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All data, including phase data, are available on CD-ROM/DVD-ROM
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Addendum I

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

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

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

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

The following example illustrates the changes :-

September 2002

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

Epicentral Estimates

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

Observational Data

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

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

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

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

Addendum II

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

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

Addendum III

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

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

JMA 01 00:31:08.4±0.2**,25°.72N×140°.90E,h0^{km},M4.2,Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHHJ	Haha-jima-NKT	1.46	51	P	Pn	00 31 35.7	-0.4
JHHJ				*e*S	Sn	00 31 56.0	+0.1
CBIJ	Chichi jima	1.79	40	P	Pn	00 31 41.1	+0.5
CBIJ				S	Sb	00 32 05.3	+0.2
BSO4	Boso 4	9.25	357	P	Pn	00 33 24.1	+1.1

---

*MAN **01** 00:41:23.7,18°.65N×120°.90E,h17^{km},mb4.9,ML3.8, MS3.8*

*IDC **01** 00:41:28.2±3.4,18°.91N×121°.84E,h107^{km}±34^{km},mb3.2/4, mb1 3.3/5,mb1mx3.0/63,mbtmp3.5/5,MS3.2/6,Ms1 3.2/6, ms1mx2.7/26,Error ellipse: s-maj=44.4km s-min=17.6km az=77.0*

ISC 01 00:41:22.0±2.8**,18°.72N**±0°.08×**120°.96E**±0°.09**,h16**^{km}±16^{km}**, n18,σ1^{s}.51**/15**,mb3.4**/4**,MS3.1**/5**,Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APYP	Conner	0.90	162	*e*P	Pb	00 41 39.5	+0.3
APYP				*e*S	Sn	00 41 53.1	+0.6
ABRA	Dolores	1.09	192	*e*P	Pb	00 41 41.4	-1.1
ABRA				*e*S	Sg	00 41 56.8	-0.6
CAUP	Cauayan	1.95	155	*e*P	Pb	00 41 57.1	-0.1
CAUP				*e*S	Sg	00 42 24.5	-0.3
BOLP	Bolinao	2.53	203	*e*P	Pn	00 42 05.0	+2.6
BOLP				*e*S	Sb	00 42 36.5	-1.4
BALP	Baler	3.02	169	*e*P	Pn	00 42 10.3	+1.2
BALP				*e*S	Sb	00 42 51.7	-0.4
SCZP	Santa Cruz	3.09	199	*e*P	Pb	00 42 18.6	+2.0
SCZP				*e*S	Sb	00 42 52.0	-2.1
TGY	Tagaytay City	4.59	180	P	Pb	00 42 37.6	-4.7
	54nm,0.3s,baz=169,slow=5.2,SNR=2.5						
TGY				S	Sb	00 43 36.0	-1.4
	69nm,0.3s,baz=180,slow=11,SNR=3.1						
DAV	Davao City (W)	12.42	158	LR	LR	00 49 45.4	
	comp=Z,130nm,21.3s,baz=358,slow=40						
KSRS	Korea Array	19.64	17	P	P	00 45 44.3	-5.6
	0.2nm,0.3s,baz=198,slow=11,SNR=5.9						
CMAR	Chiang Mai Arr	20.87	273	LR	LR	00 54 01.4	
	comp=Z,24nm,18.9s,baz=115,slow=35						
GUMO	Guam	23.52	99	LR	LR	00 55 56.9	
	comp=Z,36nm,18.2s,baz=276,slow=38						
ASAJ	Asahikawa	31.15	31	LR	LR	01 00 01.4	
	comp=Z,39nm,18.2s,baz=156,slow=36						
TLY	Talaya	35.61	341	LR	LR	01 03 53.7	
	comp=Z,40nm,18.9s,baz=98,slow=38						
WRA	Warramunga Arr	40.60	160	P	P	00 48 55.8	-5.4
	0.5nm,0.6s,baz=344,slow=8.7,SNR=2.7						
MKAR	Makanchi Array	42.25	320	P	P	00 49 13.1	-1.4
	0.6nm,0.8s,baz=126,slow=9.8,SNR=4.5						
ASAR	Alice Springs	43.98	163	P	P	00 49 25.0	-3.7
	0.2nm,0.4s,baz=339,slow=6.8,SNR=5.1						
KURBB	Kurchatov Arra	46.25	323	P	P	00 49 45.8	-0.6
	0.8nm,0.8s,baz=122,slow=7.9,SNR=7.7						
HNR	Honiara	47.56	123	LR	LR	01 07 17.6	
	comp=Z,47nm,20.0s,baz=282,slow=33						

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*IDC **01** 00:43:02.1±3.8,52°.88N×167°.64W,h0^{km},mb3.6/4, mb1 3.8/6,mb1mx3.4/75,mbtmp3.6/6,ML3.2/2,MS2.4/2, Ms1 2.5/2,ms1mx2.2/61,Error ellipse: s-maj=64.0km s-min=34.8km az=96.0*

*ISCJB **01** 00:43:04.9±0.8,52°.9N±0°.1×168°.6W±0°.1,h71^{km}±6^{km}, mb3.5/4,Error ellipse: s-maj=22.2km s-min=6.7km az=154.4*

*NEIC **01** 00:43:05.2±0.0,52°.71N×168°.34W,h42^{km},ML3.5(AEIC), After AEIC.*

ISC 01 00:43:05.8±1.0**,52°.9N**±0°.1×**168°.51W**±0°.07**,h57**^{km}±9^{km}**, n34,σ1^{s}.49**/35**,mb3.6**/4**,Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	Nikolski High	0.23	291	P	Pn	00 43 14.7	-0.4
NIKH				S	Sn	00 43 22.1	+0.4
OKTU	Okmok Mt. Tuli	0.56	29	P	Pn	00 43 19.6	+1.3
OKER	Okmok East Rim	0.62	26	P	Pn	00 43 20.5	+1.5
OKAK	Okmok	0.69	7	P	Pn	00 43 19.1	-0.7
OKID	Okmok Mt. Idak	0.72	35	P	Pn	00 43 21.3	+1.1
MSOM	Makushin Julie	1.31	45	P	Pn	00 43 28.1	+0.3
MSOM				S	Sn	00 43 45.8	+1.4
MGOD	Makushin Gods	1.33	47	P	Pn	00 43 28.4	+0.1
MGOD				S	Sn	00 43 46.2	+1.2
MCIR	Makushin Cirqu	1.43	42	P	Pn	00 43 29.9	+0.3
UNV	Unalaska Valle	1.53	51	P	Pn	00 43 31.1	+0.3
UNV				S	Sn	00 43 51.0	+1.3
MTBL	Makushin Table	1.54	45	P	Pn	00 43 31.4	+0.4
AKMO	Akutan Morgan	1.91	50	P	Pn	00 43 36.9	+0.8
AKMO				S	Sn	00 44 02.5	+3.5
LVA	Lava Point	1.95	48	P	Pn	00 43 37.5	+1.0
AHB	Akutan Harbor	2.02	52	P	Pn	00 43 38.6	+1.1
AKUT	Akutan	2.05	52	P	Pn	00 43 38.5	+0.6
AKSA	Akutan Strait	2.09	52	P	Pn	00 43 38.8	+0.4
AKSA				S	Sn	00 44 06.3	+3.0
WESP	Westdahl Peak	2.76	53	P	Pn	00 43 48.8	+1.1
WESP				S	Sn	00 44 21.9	+2.0
WESE	West Dahl East	2.82	54	P	Pn	00 43 49.3	+0.9
KOFP	Korovin Flat P	3.47	262	P	Pn	00 43 59.9	+2.5
ATKA	Atka Island	3.54	261	P	Pn	00 44 00.4	+2.2
FALS	False Pass	3.60	55	P	Pn	00 44 00.8	+1.8
SPIA	Saint Paul Isl	4.41	348	P	Pn	00 44 11.6	+1.5
SDPT	Sand Point	5.32	59	P	Pn	00 44 23.7	+1.1
KDAK	Kodiak Island	10.30	55	Pn	Pn	00 45 29.5	-1.1
	0.3nm,0.3s,baz=254,slow=7.4,SNR=10						
KDAK				Sn	Sn	00 47 17.1	-7.3
	0.1nm,0.3s,baz=24,slow=18,SNR=1.9						
ILAR	Eielson Array	16.22	34	Pn	Pn	00 46 48.3	-1.4
	0.1nm,0.3s,baz=229,slow=10,SNR=4.5						
ILAR				LR	LR	00 52 40.6	
	comp=Z,24nm,18.7s,baz=115,slow=36						
INK	Inuvik	22.62	34	P	P	00 48 00.2	-1.2
	0.9nm,0.5s,baz=235,slow=10,SNR=4.3						
YKA	Yellowknife Ar	29.50	50	P	P	00 49 02.4	-1.8
	0.2nm,0.5s,baz=274,slow=8.6,SNR=3.7						
YKA				LR	LR	01 03 16.2	
	comp=Z,4.1nm,18.3s,baz=310,slow=42						
YBH	Yreka Blue Hor	32.46	91	P	P	00 49 29.9	-0.7
	0.5nm,0.4s,baz=312,slow=2.4,SNR=4.5						
H11N2	WAKE ISLAND Hy	38.19	219	T	T	01 31 08.5	
	baz=24,slow=76,SNR=18						
H11N3	WAKE ISLAND Hy	38.20	219	T	T	01 31 09.1	
	baz=24,slow=76,SNR=33						
H11N1	WAKE ISLAND Hy	38.21	219	T	T	01 31 09.9	
	baz=24,slow=76,SNR=22						
H11S1	WAKE ISLAND Hy	39.38	219	T	T	01 32 37.6	
	baz=23,slow=76,SNR=84						
H11S2	WAKE ISLAND Hy	39.40	219	T	T	01 32 25.2	
	baz=23,slow=76,SNR=62						
H11S3	WAKE ISLAND Hy	39.40	219	T	T	01 32 33.6	
	baz=23,slow=76,SNR=45						
TXAR	Lajitas Array	52.22	90	P	P	00 52 10.9	-0.1
	0.4nm,0.4s,baz=312,slow=5.9,SNR=4.1						

---

*ISCJB **01** 00:44:28.7±0.3,22°.45S±0°.02×68°.29W±0°.04,h98^{km}±2^{km}, mb4.7/123,Error ellipse: s-maj=5.6km s-min=3.1km az=162.1*

*GCMT **01** 00:44:31.0±0.3,22°.54S×68°.71W,h127^{km}±3^{km},MW5.0/77, Moment Tensor Solution. s34,c42; s77,c103; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.99±.16; M$_{θθ}$0.36±.20; M$_{ϕϕ}$0.62±.24; M$_{rθ}$1.84±.08; M$_{θϕ}$-0.44±.14; M$_{ϕr}$-3.54±.12; Best double couple: M$_{0}$4.10700×10^{16} NP1:ϕ$_{s}$332.00000°,δ83.00000°,λ-88.00000°. NP2: ϕ$_{s}$136.00000°,δ7.00000°,λ-106.00000°. Principal axes: T 4.0780, Plg38.0000°, Azm60.0000°; N 0.0580, Plg2.0000°, Azm152.0000°; P -4.1350, Plg52.0000°, Azm245.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **01** 00:44:31.0±0.0,22°.44S×68°.63W,h113^{km},mb4.7/98, ML4.9(GUC),After GUC.*

*GUC **01** 00:44:31.6±0.5,22°.44S×68°.63W,h113^{km}±4^{km},ML4.9*

*IDC **01** 00:44:32.5±0.4,22°.36S×68°.25W,h114^{km}±3^{km},mb4.3/25, mb1 4.4/29,mb1mx4.4/40,mbtmp4.7/29,MS3.7/11, Ms1 3.7/11,ms1mx3.4/34,Error ellipse: s-maj=13.2km s-min=8.6km az=78.0*

*BJI **01** 00:44:33.8,22°.50S×68°.30W,h111^{km},mB4.9/5*

*SJA **01** 00:44:38.1±0.3,23°.23S×68°.85W,h33^{km}±10^{km},ML4.5, MW4.2*

ISC 01 00:44:32.2±0.3**,22°.46S**±0°.03×**68°.42W**±0°.05**,h114**^{km}±2^{km}**, h114^{km}:pP-P,n482,σ1^{s}.59**/546**,mb4.7**/123**,10C-6D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	1.01	311	⇑*e*P	Pn	00 44 52.6	-1.3
PB09				*e*S	Sn	00 45 07.7	-2.7
PB09				IAML		00 45 10.0	
	comp=N,33µm,1.1s						
PB06	IPOC Station P	1.09	257	⇑*i*P	Pn	00 44 52.7	-2.0
PB06				*e*S	Sn	00 45 08.9	-3.0
PB06				IAML		00 45 11.5	
	comp=E,27µm,0.4s						
PB15	IPOC Station P	1.22	232	⇑*i*P	Pn	00 44 54.8	-1.4
PB15				*e*S	Sn	00 45 12.4	-2.1
PB03	IPOC Station P	1.30	288	⇑*i*P	Pn	00 44 55.0	-2.0
PB03				*e*S	Sn	00 45 12.9	-3.0
PB03				IAML		00 45 13.2	
	comp=N,46µm,0.6s						
PB07	IPOC Station P	1.54	298	⇑*i*P	Pn	00 44 58.0	-1.8
PB07				*e*S	Sn	00 45 17.9	-3.1
PB07				IAML		00 45 18.4	
	comp=N,24µm,0.6s						
PB04	IPOC Station P	1.60	274	*e*Pn	Pn	00 44 58.4	-2.3
PB04	IPOC Station P	1.60	274	⇑*e*P	Pn	00 44 58.3	-2.3
PB04				*e*S	Sn	00 45 18.7	-3.5
PB04				IAML		00 45 24.4	
	comp=N,25µm,0.4s						
PB05	IPOC Station P	1.69	256	⇑*e*P	Pn	00 44 59.2	-2.4
PB05				*e*S	Sn	00 45 20.6	-3.4
PB05				IAML		00 45 22.1	
	comp=E,31µm,0.8s						
PB01	IPOC Station P	1.73	325	*e*Pn	Pn	00 45 00.2	-1.8
PB01	IPOC Station P	1.73	325	⇓*e*P	Pn	00 45 00.4	-1.6
PB01				*e*S	Sn	00 45 22.5	-2.2
PB02	IPOC Station P	1.78	309	⇓*e*P	Pn	00 45 01.0	-1.7
PB02				*e*S	Sn	00 45 23.0	-2.9
PB02				IAML		00 45 24.7	
	comp=E,20µm,0.4s						
PB10	IPOC Station P	2.23	242	⇑*i*P	Pn	00 45 05.6	-2.6
PB10				*e*S	Sn	00 45 31.2	-4.6
PB10				IAML		00 45 40.7	
	comp=E,6µm,0.2s						
PB08	IPOC Station P	2.41	343	⇑*i*P	Pn	00 45 10.6	-0.3
PB08				*e*S	Sn	00 45 40.7	+0.1
PB08				IAML		00 45 43.9	
	comp=E,3µm,1.3s						
PB14	IPOC Station P	2.82	220	*e*P	Pn	00 45 16.5	+0.3
PB14				*e*S	Sn	00 45 44.9	-5.1
GO02	Mina Guanaco	2.89	201	*e*Pn	Pn	00 45 15.4	-1.7
MNMC	Minye Minye	3.49	341	*e*Pn	Pn	00 45 23.0	-2.1
PB16	IPOC Station P	4.23	346	*e*P	Pn	00 45 36.1	+0.8
PB16				*i* S	Sn	00 46 06.6	-17
AHML	Horco Molle	5.14	147	*e*P	Pn	00 45 49.1	+2.2
AHML				IAML		00 46 37.3	
	comp=Z,94nm,0.7s						
GO03	Copiap	5.37	197	*e*Pn	Pn	00 45 46.3	-3.8
LPAZ	La Paz	6.15	3	P	Pn	00 46 01.3	+0.1
	comp=Z,4.9nm,0.3s,baz=175,slow=10,SNR=192						
LPAZ	La Paz	6.15	3	*e*Pn	Pn	00 45 59.5	-1.7
CYA	Choya	6.41	159	⇓*e*P	Pn	00 46 04.4	+0.3
CYA				IAML		00 46 07.8	
	comp=Z,49nm,0.6s						
LCO	Las Campanas	6.84	197	*e*Pn	Pn	00 46 05.5	-4.7
LCO	Las Campanas	6.84	197	*e*P	Pn	00 46 14.3	+4.2
LCO				*e*S	Sn	00 47 25.9	-0.7
ACLC	CERRO LA CRUZ	7.06	170	*e*P	Pn	00 46 11.4	-1.6
ACDV	Cuesta del Vie	7.70	185	*e*P	Pn	00 46 20.5	-1.3
GO04	Tololo Observa	7.97	195	*e*Pn	Pn	00 46 20.4	-5.1
APLL	PUNTA DE LOS L	8.08	168	*e*P	Pn	00 46 24.3	-2.5
AMOG	MOGNA	8.44	180	*e*P	Pn	00 46 28.9	-2.8
RTLL	Cerro Villicun	8.83	180	⇓*e*P	Pn	00 46 34.9	-2.1
RTLL				IAML		00 46 53.3	
RTLS	Leoncito	9.33	185	*e*P	Pn	00 46 39.8	-4.2
RTCV	Cerro Valdivia	9.36	181	*e*P	Pn	00 46 41.3	-2.9
SIV	San Ignacio	9.46	48	P	Pn	00 46 42.5	-3.1
	comp=Z,12nm,0.3s,baz=276,slow=9.0,SNR=406						
SIV				S	Sn	00 48 24.1	-6.2
	comp=Z,3.7nm,0.3s,baz=264,slow=18,SNR=2.3						
TCA	Tanti	9.47	160	⇓*e*P	Pn	00 46 43.7	-2.0
TCA				IAML		00 47 06.4	
	comp=Z,29nm,0.6s						
AUSP	Uspallata	9.76	185	*e*P	Pn	00 46 46.8	-2.9
ACAN	Cantantal	9.84	174	⇓*e*P	Pn	00 46 48.4	-2.2
ASAL	Salagasta	10.10	182	*e*P	Pn	00 46 50.1	-4.0
MRA	San Martin	10.21	167	*e*P	Pn	00 46 51.5	-4.0
MRA				IAML		00 48 08.8	
	comp=Z,26nm,0.5s						
ARCO	CERRO ARCO	10.35	182	*e*P	Pn	00 46 55.1	-2.5
ARCO				IAML		00 50 06.0	
	comp=Z,65nm,0.6s						
ROC1	El Roble	10.72	192	*e*Pn	Pn	00 46 58.3	-4.4
CPUP	Villa Florida	10.82	113	P	Pn	00 47 01.9	-1.9
	comp=Z,1.1nm,0.3s,baz=295,slow=11,SNR=48						
CPUP				LR	LR	00 51 47.2	
	comp=Z,183nm,20.8s,baz=307,slow=41						
PEL	Peldehue	10.83	190	*e*Pn	Pn	00 47 00.5	-3.4
GO05	HualaæØ	12.87	193	*e*Pn	Pn	00 47 28.6	-2.3
NNA	Nana	13.15	321	P	P	00 47 38.9	-1.7
	comp=Z,1.2nm,0.3s,baz=130,slow=6.3,SNR=6.2						
NNA				S	S	00 50 05.3	-11
	comp=Z,1.0nm,0.3s,baz=180,slow=9.1,SNR=2.8						
NNA	Nana	13.15	321	*e*Pn	P	00 47 37.5	-3.1
	comp=Z,41nm,0.9s						
NNA				S	S	00 50 05.3	-11
SAML	Samuel	14.35	21	*e*Pn	Pn	00 47 45.4	-4.7
TRQA	Tornquist	16.50	162	*e*Pn	Pn	00 48 14.8	-2.1
	comp=Z,80nm,1.0s						
PLCA	Paso Flores	18.30	185	P	P	00 48 37.1	-0.2
	comp=Z,1.2nm,0.3s,baz=27,slow=12,SNR=22						
PLCA				S	Sn	00 52 19.4	+16
	comp=Z,0.5nm,0.3s,baz=246,slow=20,SNR=3.2						
PLCA	Paso Flores	18.30	185	*e*P	P	00 48 34.1	-3.3
	comp=Z,56nm,0.9s						
PLCA				S	Sn	00 52 19.4	+16
SPB	Sao Paulo	19.35	97	*e*P	P	00 48 48.4	-0.4
	comp=Z,136nm,1.0s						
PTGA	Pitinga	23.11	22	P	P	00 49 26.0	-2.4
	comp=Z,36nm,0.6s,baz=206,slow=10,SNR=60						
PTGA	Pitinga	23.11	22	*e*P	P	00 49 25.7	-2.7
	comp=Z,48nm,0.8s						
OTAV	Otavalo	24.59	335	*e*P	P	00 49 46.3	+4.0
FLOC	Florencia	24.92	343	*e*P	P	00 49 44.8	-0.1
SOTA	Rioblanco	25.72	341	*e*P	P	00 49 56.7	+4.1
PCON	Cinco Dias	25.84	341	*e*P	P	00 49 55.5	+1.7
VILC	Villavicencio,	26.91	348	*e*P	P	00 50 04.7	+1.8
HORQ	Saladito	27.00	342	*e*P	P	00 50 05.9	+1.9
GRGC	Isla de Gorgon	27.04	338	*e*P	P	00 50 09.0	+5.0
YOTC	Yotoco, Valle	27.40	343	*e*P	P	00 50 08.8	+1.5
CHIC	Chingaza	27.42	348	*e*P	P	00 50 06.1	-1.7
ROSC	El Rosal	27.74	347	P	P	00 50 11.5	+0.8
	comp=Z,3.0nm,0.5s,baz=180,slow=20,SNR=2.6						
ROSC				LR	LR	01 02 41.1	
	comp=Z,112nm,18.7s,baz=114,slow=39						
RUSC	La Rusia	28.55	350	*e*P	P	00 50 16.7	-1.2
NORC	Norcasia	28.56	346	*e*P	P	00 50 17.2	-0.3
HELC	Santa Helena	29.31	345	*e*P	P	00 50 23.3	-1.3
PTBC	PUERTO BERRIO,	29.42	348	*e*P	P	00 50 20.6	-4.6
ZARC	Zaragoza, Cauc	30.43	347	*e*P	P	00 50 31.7	-2.3
SDV	Santo Domingo	31.23	356	P	P	00 50 39.7	-1.6
	comp=Z,7.9nm,0.9s,baz=176,slow=19,SNR=8.0						
SDV				LR	LR	01 05 38.1	
	comp=Z,124nm,19.9s,baz=193,slow=41						
SDV	Santo Domingo	31.23	356	*e*P	P	00 50 39.7	-1.6
	comp=Z,5.3nm,0.8s						
PCRV	Puerto La Cruz	32.65	7	P	P	00 50 52.3	-1.2
	comp=Z,9.8nm,0.7s,baz=179,slow=14,SNR=5.4						
RCBR	Riachuelo	35.48	67	P	P	00 51 16.1	-2.0
	comp=Z,130nm,1.0s,baz=236,slow=8.0,SNR=7.2						
RCBR	Riachuelo	35.48	67	*e*P	P	00 51 15.6	-2.5
	comp=Z,67nm,0.8s						
CRPR	Cabo Rojo, PR	40.24	2	*e*P	P	00 51 53.5	-4.4
	comp=Z,126nm,1.3s						
OBIP	Obispado Ponce	40.30	3	*e*P	P	00 51 54.1	-4.3
	comp=Z,57nm,1.4s						
SJG	San Juan	40.38	3	*e*P	P	00 51 54.0	-5.0
	comp=Z,94nm,1.7s						
ANWB	Willy Bob	40.41	10	*e*P	P	00 51 55.1	-4.2
	comp=Z,59nm,0.6s						
CBYP	Canovanas	40.56	4	*e*P	P	00 51 57.3	-3.3
	comp=Z,41nm,1.1s						
AOPR	Arecibo Observ	40.59	2	*e*P	P	00 51 57.2	-3.6
	comp=Z,21nm,0.8s						
PMSA	Palmer Station	42.40	177	LR	LR	01 09 13.0	
	comp=Z,145nm,18.2s,baz=340,slow=35						
059Z	Ave Maria	50.12	345	P	P	00 53 17.0	+1.1
	baz=165						
059A	Moore Haven	50.66	345	P	P	00 53 20.8	+0.9
	baz=165						
058A	Arcadia	50.90	345	P	P	00 53 22.6	+0.9
	baz=164						
959A	Okeechobee	51.13	346	P	P	00 53 24.3	+0.9
	baz=166						
958A	Wauchula	51.40	345	P	P	00 53 26.3	+0.9
	baz=164						
957A	Wimauma	51.59	344	P	P	00 53 27.8	+0.9
	baz=164						
859A	Kempfer Cattle	51.65	346	P	P	00 53 28.4	+1.1
	baz=166						
DWPF	Disney Wildern	51.82	345	P	P	00 53 29.4	+0.8
	baz=165						
657A	Interlachen	53.34	345	P	P	00 53 41.1	+1.3
	baz=165						
655A	Horseshoe Beac	53.61	344	P	P	00 53 42.5	+0.8
	baz=163						
557A	Orange Park	53.72	346	P	P	00 53 43.4	+0.9
	baz=165						
553A	Crawfordville	54.56	343	P	P	00 53 49.6	+0.9
	baz=162						
353A	Camilla	55.60	344	P	P	00 53 56.4	+0.3
	baz=162						
ZAIG	Zacatecas	55.91	321	*e*P	P	00 54 00.0	+1.2
ZAIG				*e*pP	pP	00 54 28.6	+2.5
254A	Abbeville	55.94	345	P	P	00 53 58.4	0.0
	baz=164						
252A	Lumpkin	56.36	343	P	P	00 54 02.1	+0.6
	baz=162						
NHSC	New Hope	56.38	348	P	P	00 54 02.2	+0.6
	baz=167						
NHSC	New Hope	56.38	348	*e*P	P	00 54 02.5	+0.9
NHSC				*e*pP	pP	00 54 31.6	+2.7
155A	Kite	56.39	346	P	P	00 54 02.2	+0.5
	baz=165						
154A	Montrose	56.53	345	P	P	00 54 02.9	+0.2
	baz=164						
251A	Midway	56.63	343	P	P	00 54 03.6	+0.2
	baz=161						
152A	Waverly Hall	56.99	344	P	P	00 54 06.5	+0.6
	baz=162						
Z54A	Sparta	57.07	346	P	P	00 54 06.8	+0.4
	baz=164						
Z53A	Monticello	57.28	345	P	P	00 54 08.5	+0.5
	baz=164						
150A	Eclectic	57.28	342	P	P	00 54 09.0	+1.0
	baz=161						
GOGA	Godfrey	57.38	345	*e*P	P	00 54 08.9	+0.3
	comp=Z,10nm,1.2s						
541A	Lake Charles	57.39	334	P	P	00 54 10.2	+1.4
	baz=153						
Z52A	Williamson	57.41	344	P	P	00 54 09.3	+0.5
	baz=163						
Y54A	Tignall	57.63	346	P	P	00 54 10.7	+0.2
	baz=165						
Z50A	Ashland	57.87	343	P	P	00 54 11.3	-0.8
	baz=161						
Z50A	Ashland	57.87	343	*e*P	P	00 54 11.1	-1.0
	comp=Z,6.5nm,0.9s						
Z50A				*e*pP	pP	00 54 32.6	-6.9
245A	Little AP, Sta	57.95	338	P	P	00 54 12.8	+0.1
	baz=157						
LRAL	Lakeview Retre	57.97	342	P	P	00 54 12.3	-0.4
	baz=160						
Z49A	Columbiana	57.98	342	P	P	00 54 11.9	-0.9
	baz=160						
Y51A	Rockmart	58.25	344	P	P	00 54 14.4	-0.4
	baz=162						
Z48A	Northport	58.45	341	P	P	00 54 15.5	-0.6
	baz=159						
KMSC	Kings Mountain	58.58	348	*e*P	P	00 54 17.5	+0.4
	comp=Z,26nm,1.4s						
X52A	Dahlonega	58.62	345	P	P	00 54 17.2	-0.1
	baz=164						
833A	Chaparral WMA,	58.67	328	P	P	00 54 18.1	+0.3
	baz=146						
833A	Chaparral WMA,	58.67	328	*e*P	P	00 54 17.9	+0.2
833A				*e*pP	pP	00 54 47.3	+2.0
X51A	Calhoun	58.83	344	P	P	00 54 19.0	+0.3
	baz=162						
X51A	Calhoun	58.83	344	*e*P	P	00 54 19.0	+0.3
	comp=Z,27nm,1.4s						
X50B	Fort Payne	58.93	343	P	P	00 54 20.2	+0.7
	baz=162						
W53A	Cullowhee	59.00	346	P	P	00 54 20.2	+0.2
	baz=164						
VNA3	Neumayer Olymp	59.02	161	P	P	00 54 20.3	+0.6
241A	Mo Tay, Goldon	59.03	336	*e*P	P	00 54 22.2	+2.0
	comp=Z,23nm,1.1s						
X49A	Woodville	59.16	343	P	P	00 54 20.7	-0.3
	baz=161						
NCAT	North Carolina	59.20	349	*e*P	P	00 54 21.2	-0.1
	comp=Z,13nm,0.8s						
VNA1	Neumayer--Stat	59.23	160	P	P	00 54 22.1	+1.0
X48A	Hartselle	59.30	342	P	P	00 54 22.0	-0.1
	baz=160						
X48A	Hartselle	59.30	342	*e*P	P	00 54 21.7	-0.3
	comp=Z,18nm,1.4s						
V53A	Saluda	59.40	346	P	P	00 54 22.8	0.0
	baz=165						
W50A	Signal Mountai	59.54	344	P	P	00 54 23.4	-0.3
	baz=162						
W50A	Signal Mountai	59.54	344	*e*P	P	00 54 23.4	-0.3
	comp=Z,11nm,1.0s						
CPCT	Cooper Cave	59.58	345	*e*P	P	00 54 23.8	-0.1
CPCT				*e*pP	pP	00 54 53.4	+1.9
TKL	Tuckaleechee C	59.60	346	P	P	00 54 23.8	-0.3
	comp=Z,9.2nm,1.1s,baz=161,slow=8.6,SNR=6.1						
TKL				pP	pP	00 54 51.0	-0.7
	comp=Z,7.5nm,1.1s,baz=179,slow=8.9,SNR=3.8						
TKL				LR	LR	01 23 01.5	
	comp=Z,60nm,20.0s,baz=202,slow=39						
TKL	Tuckaleechee C	59.60	346	*e*P	P	00 54 20.9	-3.2
	comp=Z,34nm,1.5s						
TKL				pP	pP	00 54 51.0	-0.7
W49A	Belvidere	59.72	343	P	P	00 54 24.7	-0.2
	baz=161						
SWET	Sewanee	59.72	343	*e*P	P	00 54 23.5	-1.4
SWET				*e*pP	pP	00 54 52.3	-0.2
V52A	Sevierville	59.74	346	P	P	00 54 24.7	-0.3
	baz=164,SNR=9.1						
V52A	Sevierville	59.74	346	*e*P	P	00 54 24.7	-0.3
	comp=Z,18nm,1.2s						
V52A				*e*pP	pP	00 54 52.2	-0.4
X46A	Booneville	59.85	341	P	P	00 54 25.6	-0.2
	baz=159						
V51A	Loudon	59.88	345	P	P	00 54 25.5	-0.4
	baz=163						
W48A	Pulaski	59.92	342	P	P	00 54 26.0	-0.2
	baz=160						
V50A	Pikevile	59.94	344	P	P	00 54 26.0	-0.3
	baz=162,SNR=7.7						
U53A	Fall Branch	60.02	347	P	P	00 54 26.2	-0.7
	baz=165						
W47A	Westpoint	60.21	342	P	P	00 54 27.5	-0.7
	baz=160						
V49A	McMinnville	60.23	344	P	P	00 54 28.0	-0.4
	baz=162,SNR=5.1						
TZTN	Tazewell	60.40	346	P	P	00 54 29.2	-0.3
	baz=164						
TZTN	Tazewell	60.40	346	*e*P	P	00 54 24.2	-5.3
	comp=Z,12nm,1.4s						
BLA	Blacksburg	60.42	349	P	P	00 54 29.3	-0.3
	baz=168						
BLA	Blacksburg	60.42	349	*e*P	P	00 54 26.2	-3.4
	comp=Z,67nm,1.8s						
V48A	Smith Brothers	60.45	343	P	P	00 54 29.4	-0.5
	baz=161,SNR=7.2						
V48A	Smith Brothers	60.45	343	*e*P	P	00 54 28.0	-1.8
	comp=Z,11nm,0.8s						
JCT	Junction City	60.66	329	P	P	00 54 31.5	+0.1
	baz=147,SNR=6.1						
JCT	Junction City	60.66	329	*e*P	P	00 54 31.5	+0.1
	comp=Z,12nm,0.8s						
IP07	Quail	60.73	351	*e*pP	pP	00 55 02.9	+3.5
CVRD	Centerville Ro	60.85	352	*e*P	P	00 54 34.2	+1.7
U49A	Red Boiling Sp	60.91	344	P	P	00 54 32.6	-0.3
	baz=162						
WVT	Waverly	61.10	342	P	P	00 54 33.6	-0.6
	baz=160						

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WVT  Waverly          61.10 342 eP    P     00 54 31.3 -2.9
          comp=Z,7.7nm,0.8s
U48A Cassie Pea, Po   61.10 343  P    P     00 54 34.6 +0.4
          baz=161
SNAA Sanae            61.23 161  P    P     00 54 35.1 +0.4
SNAA Sanae            61.23 161  P    P     00 54 35.3 +0.5
          comp=Z,17nm,0.9s,baz=282,slow=6.5,SNR=45
SNAA                             pP   pP    00 55 03.1 +0.6
          comp=Z,4.8nm,0.6s,baz=271,slow=6.5,SNR=5.2
SNAA                             LR   LR    01 19 43.3
          comp=Z,38nm,18.8s,baz=13,slow=34
U47A Clarksville      61.24 343  P    P     00 54 35.0 -0.1
          baz=160
MIAR Mount Ida        61.53 336  P    P     00 54 36.7 -0.5
          baz=154,SNR=5.5
MIAR Mount Ida        61.53 336 eP    P     00 54 34.9 -2.3
          comp=Z,5.9nm,0.8s
W41B Gary Mavity, V   61.62 338  P    P     00 54 37.7  0.0
          baz=155
T48A Bowling Green    61.63 344  P    P     00 54 38.2 +0.5
          baz=161
TXAR Lajitas Array    61.67 325  P    P     00 54 37.5 -0.8
          comp=Z,1.0nm,0.8s,baz=139,slow=8.3,SNR=6.5
TXAR                             pP   pP    00 55 06.1  0.0
          comp=Z,1.4nm,0.8s,baz=140,slow=8.0,SNR=5.2
TX31 Lajitas Ar. Si   61.67 325 eP    P     00 54 35.5 -2.9
TX31                            epP   pP    00 55 06.8 +0.7
X39A Fountain Ranch   61.70 336  P    P     00 54 38.3  0.0
          baz=153,SNR=8.2
T47A Sharon Grove     61.70 343  P    P     00 54 37.9 -0.3
          baz=161,SNR=7.4
T47A Sharon Grove     61.70 343 eP    P     00 54 35.7 -2.6
T47A                            epP   pP    00 55 05.4 -0.6
W40A Ferguson Farm,   61.92 337  P    P     00 54 39.6 -0.1
          baz=154
W40A Ferguson Farm,   61.92 337 eP    P     00 54 37.4 -2.4
          comp=Z,75nm,1.9s
T46A Princeton        61.97 342  P    P     00 54 39.3 -0.7
          baz=160,SNR=6.5
S48A Wiedeman Farm,   62.06 344  P    P     00 54 39.7 -0.9
          baz=162
V41A Mountainview     62.14 338  P    P     00 54 41.5 +0.2
          baz=155
W39A Magazine         62.19 337  P    P     00 54 41.5  0.0
          baz=154
W39A Magazine         62.19 337 eP    P     00 54 37.9 -3.6
          comp=Z,13nm,1.0s
ABTX Abilene, Hawle   62.37 330  P    P     00 54 42.8 -0.1
          baz=148
V40A Witts Springs    62.39 338  P    P     00 54 42.6 -0.3
          baz=155
V40A Witts Springs    62.39 338 esP   sP    00 55 25.0 +1.8
T44A Benton           62.50 341  P    P     00 54 43.0 -0.6
          baz=158
S46A Don Dixon Farm   62.52 343  P    P     00 54 43.5 -0.2
          baz=160
U41A Viola            62.56 339  P    P     00 54 43.7 -0.3
          baz=156
MVL  Millersville     62.58 353 eP    P     00 54 43.2 -0.8
          comp=Z,9.0nm,0.8s
WCI  Wyandotte Cave   62.66 344  P    P     00 54 44.6 -0.1
          baz=162
WCI  Wyandotte Cave   62.66 344 eP    P     00 54 42.3 -2.4
WCI                             epP   pP    00 55 14.3 +1.9
V39A Pettigrew        62.71 337  P    P     00 54 44.6 -0.5
          baz=154,SNR=9.5
MCWV Mont Chateau     62.71 350  P    P     00 54 45.1 +0.2
          baz=168
T43A Greenville       62.71 340  P    P     00 54 44.7 -0.2
          baz=158
S45A Carrier Mills    62.76 342  P    P     00 54 45.0 -0.2
          baz=159
R47A Wooly Knot Far   62.78 344  P    P     00 54 44.9 -0.5
          baz=161
U40A Yellville        62.89 338  P    P     00 54 45.9 -0.4
          baz=155
T42A Van Buren        62.92 340  P    P     00 54 46.0 -0.3
          baz=157
S44A Carbondale       62.97 342  P    P     00 54 46.1 -0.5
          baz=159
S43A Fulton Ridge,    63.10 341  P    P     00 54 46.6 -1.0
          baz=158,SNR=5.2
O56A Blue Knob Stat   63.12 351  P    P     00 54 47.5 -0.2
          baz=170
U39A Green Forest     63.14 337  P    P     00 54 47.7 -0.2
          baz=154
T41A Mountain View    63.15 339  P    P     00 54 47.5 -0.4
          baz=156
HHAR Hobbs            63.21 337 eP    P     00 54 49.5 +1.1
HHAR                            epP   pP    00 55 17.2 +1.0
R45A Skylar, Fairfi   63.24 343  P    P     00 54 48.3 -0.2
          baz=160
Q47A Bedord North L   63.36 344  P    P     00 54 49.2 -0.1
          baz=162
SSPA Standing Stone   63.39 352  P    P     00 54 49.7 +0.3
          baz=170
P50A Jamestown        63.40 347  P    P     00 54 49.4  0.0
          baz=164
N59A State Game Lan   63.42 354  P    P     00 54 50.1 +0.5
          baz=173
R44A Waltonville      63.43 342  P    P     00 54 49.8 +0.1
          baz=159
ODNJ Ogdensburg       63.48 355 eP    P     00 54 48.0 -2.0
          comp=Z,52nm,2.0s
T40A Mansfield        63.50 339  P    P     00 54 49.3 -0.9
          baz=155
S42A Caledonia        63.50 340  P    P     00 54 49.5 -0.7
          baz=157
TUL1 Leonard          63.57 335  P    P     00 54 50.5 -0.3
          baz=152
TUL1 Leonard          63.57 335 eP    P     00 54 50.0 -0.7
TUL1                            epP   pP    00 55 21.0 +2.4
FVM  French Village   63.58 341 eP    P     00 54 50.4 -0.3
FVM                             epP   pP    00 55 19.2 +0.6
BLO  Bloomington      63.61 344 epP   pP    00 55 20.3 +1.6
S41A Jillco Farms,    63.64 339  P    P     00 54 50.3 -0.9
          baz=156,SNR=7.5
Q45A Warren Harvey,   63.77 343  P    P     00 54 51.1 -0.9
          baz=160
WMOK Wichita Mounta   63.78 332  P    P     00 54 51.4 -0.7
          baz=149
ACSO Alum Creek Sta   63.83 348  P    P     00 54 51.5 -0.8
          baz=165
S40A Lebanon          63.90 339  P    P     00 54 51.9 -0.9
          baz=155
CCM  Cathedral Cave   63.90 340  P    P     00 54 52.5 -0.3
          baz=157
CCM  Cathedral Cave   63.90 340 eP    P     00 54 53.3 +0.5
CCM                             epP   pP    00 55 15.8 -5.0
R42A Luebbering       63.97 341  P    P     00 54 52.1 -1.2
          baz=157
N54A Moraine State    64.01 350  P    P     00 54 53.5  0.0
          baz=168
N54A Moraine State    64.01 350 eP    P     00 54 53.6 +0.1
          comp=Z,43nm,1.6s
T38A Diamond          64.01 337  P    P     00 54 52.7 -0.9
          baz=154
KSPA Keystone Colle   64.06 354 eP    P     00 54 54.6 +0.8
BRYW Bryant College   64.12 357 eP    P     00 54 55.8 +1.6
          comp=Z,37nm,1.0s
R41A Rosebud          64.17 340  P    P     00 54 53.3 -1.3
          baz=157,SNR=5.8
P45A Graceland, Par   64.26 343  P    P     00 54 54.8 -0.3
          baz=160
P45A Graceland, Par   64.26 343 epP   pP    00 55 24.1 +1.1
S39A Bolivar          64.26 338  P    P     00 54 54.4 -0.8
          baz=155,SNR=6.6
S39A Bolivar          64.26 338 eP    P     00 54 54.6 -0.6
S39A                            epP   pP    00 55 22.8 -0.4
S38A Stockton         64.41 338  P    P     00 54 55.7 -0.5
          baz=154
P44A Sand Creek, Wi   64.44 343  P    P     00 54 55.8 -0.5
          baz=160
MNTX Cornudas Mount   64.44 325  P    P     00 54 55.6 -1.0
          baz=142
MNTX Cornudas Mount   64.44 325 eP    P     00 54 56.3 -0.2
          comp=Z,4.0nm,1.0s
R40A Maddies Statio   64.45 339  P    P     00 54 55.7 -0.7
          baz=156
R40A Maddies Statio   64.45 339 eP    P     00 54 55.5 -0.9
R40A                            epP   pP    00 55 17.8 -6.6
M54A Oil Creek Stat   64.49 351  P    P     00 54 56.1 -0.5
          baz=169,SNR=5.3
M54A Oil Creek Stat   64.49 351 eP    P     00 54 56.4 -0.3
          comp=Z,25nm,1.3s
O47A Sheridan         64.53 345  P    P     00 54 56.6 -0.3
          baz=162
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HRV  Adam Dziewonsk   64.71 357  P    P     00 54 58.3 +0.3
          baz=177
BINY Binghamton       64.71 354  P    P     00 54 58.3 +0.3
          baz=172,SNR=5.4
BINY Binghamton       64.71 354 eP    P     00 54 58.9 +0.8
          comp=Z,19nm,1.1s
R39A Chumby, Stover   64.72 339  P    P     00 54 58.8 +0.6
          baz=155
Q41A Truxton          64.72 340  P    P     00 54 58.5 +0.3
          baz=157
P43A Skaggs, Pawnee   64.85 342  P    P     00 54 59.6 +0.6
          baz=159
R38A Fenwick Farm,    64.90 338  P    P     00 54 58.9 -0.4
          baz=154,SNR=6.1
MSTX Muleshoe         64.95 329  P    P     00 54 59.7 -0.3
          baz=145,SNR=9.2
MSTX Muleshoe         64.95 329 eP    P     00 55 00.0 +0.1
          comp=Z,18nm,1.0s
Q40A Laux Farm, Aux   65.03 340  P    P     00 55 00.9 +0.8
          baz=156
TRY  Troy             65.05 356 eP    P     00 55 02.3 +2.1
          comp=Z,28nm,0.9s
Q38A Cooks Store, C   65.50 339  P    P     00 55 03.2  0.0
          baz=155
P40A Paris            65.50 340  P    P     00 55 03.4 +0.2
          baz=156
O41A Passleys Farm,   65.68 341  P    P     00 55 04.6 +0.3
          baz=157
P39B Salisbury        65.69 340  P    P     00 55 04.0 -0.4
          baz=156
N43A Stutzman Famil   65.96 343  P    P     00 55 06.2 +0.1
          baz=159
O40A La Belle         65.99 340  P    P     00 55 06.3  0.0
          baz=156
P38A Dawn             66.07 339  P    P     00 55 06.3 -0.6
          baz=155
P38A Dawn             66.07 339 eP    P     00 55 06.1 -0.8
P38A                            epP   PcP   00 55 36.3 -0.1
N42A Yates City       66.10 342  P    P     00 55 07.0  0.0
          baz=158
N41A Harden Midland   66.22 342  P    P     00 55 07.6 -0.1
          baz=158
P37A Lathrop          66.31 338  P    P     00 55 08.3 -0.1
          baz=154
NCB  Newcomb          66.32 355 eP    P     00 55 08.4 +0.1
          comp=Z,28nm,1.5s
121A Cookes Peak, D   66.37 324  P    P     00 55 09.9 +0.8
          baz=140
LBNH Lisbon           66.45 357  P    P     00 55 10.1 +0.9
          baz=177
LBNH Lisbon           66.45 357 eP    P     00 55 10.6 +1.4
          comp=Z,24nm,1.1s
LONY Lake Ozonia      66.99 355  P    P     00 55 12.8 +0.2
          baz=174,SNR=5.4
LONY Lake Ozonia      66.99 355 eP    P     00 55 13.1 +0.5
          comp=Z,37nm,1.4s
L43A Garden Prairie   67.01 344  P    P     00 55 12.9 +0.2
          baz=160
BNM  Barren Site      67.01 326 eP    P     00 55 14.8 +1.6
FRNY Flat Rock        67.14 356 eP    P     00 55 13.8 +0.3
          comp=Z,19nm,1.2s
N37A Lee Faris, Mou   67.31 339 epP   pP    00 55 44.5 +1.7
PKME Peaks-Kenny Pk   67.40 359  P    P     00 55 15.3 +0.1
          baz=179,SNR=5.8
PKME Peaks-Kenny Pk   67.40 359 eP    P     00 55 15.6 +0.4
          comp=Z,28nm,0.8s
TASL Snake Pit, Alb   67.55 327  P    P     00 55 16.9 +0.3
          baz=142,SNR=10
ANMO Albuquerque      67.55 327  P    P     00 55 17.3 +0.7
          comp=Z,5.4nm,0.9s,baz=149,slow=9.8,SNR=17
ANMO                             pP   pP    00 55 47.4 +2.7
          comp=Z,1.6nm,0.5s,baz=143,slow=8.5,SNR=3.1
ANMO Albuquerque      67.55 327  P    P     00 55 17.3 +0.7
          baz=142
L40A Anamosa          67.58 342  P    P     00 55 17.6 +1.3
          baz=157
L40A Anamosa          67.58 342 eP    P     00 55 16.3  0.0
          comp=Z,26nm,1.5s
M38A Pleasantville    67.58 340  P    P     00 55 17.3 +0.9
          baz=156
PLVO Plevna           67.64 353 eP    P     00 55 17.2 +0.6
          comp=Z,30nm,1.4s
K42A Prairie Point,   67.72 343  P    P     00 55 17.8 +0.5
          baz=159
QSPA South Pole Qui   67.73 180  P    P     00 55 18.3 +1.0
          comp=Z,14nm,0.6s,baz=160,slow=4.7,SNR=49
QSPA                             pP   pP    00 55 46.1 +0.6
          comp=Z,14nm,0.5s,baz=184,slow=1.6,SNR=10
QSPA South Pole Qui   67.73 180 eP    P     00 55 17.5 +0.2
          comp=Z,62nm,0.6s
QSPA                             pP   pP    00 55 46.1 +0.6
TUC  Tucson           67.87 322  P    P     00 55 19.6 +1.1
          baz=138
J43A Natural Harves   68.05 344  P    P     00 55 19.1 -0.2
          baz=160,SNR=5.7
JFWS Jewell Farm      68.09 343  P    P     00 55 20.1 +0.5
          baz=158
K40A Colesburg        68.14 342  P    P     00 55 20.5 +0.6
          baz=158
L38A Oak Wood Farm,   68.17 341  P    P     00 55 20.9 +0.9
          baz=156
J42A Columbus         68.17 344  P    P     00 55 20.9 +0.8
          baz=160
LIC  Lamto            68.22  73 eP    P     00 55 20.4 -0.6
          comp=Z,47nm,0.7s
T25A Trinidad         68.30 330  P    P     00 55 22.2 +0.9
          baz=144
T25A Trinidad         68.30 330 eP    P     00 55 23.5 +2.2
          comp=Z,5.5nm,1.2s
K39A Oelwein          68.36 342  P    P     00 55 21.5 +0.2
          baz=157
TIC  Toumodi          68.42  73 eP    P     00 55 21.8 -0.5
J41A Loganville       68.45 343  P    P     00 55 22.2 +0.5
          baz=159
I43A Langenfeld Bro   68.46 345  P    P     00 55 22.0 +0.2
          baz=161
KIC  Kosan Boka       68.54  73 eP    P     00 55 22.6 -0.4
          comp=Z,75nm,0.7s
DBIC Dimbokro         68.58  73  P    P     00 55 22.7 -0.5
          comp=Z,41nm,0.7s,baz=223,slow=7.0,SNR=47
DBIC                             LR   LR    01 23 13.0
          comp=Z,66nm,21.9s,baz=130,slow=34
DBIC Dimbokro         68.58  73 eP    P     00 55 23.3 +0.1
          comp=Z,54nm,0.8s
TRQ  Mont Tremblant   68.58 355 eP    P     00 55 22.5 -0.1
I42A Draeger Farm,    68.65 344  P    P     00 55 22.9 -0.1
          baz=160
I42A Draeger Farm,    68.65 344 eP    P     00 55 22.3 -0.7
          comp=Z,35nm,1.7s
J40A Soldiers Grove   68.67 343  P    P     00 55 23.6 +0.4
          baz=158
L36A Harm Buss Farm   68.67 339  P    P     00 55 23.2  0.0
          baz=154
214A Organ Pipe Nat   68.79 320  P    P     00 55 24.0 -0.2
          baz=136
PQI  Presque Isle     68.81   0 eP    P     00 55 24.6 +0.8
J39A Decorah          68.89 342  P    P     00 55 24.6 +0.1
          baz=157
H43A Windswept, Lux   68.92 345  P    P     00 55 24.1 -0.5
          baz=161
J38A Wedel Dairy, R   69.09 341  P    P     00 55 26.2 +0.4
          baz=156
BGNE Belgrade         69.27 336  P    P     00 55 28.0 +1.0
          baz=151
SDCO Great Sand Dun   69.30 329  P    P     00 55 28.4 +0.8
          baz=144,SNR=14
SDCO Great Sand Dun   69.30 329 eP    P     00 55 28.4 +0.8
          comp=Z,6.0nm,0.9s
SDCO                            epP   pP    00 55 56.7 +0.8
J37A Redenius Farm,   69.41 341  P    P     00 55 28.6 +0.9
          baz=155
J36A Seneca 1, Swea   69.67 340  P    P     00 55 29.9 +0.6
          baz=155
J36A Seneca 1, Swea   69.67 340 epP   pP    00 55 59.4 +1.7
I38A Scanlan Farm,    69.71 342  P    P     00 55 30.2 +0.6
          baz=157
H40A Chili            69.72 343  P    P     00 55 30.4 +0.8
          baz=159
X16A Lo Mia Camp, P   69.80 323 eP    P     00 55 32.0 +1.4
          comp=Z,3.6nm,0.8s
S22A 4UR Ranch, Cre   69.94 328  P    P     00 55 32.5 +1.0
          baz=143
I37A Lemond, Waseca   70.00 341  P    P     00 55 32.6 +1.3
          baz=156
Q24A Divide           70.12 330  P    P     00 55 33.6 +1.0
          baz=144,SNR=6.1
G40A Rib Lake         70.27 344  P    P     00 55 32.8 -0.1
          baz=159
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Y14A Wickenburg       70.33 322 eP    P     00 55 35.0 +1.4
          comp=Z,3.6nm,1.1s
MVCO Mesa Verde       70.34 327  P    P     00 55 34.7 +0.8
          baz=141,SNR=6.5
MVCO Mesa Verde       70.34 327 eP    P     00 55 34.7 +0.8
          comp=Z,14nm,1.4s
MVCO                            epP   pP    00 56 05.1 +2.8
F41A Three Lakes      70.43 345  P    P     00 55 34.0  0.0
          baz=160,SNR=7.2
WUAZ Wupatki          70.57 324  P    P     00 55 36.5 +1.3
          baz=138,SNR=6.8
WUAZ Wupatki          70.57 324 eP    P     00 55 36.7 +1.5
          comp=Z,8.2nm,0.9s
H36A Jessenland, He   70.67 341  P    P     00 55 36.1 +0.7
          baz=155
ECSD EROS Data Cent   70.77 339  P    P     00 55 36.2 +0.1
          baz=153
COWI Conover          70.78 345 eP    P     00 55 36.4 +0.3
          comp=Z,6.1nm,1.1s
F40A Park Falls       70.85 344  P    P     00 55 36.0 -0.5
          baz=159,SNR=9.7
ISCO Idaho Springs    71.00 330  P    P     00 55 38.7 +0.8
          baz=144
ISCO Idaho Springs    71.00 330 eP    P     00 55 38.6 +0.8
          comp=Z,2.6nm,0.8s
ISCO                            epP   pP    00 56 08.4 +2.1
F39A Loretta          71.06 344  P    P     00 55 38.5 +0.8
          baz=158
H35A Sunnyside Ranc   71.06 340  P    P     00 55 37.7  0.0
          baz=154
Y12C Blythe           71.08 321  P    P     00 55 39.6 +1.5
          baz=136
E41A Kenton           71.08 345  P    P     00 55 37.8 -0.1
          baz=160
PV01 Paradox Valley   71.10 327 eP    P     00 55 40.0 +1.6
          comp=Z,5.7nm,0.9s
PV01                            epP   pP    00 56 09.0 +2.1
SMCO Snowmass         71.14 329 eP    P     00 55 41.0 +2.1
PV15 Paradox Valley   71.21 328 eP    P     00 55 41.5 +2.3
          comp=Z,9.7nm,1.1s
E40A Wakefield        71.29 344  P    P     00 55 39.3 +0.2
          baz=159,SNR=8.0
F38A Pierce - Schro   71.35 343  P    P     00 55 40.4 +0.9
          baz=157
PV07 Paradox Valley   71.37 328 eP    P     00 55 41.6 +1.6
          comp=Z,4.1nm,0.9s
E39A Mellen           71.39 344  P    P     00 55 39.6 -0.1
          baz=159
D41A Chassel          71.55 346  P    P     00 55 40.8 +0.2
          baz=161
D41A Chassel          71.55 346 eP    P     00 55 41.0 +0.3
          comp=Z,47nm,1.5s
BC3  Big Chuckawall   71.56 320  P    P     00 55 42.4 +1.2
          baz=135
PV09 Paradox Valley   71.66 327 eP    P     00 55 42.5 +0.6
F36A Milaca           71.72 342  P    P     00 55 42.8 +1.1
          baz=156
F36A Milaca           71.72 342 eP    P     00 55 41.2 -0.5
F36A                            epP   pP    00 56 12.2 +2.0
IRM  Iron Mountain    71.73 321  P    P     00 55 43.1 +1.1
          baz=135
U15A North Rim        71.75 324 eP    P     00 55 44.1 +1.6
          comp=Z,5.1nm,0.9s
E38A The Farm, Brul   71.86 343  P    P     00 55 43.3 +0.8
          baz=158
E38A The Farm, Brul   71.86 343 eP    P     00 55 42.7 +0.2
          comp=Z,12nm,1.4s
N23A Red Feather La   72.03 331  P    P     00 55 44.5 +0.4
          baz=144
E36A McGregor         72.24 342  P    P     00 55 45.8 +1.0
          baz=156
KNB  Kanab            72.47 324 eP    P     00 55 48.2 +1.7
          comp=Z,14nm,1.0s
GMRC Granite Mounta   72.47 321  P    P     00 55 48.1 +1.5
          baz=135
O20A White River Ci   72.50 329  P    P     00 55 47.8 +1.1
          baz=142,SNR=9.2
O20A White River Ci   72.50 329 eP    P     00 55 47.8 +1.1
          comp=Z,10nm,0.9s
D37A Cotton           72.60 343  P    P     00 55 47.8 +0.9
          baz=157
C39A Grand Marais     72.63 345  P    P     00 55 47.5 +0.4
          baz=159
LCMT Little Creek M   72.69 324 eP    P     00 55 49.5 +1.6
          comp=Z,2.6nm,0.6s
C38A Sawbill Land.    72.82 344  P    P     00 55 47.7 -0.5
          baz=158
SRU  San Rafael Swe   72.83 327 eP    P     00 55 50.5 +1.9
MTPU Mount Pierson    72.88 325 eP    P     00 55 50.7 +1.5
MTPU                            epP   pP    00 56 19.4 +1.6
KOWA Kowa             72.99  66  P    P     00 55 49.4 -0.5
          comp=Z,28nm,0.8s,baz=248,slow=8.7,SNR=58
KOWA                             LR   LR    01 28 43.7
          comp=Z,68nm,18.1s,baz=209,slow=36
KOWA Kowa             72.99  66 eP    P     00 55 49.4 -0.5
          comp=Z,37nm,0.8s
Q16A Castle Valley    73.01 326 eP    P     00 55 52.1 +2.3
          comp=Z,12nm,1.4s
P18A Preston Nutter   73.08 327 eP    P     00 55 51.9 +1.5
          comp=Z,8.8nm,1.0s
P17A Butcher Ranch,   73.21 327 eP    P     00 55 52.8 +1.9
          comp=Z,6.6nm,0.8s
MSU  Marysvale        73.23 325 eP    P     00 55 53.9 +2.7
MSU                             epP   pP    00 56 22.1 +2.4
C36A Pine Crest Far   73.26 343  P    P     00 55 50.6 -0.2
          baz=157
C35A Jirik Farms, M   73.53 342  P    P     00 55 53.4 +1.0
          baz=156
K22A Casper           73.70 332  P    P     00 55 55.3 +1.6
          baz=144
K22A Casper           73.70 332 eP    P     00 55 56.0 +2.3
          comp=Z,4.7nm,0.9s
RSSD Black Hills      73.86 334  P    P     00 55 56.4 +1.7
          baz=146
RSSD Black Hills      73.86 334 eP    P     00 55 56.7 +2.0
          comp=Z,3.7nm,0.8s
PSUT Pine Spring      74.13 324 eP    P     00 55 58.1 +1.7
          comp=Z,4.8nm,0.9s
TPNV Topopah Spring   74.33 322  P    P     00 55 59.2 +1.7
          baz=135
TPNV Topopah Spring   74.33 322 eP    P     00 55 59.5 +2.0
          comp=Z,5.5nm,1.0s
FURC Furnace Creek,   74.34 321  P    P     00 55 58.3 +1.0
          baz=134
AGMN Agassiz Nation   74.61 341  P    P     00 56 00.0 +1.4
          baz=154
DAC  Darwin (Calif)   74.64 321 eP    P     00 56 00.5 +1.1
          comp=Z,2.6nm,0.8s
DUG  Dugway, Tooele   74.81 326  P    P     00 56 01.3 +1.1
          baz=138,SNR=6.2
DUG  Dugway, Tooele   74.81 326 eP    P     00 56 01.7 +1.5
          comp=Z,4.3nm,0.9s
R11A Troy Canyon, C   74.94 323  P    P     00 56 02.3 +1.2
          baz=136
R11A Troy Canyon, C   74.94 323 eP    P     00 56 02.8 +1.7
          comp=Z,8.2nm,1.6s
SBA  Scott Base       74.97 190 eP    P     00 56 01.6 +1.1
          comp=Z,17nm,1.4s
SBA                             eP    P     00 56 02.8 +2.4
CWC  Cottonwood Cre   75.04 320  P    P     00 56 02.9 +1.4
          baz=133
A33A Warroad          75.05 342  P    P     00 56 02.9 +1.8
          baz=154
PDAR Pinedale Array   75.17 330  P    P     00 56 02.6 +0.3
          comp=Z,0.4nm,0.4s,baz=117,slow=3.1,SNR=3.0
PDAR                             pP   pP    00 56 30.4 -0.6
          comp=Z,0.6nm,0.4s,baz=127,slow=7.2,SNR=2.9
BW06 Boulder Array    75.17 330  P    P     00 56 03.7 +1.4
          baz=141
VES  Vestal, Richgr   75.23 319  P    P     00 56 03.6 +1.1
          baz=132
HWUT Hardware Ranch   75.23 328 eP    P     00 56 04.0 +1.4
          comp=Z,3.3nm,0.6s
SYO  Syowa Base       75.45 159⇑eP    P     00 56 02.2 -1.1
AHID Auburn Hatcher   75.89 329 eP    P     00 56 07.4 +1.0
          comp=Z,7.8nm,0.8s
HVU  Hansel Valley    75.96 327 eP    P     00 56 08.3 +1.6
          comp=Z,4.2nm,1.0s
VNDA Vanda            75.98 190  P    P     00 56 07.5 +1.2
          comp=Z,2.9nm,1.0s,baz=129,slow=6.5,SNR=13
VNDA                             pP   pP    00 56 36.7 +1.8
          comp=Z,2.3nm,0.8s,baz=133,slow=6.2,SNR=4.0
VNDA Vanda            75.98 190 eP    P     00 56 08.1 +1.8
          comp=Z,6.3nm,1.3s
VNDA                             pP   pP    00 56 36.7 +1.8
REDW Red Top Meadow   76.23 330 eP    P     00 56 09.0 +0.7
          comp=Z,4.7nm,0.9s
ULM  Lac du Bonnet    76.37 342  P    P     00 56 09.0 +0.4
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Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,2.3nm,0.6s,baz=161,slow=2.0,SNR=3.9						
ULM				pP	pP	00 56 38.0	+0.7
	comp=Z,3.6nm,0.6s,baz=154,slow=4.3,SNR=3.5						
TPAW	Teton Pass	76.37	330	eP	P	00 56 10.5	+1.3
	comp=Z,3.8nm,0.8s						
TPAW				epP	pP	00 56 40.1	+2.1
ELK	Elko	76.47	325	P	P	00 56 13.2	+3.5
	comp=Z,2.4nm,0.9s,baz=182,slow=4.1,SNR=12						
NV01	Mina Array Sit	76.53	322	eP	P	00 56 11.0	+0.9
NVAR	Mina Array Bea	76.53	322	P	P	00 56 11.0	+0.9
	comp=Z,1.6nm,0.8s,baz=147,slow=5.9,SNR=9.7						
NVAR				pP	pP	00 56 41.5	+2.6
	comp=Z,0.9nm,0.7s,baz=151,slow=7.8,SNR=2.8						
FLWY	Flagg Ranch	76.71	330	eP	P	00 56 12.7	+1.7
RLMT	Red Lodge	76.87	332	P	P	00 56 13.2	+1.3
	baz=142						
RLMT	Red Lodge	76.87	332	eP	P	00 56 12.8	+0.9
	comp=Z,4.1nm,0.8s						
TOA0	Torodi Ar. Sit	77.25	70	eP	P	00 56 13.7	-0.7
TORD	Torodi Ar. Bea	77.25	70	P	P	00 56 11.8	-2.6
	comp=Z,21nm,0.7s,baz=248,slow=4.6						
TORD				pP	pP	00 56 43.0	-0.3
	baz=256,slow=4.0						
HLID	Hailey	78.09	328	P	P	00 56 20.1	+1.4
	baz=137,SNR=22						
HLID	Hailey	78.09	328	eP	P	00 56 20.1	+1.4
	comp=Z,7.3nm,0.9s						
MCMT	McKenzie Canyo	78.28	329	eP	P	00 56 21.1	+1.3
MCMT				epP	pP	00 56 50.1	+1.5
BOZ	Bozeman (W)	78.30	331	P	P	00 56 21.5	+1.8
	baz=140						
AFDM	Forest Hills D	78.42	321	eP	P	00 56 22.4	+2.0
	comp=Z,11nm,1.8s						
MFID	Camas Ranch	78.69	327	eP	P	00 56 23.0	+1.1
	comp=Z,12nm,1.5s						
LRM	Limekiln Ridge	78.84	330	eP	P	00 56 23.8	+0.9
TSUM	Tsumeb	79.33	106	eP	P	00 56 27.0	+1.0
	comp=Z,26nm,0.9s						
EGMT	Eagleton	79.36	333	P	P	00 56 27.3	+2.0
	baz=142						
MOD	Modoc Plateau	80.01	323	eP	P	00 56 30.4	+1.3
	comp=Z,5.7nm,0.9s						
BMO	Blue Mountains	80.47	327	eP	P	00 56 32.1	+0.6
BMO				epP	pP	00 57 02.6	+2.1
N02D	Trinity Center	80.75	321	P	P	00 56 33.5	+0.5
	baz=131						
M04C	Macdoel	80.78	323	P	P	00 56 33.9	+0.7
	baz=131						
K05A	Summer Lake	80.89	324	eP	P	00 56 35.5	+1.6
	comp=Z,8.8nm,0.9s						
F10A	Beach Ranch, E	81.22	328	eP	P	00 56 36.5	+1.1
	comp=Z,4.7nm,0.9s						
YBH	Yreka Blue Hor	81.24	322	P	P	00 56 34.8	-0.8
	comp=Z,0.6nm,0.4s,baz=94,slow=11,SNR=4.6						
J05D	Fort Rock, OR	81.44	324	P	P	00 56 38.0	+1.3
	baz=132						
PINE	Pine Mountain	81.62	324	eP	P	00 56 39.9	+2.2
	comp=Z,9.5nm,0.8s						
MDT	Midelt	82.02	50	P	P	00 56 40.1	+0.1
	comp=Z,8.6nm,0.8s,baz=250,slow=5.3,SNR=11						
MDT				LR	LR	01 31 41.9	
	comp=Z,69nm,20.0s,baz=202,slow=35						
I05D	Terrebonne, OR	82.20	325	P	P	00 56 41.7	+1.2
	baz=132						
PBDV	Barranco-do-Ve	82.26	44	eP	P	00 56 42.2	+1.2
	comp=Z,43nm,1.8s						
PCVE	Castro Verde	82.42	44	eP	P	00 56 42.7	+0.9
	comp=Z,34nm,2.1s						
BOSA	Boshof	82.60	118	P	P	00 56 43.0	-0.2
	comp=Z,7.4nm,0.9s,baz=267,slow=5.2,SNR=11						
PBEJ	Beja	82.76	44	eP	P	00 56 45.5	+2.0
	comp=Z,25nm,1.6s						
NEW	Newport	82.80	330	P	P	00 56 41.9	-1.7
	comp=Z,0.8nm,0.5s,baz=142,slow=12,SNR=2.0						
I03D	Drain, OR	82.88	323	P	P	00 56 45.2	+1.2
	baz=130						
PMTG	Montargil	83.14	43	eP	P	00 56 46.7	+1.2
	comp=Z,31nm,1.6s						
MAW	Mawson	83.28	163	P	P	00 56 45.7	-0.1
	comp=Z,3.6nm,0.7s,baz=195,slow=8.5,SNR=10.0						
MAW				pP	pP	00 57 15.2	+0.2
	comp=Z,5.6nm,0.5s,baz=194,slow=6.1,SNR=9.8						
MAW				LR	LR	01 35 52.1	
	comp=Z,26nm,18.2s,baz=244,slow=37						
MAW	Mawson	83.28	163	eP	P	00 56 46.9	+1.1
MAW				epP	pP	00 57 15.7	+0.8
PTOM	Tomar	83.35	42	eP	P	00 56 46.5	0.0
	comp=Z,30nm,1.6s						
TAM	Tamanrasset	84.85	63	eP	P	00 56 54.7	0.0
	comp=Z,18nm,1.3s						
MVO	Moncorvo	85.11	42	eP	P	00 56 56.4	+0.9
	comp=Z,41nm,1.8s						
PBRG	Braganca	85.65	41	eP	P	00 56 59.0	+0.9
	comp=Z,27nm,1.8s						
PAB	San Pablo	85.88	44	eP	P	00 57 00.3	+0.9
	comp=Z,23nm,1.1s						
ESDC	Sonseca Array	86.20	44	P	P	00 57 01.4	+0.5
	comp=Z,6.6nm,1.1s,baz=230,slow=4.6,SNR=21						
ESLA	Sonseca Array	86.20	44	eP	P	00 57 01.8	+0.9
	comp=Z,22nm,1.3s						
ES19	SONSECA Array	86.26	44	eP	P	00 57 01.8	+0.6
SFJD	Kangerlussuaq	90.18	7	P	P	00 57 19.2	+0.2
	comp=Z,7.5nm,0.5s,baz=198,slow=3.2,SNR=2.3						
LSZ	Lusaka	90.19	107	eP	P	00 57 21.0	+0.5
	comp=Z,9.1nm,1.0s						
CASY	Casey	91.53	180	eP	P	00 57 27.4	+1.8
	comp=Z,22nm,1.0s						
YKA	Yellowknife Ar	92.24	340	P	P	00 57 28.3	-0.5
	comp=Z,2.6nm,0.7s,baz=132,slow=4.5,SNR=12						
YKA				pP	pP	00 57 58.0	-0.3
	comp=Z,1.8nm,0.6s,baz=134,slow=4.4,SNR=4.9						
KEST	Kesra	93.52	53	P	P	00 57 35.1	-0.3
	comp=Z,3.1nm,0.8s,baz=103,slow=2.9,SNR=3.6						
DAVOX	Davos/Dischmat	98.46	43	LR	LR	01 42 40.9	
	comp=Z,33nm,18.8s,baz=260,slow=36						
ARU	Arti	128.68	35	PKP	PKPdf	01 03 27.0	+1.4
	comp=Z,1.3nm,0.3s,baz=352,slow=2.8,SNR=5.2						
ARU				pPKP	pPKPdf	01 03 57.7	+1.2
	comp=Z,1.6nm,0.5s,baz=71,slow=4.2,SNR=2.1						
ASAR	Alice Springs	129.27	207	PKP	PKPdf	01 03 28.1	+0.2
	comp=Z,4.0nm,0.8s,baz=140,slow=1.9,SNR=30						
ASAR				pPKP	pPKPdf	01 03 59.1	+0.4
	comp=Z,1.5nm,0.6s,baz=136,slow=1.9,SNR=5.3						
SEY	Seymchan	131.16	337	PKP	PKPdf	01 03 29.8	-0.3
	comp=Z,2.8nm,0.9s,baz=349,slow=2.4,SNR=5.3						
GEYT	Alibeck	131.91	59	PKP	PKPdf	01 03 32.4	0.0
	comp=Z,0.4nm,0.5s,baz=57,slow=8.8,SNR=2.3						
GEYT				SKPbc	SKPbc	01 06 48.5	+0.4
	comp=Z,1.1nm,0.9s,baz=238,slow=2.8,SNR=4.8						
WRA	Warramunga Arr	132.35	210	PKP	PKPdf	01 03 34.4	+0.6
	comp=Z,4.9nm,1.0s,baz=174,slow=1.5,SNR=11						
WRA				pPKP	pPKPdf	01 04 04.0	-0.6
	comp=Z,1.0nm,0.5s,baz=146,slow=1.4,SNR=3.8						
WRA				SKPbc	SKPab	01 06 51.9	+0.4
	comp=Z,1.7nm,1.0s,baz=130,slow=4.6,SNR=6.4						
BVAR	Borovoye Array	136.32	35	PKP	PKPdf	01 03 39.5	-0.7
	comp=Z,0.7nm,0.6s,baz=328,slow=5.3,SNR=4.7						
BVAR				pPKP	pPKPdf	01 04 12.1	+1.1
	comp=Z,1.2nm,0.9s,baz=242,slow=3.1,SNR=3.5						
KURK	Kurchatov	141.87	34	PKP	PKPdf	01 03 47.4	-2.9
KURK				pPKP	pPKPdf	01 04 21.9	+0.7
KURBB	Kurchatov Arra	141.88	34	PKP	PKPdf	01 03 47.4	-2.9
	comp=Z,0.8nm,0.8s,baz=310,slow=3.1,SNR=7.3						
KURBB				pPKP	pPKPdf	01 04 21.9	+0.7
	comp=Z,0.9nm,0.7s,baz=291,slow=2.6,SNR=4.2						
ZALV	Zalesovo Beam	142.62	26	PKP	PKPdf	01 03 48.7	-2.9
	comp=Z,1.9nm,0.5s,baz=318,slow=4.6,SNR=5.8						
ZALV				pPKP	pPKPdf	01 04 24.9	+2.5
	comp=Z,1.7nm,0.5s,baz=306,slow=3.2,SNR=3.0						
NIL	Nilore	144.57	63	ePKPdf	PKPab	01 03 54.3	-0.2
KSH	Kashi	145.34	52	PKPbc	PKPab	01 03 57.4	+0.1
KSH				PP	PP	01 07 18.8	+1.1
KSH				PKS	PKSdf	01 07 30.8	-1.7
KSH				SKKS		01 13 57.3	
KSH				SS	SS	01 25 58.9	-1.6
KSH				AMB	AMB		
	comp=Z,46nm,5.6s						
MKAR	Makanchi Array	146.13	37	PKPbc	PKPbc	01 03 58.8	-0.3
	comp=Z,7.7nm,0.6s,baz=312,slow=3.4,SNR=62						
MKAR				pPKPbc	pPKPab	01 04 29.9	-0.1
	comp=Z,6.4nm,0.9s,baz=285,slow=2.9,SNR=4.0						
ASAJ	Asahikawa	146.56	318	PKPbc	PKPab	01 04 01.1	-0.6
	comp=Z,16nm,1.0s,baz=274,slow=7.1,SNR=6.2						
KLR	Kul'dur	148.88	334	PKPbc	PKPbc	01 04 06.0	-0.5
	comp=Z,0.2nm,0.8s,baz=29,slow=5.4,SNR=7.3						
TLY	Talaya	150.19	10	PKPbc	PKPbc	01 04 08.9	-0.7
	comp=Z,1.5nm,0.5s,baz=0.0,slow=5.1,SNR=2.4						
WMQ	Urumqi	150.97	37	PKPbc	PKPdf	01 04 07.4	+1.5
WMQ				PKPab	PKPab	01 04 21.4	+1.9
WMQ				AMB	AMB		
	comp=Z,55nm,11.6s						
WMQ				LR	LR		
	comp=Z,39nm,22.3s						
WMQ				LR	LR		
	comp=Z,56nm,19.7s						
WMQ				LR	LR		
	comp=Z,45nm,22.3s						
USRK	Ussuriysk Ar.	152.56	327	PKPbc	PKPbc	01 04 15.0	-0.2
	baz=64,slow=9.8						
MJAR	Matsushiro Arr	153.02	307	PKPbc	PKPbc	01 04 17.2	+0.7
	comp=Z,3.0nm,0.9s,baz=83,slow=2.1,SNR=6.8						
MJAR				PKPab	PKPab	01 04 28.6	+0.2
	comp=Z,2.4nm,0.9s,baz=68,slow=4.7,SNR=4.3						
SONM	Songino Array	154.34	8	PKP	PKPdf	01 04 11.8	+0.9
	comp=Z,0.3nm,0.6s,baz=349,slow=3.1,SNR=2.8						
SONM				PKPab	PKPab	01 04 32.5	-1.1
	comp=Z,0.8nm,0.7s,baz=308,slow=4.9,SNR=5.5						
KSRS	Korea Array	159.46	320	PKP	PKPdf	01 04 17.9	+0.4
	comp=Z,1.0nm,0.8s,baz=101,slow=1.2,SNR=5.1						
KSRS				PKPab	PKPab	01 04 56.6	+0.7
	comp=Z,1.0nm,0.8s,baz=44,slow=3.5,SNR=4.5						
KSAR	Wonju Array Be	159.49	320	PKP	PKPdf	01 04 17.9	+0.3
KSAR				PKPab	PKPab	01 04 56.5	+0.5
LZH	Lanzhou	164.85	25	ePKP	PKPdf	01 04 26.9	+3.7
NJ2	Nanjing	168.47	327	ePKP	PKPdf	01 04 26.0	+0.2
GYA	Guiyang	174.01	47	ePKP	PKPdf	01 04 28.8	-0.2
GYA				pPKP	pPKPdf	01 04 57.0	-3.1
GYA				PKPab	PKPab	01 06 07.2	+6.6
GYA				PKS	PKSdf	01 07 59.4	-2.0
GYA				PP	PP	01 09 54.6	+2.2
GYA				AMB	AMB		
	comp=Z,120nm,8.2s						

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*IDC **01** 01:02:29.2±1.5, 0°.78N×91°.56E, h0^{km}, mb3.5/7, mb1 3.8/9, mb1mx3.4/67, mbtmp3.6/9, ML4.1/1, Error ellipse: s-maj=46.1km s-min=25.2km az=48.0*

*ISCJB **01** 01:02:31.2±1.1, 1°.1N±0°.1×91°.46E±0°.07, h10^{km}, mb3.6/7, Error ellipse: s-maj=20.4km s-min=8.6km az=12.6*

*DJA **01** 01:02:35.7±4.3, 1°N±14°×9°2E±3°5, h10^{km}, M5.0/7, mb5.1/6, mB5.5/7, MLv5.1/6, Mw(mB)5.0/7*

ISC 01 01:02:33.5±1.2**, 1°.1N**±0°.1×**91°.5E**±0°.1**, h10**^{km}**, n26, **σ**1**^{s}**.15**/18**, mb3.7**/7**, North Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNSI	Sinabang, Aceh	5.03	75	P	Pn	01 03 46.9	-2.2
BSI	Banda Aceh	5.80	41	P	Pn	01 03 58.5	-1.1
MLSI	Meulaboh, Aceh	5.85	57	P	Pn	01 03 59.3	-1.0
GSI	Gunungsitoli	6.12	88	P	Pn	01 04 04.0	0.0
KCSI	Kotacane, Aceh	6.74	69	P	Pn	01 04 13.3	+0.7
LHMI	Lhok Sumawe	6.83	53	P	Pn	01 04 14.5	+0.6
PBSI	Pulau Batu	6.92	100	P	Pn	01 04 15.9	+0.9
MNSI	Mandailing Nat	8.12	92	P	Pn	01 04 32.0	+0.4
PDSI	Padang	9.22	103	P	Pn	01 04 56.4	+10
KRAB	Krabi	10.45	47	P	Pn	01 05 05.6	+2.1
	32nm,0.6s,711nm0.2nm						
PALK	Pallekele	12.35	300	Pn	Pn	01 05 30.2	+0.7
	1.1nm,0.3s,baz=115,slow=12,SNR=5.5						
PALK				Sn	Sn	01 07 37.0	-10
	4.2nm,0.3s,baz=300,slow=2.5,SNR=8.4						
CMAR	Chiang Mai Arr	18.74	23	P	Pn	01 06 54.5	+1.5
	baz=219,slow=13,SNR=3.3						
H08S2	Diego Garcia H	20.82	245	T	T	01 29 12.4	
	baz=65,slow=74,SNR=10.0						
H08S3	Diego Garcia H	20.82	245	T	T	01 29 12.4	
	baz=65,slow=74,SNR=27						
H08S1	Diego Carcia H	20.84	245	T	T	01 29 12.4	
	baz=65,slow=74,SNR=5.6						
H01W3	Cape Leeuwin H	41.63	152	T	T	01 54 45.3	
	baz=327,slow=75,SNR=17						
H01W2	Cape Leeuwin H	41.64	152	T	T	01 54 46.3	
	baz=327,slow=75,SNR=13						
H01W1	Cape Leeuwin H	41.65	151	T	T	01 54 47.6	
	baz=327,slow=75,SNR=14						
MKAR	Makanchi Array	46.20	351	P	P	01 10 57.7	-0.9
	0.3nm,0.6s,baz=171,slow=11,SNR=3.9						
WRA	Warramunga Arr	46.94	119	P	P	01 10 59.8	-5.1
	0.2nm,0.5s,baz=298,slow=8.6,SNR=2.6						
SONM	Songino Array	48.31	13	P	P	01 11 15.3	+0.1
	0.9nm,0.6s,baz=197,slow=9.1,SNR=5.7						
KURBB	Kurchatov Arra	50.54	349	P	P	01 11 31.4	-0.6
	0.7nm,0.8s,baz=177,slow=7.4,SNR=6.6						
ZALV	Zalesovo Beam	52.95	355	P	P	01 11 49.0	-0.9
	0.7nm,0.4s,baz=162,slow=6.1,SNR=3.6						
BVAR	Borovoye Array	54.63	345	P	P	01 12 01.3	-1.0
	0.1nm,0.3s,baz=186,slow=4.3,SNR=2.5						
GERES	GERESS Array B	81.11	319	P	P	01 14 49.6	+0.4
	0.2nm,0.3s,baz=90,slow=5.2,SNR=2.6						
TXAR	Lajitas Array	146.45	24	PKPbc	PKPdf	01 22 13.4	-1.0
	0.2nm,0.4s,baz=324,slow=4.5,SNR=2.5						

KRSC 01 01:29:46.3±0.9**, 53°.54N**×**161°.11E, h49**^{km}±17^{km}**, ML3.6, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.79	236	eP	Pn	01 30 02.9	+1.7
SPN				eS	Sn	01 30 13.4	+1.4
MKZ	Mys Kozlova	1.08	20	eP	Pn	01 30 07.0	+2.0
MKZ				eS	Sn	01 30 20.8	+1.9
KII	Karymskiy	1.10	297	eP	Pn	01 30 06.6	+1.1
KII				eS	Sn	01 30 19.9	+0.3
NLC	Nalytchevo	1.12	251	eP	Pn	01 30 07.2	+1.6
NLC				eS	Sn	01 30 21.1	+1.2
SDLR	Sedlovina	1.36	260	eP	Pn	01 30 10.9	+1.9
SDLR				eS	Sn	01 30 27.6	+1.7
UGLR	Uglovaya	1.41	257	eP	Pn	01 30 11.7	+2.0
UGLR				eS	Sn	01 30 29.0	+1.8
SMAR	Somma	1.41	259	eP	Pn	01 30 11.7	+1.9
KRER	Koryakskii	1.43	261	eP	Pn	01 30 12.3	+2.2
KRER				eS	Sn	01 30 30.0	+2.1
AVH	Avacha	1.45	260	eP	Pn	01 30 12.4	+2.2
AVH				eS	Sn	01 30 30.5	+2.5
KRX	Arik	1.48	264	eP	Pn	01 30 12.4	+1.7
KRX				eS	Sn	01 30 30.7	+1.7
KOK	Koryaka	1.50	261	eP	Pn	01 30 13.1	+2.2
KOK				eS	Sn	01 30 31.1	+1.7
DALK	Dalny	1.50	251	eP	Pn	01 30 12.6	+1.8
DALK				eS	Sn	01 30 30.6	+1.3
PET	Petropavlovsk	1.56	252	eP	Pn	01 30 13.7	+2.1
PET				eS	Sn	01 30 32.0	+1.3
KZV	Kizimen	1.64	343	eP	Pn	01 30 14.9	+2.0
KZV				eS	Sn	01 30 34.5	+1.5
TUMD	Tumrok D	1.71	346	eP	Pn	01 30 15.4	+1.6
TUMD				eS	Sn	01 30 35.3	+0.8
TUMR	Tumrok	1.83	342	eP	Pn	01 30 17.9	+2.5
TUMR				eS	Sn	01 30 39.5	+2.0
GNL	Ganaly	1.89	276	eP	Pn	01 30 18.5	+2.2
RUS	Russkaya	1.92	236	eP	Pn	01 30 18.7	+2.1
KRMR	Karymshinskiy	1.93	249	eP	Pn	01 30 19.1	+2.4
KRMR				eS	Sn	01 30 41.8	+2.1
MTVR	Mutnovka	2.06	240	eP	Pn	01 30 21.2	+2.6
MTVR				eS	Sn	01 30 45.5	+2.3
ASAK	Asacha	2.26	240	eP	Pn	01 30 24.7	+3.4
ASAK				eS	Sn	01 30 50.7	+2.7
KMNR	Kamenistaya	2.27	347	eP	Pn	01 30 24.9	+3.4
BZGR	Bezymyannyi-Gr	2.41	354	eP	Pn	01 30 27.0	+3.6
ZLN	Zelenaya	2.49	356	eP	Pn	01 30 28.5	+4.1
KDTR	Khodutka, Kamc	2.54	228	eP	Pn	01 30 27.4	+2.5
KDTR				eS	Sn	01 30 56.2	+1.7
LGNR	Loginova	2.56	355	eP	Pn	01 30 29.5	+4.0
LGNR				eS	Sn	01 31 00.1	+4.6
KOZ	Kozyrevsk	2.62	345	eP	Pn	01 30 29.0	+2.9
KBTR	Krutoberegovo	2.85	20	eP	Pn	01 30 31.9	+2.7
BDR	Baidarnaya	3.03	1	eP	Pn	01 30 34.7	+2.9
SMKR	Semkarok	3.05	4	eP	Pn	01 30 35.0	+2.9
SRKR	Sorokina	3.12	1	eP	Pn	01 30 36.2	+3.2
BKI	Bering	3.29	58	eP	Pn	01 30 39.0	+3.7
BKI				eS	Sn	01 31 13.9	+0.7

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*PRU **01** 01:42:25.3, 43°.84N×17°.09E, h0^{km}*

*CSEM **01** 01:42:26.4±0.2, 43°.92N×17°.00E, h2^{km}, ML2.6, Error ellipse: s-maj=5.1km s-min=3.2km az=47.0*

ISC 01 01:42:26.3±1.1**, 43°.91N**±0°.02×**17°.02E**±0°.02**, h2**^{km}±10^{km}**, n69, **σ**1**^{s}**.17**/122**, 14C-3D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BLY	Banja Luka	0.85	8	⇑iP	Pg	01 42 43.2	+0.6
BLY				S	Sb	01 42 56.2	+0.5
BLY	Banja Luka	0.85	8	⇓iPg	Pg	01 42 42.6	0.0
BLY				eSg	Sg	01 42 54.5	+0.9
BLY	Banja Luka	0.85	8	⇓iPg	Pg	01 42 42.6	0.0
BLY				eSg	Sg	01 42 54.5	+0.9
UDBI	Udbina	1.09	305	i Pg	Pg	01 42 46.6	-0.6
UDBI				Sg	Sn	01 43 04.0	-0.6
DOB	Doboj	1.13	43	eSg	Sg	01 43 02.3	-0.4
DOB	Doboj	1.13	43	eSg	Sg	01 43 02.3	-0.4
STON	Ston	1.15	154	ePg	Pg	01 42 47.3	-1.1
STON				Sg	Sn	01 43 05.0	-0.9
STON	Ston	1.15	154	⇑iPg	Pg	01 42 47.4	-1.0
STON				eSg	Sb	01 43 04.4	0.0
STON	Ston	1.15	154	⇑iPg	Pg	01 42 47.4	-1.0
STON				eSg	Sb	01 43 04.4	0.0
HAPS	Han Pijesak,Bl	1.41	82	⇑iPg	Pn	01 42 52.2	-1.0
HAPS				eSg	Sn	01 43 12.1	-0.3
HAPS	Han Pijesak,Bl	1.41	82	⇑iPg	Pn	01 42 52.2	-1.0
HAPS				eSg	Sn	01 43 12.1	-0.3
BRY	Bratogost	1.50	132	⇑iPn	Pg	01 42 54.4	-0.7
BRY				eSn	Sn	01 43 15.8	+1.1
BRY	Bratogost	1.50	132	⇑iPn	Pg	01 42 54.4	-0.7
BRY				eSn	Sn	01 43 15.8	+1.1
TREB	Trebinje	1.54	140	ePn	Pn	01 42 54.8	-0.1
TREB				eSn	Sg	01 43 16.0	+0.2
TREB	Trebinje	1.54	140	ePn	Pn	01 42 54.8	-0.1
TREB				eSn	Sg	01 43 16.0	+0.2
UPM	Unac-Piva	1.54	117	⇑iPn	Pb	01 42 55.2	-0.6
UPM				eSn	Sn	01 43 16.8	+0.9
UPM	Unac-Piva	1.54	117	⇑iPn	Pb	01 42 55.2	-0.6
UPM				eSn	Sn	01 43 16.8	+0.9
NVLJ	Novalja	1.67	294	ePn	Pn	01 42 57.0	+0.3
NVLJ				Sn	Sg	01 43 21.0	+0.9
BBLS	Lazići	1.73	91	ePn	Pb	01 42 58.3	-0.6
BBLS	Lazići	1.73	91	ePg	Pb	01 42 58.7	-0.2
BBLS				eSn	Sg	01 43 21.2	-0.6
BBLS				eSg	Sb	01 43 24.9	+3.8
BBLS	Lazići	1.73	91	ePn	Pb	01 42 58.3	-0.6
BBLS				eSn	Sg	01 43 21.2	-0.6
HCY	Herceg Novi	1.82	143	⇑iPn	Pb	01 42 59.6	-0.8
HCY				eSn	Sb	01 43 23.0	-0.6
HCY	Herceg Novi	1.82	143	⇑iPn	Pb	01 42 59.6	-0.8
HCY				eSn	Sb	01 43 23.0	-0.6
TEKS	Tekeris	1.92	70	ePn	Pn	01 42 59.6	-0.5
TEKS	Tekeris	1.92	70	ePg	Pb	01 43 01.6	-0.4
TEKS				eSn	Sn	01 43 24.8	0.0
TEKS				eSg	Sg	01 43 31.4	+3.5
TEKS	Tekeris	1.92	70	ePn	Pn	01 42 59.6	-0.5
TEKS				eSn	Sn	01 43 24.8	0.0
BOJS	Bojanci	2.03	322	i Pn	Pn	01 43 01.6	0.0
BOJS				i Sn	Sb	01 43 29.6	-0.1
	comp=Z,9.0nm,0.2s						
OZLJ	Ozalj	2.03	328	ePn	Pn	01 43 01.6	0.0
OZLJ				Sn	Sb	01 43 28.9	-0.7
DIVS	Divibare	2.16	84	ePn	Pn	01 43 03.3	-0.1
DIVS	Divibare	2.16	84	ePg	Pg	01 43 07.5	-0.1
DIVS				eSn	Sn	01 43 30.9	+0.1
DIVS				eSg	Sg	01 43 39.0	+3.4
DIVS	Divibare	2.16	84	ePn	Pn	01 43 03.3	-0.1
DIVS				eSn	Sn	01 43 30.9	+0.1
PDG	Podgorica	2.21	131	⇑iP	Pb	01 43 06.7	-0.3
PDG	Podgorica	2.21	131	S	Sg	01 43 38.9	+1.7
PDG	Podgorica	2.21	131	ePn	Pn	01 43 05.1	+1.1
PDG				eSn	Sb	01 43 32.9	-1.9
PDG	Podgorica	2.21	131	ePn	Pn	01 43 05.1	+1.1
PDG				eSn	Sb	01 43 32.9	-1.9
CRES	Cresnjev	2.21	330	i Pn	Pn	01 43 03.9	-0.2
CRES	Cresnjev	2.21	330	ePn	Pn	01 43 04.1	0.0
CRES				eSn	Sn	01 43 31.7	-0.4
CRES	Cresnjev	2.21	330	ePn	Pn	01 43 04.1	0.0
CRES				eSn	Sn	01 43 31.7	-0.4
GBRS	Gornja Briga	2.26	317	i Pn	Pb	01 43 06.8	-1.0
RIY	Rijeka	2.30	309	ePn	Pn	01 43 05.8	+0.6
RIY				eSn	Sn	01 43 33.6	-0.5
IVAS	Ivanjica	2.30	97	ePn	Pb	01 43 07.7	-0.9
IVAS				eSn	Sb	01 43 37.9	+0.4
DRME	Dracevica, Mon	2.34	137	ePn	Pn	01 43 06.2	+0.3
DRME				eSn	Sn	01 43 36.5	+1.2
DRME	Dracevica, Mon	2.34	137	ePn	Pn	01 43 06.2	+0.3
DRME				eSn	Sn	01 43 36.5	+1.2
FRGS	Fruska Gora	2.36	57	ePn	Pn	01 43 06.9	+0.8
FRGS				eSn	Sn	01 43 35.9	+0.3
FRGS	Fruska Gora	2.36	57	ePn	Pn	01 43 06.9	+0.8
FRGS				eSn	Sn	01 43 35.9	+0.3
TRUS	Trudelj	2.46	82	ePn	Pn	01 43 08.8	+1.2
BEHE	Becsehely	2.57	356	ePn	Pn	01 43 08.9	-0.1
BEHE				eSn	Sn	01 43 40.5	-0.3
BEHE	Becsehely	2.57	356	ePn	Pn	01 43 08.9	-0.1
BEHE				eSn	Sn	01 43 40.5	-0.3
CEY	Cerknica	2.59	316	ePn	Pn	01 43 09.9	+0.5
CEY				eSn	Sn	01 43 41.1	-0.5
CEY	Cerknica	2.59	316	ePn	Pn	01 43 09.9	+0.5
CEY				eSn	Sn	01 43 41.1	-0.5
SKDS	Skadanscina	2.69	308	i Pn	Pn	01 43 11.6	+0.8
SKDS				i Sn	Sn	01 43 46.2	+2.2
	comp=Z,2.0nm,0.2s						
SOKA	Soboth	3.10	334	i Pn	Pn	01 43 16.1	-0.3
	comp=Z,1.3nm,0.3s						
SOKA				eSn	Sn	01 43 52.5	-1.6
	comp=Z,1.4nm,0.3s						
OBKA	Obir	3.13	327	ePn	Pn	01 43 18.8	+2.0
	comp=Z,0.5nm,0.3s						
OBKA				Pg	Pg	01 43 26.0	-0.3
	comp=Z,1.7nm,0.3s						
OBKA				Sg	Sg	01 44 07.2	+0.4
	comp=Z,9.8nm,0.4s						
MDVR	Moldovita	3.48	74	⇑iP	Pg	01 43 32.8	-0.2
ARSA	Arzberg	3.50	343	i Pn	Pn	01 43 21.7	-0.1
	comp=Z,2.2nm,0.2s						
ARSA				eSn	Sn	01 44 01.2	-2.6
	comp=Z,2.0nm,0.5s						
BARS	Barje	3.67	106	ePn	Pn	01 43 24.9	+0.8
BZS	Buzias	3.69	61	⇑iP	Pb	01 43 31.9	-0.4
BZS	Buzias	3.69	61	S	Sn	01 44 06.9	-1.7
HERR	Herculane	3.99	74	⇓iP	Pn	01 43 24.6	-3.9
HERR	Herculane	3.99	74	S	Sn	01 44 18.5	+2.6
CONA	Conrad Observa	4.10	349	ePn	Pn	01 43 30.1	0.0
	comp=Z,1.6nm,0.3s						
CONA				eSn	Sn	01 44 17.6	-1.1
	comp=Z,1.9nm,0.3s						
ABTA	Abfaltersbach	4.26	313	ePn	Pn	01 43 33.1	+0.8
	comp=Z,1.3nm,0.3s						
MOA	Molln	4.38	335	i Pn	Pn	01 43 34.6	+0.7
	comp=Z,1.2nm,0.2s						
MOA				eSn	Sn	01 44 25.9	+0.2
	comp=Z,0.8nm,0.2s						
VYHS	Vyhne	4.76	15	ePN	Pn	01 43 39.2	+0.1
VYHS				eSN	Sn	01 44 32.8	-2.0
VYHS				eLG	Lg	01 44 39.5	
WTTA	Wattenberg	5.05	313	Sn	Sn	01 44 45.3	+3.0
WATA	Walderalm	5.13	314	ePn	Pn	01 43 47.3	+3.0
	comp=Z,3.0nm,0.3s						
MOTA	Moosalm	5.38	312	ePn	Pn	01 43 50.4	+2.6
	comp=Z,2.1nm,0.4s						
KHC	Kasperske Hory	5.74	337	ePN	Pn	01 43 52.3	-0.2
KHC				eSN	Sn	01 44 58.0	-1.0
KHC	Kasperske Hory	5.74	337	Pn	Pn	01 43 52.3	-0.2
KHC				Sn	Sn	01 44 58.0	-1.0

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*ISCJB **01** 01:43:25.8±0.3, 7°.50S±0°.05×128°.90E±0°.06, h150^{km}, mb4.1/13, Error ellipse: s-maj=9.0km s-min=5.3km az=150.0*

*NEIC **01** 01:43:26.4±0.9, 7°.47S×128°.82E, h141^{km}±11^{km}, mb4.3/5, Error ellipse: s-maj=11.8km s-min=9.6km az=67.0*

*IDC **01** 01:43:27.4±4.3, 7°.57S×128°.65E, h145^{km}±44^{km}, mb3.6/8, mb1 3.8/11, mb1mx3.5/46, mbtmp4.2/11, Error ellipse: s-maj=37.3km s-min=18.1km az=56.0*

ISC 01 01:43:26.8±0.6**, 7°.70S**±0°.06×**128°.91E**±0°.07**, h150**^{km}**, n33, **σ**2**^{s}**.33**/39**, mb4.1**/13**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.38	97	ePn	Pn	01 44 08.8	+2.4
SAUI				eSn	Sn	01 44 36.3	-0.7
SOEI	Soe	5.03	246	ePn	Pn	01 44 41.6	+0.9
FAKI	Fak Fak	5.79	35	ePn	Pn	01 44 46.9	-3.9
FITZ	Fitzroy Crossi	10.81	197	P	Pn	01 45 58.2	+0.6

	5.2nm,0.3s,baz=26,slow=11,SNR=78						
FITZ				S	**Sn**	**01 47 54.5**	**-2.8**
	7.2nm,0.3s,baz=95,slow=11,SNR=9.0						
FITZ	**Fitzroy Crossi**	**10.81**	**197**	*e*Pn	**Pn**	**01 45 58.3**	**+0.7**
WRAB	**Tennant Creek**	**13.25**	**157**	*e*Pn	**Pn**	**01 46 30.7**	**+1.5**
WRAB				*e*Sn	**Sn**	**01 48 50.3**	**-5.7**
WRA	**Warramunga Arr**	**13.26**	**157**	P	**Pn**	**01 46 31.2**	**+1.8**
	3.8nm,0.3s,baz=335,slow=14,SNR=81						
WRA				S	**Sn**	**01 48 52.3**	**-3.8**
	11nm,0.3s,baz=336,slow=22,SNR=12						
WB2	**Warramunga Arr**	**13.26**	**157**	*e*Pn	**Pn**	**01 46 31.3**	**+1.9**
WB2				*e*Sn	**Sn**	**01 48 50.8**	**-5.5**
COEN	**Coen**	**15.32**	**115**	*e*Pn	**P**	**01 46 59.4**	**+2.8**
	14nm,1.1s						
AS31	**Alice Springs**	**16.58**	**164**	*e*P	**Pn**	**01 47 14.9**	**+4.2**
	3.3nm,0.4s						
ASAR	**Alice Springs**	**16.58**	**164**	P	**Pn**	**01 47 14.3**	**+3.6**
	0.7nm,0.3s,baz=341,slow=11,SNR=33						
ASAR				S	**S**	**01 50 13.1**	**-2.0**
	2.2nm,0.3s,baz=344,slow=26,SNR=7.2						
AS01	**Alice Springs**	**16.59**	**164**	*e*P	**Pn**	**01 47 14.4**	**+3.5**
CTA	**Charters Tower**	**20.83**	**128**	P	Pn	01 48 02.2	+1.2
	1.1nm,0.5s,baz=301,slow=12,SNR=2.4						
CTAO	**Charters Tower**	**20.83**	**128**	*e*P	**P**	**01 47 58.7**	**+2.0**
STKA	**Stephens Creek**	**26.80**	**156**	P	**P**	**01 48 55.8**	**+2.8**
	1.4nm,0.7s,baz=338,slow=16,SNR=1.8						
PSI	**Prapat**	**31.69**	**288**	*e*P	**P**	**01 49 35.0**	**-1.6**
	5.8nm,0.7s						
CMAR	**Chiang Mai Arr**	**39.37**	**312**	P	**P**	**01 50 41.9**	**0.0**
	1.1nm,0.3s,baz=146,slow=6.6,SNR=4.0						
CHTO	**Chiang Mai**	**39.59**	**312**	*e*P	**P**	**01 50 42.9**	**-0.9**
	2.1nm,0.5s						
KMI	**Kunming**	**41.40**	**323**	P	**P**	**01 50 58.8**	**0.0**
KMI				pmax	pmax		
	comp=Z,22nm,0.5s						
KSRS	**Korea Array**	**44.93**	**359**	P	**P**	**01 51 26.0**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=176,slow=8.5,SNR=4.1						
HHC	**Hu-ho-hao-te**	**50.88**	**343**	*e*P	**P**	**01 52 13.6**	**+1.1**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,36nm,4.4s						
WMQ	**Urumqi**	**63.40**	**328**	P	**P**	**01 53 41.4**	**+1.0**
KSH	**Kashi**	**67.81**	**318**	*e*P	**P**	**01 54 10.1**	**+1.2**
KSH				PcP	**PcP**	**01 54 35.0**	**+0.5**
KSH				sP	sP	01 54 59.5	-1.7
KSH				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KSH				pmax	pmax		
	comp=Z,100nm,4.3s						
MK01	**Makanchi Array**	**68.21**	**327**	*e*P	**P**	**01 54 10.5**	**-0.6**
MK31	**Makanchi Array**	**68.23**	**327**	*e*P	**P**	**01 54 10.3**	**-0.9**
MKAR	**Makanchi Array**	**68.23**	**327**	P	**P**	**01 54 10.6**	**-0.6**
	comp=Z,2.0nm,0.4s,baz=124,slow=7.8,SNR=23						
MAKZ	**Makanchi**	**68.40**	**327**	*e*P	**P**	**01 54 10.9**	**-1.4**
	comp=Z,4.9nm,0.5s						
ZALV	**Zalesovo Beam**	**71.74**	**334**	P	**P**	**01 54 31.0**	**-1.4**
	comp=Z,1.1nm,0.5s,baz=122,slow=4.7,SNR=6.9						
KURBB	**Kurchatov Arra**	**72.55**	**329**	P	**P**	**01 54 36.9**	**-0.4**
	comp=Z,1.9nm,0.6s,baz=127,slow=5.1,SNR=23						
KURK	**Kurchatov**	**72.56**	**329**	*e*P	**P**	**01 54 36.8**	**-0.5**
BVAR	**Borovoye Array**	**78.08**	**328**	P	**P**	**01 55 09.2**	**+0.3**
	comp=Z,0.4nm,0.4s,baz=128,slow=6.4,SNR=5.9						
ABKAR	**Akbulak array**	**82.39**	**322**	*e*P	**P**	**01 55 31.8**	**-0.3**
TORD	**Torodi Ar. Bea**	**127.88**	**281**	PKP	**PKPdf**	**02 02 15.9**	**+0.2**
	comp=Z,0.2nm,0.7s,baz=40,slow=2.2						

DJA ***01*** *02:04:35.9±1.1, 14°N±14°×14°5E±°, h96^{km}±4^{km}, M5.1/13, mB5.6/4, mb5.2/13, MLv5.1/1, Mw(mB)5.0/4*

ISCJB ***01*** *02:04:36.0±0.6, 14°.09N±0°.03×145°.07E±0°.04, h102^{km}±5^{km}, mb4.6/138, Error ellipse: s-maj=5.9km s-min=5.6km az=30.6*

IDC ***01*** *02:04:36.4±0.5, 14°.12N×145°.18E, h95^{km}±4^{km}, mb4.2/28, mb1 4.3/29, mb1mx4.2/56, mbtmp4.6/29, MS3.2/10, Ms1 3.3/10, ms1mx3.0/52, Error ellipse: s-maj=15.6km s-min=7.8km az=92.0*

NEIC ***01*** *02:04:37.2±0.7, 14°.09N×145°.10E, h101^{km}±6^{km}, mb4.7/106, Error ellipse: s-maj=5.6km s-min=4.2km az=100.0*

NEIC Felt on Saipan. Felt [III] at Barrigada, Santa Rita, Tamuning and Yigo, Guam. Also felt at Andersen AFB, Apra Harbor, Dededo, Hagatna Heights, Mangilao and Mongmong.

GCMT ***01*** *02:04:37.2±0.4, 14°.07N×145°.10E, h134^{km}±6^{km}, MW4.9/68, Moment Tensor Solution. s14,c14; s68,c98; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.47±.13; $M_{\theta\theta}$1.61±.13; $M_{\phi\phi}$-1.14±.14; $M_{r\theta}$1.26±.09; $M_{\theta\phi}$0.81±.13; $M_{\phi r}$-1.41±.10; Best double couple: $M_0$2.46700×10^{16} NP1:ϕ_s298.00000°,δ81.00000°,λ-47.00000°. NP2: ϕ_s38.00000°,δ43.00000°,λ-167.00000°. Principal axes: T 2.2090, Plg24.0000°, Azm357.0000°; N 0.5100, Plg42.0000°, Azm110.0000°; P -2.7250, Plg39.0000°, Azm246.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 01 02:04:37.3±0.5**, 14°.09N**±0°.05×**145°.14E**±0°.06**, h105**^{km}±4^{km}**, n251,** σ**1°.20**/265**, mb4.7**/137**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**0.57**	**208**	P	**Pn**	**02 04 54.2**	**+0.1**
	3µm,0.3s,baz=38,slow=7.7,SNR=2021						
GUMO				S	**Sn**	**02 05 05.7**	**-1.0**
	3µm,0.3s,baz=344,slow=15,SNR=18						
GUMO	**Guam**	**0.57**	**208**	*e*Pn	**Pn**	**02 04 54.2**	**+0.1**
GUMO				*e*Sn	**Sn**	**02 05 05.0**	**-1.6**
CBIJ	**Chichi jima**	**13.23**	**348**	*e*Pn	**P**	**02 07 44.6**	**-2.4**
JCJ	**Chichijima**	**13.23**	**348**	P	**Pn**	**02 07 39.1**	**-1.8**
	baz=189,slow=19						
PATS	**Pohnpei**	**14.82**	**118**	*e*Pn	**Pn**	**02 08 01.6**	**0.0**
JHJ	**Hachijo jima 2**	**19.56**	**346**	LR	LR	02 15 43.1	
	comp=Z,130nm,21.7s,baz=94,slow=34						
DAV	**Davao City (W)**	**20.45**	**252**	LR	LR	02 15 43.1	
	comp=Z,31nm,20.0s,baz=346,slow=32						
H11S3	**WAKE ISLAND Hy**	**21.13**	**75**	T	T	02 30 50.7	
	baz=265,slow=73,SNR=51						
H11S1	**WAKE ISLAND Hy**	**21.15**	**75**	T	T	02 31 08.5	
	baz=265,slow=73,SNR=29						
H11S2	**WAKE ISLAND Hy**	**21.15**	**75**	T	T	02 31 09.2	
	baz=265,slow=73,SNR=59						
FAKI	**Fak Fak**	**21.19**	**218**	P	**P**	**02 09 16.2**	**+1.6**
	269nm,1.0s,2µm						
H11N1	**WAKE ISLAND Hy**	**21.54**	**72**	T	T	02 32 26.6	
	baz=257,slow=75,SNR=53						
H11N2	**WAKE ISLAND Hy**	**21.55**	**72**	T	T	02 32 20.2	
	baz=257,slow=75,SNR=19						
H11N3	**WAKE ISLAND Hy**	**21.55**	**72**	T	T	02 32 05.6	
	baz=257,slow=75,SNR=78						
INU	**Inuyama**	**22.39**	**342**	*e*P	**P**	**02 09 28.7**	**+1.6**
	140nm,1.8s						
LBMI	**Labuha**	**22.79**	**231**	P	**P**	**02 09 28.5**	**-2.8**
MJAR	**Matsushiro Arr**	**23.20**	**346**	P	**P**	**02 09 35.0**	**0.0**
	8.3nm,0.6s,baz=176,slow=12,SNR=24						
MJAR				LR	LR	02 18 10.6	
	comp=Z,71nm,20.9s,baz=180,slow=35						
MAJO	**Matsushiro**	**23.20**	**346**	*e*P	**P**	**02 09 35.4**	**+0.4**
	34nm,0.9s						
MAT	**Matsushiro**	**23.20**	**346**	P	**P**	**02 09 35.0**	**0.0**
MJB9	**Matsu-Tunnel**	**23.20**	**346**	*e*P	**P**	**02 09 35.7**	**+0.6**
	36nm,0.9s						
PMG	**Port Moresby**	**23.43**	**175**	P	**P**	**02 09 36.9**	**-0.3**
	51nm,0.7s,baz=3.7,slow=7.8,SNR=17						
YULB	**Yu-li**	**24.37**	**296**	*e*P	**P**	**02 09 47.2**	**+1.4**
	58nm,1.7s						
AAI	**Ambon**	**24.39**	**225**	P	**P**	**02 09 46.1**	**+0.2**
SSLB	**Suanglung**	**24.79**	**296**	*e*P	**P**	**02 09 51.4**	**+1.7**
	18nm,0.6s						
KMSI	**Cibinong**	**24.88**	**239**	P	**P**	**02 09 56.4**	**+6.0**
MRSI	**Marisa**	**26.65**	**241**	P	**P**	**02 10 06.0**	**-0.4**
HNR	**Honiara**	**27.61**	**147**	LR	LR	02 21 24.0	
	comp=Z,67nm,19.1s,baz=301,slow=36						
KSRS	**Korea Array**	**27.86**	**330**	P	**P**	**02 10 17.4**	**+0.4**
	1.9nm,0.6s,baz=146,slow=9.4,SNR=10						
KSAR	**Wonju Array Be**	**27.87**	**330**	P	**P**	**02 10 17.4**	**+0.3**
KS01	**Wonju Array Si**	**27.89**	**330**	*e*P	**P**	**02 10 19.5**	**+2.2**
NJ2	**Nanjing**	**29.94**	**311**	*e*P	**P**	**02 10 36.6**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,24nm,0.6s						
ASAJ	**Asahikawa**	**30.00**	**356**	P	**P**	**02 10 35.5**	**-0.4**
	4.9nm,0.5s,baz=238,slow=22,SNR=6.6						
ASAJ				LR	LR	02 21 26.9	
	comp=Z,53nm,20.7s,baz=164,slow=34						
MTN	**Manton Dam**	**30.15**	**208**	*e*P	**P**	**02 10 37.1**	**-0.4**
	64nm,1.1s						
SOEI	**Soe**	**31.47**	**222**	P	**P**	**02 10 47.7**	**-1.6**
SOEI	**Soe**	**31.47**	**222**	*e*P	**P**	**02 10 47.5**	**-1.8**
	31nm,1.0s						
USRK	**Ussuriysk Ar.**	**32.04**	**342**	P	**P**	**02 10 55.0**	**+1.2**
	6.8nm,0.7s,baz=151,slow=8.2						
USRK				LR	LR	02 23 14.4	
	comp=Z,60nm,19.7s,baz=152,slow=35						
WHN	**Wuhan**	**32.71**	**305**	P	**P**	**02 11 02.5**	**+2.6**
WHN				S	**S**	**02 16 10.5**	**+1.7**
WHN				LR	LR		
	comp=Z,480nm,17.3s						
CTA	**Charters Tower**	**33.99**	**178**	P	**P**	**02 11 11.9**	**+0.9**
	9.1nm,0.7s,baz=1.7,slow=10,SNR=18						
CTAO	**Charters Tower**	**33.99**	**178**	*e*P	**P**	**02 11 11.0**	**0.0**
WRAB	**Tennant Creek**	**35.44**	**198**	*e*P	**P**	**02 11 23.4**	**-0.2**
WRA	**Warramunga Arr**	**35.45**	**198**	P	**P**	**02 11 23.6**	**-0.1**
	37nm,0.6s,baz=18,slow=9.0,SNR=102						
WRA				PcP	**PcP**	**02 13 52.5**	**+1.2**
	2.6nm,0.6s,baz=10.0,slow=3.4,SNR=4.9						
WRA				ScP	**ScP**	**02 17 26.8**	**-0.9**
	1.4nm,0.8s,baz=19,slow=3.9,SNR=4.7						
STKI	**Sintang**	**36.12**	**250**	P	**P**	**02 11 29.1**	**-0.4**
KLR	**Kul'dur**	**36.73**	**345**	P	**P**	**02 11 34.5**	**+0.2**
	0.8nm,0.6s,baz=148,slow=8.5,SNR=24						
FITZ	**Fitzroy Crossi**	**37.33**	**212**	P	**P**	**02 11 39.6**	**0.0**
	25nm,0.7s,baz=27,slow=11,SNR=76						
FITZ				PcP	**PcP**	**02 13 58.0**	**+1.1**
	2.1nm,0.5s,baz=53,slow=5.1,SNR=2.9						
FITZ	**Fitzroy Crossi**	**37.33**	**212**	*e*P	**P**	**02 11 39.6**	**0.0**
	24nm,0.7s						
FITZ				PcP	**PcP**	**02 13 58.0**	**+1.1**
GYA	**Guiyang**	**37.99**	**295**	*e*P	**P**	**02 11 47.0**	**+1.6**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
AS01	**Alice Springs**	**39.09**	**196**	*e*P	**P**	**02 11 53.6**	**-0.8**
AS01				*e*S	**S**	**02 17 41.5**	**-4.9**
AS31	**Alice Springs**	**39.10**	**196**	*e*P	**P**	**02 11 54.5**	**0.0**
	5.2nm,0.6s						
ASAR	**Alice Springs**	**39.10**	**196**	P	**P**	**02 11 54.5**	**-0.1**
	5.8nm,0.4s,baz=17,slow=6.8,SNR=135						
ASAR				PP	**PP**	**02 13 26.3**	**-0.1**
	3.8nm,0.8s,baz=16,slow=11,SNR=5.5						
ASAR				PcP	**PcP**	**02 14 03.6**	**+1.2**
	3.1nm,0.7s,baz=17,slow=3.3,SNR=5.5						
ASAR				ScP	**ScP**	**02 17 41.5**	**+0.1**
	1.2nm,0.8s,baz=19,slow=4.1,SNR=4.9						
HHC	**Hu-ho-hao-te**	**39.57**	**319**	*e*P	**P**	**02 12 00.6**	**+2.3**
HHC				S	**S**	**02 17 52.1**	**-1.3**
HHC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,34nm,3.7s						
EIDS	**Eidsvold**	**39.65**	**172**	*e*P	**P**	**02 11 59.4**	**+0.4**
	6.1nm,0.6s						
PWJI	**Pagerwojo**	**39.72**	**238**	P	**P**	**02 11 58.6**	**-1.1**
	74nm,0.7s						
PETK	**Petropavlovsk-**	**40.18**	**12**	P	**P**	**02 12 01.5**	**-1.6**
	2.8nm,0.7s,baz=218,slow=9.0						
PETK				LR	LR	02 26 08.0	
	comp=Z,28nm,21.0s,baz=210,slow=32						
KMI	**Kunming**	**41.27**	**292**	P	**P**	**02 12 13.5**	**+0.8**
KMI				pmax	pmax		
	comp=Z,17nm,0.5s						
DZM	**Mont Dzumac**	**41.57**	**149**	P	**P**	**02 12 15.9**	**+0.9**
	9.3nm,0.8s,baz=338,slow=12,SNR=8.9						
DZM	**Mont Dzumac**	**41.57**	**149**	*e*P	**P**	**02 12 14.9**	**-0.1**
	14nm,1.0s						
LZH	**Lanzhou**	**42.91**	**308**	*e*P	**P**	**02 12 27.6**	**+1.7**
LZH				pP	pP	02 12 48.6	-1.6
LZH				PP	**PcP**	**02 14 11.7**	**-3.2**
LZH				PcP	PP	02 14 15.5	+8.0
LZH				*e*S	**S**	**02 18 41.5**	**-1.7**
LZH				sS	sS	02 19 26.8	+1.6
LZH				SS	**SS**	**02 21 52.9**	**-5.7**
LZH				pmax	pmax		
	comp=Z,27nm,1.3s						
LZH				pmax	pmax		
	comp=Z,100nm,4.3s						
LZH				LR	LR		
	comp=N,200nm,12.9s						
LZH				LR	LR		
	comp=E,190nm,13.6s						
LZH				LR	LR		
	comp=Z,210nm,15.2s						
CMAR	**Chiang Mai Arr**	**44.47**	**282**	P	**P**	**02 12 39.5**	**+1.0**
	2.3nm,0.6s,baz=83,slow=6.1,SNR=9.1						
CMAR				ScP	**ScP**	**02 18 03.1**	**+0.1**
	1.2nm,0.4s,baz=90,slow=2.1,SNR=6.8						
CMAR				LR	LR	02 31 02.8	
	comp=Z,34nm,18.9s,baz=128,slow=36						
MDSI	**Maura Dua**	**44.63**	**248**	P	**P**	**02 12 38.2**	**-1.5**
MA2	**Magadan**	**45.59**	**4**	P	**P**	**02 12 45.9**	**-0.8**
	8.5nm,0.6s,baz=192,slow=7.1,SNR=9.5						
STKA	**Stephens Creek**	**45.84**	**184**	P	**P**	**02 12 48.8**	**0.0**
	19nm,0.7s,baz=356,slow=8.0,SNR=34						
STKA	**Stephens Creek**	**45.84**	**184**	*e*P	**P**	**02 12 48.8**	**0.0**
	4.3nm,0.8s						
GTA	**Gaotai**	**47.04**	**311**	*e*P	**P**	**02 13 00.1**	**+1.6**
GTA				pP	pP	02 13 26.3	+3.1
GTA				sP	sP	02 13 39.4	+4.4
GTA				S	**S**	**02 19 44.5**	**+1.9**
GTA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,17nm,4.8s						
GTA				LR	LR		
	comp=N,110nm,16.1s						
GTA				LR	LR		
	comp=E,73nm,17.5s						
GTA				LR	LR		
	comp=Z,66nm,14.1s						
YAK	**Yakutsk**	**49.13**	**350**	*e*P	**P**	**02 13 13.5**	**-0.5**
NWAO	**Narrogin (SRO)**	**53.83**	**209**	P	**P**	**02 13 48.5**	**-0.9**
	8.4nm,0.6s,baz=7.1,slow=8.1,SNR=10						
BILL	**Bilibino**	**55.62**	**9**	*e*P	**P**	**02 14 00.4**	**-1.4**
	4.0nm,0.8s						
WMQ	**Urumqi**	**56.98**	**313**	P	**P**	**02 14 14.4**	**+2.3**
WMQ				LR	LR		
	comp=N,170nm,26.9s						
WMQ				LR	LR		
	comp=E,110nm,29.7s						
SDPT	**Sand Point**	**58.58**	**33**	*e*P	**P**	**02 14 23.2**	**+0.3**
MK01	**Makanchi Array**	**61.30**	**316**	*e*P	**P**	**02 14 42.0**	**+0.3**
MK31	**Makanchi Array**	**61.31**	**316**	*e*P	**P**	**02 14 42.3**	**+0.5**
MKAR	**Makanchi Array**	**61.31**	**316**	P	**P**	**02 14 42.3**	**+0.4**
	1.1nm,0.4s,baz=91,slow=8.8,SNR=22						
ZALV	**Zalesovo Beam**	**61.37**	**324**	P	**P**	**02 14 43.1**	**+1.1**
	1.6nm,0.6s,baz=95,slow=5.8,SNR=5.5						
ZALV	**Zalesovo Beam**	**61.37**	**324**	*e*P	**P**	**02 14 42.2**	**+0.2**
MAKZ	**Makanchi**	**61.53**	**316**	*e*P	**P**	**02 14 44.1**	**+0.8**
	3.4nm,0.8s						
OHAK	**Old Harbor**	**62.98**	**32**	*e*P	**P**	**02 14 52.6**	**-0.1**
	18nm,1.0s						
SVW2	**Sparrevohn**	**63.11**	**28**	*e*P	**P**	**02 14 53.6**	**+0.1**
	5.6nm,0.6s						
KDAK	**Kodiak Island**	**63.50**	**32**	P	**P**	**02 14 56.5**	**+0.4**
	7.6nm,0.5s,baz=251,slow=4.4,SNR=22						
KDAK	**Kodiak Island**	**63.50**	**32**	*e*P	**P**	**02 14 56.2**	**+0.1**
	8.5nm,0.8s						
KURK	**Kurchatov**	**64.37**	**320**	P	**P**	**02 15 02.4**	**+0.4**
KURBB	**Kurchatov Arra**	**64.41**	**320**	P	**P**	**02 15 02.4**	**+0.1**
	3.5nm,0.7s,baz=100,slow=7.1,SNR=26						
BRLK	**Bradley Lake**	**64.90**	**30**	*e*P	**P**	**02 15 04.8**	**-0.5**
	16nm,0.6s						
KSH	**Kashi**	**65.15**	**307**	*e*P	**P**	**02 15 10.0**	**+2.6**
KSH				*e*PcP	**PcP**	**02 15 41.5**	**+2.2**
KSH				sP	sP	02 15 50.1	+5.1
KSH				pmax	pmax		
	comp=Z,4.0nm,0.6s						
PPLA	**Purkeypile**	**65.22**	**27**	*e*P	**P**	**02 15 07.3**	**-0.1**
	8.9nm,0.8s						
SKT	**Skwentna**	**65.23**	**28**	*e*P	**P**	**02 15 06.8**	**-0.6**
	4.8nm,0.6s						
CAST	**Castle Rocks**	**65.43**	**26**	*e*P	**P**	**02 15 08.5**	**-0.1**
	14nm,0.7s						
SUA	**Susitna One**	**65.44**	**28**	*e*P	**P**	**02 15 09.4**	**+0.5**
	6.1nm,0.8s						
IM3	**Indian Mountai**	**65.63**	**23**	*e*P	**P**	**02 15 09.0**	**-0.9**
RC01	**Rabbit Creek A**	**65.81**	**29**	*e*P	**P**	**02 15 10.4**	**-0.7**
	19nm,0.6s						
KTH	**Kantishna Hill**	**65.97**	**26**	*e*P	**P**	**02 15 11.2**	**-1.0**
	7.1nm,0.8s						
BPAW	**Bear Paw Mtn.**	**66.11**	**26**	*e*P	**P**	**02 15 12.6**	**-0.3**
	6.9nm,0.8s						
TRF	**Thorofare Moun**	**66.21**	**26**	*e*P	**P**	**02 15 12.8**	**-1.0**
	8.7nm,0.9s						
PMR	**Palmer**	**66.22**	**28**	*e*P	**P**	**02 15 12.8**	**-0.9**
	11nm,0.6s						
MLY	**Manley**	**66.49**	**25**	*e*P	**P**	**02 15 15.3**	**-0.2**
	5.9nm,0.6s						
NIL	**Nilore**	**67.35**	**301**	*e*P	**P**	**02 15 21.8**	**+0.3**
COLD	**Coldfoot**	**67.38**	**22**	*e*P	**P**	**02 15 19.9**	**-1.1**
	4.4nm,0.8s						
WRH	**Wood River Hil**	**67.42**	**26**	*e*P	**P**	**02 15 19.9**	**-1.3**
	9.1nm,0.8s						
MDM	**Murphy Dome**	**67.49**	**25**	*e*P	**P**	**02 15 21.5**	**-0.3**
	6.0nm,0.8s						
CCB	**Clear Creek Bu**	**67.59**	**25**	*e*P	**P**	**02 15 20.9**	**-1.4**
	2.7nm,0.6s						
DIV	**Divide**	**67.69**	**29**	*e*P	**P**	**02 15 23.4**	**+0.3**
	6.9nm,0.7s						
KLU	**Klutina**	**67.69**	**29**	*e*P	**P**	**02 15 23.3**	**+0.2**
	6.3nm,0.6s						
ILAR	**Eielson Array**	**68.00**	**25**	P	**P**	**02 15 23.3**	**-1.6**
	4.1nm,0.4s,baz=252,slow=5.4,SNR=72						
ILAR				LR	LR	02 44 25.8	
	comp=Z,17nm,18.8s,baz=258,slow=35						
BMRM	**Bremner River**	**68.21**	**30**	*e*P	**P**	**02 15 28.1**	**+1.7**
	6.2nm,0.7s						
HARP	**HAARP**	**68.23**	**28**	*e*P	**P**	**02 15 27.0**	**+0.5**
	22nm,0.8s						
RIDG	**Independ'e Rid**	**68.64**	**27**	*e*P	**P**	**02 15 28.4**	**-0.6**
	11nm,1.2s						
CRQM	**Cirque**	**68.88**	**30**	*e*P	**P**	**02 15 30.8**	**0.0**
	10nm,0.7s						
SCRK	**Sand Creek**	**69.06**	**27**	*e*P	**P**	**02 15 31.1**	**-0.6**
	3.9nm,0.8s						
BVAR	**Borovoye Array**	**69.70**	**322**	P	**P**	**02 15 36.4**	**+0.7**
	1.6nm,0.6s,baz=107,slow=7.9,SNR=12						
BRVK	**Borovoye**	**69.76**	**322**	*e*P	**P**	**02 15 35.8**	**-0.2**
	7.3nm,0.8s						
EGAK	**Eagle**	**70.41**	**26**	*e*P	**P**	**02 15 40.6**	**+0.8**
	4.4nm,0.8s						
DAWY	**Dawson**	**71.07**	**27**	*e*P	**P**	**02 15 44.0**	**+0.1**
	3.7nm,0.8s						
INK	**Inuvik**	**73.80**	**23**	*e*P	**P**	**02 15 58.9**	**-1.0**
	5.9nm,0.9s						
DIB	**Dawson Inlet,**	**74.30**	**38**	*e*P	**P**	**02 16 03.9**	**+0.9**
	16nm,1.1s						
DLBC	**Dease Lake**	**75.42**	**33**	*e*P	**P**	**02 16 10.3**	**+0.8**
	12nm,0.9s						
ABKAR	**Akbulak array**	**76.35**	**318**	*e*P	**P**	**02 16 15.1**	**+0.1**
ARU	**Arti**	**76.51**	**325**	*e*P	**P**	**02 16 16.4**	**+0.8**
	1.8nm,0.7s						
G03D	**McMinnville, O**	**81.25**	**46**	P	**P**	**02 16 42.8**	**+0.9**
	baz=281						
B05A	**Bryant**	**81.44**	**42**	P	**P**	**02 16 43.4**	**+0.6**
	baz=282						
I03D	**Drain, OR**	**81.49**	**47**	P	**P**	**02 16 43.7**	**+0.6**
	baz=281						
L02D	**Cave Junction,**	**81.60**	**49**	P	**P**	**02 16 44.3**	**+0.5**
	baz=281						
KHMM	**Horse Mountain**	**81.76**	**50**	*e*P	**P**	**02 16 45.3**	**+0.4**
	13nm,0.8s						
HUMO	**Hull Mountain**	**81.98**	**48**	*e*P	**P**	**02 16 46.7**	**+0.9**
	8.7nm,0.9s						
H04A	**Detroit Lake**	**82.11**	**46**	*e*P	**P**	**02 16 47.3**	**+0.9**
	9.7nm,0.8s						
KCPM	**Cahto Peak**	**82.11**	**51**	*e*P	**P**	**02 16 48.5**	**+1.9**
	28nm,1.0s						
I04A	**Tendick Farm,**	**82.13**	**47**	P	**P**	**02 16 46.9**	**+0.3**
	baz=282						
YKA	**Yellowknife Ar**	**82.29**	**27**	P	**P**	**02 16 46.2**	**-0.7**
	1.2nm,0.5s,baz=284,slow=5.1,SNR=15						
M02C	**Callahan**	**82.31**	**49**	P	**P**	**02 16 48.2**	**+0.6**
	baz=282,SNR=12						
YBH	**Yreka Blue Hor**	**82.34**	**49**	P	**P**	**02 16 48.7**	**+0.9**
	10nm,0.7s,baz=289,slow=3.8,SNR=49						
YBH				LR	LR	02 46 51.2	
	comp=Z,16nm,20.8s,baz=272,slow=31						
YBH	**Yreka Blue Hor**	**82.34**	**49**	*e*P	**P**	**02 16 49.1**	**+1.3**
	12nm,0.8s						
J04D	**Umpqua Nationa**	**82.46**	**47**	P	**P**	**02 16 48.9**	**+0.3**
	baz=282						
N02D	**Trinity Center**	**82.50**	**50**	P	**P**	**02 16 49.2**	**+0.5**
	baz=282,SNR=6.0						
G05D	**Wamic, OR**	**82.59**	**45**	P	**P**	**02 16 49.3**	**+0.3**
	baz=282						
WDC	**Whiskeytown Da**	**82.71**	**50**	*e*P	**P**	**02 16 50.7**	**+1.1**
	12nm,1.3s						
I05D	**Terrebonne, OR**	**82.77**	**46**	P	**P**	**02 16 50.1**	**+0.2**
	baz=283						
K04D	**Chiloquin, OR**	**82.85**	**48**	P	**P**	**02 16 50.9**	**+0.5**
	baz=282						
GDXM	**Geysers**	**82.89**	**52**	*e*P	**P**	**02 16 52.8**	**+2.1**
	11nm,1.2s						
M04C	**Macdoel**	**82.97**	**49**	P	**P**	**02 16 51.4**	**+0.3**
	baz=283,SNR=12						
J05D	**Fort Rock, OR**	**83.08**	**47**	P	**P**	**02 16 51.8**	**+0.2**
	baz=283						
PINE	**Pine Mountain**	**83.17**	**47**	*e*P	**P**	**02 16 53.4**	**+1.2**
	25nm,0.8s						
B08A	**Colville Reser**	**83.22**	**42**	*e*P	**P**	**02 16 52.8**	**+0.7**
	9.3nm,1.0s						
O03D	**Paynes Creek**	**83.32**	**50**	P	**P**	**02 16 53.1**	**+0.2**
	baz=283,SNR=11						
K05A	**Summer Lake**	**83.44**	**48**	*e*P	**P**	**02 16 54.6**	**+1.0**
	17nm,0.9s						
NADM	**Allendale**	**83.60**	**52**	*e*P	**P**	**02 16 53.8**	**-0.3**
SPITS	**Spitsbergen Ar**	**83.60**	**351**	P	**P**	**02 16 54.0**	**+0.5**
	5.6nm,1.1s,baz=46,slow=12,SNR=4.0						
RES	**Resolute Bay**	**84.00**	**13**	*e*P	**P**	**02 16 55.3**	**-0.2**
	1.6nm,0.5s						
MOD	**Modoc Plateau**	**84.06**	**48**	*e*P	**P**	**02 16 56.8**	**+0.1**
	14nm,1.2s						
CASY	**Casey**	**84.16**	**193**	*e*P	**P**	**02 16 56.8**	**+0.6**
AFDM	**Forest Hills D**	**84.25**	**51**	*e*P	**P**	**02 16 58.8**	**+1.2**
	5.5nm,0.8s						
BEKR	**Beckworth**	**84.50**	**50**	*e*P	**P**	**02 16 59.7**	**+0.7**
	12nm,0.7s						
NEW	**Newport**	**84.68**	**42**	P	**P**	**02 16 59.9**	**+0.4**
	baz=285						
NEW	**Newport**	**84.68**	**42**	*e*P	**P**	**02 16 59.6**	**0.0**
	8.9nm,1.3s						
CMB	**Columbia Colle**	**84.91**	**52**	*e*P	**P**	**02 17 01.7**	**+0.8**
	8.6nm,0.9s						
J08A	**Circle Bar Ran**	**85.02**	**47**	*e*P	**P**	**02 17 02.5**	**+1.1**
	9.3nm,1.0s						
PNTR	**Pine Nut**	**85.25**	**51**	*e*P	**P**	**02 17 04.3**	**+1.5**
	8.5nm,0.7s						
PAHR	**Pah Rah Range**	**85.26**	**50**	*e*P	**P**	**02 17 03.8**	**+1.0**
	6.9nm,0.8s						
BMO	**Blue Mountains**	**85.45**	**45**	*e*P	**P**	**02 17 03.5**	**0.0**
	15nm,1.0s						
WAKR	**Walker**	**85.52**	**52**	*e*P	**P**	**02 17 05.7**	**+1.5**
	4.3nm,0.7s						
YERR	**Yerington**	**85.55**	**51**	*e*P	**P**	**02 17 05.5**	**+1.2**
	9.4nm,0.7s						
OMMB	**Old Mammoth Mi**	**86.08**	**52**	*e*P	**P**	**02 17 08.8**	**+1.7**
	5.8nm,1.1s						
PKM	**Mcpherson Peak**	**86.12**	**55**	P	**P**	**02 17 07.3**	**+0.1**
	baz=284						
RYN	**Ryan**	**86.18**	**51**	*e*P	**P**	**02 17 08.7**	**+1.3**
	7.6nm,0.9s						
KVN	**Kaiserville**	**86.39**	**51**	*e*P	**P**	**02 17 09.4**	**+1.0**
	7.4nm,0.8s						
NV01	**Mina Array Sit**	**86.40**	**51**	*e*P	**P**	**02 17 09.3**	**+0.8**
NVAR	**Mina Array Bea**	**86.40**	**51**	P	**P**	**02 17 09.6**	**+1.0**
	7.1nm,0.7s,baz=274,slow=5.4,SNR=41						
VES	**Vestal, Richgr**	**86.46**	**54**	P	**P**	**02 17 08.8**	**+0.2**
	baz=285						
NV11	**Mina Array Sit**	**86.51**	**51**	*e*P	**P**	**02 17 10.0**	**+1.0**
	0.4nm,0.9s						
BMN	**Battle Mountai**	**86.68**	**49**	*e*P	**P**	**02 17 11.1**	**+1.3**
	4.9nm,0.8s						
MFID	**Camas Ranch**	**86.86**	**46**	*e*P	**P**	**02 17 11.3**	**+0.8**
CWC	**Cottonwood Cre**	**87.09**	**53**	P	**P**	**02 17 11.8**	**-0.1**
	baz=285						
DAC	**Darwin (Calif)**	**87.51**	**53**	*e*P	**P**	**02 17 14.3**	**+0.4**
	3.8nm,0.9s						
MPMC	**Manual Prospec**	**87.65**	**54**	P	**P**	**02 17 15.4**	**+0.8**
	baz=286,SNR=12						
HLID	**Hailey**	**87.80**	**46**	P	**P**	**02 17 15.8**	**+0.7**
	baz=287						
HLID	**Hailey**	**87.80**	**46**	*e*P	**P**	**02 17 15.9**	**+0.7**
	9.9nm,0.8s						
HLID				*e*pP	**pP**	**02 17 42.4**	**-0.2**
FURC	**Furnace Creek,**	**88.03**	**53**	P	**P**	**02 17 17.0**	**+1.0**
	baz=286,SNR=8.0						
TPNV	**Topopah Spring**	**88.37**	**52**	P	**P**	**02 17 18.9**	**+1.0**
	baz=286,SNR=10						
TPNV	**Topopah Spring**	**88.37**	**52**	*e*P	**P**	**02 17 18.9**	**+1.0**

	10nm,0.8s						
GSC	Goldstone, Bar	88.39	54	P	P	02 17 18.7	+0.7
	baz=286,SNR=6.3						
GSC	Goldstone, Bar	88.39	54	*e*P	P	02 17 19.4	+1.4
	9.3nm,0.8s						
LRM	Limekiln Ridge	88.44	43	*e*P	P	02 17 18.7	+0.5
R11A	Troy Canyon, C	88.48	51	P	P	02 17 19.4	+1.0
	baz=287						
R11A	Troy Canyon, C	88.48	51	*e*P	P	02 17 19.4	+1.0
	12nm,1.5s						
MCMT	McKenzie Canyo	88.49	44	*e*P	P	02 17 19.4	+0.9
HRY	Holter Researc	88.56	42	*e*P	P	02 17 19.8	+1.2
HEC	Hector,Ludlow	88.89	54	P	P	02 17 21.1	+0.8
	baz=286,SNR=5.7						
TUQ	Turquoise Moun	89.05	54	P	P	02 17 22.0	+0.9
	baz=287,SNR=8.3						
BOZ	Bozeman (W)	89.06	43	P	P	02 17 21.9	+0.9
	baz=289						
BOZ	Bozeman (W)	89.06	43	*e*P	P	02 17 22.3	+1.3
	11nm,1.7s						
PFO	Pinyon Flats O	89.14	56	P	P	02 17 22.3	+0.8
	baz=286						
PFO	Pinyon Flats O	89.14	56	*e*P	P	02 17 22.8	+1.2
	17nm,1.4s						
XPFO	Piæon Flat	89.14	56	*e*P	P	02 17 22.8	+1.2
	15nm,1.4s						
SHPR	Sheep Range	89.33	53	*e*P	P	02 17 24.2	+1.8
	6.7nm,0.8s						
MONP2	Monument Peak	89.37	56	P	P	02 17 23.6	+0.8
	baz=286						
BELC	Belle Mtn. Jos	89.40	55	P	P	02 17 23.5	+0.8
	baz=287,SNR=7.3						
GMRC	Granite Mounta	89.44	54	P	P	02 17 23.6	+0.6
	baz=287,SNR=17						
HVU	Hansel Valley	89.50	47	*e*P	P	02 17 24.4	+1.3
	8.1nm,1.0s						
IKP	In-Ko-Pah, Jac	89.69	56	P	P	02 17 25.4	+1.3
	baz=287						
PSUT	Pine Spring	89.72	50	*e*P	P	02 17 25.6	+1.3
	8.0nm,0.9s						
SPUT	South Promonto	89.88	47	*e*P	P	02 17 26.1	+1.2
	5.9nm,0.9s						
BC3	Big Chuckawall	89.93	55	P	P	02 17 25.8	+0.6
	baz=287						
DUG	Dugway, Tooele	89.97	49	P	P	02 17 25.8	+0.5
	baz=288						
DUG	Dugway, Tooele	89.97	49	*e*P	P	02 17 26.1	+0.7
	6.3nm,0.8s						
DUG				*e*pP	pP	02 17 52.3	-0.5
IRM	Iron Mountain	90.03	55	P	P	02 17 26.6	+1.0
	baz=287,SNR=6.8						
FXWY	Fox Creek	90.11	45	*e*P	P	02 17 27.2	+1.1
	3.0nm,1.0s						
H17A	Grant Village	90.17	44	P	P	02 17 26.7	+0.4
	baz=290						
H17A	Grant Village	90.17	44	*e*P	P	02 17 29.3	+3.0
	9.5nm,1.4s						
FLWY	Flagg Ranch	90.19	44	*e*P	P	02 17 28.1	+1.7
	14nm,1.4s						
MOOW	Moose Ponds	90.27	45	*e*P	P	02 17 27.9	+1.2
	3.6nm,1.1s						
HWUT	Hardware Ranch	90.41	47	*e*P	P	02 17 27.9	+0.5
	6.7nm,0.8s						
SZCU	Shurtz Canyon	90.58	51	*e*P	P	02 17 29.8	+1.4
	18nm,1.8s						
GLA	Glamis	90.61	56	P	P	02 17 29.0	+0.7
	baz=287						
Y12C	Blythe	90.64	55	P	P	02 17 28.7	+0.3
	baz=287						
Y12C	Blythe	90.64	55	*e*P	P	02 17 29.6	+1.2
	8.2nm,0.8s						
LCMT	Little Creek M	90.65	52	*e*P	P	02 17 30.1	+1.6
	21nm,1.9s						
TCUT	Toone Canyon	90.69	47	*e*P	P	02 17 29.7	+0.9
	8.8nm,0.8s						
W13A	Hualapai Mount	90.74	54	*e*P	P	02 17 30.3	+1.2
PDMCI	Parker Dam,Lak	90.78	54	P	P	02 17 29.4	+0.4
	baz=288						
FINES	FINESS Array B	90.82	335	P	P	02 17 27.2	-1.4
	0.8nm,0.4s,baz=55,slow=4.8,SNR=22						
JLU	Jordanelle	90.83	48	*e*P	P	02 17 30.5	+1.0
	6.0nm,0.7s						
KNB	Kanab	90.97	52	*e*P	P	02 17 31.9	+1.8
	6.4nm,0.8s						
MSU	Marysvale	90.98	50	*e*P	P	02 17 32.7	+2.5
FFC	Flin Flon	91.25	32	*e*P	P	02 17 30.4	-0.4
PD31	Pinedale Array	91.42	45	*e*P	P	02 17 32.4	+0.3
PDAR	Pinedale Array	91.42	45	P	P	02 17 31.9	-0.3
	0.7nm,0.6s,baz=237,slow=1.7,SNR=8.6						
PDAR	Pinedale Array	91.42	45	*e*P	P	02 17 31.8	-0.4
U15A	North Rim	91.56	52	*e*P	P	02 17 34.3	+1.3
Q16A	Castle Valley	91.59	49	*e*P	P	02 17 34.4	+1.4
	18nm,1.8s						
Y14A	Wickenburg	91.79	54	*e*P	P	02 17 35.0	+1.2
Y14A				*e*pP	pP	02 18 03.5	+2.1
VNDA	Vanda	91.95	176	P	P	02 17 34.7	+1.3
	2.7nm,1.0s,baz=316,slow=4.8,SNR=12						
VNDA	Vanda	91.95	176	*e*P	P	02 17 35.2	+1.8
	3.3nm,0.9s						
SRU	San Rafael Swe	92.00	49	*e*P	P	02 17 35.5	+0.7
	4.7nm,0.8s						
P18A	Preston Nutter	92.02	48	*e*P	P	02 17 36.0	+0.9
	2.3nm,0.9s						
LAO	LASA Array	92.17	41	P	P	02 17 35.8	+0.5
	baz=293						
WUAZ	Wupatki	92.56	53	P	P	02 17 37.2	-0.3
	baz=289						
WUAZ	Wupatki	92.56	53	*e*P	P	02 17 38.7	+1.2
	4.9nm,0.8s						
214A	Organ Pipe Nat	92.56	56	P	P	02 17 37.6	+0.2
	baz=288						
PV03	Paradox Valley	93.52	49	*e*P	P	02 17 42.8	+0.9
	4.3nm,1.0s						
PV01	Paradox Valley	93.77	49	*e*P	P	02 17 43.5	+0.4
	17nm,1.9s						
TUC	Tucson	94.08	55	P	P	02 17 44.5	+0.1
	baz=289						
SMCO	Snowmass	94.55	48	*e*P	P	02 17 47.7	+0.8
	8.4nm,1.6s						
S22A	4UR Ranch, Cre	95.19	49	P	P	02 17 49.8	+0.1
	baz=292						
MNTX	Cornudas Mount	98.58	54	*e*P	P	02 18 05.1	+0.3
MAW	Mawson	99.99	203	P	Pdif	02 18 10.6	+0.6
	2.2nm,0.9s,baz=24,slow=3.8,SNR=5.7						
TXAR	Lajitas Array	100.85	56	P	Pdif	02 18 15.1	0.0
	0.5nm,0.8s,baz=283,slow=8.2,SNR=3.2						
WMOK	Wichita Mounta	102.36	49	P	Pdif	02 18 20.9	-0.6
	baz=297						
LSZ	Lusaka	119.20	260	*e*PKPdf	PKPdf	02 23 14.9	-0.2
SNAA	Sanae	119.33	191	PKP	PKPdf	02 23 13.4	-0.3
	0.7nm,0.8s,baz=174,slow=10,SNR=6.7						
TORD	Torodi Ar. Bea	134.80	305	PKP	PKPdf	02 23 44.9	+0.2
	0.3nm,0.6s,baz=41,slow=1.7						
TORD				SKPbc	SKPbc	02 27 04.9	-0.8
	baz=34,slow=2.0						
LCO	Las Campanas	143.68	120	*e*PKPdf	PKPdf	02 24 01.8	+0.8
DBIC	Dimbokro	143.78	303	PKP	PKPbc	02 23 59.1	+0.1
	5.2nm,0.9s,baz=53,slow=5.1,SNR=6.2						
TRQA	Tornquist	146.13	140	*e*PKPbc	PKPdf	02 24 04.2	-0.3
LPAZ	La Paz	147.84	98	PKPbc	PKPbc	02 24 11.1	-0.6
	3.0nm,1.1s,baz=233,slow=6.6,SNR=7.7						
SAML	Samuel	151.79	83	*e*PKPdf	PKPdf	02 24 14.6	+0.3
SAML				*e*PKPbc	PKPbc	02 24 21.0	+0.2
SAML				*e*PKPab	PKPab	02 24 29.4	-0.6

*AZER **01** 02:23:39.3±0.1, 38°.88N×48°.52E, h10^{km}, ml3.6/28, Error ellipse: s-maj=0.4km s-min=0.3km az=278.0*

*CSEM **01** 02:23:40.9±0.1, 38°.86N×48°.59E, h15^{km}, ML3.6, Error ellipse: s-maj=3.7km s-min=2.6km az=80.0*

*ISCJB **01** 02:23:41.3±0.3, 38°.85N±0°.02×48°.60E±0°.03, h23^{km}±3^{km}, Error ellipse: s-maj=4.5km s-min=3.5km az=162.8*

*TEH **01** 02:23:41.7, 38°.75N×48°.56E, h10^{km}, ML3.4*

ISC 01 02:23:41.4±0.9, **38°.87N**±0°.02×**48°.55E**±0°.02, **h16**^{km}±7^{km}, **n69, σ0^{s}.98**/118, **57C-41D, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LKRN	Lenkeran, Azer	0.24	133	⇑P	Pg	02 23 46.8	0.0
LKRN				⇓S	Sg	02 23 51.5	+1.0
LKRN	Lenkeran, Azer	0.24	133	⇑P	Pg	02 23 46.8	0.0
LKRN				⇓S	Sg	02 23 51.5	+1.0
LRK	Lerik	0.28	216	⇑P	Pb	02 23 47.7	-0.5
	SNR=1000						
LRK				⇓S	Sb	02 23 53.1	+0.3
LRK	Lerik	0.28	216	⇑P	Pb	02 23 47.7	-0.5
	SNR=2360						
LRK				⇓S	Sb	02 23 53.1	+0.3
ASTR	Astara	0.36	149	⇑P	Pb	02 23 48.6	-0.9
	SNR=1000						
ASTR				⇓S	Sb	02 23 54.2	-0.8
ASTR	Astara	0.36	149	⇑P	Pb	02 23 48.6	-0.9
	SNR=1217						
ASTR				⇓S	Sb	02 23 54.2	-0.8
GLBA	Clilabad	0.39	341	⇑P	Pb	02 23 49.5	-0.4
	SNR=274						
GLBA				⇓S	Sb	02 23 56.3	+0.6
GLBA	Clilabad	0.39	341	⇑P	Pb	02 23 49.5	-0.4
	SNR=274						
GLBA				⇓S	Sb	02 23 56.3	+0.6
GRMI	Germi	0.52	263	*e*Pg	Pg	02 23 51.2	-0.6
GRMI	Germi	0.52	263	*e*Pg	Pg	02 23 51.2	-0.6
GRMI				*e*Sg	Sb	02 23 59.1	-0.5
SAAT	Saatly	0.99	354	⇑P	Pg	02 23 59.7	-0.9
	SNR=11						
SAAT				⇑S	Sn	02 24 14.8	+0.5
SAAT	Saatly	0.99	354	⇑P	Pg	02 23 59.7	-0.9
	SNR=11						
SAAT				⇑S	Sn	02 24 14.8	+0.5
ALIB	Äli-Bayra	1.14	18	⇓P	Pb	02 24 02.6	-0.1
	SNR=18						
ALIB	Äli-Bayra	1.14	18	⇓P	Pb	02 24 02.6	-0.1
	SNR=18						
ALIB				⇑S	Sn	02 24 20.9	+2.9
KDMR	Kurdemir	1.53	349	⇑Pn	Pn	02 24 07.4	-0.6
	SNR=4.3						
KDMR				⇑Sn	Sb	02 24 29.4	+0.9
KDMR	Kurdemir	1.53	349	⇑Pn	Pn	02 24 07.4	-0.6
	SNR=4.3						
KDMR				⇑Sn	Sb	02 24 29.4	+0.9
ZRD	Zardab	1.56	335	⇓Pn	Pn	02 24 08.1	-0.3
	SNR=19						
ZRD				⇓Sn	Sb	02 24 29.8	+0.6
ZRD	Zardab	1.56	335	⇓Pn	Pn	02 24 08.1	-0.3
	SNR=19						
ZRD				⇓Sn	Sb	02 24 29.8	+0.6
GBS	Qobustan	1.69	10	⇓Pn	Pn	02 24 10.5	+0.2
	SNR=8.2						
GBS	Qobustan	1.69	10	⇓Pn	Pn	02 24 10.5	+0.2
	SNR=8.2						
GBS				⇓Sn	Sg	02 24 35.0	-0.8
BRDA	Brd	1.75	323	⇑Pn	Pn	02 24 11.3	+0.2
	SNR=18						
BRDA				⇑Sn	Sb	02 24 35.7	+0.9
BRDA	Brd	1.75	323	⇑Pn	Pn	02 24 11.3	+0.2
	SNR=18						
BRDA				⇑Sn	Sb	02 24 35.7	+0.9
IBST	Bostanabad	1.75	229	*e*Pn	Pn	02 24 11.2	-0.2
IBST				*e*		02 24 12.9	
	comp=Z,7μm,0.1s						
IBST				*e*		02 24 12.9	
	comp=N,4μm,0.1s						
IBST				*e*		02 24 38.1	
	comp=E,4μm,0.2s						
PQL	Pirkuli	1.91	1	⇑Pn	Pn	02 24 13.0	-0.5
	SNR=9.9						
PQL	Pirkuli	1.91	1	⇑Pn	Pn	02 24 13.0	-0.5
	SNR=9.9						
PQL				⇓Sn	Sb	02 24 41.0	+1.3
IML	Ismayilli	1.94	352	⇓Pn	Pn	02 24 12.8	-0.9
	SNR=17						
IML				⇓Sn	Sn	02 24 38.8	+1.0
IML	Ismayilli	1.94	352	⇓Pn	Pn	02 24 12.8	-0.9
	SNR=17						
IML				⇓Sn	Sn	02 24 38.8	+1.0
ITBZ	Tabriz	1.99	252	*e*Pn	Pn	02 24 15.2	+0.6
ITBZ				*e*		02 24 16.8	
	comp=Z,4μm,0.2s						
ITBZ				*e*		02 24 44.8	
	comp=N,4μm,0.3s						
ITBZ				*e*		02 24 45.0	
	comp=E,5μm,0.2s						
ORD	Ordubad	2.00	272	⇑Pn	Pn	02 24 14.4	-0.2
ORD				⇓Sn	Sn	02 24 40.7	+1.4
ORD	Ordubad	2.00	272	⇑Pn	Pn	02 24 14.4	-0.2
ORD				⇓Sn	Sn	02 24 40.7	+1.4
ATGJ	Altiaghaj	2.01	8	⇑Pn	Pn	02 24 14.6	-0.1
	SNR=11						
ATGJ	Altiaghaj	2.01	8	⇑Pn	Pn	02 24 14.6	-0.1
	SNR=11						
ATGJ				⇑Sn	Sg	02 24 47.6	+1.6
QBL	Gabala	2.14	345	Pn	Pn	02 24 15.8	-0.7
	SNR=6.8						
QBL				⇓Sn	Sn	02 24 43.5	+0.7
QBL	Gabala	2.14	345	Pn	Pn	02 24 15.8	-0.7
	SNR=6.8						
QBL				⇓Sn	Sn	02 24 43.5	+0.7
ZNJK	Zanjan	2.20	177	*e*Pn	Pn	02 24 16.9	-0.7
ZNJK	Zanjan	2.20	177	*e*Pn	Pn	02 24 16.9	-0.7
MNGR	Mingechevir, A	2.21	330	⇑Pn	Pn	02 24 17.2	-0.2
MNGR				⇑Sn	Sn	02 24 45.5	+1.2
MNGR	Mingechevir, A	2.21	330	⇑Pn	Pn	02 24 17.2	-0.2
MNGR				⇑Sn	Sn	02 24 45.5	+1.2
SIZA	Siyzn	2.21	7	⇑Pn	Pn	02 24 16.7	-0.9
	SNR=9.5						
SIZA				⇑Sg	Sg	02 24 52.3	-0.4
SIZA	Siyzn	2.21	7	⇑Pn	Pn	02 24 16.7	-0.9
	SNR=9.5						
SIZA				⇑Sg	Sg	02 24 52.3	-0.4
XNQ	Khinaliq	2.32	352	⇓Pn	Pn	02 24 18.1	-1.0
	SNR=15						
XNQ				⇑Sn	Sn	02 24 48.6	+1.2
XNQ	Khinaliq	2.32	352	⇓Pn	Pn	02 24 18.1	-1.0
	SNR=15						
XNQ				⇑Sn	Sn	02 24 48.6	+1.2
ISHB	Shabestar	2.38	257	*e*Pn	Pn	02 24 20.5	+0.6
ISHB				*e*		02 24 30.8	
	comp=Z,2μm,0.2s						
ISHB				*e*		02 24 32.6	
	comp=E,4μm,0.2s						
ISHB				*e*		02 25 01.0	
	comp=N,3μm,0.2s						
SBZ	Shahbuz	2.39	284	⇑Pn	Pn	02 24 19.9	-0.1
SBZ	Shahbuz	2.39	284	⇑Pn	Pn	02 24 19.9	-0.1
SBZ				⇓Sn	Sb	02 24 52.2	-1.3
NAX	Nakhchivan	2.40	278	⇓Pn	Pn	02 24 20.4	+0.3
	SNR=36						
NAX				⇑Sn	Sn	02 24 51.9	+2.7
NAX	Nakhchivan	2.40	278	⇓Pn	Pn	02 24 20.4	+0.3
	SNR=36						
NAX				⇑Sn	Sn	02 24 51.9	+2.7
GANJ	Ganja	2.47	317	⇑Pn	Pn	02 24 20.1	-0.9
	SNR=13						
GANJ				⇓Sn	Sn	02 24 49.9	-0.9
GANJ	Ganja	2.47	317	⇑Pn	Pn	02 24 20.1	-0.9
	SNR=13						
GANJ				⇓Sn	Sn	02 24 49.9	-0.9
QUBA	Quba, Azerbaij	2.48	359	⇑Pn	Pn	02 24 20.7	-0.5
	SNR=3.1						
QUBA				⇓Sn	Sn	02 24 52.4	+1.3
QUBA	Quba, Azerbaij	2.48	359	⇑Pn	Pn	02 24 20.7	-0.5
	SNR=3.1						
QUBA				⇓Sn	Sn	02 24 52.4	+1.3
SEKA	Sheki	2.55	336	Pn	Pn	02 24 21.5	-0.7
	SNR=21						
SEKA				⇑Sn	Sn	02 24 52.4	-0.6
SEKA	Sheki	2.55	336	Pn	Pn	02 24 21.5	-0.7
	SNR=21						
SEKA				⇑Sn	Sn	02 24 52.4	-0.6
QSAR	Qusar	2.65	355	⇓Pn	Pn	02 24 22.5	-1.0
	SNR=4.3						
QSAR	Qusar	2.65	355	⇓Pn	Pn	02 24 22.5	-1.0
	SNR=4.3						
QSAR				⇑Sn	Sb	02 24 58.9	-1.9
IGZV	Ghazvin	2.81	151	*e*Pn	Pn	02 24 25.0	-1.0
IGZV				*e*		02 24 58.1	
	comp=E,3μm,0.1s						
IGZV				*e*		02 25 00.4	
	comp=N,4μm,0.1s						
IGZV				*e*		02 25 00.6	
	comp=Z,1μm,0.1s						
GDB	GEDABAY	2.84	311	⇑Pn	Pn	02 24 26.3	+0.1
	SNR=6.3						
GDB				⇓Sn	Sn	02 25 01.4	+1.2
GDB	GEDABAY	2.84	311	⇑Pn	Pn	02 24 26.3	+0.1
	SNR=6.3						
GDB				⇓Sn	Sn	02 25 01.4	+1.2
HYR	Heyderabad	2.99	288	⇓Pg	Pb	02 24 31.7	-2.7
HYR				⇓Sg	Sb	02 25 11.9	+1.2
ZKTA	Zakatala	3.13	332	⇑Pn	Pn	02 24 29.9	-0.2
	SNR=7.3						
ZKTA				⇑Sn	Sn	02 25 07.9	+0.7
DDFL	Dedoflistskaro	3.17	325	P	Pn	02 24 33.5	+2.7
QZX	Qazax, Azerbai	3.28	313	⇑Pn	Pn	02 24 32.3	+0.2
	SNR=13						
QZX				⇑Sn	Sn	02 25 11.9	+1.1
QZX	Qazax, Azerbai	3.28	313	⇑Pn	Pn	02 24 32.3	+0.2
	SNR=13						
QZX				⇑Sn	Sn	02 25 11.9	+1.1
DGRG	David-gareji	3.54	318	P	Pn	02 24 36.7	+0.9
CHTH	Charan	3.60	145	*e*Pn	Pn	02 24 36.2	-0.6
CHTH	Charan	3.60	145	*e*Pn	Pn	02 24 36.2	-0.6
IMHD	Mahdasht	3.60	151	*e*Pn	Pn	02 24 37.6	+0.9
IMHD				*e*		02 25 22.7	
	comp=E,1μm,0.1s						
IMHD				*e*		02 25 22.9	
	comp=N,1μm,0.1s						
IMHD				*e*		02 27 48.7	
	comp=Z,534nm,0.0s						
IFIR	Firoozkooh	4.65	133	*e*Pn	Pn	02 24 52.3	+1.0
IFIR				*e*		02 24 54.2	
	comp=Z,275nm,0.1s						
IFIR				*e*		02 25 00.9	
	comp=N,274nm,0.1s						
IFIR				*e*		02 25 47.1	
	comp=E,212nm,0.1s						
ISHM	Shahmirzad	4.86	128	*e*Pn	Pn	02 24 53.2	-1.0
ISHM				*e*		02 25 50.8	
	comp=E,214nm,0.0s						
ISHM				*e*		02 25 52.3	
	comp=Z,639nm,0.1s						

*CSEM **01** 02:25:24.3, 38°.11N×22°.32E, h13^{km}, ML1.3/6*

ATH 01 02:25:24.3, 38°.11N×22°.32E, h13^{km}±3^{km}, **ML1.3**/6, **Error ellipse: s-maj=3.2km s-min=0.8km az=156.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KLV	Kalavryta, Ach	0.14	245	P	Pb	02 25 28.6	-0.3
KLV				S	Sg	02 25 30.3	-0.1
KLV	Kalavryta, Ach	0.14	245	P	Pg	02 25 28.2	+0.3
KLV				S	Sg	02 25 30.4	-0.1
GUR	Goura	0.17	173	P	Pg	02 25 27.8	-0.5
GUR				S	Sg	02 25 30.7	-0.4
GUR				AML	AML	02 25 32.3	
	comp=E,451μm,0.4s						
GUR				AML	AML	02 25 32.6	
	comp=N,646μm,0.3s						
GUR	Goura	0.17	173	P	Pg	02 25 28.0	-0.3
GUR				S	Sg	02 25 30.9	-0.2
THAL	Thalero	0.28	104	P	Pg	02 25 30.6	+0.5
THAL				S	Sg	02 25 34.9	+0.9
THAL				AML	AML	02 25 39.4	
	comp=E,310μm,0.4s						
THAL				AML	AML	02 25 39.9	
	comp=N,414μm,0.2s						
THAL	Thalero	0.28	104	P	Pg	02 25 30.4	+0.3
THAL				S	Sg	02 25 34.7	+0.6
DSF	Desfina	0.35	29	P	Pb	02 25 31.9	-0.5
DSF				S	Sg	02 25 35.4	-0.7
DSF				AML	AML	02 25 42.1	
	comp=N,83μm,0.3s						
DSF				AML	AML	02 25 44.6	
	comp=E,66μm,0.2s						
DSF	Desfina	0.35	29	P	Pg	02 25 31.6	+0.2
DSF				S	Sg	02 25 35.9	-0.2
SERG	Sergoula	0.37	326	P	Pg	02 25 31.5	-0.3
SERG				S	Sg	02 25 37.5	+0.8
SERG				AML	AML	02 25 41.1	
	comp=E,96μm,0.2s						
SERG				AML	AML	02 25 42.3	
	comp=N,101μm,0.3s						
SERG	Sergoula	0.37	326	P	Pg	02 25 31.6	-0.1
SERG				S	Sg	02 25 37.3	+0.6
EFP	Efpalio	0.46	315	P	Pg	02 25 33.1	-0.2
EFP				AML	AML	02 25 41.3	
	comp=E,63μm,0.4s						
EFP				AML	AML	02 25 45.1	
	comp=N,78μm,0.3s						
EFP	Efpalio	0.46	315	P	Pg	02 25 33.2	-0.1
PROD	Prodromos	0.49	71	P	Pg	02 25 33.9	+0.1
PROD				S	Sg	02 25 40.3	0.0
PROD				AML	AML	02 25 43.0	
	comp=E,78μm,0.2s						
PROD				AML	AML	02 25 43.0	
	comp=N,113μm,0.2s						
PROD	Prodromos	0.49	71	P	Pg	02 25 33.8	-0.1
PROD				S	Sg	02 25 40.5	+0.2
DRO	Drossia	0.50	252	P	Pb	02 25 34.8	-0.2
DRO	Drossia	0.50	252	P	Pg	02 25 34.4	+0.2
LTK	Loutraki	0.52	99	P	Pb	02 25 35.0	-0.3
LTK	Loutraki	0.52	99	P	Pg	02 25 34.7	+0.2
ANX	Ano Chora	0.58	328	P	Pg	02 25 35.5	-0.1
ANX	Ano Chora	0.58	328	P	Pg	02 25 35.5	-0.1
RLS	Riolos of Patr	0.67	266	P	Pg	02 25 36.9	-0.5
RLS	Riolos of Patr	0.67	266	P	Pg	02 25 37.1	-0.3
AMT	Artemida-Makis	0.75	220	P	Pg	02 25 38.7	-0.1
AMT	Artemida-Makis	0.75	220	P	Pg	02 25 38.6	-0.2
LKR	Lokris	0.77	44	P	Pb	02 25 39.4	-0.1
LKR	Lokris	0.77	44	P	Pg	02 25 39.1	0.0
PVO	Paravola	0.80	310	P	Pg	02 25 39.8	-0.1
PVO	Paravola	0.80	310	P	Pg	02 25 39.7	-0.2
ITM	Ithomi	0.97	199	P	Pb	02 25 42.1	-1.0
ITM	Ithomi	0.97	199	P	Pb	02 25 42.4	-0.7

*CSEM **01** 02:25:32.0, 38°.09N×22°.30E, h9^{km}, ML1.6/10*

THE 01 02:25:32.0, 38°.09N×22°.30E, h9^{km}±2^{km}, **ML1.6**/10, **Error ellipse: s-maj=2.6km s-min=0.5km az=211.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KLV	Kalavryta, Ach	0.13	247	P	Pg	02 25 35.2	+0.2
KLV				S	Sg	02 25 37.5	+0.5
KLV	Kalavryta, Ach	0.13	247	P	Pg	02 25 35.2	+0.2
KLV				S	Sg	02 25 37.5	+0.5
GUR	Goura	0.16	168	P	Pg	02 25 35.1	-0.4
GUR				S	Sg	02 25 37.8	-0.1
GUR	Goura	0.16	168	P	Pg	02 25 35.1	-0.4
GUR				S	Sg	02 25 37.8	-0.1
THAL	Thalero	0.29	101	P	Pg	02 25 37.6	-0.2
THAL				S	Sg	02 25 42.4	+0.7
THAL	Thalero	0.29	101	P	Pg	02 25 37.6	-0.2
THAL				S	Sg	02 25 42.4	+0.7
LAKA	Lakka	0.29	300	P	Pg	02 25 37.5	-0.4
LAKA				S	Sg	02 25 42.4	+0.6
LAKA	Lakka	0.29	300	P	Pg	02 25 37.5	-0.4
LAKA				S	Sg	02 25 42.4	+0.6
TRIZ	Trizonia	0.33	327	P	Pg	02 25 37.9	-0.6
TRIZ				S	Sg	02 25 43.0	+0.2
TRIZ	Trizonia	0.33	327	P	Pg	02 25 37.9	-0.6
TRIZ				S	Sg	02 25 43.0	+0.2
DSF	Desfina	0.36	29	P	Pg	02 25 39.5	+0.3
DSF	Desfina	0.36	29	P	Pg	02 25 39.5	+0.3
SERG	Sergoula	0.37	329	P	Pg	02 25 38.8	-0.6
SERG	Sergoula	0.37	329	P	Pg	02 25 38.8	-0.6
UPR	University Cam	0.45	295	P	Pg	02 25 40.8	+0.1
UPR	University Cam	0.45	295	P	Pg	02 25 40.8	+0.1
EFP	Efpalio	0.46	317	P	Pg	02 25 40.2	-0.7
EFP				S	Sb	02 25 48.4	-0.7
EFP	Efpalio	0.46	317	P	Pg	02 25 40.2	-0.7
EFP				S	Sb	02 25 48.4	-0.7
EFP	Efpalio	0.46	317	S	Pg	02 25 39.8	-1.1
EFP	Efpalio	0.46	317	S	Pg	02 25 39.8	-1.1
DRO	Drossia	0.49	253	P	Pg	02 25 41.1	-0.4
DRO				S	Sg	02 25 48.9	+1.0
DRO	Drossia	0.49	253	P	Pg	02 25 41.1	-0.4
DRO				S	Sg	02 25 48.9	+1.0
PROD	Prodromos	0.50	71	P	Pg	02 25 41.5	-0.3
PROD	Prodromos	0.50	71	P	Pg	02 25 41.5	-0.3
LTK	Loutraki	0.53	97	P	Pg	02 25 42.0	-0.3
LTK	Loutraki	0.53	97	P	Pg	02 25 42.0	-0.3
LOUT	Loutraki	0.54	101	P	Pg	02 25 43.0	+0.5
LOUT	Loutraki	0.54	101	P	Pg	02 25 43.0	+0.5
TRIP	Tripoli	0.56	182	P	Pg	02 25 42.6	-0.4
TRIP				S	Sg	02 25 50.9	+0.5
TRIP	Tripoli	0.56	182	P	Pg	02 25 42.6	-0.4
TRIP				S	Sg	02 25 50.9	+0.5
ANX	Ano Chora	0.58	329	P	Pg	02 25 42.5	-0.8
ANX				S	Sg	02 25 51.2	+0.2
ANX	Ano Chora	0.58	329	P	Pg	02 25 42.5	-0.8
ANX				S	Sg	02 25 51.2	+0.2

AMT	Artemida-Makis	0.73	220	P	Pg	02 25 45.7	-0.4
AMT				S	Sb	02 25 56.8	-0.2
AMT	Artemida-Makis	0.73	220	P	Pg	02 25 45.7	-0.4
AMT				S	Sb	02 25 56.8	-0.2
LKR	Lokris	0.78	44	P	Pg	02 25 47.4	+0.3
LKR	Lokris	0.78	44	P	Pg	02 25 47.4	+0.3
PVO	Paravola	0.80	311	P	Pg	02 25 47.7	+0.2
PVO	Paravola	0.80	311	P	Pg	02 25 47.7	+0.2
PDO	Prodromos	1.01	300	P	Pg	02 25 50.6	-0.9
PDO	Prodromos	1.01	300	P	Pg	02 25 50.6	-0.9

ISCJB **01** *02:32:43.8±1.4, 34°.78N±0°.08×70°.4E±0°.2, h33^{km}, Error ellipse: s-maj=21.8km s-min=8.0km az=157.5*

NNC **01** *02:32:54.7±6.8, 35°.42N×70°.14E, h121^{km}±121^{km}, mb3.3, mpv3.8, Error ellipse: s-maj=68.2km s-min=52.1km az=112.0*

ISC 01 02:32:44.2±1.5, **34°.82N**±0°.09×**70°.4E**±0°.1, **h35**^{km}**, n17,** σ**3**^{s}**.26**/23**, 6C-5D, Southeastern Afghanistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	5.73	24	⇓P	Pn	02 34 11.3	+4.3
	6.0nm,0.4s						
SFK				⇑S	Sn	02 35 16.9	+5.2
	4.8nm,0.3s						
AML	Almayashu	7.74	18	P	Pn	02 34 37.3	+2.6
	SNR=22						
MNAS	Manas	7.83	11	⇑P	Pn	02 34 39.2	+3.5
	3.8nm,0.6s						
MNAS				⇓S	Sn	02 35 59.2	-3.9
	4.5nm,0.5s						
UCH	Uchtor	8.06	22	P	Pn	02 34 41.5	+2.3
	SNR=5.2						
EKS2	Erkin-Say	8.26	17	P	Pn	02 34 44.9	+3.4
	SNR=7.9						
KK31	Karatay Array	8.27	0	⇓P	Pn	02 34 43.8	+2.2
	0.9nm,0.3s,baz=183,slow=13						
KK31				⇑S	Sn	02 36 10.4	-3.5
	1.0nm,0.2s,baz=186,slow=22						
AAK	Ala-Archa	8.43	21	⇓P	Pn	02 34 46.3	+2.4
	4.3nm,0.4s						
AAK				⇑S	Sn	02 36 13.1	-4.7
	2.4nm,0.5s						
AAK	Ala-Archa	8.43	21	P	Pn	02 34 46.8	+2.9
	SNR=8.0						
TKM2	Tokmak 2	9.04	25	⇑P	Pn	02 34 54.1	+1.8
	2.0nm,0.6s						
TKM2				⇑S	Sn	02 36 29.4	-3.5
	1.8nm,0.8s						
TKM2	Tokmak 2	9.04	25	P	Pn	02 34 54.6	+2.3
	SNR=6.6						
PYUN	Piuthan	12.64	119	eP	Pn	02 35 45.2	+3.6
PYUN				eS	Sn	02 37 57.8	-3.4
KOLN	Koldanda	13.27	118	eP	Pn	02 35 50.5	+0.3
	21nm,0.5s						
DMN	Daman	14.46	116	eP	Pn	02 36 07.8	+1.2
JIRN	Jiri	15.24	114	eP	P	02 36 20.6	-1.1
RAMN	Ramite	15.93	115	eP	Pn	02 36 22.5	-3.5
AB31	Akbulak array	16.37	335	P	P	02 36 33.8	+0.2
	3.9nm,0.6s,baz=154,slow=13,SNR=37						
AKTO	Aktyubinsk	18.04	334	⇓P	Pn	02 36 50.3	-1.6
	1.4nm,0.7s						

MAN 01 02:44:20.1, 10°.10N×123°.26E, h1^{km}**, mb4.8, ML3.7, MS3.6, Cebu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIM	Jordan	0.85	309	eP	Pb	02 44 38.0	+0.4
GUIM				eS	Sb	02 44 50.5	+1.1
MSLP	Maasin	1.57	88	eP	Pb	02 44 49.7	-0.3
MSLP				eS	Sg	02 45 13.5	+2.8
PAGZ	Pagadian	2.24	177	eP	Pn	02 44 59.1	+0.9
PAGZ				eS	Sb	02 45 28.3	-1.2
CUYO	Cuyo Island	2.33	289	eP	Pn	02 44 59.7	0.0
OTRP	Odiongan	2.56	332	eP	Pb	02 45 05.2	-1.7
OTRP				eS	Sg	02 45 43.1	+0.6
BESP	Borongan	2.61	55	eP	Pg	02 45 17.0	+6.8
BESP				eS	Sg	02 45 47.0	+2.9
CNP	Catarman	2.77	30	eP	Pg	02 45 15.7	+2.5
CNP				eS	Sg	02 45 50.5	+1.5
BUKP	Musuan	2.83	141	eP	Pn	02 45 08.0	+1.5
BUKP				eS	Sn	02 45 43.9	+2.6
SJMP	San Jose	3.15	318	eP	Pn	02 45 13.8	+2.9
BUSP	Coron	3.56	303	eP	Pn	02 45 16.9	+0.5
BUSP				eS	Sn	02 46 00.6	+1.5

TEH **01** *02:49:45.5, 31°.81N×51°.02E, h6^{km}, ML4.8*

GCMT **01** *02:49:46.0±0.2, 31°.67N×50°.90E, h17^{km}, MW5.1/92, Moment Tensor Solution. s47,c65; s92,c159; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.31±.17; $M_{\theta\theta}$-4.92±.12; $M_{\phi\phi}$0.61±.11; $M_{r\theta}$-1.95±.29; $M_{\theta\phi}$-0.18±.09; $M_{\phi r}$-1.26±.38; Best double couple: $M_0$5.18900×10^{16} NP1:ϕ_s254.00000°, δ58.00000°, λ73.00000°. NP2: ϕ_s103.00000°, δ35.00000°, λ115.00000°. Principal axes: T 5.0320, Plg71.0000°, Azm125.0000°; N 0.3170, Plg14.0000°, Azm263.0000°; P -5.3460, Plg12.0000°, Azm356.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC **01** *02:49:46.0±0.0, 31°.84N×51°.02E, h7^{km}, mb5.0/84, ML4.7(THR), MN4.9(TEH), After TEH.*

ISCJB **01** *02:49:47.8±0.5, 31°.65N±0°.01×50°.85E±0°.01, h15^{km}±3^{km}, mb4.9/194, MS4.4/75, Error ellipse: s-maj=2.6km s-min=1.7km az=25.6*

BJI **01** *02:49:47.0, 31°.80N×51°.00E, h7^{km}, mb4.9/48, mB5.2/36, Ms4.9/45, Ms7 4.6/35*

GII **01** *02:49:47.6±0.3, 31°.69N×51°.00E, h10^{km}*

CSEM **01** *02:49:47.8±0.1, 31°.75N×50°.87E, h5^{km}, mb5.0/99, Error ellipse: s-maj=3.3km s-min=2.2km az=36.0*

THR **01** *02:49:48.5±0.3, 31°.72N×51°.02E, h14^{km}±5^{km}, ML4.7*

MOS **01** *02:49:48.9±1.3, 31°.71N×50°.84E, h26^{km}, mb5.1/73, MS4.2/40, Error ellipse: s-maj=5.1km s-min=3.3km az=117.2*

DSN **01** *02:49:48.9±0.3, 31°.65N×50°.90E, h12^{km}, mb5.0/3, ML4.8/8, Error ellipse: s-maj=7.1km s-min=3.7km az=45.0*

IDC **01** *02:49:49.4±1.7, 31°.76N×50°.88E, h19^{km}±9^{km}, mb4.6/37, mb1 4.7/46, mb1mx4.6/58, mbtmp4.7/46, ML4.2/8, MS4.3/41, Ms1 4.3/41, ms1mx4.2/55, Error ellipse: s-maj=9.8km s-min=9.2km az=166.0*

OMAN **01** *02:49:50.5±0.7, 31°.61N×51°.09E, h7^{km}, Error ellipse: s-maj=15.4km s-min=5.3km az=60.0*

ISC 01 02:49:47.6±0.5, **31°.72N**±0°.02×**50°.94E**±0°.02, **h4**^{km}±2^{km}, **h4**^{km}**:pP-P, n1112,** σ**1**^{s}**.95**/1228, **mb5.0**/218, **MS4.3**/75, **39C-31D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBRJ	Brojen	0.33	55	Pg	Pg	02 49 51.9	-2.2
IBRJ				Sg	Sg	02 49 56.7	-1.7
IBRJ	Brojen	0.33	55	ePg	Pg	02 49 51.9	-2.2
IBRJ				eSg	Sg	02 49 56.8	-1.7
IBRJ				e		02 49 59.5	
	comp=N,1965µm,0.1s						
IBRJ				e		02 49 59.9	
	comp=E,2292µm,0.1s						
IBRJ				e		02 50 02.6	
	comp=Z,1598µm,0.3s						
ZNGN	Zangian	0.41	350	ePg	Pg	02 49 53.0	-2.5
ZNGN				e		02 50 01.3	
	comp=E,99nm,0.3s						
ZNGN				e		02 50 01.4	
	comp=N,99nm,0.4s						
ZNGN				e		02 50 01.5	
	comp=Z,99nm,0.2s						
ZNGN	Zangian	0.41	350	ePg	Pg	02 49 53.0	-2.5
ROKH	ROKH	0.63	7	ePg	Pg	02 49 56.9	-2.9
ROKH				eSg	Sg	02 50 05.7	-2.3
ROKH				e		02 50 09.9	
	comp=N,99nm,0.2s						
ROKH				e		02 50 12.4	
	comp=E,99nm,0.4s						
ROKH				e		02 50 12.5	
	comp=Z,99nm,0.4s						
ROKH	ROKH	0.63	7	ePg	Pg	02 49 56.9	-2.9
ROKH				eSg	Sg	02 50 05.7	-2.3
IPIR	Pirpir	0.97	358	Pg	Pg	02 50 03.4	-2.7
IPIR	Pirpir	0.97	358	e		02 50 25.1	
	comp=N,56µm,0.2s						
IPIR				ePg	Pg	02 50 03.4	-2.7
IPIR				e		02 50 25.2	
	comp=Z,9µm,0.4s						
IPIR				e		02 50 27.8	
	comp=E,58µm,0.5s						
IGAR	Gharneh	1.16	53	e		02 50 25.7	
	comp=N,95µm,0.1s						
IGAR				ePg	Pg	02 50 07.0	-2.8
IGAR				e		02 50 28.8	
	comp=Z,77µm,0.3s						
IRAM	Ramesheh	1.23	85	Pg	Pg	02 50 08.6	-2.6
IRAM	Ramesheh	1.23	85	e		02 50 31.8	
	comp=N,51µm,0.2s						
IRAM				ePg	Pg	02 50 08.6	-2.6
IRAM				e		02 50 35.5	
	comp=E,37µm,0.2s						
IRAM				e		02 50 41.0	
	comp=Z,18µm,0.3s						
IZEF	Zefreh	1.66	45	Pg	Pn	02 50 15.3	-2.5
IZEF	Zefreh	1.66	45	ePg	Pn	02 50 15.4	-2.4
IZEF				e		02 50 44.2	
	comp=E,70µm,0.5s						
IZEF				e		02 50 45.0	
	comp=N,100µm,0.4s						
IZEF				e		02 50 48.5	
	comp=Z,74µm,0.3s						
IZEF	Zefreh	1.66	45	ePg	Pn	02 50 15.4	-2.4
IKLH	Kolahrood	1.69	18	Pn	Pn	02 50 15.7	-2.3
IKLH	Kolahrood	1.69	18	ePn	Pn	02 50 15.8	-2.3
IKLH				e		02 50 50.0	
	comp=N,8µm,0.4s						
IKLH				e		02 50 51.7	
	comp=Z,17µm,0.6s						
IKLH				e		02 51 01.1	
	comp=E,81µm,0.4s						
IKLH	Kolahrood	1.69	18	ePn	Pn	02 50 15.8	-2.3
SHGR	Shooshtar-Gavs	1.86	283	P	Pb	02 50 22.0	-0.2
SHGR	Shooshtar-Gavs	1.86	283	eP	Pb	02 50 22.7	+0.5
SHGR				IAML		02 50 55.2	
	comp=N,7µm,0.6s						
SHGR				IAML		02 51 07.4	
	comp=E,10µm,0.6s						
SHGR	Shooshtar-Gavs	1.86	283	ePn	Pb	02 50 22.7	+0.5
SHGR	Shooshtar-Gavs	1.86	283	eP	Pb	02 50 22.7	+0.5
NASN	Na’in	1.92	55	Pn	Pb	02 50 22.0	-1.3
NASN	Na’in	1.92	55	ePn	Pb	02 50 22.2	-1.1
NASN				IAML		02 50 59.0	
	comp=N,4µm,0.6s						
NASN	Na’in	1.92	55	ePn	Pb	02 50 22.2	-1.1
NASN	Na’in	1.92	55	ePn	Pb	02 50 22.2	-1.1
AHWZ	Ahwaz	2.00	259	ePn	Pn	02 50 20.1	-2.0
AHWZ	Ahwaz	2.00	259	ePn	Pn	02 50 20.1	-2.0
IKAZ	Kazeroun	2.08	158	Pn	Pg	02 50 27.1	-0.3
IKAZ	Kazeroun	2.08	158	ePn	Pg	02 50 27.2	-0.2
IKAZ				e		02 51 08.2	
	comp=Z,23µm,0.3s						
IKAZ				e		02 51 12.4	
	comp=N,76nm,0.4s						
IKAZ	Kazeroun	2.08	158	Pn	Pg	02 50 27.1	-0.3
QAM	Ghamsar	2.08	12	ePn	Pn	02 50 23.0	-0.5
QAM				eSg	Sb	02 50 52.2	-0.2
QAM				e		02 51 00.4	
	comp=Z,94µm,0.2s						
QAM				e		02 51 00.7	
	comp=E,62µm,0.3s						
QAM				e		02 51 03.6	
	comp=N,41µm,0.3s						
KHMZ	Khomeyn	2.18	338	Pn	Pn	02 50 26.0	+1.1
KHMZ				Sg	Sg	02 50 57.0	-0.7
KHMZ	Khomeyn	2.18	338	ePn	Pb	02 50 26.9	-0.8
KHMZ				eSg	Sg	02 50 57.8	+0.2
KHMZ				IAML		02 51 01.6	
	comp=E,4µm,0.6s						
KHMZ				IAML		02 51 06.6	
	comp=N,3µm,0.6s						
KHMZ	Khomeyn	2.18	338	ePn	Pb	02 50 26.9	-0.8
KHMZ	Khomeyn	2.18	338	ePn	Pb	02 50 26.9	-0.8
KHMZ				eSg	Sg	02 50 57.8	+0.2
ISAD	Sadrabad	2.34	84	Pn	Pn	02 50 28.3	+1.1
ISAD	Sadrabad	2.34	84	ePn	Pn	02 50 28.4	+1.2
ISAD				e		02 51 12.3	
	comp=Z,80µm,0.4s						
ISAD				e		02 51 12.4	
	comp=E,3µm,0.4s						
ISAD				e		02 51 14.3	
	comp=N,63µm,0.4s						
ISAD	Sadrabad	2.34	84	Pn	Pn	02 50 28.3	+1.1
GHVR	GHOM	2.77	6	Pn	Pn	02 50 34.0	+1.1
GHVR	GHOM	2.77	6	ePn	Pn	02 50 34.5	+1.6
GHVR	GHOM	2.77	6	ePn	Pn	02 50 34.5	+1.6
GHVR	GHOM	2.77	6	ePn	Pn	02 50 34.5	+1.6
ICHK	Chekchek	2.99	79	ePn	Pn	02 50 38.0	+2.0
ICHK				e		02 51 33.2	
	comp=E,30µm,0.5s						
ICHK				e		02 51 38.3	
	comp=N,49µm,0.7s						
ICHK				e		02 51 47.5	
	comp=Z,26µm,0.3s						
ICHK	Chekchek	2.99	79	ePn	Pn	02 50 38.0	+2.0
IMEH	Mehriz	3.15	95	Pn	Pn	02 50 40.5	+2.3
IMEH	Mehriz	3.15	95	ePn	Pn	02 50 40.6	+2.3
IMEH				e		02 51 41.2	
	comp=N,33µm,0.4s						
IMEH				e		02 51 45.5	
	comp=Z,17µm,0.4s						
IMEH	Mehriz	3.15	95	Pn	Pn	02 50 40.5	+2.3
HSAM	Samen	3.17	322	ePn	Pn	02 50 39.3	+0.8
HSAM	Samen	3.17	322	ePn	Pn	02 50 39.3	+0.8
IVRN	Varamin	3.34	11	Pn	Pb	02 50 44.8	-2.6
IVRN	Varamin	3.34	11	ePn	Pb	02 50 44.9	-2.5
IVRN				e		02 51 06.2	
	comp=E,36µm,0.5s						
IVRN				e		02 51 51.0	
	comp=Z,40µm,0.4s						
IVRN	Varamin	3.34	11	Pn	Pb	02 50 44.8	-2.6
HAGD	Aghdareh	3.44	335	ePn	Pn	02 50 43.0	+0.7
HAGD				e		02 51 42.4	
	comp=Z,99nm,0.4s						
HAGD				e		02 51 48.8	
	comp=E,99nm,0.3s						
HAGD				e		02 51 55.0	
	comp=N,99nm,0.3s						
HAGD	Aghdareh	3.44	335	ePn	Pn	02 50 43.0	+0.7
IBZA	Bozab	3.77	318	Pn	Pn	02 50 47.2	+0.4
IBZA	Bozab	3.77	318	ePn	Pn	02 50 47.2	+0.4
IBZA				e		02 52 01.7	
	comp=N,99nm,1.4s						
IBZA				e		02 52 22.0	
	comp=E,99nm,1.7s						
IBZA				e		02 52 23.4	
	comp=Z,4µm,1.7s						
IBZA	Bozab	3.77	318	ePn	Pn	02 50 47.2	+0.4
IKOM	Komasi	3.79	311	Pn	Pn	02 50 47.6	+0.7
IKOM	Komasi	3.79	311	ePn	Pn	02 50 47.7	+0.8
IKOM				e		02 52 21.7	
	comp=N,99nm,1.3s						
IKOM				e		02 52 30.4	
	comp=E,99nm,1.8s						
IKOM				e		02 52 45.3	
	comp=Z,99nm,2.0s						
IKOM	Komasi	3.79	311	Pn	Pn	02 50 47.6	+0.7
GHIR	Ghir-Karzin	3.85	152	Pn	Pn	02 50 48.0	+0.2
GHIR	Ghir-Karzin	3.85	152	ePn	Pn	02 50 48.9	+1.1
GHIR	Ghir-Karzin	3.85	152	ePn	Pn	02 50 48.9	+1.1
GHIR	Ghir-Karzin	3.85	152	ePn	Pn	02 50 48.9	+1.1
IBAF	Bafgh	3.95	91	Pn	Pn	02 50 51.5	+2.4
IBAF	Bafgh	3.95	91	ePn	Pn	02 50 51.6	+2.4
IBAF				e		02 51 07.0	
	comp=Z,10µm,0.3s						
IBAF				e		02 51 07.4	
	comp=E,15µm,0.5s						
IBAF				e		02 52 06.1	
	comp=N,22µm,0.8s						
IBAF	Bafgh	3.95	91	Pn	Pn	02 50 51.5	+2.4
IDMV	Damavand	3.96	13	Pn	Pn	02 50 50.8	+1.4
IDMV	Damavand	3.96	13	ePn	Pn	02 50 50.8	+1.4
IDMV				e		02 52 06.4	
	comp=N,21µm,0.3s						
IDMV				e		02 52 17.4	
	comp=E,21µm,0.5s						
IDMV				e		02 52 30.2	
	comp=Z,19µm,0.6s						
IDMV	Damavand	3.96	13	ePn	Pn	02 50 50.8	+1.4
IMHD	Mahdasht	3.96	357	Pn	Pn	02 50 51.0	+1.7
IMHD	Mahdasht	3.96	357	ePn	Pn	02 50 51.1	+1.7
IMHD				e		02 50 59.6	
	comp=Z,20µm,0.3s						
IMHD				e		02 52 06.4	
	comp=N,23µm,0.3s						
IMHD				e		02 52 07.9	
	comp=E,32µm,0.4s						
IMHD	Mahdasht	3.96	357	Pn	Pn	02 50 51.0	+1.7
ILAS	Lasjerd	4.03	24	Pn	Pn	02 50 52.3	+2.0
ILAS	Lasjerd	4.03	24	ePn	Pn	02 50 52.3	+2.0
ILAS	Lasjerd	4.03	24	ePn	Pn	02 50 52.3	+2.0
HKZM	Kohzaman	4.03	336	ePn	Pn	02 50 50.6	+0.3
HKZM				e		02 52 02.2	
	comp=N,99nm,0.4s						
HKZM				e		02 52 03.9	
	comp=E,99nm,0.4s						
HKZM				e		02 52 09.0	
	comp=Z,99nm,0.4s						
HKZM	Kohzaman	4.03	336	ePn	Pn	02 50 50.6	+0.3
KCHF	Cheshme Sefid,	4.15	309	ePn	Pn	02 50 51.5	-0.5
KCHF				e		02 52 12.0	
	comp=N,99nm,1.2s						
KCHF				e		02 52 24.7	
	comp=Z,99nm,1.2s						
KCHF				e		02 52 32.8	
	comp=E,99nm,1.2s						
KCHF	Cheshme Sefid,	4.15	309	ePn	Pn	02 50 51.5	-0.5
IAFJ	Afjeh	4.18	9	Pn	Pn	02 50 53.4	+1.0
IAFJ	Afjeh	4.18	9	ePn	Pn	02 50 53.5	+1.0
IAFJ				e		02 52 07.1	
	comp=E,43µm,0.3s						
IAFJ				e		02 52 13.9	
	comp=Z,16µm,0.4s						
IAFJ				e		02 52 15.0	
	comp=N,36µm,0.4s						
IAFJ	Afjeh	4.18	9	Pn	Pn	02 50 53.4	+1.0
THKV	Tehran--Karaj	4.19	359	Pn	Pn	02 50 54.0	+1.5
THKV	Tehran--Karaj	4.19	359	ePn	Pn	02 50 54.2	+1.7
THKV	Tehran--Karaj	4.19	359	ePn	Pn	02 50 54.2	+1.7
THKV	Tehran--Karaj	4.19	359	ePn	Pn	02 50 54.2	+1.7
IFIR	Firoozkooh	4.20	21	Pn	Pn	02 50 54.0	+1.4
IFIR	Firoozkooh	4.20	21	ePn	Pn	02 50 54.1	+1.4
IFIR				e		02 51 20.4	
	comp=Z,5µm,0.2s						
IFIR				e		02 52 30.6	
	comp=E,20µm,0.6s						
IFIR				e		02 52 40.1	
	comp=N,20µm,0.5s						
IFIR	Firoozkooh	4.20	21	Pn	Pn	02 50 54.0	+1.4
IVIS	Veis	4.43	310	Pn	Pn	02 50 55.2	-0.5
IVIS	Veis	4.43	310	ePn	Pn	02 50 55.2	-0.5
IVIS				e		02 52 24.9	
	comp=N,50µm,1.0s						
IVIS				e		02 52 28.4	
	comp=E,13µm,0.6s						
IVIS				e		02 52 28.6	
	comp=Z,10µm,0.4s						
IVIS	Veis	4.43	310	ePn	Pn	02 50 55.2	-0.5
IANJ	Anjilo	4.49	33	Pn	Pn	02 50 57.7	+1.1
IANJ	Anjilo	4.49	33	ePn	Pn	02 50 57.7	+1.1
IANJ				e		02 52 37.0	
	comp=Z,13µm,0.4s						
IANJ	Anjilo	4.49	33	ePn	Pn	02 50 57.7	+1.1
ISHM	Shahmirzad	4.53	25	Pn	Pn	02 50 57.6	+0.4
ISHM	Shahmirzad	4.53	25	ePn	Pn	02 50 57.6	+0.4
ISHM				e		02 51 22.4	
	comp=Z,16µm,0.4s						
ISHM				e		02 51 24.8	
	comp=E,223nm,0.2s						
ISHM	Shahmirzad	4.53	25	Pn	Pn	02 50 57.6	+0.4
ILIN	Lien	4.61	315	Pn	Pn	02 50 58.6	+0.2
ILIN	Lien	4.61	315	ePn	Pn	02 50 58.7	+0.3
ILIN				e		02 51 56.8	
	comp=Z,8µm,0.3s						
ILIN				e		02 51 59.6	
	comp=E,13µm,0.4s						
ILIN	Lien	4.61	315	Pn	Pn	02 50 58.6	+0.2
IALA	Alasht	4.62	19	ePn	Pn	02 51 00.5	+2.0
IALA				e		02 52 29.9	
	comp=Z,18µm,0.4s						
IALA				e		02 52 41.2	
	comp=E,41µm,0.6s						
IALA	Alasht	4.62	19	ePn	Pn	02 51 00.5	+2.0
IPRN	Peran	4.66	14	ePn	Pn	02 51 00.8	+1.9
IPRN				e		02 51 20.9	
	comp=Z,25µm,0.3s						
IPRN				e		02 51 24.3	
	comp=E,31µm,0.4s						
IPRN				e		02 52 32.3	
	comp=N,33µm,0.4s						
IGZV	Ghazvin	4.70	353	ePn	Pn	02 51 00.6	+1.1
IGZV				e		02 51 18.9	
	comp=Z,10µm,0.3s						
IGZV				e		02 52 23.4	
	comp=N,21µm,0.4s						
IGZV				e		02 52 34.0	
	comp=E,25µm,0.5s						
IGZV	Ghazvin	4.70	353	ePn	Pn	02 51 00.6	+1.1
KHGB	Koh Gabri	4.94	104	ePn	Pn	02 51 04.4	+1.7
KHGB				e		02 52 49.7	
	comp=N,99nm,1.9s						
KHGB				e		02 53 06.2	
	comp=Z,99nm,2.1s						
KHGB				e		02 53 12.7	
	comp=E,99nm,2.4s						
KHGB	Koh Gabri	4.94	104	ePn	Pn	02 51 04.4	+1.7
TVBK	TV Kerman	5.29	108	ePn	Pn	02 51 10.2	+2.4
TVBK				e		02 52 56.4	
	comp=E,99nm,0.2s						
TVBK				e		02 53 15.5	
	comp=N,99nm,0.4s						
TVBK				e		02 53 24.4	
	comp=Z,99nm,0.9s						
TVBK	TV Kerman	5.29	108	ePn	Pn	02 51 10.2	+2.4
IGLO	Ghaloghah	5.34	26	ePn	Pn	02 51 11.7	+3.4
IGLO				e		02 51 36.8	
	comp=Z,14µm,0.3s						
IGLO				e		02 51 44.3	
	comp=E,23µm,0.3s						
IGLO				e		02 53 05.1	
	comp=N,47µm,0.5s						
NGRK	Negar Kerman	5.40	111	ePn	Pn	02 51 11.9	+2.7
NGRK				e		02 53 44.2	
	comp=N,99nm,2.2s						
NGRK				e		02 53 52.4	
	comp=Z,99nm,2.1s						
NGRK				e		02 55 12.3	
	comp=E,99nm,1.6s						
NGRK	Negar Kerman	5.40	111	ePn	Pn	02 51 11.9	+2.7
CHMN	Cheshme madani	5.97	106	ePn	Pn	02 51 19.3	+2.2
CHMN				e		02 52 06.2	
	comp=Z,99nm,0.4s						
CHMN				e		02 53 32.6	
	comp=N,99nm,1.2s						
CHMN				e		02 53 51.5	
	comp=E,99nm,3.0s						
CHMN	Cheshme madani	5.97	106	ePn	Pn	02 51 19.3	+2.2
GENO	Geno	6.26	132	ePn	Pn	02 51 22.0	+1.0
GENO				e		02 54 12.6	
	comp=N,99nm,2.2s						
GENO				e		02 54 13.0	
	comp=E,99nm,1.8s						
GENO				e		02 54 39.7	
	comp=Z,99nm,3.0s						
GENO	Geno	6.26	132	ePn	Pn	02 51 22.0	+1.0
NIAN	Nian	6.59	127	ePn	Pn	02 51 25.0	-0.3
NIAN				e		02 54 03.5	
	comp=E,99nm,1.6s						
NIAN				e		02 54 17.2	
	comp=Z,99nm,2.5s						
NIAN				e		02 54 26.6	
	comp=N,99nm,2.6s						
NIAN	Nian	6.59	127	ePn	Pn	02 51 25.0	-0.3
ITEG	Tejag	6.71	78	ePn	Pn	02 51 30.1	+3.0
ITEG				e		02 53 34.7	
	comp=Z,12µm,0.7s						
ITEG				e		02 53 37.5	
	comp=N,6µm,0.4s						
ITEG				e		02 53 43.0	
	comp=E,7µm,0.4s						
ITEG	Tejag	6.71	78	ePn	Pn	02 51 30.1	+3.0
IBST	Bostanabad	6.84	332	ePn	Pn	02 51 28.7	-0.2
IBST				e		02 51 57.8	
	comp=Z,2µm,0.4s						

IBST				e		02 53 51.9	
	comp=E,5µm,0.8s						
IBST				e		02 54 28.5	
	comp=N,8µm,1.0s						
IBST	Bostanabad	6.84	332	ePn	Pn	02 51 28.7	-0.2
IKOO	Kooshah	6.88	82	ePn	Pn	02 51 31.7	+2.2
IKOO				e		02 53 43.6	
	comp=E,5µm,0.5s						
IKOO				e		02 53 54.3	
	comp=Z,5µm,0.6s						
IKOO				e		02 53 57.7	
	comp=N,4µm,0.4s						
IKOO	Kooshah	6.88	82	ePn	Pn	02 51 31.7	+2.2
SHME	Shamm	7.26	140	iP	Pn	02 51 34.3	-0.2
	SNR=13						
SHME	Shamm	7.26	140	ePn	Pn	02 51 34.2	-0.2
SHME	Shamm	7.26	140	P	Pn	02 51 35.5	+1.0
	SNR=13						
KHSK	Kohestak	7.27	131	ePn	Pn	02 51 35.2	+0.5
KHSK				e		02 55 36.1	
	comp=Z,99nm,2.2s						
KHSK				e		02 55 47.7	
	comp=E,99nm,2.2s						
KHSK				e		02 56 41.0	
	comp=N,99nm,1.8s						
KHSK	Kohestak	7.27	131	ePn	Pn	02 51 35.2	+0.5
UMQ	Umm Al-Quwin	7.43	145	iP	Pn	02 51 37.8	+1.0
	SNR=7.9						
BANOM	Banah	7.44	140	P	Pn	02 51 37.7	+0.7
	SNR=38						
BANOM				S	Sn	02 53 02.8	+0.9
BANOM	Banah	7.44	140	iP	Pn	02 51 37.1	+0.1
	SNR=38						
BANOM	Banah	7.44	140	P	Pn	02 51 37.7	+0.7
	SNR=38						
BANOM				S	Sn	02 53 02.8	+0.9
IMON	Monand	7.52	76	ePn	Pn	02 51 40.3	+2.0
IMON				e		02 54 01.1	
	comp=E,4µm,0.4s						
IMON	Monand	7.52	76	ePn	Pn	02 51 40.3	+2.0
ITBZ	Tabriz	7.60	330	e		02 50 02.3	
	comp=E,736nm,0.1s						
ITBZ				ePn	Pn	02 51 40.5	+1.2
ITBZ				e		02 54 10.0	
	comp=Z,768nm,0.3s						
ITBZ				e		02 59 36.5	
	comp=N,753nm,0.1s						
IDAH	Dahanechah	7.63	80	ePn	Pn	02 51 44.8	+5.0
IDAH				e		02 54 20.0	
	comp=E,7µm,0.5s						
IDAH				e		02 54 35.6	
	comp=Z,6µm,0.7s						
IDAH				e		02 54 41.3	
	comp=N,8µm,0.7s						
IDAH	Dahanechah	7.63	80	ePn	Pn	02 51 44.8	+5.0
MSFE	Esma-Masafi	7.82	143	iP	Pn	02 51 42.2	0.0
	SNR=28						
MSFE	Esma-Masafi	7.82	143	ePn	Pn	02 51 42.5	+0.3
MSFE	Esma-Masafi	7.82	143	ePn	Pn	02 51 42.5	+0.3
MSFE	Esma-Masafi	7.82	143	P	Pn	02 51 42.8	+0.6
	SNR=28						
MSFE				S	Sn	02 53 12.4	+1.2
ISHB	Shabestar	7.87	328	ePn	Pn	02 51 44.2	+1.1
ISHB				e		02 52 37.2	
	comp=Z,996nm,0.5s						
ISHB				e		02 53 46.9	
	comp=N,2µm,0.3s						
ISHB				e		02 54 16.4	
	comp=E,3µm,0.5s						
NAZ	Nazwa, Dubai	7.89	147	P	Pn	02 51 45.0	+1.9
	SNR=103						
NAZ				S	Sn	02 53 14.0	+1.2
NAZ	Nazwa, Dubai	7.89	147	iP	Pn	02 51 43.8	+0.7
	SNR=103						
NAZ	Nazwa, Dubai	7.89	147	ePn	Pn	02 51 44.5	+1.4
NAZ	Nazwa, Dubai	7.89	147	P	Pn	02 51 43.8	+0.7
	SNR=103						
NAZ	Nazwa, Dubai	7.89	147	ePn	Pn	02 51 44.5	+1.4
NAZ				S	Sn	02 53 14.0	+1.2
ISFR	Sfrayin	7.90	46	ePn	Pn	02 51 46.9	+3.4
ISFR				e		02 51 58.2	
	comp=N,3µm,0.4s						
ISFR				e		02 52 02.5	
	comp=Z,3µm,0.3s						
ISFR				e		02 54 46.7	
	comp=E,5µm,0.5s						
ISFR	Sfrayin	7.90	46	ePn	Pn	02 51 46.9	+3.4
MDH	Madha	7.94	142	iP	Pn	02 51 43.7	-0.2
	SNR=57						
MDH	Madha	7.94	142	P	Pn	02 51 44.1	+0.3
	SNR=10.0						
MDH				S	Sn	02 53 13.8	-0.4
IKRD	Kardeh	8.05	49	ePn	Pb	02 51 58.1	-10
IKRD				e		02 55 02.3	
	comp=Z,1µm,0.5s						
IKRD				e		02 55 18.2	
	comp=E,1µm,0.5s						
IKRD				e		02 55 31.6	
	comp=N,871nm,0.5s						
IKRD	Kardeh	8.05	49	ePn	Pb	02 51 58.1	-10
ASUD	Al Ashush, Dub	8.05	150	P	Pn	02 51 47.6	+2.2
	SNR=47						
ASUD	Al Ashush, Dub	8.05	150	iP	Pn	02 51 46.3	+0.9
	SNR=47						
ASUD	Al Ashush, Dub	8.05	150	ePn	Pn	02 51 46.0	+0.6
ASUD	Al Ashush, Dub	8.05	150	ePn	Pn	02 51 46.0	+0.6
ASUD	Al Ashush, Dub	8.05	150	P	Pn	02 51 46.3	+0.9
	SNR=47						
IAKL	Akhelmad	8.10	51	ePn	Pn	02 51 51.4	+5.1
IAKL				e		02 54 48.5	
	comp=E,2µm,0.8s						
IAKL				e		02 54 51.8	
	comp=Z,2µm,0.8s						
IAKL				e		02 54 52.3	
	comp=N,2µm,0.5s						
UOSS	Minazif	8.18	144	ePn	Pn	02 51 46.9	-0.3
UOSS				eSn	Sn	02 53 17.5	-2.7
UOSS	Minazif	8.18	144	P	Pn	02 51 47.8	+0.6
	SNR=34						
UOSS				S	Sn	02 53 18.6	-1.6
UOSS	Minazif	8.18	144	iP	Pn	02 51 46.8	-0.3
	SNR=19						
UOSS	Minazif	8.18	144	ePn	Pn	02 51 46.9	-0.3
UOSS	Minazif	8.18	144	P	Pn	02 51 47.8	+0.6
	SNR=34						
UOSS				eSn	Sn	02 53 17.5	-2.7
UOSS				S	Sn	02 53 18.6	-1.6
IMOG	Moghan	8.24	56	ePn	Pn	02 51 49.2	+1.0
IMOG				e		02 54 44.5	
	comp=Z,2µm,0.7s						
IMOG				e		02 54 50.4	
	comp=E,1µm,0.5s						
IMOG				e		02 55 10.1	
	comp=N,2µm,0.5s						
IMOG	Moghan	8.24	56	ePn	Pn	02 51 49.2	+1.0
HATD	Hatta, Dubai	8.25	145	P	Pn	02 51 49.0	+0.9
	SNR=50						
HATD				S	Sn	02 53 22.8	+1.0
HATD	Hatta, Dubai	8.25	145	iP	Pn	02 51 48.6	+0.5
	SNR=7.4						
HATD	Hatta, Dubai	8.25	145	ePn	Pn	02 51 48.8	+0.7
HATD	Hatta, Dubai	8.25	145	ePn	Pn	02 51 48.8	+0.7
HATD				S	Sn	02 53 22.8	+1.0
ISRO	Mashad	8.43	55	ePn	Pn	02 51 56.2	+5.6
ISRO				e		02 54 38.9	
	comp=N,32µm,1.1s						
ISRO				e		02 55 01.7	
	comp=Z,70µm,1.7s						
ISRO				e		02 55 03.0	
	comp=E,13µm,2.2s						
ISRO	Mashad	8.43	55	ePn	Pn	02 51 56.2	+5.6
IEMG	Emamgholi	8.53	46	ePn	Pn	02 51 55.9	+3.8
IEMG				e		02 52 06.4	
	comp=Z,697nm,0.2s						
IEMG				e		02 52 11.8	
	comp=N,1µm,0.2s						
IEMG				e		02 52 26.1	
	comp=E,2µm,0.3s						
IEMG	Emamgholi	8.53	46	ePn	Pn	02 51 55.9	+3.8
GEYT	Alibeck	8.55	42	Pn	Pn	02 51 53.9	+1.6
	comp=E,1.8nm,0.3s,baz=236,slow=16,SNR=19						
GEYT				Sn	Sn	02 53 30.7	+1.4
	baz=249,slow=24,SNR=1.6						
GYA0B	ALIBECK ARRAY	8.55	42	ePn	Pn	02 51 55.2	+2.9
GYA0B	ALIBECK ARRAY	8.55	42	ePn	Pn	02 51 55.2	+2.9
ASHT	Ashkhabad	8.72	43	P	Pn	02 52 00.9	+6.5
ASHT				pmax	pmax		
	comp=Z,111nm,0.7s						
ASHT				pmax	pmax		
	comp=Z,249nm,1.0s						
ASHT	Ashkhabad	8.72	43	P	Pn	02 52 00.9	+6.5
	comp=Z,249nm,1.0s						
ALNE	Al Ain	8.73	150	iP	Pn	02 51 55.1	+0.4
	SNR=30						
ALNE	Al Ain	8.73	150	ePn	Pn	02 51 55.2	+0.4
ALNE	Al Ain	8.73	150	ePn	Pn	02 51 55.2	+0.4
ALNE	Al Ain	8.73	150	P	Pn	02 51 56.8	+2.0
	SNR=26						
IMYA	Miami	8.89	56	ePn	Pn	02 52 02.7	+5.7
IMYA				e		02 52 51.0	
	comp=Z,2µm,0.5s						
IMYA				e		02 55 06.9	
	comp=N,4µm,0.6s						
IMYA				e		02 55 16.4	
	comp=E,6µm,0.9s						
IMYA	Miami	8.89	56	ePn	Pn	02 52 02.7	+5.7
SOHO	SOHO	9.03	145	iP	Pn	02 51 58.0	-0.7
	SNR=32						
SOHO	SOHO	9.03	145	P	Pn	02 51 59.0	+0.3
	SNR=20						
SOHO				S	Sn	02 53 40.3	-0.5
RAYN	Ar Rayn	9.48	212	ePn	Pn	02 52 03.6	-1.4
RAYN				eSn	Sn	02 53 46.9	-5.2
RAYN	Ar Rayn	9.48	212	iP	Pn	02 52 04.1	-0.9
	SNR=116						
RAYN	Ar Rayn	9.48	212	eP	Pn	02 52 03.6	-1.4
RAYN				e		02 53 46.9	
RAYN	Ar Rayn	9.48	212	P	Pn	02 52 04.1	-0.9
	SNR=116						
RAYN				eS	Sn	02 53 46.9	-5.2
ARQ	Araqi	9.70	148	P	Pn	02 52 09.1	+1.0
	SNR=17						
ARQ				S	Sn	02 53 55.5	-2.1
ARQ	Araqi	9.70	148	P	Pn	02 52 09.1	+1.0
	SNR=17						
ARQ				S	Sn	02 53 55.5	-2.1
GNI	Garni	9.80	331	Pn	Pn	02 52 12.9	+3.4
	comp=E,0.7nm,0.3s,baz=224,slow=0.6,SNR=16						
GNI				Lg	Lg	02 55 07.2	
	comp=E,0.3nm,0.3s,baz=106,slow=18,SNR=2.0						
GNI	Garni	9.80	331	ePn	Pn	02 52 11.9	+2.5
GNI				Lg	Lg	02 55 07.2	
GNI	Garni	9.80	331	iP	Pn	02 52 11.4	+2.0
	SNR=8.6						
GNI	Garni	9.80	331	ceP	Pn	02 52 09.7	+0.3
GNI				pmax	pmax		
	comp=Z,75nm,0.8s						
GNI	Garni	9.80	331	eP	Pn	02 52 09.7	+0.3
	comp=Z,75nm,0.8s						
GNI	Garni	9.80	331	ePn	Pn	02 52 11.9	+2.5
GNI				Lg	Lg	02 55 07.2	
HOQ	Hoqain	9.87	144	P	Pn	02 52 11.8	+1.4
	SNR=12						
HOQ	Hoqain	9.87	144	ePn	Pn	02 52 11.1	+0.7
HOQ	Hoqain	9.87	144	ePn	Pn	02 52 11.1	+0.7
HOQ	Hoqain	9.87	144	P	Pn	02 52 11.8	+1.4
	SNR=12						
AKT	Akhty	10.08	346	eP	Pn	02 52 15.4	+2.2
AKT				eS	Sn	02 54 15.0	+8.2
AKT				pmax	pmax		
	comp=Z,14nm,0.8s						
AKT				smax	smax		
	comp=N,11nm,0.4s						
AKT				smax	smax		
	comp=E,5.0nm,0.8s						
AKT	Akhty	10.08	346	eP	Pn	02 52 15.4	+2.2
	comp=E,11nm,0.4s						
AKT				eS	Sn	02 54 15.0	+8.2
BIDO	Bidbid	10.35	140	P	Pn	02 52 18.0	+1.1
	SNR=6.7						
BIDO	Bidbid	10.35	140	ePn	Pn	02 52 16.7	-0.2
BIDO	Bidbid	10.35	140	ePn	Pn	02 52 16.7	-0.2
BIDO	Bidbid	10.35	140	P	Pn	02 52 18.0	+1.1
	SNR=6.7						
BSY	Bisya	10.53	147	P	Pn	02 52 22.8	+3.5
	SNR=14						
BSYO	Bisya	10.56	146	P	Pn	02 52 22.8	+3.1
	SNR=14						
SMDO	Samad	10.69	142	P	Pn	02 52 24.0	+2.4
	SNR=16						
SMDO	Samad	10.69	142	P	Pn	02 52 24.0	+2.4
	SNR=16						
WSAR	Wadi Sarin	10.85	139	Pn	Pn	02 52 23.3	-0.5
	comp=E,6.4nm,0.3s,baz=5.2,slow=10.0,SNR=47						
WSAR				Sn	Sn	02 54 21.6	-4.2
	comp=E,1.7nm,0.3s,baz=215,slow=18,SNR=3.4						
TBLG	Delisi	11.16	335	ePn	Pn	02 52 29.9	+2.0
TBLG	Delisi	11.16	335	eP	Pn	02 52 29.9	+2.0
TBLG	Delisi	11.16	335	ePn	Pn	02 52 29.9	+2.0
JMDO	Jabal Madar	11.28	144	P	Pn	02 52 32.1	+2.4
	SNR=7.9						
JMDO	Jabal Madar	11.28	144	P	Pn	02 52 32.1	+2.4
	SNR=7.9						
MAK	Makhachkala	11.55	347	eP	Pn	02 52 36.0	+2.8
MAK				eS	Sn	02 54 48.0	+5.4
MAK				pmax	pmax		
	comp=Z,133nm,1.3s						
MAK				MLR	MLR		
	comp=Z,845nm,16.0s						
MAK	Makhachkala	11.55	347	eP	Pn	02 52 36.0	+2.8
	comp=Z,133nm,1.3s						
MAK				eS	Sn	02 54 48.0	+5.4
	comp=Z,845nm,16.0s						
ASF	Jabal al Asfar	11.94	276	Pn	Pn	02 52 36.3	-2.4
	comp=Z,3.8nm,0.3s,baz=44,slow=9.2,SNR=64						
ASF				Sn	Sn	02 54 43.2	-9.2
	comp=Z,1.0nm,0.3s,baz=3.5,slow=19,SNR=5.2						
ASF				Lg	Lg	02 56 25.7	
	baz=216,slow=19,SNR=2.4						
ASF				LR	LR	02 58 42.4	
	comp=Z,1µm,18.9s,baz=52,slow=45						
GROC	Groznyy	12.17	342	eP	Pn	02 52 40.9	-0.8
GROC				eS	Sn	02 54 59.9	+2.1
GROC				pmax	pmax		
	comp=Z,13nm,1.0s						
GROC	Groznyy	12.17	342	eP	Pn	02 52 40.9	-0.8
	comp=Z,13nm,1.0s						
GROC				eS	Sn	02 54 59.9	+2.1
ZEI	Tsey	12.39	335	eP	Pn	02 52 46.1	+1.2
ZEI				pmax	pmax		
	comp=Z,23nm,0.9s						
MHTO	MHTO	12.40	148	P	Pn	02 52 46.2	+1.3
	SNR=29						
MHTO				S	Sn	02 55 00.8	-2.8
KSHT	Keshet	12.86	280	Pn	Pn	02 52 49.8	-1.4
KSDI	Kefar Szold	12.99	281	Pn	Pn	02 52 51.6	-1.4
HMDT	Nahal Hemdat	13.10	276	Pn	Pn	02 52 54.5	0.0
NCK	Nalchik	13.11	336	iP	Pn	02 52 56.5	+1.9
NCK	Nalchik	13.11	336	iP	Pn	02 52 56.5	+1.9
DQM	DQM	13.15	152	P	Pn	02 52 57.0	+1.8
	SNR=11						
MMLI	Mount Malkishu	13.18	277	Pn	Pn	02 52 55.8	+0.2
MMA0B	Mount Meron ar	13.20	280	Pn	Pn	02 52 54.7	-1.2
MMAI	Mount Meron Ar	13.20	280	Pn	Pn	02 52 53.5	-2.4
	comp=Z,3.2nm,0.3s,baz=93,slow=16,SNR=8.6						
MMAI				Sn	Sn	02 55 19.6	-3.7
	comp=Z,1.3nm,0.3s,baz=88,slow=25,SNR=3.2						
MMAI				Lg	Lg	02 56 50.5	
	baz=70,slow=35,SNR=2.2						
MMAI				LR	LR	02 59 33.1	
	comp=Z,1µm,18.9s,baz=170,slow=44						
NEY	Neytrino	13.22	333	iP	Pn	02 52 57.4	+1.1
NEY	Neytrino	13.22	333	iP	Pn	02 52 57.4	+1.1
DSI	Dead Sea	13.26	273	Pn	Pn	02 52 57.3	+0.6
SLTI	Sal'it	13.51	276	Pn	Pn	02 53 00.1	0.0
OFRI	'Ofer	13.55	278	Pn	Pn	02 53 01.1	+0.5
ZFRI	Zfri	13.55	269	Pn	Pn	02 53 01.0	+0.4
KBZ	Khabaz	13.57	334	Pn	Pn	02 53 05.0	+4.3
	comp=Z,0.2nm,0.3s,baz=154,slow=9.4,SNR=14						
PRNI	Paran	13.73	268	Pn	Pn	02 53 02.5	-0.7
KVAR	Kislovodsk Arr	13.84	334	Pn	Pn	02 53 07.1	+2.6
	baz=61,slow=0.9,SNR=16						
KIV	Kislovodsk	13.84	334	ePn	Pn	02 53 05.9	+1.3
KIV	Kislovodsk	13.84	334	P	Pn	02 53 08.0	+3.4
	SNR=16						
KIV	Kislovodsk	13.84	334	iP	Pn	02 53 07.1	+2.5
	SNR=14						
KIV	Kislovodsk	13.84	334	eP	Pn	02 53 06.6	+2.0
KIV				eS	Sn	02 55 43.6	+4.8
KIV				pmax	pmax		
	comp=Z,51nm,1.1s						
KIV				MLR	MLR		
	comp=Z,490nm,10.0s						
KIV	Kislovodsk	13.84	334	ePn	Pn	02 53 05.9	+1.3
KIV	Kislovodsk	13.84	334	eP	Pn	02 53 06.6	+2.0
	comp=Z,51nm,1.1s						
KIV				eS	Sn	02 55 43.6	+4.8
	comp=Z,490nm,10.0s						
RMNI	Mount Ramon	13.90	270	Pn	Pn	02 53 05.2	-0.3
EIL	Elat	13.91	266	Pn	P	02 53 54.0	+40
	comp=Z,1.1nm,0.3s,baz=66,slow=8.4,SNR=11						
EIL				Lg	Lg	02 58 03.9	
	comp=Z,0.5nm,0.3s,baz=225,slow=19,SNR=2.0						
EIL	Elat	13.91	266	Pn	Pn	02 53 04.6	-1.0
MBRI	Mt Berech	13.92	266	Pn	Pn	02 53 05.4	-0.3
WHFO	Wadi Hawf	13.97	169	P	Pn	02 53 08.0	+1.5
	SNR=6.2						
WHFO	Wadi Hawf	13.97	169	P	Pn	02 53 08.0	+1.5
	SNR=6.2						
SOC	Sochi	14.79	326	eP	Pn	02 53 18.8	+1.3
SOC				e		02 56 07.6	
SOC				pmax	pmax		
	comp=Z,24nm,1.1s						
SOC				MLR	MLR		
	comp=Z,1µm,12.0s						
SOC	Sochi	14.79	326	eP	Pn	02 53 18.8	+1.3
	comp=Z,24nm,1.1s						
SOC				eS	Sn	02 56 07.6	+5.7
	comp=Z,1µm,12.0s						
CSS	Mathiatis	15.07	287	ePn	Pn	02 53 19.9	-1.4
	comp=Z,16nm,0.8s						
CSS	Mathiatis	15.07	287	P	Pn	02 53 16.8	-4.6
CSS	Mathiatis	15.07	287	P	P	02 53 24.2	-2.6
CSS	Mathiatis	15.07	287	ePn	Pn	02 53 19.9	-1.4
	comp=Z,16nm,0.8s						
MAMC	Mammari	15.19	288	P	Pn	02 53 25.6	+2.7
SZAC	Souni	15.41	286	P	P	02 53 30.7	+0.1
KBL	Kabul	15.43	75	ePn	Pn	02 53 27.9	+1.6
	comp=Z,62nm,1.3s						
KBL	Kabul	15.43	75	eP	Pn	02 53 27.9	+1.6
KBL				pmax	pmax		
	comp=Z,62nm,1.3s						
KBL	Kabul	15.43	75	ePn	Pn	02 53 27.9	+1.6
	comp=Z,62nm,1.3s						
ALFC	Alefka	15.69	288	P	Pn	02 53 30.4	+0.8
PPCY	Paphos	15.87	286	P	P	02 53 36.1	+0.5
AKMC	Akamas	15.89	287	P	P	02 53 36.5	+0.5
BR131	Keskin Array S	16.15	304	ePn	Pn	02 53 35.9	+0.4
BR131	Keskin Array S	16.15	304	ePn	Pn	02 53 35.8	+0.3
BRTR	Keskin Array B	16.15	304	Pn	Pn	02 53 35.9	+0.3
	comp=Z,1.0nm,0.3s,baz=123,slow=12,SNR=43						
BRTR				LR	LR	03 01 04.6	
	comp=Z,2µm,18.8s,baz=110,slow=42						
BRTR				ScP	ScP	03 02 03.1	-3.3
	comp=Z,0.0nm,0.3s,baz=133,slow=5.4,SNR=5.2						
ILGA	Ilgaz	16.68	309	ePn	P	02 53 44.1	-0.8
	comp=Z,222nm,1.8s						
ILGA	Ilgaz	16.68	309	ePn	P	02 53 44.1	-0.8
	comp=Z,222nm,1.8s						
ANN	Anapa	16.80	325	eP	Pn	02 53 42.7	-0.9
ANN				eS	Sn	02 56 52.8	+2.3
ANN				pmax	pmax		
	comp=Z,19nm,1.0s						
ANN				MLR	MLR		
	comp=N,3µm,15.0s						
ANN				MLR	MLR		
	comp=Z,1µm,15.0s						
ANN				MLR	MLR		
	comp=E,189nm,15.0s						
ANN	Anapa	16.80	325	eP	Pn	02 53 42.7	-0.9
	comp=E,19nm,1.0s						
ANN				eS	Sn	02 56 52.8	+2.3
	comp=E,1µm,15.0s						
ANTO	Ankara	16.80	304⇑	iP	Pn	02 53 43.5	-0.3
ANTO	Ankara	16.80	304	ePn	Pn	02 53 44.7	+0.9
	comp=E,64nm,0.7s						
ANTO	Ankara	16.80	304	P	P	02 53 48.4	+2.4
	SNR=15						
ANTO	Ankara	16.80	304	eP	Pn	02 53 44.7	+0.9
ANTO				pmax	pmax		
	comp=Z,64nm,0.7s						
ANTO	Ankara	16.80	304	eP	Pn	02 53 44.7	+0.9
	comp=Z,64nm,0.7s						
BR231	Keskin MP Arra	16.80	304	ePn	P	02 53 46.6	+0.5
BR231	Keskin MP Arra	16.80	304	ePn	P	02 53 46.6	+0.5
ISP	Isparta	17.83	296	ePn	P	02 53 57.8	+0.3
	comp=Z,51nm,0.8s						
ISP	Isparta	17.83	296	P	P	02 53 58.4	+0.9
ISP	Isparta	17.83	296	iP	Pn	02 53 57.1	+0.3
ISP				pmax	pmax		
	comp=Z,31nm,0.8s						
ISP	Isparta	17.83	296	iP	Pn	02 53 57.1	+0.3
	comp=Z,31nm,0.8s						
ISP	Isparta	17.83	296	ePn	P	02 53 57.8	+0.3
	comp=Z,51nm,0.8s						
DAMY	Dhamar	18.09	201	ePn	Pn	02 53 59.9	-0.3
	comp=Z,87nm,1.1s						
DAMY	Dhamar	18.09	201	ePn	Pn	02 53 59.9	-0.3
	comp=Z,87nm,1.1s						
CHM	Chimkent	18.24	49	eP	P	02 54 03.4	+1.6
	comp=Z,32nm,1.2s						
CHM				iS	S	02 57 30.3	-0.7
CHM				LR	LR	03 02 03.6	
	comp=Z,563nm,13.9s						
KSL	Kastellorizon	18.26	290	P	Pn	02 54 01.0	-0.9
KSL	Kastellorizon	18.26	290	P	Pn	02 54 01.0	-0.9
KSL	Kastellorizon	18.26	290	P	Pn	02 54 01.0	-0.9
IUG	Iuzhnay	18.43	50⇑	eP	P	02 54 06.2	+2.1
	comp=Z,393nm,13.4s						
IUG				iS	S	02 57 35.7	+0.5
IUG				LR	LR	03 02 23.9	
	comp=Z,462nm,14.0s						
SIM	Simferopol'	18.63	320	ceP	P	02 54 06.2	+0.1
SIM				iS	Sn	02 57 36.0	+1.1
SIM				MLR	MLR		
	comp=Z,600nm,13.0s						
SIM	Simferopol'	18.63	320	eP	P	02 54 06.2	+0.1
	comp=Z,600nm,13.0s						
SIM				iS	Sn	02 57 36.0	+1.1
FETY	Fethiye	18.73	291	P	P	02 54 05.5	-1.8
FETY	Fethiye	18.73	291	P	P	02 54 05.5	-1.8
FETY	Fethiye	18.73	291	P	P	02 54 05.5	-1.8
BRLS	Borolday	18.74	48	iS	Sn	02 57 35.7	-2.1
AB31	Akbulak array	18.79	19	P	P	02 54 05.8	-2.0
AB31				pmax	pmax		
	comp=Z,10.0nm,0.6s						
AB31	Akbulak array	18.79	19	P	P	02 54 05.8	-2.0
	comp=Z,10.0nm,0.6s						
ABKAR	Akbulak array	18.79	19	eP	P	02 54 06.5	-1.3
ABKAR	Akbulak array	18.79	19	eP	P	02 54 06.5	-1.3
NIL	Nilore	18.88	78	eP	Pn	02 54 09.3	-0.1
	comp=Z,43nm,1.0s						
NIL	Nilore	18.88	78	eP	Pn	02 54 09.4	-0.1
NIL				pmax	pmax		
	comp=Z,43nm,1.0s						
NIL	Nilore	18.88	78	eP	Pn	02 54 09.4	-0.1
	comp=Z,43nm,1.0s						
KK31	Karatay Array	19.21	48	eP	Pn	02 54 13.5	+0.1
KK31	Karatay Array	19.21	48	P	Pn	02 54 13.3	-0.1
KK31				pmax	pmax		
	comp=Z,73nm,1.3s						
KK31	Karatay Array	19.21	48	P	Pn	02 54 13.3	-0.1
	comp=Z,73nm,1.3s						
KKAR	Karatay Array	19.21	48	eP	Pn	02 54 13.5	+0.1
KKAR	Karatay Array	19.21	48	eP	Pn	02 54 13.5	+0.1
AKTK	Aktyubinsk	19.43	14	P	P	02 54 14.3	-0.5
	comp=Z,2µm,21.0s						
AKTO	Aktyubinsk	19.43	14	P	P	02 54 14.3	-0.5
	comp=Z,0.6nm,0.3s,baz=199,slow=12,SNR=48						
AKTO				ScP	ScP	03 02 09.4	-3.4
	baz=152,slow=3.8,SNR=6.0						
AKTO				LR	LR	03 03 33.7	
	comp=Z,2µm,21.0s,baz=182,slow=42						
ARG	Arkhangelos	19.44	290	P	P	02 54 15.5	+0.5
ARG	Arkhangelos	19.44	290	P	P	02 54 15.5	+0.5
ARG	Arkhangelos	19.44	290	P	P	02 54 15.5	+0.5
ARG	Arkhangelos	19.44	290	P	P	02 54 15.5	+0.5
YER	Yerkesik	19.44	292	P	P	02 54 13.1	-2.0
YER	Yerkesik	19.44	292	P	P	02 54 13.1	-2.0
YER	Yerkesik	19.44	292	P	P	02 54 13.1	-2.0
YER	Yerkesik	19.44	292	P	P	02 54 13.1	-2.0
SFK	Sufi-Kurgan	20.04	59	P	Pn	02 54 22.4	-1.1
SFK				pmax	pmax		
	comp=Z,48nm,1.1s						
SFK	Sufi-Kurgan	20.04	59	P	Pn	02 54 22.4	-1.1
	comp=Z,48nm,1.1s						

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BODT  Bodrum            20.20 292   P      P      02 54 22.2 -1.2
BODT  Bodrum            20.20 292   P      P      02 54 22.2 -1.2
BODT  Bodrum            20.20 292   P      P      02 54 22.2 -1.2
MNAS  Manas             20.23  52   P      Pn     02 54 28.7 +3.0
MNAS                                pmax   pmax
      comp=Z,49nm,1.1s
MNAS  Manas             20.23  52   P      Pn     02 54 28.7 +3.0
      comp=Z,49nm,1.1s
SMG   Samos             20.67 293   P      P      02 54 28.3 -0.2
SMG   Samos             20.67 293   P      P      02 54 28.3 -0.2
SMG   Samos             20.67 293   P      P      02 54 28.3 -0.2
AML   Almayashu         20.89  54   P      Pn     02 54 32.6 -1.1
      SNR=26
ZKR   Zakros            20.90 286   P      Pn     02 54 32.9 -0.6
ZKR   Zakros            20.90 286   P      Pn     02 54 32.9 -0.6
ZKR   Zakros            20.90 286   P      Pn     02 54 32.9 -0.6
VORD  Divnogorie        21.08 339  eP      P      02 54 30.9 -1.8
VORD                               eS      S      02 58 23.9 -3.8
VORD                                pmax   pmax
      comp=Z,80nm,0.7s
VORD                                smax   smax
      comp=E,60nm,0.8s
VORD  Divnogorie        21.08 339  eP      P      02 54 30.9 -1.8
      comp=E,80nm,0.7s
VORD                               eS      S      02 58 23.9 -3.8
EKS2  Erkin-Say         21.16  52   P      P      02 54 36.9 +3.1
      SNR=10
AMGA  Amorgos Island    21.29 291   P      P      02 54 34.3 -0.9
VSR   Storozhevoye      21.34 339  eP      P      02 54 33.9 -1.6
VSR                                eS      S      02 58 26.8 -6.0
VSR                                 pmax   pmax
      comp=Z,90nm,0.9s
VSR                                 smax   smax
      comp=N,1µm,4.6s
ANAF  Anafi Island      21.34 289   P      P      02 54 35.0 -0.7
CHOS  Chios island      21.40 295   P      P      02 54 36.4  0.0
CHOS  Chios island      21.40 295   P      P      02 54 36.4  0.0
CHOS  Chios island      21.40 295   P      P      02 54 36.4  0.0
NPS   Neapolis          21.40 286   P      P      02 54 36.9 +0.5
NPS   Neapolis          21.40 286   P      P      02 54 36.9 +0.5
NPS   Neapolis          21.40 286   P      P      02 54 36.9 +0.5
NPS   Neapolis          21.40 286   P      P      02 54 36.9 +0.5
PRK   Paraskevi         21.41 297   P      P      02 54 34.5 -1.9
PRK   Paraskevi         21.41 297   P      P      02 54 34.5 -1.9
PRK   Paraskevi         21.41 297   P      P      02 54 34.5 -1.9
PRK   Paraskevi         21.41 297   P      P      02 54 34.5 -1.9
EFOR  EFORIE            21.42 311⇓iP      P      02 54 36.7 +0.2
ATD   Arta Tunnel       21.43 202   P      P      02 54 38.9 +2.0
      comp=N,49nm,1.1s,baz=23,slow=8.1,SNR=14
ATD                                 LR     LR     03 03 34.6
      comp=N,1µm,20.4s,baz=15,slow=38
ATD   Arta Tunnel       21.43 202  eP      P      02 54 38.7 +1.9
      comp=N,114nm,1.3s
UCH   Uchtor            21.49  54   P      P      02 54 40.2 +2.4
      SNR=20
LAST  Lasithi           21.51 286   P      P      02 54 37.7 +0.1
LAST  Lasithi           21.51 286   P      P      02 54 37.7 +0.1
LAST  Lasithi           21.51 286   P      P      02 54 37.7 +0.1
PSN   Preselentsi       21.53 310   P      P      02 54 36.0 -1.7
THR8  Santorini-Mono    21.58 289   P      P      02 54 35.5 -2.8
SANT  Santorini         21.60 289⇓iP      P      02 54 38.4 -0.1
SANT  Santorini         21.60 289   P      P      02 54 37.8 -0.7
SANT  Santorini         21.60 289   P      P      02 54 37.8 -0.7
SANT  Santorini         21.60 289   P      P      02 54 37.8 -0.7
APE   Apeiranthos       21.61 291⇑iP      P      02 54 39.2 +0.5
APE   Apeiranthos       21.61 291   P      P      02 54 39.4 +0.7
APE   Apeiranthos       21.61 291   P      P      02 54 39.4 +0.7
APE   Apeiranthos       21.61 291   P      P      02 54 39.4 +0.7
APE   Apeiranthos       21.61 291   P      P      02 54 39.4 +0.7
THR2  Thira island,     21.62 290   P      P      02 54 37.5 -1.2
THR2  Thira island,     21.62 290   P      P      02 54 37.5 -1.2
THR2  Thira island,     21.62 290   P      P      02 54 37.5 -1.2
THT1  Athinios (Pele    21.62 289   P      P      02 54 37.9 -0.8
AAK   Ala-Archa         21.63  53   P      P      02 54 45.8 +6.8
      SNR=9.5
AAK   Ala-Archa         21.63  53   P      P      02 54 42.7 +3.7
AAK                                 pmax   pmax
      comp=Z,34nm,1.1s
AAK   Ala-Archa         21.63  53   P      P      02 54 42.7 +3.7
      comp=Z,34nm,1.1s
STAX  Taxiarchis Har    21.64 289   P      P      02 54 37.4 -1.5
THR6  Thira Island,     21.64 289   P      P      02 54 37.3 -1.7
THR6  Thira Island,     21.64 289   P      P      02 54 37.3 -1.7
THR6  Thira Island,     21.64 289   P      P      02 54 37.3 -1.7
SAP1  Santorini-Akro    21.64 289   P      P      02 54 38.1 -0.9
THR3  Thira Island,     21.65 289   P      P      02 54 36.0 -3.0
THR3  Thira Island,     21.65 289   P      P      02 54 36.0 -3.0
THR3  Thira Island,     21.65 289   P      P      02 54 36.0 -3.0
THR5  Thira Island,     21.69 289   P      P      02 54 37.8 -1.6
VORR  Voronezh          21.73 340  eP      P      02 54 40.0 +0.3
VORR                                pmax   pmax
      comp=Z,500nm,1.2s
TIRR  Tirgusor          21.74 312⇑iP      P      02 54 39.9  0.0
TIRR  Tirgusor          21.74 312  eP      P      02 54 39.4 -0.5
      comp=Z,82nm,0.9s
TIRR  Tirgusor          21.74 312  eP      P      02 54 39.4 -0.5
TIRR                                pmax   pmax
      comp=Z,83nm,0.9s
TIRR  Tirgusor          21.74 312  eP      P      02 54 39.4 -0.5
      comp=Z,83nm,0.9s
KSH   Kashi             21.74  62   P      P      02 54 37.2 -2.9
KSH                                 sP     sP     02 54 43.8 +2.1
KSH                                 PP     PnPn   02 55 00.7 -0.2
KSH                                 S      S      02 58 28.5  -13
KSH                                 PcP    PcP    02 58 40.5 -0.4
KSH                                 SS     SnSn   02 59 03.7 -1.7
KSH                                 pmax   pmax
      comp=Z,83nm,0.9s
KSH                                 pmax   pmax
      comp=Z,780nm,3.3s
KSH                                 LR     LR
      comp=Z,2µm,14.8s
KSH                                 LR     LR
      comp=Z,1µm,13.2s
KSH                                 LR     LR
      comp=Z,980nm,15.0s
IOSP  Ios island        21.77 290   P      P      02 54 41.0 +0.7
FRU   Bishkek           21.79  53  eP      P      02 54 45.0 +4.4
FRU                                eS      S      02 58 45.0 +3.0
FRU                                e              02 58 52.0
FRU                                e              02 59 12.0
FRU                                 pmax   pmax
      comp=Z,130nm,2.0s
FRU   Bishkek           21.79  53  eP      P      02 54 45.0 +4.4
      comp=Z,130nm,2.0s
FRU                                eS      S      02 58 45.0 +3.0
IACM  Heraklion         21.84 286   P      P      02 54 44.2 +3.1
KSTL  Kastelli Herak    21.84 286   P      P      02 54 41.2 +0.1
TLCR                    21.84 314⇑iP      P      02 54 40.9 -0.1
PRD   Provadia          21.85 308   P      P      02 54 41.0 -0.1
USP   Ospenovka         21.89  52   P      P      02 54 44.9 +3.3
      SNR=24
CHMS  Chumysh           21.95  52   P      P      02 54 46.1 +3.9
      SNR=37
KBK   Karagaybulak      21.95  53   P      P      02 54 47.0 +4.6
      SNR=27
KZA   Kyzart            21.95  55   P      P      02 54 46.3 +3.7
      SNR=18
ICOR  Ion Corvin        21.97 311⇓iP      P      02 54 42.6 +0.2
IDI   Anoyia            21.99 286   P      P      02 54 42.4 -0.4
      comp=Z,80nm,0.8s,baz=73,slow=11,SNR=29
IDI   Anoyia            21.99 286⇑iP      P      02 54 44.2 +1.4
ALN   Alexandroupoli    22.00 302  eP      P      02 54 42.6 -0.1
      comp=Z,21nm,0.7s
ALN   Alexandroupoli    22.00 302   P      P      02 54 42.3 -0.4
ALN   Alexandroupoli    22.00 302  eP      P      02 54 42.6 -0.1
ALN                                 pmax   pmax
      comp=Z,21nm,0.7s
ALN   Alexandroupoli    22.00 302  eP      P      02 54 42.6 -0.1
      comp=Z,21nm,0.7s
TLB   Topalu            22.03 312⇑iP      P      02 54 42.7 -0.3
SIVA  Sivas             22.05 286   P      P      02 54 44.0 +0.7
SIVA  Sivas             22.05 286   P      P      02 54 44.0 +0.7
SIVA  Sivas             22.05 286   P      P      02 54 44.0 +0.7
HARR  Harsova           22.15 312⇓iP      P      02 54 44.0 -0.3
SMTH  Samothraki Isl    22.26 300   P      P      02 54 45.6 +0.1
SMTH  Samothraki Isl    22.26 300   P      P      02 54 45.6 +0.1
SMTH  Samothraki Isl    22.26 300   P      P      02 54 45.6 +0.1
CFR   Carcaliu          22.26 314⇓iP      P      02 54 44.5 -0.9
NRN   Naryn             22.27  57   P      P      02 54 48.3 +2.3
NRN   Naryn             22.27  57   P      P      02 54 48.3 +2.3
BTLS  Baital            22.38  47  eP      P      02 54 47.6 +0.9
      comp=Z,26nm,1.6s
BTLS                               i S     S      02 58 56.0 +2.8
BTLS                                LR     LR     03 04 31.0
      comp=Z,646nm,13.2s
RDO   Rodhopi           22.44 302   P      P      02 54 48.3 +0.9
RDO   Rodhopi           22.44 302   P      P      02 54 48.3 +0.9
RDO   Rodhopi           22.44 302   P      P      02 54 48.3 +0.9
MHLO  Agia Marina, M    22.47 290   P      P      02 54 49.5 +1.7
TKM2  Tokmak 2          22.49  53   P      P      02 54 51.2 +2.9
      SNR=46
TKM2  Tokmak 2          22.49  53   P      P      02 54 49.1 +0.8
TKM2                                pmax   pmax
      comp=Z,63nm,1.2s
TKM2  Tokmak 2          22.49  53   P      P      02 54 49.1 +0.8
      comp=Z,63nm,1.2s
AMRR  Amara             22.49 312⇓iP      P      02 54 49.2 +1.2
VAM   Vamos             22.56 287   P      P      02 54 46.8 -2.0
VAM   Vamos             22.56 287   P      P      02 54 46.8 -2.0
VAM   Vamos             22.56 287   P      P      02 54 46.8 -2.0
VAM   Vamos             22.56 287   P      P      02 54 46.8 -2.0
GVDS  Gavdos            22.64 285   P      P      02 54 49.8 +0.1
GVD   Gavdhos           22.64 285   P      P      02 54 48.6 -1.1
GVD   Gavdhos           22.64 285   P      P      02 54 48.6 -1.1
GVD   Gavdhos           22.64 285   P      P      02 54 48.6 -1.1
ULHL  Ulahol            22.70  55   P      P      02 54 51.9 +1.4
      SNR=45
IMMV  Iera Moni Meta    22.74 287   P      P      02 54 49.2 -1.5
KIS   Kishinev          22.81 318  eP      P      02 54 49.0 -2.3
      comp=Z,400nm,1.2s
KIS   Kishinev          22.81 318  ePP     P      02 55 19.0  +28
KIS   Kishinev          22.81 318  ePPP    PPP    02 55 28.0
KIS                                eS      S      02 58 54.0 -7.1
      comp=Z,1µm,10.0s
KIS                                eSS     SnSn   02 59 42.0  +11
KIS                                eLi            03 01 20.0
KIS                                eLg1           03 01 54.0
KIS                                eLg2           03 02 50.0
KIS                                eRg     Rg     03 04 00.0
KIS                                 LRM    MLR    03 07 42.0
      comp=Z,700nm,13.0s
KIS   Kishinev          22.81 318⇓iP      P      02 54 51.2 -0.1
KIS   Kishinev          22.81 318  eP      P      02 54 49.0 -2.3
KIS                                i              02 54 55.0
KIS                                i              02 54 58.0
KIS                                e              02 55 19.0
KIS                                ePPP    PPP    02 55 28.0
KIS                                eS      S      02 58 54.0 -7.1
KIS                                eSS     SnSn   02 59 42.0  +11
KIS                                 pmax   pmax
      comp=Z,360nm,1.2s
KIS                                 smax   smax
      comp=E,1µm,10.0s
KIS                                 smax   smax
      comp=E,1µm,8.0s
KIS   Kishinev          22.81 318  eP      P      02 54 49.0 -2.3
      comp=E,360nm,1.2s
KIS                                eS      S      02 58 54.0 -7.1
PGOR  Pogoanele         22.85 312⇓iP      P      02 54 52.4 +0.6
LEOM  Leova             22.85 317⇑iP      P      02 54 52.6 +0.8
SZH   Strazhica         22.86 307   P      P      02 54 51.0 -0.9
NDI   New Delhi         22.89  91  eP      P      02 54 56.0 +3.6
PTL   Penteli           23.05 293   P      P      02 54 54.3 +0.4
PTL   Penteli           23.05 293   P      P      02 54 54.3 +0.4
PTL   Penteli           23.05 293   P      P      02 54 54.3 +0.4
VLY   Voula,Athens      23.08 293   P      P      02 54 51.7 -2.5
VLY   Voula,Athens      23.08 293   P      P      02 54 51.7 -2.5
VLY   Voula,Athens      23.08 293   P      P      02 54 51.7 -2.5
PETR  Petresti          23.08 314⇓iP      P      02 54 54.4 +0.3
ATHU  Athens Univers    23.10 293   P      P      02 54 53.9 -0.6
ATHU  Athens Univers    23.10 293   P      P      02 54 53.9 -0.6
ATHU  Athens Univers    23.10 293   P      P      02 54 53.9 -0.6
ATH   Athens Observa    23.15 293   P      P      02 54 54.0 -1.0
ATH   Athens Observa    23.15 293   P      P      02 54 54.0 -1.0
ATH   Athens Observa    23.15 293   P      P      02 54 54.0 -1.0
RZN   Rozhen            23.18 303   P      P      02 54 53.0 -2.5
SGRR  Singureni         23.21 310⇓iP      P      02 54 56.2 +0.7
AOS   Alonnisos         23.21 296   P      P      02 54 54.9 -0.7
AOS   Alonnisos         23.21 296   P      P      02 54 54.9 -0.7
AOS   Alonnisos         23.21 296   P      P      02 54 54.9 -0.7
SULR                    23.21 311⇑iP      P      02 54 56.8 +1.3
ISR   Istrita           23.23 312⇑iP      P      02 54 56.4 +0.7
ANKY  Antikythira Is    23.31 288   P      P      02 54 56.5 -0.1
ANKY  Antikythira Is    23.31 288   P      P      02 54 56.5 -0.1
ANKY  Antikythira Is    23.31 288   P      P      02 54 56.5 -0.1
KUU   Kurty             23.36  51  eP      P      02 54 58.4 +1.3
      comp=E,30nm,1.4s
KUU                                eS      S      02 59 13.5 +2.9
KUU                                 LR     LR     03 05 24.9
      comp=E,573nm,11.2s
OUR   Ouranopolis       23.37 299   P      P      02 54 51.4 -5.8
OUR   Ouranopolis       23.37 299   P      P      02 54 51.4 -5.8
OUR   Ouranopolis       23.37 299   P      P      02 54 51.4 -5.8
OUR   Ouranopolis       23.37 299   P      P      02 54 51.4 -5.8
VRI   Vrincioaia        23.46 314⇓iP      P      02 54 57.8 -0.2
DID   Didima            23.48 292   P      P      02 54 54.5 -3.8
DID   Didima            23.48 292   P      P      02 54 54.5 -3.8
DID   Didima            23.48 292   P      P      02 54 54.5 -3.8
SECR                    23.49 312⇓iP      P      02 54 59.9 +1.5
VILL  Villia            23.49 294   P      P      02 54 56.0 -2.5
AAA   Alma-Ata          23.50  53  eP      P      02 55 01.0 +2.5
AAA                                eS      S      02 59 16.1 +3.2
AAA                                 pmax   pmax
      comp=Z,300nm,4.2s
AAA                                 smax   smax
      comp=E,1µm,19.7s
AAA                                 MLR    MLR
      comp=Z,700nm,14.0s
PLOR  Plostina          23.50 314⇑iP      P      02 54 58.8 +0.3
PAIG  Paliouri          23.51 298   P      P      02 54 57.6 -1.0
PAIG  Paliouri          23.51 298   P      P      02 54 57.6 -1.0
PAIG  Paliouri          23.51 298   P      P      02 54 57.6 -1.0
PAIG  Paliouri          23.51 298   P      P      02 54 57.6 -1.0
SKIA  Skiathos          23.53 296   P      P      02 54 57.3 -1.5
KRND  KRANIDI           23.53 292   P      P      02 54 57.4 -1.4
KTHR  Kythira           23.57 289   P      P      02 54 58.2 -1.0
MDOK  Medeo             23.57  54  eP      P      02 55 00.8 +1.4
      comp=Z,120nm,0.9s
MDOK                               eS      S      02 59 17.2 +2.9
MDOK                                LR     LR     03 05 53.2
      comp=Z,473nm,11.4s
IAS   Iasi              23.64 318⇓iP      P      02 54 59.3 -0.4
VLI   Veliai            23.65 290   P      P      02 54 57.0 -3.0
VLI   Veliai            23.65 290   P      P      02 54 57.0 -3.0
VLI   Veliai            23.65 290   P      P      02 54 57.0 -3.0
SMIA  Simia             23.68 295   P      P      02 55 00.0 -0.3
NVR   Nevrokopi         23.71 302   P      P      02 54 58.6 -2.0
NVR   Nevrokopi         23.71 302   P      P      02 54 58.6 -2.0
NVR   Nevrokopi         23.71 302   P      P      02 54 58.6 -2.0
SORM  Soroca            23.72 320⇑iP      P      02 54 59.0 -1.5
NEO   Neokhori          23.74 296   P      P      02 54 58.5 -2.4
NEO   Neokhori          23.74 296   P      P      02 54 58.5 -2.4
NEO   Neokhori          23.74 296   P      P      02 54 58.5 -2.4
LTK   Loutraki          23.75 293   P      P      02 54 58.9 -2.1
LTK   Loutraki          23.75 293   P      P      02 54 58.9 -2.1
LTK   Loutraki          23.75 293   P      P      02 54 58.9 -2.1
MLR   Muntele Rosu      23.77 312   P      P      02 55 01.4 +0.1
      comp=Z,11nm,1.0s,baz=78,slow=1.7,SNR=34
MLR                                 ScP    ScP    03 02 21.6 -2.4
      comp=Z,0.6nm,0.7s,baz=277,slow=3.5,SNR=3.6
MLR                                 LR     LR     03 06 14.5
      comp=Z,219nm,20.1s,baz=126,slow=42
MLR   Muntele Rosu      23.77 312⇓iP      P      02 55 02.9 +1.7
XOR   Xorichti          23.77 296   P      P      02 54 57.7 -3.5
XOR   Xorichti          23.77 296   P      P      02 54 57.7 -3.5
XOR   Xorichti          23.77 296   P      P      02 54 57.7 -3.5
PLG   Polygyros         23.78 299   P      P      02 55 00.5 -0.8
PLG   Polygyros         23.78 299   P      P      02 55 00.5 -0.8
PLG   Polygyros         23.78 299   P      P      02 55 00.5 -0.8
PLG   Polygyros         23.78 299   P      P      02 55 00.5 -0.8
LKR   Lokris            23.80 295   P      P      02 55 00.2 -1.3
LKR   Lokris            23.80 295   P      P      02 55 00.2 -1.3
LKR   Lokris            23.80 295   P      P      02 55 00.2 -1.3
TESR  Tescani           23.82 315⇑iP      P      02 55 01.5 -0.1
SRS   Serrai            23.84 301   P      P      02 55 00.7 -1.2
SRS   Serrai            23.84 301   P      P      02 55 00.7 -1.2
SRS   Serrai            23.84 301   P      P      02 55 00.7 -1.2
SRS   Serrai            23.84 301   P      P      02 55 00.7 -1.2
MMB   Musomiste         23.87 302   P      P      02 55 01.0 -1.1
FYTO  Fytoko, Volos     23.97 296   P      P      02 55 02.4 -0.7
FYTO  Fytoko, Volos     23.97 296   P      P      02 55 02.4 -0.7
FYTO  Fytoko, Volos     23.97 296   P      P      02 55 02.4 -0.7
HUMR  Humele            23.98 310⇓iP      P      02 55 03.4 +0.3
THAL  Thalero           23.99 293   P      P      02 55 02.8 -0.4
HORT  Hortiatis         24.09 299   P      P      02 55 03.4 -0.8
HORT  Hortiatis         24.09 299   P      P      02 55 03.4 -0.8
HORT  Hortiatis         24.09 299   P      P      02 55 03.4 -0.8
DYR   Agios Nikonas     24.13 290   P      P      02 55 03.0 -1.7
DSF   Desfina           24.14 294   P      P      02 55 02.5 -2.2
DSF   Desfina           24.14 294   P      P      02 55 02.5 -2.2
DSF   Desfina           24.14 294   P      P      02 55 02.5 -2.2
VLX   Vlachokerasia     24.14 291   P      P      02 55 03.5 -1.3
VLX   Vlachokerasia     24.14 291   P      P      02 55 03.5 -1.3
VLX   Vlachokerasia     24.14 291   P      P      02 55 03.5 -1.3
THE   Thessaloniki      24.19 299   P      P      02 55 03.6 -1.5
THE   Thessaloniki      24.19 299   P      P      02 55 03.6 -1.5
THE   Thessaloniki      24.19 299   P      P      02 55 03.6 -1.5
THE   Thessaloniki      24.19 299   P      P      02 55 03.6 -1.5
GUR   Goura             24.23 293   P      P      02 55 04.1 -1.5
GUR   Goura             24.23 293   P      P      02 55 04.1 -1.5
GUR   Goura             24.23 293   P      P      02 55 04.1 -1.5
TRIP  Tripoli           24.24 292   P      P      02 55 04.1 -1.6
PRZ   Przheval'sk       24.30  56  eP      P      02 55 08.4 +2.1
      comp=Z,67nm,0.9s
PRZ   Przheval'sk       24.30  56   P      P      02 55 08.4 +2.1
PRZ   Przheval'sk       24.30  56  eP      P      02 55 08.4 +2.1
      comp=Z,67nm,0.9s
VOIR                    24.31 312⇓iP      P      02 55 07.3 +1.0
DOPR  Dopca             24.33 313⇑iP      P      02 55 07.7 +1.3
BIZ   Bicaz             24.36 316⇓iP      P      02 55 06.7 +0.1
KNT   Kendrikon         24.36 301   P      P      02 55 05.9 -0.8
KNT   Kendrikon         24.36 301   P      P      02 55 05.9 -0.8
KNT   Kendrikon         24.36 301   P      P      02 55 05.9 -0.8
KNT   Kendrikon         24.36 301   P      P      02 55 05.9 -0.8
AGG   Agios Georgios    24.38 295   P      P      02 55 06.4 -0.5
AGG   Agios Georgios    24.38 295   P      P      02 55 06.4 -0.5
AGG   Agios Georgios    24.38 295   P      P      02 55 06.4 -0.5
AGG   Agios Georgios    24.38 295   P      P      02 55 06.4 -0.5
KLV   Kalavryta, Ach    24.39 293   P      P      02 55 06.2 -0.9
KLV   Kalavryta, Ach    24.39 293   P      P      02 55 06.2 -0.9
KLV   Kalavryta, Ach    24.39 293   P      P      02 55 06.2 -0.9
BRZS  Berezniki         24.41  35  eP      P      02 55 07.4 +0.3
      comp=Z,43nm,1.4s
BRZS                                LR     LR     03 05 43.6
      comp=Z,289nm,12.0s
LIT   Litokhoron        24.44 298  eP      P      02 55 07.2 -0.3
      comp=Z,31nm,0.9s
LIT   Litokhoron        24.44 298   P      P      02 55 06.8 -0.6
LIT   Litokhoron        24.44 298  eP      P      02 55 07.2 -0.3
      comp=Z,31nm,0.9s
SATY  Saty              24.48  55  eP      P      02 55 09.1 +1.2
      comp=Z,27nm,1.0s
SATY                               i S     S      02 59 31.6 +2.9
SATY                                LR     LR     03 06 07.8
      comp=Z,225nm,11.4s
POO   Poona             24.48 117  eP      P      02 55 07.0 -1.0
ITM   Ithomi            24.49 291  eP      P      02 55 07.3 -0.6
      comp=Z,50nm,0.6s
ITM   Ithomi            24.49 291   P      P      02 55 06.5 -1.4
ITM   Ithomi            24.49 291  eP      P      02 55 07.3 -0.6
      comp=Z,50nm,0.6s
TRIZ  Trizonia          24.49 294   P      P      02 55 06.7 -1.1
PRAR  RASCA             24.50 317⇑iP      P      02 55 07.7 -0.2
SERG  Sergoula          24.51 294   P      P      02 55 06.0 -2.1
VTS   Vitosha           24.52 304⇓iP      P      02 55 08.8 +0.5
VTS   Vitosha           24.52 304  eP      P      02 55 08.2 -0.1
      comp=Z,21nm,0.9s
VTS   Vitosha           24.52 304   P      P      02 55 06.0 -2.3
VTS   Vitosha           24.52 304   P      P      02 55 07.3 -1.0
VTS   Vitosha           24.52 304  eP      P      02 55 08.2 -0.1
      comp=Z,21nm,0.9s
ZHN   Zhinishke         24.53  54  eP      P      02 55 09.4 +1.1
      comp=Z,27nm,0.9s
ZHN                                eS      S      02 59 32.1 +2.5
LAKA  Lakka             24.55 293   P      P      02 55 08.1 -0.3
LAKA  Lakka             24.55 293   P      P      02 55 08.1 -0.3
LAKA  Lakka             24.55 293   P      P      02 55 08.1 -0.3
ARR   Arges             24.55 311⇓iP      P      02 55 08.2 -0.2
PYL   PYLOS             24.62 290   P      P      02 55 06.5 -2.5
PYL   PYLOS             24.62 290   P      P      02 55 06.5 -2.5
PYL   PYLOS             24.62 290   P      P      02 55 06.5 -2.5
EFP   Efpalio           24.62 294   P      P      02 55 07.7 -1.4
ANX   Ano Chora         24.63 294   P      P      02 55 08.3 -1.0
VAY   Valandovo         24.64 301  eP      P      02 55 08.7 -0.5
GRG   Griva             24.68 300   P      P      02 55 07.7 -1.9
GRG   Griva             24.68 300   P      P      02 55 07.7 -1.9
GRG   Griva             24.68 300   P      P      02 55 07.7 -1.9
THL   Klokotos Trika    24.70 297   P      P      02 55 08.3 -1.5
DRO   Drossia           24.73 293   P      P      02 55 08.8 -1.2
EVR   Evrytania         24.76 295   P      P      02 55 09.3 -1.2
EVR   Evrytania         24.76 295   P      P      02 55 09.3 -1.2
EVR   Evrytania         24.76 295   P      P      02 55 09.3 -1.2
KPKS  Kokpek            24.80  54  eP      P      02 55 11.7 +1.0
      comp=Z,44nm,0.9s
KPKS                               eS      S      02 59 36.2 +2.3
AKASG Malin Array Be    24.87 326   P      P      02 55 10.1 -1.1
      comp=Z,29nm,0.6s,baz=132,slow=9.0,SNR=75
AKASG                               ScP    ScP    03 02 23.8 -2.9
      comp=Z,2.3nm,0.7s,baz=93,slow=2.1,SNR=6.4
AKASG                               LR     LR     03 05 53.9
      comp=Z,953nm,21.5s,baz=100,slow=39
KIEV  Kiev              24.88 326  eP      P      02 55 10.2 -1.0
KIEV                                LR     LR
      comp=Z,723nm,20.0s
KIEV  Kiev              24.88 326  i P     P      02 55 09.9 -1.3
      SNR=62
KIEV  Kiev              24.88 326d iP      P      02 55 10.6 -0.6
KIEV                                pmax   pmax
      comp=Z,78nm,1.1s
KIEV  Kiev              24.88 326  eP      P      02 55 10.2 -1.0
AK11  Malin Array Si    24.89 326  eP      P      02 55 10.8 -0.4
RLS   Riolos of Patr    24.93 293   P      P      02 55 10.8 -1.0
RLS   Riolos of Patr    24.93 293   P      P      02 55 10.8 -1.0
RLS   Riolos of Patr    24.93 293   P      P      02 55 10.8 -1.0
PVO   Paravola          24.94 294   P      P      02 55 11.4 -0.6
STIP  Stip              25.01 302  i P     P      02 55 10.3 -2.3
KZN   Kozani            25.02 298   P      P      02 55 06.8 -5.9
KZN   Kozani            25.02 298   P      P      02 55 06.8 -5.9
KZN   Kozani            25.02 298   P      P      02 55 06.8 -5.9
KZN   Kozani            25.02 298   P      P      02 55 06.8 -5.9
MDB   Medias            25.04 313⇑iP      P      02 55 14.9 +2.1
LOT   Lotru             25.14 311⇑iP      P      02 55 14.5 +0.7
TDK   Taldyqorghan      25.15  50  eP      P      02 55 14.9 +1.1
      comp=Z,82nm,1.3s
TDK                                 LR     LR     03 06 24.4
      comp=Z,2µm,13.7s
SRE   Strehaia          25.21 309⇑iP      P      02 55 16.1 +1.8
PDO   Prodromos         25.21 294   P      P      02 55 12.8 -1.6
BURAR Bucovina Array    25.22 316⇑iP      P      02 55 15.8 +1.3
BUR04 Bucovina Ar. S    25.22 316  eP      P      02 55 13.7 -0.9
BUR04 Bucovina Ar. S    25.22 316  eP      P      02 55 13.6 -0.9
SHLS  Shalkode          25.24  55  eP      P      02 55 18.6 +3.8
      comp=Z,25nm,0.9s
SHLS                               eS      S      02 59 48.3 +7.3
SHLS                                LR     LR     03 06 11.3
      comp=Z,255nm,12.0s
BUR08 Bucovina Ar. S    25.24 316  eP      P      02 55 14.7 -0.1
BUR08 Bucovina Ar. S    25.24 316  eP      P      02 55 14.6 -0.1
KPRO  Kipourio          25.26 297   P      P      02 55 14.1 -0.8
ARU   Arti              25.27  10   P      P      02 55 15.4 +0.6
      comp=Z,15nm,0.8s,baz=192,slow=4.4,SNR=16
ARU                                 LR     LR     03 07 22.1
      comp=Z,2µm,20.1s,baz=187,slow=42
ARU   Arti              25.27  10  eP      P      02 55 15.6 +0.8
ARU                                 LR     LR
      comp=Z,2µm,20.0s
ARU   Arti              25.27  10d iP      P      02 55 15.1 +0.4
ARU                                 PPP    PPP    02 55 57.0
ARU                                eS      S      02 59 46.0 +5.0
ARU                                 SS     SnSn   03 00 40.4 +9.0
ARU                                 SSS    SSS    03 00 55.1
ARU                                 pmax   pmax
      comp=Z,40nm,1.7s
ARU                                 MLR    MLR
      comp=Z,2µm,20.0s
ARU   Arti              25.27  10  i P     P      02 55 15.1 +0.4
      comp=Z,40nm,1.7s
ARU                                eS      S      02 59 46.0 +5.0
PDGK  Podgornoye        25.31  55   P      P      02 55 17.7 +2.3
PDGK                                pmax   pmax
      comp=Z,50nm,1.1s
PDGK  Podgornoye        25.31  55   P      P      02 55 17.7 +2.3
      comp=Z,50nm,1.1s
DSL   Palaion Diasel    25.34 295   P      P      02 55 14.1 -1.5
DSL   Palaion Diasel    25.34 295   P      P      02 55 14.1 -1.5
DSL   Palaion Diasel    25.34 295   P      P      02 55 14.1 -1.5
FNA   Florina           25.41 299  eP      P      02 55 16.2  0.0
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	comp=Z,19nm,0.6s						
FNA	**Florina**	25.41	299	P	P	02 55 15.1	-1.1
FNA	**Florina**	25.41	299	*e*P	P	02 55 16.2	0.0
	comp=Z,19nm,0.6s						
FURI	**Furi**	25.41	209	*e*P	P	02 55 14.9	-1.8
FURI				*e*pP	pP	02 55 15.1	-2.8
KFL	**Anninata**	25.47	293	P	P	02 55 15.5	-1.2
ARCR	**ARCALIA**	25.48	315	⇑*i*P	P	02 55 18.7	+2.0
BIA	**Bitola**	25.49	300	*e*P	P	02 55 18.9	+2.0
BRVK	**Borovoye**	25.51	28	*e*P	P	02 55 16.2	-0.8
	comp=Z,50nm,1.0s						
BRVK				*e*PcP	PcP	02 58 47.9	-0.5
BRVK				*e*ScP	ScP	03 02 25.1	-3.4
BRVK	**Borovoye**	25.51	28	P	P	02 55 17.3	+0.3
	SNR=34						
BRVK	**Borovoye**	25.51	28	*ce*P	P	02 55 16.9	-0.1
BRVK				pmax	pmax		
	comp=Z,58nm,1.3s						
BRVK	**Borovoye**	25.51	28	*e*P	P	02 55 16.2	-0.8
	comp=Z,50nm,1.0s						
BVA0	**Borovoye Array**	25.53	28	*i* P	P	02 55 17.2	+0.1
BVA0				pmax	pmax		
	comp=Z,58nm,1.3s						
BVA0	**Borovoye Array**	25.53	28	*i* P	P	02 55 17.2	+0.1
	comp=Z,58nm,1.3s						
BVAR	**Borovoye Array**	25.53	28	P	P	02 55 17.1	-0.1
	comp=Z,17nm,0.7s,baz=231,slow=6.2,SNR=58						
BVAR				PcP	PcP	02 58 47.9	-0.6
	comp=Z,2.9nm,0.6s,baz=198,slow=2.4,SNR=7.7						
BVAR				ScP	ScP	03 02 25.6	-3.0
	comp=Z,3.9nm,0.8s,baz=242,slow=3.1,SNR=16						
BVAR				LR	LR	03 07 01.0	
	comp=Z,874nm,19.8s,baz=218,slow=40						
NEST	**Nestorio**	25.58	298	P	P	02 55 17.0	-0.8
JAN	**Janina**	25.61	296	P	P	02 55 18.7	+0.7
JAN	**Janina**	25.61	296	P	P	02 55 18.7	+0.7
JAN	**Janina**	25.61	296	P	P	02 55 18.7	+0.7
VLS	**Valsamata**	25.63	293	P	P	02 55 16.2	-2.0
VLS	**Valsamata**	25.63	293	P	P	02 55 16.2	-2.0
VLS	**Valsamata**	25.63	293	P	P	02 55 16.2	-2.0
VLS	**Valsamata**	25.63	293	P	P	02 55 16.2	-2.0
LKD2	**Lefkada island**	25.64	294	P	P	02 55 16.4	-1.9
LKD2	**Lefkada island**	25.64	294	P	P	02 55 16.4	-1.9
LKD2	**Lefkada island**	25.64	294	P	P	02 55 16.4	-1.9
FSK	**Fiskardo**	25.68	294	P	P	02 55 16.9	-1.7
CJR	**Cluj-Napoca**	25.77	313	⇑*i*P	P	02 55 21.6	+2.1
MOS	**Moscow**	25.78	343	*e*P	P	02 55 20.6	+1.3
MOS				*e*		02 55 27.5	
MOS				*e*		02 56 03.7	
MOS				*e*		03 00 50.9	
MOS				pmax	pmax		
	comp=Z,70nm,1.0s						
HERR	**Herculane**	25.81	309	⇑*i*P	P	02 55 20.6	+0.9
DEV	**Deva**	25.87	311	⇓*i*P	P	02 55 22.8	+2.5
OHR	**Ohrid**	25.90	300	*e*P	P	02 55 20.6	-0.1
IGT	**Igoumenitsa**	25.98	296	P	P	02 55 19.8	-1.6
IGT	**Igoumenitsa**	25.98	296	P	P	02 55 19.8	-1.6
IGT	**Igoumenitsa**	25.98	296	P	P	02 55 19.8	-1.6
IGT	**Igoumenitsa**	25.98	296	P	P	02 55 19.8	-1.6
SGD	**Sagiada**	26.07	296	P	P	02 55 20.9	-1.3
MDVR	**Moldovita**	26.24	308	⇑*i*P	P	02 55 23.8	0.0
BMR	**Baia Mare**	26.27	315	⇑*i*P	P	02 55 25.0	+1.1
DRGR		26.36	313	⇑*i*P	P	02 55 26.8	+2.0
KEK	**Kerkira**	26.42	296	P	P	02 55 24.0	-1.3
KEK	**Kerkira**	26.42	296	P	P	02 55 24.0	-1.3
KEK	**Kerkira**	26.42	296	P	P	02 55 24.0	-1.3
BZS	**Buzias**	26.60	310	⇑*i*P	P	02 55 27.3	+0.4
LVV	**L’vov**	27.02	320	*e*P	P	02 55 31.5	+0.8
LVV				*e*		02 56 24.1	
LVV				*e*S	S	03 00 04.9	-3.9
LVV				*e*		03 01 18.3	
LVV				MLR	MLR		
	comp=Z,300nm,15.0s						
LVV				MLR	MLR		
	comp=N,20nm,13.0s						
LVV				MLR	MLR		
	comp=E,300nm,15.0s						
LVV	**L’vov**	27.02	320	*e*P	P	02 55 31.5	+0.8
TRPA	**Tarpa**	27.05	316	⇓*i*P	P	02 55 31.6	+0.7
TRPA	**Tarpa**	27.05	316	*e*P	P	02 55 31.3	+0.4
DIVS	**Divibare**	27.20	306	*e*P	P	02 55 32.4	-0.1
	comp=E,12nm,0.9s						
DIVS	**Divibare**	27.20	306	*e*P	P	02 55 32.4	-0.1
	comp=E,12nm,0.9s						
PDG	**Podgorica**	27.30	302	⇑*i*P	P	02 55 34.8	+1.5
TTG	**Podgorica**	27.30	302	*e*P	P	02 55 32.8	-0.4
	comp=E,12nm,0.9s						
TTG	**Podgorica**	27.30	302	*e*P	P	02 55 32.8	-0.4
TTG				pmax	pmax		
	comp=Z,12nm,0.9s						
TTG	**Podgorica**	27.30	302	*e*P	P	02 55 32.8	-0.4
	comp=Z,12nm,0.9s						
UZH	**Uzhgorod**	27.42	316	*c i*P	P	02 55 35.7	+1.4
UZH				*e*		02 55 45.5	
UZH				*e*S	S	03 00 15.7	+0.6
UZH	**Uzhgorod**	27.42	316	*i* P	P	02 55 35.7	+1.4
KWP	**Kalwaria Pacla**	27.66	319	*e*P	P	02 55 36.5	+0.1
KWP	**Kalwaria Pacla**	27.66	319	*e*P	P	02 55 36.5	+0.1
KWP	**Kalwaria Pacla**	27.66	319	*e*P	P	02 55 36.5	+0.1
KURBB	**Kurchatov Arra**	27.82	39	P	P	02 55 38.8	+1.0
	comp=Z,14nm,1.0s,baz=241,slow=9.1,SNR=38						
KURBB				PcP	PcP	02 58 53.1	-0.8
	comp=Z,1.9nm,0.7s,baz=225,slow=2.8,SNR=3.1						
KURBB				ScP	ScP	03 02 33.0	-2.4
	comp=Z,5.3nm,1.1s,baz=246,slow=3.9,SNR=14						
KURK	**Kurchatov**	27.92	39	*e*P	P	02 55 39.6	+0.9
	comp=Z,30nm,1.0s						
KURK				PcP	PcP	02 58 53.1	-1.0
KURK				ScP	ScP	03 02 33.0	-2.7
KURK	**Kurchatov**	27.92	39	P	P	02 55 39.5	+0.8
	SNR=17						
KURK	**Kurchatov**	27.92	39	*ce*P	P	02 55 39.1	+0.4
KURK				pmax	pmax		
	comp=Z,53nm,1.7s						
KURK	**Kurchatov**	27.92	39	*e*P	P	02 55 39.1	+0.4
	comp=Z,53nm,1.7s						
PYUN	**Piuthan**	27.96	89	*e*P	P	02 55 39.4	-0.1
	comp=Z,39nm,0.7s						
CRVS	**Cervenica-Dubn**	28.04	316	*e*P	P	02 55 40.5	+0.7
CRVS				MLR	MLR		
	comp=Z,400nm,17.9s						
CRVS	**Cervenica-Dubn**	28.04	316	*e*P	P	02 55 40.5	+0.7
CRVS				*e*S	S	03 00 38.8	+14
CRVS				*e*L	L	03 09 32.0	
CRVS	**Cervenica-Dubn**	28.04	316	*e*P	P	02 55 40.5	+0.7
	comp=Z,400nm,17.9s						
MICGM	**Minsk**	28.08	331	*e*P	P	02 55 40.0	0.0
MICGM				*e*PP	sP	02 56 01.0	+19
MICGM				*e*S	S	03 00 21.0	-4.3
MICGM				*e*LR	LR	03 06 10.0	
MNK	**Minsk**	28.08	331	*e*P	P	02 55 40.0	0.0
MNK				*e*S	S	03 00 21.0	-4.3
MNK	**Minsk**	28.08	331	*e*P	P	02 55 40.0	0.0
MAKZ	**Makanchi**	28.14	49	*e*P	P	02 55 42.2	+1.5
	comp=Z,18nm,0.6s						
MAKZ	**Makanchi**	28.14	49	*e*P	P	02 55 42.2	+1.5
	comp=Z,18nm,0.6s						
MK01	**Makanchi Array**	28.33	49	*e*P	P	02 55 42.2	-0.3
MK01	**Makanchi Array**	28.33	49	*e*P	P	02 55 42.2	-0.3
MK31	**Makanchi Array**	28.34	49	*e*P	P	02 55 38.3	-4.2
MK31	**Makanchi Array**	28.34	49	*e*P	P	02 55 38.3	-4.2
MK31	**Makanchi Array**	28.34	49	*e*P	P	02 55 38.3	-4.2
MKAR	**Makanchi Array**	28.34	49	P	P	02 55 43.4	+0.9
	comp=Z,8.6nm,0.7s,baz=242,slow=9.3,SNR=44						
MKAR				PcP	PcP	02 58 54.0	-1.2
	comp=Z,1.8nm,0.6s,baz=249,slow=2.8,SNR=3.1						
MKAR				ScP	ScP	03 02 34.6	-2.5
	comp=Z,2.8nm,1.1s,baz=255,slow=5.5,SNR=6.9						
MKAR				LR	LR	03 07 52.0	
	comp=Z,644nm,19.8s,baz=250,slow=38						
KECS	**Kecovo**	28.44	315	*e*P	P	02 55 45.5	+2.2
KECS	**Kecovo**	28.44	315	*e*P	P	02 55 45.5	+2.2
KECS	**Kecovo**	28.44	315	*e*P	P	02 55 45.5	+2.2
DANN	**Dangsing**	28.55	88	*e*P	P	02 55 45.5	+0.6
	comp=Z,127nm,1.0s						
PSZ	**Piszkesteto**	28.57	313	⇑*i*P	P	02 55 46.0	+1.4
PSZ	**Piszkesteto**	28.57	313	*e*P	P	02 55 45.3	+0.7
	comp=Z,24nm,1.0s						
PSZ	**Piszkesteto**	28.57	313	*e*P	P	02 55 45.3	+0.7
PSZ				pmax	pmax		
	comp=Z,24nm,1.0s						
PSZ	**Piszkesteto**	28.57	313	*e*P	P	02 55 45.3	+0.7
	comp=Z,24nm,1.0s						
KOLN	**Koldanda**	28.57	89	*e*P	P	02 55 44.8	-0.2
	comp=Z,30nm,1.0s						
TIP	**Timpagrande**	28.70	295	⇓*i*P	P	02 55 46.2	+0.3
TIP	**Timpagrande**	28.70	295	*e*P	P	02 55 45.7	-0.2
	comp=Z,46nm,1.4s						
TIP	**Timpagrande**	28.70	295	P	P	02 55 45.5	-0.4
TIP	**Timpagrande**	28.70	295	*e*P	P	02 55 45.7	-0.2
	comp=Z,46nm,1.4s						
HYB	**Hyderabad**	28.76	113	*i* P	P	02 55 50.0	+3.4
NACGM	**Naroch**	28.82	331	*e*	P	02 55 44.0	-2.6
MATE	**Matera**	28.89	298	⇑*i*P	P	02 55 48.0	+0.6
NIE	**Niedzica**	28.95	317	*e*P	P	02 55 48.9	+1.0
NIE				*e*S	S	03 01 04.7	+26
NIE	**Niedzica**	28.95	317	*e*P	P	02 55 48.9	+1.0
BLY	**Banja Luka**	29.32	306	*e*P	P	02 55 50.5	-0.7
	comp=Z,6.1nm,0.9s						
BLY	**Banja Luka**	29.32	306	*e*P	P	02 55 50.5	-0.7
	comp=Z,6.1nm,0.9s						
CEL	**Celeste**	29.32	293	*e*P	P	02 55 52.2	+0.8
CEL	**Celeste**	29.32	293	*e*P	P	02 55 52.2	+0.8
LANS	**Liptovska Anna**	29.33	316	*e*P	P	02 55 51.8	+0.5
LANS	**Liptovska Anna**	29.33	316	*e*P	P	02 55 51.8	+0.5
LANS	**Liptovska Anna**	29.33	316	*e*P	P	02 55 51.8	+0.5
IIGN	**Ignalina**	29.36	331	*e*P	P	02 55 49.6	-1.8
IIGN				IAmb	IAmb	02 55 54.7	
	comp=Z,31nm,1.0s						
CSKK	**Csˆ‡kako**	29.39	312	*e*P	P	02 55 53.2	+1.4
GKN	**Gorkha**	29.39	88	*e*P	P	02 55 52.5	+0.3
	comp=Z,45nm,0.7s						
VYHS	**Vyhne**	29.44	314	*e*P	P	02 55 53.1	+0.8
VYHS				*e*S	S	03 00 45.3	-1.7
VYHS	**Vyhne**	29.44	314	*e*P	P	02 55 53.1	+0.8
VYHS				*e*S	S	03 00 45.3	-1.7
VYHS	**Vyhne**	29.44	314	*e*P	P	02 55 53.1	+0.8
CUC	**Castrocucco**	29.50	296	*e*P	P	02 55 53.2	+0.3
	comp=Z,8.9nm,0.6s						
CUC	**Castrocucco**	29.50	296	*e*P	P	02 55 53.2	+0.3
	comp=Z,8.9nm,0.6s						
ISAL	**Salakas**	29.55	331	*e*P	P	02 55 51.5	-1.6
ISAL				IAmb	IAmb	02 55 56.4	
	comp=Z,24nm,0.9s						
OJC	**Ojcow**	29.60	318	*e*P	P	02 55 52.7	-0.9
OJC				*e*S	S	03 00 47.4	-2.0
OJC	**Ojcow**	29.60	318	*e*P	P	02 55 52.7	-0.9
OJC				*e*S	S	03 00 47.4	-2.0
IZAR	**Zarasai**	29.62	331	*e*P	P	02 55 52.4	-1.3
IZAR				IAmb	IAmb	02 55 55.4	
	comp=Z,26nm,0.7s						
BEL	**Belsk**	29.83	321	*e*P	P	02 55 55.3	-0.3
BEL	**Belsk**	29.83	321	*e*P	P	02 55 55.3	-0.3
SUW	**Suwalki**	29.84	326	*e*P	P	02 55 55.0	-0.7
SUW				*e*S	S	03 00 50.4	-2.6
SUW	**Suwalki**	29.84	326	*e*P	P	02 55 55.0	-0.7
SUW				*e*S	S	03 00 50.4	-2.6
DMN	**Daman**	29.89	89	*e*P	P	02 55 56.7	-0.1
	comp=Z,94nm,1.1s						
KKN	**Kakani**	29.99	89	*e*P	P	02 55 57.9	+0.3
	comp=Z,73nm,0.7s						
KLMR	**Klimovskoe**	30.10	349	*e*P	P	02 55 55.7	-2.2
KLMR				pmax	pmax		
	comp=Z,57nm,1.1s						
KLMR	**Klimovskoe**	30.10	349	*e*P	P	02 55 55.8	-2.2
KLMR				AMP		02 56 01.1	
KLMR				LQ	LQ	03 06 33.2	
KLMR				LQ	LQ	03 06 33.2	
KLMR				LR	LR	03 08 14.2	
PRGR	**Permogore**	30.13	355	*e*P	P	02 55 57.6	-0.6
PRGR				pmax	pmax		
	comp=Z,19nm,0.9s						
PKIN	**Phulchoki**	30.15	89	*e*P	P	02 55 59.7	+0.6
	comp=Z,35nm,0.7s						
ZSN	**Zaisan**	30.21	49	*e*P	P	02 56 00.8	+1.7
	comp=Z,1.1nm,0.7s						
ZSN				LR	LR	03 09 16.9	
	comp=Z,156nm,11.0s						
JAVC	**Velka Javorina**	30.30	314	*e*P	P	02 56 00.0	+0.1
MODS	**Modra-Piesok**	30.36	313	*e*P	P	02 56 02.4	+1.9
MODS				MLR	MLR		
	comp=Z,600nm,21.0s						
MODS	**Modra-Piesok**	30.36	313	*e*P	P	02 56 02.4	+1.9
MODS				*e*S	S	03 01 31.5	+30
MODS				*e*L	L	03 08 51.3	
MODS	**Modra-Piesok**	30.36	313	*e*P	P	02 56 02.4	+1.9
	comp=Z,600nm,21.0s						
OKC	**Ostrava-Krasne**	30.40	316	*e*P	P	02 56 00.0	-0.7
OKC				*e*pP	sP	02 56 03.3	+1.0
OKC				*e*S	S	03 00 59.9	-1.9
OKC				AMS	AMS	03 10 10.0	
	comp=Z,600nm,17.2s						
OKC	**Ostrava-Krasne**	30.40	316	*e*P	P	02 56 00.0	-0.7
OKC				*e*		02 56 03.3	
OKC				*e*S	S	03 00 59.9	-1.9
OKC				MLR	MLR		
	comp=Z,600nm,17.2s						
OKC	**Ostrava-Krasne**	30.40	316	*e*P	P	02 56 00.0	-0.7
KOGS	**Kog**	30.41	309	*e*P	P	02 56 00.1	-0.7
GUN	**Gumba**	30.47	88	*e*P	P	02 56 02.1	+0.1
	comp=Z,129nm,0.9s						
VAE	**Valguarnera**	30.48	291	P	P	02 56 02.9	+1.2
	comp=Z,6.3nm,0.7s,baz=76,slow=4.2,SNR=2.5						
VAE				LR	LR	03 09 43.8	
	comp=Z,207nm,20.0s,baz=102,slow=39						
JIRN	**Jiri**	30.80	88	*e*P	P	02 56 04.9	-0.1
	comp=Z,144nm,1.1s						
BOJS	**Bojanci**	30.83	307	*e*P	P	02 56 03.9	-0.7
BOJS				*e*S	S	03 01 06.2	-2.5
CONA	**Conrad Observa**	31.11	312	*e*pP	P	02 56 06.0	-1.1
	comp=Z,5.0nm,0.9s,SNR=6.8						
ARSA	**Arzberg**	31.12	310	*e*P	P	02 56 08.2	+1.1
	comp=Z,2.9nm,0.9s						
VRAC	**Vranov**	31.12	314	⇓*i*P	P	02 56 08.2	+1.1
VRAC	**Vranov**	31.12	314	*e*P	P	02 56 06.3	-0.8
KRUC	**Moravsky**	31.15	314	*e*P	P	02 56 06.6	-0.8
WMQ	**Urumqi**	31.22	57	P	P	02 56 08.8	+0.7
WMQ				S	S	03 01 15.9	+0.9
WMQ				pmax	pmax		
	comp=Z,56nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,270nm,3.9s						
WMQ				LR	LR		
	comp=Z,3µm,16.9s						
WMQ				LR	LR		
	comp=Z,2µm,16.9s						
WMQ				LR	LR		
	comp=Z,1µm,19.9s						
PUL	**Pulkovo**	31.26	340	*i* P	P	02 56 09.2	+1.1
PUL				pmax	pmax		
	comp=Z,38nm,0.6s						
SOKA	**Soboth**	31.28	309	*e*pP	P	02 56 07.6	-1.0
	comp=Z,2.6nm,0.8s						
KRLC	**Kraliky**	31.30	316	*e*P	P	02 56 08.7	0.0
KRLC				*e*pP	sP	02 56 11.1	+0.7
KRLC	**Kraliky**	31.30	316	*e*P	P	02 56 08.7	0.0
RAMN	**Ramite**	31.36	89	*e*P	P	02 56 09.8	+0.1
	comp=Z,59nm,0.7s						
VSU	**Vasula**	31.39	336	*ce*P	P	02 56 08.3	-1.0
VSU				pmax	pmax		
	comp=Z,94nm,1.0s						
CLTB	**Caltabellotta**	31.43	291	*e*P	P	02 56 10.1	0.0
	comp=Z,18nm,1.2s						
CLTB	**Caltabellotta**	31.43	291	*e*P	P	02 56 10.1	0.0
	comp=Z,18nm,1.2s						
LJU	**Ljubljana**	31.45	308	*e*P	P	02 56 09.7	-0.4
LJU				*e*S	S	03 01 16.2	-2.3
OBKA	**Obir**	31.55	308	*e*pP	P	02 56 09.8	-1.3
	comp=Z,6.1nm,1.1s						
AQU	**L’Aquila**	31.56	300	*e*P	P	02 56 11.7	+0.5
	comp=Z,22nm,0.9s						
AQU	**L’Aquila**	31.56	300	*e*P	P	02 56 11.7	+0.5
AQU				pmax	pmax		
	comp=Z,22nm,0.9s						
AQU	**L’Aquila**	31.56	300	*e*P	P	02 56 11.6	+0.5
	comp=Z,22nm,0.9s						
KLNR	**Kaliningrad**	31.60	325	*i* P	P	02 56 10.7	-0.5
KLNR				pmax	pmax		
	comp=Z,125nm,1.0s						
DPC	**Dobruska-Polom**	31.68	316	*e*P	P	02 56 11.1	-1.0
DPC				*e*pP	sP	02 56 14.6	+0.9
DPC				AMS	AMS	03 10 50.0	
	comp=Z,600nm,20.0s						
DPC	**Dobruska-Polom**	31.68	316	*e*P	P	02 56 11.1	-1.0
DPC				*e*		02 56 14.6	
DPC				MLR	MLR		
	comp=Z,600nm,20.0s						
KSP	**Ksiaz**	31.89	317	*e*P	P	02 56 12.0	-1.8
KSP	**Ksiaz**	31.89	317	*e*P	P	02 56 12.0	-1.8
TRI	**Trieste**	31.89	307	*e*P	P	02 56 13.1	-0.8
	comp=Z,26nm,1.3s						
TRI	**Trieste**	31.89	307	*e*P	P	02 56 13.1	-0.8
TRI				pmax	pmax		
	comp=Z,26nm,1.3s						
TRI	**Trieste**	31.89	307	*e*P	P	02 56 13.1	-0.8
	comp=Z,26nm,1.3s						
UPC	**Upice**	31.92	316	*e*P	P	02 56 14.3	+0.1
UPC				*e*pP	sP	02 56 16.8	+1.0
UPC				*e*S	S	03 01 21.7	-4.0
UPC				AMS	AMS	03 11 00.0	
	comp=Z,600nm,20.1s						
UPC	**Upice**	31.92	316	*e*P	P	02 56 14.3	+0.1
UPC				*e*S	S	03 01 21.7	-4.0
UPC				MLR	MLR		
	comp=Z,600nm,20.1s						
MOA	**Molln**	32.10	311	*e*pP	P	02 56 14.6	-1.2
	comp=Z,6.8nm,0.6s,SNR=7.9						
MYKA	**Terra Mystica**	32.19	308	*e*P	P	02 56 16.3	-0.3
	comp=Z,1.6nm,0.5s						
GOPC	**GO Pecny, Ondr**	32.44	315	AMS	AMS	03 12 40.0	
	comp=Z,600nm,13.5s						
NVS	**Novosibirsk**	32.49	35	⇓*i*P	P	02 56 20.0	+0.9
NVS				*e*S	S	03 01 35.8	+1.4
NVS				pmax	pmax		
	comp=Z,20nm,1.3s						
NVS				pmax	pmax		
	comp=N,16nm,1.5s						
NVS				pmax	pmax		
	comp=E,12nm,1.2s						
NVS				smax	smax		
	comp=N,19nm,2.0s						
NVS				smax	smax		
	comp=E,22nm,2.4s						
KBA	**Koelnbreinsper**	32.50	309	*e*pP	P	02 56 18.7	-0.8
	comp=E,7.7nm,0.8s						
PRU	**Pruhonice**	32.61	315	*e*P	P	02 56 22.8	+2.6
PRU				*e*S	S	03 01 31.8	-4.6
PRU				AMS	AMS	03 12 40.0	
	comp=E,600nm,15.2s						
PRU	**Pruhonice**	32.61	315	*e*P	P	02 56 22.8	+2.6
PRU				*e*S	S	03 01 31.8	-4.6
PRU				MLR	MLR		
	comp=Z,600nm,15.2s						
PRA	**Prague**	32.70	315	AMS	AMS	03 12 50.0	
	comp=Z,900nm,16.5s						
GEA0	**GERESS Array S**	32.76	312	*e*P	P	02 56 21.0	-0.6
GEA0	**GERESS Array S**	32.76	312	*e*P	P	02 56 21.0	-0.6
GEC2	**GERESS Array S**	32.76	312	*e*P	P	02 56 21.8	+0.2
	comp=Z,6.3nm,0.7s						
GEC2	**GERESS Array S**	32.76	312	*e*P	P	02 56 21.8	+0.2
GEC2				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GERES	**GERESS Array B**	32.76	312	P	P	02 56 19.3	-2.4
	comp=Z,2.1nm,0.5s,baz=107,slow=8.9,SNR=9.9						
GERES				PcP	PcP	02 59 05.5	-1.4
	comp=Z,0.5nm,0.5s,baz=128,slow=1.6,SNR=3.4						
GERES				ScP	ScP	03 02 49.9	-1.8
	comp=Z,1.7nm,0.9s,baz=129,slow=3.6,SNR=6.6						
GERES				LR	LR	03 11 40.1	
	comp=Z,420nm,18.3s,baz=113,slow=40						
PVCC	**Panska Ves**	32.78	316	*e*P	P	02 56 24.6	+2.9
PVCC				AMS	AMS	03 11 00.0	
	comp=Z,600nm,17.8s						
PVCC	**Panska Ves**	32.78	316	*e*P	P	02 56 24.6	+2.9
PVCC				MLR	MLR		
	comp=Z,600nm,17.8s						
PVCC	**Panska Ves**	32.78	316	*e*P	P	02 56 24.6	+2.9
	comp=Z,600nm,17.8s						
ZAA0	**Zalesovo Array**	32.84	37	*e*P	P	02 56 22.1	0.0
	comp=Z,48nm,1.4s						
ZALV	**Zalesovo Beam**	32.84	37	P	P	02 56 22.1	0.0
	comp=Z,12nm,0.8s,baz=250,slow=9.5,SNR=42						
ZALV				PcP	PcP	02 59 05.1	-1.8
	comp=Z,1.2nm,0.5s,baz=278,slow=4.1,SNR=4.1						
ZALV				LR	LR	03 11 34.3	
	comp=Z,742nm,19.4s,baz=245,slow=40						
ZALV	**Zalesovo Beam**	32.84	37	*e*P	P	02 56 21.7	-0.4
ZALV				PcP	PcP	02 59 05.1	-1.8
KHC	**Kasperske Hory**	32.92	313	*e*P	P	02 56 22.0	-1.0
KHC				*e*S	S	03 01 37.9	-3.5
KHC				AMS	AMS	03 12 50.0	
	comp=Z,400nm,11.7s						
KHC	**Kasperske Hory**	32.92	313	*e*P	P	02 56 22.0	-1.0
KHC				*e*S	S	03 01 37.9	-3.5
KHC				MLR	MLR		
	comp=Z,400nm,11.7s						
ABTA	**Abfaltersbach**	32.97	308	*e*pP	P	02 56 22.3	-1.2
	comp=Z,4.4nm,0.6s						
BRG	**Berggiesshubel**	33.28	316	*e*P	P	02 56 25.7	-0.3
	comp=Z,18nm,1.4s						
BRG				S	S	03 01 44.0	-2.8
BRG	**Berggiesshubel**	33.28	316	*e*P	P	02 56 25.7	-0.3
BRG				S	S	03 01 44.0	-2.8
BRG				pmax	pmax		
	comp=Z,18nm,1.4s						
WTTA	**Wattenberg**	33.67	309	*e*pP	P	02 56 28.2	-1.5
	comp=Z,5.4nm,0.5s						
WTTA				*e*S	S	03 01 51.6	-1.8
	comp=Z,16nm,1.5s						
WATA	**Walderalm**	33.73	309	*i* P	P	02 56 30.6	+0.4
	SNR=6.1						
WATA				*e*S	S	03 01 49.8	-4.4
	comp=Z,12nm,1.3s						
FIA1	**FINESS Array S**	33.87	339	*e*P	P	02 56 30.2	-0.7
	comp=Z,78nm,1.8s						
FINES	**FINESS Array B**	33.87	339	P	P	02 56 29.4	-1.6
	comp=Z,5.1nm,0.5s,baz=147,slow=10,SNR=24						
FINES				LR	LR	03 11 41.7	
	comp=Z,693nm,18.7s,baz=145,slow=39						
NKC	**Novy Kostel**	33.96	314	*e*S	S	03 01 55.4	-2.1
VLC	**Villacollemand**	33.98	303	*e*P	P	02 56 31.3	-1.0
	comp=Z,31nm,0.9s						
VLC	**Villacollemand**	33.98	303	*e*P	P	02 56 31.3	-1.0
	comp=Z,31nm,0.9s						
CLL	**Collm**	33.99	316	*i* P	P	02 56 32.1	-0.1
	comp=Z,21nm,0.9s						
CLL				*e*S	S	03 01 56.0	-1.8
CLL				*e*SS	SS	03 04 24.0	-0.3
CLL				LmV		03 12 00.0	
	comp=Z,700nm,19.0s						
CLL	**Collm**	33.99	316	*e*P	P	02 56 32.4	+0.2
	comp=Z,21nm,0.9s						
CLL	**Collm**	33.99	316	*e*P	P	02 56 32.4	+0.2
CLL				pmax	pmax		
	comp=Z,21nm,0.9s						
MOTA	**Moosalm**	34.05	309	*e*pP	P	02 56 32.0	-0.9
	comp=Z,11nm,0.5s,SNR=25						
MOTA				*e*S	S	03 01 53.7	-5.5
	comp=Z,9.0nm,1.0s						
FETA	**Feichten**	34.23	308	*e*P	P	02 56 32.3	-2.2
	comp=Z,6.6nm,0.5s,SNR=10						
FETA				*e*S	S	03 01 58.5	-3.5
	comp=Z,11nm,1.7s						
RETA	**Reutte**	34.30	309	*e*P	P	02 56 32.4	-2.7
	comp=Z,3.6nm,0.8s						
RETA				*e*S	S	03 01 58.0	-4.9
	comp=Z,8.6nm,1.3s						
FUORN	**Ofenpass-Fuorn**	34.46	307	*e*P	P	02 56 36.0	-0.7
	comp=Z,14nm,1.0s						
FUORN				*e*S	S	03 02 05.7	0.0
BSD	**Bornholm Skovb**	34.49	323	⇓*i*P	P	02 56 34.6	-1.9
	comp=Z,85nm,0.8s						
LSA	**Lhasa**	34.50	83	*e*P	P	02 56 37.7	+0.3
	comp=Z,12nm,0.7s						
LSA				LR	LR		
	comp=Z,394nm,19.0s						
GRFO	**Grafenberg**	34.56	313	*e*P	P	02 56 36.2	-1.0
	comp=Z,25nm,1.2s						
GRFO	**Grafenberg**	34.56	313	*e*P	P	02 56 36.2	-1.0
GRFO				pmax	pmax		
	comp=Z,25nm,1.2s						
KEST	**Kesra**	34.64	288	P	P	02 56 38.1	-0.1
	comp=Z,4.9nm,0.8s,baz=90,slow=5.1,SNR=7.6						
KEST	**Kesra**	34.64	288	*e*P	P	02 56 38.4	+0.3
	comp=Z,30nm,1.1s						
KEST	**Kesra**	34.64	288	*e*P	P	02 56 38.4	+0.3
	comp=Z,30nm,1.1s						
DAVOX	**Davos/Dischmat**	34.75	308	P	P	02 56 37.6	-1.5
	comp=Z,11nm,0.7s,baz=71,slow=7.9,SNR=13						
DAVOX				LR	LR	03 14 34.0	
	comp=Z,386nm,18.2s,baz=86,slow=43						
DAVA	**Damuels**	34.85	308	*e*P	P	02 56 37.7	-2.2
	comp=Z,15nm,0.4s,SNR=13						
DAVA				*e*S	S	03 02 07.2	-4.3
	comp=Z,16nm,0.8s						

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TUE   Stuetta          35.05 307  eP     P       02 56 41.9 +0.2
      comp=Z,11nm,0.8s
TUE   Stuetta          35.05 307  eP     P       02 56 41.9 +0.2
      comp=Z,11nm,0.8s
KMBO  Kilima Mbogo     35.15 204   LR    LR      03 12 03.3
      comp=Z,371nm,19.2s,baz=18,slow=38
THTN  Thala            35.19 288  eP     P       02 56 45.0 +2.1
      comp=Z,46nm,1.1s
THTN  Thala            35.19 288  eP     P       02 56 45.0 +2.1
      comp=Z,46nm,1.1s
LLD   Lille Linde      35.98 323  i P    P       02 56 50.3 +1.0
COP   Copenhagen       36.02 323  i P    P       02 56 49.5 -0.1
      comp=Z,98nm,0.9s
SHL   Shillong         36.29  89  eP     P       02 56 50.5 -2.1
SENIN Lac Senin/Sane   36.44 306  eP     P       02 56 51.9 -1.8
      comp=Z,11nm,0.8s
SENIN Lac Senin/Sane   36.44 306  eP     P       02 56 51.8 -1.8
      comp=Z,11nm,0.8s
BNI   Bardonecchia     36.71 304  eP     P       02 56 53.6 -2.3
      comp=Z,38nm,0.9s
BNI   Bardonecchia     36.71 304  eP     P       02 56 53.6 -2.3
BNI                                pmax  pmax
      comp=Z,38nm,0.9s
BNI   Bardonecchia     36.71 304  eP     P       02 56 53.6 -2.3
      comp=Z,38nm,0.9s
HVS   Khovu-Aksy       36.82  46  i P    P       02 56 56.4 -0.3
HVS                                pmax  pmax
      comp=Z,19nm,1.0s
HVS   Khovu-Aksy       36.82  46  i P    P       02 56 56.4 -0.3
      comp=Z,19nm,1.0s
ECH   Echery           36.83 309  eP     P       02 56 55.3 -1.4
      comp=Z,10nm,1.0s
ECH   Echery           36.83 309  eP     P       02 56 55.3 -1.4
ECH                                pmax  pmax
      comp=Z,10.0nm,1.0s
ECH   Echery           36.83 309  eP     P       02 56 55.3 -1.4
      comp=Z,10.0nm,1.0s
PALK  Pallekele        36.89 125   P     P       02 57 00.2 +2.6
      comp=Z,14nm,0.9s,baz=295,slow=4.2,SNR=3.7
PALK                               LR    LR      03 13 10.3
      comp=Z,576nm,20.4s,baz=291,slow=38
BRDH  Bariadhala       37.13  94   LR    LR      03 14 30.2
      comp=Z,484nm,20.4s,baz=302,slow=40
APA   Apatity          37.35 349⇓iP      P       02 56 59.1 -1.7
APA                               i              02 58 24.0
APA                               i              02 59 18.0
APA                               i S    S       03 02 45.0 -3.9
APA                                pmax  pmax
      comp=Z,12nm,1.0s
APA                                MLR   MLR
      comp=Z,1μm,13.0s
HFS   Hagfors          37.58 330   P     P       02 57 02.0 -0.9
      comp=Z,46nm,0.8s,baz=129,slow=8.4,SNR=76
HFS                                LR    LR      03 13 31.5
      comp=Z,812nm,20.9s,baz=128,slow=38
HFS   Hagfors          37.58 330   P     P       02 57 02.0 -0.9
HFS                                pmax  pmax
      comp=Z,46nm,0.8s
HFS                                MLR   MLR
      comp=Z,812nm,20.9s
KRAR  Krasnoyarsk      37.91  38  i P    P       02 57 05.4 -0.3
MUD   Monsted U'grnd   38.00 323⇓iP      P       02 57 06.3 -0.1
      comp=Z,96nm,0.9s
NC602 NORSAR Array S   38.81 330  eP     P       02 57 12.3 -1.0
NC602 NORSAR Array S   38.81 330  eP     P       02 57 11.6 -1.6
NC602                              IAmb  IAmb    02 57 16.7
      comp=Z,858nm,1.6s
NC405 NORSAR Array S   38.93 331  eP     P       02 57 13.0 -1.3
HOMB  Homborsund       39.06 326  eP     P       02 57 15.7 +0.5
HOMB                               IAmb  IAmb    02 57 19.1
      comp=Z,42nm,0.6s
NB201 NORSAR Array S   39.07 330  eP     P       02 57 14.0 -1.5
NB2   NORSAR Subarra   39.10 330   P     P       02 57 13.9 -1.8
      comp=Z,20nm,0.7s,baz=123,slow=8.6
NB2   NORSAR Subarra   39.10 330   P     P       02 57 13.9 -1.8
      baz=123,slow=8.6
NOA   NORSAR Array B   39.10 330   LR    LR      03 14 28.0
      comp=Z,696nm,20.0s,baz=120,slow=38
NC303 NORSAR Array S   39.13 331  eP     P       02 57 14.7 -1.3
KONO  Kongsberg        39.14 328  eP     P       02 57 14.7 -1.3
      comp=Z,44nm,0.8s
KONO  Kongsberg        39.14 328ceP      P       02 57 13.7 -2.3
KONO                               pmax  pmax
      comp=Z,77nm,1.3s
KONO  Kongsberg        39.14 328  eP     P       02 57 14.7 -1.3
KONO                               IAmb  IAmb    02 57 16.3
      comp=Z,68nm,1.1s
NAO01 NORSAR Array S   39.14 330  eP     P       02 57 14.5 -1.5
NBO00 NORSAR Array S   39.28 330  eP     P       02 57 15.1 -2.2
NC204 NORSAR Array S   39.41 331  eP     P       02 57 16.8 -1.5
SNART Snartemo         39.71 325  eP     P       02 57 20.9 +0.1
SNART                              IAmb  IAmb    02 57 23.5
      comp=Z,28nm,1.0s
GTA   Gaotai           40.09  65   P     P       02 57 25.6 +1.2
GTA                                pP    sP      02 57 30.2 +4.2
GTA                                sP    pP      02 57 32.5 +6.9
GTA                                S     S       03 03 33.5 +2.3
GTA                                sS    sS      03 03 39.9 +6.7
GTA                                ScS   ScS     03 07 31.1 -1.3
GTA                                pmax  pmax
      comp=Z,16nm,1.0s
GTA                                pmax  pmax
      comp=Z,170nm,5.4s
GTA                                LR    LR
      comp=Z,750nm,12.4s
GTA                                LR    LR
      comp=Z,410nm,13.4s
GTA                                LR    LR
      comp=Z,510nm,12.4s
DOMB  Dombas           40.49 331  eP     P       02 57 25.5 -1.8
DOMB                               IAmb  IAmb    02 57 31.0
      comp=Z,73nm,1.5s
BLS5  Blasjo           40.49 327  eP     P       02 57 26.2 -1.1
BLS5                               IAmb  IAmb    02 57 29.5
      comp=Z,68nm,1.1s
ARCES ARCESS Array B   40.50 347   P     P       02 57 26.7 -0.5
      comp=Z,6.7nm,0.8s,baz=127,slow=7.8,SNR=15
ARCES                              PP    PP      02 59 00.8 +0.5
      comp=Z,6.0nm,0.8s,baz=133,slow=7.9,SNR=5.1
ARE0  ARCESS Array S   40.50 347  eP     P       02 57 26.9 -0.3
ARE0                               IAmb  IAmb    02 57 28.2
      comp=Z,19nm,1.1s
KTK1  Kautokeino       40.55 345  eP     P       02 57 27.0 -0.7
ODD1  Odda             40.61 327  eP     P       02 57 28.4 +0.1
ODD1                               IAmb  IAmb    02 57 30.2
      comp=Z,180nm,1.2s
TBLU  Trondheim        40.63 333  eP     P       02 57 27.0 -1.3
TBLU                               IAmb  IAmb    02 57 35.5
      comp=Z,20nm,0.9s
NSS   Namsos           40.69 335  eP     P       02 57 26.4 -2.5
NSS                                IAmb  IAmb    02 57 34.2
      comp=Z,19nm,1.0s
TAM   Tamanrasset      41.10 269  eP     P       02 57 33.9 +1.0
      comp=Z,8.0nm,0.7s
TAM   Tamanrasset      41.10 269  eP     P       02 57 33.9 +1.0
TAM                                pmax  pmax
      comp=Z,8.0nm,0.7s
HYA   Hoyanger         41.33 329  eP     P       02 57 33.0 -1.1
HYA                                IAmb  IAmb    02 57 38.9
      comp=Z,108nm,1.4s
BER   Bergen           41.39 328  eP     P       02 57 33.7 -0.9
BER                                IAmb  IAmb    02 57 38.2
      comp=Z,41nm,0.7s
MOY   Mondy            41.40  46  eP     P       02 57 36.6 +1.6
MOY                                pmax  pmax
      comp=Z,63nm,1.8s
AKN   Aaknes           41.42 331  eP     P       02 57 34.7 -0.2
AKN                                IAmb  IAmb    02 57 40.3
      comp=Z,71nm,1.1s
ASK   Askoy            41.49 328  eP     P       02 57 34.2 -1.3
STEI  Steigen          41.76 341  eP     P       02 57 36.8 -0.8
STEI                               IAmb  IAmb    02 57 51.8
      comp=Z,55nm,1.6s
TRO   Tromso           42.01 344  eP     P       02 57 37.8 -1.7
TRO                                IAmb  IAmb    02 57 43.2
      comp=Z,44nm,1.3s
ZAK   Zakamensk        42.67  48  eP     P       02 57 45.1 -0.3
ZAK                               e              02 59 39.8
ZAK                                pmax  pmax
      comp=Z,11nm,1.7s
ZAK                                pmax  pmax
      comp=Z,7.0nm,1.5s
TLY   Talaya           43.04  47  eP     P       02 57 49.0 +0.8
      comp=Z,13nm,1.1s
TLY                                LR    LR
      comp=Z,912nm,21.0s
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TLY   Talaya           43.04  47   P     P       02 57 51.9 +3.6
      SNR=9.0
TLY   Talaya           43.04  47c iP     P       02 57 48.2 -0.1
TLY                               e              02 59 29.4
TLY                               ePPP   PPP     03 00 10.6
TLY                               eS     S       03 04 18.0 +3.6
TLY                               eSS    SS      03 07 26.3 +0.2
TLY                               eSSS   SSS     03 08 07.8
TLY                                pmax  pmax
      comp=Z,20nm,1.5s
TLY                                MLR   MLR
      comp=Z,699nm,15.0s
IRK   Irkutsk          43.49  46  eP     P       02 57 52.2 +0.3
IRK                                pmax  pmax
      comp=Z,57nm,2.3s
LZH   Lanzhou          43.68  69  eP     P       02 57 54.7 +0.8
LZH                                pP    sP      02 57 58.9 +3.4
LZH                                sP    pP      02 58 02.6 +7.5
LZH                                PcP   PcP     02 59 44.9 +3.9
LZH                               eS     S       03 04 22.3 -2.3
LZH                                SS    SS      03 07 27.2  -12
LZH                                pmax  pmax
      comp=Z,80nm,1.1s
LZH                                pmax  pmax
      comp=Z,350nm,4.6s
LZH                                LR    LR
      comp=Z,2μm,14.9s
LZH                                LR    LR
      comp=Z,1μm,14.4s
LZH                                LR    LR
      comp=Z,2μm,15.4s
ESK   Eskdalemuir      44.39 319  eP     P       02 57 58.5 -0.5
      comp=Z,15nm,0.9s
ESK   Eskdalemuir      44.39 319  eP     P       02 57 58.5 -0.5
ESK                                pmax  pmax
      comp=Z,15nm,0.9s
CMAI  Chiengmai2       44.54  93   P     P       02 58 06.0 +5.1
      comp=Z,2.7nm,0.9s
SONM  Songino Array    44.59  52   LR    LR      03 17 18.7
      comp=Z,373nm,19.3s,baz=255,slow=37
ES19  SONSECA Array    44.65 296  eP     P       02 58 00.9 -0.5
ES19  SONSECA Array    44.65 296  eP     P       02 58 00.9 -0.5
ESDC  Sonseca Array    44.70 296   P     P       02 58 00.8 -1.0
      comp=Z,3.5nm,0.6s,baz=71,slow=6.4,SNR=15
ESDC                               PcP   PcP     02 59 44.1 -0.2
      comp=Z,0.6nm,0.5s,baz=68,slow=2.7,SNR=3.3
ESLA  Sonseca Array    44.70 296  eP     P       02 58 02.8 +1.0
      comp=Z,9.8nm,0.9s
ESLA  Sonseca Array    44.70 296  eP     P       02 58 02.8 +1.0
      comp=Z,9.8nm,0.9s
CD2   Chengdu          44.76  77   P     P       02 58 01.5 -0.9
CD2                                pP    sP      02 58 04.6 +0.5
CD2                                PP    PP      02 59 45.9 -0.8
CD2                                S     S       03 04 38.8 -1.3
CD2                                pmax  pmax
      comp=Z,20nm,0.5s
CD2                                pmax  pmax
      comp=Z,120nm,4.8s
CD2                                LR    LR
      comp=Z,470nm,12.9s
CD2                                LR    LR
      comp=Z,390nm,11.9s
CD2                                LR    LR
      comp=Z,580nm,11.3s
CHTO  Chiang Mai       44.94  95  eP     P       02 58 03.9  0.0
      comp=Z,18nm,1.1s
CHTO                               LR    LR
      comp=Z,265nm,20.0s
CHTO  Chiang Mai       44.94  95  eP     P       02 58 03.9  0.0
CHTO                               pmax  pmax
      comp=Z,19nm,1.1s
CHTO                               MLR   MLR
      comp=Z,265nm,20.0s
CHTO  Chiang Mai       44.94  95   P     P       02 58 06.2 +2.3
      comp=Z,73nm,1.6s
CMMT  Chiang Mai       44.94  95   P     P       02 58 06.2 +2.2
      comp=Z,12nm,1.1s,comp=Z,507nm
PAB   San Pablo        45.01 296  eP     P       02 58 04.3  0.0
      comp=Z,46nm,1.7s
PAB                                LR    LR
      comp=Z,251nm,19.0s
PAB   San Pablo        45.01 296  eP     P       02 58 04.3  0.0
PAB                                pmax  pmax
      comp=Z,46nm,1.7s
PAB                                MLR   MLR
      comp=Z,251nm,19.0s
PAB   San Pablo        45.01 296  eP     P       02 58 04.3  0.0
      comp=Z,251nm,19.0s
CMAR  Chiang Mai Arr   45.10  95   P     P       02 58 04.8 -0.4
      comp=Z,2.8nm,0.7s,baz=290,slow=8.4,SNR=7.3
CMAR                               PcP   PcP     02 59 45.8 -0.2
      comp=Z,3.2nm,0.7s,baz=284,slow=5.2,SNR=4.1
CMAR                               LR    LR      03 19 56.5
      comp=Z,203nm,20.2s,baz=274,slow=40
CM01  Chiang Mai Arr   45.13  95  eP     P       02 58 04.8 -0.6
KMI   Kunming          45.68  85   P     P       02 58 10.3 +0.3
KMI                                pP    sP      02 58 13.1 +1.4
KMI                                sP    pP      02 58 14.9 +3.7
KMI                                PP    PP      02 59 56.9 +0.1
KMI                                S     S       03 04 52.2 -1.7
KMI                                SS    ScS     03 08 06.6 -1.1
KMI                                pmax  pmax
      comp=Z,18nm,0.7s
KMI                                pmax  pmax
      comp=Z,220nm,3.1s
KMI                                LR    LR
      comp=Z,230nm,17.2s
KMI                                LR    LR
      comp=Z,190nm,12.6s
KMI                                LR    LR
      comp=Z,250nm,13.2s
NANT  Nan              46.44  94   P     P       02 58 16.3 +0.5
      comp=Z,4.5nm,0.8s,comp=Z,158nm
MDT   Midelt           46.52 287   P     P       02 58 15.1 -1.3
      comp=Z,2.6nm,0.7s,baz=100,slow=10.0,SNR=8.4
MDT                                LR    LR      03 22 13.9
      comp=Z,81nm,18.8s,baz=74,slow=42
PBRG  Braganca         46.52 299  eP     P       02 58 16.9 +0.7
      comp=Z,23nm,1.5s
MVO   Moncorvo         46.82 299  eP     P       02 58 19.3 +0.7
      comp=Z,26nm,1.5s
MVO   Moncorvo         46.82 299  eSS    SS      03 08 42.6 +6.7
MVO                               eLR    LR      03 18 33.1
      comp=Z,220nm,18.0s
MTE   Manteigas        47.32 298  eP     P       02 58 22.5  0.0
      comp=Z,55nm,1.5s
MTE                               eS     S       03 05 17.2 +0.5
MTE                               eSS    SS      03 08 49.5 +5.6
MTE                               eLR    LR      03 18 13.1
      comp=Z,266nm,20.0s
MTE   Manteigas        47.32 298  eP     P       02 58 22.5  0.0
MTE                               eS     S       03 05 17.2 +0.5
MTE                               eSS    SS      03 08 49.5 +5.6
PVRL  Vila Real        47.32 299  eP     P       02 58 22.1 -0.4
      comp=Z,31nm,1.8s
PVRL  Vila Real        47.32 299  eP     P       02 58 22.1 -0.4
PCBR  Castelo Branco   47.35 297  eP     P       02 58 23.3 +0.6
      comp=Z,73nm,1.7s
PCBR  Castelo Branco   47.35 297  eP     P       02 58 23.3 +0.6
PMRV  Marv??o          47.35 296  eP     P       02 58 22.1 -0.6
      comp=Z,30nm,1.4s
PMRV  Marv??o          47.35 296  eP     P       02 58 22.1 -0.6
POLO  Lamas de Olo     47.36 299  eP     P       02 58 22.1 -0.8
      comp=Z,19nm,1.8s
POLO  Lamas de Olo     47.36 299  eSS    SS      03 08 53.9 +9.2
PVIS  Viseu            47.53 298  eP     P       02 58 25.2 +1.1
      comp=Z,42nm,1.7s
PVIS  Viseu            47.53 298  eP     P       02 58 25.2 +1.1
PESTR Estremoz         47.60 296  eP     P       02 58 24.1 -0.6
      comp=Z,30nm,2.4s
PESTR Estremoz         47.60 296  eP     P       02 58 25.7 +1.0
      comp=Z,9.8nm,1.0s
PESTR Estremoz         47.60 296  eP     P       02 58 24.1 -0.6
PGAV  Gavieira, Arco   47.63 300  eP     P       02 58 24.6 -0.4
      comp=Z,39nm,1.3s
PGAV  Gavieira, Arco   47.63 300  eLR    LR      03 17 36.3
      comp=Z,174nm,20.0s
PGAV  Gavieira, Arco   47.63 300  eP     P       02 58 24.6 -0.4
PBKT  Sadao Pong       47.68  96   P     P       02 58 28.5 +3.1
      comp=Z,20nm,1.1s,comp=Z,2μm
BTO   Baotou           47.73  62  eP     P       02 58 25.4 -0.4
PBEJ  Beja             47.97 295  eP     P       02 58 28.6 +1.1
      comp=Z,55nm,1.3s
PBEJ  Beja             47.97 295  eP     P       02 58 28.6 +1.1
PVAQ  Vaqueiros        47.98 294  eLR    LR      03 18 32.5
      comp=Z,130nm,16.0s
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COI   Coimbra          48.00 298  eP     P       02 58 28.1 +0.4
      comp=Z,56nm,1.6s
COI   Coimbra          48.00 298  eP     P       02 58 28.1 +0.4
PCAS  Casmilo, Conde   48.09 297  eP     P       02 58 29.4 +1.0
      comp=Z,50nm,1.3s
PCAS  Casmilo, Conde   48.09 297  eP     P       02 58 29.4 +1.0
PTOM  Tomar            48.10 297  eP     P       02 58 28.6 +0.1
      comp=Z,75nm,1.3s
XAN   Xi'an            48.19  71   P     P       02 58 29.5 +0.2
XAN                                sP    sP      02 58 36.0 +5.0
XAN                                pmax  pmax
      comp=Z,25nm,0.9s
XAN                                pmax  pmax
      comp=Z,150nm,3.7s
PNCL  Nicolau / Gran   48.47 295  eP     P       02 58 31.8 +0.5
      comp=Z,41nm,2.0s
PNCL                              eS     S       03 05 33.8 +0.8
PNCL                              eSS    SS      03 09 11.7 +9.2
PNCL  Nicolau / Gran   48.47 295  eP     P       02 58 31.8 +0.5
PNCL                              eS     S       03 05 33.8 +0.8
PNCL                              eSS    SS      03 09 11.7 +9.2
GYA   Guiyang          48.54  81⇓iP      P       02 58 31.8 -0.4
GYA                                S     S       03 05 37.7 +3.2
GYA                                SS    SS      03 08 57.5 -6.8
GYA                                pmax  pmax
      comp=Z,20nm,1.0s
GYA                                pmax  pmax
      comp=Z,120nm,5.2s
GYA                                LR    LR
      comp=Z,520nm,17.8s
GYA                                LR    LR
      comp=Z,480nm,18.0s
TOA0  Torodi Ar. Sit   48.69 259  eP     P       02 58 32.4 -0.9
      comp=Z,50nm,0.8s
TORD  Torodi Ar. Bea   48.69 259   P     P       02 58 31.8 -1.5
      comp=Z,36nm,0.7s,baz=58,slow=7.8
TORD                               LR    LR      03 21 34.1
      comp=Z,282nm,19.3s,baz=70,slow=39
NONG  Nongkai          48.84  93   P     P       02 58 40.2 +5.7
      comp=Z,0.3nm,1.7s
HHC   Hu-ho-hao-te     48.85  61  eP     P       02 58 35.4 +1.0
HHC                                pP    sP      02 58 41.3 +5.2
HHC                                sP    pP      02 58 45.0 +9.4
HHC                                PP    PP      03 00 26.5 -1.0
HHC                                S     S       03 05 37.5 -1.1
HHC                                sS    sS      03 05 42.6 +2.1
HHC                                ScS   ScS     03 08 23.8 -4.1
HHC                                pmax  pmax
      comp=Z,10.0nm,1.0s
HHC                                pmax  pmax
      comp=Z,86nm,7.1s
HHC                                LR    LR
      comp=Z,180nm,10.4s
HHC                                LR    LR
      comp=Z,150nm,11.2s
HHC                                LR    LR
      comp=Z,170nm,10.3s
SPA0  Spitsbergen Ar   48.96 351  eP     P       02 58 34.9 +0.3
SPA0  Spitsbergen Ar   48.96 351  eP     P       02 58 35.3 +0.8
SPA0                               IAmb  IAmb    02 58 36.2
      comp=Z,82nm,1.4s
SPITS Spitsbergen Ar   48.96 351   P     P       02 58 33.0 -1.6
      comp=Z,8.2nm,0.5s,baz=124,slow=7.2,SNR=24
SPITS                              LR    LR      03 23 50.8
      comp=Z,374nm,19.0s,baz=165,slow=42
SPITS Spitsbergen Ar   48.96 351   P     P       02 58 33.0 -1.6
SPITS                              pmax  pmax
      comp=Z,8.0nm,0.5s
SPITS                              MLR   MLR
      comp=Z,374nm,19.0s
BOD   Bodaibo          49.57  39  eP     P       02 58 39.0 -0.5
BOD                                pmax  pmax
      comp=Z,57nm,1.6s
ENH   Enshi            49.67  75  eP     P       02 58 40.6 -0.1
      comp=Z,18nm,0.9s
ENH                                LR    LR
      comp=Z,425nm,19.0s
ENH   Enshi            49.67  75  eP     P       02 58 40.6 -0.1
      comp=Z,18nm,0.9s
SRAK  Srakaew          49.81  99   P     P       02 58 51.3 +9.4
SKNT  Sakolnakorn      50.05  94   P     P       02 58 49.5 +5.8
      comp=Z,6.3nm,1.3s
OPO   Ambohidratompo   50.13 185   P     P       02 58 44.4 +0.1
      comp=Z,12nm,1.1s,baz=2.1,slow=7.7,SNR=8.7
OPO                                LR    LR      03 21 54.8
      comp=Z,452nm,18.0s,baz=355,slow=38
ABPO  Ambohimpanom     50.57 185  eP     P       02 58 48.3 +0.7
      comp=Z,41nm,1.4s
ABPO  Ambohimpanom     50.57 185  eP     P       02 58 48.3 +0.7
ABPO                               pmax  pmax
      comp=Z,41nm,1.4s
TRTT  Trang            51.13 107   P     P       02 58 53.4 +1.6
      comp=Z,13nm,0.9s
LSZ   Lusaka           51.57 208   P     P       02 58 55.6 +0.4
      comp=Z,4.9nm,0.7s,baz=14,slow=6.9,SNR=9.2
LSZ   Lusaka           51.57 208  eP     P       02 58 55.2 +0.1
      comp=Z,40nm,1.5s
LSZ                                LR    LR
      comp=Z,538nm,19.0s
LSZ   Lusaka           51.57 208   P     P       02 58 57.4 +2.2
      SNR=5.2
LSZ   Lusaka           51.57 208  eP     P       02 58 55.3 +0.1
LSZ                                pmax  pmax
      comp=Z,40nm,1.5s
LSZ                                MLR   MLR
      comp=Z,538nm,19.0s
BJI   Beijing          52.46  62⇑iP      P       02 58 58.3 -3.2
BJI                                S     S       03 06 26.4 -2.0
BJI                                pmax  pmax
      comp=Z,8.0nm,0.6s
BJI                                pmax  pmax
      comp=Z,200nm,5.3s
BJI                                LR    LR
      comp=Z,1μm,17.5s
BJI                                LR    LR
      comp=Z,520nm,19.0s
KOWA  Kowa             52.84 264   P     P       02 59 03.9 -0.7
      comp=Z,25nm,0.6s,baz=52,slow=8.0,SNR=34
KOWA                               LR    LR      03 21 54.7
      comp=Z,154nm,21.5s,baz=62,slow=36
PSI   Prapat           53.48 113  eP     P       02 59 08.4 -1.1
      comp=Z,21nm,1.0s
PSI   Prapat           53.48 113  eP     P       02 59 08.4 -1.1
PSI                                pmax  pmax
      comp=Z,21nm,1.0s
WHN   Wuhan            53.58  73   P     P       02 59 12.9 +3.0
WHN                                S     S       03 06 46.7 +2.7
WHN                                LR    LR
      comp=Z,760nm,12.4s
WHN                                LR    LR
      comp=Z,640nm,10.4s
WHN                                LR    LR
      comp=Z,640nm,17.8s
TIA   Tai'an           54.12  66   P     P       02 59 14.3 +0.5
TIA                                pmax  pmax
      comp=Z,11nm,1.1s
DAG   Danmarks Havn    54.72 345  i P    P       02 59 16.1 -1.4
      comp=Z,12nm,1.0s
TIXI  Tiksi            56.45  22  eP     P       02 59 30.3 +0.3
      comp=Z,9.2nm,0.9s
TIXI  Tiksi            56.45  22ceP      P       02 59 29.3 -0.7
TIXI                               pmax  pmax
      comp=Z,16nm,1.3s
NJ2   Nanjing          56.74  70  eP     P       02 59 32.2 -0.5
NJ2                                pmax  pmax
      comp=Z,14nm,0.8s
DL2   Dalian           56.83  62   P     P       02 59 33.6 +0.4
DL2                                S     S       03 07 26.4 -0.8
DL2                                pmax  pmax
      comp=Z,36nm,0.8s
DL2                                LR    LR
      comp=Z,430nm,17.4s
DL2                                LR    LR
      comp=Z,330nm,16.6s
DL2                                LR    LR
      comp=Z,360nm,19.6s
ZEA   Zeya             57.27  43  eP     P       02 59 38.0 +1.9
ZEA                               e              03 07 30.0
ZEA                                pmax  pmax
      comp=E,49nm,1.6s
ZEA                                pmax  pmax
      comp=Z,61nm,1.6s
ZEA                                pmax  pmax
      comp=Z,200nm,4.0s
ZEA                                MLR   MLR
      comp=Z,700nm,15.0s
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ZEA				MLR	MLR		
	comp=E,600nm,17.0s						
DBIC	**Dimbokro**	**57.57**	**257**	P	**P**	**02 59 37.6**	**-1.2**
	comp=E,20nm,0.7s,baz=28,slow=8.2,SNR=20						
DBIC				LR	LR	03 26 55.9	
	comp=E,254nm,18.3s,baz=38,slow=39						
DBIC	**Dimbokro**	**57.57**	**257**	*e*P	**P**	**02 59 38.6**	**-0.2**
	comp=E,25nm,0.8s						
DBIC	**Dimbokro**	**57.57**	**257**	*e*P	**P**	**02 59 38.6**	**-0.2**
DBIC				pmax	pmax		
	comp=Z,25nm,0.8s						
KIC	**Kosan Boka**	**57.65**	**256**	*e*P	**P**	**02 59 38.9**	**-0.5**
	comp=Z,98nm,1.0s						
TIC	**Toumodi**	**57.72**	**257**	*e*P	**P**	**02 59 39.2**	**-0.7**
LIC	**Lamto**	**57.96**	**256**	*e*P	**P**	**02 59 41.0**	**-0.5**
	comp=Z,117nm,0.7s						
CN2	**Changchun**	**58.29**	**55**	*e*P	**P**	**02 59 38.7**	**-4.7**
TSUM	**Tsumeb**	**59.89**	**217**	*e*P	**P**	**02 59 54.9**	**0.0**
TSUM				LR	LR		
	comp=Z,199nm,19.0s						
SUMG	**Summit**	**59.90**	**340**	*e*P	**P**	**02 59 54.0**	**-0.7**
	comp=Z,25nm,0.9s						
SUMG	**Summit**	**59.90**	**340**	*i* P	**P**	**02 59 54.6**	**0.0**
	comp=Z,24nm,0.9s						
SUMG	**Summit**	**59.90**	**340**	*e*P	**P**	**02 59 54.0**	**-0.7**
SUMG				pmax	pmax		
	comp=Z,25nm,0.9s						
KLR	**Kul'dur**	**61.03**	**48**	*i* P	**P**	**03 00 01.4**	**-0.9**
KS01	**Wonju Array Si**	**61.96**	**61**	*e*P	**P**	**03 00 07.6**	**-1.2**
KS01	**Wonju Array Si**	**61.96**	**61**	*e*P	**P**	**03 00 07.6**	**-1.2**
KS15	**Wonju Array Si**	**61.97**	**61**	*e*P	**P**	**03 00 08.3**	**-0.4**
KSAR	**Wonju Array Be**	**61.97**	**61**	P	**P**	**03 00 08.1**	**-0.7**
KSAR	**Wonju Array Be**	**61.97**	**61**	P	**P**	**03 00 08.1**	**-0.7**
KSRS	**Korea Array**	**61.99**	**61**	P	**P**	**03 00 08.1**	**-0.9**
	comp=Z,9.6nm,0.7s,baz=281,slow=7.0,SNR=49						
KSRS				LR	LR	03 28 57.1	
	comp=Z,204nm,18.9s,baz=292,slow=38						
USRK	**Ussuriysk Ar.**	**62.69**	**53**	P	**P**	**03 00 11.9**	**-1.6**
	comp=Z,3.5nm,0.8s,baz=242,slow=3.1						
BOSA	**Boshof**	**64.78**	**205**	P	**P**	**03 00 27.6**	**+0.2**
	comp=Z,15nm,0.6s,baz=22,slow=5.4,SNR=29						
BOSA				LR	LR	03 29 20.2	
	comp=Z,332nm,21.6s,baz=33,slow=37						
BOSA	**Boshof**	**64.78**	**205**	*e*P	**P**	**03 00 27.7**	**+0.2**
	comp=Z,24nm,0.8s						
SFJD	**Kangerlussuaq**	**65.55**	**335**	LR	LR	03 30 30.2	
	comp=Z,288nm,19.8s,baz=72,slow=37						
JNU	**Nakatsue**	**65.83**	**65**	LR	LR	03 34 03.2	
	comp=Z,120nm,19.1s,baz=303,slow=40						
TYV	**Tymovskoe**	**67.14**	**43**	*e*P	**P**	**03 00 40.4**	**-2.0**
TYV				pmax	pmax		
	comp=Z,15nm,1.9s						
MA2	**Magadan**	**67.89**	**33**	*e*P	**P**	**03 00 47.1**	**+0.2**
MA2				LR	LR		
	comp=Z,193nm,21.0s						
MA2	**Magadan**	**67.89**	**33**	*e*P	**P**	**03 00 47.2**	**+0.2**
MA2				MLR	MLR		
	comp=Z,193nm,21.0s						
YSS	**Yuzh-Sakhalins**	**68.74**	**47**	*e*P	**P**	**03 00 51.9**	**-0.6**
YSS	**Yuzh-Sakhalins**	**68.74**	**47**	⇓*e*P	**P**	**03 00 51.7**	**-0.8**
YSS				*e*		03 00 56.1	
YSS				*e*		03 01 01.9	
YSS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
YSS				MLR	MLR		
	comp=Z,500nm,14.0s						
BILL	**Bilibino**	**69.66**	**21**	*e*P	**P**	**03 00 57.8**	**0.0**
BILL	**Bilibino**	**69.66**	**21**	*e*P	**P**	**03 00 58.3**	**+0.4**
BILL				*e*		03 01 19.7	
BILL				*e*		03 03 32.9	
BILL				pmax	pmax		
	comp=Z,51nm,1.7s						
BILL				MLR	MLR		
	comp=Z,474nm,22.0s						
ASAJ	**Asahikawa**	**69.81**	**50**	LR	LR	03 34 39.8	
	comp=Z,532nm,18.5s,baz=342,slow=38						
MJB9	**Matsu-Tunnel**	**69.94**	**59**	*e*P	**P**	**03 00 59.1**	**-1.1**
	comp=Z,8.8nm,0.8s						
MAJO	**Matsushiro**	**69.95**	**59**	*e*P	**P**	**03 00 59.8**	**-0.4**
	comp=Z,8.8nm,0.8s						
MAJO				LR	LR		
	comp=Z,217nm,19.0s						
MAJO	**Matsushiro**	**69.95**	**59**	*i* P	**P**	**03 00 58.8**	**-1.4**
MAJO				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MJAR	**Matsushiro Arr**	**69.95**	**59**	P	**P**	**03 00 59.9**	**-0.4**
	comp=Z,2.0nm,0.6s,baz=300,slow=11,SNR=6.1						
MJAR				LR	LR	03 32 25.6	
	comp=Z,170nm,20.1s,baz=265,slow=36						
RES	**Resolute Bay**	**71.52**	**351**	*e*P	**P**	**03 01 09.1**	**0.0**
	comp=Z,4.2nm,0.8s						
RES	**Resolute Bay**	**71.52**	**351**	*e*P	**P**	**03 01 09.1**	**0.0**
RES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
DAV	**Davao City (W)**	**73.26**	**92**	LR	LR	03 38 21.6	
	comp=Z,97nm,19.7s,baz=343,slow=40						
PETK	**Petropavlovsk-**	**74.38**	**37**	LR	LR	03 37 18.3	
	comp=Z,291nm,18.6s,baz=297,slow=38						
RDOG	**Red Dog Mine**	**77.36**	**12**	*e*P	**P**	**03 01 42.8**	**-0.4**
	comp=Z,17nm,1.4s						
SCHQ	**Schefferville**	**78.64**	**329**	P	**P**	**03 01 47.7**	**-2.9**
	comp=Z,7.6nm,1.0s,baz=31,slow=9.6,SNR=2.6						
SCHQ	**Schefferville**	**78.64**	**329**	*e*P	**P**	**03 01 50.7**	**+0.1**
	comp=Z,17nm,1.0s						
COLD	**Coldfoot**	**80.07**	**8**	*e*P	**P**	**03 01 58.0**	**-0.1**
	comp=Z,6.5nm,0.9s						
INK	**Inuvik**	**80.22**	**2**	*e*P	**P**	**03 01 57.4**	**-1.5**
	comp=Z,28nm,1.8s						
INK	**Inuvik**	**80.22**	**2**	*e*P	**P**	**03 01 57.4**	**-1.5**
INK				pmax	pmax		
	comp=Z,27nm,1.8s						
IM3	**Indian Mountai**	**80.77**	**10**	*e*P	**P**	**03 02 00.5**	**-1.4**
FYU	**Fort Yukon**	**81.25**	**6**	*e*P	**P**	**03 02 06.8**	**+2.4**
	comp=Z,54nm,1.9s						
MLY	**Manley**	**82.09**	**9**	*e*P	**P**	**03 02 08.7**	**-0.4**
	comp=Z,38nm,1.9s						
MDM	**Murphy Dome**	**82.48**	**8**	*e*P	**P**	**03 02 10.5**	**-0.5**
	comp=Z,30nm,1.5s						
IL1	**Eielson Array**	**82.82**	**8**	*e*P	**P**	**03 02 10.6**	**-2.1**
ILAR	**Eielson Array**	**82.82**	**8**	P	**P**	**03 02 11.3**	**-1.5**
	comp=Z,2.1nm,0.7s,baz=329,slow=3.7,SNR=21						
ILAR				PP	**PP**	**03 05 29.6**	**+7.6**
	comp=Z,1.0nm,1.1s,baz=346,slow=6.7,SNR=4.5						
ILAR				PKKPbc	**PKKPbc**	**03 20 40.4**	**+3.5**
	comp=Z,0.5nm,0.9s,baz=179,slow=1.9,SNR=4.3						
ILAR				LR	LR	03 42 52.9	
	comp=Z,74nm,21.1s,baz=337,slow=38						
ILB	**Eielson Array**	**82.82**	**8**	*e*P	**P**	**03 02 11.8**	**-1.0**
CCB	**Clear Creek Bu**	**82.83**	**8**	*e*P	**P**	**03 02 11.8**	**-1.0**
	comp=Z,2.9nm,0.8s						
EGAK	**Eagle**	**83.36**	**5**	*e*P	**P**	**03 02 14.9**	**-0.6**
	comp=Z,8.2nm,0.8s						
CAST	**Castle Rocks**	**83.43**	**10**	*e*P	**P**	**03 02 15.4**	**-0.5**
	comp=Z,16nm,0.8s						
MCK	**McKinley**	**83.58**	**9**	*e*P	**P**	**03 02 16.1**	**-0.6**
	comp=Z,36nm,1.7s						
MCK	**McKinley**	**83.58**	**9**	*e*P	**P**	**03 02 16.1**	**-0.6**
MCK				pmax	pmax		
	comp=Z,36nm,1.7s						
TRF	**Thorofare Moun**	**83.66**	**9**	*e*P	**P**	**03 02 16.7**	**-0.6**
	comp=Z,28nm,1.6s						
SCRK	**Sand Creek**	**83.90**	**7**	*e*P	**P**	**03 02 17.8**	**-0.7**
	comp=Z,13nm,0.9s						
RIDG	**Independ'e Rid**	**84.05**	**7**	*e*P	**P**	**03 02 18.6**	**-0.5**
	comp=Z,7.6nm,0.9s						
SVW2	**Sparrevohn**	**85.02**	**13**	*e*P	**P**	**03 02 23.9**	**-0.2**
	comp=Z,15nm,1.4s						
FCC	**Fort Churchill**	**85.26**	**343**	*e*P	**P**	**03 02 24.9**	**-0.4**
YKW3	**Yellowknife Ar**	**85.34**	**353**	*e*P	**P**	**03 02 24.3**	**-1.3**
YKA	**Yellowknife Ar**	**85.40**	**353**	P	**P**	**03 02 23.3**	**-2.6**
	comp=Z,3.0nm,1.0s,baz=7.8,slow=5.4,SNR=12						
YKA				LR	LR	03 46 47.5	
	comp=Z,28nm,18.7s,baz=36,slow=40						
YKA	**Yellowknife Ar**	**85.40**	**353**	P	**P**	**03 02 23.3**	**-2.6**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SUA	**Susitna One**	**85.49**	**10**	*e*P	**P**	**03 02 26.1**	**-0.5**
	comp=Z,14nm,0.8s						
PMR	**Palmer**	**85.60**	**9**	*e*P	**P**	**03 02 26.2**	**-0.7**
	comp=Z,13nm,1.0s						
PMR	**Palmer**	**85.60**	**9**	*e*P	**P**	**03 02 26.2**	**-0.7**
PMR				pmax	pmax		
	comp=Z,13nm,1.0s						
RC01	**Rabbit Creek A**	**86.00**	**10**	*e*P	**P**	**03 02 28.1**	**-0.8**
	comp=Z,14nm,0.8s						
BMRM	**Bremner River**	**86.78**	**8**	*e*P	**P**	**03 02 32.7**	**-0.1**
	comp=Z,21nm,1.3s						
FITZ	**Fitzroy Crossi**	**87.00**	**113**	P	**P**	**03 02 33.9**	**-0.5**
	comp=Z,6.7nm,0.7s,baz=285,slow=2.9,SNR=9.0						
BRLK	**Bradley Lake**	**87.09**	**11**	*e*P	**P**	**03 02 33.6**	**-0.7**
	comp=Z,17nm,1.0s						
LBNH	**Lisbon**	**88.21**	**323**	*e*P	**P**	**03 02 42.3**	**+2.3**
	comp=Z,9.3nm,0.8s						
LBNH	**Lisbon**	**88.21**	**323**	*e*P	**P**	**03 02 42.3**	**+2.3**
LBNH				pmax	pmax		
	comp=Z,9.0nm,0.8s						
OHAK	**Old Harbor**	**89.07**	**13**	*e*P	**P**	**03 02 45.7**	**+2.0**
LONY	**Lake Ozonia**	**89.28**	**324**	*e*P	**P**	**03 02 43.1**	**-1.9**
	comp=Z,8.5nm,1.0s						
LONY				LR	LR		
	comp=Z,319nm,20.0s						
NWAO	**Narrogin (SRO)**	**89.70**	**130**	P	**P**	**03 02 47.6**	**+0.6**
	comp=Z,7.9nm,0.7s,baz=333,slow=12,SNR=4.3						
DLBC	**Dease Lake**	**90.19**	**1**	*e*P	**P**	**03 02 50.2**	**+1.1**
	comp=Z,11nm,1.3s						
ULM	**Lac du Bonnet**	**93.25**	**339**	P	**P**	**03 03 04.7**	**+1.4**
	comp=Z,2.5nm,0.5s,baz=149,slow=2.2,SNR=3.5						
ULM	**Lac du Bonnet**	**93.25**	**339**	P	**P**	**03 03 04.7**	**+1.4**
ULM				pmax	pmax		
	comp=Z,2.0nm,0.5s						
WRA	**Warramunga Arr**	**94.89**	**110**	P	**P**	**03 03 10.5**	**-0.8**
	comp=Z,2.4nm,0.8s,baz=315,slow=3.9,SNR=14						
WRA				LR	LR	03 50 31.0	
	comp=Z,52nm,18.2s,baz=280,slow=38						
WRA	**Warramunga Arr**	**94.89**	**110**	P	**P**	**03 03 10.5**	**-0.8**
WRA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WRAB	**Tennant Creek**	**94.89**	**110**	*e*P	**P**	**03 03 13.2**	**+1.9**
WRAB	**Tennant Creek**	**94.89**	**110**	*e*P	**P**	**03 03 13.2**	**+1.9**
WB2	**Warramunga Arr**	**94.90**	**110**	*e*P	**P**	**03 03 13.9**	**+2.6**
G40A	**Rib Lake**	**95.64**	**334**	*e*P	**P**	**03 03 15.8**	**+1.4**
	comp=Z,15nm,1.8s						
ASAR	**Alice Springs**	**96.49**	**114**	P	**P**	**03 03 17.0**	**-1.6**
	comp=Z,1.3nm,0.7s,baz=307,slow=4.6,SNR=17						
ASAR				LR	LR	03 50 06.6	
	comp=Z,55nm,18.8s,baz=279,slow=38						
AS01	**Alice Springs**	**96.53**	**114**	*e*P	**P**	**03 03 20.1**	**+1.4**
MAW	**Mawson**	**99.42**	**175**	P	**Pdif**	**03 03 28.0**	**-2.6**
	comp=Z,0.9nm,0.7s,baz=0.0,slow=9.1,SNR=3.1						
MAW				LR	LR	03 44 49.3	
	comp=Z,121nm,19.1s,baz=52,slow=33						
MAW	**Mawson**	**99.42**	**175**	P	**Pdif**	**03 03 28.0**	**-2.6**
MAW				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NVAR	**Mina Array Bea**	**109.50**	**351**	PKiKP	**PKiKP**	**03 08 20.1**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=90,slow=1.8,SNR=3.0						
QSPA	**South Pole Qui**	**121.55**	**180**	PKP	**PKPdf**	**03 08 40.4**	**-1.2**
	comp=Z,5.0nm,0.8s,baz=247,slow=0.7,SNR=8.3						
QSPA	**South Pole Qui**	**121.55**	**180**	*e*PKPdf	**PKPdf**	**03 08 40.1**	**-1.5**
LPAZ	**La Paz**	**122.92**	**270**	PKP	**PKPdf**	**03 08 45.0**	**-1.4**
	comp=Z,0.7nm,0.7s,baz=215,slow=10,SNR=3.4						
VNDA	**Vanda**	**125.23**	**166**	PKP	**PKPdf**	**03 08 47.4**	**-1.0**
	comp=Z,0.5nm,0.8s,baz=294,slow=5.1,SNR=4.0						
TRQA	**Tornquist**	**125.67**	**244**	*e*PKPdf	**PKPdf**	**03 08 49.9**	**-0.5**
TRQA	**Tornquist**	**125.67**	**244**	*e*PKIKP	**PKPdf**	**03 08 49.9**	**-0.5**

NNC 01 02:54:34.6±9.1**,43°.59N**×**84°.98E,h0**^{km}**,mb4.0,mpv3.6, 2C-4D,Error ellipse: s-maj=69.5km s-min=32.4km az=116.0,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
WMQ	**Urumqi**	**1.98**	**82**	Pn	Pg	02 55 18.0	+5.4
WMQ				Sg	Sg	02 55 47.9	+10
WMQ				smax	smax		
	comp=N,1μm,0.3s						
WMQ				smax	smax		
	comp=E,1μm,0.3s						
MK31	**Makanchi Array**	**3.73**	**330**	⇓Pg	Pb	02 55 43.4	+2.0
	comp=E,7.3nm,0.5s,baz=144,slow=16,SNR=9.4						
MK31				⇓Lg	Lg	02 56 35.8	
	comp=E,7.8nm,0.4s,baz=148,slow=28,SNR=7.1						
MAKZ	**Makanchi**	**3.86**	**328**	⇓Pg	Pb	02 55 42.8	-0.7
	comp=E,17nm,1.0s						
MAKZ				⇓Lg	Lg	02 56 38.7	
	comp=E,12nm,0.8s						
PDGK	**Podgornoye**	**4.00**	**268**	⇑Pg	Pg	02 55 49.7	-1.7
	comp=E,20nm,1.0s						
PDGK				⇑Lg	Lg	02 56 38.5	
	comp=E,17nm,0.6s						

JMA ***01*** *03:15:12.9±0.1,23°.68N×121°.63E,h0^{km},M2.5*

ISCJB ***01*** *03:15:13.7±0.3,23°.71N±0°.01×121°.60E±0°.02,h7^{km}±2^{km}, Error ellipse: s-maj=3.0km s-min=2.1km az=34.1*

TAP ***01*** *03:15:14.0,23°.71N×121°.53E,h6^{km},ML3.1,C*

ISC 01 03:15:13.9±0.9**,23°.69N**±0°.02×**121°.58E**±0°.02**,h12**^{km}±6^{km}**, n76,**σ0^{s}.**86**/105**,5C-9D,Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
EGFH	**Guangfu**	**0.14**	**263**	⇓*i*P	**Pg**	**03 15 16.6**	**-0.7**
	baz=255						
EGFH				S	**Sg**	**03 15 18.8**	**-0.9**
	baz=255						
ESL	**Shilin**	**0.19**	**313**	⇓*i*P	**Pg**	**03 15 17.1**	**-1.0**
	baz=311						
ESL				*i* S	**Sg**	**03 15 19.2**	**-1.6**
	baz=311						
ENLB	**Shoufeng**	**0.22**	**5**	P	**Pg**	**03 15 19.3**	**+0.8**
	baz=24						
ENLB				S	**Sg**	**03 15 23.7**	**+2.0**
	baz=24						
HGSD	**Ruisui**	**0.24**	**217**	P	**Pg**	**03 15 19.8**	**+0.8**
	baz=221						
HGSD				*e*S	**Sg**	**03 15 24.2**	**+1.9**
	baz=221						
HWA	**Hwalien**	**0.29**	**4**	*e*P	**Pb**	**03 15 20.6**	**-0.5**
	baz=14						
EHY	**Hungye**	**0.30**	**233**	P	**Pg**	**03 15 19.6**	**-0.4**
	baz=228						
TWD	**Chiawan**	**0.39**	**2**	P	**Pg**	**03 15 21.6**	**-0.1**
	baz=357						
TWD				S	**Sg**	**03 15 27.3**	**+0.3**
	baz=357						
YULB	**Yu-li**	**0.39**	**222**	⇑P	**Pg**	**03 15 21.8**	**0.0**
	baz=227						
YULB				S	**Sb**	**03 15 28.4**	**-0.4**
	baz=227						
VWDT	**VWDT**	**0.41**	**279**	⇓P	**Pg**	**03 15 21.7**	**-0.4**
	baz=276						
TWF1	**Yuli**	**0.42**	**218**	⇑P	**Pg**	**03 15 22.4**	**+0.2**
	baz=228						
NACB	**Ninganchiao**	**0.48**	**1**	P	**Pg**	**03 15 23.1**	**-0.3**
	baz=352						
CHGB	**Renai**	**0.53**	**315**	⇓P	**Pg**	**03 15 23.9**	**-0.4**
	baz=314						
CHGB				S	**Sg**	**03 15 30.5**	**-0.9**
	baz=314						
FULB	**Fuli**	**0.55**	**209**	*e*P	**Pb**	**03 15 26.3**	**+0.8**
	baz=226						
SSLB	**Suanglung**	**0.58**	**280**	⇓P	**Pg**	**03 15 24.7**	**-0.6**
	baz=278						
SSLB				*e*S	**Sg**	**03 15 31.2**	**-1.8**
	baz=278						
CHKT	**Chengkung**	**0.62**	**199**	*e*P	**Pb**	**03 15 26.4**	**-0.2**
	baz=196						
CHKT				S	**Sb**	**03 15 36.6**	**+1.3**
	baz=196						
SMLT	**Sun Moon Lake**	**0.66**	**288**	⇑P	**Pg**	**03 15 26.4**	**-0.3**
	baz=286						
SMLT				*e*S	**Sb**	**03 15 35.7**	**-0.8**
	baz=286						
TWT	**Tachien**	**0.68**	**327**	*e*P	**Pb**	**03 15 27.2**	**-0.5**
	baz=326						
TDCB	**Techi**	**0.68**	**326**	P	**Pg**	**03 15 26.9**	**-0.3**
	baz=326						
TDCB				S	**Sg**	**03 15 34.3**	**-2.0**
	baz=326						
DPDB	**Guoxing**	**0.69**	**300**	⇓P	**Pg**	**03 15 27.1**	**-0.3**
	baz=298						
DPDB				S	**Sg**	**03 15 36.1**	**-0.4**
	baz=298						
TYC	**Yuchr**	**0.70**	**288**	P	**Pg**	**03 15 26.8**	**-0.7**
	baz=286						
ELDTW	**Lidau**	**0.72**	**226**	*e*P	**Pg**	**03 15 27.2**	**-0.6**
	baz=235						
ENA	**Nanau**	**0.75**	**11**	*e*P	**Pg**	**03 15 28.3**	**-0.2**
	baz=5.0						
NANB	**Nanao**	**0.75**	**12**	P	**Pg**	**03 15 28.3**	**-0.2**
	baz=3.0						
NNSB	**Datong**	**0.76**	**346**	⇓P	**Pg**	**03 15 28.4**	**-0.3**
	baz=338						
NNSB				S	**Sg**	**03 15 37.6**	**-1.1**
	baz=338						
NNSH	**Datong**	**0.76**	**346**	P	**Pg**	**03 15 28.4**	**-0.3**
	baz=346						
NNSH				*e*S	**Sg**	**03 15 37.3**	**-1.3**
	baz=346						
NNS	**Nan Shan**	**0.77**	**346**	⇓P	**Pg**	**03 15 28.6**	**-0.3**
	baz=338						
NNS				*e*S	**Sg**	**03 15 38.0**	**-1.1**
	baz=338						
ENAH	**Nanao**	**0.79**	**15**	*e*P	**Pb**	**03 15 29.2**	**-0.4**
	baz=16						
WJS	**Zhushan**	**0.79**	**280**	*e*P	**Pb**	**03 15 30.7**	**+1.0**
	baz=278						
WJS				*e*S	**Sb**	**03 15 42.2**	**+1.7**
	baz=278						
CHN5	**Tsauling**	**0.83**	**264**	P	**Pb**	**03 15 30.7**	**+0.3**
	baz=263						
WNT	**Mingjian**	**0.84**	**283**	P	**Pb**	**03 15 31.4**	**+0.9**
	baz=287						
WNT				*e*S	**Sn**	**03 15 44.2**	**+0.2**
	baz=287						
STYT	**Tauyuan**	**0.92**	**236**	⇓P	**Pb**	**03 15 31.8**	**0.0**
	baz=240						
WGK	**Gukeng**	**0.94**	**270**	*e*P	**Pb**	**03 15 32.8**	**+0.7**
	baz=269						
ENTT	**Nioudou**	**0.95**	**359**	P	**Pb**	**03 15 32.1**	**-0.2**
	baz=358						
TWC	**Suao**	**0.95**	**15**	*e*P	**Pb**	**03 15 32.2**	**-0.1**
	baz=358						
TPUB	**Ta-pu**	**0.95**	**246**	⇑P	**Pb**	**03 15 32.6**	**+0.2**
	baz=254						
TPUB				*e*S	**Sb**	**03 15 45.7**	**+0.6**
	baz=254						
TWG	**Pinlang**	**0.98**	**209**	*e*P	**Pg**	**03 15 31.3**	**-1.5**
	baz=209						
TWGBT	**Beinan**	**0.98**	**208**	*e*P	**Pg**	**03 15 31.1**	**-1.7**
	baz=209						
WTP	**Ta-pu**	**0.99**	**244**	⇑P	**Pb**	**03 15 33.3**	**+0.2**
	baz=251						
WTP				*e*S	**Sb**	**03 15 46.9**	**+0.7**
	baz=251						
EOS1	**EOS1**	**0.99**	**30**	*e*P	**Pn**	**03 15 33.9**	**+0.2**
	baz=50						
YHNB	**Yeheng**	**1.00**	**349**	P	**Pb**	**03 15 33.1**	**-0.1**
	baz=338						
YHNB				S	**Sg**	**03 15 45.5**	**-0.7**
	baz=338						
NSK	**Sanguang**	**1.01**	**348**	P	**Pb**	**03 15 33.2**	**-0.1**
	baz=338						
NSK				S	**Sg**	**03 15 45.4**	**-1.1**
	baz=338						
CHN2	**Minshiung**	**1.03**	**262**	*e*P	**Pn**	**03 15 34.5**	**+0.3**
	baz=261						
TWE	**Neicheng**	**1.03**	**4**	*e*P	**Pn**	**03 15 34.5**	**+0.2**
	baz=3.0						
NSY	**Sanyi**	**1.04**	**314**	*e*P	**Pn**	**03 15 35.4**	**+0.9**
	baz=314						
SLBB	**Yuanshan**	**1.06**	**3**	*e*P	**Pg**	**03 15 33.9**	**-0.5**
	baz=1.0						
CHY	**Chiayi**	**1.08**	**260**	*e*P	**Pn**	**03 15 35.2**	**+0.3**
	baz=260						
NSTT	**Nanjuang**	**1.08**	**331**	*e*P	**Pb**	**03 15 34.7**	**+0.2**
	baz=330						
LIOB	**Emei**	**1.09**	**332**	*e*P	**Pn**	**03 15 35.2**	**+0.2**
	baz=319						
TWK	**Hsinying**	**1.09**	**248**	P	**Pb**	**03 15 35.1**	**+0.4**
	baz=248						
TWK				*e*S	**Sn**	**03 15 50.8**	**+0.7**
	baz=248						
CHN1	**Nanshi**	**1.09**	**243**	P	**Pn**	**03 15 35.5**	**+0.5**
	baz=244						
CHN1				*e*S	**Sn**	**03 15 51.0**	**+0.9**
	baz=244						
SGST	**Jiashian**	**1.10**	**237**	*e*P	**Pn**	**03 15 35.6**	**+0.4**
	baz=238						
SGST				*e*S	**Sn**	**03 15 52.6**	**+2.3**
	baz=238						
PTSB	**Yuanli**	**1.10**	**314**	*e*P	**Pb**	**03 15 35.2**	**+0.3**
	baz=312						
SLGT	**Liugui**	**1.10**	**231**	*e*P	**Pb**	**03 15 35.2**	**+0.3**
	baz=234						
NMLH	**Miaoli**	**1.11**	**320**	*e*P	**Pn**	**03 15 36.0**	**+0.6**
	baz=318						
RLNB	**Erlin**	**1.14**	**281**	*e*P	**Pb**	**03 15 35.6**	**+0.1**
	baz=279						
ECL	**Taimali**	**1.23**	**208**	*e*P	**Pg**	**03 15 36.0**	**-1.5**
	baz=194						
SSD	**Sandimen**	**1.28**	**223**	*e*P	**Pg**	**03 15 37.3**	**-1.2**
	baz=217						
TIPB	**Shuangxi**	**1.30**	**10**	*e*P	**Pg**	**03 15 37.8**	**-1.1**
	baz=353						
MASBT	**Mashibuluo**	**1.38**	**219**	*e*P	**Pn**	**03 15 38.5**	**-0.5**
	baz=222						
NWF	**Wu-fen Shan**	**1.39**	**7**	*e*P	**Pb**	**03 15 40.3**	**+0.4**
	baz=4.0						
WFSB	**Wu-fen Shan**	**1.39**	**7**	*e*P	**Pb**	**03 15 39.9**	**0.0**
	baz=4.0						
JYNG	**Yonagunijimaku**	**1.46**	**58**	P	**Pn**	**03 15 39.8**	**-0.3**
JYNG				*e*S	**Sb**	**03 15 59.7**	**+0.1**
EAST	**Anshuo**	**1.46**	**208**	*e*P	**Pb**	**03 15 41.3**	**+0.2**
	baz=195						
YM07	**YM07**	**1.48**	**1**	*e*P	**Pn**	**03 15 39.8**	**-0.7**
	baz=356						
YOJ	**Yonaguni jima**	**1.52**	**59**	*e*P	**Pn**	**03 15 40.8**	**-0.1**
	baz=57						
YOJ	**Yonaguni jima**	**1.52**	**59**	P	**Pn**	**03 15 41.5**	**+0.6**
YOJ				*e*S	**Sn**	**03 16 01.6**	**+1.0**
SCZT	**Fangliau**	**1.58**	**214**	*e*P	**Pb**	**03 15 43.0**	**-0.1**
	baz=217						
LAY	**Lan-yu**	**1.64**	**181**	*e*P	**Pn**	**03 15 40.0**	**-2.6**
	baz=169						
WDGT	**Dungji**	**1.81**	**257**	*e*P	**Pn**	**03 15 44.6**	**-0.4**
	baz=267						
PHUB	**P'eng-hu**	**1.85**	**265**	*e*P	**Pn**	**03 15 44.9**	**-0.6**
	baz=265						
PNG	**Penghu**	**1.86**	**267**	*e*P	**Pn**	**03 15 45.9**	**+0.2**
	baz=267						
HATJ	**Hateruma jima**	**2.07**	**79**	*e*S	**Sn**	**03 16 14.7**	**+0.5**
JKRS	**Kuro-shima**	**2.29**	**76**	P	**Pn**	**03 15 51.6**	**+0.1**
JKRS				*e*S	**Sn**	**03 16 21.3**	**+1.7**
JIJ	**Ishigaki jima**	**2.44**	**73**	P	**Pn**	**03 15 53.8**	**+0.2**
JIJ				S	**Sn**	**03 16 23.7**	**+0.4**
JISG	**Ishigakijimahi**	**2.65**	**70**	P	**Pn**	**03 15 56.4**	**-0.1**
JISG				S	**Sn**	**03 16 29.4**	**+0.8**
JTJ	**Tarama**	**3.00**	**71**	S	**Sn**	**03 16 38.0**	**+0.7**

ISCJB ***01*** *03:25:18.0±0.4,32°.17N±0°.02×115°.29W±0°.01,h3^{km}±2^{km}, mb4.5/71,MS4.1/13,Error ellipse: s-maj=2.8km s-min=1.7km az=19.8*

ECX ***01*** *03:25:20.8±0.5,32°.21N×115°.32W,h8^{km},MD4.5,ML4.7*

GCMT ***01*** *03:25:20.8±0.5,32°.23N×115°.37W,h18^{km}±1^{km},MW4.8/69, Moment Tensor Solution. s9,c9; s69,c96; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.30±.12; $M_{\theta\theta}$-1.39±.10; $M_{\phi\phi}$1.69±.10; $M_{r\theta}$-0.73±.26; $M_{\theta\phi}$-1.19±.10; $M_{\phi r}$0.29±.20; Best double couple: $M_0$2.10900×10^{16} NP1:ϕ_s118.00000°,δ84.00000°,λ-157.00000°. NP2: ϕ_s25.00000°,δ67.00000°,λ-6.00000°. Principal axes: T 2.2030, Plg12.0000°, Azm249.0000°; N -0.1930, Plg66.0000°, Azm130.0000°; P -2.0150, Plg20.0000°, Azm344.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***01*** *03:25:20.8±0.0,32°.21N×115°.30W,h8^{km},mb4.5/103, MD4.3(MEX),ML4.5(ECX),MW4.6(PAS),After ECX.*

NEIC Felt [III] at Alberto Oviedo Mota and Mexicali and [II] at Rosarito and Tijuana. Also felt at Delta, Ensenada, Guadalupe Victoria and Rosarito. Felt [IV] at El Cajon and [III] at Calexico, El Centro, La Jolla, Lakeside and San Diego, California. Felt in much of southern California. Felt [III] at Yuma and [II] at Somerton, Arizona. Also felt at San Luis Rio Colorado, Sonora.

MEX ***01*** *03:25:22.5±0.4,32°.30N×115°.30W,h8^{km}±7^{km},MD4.3*

IDC ***01*** *03:25:23.1±0.9,32°.40N×114°.91W,h0^{km},mb4.1/10, mb1 4.3/17,mb1mx4.0/62,mbtmp4.1/17,ML3.6/6,MS4.0/19, Ms1 4.0/19,ms1mx3.8/56,Error ellipse: s-maj=18.1km s-min=9.4km az=52.0*

ISC 01 03:25:19.5±0.6**,32°.22N**±0°.02×**115°.35W**±0°.01**,h3**^{km}±4^{km}**, n740,**σ1^{s}.**57**/710**,mb4.6**/72**,MS4.1**/13**,10C-7D, California-Baja California border region**

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

```
CPBX   Cerro Prieto    0.20  10⇓eP    Pg   03 25 23.7 +0.3
CPBX                             eS    Sg   03 25 26.7 +0.7
CPBX                             IAML       03 25 33.0
       comp=N,455µm,0.3s
CPBX                             e          03 25 33.0
MBIG   Mexicali        0.23  33 eP    Pg   03 25 25.1 +1.2
MBIG   Mexicali        0.23  33 eP    Pg   03 25 24.9 +1.1
MBIG                             iS    Sg   03 25 27.5 +0.7
WESC   Westside Schoo  0.63 329⇓iP    Pg   03 25 32.6 +1.0
YUH    Yuha Desert     0.65 311⇑iP    Pg   03 25 32.7 +0.7
YUH    Yuha Desert     0.65 311 iP    Pg   03 25 32.7 +0.7
COA    Coachella       0.67  16⇓iP    Pg   03 25 32.7 +0.3
COA    Coachella       0.67  16 iP    Pg   03 25 32.7 +0.3
RMX    La Rumorosa     0.73 302⇑eP    Pg   03 25 33.3 -0.2
RMX                              eS    Sg   03 25 42.4 -0.6
RMX    La Rumorosa     0.73 302 eP    Pg   03 25 33.3 -0.2
RMX                              eS    Sg   03 25 42.4 -0.6
YMD    Yuma Desert     0.76  63⇑iP    Pg   03 25 33.5 -0.4
YMD    Yuma Desert     0.76  63 iP    Pg   03 25 33.5 -0.4
IKP    In-Ko-Pah, Jac  0.78 304  P    Pg   03 25 35.1 +0.7
       baz=124,SNR=1000
IKP                              S     Sg   03 25 45.6 +1.1
       baz=124
IKP    In-Ko-Pah, Jac  0.78 304⇑eP    Pg   03 25 35.1 +0.7
ECBX   El Chinero      0.78 161⇓eP    Pg   03 25 34.1 -0.3
ECBX                             eS    Sg   03 25 44.7 +0.1
SWSC   Sam W. Stewart  0.82 332  P    Pg   03 25 34.9 -0.3
       baz=152,SNR=1000
GLA    Glamis          0.94  28  P    Pg   03 25 36.4 -1.1
       baz=207,SNR=1000
GLA    Glamis          0.94  28 ePg   Pg   03 25 36.3 -1.1
GLA                              eSg   Sg   03 25 47.8 -1.9
ZAX    El Zacaton      1.06 229⇑eP    Pg   03 25 39.5 -0.2
ZAX                              eS    Sg   03 25 54.0 +0.6
CBX    Cerro Bola      1.12 275⇑eP    Pb   03 25 41.0 -0.6
CBX                              eS    Sb   03 25 56.4 -0.3
CBX    Cerro Bola      1.12 275 eP    Pb   03 25 41.6  0.0
CBX                              eS    Sb   03 25 55.7 -1.0
CBX    Cerro Bola      1.12 275 eP    Pb   03 25 41.0 -0.6
CBX                              eS    Sb   03 25 56.4 -0.3
MONP2  Monument Peak   1.13 307  P    Pb   03 25 40.5 -1.3
       baz=127,SNR=1000
MONP2                            S     Sg   03 25 56.5 +0.6
       baz=127
TJIG   Tijuana         1.15 281⇑eP    Pb   03 25 41.0 -0.9
TJIG   Tijuana         1.15 281 eP    Pb   03 25 41.5 -0.4
TJIG                             eS    Sb   03 25 56.2 -1.0
SPIG   San Pedro Mart  1.17 185⇓eP    Pg   03 25 41.5 -0.5
SPIG                             eS    Sg   03 25 56.6 -0.6
SPIG   San Pedro Mart  1.17 185 eP    Pg   03 25 42.7 +0.8
SPIG                             eS    Sb   03 25 58.8 +0.5
SPX    San Pedro Mart  1.17 185⇓eP    Pg   03 25 41.4 -0.6
SPX                              IAML       03 25 59.5
       comp=N,13µm,0.4s
SPX                             ⇑e          03 25 59.5
SPX    San Pedro Mart  1.17 185 eP    Pg   03 25 41.4 -0.6
ECNX   Esteban Cantu   1.20 243⇑eP    Pn   03 25 41.9 -1.3
BAR    Barrett         1.21 293⇓eP    Pn   03 25 42.2 -1.2
BAR    Barrett         1.21 293 ePn   Pn   03 25 42.0 -1.4
BAR                              eSn   Sb   03 25 58.7 -0.5
PBX    Punta Banda     1.27 248⇑eP    Pn   03 25 42.8 -1.2
PBX    Punta Banda     1.27 248 eP    Pn   03 25 42.8 -1.2
BC3    Big Chuckawall  1.44 356  P    Pn   03 25 44.0 -2.6
       baz=176,SNR=993
113A   Mohawk Valley,  1.44  67 ePn   Pn   03 25 44.0 -2.5
113A                             eSn   Sn   03 26 00.6 -5.3
SDRC   San Diego Road  1.45 291 eP    Pn   03 25 45.5 -1.0
109C   Camp Elliot, M  1.63 295  P    Pn   03 25 48.1 -1.0
       baz=114,SNR=774
CPE    Camp Elliot     1.63 295 ePn   Pn   03 25 48.1 -0.9
CPE                              eSn   Sn   03 26 09.6 -0.9
I57US  PINON FLAT INF  1.67 326 i          03 36 10.0
       baz=141,slow=316,SNR=0.2
XPFO   Piæon Flat      1.67 326 ePn   Pn   03 25 47.4 -2.4
PFO    Pinyon Flats O  1.68 326  P    Pn   03 25 47.6 -2.3
       baz=146,SNR=365
PFO    Pinyon Flats O  1.68 326 ePn   Pn   03 25 48.4 -1.5
PFO                              ePg   Pb   03 25 52.1 +1.1
PFO                              eSn   Sn   03 26 11.6 -0.4
Y12C   Blythe          1.68  24  P    Pn   03 25 47.2 -2.5
       baz=204,SNR=596
Y12C   Blythe          1.68  24 ePn   Pn   03 25 47.3 -2.5
BELC   Belle Mtn. Jos  1.86 343  P    Pn   03 25 50.0 -2.4
       baz=163,SNR=160
IRM    Iron Mountain   1.94   5  P    Pn   03 25 51.3 -2.1
       baz=185,SNR=387
MURC   Murrieta        2.08 312  P    Pn   03 25 53.6 -1.7
       baz=131,SNR=162
MURC                             Sb    Sb   03 26 25.4 +1.3
       baz=131
214A   Organ Pipe Nat  2.17  96  P    Pn   03 25 53.5 -3.0
       baz=277,SNR=1000
PDMCI  Parker Dam,Lak  2.31  26  P    Pn   03 25 56.3 -2.1
       baz=206,SNR=72
BBRC   Big Bear Solar  2.43 328  P    Pn   03 25 59.1 -1.2
       baz=147,SNR=12
GMRC   Granite Mounta  2.57 354  P    Pn   03 26 00.2 -2.0
       baz=174,SNR=86
Y14A   Wickenburg      2.61  48 ePn   Pn   03 26 00.8 -1.8
Y14A                             eSn   Sn   03 26 30.2 -4.6
NEE2   Needles Airpor  2.62  13  P    Pn   03 26 01.1 -1.6
       baz=194,SNR=16
HEC    Hector,Ludlow   2.73 343  P    Pn   03 26 02.4 -1.9
       baz=162,SNR=7.8
BFSC   Mount Baldy Ra  2.80 317  P    Pn   03 26 03.9 -1.3
       baz=136,SNR=31
SSK    Sunset Peak     2.80 316 ePn   Pb   03 26 11.4 +1.2
SCI2   San Clemente I  2.81 287  P    Pn   03 26 04.0 -1.3
       baz=105
CIS    Catalina Islan  2.84 295  P    Pn   03 26 04.9 -0.8
       baz=114
LDFC   Landfair        2.86   4 ePn   Pn   03 26 05.3 -0.8
FMP    Fort Macarthur  2.89 302  P    Pn   03 26 04.5 -2.0
       baz=120
RRX    Edison Barstow  2.99 333  P    Pn   03 26 06.3 -1.5
       baz=152
MWC    Mount Wilson    3.03 312 ePn   Pn   03 26 10.0 +1.5
MWC                              eSn   Sn   03 26 46.5 +1.1
PASC   Pasadena Art C  3.08 310 ePn   Pn   03 26 11.9 +2.9
W13A   Hualapai Mount  3.12  23 ePn   Pn   03 26 08.1 -1.7
W13A                             eSn   Sb   03 26 57.3 +3.0
DECC   Green Verdugo   3.23 310  P    Pn   03 26 09.3 -1.7
       baz=128
TUQ    Turquoise Moun  3.25 352  P    Pn   03 26 09.5 -1.9
       baz=171,SNR=47
GSC    Goldstone, Bar  3.31 339  P    Pn   03 26 10.7 -1.6
       baz=158,SNR=27
GSC    Goldstone, Bar  3.31 339 ePn   Pn   03 26 10.6 -1.6
EDW2   Edwards Air Fo  3.46 321  P    Pn   03 26 13.1 -1.2
       baz=140,SNR=14
BLG    Laguna Peak, P  3.65 302  P    Pn   03 26 16.3 -0.5
       baz=120
SNCC   San Nicolas Is  3.67 287  P    Pn   03 26 16.0 -1.1
       baz=105
SNCC   San Nicolas Is  3.67 287 ePg   Pb   03 26 28.4 +3.5
OSI    Osito Audit: C  3.70 311  P    Pn   03 26 16.2 -1.4
       baz=130
OSI    Osito Audit: C  3.70 311 ePn   Pn   03 26 17.4 -0.2
SHOC   Shoshone, Teco  3.75 348  P    Pn   03 26 17.0 -1.3
       baz=168
LRMC   Laurel Mtn Rad  3.79 330  P    Pn   03 26 16.9 -2.0
       baz=149
TUC    Tucson          3.86  87  P    Pn   03 26 17.1 -2.8
       baz=270
TUC    Tucson          3.86  87 ePn   Pn   03 26 16.7 -3.2
TUC                              ePb   Pb   03 26 28.6 +0.2
TUC                              ePg   Pg   03 26 33.5  0.0
TUC                              eSn   Sn   03 27 05.2 -0.6
TUC                              eSg   Sb   03 27 18.9 +3.3
X16A   Lo Mia Camp, P  3.94  55 ePn   Pn   03 26 19.7 -1.3
SCZ2   Santa Cruz Isl  4.01 297  P    Pn   03 26 20.5 -1.4
       baz=115
ARVC   Arvin           4.11 316  P    Pn   03 26 21.6 -1.5
       baz=134
MPMC   Manual Prospec  4.22 336  P    Pn   03 26 23.3 -1.6
       baz=155,SNR=13
SHPR   Sheep Range     4.28   2 ePn   Pn   03 26 25.3 -0.4
ISA    Isabella, Lake  4.31 324  P    Pn   03 26 24.8 -1.2
       baz=142,SNR=15
ISA    Isabella, Lake  4.31 324 ePn   Pn   03 26 25.2 -0.8
FURC   Furnace Creek,  4.42 344  P    Pn   03 26 27.1 -0.3
       baz=163
DAC    Darwin (Calif)  4.46 336 ePn   Pn   03 26 27.3 -0.8
DAC                              ePg   Pg   03 26 44.7 -0.2
DAC                              eSg   Sg   03 27 42.7  0.0
PKM    Mcpherson Peak  4.58 307  P    Pn   03 26 29.1 -0.8
       baz=124
WUAZ   Wupatki         4.66  44  P    Pn   03 26 31.3 +0.3
       baz=226,SNR=187
WUAZ   Wupatki         4.66  44 ePn   Pn   03 26 30.7 -0.2
WUAZ                             ePg   Pg   03 26 48.7 -0.2
WUAZ                             eSg   Sg   03 27 46.9 -2.3
VES    Vestal, Richgr  4.76 320  P    Pn   03 26 31.6 -0.5
       baz=138
TPNV   Topopah Spring  4.78 351  P    Pn   03 26 32.5  0.0
       baz=171,SNR=32
TPNV   Topopah Spring  4.78 351 ePn   Pn   03 26 32.7 +0.2
CWC    Cottonwood Cre  4.78 333  P    Pn   03 26 32.0 -0.6
       baz=151
U15A   North Rim       4.90  30 ePn   Pn   03 26 34.5 +0.2
HSIG                   4.95 129 ePn   Pn   03 26 39.2 +4.5
SMMC   Simmler         4.95 310  P    Pn   03 26 34.4 -0.4
       baz=128
GRAC   Grapevine Rang  5.05 341  P    Pn   03 26 35.9 -0.2
       baz=160,SNR=16
X18A   Snowflake       5.07  61 ePn   Pn   03 26 35.6 -0.9
LCMT   Little Creek M  5.09  19 ePn   Pn   03 26 36.5 -0.2
KNB    Kanab           5.22  23 ePn   Pn   03 26 38.9 +0.2
PAGB   Antelope Grade  5.37 312 ePn   Pb   03 26 49.1 -4.9
W18A   Petrified Fore  5.50  57  P    Pn   03 26 42.3 -0.1
       baz=240,SNR=127
W18A   Petrified Fore  5.50  57 ePn   Pn   03 26 42.4  0.0
CCUT   Cedar City      5.56  16 ePn   Pn   03 26 44.1 +0.7
SRIG   Santa Rosalia   5.58 150 ePg   Pg   03 27 05.8 -0.5
SZCU   Shurtz Canyon   5.68  18 ePn   Pn   03 26 45.7 +0.8
PKCU   Pink Cliffs     5.78  25 ePn   Pn   03 26 47.8 +1.4
PMPB   Monarch Peak    6.03 313 ePn   Pn   03 26 50.9 +1.3
R11A   Troy Canyon, C  6.12 358  P    Pn   03 26 50.6 -0.3
       baz=178,SNR=18
R11A   Troy Canyon, C  6.12 358 ePn   Pn   03 26 50.7 -0.3
OMMB   Old Mammoth Mi  6.16 332 ePn   Pn   03 26 56.9 +5.2
MDPB   Devils Postpil  6.21 331 ePn   Pn   03 26 54.6 +2.3
MTPU   Mount Pierson   6.36  23 ePn   Pn   03 26 56.0 +1.5
121A   Cookes Peak, D  6.40  85  P    Pn   03 26 53.2 -1.7
       baz=269,SNR=117
PSUT   Pine Spring     6.42  11 ePn   Pn   03 26 55.7 +0.6
NV11   Mina Array Sit  6.61 340 ePn   Pn   03 27 01.1 +3.4
NV01   Mina Array Sit  6.65 340 ePn   Pn   03 27 02.6 +4.3
NVAR   Mina Array Bea  6.65 340  Pn   Pn   03 27 03.5 +5.2
       comp=N,0.3nm,0.3s,baz=173,slow=15,SNR=9.9
NVAR                             Lg    Lg   03 28 52.8
       baz=180,slow=19,SNR=1.7
NVAR                             LR    LR   03 29 34.0
       comp=N,1µm,19.2s,baz=190,slow=38
SAO    San Andreas Ge  6.78 314 ePn   Pn   03 27 03.9 +4.1
SAO                              ePg   Pg   03 27 26.0 -3.3
SAO                              eSg   Sb   03 28 48.8  +10
MSU    Marysvale       6.79  22 ePn   Pn   03 27 04.4 +4.1
RYN    Ryan            6.90 339 ePn   Pn   03 27 07.8 +6.1
WAKR   Walker          7.11 333 ePn   Pn   03 27 09.5 +5.0
CMB    Columbia Colle  7.12 326 ePn   Pn   03 27 04.2 -0.4
CMB                              eSg   Sg   03 29 02.0 -6.1
KVN    Kaiserville     7.18 343 ePn   Pn   03 27 10.9 +5.4
LAZ    Ladron          7.21  70 ePn   Pn   03 27 05.6 -0.3
LENM   Lemitar         7.28  72 ePn   Pn   03 27 06.0 -0.9
Y22D   IRIS PASSCAL I  7.30  73  P    Pn   03 27 06.8 -0.4
       baz=258,SNR=21
Y22D   IRIS PASSCAL I  7.30  73 ePn   Pn   03 27 07.3 +0.1
Y22E   IRIS PASSCAL I  7.30  73  P    Pn   03 27 06.7 -0.5
       baz=258
Q16A   Castle Valley   7.50  26 ePn   Pn   03 27 13.8 +3.8
EPT    El Paso         7.52  91 ePn   Pn   03 27 10.4 +0.2
MVCO   Mesa Verde      7.52  47  P    Pn   03 27 11.4 +1.2
       baz=230,SNR=91
MVCO   Mesa Verde      7.52  47 ePn   Pn   03 27 11.8 +1.5
MVCO                             ePg   Pb   03 27 37.5 +6.8
MVCO                             eSg   Sb   03 29 08.0 +7.1
BNM    Barren Site     7.56  73 ePn   Pn   03 27 10.3 -0.4
LPM    Los Pinos Moun  7.59  72 ePn   Pn   03 27 10.8 -0.4
PNTR   Pine Nut        7.68 334 ePn   Pn   03 27 18.6 +6.1
PV05   Paradox Valley  7.77  39 ePn   Pn   03 27 18.2 +4.6
EMB    Emerald Bay     7.78 331 ePn   Pn   03 27 18.7 +5.0
TMUT   Trail Mountain  7.82  24 ePn   Pn   03 27 19.6 +5.2
RUBR   Rubicon Trail   7.86 331 ePg   Pg   03 27 48.3 -1.8
RUBR                             eLg   Lg   03 29 33.5
VCNR   Virginia City   7.88 335 ePn   Pn   03 27 21.6 +6.4
TASM   ASL Pad, Albuq  7.90  67  P    Pn   03 27 15.1 -0.3
       baz=252,SNR=33
ANMO   Albuquerque     7.90  67  Pn   Pn   03 27 15.6 +0.2
       comp=N,0.8nm,0.3s,baz=248,slow=12,SNR=35
ANMO                             Lg    Lg   03 29 26.3
       baz=199,slow=8.0,SNR=1.9
ANMO                             LR    LR   03 30 23.4
       comp=N,2µm,20.3s,baz=252,slow=40
ANMO   Albuquerque     7.90  67  P    Pn   03 27 15.1 -0.3
       baz=252
TASL   Snake Pit, Alb  7.90  67  P    Pn   03 27 15.2 -0.2
       baz=252,SNR=33
SRU    San Rafael Swe  7.92  28 ePn   Pn   03 27 17.9 +2.2
PV10   Paradox Valley  8.02  38 ePn   Pn   03 27 19.9 +2.8
PV03   Paradox Valley  8.03  40 ePn   Pn   03 27 19.8 +2.5
PV02   Paradox Valley  8.06  40 ePn   Pn   03 27 20.1 +2.5
PV09   Paradox Valley  8.06  37 ePn   Pn   03 27 20.1 +2.4
PV01   Paradox Valley  8.10  41 ePn   Pn   03 27 20.2 +2.1
PV04   Paradox Valley  8.10  39 ePn   Pn   03 27 20.8 +2.6
AFDM   Forest Hills D  8.13 327 ePn   Pn   03 27 25.9 +7.5
P17A   Butcher Ranch,  8.15  26 ePn   Pn   03 27 21.7 +2.9
PAHR   Pah Rah Range   8.16 337 ePn   Pn   03 27 26.2 +7.3
DUG    Dugway, Tooele  8.22  14  P    Pn   03 27 21.7 +2.0
       baz=195,SNR=10
DUG    Dugway, Tooele  8.22  14 ePn   Pn   03 27 23.5 +3.7
DUG                              eLg   Lg   03 29 38.8
PV07   Paradox Valley  8.27  40 ePn   Pn   03 27 23.1 +2.6
PV15   Paradox Valley  8.29  41 ePn   Pn   03 27 23.4 +2.5
BMN    Battle Mountai  8.34 350 ePn   Pn   03 27 24.8 +3.4
BMN                              eLg   Lg   03 29 57.1
MPU    Maple Canyon    8.34  20 ePn   Pn   03 27 28.0 +6.5
P18A   Preston Nutter  8.47  28 ePn   Pn   03 27 26.0 +2.7
MNTX   Cornudas Mount  8.48  91  P    Pn   03 27 22.1 -1.2
       baz=276,SNR=18
MNTX   Cornudas Mount  8.48  91 ePn   Pn   03 27 22.0 -1.2
MNTX                             eSn   Sn   03 28 58.2 -1.3
MNTX                             eLg   Lg   03 29 45.4
ELK    Elko            8.51   1  Pn   Pn   03 27 28.4 +4.6
       comp=N,0.8nm,0.3s,baz=177,slow=16,SNR=12
ELK                              Lg    Lg   03 29 46.7
       comp=N,0.4nm,0.3s,baz=239,slow=18,SNR=1.8
BEKR   Beckworth       8.64 333 ePn   Pn   03 27 29.8 +4.2
BGU    Big Grassy Mou  8.89  11 ePn   Pn   03 27 34.0 +5.1
S22A   4UR Ranch, Cre  8.90  49  P    Pn   03 27 30.0 +0.8
       baz=234,SNR=29
S22A   4UR Ranch, Cre  8.90  49 ePn   Pn   03 27 30.1 +0.8
JLU    Jordanelle      8.94  19 ePn   Pn   03 27 34.5 +4.8
CTU    Camp Tracy      8.94  18 ePn   Pn   03 27 35.0 +5.3
LPIG   La Paz          9.22 150  LR   LR   03 31 11.5
       comp=N,387nm,20.6s,baz=343,slow=38
SPUT   South Promonto  9.37  14 ePn   Pn   03 27 39.8 +4.4
TCUT   Toone Canyon    9.43  18 ePn   Pn   03 27 43.0 +6.6
O03D   Paynes Creek    9.60 329  P    Pn   03 27 39.8 +1.2
       baz=145
SMCO   Snowmass        9.72  42 ePn   Pn   03 27 43.4 +2.8
SLBS   Sierra La Lagu  9.75 149 ePn   Pn   03 27 44.9 +4.3
HVU    Hansel Valley   9.76  11 ePn   Pn   03 27 44.6 +3.7
O20A   White River Ci  9.76  34  P    Pn   03 27 42.7 +1.8
       baz=218,SNR=9.2
O20A   White River Ci  9.76  34 ePn   Pn   03 27 44.2 +3.2
O20A                             eLg   Lg   03 30 29.0
SDCO   Great Sand Dun  9.78  53  P    Pn   03 27 40.6 -0.6
       baz=238
SDCO   Great Sand Dun  9.78  53 ePn   Pn   03 27 42.4 +1.1
SDCO                             eLg   Lg   03 30 21.8
HWUT   Hardware Ranch  9.85  17 ePn   Pn   03 27 45.8 +3.7
HPIG                   9.93 120 ePn   Pn   03 27 52.8  +10
T25A   Trinidad       10.25  58  P    Pn   03 27 49.0 +1.3
       baz=244,SNR=14
T25A   Trinidad       10.25  58 ePn   Pn   03 27 50.5 +2.8
MOD    Modoc Plateau  10.44 339 ePn   Pn   03 27 56.0 +5.8
MOD                              eLg   Lg   03 31 09.2
TX31   Lajitas Ar. Si 10.45 103 ePn   Pn   03 27 51.3 +1.0
TXAR   Lajitas Array  10.45 103  Pn   Pn   03 27 51.1 +0.8
       comp=N,6.0nm,0.3s,baz=288,slow=13,SNR=205
TXAR                             Lg    Lg   03 30 44.5
       comp=N,0.1nm,0.3s,baz=300,slow=24,SNR=3.6
TXAR                             LR    LR   03 31 52.4
       comp=N,761nm,19.8s,baz=0.0,slow=38
KMRM   Mail Ridge     10.46 322 ePn   Pn   03 27 56.7 +6.3
N02D   Trinity Center 10.55 328  P    Pn   03 27 54.3 +2.7
       baz=144
Q24A   Divide         10.68  48  P    Pn   03 27 53.8 +0.1
       baz=234
MSTX   Muleshoe       10.69  77  P    Pn   03 27 55.6 +1.9
       baz=264,SNR=26
MSTX   Muleshoe       10.69  77 ePn   Pn   03 27 55.5 +1.9
M04C   Macdoel        10.86 333  P    Pn   03 27 59.4 +3.4
       baz=150,SNR=7.1
ISCO   Idaho Springs  10.92  43  P    Pn   03 27 59.4 +2.5
       baz=229,SNR=25
ISCO   Idaho Springs  10.92  43 ePn   Pn   03 27 59.8 +2.9
ISCO                             eLg   Lg   03 30 47.9
M02C   Callahan       10.95 329  P    Pn   03 28 01.9 +4.8
       baz=144,SNR=14
AHID   Auburn Hatcher 11.05  17 ePn   Pn   03 28 02.8 +4.2
YBH    Yreka Blue Hor 11.17 330  Pn   Pn   03 28 05.4 +5.3
       comp=N,0.1nm,0.3s,baz=148,slow=8.4,SNR=46
YBH                              LR    LR   03 32 57.3
       comp=N,764nm,19.2s,baz=220,slow=40
YBH    Yreka Blue Hor 11.17 330 ePn   Pn   03 28 05.6 +5.5
MFID   Camas Ranch    11.19 358 ePn   Pn   03 28 05.0 +4.6
HLID   Hailey         11.35   3  P    Pn   03 28 05.2 +2.6
       baz=184,SNR=6.0
HLID   Hailey         11.35   3 ePn   Pn   03 28 06.0 +3.4
HLID                             eLg   Lg   03 31 23.3
K05A   Summer Lake    11.37 339 ePn   Pn   03 28 09.2 +6.2
J08A   Circle Bar Ran 11.39 348 ePn   Pn   03 28 09.6 +6.4
RWWY   Rawlins        11.47  32 ePn   Pn   03 28 09.8 +5.4
BW06   Boulder Array  11.48  22  P    Pn   03 28 06.7 +2.1
       baz=205
BW06   Boulder Array  11.48  22 ePn   Pn   03 28 11.0 +6.4
PD31   Pinedale Array 11.48  22 ePn   Pn   03 28 11.4 +6.9
PDAR   Pinedale Array 11.48  22  Pn   Pn   03 28 07.0 +2.4
       comp=N,0.1nm,0.3s,baz=196,slow=10,SNR=8.2
PDAR                             Lg    Lg   03 31 13.6
       comp=N,0.3nm,0.3s,baz=203,slow=27,SNR=4.8
PDAR                             LR    LR   03 32 59.8
       comp=N,515nm,19.2s,baz=215,slow=41
PDAR   Pinedale Array 11.48  22 ePn   Pn   03 28 09.0 +4.5
PDAR                             Lg    Lg   03 31 13.6
N23A   Red Feather La 11.49  38  P    Pn   03 28 07.9 +3.3
       baz=224,SNR=5.9
N23A   Red Feather La 11.49  38 ePn   Pn   03 28 08.9 +4.2
K04D   Chiloquin, OR  11.56 336  P    Pn   03 28 05.1 -0.5
       baz=152
REDW   Red Top Meadow 11.68  16 ePn   Pn   03 28 11.0 +3.8
AMTX   Amarillo       11.71  73  P    Pn   03 28 09.5 +2.0
       baz=261
AMTX   Amarillo       11.71  73 ePn   Pn   03 28 08.1 +0.6
AMTX                             eLg   Lg   03 31 28.9
TPAW   Teton Pass     11.77  16 ePn   Pn   03 28 13.1 +4.5
FXWY   Fox Creek      11.90  15 ePn   Pn   03 28 14.2 +4.0
LOHW   Long Hollow    11.97  17 ePn   Pn   03 28 15.6 +4.3
J05D   Fort Rock, OR  11.99 339  P    Pn   03 28 15.8 +4.4
       baz=155,SNR=31
HUMO   Hull Mountain  12.00 332 ePn   Pn   03 28 14.9 +3.5
MOOW   Moose Ponds    12.07  16 ePn   Pn   03 28 16.8 +4.3
IMW    Indian Meadow  12.16  15 ePn   Pn   03 28 18.3 +4.4
J04D   Umpqua Nationa 12.23 336  P    Pn   03 28 19.4 +4.6
       baz=152,SNR=8.6
I07A   Izee           12.29 346 ePn   Pn   03 28 23.1 +7.7
KSCO   Kaye Shedlock’ 12.36  53  P    Pn   03 28 18.2 +1.7
       baz=240
KSCO   Kaye Shedlock’ 12.36  53 ePn   Pn   03 28 21.3 +4.8
PINE   Pine Mountain  12.37 341 ePn   Pn   03 28 22.9 +6.4
PINE                             eSn   Sn   03 30 37.6 +2.6
FLWY   Flagg Ranch    12.39  16 ePn   Pn   03 28 21.3 +4.3
K22A   Casper         12.54  31  P    Pn   03 28 19.6 +0.7
       baz=217
K22A   Casper         12.54  31 ePn   Pn   03 28 21.6 +2.6
YPP    Pitchstone Pla 12.55  15 ePn   Pn   03 28 24.1 +5.0
BMO    Blue Mountains 12.71 354 ePn   Pn   03 28 16.5 -4.7
MCMT   McKenzie Canyo 12.74   8 ePn   Pn   03 28 27.5 +5.8
KEBM   Edson Butte    12.80 329 ePn   Pn   03 28 26.6 +4.3
I04A   Tendick Farm,  12.82 336  P    Pn   03 28 28.0 +5.4
       baz=152,SNR=18
YHB    Horse Butte    12.93  13 ePn   Pn   03 28 29.5 +5.2
I05D   Terrebonne, OR 12.98 341  P    Pn   03 28 30.2 +5.4
       baz=157,SNR=18
I03D   Drain, OR      13.08 333  P    Pn   03 28 30.2 +4.1
       baz=149
ABTX   Abilene, Hawle 13.27  84  P    Pn   03 28 28.7 -0.2
       baz=272,SNR=8.3
ABTX   Abilene, Hawle 13.27  84 ePn   Pn   03 28 31.7 +2.8
DLMT   Dillon         13.30   8 ePn   Pn   03 28 24.4 -4.9
G08A   Pilot Rock     13.35 349 ePn   P    03 28 35.6 -4.2
JCT    Junction City  13.40  93  P    Pn   03 28 31.5 +0.9
       baz=281,SNR=27
JCT    Junction City  13.40  93 ePn   Pn   03 28 32.7 +2.1
H04A   Detroit Lake   13.54 339 ePn   Pn   03 28 37.5 +5.1
G06A   Carlson Farm,  13.63 344 ePn   P    03 28 39.5 -3.3
BOZ    Bozeman (W)    13.67  11 ePn   Pn   03 28 37.1 +2.8
       comp=N,15nm,1.4s
RLMT   Red Lodge      13.72  18  P    Pn   03 28 37.1 +1.9
       baz=202
RLMT   Red Lodge      13.72  18 ePn   Pn   03 28 36.7 +1.5
LRM    Limekiln Ridge 13.77   9 ePn   Pn   03 28 40.7 +4.9
OGNE   Ogallala       13.78  47  P    Pn   03 28 37.6 +1.8
       baz=235
OGNE   Ogallala       13.78  47 ePn   Pn   03 28 35.5 -0.3
G05D   Wamic, OR      13.81 342  P    Pn   03 28 38.5 +2.4
       baz=158
F10A   Beach Ranch, E 13.81 354 ePn   P    03 28 41.8 -3.1
WMOK   Wichita Mounta 14.05  75  P    Pn   03 28 39.2 -0.3
       baz=264
WMOK   Wichita Mounta 14.05  75 ePn   Pn   03 28 32.1 -7.4
WMOK                             eLg   Lg   03 32 39.5
833A   Chaparral WMA, 14.32 102  P    Pn   03 28 41.9 -1.2
       baz=290
HAWA   Hanford        14.52 348 ePn   P    03 28 50.1 -2.5
MSO    Missoula       14.63   4  P    Pn   03 28 49.7 +2.3
       baz=185,SNR=15
MSO    Missoula       14.63   4 ePn   Pn   03 28 51.2 +3.7
ZAIG   Zacatecas      14.72 127 ePn   P    03 28 52.9 -2.4
RSSD   Black Hills    14.82  34  P    Pn   03 28 50.7 +0.6
       baz=220
RSSD   Black Hills    14.82  34 ePn   Pn   03 28 50.8 +0.6
RSSD                             eLg   Lg   03 32 53.7
D08A   Wollman Farm,  15.07 351 ePn   P    03 28 57.2 -1.5
WHTX   Lake Whitney,  15.17  86  P    Pn   03 28 53.3 -1.3
       baz=276
435B   Jarrell        15.22  91  P    Pn   03 28 53.9 -1.4
       baz=280
435B   Jarrell        15.22  91 ePn   Pn   03 28 56.5 +1.1
       comp=N,44nm,1.4s
LON    Longmire       15.34 343 ePn   P    03 29 01.0 -0.8
       comp=N,24nm,1.1s
JTMT   Jette          15.53   3 ePn   P    03 29 04.0  0.0
       comp=N,30nm,1.3s
C09A   Chrisman Ranch 15.72 353 ePn   P    03 29 05.0 -1.0
       comp=N,26nm,1.4s
D05A   Enumclaw       15.79 343 ePn   P    03 29 07.2 +0.5
       comp=N,50nm,1.1s
LAO    LASA Array     16.06  23  P    Pn   03 29 06.7 +0.5
       baz=209
LAO    LASA Array     16.06  23 ePn   Pn   03 29 06.6 +0.3
       comp=N,74nm,1.7s
NEW    Newport        16.09 356  Pn   P    03 29 09.5 -0.5
       comp=N,0.1nm,0.3s,baz=174,slow=14,SNR=23
NEW                              Lg    Lg   03 33 41.2
       comp=N,0.1nm,0.3s,baz=107,slow=16,SNR=2.2
NEW    Newport        16.09 356  P    P    03 29 08.9 -1.1
       baz=175,SNR=13
NEW    Newport        16.09 356 ePn   P    03 29 08.9 -1.1
       comp=N,50nm,1.4s
NEW                              Lg    Lg   03 33 41.2
EGMT   Eagleton       16.35  13  P    Pn   03 29 09.7 -0.3
       baz=197
EGMT   Eagleton       16.35  13 ePn   Pn   03 29 11.5 +1.5
       comp=N,54nm,1.6s
NLWA   Neilton Lookou 16.49 339 ePn   Pn   03 29 13.6 +1.9
       comp=N,58nm,1.5s
BGNE   Belgrade       16.52  51  P    Pn   03 29 11.7 -0.5
       baz=242
TUL1   Leonard        16.61  72  P    Pn   03 29 12.5 -0.9
       baz=263,SNR=15
TUL1   Leonard        16.61  72 ePn   Pn   03 29 13.9 +0.5
       comp=N,74nm,1.3s
KSU1   Kansas State U 16.69  60  P    Pn   03 29 14.0 -0.3
       baz=251
KSU1   Kansas State U 16.69  60 ePn   Pn   03 29 14.2 -0.1
       comp=N,28nm,1.1s
WALA   Waterton Lakes 16.86   3 ePn   P    03 29 19.1 +0.5
       comp=N,32nm,1.4s
HKT    Hockley        16.87  93 ePn   P    03 29 17.8 -0.9
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								comp=N,39nm,1.3s
A04D	Lummi Island	17.39	344	P	Pn	03 29 23.7	+0.6	baz=159
NATX	Nacogdoches	17.55	86	P	Pn	03 29 25.3	+0.1	baz=277
NATX	Nacogdoches	17.55	86	*e*Pn	P	03 29 25.9	-0.5	comp=N,90nm,1.4s
X39A	Fountain Ranch	17.88	77	P	Pn	03 29 29.1	-0.1	baz=269,SNR=28
T38A	Diamond	17.97	69	P	Pn	03 29 30.3	0.0	baz=261,SNR=12
HHAR	Hobbs	18.15	71	*e*Pn	P	03 29 33.5	+0.6	comp=N,14nm,1.0s
W39A	Magazine	18.18	75	P	Pn	03 29 32.3	-0.6	baz=267,SNR=5.9
W39A	Magazine	18.18	75	*e*Pn	P	03 29 33.8	+0.5	comp=N,18nm,1.3s
Q37A	Longview Farm,	18.23	63	P	Pn	03 29 32.5	-1.0	baz=255
240A	Hunter Patters	18.28	85	P	Pn	03 29 33.7	-0.5	baz=276
DGMT	Dagmar	18.29	24	P	P	03 29 36.1	+1.7	baz=211
DGMT	Dagmar	18.29	24	*e*Pn	P	03 29 35.4	+0.9	comp=N,29nm,1.2s
MIAR	Mount Ida	18.33	77	P	Pn	03 29 34.1	-0.6	baz=269,SNR=20
MIAR	Mount Ida	18.33	77	*e*Pn	P	03 29 35.3	+0.5	comp=N,22nm,1.0s
V39A	Pettigrew	18.34	73	P	Pn	03 29 34.1	-0.8	baz=265,SNR=13
S38A	Stockton	18.38	67	P	Pn	03 29 34.5	-0.8	baz=259,SNR=16
140A	Cam and Jess,	18.38	83	P	Pn	03 29 34.5	-0.9	baz=275
N36A	Muff Farm, Cla	18.46	57	P	Pn	03 29 36.5	+0.1	baz=249
R38A	Fenwick Farm,	18.49	65	P	P	03 29 36.1	-0.5	baz=258,SNR=6.9
Z40A	Long Farm, Mag	18.49	81	P	P	03 29 35.6	-1.1	baz=273
P37A	Lathrop	18.51	61	P	P	03 29 36.2	-0.6	baz=253
U39A	Green Forest	18.53	71	P	P	03 29 36.0	-1.1	baz=263,SNR=10
Y40A	Okolona	18.57	78	P	P	03 29 36.4	-1.1	baz=271
H32A	Carlson Farm,	18.60	44	P	P	03 29 35.6	-2.2	baz=235
ECSD	EROS Data Cent	18.67	47	P	P	03 29 37.9	-0.7	baz=238,SNR=7.7
ECSD	EROS Data Cent	18.67	47	*e*Pn	Pn	03 29 39.0	+0.1	comp=N,12nm,1.1s
T39A	Clever	18.69	69	P	P	03 29 38.7	-0.2	baz=262,SNR=12
W40A	Ferguson Farm,	18.77	75	P	Pn	03 29 39.9	-0.1	baz=267
W40A	Ferguson Farm,	18.77	75	*e*P	Pn	03 29 41.2	+1.2	comp=N,51nm,1.5s
M36A	Felix, Anita	18.82	55	P	P	03 29 39.8	-0.4	baz=247
O37A	Wolven Farm, M	18.83	59	P	P	03 29 40.3	-0.1	baz=252
S39A	Bolivar	18.84	67	P	P	03 29 40.7	+0.1	baz=260,SNR=15
S39A	Bolivar	18.84	67	*e*P	Pn	03 29 41.4	+0.3	comp=N,37nm,1.4s
341A	Kurthwood	18.88	87	P	Pn	03 29 41.7	+0.3	baz=278
341A	Kurthwood	18.88	87	*e*P	Pn	03 29 43.6	+2.2	comp=N,46nm,1.3s
Q38A	Cooks Store, C	18.89	63	P	P	03 29 41.0	+0.1	baz=256,SNR=10
X40A	Basin Creek Fa	18.94	77	P	P	03 29 41.1	-0.5	baz=269
X40A	Basin Creek Fa	18.94	77	*e*P	P	03 29 41.8	+0.2	comp=N,13nm,1.4s
141A	Papa Simpson,	18.95	83	P	Pn	03 29 42.1	-0.2	baz=275
441A	DeRidder	18.95	89	P	Pn	03 29 42.2	-0.1	baz=280
N37A	Lee Faris, Mou	18.98	57	P	Pn	03 29 42.5	-0.1	baz=250
N37A	Lee Faris, Mou	18.98	57	*e*P	Pn	03 29 43.5	+0.9	comp=N,18nm,1.0s
Z41A	Richland Creek	18.99	81	P	P	03 29 42.2	+0.1	baz=273,SNR=5.9
Z41A	Richland Creek	18.99	81	*e*P	Pn	03 29 44.6	+1.9	
241A	Mo Tay, Goldon	19.00	85	P	Pn	03 29 42.9	0.0	baz=277,SNR=8.1
241A	Mo Tay, Goldon	19.00	85	*e*P	Pn	03 29 44.4	+1.6	comp=N,66nm,1.2s
V40A	Witts Springs	19.00	73	P	P	03 29 42.5	+0.1	baz=266,SNR=8.1
V40A	Witts Springs	19.00	73	*e*P	Pn	03 29 43.1	+0.1	comp=N,29nm,1.4s
G32A	Webster	19.00	42	P	P	03 29 42.4	+0.1	baz=233
U40A	Yellville	19.03	71	P	P	03 29 42.8	+0.2	baz=264,SNR=13
P38A	Dawn	19.12	61	P	P	03 29 43.8	+0.3	baz=254
P38A	Dawn	19.12	61	*e*P	Pn	03 29 44.7	+0.3	comp=N,48nm,1.8s
Y41A	Eaglette Beard	19.13	79	P	P	03 29 43.3	-0.3	baz=271,SNR=8.2
L36A	Harm Buss Farm	19.16	53	P	Pn	03 29 44.6	-0.3	baz=246
R39A	Chumby, Stover	19.18	65	P	P	03 29 44.6	+0.3	baz=258,SNR=11
X41A	Kaden, Bauxite	19.20	77	P	P	03 29 44.6	+0.1	baz=270
O38A	Galt	19.31	60	P	Pn	03 29 46.2	-0.3	baz=253
M37A	Trindle Farm,	19.31	56	P	P	03 29 46.1	+0.4	baz=248
T40A	Mansfield	19.39	69	P	P	03 29 46.9	+0.3	baz=262,SNR=12
Q39A	Willow Grove F	19.39	63	P	P	03 29 46.9	+0.4	baz=256
WHAR	Wooly Hollow	19.41	75	*e*P	Pn	03 29 47.4	-0.4	comp=N,33nm,1.4s
W41B	Gary Mavity, V	19.44	75	P	Pn	03 29 47.6	-0.5	baz=268
W41B	Gary Mavity, V	19.44	75	*e*P	Pn	03 29 47.8	-0.3	comp=N,19nm,1.3s
S40A	Lebanon	19.47	68	P	P	03 29 47.7	+0.3	baz=261,SNR=17
K36A	Gilmore City	19.54	52	P	P	03 29 48.4	+0.3	baz=245
V41A	Mountainview	19.54	73	P	P	03 29 48.5	+0.3	baz=266
G33A	Ortonville	19.58	43	P	Pn	03 29 49.4	-0.4	baz=235
342A	Flagon Creek P	19.58	86	P	Pn	03 29 49.7	-0.2	baz=278
F32A	Veblen	19.59	41	P	Pn	03 29 49.7	-0.2	baz=232
442A	Mamou	19.60	88	P	Pn	03 29 49.9	-0.2	baz=280
542A	Morse	19.61	90	P	P	03 29 49.5	+0.5	baz=282
242A	Grayson	19.64	84	P	Pn	03 29 50.3	-0.3	baz=277
P39B	Salisbury	19.67	62	P	P	03 29 50.1	+0.6	baz=255
N38A	Joes South For	19.69	58	P	P	03 29 50.5	+0.8	baz=251
Z42A	Norrel Spur, H	19.70	81	P	P	03 29 50.6	+0.6	baz=273
R40A	Maddies Statio	19.77	66	P	P	03 29 50.4	-0.3	baz=259,SNR=8.5
R40A	Maddies Statio	19.77	66	*e*P	P	03 29 51.4	+0.7	comp=N,54nm,1.7s
U41A	Viola	19.78	72	P	P	03 29 50.5	-0.2	baz=265,SNR=7.0
L37A	Phoenix Point,	19.80	54	P	P	03 29 50.7	-0.2	baz=247
Y42A	Garnett, Star	19.81	79	P	P	03 29 51.1	0.0	baz=272
CCAR	Cane Creek	19.82	79	*e*P	Pn	03 29 53.6	+0.8	comp=N,75nm,1.5s
J36A	Seneca 1, Swea	19.91	50	P	P	03 29 52.3	+0.1	baz=243
J36A	Seneca 1, Swea	19.91	50	*e*P	Pn	03 29 54.6	+0.9	comp=N,12nm,0.9s
M38A	Pleasantville	19.92	56	P	P	03 29 52.5	+0.1	baz=250
X42A	Stuttgart	19.93	77	P	P	03 29 52.5	0.0	baz=270
T41A	Mountain View	19.98	70	P	P	03 29 53.1	+0.1	baz=263,SNR=8.5
O39A	Kirksville	20.03	60	P	P	03 29 53.5	0.0	baz=254
W42A	Bald Knob	20.03	75	P	P	03 29 53.5	0.0	baz=268
S41A	Jillco Farms,	20.06	68	P	P	03 29 54.2	+0.3	baz=262
Q40A	Laux Farm, Aux	20.06	64	P	P	03 29 53.6	-0.3	baz=257,SNR=11
G34A	Benson	20.07	44	P	P	03 29 54.5	+0.6	baz=236
SCIA	State Center	20.09	55	P	P	03 29 55.0	+0.9	baz=248
SCIA	State Center	20.09	55	*e*P	Pn	03 29 56.9	+1.0	comp=N,31nm,1.1s
K37A	Belmond	20.13	52	P	P	03 29 54.8	+0.2	baz=246,SNR=6.2
443A	Delano Plantat	20.14	88	P	Pn	03 29 55.7	-0.9	baz=280
V42A	Cord	20.16	73	P	P	03 29 55.7	+0.7	baz=267
343A	Vidalia	20.20	86	P	Pn	03 29 56.6	-0.6	baz=279
143A	Socs Landing,	20.20	82	P	P	03 29 56.3	+0.9	baz=275
P40A	Paris	20.21	62	P	Pn	03 29 56.5	-0.8	baz=256,SNR=8.7
P40A	Paris	20.21	62	*e*P	Pn	03 29 56.9	-0.4	comp=N,58nm,1.6s
543A	St. Martinvill	20.21	90	P	P	03 29 56.2	+0.7	baz=282
243A	Waterproof	20.23	85	P	P	03 29 56.3	+0.7	baz=277
N39A	Derby Farms, D	20.24	58	P	P	03 29 55.8	0.0	baz=252,SNR=10
N39A	Derby Farms, D	20.24	58	*e*P	Pn	03 29 58.4	+0.7	comp=N,40nm,1.1s
H35A	Sunnyside Ranc	20.26	46	P	P	03 29 55.9	-0.1	baz=239,SNR=6.9
Z43A	Armstrong Fami	20.30	81	P	P	03 29 56.8	+0.4	baz=274
U42A	Revenden	20.33	72	P	P	03 29 56.5	-0.2	baz=265,SNR=5.5
L38A	Oak Wood Farm,	20.35	55	P	P	03 29 57.2	+0.2	baz=248,SNR=6.2
J37A	Redenius Farm,	20.42	51	P	P	03 29 57.6	-0.1	baz=244
I36A	Fitzsimmons Fa	20.44	49	P	P	03 29 58.5	+0.6	baz=242
R41A	Rosebud	20.46	66	P	P	03 29 58.3	+0.1	baz=260,SNR=18
O40A	La Belle	20.48	61	P	P	03 29 58.4	0.0	baz=255,SNR=9.4
T42A	Van Buren	20.51	70	P	P	03 29 58.0	-0.7	baz=264,SNR=14
T42A	Van Buren	20.51	70	*e*P	P	03 29 59.0	+0.2	comp=N,18nm,1.1s
Y43A	Makayla and Ka	20.52	79	P	P	03 29 59.3	+0.4	baz=272
CCM	Cathedral Cave	20.53	67	P	P	03 29 59.5	+0.6	baz=261
CCM	Cathedral Cave	20.53	67	*e*P	P	03 29 59.5	+0.6	comp=N,30nm,1.2s
X43A	Marvell	20.55	77	P	P	03 29 59.8	+0.6	baz=270
X43A	Marvell	20.55	77	*e*P	Pn	03 30 00.5	-0.8	comp=N,44nm,1.1s
F34A	Alexandria	20.60	43	P	P	03 30 00.1	+0.5	baz=236
M39A	Webster	20.67	57	P	P	03 30 00.5	+0.1	baz=251
K38A	Parkersburg	20.67	53	P	P	03 30 00.5	+0.1	baz=247,SNR=9.5
K38A	Parkersburg	20.67	53	*e*P	Pn	03 30 01.9	-0.9	comp=N,62nm,1.3s
W43A	Forest City	20.70	75	P	P	03 30 00.3	-0.4	baz=269
Q41A	Truxton	20.70	64	P	P	03 30 00.8	+0.1	baz=258,SNR=11
G35A	Watkins	20.75	45	P	P	03 30 01.3	+0.1	baz=238
H36A	Jessenland, He	20.76	47	P	P	03 30 01.5	+0.1	baz=241
I37A	Lemond, Waseca	20.83	49	P	P	03 30 02.1	-0.1	baz=243
I37A	Lemond, Waseca	20.83	49	*e*P	Pn	03 30 05.0	+0.4	comp=N,90nm,1.7s
S42A	Caledonia	20.84	68	P	P	03 30 02.5	+0.2	baz=262
V43A	Jonesboro	20.85	73	P	P	03 30 02.2	-0.2	baz=267
244A	Avery, Jackson	20.88	84	P	P	03 30 03.2	+0.4	baz=277,SNR=12
N40A	Mertquake, Sal	20.91	59	P	P	03 30 02.6	-0.4	baz=253,SNR=6.2
R42A	Luebbering	20.91	66	P	P	03 30 03.1	0.0	baz=261,SNR=9.0
344A	Westbrook Farm	20.92	86	P	P	03 30 04.2	+1.0	baz=279
344A	Westbrook Farm	20.92	86	*e*P	Pn	03 30 06.2	+0.5	comp=N,40nm,0.9s
Z44A	Pea Ridge, Bel	20.97	80	P	P	03 30 04.8	+1.0	baz=274,SNR=6.8
P41A	Barry, Barry	20.98	62	P	P	03 30 04.4	+0.6	baz=257
VBMS	Vicksburg	21.00	83	P	P	03 30 04.4	+0.4	baz=277
VBMS	Vicksburg	21.00	83	*e*P	P	03 30 06.3	+2.2	comp=N,87nm,1.0s
L39A	Vinton	21.01	55	P	P	03 30 04.2	+0.1	baz=249
PBMO	Poplar Bluff	21.01	71	*e*P	P	03 30 04.4	+0.2	comp=N,11nm,1.0s
444A	Pine Grove	21.03	88	P	P	03 30 05.2	+0.8	baz=280
144A	Alexander Plac	21.03	82	P	P	03 30 05.0	+0.6	baz=276
F35A	Swanville	21.03	44	P	P	03 30 04.6	+0.2	baz=237
E34A	Wadena	21.06	42	P	P	03 30 05.3	+0.6	baz=234
M40A	Post Highland	21.12	58	P	P	03 30 05.6	+0.4	baz=252
Y44A	Strider, Charl	21.12	78	P	P	03 30 05.2	-0.1	baz=272,SNR=7.8
J38A	Wedel Dairy, R	21.14	52	P	P	03 30 05.4	-0.1	baz=246,SNR=14
T43A	Greenville	21.15	70	P	P	03 30 05.5	-0.2	baz=264,SNR=16
FVM	French Village	21.16	67	*e*P	P	03 30 07.5	+1.8	comp=N,57nm,1.4s
G36A	St. Michael	21.20	46	P	P	03 30 06.6	+0.5	baz=240
O41A	Passleys Farm,	21.22	61	P	P	03 30 06.6	+0.2	baz=256
Q42A	Golden Eagle	21.23	65	P	P	03 30 06.3	-0.2	baz=259,SNR=6.5
K39A	Oelwein	21.30	54	P	P	03 30 06.9	-0.3	baz=248,SNR=13
445A	Amite	21.37	87	P	P	03 30 07.8	-0.2	baz=280
S43A	Fulton Ridge,	21.38	69	P	P	03 30 07.5	-0.6	baz=263,SNR=8.9
V44A	Blytheville	21.38	73	P	P	03 30 07.8	-0.3	baz=268
N41A	Harden Midland	21.39	60	P	P	03 30 09.2	+1.0	baz=254
H37A	Dierke Farm, C	21.40	48	P	P	03 30 09.3	+1.1	baz=242
145A	Houston Renfro	21.45	82	P	P	03 30 08.7	-0.2	baz=276,SNR=5.4
P42A	Winchester	21.50	63	P	P	03 30 09.6	+0.2	baz=258,SNR=12
P42A	Winchester	21.50	63	*e*P	P	03 30 10.5	+1.1	comp=N,60nm,1.3s
345A	Thompson Farm,	21.53	86	P	P	03 30 10.3	+0.5	baz=279
I38A	Scanlan Farm,	21.53	50	P	P	03 30 09.8	+0.1	baz=244,SNR=6.2
245A	Little AP, Sta	21.54	84	P	P	03 30 10.3	+0.4	baz=277
R43A	Red Bud	21.58	67	P	P	03 30 10.4	+0.1	baz=261,SNR=5.0
Z45A	Winona	21.58	80	P	P	03 30 10.9	+0.6	baz=274
Z45A	Winona	21.58	80	*e*P	P	03 30 12.3	+2.0	comp=N,147nm,1.5s
F36A	Milaca	21.66	45	P	P	03 30 11.3	+0.2	baz=238,SNR=14
F36A	Milaca	21.66	45	*e*P	P	03 30 14.1	+3.1	comp=N,42nm,1.4s
J39A	Decorah	21.66	52	P	P	03 30 10.6	-0.5	baz=247,SNR=15
Y45A	Yeager Farm, C	21.68	79	P	P	03 30 12.1	+0.7	baz=273
T44A	Benton	21.71	70	P	P	03 30 11.5	-0.2	baz=265
OXF	Oxford	21.77	77	P	P	03 30 12.5	+0.2	baz=271,SNR=8.7
OXF	Oxford	21.77	77	*e*P	P	03 30 13.6	+1.3	comp=N,39nm,1.0s
SPMN	Marine on St.	21.77	47	P	P	03 30 12.4	+0.1	baz=241,SNR=5.1
SPMN	Marine on St.	21.77	47	*e*P	P	03 30 15.7	+3.4	comp=N,27nm,1.0s
X45A	UM Field Stati	21.78	77	P	P	03 30 11.9	-0.6	baz=272
AGMN	Agassiz Nation	21.79	37	P	P	03 30 12.6	+0.2	baz=230,SNR=18
AGMN	Agassiz Nation	21.79	37	*e*P	P	03 30 13.1	+0.7	
M41A	Milan	21.80	58	P	P	03 30 12.5	-0.2	baz=253
K40A	Colesburg	21.81	54	P	P	03 30 12.7	0.0	baz=249,SNR=5.2
O42A	Bath	21.84	62	P	P	03 30 12.6	-0.4	baz=256
H38A	Maiden Rock	21.84	49	P	P	03 30 13.0	-0.1	baz=243
U44B	Burton Farm, H	21.84	72	P	P	03 30 12.7	-0.5	baz=267
Q43A	New Douglas	21.87	65	P	P	03 30 12.9	-0.5	baz=260
C34A	RKJ Ranch, Bem	21.88	39	P	P	03 30 13.2	-0.2	baz=232
W45A	Hickory Valley	21.94	75	P	P	03 30 14.2	0.0	baz=270,SNR=12
I39A	Houston	21.99	51	P	P	03 30 15.5	+0.9	baz=246
346A	Big Creek Wild	22.00	85	P	P	03 30 14.5	-0.3	baz=279
D35A	Remer	22.02	41	P	P	03 30 14.9	0.0	baz=235
BBB	Bella Bella	22.02	339	LR	LR	03 39 22.7		comp=N,676nm,19.4s,baz=156,slow=38
N42A	Yates City	22.02	60	P	P	03 30 14.6	-0.4	baz=255
S44A	Carbondale	22.04	68	P	P	03 30 15.1	-0.1	baz=263
L41A	Preston	22.05	56	P	P	03 30 14.8	-0.4	baz=252
SIUC	Southern Illin	22.07	68	*e*P	P	03 30 16.8	+1.3	comp=N,36nm,1.2s
P43A	Skaggs, Pawnee	22.14	63	P	P	03 30 16.3	0.0	baz=258
V45A	Humboldt	22.14	74	P	P	03 30 16.3	0.0	baz=268
E36A	McGregor	22.16	44	P	P	03 30 16.3	-0.2	baz=238,SNR=11
146A	Union	22.18	82	P	P	03 30 16.4	-0.3	baz=276
446A	Poplarville	22.18	87	P	P	03 30 16.8	0.0	baz=280
Z46A	Louisville	22.22	80	P	P	03 30 17.1	-0.1	baz=275
R44A	Waltonville	22.24	67	P	P	03 30 17.1	-0.2	baz=262
Y46A	Houston	22.25	79	P	P	03 30 17.0	-0.5	baz=273,SNR=14
U45A	Rockin P Farm,	22.32	72	P	P	03 30 18.6	+0.4	baz=267
J40A	Soldiers Grove	22.33	53	P	P	03 30 18.4	+0.1	baz=248
K41A	Shullsburg	22.36	55	P	P	03 30 18.1	-0.5	baz=250,SNR=5.2
Q44A	Meyer Farm, Va	22.39	65	P	P	03 30 18.8	-0.1	baz=261
M42A	Sheffield	22.39	58	P	P	03 30 18.9	-0.1	baz=254
C35A	Jirik Farms, M	22.42	40	P	P	03 30 19.1	0.0	baz=234
A33A	Warroad	22.44	36	P	P	03 30 20.2	+0.8	baz=229
X46A	Booneville	22.45	77	P	P	03 30 19.7	+0.1	baz=272
H39A	Augusta	22.49	50	P	P	03 30 19.9	0.0	baz=244
JFWS	Jewell Farm	22.50	55	P	P	03 30 20.4	+0.3	baz=250
JFWS	Jewell Farm	22.50	55	*e*P	P	03 30 20.2	+0.2	comp=N,14nm,1.0s
HDIL	Hopedale	22.50	61	P	P	03 30 19.8	-0.4	baz=256
HDIL	Hopedale	22.50	61	*e*P	P	03 30 20.6	+0.4	comp=N,40nm,1.3s
B34A	Aery, Baudette	22.53	38	P	P	03 30 20.1	-0.3	baz=231
S45A	Carrier Mills	22.57	69	P	P	03 30 19.8	-1.0	baz=264
D36A	Goodland	22.57	42	P	P	03 30 20.1	-0.7	baz=236
D36A	Goodland	22.57	42	*e*P	P	03 30 19.6	-1.2	comp=N,22nm,1.1s
I40A	Norwalk	22.60	52	P	P	03 30 21.2	-0.1	baz=247
W46A	Michie	22.61	75	P	P	03 30 21.2	-0.1	baz=270,SNR=5.2
L42A	Oliver, Polo	22.61	57	P	P	03 30 20.9	-0.4	baz=253,SNR=5.3
L42A	Oliver, Polo	22.61	57	*e*P	P	03 30 21.9	+0.5	comp=N,24nm,1.2s
247A	Quitman	22.62	83	P	P	03 30 21.3	-0.2	baz=278
N43A	Stutzman Famil	22.68	60	P	P	03 30 21.5	-0.6	baz=256
E37A	Wrenshall	22.69	44	P	P	03 30 22.2	+0.2	baz=239
F38A	Pierce - Schro	22.70	46	P	P	03 30 21.6	-0.6	baz=241
347A	Saraland	22.78	85	P	P	03 30 22.8	-0.3	baz=279
P44A	Sand Creek, Wi	22.79	64	P	P	03 30 22.5	-0.6	baz=260
U46A	Springville	22.79	72	P	P	03 30 23.0	-0.3	baz=268
J41A	Loganville	22.82	54	P	P	03 30 23.3	-0.2	baz=249
V46A	Holladay	22.82	74	P	P	03 30 23.4	-0.1	baz=269
G39A	Holcombe	22.82	48	P	P	03 30 23.4	-0.2	baz=243,SNR=9.5
147A	Livingston	22.84	82	P	P	03 30 23.6	-0.1	baz=276
147A	Livingston	22.84	82	*e*P	P	03 30 25.3	+1.6	comp=N,40nm,1.0s
PLAL	Pickwick Lake	22.86	76	*e*P	P	03 30 24.9	+1.0	comp=N,34nm,1.3s
R45A	Skylar, Fairfi	22.87	67	P	P	03 30 23.6	-0.5	baz=263
B35A	Bob, Littlefor	22.94	39	P	P	03 30 24.0	-0.8	baz=233
B35A	Bob, Littlefor	22.94	39	*e*P	P	03 30 26.8	+2.0	comp=N,30nm,1.8s
Z47A	Carrollton	22.95	80	P	P	03 30 24.6	-0.3	baz=275,SNR=12
M43A	Waltham Townsh	22.97	59	P	P	03 30 23.2	-1.9	baz=255
O44A	Mansfield	23.03	62	P	P	03 30 25.6	-0.1	baz=258
H40A	Chili	23.04	50	P	P	03 30 25.5	-0.3	baz=246,SNR=6.6
X47A	Russelville	23.05	77	P	P	03 30 25.2	-0.8	baz=272,SNR=11
Q45A	Warren Harvey,	23.05	66	P	P	03 30 24.9	-1.0	baz=262
T46A	Princeton	23.06	70	P	P	03 30 25.3	-0.7	baz=266
WVT	Waverly	23.07	73	P	P	03 30 25.7	-0.4	baz=268
WVT	Waverly	23.07	73	*e*P	P	03 30 26.8	+0.7	comp=N,22nm,1.1s
OLIL	Olney	23.07	66	*e*P	P	03 30 27.5	+1.3	comp=N,42nm,1.1s
C36A	Pine Crest Far	23.08	41	P	P	03 30 25.8	-0.4	

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        baz=236
K42A  Prairie Point,      23.08  55  P     P     03 30 25.4 -0.8
        baz=251
Y47A  UCPARC, Winfie      23.08  78  P     P     03 30 25.1 -1.2
        baz=274,SNR=7.0
ULM   Lac du Bonnet       23.10  33  P     P     03 30 25.1 -1.2
        comp=N,1.3nm,0.4s,baz=221,slow=7.3,SNR=2.3
ULM                                  LR    LR    03 39 30.1
        comp=N,520nm,18.8s,baz=238,slow=37
I41A  Arkdale             23.17  52  P     P     03 30 26.7 -0.4
        baz=248
I41A  Arkdale             23.17  52  eP    P     03 30 28.1 +1.0
        comp=N,16nm,0.9s
E38A  The Farm, Brul      23.21  45  P     P     03 30 27.2 -0.3
        baz=240
E38A  The Farm, Brul      23.21  45  eP    P     03 30 28.5 +1.0
        comp=N,35nm,1.4s
E38A                                 eS    S     03 34 39.0 -1.1
W47A  Westpoint           23.25  75  P     P     03 30 27.7 -0.3
        baz=270,SNR=5.5
S46A  Don Dixon Farm      23.25  69  P     P     03 30 27.8 -0.2
        baz=265
F39A  Loretta             23.27  47  P     P     03 30 27.9 -0.2
        baz=242
V47A  Nunnelly            23.31  73  P     P     03 30 29.0 +0.3
        baz=269
348A  Jackson             23.31  85  P     P     03 30 28.7  0.0
        baz=279
348A  Jackson             23.31  85  eP    P     03 30 31.1 +2.5
        comp=N,56nm,1.2s
L43A  Garden Prairie      23.33  57  P     P     03 30 29.0 +0.3
        baz=253
248A  Dixon Mills         23.35  83  P     P     03 30 29.5 +0.4
        baz=278
Z48A  Northport           23.36  80  P     P     03 30 29.5 +0.3
        baz=275,SNR=7.5
J42A  Columbus            23.41  54  P     P     03 30 29.3 -0.3
        baz=250,SNR=6.4
N44A  Piper City          23.42  61  P     P     03 30 29.3 -0.3
        baz=257
148A  Greensboro          23.42  81  P     P     03 30 29.0 -0.8
        baz=276
G40A  Rib Lake            23.43  49  P     P     03 30 29.4 -0.5
        baz=245,SNR=8.0
G40A  Rib Lake            23.43  49  eP    P     03 30 30.5 +0.7
        comp=N,31nm,1.6s
R46A  Gibon Southern      23.46  67  P     P     03 30 29.8 -0.3
        baz=264
P45A  Graceland, Par      23.47  64  P     P     03 30 29.9 -0.2
        baz=260
P45A  Graceland, Par      23.47  64  eP    P     03 30 31.9 +1.7
        comp=N,28nm,1.1s
U47A  Clarksville         23.51  72  P     P     03 30 30.2 -0.5
        baz=268
H41A  Junction City       23.52  51  P     P     03 30 30.5 -0.2
        baz=247
O45A  Potomac             23.61  62  P     P     03 30 31.4 -0.1
        baz=259
M44A  Midewin, Midew      23.62  59  P     P     03 30 31.4 -0.2
        baz=256
Y48A  Jasper              23.65  78  P     P     03 30 31.6 -0.4
        baz=274
T47A  Sharon Grove        23.68  71  P     P     03 30 32.3 -0.1
        baz=267
T47A  Sharon Grove        23.68  71  eP    P     03 30 34.8 +2.5
        comp=N,17nm,1.2s
E39A  Mellen              23.71  46  P     P     03 30 31.9 -0.6
        baz=242
X48A  Hartselle           23.72  77  P     P     03 30 32.2 -0.5
        baz=273
X48A  Hartselle           23.72  77  eP    P     03 30 32.9 +0.1
        comp=N,25nm,1.4s
I42A  Draeger Farm,       23.75  53  P     P     03 30 32.5 -0.4
        baz=249
I42A  Draeger Farm,       23.75  53  eP    P     03 30 34.2 +1.3
        comp=N,16nm,1.1s
F40A  Park Falls          23.77  48  P     P     03 30 32.4 -0.6
        baz=244
K43A  Burlington          23.77  56  P     P     03 30 32.7 -0.4
        baz=253
W48A  Pulaski             23.79  75  P     P     03 30 33.0 -0.4
        baz=271
LRAL  Lakeview Retre      23.86  80  P     P     03 30 33.4 -0.7
        baz=276,SNR=6.7
LRAL  Lakeview Retre      23.86  80  eP    P     03 30 35.2 +1.1
        comp=N,26nm,1.4s
V48A  Smith Brothers      23.88  74  P     P     03 30 34.0 -0.2
        baz=270
V48A  Smith Brothers      23.88  74  eP    P     03 30 35.4 +1.2
        comp=N,34nm,1.8s
249A  Camden              23.89  83  P     P     03 30 33.9 -0.4
        baz=278
P46A  Rosedale            23.89  64  P     P     03 30 34.1 -0.2
        baz=261
J43A  Natural Harves      23.92  55  P     P     03 30 34.0 -0.5
        baz=251
L44A  Lake County Fo      23.92  58  P     P     03 30 34.8 +0.2
        baz=254
349A  Repton              23.92  85  P     P     03 30 35.0 +0.4
        baz=280
C38A  Sawbill Land.       23.94  43  P     P     03 30 33.7 -1.1
        baz=238,SNR=5.8
449A  Pace                24.01  86  P     P     03 30 34.2 -1.3
        baz=281
G41A  Antigo              24.07  50  P     P     03 30 35.5 -0.4
        baz=246
BRAL  Brewton             24.07  85  P     P     03 30 35.3 -0.8
        baz=280
BRAL  Brewton             24.07  85  eP    P     03 30 35.6 -0.5
149A  Jones               24.08  81  P     P     03 30 36.0 -0.2
        baz=277,SNR=5.6
SFIN  Lafayette           24.11  62  eP    P     03 30 38.4 +2.1
        comp=N,14nm,1.0s
U48A  Cassie Pea, Po      24.12  72  P     P     03 30 36.2 -0.3
        baz=268
E40A  Wakefield           24.14  47  P     P     03 30 36.6  0.0
        baz=243
H42A  Shiocton            24.23  52  eP    P     03 30 38.8 +1.3
        comp=N,20nm,1.1s
H42A                                 eS    S     03 34 59.9 +3.4
Z49A  Columbiana          24.24  80  P     P     03 30 36.0 -1.7
        baz=276
R47A  Wooly Knot Far      24.24  67  P     P     03 30 36.0 -1.7
        baz=264
T48A  Bowling Green       24.26  70  P     P     03 30 36.2 -1.6
        baz=267
I43A  Langenfeld Bro      24.27  54  P     P     03 30 36.3 -1.5
        baz=250
Y49A  Blount Mountai      24.28  78  P     P     03 30 37.0 -1.1
        baz=274
X49A  Woodville           24.31  77  P     P     03 30 37.4 -0.9
        baz=273
F41A  Three Lakes         24.33  49  eP    P     03 30 39.8 +1.4
        comp=N,11nm,1.3s
W49A  Belvidere           24.34  75  P     P     03 30 36.8 -1.8
        baz=272,SNR=11
BLO   Bloomington         24.35  65  eP    P     03 30 40.2 +1.6
        comp=N,12nm,0.9s
Q47A  Bedord North L      24.39  66  P     P     03 30 37.6 -1.4
        baz=263
FFC   Flin Flon           24.42  19  eP    P     03 30 40.3 +1.3
        comp=N,33nm,1.8s
WCI   Wyandotte Cave      24.42  68  P     P     03 30 38.1 -1.2
        baz=265
WCI   Wyandotte Cave      24.42  68  eP    P     03 30 38.5 -0.8
        comp=N,24nm,1.1s
COWI  Conover             24.46  48  eP    P     03 30 40.3 +0.7
        comp=N,9.1nm,1.0s
N46A  Monticello          24.48  61  P     P     03 30 38.6 -1.2
        baz=258
S48A  Wiedeman Farm,      24.56  69  P     P     03 30 38.6 -2.0
        baz=266
G42A  Mountain            24.57  50  P     P     03 30 39.2 -1.3
        baz=247
SWET  Sewanee             24.61  75  eP    P     03 30 41.9 +0.9
        comp=N,23nm,1.3s
V49A  McMinnville         24.62  74  P     P     03 30 39.7 -1.5
        baz=270,SNR=6.9
C39A  Grand Marais        24.66  43  P     P     03 30 40.6 -0.7
        baz=240
H43A  Windswept, Lux      24.72  52  P     P     03 30 40.6 -1.3
        baz=250
150A  Eclectic            24.73  81  P     P     03 30 41.8 -0.3
        baz=277,SNR=9.7
E41A  Kenton              24.73  47  P     P     03 30 41.2 -0.8
        baz=244
U49A  Red Boiling Sp      24.73  72  P     P     03 30 40.8 -1.3
        baz=269
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Z50A  Ashland             24.74  80  P     P     03 30 41.7 -0.5
        baz=276,SNR=10
Y50A  Piedmont            24.84  78  P     P     03 30 42.7 -0.4
        baz=274
X50B  Fort Payne          24.87  77  P     P     03 30 42.4 -1.0
        baz=273,SNR=6.2
T49A  Edmonton            24.95  70  P     P     03 30 43.8 -0.3
        baz=268
G43A  Wallace             25.06  51  P     P     03 30 45.1 +0.1
        baz=248
W50A  Signal Mountai      25.12  75  P     P     03 30 45.7 +0.1
        baz=272
D41A  Chassel             25.24  46  P     P     03 30 47.0 +0.4
        baz=244
351A  Pinckard            25.28  84  P     P     03 30 47.0 -0.1
        baz=280
V50A  Pikevile            25.28  74  P     P     03 30 46.8 -0.3
        baz=271
C40A  Isle Royale Na      25.28  44  P     P     03 30 47.4 +0.5
        baz=241
251A  Midway              25.31  82  P     P     03 30 46.5 -0.8
        baz=278,SNR=12
151A  Opelika             25.32  81  P     P     03 30 47.5  0.0
        baz=278
Z51A  Franklin            25.36  79  P     P     03 30 47.0 -0.8
        baz=276
Y51A  Rockmart            25.39  78  P     P     03 30 48.5 +0.4
        baz=275
X51A  Calhoun             25.52  76  P     P     03 30 48.5 -0.8
        baz=273,SNR=5.4
CPCT  Cooper Cave         25.75  74  eP    P     03 30 52.5 +1.1
        comp=N,20nm,1.1s
152A  Waverly Hall        25.81  81  P     P     03 30 52.0 +0.1
        baz=277
152A  Waverly Hall        25.81  81  eP    P     03 30 52.6 +0.7
        comp=N,15nm,1.1s
352A  Blakely             25.81  83  P     P     03 30 52.1 +0.2
        baz=280
352A  Blakely             25.81  83  eP    P     03 30 52.7 +0.8
        comp=N,27nm,1.2s
V51A  Loudon              25.89  74  P     P     03 30 52.4 -0.2
        baz=271
V51A  Loudon              25.89  74  eP    P     03 30 53.1 +0.5
        comp=N,29nm,1.4s
Z52A  Williamson          26.00  79  P     P     03 30 53.2 -0.4
        baz=276
Y52A  Lilburn             26.23  78  P     P     03 30 55.6  0.0
        baz=275
Y52A  Lilburn             26.23  78  eP    P     03 30 56.5 +0.8
        comp=N,13nm,1.3s
X52A  Dahlonega           26.31  76  P     P     03 30 55.4 -1.1
        baz=274
TKL   Tuckaleechee C      26.36  74  P     P     03 30 58.0 +1.2
        comp=N,1.6nm,0.8s,baz=270,slow=20,SNR=2.6
TKL                                  LR    LR    03 42 01.6
        comp=N,718nm,19.2s,baz=336,slow=38
253A  Americus            26.39  82  P     P     03 30 57.1  0.0
        baz=279
P50A  Jamestown           26.50  65  P     P     03 30 58.2 +0.1
        baz=264
V52A  Sevierville         26.50  73  P     P     03 30 58.1 -0.1
        baz=271
TZTN  Tazewell            26.53  72  P     P     03 30 58.4 +0.1
        baz=270
Y53A  Monroe              26.62  78  P     P     03 30 59.4 +0.1
        baz=275
F45A  CMU Biological      26.64  51  P     P     03 30 58.3 -0.9
        baz=250
O50A  Cable               26.70  64  P     P     03 30 59.7 -0.2
        baz=263
GOGA  Godfrey             26.77  79  P     P     03 31 00.4 -0.1
        baz=276
X53A  Estanollee          26.80  76  P     P     03 31 00.6 -0.3
        baz=274
W53A  Cullowhee           26.88  75  P     P     03 31 01.7 +0.1
        baz=273
T52A  Hallie              26.98  71  P     P     03 31 01.5 -1.0
        baz=269
454A  Quitman             27.05  85  P     P     03 31 02.7 -0.4
        baz=282
BG3   Lake Jocassee       27.07  75  eP    P     03 31 05.0 +1.7
        comp=N,20nm,1.1s
254A  Abbeville           27.11  82  P     P     03 31 03.1 -0.5
        baz=279
N50A  Nevada              27.14  63  P     P     03 31 02.9 -0.9
        baz=262
V53A  Saluda              27.14  74  P     P     03 31 03.2 -0.8
        baz=272
154A  Montrose            27.16  80  P     P     03 31 03.7 -0.4
        baz=278
ACSO  Alum Creek Sta      27.19  64  P     P     03 31 03.9 -0.4
        baz=263
ACSO  Alum Creek Sta      27.19  64  eP    P     03 31 04.4 +0.1
        comp=N,4.2nm,0.5s
Z54A  Sparta              27.31  79  P     P     03 31 05.1 -0.3
        baz=277
U53A  Fall Branch         27.31  72  P     P     03 31 04.2 -1.3
        baz=271
Y54A  Tignall             27.37  78  P     P     03 31 06.0 +0.1
        baz=276
155A  Kite                27.70  80  P     P     03 31 08.3 -0.7
        baz=278
255A  Hazlehurst          27.80  82  P     P     03 31 09.5 -0.3
        baz=280
Z55A  Blythe              27.89  79  P     P     03 31 10.4 -0.3
        baz=277
DLBC  Dease Lake          28.05 344  P     P     03 31 14.1 +2.2
        comp=N,4.9nm,0.9s,baz=177,slow=7.0,SNR=8.4
DLBC                                 LR    LR    03 43 12.1
        comp=N,352nm,19.7s,baz=212,slow=38
DLBC  Dease Lake          28.05 344  eP    P     03 31 13.3 +1.4
        comp=N,8.2nm,1.0s
356A  Blackshear          28.19  83  P     P     03 31 11.8 -1.5
        baz=281
KMSC  Kings Mountain      28.37  75  P     P     03 31 14.0 -1.0
        baz=274
BLA   Blacksburg          29.03  70  P     P     03 31 21.1 +0.2
        baz=271
N54A  Moraine State       29.54  63  P     P     03 31 24.1 -1.1
        baz=264
ERPA  Erie                29.67  60  P     P     03 31 26.2 -0.2
        baz=262
M54A  Oil Creek Stat      29.84  62  P     P     03 31 27.9  0.0
        baz=264
YKA   Yellowknife Ar      30.30   1  P     P     03 31 34.1 +2.5
        comp=N,0.4nm,0.6s,baz=183,slow=9.1,SNR=2.7
O56A  Blue Knob Stat      30.56  64  P     P     03 31 34.4 +0.1
        baz=266
060A  Indiantown          30.76  91  P     P     03 31 35.8 -0.3
        baz=288
SSPA  Standing Stone      31.10  64  P     P     03 31 39.3 +0.2
        baz=266
CNNC  Cliffs of the       31.18  74  P     P     03 31 40.5 +0.8
        baz=275
BINY  Binghamton          32.64  61  P     P     03 31 52.9 +0.3
        baz=265
N59A  State Game Lan      32.72  63  P     P     03 31 53.6 +0.3
        baz=267
LONY  Lake Ozonia         33.91  57  P     P     03 32 03.5 -0.1
        baz=263
PAL   Palisades           34.13  63  P     P     03 32 04.3 -1.2
        baz=269
DAWY  Dawson              35.22 342  eP    P     03 32 15.2 +0.4
        comp=N,11nm,1.4s
HRV   Adam Dziewonsk      35.94  61  P     P     03 32 19.9 -1.2
        baz=268
KDAK  Kodiak Island       35.95 326  P     P     03 32 26.9 +5.9
        comp=N,4.2nm,1.0s,baz=120,slow=8.1,SNR=3.2
EGAK  Eagle               36.26 342  eP    P     03 32 25.0 +1.4
        comp=N,14nm,1.4s
SCRK  Sand Creek          36.46 339  eP    P     03 32 28.3 +2.8
        comp=N,7.2nm,1.0s
PMR   Palmer              36.59 334  eP    P     03 32 29.1 +2.6
        comp=N,9.1nm,1.1s
INK   Inuvik              37.63 349  eP    P     03 32 35.4 +0.2
        comp=N,7.5nm,1.1s
PKME  Peaks-Kenny Pk      37.71  56  P     P     03 32 34.8 -1.5
        baz=266
MCK   McKinley            37.88 336  eP    P     03 32 39.9 +2.4
        comp=N,11nm,1.1s
IL1   Eielson Array       37.91 339  eP    P     03 32 39.2 +1.6
ILAR  Eielson Array       37.91 339  P     P     03 32 39.8 +2.2
        comp=N,5.0nm,1.1s,baz=151,slow=7.0,SNR=32
ILB   Eielson Array       37.91 339  eP    P     03 32 39.9 +2.2
CCB   Clear Creek Bu      38.11 338  eP    P     03 32 41.7 +2.4
        comp=N,3.4nm,1.0s
TRF   Thorofare Moun      38.17 335  eP    P     03 32 42.1 +2.1
        comp=N,16nm,1.3s
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MDM   Murphy Dome         38.46 338  eP    P     03 32 44.8 +2.5
        comp=N,5.2nm,1.1s
PPLA  Purkeypile          38.52 334  eP    P     03 32 45.5 +2.5
        comp=N,15nm,1.1s
FYU   Fort Yukon          38.72 341  eP    P     03 32 47.9 +3.5
        comp=N,13nm,1.1s
CAST  Castle Rocks        38.79 335  eP    P     03 32 47.3 +2.2
        comp=N,7.8nm,1.2s
BPAW  Bear Paw Mtn.       38.81 336  eP    P     03 32 47.3 +2.0
        comp=N,9.2nm,1.1s
MLY   Manley              39.31 337  eP    P     03 32 51.8 +2.4
        comp=N,3.4nm,0.9s
COLD  Coldfoot            40.58 340  eP    P     03 33 03.4 +3.4
        comp=N,5.1nm,1.2s
SCHQ  Schefferville       40.74  42  LR    LR    03 49 20.4
        comp=N,235nm,18.4s,baz=300,slow=36
IM3   Indian Mountai      40.89 337  eP    P     03 33 03.6 +1.1
TOLK  Toolik Lake Re      41.37 342  P     P     03 33 05.6 -0.9
        baz=134
ROSC  El Rosal            47.02 117  LR    LR    03 56 31.4
        comp=N,76nm,18.6s,baz=55,slow=40
RUSC  La Rusia            47.30 114  eP    P     03 33 58.9 +3.8
        comp=N,6.6nm,1.2s
SFJD  Kangerlussuaq       50.94  27  LR    LR    03 56 34.9
        comp=N,265nm,19.1s,baz=254,slow=37
PCRV  Puerto La Cruz      51.57 103  LR    LR    03 58 44.2
        comp=N,92nm,20.0s,baz=294,slow=39
SUMG  Summit              55.68  21  eP    P     03 35 01.3 +4.3
        comp=N,12nm,1.2s
PMOR  Pomariorio Ree      56.36 219  eT    T     04 34 26.1
        comp=N,1.5nm,0.2s
PPT   Papeete             59.38 219  LR    LR    03 55 26.8
        comp=N,80nm,19.5s,baz=322,slow=30
PPT2  Papeete2            59.40 219  eLR   LR    03 52 45.9
        comp=N,234nm,28.0s
SAML  Samuel              64.42 120  eP    P     03 35 55.5 -1.8
        comp=N,1.5nm,0.8s
SPITS Spitsbergen Ar      66.24  10  LR    LR    04 04 35.4
        comp=N,192nm,19.3s,baz=310,slow=36
ARCES ARCESS Array B      74.60  13  LR    LR    04 12 10.3
        comp=N,98nm,18.5s,baz=352,slow=38
NOA   NORSAR Array B      77.42  24  LR    LR    04 11 00.2
        comp=N,103nm,19.8s,baz=325,slow=36
HFS   Hagfors             78.92  23  P     P     03 37 26.4 +2.4
        comp=N,0.7nm,0.5s,baz=280,slow=8.4,SNR=4.2
CPUP  Villa Florida       80.28 129  P     P     03 37 34.3 +2.5
        comp=N,2.2nm,1.1s,baz=355,slow=12,SNR=2.9
FINES FINESS Array B      81.55  18  P     P     03 37 40.3 +2.2
        comp=N,1.4nm,0.7s,baz=325,slow=3.0,SNR=7.2
PLCA  Paso Flores         83.56 147  P     P     03 37 54.3 +5.5
        comp=N,3.3nm,0.9s,baz=308,slow=13,SNR=3.3
MDT   Midelt              88.08  52  LR    LR    04 16 18.6
        comp=N,152nm,19.1s,baz=310,slow=35
HHC   Hu-ho-hao-te        95.37 326  eP    P     03 38 44.5 -0.9
HHC                                  pmax  pmax
        comp=Z,11nm,1.1s
HHC                                  pmax  pmax
        comp=Z,38nm,4.8s
NJ2   Nanjing             98.10 316  eP    P     03 38 56.1 -1.7
NJ2                                  pmax  pmax
        comp=Z,11nm,0.5s
LZH   Lanzhou            102.77 328  SS    SS    03 57 59.7  -12
LZH                                  pmax  pmax
        comp=Z,16nm,1.0s
LZH                                  pmax  pmax
        comp=Z,160nm,6.5s
ASAR  Alice Springs      119.15 259  PKP   PKPdf 03 44 15.7 +5.4
        comp=Z,0.4nm,1.0s,baz=84,slow=2.6,SNR=3.7
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NNC 01 03:30:56.3±5.4, 37.̊11N×70.̊60E, h0km, mb4.1, mpv3.8, 3C-6D, Error ellipse: s-maj=43.0km s-min=33.5km az=161.0, Afghanistan-Tajikistan border region

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Code  Station Name           Δ°   AZ°    Phase ID          Time      Res
                                        Op    ISC        h  m  s     ISC
SFK   Sufi-Kurgan           3.68   37  ⇑P     Pn      03 31 54.2 -0.5
        24nm,0.3s
SFK                                    ⇓S     Sn      03 32 40.1 +1.1
        11nm,0.3s
MNAS  Manas                 5.56   15  ⇑P     Pn      03 32 21.9 +1.4
        1.6nm,0.5s
MNAS                                   ⇓S     Sn      03 33 26.1 +0.9
        7.0nm,0.5s
KK31  Karatay Array         5.98  359  ⇓P     Pn      03 32 28.0 +1.8
        5.0nm,0.3s,baz=178,slow=13
KK31                                   ⇓S     Sn      03 33 38.1 +2.7
        0.6nm,0.2s,baz=186,slow=23
AAK   Ala-Archa             6.28   27  ⇓P     Pn      03 32 29.2 -1.1
        3.4nm,0.5s
AAK                                    ⇑S     Sn      03 33 42.1 -0.8
        5.8nm,0.7s
AB31  Akbulak array        14.39  331  ⇓P     Pn      03 34 20.6 -0.6
        0.4nm,0.3s,baz=140,slow=14,SNR=12
```

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*ISCJB **01** 03:33:45.6±0.5, 32.̊25N±0.̊03×115.̊23W±0.̊02, h12km±4km, Error ellipse: s-maj=4.5km s-min=3.3km az=15.5*

*NEIC **01** 03:33:47.8±0.0, 32.̊20N×115.̊30W, h7km, ML3.3(ECX), ML3.5(PAS), After ECX.*

NEIC Felt at San Luis Rio Colorado, Sonora. Also felt at Chula Vista and San Diego, California and at Yuma, Arizona.

*MEX **01** 03:33:47.0±0.5, 32.̊41N×115.̊05W, h24km±5km, MD3.9*

*ECX **01** 03:33:47.8±0.5, 32.̊20N×115.̊31W, h8km, MD3.3, ML3.5*

ISC 01 03:33:46.0±0.8, 32.̊24N±0.̊03×115.̊31W±0.̊02, h12km±6km, n63, σ1.̊14/88, 2C, California-Baja California border region

```
Code  Station Name           Δ°   AZ°    Phase ID          Time      Res
                                        Op    ISC        h  m  s     ISC
CPBX  Cerro Prieto          0.18    1   eP    Pg      03 33 50.3 +0.2
CPBX                                    eS    Sg      03 33 53.9 +0.9
CPBX                                   ⇑e             03 33 56.8
CPBX                                    IAML          03 33 56.8
        comp=E,35µm,0.2s
MBIG  Mexicali              0.20   29   eP    Pb      03 33 51.7 +0.1
MBIG  Mexicali              0.20   29   i P   Pb      03 33 50.5 -1.1
MBIG                                    i S   Sb      03 33 53.8 +0.5
MBIG  Mexicali              0.20   29   i P   Pb      03 33 50.4 -1.1
MBIG                                    i S   Sb      03 33 53.8 +0.5
DREC  Desert Rsrch C        0.58  348   i P   Pb      03 33 58.5 +0.4
WESC  Westside Schoo        0.63  326   i P   Pb      03 33 59.6 +0.7
RMX   La Rumorosa           0.75  300   eP    Pg      03 34 00.2 -0.3
RMX                                     eS    Sg      03 34 09.7 -0.7
RMX                                     IAML          03 34 11.8
        comp=N,2µm,0.2s
RMX                                     e             03 34 11.8
RMX   La Rumorosa           0.75  300   eP    Pg      03 34 00.2 -0.3
RMX                                     eS    Sg      03 34 09.7 -0.7
IKP   In-Ko-Pah, Jac        0.79  302   P     Pb      03 34 02.0 +0.2
        baz=124,SNR=37
IKP                                     S     Sb      03 34 13.0 +0.5
        baz=124
IKP   In-Ko-Pah, Jac        0.79  302  ⇑iP    Pb      03 34 02.0 +0.2
SWSC  Sam W. Stewart        0.82  330   P     Pg      03 34 01.8 -0.1
        baz=151,SNR=16
GLA   Glamis                0.91   26   P     Pb      03 34 02.9 -0.8
        baz=206,SNR=17
GLA   Glamis                0.91   26   ePg   Pb      03 34 02.7 -1.1
MONP2 Monument Peak         1.15  305   P     Pn      03 34 07.5 -0.5
        baz=126,SNR=44
MONP2                                   S     Sb      03 34 23.2 +0.4
        baz=126
CBX   Cerro Bola            1.15  274   eP    Pb      03 34 08.1 +0.2
CBX                                     eS    Sb      03 34 23.2 +0.3
CBX                                     IAML          03 34 25.1
        comp=N,2µm,0.5s
CBX   Cerro Bola            1.15  274   eP    Pg      03 34 08.4 +0.3
CBX                                     eS    Sg      03 34 24.2 +1.0
CBX   Cerro Bola            1.15  274   eP    Pg      03 34 08.4 +0.3
CBX                                     eS    Sg      03 34 24.2 +1.0
CBX   Cerro Bola            1.15  274   eP    Pb      03 34 08.1 +0.2
CBX                                     eS    Sb      03 34 23.2 +0.3
TJIG  Tijuana               1.17  280   eP    Pb      03 34 08.3 +0.1
TJIG                                    eS    Sb      03 34 23.8 +0.5
TJIG  Tijuana               1.17  280   eP    Pb      03 34 08.3 +0.1
TJIG                                    eS    Sb      03 34 23.8 +0.5
SPIG  San Pedro Mart        1.19  186   eP    Pg      03 34 08.5 -0.5
SPIG  San Pedro Mart        1.19  186   eP    Pg      03 34 08.5 -0.5
SPIG                                    eS    Sn      03 34 25.6 +0.5
SPIG  San Pedro Mart        1.19  186   eP    Pg      03 34 08.5 -0.5
SPIG                                    eS    Sn      03 34 25.6 +0.5
SPIG  San Pedro Mart        1.19  186   eP    Pg      03 34 08.5 -0.5
SPIG                                    eS    Sn      03 34 25.6 +0.5
SPX   San Pedro Mart        1.19  186   eP    Pg      03 34 08.2 -0.8
```

SPX	**San Pedro Mart**	**1.19**	**186**	*e*P	**Pg**	**03 34 08.2**	**-0.8**
SPX				*e*S	**Sn**	**03 34 25.1**	**0.0**
BAR	**Barrett**	**1.23**	**291**	*e*P	**Pn**	**03 34 09.1**	**0.0**
BAR	**Barrett**	**1.23**	**291**	*e*Pg	**Pn**	**03 34 09.0**	**0.0**
113A	**Mohawk Valley,**	**1.41**	**67**	*e*Pn	**Pn**	**03 34 10.0**	**-1.5**
BC3	**Big Chuckawall**	**1.42**	**355**	P	**Pn**	**03 34 10.7**	**-1.1**
	baz=176,SNR=27						
SDRC	**San Diego Road**	**1.47**	**290**	*e*P	**Pb**	**03 34 13.3**	**+0.1**
Y12C	**Blythe**	**1.65**	**23**	P	**Pn**	**03 34 14.0**	**-0.7**
	baz=204,SNR=15						
Y12C	**Blythe**	**1.65**	**23**	*e*Pn	**Pg**	**03 34 16.7**	**-0.9**
109C	**Camp Elliot, M**	**1.65**	**294**	Pb	**Pb**	**03 34 15.6**	**-0.7**
	baz=114,SNR=63						
109C				Sb	**Sb**	**03 34 38.5**	**+1.4**
	baz=114						
CPE	**Camp Elliot**	**1.65**	**294**	*e*Pn	**Pb**	**03 34 16.0**	**-0.3**
XPFO	**Piæon Flat**	**1.68**	**325**	*e*Pn	**Pn**	**03 34 13.6**	**-1.7**
PFO	**Pinyon Flats O**	**1.68**	**325**	P	**Pn**	**03 34 14.4**	**-0.9**
	baz=146,SNR=8.9						
PFO				Sb	**Sg**	**03 34 39.6**	**-0.5**
	baz=146						
PFO	**Pinyon Flats O**	**1.68**	**325**	*e*Pn	**Pn**	**03 34 15.4**	**+0.1**
PFO				*e*Sn	**Sg**	**03 34 39.7**	**-0.3**
BELC	**Belle Mtn. Jos**	**1.85**	**342**	P	**Pn**	**03 34 17.0**	**-0.7**
	baz=162,SNR=15						
IRM	**Iron Mountain**	**1.92**	**4**	Pb	**Pb**	**03 34 19.9**	**-1.1**
	baz=184,SNR=15						
MURC	**Murrieta**	**2.09**	**311**	P	**Pn**	**03 34 20.6**	**-0.3**
	baz=131,SNR=14						
214A	**Organ Pipe Nat**	**2.14**	**97**	P	**Pn**	**03 34 19.9**	**-1.6**
	baz=277,SNR=5.2						
GMRC	**Granite Mounta**	**2.56**	**354**	P	**Pn**	**03 34 26.9**	**-0.5**
	baz=174,SNR=12						
Y14A	**Wickenburg**	**2.58**	**48**	*e*Pn	**Pn**	**03 34 27.7**	**+0.1**
LDFC	**Landfair**	**2.84**	**3**	*e*Pn	**Pn**	**03 34 31.2**	**-0.1**
PASC	**Pasadena Art C**	**3.09**	**309**	*e*Pn	**Pn**	**03 34 33.4**	**-1.1**
W13A	**Hualapai Mount**	**3.09**	**22**	*e*Pn	**Pn**	**03 34 35.2**	**+0.3**
OSI	**Osito Audit: C**	**3.71**	**311**	*e*Pn	**Pn**	**03 34 42.9**	**-0.3**
TUC	**Tucson**	**3.83**	**88**	*e*Pg	**Pg**	**03 34 59.5**	**0.0**
TUC				*e*Sg	**Sg**	**03 35 50.1**	**+1.0**
X16A	**Lo Mia Camp, P**	**3.90**	**55**	*e*Pn	**Pn**	**03 34 46.6**	**+0.6**
DAC	**Darwin (Calif)**	**4.45**	**335**	*e*Pn	**Pn**	**03 34 55.2**	**+1.6**
DAC				*e*Pg	**Pg**	**03 35 11.4**	**+0.1**
DAC				*e*Sg	**Sg**	**03 36 08.5**	**-0.5**
WUAZ	**Wupatki**	**4.63**	**44**	*e*Pn	**Pn**	**03 34 57.9**	**+2.0**
TPNV	**Topopah Spring**	**4.77**	**351**	*e*Pg	**Pg**	**03 35 19.4**	**+2.1**
X18A	**Snowflake**	**5.03**	**62**	*e*Pn	**Pn**	**03 35 01.1**	**-0.4**
LCMT	**Little Creek M**	**5.06**	**19**	*e*Pn	**Pn**	**03 35 02.4**	**+0.6**
DPD	**Davis Peak**	**5.45**	**305**	*e*Pg	**Pg**	**03 35 28.4**	**-2.0**
W18A	**Petrified Fore**	**5.46**	**57**	*e*Pn	**Pn**	**03 35 07.3**	**-0.1**
MGPM	**Gravel Pit**	**6.13**	**332**	*e*Pn	**Pn**	**03 35 14.3**	**-2.3**
MSU	**Marysvale**	**6.76**	**21**	*e*Pn	**Pn**	**03 35 26.1**	**+0.8**
CMB	**Columbia Colle**	**7.12**	**326**	*e*Pn	**Pn**	**03 35 33.0**	**+2.9**
CMB				*e*Sg	**Sg**	**03 37 29.2**	**-5.4**
LENM	**Lemitar**	**7.25**	**72**	*e*Pn	**Pn**	**03 35 32.0**	**+0.1**
MVCO	**Mesa Verde**	**7.49**	**47**	*e*Pn	**Pn**	**03 35 38.7**	**+3.5**
MVCO				*e*Sg	**Sg**	**03 37 46.2**	**0.0**
BNM	**Barren Site**	**7.52**	**73**	*e*Pn	**Pn**	**03 35 33.8**	**-1.9**

IDC 01 03:59:31.9±11.0,3°.68S×153°.67E,h374^{km}±128^{km}, mb2.8/3,mb1 3.1/4,mb1mx2.7/45,mbtmp3.6/4,Error ellipse: s-maj=148.9km s-min=36.8km az=137.0,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**17.84**	**203**	P	P	04 03 16.1	+0.1
	0.4nm,0.3s,baz=31,slow=12,SNR=6.3						
WRA	**Warramunga Arr**	**24.84**	**228**	P	P	04 04 22.5	+0.4
	0.4nm,0.3s,baz=52,slow=9.6,SNR=8.3						
ASAR	**Alice Springs**	**27.56**	**222**	P	P	04 04 45.7	-0.6
	0.4nm,0.7s,baz=53,slow=8.2,SNR=6.4						
ILAR	**Eielson Array**	**80.80**	**22**	P	P	04 11 04.5	0.0
	0.2nm,0.6s,baz=243,slow=4.7,SNR=6.0						
TORD	**Torodi Ar. Bea**	**150.76**	**290**	PKPbc	PKPbc	04 18 41.3	-0.3
	baz=84,slow=2.7						

MAN 01 04:04:10.8,9°.94N×123°.09E,h33^{km},mb3.8,ML2.5,MS2.0, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIM	**Jordan**	**0.84**	**324**	*e*P	Pb	04 04 27.0	0.0
GUIM				*e*S	Sb	04 04 37.8	-0.2
MSLP	**Maasin**	**1.75**	**84**	*e*P	Pn	04 04 38.9	0.0
MSLP				*e*S	Sn	04 05 00.7	+0.6

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*IDC **01** 04:04:14.3±0.9,25°.44N×142°.77E,h0^{km},mb3.7/12, mb1 3.9/12,mb1mx3.7/58,mbtmp3.7/12,Error ellipse: s-maj=31.1km s-min=16.8km az=82.0*

*ISCJB **01** 04:04:18.0±0.7,25°.33N±0°.06×142°.7E±0°.2,h38^{km}, mb3.8/13,Error ellipse: s-maj=25.7km s-min=8.0km az=169.5*

*JMA **01** 04:04:18.6,25°.56N×142°.71E,h4^{km},M3.7*

ISC 01 04:04:19.8±0.9,25°.4N±0°.1×142°.7E±0°.2,h38^{km},n22, σ0^{s}.77/18,mb3.8/13,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	**1.32**	**338**	P	**Pn**	**04 04 40.9**	**-0.9**
JCJ	**Chichijima**	**1.76**	**344**	Pn	**Pn**	**04 04 47.8**	**-0.1**
	78nm,0.3s,baz=307,slow=20,SNR=68						
JCJ				Sn	**Sn**	**04 05 10.9**	**+2.0**
	74nm,0.3s,baz=294,slow=19,SNR=19						
CBIJ	**Chichi jima**	**1.76**	**344**	P	**Pn**	**04 04 48.0**	**+0.2**
CBIJ				*e*S	**Sn**	**04 05 09.1**	**+0.1**
H11N1	**WAKE ISLAND Hy**	**23.00**	**99**	T	T	04 33 20.5	
	baz=291						
H11N2	**WAKE ISLAND Hy**	**23.00**	**99**	T	T	04 33 19.2	
	baz=291						
H11N3	**WAKE ISLAND Hy**	**23.01**	**99**	T	T	04 33 20.8	
	baz=291						
H11S3	**WAKE ISLAND Hy**	**23.23**	**102**	T	T	04 33 30.6	
	baz=289						
H11S1	**WAKE ISLAND Hy**	**23.24**	**102**	T	T	04 33 39.7	
	baz=289						
H11S2	**WAKE ISLAND Hy**	**23.25**	**102**	T	T	04 33 41.4	
	baz=289						
KLR	**Kul'dur**	**25.29**	**343**	P	**P**	**04 09 42.8**	**+0.2**
	0.2nm,0.7s,baz=139,slow=4.7,SNR=7.6						
WRA	**Warramunga Arr**	**45.80**	**191**	P	**P**	**04 12 39.1**	**+1.1**
	1.6nm,0.5s,baz=9.3,slow=8.7,SNR=17						
ASAR	**Alice Springs**	**49.52**	**191**	P	**P**	**04 13 07.2**	**+0.3**
	0.3nm,0.6s,baz=23,slow=11,SNR=4.2						
ZALV	**Zalesovo Beam**	**51.10**	**320**	P	**P**	**04 13 17.1**	**-1.3**
	0.5nm,0.5s,baz=117,slow=8.0,SNR=2.7						
MKAR	**Makanchi Array**	**51.94**	**311**	P	**P**	**04 13 24.9**	**-0.1**
	0.3nm,0.5s,baz=92,slow=10,SNR=6.2						
KURBB	**Kurchatov Arra**	**54.58**	**315**	P	**P**	**04 13 43.6**	**-0.6**
	1.9nm,0.5s,baz=91,slow=8.3,SNR=26						
ILAR	**Eielson Array**	**58.96**	**28**	P	**P**	**04 14 14.7**	**-0.5**
	0.4nm,0.7s,baz=256,slow=6.1,SNR=6.1						
BVAR	**Borovoye Array**	**59.63**	**318**	P	**P**	**04 14 20.1**	**+0.1**
	2.1nm,0.5s,baz=92,slow=7.0,SNR=17						
YKA	**Yellowknife Ar**	**73.39**	**28**	P	**P**	**04 15 47.3**	**-0.3**
	0.5nm,0.7s,baz=300,slow=6.2,SNR=3.5						
FINES	**FINESS Array B**	**79.68**	**334**	P	**P**	**04 16 23.4**	**+0.2**
	1.2nm,0.7s,baz=60,slow=5.2,SNR=12						
PDAR	**Pinedale Array**	**85.06**	**45**	P	**P**	**04 16 52.5**	**+0.4**
	0.1nm,0.3s,baz=315,slow=5.5,SNR=3.1						
HFS	**Hagfors**	**85.17**	**337**	P	**P**	**04 16 51.4**	**-0.5**
	1.0nm,0.6s,baz=115,slow=6.5,SNR=8.9						
NB2	**NORSAR Subarra**	**85.36**	**339**	P	**P**	**04 16 52.9**	**0.0**
	comp=Z,0.3nm,0.5s,baz=56,slow=5.1						

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*NIED **01** 04:09:00,36°.90N×140°.60E,h5^{km},Mw3.5 Best double couple: $M_0$1.76000×10^{14} NP1:ϕ_s298.00000°,δ22.00000°, λ-94.00000°. NP2:ϕ_s123.00000°,δ69.00000°, λ-88.00000°.*

*IDC **01** 04:09:50.7±0.9,36°.98N×140°.49E,h0^{km},mb3.6/5, mb1 3.7/7,mb1mx3.4/66,mbtmp3.6/7,ML3.3/2,Error ellipse: s-maj=25.2km s-min=18.3km az=111.0*

*ISCJB **01** 04:09:51.7±0.5,36°.95N±0°.03×140°.62E±0°.05,h20^{km}±4^{km}, mb3.6/5,Error ellipse: s-maj=6.8km s-min=5.0km az=23.8*

*JMA **01** 04:09:52.5,36°.96N×140°.54E,h8^{km}±1^{km},M3.7 Broadband fault plane solution: P waves. NP1: ϕ_s139.00000°,δ60.00000°,λ-79.00000°. NP2: ϕ_s298.00000°,δ32.00000°,λ-108.00000°. Principal axes: T Plg14.0000°, Azm221.0000°; N Plg10.0000°, Azm313.0000°; P Plg73.0000°, Azm77.0000°;*

JMA Felt II J1.

ISC 01 04:09:52.2±0.9,36°.96N±0°.03×140°.53E±0°.04,h12^{km}±6^{km}, n22,σ0^{s}.70/25,mb3.7/5,5C,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFFD	**Fukushimafurud**	**0.13**	**13**	P	**Pg**	**04 09 55.5**	**0.0**
JFFD				S	**Sg**	**04 09 57.5**	**-0.5**
ONAJ	**Iwakimizuishiy**	**0.26**	**57**	⇑P	**Pg**	**04 09 57.7**	**+0.1**
ONAJ				*e*S	**Sg**	**04 10 01.4**	**+0.1**
JHO	**Hitachi**	**0.35**	**174**	⇑P	**Pg**	**04 09 59.4**	**+0.1**
JHO				S	**Sg**	**04 10 04.1**	**+0.1**
JSB	**Shiboa**	**0.48**	**271**	⇑P	**Pb**	**04 10 02.9**	**+0.3**
JSB				S	**Sb**	**04 10 09.5**	**-0.2**
JFK	**Kawauchi**	**0.49**	**34**	⇑P	**Pb**	**04 10 01.9**	**-0.9**
JFK				S	**Sg**	**04 10 08.4**	**0.0**
JFT	**Otama**	**0.58**	**345**	⇑P	**Pb**	**04 10 03.8**	**-0.4**
JFT				S	**Sg**	**04 10 11.2**	**+0.1**
MJAR	**Matsushiro Arr**	**1.91**	**258**	Pn	**Pn**	**04 10 24.6**	**+0.1**
	22nm,0.3s,baz=334,slow=8.0,SNR=144						
MJAR				Sn	**Sb**	**04 10 50.2**	**-0.4**
	33nm,0.3s,baz=77,slow=18,SNR=7.2						
MAT	**Matsushiro**	**1.91**	**258**	P	**Pb**	**04 10 26.3**	**-0.6**
MAT				S	**Sb**	**04 10 51.6**	**+0.9**
JHJ	**Hachijo jima 2**	**3.88**	**189**	Pn	**Pn**	**04 10 52.0**	**+0.4**
	6.8nm,0.3s,baz=142,slow=19,SNR=2.5						
JHJ				Sn	**Sn**	**04 11 35.8**	**-1.3**
	8.3nm,0.3s,baz=105,slow=20,SNR=2.5						
ASAJ	**Asahikawa**	**7.32**	**12**	Pn	**Pn**	**04 11 40.3**	**+1.5**
	0.5nm,0.3s,baz=192,slow=15,SNR=2.2						
H11N2	**WAKE ISLAND Hy**	**28.73**	**119**	T	T	04 45 41.0	
	baz=313,slow=75,SNR=37						
H11N1	**WAKE ISLAND Hy**	**28.73**	**120**	T	T	04 45 40.5	
	baz=313,slow=75,SNR=66						
H11N3	**WAKE ISLAND Hy**	**28.74**	**119**	T	T	04 45 40.7	
	baz=313,slow=75,SNR=32						
H11S1	**WAKE ISLAND Hy**	**29.42**	**122**	T	T	04 46 30.8	
	baz=314,slow=75,SNR=138						
H11S3	**WAKE ISLAND Hy**	**29.42**	**122**	T	T	04 46 30.6	
	baz=314,slow=75,SNR=72						
H11S2	**WAKE ISLAND Hy**	**29.44**	**122**	T	T	04 46 31.6	
	baz=314,slow=75,SNR=53						
KURBB	**Kurchatov Arra**	**45.48**	**308**	P	**P**	**04 18 11.1**	**+0.1**
	0.4nm,0.4s,baz=82,slow=7.8,SNR=4.4						
ILAR	**Eielson Array**	**49.94**	**32**	P	**P**	**04 18 45.9**	**+0.5**
	0.2nm,0.6s,baz=268,slow=5.4,SNR=3.6						
WRA	**Warramunga Arr**	**56.90**	**187**	P	**P**	**04 19 36.5**	**-0.5**
	0.6nm,0.7s,baz=4.6,slow=7.4,SNR=5.6						
ASAR	**Alice Springs**	**60.62**	**187**	P	**P**	**04 20 03.9**	**+1.0**
	0.3nm,0.7s,baz=14,slow=8.2,SNR=3.7						
FINES	**FINESS Array B**	**68.55**	**332**	P	**P**	**04 20 53.5**	**-0.7**
	1.7nm,0.9s,baz=53,slow=6.6,SNR=2.6						
LPAZ	**La Paz**	**147.34**	**59**	PKPbc	**PKPab**	**04 29 37.5**	**-1.2**
	0.3nm,0.4s,baz=256,slow=8.3,SNR=2.9						

DJA 01 04:13:01.6±2.8,3°N±6°×9°6E±2°2,h19^{km}±23^{km},M3.5/4, MLv3.5/4,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNSI	**Sinabang, Aceh**	**0.94**	**121**	P	Pg	04 13 20.0	+0.1
SNSI	**Sinabang, Aceh**	**0.94**	**121**	P	Pg	04 13 20.0	+0.1
MLSI	**Meulaboh, Aceh**	**1.63**	**33**	P	Pn	04 13 29.2	-0.1
MLSI				S	Sb	04 13 51.1	-0.1
MLSI	**Meulaboh, Aceh**	**1.63**	**33**	P	Pn	04 13 29.1	-0.2
MLSI				S	Sb	04 13 51.0	-0.2
TPTI		**1.70**	**77**	P	Pn	04 13 29.5	-0.7
TPTI				S	Sb	04 13 53.7	+0.5
KCSI	**Kotacane, Aceh**	**2.33**	**74**	P	Pn	04 13 37.5	-1.5
KCSI	**Kotacane, Aceh**	**2.33**	**74**	P	Pn	04 13 40.6	+1.6
GSI	**Gunungsitoli**	**2.59**	**127**	P	Pn	04 13 43.1	+0.6
GSI	**Gunungsitoli**	**2.59**	**127**	P	Pn	04 13 43.0	+0.5
LHMI	**Lhok Sumawe**	**2.73**	**31**	P	Pg	04 14 00.1	+6.2

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*MOS **01** 04:13:49.8±1.1,25°.58N×94°.74E,h51^{km},mb5.6/102, MS4.7/40,Error ellipse: s-maj=6.0km s-min=3.3km az=121.4*

*BJI **01** 04:13:49.2,25°.64N×94°.63E,h59^{km},mb5.3/76,mB5.5/52, Ms5.3/93,Ms7 5.0/85*

*ISCJB **01** 04:13:50.9±0.2,25°.58N±0°.01×94°.61E±0°.01,h61^{km}±2^{km}, mb5.4/299,Error ellipse: s-maj=2.4km s-min=1.9km az=29.2*

*IDC **01** 04:13:51.8±0.4,25°.58N×94°.81E,h56^{km}±3^{km},mb4.8/57, mb1 4.8/58,mb1mx4.8/67,mbtmp5.1/58,MS4.6/44, Ms1 4.6/44,ms1mx4.5/56,Error ellipse: s-maj=7.9km s-min=6.7km az=29.0*

*NEIC **01** 04:13:52.1±0.1,25°.59N×94°.70E,mb5.5/147,MW5.6, Error ellipse: s-maj=4.2km s-min=3.0km az=210.0, Moment Tensor Solution. s35 Moment tensor: Scale 10^{17}Nm; M_{rr}0.14; $M_{\theta\theta}$-2.06; $M_{\phi\phi}$1.92; $M_{r\theta}$-0.27; $M_{\theta\phi}$2.56; $M_{\phi r}$-0.48; Best double couple: $M_0$3.30000×10^{17} NP1: ϕ_s161.00000°,δ83.00000°,λ173.00000°. NP2: ϕ_s252.00000°,δ83.00000°,λ7.00000°. Principal axes: T 3.2700, Plg10.0000°, Azm116.0000°; N 0.0400, Plg80.0000°, Azm294.0000°; P -3.3100, Plg0.0000°, Azm26.0000°;*

NEIC Felt at Nagaon, Phek and Shillong, India. Also felt at Sylhet, Bangladesh.

*GCMT **01** 04:13:52.1±0.1,25°.60N×94°.73E,h50^{km},MW5.6/126, Moment Tensor Solution. s92,c135; s126,c300; Duration: 1^{s}.5 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.06±.04; $M_{\theta\theta}$-2.81±.04; $M_{\phi\phi}$2.86±.04; $M_{r\theta}$-0.40±.04; $M_{\theta\phi}$1.28±.03; $M_{\phi r}$-0.59±.04; Best double couple: $M_0$3.18800×10^{17} NP1:ϕ_s238.00000°,δ86.00000°, λ12.00000°. NP2:ϕ_s147.00000°,δ78.00000°,λ176.00000°. Principal axes: T 3.2660, Plg11.0000°, Azm103.0000°; N -0.1610, Plg78.0000°, Azm257.0000°; P -3.1100, Plg5.0000°, Azm12.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*NDI **01** 04:13:53.2±2.4,25°.67N×94°.54E,h70^{km}±8^{km},ML5.6, mb5.5(NEIC)*

ISC 01 04:13:51.8±0.2,25°.60N±0°.02×94°.71E±0°.02,h56^{km}±1^{km}, h56^{km}:pP-P,n1011,σ1^{s}.80/1254,mb5.5/325,MS4.7/78, 51C-35D,Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOHI	**KOHIMA**	**0.55**	**283**	*e*P	**Pn**	**04 14 04.3**	**+0.1**
KOHI				*e*S	**Sn**	**04 14 12.9**	**-0.4**
KOHI				IAML		04 14 14.7	
	comp=E,259μm,0.8s						
MOKO	**MOKOCHONG**	**0.74**	**347**	*e*P	**Pn**	**04 14 07.4**	**+0.9**
MOKO				*e*S	**Sn**	**04 14 17.4**	**+0.3**
MOKO				IAML		04 14 22.3	
	comp=N,658μm,1.1s						
MOKO				IAML		04 14 23.7	
	comp=E,427μm,0.9s						
IMP	**Imphal**	**1.03**	**222**	*e*P	**Pn**	**04 14 11.2**	**+1.0**
IMP				*e*S	**Sn**	**04 14 24.0**	**+0.2**
IMP				IAML		04 14 25.6	
	comp=N,90μm,0.7s						
IMP				IAML		04 14 29.4	
	comp=E,115μm,0.0s						
JORH	**JORHAT**	**1.21**	**340**	*e*P	**Pn**	**04 14 12.9**	**+0.4**
JORH				*e*S	**Sn**	**04 14 27.6**	**-0.3**
JORH				IAML		04 14 32.1	
	comp=N,399μm,0.3s						
JORH				IAML		04 14 33.1	
	comp=E,220μm,0.2s						
ITAN	**ITANAGAR**	**1.77**	**330**	*e*P	**Pn**	**04 14 20.3**	**+0.2**
ITAN				*e*S	**Sn**	**04 14 39.3**	**-2.3**
ITAN				IAML		04 14 52.5	
	comp=N,182μm,0.6s						
ITAN				IAML		04 15 01.0	
	comp=E,119μm,0.2s						
TEZP	**TEZPUR**	**1.99**	**301**	*e*P	**Pn**	**04 14 21.9**	**-1.2**
TEZP				*e*S	**Sn**	**04 14 43.8**	**-3.1**
LKP	**Lekhapani**	**2.00**	**30**	*e*P	**Pn**	**04 14 24.7**	**+1.4**
ZIRO	**ZIRO**	**2.06**	**338**	*e*P	**Pn**	**04 14 24.1**	**-0.2**
ZIRO				*e*S	**Sn**	**04 14 47.2**	**-1.7**
SHL	**Shillong**	**2.55**	**270**	⇑*i*PN	**Pn**	**04 14 29.5**	**-1.4**
SHL				*e*P	**Pn**	**04 14 29.8**	**-1.1**
SHL				*e*S	**Sn**	**04 14 57.7**	**-3.2**
GUWA	**GUWAHATI**	**2.78**	**283**	*e*P	**Pn**	**04 14 32.8**	**-1.0**
GUWA				*e*S	**Sn**	**04 15 03.3**	**-2.8**
GUWA				IAML		04 15 19.4	
	comp=E,19μm,0.2s						
SAIH	**SAIHA**	**3.47**	**207**	*e*P	**Pn**	**04 14 44.1**	**+0.6**
SAIH				*e*S	**Sn**	**04 15 23.3**	**-0.1**
SAIH				IAML		04 15 36.3	
	comp=E,9μm,0.0s						
AGT	**Agartala**	**3.58**	**242**	*e*P	**Pn**	**04 14 45.4**	**+0.6**
AGT				*e*S	**Sn**	**04 15 22.6**	**-3.2**
BELO	**BELONIA**	**3.78**	**232**	*e*P	**Pn**	**04 14 47.1**	**-0.5**
BELO				*e*S	**Sn**	**04 15 27.6**	**-3.2**
TURI	**Tura**	**3.95**	**270**	*e*P	**Pn**	**04 14 50.3**	**+0.4**
BRDH	**Bariadhala**	**4.04**	**224**	P	**Pn**	**04 14 53.1**	**+2.0**
	comp=E,82nm,0.3s,baz=46,slow=20,SNR=16						
BRDH				S	**Sn**	**04 15 34.2**	**-2.9**
	comp=E,425nm,0.3s,baz=59,slow=19,SNR=6.2						
BRDH				LR	LR	04 17 26.5	
	comp=E,17μm,20.7s,baz=42,slow=52						
DHUB	**DHUBRI**	**4.26**	**277**	*e*P	**Pn**	**04 14 52.7**	**-1.5**
DHUB				*e*S	**Sn**	**04 15 37.6**	**-5.1**
LSA	**Lhasa**	**5.16**	**323**	P	**Pn**	**04 15 08.0**	**+1.1**
LSA				S	**Sn**	**04 16 02.1**	**-3.2**
LSA				LR	LR		
	comp=E,7μm,7.0s						
LSA				LR	LR		
	comp=E,15μm,6.7s						
LSA				LR	LR		
	comp=E,18μm,8.3s						
LSA	**Lhasa**	**5.16**	**323**	*e*Pn	**Pn**	**04 15 07.8**	**+0.9**
	comp=E,1μm,0.4s						
LSA				*e*Sn	**Sn**	**04 16 05.7**	**+0.4**
LSA	**Lhasa**	**5.16**	**323**	P	**Pn**	**04 15 08.1**	**+1.2**
LSA	**Lhasa**	**5.16**	**323**	*e*P	**Pn**	**04 15 07.8**	**+0.9**
LSA				*e*		04 16 05.7	
LSA				pmax	pmax		
	comp=Z,1μm,0.4s						
GTK	**Tadong**	**5.73**	**289**	*e*P	**Pn**	**04 15 13.4**	**-1.1**
TAPN	**Taplejung**	**6.51**	**287**	*e*Pn	**Pn**	**04 15 23.9**	**-1.3**
ODAN	**Odare**	**6.69**	**282**	*e*Pn	**Pn**	**04 15 26.4**	**-1.3**
ODAN				*e*Sn	**Sn**	**04 16 38.7**	**-3.9**
	comp=Z,11μm,0.6s						
CMAI	**Chiengmai2**	**6.92**	**144**	P	**Pn**	**04 15 33.5**	**+2.7**
	comp=Z,39nm,0.7s,comp=Z,722nmcomp=Z,0.9nm						
KMI	**Kunming**	**7.28**	**92**	P	Pn	04 15 40.7	+4.9
KMI				S	**Sn**	**04 17 01.5**	**+4.3**
KMI				pmax	pmax		
	comp=Z,300nm,1.2s						
KMI				pmax	pmax		
	comp=Z,6μm,3.9s						
KMI				LR	LR		
	comp=Z,18μm,5.0s						
KMI				LR	LR		
	comp=Z,3μm,3.8s						
KMI				LR	LR		
	comp=Z,10μm,11.4s						
RAMN	**Ramite**	**7.40**	**282**	*e*Pn	**Pn**	**04 15 36.2**	**-1.2**
RAMN				*e*Sn	**Sn**	**04 16 55.2**	**-4.9**
	comp=Z,3μm,0.8s						
CHTO	**Chiang Mai**	**7.81**	**149**	*e*Pn	**Pn**	**04 15 45.0**	**+2.1**
CHTO				*e*Lg	Lg	04 17 39.7	
CHTO	**Chiang Mai**	**7.81**	**149**	P	**Pn**	**04 15 46.1**	**+3.2**
	SNR=33						
CHTO	**Chiang Mai**	**7.81**	**149**	*e*P	**Pn**	**04 15 45.0**	**+2.1**
CHTO	**Chiang Mai**	**7.81**	**149**	P	**Pn**	**04 15 45.4**	**+2.5**
	comp=Z,830nm,1.0s,comp=Z,10μmcomp=Z,18nm						
CMMT	**Chiang Mai**	**7.81**	**149**	P	**Pn**	**04 15 45.3**	**+2.4**
	comp=Z,191nm,0.9s,comp=Z,2μmcomp=Z,3.9nm						
JIRN	**Jiri**	**7.89**	**287**	*e*Pn	**Pn**	**04 15 42.5**	**-1.8**
CM31	**Chiang Mai Arr**	**8.12**	**150**	*e*Pn	**Pn**	**04 15 50.0**	**+2.8**
CMAR	**Chiang Mai Arr**	**8.12**	**150**	P	**Pn**	**04 15 49.5**	**+2.4**
	comp=Z,4.5nm,0.3s,baz=324,slow=13,SNR=86						
CMAR				LR	LR	04 19 28.7	
	comp=Z,9μm,18.6s,baz=332,slow=42						
CMAR				ScP	**ScP**	**04 25 45.2**	**-0.5**
	comp=Z,0.6nm,0.3s,baz=294,slow=2.1,SNR=6.7						
CM01	**Chiang Mai Arr**	**8.16**	**150**	*e*Pn	**Pn**	**04 15 48.7**	**+1.1**
GUN	**Gumba**	**8.22**	**288**	*e*Pn	**Pn**	**04 15 46.8**	**-1.9**
GUN				*e*Sn	**Sn**	**04 17 14.0**	**-6.3**
	comp=Z,8μm,0.8s						
BOK	**Bokaro**	**8.22**	**259**	*e*P	**Pn**	**04 15 47.1**	**-1.4**
BOK				*e*x	x	04 17 11.1	
PKIN	**Phulchoki**	**8.56**	**285**	*e*Pn	**Pn**	**04 15 52.2**	**-1.1**
KKN	**Kakani**	**8.71**	**287**	*e*Pn	**Pn**	**04 15 53.3**	**-2.0**
DMN	**Daman**	**8.82**	**285**	*e*Pn	**Pn**	**04 15 54.6**	**-2.3**
DMN				*e*Sn	**Sn**	**04 17 29.0**	**-6.0**
	comp=Z,5μm,1.0s						
GKN	**Gorkha**	**9.31**	**287**	*e*Pn	**Pn**	**04 16 01.1**	**-2.4**
GKN				*e*Sn	**Sn**	**04 17 38.7**	**-8.1**
	comp=Z,8μm,1.0s						
CD2	**Chengdu**	**9.57**	**54**	⇓*i*P	**Pn**	**04 16 08.0**	**+1.0**
CD2				S	**Sn**	**04 17 54.5**	**+1.4**
CD2				pmax	pmax		
	comp=Z,140nm,0.5s						
CD2				pmax	pmax		
	comp=Z,220nm,5.6s						
CD2				LR	LR		
	comp=Z,22μm,10.4s						
CD2				LR	LR		
	comp=Z,12μm,9.4s						
PHIT	**Phitsanulok**	**9.92**	**146**	P	**Pn**	**04 16 15.3**	**+3.6**
	comp=Z,254nm,0.8s,comp=Z,2μm						
UMPA	**Umpang Tak**	**10.12**	**157**	P	Pn	04 16 22.8	+8.3
DANN	**Dangsing**	**10.14**	**288**	*e*Pn	**Pn**	**04 16 11.3**	**-3.7**
KOLN	**Koldanda**	**10.16**	**285**	*e*Pn	**Pn**	**04 16 11.8**	**-3.4**
KOLN				*e*Sn	**Sn**	**04 18 00.6**	**-7.2**
	comp=Z,1μm,0.5s						
PBKT	**Sadao Pong**	**10.72**	**146**	P	**Pn**	**04 16 26.2**	**+3.6**
	comp=Z,159nm,0.9s,comp=Z,2μm						
PYUN	**Piuthan**	**10.75**	**286**	*e*Pn	**Pn**	**04 16 19.2**	**-4.1**
GYA	**Guiyang**	**10.79**	**83**	⇑*i*P	**Pn**	**04 16 25.5**	**+1.8**
GYA				PP		04 16 35.0	
GYA				sP		04 16 45.4	
GYA				S	**Sn**	**04 18 23.9**	**+0.9**
GYA				SS	**SnSn**	**04 18 40.0**	**+4.8**
GYA				pmax	pmax		
	comp=Z,90nm,1.0s						
GYA				pmax	pmax		
	comp=Z,1μm,8.4s						
GYA				LR	LR		
	comp=Z,7μm,12.1s						
GYA				LR	LR		
	comp=Z,3μm,9.8s						
GYA				LR	LR		
	comp=Z,4μm,10.2s						
NONG	**Nongkai**	**10.85**	**132**	P	Pn	04 16 29.7	+5.3
UTHA	**Uthaitani**	**10.93**	**155**	P	**Pn**	**04 16 28.4**	**+2.9**
	comp=Z,61nm,0.8s,comp=Z,511nm						
CHLP	**Challavanipeta**	**12.13**	**237**	*e*P	**Pn**	**04 16 40.3**	**-1.7**
CHLP				IAmb	IAmb	04 16 48.8	
	comp=Z,118nm,0.6s						
CHLP				*e*S	Sn	04 18 40.1	-16
LZH	**Lanzhou**	**13.06**	**35**	*e*P	**Pn**	**04 16 54.0**	**-0.7**
LZH				pP	P	04 17 04.2	+0.9
LZH				sP		04 17 11.3	
LZH				*e*S	**Sn**	**04 19 24.3**	**+5.8**
LZH				sS	S	04 19 39.5	-1.4
LZH				pmax	pmax		
	comp=Z,2μm,4.9s						
LZH				LR	LR		
	comp=Z,19μm,10.8s						
LZH				LR	LR		
	comp=Z,21μm,11.9s						
VIS	**Vishakhapatnam**	**13.16**	**236**	*i* P	**Pn**	**04 16 55.7**	**-0.3**
VIS				*i* S	Sn	04 19 06.4	-14
ENH	**Enshi**	**13.87**	**67**	*e*Pn	**Pn**	**04 17 02.2**	**-3.4**
	comp=Z,250nm,0.5s						
ENH				*e*P	**P**	**04 17 11.1**	**-1.1**
ENH				*e*S	**S**	**04 19 52.5**	**-4.7**
GTA	**Gaotai**	**14.42**	**16**	P	**Pn**	**04 17 09.9**	**-3.1**
GTA				pP	P	04 17 19.3	+0.9
GTA				sP		04 17 26.7	
GTA				S	**Sn**	**04 19 44.9**	**-6.6**
GTA				ScP	**ScP**	**04 25 53.6**	**-0.7**
GTA				ScS	**ScS**	**04 29 31.7**	**-0.2**
GTA				pmax	pmax		
	comp=Z,92nm,1.5s						
GTA				pmax	pmax		
	comp=Z,1μm,7.9s						
GTA				LR	LR		
	comp=Z,4μm,8.6s						
GTA				LR	LR		
	comp=Z,10μm,10.0s						
GTA				LR	LR		
	comp=Z,4μm,7.7s						

PVM	**Polavaram**	**14.74**	**238**	*e*P	**Pn**	**04 17 14.2**	**-2.9**
PVM				IAmb	IAmb	04 17 36.8	
	comp=Z,146nm,0.7s						
PVM				*e*S	Sn	04 19 34.4	-25
XAN	**Xi'an**	**14.92**	**52**	P	**Pn**	**04 17 14.9**	**-4.5**
XAN				pP	P	04 17 25.0	+1.2
XAN				PP	**PnPn**	**04 17 28.1**	**-0.1**
XAN				S	**S**	**04 20 11.7**	**-7.0**
XAN				pmax	pmax		
	comp=Z,82nm,0.7s						
XAN				pmax	pmax		
	comp=Z,520nm,3.6s						
XAN				LR	LR		
	comp=Z,10µm,10.6s						
XAN				LR	LR		
	comp=Z,4µm,9.8s						
XAN				LR	LR		
	comp=Z,4µm,17.3s						
NGP	**Nagpur**	**15.04**	**256⇓**	*e*P	**Pn**	**04 17 18.6**	**-2.4**
NGP				*e*x	x	04 19 54.5	
DDI	**Dehra Dun**	**15.44**	**291**	*e*P	**Pn**	**04 17 23.8**	**-2.4**
DDI				*e*x	x	04 20 03.3	
QIZ	**Qiongzhong**	**15.45**	**112**	P	**Pn**	**04 17 27.0**	**+0.7**
QIZ				S	**S**	**04 20 24.0**	**-5.7**
QIZ				pmax	pmax		
	comp=Z,1µm,6.1s						
QIZ				LR	LR		
	comp=Z,5µm,6.9s						
QIZ				LR	LR		
	comp=Z,4µm,7.1s						
QIZ				LR	LR		
	comp=Z,4µm,13.1s						
QIZ	**Qiongzhong**	**15.45**	**112**	*e*P	**P**	**04 17 29.2**	**-0.6**
	comp=Z,852nm,1.9s						
RPR	**Rampur**	**15.76**	**248**	*e*P	**Pn**	**04 17 28.2**	**-2.0**
RPR				IAmb	IAmb	04 17 48.1	
	comp=Z,558nm,1.3s						
RPR				*e*S	Sn	04 20 07.1	-17
NDI	**New Delhi**	**15.87**	**285**	*e*P	**Pn**	**04 17 31.0**	**-0.6**
SMLA	**Simla**	**16.38**	**294**	*e*x	**Pn**	**04 17 33.6**	**-4.5**
SMLA				*e*x	x	04 20 26.5	
SMLA				IAML		04 20 30.3	
	comp=E,335nm,0.7s						
SMLA				IAML		04 20 33.0	
	comp=N,222nm,0.0s						
SRSP	**Sriramsagar**	**16.53**	**250**	*i* P	**Pn**	**04 17 34.5**	**-5.4**
SRSP				*e*P	**Pn**	**04 17 34.5**	**-5.4**
SRSP				IAmb	IAmb	04 17 37.3	
	comp=Z,598nm,1.1s						
SRSP				*e*S	Sn	04 20 22.7	-20
ADKI	**Addanki**	**16.84**	**238**	*e*P	**Pn**	**04 17 43.5**	**-0.3**
ADKI				IAmb	IAmb	04 18 00.7	
	comp=Z,449nm,1.7s						
ADKI				*e*S	Sn	04 20 34.9	-15
NJS	**Nagarjunasagar**	**16.94**	**241**	*e*P	**Pn**	**04 17 42.6**	**-2.5**
NJS				IAmb	IAmb	04 18 01.6	
	comp=Z,313nm,1.2s						
NJS				*e*S	**Sn**	**04 20 48.6**	**-4.1**
HYB	**Hyderabad**	**17.08**	**245**	*i* P	**Pn**	**04 17 46.0**	**-0.9**
	comp=Z,400nm,1.0s						
HYB				*e*S	**S**	**04 21 04.0**	**+0.9**
HYB	**Hyderabad**	**17.08**	**245**	*e*P	**Pn**	**04 17 45.7**	**-1.1**
HYB				*e*x	x	04 20 41.1	
HYBB	**Hyderabad (bro**	**17.08**	**245**	*e*P	**Pn**	**04 17 45.5**	**-1.3**
HYBB				IAmb	IAmb	04 18 03.0	
	comp=Z,775nm,1.4s						
HYBB				*e*S	Sn	04 20 37.8	-18
GZH	**Guangzhou**	**17.17**	**94**	P	**P**	**04 17 50.6**	**+1.8**
GZH				S	**S**	**04 21 04.1**	**-0.6**
GZH				LR	LR		
	comp=Z,7µm,7.9s						
GZH				LR	LR		
	comp=Z,4µm,7.5s						
DHRM	**DHARAMSHALA**	**17.41**	**297**	*e*x	**Pn**	**04 17 46.5**	**-4.5**
DHRM				*e*x	x	04 20 50.1	
DHRM				IAML		04 20 53.4	
	comp=E,210nm,0.4s						
DHRM				IAML		04 20 54.2	
	comp=N,191nm,1.2s						
SRLM	**Srisailam**	**17.53**	**240**	*e*P	**Pn**	**04 17 49.4**	**-3.0**
SRLM				IAmb	IAmb	04 18 13.9	
	comp=Z,264nm,1.0s						
SRLM				*e*S	**Sn**	**04 21 01.3**	**-5.6**
MCO	**Taipa Grande**	**17.59**	**97**	P	**P**	**04 17 55.0**	**+1.6**
KRAB	**Krabi**	**17.81**	**165**	P	**P**	**04 17 57.7**	**+1.9**
	comp=Z,190nm,0.8s,comp=Z,2µm						
KRAB	**Krabi**	**17.81**	**165**	P	**P**	**04 17 57.7**	**+1.9**
PKDT	**Phuket**	**17.95**	**168**	P	**Pn**	**04 17 59.5**	**+2.0**
	comp=Z,67nm,1.1s,comp=Z,2µm						
PKDT	**Phuket**	**17.95**	**168**	P	**Pn**	**04 17 59.5**	**+2.0**
WHN	**Wuhan**	**18.02**	**70⇓**	*i*P	**P**	**04 17 56.0**	**-2.1**
WHN				pP	**pP**	**04 18 07.7**	**-2.7**
WHN				PP	**PnPn**	**04 18 12.7**	**+2.1**
WHN				sP	**sP**	**04 18 16.1**	**-1.4**
WHN				S	**Sn**	**04 21 16.4**	**-2.1**
WHN				sS	**sS**	**04 21 34.9**	**-6.8**
WHN				LR	LR		
	comp=Z,5µm,11.1s						
WHN				LR	LR		
	comp=Z,10µm,11.4s						
TRTT	**Trang**	**18.30**	**164**	P	**Pn**	**04 18 02.9**	**+1.2**
	comp=Z,71nm,0.9s,comp=Z,1µm						
TRTT	**Trang**	**18.30**	**164**	P	**Pn**	**04 18 02.9**	**+1.2**
KLRI	**Killari**	**18.39**	**250**	*e*P	**P**	**04 18 00.0**	**-2.3**
KLRI				IAmb	IAmb	04 18 18.4	
	comp=Z,587nm,1.2s						
KLRI				*e*S	Sn	04 21 06.2	-22
WMQ	**Urumqi**	**19.05**	**344**	P	**Pn**	**04 18 11.1**	**+0.4**
WMQ				S	**S**	**04 21 38.6**	**-4.1**
WMQ				sS	sS	04 21 55.5	-7.2
WMQ				pmax	pmax		
	comp=Z,140nm,2.3s						
WMQ				pmax	pmax		
	comp=Z,6µm,4.3s						
WMQ				LR	LR		
	comp=Z,10µm,23.9s						
WMQ				LR	LR		
	comp=Z,22µm,23.9s						
WMQ				LR	LR		
	comp=Z,2µm,18.5s						
TIY	**Taiyuan**	**19.29**	**47**	P	**P**	**04 18 11.5**	**-0.6**
TIY				S	S	04 21 34.8	-13
TIY				sS	**Sn**	**04 21 55.7**	**+6.5**
TIY				SS	**SnSn**	**04 22 09.4**	**+5.3**
TIY				pmax	pmax		
	comp=Z,130nm,0.6s						
TIY				pmax	pmax		
	comp=Z,510nm,4.1s						
TIY				LR	LR		
	comp=Z,2µm,8.3s						
TIY				LR	LR		
	comp=Z,3µm,9.9s						
TIY				LR	LR		
	comp=Z,2µm,11.9s						
URV	**Uravakonda**	**19.48**	**240**	*e*P	P	04 18 02.6	-12
URV				IAmb	IAmb	04 18 36.6	
	comp=Z,113nm,1.1s						
URV				*e*S	S	04 21 37.2	-14
BTO	**Baotou**	**19.66**	**37**	*e*P	**P**	**04 18 15.8**	**-0.4**
CHCP	**Chirah Chowk**	**20.27**	**298**	P	**P**	**04 18 22.3**	**-0.4**
NIL	**Nilore**	**20.28**	**298**	*e*P	**P**	**04 18 22.2**	**-0.6**
NIL				*e*S	S	04 21 54.8	-12
NIL	**Nilore**	**20.28**	**298**	*e*P	**P**	**04 18 22.2**	**-0.6**
NIL				*e*S	S	04 21 54.8	-12
SARP	**Sargodha**	**20.30**	**293**	P	**P**	**04 18 21.9**	**-1.1**
LHMI	**Lhok Sumawe**	**20.37**	**174**	P	Pn	04 18 29.2	+2.8
LHMI	**Lhok Sumawe**	**20.37**	**174**	*e*P	Pn	04 18 27.5	+1.1
	comp=Z,512nm,0.9s						
POO	**Poona**	**20.56**	**254**	*e*P	**P**	**04 18 26.9**	**+0.9**
POO				*e*x	x	04 21 60.0	
HHC	**Hu-ho-hao-te**	**20.68**	**39**	*e*P	**P**	**04 18 28.6**	**+1.4**
HHC				pP	pP	04 18 42.0	+2.3
HHC				PP	**PnPn**	**04 18 50.6**	**+3.4**
HHC				S	**S**	**04 22 13.2**	**-2.0**
HHC				sS	sS	04 22 35.2	-0.4
HHC				SS	**SnSn**	**04 22 44.6**	**+6.3**
HHC				pmax	pmax		
	comp=Z,97nm,1.1s						
HHC				pmax	pmax		
	comp=Z,510nm,4.6s						
HHC				LR	LR		
	comp=Z,3µm,12.2s						
HHC				LR	LR		
	comp=Z,3µm,12.3s						
HHC				LR	LR		
	comp=Z,2µm,14.7s						
KSH	**Kashi**	**20.96**	**316**	P	**P**	**04 18 31.1**	**+0.8**
KSH				sP	sP	04 18 52.2	+2.3
KSH				PP	**PnPn**	**04 18 56.9**	**+5.9**
KSH				S	**S**	**04 22 12.6**	**-8.2**
KSH				SS	**SnSn**	**04 22 49.9**	**+4.8**
KSH				pmax	pmax		
	comp=Z,570nm,1.3s						
KSH				pmax	pmax		
	comp=Z,960nm,3.1s						
KSH				LR	LR		
	comp=Z,6µm,16.7s						
KSH				LR	LR		
	comp=Z,2µm,11.8s						
KSH				LR	LR		
	comp=Z,6µm,14.1s						
KULM	**Kulim**	**20.98**	**163**	P	**P**	**04 18 32.0**	**+1.5**
THW	**Thamme Wali**	**21.26**	**295**	P	**P**	**04 18 32.5**	**-1.0**
MLSI	**Meulaboh, Aceh**	**21.28**	**175**	P	**P**	**04 18 32.8**	**-0.8**
	comp=Z,694nm,0.8s,comp=Z,6µm						
CEP	**Cherat**	**21.40**	**298**	P	**P**	**04 18 33.7**	**-1.3**
SHLS	**Shalkode**	**21.50**	**328⇓**	*i*P	**P**	**04 18 34.6**	**-1.4**
	comp=Z,104nm,1.6s						
SHLS				*i* sP	**sP**	**04 18 55.4**	**-0.3**
SHLS				LR	LR	04 28 55.0	
	comp=Z,483nm,10.2s						
PRZ	**Przheval'sk**	**21.53**	**326**	*e*P	**P**	**04 18 37.9**	**+1.6**
	comp=Z,1µm,1.6s						
PRZ	**Przheval'sk**	**21.53**	**326**	*e*P	**P**	**04 18 37.9**	**+1.6**
PRZ				pmax	pmax		
	comp=Z,1µm,1.6s						
QZH	**Quanzhou**	**21.61**	**87⇑**	*i*P	**P**	**04 18 35.4**	**-1.7**
QZH				sP	**sP**	**04 18 58.2**	**+1.4**
QZH				S	**S**	**04 22 29.1**	**-4.5**
QZH				pmax	pmax		
	comp=Z,87nm,0.9s						
QZH				LR	LR		
	comp=Z,6µm,13.3s						
QZH				LR	LR		
	comp=Z,2µm,11.4s						
QZH				LR	LR		
	comp=Z,4µm,9.0s						
PDGK	**Podgornoye**	**21.62**	**329**	P	**P**	**04 18 37.4**	**+0.1**
PDGK				pmax	pmax		
	comp=Z,323nm,1.0s						
UZB	**Uzynbulak**	**21.70**	**328**	*e*P	**P**	**04 18 38.6**	**+0.4**
	comp=Z,46nm,1.7s						
UZB				*i* sP	**sP**	**04 18 59.3**	**+1.4**
UZB				LR	LR	04 28 43.7	
	comp=Z,336nm,9.9s						
TIA	**Tai'an**	**21.90**	**56**	P	**P**	**04 18 39.6**	**-0.6**
TIA				S	**S**	**04 22 35.7**	**-3.4**
TIA				pmax	pmax		
	comp=Z,25nm,0.7s						
TIA				LR	LR		
	comp=Z,5µm,13.8s						
TIA				LR	LR		
	comp=Z,3µm,13.6s						
TIA				LR	LR		
	comp=Z,4µm,18.0s						
SATY	**Saty**	**21.94**	**327⇓**	*i*P	**P**	**04 18 41.3**	**+0.5**
	comp=Z,82nm,0.8s						
SATY				*i* sP	**sP**	**04 19 02.1**	**+1.7**
SATY				*i* S	**S**	**04 22 41.8**	**+1.9**
SATY				LR	LR	04 29 16.6	
	comp=Z,654nm,11.3s						
ZHN	**Zhinishke**	**22.01**	**327⇓**	*i*P	**P**	**04 18 41.8**	**+0.3**
	comp=Z,41nm,1.2s						
ZHN				*i* sP	**sP**	**04 19 02.6**	**+1.5**
ZHN				*i* S	**S**	**04 22 42.3**	**+1.1**
NJ2	**Nanjing**	**22.09**	**68**	*e*P	**P**	**04 18 39.6**	**-2.6**
NJ2				pP	**pP**	**04 18 53.6**	**-1.3**
NJ2				sP	**sP**	**04 18 59.2**	**-2.7**
NJ2				S	**S**	**04 22 38.3**	**-4.2**
NJ2				sS	**sS**	**04 23 04.9**	**+1.5**
NJ2				pmax	pmax		
	comp=Z,53nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,470nm,3.5s						
NJ2				LR	LR		
	comp=Z,12µm,15.7s						
NJ2				LR	LR		
	comp=Z,3µm,11.4s						
NJ2				LR	LR		
	comp=Z,2µm,16.3s						
KPKS	**Kokpek**	**22.11**	**328⇓**	*i*P	**P**	**04 18 42.8**	**+0.3**
	comp=Z,130nm,1.7s						
KPKS				*i* sP	**sP**	**04 19 03.5**	**+1.4**
KPKS				LR	LR	04 28 21.5	
	comp=Z,1µm,12.3s						
NRN	**Naryn**	**22.12**	**320**	*e*P	**P**	**04 18 44.6**	**+1.7**
	comp=Z,246nm,1.3s						
NRN	**Naryn**	**22.12**	**320**	*e*P	**P**	**04 18 44.6**	**+1.7**
NRN				pmax	pmax		
	comp=Z,246nm,1.3s						
KCSI	**Kotacane, Aceh**	**22.15**	**172**	P	**P**	**04 18 42.3**	**-0.7**
	comp=Z,240nm,0.9s,comp=Z,3µm						
ULHL	**Ulahol**	**22.51**	**322**	P	**P**	**04 18 49.3**	**+2.3**
	SNR=71						
PALK	**Pallekele**	**22.60**	**219**	P	**P**	**04 18 49.0**	**+1.1**
	comp=Z,74nm,0.9s,baz=116,slow=1.5,SNR=16						
PALK				S	**S**	**04 22 47.1**	**-4.7**
	comp=Z,22nm,0.7s,baz=296,slow=20,SNR=10						
PALK				LR	LR	04 28 46.7	
	comp=Z,2µm,21.1s,baz=101,slow=40						
PALK	**Pallekele**	**22.60**	**219**	*e*P	**P**	**04 18 49.0**	**+1.1**
	comp=Z,351nm,1.3s						
PALK				*e*S	**S**	**04 22 48.0**	**-3.8**
PALK	**Pallekele**	**22.60**	**219**	P	**P**	**04 18 49.6**	**+1.7**
	SNR=12						
PALK	**Pallekele**	**22.60**	**219**	*i* P	**P**	**04 18 48.5**	**+0.6**
	SNR=17						
MDOK	**Medeo**	**22.71**	**325⇑**	*i*P	**P**	**04 18 49.3**	**+0.4**
	comp=Z,724nm,1.1s						
MDOK				*i* sP	**sP**	**04 19 10.5**	**+1.8**
MDOK				*i* S	**S**	**04 22 54.1**	**+0.7**
MDOK				LR	LR	04 29 18.3	
	comp=Z,2µm,12.7s						
AAA	**Alma-Ata**	**22.81**	**325**	*e*P	**P**	**04 18 50.7**	**+0.8**
	comp=Z,81nm,0.9s						
AAA				LR	LR	04 29 25.3	
	comp=Z,1µm,14.3s						
AAA	**Alma-Ata**	**22.81**	**325**	*e*P	**P**	**04 18 50.2**	**+0.3**
AAA				*e*S	**S**	**04 22 54.6**	**-0.4**
AAA				pmax	pmax		
	comp=Z,1µm,3.9s						
AAA				smax	smax		
	comp=N,4µm,14.8s						
AAA				MLR	MLR		
	comp=Z,2µm,15.0s						
SFK	**Sufi-Kurgan**	**22.82**	**314**	P	**P**	**04 18 50.4**	**+0.2**
SFK				pmax	pmax		
	comp=Z,445nm,1.0s						
BHJ	**Bhuj**	**22.92**	**269**	*e*P	**P**	**04 18 51.4**	**+0.3**
KZA	**Kyzart**	**22.96**	**321**	P	**P**	**04 18 52.6**	**+0.7**
	SNR=25						
BJT	**Baijiatuau**	**22.99**	**46**	*e*P	**P**	**04 18 51.2**	**-0.5**
	comp=Z,93nm,0.7s						
BJT				*e*ScP	**ScP**	**04 26 11.1**	**-1.8**
BJT	**Baijiatuau**	**22.99**	**46**	*e*P	**P**	**04 18 51.2**	**-0.5**
BJT				pmax	pmax		
	comp=Z,93nm,0.7s						
BJI	**Beijing**	**23.00**	**46⇑**	*i*P	**P**	**04 18 51.8**	**0.0**
BJI				sP	**sP**	**04 19 09.8**	**-1.8**
BJI				S	**S**	**04 22 59.9**	**+1.9**
BJI				pmax	pmax		
	comp=Z,88nm,0.7s						
PSI	**Prapat**	**23.03**	**169**	*e*P	**P**	**04 18 52.3**	**-0.1**
	comp=Z,344nm,0.9s						
PSI				*e*S	**S**	**04 22 58.9**	**-0.2**
PSI	**Prapat**	**23.03**	**169**	*e*P	**P**	**04 18 52.3**	**-0.1**
PSI				*e*S	**S**	**04 22 58.9**	**-0.2**
PSI				pmax	pmax		
	comp=Z,344nm,0.9s						
SNSI	**Sinabang, Aceh**	**23.11**	**176**	P	**P**	**04 18 53.6**	**+0.5**
	comp=Z,232nm,0.8s						
TKM2	**Tokmak 2**	**23.32**	**323**	P	**P**	**04 18 55.6**	**+0.4**
	SNR=93						
TKM2	**Tokmak 2**	**23.32**	**323**	P	**P**	**04 18 55.5**	**+0.4**
TKM2				pmax	pmax		
	comp=Z,268nm,1.2s						
MK01	**Makanchi Array**	**23.32**	**338**	*e*P	**P**	**04 18 54.0**	**-0.9**
MK31	**Makanchi Array**	**23.34**	**338**	*e*P	**P**	**04 18 55.0**	**-0.2**
MK31	**Makanchi Array**	**23.34**	**338**	*e*P	**P**	**04 18 55.0**	**-0.2**
MKAR	**Makanchi Array**	**23.34**	**338**	P	**P**	**04 18 54.8**	**-0.4**
	comp=Z,103nm,0.6s,baz=146,slow=12,SNR=144						
MKAR				S	**S**	**04 23 03.8**	**+0.2**
	comp=Z,11nm,0.9s,baz=156,slow=7.6,SNR=4.4						
MKAR				ScP	**ScP**	**04 26 14.8**	**+1.1**
	comp=Z,5.3nm,0.7s,baz=151,slow=2.3,SNR=10						
MAKZ	**Makanchi**	**23.46**	**338**	*e*P	**P**	**04 18 56.0**	**-0.2**
	comp=Z,239nm,0.9s						
MAKZ	**Makanchi**	**23.46**	**338**	*e*P	**P**	**04 18 56.0**	**-0.2**
MAKZ				pmax	pmax		
	comp=Z,239nm,0.9s						
UCH	**Uchtor**	**23.48**	**320**	P	**P**	**04 18 57.7**	**+0.7**
	SNR=29						
KBK	**Karagaybulak**	**23.50**	**321**	P	**P**	**04 18 58.6**	**+1.7**
	SNR=32						
TPUB	**Ta-pu**	**23.70**	**90**	*e*P	**P**	**04 18 58.4**	**-0.2**
	comp=Z,101nm,1.0s						
AAK	**Ala-Archa**	**23.75**	**321**	P	**P**	**04 19 00.9**	**+1.8**
	SNR=32						
AAK	**Ala-Archa**	**23.75**	**321**	P	**P**	**04 19 00.0**	**+0.9**
AAK				pmax	pmax		
	comp=Z,265nm,1.4s						
FRU	**Bishkek**	**23.80**	**321**	*i* P	**P**	**04 19 00.0**	**+0.5**
FRU				*i*		04 19 18.0	
FRU				*e*S	**S**	**04 23 12.0**	**+0.9**
FRU				*i*		04 24 22.0	
FRU				pmax	pmax		
	comp=Z,270nm,2.0s						
CHMS	**Chumysh**	**23.84**	**322**	P	**P**	**04 19 01.6**	**+1.9**
	SNR=24						
KBL	**Kabul**	**23.88**	**298**	*e*P	**P**	**04 18 59.5**	**-0.9**
	comp=Z,2µm,1.6s						
KBL				*e*S	**S**	**04 23 15.2**	**+2.4**
KBL	**Kabul**	**23.88**	**298**	*e*P	**P**	**04 18 59.5**	**-0.9**
KBL				*e*S	**S**	**04 23 15.2**	**+2.4**
KBL				pmax	pmax		
	comp=Z,2µm,1.6s						
AML	**Almayashu**	**23.90**	**319**	P	**P**	**04 19 03.1**	**+2.3**
	SNR=20						
SSLB	**Suanglung**	**23.91**	**89**	*e*P	**P**	**04 19 01.4**	**+0.8**
	comp=Z,80nm,1.1s						
SSE	**Sheshan**	**23.91**	**71**	P	**P**	**04 18 59.4**	**-1.1**
SSE				S	**S**	**04 23 08.6**	**-4.4**
SSE				pmax	pmax		
	comp=Z,20nm,0.6s						
SSE				pmax	pmax		
	comp=Z,140nm,4.0s						
SSE				LR	LR		
	comp=Z,3µm,16.7s						
SSE				LR	LR		
	comp=Z,1µm,12.8s						
USP	**Ospenovka**	**24.15**	**322**	P	**P**	**04 19 05.6**	**+3.0**
	SNR=6.2						
YHNB	**Yeheng**	**24.15**	**86**	*e*P	**P**	**04 19 04.3**	**+1.4**
	comp=Z,80nm,0.8s						
EKS2	**Erkin-Say**	**24.18**	**320**	P	**P**	**04 19 06.5**	**+3.6**
	SNR=6.8						
TWG	**Pinlang**	**24.19**	**91**	*e*P	**P**	**04 19 04.0**	**+0.9**
	comp=Z,749nm,1.3s						
TATO	**Taipei**	**24.21**	**86**	*e*P	**P**	**04 19 04.0**	**+0.7**
	comp=Z,113nm,1.1s						
YULB	**Yu-li**	**24.29**	**90**	*e*P	**P**	**04 19 04.1**	**+0.1**
	comp=Z,173nm,1.3s						
GSI	**Gunungsitoli**	**24.32**	**173**	P	**P**	**04 19 04.0**	**-0.2**
	comp=Z,489nm,0.8s,comp=Z,6µm						
GSI	**Gunungsitoli**	**24.32**	**173**	*e*P	**P**	**04 19 02.7**	**-1.5**
	comp=Z,490nm,1.0s						
NACB	**Ninganchiao**	**24.42**	**88**	*e*P	**P**	**04 19 04.9**	**-0.3**
	comp=Z,220nm,1.2s						
DGZ	**Jazzator, Alta**	**24.71**	**349**	*i* P	**P**	**04 19 09.2**	**+1.4**
DGZ				pmax	pmax		
	comp=Z,42nm,1.0s						
MNAS	**Manas**	**24.83**	**318**	P	**P**	**04 19 10.4**	**+1.5**
MNAS				pmax	pmax		
	comp=Z,207nm,0.9s						
MNSI	**Mandailing Nat**	**25.11**	**168**	P	**P**	**04 19 10.2**	**-1.2**
BOLP	**Bolinao**	**25.22**	**106**	*e*P	**P**	**04 19 14.5**	**+2.0**
ABRA	**Dolores**	**25.41**	**103**	*e*P	**P**	**04 19 15.4**	**+1.2**
HVS	**Khovu-Aksy**	**25.51**	**359***c*	*i*P	**P**	**04 19 16.3**	**+1.4**
HVS				pmax	pmax		
	comp=Z,403nm,0.9s						
BTLS	**Baital**	**25.57**	**325**	*i* P	**P**	**04 19 16.2**	**+0.8**
	comp=Z,32nm,1.5s						
BTLS				*i* sP	**sP**	**04 19 38.3**	**+2.2**
BTLS				LR	LR	04 30 37.9	
	comp=Z,322nm,11.4s						
ZAK	**Zakamensk**	**25.61**	**13**	*e*P	**P**	**04 19 16.3**	**+0.4**
ZAK				*e*		04 30 07.7	
ZAK				pmax	pmax		
	comp=Z,151nm,1.4s						
PBSI	**Pulau Batu**	**25.74**	**172**	P	**P**	**04 19 19.1**	**+1.9**
	comp=Z,466nm,1.0s,comp=Z,4µm						
APYP	**Conner**	**25.79**	**102**	*e*P	**P**	**04 19 18.8**	**+1.1**
BKNI	**Bangkinang**	**25.86**	**165**	P	**P**	**04 19 19.6**	**+1.3**
	comp=Z,349nm,0.8s,comp=Z,4µm						
BKNI	**Bangkinang**	**25.86**	**165**	*e*P	**P**	**04 19 19.6**	**+1.3**
	comp=Z,325nm,1.1s						
IUG	**Iuzhnay**	**26.17**	**315**	*e*P	**P**	**04 19 22.2**	**+1.2**
	comp=Z,38nm,0.9s						
IUG				*i* pP	**pP**	**04 19 36.9**	**+1.9**
IUG				LR	LR	04 30 42.0	
	comp=Z,200nm,9.9s						
DL2	**Dalian**	**26.24**	**53⇑**	*i*P	**P**	**04 19 20.9**	**-0.6**
DL2				sP	**sP**	**04 19 39.4**	**-2.8**
DL2				S	**S**	**04 23 48.1**	**-1.8**
DL2				sS	**sS**	**04 24 07.1**	**-6.7**
DL2				pmax	pmax		
	comp=Z,190nm,0.6s						
DL2				pmax	pmax		
	comp=Z,360nm,3.9s						
DL2				LR	LR		
	comp=Z,2µm,18.1s						
DL2				LR	LR		
	comp=Z,2µm,17.4s						
DL2				LR	LR		
	comp=Z,2µm,13.1s						
KK31	**Karatay Array**	**26.38**	**318**	*e*P	**P**	**04 19 23.1**	**+0.3**
KK31	**Karatay Array**	**26.38**	**318**	P	**P**	**04 19 23.1**	**+0.3**
KK31				pmax	pmax		
	comp=Z,9.0nm,0.4s						
KKAR	**Karatay Array**	**26.38**	**318**	*e*P	**P**	**04 19 23.1**	**+0.3**
KKAR	**Karatay Array**	**26.38**	**318**	*e*P	**P**	**04 19 23.1**	**+0.3**
MOY	**Mondy**	**26.47**	**9**	*e*P	**P**	**04 19 26.4**	**+2.8**
MOY				pmax	pmax		
	comp=Z,148nm,1.9s						
CHM	**Chimkent**	**26.53**	**315**	*e*P	**P**	**04 19 25.4**	**+1.3**
	comp=Z,46nm,1.8s						
TLY	**Talaya**	**26.92**	**12**	P	**P**	**04 19 28.7**	**+1.1**
	comp=Z,3.8nm,0.5s,baz=208,slow=8.3,SNR=18						
TLY	**Talaya**	**26.92**	**12**	*e*P	**P**	**04 19 29.9**	**+2.3**
	comp=Z,94nm,1.6s						
TLY	**Talaya**	**26.92**	**12**	P	**P**	**04 19 31.2**	**+3.6**
	SNR=30						
TLY	**Talaya**	**26.92**	**12***d*	*i*P	**P**	**04 19 28.9**	**+1.3**
TLY				*e*		04 19 51.5	
TLY				*e*		04 20 08.3	
TLY				*e*S	**S**	**04 24 05.0**	**+4.6**
TLY				pmax	pmax		
	comp=Z,54nm,1.7s						
TLY				MLR	MLR		
	comp=Z,954nm,11.0s						
PDSI	**Padang**	**26.94**	**167**	P	**P**	**04 19 26.0**	**-2.0**
SISI	**Saibi**	**27.10**	**170**	P	**P**	**04 19 32.0**	**+2.5**
	comp=Z,230nm,0.9s,comp=Z,2µm						
TGY	**Tagaytay City**	**27.14**	**110**	LR	LR	04 30 56.8	
	comp=Z,1µm,19.0s,baz=276,slow=38						
IRK	**Irkutsk**	**27.58**	**13**	*e*P	**P**	**04 19 36.2**	**+2.8**
IRK				pmax	pmax		
	comp=Z,203nm,1.5s						
BUSP	**Coron**	**27.60**	**115**	*e*P	**P**	**04 19 33.6**	**-0.4**
KURBB	**Kurchatov Arra**	**27.91**	**338**	P	**P**	**04 19 36.6**	**+0.3**
	comp=Z,34nm,0.7s,baz=146,slow=9.8,SNR=137						
KURBB				PcP	**PcP**	**04 22 51.7**	**+1.0**
	comp=Z,3.4nm,0.5s,baz=142,slow=2.4,SNR=3.5						
KURBB				ScP	**ScP**	**04 26 27.0**	**+0.2**
	comp=Z,4.8nm,0.6s,baz=151,slow=2.7,SNR=9.3						
KURBB				P3KPbc		04 51 59.1	
	comp=Z,1.4nm,0.9s,baz=323,slow=4.6,SNR=12						
KURK	**Kurchatov**	**27.96**	**338**	*e*P	**P**	**04 19 37.1**	**+0.3**
	comp=Z,102nm,0.9s						
KURK				PcP	**PcP**	**04 22 51.7**	**+0.9**
KURK				*e*ScP	**ScP**	**04 26 26.6**	**-0.3**
KURK				*e*		04 51 59.1	
KURK	**Kurchatov**	**27.96**	**338**	P	**P**	**04 19 37.5**	**+0.7**
	SNR=26						
KURK	**Kurchatov**	**27.96**	**338***c*	*e*P	**P**	**04 19 37.1**	**+0.3**
KURK				pmax	pmax		

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          comp=Z,40nm,0.6s
SJMP  San Jose          28.11 113 eP     P       04 19 38.5  -0.1
KDM   Kudat             28.14 128  P     P       04 19 40.0 +1.3
KKM   Kota Kinabalu     28.31 130  P     P       04 19 44.0 +3.6
KSM   Kuching           28.31 145  P     P       04 19 41.0 +0.7
SBUM  Sibu              28.53 141  P     P       04 19 44.0 +1.7
OTUK  Ortayu            28.62 328  P     P       04 19 42.8   0.0
OTUK                               pmax  pmax
          comp=Z,16nm,0.4s
PPSI  Pulau Pagai       28.66 169  P     P       04 19 44.6 +1.2
          comp=Z,880nm,0.8s,comp=Z,7µm
SNY   Shenyang          28.78  49 ⇑P     P       04 19 43.6  -0.6
SNY                                sP    sP      04 20 04.9  -0.1
SNY                                S     S       04 24 27.2  -2.6
SNY                                pmax  pmax
          comp=Z,340nm,1.4s
SNY                                LR    LR
          comp=Z,2µm,13.1s
SNY                                LR    LR
          comp=Z,2µm,17.6s
SNY                                LR    LR
          comp=Z,3µm,13.8s
OTRP  Odiongan          28.92 112 eP     P       04 19 45.4  -0.3
ZAA0  Zalesovo Array    29.26 348 eP     P       04 19 49.1 +0.8
          comp=Z,127nm,1.5s
ZALV  Zalesovo Beam     29.26 348  P     P       04 19 49.1 +0.8
          comp=Z,18nm,0.5s,baz=165,slow=7.4,SNR=59
ZALV                               PcP   PcP     04 22 56.0 +2.0
          comp=Z,2.0nm,0.4s,baz=164,slow=5.7,SNR=2.6
ZALV                               ScP   ScP     04 26 30.0  -0.9
          comp=Z,2.0nm,0.5s,baz=180,slow=3.6,SNR=5.3
ZALV                               LR    LR      04 32 34.2
          comp=Z,1µm,20.0s,baz=183,slow=38
ZALV  Zalesovo Beam     29.26 348 eP     P       04 19 48.4 +0.1
ZALV                               PcP   PcP     04 22 56.0 +2.0
ZALV                               ScP   ScP     04 26 30.0  -0.9
ZALV  Zalesovo Beam     29.26 348  P     P       04 19 49.1 +0.8
ZALV                                             04 22 56.0
ZALV                                             04 26 30.0
ZALV                               pmax  pmax
          comp=Z,19nm,0.5s
ZALV                               MLR   MLR
          comp=Z,1µm,20.0s
BRZS  Berezniki         29.71 331 eP     P       04 19 53.7 +1.3
          comp=Z,18nm,1.0s
BRZS                              eS     S       04 24 46.0 +1.7
BRZS                               LR    LR      04 32 59.2
          comp=Z,610nm,11.7s
TJN   Taejon            29.86  61 i P    P       04 19 51.3  -2.5
JOW   Kunigami          30.09  80  P     P       04 19 53.8  -2.2
          comp=Z,28nm,0.4s,baz=204,slow=5.5,SNR=14
JOW                                LR    LR      04 32 53.3
          comp=Z,1µm,19.1s,baz=317,slow=38
JOW   Kunigami          30.09  80 eP     P       04 19 54.2  -1.9
          comp=Z,34nm,0.8s
STKI  Sintang           30.11 145  P     P       04 19 58.2 +1.9
          comp=Z,109nm,1.0s
NVS   Novosibirsk       30.41 347⇑iP     P       04 19 59.5 +1.0
NVS                               i *PP  pP      04 20 14.9 +2.3
NVS                               i              04 20 23.5
NVS                               i S    S       04 24 56.1 +1.0
NVS                               e              04 27 06.9
NVS                                pmax  pmax
          comp=Z,144nm,1.7s
NVS                                pmax  pmax
          comp=N,86nm,1.6s
NVS                                pmax  pmax
          comp=E,78nm,1.6s
NVS                                smax  smax
          comp=N,144nm,2.5s
NVS                                smax  smax
          comp=E,192nm,2.5s
KRAR  Krasnoyarsk       30.41 358 i P    P       04 20 00.6 +2.1
KS15  Wonju Array Si    30.49  59 eP     P       04 19 57.7  -1.8
KSAR  Wonju Array Be    30.49  59  P     P       04 19 57.3  -2.2
KSAR                               PcP   PcP     04 22 57.5   0.0
KSAR                               ScP   ScP     04 26 32.6  -2.6
KSAR  Wonju Array Be    30.49  59  P     P       04 19 57.3  -2.2
KSAR                                             04 22 57.6
KSAR                                             04 26 32.7
KS01  Wonju Array Si    30.51  59 eP     P       04 19 58.2  -1.4
KSRS  Korea Array       30.53  59  P     P       04 19 57.3  -2.4
          comp=E,4.9nm,0.4s,baz=252,slow=8.7,SNR=40
KSRS                               PcP   PcP     04 22 57.5   0.0
          comp=E,2.0nm,0.6s,baz=267,slow=2.2,SNR=5.1
KSRS                               ScP   ScP     04 26 32.6  -2.7
          comp=E,2.6nm,0.6s,baz=270,slow=4.8,SNR=10
KSRS                               LR    LR      04 33 29.0
          comp=E,1µm,20.2s,baz=260,slow=39
HIA   Hailar            30.61  33 eP     P       04 20 02.4 +2.0
          comp=E,46nm,0.7s
HIA   Hailar            30.61  33 eP     P       04 20 02.4 +2.0
HIA                                pmax  pmax
          comp=Z,46nm,0.7s
CN2   Changchun         30.87  46 eP     P       04 20 01.8  -0.9
CN2                               ePP    PnPn    04 21 04.3  -0.7
CN2                               eS     S       04 24 59.0  -3.6
CN2                               eSS    SnSn    04 26 45.5  -1.1
CN2                                pmax  pmax
          comp=Z,60nm,0.6s
CN2                                pmax  pmax
          comp=Z,200nm,4.0s
CN2                                LR    LR
          comp=Z,3µm,14.0s
CN2                                LR    LR
          comp=Z,1µm,14.0s
CN2                                LR    LR
          comp=Z,2µm,16.0s
MDSI  Maura Dua         31.29 162  P     P       04 20 05.7  -0.9
LWLI  Liwa              31.76 162  P     P       04 20 10.4  -0.5
          comp=Z,143nm,0.8s,comp=Z,6µm
JNU   Nakatsue          32.29  68  P     P       04 20 13.4  -2.0
          comp=Z,15nm,0.6s,baz=346,slow=5.4,SNR=7.1
JNU                                LR    LR      04 33 27.9
          comp=Z,1µm,20.4s,baz=299,slow=36
MSLP  Maasin            32.45 113 eP     P       04 20 17.7 +0.8
PAGZ  Pagadian          32.52 118 eP     P       04 20 18.2 +0.6
PBKI  Pangkalan Bun     32.59 147  P     P       04 20 21.7 +3.6
          comp=Z,175nm,0.9s
MTKI  Muara Teweh, K    32.83 140  P     P       04 20 21.9 +1.8
          comp=Z,99nm,0.7s
WSAR  Wadi Sarin        32.87 274  P     P       04 20 20.4  -0.1
          comp=Z,17nm,0.6s,baz=93,slow=12,SNR=14
WSAR                               LR    LR      04 35 59.0
          comp=Z,947nm,18.9s,baz=88,slow=40
BVA0  Borovoye Array    32.91 333  P     P       04 20 20.2  -0.3
BVA0                               pmax  pmax
          comp=Z,40nm,1.4s
BVAR  Borovoye Array    32.91 333  P     P       04 20 21.2 +0.7
          comp=Z,6.3nm,0.4s,baz=138,slow=9.5,SNR=40
BVAR                               ScP   ScP     04 26 42.8  -0.3
          comp=Z,6.0nm,0.6s,baz=159,slow=3.3,SNR=10
BVAR                               LR    LR      04 35 15.9
          comp=Z,2µm,20.3s,baz=135,slow=39
BRVK  Borovoye          32.98 333 eP     P       04 20 21.5 +0.4
          comp=Z,30nm,0.8s
BRVK                              eScP   ScP     04 26 42.1  -1.3
BRVK  Borovoye          32.98 333  P     P       04 20 21.8 +0.7
          SNR=15
BRVK  Borovoye          32.98 333ceP     P       04 20 21.5 +0.4
BRVK                               pmax  pmax
          comp=Z,20nm,1.0s
GEYT  Alibeck           33.24 301  P     P       04 20 24.7 +1.0
          comp=Z,38nm,1.1s,baz=97,slow=11,SNR=50
GYA0B ALIBECK ARRAY     33.24 301 eP     P       04 20 25.5 +1.8
          comp=Z,161nm,1.4s
BIDO  Bidbid            33.27 274  P     P       04 20 25.0 +1.0
          SNR=7.8
SMDO  Samad             33.43 274  P     P       04 20 27.0 +1.5
          SNR=6.7
MDJ   Mudanjiang        33.92  47  P     P       04 20 26.6  -2.8
MDJ                                pP    pP      04 20 42.0  -1.7
MDJ                                sP    sP      04 20 50.0  -0.3
MDJ                                PP    PnPn    04 21 42.6  -1.2
MDJ                                S     S       04 25 50.6 +0.5
MDJ                                sS    sS      04 26 17.1 +2.8
MDJ                                pmax  pmax
          comp=Z,42nm,1.4s
MDJ                                pmax  pmax
          comp=Z,200nm,4.3s
MDJ                                LR    LR
          comp=Z,3µm,12.7s
MDJ                                LR    LR
          comp=Z,2µm,11.9s
MDJ                                LR    LR
          comp=Z,2µm,15.1s
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MDJ   Mudanjiang        33.92  47 eP     P       04 20 28.5  -0.9
          comp=Z,38nm,1.0s
DBJI  Dramaga           34.04 158  P     P       04 20 31.8 +1.1
          comp=Z,78nm,0.8s
MSHR  Mys Shultsa       34.29  51ceP     P       04 20 32.7   0.0
BANOM Banah             34.51 279  P     P       04 20 35.7 +0.9
SOHO  SOHO              34.59 276 i P    P       04 20 36.7 +1.3
          SNR=7.5
MDH   Madha             34.60 278  P     P       04 20 35.1  -0.4
SHME  Shamm             34.63 279  P     P       04 20 36.2 +0.4
MSFE  Esma-Masafi       34.72 278  P     P       04 20 37.8 +1.2
UOSS  Minazif           34.74 277 eP     P       04 20 36.5  -0.3
          comp=Z,28nm,0.9s
UOSS  Minazif           34.74 277  P     P       04 20 36.4  -0.3
DAV   Davao City (W)    34.74 117  P     P       04 20 36.7  -0.1
          comp=Z,168nm,0.4s,baz=124,slow=5.5,SNR=6.1
DAV                                LR    LR      04 35 56.2
          comp=Z,1µm,18.5s,baz=293,slow=38
DAV   Davao City (W)    34.74 117⇑iP     P       04 20 36.9 +0.1
HATD  Hatta, Dubai      34.83 277  P     P       04 20 39.1 +1.6
          SNR=6.2
HATD  Hatta, Dubai      34.83 277 i P    P       04 20 37.6   0.0
          SNR=16
MPSI  Mapaga            34.96 132  P     P       04 20 42.8 +4.1
BOD   Bodaibo           35.01  18 eP     P       04 20 39.4 +0.8
BOD                               e              04 30 51.0
BOD                                pmax  pmax
          comp=Z,83nm,1.8s
NAZ   Nazwa, Dubai      35.22 278  P     P       04 20 41.5 +0.6
ALNE  Al Ain            35.30 276 i P    P       04 20 42.4 +0.7
          SNR=10
USRK  Ussuriysk Ar.     35.38  49  P     P       04 20 41.7  -0.4
          comp=Z,70nm,0.7s,baz=256,slow=7.9
USRK                               ScP   ScP     04 26 48.7  -3.4
          baz=280,slow=1.0
USRK                               LR    LR      04 37 36.9
          comp=Z,424nm,18.8s,baz=241,slow=40
KPJI  Karang Pucung     35.54 155  P     P       04 20 45.3 +1.7
          comp=Z,201nm,1.1s
ASUD  Al Ashush, Dub    35.58 277 i P    P       04 20 44.7 +0.7
          SNR=8.4
AB31  Akbulak array     35.84 320 eP     P       04 20 46.2 +0.3
AB31                               pmax  pmax
          comp=Z,9.0nm,0.4s
ABKAR Akbulak array     35.84 320 eP     P       04 20 46.3 +0.4
SMRI  Semarang          35.88 153  P     P       04 20 49.5 +2.9
          comp=Z,391nm,0.7s
MRSI  Marisa            36.26 129  P     P       04 20 51.6 +1.8
          comp=Z,34nm,0.8s,comp=Z,750nm
TBJI  Tambak Boyo       36.28 150  P     P       04 20 53.4 +3.4
          comp=Z,363nm,0.9s,comp=Z,3µm
NGJI  Ngawi             36.60 151  P     P       04 20 57.0 +4.3
GRJI  Gresik            36.65 149  P     P       04 20 56.3 +3.2
          comp=Z,138nm,0.8s
APSI  Ampana            37.06 131  P     P       04 21 00.8 +4.2
ZEA   Zeya              37.07  32 eP     P       04 20 57.3 +1.0
ZEA                               e              04 21 20.0
ZEA                               e              04 22 18.0
ZEA                               ePPP   PPP     04 22 48.0
ZEA                               eS     S       04 26 38.0  -0.2
ZEA                               eSSS   SSS     04 29 18.0
ZEA                                pmax  pmax
          comp=N,30nm,1.0s
ZEA                                pmax  pmax
          comp=Z,32nm,1.0s
ZEA                                pmax  pmax
          comp=Z,500nm,9.0s
ZEA                                pmax  pmax
          comp=N,200nm,8.0s
ZEA                                smax  smax
          comp=E,500nm,5.0s
ZEA                                smax  smax
          comp=N,300nm,8.0s
ZEA                                MLR   MLR
          comp=N,2µm,14.0s
ZEA                                MLR   MLR
          comp=Z,2µm,14.0s
ZEA                                MLR   MLR
          comp=E,1µm,15.0s
KLR   Kul'dur           37.16  41  P     P       04 20 57.3 +0.2
          comp=E,1.9nm,0.5s,baz=256,slow=8.9,SNR=34
KLR   Kul'dur           37.16  41c iP    P       04 20 57.5 +0.4
TTSI  Tana Toraja       37.46 136  P     P       04 21 01.5 +1.5
          comp=E,82nm,0.8s,comp=E,1µm
AKTO  Aktyubinsk        37.49 321  P     P       04 21 00.7 +0.7
          comp=E,10.0nm,0.3s,baz=102,slow=5.8,SNR=33
AKTO                               pP    pP      04 21 15.2 +0.9
          comp=E,55nm,0.8s,baz=120,slow=8.5,SNR=24
AKTO                               LR    LR      04 37 21.2
          comp=E,1µm,21.8s,baz=121,slow=38
INU   Inuyama           37.50  65 eP     P       04 20 59.5  -0.7
          comp=E,179nm,1.9s
KMSI  Cibinong          37.64 127  P     P       04 21 05.5 +3.9
BLJI  Banyuglugur       37.90 149  P     P       04 21 05.3 +1.6
          comp=E,239nm,0.6s,comp=E,3µm
LUWI  Luwuk             37.92 130  P     P       04 21 06.6 +2.7
          comp=E,151nm,1.0s
LUWI  Luwuk             37.92 130 eP     P       04 21 04.9 +0.9
          comp=E,185nm,1.0s
CLNS  Chul'man          38.00  27 eP     P       04 21 05.5 +1.3
CLNS                              e*PP   sP      04 21 22.6  -2.6
CLNS                              e              04 22 34.5
CLNS                              e              04 23 16.8
CLNS                              eS     S       04 26 55.1 +2.8
CLNS                              eSSS   SSS     04 31 05.9
CLNS                               pmax  pmax
          comp=Z,35nm,1.0s
CLNS                               pmax  pmax
          comp=N,19nm,1.0s
CLNS                               pmax  pmax
          comp=E,25nm,1.2s
CLNS                               pmax  pmax
          comp=Z,23nm,1.2s
CLNS                               pmax  pmax
          comp=N,26nm,1.0s
CLNS                               pmax  pmax
          comp=E,28nm,1.2s
CLNS                               smax  smax
          comp=N,174nm,11.3s
CLNS                               smax  smax
          comp=E,456nm,13.4s
CLNS                               MLR   MLR
          comp=N,770nm,11.0s
CLNS                               MLR   MLR
          comp=Z,1µm,12.0s
CLNS                               MLR   MLR
          comp=E,968nm,13.0s
SPSI  Sidrap Palu       38.14 137  P     P       04 21 07.1 +1.3
          comp=E,40nm,0.8s,comp=E,671nm
GMJI  Gumukmas          38.29 149  P     P       04 21 09.5 +2.5
          comp=E,121nm,0.9s
MJB9  Matsu-Tunnel      38.53  63 eP     P       04 21 07.6  -1.4
          comp=E,33nm,0.9s
MAJO  Matsushiro        38.53  63 eP     P       04 21 07.3  -1.7
          comp=E,32nm,0.9s
MAJO  Matsushiro        38.53  63 i P    P       04 21 07.4  -1.6
MAJO                               pmax  pmax
          comp=Z,16nm,1.1s
MAT   Matsushiro        38.53  63  P     P       04 21 06.8  -2.2
MAT                               eS     S       04 27 01.2 +0.4
MJAR  Matsushiro Arr    38.54  63  P     P       04 21 07.2  -1.7
          comp=Z,7.8nm,0.7s,baz=271,slow=9.3,SNR=26
MJAR                               pP    pP      04 21 23.1  -0.3
          comp=Z,6.2nm,0.5s,baz=269,slow=10,SNR=5.7
MJAR                               PcP   PcP     04 23 20.6  -0.1
          comp=Z,2.8nm,0.7s,baz=267,slow=3.4,SNR=4.8
MJAR                               ScP   S       04 27 01.4 +0.6
          comp=Z,6.8nm,0.6s,baz=256,slow=1.9,SNR=20
MJAR                               LR    LR      04 37 56.3
          comp=Z,1µm,20.3s,baz=280,slow=38
MJAR  Matsushiro Arr    38.54  63  P     P       04 21 07.3  -1.7
MJAR                               *PP   pP      04 21 23.1  -0.3
MJAR                                             04 23 20.6
MJAR                                             04 27 01.5
MJAR                               pmax  pmax
          comp=Z,5.0nm,0.5s
MJAR                               MLR   MLR
          comp=Z,1µm,20.3s
TEY   Ternei            38.78  49⇓eP     P       04 21 09.8  -1.0
TEY                                pmax  pmax
          comp=E,50nm,0.7s
TEY                                pmax  pmax
          comp=N,70nm,1.3s
TEY                                pmax  pmax
          comp=Z,120nm,0.6s
JAGI  Jajag, Banyuwa    38.80 148  P     P       04 21 13.0 +1.8
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          comp=Z,128nm,1.0s
JAGI  Jajag, Banyuwa    38.80 148 eP     P       04 21 11.4 +0.2
          comp=Z,103nm,0.9s
BKSI  Bulukumba         39.42 138  P     P       04 21 21.1 +4.6
JHJ   Hachijo jima 2    39.76  68  LR    LR      04 37 13.8
          comp=Z,568nm,21.1s,baz=292,slow=35
TNTI  Ternate           40.02 123 eP     P       04 21 22.3 +0.8
          comp=Z,76nm,0.9s
ARU   Arti              40.32 330  P     P       04 21 24.3 +0.8
          comp=Z,19nm,0.6s,baz=118,slow=5.9,SNR=23
ARU                                pP    pP      04 21 38.9 +0.9
          comp=Z,34nm,0.6s,baz=122,slow=5.3,SNR=7.0
ARU   Arti              40.32 330 eP     P       04 21 24.3 +0.8
          comp=Z,60nm,0.9s
ARU                                pP    pP      04 21 38.9 +0.9
ARU   Arti              40.32 330d iP    P       04 21 24.1 +0.6
ARU                               e*PP   pP      04 21 38.6 +0.6
ARU                                              04 22 54.2
ARU                                              04 23 26.9
ARU                               eS     S       04 27 27.5 +0.4
ARU                                *SS   sS      04 27 51.3  -0.2
ARU                                SS    SS      04 30 20.8  -6.5
ARU                                pmax  pmax
          comp=Z,61nm,1.7s
ARU                                MLR   MLR
          comp=Z,977nm,18.0s
TWSI  Taliwang, Sumb    40.38 145  P     P       04 21 23.3  -1.2
GRNR  Gornyy            40.54  41⇑iP     P       04 21 28.0 +2.6
GRNR                               pmax  pmax
          comp=E,84nm,0.6s
GRNR                               pmax  pmax
          comp=Z,150nm,0.6s
PLAI  Plampang          40.93 144  P     P       04 21 29.0   0.0
          comp=Z,150nm,0.9s,comp=Z,2µm
AKT   Akhty             41.71 304 eP     P       04 21 35.8 +0.5
AKT                               e              04 23 20.9
AKT                               eS     S       04 27 47.3  -1.1
AKT                                pmax  pmax
          comp=Z,156nm,1.2s
NLAI  Namlea            42.51 128  P     P       04 21 43.6 +1.7
ASAJ  Asahikawa         42.76  52  P     P       04 21 43.8 +0.2
          comp=Z,77nm,0.6s,baz=259,slow=7.5,SNR=62
ASAJ                               PcP   PcP     04 23 33.7  -0.6
          comp=Z,7.9nm,0.5s,baz=45,slow=2.9,SNR=2.9
ASAJ                               LR    LR      04 42 41.8
          comp=Z,501nm,18.0s,baz=270,slow=40
ASAJ  Asahikawa         42.76  52 eP     P       04 21 43.1  -0.5
          comp=Z,86nm,0.6s
ASAJ                               PcP   PcP     04 23 33.7  -0.6
YAK   Yakutsk           43.30  23  P     P       04 21 48.5 +0.8
          comp=Z,36nm,0.5s,baz=304,slow=0.5,SNR=9.9
YAK   Yakutsk           43.30  23 eP     P       04 21 48.8 +1.1
          comp=Z,53nm,0.6s
YAK   Yakutsk           43.30  23 i P    P       04 21 48.7 +1.0
YAK                                pmax  pmax
          comp=Z,56nm,1.0s
MMRI  Maumere           43.31 138  P     P       04 21 47.0  -1.4
GROC  Groznyy           43.36 307 eP     P       04 21 49.8 +1.3
GROC                              e              04 23 32.6
GROC                              e              04 23 41.9
GROC                               pmax  pmax
          comp=Z,452nm,1.2s
YSS   Yuzh-Sakhalins    43.40  48 eP     P       04 21 48.8 +0.1
YSS   Yuzh-Sakhalins    43.40  48αeP     P       04 21 48.8 +0.1
YSS                               e*SP   sP      04 22 10.1 +0.2
YSS                               ePPP   PPP     04 24 06.0
YSS                               i S    S       04 28 10.1  -2.6
YSS                               eSSS   SSS     04 31 39.0
YSS                                pmax  pmax
          comp=Z,100nm,0.6s
YSS                                pmax  pmax
          comp=E,60nm,0.8s
YSS                                pmax  pmax
          comp=Z,500nm,2.0s
YSS                                pmax  pmax
          comp=E,300nm,2.2s
YSS                                MLR   MLR
          comp=E,800nm,16.0s
AAI   Ambon             43.61 127  P     P       04 21 52.0 +1.2
GNI   Garni             43.84 302 eP     P       04 21 53.8 +1.1
GNI   Garni             43.84 302 i P    P       04 21 54.3 +1.6
GNI                                pmax  pmax
          comp=Z,101nm,1.0s
NKL   Nikolayevsk       43.86  39 eP     P       04 21 52.2  -0.1
NKL                               e              04 22 11.0
NKL                               eS     S       04 28 18.0  -1.3
NKL                               e              04 31 46.0
NKL                                pmax  pmax
          comp=N,13nm,0.7s
NKL                                pmax  pmax
          comp=E,21nm,0.7s
NKL                                pmax  pmax
          comp=Z,42nm,0.7s
NKL                                smax  smax
          comp=N,1µm,6.0s
NKL                                smax  smax
          comp=E,700nm,6.0s
NKL                                MLR   MLR
          comp=E,1µm,10.0s
NKL                                MLR   MLR
          comp=Z,2µm,12.0s
MSAI  Masohi            43.91 126  P     P       04 21 54.1 +0.9
TBLG  Delisi            43.97 304 eP     P       04 21 55.8 +2.3
          comp=Z,46nm,0.9s
TBLG  Delisi            43.97 304 eP     P       04 21 55.8 +2.3
TBLG                               pmax  pmax
          comp=Z,46nm,0.9s
TYV   Tymovskoe         44.30  42 eP     P       04 21 57.0 +1.1
TYV                               eS     S       04 28 27.4 +1.6
TYV                                pmax  pmax
          comp=Z,300nm,2.2s
TYV                                pmax  pmax
          comp=Z,48nm,1.4s
TYV                                smax  smax
          comp=E,900nm,10.1s
RAYN  Ar Rayn           44.60 278 eP     P       04 21 58.8 +0.1
          comp=E,109nm,1.3s
RAYN                              epP    pP      04 22 13.8 +0.4
RAYN  Ar Rayn           44.60 278 i P    P       04 21 58.9 +0.1
          SNR=15
RAYN  Ar Rayn           44.60 278 eP     P       04 21 58.8 +0.1
RAYN                              e*PP   pP      04 22 13.8 +0.4
RAYN                               pmax  pmax
          comp=Z,109nm,1.3s
ZEI   Tsey              44.69 306 eP     P       04 21 58.5  -0.9
ZEI                                pmax  pmax
          comp=Z,211nm,1.5s
AKH   Akhalkalaki       44.88 304⇓iP     P       04 22 03.5 +2.6
AKH   Akhalkalaki       44.88 304 eP     P       04 22 02.6 +1.7
          comp=Z,109nm,1.0s
AKH   Akhalkalaki       44.88 304 eP     P       04 22 02.6 +1.7
AKH                                pmax  pmax
          comp=Z,109nm,1.0s
NCK   Nalchik           44.98 307 i P    P       04 22 02.1 +0.6
NCK                                pmax  pmax
          comp=Z,25nm,0.8s
YUK   Yuzh-Kuril'sk     45.08  52 eP     P       04 22 00.4  -1.8
YUK                               i S    S       04 28 34.4  -2.8
YUK                                SS    ScS     04 31 51.6  -2.5
YUK                                pmax  pmax
          comp=Z,169nm,1.0s
YUK                                pmax  pmax
          comp=N,31nm,0.5s
YUK                                pmax  pmax
          comp=E,71nm,0.8s
YUK                                MLR   MLR
          comp=E,98nm,10.0s
YUK                                MLR   MLR
          comp=Z,636nm,16.0s
YUK                                MLR   MLR
          comp=N,473nm,12.0s
SOEI  Soe               45.42 137  P     P       04 22 04.7  -0.7
KBZ   Khabaz            45.51 307  P     P       04 22 06.5 +0.9
          comp=N,4.5nm,0.7s,baz=73,slow=15,SNR=7.4
KBZ                                LR    LR      04 44 05.3
          comp=N,632nm,20.4s,baz=88,slow=40
NEY   Neytrino          45.59 306 i P    P       04 22 08.8 +2.2
NEY                                pmax  pmax
          comp=Z,5.0nm,0.8s
KIV   Kislovodsk        45.69 307 eP     P       04 22 08.3 +1.1
          comp=Z,101nm,0.9s
KIV                               epP    pP      04 22 23.6 +1.6
KIV   Kislovodsk        45.69 307  P     P       04 22 09.0 +1.8
          SNR=12
KIV   Kislovodsk        45.69 307 i P    P       04 22 08.8 +1.6
          SNR=10
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KIV	Kislovodsk	45.69	307	eP	P	04 22 08.6	+1.4
KIV				eS	S	04 28 48.6	+2.3
KIV				pmax	pmax		
	comp=Z,54nm,1.0s						
KIV				MLR	MLR		
	comp=Z,533nm,16.0s						
FAKI	Fak Fak	46.11	122	P	P	04 22 09.9	-0.8
KUR	Kuril'sk	46.64	51c	eP	P	04 22 13.1	-1.4
KUR				e		04 24 06.1	
KUR				eS	S	04 28 54.2	-5.3
KUR				pmax	pmax		
	comp=Z,315nm,2.0s						
KUR				pmax	pmax		
	comp=Z,130nm,1.4s						
KUR				pmax	pmax		
	comp=E,26nm,1.1s						
KUR				pmax	pmax		
	comp=N,31nm,1.5s						
KUR				MLR	MLR		
	comp=E,240nm,14.0s						
KUR				MLR	MLR		
	comp=Z,543nm,14.0s						
KUR				MLR	MLR		
	comp=N,266nm,15.0s						
SOC	Sochi	47.80	307	eP	P	04 22 24.5	+0.9
SOC				e*PP	pP	04 22 38.5	+0.1
SOC				e*SP	sP	04 22 45.0	+0.1
SOC				e		04 24 11.2	
SOC				eS	S	04 29 18.1	+1.9
SOC				pmax	pmax		
	comp=Z,40nm,0.9s						
SOC				MLR	MLR		
	comp=Z,417nm,13.0s						
GUMO	Guam	48.49	94	P	P	04 22 27.7	-1.6
	comp=Z,43nm,0.8s,baz=49,slow=20,SNR=2.9						
GUMO				LR	LR	04 42 28.3	
	comp=Z,328nm,21.5s,baz=328,slow=36						
MSEY	Mahe Island	48.52	237	eP	P	04 22 27.9	-1.5
	comp=Z,169nm,1.4s						
MSEY	Mahe Island	48.52	237	eP	P	04 22 28.0	-1.5
MSEY				pmax	pmax		
	comp=Z,169nm,1.4s						
PRGR	Permogore	48.70	331⇑	iP	P	04 22 31.0	+0.8
PRGR				i *PP	pP	04 22 45.5	+0.5
PRGR				pmax	pmax		
	comp=Z,30nm,0.7s						
VORD	Divnogorie	48.92	316	eP	P	04 22 33.2	+1.1
VORD				e*PP	pP	04 22 45.3	-1.6
VORD				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VSR	Storozhevoye	49.05	317	eP	P	04 22 34.8	+1.8
VSR				e*PP	pP	04 22 47.6	-0.3
VSR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
VORR	Voronezh	49.10	317	P	P	04 22 47.0	+14
VORR				pmax	pmax		
	comp=Z,500nm,1.4s						
ANN	Anapa	49.51	308	eP	P	04 22 35.1	-1.5
ANN				e*PP	pP	04 22 50.6	-0.9
ANN				e		04 23 53.6	
ANN				eS	S	04 29 39.7	-0.5
ANN				eSS	SS	04 33 11.0	-1.5
ANN				pmax	pmax		
	comp=Z,36nm,1.2s						
TIXI	Tiksi	49.89	13	P	P	04 22 39.7	+0.5
	comp=Z,41nm,0.4s,baz=231,slow=4.1,SNR=11						
TIXI	Tiksi	49.89	13	eP	P	04 22 39.5	+0.3
	comp=Z,67nm,0.6s						
TIXI	Tiksi	49.89	13c	eP	P	04 22 39.2	+0.1
TIXI				pmax	pmax		
	comp=Z,47nm,0.5s						
ASF	Jabal al Asfar	50.53	292	P	P	04 22 45.5	+0.8
	comp=Z,12nm,0.7s,baz=55,slow=2.7,SNR=20						
MOS	Moscow	50.81	322	eP	P	04 22 48.9	+2.6
MOS				i		04 23 03.3	
MOS				e		04 24 43.6	
MOS				eS	S	04 29 54.2	-3.7
MOS				pmax	pmax		
	comp=Z,39nm,0.6s						
MOS				MLR	MLR		
	comp=Z,900nm,16.0s						
ATD	Arta Tunnel	50.81	264	P	P	04 22 48.1	+1.1
	comp=Z,20nm,0.7s,baz=40,slow=4.9,SNR=8.7						
ATD				pP	pP	04 23 03.0	+1.1
	comp=Z,99nm,1.1s,baz=52,slow=9.6,SNR=18						
ATD				LR	LR	04 43 35.9	
	comp=Z,381nm,21.5s,baz=66,slow=35						
KLMR	Klimovskoe	51.16	329	eP	P	04 22 48.9	0.0
KLMR				eS	S	04 30 03.6	+0.9
KLMR				eSS	SS	04 33 40.0	+1.7
KLMR				pmax	pmax		
	comp=Z,233nm,1.0s						
KLMR	Klimovskoe	51.16	329	eP	P	04 22 48.9	0.0
KLMR				AMP		04 23 07.3	
	comp=Z,233nm,1.0s						
KLMR				eS	S	04 30 03.6	+0.9
KLMR				eSS	SS	04 33 40.0	+1.7
KLMR				LQ	LQ	04 40 27.7	
KLMR				LR	LR	04 42 23.1	
MA2	Magadan	51.21	33	P	P	04 22 49.6	+0.4
	comp=Z,50nm,0.7s,baz=267,slow=6.8,SNR=36						
MA2	Magadan	51.21	33	eP	P	04 22 49.7	+0.4
	comp=Z,47nm,0.7s						
MA2				ePcP	PcP	04 24 01.3	-2.6
MA2				eScP	ScP	04 27 53.2	-2.4
MA2	Magadan	51.21	33	eP	P	04 22 49.7	+0.4
MA2				e		04 24 01.3	
MA2				pmax	pmax		
	comp=Z,47nm,0.7s						
SHBL	Chebaa	51.33	293	eP	P	04 22 51.3	+0.5
BHL	Bhannes	51.33	294	eP	P	04 22 51.8	+1.1
MMAI	Mount Meron Ar	51.66	293	P	P	04 22 53.6	+0.4
	comp=Z,4.7nm,0.6s,baz=74,slow=7.2,SNR=8.6						
MMAI				LR	LR	04 46 54.6	
	comp=Z,287nm,21.8s,baz=170,slow=38						
SIM	Simferopol'	51.87	308	eP	P	04 23 09.3	+15
SIM				eS	S	04 30 08.0	-5.0
SIM				pmax	pmax		
	comp=Z,53nm,1.0s						
MTN	Manton Dam	52.15	133	eP	P	04 22 55.3	-1.5
	comp=Z,26nm,1.0s						
GENI	Genyem	52.17	116	P	P	04 22 57.2	+0.2
ILGA	Ilgaz	52.24	303	eP	P	04 22 59.1	+1.5
	comp=Z,213nm,1.2s						
BR131	Keskin Array S	52.38	302	eP	P	04 22 59.0	+0.5
BRTR	Keskin Array B	52.38	302	P	P	04 22 59.1	+0.6
	comp=Z,12nm,0.7s,baz=121,slow=7.5,SNR=71						
MBWA	Marble Bar	52.45	150	eP	P	04 22 58.0	-0.9
SKR	Severo-Kuril's	52.67	45	eP	P	04 22 50.7	-10
SKR				MLR	MLR		
	comp=Z,800nm,15.0s						
FITZ	Fitzroy Crossi	52.84	142	P	P	04 23 01.4	-0.4
	comp=Z,24nm,0.7s,baz=333,slow=5.7,SNR=81						
FITZ				LR	LR	04 49 01.9	
	comp=Z,498nm,20.0s,baz=320,slow=40						
FITZ	Fitzroy Crossi	52.84	142	eP	P	04 23 01.2	-0.7
	comp=Z,35nm,0.9s						
SEY	Seymchan	52.91	29	P	P	04 23 02.0	+0.1
	comp=Z,5.6nm,0.3s,baz=250,slow=6.1,SNR=30						
SEY				PcP	PcP	04 24 10.4	+0.3
	comp=Z,10nm,0.5s,baz=249,slow=5.7,SNR=4.6						
ANTO	Ankara	53.02	302⇑	iP	P	04 23 03.7	+0.6
ANTO	Ankara	53.02	302	eP	P	04 23 04.1	+1.0
	comp=Z,181nm,1.4s						
ANTO	Ankara	53.02	302	P	P	04 23 04.5	+1.4
	SNR=16						
ANTO	Ankara	53.02	302	eP	P	04 23 04.1	+1.0
ANTO				pmax	pmax		
	comp=Z,181nm,1.4s						
BR231	Keskin MP Arra	53.03	302	eP	P	04 23 04.7	+1.4
CSS	Mathiatis	53.10	296	eP	P	04 23 03.6	-0.1
	comp=Z,7.5nm,0.8s						
SZAC	Souni	53.49	295	P	P	04 23 06.5	-0.2
ALFC	Alefka	53.67	296	P	P	04 23 06.7	-1.2
PEA0B	Petropavlovsk-	53.84	42	eP	P	04 23 09.8	+0.9
	comp=Z,46nm,1.0s						
PETK	Petropavlovsk-	53.84	42	P	P	04 23 09.8	+1.0
	comp=Z,12nm,0.5s,baz=255,slow=3.6						
PETK				PcP	PcP	04 24 13.4	-0.5
	baz=344,slow=3.7						
PETK				LR	LR	04 47 14.4	
	comp=Z,622nm,19.8s,baz=268,slow=37						
PETK	Petropavlovsk-	53.84	42	eP	P	04 23 08.6	-0.2
PETK				PcP	PcP	04 24 13.4	-0.5
PPCY	Paphos	53.91	296	P	P	04 23 08.1	-1.5
PET	Petropavlovsk	54.41	42	eP	P	04 23 12.8	-0.2
	comp=Z,108nm,1.5s						
PET	Petropavlovsk	54.41	42	eP	P	04 23 13.4	+0.5
PET				i S	S	04 30 43.6	-3.5
PET				e		04 32 53.2	
PET				eSS	SKiKP	04 34 21.7	+3.9
PET				pmax	pmax		
	comp=Z,51nm,1.4s						
PET				MLR	MLR		
	comp=Z,700nm,18.0s						
PET				MLR	MLR		
	comp=Z,900nm,13.0s						
ISP	Isparta	54.98	299⇓	iP	P	04 23 17.6	0.0
ISP	Isparta	54.98	299	eP	P	04 23 17.4	-0.2
	comp=Z,181nm,1.9s						
ISP	Isparta	54.98	299	i P	P	04 23 17.5	0.0
ISP				pmax	pmax		
	comp=Z,16nm,0.9s						
AKASG	Malin Array Be	55.25	315	P	P	04 23 18.1	-0.9
	comp=Z,13nm,0.5s,baz=79,slow=6.6,SNR=40						
AKASG				pP	pP	04 23 33.1	-1.1
	comp=Z,47nm,0.6s,baz=81,slow=6.3,SNR=21						
AKASG				LR	LR	04 50 35.8	
	comp=Z,804nm,19.4s,baz=95,slow=40						
AKASG	Malin Array Be	55.25	315	P	P	04 23 18.2	-0.9
AKASG				*PP	pP	04 23 33.1	-1.1
AKASG				pmax	pmax		
	comp=Z,20nm,0.5s						
AKASG				MLR	MLR		
	comp=Z,804nm,19.4s						
AKBB	Malin Array Si	55.25	315	eP	P	04 23 18.4	-0.7
	comp=Z,86nm,0.8s						
AKBB	Malin Array Si	55.25	315	eP	P	04 23 18.4	-0.7
AKBB				pmax	pmax		
	comp=Z,86nm,0.8s						
KIEV	Kiev	55.26	315	eP	P	04 23 18.4	-0.8
	comp=Z,80nm,0.8s						
KIEV				epP	pP	04 23 34.3	0.0
KIEV	Kiev	55.26	315	i P	P	04 23 18.5	-0.7
	SNR=32						
KIEV	Kiev	55.26	315	i P	P	04 23 18.5	-0.7
KIEV				pmax	pmax		
	comp=Z,19nm,0.8s						
AK11	Malin Array Si	55.29	315	eP	P	04 23 18.7	-0.6
PUL	Pulkovo	55.38	326	i P	P	04 23 20.5	+0.7
PUL				pmax	pmax		
	comp=Z,37nm,0.8s						
KIS	Kishinev	55.54	311	eP	P	04 23 36.0	+15
	comp=Z,100nm,1.4s						
KIS	Kishinev	55.54	311	ePP	PP	04 25 50.0	+24
KIS	Kishinev	55.54	311	eP	P	04 23 36.0	+15
KIS				e		04 24 20.0	
KIS				eS	S	04 31 24.0	+21
KIS				pmax	pmax		
	comp=Z,100nm,1.4s						
KIS				MLR	MLR		
	comp=Z,500nm,13.0s						
KIS				MLR	MLR		
	comp=N,600nm,14.0s						
KIS				MLR	MLR		
	comp=Z,500nm,16.0s						
APA	Apatity	55.72	336⇓	iP	P	04 23 22.2	0.0
APA				i S	S	04 31 02.0	-2.3
APA				i PS	PnS	04 31 28.0	+6.6
APA				pmax	pmax		
	comp=Z,11nm,0.9s						
APA				MLR	MLR		
	comp=Z,800nm,13.0s						
EFOR	EFORIE	55.82	307⇑	iP	P	04 23 25.1	+1.8
SORM	Soroca	55.83	312⇑	iP	P	04 23 23.6	+0.3
TIRR	Tirgusor	55.95	308⇓	iP	P	04 23 25.9	+1.7
LEOM	Leova	55.95	310⇓	iP	P	04 23 25.9	+1.7
CFR	Carcaliu	56.10	309⇑	iP	P	04 23 26.1	+0.8
MICGM	Minsk	56.20	320⇑	eP	pP	04 23 40.0	-0.9
MICGM				PM		04 23 42.0	
	comp=Z,0.4nm,1.0s						
MNK	Minsk	56.20	320⇑	eP	pP	04 23 40.0	-0.9
MNK				pmax	pmax		
	comp=Z,400nm,1.0s						
TLB	Topalu	56.20	308⇑	iP	P	04 23 27.6	+1.6
HARR	Harsova	56.28	308⇑	iP	P	04 23 28.4	+1.9
ICOR	Ion Corvin	56.41	307⇑	iP	P	04 23 28.1	+0.6
PETR	Petresti	56.70	309⇑	iP	P	04 23 31.3	+1.8
YER	Yerkesik	56.84	299	P	P	04 23 30.4	-0.4
YER	Yerkesik	56.84	299	P	P	04 23 30.4	-0.4
YER	Yerkesik	56.84	299	P	P	04 23 30.4	-0.4
NACGM	Naroch	56.85	320	eP	P	04 23 30.0	-0.4
NACGM				PM		04 23 49.0	
	comp=Z,0.5nm,0.9s						
NACGM				eS	S	04 31 16.0	-3.6
NACGM				eLR	LR	04 44 27.0	
GRER		56.90	309⇓	iP	P	04 23 32.5	+1.5
VRI	Vrincioaia	57.04	309⇑	iP	P	04 23 34.0	+2.0
TESR	Tescani	57.05	310⇓	iP	P	04 23 33.3	+1.2
VSU	Vasula	57.07	325	i P	P	04 23 32.5	+0.6
VSU				pmax	pmax		
	comp=Z,46nm,0.9s						
PLOR	Plostina	57.10	309⇓	iP	P	04 23 34.2	+1.8
IIGN	Ignalina	57.19	321	eP	P	04 23 33.3	+0.5
IIGN				IAmb	IAmb	04 23 52.7	
	comp=Z,56nm,0.6s						
IZAR	Zarasai	57.19	321	eP	P	04 23 33.4	+0.6
IZAR				IAmb	IAmb	04 23 52.7	
	comp=Z,42nm,0.7s						
ISR	Istrita	57.23	309⇑	iP	P	04 23 35.9	+2.5
ISAL	Salakas	57.25	321	eP	P	04 23 33.8	+0.5
ISAL				IAmb	IAmb	04 23 53.2	
	comp=Z,47nm,0.9s						
BIZ	Bicaz	57.40	311⇓	iP	P	04 23 35.4	+0.9
SULR		57.47	308⇓	iP	P	04 23 37.7	+2.7
MLR	Muntele Rosu	57.62	309	P	P	04 23 37.7	+1.5
	comp=Z,6.9nm,0.8s,baz=140,slow=6.2,SNR=54						
MLR				LR	LR	04 51 35.0	
	comp=Z,168nm,21.9s,baz=76,slow=39						
MLR	Muntele Rosu	57.62	309⇓	iP	P	04 23 38.0	+1.8
BODT	Bodrum	57.62	299	P	P	04 23 35.7	-0.5
BODT	Bodrum	57.62	299	P	P	04 23 35.7	-0.5
FIA1	FINESS Array S	57.66	328	eP	P	04 23 36.7	+0.7
	comp=Z,105nm,1.1s						
FINES	FINESS Array B	57.66	328	P	P	04 23 36.2	+0.2
	comp=Z,7.0nm,0.5s,baz=96,slow=6.4,SNR=39						
FINES				pP	pP	04 23 51.6	+0.4
	comp=Z,31nm,0.7s,baz=104,slow=8.0,SNR=17						
SMG	Samos	57.89	300	P	P	04 23 38.4	+0.3
SMG	Samos	57.89	300	P	P	04 23 38.4	+0.3
BURAR	Bucovina Array	57.96	312⇑	iP	P	04 23 40.5	+2.0
BUR04	Bucovina Ar. S	57.96	312	eP	P	04 23 38.5	-0.1
DOPR	Dopca	57.97	310⇑	iP	P	04 23 40.8	+2.3
BUR08	Bucovina Ar. S	57.97	312	eP	P	04 23 38.6	0.0
ALN	Alexandroupoli	58.04	304	eP	P	04 23 40.0	+1.0
	comp=Z,115nm,1.7s						
ALN	Alexandroupoli	58.04	304	P	P	04 23 39.1	+0.1
ALN	Alexandroupoli	58.04	304	eP	P	04 23 40.1	+1.0
ALN				pmax	pmax		
	comp=Z,115nm,1.7s						
VOIR		58.25	309⇓	iP	P	04 23 42.1	+1.5
MTUR	Matau	58.26	309⇑	iP	P	04 23 43.3	+2.6
RDO	Rodhopi	58.38	304	P	pP	04 23 54.7	-2.0
CHOS	Chios island	58.39	301	P	pP	04 23 55.6	-1.3
KEV	Kevo	58.52	338	eP	P	04 23 42.8	+0.8
KEV	Kevo	58.52	338	eP	P	04 23 42.8	+0.8
ARR	Arges	58.55	309⇑	iP	P	04 23 43.8	+1.1
ARCR	ARCALIA	58.59	311⇑	iP	P	04 23 45.5	+2.7
LVV	L'vov	58.60	314	eP	P	04 23 44.9	+2.0
LVV				e		04 23 58.9	
LVV				eS	S	04 31 37.6	-5.2
LVV				e		04 32 07.8	
LVV				e		04 35 31.8	
LVV				e		04 38 07.5	
LVV				MLR	MLR		
	comp=N,100nm,19.0s						
LVV				MLR	MLR		
	comp=Z,400nm,19.0s						
LVV				MLR	MLR		
	comp=E,400nm,20.0s						
ZKR	Zakros	58.83	297	P	P	04 23 44.8	+0.1
ZKR	Zakros	58.83	297	P	P	04 23 44.8	+0.1
SUW	Suwalki	58.95	319	eP	P	04 23 45.3	+0.1
SUW				epP	pP	04 23 59.3	-1.1
SUW	Suwalki	58.95	319	eP	P	04 23 45.3	+0.1
SUW				e*PP	pP	04 23 59.3	-1.1
ANAF	Anafi Island	58.96	298	P	P	04 23 45.0	-0.6
ANAF				S	pP	04 23 52.1	-8.7
ANAF				AML	AML	04 24 01.3	
	comp=N,454µm,1.1s						
ANAF				AML	AML	04 24 01.9	
	comp=E,617µm,0.9s						
ANAF	Anafi Island	58.96	298	P	P	04 23 44.9	-0.6
ANAF	Anafi Island	58.96	298	P	P	04 23 44.8	-0.8
ANAF				S	pP	04 23 52.1	-8.7
ARCES	ARCESS Array B	59.00	337	P	P	04 23 45.8	+0.5
	comp=E,16nm,0.7s,baz=95,slow=8.2,SNR=68						
ARCES				pP	pP	04 24 00.6	+0.1
	comp=E,14nm,0.7s,baz=90,slow=7.3,SNR=6.4						
ARCES				LR	LR	04 51 33.1	
	comp=E,714nm,20.2s,baz=100,slow=38						
ARE0	ARCESS Array S	59.00	337	eP	P	04 23 46.3	+1.0
	comp=E,89nm,1.5s						
ARE0	ARCESS Array S	59.00	337	eP	P	04 23 45.9	+0.7
ARE0				IAmb	IAmb	04 23 47.2	
	comp=Z,15nm,0.5s						
BMR	Baia Mare	59.12	312⇓	iP	P	04 23 48.7	+2.3
CJR	Cluj-Napoca	59.13	311⇑	iP	P	04 23 48.6	+1.9
LOT	Lotru	59.15	309⇓	iP	P	04 23 48.8	+1.9
THR8	Santorini-Mono	59.18	299	P	P	04 23 43.2	-3.9
THR8	Santorini-Mono	59.18	299	P	P	04 23 43.2	-3.9
SANT	Santorini	59.20	299⇑	iP	P	04 23 48.2	+0.9
SANT	Santorini	59.20	299	P	P	04 23 46.1	-1.2
SANT	Santorini	59.20	299	P	P	04 23 46.1	-1.2
SAP2K	Karterados	59.21	299	P	P	04 23 45.7	-1.6
SAP2K	Karterados	59.21	299	P	P	04 23 45.7	-1.6
THT1	Athinios (Pele	59.23	299	P	P	04 23 45.9	-1.5
THT1	Athinios (Pele	59.23	299	P	P	04 23 45.9	-1.5
STAX	Taxiarchis Har	59.24	299	P	P	04 23 47.0	-0.5
STAX	Taxiarchis Har	59.24	299	P	P	04 23 47.0	-0.5
THR3	Thira Island,	59.24	299	P	P	04 23 45.1	-2.4
THR3	Thira Island,	59.24	299	P	P	04 23 45.1	-2.4
THR3	Thira Island,	59.24	299	P	P	04 23 45.1	-2.4
THR6	Thira Island,	59.26	299	P	P	04 23 45.7	-1.9
THR6	Thira Island,	59.26	299	P	P	04 23 45.7	-1.9
THR6	Thira Island,	59.26	299	P	P	04 23 45.7	-1.9
SAP1	Santorini-Akro	59.26	299	P	P	04 23 44.2	-3.4
SAP1	Santorini-Akro	59.26	299	P	P	04 23 47.2	-0.4
SAP1	Santorini-Akro	59.26	299	P	P	04 23 47.2	-0.4
IOSP	Ios island	59.27	299	P	P	04 23 49.2	+1.5
IOSP	Ios island	59.27	299	P	P	04 23 49.4	+1.7
THR5	Thira Island,	59.28	299	P	P	04 23 46.1	-1.7
THR5	Thira Island,	59.28	299	P	P	04 23 46.1	-1.7
NPS	Neapolis	59.29	297	P	P	04 23 47.6	-0.2
NPS				S	pP	04 23 58.5	-4.6
NPS				AML	AML	04 24 09.8	
	comp=E,206µm,1.0s						
NPS				AML	AML	04 24 10.7	
	comp=N,211µm,0.8s						
NPS	Neapolis	59.29	297	P	P	04 23 47.9	0.0
NPS	Neapolis	59.29	297	P	P	04 23 47.9	0.0
NPS	Neapolis	59.29	297	P	P	04 23 47.9	0.0
NPS	Neapolis	59.29	297	P	P	04 23 48.0	0.0
NPS				S	pP	04 23 58.6	-4.6
LAST	Lasithi	59.42	297	P	P	04 23 50.0	+1.1
LAST				S	pP	04 24 01.9	-2.2
LAST				AML	AML	04 24 07.7	
	comp=E,224µm,2.0s						
LAST				AML	AML	04 24 09.6	
	comp=N,207µm,2.1s						
LAST	Lasithi	59.42	297	P	P	04 23 48.7	-0.2
LAST	Lasithi	59.42	297	P	P	04 23 48.7	-0.2
LAST	Lasithi	59.42	297	P	P	04 23 49.9	+1.1
LAST				S	pP	04 24 01.5	-2.6
WRA	Warramunga Arr	59.44	136	P	P	04 23 48.5	-0.5
	comp=N,126nm,0.7s,baz=323,slow=7.4,SNR=185						
WRA				LR	LR	04 52 18.5	
	comp=N,362nm,21.5s,baz=310,slow=39						
WRA				PKP2bc		04 53 30.5	
	comp=N,0.6nm,0.7s,baz=152,slow=1.9,SNR=4.9						
WRA				PKP2ab		04 53 42.5	
	comp=N,2.6nm,1.0s,baz=131,slow=2.3,SNR=6.8						
WRA				P4KPbc		05 00 55.8	
	comp=N,0.7nm,0.9s,baz=332,slow=4.1,SNR=5.8						
WRAB	Tennant Creek	59.44	136	eP	P	04 23 48.1	-0.9
WRAB	Tennant Creek	59.44	136c	iP	P	04 23 48.5	-0.5
WRAB				pmax	pmax		
	comp=Z,165nm,0.8s						
KWP	Kalwaria Pacla	59.47	314	eP	P	04 23 49.1	+0.2
KWP				epP	pP	04 24 04.7	+0.5
KWP	Kalwaria Pacla	59.47	314	eP	P	04 23 49.1	+0.2
KWP				e*PP	pP	04 24 04.7	+0.5
NVR	Nevrokopi	59.61	304	P	P	04 23 50.0	0.0
NVR	Nevrokopi	59.61	304	P	P	04 23 50.0	0.0
BILL	Bilibino	59.63	24	eP	P	04 23 50.5	+0.9
	comp=Z,48nm,1.0s						
BILL	Bilibino	59.63	24c	eP	P	04 23 50.2	+0.6
BILL				e		04 24 10.7	
BILL				e		04 24 34.6	
BILL				i S	S	04 31 57.3	+1.8
BILL				pmax	pmax		
	comp=Z,52nm,1.3s						
BILL				MLR	MLR		
	comp=Z,928nm,16.0s						
OUR	Ouranopolis	59.67	303	P	P	04 23 48.5	-1.9
OUR	Ouranopolis	59.67	303	P	P	04 23 48.5	-1.9
OUR	Ouranopolis	59.67	303	P	P	04 23 48.5	-1.9
DEV	Deva	59.70	310⇓	iP	P	04 23 53.1	+2.6
TRPA	Tarpa	59.71	312⇑	iP	P	04 23 52.0	+1.5
KTK1	Kautokeino	59.72	337	eP	P	04 23 51.7	+1.4
DRGR		59.73	311⇓	iP	P	04 23 52.6	+1.8
HAMF	Hammerfest	59.80	339	eP	P	04 23 52.5	+1.8
HAMF				IAmb	IAmb	04 23 52.6	
	comp=Z,184nm,1.4s						
UZH	Uzhgorod	59.83	313	eP	P	04 23 53.1	+1.8
UZH				i *PP	pP	04 24 07.7	+1.1
UZH				e		04 24 33.3	
UZH				eS	S	04 31 58.0	-0.6
SRS	Serrai	59.84	304	P	P	04 23 49.0	-2.6
SRS	Serrai	59.84	304	P	P	04 23 49.0	-2.6
SRS	Serrai	59.84	304	P	P	04 23 49.0	-2.6
IDI	Anoyia	59.87	297	P	P	04 23 51.9	-0.1
	comp=Z,11nm,0.3s,baz=25,slow=14,SNR=30						
VTS	Vitosha	59.91	306⇑	iP	P	04 23 53.1	+0.9
VTS	Vitosha	59.91	306	eP	P	04 23 52.2	0.0
	comp=Z,194nm,1.8s						
VTS	Vitosha	59.91	306	P	P	04 23 52.4	+0.2
VTS	Vitosha	59.91	306	eP	P	04 23 52.2	0.0
VTS				pmax	pmax		
	comp=Z,194nm,1.8s						
PAIG	Paliouri	59.97	303	P	P	04 23 52.8	+0.4
PAIG	Paliouri	59.97	303	P	P	04 23 52.8	+0.4
PAIG	Paliouri	59.97	303	P	P	04 23 52.8	+0.4
SIVA	Sivas	59.98	297	P	P	04 23 52.7	+0.1
SIVA	Sivas	59.98	297	P	P	04 23 52.7	+0.1
SIVA	Sivas	59.98	297	P	P	04 23 52.7	+0.1
PLG	Polygyros	60.07	303	P	P	04 23 53.6	+0.4
PLG	Polygyros	60.07	303	P	P	04 23 53.6	+0.4
PLG	Polygyros	60.07	303	P	P	04 23 53.6	+0.4
PRNS	Prines Rethymn	60.16	298	P	P	04 23 55.6	+1.8
PRNS	Prines Rethymn	60.16	298	P	P	04 23 55.6	+1.8
HERR	Herculane	60.16	309⇑	iP	P	04 23 56.0	+2.3
VLY	Voula,Athens	60.24	300	P	P	04 23 54.7	+0.3
VLY	Voula,Athens	60.24	300	P	P	04 23 54.7	+0.3
HORT	Hortiatis	60.30	304	P	P	04 23 53.3	-1.5
HORT	Hortiatis	60.30	304	P	P	04 23 53.3	-1.5
CRVS	Cervenica-Dubn	60.35	313	eP	P	04 23 55.9	+1.0
CRVS				e		04 24 10.8	
CRVS				eS	S	04 32 02.8	-2.6
CRVS				pmax	pmax		
	comp=Z,56nm,1.1s						
CRVS	Cervenica-Dubn	60.35	313	eP	P	04 23 55.9	+1.0
CRVS				epP	pP	04 24 10.8	+0.6
CRVS				eS	S	04 32 02.8	-2.6
CRVS				eL	L	04 48 33.1	
KNT	Kendrikon	60.35	304	P	P	04 23 55.0	-0.1
KNT	Kendrikon	60.35	304	P	P	04 23 55.0	-0.1
KNT	Kendrikon	60.35	304	P	P	04 23 55.0	-0.1
VAM	Vamos	60.39	298	P	P	04 23 56.5	+1.1
VAM	Vamos	60.39	298	P	P	04 23 55.5	+0.1
VAM	Vamos	60.39	298	P	P	04 23 55.5	+0.1
VAM	Vamos	60.39	298	P	P	04 23 55.5	+0.1
VAM	Vamos	60.39	298	P	P	04 23 56.2	+0.8
XOR	Xorichti	60.43	302	P	P	04 23 55.6	-0.1
XOR	Xorichti	60.43	302	P	P	04 23 55.6	-0.1
SMIA	Simia	60.51	302	P	P	04 23 55.8	-0.4
BEL	Belsk	60.51	317	eP	P	04 23 56.4	+0.4
BEL				epP	pP	04 24 10.8	-0.4
BEL	Belsk	60.51	317	eP	P	04 23 56.4	+0.4
BEL				e*PP	pP	04 24 10.8	-0.4
VILL	Villia	60.56	301	P	P	04 23 54.5	-2.1

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IMMV  Iera Moni Meta   60.56 298   P       P      04 23 57.5 +0.9
IMMV  Iera Moni Meta   60.56 298   P       P      04 23 54.6 -2.0
IMMV  Iera Moni Meta   60.56 298   P       P      04 23 57.8 +1.2
GVDS  Gavdos           60.60 297   P       P      04 23 56.4 -0.4
GVDS  Gavdos           60.60 297   P       P      04 23 56.4 -0.4
GVD   Gavdhos          60.60 297   P       P      04 23 55.8 -1.1
GVD   Gavdhos          60.60 297   P       P      04 23 55.8 -1.1
FYTO  Fytoko, Volos    60.62 302   P       P      04 23 54.6 -2.3
FYTO  Fytoko, Volos    60.62 302   P       P      04 23 54.6 -2.3
BZS   Buzias           60.63 310⇓iP       P      04 23 58.6 +1.7
MDVR  Moldovita        60.67 309⇑iP       P      04 23 58.8 +1.5
GRG   Griva            60.76 304   P       P      04 23 56.1 -1.8
GRG   Griva            60.76 304   P       P      04 23 56.1 -1.8
GRG   Griva            60.76 304   P       P      04 23 56.1 -1.8
STIP  Stip             60.80 305  ePg      P      04 23 55.6 -2.4
STIP                              eSg      pP     04 24 11.7 -1.7
KRND  KRANIDI          60.83 300   P       P      04 23 57.8 -0.6
LIT   Litokhoron       60.84 303  eP       P      04 23 59.3 +0.9
      comp=Z,59nm,0.9s
LIT   Litokhoron       60.84 303   P       P      04 23 57.7 -0.7
LIT   Litokhoron       60.84 303  eP       P      04 23 59.3 +0.9
LIT                                pmax    pmax
      comp=Z,59nm,0.9s
LTK   Loutraki         60.85 301   P       P      04 23 56.3 -2.2
LTK   Loutraki         60.85 301   P       P      04 23 56.3 -2.2
LOUT  Loutraki         60.85 301   P       P      04 23 52.5 -6.0
KECS  Kecovo           61.04 313  eP       pP     04 24 13.7 -1.2
KECS  Kecovo           61.04 313  e        pP     04 24 13.7 -1.2
KECS                              e               04 24 15.2
NIE   Niedzica         61.05 314  eP       P      04 24 00.7 +0.9
NIE                               epP      pP     04 24 15.3 +0.2
NIE                               eS       S      04 32 12.3 -2.1
NIE   Niedzica         61.05 314  eP       P      04 24 00.7 +0.9
NIE                               e*PP     pP     04 24 15.3 +0.2
NIE                               eS       S      04 32 12.3 -2.1
DSF   Desfina          61.12 301   P       P      04 23 58.7 -1.7
DSF   Desfina          61.12 301   P       P      04 23 58.7 -1.7
VLI   Veliai           61.13 299   P       P      04 23 57.9 -2.5
VLI   Veliai           61.13 299   P       P      04 23 57.9 -2.5
AGG   Agios Georgios   61.15 302   P       P      04 23 58.5 -2.1
KTHR  Kythira          61.17 299   P       P      04 23 55.7 -5.0
OJC   Ojcow            61.29 315  eP       P      04 24 02.4 +1.1
OJC                               epP      pP     04 24 16.0 -0.6
OJC                               eS       S      04 32 14.4 -2.9
OJC   Ojcow            61.29 315  eP       P      04 24 02.4 +1.1
      comp=Z,59nm,0.8s
OJC   Ojcow            61.29 315  eP       P      04 24 02.4 +1.1
OJC                               e*PP     pP     04 24 16.0 -0.6
OJC                               eS       S      04 32 14.4 -2.9
THL   Klokotos Trika   61.30 303   P       P      04 23 59.5 -2.0
TRO   Tromso           61.30 337  eP       P      04 24 01.4 +0.5
TRO                                IAmb    IAmb   04 24 03.1
      comp=Z,40nm,0.9s
KZN   Kozani           61.34 304   P       P      04 24 00.5 -1.4
KZN   Kozani           61.34 304   P       P      04 24 00.5 -1.4
KZN   Kozani           61.34 304   P       P      04 24 00.5 -1.4
GUR   Goura            61.35 301   P       P      04 24 00.5 -1.6
GUR   Goura            61.35 301   P       P      04 24 00.5 -1.6
VLX   Vlachokerasia    61.44 300   P       P      04 23 57.3 -5.3
VLX   Vlachokerasia    61.44 300   P       P      04 23 57.3 -5.3
TRIZ  Trizonia         61.48 301   P       P      04 24 00.4 -2.3
KLV   Kalavryta, Ach   61.48 301   P       P      04 24 01.3 -1.6
KLV   Kalavryta, Ach   61.48 301   P       P      04 24 01.3 -1.6
SERG  Sergoula         61.48 301   P       P      04 24 00.9 -1.9
TRIP  Tripoli          61.49 300   P       P      04 24 00.5 -2.4
KMBO  Kilima Mbogo     61.49 254   P       P      04 24 19.2  +16
      comp=Z,5.0nm,0.6s,baz=51,slow=11,SNR=19
PSZ   Piszkesteto      61.50 312⇓iP       P      04 24 04.2 +1.4
PSZ   Piszkesteto      61.50 312  eP       P      04 24 03.8 +0.9
      comp=Z,49nm,1.1s
ANX   Ano Chora        61.55 302   P       P      04 24 01.5 -1.9
FNA   Florina          61.55 304  eP       P      04 24 02.7 -0.6
      comp=Z,95nm,1.5s
FNA   Florina          61.55 304   P       P      04 24 01.8 -1.5
FNA   Florina          61.55 304  eP       P      04 24 02.7 -0.6
FNA                                pmax    pmax
      comp=Z,95nm,1.5s
EVR   Evrytania        61.57 302   P       P      04 24 01.9 -1.6
EVR   Evrytania        61.57 302   P       P      04 24 01.9 -1.6
LAKA  Lakka            61.57 301   P       P      04 24 02.2 -1.2
LAKA  Lakka            61.57 301   P       P      04 24 02.2 -1.2
EFP   Efpalio          61.59 301   P       P      04 24 01.9 -1.6
DYR   Agios Nikonas    61.60 300   P       P      04 24 02.3 -1.3
LANS  Liptovska Anna   61.63 314  eP       P      04 24 06.4 +2.8
LANS                              e               04 24 20.3
LANS  Liptovska Anna   61.63 314  eP       P      04 24 06.4 +2.8
LANS                              epP      pP     04 24 20.3 +1.3
KPRO  Kipourio         61.72 303   P       P      04 24 03.3 -1.1
PMG   Port Moresby     61.76 117   P       P      04 24 04.8 -0.1
      comp=Z,46nm,0.5s,baz=36,slow=2.7,SNR=24
PMG   Port Moresby     61.76 117  eP       P      04 24 04.8 -0.1
      comp=Z,52nm,0.6s
ITM   Ithomi           61.83 300   P       P      04 24 03.9 -1.3
DRO   Drossia          61.84 301   P       P      04 24 04.4 -0.8
PVO   Paravola         61.85 302   P       P      04 24 04.0 -1.2
NEST  Nestorio         61.87 304   P       P      04 24 03.3 -2.2
AMT   Artemida-Makis   61.93 301   P       P      04 24 05.1 -0.7
AS31  Alice Springs    61.96 139  eP       P      04 24 05.7 -0.4
      comp=Z,22nm,0.8s
ASAR  Alice Springs    61.96 139   P       P      04 24 05.8 -0.3
      comp=Z,78nm,0.7s,baz=322,slow=6.6,SNR=483
ASAR                               PKP2bc         04 53 23.8
      comp=Z,0.7nm,0.8s,baz=120,slow=3.3,SNR=4.2
ASAR                               LR      LR     04 54 24.7
      comp=Z,503nm,19.9s,baz=318,slow=39
ASAR                               P4KPbc         05 01 07.3
      comp=Z,0.5nm,0.7s,baz=315,slow=4.6,SNR=6.9
AS01  Alice Springs    61.99 139  eP       P      04 24 05.1 -1.2
DIVS  Divibare         62.00 308  eP       P      04 24 06.1 -0.2
      comp=Z,32nm,0.8s
RLS   Riolos of Patr   62.01 301   P       P      04 24 05.4 -0.9
RLS   Riolos of Patr   62.01 301   P       P      04 24 05.4 -0.9
PYL   PYLOS            62.03 300   P       P      04 24 04.7 -1.8
PYL   PYLOS            62.03 300   P       P      04 24 04.7 -1.8
NWAO  Narrogin (SRO)   62.03 159   P       P      04 24 04.9 -1.4
      comp=Z,49nm,0.5s,baz=210,slow=6.1,SNR=95
NWAO                               LR      LR     04 53 28.2
      comp=Z,552nm,19.5s,baz=204,slow=38
NWAO  Narrogin (SRO)   62.03 159  eP       P      04 24 05.4 -1.0
      comp=Z,45nm,0.6s
NWAO  Narrogin (SRO)   62.03 159  eP       P      04 24 05.4 -1.0
NWAO                               pmax    pmax
      comp=Z,45nm,0.6s
DSL   Palaion Diasel   62.08 302   P       P      04 24 06.1 -0.7
DSL   Palaion Diasel   62.08 302   P       P      04 24 06.1 -0.7
PDO   Prodromos        62.12 302   P       P      04 24 05.1 -1.9
VYHS  Vyhne            62.13 313  eP       P      04 24 07.9 +0.9
VYHS                              e               04 24 21.9
VYHS                               pmax    pmax
      comp=Z,26nm,1.2s
VYHS  Vyhne            62.13 313  eP       P      04 24 07.9 +0.9
VYHS                              epP      pP     04 24 21.9 -0.4
IVA   Berane           62.27 307⇓iP       P      04 24 07.6 -0.5
PVY   Plav             62.28 306⇓iP       P      04 24 07.7 -0.5
OKC   Ostrava-Krasne   62.39 315  eP       P      04 24 09.7 +1.0
OKC                               epP      pP     04 24 24.9 +0.9
OKC                               eS       S      04 32 29.1 -2.1
OKC                               ePS      PnS    04 32 55.4 +2.0
OKC                                AMS     AMS    04 54 40.0
      comp=Z,500nm,15.0s
OKC   Ostrava-Krasne   62.39 315  eP       P      04 24 09.7 +1.0
OKC                               e               04 24 24.9
OKC                               eS       S      04 32 29.1 -2.1
OKC                               e               04 32 55.4
OKC                                MLR     MLR
      comp=Z,500nm,15.0s
LKD2  Lefkada island   62.48 302   P       P      04 24 07.4 -2.1
LKD2  Lefkada island   62.48 302   P       P      04 24 07.4 -2.1
KFL   Anninata         62.52 301   P       P      04 24 07.1 -2.6
SRO2  Moca             62.52 312  eP       P      04 24 09.6  0.0
SRO2                              e               04 24 24.0
SRO2  Moca             62.52 312  eP       P      04 24 09.6  0.0
SRO2                              epP      pP     04 24 24.0 -0.9
KOME  Kolasin          62.55 307  eP       P      04 24 09.7 -0.3
PLE   Pljevlja         62.56 307⇓iP       P      04 24 10.0 -0.1
IGT   Igoumenitsa      62.58 303   P       P      04 24 08.7 -1.4
IGT   Igoumenitsa      62.58 303   P       P      04 24 08.7 -1.4
IGT   Igoumenitsa      62.58 303   P       P      04 24 08.7 -1.4
STEI  Steigen          62.59 335  eP       P      04 24 10.4 +0.7
STEI                               IAmb    IAmb   04 24 11.4
      comp=Z,14nm,0.5s
FSK   Fiskardo         62.62 302   P       P      04 24 07.7 -2.7

SGD   Sagiada          62.63 303   P       P      04 24 08.5 -2.0
VLS   Valsamata        62.66 301   P       P      04 24 08.9 -1.8
VLS   Valsamata        62.66 301   P       P      04 24 08.9 -1.8
VLS   Valsamata        62.66 301   P       P      04 24 08.9 -1.8
SPA0  Spitsbergen Ar   62.73 347  eP       P      04 24 11.7 +1.2
SPA0  Spitsbergen Ar   62.73 347  eP       P      04 24 11.8 +1.2
SPA0                               IAmb    IAmb   04 24 12.7
      comp=Z,19nm,0.9s
SPITS Spitsbergen Ar   62.73 347   P       P      04 24 10.7 +0.2
      comp=Z,2.8nm,0.4s,baz=54,slow=7.3,SNR=36
SPITS                              LR      LR     04 54 18.3
      comp=Z,534nm,21.2s,baz=125,slow=39
PDG   Podgorica        62.82 306⇓iP       P      04 24 12.0 +0.4
PDG   Podgorica        62.82 306   P       P      04 24 10.2 -1.4
TTG   Podgorica        62.82 306  eP       P      04 24 10.8 -0.8
TTG   Podgorica        62.82 306  eP       P      04 24 11.1 -0.5
      comp=Z,95nm,1.0s
TTG   Podgorica        62.82 306  eP       P      04 24 11.1 -0.5
TTG                                pmax    pmax
      comp=Z,95nm,1.0s
JAVC  Velka Javorina   62.84 314  eP       P      04 24 13.4 +1.6
JAVC                              epP      pP     04 24 27.6 +0.5
ULC   Ulcinj           62.91 306  eP       P      04 24 11.5 -0.8
DRME  Dracevica, Mon   62.91 306  eP       P      04 24 11.8 -0.5
UPM   Unac-Piva        62.93 307  eP       P      04 24 12.2 -0.4
NKY   Niksic           62.94 307  eP       P      04 24 12.5 -0.1
KEK   Kerkira          62.94 303   P       P      04 24 10.6 -1.9
KEK   Kerkira          62.94 303   P       P      04 24 10.6 -1.9
MOR8  Moi Rana         62.95 333  eP       P      04 24 12.3 +0.2
MOR8                               IAmb    IAmb   04 24 13.4
      comp=Z,17nm,0.7s
NKME  Niksic           62.97 307  eP       P      04 24 12.3 -0.5
CEME  Cevo             63.04 307  eP       P      04 24 12.7 -0.5
BUM   Brajici-Budva    63.10 306  eP       P      04 24 13.1 -0.6
MODS  Modra-Piesok     63.17 313  eP       P      04 24 15.3 +1.4
MODS                              e               04 24 29.0
MODS                              eS       PnS    04 33 01.7 -2.4
MODS                               pmax    pmax
      comp=Z,59nm,1.3s
MODS  Modra-Piesok     63.17 313  eP       P      04 24 15.3 +1.4
MODS                              epP      pP     04 24 29.0 -0.3
MODS                              eS       PnS    04 33 01.7 -2.4
MODS                              eL       L      04 50 28.5
LOF   Lofoten          63.23 336  eP       P      04 24 14.1 +0.2
LOF                                IAmb    IAmb   04 24 16.1
      comp=Z,119nm,0.2s
KRLC  Kraliky          63.23 315  eP       P      04 24 15.9 +1.6
KRLC                              epP      pP     04 24 31.2 +1.5
KRLC  Kraliky          63.23 315  eP       P      04 24 15.9 +1.6
KRLC                              e               04 24 31.2
BRY   Bratogost        63.25 307⇓iP       P      04 24 14.2 -0.5
HCY   Herceg Novi      63.37 306  eP       P      04 24 14.6 -0.7
KSP   Ksiaz            63.43 316  eP       P      04 24 17.0 +1.5
KSP                               epP      pP     04 24 31.4 +0.5
KSP                               eS       S      04 32 41.4 -2.7
KSP   Ksiaz            63.43 316  eP       P      04 24 17.0 +1.5
KSP                               e*PP     pP     04 24 31.4 +0.5
KSP                               eS       S      04 32 41.4 -2.7
KONS  Konsvik          63.47 334  eP       P      04 24 15.9 +0.4
KONS                               IAmb    IAmb   04 24 17.3
VRAC  Vranov           63.47 314⇑iP       P      04 24 18.0 +2.1
VRAC  Vranov           63.47 314  eP       P      04 24 16.7 +0.8
VRAC                              epP      pP     04 24 31.5 +0.2
DPC   Dobruska-Polom   63.48 315  eP       P      04 24 16.6 +0.6
DPC                               epP      pP     04 24 33.5 +2.1
DPC                               eS       S      04 32 42.8 -2.1
DPC                               ePS      PnS    04 33 07.1 -1.3
DPC                                AMS     AMS    04 55 00.0
      comp=Z,700nm,14.0s
DPC   Dobruska-Polom   63.48 315  eP       P      04 24 16.6 +0.6
DPC                               e               04 24 33.5
DPC                               eS       S      04 32 42.8 -2.1
DPC                               e               04 33 07.1
DPC                                MLR     MLR
      comp=Z,700nm,14.0s
KRUC  Moravsky         63.64 314  eP       P      04 24 17.5 +0.5
KRUC                              epP      pP     04 24 32.2 -0.2
UPC   Upice            63.66 316  eP       P      04 24 17.9 +0.8
UPC                               epP      pP     04 24 34.3 +1.8
UPC                               eS       S      04 32 45.5 -1.5
UPC                                AMS     AMS    04 55 10.0
      comp=Z,700nm,15.3s
UPC   Upice            63.66 316  eP       P      04 24 17.9 +0.8
UPC                               e               04 24 34.3
UPC                               eS       S      04 32 45.5 -1.5
UPC                                MLR     MLR
      comp=Z,700nm,15.3s
BSD   Bornholm Skovb   63.66 321  i P      P      04 24 16.8 -0.2
KBS   Kingsbay         63.66 348  eP       P      04 24 17.1 +0.5
KBS                                IAmb    IAmb   04 24 18.4
      comp=Z,18nm,1.2s
HFS   Hagfors          63.73 327   P       P      04 24 17.6 +0.3
      comp=Z,19nm,0.5s,baz=98,slow=6.3,SNR=138
OPO   Ambohidratompo   63.74 231   P       P      04 24 18.7 +0.5
      comp=Z,14nm,0.8s,baz=39,slow=6.3,SNR=17
OPO                                pP      pP     04 24 34.9 +1.3
      comp=Z,36nm,0.9s,baz=57,slow=7.0,SNR=11
OPO                                LR      LR     04 50 48.7
      comp=Z,440nm,19.3s,baz=62,slow=35
STON  Ston             63.86 307   P       P      04 24 18.1 -0.4
BLY   Banja Luka       63.86 309⇓iP       P      04 24 20.4 +1.9
BLY   Banja Luka       63.86 309  eP       P      04 24 19.8 +1.3
      comp=Z,76nm,1.3s
ABPO  Ambohimpanom     64.01 231  eP       P      04 24 20.8 +0.8
      comp=Z,61nm,1.0s
ABPO                              epP      pP     04 24 36.7 +1.3
ABPO  Ambohimpanom     64.01 231  eP       P      04 24 20.8 +0.8
ABPO                              e*PP     pP     04 24 36.7 +1.3
ABPO                               pmax    pmax
      comp=Z,61nm,1.0s
NSS   Namsos           64.10 332  eP       P      04 24 19.8 +0.2
NSS                                IAmb    IAmb   04 24 23.6
      comp=Z,13nm,1.1s
CONA  Conrad Observa   64.18 313  eP       P      04 24 21.1 +0.4
      comp=Z,17nm,1.0s,SNR=10
KOGS  Kog              64.19 311  eP       P      04 24 21.9 +1.2
KOGS                              epP      pP     04 24 35.5 -0.5
KOGS                              eS       S      04 32 50.7 -3.0
FORT  Forrest          64.51 148  eP       P      04 24 22.8  0.0
      comp=Z,120nm,1.2s
ARSA  Arzberg          64.53 312  eP       P      04 24 23.0 +0.1
      comp=Z,5.8nm,0.8s,SNR=5.4
GOPC  GO Pecny, Ondr   64.53 315  eP       P      04 24 24.5 +1.7
GOPC                              epP      pP     04 24 39.6 +1.4
GOPC                              eS       S      04 32 55.5 -2.4
GOPC                              epP      PnS    04 33 19.2 -3.4
GOPC                               AMS     AMS    04 55 40.0
      comp=Z,600nm,13.3s
GOPC  GO Pecny, Ondr   64.53 315  eP       P      04 24 24.5 +1.7
GOPC                              e               04 24 39.6
GOPC                              eS       S      04 32 55.5 -2.4
GOPC                              e               04 33 19.2
GOPC                               MLR     MLR
      comp=Z,600nm,13.3s
PVCC  Panska Ves       64.56 316  eP       P      04 24 24.5 +1.5
PVCC                              epP      pP     04 24 40.8 +2.4
PVCC  Panska Ves       64.56 316  eP       P      04 24 24.5 +1.5
PVCC                              e               04 24 40.8
PRU   Pruhonice        64.67 315  eP       P      04 24 24.5 +0.8
PRU                               ex       x      04 24 41.1
PRU                               eS       S      04 32 56.9 -2.7
PRU                               ePS      PnS    04 33 24.6 +0.1
PRU                                AMS     AMS    04 55 50.0
      comp=Z,700nm,14.0s
PRU   Pruhonice        64.67 315  eP       P      04 24 24.5 +0.8
PRU                               e               04 24 41.1
PRU                               eS       S      04 32 56.9 -2.7
PRU                               e               04 33 24.6
PRU                                MLR     MLR
      comp=Z,700nm,14.0s
NC602 NORSAR Array S   64.72 327  eP       P      04 24 23.8  0.0
NC602                              IAmb    IAmb   04 24 24.6
      comp=Z,151nm,0.7s
PRA   Prague           64.73 315  eS       S      04 32 59.9 -0.3
PRA                               ePS             04 33 25.4
NB2   NORSAR Subarra   64.83 328   P       P      04 24 24.2 -0.4
      comp=Z,42nm,0.9s,baz=82,slow=6.5
NB2   NORSAR Subarra   64.83 328   P       P      04 24 24.2 -0.4
      baz=82,slow=6.5
BRG   Berggiesshubel   64.89 316  eP       P      04 24 25.6 +0.5
      comp=Z,15nm,1.2s
BRG                               i pP     pP     04 24 41.0 +0.4
      comp=Z,56nm,1.0s

BRG                               i PCP    PcP    04 25 00.7 +2.7
      comp=Z,18nm,0.7s
BRG                                S       S      04 32 53.0 -9.2
BRG                                PKPPKP  P'P'df 04 53 27.9  +15
      comp=Z,2.2nm,0.9s
      comp=N,435nm,12.7s
      comp=E,492nm,19.9s
      comp=Z,728nm,16.6s
BRG   Berggiesshubel   64.89 316  eP       P      04 24 25.6 +0.5
BRG                               i *PP    pP     04 24 41.0 +0.4
BRG                               i               04 25 00.7
BRG                                S       S      04 32 53.0 -9.2
BRG                                pmax    pmax
      comp=Z,15nm,1.2s
BRG                                MLR     MLR
      comp=N,435nm,12.7s
BRG                                MLR     MLR
      comp=E,492nm,19.9s
BRG                                MLR     MLR
      comp=Z,728nm,16.6s
UDBI  Udbina           64.90 309   P       P      04 24 26.1 +0.7
SOKA  Soboth           64.97 312  eP       P      04 24 25.5 -0.3
      comp=Z,5.8nm,0.6s,SNR=8.5
TBLU  Trondheim        64.99 330  eP       P      04 24 25.7 +0.1
BOJS  Bojanci          65.05 310  i P      P      04 24 27.5 +1.2
BOJS                              eS       S      04 33 01.8 -2.7
MATE  Matera           65.06 305⇑iP       P      04 24 26.4  0.0
OSL   Oslo             65.23 327  eP       P      04 24 27.8 +0.7
OSL                                IAmb    IAmb   04 24 28.6
      comp=Z,35nm,0.5s
MOA   Molln            65.25 313  eP       P      04 24 27.6  0.0
      comp=Z,8.8nm,0.6s,SNR=9.8
OBKA  Obir             65.33 312  eP       P      04 24 27.9 -0.3
      comp=Z,7.5nm,0.9s,SNR=6.2
TIP   Timpagrande      65.36 303⇑iP       P      04 24 29.7 +1.2
TIP   Timpagrande      65.36 303  eP       P      04 24 28.1 -0.4
      comp=Z,29nm,0.9s
TIP   Timpagrande      65.36 303   P       P      04 24 27.9 -0.6
CLL   Collm            65.40 317  i P      P      04 24 28.2 -0.1
      comp=Z,10.0nm,1.2s
CLL                               i pP     pP     04 24 44.2 +0.4
      comp=Z,46nm,1.2s
CLL                               eS       S      04 33 07.0 -1.4
CLL                               esS      sS     04 33 33.0 -1.4
CLL                               eSS      SS     04 37 24.0 +2.0
CLL                               eSSS     SSS    04 40 30.0
CLL   Collm            65.40 317  eP       P      04 24 28.2 -0.1
      comp=Z,32nm,1.0s
CLL   Collm            65.40 317  eP       P      04 24 28.3 -0.1
CLL                                pmax    pmax
      comp=Z,32nm,1.0s
GEC2  GERESS Array S   65.42 314  eP       P      04 24 29.2 +0.5
      comp=Z,66nm,1.1s
GEC2  GERESS Array S   65.42 314  eP       P      04 24 29.3 +0.5
GEC2                               pmax    pmax
      comp=Z,66nm,1.1s
GERES GERESS Array B   65.42 314   P       P      04 24 28.9 +0.2
      comp=Z,7.4nm,0.7s,baz=76,slow=7.0,SNR=65
GERES                              pP      pP     04 24 44.2  0.0
      comp=Z,22nm,0.6s,baz=72,slow=6.3,SNR=18
GERES                              LR      LR     04 56 53.5
      comp=Z,591nm,19.3s,baz=82,slow=39
GEA0  GERESS Array S   65.42 314  eP       P      04 24 28.8  0.0
LJU   Ljubljana        65.44 311  eP       P      04 24 29.1 +0.3
LJU                               epP      pP     04 24 43.8 -0.4
LJU                               e               04 25 09.2
KHC   Kasperske Hory   65.45 314  eP       P      04 24 30.0 +1.2
KHC                               epP      pP     04 24 45.0 +0.7
KHC                               ex       x      04 27 08.0
KHC                               eS       S      04 33 06.7 -2.5
KHC                               ePS      PnS    04 33 32.5 -2.7
KHC                                AMS     AMS    04 56 20.0
      comp=Z,500nm,13.8s
KHC   Kasperske Hory   65.45 314  eP       P      04 24 30.0 +1.2
KHC                               e               04 24 45.0
KHC                               eS       S      04 33 06.7 -2.5
KHC                               e               04 33 32.5
KHC                                MLR     MLR
      comp=Z,500nm,13.8s
NVLJ  Novalja          65.52 309   P       P      04 24 29.2 -0.1
DOMB  Dombas           65.71 329  eP       P      04 24 30.2  0.0
DOMB                               IAmb    IAmb   04 24 31.5
      comp=Z,48nm,0.3s
KONO  Kongsberg        65.84 326  eP       P      04 24 31.9 +0.9
KONO                               IAmb    IAmb   04 24 49.0
      comp=Z,80nm,1.3s
CUC   Castrocucco      65.87 304  eP       P      04 24 31.2 -0.5
      comp=Z,18nm,0.8s
CADS  Cadrg            65.94 311  i P      P      04 24 31.6 -0.5
NKC   Novy Kostel      65.95 316  eP       P      04 24 34.5 +2.5
NKC                               eS       S      04 33 15.2 -0.1
NKC   Novy Kostel      65.95 316  eP       P      04 24 34.5 +2.5
NKC                               eS       S      04 33 15.2 -0.1
KBA   Koelnbreinsper   66.02 312  eP       P      04 24 33.1 +0.4
      comp=Z,5.2nm,0.5s
TRI   Trieste          66.03 311  eP       P      04 24 33.6 +1.0
      comp=Z,73nm,1.0s
TRI   Trieste          66.03 311  eP       P      04 24 33.6 +1.0
TRI                                pmax    pmax
      comp=Z,73nm,1.0s
CEL   Celeste          66.24 302  eP       P      04 24 34.2 +0.1
      comp=Z,69nm,0.9s
AKN   Aaknes           66.64 329  eP       P      04 24 36.2  0.0
AKN                                IAmb    IAmb   04 24 41.9
      comp=Z,30nm,1.3s
ABTA  Abfaltersbach    66.65 312  eP       P      04 24 35.5 -1.1
      comp=Z,4.9nm,0.7s,SNR=6.0
GRFO  Grafenberg       66.84 315  eP       P      04 24 37.8 +0.1
      comp=Z,150nm,1.7s
GRFO                              epP      pP     04 24 53.7 +0.5
GRFO  Grafenberg       66.84 315  eP       P      04 24 37.8 +0.1
GRFO                              e*PP     pP     04 24 53.7 +0.5
GRFO                               pmax    pmax
      comp=Z,150nm,1.7s
MBAR  Mbarara          66.93 258  eP       P      04 24 40.4 +1.4
      comp=Z,41nm,1.1s
AQU   L'Aquila         67.07 307  eP       P      04 24 39.5 +0.2
      comp=Z,244nm,1.6s
AQU   L'Aquila         67.07 307  eP       P      04 24 39.6 +0.2
AQU                                pmax    pmax
      comp=Z,244nm,1.6s
WTTA  Wattenberg       67.11 313  eP       P      04 24 40.2 +0.5
      comp=Z,9.3nm,0.6s
WATA  Walderalm        67.14 313  eP       P      04 24 40.2 +0.4
      comp=Z,5.9nm,0.7s,SNR=6.1
HYA   Hoyanger         67.22 328  eP       P      04 24 40.2 +0.4
HYA                                IAmb    IAmb   04 24 41.4
      comp=Z,15nm,1.0s
MOTA  Moosalm          67.45 313  eP       P      04 24 42.9 +1.1
      comp=Z,14nm,0.8s,SNR=20
BLS5  Blasjo           67.45 326  eP       P      04 24 42.5 +1.0
BLS5                               IAmb    IAmb   04 24 43.0
      comp=Z,6.5nm,0.4s
VAE   Valguarnera      67.57 302   LR      LR     04 58 59.1
      comp=Z,176nm,19.4s,baz=100,slow=40
CTA   Charters Tower   67.60 127   P       P      04 24 42.1 -0.8
      comp=Z,27nm,0.9s,baz=314,slow=9.8,SNR=28
CTAO  Charters Tower   67.60 127  eP       P      04 24 42.8 -0.1
      comp=Z,37nm,0.9s
CTAO  Charters Tower   67.60 127  eP       P      04 24 42.8 -0.1
CTAO                               pmax    pmax
      comp=Z,37nm,0.9s
RETA  Reutte           67.64 313  eP       P      04 24 42.7 -0.2
      comp=Z,10nm,0.7s,SNR=8.5
BER   Bergen           67.80 328  eP       P      04 24 44.4 +0.9
BER                                IAmb    IAmb   04 25 16.1
      comp=Z,87nm,1.2s
ASK   Askoy            67.84 328  eP       P      04 24 44.2 +0.4
ASK                                IAmb    IAmb   04 24 49.8
      comp=Z,107nm,1.8s
SUE   Sulen            67.92 328  eP       P      04 24 45.2 +0.9
SUE                                IAmb    IAmb   04 25 03.6
      comp=Z,195nm,1.6s
STAV  Stavanger        67.94 326  eP       P      04 24 45.3 +0.9
STAV                               IAmb    IAmb   04 24 52.1
      comp=Z,46nm,1.4s
FUORN Ofenpass-Fuorn   68.18 312  eP       P      04 24 47.1 +0.5
      comp=Z,24nm,1.0s
DAVA  Damuels          68.27 313  i P      P      04 24 48.1 +1.2
      comp=Z,7.9nm,0.7s
STU   Stuttgart        68.34 315  eP       P      04 24 47.3 +0.1
      comp=Z,72nm,1.1s
STU   Stuttgart        68.34 315  eP       P      04 24 47.3 +0.1
STU                                pmax    pmax
      comp=Z,72nm,1.1s
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DAVOX	Davos/Dischmat	68.40	313	P	P	04 24 47.5	-0.3
	comp=Z,7.7nm,0.5s,baz=132,slow=6.6,SNR=18						
TUE	Stuetta	68.83	312	eP	P	04 24 51.7	+1.2
	comp=Z,27nm,0.9s						
BFO	Black Forest	69.01	314	eP	P	04 24 51.4	-0.1
	comp=Z,9.7nm,1.6s						
BFO	Black Forest	69.01	314	i P	P	04 24 51.9	+0.5
ECH	Echery	69.80	315	eP	P	04 24 58.0	+1.7
	comp=Z,17nm,1.0s						
ECH	Echery	69.80	315	eP	P	04 24 58.0	+1.7
ECH				pmax	pmax		
	comp=Z,17nm,1.0s						
MEM	Membach	69.86	317	⇑P	P	04 24 57.5	+1.0
	comp=Z,21nm,1.3s						
WLF	Walferdange	70.03	316	⇑P	P	04 24 59.5	+1.9
	comp=Z,67nm,1.4s						
WLF	Walferdange	70.03	316	eP	P	04 24 58.6	+1.0
	comp=Z,84nm,1.0s						
WLF	Walferdange	70.03	316	eP	P	04 24 58.6	+1.0
WLF				pmax	pmax		
	comp=Z,84nm,1.0s						
BBOO	Buckleboo	70.18	144	eP	P	04 24 58.1	-0.6
	comp=Z,90nm,1.1s						
SENIN	Lac Senin/Sane	70.22	313	eP	P	04 25 00.8	+1.6
	comp=Z,28nm,0.9s						
BCLA	Clavier	70.35	317	⇑P	P	04 25 00.0	+0.5
	comp=Z,21nm,1.6s						
DAG	Danmarks Havn	70.38	347	i P	P	04 24 59.6	+0.3
DAG				i		04 25 16.6	
LRW	Lerwick	70.99	328	eP	P	04 25 03.0	-0.2
RDOG	Red Dog Mine	71.01	23	eP	P	04 25 04.4	+1.1
	comp=Z,27nm,0.5s						
BNI	Bardonecchia	71.02	311	eP	P	04 25 03.6	-0.3
	comp=Z,55nm,1.4s						
BNI	Bardonecchia	71.02	311	eP	P	04 25 03.6	-0.3
BNI				pmax	pmax		
	comp=Z,55nm,1.4s						
ANM	Nome	71.31	27	eP	P	04 25 05.4	+0.3
	comp=Z,34nm,0.8s						
ANM	Nome	71.31	27	eP	P	04 25 05.4	+0.3
ANM				pmax	pmax		
	comp=Z,34nm,0.8s						
TAMR	Tamra	71.74	303	eP	P	04 25 10.3	+2.1
	comp=Z,89nm,0.9s						
KEST	Kesra	71.98	301	P	P	04 25 10.3	+0.5
	comp=Z,33nm,1.0s,baz=306,slow=2.7,SNR=33						
KEST				LR	LR	05 03 21.5	
	comp=Z,168nm,18.8s,baz=326,slow=41						
KEST	Kesra	71.98	301	eP	P	04 25 10.8	+0.9
	comp=Z,161nm,1.1s						
HNR	Honiara	72.35	110	LR	LR	04 54 29.1	
	comp=Z,239nm,21.6s,baz=320,slow=34						
SSB	Saint Sauveur	72.39	312	eP	P	04 25 11.5	-0.5
	comp=Z,53nm,1.5s						
SSB	Saint Sauveur	72.39	312	eP	P	04 25 11.5	-0.5
SSB				pmax	pmax		
	comp=Z,53nm,1.5s						
THTN	Thala	72.55	302	eP	P	04 25 14.3	+1.1
	comp=Z,52nm,0.9s						
STKA	Stephens Creek	72.59	139	P	P	04 25 12.8	-0.4
	comp=Z,22nm,0.5s,baz=321,slow=6.1,SNR=51						
STKA				LR	LR	05 02 56.5	
	comp=Z,329nm,18.6s,baz=311,slow=41						
STKA	Stephens Creek	72.59	139	eP	P	04 25 12.6	-0.6
	comp=Z,19nm,1.4s						
DRUM	Mains of Drumt	72.70	325	eP	P	04 25 14.1	+0.6
MME1	Meikle Cairn	72.81	326	eP	P	04 25 14.7	+0.5
MCD	Coleburn Disti	72.86	326	eP	P	04 25 15.3	+0.8
BIGH	Upper Bighouse	72.86	327	eP	P	04 25 15.2	+0.8
ESY	Stoneypath	73.12	324	eP	P	04 25 16.4	+0.4
EDMD	Edmundbyers	73.15	323	eP	P	04 25 16.7	+0.4
CMAH	Djebel Manchou	73.16	303	P	pP	04 25 32.6	+0.1
ABSA	Djebel Ababsia	73.23	303	P	pP	04 25 33.0	0.0
HPK	Haverah Park	73.27	322	eP	P	04 25 18.4	+1.5
HPK				IAmb	IAmb	04 25 18.5	
	comp=Z,39nm,1.1s						
EDI	Edinburgh	73.42	324	eP	P	04 25 18.0	+0.2
EDI				IAmb	IAmb	04 25 22.8	
	comp=Z,116nm,1.9s						
CAEH	’Ain El Ouahch	73.54	303	P	pP	04 25 34.7	+0.1
ESK	Eskdalemuir	73.64	324	eP	P	04 25 19.5	+0.3
	comp=Z,22nm,0.6s						
ESK				epP	pP	04 25 35.7	+0.8
ESK	Eskdalemuir	73.64	324	eP	P	04 25 19.7	+0.5
ESK	Eskdalemuir	73.64	324	eP	P	04 25 19.5	+0.3
ESK				e*PP	pP	04 25 35.7	+0.8
ESK				pmax	pmax		
	comp=Z,22nm,0.6s						
CKFL	Kef-Lekhel	73.77	303	P	pP	04 25 36.0	-0.1
EAB	Aberfoyle	73.92	325	eP	P	04 25 21.9	+1.2
CASM	Ain Smara	73.99	303	P	pP	04 25 37.7	+0.3
PGBU	Glenifferbraes	74.14	325	eP	P	04 25 22.7	+0.7
PGBU				IAmb	IAmb	04 25 28.7	
	comp=Z,225nm,1.8s						
KPL	Plockton	74.15	326	eP	P	04 25 23.4	+1.3
DFRA	Djebel Bou Aff	74.36	303	P	pP	04 25 39.5	-0.1
EIDS	Eidsvold	74.38	129	eP	P	04 25 23.9	0.0
	comp=Z,82nm,1.3s						
FOEL	Foel Wylfa	74.54	321	eP	P	04 25 25.8	+1.3
FOEL				IAmb	IAmb	04 25 26.8	
	comp=Z,54nm,1.3s						
MONM	Monmouth	74.70	320	eP	P	04 25 26.8	+1.5
MONM				IAmb	IAmb	04 25 31.5	
	comp=Z,122nm,1.9s						
HGH	Gray Hill	74.78	320	eP	P	04 25 26.4	+0.6
AKUT	Akutan	74.96	37	eP	P	04 25 26.8	0.0
	comp=Z,53nm,0.8s						
IM3	Indian Mountai	75.14	23	eP	P	04 25 28.1	+0.4
TOLK	Toolik Lake Re	75.15	20	eP	P	04 25 29.1	+1.4
	comp=Z,108nm,1.4s						
COLD	Coldfoot	75.71	21	eP	P	04 25 32.4	+1.4
	comp=Z,19nm,1.0s						
LSZ	Lusaka	76.42	246	eP	P	04 25 37.0	+1.1
	comp=Z,74nm,0.9s						
LSZ				epP	pP	04 25 53.4	+1.7
LSZ	Lusaka	76.42	246	P	P	04 25 40.7	+4.7
	SNR=11						
LSZ	Lusaka	76.42	246	eP	P	04 25 37.0	+1.1
LSZ				e*PP	pP	04 25 53.4	+1.7
LSZ				pmax	pmax		
	comp=Z,74nm,0.9s						
MLY	Manley	76.71	23	eP	P	04 25 37.9	+1.2
	comp=Z,54nm,1.0s						
SVW2	Sparrevohn	76.84	28	eP	P	04 25 38.8	+1.3
	comp=Z,40nm,0.6s						
CAST	Castle Rocks	77.07	25	eP	P	04 25 39.8	+1.1
	comp=Z,53nm,0.6s						
SUMG	Summit	77.07	347	eP	P	04 25 39.4	+0.4
	comp=Z,68nm,1.0s						
SUMG	Summit	77.07	347	i P	P	04 25 39.1	+0.1
SUMG				i		04 25 55.3	
SUMG	Summit	77.07	347	eP	P	04 25 39.4	+0.4
SUMG				pmax	pmax		
	comp=Z,68nm,1.0s						
BPAW	Bear Paw Mtn.	77.12	24	eP	P	04 25 39.8	+0.8
	comp=Z,39nm,0.6s						
SDPT	Sand Point	77.24	34	eP	P	04 25 39.3	-0.5
	comp=Z,67nm,0.5s						
PPLA	Purkeypile	77.31	26	eP	P	04 25 41.2	+1.0
	comp=Z,51nm,0.9s						
MDM	Murphy Dome	77.64	23	eP	P	04 25 42.8	+0.9
	comp=Z,67nm,1.0s						
FYU	Fort Yukon	77.70	21	eP	P	04 25 44.2	+2.1
	comp=Z,126nm,1.5s						
TRF	Thorofare Moun	77.74	25	eP	P	04 25 44.0	+1.4
	comp=Z,16nm,0.8s						
COLA	College	77.82	23	eP	P	04 25 43.4	+0.6
	comp=Z,36nm,0.8s						
COLA	College	77.82	23	eP	P	04 25 43.4	+0.6
COLA				pmax	pmax		
	comp=Z,36nm,0.8s						
CHGN	Chignik	77.84	33	eP	P	04 25 42.2	-0.9
	comp=Z,52nm,0.4s						
ARMA	Armidale	77.93	132	eP	P	04 25 45.2	+1.1
	comp=Z,51nm,0.8s						
CCB	Clear Creek Bu	77.97	23	eP	P	04 25 43.6	0.0
	comp=Z,12nm,1.0s						
SKT	Skwentna	78.05	26	eP	P	04 25 42.0	-2.2
	comp=Z,80nm,1.0s						
MCK	McKinley	78.08	24	eP	P	04 25 45.1	+0.8
	comp=Z,28nm,0.9s						
ILAR	Eielson Array	78.22	23	P	P	04 25 44.8	-0.2
	comp=Z,9.1nm,0.7s,baz=306,slow=4.3,SNR=73						
ILAR				LR	LR	05 04 32.8	
	comp=Z,555nm,19.2s,baz=292,slow=39						
RSO	Redoubt South	78.36	28	eP	P	04 25 47.9	+1.7
SUA	Susitna One	78.65	26	eP	P	04 25 48.1	+0.4
	comp=Z,72nm,0.7s						
PMR	Palmer	79.22	26	eP	P	04 25 50.7	+0.1
	comp=Z,42nm,0.7s						
PMR	Palmer	79.22	26	eP	P	04 25 50.7	+0.1
PMR				pmax	pmax		
	comp=Z,42nm,0.7s						
RC01	Rabbit Creek A	79.26	26	eP	P	04 25 51.3	+0.5
	comp=Z,63nm,0.7s						
CAN	Canberra	79.42	138	eP	P	04 25 52.1	0.0
	comp=Z,67nm,1.2s						
CAN	Canberra	79.42	138	eP	P	04 25 52.1	0.0
CAN				pmax	pmax		
	comp=Z,67nm,1.2s						
CNPM	China Poot	79.51	28	eP	P	04 25 52.8	+0.5
	comp=Z,30nm,0.6s						
RIDG	Independ’e Rid	79.55	23	eP	P	04 25 52.8	+0.3
RES	Resolute Bay	79.76	3	eP	P	04 25 54.4	+1.1
	comp=Z,16nm,0.9s						
RES				epP	sP	04 26 12.7	-2.7
SCM	Sheep Creek Mo	79.78	25	eP	P	04 25 54.7	+0.9
	comp=Z,39nm,0.6s						
OHAK	Old Harbor	79.83	31	eP	P	04 25 53.1	-0.8
KDAK	Kodiak Island	79.86	30	P	P	04 25 54.4	+0.3
	baz=275,slow=5.5						
KDAK	Kodiak Island	79.86	30	eP	P	04 25 54.1	0.0
	comp=Z,46nm,0.6s						
INK	Inuvik	79.90	16	eP	P	04 25 55.2	+1.0
	comp=Z,47nm,1.0s						
INK	Inuvik	79.90	16	eP	P	04 25 55.2	+1.0
INK				pmax	pmax		
	comp=Z,47nm,1.0s						
EGAK	Eagle	80.14	21	eP	P	04 25 56.6	+1.0
	comp=Z,38nm,1.0s						
HARP	HAARP	80.26	24	eP	P	04 25 58.5	+2.2
	comp=Z,38nm,0.8s						
ES19	SONSECA Array	80.26	309	eP	P	04 25 57.4	+0.6
ESDC	Sonseca Array	80.31	309	P	P	04 25 57.6	+0.5
	comp=Z,2.0nm,0.7s,baz=48,slow=4.9,SNR=11						
KLU	Klutina	80.53	25	eP	P	04 25 58.9	+1.1
	comp=Z,48nm,0.7s						
PAB	San Pablo	80.64	309	eP	P	04 25 59.5	+0.7
	comp=Z,42nm,1.4s						
PAB	San Pablo	80.64	309	eP	P	04 25 59.5	+0.7
PAB				pmax	pmax		
	comp=Z,42nm,1.4s						
DIV	Divide	80.80	25	eP	P	04 26 00.4	+1.1
	comp=Z,31nm,0.6s						
DAWY	Dawson	81.19	21	eP	P	04 26 02.2	+1.0
	comp=Z,32nm,1.1s						
BMRM	Bremner River	81.35	25	eP	P	04 26 03.5	+1.3
	comp=Z,71nm,0.7s						
RAGM	Ragged Mountai	81.69	26	eP	P	04 26 05.9	+2.0
	comp=Z,72nm,1.4s						
MVO	Moncorvo	81.77	312	eP	P	04 26 06.9	+2.1
	comp=Z,62nm,1.4s						
MVO				epP	pP	04 26 21.2	+0.5
MVO				eS	S	04 36 18.1	+4.5
MVO	Moncorvo	81.77	312	eLQ	LQ	04 50 57.7	
MVO				eLR	LR	04 54 37.3	
	comp=Z,260nm,18.0s						
TGL	Tana Glacier	82.16	25	eP	P	04 26 08.0	+1.5
	comp=Z,69nm,1.0s						
POLO	Lamas de Olo	82.19	312	epP	pP	04 26 23.4	+0.4
PGAV	Gavieira, Arco	82.23	313	epP	pP	04 26 24.2	+1.0
PGAV	Gavieira, Arco	82.23	313	eLR	LR	04 54 50.8	
	comp=Z,143nm,20.0s						
MTE	Manteigas	82.47	311	epP	pP	04 26 25.6	+1.2
MTE	Manteigas	82.47	311	eS	S	04 36 44.7	+24
MTE	Manteigas	82.47	311	eLQ	LQ	04 52 00.3	
MTE				eLR	LR	04 54 53.6	
	comp=Z,224nm,18.0s						
PVIS	Viseu	82.56	312	epP	pP	04 26 23.7	-1.1
PCBR	Castelo Branco	82.67	311	eP	P	04 26 14.0	+4.6
	comp=Z,49nm,1.3s						
PCBR				epP	pP	04 26 27.2	+1.8
PMRV	Marv??o	82.80	310	eP	P	04 26 13.6	+3.5
	comp=Z,41nm,1.1s						
PMRV				epP	pP	04 26 26.5	+0.4
PESTR	Estremoz	83.20	310	eS	S	04 36 48.5	+20
PESTR				eSS	SS	04 41 57.4	+4.5
PCAS	Casmilo, Conde	83.27	311	eS	S	04 36 32.5	+3.6
PCAS				eSS	SS	04 41 58.0	+4.1
PTOM	Tomar	83.42	311	eP	P	04 26 17.6	+4.3
	comp=Z,84nm,1.9s						
PTOM				epP	pP	04 26 30.0	+0.8
PMTG	Montargil	83.54	310	eP	P	04 26 14.8	+0.9
	comp=Z,77nm,1.6s						
PMTG				epP	pP	04 26 30.9	+1.0
PMTG	Montargil	83.54	310	eS	S	04 36 33.7	+2.1
PMTG				eSS	SS	04 42 04.4	+6.5
TAU	Tasmania Unive	83.61	144	eP	P	04 26 13.6	-0.4
	comp=Z,121nm,1.4s						
TAU	Tasmania Unive	83.61	144	eP	P	04 26 13.6	-0.4
TAU				pmax	pmax		
	comp=Z,121nm,1.4s						
MDT	Midelt	83.76	303	P	P	04 26 16.0	+0.6
	comp=Z,1.2nm,0.7s,baz=70,slow=12,SNR=4.7						
MDT				LR	LR	05 07 51.8	
	comp=Z,189nm,20.0s,baz=62,slow=39						
PBEJ	Beja	83.78	309	epP	pP	04 26 31.7	+0.6
PVAQ	Vaqueiros	83.96	309	eP	P	04 26 16.1	0.0
	comp=Z,108nm,1.6s						
PVAQ				epP	pP	04 26 33.1	+1.0
PVAQ	Vaqueiros	83.96	309	eS	S	04 36 52.9	+17
PVAQ	Vaqueiros	83.96	309	eLQ	LQ	04 54 42.8	
PVAQ				eLR	LR	04 57 02.8	
	comp=Z,233nm,18.0s						
SFJD	Kangerlussuaq	84.07	347	LR	LR	05 06 45.0	
	comp=Z,407nm,21.2s,baz=30,slow=38						
SFJD	Kangerlussuaq	84.07	347	eP	P	04 26 16.7	+0.7
	comp=Z,46nm,0.9s						
SFJD				epP	pP	04 26 32.8	+0.8
SFJD	Kangerlussuaq	84.07	347	i P	P	04 26 13.9	-2.1
SFJD				i		04 26 38.4	
SFJD	Kangerlussuaq	84.07	347	eP	P	04 26 16.7	+0.7
SFJD				e*PP	pP	04 26 32.8	+0.8
SFJD				pmax	pmax		
	comp=Z,46nm,0.9s						
DZM	Mont Dzumac	84.15	118	P	P	04 26 17.6	+0.3
	comp=Z,7.4nm,0.7s,baz=252,slow=4.8,SNR=10.0						
DZM	Mont Dzumac	84.15	118	eP	P	04 26 18.1	+0.8
	comp=Z,36nm,1.3s						
PBDV	Barranco-do-Ve	84.18	308	epP	pP	04 26 34.8	+1.5
PBDV	Barranco-do-Ve	84.18	308	eS	S	04 37 00.0	+22
PNCL	Nicolau / Gran	84.20	309	epP	pP	04 26 34.3	+1.0
PNCL	Nicolau / Gran	84.20	309	eS	S	04 37 01.6	+23
PNCL				eSS	SS	04 42 11.7	+4.0
PMAFR	Mafra	84.32	311	eS	S	04 36 41.4	+1.9
PMAFR				eSS	SS	04 42 13.4	+3.9
MORF	Marmelete	84.66	309	eS	S	04 36 53.4	+10
PFVI	Vila Bisbo	84.87	309	epP	pP	04 26 37.8	+1.1
PFVI	Vila Bisbo	84.87	309	eS	S	04 36 44.3	-0.6
BOSA	Boshof	85.76	236	P	P	04 26 25.4	+0.1
	comp=Z,7.0nm,0.7s,baz=56,slow=2.2,SNR=12						
BOSA				pP	pP	04 26 42.3	+0.9
	comp=Z,44nm,0.8s,baz=56,slow=5.5,SNR=19						
BOSA				LR	LR	05 04 53.3	
	comp=Z,246nm,19.7s,baz=56,slow=36						
BOSA	Boshof	85.76	236	eP	P	04 26 26.3	+1.0
	comp=Z,67nm,0.9s						
BOSA				pP	pP	04 26 42.3	+0.9
BOSA	Boshof	85.76	236	eP	P	04 26 26.3	+1.0
BOSA				*PP	pP	04 26 42.3	+0.9
BOSA				pmax	pmax		
	comp=Z,67nm,0.9s						
SKAG	Skagway	85.80	23	eP	P	04 26 26.8	+2.0
	comp=Z,56nm,1.0s						
BESE	Bessie Mountai	86.60	24	eP	P	04 26 32.6	+3.6
	comp=Z,98nm,1.8s						
JIS	Juneau Island	87.00	24	eP	P	04 26 34.1	+3.4
	comp=Z,24nm,1.0s						
TOA0	Torodi Ar. Sit	87.08	283	eP	P	04 26 33.5	+1.5
TORD	Torodi Ar. Bea	87.08	283	P	P	04 26 33.0	+1.1
	comp=Z,5.6nm,0.8s,baz=270,slow=5.8						
TORD				pP	pP	04 26 48.6	+0.6
	baz=57,slow=3.9						
TORD				LR	LR	05 11 48.1	
	comp=Z,243nm,19.0s,baz=50,slow=40						
TSUM	Tsumeb	87.15	247	eP	P	04 26 32.7	+0.4
	comp=Z,31nm,1.2s						
DLBC	Dease Lake	88.39	22	P	P	04 26 37.1	-0.4
	comp=Z,7.6nm,1.0s,baz=319,slow=4.3,SNR=7.2						
DLBC	Dease Lake	88.39	22	eP	P	04 26 39.5	+1.9
	comp=Z,21nm,1.1s						
YKW3	Yellowknife Ar	89.07	13	eP	P	04 26 41.9	+1.4
WRAK	Wrangell Islan	89.12	24	eP	P	04 26 41.5	+0.7
	comp=Z,10.0nm,0.9s						
YKA	Yellowknife Ar	89.14	13	P	P	04 26 41.1	+0.3
	comp=Z,2.6nm,0.5s,baz=335,slow=5.2,SNR=33						
YKA				PP	PP	04 30 09.9	-0.9
	comp=Z,2.5nm,0.6s,baz=334,slow=7.8,SNR=8.7						
YKA				PKKPbc	PKKPbc	04 44 16.5	-2.6
	comp=Z,0.2nm,0.4s,baz=157,slow=2.4,SNR=6.4						
YKA				LR	LR	05 12 57.3	
	comp=Z,5.2nm,18.4s,baz=330,slow=40						
CRAG	Craig	89.54	25	eP	P	04 26 46.0	+3.2
	comp=Z,13nm,0.9s						
KOWA	Kowa	91.47	287	P	P	04 26 53.9	+1.2
	comp=Z,5.0nm,0.7s,baz=345,slow=5.1,SNR=15						
KOWA				LR	LR	05 15 13.0	
	comp=Z,406nm,20.1s,baz=66,slow=40						
CASY	Casey	92.38	174	eP	P	04 26 54.8	-0.7
	comp=Z,10nm,0.9s						
DBIC	Dimbokro	95.70	280	P	P	04 27 12.5	+0.4
	comp=Z,4.6nm,0.9s,baz=72,slow=6.1,SNR=4.8						
DBIC				LR	LR	05 13 46.5	
	comp=Z,205nm,21.4s,baz=52,slow=38						
MAW	Mawson	95.91	192	P	P	04 27 10.8	-0.9
	comp=Z,4.8nm,1.2s,baz=71,slow=9.3,SNR=4.9						
MAW				PKKP	PKKPbc	04 43 59.9	-3.1
	comp=Z,0.9nm,0.5s,baz=166,slow=3.6,SNR=7.2						
MAW	Mawson	95.91	192	eP	P	04 27 13.6	+1.9
MAW				epP	pP	04 27 30.9	+3.0
MAW				PKKP	PKKPbc	04 43 59.9	-3.1
MAW	Mawson	95.91	192	eP	P	04 27 13.6	+1.9
MAW				e*PP	pP	04 27 30.9	+3.0
SCHQ	Schefferville	98.34	349	P	P	04 27 22.6	-0.7
	comp=Z,4.5nm,0.9s,baz=270,slow=8.1,SNR=3.0						
SCHQ				LR	LR	05 15 46.4	
	comp=Z,260nm,21.3s,baz=16,slow=38						
FFC	Flin Flon	98.72	10	eP	P	04 27 24.6	-0.4
FFC	Flin Flon	98.72	10	eP	P	04 27 24.6	-0.4
AFI	Afiamalu	99.00	101	LR	LR	05 13 37.2	
	comp=Z,136nm,18.7s,baz=220,slow=36						
SYO	Syowa Base	102.40	198⇓	ePdiff	Pdif	04 27 42.4	+1.7
BOZ	Bozeman (W)	105.20	19	ePKP	PKiKP	04 32 08.0	-0.2
HLID	Hailey	106.16	22	ePKP	PKiKP	04 32 09.4	-0.7
PDAR	Pinedale Array	108.39	19	PKiKP	PKiKP	04 32 13.6	-0.7
	comp=Z,0.2nm,0.4s,baz=227,slow=2.2,SNR=2.9						
NVAR	Mina Array Bea	109.19	27	PKiKP	PKiKP	04 32 15.7	-0.3
	comp=Z,0.4nm,0.6s,baz=180,slow=0.1,SNR=3.2						
VNDA	Vanda	110.07	168	PKKP	PKKPab	04 43 32.0	+4.7
	comp=Z,0.4nm,0.3s,baz=32,slow=7.7,SNR=8.7						
QSPA	South Pole Qui	115.41	180	PKP	PKPdf	04 32 25.6	-0.9
	comp=Z,2.9nm,0.8s,baz=296,slow=1.2,SNR=7.8						
QSPA				PKKPbc	PKKPbc	04 43 01.8	-1.4
	comp=Z,0.8nm,0.5s,baz=154,slow=1.8,SNR=6.9						
QSPA	South Pole Qui	115.41	180	ePKPdf	PKPdf	04 32 25.1	-1.5
QSPA				PKKPbc	PKKPbc	04 43 01.8	-1.4
SNAA	Sanae	116.44	201	PKP	PKPdf	04 32 27.9	-0.5
SNAA	Sanae	116.44	201	PKP	PKPdf	04 32 27.7	-0.7
	comp=Z,0.4nm,0.4s,baz=226,slow=3.7,SNR=8.3						
SNAA				SKP		04 35 57.8	
	comp=Z,0.7nm,0.5s,baz=297,slow=4.5,SNR=5.2						
SNAA				PKKPbc	PKKPbc	04 42 56.3	-2.9
	comp=Z,0.6nm,0.5s,baz=226,slow=3.6,SNR=9.5						
WCI	Wyandotte Cave	116.50	1	ePKPdf	PKPdf	04 32 29.8	+0.2
WCI	Wyandotte Cave	116.50	1	ePKIKP	PKPdf	04 32 29.8	+0.2
ANMO	Albuquerque	116.53	19	PKP	PKPdf	04 32 30.5	+0.5
	comp=Z,1.2nm,0.7s,baz=62,slow=1.5,SNR=6.0						
ANMO	Albuquerque	116.53	19	ePKPdf	PKPdf	04 32 30.1	+0.1
ANMO	Albuquerque	116.53	19	PKIKP	PKPdf	04 32 30.5	+0.5
ANMO				pmax	pmax		
	comp=Z,2.0nm,0.9s						
TUC	Tucson	117.49	24	ePKPdf	PKPdf	04 32 32.1	+0.3
TUC	Tucson	117.49	24	ePKIKP	PKPdf	04 32 32.1	+0.3
VNA1	Neumayer--Stat	118.21	202	PKP	PKPdf	04 32 32.1	+0.4
VNA3	Neumayer Olymp	118.63	201	PKP	PKPdf	04 32 32.3	-0.3
WMOK	Wichita Mounta	118.64	13	ePKPdf	PKPdf	04 32 32.5	-1.4
WMOK	Wichita Mounta	118.64	13	ePKIKP	PKPdf	04 32 32.5	-1.4
TKL	Tuckaleechee C	119.06	359	PKP	PKPdf	04 32 34.3	-0.3
	comp=Z,1.8nm,0.4s,baz=140,slow=7.7,SNR=9.0						
MIAR	Mount Ida	119.67	8	ePKPdf	PKPdf	04 32 36.4	+0.6
MIAR	Mount Ida	119.67	8	ePKIKP	PKPdf	04 32 36.4	+0.6
MNTX	Cornudas Mount	119.88	20	ePKPdf	PKPdf	04 32 36.4	+0.1
LRAL	Lakeview Retre	121.67	2	ePKPdf	PKPdf	04 32 39.4	-0.3
JCT	Junction City	122.53	15	ePKPdf	PKPdf	04 32 41.2	-0.3
JCT	Junction City	122.53	15	ePKIKP	PKPdf	04 32 41.2	-0.3
TXAR	Lajitas Array	122.60	19	PKP	PKPdf	04 32 41.9	+0.2
	comp=Z,2.0nm,0.6s,baz=88,slow=0.8,SNR=23						
TXAR				pPKP	pPKPdf	04 32 57.4	-1.0
	comp=Z,1.3nm,0.5s,baz=173,slow=3.2,SNR=6.8						
TXAR				PKKPbc	PKKPbc	04 42 29.4	-6.4
	comp=Z,0.2nm,0.6s,baz=270,slow=1.3,SNR=3.7						
PCRV	Puerto La Cruz	139.14	328	PKP	PKPdf	04 33 12.4	-0.8
	comp=Z,1.9nm,0.4s,baz=7.1,slow=8.1,SNR=2.5						
SDV	Santo Domingo	142.87	336	PKP	PKPdf	04 33 19.1	-1.0
	comp=Z,21nm,0.3s,baz=28,slow=6.4,SNR=4.4						
OCAC	Ocana	144.40	339	eP	PKPbc	04 33 21.4	+0.2
MOTC	Monteria, Cord	144.56	343	eP	PKPdf	04 33 22.2	-0.6
BCIP	Isla Barro Col	145.04	351	eP	PKPdf	04 33 27.2	+3.5
CAPC	Capurgana	145.10	346	eP	PKPdf	04 33 23.6	-0.2
ZARC	Zaragoza, Cauc	145.57	341	eP	PKPab	04 33 25.1	0.0
BRRC	Barranca, Sant	145.59	339	eP	PKPab	04 33 25.5	+0.4
BARC	Barichara	145.90	338	eP	PKPab	04 33 27.4	+0.8
PTBC	PUERTO BERRIO,	146.36	340	eP	PKPbc	04 33 27.1	-0.1
RUSC	La Rusia	146.52	338	eP	PKPbc	04 33 28.4	+0.1
HELC	Santa Helena	147.00	342	eP	PKPab	04 33 30.3	-0.6
NORC	Norcasia	147.41	340	eP	PKPbc	04 33 30.7	+0.5
GUYC	Guyana, Colomb	147.88	341	eP	PKPbc	04 33 33.0	+1.0
ROSC	El Rosal	147.92	339	PKPbc	PKPab	04 33 33.6	-1.0
	comp=Z,36nm,0.5s,baz=266,slow=4.9,SNR=32						
ROSC	El Rosal	147.92	339	eP	PKPab	04 33 33.6	-1.0
CHIC	Chingaza	147.92	338	eP	PKPbc	04 33 32.4	+0.3
VILC	Villavicencio,	148.39	337	eP	PKPbc	04 33 33.8	+0.8
PRAC	Prado	149.16	339	eP	PKPbc	04 33 35.4	+0.6
YOTC	Yotoco, Valle	149.34	342	eP	PKPdf	04 33 32.0	+1.0
MALC	Bahia Malaga	149.57	344	eP	PKPbc	04 33 37.5	+1.7
HORQ	Saladito	149.89	343	eP	PKPbc	04 33 37.6	+0.7
GRGC	Isla de Gorgon	150.74	345	eP	PKPbc	04 33 40.7	+2.1
PCON	Cinco Dias	150.93	341	eP	PKPbc	04 33 41.9	+2.1
SOTA	Rioblanco	151.17	342	eP	PKPbc	04 33 41.5	+1.2
FLOC	Florencia	151.41	340	eP	PKPbc	04 33 40.9	+0.6
GCUF	Volcan Galeras	152.24	343	eP	PKPbc	04 33 43.3	+0.6
SAML	Samuel	153.24	304	ePKPbc	PKPbc	04 33 44.4	+0.1
CPUP	Villa Florida	154.86	262	PKP	PKPdf	04 33 38.9	+0.2
	comp=Z,1.6nm,0.7s,baz=151,slow=3.4,SNR=3.5						
PLCA	Paso Flores	160.55	216	PKPab	PKPab	04 34 26.2	-0.8
	comp=Z,3.9nm,0.8s,baz=212,slow=3.6,SNR=6.2						
LPAZ	La Paz	161.50	297	PKP	PKPdf	04 33 49.1	+1.3
	comp=Z,1.5nm,0.8s,baz=192,slow=2.5,SNR=8.3						
LPAZ				PKPab	PKPab	04 34 30.8	-1.6
	comp=Z,3.2nm,0.8s,baz=32,slow=13,SNR=4.6						

DJA 01 04:17:37.6±3.1,**1°N**±18°×**12°7E**±1°1,**h11**km±38km,**M3.5**/5,
MLv3.5/5,**Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBMI	Labuha	1.91	166	P	Pn	04 18 10.1	0.0
LBMI				S	Sn	04 18 34.9	+0.7
MSAI	Masohi	4.92	158	P	Pn	04 18 51.6	+0.1

IDC ***01*** *04:23:22.0±0.6,7°59S×128°63E,h0km,mb4.3/11,*
mb1 4.4/15,mb1mx4.2/47,mbtmp4.4/15,ML4.5/3,MS3.7/4,
Ms1 3.7/4,ms1mx3.2/51,Error ellipse: s-maj=28.0km
s-min=14.1km az=70.0

BJI ***01*** *04:23:27.8,8°05S×129°15E,h90km,mb4.7/20,mB5.3/7*

ISCJB ***01*** *04:23:31.1±0.2,7°83S±0°03×128°69E±0°04,h100km,*
mb4.5/25,Error ellipse: s-maj=6.6km s-min=4.2km
az=157.2

NEIC ***01*** *04:23:31.3±0.8,7°77S×128°62E,h82km±8km,mb4.5/9,*
Error ellipse: s-maj=8.8km s-min=7.0km az=55.0

DJA ***01*** *04:23:44.9±0.4,7°S±6°×12°9E±°,h180km±7km,M4.8/7,*
mb5.0/7,mB5.2/4,MLv4.7/6,Mw(mB)4.6/4

ISC 01 04:23:32.5±0.4,**7°91S**±0°05×**128°68E**±0°06,**h100**km,**n91,**
σ**2s06**/84,**mb4.6**/25,**2D,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.59	92	P	Pn	04 24 25.4	+13
SAUI	Saumlaki	2.59	92	ePn	Pn	04 24 13.8	+1.0
BNDI	Bandanaira	3.58	20	P	Pn	04 24 22.4	-3.6
AAI	Ambon	4.22	353	P	Pn	04 24 31.1	-3.6
SOEI	Soe	4.73	247	ePn	Pn	04 24 41.1	-0.7

NLAI	Namlea	4.90	341	P	Pn	04 24 43.4	-0.5
MTN	Manton Dam	5.46	154	P	Pn	04 24 51.3	-0.2
	baz=5.6,SNR=24						
MTN	Manton Dam	5.46	154	*e*Pn	Pn	04 24 54.4	+2.9
KDU	Kakadu	6.04	142	P	Pn	04 24 59.6	+0.3
	baz=6.1,SNR=72						
FAKI	Fak Fak	6.10	36	P	Pn	04 24 57.8	-2.4
FAKI	Fak Fak	6.10	36	*e*Pn	Pn	04 24 57.5	-2.7
MMRI	Maumere	6.42	263	*e*Pn	Pn	04 25 04.0	-0.6
LBMI	Labuha	7.32	351	P	Pn	04 25 13.2	-3.6
KNRA	Kununurra	7.72	179	P	Pn	04 25 21.2	-1.0
	baz=7.8,SNR=17						
BKSI	Bulukumba	8.88	286	P	Pn	04 25 40.2	+2.1
SPSI	Sidrap Palu	9.69	293	P	Pn	04 25 50.3	+1.2
BAKI	Biak	9.96	48	P	Pn	04 25 53.6	+0.8
	368nm,1.1s,4µm						
FITZ	Fitzroy Crossi	10.55	196	P	Pn	04 25 59.1	-1.7
	baz=11,SNR=6.5						
FITZ	Fitzroy Crossi	10.55	196	Pn	Pn	04 26 00.1	-0.6
	2.8nm,0.3s,baz=33,slow=10,SNR=29						
FITZ				Sn	Sn	04 27 52.6	-4.4
	4.9nm,0.3s,baz=259,slow=4.9,SNR=4.7						
FITZ				LR	LR	04 31 17.3	
	comp=Z,150nm,19.2s,baz=99,slow=44						
FITZ	Fitzroy Crossi	10.55	196	*e*Pn	Pn	04 25 59.7	-1.1
FITZ				Sn	Sn	04 27 52.6	-4.4
MRSI	Marisa	10.70	321	P	Pn	04 26 05.8	+2.9
WAMI	Wamena	10.74	69	P	Pn	04 26 12.0	+8.6
WRAB	Tennant Creek	13.15	156	*e*Pn	Pn	04 26 36.1	+0.6
WRAB				*e*Sn	Sn	04 28 52.7	-7.6
WRA	Warramunga Arr	13.16	156	Pn	Pn	04 26 34.5	-1.1
	3.1nm,0.3s,baz=344,slow=12,SNR=10						
WRA				Sn	Sn	04 28 56.0	-4.4
	11nm,0.3s,baz=335,slow=22,SNR=16						
WRA				LR	LR	04 32 34.0	
	comp=Z,353nm,20.0s,baz=310,slow=41						
WB2	Warramunga Arr	13.16	156	P	Pn	04 26 34.6	-1.0
	baz=13						
WB2	Warramunga Arr	13.16	156	*e*Pn	Pn	04 26 35.1	-0.5
COEN	Coen	15.44	114	P	Pn	04 27 04.2	-0.7
	baz=16,SNR=10						
COEN	Coen	15.44	114	*e*Pn	Pn	04 27 05.9	+0.9
	54nm,1.4s						
AS31	Alice Springs	16.45	163	*e*Pn	P	04 27 18.5	+0.1
	11nm,0.8s						
ASAR	Alice Springs	16.45	163	Pn	Pn	04 27 18.1	+0.6
	1.2nm,0.3s,baz=336,slow=9.8,SNR=6.1						
ASAR				Sn	Sn	04 30 13.2	-6.8
	2.2nm,0.3s,baz=344,slow=24,SNR=8.7						
ASAR				LR	LR	04 34 13.2	
	comp=Z,244nm,21.3s,baz=300,slow=39						
AS01	Alice Springs	16.46	163	*e*Pn	P	04 27 19.2	+0.6
WRKA	Warakurna	17.04	181	P	Pn	04 27 24.9	+0.2
	baz=17,SNR=9.8						
MTSU	Mount Surprise	18.30	125	P	Pn	04 27 42.4	+2.5
	baz=18,SNR=7.1						
PMG	Port Moresby	18.33	96	P	P	04 27 38.5	-0.7
	1.3nm,0.3s,baz=277,slow=10,SNR=6.7						
PMG	Port Moresby	18.33	96	*e*P	Pn	04 27 41.6	+1.3
	31nm,0.9s						
CTA	Charters Tower	20.88	127	P	P	04 28 09.2	+2.4
	2.2nm,0.9s,baz=309,slow=6.5,SNR=1.9						
CTAO	Charters Tower	20.88	127	*e*P	P	04 28 07.5	+0.6
MEEK	Meekatharra	20.94	206	P	P	04 28 11.4	+4.0
	baz=21,SNR=3.2						
QLP	Quilpie	23.73	143	P	P	04 28 40.2	+4.6
	baz=24,SNR=15						
STKA	Stephens Creek	26.71	155	P	P	04 29 05.7	+3.2
	3.6nm,0.6s,baz=310,slow=8.2,SNR=3.8						
HTT	Hallett	27.11	161	P	P	04 29 13.9	+7.7
	baz=27,SNR=3.3						
CMSA	Cobar Meteorol	28.36	148	P	P	04 29 22.0	+4.7
	baz=28,SNR=8.3						
ARPS	Mount Arapiles	31.13	159	P	P	04 29 47.5	+5.8
	baz=31,SNR=6.2						
PSI	Prapat	31.54	289	*e*P	P	04 29 44.6	-1.1
	13nm,0.8s						
YNG	Young	31.93	148	P	P	04 29 54.1	+5.4
	baz=32,SNR=5.4						
KCSI	Kotacane, Aceh	32.86	289	P	P	04 29 57.1	-0.1
TOO	Toolangi	33.23	155	P	P	04 30 06.1	+6.0
	baz=33,SNR=4.2						
DZM	Mont Dzumac	38.97	115	*e*LR	LR	04 41 43.2	
	514nm,36.2s						
CMAR	Chiang Mai Arr	39.34	312	P	P	04 30 52.0	-0.4
	0.9nm,0.4s,baz=136,slow=7.2,SNR=5.5						
CHTO	Chiang Mai	39.56	312	*e*P	P	04 30 53.3	-0.9
	2.7nm,0.3s						
GYA	Guiyang	40.30	329	*e*P	P	04 31 01.8	+1.5
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NJ2	Nanjing	40.83	347	*e*P	P	04 31 05.0	+0.6
NJ2				pmax	pmax		
	comp=Z,16nm,0.6s						
KMI	Kunming	41.43	323	P	P	04 31 10.7	+1.0
KMI				pmax	pmax		
	comp=Z,8.0nm,0.5s						
MAJO	Matsushiro	45.11	11	*e*P	P	04 31 36.5	-2.4
	14nm,1.0s						
MAT	Matsushiro	45.11	11	P	P	04 31 36.8	-2.1
MJAR	Matsushiro Arr	45.11	11	P	P	04 31 37.0	-2.0
	8.7nm,0.9s,baz=196,slow=10,SNR=18						
MJB9	Matsu-Tunnel	45.11	11	*e*P	P	04 31 37.9	-1.0
	13nm,1.0s						
KSAR	Wonju Array Be	45.12	359	P	P	04 31 39.0	0.0
KSRS	Korea Array	45.13	359	P	P	04 31 39.0	0.0
	1.9nm,0.6s,baz=181,slow=9.5,SNR=12						
KS01	Wonju Array Si	45.15	359	*e*P	P	04 31 39.7	+0.6
BJI	Beijing	49.09	347⇓	*e*P	P	04 32 09.0	-0.7
BJI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
LZH	Lanzhou	49.61	333	*e*P	P	04 32 14.3	+0.3
LZH				pP	sP	04 32 41.8	-7.3
LZH				sP	pP	04 32 51.5	+14
LZH				pmax	pmax		
	comp=Z,21nm,1.1s						
HHC	Hu-ho-hao-te	51.01	343	*e*P	P	04 32 26.2	+1.8
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
USRK	Ussuriysk Ar.	51.95	3	P	P	04 32 31.0	-0.1
	5.2nm,0.8s,baz=188,slow=7.2						
GTA	Gaotai	54.15	333	*e*P	P	04 32 48.2	+0.6
GTA				pP	pP	04 33 11.4	-0.5
GTA				sP	sP	04 33 22.6	-0.4
GTA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
WMQ	Urumqi	63.45	328	P	P	04 33 52.5	+0.6
WMQ				sP	PcP	04 34 28.1	+0.3
PETK	Petropavlovsk-	65.59	19	*e*P	P	04 34 06.0	+0.4
KSH	Kashi	67.81	318	*e*P	P	04 34 21.4	+1.3
MK01	Makanchi Array	68.26	328	*e*P	P	04 34 21.8	-0.9
MAKZ	Makanchi	68.45	327	*e*P	P	04 34 22.2	-1.6
	5.3nm,0.9s						
ZAA0	Zalesovo Array	71.83	334	*e*P	P	04 34 43.8	-0.4
	19nm,1.4s						
ZALV	Zalesovo Beam	71.83	334	P	P	04 34 43.7	-0.5
	4.6nm,0.7s,baz=131,slow=5.0,SNR=16						
ZALV	Zalesovo Beam	71.83	334	*e*P	P	04 34 43.3	-0.9
KURBB	Kurchatov Arra	72.61	329	P	P	04 34 49.2	+0.3
	5.1nm,0.7s,baz=129,slow=4.7,SNR=31						
KURK	Kurchatov	72.62	329	*e*P	P	04 34 49.6	+0.6
MAW	Mawson	73.63	201	P	P	04 34 59.2	+4.4
	1.4nm,0.6s,baz=65,slow=11,SNR=4.2						
MAW	Mawson	73.63	201	*e*P	P	04 34 56.5	+1.7
	4.6nm,1.8s						
BVAR	Borovoye Array	78.14	328	P	P	04 35 22.1	+1.5
	3.5nm,0.8s,baz=130,slow=9.4,SNR=18						
BRVK	Borovoye	78.21	328	*e*P	P	04 35 20.8	-0.2
TIXI	Tiksi	79.39	0	*e*P	P	04 35 27.3	+0.3
PPT2	Papeete2	79.82	106	*e*LR	LR	05 00 36.4	
	392nm,25.8s						
SYO	Syowa Base	82.35	201⇓	*e*X	P	04 35 40.0	-2.9
ABKAR	Akbulak array	82.41	322	*e*P	P	04 35 44.1	+0.5
AKTO	Aktyubinsk	83.99	323	P	P	04 35 52.2	+0.5
	3.7nm,0.9s,baz=115,slow=7.6,SNR=7.4						
ARU	Arti	85.79	328	*e*P	P	04 36 01.0	+0.4
	15nm,1.1s						
SNAA	Sanae	94.48	194	LR	LR	05 19 31.8	
	comp=Z,107nm,18.7s,baz=54,slow=36						
ILAR	Eielson Array	94.72	25	P	P	04 36 40.5	-1.9
	0.4nm,0.7s,baz=259,slow=3.9,SNR=4.5						
TORD	Torodi Ar. Bea	127.70	280	PKP	PKPdf	04 42 28.7	+1.5
	1.4nm,1.0s,baz=159,slow=26						
S39A	Bolivar	131.85	45	*e*PKPdf	PKPdf	04 42 35.2	+0.7
CPUP	Villa Florida	145.47	170	PKPbc	PKPab	04 43 03.0	+2.9
	2.5nm,0.5s,baz=212,slow=3.7,SNR=3.2						
LPAZ	La Paz	150.76	145	PKPbc	PKPab	04 43 18.6	-3.6
	3.0nm,0.4s,baz=43,slow=5.0,SNR=17						

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*MEX **01** 04:28:25.5±0.5, 32°.56N×114°.97W, h16^{km}±111^{km}, MD3.7*

*ISCJB **01** 04:28:26.4±1.1, 32°.34N±0°.05×115°.24W±0°.07, h21^{km}±6^{km}, Error ellipse: s-maj=12.3km s-min=6.2km az=139.9*

*ECX **01** 04:28:28.1±0.6, 32°.27N×115°.29W, h5^{km}, MD2.3, ML2.5*

ISC 01 04:28:26.1±1.9**, 32°.36N**±0°.09×**115°.2W**±0°.1**, h24**^{km}±8^{km}**, n10,** σ0^{s}.**79**/18**, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPBX	Cerro Prieto	0.09	313	*e*P	Pn	04 28 30.5	0.0
CPBX				*e*S	Sb	04 28 33.6	0.0
CPBX				IAML		04 28 35.6	
	comp=E,3µm,0.2s						
CPBX				*e*		04 28 35.6	
RMX	La Rumorosa	0.76	289	*e*P	Pn	04 28 40.6	-0.8
RMX				*e*S	Sb	04 28 49.4	-1.4
IKP	In-Ko-Pah, Jac	0.80	292	*e*P	Pn	04 28 42.4	+0.4
ECBX	El Chinero	0.89	170	*e*P	Pb	04 28 42.7	-0.3
ECBX				*e*S	Sb	04 28 54.0	-0.4
ECBX				IAML		04 28 55.4	
	comp=N,110nm,0.2s						
ECBX				*e*		04 28 55.4	
CBX	Cerro Bola	1.22	268	*e*P	Pb	04 28 48.4	-0.1
CBX				*e*S	Sn	04 29 04.2	+0.7
CBX	Cerro Bola	1.22	268	*e*P	Pb	04 28 47.9	-0.6
CBX				*e*S	Sb	04 29 05.1	+1.2
ZAX	El Zacaton	1.22	227	*e*P	Pn	04 28 47.7	-0.1
ZAX				*e*S	Sn	04 29 02.9	-0.7
ZAX				IAML		04 29 04.7	
	comp=N,99nm,0.3s						
ZAX				*e*		04 29 04.7	
TJIG	Tijuana	1.23	274	*e*P	Pn	04 28 47.3	-0.5
TJIG				*e*S	Sn	04 29 04.2	+0.6
BAR	Barrett	1.26	285	*e*P	Pb	04 28 49.8	+0.6
SPIG	San Pedro Mart	1.32	189	*e*P	Pn	04 28 49.4	0.0
SPIG				*e*S	Sn	04 29 07.8	+1.4

MEX 01 04:28:44.4±0.6**, 24°.27N**×**109°.10W, h10**^{km}**, MD3.6, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SLBS	Sierra La Lagu	0.97	233	*e*P	Pg	04 29 00.6	-2.5
SLBS				*i* S	Sg	04 29 12.1	-3.5
LPIG	La Paz	1.12	262	*e*P	Pb	04 29 01.9	-3.9
LPIG				*i* S	Sg	04 29 16.8	-3.6

MAN 01 04:33:43.6, 7°.18N×**125°.23E, h17**^{km}**, mb4.1, ML2.9, MS2.5, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUKP	Musuan	0.71	347	*e*P	Pb	04 33 57.6	-0.1
BUKP				*e*S	Sn	04 34 09.0	-0.6
SKMP	Bagumbayan, Su	0.94	226	*e*P	Pb	04 34 00.1	-1.4
PAGZ	Pagadian	1.95	290	*e*P	Pn	04 34 16.2	+0.3

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*ISCJB **01** 04:54:04.3±0.3, 25°.64N±0°.03×94°.51E±0°.03, h78^{km}±3^{km}, mb4.0/28, Error ellipse: s-maj=4.4km s-min=3.7km az=148.9*

*NEIC **01** 04:54:04.4±0.2, 25°.59N×94°.72E, mb4.3/3, Error ellipse: s-maj=6.9km s-min=4.8km az=51.0*

*IDC **01** 04:54:04.4±0.6, 25°.55N×94°.70E, h59^{km}±4^{km}, mb3.8/21, mb1 3.9/23, mb1mx3.7/66, mbtmp4.1/23, MS3.2/5, Ms1 3.3/5, ms1mx2.9/69, Error ellipse: s-maj=12.4km s-min=9.8km az=97.0*

*NDI **01** 04:54:05.5±2.9, 25°.68N×94°.63E, h68^{km}±12^{km}, ML4.3, mb4.3(NEIC)*

ISC 01 04:54:04.8±0.5**, 25°.65N**±0°.03×**94°.60E**±0°.05**, h62**^{km}±4^{km}**, n74,** σ1^{s}.**57**/112**, mb4.2**/28**, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOHI	KOHIMA	0.45	280	*e*P	Pn	04 54 17.5	+0.9
KOHI				*e*S	Sn	04 54 22.2	-3.0
KOHI				IAML		04 54 28.6	
	comp=E,8µm,1.0s						
KOHI				IAML		04 54 29.1	
	comp=N,9µm,1.0s						
MOKO	MOKOCHONG	0.68	354	*e*P	Pn	04 54 20.5	+1.4
MOKO				*e*S	Sn	04 54 30.7	+1.2
MOKO				IAML		04 54 31.5	
	comp=N,4µm,1.2s						
MOKO				IAML		04 54 32.1	
	comp=E,6µm,2.3s						
IMP	Imphal	1.00	216	*e*P	Pn	04 54 24.6	+1.6
IMP				*e*S	Sn	04 54 38.5	+2.0
IMP				IAML		04 54 39.3	
	comp=N,4µm,0.2s						
IMP				IAML		04 54 43.4	
	comp=E,6µm,1.1s						
JORH	JORHAT	1.14	344	*e*P	Pn	04 54 25.6	+1.0
JORH				*e*S	Sn	04 54 41.4	+1.9
JORH				IAML		04 54 44.6	
	comp=E,17µm,0.0s						
ITAN	ITANAGAR	1.69	333	*e*P	Pn	04 54 33.0	+1.0
ITAN				*e*S	Sn	04 54 52.4	-0.3
ITAN				IAML		04 54 54.7	
	comp=E,10µm,0.3s						
ITAN				IAML		04 54 55.3	
	comp=N,18µm,0.5s						
TEZP	TEZPUR	1.88	301	*e*P	Pn	04 54 35.0	+0.3
TEZP				*e*S	Sn	04 54 56.7	-0.6
TEZP				IAML		04 54 59.9	
	comp=E,6µm,0.6s						
TEZP				IAML		04 55 00.5	
	comp=N,9µm,0.7s						
ZIRO	ZIRO	1.99	341	*e*P	Pn	04 54 36.6	+0.3
ZIRO				*e*S	Sn	04 54 58.7	-1.5
ZIRO				IAML		04 55 04.7	
	comp=E,8µm,0.6s						
ZIRO				IAML		04 55 05.2	
	comp=N,12µm,0.3s						
LKP	Lekhapani	2.02	33	*e*P	Pn	04 54 36.8	+0.3
LKP				*e*S	Sn	04 54 59.8	-0.9
LKP				IAML		04 55 10.8	
	comp=E,3µm,3.1s						
SHL	Shillong	2.45	269	*e*P	Pn	04 54 43.0	+0.4
SHL				*e*S	Sn	04 55 10.4	-1.1
SHL				IAML		04 55 13.6	
	comp=N,2µm,0.5s						
SHL				IAML		04 55 14.7	
	comp=E,2µm,0.2s						
GUWA	GUWAHATI	2.67	282	*e*P	Pn	04 54 46.1	+0.7
GUWA				*e*S	Sn	04 55 17.1	+0.5
GUWA				IAML		04 55 17.6	
	comp=N,2µm,0.7s						
GUWA				IAML		04 55 18.0	
	comp=E,2µm,0.3s						
SAIH	SAIHA	3.47	205	*e*P	Pn	04 54 56.9	+0.4
SAIH				*e*S	Sn	04 55 34.9	-1.5
SAIH				IAML		04 55 43.5	
	comp=E,309nm,0.3s						
SAIH				IAML		04 55 44.0	
	comp=N,302nm,0.7s						
AGT	Agartala	3.51	241	*e*P	Pn	04 54 59.2	+2.3
AGT				*e*S	Sn	04 55 39.0	+1.8
BELO	BELONIA	3.73	231	*e*S	Sn	04 55 42.6	-0.1
TURI	Tura	3.85	269	*e*P	Pn	04 55 03.5	+2.0
TURI				*e*S	Sn	04 55 46.2	+0.6
TURI				IAML		04 55 46.9	
	comp=E,2µm,0.5s						
TURI				IAML		04 55 49.9	
	comp=N,3µm,0.5s						
BRDH	Bariadhala	4.00	223	P	Pn	04 55 03.4	-0.2
	comp=N,16nm,0.3s,baz=266,slow=19,SNR=2.0						
BRDH				S	Sn	04 55 49.0	-0.2
	comp=N,162nm,0.3s,baz=75,slow=20,SNR=18						
BRDH				LR	LR	04 57 11.3	
	comp=N,187nm,21.6s,baz=340,slow=47						
DHUB	DHUBRI	4.16	276	*e*P	Pn	04 55 06.1	+0.3
DHUB				*e*S	Sn	04 55 50.8	-2.4
LSA	Lhasa	5.06	324	*e*Pn	Pn	04 55 20.1	+1.5
	comp=N,48nm,0.6s						
LSA				*e*Sn	Sn	04 56 09.6	-6.3
GTK	Tadong	5.62	289	*e*P	Pn	04 55 25.9	0.0
GTK				*e*S	Sn	04 56 28.4	-0.8
TAPN	Taplejung	6.40	287	*e*Pn	Pn	04 55 37.1	+0.4
TAPN				*e*Sn	Sn	04 56 47.1	-1.4
	comp=N,293nm,0.4s						
ODAN	Odare	6.58	282	*e*Pn	Pn	04 55 39.5	+0.3
ODAN				*e*Sn	Sn	04 56 51.4	-1.5
	comp=N,654nm,0.5s						
RAMN	Ramite	7.29	282	*e*Pn	Pn	04 55 49.4	+0.5
RAMN				*e*Sn	Sn	04 57 08.0	-2.4
	comp=N,447nm,0.6s						
JIRN	Jiri	7.78	287	*e*Pn	Pn	04 55 55.9	+0.2
JIRN				*e*Sn	Sn	04 57 21.0	-1.6
	comp=N,364nm,0.4s						
CHTO	Chiang Mai	7.90	149	*e*Pn	Pn	04 55 54.9	-2.2
GUN	Gumba	8.11	288	*e*Pn	Pn	04 56 00.1	-0.1
GUN				*e*Sn	Sn	04 57 28.5	-2.1
	comp=N,334nm,0.4s						
CMAR	Chiang Mai Arr	8.21	150	P	Pn	04 56 01.0	-0.3
	comp=N,0.8nm,0.3s,baz=325,slow=13,SNR=8.2						
CMAR				LR	LR	04 59 41.3	
	comp=N,115nm,18.3s,baz=170,slow=42						
PKIN	Phulchoki	8.45	285	*e*Pn	Pn	04 56 05.7	+0.9
PKIN				*e*Sn	Sn	04 57 36.9	-2.0
	comp=N,293nm,0.5s						
KKN	Kakani	8.60	286	*e*Pn	Pn	04 56 06.5	-0.3
KKN				*e*Sn	Sn	04 57 39.8	-2.6
	comp=N,78nm,0.2s						
DMN	Daman	8.71	285	*e*Pn	Pn	04 56 07.9	-0.5
DMN				*e*Sn	Sn	04 57 42.7	-2.5
	comp=N,174nm,0.6s						
GKN	Gorkha	9.20	287	*e*Pn	Pn	04 56 14.8	-0.1
GKN				*e*Sn	Sn	04 57 53.4	-3.6
	comp=N,152nm,0.3s						
DANN	Dangsing	10.03	288	*e*Pn	Pn	04 56 24.6	-1.8
DANN				*e*Sn	Sn	04 58 13.5	-4.1
	comp=N,96nm,0.3s						
KOLN	Koldanda	10.06	285	*e*Pn	Pn	04 56 25.4	-1.3
KOLN				*e*Sn	Sn	04 58 14.4	-3.6
	comp=N,95nm,0.4s						
PYUN	Piuthan	10.64	286	*e*Pn	Pn	04 56 32.6	-2.1
PYUN				*e*Sn	Sn	04 58 28.3	-4.2
	comp=N,171nm,0.6s						
ENH	Enshi	13.94	67	*e*Pn	Pn	04 57 19.0	-0.4
NIL	Nilore	20.17	298	*e*P	P	04 58 35.0	+0.8
PALK	Pallekele	22.57	218	LR	LR	05 12 08.5	
	comp=N,32nm,18.3s,baz=114,slow=48						
MKAR	Makanchi Array	23.27	338	P	P	04 59 07.3	+0.4
	comp=N,6.4nm,0.7s,baz=148,slow=11,SNR=30						
MKAR				pP	pP	04 59 22.5	+1.6
	comp=N,5.7nm,0.6s,baz=154,slow=12,SNR=7.9						
MKAR				ScP	ScP	05 06 25.6	+0.4
	comp=N,0.4nm,0.6s,baz=155,slow=4.4,SNR=3.5						
KURBB	Kurchatov Arra	27.83	338	P	P	04 59 49.0	+0.9
	comp=N,2.0nm,0.6s,baz=147,slow=9.3,SNR=21						
KURBB				ScP	ScP	05 06 37.6	-0.6
	comp=N,0.3nm,0.2s,baz=155,slow=2.1,SNR=4.3						
KURK	Kurchatov	27.88	338	P	P	04 59 49.0	+0.5
KURK				ScP	ScP	05 06 37.6	-0.7
ZALV	Zalesovo Beam	29.19	348	P	P	05 00 01.8	+1.7
	comp=N,3.7nm,0.7s,baz=157,slow=6.5,SNR=13						
ZALV				ScP	ScP	05 06 41.6	-0.7
	comp=N,0.5nm,0.5s,baz=195,slow=2.2,SNR=3.1						
KSAR	Wonju Array Be	30.56	59	P	P	05 00 09.2	-3.3
KSRS	Korea Array	30.59	59	P	P	05 00 09.1	-3.6
	comp=N,0.4nm,0.4s,baz=39,slow=25,SNR=3.9						
BVAR	Borovoye Array	32.82	333	P	P	05 00 33.5	+1.4
	comp=N,0.5nm,0.4s,baz=134,slow=12,SNR=4.6						
BVAR				pP	pP	05 00 48.2	+0.7
	comp=N,1.0nm,0.5s,baz=139,slow=12,SNR=5.3						
BVAR				ScP	ScP	05 06 54.8	+0.2
	comp=N,0.4nm,0.5s,baz=132,slow=2.1,SNR=3.4						
USRK	Ussuriysk Ar.	35.43	49	P	P	05 00 53.8	-1.0
	comp=N,2.4nm,0.4s,baz=246,slow=6.1						
KLR	Kul'dur	37.19	41	P	P	05 01 09.6	-0.2
	comp=N,0.1nm,0.4s,baz=287,slow=8.2,SNR=7.8						
AKTO	Aktyubinsk	37.40	321	P	P	05 01 13.2	+1.7
	comp=N,1.3nm,0.7s,baz=99,slow=8.1,SNR=3.7						
ASAJ	Asahikawa	42.81	52	P	P	05 01 55.3	-1.2
	comp=N,7.3nm,0.7s,baz=285,slow=8.8,SNR=5.9						
YSS	Yuzh-Sakhalins	43.44	48	*e*P	P	05 02 01.2	-0.3
	comp=N,8.5nm,0.6s						
GNI	Garni	43.74	302	*e*P	P	05 02 05.2	+1.0
MA2	Magadan	51.23	33	*e*P	P	05 03 02.1	+0.4
BRTR	Keskin Array B	52.27	302	P	P	05 03 11.3	+1.2
	comp=N,0.4nm,0.7s,baz=93,slow=7.9,SNR=2.8						
BRTR				pP	pP	05 03 25.8	-0.6
	comp=N,1.0nm,0.6s,baz=120,slow=7.7,SNR=5.2						
MBWA	Marble Bar	52.54	150	*e*P	P	05 03 10.9	-1.1
PETK	Petropavlovsk-	53.87	42	P	P	05 03 22.3	+0.8
	comp=N,1.5nm,0.5s,baz=270,slow=6.1						
AKASG	Malin Array Be	55.15	315	P	P	05 03 31.5	+0.8
	comp=N,0.4nm,0.3s,baz=80,slow=7.0,SNR=3.7						
AKASG				pP	pP	05 03 46.3	-0.8
	comp=N,2.3nm,0.5s,baz=79,slow=6.5,SNR=7.2						
KIEV	Kiev	55.16	315	*e*P	P	05 03 31.2	+0.4
	comp=N,3.3nm,0.7s						
FINES	FINESS Array B	57.56	328	P	P	05 03 48.2	+0.5
	comp=N,0.4nm,0.3s,baz=94,slow=8.0,SNR=6.3						
FINES				pP	pP	05 04 04.1	-0.1
	comp=N,1.7nm,0.6s,baz=79,slow=9.9,SNR=2.9						
ARCES	ARCESS Array B	58.92	337	P	P	05 03 57.8	+0.7
	comp=N,1.5nm,0.6s,baz=94,slow=4.9,SNR=7.0						
WRA	Warramunga Arr	59.54	136	P	P	05 04 01.1	-0.9
	comp=N,5.8nm,0.4s,baz=323,slow=7.4,SNR=92						
WRAB	Tennant Creek	59.54	136	*e*P	P	05 04 01.1	-0.9
PMG	Port Moresby	61.87	117	LR	LR	05 32 41.1	
	comp=N,34nm,19.3s,baz=112,slow=38						
PMG	Port Moresby	61.87	117	*e*P	P	05 04 17.1	-0.9
ASAR	Alice Springs	62.06	139	P	P	05 04 18.5	-0.6
	comp=N,2.1nm,0.4s,baz=321,slow=6.6,SNR=32						
NWAO	Narrogin (SRO)	62.11	159	P	P	05 04 17.7	-1.5
	comp=N,9.5nm,1.0s,baz=43,slow=18,SNR=7.2						
NWAO	Narrogin (SRO)	62.11	159	*e*P	P	05 04 17.9	-1.3
SPITS	Spitsbergen Ar	62.66	347	P	P	05 04 22.9	+0.5
	comp=N,5.6nm,1.0s,baz=129,slow=39,SNR=4.7						
HFS	Hagfors	63.63	327	P	P	05 04 29.9	+0.9
	comp=N,2.1nm,0.5s,baz=99,slow=9.1,SNR=16						
NB2	NORSAR Subarra	64.74	328	P	P	05 04 36.5	+0.1
	comp=Z,0.8nm,0.6s,baz=82,slow=6.5						
GERES	GERESS Array B	65.32	314	P	P	05 04 41.2	+0.8
	comp=Z,0.6nm,0.7s,baz=77,slow=7.0,SNR=7.6						
GERES				pP	pP	05 04 57.8	+0.6
	comp=Z,1.3nm,0.6s,baz=75,slow=7.1,SNR=7.7						
ILAR	Eielson Array	78.22	23	P	P	05 05 57.2	-0.1
	comp=Z,0.4nm,0.5s,baz=195,slow=4.4,SNR=4.1						
KDAK	Kodiak Island	79.87	30	*e*P	P	05 06 06.2	-0.3
	comp=Z,2.4nm,0.4s						
INK	Inuvik	79.89	16	LR	LR	05 48 47.6	
	comp=Z,35nm,18.1s,baz=356,slow=41						
DAWY	Dawson	81.19	21	*e*P	P	05 06 14.3	+0.8
	comp=Z,0.6nm,0.5s						
TORD	Torodi Ar. Bea	86.97	283	P	P	05 06 45.7	+1.9
	comp=Z,0.4nm,0.9s,baz=58,slow=3.9						
TORD				pP	pP	05 07 01.2	0.0
YKA	Yellowknife Ar	89.12	13	P	P	05 06 54.2	+1.1
	comp=Z,0.3nm,0.8s,baz=328,slow=5.8,SNR=3.6						
JCT	Junction City	122.51	15	*e*PKPdf	PKPdf	05 12 53.5	-0.2

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*TIR **01** 04:57:41.4, 40°.18N×20°.65E, h18^{km}, Md3.1/4*

*ATH **01** 04:57:41.9, 40°.18N×20°.67E, h17^{km}±2^{km}, ML2.4/8, Error ellipse: s-maj=2.5km s-min=0.7km az=98.0*

*CSEM **01** 04:57:42.5±0.1, 40°.17N×20°.69E, h2^{km}, ML2.3, Error ellipse: s-maj=3.4km s-min=2.4km az=97.0*

*THE **01** 04:57:42.3, 40°.18N×20°.68E, h0^{km}±1^{km}, ML2.3/16, Error ellipse: s-maj=1.3km s-min=0.4km az=307.0*

*SKO **01** 04:57:42.5, 40°.12N×20°.70E, h0^{km}, M2.1, ML2.5*

ISC 01 04:57:42.4±1.0**, 40°.18N**±0°.01×**20°.67E**±0°.02**, h6**^{km}±9^{km}**, n78,** σ0^{s}.**66**/131**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PENT	Pentalofos	0.36	86	P	Pg	04 57 49.4	-0.1
PENT				S	Sg	04 57 55.1	+1.0
PENT				AML	AML	04 57 55.7	
	comp=N,744µm,0.2s						
PENT				AML	AML	04 57 56.2	
	comp=E,773µm,0.3s						
PENT	Pentalofos	0.36	86	P	Pg	04 57 49.2	-0.2
PENT				S	Sg	04 57 54.5	+0.3
PENT	Pentalofos	0.36	86	P	Pg	04 57 49.3	-0.1
PENT				S	Sg	04 57 54.5	+0.3
NEST	Nestorio	0.38	50	P	Pg	04 57 50.0	+0.2
NEST				S	Sg	04 57 55.5	+0.7
NEST				AML	AML	04 57 56.1	

	comp=N,2335µm,0.5s						
NEST				AML	AML	04 57 56.4	
	comp=E,2191µm,0.4s						
NEST	**Nestorio**	**0.38**	**50**	P	**Pg**	**04 57 49.6**	**-0.2**
NEST				S	**Sg**	**04 57 55.6**	**+0.9**
NEST	**Nestorio**	**0.38**	**50**	P	**Pg**	**04 57 49.6**	**-0.2**
NEST				S	**Sg**	**04 57 55.3**	**+0.6**
KBN	**Korca**	**0.46**	**11**	*i* Pg	**Pg**	**04 57 50.4**	**-0.9**
KBN				*i* Sg	**Sg**	**04 57 57.7**	**+0.4**
KBN	**Korca**	**0.46**	**11**	*i* PG	**Pg**	**04 57 50.4**	**-0.9**
KBN				*i* SG	**Sg**	**04 57 57.6**	**+0.4**
JAN	**Janina**	**0.54**	**165**	P	**Pg**	**04 57 51.8**	**-1.0**
JAN				S	**Sg**	**04 57 59.9**	**+0.2**
JAN				AML	AML	04 58 02.6	
	comp=E,1503µm,0.3s						
JAN				AML	AML	04 58 02.7	
	comp=N,1261µm,0.2s						
JAN	**Janina**	**0.54**	**165**	P	**Pg**	**04 57 52.0**	**-0.7**
JAN				S	**Sg**	**04 58 00.4**	**+0.7**
JAN	**Janina**	**0.54**	**165**	P	**Pg**	**04 57 52.1**	**-0.7**
JAN				S	**Sg**	**04 58 00.0**	**+0.2**
KPRO	**Kipourio**	**0.57**	**112**	P	**Pg**	**04 57 52.7**	**-0.8**
KPRO				S	**Sg**	**04 58 01.6**	**+0.6**
KPRO				AML	AML	04 58 08.1	
	comp=E,654µm,0.5s						
KPRO				AML	AML	04 58 10.4	
	comp=N,675µm,0.6s						
KPRO	**Kipourio**	**0.57**	**112**	P	**Pg**	**04 57 52.8**	**-0.7**
KPRO				S	**Sg**	**04 58 01.5**	**+0.6**
KPRO	**Kipourio**	**0.57**	**112**	P	**Pg**	**04 57 52.9**	**-0.6**
KPRO				S	**Sg**	**04 58 01.4**	**+0.4**
SGD	**Sagiada**	**0.66**	**211**	P	**Pg**	**04 57 54.9**	**-0.1**
SGD	**Sagiada**	**0.66**	**211**	P	**Pg**	**04 57 54.6**	**-0.4**
SGD	**Sagiada**	**0.66**	**211**	P	**Pg**	**04 57 54.6**	**-0.4**
IGT	**Igoumenitsa**	**0.69**	**202**	P	**Pg**	**04 57 54.7**	**-1.0**
IGT				S	**Sg**	**04 58 05.2**	**+0.5**
IGT				AML	AML	04 58 08.8	
	comp=E,1275µm,0.5s						
IGT				AML	AML	04 58 09.7	
	comp=N,674µm,0.3s						
IGT	**Igoumenitsa**	**0.69**	**202**	P	**Pg**	**04 57 54.9**	**-0.8**
IGT				S	**Sb**	**04 58 06.0**	**-0.7**
IGT	**Igoumenitsa**	**0.69**	**202**	P	**Pg**	**04 57 55.0**	**-0.8**
IGT				S	**Sg**	**04 58 05.1**	**+0.4**
FNA	**Florina**	**0.81**	**41**	P	**Pg**	**04 57 57.0**	**-1.1**
FNA				S	**Sg**	**04 58 08.2**	**-0.4**
FNA				AML	AML	04 58 10.2	
	comp=E,698µm,0.7s						
FNA				AML	AML	04 58 11.9	
	comp=N,730µm,0.4s						
FNA	**Florina**	**0.81**	**41**	P	**Pg**	**04 57 57.2**	**-0.8**
FNA				S	**Sg**	**04 58 09.1**	**+0.5**
FNA	**Florina**	**0.81**	**41**	P	**Pg**	**04 57 57.2**	**-0.8**
FNA				S	**Sg**	**04 58 08.5**	**-0.1**
KEK	**Kerkira**	**0.81**	**236**	P	**Pg**	**04 57 57.3**	**-0.7**
KEK				S	**Sb**	**04 58 10.2**	**0.0**
KEK				AML	AML	04 58 12.7	
	comp=N,521µm,0.5s						
KEK				AML	AML	04 58 14.3	
	comp=E,601µm,0.5s						
KEK	**Kerkira**	**0.81**	**236**	P	**Pg**	**04 57 57.4**	**-0.7**
KEK				S	**Sb**	**04 58 10.3**	**+0.1**
KEK	**Kerkira**	**0.81**	**236**	P	**Pg**	**04 57 57.4**	**-0.7**
KEK				S	**Sg**	**04 58 09.6**	**+1.0**
KZN	**Kozani**	**0.85**	**81**	P	**Pg**	**04 57 58.6**	**-0.2**
KZN				S	**Sb**	**04 58 11.2**	**-0.1**
KZN				AML	AML	04 58 16.2	
	comp=E,423µm,0.5s						
KZN				AML	AML	04 58 16.5	
	comp=N,274µm,0.4s						
KZN	**Kozani**	**0.85**	**81**	P	**Pg**	**04 57 58.4**	**-0.4**
KZN				S	**Sb**	**04 58 11.7**	**+0.3**
KZN	**Kozani**	**0.85**	**81**	P	**Pg**	**04 57 58.4**	**-0.4**
KZN				S	**Sb**	**04 58 10.7**	**-0.7**
OHR	**Ohrid**	**0.94**	**6**	*i* Pg	**Pg**	**04 58 00.6**	**+0.1**
OHR				*i* Sg	**Sb**	**04 58 13.9**	**-0.1**
OHR				*e*Lg	Lg	04 58 15.4	
	comp=E,139nm,0.6s						
OHR				*e*Lg	Lg	04 58 16.1	
	comp=N,76nm,0.6s						
BIA	**Bitola**	**0.98**	**30**	P	**Pg**	**04 58 00.8**	**-0.4**
BIA				S	**Sb**	**04 58 14.8**	**-0.2**
BIA	**Bitola**	**0.98**	**30**	*i* Pg	**Pg**	**04 58 01.1**	**-0.2**
BIA				*i* Sg	**Sb**	**04 58 15.1**	**+0.1**
BIA	**Bitola**	**0.98**	**30**	P	**Pg**	**04 58 00.8**	**-0.4**
BIA				S	**Sb**	**04 58 14.8**	**-0.2**
DSL	**Palaion Diasel**	**1.09**	**162**	P	**Pg**	**04 58 02.4**	**-1.0**
DSL	**Palaion Diasel**	**1.09**	**162**	P	**Pg**	**04 58 02.2**	**-1.1**
DSL				S	**Sb**	**04 58 18.3**	**+0.1**
DSL	**Palaion Diasel**	**1.09**	**162**	P	**Pg**	**04 58 02.5**	**-0.8**
DSL				S	**Sb**	**04 58 18.3**	**+0.1**
KTI	**Kastanea**	**1.13**	**78**	P	**Pg**	**04 58 03.3**	**-0.7**
KTI	**Kastanea**	**1.13**	**78**	P	**Pg**	**04 58 03.3**	**-0.7**
THL	**Klokotos Trika**	**1.20**	**120**	P	**Pg**	**04 58 04.5**	**-0.9**
THL	**Klokotos Trika**	**1.20**	**120**	P	**Pg**	**04 58 04.9**	**-0.5**
THL				S	**Sn**	**04 58 22.8**	**+0.5**
THL	**Klokotos Trika**	**1.20**	**120**	P	**Pg**	**04 58 04.9**	**-0.5**
THL				S	**Sn**	**04 58 22.8**	**+0.5**
KRUS	**Krusevo**	**1.27**	**20**	*i* Pg	**Pg**	**04 58 05.8**	**-1.1**
LKD2	**Lefkada island**	**1.38**	**180**	P	**Pb**	**04 58 08.9**	**+0.2**
LKD2	**Lefkada island**	**1.38**	**180**	P	**Pn**	**04 58 08.5**	**+0.2**
LKD2				S	**Sn**	**04 58 28.4**	**+1.5**
LKD2	**Lefkada island**	**1.38**	**180**	P	**Pn**	**04 58 08.4**	**+0.2**
LKD2				S	**Sn**	**04 58 28.4**	**+1.5**
LIT	**Litokhoron**	**1.40**	**92**	P	**Pn**	**04 58 07.3**	**-1.1**
LIT	**Litokhoron**	**1.40**	**92**	P	**Pn**	**04 58 07.5**	**-0.9**
LIT				S	**Sn**	**04 58 27.8**	**+0.6**
LIT	**Litokhoron**	**1.40**	**92**	P	**Pn**	**04 58 07.7**	**-0.7**
LIT				S	**Sn**	**04 58 27.8**	**+0.6**
PHP	**Peshkopia**	**1.52**	**353**	*i* Pn	**Pn**	**04 58 10.0**	**-0.2**
PHP				*i* Sn	**Sg**	**04 58 31.5**	**+0.2**
PHP	**Peshkopia**	**1.52**	**353**	*i* PN	**Pn**	**04 58 10.0**	**-0.2**
PHP				*i* SN	**Sg**	**04 58 31.5**	**+0.2**
GRG	**Griva**	**1.53**	**59**	P	**Pn**	**04 58 10.4**	**+0.1**
GRG	**Griva**	**1.53**	**59**	P	**Pn**	**04 58 09.6**	**-0.7**
GRG				S	**Sg**	**04 58 31.8**	**+0.1**
GRG	**Griva**	**1.53**	**59**	P	**Pn**	**04 58 10.5**	**+0.1**
GRG				S	**Sg**	**04 58 31.8**	**+0.1**
EVR	**Evrytania**	**1.53**	**145**	P	**Pn**	**04 58 10.5**	**+0.1**
EVR	**Evrytania**	**1.53**	**145**	P	**Pn**	**04 58 10.3**	**-0.1**
EVR				S	**Sg**	**04 58 32.0**	**+0.3**
EVR	**Evrytania**	**1.53**	**145**	P	**Pn**	**04 58 10.5**	**+0.1**
EVR				S	**Sg**	**04 58 32.0**	**+0.3**
PVO	**Paravola**	**1.69**	**157**	P	**Pn**	**04 58 12.9**	**+0.4**
PVO	**Paravola**	**1.69**	**157**	P	**Pn**	**04 58 12.9**	**+0.4**
FSK	**Fiskardo**	**1.71**	**183**	P	**Pn**	**04 58 13.0**	**+0.2**
FSK				S	**Sb**	**04 58 36.5**	**+0.4**
AGG	**Agios Georgios**	**1.72**	**131**	P	**Pb**	**04 58 14.3**	**-0.2**
AGG	**Agios Georgios**	**1.72**	**131**	P	**Pn**	**04 58 13.3**	**+0.4**
AGG				S	**Sg**	**04 58 37.2**	**-0.6**
AGG	**Agios Georgios**	**1.72**	**131**	P	**Pn**	**04 58 13.3**	**+0.4**
AGG				S	**Sg**	**04 58 37.2**	**-0.6**
VAY	**Valandovo**	**1.84**	**51**	P	**Pn**	**04 58 14.8**	**+0.3**
VAY				S	**Sb**	**04 58 39.5**	**-0.3**
VAY	**Valandovo**	**1.84**	**51**	*e*Pn	**Pb**	**04 58 15.9**	**-0.6**
VAY	**Valandovo**	**1.84**	**51**	P	**Pn**	**04 58 14.8**	**+0.3**
VAY				S	**Sb**	**04 58 39.5**	**-0.3**
STIP	**Stip**	**1.90**	**37**	*e*Pn	**Pg**	**04 58 19.4**	**+0.5**
PUK	**Puka**	**1.96**	**343**	*i* Pn	**Pb**	**04 58 18.8**	**+0.3**
PUK				*i* Sn	**Sb**	**04 58 43.6**	**+0.4**
PUK	**Puka**	**1.96**	**343**	*i* PN	**Pb**	**04 58 18.8**	**+0.3**
PUK				*i* SN	**Sb**	**04 58 43.6**	**+0.4**
SJES	**Sjenica**	**3.13**	**351**	*e*Pn	**Pn**	**04 58 34.1**	**+1.7**
IVAS	**Ivanjica**	**3.42**	**354**	*e*Pn	**Pn**	**04 58 37.1**	**+0.8**
STON	**Ston**	**3.50**	**321**	*e*Pn	**Pn**	**04 58 36.4**	**-0.9**
STON				Sn	**Sn**	**04 59 18.3**	**-0.7**
BOVS	**Bovan**	**3.54**	**12**	*e*Pn	**Pn**	**04 58 37.3**	**-0.6**
GRUS	**Gruza**	**3.71**	**0**	*e*Pn	**Pn**	**04 58 41.8**	**+1.5**
ZAGS	**Zajecar**	**3.82**	**17**	*e*Pn	**Pn**	**04 58 41.2**	**-0.5**
DIVS	**Divibare**	**3.95**	**353**	*e*Pn	**Pn**	**04 58 45.7**	**+2.0**
TEKS	**Tekeris**	**4.45**	**349**	*e*Pn	**Pn**	**04 58 51.1**	**+0.6**
UDBI	**Udbina**	**5.67**	**322**	*e*Pn	**Pn**	**04 59 07.8**	**+0.6**
NVLJ	**Novalja**	**6.14**	**317**	*i* Pn	**Pn**	**04 59 12.0**	**-1.6**
NVLJ				Sn	**Sn**	**05 00 22.6**	**-1.4**

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*ISCJB **01** 05:08:41.7±1.1, 67°.59N±0°.03×33°.6E±0°.2, h0^{km}, Error ellipse: s-maj=8.8km s-min=4.7km az=2.1*

*HEL **01** 05:08:43.2±0.5, 67°.61N×33°.87E, h0^{km}, ML2.3, Explosion*

*CSEM **01** 05:08:43.3±0.7, 67°.59N×33°.68E, h2^{km}, ML2.3, Error ellipse: s-maj=15.0km s-min=8.0km az=99.0, Mining explosion.*

*KOLA **01** 05:08:44.0, 67°.67N×33°.78E, h0^{km}*

*NAO **01** 05:08:46.6±1.7, 67°.65N×33°.17E, ML3.0*

ISC 01 05:08:41.7±1.6, **67°.62N**±0°.04×**33°.92E**±0°.08, **h0^{km}, n37,** σ**1^{s}.25**/62, **Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APA	**Apatity**	**0.20**	**255**	P	**Pg**	**05 08 47.1**	**+1.5**
APA				S	**Sg**	**05 08 49.4**	**+1.2**
APA0	**Apatity Array**	**0.36**	**268**	P	**Pg**	**05 08 49.5**	**+1.0**
APA0				S	**Sg**	**05 08 53.5**	**+0.4**
VRF	**Varrio**	**1.65**	**276**	PG	**Pn**	**05 09 12.3**	**+0.3**
VRF				MSG		05 09 31.9	
	comp=Z,28nm,0.2s						
VRF				SG	**Sn**	**05 09 32.8**	**-1.0**
VRF	**Varrio**	**1.65**	**276**	Pg	**Pn**	**05 09 12.3**	**+0.3**
VRF				Sg	**Sn**	**05 09 32.8**	**-1.0**
	comp=Z,28nm,0.2s						
KU6	**Riekki**	**2.26**	**227**	PG	**Pb**	**05 09 23.1**	**-0.3**
	baz=45						
KU6				MSG		05 09 49.5	
	comp=Z,17nm,0.2s						
KU6				SG	**Sg**	**05 09 53.5**	**-0.8**
KU6	**Riekki**	**2.26**	**227**	Pg	**Pb**	**05 09 23.1**	**-0.3**
KU6				Sg	**Sg**	**05 09 53.5**	**-0.8**
	comp=Z,17nm,0.2s						
MSF	**Maaselka**	**2.59**	**231**	PB	**Pb**	**05 09 27.5**	**-1.4**
MSF				SG	**Sg**	**05 10 03.8**	**-0.9**
SGF	**Sodankyl**	**2.85**	**270**	PN	**Pn**	**05 09 29.5**	**+1.2**
SGF				SG	**Sb**	**05 10 08.1**	**-0.5**
SGF	**Sodankyl**	**2.85**	**270**	Pn	**Pn**	**05 09 29.5**	**+1.2**
RNF	**Rovaniemi**	**3.25**	**255**	PN	**Pn**	**05 09 35.5**	**+1.6**
RNF				SN	**Sn**	**05 10 14.2**	**+0.9**
RNF	**Rovaniemi**	**3.25**	**255**	Pn	**Pn**	**05 09 35.5**	**+1.6**
RNF				Sn	**Sn**	**05 10 14.2**	**+0.9**
KEV	**Kevo**	**3.31**	**314**	PN	**Pn**	**05 09 36.1**	**+1.4**
KEV				SN	**Sn**	**05 10 14.8**	**+0.1**
KEV	**Kevo**	**3.31**	**314**	Pn	**Pn**	**05 09 36.1**	**+1.4**
KEV				Sn	**Sn**	**05 10 14.8**	**+0.1**
ARA0	**ARCESS Array S**	**3.64**	**306**	Pn	**Pn**	**05 09 40.2**	**+1.0**
	baz=121,slow=16						
ARA0				Sn	**Sn**	**05 10 21.4**	**-1.3**
	baz=121,slow=28						
ARA0				Lg	Lg	05 10 32.6	
	baz=115,slow=37						
ARA0	**ARCESS Array S**	**3.64**	**306**	Pn	**Pn**	**05 09 40.2**	**+1.0**
	SNR=134						
ARA0				Sn	**Sn**	**05 10 21.5**	**-1.3**
	SNR=9.4						
ARA0				Lg	Lg	05 10 32.6	
	SNR=7.9						
ARA0	**ARCESS Array S**	**3.64**	**306**	Pn	**Pn**	**05 09 40.2**	**+1.0**
	baz=121,slow=16						
ARA0				Sn	**Sn**	**05 10 21.4**	**-1.3**
	baz=121,slow=28						
ARA0				Lg	Lg	05 10 32.6	
	baz=115,slow=37						
ARE0	**ARCESS Array S**	**3.64**	**306**	PN	**Pn**	**05 09 40.2**	**+1.0**
	baz=121						
ARE0				SN	**Sn**	**05 10 21.5**	**-1.2**
ARE0	**ARCESS Array S**	**3.64**	**306**	Pn	**Pn**	**05 09 40.2**	**+1.0**
ARE0				Sn	**Sn**	**05 10 21.5**	**-1.2**
ARE0	**ARCESS Array S**	**3.64**	**306**	*e*P	**Pn**	**05 09 40.3**	**+1.0**
ARE0				*e*S	**Sn**	**05 10 21.3**	**-1.4**
ARE0				IAML		05 10 40.5	
	comp=Z,25nm,0.5s						
HEF	**Hetta**	**3.94**	**286**	PN	**Pn**	**05 09 44.5**	**+1.1**
HEF	**Hetta**	**3.94**	**286**	Pn	**Pn**	**05 09 44.5**	**+1.1**
TOF	**Tornio**	**4.09**	**252**	PN	**Pn**	**05 09 47.5**	**+2.1**
TOF				SN	**Sn**	**05 10 35.2**	**+1.3**
TOF	**Tornio**	**4.09**	**252**	Pn	**Pn**	**05 09 47.5**	**+2.1**
OUL	**Oulu**	**4.11**	**236**	PB	**Pb**	**05 09 53.3**	**-1.6**
	baz=49						
KTK1	**Kautokeino**	**4.20**	**294**	*e*P	**Pn**	**05 09 47.3**	**+0.3**
KTK1				*e*S	**Sn**	**05 10 35.1**	**-1.6**
KTK1				IAML		05 10 58.3	
	comp=Z,20nm,0.5s						
LANU	**Lannavaara**	**4.54**	**281**	PN	**Pn**	**05 09 51.9**	**+0.3**
LANU				SG	**Sb**	**05 10 60.0**	**+2.6**
LANU	**Lannavaara**	**4.54**	**281**	Pn	**Pn**	**05 09 51.9**	**+0.3**
KALU	**Kalix**	**4.55**	**252**	PN	**Pn**	**05 09 52.7**	**+1.1**
	baz=65						
KALU				SG	**Sg**	**05 11 04.8**	**-2.8**
KALU	**Kalix**	**4.55**	**252**	Pn	**Pn**	**05 09 52.7**	**+1.1**
KALU				Sg	**Sg**	**05 11 04.8**	**-2.8**
FIA0	**FINESS Array S**	**7.06**	**212**	Pn	**Pn**	**05 10 26.9**	**+0.8**
	baz=26,slow=14						
FIA0				Sn	**Sn**	**05 11 46.1**	**-0.8**
FIA0				Lg	Lg	05 12 18.1	
	baz=21,slow=28						
FIA0	**FINESS Array S**	**7.06**	**212**	Pn	**Pn**	**05 10 26.9**	**+0.8**
	baz=26,slow=14						
FIA0				Sn	**Sn**	**05 11 46.1**	**-0.8**
FIA0				Lg	Lg	05 12 18.1	
	baz=21,slow=28						
HFS	**Hagfors**	**11.60**	**239**	Pn	**Pn**	**05 11 27.0**	**-1.3**
	baz=49,slow=14						
HFS				Sn	Sn	05 13 26.8	-11
	baz=60,slow=28						
HFS	**Hagfors**	**11.60**	**239**	Pn	**Pn**	**05 11 27.0**	**-1.3**
	baz=49,slow=14						
HFS				Sn	Sn	05 13 26.8	-11
	baz=60,slow=28						
SPA0	**Spitsbergen Ar**	**11.70**	**342**	Pn	**Pn**	**05 11 29.7**	**+0.1**
	baz=144,slow=11						
SPA0	**Spitsbergen Ar**	**11.70**	**342**	Pn	**Pn**	**05 11 29.7**	**+0.1**
	baz=144,slow=11						
NRA0	**NORESS Array S**	**11.89**	**245**	Pn	**Pn**	**05 11 31.2**	**-1.0**
	baz=50,slow=16						
NRA0				Lg	Lg	05 14 55.9	
	baz=42,slow=37						
NRA0	**NORESS Array S**	**11.89**	**245**	Pn	**Pn**	**05 11 31.2**	**-1.0**
	baz=50,slow=16						
NRA0				Lg	Lg	05 14 55.9	
	baz=42,slow=37						

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*ISCJB **01** 05:09:22.9±2.2, 71°.4N±0°.1×9°.8W±0°.7, h10^{km}, Error ellipse: s-maj=35.5km s-min=7.7km az=148.5*

*BER **01** 05:09:26.1±0.6, 71°.24N×9°.91W, h14^{km}±10^{km}, ML2.7*

ISC 01 05:09:23.7±2.5, **71°.2N**±0°.2×**10°.2W**±0°.2, **h10^{km}, n5,** σ**0^{s}.48**/6, **1C, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JMIC	**Jan Mayen**	**0.60**	**113**	⇑*i*P	**Pg**	**05 09 35.6**	**+0.4**
JMIC				*e*S	**Sg**	**05 09 42.6**	**-0.4**
JMIC				IAML		05 09 43.5	
	comp=Z,494nm,0.2s						
DAG	**Danmarks Havn**	**6.04**	**341**	*i* P	**Pn**	**05 10 52.8**	**0.0**
DAG				*e*S	Sn	05 11 54.7	-7.1
KBS	**Kingsbay**	**9.51**	**26**	*e*Pn	**Pn**	**05 11 40.0**	**-0.3**
KONS	**Konsvik**	**9.61**	**108**	*e*Pn	**Pn**	**05 11 41.5**	**-0.2**
SPA0	**Spitsbergen Ar**	**9.76**	**33**	*e*Pn	**Pn**	**05 11 44.2**	**+0.4**

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*SJA **01** 05:46:04.3±0.3, 24°.12S×66°.40W, h267^{km}±37^{km}, ML3.2, MW2.6*

*ISCJB **01** 05:46:06.3±0.9, 24°.09S±0°.05×67°.2W±0°.2, h189^{km}±31^{km}, Error ellipse: s-maj=26.2km s-min=7.3km az=170.5*

*GUC **01** 05:46:07.8±0.6, 23°.81S×67°.53W, h228^{km}±10^{km}, ML3.7*

ISC 01 05:46:06.9±2.2, **23°.99S**±0°.07×**67°.4W**±0°.2, **h225**^{km}±35^{km}, **n15,** σ**0^{s}.88**/24, **7C-3D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB15	**IPOC Station P**	**2.08**	**291**	⇑*i*P	**Pn**	**05 46 49.0**	**+0.5**
PB15				*i* S	**S**	**05 47 20.1**	**-0.5**
PB06	**IPOC Station P**	**2.40**	**302**	⇑*i*P	**Pn**	**05 46 52.3**	**+0.7**
PB06				*i* S	**S**	**05 47 25.8**	**-0.5**
PB06				IAML		05 47 27.8	
	comp=N,308nm,0.2s						
PB09	**IPOC Station P**	**2.79**	**321**	⇓*i*P	**Pn**	**05 46 56.9**	**+1.2**
PB09				*i* S	**S**	**05 47 34.2**	**+0.4**
PB09				IAML		05 47 39.3	
	comp=E,67nm,0.3s						
PB05	**IPOC Station P**	**2.84**	**293**	⇑*i*P	**Pn**	**05 46 57.1**	**+0.8**
PB05				*i* S	**S**	**05 47 33.9**	**-1.0**
PB05				IAML		05 47 40.8	
	comp=E,61nm,0.2s						
PB03	**IPOC Station P**	**2.93**	**311**	⇑*i*P	**Pn**	**05 46 58.0**	**+0.7**
PB03				*i* S	**S**	**05 47 35.7**	**-1.0**
PB03				IAML		05 47 39.8	
	comp=E,156nm,0.3s						
PB10	**IPOC Station P**	**2.96**	**279**	⇑*i*P	**Pn**	**05 46 58.6**	**+1.1**
PB10				*i* S	**S**	**05 47 37.0**	**0.0**
PB10				IAML		05 47 41.5	
	comp=E,42nm,0.3s						
PB04	**IPOC Station P**	**3.05**	**302**	⇓*i*P	**Pn**	**05 46 59.6**	**+0.9**
PB04				*i* S	**S**	**05 47 38.1**	**-1.0**
PB04				IAML		05 47 41.6	
	comp=N,169nm,0.3s						
PB07	**IPOC Station P**	**3.24**	**314**	⇑*i*P	**Pn**	**05 47 01.4**	**+0.6**
PB07				*i* S	**S**	**05 47 42.0**	**-1.0**
PB07				IAML		05 47 42.9	
	comp=E,178nm,0.3s						
PB01	**IPOC Station P**	**3.53**	**326**	⇓*i*P	**Pn**	**05 47 04.4**	**+0.2**
PB01				*i* S	**S**	**05 47 47.6**	**-1.5**
PB01				IAML		05 47 48.7	
	comp=E,105nm,0.3s						
PB02	**IPOC Station P**	**3.54**	**318**	⇑*i*P	**Pn**	**05 47 04.6**	**+0.2**
PB02				*i* S	**S**	**05 47 48.0**	**-1.3**
PB02				IAML		05 47 49.5	
	comp=E,139nm,0.3s						
PB08	**IPOC Station P**	**4.17**	**336**	*e*P	**Pn**	**05 47 13.2**	**+0.9**
PB08				*i* S	**S**	**05 48 03.3**	**-0.3**
VCA	**Vinchina**	**4.79**	**189**	IAML		05 47 19.7	
	comp=Z,5.5nm,0.2s						
VCA				*e*P	**Pn**	**05 47 19.8**	**+0.3**
ACLC	**CERRO LA CRUZ**	**5.43**	**176**	*e*P	Pn	05 47 24.9	-2.6
ACLC				*e*S	S	05 48 24.7	-6.6
AGUA	**GUANDACOL**	**5.57**	**190**	*e*P	**Pn**	**05 47 29.2**	**0.0**
APLL	**PUNTA DE LOS L**	**6.42**	**174**	*e*P	Pn	05 47 36.5	-3.5
APLL				IAML		05 47 37.6	
	comp=Z,9.1nm,0.2s						
APLL				*e*S	S	05 48 44.6	-10

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*ISCJB **01** 05:52:39.5±0.5, 32°.23N±0°.02×115°.26W±0°.02, h10^{km}±3^{km}, Error ellipse: s-maj=3.4km s-min=3.0km az=17.9*

*MEX **01** 05:52:40.7±0.5, 32°.41N×115°.04W, h27^{km}±5^{km}, MD3.9*

*ECX **01** 05:52:41.4±0.6, 32°.19N×115°.31W, h8^{km}, MD3.4, ML3.6*

*NEIC **01** 05:52:41.4±0.0, 32°.19N×115°.31W, h8^{km}, MD3.6(ECX), ML3.5(PAS), After ECX.*

NEIC Felt at San Diego, California.

ISC 01 05:52:39.8±1.0, **32°.20N**±0°.02×**115°.32W**±0°.02, **h7**^{km}±8^{km}, **n70,** σ**1^{s}.22**/97, **2C-6D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPBX	**Cerro Prieto**	**0.22**	**4**	⇓*e*P	**Pg**	**05 52 43.9**	**-0.2**
CPBX				*e*S	**Sg**	**05 52 47.1**	**-0.1**
CPBX				IAML		05 52 52.3	
	comp=N,26µm,0.4s						
CPBX				⇓*e*		05 52 52.3	
MBIG	**Mexicali**	**0.23**	**26**	*e*P	**Pg**	**05 52 45.4**	**+1.0**
MBIG	**Mexicali**	**0.23**	**26**	*e*P	**Pg**	**05 52 44.9**	**+0.5**
MBIG				*e*S	**Sg**	**05 52 47.5**	**0.0**
DREC	**Desert Rsrch C**	**0.61**	**350**	*e*P	**Pb**	**05 52 52.6**	**-0.2**
WESC	**Westside Schoo**	**0.66**	**328**	⇓*i*P	**Pb**	**05 52 53.3**	**-0.3**
SNR	**Schaffner Ranc**	**0.67**	**352**	*e*P	**Pg**	**05 52 53.1**	**+0.4**
COA	**Coachella**	**0.68**	**14**	⇓*i*P	**Pb**	**05 52 54.0**	**0.0**
YMD	**Yuma Desert**	**0.75**	**61**	⇑*i*P	**Pb**	**05 52 54.8**	**-0.3**
RMX	**La Rumorosa**	**0.76**	**302**	*e*P	**Pg**	**05 52 53.9**	**-0.5**
RMX				*e*S	**Sg**	**05 53 03.4**	**-0.9**
ECBX	**El Chinero**	**0.76**	**162**	*e*P	**Pg**	**05 52 54.6**	**+0.2**
ECBX				*e*S	**Sg**	**05 53 04.8**	**+0.5**
IKP	**In-Ko-Pah, Jac**	**0.81**	**304**	P	**Pg**	**05 52 55.7**	**+0.4**
	baz=122,SNR=60						
IKP				S	**Sg**	**05 53 06.5**	**+0.7**
	baz=122						
IKP	**In-Ko-Pah, Jac**	**0.81**	**304**	*e*P	**Pg**	**05 52 55.7**	**+0.4**
SWSC	**Sam W. Stewart**	**0.85**	**332**	P	**Pg**	**05 52 55.5**	**-0.5**
	baz=150,SNR=86						
SWSC				S	**Sg**	**05 53 07.2**	**+0.2**
	baz=150						
GLA	**Glamis**	**0.95**	**26**	P	**Pg**	**05 52 56.6**	**-1.4**
	baz=206,SNR=99						
GLA				S	**Sg**	**05 53 08.6**	**-1.7**
	baz=206						
GLA	**Glamis**	**0.95**	**26**	*e*Pg	**Pg**	**05 52 57.6**	**-0.3**
GLA				*e*Sg	**Sg**	**05 53 08.5**	**-1.7**
CBX	**Cerro Bola**	**1.14**	**276**	*e*P	**Pg**	**05 53 01.8**	**+0.1**
CBX				*e*S	**Sb**	**05 53 17.3**	**+0.3**
CBX				IAML		05 53 18.7	
	comp=N,2µm,0.5s						
CBX				⇓*e*		05 53 18.7	
CBX	**Cerro Bola**	**1.14**	**276**	*e*P	**Pg**	**05 53 02.0**	**+0.3**
CBX				*e*S	**Sn**	**05 53 18.0**	**-0.3**
CBX	**Cerro Bola**	**1.14**	**276**	*e*P	**Pg**	**05 53 02.0**	**+0.3**
CBX				*e*S	**Sn**	**05 53 18.0**	**-0.3**
SPIG	**San Pedro Mart**	**1.16**	**186**	*e*P	**Pg**	**05 53 01.8**	**-0.1**
SPIG	**San Pedro Mart**	**1.16**	**186**	*e*P	**Pg**	**05 53 01.9**	**-0.1**
SPIG				*i* S	**Sn**	**05 53 19.4**	**+0.5**
SPIG	**San Pedro Mart**	**1.16**	**186**	*e*P	**Pg**	**05 53 01.9**	**-0.1**
SPIG				*i* S	**Sn**	**05 53 19.4**	**+0.5**
SPX	**San Pedro Mart**	**1.16**	**186**	*e*P	**Pg**	**05 53 01.6**	**-0.4**
SPX				⇓*e*		05 53 20.2	
SPX				IAML		05 53 20.2	
	comp=N,729nm,0.2s						
SPX	**San Pedro Mart**	**1.16**	**186**	*e*P	**Pg**	**05 53 02.1**	**+0.1**
SPX				*i* S	**Sn**	**05 53 19.2**	**+0.3**
MONP2	**Monument Peak**	**1.16**	**307**	P	**Pg**	**05 53 01.1**	**-0.9**
	baz=125,SNR=80						
MONP2				S	**Sb**	**05 53 17.5**	**-0.1**
	baz=125						
TJIG	**Tijuana**	**1.17**	**282**	*e*P	**Pg**	**05 53 01.9**	**-0.4**
TJIG				*e*S	**Sb**	**05 53 18.1**	**+0.4**
BAR	**Barrett**	**1.24**	**293**	⇑*i*P	**Pb**	**05 53 02.8**	**-0.7**
BAR	**Barrett**	**1.24**	**293**	*e*Pn	**Pb**	**05 53 03.2**	**-0.3**
BAR				*e*Sn	**Sg**	**05 53 19.6**	**0.0**
113A	**Mohawk Valley,**	**1.43**	**66**	*e*Pn	**Pn**	**05 53 04.1**	**-2.0**
113A				*e*Sn	**Sb**	**05 53 21.4**	**-3.7**
BC3	**Big Chuckawall**	**1.46**	**356**	P	**Pn**	**05 53 04.4**	**-2.2**
	baz=175,SNR=91						
SDRC	**San Diego Road**	**1.47**	**292**	*e*P	**Pn**	**05 53 06.4**	**-0.3**
109C	**Camp Elliot, M**	**1.66**	**295**	P	**Pn**	**05 53 08.7**	**-0.5**
	baz=113,SNR=70						
109C				S	**Sb**	**05 53 31.6**	**-0.1**
	baz=113						
CPE	**Camp Elliot**	**1.66**	**295**	*e*Pn	**Pn**	**05 53 09.2**	**0.0**
CPE				*e*Sn	**Sb**	**05 53 32.0**	**+0.3**
Y12C	**Blythe**	**1.69**	**23**	Pb	**Pn**	**05 53 09.4**	**-0.2**
	baz=203,SNR=79						
Y12C				Sb	**Sn**	**05 53 31.4**	**-0.1**
	baz=203						
Y12C	**Blythe**	**1.69**	**23**	*e*Pn	**Pb**	**05 53 11.1**	**-0.1**
XPFO	**Piæon Flat**	**1.70**	**326**	*e*Pn	**Pn**	**05 53 08.2**	**-1.8**
PFO	**Pinyon Flats O**	**1.70**	**326**	P	**Pn**	**05 53 08.2**	**-1.8**
	baz=145,SNR=15						
PFO				Sb	**Sb**	**05 53 33.6**	**+0.4**
	baz=145						
PFO	**Pinyon Flats O**	**1.70**	**326**	*e*Pn	**Pn**	**05 53 08.2**	**-1.8**
BELC	**Belle Mtn. Jos**	**1.88**	**343**	P	**Pn**	**05 53 11.8**	**-0.8**
	baz=162,SNR=25						
IRM	**Iron Mountain**	**1.96**	**4**	P	**Pn**	**05 53 12.1**	**-1.4**
	baz=184						
IRM				S	**Sn**	**05 53 37.1**	**-1.1**
	baz=184						
MURC	**Murrieta**	**2.11**	**312**	P	**Pn**	**05 53 14.6**	**-0.9**
	baz=130						
MURC				Sb	**Sg**	**05 53 46.3**	**-1.2**
	baz=130						
214A	**Organ Pipe Nat**	**2.14**	**96**	P	**Pn**	**05 53 13.7**	**-2.2**
	baz=278,SNR=97						
GMRC	**Granite Mounta**	**2.59**	**354**	P	**Pn**	**05 53 20.8**	**-1.5**
	baz=173,SNR=19						
Y14A	**Wickenburg**	**2.60**	**48**	*e*Pn	**Pb**	**05 53 26.1**	**-0.8**
BFSC	**Mount Baldy Ra**	**2.82**	**317**	P	**Pn**	**05 53 24.9**	**-0.6**
	baz=135						
LDFC	**Landfair**	**2.88**	**3**	*e*Pn	**Pg**	**05 53 37.5**	**+2.6**
MWC	**Mount Wilson**	**3.06**	**312**	*e*Pn	**Pg**	**05 53 36.8**	**-1.6**
MWC				*e*Sn	**Sg**	**05 54 15.9**	**-2.1**
PASC	**Pasadena Art C**	**3.10**	**310**	*e*Pn	**Pg**	**05 53 37.8**	**-1.5**
PASC				*e*Sn	**Sb**	**05 54 15.1**	**+1.7**
W13A	**Hualapai Mount**	**3.13**	**22**	*e*Pg	**Pb**	**05 53 37.2**	**+1.3**
W13A				*e*Sn	**Sb**	**05 54 16.5**	**+2.2**
GSC	**Goldstone, Bar**	**3.33**	**339**	*e*Pg	**Pg**	**05 53 46.0**	**+2.3**
TUC	**Tucson**	**3.84**	**87**	*e*Pn	**Pn**	**05 53 38.3**	**-1.1**
X16A	**Lo Mia Camp, P**	**3.93**	**55**	*e*Pn	**Pn**	**05 53 40.7**	**0.0**
TEJ	**El Tejon**	**4.12**	**318**	*e*Pg	**Pg**	**05 53 56.7**	**-2.1**
SHPR	**Sheep Range**	**4.30**	**2**	*e*Pn	**Pn**	**05 53 46.2**	**+0.5**
ISA	**Isabella, Lake**	**4.34**	**324**	*e*Pg	**Pg**	**05 54 04.1**	**+1.2**
DAC	**Darwin (Calif)**	**4.48**	**336**	*e*Pg	**Pg**	**05 54 07.7**	**+2.1**

WUAZ	Wupatki	4.66	44	*e*Pn	Pn	05 53 51.6	+0.9
TPNV	Topopah Spring	4.80	351	*e*Pg	Pg	05 54 12.3	+0.6
U15A	North Rim	4.91	30	*e*Pn	Pn	05 53 55.3	+1.1
X18A	Snowflake	5.06	61	*e*Pn	Pn	05 53 56.0	-0.2
LCMT	Little Creek M	5.10	19	*e*Pn	Pn	05 53 58.7	+2.0
KNB	Kanab	5.23	23	*e*Pn	Pn	05 53 59.6	+1.1
SZCU	Shurtz Canyon	5.69	18	*e*Pg	Pg	05 54 27.3	-1.5
R11A	Troy Canyon, C	6.14	358	*e*Pg	Pg	05 54 37.5	+0.1
PSUT	Pine Spring	6.43	10	*e*Pg	Pg	05 54 46.5	+3.5
LENM	Lemitar	7.27	72	*e*Pn	Pn	05 54 26.7	+0.2
MVCO	Mesa Verde	7.52	46	*e*Pn	Pn	05 54 32.5	+2.4
MVCO				*e*Pg	Pb	05 54 38.3	-12
BNM	Barren Site	7.54	73	*e*Pn	Pn	05 54 30.7	+0.3
SRU	San Rafael Swe	7.92	28	*e*Pg	Pg	05 55 10.3	-1.2
TX31	Lajitas Ar. Si	10.42	103	*e*Pn	Pn	05 55 11.3	+1.5
BW06	Boulder Array	11.49	22	*e*Pn	Pn	05 55 25.4	+0.9

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*ISCJB **01** 06:06:12.7±0.9, 21°.75N±0°.09×143°.3E±0°.2, h250^{km}, mb3.5/12, Error ellipse: s-maj=25.1km s-min=11.9km az=178.2*

*IDC **01** 06:06:13.2±2.3, 21°.75N×143°.32E, h238^{km}±19^{km}, mb3.3/13, mb1 3.4/14, mb1mx3.2/60, mbtmp3.9/14, Error ellipse: s-maj=19.5km s-min=16.3km az=102.0*

ISC 01 06:06:14.5±0.9**, 21°.8N**±0°.1×**143°.3E**±0°.2**, h250**^{km}**, n15, σ0^{s}.87**/16**, mb3.6**/12**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	5.36	349	P	Pn	06 07 33.1	-1.5
	baz=108,slow=20						
JCJ				S	S	06 08 38.1	-0.6
	3.4nm,0.3s,baz=108,slow=20,SNR=2.7						
KSRS	Korea Array	20.49	323	P	P	06 10 35.2	+1.6
	1.4nm,0.7s,baz=150,slow=9.3,SNR=9.3						
KLR	Kul'dur	28.86	344	P	P	06 11 50.2	+0.4
	0.1nm,0.5s,baz=135,slow=4.9,SNR=6.8						
CMAR	Chiang Mai Arr	41.66	274	P	P	06 13 39.0	0.0
	1.5nm,0.2s,baz=76,slow=9.2,SNR=7.3						
WRA	Warramunga Arr	42.41	193	P	P	06 13 44.0	-0.9
	0.2nm,0.5s,baz=14,slow=9.5,SNR=3.7						
ZALV	Zalesovo Beam	54.19	322	P	P	06 15 14.1	0.0
	1.5nm,0.6s,baz=110,slow=7.6,SNR=5.9						
MKAR	Makanchi Array	54.70	313	P	P	06 15 18.8	+0.8
	0.2nm,0.3s,baz=95,slow=7.8,SNR=3.5						
KURBB	Kurchatov Arra	57.51	317	P	P	06 15 38.1	+0.4
	0.7nm,0.5s,baz=89,slow=8.1,SNR=5.1						
ILAR	Eielson Array	61.90	27	P	P	06 16 07.5	+0.2
	0.7nm,0.7s,baz=262,slow=5.6,SNR=12						
BVAR	Borovoye Array	62.65	319	P	P	06 16 12.7	+0.2
	1.3nm,0.4s,baz=96,slow=7.5,SNR=7.7						
YKA	Yellowknife Ar	76.31	28	P	P	06 17 36.5	+0.9
	0.3nm,0.4s,baz=291,slow=5.9,SNR=6.5						
ARCES	ARCESS Array B	78.85	342	P	P	06 17 49.8	+0.3
	1.2nm,0.8s,baz=72,slow=9.1,SNR=5.4						
FINES	FINESS Array B	83.12	335	P	P	06 18 11.3	-0.8
	1.3nm,0.5s,baz=66,slow=4.8,SNR=15						
HFS	Hagfors	88.66	337	P	P	06 18 38.3	-1.0
	1.1nm,0.5s,baz=72,slow=4.7,SNR=6.2						
LPAZ	La Paz	149.83	85	PKPbc	PKPbc	06 25 36.9	+0.4
	0.3nm,0.5s,baz=49,slow=9.3,SNR=3.7						

MAN 01 06:11:57.1, 17°.92N×121°.06E, h107^{km}**, mb3.9, ML2.7, MS2.3, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APYP	Conner	0.18	107	*e*P	Pn	06 12 11.8	-0.3
APYP				*e*S	Sn	06 12 25.2	+1.9
ABRA	Dolores	0.43	232	*e*P	Pn	06 12 14.8	+1.5
ABRA				*e*S	Sn	06 12 28.0	+2.8

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*ISCJB **01** 06:25:33.5±0.7, 22°.70S±0°.04×66°.28W±0°.06, h245^{km}, Error ellipse: s-maj=7.2km s-min=5.4km az=5.1*

*NEIC **01** 06:25:34.1±0.6, 22°.67S×66°.52W, h295^{km}±19^{km}, mb4.5/2, Error ellipse: s-maj=22.8km s-min=7.1km az=101.0*

*GUC **01** 06:25:35.5±0.4, 22°.53S×66°.77W, h274^{km}±13^{km}, ML4.3*

ISC 01 06:25:33.0±1.0**, 22°.68S**±0°.05×**66°.28W**±0°.08**, h245**^{km}**, n22, σ1^{s}.57**/39**, 3C-5D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB15	IPOC Station P	2.99	259	*e*P	Pn	06 26 28.1	+2.8
PB15				*i* S	S	06 27 07.7	+1.2
PB15				IAML		06 27 14.2	
	comp=E,1μm,0.3s						
PB06	IPOC Station P	3.04	269	*e*P	Pn	06 26 28.0	+2.2
PB06				*e*S	S	06 27 08.5	+1.1
PB06				IAML		06 27 12.1	
	comp=E,122nm,0.1s						
PB03	IPOC Station P	3.28	280	⇑*i*P	Pn	06 26 30.0	+1.6
PB03				*e*S	S	06 27 11.8	-0.4
PB01	IPOC Station P	3.40	298	*e*Pn	Pn	06 26 31.5	+1.8
PB01				*e*S	S	06 27 14.2	-0.3
PB01	IPOC Station P	3.40	298	⇓*i*P	Pn	06 26 31.4	+1.8
PB01				*e*S	S	06 27 14.0	-0.5
PB07	IPOC Station P	3.48	285	⇑*e*P	Pn	06 26 32.5	+1.8
PB07				*i* S	S	06 27 15.4	-0.9
PB04	IPOC Station P	3.59	275	*e*Pn	Pn	06 26 33.4	+1.4
PB04				*e*S	S	06 27 18.0	-0.7
PB04	IPOC Station P	3.59	275	⇓*i*P	Pn	06 26 33.9	+1.8
PB04				*e*S	S	06 27 18.1	-0.7
PB02	IPOC Station P	3.62	291	*e*P	Pn	06 26 33.7	+1.4
PB02				*e*S	S	06 27 17.9	-1.3
PB05	IPOC Station P	3.62	267	⇑*i*P	Pn	06 26 34.1	+1.8
PB05				*i* S	S	06 27 18.6	-0.7
PB08	IPOC Station P	3.68	313	⇓*i*P	Pn	06 26 35.6	+2.2
PB08				*i* S	S	06 27 21.1	+0.1
GO02	Mina Guanaco	3.91	230	*e*Pn	Pn	06 26 38.0	+2.2
GO02				*e*S	S	06 27 26.9	+1.4
GO02	Mina Guanaco	3.91	230	⇓*i*P	Pn	06 26 38.2	+2.4
GO02				*i* S	S	06 27 26.9	+1.4
PB10	IPOC Station P	4.02	257	⇓*i*P	Pn	06 26 38.8	+1.9
PB10				*e*S	S	06 27 25.8	-1.7
MNMC	Minye Minye	4.70	318	*e*Pn	Pn	06 26 46.5	+1.2
MNMC				*e*S	S	06 27 41.2	-1.5
GO03	Copiap	6.06	215	*e*Pn	Pn	06 27 02.6	+0.8
GO03				*e*S	S	06 28 10.5	-2.4
LPAZ	La Paz	6.59	344	*e*Pn	Pn	06 27 10.3	+1.1
LPAZ				*e*S	S	06 28 26.2	+0.2
LCO	Las Campanas	7.46	211	*e*Pn	Pn	06 27 19.6	0.0
LCO				*e*S	S	06 28 35.2	-10
GO05	HualaæØ	13.24	201	*e*Pn	Pn	06 28 31.8	-0.2
SAML	Samuel	13.97	13	*e*P	Pn	06 28 41.0	-0.2
SPB	Sao Paulo	17.36	97	*e*P	P	06 29 19.5	+0.5
	comp=E,21nm,1.6s						
PLCA	Paso Flores	18.36	190	*e*P	P	06 29 26.9	-2.9
	comp=E,42nm,1.7s						

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*DJA **01** 06:28:50.5±2.8, 3°N±8°×12°6E±°, h22^{km}±27^{km}, M4.2/7, mB5.3/2, mb4.4/3, MLv4.0/7, Mw(mB)4.7/2*

*IDC **01** 06:28:55.2±1.8, 1°.17N×127°.54E, h0^{km}, mb3.7/4, mb1 3.9/5, mb1mx3.6/53, mbtmp3.8/5, ML4.0/1, MS3.6/2, Ms1 3.6/2, ms1mx2.6/46, Error ellipse: s-maj=102.0km s-min=24.8km az=68.0*

ISC 01 06:28:42.5±3.9**, 3°.3N**±0°.4×**126°.3E**±0°.2**, h63**^{km}**, n12, σ2^{s}.51**/10**, mb3.4**/4**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBMI	Labuha	4.04	163	P	Pn	06 29 43.8	+1.8
MRSI	Marisa	5.18	238	P	Pn	06 29 58.6	+1.1
SANI	Sanana	5.28	184	P	Pn	06 29 58.0	-0.9
NLAI	Namlea	6.50	173	P	Pn	06 30 15.8	+0.2
	55nm,1.1s,2μm0.3nm						
MPSI	Mapaga	7.05	246	P	Pn	06 30 24.2	+1.1
MSAI	Masohi	7.05	158	P	Pn	06 30 25.7	+2.5
FITZ	Fitzroy Crossi	21.23	182	P	P	06 33 21.9	-1.5
	0.4nm,0.3s,baz=27,slow=8.1,SNR=8.6						
WRA	Warramunga Arr	24.36	161	P	P	06 33 49.5	-5.3
	1.7nm,0.8s,baz=341,slow=10,SNR=7.1						
ASAR	Alice Springs	27.76	165	P	P	06 34 25.2	-0.3
	0.4nm,0.6s,baz=347,slow=7.6,SNR=5.1						
STKA	Stephens Creek	37.84	159	P	P	06 35 54.1	+1.0
	2.3nm,0.8s,baz=333,slow=11,SNR=2.5						
ASAJ	Asahikawa	43.16	17	LR	LR	06 54 42.2	
	comp=Z,33nm,21.7s,baz=120,slow=34						
AKASG	Malin Array Be	92.00	321	LR	LR	07 28 29.5	
	comp=Z,56nm,19.9s,baz=285,slow=38						

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*ISCJB **01** 06:29:17.8±0.7, 32°.22N±0°.02×115°.25W±0°.03, h10^{km}±5^{km}, Error ellipse: s-maj=4.6km s-min=3.9km az=167.3*

*ECX **01** 06:29:19.4±0.6, 32°.21N×115°.28W, h6^{km}, MD2.6, ML2.8*

ISC 01 06:29:17.4±1.0**, 32°.22N**±0°.03×**115°.28W**±0°.03**, h13**^{km}±8^{km}**, n27, σ0^{s}.57**/41**, 2C-3D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPBX	Cerro Prieto	0.20	355	*e*P	Pg	06 29 22.1	+0.2
CPBX				*e*S	Sg	06 29 25.0	+0.1
CPBX				⇓*e*		06 29 28.8	
CPBX				IAML		06 29 28.8	
	comp=N,6μm,0.4s						
MBIG	Mexicali	0.20	21	*e*P	Pb	06 29 23.4	+0.4
COA	Coachella	0.66	12	*e*P	Pb	06 29 31.1	+0.4
WESC	Westside Schoo	0.66	325	⇓*i*P	Pb	06 29 31.3	+0.5
YUH	Yuha Desert	0.69	309	⇑*i*P	Pb	06 29 31.3	0.0
YMD	Yuma Desert	0.71	61	⇑*i*P	Pb	06 29 32.0	+0.3
ECBX	El Chinero	0.77	165	*e*P	Pb	06 29 33.0	+0.4
ECBX				*e*S	Sb	06 29 43.2	+0.2
RMX	La Rumorosa	0.78	300	*e*P	Pg	06 29 32.5	0.0
RMX				*e*S	Sg	06 29 42.6	-0.1
IKP	In-Ko-Pah, Jac	0.82	302	P	Pb	06 29 33.8	+0.2
	baz=123,SNR=9.7						
IKP				S	Sb	06 29 44.7	0.0
	baz=123						
IKP	In-Ko-Pah, Jac	0.82	302	*e*P	Pb	06 29 33.8	+0.2
SWSC	Sam W. Stewart	0.85	329	P	Pg	06 29 33.7	-0.1
	baz=150,SNR=11						
SWSC				S	Sb	06 29 45.8	+0.5
	baz=150						
GLA	Glamis	0.92	25	P	Pg	06 29 34.8	-0.3
	baz=204,SNR=16						
GLA				S	Sg	06 29 46.4	-0.8
	baz=204						
ZAX	El Zacaton	1.10	231	*e*P	Pb	06 29 38.4	+0.1
ZAX				*e*S	Sn	06 29 53.3	-0.3
CBX	Cerro Bola	1.17	275	*e*P	Pg	06 29 40.2	+0.2
CBX				*e*S	Sn	06 29 55.9	+0.3
CBX				IAML		06 29 56.7	
	comp=N,263nm,0.4s						
CBX				⇓*e*		06 29 56.7	
MONP2	Monument Peak	1.18	305	P	Pg	06 29 40.1	0.0
	baz=126,SNR=14						
MONP2				S	Sn	06 29 55.7	-0.1
	baz=126						
SPIG	San Pedro Mart	1.18	188	*e*P	Pg	06 29 40.2	+0.1
SPX	San Pedro Mart	1.18	188	*e*P	Pg	06 29 40.4	+0.2
ECNX	Esteban Cantu	1.25	244	*e*P	Pb	06 29 41.2	+0.3
BAR	Barrett	1.26	292	*e*P	Pb	06 29 41.1	0.0
BC3	Big Chuckawall	1.44	354	P	Pn	06 29 42.6	-0.8
	baz=174,SNR=29						
Y12C	Blythe	1.66	22	Pb	Pg	06 29 49.1	-0.1
	baz=203,SNR=15						
Y12C				S	Sb	06 30 09.2	+0.6
	baz=203						
109C	Camp Elliot, M	1.68	294	P	Pb	06 29 47.9	-0.3
	baz=114,SNR=8.7						
109C				S	Sb	06 30 10.1	+0.9
	baz=114						
PFO	Pinyon Flats O	1.71	325	P	Pn	06 29 46.3	-0.7
	baz=145						
PFO				S	Sb	06 30 10.4	+0.2
	baz=145						
IRM	Iron Mountain	1.94	3	P	Pn	06 29 50.2	+0.1
	baz=184,SNR=13						
214A	Organ Pipe Nat	2.11	96	P	Pn	06 29 52.1	-0.4
	baz=277,SNR=16						
MURC	Murrieta	2.12	311	Pb	Pb	06 29 55.9	+0.2
	baz=131						
MURC				Sb	Sg	06 30 24.1	-1.5
	baz=131						
BFSC	Mount Baldy Ra	2.83	316	Pb	Pb	06 30 08.3	+0.4
	baz=135						
BFSC				Sb	Sb	06 30 44.9	+2.2
	baz=135						

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*BJI **01** 06:36:01.9, 31°.86N×115°.63W, h6^{km}, mb4.9/3, Ms4.6/2, Ms7 4.3/2*

*ISCJB **01** 06:36:04.9±0.4, 32°.18N±0°.01×115°.28W±0°.01, h5^{km}±2^{km}, mb4.5/72, MS4.0/36, Error ellipse: s-maj=2.6km s-min=1.7km az=22.5*

*ECX **01** 06:36:07.2±0.6, 32°.20N×115°.31W, h8^{km}, MD4.6, ML4.8*

*GCMT **01** 06:36:07.3±0.4, 32°.18N×115°.24W, h12^{km}, MW4.8/78, Moment Tensor Solution. s9,c10; s78,c107; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.01±.09; M$_{θθ}$-1.65±.09; M$_{φφ}$1.67±.06; M$_{rθ}$-0.29±.25; M$_{θφ}$-0.71±.07; M$_{φr}$-1.46±.21; Best double couple: M$_0$2.29300×10^{16} NP1:φ$_s$213.00000°,δ85.00000°,λ36.00000°. NP2: φ$_s$119.00000°,δ54.00000°,λ174.00000°. Principal axes: T 2.5680, Plg29.0000°, Azm83.0000°; N -0.5430, Plg53.0000°, Azm220.0000°; P -2.0180, Plg21.0000°, Azm341.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **01** 06:36:07.3±0.0, 32°.19N×115°.31W, h8^{km}, mb4.5/110, MD4.8(ECX), MW4.7(PAS), After ECX.*

NEIC Felt [III] at Mexicali and [II] at Alberto Oviedo Mota and Ensenada. Also felt at Tijuana. Felt [IV] at El Centro and [III] at Calexico, Chula Vista, El Cajon, Lakeside, Ocotillo and San Diego, California. Felt [III] at Yuma and [II] at Somerton, Arizona.

*MEX **01** 06:36:08.3±0.4, 32°.29N×115°.17W, h17^{km}±8^{km}, MD4.2*

*IDC **01** 06:36:10.9±3.3, 32°.31N×115°.09W, h30^{km}±22^{km}, mb4.1/7, mb1 4.2/15, mb1mx3.8/61, mbtmp4.2/15, ML3.6/7, MS4.0/41, Ms1 4.0/41, ms1mx3.9/55, Error ellipse: s-maj=24.6km s-min=9.7km az=44.0*

ISC 01 06:36:06.2±1.0**, 32°.20N**±0°.02×**115°.31W**±0°.02**, h6**^{km}±7^{km}**, n666, σ1^{s}.59**/624**, mb4.6**/72**, MS4.1**/36**, 5C-9D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPBX	Cerro Prieto	0.22	1	⇓*e*P	Pg	06 36 09.8	-0.8
CPBX				*e*S	Sg	06 36 13.2	-0.4
CPBX				⇓*e*		06 36 17.0	
CPBX				IAML		06 36 17.0	
	comp=E,450μm,0.4s						
CPBX				IAML		06 36 17.6	
	comp=N,346μm,0.4s						
CPBX				*e*		06 36 17.6	
MBIG	Mexicali	0.23	24	*e*P	Pg	06 36 11.2	+0.4
MBIG				*i* S	Sg	06 36 13.8	-0.1
DREC	Desert Rsrch C	0.62	349	⇓*e*P	Pg	06 36 18.4	+0.3
ERPC	Ernies Place	0.62	331	⇓*i*P	Pg	06 36 18.4	+0.3
WESC	Westside Schoo	0.66	328	⇓*i*P	Pg	06 36 19.2	+0.2
COA	Coachella	0.68	13	⇓*i*P	Pg	06 36 18.9	-0.5
YUH	Yuha Desert	0.69	311	⇑*i*P	Pg	06 36 19.1	-0.3
COK	Cook Ranch	0.74	332	⇓*i*P	Pg	06 36 20.2	-0.3
YMD	Yuma Desert	0.74	61	⇑*i*P	Pg	06 36 19.6	-0.8
ECBX	El Chinero	0.76	163	⇓*e*P	Pg	06 36 20.6	-0.2
ECBX				*e*S	Sg	06 36 30.7	+0.1
RMX	La Rumorosa	0.77	302	⇑*e*P	Pg	06 36 19.8	-1.2
RMX				*e*S	Sg	06 36 29.2	-1.7
RMX				*e*		06 36 30.2	
RMX				IAML		06 36 30.2	
	comp=E,39μm,0.2s						
IKP	In-Ko-Pah, Jac	0.81	304	P	Pg	06 36 21.6	-0.3
	baz=122,SNR=1000						
IKP				S	Sg	06 36 32.1	-0.3
	baz=122						
IKP	In-Ko-Pah, Jac	0.81	304	*e*P	Pg	06 36 21.6	-0.3
SWSC	Sam W. Stewart	0.85	331	P	Pg	06 36 21.4	-1.2
	baz=149,SNR=1000						
SWSC				S	Sg	06 36 33.1	-0.6
	baz=149						
GLA	Glamis	0.94	25	P	Pg	06 36 22.4	-1.9
	baz=205,SNR=1000						
GLA				S	Sg	06 36 34.2	-2.5
	baz=205						
GLA	Glamis	0.94	25	*e*Pg	Pg	06 36 22.8	-1.6
ZAX	El Zacaton	1.07	230	*e*P	Pb	06 36 26.2	-0.9
ZAX				*e*S	Sb	06 36 40.2	-1.2
CBX	Cerro Bola	1.15	276	*e*P	Pg	06 36 27.7	-0.7
CBX				*e*S	Sg	06 36 42.9	-0.4
CBX				⇑*e*		06 36 46.8	
CBX				IAML		06 36 46.8	
	comp=E,37μm,0.3s						
CBX	Cerro Bola	1.15	276	*e*P	Pb	06 36 28.4	-0.3
CBX				*e*S	Sg	06 36 42.6	-0.7
CBX	Cerro Bola	1.15	276	*e*P	Pb	06 36 28.4	-0.3
CBX				*e*S	Sg	06 36 42.6	-0.7
SPIG	San Pedro Mart	1.16	187	*e*P	Pg	06 36 27.9	-0.5
SPIG	San Pedro Mart	1.16	187	*e*P	Pg	06 36 27.9	-0.5
SPIG				*e*S	Sb	06 36 43.0	-1.1
SPIG	San Pedro Mart	1.16	187	*e*P	Pg	06 36 27.9	-0.5
SPIG				*e*S	Sb	06 36 43.0	-1.1
SPX	San Pedro Mart	1.16	187	*e*P	Pg	06 36 27.9	-0.6
SPX				⇓*e*		06 36 49.2	
SPX				IAML		06 36 49.2	
	comp=N,11μm,0.8s						
SPX	San Pedro Mart	1.16	187	*e*P	Pg	06 36 27.9	-0.6
SPX				*i* S	Sg	06 36 42.7	-0.7
MONP2	Monument Peak	1.17	307	P	Pg	06 36 27.1	-1.6
	baz=125,SNR=1000						
MONP2				S	Sg	06 36 42.9	-0.9
	baz=125						
TJIG	Tijuana	1.18	282	*e*P	Pg	06 36 27.8	-1.0
TJIG				*e*S	Sg	06 36 43.2	-0.9
ECNX	Esteban Cantu	1.22	244	*e*P	Pg	06 36 28.7	-0.9
BAR	Barrett	1.25	293	*e*P	Pg	06 36 28.7	-1.5
BAR	Barrett	1.25	293	*e*Pn	Pg	06 36 29.5	-0.7
BAR				*e*Sn	Sg	06 36 45.3	-1.1
PBX	Punta Banda	1.29	250	⇑*e*P	Pg	06 36 29.6	-1.3
113A	Mohawk Valley,	1.42	66	*e*Pn	Pn	06 36 30.1	-2.5
BC3	Big Chuckawall	1.46	355	P	Pn	06 36 30.3	-2.9
	baz=174,SNR=1000						
109C	Camp Elliot, M	1.67	295	P	Pn	06 36 34.6	-1.3
	baz=113,SNR=1000						
109C				Sb	Sn	06 36 57.9	+0.3
	baz=113						
CPE	Camp Elliot	1.67	295	*e*Pn	Pn	06 36 35.4	-0.5
Y12C	Blythe	1.68	23	P	Pn	06 36 33.4	-2.8
	baz=203,SNR=1000						
Y12C	Blythe	1.68	23	*e*Pn	Pn	06 36 36.1	-0.1
I57US	PINON FLAT INF	1.70	326	*i*		06 46 50.0	
	baz=145,slow=323,SNR=0.3						
XPFO	Piæon Flat	1.71	326	*e*Pn	Pn	06 36 34.4	-2.3
PFO	Pinyon Flats O	1.71	326	P	Pn	06 36 34.1	-2.6
	baz=145,SNR=556						
PFO				Sb	Sn	06 36 58.9	0.0
	baz=145						
PFO	Pinyon Flats O	1.71	326	*e*Pn	Pn	06 36 34.4	-2.3
BELC	Belle Mtn. Jos	1.89	342	P	Pn	06 36 36.4	-2.8
	baz=161,SNR=161						
IRM	Iron Mountain	1.96	4	P	Pn	06 36 37.5	-2.6
	baz=184,SNR=335						
MURC	Murrieta	2.12	312	P	Pn	06 36 40.2	-2.0
	baz=130,SNR=151						
MURC				Sb	Sb	06 37 10.8	-0.7
	baz=130						
214A	Organ Pipe Nat	2.13	96	P	Pn	06 36 39.7	-2.7
	baz=278,SNR=385						
PDMCI	Parker Dam,Lak	2.32	25	P	Pn	06 36 42.5	-2.4
	baz=205,SNR=104						
PDMCI				S	Sn	06 37 10.4	-3.4
	baz=205						
BBRC	Big Bear Solar	2.46	327	P	Pn	06 36 45.6	-1.6
	baz=146,SNR=19						
GMRC	Granite Mounta	2.60	354	P	Pn	06 36 46.5	-2.4
	baz=173,SNR=188						
Y14A	Wickenburg	2.60	47	*e*Pn	Pn	06 36 48.4	-0.5
NEE2	Needles Airpor	2.63	13	P	Pn	06 36 47.1	-2.1
	baz=192,SNR=33						
NEE2				S	Sn	06 37 17.8	-3.5
	baz=192						
HEC	Hector,Ludlow	2.76	342	P	Pn	06 36 48.8	-2.3
	baz=161,SNR=11						
BFSC	Mount Baldy Ra	2.83	317	P	Pn	06 36 50.4	-1.7
	baz=135,SNR=54						
BFSC				Sb	Sb	06 37 32.3	+0.1
	baz=135						
SCI2	San Clemente I	2.84	287	P	Pn	06 36 50.1	-2.0
	baz=105						
CIS	Catalina Islan	2.88	296	P	Pn	06 36 50.5	-2.1
	baz=114,SNR=31						
LDFC	Landfair	2.88	3	*e*Pn	Pn	06 36 52.2	-0.5
FMP	Fort Macarthur	2.93	302	P	Pn	06 36 51.2	-2.1
	baz=120						
RRX	Edison Barstow	3.02	333	P	Pn	06 36 52.3	-2.3
	baz=151,SNR=18						
MWC	Mount Wilson	3.06	312	*e*Pn	Pb	06 37 01.2	-0.1
PASC	Pasadena Art C	3.11	310	*e*Pn	Pb	06 37 02.0	0.0
W13A	Hualapai Mount	3.13	22	*e*Pn	Pn	06 36 54.6	-1.7
DECC	Green Verdugo	3.26	310	P	Pn	06 36 55.7	-2.2
	baz=128,SNR=29						
TUQ	Turquoise Moun	3.27	351	P	Pn	06 36 55.9	-2.3
	baz=170,SNR=20						
GSC	Goldstone, Bar	3.34	338	P	Pn	06 36 56.9	-2.1
	baz=157,SNR=34						
GSC	Goldstone, Bar	3.34	338	*e*Pn	Pn	06 36 59.6	+0.6
EDW2	Edwards Air Fo	3.49	321	P	Pn	06 36 59.4	-1.7
	baz=139,SNR=30						
BLG	Laguna Peak, P	3.68	302	P	Pn	06 37 02.3	-1.4
	baz=120						
SNCC	San Nicolas Is	3.70	288	P	Pn	06 37 02.3	-1.7
	baz=105						
SNCC	San Nicolas Is	3.70	288	*e*Pn	Pn	06 37 05.9	+2.0
OSI	Osito Audit: C	3.74	311	P	Pn	06 37 02.5	-2.0
	baz=129,SNR=10						
OSI	Osito Audit: C	3.74	311	*e*Pn	Pn	06 37 04.8	+0.4
SHOC	Shoshone, Teco	3.78	348	P	Pn	06 37 02.4	-2.6
	baz=167,SNR=16						
LRMC	Laurel Mtn Rad	3.82	330	P	Pn	06 37 03.6	-2.2
	baz=148,SNR=10						
TUC	Tucson	3.84	87	P	Pn	06 37 02.9	-3.0
	baz=270						
TUC	Tucson	3.84	87	*e*Pn	Pn	06 37 06.3	+0.4
X16A	Lo Mia Camp, P	3.92	55	*e*Pn	Pn	06 37 06.8	-0.4
SCZ2	Santa Cruz Isl	4.05	297	P	Pn	06 37 07.1	-1.7
	baz=115						
ARVC	Arvin	4.14	316	P	Pn	06 37 08.2	-1.7
	baz=134						
MPMC	Manual Prospec	4.25	335	P	Pn	06 37 09.6	-2.1
	baz=154,SNR=14						
SHPR	Sheep Range	4.30	2	*e*Pn	Pn	06 37 11.8	-0.5
ISA	Isabella, Lake	4.34	324	P	Pn	06 37 11.1	-1.7
	baz=142,SNR=11						
ISA	Isabella, Lake	4.34	324	*e*Pn	Pn	06 37 12.4	-0.5
DAC	Darwin (Calif)	4.49	336	*e*Pn	Pn	06 37 14.4	-0.5
PKM	Mcpherson Peak	4.62	307	P	Pn	06 37 15.4	-1.4
	baz=124						
WUAZ	Wupatki	4.66	44	P	Pn	06 37 17.1	-0.1
	baz=226,SNR=98						
WUAZ	Wupatki	4.66	44	*e*Pn	Pn	06 37 17.7	+0.5
VES	Vestal, Richgr	4.80	320	P	Pn	06 37 17.9	-1.1
	baz=138,SNR=9.2						
TPNV	Topopah Spring	4.80	351	P	Pn	06 37 18.3	-1.0
	baz=170,SNR=31						
TPNV	Topopah Spring	4.80	351	*e*Pn	Pn	06 37 19.8	+0.5
CWC	Cottonwood Cre	4.81	332	P	Pn	06 37 17.6	-1.8
	baz=151						
U15A	North Rim	4.90	30	*e*Pn	Pn	06 37 21.4	+0.7
HSIG		4.92	129	*i* P	Pn	06 37 19.1	-1.5
HSIG				*i* S	Sn	06 38 13.4	-4.4
HSIG		4.92	129	*e*Pn	Pn	06 37 23.2	+2.6
HSIG				*i* S	Sn	06 38 13.4	-4.4
SMMC	Simmler	4.99	310	P	Pn	06 37 19.3	-2.4
	baz=127						
X18A	Snowflake	5.05	61	*e*Pn	Pn	06 37 22.4	-0.3
GRAC	Grapevine Rang	5.08	341	P	Pn	06 37 21.9	-1.0
	baz=160						
LCMT	Little Creek M	5.10	19	*e*Pn	Pn	06 37 23.3	+0.1
319A	Douglas	5.20	97	*e*Pn	Pn	06 37 24.6	0.0
KNB	Kanab	5.23	22	*e*Pn	Pn	06 37 25.5	+0.5
PAGB	Antelope Grade	5.41	312	*e*Pn	Pb	06 37 34.7	-6.4
TIN	Tinemaha, Big	5.41	334	P	Pn	06 37 26.5	-1.1
	baz=153						
W18A	Petrified Fore	5.49	56	P	Pn	06 37 28.2	-0.4
	baz=239,SNR=30						
W18A	Petrified Fore	5.49	56	*e*Pn	Pn	06 37 29.1	+0.4
SRIG	Santa Rosalia	5.54	150	*e*Pn	Pn	06 37 33.9	+4.7
CCUT	Cedar City	5.58	16	*e*Pn	Pn	06 37 30.8	+0.9
SZCU	Shurtz Canyon	5.69	18	*e*Pn	Pn	06 37 32.1	+0.7
PKCU	Pink Cliffs	5.79	24	*e*Pn	Pn	06 37 33.3	+0.4
PMPB	Monarch Peak	6.06	313	*e*Pn	Pn	06 37 37.0	+0.5
R11A	Troy Canyon, C	6.14	358	P	Pn	06 37 36.5	-1.1
	baz=178,SNR=15						
R11A	Troy Canyon, C	6.14	358	*e*Pn	Pn	06 37 37.5	-0.2
OMMB	Old Mammoth Mi	6.20	332	*e*Pn	Pn	06 37 40.6	+2.1
MDPB	Devils Postpil	6.24	331	*e*Pn	Pn	06 37 41.0	+1.9
MTPU	Mount Pierson	6.37	23	*e*Pn	Pn	06 37 43.3	+2.4
121A	Cookes Peak, D	6.38	85	P	Pn	06 37 39.4	-1.5

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     baz=269,SNR=62
PSUT Pine Spring        6.43  10 ePn     Pn     06 37 42.5 +0.8
NV11 Mina Array Sit     6.64 340 ePn     Pn     06 37 45.1 +0.7
NV01 Mina Array Sit     6.68 339 ePn     Pn     06 37 49.9 +4.8
NVAR Mina Array Bea     6.68 339  Pn     Pn     06 37 45.9 +0.8
     comp=N,0.2nm,0.3s,baz=149,slow=16,SNR=2.8
NVAR                              Lg     Lg     06 39 40.5
     baz=144,slow=20,SNR=2.0
NVAR                              LR     LR     06 40 21.0
     comp=N,1µm,19.9s,baz=218,slow=38
MSU  Marysvale          6.80  21 ePn     Pn     06 37 50.7 +3.9
WAKR Walker             7.14 333 ePn     Pn     06 37 56.2 +4.8
CMB  Columbia Colle     7.16 326 ePn     Pn     06 37 51.9 +0.5
LAZ  Ladron             7.18  70 ePn     Pn     06 37 51.6 -0.4
KVN  Kaiserville        7.21 342 ePn     Pn     06 37 58.2 +6.0
LENM Lemitar            7.26  72 ePn     Pn     06 37 52.3 -0.7
Y22D IRIS PASSCAL I     7.28  73  P      Pn     06 37 52.8 -0.4
     baz=257
Y22E IRIS PASSCAL I     7.28  73  P      Pn     06 37 52.8 -0.4
     baz=257
YERR Yerington          7.49 336 ePn     Pn     06 38 01.4 +5.3
EPT  El Paso            7.49  91 ePn     Pn     06 37 55.7 -0.4
MVCO Mesa Verde         7.51  46  P      Pn     06 37 56.6 +0.1
     baz=230,SNR=56
MVCO Mesa Verde         7.51  46 ePn     Pn     06 37 57.2 +0.7
BNM  Barren Site        7.54  73 ePn     Pn     06 37 56.5 -0.4
LPM  Los Pinos Moun     7.57  71 ePn     Pn     06 37 56.9 -0.4
PNTR Pine Nut           7.71 334 ePn     Pn     06 38 04.8 +5.6
PV05 Paradox Valley     7.76  39 ePn     Pn     06 38 04.1 +4.1
TMUT Trail Mountain     7.83  24 ePn     Pn     06 38 08.3 +7.4
TASM ASL Pad, Albuq     7.88  67  P      Pn     06 38 01.1 -0.4
     baz=252,SNR=19
ANMO Albuquerque        7.88  67  Pn     Pn     06 38 01.8 +0.2
     comp=N,1.3nm,0.3s,baz=242,slow=12,SNR=28
ANMO                              Lg     Lg     06 40 15.3
     comp=N,0.3nm,0.3s,baz=165,slow=19,SNR=2.8
ANMO                              LR     LR     06 41 10.0
     comp=N,2µm,20.3s,baz=250,slow=39
ANMO Albuquerque        7.88  67  P      Pn     06 38 01.3 -0.2
     baz=252
ANMO Albuquerque        7.88  67 ePn     Pn     06 38 01.4 -0.2
ANMO                              Lg     Lg     06 40 15.3
TASL Snake Pit, Alb     7.88  67  P      Pn     06 38 01.3 -0.3
     baz=252,SNR=21
VCNR Virginia City      7.91 335 ePn     Pn     06 38 07.5 +5.5
SRU  San Rafael Swe     7.92  28 ePn     Pn     06 38 05.6 +3.5
PV10 Paradox Valley     8.02  38 ePn     Pn     06 38 06.1 +2.6
PV03 Paradox Valley     8.03  39 ePn     Pn     06 38 06.0 +2.4
PV02 Paradox Valley     8.05  40 ePn     Pn     06 38 06.8 +2.8
PV09 Paradox Valley     8.06  37 ePn     Pn     06 38 06.4 +2.3
PV01 Paradox Valley     8.09  41 ePn     Pn     06 38 06.6 +2.1
PV04 Paradox Valley     8.10  38 ePn     Pn     06 38 07.4 +2.9
P17A Butcher Ranch,     8.15  26 ePn     Pn     06 38 09.4 +4.2
AFDM Forest Hills D     8.16 327 ePn     Pn     06 38 15.9  +11
PAHR Pah Rah Range      8.19 337 ePn     Pn     06 38 12.0 +6.3
DUG  Dugway, Tooele     8.23  13 ePn     Pn     06 38 11.5 +5.2
PV07 Paradox Valley     8.27  39 ePn     Pn     06 38 09.7 +2.8
PV15 Paradox Valley     8.29  40 ePn     Pn     06 38 09.6 +2.4
MPU  Maple Canyon       8.35  20 ePn     Pn     06 38 11.8 +3.8
BMN  Battle Mountai     8.36 350 ePn     Pn     06 38 13.5 +5.4
MNTX Cornudas Mount     8.45  91  P      Pn     06 38 07.8 -1.4
     baz=276,SNR=33
MNTX Cornudas Mount     8.45  91 ePn     Pn     06 38 08.0 -1.2
P18A Preston Nutter     8.47  28 ePn     Pn     06 38 13.8 +4.0
ELK  Elko               8.53   0  Pn     Pn     06 38 12.5 +2.0
     comp=N,0.6nm,0.3s,baz=232,slow=13,SNR=7.1
ELK                               Lg     Lg     06 40 36.5
     comp=N,0.2nm,0.3s,baz=241,slow=13,SNR=2.0
ELK                               LR     LR     06 42 01.6
     comp=N,1µm,18.1s,baz=224,slow=42
BEKR Beckworth          8.68 333 ePn     Pn     06 38 16.0 +3.6
S22A 4UR Ranch, Cre     8.89  49  P      Pn     06 38 15.4  0.0
     baz=234,SNR=18
S22A 4UR Ranch, Cre     8.89  49 ePn     Pn     06 38 16.2 +0.7
BGU  Big Grassy Mou     8.90  11 ePn     Pn     06 38 18.3 +2.8
JLU  Jordanelle         8.95  19 ePn     Pn     06 38 20.5 +4.3
CTU  Camp Tracy         8.95  18 ePn     Pn     06 38 20.7 +4.6
LPIG La Paz             9.19 150  Pn     Pn     06 38 22.5 +3.1
     comp=N,1.6nm,0.3s,baz=205,slow=3.5,SNR=2.9
GDL2 Guadalupe Moun     9.28  87 ePn     Pn     06 38 21.9 +1.3
SPUT South Promonto     9.38  13 ePn     Pn     06 38 25.8 +3.8
TCUT Toone Canyon       9.44  18 ePn     Pn     06 38 28.8 +5.8
O03D Paynes Creek       9.63 329  P      Pn     06 38 25.9 +0.5
     baz=145
SLBS Sierra La Lagu     9.71 149 ePn     Pn     06 38 31.5 +4.9
SMCO Snowmass           9.72  42 ePn     Pn     06 38 29.4 +2.6
O20A White River Ci     9.76  34  P      Pn     06 38 28.2 +0.9
     baz=218,SNR=6.9
O20A White River Ci     9.76  34 ePn     Pn     06 38 30.5 +3.1
SDCO Great Sand Dun     9.77  53  P      Pn     06 38 28.1 +0.7
     baz=238
SDCO Great Sand Dun     9.77  53 ePn     Pn     06 38 28.2 +0.7
HVU  Hansel Valley      9.78  11 ePn     Pn     06 38 30.2 +2.8
HWUT Hardware Ranch     9.86  17 ePn     Pn     06 38 32.1 +3.5
T25A Trinidad          10.24  58 ePn     Pn     06 38 36.8 +2.9
TX31 Lajitas Ar. Si    10.41 103 ePn     Pn     06 38 37.0 +0.8
TXAR Lajitas Array     10.41 103  Pn     Pn     06 38 37.2 +1.0
     comp=N,4.9nm,0.3s,baz=281,slow=12,SNR=190
TXAR                              Lg     Lg     06 41 35.4
     comp=N,0.2nm,0.3s,baz=269,slow=28,SNR=4.6
TXAR                              LR     LR     06 43 20.0
     comp=N,943nm,18.5s,baz=0.0,slow=42
MOD  Modoc Plateau     10.47 339 ePn     Pn     06 38 42.3 +5.2
MSTX Muleshoe          10.67  77 ePn     Pn     06 38 41.6 +2.0
ISCO Idaho Springs     10.91  43 ePn     Pn     06 38 45.8 +2.6
AHID Auburn Hatcher    11.06  16 ePn     Pn     06 38 49.6 +4.5
YBH  Yreka Blue Hor    11.20 330  Pn     Pn     06 38 51.6 +4.7
     comp=N,0.1nm,0.3s,baz=152,slow=8.2,SNR=48
YBH                               LR     LR     06 43 26.1
     comp=N,479nm,20.2s,baz=254,slow=39
YBH  Yreka Blue Hor    11.20 330 ePn     Pn     06 38 51.9 +5.0
MFID Camas Ranch       11.21 358 ePn     Pn     06 38 51.5 +4.5
HLID Hailey            11.37   3  P      Pn     06 38 53.2 +3.9
     baz=184,SNR=12
HLID Hailey            11.37   3 ePn     Pn     06 38 54.4 +5.1
K05A Summer Lake       11.40 339 ePn     Pn     06 38 55.5 +5.7
J08A Circle Bar Ran    11.42 348 ePn     Pn     06 38 55.5 +5.6
BW06 Boulder Array     11.49  22 ePn     Pn     06 38 55.5 +4.5
PD31 Pinedale Array    11.49  22 ePn     Pn     06 38 57.2 +6.1
PDAR Pinedale Array    11.49  22  Pn     Pn     06 38 52.7 +1.6
     comp=N,0.1nm,0.3s,baz=196,slow=10,SNR=6.8
PDAR                              Lg     Lg     06 42 07.8
     comp=N,0.0nm,0.3s,baz=206,slow=30,SNR=2.1
PDAR                              LR     LR     06 43 33.5
     comp=N,819nm,18.8s,baz=213,slow=39
PDAR Pinedale Array    11.49  22 ePn     Pn     06 38 54.1 +3.0
PDAR                              Lg     Lg     06 42 07.8
AMTX Amarillo          11.68  73  P      Pn     06 38 53.6  0.0
     baz=261
AMTX Amarillo          11.68  73 ePn     Pn     06 38 54.8 +1.2
REDW Red Top Meadow    11.69  16 ePn     Pn     06 38 57.4 +3.7
TPAW Teton Pass        11.79  16 ePn     Pn     06 38 59.1 +4.1
SNOW Snow King Moun    11.81  16 ePn     Pn     06 38 59.1 +3.7
FXWY Fox Creek         11.91  15 ePn     Pn     06 38 59.7 +3.0
L02D Cave Junction,    11.93 329  P      Pn     06 39 00.4 +3.5
     baz=144
LOHW Long Hollow       11.98  17 ePn     Pn     06 39 02.2 +4.5
J05D Fort Rock, OR     12.02 339  P      Pn     06 39 02.1 +4.0
     baz=155,SNR=38
HUMO Hull Mountain     12.03 332 ePn     Pn     06 39 03.2 +5.0
MOOW Moose Ponds       12.08  16 ePn     Pn     06 39 02.3 +3.2
IMW  Indian Meadow     12.18  15 ePn     Pn     06 39 04.0 +3.5
J04D Umpqua Nationa    12.26 336  P      Pn     06 39 02.6 +1.1
     baz=152,SNR=8.9
PINE Pine Mountain     12.39 341 ePn     Pn     06 39 08.9 +5.6
PINE                             eSn     Sn     06 41 17.1 -4.7
FLWY Flagg Ranch       12.40  16 ePn     Pn     06 39 07.3 +3.8
K22A Casper            12.55  31 ePn     Pn     06 39 13.1 +7.7
YPP  Pitchstone Pla    12.56  15 ePn     Pn     06 39 10.2 +4.5
H17A Grant Village     12.73  16  P      Pn     06 39 10.2 +2.3
     baz=198
H17A Grant Village     12.73  16 ePn     Pn     06 39 15.6 +7.6
BMO  Blue Mountains    12.73 354 ePn     Pn     06 39 13.3 +5.5
MCMT McKenzie Canyo    12.76   8 ePn     Pn     06 39 13.7 +5.4
KEBM Edson Butte       12.83 329 ePn     Pn     06 39 14.5 +5.4
I04A Tendick Farm,     12.85 336  P      Pn     06 39 10.8 +1.4
     baz=152,SNR=17
YMR  Madison River     12.91  14 ePn     Pn     06 39 16.2 +5.9
YHB  Horse Butte       12.94  13 ePn     Pn     06 39 15.6 +4.8
I05D Terrebonne, OR    13.01 340  P      Pn     06 39 16.1 +4.5
     baz=157,SNR=17
ABTX Abilene, Hawle    13.25  84  P      Pn     06 39 17.0 +2.1
     baz=272,SNR=8.9
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ABTX Abilene, Hawle    13.25  84 ePn     Pn     06 39 17.6 +2.7
DLMT Dillon            13.31   8 ePn     Pn     06 39 20.9 +5.1
JCT  Junction City     13.37  93  P      Pn     06 39 18.2 +1.7
     baz=282,SNR=31
JCT  Junction City     13.37  93 ePn     Pn     06 39 19.0 +2.5
G08A Pilot Rock        13.38 349 ePn     P      06 39 22.4 -3.9
H04A Detroit Lake      13.57 339 ePn     Pn     06 39 23.6 +4.3
G06A Carlson Farm,     13.66 344 ePn     P      06 39 26.4 -3.0
BOZ  Bozeman (W)       13.68  11  P      Pn     06 39 23.4 +2.6
     baz=193,SNR=9.7
RLMT Red Lodge         13.73  18  P      Pn     06 39 21.4 -0.2
     baz=202
RLMT Red Lodge         13.73  18 ePn     Pn     06 39 24.7 +3.0
LRM  Limekiln Ridge    13.79   8 ePn     P      06 39 27.5 -3.5
WMOK Wichita Mounta    14.03  75  P      Pn     06 39 24.9 -0.6
     baz=264,SNR=5.0
WMOK Wichita Mounta    14.03  75 ePn     Pn     06 39 26.3 +0.7
E09A Wood Farm, Sta    14.46 352 ePn     P      06 39 36.4 -1.9
HAWA Hanford           14.54 348 ePn     P      06 39 36.8 -2.4
MSO  Missoula          14.65   4  P      Pn     06 39 35.5 +1.4
     baz=184
MSO  Missoula          14.65   4 ePn     P      06 39 38.7 -1.8
ZAIG Zacatecas         14.69 127 ePn     P      06 39 38.6 -2.6
ZAIG                             eSn     Sn     06 41 59.4  -19
HRY  Holter Researc    14.74   9 ePn     P      06 39 41.8 +0.3
RSSD Black Hills       14.83  33 ePn     P      06 39 45.4 +2.8
WHTX Lake Whitney,     15.14  86  P      Pn     06 39 40.0 -0.6
     baz=276,SNR=9.5
WHTX Lake Whitney,     15.14  86 ePn     Pn     06 39 41.2 +0.6
     comp=N,56nm,1.0s
435B Jarrell           15.19  91  P      Pn     06 39 41.3 -0.1
     baz=280
435B Jarrell           15.19  91 ePn     Pn     06 39 42.7 +1.4
     comp=N,52nm,1.5s
LON  Longmire          15.37 343 ePn     P      06 39 47.4 -0.9
     comp=N,30nm,1.1s
TBM  Table Mountain    15.49 346 ePn     Pn     06 39 39.5 -5.8
JTMT Jette             15.55   3 ePn     P      06 39 52.8 +2.3
     comp=N,27nm,1.1s
LTY  Liberty           15.59 346 ePn     P      06 39 50.6 -0.2
     comp=N,15nm,1.3s
E03A Lebam             15.67 338 ePn     P      06 39 50.2 -1.4
     comp=N,53nm,1.0s
C09A Chrisman Ranch    15.75 353 ePn     P      06 39 51.8 -0.7
     comp=N,22nm,1.4s
D05A Enumclaw          15.82 343 ePn     P      06 39 53.5 +0.2
LAO  LASA Array        16.07  23  P      Pn     06 39 53.2 +0.5
     baz=209
LAO  LASA Array        16.07  23 ePn     Pn     06 39 53.5 +0.7
     comp=N,19nm,1.0s
NEW  Newport           16.11 356  Pn     P      06 39 55.5 -1.1
     comp=N,0.2nm,0.3s,baz=169,slow=14,SNR=20
NEW  Newport           16.11 356  P      Pn     06 39 53.8 +0.6
     baz=174,SNR=18
NEW  Newport           16.11 356 ePn     P      06 39 55.9 -0.7
     comp=N,79nm,1.6s
EGMT Eagleton          16.36  13  P      Pn     06 39 56.5  0.0
     baz=197,SNR=6.1
EGMT Eagleton          16.36  13 ePn     P      06 40 00.0 +0.6
     comp=N,16nm,1.0s
B08A Colville Reser    16.43 350 ePn     P      06 39 59.5 -0.6
     comp=N,18nm,1.1s
NLWA Neilton Lookou    16.52 339 ePn     P      06 40 04.3 +3.1
     comp=N,28nm,1.2s
TUL1 Leonard           16.59  72  P      Pn     06 39 58.9 -0.5
     baz=263,SNR=18
TUL1 Leonard           16.59  72 ePn     Pn     06 40 00.1 +0.7
     comp=N,51nm,1.1s
HKT  Hockley           16.84  93 ePn     P      06 40 04.4 -0.2
     comp=N,54nm,1.5s
WALA Waterton Lakes    16.88   3 ePn     P      06 40 06.0 +0.8
     comp=N,55nm,1.5s
B06A Marblemount       16.96 346 ePn     P      06 40 09.7 +3.8
     comp=N,15nm,0.8s
NATX Nacogdoches       17.53  86  P      Pn     06 40 11.1 -0.1
     baz=277
NATX Nacogdoches       17.53  86 ePn     P      06 40 13.0 +0.7
     comp=N,307nm,1.8s
X39A Fountain Ranch    17.86  77  P      Pn     06 40 15.3  0.0
     baz=269,SNR=26
T38A Diamond           17.95  69  P      Pn     06 40 16.5  0.0
     baz=261,SNR=11
HHAR Hobbs             18.13  71 ePn     Pn     06 40 18.6  0.0
     comp=N,7.7nm,1.0s
W39A Magazine          18.16  75  P      Pn     06 40 18.5 -0.5
     baz=267,SNR=8.0
W39A Magazine          18.16  75 ePn     P      06 40 19.9 +0.6
     comp=N,12nm,1.1s
DGMT Dagmar            18.30  24 ePn     P      06 40 24.3 +3.5
     comp=N,15nm,0.9s
MIAR Mount Ida         18.30  77  P      Pn     06 40 20.8  0.0
     baz=269,SNR=22
MIAR Mount Ida         18.30  77 ePn     P      06 40 21.4 +0.5
     comp=N,18nm,0.9s
V39A Pettigrew         18.32  73  P      Pn     06 40 20.5 -0.5
     baz=265,SNR=17
S38A Stockton          18.36  67  P      Pn     06 40 21.0 -0.4
     baz=259,SNR=12
R38A Fenwick Farm,     18.47  65  P      P      06 40 22.1 -0.7
     baz=258
U39A Green Forest      18.51  71  P      P      06 40 23.0 -0.2
     baz=263,SNR=8.7
Y40A Okolona           18.54  78  P      P      06 40 22.9 -0.6
     baz=271
H32A Carlson Farm,     18.59  44  P      P      06 40 23.1 -0.9
     baz=235
ECSD EROS Data Cent    18.66  47  P      P      06 40 24.4 -0.4
     baz=238,SNR=8.4
ECSD EROS Data Cent    18.66  47 eP      Pn     06 40 25.5 +0.5
     comp=N,7.8nm,1.1s
T39A Clever            18.67  69  P      P      06 40 24.3 -0.7
     baz=262,SNR=14
W40A Ferguson Farm,    18.74  75  P      P      06 40 25.8 +0.1
     baz=267,SNR=8.1
W40A Ferguson Farm,    18.74  75 eP      Pn     06 40 26.9 +0.8
     comp=N,28nm,1.3s
S39A Bolivar           18.82  67  P      P      06 40 26.5 -0.2
     baz=260,SNR=7.5
S39A Bolivar           18.82  67 eP      Pn     06 40 27.5 +0.4
     comp=N,57nm,1.6s
341A Kurthwood         18.85  87  P      P      06 40 27.2 +0.3
     baz=278,SNR=5.5
341A Kurthwood         18.85  87 eP      Pn     06 40 29.1 +1.7
     comp=N,61nm,1.4s
Q38A Cooks Store, C    18.87  63  P      P      06 40 27.0 -0.1
     baz=256,SNR=7.7
X40A Basin Creek Fa    18.91  77  P      P      06 40 27.2 -0.4
     baz=269
141A Papa Simpson,     18.92  83  P      P      06 40 28.1 +0.4
     baz=275
441A DeRidder          18.92  89  P      Pn     06 40 28.8 +0.5
     baz=280
Z41A Richland Creek    18.96  81  P      P      06 40 27.7 -0.4
     baz=273,SNR=6.3
Z41A Richland Creek    18.96  81 eP      Pn     06 40 29.8 +1.0
     comp=N,52nm,1.0s
241A Mo Tay, Goldon    18.97  85  P      P      06 40 28.8 +0.6
     baz=277,SNR=7.3
241A Mo Tay, Goldon    18.97  85 eP      Pn     06 40 30.7 +1.8
     comp=N,100nm,1.3s
V40A Witts Springs     18.98  73  P      P      06 40 28.1 -0.3
     baz=266,SNR=7.8
V40A Witts Springs     18.98  73 eP      Pn     06 40 29.4 +0.3
     comp=N,28nm,1.4s
U40A Yellville         19.01  71  P      P      06 40 27.6 -1.0
     baz=264,SNR=11
Y41A Eaglette Beard    19.10  79  P      P      06 40 29.0 -0.7
     baz=271,SNR=8.2
P38A Dawn              19.11  61  P      P      06 40 29.7  0.0
     baz=254
P38A Dawn              19.11  61 eP      Pn     06 40 30.8 +0.3
     comp=N,58nm,1.9s
R39A Chumby, Stover    19.16  65  P      P      06 40 30.0 -0.4
     baz=258,SNR=11
T40A Mansfield         19.37  69  P      P      06 40 32.0 -0.6
     baz=262,SNR=10.0
Q39A Willow Grove F    19.38  63  P      P      06 40 32.5 -0.1
     baz=256,SNR=7.1
WHAR Wooly Hollow      19.39  75 eP      P      06 40 33.7 +0.9
     comp=N,18nm,1.1s
W41B Gary Mavity, V    19.41  75  P      Pn     06 40 34.8 +0.6
     baz=268
W41B Gary Mavity, V    19.41  75 eP      P      06 40 34.0 +0.9
     comp=N,26nm,1.5s
S40A Lebanon           19.45  68  P      P      06 40 33.2 -0.3
     baz=261,SNR=15
V41A Mountainview      19.52  73  P      P      06 40 33.9 -0.4
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     baz=266,SNR=7.8
K36A Gilmore City      19.52  52  P      P      06 40 34.4 +0.1
     baz=244
342A Flagon Creek P    19.55  86  P      P      06 40 34.4 -0.3
     baz=278,SNR=6.4
342A Flagon Creek P    19.55  86 eP      Pn     06 40 37.8 +1.9
     comp=N,248nm,1.6s
242A Grayson           19.61  84  P      Pn     06 40 36.3 -0.3
     baz=277
Z42A Norrel Spur, H    19.68  81  P      P      06 40 36.7 +0.7
     baz=273
R40A Maddies Statio    19.75  66  P      P      06 40 37.1 +0.3
     baz=259,SNR=12
R40A Maddies Statio    19.75  66 eP      P      06 40 37.9 +1.0
     comp=N,22nm,1.1s
U41A Viola             19.75  71  P      P      06 40 36.6 -0.2
     baz=265,SNR=9.4
L37A Phoenix Point,    19.79  54  P      P      06 40 37.3 +0.2
     baz=247
Y42A Garnett, Star     19.79  79  P      P      06 40 37.0 -0.2
     baz=272
J36A Seneca 1, Swea    19.90  50  P      P      06 40 38.5 +0.1
     baz=243
J36A Seneca 1, Swea    19.90  50 eP      Pn     06 40 40.2 +0.2
     comp=N,23nm,1.3s
M38A Pleasantville     19.91  56  P      P      06 40 39.6 +1.1
     baz=250
T41A Mountain View     19.95  69  P      P      06 40 39.1  0.0
     baz=263,SNR=9.0
S41A Jillco Farms,     20.04  68  P      P      06 40 39.8 -0.2
     baz=262,SNR=17
Q40A Laux Farm, Aux    20.05  64  P      P      06 40 40.1 +0.2
     baz=257,SNR=11
K37A Belmond           20.12  52  P      P      06 40 40.7 -0.1
     baz=245,SNR=6.7
V42A Cord              20.14  73  P      P      06 40 40.6 -0.5
     baz=267,SNR=5.9
343A Vidalia           20.17  86  P      P      06 40 41.2 -0.2
     baz=279
143A Socs Landing,     20.18  82  P      P      06 40 41.7 +0.2
     baz=275
143A Socs Landing,     20.18  82 eP      Pn     06 40 43.7 +0.4
     comp=N,54nm,1.1s
P40A Paris             20.19  62  P      P      06 40 41.6 +0.1
     baz=256,SNR=7.4
P40A Paris             20.19  62 eP      P      06 40 42.5 +1.0
     comp=N,76nm,1.9s
N39A Derby Farms, D    20.23  58  P      P      06 40 43.0 +1.0
     baz=252,SNR=9.9
N39A Derby Farms, D    20.23  58 eP      Pn     06 40 44.4 +0.5
     comp=N,28nm,1.0s
H35A Sunnyside Ranc    20.26  46  P      P      06 40 42.5 +0.3
     baz=239,SNR=5.2
Z43A Armstrong Fami    20.27  81  P      P      06 40 43.4 +1.0
     baz=274
U42A Revenden          20.30  72  P      P      06 40 42.6 -0.2
     baz=265,SNR=12
L38A Oak Wood Farm,    20.34  54  P      P      06 40 44.0 +0.9
     baz=248
J37A Redenius Farm,    20.41  51  P      P      06 40 43.6 -0.3
     baz=244,SNR=14
I36A Fitzsimmons Fa    20.43  49  P      P      06 40 45.0 +0.8
     baz=242
R41A Rosebud           20.44  66  P      P      06 40 43.2 -1.1
     baz=260,SNR=21
O40A La Belle          20.47  61  P      P      06 40 44.4 -0.2
     baz=255,SNR=8.9
T42A Van Buren         20.49  70  P      P      06 40 44.7 -0.1
     baz=264,SNR=13
T42A Van Buren         20.49  70 eP      P      06 40 45.5 +0.7
     comp=N,23nm,1.2s
Y43A Makayla and Ka    20.50  79  P      P      06 40 45.2 +0.3
     baz=272
CCM  Cathedral Cave    20.51  67  P      P      06 40 46.1 +1.1
     baz=261
CCM  Cathedral Cave    20.51  67 eP      Pn     06 40 46.6 -0.6
     comp=N,82nm,1.8s
X43A Marvell           20.53  77  P      P      06 40 45.7 +0.5
     baz=270
X43A Marvell           20.53  77 eP      Pn     06 40 47.0 -0.4
     comp=N,42nm,1.2s
M39A Webster           20.66  57  P      P      06 40 47.5 +0.9
     baz=251
K38A Parkersburg       20.66  53  P      P      06 40 48.1 +1.5
     baz=247
Q41A Truxton           20.68  64  P      P      06 40 47.4 +0.6
     baz=258
H36A Jessenland, He    20.75  47  P      P      06 40 48.3 +0.7
     baz=241
S42A Caledonia         20.82  68  P      P      06 40 48.0 -0.4
     baz=262,SNR=15
I37A Lemond, Waseca    20.82  49  P      P      06 40 49.2 +0.8
     baz=243
I37A Lemond, Waseca    20.82  49 eP      Pn     06 40 51.0 +0.2
     comp=N,19nm,1.2s
244A Avery, Jackson    20.85  84  P      P      06 40 49.5 +0.8
     baz=277,SNR=10
344A Westbrook Farm    20.89  85  P      P      06 40 49.3 +0.2
     baz=279,SNR=5.5
344A Westbrook Farm    20.89  85 eP      Pn     06 40 51.9 +0.2
     comp=N,66nm,1.4s
N40A Mertquake, Sal    20.89  59  P      P      06 40 49.1 -0.1
     baz=253,SNR=5.6
R42A Luebbering        20.89  66  P      P      06 40 49.4 +0.2
     baz=260,SNR=10
Z44A Pea Ridge, Bel    20.95  80  P      P      06 40 50.6 +0.8
     baz=274
P41A Barry, Barry      20.96  62  P      P      06 40 50.6 +0.7
     baz=257
VBMS Vicksburg         20.97  83  P      P      06 40 49.7 -0.4
     baz=277,SNR=5.8
VBMS Vicksburg         20.97  83 eP      Pn     06 40 52.8 +0.2
     comp=N,93nm,0.9s
PBMO Poplar Bluff      20.99  71 eP      P      06 40 50.9 +0.6
     comp=N,16nm,1.1s
L39A Vinton            21.00  55  P      P      06 40 50.3 +0.1
     baz=249
144A Alexander Plac    21.01  82  P      P      06 40 50.2 -0.3
     baz=276
F35A Swanville         21.03  44  P      P      06 40 51.7 +1.1
     baz=237
E34A Wadena            21.06  41  P      P      06 40 51.1 +0.2
     baz=234
Y44A Strider, Charl    21.09  78  P      P      06 40 50.9 -0.5
     baz=272
M40A Post Highland     21.10  57  P      P      06 40 51.5  0.0
     baz=252
J38A Wedel Dairy, R    21.13  52  P      P      06 40 51.8 +0.2
     baz=246,SNR=15
T43A Greenville        21.13  70  P      P      06 40 51.3 -0.4
     baz=264,SNR=16
FVM  French Village    21.14  67 eP      P      06 40 53.8 +1.9
     comp=N,80nm,1.6s
G36A St. Michael       21.19  46  P      P      06 40 52.2 -0.1
     baz=239
O41A Passleys Farm,    21.20  61  P      P      06 40 52.5  0.0
     baz=256
Q42A Golden Eagle      21.21  65  P      P      06 40 52.5  0.0
     baz=259,SNR=5.7
K39A Oelwein           21.28  54  P      P      06 40 53.2 -0.1
     baz=248,SNR=12
S43A Fulton Ridge,     21.36  68  P      P      06 40 54.3 +0.1
     baz=263,SNR=8.6
N41A Harden Midland    21.38  60  P      P      06 40 54.6 +0.3
     baz=254,SNR=5.7
N41A Harden Midland    21.38  60 eP      P      06 40 55.1 +0.8
     comp=N,27nm,1.1s
145A Houston Renfro    21.43  82  P      P      06 40 55.0  0.0
     baz=276,SNR=5.9
P42A Winchester        21.48  63  P      P      06 40 56.2 +0.7
     baz=258
P42A Winchester        21.48  63 eP      P      06 40 56.8 +1.2
     comp=N,30nm,1.1s
245A Little AP, Sta    21.52  84  P      P      06 40 57.3 +1.3
     baz=277
L40A Anamosa           21.52  56  P      P      06 40 56.4 +0.5
     baz=251
L40A Anamosa           21.52  56 eP      P      06 40 56.6 +0.7
     comp=N,16nm,1.1s
I38A Scanlan Farm,     21.52  50  P      P      06 40 56.9 +1.0
     baz=244,SNR=6.7
Z45A Winona            21.56  80  P      P      06 40 57.4 +1.0
     baz=274
Z45A Winona            21.56  80 eP      P      06 40 59.0 +2.7
     comp=N,71nm,1.3s
R43A Red Bud           21.57  67  P      P      06 40 57.5 +1.1
     baz=261
J39A Decorah           21.65  52  P      P      06 40 57.1 -0.1
     baz=247,SNR=14
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F36A	Milaca	21.65	45	P	P	06 40 57.5	+0.3
	baz=238,SNR=11						
F36A	Milaca	21.65	45	*e*P	P	06 41 00.4	+3.1
	comp=N,16nm,1.0s						
Y45A	Yeager Farm, C	21.65	79	P	P	06 40 58.3	+1.0
	baz=273						
T44A	Benton	21.69	70	P	P	06 40 57.3	-0.4
	baz=265						
OXF	Oxford	21.74	77	P	P	06 40 57.3	-1.0
	baz=271,SNR=6.3						
OXF	Oxford	21.74	77	*e*P	P	06 40 59.8	+1.4
	comp=N,43nm,1.0s						
X45A	UM Field Stati	21.76	77	P	P	06 40 57.6	-0.9
	baz=272						
SPMN	Marine on St.	21.77	47	P	P	06 40 58.9	+0.4
	baz=241,SNR=5.9						
SPMN	Marine on St.	21.77	47	*e*P	P	06 41 00.3	+1.8
	comp=N,25nm,1.1s						
AGMN	Agassiz Nation	21.79	37	P	P	06 40 59.4	+0.7
	baz=229						
AGMN	Agassiz Nation	21.79	37	*e*P	P	06 41 00.0	+1.3
	comp=N,29nm,1.4s						
M41A	Milan	21.79	58	P	P	06 40 59.3	+0.5
	baz=253						
K40A	Colesburg	21.80	54	P	P	06 40 58.5	-0.4
	baz=249,SNR=5.6						
U44B	Burton Farm, H	21.82	72	P	P	06 40 59.1	-0.1
	baz=267						
Q43A	New Douglas	21.85	65	P	P	06 40 59.7	+0.2
	baz=260						
W45A	Hickory Valley	21.92	75	P	P	06 41 00.1	-0.1
	baz=270,SNR=8.9						
346A	Big Creek Wild	21.97	85	P	P	06 41 00.8	0.0
	baz=279						
346A	Big Creek Wild	21.97	85	*e*P	P	06 41 03.2	+2.4
	comp=N,30nm,0.9s						
I39A	Houston	21.98	51	P	P	06 41 00.1	-0.7
	baz=246,SNR=7.0						
I39A	Houston	21.98	51	*e*P	P	06 41 05.3	+4.5
	comp=N,22nm,0.9s						
N42A	Yates City	22.01	60	P	P	06 41 00.8	-0.3
	baz=255						
S44A	Carbondale	22.02	68	P	P	06 41 00.5	-0.8
	baz=263						
L41A	Preston	22.03	56	P	P	06 41 01.1	-0.3
	baz=251,SNR=5.6						
BBB	Bella Bella	22.05	339	LR	LR	06 50 09.5	
	comp=N,721nm,18.6s,baz=163,slow=38						
SIUC	Southern Illin	22.05	68	*e*P	P	06 41 02.4	+0.8
	comp=N,32nm,1.2s						
146A	Union	22.15	82	*e*P	P	06 41 05.0	+2.2
	comp=N,49nm,1.3s						
E36A	McGregor	22.16	43	P	P	06 41 02.1	-0.6
	baz=238,SNR=6.3						
Z46A	Louisville	22.20	80	P	P	06 41 03.1	-0.2
	baz=275,SNR=7.1						
Y46A	Houston	22.22	78	P	P	06 41 03.4	-0.1
	baz=273,SNR=19						
R44A	Waltonville	22.22	67	P	P	06 41 02.6	-0.9
	baz=262						
J40A	Soldiers Grove	22.32	53	P	P	06 41 04.2	-0.3
	baz=248						
G38A	Ridgeland	22.33	48	P	P	06 41 04.7	+0.1
	baz=243						
Q44A	Meyer Farm, Va	22.37	65	P	P	06 41 05.0	-0.1
	baz=261						
C35A	Jirik Farms, M	22.41	40	P	P	06 41 05.1	-0.4
	baz=234						
X46A	Booneville	22.42	77	P	P	06 41 05.4	-0.3
	baz=272,SNR=8.8						
A33A	Warroad	22.44	36	P	P	06 41 06.4	+0.7
	baz=229,SNR=7.8						
H39A	Augusta	22.48	49	P	P	06 41 06.0	-0.2
	baz=244						
JFWS	Jewell Farm	22.49	54	P	P	06 41 06.9	+0.7
	baz=250						
JFWS	Jewell Farm	22.49	54	*e*P	P	06 41 08.1	+1.8
	comp=N,13nm,1.1s						
HDIL	Hopedale	22.49	61	P	P	06 41 05.9	-0.4
	baz=256						
HDIL	Hopedale	22.49	61	*e*P	P	06 41 06.2	0.0
	comp=N,19nm,1.1s						
B34A	Aery, Baudette	22.53	38	P	P	06 41 07.3	+0.6
	baz=231						
S45A	Carrier Mills	22.55	69	P	P	06 41 06.8	-0.1
	baz=264						
D36A	Goodland	22.57	42	P	P	06 41 07.9	+0.8
	baz=236						
D36A	Goodland	22.57	42	*e*P	P	06 41 07.9	+0.8
	comp=N,17nm,1.3s						
W46A	Michie	22.58	75	P	P	06 41 07.5	+0.2
	baz=270						
I40A	Norwalk	22.59	52	P	P	06 41 07.9	+0.5
	baz=247						
247A	Quitman	22.60	83	P	P	06 41 08.6	+1.1
	baz=278						
L42A	Oliver, Polo	22.60	57	P	P	06 41 07.9	+0.4
	baz=253						
F38A	Pierce - Schro	22.69	46	P	P	06 41 08.8	+0.4
	baz=241,SNR=13						
347A	Saraland	22.75	85	P	P	06 41 09.3	+0.2
	baz=279						
P44A	Sand Creek, Wi	22.77	64	P	P	06 41 09.2	-0.1
	baz=260						
V46A	Holladay	22.80	73	P	P	06 41 09.9	+0.2
	baz=269						
J41A	Loganville	22.80	54	P	P	06 41 09.7	+0.1
	baz=249						
147A	Livingston	22.81	82	P	P	06 41 10.1	+0.4
	baz=276,SNR=6.6						
147A	Livingston	22.81	82	*e*P	P	06 41 11.5	+1.7
	comp=N,53nm,1.0s						
G39A	Holcombe	22.82	48	P	P	06 41 09.3	-0.5
	baz=243,SNR=5.8						
PLAL	Pickwick Lake	22.83	76	*e*P	P	06 41 10.8	+0.8
	comp=N,33nm,1.3s						
R45A	Skylar, Fairfi	22.85	67	P	P	06 41 10.3	+0.1
	baz=263						
Z47A	Carrollton	22.93	80	P	P	06 41 11.0	0.0
	baz=275,SNR=18						
B35A	Bob, Littlefor	22.94	39	P	P	06 41 13.0	+2.0
	baz=233						
M43A	Waltham Townsh	22.95	59	P	P	06 41 11.8	+0.7
	baz=255						
D37A	Cotton	22.98	43	P	P	06 41 11.9	+0.5
	baz=238						
O44A	Mansfield	23.02	62	P	P	06 41 11.5	-0.3
	baz=258						
X47A	Russelville	23.02	77	P	P	06 41 12.6	+0.6
	baz=272,SNR=9.8						
H40A	Chili	23.03	50	P	P	06 41 12.4	+0.4
	baz=246						
Q45A	Warren Harvey,	23.03	66	P	P	06 41 11.1	-1.0
	baz=262						
T46A	Princeton	23.04	70	P	P	06 41 12.3	+0.2
	baz=266						
WVT	Waverly	23.04	73	P	P	06 41 12.8	+0.6
	baz=268						
WVT	Waverly	23.04	73	*e*P	P	06 41 13.7	+1.5
	comp=N,15nm,1.0s						
OLIL	Olney	23.05	66	*e*P	P	06 41 13.1	+0.9
	comp=N,25nm,0.9s						
Y47A	UCPARC, Winfie	23.06	78	P	P	06 41 12.1	-0.2
	baz=274,SNR=7.9						
K42A	Prairie Point,	23.07	55	P	P	06 41 12.6	+0.2
	baz=251,SNR=7.8						
C36A	Pine Crest Far	23.07	41	P	P	06 41 12.6	+0.2
	baz=236						
ULM	Lac du Bonnet	23.10	33	LR	LR	06 51 47.7	
	comp=N,65nm,18.4s,baz=228,slow=41						
I41A	Arkdale	23.16	52	P	P	06 41 14.0	+0.8
	baz=248						
I41A	Arkdale	23.16	52	*e*P	P	06 41 14.3	+1.1
	comp=N,16nm,1.0s						
E38A	The Farm, Brul	23.20	45	P	P	06 41 14.1	+0.4
	baz=240						
E38A	The Farm, Brul	23.20	45	*e*P	P	06 41 14.7	+1.0
	comp=N,20nm,1.3s						
W47A	Westpoint	23.22	75	P	P	06 41 14.1	0.0
	baz=270						
S46A	Don Dixon Farm	23.23	69	P	P	06 41 14.4	+0.3
	baz=265						
F39A	Loretta	23.26	47	P	P	06 41 14.5	+0.2
	baz=242						
348A	Jackson	23.29	85	P	P	06 41 14.7	0.0
	baz=279						
348A	Jackson	23.29	85	*e*P	P	06 41 17.2	+2.5
	comp=N,171nm,1.7s						
V47A	Nunnelly	23.29	73	P	P	06 41 15.0	+0.3
	baz=269						
L43A	Garden Prairie	23.31	57	P	P	06 41 14.9	0.0
	baz=253						
248A	Dixon Mills	23.32	83	P	P	06 41 16.1	+1.0
	baz=278						
Z48A	Northport	23.34	80	P	P	06 41 15.8	+0.6
	baz=275,SNR=15						
J42A	Columbus	23.40	54	P	P	06 41 15.7	-0.1
	baz=250,SNR=6.9						
148A	Greensboro	23.40	81	P	P	06 41 15.8	0.0
	baz=276						
N44A	Piper City	23.40	61	P	P	06 41 15.6	-0.2
	baz=257						
G40A	Rib Lake	23.42	49	P	P	06 41 16.2	+0.2
	baz=245						
G40A	Rib Lake	23.42	49	*e*P	P	06 41 16.4	+0.4
	comp=N,21nm,1.5s						
R46A	Gibon Southern	23.45	67	P	P	06 41 16.5	+0.3
	baz=264						
P45A	Graceland, Par	23.45	64	P	P	06 41 16.0	-0.3
	baz=260						
P45A	Graceland, Par	23.45	64	*e*P	P	06 41 17.9	+1.7
	comp=N,26nm,1.3s						
U47A	Clarksville	23.49	72	P	P	06 41 16.9	+0.2
	baz=268,SNR=7.1						
H41A	Junction City	23.51	51	*e*P	P	06 41 17.9	+1.1
	comp=N,8.2nm,0.9s						
M44A	Midewin, Midew	23.61	59	P	P	06 41 17.5	-0.3
	baz=256						
M44A	Midewin, Midew	23.61	59	*e*P	P	06 41 18.4	+0.6
	comp=N,21nm,1.1s						
Y48A	Jasper	23.62	78	P	P	06 41 18.1	+0.1
	baz=274						
T47A	Sharon Grove	23.66	71	P	P	06 41 19.2	+0.8
	baz=267						
T47A	Sharon Grove	23.66	71	*e*P	P	06 41 20.9	+2.5
	comp=N,57nm,2.0s						
X48A	Hartselle	23.70	77	P	P	06 41 18.5	-0.3
	baz=273,SNR=7.7						
X48A	Hartselle	23.70	77	*e*P	P	06 41 19.2	+0.5
	comp=N,63nm,1.8s						
E39A	Mellen	23.70	46	P	P	06 41 18.6	-0.1
	baz=242						
I42A	Draeger Farm,	23.74	53	P	P	06 41 19.1	0.0
	baz=249						
I42A	Draeger Farm,	23.74	53	*e*P	P	06 41 20.4	+1.3
	comp=N,11nm,1.1s						
K43A	Burlington	23.75	56	P	P	06 41 18.5	-0.7
	baz=253,SNR=5.4						
K43A	Burlington	23.75	56	*e*P	P	06 41 19.4	+0.2
	comp=N,29nm,0.9s						
F40A	Park Falls	23.76	48	P	P	06 41 19.3	0.0
	baz=244						
W48A	Pulaski	23.77	75	P	P	06 41 19.5	0.0
	baz=271						
LRAL	Lakeview Retre	23.84	80	P	P	06 41 20.5	+0.4
	baz=276,SNR=10						
LRAL	Lakeview Retre	23.84	80	*e*P	P	06 41 21.5	+1.4
	comp=N,17nm,1.0s						
V48A	Smith Brothers	23.85	74	P	P	06 41 20.2	0.0
	baz=270						
V48A	Smith Brothers	23.85	74	*e*P	P	06 41 21.6	+1.3
	comp=N,26nm,1.4s						
249A	Camden	23.86	83	P	P	06 41 20.1	-0.2
	baz=278,SNR=6.9						
P46A	Rosedale	23.87	64	P	P	06 41 21.1	+0.7
	baz=261						
349A	Repton	23.90	85	P	P	06 41 20.4	-0.4
	baz=280,SNR=6.8						
C38A	Sawbill Land.	23.94	43	P	P	06 41 20.9	-0.1
	baz=238						
BRAL	Brewton	24.05	85	P	P	06 41 22.6	+0.5
	baz=280,SNR=5.2						
BRAL	Brewton	24.05	85	*e*P	P	06 41 24.2	+2.1
	comp=N,90nm,1.2s						
149A	Jones	24.06	81	P	P	06 41 21.4	-0.8
	baz=277,SNR=11						
SFIN	Lafayette	24.09	62	P	P	06 41 23.1	+0.6
	baz=259						
SFIN	Lafayette	24.09	62	*e*P	P	06 41 24.6	+2.1
	comp=N,15nm,1.2s						
U48A	Cassie Pea, Po	24.10	72	P	P	06 41 23.1	+0.5
	baz=268						
E40A	Wakefield	24.13	47	P	P	06 41 23.3	+0.4
	baz=243						
Z49A	Columbiana	24.21	80	P	P	06 41 24.3	+0.6
	baz=276,SNR=5.6						
H42A	Shiocton	24.21	52	P	P	06 41 23.6	0.0
	baz=249						
H42A	Shiocton	24.21	52	*e*P	P	06 41 24.9	+1.3
	comp=N,14nm,1.0s						
R47A	Wooly Knot Far	24.23	67	P	P	06 41 23.6	-0.1
	baz=264						
T48A	Bowling Green	24.24	70	P	P	06 41 23.1	-0.8
	baz=267						
Y49A	Blount Mountai	24.25	78	P	P	06 41 23.9	-0.2
	baz=274						
Y49A	Blount Mountai	24.25	78	*e*P	P	06 41 25.6	+1.5
	comp=N,13nm,1.2s						
I43A	Langenfeld Bro	24.26	53	P	P	06 41 24.0	0.0
	baz=250						
X49A	Woodville	24.29	77	P	P	06 41 24.2	-0.2
	baz=273,SNR=7.3						
W49A	Belvidere	24.32	75	P	P	06 41 24.8	+0.2
	baz=271,SNR=14						
F41A	Three Lakes	24.32	49	P	P	06 41 24.6	0.0
	baz=245						
BLO	Bloomington	24.33	65	*e*P	P	06 41 25.8	+1.1
	comp=N,44nm,1.8s						
Q47A	Bedord North L	24.38	66	P	P	06 41 25.3	+0.2
	baz=263						
FFC	Flin Flon	24.43	19	*e*P	P	06 41 27.6	+2.2
	comp=N,8.3nm,1.2s						
COWI	Conover	24.45	48	*e*P	P	06 41 26.5	+0.7
N46A	Monticello	24.46	61	P	P	06 41 25.8	-0.1
	baz=258						
S48A	Wiedeman Farm,	24.54	69	P	P	06 41 26.8	+0.2
	baz=266						
250A	Grady	24.58	83	P	P	06 41 26.9	-0.1
	baz=278						
250A	Grady	24.58	83	*e*P	P	06 41 28.8	+1.8
	comp=N,40nm,1.5s						
SWET	Sewanee	24.59	75	*e*P	P	06 41 28.0	+0.9
	comp=N,17nm,1.1s						
150A	Eclectic	24.70	81	P	P	06 41 27.9	-0.2
	baz=277,SNR=15						
Z50A	Ashland	24.71	80	P	P	06 41 27.7	-0.6
	baz=276,SNR=11						
Z50A	Ashland	24.71	80	*e*P	P	06 41 29.8	+1.5
	comp=N,18nm,0.9s						
R48A	Northridge Ran	24.75	67	P	P	06 41 28.7	+0.2
	baz=264						
O47A	Sheridan	24.76	63	P	P	06 41 29.0	+0.4
	baz=260						
Y50A	Piedmont	24.81	78	P	P	06 41 29.0	-0.1
	baz=274						
X50B	Fort Payne	24.85	77	P	P	06 41 28.9	-0.6
	baz=273,SNR=11						
T49A	Edmonton	24.93	70	P	P	06 41 30.4	+0.3
	baz=268,SNR=6.2						
W50A	Signal Mountai	25.09	75	P	P	06 41 31.2	-0.5
	baz=272,SNR=6.3						
W50A	Signal Mountai	25.09	75	*e*P	P	06 41 32.6	+0.9
	comp=N,16nm,1.0s						
351A	Pinckard	25.25	84	P	P	06 41 34.0	+1.0
	baz=280						
V50A	Pikevile	25.25	74	P	P	06 41 33.0	-0.1
	baz=271						
251A	Midway	25.28	82	P	P	06 41 33.4	0.0
	baz=278,SNR=17						
151A	Opelika	25.29	81	P	P	06 41 33.7	+0.2
	baz=278						
Y51A	Rockmart	25.37	78	P	P	06 41 34.1	0.0
	baz=275,SNR=16						
T50A	Nancy	25.48	71	P	P	06 41 36.0	+0.9
	baz=268						
X51A	Calhoun	25.49	76	*e*P	P	06 41 36.2	+0.9
	comp=N,34nm,1.0s						
CPCT	Cooper Cave	25.73	74	*e*P	P	06 41 38.4	+1.0
	comp=N,23nm,1.3s						
152A	Waverly Hall	25.78	81	P	P	06 41 37.9	0.0
	baz=277,SNR=5.5						
152A	Waverly Hall	25.78	81	*e*P	P	06 41 38.9	+1.0
	comp=N,32nm,1.3s						
352A	Blakely	25.78	83	P	P	06 41 38.5	+0.6
	baz=280						
352A	Blakely	25.78	83	*e*P	P	06 41 40.8	+2.8
	comp=N,23nm,1.0s						
V51A	Loudon	25.86	73	P	P	06 41 38.8	+0.2
	baz=271						
V51A	Loudon	25.86	73	*e*P	P	06 41 39.8	+1.2
	comp=N,17nm,1.2s						
Z52A	Williamson	25.97	79	P	P	06 41 40.2	+0.6
	baz=276						
Y52A	Lilburn	26.20	78	P	P	06 41 42.3	+0.5
	baz=275						
X52A	Dahlonega	26.29	76	P	P	06 41 42.1	-0.4
	baz=274,SNR=5.7						
TKL	Tuckaleechee C	26.34	74	P	P	06 41 42.7	-0.2
	comp=N,2.8nm,0.9s,baz=238,slow=9.5,SNR=3.4						
TKL				LR	LR	06 52 18.9	
	comp=N,569nm,20.5s,baz=270,slow=37						
TKL	Tuckaleechee C	26.34	74	*e*P	P	06 41 45.0	+2.1
	comp=N,17nm,1.3s						
253A	Americus	26.36	82	P	P	06 41 43.1	-0.1
	baz=279						
253A	Americus	26.36	82	*e*P	P	06 41 44.4	+1.2
	comp=N,28nm,1.0s						
V52A	Sevierville	26.48	73	*e*P	P	06 41 45.0	+0.8
	comp=N,19nm,1.4s						
P50A	Jamestown	26.48	65	P	P	06 41 44.4	+0.2
	baz=264						
Y53A	Monroe	26.60	78	P	P	06 41 46.9	+1.6
	baz=275						
Z53A	Monticello	26.67	79	P	P	06 41 46.1	+0.2
	baz=276						
GOGA	Godfrey	26.74	79	P	P	06 41 46.5	-0.1
	baz=276						
X53A	Estanollee	26.78	76	P	P	06 41 47.5	+0.5
	baz=274						
W53A	Cullowhee	26.85	75	P	P	06 41 48.8	+1.1
	baz=273						
TIGA	Tifton	26.92	83	P	P	06 41 48.1	-0.1
	baz=280						
V53A	Saluda	27.12	74	P	P	06 41 50.5	+0.5
	baz=272						
N50A	Nevada	27.12	62	P	P	06 41 50.5	+0.6
	baz=262						
ACSO	Alum Creek Sta	27.18	64	P	P	06 41 50.7	+0.2
	baz=263						
ACSO	Alum Creek Sta	27.18	64	*e*P	P	06 41 51.8	+1.4
	comp=N,11nm,1.0s						
Z54A	Sparta	27.28	79	P	P	06 41 51.6	+0.2
	baz=277						
Y54A	Tignall	27.34	78	P	P	06 41 52.5	+0.5
	baz=276						
155A	Kite	27.67	80	P	P	06 41 55.2	+0.2
	baz=278						
DLBC	Dease Lake	28.08	344	P	P	06 42 00.6	+2.2
	comp=N,5.4nm,0.9s,baz=176,slow=7.9,SNR=4.6						
DLBC				LR	LR	06 54 09.1	
	comp=N,426nm,19.4s,baz=149,slow=38						
DLBC	Dease Lake	28.08	344	*e*P	P	06 42 01.0	+2.6
	comp=N,6.9nm,0.9s						
656A	Willston	28.24	87	P	P	06 41 59.6	-0.5
	baz=284						
KMSC	Kings Mountain	28.35	75	P	P	06 41 60.0	-1.0
	baz=274						
857A	Zephyrhills	28.78	89	P	P	06 42 03.8	-1.1
	baz=286						
758A	Lake Helen	29.47	87	P	P	06 42 10.2	-0.8
	baz=285						
DWPF	Disney Wildern	29.50	89	P	P	06 42 10.8	-0.4
	baz=286						
N54A	Moraine State	29.52	63	P	P	06 42 11.9	+0.5
	baz=264						
M54A	Oil Creek Stat	29.82	62	P	P	06 42 14.5	+0.5
	baz=263						
859A	Kempfer Cattle	29.97	89	P	P	06 42 15.3	-0.1
	baz=287						
YKA	Yellowknife Ar	30.32	1	P	P	06 42 18.8	+0.7
	comp=N,0.6nm,0.9s,baz=185,slow=6.6,SNR=4.8						
YKA				LR	LR	06 54 44.7	
	comp=N,30nm,18.4s,baz=184,slow=37						
O56A	Blue Knob Stat	30.54	64	P	P	06 42 20.2	-0.3
	baz=266						
061Z	Ochoppi	30.65	93	P	P	06 42 20.3	-1.1
	baz=290						
BINY	Binghamton	32.63	61	P	P	06 42 38.5	-0.3
	baz=265						
N59A	State Game Lan	32.70	63	P	P	06 42 38.8	-0.7
	baz=267						
LBNH	Lisbon	35.75	58	P	P	06 43 05.1	-0.7
	baz=265						
EGAK	Eagle	36.29	342	*e*P	P	06 43 12.7	+2.6
	comp=N,8.8nm,1.2s						
PMR	Palmer	36.63	334	*e*P	P	06 43 15.7	+2.7
	comp=N,10nm,1.0s						
INK	Inuvik	37.66	349	*e*P	P	06 43 23.8	+2.1
	comp=N,8.6nm,1.1s						
SKT	Skwentna	37.77	333	*e*P	P	06 43 25.0	+2.2
	comp=N,6.0nm,1.1s						
MCK	McKinley	37.91	336	*e*P	P	06 43 26.3	+2.4
	comp=N,9.8nm,1.0s						
IL1	Eielson Array	37.94	339	*e*P	P	06 43 25.3	+1.1
ILAR	Eielson Array	37.94	339	P	P	06 43 25.9	+1.7
	comp=N,3.7nm,0.9s,baz=115,slow=24,SNR=4.4						
ILAR				LR	LR	06 59 05.7	
	comp=N,246nm,18.3s,baz=154,slow=36						
ILB	Eielson Array	37.94	339	*e*P	P	06 43 26.4	+2.2
CCB	Clear Creek Bu	38.14	338	*e*P	P	06 43 27.6	+1.7
	comp=N,5.3nm,1.4s						
TRF	Thorofare Moun	38.20	335	*e*P	P	06 43 28.7	+2.2
	comp=N,13nm,1.2s						
MDM	Murphy Dome	38.49	338	*e*P	P	06 43 30.7	+1.9
	comp=N,4.6nm,1.1s						
PPLA	Purkeypile	38.55	334	*e*P	P	06 43 31.9	+2.4
	comp=N,16nm,1.1s						
FYU	Fort Yukon	38.75	341	*e*P	P	06 43 33.9	+3.0
	comp=N,16nm,1.0s						
CAST	Castle Rocks	38.82	335	*e*P	P	06 43 33.3	+1.6
	comp=N,4.6nm,1.0s						
BPAW	Bear Paw Mtn.	38.84	336	*e*P	P	06 43 33.5	+1.7
	comp=N,14nm,1.1s						
MLY	Manley	39.34	337	*e*P	P	06 43 38.1	+2.1
	comp=N,4.7nm,0.8s						
COLD	Coldfoot	40.61	340	*e*P	P	06 43 49.3	+2.9
SCHQ	Schefferville	40.74	42	LR	LR	07 00 07.1	
	comp=N,232nm,18.4s,baz=350,slow=35						
IM3	Indian Mountai	40.92	337	*e*P	P	06 43 50.6	+1.6
TOLK	Toolik Lake Re	41.40	342	P	P	06 43 53.6	+0.6
	baz=134,SNR=7.3						
TOLK	Toolik Lake Re	41.40	342	*e*P	P	06 43 56.0	+3.0
ROSC	El Rosal	46.99	117	LR	LR	07 06 20.4	
	comp=N,102nm,19.3s,baz=9.5,slow=39						
RUSC	La Rusia	47.27	114	*e*P	P	06 44 41.9	+0.8
SDV	Santo Domingo	47.38	109	LR	LR	07 07 57.9	
	comp=N,144nm,18.2s,baz=231,slow=40						
PCRV	Puerto La Cruz	51.53	103	LR	LR	07 09 40.9	
	comp=N,74nm,20.6s,baz=284,slow=39						
SUMG	Summit	55.69	21	*e*P	P	06 45 44.6	+1.3
NNA	Nana	57.31	134	LR	LR	07 06 40.5	
	comp=N,103nm,20.2s,baz=330,slow=32						
PPT	Papeete	59.38	219	LR	LR	07 04 43.9	
	comp=N,165nm,20.6s,baz=116,slow=29						
PPT2	Papeete2	59.40	219	*e*LR	LR	07 03 22.9	
	comp=N,109nm,21.8s						
LPAZ	La Paz	66.07	130	LR	LR	07 13 08.7	
	comp=N,95nm,20.9s,baz=316,slow=34						
SPITS	Spitsbergen Ar	66.26	10	P	P	06 46 53.1	-1.5
	comp=N,6.8nm,0.9s,baz=303,slow=12,SNR=7.3						
SPITS				LR	LR	07 15 21.6	
	comp=N,206nm,19.5s,baz=100,slow=36						
RAR	Rarotonga	68.05	225	LR	LR	07 09 26.5	
	comp=N,213nm,21.0s,baz=112,slow=29						
AFI	Afiamalu	70.84	239	LR	LR	07 09 25.6	
	comp=N,142nm,21.1s,baz=147,slow=28						
NOA	NORSAR Array B	77.43	24	LR	LR	07 21 46.9	
	comp=N,81nm,20.0s,baz=325,slow=35						
HFS	Hagfors	78.93	23	P	P	06 48 11.9	+1.6
	comp=N,1.8nm,0.7s,baz=358,slow=5.0,SNR=3.9						
CPUP	Villa Florida	80.24	129	LR	LR	07 22 51.3	
	comp=N,33nm,19.7s,baz=12,slow=35						
FINES	FINESS Array B	81.56	18	P	P	06 48 25.2	+0.8
	comp=N,1.3nm,0.7s,baz=22,slow=2.1,SNR=5.8						
FINES				LR	LR	07 25 07.3	
	comp=N,87nm,18.3s,baz=342,slow=36						
MJAR	Matsushiro Arr	83.07	309	LR	LR	07 18 49.0	
	comp=N,29nm,21.7s,baz=65,slow=31						
PLCA	Paso Flores	83.52	147	LR	LR	07 17 52.2	
	comp=N,106nm,21.0s,baz=3.0,slow=30						
ESDC	Sonseca Array	84.32	46	LR	LR	07 24 20.9	
	comp=N,93nm,18.5s,baz=305,slow=34						
DAVOX	Davos/Dischmat	87.17	34	LR	LR	07 27 16.0	
	comp=N,147nm,18.7s,baz=80,slow=35						

GERES	GERESS Array B	87.39	31	LR	LR	07 28 54.6	
	comp=N,116nm,18.5s,baz=324,slow=36						
MDT	Midelt	88.07	52	LR	LR	07 27 04.5	
	comp=N,161nm,18.9s,baz=327,slow=35						
HNR	Honiara	90.56	259	LR	LR	07 21 23.2	
	comp=N,78nm,21.0s,baz=61,slow=30						
GUMO	Guam	90.96	287	LR	LR	07 21 15.3	
	comp=N,50nm,21.9s,baz=80,slow=30						
DZM	Mont Dzumac	92.17	245	LR	LR	07 23 20.4	
	comp=N,57nm,19.8s,baz=14,slow=31						
ZALV	Zalesovo Beam	92.45	348	LR	LR	07 33 08.1	
	comp=N,24nm,21.9s,baz=70,slow=37						
KEST	Kesra	94.82	42	LR	LR	07 30 36.0	
	comp=N,95nm,20.2s,baz=258,slow=34						
BVAR	Borovoye Array	94.99	357	LR	LR	07 38 36.1	
	comp=N,92nm,18.2s,baz=357,slow=40						
MLR	Muntele Rosu	95.06	26	LR	LR	07 33 47.6	
	comp=N,27nm,18.2s,baz=322,slow=36						
HHC	Hu-ho-hao-te	95.40	326	*e*P	P	06 49 32.5	+0.7
HHC				pmax	pmax		
	comp=N,7.0nm,1.0s						
AKTO	Aktyubinsk	97.52	4	LR	LR	07 35 46.7	
	comp=N,88nm,22.0s,baz=0.2,slow=37						
NJ2	Nanjing	98.13	316	*e*P	P	06 49 42.5	-1.7
KOWA	Kowa	99.57	66	LR	LR	07 33 23.3	
	comp=N,122nm,19.5s,baz=30,slow=34						
MKAR	Makanchi Array	99.78	348	LR	LR	07 42 27.3	
	comp=N,35nm,18.0s,baz=38,slow=40						
WMQ	Urumqi	101.48	343	P	Pdif	06 50 01.1	+2.1
WMQ				LR	LR		
	comp=N,140nm,30.1s						
WMQ				LR	LR		
	comp=N,120nm,30.1s						
LZH	Lanzhou	102.80	328	*e*P	Pdif	06 49 59.9	-5.2
ASAR	Alice Springs	119.18	259	PKP	PKPdf	06 54 55.5	-1.1
	comp=N,0.1nm,0.4s,baz=102,slow=3.0,SNR=2.9						

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*ISK **01** 06:37:45.8, 38°.56N×39°.73E, h13^{km}, ML2.2/6*
*CSEM **01** 06:37:46.4±0.2, 38°.54N×39°.73E, h8^{km}, ML2.2, Error ellipse: s-maj=4.7km s-min=3.5km az=15.0*
*DDA **01** 06:37:46.2, 38°.50N×39°.71E, h7^{km}, Ml2.7*
ISC 01 06:37:46.3±0.9, **38°.54N**±0°.03×**39°.72E**±0°.02, **h15**^{km}±10^{km}, **n27**, σ**0^s.93**/46, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVRC	Sivrice-ELAZID	0.36	243	PG	Pg	06 37 53.9	+0.1
SVRC				SG	Sb	06 37 59.8	-0.2
SVRC	Sivrice-ELAZID	0.36	243	*e*Pg	Pg	06 37 53.9	+0.1
SVRC				*e*Sg	Sb	06 37 59.8	-0.2
PTK	Pertek	0.43	324	PG	Pg	06 37 54.7	-0.3
PTK				SG	Sg	06 38 01.2	+0.2
PTK	Pertek	0.43	324	*e*Pg	Pg	06 37 54.7	-0.3
PTK				*e*Sg	Sg	06 38 01.2	+0.2
HANI	Diyarbakir_Han	0.55	103	*i* P	Pg	06 37 56.9	-0.3
HANI				*i* S	Sb	06 38 05.1	-0.2
HANI	Diyarbakir_Han	0.55	103	P	Pg	06 37 56.9	-0.3
HANI				S	Sb	06 38 05.1	-0.2
ELZG	Elazig	0.58	266	*i* P	Pg	06 37 57.6	0.0
ELZG				*i* S	Sb	06 38 07.5	+1.2
ELZG	Elazig	0.58	266	P	Pg	06 37 57.7	0.0
ELZG				S	Sb	06 38 07.5	+1.2
TNCL	Tunceli-Merkez	0.59	347	*i* P	Pb	06 37 58.5	+0.2
TNCL				*i* S	Sb	06 38 07.0	+0.5
TNCL	Tunceli-Merkez	0.59	347	P	Pb	06 37 58.5	+0.2
TNCL				S	Sb	06 38 07.0	+0.5
BNGB	Bingˆ¶l	0.88	59	PG	Pg	06 38 02.8	-0.5
BNGB				SG	Sb	06 38 15.3	+0.5
MALT	Malatya	1.04	258	PG	Pg	06 38 05.6	-0.8
MALT	Malatya	1.04	258	*e*Pg	Pg	06 38 05.6	-0.8
MAZI	Mazidag	1.23	152	PN	Pn	06 38 09.3	+0.4
MAZI	Mazidag	1.23	152	*e*Pn	Pn	06 38 09.3	+0.4
SVAN	Silvan-Diyarba	1.23	108	PN	Pn	06 38 09.2	+0.3
SVAN	Silvan-Diyarba	1.23	108	*e*Pn	Pn	06 38 09.2	+0.3
URFA	Urfa	1.31	213	PN	Pn	06 38 10.7	+0.7
URFA	Urfa	1.31	213	*e*Pn	Pn	06 38 10.7	+0.7
BTMN	Batman	1.39	118	*i* P	Pg	06 38 12.4	-0.5
BTMN				*i* S	Sg	06 38 31.8	+0.8
BTMN	Batman	1.39	118	P	Pg	06 38 12.4	-0.5
BTMN				S	Sg	06 38 31.8	+0.8
SANL	SANLIURFA_Merk	1.48	203	*i* P	Pn	06 38 09.1	-3.3
SANL				*i* S	Sg	06 38 33.9	-0.3
SANL	SANLIURFA_Merk	1.48	203	P	Pn	06 38 09.1	-3.3
SANL				S	Sg	06 38 33.9	-0.3
MARD	Mardin	1.49	145	*i* P	Pn	06 38 12.2	-0.3
MARD				*i* S	Sg	06 38 33.8	-0.4
ATAB	Bozova	1.55	227	*i* P	Pb	06 38 14.8	+0.1
ATAB				*i* S	Sg	06 38 36.4	+0.1
ATAB	Bozova	1.55	227	P	Pb	06 38 14.8	+0.1
ATAB				S	Sg	06 38 36.4	+0.1
SURC	SANLIURFA_SURC	1.88	208	*i* P	Pg	06 38 24.4	+2.0
SURC				*i* S	Sg	06 38 46.6	-0.1

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*ISCJB **01** 06:49:57.3±0.5, 32°.20N±0°.02×115°.27W±0°.02, h9^{km}±4^{km}, Error ellipse: s-maj=3.4km s-min=3.2km az=5.2*
*MEX **01** 06:49:58.8±0.8, 32°.35N×115°.08W, h33^{km}±6^{km}, MD3.9*
*NEIC **01** 06:49:59.1±0.0, 32°.21N×115°.28W, h6^{km}, ML3.5(PAS), ML3.6(ECX), After ECX.*
*ECX **01** 06:49:59.1±0.7, 32°.20N×115°.28W, h6^{km}, MD3.4, ML3.6*
ISC 01 06:49:58.0±0.9, **32°.19N**±0°.02×**115°.30W**±0°.02, **h11**^{km}±8^{km}, **n69**, σ**1^s.58**/84, **3D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPBX	Cerro Prieto	0.22	358	*e*P	Pg	06 50 01.8	-0.9
CPBX				*e*S	Sg	06 50 05.2	-0.6
MBIG	Mexicali	0.23	21	*e*P	Pg	06 50 02.9	+0.1
MBIG	Mexicali	0.23	21	*e*P	Pg	06 50 02.9	+0.1
MBIG				*e*S	Sg	06 50 07.3	+1.3
DREC	Desert Rsrch C	0.62	348	⇓*i*P	Pb	06 50 10.5	-0.5
WESC	Westside Schoo	0.68	327	⇓*i*P	Pg	06 50 11.2	+0.1
ECBX	El Chinero	0.75	164	*e*P	Pg	06 50 12.2	-0.3
ECBX				*e*S	Sg	06 50 22.8	+0.5
RMX	La Rumorosa	0.78	302	*e*P	Pg	06 50 11.8	-1.3
RMX				*e*S	Sg	06 50 21.6	-1.7
RMX				*e*		06 50 23.2	
RMX				IAML		06 50 23.2	
	comp=N,2μm,0.3s						
IKP	In-Ko-Pah, Jac	0.83	304	P	Pg	06 50 13.7	-0.3
	baz=122,SNR=35						
IKP				S	Sg	06 50 24.6	-0.2
	baz=122						
IKP	In-Ko-Pah, Jac	0.83	304	*i* P	Pg	06 50 13.7	-0.3
SWSC	Sam W. Stewart	0.86	331	P	Pg	06 50 13.3	-1.3
	baz=149						
SWSC				S	Sg	06 50 25.8	-0.1
	baz=149						
GLA	Glamis	0.94	25	P	Pg	06 50 14.4	-1.8
	baz=205,SNR=12						
GLA				S	Sg	06 50 26.4	-2.1
	baz=205						
ZAX	El Zacaton	1.07	231	*e*P	Pg	06 50 18.3	-0.4
ZAX				*e*S	Sg	06 50 33.1	+0.4
ZAX				IAML		06 50 39.0	
	comp=E,2μm,0.5s						
ZAX				*e*		06 50 39.0	
SPIG	San Pedro Mart	1.15	187	*e*P	Pg	06 50 19.6	-0.7
SPIG	San Pedro Mart	1.15	187	*e*P	Pg	06 50 19.5	-0.7
SPIG				*e*S	Sg	06 50 35.6	+0.4
SPIG	San Pedro Mart	1.15	187	*e*Pg	Pg	06 50 19.5	-0.7
SPIG				*e*Sn	Sg	06 50 35.6	+0.4
SPX	San Pedro Mart	1.15	187	*e*P	Pg	06 50 19.6	-0.7
SPX				IAML		06 50 37.1	
	comp=E,828nm,0.4s						
SPX	San Pedro Mart	1.15	187	*e*Pg	Pg	06 50 19.8	-0.5
SPX				*e*Sn	Sg	06 50 36.2	+1.0
CBX	Cerro Bola	1.17	276	*e*P	Pg	06 50 20.1	-0.4
CBX				*e*S	Sg	06 50 35.3	-0.4
CBX				⇓*e*		06 50 36.8	
CBX				IAML		06 50 36.8	
	comp=N,2μm,0.5s						
CBX	Cerro Bola	1.17	276	*e*P	Pg	06 50 20.1	-0.4
CBX				*e*S	Sg	06 50 35.0	-0.6
CBX	Cerro Bola	1.17	276	*e*Pn	Pg	06 50 20.1	-0.4
CBX				*e*Sn	Sg	06 50 35.0	-0.6
MONP2	Monument Peak	1.18	307	P	Pg	06 50 19.8	-0.9
	baz=125,SNR=21						
MONP2				S	Sg	06 50 35.6	-0.5
	baz=125						
TJIG	Tijuana	1.19	282	*e*P	Pb	06 50 19.8	-0.9
TJIG				*i* S	Sg	06 50 35.6	-0.9
ECNX	Esteban Cantu	1.23	245	*e*P	Pn	06 50 20.7	-0.6
BAR	Barrett	1.26	293	*e*P	Pn	06 50 21.1	-0.6
BAR	Barrett	1.26	293	*e*Pn	Pn	06 50 21.3	-0.4
BC3	Big Chuckawall	1.46	355	P	Pn	06 50 22.3	-2.3
	baz=174,SNR=17						
SDRC	San Diego Road	1.49	292	*e*P	Pn	06 50 25.2	+0.3
109C	Camp Elliot, M	1.68	295	P	Pn	06 50 26.8	-0.6
	baz=113,SNR=20						
109C				Sb	Sn	06 50 49.9	+0.9
	baz=113						
CPE	Camp Elliot	1.68	295	*e*Pn	Pn	06 50 26.9	-0.5
Y12C	Blythe	1.68	22	Pb	Pn	06 50 26.8	-0.6
	baz=203						
Y12C				Sb	Sb	06 50 48.5	-1.8
	baz=203						
PFO	Pinyon Flats O	1.72	326	P	Pn	06 50 26.1	-2.0
	baz=144						
BELC	Belle Mtn. Jos	1.90	342	Pb	Pn	06 50 30.6	0.0
	baz=161,SNR=12						
IRM	Iron Mountain	1.96	4	Pb	Pn	06 50 32.1	+0.7
	baz=183,SNR=16						
214A	Organ Pipe Nat	2.12	96	P	Pn	06 50 31.3	-2.3
	baz=278						
MURC	Murrieta	2.13	312	Pb	Pn	06 50 35.2	+1.6
	baz=130,SNR=12						
MURC				Sb	Sb	06 51 04.1	+1.0
	baz=130						
BBRC	Big Bear Solar	2.47	327	Pb	Pb	06 50 41.4	-1.3
	baz=146						
BFSC	Mount Baldy Ra	2.84	316	Pb	Pb	06 50 47.6	-1.3
	baz=135						
BFSC				Sb	Sb	06 51 23.7	-0.1
	baz=135						
SSK	Sunset Peak	2.84	316	*e*Pn	Pb	06 50 49.7	+0.7
MWC	Mount Wilson	3.08	312	*e*Pn	Pn	06 50 45.3	-1.6
PASC	Pasadena Art C	3.12	310	*e*Pn	Pb	06 50 54.7	+1.0
W13A	Hualapai Mount	3.13	22	*e*Pn	Pn	06 50 49.7	+2.1
GSC	Goldstone, Bar	3.35	338	*e*Pn	Pb	06 50 59.0	+1.6
OSI	Osito Audit: C	3.75	311	*e*Pg	Pg	06 51 10.8	+0.9
TUC	Tucson	3.82	87	*e*Pg	Pb	06 51 05.6	0.0
X16A	Lo Mia Camp, P	3.92	54	*e*Pn	Pn	06 50 57.6	-0.7
SHPR	Sheep Range	4.30	1	*e*Pn	Pn	06 51 05.9	+2.2
WUAZ	Wupatki	4.65	43	*e*Pn	Pn	06 51 08.4	-0.1
U15A	North Rim	4.90	30	*e*Pn	Pn	06 51 12.7	+0.7
X18A	Snowflake	5.04	61	*e*Pn	Pn	06 51 13.5	-0.3
LCMT	Little Creek M	5.10	19	*e*Pn	Pn	06 51 15.1	+0.6
KNB	Kanab	5.23	22	*e*Pn	Pn	06 51 17.0	+0.7
SZCU	Shurtz Canyon	5.69	18	*e*Pn	Pn	06 51 23.9	+1.2
R11A	Troy Canyon, C	6.15	358	*e*Pg	Pg	06 51 53.8	-1.9
MTPU	Mount Pierson	6.37	23	*e*Pg	Pg	06 51 55.6	-4.3
PSUT	Pine Spring	6.43	10	*e*Pg	Pg	06 52 06.5	+5.3
MSU	Marysvale	6.80	21	*e*Pg	Pg	06 52 01.4	-6.8
LENM	Lemitar	7.25	72	*e*Pn	Pn	06 51 44.2	+0.1
Y22D	IRIS PASSCAL I	7.27	73	*e*Pn	Pn	06 51 40.6	-3.8
MVCO	Mesa Verde	7.51	46	*e*Pn	Pn	06 51 49.8	+2.0
TMUT	Trail Mountain	7.83	24	*e*Pg	Pg	06 52 29.3	+1.4
SRU	San Rafael Swe	7.92	28	*e*Pg	Pg	06 52 33.1	+3.4
PV14	Lion Creek, Pa	8.02	38	*e*Pn	Pn	06 51 49.0	-5.7
PV11	David Mesa, Pa	8.04	39	*e*Pn	Pn	06 51 58.9	+3.8
PV02	Paradox Valley	8.05	40	*e*Pn	Pb	06 52 07.6	-10
PV09	Paradox Valley	8.05	37	*e*Pn	Pn	06 51 59.6	+4.3
PV23	Carpenter Ridg	8.08	38	*e*Pn	Pn	06 51 59.7	+4.0
PV12	Saucer Basin,	8.09	39	*e*Pn	Pn	06 51 59.3	+3.5
P17A	Butcher Ranch,	8.15	26	*e*Pg	Pg	06 52 37.5	+3.5
PV21	Cone Mtn., Par	8.18	37	*e*Pn	Pn	06 52 00.9	+3.9

NNC 01 06:51:12.4±6.2, **37°.05N×70°.25E, h0**^{km}**, mb3.8, mpv3.4, 5C-5D, Error ellipse: s-maj=50.7km s-min=35.8km az=168.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	3.91	40	⇓Pn	Pn	06 52 13.4	-0.4
	3.9nm,0.3s						
SFK				⇑Sn	Sn	06 53 00.9	+0.3
	7.1nm,0.3s						
MNAS	Manas	5.70	17	⇑Pn	Pn	06 52 39.9	+1.5
	1.4nm,0.6s						
MNAS				⇓Sn	Sn	06 53 45.8	+1.2
	3.6nm,0.3s						
KK31	Karatay Array	6.05	2	⇑Pn	Pn	06 52 45.1	+2.0
	0.6nm,0.3s,baz=185,slow=13						
KK31				⇑Sn	Sn	06 53 57.2	+4.1
	5.3nm,0.4s,baz=190,slow=24						
AAK	Ala-Archa	6.46	29	⇑Pn	Pn	06 52 47.9	-1.1
	2.5nm,0.4s						
AAK				⇓Sn	Sn	06 54 01.8	-1.6
	2.3nm,0.5s						
AB31	Akbulak array	14.31	332	P	Pn	06 54 35.9	-0.3
	0.4nm,0.3s,baz=164,slow=12,SNR=11						
AB31				⇓S	Sn	06 57 13.5	-2.1
	0.6nm,0.5s,baz=150,slow=24,SNR=3.2						
AKTO	Aktyubinsk	16.00	331	⇓P	Pn	06 54 59.8	+1.0
	3.6nm,0.8s						

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*LDG **01** 07:03:46.6±0.1, 48°.88N×9°.68E, h10^{km}, Md2.3/2, Ml2.2/6, Error ellipse: s-maj=1.2km s-min=1.0km az=129.0*
*STR **01** 07:03:50.0±1.1, 49°N±3°×1°0E±°, h10^{km}, M3.1/7, MLv3.1/7*
*CSEM **01** 07:03:50.3±1.0, 48°.77N×9°.34E, h15^{km}, ML3.1, Error ellipse: s-maj=17.0km s-min=10.8km az=70.0*
ISC 01 07:03:47.6±1.5, **48°.90N**±0°.05×**9°.57E**±0°.06, **h14**^{km}±12^{km}, **n18**, σ**1^s.41**/26, **Germany**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUT	Gutenstein	0.88	200	Pg	Pg	07 04 03.8	-0.9
GUT				Sg	Sg	07 04 15.0	-1.2
OPP	Oppenau	1.00	247	Pg	Pg	07 04 06.6	-0.3
OPP	Oppenau	1.00	247	Pg	Pg	07 04 06.6	-0.3
KIZ	Kirchzarten	1.45	230	Pg	Pg	07 04 15.6	+0.1
KIZ				Sg	Sg	07 04 34.6	+0.3
KIZ	Kirchzarten	1.45	230	Pg	Pg	07 04 15.6	+0.1
CDF	Champ du Feu	1.60	253	*e*Pg	Pb	07 04 17.4	+0.5
CDF				*e*Sg	Sb	07 04 38.7	+1.7
	2.2nm,0.2s						
CDF	Champ du Feu	1.60	253	*e*Pg	Pb	07 04 17.4	+0.5
CDF				*e*Sg	Sb	07 04 38.7	+1.7
	1.1nm,0.2s						
ABH	Alteburg	1.65	307	Pn	Pg	07 04 19.1	-0.2
ABH	Alteburg	1.65	307	Pn	Pg	07 04 19.1	-0.2
ECH	Echery	1.74	248	Pg	Pg	07 04 20.5	-0.6
ECH	Echery	1.74	248	Pg	Pg	07 04 20.5	-0.6
HINF	Hinteralfeld	2.11	240	*e*Pg	Pb	07 04 26.7	+1.1
HINF				*e*Sg	Sb	07 04 54.4	+2.7
	1.5nm,0.2s						
HINF	Hinteralfeld	2.11	240	*e*Pg	Pb	07 04 26.7	+1.1
HAU	Haudompre	2.33	249	*e*Pg	Pb	07 04 30.7	+1.4
HAU				*e*Sg	Sg	07 05 01.9	-0.4
	1.9nm,0.3s						
HAU	Haudompre	2.33	249	*e*Pg	Pb	07 04 30.7	+1.4
SFTF	Sexfontaines	3.09	259	*e*Pg	Pg	07 04 45.0	-1.8
SFTF				*e*Sn	Sn	07 05 10.1	-2.5
	3.4nm,0.4s						
SFTF	Sexfontaines	3.09	259	*e*Pg	Pg	07 04 45.0	-1.8
SFTF				*e*Sn	Sn	07 05 10.1	-2.5
	1.7nm,0.4s						
CLL	Collm	3.27	41	*e*Sg	Sb	07 05 26.0	+1.0

IDC 01 07:11:11.6±6.4, **20°.61S×67°.21W, h209**^{km}±45^{km}, **mb3.2**/2, **mb1 3.3**/4, **mb1mx2.9**/38, **mbtmp3.6**/4, **Error ellipse: s-maj=72.2km s-min=22.9km az=15.0, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz	4.38	348	P	Pn	07 12 18.9	-0.1
	2.5nm,0.3s,baz=148,slow=7.2,SNR=108						
LPAZ				S	S	07 13 12.6	+0.8
	baz=270,slow=10,SNR=1.2						
SIV	San Ignacio	7.42	53	P	Pn	07 12 57.7	+0.3
	0.6nm,0.3s,baz=255,slow=11,SNR=22						
SIV				S	S	07 14 22.3	+0.7
	0.0nm,0.3s,baz=143,slow=20,SNR=2.3						
TORD	Torodi Ar. Bea	75.56	70	P	P	07 22 33.6	-0.2
	0.9nm,1.1s,baz=234,slow=5.0						
YKA	Yellowknife Ar	90.88	340	P	P	07 23 51.3	+0.3
	0.1nm,0.4s,baz=139,slow=4.1,SNR=4.1						
MKAR	Makanchi Array	143.98	36	PKP	PKPdf	07 30 21.6	-0.6
	0.5nm,0.9s,baz=328,slow=5.1,SNR=2.9						

IDC 01 07:40:21.4±1.7, **8°.02N×123°.25E, h0**^{km}**, mb3.8**/5, **mb1 4.0**/5, **mb1mx3.5**/55, **mbtmp3.8**/5, **Error ellipse: s-maj=140.4km s-min=27.0km az=69.0, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	26.06	175	P	P	07 45 58.5	+1.9
	0.7nm,0.4s,baz=354,slow=7.4,SNR=7.0						
WRA	Warramunga Arr	29.85	159	P	P	07 46 30.2	-0.4
	1.0nm,0.6s,baz=332,slow=11,SNR=12						
ASAR	Alice Springs	33.17	162	P	P	07 47 00.3	+0.5
	0.3nm,0.3s,baz=341,slow=8.2,SNR=7.8						
STKA	Stephens Creek	43.37	157	P	P	07 48 23.6	-2.1
	3.4nm,0.9s,baz=319,slow=11,SNR=4.8						
ZALV	Zalesovo Beam	55.23	333	P	P	07 49 56.0	0.0
	0.3nm,0.3s,baz=133,slow=10,SNR=1.9						

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*BJI **01** 07:49:50.1, 5°.41N×125°.87E, h145^{km}, mb4.7/25, mB4.8/9*
*NEIC **01** 07:49:53.9±0.6, 5°.66N×125°.54E, h151^{km}±6^{km}, mb4.7/26, Error ellipse: s-maj=7.6km s-min=4.1km az=80.0*
NEIC Felt [II PIVS] at General Santos.
*IDC **01** 07:49:54.0±0.6, 5°.69N×125°.48E, h152^{km}±5^{km}, mb4.2/28, mb1 4.2/28, mb1mx4.0/54, mbtmp4.6/28, MS3.1/3, Ms1 3.2/3, ms1mx2.7/49, Error ellipse: s-maj=16.2km s-min=7.4km az=81.0*
*MAN **01** 07:49:53.4, 5°.58N×125°.72E, h153^{km}, mb5.5, ML4.5, MS4.8*
*ISCJB **01** 07:49:53.3±0.3, 5°.67N±0°.02×125°.69E±0°.04, h158^{km}±3^{km}, mb4.6/57, Error ellipse: s-maj=6.4km s-min=3.3km az=168.9*
*DJA **01** 07:49:54.5±0.4, 6°N±4°×12°6E±°, h149^{km}±4^{km}, M4.8/15, mB5.2/8, mb5.0/15, MLv5.1/8, Mw(mB)4.5/8*
ISC 01 07:49:54.6±0.6, **5°.65N**±0°.04×**125°.67E**±0°.06, **h157**^{km}±5^{km}, **n152**, σ**1^s.47**/178, **mb4.6**/57, **1C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	Mati	1.41	24	*e*P	Pn	07 50 22.6	-1.2
MATI				*e*S	Sn	07 50 43.9	-2.5
DAV	Davao City (W)	1.41	356	P	Pn	07 50 22.3	-1.6
	157nm,0.3s,baz=102,slow=1.2,SNR=18						
DAV				S	Sn	07 50 44.3	-2.1
	590nm,0.3s,baz=72,slow=20,SNR=35						
DAV				LR	LR	07 51 00.6	
	comp=Z,1μm,19.5s,baz=230,slow=48						
DAV	Davao City (W)	1.41	356	*e*Pn	Pn	07 50 23.9	+0.1
DAV				*e*Sn	Sn	07 50 44.3	-2.1
SKMP	Bagumbayan, Su	1.42	308	*e*P	Pn	07 50 23.1	-0.8
SKMP				*e*S	Sn	07 50 44.2	-2.2
BUKP	Musuan	2.29	345	*e*P	Pn	07 50 33.3	-0.4
BUKP				*e*S	Sn	07 51 05.6	+1.7
PAGZ	Pagadian	3.15	314	*e*P	Pn	07 50 43.9	-0.3
PAGZ				*e*S	Sn	07 51 23.7	+1.0
BUTP	Butuan	3.30	359	*e*P	Pn	07 50 47.1	+1.1
BUTP				*e*S	Sn	07 51 28.8	+2.7
MSLP	Maasin	4.53	350	*e*P	Pn	07 51 02.1	+0.2
TNTI	Ternate	5.13	161	*e*Pn	Pn	07 51 08.5	-1.4
TNTI				*e*Sn	Sn	07 52 07.6	-1.2
KMSI	Cibinong	5.32	199	P	Pn	07 51 13.2	+0.8
GUIM	Jordan	5.81	329	*e*P	Pn	07 51 20.2	+1.3
MRSI	Marisa	6.35	216	P	Pn	07 51 27.3	+1.2
LBMI	Labuha	6.51	164	P	Pn	07 51 26.8	-1.4
LUWI	Luwuk	7.25	204	*e*Pn	Pn	07 51 35.7	-2.4
SANI	Sanana	7.66	178	P	Pn	07 51 39.6	-3.9
APSI	Ampana	7.66	212	P	Pn	07 51 44.5	+1.0
MPSI	Mapaga	7.82	228	P	Pn	07 51 47.6	+2.0
PALU	Palau	8.90	79	P	Pn	07 51 59.3	-0.8
	baz=9.2,SNR=5.0						
NLAI	Namlea	8.95	171	P	Pn	07 51 58.4	-2.2
TGY	Tagaytay City	9.61	331	P	Pn	07 52 11.9	+2.5
	25nm,0.3s,baz=238,slow=4.6,SNR=4.6						
AAI	Ambon	9.61	165	P	Pn	07 52 08.0	-1.5
TTSI	Tana Toraja	10.43	214	P	Pn	07 52 24.0	+3.7
FAKI	Fak Fak	10.75	142	P	Pn	07 52 23.4	-1.1
FAKI	Fak Fak	10.75	142	*e*Pn	Pn	07 52 23.8	-0.7
SOEI	Soe	15.37	185	*e*Pn	Pn	07 53 23.1	-0.4
	52nm,0.4s						
TWG	Pinlang	17.64	346	*e*P	P	07 53 49.2	-0.3
	81nm,0.4s						
TPUB	Ta-pu	18.21	345	*e*P	P	07 53 55.3	-0.4
	70nm,1.5s						
SSLB	Suanglung	18.60	346	*e*P	P	07 53 59.3	-0.7
	14nm,0.9s						
MTN	Manton Dam	19.16	164	P	P	07 54 07.0	+0.9
	baz=19,SNR=16						
MTN	Manton Dam	19.16	164	*e*P	P	07 54 06.0	-0.1
	22nm,0.6s						
KDU	Kakadu	19.43	160	P	P	07 54 09.7	+0.7
	baz=20,SNR=70						
SMRI	Semarang	19.75	230	*e*P	P	07 54 12.0	-0.6
	109nm,1.3s						
JOW	Kunigami	21.21	6	P	P	07 54 28.9	+0.9
	43nm,0.5s,baz=178,slow=12,SNR=21						
JOW	Kunigami	21.21	6	*e*P	P	07 54 28.2	+0.2
	53nm,0.7s						
KNRA	Kununurra	21.41	172	P	P	07 54 30.3	0.0
	baz=21,SNR=23						
FITZ	Fitzroy Crossi	23.60	180	P	P	07 54 51.9	+0.5
	baz=24,SNR=23						
FITZ	Fitzroy Crossi	23.60	180	P	P	07 54 51.8	+0.5
	20nm,0.5s,baz=6.1,slow=7.8,SNR=91						
FITZ				PcP	PcP	07 58 31.5	-0.5
	2.8nm,0.9s,baz=153,slow=2.3,SNR=3.3						
FITZ				ScP	ScP	08 01 54.3	-1.3
	1.7nm,0.8s,baz=336,slow=1.9,SNR=2.8						
FITZ	Fitzroy Crossi	23.60	180	*e*P	P	07 54 51.5	+0.2
	22nm,0.6s						
FITZ				PcP	PcP	07 58 31.5	-0.5
FITZ				ScP	ScP	08 01 54.3	-1.3
MDSI	Maura Dua	23.71	245	P	P	07 54 55.0	+2.6
MNAI	Manna	24.77	247	*e*P	P	07 55 01.2	-0.9
	496nm,1.2s						
BKNI	Bangkinang	25.15	259	*e*P	P	07 55 05.4	-0.2
	53nm,0.5s						
COEN	Coen	26.10	138	P	P	07 55 14.7	+0.7
	baz=26,SNR=11						
COEN	Coen	26.10	138	*e*P	P	07 55 14.6	+0.6
	51nm,1.8s						
PMG	Port Moresby	26.12	125	P	P	07 55 13.9	-0.3
	14nm,0.8s,baz=271,slow=2.1,SNR=4.2						
PMG	Port Moresby	26.12	125	*e*P	P	07 55 14.2	-0.1
	14nm,0.8s						
CBIJ	Chichi jima	26.50	35	*e*P	P	07 55 17.1	-0.4
	115nm,1.3s						
JCJ	Chichijima	26.50	35	P	P	07 55 16.7	-0.8
	48nm,0.6s,baz=270,slow=15						
WB9	Warramunga Arr	26.70	161	P	P	07 55 19.2	-0.1
	baz=27						
WRAB	Tennant Creek	26.82	162	*e*P	P	07 55 19.9	-0.5
	13nm,0.8s						
PSI	Prapat	26.82	265	*e*P	P	07 55 20.0	-0.8
	11nm,0.8s						
WRA	Warramunga Arr	26.82	162	P	P	07 55 20.0	-0.5
	3.8nm,0.5s,baz=335,slow=10,SNR=53						
WRA				PcP	PcP	07 58 39.2	-0.1
	2.8nm,0.7s,baz=338,slow=2.9,SNR=7.7						
WRA				S	S	07 59 41.4	-3.8
	2.6nm,1.1s,baz=333,slow=16,SNR=5.9						
WRA				ScP	ScP	08 02 04.0	-0.9
	1.1nm,0.9s,baz=340,slow=2.6,SNR=3.1						
WB2	Warramunga Arr	26.83	162	*e*P	P	07 55 20.4	-0.1
NJ2	Nanjing	27.03	347	*e*P	P	07 55 24.2	+2.1
NJ2				pmax	pmax		
	comp=Z,13nm,0.6s						
GYA	Guiyang	27.52	321	*e*P	P	07 55 28.2	+1.4
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
JNU	Nakatsue	27.76	9	P	P	07 55 28.0	-0.7
	11nm,0.7s,baz=56,slow=9.7,SNR=5.5						
JNU	Nakatsue	27.76	9	*e*P	P	07 55 28.2	-0.5
	16nm,0.9s						
KCSI	Kotacane, Aceh	27.89	267	P	P	07 55 29.9	-0.2
GSI	Gunungsitoli	28.37	262	P	P	07 55 34.2	-0.1
GSI	Gunungsitoli	28.37	262	*e*P	P	07 55 33.6	-0.7
	52nm,0.7s						
CMAR	Chiang Mai Arr	29.02	298	P	P	07 55 36.7	-3.3
	1.3nm,0.4s,baz=113,slow=8.7,SNR=5.0						
CMAR				S	S	08 00 13.1	-6.8
	1.0nm,0.3s,baz=115,slow=15,SNR=3.6						
CHTO	Chiang Mai	29.15	299	*e*P	P	07 55 39.5	-1.8
	26nm,1.8s						
KMI	Kunming	29.29	314	P	P	07 55 44.7	+2.1

KMI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
QIS	Mount Isa	29.42	153	P	P	07 55 44.1	+0.6
	baz=30,SNR=17						
MTSU	Mount Surprise	29.95	142	P	P	07 55 49.5	+1.2
	baz=30,SNR=6.1						
AS16	Alice Springs	30.20	165	P	P	07 55 50.7	+0.2
	baz=30						
AS31	Alice Springs	30.23	165	eP	P	07 55 50.9	+0.3
	3.4nm,0.4s						
ASAR	Alice Springs	30.23	165	P	P	07 55 50.9	+0.2
	6.2nm,0.5s,baz=345,slow=7.4,SNR=170						
ASAR				PcP	PcP	07 58 48.2	+0.5
	5.1nm,0.6s,baz=346,slow=2.4,SNR=16						
ASAR				S	S	08 00 37.3	-1.4
	0.8nm,0.7s,baz=355,slow=20,SNR=4.0						
ASAR				ScP	ScP	08 02 15.8	+0.3
	1.2nm,0.7s,baz=347,slow=2.9,SNR=8.3						
AS01	Alice Springs	30.24	165	eP	P	07 55 50.3	-0.4
AS01				ePcP	PcP	07 58 47.9	+0.1
WRKA	Warakurna	30.61	175	P	P	07 55 54.6	+0.6
	baz=31,SNR=32						
KS15	Wonju Array Si	31.71	3	eP	P	07 56 04.6	+1.1
KSAR	Wonju Array Be	31.71	3	P	P	07 56 04.4	+1.0
KSRS	Korea Array	31.72	3	P	P	07 56 04.4	+0.8
	10nm,0.7s,baz=184,slow=10,SNR=65						
KSRS				LR	LR	08 10 10.8	
	comp=Z,23nm,20.4s,baz=140,slow=38						
KS01	Wonju Array Si	31.74	3	eP	P	07 56 04.5	+0.7
CD2	Chengdu	32.48	323	eP	P	07 56 10.0	-0.4
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CTAO	Charters Tower	32.62	142	eP	P	07 56 12.3	+0.7
	5.2nm,0.6s						
MEEK	Meekatharra	32.82	192	P	P	07 56 13.3	0.0
	baz=33,SNR=11						
MAJO	Matsushiro	32.82	19	eP	P	07 56 12.5	-0.7
	9.0nm,1.0s						
MAT	Matsushiro	32.82	19	P	P	07 56 12.6	-0.7
MJAR	Matsushiro Arr	32.82	19	P	P	07 56 11.9	-1.3
	5.5nm,0.9s,baz=200,slow=9.9,SNR=13						
MJB9	Matsu-Tunnel	32.83	19	eP	P	07 56 12.6	-0.7
	9.6nm,1.0s						
MORW	Morawa	35.74	195	P	P	07 56 38.6	+0.2
	baz=36,SNR=8.2						
FORT	Forrest	36.30	177	P	P	07 56 43.8	+0.7
	baz=36,SNR=9.1						
FORT	Forrest	36.30	177	eP	P	07 56 43.3	+0.2
	39nm,0.6s						
LZH	Lanzhou	36.32	329	eP	P	07 56 42.7	-0.8
LZH				pP	pP	07 57 12.0	-5.3
LZH				sP	sP	07 57 28.5	-6.8
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
QLP	Quilpie	36.75	152	P	P	07 56 47.5	+0.6
	baz=37,SNR=4.8						
KMBL	Kambalda	36.99	185	P	P	07 56 49.3	+0.3
	baz=37,SNR=21						
BLDU	Ballidu	37.07	193	P	P	07 56 49.8	+0.2
	baz=37,SNR=32						
HHC	Hu-ho-hao-te	37.26	342	eP	P	07 56 53.6	+2.3
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KLBR	Kellerberrin	37.80	191	P	P	07 56 56.0	+0.2
	baz=38,SNR=37						
CN2	Changchun	38.00	360	eP	P	07 56 56.8	-0.5
CN2				epP	pP	07 57 28.0	-3.3
MUN	Mundaring	38.49	193	P	P	07 57 02.1	+0.5
	baz=38,SNR=14						
USRK	Ussuriysk Ar.	38.79	7	P	P	07 57 04.8	+0.9
	8.3nm,0.8s,baz=198,slow=7.3						
MDJ	Mudanjiang	38.96	4	eP	P	07 57 06.7	+1.3
	33nm,1.0s						
NWAO	Narrogin (SRO)	39.19	191	P	P	07 57 08.1	+0.6
	baz=39,SNR=27						
NWAO	Narrogin (SRO)	39.19	191	P	P	07 57 07.8	+0.4
	14nm,0.4s,baz=52,slow=3.5,SNR=41						
BBOO	Buckleboo	39.50	166	P	P	07 57 10.9	+1.0
	baz=40,SNR=160						
BBOO	Buckleboo	39.50	166	eP	P	07 57 11.0	+1.0
	52nm,0.6s						
EIDS	Eidsvold	39.51	142	eP	P	07 57 10.3	+0.2
	6.7nm,0.8s						
STKA	Stephens Creek	40.29	159	P	P	07 57 17.7	+1.2
	baz=40,SNR=19						
STKA	Stephens Creek	40.29	159	P	P	07 57 17.6	+1.1
	29nm,0.7s,baz=329,slow=8.2,SNR=52						
STKA				PcP	PcP	07 59 16.8	-0.3
	7.0nm,0.7s,baz=17,slow=4.8,SNR=3.9						
STKA				ScP	ScP	08 02 51.7	0.0
	0.7nm,0.5s,baz=312,slow=5.8,SNR=3.0						
STKA	Stephens Creek	40.29	159	eP	P	07 57 17.7	+1.2
	6.2nm,0.8s						
STKA				PcP	PcP	07 59 16.8	-0.3
STKA				ScP	ScP	08 02 51.7	0.0
HTT	Hallett	40.85	163	P	P	07 57 22.8	+1.6
	baz=41,SNR=16						
ASAJ	Asahikawa	41.09	19	P	P	07 57 23.6	+0.7
	3.6nm,0.3s,baz=247,slow=7.7,SNR=4.6						
CMSA	Cobar Meteorol	41.62	154	P	P	07 57 28.8	+1.4
	baz=42,SNR=23						
H11S3	WAKE ISLAND Hy	41.97	69	T	T	08 41 59.6	
	baz=323,slow=74,SNR=2.9						
H11S2	WAKE ISLAND Hy	41.99	69	T	T	08 42 02.2	
	baz=246,slow=74,SNR=3.9						
ARMA	Armidale	43.64	147	P	P	07 57 45.5	+1.7
	baz=44,SNR=6.2						
ARPS	Mount Arapiles	44.83	162	P	P	07 57 54.7	+1.7
	baz=45,SNR=16						
YNG	Young	45.16	153	P	P	07 57 57.7	+1.9
	baz=45,SNR=20						
CAN	Canberra	46.29	153	P	P	07 58 07.0	+2.4
	baz=46						
CAN	Canberra	46.29	153	eP	P	07 58 06.8	+2.1
	28nm,0.8s						
CNB	Canberra Magne	46.45	153	P	P	07 58 08.2	+2.3
	baz=47,SNR=10						
TOO	Toolangi	46.80	158	P	P	07 58 11.1	+2.5
	baz=47,SNR=14						
DZM	Mont Dzumac	48.50	126	P	P	07 58 23.4	+1.4
	9.8nm,0.7s,baz=275,slow=12,SNR=11						
DZM	Mont Dzumac	48.50	126	eP	P	07 58 23.7	+1.7
	13nm,0.8s						
WMQ	Urumqi	50.56	325	P	P	07 58 38.7	+1.5
WMQ				LR	LR		
	comp=N,150nm,24.5s						
WMQ				LR	LR		
	comp=E,130nm,36.9s						
PETK	Petropavlovsk-	54.08	23	P	P	07 59 04.3	+1.5
	5.2nm,0.9s,baz=238,slow=4.6						
PETK				LR	LR	08 22 33.3	
	comp=Z,26nm,19.8s,baz=225,slow=36						
MK01	Makanchi Array	55.37	325	eP	P	07 59 11.7	-0.7
MK31	Makanchi Array	55.39	325	eP	P	07 59 09.0	-3.5
MKAR	Makanchi Array	55.39	325	P	P	07 59 12.0	-0.5
	3.6nm,0.4s,baz=119,slow=7.5,SNR=62						
MKAR				ScP	ScP	08 03 52.5	-2.5
	0.6nm,0.6s,baz=112,slow=5.4,SNR=3.6						
MKAR	Makanchi Array	55.39	325	eP	P	07 59 12.2	-0.3
	33nm,0.4s						
MKAR				ScP	ScP	08 03 52.5	-2.5
KSH	Kashi	55.95	315	eP	P	07 59 18.2	+1.4
KSH				esP	sP	08 00 07.1	-3.4
ZALV	Zalesovo Beam	58.41	333	P	P	07 59 31.1	-2.5
	1.6nm,0.4s,baz=127,slow=6.7,SNR=7.5						
KURBB	Kurchatov Arra	59.56	327	P	P	07 59 40.7	-0.8
	2.4nm,0.7s,baz=125,slow=6.7,SNR=25						
KURK	Kurchatov	59.56	327	eP	P	07 59 41.0	-0.6
	4.7nm,0.6s						
LBZ	Lake Benmore	63.85	146	eP	P	08 00 12.0	+1.6
	26nm,0.7s						
RPZ	Rata Peaks	63.93	145	eP	P	08 00 12.5	+1.6
	38nm,1.3s						
BKZ	Black Stump Fm	64.71	138	eP	P	08 00 17.3	+1.2
	40nm,1.5s						
BVAR	Borovoye Array	65.14	327	P	P	08 00 17.4	-1.2
	0.5nm,0.4s,baz=100,slow=4.0,SNR=4.5						
TIXI	Tiksi	65.95	1	eP	P	08 00 23.8	+0.3
	6.0nm,0.4s						
CASY	Casey	72.59	186	eP	P	08 01 05.2	+0.9
	9.9nm,0.6s						
IM3	Indian Mountai	81.03	24	eP	P	08 01 52.9	+1.2
ILAR	Eielson Array	83.83	26	P	P	08 02 06.2	0.0
	0.7nm,0.5s,baz=246,slow=4.9,SNR=18						
MAW	Mawson	85.18	200	P	P	08 02 13.3	+0.6
	baz=85,SNR=11						
MAW	Mawson	85.18	200	P	P	08 02 13.1	+0.3
	5.4nm,0.9s,baz=73,slow=6.2,SNR=14						
MAW	Mawson	85.18	200	eP	P	08 02 13.4	+0.6
VNDA	Vanda	85.45	173	P	P	08 02 13.8	-0.2
	1.4nm,0.6s,baz=320,slow=6.5,SNR=10						
VNDA	Vanda	85.45	173	eP	P	08 02 14.7	+0.7
ARCES	ARCESS Array B	88.29	340	P	P	08 02 26.7	-1.3
	2.2nm,0.9s,baz=69,slow=6.6,SNR=3.5						
SPITS	Spitsbergen Ar	88.40	349	P	P	08 02 27.5	-0.9
	2.9nm,0.8s,baz=54,slow=13,SNR=5.0						
FINES	FINESS Array B	89.65	332	P	P	08 02 33.2	-1.2
	0.6nm,0.5s,baz=37,slow=4.8,SNR=7.5						
SYO	Syowa Base	93.83	201	⇓eP	P	08 02 53.5	0.0
SYO	Syowa Base	93.83	201	⇑ePcP	PcP	08 02 57.8	+3.9
QSPA	South Pole Qui	95.55	180	P	P	08 03 02.1	+0.5
	1.6nm,0.8s,baz=167,slow=1.7,SNR=5.9						
NOA	NORSAR Array B	96.61	334	LR	LR	08 52 20.1	
	comp=Z,9.7nm,18.4s,baz=205,slow=39						
YKA	Yellowknife Ar	98.19	24	P	P	08 03 12.1	-1.4
	0.4nm,0.8s,baz=303,slow=5.4,SNR=3.7						
YKA				PKKP	PKKPbc	08 19 43.8	-3.8
	0.4nm,0.5s,baz=123,slow=3.4,SNR=6.8						
TXAR	Lajitas Array	121.23	51	PKP	PKPdf	08 08 29.6	-0.2
	0.5nm,0.7s,baz=274,slow=1.3,SNR=8.5						
TORD	Torodi Ar. Bea	121.31	289	PKP	PKPdf	08 08 28.9	-1.2
	0.8nm,0.7s,baz=110,slow=2.0						
JCT	Junction City	123.58	48	ePKPdf	PKPdf	08 08 34.9	+0.7
TKL	Tuckaleechee C	130.47	32	PKP	PKPdf	08 08 48.0	+0.9
	2.5nm,0.7s,baz=115,slow=6.4,SNR=5.9						
PLCA	Paso Flores	142.16	160	PKP	PKPdf	08 09 06.0	-2.7
	1.7nm,0.6s,baz=319,slow=3.0,SNR=4.7						
LCO	Las Campanas	152.07	148	ePKPbc	PKPbc	08 09 32.4	0.0

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*IDC **01** 07:54:21.6±1.6, 32.°17N×115.°16W, h0^{km}, mb3.4/1, mb1 3.5/7, mb1mx3.4/53, mbtmp3.2/7, ML3.2/6, MS3.0/12, Ms1 3.0/12, ms1mx2.9/27, Error ellipse: s-maj=24.5km s-min=10.0km az=36.0*

*ECX **01** 07:54:21.7±0.6, 32.°20N×115.°29W, h8^{km}, MD4.0, ML4.2*

*NEIC **01** 07:54:21.8±0.0, 32.°20N×115.°29W, h8^{km}, mb4.2/1, MD4.2(ECX), MW4.1(PAS), After ECX.*

NEIC Felt at Mexicali. Also felt at Calexico, Campo and El Centro, California and at Yuma, Arizona.

*MEX **01** 07:54:22.3±0.3, 32.°38N×115.°11W, h20^{km}±3^{km}, MD4.1*

ISC 01 07:54:20.3±1.2, **32.°19N**±0.°03×**115.°28W**±0.°02, **h2**^{km}±9^{km}, **n129**, σ**1^{s}94**/137, **MS3.0**/4, **5C-7D**, **California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBIG	Mexicali	0.22	17	eP	Pg	07 54 25.5	+0.8
MBIG	Mexicali	0.22	17	eP	Pg	07 54 25.1	+0.5
MBIG				eS	Sg	07 54 27.5	-0.1
CPBX	Cerro Prieto	0.23	354	⇓eP	Pg	07 54 24.3	-0.4
CPBX				eS	Sg	07 54 27.5	-0.2
CPBX				IAML		07 54 31.5	
	comp=N,205µm,0.4s						
CPBX				e		07 54 31.5	
DREC	Desert Rsrch C	0.63	347	⇓iP	Pg	07 54 33.0	+0.6
ERPC	Ernies Place	0.64	329	⇓iP	Pg	07 54 32.9	+0.3
COA	Coachella	0.68	11	⇓iP	Pg	07 54 33.2	-0.2
WESC	Westside Schoo	0.68	326	⇑iP	Pg	07 54 33.6	+0.2
YUH	Yuha Desert	0.71	310	⇑iP	Pg	07 54 33.6	-0.4
YMD	Yuma Desert	0.72	60	⇑iP	Pg	07 54 33.9	-0.2
ECBX	El Chinero	0.74	165	eP	Pb	07 54 35.1	-0.8
ECBX				eS	Sb	07 54 45.3	-1.3
ECBX				⇓e		07 54 47.2	
ECBX				IAML		07 54 47.2	
	comp=E,10µm,0.4s						
RMX	La Rumorosa	0.79	301	eP	Pg	07 54 34.3	-1.2
RMX				eS	Sg	07 54 43.9	-1.9
RMX				⇓e		07 54 45.9	
RMX				IAML		07 54 45.9	
	comp=E,10µm,0.3s						
IKP	In-Ko-Pah, Jac	0.84	303	P	Pg	07 54 36.0	-0.4
	baz=123,SNR=483						
IKP				S	Sg	07 54 47.1	-0.3
	baz=123						
IKP	In-Ko-Pah, Jac	0.84	303	eP	Pg	07 54 36.1	-0.4
SWSC	Sam W. Stewart	0.87	330	P	Pg	07 54 35.9	-1.2
	baz=150,SNR=400						
SWSC				S	Sg	07 54 47.4	-0.9
	baz=150						
GLA	Glamis	0.94	24	P	Pg	07 54 36.8	-1.5
	baz=205,SNR=435						
GLA				S	Sg	07 54 48.6	-1.9
	baz=205						
GLA	Glamis	0.94	24	ePg	Pg	07 54 37.0	-1.3
ZAX	El Zacaton	1.08	232	eP	Pb	07 54 40.9	-1.0
ZAX				IAML		07 54 57.1	
	comp=E,8µm,0.4s						
SPIG	San Pedro Mart	1.16	188	eP	Pb	07 54 42.2	-1.0
SPIG	San Pedro Mart	1.16	188	eP	Pn	07 54 43.4	-0.3
SPIG				eS	Sn	07 54 59.6	-0.7
SPIG	San Pedro Mart	1.16	188	eP	Pn	07 54 43.4	-0.3
SPIG				eS	Sn	07 54 59.6	-0.7
SPX	San Pedro Mart	1.16	188	eP	Pb	07 54 42.2	-1.0
SPX	San Pedro Mart	1.16	188	eP	Pn	07 54 43.2	-0.6
SPX				eS	Sn	07 54 59.8	-0.5
CBX	Cerro Bola	1.18	276	⇑eP	Pb	07 54 42.4	-1.1
CBX				eS	Sb	07 54 57.9	-1.4
CBX				⇓e		07 54 59.5	
CBX				IAML		07 54 59.5	
	comp=N,6µm,0.4s						
CBX				⇑e		07 55 01.6	
CBX				IAML		07 55 01.6	
	comp=E,5µm,0.3s						
CBX	Cerro Bola	1.18	276	eP	Pb	07 54 42.5	-1.1
CBX				eS	Sg	07 54 58.2	-0.1
CBX	Cerro Bola	1.18	276	eP	Pb	07 54 42.5	-1.1
CBX				eS	Sg	07 54 58.2	-0.1
MONP2	Monument Peak	1.19	306	P	Pb	07 54 41.7	-2.1
	baz=126,SNR=567						
MONP2				S	Sb	07 54 57.4	-2.3
	baz=126						
TJIG	Tijuana	1.21	282	eP	Pb	07 54 42.5	-1.4
TJIG				eS	Sb	07 54 58.2	-1.7
ECNX	Esteban Cantu	1.24	245	eP	Pn	07 54 43.3	-1.5
BAR	Barrett	1.28	293	eP	Pn	07 54 43.6	-1.6
BAR	Barrett	1.28	293	eP	Pn	07 54 43.8	-1.3
PBX	Punta Banda	1.31	250	eP	Pn	07 54 44.2	-1.4
113A	Mohawk Valley,	1.40	65	ePg	Pn	07 54 44.7	-2.1
113A				eSg	Sn	07 55 01.5	-4.3
BC3	Big Chuckawall	1.47	354	P	Pn	07 54 44.8	-3.0
	baz=175,SNR=335						
Y12C	Blythe	1.68	22	P	Pn	07 54 48.0	-2.7
	baz=203,SNR=136						
Y12C	Blythe	1.68	22	ePn	Pn	07 54 48.2	-2.5
109C	Camp Elliot, M	1.69	295	Pb	Pn	07 54 50.3	-0.6
	baz=114,SNR=246						
109C				Sb	Sb	07 55 12.5	-1.4
	baz=114						
CPE	Camp Elliot	1.69	295	eP	Pn	07 54 50.5	-0.4
XPFO	Piæon Flat	1.73	325	eP	Pn	07 54 48.7	-2.8
PFO	Pinyon Flats O	1.73	325	Pn	Pg	07 54 53.5	0.0
	comp=E,0.7nm,0.3s,baz=172,slow=14,SNR=7.6						
PFO	Pinyon Flats O	1.73	325	P	Pn	07 54 48.6	-2.9
	baz=145,SNR=54						
PFO				Sb	Sn	07 55 13.3	-0.9
	baz=145						
PFO	Pinyon Flats O	1.73	325	ePn	Pn	07 54 49.5	-2.0
PFO				eSn	Sb	07 55 14.0	-1.1
BELC	Belle Mtn. Jos	1.90	342	P	Pn	07 54 50.8	-3.0
	baz=162,SNR=146						
IRM	Iron Mountain	1.96	3	P	Pn	07 54 52.0	-2.7
	baz=184,SNR=98						
214A	Organ Pipe Nat	2.11	96	P	Pn	07 54 53.9	-2.7
	baz=277,SNR=97						
MURC	Murrieta	2.14	312	P	Pn	07 54 54.9	-2.2
	baz=131,SNR=153						
PDMCI	Parker Dam,Lak	2.31	24	P	Pn	07 54 56.6	-2.8
	baz=205,SNR=34						
BBRC	Big Bear Solar	2.48	327	P	Pn	07 54 59.9	-2.0
	baz=146,SNR=11						
Y14A	Wickenburg	2.58	47	ePn	Pn	07 55 02.7	-0.5
GMRC	Granite Mounta	2.60	353	P	Pn	07 55 01.2	-2.3
	baz=173,SNR=26						
NEE2	Needles Airpor	2.63	12	P	Pn	07 55 01.7	-2.0
	baz=192,SNR=26						
BFSC	Mount Baldy Ra	2.85	316	P	Pn	07 55 05.3	-1.7
	baz=135,SNR=20						
BFSC				Sb	Sb	07 55 47.6	+0.1
	baz=135						
SSK	Sunset Peak	2.86	315	ePn	Pb	07 55 12.4	+0.3
LDFC	Landfair	2.88	3	ePn	Pn	07 55 06.5	-0.8
CIS	Catalina Islan	2.91	295	P	Pn	07 55 06.0	-1.5
	baz=114,SNR=13						
CIS				Sb	Sb	07 55 48.5	-0.4
	baz=114						
MWC	Mount Wilson	3.09	312	ePn	Pb	07 55 15.6	-0.4
MWC				eSn	Sg	07 55 59.2	-0.4
W13A	Hualapai Mount	3.12	21	ePn	Pn	07 55 10.3	-0.5
PASC	Pasadena Art C	3.14	310	ePn	Pb	07 55 16.1	-0.7
PASC				eSn	Sb	07 55 56.6	+1.1
GSC	Goldstone, Bar	3.35	338	ePn	Pn	07 55 13.4	-0.4
OSI	Osito Audit: C	3.76	311	ePn	Pb	07 55 26.6	-0.9
TUC	Tucson	3.81	87	ePn	Pn	07 55 20.7	+0.7
TUC				i S	Sn	07 55 58.3	-7.1
X16A	Lo Mia Camp, P	3.90	54	ePn	Pn	07 55 20.9	-0.5
SHPR	Sheep Range	4.30	1	ePn	Pn	07 55 26.2	-0.7
ISA	Isabella, Lake	4.36	323	ePn	Pn	07 55 29.8	+2.1
DAC	Darwin (Calif)	4.50	335	ePn	Pn	07 55 29.9	+0.2
WUAZ	Wupatki	4.64	43	ePn	Pn	07 55 31.9	+0.4
TPNV	Topopah Spring	4.81	351	ePn	Pn	07 55 36.9	+3.0
U15A	North Rim	4.89	29	ePn	Pn	07 55 35.1	0.0
X18A	Snowflake	5.03	61	ePn	Pn	07 55 36.5	-0.4
LCMT	Little Creek M	5.09	19	ePn	Pn	07 55 37.5	-0.2
319A	Douglas	5.17	97	ePn	Pn	07 55 38.6	-0.2
KNB	Kanab	5.22	22	ePn	Pn	07 55 39.3	-0.2
PAGB	Antelope Grade	5.43	312	ePg	Pg	07 56 06.9	+2.4
CCUT	Cedar City	5.57	16	ePn	Pn	07 55 44.7	+0.3
SZCU	Shurtz Canyon	5.68	18	ePn	Pn	07 55 46.2	+0.3
R11A	Troy Canyon, C	6.15	358	ePn	Pn	07 55 51.8	-0.5
MTPU	Mount Pierson	6.36	23	ePn	Pn	07 56 00.5	+5.2
PSUT	Pine Spring	6.43	10	ePn	Pn	07 55 56.7	+0.5
NV11	Mina Array Sit	6.65	340	ePg	Pg	07 56 27.7	-0.1
NV01	Mina Array Sit	6.70	339	ePg	Pg	07 56 28.1	-0.6
NVAR	Mina Array Bea	6.70	339	Pn	Pn	07 56 02.3	+2.5
	comp=E,0.1nm,0.3s,baz=158,slow=15,SNR=2.6						
NVAR				Lg	Lg	07 57 54.6	
	baz=149,slow=30,SNR=1.7						
NVAR				LR	LR	07 57 55.9	
	comp=E,13nm,18.8s,baz=206,slow=32						
MSU	Marysvale	6.79	21	ePn	Pn	07 56 05.4	+4.2
RYN	Ryan	6.95	338	ePg	Pg	07 56 36.1	+2.7
WAKR	Walker	7.16	333	ePg	Pg	07 56 37.8	+0.4
LAZ	Ladron	7.16	70	ePn	Pn	07 56 07.9	+1.7
KVN	Kaiserville	7.22	342	ePg	Pg	07 56 36.6	-2.0
LENM	Lemitar	7.23	72	ePn	Pn	07 56 07.0	-0.2
MVCO	Mesa Verde	7.50	46	ePn	Pn	07 56 12.4	+1.6
BNM	Barren Site	7.51	73	ePn	Pn	07 56 11.0	0.0
LPM	Los Pinos Moun	7.54	71	ePn	Pn	07 56 13.3	+1.9
PV05	Paradox Valley	7.75	39	ePg	Pg	07 56 50.7	+2.0
ANMO	Albuquerque	7.86	67	Pn	Pn	07 56 17.7	+1.9
	comp=E,0.1nm,0.3s,baz=254,slow=14,SNR=5.9						
ANMO				Lg	Lg	07 58 28.2	
	comp=E,0.1nm,0.3s,baz=192,slow=16,SNR=3.1						
ANMO				LR	LR	07 59 41.6	
	comp=E,175nm,19.8s,baz=252,slow=41						
ANMO	Albuquerque	7.86	67	ePn	Pn	07 56 18.2	+2.4
ANMO				Lg	Lg	07 58 28.2	
VCNR	Virginia City	7.93	335	ePn	Pn	07 56 26.6	+10
PV10	Paradox Valley	8.00	38	ePg	Pg	07 56 51.4	-2.2
PV03	Paradox Valley	8.01	39	ePn	Pn	07 56 20.2	+2.3
PV09	Paradox Valley	8.05	37	ePn	Pn	07 56 20.9	+2.4
PV01	Paradox Valley	8.08	41	ePn	Pn	07 56 21.2	+2.4
PV04	Paradox Valley	8.09	38	ePn	Pn	07 56 22.1	+3.3
PV07	Paradox Valley	8.25	39	ePn	Pn	07 56 23.9	+2.6
PV15	Paradox Valley	8.28	40	ePn	Pn	07 56 24.8	+3.3
MNTX	Cornudas Mount	8.42	91	ePn	Pn	07 56 22.9	-0.5
ELK	Elko	8.54	0	Pn	Pn	07 56 28.6	+3.5
	comp=E,0.2nm,0.3s,baz=177,slow=11,SNR=3.6						
ELK				Lg	Lg	07 58 51.5	
	comp=E,0.1nm,0.3s,baz=284,slow=19,SNR=2.0						
ELK				LR	LR	07 59 59.8	
	comp=E,151nm,21.6s,baz=252,slow=40						
BEKR	Beckworth	8.69	333	ePn	Pn	07 56 31.9	+4.7
S22A	4UR Ranch, Cre	8.87	49	ePn	Pn	07 56 32.5	+2.8
BGU	Big Grassy Mou	8.90	11	ePn	Pn	07 56 36.4	+6.4
JLU	Jordanelle	8.94	19	ePn	Pn	07 56 34.8	+4.1
LPIG	La Paz	9.17	150	LR	LR	08 00 12.4	
	comp=E,96nm,18.9s,baz=5.5,slow=38						
HWUT	Hardware Ranch	9.85	16	ePn	Pn	07 56 48.3	+5.2
HPIG		9.87	120	ePn	Pn	07 56 44.2	+0.8
TX31	Lajitas Ar. Si	10.38	103	ePn	Pn	07 56 52.0	+1.6
TXAR	Lajitas Array	10.38	103	Pn	Pn	07 56 51.8	+1.5
	comp=E,0.3nm,0.3s,baz=282,slow=13,SNR=39						
TXAR				Lg	Lg	07 59 45.6	
	comp=E,0.0nm,0.3s,baz=276,slow=34,SNR=2.5						
TXAR				LR	LR	08 01 14.4	
	comp=E,220nm,18.9s,baz=0.0,slow=40						
MSTX	Muleshoe	10.64	77	ePn	Pn	07 57 01.0	+7.2
YBH	Yreka Blue Hor	11.22	330	Pn	Pn	07 57 06.6	+4.9
	comp=E,0.0nm,0.3s,baz=157,slow=11,SNR=8.0						
YBH				LR	LR	08 01 48.4	
	comp=E,79nm,18.6s,baz=310,slow=40						
YBH	Yreka Blue Hor	11.22	330	ePn	Pn	07 57 07.1	+5.4
K05A	Summer Lake	11.42	339	ePn	Pn	07 57 10.4	+5.9
PDAR	Pinedale Array	11.49	22	Pn	Pn	07 57 10.4	+4.9
	comp=E,0.1nm,0.3s,baz=236,slow=7.5,SNR=2.3						
PDAR				LR	LR	08 01 55.4	
	comp=E,118nm,19.4s,baz=218,slow=40						
TPAW	Teton Pass	11.78	16	ePn	Pn	07 57 13.7	+4.1
FXWY	Fox Creek	11.91	15	ePn	Pn	07 57 14.6	+3.4
PINE	Pine Mountain	12.41	341	ePn	Pn	07 57 23.9	+5.8
JCT	Junction City	13.34	93	ePn	Pn	07 57 34.5	+3.7
H04A	Detroit Lake	13.59	339	ePn	P	07 57 39.1	-4.2
MSO	Missoula	14.65	4	eP	P	07 57 58.2	+3.0
HRY	Holter Researc	14.74	9	eP	P	07 57 59.9	+3.8
LAO	LASA Array	16.06	23	ePn	P	07 58 13.7	+2.9
	comp=E,27nm,1.4s						
NEW	Newport	16.11	356	LR	LR	08 04 45.9	
	comp=E,79nm,20.2s,baz=186,slow=39						
BBB	Bella Bella	22.06	339	LR	LR	08 09 18.7	
	comp=E,40nm,18.4s,baz=166,slow=41						
TKL	Tuckaleechee C	26.31	74	LR	LR	08 10 44.2	
	comp=E,104nm,21.2s,baz=290,slow=38						
YKA	Yellowknife Ar	30.32	1	LR	LR	08 13 23.9	
	comp=E,7.7nm,18.6s,baz=195,slow=38						
ILAR	Eielson Array	37.95	339	P	P	08 01 40.6	+1.7
	comp=E,0.4nm,0.7s,baz=151,slow=7.5,SNR=6.8						
ILAR				LR	LR	08 17 30.5	
	comp=E,34nm,18.2s,baz=262,slow=36						

MEX 01 08:05:05.3±0.6, **18.°00N**×**100.°65W**, **h7**^{km}±4^{km}, **MD3.9**, **Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARIG	Puente Sto Nin	0.40	46	eP	Pg	08 05 12.3	-0.7
ARIG				eS	Sg	08 05 18.7	+0.3
MEIG	Mezcala	0.98	94	eP	Pg	08 05 22.1	-2.1
MEIG				i S	Sg	08 05 33.9	-3.0
CAIG	El Cayaco	1.02	159	eP	Pg	08 05 21.9	-2.9
CAIG				eS	Sg	08 05 35.1	-2.9
PLIG	Platanillo	1.16	70	eP	Pg	08 05 24.8	-2.8
PLIG				i S	Sg	08 05 38.5	-4.0
ACX	Acapulco	1.35	146	eP	Pn	08 05 27.8	-2.8
ACX				i S	Sb	08 05 44.3	-4.3
YAIG	Yautepec	1.73	60	i P	Pn	08 05 33.1	-2.8
YAIG				i S	Sn	08 05 53.6	-4.7
MOIG	Morelia	1.74	343	eP	Pn	08 05 33.0	-3.2
MOIG				i S	Sn	08 05 53.7	-5.2
TLIG	Tlapa	2.03	102	eP	Pn	08 05 36.7	-3.3
TLIG				i S	Sn	08 06 01.1	-4.7
PPM	Popocatepetl	2.19	61	i P	Pn	08 05 40.6	-2.0
MMIG	Aquila	2.58	277	i P	Pn	08 05 45.0	-2.5

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*ISCJB **01** 08:06:31.9±0.7, 32.°22N±0.°04×115.°28W±0.°05, h10^{km}±8^{km}, Error ellipse: s-maj=8.6km s-min=5.4km az=142.1*

*ECX **01** 08:06:33.0±0.6, 32.°19N×115.°27W, h8^{km}, ML2.8*

*MEX **01** 08:06:33.8±0.3, 32.°34N×115.°12W, h23^{km}±5^{km}, MD3.5*

ISC 01 08:06:31.4±1.0, **32.°21N**±0.°03×**115.°29W**±0.°04, **h11**^{km}±9^{km}, **n16**, σ**0^{s}41**/23, **5C**, **California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPBX	Cerro Prieto	0.21	356	eP	Pg	08 06 35.6	-0.3
CPBX				eS	Sg	08 06 38.6	-0.3
CPBX				⇑e		08 06 42.6	
CPBX				IAML		08 06 42.6	
	comp=N,5µm,0.3s						
MBIG	Mexicali	0.21	20	eP	Pb	08 06 37.1	-0.2
MBIG				eS	Sg	08 06 39.5	+0.5

DREC	Desert Rsrch C	0.61	347	eP	Pb	08 06 44.5	+0.4
ERPC	Ernies Place	0.62	329	eP	Pb	08 06 44.6	+0.3
WESC	Westside Schoo	0.67	326	eP	Pb	08 06 45.4	+0.4
COA	Coachella	0.67	12	eP	Pb	08 06 44.9	-0.2
YUH	Yuha Desert	0.69	309	⇑iP	Pg	08 06 45.3	+0.4
YMD	Yuma Desert	0.71	61	⇑iP	Pg	08 06 45.5	+0.2
ECBX	El Chinero	0.76	165	eP	Pg	08 06 46.5	+0.4
ECBX				eS	Sg	08 06 56.4	+0.3
ECBX				e		08 06 58.0	
ECBX				IAML		08 06 58.0	
	comp=E,398nm,0.5s						
IKP	In-Ko-Pah, Jac	0.82	302	⇑iP	Pb	08 06 47.8	0.0
ZAX	El Zacaton	1.09	231	eP	Pb	08 06 51.6	-0.7
SPIG	San Pedro Mart	1.17	188	eP	Pg	08 06 54.7	+0.7
SPIG				i S	Sn	08 07 10.3	+0.2
SPX	San Pedro Mart	1.17	188	eP	Pb	08 06 53.4	-0.5
CBX	Cerro Bola	1.17	275	eP	Pn	08 06 54.0	+0.1
CBX				eS	Sn	08 07 09.8	-0.1
CBX				IAML		08 07 10.8	
	comp=E,179nm,0.3s						
CBX				⇑e		08 07 10.8	
CBX	Cerro Bola	1.17	275	eP	Pb	08 06 53.7	-0.1
CBX				eS	Sg	08 07 09.4	+0.2
TJIG	Tijuana	1.20	281	eP	Pn	08 06 53.4	-0.8
TJIG				i S	Sb	08 07 09.7	0.0

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*DDA **01** 08:08:49.0, 41°.16N×43°.85E, h7^{km}, Ml2.8*

*TIF **01** 08:08:49.6, 41°.24N×43°.84E, h17^{km}±2^{km}*

*CSEM **01** 08:08:49.4±0.1, 41°.17N×43°.85E, h2^{km}, ML2.3, Error ellipse: s-maj=3.9km s-min=2.4km az=141.0*

ISC 01 08:08:49.5±1.1**, 41°.16N**±0°.03×**43°.85E**±0°.03**, h7**^{km}±10^{km}**, n18, σ0$.^{s}$64**/35**, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BGD	Bogdanovka	0.21	298	P	Pg	08 08 53.9	+0.1
BGD				S	Sg	08 08 57.2	+0.4
BGD	Bogdanovka	0.21	298	P	Pg	08 08 53.9	+0.1
BGD				S	Sg	08 08 57.2	+0.4
AKH	Akhalkalaki	0.36	313	P	Pg	08 08 56.3	-0.4
AKH				S	Sg	08 09 01.1	-0.4
AKH	Akhalkalaki	0.36	313	P	Pg	08 08 56.3	-0.4
AKH				S	Sg	08 09 01.1	-0.4
EAK	Akyaka	0.51	201	i P	Pg	08 08 59.9	+0.5
EAK				i S	Sb	08 09 07.4	-1.2
EAK	Akyaka	0.51	201	P	Pg	08 08 59.9	+0.5
EAK				S	Sb	08 09 07.4	-1.2
DIGO	Kars	0.83	206	i P	Pg	08 09 04.5	-1.0
DIGO				i S	Sg	08 09 17.0	+0.7
DIGO	Kars	0.83	206	P	Pg	08 09 04.5	-1.0
DIGO				S	Sg	08 09 17.0	+0.7
TBLG	Delisi	0.88	49	P	Pg	08 09 06.0	-0.4
TBLG				S	Sb	08 09 18.4	-0.6
TBLG	Delisi	0.88	49	P	Pg	08 09 06.1	-0.3
TBLG				S	Sb	08 09 18.4	-0.6
DUS	Dusheti	1.13	34	P	Pg	08 09 11.1	0.0
DUS	Dusheti	1.13	34	P	Pg	08 09 11.1	0.0
DUS				S	Sb	08 09 26.1	-0.1
DGRG	David-gareji	1.19	75	P	Pn	08 09 12.6	0.0
DGRG				S	Sn	08 09 30.3	+1.3
DGRG	David-gareji	1.19	75	P	Pb	08 09 12.3	0.0
DGRG				S	Sb	08 09 27.7	-0.2
ARTV	Artvin	1.45	271	i P	Pn	08 09 16.3	0.0
ARTV				i S	Sg	08 09 37.1	+1.0
ARTV	Artvin	1.45	271	P	Pn	08 09 16.3	0.0
ARTV				S	Sg	08 09 37.1	+1.0
DBAD	Bademkaya	1.63	266	i P	Pb	08 09 19.6	-0.4
DBAD				i S	Sb	08 09 41.2	+0.3
DBAD	Bademkaya	1.63	266	P	Pb	08 09 19.6	-0.4
DBAD				S	Sb	08 09 41.2	+0.3

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*MEX **01** 08:10:18.4±0.4, 32°.41N×115°.07W, h27^{km}±3^{km}, MD3.9*

*ECX **01** 08:10:19.0±0.6, 32°.21N×115°.29W, h7^{km}, MD2.6, ML2.8*

ISC 01 08:10:17.4±1.0**, 32°.30N**±0°.05×**115°.22W**±0°.06**, h24**^{km}±6^{km}**, n19, σ1$.^{s}$16**/28**, 1C-2D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBIG	Mexicali	0.11	8	eP	Pb	08 10 22.9	+0.9
MBIG	Mexicali	0.11	8	eP	Pb	08 10 22.1	0.0
MBIG				eS	Sb	08 10 25.4	+0.2
CPBX	Cerro Prieto	0.14	328	eP	Pn	08 10 21.5	-2.6
CPBX				eS	Sn	08 10 24.9	-0.8
CPBX				⇓e		08 10 27.5	
CPBX				IAML		08 10 27.5	
	comp=N,5µm,0.1s						
COA	Coachella	0.57	8	eP	Pb	08 10 30.7	+1.9
YMD	Yuma Desert	0.62	66	⇑iP	Pb	08 10 31.4	+1.7
WESC	Westside Schoo	0.63	317	eP	Pn	08 10 31.0	+0.1
YUH	Yuha Desert	0.69	300	eP	Pn	08 10 30.8	-0.9
RMX	La Rumorosa	0.79	293	eP	Pn	08 10 32.1	-1.1
RMX				eS	Sn	08 10 42.1	-2.3
IKP	In-Ko-Pah, Jac	0.83	295	eP	Pn	08 10 33.4	-0.3
ECBX	El Chinero	0.83	170	eP	Pn	08 10 32.3	-1.4
ECBX				eS	Sn	08 10 43.1	-2.1
ECBX				IAML		08 10 44.3	
	comp=E,318nm,0.3s						
ZAX	El Zacaton	1.19	229	eP	Pn	08 10 38.4	-0.2
ZAX				eS	Sn	08 10 52.5	-1.7
ZAX				⇓e		08 10 55.3	
ZAX				IAML		08 10 55.3	
	comp=E,209nm,0.4s						
CBX	Cerro Bola	1.23	271	eP	Pn	08 10 39.5	+0.3
CBX				eS	Sn	08 10 55.1	0.0
CBX	Cerro Bola	1.23	271	eP	Pn	08 10 39.4	+0.2
CBX				eS	Sn	08 10 55.3	+0.3
TJIG	Tijuana	1.24	277	i P	Pn	08 10 39.3	0.0
TJIG				i S	Sn	08 10 55.3	0.0
SPIG	San Pedro Mart	1.27	190	eP	Pn	08 10 39.6	-0.3
SPIG	San Pedro Mart	1.27	190	eP	Pn	08 10 39.8	-0.1
SPIG				eS	Sn	08 10 57.0	+0.7
SPX	San Pedro Mart	1.27	190	eP	Pn	08 10 39.7	-0.2
BAR	Barrett	1.29	288	eP	Pn	08 10 40.7	+0.7
ECNX	Esteban Cantu	1.34	242	eP	Pn	08 10 40.6	-0.1

MAN 01 08:22:13.3, 8°.20N×122°.96E, h28^{km}**, mb4.0, ML2.8, MS2.4, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAGZ	Pagadian	0.54	130	eP	Pb	08 22 24.5	+0.1
PAGZ				eS	Sb	08 22 30.5	-1.4
BUKP	Musuan	2.10	99	eP	Pn	08 22 47.8	+1.1
GUIM	Jordan	2.44	351	eP	Pn	08 22 51.5	+0.1
BESP	Borongan	4.17	36	eP	Pn	08 23 18.1	+3.0

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*ISCJB **01** 08:25:29.5±0.4, 37°.78N±0°.02×26°.77E±0°.04, h10^{km}±4^{km}, Error ellipse: s-maj=5.3km s-min=3.6km az=151.6*

*DDA **01** 08:25:29.7, 37°.80N×26°.76E, h7^{km}, Ml2.5*

*CSEM **01** 08:25:29.5±0.1, 37°.75N×26°.76E, h12^{km}, ML2.2, Error ellipse: s-maj=3.3km s-min=2.5km az=42.0*

*ATH **01** 08:25:29.1, 37°.76N×26°.77E, h14^{km}±5^{km}, ML2.2/1, Error ellipse: s-maj=6.8km s-min=1.4km az=92.0*

*ISK **01** 08:25:29.2, 37°.77N×26°.77E, h17^{km}, ML2.3/5*

ISC 01 08:25:29.4±0.8**, 37°.77N**±0°.02×**26°.77E**±0°.02**, h12**^{km}±6^{km}**, n29, σ0$.^{s}$46**/51**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMG	Samos	0.08	142	P	Pg	08 25 32.2	+0.2
SMG				S	Sg	08 25 33.7	-0.1
SMG				AML	AML	08 25 34.1	
	comp=N,4270µm,0.3s						
SMG				AML	AML	08 25 35.0	
	comp=E,2337µm,0.2s						
SMG	Samos	0.08	142	P	Pg	08 25 32.0	0.0
SMG				S	Sg	08 25 33.8	-0.1
DGB	˜zmir	0.29	17	i P	Pg	08 25 35.2	-0.1
DGB				i S	Sg	08 25 39.0	-0.3
GCAM	G?zelcaml?	0.37	101	PG	Pg	08 25 37.1	+0.3
GCAM				SG	Sb	08 25 43.5	-0.2
GCAM	G?zelcaml?	0.37	101	i P	Pg	08 25 37.1	+0.3
GCAM				i S	Sb	08 25 44.1	+0.4
GCAM	G?zelcaml?	0.37	101	P	Pg	08 25 37.1	+0.3
GCAM				eSg	Sb	08 25 43.5	-0.2
GCAM				S	Sb	08 25 44.1	+0.4
ZEY	˜zmir	0.51	335	i P	Pg	08 25 39.1	-0.3
ZEY				i S	Sg	08 25 46.0	-0.1
URLA	Izmir	0.60	347	PG	Pg	08 25 41.6	+0.5
URLA				SG	Sb	08 25 50.5	+0.1
URLA	Izmir	0.60	347	i P	Pb	08 25 42.1	+0.2
URLA				i S	Sg	08 25 49.8	+0.7
URLA	Izmir	0.60	347	ePg	Pg	08 25 41.6	+0.5
URLA	Izmir	0.60	347	P	Pb	08 25 42.1	+0.2
URLA				S	Sg	08 25 49.8	+0.7
URLA				eSg	Sb	08 25 50.5	+0.1
BODT	Bodrum	0.83	149	PG	Pb	08 25 45.9	+0.1
BODT				SG	Sb	08 25 57.8	+0.9
BODT	Bodrum	0.83	149	ePg	Pb	08 25 45.9	+0.1
BODT				eSg	Sb	08 25 57.8	+0.9
CHOS	Chios island	0.83	317	PG	Pn	08 25 46.5	-0.6
CHOS	Chios island	0.83	317	P	Pb	08 25 45.8	0.0
CHOS				S	Sg	08 25 56.6	+0.2
CHOS	Chios island	0.83	317	P	Pg	08 25 45.6	+0.1
CHOS	Chios island	0.83	317	ePg	Pn	08 25 46.5	-0.6
CHOS				S	Sg	08 25 56.8	+0.4
AYDN	Tasoluk	0.89	97	i P	Pg	08 25 46.2	-0.2
AYDN				i S	Sg	08 25 58.1	+0.1
AYDN	Tasoluk	0.89	97	P	Pg	08 25 46.2	-0.2
AYDN				S	Sg	08 25 58.1	+0.1
AYDB	Zeytinkoy-Aydi	0.90	79	PG	Pb	08 25 47.2	+0.1
AYDB	Zeytinkoy-Aydi	0.90	79	ePg	Pb	08 25 47.2	+0.1
AMGA	Amorgos Island	1.17	217	P	Pn	08 25 51.1	-0.6
AMGA				S	Sb	08 26 06.1	-0.7
AMGA	Amorgos Island	1.17	217	P	Pn	08 25 51.0	-0.6
AMGA				S	Sb	08 26 06.5	-0.3
APE	Apeiranthos	1.21	235	PN	Pn	08 25 51.9	-0.4
APE	Apeiranthos	1.21	235	P	Pn	08 25 51.4	-0.9
APE				S	Sg	08 26 09.5	+1.0
APE	Apeiranthos	1.21	235	P	Pn	08 25 51.6	-0.7
APE	Apeiranthos	1.21	235	ePn	Pn	08 25 51.9	-0.4
APE				S	Sg	08 26 09.0	+0.5
DAT	Datca	1.23	148	PN	Pn	08 25 52.0	-0.5
DAT	Datca	1.23	148	ePn	Pn	08 25 52.0	-0.5

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*IDC **01** 08:34:12.1±0.8, 3°.43S×89°.66E, h0^{km}, mb3.9/12, mb1 4.0/12, mb1mx3.7/67, mbtmp3.9/12, MS3.4/10, Ms1 3.4/10, ms1mx3.0/62, Error ellipse: s-maj=33.9km s-min=17.1km az=55.0*

ISC 01 08:34:13.5±0.9**, 3°.4S**±0°.2×**89°.5E**±0°.2**, h10**^{km}**, n29, σ1$.^{s}$42**/17**, mb4.0**/13**, MS3.4**/9**, South Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	Pallekele	13.78	320	Pn	Pn	08 37 26.4	-2.7
	0.6nm,0.3s,baz=135,slow=14,SNR=3.2						
PALK				Sn	Sn	08 39 49.8	-13
	0.6nm,0.3s,baz=118,slow=16,SNR=2.8						
PALK				LR	LR	08 41 54.1	
	comp=Z,153nm,19.9s,baz=115,slow=33						
H08S2	Diego Garcia H	17.46	255	T	T	08 55 58.7	
	baz=76,slow=74,SNR=42						
H08S3	Diego Garcia H	17.47	255	T	T	08 55 55.1	
	baz=76,slow=74,SNR=763						
H08S1	Diego Carcia H	17.48	255	T	T	08 55 57.5	
	baz=76,slow=74,SNR=21						
CMAR	Chiang Mai Arr	23.62	23	P	P	08 39 23.9	-1.1
	1.5nm,0.3s,baz=210,slow=11,SNR=4.5						
CMAR				LR	LR	08 50 06.2	
	comp=Z,53nm,18.0s,baz=210,slow=40						
BRDH	Bariadhala	26.00	4	LR	LR	08 50 00.5	
	comp=Z,144nm,18.4s,baz=133,slow=36						
DAV	Davao City (W)	37.46	74	LR	LR	08 57 27.1	
	comp=Z,32nm,19.4s,baz=116,slow=37						
H01W3	Cape Leeuwin H	38.77	147	T	T	09 22 39.8	
	baz=319,slow=75,SNR=38						
H01W2	Cape Leeuwin H	38.78	147	T	T	09 22 37.6	
	baz=319,slow=75,SNR=44						
H01W1	Cape Leeuwin H	38.79	147	T	T	09 22 38.7	
	baz=319,slow=75,SNR=43						
WRA	Warramunga Arr	46.67	114	P	P	08 42 41.2	-1.6
	0.9nm,0.8s,baz=289,slow=8.8,SNR=3.3						
ASAR	Alice Springs	47.34	119	P	P	08 42 47.5	-0.5
	1.2nm,0.8s,baz=297,slow=7.4,SNR=13						
MKAR	Makanchi Array	50.38	354	P	P	08 43 11.0	+0.1
	1.5nm,0.9s,baz=176,slow=8.5,SNR=7.5						
KURBB	Kurchatov Arra	54.63	351	P	P	08 43 42.4	+0.2
	1.5nm,0.9s,baz=184,slow=7.1,SNR=9.4						
STKA	Stephens Creek	56.43	126	P	P	08 43 55.3	-0.4
	3.7nm,1.0s,baz=316,slow=9.0,SNR=4.1						
ZALV	Zalesovo Beam	57.27	357	P	P	08 44 01.0	-0.1
	0.5nm,0.3s,baz=168,slow=6.8,SNR=3.0						
ZALV				LR	LR	09 10 18.8	
	comp=Z,24nm,18.7s,baz=240,slow=38						
BVAR	Borovoye Array	58.48	347	P	P	08 44 10.3	+0.6
	0.2nm,0.4s,baz=158,slow=7.0,SNR=2.5						
BVAR				LR	LR	09 09 34.5	
	comp=Z,38nm,19.9s,baz=178,slow=36						
AKTO	Aktyubinsk	60.06	337	LR	LR	09 10 44.0	
	comp=Z,27nm,20.3s,baz=130,slow=36						
MJAR	Matsushiro Arr	60.28	44	LR	LR	09 13 51.3	
	comp=Z,10nm,18.2s,baz=155,slow=40						
MLR	Muntele Rosu	74.30	319	P	P	08 45 51.2	-0.1
	0.4nm,0.6s,baz=90,slow=8.1,SNR=5.3						
FINES	FINESS Array B	80.63	334	P	P	08 46 27.5	+1.2
	1.1nm,0.7s,baz=54,slow=12,SNR=2.6						
VNDA	Vanda	82.91	168	LR	LR	09 16 57.2	
	comp=Z,80nm,21.5s,baz=165,slow=31						
GERES	GERESS Array B	83.26	320	P	P	08 46 42.8	+2.3
	0.1nm,0.3s,baz=142,slow=4.6,SNR=4.8						
ARCES	ARCESS Array B	84.33	341	P	P	08 46 47.1	+1.7
	1.0nm,0.6s,baz=22,slow=13,SNR=3.5						
NOA	NORSAR Array B	87.30	332	LR	LR	09 29 03.1	
	comp=Z,17nm,18.9s,baz=85,slow=38						
SPITS	Spitsbergen Ar	89.88	349	P	P	08 47 14.4	+2.1
	8.0nm,1.0s,baz=90,slow=3.0,SNR=4.6						
SIV	San Ignacio	145.12	236	PKPbc	PKPbc	08 53 50.3	-1.6
	1.0nm,1.0s,baz=167,slow=10,SNR=5.2						
LPAZ	La Paz	150.49	228	PKPbc	PKPbc	08 54 07.2	-0.1
	0.7nm,0.9s,baz=241,slow=13,SNR=2.7						
TXAR	Lajitas Array	151.33	25	PKPbc	PKPbc	08 54 08.6	+0.3
	0.4nm,0.5s,baz=74,slow=0.2,SNR=6.8						

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*ISCJB **01** 08:48:30.6±0.6, 31°.49S±0°.02×69°.26W±0°.04, h120^{km}±6^{km}, Error ellipse: s-maj=5.4km s-min=3.7km az=15.2*

*GUC **01** 08:48:30.5±0.5, 31°.47S×69°.66W, h151^{km}±9^{km}, ML3.4*

*SJA **01** 08:48:30.6±1.0, 31°.48S×69°.28W, h111^{km}±4^{km}, ML3.3, MW3.5*

ISC 01 08:48:30.7±1.4**, 31°.49S**±0°.03×**69°.26W**±0°.04**, h120**^{km}±9^{km}**, n25, σ0$.^{s}$94**/46**, 4D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTLS	Leoncito	0.31	186	eP	Pn	08 48 47.5	-0.6
RTLS				eS	Sn	08 49 00.5	-0.8
RTLS				IAML		08 49 01.6	
	comp=Z,977nm,0.1s						
ZON	Zonda	0.50	96	eP	Pn	08 48 48.2	-0.5
ZON				eS	Sn	08 49 02.0	-0.4
ZON				IAML		08 49 02.2	
	comp=Z,538nm,0.2s						
SJA	San Juan	0.59	93	eP	Pn	08 48 50.2	+0.8
SJA				eS	Sn	08 49 02.2	-1.2
SJA				IAML		08 49 04.7	
	comp=Z,720nm,0.2s						
RTLL	Cerro Villicun	0.69	76	eP	Pn	08 48 50.3	+0.2
RTLL				eS	Sn	08 49 04.8	+0.1
RTCV	Cerro Valdivia	0.71	121	eP	Pn	08 48 51.2	+0.9
RTCV				eS	Sn	08 49 04.9	-0.2
AMOG	MOGNA	0.86	50	eP	Pn	08 48 52.2	+0.6
AMOG				eS	Sn	08 49 06.5	-0.7
ASAL	Salagasta	1.15	162	eP	Pn	08 48 54.7	+0.3
ASAL				eS	Sn	08 49 12.5	+0.1
ACDV	Cuesta del Vie	1.32	5	eP	Pn	08 48 56.6	+0.2
ACDV				⇓eS	Sn	08 49 16.3	+0.5
ACDV				IAML		08 49 16.6	
	comp=Z,314nm,0.4s						
AROD	Rodeo	1.34	352	eP	Pn	08 48 57.2	+0.5
AROD				eS	Sn	08 49 16.7	+0.4
ARCO	CERRO ARCO	1.37	169	eP	Pn	08 48 57.5	+0.6
ARCO				eS	Sn	08 49 17.6	+0.8
ARCO				IAML		08 49 19.2	
	comp=Z,681nm,0.2s						
AAGR	Agrelo	1.63	167	eP	Pn	08 49 00.0	+0.2
AAGR				eS	Sn	08 49 22.6	+0.6
GO04	Tololo Observa	1.87	314	eP	Pn	08 49 02.6	-0.3
GO04				i S	Sn	08 49 26.9	-0.4
GO04				IAML		08 49 30.7	
	comp=E,681nm,0.3s						
TLL	Tololo Astrono	1.88	314	eP	Pn	08 49 02.7	-0.2
TLL				eS	Sn	08 49 27.1	-0.5
TLL				IAML		08 49 28.8	
	comp=E,289nm,0.3s						
ACAN	Cantantal	1.92	114	eP	Pn	08 49 04.4	+1.1
FCH	Farellones	2.03	205	⇓iP	Pn	08 49 05.8	+1.0
FCH				i S	Sn	08 49 33.1	+2.1
FCH				IAML		08 49 38.5	
	comp=E,338nm,0.2s						
PEL	Peldehue	2.04	216	eP	Pn	08 49 05.0	+0.3
PEL				eS	Sn	08 49 30.8	0.0
PEL				IAML		08 49 32.7	
	comp=E,158nm,0.2s						
ROCH	El Roble	2.09	225	eP	Pn	08 49 05.4	-0.2
ROCH				i S	Sn	08 49 31.9	-0.3
ROCH				IAML		08 49 33.8	
	comp=N,284nm,0.3s						
ROC1	El Roble	2.10	225	eP	Pn	08 49 04.2	-1.5
ROC1				eS	Sn	08 49 31.3	-1.1
AGUA	GUANDACOL	2.11	18	eP	Pn	08 49 07.5	+1.8
AGUA				eS	Sn	08 49 34.2	+1.9
CLCH	Cerro Calan	2.18	209	eP	Pn	08 49 07.1	+0.5
CLCH				eS	Sn	08 49 34.8	+0.7
CLCH				IAML		08 49 36.5	
	comp=E,332nm,0.7s						
APLL	PUNTA DE LOS L	2.59	66	eP	Pn	08 49 11.3	-0.4
APLL				⇓eS	Sn	08 49 43.3	+0.1
APLL				IAML		08 49 43.9	
	comp=Z,42nm,0.3s						
LCO	Las Campanas	2.77	333	⇓iP	Pn	08 49 14.1	-0.2
LCO				eS	Sn	08 49 47.0	-0.8
LCO				IAML		08 49 49.1	
	comp=E,97nm,0.3s						
VCA	Vinchina	2.90	19	eP	Pn	08 49 16.4	+0.5
VCA				IAML		08 49 55.0	
	comp=Z,55nm,0.4s						
MRA	San Martin	3.15	108	eS	Sn	08 49 53.4	-3.0
TCA	Tanti	3.99	89	eP	Pn	08 49 29.1	-1.1
TCA				IAML		08 50 31.2	
	comp=Z,17nm,0.6s						

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*MDD **01** 08:50:31.2±3.4, 43°.22N×13°.81W, h0^{km}, mb4.0/3, Error ellipse: s-maj=31.6km s-min=25.1km az=56.0, PRXIMO SOLUCIN POBRE*

ISC 01 08:50:31.9±4.1**, 43°.1N**±0°.1×**13°.7W**±0°.2**, h10**^{km}**, n20, σ1$.^{s}$33**/26**, 2C, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EMAZ	Mazaricos	3.47	91	P	Pn	08 51 26.4	+0.4
	0.7nm,0.1s,SNR=7.9						
EMAZ				S	Sn	08 52 05.7	-1.5
	1.2nm,0.1s,SNR=7.9						
EAGO	Agolada(Pontev	4.13	92	⇑P	Pn	08 51 35.4	+0.3
	1.7nm,0.1s,SNR=18						
EAGO				S	Sn	08 52 22.0	-1.5
	0.5nm,0.0s,SNR=7.9						
PGAV	Gavieira, Arco	4.17	104	ePn	Pn	08 51 37.0	+1.3
PGAV				eSn	Sn	08 52 25.1	+0.6
PGAV				A	A	08 52 26.3	
	1.9nm,0.1s						
ELOB	Lobios	4.35	104	⇑P	Pn	08 51 39.1	+1.0
	0.3nm,0.1s,SNR=18						
ELOB				S	Sn	08 52 29.5	+0.6
	0.3nm,0.1s,SNR=6.6						
PCAB	Cabril	4.42	106	eSn	Sn	08 52 31.1	+0.4
PCAB				A	A	08 52 33.0	
	3.8nm,0.7s						
PCAB	Cabril	4.42	106	S	Sn	08 52 31.1	+0.4
	1.9nm,0.7s						
POLO	Lamas de Olo	4.71	109	eSn	Sn	08 52 38.2	+0.4
POLO				A	A	08 52 41.5	
	0.9nm,0.8s						
EPON	Pontenova	4.80	85	P	Pn	08 51 44.1	-0.1
	1.9nm,0.2s,SNR=6.2						
EPON				S	Sn	08 52 38.6	-1.3
	0.3nm,0.1s,SNR=7.9						
PVIS	Viseu	4.94	117	eSn	Sn	08 52 44.7	+1.3
PVIS	Viseu	4.94	117	S	Sn	08 52 44.7	+1.3
PCAS	Casmilo, Conde	4.94	126	eSn	Sn	08 52 44.9	+1.5
PCAS				A	A	08 52 45.5	
	2.3nm,0.7s						
MVO	Moncorvo	5.32	109	eSn	Sn	08 52 52.4	-0.5
MVO				A	A	08 52 55.5	
	2.4nm,0.6s						
MVO	Moncorvo	5.32	109	S	Sn	08 52 52.5	-0.4
	0.3nm,0.0s,SNR=7.9						
PMRV	Marv??o	6.00	125	eSn	Sn	08 53 08.8	-0.6
PMRV				A	A	08 53 09.3	
	1.6nm,0.8s						
PMRV	Marv??o	6.00	125	S	Sn	08 53 08.8	-0.6
	1.6nm,0.8s						
EARI	Arriondas	6.22	85	P	Pn	08 52 04.2	+0.5
	0.3nm,0.1s,SNR=7.9						
PESTR	Estremoz	6.25	130	eSn	Sn	08 53 14.3	-1.5
PESTR				A	A	08 53 16.7	
	1.0nm,0.6s						
PNCL	Nicolau / Gran	6.34	140	eSn	Sn	08 53 16.3	-1.4
PNCL				A	A	08 53 17.9	
	2.7nm,0.7s						
EBAD	Badajoz	6.66	128	S	Sn	08 53 22.4	-3.3
	0.2nm,0.0s,SNR=7.9						
EMIN	Mina Concepcio	7.54	132	P	Pn	08 52 22.9	+0.9
	0.3nm,0.2s,SNR=4.0						
EMIN				S	Sn	08 53 44.8	-2.7
	0.7nm,0.3s,SNR=7.9						

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*ISCJB **01** 09:03:54.9±0.6, 32°.09S±0°.02×69°.40W±0°.03, h126^{km}±5^{km}, Error ellipse: s-maj=5.0km s-min=3.9km az=23.8*

*GUC **01** 09:03:55.3±0.5, 32°.06S×69°.69W, h136^{km}±10^{km}, ML3.1*

*SJA **01** 09:03:55.7±1.1, 32°.10S×69°.43W, h111^{km}±5^{km}, ML3.2, MW3.3*

ISC 01 09:03:54.5±1.4**, 32°.11S**±0°.03×**69°.38W**±0°.04**, h132**^{km}±8^{km}**, n27, σ1$.^{s}$21**/51**, 3C-1D, Mendoza Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUSP	Uspallata	0.12	183	eP	Pn	09 04 13.6	+0.7
AUSP				eS	Sn	09 04 26.3	-0.4
RTLS	Leoncito	0.31	13	eP	Pn	09 04 12.9	-0.4
RTLS				IAML		09 04 12.9	
	comp=Z,697nm,0.3s						
RTLS				eS	Sn	09 04 25.9	-1.6
ASAL	Salagasta	0.67	137	eP	Pn	09 04 15.6	+0.7
ASAL				eS	Sn	09 04 29.3	-1.1
RTCV	Cerro Valdivia	0.75	71	eP	Pn	09 04 16.6	+1.1
RTCV				eS	Sn	09 04 30.6	-0.9
ZON	Zonda	0.82	47	eP	Pn	09 04 15.9	-0.1
ZON				eS	Sn	09 04 31.3	-1.0
ZON				IAML		09 04 32.5	
	comp=Z,155nm,0.3s						
ARCO	CERRO ARCO	0.82	153	eP	Pn	09 04 16.9	+0.6
ARCO				eS	Sn	09 04 30.4	-2.4
ARCO				IAML		09 04 34.0	
	comp=Z,908nm,0.3s						
SJA	San Juan	0.90	51	eP	Pn	09 04 18.1	+1.3
SJA				eS	Sn	09 04 33.8	+0.2
SJA				IAML		09 04 34.9	
	comp=Z,229nm,0.6s						
AAGR	Agrelo	1.08	155	eP	Pn	09 04 19.4	+0.9
AAGR				eS	Sn	09 04 36.3	-0.4
RTLL	Cerro Villicun	1.09	45	eP	Pn	09 04 19.6	+1.0
RTLL				eS	Sn	09 04 36.7	0.0
AMOG	MOGNA	1.39	33	eP	Pn	09 04 22.9	+1.4
AMOG				eS	Sn	09 04 42.0	-0.2
FCH	Farellones	1.44	212	⇑iP	Pn	09 04 23.6	+1.2
FCH				i S	Sn	09 04 45.2	+1.6
FCH				IAML		09 04 45.7	
	comp=E,205nm,0.4s						
PEL	Peldehue	1.51	226	⇑iP	Pn	09 04 23.1	+0.2
PEL				i S	Sn	09 04 44.2	-0.4
PEL				IAML		09 04 45.8	
	comp=E,143nm,0.5s						
AVIZ	Vizcacheras	1.54	152	eP	Pn	09 04 24.6	+1.3
AVIZ				eS	Sn	09 04 45.4	0.0
CLCH	Cerro Calan	1.61	217	eP	Pn	09 04 25.0	+1.0
CLCH				eS	Sn	09 04 46.9	+0.2
CLCH				IAML		09 04 49.6	
	comp=E,423nm,0.7s						
ROCH	El Roble	1.63	237	⇑iP	Pn	09 04 24.3	-0.1

ROCH				iS	Sn	09 04 46.4	-0.8
ROCH				IAML		09 04 50.1	
	comp=N,254nm,0.3s						
ROC1	**El Roble**	**1.63**	**237**	eP	**Pn**	**09 04 24.6**	**+0.1**
ROC1				eS	**Sn**	**09 04 47.0**	**-0.3**
ACAN	**Cantantal**	**1.86**	**96**	eP	**Pn**	**09 04 29.2**	**+2.2**
ACAN				eS	**Sn**	**09 04 52.4**	**+0.6**
AROD	**Rodeo**	**1.93**	**358**	eP	**Pn**	**09 04 29.1**	**+1.0**
AROD				eS	**Sn**	**09 04 54.4**	**+0.6**
GO04	**Tololo Observa**	**2.28**	**327**	eP	**Pn**	**09 04 32.1**	**-0.1**
GO04				eS	**Sn**	**09 05 00.2**	**-1.0**
TLL	**Tololo Astrono**	**2.29**	**327**	eP	**Pn**	**09 04 32.4**	**0.0**
TLL				eS	**Sn**	**09 05 00.1**	**-1.3**
TLL				IAML		09 05 10.4	
	comp=N,167nm,0.4s						
AGUA	**GUANDACOL**	**2.72**	**17**	eP	**Pn**	**09 04 39.8**	**+2.1**
AGUA				eS	**Sn**	**09 05 12.3**	**+1.3**
MRA	**San Martin**	**3.12**	**97**	eP	**Pn**	**09 04 43.4**	**+0.6**
MRA				eS	**Sn**	**09 05 15.1**	**-4.9**
MRA				IAML		09 05 21.2	
	comp=Z,35nm,0.3s						
LCO	**Las Campanas**	**3.29**	**339**	⇓iP	**Pn**	**09 04 45.0**	**-0.2**
LCO				iS	**Sn**	**09 05 23.7**	**-0.6**
LCO				IAML		09 05 24.9	
	comp=E,65nm,0.3s						
ACLC	**CERRO LA CRUZ**	**3.39**	**39**	eP	**Pn**	**09 04 46.5**	**0.0**
ACLC				eS	**Sn**	**09 05 25.8**	**-0.8**
VCA	**Vinchina**	**3.51**	**17**	eP	**Pn**	**09 04 48.8**	**+0.8**
VCA				IAML		09 05 32.5	
	comp=Z,92nm,0.3s						
SUCO	**SUCO**	**3.98**	**109**	eP	**Pn**	**09 04 54.2**	**+0.1**
SUCO				IAML		09 05 41.5	
	comp=Z,30nm,0.3s						
TCA	**Tanti**	**4.15**	**81**	eP	**Pn**	**09 04 56.3**	**0.0**
TCA				IAML		09 06 19.9	
	comp=Z,12nm,0.5s						

NIED **01** 09:03:00, 38°.20N×144°.00E, h5^{km}, Mw3.6 Best double couple: M$_0$3.08000×10^{14} NP1:φ$_s$47.00000°, δ44.00000°, λ-31.00000°. NP2:φ$_s$160.00000°, δ69.00000°, λ-129.00000°.

IDC **01** 09:03:51.0±1.0, 38°.05N×144°.10E, h0^{km}, mb3.6/7, mb1 3.8/10, mb1mx3.5/64, mbtmp3.7/10, ML3.6/3, MS3.0/2, Ms1 3.0/2, ms1mx2.2/63, Error ellipse: s-maj=26.7km s-min=18.8km az=107.0

ISCJB **01** 09:03:53.7±0.6, 38°.13N±0°.04×144°.01E±0°.05, h33^{km}, mb3.6/7, MS3.6/1, Error ellipse: s-maj=6.0km s-min=5.1km az=15.3

JMA **01** 09:03:54.4±0.2, 38°.17N×143°.95E, h39^{km}, M3.9

ISC 01 09:03:56.2±0.9**, 38°.17N**±0°.05×**143°.96E**±0°.08**, h35^{km}, n26, σ2^{s}.05**/38**, mb3.5**/7**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.01**	**298**	P	**Pn**	**09 04 27.0**	**-0.6**
OFUJ				S	**Sn**	**09 04 51.2**	**-0.3**
JIO	**Ouri**	**2.07**	**279**	P	**Pn**	**09 04 27.8**	**-0.6**
JIO				S	**Sn**	**09 04 52.4**	**-0.6**
MIYJ	**Miyakonagasawa**	**2.19**	**311**	P	**Pn**	**09 04 29.0**	**-1.0**
MIYJ				S	**Sn**	**09 04 54.8**	**-1.0**
JMK	**Ichinoseki**	**2.29**	**291**	P	**Pn**	**09 04 31.2**	**-0.1**
JOM	**Ohasama**	**2.46**	**303**	P	**Pn**	**09 04 33.8**	**+0.1**
JOM				S	**Sn**	**09 05 02.5**	**0.0**
JYK	**Kaneyama**	**2.92**	**286**	P	**Pn**	**09 04 40.7**	**+0.6**
JYK				eS	**Sn**	**09 05 15.2**	**+1.3**
JFT	**Otama**	**2.94**	**258**	P	**Pn**	**09 04 40.6**	**+0.2**
JFT				S	**Sn**	**09 05 14.6**	**+0.2**
JOT	**Ohata**	**3.92**	**326**	P	**Pn**	**09 04 54.6**	**+0.8**
JAG	**Ashikaga**	**3.99**	**246**	P	**Pn**	**09 04 54.2**	**-0.6**
BSO1	**Boso 1**	**4.25**	**215**	P	**Pn**	**09 04 55.7**	**-2.2**
BSO1				S	**Sn**	**09 05 44.1**	**-1.9**
JKB	**Kayabe**	**4.34**	**330**	P	**Pn**	**09 05 01.0**	**+1.4**
JKB				S	**Sn**	**09 05 47.6**	**-1.4**
JCH	**Churui**	**4.47**	**354**	P	**Pn**	**09 05 00.0**	**-1.3**
JCH				S	**Sn**	**09 05 48.9**	**-3.2**
JRY	**Ryogami san**	**4.58**	**244**	P	**Pn**	**09 05 02.5**	**-0.4**
JRY				eS	**Sn**	**09 05 51.8**	**-3.0**
MJAR	**Matsushiro Arr**	**4.86**	**252**	Pn	**Pn**	**09 05 07.6**	**+0.8**
	1.2nm,0.3s,baz=137,slow=9.1,SNR=13						
MJAR				Sn	**Sn**	**09 06 04.5**	**+2.7**
	0.7nm,0.3s,baz=96,slow=11,SNR=4.1						
NEM2	**Nemuro 2**	**5.37**	**14**	P	**Pn**	**09 05 10.3**	**-3.4**
NEM2				S	**Sn**	**09 06 08.5**	**-5.7**
ASAJ	**Asahikawa**	**6.03**	**351**	Pn	**Pn**	**09 05 22.9**	**+0.1**
	1.6nm,0.3s,baz=193,slow=11,SNR=16						
ASAJ				Sn	**Sn**	**09 06 31.4**	**+0.8**
	0.7nm,0.3s,baz=267,slow=33,SNR=2.7						
JHJ	**Hachijo jima 2**	**6.07**	**215**	Pn	**Pn**	**09 05 22.2**	**-1.2**
	3.7nm,0.3s,baz=321,slow=22,SNR=4.7						
JHJ				Sn	**Sn**	**09 06 24.8**	**-6.9**
	12nm,0.3s,baz=75,slow=23,SNR=4.1						
KSRS	**Korea Array**	**12.70**	**272**	LR	LR	09 11 44.0	
	comp=Z,21nm,18.9s,baz=80,slow=37						
MKAR	**Makanchi Array**	**45.24**	**302**	P	**P**	**09 12 11.3**	**+1.3**
	0.4nm,0.7s,baz=74,slow=11,SNR=3.8						
KURBB	**Kurchatov Arra**	**46.91**	**308**	P	**P**	**09 12 24.0**	**+1.1**
	0.4nm,0.5s,baz=80,slow=8.5,SNR=3.6						
ILAR	**Eielson Array**	**47.45**	**33**	P	**P**	**09 12 28.1**	**+1.0**
	0.4nm,0.9s,baz=279,slow=6.0,SNR=3.7						
WRA	**Warramunga Arr**	**58.50**	**191**	P	**P**	**09 13 47.7**	**-1.2**
	1.3nm,0.6s,baz=10,slow=7.3,SNR=14						
ASAR	**Alice Springs**	**62.23**	**190**	P	**P**	**09 14 14.2**	**-0.1**
	0.3nm,0.7s,baz=13,slow=9.5,SNR=3.9						
FINES	**FINESS Array B**	**68.74**	**333**	P	**P**	**09 14 56.5**	**+0.6**
	2.0nm,0.9s,baz=27,slow=16,SNR=3.8						
HFS	**Hagfors**	**73.87**	**337**	LR	LR	09 51 22.2	
	comp=Z,29nm,19.3s,baz=240,slow=38						
PDAR	**Pinedale Array**	**75.43**	**47**	P	**P**	**09 15 37.3**	**+0.6**
	0.2nm,0.5s,baz=313,slow=3.1,SNR=2.8						

IDC **01** 09:04:11.1±4.8, 48°.57N×152°.52E, h0^{km}, mb3.6/5, mb1 3.9/6, mb1mx3.4/64, mbtmp3.6/6, MS2.5/2, Ms1 2.5/2, ms1mx2.3/60, Error ellipse: s-maj=181.6km s-min=49.7km az=109.0

KRSC **01** 09:04:24.4±1.4, 48°.56N×156°.26E, h31^{km}±12^{km}, ML4.4

MOS **01** 09:04:25.4±1.0, 48°.50N×156°.36E, h22^{km}, mb4.3/2, Error ellipse: s-maj=36.1km s-min=4.4km az=79.0

ISC 01 09:04:27.3±1.6**, 48°.6N**±0°.1×**155°.8E**±0°.1**, h35^{km}, n66, σ1^{s}.11**/73**, mb3.6**/5**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**2.14**	**5**	eP	**Pn**	**09 04 58.8**	**-1.7**
SKR				eS	**Sn**	**09 05 23.8**	**-2.1**
SKR	**Severo-Kuril's**	**2.14**	**5**	ePN	**Pn**	**09 04 59.6**	**-0.9**
SKR				eS	**Sn**	**09 05 24.6**	**-1.3**
SKR				pmax	pmax		
	comp=Z,36nm,0.2s						
SKR				smax	smax		
	comp=N,141nm,0.3s						
SKR				smax	smax		
	comp=E,300nm,0.7s						
PAU	**Pauzhetka**	**2.99**	**12**	eP	**Pn**	**09 05 12.2**	**+0.1**
PAU				eS	**Sn**	**09 05 48.1**	**+1.4**
PAU	**Pauzhetka**	**2.99**	**12**	PN	**Pn**	**09 05 12.2**	**+0.1**
PAU				S	**Sn**	**09 05 48.1**	**+1.4**
KDTR	**Khodutka, Kamc**	**3.57**	**23**	eP	**Pn**	**09 05 20.3**	**+0.2**
KDTR				eS	**Sn**	**09 06 01.5**	**+0.5**
MIPR	**Malaya Ipel'ka**	**3.78**	**9**	eP	**Pn**	**09 05 22.3**	**-0.7**
MIPR	**Malaya Ipel'ka**	**3.78**	**9**	PN	**Pn**	**09 05 22.3**	**-0.7**
ASAK	**Asacha**	**4.06**	**18**	eP	**Pn**	**09 05 28.0**	**+1.1**
ASAK	**Asacha**	**4.06**	**18**	PN	**Pn**	**09 05 28.0**	**+1.1**
MTVR	**Mutnovka**	**4.21**	**20**	eP	**Pn**	**09 05 30.0**	**+0.9**
MTVR				eS	**Sn**	**09 06 17.9**	**+0.8**
MTVR	**Mutnovka**	**4.21**	**20**	PN	**Pn**	**09 05 30.0**	**+0.9**
MTVR				S	**Sn**	**09 06 17.9**	**+0.8**
RUS	**Russkaya**	**4.25**	**23**	eP	**Pn**	**09 05 29.3**	**-0.1**
RUS				eS	**Sn**	**09 06 16.7**	**-1.0**
RUS	**Russkaya**	**4.25**	**23**	PN	**Pn**	**09 05 29.3**	**-0.1**
APC	**Apacha**	**4.46**	**10**	eP	**Pn**	**09 05 34.0**	**+1.6**
APC	**Apacha**	**4.46**	**10**	PN	**Pn**	**09 05 34.0**	**+1.6**
KRMR	**Karymshinskiy**	**4.53**	**18**	eP	**Pn**	**09 05 34.5**	**+1.2**
KRMR				eS	**Sn**	**09 06 26.6**	**+2.0**
KRMR	**Karymshinskiy**	**4.53**	**18**	PN	**Pn**	**09 05 34.5**	**+1.2**
KRMR				S	**Sn**	**09 06 26.6**	**+2.0**
PETK	**Petropavlovsk-**	**4.71**	**14**	Pn	**Pn**	**09 05 37.2**	**+1.3**
	baz=186,slow=13						
PETK				Sn	Sn	09 06 41.8	+12
PETK				LR	LR	09 07 41.3	
	comp=E,54nm,21.0s,baz=170,slow=38						
PETK	**Petropavlovsk-**	**4.71**	**14**	PN	**Pn**	**09 05 37.2**	**+1.3**
PETK						09 06 41.8	
PETK				MLR	MLR		
	comp=Z,54nm,21.0s						
PET	**Petropavlovsk**	**4.82**	**21**	PN	**Pn**	**09 05 37.8**	**+0.5**
DALK	**Dalny**	**4.85**	**21**	eP	**Pn**	**09 05 38.4**	**+0.6**
DALK				eS	**Sn**	**09 06 32.6**	**-0.1**
DALK	**Dalny**	**4.85**	**21**	PN	**Pn**	**09 05 38.4**	**+0.6**
UGLR	**Uglovaya**	**5.04**	**21**	eP	**Pn**	**09 05 41.4**	**+1.0**
UGLR	**Uglovaya**	**5.04**	**21**	PN	**Pn**	**09 05 41.4**	**+1.0**
AVH	**Avacha**	**5.07**	**20**	eP	**Pn**	**09 05 42.5**	**+1.7**
AVH	**Avacha**	**5.07**	**20**	PN	**Pn**	**09 05 42.5**	**+1.7**
KOK	**Koryaka**	**5.07**	**19**	eP	**Pn**	**09 05 42.3**	**+1.5**
KOK	**Koryaka**	**5.07**	**19**	PN	**Pn**	**09 05 42.3**	**+1.5**
KRER	**Koryakskii**	**5.11**	**20**	eP	**Pn**	**09 05 42.8**	**+1.4**
KRER	**Koryakskii**	**5.11**	**20**	PN	**Pn**	**09 05 42.8**	**+1.4**
SDLR	**Sedlovina**	**5.11**	**21**	eP	**Pn**	**09 05 41.9**	**+0.5**
SDLR				eS	**Sn**	**09 06 38.5**	**-0.7**
SDLR	**Sedlovina**	**5.11**	**21**	PN	**Pn**	**09 05 41.9**	**+0.5**
KRX	**Arik**	**5.13**	**19**	eP	**Pn**	**09 05 42.9**	**+1.1**
KRX	**Arik**	**5.13**	**19**	PN	**Pn**	**09 05 42.9**	**+1.1**
NLC	**Nalytchevo**	**5.13**	**24**	eP	**Pn**	**09 05 42.0**	**+0.4**
NLC	**Nalytchevo**	**5.13**	**24**	PN	**Pn**	**09 05 42.0**	**+0.4**
SPN	**Mys Shipunski**	**5.27**	**29**	eP	**Pn**	**09 05 43.3**	**-0.2**
SPN				eS	**Sn**	**09 06 41.5**	**-1.4**
SPN	**Mys Shipunski**	**5.27**	**29**	PN	**Pn**	**09 05 43.3**	**-0.2**
GNL	**Ganaly**	**5.32**	**14**	eP	**Pn**	**09 05 45.6**	**+1.3**
GNL	**Ganaly**	**5.32**	**14**	PN	**Pn**	**09 05 45.6**	**+1.3**
KII	**Karymskiy**	**5.94**	**21**	eP	**Pn**	**09 05 53.5**	**+0.7**
KII	**Karymskiy**	**5.94**	**21**	PN	**Pn**	**09 05 53.5**	**+0.7**
MKZ	**Mys Kozlova**	**7.05**	**29**	eP	**Pn**	**09 06 07.0**	**-0.8**
MKZ				eS	**Sn**	**09 07 24.5**	**-2.1**
MKZ	**Mys Kozlova**	**7.05**	**29**	PN	**Pn**	**09 06 07.0**	**-0.8**
TUMR	**Tumrok**	**7.25**	**20**	eP	**Pn**	**09 06 11.8**	**+1.0**
TUMR	**Tumrok**	**7.25**	**20**	PN	**Pn**	**09 06 11.8**	**+1.0**
KBTR	**Krutoberegovo**	**8.78**	**26**	eP	**Pn**	**09 06 32.2**	**+0.7**
KBTR	**Krutoberegovo**	**8.78**	**26**	PN	**Pn**	**09 06 32.2**	**+0.7**
BKI	**Bering**	**9.14**	**39**	P	**Pn**	**09 06 37.3**	**+0.7**
BKI	**Bering**	**9.14**	**39**	PN	**Pn**	**09 06 37.3**	**+0.7**
MA2	**Magadan**	**11.44**	**347**	LR	LR	09 10 40.5	
	comp=Z,28nm,20.4s,baz=154,slow=35						
H11N2	**WAKE ISLAND Hy**	**30.11**	**159**	T	T	09 42 28.2	
	baz=347						
H11N1	**WAKE ISLAND Hy**	**30.12**	**159**	T	T	09 42 28.4	
	baz=347,slow=74,SNR=13						
H11N3	**WAKE ISLAND Hy**	**30.12**	**159**	T	T	09 42 29.3	
	baz=347,slow=74						
H11S1	**WAKE ISLAND Hy**	**31.24**	**160**	T	T	09 43 51.4	
	baz=346,slow=76,SNR=116						
H11S3	**WAKE ISLAND Hy**	**31.25**	**160**	T	T	09 43 51.4	
	baz=346,slow=76,SNR=118						
H11S2	**WAKE ISLAND Hy**	**31.26**	**160**	T	T	09 43 51.4	
	baz=346,slow=76,SNR=101						
ILAR	**Eielson Array**	**33.99**	**40**	P	**P**	**09 11 07.2**	**-0.1**
	comp=Z,0.2nm,0.6s,baz=252,slow=8.9,SNR=5.7						
ILAR	**Eielson Array**	**33.99**	**40**	eP	**P**	**09 11 07.1**	**-0.1**
INK	**Inuvik**	**39.14**	**34**	P	**P**	**09 11 49.9**	**-1.0**
	comp=Z,2.0nm,0.9s,baz=284,slow=7.6,SNR=3.2						
INK	**Inuvik**	**39.14**	**34**	P	**P**	**09 11 49.9**	**-1.0**
INK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
YKA	**Yellowknife Ar**	**48.38**	**38**	P	**P**	**09 13 04.1**	**-1.1**
	comp=Z,0.5nm,0.8s,baz=303,slow=8.0,SNR=4.0						
YKA	**Yellowknife Ar**	**48.38**	**38**	P	**P**	**09 13 04.1**	**-1.1**
PDAR	**Pinedale Array**	**62.21**	**56**	P	**P**	**09 14 45.9**	**+0.5**
	comp=Z,0.4nm,0.7s,baz=326,slow=2.1,SNR=6.0						
TXAR	**Lajitas Array**	**75.02**	**63**	P	**P**	**09 16 06.4**	**+1.0**
	comp=Z,0.4nm,0.6s,baz=295,slow=4.6,SNR=7.5						
TXAR	**Lajitas Array**	**75.02**	**63**	eP	**P**	**09 16 06.3**	**+1.0**

CSEM 01 09:16:08.0, 27°.65N×18°.13W, h22^{km}, ML3.5, Canary Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CORC	**Orchilla, El H**	**0.06**	**348**	P	Pb	09 16 11.8	-0.2
	SNR=18						
CORC				S	Sb	09 16 14.8	0.0
	SNR=7.9						
CJUL	**El Julon, El H**	**0.09**	**29**	P	Pb	09 16 12.1	-0.3
	SNR=18						
CJUL				S	Sb	09 16 15.2	-0.2
	SNR=7.9						
CTAD	**Las Tabladas,**	**0.11**	**22**	P	Pb	09 16 12.0	-0.4
	SNR=18						
CTAD				S	Sb	09 16 14.9	-0.5
	9μm,0.1s,SNR=7.9						
CMCL	**Mercadel, El H**	**0.12**	**57**	P	Pb	09 16 12.3	-0.3
	SNR=18						
CMCL				S	Sb	09 16 15.6	-0.1
	SNR=7.9						
CTAN	**El Hierro**	**0.12**	**33**	P	Pb	09 16 12.1	-0.5
	SNR=18						
CTAN				S	Sb	09 16 15.6	0.0
	SNR=7.9						
CCUM	**Cumbre, El Hie**	**0.13**	**43**	P	Pb	09 16 12.3	-0.4
	SNR=18						
CCUM				S	Sb	09 16 15.1	-0.7
	SNR=7.9						
CRST	**La Restinga, E**	**0.13**	**93**	P	Pb	09 16 12.1	-0.5
	SNR=18						
CRST				S	Sb	09 16 15.7	0.0
	SNR=7.9						
CHIE	**El Hierro**	**0.17**	**63**	P	Pb	09 16 12.7	-0.3
	SNR=18						
CTIG	**El Hierro**	**0.23**	**53**	P	Pb	09 16 13.4	-0.4
	SNR=18						
CTIG				S	Sb	09 16 17.5	-0.3
	1μm,0.1s,SNR=7.9						

ISCJB **01** 09:24:07.5±0.7, 9°.9N±0°.1×93°.6E±0°.1, h24^{km}, mb3.9/17, MS3.3/6, Error ellipse: s-maj=21.7km s-min=11.4km az=143.6

IDC **01** 09:24:18.0±5.3, 10°.17N×93°.74E, h94^{km}±47^{km}, mb3.6/17, mb1 3.7/18, mb1mx3.5/62, mbtmp4.0/18, MS3.2/8, Ms1 3.2/8, ms1mx2.9/60, Error ellipse: s-maj=34.8km s-min=15.1km az=46.0

ISC 01 09:24:09.8±1.1**, 10°.0N**±0°.2×**93°.7E**±0°.2**, h24^{km}, n31, σ0^{s}.94**/25**, mb4.0**/17**, MS3.3**/6**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**9.79**	**31**	P	Pn	09 26 35.2	+6.1
	0.9nm,0.3s,baz=224,slow=14,SNR=9.9						
BRDH	**Bariadhala**	**12.73**	**351**	LR	LR	09 33 16.0	
	comp=Z,90nm,19.3s,baz=178,slow=43						
PALK	**Pallekele**	**13.15**	**259**	LR	LR	09 31 46.9	
	comp=Z,98nm,21.5s,baz=117,slow=34						
ODAN	**Odare**	**17.77**	**341**	eP	**Pn**	**09 28 17.2**	**+1.3**
	7.8nm,0.4s						
RAMN	**Ramite**	**18.12**	**339**	eP	**P**	**09 28 22.0**	**+1.6**
	9.2nm,0.4s						
JIRN	**Jiri**	**18.91**	**339**	eP	**P**	**09 28 29.9**	**+0.7**
	8.4nm,0.3s						
GUN	**Gumba**	**19.25**	**339**	eP	**P**	**09 28 34.0**	**+1.1**
	19nm,0.4s						
GKN	**Gorkha**	**19.81**	**336**	eP	**P**	**09 28 39.6**	**+0.8**
	12nm,0.4s						
KOLN	**Koldanda**	**20.05**	**333**	eP	**P**	**09 28 43.3**	**+1.8**
	16nm,0.4s						
DANN	**Dangsing**	**20.48**	**334**	eP	**P**	**09 28 47.1**	**+0.8**
	17nm,0.4s						
PYUN	**Piuthan**	**20.61**	**332**	eP	**P**	**09 28 49.1**	**+1.5**
	19nm,0.3s						
WSAR	**Wadi Sarin**	**35.97**	**296**	LR	LR	09 46 54.5	
	comp=Z,43nm,18.4s,baz=188,slow=38						
MKAR	**Makanchi Array**	**37.90**	**347**	P	**P**	**09 31 24.2**	**-0.8**
	1.2nm,0.6s,baz=168,slow=8.3,SNR=11						
KSRS	**Korea Array**	**41.15**	**43**	P	**P**	**09 31 51.5**	**-0.7**
	0.4nm,0.4s,baz=237,slow=8.7,SNR=4.1						
GEYT	**Alibeck**	**42.33**	**317**	P	**P**	**09 32 02.4**	**+0.4**
	4.4nm,0.5s,baz=128,slow=9.6,SNR=12						
GEYT				LR	LR	09 50 31.5	
	comp=Z,41nm,21.2s,baz=240,slow=37						
KURBB	**Kurchatov Arra**	**42.36**	**346**	P	**P**	**09 32 01.5**	**-0.4**
	1.0nm,0.6s,baz=161,slow=8.0,SNR=9.3						
ZALV	**Zalesovo Beam**	**44.37**	**352**	P	**P**	**09 32 17.7**	**-0.4**
	4.5nm,0.3s,baz=183,slow=8.8,SNR=18						
BVAR	**Borovoye Array**	**46.82**	**341**	P	**P**	**09 32 37.2**	**-0.4**
	0.4nm,0.4s,baz=133,slow=8.2,SNR=3.7						
AKTO	**Aktyubinsk**	**49.86**	**331**	P	**P**	**09 33 00.3**	**-0.8**
	0.8nm,0.3s,baz=120,slow=8.1,SNR=4.4						
AKTO				LR	LR	09 56 00.8	
	comp=Z,27nm,18.9s,baz=141,slow=38						
WRA	**Warramunga Arr**	**49.87**	**127**	P	**P**	**09 33 02.6**	**+1.0**
	0.2nm,0.4s,baz=307,slow=8.3,SNR=11						
ASAR	**Alice Springs**	**51.63**	**131**	P	**P**	**09 33 15.5**	**+0.7**
	0.6nm,0.8s,baz=304,slow=6.2,SNR=5.2						
GNI	**Garni**	**52.65**	**313**	LR	LR	09 58 28.6	
	comp=Z,27nm,19.4s,baz=136,slow=39						
BRTR	**Keskin Array B**	**60.72**	**310**	P	**P**	**09 34 18.7**	**-1.0**
	1.0nm,0.4s,baz=34,slow=31,SNR=2.8						
BRTR				LR	LR	10 05 25.4	
	comp=Z,15nm,18.2s,baz=100,slow=41						
MLR	**Muntele Rosu**	**67.34**	**315**	P	**P**	**09 35 03.4**	**+0.3**
	0.4nm,0.6s,baz=98,slow=18,SNR=3.5						
FINES	**FINESS Array B**	**70.62**	**332**	P	**P**	**09 35 22.0**	**-0.9**
	0.4nm,0.4s,baz=78,slow=7.5,SNR=4.2						
ARCES	**ARCESS Array B**	**73.10**	**340**	P	**P**	**09 35 37.6**	**-0.2**
	0.7nm,0.3s,baz=99,slow=6.8,SNR=18						
GERES	**GERESS Array B**	**75.95**	**318**	P	**P**	**09 35 54.5**	**-0.3**
	0.4nm,0.5s,baz=91,slow=5.3,SNR=6.0						
HFS	**Hagfors**	**76.39**	**330**	P	**P**	**09 35 56.3**	**-0.7**
	1.4nm,0.9s,baz=100,slow=7.9,SNR=4.4						
SPITS	**Spitsbergen Ar**	**77.65**	**348**	P	**P**	**09 36 03.9**	**0.0**
	2.2nm,0.6s,baz=101,slow=3.7,SNR=3.9						
NOA	**NORSAR Array B**	**77.65**	**330**	LR	LR	10 12 14.6	
	comp=Z,14nm,20.7s,baz=190,slow=37						
DAVOX	**Davos/Dischmat**	**78.55**	**316**	P	**P**	**09 36 09.6**	**-0.1**
	1.0nm,0.4s,baz=199,slow=9.3,SNR=3.7						

ISCJB **01** 09:31:18.9±0.4, 20°.85S±0°.07×178°.59W±0°.08, h587^{km}, mb4.0/24, Error ellipse: s-maj=10.4km s-min=8.4km az=135.7

IDC **01** 09:31:18.9±1.2, 20°.74S×178°.53W, h573^{km}±13^{km}, mb3.6/24, mb1 3.7/27, mb1mx3.6/44, mbtmp4.5/27, Error ellipse: s-maj=12.0km s-min=9.2km az=151.0

ISC 01 09:31:19.4±0.4**, 20°.70S**±0°.09×**178°.47W**±0°.08**, h587^{km}, n91, σ1^{s}.28**/101**, mb4.0**/24**, 11C-12D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**9.30**	**44**	P	**P**	**09 33 29.0**	**-2.2**
	12nm,0.3s,baz=163,slow=1.0,SNR=13						
AFI				S	**S**	**09 35 12.7**	**-6.6**
	18nm,0.3s,baz=39,slow=22,SNR=12						
DZM	**Mont Dzumac**	**14.12**	**262**	P	**P**	**09 34 18.9**	**-0.9**
	1.5nm,0.3s,baz=86,slow=20,SNR=15						
URZ	**Urewera**	**17.91**	**191**	P	**P**	**09 34 53.1**	**-1.5**
	0.8nm,0.3s,baz=356,slow=14,SNR=3.5						
URZ				S	**S**	**09 37 44.8**	**-4.6**
	0.2nm,0.3s,baz=207,slow=22,SNR=3.2						
PPT	**Papeete**	**27.46**	**88**	P	**P**	**09 36 21.4**	**+1.3**
	44nm,0.7s,baz=24,slow=6.8,SNR=3.3						
CTA	**Charters Tower**	**33.03**	**265**	P	**P**	**09 37 07.9**	**+0.1**
	3.9nm,0.4s,baz=87,slow=11,SNR=19						
PMG	**Port Moresby**	**34.96**	**284**	P	**P**	**09 37 24.3**	**+0.4**
	26nm,0.8s,baz=101,slow=5.2,SNR=5.2						
STKA	**Stephens Creek**	**37.30**	**244**	P	**P**	**09 37 43.3**	**+0.3**
	2.0nm,0.5s,baz=84,slow=11,SNR=12						
ASAR	**Alice Springs**	**44.04**	**257**	P	**P**	**09 38 36.2**	**-0.3**
	13nm,0.7s,baz=94,slow=7.5,SNR=272						
ASAR				PcP	**PcP**	**09 40 08.6**	**-0.3**
	3.0nm,0.8s,baz=108,slow=4.0,SNR=9.2						
ASAR				ScP	**ScP**	**09 43 07.7**	**+2.3**
	0.2nm,0.7s,baz=89,slow=4.1,SNR=4.1						
ASAR				S	**S**	**09 44 25.1**	**-2.2**
	2.6nm,0.8s,baz=92,slow=15,SNR=17						
WRA	**Warramunga Arr**	**44.13**	**262**	P	**P**	**09 38 36.3**	**-1.0**
	5.8nm,0.4s,baz=98,slow=8.1,SNR=316						
WRA				PcP	**PcP**	**09 40 09.1**	**-0.1**
	2.6nm,0.9s,baz=92,slow=3.8,SNR=4.6						
WRA				ScP	**ScP**	**09 43 08.8**	**+3.0**
	0.7nm,1.0s,baz=103,slow=5.6,SNR=3.9						
WRA				S	**S**	**09 44 25.2**	**-3.5**
	1.8nm,0.9s,baz=98,slow=13,SNR=5.2						
FITZ	**Fitzroy Crossi**	**52.56**	**263**	P	**P**	**09 39 39.5**	**-0.2**
	3.9nm,0.6s,baz=78,slow=3.7,SNR=21						
VNDA	**Vanda**	**57.67**	**185**	P	**P**	**09 40 15.1**	**+0.9**
	0.6nm,0.6s,baz=26,slow=5.2,SNR=4.3						
VNDA				ScP	**ScP**	**09 44 04.6**	**+1.6**
	1.3nm,0.9s,baz=5.5,slow=3.7,SNR=4.6						
NWAO	**Narrogin (SRO)**	**57.88**	**243**	P	**P**	**09 40 16.2**	**-0.3**
	6.0nm,0.8s,baz=96,slow=2.8,SNR=4.1						
QSPA	**South Pole Qui**	**69.36**	**180**	P	**P**	**09 41 29.8**	**+0.8**
	2.3nm,0.8s						
MJAR	**Matsushiro Arr**	**70.11**	**324**	P	**P**	**09 41 33.5**	**-0.2**
	3.7nm,0.6s,baz=163,slow=6.3,SNR=13						
JNU	**Nakatsue**	**72.12**	**317**	P	**P**	**09 41 46.4**	**+0.8**
	17nm,0.9s,baz=126,slow=7.1,SNR=4.2						
ASAJ	**Asahikawa**	**73.69**	**332**	P	**P**	**09 41 56.2**	**+2.0**
	7.8nm,0.6s,baz=228,slow=6.2,SNR=12						
PETK	**Petropavlovsk-**	**76.36**	**345**	P	**P**	**09 42 09.5**	**+0.6**
	7.0nm,0.6s,baz=131,slow=5.7						
KSRS	**Korea Array**	**76.75**	**319**	P	**P**	**09 42 12.6**	**+1.3**
	2.8nm,0.7s,baz=136,slow=6.8,SNR=13						
USRK	**Ussuriysk Ar.**	**78.88**	**326**	P	**P**	**09 42 24.5**	**+1.8**
	7.4nm,0.7s,baz=123,slow=3.6						
YBH	**Yreka Blue Hor**	**80.73**	**39**	P	**P**	**09 42 34.5**	**+2.0**
	1.3nm,0.6s,baz=135,slow=3.8,SNR=13						
NVAR	**Mina Array Bea**	**81.48**	**44**	P	**P**	**09 42 38.2**	**+1.6**
	0.5nm,0.6s,baz=227,slow=8.4,SNR=5.0						
TXAR	**Lajitas Array**	**87.54**	**58**	P	**P**	**09 43 07.9**	**+1.7**
	1.1nm,0.8s,baz=216,slow=6.6,SNR=16						
ANMO	**Albuquerque**	**87.88**	**51**	P	**P**	**09 43 09.7**	**+1.9**
	0.2nm,0.3s,baz=214,slow=7.3,SNR=2.1						
ILAR	**Eielson Array**	**88.61**	**13**	P	**P**	**09 43 09.7**	**-0.6**
	1.8nm,0.5s,baz=229,slow=5.7,SNR=26						
PDAR	**Pinedale Array**	**89.41**	**43**	P	**P**	**09 43 15.8**	**+1.0**
	0.5nm,0.5s,baz=204,slow=3.4,SNR=6.8						
PLCA	**Paso Flores**	**89.45**	**134**	P	**P**	**09 43 16.0**	**+1.0**
	1.5nm,0.7s,baz=156,slow=1.0,SNR=3.0						
CMAR	**Chiang Mai Arr**	**89.76**	**290**	P	**P**	**09 43 18.2**	**+1.5**
	4.3nm,0.7s,baz=129,slow=3.3,SNR=14						
ZALV	**Zalesovo Beam**	**110.37**	**321**	PKiKP	**PKiKP**	**09 48 44.0**	**-1.3**
	0.5nm,0.4s,baz=138,slow=2.0,SNR=4.1						
MKAR	**Makanchi Array**	**111.01**	**313**	PKiKP	**PKiKP**	**09 48 45.5**	**-1.4**
	0.5nm,0.4s,baz=159,slow=0.5,SNR=6.9						
KURBB	**Kurchatov Arra**	**113.89**	**317**	PKiKP	**PKiKP**	**09 48 50.8**	**-1.4**
	1.2nm,0.7s,baz=100,slow=2.0,SNR=11						
BVAR	**Borovoye Array**	**118.95**	**320**	PKP	**PKPdf**	**09 49 01.2**	**-0.7**
	3.1nm,0.3s,baz=123,slow=1.6,SNR=24						
SPITS	**Spitsbergen Ar**	**122.04**	**356**	PKP	**PKPdf**	**09 49 06.9**	**-0.2**
	11nm,1.1s,baz=18,slow=5.2,SNR=5.3						
AKTO	**Aktyubinsk**	**126.92**	**318**	PKP	**PKPdf**	**09 49 17.5**	**+0.3**
	1.8nm,0.5s,baz=96,slow=3.6,SNR=9.6						
ARCES	**ARCESS Array B**	**129.04**	**349**	PKP	**PKPdf**	**09 49 20.3**	**-0.4**
	1.9nm,0.6s,baz=64,slow=0.1,SNR=14						
FINES	**FINESS Array B**	**135.84**	**343**	PKhKP	PKPpre	09 49 23.3	
	1.5nm,0.9s,baz=57,slow=5.1,SNR=3.8						
FINES				PKP	**PKiKP**	**09 49 35.2**	**-0.2**
	1.2nm,0.6s,baz=72,slow=4.5,SNR=4.0						
NB2	**NORSAR Subarra**	**139.13**	**353**	PKP	PKPpre	09 49 32.8	
	comp=Z,0.6nm,0.6s,baz=14,slow=3.1						
HFS	**Hagfors**	**139.67**	**351**	PKhKP	PKPpre	09 49 33.6	
	comp=Z,1.8nm,0.3s,baz=65,slow=3.5,SNR=22						
AKASG	**Malin Array Be**	**142.97**	**331**	PKhKP	PKPpre	09 49 43.9	
	comp=Z,9.4nm,0.4s,baz=43,slow=4.4,SNR=76						
AKASG				SKPbc	**SKPbc**	**09 52 30.8**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=36,slow=2.5,SNR=5.0						
SORM	**Soroca**	**145.14**	**328**	⇓iP	**PKPbc**	**09 49 51.6**	**-0.2**
ASF	**Jabal al Asfar**	**146.47**	**297**	PKPbc	**PKPbc**	**09 49 56.1**	**-0.1**
	comp=Z,4.2nm,0.8s,baz=56,slow=3.6,SNR=5.5						
BRTR	**Keskin Array B**	**146.65**	**312**	PKPbc	**PKPbc**	**09 49 56.0**	**-0.5**
	comp=Z,3.9nm,0.6s,baz=137,slow=4.6,SNR=19						
TLCR		**146.81**	**324**	⇓iP	**PKPbc**	**09 49 56.8**	**+0.3**
BURAR	**Bucovina Array**	**147.02**	**330**	⇑iP	**PKPbc**	**09 49 57.7**	**+0.5**
BIZ	**Bicaz**	**147.07**	**328**	⇑iP	**PKPbc**	**09 49 58.1**	**+0.9**
TESR	**Tescani**	**147.10**	**327**	⇓iP	**PKPbc**	**09 49 57.5**	**+0.2**
ANTO	**Ankara**	**147.17**	**313**	⇑iP	**PKPbc**	**09 49 58.1**	**+0.3**
CFR	**Carcaliu**	**147.19**	**324**	⇓iP	**PKPbc**	**09 49 57.3**	**-0.2**
TIRR	**Tirgusor**	**147.49**	**323**	⇓iP	**PKPbc**	**09 49 58.4**	**+0.1**
VRI	**Vrincioaia**	**147.49**	**326**	⇓iP	**PKPbc**	**09 49 58.4**	**+0.1**
MMAI	**Mount Meron Ar**	**147.53**	**299**	PKPbc	**PKPbc**	**09 49 59.3**	**+0.4**
	comp=Z,7.3nm,0.5s,baz=69,slow=4.8,SNR=9.6						
TLB	**Topalu**	**147.62**	**323**	⇑iP	**PKPbc**	**09 49 58.8**	**+0.2**
CRVS	**Cervenica-Dubn**	**147.65**	**335**	ePKP	**PKPbc**	**09 49 59.1**	**+0.5**
CRVS				e		09 50 03.7	
TRPA	**Tarpa**	**147.82**	**333**	⇑iP	**PKPbc**	**09 49 59.4**	**+0.4**
ISR	**Istrita**	**148.09**	**326**	⇓iP	**PKPbc**	**09 50 00.9**	**+1.0**
DOPR	**Dopca**	**148.10**	**328**	⇑iP	**PKPbc**	**09 50 01.7**	**+1.8**
MLR	**Muntele Rosu**	**148.15**	**327**	PKPbc	**PKPbc**	**09 50 00.0**	**-0.1**
	comp=Z,1.4nm,0.6s,baz=53,slow=3.4,SNR=10						
MLR	**Muntele Rosu**	**148.15**	**327**	⇓iP	**PKPbc**	**09 50 00.0**	**-0.2**
CLL	**Collm**	**148.16**	**346**	i PKPbc	**PKPbc**	**09 49 59.9**	**+0.1**
	comp=Z,15nm,0.8s						
CLL				i PKPab	**PKPab**	**09 50 05.0**	**0.0**
	comp=Z,11nm,0.8s						

DPC	Dobruska-Polom	148.18	342	ePKP	PKPbc	09 50 00.5	+0.5
DPC				ex	x	09 50 06.2	
LANS	Liptovska Anna	148.20	337	ePKP	PKPbc	09 50 01.3	+1.3
LANS				e		09 50 06.8	
BRG	Berggiesshubel	148.34	345	i PKP	PKPbc	09 50 00.3	0.0
	comp=Z,6.6nm,0.9s						
BRG				i		09 50 05.7	
	comp=Z,7.0nm,0.8s						
CJR	Cluj-Napoca	148.43	330	⇓iP	PKPbc	09 50 00.6	-0.1
PVCC	Panska Ves	148.50	344	ePKP	PKPbc	09 50 01.2	+0.5
PVCC				ex	x	09 50 07.4	
VOIR		148.65	327	⇓iP	PKPbc	09 50 01.3	0.0
DRGR		148.78	331	⇑iP	PKPbc	09 50 01.6	0.0
ARR	Arges	148.90	328	⇑iP	PKPbc	09 50 03.1	+1.2
VYHS	Vyhne	148.98	337	ePKP	PKPbc	09 50 02.3	+0.4
VYHS				e		09 50 09.3	
PRU	Pruhonice	149.00	344	ePKP	PKPbc	09 50 02.2	+0.3
PRU				ex	x	09 50 09.3	
GOPC	GO Pecny, Ondr	149.01	343	ePKP	PKPbc	09 50 02.2	+0.2
GOPC				ex	x	09 50 09.2	
VRAC	Vranov	149.03	341	ePKP	PKPbc	09 50 02.1	+0.1
VRAC				e		09 50 09.6	
JAVC	Velka Javorina	149.07	339	ePKP	PKPbc	09 50 03.4	+1.2
JAVC				e		09 50 10.6	
KRUC	Moravsky	149.31	341	ePKP	PKPbc	09 50 02.7	0.0
KRUC				e		09 50 10.4	
ISP	Isparta	149.66	311	⇓iP	PKPbc	09 50 02.9	-1.1
KHC	Kasperske Hory	150.04	344	ePKP	PKPbc	09 50 04.6	+0.1
KHC				ex	x	09 50 13.5	
BZS	Buzias	150.16	331	⇑iP	PKPbc	09 50 04.9	+0.1
GERES	GERESS Array B	150.27	344	PKPbc	PKPbc	09 50 04.9	-0.2
	comp=Z,3.0nm,0.6s,baz=38,slow=2.4,SNR=30						
GERES				PKPab	PKPab	09 50 14.3	+0.4
	comp=Z,1.3nm,0.8s,baz=29,slow=3.0,SNR=6.5						
HERR	Herculane	150.34	329	⇓iP	PKPbc	09 50 05.2	0.0
CONA	Conrad Observa	150.47	340	ePKPbc	PKPbc	09 50 05.6	0.0
	comp=Z,9.6nm,1.2s						
MDVR	Moldovita	150.75	330	⇑iP	PKPbc	09 50 06.1	-0.2
MOA	Molln	151.03	342	i PKPbc	PKPbc	09 50 06.4	-0.4
	comp=Z,1.7nm,0.5s						
ARSA	Arzberg	151.18	340	ePKPbc	PKPbc	09 50 06.4	-0.7
	comp=Z,2.3nm,1.1s						
VTS	Vitosha	151.57	325	⇑iP	PKPbc	09 50 08.3	0.0
SOKA	Soboth	151.84	340	ePKPbc	PKPbc	09 50 07.9	-0.8
	comp=Z,3.2nm,0.8s						
KBA	Koelnbreinsper	151.99	343	i PKPbc	PKPbc	09 50 08.5	-0.7
	comp=Z,2.3nm,0.6s						
WATA	Walderalm	152.21	345	ePKPbc	PKPbc	09 50 09.8	+0.2
	comp=Z,1.0nm,0.5s						
WTTA	Wattenberg	152.26	345	ePKPbc	PKPbc	09 50 08.9	-0.8
	comp=Z,2.9nm,0.5s						
MOTA	Moosalm	152.31	346	ePKPbc	PKPbc	09 50 10.1	+0.3
	comp=Z,3.3nm,0.8s						
ABTA	Abfaltersbach	152.52	344	ePKPbc	PKPbc	09 50 09.3	-0.9
	comp=Z,5.6nm,0.6s						
FETA	Feichten	152.70	346	i PKPbc	PKPbc	09 50 10.2	-0.5
	comp=Z,3.8nm,0.9s						
DAVOX	Davos/Dischmat	153.11	347	PKPbc	PKPbc	09 50 11.7	+0.1
	comp=Z,4.9nm,0.6s,baz=238,slow=2.2,SNR=9.9						
DAVOX				PKPab	PKPab	09 50 26.6	+0.5
	comp=Z,2.4nm,0.6s,baz=39,slow=6.5,SNR=4.3						
TORD	Torodi Ar. Bea	172.48	181	PKP	PKPdf	09 50 21.6	-1.0
	comp=Z,0.8nm,0.9s,baz=208,slow=2.8						

IDC 01 09:47:42.5±3.5**,15°.97S×176°.13W,h0^{km},mb4.1**/4**,mb1 4.3**/4**,mb1mx3.7**/43**,mbtmp4.1**/4**,Error ellipse: s-maj=149.7km s-min=73.9km az=157.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	41.47	240	P	P	09 55 31.4	0.0
	1.6nm,0.5s,baz=85,slow=11,SNR=4.3						
WRA	Warramunga Arr	47.15	257	P	P	09 56 16.8	-0.3
	0.6nm,0.4s,baz=92,slow=7.8,SNR=28						
WRA				PcP	PcP	09 57 48.8	-0.2
	0.4nm,0.8s,baz=88,slow=3.4,SNR=3.1						
ASAR	Alice Springs	47.43	252	P	P	09 56 18.8	-0.5
	5.9nm,0.6s,baz=88,slow=8.3,SNR=138						
ASAR				PcP	PcP	09 57 49.1	-0.8
	0.2nm,0.4s,baz=102,slow=4.2,SNR=4.8						
FITZ	Fitzroy Crossi	55.52	259	P	P	09 57 20.5	+0.6
	1.9nm,1.1s,baz=101,slow=5.2,SNR=3.4						

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*ISCJB **01** 09:53:43.8±0.8,29°.81N±0°.05×102°.67E±0°.07,h10^{km},mb3.4/4,Error ellipse: s-maj=9.2km s-min=7.0km az=159.3*

*IDC **01** 09:53:44.6±1.3,29°.80N×102°.56E,h0^{km},mb3.5/4,mb1 3.6/5,mb1mx3.3/65,mbtmp3.5/5,ML3.6/1,Error ellipse: s-maj=83.2km s-min=22.9km az=60.0*

*BJI **01** 09:53:46.4,30°.03N×102°.45E,h10^{km},ML3.6/13*

ISC 01 09:53:46.9±1.0**,29°.98N**±0°.06×**102°.54E**±0°.09**,h10^{km},n9,σ2^{s}69**/14**,mb3.5**/4**,1C,Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CD2	Chengdu	1.40	48	⇑iPg	Pn	09 54 12.5	0.0
CD2				Sg	Sg	09 54 32.0	0.0
CD2				smax	smax		
	comp=N,7μm,0.6s						
CD2				smax	smax		
	comp=E,4μm,0.5s						
GYA	Guiyang	5.06	133	Pg	Pn	09 55 06.2	+3.3
GYA				Sn	Sn	09 56 04.1	+2.6
GYA				Sg	Sg	09 56 25.3	-4.0
GYA				smax	smax		
	comp=N,80nm,0.7s						
GYA				smax	smax		
	comp=E,50nm,0.8s						
GYA	Guiyang	5.06	133	Pn	Pn	09 55 06.2	+3.3
GYA				Sn	Sn	09 56 04.1	+2.6
GYA				Sg	Sg	09 56 25.3	-4.0
GYA				smax	smax		
	comp=E,80nm,0.7s						
GYA				smax	smax		
	comp=E,50nm,0.8s						
SONM	Songino Array	18.07	8	P	P	09 57 59.4	+0.8
	comp=E,0.2nm,0.3s,baz=195,slow=10,SNR=3.2						
WMQ	Urumqi	18.17	324	eP	Pn	09 57 57.6	-1.7
MKAR	Makanchi Array	22.99	323	P	P	09 58 52.4	+0.7
	comp=E,0.2nm,0.4s,baz=125,slow=13,SNR=1.9						
KURBB	Kurchatov Arra	27.36	326	P	P	09 59 32.8	+0.8
	comp=E,0.7nm,0.2s,baz=130,slow=11,SNR=1.7						
WRA	Warramunga Arr	58.33	144	P	P	10 03 40.3	-1.9
	comp=E,0.3nm,0.7s,baz=334,slow=7.6,SNR=5.2						
ASAR	Alice Springs	61.26	147	P	P	10 04 00.7	-1.7
	comp=E,0.4nm,1.0s,baz=353,slow=6.5,SNR=2.0						

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*ISCJB **01** 10:05:52.7±0.3,39°.81N±0°.02×123°.35W±0°.04,h4^{km}±4^{km},Error ellipse: s-maj=4.9km s-min=2.7km az=165.2*

*NEIC **01** 10:05:53.0±0.0,39°.78N×123°.35W,h11^{km},MW3.6(BRK),After NCEDC.*

NEIC Felt at Arcata, Laytonville and Magalia.

ISC 01 10:05:53.2±0.9**,39°.79N**±0°.02×**123°.33W**±0°.03**,h9^{km}**±8^{km}**,n92,σ1^{s}31**/97**,Near coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KIPM	Iron Peak	0.12	279	ePg	Pg	10 05 55.8	-0.3
KBNM	Bluenose Ridge	0.14	45	ePg	Pg	10 05 57.0	+0.5
KFPM	Farley Peak	0.17	207	ePg	Pg	10 05 56.3	-0.5
KCPM	Cahto Peak	0.22	242	ePg	Pg	10 05 57.8	0.0
KCPM				eSg	Sg	10 06 02.2	+1.3
KRKM	Rackout Spring	0.25	154	ePg	Pg	10 05 58.5	+0.1
KKPM	Kettenpom Peak	0.35	359	ePg	Pb	10 06 01.1	-0.7
GHMM	Hull Mountain	0.42	134	ePg	Pg	10 06 01.9	+0.4
GTC	Three Chop Rid	0.43	205	ePg	Pg	10 06 01.5	-0.1
GASB	Alder Springs	0.49	106	ePg	Pg	10 06 03.0	+0.2
KMRM	Mail Ridge	0.52	326	ePg	Pg	10 06 03.2	-0.1
GNAM	Navarro Ridge	0.64	202	ePg	Pg	10 06 05.4	-0.1
KCRM	Chalk Rock	0.74	329	ePg	Pb	10 06 07.9	-0.4
KCSM	Cold Springs	0.76	349	ePg	Pb	10 06 08.7	0.0
GHOM	Hamilton Openi	0.76	193	ePg	Pg	10 06 07.1	-0.8
KSMM	Slide Mountain	0.76	301	ePg	Pg	10 06 07.5	-0.4
GHLM	Highland Sprin	0.79	162	ePg	Pg	10 06 08.1	-0.3
HOPS	Hopland Field	0.82	166	ePg	Pg	10 06 08.6	-0.4
GSNM	Snow Mountain	0.85	173	ePg	Pb	10 06 09.8	-0.5
GMKM	Mount Konoctai	0.92	153	ePg	Pb	10 06 11.1	-0.3
GACM	Adobe Creek	0.98	158	ePg	Pb	10 06 12.0	-0.5
GPMM	Pine Mountain	0.99	163	ePg	Pb	10 06 12.3	-0.2
WDC	Whiskeytown Da	0.99	37	ePg	Pg	10 06 12.0	-0.3
WDC				eSn	Sb	10 06 26.6	+0.9
KCTM	Capetown	1.03	312	ePg	Pg	10 06 12.2	-0.9
GSGM	Seigler Mounta	1.04	152	ePg	Pn	10 06 13.2	-0.7
GDXM	Geysers	1.06	157	ePg	Pg	10 06 13.3	-0.4
GBGM	Boggs Mountain	1.10	153	ePn	Pn	10 06 15.9	+1.1
SKG	Skaggs Springs	1.11	167	ePn	Pn	10 06 15.1	+0.1
KHMM	Horse Mountain	1.13	344	ePg	Pb	10 06 14.0	-0.9
JCC	Jacoby Creek,	1.16	333	ePg	Pb	10 06 13.9	-1.5
GARM	Arbuckle	1.18	135	ePn	Pg	10 06 16.4	+0.6
GHCM	House Creek	1.19	175	ePn	Pg	10 06 16.1	+0.1
NMCNC	Mill Creek, So	1.24	165	ePn	Pg	10 06 17.1	+0.1
OSUM	Sutter Buttes	1.25	114	ePn	Pn	10 06 15.4	-1.4
NHSM	Mount Saint He	1.26	154	ePn	Pg	10 06 18.2	+0.8
FTR	Fort Ross	1.27	174	ePn	Pg	10 06 18.4	+0.8
O03D	Paynes Creek	1.27	66	P	Pn	10 06 16.0	-1.2
	baz=247,SNR=852						
O03D				S	Sb	10 06 33.9	0.0
	baz=247						
O03D	Paynes Creek	1.27	66	ePn	Pn	10 06 16.1	-1.2
N02D	Trinity Center	1.27	22	P	Pn	10 06 16.5	-0.7
	baz=202,SNR=442						
N02D				S	Sg	10 06 35.2	+1.0
	baz=202						
OSTM	Stimpson Lane	1.40	107	ePn	Pn	10 06 17.7	-1.1
NBPM	Berryessa Peak	1.43	142	ePn	Pg	10 06 21.6	+1.1
ORV	Oroville	1.43	99	ePn	Pn	10 06 17.7	-1.6
LRDM	Redding Peak	1.58	64	ePn	Pn	10 06 21.4	0.0
M02C	Callahan	1.64	12	P	Pn	10 06 21.6	-0.7
	baz=193,SNR=114						
M02C				S	Sg	10 06 45.5	-0.4
	baz=193						
MCCM	Marconi Confer	1.68	168	ePn	Pg	10 06 25.6	+0.2
LGBM	Gray Butte	1.78	29	ePn	Pn	10 06 24.2	-0.1
LBCM	Butte Creek Ri	1.84	55	ePn	Pn	10 06 25.1	0.0
LBFM	Black Fox Moun	1.90	35	ePn	Pn	10 06 26.3	+0.3
LMPM	Military Pass	1.91	27	ePn	Pb	10 06 27.3	-1.1
LTIM	Timbered Crate	1.97	45	ePn	Pn	10 06 27.3	+0.5
YBH	Yreka Blue Hor	2.00	13	ePn	Pn	10 06 26.9	-0.3
AFDM	Forest Hills D	2.01	114	ePn	Pn	10 06 26.5	-0.8
KTRM	Thompson Ridge	2.12	359	ePn	Pn	10 06 28.4	-0.5
LGMM	Garner Mountai	2.13	32	ePn	Pn	10 06 29.6	+0.5
B040	Montague	2.15	18	ePn	Pn	10 06 29.6	+0.3
BEKR	Beckworth	2.29	87	ePn	Pn	10 06 32.2	+1.0
M04C	Macdoel	2.29	29	P	Pn	10 06 31.2	0.0
	baz=210,SNR=45						
L02D	Cave Junction,	2.37	355	P	Pn	10 06 31.6	-0.7
	baz=175,SNR=13						
KBO	Bosley Butte	2.51	345	ePn	Pn	10 06 33.4	-0.9
VPK	Verdi Peak	2.56	96	ePn	Pb	10 06 37.2	-2.2
RUBR	Rubicon Trail	2.56	106	ePn	Pn	10 06 36.6	+1.5
HUMO	Hull Mountain	2.83	6	ePn	Pn	10 06 38.8	+0.2
VCNR	Virginia City	2.88	99	ePn	Pb	10 06 42.3	-2.6
CMB	Columbia Colle	2.89	126	ePn	Pn	10 06 39.0	-0.4
PNTR	Pine Nut	2.97	102	ePn	Pn	10 06 42.9	+2.2
PAHR	Pah Rah Range	3.04	90	ePn	Pn	10 06 43.1	+1.5
K04D	Chiloquin, OR	3.07	22	P	Pn	10 06 42.6	+0.6
	baz=203						
MOD	Modoc Plateau	3.12	46	ePn	Pn	10 06 44.9	+2.3
KEBM	Edson Butte	3.17	346	ePn	Pn	10 06 42.7	-0.6
YERR	Yerington	3.27	103	ePn	Pn	10 06 46.6	+1.8
WAKR	Walker	3.28	112	ePn	Pb	10 06 48.5	-3.2
SAO	San Andreas Ge	3.36	153	ePn	Pn	10 06 49.0	+3.1
K05A	Summer Lake	3.46	31	ePn	Pn	10 06 48.1	+0.7
J04D	Umpqua Nationa	3.57	14	P	Pn	10 06 50.2	+1.3
	baz=195,SNR=7.9						
J05D	Fort Rock, OR	3.83	24	P	Pn	10 06 53.8	+1.4
	baz=205,SNR=7.7						
I03D	Drain, OR	3.90	360	P	Pn	10 06 54.0	+0.7
	baz=180,SNR=28						
RYN	Ryan	3.91	106	ePn	Pn	10 06 55.7	+2.2
MDPB	Devils Postpil	3.96	122	ePn	Pn	10 06 57.8	+3.5
OMMB	Old Mammoth Mi	4.02	121	ePn	Pb	10 06 59.7	-4.7
I04A	Tendick Farm,	4.06	9	P	Pn	10 06 56.2	+0.8
	baz=190						
KVN	Kaiserville	4.11	99	ePn	Pn	10 06 58.0	+1.6
NV01	Mina Array Sit	4.14	108	ePn	Pn	10 06 58.4	+1.7
NV11	Mina Array Sit	4.24	107	ePn	Pn	10 07 00.1	+2.0
PINE	Pine Mountain	4.38	23	ePn	Pn	10 07 01.4	+1.4
WVOR	Wild Horse Val	4.42	52	ePn	Pn	10 07 03.7	+3.2
H04A	Detroit Lake	4.96	9	ePn	Pn	10 07 09.5	+1.6
E03A	Lebam	6.75	359	ePn	Pn	10 07 33.7	+1.3
NLWA	Neilton Lookou	7.61	357	ePn	Pn	10 07 45.1	+0.9
NLU	North Lily Min	8.65	85	ePn	Pn	10 08 00.4	+1.6
MSU	Marysvale	8.76	95	ePn	Pn	10 07 59.8	-0.4
PGC	Sidney	8.86	359	ePn	Pn	10 08 02.2	+1.0
MTPU	Mount Pierson	8.86	98	ePn	Pn	10 08 04.1	+2.4
GDL2	Guadalupe Moun	17.09	110	ePn	P	10 09 53.9	-0.3

CSEM 01 10:11:41.0,27°.66N×18°.13W,h22^{km},ML4.0,Canary Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CORC	Orchilla, El H	0.05	339	P	Pb	10 11 44.7	-0.1
	SNR=18						
CORC				S	Sb	10 11 47.4	0.0
	27μm,0.2s,SNR=7.9						
CTAD	Las Tabladas,	0.10	21	P	Pb	10 11 44.9	-0.3
	SNR=18						
CTAD				S	Sb	10 11 47.7	-0.3
	7μm,0.1s,SNR=7.9						
CMCL	Mercadel, El H	0.11	60	P	Pb	10 11 45.2	-2.2
	SNR=18						
CMCL				S	Sb	10 11 48.4	-3.5
	16μm,0.1s,SNR=7.9						
CCUM	Cumbre, El Hie	0.12	44	P	Pb	10 11 45.1	-2.0
	SNR=18						
CCUM				S	Sb	10 11 48.1	-3.4
	12μm,0.2s,SNR=7.9						
CRST	La Restinga, E	0.13	97	P	Pb	10 11 45.1	-1.9
	SNR=18						
CRST				S	Sb	10 11 48.5	-2.7
	28μm,0.2s,SNR=7.9						
CHIE	El Hierro	0.16	65	P	Pb	10 11 45.6	-1.2
	SNR=18						
CTIG	El Hierro	0.22	54	P	Pb	10 11 46.3	-0.6
	SNR=18						
CTIG				S	Sb	10 11 50.1	-0.9
	3μm,0.2s,SNR=7.9						
EHIG	Higuera	0.94	17	S	Sb	10 12 09.1	-1.6
	1μm,0.1s,SNR=7.9						
EGOM	La Gomera	0.95	58	S	Sb	10 12 08.1	-2.8
	598nm,0.1s,SNR=7.9						
CRAJ	Montana Rajada	1.48	66	S	Sn	10 12 22.1	-3.4
	488nm,0.2s,SNR=7.9						

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*ISCJB **01** 10:19:57.7±0.9,3°.5S±0°.2×89°.3E±0°.2,h10^{km},mb3.7/7,MS2.8/2,Error ellipse: s-maj=31.5km s-min=14.1km az=142.3*

*IDC **01** 10:19:58.3±1.0,3°.49S×89°.46E,h0^{km},mb3.6/7,mb1 3.8/8,mb1mx3.5/62,mbtmp3.7/8,ML4.1/1,MS2.9/3,Ms1 2.9/3,ms1mx2.5/60,Error ellipse: s-maj=41.5km s-min=18.9km az=56.0*

ISC 01 10:19:59.6±1.0**,3°.5S**±0°.2×**89°.4E**±0°.2**,h10^{km},n16,σ0^{s}72**/10**,mb3.7**/7**,South Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALK	Pallekele	13.76	321	Pn	Pn	10 23 14.0	-1.0
	0.8nm,0.3s,baz=118,slow=9.0,SNR=6.8						
PALK				Sn	Sn	10 25 32.2	-16
	0.8nm,0.3s,baz=115,slow=6.8,SNR=3.3						
PALK				LR	LR	10 28 01.3	
	comp=Z,50nm,20.9s,baz=115,slow=35						
H08S2	Diego Garcia H	17.32	255	T	T	10 41 39.7	
	baz=76,slow=73,SNR=93						
H08S3	Diego Garcia H	17.33	256	T	T	10 41 41.6	
	baz=76,slow=73,SNR=992						
H08S1	Diego Carcia H	17.34	255	T	T	10 41 42.1	
	baz=76,slow=73,SNR=23						
CMAR	Chiang Mai Arr	23.74	23	P	P	10 25 12.6	+0.3
	0.5nm,0.3s,baz=195,slow=10,SNR=3.8						
CMAR				LR	LR	10 32 36.1	
	comp=Z,21nm,21.5s,baz=194,slow=32						
H01W3	Cape Leeuwin H	38.77	147	T	T	11 08 20.1	
	baz=319,slow=76,SNR=18						
H01W2	Cape Leeuwin H	38.78	147	T	T	11 08 23.5	
	baz=319,slow=76,SNR=20						
H01W1	Cape Leeuwin H	38.79	147	T	T	11 08 30.0	
	baz=319,slow=76,SNR=13						
WRA	Warramunga Arr	46.76	114	P	P	10 28 29.3	-0.3
	0.5nm,1.0s,baz=289,slow=8.8,SNR=3.2						
ASAR	Alice Springs	47.41	119	P	P	10 28 34.6	-0.1
	0.3nm,0.4s,baz=291,slow=7.7,SNR=11						
ASAR				PcP	PcP	10 30 04.9	-0.4
	0.1nm,0.5s,baz=294,slow=3.7,SNR=2.6						
MKAR	Makanchi Array	50.45	354	P	P	10 28 57.6	0.0
	0.2nm,0.4s,baz=184,slow=8.7,SNR=3.9						
KSRS	Korea Array	54.20	38	LR	LR	10 53 18.9	
	comp=Z,13nm,18.2s,baz=85,slow=37						
KURBB	Kurchatov Arra	54.70	352	P	P	10 29 28.9	0.0
	0.5nm,0.2s,baz=179,slow=8.1,SNR=2.7						
BRTR	Keskin Array B	66.75	316	P	P	10 30 53.0	+1.5
	0.6nm,0.6s,baz=102,slow=5.0,SNR=2.6						
VNDA	Vanda	82.86	168	P	P	10 32 23.8	-0.1
	0.8nm,0.6s,baz=292,slow=6.8,SNR=3.7						
TXAR	Lajitas Array	151.45	24	PKPbc	PKPbc	10 39 54.8	0.0
	0.2nm,0.7s,baz=298,slow=1.9,SNR=3.5						

MAN 01 10:31:19.2,13°.54N×123°.35E,h16^{km},mb3.8,ML2.5,MS2.1,Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AUQP	San Andres	0.69	252	eP	Pg	10 31 32.0	-0.7
PVCP	Virac	0.79	86	eP	Pg	10 31 34.6	+0.1
PVCP				eS	Sn	10 31 47.2	+0.1
BOAC	Boac	1.46	267	eP	Pn	10 31 44.1	-0.8
BOAC				eS	Sb	10 32 04.3	-0.1
SJMP	San Jose	2.42	244	eP	Pn	10 31 59.1	+0.9

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*ISCJB **01** 10:49:55.0±0.7,32°.22N±0°.04×115°.26W±0°.06,h11^{km}±8^{km},Error ellipse: s-maj=9.1km s-min=5.6km az=140.9*

*ECX **01** 10:49:56.0±0.5,32°.19N×115°.29W,h6^{km},MD2.1,ML2.3*

*MEX **01** 10:49:57.3±0.4,32°.36N×115°.12W,h20^{km}±4^{km},MD3.7*

ISC 01 10:49:54.9±1.0**,32°.20N**±0°.04×**115°.29W**±0°.05**,h11^{km}**±12^{km}**,n15,σ0^{s}69**/22**,California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPBX	Cerro Prieto	0.22	357	eP	Pg	10 49 59.0	-0.5
CPBX				eS	Sg	10 50 02.5	-0.1
CPBX				IAML		10 50 04.5	
	comp=E,2μm,0.2s						
CPBX				e		10 50 04.5	
MBIG	Mexicali	0.22	21	eP	Pg	10 50 00.3	+0.7
MBIG	Mexicali	0.22	21	i P	Pg	10 50 00.1	+0.5
MBIG				i S	Sg	10 50 02.3	-0.4
WESC	Westside Schoo	0.67	326	eP	Pg	10 50 08.3	+0.4
COA	Coachella	0.68	12	eP	Pg	10 50 08.5	+0.4
YUH	Yuha Desert	0.70	310	eP	Pg	10 50 08.4	0.0
YMD	Yuma Desert	0.72	60	eP	Pg	10 50 08.5	-0.4
ECBX	El Chinero	0.75	164	eP	Pg	10 50 09.0	-0.4
ECBX				eS	Sg	10 50 19.5	+0.2
SPIG	San Pedro Mart	1.16	187	eP	Pn	10 50 16.5	-0.9
SPIG	San Pedro Mart	1.16	187	eP	Pn	10 50 17.6	+0.3
SPIG				eS	Sb	10 50 34.4	+2.0
SPX	San Pedro Mart	1.16	187	eP	Pn	10 50 16.6	-0.8
CBX	Cerro Bola	1.17	276	eP	Pn	10 50 16.9	-0.5
CBX				eS	Sb	10 50 32.4	0.0
CBX				IAML		10 50 34.0	
	comp=E,76nm,0.4s						
CBX	Cerro Bola	1.17	276	eP	Pn	10 50 17.3	0.0
CBX				eS	Sb	10 50 33.0	+0.6
TJIG	Tijuana	1.20	282	eP	Pn	10 50 17.1	-0.5
TJIG				eS	Sb	10 50 32.9	-0.1
BAR	Barrett	1.26	293	eP	Pn	10 50 18.1	-0.5

RSNC 01 10:50:41.4±0.8**,6°.56N×73°.54W,h113^{km}**±4^{km}**,ML2.3,Mw3.5,2C-2D,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	Barichara	0.36	85	⇑iP	Pn	10 50 57.9	-0.1
BARC				eS	Sn	10 51 10.1	-0.4
BRRC	Barranca, Sant	0.57	343	⇓iP	Pn	10 50 58.8	-0.3
BRRC				eS	Sn	10 51 12.7	+0.4
BRRC				i		10 51 18.5	
	comp=Z,72nm,0.1s						
RUSC	La Rusia	0.80	145	⇓iP	Pn	10 51 01.0	-0.5
RUSC				i		10 51 02.2	
	comp=Z,22nm,0.1s						
RUSC				eS	Sn	10 51 16.7	+0.2
PTBC	PUERTO BERRIO,	0.91	269	⇑iP	Pn	10 51 00.8	-1.1
PTBC				i		10 51 16.9	
	comp=Z,43nm,0.2s						
PAMC	Pamplona, Colo	1.14	47	eP	Pn	10 51 05.0	+0.2
PAMC				eS	Sn	10 51 22.5	+0.1
ZARC	Zaragoza, Cauc	1.60	305	eP	Pn	10 51 09.5	-0.1
ZARC				eS	Sn	10 51 31.2	+0.1
ZARC				i		10 51 36.1	
	comp=Z,44nm,0.3s						
YOPC	Yopal, Colombi	1.64	137	eP	Pn	10 51 10.1	-0.1
YOPC				i		10 51 10.4	
	comp=Z,34nm,0.4s						
YOPC				eS	Sn	10 51 31.8	-0.1
NORC	Norcasia	1.65	233	eP	Pn	10 51 09.7	-0.6
NORC				eS	Sn	10 51 31.3	-0.9
OCAC	Ocana	1.68	7	eP	Pn	10 51 10.1	-0.7
OCAC				eS	Sn	10 51 32.1	-1.0
TAMC	Tame, Arauca	1.74	94	eP	Pn	10 51 10.7	-0.6
TAMC				eS	Sn	10 51 33.4	-0.8
ROSC	El Rosal	1.88	204	eP	Pn	10 51 12.6	-0.8
ROSC				eS	Sn	10 51 37.9	+0.2
ROSC				i		10 51 44.8	
	comp=Z,27nm,0.6s						
CHIC	Chingaza	1.93	186	eP	Pn	10 51 13.9	-0.1
CHIC				i		10 51 44.4	
	comp=Z,12nm,0.4s						
HELC	Santa Helena	2.01	260	eP	Pn	10 51 15.1	+0.1
HELC				eS	Sn	10 51 40.6	0.0
HELC				i		10 51 46.5	
	comp=Z,17nm,0.2s						
UREC	San Jos˜' de U	2.30	301	eS	Sn	10 51 45.9	-0.9
TOLC	Tolima	2.64	222	eP	Pn	10 51 22.9	-0.3
DBBC	Dabeiba	2.69	280	eP	Pn	10 51 23.9	+0.4
PRAC	Prado	3.13	205	eP	Pn	10 51 28.9	-0.3
PRAC				eS	Sn	10 52 05.0	-1.2
CODC	Agust˜›n Codaz	3.36	2	eP	Pn	10 51 31.9	-0.3
CODC				eS	Sn	10 52 11.2	-0.3
CODC				i		10 52 23.7	
	comp=Z,8.2nm,0.2s						

IDC 01 11:00:06.5±5.4**,5°.76S×151°.49E,h73^{km}**±44^{km}**,mb3.6**/4**,mb1 3.9**/5**,mb1mx3.4**/43**,mbtmp4.0**/5**,ML2.1**/1**,Error ellipse: s-maj=95.0km s-min=29.6km az=131.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	5.61	230	P	Pn	11 01 27.2	-0.3
	3.5nm,0.3s,baz=47,slow=8.4,SNR=9.2						
PMG				S	Sn	11 02 32.4	+1.7
	3.1nm,0.3s,baz=271,slow=22,SNR=6.6						
WRA	Warramunga Arr	21.83	228	P	P	11 04 51.9	-1.2
	1.5nm,0.6s,baz=54,slow=10,SNR=12						
ASAR	Alice Springs	24.57	222	P	P	11 05 19.5	-0.2
	1.8nm,0.7s,baz=54,slow=9.0,SNR=28						
FITZ	Fitzroy Crossi	28.05	242	P	P	11 05 51.4	+0.2
	2.2nm,0.6s,baz=88,slow=9.0,SNR=7.3						
ILAR	Eielson Array	83.54	22	P	P	11 12 25.9	-0.3
	0.9nm,0.7s,baz=250,slow=5.3,SNR=14						
TORD	Torodi Ar. Bea	149.34	286	PKPbc	PKPbc	11 19 48.6	+0.5
	baz=88,slow=3.4						

IDC 01 11:18:14.9±2.5**,25°.99S×132°.17E,h0^{km},mb1 3.8**/4**,mb1mx3.5**/41**,mbtmp3.7**/4**,ML2.9**/4**,Error ellipse: s-maj=24.4km s-min=19.9km az=122.0,Northern Territory**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	2.80	35	Pn	Pn	11 19 02.8	+1.7
	0.6nm,0.3s,baz=216,slow=12,SNR=57						
ASAR				Sn	Sn	11 19 37.3	+1.8
	0.6nm,0.3s,baz=212,slow=23,SNR=6.4						
ASAR				Lg	Lg	11 19 44.0	
	1.5nm,0.3s,baz=216,slow=26,SNR=14						
WRA	Warramunga Arr	6.34	19	Pn	Pn	11 19 49.9	+0.2

	0.3nm,0.3s,baz=200,slow=14,SNR=20						
WRA				Sn	Sn	11 21 00.8	-2.0
	0.3nm,0.3s,baz=201,slow=24,SNR=6.0						
WRA				Lg	Lg	11 21 32.8	
	0.3nm,0.3s,baz=192,slow=28,SNR=3.5						
FITZ	**Fitzroy Crossi**	**9.91**	**321**	Pn	Pn	11 20 37.6	-1.1
	0.1nm,0.3s,baz=144,slow=10,SNR=6.3						
FITZ				Sn	Sn	11 22 24.3	-6.4
	0.1nm,0.3s,baz=54,slow=17,SNR=2.9						
STKA	**Stephens Creek**	**10.13**	**128**	Pn	Pn	11 20 42.1	+0.4
	0.1nm,0.3s,baz=345,slow=16,SNR=2.8						
STKA				Sn	Sn	11 22 32.6	-3.4
	0.4nm,0.3s,baz=73,slow=7.6,SNR=6.6						
NWAO	**Narrogin (SRO)**	**14.72**	**239**	Pn	Pn	11 21 42.7	-1.8
	0.2nm,0.3s,baz=328,slow=6.8,SNR=2.5						

*IDC **01** 11:19:34.8±1.4,0°.56N×92°.03E,h0^{km},mb3.4/5,mb1 3.8/7, mb1mx3.5/62,mbtmp3.6/7,ML4.3/2,MS3.2/6,Ms1 3.2/6, ms1mx2.8/43,Error ellipse: s-maj=48.7km s-min=23.9km az=49.0*

*ISCJB **01** 11:19:37.4±1.1,0°.7N±0°.1×92°.10E±0°.08,h33^{km},mb3.5/5, MS3.3/4,Error ellipse: s-maj=16.1km s-min=11.3km az=23.0*

*DJA **01** 11:19:37.9±4.0,1°N±16°×9°2E±3°1,h10^{km},M4.5/7, mB5.0/1,mb4.6/7,MLv4.5/6,Mw(mB)4.4/1*

ISC 01 11:19:39.4±1.0,**0°.6N**±0°.1×**92°.0E**±0°.1,**h35^{km},n19, σ1^{s}.32**/16,**mb3.6**/5,**MS3.3**/4,**Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNSI	**Sinabang, Aceh**	**4.64**	**68**	P	**Pn**	**11 20 45.9**	**-1.2**
GSI	**Gunungsitoli**	**5.58**	**83**	P	**Pn**	**11 20 58.0**	**-2.0**
MLSI	**Meulaboh, Aceh**	**5.66**	**50**	P	**Pn**	**11 21 01.0**	**-0.2**
TPTI		**5.77**	**63**	P	**Pn**	**11 21 01.0**	**-1.6**
BSI	**Banda Aceh**	**5.83**	**34**	P	**Pn**	**11 21 02.8**	**-0.6**
PBSI	**Pulau Batu**	**6.28**	**96**	P	**Pn**	**11 21 09.3**	**-0.3**
KCSI	**Kotacane, Aceh**	**6.41**	**63**	P	**Pn**	**11 21 10.7**	**-0.7**
MNSI	**Mandailing Nat**	**7.55**	**89**	P	**Pn**	**11 21 26.5**	**-0.5**
PALK	**Pallekele**	**13.09**	**301**	Pn	**Pn**	**11 22 40.6**	**-2.4**
	1.9nm,0.3s,baz=116,slow=12,SNR=8.8						
PALK				Sn	Sn	11 24 54.6	-13
	1.0nm,0.3s,baz=291,slow=4.1,SNR=3.6						
PALK				LR	LR	11 27 09.8	
	comp=Z,77nm,18.3s,baz=116,slow=35						
CMAR	**Chiang Mai Arr**	**18.97**	**21**	P	**Pn**	**11 23 58.8**	**0.0**
	0.3nm,0.3s,baz=210,slow=12,SNR=4.8						
CMAR				LR	LR	11 31 18.0	
	comp=Z,27nm,18.6s,baz=185,slow=37						
WSAR	**Wadi Sarin**	**39.45**	**307**	LR	LR	11 41 36.7	
	comp=Z,78nm,18.5s,baz=286,slow=34						
WRA	**Warramunga Arr**	**46.21**	**119**	P	**P**	**11 28 01.2**	**-0.3**
	0.7nm,1.0s,baz=295,slow=8.4,SNR=3.9						
ASAR	**Alice Springs**	**47.28**	**124**	P	**P**	**11 28 10.4**	**+0.6**
	0.5nm,1.1s,baz=306,slow=8.1,SNR=2.7						
SONM	**Songino Array**	**48.64**	**13**	P	**P**	**11 28 21.5**	**+1.4**
	0.6nm,0.7s,baz=193,slow=5.9,SNR=3.2						
SONM				LR	LR	11 51 10.1	
	comp=Z,42nm,18.1s,baz=1.5,slow=39						
KURBB	**Kurchatov Arra**	**51.11**	**349**	P	**P**	**11 28 39.0**	**+0.4**
	0.2nm,0.3s,baz=179,slow=7.4,SNR=3.1						
MJAR	**Matsushiro Arr**	**55.66**	**45**	LR	LR	11 57 06.4	
	comp=Z,15nm,18.1s,baz=250,slow=40						
GERES	**GERESS Array B**	**81.85**	**319**	P	**P**	**11 31 57.5**	**+2.2**
	0.2nm,0.5s,baz=79,slow=5.2,SNR=2.8						
NOA	**NORSAR Array B**	**85.00**	**331**	LR	LR	12 13 57.2	
	comp=Z,9.6nm,18.4s,baz=320,slow=38						
TXAR	**Lajitas Array**	**146.64**	**25**	PKPbc	**PKPbc**	**11 39 17.8**	**-0.5**
	0.3nm,0.9s,baz=0.0,slow=3.6,SNR=3.2						

*NEIC **01** 11:24:30.1±0.0,32°.22N×115°.29W,h8^{km},ML2.9(ECX), ML2.9(PAS),After ECX.*

ECX 01 11:24:30.1±0.6,**32°.22N×115°.30W,h8^{km},MD2.9,ML3.1, 5C-2D,California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPBX	**Cerro Prieto**	**0.20**	**358**	*e*P	Pg	11 24 32.5	-1.6
CPBX				*e*S	Sg	11 24 35.8	-1.0
CPBX				⇑*e*		11 24 37.0	
CPBX				IAML		11 24 37.0	
	comp=N,13μm,0.1s						
MBIG	**Mexicali**	**0.20**	**24**	*e*P	Pg	11 24 33.9	-0.3
WESC	**Westside Schoo**	**0.65**	**326**	*e*P	Pg	11 24 41.9	-0.8
COA	**Coachella**	**0.66**	**13**	⇓*i*P	Pg	11 24 41.8	-1.0
YUH	**Yuha Desert**	**0.68**	**309**	⇑*i*P	Pg	11 24 41.9	-1.3
YMD	**Yuma Desert**	**0.72**	**62**	⇑*i*P	Pg	11 24 42.7	-1.2
RMX	**La Rumorosa**	**0.76**	**300**	*e*P	Pg	11 24 42.5	-2.3
RMX				*e*S	Sg	11 24 52.0	-2.9
RMX				IAML		11 24 54.1	
	comp=E,486nm,0.1s						
RMX				⇓*e*		11 24 54.2	
ECBX	**El Chinero**	**0.78**	**164**	*e*P	Pg	11 24 43.7	-1.4
ECBX				*e*S	Sg	11 24 54.2	-0.9
ECBX				⇑*e*		11 24 55.5	
ECBX				IAML		11 24 55.5	
	comp=N,593nm,0.3s						
IKP	**In-Ko-Pah, Jac**	**0.81**	**302**	P	Pg	11 24 44.4	-1.4
	baz=122,SNR=37						
IKP				S	Sg	11 24 54.1	-2.2
	baz=122						
IKP	**In-Ko-Pah, Jac**	**0.81**	**302**	⇑*i*P	Pg	11 24 44.4	-1.3
SWSC	**Sam W. Stewart**	**0.84**	**330**	P	Pg	11 24 44.2	-2.0
	baz=149,SNR=21						
SWSC				S	Sg	11 24 54.8	-2.4
	baz=149						
GLA	**Glamis**	**0.92**	**25**	P	Pg	11 24 46.2	-1.6
	baz=205,SNR=42						
GLA				S	Sg	11 24 57.9	-1.7
	baz=205						
GLA	**Glamis**	**0.92**	**25**	*e*Pg	Pg	11 24 45.4	-2.4
GLA				*e*Sg	Sg	11 24 58.9	-0.8
ZAX	**El Zacaton**	**1.09**	**230**	*e*P	Pg	11 24 49.1	-1.9
ZAX				*e*S	Sg	11 25 03.9	-1.3
ZAX				IAML		11 25 05.0	
	comp=N,673nm,0.6s						
ZAX				*e*		11 25 05.0	
CBX	**Cerro Bola**	**1.16**	**275**	*e*P	Pg	11 24 50.6	-1.9
CBX				*e*S	Sg	11 25 06.0	-1.5
MONP2	**Monument Peak**	**1.16**	**305**	P	Pg	11 24 50.6	-1.8
	baz=125,SNR=49						
MONP2				S	Sg	11 25 05.7	-1.9
	baz=125						
SPIG	**San Pedro Mart**	**1.18**	**187**	*e*P	Pg	11 24 50.9	-1.9
SPX	**San Pedro Mart**	**1.18**	**187**	*e*P	Pg	11 24 51.1	-1.8
ECNX	**Esteban Cantu**	**1.24**	**243**	*e*P	Pn	11 24 52.0	-1.9
BAR	**Barrett**	**1.25**	**292**	*e*P	Pn	11 24 51.7	-2.2
BAR	**Barrett**	**1.25**	**292**	*e*Pn	Pn	11 24 51.5	-2.5
BAR				*e*Sg	Sb	11 25 08.1	-2.1
PBX	**Punta Banda**	**1.31**	**249**	*e*P	Pn	11 24 52.6	-2.1
113A	**Mohawk Valley,**	**1.40**	**67**	*e*Pn	Pn	11 24 53.2	-2.8
113A				*e*Sn	Sb	11 25 10.4	-4.2
BC3	**Big Chuckawall**	**1.44**	**355**	P	Pn	11 24 53.1	-3.4
	baz=175,SNR=25						
SDRC	**San Diego Road**	**1.48**	**291**	*e*P	Pn	11 24 55.2	-1.9
Y12C	**Blythe**	**1.66**	**23**	Pb	Pn	11 24 58.9	-0.6
	baz=203,SNR=18						
Y12C				Sb	Sn	11 25 21.0	+0.1
	baz=203						
Y12C	**Blythe**	**1.66**	**23**	*e*Pn	Pn	11 24 59.5	+0.1
109C	**Camp Elliot, M**	**1.67**	**294**	P	Pn	11 24 57.6	-2.0
	baz=113,SNR=20						
109C				Sb	Sn	11 25 20.7	-0.5
	baz=113						
CPE	**Camp Elliot**	**1.67**	**294**	*e*Pn	Pn	11 24 57.3	-2.3
CPE				*e*Sn	Sn	11 25 20.4	-0.8
XPFO	**Piæon Flat**	**1.69**	**325**	*e*Pn	Pn	11 24 56.8	-3.3
XPFO				*e*Pg	Pb	11 24 56.9	-4.7
XPFO				*e*Sn	Sn	11 25 21.7	-0.4
XPFO				*e*Sg	Sb	11 25 22.1	-1.0
XPFO	**Piæon Flat**	**1.69**	**325**	*e*Pn	Sn	11 25 21.8	-0.3
PFO	**Pinyon Flats O**	**1.70**	**325**	P	Pn	11 24 56.9	-3.3
	baz=144						
PFO				Sb	Sn	11 25 21.8	-0.4
	baz=144						
PFO	**Pinyon Flats O**	**1.70**	**325**	*e*Pn	Pn	11 24 56.7	-3.5
PFO	**Pinyon Flats O**	**1.70**	**325**	*e*Pn	Sn	11 25 21.7	-0.4
BELC	**Belle Mtn. Jos**	**1.87**	**342**	Pb	Pn	11 25 02.4	-0.1
	baz=161						
IRM	**Iron Mountain**	**1.93**	**4**	Pb	Pn	11 25 03.7	+0.3
	baz=184,SNR=9.0						
MURC	**Murrieta**	**2.11**	**311**	P	Pn	11 25 03.6	-2.2
	baz=130,SNR=16						
MURC				S	Sn	11 25 29.5	-2.7
	baz=130						
Y14A	**Wickenburg**	**2.57**	**48**	*e*Pn	Pn	11 25 10.4	-1.8
Y14A				*e*Pg	Pb	11 25 15.7	-0.8
W13A	**Hualapai Mount**	**3.10**	**22**	*e*Pn	Pn	11 25 17.1	-2.5
SNCC	**San Nicolas Is**	**3.71**	**287**	*e*Pg	Pb	11 25 33.9	-1.9
X16A	**Lo Mia Camp, P**	**3.90**	**55**	*e*Pn	Pn	11 25 29.5	-1.0
SHPR	**Sheep Range**	**4.27**	**1**	*e*Pn	Pg	11 25 53.1	+1.1
U15A	**North Rim**	**4.88**	**30**	*e*Pn	Pn	11 25 43.6	-0.4
KNB	**Kanab**	**5.20**	**22**	*e*Pn	Pn	11 25 48.1	-0.2
SZCU	**Shurtz Canyon**	**5.66**	**18**	*e*Pn	Pn	11 25 55.5	+0.8

NEIC 01 11:24:56.9±0.0,**33°.80N×118°.35W,h10^{km},ML2.0**(PAS), **After PAS.,Southern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PASC	**Pasadena Art C**	**0.39**	**20**	*e*Pg	Pg	11 25 03.9	-0.9
MWC	**Mount Wilson**	**0.48**	**30**	*e*Pg	Pg	11 25 05.7	-0.7
MWC				*e*Sg	Sb	11 25 18.1	+3.1

*ISCJB **01** 11:49:16.2±0.7,32°.22N±0°.04×115°.27W±0°.05,h11^{km}±7^{km}, Error ellipse: s-maj=7.9km s-min=5.0km az=145.9*

*ECX **01** 11:49:17.5±0.5,32°.19N×115°.28W,h8^{km},MD2.6,ML2.8*

*MEX **01** 11:49:17.4±0.3,32°.35N×115°.06W,h24^{km}±5^{km},MD3.9*

ISC 01 11:49:16.0±1.1,**32°.23N**±0°.03×**115°.24W**±0°.04,**h19^{km}**±2^{km}, **n18,σ0^{s}.43**/27,**2C-3D,California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MBIG	**Mexicali**	**0.18**	**11**	*e*P	**Pg**	**11 49 21.2**	**+0.5**
MBIG				*i* S	**Sg**	**11 49 23.6**	**-0.3**
CPBX	**Cerro Prieto**	**0.19**	**343**	*e*P	**Pb**	**11 49 20.3**	**+0.1**
CPBX				*e*S	**Sg**	**11 49 23.8**	**-0.6**
CPBX				⇓*e*		11 49 24.7	
CPBX				IAML		11 49 24.7	
	comp=N,4μm,0.2s						
ERPC	**Ernies Place**	**0.62**	**325**	*e*P	**Pg**	**11 49 28.6**	**+0.2**
COA	**Coachella**	**0.64**	**9**	*e*P	**Pn**	**11 49 29.4**	**-0.6**
YMD	**Yuma Desert**	**0.67**	**61**	⇑*i*P	**Pg**	**11 49 29.9**	**+0.6**
WESC	**Westside Schoo**	**0.67**	**322**	*e*P	**Pg**	**11 49 29.9**	**+0.6**
YUH	**Yuha Desert**	**0.71**	**306**	⇓*i*P	**Pb**	**11 49 29.8**	**0.0**
ECBX	**El Chinero**	**0.77**	**168**	*e*P	**Pb**	**11 49 30.6**	**-0.3**
ECBX				*e*S	**Sb**	**11 49 40.9**	**-0.1**
ECBX				IAML		11 49 42.3	
	comp=E,344nm,0.2s						
ECBX				⇑*e*		11 49 42.3	
RMX	**La Rumorosa**	**0.80**	**298**	*e*P	**Pb**	**11 49 31.0**	**-0.5**
RMX				*e*S	**Sb**	**11 49 41.1**	**-0.8**
IKP	**In-Ko-Pah, Jac**	**0.85**	**300**	*e*P	**Pb**	**11 49 32.3**	**+0.1**
ZAX	**El Zacaton**	**1.14**	**231**	*e*P	**Pn**	**11 49 36.4**	**-0.6**
ZAX				*e*S	**Sb**	**11 49 51.1**	**-0.4**
ZAX				⇓*e*		11 49 52.1	
ZAX				IAML		11 49 52.1	
	comp=N,290nm,0.5s						
SPIG	**San Pedro Mart**	**1.20**	**189**	*e*P	**Pn**	**11 49 38.1**	**0.0**
SPIG	**San Pedro Mart**	**1.20**	**189**	*e*P	**Pn**	**11 49 38.1**	**0.0**
SPIG				*i* S	**Sn**	**11 49 54.6**	**+0.6**
CBX	**Cerro Bola**	**1.21**	**274**	*e*P	**Pn**	**11 49 38.1**	**+0.1**
CBX				*e*S	**Sb**	**11 49 53.8**	**+0.1**
CBX				*e*		11 49 55.6	
CBX				IAML		11 49 55.6	
	comp=N,310nm,0.5s						
CBX	**Cerro Bola**	**1.21**	**274**	*e*P	**Pn**	**11 49 38.2**	**+0.1**
CBX				*e*S	**Sn**	**11 49 54.4**	**+0.4**
TJIG	**Tijuana**	**1.23**	**280**	*e*P	**Pn**	**11 49 38.0**	**-0.3**
TJIG				*e*S	**Sb**	**11 49 54.3**	**0.0**
BAR	**Barrett**	**1.29**	**291**	*e*P	**Pn**	**11 49 39.6**	**+0.5**
SDRC	**San Diego Road**	**1.52**	**290**	*e*P	**Pb**	**11 49 43.5**	**-0.2**

IDC 01 12:01:10.6±3.3,**33°.50S×178°.37W,h0^{km},mb3.6**/2, **mb1 3.9**/3,**mb1mx3.6**/39,**mbtmp3.7**/3,**ML3.7**/1,**MS3.1**/1, **Ms1 3.1**/1,**ms1mx2.5**/32,**Error ellipse: s-maj=76.4km s-min=46.7km az=122.0,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**6.00**	**216**	Pn	Pn	12 02 40.1	-0.5
	1.9nm,0.3s,baz=265,slow=3.1,SNR=28						
URZ				Sn	Sn	12 03 45.0	-5.0
	1.5nm,0.3s,baz=182,slow=23,SNR=6.0						
RPZ	**Rata Peaks**	**13.12**	**216**	LR	LR	12 10 07.4	
	comp=Z,76nm,18.1s,baz=214,slow=41						
ASAR	**Alice Springs**	**42.72**	**270**	P	P	12 09 09.6	-0.1
	0.5nm,0.7s,baz=116,slow=6.9,SNR=7.7						
WRA	**Warramunga Arr**	**43.99**	**276**	P	P	12 09 19.8	-0.1
	0.4nm,0.3s,baz=116,slow=8.1,SNR=12						
FINES	**FINESS Array B**	**147.92**	**338**	PKPbc	PKPbc	12 20 56.4	-0.6
	0.6nm,0.6s,baz=61,slow=3.5,SNR=3.7						

*ISCJB **01** 12:09:00.6±0.5,6°.84N±0°.03×73°.14W±0°.03,h156^{km}±4^{km}, mb3.2/3,Error ellipse: s-maj=5.7km s-min=4.6km az=19.6*

*IDC **01** 12:09:00.4±2.1,6°.66N×72°.82W,h175^{km}±28^{km},mb2.9/3, mb1 3.4/5,mb1mx3.0/41,mbtmp3.5/5,Error ellipse: s-maj=92.9km s-min=8.2km az=134.0*

*RSNC **01** 12:09:02.4±0.9,6°.81N×73°.15W,h148^{km}±4^{km},ML3.4, Mw3.8*

ISC 01 12:09:00.8±0.9,**6°.84N**±0°.03×**73°.13W**±0°.04,**h157^{km}**±6^{km}, **n30,σ0^{s}.87**/47,**mb3.2**/3,**3C,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.25**	**192**	*i* P	**Pn**	**12 09 22.5**	**+0.1**
BARC				*e*S	**Sn**	**12 09 37.5**	**-1.4**
BARC				*i*		12 09 38.8	
	comp=Z,378nm,0.7s						
BRRC	**Barranca, Sant**	**0.64**	**295**	⇑*i*P	**Pn**	**12 09 24.4**	**+0.7**
BRRC				*e*S	**Sn**	**12 09 41.3**	**+0.1**
BRRC				*i*		12 09 44.3	
	comp=Z,384nm,0.2s						
PAMC	**Pamplona, Colo**	**0.65**	**41**	*i* P	**Pn**	**12 09 25.4**	**+1.0**
PAMC				*e*S	**Sn**	**12 09 42.1**	**-0.3**
PAMC				*i*		12 09 44.7	
	comp=Z,349nm,0.6s						
RUSC	**La Rusia**	**0.94**	**177**	⇑*i*P	**Pn**	**12 09 26.4**	**0.0**
RUSC				*e*S	**Sn**	**12 09 45.4**	**-0.6**
RUSC				*i*		12 09 47.7	
	comp=Z,316nm,0.5s						
PTBC	**PUERTO BERRIO,**	**1.35**	**257**	*e*P	**Pn**	**12 09 29.0**	**-0.4**
PTBC				*e*S	**Sn**	**12 09 50.1**	**-1.3**
PTBC				*i*		12 09 57.9	
	comp=Z,248nm,0.4s						
TAMC	**Tame, Arauca**	**1.39**	**107**	⇑*i*P	**Pn**	**12 09 30.7**	**+0.8**
TAMC				*e*S	**Sn**	**12 09 51.8**	**-0.3**
OCAC	**Ocana**	**1.40**	**352**	*e*P	**Pn**	**12 09 30.6**	**+0.4**
OCAC				*e*S	**Sn**	**12 09 52.1**	**-0.5**
OCAC				*i*		12 09 58.2	
	comp=Z,613nm,0.3s						
YOPC	**Yopal, Colombi**	**1.64**	**154**	*i* P	**Pn**	**12 09 33.0**	**+0.5**
YOPC				*e*S	**Sn**	**12 09 56.4**	**-0.4**
YOPC				*i*		12 10 00.1	
	comp=Z,141nm,0.3s						
ZARC	**Zaragoza, Cauc**	**1.83**	**291**	*e*P	**Pn**	**12 09 35.0**	**+0.5**
ZARC				*e*S	**Sn**	**12 10 00.7**	**+0.2**
ZARC				*i*		12 10 06.8	
	comp=Z,243nm,0.5s						
NORC	**Norcasia**	**2.15**	**234**	*e*P	**Pn**	**12 09 38.5**	**+0.4**
NORC				*e*S	**Sn**	**12 10 06.0**	**-0.9**
CHIC	**Chingaza**	**2.28**	**195**	*e*P	**Pn**	**12 09 40.4**	**+0.3**
CHIC				*e*S	**Sn**	**12 10 09.8**	**-0.5**
CHIC				*i*		12 10 18.4	
	comp=Z,125nm,0.6s						
ROSC	**El Rosal**	**2.31**	**211**	P	**Pn**	**12 09 42.3**	**+1.8**
	comp=Z,35nm,0.3s,baz=26,slow=8.0,SNR=39						
ROSC				S	**Sn**	**12 10 13.5**	**+2.5**
	comp=Z,54nm,0.3s,baz=194,slow=22,SNR=24						
ROSC	**El Rosal**	**2.31**	**211**	*e*S	**Sn**	**12 10 10.7**	**-0.4**
ROSC				*i*		12 10 17.1	
	comp=Z,211nm,0.4s						
HELC	**Santa Helena**	**2.47**	**255**	*e*P	**Pn**	**12 09 42.9**	**+0.6**
HELC				*e*S	**Sn**	**12 10 13.4**	**-0.9**
HELC				*i*		12 10 20.7	
	comp=Z,140nm,0.3s						
UREC	**San Josˆ' de U**	**2.55**	**291**	*e*P	**Pn**	**12 09 42.9**	**-0.1**
UREC				*i*		12 10 25.1	
	comp=Z,186nm,0.3s						
VILC	**Villavicencio,**	**2.77**	**192**	*e*P	**Pn**	**12 09 45.3**	**-0.5**
VILC				*e*S	**Sn**	**12 10 19.2**	**-1.3**
VILC				*i*		12 10 25.7	
	comp=Z,82nm,0.5s						
DBBC	**Dabeiba**	**3.06**	**273**	*e*P	**Pn**	**12 09 50.4**	**+1.1**
CODC	**Agustˆ›n Codaz**	**3.09**	**354**	*e*P	**Pn**	**12 09 50.0**	**+0.4**
CODC				*i*		12 10 35.3	
	comp=Z,78nm,0.3s						
TOLC	**Tolima**	**3.13**	**224**	*e*P	**Pn**	**12 09 51.5**	**+1.0**
MOTC	**Monteria, Cord**	**3.17**	**308**	*e*S	**Sn**	**12 10 28.9**	**-0.3**
SDV	**Santo Domingo**	**3.20**	**50**	P	**Pn**	**12 09 51.7**	**+0.5**
	comp=Z,7.3nm,0.3s,baz=243,slow=4.5,SNR=27						
SDV				S	**Sn**	**12 10 28.9**	**-1.3**
	comp=Z,24nm,0.3s,baz=264,slow=19,SNR=22						
SDV	**Santo Domingo**	**3.20**	**50**	*e*P	**Pn**	**12 09 51.8**	**+0.6**
ANIL	**Santa Ana**	**3.25**	**224**	*e*P	**Pn**	**12 09 51.4**	**-0.6**
ANIL				*e*S	**Sn**	**12 10 31.4**	**-0.2**
PRAC	**Prado**	**3.56**	**209**	*e*P	**Pn**	**12 09 55.9**	**+0.1**
PRAC				*e*S	**Sn**	**12 10 38.1**	**-0.3**
SJAC	**San Juan de Ar**	**3.64**	**193**	*e*P	**Pn**	**12 09 58.1**	**+1.3**
SJCC	**San Jacinto, C**	**3.65**	**326**	*e*P	**Pn**	**12 09 56.7**	**-0.1**
SJCC				*i*		12 10 42.1	
	comp=Z,54nm,0.5s						
FLOC	**Florencia**	**5.80**	**206**	*e*P	**Pn**	**12 10 24.2**	**-0.8**
FLOC				*i*		12 10 26.9	
	comp=Z,14nm,0.3s						
TXAR	**Lajitas Array**	**36.44**	**312**	P	**P**	**12 15 51.8**	**+0.9**
	comp=Z,0.3nm,0.5s,baz=122,slow=9.9,SNR=6.4						
PDAR	**Pinedale Array**	**48.06**	**324**	P	**P**	**12 17 25.4**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=112,slow=9.8,SNR=2.6						
YKA	**Yellowknife Ar**	**63.24**	**340**	P	**P**	**12 19 10.9**	**-1.4**
	comp=Z,0.4nm,0.5s,baz=157,slow=11,SNR=4.2						

KRSC 01 12:27:28.2±1.4,**56°.33N×162°.93E,h32^{km}**±9^{km},**ML3.9, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**0.13**	**208**	*i* P	Pn	12 27 35.8	+1.8
KBTR				*i* S	Sb	12 27 39.7	+1.7
KBG	**Krutoberegovo**	**0.14**	**241**	*e*P	Pn	12 27 34.7	+0.5
KBG				*i* S	Sb	12 27 38.3	+0.2
SMKR	**Semkarok**	**0.85**	**288**	*i* P	Pn	12 27 43.4	-0.6
SMKR				*e*S	Sn	12 27 53.9	-1.5
BDR	**Baidarnaya**	**0.99**	**285**	*i* P	Pn	12 27 46.1	+0.2
BDR				*e*S	Sn	12 27 58.3	-0.5
SRKR	**Sorokina**	**1.03**	**289**	*i* P	Pn	12 27 46.8	+0.3
SRKR				*e*S	Sn	12 27 59.4	-0.5
ZLN	**Zelenaya**	**1.23**	**256**	*e*P	Pb	12 27 50.8	-0.1
ZLN				*e*S	Sb	12 28 06.3	-0.1
CIRR	**Tsirk**	**1.24**	**261**	*e*P	Pb	12 27 50.7	-0.4
CIRR				*e*S	Sb	12 28 06.0	-0.7
KLY	**Klyuchi**	**1.27**	**270**	*e*P	Pn	12 27 48.5	-1.2
KLY				*e*S	Sn	12 28 02.8	-2.8
LGNR	**Loginova**	**1.28**	**260**	*e*P	Pb	12 27 51.4	-0.4
LGNR				*e*S	Sb	12 28 07.2	-0.8
KRSR	**Krestovskiy**	**1.32**	**266**	*e*P	Pn	12 27 51.3	+0.8
KRSR				*e*S	Sn	12 28 07.6	+0.5
BZWR	**Bezymyannyi-We**	**1.41**	**256**	*e*P	Pb	12 27 53.5	-0.5
BZMR	**Bezymyannaya**	**1.42**	**255**	*e*P	Pb	12 27 53.4	-0.8
KIRR	**Kirishev**	**1.50**	**257**	*e*P	Pb	12 27 54.7	-0.7
KPT	**Kopyto**	**1.56**	**258**	*e*P	Pb	12 27 55.7	-0.7
KMNR	**Kamenistaya**	**1.62**	**250**	*i* P	Pb	12 27 57.3	-0.1
KMNR				*e*S	Sb	12 28 17.8	+0.3
KOZ	**Kozyrevsk**	**1.73**	**262**	*e*P	Pb	12 27 58.6	-0.7
KOZ				*e*S	Sb	12 28 20.9	+0.3
TUMD	**Tumrok D**	**1.82**	**233**	*i* P	Pb	12 27 59.9	-0.9
TUMD				*e*S	Sb	12 28 21.8	-1.4
TUMR	**Tumrok**	**1.89**	**238**	*e*P	Pb	12 28 01.5	-0.5
MKZ	**Mys Kozlova**	**1.90**	**202**	*e*P	Pb	12 28 01.7	-0.5
KZV	**Kizimen**	**1.92**	**232**	*e*P	Pb	12 28 01.8	-0.9
BKI	**Bering**	**2.05**	**122**	*e*P	Pn	12 27 59.2	-1.2
ESO	**Esso**	**2.40**	**262**	*e*P	Pb	12 28 08.9	-1.8
ESO				*e*S	Sb	12 28 38.4	-1.5
OSSR	**Ossora**	**2.93**	**1**	*e*P	Pb	12 28 17.5	-2.2
PALN	**Palana**	**3.20**	**331**	*e*P	Pb	12 28 21.8	-2.4
SPN	**Mys Shipunski**	**3.65**	**209**	*e*P	Pn	12 28 26.3	+4.0
SPN				*e*S	Sn	12 29 09.9	+5.7
NLC	**Nalytchevo**	**3.78**	**215**	*e*S	Sn	12 29 11.9	+4.4
SDLR	**Sedlovina**	**3.85**	**219**	*e*P	Pn	12 28 28.4	+3.2
GNL	**Ganaly**	**3.90**	**230**	*e*P	Pn	12 28 29.5	+3.6
AVH	**Avacha**	**3.91**	**220**	P	Pn	12 28 30.1	+4.1
UGLR	**Uglovaya**	**3.92**	**219**	*e*P	Pn	12 28 31.3	+5.0
RUS	**Russkaya**	**4.68**	**215**	*e*P	Pn	12 28 40.5	+4.0

*BJI **01** 12:51:07.6,0°.61N×97°.05E,h35^{km},mb4.5/28,mB4.7/15, Ms4.1/9,Ms7 3.9/8*

*IDC **01** 12:51:08.2±1.2,1°.15N×96°.91E,h0^{km},mb4.1/13, mb1 4.2/14,mb1mx3.9/60,mbtmp4.1/14,ML4.0/1,MS3.2/7, Ms1 3.2/7,ms1mx2.9/61,Error ellipse: s-maj=42.2km s-min=15.3km az=55.0*

*ISCJB **01** 12:51:10.8±0.5,1°.21N±0°.05×96°.91E±0°.05,h28^{km}, mb4.3/22,MS3.4/9,Error ellipse: s-maj=9.1km s-min=5.2km az=40.9*

*DJA **01** 12:51:10.6±1.2,1°N±5°×9°7E±°,h16^{km}±8^{km},M4.0/8, MLv4.0/8*

*NEIC **01** 12:51:13.8±0.4,1°.23N×97°.07E,h35^{km},mb4.6/4,Error ellipse: s-maj=11.5km s-min=6.3km az=49.0*

ISC 01 12:51:13.5±0.7,**1°.26N**±0°.06×**96°.99E**±0°.07,**h28^{km},n63, σ1^{s}.51**/55,**mb4.3**/22,**MS3.4**/9,**1D,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSI	**Gunungsitoli**	**0.59**	**86**	P	**Pb**	**12 51 23.9**	**-1.4**
GSI				S	**Sn**	**12 51 34.3**	**-0.4**
GSI	**Gunungsitoli**	**0.59**	**86**	*e*Pn	**Pb**	**12 51 24.2**	**-1.1**
SNSI	**Sinabang, Aceh**	**1.31**	**330**	P	**Pn**	**12 51 34.4**	**-1.6**
PBSI	**Pulau Batu**	**1.84**	**135**	P	**Pn**	**12 51 42.2**	**-1.0**
TPTI		**1.99**	**6**	P	**Pn**	**12 51 43.4**	**-1.9**
KCSI	**Kotacane, Aceh**	**2.38**	**19**	P	**Pn**	**12 51 49.3**	**-1.3**
PSI	**Prapat**	**2.47**	**52**	*e*Pn	**Pn**	**12 51 50.6**	**-1.4**
MNSI	**Mandailing Nat**	**2.63**	**100**	P	**Pn**	**12 51 53.4**	**-0.8**
MLSI	**Meulaboh, Aceh**	**3.04**	**349**	P	**Pn**	**12 51 58.0**	**-1.7**
SISI	**Saibi**	**3.32**	**141**	P	**Pn**	**12 52 02.9**	**-0.7**
PDSI	**Padang**	**4.09**	**122**	P	Pb	12 52 33.8	+8.9
BSI	**Banda Aceh**	**4.53**	**338**	P	**Pn**	**12 52 17.8**	**-2.5**
CM01	**Chiang Mai Arr**	**17.16**	**6**	*e*Pn	**P**	**12 55 12.1**	**-0.7**
CMAR	**Chiang Mai Arr**	**17.20**	**6**	P	**Pn**	**12 55 10.1**	**-1.7**
	0.2nm,0.3s,baz=197,slow=12,SNR=13						
PALK	**Pallekele**	**17.30**	**291**	LR	LR	13 01 15.2	
	comp=Z,107nm,18.4s,baz=115,slow=35						
KMI	**Kunming**	**24.36**	**13**	P	**P**	**12 56 30.8**	**+1.2**
KMI				pmax	pmax		
	comp=Z,12nm,0.9s						
H08S2	**Diego Garcia H**	**25.98**	**250**	T	T	13 23 39.8	
	baz=70,slow=74,SNR=292						
H08S3	**Diego Garcia H**	**25.99**	**250**	T	T	13 23 41.8	
	baz=70,slow=74,SNR=2366						
H08S1	**Diego Carcia H**	**26.00**	**250**	T	T	13 23 38.9	
	baz=70,slow=74,SNR=322						
GYA	**Guiyang**	**26.72**	**20**	*e*P	**P**	**12 56 52.8**	**+2.0**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CD2	**Chengdu**	**30.18**	**12**	*e*P	**P**	**12 57 22.0**	**+0.5**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
FITZ	**Fitzroy Crossi**	**34.14**	**126**	P	**P**	**12 57 54.5**	**-1.8**
	1.7nm,0.8s,baz=307,slow=10,SNR=3.8						
FITZ	**Fitzroy Crossi**	**34.14**	**126**	*e*P	**P**	**12 57 54.8**	**-1.6**
	8.7nm,1.4s						
LZH	**Lanzhou**	**35.23**	**10**	*e*P	P	12 57 59.8	-5.9
LZH				pP	pP	12 58 08.8	-5.2
LZH				sP	sP	12 58 12.4	-5.1
LZH				pmax	pmax		
	comp=Z,22nm,1.1s						
NJ2	**Nanjing**	**36.92**	**32**	*e*P	**P**	**12 58 21.0**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.7s						
GTA	**Gaotai**	**38.05**	**4**	*e*P	**P**	**12 58 29.8**	**0.0**
GTA				pP	sP	12 58 40.0	-1.5
GTA				sP	pP	12 58 43.9	+5.8
GTA				S	**S**	**13 04 20.6**	**-0.2**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,30nm,5.2s						
GTA				LR	LR		
	comp=Z,71nm,14.8s						
GTA				LR	LR		

	comp=Z,78nm,15.5s						
GTA				LR	LR		
	comp=Z,100nm,13.7s						
H01W3	Cape Leeuwin H	39.38	158	T	T	13 40 32.3	
	baz=334,slow=76,SNR=46						
H01W2	Cape Leeuwin H	39.40	158	T	T	13 40 33.3	
	baz=334,slow=76,SNR=37						
H01W1	Cape Leeuwin H	39.40	158	T	T	13 40 33.4	
	baz=334,slow=76,SNR=42						
HHC	Hu-ho-hao-te	41.56	17	eP	P	12 59 01.2	+2.3
HHC				pP	pP	12 59 08.1	+0.8
HHC				S	S	13 05 19.7	+6.5
HHC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,48nm,5.9s						
HHC				LR	LR		
	comp=Z,70nm,9.6s						
HHC				LR	LR		
	comp=Z,58nm,10.6s						
HHC				LR	LR		
	comp=Z,47nm,11.2s						
WRA	Warramunga Arr	42.25	122	P	P	12 59 03.5	-1.2
	comp=Z,1.5nm,0.8s,baz=299,slow=9.0,SNR=14						
WB2	Warramunga Arr	42.26	122	eP	P	12 59 04.0	-0.8
	comp=Z,4.7nm,1.0s						
KSH	Kashi	42.62	336	eP	P	12 59 06.7	-0.9
KSH				sP	sP	12 59 21.5	+2.1
KSH				ePP	PP	13 00 49.6	+2.8
WMQ	Urumqi	43.17	350	P	P	12 59 13.2	+1.3
WMQ				LR	LR		
	comp=Z,78nm,22.7s						
WMQ				LR	LR		
	comp=Z,100nm,25.9s						
ASAR	Alice Springs	43.60	127	P	P	12 59 15.1	-0.6
	comp=Z,1.2nm,0.8s,baz=298,slow=7.7,SNR=12						
AS01	Alice Springs	43.64	127	eP	P	12 59 14.5	-1.4
KSAR	Wonju Array Be	45.89	35	P	P	12 59 33.0	-0.5
KS01	Wonju Array Si	45.92	35	eP	P	12 59 32.7	-1.1
KSRS	Korea Array	45.92	35	P	P	12 59 33.0	-0.8
	comp=Z,3.4nm,0.9s,baz=226,slow=8.5,SNR=15						
KSRS				LR	LR	13 19 30.1	
	comp=Z,20nm,19.0s,baz=252,slow=37						
SONM	Songino Array	47.10	9	P	P	12 59 43.1	0.0
	comp=Z,2.2nm,0.7s,baz=190,slow=9.5,SNR=11						
MK01	Makanchi Array	47.10	346	eP	P	12 59 43.1	0.0
SONA1	Songino Array	47.11	9	eP	P	12 59 43.0	-0.3
MK31	Makanchi Array	47.13	346	eP	P	12 59 43.2	0.0
MKAR	Makanchi Array	47.13	346	P	P	12 59 43.4	+0.1
	comp=Z,1.3nm,0.6s,baz=160,slow=9.1,SNR=15						
MKAR	Makanchi Array	47.13	346	eP	P	12 59 43.2	0.0
	comp=Z,13nm,0.8s						
KK31	Karatay Array	47.91	334	eP	P	12 59 50.2	+0.9
KKAR	Karatay Array	47.91	334	eP	P	12 59 50.1	+0.8
CN2	Changchun	49.34	27	eP	P	12 59 58.0	-2.4
TLY	Talaya	50.55	5	LR	LR	13 24 43.0	
	comp=Z,37nm,18.3s,baz=169,slow=40						
KURBB	Kurchatov Arra	51.61	345	P	P	13 00 16.9	-0.5
	comp=Z,1.1nm,0.5s,baz=161,slow=6.8,SNR=9.2						
KURK	Kurchatov	51.68	345	P	P	13 00 16.9	-0.9
MJAR	Matsushiro Arr	51.79	42	LR	LR	13 24 32.7	
	comp=Z,18nm,18.1s,baz=210,slow=39						
USRK	Ussuriysk Ar.	52.83	31	P	P	13 00 26.7	+0.2
	comp=Z,5.2nm,0.8s,baz=214,slow=6.1						
USRK				LR	LR	13 26 02.2	
	comp=Z,44nm,18.9s,baz=222,slow=40						
ZAA0	Zalesovo Array	53.46	351	eP	P	13 00 31.0	0.0
	comp=Z,4.7nm,0.6s						
ZALV	Zalesovo Beam	53.46	351	P	P	13 00 31.0	0.0
	comp=Z,3.6nm,0.4s,baz=182,slow=6.6,SNR=21						
ZALV				LR	LR	13 26 58.3	
	comp=Z,14nm,18.0s,baz=70,slow=40						
ZALV	Zalesovo Beam	53.46	351	eP	P	13 00 30.8	-0.2
BVAR	Borovoye Array	56.12	341	P	P	13 00 49.9	-0.5
	comp=Z,2.2nm,0.7s,baz=134,slow=8.3,SNR=14						
BVAR				LR	LR	13 28 45.9	
	comp=Z,18nm,19.2s,baz=316,slow=40						
ABKAR	Akbulak array	57.36	332	eP	P	13 00 58.7	-0.4
AKTO	Aktyubinsk	59.08	332	P	P	13 01 10.1	-1.0
	comp=Z,0.9nm,0.5s,baz=194,slow=4.2,SNR=3.4						
FINES	FINESS Array B	79.84	333	P	P	13 03 18.6	-0.6
	comp=Z,1.7nm,0.9s,baz=140,slow=5.4,SNR=3.4						
SYO	Syowa Base	80.00	198	⇓ePcP	PcP	13 03 29.1	+1.9
ARCES	ARCESS Array B	82.40	340	P	P	13 03 32.4	-0.4
	comp=Z,2.4nm,1.0s,baz=122,slow=4.4,SNR=4.3						
TXAR	Lajitas Array	143.72	31	PKP	PKPbc	13 10 44.1	-0.2
	comp=Z,0.2nm,0.8s,baz=108,slow=0.3,SNR=3.0						

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*ISCJB **01** 12:54:56.4±0.6, 32.°22N±0.°02×115.°23W±0.°02, h12km±4km, Error ellipse: s-maj=3.9km s-min=3.2km az=174.5*

*NEIC **01** 12:54:58.0±0.0, 32.°21N×115.°26W, h6km, ML2.9(PAS), ML3.0(ECX), After ECX.*

*ECX **01** 12:54:58.0±0.6, 32.°21N×115.°26W, h6km, MD3.0, ML3.3*

ISC 01 12:54:56.8±1.0**, 32.°19N**±0.°02×**115.°28W**±0.°02**, h8**km±9km**, n57, σ1.^{s}38**/72**, 1C-8D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBIG	Mexicali	0.23	17	eP	Pg	12 55 02.0	+0.6
CPBX	Cerro Prieto	0.23	355	eP	Pg	12 55 00.9	-0.6
CPBX				eS	Sg	12 55 04.3	-0.3
CPBX				IAML		12 55 07.7	
	comp=N,22μm,0.2s						
CPBX				⇓e		12 55 07.7	
ERPC	Ernies Place	0.64	330	eP	Pg	12 55 09.7	+0.5
WESC	Westside Schoo	0.69	326	⇓iP	Pg	12 55 10.4	+0.3
COA	Coachella	0.69	11	⇓iP	Pg	12 55 09.8	-0.3
YUH	Yuha Desert	0.71	310	⇓iP	Pg	12 55 10.3	-0.2
YMD	Yuma Desert	0.72	59	⇑iP	Pg	12 55 10.3	-0.4
ECBX	El Chinero	0.74	165	eP	Pg	12 55 11.3	+0.2
ECBX				eS	Sg	12 55 21.9	+1.2
RMX	La Rumorosa	0.79	302	eP	Pg	12 55 11.0	-1.1
RMX				eS	Sg	12 55 20.9	-1.6
IKP	In-Ko-Pah, Jac	0.84	304	P	Pg	12 55 12.8	-0.2
	baz=121,SNR=51						
IKP				S	Sg	12 55 23.9	-0.1
	baz=121						
IKP	In-Ko-Pah, Jac	0.84	304	⇓iP	Pg	12 55 12.8	-0.2
SWSC	Sam W. Stewart	0.87	330	P	Pg	12 55 12.6	-1.1
	baz=148,SNR=32						
SWSC				S	Sg	12 55 25.1	+0.1
	baz=148						
GLA	Glamis	0.94	24	P	Pg	12 55 13.3	-1.6
	baz=204,SNR=95						
GLA				S	Sg	12 55 26.3	-1.0
	baz=204						
GLA	Glamis	0.94	24	ePg	Pg	12 55 13.2	-1.8
GLA				eSn	Sg	12 55 26.4	-0.8
ZAX	El Zacaton	1.08	232	eP	Pg	12 55 17.2	-0.3
ZAX				eS	Sg	12 55 32.4	+0.8
ZAX				IAML		12 55 33.8	
	comp=N,588nm,0.3s						
ZAX				⇓e		12 55 33.8	
SPIG	San Pedro Mart	1.15	188	eP	Pg	12 55 18.6	-0.3
SPX	San Pedro Mart	1.15	188	eP	Pg	12 55 18.7	-0.3
SPX				IAML		12 55 36.2	
	comp=E,309nm,0.4s						
CBX	Cerro Bola	1.18	276	eP	Pg	12 55 19.0	-0.5
CBX				eS	Sg	12 55 34.9	+0.1
CBX				⇓e		12 55 36.2	
CBX				⇓e		12 55 38.5	
CBX				IAML		12 55 38.5	
	comp=E,801nm,0.5s						
MONP2	Monument Peak	1.19	306	P	Pg	12 55 18.2	-1.6
	baz=124,SNR=73						
MONP2				S	Sg	12 55 35.3	0.0
	baz=124						
ECNX	Esteban Cantu	1.24	245	eP	Pg	12 55 19.9	-0.7
BAR	Barrett	1.28	293	eP	Pn	12 55 20.0	-1.0
BAR	Barrett	1.28	293	ePn	Pn	12 55 19.7	-1.3
BAR				eSn	Sg	12 55 36.5	-1.4
PBX	Punta Banda	1.31	251	eP	Pn	12 55 21.1	-0.4
113A	Mohawk Valley,	1.40	65	ePn	Pn	12 55 20.7	-2.0
113A				eSn	Sb	12 55 37.8	-3.5
BC3	Big Chuckawall	1.47	354	P	Pn	12 55 21.4	-2.4
	baz=174,SNR=35						
SDRC	San Diego Road	1.51	292	eP	Pn	12 55 23.8	-0.4
Y12C	Blythe	1.68	22	ePn	Pn	12 55 27.3	+0.7
109C	Camp Elliot, M	1.69	295	P	Pn	12 55 25.9	-0.8
	baz=113,SNR=17						
109C				S	Sn	12 55 49.3	+0.7
	baz=113						
CPE	Camp Elliot	1.69	295	ePn	Pn	12 55 25.7	-1.0
CPE				eSn	Sn	12 55 49.1	+0.5
TPFO	Pinon Flats	1.73	325	P	Pn	12 55 25.1	-2.2
	baz=144						
XPFO	Piæon Flat	1.73	325	ePn	Pn	12 55 24.7	-2.7
PFO	Pinyon Flats O	1.73	325	P	Pn	12 55 25.1	-2.3
	baz=144,SNR=11						
PFO	Pinyon Flats O	1.73	325	ePn	Pn	12 55 24.8	-2.6
BELC	Belle Mtn. Jos	1.91	342	Pb	Pn	12 55 30.3	+0.5
	baz=161,SNR=21						
IRM	Iron Mountain	1.97	3	P	Pn	12 55 28.8	-1.7
	baz=183,SNR=16						
214A	Organ Pipe Nat	2.11	96	P	Pn	12 55 30.3	-2.1
	baz=278						
MURC	Murrieta	2.14	312	P	Pn	12 55 31.5	-1.4
	baz=130,SNR=22						
MURC				Sb	Sb	12 56 03.7	+1.0
	baz=130						
Y14A	Wickenburg	2.59	47	ePn	Pn	12 55 38.1	-0.9
GMRC	Granite Mounta	2.61	353	Pb	Pn	12 55 42.7	+3.2
	baz=172,SNR=10						
MWC	Mount Wilson	3.09	312	ePg	Pb	12 55 52.4	+0.2
W13A	Hualapai Mount	3.13	21	ePg	Pb	12 55 54.0	+1.2
PASC	Pasadena Art C	3.14	310	ePg	Pb	12 55 53.4	+0.5
GSC	Goldstone, Bar	3.36	338	ePg	Pg	12 56 02.4	+1.2
TUC	Tucson	3.81	87	ePg	Pb	12 56 04.0	-0.4
X16A	Lo Mia Camp, P	3.91	54	ePn	Pn	12 55 57.2	-0.2
ISA	Isabella, Lake	4.37	323	ePn	Pn	12 56 04.7	+1.2
WUAZ	Wupatki	4.64	43	ePn	Pn	12 56 07.0	-0.4
TPNV	Topopah Spring	4.82	351	ePn	Pn	12 56 08.2	-1.6
U15A	North Rim	4.90	29	ePn	Pn	12 56 10.6	-0.5
U15A				ePg	Pb	12 56 27.2	+4.1
X18A	Snowflake	5.03	61	ePn	Pn	12 56 12.9	+0.1
LCMT	Little Creek M	5.10	19	ePn	Pn	12 56 13.7	0.0
KNB	Kanab	5.23	22	ePn	Pn	12 56 16.0	+0.5
W18A	Petrified Fore	5.47	56	ePn	Pn	12 56 19.4	+0.6
PSNM	Stone Corral	5.50	312	ePn	Pn	12 56 24.3	+5.3
CCUT	Cedar City	5.58	16	ePn	Pn	12 56 22.2	+1.8
LENM	Lemitar	7.24	72	ePn	Pn	12 56 43.6	+0.5
MVCO	Mesa Verde	7.50	46	ePn	Pn	12 56 48.8	+2.0

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*MOS **01** 13:09:34.6±0.6, 43.°47N×147.°71E, h54km, mb4.2/1, Error ellipse: s-maj=35.0km s-min=16.5km az=43.7*

*JMA **01** 13:09:37.2±0.3, 43.°49N×147.°47E, h41km, M3.6*

*SKHL **01** 13:09:38.5±0.5, 43.°62N×147.°54E, h64km±2km, mb4.6/6*

ISC 01 13:09:32.5±2.2**, 43.°53N**±0.°07×**147.°59E**±0.°07**, h9**km±11km**, n24, σ1.^{s}75**/42**, 1C-5D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	Shikotan	0.65	302	i P	Pn	13 09 51.0	+3.1
SHO				AMB	AMB	13 09 51.0	
	42nm,0.3s						
SHO				AMB	AMB	13 09 51.0	
	180nm,0.3s						
SHO				AMB	AMB	13 09 51.0	
	544nm,0.3s						
SHO				i S	Sn	13 10 00.0	+1.7
SHO				A	A	13 10 01.0	
	3μm,0.3s						
SHO				A	A	13 10 01.0	
	2μm,0.3s						
SHO	Shikotan	0.65	302	d iPN	Pn	13 09 51.2	+3.3
SHO				i S	Sn	13 10 00.7	+2.4
SHO				pmax	pmax		
	comp=N,42nm,0.1s						
SHO				pmax	pmax		
	comp=E,180nm,0.1s						
SHO				pmax	pmax		
	comp=Z,544nm,0.1s						
SHO				smax	smax		
	comp=E,2.0nm,0.3s						
SHO				smax	smax		
	comp=N,3.0nm,0.2s						
YUK	Yuzh-Kuril'sk	1.35	293	i P	Pb	13 09 58.0	0.0
YUK				AMB	AMB	13 10 00.0	
	comp=N,73nm,0.2s						
YUK				AMB	AMB	13 10 00.0	
	comp=N,41nm,0.2s						
YUK				AMB	AMB	13 10 00.0	
	comp=N,111nm,0.2s						
YUK				i S	Sg	13 10 14.7	-1.2
YUK				A	A	13 10 18.0	
	comp=N,364nm,0.2s						
YUK				A	A	13 10 18.0	
	comp=N,636nm,0.2s						
YUK	Yuzh-Kuril'sk	1.35	293	d iPN	Pg	13 09 58.7	+0.3
YUK				i S	Sn	13 10 14.5	-1.1
YUK				pmax	pmax		
	comp=E,41nm,0.1s						
YUK				pmax	pmax		
	comp=Z,111nm,0.1s						
YUK				pmax	pmax		
	comp=N,73nm,0.2s						
YUK				smax	smax		
	comp=E,636nm,0.2s						
YUK				smax	smax		
	comp=N,364nm,0.1s						
NEM2	Nemuro 2	1.35	264	P	Pg	13 09 59.2	+0.7
NEM2				eS	Sn	13 10 15.3	-0.4
GRPR	Tuman	1.40	290	i P	Pg	13 09 59.8	+0.5
GRPR				AMB	AMB	13 10 00.0	
	comp=N,69nm,0.2s						
GRPR				i S	Sb	13 10 15.0	-1.7
GRPR				A	A	13 10 17.0	
	comp=N,483nm,0.4s						
GRPR				A	A	13 10 17.0	
	comp=N,1μm,0.4s						
GRPR	Tuman	1.40	290	⇓iPN	Pg	13 09 59.6	+0.3
GRPR				i S	Sn	13 10 15.6	-1.2
GRPR				pmax	pmax		
	comp=Z,69nm,0.1s						
GRPR				smax	smax		
	comp=E,1μm,0.4s						
GRPR				smax	smax		
	comp=N,483nm,0.1s						
LAGR	Lagunnoye	1.41	293	i P	Pg	13 10 00.0	+0.5
LAGR				AMB	AMB	13 10 01.0	
	comp=N,43nm,0.2s						
LAGR				AMB	AMB	13 10 01.0	
	comp=N,85nm,0.2s						
LAGR				i S	Sn	13 10 16.0	-1.0
LAGR				A	A	13 10 18.0	
	comp=N,809nm,0.2s						
LAGR				A	A	13 10 18.0	
	comp=N,565nm,0.2s						
LAGR	Lagunnoye	1.41	293	⇓iPN	Pg	13 10 00.0	+0.5
LAGR				i S	Sn	13 10 16.1	-1.0
LAGR				pmax	pmax		
	comp=N,43nm,0.2s						
LAGR				pmax	pmax		
	comp=Z,85nm,0.2s						
LAGR				pmax	pmax		
	comp=E,37nm,0.1s						
LAGR				smax	smax		
	comp=E,565nm,0.1s						
LAGR				smax	smax		
	comp=N,809nm,0.2s						
GLVR	Golovnino	1.52	279	i P	Pb	13 10 01.0	+0.1
GLVR				AMB	AMB	13 10 05.0	
	comp=N,61nm,0.1s						
GLVR				i S	Sg	13 10 20.0	-1.3
GLVR				A	A	13 10 23.0	
	comp=N,384nm,0.3s						
GLVR				A	A	13 10 23.0	
	comp=N,1μm,0.3s						
GLVR	Golovnino	1.52	279	d iPN	Pg	13 10 01.8	+0.2
GLVR				i S	Sg	13 10 20.0	-1.3
GLVR				pmax	pmax		
	comp=Z,61nm,0.1s						
GLVR				smax	smax		
	comp=N,384nm,0.1s						
GLVR				smax	smax		
	comp=E,1μm,0.3s						
KUR	Kuril'sk	1.72	7	i P	Pn	13 10 03.8	+1.2
KUR				AMB	AMB	13 10 04.0	
	comp=E,9.0nm,0.2s						
KUR				AMB	AMB	13 10 04.0	
	comp=E,15nm,0.2s						
KUR				AMB	AMB	13 10 04.0	
	comp=E,35nm,0.2s						
KUR				i S	Sn	13 10 23.2	-1.5
KUR				A	A	13 10 24.0	
	comp=E,416nm,0.2s						
KUR				A	A	13 10 24.0	
	comp=E,242nm,0.2s						
KUR	Kuril'sk	1.72	7	c iPN	Pn	13 10 03.4	+0.8
KUR				i S	Sn	13 10 22.7	-2.0
KUR				pmax	pmax		
	comp=Z,35nm,0.1s						
KUR				pmax	pmax		
	comp=E,15nm,0.2s						
KUR				pmax	pmax		
	comp=N,9.0nm,0.1s						
KUR				smax	smax		
	comp=N,416μm,0.2s						
KUR				smax	smax		
	comp=E,242nm,0.2s						
JRA	Rausu	1.83	284	P	Pb	13 10 06.0	-0.3
JRA				eS	Sb	13 10 27.4	-1.9
JNK	Nakash	2.09	273	P	Pn	13 10 09.1	+1.4
JNK				eS	Sn	13 10 32.3	-1.6
JAK	Akkeshi	2.18	257	P	Pn	13 10 10.4	+1.4
JAK				eS	Sn	13 10 35.0	-1.1
JTKR	Abashiri--Toko	2.70	281	eS	Sb	13 10 51.2	-3.1
JAR	Ashorobuto	2.79	267	P	Pn	13 10 19.6	+2.2
JAR				eS	Sn	13 10 51.4	+0.1
JOB	Onbets	2.81	258	eS	Sn	13 10 51.4	-0.4
JCH	Churui	3.23	255	P	Pn	13 10 25.0	+1.6
JCH				eS	Sn	13 11 00.3	-1.7
JFR	Furan	3.66	266	P	Pn	13 10 32.4	+3.0
JNBK	Urakawa-nobuka	3.77	252	P	Pn	13 10 32.7	+1.9
YSS	Yuzh-Sakhalins	4.84	317	eP	Pn	13 10 48.8	+3.3
YSS	Yuzh-Sakhalins	4.84	317	ePN	Pn	13 10 48.8	+3.3

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*NIED **01** 13:14:00, 39.°80N×142.°30E, h50km, Mw3.6 Best double couple: M$_0$3.11000×10^{14} NP1:φ$_s$201.00000°, δ24.00000°, λ91.00000°. NP2:φ$_s$20.00000°, δ66.00000°, λ89.00000°.*

*ISCJB **01** 13:14:11.1±1.0, 39.°86N±0.°04×142.°4E±0.°1, h51km±7km, mb3.7/6, Error ellipse: s-maj=14.7km s-min=6.3km az=2.3*

*JMA **01** 13:14:12.8±0.1, 39.°84N×142.°25E, h43km±1km, M3.6*

*IDC **01** 13:14:12.9±2.5, 39.°96N×142.°58E, h59km±22km, mb3.4/6, mb1 3.5/9, mb1mx3.2/67, mbtmp3.6/9, ML2.7/2, MS2.2/1, Ms1 2.2/1, ms1mx2.0/42, Error ellipse: s-maj=33.5km s-min=14.6km az=91.0*

ISC 01 13:14:12.0±1.4**, 39.°85N**±0.°04×**142.°33E**±0.°10**, h44**km±11km**, n25, σ1.^{s}05**/28**, mb3.8**/6**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	0.37	284	P	Pn	13 14 21.7	+0.4
JTH				S	Sn	13 14 27.7	-0.2
MIYJ	Miyakonagasawa	0.48	235	P	Pn	13 14 22.7	0.0
MIYJ				S	Sn	13 14 29.6	-0.6
JKZ	Kuzumaki	0.78	280	P	Pn	13 14 27.0	+0.3
JKZ				S	Sn	13 14 37.0	-0.3
JANG	Nango	0.81	310	P	Pn	13 14 27.0	-0.1
JANG				S	Sn	13 14 37.2	-0.9
JOM	Ohasama	0.88	245	P	Pn	13 14 28.2	+0.1
JOM				S	Sn	13 14 39.4	-0.4
OFUJ	Ofunato	0.92	214	P	Pn	13 14 28.8	+0.2
OFUJ				S	Sn	13 14 40.1	-0.6
JMK	Ichinoseki	1.24	224	P	Pn	13 14 33.4	+0.5
JMK				eS	Sn	13 14 48.5	0.0
JTM	Tenmabayashi	1.34	315	P	Pn	13 14 34.9	+0.6
JTM				eS	Sn	13 14 51.6	+0.6
JAH	Hinai	1.34	285	P	Pn	13 14 35.0	+0.7
JRG	Rokugo	1.39	251	P	Pn	13 14 35.5	+0.6
ASAJ	Asahikawa	4.27	3	P	Pn	13 15 15.6	+1.2
	0.3nm,0.3s,baz=278,slow=10,SNR=3.6						
ASAJ				S	Sn	13 16 01.1	-1.8
	0.9nm,0.3s,baz=190,slow=11,SNR=2.3						
ASAJ				LR	LR	13 17 18.7	
	comp=Z,35nm,21.7s,baz=189,slow=45						
MJAR	Matsushiro Arr	4.63	226	P	Pn	13 15 22.8	+3.3
	0.7nm,0.3s,baz=29,slow=12,SNR=18						
USRK	Ussuriysk Ar.	8.84	303	P	Pn	13 16 19.5	+2.4
	baz=106,slow=16						
H11N2	WAKE ISLAND Hy	29.11	126	T	T	13 50 50.0	
	baz=319,slow=75,SNR=124						
H11N1	WAKE ISLAND Hy	29.11	126	T	T	13 50 53.3	
	baz=319,slow=75,SNR=96						
H11N3	WAKE ISLAND Hy	29.12	126	T	T	13 50 55.1	
	baz=319,slow=75,SNR=90						
H11S1	WAKE ISLAND Hy	29.91	128	T	T	13 51 57.2	
	baz=320,slow=76,SNR=33						
H11S3	WAKE ISLAND Hy	29.91	128	T	T	13 51 52.9	
	baz=320,slow=76,SNR=18						
H11S2	WAKE ISLAND Hy	29.93	128	T	T	13 51 54.8	
	baz=320,slow=76,SNR=19						
ZALV	Zalesovo Beam	40.60	310	P	P	13 21 47.3	0.0
	0.6nm,0.4s,baz=90,slow=10,SNR=2.8						
MKAR	Makanchi Array	43.29	300	P	P	13 22 09.5	+0.2
	0.3nm,0.4s,baz=87,slow=11,SNR=7.5						
KURBB	Kurchatov Arra	44.88	306	P	P	13 22 21.7	-0.3
	0.6nm,0.4s,baz=81,slow=8.8,SNR=7.1						
WRA	Warramunga Arr	59.95	189	P	P	13 24 13.5	-0.3
	0.9nm,0.6s,baz=6.8,slow=7.0,SNR=13						
ASAR	Alice Springs	63.67	189	P	P	13 24 39.2	+0.4
	0.3nm,0.6s,baz=0.1,slow=6.8,SNR=7.7						
FINES	FINESS Array B	66.66	332	P	P	13 24 56.9	-0.8
	0.8nm,0.7s,baz=72,slow=4.5,SNR=2.6						

PGC 01 13:58:35.5±0.9**, 50.°55N**×**130.°41W, h10**km**, MLSn3.0**/29**, Mw3.7**/29**, 212km west of Pt. Hardy, Bc Vancouver Island, Canada Region, Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOLB	Holberg	1.46	85	P	Pn	13 58 59.9	-2.0
HOLB				S	Sn	13 59 16.0	-5.0
BPBC	Brooks Peninsu	1.73	102	Pn	Pn	13 59 03.3	-2.5
PHC	Port Hardy	1.90	84	Pn	Pn	13 59 06.2	-1.7
PHC				Sn	Sn	13 59 27.3	-4.7
MAYB	Maynard	2.07	93	Pn	Pn	13 59 08.7	-1.8
BBB	Bella Bella	2.18	40	Pn	Pn	13 59 10.2	-1.6
BBB				Sn	Sn	13 59 34.7	-4.2
BNB	Barry Inlet	2.20	338	Pn	Pn	13 59 10.2	-1.9
EDB	Eliza Dome	2.22	106	Pn	Pn	13 59 10.0	-2.3
TLCB	Telegraph Cove	2.28	89	Sn	Sn	13 59 37.2	-4.0
WOSB	Woss	2.49	97	Pn	Pn	13 59 14.8	-1.4
ETB	Estevan Point	2.76	114	Pn	Pn	13 59 18.3	-1.4
NCRB	Newcastle Ridg	2.79	91	Pn	Pn	13 59 18.8	-1.4
GDR	Gold River	2.92	104	Pn	Pn	13 59 20.5	-1.4
BCBC	Bella Coola	2.93	50	Sn	Sn	13 59 52.3	-4.9
DIB	Dawson Inlet,	2.95	335	Pn	Pn	13 59 21.0	-1.3
TOFB	Tofino	3.23	114	Pn	Pn	13 59 24.8	-1.4
CBB	Campbell River	3.28	97	Pn	Pn	13 59 26.1	-0.7
BTB	Buttle Lake	3.33	107	Pn	Pn	13 59 26.7	-1.1
OZB	Mount Ozzard	3.56	115	Pn	Pn	13 59 29.2	-1.6
RUBB	Prince Rupert	3.79	1	Pn	Pn	13 59 33.2	-0.6
RUBB				Sn	Sn	14 00 15.5	-2.9
TXB	Texada	3.94	100	Pn	Pn	13 59 35.2	-0.8
MGB	Mount Grey	4.02	110	Pn	Pn	13 59 35.7	-1.4
SHB	Sechelt	4.32	100	Pn	Pn	13 59 40.6	-0.7
YOUB	Youbou, Lake C	4.32	110	Pn	Pn	13 59 40.9	-0.3
NLLB	Nanaimo Lost L	4.36	105	Pn	Pn	13 59 41.1	-0.6
UBRB	Upper Baezaeko	4.58	57	Pn	Pn	13 59 45.3	+0.5
UBRB				Sn	Sn	14 00 34.5	-3.7
BPCB	Bare Point	4.64	108	Pn	Pn	13 59 46.3	+0.7
LZB	Mount Lazard	4.70	112	Pn	Pn	13 59 47.1	+0.6
WPB	Watts Point	4.72	98	Pn	Pn	13 59 46.8	+0.1
BIB	Bowen Island	4.72	101	Pn	Pn	13 59 48.0	+1.3
OFR	Olym-F Res Ctr	4.73	121	Pn	Pn	13 59 47.6	+0.8
GOBB	Galiano Island	4.75	107	Pn	Pn	13 59 47.5	+0.4
OBC	Olympics--Boni	4.85	119	Pn	Pn	13 59 49.1	+0.6
B009	North Saanich	4.91	110	Pn	Pn	13 59 49.7	+0.5
B010	North Saanich	4.91	110	Pn	Pn	13 59 49.9	+0.6
PGC	Sidney	4.91	110	Pn	Pn	13 59 49.7	+0.4
B011	North Saanich	4.91	110	Pn	Pn	13 59 49.5	+0.2
PA04	PA04 Cage	4.91	110	Pn	Pn	13 59 49.7	+0.5
SNB	Saturna Island	5.03	108	Pn	Pn	13 59 51.6	+0.7
LLLB	Lillooet	5.43	86	Pn	Pn	13 59 56.6	0.0
VDB	Vedder Mountai	5.59	103	Pn	Pn	13 59 59.4	+0.7
HDW	Hoodsport	5.63	118	Pn	Pn	14 00 00.6	+1.3
MBW	Mount Baker	5.80	104	Pn	Pn	14 00 02.7	+1.0
JCW	Jim Creek	6.02	110	Pn	Pn	14 00 05.1	+0.6
B06A	Marblemount	6.16	106	Pn	Pn	14 00 07.3	+1.0
FMW	Mount Fremont	6.82	119	Pn	Pn	14 00 17.4	+1.8
LTY	Liberty	7.21	113	Pn	Pn	14 00 22.4	+1.4

*ISCJB **01** 14:31:24.3±0.5, 18°.75N±0°.05×145°.5E±0°.1, h200km, mb3.6/20, Error ellipse: s-maj=17.6km s-min=6.7km az=179.3*

*IDC **01** 14:31:27.5±2.2, 18°.74N×145°.55E, h217km±22km, mb3.5/20, mb1 3.6/23, mb1mx3.5/58, mbtmp4.1/23, Error ellipse: s-maj=15.9km s-min=8.4km az=87.0*

ISC 01 14:31:25.8±0.6, **18°.72N**±0°.07×**145°.6E**±0°.2, **h200**km, **n27**, σ**0ˢ.97**/24, **mb3.8**/20, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	5.14	187	P	Pn	14 32 43.0	+0.9
	14nm,0.3s,baz=323,slow=4.6,SNR=39						
GUMO				S	Sn	14 33 41.1	-1.2
	19nm,0.3s,baz=233,slow=20,SNR=3.6						
JHJ	Hachijo jima 2	15.25	341	P	Pn	14 34 52.1	+1.1
	3.4nm,0.3s,baz=139,slow=19,SNR=2.5						
MJAR	Matsushiro Arr	18.90	341	P	P	14 35 31.1	-0.2
	0.8nm,0.3s,baz=166,slow=10,SNR=11						
H11S3	WAKE ISLAND Hy	20.04	87	T	T	14 56 43.3	
	baz=291,slow=74,SNR=4.3						
H11S2	WAKE ISLAND Hy	20.05	87	T	T	14 56 43.9	
	baz=277,slow=74,SNR=4.8						
H11N1	WAKE ISLAND Hy	20.18	84	T	T	14 57 01.8	
	baz=260,slow=74,SNR=3.3						
H11N3	WAKE ISLAND Hy	20.20	84	T	T	14 57 21.9	
	baz=252,slow=74,SNR=4.6						
KSRS	Korea Array	24.22	324	P	P	14 36 24.1	-0.1
	1.0nm,0.5s,baz=148,slow=10,SNR=7.0						
ASAJ	Asahikawa	25.45	355	P	P	14 36 36.6	+1.4
	5.5nm,0.6s,baz=174,slow=15,SNR=8.0						
PETK	Petropavlovsk-	35.60	13	P	P	14 38 04.5	+0.4
	1.5nm,0.7s,baz=212,slow=6.8						
WRA	Warramunga Arr	39.96	197	P	P	14 38 41.7	+0.6
	1.2nm,0.3s,baz=14,slow=8.6,SNR=38						
FITZ	Fitzroy Crossi	41.49	209	P	P	14 38 54.1	+0.6
	1.1nm,0.3s,baz=26,slow=7.3,SNR=40						
SONM	Songino Array	43.04	321	P	P	14 39 05.6	-0.3
	0.5nm,0.6s,baz=135,slow=8.7,SNR=2.8						
ASAR	Alice Springs	43.63	196	P	P	14 39 11.3	+0.6
	0.2nm,0.3s,baz=19,slow=6.6,SNR=23						
CMAR	Chiang Mai Arr	44.08	277	P	P	14 39 15.6	+1.2
	0.4nm,0.5s,baz=84,slow=4.6,SNR=3.2						
DZM	Mont Dzumac	45.40	152	P	P	14 39 25.2	+0.4
	5.6nm,0.7s,baz=297,slow=2.3,SNR=4.0						
STKA	Stephens Creek	50.45	184	P	P	14 40 02.0	-1.2
	1.1nm,0.8s,baz=348,slow=9.3,SNR=3.4						
ZALV	Zalesovo Beam	57.92	323	P	P	14 40 55.4	-1.5
	0.7nm,0.4s,baz=115,slow=5.2,SNR=3.1						
MKAR	Makanchi Array	58.35	314	P	P	14 41 00.1	0.0
	1.0nm,0.5s,baz=95,slow=6.9,SNR=12						
KURBB	Kurchatov Arra	61.21	318	P	P	14 41 18.7	-0.8
	1.3nm,0.5s,baz=94,slow=7.3,SNR=11						
ILAR	Eielson Array	63.69	26	P	P	14 41 34.9	-0.7
	1.0nm,0.7s,baz=263,slow=4.9,SNR=16						
BVAR	Borovoye Array	66.37	320	P	P	14 41 52.4	-0.7
	2.1nm,0.5s,baz=90,slow=7.4,SNR=18						
INK	Inuvik	69.41	23	P	P	14 42 11.5	-0.2
	1.2nm,0.5s,baz=289,slow=5.4,SNR=5.8						
YKA	Yellowknife Ar	78.04	28	P	P	14 43 01.9	-0.1
	0.7nm,0.5s,baz=296,slow=5.5,SNR=3.2						
ARCES	ARCESS Array B	82.43	342	P	P	14 43 25.2	-0.1
	1.3nm,0.7s,baz=50,slow=8.0,SNR=3.9						
NVAR	Mina Array Bea	83.24	52	P	P	14 43 31.1	+0.7
	0.4nm,0.7s,baz=267,slow=4.5,SNR=4.2						
FINES	FINESS Array B	86.81	335	P	P	14 43 45.0	-2.3
	0.6nm,0.4s,baz=57,slow=5.3,SNR=8.4						

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*IDC **01** 14:40:48.3±0.6, 15°.28S×173°.25W, h0km, mb4.0/13, mb1 4.2/13, mb1mx4.0/44, mbtmp4.1/13, MS3.4/17, Ms1 3.4/17, ms1mx3.2/48, Error ellipse: s-maj=29.0km s-min=14.1km az=133.0*

*NEIC **01** 14:40:49.9±0.3, 15°.24S×173°.27W, h10km, mb4.4/2, Error ellipse: s-maj=16.8km s-min=7.6km az=137.0*

*ISCJB **01** 14:40:51.8±0.5, 15°.2S±0°.1×173°.4W±0°.1, h35km, mb4.1/14, MS3.4/16, Error ellipse: s-maj=22.9km s-min=10.0km az=136.4*

ISC 01 14:40:53.2±0.6, **15°.2S**±0°.2×**173°.2W**±0°.1, **h35**km, **n39**, σ**1ˢ.41**/23, **mb4.1**/14, **MS3.3**/16, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	1.84	47	Pn	Pn	14 41 22.7	+0.3
	336nm,0.3s,baz=189,slow=4.3,SNR=598						
AFI				Sn	Sn	14 41 41.9	-2.7
	680nm,0.3s,baz=36,slow=22,SNR=22						
AFI				LR	LR	14 42 02.6	
	comp=Z,686nm,18.4s,baz=152,slow=38						
AFI	Afiamalu	1.84	47	Pn	Pn	14 41 22.8	+0.3
AFI				*e*Sn	Sn	14 41 41.4	-3.2
AFI				Sn	Sn	14 41 41.9	-2.7
RAR	Rarotonga	14.06	117	LR	LR	14 49 16.0	
	comp=Z,219nm,18.1s,baz=295,slow=36						
DZM	Mont Dzumac	20.49	247	P	P	14 45 28.3	-0.1
	2.9nm,0.7s,baz=101,slow=19,SNR=2.7						
DZM				LR	LR	14 52 00.5	
	comp=Z,102nm,18.3s,baz=67,slow=33						
DZM	Mont Dzumac	20.49	247	*e*P	Pn	14 45 34.5	+3.8
	70nm,1.0s						
DZM				*e*LR	LR	14 50 39.3	
	165nm,26.4s						
PPT2	Papeete2	22.75	99	*e*LR	LR	14 51 11.2	
	115nm,24.2s						
TBI	Tubuai	23.78	114	*e*LR	LR	14 51 29.9	
	191nm,29.5s						
TBI	Tubuai	23.78	114	*e*T	T	15 10 08.5	
	18nm,0.3s						
URZ	Urewera	24.54	199	P	P	14 46 08.3	-1.3
	18nm,0.6s,baz=303,slow=6.3,SNR=18						
HNR	Honiara	26.87	279	LR	LR	14 55 11.6	
	comp=Z,81nm,21.7s,baz=144,slow=32						
RKT	Rikitea	36.84	108	*e*T	T	15 26 27.5	
	5.8nm,0.3s						
PMG	Port Moresby	39.15	274	LR	LR	15 01 51.7	
	comp=Z,46nm,20.9s,baz=152,slow=32						
STKA	Stephens Creek	44.34	240	P	P	14 48 58.6	-1.6
	1.0nm,0.5s,baz=98,slow=12,SNR=3.5						
WRAB	Tennant Creek	50.11	257	*e*P	P	14 49 44.5	-0.9
	1.5nm,0.7s						
WRA	Warramunga Arr	50.12	257	P	P	14 49 44.0	-1.5
	1.0nm,0.6s,baz=91,slow=7.0,SNR=15						
ASAR	Alice Springs	50.40	252	P	P	14 49 46.0	-1.6
	2.5nm,0.6s,baz=90,slow=7.6,SNR=70						
ASAR				LR	LR	15 09 42.4	
	comp=Z,39nm,18.7s,baz=100,slow=34						
FITZ	Fitzroy Crossi	58.48	258	LR	LR	15 14 04.3	
	comp=Z,44nm,19.3s,baz=82,slow=34						
SBA	Scott Base	63.48	185	*e*P	P	14 51 20.3	+1.0
	4.0nm,0.8s						
VNDA	Vanda	63.61	186	P	P	14 51 20.7	+0.6
	3.1nm,0.9s,baz=4.0,slow=7.6,SNR=13						
DAV	Davao City (W)	64.60	286	LR	LR	15 18 23.1	
	comp=Z,18nm,18.1s,baz=111,slow=35						
MJAR	Matsushiro Arr	68.92	320	LR	LR	15 17 03.4	
	comp=Z,12nm,21.7s,baz=120,slow=32						
ASAJ	Asahikawa	71.48	328	LR	LR	15 16 49.8	
	comp=Z,14nm,21.9s,baz=178,slow=30						
YBH	Yreka Blue Hor	73.29	37	LR	LR	15 16 55.7	
	comp=Z,37nm,21.2s,baz=224,slow=30						
NVAR	Mina Array Bea	74.02	42	P	P	14 52 26.6	+0.8
	0.1nm,0.3s,baz=224,slow=7.6,SNR=3.3						
NVAR				LR	LR	15 19 23.6	
	comp=Z,58nm,18.3s,baz=166,slow=31						
QSPA	South Pole Qui	74.86	180	P	P	14 52 30.1	-0.1
	9.5nm,1.0s,baz=320,slow=7.9,SNR=18						
QSPA	South Pole Qui	74.86	180	*e*P	P	14 52 30.0	-0.1
	71nm,1.2s						
KSRS	Korea Array	76.17	315	LR	LR	15 25 26.4	
	comp=Z,11nm,18.2s,baz=88,slow=35						
HLID	Hailey	79.31	39	*e*P	P	14 52 56.9	+1.4
MA2	Magadan	80.03	342	LR	LR	15 25 11.9	
	comp=Z,9.8nm,19.7s,baz=202,slow=33						
TXAR	Lajitas Array	80.30	56	P	P	14 53 02.1	+1.0
	0.6nm,0.9s,baz=238,slow=7.2,SNR=5.7						
TXAR				LR	LR	15 22 50.6	
	comp=Z,24nm,18.1s,baz=0.0,slow=31						
ANMO	Albuquerque	80.49	50	P	P	14 53 03.3	+1.2
	0.5nm,0.4s,baz=194,slow=5.1,SNR=3.7						
PDAR	Pinedale Array	81.95	42	P	P	14 53 10.4	+0.7
	0.3nm,0.6s,baz=207,slow=3.0,SNR=4.8						
ILAR	Eielson Array	82.19	11	P	P	14 53 12.2	+2.0
	0.2nm,0.7s,baz=235,slow=6.7,SNR=4.6						
MAW	Mawson	88.07	199	P	P	14 53 39.6	-0.1
	3.8nm,0.7s,baz=130,slow=9.4,SNR=5.4						
CMAR	Chiang Mai Arr	92.76	288	LR	LR	15 32 35.2	
	comp=Z,5.0nm,20.2s,baz=285,slow=34						
ULM	Lac du Bonnet	93.62	39	LR	LR	15 31 06.5	
	comp=Z,29nm,19.1s,baz=300,slow=32						
SONM	Songino Array	94.84	318	LR	LR	15 31 23.6	
	comp=Z,17nm,21.4s,baz=108,slow=32						
GERES	GERESS Array B	145.96	352	PKPbc	PKPab	15 00 30.6	+0.8
	0.2nm,0.4s,baz=132,slow=1.5,SNR=2.7						
BRTR	Keskin Array B	146.13	321	PKPbc	PKPab	15 00 31.7	+0.8
	1.8nm,0.8s,baz=110,slow=2.5,SNR=7.4						

DJA 01 14:42:01.5±0.6, **10°S**±8°×**11°9E**±°, **h65**km±30km, **M3.5**/7, **MLv3.5**/7, **South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSI	Waingapu	1.55	73	P	Pn	14 42 27.4	+0.4
PLAI	Plampang	1.63	322	P	Pn	14 42 27.7	-0.4
PLAI				S	Sn	14 42 48.3	+0.2
TWSI	Taliwang, Sumb	2.33	306	P	Pn	14 42 37.4	-0.1
EDFI	Ende, Flores	3.17	65	P	Pn	14 42 48.8	-0.3
IGBI	Denpasar	3.82	289	P	Pn	14 42 57.7	-0.2
BKSI	Bulukumba	4.95	16	P	Pn	14 43 13.6	+0.3

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*ISCJB **01** 14:45:07.6±0.5, 32°.22N±0°.02×115°.24W±0°.03, h12km±3km, Error ellipse: s-maj=3.7km s-min=3.5km az=143.6*

*NEIC **01** 14:45:09.1±0.0, 32°.20N×115°.26W, h6km, ML2.9(PAS), ML3.2(ECX), After ECX.*

*ECX **01** 14:45:09.1±0.5, 32°.20N×115°.26W, h6km, MD3.0, ML3.2*

*MEX **01** 14:45:09.9±0.5, 32°.32N×115°.14W, h20km±9km, MD3.8*

ISC 01 14:45:07.5±0.9, **32°.21N**±0°.02×**115°.27W**±0°.02, **h14**km±7km, **n44**, σ**0ˢ.99**/65, **3C-1D**, **California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBIG	Mexicali	0.20	18	*e*P	Pb	14 45 13.3	+0.3
MBIG	Mexicali	0.20	18	*e*P	Pb	14 45 13.1	+0.1
MBIG				*e*S	Sg	14 45 15.1	-0.2
CPBX	Cerro Prieto	0.20	353	*e*P	Pg	14 45 12.2	0.0
CPBX				*e*S	Sg	14 45 15.6	+0.3
CPBX				*e*		14 45 17.2	
CPBX				IAML		14 45 17.2	
	comp=N,14μm,0.2s						
ERPC	Ernies Place	0.62	328	*e*P	Pb	14 45 20.6	+0.5
WESC	Westside Schoo	0.67	325	*e*P	Pb	14 45 21.3	+0.5
YUH	Yuha Desert	0.70	308	⇑*i*P	Pg	14 45 21.5	+0.3
YMD	Yuma Desert	0.70	61	⇑*i*P	Pb	14 45 21.5	0.0
ECBX	El Chinero	0.76	166	*e*P	Pg	14 45 22.2	-0.1
ECBX				*e*S	Sb	14 45 32.7	0.0
ECBX				⇓*e*		14 45 34.1	
ECBX				IAML		14 45 34.1	
	comp=N,827nm,0.3s						
RMX	La Rumorosa	0.78	300	*e*P	Pg	14 45 22.1	-0.7
RMX				*e*S	Sg	14 45 32.0	-1.1
RMX				IAML		14 45 33.6	
	comp=E,689nm,0.2s						
RMX				*e*		14 45 33.6	
IKP	In-Ko-Pah, Jac	0.83	302	⇑*i*P	Pg	14 45 23.9	+0.3
GLA	Glamis	0.92	24	*e*Pg	Pg	14 45 24.3	-1.0
GLA				*e*Sn	Sg	14 45 35.2	-2.1
ZAX	El Zacaton	1.10	231	*e*P	Pb	14 45 28.5	+0.2
ZAX				*e*S	Sg	14 45 43.3	+0.2
SPIG	San Pedro Mart	1.18	188	*e*P	Pb	14 45 29.7	-0.1
SPIG	San Pedro Mart	1.18	188	*e*P	Pb	14 45 29.6	-0.1
SPIG				*e*S	Sg	14 45 45.5	0.0
SPIG	San Pedro Mart	1.18	188	*e*P	Pb	14 45 29.6	-0.1
SPIG				*e*S	Sg	14 45 45.5	0.0
SPX	San Pedro Mart	1.18	188	*e*P	Pn	14 45 29.9	+0.1
SPX	San Pedro Mart	1.18	188	*e*P	Pn	14 45 29.9	+0.1
SPX				*e*S	Sg	14 45 45.6	0.0
CBX	Cerro Bola	1.18	275	*e*P	Pn	14 45 29.9	+0.2
CBX				*e*S	Sg	14 45 45.8	+0.1
CBX				IAML		14 45 47.2	
	comp=N,906nm,0.4s						
CBX				*e*		14 45 47.2	
CBX	Cerro Bola	1.18	275	*e*P	Pn	14 45 29.8	+0.2
CBX				*e*S	Sb	14 45 45.0	0.0
CBX	Cerro Bola	1.18	275	*e*P	Pn	14 45 29.8	+0.2
TJIG	Tijuana	1.21	281	*e*P	Pn	14 45 29.7	-0.2
TJIG				*e*S	Sb	14 45 45.4	-0.1
ECNX	Esteban Cantu	1.25	244	*e*P	Pn	14 45 30.9	+0.3
BAR	Barrett	1.27	292	*e*P	Pn	14 45 30.9	+0.1
BAR	Barrett	1.27	292	*e*Pn	Pn	14 45 30.7	-0.1
BAR				*e*Sn	Sb	14 45 47.3	-0.1
PBX	Punta Banda	1.32	250	*e*P	Pn	14 45 31.8	+0.3
113A	Mohawk Valley,	1.39	66	*e*Pn	Pn	14 45 31.7	-0.7
113A				*e*Sn	Sn	14 45 48.8	-1.7
HWB	Hans Werner Br	1.64	300	*e*Pn	Pb	14 45 38.3	+0.8
HWB				*e*Sn	Sb	14 45 59.4	+1.4
Y12C	Blythe	1.66	22	*e*Pn	Pg	14 45 39.0	-0.3
CPE	Camp Elliot	1.69	294	*e*Pn	Pn	14 45 36.8	+0.3
CPE				*e*Sn	Sb	14 46 00.1	+0.8
CPE				*e*Sn	Sg	14 46 00.5	-1.3
XPFO	Piæon Flat	1.71	325	*e*Pn	Pn	14 45 35.8	-1.1
XPFO				*e*Pg	Pb	14 45 36.0	-2.8
XPFO				*e*Sn	Sb	14 46 00.7	+0.5
PFO	Pinyon Flats O	1.71	325	*e*Pn	Pg	14 45 41.0	+0.5
PFO				*e*Sn	Sb	14 46 00.6	+0.3
SNDA	J Saunders Pla	1.75	320	*e*Pn	Pn	14 45 37.1	-0.4
SNDA				*e*Sn	Sg	14 46 04.3	+0.5
CRY	Cary Ranch	1.83	318	*e*Sn	Sg	14 46 05.5	-0.8
Y14A	Wickenburg	2.57	47	*e*Pn	Pn	14 45 51.1	+2.4
W13A	Hualapai Mount	3.10	22	*e*Pn	Pn	14 45 57.0	+0.8
TUC	Tucson	3.80	87	*e*Pn	Pn	14 46 05.5	-0.2
X16A	Lo Mia Camp, P	3.89	55	*e*Pn	Pn	14 46 07.3	+0.3
SHPR	Sheep Range	4.28	1	*e*Pn	Pn	14 46 13.7	+1.3
WUAZ	Wupatki	4.62	43	*e*Pn	Pn	14 46 18.9	+1.9
U15A	North Rim	4.87	30	*e*Pn	Pn	14 46 22.5	+1.9
X18A	Snowflake	5.02	61	*e*Pn	Pn	14 46 23.2	+0.8
LCMT	Little Creek M	5.07	19	*e*Pn	Pn	14 46 25.4	+2.3
KNB	Kanab	5.20	22	*e*Pn	Pn	14 46 27.3	+2.3
W18A	Petrified Fore	5.45	56	*e*Pn	Pn	14 46 30.6	+2.2

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*NIED **01** 15:13:00, 36°.70N×141°.50E, h44km, Mw3.5 Best double couple: $M_0$2.36000×10^{14} NP1:ϕ_s221.00000°, δ22.00000°, λ145.00000°. NP2:ϕ_s344.00000°, δ78.00000°, λ72.00000°.*

*JMA **01** 15:13:25.9±0.1, 36°.68N×141°.51E, h40km±3km, M3.5*

*IDC **01** 15:13:25.5±2.8, 36°.58N×141°.77E, h44km±24km, mb3.2/4, mb1 3.4/7, mb1mx3.1/64, mbtmp3.5/7, ML3.2/3, Error ellipse: s-maj=24.0km s-min=13.5km az=73.0*

ISC 01 15:13:22.0±2.2, **36°.64N**±0°.05×**141°.73E**±0°.08, **h14**km±11km, **n25**, σ**1ˢ.38**/26, **mb3.5**/4, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.88	302	P	Pg	15 13 39.5	+0.4
ONAJ				*e*S	Sg	15 13 49.3	-1.4
JHO	Hitachi	0.94	269	P	Pb	15 13 40.0	0.0
JHYU	Hitachinakayam	0.97	253	P	Pn	15 13 41.2	0.0
JHYU				S	Sb	15 13 52.3	-0.9
JFK	Kawauchi	1.00	317	P	Pb	15 13 41.5	+0.3
JFFD	Fukushimafurud	1.04	296	P	Pb	15 13 41.5	-0.4
JFT	Otama	1.42	309	P	Pb	15 13 48.4	+0.1
JFT				*e*S	Sn	15 14 04.3	-1.7
JMM	Marumori	1.44	329	P	Pn	15 13 48.1	+0.5
JMM				S	Sn	15 14 04.6	-1.7
JFY	Yanaizu	1.80	296	P	Pn	15 13 53.4	+0.8
JIO	Ouri	1.84	351	P	Pn	15 13 54.3	+1.1
JOU	Okura	1.92	334	P	Pn	15 13 56.1	+1.7
JKT	Katashina	2.00	274	P	Pn	15 13 56.2	+0.7
MJAR	Matsushiro Arr	2.84	269	P	Pn	15 14 08.3	+1.4
	5.2nm,0.3s,baz=86,slow=14,SNR=84						
MJAR				S	Sn	15 14 42.3	+1.4
	4.0nm,0.3s,baz=273,slow=32,SNR=5.8						
MAT	Matsushiro	2.84	269	P	Pn	15 14 08.8	+1.9
MAT				S	Sn	15 14 43.3	+2.3
JHJ	Hachijo jima 2	3.86	205	P	Pn	15 14 23.3	+2.4
	6.4nm,0.3s,baz=72,slow=20,SNR=5.0						
JHJ				S	Sn	15 15 04.2	-1.8
	5.9nm,0.3s,baz=38,slow=19,SNR=2.1						
ASAJ	Asahikawa	7.50	5	P	Pn	15 15 12.9	+2.0
	0.3nm,0.3s,baz=243,slow=6.8,SNR=5.8						
H11N2	WAKE ISLAND Hy	27.73	121	T	T	15 48 29.9	
	baz=313,slow=75,SNR=34						
H11N1	WAKE ISLAND Hy	27.73	121	T	T	15 48 32.2	
	baz=313,slow=75,SNR=37						
H11N3	WAKE ISLAND Hy	27.74	121	T	T	15 48 34.6	
	baz=313,slow=75,SNR=27						
SONM	Songino Array	28.22	304	P	P	15 19 14.1	-0.3
	0.5nm,0.5s,baz=98,slow=8.9,SNR=2.3						
H11S1	WAKE ISLAND Hy	28.43	123	T	T	15 49 28.2	
	baz=315,slow=76,SNR=19						
H11S3	WAKE ISLAND Hy	28.43	123	T	T	15 49 27.0	
	baz=315,slow=76,SNR=17						
H11S2	WAKE ISLAND Hy	28.45	123	T	T	15 49 28.5	
	baz=315,slow=76,SNR=20						
ZALV	Zalesovo Beam	42.37	313	P	P	15 21 14.5	-1.0
	0.4nm,0.4s,baz=108,slow=8.0,SNR=2.6						
KURBB	Kurchatov Arra	46.45	308	P	P	15 21 48.1	-0.1
	0.3nm,0.6s,baz=78,slow=7.2,SNR=4.0						
WRA	Warramunga Arr	56.70	188	P	P	15 23 05.4	+0.2
	0.2nm,0.7s,baz=6.0,slow=7.3,SNR=3.0						

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*UPP **01** 15:25:20.4, 67°.83N×20°.21E, h0km, ML1.5, Suspected Mining explosion.*

*CSEM **01** 15:25:20.4, 67°.83N×20°.21E, h0km, ML1.5, Suspected Mining explosion.*

HEL 01 15:25:20.9±0.1, **67°.85N**×**20°.20E**, **h0**km, **ML1.1**, **ML1.4**(UPP), **Explosion**, **Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.12	27	*i* P	Pg	15 25 22.9	-0.2
KUA				*i* S	Sg	15 25 24.7	+0.1
KUA	Kurravaara	0.12	27	P	Pg	15 25 23.2	+0.1
KUA				S	Sg	15 25 25.4	+0.8
KUA	Kurravaara	0.12	27	P	Pg	15 25 22.9	-0.2
KUA				S	Sg	15 25 24.7	+0.1
RATU	Laukkuluspa	0.23	263	*i* P	Pg	15 25 25.3	-0.1
RATU	Laukkuluspa	0.23	263	P	Pg	15 25 25.2	-0.1
RATU	Laukkuluspa	0.23	263	P	Pg	15 25 25.3	0.0
NIKU	Nikkaluokta	0.44	273	*i* P	Pg	15 25 28.7	-0.6
NIKU	Nikkaluokta	0.44	273	P	Pg	15 25 28.9	-0.4
NIKU	Nikkaluokta	0.44	273	P	Pg	15 25 28.7	-0.6
LANU	Lannavaara	0.70	73	*e*P	Pg	15 25 33.7	-0.6
LANU				*e*S	Sg	15 25 43.5	+0.1
LANU	Lannavaara	0.70	73	P	Pg	15 25 33.8	-0.6
LANU	Lannavaara	0.70	73	*e*P	Pg	15 25 33.7	-0.7
LANU				*e*S	Sg	15 25 43.5	0.0
KIF	Kilpisjarvi	1.18	11	*e*PN	Pn	15 25 44.8	+0.2
KIF				MSG		15 25 55.9	
	comp=Z,1.2nm,0.2s						
KIF				*e*SB	Sb	15 26 00.2	+0.3
KIF	Kilpisjarvi	1.18	11	*e*Pn	Pn	15 25 44.8	+0.2
KIF				*e*Sb	Sb	15 26 00.2	+0.3
PAJU	Pajala	1.40	125	*e*P	Pg	15 25 45.4	-2.3
PAJU	Pajala	1.40	125	P	Pg	15 25 45.5	-2.2
PAJU	Pajala	1.40	125	P	Pg	15 25 45.4	-2.3
HEF	Hetta	1.41	65	*e*PN	Pn	15 25 47.4	-0.4
HEF				MSG		15 26 02.9	
	comp=Z,1.4nm,0.2s						
HEF				*e*SN	Sg	15 26 06.2	+0.1
HEF	Hetta	1.41	65	*e*Pn	Pn	15 25 47.4	-0.4
HEF				*e*Sn	Sg	15 26 06.2	0.0
KALU	Kalix	2.36	147	*e*PB	Pn	15 26 01.8	+1.0
	baz=328						
KALU				*e*SG	Sb	15 26 34.8	+1.0
KALU	Kalix	2.36	147	*e*Pb	Pn	15 26 01.8	+1.0
KALU				*e*Sg	Sb	15 26 34.8	+1.0
TOF	Tornio	2.41	136	*e*PG	Pb	15 26 03.8	-1.2
TOF				*e*SG	Sb	15 26 35.4	+0.2
TOF	Tornio	2.41	136	*e*Pg	Pb	15 26 03.8	-1.2
TOF				*e*Sg	Sb	15 26 35.4	+0.2
SGF	Sodankyl	2.45	97	*e*SG	Sb	15 26 35.5	-1.0
SGF	Sodankyl	2.45	97	*e*Sg	Sb	15 26 35.5	-1.0
ARE0	ARCESS Array S	2.57	46	*e*PG	Pb	15 26 06.4	-1.4
ARE0				*e*SG	Sb	15 26 39.1	-0.9
RNF	Rovaniemi	2.58	116	*e*PB	Pn	15 26 05.6	+1.7
	baz=302						
RNF				*e*SB	Sb	15 26 38.7	-1.6
RNF	Rovaniemi	2.58	116	*e*Pb	Pn	15 26 05.6	+1.7
RNF				*e*Sb	Sb	15 26 38.7	-1.6

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*IDC **01** 15:30:24.4±1.9, 30°.38S×177°.35W, h0km, mb4.1/5, mb1 4.3/5, mb1mx3.7/38, mbtmp4.1/5, Error ellipse: s-maj=42.3km s-min=30.2km az=114.0*

*NEIC **01** 15:30:25.8±1.5, 30°.29S×177°.33W, h10km, mb4.1/1, Error ellipse: s-maj=31.4km s-min=20.2km az=109.0*

ISC 01 15:30:29.5±1.8, **30°.2S**±0°.1×**177°.4W**±0°.3, **h33**km, **n12**, σ**0ˢ.69**/14, **mb4.2**/6, **Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.04	331	Pn	Pb	15 30 48.7	-0.3
	151nm,0.3s,baz=18,slow=21,SNR=14						
RAO				Sn	Sn	15 31 01.0	-0.1
	2μm,0.3s,baz=32,slow=19,SNR=30						
RAO	Raoul Island	1.04	331	*e*Pn	Pn	15 30 48.0	+0.3
RAO				Sn	Sn	15 31 01.0	-0.1
URZ	Urewera	9.28	208	Sn	Sn	15 34 15.6	-8.6
	0.5nm,0.3s,baz=189,slow=19,SNR=2.8						
CTA	Charters Tower	34.32	278	P	P	15 37 14.3	+1.1
	2.5nm,0.5s,baz=91,slow=10,SNR=7.2						
STKA	Stephens Creek	35.08	256	P	P	15 37 19.9	+0.3
	0.7nm,0.5s,baz=98,slow=11,SNR=4.4						
ASAR	Alice Springs	43.68	266	P	P	15 38 30.4	-1.1
	0.5nm,0.4s,baz=106,slow=7.2,SNR=20						
ASAR				PcP	PcP	15 40 17.8	-0.5
	0.3nm,1.0s,baz=129,slow=4.1,SNR=2.7						
WRAB	Tennant Creek	44.65	272	*e*P	P	15 38 39.1	-0.1
	1.5nm,0.5s						
WRA	Warramunga Arr	44.65	272	P	P	15 38 37.9	-1.4
	1.5nm,0.3s,baz=110,slow=8.1,SNR=76						
FITZ	Fitzroy Crossi	52.92	269	P	P	15 39 42.6	-0.2
	8.2nm,1.4s,baz=104,slow=4.2,SNR=3.0						
KURK	Kurchatov	121.29	314	PKP	PKPdf	15 49 18.8	+0.1
KURBB	Kurchatov Arra	121.33	314	PKP	PKPdf	15 49 18.8	0.0
	0.2nm,0.6s,baz=78,slow=0.4,SNR=3.5						
FINES	FINESS Array B	145.12	340	PKPbc	PKPdf	15 50 03.0	+0.3
	1.7nm,0.5s,baz=57,slow=5.1,SNR=15						

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*CSEM **01** 16:02:37.8±0.3, 39°.00N×43°.71E, h2km, ML3.7, Error ellipse: s-maj=6.5km s-min=4.7km az=106.0*

*DDA **01** 16:02:37.1, 39°.01N×43°.67E, h5km, Ml3.7*

*ISK **01** 16:02:37.2, 38°.98N×43°.68E, h4km, ML3.5/16*

ISC 01 16:02:38.0±1.0, **39°.01N**±0°.02×**43°.67E**±0°.02, **h3**km±8km, **n86**, σ**1ˢ.16**/111, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VMUR	Van-Muradiye	0.08	254	*i* P	Pg	16 02 39.1	-0.5
VMUR				*i* S	Sg	16 02 40.7	-0.1
VMUR	Van-Muradiye	0.08	254	P	Pg	16 02 39.1	-0.5
VMUR				S	Sg	16 02 40.7	-0.1
CLDR	Caldiran	0.24	56	PG	Pg	16 02 42.4	-0.1
CLDR				SG	Sg	16 02 46.8	+1.1
CLDR	Caldiran	0.24	56	*i* P	Pg	16 02 42.5	-0.1
CLDR				*i* S	Sg	16 02 46.8	+1.1
CLDR	Caldiran	0.24	56	P	Pg	16 02 42.5	-0.1
CLDR				S	Sg	16 02 46.8	+1.1
ERCV	ERCIS-VAN	0.26	272	PG	Pg	16 02 42.5	-0.4
ERCV				SG	Sg	16 02 47.4	+1.1
ERCV	ERCIS-VAN	0.26	272	*e*Pg	Pg	16 02 42.5	-0.4
ERCV				*e*Sg	Sg	16 02 47.4	+1.1
VANB	Van	0.47	208	PG	Pb	16 02 47.8	-1.1
VANB				SG	Sb	16 02 55.8	-0.5
VANB	Van	0.47	208	*e*Pg	Pb	16 02 47.8	-1.1
VANB				*e*Sg	Sb	16 02 55.8	-0.5
TVAN	Van	0.52	203	*i* P	Pb	16 02 48.2	-1.7
TVAN				*i* S	Sb	16 02 57.3	-0.7
TVAN	Van	0.52	203	P	Pb	16 02 48.2	-1.7
TVAN				S	Sb	16 02 57.3	-0.7
ADCV	BITLIS_Adilcev	0.76	255	*i* P	Pg	16 02 52.0	-0.6
ADCV				*i* S	Sb	16 03 04.1	-0.7
ADCV	BITLIS_Adilcev	0.76	255	P	Pg	16 02 52.0	-0.6
ADCV				S	Sb	16 03 04.1	-0.7
TUTA	Tutak	0.77	301	*i* P	Pg	16 02 52.2	-0.6
TUTA				*i* S	Sg	16 03 03.3	+0.6
TUTA	Tutak	0.77	301	P	Pg	16 02 52.2	-0.6
TUTA				S	Sg	16 03 03.3	+0.6
GEVA	Gevas	0.84	214	*i* P	Pg	16 02 53.4	-0.8
GEVA				*i* S	Sn	16 03 10.3	+0.4
GEVA	Gevas	0.84	214	P	Pg	16 02 53.4	-0.8
IGDI	IGDIR	0.91	20	*i* P	Pg	16 02 55.1	-0.4
IGDI				*i* S	Sn	16 03 10.5	-1.0
TASB	TASBURUN-IGDIR	1.07	24	PN	Pn	16 02 58.9	-1.0

TASB				SN	Sn	16 03 14.5	-0.8
TASB	**TASBURUN-IGDIR**	**1.07**	**24**	ePn	**Pn**	**16 02 58.9**	**-1.0**
TASB				eSn	Sn	16 03 14.5	-0.8
EATA	**Eleskirt**	**1.25**	**313**	iP	**Pg**	**16 03 00.8**	**-1.1**
EATA				iS	**Sn**	**16 03 19.2**	**-0.8**
EATA	**Eleskirt**	**1.25**	**313**	P	**Pg**	**16 03 00.8**	**-1.1**
EATA				S	**Sn**	**16 03 19.2**	**-0.8**
EKAR	**Karacoban**	**1.27**	**282**	iP	**Pn**	**16 03 02.5**	**-0.3**
EKAR				iS	**Sn**	**16 03 23.6**	**+3.0**
EKAR	**Karacoban**	**1.27**	**282**	P	**Pn**	**16 03 02.5**	**-0.3**
GURO	**Guroymak-BITLI**	**1.36**	**251**	PN	**Pb**	**16 03 03.6**	**-0.5**
GURO	**Guroymak-BITLI**	**1.36**	**251**	ePn	**Pb**	**16 03 03.6**	**-0.5**
GNI	**Garni**	**1.41**	**36**	PN	**Pg**	**16 03 04.5**	**-0.5**
GNI	**Garni**	**1.41**	**36**	ePn	**Pg**	**16 03 04.5**	**-0.5**
DIGO	**Kars**	**1.42**	**351**	iP	**Pg**	**16 03 04.8**	**-0.4**
DIGO	**Kars**	**1.42**	**351**	P	**Pg**	**16 03 04.8**	**-0.4**
YOVA	**Hakkari_Yˆ…kse**	**1.50**	**161**	iP	**Pb**	**16 03 05.6**	**-1.0**
YOVA				iS	**Sg**	**16 03 29.6**	**+3.3**
YOVA	**Hakkari_Yˆ…kse**	**1.50**	**161**	P	**Pb**	**16 03 05.6**	**-1.0**
EAK	**Akyaka**	**1.67**	**358**	iP	**Pg**	**16 03 10.9**	**+0.8**
EAK	**Akyaka**	**1.67**	**358**	P	**Pg**	**16 03 10.9**	**+0.8**
SRTM	**Siirt_Merkez**	**1.71**	**234**	iP	**Pb**	**16 03 09.0**	**-1.0**
SRTM				iS	**Sg**	**16 03 37.3**	**+4.5**
SRTM	**Siirt_Merkez**	**1.71**	**234**	P	**Pb**	**16 03 09.0**	**-1.0**
HOMI	**Horasan**	**1.71**	**308**	iP	**Pg**	**16 03 10.9**	**+0.2**
VRTB	**Varto-Mus**	**1.73**	**276**	PN	**Pb**	**16 03 09.4**	**-1.0**
VRTB	**Varto-Mus**	**1.73**	**276**	iP	**Pb**	**16 03 09.5**	**-1.0**
VRTB	**Varto-Mus**	**1.73**	**276**	P	**Pb**	**16 03 09.5**	**-1.0**
CUKT	**Cukurca**	**1.76**	**182**	PN	**Pn**	**16 03 08.7**	**-0.8**
CUKT	**Cukurca**	**1.76**	**182**	iP	**Pn**	**16 03 07.4**	**-2.1**
CUKT				iS	**Sg**	**16 03 38.4**	**+3.8**
CUKT	**Cukurca**	**1.76**	**182**	P	**Pn**	**16 03 07.4**	**-2.1**
CUKT	**Cukurca**	**1.76**	**182**	ePn	**Pn**	**16 03 08.7**	**-0.8**
SIRT	**Sirnak**	**1.79**	**213**	PN	**Pn**	**16 03 09.3**	**-0.6**
SIRT	**Sirnak**	**1.79**	**213**	ePn	**Pn**	**16 03 09.3**	**-0.6**
SIRN	**S˜–rnak**	**1.81**	**214**	iP	**Pb**	**16 03 10.7**	**-1.0**
SIRN	**S˜–rnak**	**1.81**	**214**	P	**Pb**	**16 03 10.7**	**-1.0**
SENK	**Senkaya-Erzuru**	**1.85**	**327**	PN	**Pb**	**16 03 11.4**	**-1.2**
SENK	**Senkaya-Erzuru**	**1.85**	**327**	ePn	**Pb**	**16 03 11.4**	**-1.2**
BNGL	**BINGOL**	**1.96**	**269**	iP	**Pg**	**16 03 15.8**	**+0.2**
ERZM	**Erzurum**	**1.99**	**297**	iP	**Pb**	**16 03 14.9**	**-0.1**
ERZM	**Erzurum**	**1.99**	**297**	P	**Pb**	**16 03 14.9**	**-0.1**
SVAN	**Silvan-Diyarba**	**2.12**	**247**	PN	**Pn**	**16 03 14.8**	**+0.5**
SVAN	**Silvan-Diyarba**	**2.12**	**247**	iP	**Pb**	**16 03 16.4**	**-0.6**
SVAN	**Silvan-Diyarba**	**2.12**	**247**	ePn	**Pn**	**16 03 14.8**	**+0.5**
SVAN	**Silvan-Diyarba**	**2.12**	**247**	P	**Pb**	**16 03 16.4**	**-0.6**
BTMN	**Batman**	**2.19**	**240**	iP	**Pb**	**16 03 18.3**	**0.0**
BTMN	**Batman**	**2.19**	**240**	P	**Pb**	**16 03 18.3**	**0.0**
BGD	**Bogdanovka**	**2.25**	**359**	P	**Pg**	**16 03 20.5**	**-0.6**
BNGB	**Bingˆ¶l**	**2.33**	**270**	PN	**Pn**	**16 03 17.7**	**+0.4**
BGOL	**Bingol**	**2.33**	**270**	iP	**Pb**	**16 03 19.4**	**-1.3**
BGOL	**Bingol**	**2.33**	**270**	P	**Pb**	**16 03 19.4**	**-1.3**
DDEM	**Demirkent**	**2.39**	**323**	iP	**Pg**	**16 03 22.2**	**-1.6**
AKH	**Akhalkalaki**	**2.40**	**357**	PN	**Pn**	**16 03 19.3**	**+1.0**
AKH	**Akhalkalaki**	**2.40**	**357**	P	**Pb**	**16 03 22.3**	**+0.4**
AKH	**Akhalkalaki**	**2.40**	**357**	ePn	**Pn**	**16 03 19.3**	**+1.0**
YEDI	**Yedisu-Bingol**	**2.46**	**281**	PN	**Pn**	**16 03 19.5**	**+0.3**
YEDI	**Yedisu-Bingol**	**2.46**	**281**	ePn	**Pn**	**16 03 19.5**	**+0.3**
BINT	**Bingol**	**2.48**	**268**	ePn	**Pn**	**16 03 17.7**	**-1.7**
DBAD	**Bademkaya**	**2.51**	**324**	iP	**Pb**	**16 03 23.5**	**-0.3**
ARTV	**Artvin**	**2.55**	**329**	iP	**Pg**	**16 03 25.2**	**-1.6**
HANI	**Diyarbakir_Han**	**2.62**	**258**	iP	**Pb**	**16 03 26.3**	**+0.6**
TBLG	**Delisi**	**2.84**	**16**	P	**Pg**	**16 03 31.8**	**-0.6**
BCA	**Borcka**	**2.89**	**328**	PN	**Pn**	**16 03 26.3**	**+1.4**
BCA	**Borcka**	**2.89**	**328**	ePn	**Pn**	**16 03 26.3**	**+1.4**
MAZI	**Mazidag**	**2.97**	**240**	PN	**Pn**	**16 03 26.9**	**+0.8**
MAZI	**Mazidag**	**2.97**	**240**	ePn	**Pn**	**16 03 26.9**	**+0.8**
DDFL	**Dedoflistskaro**	**3.07**	**37**	P	**Pg**	**16 03 38.7**	**+1.8**
DUS	**Dusheti**	**3.18**	**14**	P	**Pg**	**16 03 37.0**	**-1.8**
PTK	**Pertek**	**3.33**	**269**	PN	**Pn**	**16 03 31.8**	**+0.6**
PTK	**Pertek**	**3.33**	**269**	ePn	**Pn**	**16 03 31.8**	**+0.6**
URFA	**Urfa**	**4.12**	**249**	PN	**Pn**	**16 03 43.2**	**+1.2**
URFA	**Urfa**	**4.12**	**249**	ePn	**Pn**	**16 03 43.2**	**+1.2**
MALT	**Malatya**	**4.16**	**262**	PN	**Pn**	**16 03 43.4**	**+0.9**
MALT	**Malatya**	**4.16**	**262**	ePn	**Pn**	**16 03 43.4**	**+0.9**

ISCJB ***01*** *16:17:50.6±0.6, 31°.49S±0°.05×138°.78E±0°.05, h10^{km}, Error ellipse: s-maj=7.2km s-min=6.1km az=33.8*
AUST ***01*** *16:17:51.8±0.0, 31°.57S×138°.81E, h10^{km}, Error ellipse: s-maj=0.2km s-min=0.1km az=5.0*
IDC ***01*** *16:17:53.5±4.9, 31°.38S×138°.86E, h0^{km}, mb1 3.2/2, mb1mx3.1/38, mbtmp2.9/2, ML2.2/3, Error ellipse: s-maj=87.2km s-min=17.4km az=31.0*
ISC 01 16:17:52.6±1.0, **31°.56S**±0°.07×**138°.78E**±0°.05, **h10**^{km}**, n9, σ1**^{s}**.05**/14**, South Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HTT	**Hallett**	**1.86**	**176**	P	**Pn**	**16 18 25.2**	**+0.6**
	baz=1.9						
HTT				S	**Sn**	**16 18 47.2**	**-1.1**
	baz=1.9						
STKA	**Stephens Creek**	**2.42**	**98**	P	**Pn**	**16 18 32.1**	**-0.1**
	baz=2.4						
STKA				S	**Sn**	**16 19 01.8**	**+0.1**
	baz=2.4						
STKA	**Stephens Creek**	**2.42**	**98**	Pn	**Pn**	**16 18 34.2**	**+2.1**
	0.1nm,0.3s,baz=280,slow=10,SNR=5.9						
STKA				Sn	**Sn**	**16 19 00.8**	**-1.0**
	1.1nm,0.3s,baz=286,slow=13,SNR=6.6						
STKA				Lg	Lg	16 19 09.0	
	2.2nm,0.3s,baz=279,slow=19,SNR=9.5						
BBOO	**Buckleboo**	**2.62**	**241**	P	**Pn**	**16 18 34.9**	**-0.1**
	baz=2.6						
BBOO				S	**Sn**	**16 19 07.3**	**+0.4**
	baz=2.6						
ARPS	**Mount Arapiles**	**5.78**	**155**	P	**Pn**	**16 19 18.5**	**+0.1**
	baz=5.8						
CMSA	**Cobar Meteorol**	**5.90**	**92**	P	**Pn**	**16 19 19.8**	**-0.2**
	baz=5.9						
ASAR	**Alice Springs**	**8.98**	**330**	Pn	**Pn**	**16 20 02.8**	**+0.4**
	0.0nm,0.3s,baz=149,slow=13,SNR=3.4						
ASAR				Sn	**Sn**	**16 21 41.7**	**-1.9**
	0.1nm,0.3s,baz=154,slow=22,SNR=4.1						
FORT	**Forrest**	**9.22**	**272**	P	**Pn**	**16 20 06.2**	**+0.5**
	baz=9.2						
WRA	**Warramunga Arr**	**12.24**	**340**	Pn	**Pn**	**16 20 47.9**	**+0.8**
	0.0nm,0.3s,baz=161,slow=14,SNR=3.9						

AAE ***01*** *16:18:56.2±6.7, 14°.69N×42°.36E, h0^{km}±464^{km}*
BJI ***01*** *16:19:06.3, 12°.79N×41°.23E, h6^{km}, mb4.7/41, mB4.9/30, Ms4.7/17, Ms7 4.4/14*
DSN ***01*** *16:19:10.3±4.2, 13°.04N×41°.73E, h10^{km}, mb5.1/12, Error ellipse: s-maj=68.3km s-min=13.1km az=6.0*
DHMR ***01*** *16:19:11.4±1.7, 13°.14N×41°.90E, h12^{km}±17^{km}, ML4.9*
IDC ***01*** *16:19:12.1±0.5, 13°.26N×41°.74E, h0^{km}, mb4.3/30, mb1 4.4/34, mb1mx4.3/58, mbtmp4.3/34, ML3.9/4, MS3.9/36, Ms1 3.9/36, ms1mx3.8/53, Error ellipse: s-maj=13.2km s-min=8.9km az=64.0*
MOS ***01*** *16:19:12.5±1.0, 13°.34N×41°.71E, h12^{km}, mb5.0/31, MS4.1/7, Error ellipse: s-maj=10.3km s-min=5.5km az=88.7*
ARO ***01*** *16:19:12.2, 13°N±2°×4°2E±°, h8^{km}±1^{km}, Ml4.9*
ISCJB ***01*** *16:19:12.4±0.2, 13°.35N±0°.02×41°.77E±0°.02, h10^{km}, mb4.6/93, MS4.0/47, Error ellipse: s-maj=3.6km s-min=3.2km az=137.0*
CSEM ***01*** *16:19:13.6±0.2, 13°.26N×41°.79E, h10^{km}, mb4.6/37, Error ellipse: s-maj=7.8km s-min=4.8km az=7.0*
GCMT ***01*** *16:19:13.5±0.3, 13°.53N×41°.70E, h25^{km}±1^{km}, MW5.0/69, Moment Tensor Solution. s15,c18; s69,c103; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.53±.16; $M_{\theta\theta}$-1.83±.12; $M_{\phi\phi}$1.31±.14; $M_{r\theta}$-1.94±.26; $M_{\theta\phi}$-1.90±.08; $M_{\phi r}$1.00±.26; Best double couple: $M_0$3.32200×10^{16} NP1:ϕ_s287.00000°, δ83.00000°, λ138.00000°. NP2: ϕ_s23.00000°, δ49.00000°, λ10.00000°. Principal axes: T 3.3760, Plg34.0000°, Azm236.0000°; N -0.0990, Plg48.0000°, Azm99.0000°; P -3.2680, Plg22.0000°, Azm342.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC ***01*** *16:19:13.5±0.3, 13°.35N×41°.79E, h10^{km}, mb4.8/21 Error ellipse: s-maj=6.2km s-min=4.9km az=11.0*
ISC 01 16:19:13.7±0.3, **13°.27N**±0°.03×**41°.82E**±0°.03, **h10**^{km}**, n294, σ1**^{s}**.94**/325**, mb4.6**/94**, MS4.0**/48**, 21C-17D, Ethiopia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAOD	**Malaho**	**1.23**	**161**	eP	**Pb**	**16 19 36.7**	**-0.4**
LDLD	**Lac de Lave**	**1.80**	**158**	eP	**Pb**	**16 19 45.7**	**-1.1**
TDD	**Tadjoura Ara**	**1.80**	**144**	eP	**Pn**	**16 19 45.2**	**+0.4**
OBO	**Obock**	**1.92**	**131**	eP	**Pn**	**16 19 46.8**	**+0.3**
SGH	**Sud-Ghoubbet**	**1.98**	**156**	eP	**Pn**	**16 19 48.2**	**+0.8**
ATD	**Arta Tunnel**	**1.99**	**150**	Pn	**Pn**	**16 19 48.4**	**+0.8**
	289nm,0.3s,baz=82,slow=4.0,SNR=484						
ATD				Lg	Lg	16 20 16.8	
	288nm,0.3s,baz=173,slow=17,SNR=5.9						
ATD	**Arta Tunnel**	**1.99**	**150**	eP	**Pn**	**16 19 48.4**	**+0.8**
ATD	**Arta Tunnel**	**1.99**	**150**	eP	**Pn**	**16 19 48.3**	**+0.7**
ATD				eS	**Sg**	**16 20 17.7**	**-0.2**
ATD	**Arta Tunnel**	**1.99**	**150**	ePn	**Pn**	**16 19 48.3**	**+0.7**
MCAD	**Moucha**	**2.04**	**138**	eP	**Pn**	**16 19 48.6**	**+0.4**
GBR	**Grand-Bara**	**2.19**	**163**	eP	**Pn**	**16 19 51.4**	**+1.0**
UDYN	**Al ‘Udayn**	**2.20**	**71**	⇑iP	**Pn**	**16 19 48.5**	**-2.0**
UDYN				iS	**Sb**	**16 20 19.7**	**-1.4**
UDYN				AML	AML	16 20 29.8	
	comp=N,11µm,0.6s						
ATA	**Atar**	**2.25**	**143**	eP	**Pn**	**16 19 52.1**	**+1.0**
DHBB	**Dhamar BB**	**2.81**	**62**	iP	**Pn**	**16 19 59.1**	**0.0**
DHBB				iS	**Sb**	**16 20 36.8**	**-2.1**
DHBB	**Dhamar BB**	**2.81**	**62**	iP	**Pn**	**16 19 59.1**	**0.0**
DHBB				iS	**Sb**	**16 20 36.8**	**-2.1**
DAMY	**Dhamar**	**2.81**	**62**	ePn	**Pn**	**16 19 57.9**	**-1.2**
DAMY	**Dhamar**	**2.81**	**62**	ePn	**Pn**	**16 19 57.9**	**-1.2**
DESE	**Dese**	**3.02**	**225**	eP	**Pn**	**16 20 01.3**	**-0.7**
DESE				eS	**Sg**	**16 20 47.7**	**-3.2**
DESE	**Dese**	**3.02**	**225**	eP	**Pn**	**16 20 01.3**	**-0.7**
DESE				eS	**Sg**	**16 20 47.7**	**-3.2**
DESE	**Dese**	**3.02**	**225**	eP	**Pn**	**16 20 01.3**	**-0.7**
DESE				eS	**Sg**	**16 20 47.7**	**-3.2**
ADEN	**Aden**	**3.12**	**99**	iP	**Pn**	**16 20 02.7**	**-0.3**
ADEN				iS	**Sn**	**16 20 40.6**	**+0.3**
ADEN				AML	AML	16 20 59.1	
	comp=N,8µm,0.6s						
ADEN	**Aden**	**3.12**	**99**	iP	**Pn**	**16 20 02.7**	**-0.3**
ADEN				iS	**Sn**	**16 20 40.7**	**+0.3**
	comp=N,4µm,0.6s						
SANA	**San‘a**	**3.13**	**47**	iS	**Sb**	**16 20 44.9**	**-3.1**
ANKE	**Ethiopia-Afar**	**4.18**	**209**	iP	**Pn**	**16 20 20.0**	**+2.0**
ANKE				eS	**Sg**	**16 21 23.0**	**-5.3**
ANKE	**Ethiopia-Afar**	**4.18**	**209**	iP	**Pn**	**16 20 20.0**	**+2.0**
ANKE				eS	**Sg**	**16 21 23.0**	**-5.3**
ANKE	**Ethiopia-Afar**	**4.18**	**209**	iP	**Pn**	**16 20 20.0**	**+2.0**
ANKE				eS	**Sg**	**16 21 23.0**	**-5.3**
ANKE	**Ethiopia-Afar**	**4.18**	**209**	iP	**Pn**	**16 20 20.0**	**+2.0**
ANKE				eS	**Sg**	**16 21 23.0**	**-5.3**
HARA	**HARA**	**4.21**	**160**	eP	**Pn**	**16 20 17.7**	**-0.5**
HARA				iS	**Sb**	**16 21 15.7**	**-3.2**
HARA	**HARA**	**4.21**	**160**	eP	**Pn**	**16 20 17.7**	**-0.5**
HARA				iS	**Sb**	**16 21 15.7**	**-3.2**
AAE	**Adis Abeba**	**5.17**	**216**	eP	**Pn**	**16 20 33.7**	**+2.2**
AAE				eS	**Sb**	**16 21 48.9**	**+2.1**
AAE	**Adis Abeba**	**5.17**	**216**	eP	**Pn**	**16 20 32.5**	**+1.0**
AAE				eS	**Sg**	**16 21 55.5**	**-4.3**
AAE	**Adis Abeba**	**5.17**	**216**	eP	**Pn**	**16 20 33.7**	**+2.2**
AAE				eS	**Sb**	**16 21 48.9**	**+2.1**
AAE	**Adis Abeba**	**5.17**	**216**	eP	**Pn**	**16 20 33.7**	**+2.2**
AAE				eS	**Sb**	**16 21 48.9**	**+2.1**
MUKL	**Al Mukalla**	**7.11**	**79**	iS	**Sn**	**16 22 16.8**	**-2.0**
RAYN	**Ar Rayn**	**10.78**	**18**	ePn	**Pn**	**16 21 45.5**	**-2.8**
RAYN	**Ar Rayn**	**10.78**	**18**	eP	**Pn**	**16 21 45.5**	**-2.8**
LODK	**Lodwar**	**11.68**	**214**	eP	**Pn**	**16 22 04.5**	**+3.8**
LODK				e		16 22 05.0	
	baz=314,slow=11						
LODK				eS		16 25 16.6	
LODK				eS		16 25 17.1	
LODK	**Lodwar**	**11.68**	**214**	eP	**Pn**	**16 22 04.5**	**+3.8**
LODK				e		16 22 05.0	
	baz=314,slow=11						
LODK				eS		16 25 16.6	
LODK				eS		16 25 17.1	
KMBO	**Kilima Mbogo**	**15.00**	**198**	Pn	P	16 23 03.0	+11
	comp=N,0.1nm,0.3s,baz=25,slow=14,SNR=7.5						
KMBO				Lg	Lg	16 27 13.7	
	comp=N,0.1nm,0.3s,baz=83,slow=8.4,SNR=2.7						
KMBO				LR	LR	16 28 40.4	
	comp=N,891nm,18.3s,baz=20,slow=38						
ALNE	**Al Ain**	**17.00**	**49**	iP	**Pn**	**16 23 11.5**	**-0.2**
	SNR=12						
ASUD	**Al Ashush, Dub**	**17.04**	**47**	iP	**Pn**	**16 23 11.5**	**-0.7**
	SNR=7.3						
NAZ	**Nazwa, Dubai**	**17.50**	**46**	P	**P**	**16 23 20.0**	**+0.8**
	SNR=14						
NAZ	**Nazwa, Dubai**	**17.50**	**46**	iP	**Pn**	**16 23 17.6**	**-0.5**
	SNR=12						
EIL	**Elat**	**17.52**	**340**	P	**Pn**	**16 23 17.4**	**-0.9**
	comp=N,0.1nm,0.3s,baz=204,slow=20,SNR=1.9						
SOHO	**SOHO**	**17.62**	**50**	iP	**Pn**	**16 23 18.5**	**-1.0**
	SNR=12						
MBAR	**Mbarara**	**17.62**	**219**	ePn	**Pn**	**16 23 19.2**	**-0.5**
	comp=N,14nm,1.2s						
MBAR	**Mbarara**	**17.62**	**219**	eP	**Pn**	**16 23 19.3**	**-0.5**
MBAR				pmax	pmax		
	comp=Z,14nm,1.2s						
HATD	**Hatta, Dubai**	**17.74**	**48**	P	**P**	**16 23 22.0**	**+0.2**
	SNR=16						
HATD	**Hatta, Dubai**	**17.74**	**48**	iP	**Pn**	**16 23 19.5**	**-1.4**
	SNR=9.9						
UOSS	**Minazif**	**17.86**	**47**	ePn	**Pn**	**16 23 20.4**	**-2.1**
	comp=Z,188nm,1.5s						
UOSS	**Minazif**	**17.86**	**47**	iP	**Pn**	**16 23 21.1**	**-1.4**
	SNR=14						
HOQ	**Hoqain**	**17.91**	**53**	P	**P**	**16 23 27.0**	**+3.3**
	SNR=7.9						
JMDO	**Jabal Madar**	**17.94**	**57**	P	**P**	**16 23 25.0**	**+1.0**
	SNR=8.8						
MSFE	**Esma-Masafi**	**18.09**	**46**	iP	**Pn**	**16 23 24.8**	**-0.5**
	SNR=24						
MDH	**Madha**	**18.14**	**47**	iP	**Pn**	**16 23 25.5**	**-0.4**
	SNR=24						
SMDO	**Samad**	**18.22**	**55**	P	**P**	**16 23 28.0**	**+0.7**
	SNR=7.9						
SHME	**Shamm**	**18.51**	**44**	iP	**P**	**16 23 29.3**	**-1.0**
	SNR=7.0						
BIDO	**Bidbid**	**18.51**	**54**	P	**Pn**	**16 23 32.0**	**+1.5**
	SNR=10						
BANOM	**Banah**	**18.54**	**45**	P	**Pn**	**16 23 31.8**	**+0.9**
	SNR=14						
BANOM	**Banah**	**18.54**	**45**	iP	**P**	**16 23 29.7**	**-1.0**
	SNR=22						
WBK	**Wadi Bani Khal**	**18.76**	**58**	P	**Pn**	**16 23 38.0**	**+4.4**
	SNR=5.3						
WSAR	**Wadi Sarin**	**18.78**	**56**	P	**P**	**16 23 33.3**	**0.0**
	comp=Z,0.3nm,0.3s,baz=266,slow=12,SNR=14						
WSAR				LR	LR	16 31 12.2	
	comp=Z,881nm,20.2s,baz=234,slow=38						
ASF	**Jabal al Asfar**	**19.35**	**347**	P	**P**	**16 23 39.8**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=16,slow=6.8,SNR=4.6						
ASF				S	**S**	**16 27 21.3**	**+2.6**
	comp=Z,0.2nm,0.3s,baz=119,slow=7.3,SNR=1.7						
MMAI	**Mount Meron Ar**	**20.52**	**344**	P	**P**	**16 23 52.6**	**+0.3**
	comp=Z,3.3nm,0.8s,baz=152,slow=13,SNR=3.8						
MMAI				S	**S**	**16 27 42.1**	**+0.2**
	comp=Z,9.9nm,1.1s,baz=268,slow=39,SNR=2.6						
MMAI				LR	LR	16 30 53.7	
	comp=Z,248nm,19.3s,baz=215,slow=34						
GNI	**Garni**	**26.90**	**5**	P	**P**	**16 24 56.1**	**+0.9**
	comp=Z,9.5nm,0.8s,baz=97,slow=6.3,SNR=6.3						
GNI				S	**S**	**16 29 33.9**	**+1.8**
	comp=Z,3.4nm,0.4s,baz=164,slow=7.4,SNR=2.0						
GNI				LR	LR	16 36 00.5	
	comp=Z,327nm,18.2s,baz=176,slow=38						
GNI	**Garni**	**26.90**	**5**	eP	**P**	**16 24 54.7**	**-0.5**
	comp=Z,14nm,0.9s						
GNI				S	**S**	**16 29 33.9**	**+1.8**
GNI	**Garni**	**26.90**	**5**	P	**P**	**16 24 55.7**	**+0.5**
GNI	**Garni**	**26.90**	**5**	⇑eP	**P**	**16 24 58.1**	**+2.9**
GNI				pmax	pmax		
	comp=Z,70nm,1.3s						
BR131	**Keskin Array S**	**27.33**	**346**	eP	**P**	**16 24 56.5**	**-2.5**
BRTR	**Keskin Array B**	**27.33**	**346**	P	**P**	**16 24 59.0**	**+0.1**
	comp=Z,3.2nm,0.9s,baz=156,slow=9.5,SNR=15						
BRTR				PcP	**PcP**	**16 28 18.5**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=158,slow=4.7,SNR=4.2						
BRTR				LR	LR	16 34 46.6	
	comp=Z,232nm,18.8s,baz=152,slow=34						
APE	**Apeiranthos**	**27.83**	**331**	⇑iP	**P**	**16 25 03.6**	**+0.2**
APE				pmax	pmax		
	comp=Z,104nm,1.3s						
GEYT	**Alibeck**	**28.53**	**28**	P	**P**	**16 25 10.5**	**+0.9**
	comp=Z,1.4nm,0.8s,baz=224,slow=19,SNR=3.9						
ZEI	**Tsey**	**29.47**	**3**	eP	**P**	**16 25 18.9**	**+0.8**
ZEI				pmax	pmax		
	comp=Z,6.0nm,0.4s						
ZEI	**Tsey**	**29.47**	**3**	eP	**P**	**16 25 18.9**	**+0.8**
	comp=Z,6.0nm,0.4s						
NCK	**Nalchik**	**30.16**	**3**	⇓eP	**P**	**16 25 25.8**	**+1.8**
NCK				pmax	pmax		
	comp=Z,4.0nm,0.2s						
SOC	**Sochi**	**30.27**	**357**	eP	**P**	**16 25 21.4**	**-3.5**
SOC				e		16 26 21.6	
SOC				eS	**S**	**16 30 21.3**	**-3.3**
SOC				eS	S	16 30 24.2	-0.4
SOC				eSS	**SnSn**	**16 31 56.7**	**-2.1**
SOC				MLR	MLR		
	comp=Z,288nm,11.0s						
KBZ	**Khabaz**	**30.37**	**2**	P	**P**	**16 25 25.8**	**0.0**
	comp=Z,5.8nm,1.0s,baz=274,slow=12,SNR=4.4						
KBZ				LR	LR	16 37 45.9	
	comp=Z,211nm,19.7s,baz=190,slow=37						
KIV	**Kislovodsk**	**30.59**	**1**	P	**P**	**16 25 28.2**	**+0.3**
KIV	**Kislovodsk**	**30.59**	**1**	eP	**P**	**16 25 28.7**	**+0.8**
KIV				eS	**S**	**16 30 31.3**	**+1.3**
KIV				pmax	pmax		
	comp=Z,13nm,1.1s						
KIV				MLR	MLR		
	comp=Z,167nm,15.0s						
KIV	**Kislovodsk**	**30.59**	**1**	P	**P**	**16 25 28.2**	**+0.3**
ANN	**Anapa**	**31.65**	**354**	eP	**P**	**16 25 33.1**	**-4.0**
ANN				e*PP	**pP**	**16 25 39.3**	**-0.8**
ANN				e		16 26 39.8	
ANN				eS	**S**	**16 30 40.4**	**-5.9**
ANN				eSS	**SnSn**	**16 32 32.9**	**+0.5**
ANN				pmax	pmax		
	comp=Z,37nm,1.4s						
ANN				MLR	MLR		
	comp=E,25nm,13.0s						
ANN				MLR	MLR		
	comp=N,395nm,13.0s						
ANN				MLR	MLR		
	comp=Z,203nm,13.0s						
OPO	**Ambohidratompo**	**32.07**	**170**	LR	LR	16 37 52.4	
	comp=Z,188nm,20.1s,baz=350,slow=35						
SIM	**Simferopol’**	**32.25**	**350**	P	P	16 25 50.7	+8.3
TIRR	**Tirgusor**	**33.13**	**342**	⇓iP	**P**	**16 25 51.8**	**+1.7**
VTS	**Vitosha**	**33.37**	**335**	⇓iP	**P**	**16 25 53.2**	**+0.8**
VTS	**Vitosha**	**33.37**	**335**	eP	**P**	**16 25 49.2**	**-3.2**
VTS	**Vitosha**	**33.37**	**335**	eP	**P**	**16 25 49.2**	**-3.2**
CFR	**Carcaliu**	**33.87**	**343**	⇑iP	**P**	**16 25 56.3**	**-0.2**
CFR	**Carcaliu**	**33.87**	**343**	⇑iP	**P**	**16 25 56.3**	**-0.2**
ISR	**Istrita**	**34.31**	**341**	⇑iP	**P**	**16 26 01.2**	**+0.8**
VAE	**Valguarnera**	**34.33**	**320**	LR	LR	16 39 42.4	
	comp=Z,133nm,18.3s,baz=154,slow=36						
MLR	**Muntele Rosu**	**34.83**	**340**	P	**P**	**16 26 05.4**	**+0.3**
	comp=Z,1.1nm,0.8s,baz=193,slow=9.9,SNR=9.0						
MLR	**Muntele Rosu**	**34.83**	**340**	⇓iP	**P**	**16 26 06.1**	**+1.1**
MLR	**Muntele Rosu**	**34.83**	**340**	eP	**P**	**16 26 03.7**	**-1.3**
	comp=Z,14nm,1.1s						
MLR	**Muntele Rosu**	**34.83**	**340**	eP	**P**	**16 26 03.7**	**-1.3**
MLR				pmax	pmax		
	comp=Z,14nm,1.1s						
MLR	**Muntele Rosu**	**34.83**	**340**	eP	**P**	**16 26 03.7**	**-1.3**
	comp=Z,14nm,1.1s						
VRI	**Vrincioaia**	**34.92**	**341**	⇑iP	**P**	**16 26 06.5**	**+0.9**
PLOR	**Plostina**	**34.93**	**341**	⇑iP	**P**	**16 26 06.8**	**+1.0**
PDG	**Podgorica**	**35.02**	**330**	⇑iP	**P**	**16 26 07.2**	**+0.7**
TTG	**Podgorica**	**35.02**	**330**	eP	**P**	**16 26 05.2**	**-1.4**
	comp=Z,10nm,1.0s						
TTG	**Podgorica**	**35.02**	**330**	eP	**P**	**16 26 05.2**	**-1.4**
TTG				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NIL	**Nilore**	**35.04**	**49**	eP	**P**	**16 26 06.7**	**-0.2**
	comp=Z,39nm,1.3s						
NIL	**Nilore**	**35.04**	**49**	eP	**P**	**16 26 06.7**	**-0.2**
NIL				pmax	pmax		
	comp=Z,39nm,1.3s						
ARR	**Arges**	**35.17**	**339**	⇓iP	**P**	**16 26 07.5**	**-0.4**
ARR	**Arges**	**35.17**	**339**	⇓iP	**P**	**16 26 07.5**	**-0.4**
HERR	**Herculane**	**35.59**	**336**	⇑iP	**P**	**16 26 11.1**	**-0.3**
TAM	**Tamanrasset**	**35.71**	**291**	eP	**P**	**16 26 12.2**	**-0.7**
	comp=Z,8.9nm,1.2s						
TAM	**Tamanrasset**	**35.71**	**291**	eP	**P**	**16 26 12.2**	**-0.7**
TAM				pmax	pmax		
	comp=Z,9.0nm,1.2s						
MDVR	**Moldovita**	**35.79**	**335**	⇑iP	**P**	**16 26 12.1**	**-1.1**
DIVS	**Divibare**	**35.97**	**333**	eP	**P**	**16 26 13.3**	**-1.5**
	comp=Z,13nm,1.6s						
BIZ	**Bicaz**	**36.07**	**342**	⇓iP	**P**	**16 26 15.6**	**+0.1**
BIZ	**Bicaz**	**36.07**	**342**	⇓iP	**P**	**16 26 15.6**	**+0.1**
KEST	**Kesra**	**36.79**	**313**	P	**P**	**16 26 22.1**	**+0.2**
	comp=Z,5.8nm,0.9s,baz=180,slow=9.1,SNR=5.4						
KEST				LR	LR	16 42 22.2	
	comp=Z,371nm,20.0s,baz=26,slow=38						
BURAR	**Bucovina Array**	**36.95**	**341**	⇓iP	**P**	**16 26 25.6**	**+2.5**
BUR04	**Bucovina Ar. S**	**36.95**	**341**	eP	**P**	**16 26 22.5**	**-0.6**
BUR04	**Bucovina Ar. S**	**36.95**	**341**	eP	**P**	**16 26 22.5**	**-0.6**
BUR08	**Bucovina Ar. S**	**36.98**	**341**	eP	**P**	**16 26 22.9**	**-0.5**
DRGR		**37.08**	**338**	⇓iP	**P**	**16 26 24.2**	**0.0**
VSR	**Storozhevoye**	**37.91**	**357**	eP	**P**	**16 26 31.6**	**+0.5**
VSR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
VSR	**Storozhevoye**	**37.91**	**357**	eP	**P**	**16 26 31.6**	**+0.5**
	comp=Z,8.0nm,0.8s						
KK31	**Karatay Array**	**38.67**	**34**	eP	**P**	**16 26 37.8**	**+0.1**
KKAR	**Karatay Array**	**38.67**	**34**	eP	**P**	**16 26 37.0**	**-0.6**
PALK	**Pallekele**	**38.68**	**95**	LR	LR	16 40 10.2	
	comp=Z,180nm,18.9s,baz=295,slow=32						
KIEV	**Kiev**	**38.72**	**347**	eP	**P**	**16 26 36.5**	**-1.4**
	comp=Z,3.9nm,0.9s						
KIEV	**Kiev**	**38.72**	**347**	P	**P**	**16 26 34.7**	**-3.2**
KIEV	**Kiev**	**38.72**	**347**	⇑eP	**P**	**16 26 38.0**	**+0.1**
KIEV				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AKASG	**Malin Array Be**	**38.72**	**347**	P	**P**	**16 26 36.6**	**-1.3**
	comp=Z,2.1nm,0.7s,baz=162,slow=6.8,SNR=8.9						
AKASG				LR	LR	16 43 35.6	
	comp=Z,33nm,21.4s,baz=115,slow=38						
AKBB	**Malin Array Si**	**38.72**	**347**	eP	**P**	**16 26 36.5**	**-1.4**
	comp=Z,4.3nm,0.9s						
AKBB	**Malin Array Si**	**38.72**	**347**	eP	**P**	**16 26 36.5**	**-1.4**
AKBB				pmax	pmax		
	comp=Z,4.0nm,0.9s						
AKBB	**Malin Array Si**	**38.72**	**347**	eP	**P**	**16 26 36.5**	**-1.4**
	comp=Z,4.0nm,0.9s						
ABKAR	**Akbulak array**	**38.87**	**19**	eP	**P**	**16 26 38.6**	**-0.6**
ABKAR	**Akbulak array**	**38.87**	**19**	eP	**P**	**16 26 38.6**	**-0.6**
TOA0	**Torodi Ar. Sit**	**39.04**	**275**	eP	**P**	**16 26 40.4**	**-0.7**
TORD	**Torodi Ar. Bea**	**39.04**	**275**	P	**P**	**16 26 39.2**	**-1.9**
	comp=Z,6.9nm,1.0s,baz=83,slow=8.7						
TORD				LR	LR	16 42 38.2	
	comp=Z,236nm,19.1s,baz=210,slow=36						
CRVS	**Cervenica-Dubn**	**39.32**	**339**	eP	**P**	**16 26 43.0**	**0.0**
CRVS				pmax	pmax		
	comp=Z,7.0nm,1.4s						
CRVS	**Cervenica-Dubn**	**39.32**	**339**	eP	**P**	**16 26 43.0**	**0.0**
CRVS	**Cervenica-Dubn**	**39.32**	**339**	eP	**P**	**16 26 43.0**	**0.0**
	comp=Z,7.0nm,1.4s						
AKTK	**Aktyubinsk**	**39.35**	**16**	P	**P**	**16 26 43.2**	**-0.1**
AKTO	**Aktyubinsk**	**39.35**	**16**	P	**P**	**16 26 43.2**	**-0.1**
	comp=Z,9.6nm,0.9s,baz=215,slow=11,SNR=23						
AKTO				LR	LR	16 44 58.8	
	comp=Z,156nm,18.4s,baz=185,slow=39						
KWP	**Kalwaria Pacla**	**39.52**	**340**	eP	**P**	**16 26 44.0**	**-0.6**
	comp=Z,123nm,0.5s						
KWP	**Kalwaria Pacla**	**39.52**	**340**	eP	**P**	**16 26 44.1**	**-0.6**
KWP				pmax	pmax		
	comp=Z,123nm,0.5s						
KSH	**Kashi**	**39.84**	**43**	P	**P**	**16 26 43.4**	**-4.3**
KSH				sP	pP	16 26 50.7	-0.1
KSH				PcP	**PcP**	**16 28 52.5**	**-1.1**
KSH				PcS	**PcS**	**16 32 39.9**	**-3.9**
KSH				S	**S**	**16 32 43.9**	**-8.5**
KSH				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KSH				pmax	pmax		
	comp=Z,67nm,3.9s						
KSH				LR	LR		
	comp=Z,320nm,10.8s						
KSH				LR	LR		
	comp=Z,310nm,11.7s						
KSH				LR	LR		
	comp=Z,400nm,10.6s						
AML	**Almayashu**	**39.88**	**38**	P	**P**	**16 26 51.7**	**+3.5**
	SNR=12						
VYHS	**Vyhne**	**39.96**	**336**	eP	**P**	**16 26 48.2**	**-0.1**
VYHS				pmax	pmax		
	comp=Z,8.0nm,1.6s						
VYHS	**Vyhne**	**39.96**	**336**	eP	**P**	**16 26 48.2**	**-0.1**

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SOKA  Soboth           40.20 331  epP      P         16 26 52.6 +2.1
      comp=Z,2.8nm,0.8s
EKS2  Erkin-Say        40.24  37   P       P         16 26 54.1 +3.2
      SNR=8.6
OBKA  Obir             40.31 331  epP      P         16 26 52.8 +1.5
      comp=Z,3.9nm,0.8s
OBKA  Obir             40.31 331   P       P         16 26 52.8 +1.5
      comp=Z,3.9nm,0.8s
ARSA  Arzberg          40.40 332  eP       P         16 26 52.3 +0.3
      comp=Z,3.6nm,0.6s
ARSA  Arzberg          40.40 332   P       P         16 26 52.3 +0.3
      comp=Z,3.6nm,0.6s
UCH   Uchtor           40.42  38   P       P         16 26 56.4 +3.6
      SNR=11
MODS  Modra-Piesok     40.49 335  eP       P         16 26 50.7 -2.1
MODS                               pmax    pmax
      comp=Z,19nm,1.5s
MODS  Modra-Piesok     40.49 335  eP       P         16 26 50.7 -2.1
MODS  Modra-Piesok     40.49 335  eP       P         16 26 50.7 -2.1
      comp=Z,19nm,1.5s
CONA  Conrad Observa   40.76 333  eP       P         16 26 55.5 +0.5
      comp=Z,7.7nm,1.5s
CONA  Conrad Observa   40.76 333   P       P         16 26 55.5 +0.5
      comp=Z,7.7nm,1.5s
KZA   Kyzart           40.78  39   P       P         16 27 00.1 +4.4
      SNR=5.6
MYKA  Terra Mystica    40.83 330  epP      P         16 26 57.8 +2.2
      comp=Z,2.2nm,0.6s
MYKA  Terra Mystica    40.83 330   P       P         16 26 57.8 +2.2
      comp=Z,2.2nm,0.6s
FRU   Bishkek          40.84  38  eP       P         16 27 00.0 +4.2
FRU                               e                  16 28 54.0
FRU                                pmax    pmax
      comp=Z,40nm,2.0s
KBK   Karagaybulak     40.94  38   P       P         16 27 00.6 +3.8
      SNR=6.8
CHMS  Chumysh          41.02  37   P       P         16 27 00.3 +3.1
      SNR=5.8
USP   Ospenovka        41.03  37   P       P         16 27 00.4 +3.0
      SNR=5.1
KBA   Koelnbreinsper   41.29 330  eP       P         16 26 59.6  0.0
      comp=Z,1.6nm,0.6s
MOA   Molln            41.41 332  eP       P         16 27 00.2 -0.2
      comp=Z,1.3nm,0.6s
ABTA  Abfaltersbach    41.46 329  eP       P         16 27 01.0 +0.1
      comp=Z,2.3nm,0.6s
OBN   Obninsk          41.95 355⇑eP       P         16 27 06.3 +1.7
OBN                               e                  16 28 44.1
OBN                               ePPP     PPP       16 29 13.3
OBN                                pmax    pmax
      comp=Z,33nm,1.3s
OBN                                MLR     MLR
      comp=Z,80nm,20.0s
OBN   Obninsk          41.95 355  eP       P         16 27 06.3 +1.7
      comp=Z,33nm,1.3s
GEA0  GERESS Array S   42.39 332  eP       P         16 27 07.3 -1.2
GEA0  GERESS Array S   42.39 332  eP       P         16 27 07.3 -1.2
GEC2  GERESS Array S   42.40 333  eP       P         16 27 07.3 -1.2
      comp=Z,11nm,1.4s
GEC2  GERESS Array S   42.40 333  eP       P         16 27 07.3 -1.2
GEC2                               pmax    pmax
      comp=Z,11nm,1.4s
GERES GERESS Array B   42.40 333   P       P         16 27 07.6 -0.9
      comp=Z,2.4nm,0.7s,baz=127,slow=8.1,SNR=13
DPC   Dobruska-Polom   42.43 336  eP       P         16 27 09.7 +1.0
DPC   Dobruska-Polom   42.43 336  eP       P         16 27 09.7 +1.0
DPC   Dobruska-Polom   42.43 336  eP       P         16 27 09.7 +1.0
MOS   Moscow           42.51 356  eP       P         16 27 11.8 +2.7
MOS                               e                  16 28 52.2
MOS                                pmax    pmax
      comp=Z,79nm,1.4s
MOS   Moscow           42.51 356  eP       P         16 27 11.8 +2.7
      comp=Z,79nm,1.4s
FETA  Feichten         42.55 328  eP       P         16 27 08.2 -1.6
      comp=Z,3.6nm,0.8s
MOTA  Moosalm          42.58 329  eP       P         16 27 09.9 -0.1
      comp=Z,0.3nm,0.4s
KHC   Kasperske Hory   42.67 333  eP       P         16 27 08.6 -2.0
KHC                               epP      pP        16 27 12.0 -1.7
KHC   Kasperske Hory   42.67 333  eP       P         16 27 08.6 -2.0
KHC                               e                  16 27 12.0
KHC   Kasperske Hory   42.67 333  eP       P         16 27 08.6 -2.0
PRZ   Przheval'sk      42.96  40  eP       P         16 27 13.0 -0.3
      comp=Z,26nm,1.2s
PRZ   Przheval'sk      42.96  40  eP       P         16 27 13.0 -0.3
PRZ                                pmax    pmax
      comp=Z,26nm,1.2s
DAVA  Damuels          43.16 328  eP       P         16 27 15.1 +0.4
      comp=Z,6.2nm,0.7s
BRG   Berggiesshubel   43.80 335  eP       P         16 27 18.6 -1.1
      comp=Z,1.3nm,0.7s
BRG                                S       S         16 33 56.0 +5.6
BRG   Berggiesshubel   43.80 335  eP       P         16 27 18.6 -1.1
BRG                                S       S         16 33 56.0 +5.6
BRG                                pmax    pmax
      comp=Z,1.0nm,0.7s
SENIN Lac Senin/Sane   43.94 326  eP       P         16 27 20.1 -1.1
      comp=Z,6.3nm,0.8s
KOWA  Kowa             44.46 277   P       P         16 27 24.5 -1.0
      comp=Z,5.1nm,0.8s,baz=91,slow=5.5,SNR=9.5
KOWA                               LR      LR        16 46 32.9
      comp=Z,329nm,19.1s,baz=74,slow=37
KOWA  Kowa             44.46 277  eP       P         16 27 24.2 -1.3
      comp=Z,25nm,1.5s
CLL   Collm            44.52 334  eP       P         16 27 26.0 +0.5
CLL                               eS       S         16 34 04.0 +3.1
BOSA  Boshof           44.61 201   LR      LR        16 44 46.1
      comp=Z,243nm,20.1s,baz=26,slow=34
ARU   Arti             44.96  13  eP       P         16 27 27.0 -1.9
      comp=Z,15nm,0.9s
ARU   Arti             44.96  13c iP       P         16 27 29.0 +0.1
ARU                                                  16 29 09.5
ARU                                PPP     PPP       16 29 48.4
ARU                                S       S         16 34 08.9 +1.8
ARU                                SS      ScS       16 37 25.0 -1.2
ARU                                pmax    pmax
      comp=Z,23nm,1.2s
ARU                                MLR     MLR
      comp=Z,220nm,19.0s
ARU   Arti             44.96  13  eP       P         16 27 27.0 -1.9
      comp=Z,15nm,0.9s
ARU                                S       S         16 34 08.9 +1.8
      comp=Z,220nm,19.0s
ARU                                ScS     ScS       16 37 25.0 -1.2
BVAR  Borovoye Array   45.71  24   P       P         16 27 35.6 +0.7
      comp=Z,3.2nm,0.8s,baz=212,slow=7.5,SNR=20
KIC   Kosan Boka       46.33 266  eP       P         16 27 40.0 -0.4
      comp=Z,184nm,1.9s
DBIC  Dimbokro         46.38 267   P       P         16 27 40.5 -0.3
      comp=Z,9.2nm,0.8s,baz=56,slow=6.0,SNR=7.4
DBIC                               LR      LR        16 46 50.1
      comp=Z,141nm,18.7s,baz=58,slow=36
VSU   Vasula           46.52 349⇑eP       P         16 27 40.1 -1.0
VSU                                pmax    pmax
      comp=Z,52nm,2.5s
MDT   Midelt           46.53 303   P       P         16 27 41.5 -0.3
      comp=Z,3.8nm,1.0s,baz=85,slow=7.3,SNR=3.6
MDT                                LR      LR        16 49 11.2
      comp=Z,319nm,19.7s,baz=122,slow=39
TIC   Toumodi          46.54 267  eP       P         16 27 41.7 -0.4
LIC   Lamto            46.64 266  eP       P         16 27 42.2 -0.6
      comp=Z,121nm,1.7s
KLMR  Klimovskoe       47.54 358  eP       P         16 27 47.3 -1.8
KLMR                               pmax    pmax
      comp=Z,46nm,1.3s
KLMR  Klimovskoe       47.54 358  eP       P         16 27 47.3 -1.8
KLMR                               AMP               16 27 51.0
      comp=Z,46nm,1.3s
MK01  Makanchi Array   47.57  37  eP       P         16 27 49.5 -0.1
MK31  Makanchi Array   47.58  37  eP       P         16 27 49.5 -0.2
MK31  Makanchi Array   47.58  37  eP       P         16 27 49.5 -0.2
MK31  Makanchi Array   47.58  37  eP       P         16 27 49.5 -0.2
MKAR  Makanchi Array   47.58  37   P       P         16 27 50.2 +0.5
      comp=Z,11nm,0.9s,baz=236,slow=6.7,SNR=30
MKAR                               LR      LR        16 51 05.2
      comp=Z,358nm,18.4s,baz=242,slow=40
MKAR  Makanchi Array   47.58  37  eP       P         16 27 49.7  0.0
      comp=Z,85nm,1.0s
MKAR  Makanchi Array   47.58  37  eP       P         16 27 49.7  0.0
MKAR                               pmax    pmax
      comp=Z,85nm,1.0s
MKAR  Makanchi Array   47.58  37  eP       P         16 27 49.7  0.0
      comp=Z,85nm,1.0s
KURBB Kurchatov Arra   47.70  31   P       P         16 27 50.9 +0.4
      comp=Z,6.8nm,0.9s,baz=233,slow=8.1,SNR=38
KURK  Kurchatov        47.81  31  eP       P         16 27 51.3 -0.1
      comp=Z,29nm,1.3s
KURK  Kurchatov        47.81  31   P       P         16 27 52.7 +1.4
      SNR=10
KURK  Kurchatov        47.81  31d iP       P         16 27 53.4 +2.1
KURK                               pmax    pmax
      comp=Z,26nm,1.3s
ES19  SONSECA Array    47.97 312  eP       P         16 27 50.2 -2.7
ESDC  Sonseca Array    48.01 312   P       P         16 27 52.7 -0.5
      comp=Z,1.6nm,0.7s,baz=110,slow=6.7,SNR=9.5
ESDC                               LR      LR        16 47 14.9
      comp=Z,100nm,21.7s,baz=150,slow=35
PAB   San Pablo        48.24 312  eP       P         16 27 53.6 -1.4
PAB   San Pablo        48.24 312  eP       P         16 27 53.6 -1.4
LSA   Lhasa            48.36  62  eP       P         16 27 56.7 +0.2
      comp=Z,44nm,1.8s
LSA   Lhasa            48.36  62  eP       P         16 27 56.7 +0.2
LSA                                pmax    pmax
      comp=Z,44nm,1.8s
PRGR  Permogore        48.37   2  eP       P         16 27 54.6 -0.9
PRGR                               pmax    pmax
      comp=Z,29nm,1.1s
FINES FINESS Array B   49.44 350   P       P         16 28 02.4 -1.3
      comp=Z,3.1nm,0.9s,baz=148,slow=11,SNR=7.2
FINES                              LR      LR        16 49 41.1
      comp=Z,42nm,18.5s,baz=167,slow=37
WMQ   Urumqi           49.61  43   P       P         16 28 06.9 +1.5
WMQ                                pP      sP        16 28 11.0 +1.2
WMQ                                sP      pP        16 28 13.5 +4.9
WMQ                                pmax    pmax
      comp=Z,32nm,0.6s
WMQ                                pmax    pmax
      comp=Z,150nm,3.7s
WMQ                                LR      LR
      comp=Z,620nm,17.5s
WMQ                                LR      LR
      comp=Z,370nm,24.1s
WMQ                                LR      LR
      comp=Z,220nm,24.1s
HFS   Hagfors          51.16 342   P       P         16 28 15.6 -1.1
      comp=Z,2.1nm,0.8s,baz=132,slow=8.3,SNR=5.0
HFS                                LR      LR        16 49 25.6
      comp=Z,65nm,21.5s,baz=155,slow=36
DGZ   Jazzator, Alta   52.00  36⇓eP       P         16 28 24.0 +0.5
DGZ                                pmax    pmax
      comp=Z,11nm,1.6s
NVS   Novosibirsk      52.53  29⇓iP       P         16 28 28.0 +0.9
NVS                               e                  16 29 37.9
NVS                                pmax    pmax
      comp=Z,18nm,1.3s
NVS                                pmax    pmax
      comp=N,9.0nm,1.4s
NVS                                pmax    pmax
      comp=E,5.0nm,1.2s
NOA   NORSAR Array B   52.62 342   LR      LR        16 50 21.0
      comp=E,34nm,20.6s,baz=130,slow=36
ZAA0  Zalesovo Array   52.78  30  eP       P         16 28 28.2 -0.8
      comp=E,21nm,1.0s
ZAA0  Zalesovo Array   52.78  30  eP       P         16 28 28.2 -0.8
      comp=E,21nm,1.0s
ZALV  Zalesovo Beam    52.78  30   P       P         16 28 28.6 -0.4
      comp=E,12nm,0.8s,baz=239,slow=7.2,SNR=36
ZALV                               LR      LR        16 53 50.5
      comp=E,180nm,18.9s,baz=250,slow=39
ZALV  Zalesovo Beam    52.78  30  eP       P         16 28 28.0 -1.0
ZALV  Zalesovo Beam    52.78  30  eP       P         16 28 28.0 -1.0
ZALV  Zalesovo Beam    52.78  30  eP       P         16 28 28.0 -1.0
APA   Apatity          54.54 356⇓iP       P         16 28 40.2 -1.4
APA                                pmax    pmax
      comp=Z,5.0nm,0.6s
APA                                MLR     MLR
      comp=Z,100nm,19.0s
CM31  Chiang Mai Arr   55.01  77  eP       P         16 28 44.1 -1.7
CMAR  Chiang Mai Arr   55.01  77   P       P         16 28 46.4 +0.6
      comp=Z,5.8nm,0.9s,baz=279,slow=8.2,SNR=19
CMAR                               LR      LR        16 49 21.0
      comp=Z,36nm,21.6s,baz=238,slow=33
CM01  Chiang Mai Arr   55.03  77  eP       P         16 28 44.8 -1.2
NANT  Nan              56.65  76   P       P         16 29 01.7 +4.1
      comp=Z,3.7nm,1.2s,comp=Z,46nm
GTA   Gaotai           57.05  52   P       P         16 29 02.7 +2.4
GTA                                pP      sP        16 29 07.3 +2.6
GTA                                sP      pP        16 29 09.8 +6.3
GTA                                S       S         16 37 00.8 +5.5
GTA                                SS      SS        16 40 53.5  +10
GTA                                pmax    pmax
      comp=Z,6.0nm,1.4s
GTA                                pmax    pmax
      comp=Z,50nm,5.1s
GTA                                LR      LR
      comp=Z,160nm,17.9s
GTA                                LR      LR
      comp=Z,140nm,16.1s
GTA                                LR      LR
      comp=Z,210nm,15.5s
PBKT  Sadao Pong       57.08  79   P       P         16 29 01.8 +1.1
      comp=Z,11nm,1.3s
ARCES ARCESS Array B   57.17 353   P       P         16 28 59.6 -0.9
      comp=Z,2.8nm,0.8s,baz=157,slow=6.6,SNR=12
KRAR  Krasnoyarsk      57.83  31⇑eP       P         16 29 06.8 +1.4
KMI   Kunming          58.31  69   P       P         16 29 10.6 +1.0
KMI                                pmax    pmax
      comp=Z,10.0nm,0.5s
LZH   Lanzhou          59.76  56  eP       P         16 29 20.3 +1.0
LZH                                pP      sP        16 29 24.7 +0.9
LZH                                sP      pP        16 29 27.8 +5.2
LZH                                pmax    pmax
      comp=Z,28nm,1.0s
LZH                                pmax    pmax
      comp=Z,95nm,4.5s
LZH                                LR      LR
      comp=Z,290nm,13.6s
LZH                                LR      LR
      comp=Z,240nm,12.2s
LZH                                LR      LR
      comp=Z,430nm,15.7s
ZAK   Zakamensk        61.77  40  eP       P         16 29 31.3 -1.4
ZAK                                pmax    pmax
      comp=Z,3.0nm,1.4s
GYA   Guiyang          61.83  67  eP       P         16 29 34.2 +0.6
GYA                                pmax    pmax
      comp=Z,10.0nm,1.0s
TLY   Talaya           62.31  38  eP       P         16 29 36.2  0.0
TLY                               eS       S         16 38 14.9  +12
TLY                                pmax    pmax
      comp=Z,8.0nm,1.9s
TLY                                MLR     MLR
      comp=Z,332nm,20.0s
SONM  Songino Array    63.25  43   P       P         16 29 43.2 +0.5
      comp=Z,5.8nm,0.9s,baz=260,slow=6.5,SNR=28
SONM                               LR      LR        17 02 57.7
      comp=Z,144nm,19.0s,baz=266,slow=42
SONA1 Songino Array    63.26  43  eP       P         16 29 41.8 -1.0
SONA1 Songino Array    63.26  43  eP       P         16 29 41.8 -1.0
XAN   Xi'an            63.79  58   P       P         16 29 48.1 +1.7
XAN                                pmax    pmax
      comp=Z,11nm,1.3s
XAN                                pmax    pmax
      comp=Z,73nm,5.4s
ENH   Enshi            64.25  63  eP       P         16 29 48.5 -1.0
      comp=Z,21nm,1.4s
SPITS Spitsbergen Ar   66.15 354   P       P         16 30 01.2 +0.2
      comp=Z,20nm,1.1s,baz=108,slow=4.7,SNR=4.1
SPITS                              LR      LR        16 59 00.7
      comp=Z,40nm,21.9s,baz=240,slow=36
HHC   Hu-ho-hao-te     66.15  51  eP       P         16 30 02.1 +0.3
HHC                                pP      sP        16 30 05.5 -0.7
HHC                                S       S         16 38 52.9 +2.2
HHC                                sS      sS        16 39 03.5 +7.4
HHC                                pmax    pmax
      comp=Z,9.0nm,1.0s
HHC                                pmax    pmax
      comp=Z,62nm,4.2s
HHC                                LR      LR
      comp=Z,84nm,15.6s
HHC                                LR      LR
      comp=Z,66nm,14.1s
WHN   Wuhan            68.44  62   P       P         16 30 18.6 +2.3
BOD   Bodaibo          69.39  33  eP       P         16 30 21.0 -0.7
BOD                                pmax    pmax
      comp=Z,12nm,1.3s
BJI   Beijing          69.65  52⇑eP       P         16 30 26.5 +2.8
BJI                                pmax    pmax
      comp=Z,14nm,1.0s
NJ2   Nanjing          72.19  60  eP       P         16 30 38.1 -1.1
NJ2                                pmax    pmax
      comp=Z,8.0nm,0.6s
SUMG  Summit           74.52 342  eP       P         16 30 51.5 -1.2
      comp=Z,14nm,1.3s
SUMG  Summit           74.52 342  eP       P         16 30 51.5 -1.2
SUMG                               pmax    pmax
      comp=Z,14nm,1.3s
CN2   Changchun        76.38  48  eP       P         16 30 59.6 -3.8
CN2                               esP      pP        16 31 06.8 +0.1
TIXI  Tiksi            76.58  19  eP       P         16 31 02.7 -1.3
      comp=Z,17nm,1.4s
TIXI  Tiksi            76.58  19deP       P         16 31 05.0 +1.0
TIXI                               pmax    pmax
      comp=Z,17nm,1.7s
KSAR  Wonju Array Be   78.97  54   P       P         16 31 18.4 +0.3
KSAR  Wonju Array Be   78.97  54   P       P         16 31 18.4 +0.3
KS01  Wonju Array Si   78.98  54  eP       P         16 31 17.3 -0.8
KSRS  Korea Array      79.00  54   P       P         16 31 18.4 +0.2
      comp=Z,2.1nm,1.0s,baz=287,slow=4.6,SNR=8.0
KSRS                               LR      LR        17 12 39.0
      comp=Z,42nm,18.2s,baz=289,slow=41
KLR   Kul'dur          80.04  42⇓eP       P         16 31 24.8 +1.2
USRK  Ussuriysk Ar.    81.00  47   LR      LR        17 13 00.1
      comp=Z,118nm,18.5s,baz=282,slow=40
SYO   Syowa Base       82.07 181⇓eP       P         16 31 33.0 -0.9
MAW   Mawson           82.09 172   LR      LR        17 01 25.2
      comp=Z,57nm,21.4s,baz=32,slow=31
JNU   Nakatsue         82.10  58   LR      LR        17 14 22.2
      comp=Z,62nm,18.2s,baz=303,slow=40
MJAR  Matsushiro Arr   87.25  53   P       P         16 32 00.7 -0.3
      comp=Z,2.6nm,1.1s,baz=286,slow=6.2,SNR=5.7
MJAR                               LR      LR        17 17 02.7
      comp=Z,72nm,18.3s,baz=315,slow=40
SEY   Seymchan         87.34  25⇑iP       P         16 32 02.3 +1.5
YSS   Yuzh-Sakhalins   87.73  42  eP       P         16 32 05.1 +2.1
YSS                                MLR     MLR
      comp=Z,200nm,17.0s
FITZ  Fitzroy Crossi   88.32 109   LR      LR        17 06 09.8
      comp=Z,49nm,18.1s,baz=312,slow=32
ASAJ  Asahikawa        88.45  45   LR      LR        17 16 30.0
      comp=Z,102nm,18.9s,baz=340,slow=39
BILL  Bilibino         89.77  18ceP       P         16 32 15.3 +3.1
BILL                              e                  16 35 39.8
BILL                              ePPP     PPP       16 37 49.5
BILL                               pmax    pmax
      comp=Z,7.0nm,1.7s
BILL                               MLR     MLR
      comp=Z,55nm,17.0s
SNAA  Sanae            89.84 193   P       P         16 32 13.5 +1.2
      comp=Z,1.5nm,1.0s,baz=22,slow=8.4,SNR=3.3
SNAA                               LR      LR        17 10 42.7
      comp=Z,104nm,18.6s,baz=0.0,slow=34
SNAA  Sanae            89.84 193⇑eP       P         16 32 12.9 +0.6
PETK  Petropavlovsk-   94.26  33   LR      LR        17 20 07.0
      comp=Z,106nm,19.5s,baz=296,slow=39
PET   Petropavlovsk    94.81  33⇑eP       P         16 32 38.1 +2.4
PET                                pmax    pmax
      comp=Z,22nm,1.0s
WRA   Warramunga Arr   96.75 109   P       P         16 32 45.7 +0.4
      comp=Z,0.7nm,0.8s,baz=300,slow=3.6,SNR=4.4
ASAR  Alice Springs    97.09 113   P       P         16 32 46.3 -0.5
      comp=Z,0.5nm,0.9s,baz=290,slow=4.1,SNR=5.5
ASAR                               LR      LR        17 15 57.6
      comp=Z,33nm,19.6s,baz=268,slow=35
PDAR  Pinedale Array  118.37 336   PKP     PKPdf     16 38 01.5 -0.7
      comp=Z,0.3nm,0.7s,baz=38,slow=4.6,SNR=4.5
NV01  Mina Array Sit  125.31 341  ePKPdf   PKPdf     16 38 15.6  0.0
NVAR  Mina Array Bea  125.31 341   PKP     PKPdf     16 38 16.6 +1.0
      comp=Z,0.9nm,0.8s,baz=18,slow=0.3,SNR=6.0
MNTX  Cornudas Mount  125.34 326  ePKPdf   PKPdf     16 38 15.5 -0.1
TX31  Lajitas Ar. Si  126.12 322  ePKPdf   PKPdf     16 38 16.9 -0.4
TXAR  Lajitas Array   126.12 322   PKP     PKPdf     16 38 17.4 +0.2
      comp=Z,0.5nm,0.8s,baz=107,slow=1.3,SNR=7.6
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IDC 01 16:38:07.1±8.8**, 19°.62S**×**177°.79W, h589**^{km}±83^{km}**,**
mb3.0/5**, mb1 3.2**/6**, mb1mx2.7**/53**, mbtmp3.9**/6**, Error ellipse: s-maj=85.3km s-min=33.5km az=122.0, Fiji Islands region**

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Code  Station Name      Δ°   AZ°    Phase ID           Time       Res
                                  Op        ISC       h  m  s     ISC
DZM   Mont Dzumac      14.94 258  P         P         16 41 16.4 +1.2
      0.3nm,0.3s,baz=108,slow=20,SNR=4.6
CTA   Charters Tower   33.79 263  P         P         16 44 01.6 -0.1
      1.8nm,0.3s,baz=86,slow=10,SNR=8.4
ASAR  Alice Springs    44.92 256  P         P         16 45 30.7 -0.1
      1.0nm,0.4s,baz=87,slow=8.2,SNR=57
ASAR                              PcP       PcP       16 46 59.4  0.0
      0.2nm,0.5s,baz=110,slow=4.3,SNR=3.3
WRA   Warramunga Arr   44.93 261  P         P         16 45 30.4 -0.6
      0.8nm,0.3s,baz=97,slow=7.7,SNR=42
MJAR  Matsushiro Arr   69.62 323  P         P         16 48 18.5 +0.2
      0.9nm,0.8s,baz=140,slow=5.7,SNR=4.1
ILAR  Eielson Array    87.42  13  P         P         16 49 51.6 -0.5
      0.3nm,0.8s,baz=206,slow=5.7,SNR=2.7
BVAR  Borovoye Array  118.53 320  PKP       PKPdf     16 55 48.5  0.0
      0.2nm,0.3s,baz=76,slow=1.8,SNR=2.6
```

NEIC ***01*** *16:46:52.3*±*0.0, 35°.79S*×*177°.68E, h222*^{km}*, ML4.1(WEL), After WEL.*

WEL 01 16:46:51.5, 36°S±11°×**17°8E**±°**, h252**^{km}±9^{km}**, Off east coast of North Island**

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Code  Station Name      Δ°   AZ°    Phase ID           Time       Res
                                  Op        ISC       h  m  s     ISC
MXZ   Matakaoa Point    1.65 170  Pn        Pn        16 47 31.2 +0.1
MXZ   Matakaoa Point    1.65 170  P         Pn        16 47 31.0  0.0
MXZ                               S         S         16 48 00.1 -2.2
HAZ   Te Kaha           1.82 184  P         Pn        16 47 32.5 +0.1
HAZ                               S         S         16 48 02.2 -2.6
WMGZ  Waiomatatini S    1.92 169  Pn        Pn        16 47 33.8 +0.5
WMGZ  Waiomatatini S    1.92 169  P         Pn        16 47 33.9 +0.6
PKGZ  Pakihiroa         1.95 177  P         Pn        16 47 33.9 +0.2
PKGZ                              S         S         16 48 05.1 -1.9
GRZ   Great Barrier     2.03 260  P         Pn        16 47 34.3  0.0
RUGZ  Raukumara Rang    2.04 186  P         Pn        16 47 34.0 -0.5
PUZ   Puketiti          2.15 173  Pn        Pn        16 47 35.6 +0.2
PUZ   Puketiti          2.15 173  P         Pn        16 47 35.6 +0.2
PUZ                               S         S         16 48 07.6 -2.6
OPRZ  Ohinepanea        2.20 210  P         Pn        16 47 36.8 +1.0
OPRZ                              S         S         16 48 14.2 +3.2
TWGZ  Tauwhareparae     2.24 179  Pn        Pn        16 47 37.2 +0.9
TWGZ  Tauwhareparae     2.24 179  P         Pn        16 47 37.2 +0.9
TWGZ                              S         S         16 48 11.5 -0.3
MARZ  Manawahe          2.28 206  P         Pn        16 47 38.0 +1.3
EDRZ  Edgecumbe         2.37 204  P         Pn        16 47 38.8 +1.2
URZ   Urewera           2.41 196  Pn        Pn        16 47 37.9  0.0
URZ   Urewera           2.41 196  P         Pn        16 47 37.9  0.0
MWZ   Matawai           2.42 188  Pn        Pn        16 47 38.4 +0.4
MWZ   Matawai           2.42 188  P         Pn        16 47 38.3 +0.3
WIAZ  Waiheke Island    2.42 248  P         Pn        16 47 38.5 +0.5
KARZ  Kaharoa           2.48 213  P         Pn        16 47 40.6 +2.0
KMRZ  Kaimai            2.49 219  P         Pn        16 47 40.0 +1.3
TKGZ  Te Karaka         2.50 182  P         Pn        16 47 39.2 +0.5
TKGZ                              S         S         16 48 13.7 -2.5
OMRZ  Omania            2.50 210  P         Pn        16 47 40.5 +1.6
MKAZ  Moumakai          2.52 242  P         Pn        16 47 39.7 +0.7
CNGZ  Carnagh Statio    2.55 175  Pn        Pn        16 47 40.1 +0.8
CNGZ  Carnagh Statio    2.55 175  P         Pn        16 47 40.1 +0.8
TARZ  Mount Tarawera    2.56 206  P         Pn        16 47 41.2 +1.6
RAGZ  Rawiri            2.59 189  Pn        Pn        16 47 40.2 +0.5
RAGZ                              Sn        S         16 48 17.0 -1.0
ETAZ  East Tamaki Re    2.63 246  P         Pn        16 47 41.0 +0.8
RRRZ  Republican Roa    2.65 205  Pn        Pn        16 47 41.4 +1.0
MUGZ  Murupara          2.70 200  P         Pn        16 47 41.0 +0.2
MUGZ                              S         S         16 48 18.1 -1.9
HSRZ  Hossack Road      2.73 209  P         Pn        16 47 43.4 +2.2
RIGZ  Rimuhau           2.77 183  P         Pn        16 47 41.8 +0.2
RTZ   Ruatahuna         2.78 196  P         Pn        16 47 41.4 -0.3
RVAZ  Riverhead Bore    2.84 252  P         Pn        16 47 42.2 -0.1
PRRZ  Plateau Road      2.84 205  Pn        Pn        16 47 42.8 +0.5
PRRZ  Plateau Road      2.84 205  P         Pn        16 47 42.9 +0.6
SNGZ  Shannon Statio    2.88 189  Pn        Pn        16 47 42.8  0.0
WTAZ  Waiatarua         2.89 249  P         Pn        16 47 43.8 +0.9
WCZ   Waipu Caves       2.92 269  P         Pn        16 47 43.4 +0.3
PRGZ  Paritu Road       2.98 181  Pn        Pn        16 47 44.3 +0.5
PRGZ  Paritu Road       2.98 181  P         Pn        16 47 44.6 +0.7
KUTZ  Kaahu Road        3.06 213  P         Pn        16 47 46.4 +1.7
KNZ   Kokohu            3.09 184  P         Pn        16 47 44.9  0.0
KNZ   Kokohu            3.09 184  P         S         16 48 22.5 -4.8
MRHZ  Matea Rd          3.13 202  P         Pn        16 47 45.3 -0.2
WHHZ  Waihua            3.18 190  P         Pn        16 47 46.3 +0.3
WHHZ  Waihua            3.18 190  P         S         16 48 28.2 -1.1
MHGZ  Mahia Peninsul    3.21 180  Pn        Pn        16 47 46.7 +0.4
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MHGZ	Mahia Peninsul	3.21	180	P	Pn	16 47 46.8	+0.5
MHGZ	Mahia Peninsul	3.21	180	P	S	16 48 22.8	-7.0
NMHZ	Naumai	3.28	196	Pn	Pn	16 47 47.4	+0.2
NMHZ				Sn	S	16 48 30.4	-0.9
NMHZ	Naumai	3.28	196	P	Pn	16 47 47.6	+0.5
RATZ	Rangitukua	3.40	210	P	Pn	16 47 49.7	+1.3
ARHZ	Aropaoanui	3.40	192	Pn	Pn	16 47 48.5	0.0
ARHZ				Sn	S	16 48 32.6	-1.0
ARHZ	Aropaoanui	3.40	192	P	Pn	16 47 48.6	+0.2
BKZ	Black Stump Fm	3.42	199	Pn	Pn	16 47 48.1	-0.6
BKZ	Black Stump Fm	3.42	199	P	Pn	16 47 48.1	-0.6
KATZ	Kakaramea	3.52	210	P	Pn	16 47 51.8	+1.9
HIZ	Hauiti	3.56	223	Pn	Pn	16 47 51.8	+1.6
HIZ	Hauiti	3.56	223	P	Pn	16 47 52.4	+2.2
OUZ	Omahuta	3.61	280	P	Pn	16 47 50.9	+0.1
MCHZ	McNeill Hill	3.64	195	Pn	Pn	16 47 50.8	-0.3
MCHZ	McNeill Hill	3.64	195	P	Pn	16 47 51.0	-0.1
MCHZ	McNeill Hill	3.64	195	P	S	16 48 36.3	-2.2
WTVZ	West Tongariro	3.68	210	P	Pn	16 47 50.0	-1.7
KWHZ	Kaweka Forest	3.68	199	P	Pn	16 47 51.3	-0.4
KWHZ	Kaweka Forest	3.68	199	P	S	16 48 38.4	-1.1
OTVZ	Oturere	3.69	209	Pn	Pn	16 47 52.0	+0.2
TWVZ	Taurewa	3.71	212	P	Pn	16 47 52.2	+0.2
NGZ	Ngauruhoe	3.73	209	P	Pn	16 47 53.0	+0.7
COVZ	Chateau Observ	3.77	210	P	Pn	16 47 53.3	+0.5
TUVZ	Tukino	3.79	208	Pn	Pn	16 47 52.8	-0.2
TUVZ	Tukino	3.79	208	P	Pn	16 47 50.1	-2.9
FWVZ	Far West T-bar	3.81	209	ePn	Pn	16 47 47.5	-5.9
FWVZ	Far West T-bar	3.81	209	P	Pn	16 47 53.3	-0.1
WHVZ	Whangaehu Hut	3.83	208	Pn	Pn	16 47 52.5	-1.0
WHVZ	Whangaehu Hut	3.83	208	P	Pn	16 47 53.3	-0.2
BHHZ	Black Hill Sta	3.84	202	Pn	Pn	16 47 52.7	-0.9
BHHZ				Sn	S	16 48 38.8	-4.1
BHHZ	Black Hill Sta	3.84	202	P	Pn	16 47 52.8	-0.7
WNVZ	Wahianoa	3.86	208	Pn	Pn	16 47 47.4	-6.5
MOVZ	Moawhango	3.87	206	Pn	Pn	16 47 53.1	-0.8
MOVZ	Moawhango	3.87	206	P	Pn	16 47 53.1	-0.8
KRHZ	Kereru	3.90	198	P	Pn	16 47 53.5	-0.7
KRHZ	Kereru	3.90	198	P	S	16 48 41.7	-2.3
KAHZ	Kahuranaki	3.94	192	Pn	Pn	16 47 54.3	-0.4
KAHZ	Kahuranaki	3.94	192	P	Pn	16 47 54.4	-0.3
KAHZ	Kahuranaki	3.94	192	P	S	16 48 37.4	-7.5
VRZ	Vera Road	4.06	218	P	Pn	16 47 57.7	+1.7
PXZ	Pawanui	4.17	191	Pn	Pn	16 47 56.3	-1.0
PXZ				Sn	S	16 48 45.2	-4.5
PXZ	Pawanui	4.17	191	P	Pn	16 47 56.5	-0.8
PXZ	Pawanui	4.17	191	P	S	16 48 41.9	-7.8
PNHZ	Pukenui	4.20	199	Pn	Pn	16 47 56.5	-1.2
PNHZ	Pukenui	4.20	199	P	Pn	16 47 55.8	-1.9
PNHZ	Pukenui	4.20	199	P	S	16 48 44.4	-6.0
WPHZ	Waipukurau	4.29	196	Pn	Pn	16 47 57.4	-1.3
WPHZ	Waipukurau	4.29	196	P	Pn	16 47 57.7	-1.0
WPHZ	Waipukurau	4.29	196	P	S	16 48 45.6	-6.5
TSZ	Takapari Road	4.40	200	Pn	Pn	16 47 58.6	-1.4
TSZ				Sn	S	16 48 51.2	-3.5
TSZ	Takapari Road	4.40	200	P	S	16 48 50.8	-3.8
PRHZ	Porangahau	4.44	193	Pn	Pn	16 47 59.7	-0.9
PRHZ	Porangahau	4.44	193	P	Pn	16 47 59.7	-0.8
PRHZ	Porangahau	4.44	193	P	S	16 48 45.7	-10
WAZ	Wanganui	4.47	211	P	Pn	16 48 01.0	+0.1
DVHZ	Dannevirke	4.57	197	Pn	Pn	16 48 00.0	-2.1
DVHZ	Dannevirke	4.57	197	P	Pn	16 48 00.2	-1.9
DVHZ	Dannevirke	4.57	197	P	S	16 48 52.7	-5.7
ANWZ	Angora Road	4.66	194	P	Pn	16 48 02.2	-0.9
POWZ	Post Office Ro	4.76	200	Pn	Pn	16 48 02.7	-1.7
POWZ	Post Office Ro	4.76	200	P	Pn	16 48 03.1	-1.2
PRWZ	Pori Road	4.86	198	Pn	Pn	16 48 04.5	-1.0
PRWZ	Pori Road	4.86	198	P	Pn	16 48 04.7	-0.9
BFZ	Birch Farm	4.92	195	Pn	Pn	16 48 04.7	-1.5
BFZ	Birch Farm	4.92	195	P	Pn	16 48 04.8	-1.5
MRZ	Mangatainoka R	5.07	201	Pn	Pn	16 48 05.8	-2.2
TIWZ	Tintock	5.09	198	Pn	Pn	16 48 06.7	-1.7
TIWZ	Tintock	5.09	198	P	Pn	16 48 06.8	-1.6
HOWZ	Holdsworth Sta	5.30	200	Pn	Pn	16 48 08.7	-2.3
HOWZ	Holdsworth Sta	5.30	200	P	Pn	16 48 08.8	-2.2
OGWZ	Otaki Gorge	5.33	203	Pn	Pn	16 48 09.2	-2.1
OGWZ	Otaki Gorge	5.33	203	P	Pn	16 48 09.2	-2.1
TMWZ	Te Maipa	5.41	197	Pn	Pn	16 48 11.0	-1.2
TMWZ	Te Maipa	5.41	197	P	Pn	16 48 10.9	-1.3
KIW	Kapiti Island	5.46	205	Pn	Pn	16 48 10.7	-2.2
KIW	Kapiti Island	5.46	205	P	Pn	16 48 10.6	-2.3
MTW	Mount Morrison	5.55	199	Pn	Pn	16 48 11.8	-2.2
MTW	Mount Morrison	5.55	199	P	Pn	16 48 11.8	-2.2
CAW	Cannon Point	5.63	203	Pn	Pn	16 48 12.3	-2.6
CAW	Cannon Point	5.63	203	P	Pn	16 48 12.5	-2.5
MSWZ	Moikau Station	5.86	200	Pn	Pn	16 48 15.3	-2.5
MSWZ	Moikau Station	5.86	200	P	Pn	16 48 15.4	-2.4
TCW	Tory Channel	6.00	207	P	Pn	16 48 16.9	-2.6
PLWZ	Palliser	6.00	200	Pn	Pn	16 48 17.0	-2.7
PLWZ	Palliser	6.00	200	P	Pn	16 48 17.0	-2.6
TUWZ	Tuamarina	6.31	208	Pn	Pn	16 48 20.7	-2.7
TUWZ	Tuamarina	6.31	208	P	Pn	16 48 20.6	-2.8
NNZ	Nelson	6.37	213	Pn	Pn	16 48 21.6	-2.5
NNZ	Nelson	6.37	213	P	Pn	16 48 21.9	-2.2
QRZ	Quartz Range	6.47	219	Pn	Pn	16 48 22.7	-2.7
QRZ	Quartz Range	6.47	219	P	Pn	16 48 22.8	-2.6
BSWZ	Blackbirch Sta	6.58	208	Pn	Pn	16 48 24.7	-2.2
BSWZ	Blackbirch Sta	6.58	208	P	Pn	16 48 25.1	-1.8
THZ	Tophouse	7.02	212	Pn	Pn	16 48 30.4	-2.0
THZ				Sn	S	16 49 47.7	-5.6
THZ	Tophouse	7.02	212	P	Pn	16 48 30.6	-1.8
KHZ	Kahutara	7.32	206	Pn	Pn	16 48 33.7	-2.3
KHZ	Kahutara	7.32	206	P	Pn	16 48 33.8	-2.2
DSZ	Denniston Nort	7.52	218	Pn	Pn	16 48 36.7	-2.0
DSZ	Denniston Nort	7.52	218	P	Pn	16 48 37.2	-1.4
INZ	Inchbonnie	8.44	215	P	Pn	16 48 48.3	-1.9
OXZ	Oxford	8.67	210	Pn	Pn	16 48 49.9	-3.2
OXZ	Oxford	8.67	210	P	Pn	16 48 50.4	-2.7
MQZ	McQueen's Vall	8.76	206	Pn	Pn	16 48 51.0	-3.2
MQZ	McQueen's Vall	8.76	206	P	Pn	16 48 51.1	-3.1
JCZ	Jackson Bay	10.73	218	P	Pn	16 49 17.1	-2.1

IDC 01 17:08:43.1±7.4**, 30°.49S×178°.75W, h0^{km}, mb3.3**/2**, mb1 3.5**/2**, mb1mx3.3**/38**, mbtmp3.3**/2**, Error ellipse: s-maj=310.6km s-min=58.4km az=156.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	42.46	267	P	P	17 16 39.9	-0.3
	0.2nm,0.8s,baz=105,slow=7.3,SNR=4.1						
WRA	Warramunga Arr	43.46	273	P	P	17 16 48.2	-0.1
	0.2nm,0.3s,baz=111,slow=8.1,SNR=4.6						
FINES	FINESS Array B	145.01	339	PKPbc	PKPbc	17 28 20.2	-0.8
	1.5nm,1.0s,baz=72,slow=4.5,SNR=2.8						

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*IDC **01** 17:18:12.9±2.5, 18°.26S×175°.28W, h202^{km}±28^{km}, mb3.4/7, mb1 3.6/8, mb1mx3.3/43, mbtmp4.0/8, Error ellipse: s-maj=25.7km s-min=19.4km az=116.0*

*ISCJB **01** 17:18:13.6±0.8, 18°.1S±0°.2×175°.1W±0°.2, h238^{km}, mb3.6/7, Error ellipse: s-maj=30.9km s-min=10.0km az=42.2*

ISC 01 17:18:14.9±0.9**, 18°.1S**±0°.2×**175°.0W**±0°.2**, h238^{km}, n8,** σ**2^{s}19**/9**, mb3.6**/7**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	5.21	38	P	Pn	17 19 34.1	+1.1
	2.7nm,0.3s,baz=229,slow=19,SNR=4.9						
AFI				S	S	17 20 31.7	-3.4
	10nm,0.3s,baz=139,slow=20,SNR=8.4						
URZ	Urewera	21.24	197	P	P	17 22 40.0	-2.5
	7.5nm,0.8s,baz=47,slow=12,SNR=4.9						
STKA	Stephens Creek	41.37	242	P	P	17 25 37.8	-0.1
	0.8nm,0.5s,baz=51,slow=6.5,SNR=4.1						
WRA	Warramunga Arr	47.75	259	P	P	17 26 27.1	-1.4
	0.4nm,0.3s,baz=97,slow=7.3,SNR=19						
ASAR	Alice Springs	47.83	254	P	P	17 26 28.5	-0.6
	4.0nm,0.5s,baz=91,slow=8.4,SNR=143						
FITZ	Fitzroy Crossi	56.16	260	P	P	17 27 30.6	+0.3
	1.4nm,0.9s,baz=113,slow=7.7,SNR=4.2						
QSPA	South Pole Qui	71.97	180	P	P	17 29 13.8	+1.4
	1.4nm,0.7s,baz=22,slow=1.3,SNR=7.2						
ILAR	Eielson Array	85.38	12	P	P	17 30 27.2	+2.3
	0.2nm,0.5s,baz=210,slow=6.7,SNR=3.5						

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*IDC **01** 17:28:15.9±8.7, 32°.63S×179°.71E, h231^{km}±58^{km}, mb3.3/4, mb1 3.5/5, mb1mx3.1/39, mbtmp3.9/5, Error ellipse: s-maj=90.3km s-min=19.1km az=46.0*

*WEL **01** 17:28:16.2±0.8, 33°S±8°×17°9W±2°0, h309^{km}±10^{km}*

ISC 01 17:28:24.1±1.7**, 33°.3S**±0°.1×**179°.7E**±0°.2**, h300^{km}, n31,** σ**2^{s}16**/36**, mb3.3**/4**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	Matakaoa Point	4.42	195	P	Pn	17 29 36.6	+1.8
GLKZ	Green Lake	4.49	27	S	S	17 30 12.7	-21
WMGZ	Waiomatatini S	4.65	193	P	Pn	17 29 37.4	0.0
WMGZ				S	S	17 30 38.7	+2.3
HAZ	Te Kaha	4.74	199	P	Pn	17 29 39.1	+0.7
HAZ				S	S	17 30 40.7	+2.6
PKGZ	Pakihiroa	4.79	196	P	Pn	17 29 38.4	-0.7
PUZ	Puketiti	4.92	194	P	Pn	17 29 39.6	-1.0
PUZ				S	S	17 30 43.3	+1.1
RUGZ	Raukumara Rang	4.96	199	P	Pn	17 29 40.5	-0.6
TWGZ	Tauwhareparae	5.08	196	P	Pn	17 29 42.0	-0.5
TWGZ				S	S	17 30 48.7	+3.2
WCZ	Waipu Caves	5.17	238	P	Pn	17 29 45.4	+1.9
TGRZ	Tauranga	5.26	212	P	Pn	17 29 44.7	+0.2
CNGZ	Carnagh Statio	5.33	193	P	Pn	17 29 45.1	-0.2
MKAZ	Moumakai	5.34	223	P	Pn	17 29 48.7	+3.2
TKGZ	Te Karaka	5.37	196	P	Pn	17 29 44.6	-1.1
TKGZ				S	S	17 30 53.2	+1.8
URZ	Urewera	5.40	202	P	Pn	17 29 44.5	-1.6
	1.9nm,0.3s,baz=314,slow=16,SNR=59						
URZ				S	S	17 30 52.8	+0.6
	2.5nm,0.3s,baz=139,slow=18,SNR=11						
URZ	Urewera	5.40	202	P	Pn	17 29 45.2	-0.9
MRZ	Mangatainoka R	8.08	203	P	Pn	17 30 15.3	-3.2
MRZ				S	S	17 31 48.1	-3.1
OGWZ	Otaki Gorge	8.35	205	P	Pn	17 30 18.9	-2.9
KIW	Kapiti Island	8.48	206	P	Pn	17 30 20.2	-3.3
MTW	Mount Morrison	8.55	202	P	Pn	17 30 21.1	-3.2
CAW	Cannon Point	8.65	204	P	Pn	17 30 22.1	-3.3
PLWZ	Palliser	9.00	202	P	Pn	17 30 26.6	-3.2
TCW	Tory Channel	9.03	207	P	Pn	17 30 28.6	-1.4
TUWZ	Tuamarina	9.34	208	P	Pn	17 30 32.0	-1.9
NNZ	Nelson	9.39	211	P	Pn	17 30 33.8	-0.8
THZ	Tophouse	10.05	211	P	Pn	17 30 42.0	-0.7
KHZ	Kahutara	10.34	206	P	Pn	17 30 45.0	-1.2
ASAR	Alice Springs	41.13	271	P	P	17 35 37.6	-2.1
	0.5nm,0.6s,baz=111,slow=8.3,SNR=11						
WRA	Warramunga Arr	42.39	277	P	P	17 35 47.1	-2.8
	0.6nm,0.3s,baz=114,slow=7.7,SNR=15						
FITZ	Fitzroy Crossi	50.51	273	P	P	17 36 50.4	-2.2
	1.4nm,0.8s,baz=130,slow=7.9,SNR=3.4						
QSPA	South Pole Qui	56.83	180	P	P	17 37 41.2	+3.6
	2.5nm,0.7s,baz=7.9,slow=18,SNR=12						
TORD	Torodi Ar. Bea	159.87	186	PKPab	PKPab	17 48 29.4	+0.8
	baz=158,slow=4.7						

IDC 01 17:38:43.5±3.2**, 33°.20S×178°.56W, h0^{km}, mb3.7**/2**, mb1 4.0**/3**, mb1mx3.5**/40**, mbtmp3.8**/3**, ML3.7**/1**, Error ellipse: s-maj=73.2km s-min=46.4km az=120.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	6.16	214	Pn	Pn	17 40 14.9	-0.8
	1.9nm,0.3s,baz=73,slow=17,SNR=23						
URZ				Sn	Sn	17 41 22.7	-4.0
	1.5nm,0.3s,baz=168,slow=20,SNR=7.9						
ASAR	Alice Springs	42.56	270	P	P	17 46 41.3	0.0
	0.6nm,0.6s,baz=112,slow=7.3,SNR=18						
WRA	Warramunga Arr	43.80	275	P	P	17 46 51.2	-0.1
	0.8nm,0.6s,baz=114,slow=7.8,SNR=10.0						
FINES	FINESS Array B	147.58	338	PKPbc	PKPbc	17 58 28.2	-0.7
	0.9nm,0.8s,baz=67,slow=3.6,SNR=4.2						

IDC 01 17:43:39.7±2.4**, 22°.13S×168°.85E, h0^{km}, mb3.4**/2**, mb1 3.7**/3**, mb1mx3.4**/43**, mbtmp3.5**/3**, ML3.4**/1**, MS3.0**/2**, Ms1 3.0**/2**, ms1mx2.5**/21**, 1C-1D, Error ellipse: s-maj=137.3km s-min=28.1km az=168.0, New Caledonia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	2.23	271	Pn	Pn	17 44 19.0	+0.9
	12nm,0.3s,baz=126,slow=11,SNR=455						
DZM				Sn	Sn	17 44 46.7	+0.3
	34nm,0.3s,baz=191,slow=19,SNR=5.2						
STKA	Stephens Creek	26.09	242	LR	LR	17 58 41.0	
	comp=Z,36nm,19.5s,baz=28,slow=34						
ASAR	Alice Springs	32.18	260	P	P	17 50 09.6	-0.1
	0.4nm,0.7s,baz=88,slow=9.2,SNR=5.4						
WRA	Warramunga Arr	32.24	267	P	P	17 50 09.5	-0.7
	0.5nm,0.8s,baz=96,slow=8.2,SNR=2.9						
DAV	Davao City (W)	51.37	299	LR	LR	18 15 06.1	
	comp=Z,13nm,18.4s,baz=140,slow=37						
ARCES	ARCESS Array B	127.75	345	PKP	PKPdf	18 02 45.5	-1.0
	2.7nm,1.0s,baz=48,slow=1.3,SNR=4.0						
BRG	Berggiesshubel	145.26	332	ePKP	PKPbc	18 03 18.4	-0.5
	4.2nm,0.8s						
CLL	Collm	145.34	333	⇑iPKPbc	PKPbc	18 03 18.6	-0.6
	comp=Z,5.0nm,1.0s						
CLL				⇓iPKPab	PKiKP	18 03 23.8	+0.5
	comp=Z,4.0nm,1.0s						
GERES	GERESS Array B	146.82	330	PKPbc	PKPbc	18 03 23.7	-0.2
	comp=Z,1.3nm,0.7s,baz=35,slow=3.6,SNR=9.3						
DAVOX	Davos/Dischmat	150.09	330	PKPbc	PKPbc	18 03 32.4	-0.3
	baz=25,slow=14						

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*MOS **01** 17:44:57.6±1.3, 20°.51S×71°.17W, h29^{km}, mb4.9/16, Error ellipse: s-maj=17.6km s-min=7.1km az=113.7*

*NEIC **01** 17:44:58.0±0.0, 20°.84S×71°.32W, h33^{km}, mb4.7/45, ML5.1(GUC), After GUC.*

NEIC Felt [III] at Alto Hospicio, Iquique and Pica.

*ISCJB **01** 17:44:58.4±0.6, 20°.60S±0°.02×71°.34W±0°.05, h46^{km}±6^{km}, mb4.6/63, MS4.0/29, Error ellipse: s-maj=7.2km s-min=3.3km az=174.2*

*BJI **01** 17:44:59.8, 20°.60S×70°.80W, h30^{km}, mB4.9/3, Ms5.0/4, Ms7 4.9/4*

*GUC **01** 17:44:59.5±0.5, 20°.59S×71°.25W, h32^{km}±2^{km}, ML5.2*

*IDC **01** 17:45:01.6±0.7, 20°.55S×71°.37W, h50^{km}±5^{km}, mb4.6/22, mb1 4.7/24, mb1mx4.6/39, mbtmp4.8/24, MS3.9/26, Ms1 3.9/26, ms1mx3.8/38, Error ellipse: s-maj=17.3km s-min=10.2km az=78.0*

ISC 01 17:44:58.6±0.7**, 20°.68S**±0°.03×**71°.47W**±0°.05**, h29**^{km}±4^{km}**, n688,** σ**1^{s}42**/701**, mb4.7**/63**, MS3.9**/29**, 11C-13D, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB02	IPOC Station P	1.60	114	⇓iP	Pn	17 45 24.6	-0.4
PB02				iS	Sn	17 45 44.1	-0.7
PB02				IAML		17 45 46.3	
	comp=E,46µm,0.3s						
PSGC	Pisagua	1.66	50	⇑iP	Pn	17 45 24.7	-1.2
PSGC				iS	Sn	17 45 43.7	-2.6
PB07	IPOC Station P	1.80	125	⇓iP	Pn	17 45 27.3	-0.6
PB07				iS	Sn	17 45 48.0	-2.0
PB07				IAML		17 45 49.9	
	comp=N,34µm,0.4s						
PB01	IPOC Station P	1.88	101	ePn	Pn	17 45 28.9	-0.1
PB01	IPOC Station P	1.88	101	⇓iP	Pn	17 45 28.7	-0.2
PB01				iS	Sn	17 45 51.3	-0.6
PB01				IAML		17 45 53.4	
	comp=E,47µm,0.3s						
PB04	IPOC Station P	2.05	144	ePn	Pn	17 45 30.6	-0.8
PB04				eSn	Sn	17 45 48.5	-7.5
PB04	IPOC Station P	2.05	144	⇓iP	Pn	17 45 30.5	-0.8
PB04				iS	Sn	17 45 53.6	-2.5
PB03	IPOC Station P	2.10	131	⇓iP	Pn	17 45 31.5	-0.5
PB03				iS	Sn	17 45 56.5	-0.7
PB03				IAML		17 45 58.2	
	comp=N,20µm,0.5s						
PB08	IPOC Station P	2.23	76	⇑iP	Pn	17 45 34.0	-0.1
PB08				iS	Sn	17 45 59.7	-1.2
PB12	IPOC Station P	2.32	28	⇑iP	Pn	17 45 34.0	-1.1
PB12				iS	Sn	17 45 59.6	-3.0
MNMC	Minye Minye	2.34	49	⇑iP	Pn	17 45 35.2	-0.3
MNMC				iS	Sn	17 46 02.1	-1.3
MNMC				IAML		17 46 05.7	
	comp=E,31µm,0.4s						
PB09	IPOC Station P	2.35	119	⇓iP	Pn	17 45 36.3	+0.8
PB09				iS	Sb	17 46 04.9	-4.2
PB09				IAML		17 46 06.3	
	comp=E,21µm,0.4s						
ARCH	Arica	2.44	27	eP	Pn	17 45 35.6	-1.0
ARCH				iS	Sn	17 46 04.0	-1.6
ARCH				IAML		17 46 04.9	
	comp=E,37µm,0.5s						
PB05	IPOC Station P	2.46	152	⇓iP	Pn	17 45 35.8	-1.1
PB05				eS	Sn	17 46 03.1	-2.9
PB05				IAML		17 46 06.1	
	comp=N,8µm,0.4s						
PB06	IPOC Station P	2.67	139	⇓iP	Pn	17 45 39.5	-0.5
PB06				iS	Sn	17 46 09.6	-1.8
PB06				IAML		17 46 11.1	
	comp=E,13µm,0.5s						
PB10	IPOC Station P	2.94	163	eS	Sn	17 46 14.0	-3.9
PB10	IPOC Station P	2.94	163	⇑iP	Pn	17 45 42.2	-1.3
PB10				iS	Sn	17 46 13.9	-3.9
PB16	IPOC Station P	2.98	39	⇑iP	Pn	17 45 44.2	-0.3
PB15	IPOC Station P	3.12	144	⇓iP	Pn	17 45 45.6	-0.6
PB15				iS	Sn	17 46 20.1	-2.4
PB14	IPOC Station P	4.04	166	eP	Pn	17 45 58.1	-0.8
PB14				eS	Sn	17 46 41.1	-4.4
PB14	IPOC Station P	4.04	166	⇑iP	Pn	17 45 58.0	-0.8
GO02	Mina Guanaco	4.78	159	ePn	Pn	17 46 08.8	-0.2
GO02	Mina Guanaco	4.78	159	⇓iP	Pn	17 46 08.6	-0.4
GO02				iS	Sn	17 47 01.5	-2.2
LPAZ	La Paz	5.40	36	P	Pn	17 46 19.9	+2.2
	comp=E,58nm,0.3s,baz=236,slow=7.1,SNR=602						
LPAZ				LR	LR	17 48 28.0	
	comp=E,780nm,20.6s,baz=194,slow=39						
LPAZ	La Paz	5.40	36	eP	Pn	17 46 20.3	+2.5
LPAZ	La Paz	5.40	36	P	Pn	17 46 20.0	+2.2
LPAZ				pmax	pmax		
	comp=Z,58nm,0.3s						
LPAZ				MLR	MLR		
	comp=Z,781nm,20.6s						
YJA	Yavi	5.74	106	eP	Pn	17 46 25.3	+3.0
YJA				IAML		17 46 28.9	
	comp=Z,49nm,0.4s						
HJA	Humahuaca	6.16	115	eP	Pn	17 46 31.9	+3.9
HJA				IAML		17 46 36.2	
	comp=Z,159nm,0.4s						
SLA	San Lorenzo	6.81	127	eP	Pn	17 46 41.0	+4.1
SLA				IAML		17 46 42.7	
	comp=Z,192nm,0.5s						
AHML	Horco Molle	8.27	138	eP	Pn	17 46 58.6	+1.8
AHML				IAML		17 47 00.1	
	comp=Z,106nm,0.4s						
LCO	Las Campanas	8.32	175	eP	Pn	17 46 54.3	-3.3
VCA	Vinchina	8.55	160	eP	Pn	17 47 00.7	0.0
VCA				IAML		17 49 19.0	
	comp=Z,93nm,0.6s						
AGUA	GUANDACOL	9.17	164	eP	Pn	17 47 10.8	+1.7
CYA	Choya	9.28	147	eP	Pn	17 47 10.2	-0.4
CYA				IAML		17 47 11.5	
	comp=Z,41nm,0.5s						
ACLC	CERRO LA CRUZ	9.62	156	eP	Pn	17 47 13.8	-1.5
NNA	Nana	10.07	328	P	Pn	17 47 21.3	-0.1
	comp=Z,2.7nm,0.3s,baz=160,slow=8.7,SNR=7.1						
NNA				S	Sn	17 49 06.3	-7.2
	comp=Z,17nm,0.3s,baz=182,slow=11,SNR=9.6						
NNA				LR	LR	17 50 55.9	
	comp=Z,886nm,21.3s,baz=159,slow=35						
AMOG	MOGNA	10.56	166	eP	Pn	17 47 26.8	-1.3
APLL	PUNTA DE LOS L	10.65	156	eP	Pn	17 47 26.3	-3.0
APLL				IAML		17 49 22.1	
	comp=Z,22nm,0.5s						
SIV	San Ignacio	10.91	66	P	Pn	17 47 30.7	-2.3
	comp=Z,16nm,0.3s,baz=263,slow=11,SNR=186						
CPUP	Villa Florida	14.13	116	P	Pn	17 48 14.5	-2.4
	comp=Z,0.4nm,0.3s,baz=291,slow=11,SNR=23						
SAML	Samuel	14.14	36	ePn	Pn	17 48 12.7	-4.4
SAML	Samuel	14.14	36	eP	Pn	17 48 12.7	-4.4
TRQA	Tornquist	19.16	157	eP	Pn	17 49 20.4	-0.5
	comp=Z,141nm,1.0s						
TRQA	Tornquist	19.16	157	eP	Pn	17 49 20.4	-0.5
TRQA				pmax	pmax		
	comp=Z,141nm,1.0s						
PLCA	Paso Flores	20.00	178	P	P	17 49 30.3	+1.3
	comp=Z,42nm,0.9s,baz=18,slow=12,SNR=38						
PLCA				LR	LR	17 57 36.1	
	comp=Z,255nm,19.2s,baz=30,slow=38						
OTAV	Otavalo	21.89	341	eP	P	17 49 49.2	-0.7
	comp=Z,22nm,0.8s						
OTAV	Otavalo	21.89	341	eP	P	17 49 49.2	-0.7
OTAV				pmax	pmax		
	comp=Z,22nm,0.8s						
CMBC	Cumbal	22.38	343	eP	P	17 49 57.5	+2.3
FLOC	Florencia	22.50	349	eP	P	17 49 56.9	+0.7
GCUF	Volcan Galeras	22.52	344	eP	P	17 49 59.2	+2.4
CRUC	La Cruz	22.76	346	eP	P	17 50 00.3	+1.2
PTGA	Pitinga	22.79	31	P	P	17 49 57.7	-1.4
	comp=Z,118nm,0.4s,baz=204,slow=12,SNR=115						
PTGA				LR	LR	17 59 21.6	
	comp=Z,418nm,19.2s,baz=196,slow=38						
PTGA	Pitinga	22.79	31	eP	P	17 49 57.6	-1.6
SOTA	Rioblanco	23.23	347	eP	P	17 50 06.3	+2.2
BETC	Betania	23.55	350	eP	P	17 50 08.3	+1.6
MARP	Paez Belalcaza	23.79	349	eP	P	17 50 10.3	+1.0
SJAC	San Juan de Ar	23.93	354	eP	P	17 50 12.4	+1.9
GRGC	Isla de Gorgon	24.44	344	eP	P	17 50 16.3	+1.3
PRAC	Prado	24.48	352	eP	P	17 50 13.4	-2.0
PRAC	Prado	24.48	352	eP	P	17 50 15.8	+0.4
HORQ	Saladito	24.54	348	eP	P	17 50 16.8	+0.5
VILC	Villavicencio,	24.74	355	eP	P	17 50 18.9	+1.0
YOTC	Yotoco, Valle	24.98	348	eP	P	17 50 20.4	+0.4
MALC	Bahia Malaga	25.21	346	eP	P	17 50 24.4	+2.4
CHIC	Chingaza	25.25	355	eP	P	17 50 23.3	+0.4
ANIL	Santa Ana	25.31	351	eP	P	17 50 24.8	+1.5
TOLC	Tolima	25.39	351	eP	P	17 50 25.3	+1.2
ROSC	El Rosal	25.52	353	P	P	17 50 26.6	+1.3
	comp=Z,12nm,0.5s,baz=161,slow=8.1,SNR=7.6						
ROSC				LR	LR	18 01 14.2	
	comp=Z,463nm,20.1s,baz=192,slow=38						
ROSC	El Rosal	25.52	353	eP	P	17 50 23.8	-1.4
	comp=Z,19nm,1.0s						
YOPC	Yopal, Colombi	25.89	358	eP	P	17 50 28.0	-0.4
NORC	Norcasia	26.30	352	eP	P	17 50 31.8	-0.1
RUSC	La Rusia	26.46	356	eP	P	17 50 34.5	+0.6
RUSC	La Rusia	26.46	356	eP	P	17 50 34.3	+0.4
TAMC	Tame, Arauca	26.95	359	eP	P	17 50 38.0	+0.1
HELC	Santa Helena	27.00	351	eP	P	17 50 36.7	-1.9
HELC	Santa Helena	27.00	351	eP	P	17 50 38.3	-0.4
BARC	Barichara	27.16	356	eP	P	17 50 39.3	-0.6
PTBC	PUERTO BERRIO,	27.21	353	eP	P	17 50 37.3	-2.8
SOLC	Bahia Solano	27.37	347	eP	P	17 50 43.3	+1.8
PAMC	Pamplona, Colo	27.87	357	eP	P	17 50 45.8	-0.8
ZARC	Zaragoza, Cauc	28.20	353	eP	P	17 50 47.8	-1.2
OCAC	Ocana	28.80	356	eP	P	17 50 52.5	-1.9
SDV	Santo Domingo	29.39	2	P	P	17 50 58.1	-1.8
	comp=Z,8.2nm,0.5s,baz=195,slow=6.3,SNR=8.0						
SDV	Santo Domingo	29.39	2	eP	P	17 50 54.4	-5.4
CODC	Agustˆ›n Codaz	30.49	356	eP	P	17 51 04.8	-4.5
SJCC	San Jacinto, C	30.61	353	eP	P	17 51 09.8	-0.6
PCRV	Puerto La Cruz	31.39	13	P	P	17 51 17.6	+0.3
	comp=Z,22nm,0.6s,baz=259,slow=3.9,SNR=14						
PCRV				LR	LR	18 05 14.1	
	comp=Z,1µm,19.5s,baz=183,slow=39						
EFI	East Falkland	32.66	164	eP	P	17 51 28.2	+0.2
ZAM	Aeronautique	36.51	17	eP	P	17 51 59.1	-2.5
LPMF	Morne Lapointe	36.52	17	eP	P	17 52 01.4	-0.4
MVM	Montagne Vaucl	36.52	17	eP	P	17 51 59.9	-1.9
FDF	Fort de France	36.63	17	eP	P	17 51 60.0	-2.7
CXM	Morne La Croix	36.70	17	eP	P	17 52 04.5	+1.1
SJG	San Juan	38.91	8	eP	P	17 52 17.4	-4.5
	comp=Z,31nm,0.8s						
SJG	San Juan	38.91	8	eP	P	17 52 18.2	-3.7
SJG	San Juan	38.91	8	eP	P	17 52 17.4	-4.5
SJG				pmax	pmax		
	comp=Z,31nm,0.8s						
CBYP	Canovanas	39.10	8	eP	P	17 52 20.5	-3.1
SMRT	St. Maarten	39.36	13	eP	P	17 52 22.6	-3.1
PMSA	Palmer Station	44.34	175	P	P	17 53 07.7	+1.8
	comp=Z,32nm,1.0s,baz=349,slow=9.9,SNR=4.3						
PMSA				LR	LR	18 12 08.9	
	comp=Z,81nm,18.3s,baz=7.0,slow=37						
058A	Arcadia	48.50	348	P	P	17 53 39.2	+0.3
	baz=167						
555A	McAlpin	51.71	347	P	P	17 54 03.3	+0.1
	baz=166						
553A	Crawfordville	52.09	346	P	P	17 54 06.6	+0.5
	baz=164						
454A	Quitman	52.42	347	P	P	17 54 08.3	-0.3
	baz=166						
453A	Whigham	52.71	346	P	P	17 54 10.8	+0.2
	baz=165						

TIGA	Tifton baz=166	53.11	347	P	P	17 54 13.3	-0.4
353A	Camilla baz=165,SNR=5.3	53.16	346	P	P	17 54 13.3	-0.7
255A	Hazlehurst baz=167	53.36	348	P	P	17 54 15.0	-0.4
351A	Pinckard baz=163,SNR=6.3	53.41	345	P	P	17 54 15.4	-0.5
352A	Blakely baz=164,SNR=5.9	53.45	346	P	P	17 54 15.4	-0.7
254A	Abbeville baz=166,SNR=5.1	53.54	347	P	P	17 54 16.1	-0.7
350A	Dozier baz=163	53.73	344	P	P	17 54 18.0	-0.2
253A	Americus baz=165	53.83	347	P	P	17 54 18.8	-0.1
349A	Repton baz=162	53.89	343	P	P	17 54 19.2	-0.2
156A	Sylvania baz=168	53.90	350	P	P	17 54 19.5	+0.2
252A	Lumpkin baz=164	53.90	346	P	P	17 54 18.7	-0.7
155A	Kite baz=167	54.04	349	P	P	17 54 19.9	-0.5
NHSC	New Hope baz=170	54.13	351	P	P	17 54 21.2	+0.1
251A	Midway baz=164,SNR=9.6	54.15	345	P	P	17 54 20.3	-1.0
154A	Montrose baz=166	54.15	348	P	P	17 54 20.8	-0.5
250A	Grady baz=163,SNR=5.5	54.25	344	P	P	17 54 20.9	-1.1
250A	Grady	54.25	344	*e*P	P	17 54 21.4	-0.6
347A	Saraland baz=160	54.32	342	P	P	17 54 22.1	-0.3
249A	Camden baz=162,SNR=6.3	54.47	344	P	P	17 54 22.8	-0.7
152A	Waverly Hall baz=165,SNR=7.5	54.54	346	P	P	17 54 23.0	-1.1
151A	Opelika baz=164	54.55	346	P	P	17 54 23.1	-1.0
Z54A	Sparta baz=167,SNR=5.1	54.71	348	P	P	17 54 24.1	-1.2
248A	Dixon Mills baz=161,SNR=5.7	54.74	343	P	P	17 54 24.7	-0.8
150A	Eclectic baz=163,SNR=6.0	54.79	345	P	P	17 54 24.6	-1.2
Z53A	Monticello baz=166	54.89	348	P	P	17 54 25.5	-1.1
149A	Jones baz=162	54.97	344	P	P	17 54 25.7	-1.5
Z52A	Williamson baz=165,SNR=5.4	54.98	347	P	P	17 54 26.2	-1.1
GOGA	Godfrey baz=166	55.00	348	P	P	17 54 26.1	-1.3
344A	Westbrook Farm baz=158	55.03	340	P	P	17 54 27.2	-0.5
Y54A	Tignall baz=167,SNR=5.3	55.29	349	P	P	17 54 28.4	-1.0
Z50A	Ashland baz=164,SNR=13	55.38	345	P	P	17 54 28.9	-1.3
Z50A	Ashland	55.38	345	*e*P	P	17 54 28.9	-1.3
LRAL	Lakeview Retre baz=162	55.44	344	P	P	17 54 29.5	-1.1
Y53A	Monroe baz=166	55.45	348	P	P	17 54 29.4	-1.2
Z49A	Columbiana baz=163,SNR=6.2	55.47	345	P	P	17 54 29.6	-1.3
342A	Flagon Creek P baz=156	55.50	338	P	P	17 54 31.7	+0.8
Y51A	Rockmart baz=164,SNR=9.3	55.80	346	P	P	17 54 31.9	-1.3
Z47A	Carrollton baz=161	55.88	343	P	P	17 54 32.8	-0.9
Z48A	Northport baz=162	55.91	344	P	P	17 54 32.7	-1.2
Y50A	Piedmont baz=164,SNR=5.8	55.95	346	P	P	17 54 33.1	-1.1
X53A	Estanollee baz=167	56.02	348	P	P	17 54 34.0	-0.8
Y49A	Blount Mountai baz=163	56.08	345	P	P	17 54 33.7	-1.4
X52A	Dahlonega baz=166	56.24	348	P	P	17 54 35.3	-1.0
KMSC	Kings Mountain baz=169	56.30	350	P	P	17 54 36.1	-0.6
X51A	Calhoun baz=165	56.40	347	P	P	17 54 36.6	-0.8
X50B	Fort Payne baz=164,SNR=5.9	56.48	346	P	P	17 54 36.7	-1.3
Y47A	UCPARC, Winfie baz=162,SNR=5.9	56.48	344	P	P	17 54 36.7	-1.3
Z44A	Pea Ridge, Bel baz=159	56.63	341	P	P	17 54 38.7	-0.3
W53A	Cullowhee baz=167,SNR=12	56.65	349	P	P	17 54 38.6	-0.7
X49A	Woodville baz=163,SNR=5.9	56.68	345	P	P	17 54 38.1	-1.4
X48A	Hartselle baz=162,SNR=9.3	56.80	345	P	P	17 54 39.0	-1.3
141A	Papa Simpson, baz=156	56.82	338	P	P	17 54 41.2	+0.8
Y45A	Yeager Farm, C baz=160	56.92	342	P	P	17 54 40.7	-0.3
V53A	Saluda baz=167,SNR=7.7	57.07	349	P	P	17 54 41.3	-1.0
X47A	Russelville baz=162,SNR=5.6	57.07	344	P	P	17 54 40.5	-1.7
W50A	Signal Mountai baz=164,SNR=7.9	57.11	347	P	P	17 54 41.4	-1.1
TKL	Tuckaleechee C comp=Z,14nm,0.9s,baz=158,slow=5.4,SNR=22	57.23	348	P	P	17 54 42.0	-1.4
TKL	comp=Z,75nm,18.2s,baz=182,slow=40			LR	LR	18 23 25.7	
TKL	Tuckaleechee C	57.23	348	*e*P	P	17 54 41.6	-1.8
TKL	Tuckaleechee C	57.23	348	P	P	17 54 42.0	-1.4
TKL	comp=Z,15nm,0.9s			pmax	pmax		
TKL	comp=Z,75nm,18.2s			MLR	MLR		
W49A	Belvidere baz=163	57.25	346	P	P	17 54 42.3	-1.1
V52A	Sevierville baz=166,SNR=20	57.38	348	P	P	17 54 43.1	-1.2
V52A	Sevierville	57.38	348	*e*P	P	17 54 41.9	-2.5
X45A	UM Field Stati baz=160	57.40	342	P	P	17 54 43.6	-0.8
W48A	Pulaski baz=163,SNR=9.3	57.42	345	P	P	17 54 43.2	-1.5
OXF	Oxford baz=160	57.48	342	P	P	17 54 43.8	-1.3
V51A	Loudon baz=166,SNR=7.6	57.49	348	P	P	17 54 43.8	-1.3
V50A	Pikevile baz=165,SNR=23	57.52	347	P	P	17 54 44.3	-1.0
PLAL	Pickwick Lake	57.56	344	*e*P	P	17 54 43.9	-1.8
Z40A	Long Farm, Mag baz=156,SNR=5.6	57.58	338	P	P	17 54 46.3	+0.5
W47A	Westpoint baz=162,SNR=6.6	57.70	344	P	P	17 54 45.0	-1.6
U53A	Fall Branch baz=168	57.70	349	P	P	17 54 45.3	-1.4
JCT	Junction City baz=148	57.71	331	P	P	17 54 45.8	-1.0
V49A	McMinnville baz=164,SNR=14	57.78	346	P	P	17 54 45.8	-1.4
Y41A	Eaglette Beard baz=156	57.88	339	P	P	17 54 48.0	+0.1
V48A	Smith Brothers baz=163,SNR=12	57.97	345	P	P	17 54 47.2	-1.3
W45A	Hickory Valley baz=160	58.03	343	P	P	17 54 47.7	-1.2
TZTN	Tazewell baz=167	58.05	349	P	P	17 54 48.2	-0.9
BLA	Blacksburg baz=170	58.20	352	P	P	17 54 49.5	-0.6
V47A	Nunnelly baz=162	58.23	345	P	P	17 54 48.6	-1.7
Y40A	Okolona baz=156	58.23	339	P	P	17 54 50.0	-0.4
V46A	Holladay baz=162	58.35	344	P	P	17 54 49.1	-2.0
LPIG	La Paz comp=Z,66nm,21.3s,baz=171,slow=30	58.41	318	LR	LR	18 13 44.4	
U49A	Red Boiling Sp baz=164,SNR=14	58.47	346	P	P	17 54 50.7	-1.3
WVT	Waverly baz=162	58.59	344	P	P	17 54 51.0	-1.8
WVT	Waverly	58.59	344	*e*P	P	17 54 51.0	-1.8
WVT	Waverly	58.59	344	*e*P	P	17 54 51.0	-1.8
IP07	Quail	58.62	354	*e*P	P	17 54 53.6	+0.7
TXAR	Lajitas Array comp=Z,1.8nm,0.8s,baz=150,slow=8.7,SNR=16	58.62	327	P	P	17 54 53.0	-0.3
TXAR	comp=Z,109nm,19.1s,baz=0.0,slow=33			LR	LR	18 17 14.9	
U48A	Cassie Pea, Po baz=163,SNR=8.3	58.64	346	P	P	17 54 52.0	-1.2
U47A	Clarksville baz=163,SNR=7.6	58.75	345	P	P	17 54 52.5	-1.5
T50A	Nancy baz=165,SNR=9.4	58.76	347	P	P	17 54 52.7	-1.3
MIAR	Mount Ida baz=156,SNR=14	58.81	339	P	P	17 54 53.9	-0.6
W41B	Gary Mavity, V baz=157,SNR=7.6	58.95	340	P	P	17 54 54.5	-0.9
W41B	Gary Mavity, V	58.95	340	*e*P	P	17 54 52.6	-2.7
X39A	Fountain Ranch baz=155,SNR=8.9	58.97	338	P	P	17 54 55.2	-0.3
T49A	Edmonton baz=165,SNR=30	58.99	347	P	P	17 54 54.4	-1.2
U45A	Rockin P Farm, baz=161	59.03	344	P	P	17 54 54.9	-1.0
WHAR	Wooly Hollow	59.07	340	*e*P	P	17 54 55.8	-0.4
S51A	Beattyville baz=167	59.12	349	P	P	17 54 55.4	-1.1
T48A	Bowling Green baz=164,SNR=16	59.18	346	P	P	17 54 55.7	-1.3
T47A	Sharon Grove baz=163,SNR=14	59.23	345	P	P	17 54 56.0	-1.3
T47A	Sharon Grove	59.23	345	*e*P	P	17 54 56.1	-1.1
W40A	Ferguson Farm, baz=156,SNR=8.6	59.23	339	P	P	17 54 57.1	-0.2
W40A	Ferguson Farm,	59.23	339	*e*P	P	17 54 57.4	+0.1
ABTX	Abilene, Hawle baz=149,SNR=6.6	59.46	332	P	P	17 54 58.6	-0.4
ABTX	Abilene, Hawle	59.46	332	*e*P	P	17 54 58.7	-0.3
T46A	Princeton baz=162,SNR=12	59.47	345	P	P	17 54 57.5	-1.4
W39A	Magazine baz=156,SNR=11	59.47	339	P	P	17 54 58.7	-0.3
W39A	Magazine	59.47	339	*e*P	P	17 54 59.0	0.0
V41A	Mountainview baz=157,SNR=5.8	59.48	341	P	P	17 54 57.9	-1.2
S48A	Wiedeman Farm, baz=164,SNR=14	59.63	347	P	P	17 54 58.2	-1.8
V40A	Witts Springs baz=157,SNR=5.5	59.71	340	P	P	17 54 59.3	-1.4
V40A	Witts Springs	59.71	340	*e*P	P	17 54 59.9	-0.8
U42A	Revenden baz=158,SNR=6.5	59.73	342	P	P	17 54 59.4	-1.3
U41A	Viola baz=158,SNR=6.5	59.93	341	P	P	17 55 00.9	-1.2
V39A	Pettigrew baz=156,SNR=15	60.01	339	P	P	17 55 02.0	-0.7
S46A	Don Dixon Farm baz=162,SNR=10	60.04	345	P	P	17 55 01.3	-1.5
T43A	Greenville baz=160,SNR=5.4	60.14	343	P	P	17 55 02.2	-1.3
U40A	Yellville baz=157,SNR=11	60.23	340	P	P	17 55 03.3	-0.9
WCI	Wyandotte Cave baz=164	60.23	347	P	P	17 55 02.7	-1.5
S45A	Carrier Mills baz=162,SNR=9.5	60.24	344	P	P	17 55 02.8	-1.4
T42A	Van Buren baz=159	60.32	342	P	P	17 55 03.2	-1.5
R47A	Wooly Knot Far baz=164,SNR=6.0	60.35	346	P	P	17 55 03.2	-1.7
S44A	Carbondale baz=161	60.43	344	P	P	17 55 04.7	-0.8
U39A	Green Forest baz=156,SNR=6.6	60.45	340	P	P	17 55 04.6	-1.2
R46A	Gibon Southern baz=163	60.49	346	P	P	17 55 04.3	-1.6
T41A	Mountain View baz=158,SNR=7.8	60.53	341	P	P	17 55 04.9	-1.3
S43A	Fulton Ridge, baz=160,SNR=6.2	60.54	343	P	P	17 55 04.8	-1.4
R45A	Skylar, Fairfi baz=162,SNR=10.0	60.75	345	P	P	17 55 06.3	-1.4
TUL1	Leonard baz=154,SNR=6.0	60.82	337	P	P	17 55 07.5	-0.7
TUL1	Leonard	60.82	337	*e*P	P	17 55 07.9	-0.3
T40A	Mansfield baz=157	60.85	341	P	P	17 55 07.4	-1.0
S42A	Caledonia baz=159	60.92	343	P	P	17 55 07.5	-1.4
Q47A	Bedord North L baz=164,SNR=5.1	60.94	347	P	P	17 55 07.4	-1.5
O56A	Blue Knob Stat baz=172,SNR=6.3	61.00	354	P	P	17 55 09.4	0.0
O56A	Blue Knob Stat	61.00	354	*e*P	P	17 55 09.9	+0.6
T39A	Clever baz=156,SNR=7.1	61.01	340	P	P	17 55 08.5	-1.0
FVM	French Village	61.02	343	*e*P	P	17 55 09.5	0.0
S41A	Jillco Farms, baz=158,SNR=12	61.02	342	P	P	17 55 08.3	-1.2
P50A	Jamestown baz=167,SNR=5.6	61.08	349	P	P	17 55 08.5	-1.3
R43A	Red Bud baz=160	61.16	343	P	P	17 55 09.6	-0.9
S40A	Lebanon baz=158,SNR=7.8	61.26	341	P	P	17 55 10.0	-1.2
Q45A	Warren Harvey, baz=162,SNR=7.5	61.29	345	P	P	17 55 09.7	-1.6
SSPA	Standing Stone baz=173	61.30	354	P	P	17 55 11.4	+0.1
CCM	Cathedral Cave baz=159	61.31	342	P	P	17 55 11.3	-0.2
CCM	Cathedral Cave	61.31	342	*e*P	P	17 55 09.0	-2.5
CCM	Cathedral Cave	61.31	342	*e*P	P	17 55 09.0	-2.5
T38A	Diamond baz=156,SNR=16	61.32	339	P	P	17 55 10.7	-0.9
R42A	Luebbering baz=159,SNR=6.2	61.40	343	P	P	17 55 11.0	-1.0
MNTX	Cornudas Mount baz=144,SNR=13	61.40	327	P	P	17 55 11.5	-0.7
MNTX	Cornudas Mount	61.40	327	*e*P	P	17 55 10.5	-1.8
P47A	Martinsville baz=164,SNR=12	61.44	347	P	P	17 55 10.7	-1.6
Q44A	Meyer Farm, Va baz=161,SNR=5.7	61.51	344	P	P	17 55 11.2	-1.7
O50A	Cable baz=167,SNR=6.6	61.57	349	P	P	17 55 11.8	-1.4
R41A	Rosebud baz=159,SNR=18	61.58	342	P	P	17 55 12.3	-1.0
S39A	Bolivar baz=157,SNR=19	61.60	340	P	P	17 55 12.4	-1.0
S39A	Bolivar	61.60	340	*e*P	P	17 55 12.7	-0.8
VNA3	Neumayer Olymp	61.62	161	P	P	17 55 14.4	+1.1
Q43A	New Douglas baz=160	61.72	344	P	P	17 55 13.3	-1.0
S38A	Stockton baz=156,SNR=11	61.73	340	P	P	17 55 13.3	-1.1
P46A	Rosedale baz=163,SNR=5.8	61.76	346	P	P	17 55 12.8	-1.7
P45A	Graceland, Par baz=163,SNR=14	61.80	346	P	P	17 55 12.9	-1.9
P45A	Graceland, Par	61.80	346	*e*P	P	17 55 12.0	-2.8
R40A	Maddies Statio baz=158,SNR=9.8	61.83	342	P	P	17 55 13.9	-1.1
R40A	Maddies Statio	61.83	342	*e*P	P	17 55 13.9	-1.1
N54A	Moraine State baz=171,SNR=7.6	61.84	353	P	P	17 55 14.7	-0.3
N54A	Moraine State	61.84	353	*e*P	P	17 55 14.1	-0.9
VNA1	Neumayer--Stat	61.85	160	P	P	17 55 16.4	+1.6
Q42A	Golden Eagle baz=160,SNR=7.4	61.92	343	P	P	17 55 14.8	-0.7
P44A	Sand Creek, Wi baz=162	61.95	345	P	P	17 55 14.2	-1.6
MSTX	Muleshoe baz=147,SNR=8.8	61.99	331	P	P	17 55 15.7	-0.7
MSTX	Muleshoe	61.99	331	*e*P	P	17 55 15.9	-0.4
R39A	Chumby, Stover baz=157	62.08	341	P	P	17 55 15.7	-1.0
N50A	Nevada baz=168	62.10	350	P	P	17 55 15.6	-1.2
O47A	Sheridan baz=164,SNR=13	62.14	347	P	P	17 55 15.2	-1.8
Q41A	Truxton baz=159,SNR=7.4	62.15	343	P	P	17 55 15.9	-1.2
R38A	Fenwick Farm, baz=156,SNR=14	62.24	340	P	P	17 55 16.6	-1.1
P43A	Skaggs, Pawnee baz=161,SNR=9.3	62.34	344	P	P	17 55 16.7	-1.7
M54A	Oil Creek Stat baz=171,SNR=6.1	62.34	353	P	P	17 55 17.7	-0.7
M54A	Oil Creek Stat	62.34	353	*e*P	P	17 55 17.9	-0.5
Q40A	Laux Farm, Aux baz=158	62.43	342	P	P	17 55 17.9	-1.0
SFIN	Lafayette baz=163,SNR=17	62.47	347	P	P	17 55 17.1	-2.1
SFIN	Lafayette	62.47	347	*e*P	P	17 55 17.2	-2.0
O45A	Potomac baz=163,SNR=32	62.48	346	P	P	17 55 17.3	-2.0
P42A	Winchester baz=160,SNR=8.0	62.50	344	P	P	17 55 17.9	-1.6
BINY	Binghamton baz=175	62.70	356	P	P	17 55 21.4	+0.6
Q39A	Willow Grove F baz=157,SNR=11	62.74	341	P	P	17 55 20.0	-1.1
P41A	Barry, Barry baz=159	62.77	343	P	P	17 55 20.0	-1.3
Q38A	Cooks Store, C baz=157,SNR=18	62.86	341	P	P	17 55 21.1	-0.8
HRV	Adam Dziewonsk baz=180	62.87	360	P	P	17 55 22.3	+0.4
N46A	Monticello baz=164,SNR=9.0	62.89	347	P	P	17 55 20.4	-1.6
O43A	Sugar Creek Fa baz=161	62.89	345	P	P	17 55 20.6	-1.5
P40A	Paris baz=158,SNR=6.6	62.91	342	P	P	17 55 21.2	-1.0
P40A	Paris	62.91	342	*e*P	P	17 55 21.3	-1.0
O42A	Bath baz=160	63.00	344	P	P	17 55 21.7	-1.0
N45A	Kentland baz=163,SNR=6.5	63.01	346	P	P	17 55 20.9	-1.9
Q37A	Longview Farm, baz=156	63.04	340	P	P	17 55 22.2	-0.9
P39B	Salisbury baz=158,SNR=9.5	63.08	342	P	P	17 55 22.3	-1.0
N44A	Piper City baz=162,SNR=5.2	63.10	346	P	P	17 55 21.5	-1.9
O41A	Passleys Farm, baz=160,SNR=11	63.14	343	P	P	17 55 22.1	-1.5
HDIL	Hopedale baz=161,SNR=7.2	63.15	345	P	P	17 55 22.1	-1.6
HDIL	Hopedale comp=Z,24nm,0.7s	63.15	345	*e*P	P	17 55 20.9	-2.9
319A	Douglas	63.21	324	*e*P	P	17 55 25.8	+1.2
121A	Cookes Peak, D baz=142	63.30	326	P	P	17 55 25.7	+0.6
O40A	La Belle baz=159,SNR=5.5	63.41	343	P	P	17 55 24.3	-1.2
P38A	Dawn baz=157,SNR=8.1	63.44	341	P	P	17 55 24.5	-1.2
P38A	Dawn	63.44	341	*e*P	P	17 55 24.8	-0.9
N43A	Stutzman Famil baz=161,SNR=9.6	63.48	345	P	P	17 55 24.6	-1.3
N42A	Yates City baz=160	63.59	344	P	P	17 55 25.2	-1.4
M44A	Midewin, Midew baz=163	63.64	346	P	P	17 55 25.4	-1.6
M44A	Midewin, Midew	63.64	346	*e*P	P	17 55 25.4	-1.6
P37A	Lathrop baz=156	63.66	340	P	P	17 55 25.7	-1.4
N41A	Harden Midland baz=160	63.69	344	P	P	17 55 26.4	-0.8
N41A	Harden Midland	63.69	344	*e*P	P	17 55 26.2	-1.0
SNAA	Sanae	63.83	161	P	P	17 55 29.0	+1.0
SNAA	Sanae comp=Z,23nm,0.8s,baz=273,slow=9.2,SNR=92	63.83	161	P	P	17 55 28.8	+0.8
SNAA	comp=Z,90nm,20.2s,baz=359,slow=35			LR	LR	18 21 59.9	
SNAA	Sanae	63.83	161	*e*P	P	17 55 29.0	+1.0
O38A	Galt baz=157	63.88	341	P	P	17 55 27.7	-0.9
M43A	Waltham Townsh baz=162,SNR=11	63.90	345	P	P	17 55 27.1	-1.6
N40A	Mertquake, Sal baz=159	64.05	343	P	P	17 55 28.4	-1.2
O37A	Wolven Farm, M baz=156,SNR=6.0	64.12	341	P	P	17 55 29.0	-1.2
M41A	Milan baz=160	64.23	344	P	P	17 55 29.4	-1.5
N39A	Derby Farms, D baz=158,SNR=5.6	64.29	342	P	P	17 55 30.1	-1.2
N39A	Derby Farms, D	64.29	342	*e*P	P	17 55 30.1	-1.2
N38A	Joes South For baz=157	64.43	342	P	P	17 55 31.3	-0.9
M40A	Post Highland baz=159,SNR=7.7	64.51	343	P	P	17 55 31.4	-1.3
ANMO	Albuquerque comp=Z,3.1nm,0.8s,baz=144,slow=7.5,SNR=12	64.54	329	P	P	17 55 33.4	+0.2
ANMO	Albuquerque baz=144	64.54	329	P	P	17 55 33.6	+0.3
ANMO	Albuquerque comp=Z,3.4nm,0.8s	64.54	329	*e*P	P	17 55 33.8	+0.5
ANMO	Albuquerque	64.54	329*c*	*i*P	P	17 55 33.7	+0.5
ANMO	comp=Z,11nm,2.0s			pmax	pmax		
TASL	Snake Pit, Alb baz=144,SNR=7.3	64.54	329	P	P	17 55 33.8	+0.5
L43A	Garden Prairie baz=162,SNR=11	64.56	346	P	P	17 55 31.6	-1.4
N37A	Lee Faris, Mou baz=156	64.69	341	P	P	17 55 33.3	-0.5
N37A	Lee Faris, Mou	64.69	341	*e*P	P	17 55 33.3	-0.5
TUC	Tucson baz=139	64.75	324	P	P	17 55 35.4	+0.8
M39A	Webster baz=158,SNR=5.3	64.76	343	P	P	17 55 33.0	-1.3
L41A	Preston baz=160,SNR=5.5	64.88	344	P	P	17 55 33.6	-1.5
K43A	Burlington baz=162,SNR=7.2	64.96	346	P	P	17 55 34.3	-1.3
K43A	Burlington	64.96	346	*e*P	P	17 55 34.6	-1.0
M38A	Pleasantville baz=158	64.99	342	P	P	17 55 34.8	-1.0
L40A	Anamosa baz=160	65.05	344	P	P	17 55 35.5	-0.7
M37A	Trindle Farm, baz=157,SNR=22	65.23	341	P	P	17 55 36.8	-0.6
K42A	Prairie Point, baz=162,SNR=14	65.26	346	P	P	17 55 36.5	-1.1
L39A	Vinton baz=159,SNR=7.4	65.31	343	P	P	17 55 36.5	-1.4
K41A	Shullsburg baz=160,SNR=5.9	65.33	345	P	P	17 55 36.7	-1.3
T25A	Trinidad baz=146,SNR=5.2	65.37	331	P	P	17 55 39.0	+0.4
T25A	Trinidad comp=Z,4.9nm,0.8s	65.37	331	*e*P	P	17 55 39.1	+0.5
M36A	Felix, Anita baz=156	65.50	341	P	P	17 55 38.2	-1.0
SADO	Sadowa	65.51	354	*e*P	P	17 55 38.6	-0.6
L38A	Oak Wood Farm, baz=158,SNR=11	65.59	343	P	P	17 55 38.6	-1.1
JFWS	Jewell Farm baz=161,SNR=9.2	65.61	345	P	P	17 55 38.7	-1.1
JFWS	Jewell Farm	65.61	345	*e*P	P	17 55 38.8	-1.0
JFWS	Jewell Farm	65.61	345	*e*P	P	17 55 38.8	-1.0
J43A	Natural Harves baz=162,SNR=6.6	65.63	347	P	P	17 55 38.7	-1.2
K40A	Colesburg baz=160,SNR=18	65.63	344	P	P	17 55 38.6	-1.3
214A	Organ Pipe Nat baz=137,SNR=9.8	65.63	322	P	P	17 55 41.0	+0.7
J42A	Columbus baz=162	65.72	346	P	P	17 55 39.5	-1.1
L37A	Phoenix Point, baz=157	65.80	342	P	P	17 55 40.3	-0.8
K39A	Oelwein baz=159,SNR=14	65.83	344	P	P	17 55 39.9	-1.4
J41A	Loganville baz=161,SNR=13	65.97	345	P	P	17 55 41.2	-1.0
X18A	Snowflake comp=Z,5.3nm,1.0s	65.98	326	*e*P	P	17 55 44.1	+1.4
K38A	Parkersburg baz=158	66.01	343	P	P	17 55 41.4	-1.0
K38A	Parkersburg	66.01	343	*e*P	P	17 55 41.4	-1.0
I43A	Langenfeld Bro baz=163,SNR=9.9	66.05	347	P	P	17 55 41.5	-1.1
L36A	Harm Buss Farm baz=156	66.05	341	P	P	17 55 41.9	-0.8
KSCO	Kaye Shedlock’ baz=148	66.17	334	P	P	17 55 43.5	-0.2
J40A	Soldiers Grove baz=160,SNR=12	66.18	345	P	P	17 55 42.5	-1.0
BUKO	Buck Lake baz=172,SNR=9.9	66.20	354	P	P	17 55 43.1	-0.5

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KLBO Killbear Provi    66.20 353  P      P      17 55 41.8 -1.8
     baz=171,SNR=6.2
I42A Draeger Farm,     66.22 346  P      P      17 55 42.8 -0.9
     baz=162,SNR=7.9
SDCO Great Sand Dun    66.36 331  P      P      17 55 45.4 +0.3
     baz=145,SNR=18
SDCO Great Sand Dun    66.36 331 eP      P      17 55 45.7 +0.5
K37A Belmond           66.36 342  P      P      17 55 43.5 -1.2
     baz=157,SNR=9.7
J39A Decorah           66.37 344  P      P      17 55 43.6 -1.1
     baz=159,SNR=20
K36A Gilmore City      66.48 342  P      P      17 55 44.9 -0.5
     baz=156,SNR=8.4
H43A Windswept, Lux    66.53 347  P      P      17 55 44.6 -1.1
     baz=163,SNR=9.9
H43A Windswept, Lux    66.53 347 eP      P      17 55 44.6 -1.1
BGNE Belgrade          66.55 338  P      P      17 55 45.3 -0.6
     baz=153
J38A Wedel Dairy, R    66.55 343  P      P      17 55 44.7 -1.2
     baz=158,SNR=10.0
I41A Arkdale           66.60 346  P      P      17 55 45.2 -0.9
     baz=161
I41A Arkdale           66.60 346 eP      P      17 55 45.5 -0.7
I40A Norwalk           66.62 345  P      P      17 55 45.2 -1.1
     baz=160
TRQ  Mont Tremblant    66.64 358 eP      P      17 55 46.2 -0.3
X16A Lo Mia Camp, P    66.70 325 eP      P      17 55 48.5 +1.2
     comp=Z,8.2nm,1.0s
H42A Shiocton          66.73 347  P      P      17 55 45.9 -1.0
     baz=163,SNR=5.4
H42A Shiocton          66.73 347 eP      P      17 55 46.1 -0.9
I39A Houston           66.81 344  P      P      17 55 46.6 -0.9
     baz=160,SNR=11
I39A Houston           66.81 344 eP      P      17 55 46.7 -0.9
J37A Redenius Farm,    66.84 343  P      P      17 55 46.8 -0.9
     baz=158,SNR=7.3
S22A 4UR Ranch, Cre    66.97 330  P      P      17 55 49.9 +0.9
     baz=144,SNR=5.7
S22A 4UR Ranch, Cre    66.97 330 eP      P      17 55 49.9 +0.9
     comp=Z,4.6nm,1.1s
H41A Junction City     67.08 346  P      P      17 55 48.1 -1.1
     baz=162
J36A Seneca 1, Swea    67.08 342  P      P      17 55 49.0 -0.2
     baz=157,SNR=5.6
J36A Seneca 1, Swea    67.08 342 eP      P      17 55 48.7 -0.6
I38A Scanlan Farm,     67.19 344  P      P      17 55 49.0 -0.9
     baz=159,SNR=18
Y14A Wickenburg        67.20 323 eP      P      17 55 51.3 +1.0
     comp=Z,4.1nm,0.9s
F46A Macinaw City C    67.23 350  P      P      17 55 49.1 -1.0
     baz=166
H40A Chili             67.25 345  P      P      17 55 49.3 -1.0
     baz=161,SNR=19
G43A Wallace           67.27 348  P      P      17 55 49.0 -1.3
     baz=164,SNR=5.7
G43A Wallace           67.27 348 eP      P      17 55 48.9 -1.5
F45A CMU Biological    67.27 349  P      P      17 55 49.1 -1.3
     baz=166,SNR=6.6
MVCO Mesa Verde        67.34 329  P      P      17 55 51.9 +0.6
     baz=142
MVCO Mesa Verde        67.34 329 eP      P      17 55 51.7 +0.4
G42A Mountain          67.40 347  P      P      17 55 50.2 -1.0
     baz=163
I37A Lemond, Waseca    67.45 343  P      P      17 55 51.0 -0.5
     baz=158
I37A Lemond, Waseca    67.45 343 eP      P      17 55 51.1 -0.5
WUAZ Wupatki           67.49 325  P      P      17 55 53.8 +1.6
     baz=140,SNR=8.2
WUAZ Wupatki           67.49 325 eP      P      17 55 53.9 +1.6
H39A Augusta           67.52 345  P      P      17 55 51.0 -1.0
     baz=160
GLA  Glamis            67.60 321  P      P      17 55 54.2 +1.4
     baz=136
GLA  Glamis            67.60 321 eP      P      17 55 54.4 +1.6
GLA  Glamis            67.60 321 eP      P      17 55 54.4 +1.6
I36A Fitzsimmons Fa    67.62 343  P      P      17 55 51.8 -0.9
     baz=157
F44A Big Bay de Noc    67.72 349  P      P      17 55 51.9 -1.2
     baz=165
F43A Flat Rock, Esc    67.72 348  P      P      17 55 51.7 -1.4
     baz=164,SNR=12
H38A Maiden Rock       67.77 344  P      P      17 55 52.8 -0.8
     baz=159
G40A Rib Lake          67.82 346  P      P      17 55 52.8 -1.1
     baz=161,SNR=5.3
G40A Rib Lake          67.82 346 eP      P      17 55 53.1 -0.8
     comp=Z,4.4nm,0.8s
H37A Dierke Farm, C    67.84 344  P      P      17 55 53.4 -0.7
     baz=158
E45A Wooded Hills,     67.87 350  P      P      17 55 53.3 -0.8
     baz=166
F41A Three Lakes       68.02 347  P      P      17 55 54.3 -0.9
     baz=162,SNR=14
F41A Three Lakes       68.02 347 eP      P      17 55 54.3 -0.9
G39A Holcombe          68.06 345  P      P      17 55 54.4 -1.0
     baz=160
ISCO Idaho Springs     68.09 332  P      P      17 55 56.5 +0.4
     baz=146,SNR=6.6
ISCO Idaho Springs     68.09 332 eP      P      17 55 56.5 +0.4
ISCO Idaho Springs     68.09 332 eP      P      17 55 56.5 +0.4
PV01 Paradox Valley    68.10 329 eP      P      17 55 57.0 +0.9
H36A Jessenland, He    68.11 343  P      P      17 55 55.3 -0.4
     baz=157
G38A Ridgeland         68.12 345  P      P      17 55 54.4 -1.3
     baz=159
ECSD EROS Data Cent    68.13 341  P      P      17 55 55.1 -0.8
     baz=155,SNR=16
ECSD EROS Data Cent    68.13 341 eP      P      17 55 55.2 -0.6
SMCO Snowmass          68.19 331 eP      P      17 55 57.7 +0.8
E43A Lone Tree Farm    68.21 348  P      P      17 55 55.1 -1.2
     baz=164,SNR=7.8
E43A Lone Tree Farm    68.21 348 eP      P      17 55 55.1 -1.2
PV15 Paradox Valley    68.22 329 eP      P      17 55 58.4 +1.5
PV02 Paradox Valley    68.24 329 eP      P      17 55 57.9 +0.9
PV05 Paradox Valley    68.31 329 eP      P      17 55 58.4 +1.0
PV03 Paradox Valley    68.33 329 eP      P      17 55 58.5 +0.9
COWI Conover           68.37 347 eP      P      17 55 56.4 -1.0
PV07 Paradox Valley    68.38 329 eP      P      17 55 59.0 +1.1
     comp=Z,4.9nm,1.0s
BC3  Big Chuckawall    68.39 321  P      P      17 55 59.1 +1.2
     baz=136,SNR=7.8
SPMN Marine on St.     68.41 344  P      P      17 55 56.8 -0.8
     baz=158
SPMN Marine on St.     68.41 344 eP      P      17 55 56.9 -0.8
F40A Park Falls        68.42 346  P      P      17 55 56.8 -0.8
     baz=161,SNR=24
BAR  Barrett           68.43 320 eP      P      17 55 59.6 +1.5
     comp=Z,7.1nm,0.9s
E42A Champion          68.44 348  P      P      17 55 56.7 -1.1
     baz=163,SNR=5.2
NVL  N'lazarevskaya    68.44 159⇑iP      P      17 55 58.4 +0.9
NVL                              eS      S      18 05 02.3 +5.3
NVL                              eSSS    SSS    18 12 28.2
NVL                               pmax   pmax
     comp=Z,36nm,1.2s
H35A Sunnyside Ranc    68.48 342  P      P      17 55 57.1 -0.9
     baz=156,SNR=5.3
IRM  Iron Mountain     68.58 322  P      P      17 56 00.3 +1.4
     baz=136,SNR=8.7
F39A Loretta           68.59 346  P      P      17 55 57.7 -1.0
     baz=160,SNR=7.3
PV09 Paradox Valley    68.66 329 eP      P      17 56 00.8 +1.1
U15A North Rim         68.67 326 eP      P      17 56 01.0 +1.2
E41A Kenton            68.68 347  P      P      17 55 58.1 -1.2
     baz=162
E40A Wakefield         68.86 346  P      P      17 55 59.8 -0.6
     baz=161,SNR=18
F38A Pierce - Schro    68.86 345  P      P      17 55 59.6 -0.8
     baz=160,SNR=5.6
E39A Mellen            68.95 346  P      P      17 56 00.1 -0.9
     baz=161,SNR=9.2
XPFO Piæon Flat        68.95 321 eP      P      17 56 03.1 +1.7
     comp=Z,5.8nm,0.9s
PFO  Pinyon Flats O    68.95 321  P      P      17 56 02.9 +1.5
     baz=135
PFO  Pinyon Flats O    68.95 321 eP      P      17 56 03.1 +1.7
     comp=Z,7.1nm,0.9s
PFO  Pinyon Flats O    68.95 321 eP      P      17 56 03.1 +1.7
PFO                               pmax   pmax
     comp=Z,7.0nm,0.9s
BELC Belle Mtn. Jos    68.96 321  P      P      17 56 02.8 +1.3
     baz=135
H32A Carlson Farm,     69.08 340  P      P      17 56 01.3 -0.5
     baz=154
N23A Red Feather La    69.14 333  P      P      17 56 03.1 +0.6
     baz=146
N23A Red Feather La    69.14 333 eP      P      17 56 03.4 +0.9
     comp=Z,9.3nm,1.3s
D41A Chassel           69.17 348  P      P      17 56 01.8 -0.5
     baz=163,SNR=9.0
D41A Chassel           69.17 348 eP      P      17 56 01.8 -0.5
F36A Milaca            69.19 344  P      P      17 56 01.4 -1.0
     baz=158,SNR=18
F36A Milaca            69.19 344 eP      P      17 56 01.1 -1.4
GMRC Granite Mounta    69.32 322  P      P      17 56 05.0 +1.4
     baz=136,SNR=11
KNB  Kanab             69.39 326 eP      P      17 56 05.9 +1.8
KNB  Kanab             69.39 326 eP      P      17 56 05.9 +1.8
E38A The Farm, Brul    69.39 345 eP      P      17 56 02.9 -0.8
     comp=Z,6.7nm,1.0s
G33A Ortonville        69.40 341  P      P      17 56 02.9 -0.8
     baz=155,SNR=5.0
QSPA South Pole Qui    69.50 180  P      P      17 56 05.5 +1.2
     comp=Z,12nm,0.8s,baz=154,slow=3.2,SNR=39
O20A White River Ci    69.54 331  P      P      17 56 05.7 +0.7
     baz=143,SNR=10
O20A White River Ci    69.54 331 eP      P      17 56 05.8 +0.7
LCMT Little Creek M    69.61 325 eP      P      17 56 07.2 +1.8
E36A McGregor          69.73 344  P      P      17 56 04.8 -0.9
     baz=158,SNR=9.5
HEC  Hector,Ludlow     69.74 322  P      P      17 56 07.9 +1.7
     baz=135,SNR=7.0
SRU  San Rafael Swe    69.81 329 eP      P      17 56 07.9 +1.2
SRU  San Rafael Swe    69.81 329 eP      P      17 56 07.9 +1.2
MTPU Mount Pierson     69.83 327 eP      P      17 56 08.2 +1.2
     comp=Z,4.6nm,0.7s
SZCU Shurtz Canyon     69.96 326 eP      P      17 56 09.6 +1.9
     comp=Z,5.7nm,0.8s
Q16A Castle Valley     69.98 328 eP      P      17 56 08.9 +1.2
CCUT Cedar City        70.07 326 eP      P      17 56 10.4 +2.1
BFSC Mount Baldy Ra    70.10 321  P      P      17 56 09.4 +0.9
     baz=134
C40A Isle Royale Na    70.11 347  P      P      17 56 08.1 +0.1
     baz=162
D37A Cotton            70.12 345  P      P      17 56 07.2 -0.9
     baz=159,SNR=6.3
MSU  Marysvale         70.18 327 eP      P      17 56 11.4 +2.5
MSU  Marysvale         70.18 327 eP      P      17 56 11.5 +2.5
P17A Butcher Ranch,    70.20 329 eP      P      17 56 09.9 +0.9
C39A Grand Marais      70.22 347  P      P      17 56 07.5 -1.2
     baz=161,SNR=16
SHPR Sheep Range       70.28 324 eP      P      17 56 11.1 +1.6
TMUT Trail Mountain    70.30 328 eP      P      17 56 11.1 +1.3
     comp=Z,6.3nm,0.7s
GSC  Goldstone, Bar    70.35 322  P      P      17 56 11.3 +1.3
     baz=135
GSC  Goldstone, Bar    70.35 322 eP      P      17 56 11.7 +1.8
     comp=Z,7.7nm,1.1s
GSC  Goldstone, Bar    70.35 322 eP      P      17 56 11.7 +1.8
GSC                               pmax   pmax
     comp=Z,8.0nm,1.1s
C38A Sawbill Land.     70.37 346  P      P      17 56 08.3 -1.4
     baz=160,SNR=9.5
D35A Remer             70.46 344  P      P      17 56 10.5 +0.3
     baz=158
C37A Embarrass         70.60 345  P      P      17 56 10.2 -0.8
     baz=159
EYMN Ely               70.64 346  P      P      17 56 09.9 -1.4
     baz=160,SNR=9.8
EYMN Ely               70.64 346 eP      P      17 56 09.8 -1.4
EDW2 Edwards Air Fo    70.75 321  P      P      17 56 13.2 +0.9
     baz=134
C36A Pine Crest Far    70.78 345  P      P      17 56 11.2 -1.0
     baz=159,SNR=13
DBIC Dimbokro          70.81  75  P      P      17 56 13.0 -0.1
     comp=Z,6.9nm,0.8s,baz=192,slow=5.2,SNR=5.2
DBIC                              LR     LR     18 27 39.9
     comp=Z,62nm,18.1s,baz=233,slow=36
K22A Casper            70.83 333  P      P      17 56 13.3 +0.5
     baz=145
K22A Casper            70.83 333 eP      P      17 56 13.6 +0.8
     comp=Z,10.0nm,1.2s
LRMC Laurel Mtn Rad    70.98 321  P      P      17 56 15.1 +1.3
     baz=134,SNR=6.0
C35A Jirik Farms, M    71.01 344  P      P      17 56 12.4 -1.1
     baz=158,SNR=8.6
RSSD Black Hills       71.05 336  P      P      17 56 14.7 +0.5
     baz=148
RSSD Black Hills       71.05 336 eP      P      17 56 14.8 +0.6
RSSD Black Hills       71.05 336 eP      P      17 56 14.8 +0.6
MPU  Maple Canyon      71.06 328 eP      P      17 56 15.7 +1.4
PSUT Pine Spring       71.06 326 eP      P      17 56 15.9 +1.5
TPNV Topopah Spring    71.20 323  P      P      17 56 16.8 +1.7
     baz=136,SNR=17
TPNV Topopah Spring    71.20 323 eP      P      17 56 17.0 +1.8
TPNV Topopah Spring    71.20 323 eP      P      17 56 17.0 +1.8
FURC Furnace Creek,    71.20 323  P      P      17 56 16.6 +1.7
     baz=135,SNR=12
MPMC Manual Prospec    71.27 322  P      P      17 56 16.6 +1.0
     baz=135,SNR=5.3
DAC  Darwin (Calif)    71.49 322 eP      P      17 56 18.5 +1.5
B35A Bob, Littlefor    71.56 345  P      P      17 56 15.7 -1.1
     baz=158,SNR=12
ISA  Isabella, Lake    71.57 321  P      P      17 56 17.4 +0.1
     baz=134
ISA  Isabella, Lake    71.57 321 eP      P      17 56 18.1 +0.8
ISA  Isabella, Lake    71.57 321 eP      P      17 56 18.1 +0.8
CTU  Camp Tracy        71.64 329 eP      P      17 56 18.9 +1.2
     comp=Z,5.8nm,0.9s
DUG  Dugway, Tooele    71.78 328  P      P      17 56 19.7 +1.1
     baz=139,SNR=21
DUG  Dugway, Tooele    71.78 328 eP      P      17 56 19.9 +1.3
DUG  Dugway, Tooele    71.78 328 eP      P      17 56 19.9 +1.3
TCUT Toone Canyon      71.80 329 eP      P      17 56 20.1 +1.3
R11A Troy Canyon, C    71.85 325  P      P      17 56 20.6 +1.6
     baz=137,SNR=17
R11A Troy Canyon, C    71.85 325 eP      P      17 56 20.6 +1.6
     comp=Z,7.4nm,0.8s
CWC  Cottonwood Cre    71.88 322  P      P      17 56 20.6 +1.3
     baz=134
VES  Vestal, Richgr    72.06 321  P      P      17 56 21.5 +1.4
     baz=134,SNR=5.0
AGMN Agassiz Nation    72.06 343  P      P      17 56 18.9 -0.9
     baz=156,SNR=14
AGMN Agassiz Nation    72.06 343 eP      P      17 56 18.2 -1.6
BW06 Boulder Array     72.24 332  P      P      17 56 21.9 +0.6
     baz=143
PD31 Pinedale Array    72.24 332 eP      P      17 56 21.6 +0.2
PDAR Pinedale Array    72.24 332  P      P      17 56 21.2 -0.1
     comp=Z,1.6nm,0.6s,baz=134,slow=5.9,SNR=25
PDAR                              LR     LR     18 29 57.0
     comp=Z,62nm,19.0s,baz=135,slow=37
PDAR Pinedale Array    72.24 332 eP      P      17 56 20.8 -0.5
SMMC Simmler           72.24 320  P      P      17 56 22.9 +1.6
     baz=133
HWUT Hardware Ranch    72.25 330 eP      P      17 56 22.0 +0.6
BGU  Big Grassy Mou    72.44 328 eP      P      17 56 23.3 +0.8
     comp=Z,8.1nm,1.0s
SPUT South Promonto    72.45 329 eP      P      17 56 23.7 +1.2
A33A Warroad           72.52 344  P      P      17 56 21.9 -0.7
     baz=156,SNR=8.6
AHID Auburn Hatcher    72.94 331 eP      P      17 56 25.9 +0.5
HVU  Hansel Valley     72.96 329 eP      P      17 56 26.5 +0.9
HVU  Hansel Valley     72.96 329 eP      P      17 56 26.5 +0.9
OMMB Old Mammoth Mi    73.23 322 eP      P      17 56 28.8 +1.4
MDPB Devils Postpil    73.28 322 eP      P      17 56 29.7 +1.9
REDW Red Top Meadow    73.29 331 eP      P      17 56 28.3 +0.7
     comp=Z,7.6nm,0.8s
NV11 Mina Array Sit    73.32 323 eP      P      17 56 29.4 +1.6
     comp=Z,0.7nm,1.0s
SNOW Snow King Moun    73.32 331 eP      P      17 56 29.0 +1.2
LOHW Long Hollow       73.37 331 eP      P      17 56 28.7 +0.6
     comp=Z,11nm,1.1s
NV01 Mina Array Sit    73.40 323 eP      P      17 56 29.5 +1.1
NVAR Mina Array Bea    73.40 323  P      P      17 56 29.6 +1.3
     comp=Z,8.1nm,0.8s,baz=152,slow=6.4,SNR=52
NVAR                              LR     LR     18 24 43.7
     comp=Z,62nm,20.6s,baz=270,slow=32
TPAW Teton Pass        73.43 331 eP      P      17 56 29.4 +0.9
MOOW Moose Ponds       73.54 331 eP      P      17 56 29.9 +0.8
     comp=Z,3.8nm,0.7s
FXWY Fox Creek         73.58 331 eP      P      17 56 30.0 +0.7
     comp=Z,7.6nm,0.9s
RYN  Ryan              73.66 323 eP      P      17 56 31.1 +1.3
     comp=Z,8.9nm,0.9s
KVN  Kaiserville       73.72 324 eP      P      17 56 31.2 +1.0
IMW  Indian Meadow     73.75 331 eP      P      17 56 31.1 +0.8
FLWY Flagg Ranch       73.79 332 eP      P      17 56 31.7 +1.3
ULM  Lac du Bonnet     73.85 344  P      P      17 56 29.4 -1.0
     comp=Z,12nm,0.6s,baz=154,slow=6.6,SNR=12
ULM                               pP     sP     17 56 43.8 +0.9
     comp=Z,6.4nm,0.6s,baz=144,slow=6.4,SNR=4.4
ULM                               sP     PcP    17 56 50.8 +5.0
     comp=Z,14nm,0.4s,baz=148,slow=5.7,SNR=9.9
ULM                               LR     LR     18 30 35.0
     comp=Z,82nm,21.5s,baz=170,slow=37
H17A Grant Village     73.98 332  P      P      17 56 33.2 +1.6
     baz=142
H17A Grant Village     73.98 332 eP      P      17 56 33.4 +1.7
     comp=Z,11nm,1.4s
RLMT Red Lodge         73.99 333  P      P      17 56 32.4 +0.7
     baz=143,SNR=8.8
RLMT Red Lodge         73.99 333 eP      P      17 56 32.7 +1.1
LAO  LASA Array        74.05 336  P      P      17 56 33.3 +1.5
     baz=146
WAKR Walker            74.09 323 eP      P      17 56 34.5 +2.1
     comp=Z,10nm,1.1s
YERR Yerington         74.31 323 eP      P      17 56 35.2 +1.6
CMB  Columbia Colle    74.31 322 eP      P      17 56 34.3 +0.8
     comp=Z,5.0nm,1.1s
CMB  Columbia Colle    74.31 322 eP      P      17 56 34.3 +0.8
CMB                               pmax   pmax
     comp=Z,5.0nm,1.1s
PNTR Pine Nut          74.58 323 eP      P      17 56 37.0 +1.8
GCMT Greycliff         74.69 333 eP      P      17 56 36.3 +0.7
DGMT Dagmar            74.81 338  P      P      17 56 36.9 +0.8
     baz=148
PAHR Pah Rah Range     74.89 324 eP      P      17 56 38.6 +1.7
KOWA Kowa              74.90  68  P      P      17 56 36.5 -0.8
     comp=Z,10nm,0.5s,baz=246,slow=8.3,SNR=28
KOWA                              LR     LR     18 28 12.6
     comp=Z,215nm,19.6s,baz=214,slow=35
KOWA Kowa              74.90  68 eP      P      17 56 36.9 -0.4
HLID Hailey            75.10 329  P      P      17 56 39.4 +1.3
     baz=139,SNR=23
HLID Hailey            75.10 329 eP      P      17 56 39.4 +1.3
AFDM Forest Hills D    75.27 322 eP      P      17 56 40.0 +1.0
     comp=Z,6.9nm,0.9s
SCHQ Schefferville     75.31   3  LR     LR     18 29 40.4
     comp=Z,52nm,21.7s,baz=228,slow=36
MCMT McKenzie Canyo    75.33 331 eP      P      17 56 40.8 +1.3
BOZ  Bozeman (W)       75.38 332  P      P      17 56 40.4 +0.8
     baz=141,SNR=9.7
BOZ  Bozeman (W)       75.38 332 eP      P      17 56 40.4 +0.8
     comp=Z,7.7nm,1.0s
BOZ  Bozeman (W)       75.38 332 eP      P      17 56 40.4 +0.8
BOZ                               pmax   pmax
     comp=Z,8.0nm,1.0s
BEKR Beckworth         75.55 323 eP      P      17 56 41.2 +0.5
DLMT Dillon            75.63 331 eP      P      17 56 42.4 +1.4
     comp=Z,9.9nm,1.1s
MFID Camas Ranch       75.68 328 eP      P      17 56 42.5 +1.2
LRM  Limekiln Ridge    75.92 332 eP      P      17 56 44.0 +1.1
ORV  Oroville          75.98 322 eP      P      17 56 44.6 +1.6
ORV  Oroville          75.98 322 eP      P      17 56 44.6 +1.6
SBA  Scott Base        76.19 191 eP      P      17 56 46.4 +2.7
     comp=Z,8.1nm,1.1s
EGMT Eagleton          76.52 335  P      P      17 56 46.6 +0.6
     baz=143
O03D Paynes Creek      76.65 323  P      P      17 56 47.3 +0.4
     baz=132,SNR=5.3
MOD  Modoc Plateau     76.91 325 eP      P      17 56 49.6 +1.2
J08A Circle Bar Ran    76.97 327 eP      P      17 56 49.8 +1.1
     comp=Z,4.9nm,0.6s
VNDA Vanda             77.23 190  P      P      17 56 51.8 +2.2
     comp=Z,3.0nm,0.8s,baz=136,slow=4.2,SNR=19
VNDA                              LR     LR     18 27 24.9
     comp=Z,48nm,18.4s,baz=146,slow=33
VNDA Vanda             77.23 190 eP      P      17 56 51.6 +2.1
     comp=Z,5.5nm,1.0s
WDC  Whiskeytown Da    77.26 323 eP      P      17 56 49.7 -0.5
WDC  Whiskeytown Da    77.26 323 eP      P      17 56 49.7 -0.5
MSO  Missoula          77.36 332  P      P      17 56 51.8 +1.1
     baz=140
MSO  Missoula          77.36 332 eP      P      17 56 52.2 +1.5
     comp=Z,3.4nm,0.8s
BMO  Blue Mountains    77.46 328 eP      P      17 56 52.2 +0.8
BMO  Blue Mountains    77.46 328 eP      P      17 56 52.2 +0.8
N02D Trinity Center    77.61 323  P      P      17 56 52.2 -0.1
     baz=132,SNR=5.5
M04C Macdoel           77.67 324  P      P      17 56 53.4 +0.7
     baz=132,SNR=13
K05A Summer Lake       77.80 325 eP      P      17 56 55.1 +1.7
M02C Callahan          77.97 323  P      P      17 56 54.6 +0.3
     baz=132
SYO  Syowa Base        78.09 160⇑iP      P      17 56 54.4 -0.1
YBH  Yreka Blue Hor    78.12 323  P      P      17 56 54.5 -0.6
     comp=Z,5.1nm,0.9s,baz=47,slow=3.0,SNR=9.2
YBH                               LR     LR     18 29 32.6
     comp=Z,57nm,19.9s,baz=144,slow=34
YBH  Yreka Blue Hor    78.12 323 eP      P      17 56 54.8 -0.3
     comp=Z,5.5nm,0.9s
YBH  Yreka Blue Hor    78.12 323 eP      P      17 56 54.8 -0.3
YBH                               pmax   pmax
     comp=Z,6.0nm,0.9s
F10A Beach Ranch, E    78.23 329 eP      P      17 56 56.9 +1.2
     comp=Z,6.2nm,0.7s
J05D Fort Rock, OR     78.36 325  P      P      17 56 57.6 +1.1
     baz=133,SNR=9.2
PINE Pine Mountain     78.55 326 eP      P      17 56 59.1 +1.6
J04D Umpqua Nationa    78.80 325  P      P      17 56 59.8 +0.8
     baz=132
L02D Cave Junction,    78.90 323  P      P      17 57 00.5 +1.2
     baz=131
I05D Terrebonne, OR    79.14 326  P      P      17 57 01.9 +1.3
     baz=133,SNR=12
I04A Tendick Farm,     79.34 325  P      P      17 57 02.0 +0.3
     baz=132
TORD Torodi Ar. Bea    79.35  72  P      P      17 57 01.1 -1.2
     comp=Z,3.4nm,0.6s,baz=251,slow=5.2
FFC  Flin Flon         79.52 343 eP      P      17 57 02.2 -0.1
     comp=Z,11nm,1.4s
FFC  Flin Flon         79.52 343 eP      P      17 57 02.2 -0.1
FFC                               pmax   pmax
     comp=Z,11nm,1.4s
I03D Drain, OR         79.78 325  P      P      17 57 05.5 +1.6
     baz=132
NEW  Newport           79.86 331  P      P      17 57 04.9 +0.5
     baz=137
C09A Chrisman Ranch    80.05 330 eP      P      17 57 06.8 +1.4
LTY  Liberty           80.81 329 eP      P      17 57 10.7 +1.1
FCC  Fort Churchill    81.33 348 eP      P      17 57 11.0 -0.9
FCC  Fort Churchill    81.33 348 eP      P      17 57 11.0 -0.9
D05A Enumclaw          81.42 328 eP      P      17 57 13.8 +1.0
B05A Bryant            82.21 329  P      P      17 57 17.2 +0.3
     baz=133
TSUM Tsumeb            82.56 108 eP      P      17 57 20.8 +1.1
MDT  Midelt            83.08  51  LR     LR     18 34 44.9
     comp=Z,59nm,18.4s,baz=184,slow=36
MAW  Mawson            85.78 164  P      P      17 57 35.6 +0.7
     comp=Z,8.3nm,0.8s,baz=202,slow=5.8,SNR=19
MAW                               LR     LR     18 34 33.7
     comp=Z,90nm,21.7s,baz=240,slow=35
MAW  Mawson            85.78 164 eP      P      17 57 35.7 +0.8
     comp=Z,3.7nm,1.1s
MAW  Mawson            85.78 164 eP      P      17 57 35.7 +0.8
MAW                               pmax   pmax
     comp=Z,4.0nm,1.1s
BOSA Boshof            85.93 119  P      P      17 57 36.8 +0.2
     comp=Z,4.2nm,0.9s,baz=268,slow=2.8,SNR=9.9
BOSA                              LR     LR     18 31 44.0
     comp=Z,54nm,21.8s,baz=244,slow=33
ESDC Sonseca Array     86.95  46  P      P      17 57 42.4 +1.3
     comp=Z,0.4nm,0.5s,baz=249,slow=5.4,SNR=3.7
ESDC                              pP     sP     17 57 55.9 +2.2
     comp=Z,0.8nm,0.5s,baz=249,slow=5.6,SNR=3.7
ESDC                              LR     LR     18 34 44.2
     comp=Z,49nm,19.1s,baz=165,slow=34
SFJD Kangerlussuaq     88.79   8  LR     LR     18 39 35.3
     comp=Z,55nm,18.7s,baz=230,slow=37
YKA  Yellowknife Ar    89.64 341  P      P      17 57 53.0 -0.2
     comp=Z,6.1nm,0.7s,baz=135,slow=4.7,SNR=25
YKA                               LR     LR     18 41 21.2
     comp=Z,5.9nm,20.2s,baz=138,slow=38
URZ  Urewera           93.02 227  LR     LR     18 30 22.0
     comp=Z,111nm,19.7s,baz=4.0,slow=29
KEST Kesra             94.73  54  LR     LR     18 42 30.4
     comp=Z,95nm,18.2s,baz=202,slow=36
ILAR Eielson Array    102.49 335  PP     PP     18 03 09.0 +4.0
     comp=Z,0.3nm,1.0s,baz=83,slow=7.4,SNR=5.0
OBN  Obninsk          117.00  38 i PKIKP PKPdf  18 03 42.0 +1.7
OBN                              e              18 04 51.6
OBN                               pmax   pmax
     comp=Z,3.0nm,0.9s
OBN                               MLR    MLR
     comp=Z,53nm,19.0s
VSR  Storozhevoye     118.72  42 ePKIKP  PKPdf  18 03 43.6 -0.2
BILL Bilibino         120.89 338 ePKIKP  PKPdf  18 03 48.6 +1.1
BILL                             ePPP    PPP    18 07 52.9
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BILL				pmax	pmax		
	comp=Z,1.0nm,1.4s						
BILL				MLR	MLR		
	comp=Z,76nm,19.0s						
H11S2	WAKE ISLAND Hy	125.40	278	T	T	20 21 29.9	
	baz=103						
H11S1	WAKE ISLAND Hy	125.41	278	T	T	20 21 30.6	
	baz=103						
H11S3	WAKE ISLAND Hy	125.42	278	T	T	20 21 31.4	
	baz=103						
H11N3	WAKE ISLAND Hy	125.47	280	T	T	20 21 45.2	
	baz=105						
H11N2	WAKE ISLAND Hy	125.49	280	T	T	20 21 38.6	
	baz=105,slow=74						
H11N1	WAKE ISLAND Hy	125.49	280	T	T	20 21 49.0	
	baz=105,slow=74						
ARU	Arti	128.79	33	⇓*e*PKIKP	PKPdf	18 04 01.9	-1.1
ASAR	Alice Springs	129.46	211	PKP	PKPdf	18 04 05.1	-0.3
	comp=Z,1.4nm,0.8s,baz=133,slow=2.0,SNR=12						
WRA	Warramunga Arr	132.38	214	PKP	PKPdf	18 04 10.9	-0.1
	comp=Z,1.2nm,0.7s,baz=151,slow=1.9,SNR=11						
BVAR	Borovoye Array	136.44	33	PKP	PKPdf	18 04 18.7	+1.2
	comp=Z,0.5nm,0.7s,baz=264,slow=4.3,SNR=3.4						
KURK	Kurchatov	141.90	31	PKP	PKPdf	18 04 28.3	+0.8
KURK	Kurchatov	141.90	31	PKIKP	PKPdf	18 04 28.3	+0.8
KURK				pmax	pmax		
	comp=Z,1.0nm,0.2s						
KURBB	Kurchatov Arra	141.92	31	PKP	PKPdf	18 04 28.3	+0.8
	comp=Z,0.9nm,0.2s,baz=310,slow=2.0,SNR=4.0						
ZALV	Zalesovo Beam	142.18	23	PKhKP	PKPpre	18 04 22.1	
	comp=Z,0.9nm,0.4s,baz=335,slow=5.1,SNR=4.6						
ZALV				PKP	PKPdf	18 04 27.0	-0.9
	comp=Z,1.4nm,0.6s,baz=271,slow=2.4,SNR=7.8						
ZALV	Zalesovo Beam	142.18	23	PKIKP	PKPdf	18 04 27.0	-0.9
KLR	Kul'dur	146.02	332	*c i*PKP2	PKPbc	18 04 35.7	+0.1
MKAR	Makanchi Array	146.32	33	PKPbc	PKPbc	18 04 36.0	-0.6
	comp=Z,2.7nm,0.7s,baz=320,slow=3.2,SNR=22						
KSH	Kashi	146.40	49	*e*PKPbc	PKPdf	18 04 35.2	-0.7
KSH				pPKP	pPKPbc	18 04 46.1	-0.6
KSH				sPKP		18 04 49.1	
KSH				PP	PP	18 08 02.0	+1.9
KSH				PKS	PKSdf	18 08 09.1	-2.3
KSH				AMB	AMB		
	comp=Z,89nm,3.8s						
DGZ	Jazzator, Alta	146.54	25	PKP2	PKPbc	18 04 37.6	+0.3
MOY	Mondy	148.52	9	*e*PKP2	PKPbc	18 04 43.6	+0.9
TLY	Talaya	148.83	6	⇓PKIKP	PKPdf	18 04 39.9	+0.5
MJAR	Matsushiro Arr	149.69	308	PKPbc	PKPbc	18 04 46.2	+0.2
	comp=Z,2.7nm,0.6s,baz=117,slow=1.3,SNR=14						
MAJO	Matsushiro	149.69	308	⇓*i*PKP2	PKPbc	18 04 45.6	-0.4
MAT	Matsushiro	149.69	308	PKP	PKPbc	18 04 46.1	+0.1
ZAK	Zakamensk	150.07	7	*e*PKHKP	PKPpre	18 04 44.5	
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
WMQ	Urumqi	151.12	32	PKPbc	PKPdf	18 04 43.5	+0.1
WMQ				LR	LR		
	comp=Z,79nm,26.1s						
WMQ				LR	LR		
	comp=Z,140nm,26.1s						
WMQ				LR	LR		
	comp=Z,94nm,26.1s						
SONM	Songino Array	152.86	3	PKPbc	PKPbc	18 04 53.3	+0.2
	comp=Z,0.7nm,0.5s,baz=303,slow=1.3,SNR=5.1						
SONM				PKPab	PKPab	18 05 03.1	-0.9
	comp=Z,2.8nm,0.9s,baz=335,slow=2.3,SNR=9.3						
CN2	Changchun	152.98	332	*e*PKPbc	PKPdf	18 04 41.5	-4.5
KSRS	Korea Array	156.28	319	PKPab	PKPab	18 05 19.0	+0.2
	comp=Z,0.8nm,0.8s,baz=46,slow=3.9,SNR=4.1						
KSRS	Korea Array	156.28	319	PKP2	PKPab	18 05 19.0	+0.2
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KSAR	Wonju Array Be	156.31	319	PKPab	PKPab	18 05 19.0	0.0
KSAR	Wonju Array Be	156.31	319	PKP2	PKPab	18 05 19.0	0.0
HHC	Hu-ho-hao-te	159.73	353	*e*PKP	PKPdf	18 04 54.0	-1.1
HHC				SKKS		18 16 05.2	
HHC				AMB	AMB		
	comp=Z,20nm,6.2s						
HHC				LR	LR		
	comp=Z,51nm,16.7s						
HHC				LR	LR		
	comp=Z,41nm,15.5s						
HHC				LR	LR		
	comp=Z,290nm,19.0s						
GTA	Gaotai	159.89	20	PKP	PKPdf	18 04 54.4	-0.9
GTA				pPKP	pPKPdf	18 05 05.1	+0.2
GTA				sPKP		18 05 08.9	
GTA				PKPab	PKPab	18 05 38.0	+3.5
LZH	Lanzhou	164.11	14	*e*PKP	PKPdf	18 04 57.6	-2.2
LZH				pPKP	pPKPdf	18 05 04.7	-4.7
LZH				sPKP		18 05 07.6	
NJ2	Nanjing	165.39	323	*e*PKP	PKPdf	18 05 00.0	-0.8
CMAR	Chiang Mai Arr	170.69	102	PKPab	PKPab	18 06 21.6	-1.1
	comp=Z,0.9nm,0.8s,baz=246,slow=5.8,SNR=4.9						
GYA	Guiyang	174.00	16	*e*PKP	PKPdf	18 05 05.2	-1.0
GYA				PKPab	PKPab	18 06 38.0	+1.1
GYA				PKS	PKSdf	18 08 36.6	-2.1
GYA				PP	PP	18 10 31.5	+3.7
GYA				AMB	AMB		
	comp=Z,110nm,8.2s						

IDC 01 17:46:18.2±23.0,18°.20S×177°.99W,h520km±206km, mb2.6/3,mb1 2.9/3,mb1mx2.7/43,mbtmp3.5/3,Error ellipse: s-maj=277.5km s-min=44.7km az=132.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	44.97	260	P	P	17 53 46.3	-0.7
	0.2nm,0.5s,baz=96,slow=7.3,SNR=8.2						
ASAR	Alice Springs	45.09	254	P	P	17 53 48.4	+0.4
	0.7nm,0.5s,baz=89,slow=8.6,SNR=22						
ASAR				PcP	PcP	17 55 17.2	-0.6
	0.3nm,0.7s,baz=105,slow=5.3,SNR=3.5						
ILAR	Eielson Array	86.08	13	P	P	17 58 03.1	-0.1
	0.1nm,0.4s,baz=214,slow=6.4,SNR=2.9						
GERES	GERESS Array B	147.99	345	PKPbc	PKPbc	18 05 04.5	-0.4
	0.4nm,0.4s,baz=20,slow=3.1,SNR=4.3						

IDC 01 18:34:29.2±29.0,17°.83S×175°.23W,h0km,mb4.0/4, mb1 4.2/4,mb1mx3.6/42,mbtmp4.0/4,Error ellipse: s-maj=579.3km s-min=158.1km az=87.0,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	41.32	242	P	P	18 42 17.4	+0.5
	2.0nm,0.9s,baz=96,slow=9.3,SNR=3.4						
WRA	Warramunga Arr	47.62	259	P	P	18 43 07.2	-0.3
	0.8nm,0.4s,baz=98,slow=7.4,SNR=23						
ASAR	Alice Springs	47.72	254	P	P	18 43 08.0	-0.2
	1.0nm,0.4s,baz=88,slow=8.2,SNR=36						
FITZ	Fitzroy Crossi	56.02	260	P	P	18 44 10.0	-0.2
	2.1nm,1.0s,baz=124,slow=3.6,SNR=5.9						

MAN 01 18:53:44.2,7°.51N×127°.24E,h10km,mb4.0,ML2.8,MS2.4, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	1.13	240	*e*P	Pb	18 54 05.1	-0.7
MATI				*e*S	Sn	18 54 22.2	+0.5
BUKP	Musuan	2.19	280	*e*P	Pn	18 54 21.0	+0.2
BUKP				*e*S	Sn	18 54 49.1	+1.1

*IDC **01** 19:26:22.2±0.9,25°.42N×142°.67E,h0km,mb3.7/8, mb1 3.8/8,mb1mx3.5/64,mbtmp3.7/8,Error ellipse: s-maj=36.3km s-min=16.4km az=81.0*

*ISCJB **01** 19:26:25.1±0.9,25°.34N±0°.09×142°.9E±0°.3,h38km, mb3.6/9,Error ellipse: s-maj=37.3km s-min=10.4km az=168.4*

ISC 01 19:26:27.5±1.0,25°.4N±0°.1×142°.7E±0°.3,h38km,n11, σ0ˢ.87/12,mb3.7/9,Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	1.77	344	Pn	Pn	19 26 55.5	-0.2
	35nm,0.3s,baz=109,slow=9.9,SNR=17						
JCJ				Sn	Sn	19 27 18.5	+1.4
	62nm,0.3s,baz=274,slow=23,SNR=20						
KLR	Kul'dur	25.30	343	P	P	19 31 50.7	+0.3
	0.1nm,0.8s,baz=90,slow=6.3,SNR=3.5						
WRA	Warramunga Arr	45.78	191	P	P	19 34 46.6	+1.0
	0.8nm,0.5s,baz=10,slow=8.7,SNR=12						
ASAR	Alice Springs	49.50	191	P	P	19 35 14.5	0.0
	0.4nm,0.8s,baz=26,slow=11,SNR=3.9						
MKAR	Makanchi Array	51.95	311	P	P	19 35 32.6	-0.1
	0.2nm,0.5s,baz=88,slow=8.8,SNR=4.1						
KURBB	Kurchatov Arra	54.59	315	P	P	19 35 51.3	-0.6
	1.2nm,0.5s,baz=91,slow=8.3,SNR=20						
ILAR	Eielson Array	58.98	28	P	P	19 36 22.3	-0.7
	0.3nm,0.7s,baz=260,slow=5.2,SNR=3.3						
BVAR	Borovoye Array	59.63	318	P	P	19 36 27.5	-0.2
	1.1nm,0.5s,baz=79,slow=7.8,SNR=9.4						
FINES	FINESS Array B	79.69	334	P	P	19 38 30.5	-0.5
	1.5nm,0.8s,baz=45,slow=6.1,SNR=4.1						
AKASG	Malin Array Be	84.28	324	P	P	19 38 54.6	-0.7
	0.2nm,0.3s,baz=55,slow=4.9,SNR=2.0						
LPAZ	La Paz	149.84	79	PKPbc	PKPbc	19 46 16.5	+1.4
	1.5nm,0.3s,baz=250,slow=4.0,SNR=20						

MEX 01 19:41:37.5±0.3,15°.20N×94°.29W,h8km±17km,MD3.8, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.15	64	*e*P	Pg	19 41 56.2	-3.3
PCIG				*e*S	Sg	19 42 10.5	-3.9
TGIG		1.93	35	*e*P	Pn	19 42 07.5	-3.3
TGIG				*e*S	Sn	19 42 30.6	-4.7
CCIG	Comitan	2.33	62	*e*P	Pn	19 42 13.1	-3.3

IDC 01 19:49:33.9±3.0,3°.52N×128°.35E,h0km,mb3.9/4, mb1 4.1/4,mb1mx3.5/50,mbtmp3.9/4,Error ellipse: s-maj=94.2km s-min=52.1km az=85.0,North of Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	21.65	187	P	P	19 54 26.1	0.0
	3.9nm,1.1s,baz=21,slow=8.6,SNR=2.7						
WRA	Warramunga Arr	24.05	166	P	P	19 54 50.4	-0.6
	2.8nm,0.6s,baz=346,slow=10,SNR=3.0						
ASAR	Alice Springs	27.56	169	P	P	19 55 22.4	-0.3
	0.4nm,0.5s,baz=356,slow=8.3,SNR=7.2						
ASAR				PcP	PcP	19 58 41.1	+0.1
	0.2nm,0.6s,baz=355,slow=2.7,SNR=4.0						
STKA	Stephens Creek	37.39	161	P	P	19 56 48.8	+0.2
	1.9nm,0.4s,baz=329,slow=7.6,SNR=15						

DJA 01 20:00:51.1±0.5,9°S±6°×11°9E±°,h81km±8km,M3.4/8, MLv3.4/8,Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	Plampang	1.22	284	P	Pn	20 01 13.2	+0.2
PLAI				S	Sn	20 01 30.0	+0.6
WSI	Waingapu	1.41	113	P	Pn	20 01 15.4	+0.1
BASI	Baing, Sumba	1.92	125	P	Pn	20 01 21.9	0.0
TWSI	Taliwang, Sumb	2.11	280	P	Pn	20 01 24.8	+0.3
EDFI	Ende, Flores	2.70	82	P	Pn	20 01 32.6	0.0
IGBI	Denpasar	3.80	274	P	Pn	20 01 47.0	-0.3
BKSI	Bulukumba	3.94	17	P	Pn	20 01 49.3	0.0
JAGI	Jajag, Banyuwa	4.81	277	P	Pn	20 01 59.8	-1.4

*ISCJB **01** 20:22:16.0±0.5,38°.73N±0°.03×42°.66E±0°.03,h10km±4km, Error ellipse: s-maj=4.5km s-min=4.2km az=156.5*

*CSEM **01** 20:22:15.8±0.2,38°.75N×42°.67E,h12km,ML2.9,Error ellipse: s-maj=3.9km s-min=3.4km az=155.0*

*DDA **01** 20:22:15.2,38°.72N×42°.64E,h7km,Ml2.9*

*ISK **01** 20:22:15.4,38°.74N×42°.68E,h10km,ML2.5/7*

ISC 01 20:22:15.9±0.9,38°.73N±0°.02×42°.66E±0°.02,h13km±5km, n32,σ0ˢ.71/50,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADCV	BITLIS_Adilcev	0.10	33	*i* P	Pg	20 22 19.0	-0.1
ADCV				*i* S	Sg	20 22 21.5	+0.2
ADCV	BITLIS_Adilcev	0.10	33	P	Pg	20 22 19.0	-0.1
ADCV				S	Sg	20 22 21.5	+0.2
GEVA	Gevas	0.52	143	*i* P	Pg	20 22 25.3	-0.9
GEVA				*i* S	Sb	20 22 33.6	-0.8
GEVA	Gevas	0.52	143	P	Pg	20 22 25.3	-0.9
GEVA				S	Sb	20 22 33.7	-0.8
GURO	Guroymak-BITLI	0.52	250	PG	Pb	20 22 26.7	-0.3
GURO				SG	Sb	20 22 34.2	-0.3
GURO	Guroymak-BITLI	0.52	250	*e*Pg	Pb	20 22 26.7	-0.3
GURO				*e*Sg	Sb	20 22 34.2	-0.3
VANB	Van	0.59	103	PG	Pb	20 22 27.8	-0.3
VANB				SG	Sb	20 22 36.8	+0.4
VANB	Van	0.59	103	*e*Pg	Pb	20 22 27.8	-0.3
VANB				*e*Sg	Sb	20 22 36.8	+0.4
TVAN	Van	0.62	109	*i* P	Pg	20 22 27.6	-0.4
TVAN				*i* S	Sb	20 22 37.2	-0.2
TVAN	Van	0.62	109	P	Pg	20 22 27.6	-0.4
TVAN				S	Sb	20 22 37.2	-0.2
TUTA	Tutak	0.68	10	*i* P	Pg	20 22 28.6	-0.7
TUTA				*i* S	Sb	20 22 39.2	-0.1
TUTA	Tutak	0.68	10	P	Pg	20 22 28.6	-0.7
TUTA				S	Sb	20 22 39.2	-0.1
VMUR	Van-Muradiye	0.76	70	*i* P	Pg	20 22 30.2	-0.5
VMUR				*i* S	Sb	20 22 41.5	+0.1
VMUR	Van-Muradiye	0.76	70	P	Pg	20 22 30.2	-0.5
VMUR				S	Sb	20 22 41.5	+0.1
AGRB	Hanur-Agry	0.89	17	PG	Pb	20 22 32.8	-0.5
AGRB				SG	Sb	20 22 45.0	-0.1
AGRB	Hanur-Agry	0.89	17	*e*Pg	Pb	20 22 32.8	-0.5
AGRB				*e*Sg	Sb	20 22 45.0	-0.1
CLDR	Caldiran	1.06	67	PG	Pg	20 22 35.7	-0.8
CLDR	Caldiran	1.06	67	*i* P	Pg	20 22 35.4	-1.1
CLDR				*i* S	Sn	20 22 53.1	+1.6
CLDR	Caldiran	1.06	67	P	Pg	20 22 35.4	-1.1
CLDR	Caldiran	1.06	67	*e*Pg	Pg	20 22 35.7	-0.8
EATA	Eleskirt	1.14	354	*i* P	Pg	20 22 37.2	-0.7
EATA				*i* S	Sn	20 22 54.6	+1.1
EATA	Eleskirt	1.14	354	P	Pg	20 22 37.2	-0.7
SIRT	Sirnak	1.24	188	PN	Pg	20 22 39.5	-0.2
SIRT	Sirnak	1.24	188	*e*Pn	Pg	20 22 39.5	-0.2
SVAN	Silvan-Diyarba	1.28	244	PN	Pg	20 22 40.2	-0.4
SVAN	Silvan-Diyarba	1.28	244	*e*Pn	Pg	20 22 40.2	-0.4
BNGB	Bingˆ¶l	1.57	280	PN	Pb	20 22 44.2	-0.6
CUKT	Cukurca	1.66	153	PN	Pb	20 22 45.6	-0.8
CUKT	Cukurca	1.66	153	*e*Pn	Pb	20 22 45.6	-0.8
BINT	Bingol	1.70	276	*e*Pn	Pn	20 22 44.2	-1.2
MAZI	Mazidag	2.16	235	PN	Pn	20 22 53.3	+1.6
MAZI	Mazidag	2.16	235	*e*Pn	Pn	20 22 53.3	+1.6

*NIED **01** 20:28:00,40°.90N×145°.10E,h5km,Mw3.6   Best double couple: M₀3.16000×10¹⁴   NP1:φₛ30.00000°,δ36.00000°, λ-106.00000°.   NP2:φₛ229.00000°,δ56.00000°, λ-79.00000°.*

*IDC **01** 20:28:27.1±1.3,40°.80N×144°.98E,h0km,mb3.8/4, mb1 3.9/6,mb1mx3.4/66,mbtmp3.7/6,ML3.3/2,MS3.0/7, Ms1 3.0/7,ms1mx2.6/62,Error ellipse: s-maj=36.8km s-min=26.3km az=86.0*

*ISCJB **01** 20:28:29.8±0.7,40°.93N±0°.03×144°.94E±0°.05,h33km, mb3.8/4,MS3.1/6,Error ellipse: s-maj=6.1km s-min=4.4km az=32.0*

*JMA **01** 20:28:29.1±0.1,40°.91N×145°.07E,h69km±2km,M3.6*

ISC 01 20:28:30.9±1.2,40°.88N±0°.06×145°.02E±0°.07,h35km,n35, σ1ˢ.54/41,mb3.8/4,MS3.0/6,Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JEM	Erimo	1.80	310	P	Pn	20 28 58.8	-0.6
JEM				*e*S	Sn	20 29 19.9	-1.1
JTHR	Tokachihiroo	1.91	318	P	Pn	20 29 00.4	-0.5
JTHR				*e*S	Sn	20 29 22.0	-1.7
JAK	Akkeshi	2.12	354	P	Pn	20 29 02.7	-1.1
JAK				*e*S	Sn	20 29 26.9	-2.1
JCH	Churui	2.13	325	P	Pn	20 29 03.3	-0.6
JCH				*e*S	Sn	20 29 27.7	-1.4
JNBK	Urakawa-nobuka	2.20	310	P	Pn	20 29 04.9	0.0
JNBK				*e*S	Sn	20 29 30.2	-0.6
JOB	Onbets	2.20	337	P	Pn	20 29 04.4	-0.5
JOB				*e*S	Sn	20 29 30.4	-0.5
NEM2	Nemuro 2	2.54	12	P	Pn	20 29 08.7	-0.8
NEM2				*e*S	Sn	20 29 37.1	-2.1
JAR	Ashorobuto	2.58	339	P	Pn	20 29 09.1	-1.1
JAR				*e*S	Sn	20 29 38.7	-1.7
JNK	Nakash	2.71	355	P	Pn	20 29 10.4	-1.5
JNK				*e*S	Sn	20 29 39.9	-3.5
JANG	Nango	2.71	260	P	Pn	20 29 11.1	-0.9
JANG				*e*S	Sn	20 29 40.1	-3.5
JBT2	Biratori 2	2.74	315	P	Pn	20 29 12.3	0.0
JBT2				*e*S	Sn	20 29 44.2	0.0
JFR	Furan	2.91	322	P	Pn	20 29 14.1	-0.5
JFR				*e*S	Sn	20 29 46.7	-1.7
JTM	Tenmabayashi	3.00	269	P	Pn	20 29 15.7	-0.1
JTM				*e*S	Sn	20 29 48.7	-1.8
JOT	Ohata	3.04	281	P	Pn	20 29 16.0	-0.4
JOT				*e*S	Sn	20 29 49.2	-2.3
JRA	Rausu	3.05	1	P	Pn	20 29 15.8	-0.8
JRA				*e*S	Sn	20 29 50.5	-1.4
JKB	Kayabe	3.16	290	P	Pn	20 29 18.2	+0.1
JKB				*e*S	Sn	20 29 52.7	-1.9
JTKR	Abashiri--Toko	3.19	345	P	Pn	20 29 18.4	-0.1
JTKR				*e*S	Sn	20 29 54.0	-1.3
ASAJ	Asahikawa	3.69	332	Pn	Pn	20 29 25.6	+0.2
	2.0nm,0.3s,baz=192,slow=17,SNR=43						
ASAJ				Sn	Sn	20 30 06.4	-1.3
	1.8nm,0.3s,baz=108,slow=3.4,SNR=5.2						
ASAJ				LR	LR	20 31 11.2	
	comp=Z,78nm,21.2s,baz=169,slow=44						
MJAR	Matsushiro Arr	6.86	233	Pn	Pn	20 30 08.9	-0.1
	0.4nm,0.3s,baz=40,slow=12,SNR=7.6						
MJAR				Sn	Sn	20 31 22.5	-3.4
	0.1nm,0.3s,baz=12,slow=27,SNR=2.6						
YAK	Yakutsk	23.11	341	LR	LR	20 43 40.6	
	comp=Z,22nm,18.6s,baz=104,slow=39						
H11N2	WAKE ISLAND Hy	28.16	132	T	T	21 03 53.0	
	baz=324,slow=76,SNR=11						
H11N1	WAKE ISLAND Hy	28.17	132	T	T	21 03 53.4	
	baz=324,slow=76,SNR=16						
H11N3	WAKE ISLAND Hy	28.18	132	T	T	21 03 55.1	
	baz=324,slow=76,SNR=11						
SONM	Songino Array	28.25	297	LR	LR	20 45 34.2	
	comp=Z,21nm,18.8s,baz=196,slow=36						
H11S1	WAKE ISLAND Hy	29.04	134	T	T	21 04 59.1	
	baz=325,slow=76,SNR=8.8						
H11S3	WAKE ISLAND Hy	29.04	134	T	T	21 04 59.7	
	baz=325,slow=76,SNR=7.4						
H11S2	WAKE ISLAND Hy	29.05	134	T	T	21 04 58.0	
	baz=325,slow=76,SNR=14						
TLY	Talaya	30.18	305	LR	LR	20 47 56.2	
	comp=Z,14nm,18.7s,baz=189,slow=39						
KURBB	Kurchatov Arra	45.95	306	P	P	20 36 51.6	+1.5
	0.4nm,0.6s,baz=72,slow=8.8,SNR=4.1						
BVAR	Borovoye Array	50.13	311	LR	LR	21 01 38.5	
	comp=Z,19nm,18.2s,baz=352,slow=40						
CTA	Charters Tower	60.67	179	LR	LR	21 04 36.3	
	comp=Z,63nm,19.5s,baz=270,slow=36						
WRA	Warramunga Arr	61.32	191	P	P	20 38 43.4	+0.4
	1.0nm,0.9s,baz=12,slow=7.7,SNR=5.2						
FINES	FINESS Array B	66.70	333	P	P	20 39 19.9	+2.1
	2.3nm,1.1s,baz=54,slow=7.1,SNR=2.4						
AKASG	Malin Array Be	72.94	323	LR	LR	21 14 39.8	
	comp=Z,21nm,18.5s,baz=240,slow=38						
TXAR	Lajitas Array	85.58	55	P	P	20 41 08.2	+2.4
	0.2nm,0.6s,baz=308,slow=4.4,SNR=6.3						

*IDC **01** 20:36:47.8±3.1,23°.21N×94°.27E,h64km±34km,mb3.2/4, mb1 3.3/6,mb1mx3.0/65,mbtmp3.4/6,ML3.5/2,Error ellipse: s-maj=28.6km s-min=16.5km az=42.0*

*ISCJB **01** 20:36:48.8±0.8,23°.1N±0°.1×94°.13E±0°.08,h105km, mb3.4/4,Error ellipse: s-maj=15.0km s-min=10.1km az=16.0*

ISC 01 20:36:50.3±1.0,23°.1N±0°.1×94°.09E±0°.08,h105km,n7, σ2ˢ.03/8,mb3.4/4,Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRDH	Bariadhala	2.30	260	P	Pn	20 37 24.7	-2.2
	21nm,0.3s,baz=72,slow=20,SNR=3.3						
BRDH				S	Sn	20 37 55.9	+0.9
	21nm,0.3s,baz=246,slow=20,SNR=2.4						
SHL	Shillong	3.19	321	*e*PN	Pn	20 37 37.0	-1.9
SHL				*e*SN	Sn	20 38 10.5	-5.9
CMAR	Chiang Mai Arr	6.46	135	P	Pn	20 38 21.0	-2.0
	0.1nm,0.3s,baz=314,slow=13,SNR=4.5						
CMAR				Lg	Lg	20 40 12.8	
	0.0nm,0.3s,baz=318,slow=34,SNR=2.5						
MKAR	Makanchi Array	25.50	341	P	P	20 42 09.6	+0.7
	0.6nm,0.5s,baz=157,slow=8.8,SNR=10						
KURBB	Kurchatov Arra	30.05	340	P	P	20 42 50.7	+1.3
	0.2nm,0.5s,baz=144,slow=10.0,SNR=3.8						
WRA	Warramunga Arr	58.06	134	P	P	20 46 34.1	+1.3
	0.6nm,0.9s,baz=319,slow=7.6,SNR=3.6						
ASAR	Alice Springs	60.46	138	P	P	20 46 51.1	+1.8
	0.2nm,0.5s,baz=317,slow=6.7,SNR=3.3						

IDC 01 20:38:43.0±2.4,5°.78S×133°.63E,h0km,mb3.8/1, mb1 3.7/4,mb1mx3.3/44,mbtmp3.6/4,ML3.2/3,Error ellipse: s-maj=84.9km s-min=29.5km az=83.0,Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.10	177	Pn	Pn	20 42 03.6	-0.5
	0.1nm,0.3s,baz=355,slow=11,SNR=4.4						
WRA				Sn	Sn	20 44 28.3	-13
	0.1nm,0.3s,baz=351,slow=24,SNR=2.8						
FITZ	Fitzroy Crossi	14.53	212	Pn	Pn	20 42 11.3	+1.4
	0.2nm,0.3s,baz=39,slow=14,SNR=11						
FITZ				Sn	Sn	20 44 46.2	-5.6
	0.2nm,0.3s,baz=323,slow=20,SNR=3.9						
ASAR	Alice Springs	17.79	179	P	Pn	20 42 51.8	-0.5
	0.1nm,0.3s,baz=2.2,slow=12,SNR=6.5						
MKAR	Makanchi Array	69.24	325	P	P	20 49 51.9	0.0
	0.2nm,0.5s,baz=112,slow=5.9,SNR=2.8						

*ROM **01** 21:02:40.4±0.1,44°.857N±0°.007×11°.225E±0°.009, h9km,ML3.2/64*

*ISCJB **01** 21:02:43.0±0.2,44°.83N±0°.01×11°.21E±0°.02,h22km±2km, Error ellipse: s-maj=2.6km s-min=2.1km az=148.4*

*CSEM **01** 21:02:42.2±0.2,44°.85N×11°.27E,h8km,ML3.2/32,Error ellipse: s-maj=5.2km s-min=2.7km az=151.0*

*LDG **01** 21:02:43.1±0.1,44°.85N×11°.29E,h2km,Ml3.1/19,Error ellipse: s-maj=3.1km s-min=2.5km az=62.0*

*PRU **01** 21:02:45.6,44°.88N×11°.51E,h24km,M3.2*

ISC 01 21:02:42.3±0.8,44°.88N±0°.02×11°.24E±0°.01,h14km±4km, n216,σ1ˢ.26/290,1C-3D,Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T0800	Massa Finalese	0.03	173	*i* P	Pg	21 02 44.4	-0.4
T0800				S	Sg	21 02 46.2	-0.3
T0822	Casumaru (Bond	0.09	121	*i* P	Pg	21 02 44.9	-0.4
T0822				S	Sg	21 02 47.8	+0.5
T0822				AML	AML		
T0822				AML	AML		
T0822				AML	AML		
T0822				AML	AML		
T0822				AML	AML		
T0822				AML	AML		
SERM	Sermide	0.14	16	P	Pb	21 02 46.5	-0.2
SERM				AML	AML		
	comp=E,4655µm,0.4s						
SERM				AML	AML		
	comp=N,8585µm,0.5s						
SERM				AML	AML		
	comp=E,6230µm,0.7s						
SERM				AML	AML		
	comp=N,11650µm,0.5s						
SERM				AML	AML		
	comp=E,4650µm,0.4s						
SERM				AML	AML		
	comp=N,8585µm,0.5s						
SERM				AML	AML		
	comp=E,6230µm,0.7s						
SERM				AML	AML		
	comp=N,11650µm,0.5s						
SERM				AML	AML		
	comp=N,11650µm,0.5s						
SERM				AML	AML		
	comp=E,6230µm,0.7s						
SERM				AML	AML		
	comp=N,8585µm,0.5s						
SERM				AML	AML		
	comp=E,4650µm,0.4s						

RAVA	**Ravarino**	**0.15**	**216**	P	**Pg**	**21 02 45.8**	**-0.3**
RAVA				AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
RAVA				AML	AML		
T0821	**Loc. Casaglia**	**0.21**	**83**	P	**Pg**	**21 02 46.9**	**-0.2**
T0821				AML	AML		
	comp=E,8130µm,0.5s						
T0821				AML	AML		
	comp=N,6045µm,0.4s						
T0821				AML	AML		
	comp=E,8320µm,0.5s						
T0821				AML	AML		
	comp=N,6180µm,0.4s						
T0821				AML	AML		
	comp=E,8130µm,0.5s						
T0821				AML	AML		
	comp=N,6050µm,0.4s						
T0821				AML	AML		
	comp=E,8320µm,0.5s						
T0821				AML	AML		
	comp=N,6180µm,0.4s						
T0821				AML	AML		
	comp=N,6050µm,0.4s						
T0821				AML	AML		
	comp=N,6180µm,0.4s						
T0821				AML	AML		
	comp=E,8130µm,0.5s						
T0821				AML	AML		
	comp=E,8320µm,0.5s						
NDIM	**Novi di Modena**	**0.24**	**272**	P	**Pg**	**21 02 47.3**	**-0.3**
NDIM				S	**Sb**	**21 02 52.1**	**-0.6**
NDIM				AML	AML		
	comp=E,57750µm,0.2s						
NDIM				AML	AML		
	comp=N,33800µm,0.2s						
NDIM				AML	AML		
	comp=E,59100µm,0.3s						
NDIM				AML	AML		
	comp=N,32000µm,0.2s						
NDIM				AML	AML		
	comp=E,57800µm,0.2s						
NDIM				AML	AML		
	comp=N,33750µm,0.2s						
NDIM				AML	AML		
	comp=E,59100µm,0.3s						
NDIM				AML	AML		
	comp=N,32000µm,0.2s						
NDIM				AML	AML		
	comp=E,57800µm,0.2s						
NDIM				AML	AML		
	comp=E,59100µm,0.3s						
NDIM				AML	AML		
	comp=N,33750µm,0.2s						
NDIM				AML	AML		
	comp=N,32000µm,0.2s						
GAZZ	**Gazzo Veronese**	**0.26**	**336**	*e*Pg	**Pb**	**21 02 48.8**	**0.0**
GAZZ	**Gazzo Veronese**	**0.26**	**336**	*e*Pg	**Pb**	**21 02 48.8**	**0.0**
FIU	**Minerbio Fiu**	**0.30**	**143**	P	**Pg**	**21 02 48.4**	**-0.2**
FIU				S	**Sb**	**21 02 54.2**	**+0.1**
FIU				AML	AML		
	comp=E,8185µm,1.0s						
FIU				AML	AML		
	comp=N,6095µm,1.0s						
FIU				AML	AML		
	comp=E,8185µm,1.0s						
FIU				AML	AML		
	comp=N,6095µm,1.0s						
FIU				AML	AML		
	comp=N,6095µm,1.0s						
FIU				AML	AML		
	comp=E,8185µm,1.0s						
T0825	**Gonzaga (MN)**	**0.30**	**289**	P	**Pb**	**21 02 49.6**	**+0.2**
T0825				S	**Sn**	**21 02 56.7**	**-1.7**
T0825				AML	AML		
	comp=E,40600µm,0.4s						
T0825				AML	AML		
	comp=N,32300µm,0.2s						
T0825				AML	AML		
	comp=E,40600µm,0.4s						
T0825				AML	AML		
	comp=N,32250µm,0.2s						
T0825				AML	AML		
	comp=E,40600µm,0.4s						
T0825				AML	AML		
	comp=N,32300µm,0.2s						
T0825				AML	AML		
	comp=N,32300µm,0.2s						
T0825				AML	AML		
	comp=E,40600µm,0.4s						
NOVE	**Novellara**	**0.38**	**258**	P	**Pg**	**21 02 50.2**	**+0.1**
NOVE				AML	AML		
	comp=E,4645µm,0.4s						
NOVE				AML	AML		
	comp=N,5310µm,0.3s						
NOVE				AML	AML		
	comp=E,4645µm,0.4s						
NOVE				AML	AML		
	comp=N,5310µm,0.3s						
NOVE				AML	AML		
	comp=E,4640µm,0.4s						
NOVE				AML	AML		
	comp=N,5315µm,0.3s						
NOVE				AML	AML		
	comp=N,5315µm,0.3s						
NOVE				AML	AML		
	comp=E,4640µm,0.4s						
MTRZ	**Monterenzio**	**0.53**	**162**	P	**Pn**	**21 02 55.8**	**+0.3**
MTRZ				AML	AML		
	comp=E,3115µm,1.3s						
MTRZ				AML	AML		
	comp=N,2230µm,1.5s						
MTRZ				AML	AML		
	comp=E,3295µm,1.3s						
MTRZ				AML	AML		
	comp=N,2310µm,1.5s						
MTRZ				AML	AML		
	comp=E,3120µm,1.3s						
MTRZ				AML	AML		
	comp=N,2230µm,1.5s						
MTRZ				AML	AML		
	comp=E,3295µm,1.3s						
MTRZ				AML	AML		
	comp=N,2310µm,1.5s						
MTRZ				AML	AML		
	comp=E,3115µm,1.3s						
MTRZ				AML	AML		
	comp=N,2230µm,1.5s						
MTRZ				AML	AML		
	comp=E,3295µm,1.3s						
MTRZ				AML	AML		
	comp=N,2310µm,1.5s						
MTRZ				AML	AML		
	comp=E,3115µm,1.3s						
MTRZ				AML	AML		
	comp=E,3295µm,1.3s						
MTRZ				AML	AML		
	comp=N,2230µm,1.5s						
MTRZ				AML	AML		
	comp=N,2310µm,1.5s						
ZCCA	**Zocca**	**0.56**	**200**	P	**Pg**	**21 02 53.0**	**-0.4**
ZCCA				AML	AML		
	comp=E,1660µm,1.2s						
ZCCA				AML	AML		
	comp=N,1620µm,1.6s						
ZCCA				AML	AML		
	comp=E,1650µm,0.4s						
ZCCA				AML	AML		
	comp=N,1810µm,1.3s						
ZCCA				AML	AML		
	comp=E,1660µm,1.2s						
ZCCA				AML	AML		
	comp=N,1618µm,1.6s						
ZCCA				AML	AML		
	comp=E,1650µm,0.4s						
ZCCA				AML	AML		
	comp=N,1810µm,1.3s						
ZCCA				AML	AML		
	comp=E,1660µm,1.2s						
ZCCA				AML	AML		
	comp=E,1650µm,0.4s						
ZCCA				AML	AML		
	comp=N,1618µm,1.6s						
ZCCA				AML	AML		
	comp=N,1810µm,1.3s						
TEOL	**Teolo**	**0.57**	**32⇓**	*e*Pg	**Pb**	**21 02 54.0**	**-0.1**
TEOL				*e*Sg	**Sn**	**21 03 04.2**	**-1.1**
TEOL	**Teolo**	**0.57**	**32**	*e*Pg	**Pb**	**21 02 54.0**	**-0.1**
TEOL				*e*Sg	**Sn**	**21 03 04.2**	**-1.1**
TEOL	**Teolo**	**0.57**	**32**	P	**Pb**	**21 02 54.1**	**-0.1**
TEOL				AML	AML		
	comp=E,5400µm,0.5s						
TEOL				AML	AML		
	comp=N,4545µm,0.4s						
TEOL				AML	AML		
	comp=E,5400µm,0.5s						
TEOL				AML	AML		
	comp=N,4545µm,0.4s						
TEOL				AML	AML		
	comp=N,4545µm,0.4s						
TEOL				AML	AML		
	comp=E,5400µm,0.5s						
ADRI	**Adria, Italy**	**0.57**	**73⇑**	*e*Pg	**Pb**	**21 02 54.8**	**+0.7**
ADRI	**Adria, Italy**	**0.57**	**73**	*e*Pg	**Pb**	**21 02 54.8**	**+0.7**
IMOL	**Imola, Italy**	**0.63**	**145**	P	**Pn**	**21 02 56.8**	**0.0**
FNVD	**Fontana Vidola**	**0.71**	**187**	P	**Pg**	**21 02 56.2**	**-0.1**
FNVD				AML	AML		
	comp=E,1370µm,0.7s						
FNVD				AML	AML		
	comp=N,1358µm,0.4s						
FNVD				AML	AML		
	comp=E,1370µm,0.7s						
FNVD				AML	AML		
	comp=N,1358µm,0.4s						
FNVD				AML	AML		
	comp=E,1370µm,0.7s						
FNVD				AML	AML		
	comp=N,1358µm,0.4s						
ERBM	**Eremo**	**0.75**	**233**	P	**Pb**	**21 02 57.9**	**+0.7**
ERBM				AML	AML		
	comp=E,877µm,1.3s						
ERBM				AML	AML		
	comp=N,1002µm,1.3s						
ERBM				AML	AML		
	comp=E,876µm,1.3s						
ERBM				AML	AML		
	comp=N,1001µm,1.3s						
ERBM				AML	AML		
	comp=E,877µm,1.3s						
ERBM				AML	AML		
	comp=N,1000µm,1.3s						
ERBM				AML	AML		
	comp=E,877µm,1.3s						
ERBM				AML	AML		
	comp=N,1000µm,1.3s						
BRIS	**BRISIGHELLA**	**0.75**	**165**	P	**Pn**	**21 02 59.2**	**+0.7**
MARN	**Marana (Italy)**	**0.76**	**358⇓**	*e*Pg	**Pb**	**21 02 57.4**	**0.0**
MARN				*e*Sg	**Sn**	**21 03 10.6**	**+0.6**
MARN	**Marana (Italy)**	**0.76**	**358**	*e*Pg	**Pb**	**21 02 57.4**	**0.0**
MARN				*e*Sg	**Sn**	**21 03 10.6**	**+0.6**
ROVR	**Roverˆ¤ Verone**	**0.78**	**351**	*e*P	**Pg**	**21 02 57.6**	**+0.1**
ROVR				AML	AML		
	comp=E,3620µm,0.3s						
ROVR				AML	AML		
	comp=N,6425µm,0.3s						
ROVR				AML	AML		
	comp=E,3620µm,0.3s						
ROVR				AML	AML		
	comp=N,6425µm,0.3s						
ROVR				AML	AML		
	comp=E,3620µm,0.3s						
ROVR				AML	AML		
	comp=N,6425µm,0.3s						
ROVR				AML	AML		
	comp=E,3620µm,0.3s						
ROVR				AML	AML		
	comp=N,6425µm,0.3s						
BALD	**Monte Baldo**	**0.86**	**340**	*e*Pg	**Pb**	**21 02 59.5**	**+0.3**
BALD				*e*Sg	**Sn**	**21 03 13.2**	**+0.5**
BALD	**Monte Baldo**	**0.86**	**340**	*e*Pg	**Pb**	**21 02 59.5**	**+0.3**
BALD				*e*Sg	**Sn**	**21 03 13.2**	**+0.5**
SALO	**Salr**	**0.90**	**326**	P	**Pg**	**21 03 00.1**	**+0.4**
SALO				AML	AML		
	comp=E,3680µm,0.6s						
SALO				AML	AML		
	comp=N,4870µm,0.3s						
SALO				AML	AML		
	comp=E,3680µm,0.6s						
SALO				AML	AML		
	comp=N,4870µm,0.3s						
SALO				AML	AML		
	comp=E,3680µm,0.6s						
SALO				AML	AML		
	comp=N,4870µm,0.3s						
POPM	**Popiglio**	**0.90**	**203**	P	**Pb**	**21 02 59.3**	**-0.5**
POPM				AML	AML		
	comp=E,1148µm,0.4s						
POPM				AML	AML		
	comp=N,1670µm,0.4s						
POPM				AML	AML		
	comp=E,1148µm,0.4s						
POPM				AML	AML		
	comp=N,1670µm,0.4s						
POPM				AML	AML		
	comp=E,1148µm,0.4s						
POPM				AML	AML		
	comp=N,1670µm,0.4s						
BDI	**Bagni Di Lucca**	**0.94**	**210**	P	**Pg**	**21 03 00.8**	**+0.3**
BDI				AML	AML		
	comp=E,1270µm,0.7s						
BDI				AML	AML		
	comp=N,1205µm,1.2s						
BDI				AML	AML		
	comp=E,1110µm,0.9s						
BDI				AML	AML		
	comp=N,1255µm,0.4s						
BDI				AML	AML		
	comp=E,1110µm,0.9s						
BDI				AML	AML		
	comp=N,1205µm,1.2s						
BDI				AML	AML		
	comp=E,1270µm,0.7s						
BDI				AML	AML		
	comp=N,1255µm,0.4s						
VLC	**Villacollemand**	**0.94**	**221**	P	**Pg**	**21 03 00.7**	**+0.1**
VLC				AML	AML		
	comp=E,478µm,0.7s						
VLC				AML	AML		
	comp=N,534µm,1.0s						
VLC				AML	AML		
	comp=E,478µm,0.7s						
VLC				AML	AML		
	comp=N,534µm,1.0s						
VLC				AML	AML		
	comp=E,478µm,0.7s						
VLC				AML	AML		
	comp=N,534µm,1.0s						
MAGA	**Magasa**	**1.00**	**334**	P	**Pg**	**21 03 01.7**	**+0.1**
MAGA				AML	AML		
	comp=E,14300µm,0.6s						
MAGA				AML	AML		
	comp=N,12300µm,0.5s						
MAGA				AML	AML		
	comp=E,14300µm,0.6s						
MAGA				AML	AML		
	comp=N,12300µm,0.5s						
MAGA				AML	AML		
	comp=N,12300µm,0.5s						
MAGA				AML	AML		
	comp=E,14300µm,0.6s						
DOSS	**Dosso del Somm**	**1.00**	**358⇓**	*e*Pg	**Pb**	**21 03 01.7**	**+0.1**
DOSS				*e*Sg	**Sn**	**21 03 16.8**	**+0.6**
DOSS	**Dosso del Somm**	**1.00**	**358**	*e*Pg	**Pb**	**21 03 01.7**	**+0.1**
DOSS				*e*Sg	**Sn**	**21 03 16.8**	**+0.6**
SFI	**Santa Sofia**	**1.06**	**156**	P	**Pg**	**21 03 03.0**	**+0.1**
SFI				AML	AML		
	comp=E,1155µm,0.6s						
SFI				AML	AML		
	comp=N,1255µm,1.4s						
SFI				AML	AML		
	comp=E,1155µm,0.6s						
SFI				AML	AML		
	comp=N,1365µm,1.4s						
SFI				AML	AML		
	comp=E,1155µm,0.6s						
SFI				AML	AML		
	comp=N,1250µm,1.4s						
SFI				AML	AML		
	comp=E,1155µm,0.6s						
SFI				AML	AML		
	comp=N,1365µm,1.4s						
SFI				AML	AML		
	comp=N,1250µm,1.4s						
SFI				AML	AML		
	comp=N,1365µm,1.4s						
SFI				AML	AML		
	comp=E,1155µm,0.6s						
SFI				AML	AML		
	comp=E,1155µm,0.6s						
CGRP	**Cima Grappa**	**1.08**	**21**	*e*Pg	**Pg**	**21 03 03.7**	**+0.6**
CGRP				*e*Sg	**Sn**	**21 03 19.7**	**+1.7**
CGRP	**Cima Grappa**	**1.08**	**21**	*e*Pg	**Pg**	**21 03 03.7**	**+0.6**
CGRP				*e*Sg	**Sn**	**21 03 19.7**	**+1.7**
CGRP	**Cima Grappa**	**1.08**	**21**	P	**Pg**	**21 03 03.3**	**+0.1**
CGRP				AML	AML		
	comp=E,1355µm,0.5s						
CGRP				AML	AML		
	comp=N,1550µm,0.7s						
CGRP				AML	AML		
	comp=E,1355µm,0.5s						
CGRP				AML	AML		
	comp=N,1550µm,0.7s						
CGRP				AML	AML		
	comp=N,1550µm,0.7s						
CGRP				AML	AML		
	comp=E,1355µm,0.5s						
MAIM	**Mastiano**	**1.10**	**209**	P	**Pn**	**21 03 03.4**	**+0.1**
MAIM				AML	AML		
	comp=E,692µm,0.9s						
MAIM				AML	AML		
	comp=N,1290µm,0.7s						
MAIM				AML	AML		
	comp=E,692µm,0.9s						
MAIM				AML	AML		
	comp=N,1290µm,0.7s						
MAIM				AML	AML		
	comp=N,1290µm,0.7s						
MAIM				AML	AML		
	comp=E,692µm,0.9s						
MTLO	**Montello**	**1.11**	**32**	*e*Pg	**Pg**	**21 03 04.2**	**+0.4**
MTLO				*e*Sg	**Sn**	**21 03 20.9**	**+2.3**
MTLO	**Montello**	**1.11**	**32**	*e*Pg	**Pg**	**21 03 04.2**	**+0.4**
MTLO				*e*Sg	**Sn**	**21 03 20.9**	**+2.3**
CTL8	**Castelleone**	**1.12**	**291**	AML	AML		
	comp=N,572µm,0.8s						
CTL8				AML	AML		
	comp=E,1490µm,0.7s						
CTL8				AML	AML		
	comp=N,2495µm,0.5s						
CTL8				AML	AML		
	comp=E,608µm,0.7s						
CTL8				AML	AML		
	comp=N,572µm,0.8s						
CTL8				AML	AML		
	comp=E,608µm,0.7s						
CTL8				AML	AML		
	comp=N,2495µm,0.5s						
CTL8				AML	AML		
	comp=E,1490µm,0.7s						
ASQU	**Asqua**	**1.15**	**160**	P	**Pg**	**21 03 04.8**	**+0.3**
ASQU				AML	AML		
	comp=E,704µm,0.5s						
ASQU				AML	AML		
	comp=N,972µm,1.5s						
ASQU				AML	AML		
	comp=N,972µm,1.5s						
ASQU				AML	AML		
	comp=E,704µm,0.5s						
PANI	**Panarotta**	**1.17**	**3**	*e*Pg	**Pb**	**21 03 04.8**	**+0.3**
PANI				*e*Sg	**Sg**	**21 03 22.3**	**+2.0**
PANI	**Panarotta**	**1.17**	**3**	*e*Pg	**Pb**	**21 03 04.8**	**+0.3**
PANI				*e*Sg	**Sg**	**21 03 22.3**	**+2.0**
RNI	**Roncone**	**1.19**	**339**	*e*Pg	**Pb**	**21 03 05.0**	**+0.3**
RNI				*e*Sg	**Sg**	**21 03 22.5**	**+1.8**
RNI	**Roncone**	**1.19**	**339**	*e*Pg	**Pb**	**21 03 05.0**	**+0.3**
RNI				*e*Sg	**Sg**	**21 03 22.5**	**+1.8**
CTI	**Castel Tesino**	**1.21**	**14**	*e*P	**Pb**	**21 03 05.1**	**+0.1**
CTI				AML	AML		
	comp=E,1244µm,0.2s						
CTI				AML	AML		
	comp=N,1435µm,0.2s						
CTI				AML	AML		
	comp=E,1244µm,0.2s						
CTI				AML	AML		
	comp=N,1435µm,0.2s						
CTI				AML	AML		
	comp=N,1435µm,0.2s						
CTI				AML	AML		
	comp=E,1244µm,0.2s						
VARN	**Col Varnada, M**	**1.27**	**28**	*e*Pg	**Pn**	**21 03 05.8**	**+0.1**
VARN				*e*Sg	**Sg**	**21 03 26.1**	**+2.7**
VARN	**Col Varnada, M**	**1.27**	**28**	*e*Pg	**Pn**	**21 03 05.8**	**+0.1**
VARN				*e*Sg	**Sg**	**21 03 26.0**	**+2.7**
BOB	**Bobbio (Coli)**	**1.28**	**266**	P	**Pg**	**21 03 07.4**	**+0.4**
BOB				AML	AML		
	comp=E,524µm,1.4s						
BOB				AML	AML		
	comp=N,826µm,0.8s						
BOB				AML	AML		
	comp=E,524µm,1.4s						
BOB				AML	AML		
	comp=N,826µm,0.8s						
BOB				AML	AML		
	comp=E,524µm,1.4s						
BOB				AML	AML		
	comp=N,826µm,0.8s						
MABI	**Malga Bissina**	**1.28**	**337**	P	**Pb**	**21 03 06.5**	**+0.1**
MABI				AML	AML		
	comp=E,496µm,1.1s						
MABI				AML	AML		
	comp=N,541µm,0.3s						
MABI				AML	AML		
	comp=E,496µm,1.1s						
MABI				AML	AML		
	comp=N,541µm,0.3s						
MABI				AML	AML		
	comp=N,541µm,0.3s						
MABI				AML	AML		
	comp=E,496µm,1.1s						
PLMA	**Palmaria, Port**	**1.30**	**231**	P	**Pg**	**21 03 07.4**	**+0.1**
PLMA				AML	AML		
	comp=E,414µm,0.8s						
PLMA				AML	AML		
	comp=N,761µm,1.2s						
PLMA				AML	AML		
	comp=E,414µm,0.8s						
PLMA				AML	AML		
	comp=N,761µm,1.2s						
MSSA	**Maissana**	**1.35**	**246**	P	**Pg**	**21 03 08.4**	**0.0**
MSSA				AML	AML		
	comp=E,738µm,0.8s						
MSSA				AML	AML		
	comp=N,1180µm,0.8s						
MSSA				AML	AML		
	comp=E,738µm,0.8s						
MSSA				AML	AML		
	comp=N,1180µm,0.8s						
CRE	**Caprese Michel**	**1.36**	**158**	P	**Pg**	**21 03 08.5**	**+0.1**
CRE				AML	AML		
	comp=E,544µm,0.9s						
CRE				AML	AML		
	comp=N,606µm,1.5s						
CRE				AML	AML		
	comp=E,544µm,0.9s						
CRE				AML	AML		
	comp=N,606µm,1.5s						
CSNT	**Castellina Chi**	**1.41**	**179**	AML	AML		
	comp=E,297µm,1.6s						
CSNT				AML	AML		
	comp=N,354µm,0.8s						
CSNT				AML	AML		
	comp=N,354µm,0.8s						
CSNT				AML	AML		
	comp=E,297µm,1.6s						
CAE	**Caneva**	**1.41**	**36**	*e*Pg	**Pb**	**21 03 08.9**	**+0.5**
CAE	**Caneva**	**1.41**	**36**	*e*Pg	**Pb**	**21 03 08.9**	**+0.5**
PARC	**Parchiule**	**1.42**	**149**	P	**Pg**	**21 03 09.5**	**-0.2**
PARC				AML	AML		
	comp=E,322µm,0.7s						
PARC				AML	AML		
	comp=N,344µm,0.6s						
PARC				AML	AML		
	comp=N,344µm,0.6s						
PARC				AML	AML		
	comp=E,322µm,0.7s						
POLC	**Polcenigo**	**1.45**	**37**	P	**Pb**	**21 03 08.7**	**-0.4**
POLC				AML	AML		
	comp=E,1108µm,0.8s						
POLC				AML	AML		

	comp=N,1295µm,1.3s						
POLC				AML	AML		
	comp=E,1108µm,0.8s						
POLC				AML	AML		
	comp=N,1295µm,1.3s						
POLC				AML	AML		
	comp=N,1295µm,1.3s						
POLC				AML	AML		
	comp=E,1108µm,0.8s						
AGOR	**Agordo**	**1.52**	**22**	*e*Pg	**Pb**	**21 03 10.1**	**-0.1**
AGOR	**Agordo**	**1.52**	**22**	P	**Pn**	**21 03 09.4**	**+0.3**
AGOR				AML	AML		
	comp=E,458µm,0.5s						
AGOR				AML	AML		
	comp=N,732µm,0.3s						
AGOR				AML	AML		
	comp=N,732µm,0.3s						
AGOR				AML	AML		
	comp=E,458µm,0.5s						
OZOL	**Ozolo**	**1.53**	**355**	*e*Pg	**Pb**	**21 03 10.7**	**+0.1**
OZOL	**Ozolo**	**1.53**	**355**	*e*Pg	**Pb**	**21 03 10.7**	**+0.1**
ATMC	**Monte Cedrone**	**1.58**	**154**	AML	AML		
	comp=E,694µm,0.9s						
ATMC				AML	AML		
	comp=N,490µm,0.7s						
ATMC				AML	AML		
	comp=E,694µm,0.9s						
ATMC				AML	AML		
	comp=N,490µm,0.7s						
KOSI	**Kohlern**	**1.59**	**3**	P	**Pb**	**21 03 11.3**	**-0.2**
KOSI				AML	AML		
	comp=E,1015µm,1.2s						
KOSI				AML	AML		
	comp=N,872µm,0.4s						
KOSI				AML	AML		
	comp=E,1015µm,1.2s						
KOSI				AML	AML		
	comp=N,872µm,0.4s						
CSO	**Casso**	**1.59**	**28**	*e*Pg	**Pb**	**21 03 11.5**	**0.0**
CSO	**Casso**	**1.59**	**28**	*e*Pg	**Pb**	**21 03 11.5**	**0.0**
CARE	**Lago del Cares**	**1.59**	**346**	*e*Pg	**Pb**	**21 03 11.6**	**-0.1**
CARE	**Lago del Cares**	**1.59**	**346**	*e*Pg	**Pb**	**21 03 11.6**	**-0.1**
MLNI	**Malnisio**	**1.59**	**37**	*e*Pg	**Pb**	**21 03 11.5**	**-0.1**
MLNI	**Malnisio**	**1.59**	**37**	*e*Pg	**Pb**	**21 03 11.5**	**-0.1**
APPI	**Appiano**	**1.60**	**360**	P	**Pb**	**21 03 11.4**	**-0.4**
APPI				AML	AML		
	comp=E,1220µm,0.3s						
APPI				AML	AML		
	comp=N,795µm,0.4s						
APPI				AML	AML		
	comp=E,1220µm,0.3s						
APPI				AML	AML		
	comp=N,795µm,0.4s						
PIEI	**Pieia**	**1.63**	**145**	AML	AML		
	comp=N,194µm,1.3s						
PIEI				AML	AML		
	comp=E,234µm,0.4s						
PIEI				AML	AML		
	comp=E,234µm,0.4s						
PIEI				AML	AML		
	comp=N,194µm,1.3s						
CAFI	**Castiglion Fio**	**1.63**	**161**	AML	AML		
	comp=N,236µm,0.6s						
CAFI				AML	AML		
	comp=E,328µm,0.6s						
CAFI				AML	AML		
	comp=E,328µm,0.6s						
CAFI				AML	AML		
	comp=N,236µm,0.6s						
ATPC	**Poggio Castell**	**1.65**	**148**	P	**Pg**	**21 03 13.8**	**-0.2**
ATPC				AML	AML		
	comp=E,372µm,1.3s						
ATPC				AML	AML		
	comp=N,352µm,0.7s						
ATPC				AML	AML		
	comp=N,352µm,0.7s						
ATPC				AML	AML		
	comp=E,372µm,1.3s						
MPAG	**Monte Paganucc**	**1.66**	**138**	P	**Pn**	**21 03 11.7**	**+0.6**
MPAG				AML	AML		
	comp=E,216µm,0.6s						
MPAG				AML	AML		
	comp=N,354µm,0.8s						
MPAG				AML	AML		
	comp=E,216µm,0.6s						
MPAG				AML	AML		
	comp=N,354µm,0.8s						
CIMO	**Cimolais**	**1.66**	**30**	*e*Pg	**Pb**	**21 03 12.9**	**+0.2**
CIMO	**Cimolais**	**1.66**	**30**	*e*Pg	**Pb**	**21 03 12.9**	**+0.2**
ATBU	**Serra di Buran**	**1.69**	**146**	AML	AML		
	comp=N,874µm,0.7s						
ATBU				AML	AML		
	comp=E,681µm,0.6s						
ATBU				AML	AML		
	comp=N,874µm,0.7s						
ATBU				AML	AML		
	comp=E,681µm,0.6s						
BRMO	**Bormio**	**1.71**	**339**	P	**Pb**	**21 03 13.3**	**-0.3**
BRMO				AML	AML		
	comp=E,494µm,0.5s						
BRMO				AML	AML		
	comp=N,568µm,1.1s						
BRMO				AML	AML		
	comp=E,494µm,0.5s						
BRMO				AML	AML		
	comp=N,568µm,1.1s						
ATVO	**AVT- Monte Val**	**1.71**	**150**	AML	AML		
	comp=N,360µm,0.5s						
ATVO				AML	AML		
	comp=E,347µm,0.6s						
ATVO				AML	AML		
	comp=N,360µm,0.5s						
ATVO				AML	AML		
	comp=E,347µm,0.6s						
STAL	**STALIGIAL**	**1.73**	**36**	AML	AML		
	comp=N,630µm,0.9s						
STAL				AML	AML		
	comp=E,624µm,0.7s						
STAL				AML	AML		
	comp=N,728µm,0.3s						
STAL				AML	AML		
	comp=E,778µm,0.3s						
STAL				AML	AML		
	comp=N,630µm,0.9s						
STAL				AML	AML		
	comp=E,778µm,0.3s						
STAL				AML	AML		
	comp=N,728µm,0.3s						
STAL				AML	AML		
	comp=E,624µm,0.7s						
MOSI	**Grossmontoni**	**1.81**	**345**	AML	AML		
	comp=N,1625µm,0.8s						
MOSI				AML	AML		
	comp=E,1033µm,1.4s						
MOSI				AML	AML		
	comp=N,1625µm,0.8s						
MOSI				AML	AML		
	comp=E,1033µm,1.4s						
ABSI	**Aberstueckl**	**1.85**	**2**	AML	AML		
	comp=E,1180µm,0.4s						
ABSI				AML	AML		
	comp=E,1180µm,0.4s						
ABSI				AML	AML		
	comp=N,1042µm,0.8s						
ABSI				AML	AML		
	comp=N,1042µm,0.8s						
MUGIO	**Muggio**	**1.87**	**305**	P	**Pn**	**21 03 14.8**	**+0.8**
PCP	**Piancastagn**	**1.95**	**261**	P	**Pb**	**21 03 17.8**	**+0.1**
VARE	**Varese**	**2.00**	**300**	AML	AML		
	comp=N,278µm,0.3s						
VARE				AML	AML		
	comp=E,355µm,0.2s						
VARE				AML	AML		
	comp=N,278µm,0.3s						
VARE				AML	AML		
	comp=E,355µm,0.2s						
ROSI	**Rosskopf**	**2.05**	**3**	AML	AML		
	comp=N,768µm,0.6s						
ROSI				AML	AML		
	comp=E,569µm,0.9s						
ROSI				AML	AML		
	comp=N,768µm,0.6s						
ROSI				AML	AML		
	comp=E,569µm,0.9s						
ROTM	**Rocchetta Tana**	**2.06**	**270**	AML	AML		
	comp=E,768µm,0.7s						
ROTM				AML	AML		
	comp=E,768µm,0.7s						
ROTM				AML	AML		
	comp=N,1020µm,0.5s						
ROTM				AML	AML		
	comp=N,1020µm,0.5s						
ABTA	**Abfaltersbach**	**2.07**	**25**	*e*Pn	**Pn**	**21 03 18.1**	**+1.4**
	comp=N,0.4nm,0.2s,SNR=25						
ABTA				Sn	**Sb**	**21 03 45.1**	**-0.2**
	comp=N,1.0nm,0.1s						
ABTA	**Abfaltersbach**	**2.07**	**25**	Pn	**Pn**	**21 03 18.1**	**+1.4**
	comp=N,0.4nm,0.2s,SNR=25						
ABTA				Sn	**Sb**	**21 03 45.1**	**-0.2**
	comp=N,1.0nm,0.1s						
SKDS	**Skadanscina**	**2.07**	**70**	*i* Pn	**Pn**	**21 03 16.2**	**-0.5**
SKDS				*i* Sn	**Sn**	**21 03 41.5**	**-0.8**
	comp=Z,59nm,0.3s						
SKDS	**Skadanscina**	**2.07**	**70**	Pn	**Pn**	**21 03 16.2**	**-0.5**
SKDS				*i* Sn	**Sn**	**21 03 41.5**	**-0.8**
	comp=Z,59nm,0.3s						
SACS	**San Casciano d**	**2.08**	**166**	AML	AML		
	comp=N,108µm,0.7s						
SACS				AML	AML		
	comp=E,98µm,1.0s						
SACS				AML	AML		
	comp=N,108µm,0.7s						
SACS				AML	AML		
	comp=E,98µm,1.0s						
CASP	**Castiglione de**	**2.10**	**188**	AML	AML		
	comp=E,66µm,1.1s						
CASP				AML	AML		
	comp=N,88µm,0.8s						
CASP				AML	AML		
	comp=N,88µm,0.8s						
CASP				AML	AML		
	comp=E,66µm,1.1s						
PTCC	**Patocco-Chiusa**	**2.13**	**43**	AML	AML		
	comp=E,238µm,0.7s						
PTCC				AML	AML		
	comp=E,238µm,0.7s						
PTCC				AML	AML		
	comp=N,272µm,0.6s						
PTCC				AML	AML		
	comp=N,272µm,0.6s						
QLNO	**Quiliano**	**2.14**	**256**	AML	AML		
	comp=E,106µm,0.4s						
QLNO				AML	AML		
	comp=E,106µm,0.4s						
QLNO				AML	AML		
	comp=N,176µm,0.5s						
QLNO				AML	AML		
	comp=N,176µm,0.5s						
RISI	**Rein**	**2.15**	**15**	AML	AML		
	comp=N,758µm,0.5s						
RISI				AML	AML		
	comp=E,690µm,0.5s						
RISI				AML	AML		
	comp=N,758µm,0.5s						
RISI				AML	AML		
	comp=E,690µm,0.5s						
FETA	**Feichten**	**2.17**	**351**	Pn	**Pb**	**21 03 21.0**	**-0.5**
	comp=E,9.9nm,0.2s,SNR=27						
FETA				Sn	**Sb**	**21 03 50.3**	**+1.9**
	comp=E,20nm,0.4s						
FETA	**Feichten**	**2.17**	**351**	Pn	**Pb**	**21 03 21.0**	**-0.5**
	comp=E,9.9nm,0.2s,SNR=27						
FETA				Sn	**Sb**	**21 03 50.3**	**+1.9**
	comp=E,20nm,0.4s						
FINB	**Finale Ligure**	**2.20**	**252**	AML	AML		
	comp=E,601µm,0.3s						
FINB				AML	AML		
	comp=E,601µm,0.3s						
FINB				AML	AML		
	comp=N,17µm,0.3s						
FINB				AML	AML		
	comp=N,17µm,0.3s						
CADS	**Cadrg**	**2.21**	**51**	*i* Pn	**Pn**	**21 03 18.9**	**+0.2**
CADS				*i* Sn	**Sn**	**21 03 46.4**	**+0.6**
	comp=Z,130nm,0.7s						
CADS	**Cadrg**	**2.21**	**51**	*i* Pn	**Pn**	**21 03 18.9**	**+0.2**
CADS				*i* Sn	**Sn**	**21 03 46.4**	**+0.6**
	comp=Z,130nm,0.7s						
JAVS	**Javornik**	**2.23**	**62**	*i* Pn	**Pn**	**21 03 19.2**	**+0.2**
JAVS				*i* Sn	**Sn**	**21 03 47.0**	**+0.6**
	comp=Z,92nm,0.6s						
JAVS	**Javornik**	**2.23**	**62**	*i* Pn	**Pn**	**21 03 19.2**	**+0.2**
JAVS				*i* Sn	**Sn**	**21 03 47.0**	**+0.6**
	comp=Z,92nm,0.6s						
FDMO	**Fiordimonte**	**2.27**	**143**	AML	AML		
	comp=N,130µm,0.5s						
FDMO				AML	AML		
	comp=E,102µm,0.6s						
FDMO				AML	AML		
	comp=N,130µm,0.5s						
FDMO				AML	AML		
	comp=E,102µm,0.6s						
MOMA	**Monte Martano**	**2.29**	**155**	AML	AML		
	comp=N,114µm,0.3s						
MOMA				AML	AML		
	comp=E,124µm,0.8s						
MOMA				AML	AML		
	comp=N,114µm,0.3s						
MOMA				AML	AML		
	comp=E,124µm,0.8s						
ACOM	**Acomizza, Ital**	**2.31**	**43**	AML	AML		
	comp=N,467µm,0.5s						
ACOM				AML	AML		
	comp=E,480µm,1.2s						
ACOM				AML	AML		
	comp=N,467µm,0.5s						
ACOM				AML	AML		
	comp=E,480µm,1.2s						
WTTA	**Wattenberg**	**2.40**	**6**	Pn	**Pb**	**21 03 24.2**	**-1.2**
	comp=E,14nm,0.3s,SNR=15						
WTTA				Sg	**Sg**	**21 03 59.2**	**-0.4**
	comp=E,81nm,0.7s						
WTTA	**Wattenberg**	**2.40**	**6**	Pn	**Pb**	**21 03 24.2**	**-1.2**
	comp=E,14nm,0.3s,SNR=15						
WTTA				Sg	**Sg**	**21 03 59.2**	**-0.4**
	comp=E,81nm,0.7s						
WTTA	**Wattenberg**	**2.40**	**6**	AML	AML		
	comp=E,400µm,0.6s						
WTTA				AML	AML		
	comp=N,270µm,0.7s						
WTTA				AML	AML		
	comp=E,400µm,0.6s						
WTTA				AML	AML		
	comp=N,270µm,0.7s						
MYKA	**Terra Mystica**	**2.43**	**43**	Pn	**Pb**	**21 03 24.9**	**-0.9**
	comp=N,0.6nm,0.2s,SNR=16						
MYKA				Sg	**Sg**	**21 04 01.9**	**+1.6**
	comp=N,30nm,0.5s						
MYKA	**Terra Mystica**	**2.43**	**43**	Pn	**Pb**	**21 03 24.9**	**-0.9**
	comp=N,0.6nm,0.2s,SNR=16						
MYKA				Sg	**Sg**	**21 04 01.9**	**+1.6**
	comp=N,30nm,0.5s						
NRCA	**Norcia**	**2.45**	**146**	AML	AML		
	comp=N,102µm,0.5s						
NRCA				AML	AML		
	comp=E,106µm,0.8s						
NRCA				AML	AML		
	comp=N,102µm,0.5s						
NRCA				AML	AML		
	comp=E,106µm,0.8s						
MOTA	**Moosalm**	**2.47**	**358**	*e*Pn	**Pb**	**21 03 26.0**	**-0.6**
	comp=E,7.5nm,0.2s,SNR=60						
MOTA	**Moosalm**	**2.47**	**358**	Pn	**Pb**	**21 03 26.0**	**-0.6**
	comp=E,7.5nm,0.2s,SNR=60						
WATA	**Walderalm**	**2.47**	**5**	*e*Pn	**Pb**	**21 03 25.7**	**-0.9**
	comp=E,15nm,0.2s,SNR=32						
WATA	**Walderalm**	**2.47**	**5**	Pn	**Pb**	**21 03 25.7**	**-0.9**
	comp=E,15nm,0.2s,SNR=32						
IMI	**Imperia**	**2.59**	**249**	AML	AML		
	comp=N,206µm,0.9s						
IMI				AML	AML		
	comp=E,149µm,1.6s						
IMI				AML	AML		
	comp=E,149µm,1.6s						
IMI				AML	AML		
	comp=N,206µm,0.9s						
DAVA	**Damuels**	**2.59**	**339**	Pn	**Pb**	**21 03 26.9**	**-1.7**
	comp=N,11nm,0.4s,SNR=11						
DAVA				Sn	**Sb**	**21 03 59.4**	**-0.9**
	comp=N,40nm,0.5s						
DAVA	**Damuels**	**2.59**	**339**	Pn	**Pb**	**21 03 26.9**	**-1.7**
	comp=N,11nm,0.4s,SNR=11						
DAVA				Sn	**Sb**	**21 03 59.4**	**-0.9**
	comp=N,40nm,0.5s						
NVLJ	**Novalja**	**2.60**	**96**	*e*Pn	**Pn**	**21 03 24.1**	**+0.1**
NVLJ				Sn	**Sn**	**21 03 55.0**	**-0.4**
RETA	**Reutte**	**2.63**	**353**	*e*Pn	**Pb**	**21 03 27.1**	**-2.2**
	comp=N,5.6nm,0.2s,SNR=12						
RETA				*e*Sn	**Sb**	**21 03 60.0**	**-1.5**
	comp=N,10nm,0.2s						
RETA	**Reutte**	**2.63**	**353**	Pn	**Pb**	**21 03 27.1**	**-2.2**
	comp=N,5.6nm,0.2s,SNR=12						
RETA				Sn	**Sb**	**21 04 00.0**	**-1.5**
	comp=N,10nm,0.2s						
KBA	**Koelnbreinsper**	**2.64**	**33**	Pg	**Pg**	**21 03 32.0**	**-1.0**
	comp=N,22nm,0.3s,SNR=18						
KBA				Sg	**Sg**	**21 04 06.6**	**-0.7**
	comp=N,20nm,0.3s						
KBA	**Koelnbreinsper**	**2.64**	**33**	Pg	**Pg**	**21 03 32.0**	**-1.0**
	comp=N,22nm,0.3s,SNR=18						
KBA				Sg	**Sg**	**21 04 06.6**	**-0.7**
	comp=N,20nm,0.3s						
GUMA	**Gualdo di Mace**	**2.66**	**132**	AML	AML		
	comp=E,580µm,0.5s						
GUMA				AML	AML		
	comp=E,580µm,0.5s						
GUMA				AML	AML		
	comp=N,520µm,0.5s						
GUMA				AML	AML		
	comp=N,520µm,0.5s						
OBKA	**Obir**	**2.83**	**54**	Pn	**Pn**	**21 03 28.6**	**+1.4**
	comp=N,0.5nm,0.1s						
OBKA				Sn	**Sn**	**21 04 03.1**	**+1.9**
	comp=N,17nm,0.5s						
OBKA				Sg	**Sg**	**21 04 13.9**	**+0.5**
	comp=N,37nm,0.4s						
OBKA	**Obir**	**2.83**	**54**	Pn	**Pn**	**21 03 28.6**	**+1.4**
	comp=N,0.5nm,0.1s						
OBKA				Sn	**Sn**	**21 04 03.1**	**+1.9**
	comp=N,17nm,0.5s						
OBKA				Sg	**Sg**	**21 04 13.9**	**+0.5**
	comp=N,37nm,0.4s						
PGF	**Pioggiola**	**2.84**	**216**	*e*Pn	**Pn**	**21 03 28.1**	**+0.8**
PGF				*e*Sn	**Sn**	**21 04 01.0**	**-0.4**
	comp=N,7.3nm,0.3s						
PGF	**Pioggiola**	**2.84**	**216**	*e*Pn	**Pn**	**21 03 28.1**	**+0.8**
PGF				*e*Sn	**Sn**	**21 04 01.0**	**-0.4**
	comp=N,3.7nm,0.3s						
SBF	**Sospel**	**2.91**	**251**	*e*Pn	**Pn**	**21 03 29.6**	**+1.3**
SBF				*e*Sn	**Sn**	**21 04 02.9**	**-0.2**
	comp=N,5.2nm,0.2s						
SBF	**Sospel**	**2.91**	**251**	*e*Pn	**Pn**	**21 03 29.6**	**+1.3**
SBF				*e*Sn	**Sn**	**21 04 02.9**	**-0.2**
	comp=N,2.6nm,0.2s						
OZLJ	**Ozalj**	**3.07**	**75**	*e*Pn	**Pn**	**21 03 30.2**	**-0.2**
SURF	**Saint Ours**	**3.19**	**264**	P	**Pn**	**21 03 33.6**	**+1.5**
SURF	**Saint Ours**	**3.19**	**264**	P	**Pn**	**21 03 33.6**	**+1.5**
MBDF	**Montbardon**	**3.19**	**269**	*e*Pn	**Pn**	**21 03 32.5**	**+0.4**
MBDF				*e*Sn	**Sn**	**21 04 09.5**	**-0.5**
	comp=N,6.9nm,0.2s						
MBDF	**Montbardon**	**3.19**	**269**	*e*Pn	**Pn**	**21 03 32.5**	**+0.4**
MBDF				*e*Sn	**Sn**	**21 04 09.5**	**-0.5**
	comp=N,3.5nm,0.2s						
SOKA	**Soboth**	**3.21**	**54**	*e*Pn	**Pn**	**21 03 33.3**	**+1.0**
	comp=N,0.7nm,0.2s						
SOKA				*e*Sn	**Sn**	**21 04 10.8**	**+0.5**
	comp=N,5.5nm,0.4s						
SOKA				Sg	**Sg**	**21 04 23.3**	**-2.0**
	comp=N,12nm,0.6s						
SOKA	**Soboth**	**3.21**	**54**	Pn	**Pn**	**21 03 33.3**	**+1.0**
	comp=N,0.7nm,0.2s						
SOKA				Sn	**Sn**	**21 04 10.8**	**+0.5**
	comp=N,5.5nm,0.4s						
SOKA				Sg	**Sg**	**21 04 23.3**	**-2.0**
	comp=N,12nm,0.6s						
LPG	**La Plagne**	**3.24**	**283**	*e*Pn	**Pn**	**21 03 34.8**	**+1.9**
LPG				*e*Sn	**Sn**	**21 04 10.8**	**-0.6**
	comp=N,6.3nm,0.3s						
LPG	**La Plagne**	**3.24**	**283**	*e*Pn	**Pn**	**21 03 34.8**	**+1.9**
LPG				*e*Sn	**Sn**	**21 04 10.8**	**-0.6**
	comp=N,3.2nm,0.3s						
UDBI	**Udbina**	**3.24**	**95**	*e*Pn	**Pn**	**21 03 34.1**	**+1.3**
UDBI				Sn	**Sn**	**21 04 11.6**	**+0.3**
LPL	**La Plagne**	**3.25**	**283**	*e*Pn	**Pn**	**21 03 32.7**	**-0.4**
LPL				*e*Sn	**Sn**	**21 04 11.3**	**-0.4**
	comp=N,8.1nm,0.2s						
LPL	**La Plagne**	**3.25**	**283**	*e*Pn	**Pn**	**21 03 32.7**	**-0.4**
LPL				*e*Sn	**Sn**	**21 04 11.3**	**-0.4**
	comp=N,4.1nm,0.2s						
FRF	**La Foret Royal**	**3.56**	**250**	*e*Pn	**Pn**	**21 03 37.5**	**+0.4**
FRF				*e*Sn	**Sn**	**21 04 18.3**	**-0.6**
	comp=N,3.2nm,0.2s						
FRF	**La Foret Royal**	**3.56**	**250**	*e*Pn	**Pn**	**21 03 37.5**	**+0.4**
FRF				*e*Sn	**Sn**	**21 04 18.3**	**-0.6**
	comp=N,1.6nm,0.2s						
MOA	**Molln**	**3.63**	**34**	*e*Pn	**Pn**	**21 03 39.9**	**+1.7**
	comp=N,1.6nm,0.2s						
MOA				Pg	**Pg**	**21 03 50.6**	**-1.4**
	comp=N,5.9nm,0.3s						
MOA				*e*Sn	**Sn**	**21 04 23.2**	**+2.3**
	comp=N,9.6nm,0.3s						
MOA	**Molln**	**3.63**	**34**	Pn	**Pn**	**21 03 39.9**	**+1.7**
	comp=N,1.6nm,0.2s						
LMR	**La Mourre**	**3.74**	**247**	*e*Pn	**Pn**	**21 03 40.8**	**+1.2**
LMR				*e*Sn	**Sn**	**21 04 22.4**	**-1.1**
	comp=N,9.9nm,0.3s						
LMR	**La Mourre**	**3.74**	**247**	*e*Pn	**Pn**	**21 03 40.8**	**+1.2**
LMR				*e*Sn	**Sn**	**21 04 22.4**	**-1.1**
	comp=N,4.9nm,0.3s						
ARSA	**Arzberg**	**3.81**	**50**	*e*Pn	**Pn**	**21 03 41.4**	**+0.8**
	comp=N,0.7nm,0.2s						
ARSA				*e*Sn	**Sn**	**21 04 23.6**	**-1.6**
	comp=N,3.7nm,0.5s						
ARSA				Sg	**Sg**	**21 04 43.9**	**-0.7**
	comp=N,4.1nm,0.7s						
ARSA	**Arzberg**	**3.81**	**50**	Pn	**Pn**	**21 03 41.4**	**+0.8**
	comp=N,0.7nm,0.2s						
ARSA				Sn	**Sn**	**21 04 23.6**	**-1.6**
	comp=N,3.7nm,0.5s						
ARSA				Sg	**Sg**	**21 04 43.9**	**-0.7**
	comp=N,4.1nm,0.7s						
ORIF	**Oris-en-Rattie**	**3.81**	**272**	*e*Pn	**Pn**	**21 03 43.1**	**+2.4**
ORIF				*e*Sn	**Sn**	**21 04 25.4**	**+0.1**
	comp=N,3.6nm,0.2s						
ORIF	**Oris-en-Rattie**	**3.81**	**272**	P	**Pn**	**21 03 43.3**	**+2.6**
ORIF	**Oris-en-Rattie**	**3.81**	**272**	*e*Pn	**Pn**	**21 03 43.1**	**+2.4**
ORIF				*e*Sn	**Sn**	**21 04 25.4**	**+0.1**
	comp=N,1.8nm,0.2s						
KIZ	**Kirchzarten**	**3.84**	**324**	P	**Pn**	**21 03 43.3**	**+2.3**
KIZ	**Kirchzarten**	**3.84**	**324**	P	**Pn**	**21 03 43.3**	**+2.3**
CABF	**La Chapelle**	**4.00**	**297**	*e*Pn	**Pn**	**21 03 45.3**	**+2.0**
CABF				*e*Sn	**Sn**	**21 04 29.4**	**-0.7**
	comp=N,3.1nm,0.2s						
CABF	**La Chapelle**	**4.00**	**297**	*e*Pn	**Pn**	**21 03 45.3**	**+2.0**
CABF				*e*Sn	**Sn**	**21 04 29.4**	**-0.7**
	comp=N,1.5nm,0.2s						
MOF	**Molkenrain**	**4.12**	**318**	P	**Pn**	**21 03 46.4**	**+1.5**
MOF	**Molkenrain**	**4.12**	**318**	P	**Pn**	**21 03 46.4**	**+1.5**
SMRF	**Simiane la Rot**	**4.16**	**259**	*e*Pn	**Pn**	**21 03 45.6**	**+0.2**
SMRF				*e*Sn	**Sn**	**21 04 32.8**	**-1.0**
SMRF	**Simiane la Rot**	**4.16**	**259**	*e*Pn	**Pn**	**21 03 45.6**	**+0.2**
SMRF				*e*Sn	**Sn**	**21 04 32.8**	**-1.0**
OPP	**Oppenau**	**4.19**	**331**	P	**Pn**	**21 03 46.9**	**+1.2**
OPP	**Oppenau**	**4.19**	**331**	P	**Pn**	**21 03 46.9**	**+1.2**
HINF	**Hinteralfeld**	**4.23**	**316**	*e*Pn	**Pn**	**21 03 47.7**	**+1.3**
HINF				*e*Sn	**Sn**	**21 04 35.1**	**-0.4**
	comp=N,8.7nm,0.2s						
HINF	**Hinteralfeld**	**4.23**	**316**	*e*Pn	**Pn**	**21 03 47.7**	**+1.3**
HINF				*e*Sn	**Sn**	**21 04 35.1**	**-0.4**
	comp=N,4.3nm,0.2s						
ECH	**Echery**	**4.37**	**321**	P	**Pn**	**21 03 49.1**	**+0.9**
ECH	**Echery**	**4.37**	**321**	P	**Pn**	**21 03 49.1**	**+0.9**
CONA	**Conrad Observa**	**4.42**	**45**	*e*Pn	**Pn**	**21 03 50.7**	**+1.7**
	comp=N,1.1nm,0.4s						
CONA				Pg	**Pg**	**21 04 05.4**	**-1.6**
	comp=N,3.0nm,0.4s						
CONA				*e*Sn	**Sn**	**21 04 40.2**	**0.0**
	comp=N,3.8nm,0.2s						
CONA				Sg	**Sg**	**21 05 07.6**	**+3.5**
	comp=N,8.0nm,0.7s						
CONA	**Conrad Observa**	**4.42**	**45**	Pn	**Pn**	**21 03 50.7**	**+1.7**
	comp=N,1.1nm,0.4s						
WLS	**Welschbruch**	**4.44**	**324**	P	**Pn**	**21 03 50.5**	**+1.3**
WLS	**Welschbruch**	**4.44**	**324**	P	**Pn**	**21 03 50.5**	**+1.3**
CDF	**Champ du Feu**	**4.47**	**324**	*e*Pn	**Pn**	**21 03 50.0**	**+0.3**
CDF				*e*Sn	**Sn**	**21 04 40.5**	**-1.0**
	comp=N,5.3nm,0.2s						
CDF	**Champ du Feu**	**4.47**	**324**	*e*Pn	**Pn**	**21 03 50.0**	**+0.3**
CDF				*e*Sn	**Sn**	**21 04 40.5**	**-1.0**
	comp=N,2.7nm,0.2s						
KHC	**Kasperske Hory**	**4.54**	**20**	*e*PN	**Pn**	**21 03 51.1**	**+0.4**

```
KHC                                ePG    Pg     21 04 06.6 -2.7
KHC                                eSN    Sn     21 04 42.3 -1.0
KHC                                eSG    Sg     21 05 08.9 +0.7
      comp=N,17nm,0.6s
KHC   Kasperske Hory      4.54  20  Pn    Pn     21 03 51.1 +0.4
HAU   Haudompre           4.61 314 ePn    Pn     21 03 52.0 +0.5
HAU                                eSn    Sn     21 04 43.4 -1.4
      comp=N,12nm,0.2s
HAU   Haudompre           4.61 314 ePn    Pn     21 03 52.0 +0.5
VIVF  Saint-Julien-l      4.67 272 ePn    Pn     21 03 53.2 +0.8
VIVF                               eSn    Sn     21 04 44.8 -1.6
      comp=N,1.7nm,0.2s
VIVF  Saint-Julien-l      4.67 272 ePn    Pn     21 03 53.2 +0.8
THEF  They Montfort       4.94 315  P     Pn     21 03 57.6 +1.6
THEF  They Montfort       4.94 315  P     Pn     21 03 57.6 +1.6
STON  Ston                5.08 111 ePn    Pn     21 03 58.4 +0.4
PAGF  Fort de Pagny       5.28 316 ePn    Pn     21 04 02.6 +1.8
PAGF                               eSn    Sn     21 04 59.2 -2.3
      comp=N,3.5nm,0.2s
PAGF  Fort de Pagny       5.28 316 ePn    Pn     21 04 02.6 +1.8
NKC   Novy Kostel         5.42   8 eSG    Sg     21 05 35.6 -0.6
      comp=N,9.1nm,0.5s
NKC   Novy Kostel         5.42   8  Sg    Sg     21 05 35.6 -0.6
      comp=N,9.1nm,0.5s
SFTF  Sexfontaines        5.42 310 eSn    Sn     21 05 04.3 -0.6
      comp=N,4.4nm,0.2s
SFTF  Sexfontaines        5.42 310 eSn    Sn     21 05 04.3 -0.6
      comp=N,2.2nm,0.2s
MODS  Modra-Piesok        5.43  48 ePN    Pn     21 04 03.5 +0.7
MODS                               eSN    Sn     21 05 03.5 -1.6
MODS  Modra-Piesok        5.43  48 ePn    Pn     21 04 03.5 +0.7
MODS                               eSn    Sn     21 05 03.5 -1.6
SMF   Signal de Mont      5.47 291 ePn    Pn     21 04 04.8 +1.4
SMF                                eSn    Sn     21 05 04.4 -1.7
      comp=N,5.3nm,0.3s
SMF   Signal de Mont      5.47 291 ePn    Pn     21 04 04.8 +1.4
PRU   Pruhonice           5.58  22 eSG    Sg     21 05 40.2 -1.2
      comp=N,8.9nm,0.6s
PRU   Pruhonice           5.58  22  Sg    Sg     21 05 40.2 -1.2
      comp=N,8.9nm,0.6s
GOPC  GO Pecny, Ondr      5.58  24 ePN    Pn     21 04 06.2 +1.3
GOPC  GO Pecny, Ondr      5.58  24  Pn    Pn     21 04 06.2 +1.3
ABH   Alteburg            5.60 335  P     Pn     21 04 06.8 +1.6
ABH   Alteburg            5.60 335  P     Pn     21 04 06.8 +1.6
LOR   Lormes              5.67 298 ePn    Pn     21 04 06.9 +0.8
LOR   Lormes              5.67 298 ePn    Pn     21 04 06.9 +0.8
SSF   Saint Saulge        5.82 295 ePn    Pn     21 04 08.0 -0.1
SSF                                eSn    Sn     21 05 12.6 -2.0
      comp=N,0.8nm,0.2s
SSF   Saint Saulge        5.82 295 ePn    Pn     21 04 08.0 -0.1
AVF   Avril sur Loir      5.84 292 ePn    Pn     21 04 09.0 +0.6
AVF   Avril sur Loir      5.84 292 ePn    Pn     21 04 09.0 +0.6
BGF   Bois d'Agland       6.11 289 eP     Pn     21 04 14.6 +2.4
BGF                                eSn    Sn     21 05 20.0 -1.9
      comp=N,4.2nm,0.2s
BGF   Bois d'Agland       6.11 289 eP     Pn     21 04 14.6 +2.4
BRG   Berggiesshubel      6.27  16  PG    Pg     21 04 39.0 -3.3
BRG                                 SG    Sb     21 05 53.2 +7.3
      comp=N,25nm,1.6s
VYHS  Vyhne               6.35  53 ePN    Pn     21 04 14.8 -0.7
VYHS                               eSN    Sn     21 05 23.0 -4.8
VYHS  Vyhne               6.35  53 ePn    Pn     21 04 14.8 -0.7
TCF   Toulx Ste Croi      6.50 286 ePn    Pn     21 04 19.8 +2.3
TCF   Toulx Ste Croi      6.50 286 ePn    Pn     21 04 19.8 +2.3
CLL   Collm               6.54  10 ePg    Pg     21 04 43.0 -4.5
CLL                                i Sg   Sg     21 06 12.0 -0.1
      comp=Z,12nm,1.1s
```

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*IDC **01** 21:14:15.7±5.6, 21°.98S×170°.78E, h101km±43km, mb3.6/6, mb1 3.7/7, mb1mx3.4/41, mbtmp4.0/7, Error ellipse: s-maj=44.6km s-min=25.9km az=69.0*
*ISCJB **01** 21:14:16.2±1.3, 22°.1S±0°.3×170°.6E±0°.1, h112km, mb3.8/6, Error ellipse: s-maj=36.8km s-min=12.8km az=11.4*
ISC 01 21:14:17.0±1.1**, 22°.0S**±0°.2×**170°.6E**±0°.1**, h112**km**, n10, σ0ˢ.67**/11**, mb3.8**/6**, Southeast of Loyalty Islands**

```
Code  Station Name         Δ°  AZ°   Phase ID         Time      Res
                                   Op     ISC     h  m  s      ISC
DZM   Mont Dzumac         3.89 268 P      Pn     21 15 15.2 +0.2
      21nm,0.3s,baz=130,slow=13,SNR=150
DZM                                S      Sn     21 15 59.3 -0.8
      17nm,0.3s,baz=133,slow=17,SNR=5.8
ASAR  Alice Springs      33.84 260 P      P      21 20 50.1 +1.1
      1.2nm,0.7s,baz=81,slow=9.1,SNR=14
WRA   Warramunga Arr     33.91 267 P      P      21 20 49.6  0.0
      0.5nm,0.6s,baz=98,slow=8.2,SNR=4.2
QSPA  South Pole Qui     68.09 180 P      P      21 25 04.7 +0.1
      2.6nm,0.9s,baz=321,slow=6.5,SNR=7.1
MAW   Mawson             76.40 202 P      P      21 25 54.1 +0.3
      0.4nm,0.3s,baz=112,slow=19,SNR=3.1
SNAA  Sanae              86.49 182 P      P      21 26 46.3 -0.7
      1.7nm,0.8s,baz=208,slow=12,SNR=4.6
SONM  Songino Array      90.18 323 P      P      21 27 05.3 +0.5
      0.2nm,0.3s,baz=137,slow=3.0,SNR=2.2
ARCES ARCESS Array B    128.03 345 PKP    PKPdf  21 33 08.2 -0.9
      1.3nm,1.0s,baz=60,slow=4.4,SNR=3.9
GERES GERESS Array B    147.51 331 PKPbc  PKPbc  21 33 48.0 -0.1
      0.2nm,0.5s,baz=46,slow=4.2,SNR=3.9
DAVOX Davos/Dischmat    150.75 332 PKPbc  PKPbc  21 33 56.2 -0.2
      1.3nm,0.3s,baz=31,slow=18,SNR=3.7
```

MEX 01 21:20:54.9±0.3**, 17°.81N**×**101°.62W, h7**km±5km**, MD3.8, Near coast of Guerrero**

```
Code  Station Name         Δ°  AZ°   Phase ID         Time      Res
                                   Op     ISC     h  m  s      ISC
ARIG  Puente Sto Nin      1.30  69 eP     Pn     21 21 15.8 -3.7
ARIG                               eS     Sb     21 21 31.9 -4.7
CAIG  El Cayaco           1.50 120 eP     Pn     21 21 18.6 -3.6
CAIG                               eS     Sn     21 21 37.0 -5.1
MMIG  Aquila              1.71 287 i P    Pn     21 21 22.2 -3.0
MMIG                               i S    Sn     21 21 42.1 -5.2
MEIG  Mezcala             1.91  86 eP     Pn     21 21 24.4 -3.6
MEIG                               eS     Sn     21 21 47.8 -4.5
TLIG  Tlapa               2.92  94 i P    Pn     21 21 39.0 -3.0
TLIG                               eS     Sn     21 22 14.3 -3.2
```

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*JMA **01** 21:27:42.7±0.2, 46°.20N×141°.68E, h15km±2km, M2.7*
*SKHL **01** 21:27:42.8±0.5, 46°.06N×141°.79E, h10km, mb4.1/1*
*ISCJB **01** 21:27:44.1±0.8, 46°.11N±0°.03×141°.7E±0°.1, h10km, Error ellipse: s-maj=12.7km s-min=3.5km az=8.7*
ISC 01 21:27:43.0±1.3**, 46°.08N**±0°.03×**141°.7E**±0°.1**, h10**km**, n7, σ0ˢ.59**/11**, 1C, Sakhalin Island**

```
Code  Station Name         Δ°  AZ°   Phase ID         Time      Res
                                   Op     ISC     h  m  s      ISC
NEVR  Nevel'sk            0.61  12 ePg    Pg     21 27 55.1 +0.3
NEVR                                AMB   AMB    21 27 55.9
      38nm,0.1s
NEVR                               eSg    Sb     21 28 04.1 -0.3
NEVR                                A     A      21 28 05.5
      430nm,0.2s
JWK2  Keihoku             0.78 169  P     Pn     21 27 59.5 -0.5
JWK2                               eS     Sn     21 28 11.2 -0.5
JRR   Rishiri             0.98 196 eS     Sn     21 28 17.3 +0.7
KHLM  Kholmsk             1.01  15 eSg    Sn     21 28 16.8 -0.7
KHLM                                A     A      21 28 17.5
      410nm,0.4s
YSS   Yuzh-Sakhalins      1.15  40⇑iPg    Pn     21 28 05.4 +0.3
YSS                                 AMB   AMB    21 28 05.7
      20nm,0.4s
YSS                                eSg    Sn     21 28 20.9  0.0
YSS                                 A     A      21 28 21.7
      200nm,0.4s
YSS                                 A     A      21 28 21.7
      100nm,0.4s
JSE   Soyaes              1.29 150  P     Pg     21 28 07.5 -0.2
JSE                                eS     Sn     21 28 25.3 +1.0
JYG   Yagishiri           1.66 186 eS     Sb     21 28 34.7 +0.1
```

IDC 01 21:29:23.1±2.2**, 4°.68S**×**152°.02E, h0**km**, mb3.3**/3**, mb1 3.7**/3**, mb1mx3.3**/42**, mbtmp3.4**/3**, Error ellipse: s-maj=156.2km s-min=30.6km az=127.0, New Britain region**

```
Code  Station Name         Δ°  AZ°   Phase ID         Time      Res
                                   Op     ISC     h  m  s      ISC
WRA   Warramunga Arr     22.95 227 P      P      21 34 28.7 -0.6
      0.5nm,0.7s,baz=54,slow=10,SNR=3.2
ASAR  Alice Springs      25.72 221 P      P      21 34 56.0 +0.6
      0.7nm,1.1s,baz=53,slow=9.6,SNR=3.2
ILAR  Eielson Array      82.34  22 P      P      21 41 46.5 -0.1
      0.4nm,0.7s,baz=236,slow=5.1,SNR=4.4
```

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*ISK **01** 21:47:21.9, 38°.59N×43°.19E, h20km, ML2.4/5*
*CSEM **01** 21:47:22.6±0.2, 38°.58N×43°.21E, h20km, ML2.4, Error ellipse: s-maj=5.7km s-min=4.3km az=138.0*
*ISCJB **01** 21:47:23.1±0.5, 38°.58N±0°.04×43°.22E±0°.05, h24km±5km, Error ellipse: s-maj=6.9km s-min=5.2km az=141.1*
*DDA **01** 21:47:23.2, 38°.61N×43°.18E, h7km, Ml2.7*
ISC 01 21:47:22.5±1.0**, 38°.60N**±0°.03×**43°.20E**±0°.03**, h19**km±2km**, n25, σ0ˢ.66**/41**, Turkey**

```
Code  Station Name         Δ°  AZ°   Phase ID         Time      Res
                                   Op     ISC     h  m  s      ISC
VANB  Van                 0.15  93  PG    Pg     21 47 27.2 +0.2
VANB                                SG    Sg     21 47 31.2 +1.2
VANB  Van                 0.15  93 ePg    Pg     21 47 27.2 +0.2
VANB                               eSg    Sg     21 47 31.2 +1.2
TVAN  Van                 0.18 114 i P    Pg     21 47 27.2 -0.3
TVAN                               i S    Sg     21 47 31.4 +0.6
TVAN  Van                 0.18 114  P     Pg     21 47 27.2 -0.3
TVAN                                S     Sg     21 47 31.4 +0.6
GEVA  Gevas               0.31 201 i P    Pb     21 47 29.8 +0.3
GEVA                               i S    Sn     21 47 36.8 -1.5
GEVA  Gevas               0.31 201  P     Pb     21 47 29.8 +0.3
GEVA                                S     Sn     21 47 36.8 -1.5
ADCV  BITLIS_Adilcev      0.42 299 i P    Pg     21 47 31.1 -0.3
ADCV                               i S    Sb     21 47 38.6 +0.9
ADCV  BITLIS_Adilcev      0.42 299  P     Pg     21 47 31.1 -0.3
ADCV                                S     Sb     21 47 38.6 +0.9
VMUR  Van-Muradiye        0.48  37 i P    Pb     21 47 32.5 -0.1
VMUR                               i S    Sn     21 47 41.1 -1.5
VMUR  Van-Muradiye        0.48  37  P     Pb     21 47 32.5 -0.1
VMUR                                S     Sn     21 47 41.1 -1.5
CLDR  Caldiran            0.78  46  PG    Pg     21 47 37.9 +0.1
CLDR                                SG    Sn     21 47 49.5 -0.5
CLDR  Caldiran            0.78  46 i P    Pg     21 47 37.8 -0.1
CLDR                               i S    Sn     21 47 50.0  0.0
CLDR  Caldiran            0.78  46 ePg    Pg     21 47 37.9 +0.1
CLDR                               eSg    Sn     21 47 49.5 -0.5
CLDR                                S     Sn     21 47 50.0  0.0
GURO  Guroymak-BITLI      0.92 267  PG    Pg     21 47 40.1 -0.3
GURO                                SG    Sn     21 47 53.2  0.0
GURO  Guroymak-BITLI      0.92 267 ePg    Pg     21 47 40.1 -0.3
GURO                               eSg    Sn     21 47 53.2  0.0
AGRB  Hanur-Agry          0.98 351  PG    Pb     21 47 40.9 -0.2
AGRB  Hanur-Agry          0.98 351 ePg    Pb     21 47 40.9 -0.2
SRTM  Siirt_Merkez        1.18 239 i P    Pg     21 47 45.3  0.0
SRTM  Siirt_Merkez        1.18 239  P     Pg     21 47 45.3  0.0
SIRT  Sirnak              1.25 209  PN    Pn     21 47 44.8 -0.3
SIRT  Sirnak              1.25 209 ePn    Pn     21 47 44.8 -0.3
EATA  Eleskirt            1.37 337 i P    Pb     21 47 47.8  0.0
EATA  Eleskirt            1.37 337  P     Pb     21 47 47.8  0.0
CUKT  Cukurca             1.39 166  PN    Pn     21 47 46.4 -0.6
CUKT  Cukurca             1.39 166 ePn    Pn     21 47 46.4 -0.6
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*ISCJB **01** 21:48:08.2±0.2, 43°.42N±0°.03×84°.81E±0°.03, h10km, mb4.1/41, MS3.7/1, Error ellipse: s-maj=3.7km s-min=3.0km az=24.5*
*IDC **01** 21:48:08.1±0.6, 43°.41N×84°.72E, h0km, mb3.8/17, mb1 3.9/22, mb1mx3.8/64, mbtmp3.8/22, ML3.6/5, MS3.4/2, Ms1 3.4/2, ms1mx2.8/56, Error ellipse: s-maj=17.6km s-min=10.4km az=48.0*
*BJI **01** 21:48:09.7, 43°.47N×84°.71E, h8km, mb4.3/22, mB4.3/17, ML4.5/12, Ms4.0/8, Ms7 3.7/6*
*SOME **01** 21:48:11.1, 43°.47N×84°.58E, h15km, MS3.2*
*NNC **01** 21:48:12.4±1.6, 43°.56N×84°.53E, h0km, mb4.5, mpv4.2, Error ellipse: s-maj=16.1km s-min=7.7km az=119.0*
*MOS **01** 21:48:12.2±1.1, 43°.53N×84°.72E, h38km, mb4.2/19, Error ellipse: s-maj=7.8km s-min=5.7km az=114.8*
*NEIC **01** 21:48:13.8±0.5, 43°.46N×84°.76E, h39km±4km, mb4.2/13, Error ellipse: s-maj=5.1km s-min=4.7km az=207.0*
ISC 01 21:48:10.3±0.3**, 43°.48N**±0°.03×**84°.57E**±0°.02**, h10**km**, n175, σ2ˢ.29**/204**, mb4.1**/41**, 25C-20D, Northern Xinjiang**

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Code  Station Name         Δ°  AZ°   Phase ID         Time      Res
                                   Op     ISC     h  m  s      ISC
WMQ   Urumqi              2.29  80  Pn    Pn     21 48 50.0 +1.8
WMQ                                 Sg    Sb     21 49 21.0 +0.8
KTMS  Ketmen              3.07 271 eP     Pb     21 49 07.2 +2.1
      352nm,0.3s
KTMS                               eS     Sg     21 49 47.7 -1.3
      878nm,0.4s
DJR   Jarkent             3.56 285 eP     Pb     21 49 15.7 +2.3
      51nm,0.3s
DJR                                eS     Sg     21 50 02.4 -2.2
      271nm,0.4s
MK01  Makanchi Array      3.66 335 ePn    Pn     21 49 09.1 +2.1
MK31  Makanchi Array      3.68 335 ⇓Pn    Pn     21 49 09.7 +2.4
      7.6nm,0.4s,baz=154,slow=13,SNR=929
MK31                                Pg    Pb     21 49 18.7 +3.2
      28nm,0.3s,baz=152,slow=16,SNR=34
MK31                               ⇑Lg    Lg     21 50 07.1
      1µm,0.8s,baz=144,slow=29,SNR=8.9
MK31  Makanchi Array      3.68 335 ePn    Pn     21 49 09.7 +2.4
MK31  Makanchi Array      3.68 335 i P    Pn     21 49 09.7 +2.4
MK31                                pmax  pmax
      comp=Z,8.0nm,0.4s
MKAR  Makanchi Array      3.68 335  Pn    Pn     21 49 09.8 +2.5
      comp=Z,6.2nm,0.3s,baz=149,slow=15,SNR=382
MKAR                                Pg    Pb     21 49 17.4 +1.9
      comp=Z,22nm,0.3s,baz=147,slow=17,SNR=45
MKAR                                Sn    Sn     21 49 55.2 +4.4
      comp=Z,37nm,0.3s,baz=144,slow=20,SNR=5.6
MKAR                                Lg    Lg     21 50 05.5
      comp=Z,124nm,0.3s,baz=149,slow=31,SNR=15
PDGK  Podgornoye          3.71 269 ⇑Pn    Pn     21 49 10.8 +3.0
      comp=Z,18nm,0.4s
PDGK                               ⇑Pg    Pb     21 49 19.7 +3.7
      comp=Z,228nm,0.8s
PDGK                               ⇓Lg    Lg     21 50 06.8
      comp=Z,349nm,0.4s
PDGK  Podgornoye          3.71 269 i P    Pn     21 49 10.7 +3.0
PDGK                                pmax  pmax
      comp=Z,18nm,0.3s
SHLS  Shalkode            3.74 267 eP     Pn     21 49 13.3 +5.0
      comp=Z,427nm,0.4s
SHLS                               eS     Sb     21 49 58.7 -3.3
      comp=Z,2µm,0.6s
MAKZ  Makanchi            3.80 332 ⇓Pn    Pn     21 49 11.4 +2.4
      comp=Z,13nm,0.6s
MAKZ                               ⇓Pg    Pg     21 49 20.9 -2.2
      comp=Z,74nm,0.6s
MAKZ                               ⇑Lg    Lg     21 50 10.4
      comp=Z,634nm,1.0s
MAKZ  Makanchi            3.80 332 ePn    Pn     21 49 11.6 +2.7
MAKZ  Makanchi            3.80 332 i P    Pn     21 49 11.3 +2.4
MAKZ                                pmax  pmax
      comp=Z,13nm,0.6s
ZSN   Zaisan              3.97   3 eP     Pb     21 49 23.1 +2.7
      comp=Z,29nm,0.3s
ZSN                                eS     Sg     21 50 14.4 -3.4
      comp=Z,242nm,0.7s
UZB   Uzynbulak           4.06 267 eP     Pb     21 49 24.3 +2.2
      comp=Z,94nm,0.4s
UZB                                eS     Sg     21 50 17.6 -3.3
      comp=Z,306nm,0.5s
KAPS  Kapalarasan         4.15 298 eP     Pg     21 49 27.7 -2.1
      comp=Z,69nm,0.5s
KAPS                               eS     Sg     21 50 23.3 -0.2
      comp=Z,648nm,0.7s
KPKS  Kokpek              4.29 272 eP     Pb     21 49 29.8 +4.0
      comp=Z,294nm,0.7s
KPKS                               eS     Sg     21 50 26.3 -1.6
      comp=Z,809nm,0.4s
ZHN   Zhinishke           4.49 268 eP     Pb     21 49 31.8 +2.5
      comp=Z,105nm,0.5s
ZHN                                eS     Sb     21 50 29.4 +5.9
      comp=Z,218nm,0.2s
SATY  Saty                4.52 267 eP     Pb     21 49 32.7 +2.8
      comp=Z,398nm,0.5s
SATY                               eS     Sg     21 50 31.4 -4.1
      comp=Z,361nm,0.5s
PRZ   Przheval'sk         4.64 260 ePn    Pn     21 49 24.0 +3.4
PRZ   Przheval'sk         4.64 260 eP     Pn     21 49 24.0 +3.4
KURS  Kuram               4.66 272 eP     Pg     21 49 38.1 -1.4
      comp=Z,94nm,0.6s
KURS                               eS     Sg     21 50 41.4 +1.5
      comp=Z,175nm,0.6s
TDK   Taldyqorghan        4.68 291 eP     Pb     21 49 37.2 +4.7
      comp=Z,620nm,0.7s
TDK                                eS     Sg     21 50 40.1 -0.6
      comp=Z,2µm,0.8s
ARXS  Arharly             4.93 281 eP     Pb     21 49 41.9 +5.1
      comp=Z,121nm,0.6s
ARXS                               eS     Sg     21 50 47.6 -1.0
      comp=Z,473nm,0.7s
KOTS  Kotyrbulak          5.45 270 eP     Pg     21 49 52.4 -2.2
      comp=Z,55nm,0.5s
KOTS                               eS     Sg     21 51 04.8 -0.3
      comp=Z,265nm,0.7s
MDOK  Medeo               5.50 269 ⇓Pn    Pn     21 49 34.8 +2.4
      comp=Z,13nm,0.4s
MDOK                               ⇓Pg    Pb     21 49 50.8 +4.3
      comp=Z,66nm,0.6s
MDOK                               ⇓Lg    Lg     21 51 06.9
      comp=Z,356nm,1.0s
MDOK  Medeo               5.50 269 eP     Pg     21 49 53.1 -2.5
      comp=Z,70nm,0.5s
MDOK                               eS     Sg     21 51 06.4 -0.4
      comp=Z,12µm,0.8s
CHKK  Chushkaly           5.51 276 eP     Pg     21 49 54.9 -1.0
      comp=Z,66nm,0.8s
CHKK                               eS     Sg     21 51 09.1 +1.8
      comp=Z,176nm,0.5s
TNSS  Tian-Shan           5.59 268 eP     Pb     21 49 53.8 +5.6
      comp=Z,108nm,0.5s
TNSS                               eS     Sg     21 51 07.5 -2.2
      comp=Z,122nm,0.9s
AAA   Alma-Ata            5.59 270 eP     Pb     21 49 52.4 +4.4
AAA                                 pmax  pmax
      comp=Z,66nm,0.6s
IZV   Izvestkoviy         5.83 268 eP     Pg     21 49 59.6 -2.3
      comp=Z,115nm,0.6s
IZV                                eS     Sg     21 51 18.0 +0.5
      comp=Z,316nm,0.6s
MTBS  Maitube             5.95 269 eP     Pg     21 50 00.8 -3.5
      comp=Z,36nm,0.4s
MTBS                               eS     Sg     21 51 19.2 -2.1
      comp=Z,111nm,0.4s
KUU   Kurty               5.98 277 eP     Pb     21 50 00.9 +6.3
      comp=Z,49nm,0.7s
KUU                                eS     Sg     21 51 20.0 -2.4
      comp=Z,267nm,0.7s
ULHL  Ulahol              6.25 261  P     Pn     21 49 44.5 +1.8
      SNR=25
KST   Kastek              6.30 269 eP     Pg     21 50 07.8 -3.2
      comp=Z,91nm,0.6s
KST                                eS     Sg     21 51 31.4 -1.2
      comp=Z,191nm,0.6s
DGZ   Jazzator, Alta      6.52  17 eP     Pn     21 49 49.2 +2.8
TKM2  Tokmak 2            6.58 268 ⇓Pn    Pn     21 49 51.3 +3.9
      comp=Z,9.8nm,0.5s
TKM2                               ⇓Pg    Pb     21 50 12.2 +7.1
      comp=Z,50nm,0.8s
TKM2                               ⇓Lg    Lg     21 51 41.8
      comp=Z,120nm,0.6s
TKM2  Tokmak 2            6.58 268  P     Pn     21 49 51.4 +4.1
      SNR=41
TKM2  Tokmak 2            6.58 268 i P    Pn     21 49 51.3 +3.9
TKM2                                pmax  pmax
      comp=Z,10.0nm,0.4s
NRN   Naryn               6.66 255 ePn    Pn     21 49 51.1 +2.6
NRN   Naryn               6.66 255 eP     Pn     21 49 51.2 +2.6
KZA   Kyzart              7.00 262  P     Pn     21 49 56.4 +3.2
      SNR=20
KBK   Karagaybulak        7.10 267  P     Pn     21 49 57.7 +3.3
      SNR=9.7
CHMS  Chumysh             7.19 270  P     Pn     21 49 58.3 +2.8
      SNR=11
FRU   Bishkek             7.31 268 eP     Pn     21 50 04.0 +6.8
FRU                                 pmax  pmax
      comp=E,260nm,1.8s
USP   Ospenovka           7.34 272  P     Pn     21 50 02.0 +4.4
      SNR=7.6
UCH   Uchtor              7.50 264  P     Pn     21 50 03.4 +3.3
      SNR=12
KSH   Kashi               7.57 241  P     Pn     21 50 10.5  +10
KSH                                 sP    Pb     21 50 20.9 -0.9
KSH                                 S     Sb     21 51 41.9  -10
KSH                                 pmax  pmax
      comp=E,56nm,4.5s
KSH                                 smax  smax
      comp=E,270nm,1.0s
KSH                                 smax  smax
      comp=E,240nm,0.9s
KSH                                 LR    LR
      comp=E,220nm,3.0s
KURBB Kurchatov Arra      8.24 332  Pn    Pn     21 50 10.5 +0.6
      comp=E,0.4nm,0.3s,baz=176,slow=28,SNR=26
KURBB                               Sn    Sn     21 51 41.0 -2.0
      comp=E,1.3nm,0.3s,baz=154,slow=22,SNR=10
KURBB                               Lg    Lg     21 52 28.6
      comp=E,1.9nm,0.3s,baz=153,slow=31,SNR=12
KURBB Kurchatov Arra      8.24 332 ⇓Pn    Pn     21 50 10.7 +0.8
      comp=E,4.6nm,0.4s
KURBB                              ⇓Lg    Lg     21 52 32.9
      comp=E,340nm,0.7s
KURK  Kurchatov           8.29 333 ⇑Pn    Pn     21 50 09.8 -0.7
KURK                               ⇑Lg    Lg     21 52 33.5
KURK  Kurchatov           8.29 333 ePn    Pn     21 50 12.0 +1.4
KURK                                Sn    Sn     21 51 41.0 -3.2
KURK  Kurchatov           8.29 333⇑eP     Pn     21 50 11.4 +0.8
MNAS  Manas               8.90 268 ⇑Pn    Pn     21 50 22.7 +3.6
      comp=E,3.3nm,0.7s
MNAS                               ⇑Lg    Lg     21 53 01.2
      comp=E,54nm,1.1s
OTUK  Ortayu              9.77 303 ⇓Pn    Pn     21 50 32.3 +1.4
      comp=E,5.7nm,0.6s
OTUK                               ⇓Lg    Lg     21 53 19.2
      comp=E,200nm,0.9s
OTUK  Ortayu              9.77 303 i P    Pn     21 50 32.3 +1.4
OTUK                                pmax  pmax
      comp=Z,6.0nm,0.6s
HVS   Khovu-Aksy          9.85  36⇓eP     Pn     21 50 31.4 -0.5
KK31  Karatay Array      10.26 273 ⇓Pn    Pn     21 50 41.5 +3.8
      comp=Z,6.9nm,0.8s
KK31                               ⇓Lg    Lg     21 53 37.5
      comp=Z,24nm,0.7s
KK31  Karatay Array      10.26 273 ePn    Pn     21 50 41.9 +4.3
KK31  Karatay Array      10.26 273 i P    Pn     21 50 41.4 +3.8
KKAR  Karatay Array      10.26 273 ePn    Pn     21 50 41.9 +4.3
ZAA0  Zalesovo Array     10.47   1 ePn    Pn     21 50 39.9 -0.5
ZALV  Zalesovo Beam      10.47   1  Pn    Pn     21 50 39.8 -0.7
      comp=Z,3.3nm,0.3s,baz=185,slow=14,SNR=36
ZALV                                Sn    Sn     21 52 34.4 -3.4
      comp=Z,9.6nm,0.3s,baz=176,slow=26,SNR=20
ZALV                                LR    LR     21 54 01.7
      comp=Z,18nm,19.6s,baz=250,slow=34
NVS   Novosibirsk        11.40 356 eP     Pn     21 50 53.2 +0.1
NVS                                e             21 52 57.5
GTA   Gaotai             12.14 104 eP     Pn     21 51 01.0 -2.4
GTA                                 pP           21 51 04.3
GTA                                 sP           21 51 07.5
GTA                                 S     Sn     21 53 17.9 -0.9
GTA                                 sS           21 53 23.4
GTA                                 SS    SnSn   21 53 31.7 +1.1
GTA                                 pmax  pmax
      comp=Z,2.0nm,0.6s
GTA                                 pmax  pmax
      comp=Z,38nm,5.9s
GTA                                 LR    LR
      comp=Z,160nm,7.3s
GTA                                 LR    LR
      comp=Z,190nm,8.9s
GTA                                 LR    LR
      comp=Z,200nm,9.6s
CHCP  Chirah Chowk       13.20 226  P     Pn     21 51 17.3 -0.5
NIL   Nilore             13.21 226 ePn    Pn     21 51 17.3 -0.6
      comp=Z,45nm,0.6s
NIL   Nilore             13.21 226 eP     Pn     21 51 17.3 -0.6
NIL                                 pmax  pmax
      comp=Z,45nm,0.6s
BVAR  Borovoye Array     13.41 320  Pn    Pn     21 51 23.3 +2.8
      comp=Z,0.5nm,0.3s,baz=112,slow=14,SNR=6.9
BVAR                                Sn    Sn     21 53 45.5 -4.0
      comp=Z,0.5nm,0.3s,baz=128,slow=22,SNR=5.3
BVAR                                LR    LR     21 56 31.6
      comp=Z,133nm,19.2s,baz=128,slow=37
BVAR  Borovoye Array     13.41 320  P     Pn     21 51 23.3 +2.8
BVAR                                             21 53 45.5
BVAR                                pmax  pmax
      comp=Z,1.0nm,0.3s
BVAR                                smax  smax
      comp=N,1.0nm,0.3s
BVAR                                MLR   MLR
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               comp=Z,133nm,19.2s
KRAR  Krasnoyarsk       13.63  20⇑eP     Pn       21 51 21.1 -2.3
ZAK   Zakamensk         14.50  55 eP     Pn       21 51 34.6 -1.0
ZAK                                pmax  pmax
               comp=Z,2.0nm,1.1s
THW   Thamme Wali       14.67 228  P     Pn       21 51 35.5 -2.4
LSA   Lhasa             14.73 157 ePn    Pn       21 51 39.7 +0.6
               comp=Z,18nm,0.6s
LSA   Lhasa             14.73 157 eP     Pn       21 51 39.7 +0.6
LSA                                pmax  pmax
               comp=Z,19nm,0.6s
DANN  Dangsing          15.12 183 eP     Pn       21 51 41.7 -2.5
               comp=Z,16nm,0.5s
TLY   Talaya            15.23  51  LR    LR       21 57 00.5
               comp=Z,23nm,21.2s,baz=244,slow=35
TLY   Talaya            15.23  51⇑eP     Pn       21 51 45.2 -0.1
PYUN  Piuthan           15.40 185 eP     Pn       21 51 44.6 -3.3
               comp=Z,62nm,1.0s
GKN   Gorkha            15.45 180 eP     Pn       21 51 46.8 -1.6
               comp=Z,10nm,0.5s
GUN   Gumba             15.57 176 eP     Pn       21 51 48.4 -1.9
               comp=Z,88nm,1.0s
KKN   Kakani            15.67 178 eP     Pn       21 51 49.7 -1.7
               comp=Z,19nm,0.7s
KOLN  Koldanda          15.70 183 eP     Pn       21 51 49.0 -2.8
               comp=Z,12nm,0.5s
JIRN  Jiri              15.84 175 eP     Pn       21 51 52.3 -1.5
               comp=Z,26nm,0.4s
DMN   Daman             15.85 178 eP     Pn       21 51 51.8 -1.9
               comp=Z,8.4nm,0.5s
SONM  Songino Array     15.85  66  Pn    Pn       21 51 53.1 -0.4
               comp=Z,0.2nm,0.3s,baz=260,slow=13,SNR=17
SONM                               Lg    Lg       21 56 28.8
               comp=Z,0.3nm,0.3s,baz=261,slow=28,SNR=3.8
SONM                               LR    LR       21 58 30.2
               comp=Z,148nm,18.3s,baz=270,slow=39
SONA1 Songino Array     15.86  66 ePn    Pn       21 51 53.6 -0.1
LZH   Lanzhou           16.53 110 eP     Pn       21 51 59.2 -3.2
LZH                                PP    PnPn     21 52 19.5 +8.1
LZH                               eS     Sn       21 54 57.6 -8.4
LZH                                SS    S        21 55 19.5 +1.6
LZH                                pmax  pmax
               comp=Z,24nm,1.0s
LZH                                pmax  pmax
               comp=Z,120nm,4.6s
LZH                                LR    LR
               comp=Z,300nm,10.7s
LZH                                LR    LR
               comp=Z,300nm,10.1s
LZH                                LR    LR
               comp=Z,320nm,11.9s
RAMN  Ramite            16.58 174 eP     Pn       21 52 01.2 -1.9
               comp=Z,26nm,0.6s
ODAN  Odare             16.74 171 eP     Pn       21 52 03.2 -2.0
               comp=Z,20nm,0.6s
AB31  Akbulak array     17.91 297 ⇓P     Pn       21 52 19.3 -0.1
               comp=Z,4.0nm,0.7s,baz=101,slow=12,SNR=13
ABKAR Akbulak array     17.91 297 ePn    Pn       21 52 19.3 -0.1
AKTO  Aktyubinsk        19.35 300  P     P        21 52 36.7 +0.9
               comp=Z,0.2nm,0.3s,baz=103,slow=16,SNR=8.2
AKTO                               S     Sn       21 56 05.5 -8.2
               comp=Z,0.1nm,0.3s,baz=80,slow=19,SNR=1.6
AKTO                               Lg    Lg       21 58 25.1
               comp=Z,0.1nm,0.3s,baz=195,slow=20,SNR=2.9
AKTO  Aktyubinsk        19.35 300 ⇑P     Pn       21 52 40.4 +3.6
               comp=Z,4.8nm,0.7s
CD2   Chengdu           19.72 123 eP     P        21 52 38.5 -1.5
HHC   Hu-ho-hao-te      20.15  88 eP     P        21 52 44.6 -0.1
HHC                                pP    sP       21 52 52.0 +3.2
HHC                                PP    PnPn     21 53 04.1 +3.2
HHC                                S     S        21 56 26.9 -4.0
HHC                                SS    SnSn     21 56 50.6 +3.0
HHC                                pmax  pmax
               comp=Z,12nm,1.1s
HHC                                pmax  pmax
               comp=Z,48nm,5.5s
GEYT  Alibeck           20.77 264  P     P        21 52 51.6 +0.3
               comp=Z,2.5nm,0.7s,baz=57,slow=7.0,SNR=7.6
GYA0B ALIBECK ARRAY     20.77 264 eP     P        21 52 52.6 +1.2
               comp=Z,6.3nm,0.8s
ARU   Arti              21.00 317  P     P        21 52 54.5 +0.8
               comp=Z,3.4nm,0.5s,baz=98,slow=2.6,SNR=10.0
ARU                                Lg    Lg       21 59 14.5
               comp=Z,5.3nm,0.9s,baz=72,slow=20,SNR=4.8
ARU   Arti              21.00 317 eP     P        21 52 54.5 +0.8
               comp=Z,8.3nm,1.0s
ARU   Arti              21.00 317d iP    P        21 52 54.9 +1.2
ARU                                               21 53 10.8
ARU                                S     S        21 56 49.4 +2.0
ARU                                SS    SnSn     21 57 08.4 +0.3
ARU                                pmax  pmax
               comp=Z,7.0nm,1.0s
BRDH  Bariadhala        21.56 162  P     P        21 52 58.0 -1.9
               comp=Z,49nm,0.4s,baz=72,slow=20,SNR=4.7
BOD   Bodaibo           23.29  42 eP     P        21 53 18.0  0.0
BOD                                pmax  pmax
               comp=Z,6.0nm,1.5s
KMI   Kunming           23.59 135  P     P        21 53 20.3 -1.2
KMI                                pmax  pmax
               comp=Z,7.0nm,0.6s
GYA   Guiyang           24.70 126 eP     P        21 53 31.0 -0.8
GYA                                pmax  pmax
               comp=Z,10.0nm,0.7s
CMAR  Chiang Mai Arr    27.74 150  P     P        21 53 58.4 -0.7
               comp=Z,2.1nm,0.8s,baz=326,slow=8.6,SNR=12
CN2   Changchun         29.37  75 eP     P        21 54 06.6 -6.8
CN2                               esP    pP       21 54 17.3 +0.8
CN2                               ePP    PnPn     21 54 53.6  -13
CN2                               eS     S        21 58 42.2  -25
CN2                                LR    LR
               comp=N,120nm,13.0s
CN2                                LR    LR
               comp=E,80nm,13.0s
CN2                                LR    LR
               comp=Z,90nm,13.0s
NEY   Neytrino          30.20 284⇑eP     P        21 54 22.7 +1.8
NEY                                pmax  pmax
               comp=Z,2.0nm,1.0s
VSR   Storozhevoye      31.29 300⇑iP     P        21 54 30.4 +0.1
VSR                                pmax  pmax
               comp=Z,5.0nm,0.5s
KLMR  Klimovskoe        31.83 319 eP     P        21 54 34.5 -0.3
KLMR                               pmax  pmax
               comp=Z,9.0nm,1.1s
KLMR  Klimovskoe        31.83 319 eP     P        21 54 34.6 -0.3
KLMR                               AMP            21 54 50.1
               comp=Z,9.0nm,1.1s
OBN   Obninsk           32.75 308 eP     P        21 54 42.2 -0.8
OBN                                pmax  pmax
               comp=Z,2.0nm,0.8s
KSAR  Wonju Array Be    33.21  85  P     P        21 54 45.4 -1.9
KSAR  Wonju Array Be    33.21  85  P     P        21 54 45.4 -1.9
KSRS  Korea Array       33.23  85  P     P        21 54 45.4 -2.1
               comp=Z,0.5nm,0.4s,baz=284,slow=9.3,SNR=3.5
AKASG Malin Array Be    37.59 301  P     P        21 55 24.6 -0.1
               comp=Z,0.5nm,0.4s,baz=67,slow=8.4,SNR=5.0
AKBB  Malin Array Si    37.59 301 eP     P        21 55 25.5 +0.7
               comp=Z,3.7nm,1.0s
KIEV  Kiev              37.60 301 eP     P        21 55 25.3 +0.4
               comp=Z,4.0nm,1.1s
KIEV  Kiev              37.60 301⇓eP     P        21 55 25.3 +0.4
KIEV                               pmax  pmax
               comp=Z,3.0nm,1.0s
RAYN  Ar Rayn           37.74 251 eP     P        21 55 27.0 +0.6
               comp=Z,3.4nm,0.8s
RAYN  Ar Rayn           37.74 251 eP     P        21 55 27.0 +0.6
RAYN                               pmax  pmax
               comp=Z,3.0nm,0.8s
BR131 Keskin Array S    37.79 282 eP     P        21 55 28.4 +1.6
BRTR  Keskin Array B    37.79 282  P     P        21 55 28.1 +1.3
               comp=Z,2.5nm,0.8s,baz=106,slow=9.1,SNR=14
VSU   Vasula            38.09 314c iP    P        21 55 29.0 +0.1
VSU                                pmax  pmax
               comp=Z,28nm,1.1s
FIA1  FINESS Array S    38.36 319 eP     P        21 55 31.8 +0.7
FINES FINESS Array B    38.36 319  P     P        21 55 31.2 +0.1
               comp=Z,0.7nm,0.5s,baz=79,slow=9.2,SNR=12
SORM  Soroca            38.72 297⇑iP     P        21 55 35.0 +0.7
ARCES ARCESS Array B    39.33 332  P     P        21 55 39.3 +0.1
               comp=Z,1.7nm,0.9s,baz=96,slow=8.3,SNR=6.0
CFR   Carcaliu          39.70 293⇑iP     P        21 55 44.1 +1.5
BIZ   Bicaz             40.51 296⇑iP     P        21 55 51.2 +1.9
ISP   Isparta           40.79 281 eP     P        21 55 53.2 +1.5
               comp=Z,8.2nm,0.7s
ISP   Isparta           40.79 281 eP     P        21 55 53.3 +1.5
ISP                                pmax  pmax
               comp=Z,8.0nm,0.7s
BURAR Bucovina Array    40.89 297⇑iP     P        21 55 54.7 +2.2
BUR04 Bucovina Ar. S    40.89 297 eP     P        21 55 53.8 +1.2
BUR08 Bucovina Ar. S    40.89 297 eP     P        21 55 54.5 +2.0
MAJO  Matsushiro        41.05  81⇑eP     P        21 55 54.8 +0.9
MAJO                               pmax  pmax
               comp=Z,7.0nm,1.1s
MLR   Muntele Rosu      41.07 294  P     P        21 55 55.4 +1.3
               comp=Z,0.2nm,0.5s,baz=62,slow=18,SNR=5.6
MLR   Muntele Rosu      41.07 294⇑iP     P        21 55 56.5 +2.4
MLR   Muntele Rosu      41.07 294 eP     P        21 55 54.2 +0.1
               comp=Z,2.6nm,0.8s
DOPR  Dopca             41.28 295⇑iP     P        21 56 05.0 +9.3
KWP   Kalwaria Pacla    41.91 301 eP     P        21 56 01.9 +1.1
               comp=Z,68nm,0.9s
KWP   Kalwaria Pacla    41.91 301 eP     P        21 56 01.9 +1.1
KWP                                pmax  pmax
               comp=Z,68nm,0.9s
TRPA  Tarpa             42.46 299⇑iP     P        21 56 07.1 +1.9
DRGR                    42.77 297⇑iP     P        21 56 10.3 +2.4
OJC   Ojcow             43.55 302 eP     P        21 56 14.6 +0.6
               comp=Z,6.8nm,1.2s
OJC   Ojcow             43.55 302 eP     P        21 56 14.6 +0.6
OJC                                pmax  pmax
               comp=Z,7.0nm,1.2s
GSI   Gunungsitoli      43.57 161 eP     P        21 56 13.5 -1.0
               comp=Z,38nm,1.5s
BZS   Buzias            43.89 296⇑iP     P        21 56 17.3 +0.5
HFS   Hagfors           44.52 318  P     P        21 56 21.9 +0.2
               comp=Z,1.1nm,0.5s,baz=83,slow=12,SNR=10
LIT   Litokhoron        45.46 288 eP     P        21 56 29.6 +0.1
               comp=Z,5.5nm,0.9s
LIT   Litokhoron        45.46 288 eP     P        21 56 29.6 +0.1
LIT                                pmax  pmax
               comp=Z,6.0nm,0.9s
DIVS  Divibare          45.52 294 eP     P        21 56 30.5 +0.5
               comp=Z,1.8nm,0.8s
NB2   NORSAR Subarra    45.53 319  P     P        21 56 29.6 -0.2
               comp=Z,1.5nm,0.6s,baz=78,slow=8.6
NAO01 NORSAR Array S    45.73 319 eP     P        21 56 32.2 +0.9
IDI   Anoyia            45.98 281  P     P        21 56 33.7  0.0
               comp=Z,20nm,1.1s,baz=40,slow=9.2,SNR=5.7
CLL   Collm             47.29 306 i (P)  P        21 56 47.0 +3.3
BILL  Bilibino          47.55  30 eP     P        21 56 46.1 +0.6
BILL                               pmax  pmax
               comp=Z,1.0nm,1.0s
GERES GERESS Array B    47.75 303  P     P        21 56 48.0 +0.6
               comp=Z,0.5nm,0.6s,baz=80,slow=8.3,SNR=4.3
GEA0  GERESS Array S    47.75 303 eP     P        21 56 48.1 +0.7
FUORN Ofenpass-Fuorn    50.77 301 eP     P        21 57 11.0 +0.3
               comp=Z,9.4nm,1.5s
DAVOX Davos/Dischmat    50.94 301  P     P        21 57 12.0 +0.1
               baz=30,slow=20,SNR=5.8
DAVOX Davos/Dischmat    50.94 301  P     P        21 57 12.0 +0.1
COLD  Coldfoot          62.08  21 eP     P        21 58 30.3 -0.4
               comp=Z,1.8nm,0.9s
ES19  SONSECA Array     63.18 300 eP     P        21 58 38.7 +0.2
ESDC  Sonseca Array     63.23 300  P     P        21 58 39.5 +0.6
               comp=Z,0.4nm,0.7s,baz=55,slow=7.9,SNR=4.1
BWN   Browne            64.58  23 eP     P        21 58 47.1 -0.2
               comp=Z,41nm,1.3s
IL1   Eielson Array     64.84  22 eP     P        21 58 48.2 -0.7
ILAR  Eielson Array     64.84  22  P     P        21 58 48.2 -0.7
               comp=Z,0.3nm,0.7s,baz=314,slow=4.9,SNR=3.5
KDAK  Kodiak Island     68.44  29 i P    P        21 59 14.7 +2.7
YKA   Yellowknife Ar    73.25   9  P     P        21 59 41.5 +0.3
               comp=Z,0.3nm,0.6s,baz=335,slow=6.2,SNR=2.4
TORD  Torodi Ar. Bea    75.94 275  P     P        21 59 55.7 -1.8
               comp=Z,0.4nm,0.5s,baz=35,slow=5.5
WRA   Warramunga Arr    77.89 133  P     P        22 00 06.8 -1.5
               comp=Z,0.8nm,0.6s,baz=338,slow=5.6,SNR=10.0
ASAR  Alice Springs     80.72 135  P     P        22 00 22.4 -1.4
               comp=Z,0.5nm,0.6s,baz=331,slow=5.7,SNR=6.3
CPUP  Villa Florida    144.74 286  PKP   PKPab    22 07 45.6 -0.6
               comp=Z,1.7nm,0.8s,baz=315,slow=2.9,SNR=2.9
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CNRM ***01*** *22:01:12.2, 35°.24N×63°.00E, h15^{km}, ML5.6*

ISCJB ***01*** *22:01:23.5±0.5, 34°.55N±0°.02×59°.96E±0°.01, h7^{km}±3^{km}, mb5.1/218, MS4.6/73, Error ellipse: s-maj=2.6km s-min=1.8km az=3.0*

TEH ***01*** *22:01:25.9, 34°.48N×59°.93E, h28^{km}, ML5.3*

NEIC ***01*** *22:01:25.9±0.0, 34°.48N×59°.93E, h28^{km}, mb5.3/85, MW5.1, ML5.3(THR), MN5.3(TEH), Moment Tensor Solution. s19 Moment tensor: Scale 10^{16}Nm; M_{rr}4.63; $M_{\theta\theta}$-1.77; $M_{\phi\phi}$-2.86; $M_{r\theta}$-1.41; $M_{\theta\phi}$1.80; $M_{\phi r}$1.12; Best double couple: $M_0$4.80000×10^{16} NP1:ϕ_s148.00000°, δ34.00000°, λ98.00000°. NP2:ϕ_s318.00000°, δ56.00000°, λ85.00000°. Principal axes: T 5.0000, Plg78.0000°, Azm209.0000°; N -0.4700, Plg4.0000°, Azm321.0000°; P -4.5200, Plg11.0000°, Azm52.0000°; After TEH.*

GCMT ***01*** *22:01:25.9±0.2, 34°.51N×59°.94E, h21^{km}, MW5.2/100, Moment Tensor Solution. s81,c127; s100,c185; Duration: 1^{s}0 Moment tensor: Scale 10^{16}Nm; M_{rr}6.19±.16; $M_{\theta\theta}$-1.19±.12; $M_{\phi\phi}$-4.99±.11; $M_{r\theta}$-3.37±.25; $M_{\theta\phi}$2.25±.09; $M_{\phi r}$2.58±.20; Best double couple: $M_0$7.42700×10^{16} NP1:ϕ_s321.00000°, δ62.00000°, λ77.00000°. NP2:ϕ_s168.00000°, δ30.00000°, λ114.00000°. Principal axes: T 7.7120, Plg70.0000°, Azm203.0000°; N -0.5610, Plg12.0000°, Azm327.0000°; P -7.1410, Plg16.0000°, Azm60.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

THR ***01*** *22:01:25.8±0.4, 34°.58N×59°.89E, h18^{km}±3^{km}, ML5.3*

BJI ***01*** *22:01:25.2, 34°.61N×60°.10E, h9^{km}, mb4.9/73, mB5.2/58, Ms5.1/74, Ms7 5.0/67*

CSEM ***01*** *22:01:25.2±0.1, 34°.55N×59°.98E, h8^{km}, mb5.2/98, Mw5.1, Error ellipse: s-maj=2.7km s-min=2.5km az=157.0*

MOS ***01*** *22:01:26.3±1.0, 34°.48N×59°.93E, h28^{km}, mb5.4/86, MS4.4/38, Error ellipse: s-maj=5.0km s-min=3.6km az=127.4*

DSN ***01*** *22:01:28.8±0.4, 34°.55N×59°.80E, h40^{km}, mb5.2/6, Error ellipse: s-maj=6.0km s-min=4.7km az=95.0*

NNC ***01*** *22:01:28.7±4.4, 34°.84N×60°.31E, h0^{km}, mb5.3, mpv4.9, Error ellipse: s-maj=49.9km s-min=21.2km az=19.0*

IDC ***01*** *22:01:32.2±2.6, 34°.50N×59°.92E, h65^{km}±23^{km}, mb4.7/42, mb1 4.7/45, mb1mx4.7/58, mbtmp5.0/45, MS4.4/37, Ms1 4.4/37, ms1mx4.3/59, Error ellipse: s-maj=10.2km s-min=7.7km az=163.0*

ISC 01 22:01:25.7±0.5**, 34°.57N**±0°.02×**59°.95E**±0°.02**, h11**^{km}±3^{km}**, h11**^{km}**:pP-P, n1032,** σ**1**^{s}**68**/1106**, mb5.2**/235**, MS4.5**/74**, 73C-54D, Northern and central Iran**

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Code  Station Name         Δ°   AZ°    Phase ID            Time      Res
                                     Op     ISC         h  m  s    ISC
SHRT  Shahrakht          0.96 163 ePg    Pb          22 01 44.4  0.0
SHRT                               IAML              22 01 59.1
               comp=E,125µm,0.4s
SHRT                               IAML              22 01 59.7
               comp=N,86µm,0.4s
SHRT  Shahrakht          0.96 163 ePg    Pb          22 01 44.4  0.0
SHRT  Shahrakht          0.96 163 ePg    Pb          22 01 44.4  0.0
IMOG  Moghan             1.61 342 ePn    Pb          22 01 55.9 +0.2
IMOG                              e                  22 02 02.7
               comp=Z,66µm,0.2s
IMOG                              e                  22 02 22.1
               comp=N,96µm,0.2s
IMOG                              e                  22 02 23.0
               comp=E,27µm,0.2s
IMOG  Moghan             1.61 342 ePn    Pb          22 01 55.9 +0.2
IMYA  Miami              1.77   4 ePn    Pb          22 01 58.5 +0.2
IMYA                              e                  22 02 32.3
               comp=N,52µm,0.4s
IMYA                              e                  22 02 32.9
               comp=Z,30µm,0.4s
IMYA                              e                  22 02 35.1
               comp=E,22µm,0.3s
IMYA  Miami              1.77   4 ePn    Pb          22 01 58.5 +0.2
ISRO  Mashad             1.78 347 ePn    Pb          22 01 58.2 -0.2
ISRO  Mashad             1.78 347 ePn    Pb          22 01 58.2 -0.2
IDAH  Dahanechah         1.83 182 ePn    Pn          22 01 57.5 +0.2
IDAH                              e                  22 02 25.6
               comp=N,1902µm,0.2s
IDAH                              e                  22 02 25.8
               comp=E,1419µm,0.2s
IDAH                              e                  22 02 29.1
               comp=Z,33µm,0.3s
IDAH  Dahanechah         1.83 182 ePn    Pn          22 01 57.5 +0.2
ITEG  Tejag              1.94 211 ePn    Pn          22 01 58.9 +0.1
ITEG                              e                  22 02 28.1
               comp=N,1284µm,0.3s
ITEG                              e                  22 02 28.3
               comp=Z,2038µm,0.7s
ITEG                              e                  22 02 28.6
               comp=E,1405µm,0.3s
ITEG  Tejag              1.94 211 ePn    Pn          22 01 58.9 +0.1
IPAY  Payeh              2.03 338 ePn    Pb          22 02 02.0 -0.8
IPAY                              e                  22 02 36.8
               comp=Z,39µm,0.3s
IPAY                              e                  22 02 40.6
               comp=N,33µm,0.2s
IPAY                              e                  22 02 40.6
               comp=E,6µm,0.3s
IPAY  Payeh              2.03 338 ePn    Pb          22 02 02.0 -0.8
IAKL  Akhelmad           2.25 335 e                  22 02 42.7
               comp=Z,63µm,0.3s
IAKL                              ePn    Pb          22 02 05.7 -0.8
IAKL                              e                  22 02 46.2
               comp=E,32µm,0.3s
IAKL                              e                  22 02 47.7
               comp=N,5µm,0.2s
IKOO  Kooshah            2.28 201 ePn    Pn          22 02 03.3 -0.2
IKOO                              e                  22 02 38.1
               comp=Z,85µm,0.3s
IKOO                              e                  22 02 40.8
               comp=E,88µm,0.2s
IKOO                              e                  22 02 42.7
               comp=N,19µm,0.3s
IKOO  Kooshah            2.28 201 ePn    Pn          22 02 03.3 -0.2
IKRD  Kardeh             2.49 332 e                  22 02 44.0
               comp=Z,6µm,0.4s
IKRD                              ePn    Pn          22 02 05.0 -1.4
IKRD                              e                  22 02 44.5
               comp=E,84µm,0.5s
IKRD                              e                  22 02 57.4
               comp=N,45µm,0.4s
TABS  Tabas              2.52 249 ePn    Pn          22 02 07.4 +0.7
TABS                              eSg    Sb          22 02 43.6 +1.6
TABS                               IAML              22 02 52.5
               comp=N,9µm,0.7s
TABS  Tabas              2.52 249 ePn    Pn          22 02 07.4 +0.7
TABS  Tabas              2.52 249 ePn    Pn          22 02 07.4 +0.7
TKDS  Koohdasht(Taba     2.53 249 e                  22 02 45.5
               comp=E,99nm,0.4s
TKDS                              ePn    Pn          22 02 06.5 -0.3
TKDS                              e                  22 02 45.5
               comp=N,99nm,0.4s
TKDS                              e                  22 02 52.9
               comp=Z,99nm,0.5s
IQHU  Qucahn             2.75 336 ePn    Pb          22 02 13.2 -1.7
IQHU                              e                  22 03 31.0
               comp=Z,74µm,0.6s
IQHU  Qucahn             2.75 336 ePn    Pb          22 02 13.2 -1.7
TNSJ  Nastanj            2.83 259 ePn    Pn          22 02 10.9  0.0
TNSJ                              e                  22 02 58.2
               comp=N,99nm,0.4s
TNSJ                              e                  22 03 07.9
               comp=E,99nm,0.5s
TNSJ                              e                  22 03 15.2
               comp=Z,99nm,0.3s
TNSJ  Nastanj            2.83 259 ePn    Pn          22 02 10.9  0.0
ISFR  Sfrayin            2.94 328 ePn    Pn          22 02 15.1 +2.5
ISFR                              e                  22 03 15.2
               comp=Z,82µm,0.5s
ISFR                              e                  22 03 25.8
               comp=E,44µm,0.3s
ISFR                              e                  22 03 33.9
               comp=N,84µm,0.3s
ISFR  Sfrayin            2.94 328 ePn    Pn          22 02 15.1 +2.5
IEMG  Emamgholi          3.03 340 ePn    Pn          22 02 16.9 +3.1
IEMG                              e                  22 02 39.9
               comp=N,58µm,0.2s
IEMG                              e                  22 03 22.9
               comp=Z,52µm,0.3s
IEMG                              e                  22 03 29.2
               comp=E,694nm,0.2s
IEMG  Emamgholi          3.03 340 ePn    Pn          22 02 16.9 +3.1
TPRV  Parvadeh(Tabas     3.12 241 ePn    Pn          22 02 14.7 -0.2
TPRV                              e                  22 03 15.8
               comp=E,99nm,0.6s
TPRV                              e                  22 03 17.3
               comp=N,99nm,0.5s
TPRV                              e                  22 03 41.8
               comp=Z,99nm,1.0s
TPRV  Parvadeh(Tabas     3.12 241 ePn    Pn          22 02 14.7 -0.2
SHRO  Shahrood           3.52 295 ePn    Pn          22 02 21.2 +0.8
SHRO                              eSg    Sb          22 03 13.9 +3.1
SHRO  Shahrood           3.52 295 ePn    Pn          22 02 21.2 +0.8
SHRO  Shahrood           3.52 295 ePn    Pn          22 02 21.2 +0.8
ASHT  Ashkhabad          3.60 340 ⇓Pn    Pn          22 02 24.3 +2.9
               comp=Z,33nm,0.5s
ASHT                              ⇓Pg    Pg          22 02 35.6 +1.0
               comp=Z,1µm,0.7s
ASHT                              ⇓Lg    Lg          22 03 22.8
               comp=Z,6µm,1.1s
ASHT  Ashkhabad          3.60 340 i P    Pn          22 02 24.3 +2.9
ASHT                               pmax  pmax
               comp=Z,82nm,0.4s
ASHT  Ashkhabad          3.60 340  Pn    Pn          22 02 24.3 +2.9
               comp=Z,33nm,0.5s
GEYT  Alibeck            3.67 337  P     Pn          22 02 23.7 +1.4
               comp=Z,9.0nm,0.3s,baz=292,slow=32,SNR=113
GEYT                               S     Sg          22 03 22.9 -0.5
               comp=Z,20nm,0.3s,baz=138,slow=18,SNR=3.0
GEYT                               LR    LR          22 04 20.7
               comp=Z,9µm,20.0s,baz=205,slow=45
GYA0B ALIBECK ARRAY      3.67 337 ⇑Pn    Pn          22 02 23.5 +1.1
               comp=Z,75nm,0.7s
GYA0B                             ⇓Pg    Pg          22 02 34.8 -1.1
               comp=Z,942nm,0.9s
GYA0B                             ⇓Lg    Lg          22 03 25.4
               comp=Z,3µm,1.0s
GYA0B ALIBECK ARRAY      3.67 337 ePn    Pn          22 02 23.7 +1.3
GYA0B                             eSn    Sn          22 03 02.8 -2.8
GYA0B ALIBECK ARRAY      3.67 337  Pn    Pn          22 02 23.5 +1.1
               comp=Z,75nm,0.7s
GYA0B ALIBECK ARRAY      3.67 337  Pg    Pg          22 02 34.8 -1.1
               comp=Z,942nm,0.9s
GYA0B                             eSn    Sn          22 03 02.8 -2.8
GYA0B                              Lg    Lg          22 03 25.4
               comp=Z,3µm,1.0s
MRVT  Maraveh tapeh      4.39 316 ePn    Pn          22 02 33.6 +1.3
MRVT  Maraveh tapeh      4.39 316 ePn    Pn          22 02 33.7 +1.3
MRVT  Maraveh tapeh      4.39 316 ePn    Pn          22 02 33.7 +1.3
IMND  Minoodasht         4.56 307 ePn    Pn          22 02 37.3 +2.7
IMND                              e                  22 03 59.1
               comp=Z,13µm,0.4s
IMND                              e                  22 04 12.1
               comp=N,29µm,0.6s
IMND                              e                  22 04 16.2
               comp=E,27µm,0.5s
IMND  Minoodasht         4.56 307 ePn    Pn          22 02 37.3 +2.7
ZHSF  Zahedan            4.99 172 ePn    Pn          22 02 42.6 +1.8
ZHSF  Zahedan            4.99 172 ePn    Pn          22 02 42.5 +1.8
ZHSF  Zahedan            4.99 172 ePn    Pn          22 02 42.5 +1.8
IANJ  Anjilo             5.03 282 ePn    Pn          22 02 41.6 +0.3
IANJ                              e                  22 04 12.7
               comp=Z,18µm,0.3s
IANJ  Anjilo             5.03 282 ePn    Pn          22 02 41.6 +0.3
KHGB  Koh Gabri          5.11 216 ePn    Pn          22 02 42.5 +0.1
KHGB                              e                  22 04 16.9
               comp=E,99nm,0.7s
KHGB                              e                  22 04 19.7
               comp=N,99nm,0.8s
KHGB                              e                  22 04 21.5
               comp=Z,99nm,0.7s
KHGB  Koh Gabri          5.11 216 ePn    Pn          22 02 42.5 +0.1
CHMN  Cheshme madani     5.12 204 e
               comp=N,99nm,0.0s
CHMN                              ePn    Pn          22 02 42.0 -0.6
CHMN                              e                  22 04 14.3
               comp=Z,99nm,1.0s
CHMN                              e                  22 04 21.5
               comp=E,99nm,0.5s
ICHK  Chekchek           5.18 245 ePn    Pn          22 02 43.6 +0.2
ICHK                              e                  22 04 20.0
               comp=Z,49µm,0.5s
ICHK                              e                  22 04 20.3
               comp=E,71µm,0.6s
ICHK                              e                  22 04 20.8
               comp=N,92µm,0.5s
ICHK  Chekchek           5.18 245 ePn    Pn          22 02 43.6 +0.2
TVBK  TV Kerman          5.31 211 ePn    Pn          22 02 46.0 +0.8
TVBK                              e                  22 04 20.7
               comp=E,99nm,1.0s
TVBK                              e                  22 04 20.8
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	comp=N,99nm,0.6s						
TVBK				*e*		22 04 41.7	
	comp=Z,99nm,1.0s						
TVBK	**TV Kerman**	**5.31**	**211**	*e*Pn	**Pn**	**22 02 46.0**	**+0.8**
KRBR	**Kerman**	**5.31**	**211**	IAML		22 04 23.2	
	comp=N,1µm,0.6s						
KRBR				IAML		22 04 28.5	
	comp=E,2µm,0.8s						
IGLO	**Ghaloghah**	**5.35**	**293**	*e*Pn	**Pn**	**22 02 47.5**	**+1.8**
IGLO				*e*		22 04 43.1	
	comp=Z,86µm,0.8s						
IGLO				*e*		22 04 43.7	
	comp=E,78µm,0.5s						
IGLO				*e*		22 04 55.9	
	comp=N,88µm,0.5s						
ANAR	**Anarak**	**5.35**	**257**	*e*Pn	**Pn**	**22 02 45.7**	**+0.1**
ANAR				*e*		22 04 25.3	
	comp=E,99nm,0.5s						
ANAR				*e*		22 04 32.1	
	comp=Z,99nm,0.4s						
ANAR				*e*		22 04 33.7	
	comp=N,99nm,0.6s						
ANAR	**Anarak**	**5.35**	**257**	*e*Pn	**Pn**	**22 02 45.7**	**+0.1**
IMEH	**Mehriz**	**5.49**	**236**	*e*Pn	**Pn**	**22 02 47.7**	**+0.1**
IMEH				*e*		22 04 26.2	
	comp=N,42µm,0.5s						
IMEH				*e*		22 04 28.4	
	comp=Z,58µm,0.6s						
IMEH	**Mehriz**	**5.49**	**236**	*e*Pn	**Pn**	**22 02 47.7**	**+0.1**
ISHM	**Shahmirzad**	**5.59**	**285**	*e*Pn	**Pn**	**22 02 49.8**	**+0.8**
ISHM				*e*		22 02 56.0	
	comp=E,468nm,0.1s						
ISHM				*e*		22 04 38.5	
	comp=Z,21µm,0.4s						
NGRK	**Negar Kerman**	**5.62**	**210**	*e*Pn	**Pn**	**22 02 50.0**	**+0.5**
NGRK				*e*		22 04 28.1	
	comp=N,99nm,1.1s						
NGRK				*e*		22 04 29.6	
	comp=E,99nm,0.7s						
NGRK				*e*		22 04 40.6	
	comp=Z,99nm,0.8s						
NGRK	**Negar Kerman**	**5.62**	**210**	*e*Pn	**Pn**	**22 02 50.0**	**+0.5**
ILAS	**Lasjerd**	**5.80**	**280**	*e*Pn	**Pn**	**22 02 52.4**	**+0.6**
ILAS				*e*		22 04 35.1	
	comp=E,24µm,0.4s						
ILAS	**Lasjerd**	**5.80**	**280**	*e*Pn	**Pn**	**22 02 52.4**	**+0.6**
ISAD	**Sadrabad**	**5.88**	**245**	*e*Pn	**Pn**	**22 02 52.9**	**-0.1**
ISAD				*e*		22 04 39.0	
	comp=Z,42µm,0.4s						
ISAD				*e*		22 04 40.4	
	comp=N,35µm,0.4s						
ISAD				*e*		22 04 58.1	
	comp=E,37µm,0.4s						
ISAD	**Sadrabad**	**5.88**	**245**	*e*Pn	**Pn**	**22 02 52.9**	**-0.1**
IFIR	**Firoozkooh**	**5.99**	**282**	*e*Pn	**Pn**	**22 02 55.8**	**+1.2**
IFIR				*e*		22 04 51.5	
	comp=E,36µm,0.5s						
IFIR				*e*		22 04 52.0	
	comp=N,38µm,0.7s						
IFIR				*e*		22 04 53.7	
	comp=Z,3µm,0.2s						
IFIR	**Firoozkooh**	**5.99**	**282**	*e*Pn	**Pn**	**22 02 55.8**	**+1.2**
IALA	**Alasht**	**6.03**	**287**	*e*Pn	**Pn**	**22 02 56.6**	**+1.5**
IALA				*e*		22 05 15.6	
	comp=Z,23µm,0.7s						
IALA				*e*		22 05 16.9	
	comp=E,49µm,0.7s						
IALA	**Alasht**	**6.03**	**287**	*e*Pn	**Pn**	**22 02 56.6**	**+1.5**
ISFB	**Sefidab**	**6.37**	**270**	*e*		22 05 08.0	
	comp=Z,16µm,0.4s						
ISFB				*e*		22 05 09.3	
	comp=E,38µm,0.6s						
ISFB				*e*		22 05 15.2	
	comp=N,15µm,0.4s						
IPRN	**Peran**	**6.44**	**287**	*e*Pn	**Pn**	**22 03 01.4**	**+0.9**
IPRN				*e*		22 03 44.1	
	comp=Z,13µm,0.3s						
IPRN				*e*		22 05 18.8	
	comp=E,23µm,0.4s						
IPRN				*e*		22 05 27.6	
	comp=N,23µm,0.5s						
IZEF	**Zefreh**	**6.56**	**257**	*e*Pn	**Pn**	**22 03 02.1**	**-0.3**
IZEF				*e*		22 04 56.6	
	comp=Z,6µm,0.5s						
IZEF				*e*		22 05 05.0	
	comp=N,10µm,0.6s						
IZEF				*e*		22 05 12.0	
	comp=E,25µm,1.0s						
IZEF	**Zefreh**	**6.56**	**257**	*e*Pn	**Pn**	**22 03 02.1**	**-0.3**
IDMV	**Damavand**	**6.57**	**281**	*e*Pn	**Pn**	**22 03 03.9**	**+1.4**
IDMV				*e*		22 05 15.1	
	comp=E,19µm,0.4s						
IDMV				*e*		22 05 18.4	
	comp=N,438nm,1.1s						
IDMV				*e*		22 05 33.7	
	comp=Z,32µm,0.7s						
IDMV	**Damavand**	**6.57**	**281**	*e*Pn	**Pn**	**22 03 03.9**	**+1.4**
IAFJ	**Afjeh**	**6.86**	**283**	*e*Pn	**Pn**	**22 03 08.6**	**+2.0**
IAFJ				*e*		22 05 29.9	
	comp=N,23µm,0.6s						
IAFJ				*e*		22 05 41.6	
	comp=E,19µm,0.5s						
IAFJ				*e*		22 05 46.5	
	comp=Z,14µm,0.6s						
IAFJ	**Afjeh**	**6.86**	**283**	*e*Pn	**Pn**	**22 03 08.6**	**+2.0**
IRAM	**Ramesheh**	**6.91**	**249**	*e*Pn	**Pn**	**22 03 07.3**	**+0.1**
IRAM				*e*		22 05 23.7	
	comp=N,6µm,0.4s						
IRAM				*e*		22 05 26.6	
	comp=E,30µm,0.9s						
IRAM				*e*		22 05 30.6	
	comp=Z,13µm,0.5s						
IRAM	**Ramesheh**	**6.91**	**249**	*e*Pn	**Pn**	**22 03 07.3**	**+0.1**
IKLH	**Kolahrood**	**7.07**	**262**	*e*Pn	**Pn**	**22 03 09.4**	**+0.1**
IKLH				*e*		22 05 28.6	
	comp=N,22µm,0.6s						
IKLH				*e*		22 05 33.3	
	comp=Z,17µm,0.6s						
IKLH				*e*		22 05 42.9	
	comp=E,27µm,0.5s						
IKLH	**Kolahrood**	**7.07**	**262**	*e*Pn	**Pn**	**22 03 09.4**	**+0.1**
GHVR	**GHOM**	**7.14**	**272**	*e*Pn	**Pn**	**22 03 11.7**	**+1.6**
GHVR	**GHOM**	**7.14**	**272**	*e*Pn	**Pn**	**22 03 11.6**	**+1.4**
GHVR	**GHOM**	**7.14**	**272**	*e*Pn	**Pn**	**22 03 11.6**	**+1.4**
CHTH	**Charan**	**7.34**	**283**	*e*Pn	**Pn**	**22 03 14.2**	**+1.1**
NIAN	**Nian**	**7.48**	**202**	*e*Pn	**Pn**	**22 03 14.6**	**-0.1**
NIAN				*e*		22 05 37.6	
	comp=E,99nm,1.0s						
NIAN				*e*		22 05 44.2	
	comp=Z,99nm,1.2s						
NIAN				*e*		22 05 55.9	
	comp=N,99nm,1.1s						
NIAN	**Nian**	**7.48**	**202**	*e*Pn	**Pn**	**22 03 14.6**	**-0.1**
IMHD	**Mahdasht**	**7.69**	**281**	*e*Pn	**Pn**	**22 03 19.8**	**+2.1**
IMHD				*e*		22 04 06.2	
	comp=Z,4µm,0.4s						
IMHD				*e*		22 06 09.4	
	comp=N,5µm,0.3s						
IMHD				*e*		22 06 23.9	
	comp=E,4µm,0.3s						
IMHD	**Mahdasht**	**7.69**	**281**	*e*Pn	**Pn**	**22 03 19.8**	**+2.1**
IBRJ	**Brojen**	**7.75**	**252**	*e*Pn	**Pn**	**22 03 20.1**	**+1.4**
IBRJ				*e*		22 05 49.0	
	comp=N,5µm,0.5s						
IBRJ				*e*		22 06 01.0	
	comp=Z,10µm,0.7s						
IBRJ				*e*		22 06 12.8	
	comp=E,5µm,0.5s						
ROKH	**ROKH**	**7.77**	**256**	*e*Pn	**Pn**	**22 03 20.6**	**+1.7**
ROKH				*e*		22 06 24.4	
	comp=Z,99nm,4.3s						
ROKH				*e*		22 06 27.6	
	comp=N,99nm,1.5s						
ROKH				*e*		22 06 27.6	
	comp=E,99nm,2.3s						
ROKH	**ROKH**	**7.77**	**256**	*e*Pn	**Pn**	**22 03 20.6**	**+1.7**
IPIR	**Pirpir**	**7.78**	**259**	*e*Pn	**Pn**	**22 03 21.3**	**+2.1**
IPIR				*e*		22 05 48.1	
	comp=E,10µm,0.5s						
IPIR				*e*		22 05 54.9	
	comp=N,14µm,0.6s						
IPIR				*e*		22 06 01.6	
	comp=Z,8µm,0.5s						
IPIR	**Pirpir**	**7.78**	**259**	*e*Pn	**Pn**	**22 03 21.3**	**+2.1**
QALM	**Alamut, Qazvin**	**7.81**	**286**	*e*Pn	**Pn**	**22 03 21.7**	**+2.2**
QALM				*e*		22 06 03.2	
	comp=N,99nm,1.0s						
QALM				*e*		22 06 06.7	
	comp=E,99nm,1.0s						
QALM				*e*		22 07 56.9	
	comp=Z,99nm,2.8s						
QALM	**Alamut, Qazvin**	**7.81**	**286**	*e*Pn	**Pn**	**22 03 21.7**	**+2.2**
GENO	**Geno**	**7.84**	**205**	*e*Pn	**Pn**	**22 03 20.5**	**+0.6**
GENO				*e*		22 05 43.1	
	comp=Z,99nm,2.5s						
GENO				*e*		22 05 49.9	
	comp=E,99nm,0.9s						
GENO				*e*		22 06 03.4	
	comp=N,99nm,1.3s						
GENO	**Geno**	**7.84**	**205**	*e*Pn	**Pn**	**22 03 20.5**	**+0.6**
ZNGN	**Zangian**	**7.99**	**255**	*e*Pn	**Pn**	**22 03 23.2**	**+1.1**
ZNGN				*e*		22 06 00.9	
	comp=E,99nm,0.8s						
ZNGN				*e*		22 06 02.7	
	comp=N,99nm,0.6s						
ZNGN				*e*		22 06 04.4	
	comp=Z,99nm,0.8s						
ZNGN	**Zangian**	**7.99**	**255**	*e*Pn	**Pn**	**22 03 23.2**	**+1.1**
SHI	**Shiraz**	**7.99**	**234**	*e*Pn	**Pn**	**22 03 25.9**	**+4.0**
SHI				*e*		22 06 07.7	
	comp=Z,17µm,1.1s						
JHRM	**Jahrom**	**8.13**	**224**	*e*		22 06 19.8	
	comp=Z,99nm,0.3s						
IGZV	**Ghazvin**	**8.14**	**286**	*e*Pn	**Pn**	**22 03 26.3**	**+2.3**
IGZV				*e*		22 06 14.0	
	comp=Z,4µm,0.6s						
IGZV				*e*		22 06 34.4	
	comp=N,15µm,0.8s						
IGZV				*e*		22 06 38.7	
	comp=E,8µm,0.7s						
IGZV	**Ghazvin**	**8.14**	**286**	*e*Pn	**Pn**	**22 03 26.3**	**+2.3**
KHSK	**Kohestak**	**8.18**	**199**	*e*Pn	**Pn**	**22 03 25.2**	**+0.9**
KHSK				*e*		22 06 07.8	
	comp=N,99nm,1.1s						
KHSK				*e*		22 06 12.0	
	comp=E,99nm,1.0s						
KHSK				*e*		22 06 21.6	
	comp=Z,99nm,1.3s						
KHSK	**Kohestak**	**8.18**	**199**	*e*Pn	**Pn**	**22 03 25.2**	**+0.9**
IRAZ	**Razeghan**	**8.27**	**279**	*e*Pn	**Pn**	**22 03 26.6**	**+0.9**
IRAZ				*e*		22 06 22.9	
	comp=N,6µm,0.5s						
IRAZ				*e*		22 06 32.6	
	comp=E,24µm,0.8s						
IRAZ				*e*		22 06 38.5	
	comp=Z,9µm,0.7s						
IRAZ	**Razeghan**	**8.27**	**279**	*e*Pn	**Pn**	**22 03 26.6**	**+0.9**
IKAZ	**Kazeroun**	**8.37**	**237**	*e*Pn	**Pn**	**22 03 28.4**	**+1.2**
IKAZ				*e*		22 06 38.0	
	comp=Z,15µm,0.7s						
IKAZ	**Kazeroun**	**8.37**	**237**	*e*Pn	**Pn**	**22 03 28.4**	**+1.2**
QABG	**Abgarm-Qazvin**	**8.57**	**281**	*e*Pn	**Pn**	**22 03 30.8**	**+0.9**
QABG				*e*		22 06 31.4	
	comp=N,99nm,0.8s						
QABG				*e*		22 06 31.5	
	comp=E,99nm,1.1s						
QABG				*e*		22 07 43.0	
	comp=Z,99nm,3.9s						
QABG	**Abgarm-Qazvin**	**8.57**	**281**	*e*Pn	**Pn**	**22 03 30.8**	**+0.9**
HAGD	**Aghdareh**	**8.91**	**275**	*e*		22 02 01.9	
	comp=E,99nm,0.0s						
HAGD				*e*		22 02 13.9	
	comp=Z,99nm,0.0s						
HAGD				*e*Pn	**Pn**	**22 03 34.9**	**+0.4**
HKZM	**Kohzaman**	**9.10**	**278**	*e*Pn	**Pn**	**22 03 37.3**	**+0.1**
HKZM				*e*		22 04 31.4	
	comp=Z,99nm,0.6s						
HKZM				*e*		22 04 31.7	
	comp=E,99nm,0.4s						
HKZM				*e*		22 06 44.2	
	comp=N,99nm,0.7s						
HKZM	**Kohzaman**	**9.10**	**278**	*e*Pn	**Pn**	**22 03 37.3**	**+0.1**
SHME	**Shamm**	**9.11**	**202**	*i* P	**Pn**	**22 03 37.5**	**+0.4**
	SNR=16						
BANOM	**Banah**	**9.18**	**201**	P	Pn	22 03 46.7	+8.6
	SNR=9.6						
BANOM	**Banah**	**9.18**	**201**	*i* P	**Pn**	**22 03 38.3**	**+0.3**
	SNR=18						
BANOM	**Banah**	**9.18**	**201**	P	**Pn**	**22 03 38.3**	**+0.3**
	SNR=18						
HSAM	**Samen**	**9.38**	**271**	*e*Pn	**Pn**	**22 03 42.2**	**+1.1**
HSAM				*e*		22 07 35.3	
	comp=N,99nm,1.1s						
HSAM				*e*		22 07 41.2	
	comp=E,99nm,1.2s						
HSAM	**Samen**	**9.38**	**271**	*e*Pn	**Pn**	**22 03 42.2**	**+1.1**
MSFE	**Esma-Masafi**	**9.75**	**201**	*i* P	**Pn**	**22 03 46.1**	**+0.2**
	SNR=7.5						
MDH	**Madha**	**9.77**	**200**	P	**Pn**	**22 03 46.9**	**+0.8**
MDH	**Madha**	**9.77**	**200**	P	**Pn**	**22 03 46.9**	**+0.8**
IBZA	**Bozab**	**9.98**	**273**	*e*Pn	**Pn**	**22 03 51.1**	**+1.9**
IBZA				*e*		22 07 06.9	
	comp=Z,61µm,1.3s						
IBZA	**Bozab**	**9.98**	**273**	*e*Pn	**Pn**	**22 03 51.1**	**+1.9**
THW	**Thamme Wali**	**9.99**	**97**	P	**Pn**	**22 03 51.3**	**+2.2**
TAS	**Tashkent**	**9.99**	**45**	⇑Pn	**Pn**	**22 03 49.3**	**+0.1**
	comp=Z,512nm,0.9s						
TAS	**Tashkent**	**9.99**	**45**	*i* P	**Pn**	**22 03 50.3**	**+1.1**
TAS				pmax	pmax		
	comp=Z,634nm,1.0s						
TAS	**Tashkent**	**9.99**	**45**	Pn	**Pn**	**22 03 49.3**	**+0.1**
	comp=Z,512nm,0.9s						
TAS	**Tashkent**	**9.99**	**45**	*i* P	**Pn**	**22 03 50.3**	**+1.1**
	comp=Z,634nm,1.0s						
IKFM	**Kafar-mosalman**	**10.10**	**267**	*e*Pn	**Pn**	**22 03 52.2**	**+1.6**
IKFM				*e*		22 07 09.5	
	comp=Z,99nm,1.5s						
IKFM				*e*		22 07 18.8	
	comp=E,99nm,1.2s						
IKFM				*e*		22 07 20.6	
	comp=N,99nm,1.3s						
IKFM	**Kafar-mosalman**	**10.10**	**267**	*e*Pn	**Pn**	**22 03 52.2**	**+1.6**
UOSS	**Minazif**	**10.13**	**200**	P	**Pn**	**22 03 50.8**	**-0.2**
UOSS	**Minazif**	**10.13**	**200**	P	**Pn**	**22 03 50.8**	**-0.2**
NAZ	**Nazwa, Dubai**	**10.25**	**202**	P	**Pn**	**22 03 55.0**	**+2.3**
	SNR=17						
NAZ	**Nazwa, Dubai**	**10.25**	**202**	*i* P	**Pn**	**22 03 53.0**	**+0.3**
	SNR=5.9						
NAZ	**Nazwa, Dubai**	**10.25**	**202**	P	**Pn**	**22 03 53.0**	**+0.3**
	SNR=5.9						
HATD	**Hatta, Dubai**	**10.26**	**200**	P	Pn	22 03 60.0	+7.1
	SNR=9.4						
HATD	**Hatta, Dubai**	**10.26**	**200**	*i* P	**Pn**	**22 03 54.1**	**+1.2**
	SNR=7.7						
HATD	**Hatta, Dubai**	**10.26**	**200**	P	**Pn**	**22 03 54.1**	**+1.2**
	SNR=7.7						
IKOM	**Komasi**	**10.29**	**271**	*e*Pn	**Pn**	**22 03 54.0**	**+0.6**
IKOM				*e*		22 09 11.5	
	comp=Z,99nm,2.5s						
IKOM	**Komasi**	**10.29**	**271**	*e*Pn	**Pn**	**22 03 54.0**	**+0.6**
KCHF	**Cheshme Sefid,**	**10.67**	**272**	*e*Pn	**Pn**	**22 04 00.3**	**+1.7**
KCHF				*e*		22 07 50.8	
	comp=Z,99nm,1.2s						
KCHF	**Cheshme Sefid,**	**10.67**	**272**	*e*Pn	**Pn**	**22 04 00.3**	**+1.7**
ASUD	**Al Ashush, Dub**	**10.69**	**203**	P	**Pn**	**22 03 58.9**	**+0.2**
ASUD	**Al Ashush, Dub**	**10.69**	**203**	P	**Pn**	**22 03 58.9**	**+0.2**
ILIN	**Lien**	**10.69**	**276**	*e*Pn	**Pn**	**22 03 59.8**	**+0.8**
ILIN				*e*		22 07 59.2	
	comp=Z,2µm,0.6s						
ILIN				*e*		22 08 12.6	
	comp=E,1µm,0.5s						
ILIN	**Lien**	**10.69**	**276**	*e*Pn	**Pn**	**22 03 59.8**	**+0.8**
IVIS	**Veis**	**10.80**	**273**	*e*Pn	**Pn**	**22 04 03.1**	**+2.7**
IVIS				*e*		22 07 35.1	
	comp=Z,3µm,0.8s						
IVIS				*e*		22 07 55.6	
	comp=N,6µm,0.9s						
IVIS				*e*		22 08 12.9	
	comp=E,4µm,1.0s						
IVIS	**Veis**	**10.80**	**273**	*e*Pn	**Pn**	**22 04 03.1**	**+2.7**
SOHO	**SOHO**	**10.81**	**197**	*i* P	**Pn**	**22 04 00.4**	**-0.1**
	SNR=18						
SOHO	**SOHO**	**10.81**	**197**	P	**Pn**	**22 04 00.4**	**-0.1**
	SNR=18						
CHM	**Chimkent**	**10.82**	**41**	*e*P	**Pn**	**22 04 00.6**	**+0.1**
	comp=E,28nm,0.7s						
CHM				*e*S	**Sn**	**22 06 02.0**	**+0.5**
CHM				LR	LR	22 09 08.7	
	comp=E,2µm,10.5s						
AJN	**Ajban**	**10.86**	**205**	P	**Pn**	**22 03 59.7**	**-1.4**
IUG	**Iuzhnay**	**10.94**	**43**	*e*P	**Pn**	**22 04 02.2**	**0.0**
	comp=E,33nm,0.5s						
IUG				*e*S	**Sn**	**22 06 04.9**	**+0.1**
IUG				LR	LR	22 09 17.1	
	comp=E,3µm,12.1s						
SARP	**Sargodha**	**10.98**	**100**	P	**Pn**	**22 04 05.8**	**+3.2**
IBST	**Bostanabad**	**11.01**	**290**	*e*		22 04 39.1	
	comp=Z,437nm,0.3s						
IBST				*e*Pn	**Pn**	**22 04 05.0**	**+1.7**
IBST				*e*		22 06 00.5	
	comp=E,658nm,0.5s						
IBST				*e*		22 07 58.3	
	comp=N,504nm,0.6s						
IHRS	**Heris**	**11.05**	**294**	*e*		22 04 43.3	
	comp=Z,861nm,0.4s						
IHRS				*e*		22 04 45.8	
	comp=N,1µm,0.6s						
IHRS				*e*		22 04 58.2	
	comp=E,1µm,0.4s						
NIL	**Nilore**	**11.07**	**91**	*e*Pn	**Pn**	**22 04 06.1**	**+2.1**
NIL	**Nilore**	**11.07**	**91**	*e*P	**Pn**	**22 04 06.1**	**+2.1**
NIL	**Nilore**	**11.07**	**91**	*e*P	**Pn**	**22 04 06.1**	**+2.1**
CHCP	**Chirah Chowk**	**11.08**	**91**	P	**Pn**	**22 04 06.5**	**+2.4**
ALNE	**Al Ain**	**11.10**	**200**	*i* P	**Pn**	**22 04 04.3**	**0.0**
	SNR=5.9						
ALNE	**Al Ain**	**11.10**	**200**	P	**Pn**	**22 04 05.6**	**+1.3**
	SNR=16						
WSAR	**Wadi Sarin**	**11.35**	**186**	P	**Pn**	**22 04 08.0**	**+0.2**
	comp=E,1.2nm,0.3s,baz=38,slow=6.8,SNR=13						
WSAR				LR	LR	22 08 34.1	
	comp=E,808nm,18.7s,baz=34,slow=37						
KK31	**Karatay Array**	**11.84**	**41**	⇓Pn	**Pn**	**22 04 12.6**	**-1.9**
	comp=E,32nm,0.6s,baz=229,slow=14						
KK31				⇑Sn	**Sn**	**22 06 25.7**	**-0.9**
	comp=E,58nm,0.7s,baz=241,slow=26						
KK31	**Karatay Array**	**11.84**	**41**	*e*Pn	**Pn**	**22 04 13.0**	**-1.5**
KK31	**Karatay Array**	**11.84**	**41**	*e*P	**Pn**	**22 04 13.0**	**-1.5**
KK31	**Karatay Array**	**11.84**	**41**	*e*Pn	**Pn**	**22 04 13.0**	**-1.5**
KKAR	**Karatay Array**	**11.84**	**41**	*e*Pn	**Pn**	**22 04 13.0**	**-1.5**
KKAR	**Karatay Array**	**11.84**	**41**	*e*P	**Pn**	**22 04 13.0**	**-1.5**
KKAR	**Karatay Array**	**11.84**	**41**	*e*Pn	**Pn**	**22 04 13.0**	**-1.5**
AKT	**Akhty**	**11.84**	**309**	*e*P	**Pn**	**22 04 13.4**	**-1.2**
AKT				*e*S	**Sn**	**22 06 30.6**	**+3.8**
AKT				pmax	pmax		
	comp=Z,17nm,0.6s						
AKT				smax	smax		
	comp=E,31nm,0.5s						
AKT				smax	smax		
	comp=N,19nm,0.5s						
AKT	**Akhty**	**11.84**	**309**	*e*P	**Pn**	**22 04 13.4**	**-1.2**
	comp=N,17nm,0.6s						
SFK	**Sufi-Kurgan**	**12.08**	**59**	⇓Pn	**Pn**	**22 04 17.0**	**-1.0**
	comp=N,90nm,0.6s						
SFK				⇑Sn	**Sn**	**22 06 33.9**	**+1.1**
	comp=N,79nm,0.6s						
SFK	**Sufi-Kurgan**	**12.08**	**59**	*i* P	**Pn**	**22 04 16.9**	**-1.0**
SFK				pmax	pmax		
	comp=Z,352nm,1.4s						
SFK	**Sufi-Kurgan**	**12.08**	**59**	Pn	**Pn**	**22 04 17.0**	**-1.0**
	comp=Z,90nm,0.6s						
SFK				Sn	**Sn**	**22 06 33.9**	**+1.1**
	comp=Z,79nm,0.6s						
ISHB	**Shabestar**	**12.12**	**292**	*e*Pn	**Pn**	**22 04 19.5**	**+0.9**
ISHB				*e*		22 04 43.9	
	comp=Z,400nm,0.4s						
ISHB				*e*		22 04 50.3	
	comp=N,484nm,0.4s						
ISHB				*e*		22 05 07.6	
	comp=E,857nm,0.5s						
MNAS	**Manas**	**12.61**	**47**	⇓Pn	**Pn**	**22 04 24.0**	**-1.1**
	comp=E,26nm,0.5s						
MNAS				⇑Sn	**Sn**	**22 06 38.7**	**-6.8**
	comp=E,149nm,1.1s						
MNAS	**Manas**	**12.61**	**47**	*i* P	**Pn**	**22 04 23.9**	**-1.1**
MNAS				pmax	pmax		
	comp=Z,363nm,0.7s						
MNAS	**Manas**	**12.61**	**47**	Pn	**Pn**	**22 04 24.0**	**-1.1**
	comp=Z,26nm,0.5s						
MAK	**Makhachkala**	**12.81**	**315**	*e*P	**Pn**	**22 04 28.6**	**+0.9**
MAK				*e*S	**Sn**	**22 06 51.5**	**+1.2**
MAK				pmax	pmax		
	comp=Z,69nm,1.0s						
MAK				MLR	MLR		
	comp=Z,3µm,15.0s						
MAK	**Makhachkala**	**12.81**	**315**	*e*P	**Pn**	**22 04 28.6**	**+0.9**
	comp=Z,69nm,1.0s						
MAK				*e*S	**Sn**	**22 06 51.5**	**+1.2**
	comp=Z,3µm,15.0s						
MZR	**Muzera**	**12.84**	**208**	P	**Pn**	**22 04 28.0**	**-0.2**
AML	**Almayashu**	**13.16**	**51**	P	**Pn**	**22 04 30.1**	**-2.7**
	SNR=23						
GNI	**Garni**	**13.31**	**299**	P	**Pn**	**22 04 39.3**	**+4.6**
	comp=Z,0.7nm,0.3s,baz=156,slow=3.5,SNR=21						
GNI				LR	LR	22 11 06.6	
	comp=Z,1µm,19.6s,baz=96,slow=43						
GNI	**Garni**	**13.31**	**299**	*e*Pn	Pn	22 04 39.6	+4.9
GNI	**Garni**	**13.31**	**299**	P	**P**	**22 04 41.1**	**-3.4**
	SNR=16						
GNI	**Garni**	**13.31**	**299**	*i* P	**Pn**	**22 04 34.9**	**+0.2**
	SNR=14						
GNI	**Garni**	**13.31**	**299**	*d i*P	P	22 04 39.7	-4.8
GNI				pmax	pmax		
	comp=Z,399nm,1.7s						
GNI	**Garni**	**13.31**	**299**	P	**Pn**	**22 04 34.9**	**+0.2**
	SNR=14						
GNI	**Garni**	**13.31**	**299**	*e*Pn	Pn	22 04 39.6	+4.9
EKS2	**Erkin-Say**	**13.49**	**49**	P	**Pn**	**22 04 35.3**	**-1.7**
	SNR=61						
KSH	**Kashi**	**13.72**	**64**	P	Pn	22 04 33.8	-6.4
KSH				sP	P	22 04 45.4	-3.5
KSH				PP	**PnPn**	**22 04 46.6**	**-1.4**
KSH				S	Sn	22 06 58.6	-14
KSH				SS	**SnSn**	**22 07 14.8**	**-10**
KSH				pmax	pmax		
	comp=Z,190nm,1.2s						
KSH				pmax	pmax		
	comp=Z,440nm,5.3s						
KSH				LR	LR		
	comp=Z,4µm,6.1s						
KSH				LR	LR		
	comp=Z,5µm,7.0s						
KSH				LR	LR		
	comp=Z,5µm,8.8s						
UCH	**Uchtor**	**13.73**	**52**	P	**Pn**	**22 04 39.6**	**-1.1**
	SNR=33						
DHRM	**DHARAMSHALA**	**13.86**	**95**	*e*P	**Pn**	**22 04 45.1**	**+2.9**
DHRM				*e*x	x	22 07 35.8	
AAK	**Ala-Archa**	**13.93**	**50**	P	**Pn**	**22 04 42.4**	**-0.6**
	SNR=60						
AAK	**Ala-Archa**	**13.93**	**50**	*i* P	**Pn**	**22 04 41.8**	**-1.3**
AAK				pmax	pmax		
	comp=Z,186nm,0.6s						
TBLG	**Delisi**	**13.93**	**305**	*e*Pn	**Pn**	**22 04 46.1**	**+3.1**
TBLG	**Delisi**	**13.93**	**305**	*e*Pn	**Pn**	**22 04 46.1**	**+3.1**
GROC	**Groznyy**	**13.98**	**312**	*e*P	**Pn**	**22 04 43.1**	**-0.5**
GROC				*e*S	**Sn**	**22 07 19.5**	**+0.7**
GROC				pmax	pmax		
	comp=Z,37nm,1.1s						
FRU	**Bishkek**	**14.10**	**50**	*i* P	**Pn**	**22 04 44.0**	**-1.4**
FRU				*i* S	**Sn**	**22 07 19.0**	**-2.9**
FRU				pmax	pmax		
	comp=Z,120nm,1.4s						
FRU				pmax	pmax		
	comp=E,10µm,10.0s						
BHJ	**Bhuj**	**14.11**	**140**	*e*P	**Pn**	**22 04 43.5**	**-2.0**
BHJ				IAmb	IAmb	22 04 44.6	
	comp=Z,179nm,0.1s						
KZA	**Kyzart**	**14.15**	**53**	P	**Pn**	**22 04 45.0**	**-1.3**
	SNR=9.3						
KBK	**Karagaybulak**	**14.22**	**51**	P	**Pn**	**22 04 46.4**	**-0.8**
	SNR=74						
USP	**Ospenovka**	**14.26**	**48**	P	**Pn**	**22 04 45.7**	**-1.8**
	SNR=13						
CHMS	**Chumysh**	**14.27**	**49**	P	**Pn**	**22 04 46.8**	**-1.0**
	SNR=23						
NRN	**Naryn**	**14.38**	**57**	*e*Pn	**Pn**	**22 04 45.6**	**-3.9**
NRN	**Naryn**	**14.38**	**57**	*e*P	**Pn**	**22 04 45.6**	**-3.9**
NRN	**Naryn**	**14.38**	**57**	*e*Pn	**Pn**	**22 04 45.6**	**-3.9**
AKH	**Akhalkalaki**	**14.65**	**303**	*e*Pn	**Pn**	**22 04 55.2**	**+2.2**
AKH	**Akhalkalaki**	**14.65**	**303**	*e*P	**Pn**	**22 04 55.2**	**+2.2**
AKH	**Akhalkalaki**	**14.65**	**303**	*e*Pn	**Pn**	**22 04 55.2**	**+2.2**
AB31	**Akbulak array**	**14.68**	**360**	⇓Pn	**Pn**	**22 04 49.6**	**-3.6**
	comp=Z,66nm,0.7s,baz=191,slow=13,SNR=147						
AB31				⇓Sn	**Sn**	**22 07 30.5**	**-5.2**
	comp=Z,36nm,0.9s,baz=129,slow=27,SNR=5.5						
AB31	**Akbulak array**	**14.68**	**360**	*i* P	**Pn**	**22 04 49.5**	**-3.6**
AB31				pmax	pmax		
	comp=Z,66nm,0.7s						

ABKAR	Akbulak array	14.68	360	ePn	Pn	22 04 49.7	-3.4
ABKAR	Akbulak array	14.68	360	ePn	Pn	22 04 49.7	-3.4
TKM2	Tokmak 2	14.77	51	⇓Pn	Pn	22 04 51.9	-2.8
	comp=Z,17nm,0.6s						
TKM2				⇓Sn	Sn	22 07 37.2	-1.2
	comp=Z,31nm,0.9s						
TKM2	Tokmak 2	14.77	51	P	Pn	22 04 52.9	-1.7
	SNR=52						
TKM2	Tokmak 2	14.77	51	i P	Pn	22 04 51.9	-2.8
TKM2				pmax	pmax		
	comp=Z,65nm,0.6s						
SMLA	Simla	14.87	99	eP	P	22 04 59.2	-2.4
SMLA				IAmb	IAmb	22 05 02.1	
	comp=Z,271nm,1.8s						
SMLA				ex	x	22 08 01.3	
SMLA				IAML		22 08 46.7	
	comp=E,11nm,1.6s						
SMLA				IAML		22 08 47.5	
ULHL	Ulahol	14.88	54	P	Pn	22 04 54.9	-1.3
	SNR=8.7						
ZEI	Tsey	14.96	308	eP	P	22 05 02.3	-0.6
ZEI				pmax	pmax		
	comp=Z,70nm,1.0s						
BTLS	Baital	15.04	42	eP	Pn	22 04 57.3	-0.8
	comp=Z,3.5nm,0.7s						
BTLS				LR	LR	22 11 46.6	
	comp=Z,1µm,11.1s						
NCK	Nalchik	15.50	310⇑	eP	Pn	22 05 03.9	-0.3
KUU	Kurty	15.72	49	eP	Pn	22 05 07.1	0.0
	comp=Z,13nm,0.7s						
KUU				LR	LR	22 12 16.7	
	comp=Z,3µm,9.8s						
AAA	Alma-Ata	15.76	52	eP	Pn	22 05 07.9	+0.3
AAA				eS	Sn	22 08 01.9	-0.3
AAA				pmax	pmax		
	comp=Z,400nm,3.4s						
AAA				smax	smax		
	comp=N,2µm,8.2s						
AAA				MLR	MLR		
	comp=Z,5µm,15.0s						
MDOK	Medeo	15.82	52	eP	Pn	22 05 09.4	+0.9
	comp=Z,404nm,0.6s						
MDOK				LR	LR	22 11 56.9	
	comp=Z,5µm,14.8s						
NDI	New Delhi	15.83	107	eP	Pn	22 05 10.0	+1.5
DDI	Dehra Dun	15.86	100	eP	P	22 05 11.2	-1.5
AKTO	Aktyubinsk	15.92	355	P	Pn	22 05 07.6	-2.0
	comp=Z,1.2nm,0.3s,baz=183,slow=13,SNR=15						
AKTO				S	Sn	22 08 00.8	-5.2
	comp=Z,0.9nm,0.3s,baz=42,slow=16,SNR=3.7						
AKTO				LR	LR	22 12 20.9	
	comp=Z,2µm,18.2s,baz=165,slow=41						
AKTO	Aktyubinsk	15.92	355	⇑Pn	Pn	22 05 07.4	-2.1
	comp=Z,153nm,1.2s						
AKTO				⇓Sn	Sn	22 08 07.0	+1.1
	comp=Z,98nm,1.6s						
NEY	Neytrino	15.94	308⇓	eP	P	22 05 12.6	-1.1
NEY	Neytrino	15.94	308	eP	P	22 05 12.6	-1.1
KBZ	Khabaz	16.06	310	P	Pn	22 05 10.0	-1.3
	comp=Z,1.2nm,0.3s,baz=128,slow=9.3,SNR=8.6						
KBZ				LR	LR	22 13 04.2	
	comp=Z,728nm,20.5s,baz=124,slow=43						
KBZ	Khabaz	16.06	310	P	Pn	22 05 10.0	-1.3
KBZ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KBZ				MLR	MLR		
	comp=Z,729nm,20.5s						
KBZ	Khabaz	16.06	310	P	Pn	22 05 10.0	-1.3
KVAR	Kislovodsk Arr	16.30	310	P	Pn	22 05 14.2	-0.3
	baz=85,slow=17,SNR=9.2						
KVAR				LR	LR	22 13 19.7	
	comp=Z,671nm,19.0s,baz=110,slow=43						
KIV	Kislovodsk	16.30	310	ePn	Pn	22 05 13.5	-1.1
	comp=Z,205nm,1.1s						
KIV	Kislovodsk	16.30	310	P	Pn	22 05 13.5	-1.1
	SNR=32						
KIV	Kislovodsk	16.30	310	i P	Pn	22 05 13.4	-1.1
	SNR=22						
KIV	Kislovodsk	16.30	310	eP	Pn	22 05 15.9	+1.3
KIV				pmax	pmax		
	comp=Z,190nm,1.1s						
KIV				MLR	MLR		
	comp=Z,367nm,13.0s						
KIV	Kislovodsk	16.30	310	eP	Pn	22 05 15.9	+1.3
	comp=Z,367nm,13.0s						
PRZ	Przheval'sk	16.44	56	ePn	Pn	22 05 14.9	-1.5
	comp=Z,578nm,1.1s						
PRZ	Przheval'sk	16.44	56	eP	Pn	22 05 15.0	-1.5
PRZ				pmax	pmax		
	comp=Z,578nm,1.1s						
PRZ	Przheval'sk	16.44	56	ePn	Pn	22 05 14.9	-1.5
	comp=Z,578nm,1.1s						
OTUK	Ortayu	16.49	30	⇑Pn	Pn	22 05 13.8	-3.2
	comp=Z,29nm,0.8s						
OTUK				⇑Sn	Sn	22 08 12.5	-7.5
	comp=Z,48nm,0.7s						
SATY	Saty	16.67	54	eP	Pn	22 05 20.1	+0.8
	comp=Z,15nm,0.9s						
SATY				LR	LR	22 12 46.2	
	comp=Z,1µm,11.6s						
RAYN	Ar Rayn	16.73	233	ePn	Pn	22 05 16.2	-4.0
	comp=Z,785nm,1.3s						
RAYN	Ar Rayn	16.73	233	i P	Pn	22 05 17.9	-2.2
	SNR=106						
RAYN	Ar Rayn	16.73	233	eP	Pn	22 05 16.2	-4.0
RAYN				pmax	pmax		
	comp=Z,785nm,1.3s						
RAYN	Ar Rayn	16.73	233	ePn	Pn	22 05 16.2	-4.0
	comp=Z,785nm,1.3s						
KPKS	Kokpek	17.03	53	eP	Pn	22 05 23.9	+0.1
	comp=Z,4.7nm,0.7s						
KPKS				eS	Sn	22 08 33.3	+0.2
KPKS				LR	LR	22 12 48.2	
	comp=Z,1µm,11.4s						
UZB	Uzynbulak	17.12	54	eP	Pn	22 05 25.1	0.0
	comp=Z,4.7nm,0.8s						
UZB				LR	LR	22 13 08.7	
	comp=Z,571nm,9.7s						
SHLS	Shalkode	17.42	55	eP	P	22 05 32.5	+2.5
	comp=Z,5.5nm,0.9s						
SHLS				eS	S	22 08 49.6	-1.5
SHLS				LR	LR	22 13 33.4	
	comp=Z,781nm,11.3s						
PDGK	Podgornoye	17.51	54	⇑Pn	P	22 05 31.1	0.0
	comp=Z,103nm,1.2s						
PDGK	Podgornoye	17.51	54	i P	P	22 05 31.0	0.0
PDGK				pmax	pmax		
	comp=Z,187nm,1.4s						
PDGK	Podgornoye	17.51	54	i P	P	22 05 31.0	0.0
	comp=Z,187nm,1.4s						
BRZS	Berezniki	18.01	27	eP	P	22 05 36.9	+0.5
	comp=Z,26nm,1.0s						
BRZS				eS	Sn	22 08 58.3	+1.6
BRZS				LR	LR	22 14 10.0	
	comp=Z,827nm,9.0s						
SOC	Sochi	18.07	306d	iP	P	22 05 37.6	+0.6
SOC				e		22 08 58.9	
SOC				pmax	pmax		
	comp=Z,34nm,0.8s						
SOC				MLR	MLR		
	comp=Z,780nm,12.0s						
SOC	Sochi	18.07	306	i P	P	22 05 37.6	+0.6
	comp=Z,34nm,0.8s						
BHPL	Bhopal	18.98	122	eP	Pn	22 05 47.9	0.0
BHPL				IAmb	IAmb	22 05 48.7	
	comp=Z,27nm,1.0s						
ASF	Jabal al Asfar	19.39	269	P	Pn	22 05 53.8	+0.8
	comp=Z,0.6nm,0.3s,baz=34,slow=5.8,SNR=25						
ASF				LR	LR	22 14 54.5	
	comp=Z,2µm,18.2s,baz=27,slow=41						
HWQ	Hawqa	19.80	276	eP	Pn	22 05 57.9	+0.1
BVA0	Borovoye Array	19.89	19	Pn	Pn	22 05 58.0	-0.6
	comp=Z,194nm,1.6s,baz=197,slow=11,SNR=350						
BVA0	Borovoye Array	19.89	19	Pn	Pn	22 05 58.0	-0.6
	comp=Z,194nm,1.6s,SNR=350						
BVAR	Borovoye Array	19.89	19	P	Pn	22 05 58.5	0.0
	comp=Z,7.7nm,0.3s,baz=197,slow=11,SNR=179						
BVAR				S	S	22 09 30.9	-10
	comp=Z,0.9nm,0.3s,baz=207,slow=16,SNR=3.7						
BVAR				LR	LR	22 14 44.9	
	comp=Z,2µm,21.1s,baz=208,slow=40						
BRVK	Borovoye	19.89	19	eP	Pn	22 05 58.1	-0.5
	comp=Z,714nm,1.5s						
BRVK	Borovoye	19.89	19	eP	Pn	22 05 58.1	-0.5
BRVK				pmax	pmax		
	comp=Z,714nm,1.5s						
BRVK	Borovoye	19.89	19	eP	Pn	22 05 58.1	-0.5
	comp=Z,714nm,1.5s						
RCY	Rachaya	20.01	274	eP	Pn	22 06 00.1	-0.2
ANN	Anapa	20.06	307c	iP	P	22 05 59.7	+0.9
ANN				i S	Sn	22 09 46.9	+0.8
ANN				i SS	SnSn	22 10 04.0	+3.6
ANN				pmax	pmax		
	comp=Z,149nm,1.4s						
ANN				MLR	MLR		
	comp=E,142nm,14.0s						
ANN				MLR	MLR		
	comp=Z,761nm,14.0s						
ANN				MLR	MLR		
	comp=N,437nm,13.0s						
ANN	Anapa	20.06	307	i P	P	22 05 59.7	+0.9
	comp=N,149nm,1.4s						
BHL	Bhannes	20.09	275	eP	Pn	22 06 01.1	-0.1
SHBL	Chebaa	20.11	273	eP	Pn	22 06 01.4	0.0
POO	Poona	20.21	139	eP	P	22 06 01.5	+0.9
POO				IAmb	IAmb	22 06 02.2	
	comp=Z,35nm,0.8s						
MMAI	Mount Meron Ar	20.45	273	P	Pn	22 06 05.0	-0.4
	comp=Z,33nm,0.9s,baz=88,slow=14,SNR=42						
MAKZ	Makanchi	20.62	47	eP	P	22 06 06.1	+1.1
	comp=Z,326nm,1.6s						
MAKZ	Makanchi	20.62	47	eP	P	22 06 06.1	+1.1
MAKZ				pmax	pmax		
	comp=Z,326nm,1.6s						
PYUN	Piuthan	20.69	102	eP	P	22 06 04.7	-1.3
	comp=Z,856nm,1.3s						
MK01	Makanchi Array	20.80	47	eP	P	22 06 07.1	+0.2
MK01	Makanchi Array	20.80	47	eP	P	22 06 07.1	+0.2
MK31	Makanchi Array	20.80	47	P	P	22 06 07.5	+0.6
	comp=Z,4.5nm,0.7s,baz=234,slow=9.3,SNR=175						
MK31	Makanchi Array	20.80	47	eP	Pn	22 06 08.3	-1.1
MK31	Makanchi Array	20.80	47	eP	Pn	22 06 08.3	-1.1
MK31	Makanchi Array	20.80	47	eP	Pn	22 06 08.3	-1.1
MKAR	Makanchi Array	20.80	47	P	P	22 06 07.7	+0.7
	comp=Z,4.2nm,0.6s,baz=234,slow=9.1,SNR=31						
MKAR				PcP	PcP	22 10 14.5	-1.1
	comp=Z,3.1nm,0.7s,baz=222,slow=1.9,SNR=3.7						
MKAR				LR	LR	22 14 21.4	
	comp=Z,321nm,19.9s,baz=243,slow=37						
MKAR	Makanchi Array	20.80	47	eP	Pn	22 06 08.3	-1.1
	comp=Z,283nm,0.9s						
MKAR				PcP	PcP	22 10 14.5	-1.1
MKAR	Makanchi Array	20.80	47	eP	Pn	22 06 08.3	-1.1
MKAR						22 10 14.5	
MKAR				pmax	pmax		
	comp=Z,283nm,0.9s						
MKAR	Makanchi Array	20.80	47	eP	Pn	22 06 08.3	-1.1
	comp=Z,283nm,0.9s						
JBP	Jabalpur	20.86	118	eP	P	22 06 08.3	+0.7
JBP				IAmb	IAmb	22 06 13.9	
	comp=Z,592nm,0.4s						
KURBB	Kurchatov Arra	20.99	35	P	Pn	22 06 10.4	-1.1
	comp=Z,15nm,0.9s,baz=232,slow=11,SNR=81						
KURBB	Kurchatov Arra	20.99	35	⇓P	P	22 06 10.0	+1.1
	comp=Z,133nm,1.1s						
KURBB	Kurchatov Arra	20.99	35	P	P	22 06 10.0	+1.1
	comp=Z,133nm,1.1s						
KURK	Kurchatov	21.09	34	⇓P	P	22 06 10.2	+0.2
	comp=Z,220nm,1.4s						
KURK	Kurchatov	21.09	34	eP	P	22 06 11.5	+1.5
	comp=Z,271nm,1.4s						
KURK	Kurchatov	21.09	34	P	P	22 06 12.4	+2.4
	SNR=85						
KURK	Kurchatov	21.09	34c	iP	P	22 06 11.3	+1.3
KURK				pmax	pmax		
	comp=Z,88nm,1.3s						
DANN	Dangsing	21.21	100	eP	P	22 06 11.0	-0.8
	comp=Z,257nm,0.7s						
KOLN	Koldanda	21.32	102	eP	P	22 06 11.6	-1.2
	comp=Z,73nm,0.7s						
NGP	Nagpur	21.49	124	eP	P	22 06 14.4	-0.1
BR131	Keskin Array S	21.56	292	eP	P	22 06 15.8	+0.5
BR131	Keskin Array S	21.56	292	eP	P	22 06 15.8	+0.5
BRTR	Keskin Array B	21.56	292	P	P	22 06 15.7	+0.5
	comp=Z,60nm,1.2s,baz=111,slow=9.5,SNR=60						
BRTR				S	S	22 10 07.5	-6.6
	comp=Z,1.9nm,1.0s,baz=107,slow=9.5,SNR=2.9						
BRTR				LR	LR	22 15 48.9	
	comp=Z,598nm,18.1s,baz=100,slow=40						
ILGA	Ilgaz	21.67	295	eP	P	22 06 15.8	-0.7
	comp=Z,89nm,1.2s						
ILGA	Ilgaz	21.67	295	eP	P	22 06 15.8	-0.7
	comp=Z,89nm,1.2s						
SEM	Semipalatinsk	21.68	37	eP	P	22 06 17.5	+1.0
	comp=Z,36nm,1.3s						
SEM				LR	LR	22 15 43.3	
	comp=Z,2µm,12.4s						
EIL	Elat	21.71	264	P	P	22 06 23.2	+6.4
	comp=Z,62nm,1.1s,baz=97,slow=3.4,SNR=23						
CSS	Mathiatis	21.85	279	eP	P	22 06 19.7	+1.4
	comp=Z,16nm,1.1s						
CSS	Mathiatis	21.85	279	P	S	22 10 20.8	+1.0
CSS	Mathiatis	21.85	279	eP	P	22 06 19.7	+1.4
	comp=Z,16nm,1.1s						
ARU	Arti	21.88	358	P	P	22 06 19.2	+0.8
	comp=Z,62nm,0.9s,baz=173,slow=6.8,SNR=81						
ARU	Arti	21.88	358	eP	P	22 06 18.7	+0.3
	comp=Z,236nm,1.0s						
ARU	Arti	21.88	358c	iP	P	22 06 19.2	+0.8
ARU				PPP	PPP	22 06 49.6	
ARU				S	S	22 10 22.7	+2.8
ARU				SS	SnSn	22 10 49.3	+4.1
ARU				pmax	pmax		
	comp=Z,232nm,1.7s						
ARU				MLR	MLR		
	comp=Z,1µm,16.0s						
ARU	Arti	21.88	358	i P	P	22 06 19.2	+0.8
	comp=Z,232nm,1.7s						
MAMC	Mammari	21.92	279	P	P	22 06 20.3	+1.3
GKN	Gorkha	22.06	100	eP	P	22 06 19.7	-1.1
	comp=Z,319nm,1.2s						
VORD	Divnogorie	22.21	324	eP	P	22 06 21.0	-0.9
VORD				pmax	pmax		
	comp=Z,20nm,0.8s						
VORD	Divnogorie	22.21	324	eP	P	22 06 21.0	-0.9
	comp=Z,20nm,0.8s						
ANTO	Ankara	22.22	292⇓	iP	P	22 06 24.0	+1.7
ANTO	Ankara	22.22	292	eP	P	22 06 24.6	+2.3
	comp=Z,48nm,0.9s						
ANTO	Ankara	22.22	292	P	P	22 06 24.3	+2.0
	SNR=18						
ANTO	Ankara	22.22	292	eP	P	22 06 24.6	+2.3
ANTO				pmax	pmax		
	comp=Z,48nm,0.9s						
ANTO	Ankara	22.22	292	P	P	22 06 24.3	+2.0
	SNR=18						
BR231	Keskin MP Arra	22.23	292	eP	P	22 06 24.7	+2.2
BR231	Keskin MP Arra	22.23	292	eP	P	22 06 24.7	+2.2
SZAC	Souni	22.25	278	P	P	22 06 20.9	-1.7
SIM	Simferopol'	22.31	305	eP	P	22 06 23.1	-0.1
SIM				eS	S	22 10 32.0	+3.6
SIM				pmax	pmax		
	comp=Z,368nm,1.1s						
SIM				MLR	MLR		
	comp=Z,300nm,12.0s						
SIM	Simferopol'	22.31	305	eP	P	22 06 23.1	-0.1
	comp=Z,368nm,1.1s						
VSR	Storozhevoye	22.43	324	eP	P	22 06 23.1	-1.2
VSR				eS	S	22 10 27.9	-2.5
VSR				pmax	pmax		
	comp=Z,70nm,1.3s						
VSR				smax	smax		
	comp=N,370nm,10.4s						
VSR				MLR	MLR		
	comp=Z,510nm,12.0s						
VSR	Storozhevoye	22.43	324	eP	P	22 06 23.1	-1.2
	comp=Z,70nm,1.3s						
DMN	Daman	22.60	101	eP	P	22 06 25.7	-0.9
	comp=Z,357nm,1.1s						
AKMC	Akamas	22.66	279	P	P	22 06 28.9	+1.9
KKN	Kakani	22.67	100	eP	P	22 06 26.0	-1.3
	comp=Z,146nm,0.8s						
PPCY	Paphos	22.67	279	P	P	22 06 26.3	-0.7
ZSN	Zaisan	22.67	48	eP	P	22 06 28.1	+1.1
	comp=Z,25nm,1.3s						
ZSN				eS	S	22 10 36.1	+1.1
ZSN				LR	LR	22 16 31.8	
	comp=Z,382nm,9.1s						
VORR	Voronezh	22.70	325	eP	P	22 06 29.0	+1.8
VORR				pmax	pmax		
	comp=Z,350nm,2.0s						
GUN	Gumba	23.11	100	eP	P	22 06 31.7	-0.3
	comp=Z,318nm,0.8s						
WMQ	Urumqi	23.32	58	P	P	22 06 36.6	+2.9
WMQ				pP	sP	22 06 43.8	+5.5
WMQ				PcP	PcP	22 10 26.5	+5.8
WMQ				S	S	22 10 48.5	+2.3
WMQ				pmax	pmax		
	comp=Z,160nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,590nm,3.7s						
WMQ				LR	LR		
	comp=Z,3µm,24.9s						
WMQ				LR	LR		
	comp=Z,2µm,24.1s						
WMQ				LR	LR		
	comp=Z,1µm,28.9s						
JIRN	Jiri	23.46	100	eP	P	22 06 34.5	-1.1
	comp=Z,426nm,1.1s						
HYB	Hyderabad	23.83	131	i P	P	22 06 40.0	+1.0
HYB	Hyderabad	23.83	131	eP	P	22 06 38.9	0.0
HYB				IAmb	IAmb	22 06 43.3	
	comp=Z,73nm,0.9s						
ISP	Isparta	23.92	286⇑	iP	P	22 06 40.2	+0.4
ISP	Isparta	23.92	286	eP	P	22 06 39.2	-0.6
	comp=Z,356nm,1.9s						
ISP	Isparta	23.92	286	P	S	22 10 53.7	-2.5
ISP	Isparta	23.92	286c	iP	P	22 06 39.7	-0.1
ISP				pmax	pmax		
	comp=Z,105nm,1.5s						
ISP	Isparta	23.92	286	i P	P	22 06 39.7	-0.1
	comp=Z,105nm,1.5s						
RAMN	Ramite	24.08	101	eP	P	22 06 40.7	-0.8
	comp=Z,232nm,1.0s						
DAMY	Dhamar	24.36	219	eP	P	22 06 45.6	+1.4
	comp=Z,178nm,1.0s						
ODAN	Odare	24.76	101	eP	P	22 06 47.9	+0.2
	comp=Z,310nm,1.0s						
BOK	Bokaro	24.99	109	eP	P	22 06 49.2	-0.4
BOK				IAmb	IAmb	22 06 51.0	
	comp=Z,67nm,1.0s						
DGZ	Jazzator, Alta	25.19	45	i P	P	22 06 52.7	+1.4
DGZ				pmax	pmax		
	comp=Z,16nm,0.7s						
MANT	Manisa	25.46	288	eP	P	22 06 54.1	+0.2
	comp=Z,160nm,1.1s						
MANT	Manisa	25.46	288	eP	P	22 06 54.1	+0.2
	comp=Z,160nm,1.1s						
GTK	Tadong	25.56	99	eP	P	22 06 56.7	+1.9
GTK				IAmb	IAmb	22 07 00.9	
	comp=Z,247nm,1.6s						
EFOR	EFORIE	25.89	301⇓	iP	P	22 06 58.8	+1.3
NVS	Novosibirsk	25.95	32⇓	iP	P	22 07 00.0	+2.1
NVS				eS	S	22 11 32.4	+4.4
NVS				pmax	pmax		
	comp=N,102nm,1.6s						
NVS				pmax	pmax		
	comp=Z,132nm,1.6s						
NVS				pmax	pmax		
	comp=E,28nm,1.8s						
NVS				smax	smax		
	comp=N,43nm,2.0s						
NVS				smax	smax		
	comp=E,36nm,2.0s						
TLCR		25.99	303⇑	iP	P	22 06 59.3	+0.9
ZAA0	Zalesovo Array	26.09	34	⇑P	P	22 06 59.6	+0.5
	comp=E,128nm,1.1s						
ZAA0	Zalesovo Array	26.09	34	eP	P	22 06 59.5	+0.3
ZAA0				epP	P	22 07 00.0	+0.8
ZALV	Zalesovo Beam	26.09	34	P	P	22 06 59.9	+0.7
	comp=E,33nm,0.8s,baz=242,slow=9.0,SNR=29						
ZALV	Zalesovo Beam	26.09	34	eP	P	22 06 59.3	+0.1
TIRR	Tirgusor	26.12	302⇑	iP	P	22 06 59.9	+0.4
TIRR	Tirgusor	26.12	302	eP	P	22 06 59.1	-0.4
	comp=E,24nm,0.9s						
TIRR	Tirgusor	26.12	302	eP	P	22 06 59.1	-0.4
TIRR				pmax	pmax		
	comp=Z,24nm,0.9s						
TIRR	Tirgusor	26.12	302	eP	P	22 06 59.1	-0.4
	comp=Z,24nm,0.9s						
PSN	Preselentsi	26.14	300	eP	P	22 07 00.1	+0.4
MOS	Moscow	26.16	331	eP	P	22 07 00.4	+0.6
MOS				i		22 07 06.3	
MOS				e		22 07 39.5	
MOS				e		22 11 31.5	
MOS				pmax	pmax		
	comp=Z,128nm,1.4s						
MOS				MLR	MLR		
	comp=Z,1µm,16.0s						
OBN	Obninsk	26.17	329	eP	P	22 07 00.5	+0.6
	comp=Z,554nm,1.1s						
OBN	Obninsk	26.17	329c	iP	P	22 06 59.8	-0.1
OBN				ePPP	PPP	22 07 46.8	
OBN				i S	S	22 11 31.0	-0.4
OBN				pmax	pmax		
	comp=Z,289nm,1.2s						
OBN				MLR	MLR		
	comp=Z,680nm,16.0s						
TLB	Topalu	26.40	302⇑	iP	P	22 07 02.7	+0.6
CFR	Carcaliu	26.46	303⇓	iP	P	22 07 02.8	+0.2
KIS	Kishinev	26.46	307⇑	iP	P	22 07 03.0	+0.4
	comp=Z,400nm,2.0s						
KIS				eS	S	22 11 40.0	+3.8
KIS				eLQ	LQ	22 16 03.0	
KIS				LRM	MLR	22 19 56.0	
	comp=Z,1µm,15.0s						
KIS	Kishinev	26.46	307⇑	iP	P	22 07 03.7	+1.1
KIS	Kishinev	26.46	307α	iP	P	22 07 03.0	+0.4
KIS				i		22 07 10.0	
KIS				e		22 07 50.0	
KIS				e		22 08 02.0	
KIS				eS	S	22 11 40.0	+3.8
KIS				i		22 11 56.0	
KIS				pmax	pmax		
	comp=Z,400nm,2.0s						
KIS				pmax	pmax		
	comp=Z,400nm,2.0s						
KIS				MLR	MLR		
	comp=Z,1µm,14.0s						
KIS				MLR	MLR		
	comp=E,1µm,15.0s						
KIS	Kishinev	26.46	307	i P	P	22 07 03.0	+0.4
	comp=E,400nm,2.0s						
ICOR	Ion Corvin	26.48	301⇑	iP	P	22 07 03.0	+0.1
PRD	Provadia	26.63	299	eP	P	22 07 04.4	+0.2
LEOM	Leova	26.69	306⇓	iP	P	22 07 05.9	+1.2
LSA	Lhasa	26.80	92	P	P	22 07 06.3	-0.1
LSA				pmax	pmax		
	comp=E,5.0nm,1.7s						
LSA	Lhasa	26.80	92	eP	P	22 07 07.2	+0.8
	comp=E,35nm,0.9s						
LSA	Lhasa	26.80	92	P	P	22 07 06.8	+0.4
LSA	Lhasa	26.80	92	eP	P	22 07 07.2	+0.8
LSA				pmax	pmax		
	comp=Z,35nm,0.9s						
LSA	Lhasa	26.80	92	eP	P	22 07 07.2	+0.8
	comp=Z,35nm,0.9s						
BWNR	Bhubaneshwar	26.90	115	eP	P	22 07 06.4	-0.4
SORM	Soroca	27.10	310⇓	iP	P	22 07 08.5	+0.1
PETR	Petresti	27.20	304⇓	iP	P	22 07 11.8	+2.5
PGOR	Pogoanele	27.20	302⇓	iP	P	22 07 10.5	+1.2
IAS	Iasi	27.34	307⇓	iP	P	22 07 11.2	+0.7
ALN	Alexandroupoli	27.43	293	eP	P	22 07 12.9	+1.5
	comp=Z,19nm,1.1s						
ALN	Alexandroupoli	27.43	293	P	P	22 07 11.7	+0.3
ALN	Alexandroupoli	27.43	293	P	P	22 07 11.7	+0.3
AKASG	Malin Array Be	27.50	315	P	P	22 07 12.1	+0.2
	comp=Z,29nm,1.0s,baz=111,slow=7.9,SNR=36						
AKASG				PcP	PcP	22 10 28.9	-1.0
	comp=Z,1.2nm,0.4s,baz=86,slow=2.9,SNR=4.6						
AKASG				LR	LR	22 20 41.2	
	comp=Z,790nm,18.2s,baz=105,slow=42						
AKASG	Malin Array Be	27.50	315	P	P	22 07 12.1	+0.2
AKASG						22 10 28.9	
AKASG				pmax	pmax		
	comp=Z,22nm,0.9s						
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKASG				MLR	MLR		
	comp=Z,790nm,18.3s						
AKBB	Malin Array Si	27.50	315	eP	P	22 07 11.2	-0.7
	comp=Z,50nm,0.8s						
AKBB	Malin Array Si	27.50	315	eP	P	22 07 11.2	-0.7
AKBB				pmax	pmax		
	comp=Z,50nm,0.8s						
KIEV	Kiev	27.51	315	eP	P	22 07 11.5	-0.5
	comp=Z,48nm,0.8s						
KIEV	Kiev	27.51	315	i P	P	22 07 10.0	-2.0

	SNR=44						
KIEV	Kiev	27.51	315	c iP	P	22 07 11.4	-0.6
KIEV				pmax	pmax		
	comp=Z,30nm,1.1s						
KIEV				MLR	MLR		
	comp=Z,896nm,17.0s						
KIEV	Kiev	27.51	315	eP	P	22 07 11.5	-0.5
	comp=Z,48nm,0.8s						
AK11	Malin Array Si	27.52	315	eP	P	22 07 11.4	-0.7
ISR	Istrita	27.55	303	⇑iP	P	22 07 14.2	+1.7
VRI	Vrincioaia	27.57	304	⇓iP	P	22 07 13.9	+1.2
PLOR	Plostina	27.62	304	⇑iP	P	22 07 14.8	+1.6
SULR		27.67	302	⇑iP	P	22 07 15.2	+1.7
SZH	Strazhica	27.70	298	eP	P	22 07 13.4	-0.4
ATD	Arta Tunnel	27.73	218	P	P	22 07 15.6	+1.3
	comp=Z,16nm,1.1s,baz=17,slow=1.3,SNR=5.9						
ATD	Arta Tunnel	27.73	218	eP	P	22 07 15.1	+0.8
	comp=Z,34nm,1.1s						
TESR	Tescani	27.77	306	⇑iP	P	22 07 15.4	+1.0
APE	Apeiranthos	27.93	285	⇓eP	P	22 07 18.4	+2.4
APE				pmax	pmax		
	comp=Z,92nm,1.7s						
MLR	Muntele Rosu	28.03	303	P	P	22 07 19.3	+2.4
	comp=Z,18nm,1.1s,baz=60,slow=4.8						
MLR	Muntele Rosu	28.03	303	⇓iP	P	22 07 19.1	+2.1
MLR	Muntele Rosu	28.03	303	eP	P	22 07 18.8	+1.8
	comp=Z,190nm,1.3s						
MLR	Muntele Rosu	28.03	303	⇓iP	P	22 07 19.1	+2.1
BIZ	Bicaz	28.23	306	⇑iP	P	22 07 20.2	+1.6
PRAR	RASCA	28.26	307	⇑iP	P	22 07 19.7	+0.9
RZN	Rozhen	28.47	295	eP	P	22 07 21.2	+0.3
DOPR	Dopca	28.51	304	⇑iP	P	22 07 23.1	+2.1
HUMR	Humele	28.55	301	⇑iP	P	22 07 22.5	+1.1
PRGR	Permogore	28.59	346	⇑iP	P	22 07 21.0	-0.5
PRGR				pmax	pmax		
	comp=Z,49nm,1.3s						
VOIR		28.64	303	⇓iP	P	22 07 23.3	+1.0
IDI	Anoyia	28.67	282	P	P	22 07 21.8	-0.8
	comp=Z,23nm,1.2s,baz=356,slow=2.5,SNR=5.7						
IDI				LR	LR	22 21 47.0	
	comp=Z,273nm,21.1s,baz=142,slow=42						
ARR	Arges	28.92	303	⇓iP	P	22 07 25.8	+1.0
PGB	Panagyurishte	28.93	297	eP	P	22 07 24.4	-0.4
SHL	Shillong	28.96	99	eP	P	22 07 27.2	+1.8
BURAR	Bucovina Array	28.98	307	⇑iP	P	22 07 26.3	+1.0
BUR04	Bucovina Ar. S	28.99	307	eP	P	22 07 25.0	-0.4
BUR04	Bucovina Ar. S	28.99	307	eP	P	22 07 25.0	-0.4
BUR08	Bucovina Ar. S	29.00	307	eP	P	22 07 26.1	+0.6
NVR	Nevrokopi	29.09	294	P	P	22 07 26.7	+0.4
NVR	Nevrokopi	29.09	294	P	P	22 07 26.7	+0.4
NVR	Nevrokopi	29.09	294	P	P	22 07 26.7	+0.4
MMB	Musomiste	29.20	295	eP	P	22 07 26.7	-0.6
PAIG	Paliouri	29.23	291	P	P	22 07 26.9	-0.5
PAIG	Paliouri	29.23	291	P	P	22 07 26.9	-0.5
PAIG	Paliouri	29.23	291	P	P	22 07 26.9	-0.5
SRS	Serrai	29.29	294	P	P	22 07 28.1	0.0
SRS	Serrai	29.29	294	P	P	22 07 28.1	0.0
SRS	Serrai	29.29	294	P	P	22 07 28.1	0.0
KLMR	Klimovskoe	29.42	340	eP	P	22 07 27.6	-1.3
KLMR				eS	S	22 12 23.0	+0.6
KLMR				pmax	pmax		
	comp=Z,135nm,1.4s						
KLMR	Klimovskoe	29.42	340	eP	P	22 07 27.6	-1.3
KLMR				AMP		22 07 34.0	
	comp=Z,135nm,1.4s						
KLMR				eS	S	22 12 23.1	+0.6
KLMR				eS	S	22 12 23.1	+0.6
KLMR				LQ	LQ	22 17 26.1	
KLMR				LQ	LQ	22 17 26.1	
KLMR				LR	LR	22 19 57.6	
ARCR	ARCALIA	29.44	306	⇓iP	P	22 07 31.6	+2.4
HVS	Khovu-Aksy	29.44	45	⇑eP	P	22 07 31.7	+2.4
HVS				pmax	pmax		
	comp=Z,7.0nm,0.8s						
LOT	Lotru	29.54	303	⇓iP	P	22 07 31.0	+0.7
XOR	Xorichti	29.62	290	P	P	22 07 30.2	-0.8
XOR	Xorichti	29.62	290	P	P	22 07 30.2	-0.8
XOR	Xorichti	29.62	290	P	P	22 07 30.2	-0.8
SMIA	Simia	29.63	289	P	P	22 07 30.3	-0.8
VTS	Vitosha	29.64	297	⇑iP	P	22 07 32.3	+1.1
VTS	Vitosha	29.64	297	eP	P	22 07 31.8	+0.5
	comp=Z,126nm,2.0s						
VTS	Vitosha	29.64	297	eP	P	22 07 31.5	+0.3
VTS	Vitosha	29.64	297	P	P	22 07 31.7	+0.5
VTS	Vitosha	29.64	297	P	P	22 07 31.7	+0.5
KKB	Krupnik	29.70	295	eP	P	22 07 28.9	-2.7
ZIRO	ZIRO	29.78	94	eP	P	22 07 34.4	+1.7
KNT	Kendrikon	29.82	294	P	P	22 07 23.8	-8.9
KNT	Kendrikon	29.82	294	P	P	22 07 23.8	-8.9
KNT	Kendrikon	29.82	294	P	P	22 07 23.8	-8.9
KNT	Kendrikon	29.82	294	P	P	22 07 23.8	-8.9
CJR	Cluj-Napoca	29.87	305	⇓iP	P	22 07 35.2	+2.1
MICGM	Minsk	29.93	322	eP	P	22 07 35.0	+1.5
MICGM				epP	sP	22 08 00.0	+22
MICGM				ePP	PP	22 08 36.0	-4.9
MICGM				ePPP	PPP	22 08 50.0	
MICGM				eS	S	22 12 32.0	+1.4
MICGM				eSS	SnSn	22 14 06.0	+4.5
MICGM				eSSS	SSS	22 14 34.0	
MICGM				eLR	LR	22 20 56.0	
MNK	Minsk	29.93	322	eP	P	22 07 35.0	+1.5
MNK				e		22 08 36.0	
MNK				ePPP	PPP	22 08 50.0	
MNK				eS	S	22 12 32.0	+1.4
MNK				eSS	SnSn	22 14 06.0	+4.5
MNK				eSSS	SSS	22 14 34.0	
VAY	Valandovo	30.07	294	P	P	22 07 31.1	-3.8
VAY	Valandovo	30.07	294	P	P	22 07 31.1	-3.8
VAY	Valandovo	30.07	294	eP	P	22 07 35.3	+0.4
VAY	Valandovo	30.07	294	P	P	22 07 31.1	-3.8
VAY	Valandovo	30.07	294	P	P	22 07 31.1	-3.8
BMR	Baia Mare	30.13	307	⇓iP	P	22 07 37.3	+1.9
LIT	Litokhoron	30.14	292	eP	P	22 07 35.6	+0.1
	comp=Z,34nm,1.1s						
LIT	Litokhoron	30.14	292	P	P	22 07 34.5	-1.0
LIT	Litokhoron	30.14	292	P	P	22 07 34.5	-1.0
GRG	Griva	30.19	293	P	P	22 07 35.4	-0.6
GRG	Griva	30.19	293	P	P	22 07 35.4	-0.6
GRG	Griva	30.19	293	P	P	22 07 35.4	-0.6
GRG	Griva	30.19	293	P	P	22 07 35.4	-0.6
AGG	Agios Georgios	30.31	290	eP	P	22 07 36.7	-0.4
AGG	Agios Georgios	30.31	290	P	P	22 07 28.8	-8.3
AGG	Agios Georgios	30.31	290	eP	P	22 07 36.7	-0.4
AGG	Agios Georgios	30.31	290	eP	P	22 07 36.7	-0.4
LVV	L'vov	30.32	311	eP	P	22 07 37.3	+0.3
LVV				e		22 08 34.5	
LVV				e		22 08 56.1	
LVV				eS	S	22 12 34.5	-2.5
LVV				e		22 14 20.9	
LVV				MLR	MLR		
	comp=Z,400nm,15.0s						
LVV				MLR	MLR		
	comp=N,100nm,14.0s						
LVV				MLR	MLR		
	comp=E,400nm,15.0s						
STIP	Stip	30.36	295	eP	P	22 07 35.5	-1.9
GUR	Goura	30.38	287	P	P	22 07 36.3	-1.5
GUR	Goura	30.38	287	P	P	22 07 36.3	-1.5
GUR	Goura	30.38	287	P	P	22 07 36.3	-1.5
HERR	Herculane	30.41	301	⇑iP	P	22 07 38.1	+0.2
DRGR		30.48	305	⇑iP	P	22 07 39.8	+1.2
THL	Klokotos Trika	30.52	291	P	P	22 07 37.0	-1.9
KZN	Kozani	30.68	292	P	P	22 07 39.4	-1.0
KZN	Kozani	30.68	292	P	P	22 07 39.4	-1.0
KZN	Kozani	30.68	292	P	P	22 07 39.4	-1.0
KZN	Kozani	30.68	292	P	P	22 07 39.4	-1.0
KOHI	KOHIMA	30.71	97	eP	P	22 07 42.6	+1.7
ITM	Ithomi	30.79	286	eP	P	22 07 39.7	-1.6
	comp=E,42nm,1.0s						
ITM	Ithomi	30.79	286	eP	P	22 07 39.7	-1.6
	comp=E,42nm,1.0s						
MOKO	MOKOCHONG	30.80	96	eP	P	22 07 41.6	-0.1
MOKO				IAmb	IAmb	22 07 45.4	
	comp=Z,155nm,1.8s						
TRPA	Tarpa	30.86	307	⇑iP	P	22 07 42.5	+0.7
TRPA	Tarpa	30.86	307	⇑eP	P	22 07 43.0	+1.2
MDVR	Moldovita	30.89	301	⇓iP	P	22 07 42.9	+0.7
SKO	Skopje	30.92	295	P	P	22 07 42.2	-0.3
SKO	Skopje	30.92	295	P	P	22 07 42.2	-0.3
SKO	Skopje	30.92	295	eP	P	22 07 43.7	+1.2
SKO	Skopje	30.92	295	P	P	22 07 42.2	-0.3
SKO	Skopje	30.92	295	P	P	22 07 42.2	-0.3
FNA	Florina	30.97	293	eP	P	22 07 43.0	0.0
	comp=Z,90nm,1.6s						
FNA	Florina	30.97	293	P	P	22 07 42.8	-0.2
FNA	Florina	30.97	293	eP	P	22 07 43.0	0.0
FNA				pmax	pmax		
	comp=Z,90nm,1.6s						
FNA	Florina	30.97	293	P	P	22 07 42.8	-0.2
KPRO	Kipourio	31.01	291	P	P	22 07 38.4	-4.9
BIA	Bitola	31.01	294	eP	P	22 07 44.5	+1.2
BZS	Buzias	31.06	302	⇑iP	P	22 07 44.6	+1.0
KRUS	Krusevo	31.06	294	eP	P	22 07 45.2	+1.4
KRAR	Krasnoyarsk	31.09	36	⇑eP	P	22 07 47.1	+3.4
KWP	Kalwaria Pacla	31.10	310	eP	P	22 07 44.6	+0.7
KWP	Kalwaria Pacla	31.10	310	eP	P	22 07 44.5	+0.5
	comp=Z,715nm,1.1s						
KWP	Kalwaria Pacla	31.10	310	eP	P	22 07 44.6	+0.7
KWP	Kalwaria Pacla	31.10	310	eP	P	22 07 44.6	+0.7
UZH	Uzhgorod	31.12	308	d iP	P	22 07 44.4	+0.3
UZH				i		22 07 49.0	
LTVH	L˘'tav˘'rtes,	31.13	306	⇑eP	P	22 07 47.0	+2.8
IIGN	Ignalina	31.17	322	eP	P	22 07 44.1	-0.4
IIGN				IAmb	IAmb	22 07 50.1	
	comp=Z,25nm,1.1s						
NEST	Nestorio	31.23	292	P	P	22 07 44.4	-0.9
PDO	Prodromos	31.23	289	P	P	22 07 44.7	-0.5
DSL	Palaion Diasel	31.26	290	P	P	22 07 43.2	-2.3
DSL	Palaion Diasel	31.26	290	P	P	22 07 43.2	-2.3
DSL	Palaion Diasel	31.26	290	P	P	22 07 43.2	-2.3
SAIH	SAIHA	31.28	104	eP	P	22 07 46.5	+0.5
SAIH				IAmb	IAmb	22 07 51.2	
	comp=Z,37nm,1.0s						
ISAL	Salakas	31.32	323	eP	P	22 07 45.4	-0.4
ISAL				IAmb	IAmb	22 07 51.4	
	comp=Z,26nm,1.1s						
IZAR	Zarasai	31.35	323	eP	P	22 07 45.5	-0.5
IZAR				IAmb	IAmb	22 07 51.5	
	comp=Z,22nm,1.1s						
BANR	Banloc	31.36	302	⇑iP	P	22 07 48.1	+1.8
OHR	Ohrid	31.40	294	eP	P	22 07 46.7	-0.1
JAN	Janina	31.41	291	P	P	22 07 45.8	-1.0
JAN	Janina	31.41	291	P	P	22 07 45.8	-1.0
JAN	Janina	31.41	291	P	P	22 07 45.8	-1.0
JAN	Janina	31.41	291	P	P	22 07 45.8	-1.0
KBN	Korca	31.42	293	P	P	22 07 46.7	-0.3
KBN	Korca	31.42	293	P	P	22 07 46.7	-0.3
KBN	Korca	31.42	293	P	P	22 07 46.7	-0.3
KBN	Korca	31.42	293	P	P	22 07 46.7	-0.3
LKP	Lekhapani	31.50	93	eP	P	22 07 47.8	+0.1
LKD2	Lefkada island	31.62	289	P	P	22 07 47.2	-1.5
LKD2	Lefkada island	31.62	289	P	P	22 07 47.2	-1.5
LKD2	Lefkada island	31.62	289	P	P	22 07 47.2	-1.5
PHP	Peshkopia	31.67	295	P	P	22 07 46.9	-2.2
PHP	Peshkopia	31.67	295	P	P	22 07 46.9	-2.2
PHP	Peshkopia	31.67	295	P	P	22 07 46.9	-2.2
PHP	Peshkopia	31.67	295	P	P	22 07 46.9	-2.2
CRVS	Cervenica-Dubn	31.72	309	eP	P	22 07 50.5	+1.1
CRVS				e		22 07 55.1	
CRVS				pmax	pmax		
	comp=Z,57nm,1.1s						
CRVS	Cervenica-Dubn	31.72	309	eP	P	22 07 50.5	+1.1
CRVS				epP	sP	22 07 55.1	+1.0
FSK	Fiskardo	31.73	289	P	P	22 07 47.2	-2.3
PUL	Pulkovo	31.77	332	⇓eP	P	22 07 52.0	+2.3
IGT	Igoumenitsa	31.82	291	P	P	22 07 49.3	-1.1
IGT	Igoumenitsa	31.82	291	P	P	22 07 49.3	-1.1
IGT	Igoumenitsa	31.82	291	P	P	22 07 49.3	-1.1
IGT	Igoumenitsa	31.82	291	P	P	22 07 49.3	-1.1
SGD	Sagiada	31.89	291	P	P	22 07 49.9	-1.1
GTA	Gaotai	32.02	69	⇑P	P	22 07 54.5	+2.2
GTA				pP	sP	22 07 59.5	+2.5
GTA				sP	pP	22 08 02.9	+7.3
GTA				PcP	PcP	22 10 42.2	+0.2
GTA				S	S	22 13 07.8	+3.7
GTA				sS	sS	22 13 17.7	+8.2
GTA				PcS	PcS	22 14 29.4	+2.6
GTA				pmax	pmax		
	comp=Z,19nm,1.0s						
GTA				pmax	pmax		
	comp=Z,220nm,5.2s						
GTA				LR	LR		
	comp=Z,960nm,17.2s						
GTA				LR	LR		
	comp=Z,2μm,16.5s						
GTA				LR	LR		
	comp=Z,3μm,14.4s						
DIVS	Divibare	32.07	299	eP	P	22 07 52.7	+0.1
	comp=Z,54nm,1.4s						
DIVS	Divibare	32.07	299	⇑iP	P	22 07 52.8	+0.2
SUW	Suwalki	32.21	318	eP	P	22 07 53.4	-0.2
SUW	Suwalki	32.21	318	eP	P	22 07 54.7	+1.1
	comp=Z,51nm,1.1s						
SUW	Suwalki	32.21	318	eP	P	22 07 54.7	+1.1
SUW				pmax	pmax		
	comp=Z,51nm,1.1s						
KEK	Kerkira	32.22	291	P	P	22 07 51.9	-2.0
KEK	Kerkira	32.22	291	P	P	22 07 51.9	-2.0
KEK	Kerkira	32.22	291	P	P	22 07 51.9	-2.0
KECS	Kecovo	32.27	308	eP	P	22 07 54.8	+0.6
KECS				pmax	pmax		
	comp=Z,13nm,0.9s						
KECS	Kecovo	32.27	308	eP	P	22 07 54.8	+0.6
TEKS	Tekeris	32.43	300	⇑iP	P	22 07 56.7	+1.0
BBLS	Lazići	32.48	299	⇑iP	P	22 07 56.7	+0.5
VSU	Vasula	32.50	328	d iP	P	22 07 56.5	+0.4
VSU				pmax	pmax		
	comp=Z,323nm,1.7s						
PDG	Podgorica	32.55	296	⇓iP	P	22 07 56.7	0.0
PDG	Podgorica	32.55	296	P	P	22 07 55.9	-0.8
TTG	Podgorica	32.55	296	eP	P	22 07 55.9	-0.8
	comp=Z,35nm,0.9s						
TTG	Podgorica	32.55	296	eP	P	22 07 55.9	-0.8
TTG				pmax	pmax		
	comp=Z,35nm,0.9s						
PSZ	Piszkesteto	32.56	306	⇑iP	P	22 07 58.3	+1.4
PSZ	Piszkesteto	32.56	306	⇑eP	P	22 07 58.1	+1.2
PSZ	Piszkesteto	32.56	306	eP	P	22 07 58.0	+1.1
	comp=Z,87nm,1.2s						
PSZ	Piszkesteto	32.56	306	eP	P	22 07 58.0	+1.1
PSZ				pmax	pmax		
	comp=Z,87nm,1.2s						
NIE	Niedzica	32.58	309	eP	P	22 07 58.4	+1.4
NIE	Niedzica	32.58	309	eP	P	22 07 58.4	+1.4
LANS	Liptovska Anna	33.06	309	eP	P	22 08 02.3	+1.1
LANS				e		22 08 06.7	
LANS	Liptovska Anna	33.06	309	eP	P	22 08 02.3	+1.1
LANS				epP	sP	22 08 06.7	+0.9
OJC	Ojcow	33.06	311	eP	P	22 08 01.6	+0.5
OJC	Ojcow	33.06	311	eP	P	22 08 00.7	-0.5
	comp=Z,98nm,1.2s						
OJC	Ojcow	33.06	311	eP	P	22 08 01.6	+0.5
BUD	Budapest	33.08	306	⇑eP	P	22 08 01.9	+0.6
MORH	M˘‡r˘¡gy, Hung	33.19	303	⇑eP	P	22 08 03.1	+0.9
PALK	Pallekele	33.22	140	P	P	22 08 03.8	+0.9
	comp=Z,16nm,0.8s,baz=296,slow=7.7,SNR=3.8						
PALK				LR	LR	22 22 42.5	
	comp=Z,516nm,19.7s,baz=288,slow=38						
VYHS	Vyhne	33.35	307	eP	P	22 08 04.7	+1.0
VYHS				e		22 08 09.0	
VYHS				pmax	pmax		
	comp=Z,47nm,1.3s						
VYHS	Vyhne	33.35	307	eP	P	22 08 04.7	+1.0
VYHS				epP	sP	22 08 09.0	+0.6
CSKK	Cs˘‡kako	33.58	305	eP	P	22 08 07.0	+1.4
STON	Ston	33.70	297	P	P	22 08 05.2	-1.5
MOY	Mondy	33.95	47	eP	P	22 08 12.0	+3.0
MOY				pmax	pmax		
	comp=Z,92nm,1.6s						
FASA	Fasano	34.02	293	eP	P	22 08 09.1	-0.5
OKC	Ostrava-Krasne	34.03	310	eP	P	22 08 10.6	+1.0
OKC				epP	sP	22 08 14.4	+0.1
OKC				AMS	AMS	22 24 50.0	
	comp=Z,400nm,13.5s						
OKC	Ostrava-Krasne	34.03	310	eP	P	22 08 10.6	+1.0
OKC				e		22 08 14.4	
OKC				MLR	MLR		
	comp=Z,400nm,13.5s						
KLNR	Kaliningrad	34.05	318	ceP	P	22 08 10.4	+0.8
KLNR				pmax	pmax		
	comp=Z,78nm,1.8s						
KLNR				MLR	MLR		
	comp=Z,597nm,17.0s						
BLY	Banja Luka	34.11	300	⇓iP	P	22 08 11.6	+1.3
BLY	Banja Luka	34.11	300	eP	P	22 08 11.0	+0.7
	comp=Z,18nm,1.0s						
JAVC	Velka Javorina	34.17	308	eP	P	22 08 12.6	+1.7
MASS	Massafra	34.19	293	eP	P	22 08 08.6	-2.5
MODS	Modra-Piesok	34.36	307	eP	P	22 08 13.5	+1.0
MODS				e		22 08 18.0	
MODS				pmax	pmax		
	comp=Z,114nm,1.2s						
MODS	Modra-Piesok	34.36	307	eP	P	22 08 13.5	+1.0
MODS				epP	sP	22 08 18.0	+0.8
BAI	Bari	34.36	294	eP	P	22 08 06.7	-5.8
FIA1	FINESS Array S	34.46	332	eP	P	22 08 13.3	+0.2
FINES	FINESS Array B	34.46	332	P	P	22 08 13.2	+0.1
	comp=Z,17nm,0.7s,baz=135,slow=9.1,SNR=92						
FINES				LR	LR	22 25 17.7	
	comp=Z,927nm,18.6s,baz=126,slow=41						
BEHE	Becsehely	34.50	303	⇑eP	P	22 08 15.0	+1.3
MATE	Matera	34.52	293	⇑iP	P	22 08 12.8	-1.1
SG1	Sgolgore (BA)	34.53	293	eP	P	22 08 12.8	-1.3
TIP	Timpagrande	34.61	291	⇓iP	P	22 08 14.0	-0.8
TIP	Timpagrande	34.61	291	eP	P	22 08 13.5	-1.3
	comp=Z,24nm,1.2s						
TIP	Timpagrande	34.61	291	P	P	22 08 09.8	-5.0
TIP	Timpagrande	34.61	291	eP	P	22 08 13.5	-1.3
	comp=Z,24nm,1.2s						
SOP	Sopron	34.76	305	⇑eP	P	22 08 16.7	+0.8
VRAC	Vranov	34.94	308	⇑iP	P	22 08 18.3	+0.8
VRAC	Vranov	34.94	308	eP	P	22 08 18.0	+0.5
KRUC	Moravsky	35.03	308	eP	P	22 08 18.9	+0.6
MS1	Monte Sant'Ang	35.03	295	eP	P	22 08 18.1	-0.4
ZAK	Zakamensk	35.10	50	eP	P	22 08 19.4	+0.5
ZAK				e		22 10 47.8	
ZAK				pmax	pmax		
	comp=Z,24nm,1.7s						
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.2s						
UDBI	Udbina	35.12	300	P	P	22 08 18.9	-0.3
CONA	Conrad Observa	35.25	306	eP	P	22 08 20.6	+0.3
	comp=Z,26nm,1.1s,SNR=18						
CUC	Castrocucco	35.26	292	eP	P	22 08 20.0	-0.3
	comp=Z,30nm,0.9s						
CUC	Castrocucco	35.26	292	eP	P	22 08 20.0	-0.3
	comp=Z,30nm,0.9s						
DPC	Dobruska-Polom	35.28	310	eP	P	22 08 21.7	+1.3
DPC				AMS	AMS	22 28 00.0	
	comp=Z,300nm,12.9s						
DPC	Dobruska-Polom	35.28	310	eP	P	22 08 21.7	+1.3
DPC				MLR	MLR		
	comp=Z,300nm,12.9s						
GKP	Gorka Klasztor	35.34	315	eP	P	22 08 22.1	+1.3
GKP	Gorka Klasztor	35.34	315	eP	P	22 08 22.1	+1.3
OZLJ	Ozalj	35.36	302	P	P	22 08 21.0	-0.1
KSP	Ksiaz	35.38	311	eP	P	22 08 22.2	+0.9
KSP	Ksiaz	35.38	311	eP	P	22 08 22.2	+0.9
ARSA	Arzberg	35.42	305	eP	P	22 08 22.3	+0.7
	comp=Z,52nm,1.3s,SNR=36						
UPC	Upice	35.50	310	eP	P	22 08 23.8	+1.5
UPC				epP	sP	22 08 28.2	+1.2
UPC				eS	S	22 13 58.0	+0.6
UPC				AMS	AMS	22 24 40.0	
	comp=Z,500nm,14.7s						
UPC	Upice	35.50	310	eP	P	22 08 23.8	+1.5
UPC				e		22 08 28.2	
UPC				eS	S	22 13 58.0	+0.6
UPC				MLR	MLR		
	comp=Z,500nm,14.7s						
BOJS	Bojanci	35.50	302	⇑iP	P	22 08 22.4	0.0
BOJS				e		22 10 50.8	
TLY	Talaya	35.56	48	P	P	22 08 23.3	+0.4
	comp=Z,0.5nm,0.3s,baz=250,slow=14,SNR=1.8						
TLY	Talaya	35.56	48	eP	P	22 08 24.1	+1.3
TLY				e		22 09 49.7	
TLY				eS	S	22 14 05.1	+6.7
TLY				pmax	pmax		
	comp=Z,48nm,1.6s						
TLY				MLR	MLR		
	comp=Z,2μm,16.0s						
LZH	Lanzhou	35.62	75	eP	P	22 08 25.5	+1.8
LZH				pP	sP	22 08 34.4	+6.0
LZH				sP	pP	22 08 37.6	+11
LZH				PP	PnPn	22 09 41.9	-1.0
LZH				eS	S	22 13 58.4	-1.5
LZH				sS	sS	22 14 11.4	+6.0
LZH				SS	SnSn	22 16 12.7	-7.8
LZH				pmax	pmax		
	comp=Z,87nm,1.1s						
LZH				pmax	pmax		
	comp=Z,530nm,5.7s						
LZH				LR	LR		
	comp=Z,2μm,13.9s						
LZH				LR	LR		
	comp=Z,3μm,13.8s						
LZH				LR	LR		
	comp=Z,4μm,15.9s						
PERS	Pernice	35.65	304	⇑iP	P	22 08 24.0	+0.3
SOKA	Soboth	35.71	304	eP	P	22 08 24.8	+0.5
	comp=Z,26nm,1.1s,SNR=26						
NVLJ	Novalja	35.76	300	P	P	22 08 24.1	-0.4
LJU	Ljubljana	36.03	302	⇑iP	P	22 08 27.4	+0.5
LJU				ePP	PP	22 09 59.6	+11
LJU				e		22 10 52.1	
LJU				eS	S	22 14 07.4	+1.7
LJU				e		22 14 12.7	
OBKA	Obir	36.04	303	eP	P	22 08 27.6	+0.6
	comp=Z,16nm,1.6s,SNR=11						
IRK	Irkutsk	36.06	47	eP	P	22 08 26.5	-0.5
IRK				pmax	pmax		
	comp=Z,69nm,2.0s						
GOPC	GO Pecny, Ondr	36.19	309	eP	P	22 08 29.1	+0.9
GOPC				AMS	AMS	22 26 00.0	
	comp=Z,700nm,12.7s						
GOPC	GO Pecny, Ondr	36.19	309	eP	P	22 08 29.1	+0.9
GOPC				MLR	MLR		
	comp=Z,700nm,12.7s						
MOA	Molln	36.31	306	eP	P	22 08 29.6	+0.3
	comp=Z,16nm,1.3s,SNR=8.4						
JAVS	Javornik	36.35	302	⇑iP	P	22 08 29.6	-0.1
JAVS				eS	S	22 14 12.0	+1.3
JAVS				e		22 14 16.6	
JAVS	Javornik	36.35	302	eS	S	22 14 12.0	+1.3
PRU	Pruhonice	36.36	309	eP	P	22 08 30.6	+1.0
PRU				epP	sP	22 08 36.6	+2.3
PRU				AMS	AMS	22 26 00.0	
	comp=Z,500nm,12.7s						
PRU	Pruhonice	36.36	309	eP	P	22 08 30.6	+1.0
PRU				e		22 08 36.6	
PRU				MLR	MLR		
	comp=Z,500nm,12.7s						
APA	Apatity	36.40	343	⇓iP	P	22 08 31.4	+1.7
APA				i S	S	22 14 09.0	-1.8
APA				pmax	pmax		
	comp=Z,43nm,1.0s						
APA				MLR	MLR		
	comp=Z,2μm,13.0s						
PVCC	Panska Ves	36.41	310	eP	P	22 08 31.1	+1.0
PVCC				epP	sP	22 08 34.9	+0.1
PVCC				AMS	AMS	22 25 30.0	
	comp=Z,500nm,14.2s						
PVCC	Panska Ves	36.41	310	eP	P	22 08 31.1	+1.0
PVCC				e		22 08 34.9	
PVCC				MLR	MLR		
	comp=Z,500nm,14.2s						
PRA	Prague	36.44	309	AMS	AMS	22 26 10.0	
	comp=Z,500nm,12.5s						
TRI	Trieste	36.55	302	eP	P	22 08 30.4	-0.9
	comp=Z,32nm,1.1s						
TRI	Trieste	36.55	302	eP	P	22 08 30.4	-0.9
TRI				pmax	pmax		
	comp=Z,32nm,1.1s						
CADS	Cadrg	36.59	303	⇑iP	P	22 08 31.5	-0.1
MYKA	Terra Mystica	36.67	303	eP	P	22 08 32.7	+0.3
	comp=Z,4.5nm,0.6s,SNR=9.7						
VAE	Valguarnera	36.67	288	P	P	22 08 34.4	+1.8
	comp=Z,13nm,0.8s,baz=82,slow=3.9,SNR=7.1						
GEA0	GERESS Array S	36.77	307	eP	P	22 08 32.8	-0.5
GEC2	GERESS Array S	36.77	307	eP	P	22 08 33.8	+0.5
	comp=Z,108nm,1.8s						
GEC2	GERESS Array S	36.77	307	eP	P	22 08 33.8	+0.5
GEC2				pmax	pmax		
	comp=Z,109nm,1.8s						
GERES	GERESS Array B	36.77	307	P	P	22 08 33.5	+0.2
	comp=Z,6.0nm,0.7s,baz=96,slow=6.8,SNR=48						
GERES				PcP	PcP	22 10 54.5	-0.8
	comp=Z,4.3nm,0.7s,baz=72,slow=4.3,SNR=6.7						
GERES				LR	LR	22 26 26.1	

	comp=Z,493nm,19.5s,baz=98,slow=41						
CD2	**Chengdu**	**36.82**	**83**	P	**P**	**22 08 34.8**	**+1.0**
CD2				pP	sP	22 08 41.8	+3.3
CD2				PP	**PP**	**22 09 58.9**	**+1.3**
CD2				S	**S**	**22 14 18.5**	**+0.4**
CD2				sS	sS	22 14 30.5	+6.9
CD2				pmax	pmax		
	comp=Z,50nm,0.5s						
CD2				pmax	pmax		
	comp=Z,320nm,5.0s						
CD2				LR	LR		
	comp=Z,2µm,18.5s						
CD2				LR	LR		
	comp=Z,2µm,13.3s						
CD2				LR	LR		
	comp=Z,2µm,11.7s						
SONM	**Songino Array**	**36.83**	**55**	P	**P**	**22 08 35.5**	**+1.7**
	comp=Z,13nm,1.0s,baz=264,slow=9.1,SNR=20						
SONM				PcP	**PcP**	**22 10 55.1**	**-0.6**
	comp=Z,5.2nm,1.0s,baz=280,slow=2.0,SNR=2.5						
SONM				LR	LR	22 26 01.2	
	comp=Z,1µm,18.2s,baz=267,slow=40						
SONA1	**Songino Array**	**36.83**	**55**	*e*P	**P**	**22 08 35.4**	**+1.5**
BRG	**Berggiesshubel**	**36.86**	**311**	*i* P	**P**	**22 08 34.9**	**+1.1**
	comp=Z,53nm,1.3s						
BRG				*i*		22 08 39.5	
	comp=Z,112nm,1.5s						
BRG				*e*PP	**PnPn**	**22 10 01.6**	**+3.9**
	comp=Z,23nm,1.4s						
BRG				S	**S**	**22 14 20.0**	**+1.9**
BRG				SCP	**ScP**	**22 14 44.0**	**+1.8**
BRG				SS	**SS**	**22 16 55.0**	**-4.1**
	comp=N,399nm,13.0s						
	comp=E,374nm,12.0s						
	comp=Z,547nm,11.4s						
BRG	**Berggiesshubel**	**36.86**	**311**	*i* P	**P**	**22 08 34.9**	**+1.1**
BRG				*i*		22 08 39.5	
BRG				*e*		22 10 01.6	
BRG				S	**S**	**22 14 20.0**	**+1.9**
BRG				pmax	pmax		
	comp=Z,53nm,1.3s						
BRG				pmax	pmax		
	comp=Z,112nm,1.5s						
BRG				pmax	pmax		
	comp=Z,23nm,1.4s						
BRG				MLR	MLR		
	comp=N,399nm,13.0s						
BRG				MLR	MLR		
	comp=E,374nm,12.0s						
BRG				MLR	MLR		
	comp=Z,547nm,11.4s						
KHC	**Kasperske Hory**	**36.88**	**308**	*e*P	**P**	**22 08 32.8**	**-1.3**
KHC				*e*pP	**sP**	**22 08 38.7**	**-0.1**
KHC				*e*PP	**PnPn**	**22 09 58.8**	**+0.7**
KHC				AMS	AMS	22 28 50.0	
	comp=Z,400nm,12.2s						
KHC	**Kasperske Hory**	**36.88**	**308**	*e*P	**P**	**22 08 32.8**	**-1.3**
KHC				*e*		22 08 38.7	
KHC				*e*		22 09 58.8	
KHC				MLR	MLR		
	comp=Z,400nm,12.2s						
AQU	**L’Aquila**	**36.89**	**296**	*e*P	**P**	**22 08 34.9**	**+0.6**
	comp=Z,52nm,0.9s						
AQU	**L’Aquila**	**36.89**	**296**	*e*P	**P**	**22 08 34.9**	**+0.6**
AQU				pmax	pmax		
	comp=Z,53nm,0.9s						
AQU	**L’Aquila**	**36.89**	**296**	⇑*i*P	**P**	**22 08 34.7**	**+0.4**
KBA	**Koelnbreinsper**	**36.89**	**304**	*e*P	**P**	**22 08 35.0**	**+0.6**
	comp=Z,51nm,1.6s,SNR=13						
BSD	**Bornholm Skovb**	**37.12**	**318**	*i* P	**P**	**22 08 34.2**	**-1.8**
	comp=Z,63nm,1.1s						
CMAI	**Chiengmai2**	**37.44**	**103**	P	**P**	**22 08 38.8**	**-0.6**
	comp=Z,8.0nm,1.0s						
ABTA	**Abfaltersbach**	**37.45**	**304**	*e*P	**P**	**22 08 39.5**	**+0.5**
	comp=Z,15nm,0.9s,SNR=27						
CLL	**Collm**	**37.51**	**311**	*i* P	**P**	**22 08 39.5**	**+0.2**
	comp=Z,28nm,1.1s						
CLL				*e*PP	**PP**	**22 10 01.0**	**-3.8**
CLL				*e*S	**S**	**22 14 29.0**	**+1.0**
CLL				*e*SS	SS	22 17 30.0	+18
CLL				LmV		22 26 00.0	
	comp=Z,500nm,18.6s						
CLL	**Collm**	**37.51**	**311**	*e*P	**P**	**22 08 40.2**	**+0.9**
	comp=Z,24nm,1.0s						
CLL	**Collm**	**37.51**	**311**	*e*P	**P**	**22 08 40.3**	**+0.9**
CLL				pmax	pmax		
	comp=Z,24nm,1.0s						
CLTB	**Caltabellotta**	**37.59**	**289**	*e*P	**P**	**22 08 40.4**	**0.0**
	comp=Z,38nm,1.1s						
CLTB	**Caltabellotta**	**37.59**	**289**	*e*P	**P**	**22 08 40.4**	**0.0**
	comp=Z,38nm,1.1s						
NKC	**Novy Kostel**	**37.72**	**309**	*e*PP	PP	22 10 12.6	+5.4
NKC				*e*S	**S**	**22 14 33.9**	**+2.5**
NKC				AMS	AMS	22 30 10.0	
	comp=Z,500nm,15.9s						
CHTO	**Chiang Mai**	**37.95**	**104**	*e*P	**P**	**22 08 43.3**	**-0.2**
	comp=Z,66nm,1.0s						
CHTO	**Chiang Mai**	**37.95**	**104**	P	**P**	**22 08 43.7**	**+0.2**
	SNR=17						
CHTO	**Chiang Mai**	**37.95**	**104**	*e*P	**P**	**22 08 43.3**	**-0.2**
CHTO				pmax	pmax		
	comp=Z,66nm,1.0s						
CHTO	**Chiang Mai**	**37.95**	**104**	P	**P**	**22 08 43.2**	**-0.2**
	comp=Z,357nm,1.0s,comp=Z,3µm						
CMMT	**Chiang Mai**	**37.95**	**104**	P	**P**	**22 08 43.1**	**-0.4**
	comp=Z,78nm,1.0s,comp=Z,709nm						
KMI	**Kunming**	**38.05**	**93**	P	**P**	**22 08 44.5**	**-0.1**
KMI				pP	sP	22 08 51.8	+2.5
KMI				sP	pP	22 08 54.9	+7.0
KMI				PP	**PnPn**	**22 10 17.3**	**+4.5**
KMI				S	**S**	**22 14 36.9**	**-0.4**
KMI				sS	ScP	22 14 51.2	+3.7
KMI				pmax	pmax		
	comp=Z,26nm,0.9s						
KMI				pmax	pmax		
	comp=Z,160nm,3.1s						
KMI				LR	LR		
	comp=Z,400nm,14.9s						
KMI				LR	LR		
	comp=Z,550nm,15.4s						
KMI				LR	LR		
	comp=Z,500nm,15.7s						
WTTA	**Wattenberg**	**38.06**	**304**	*e*P	**P**	**22 08 44.2**	**-0.1**
	comp=Z,69nm,1.2s,SNR=14						
WATA	**Walderalm**	**38.10**	**305**	*e*P	**P**	**22 08 45.5**	**+0.8**
	comp=Z,14nm,0.7s,SNR=24						
CM31	**Chiang Mai Arr**	**38.14**	**105**	*e*P	**P**	**22 08 45.3**	**+0.2**
CMAR	**Chiang Mai Arr**	**38.14**	**105**	P	**P**	**22 08 44.8**	**-0.3**
	comp=Z,14nm,0.7s,baz=300,slow=8.3,SNR=81						
CMAR				PcP	**PcP**	**22 10 58.0**	**-1.9**
	comp=Z,2.4nm,0.5s,baz=289,slow=4.6,SNR=3.4						
CMAR				LR	LR	22 27 37.3	
	comp=Z,262nm,18.1s,baz=296,slow=41						
CM01	**Chiang Mai Arr**	**38.17**	**105**	*e*P	**P**	**22 08 44.2**	**-1.1**
MOTA	**Moosalm**	**38.43**	**305**	*e*P	**P**	**22 08 47.5**	**+0.1**
	comp=Z,10nm,1.0s,SNR=20						
GRFO	**Grafenberg**	**38.46**	**308**	*e*P	**P**	**22 08 48.6**	**+1.2**
	comp=Z,33nm,1.2s						
GRFO	**Grafenberg**	**38.46**	**308**	*e*P	**P**	**22 08 48.7**	**+1.2**
GRFO				pmax	pmax		
	comp=Z,33nm,1.2s						
RETA	**Reutte**	**38.66**	**305**	*e*P	**P**	**22 08 48.5**	**-0.8**
	comp=Z,34nm,1.1s,SNR=18						
FETA	**Feichten**	**38.68**	**304**	*e*P	**P**	**22 08 49.0**	**-0.5**
	comp=Z,43nm,1.2s,SNR=30						
LLD	**Lille Linde**	**38.68**	**317**	*i* P	**P**	**22 08 50.4**	**+1.3**
	comp=Z,97nm,1.1s						
VLC	**Villacollemand**	**38.98**	**299**	*e*P	**P**	**22 08 51.2**	**-0.7**
	comp=Z,65nm,1.1s						
FUORN	**Ofenpass-Fuorn**	**38.99**	**303**	*e*P	**P**	**22 08 52.6**	**+0.3**
	comp=Z,23nm,0.8s						
HFS	**Hagfors**	**39.23**	**325**	P	**P**	**22 08 54.1**	**+0.3**
	comp=Z,34nm,1.0s,baz=99,slow=8.9,SNR=36						
HFS				LR	LR	22 26 54.6	
	comp=Z,566nm,18.0s,baz=108,slow=39						
HFS	**Hagfors**	**39.23**	**325**	P	**P**	**22 08 54.1**	**+0.3**
HFS				pmax	pmax		
	comp=Z,33nm,1.0s						
HFS				MLR	MLR		
	comp=Z,566nm,18.0s						
DAVA	**Damuels**	**39.26**	**304**	*e*P	**P**	**22 08 53.8**	**-0.5**
	comp=Z,42nm,0.9s,SNR=20						
DAVOX	**Davos/Dischmat**	**39.26**	**304**	P	**P**	**22 08 53.9**	**-0.5**
	baz=95,slow=6.4,SNR=13						
DAVOX				PcP	**PcP**	**22 11 02.2**	**-1.0**
	comp=Z,6.3nm,0.8s,baz=90,slow=8.1,SNR=4.9						
UMPA	**Umpang Tak**	**39.32**	**108**	P	P	22 09 00.9	+5.9
NANT	**Nan**	**39.36**	**103**	P	**P**	**22 08 54.8**	**-0.6**
	comp=Z,3.9nm,0.6s						
KEV	**Kevo**	**39.60**	**343**	*e*P	**P**	**22 08 57.9**	**+1.2**
	comp=Z,74nm,1.1s						
KEV	**Kevo**	**39.60**	**343**	*e*P	**P**	**22 08 57.9**	**+1.2**
KEV				pmax	pmax		
	comp=Z,74nm,1.1s						
TUE	**Stuetta**	**39.63**	**303**	*e*P	**P**	**22 08 57.0**	**-0.5**
	comp=Z,88nm,1.8s						
BTO	**Baotou**	**39.70**	**66**	*e*P	**P**	**22 08 59.6**	**+1.6**
STU	**Stuttgart**	**39.74**	**307**	*e*P	**P**	**22 08 58.7**	**+0.5**
	comp=Z,119nm,1.4s						
STU	**Stuttgart**	**39.74**	**307**	*e*P	**P**	**22 08 58.7**	**+0.5**
STU				pmax	pmax		
	comp=Z,119nm,1.4s						
ARCES	**ARCESS Array B**	**39.82**	**342**	P	**P**	**22 08 59.1**	**+0.6**
	comp=Z,22nm,0.9s,baz=141,slow=9.3,SNR=29						
ARCES				LR	LR	22 27 12.8	
	comp=Z,1µm,19.5s,baz=133,slow=39						
ARCES	**ARCESS Array B**	**39.82**	**342**	*e*P	**P**	**22 08 58.8**	**+0.3**
ARCES	**ARCESS Array B**	**39.82**	**342**	*e*P	**P**	**22 08 58.8**	**+0.3**
ARE0	**ARCESS Array S**	**39.82**	**342**	*e*P	**P**	**22 08 60.0**	**+1.4**
	comp=Z,45nm,1.1s						
ARE0	**ARCESS Array S**	**39.82**	**342**	*e*P	**P**	**22 08 59.8**	**+1.2**
PHIT	**Phitsanulok**	**40.00**	**105**	P	P	22 09 05.6	+4.9
	comp=Z,44nm,0.9s						
XAN	**Xi’an**	**40.14**	**76**	P	**P**	**22 09 02.2**	**+0.5**
XAN				pP	sP	22 09 08.5	+2.1
XAN				pmax	pmax		
	comp=Z,51nm,1.2s						
BFO	**Black Forest**	**40.31**	**306**	*e*P	**P**	**22 09 02.8**	**-0.2**
	comp=Z,5.3nm,1.2s						
BFO	**Black Forest**	**40.31**	**306**	*i* P	**P**	**22 09 03.3**	**+0.4**
NC602	**NORSAR Array S**	**40.44**	**325**	*e*P	**P**	**22 09 03.6**	**-0.2**
MUD	**Monsted U’grnd**	**40.58**	**319**	*i* P	**P**	**22 09 04.8**	**-0.2**
	comp=Z,41nm,1.3s						
NB2	**NORSAR Subarra**	**40.69**	**326**	P	**P**	**22 09 05.2**	**-0.7**
	comp=Z,125nm,2.0s,baz=107,slow=8.6						
NB2	**NORSAR Subarra**	**40.69**	**326**	P	**P**	**22 09 05.2**	**-0.7**
	baz=107,slow=8.6						
GYA	**Guiyang**	**40.76**	**88**	⇑*i*P	**P**	**22 09 06.5**	**-0.5**
GYA				pP	sP	22 09 15.3	+3.6
GYA				PP	**PnPn**	**22 10 46.0**	**+1.1**
GYA				S	**S**	**22 15 18.4**	**+0.7**
GYA				sS	sS	22 15 29.0	+5.8
GYA				pmax	pmax		
	comp=Z,40nm,0.9s						
GYA				pmax	pmax		
	comp=Z,130nm,5.4s						
GYA				LR	LR		
	comp=Z,560nm,17.8s						
GYA				LR	LR		
	comp=Z,510nm,18.0s						
GYA				LR	LR		
	comp=Z,640nm,18.2s						
PBKT	**Sadao Pong**	**40.79**	**106**	P	**P**	**22 09 07.5**	**+0.4**
	comp=Z,64nm,1.0s,comp=Z,711nm						
HHC	**Hu-ho-hao-te**	**40.82**	**65**	*e*P	**P**	**22 09 09.2**	**+1.8**
HHC				pP	sP	22 09 14.0	+1.9
HHC				PP	**PnPn**	**22 10 49.5**	**+4.0**
HHC				PcP	**PcP**	**22 11 08.1**	**-0.2**
HHC				S	**S**	**22 15 22.9**	**+4.5**
HHC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,170nm,5.9s						
HHC				LR	LR		
	comp=Z,570nm,12.6s						
HHC				LR	LR		
	comp=Z,610nm,11.3s						
HHC				LR	LR		
	comp=Z,560nm,11.7s						
KEST	**Kesra**	**41.02**	**287**	P	**P**	**22 09 09.8**	**+0.9**
	comp=Z,79nm,1.1s,baz=352,slow=2.0,SNR=30						
KEST	**Kesra**	**41.02**	**287**	*e*P	**P**	**22 09 09.9**	**+0.9**
	comp=Z,181nm,1.4s						
KEST	**Kesra**	**41.02**	**287**	*e*P	**P**	**22 09 09.9**	**+0.9**
	comp=Z,181nm,1.4s						
HAMF	**Hammerfest**	**41.03**	**343**	*e*P	**P**	**22 09 09.8**	**+1.3**
SENIN	**Lac Senin/Sane**	**41.05**	**303**	*e*P	**P**	**22 09 08.7**	**-0.6**
	comp=Z,23nm,0.7s						
KONO	**Kongsberg**	**41.06**	**323**	*e*P	**P**	**22 09 10.4**	**+1.4**
	comp=Z,52nm,1.2s						
KONO	**Kongsberg**	**41.06**	**323**	⇓*e*P	**P**	**22 09 10.2**	**+1.2**
KONO				pmax	pmax		
	comp=Z,75nm,1.7s						
KONO	**Kongsberg**	**41.06**	**323**	*e*P	**P**	**22 09 08.7**	**-0.2**
ECH	**Echery**	**41.09**	**306**	*e*P	**P**	**22 09 08.9**	**-0.5**
	comp=Z,72nm,1.2s						
ECH	**Echery**	**41.09**	**306**	*e*P	**P**	**22 09 08.9**	**-0.5**
ECH				pmax	pmax		
	comp=Z,72nm,1.2s						
MOR8	**Moi Rana**	**41.32**	**334**	*e*P	**P**	**22 09 11.4**	**+0.4**
MOR8				IAmb	IAmb	22 09 15.6	
	comp=Z,35nm,1.1s						
WTSB	**Winterswijk**	**41.42**	**312**	*e*P	**P**	**22 09 12.4**	**+0.5**
WTSB				*e*pP	**sP**	**22 09 17.4**	**+0.7**
BNI	**Bardonecchia**	**41.56**	**301**	*e*P	**P**	**22 09 12.8**	**-0.7**
	comp=Z,53nm,1.0s						
BNI	**Bardonecchia**	**41.56**	**301**	*e*P	**P**	**22 09 12.8**	**-0.7**
BNI				pmax	pmax		
	comp=Z,53nm,1.0s						
NSS	**Namsos**	**41.57**	**331**	*e*P	**P**	**22 09 13.3**	**+0.2**
THTN	**Thala**	**41.58**	**287**	*e*P	**P**	**22 09 14.5**	**+0.9**
	comp=Z,67nm,1.2s						
THTN	**Thala**	**41.58**	**287**	*e*P	**P**	**22 09 14.5**	**+0.9**
	comp=Z,67nm,1.2s						
TRO	**Tromso**	**41.67**	**340**	*e*P	**P**	**22 09 14.6**	**+0.9**
TRO				IAmb	IAmb	22 09 19.5	
	comp=Z,68nm,0.7s						
ENH	**Enshi**	**41.70**	**82**	*e*P	**P**	**22 09 15.2**	**+0.6**
	comp=Z,16nm,0.9s						
ENH	**Enshi**	**41.70**	**82**	*e*P	**P**	**22 09 15.2**	**+0.6**
	comp=Z,16nm,0.9s						
NONG	**Nongkai**	**41.72**	**102**	P	**P**	**22 09 14.3**	**-0.5**
	comp=Z,0.9nm,1.2s,comp=Z,194nm						
WLF	**Walferdange**	**41.75**	**308**	⇓P	**P**	**22 09 15.9**	**+1.2**
	comp=Z,46nm,1.6s						
WLF	**Walferdange**	**41.75**	**308**	*e*P	**P**	**22 09 16.3**	**+1.6**
	comp=Z,70nm,1.2s						
WLF	**Walferdange**	**41.75**	**308**	*e*P	**P**	**22 09 16.3**	**+1.6**
WLF				pmax	pmax		
	comp=Z,70nm,1.2s						
TBLU	**Trondheim**	**41.82**	**329**	*e*P	**P**	**22 09 14.7**	**-0.4**
TBLU				IAmb	IAmb	22 09 19.9	
	comp=Z,40nm,1.1s						
MEM	**Membach**	**41.86**	**309**	⇑P	**P**	**22 09 16.4**	**+0.8**
	comp=Z,33nm,1.3s						
PHET	**Kaeng Krachan**	**41.87**	**111**	P	P	22 09 21.0	+4.9
	comp=Z,8.1nm,0.7s						
STEI	**Steigen**	**41.88**	**337**	*e*P	**P**	**22 09 15.6**	**+0.1**
HGN	**Heimansgroeve**	**41.91**	**310**	*e*P	**P**	**22 09 16.7**	**+0.7**
HGN				*e*pP	**sP**	**22 09 20.7**	**0.0**
KONS	**Konsvik**	**41.94**	**334**	*e*P	**P**	**22 09 16.9**	**+0.9**
DOMB	**Dombas**	**41.97**	**327**	*e*P	**P**	**22 09 16.6**	**+0.2**
DOMB				IAmb	IAmb	22 09 21.5	
	comp=Z,44nm,0.9s						
SNART	**Snartemo**	**41.98**	**321**	*e*P	**P**	**22 09 18.1**	**+1.7**
SNART				IAmb	IAmb	22 09 22.1	
	comp=Z,89nm,1.6s						
TIY	**Taiyuan**	**42.05**	**70**	*e*P	**P**	**22 09 18.5**	**+1.1**
TIY				PP	**PP**	**22 10 58.3**	**+3.7**
TIY				S	**S**	**22 15 42.9**	**+6.3**
TIY				pmax	pmax		
	comp=Z,56nm,0.9s						
TIY				pmax	pmax		
	comp=Z,160nm,3.8s						
TIY				LR	LR		
	comp=Z,1µm,12.6s						
TIY				LR	LR		
	comp=Z,960nm,16.7s						
TIY				LR	LR		
	comp=Z,1µm,16.9s						
BEBN	**Eben Emael**	**42.07**	**310**	⇓P	**P**	**22 09 16.1**	**-1.2**
BCLA	**Clavier**	**42.30**	**309**	⇑P	**P**	**22 09 20.1**	**+0.9**
	comp=Z,18nm,1.3s						
CMAH	**Djebel Manchou**	**42.32**	**289**	P	**P**	**22 09 19.4**	**-0.3**
CMAH	**Djebel Manchou**	**42.32**	**289**	P	**P**	**22 09 19.4**	**-0.3**
ABSA	**Djebel Ababsia**	**42.36**	**288**	P	**P**	**22 09 20.5**	**+0.5**
ABSA	**Djebel Ababsia**	**42.36**	**288**	P	**P**	**22 09 20.5**	**+0.5**
BLS5	**Blasjo**	**42.57**	**323**	*e*P	**P**	**22 09 22.9**	**+1.6**
BOD	**Bodaibo**	**42.58**	**40**	*e*P	**P**	**22 09 22.2**	**+0.8**
BOD				pmax	pmax		
	comp=Z,67nm,1.7s						
CAEH	**’Ain El Ouahch**	**42.73**	**289**	P	**P**	**22 09 24.0**	**+1.1**
CAEH	**’Ain El Ouahch**	**42.73**	**289**	P	**P**	**22 09 24.0**	**+1.1**
DOU	**Dourbes**	**42.76**	**309**	⇑P	**P**	**22 09 23.9**	**+1.0**
	comp=Z,26nm,1.2s						
MOL	**Molde**	**42.80**	**327**	*e*P	**P**	**22 09 24.5**	**+1.5**
MOL				IAmb	IAmb	22 09 28.3	
	comp=Z,27nm,1.1s						
STAV	**Stavanger**	**42.86**	**322**	*e*P	**P**	**22 09 25.8**	**+2.2**
STAV				IAmb	IAmb	22 09 29.7	
	comp=Z,46nm,1.2s						
CKFL	**Kef-Lekhel**	**42.92**	**288**	P	**P**	**22 09 25.2**	**+0.6**
CKFL	**Kef-Lekhel**	**42.92**	**288**	P	**P**	**22 09 25.2**	**+0.6**
AKN	**Aaknes**	**42.94**	**327**	*e*P	**P**	**22 09 25.7**	**+1.4**
AKN				IAmb	IAmb	22 09 31.3	
	comp=Z,48nm,1.0s						
SKNT	**Sakolnakorn**	**42.98**	**103**	P	**P**	**22 09 24.7**	**-0.4**
	comp=Z,23nm,1.0s						
HYA	**Hoyanger**	**43.07**	**325**	*e*P	**P**	**22 09 26.6**	**+1.4**
CASM	**Ain Smara**	**43.14**	**288**	P	**P**	**22 09 26.4**	**+0.1**
CASM	**Ain Smara**	**43.14**	**288**	P	**P**	**22 09 26.4**	**+0.1**
CTEI	**Djebel Teioual**	**43.25**	**288**	P	**P**	**22 09 27.8**	**+0.5**
CTEI	**Djebel Teioual**	**43.25**	**288**	P	**P**	**22 09 27.8**	**+0.5**
BER	**Bergen**	**43.32**	**324**	*e*P	**P**	**22 09 29.1**	**+1.8**
BER				IAmb	IAmb	22 09 32.9	
	comp=Z,71nm,1.2s						
DGAR	**Diego Garcia**	**43.40**	**162**	⇓*e*P	**P**	**22 09 27.6**	**-0.8**
ASK	**Askoy**	**43.41**	**324**	*e*P	**P**	**22 09 30.0**	**+2.0**
ASK				IAmb	IAmb	22 09 30.7	
	comp=Z,56nm,1.1s						
DFRA	**Djebel Bou Aff**	**43.55**	**289**	P	**P**	**22 09 29.9**	**+0.2**
DFRA	**Djebel Bou Aff**	**43.55**	**289**	P	**P**	**22 09 29.9**	**+0.2**
SUE	**Sulen**	**43.73**	**325**	*e*P	**P**	**22 09 32.3**	**+1.7**
SUE				IAmb	IAmb	22 09 36.9	
	comp=Z,90nm,1.2s						
CKHR	**Kef el Ahmar**	**43.97**	**288**	P	**P**	**22 09 33.6**	**+0.6**
CKHR	**Kef el Ahmar**	**43.97**	**288**	P	**P**	**22 09 33.6**	**+0.6**
SET	**Setif**	**44.01**	**288**	P	**P**	**22 09 36.0**	**+2.7**
SET	**Setif**	**44.01**	**288**	P	**P**	**22 09 36.0**	**+2.7**
MBAR	**Mbarara**	**44.41**	**224**	*e*P	**P**	**22 09 36.7**	**-0.1**
	comp=Z,80nm,1.8s						
MBAR	**Mbarara**	**44.41**	**224**	*e*P	**P**	**22 09 36.7**	**-0.1**
MBAR				pmax	pmax		
	comp=Z,80nm,1.8s						
BJT	**Baijiatuau**	**44.43**	**66**	*e*P	**P**	**22 09 37.5**	**+1.0**
	comp=Z,25nm,1.0s						
BJT	**Baijiatuau**	**44.43**	**66**	*e*P	**P**	**22 09 37.5**	**+1.0**
BJT				pmax	pmax		
	comp=Z,25nm,1.0s						
BJT	**Baijiatuau**	**44.43**	**66**	*e*P	**P**	**22 09 37.5**	**+1.0**
	comp=Z,25nm,1.0s						
BJI	**Beijing**	**44.43**	**66**	⇓*e*P	**P**	**22 09 37.7**	**+1.2**
BJI				S	**S**	**22 16 14.4**	**+3.2**
BJI				pmax	pmax		
	comp=Z,11nm,0.8s						
BJI				pmax	pmax		
	comp=Z,260nm,5.2s						
BJI				LR	LR		
	comp=Z,1µm,13.9s						
BJI				LR	LR		
	comp=Z,1µm,10.4s						
KRAB	**Krabi**	**44.53**	**117**	P	P	22 09 45.1	+7.5
TRTT	**Trang**	**45.16**	**117**	P	**P**	**22 09 46.9**	**+4.3**
	comp=Z,9.6nm,0.9s						
WHN	**Wuhan**	**45.57**	**79**	P	**P**	**22 09 46.4**	**+0.7**
WHN				S	**S**	**22 16 30.5**	**+2.5**
WHN				pmax	pmax		
	comp=Z,430nm,7.4s						
WHN				LR	LR		
	comp=Z,2µm,10.2s						
WHN				LR	LR		
	comp=Z,550nm,12.5s						
WHN				LR	LR		
	comp=Z,2µm,17.0s						
TIA	**Tai’an**	**46.05**	**71**	P	**P**	**22 09 50.8**	**+1.3**
TIA				S	**S**	**22 16 39.2**	**+4.3**
TIA				pmax	pmax		
	comp=Z,13nm,0.8s						
TIA				pmax	pmax		
	comp=Z,170nm,3.0s						
TIA				LR	LR		
	comp=Z,630nm,16.7s						
TIA				LR	LR		
	comp=Z,400nm,14.7s						
TIA				LR	LR		
	comp=Z,330nm,9.1s						
QIZ	**Qiongzhong**	**46.69**	**96**	P	**P**	**22 09 56.3**	**+1.6**
QIZ				S	**S**	**22 16 45.1**	**+0.8**
QIZ				LR	LR		
	comp=Z,360nm,14.7s						
QIZ				LR	LR		
	comp=Z,260nm,14.1s						
QIZ				LR	LR		
	comp=Z,300nm,13.3s						
SPITS	**Spitsbergen Ar**	**47.47**	**349**	LR	LR	22 33 04.1	
	comp=Z,691nm,18.0s,baz=160,slow=40						
PSI	**Prapat**	**48.07**	**122**	LR	LR	22 32 51.1	
	comp=Z,521nm,18.9s,slow=39						
PSI	**Prapat**	**48.07**	**122**	*e*P	**P**	**22 10 04.1**	**-1.5**
	comp=Z,44nm,0.9s						
PSI	**Prapat**	**48.07**	**122**	*e*P	**P**	**22 10 04.1**	**-1.5**
PSI				pmax	pmax		
	comp=Z,44nm,0.9s						
GSI	**Gunungsitoli**	**48.23**	**125**	*e*P	**P**	**22 10 05.7**	**-0.9**
	comp=Z,38nm,0.8s						
TAM	**Tamanrasset**	**48.66**	**271**	*e*P	**P**	**22 10 09.5**	**-0.6**
	comp=Z,50nm,1.7s						
TAM	**Tamanrasset**	**48.66**	**271**	*e*P	**P**	**22 10 09.5**	**-0.6**
TAM				pmax	pmax		
	comp=Z,50nm,1.7s						
TAM	**Tamanrasset**	**48.66**	**271**	*e*P	**P**	**22 10 09.5**	**-0.6**
	comp=Z,50nm,1.7s						
NJ2	**Nanjing**	**48.69**	**75**	*e*P	**P**	**22 10 10.0**	**0.0**
NJ2				S	**S**	**22 17 13.1**	**+0.7**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.7s						
NJ2				LR	LR		
	comp=Z,560nm,9.5s						
NJ2				LR	LR		
	comp=Z,1µm,13.0s						
NJ2				LR	LR		
	comp=Z,2µm,15.2s						
SESP	**Santiago Espad**	**49.62**	**293**	P	**P**	**22 10 17.4**	**0.0**
ZEA	**Zeya**	**49.95**	**46**	*e*P	**P**	**22 10 21.0**	**+1.6**
ZEA				*e*		22 17 36.0	
ZEA				pmax	pmax		
	comp=E,46nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,46nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,300nm,8.0s						
ES19	**SONSECA Array**	**50.21**	**296**	*e*P	**P**	**22 10 20.9**	**-0.7**
ESDC	**Sonseca Array**	**50.27**	**296**	P	**P**	**22 10 21.4**	**-0.6**
	comp=Z,8.9nm,0.5s,baz=69,slow=7.6,SNR=131						
ESDC				PcP	**PcP**	**22 11 39.2**	**-1.7**
	comp=Z,1.0nm,0.5s,baz=57,slow=3.3,SNR=4.6						
ESLA	**Sonseca Array**	**50.27**	**296**	*e*P	**P**	**22 10 21.9**	**-0.2**
	comp=Z,34nm,1.1s						
ESLA	**Sonseca Array**	**50.27**	**296**	*e*P	**P**	**22 10 21.9**	**-0.2**
	comp=Z,34nm,1.1s						
CN2	**Changchun**	**50.41**	**59**	*e*P	**P**	**22 10 20.0**	**-3.0**
CN2				*e*pP	pP	22 10 27.4	+1.0
CN2				*e*S	**S**	**22 17 30.4**	**-5.8**
CN2				*e*SS	**SS**	**22 21 01.9**	**-7.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,800nm,17.0s						
CN2				LR	LR		
	comp=Z,580nm,17.0s						
CN2				LR	LR		
	comp=Z,1µm,19.0s						
PAB	**San Pablo**	**50.59**	**296**	*e*P	**P**	**22 10 24.1**	**-0.5**
	comp=Z,132nm,1.8s						
PAB	**San Pablo**	**50.59**	**296**	*e*P	**P**	**22 10 24.1**	**-0.5**
PAB				pmax	pmax		
	comp=Z,132nm,1.8s						
PAB	**San Pablo**	**50.59**	**296**	*e*P	**P**	**22 10 24.1**	**-0.5**
	comp=Z,132nm,1.8s						
YAK	**Yakutsk**	**50.74**	**35**	*e*P	**P**	**22 10 29.6**	**+4.4**
	comp=Z,75nm,1.0s						
YAK	**Yakutsk**	**50.74**	**35**	*e*P	**P**	**22 10 25.3**	**+0.1**
YAK				pmax	pmax		
	comp=Z,24nm,1.2s						
SSE	**Sheshan**	**50.88**	**76**	P	**P**	**22 10 23.7**	**-3.1**
SSE				S	**S**	**22 17 36.6**	**-6.5**

SSE				pmax	pmax		
	comp=Z,4.0nm,0.4s						
SSE				pmax	pmax		
	comp=Z,140nm,3.7s						
SSE				LR	LR		
	comp=Z,290nm,17.7s						
SSE				LR	LR		
	comp=Z,400nm,15.5s						
TIXI	Tiksi	50.97	22	eP	P	22 10 26.9	+0.1
	comp=Z,38nm,1.2s						
TIXI	Tiksi	50.97	22c	iP	P	22 10 27.2	+0.4
TIXI				pmax	pmax		
	comp=Z,48nm,1.7s						
TIXI				MLR	MLR		
	comp=Z,1µm,16.0s						
QZH	Quanzhou	51.19	84⇓	iP	P	22 10 31.6	+2.4
QZH				S	S	22 17 50.2	+2.7
QZH				pmax	pmax		
	comp=Z,140nm,7.6s						
QZH				LR	LR		
	comp=Z,590nm,14.2s						
QZH				LR	LR		
	comp=Z,380nm,13.7s						
QZH				LR	LR		
	comp=Z,600nm,13.3s						
PBRG	Braganca	51.74	299	eP	P	22 10 32.9	-0.2
	comp=Z,39nm,1.5s						
HORN	Hornachuelos	51.75	294	P	P	22 10 32.6	-0.6
VAL	Valentia	51.93	312	eP	P	22 10 39.8	+5.5
MVO	Moncorvo	52.12	298	eP	P	22 10 35.8	-0.2
	comp=Z,61nm,1.9s						
MVO				eS	S	22 18 03.6	+3.5
MVO	Moncorvo	52.12	298	eLR	LR	22 34 14.9	
	comp=Z,241nm,20.0s						
PVRL	Vila Real	52.59	299	eP	P	22 10 39.8	+0.4
	comp=Z,95nm,1.9s						
POLO	Lamas de Olo	52.62	299	eP	P	22 10 39.4	-0.3
	comp=Z,24nm,1.4s						
POLO				eS	S	22 18 08.7	+1.7
PCAB	Cabril	52.69	299	eP	P	22 10 40.3	+0.1
	comp=Z,95nm,1.6s						
MTE	Manteigas	52.71	298	eP	P	22 10 40.8	+0.4
	comp=Z,182nm,1.4s						
MTE				eS	S	22 18 11.5	+3.3
MTE	Manteigas	52.71	298	eLR	LR	22 36 05.0	
	comp=Z,166nm,20.0s						
MTE	Manteigas	52.71	298	eP	P	22 10 40.7	+0.4
	comp=Z,122nm,1.2s						
PGAV	Gavieira, Arco	52.80	300	eP	P	22 10 41.5	+0.4
	comp=Z,137nm,1.6s						
PGAV				eS	S	22 18 15.1	+5.7
PCBR	Castelo Branco	52.82	297	eP	P	22 10 42.1	+1.0
	comp=Z,130nm,1.7s						
PVIS	Viseu	52.87	298	eP	P	22 10 42.0	+0.4
	comp=Z,72nm,1.3s						
PMRV	Marv??o	52.88	296	eP	P	22 10 41.5	-0.1
	comp=Z,99nm,1.2s						
PMRV	Marv??o	52.88	296	eLR	LR	22 36 32.6	
	comp=Z,108nm,18.0s						
PMRV	Marv??o	52.88	296	eP	P	22 10 41.5	-0.1
MDJ	Mudanjiang	53.10	57	P	P	22 10 44.9	+1.8
MDJ				pmax	pmax		
	comp=Z,11nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,210nm,7.2s						
PESTR	Estremoz	53.19	296	eP	P	22 10 43.3	-0.7
	comp=Z,65nm,1.2s						
PESTR				eS	S	22 18 15.9	+1.2
PESTR	Estremoz	53.19	296	eP	P	22 10 43.2	-0.7
	comp=Z,23nm,1.0s						
COI	Coimbra	53.40	298	eP	P	22 10 46.0	+0.6
	comp=Z,110nm,1.6s						
KLR	Kul'dur	53.45	51	LR	LR	22 35 58.2	
	comp=Z,99nm,19.3s,baz=281,slow=39						
KLR	Kul'dur	53.45	51c	iP	P	22 10 45.8	+0.2
PCAS	Casmilo, Conde	53.51	297	eS	S	22 18 20.3	+1.3
PTOM	Tomar	53.57	297	eP	P	22 10 46.8	+0.1
	comp=Z,152nm,1.3s						
TPUB	Ta-pu	53.58	85	eP	P	22 10 51.1	+4.1
YHNB	Yeheng	53.59	83	eP	P	22 10 50.1	+3.0
	comp=Z,40nm,1.0s						
PMTG	Montargil	53.60	296	eP	P	22 10 46.4	-0.5
	comp=Z,68nm,1.3s						
PMTG				eS	S	22 18 20.7	+0.5
EVO	Evora	53.61	295	eP	P	22 10 46.1	-0.9
	comp=Z,81nm,1.6s						
SSLB	Suanglung	53.63	84	eP	P	22 10 48.5	+1.1
	comp=Z,50nm,1.1s						
PBEJ	Beja	53.66	295	eP	P	22 10 47.9	+0.5
	comp=Z,64nm,1.5s						
PVAQ	Vaqueiros	53.75	294	eP	P	22 10 47.1	-0.9
	comp=Z,68nm,1.4s						
PVAQ	Vaqueiros	53.75	294	eLR	LR	22 37 35.5	
	comp=Z,150nm,18.0s						
PVAQ	Vaqueiros	53.75	294	eP	P	22 10 47.1	-0.9
TJN	Taejon	53.89	67⇓	eP	P	22 10 51.4	+2.4
PCVE	Castro Verde	53.92	294	eP	P	22 10 48.6	-0.6
	comp=Z,71nm,1.6s						
PCVE	Castro Verde	53.92	294	eP	P	22 10 48.6	-0.6
KS01	Wonju Array Si	53.93	66	eP	P	22 10 49.5	+0.2
KS01	Wonju Array Si	53.93	66	eP	P	22 10 49.5	+0.2
KS15	Wonju Array Si	53.94	66	eP	P	22 10 50.4	+1.0
KS15	Wonju Array Si	53.94	66	eP	P	22 10 50.4	+1.0
KSAR	Wonju Array Be	53.94	66	P	P	22 10 49.6	+0.3
KSAR				PcP	PcP	22 11 53.2	-1.5
KSAR	Wonju Array Be	53.94	66	P	P	22 10 49.7	+0.3
KSAR						22 11 53.2	
KSAR	Wonju Array Be	53.94	66	P	P	22 10 49.7	+0.3
PBDV	Barranco-do-Ve	53.96	294	eP	P	22 10 48.8	-0.8
	comp=Z,39nm,1.6s						
KSRS	Korea Array	53.96	66	P	P	22 10 49.6	+0.1
	comp=Z,24nm,1.1s,baz=279,slow=7.1,SNR=43						
KSRS				PcP	PcP	22 11 53.2	-1.6
	comp=Z,2.5nm,0.7s,baz=295,slow=4.2,SNR=2.1						
KSRS				LR	LR	22 36 56.0	
	comp=Z,817nm,18.3s,baz=290,slow=39						
KSRS	Korea Array	53.96	66	P	P	22 10 49.7	+0.1
KSRS						22 11 53.2	
KSRS				pmax	pmax		
	comp=Z,25nm,1.1s						
KSRS				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KSRS				MLR	MLR		
	comp=Z,817nm,18.3s						
MESJ	Messejana	53.98	295	eP	P	22 10 49.3	-0.4
MESJ				AMb	AMB	22 10 52.3	
	comp=Z,35nm,1.3s						
MESJ	Messejana	53.98	295	eP	P	22 10 49.3	-0.4
DAG	Danmarks Havn	54.04	344⇑	iP	P	22 10 49.6	+0.1
	comp=Z,58nm,1.4s						
YULB	Yu-li	54.09	85	eP	P	22 10 51.5	+0.8
PNCL	Nicolau / Gran	54.13	295	eP	P	22 10 50.9	+0.1
	comp=Z,80nm,1.6s						
OPO	Ambohidratompo	54.22	195	P	P	22 10 50.7	-1.0
	comp=Z,7.2nm,0.7s,baz=353,slow=2.9,SNR=8.8						
USRK	Ussuriysk Ar.	54.87	57	P	P	22 10 57.6	+1.5
	comp=Z,6.9nm,0.9s,baz=306,slow=3.4						
USRK				LR	LR	22 38 26.2	
	comp=Z,376nm,19.1s,baz=282,slow=40						
GRNR	Gornyy	56.02	48	eP	P	22 11 02.5	-1.8
TORD	Torodi Ar. Bea	56.59	263	P	P	22 11 06.8	-2.0
	comp=Z,26nm,0.9s,baz=59,slow=6.7						
JNU	Nakatsue	57.76	70	P	P	22 11 17.1	+0.2
	comp=Z,12nm,0.9s,baz=298,slow=7.0,SNR=1.5						
JNU				LR	LR	22 39 43.7	
	comp=Z,877nm,18.4s,baz=303,slow=40						
NKL	Nikolayevsk	57.93	45	eP	P	22 11 17.0	-0.7
NKL				e		22 19 16.0	
NKL				pmax	pmax		
	comp=Z,69nm,1.0s						
NKL				pmax	pmax		
	comp=Z,300nm,8.0s						
NKL				MLR	MLR		
	comp=N,1µm,12.0s						
NKL				MLR	MLR		
	comp=E,2µm,12.0s						
NKL				MLR	MLR		
	comp=Z,2µm,12.0s						
LSZ	Lusaka	58.04	217	P	P	22 11 18.6	-0.4
	comp=Z,8.0nm,0.8s,baz=37,slow=5.9,SNR=20						
LSZ	Lusaka	58.04	217	eP	P	22 11 17.9	-1.1
LSZ	Lusaka	58.04	217	eP	P	22 11 17.9	-1.1
JOW	Kunigami	58.27	77	LR	LR	22 38 18.9	
	comp=Z,307nm,21.3s,baz=34,slow=38						
TYV	Tymovskoe	59.78	47	eP	P	22 11 32.6	+2.0
TYV				eS	S	22 19 46.2	+4.6
TYV				pmax	pmax		
	comp=Z,200nm,4.0s						
TYV				pmax	pmax		
	comp=Z,29nm,1.0s						
TYV				smax	smax		
	comp=N,200nm,4.1s						
TYV				MLR	MLR		
	comp=Z,1µm,14.0s						
SUMG	Summit	59.85	340	eP	P	22 11 31.3	0.0
SUMG	Summit	59.85	340	iP	P	22 11 31.3	0.0
	comp=Z,54nm,1.4s						
SUMG	Summit	59.85	340	eP	P	22 11 31.3	0.0
KOWA	Kowa	60.57	268	P	P	22 11 35.7	-0.8
	comp=Z,42nm,0.6s,baz=59,slow=9.9,SNR=99						
KOWA	Kowa	60.57	268	eP	P	22 11 35.6	-1.0
SEY	Seymchan	60.91	32⇑	eP	P	22 11 39.3	+1.2
YSS	Yuzh-Sakhalins	61.17	51	eP	P	22 11 43.8	+3.7
YSS	Yuzh-Sakhalins	61.17	51	eP	P	22 11 40.0	-0.1
YSS				e		22 11 44.4	
YSS				pmax	pmax		
	comp=Z,30nm,0.5s						
YSS				MLR	MLR		
	comp=Z,1µm,15.0s						
YSS				MLR	MLR		
	comp=E,1µm,16.0s						
MAT	Matsushiro	61.96	63	P	P	22 11 48.6	+2.9
MAT				eS	S	22 20 13.8	+3.9
MAJO	Matsushiro	61.96	63	eP	P	22 11 45.8	+0.1
	comp=E,34nm,1.4s						
MAJO	Matsushiro	61.96	63⇓	eP	P	22 11 45.4	-0.3
MAJO				pmax	pmax		
	comp=Z,12nm,1.4s						
MJAR	Matsushiro Arr	61.96	63	P	P	22 11 45.6	-0.2
	comp=Z,6.0nm,1.0s,baz=288,slow=9.8,SNR=12						
MJAR				LR	LR	22 41 40.3	
	comp=Z,432nm,18.6s,baz=305,slow=39						
ASAJ	Asahikawa	62.10	54	LR	LR	22 41 30.2	
	comp=Z,305nm,20.5s,baz=286,slow=39						
BILL	Bilibino	64.14	24	eP	P	22 11 57.3	-2.4
BILL	Bilibino	64.14	24	eP	P	22 12 01.0	+1.3
BILL				e		22 14 23.5	
BILL				ePPP	PPP	22 15 51.7	
BILL				pmax	pmax		
	comp=Z,25nm,1.7s						
BILL				MLR	MLR		
	comp=Z,668nm,15.0s						
JHJ	Hachijo jima 2	64.57	66	LR	LR	22 43 41.2	
	comp=Z,633nm,18.8s,baz=273,slow=39						
DBIC	Dimbokro	65.54	261	P	P	22 12 08.2	-1.3
	comp=Z,17nm,0.8s,baz=36,slow=6.8,SNR=15						
DBIC				LR	LR	22 44 08.6	
	comp=Z,868nm,18.1s,baz=34,slow=39						
DBIC	Dimbokro	65.54	261	eP	P	22 12 08.6	-0.9
DBIC	Dimbokro	65.54	261	eP	P	22 12 08.6	-0.9
KIC	Kosan Boka	65.62	261	eP	P	22 12 08.6	-1.5
	comp=Z,113nm,1.1s						
TIC	Toumodi	65.68	261	eP	P	22 12 08.8	-1.7
LIC	Lamto	65.93	261	eP	P	22 12 10.4	-1.7
	comp=Z,89nm,0.8s						
SFJD	Kangerlussuaq	66.08	336	LR	LR	22 42 48.4	
	comp=Z,631nm,18.0s,baz=52,slow=37						
TSUM	Tsumeb	66.95	224	P	P	22 12 17.9	-0.6
	comp=Z,12nm,0.9s,baz=9.8,slow=6.5,SNR=17						
TSUM	Tsumeb	66.95	224	eP	P	22 12 18.4	-0.2
PETK	Petropavlovsk-	67.45	40	P	P	22 12 21.4	+0.1
	comp=Z,8.4nm,0.9s,baz=298,slow=3.1						
PETK				LR	LR	22 44 26.8	
	comp=Z,320nm,18.7s,baz=296,slow=38						
PETK	Petropavlovsk-	67.45	40	eP	P	22 12 20.1	-1.1
LBTB	Lobatse	67.63	214	P	P	22 12 22.2	-0.5
	comp=Z,23nm,0.9s,baz=27,slow=6.1,SNR=57						
SKR	Severo-Kuril's	67.70	43	eP	P	22 12 21.2	-1.6
SKR				MLR	MLR		
	comp=Z,300nm,19.0s						
PET	Petropavlovsk	68.00	40	eP	P	22 12 20.9	-3.7
PET				e		22 14 50.5	
PET				eS	S	22 21 14.8	-8.7
PET				pmax	pmax		
	comp=Z,100nm,8.9s						
PET				pmax	pmax		
	comp=Z,100nm,13.9s						
PET				MLR	MLR		
	comp=Z,400nm,19.0s						
RES	Resolute Bay	69.76	353	eP	P	22 12 35.6	+0.3
	comp=Z,16nm,1.1s						
RES	Resolute Bay	69.76	353	eP	P	22 12 35.6	+0.3
RES				pmax	pmax		
	comp=Z,16nm,1.1s						
BOSA	Boshof	70.89	212	P	P	22 12 41.6	-1.3
	comp=Z,14nm,0.9s,baz=21,slow=5.3,SNR=15						
BOSA	Boshof	70.89	212	eP	P	22 12 41.4	-1.4
TOLK	Toolik Lake Re	74.78	11	P	P	22 13 06.5	+1.0
	baz=335						
BATI	Baumata	74.91	114	LR	LR	22 50 22.6	
	comp=Z,202nm,20.6s,baz=140,slow=39						
INK	Inuvik	76.94	5	eP	P	22 13 18.2	+0.6
	comp=Z,53nm,1.0s						
INK	Inuvik	76.94	5	eP	P	22 13 18.3	+0.6
INK				pmax	pmax		
	comp=Z,53nm,1.0s						
GUMO	Guam	78.29	82	LR	LR	22 50 24.0	
	comp=Z,101nm,19.2s,baz=283,slow=37						
ILAR	Eielson Array	78.77	11	P	P	22 13 27.9	-0.1
	comp=Z,9.6nm,1.0s,baz=321,slow=3.5,SNR=23						
ILAR	Eielson Array	78.77	11	P	P	22 13 27.9	-0.1
ILAR				pmax	pmax		
	comp=Z,14nm,1.3s						
EGAK	Eagle	79.60	9	eP	P	22 13 33.0	+0.5
	comp=Z,55nm,1.1s						
SCHQ	Schefferville	79.93	332	P	P	22 13 34.5	-0.1
	comp=Z,5.7nm,0.5s,baz=54,slow=8.4,SNR=8.9						
SCHQ				LR	LR	22 50 43.8	
	comp=Z,294nm,19.8s,baz=42,slow=37						
DAWY	Dawson	80.51	8	eP	P	22 13 37.8	+0.2
	comp=Z,85nm,1.3s						
FITZ	Fitzroy Crossi	81.45	119	P	P	22 13 42.6	-0.4
	comp=Z,9.6nm,0.7s,baz=347,slow=7.2,SNR=16						
YKA	Yellowknife Ar	83.18	357	P	P	22 13 52.0	+0.5
	comp=Z,42nm,1.0s,baz=359,slow=5.8,SNR=26						
YKA				LR	LR	22 56 49.5	
	comp=Z,24nm,18.0s,baz=359,slow=40						
YKA	Yellowknife Ar	83.18	357	P	P	22 13 52.0	+0.5
YKA	Yellowknife Ar	83.18	357	P	P	22 13 52.0	+0.5
YKA				pmax	pmax		
	comp=Z,42nm,1.0s						
YKA				MLR	MLR		
	comp=Z,24nm,18.0s						
KDAK	Kodiak Island	84.02	17	eP	P	22 13 56.1	+0.3
	comp=Z,139nm,1.1s						
KDAK	Kodiak Island	84.02	17	iP	P	22 13 56.9	+1.0
FCC	Fort Churchill	84.53	347	eP	P	22 13 58.2	-0.2
	comp=Z,49nm,1.1s						
FCC	Fort Churchill	84.53	347	eP	P	22 13 58.3	-0.2
FCC				pmax	pmax		
	comp=Z,49nm,1.1s						
NWAO	Narrogin (SRO)	86.01	135	P	P	22 14 04.8	-1.3
	comp=Z,19nm,1.0s,baz=185,slow=7.5,SNR=7.9						
CHGQ	Chibougamau	86.67	332	P	P	22 14 09.3	0.0
	baz=36						
DLBC	Dease Lake	86.97	5	eP	P	22 14 11.4	+0.6
	comp=Z,32nm,1.1s						
MATQ	Matagami	88.01	334	P	P	22 14 15.1	-0.7
	baz=34						
WRAK	Wrangell Islan	88.77	7	eP	P	22 14 20.2	+1.0
	comp=Z,24nm,1.0s						
WRA	Warramunga Arr	89.00	115	P	P	22 14 19.7	-1.2
	comp=Z,12nm,0.8s,baz=320,slow=4.1,SNR=68						
WRA	Warramunga Arr	89.00	115	P	P	22 14 19.7	-1.2
WRA				pmax	pmax		
	comp=Z,19nm,0.8s						
WRAB	Tennant Creek	89.01	115	eP	P	22 14 19.8	-1.1
	comp=Z,27nm,0.9s						
WRAB	Tennant Creek	89.01	115⇓	iP	P	22 14 20.2	-0.7
WRAB				pmax	pmax		
	comp=Z,51nm,1.7s						
FFC	Flin Flon	89.72	350	eP	P	22 14 23.6	0.0
	comp=Z,55nm,1.2s						
FFC	Flin Flon	89.72	350	eP	P	22 14 23.7	0.0
FFC				pmax	pmax		
	comp=Z,55nm,1.2s						
ALFO	Alfred	90.34	330	P	P	22 14 26.7	-0.1
	baz=36						
BELQ	Belleterre	90.36	333	P	P	22 14 26.7	-0.2
	baz=33						
ORIO	Orleans, Innes	90.74	330	P	P	22 14 28.9	+0.2
	baz=35						
ASAR	Alice Springs	90.94	118	P	P	22 14 28.6	-1.3
	comp=Z,2.4nm,0.6s,baz=313,slow=4.9,SNR=16						
ASAR				PKiKP	PKiKP	22 19 23.2	-0.1
	comp=Z,0.3nm,0.5s,baz=342,slow=1.6,SNR=4.3						
LONY	Lake Ozonia	91.03	329	eP	P	22 14 30.1	0.0
	comp=Z,37nm,1.0s						
PEMO	Pembroke	91.25	332	P	P	22 14 30.6	-0.4
	baz=34						
PLVO	Plevna	91.70	331	P	P	22 14 33.1	0.0
	baz=34						
BANO	Bancroft	92.06	332	P	P	22 14 34.5	-0.4
	baz=34						
BUKO	Buck Lake	92.27	333	P	P	22 14 35.6	-0.2
	baz=32						
DELO	Deloro Mine	92.35	331	P	P	22 14 35.6	-0.6
	baz=34						
KLBO	Killbear Provi	92.65	333	P	P	22 14 36.9	-0.7
	baz=32						
ULM	Lac du Bonnet	92.88	345	P	P	22 14 38.7	+0.2
	comp=Z,17nm,1.1s,baz=30,slow=6.6,SNR=4.0						
ULM				LR	LR	23 00 04.7	
	comp=Z,289nm,18.2s,baz=358,slow=38						
WLVO	Wesleyville	93.16	331	P	P	22 14 39.0	-0.9
	baz=33						
TOBO	Tobermory, Bru	93.25	334	P	P	22 14 40.7	+0.4
	baz=31						
DRWO	Darlington Wes	93.33	331	P	P	22 14 40.0	-0.7
	baz=33						
CLWO	Collingwood	93.45	333	P	P	22 14 41.1	-0.2
	baz=32						
BINY	Binghamton	93.59	329	P	P	22 14 41.0	-1.0
	baz=35						
BINY	Binghamton	93.59	329	eP	P	22 14 41.6	-0.4
	comp=Z,16nm,0.9s						
BMRO	Meriville Lake	93.67	333	P	P	22 14 40.3	-1.9
	baz=31						
EYMN	Ely	93.97	341	P	P	22 14 41.5	-2.0
	baz=23						
EYMN	Ely	93.97	341	eP	P	22 14 43.4	-0.2
	comp=Z,15nm,1.3s						
A33A	Warroad	94.01	344	P	P	22 14 42.7	-1.0
	baz=20						
BWLO	Walkerton	94.05	333	P	P	22 14 43.9	-0.1
	baz=31						
B35A	Bob, Littlefor	94.16	343	P	P	22 14 43.5	-0.9
	baz=22						
B34A	Aery, Baudette	94.26	343	P	P	22 14 43.4	-1.5
	baz=21						
E42A	Champion	94.33	338	P	P	22 14 44.6	-0.7
	baz=26						
BASO	Ashfield	94.34	333	P	P	22 14 44.0	-1.3
	baz=31						
C37A	Embarrass	94.35	342	P	P	22 14 45.0	-0.3
	baz=23						
E41A	Kenton	94.61	339	P	P	22 14 45.1	-1.5
	baz=25						
F43A	Flat Rock, Esc	94.63	338	P	P	22 14 45.4	-1.2
	baz=27						
AGMN	Agassiz Nation	94.72	344	P	P	22 14 45.6	-1.3
	baz=20						
AGMN	Agassiz Nation	94.72	344	eP	P	22 14 46.6	-0.3
	comp=Z,18nm,1.3s						
C35A	Jirik Farms, M	94.83	343	P	P	22 14 46.0	-1.6
	baz=21						
E40A	Wakefield	94.90	340	P	P	22 14 46.6	-1.2
	baz=25						
ELFO	Elginfield	94.91	333	P	P	22 14 46.4	-1.6
	baz=31						
COWI	Conover	94.99	339	eP	P	22 14 48.0	-0.3
	comp=Z,5.2nm,1.1s						
E39A	Mellen	95.15	340	P	P	22 14 47.1	-1.9
	baz=24						
F41A	Three Lakes	95.31	339	P	P	22 14 47.8	-2.0
	baz=25						
F40A	Park Falls	95.44	340	P	P	22 14 48.1	-2.3
	baz=24						
G42A	Mountain	95.55	338	P	P	22 14 49.8	-1.1
	baz=26						
F39A	Loretta	95.67	340	P	P	22 14 50.1	-1.3
	baz=24						
SSPA	Standing Stone	95.69	329	P	P	22 14 51.9	+0.3
	baz=34						
M54A	Oil Creek Stat	95.69	331	P	P	22 14 50.5	-1.1
	baz=32						
E36A	McGregor	95.75	342	P	P	22 14 51.1	-0.7
	baz=22						
F38A	Pierce - Schro	95.90	341	P	P	22 14 52.2	-0.2
	baz=23						
DGMT	Dagmar	96.13	349	P	P	22 14 53.1	-0.3
	baz=13						
F36A	Milaca	96.43	342	P	P	22 14 53.5	-1.3
	baz=22						
G38A	Ridgeland	96.62	340	P	P	22 14 54.5	-1.2
	baz=23						
CTA	Charters Tower	98.21	109	P	P	22 15 01.7	-1.5
	comp=Z,4.0nm,0.7s,baz=344,slow=7.4,SNR=3.4						
ECSD	EROS Data Cent	99.19	343	eP	Pdif	22 15 07.5	+0.1
	comp=Z,11nm,1.2s						
STKA	Stephens Creek	101.23	121	P	Pdif	22 15 14.8	-1.6
	comp=Z,2.3nm,0.8s,baz=318,slow=3.8,SNR=4.1						
PDAR	Pinedale Array	102.44	352	PKiKP	PKiKP	22 19 43.6	+0.1
	comp=Z,0.4nm,0.7s,baz=15,slow=3.7,SNR=3.3						
NVAR	Mina Array Bea	107.35	359	PKiKP	PKiKP	22 19 52.7	0.0
	comp=Z,0.6nm,0.8s,baz=321,slow=1.3,SNR=3.3						
TXAR	Lajitas Array	114.58	344	PKP	PKPdf	22 20 05.8	-0.6
	comp=Z,1.5nm,0.8s,baz=48,slow=1.9,SNR=6.7						
TXAR				PKKPbc	PKKPbc	22 30 42.5	-1.7
	comp=Z,0.2nm,0.7s,baz=184,slow=5.0,SNR=3.5						
SNAA	Sanae	114.61	198	PKKPbc	PKKPbc	22 30 43.6	-1.3
	comp=Z,0.7nm,0.3s,baz=266,slow=19,SNR=4.1						
QSPA	South Pole Qui	124.38	180	PKP	PKPdf	22 20 22.1	-1.8
	comp=Z,8.5nm,0.9s,baz=265,slow=0.5,SNR=9.0						
VNDA	Vanda	126.04	165	PKP	PKPdf	22 20 24.6	-2.0
	comp=Z,0.7nm,0.9s,baz=255,slow=4.2,SNR=3.1						
CPUP	Villa Florida	126.06	261	PKP	PKPdf	22 20 26.1	-2.1
	comp=Z,1.2nm,0.6s,baz=60,slow=4.5,SNR=4.8						
LPAZ	La Paz	130.26	278	PKP	PKPdf	22 20 35.7	-1.6
	comp=Z,3.2nm,1.0s,baz=6.1,slow=9.7,SNR=5.9						
PLCA	Paso Flores	140.75	246	PKP	PKPdf	22 20 53.2	-2.3
	comp=Z,2.9nm,0.9s,baz=76,slow=4.2,SNR=2.4						
PMOR	Pomariorio Ree	148.26	59	ePKPbc	PKPdf	22 21 06.1	-2.9
	comp=Z,173nm,1.0s						
VAH	Vaihoa	148.60	59	ePKPbc	PKPdf	22 21 06.8	-2.8
	comp=Z,106nm,1.1s						
PPT2	Papeete2	148.71	65	ePKPbc	PKPdf	22 21 07.2	-2.6
	comp=Z,114nm,1.2s						
PPT2	Papeete2	148.71	65	eLR	LR	23 10 25.9	
	comp=Z,171nm,23.0s						
TIAR	Tiarei	148.86	65	ePKPbc	PKPdf	22 21 07.4	-2.6
	comp=Z,16nm,0.9s						
TVO	Taravao	149.07	65	ePKPbc	PKPdf	22 21 08.0	-2.4
	comp=Z,37nm,0.8s						
TBI	Tubuai	152.04	74	ePKPbc	PKPdf	22 21 14.3	-0.5
	comp=Z,294nm,0.9s						

SJA 01 22:03:20.3±0.6, 31°.85S×67°.17W, h132^{km}±3^{km}, ML2.9, MW3.5, 1D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACAN	Cantantal	0.42	182	iP	Pn	22 03 40.4	+1.1
ACAN				iS	Sn	22 03 54.0	+0.3
RTCV	Cerro Valdivia	1.16	269	iP	Pn	22 03 45.6	+0.6
RTCV				iS	Sn	22 04 04.6	+0.8
RTLL	Cerro Villicun	1.23	295⇓	iP	Pn	22 03 46.4	+0.7
RTLL				iS	Sn	22 04 05.6	+0.7
MRA	San Martin	1.36	115	iP	Pn	22 03 47.8	+0.7
MRA				iS	Sn	22 04 08.1	+0.6
MRA				IAML		22 04 08.4	
	comp=Z,123nm,0.2s						
AMOG	MOGNA	1.45	309	iP	Pn	22 03 49.2	+1.1
APLL	PUNTA DE LOS L	1.56	21	iP	Pn	22 03 50.1	+0.9
APLL				IAML		22 04 12.3	
	comp=Z,104nm,0.6s						
ASAL	Salagasta	1.59	242	iP	Pn	22 03 50.5	+0.9
ARCO	CERRO ARCO	1.79	236	iP	Pn	22 03 52.5	+0.5
ARCO				IAML		22 04 18.1	
	comp=Z,73nm,0.4s						
RTLS	Leoncito	1.81	271	iP	Pn	22 03 53.4	+1.0
RTLS				IAML		22 04 18.2	
	comp=Z,54nm,0.3s						
RTLS				iS	Sn	22 04 18.3	+1.4
AAGR	Agrelo	1.86	228	iP	Pn	22 03 53.7	+0.9
AAGR				iS	Sn	22 04 18.8	+1.1
AUSP	Uspallata	1.92	258	iP	Pn	22 03 55.1	+1.4
TCA	Tanti	2.26	77	iP	Pn	22 03 58.6	+1.0
TCA				IAML		22 03 58.7	

	comp=Z,47nm,0.3s						
ACLC	**CERRO LA CRUZ**	**2.43**	**5**	*i* P	Pn	22 04 00.7	+0.8
ACLC				*i* S	Sn	22 04 30.6	+0.4
VCA	**Vinchina**	**3.23**	**344**	*i* P	Pn	22 04 11.4	+1.2
VCA				IAML		22 04 12.3	
	comp=Z,29nm,0.3s						

IDC 01 22:05:07.0±5.5**, 14°.54N**×**55°.00E, h0^{km}, mb4.0**/8**, mb1 4.1**/8**, mb1mx3.7**/65**, mbtmp4.0**/8**, Error ellipse: s-maj=118.0km s-min=33.6km az=172.0, Owen Fracture Zone region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H08N2	**Diego Garcia H**	**26.11**	**141**	T	T	22 37 37.7	
	baz=324,slow=76,SNR=67						
H08N3	**Diego Garcia H**	**26.12**	**142**	T	T	22 37 49.0	
	baz=324,slow=76,SNR=58						
H08N1	**Diego Carcia H**	**26.13**	**141**	T	T	22 37 40.2	
	baz=324,slow=76,SNR=71						
MKAR	**Makanchi Array**	**39.42**	**30**	P	P	22 12 38.3	-0.4
	2.0nm,0.7s,baz=214,slow=7.3,SNR=4.2						
BVAR	**Borovoye Array**	**40.29**	**14**	P	P	22 12 45.3	-0.5
	4.7nm,0.8s,baz=198,slow=7.3,SNR=4.7						
AKASG	**Malin Array Be**	**41.66**	**335**	P	P	22 12 57.5	+0.4
	0.9nm,0.7s,baz=134,slow=6.6,SNR=3.4						
ZALV	**Zalesovo Beam**	**45.74**	**24**	P	P	22 13 31.3	+1.3
	2.2nm,0.7s,baz=232,slow=9.0,SNR=2.3						
FINES	**FINESS Array B**	**51.24**	**343**	P	P	22 14 11.9	-0.3
	1.6nm,0.6s,baz=138,slow=11,SNR=6.0						
SONM	**Songino Array**	**53.74**	**41**	P	P	22 14 30.6	-0.6
	0.9nm,0.5s,baz=242,slow=6.8,SNR=4.0						
ESDC	**Sonseca Array**	**57.04**	**308**	P	P	22 14 55.2	+0.2
	0.7nm,0.6s,baz=81,slow=7.1,SNR=4.5						
ARCES	**ARCESS Array B**	**57.99**	**348**	P	P	22 15 00.3	-0.9
	1.6nm,0.5s,baz=149,slow=7.2,SNR=13						
H01W3	**Cape Leeuwin H**	**74.56**	**133**	T	T	23 38 04.5	
	baz=302,slow=75,SNR=34						
H01W2	**Cape Leeuwin H**	**74.56**	**133**	T	T	23 38 05.7	
	baz=302,slow=75,SNR=44						
H01W1	**Cape Leeuwin H**	**74.57**	**133**	T	T	23 37 53.4	
	baz=302,slow=75,SNR=39						

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*CSEM **01** 22:05:53.7, 34°.55N×59°.96E, h10^{km}, ML3.9*

TEH 01 22:05:53.7, 34°.55N×59°.96E, h10^{km}, ML3.9, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IMOG	**Moghan**	**1.64**	**342**	*e*Pn	Pn	22 06 22.3	-0.5
IMOG				*e*		22 06 45.9	
	comp=E,9μm,0.2s						
IMOG				*e*		22 06 47.8	
	comp=Z,6μm,0.1s						
IMOG				*e*		22 06 52.6	
	comp=N,9μm,0.2s						
IMOG	**Moghan**	**1.64**	**342**	*e*Pn	Pn	22 06 22.3	-0.5
IMYA	**Miami**	**1.79**	**4**	*e*Pn	Pn	22 06 25.4	+0.5
IMYA				*e*		22 06 51.4	
	comp=Z,16μm,0.3s						
IMYA				*e*		22 06 51.8	
	comp=E,21μm,0.3s						
IMYA				*e*		22 06 55.2	
	comp=N,15μm,0.2s						
IMYA	**Miami**	**1.79**	**4**	*e*Pn	Pn	22 06 25.4	+0.5
IDAH	**Dahanechah**	**1.81**	**183**	*e*Pn	Pn	22 06 24.5	-0.7
IDAH				*e*		22 06 50.5	
	comp=Z,14μm,0.1s						
IDAH				*e*		22 06 50.8	
	comp=N,30μm,0.2s						
IDAH				*e*		22 06 52.6	
	comp=E,29μm,0.2s						
IDAH	**Dahanechah**	**1.81**	**183**	*e*Pn	Pn	22 06 24.5	-0.7
ITEG	**Tejag**	**1.94**	**212**	*e*Pn	Pn	22 06 27.1	+0.3
ITEG				*e*		22 06 27.9	
	comp=Z,14μm,0.1s						
ITEG				*e*		22 06 53.7	
	comp=E,26μm,0.3s						
ITEG				*e*		22 06 55.4	
	comp=N,25μm,0.3s						
ITEG	**Tejag**	**1.94**	**212**	*e*Pn	Pn	22 06 27.1	+0.3
IPAY	**Payeh**	**2.05**	**338**	*e*Pn	Pn	22 06 28.2	-0.3
IPAY				*e*		22 06 57.5	
	comp=Z,4μm,0.2s						
IPAY				*e*		22 07 03.7	
	comp=N,7μm,0.2s						
IPAY				*e*		22 07 06.4	
	comp=E,4μm,0.2s						
IPAY	**Payeh**	**2.05**	**338**	*e*Pn	Pn	22 06 28.2	-0.3
IKOO	**Kooshah**	**2.27**	**201**	*e*Pn	Pn	22 06 31.6	+0.1
IKOO				*e*		22 07 03.7	
	comp=Z,6μm,0.3s						
IKOO				*e*		22 07 03.9	
	comp=N,6μm,0.3s						
IKOO				*e*		22 07 08.5	
	comp=E,7μm,0.2s						
IKOO	**Kooshah**	**2.27**	**201**	*e*Pn	Pn	22 06 31.6	+0.1

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*ISCJB **01** 22:09:44.7±0.6, 32°.22N±0°.03×115°.28W±0°.04, h12^{km}±6^{km}, Error ellipse: s-maj=6.7km s-min=4.8km az=150.8*

*ECX **01** 22:09:45.9±0.6, 32°.20N×115°.27W, h6^{km}, MD2.8, ML3.0*

*MEX **01** 22:09:46.5±0.3, 32°.25N×115°.29W, h7^{km}±9^{km}, MD3.7*

ISC 01 22:09:44.5±1.1**, 32°.20N**±0°.03×**115°.31W**±0°.03**, h12^{km}**±11^{km}**, n21, σ0^{s}67**/29**, 3C-2D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CPBX	**Cerro Prieto**	**0.22**	**2**	*e*P	**Pg**	**22 09 48.7**	**-0.6**
CPBX				*e*S	**Sg**	**22 09 52.4**	**-0.2**
CPBX				IAML		22 09 54.0	
	comp=N,10μm,0.1s						
CPBX				⇓*e*		22 09 54.0	
MBIG	**Mexicali**	**0.23**	**25**	*e*P	**Pg**	**22 09 50.1**	**+0.6**
MBIG	**Mexicali**	**0.23**	**25**	*i* P	**Pg**	**22 09 49.9**	**+0.4**
MBIG				*e*S	**Sg**	**22 09 52.4**	**-0.5**
EMSC	**East Mesa**	**0.61**	**27**	*e*P	**Pg**	**22 09 56.6**	**+0.2**
WESC	**Westside Schoo**	**0.67**	**328**	*e*P	**Pg**	**22 09 57.9**	**+0.5**
COA	**Coachella**	**0.69**	**13**	*e*P	**Pg**	**22 09 57.7**	**-0.2**
YUH	**Yuha Desert**	**0.69**	**311**	⇓*i*P	**Pg**	**22 09 58.2**	**+0.4**
COK	**Cook Ranch**	**0.74**	**332**	*e*P	**Pg**	**22 09 59.0**	**+0.1**
YMD	**Yuma Desert**	**0.74**	**61**	⇑*i*P	**Pg**	**22 09 58.2**	**-0.7**
ECBX	**El Chinero**	**0.75**	**163**	*e*P	**Pg**	**22 09 59.2**	**+0.1**
ECBX				*e*S	**Sg**	**22 10 09.4**	**+0.4**
ECBX				⇑*e*		22 10 11.1	
ECBX				IAML		22 10 11.1	
	comp=E,685nm,0.4s						
RMX	**La Rumorosa**	**0.77**	**302**	*e*P	**Pg**	**22 09 59.4**	**0.0**
RMX				*e*S	**Sg**	**22 10 09.8**	**+0.3**
IKP	**In-Ko-Pah, Jac**	**0.81**	**304**	*e*P	**Pg**	**22 10 00.4**	**+0.2**
ZAX	**El Zacaton**	**1.06**	**231**	*e*P	**Pg**	**22 10 05.1**	**+0.1**
ZAX				*e*S	**Sg**	**22 10 19.9**	**+1.0**
ZAX				*e*		22 10 21.4	
ZAX				IAML		22 10 21.4	
	comp=N,257nm,0.3s						
CBX	**Cerro Bola**	**1.15**	**276**	*e*P	**Pg**	**22 10 06.6**	**-0.1**
CBX				*e*S	**Sg**	**22 10 22.8**	**+1.1**
CBX				IAML		22 10 23.7	
	comp=E,566nm,0.5s						
CBX				⇑*e*		22 10 23.7	
SPIG	**San Pedro Mart**	**1.15**	**187**	*e*P	**Pg**	**22 10 06.4**	**-0.4**
SPIG	**San Pedro Mart**	**1.15**	**187**	*e*P	**Pg**	**22 10 06.2**	**-0.5**
SPIG				*e*S	**Sg**	**22 10 21.7**	**-0.1**
SPX	**San Pedro Mart**	**1.15**	**186**	*e*P	**Pg**	**22 10 06.5**	**-0.3**
TJIG	**Tijuana**	**1.18**	**282**	*e*P	**Pg**	**22 10 05.7**	**-1.5**
TJIG				*e*S	**Sg**	**22 10 20.7**	**-1.8**
ECNX	**Esteban Cantu**	**1.22**	**244**	*e*P	**Pg**	**22 10 07.8**	**-0.2**
BAR	**Barrett**	**1.25**	**293**	*e*P	**Pn**	**22 10 07.7**	**-0.1**
PBX	**Punta Banda**	**1.28**	**250**	*e*P	**Pn**	**22 10 08.6**	**+0.4**

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*IDC **01** 22:15:13.5±0.7, 22°.01N×143°.11E, h0^{km}, mb3.9/15, mb1 4.1/16, mb1mx3.8/64, mbtmp3.9/16, ML4.2/1, Error ellipse: s-maj=25.7km s-min=15.0km az=78.0*

*ISCJB **01** 22:15:16.7±0.6, 22°.01N±0°.06×143°.0E±0°.2, h33^{km}, mb3.9/15, Error ellipse: s-maj=23.3km s-min=8.7km az=173.4*

ISC 01 22:15:18.7±0.8**, 22°.00N**±0°.09×**143°.1E**±0°.2**, h35^{km}, n24, σ0^{s}82**/19**, mb4.0**/15**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**5.13**	**351**	Pn	**Pn**	**22 16 32.5**	**-0.6**
	8.4nm,0.3s,baz=131,slow=20,SNR=6.1						
JCJ				Sn	**Sn**	**22 17 31.8**	**+0.7**
	baz=120,slow=20						
KSRS	**Korea Array**	**20.21**	**323**	P	**P**	**22 19 51.2**	**+0.8**
	2.4nm,0.7s,baz=134,slow=12,SNR=11						
H11N1	**WAKE ISLAND Hy**	**22.37**	**91**	T	T	22 43 31.0	
	baz=280,slow=75,SNR=11						
H11N2	**WAKE ISLAND Hy**	**22.38**	**91**	T	T	22 43 31.4	
	baz=280,slow=75,SNR=6.7						
H11N3	**WAKE ISLAND Hy**	**22.39**	**91**	T	T	22 43 32.3	
	baz=280,slow=75,SNR=7.2						
H11S3	**WAKE ISLAND Hy**	**22.43**	**95**	T	T	22 43 35.6	
	baz=284,slow=75,SNR=76						
H11S1	**WAKE ISLAND Hy**	**22.44**	**95**	T	T	22 43 36.1	
	baz=284,slow=75,SNR=79						
H11S2	**WAKE ISLAND Hy**	**22.45**	**95**	T	T	22 43 36.8	
	baz=284,slow=75,SNR=69						
KLR	**Kul'dur**	**28.62**	**344**	P	**P**	**22 21 12.5**	**+0.9**
	0.3nm,0.7s,baz=153,slow=9.8,SNR=9.1						
SONM	**Songino Array**	**39.03**	**320**	P	**P**	**22 22 42.5**	**+0.4**
	1.0nm,0.7s,baz=134,slow=8.0,SNR=2.9						
WRA	**Warramunga Arr**	**42.55**	**192**	P	**P**	**22 23 11.0**	**-0.3**
	1.4nm,0.7s,baz=14,slow=8.6,SNR=11						
ASAR	**Alice Springs**	**46.26**	**192**	P	**P**	**22 23 40.9**	**0.0**
	0.7nm,0.7s,baz=13,slow=8.7,SNR=6.3						
STKA	**Stephens Creek**	**53.59**	**182**	P	**P**	**22 24 37.1**	**+0.7**
	1.7nm,0.8s,baz=341,slow=13,SNR=3.6						
ZALV	**Zalesovo Beam**	**53.91**	**322**	P	**P**	**22 24 38.4**	**-0.1**
	2.9nm,0.5s,baz=106,slow=7.6,SNR=7.4						
MKAR	**Makanchi Array**	**54.41**	**312**	P	**P**	**22 24 42.9**	**+0.5**
	0.8nm,0.6s,baz=88,slow=8.3,SNR=5.8						
KURBB	**Kurchatov Arra**	**57.23**	**317**	P	**P**	**22 25 02.2**	**-0.1**
	2.4nm,0.8s,baz=96,slow=7.7,SNR=16						
ILAR	**Eielson Array**	**61.82**	**27**	P	**P**	**22 25 33.0**	**-0.8**
	0.4nm,0.9s,baz=270,slow=5.4,SNR=3.8						
BVAR	**Borovoye Array**	**62.37**	**319**	P	**P**	**22 25 38.0**	**+0.3**
	4.1nm,0.6s,baz=88,slow=7.7,SNR=22						
ARCES	**ARCESS Array B**	**78.60**	**341**	P	**P**	**22 27 16.4**	**-0.1**
	1.5nm,0.8s,baz=69,slow=6.8,SNR=5.5						
FINES	**FINESS Array B**	**82.86**	**334**	P	**P**	**22 27 37.5**	**-1.8**
	0.7nm,0.6s,baz=76,slow=5.9,SNR=7.7						
NVAR	**Mina Array Bea**	**83.04**	**51**	P	**P**	**22 27 42.3**	**+1.3**
	1.1nm,0.8s,baz=264,slow=6.1,SNR=8.7						
PDAR	**Pinedale Array**	**87.25**	**45**	P	**P**	**22 28 01.5**	**-0.6**
	0.2nm,0.5s,baz=318,slow=1.2,SNR=3.0						
BRTR	**Keskin Array B**	**90.06**	**313**	P	**P**	**22 28 14.2**	**-1.1**
	0.5nm,0.7s,baz=46,slow=4.2,SNR=4.9						
LPAZ	**La Paz**	**150.02**	**85**	PKPbc	**PKPbc**	**22 35 07.8**	**+0.6**
	1.9nm,0.6s,baz=249,slow=2.5,SNR=5.2						

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*IDC **01** 22:17:57.9±1.0, 31°.73N×103°.67E, h0^{km}, mb3.8/10, mb1 3.9/12, mb1mx3.6/70, mbtmp3.8/12, ML3.7/2, Error ellipse: s-maj=29.8km s-min=18.5km az=57.0*

*ISCJB **01** 22:17:58.4±0.3, 31°.76N±0°.03×103°.66E±0°.03, h13^{km}, mb3.8/11, Error ellipse: s-maj=4.1km s-min=3.9km az=171.2*

*BJI **01** 22:17:59.4, 31°.72N×103°.51E, h18^{km}, mb4.1/12, ML4.1/18, Ms4.0/14, Ms7 4.0/10*

*NEIC **01** 22:18:01.6±2.5, 31°.75N×103°.61E, h23^{km}±19^{km}, mb4.4/4, Error ellipse: s-maj=10.6km s-min=6.2km az=199.0*

ISC 01 22:17:59.7±0.5**, 31°.74N**±0°.03×**103°.61E**±0°.04**, h13^{km}, n54, σ2^{s}22**/66**, mb4.0**/11**, 1D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	**Chengdu**	**0.84**	**171**	⇓*i*Pg	**Pg**	**22 18 14.8**	**-1.1**
CD2				Sg	**Sg**	**22 18 26.7**	**-0.2**
CD2				smax	smax		
	comp=N,6μm,0.6s						
CD2				smax	smax		
	comp=E,6μm,0.7s						
LZH	**Lanzhou**	**4.34**	**3**	*e*Pn	**Pn**	**22 19 03.5**	**-2.0**
LZH				Pg	**Pb**	**22 19 13.2**	**-2.7**
LZH				smax	smax		
	comp=N,580nm,1.2s						
LZH				smax	smax		
	comp=E,890nm,1.0s						
LZH				LR	LR		
	comp=N,3μm,5.7s						
LZH				LR	LR		
	comp=E,3μm,5.2s						
LZH				LR	LR		
	comp=Z,3μm,5.7s						
XAN	**Xi'an**	**5.02**	**61**	Pn	**Pn**	**22 19 17.2**	**+2.4**
XAN				Pg	**Pg**	**22 19 32.9**	**-3.0**
XAN				Sn	**Sn**	**22 20 15.0**	**+2.2**
XAN				Sg	**Sb**	**22 20 32.7**	**+4.9**
XAN				smax	smax		
	comp=N,290nm,1.0s						
XAN				smax	smax		
	comp=E,330nm,0.8s						
ENH	**Enshi**	**5.25**	**105**	*e*Pn	**Pn**	**22 19 19.4**	**+1.4**
ENH				*e*Sn	**Sn**	**22 20 19.8**	**+1.3**
GYA	**Guiyang**	**5.90**	**152**	Pn	**Pn**	**22 19 24.9**	**-2.1**
GYA				Pg	Pg	22 19 48.0	-4.8
GYA				Sn	**Sn**	**22 20 37.5**	**+2.9**
GYA				Sg	**Sb**	**22 20 56.8**	**+3.6**
GYA				smax	smax		
	comp=N,150nm,0.7s						
GYA				smax	smax		
	comp=E,260nm,0.8s						
KMI	**Kunming**	**6.64**	**187**	Pn	**Pn**	**22 19 37.0**	**-0.2**
KMI				Sn	**Sn**	**22 20 49.8**	**-3.0**
KMI				LR	LR		
	comp=N,530nm,6.4s						
KMI				LR	LR		
	comp=E,570nm,5.0s						
KMI				LR	LR		
	comp=Z,460nm,10.7s						
GTA	**Gaotai**	**8.25**	**339**	*e*P	**Pb**	**22 20 25.1**	**+2.6**
GTA				pP	Pg	22 20 32.2	-5.5
GTA				sP	Pn	22 20 35.5	+36
GTA	**Gaotai**	**8.25**	**339**	*e*P	**Pg**	**22 20 35.5**	**-2.2**
GTA				pP	Pb	22 20 39.0	+16
GTA				sP	Pn	22 20 41.7	+42
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,16nm,1.6s						
WHN	**Wuhan**	**9.28**	**95**	P	**Pn**	**22 20 15.7**	**+2.4**
WHN				S	**Sn**	**22 21 55.5**	**-2.1**
WHN				LR	LR		
	comp=Z,2μm,5.4s						
WHN				LR	LR		
	comp=Z,1μm,8.2s						
WHN				LR	LR		
	comp=Z,1μm,11.3s						
LSA	**Lhasa**	**10.91**	**262**	*e*Pn	**Pn**	**22 20 37.0**	**+1.0**
HHC	**Hu-ho-hao-te**	**11.12**	**33**	*e*P	**Pn**	**22 20 41.1**	**+2.6**
HHC				sP		22 20 49.3	
HHC				S	**Sn**	**22 22 42.1**	**-0.7**
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC				LR	LR		
	comp=Z,240nm,5.1s						
HHC				LR	LR		
	comp=Z,130nm,6.6s						
CHTO	**Chiang Mai**	**13.54**	**199**	*e*Pn	**Pn**	**22 21 08.3**	**-3.3**
QIZ	**Qiongzhong**	**13.85**	**155**	*e*Pn	**Pn**	**22 21 17.1**	**+1.3**
CM31	**Chiang Mai Arr**	**13.88**	**199**	*e*Pn	**Pn**	**22 21 16.2**	**0.0**
CMAR	**Chiang Mai Arr**	**13.88**	**199**	Pn	**Pn**	**22 21 17.0**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=12,slow=13,SNR=4.8						
CM01	**Chiang Mai Arr**	**13.91**	**199**	*e*Pn	**Pn**	**22 21 18.8**	**+2.1**
ODAN	**Odare**	**14.96**	**255**	*e*P	**Pn**	**22 21 27.4**	**-3.7**
	comp=Z,7.9nm,0.6s						
RAMN	**Ramite**	**15.58**	**256**	*e*P	**Pn**	**22 21 37.2**	**-2.1**
	comp=Z,24nm,1.1s						
JIRN	**Jiri**	**15.67**	**259**	*e*P	**Pn**	**22 21 40.9**	**+0.3**
	comp=Z,62nm,1.0s						
GUN	**Gumba**	**15.85**	**261**	*e*P	**P**	**22 21 44.9**	**-1.8**
	comp=Z,20nm,0.6s						
SONM	**Songino Array**	**16.21**	**7**	Pn	**Pn**	**22 21 46.5**	**-0.7**
	comp=Z,0.1nm,0.3s,baz=190,slow=13,SNR=3.7						
SONA1	**Songino Array**	**16.23**	**7**	*e*Pn	**Pn**	**22 21 45.0**	**-2.5**
KKN	**Kakani**	**16.39**	**261**	*e*P	**P**	**22 21 51.4**	**-1.2**
	comp=Z,29nm,1.0s						
DMN	**Daman**	**16.60**	**260**	*e*P	**P**	**22 21 53.4**	**-1.5**
	comp=Z,26nm,0.9s						
GKN	**Gorkha**	**16.87**	**262**	*e*P	**P**	**22 21 57.9**	**+0.1**
	comp=Z,9.8nm,0.5s						
YHNB	**Yeheng**	**17.16**	**110**	*e*Pn	**Pn**	**22 21 53.5**	**-5.8**
	comp=Z,141nm,0.7s						
WMQ	**Urumqi**	**17.39**	**318**	P	**P**	**22 22 04.0**	**+0.6**
DANN	**Dangsing**	**17.51**	**264**	*e*P	**P**	**22 22 07.3**	**+2.2**
	comp=Z,21nm,1.0s						
KOLN	**Koldanda**	**17.81**	**262**	*e*P	**P**	**22 22 08.3**	**0.0**
	comp=Z,6.8nm,0.6s						
PYUN	**Piuthan**	**18.23**	**264**	*e*P	**P**	**22 22 14.5**	**+1.6**
	comp=Z,26nm,1.0s						
KS15	**Wonju Array Si**	**20.75**	**67**	*e*P	**P**	**22 22 40.5**	**+0.3**
KSAR	**Wonju Array Be**	**20.75**	**67**	P	**P**	**22 22 40.6**	**+0.4**
KS01	**Wonju Array Si**	**20.77**	**67**	*e*P	**P**	**22 22 41.1**	**+0.7**
KSRS	**Korea Array**	**20.79**	**67**	P	**P**	**22 22 40.6**	**+0.1**
	comp=Z,2.9nm,0.8s,baz=257,slow=9.7,SNR=13						
CN2	**Changchun**	**20.98**	**49**	*e*P	**P**	**22 22 46.5**	**+3.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
MK01	**Makanchi Array**	**22.20**	**319**	*e*P	**P**	**22 22 56.5**	**+0.7**
MK31	**Makanchi Array**	**22.22**	**319**	*e*P	**P**	**22 22 57.0**	**+1.0**
MKAR	**Makanchi Array**	**22.22**	**319**	P	**P**	**22 22 56.7**	**+0.7**
	comp=Z,1.0nm,0.6s,baz=122,slow=13,SNR=8.8						
MKAR	**Makanchi Array**	**22.22**	**319**	*e*P	**P**	**22 22 57.0**	**+1.0**
	comp=Z,17nm,0.8s						
MAKZ	**Makanchi**	**22.41**	**318**	*e*P	**P**	**22 22 57.4**	**-0.5**
	comp=Z,4.8nm,0.9s						
KSH	**Kashi**	**23.70**	**297**	P	**P**	**22 23 12.4**	**+1.0**
KSH				sP	sP	22 23 21.1	+4.2
KSH				PP	**PnPn**	**22 23 46.9**	**+8.2**
ZALV	**Zalesovo Beam**	**25.97**	**334**	P	**P**	**22 23 32.0**	**+0.2**
	comp=Z,0.8nm,0.5s,baz=120,slow=9.0,SNR=4.7						
ZALV	**Zalesovo Beam**	**25.97**	**334**	*e*P	**P**	**22 23 32.2**	**+0.4**
KURBB	**Kurchatov Arra**	**26.48**	**323**	P	**P**	**22 23 37.2**	**+0.7**
	comp=Z,1.3nm,0.8s,baz=126,slow=9.7,SNR=13						
KURK	**Kurchatov**	**26.48**	**323**	P	**P**	**22 23 37.2**	**+0.7**
KK31	**Karatay Array**	**28.45**	**303**	*e*P	**P**	**22 23 53.3**	**-1.0**
KKAR	**Karatay Array**	**28.45**	**303**	*e*P	**P**	**22 23 53.7**	**-0.6**
ARU	**Arti**	**39.67**	**322**	P	**P**	**22 25 31.9**	**+0.7**
	comp=Z,1.7nm,0.7s,baz=101,slow=7.2,SNR=3.2						
WRA	**Warramunga Arr**	**59.24**	**146**	P	**P**	**22 28 00.2**	**-0.7**
	comp=Z,1.3nm,0.9s,baz=337,slow=7.6,SNR=4.0						
ASAR	**Alice Springs**	**62.25**	**148**	P	**P**	**22 28 21.6**	**+0.2**
	comp=Z,1.3nm,1.1s,baz=338,slow=5.9,SNR=3.0						
COLD	**Coldfoot**	**67.06**	**24**	*e*P	**P**	**22 28 53.6**	**+1.3**
	comp=Z,1.8nm,0.9s						
ILAR	**Eielson Array**	**69.45**	**26**	P	**P**	**22 29 06.8**	**-0.5**
	comp=Z,0.3nm,0.6s,baz=286,slow=6.5,SNR=4.9						
INK	**Inuvik**	**71.70**	**19**	P	**P**	**22 29 21.5**	**+0.7**
	comp=Z,1.7nm,0.8s,baz=339,slow=5.3,SNR=2.6						
YKA	**Yellowknife Ar**	**81.21**	**17**	P	**P**	**22 30 15.5**	**+0.6**
	comp=Z,0.4nm,0.6s,baz=334,slow=5.2,SNR=3.0						

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*IDC **01** 22:18:14.3±0.9, 34°.21N×59°.85E, h0^{km}, mb3.6/11, mb1 3.8/14, mb1mx3.6/61, mbtmp3.6/14, ML3.3/3, Error ellipse: s-maj=19.2km s-min=15.4km az=50.0*

*ISCJB **01** 22:18:17.0±0.4, 34°.51N±0°.03×59°.86E±0°.05, h10^{km}, mb3.6/10, Error ellipse: s-maj=6.2km s-min=4.3km az=10.4*

*THR **01** 22:18:16.2±0.3, 34°.65N×59°.94E, h15^{km}±2^{km}, ML3.9*

*CSEM **01** 22:18:17.7±0.2, 34°.51N×59°.85E, h5^{km}, ML3.9, Error ellipse: s-maj=7.5km s-min=4.5km az=86.0*

*TEH **01** 22:18:19.4, 34°.49N×59°.98E, h24^{km}, ML3.9*

ISC 01 22:18:17.9±0.6**, 34°.48N**±0°.03×**59°.97E**±0°.05**, h10^{km}, n70, σ1^{s}28**/68**, mb3.6**/10**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHRT	**Shahrakht**	**0.87**	**162**	*e*Pg	**Pg**	**22 18 35.6**	**+0.9**
SHRT				IAML		22 18 51.1	
	comp=E,3μm,0.3s						
SHRT				IAML		22 18 51.3	
	comp=N,4μm,0.4s						
SHRT	**Shahrakht**	**0.87**	**162**	*e*Pg	**Pg**	**22 18 35.7**	**+0.9**
SHRT	**Shahrakht**	**0.87**	**162**	*e*Pg	**Pg**	**22 18 35.7**	**+0.9**
IMOG	**Moghan**	**1.70**	**343**	*e*Pn	**Pn**	**22 18 47.5**	**-0.5**
IMOG				*e*		22 19 12.0	
	comp=E,10μm,0.2s						
IMOG				*e*		22 19 18.7	
	comp=N,13μm,0.2s						
IMOG				*e*		22 19 19.4	
	comp=Z,7μm,0.2s						
IMOG	**Moghan**	**1.70**	**343**	*e*Pn	**Pn**	**22 18 47.5**	**-0.5**
IDAH	**Dahanechah**	**1.74**	**183**	*e*Pn	**Pn**	**22 18 48.6**	**+0.2**
IDAH				*e*		22 19 16.2	
	comp=N,48μm,0.2s						
IDAH				*e*		22 19 16.5	
	comp=Z,25μm,0.2s						
IDAH				*e*		22 19 19.6	
	comp=E,45μm,0.1s						
IDAH	**Dahanechah**	**1.74**	**183**	*e*Pn	**Pn**	**22 18 48.6**	**+0.2**
IMYA	**Miami**	**1.86**	**3**	*e*Pn	**Pn**	**22 18 49.2**	**-0.8**
IMYA				*e*		22 19 16.6	
	comp=Z,20μm,0.3s						
IMYA				*e*		22 19 16.9	
	comp=E,25μm,0.2s						
IMYA				*e*		22 19 20.6	
	comp=N,25μm,0.2s						
IMYA	**Miami**	**1.86**	**3**	*e*Pn	**Pn**	**22 18 49.2**	**-0.8**
ISRO	**Mashad**	**1.87**	**348**	*e*Pn	**Pn**	**22 18 50.4**	**+0.3**
ISRO				*e*		22 19 15.9	
	comp=E,13μm,0.2s						
ISRO				*e*		22 19 16.2	
	comp=Z,15μm,0.2s						
ISRO				*e*		22 19 16.7	
	comp=N,11μm,0.3s						
ISRO	**Mashad**	**1.87**	**348**	*e*Pn	**Pn**	**22 18 50.4**	**+0.3**
ITEG	**Tejag**	**1.88**	**213**	*e*Pn	**Pn**	**22 18 49.9**	**-0.4**
ITEG				*e*		22 18 53.4	
	comp=Z,20μm,0.1s						
ITEG				*e*		22 19 19.4	
	comp=E,32μm,0.2s						
ITEG				*e*		22 19 21.6	
	comp=N,27μm,0.2s						
ITEG	**Tejag**	**1.88**	**213**	*e*Pn	**Pn**	**22 18 49.9**	**-0.4**
IPAY	**Payeh**	**2.12**	**338**	*e*Pn	**Pn**	**22 18 53.4**	**-0.2**
IPAY				*e*		22 19 27.5	
	comp=Z,4μm,0.2s						
IPAY				*e*		22 19 29.9	
	comp=N,10μm,0.2s						
IPAY				*e*		22 19 32.6	
	comp=E,5μm,0.2s						
IPAY	**Payeh**	**2.12**	**338**	*e*Pn	**Pn**	**22 18 53.4**	**-0.2**
IKOO	**Kooshah**	**2.20**	**202**	*e*Pn	**Pn**	**22 18 54.4**	**-0.4**
IKOO				*e*		22 19 29.2	
	comp=Z,6μm,0.3s						
IKOO				*e*		22 19 30.9	
	comp=N,9μm,0.2s						
IKOO				*e*		22 19 34.0	
	comp=E,9μm,0.2s						
IKOO	**Kooshah**	**2.20**	**202**	*e*Pn	**Pn**	**22 18 54.4**	**-0.4**
IAKL	**Akhelmad**	**2.34**	**335**	*e*Pn	**Pn**	**22 18 56.6**	**-0.1**
IAKL				*e*		22 19 18.9	
	comp=Z,3μm,0.1s						
IAKL				*e*		22 19 30.6	
	comp=E,6μm,0.2s						
IAKL				*e*		22 19 30.8	
	comp=N,6μm,0.2s						
IAKL	**Akhelmad**	**2.34**	**335**	*e*Pn	**Pn**	**22 18 56.6**	**-0.1**
TABS	**Tabas**	**2.51**	**251**	*e*Pn	**Pn**	**22 18 59.0**	**+0.2**
TABS				*e*Sg	**Sb**	**22 19 35.9**	**+1.9**
TABS				IAML		22 19 39.2	
	comp=N,427nm,0.4s						
TABS	**Tabas**	**2.51**	**251**	*e*Pn	**Pn**	**22 18 59.0**	**+0.2**
TABS	**Tabas**	**2.51**	**251**	*e*Pn	**Pn**	**22 18 59.0**	**+0.2**
TABS				*e*Sg	**Sb**	**22 19 35.9**	**+1.9**
TKDS	**Koohdasht(Taba**	**2.52**	**251**	*e*Pn	**Pn**	**22 18 59.2**	**+0.2**
TKDS				*e*		22 19 04.1	
	comp=Z,99nm,0.2s						
TKDS				*e*		22 19 38.6	
	comp=N,99nm,0.1s						
TKDS				*e*		22 19 51.2	
	comp=E,99nm,0.3s						
TKDS	**Koohdasht(Taba**	**2.52**	**251**	*e*Pn	**Pn**	**22 18 59.2**	**+0.2**
IKRD	**Kardeh**	**2.58**	**333**	*e*Pn	Pn	22 18 55.7	-4.3
IKRD				*e*		22 19 31.7	
	comp=Z,4μm,0.2s						
IKRD				*e*		22 19 33.3	
	comp=N,7μm,0.2s						
IKRD				*e*		22 19 33.5	
	comp=E,6μm,0.2s						
IKRD	**Kardeh**	**2.58**	**333**	*e*Pn	Pn	22 18 55.7	-4.3
TNSJ	**Nastanj**	**2.83**	**260**	*e*Pn	**Pn**	**22 19 02.3**	**-1.0**
TNSJ	**Nastanj**	**2.83**	**260**	*e*Pn	**Pn**	**22 19 02.3**	**-1.0**
ISFR	**Sfrayin**	**3.03**	**329**	*e*		22 19 30.6	
	comp=Z,2μm,0.3s						

ISFR				*e*Pn	Pn	22 19 05.8	-0.3
ISFR				*e*		22 19 52.9	
	comp=N,3µm,0.3s						
ISFR				*e*		22 20 01.4	
	comp=E,6µm,0.2s						
TPRV	Parvadeh(Tabas	3.10	243	*e*		22 19 57.1	
	comp=N,99nm,0.2s						
TPRV				*e*Pn	Pn	22 19 06.1	-0.8
TPRV				*e*		22 20 02.0	
	comp=Z,99nm,0.2s						
TPRV				*e*		22 20 08.0	
	comp=E,99nm,0.3s						
IEMG	Emamgholi	3.12	340	*e*Pn	Pn	22 19 07.8	+0.4
IEMG				*e*		22 20 01.2	
	comp=N,4µm,0.2s						
IEMG				*e*		22 20 09.2	
	comp=E,5µm,0.2s						
IEMG				*e*		22 20 15.0	
	comp=Z,2µm,0.2s						
IEMG	Emamgholi	3.12	340	*e*Pn	Pn	22 19 07.8	+0.4
SHRO	Shahrood	3.57	296	*e*Pn	Pn	22 19 12.1	-1.4
SHRO				*e*Sg	Sb	22 20 04.8	0.0
SHRO	Shahrood	3.57	296	*e*Pn	Pn	22 19 12.1	-1.4
SHRO	Shahrood	3.57	296	*e*Pn	Pn	22 19 12.1	-1.4
GEYT	Alibeck	3.75	337	Pn	Pn	22 19 15.1	-0.9
	comp=Z,0.7nm,0.3s,baz=183,slow=17,SNR=11						
GEYT				Pg	Pb	22 19 28.4	+4.1
	comp=Z,3.5nm,0.3s,baz=157,slow=19,SNR=19						
GEYT				Sn	Sn	22 20 04.5	+4.3
	comp=Z,1.7nm,0.3s,baz=147,slow=38,SNR=2.8						
GEYT				Lg	Lg	22 20 20.4	
	comp=Z,2.0nm,0.3s,baz=273,slow=13,SNR=4.6						
ZHSF	Zahedan	4.90	172	*e*Pn	Pn	22 19 34.0	+2.2
ZHSF	Zahedan	4.90	172	*e*Pn	Pn	22 19 34.0	+2.2
ZHSF	Zahedan	4.90	172	*e*Pn	Pn	22 19 34.0	+2.2
CHMN	Cheshme madani	5.04	205	*e*Pn	Pn	22 19 35.1	+1.1
CHMN				*e*		22 21 05.9	
	comp=E,99nm,0.3s						
CHMN				*e*		22 21 09.8	
	comp=N,99nm,0.3s						
CHMN				*e*		22 21 11.3	
	comp=Z,99nm,0.6s						
CHMN	Cheshme madani	5.04	205	*e*Pn	Pn	22 19 35.1	+1.1
KHGB	Koh Gabri	5.05	217	*e*Pn	Pn	22 19 33.9	0.0
KHGB				*e*		22 21 11.8	
	comp=Z,99nm,0.6s						
KHGB				*e*		22 21 12.9	
	comp=N,99nm,0.3s						
KHGB				*e*		22 21 13.5	
	comp=E,99nm,0.3s						
KHGB	Koh Gabri	5.05	217	*e*Pn	Pn	22 19 33.9	0.0
ICHK	Chekchek	5.16	246	*e*		22 20 01.4	
	comp=Z,969nm,0.2s						
ICHK				*e*		22 21 10.1	
	comp=N,987nm,0.2s						
ICHK				*e*		22 21 18.6	
	comp=E,1µm,0.3s						
ANAR	Anarak	5.35	258	*e*Pn	Pn	22 19 36.9	-1.1
ANAR				*e*		22 21 12.7	
	comp=E,99nm,0.3s						
ANAR				*e*		22 21 25.2	
	comp=N,99nm,0.2s						
ANAR				*e*		22 21 31.6	
	comp=Z,99nm,0.5s						
ANAR	Anarak	5.35	258	*e*Pn	Pn	22 19 36.9	-1.1
IGLO	Ghaloghah	5.40	294	*e*Pn	Pn	22 19 38.3	-0.4
IGLO				*e*		22 21 25.6	
	comp=E,775nm,0.3s						
IGLO				*e*		22 21 30.7	
	comp=Z,497nm,0.4s						
IGLO				*e*		22 21 44.9	
	comp=N,1µm,0.4s						
IMEH	Mehriz	5.46	237	*e*		22 20 08.8	
	comp=Z,562nm,0.3s						
IMEH				*e*		22 21 26.1	
	comp=N,453nm,0.4s						
ISHM	Shahmirzad	5.63	285	*e*Pn	Pn	22 19 41.3	-0.6
ISHM				*e*		22 21 18.5	
	comp=Z,662nm,0.2s						
ISAD	Sadrabad	5.86	246	*e*		22 21 31.5	
	comp=N,794nm,0.3s						
ISAD				*e*		22 21 31.9	
	comp=Z,759nm,0.3s						
IPRN	Peran	6.48	288	*e*Pn	Pn	22 19 52.8	-0.6
IPRN				*e*		22 20 07.9	
	comp=E,1µm,0.2s						
IPRN				*e*		22 20 08.6	
	comp=Z,348nm,0.1s						
IPRN				*e*		22 20 11.9	
	comp=N,534nm,0.1s						
IZEF	Zefreh	6.56	258	*e*Pn	Pn	22 19 54.6	-0.1
IZEF				*e*		22 21 48.5	
	comp=E,188nm,0.2s						
IZEF				*e*		22 21 50.3	
	comp=Z,154nm,0.2s						
IZEF				*e*		22 22 03.1	
	comp=N,246nm,0.3s						
IZEF	Zefreh	6.56	258	*e*Pn	Pn	22 19 54.6	-0.1
IRAM	Ramesheh	6.90	249	*e*		22 21 58.9	
	comp=N,149nm,0.3s						
IRAM				*e*		22 21 59.6	
	comp=Z,130nm,0.3s						
IRAM				*e*		22 22 14.7	
	comp=E,345nm,0.6s						
GHVR	GHOM	7.16	272	*e*Pn	Pn	22 20 03.0	+0.2
GHVR				IAML		22 22 29.0	
	comp=N,11nm,0.7s						
GHVR				IAML		22 22 32.3	
	comp=E,15nm,0.6s						
GHVR	GHOM	7.16	272	*e*Pn	Pn	22 20 03.0	+0.2
GHVR	GHOM	7.16	272	*e*Pn	Pn	22 20 03.0	+0.2
AKTO	Aktyubinsk	16.01	355	Pn	Pn	22 22 04.2	+1.1
	comp=E,0.2nm,0.3s,baz=199,slow=18,SNR=2.6						
KBZ	Khabaz	16.13	310	Pn	Pn	22 22 04.9	+0.3
	comp=E,0.3nm,0.3s,baz=90,slow=6.1,SNR=2.5						
BVAR	Borovoye Array	19.97	19	P	P	22 22 50.4	+0.3
	comp=E,1.5nm,0.5s,baz=198,slow=12,SNR=13						
KURBB	Kurchatov Arra	21.05	34	P	P	22 23 01.1	-0.8
	comp=E,0.8nm,0.7s,baz=229,slow=11,SNR=4.6						
BRTR	Keskin Array B	21.61	292	P	P	22 23 07.6	-0.6
	comp=E,0.6nm,0.8s,baz=96,slow=10,SNR=3.5						
ARU	Arti	21.97	358	P	P	22 23 13.2	+1.5
	comp=E,4.1nm,0.8s,baz=160,slow=5.3,SNR=6.3						
AKASG	Malin Array Be	27.57	315	P	P	22 24 05.5	+0.5
	comp=E,0.2nm,0.3s,baz=106,slow=9.8,SNR=2.6						
GERES	GERESS Array B	36.84	307	P	P	22 25 24.7	-1.5
	comp=E,0.3nm,0.6s,baz=90,slow=7.8,SNR=2.5						
CMAR	Chiang Mai Arr	38.10	105	P	P	22 25 36.2	-0.9
	comp=E,0.8nm,0.7s,baz=296,slow=6.9,SNR=3.6						
ESDC	Sonseca Array	50.32	296	P	P	22 27 12.3	-2.6
	comp=E,0.5nm,0.6s,baz=74,slow=8.3,SNR=3.7						
TORD	Torodi Ar. Bea	56.60	263	P	P	22 27 57.5	-3.7
	comp=E,1.3nm,1.0s,baz=56,slow=7.7						
KOWA	Kowa	60.59	268	P	P	22 28 26.0	-3.1
	comp=E,2.5nm,0.7s,baz=63,slow=9.5,SNR=5.0						
WRA	Warramunga Arr	88.95	115	P	P	22 31 10.8	-2.2
	comp=E,0.6nm,0.8s,baz=323,slow=4.2,SNR=3.0						

IDC 01 22:23:47.8±3.5**, 6°.80S**×**125°.37E, h472**^{km}±47^{km}**, mb2.4**/1**, mb1 2.9**/4**, mb1mx2.5**/52**, mbtmp3.6**/4**, Error ellipse: s-maj=95.3km s-min=22.6km az=53.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	3.78	206	P	P	22 25 03.7	+1.1
	baz=253,slow=19						
BATI				S	S	22 26 03.4	0.0
	baz=107,slow=20						
FITZ	Fitzroy Crossi	11.23	179	P	P	22 26 17.8	-0.5
	1.6nm,0.3s,baz=18,slow=11,SNR=32						
WRA	Warramunga Arr	15.70	147	P	P	22 27 05.3	-0.7
	0.3nm,0.3s,baz=325,slow=10,SNR=8.9						
ASAR	Alice Springs	18.67	155	P	P	22 27 36.4	+0.5
	0.3nm,0.3s,baz=342,slow=14,SNR=13						
MKAR	Makanchi Array	65.61	329	P	P	22 33 44.2	-0.1
	0.1nm,0.5s,baz=144,slow=5.8,SNR=3.5						

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*ISCJB **01** 22:45:54.1±0.9, 6°.38N±0°.07×126°.8E±0°.1, h113^{km}±8^{km}, mb3.9/10, Error ellipse: s-maj=18.1km s-min=11.0km az=166.8*

*IDC **01** 22:45:54.9±2.6, 6°.42N×126°.92E, h106^{km}±21^{km}, mb3.6/10, mb1 3.8/11, mb1mx3.4/55, mbtmp4.1/11, Error ellipse: s-maj=44.0km s-min=11.7km az=71.0*

*MAN **01** 22:45:54.0, 6°.44N×126°.97E, h81^{km}, mb5.0, ML3.9, MS3.9*

ISC 01 22:45:54.8±1.2**, 6°.29N**±0°.08×**126°.8E**±0°.1**, h102**^{km}±10^{km}**, n18, σ1^{s}.38**/24**, mb4.0**/10**, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	0.83	322	*e*P	Pn	22 46 12.4	-1.2
MATI				*e*S	Sn	22 46 26.3	-1.4
DAV	Davao City (W)	1.42	303	P	Pn	22 46 20.8	+0.6
	364nm,0.3s,baz=126,slow=4.0,SNR=18						
DAV				S	Sn	22 46 41.2	+1.8
	262nm,0.3s,baz=270,slow=20,SNR=8.3						
SKMP	Bagumbayan, Su	2.23	276	*e*P	Pn	22 46 30.6	+0.2
SKMP				*e*S	Sn	22 46 56.9	-0.8
BUKP	Musuan	2.32	313	*e*P	Pn	22 46 31.5	-0.1
BUKP				*e*S	Sn	22 46 59.1	-0.8
BUTP	Butuan	2.90	337	*e*P	Pn	22 46 40.6	+1.4
BUTP				*e*S	Sn	22 47 17.4	+3.9
PAGZ	Pagadian	3.71	295	*e*P	Pn	22 46 50.3	+0.3
BATI	Baumata	16.67	191	P	P	22 49 45.4	+2.3
	5.8nm,0.3s,baz=172,slow=1.0,SNR=3.8						
FITZ	Fitzroy Crossi	24.25	183	P	P	22 51 03.5	+1.0
	2.8nm,0.5s,baz=1.0,slow=12,SNR=26						
WRA	Warramunga Arr	27.11	164	P	P	22 51 28.5	+0.1
	0.6nm,0.7s,baz=342,slow=10,SNR=4.5						
ASAR	Alice Springs	30.57	167	P	P	22 51 59.6	+0.5
	0.6nm,0.4s,baz=344,slow=7.2,SNR=7.1						
ASAR				PcP	PcP	22 54 55.4	-0.2
	0.4nm,0.5s,baz=7.2,slow=2.8,SNR=4.2						
NWAO	Narrogin (SRO)	40.03	193	P	P	22 53 21.0	+1.0
	4.6nm,0.4s,baz=254,slow=7.0,SNR=16						
STKA	Stephens Creek	40.50	160	P	P	22 53 23.6	-0.2
	2.5nm,0.7s,baz=338,slow=7.4,SNR=5.8						
MKAR	Makanchi Array	55.51	324	P	P	22 55 19.0	-0.3
	0.6nm,0.4s,baz=120,slow=7.3,SNR=8.4						
KURBB	Kurchatov Arra	59.63	327	P	P	22 55 47.1	-1.0
	1.0nm,0.7s,baz=125,slow=6.9,SNR=9.6						
BVAR	Borovoye Array	65.22	326	P	P	22 56 24.9	-0.5
	0.8nm,0.8s,baz=123,slow=5.3,SNR=5.3						
ILAR	Eielson Array	82.79	26	P	P	22 58 06.7	-0.8
	0.3nm,0.5s,baz=245,slow=6.0,SNR=4.8						
ARCES	ARCESS Array B	88.08	340	P	P	22 58 32.2	-1.4
	1.7nm,0.8s,baz=80,slow=5.6,SNR=5.1						
TORD	Torodi Ar. Bea	122.14	290	PKP	PKPdf	23 04 37.8	-0.9
	0.1nm,0.3s,baz=67,slow=2.4						

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*ISCJB **01** 22:59:11.2±1.3, 43°.57N±0°.08×84°.7E±0°.1, h10^{km}, Error ellipse: s-maj=11.5km s-min=10.3km az=146.9*

*IDC **01** 22:59:14.6±3.9, 43°.64N×85°.02E, h0^{km}, mb1 3.0/4, mb1mx2.9/76, mbtmp3.0/4, ML2.6/4, Error ellipse: s-maj=53.4km s-min=26.4km az=38.0*

*NNC **01** 22:59:19.6±4.4, 43°.63N×84°.49E, h0^{km}, mb3.3, mpv3.0, Error ellipse: s-maj=36.3km s-min=17.3km az=126.0*

ISC 01 22:59:15.3±1.7**, 43°.66N**±0°.09×**84°.88E**±0°.10**, h10**^{km}**, n8, σ2^{s}.05**/13**, 3C-3D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MK31	Makanchi Array	3.63	331	⇓Pn	Pn	23 00 15.1	+3.5
	0.3nm,0.3s,baz=150,slow=15,SNR=86						
MK31				⇓Pg	Pg	23 00 23.4	-1.5
	0.9nm,0.2s,baz=150,slow=17,SNR=8.4						
MK31				Lg	Lg	23 01 12.3	
	7.5nm,0.3s,baz=144,slow=29,SNR=10						
MKAR	Makanchi Array	3.63	331	Pn	Pn	23 00 14.3	+2.7
	0.3nm,0.3s,baz=150,slow=14,SNR=20						
MKAR				Pg	Pg	23 00 23.3	-1.6
	2.3nm,0.3s,baz=146,slow=18,SNR=50						
MKAR				Sn	Sn	23 00 52.4	-2.1
	3.5nm,0.3s,baz=147,slow=16,SNR=8.9						
MKAR				Lg	Lg	23 01 12.4	
	11nm,0.3s,baz=149,slow=29,SNR=17						
MAKZ	Makanchi	3.76	328	⇑Pg	Pg	23 00 26.0	-1.3
	1.5nm,0.3s						
MAKZ				⇑Lg	Lg	23 01 16.5	
	11nm,0.5s						
PDGK	Podgornoye	3.94	267	⇑Pg	Pb	23 00 25.9	+1.0
	4.3nm,0.5s						
PDGK				⇓Lg	Lg	23 01 11.7	
	9.3nm,0.3s						
MDOK	Medeo	5.73	268	Pg	Pg	23 01 02.5	-2.5
	2.4nm,0.8s						
MDOK				Lg	Lg	23 02 11.7	
	6.3nm,0.6s						
KURBB	Kurchatov Arra	8.20	330	Pn	Pn	23 01 15.8	+1.6
	0.1nm,0.3s,baz=145,slow=13,SNR=4.9						
KURBB				Sn	Sn	23 02 47.4	+0.5
	0.1nm,0.3s,baz=148,slow=2.1,SNR=4.9						
KURBB				Lg	Lg	23 03 36.7	
	0.2nm,0.3s,baz=138,slow=27,SNR=8.8						
ZALV	Zalesovo Beam	10.30	360	Pn	Pn	23 01 43.2	+0.2
	0.2nm,0.3s,baz=183,slow=7.9,SNR=2.7						
ZALV				Sn	Sn	23 03 37.4	-1.1
	0.3nm,0.3s,baz=178,slow=25,SNR=5.8						
SONM	Songino Array	15.58	67	Pn	Pn	23 02 54.7	-0.3
	0.1nm,0.3s,baz=263,slow=12,SNR=2.7						

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*ISCJB **01** 23:02:30.8±0.7, 17°.79S±0°.04×178°.49W±0°.03, h572^{km}±9^{km}, mb4.6/215, Error ellipse: s-maj=6.4km s-min=4.0km az=153.8*

*BJI **01** 23:02:30.5, 17°.70S×178°.50W, h564^{km}, mb4.5/14, mB4.9/6*

*IDC **01** 23:02:31.4±0.5, 17°.77S×178°.38W, h568^{km}±6^{km}, mb4.2/32, mb1 4.3/34, mb1mx4.1/53, mbtmp5.1/34, Error ellipse: s-maj=9.1km s-min=6.7km az=145.0*

*NEIC **01** 23:02:32.2±0.6, 17°.78S×178°.49W, h578^{km}±7^{km}, mb4.6/182, Error ellipse: s-maj=4.8km s-min=3.3km az=143.0*

ISC 01 23:02:31.5±0.5**, 17°.81S**±0°.05×**178°.38W**±0°.05**, h572**^{km}±5^{km}**, h573**^{km}**:pP-P, n503, σ1^{s}.09**/526**, mb4.6**/214**, 16C-8D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	7.44	59	P	P	23 04 22.7	-2.0
	52nm,0.3s,baz=225,slow=1.1,SNR=57						
FUNA	Funafuti	9.53	345	*e*P	P	23 04 44.5	-0.6
RAO	Raoul Island	11.39	178	S	S	23 07 12.3	+3.3
	115nm,0.3s,baz=9.0,slow=19,SNR=5.3						
DZM	Mont Dzumac	14.89	251	P	P	23 05 39.0	-0.5
	3.2nm,0.3s,baz=81,slow=14,SNR=54						
DZM	Mont Dzumac	14.89	251	*e*P	P	23 05 37.6	-1.9
	126nm,0.8s						
DZM	Mont Dzumac	14.89	251	*e*P	P	23 05 38.6	-0.9
NFK	Norfolk Island	16.79	226	P	P	23 05 59.9	+2.5
	baz=17,SNR=6.1						
RAR	Rarotonga	17.86	104	S	S	23 09 01.9	-0.6
	4.2nm,0.3s,baz=153,slow=11,SNR=3.0						
OUZ	Omahuta	18.75	201	*e*P	P	23 06 15.6	+0.5
	93nm,0.8s						
MXZ	Matakaoa Point	19.89	188	*e*P	P	23 06 26.1	+0.7
	32nm,0.8s						
URZ	Urewera	20.75	190	P	P	23 06 31.9	-1.2
	18nm,0.7s,baz=345,slow=3.3,SNR=9.3						
URZ				S	S	23 09 41.2	-7.1
	10.0nm,0.8s,baz=49,slow=20,SNR=4.9						
URZ	Urewera	20.75	190	*e*P	P	23 06 31.7	-1.4
	30nm,0.7s						
URZ				S	S	23 09 41.2	-7.1
BKZ	Black Stump Fm	21.74	191	*e*P	P	23 06 40.5	-1.6
	76nm,1.9s						
HNR	Honiara	22.64	289	P	P	23 06 51.6	+1.3
	110nm,0.6s,baz=194,slow=0.8,SNR=4.4						
BFZ	Birch Farm	23.26	190	*e*P	P	23 06 55.6	+0.1
	43nm,1.1s						
SNZO	South Karori	24.16	193	*e*P	P	23 07 01.8	-1.6
	108nm,1.3s						
LHI	Lord Howe Isla	24.56	232	*e*P	P	23 07 07.8	+0.6
	114nm,0.8s						
THZ	Tophouse	25.01	196	*e*P	P	23 07 12.0	+0.9
	18nm,0.7s						
KHZ	Kahutara	25.47	194	*e*P	P	23 07 15.1	+0.1
	201nm,2.0s						
LTZ	Lake Taylor	26.13	196	*e*P	P	23 07 20.6	-0.3
	36nm,0.6s						
OXZ	Oxford	26.70	196	*e*P	P	23 07 25.2	-0.7
	67nm,0.8s						
MQZ	McQueen's Vall	26.90	194	*e*P	P	23 07 29.4	+1.8
	86nm,1.7s						
RPZ	Rata Peaks	27.32	197	P	P	23 07 32.0	+0.6
	14nm,0.7s,baz=31,slow=3.3,SNR=5.7						
RPZ	Rata Peaks	27.32	197	*e*P	P	23 07 32.1	+0.8
	84nm,1.8s						
PPT2	Papeete2	27.43	94	*e*P	P	23 07 35.0	+2.3
	46nm,0.7s						
PPT	Papeete	27.43	94	P	P	23 07 33.0	+0.4
	72nm,0.6s,baz=255,slow=12,SNR=5.9						
PPT	Papeete	27.43	94	*e*P	P	23 07 32.9	+0.3
PPTF	Pamatai, Papee	27.44	94	*e*P	P	23 07 33.2	+0.5
	70nm,0.7s						
FOZ	Fox Glacier	27.52	199	*e*P	P	23 07 33.5	+0.5
	74nm,0.8s						
TIAR	Tiarei	27.65	94	*e*P	P	23 07 36.8	+2.2
	12nm,0.8s						
TVO	Taravao	27.72	94	*e*P	P	23 07 37.5	+2.3
	19nm,0.8s						
LBZ	Lake Benmore	28.18	198	*e*P	P	23 07 37.6	-1.2
	19nm,0.8s						
ODZ	Otahua Downs	28.66	196	*e*P	P	23 07 43.8	+0.8
	62nm,1.5s						
WKZ	Wanaka	28.93	199	*e*P	P	23 07 45.0	-0.4
	45nm,0.9s						
EIDS	Eidsvold	29.33	250	P	P	23 07 49.0	-0.1
	baz=30,SNR=20						
EIDS	Eidsvold	29.33	250	*e*P	P	23 07 49.0	-0.1
	52nm,0.8s						
MLZ	Mavora Lakes	29.70	199	*e*P	P	23 07 52.6	+0.7
	47nm,0.8s						
ARMA	Armidale	30.02	240	P	P	23 07 56.3	+1.2
	baz=30,SNR=51						
ARMA	Armidale	30.02	240	*e*P	P	23 07 56.2	+1.2
	72nm,0.8s						
DCZ	Deep Cove	30.10	201	*e*P	P	23 07 55.5	+0.2
	42nm,1.2s						
WHZ	Wether Hill Ro	30.22	199	*e*P	P	23 07 57.4	+0.9
	53nm,1.0s						
MGCD	Mangrove Creek	31.37	235	P	P	23 08 07.9	+1.4
	baz=32,SNR=25						
RMQ	Roma	31.57	248	P	P	23 08 09.2	+1.0
	baz=32,SNR=45						
CTA	Charters Tower	33.49	260	P	P	23 08 24.6	+0.1
	45nm,0.6s,baz=95,slow=10,SNR=52						
CTAO	Charters Tower	33.49	260	*e*P	P	23 08 24.7	+0.1
	56nm,0.7s						
CNB	Canberra Magne	33.51	232	P	P	23 08 25.9	+1.3
	baz=34,SNR=103						
PATS	Pohnpei	33.62	315	P	P	23 08 25.6	-0.1
	baz=34,SNR=3.7						
CAN	Canberra	33.78	232	*e*P	P	23 08 27.9	+0.9
	75nm,0.8s						
YNG	Young	33.87	234	P	P	23 08 28.8	+1.2
	baz=34,SNR=12						
MILA	Mila	34.37	230	P	P	23 08 32.9	+1.1
	baz=35,SNR=12						
PMG	Port Moresby	34.48	279	P	P	23 08 33.9	+1.0
	201nm,0.8s,baz=83,slow=7.4,SNR=68						
PMG	Port Moresby	34.48	279	*e*P	P	23 08 33.9	+1.0
	206nm,0.8s						
CMSA	Cobar Meteorol	35.22	240	P	P	23 08 39.6	+0.7
	baz=35,SNR=105						
MTSU	Mount Surprise	35.45	264	P	P	23 08 41.0	0.0
	baz=36,SNR=22						
QLP	Quilpie	35.60	249	P	P	23 08 42.3	+0.2
	baz=36,SNR=54						
MANU	Manus Island	37.09	291	*e*P	P	23 08 55.4	+0.9
	72nm,0.9s						
COEN	Coen	37.14	270	P	P	23 08 55.6	+0.7
	baz=37,SNR=7.4						
COEN	Coen	37.14	270	*e*P	P	23 08 55.7	+0.8
	141nm,0.8s						
TOO	Toolangi	37.25	231	P	P	23 08 56.6	+1.1
	baz=38,SNR=42						
MOO	Moorlands	38.18	223	P	P	23 09 04.0	+1.0
	baz=38,SNR=7.1						
TAU	Tasmania Unive	38.33	222	*e*P	P	23 09 04.1	0.0
	180nm,1.8s						
STKA	Stephens Creek	38.70	241	P	P	23 09 08.4	+1.1
	baz=39,SNR=96						
STKA	Stephens Creek	38.70	241	P	P	23 09 08.4	+1.1
	89nm,0.7s,baz=90,slow=9.4,SNR=174						
STKA				ScP	ScP	23 14 00.7	+2.0
	3.6nm,0.7s,baz=81,slow=2.0,SNR=3.2						
STKA	Stephens Creek	38.70	241	*e*P	P	23 09 08.4	+1.1
	21nm,0.8s						
STKA				ScP	ScP	23 14 00.7	+2.0
QIS	Mount Isa	39.70	259	P	P	23 09 14.7	-0.9
	baz=40,SNR=8.3						
ARPS	Mount Arapiles	39.73	234	P	P	23 09 16.2	+0.7
	baz=40,SNR=13						
HTT	Hallett	41.22	239	P	P	23 09 28.2	+0.7
	baz=41,SNR=59						
HMH	Humu'ula Sheep	43.45	32	*e*P	P	23 09 44.7	-0.7
	249nm,1.7s						
BBOO	Buckleboo	43.48	241	P	P	23 09 45.5	+0.4
	baz=44,SNR=176						
BBOO	Buckleboo	43.48	241	*e*P	P	23 09 45.6	+0.4
	113nm,0.8s						
WB2	Warramunga Arr	44.67	259	*e*P	P	23 09 53.9	-0.6
	93nm,0.6s						
WRAB	Tennant Creek	44.67	259	*e*P	P	23 09 53.7	-0.8
	49nm,0.6s						
WRA	Warramunga Arr	44.68	259	P	P	23 09 53.8	-0.8
	62nm,0.6s,baz=93,slow=7.3,SNR=420						
WRA				ScP	ScP	23 14 24.5	+1.5
	3.5nm,0.9s,baz=85,slow=3.8,SNR=5.4						
WRA				S	S	23 15 45.9	-4.4
	0.7nm,0.7s,baz=94,slow=11,SNR=2.8						
AS01	Alice Springs	44.80	254	*e*P	P	23 09 55.0	-0.5
AS31	Alice Springs	44.85	254	*e*P	P	23 09 55.7	-0.2
	133nm,0.6s						
ASAR	Alice Springs	44.85	254	P	P	23 09 56.0	+0.1
	416nm,0.6s,baz=88,slow=8.4,SNR=3562						
ASAR				PcP	PcP	23 11 24.9	-0.3
	5.3nm,0.6s,baz=102,slow=5.4,SNR=3.2						
ASAR				ScP	ScP	23 14 25.4	+1.7
	2.5nm,0.6s,baz=94,slow=3.6,SNR=4.5						
ASAR				S	S	23 15 49.8	-2.9
	2.8nm,0.7s,baz=89,slow=14,SNR=7.8						
ASAR				ScS	ScS	23 18 51.3	+0.9
	0.4nm,0.7s,baz=79,slow=6.7,SNR=5.4						
KDU	Kakadu	47.59	269	P	P	23 10 16.3	-0.3
	baz=48,SNR=35						
MTN	Manton Dam	48.83	268	P	P	23 10 25.2	-0.7
	baz=49,SNR=19						
MTN	Manton Dam	48.83	268	*e*P	P	23 10 25.3	-0.7
	80nm,0.6s						
WRKA	Warakurna	49.90	252	P	P	23 10 33.5	-0.2
	baz=50,SNR=570						
FORT	Forrest	50.08	245	P	P	23 10 34.4	-0.4
	baz=50,SNR=172						
FORT	Forrest	50.08	245	*e*P	P	23 10 34.4	-0.4
	161nm,0.6s						
KNRA	Kununurra	50.53	264	P	P	23 10 38.0	-0.3
	baz=51,SNR=23						
KMBL	Kambalda	55.38	244	P	P	23 11 11.8	-0.7
	baz=56,SNR=11						
SOEI	Soe	56.10	270	*e*P	P	23 11 18.9	+1.0
	149nm,0.7s						
TNTI	Ternate	56.47	283	*e*P	P	23 11 20.9	+0.6
	48nm,0.7s						
BATI	Baumata	56.56	269	P	P	23 11 21.9	+0.9
	50nm,0.6s,baz=100,slow=11,SNR=7.6						
MMRI	Maumere	58.33	271	*e*P	P	23 11 32.3	-0.7
	66nm,0.6s						
MEEK	Meekatharra	58.50	249	P	P	23 11 33.3	-0.7
	baz=59,SNR=23						
KLBR	Kellerberrin	58.90	243	P	P	23 11 36.0	-0.6
	baz=59,SNR=29						
NWAO	Narrogin (SRO)	59.28	242	P	P	23 11 38.9	-0.2
	baz=59,SNR=21						
NWAO	Narrogin (SRO)	59.28	242	P	P	23 11 38.6	-0.4
	21nm,0.6s,baz=314,slow=6.3,SNR=34						
NWAO	Narrogin (SRO)	59.28	242	*e*P	P	23 11 38.8	-0.3
	26nm,0.6s						
BLDU	Ballidu	59.85	245	P	P	23 11 42.6	-0.3
	baz=60,SNR=32						
LUWI	Luwuk	60.12	279	*e*P	P	23 11 43.9	-1.0
	55nm,0.8s						
MUN	Mundaring	60.19	243	P	P	23 11 45.2	0.0
	baz=60,SNR=12						
VNDA	Vanda	60.54	185	P	P	23 11 48.1	+1.5
	0.9nm,0.6s,baz=4.5,slow=9.4,SNR=7.5						
VNDA	Vanda	60.54	185	*e*P	P	23 11 47.7	+1.1
	1.7nm,0.8s						
MORW	Morawa	60.55	246	P	P	23 11 47.0	-0.5
	baz=61,SNR=13						
H01W1	Cape Leeuwin H	61.76	240	P	P	23 11 56.6	+1.5
	baz=116,slow=6.3,SNR=5.1						
H01W3	Cape Leeuwin H	61.77	240	P	P	23 11 56.6	+1.5
	baz=116,slow=6.3,SNR=4.0						
H01W2	Cape Leeuwin H	61.77	240	P	P	23 11 56.3	+1.2

	baz=116,slow=6.3,SNR=4.5						
GIRL	**Giralia**	**62.95**	**253**	P	**P**	**23 12 04.3**	**+1.1**
	baz=63,SNR=9.0						
JAGI	**Jajag, Banyuwa**	**66.07**	**268**	*e*P	**P**	**23 12 21.4**	**-1.7**
	83nm,0.7s						
CASY	**Casey**	**66.23**	**205**	*e*P	**P**	**23 12 23.7**	**+0.6**
	9.4nm,0.9s						
MJAR	**Matsushiro Arr**	**67.85**	**323**	P	**P**	**23 12 33.0**	**-0.5**
	1.6nm,0.5s,baz=165,slow=5.7,SNR=7.2						
MAT	**Matsushiro**	**67.85**	**323**	P	**P**	**23 12 33.1**	**-0.4**
UGM	**Wanagama**	**69.68**	**268**	*e*P	**P**	**23 12 43.6**	**-1.5**
	980nm,1.9s						
ASAJ	**Asahikawa**	**71.21**	**331**	P	**P**	**23 12 54.3**	**+1.0**
	4.6nm,0.6s,baz=200,slow=12,SNR=4.0						
YULB	**Yu-li**	**71.75**	**303**	*e*P	**P**	**23 12 56.1**	**-0.8**
	6.6nm,0.6s						
SSLB	**Suanglung**	**72.21**	**303**	*e*P	**P**	**23 12 58.0**	**-1.6**
	8.9nm,0.8s						
TPUB	**Ta-pu**	**72.24**	**302**	*e*P	**P**	**23 12 57.8**	**-2.0**
	24nm,0.7s						
QSPA	**South Pole Qui**	**72.24**	**180**	P	**P**	**23 13 00.2**	**+1.0**
	12nm,0.8s,baz=334,slow=11,SNR=37						
QSPA	**South Pole Qui**	**72.24**	**180**	*e*P	**P**	**23 12 59.2**	**0.0**
	80nm,1.1s						
CISI	**Cisompet, Garu**	**72.36**	**268**	*e*P	**P**	**23 12 59.9**	**-0.9**
	57nm,0.6s						
PETK	**Petropavlovsk-**	**73.60**	**345**	P	**P**	**23 13 06.4**	**-0.5**
	7.8nm,0.6s,baz=126,slow=7.3						
PETK	**Petropavlovsk-**	**73.60**	**345**	*e*P	**P**	**23 13 06.7**	**-0.2**
KSRS	**Korea Array**	**74.65**	**318**	P	**P**	**23 13 13.4**	**+0.3**
	0.7nm,0.4s,baz=136,slow=5.4,SNR=3.7						
KSAR	**Wonju Array Be**	**74.67**	**318**	P	**P**	**23 13 13.4**	**+0.2**
CHGN	**Chignik**	**75.72**	**11**	*e*P	**P**	**23 13 17.8**	**-0.9**
	16nm,0.7s						
ANZ	**Anzar Road**	**76.31**	**44**	*e*P	**P**	**23 13 24.9**	**+2.5**
SAO	**San Andreas Ge**	**76.33**	**44**	*e*P	**P**	**23 13 23.0**	**+0.4**
	17nm,0.8s						
PMPB	**Monarch Peak**	**76.45**	**45**	*e*P	**P**	**23 13 23.2**	**-0.1**
	21nm,0.7s						
PAGB	**Antelope Grade**	**76.56**	**45**	*e*P	**P**	**23 13 25.0**	**+1.2**
	19nm,1.2s						
KMRM	**Mail Ridge**	**76.92**	**40**	*e*P	**P**	**23 13 27.2**	**+1.5**
	36nm,0.7s						
PASC	**Pasadena Art C**	**77.14**	**48**	*e*P	**P**	**23 13 27.6**	**+0.6**
	14nm,0.6s						
ARVC	**Arvin**	**77.20**	**46**	P	**P**	**23 13 27.8**	**+0.5**
	baz=237						
MWC	**Mount Wilson**	**77.25**	**48**	*e*P	**P**	**23 13 28.2**	**+0.4**
	22nm,0.7s						
VES	**Vestal, Richgr**	**77.41**	**46**	P	**P**	**23 13 28.8**	**+0.4**
	baz=237						
MURC	**Murrieta**	**77.54**	**48**	P	**P**	**23 13 29.8**	**+0.6**
	baz=239						
BFSC	**Mount Baldy Ra**	**77.54**	**48**	P	**P**	**23 13 29.7**	**+0.4**
	baz=238,SNR=5.8						
OHAK	**Old Harbor**	**77.63**	**14**	*e*P	**P**	**23 13 27.7**	**-1.4**
	20nm,0.6s						
EDW2	**Edwards Air Fo**	**77.64**	**47**	P	**P**	**23 13 30.4**	**+0.6**
	baz=238,SNR=14						
ISA	**Isabella, Lake**	**77.73**	**46**	P	**P**	**23 13 30.8**	**+0.5**
	baz=238,SNR=6.3						
ISA	**Isabella, Lake**	**77.73**	**46**	*e*P	**P**	**23 13 31.3**	**+1.0**
	15nm,0.8s						
MONP2	**Monument Peak**	**77.73**	**49**	P	**P**	**23 13 31.2**	**+0.8**
	baz=239,SNR=16						
CMB	**Columbia Colle**	**77.75**	**43**	*e*P	**P**	**23 13 30.7**	**+0.4**
	11nm,0.8s						
IKP	**In-Ko-Pah, Jac**	**77.83**	**50**	P	**P**	**23 13 31.4**	**+0.5**
	baz=240,SNR=8.1						
WDC	**Whiskeytown Da**	**77.85**	**40**	*e*P	**P**	**23 13 31.7**	**+1.0**
	32nm,1.6s						
AFDM	**Forest Hills D**	**77.89**	**42**	*e*P	**P**	**23 13 31.6**	**+0.6**
	12nm,1.0s						
ORV	**Oroville**	**77.90**	**41**	*e*P	**P**	**23 13 31.4**	**+0.4**
	10nm,1.1s						
NJ2	**Nanjing**	**77.90**	**309**	*e*P	**P**	**23 13 32.7**	**+1.6**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
N02D	**Trinity Center**	**77.98**	**40**	P	**P**	**23 13 32.4**	**+0.9**
	baz=234						
PFO	**Pinyon Flats O**	**78.07**	**49**	P	**P**	**23 13 32.9**	**+0.7**
	baz=239						
O03D	**Paynes Creek**	**78.14**	**41**	P	**P**	**23 13 33.1**	**+0.8**
	baz=234						
M02C	**Callahan**	**78.14**	**39**	P	**P**	**23 13 33.3**	**+1.0**
	baz=233,SNR=7.1						
L02D	**Cave Junction,**	**78.16**	**38**	P	**P**	**23 13 33.3**	**+1.0**
	baz=233						
LRMC	**Laurel Mtn Rad**	**78.18**	**47**	P	**P**	**23 13 33.4**	**+0.6**
	baz=238						
SWSC	**Sam W. Stewart**	**78.21**	**50**	P	**P**	**23 13 33.4**	**+0.6**
	baz=240						
KDAK	**Kodiak Island**	**78.30**	**14**	P	**P**	**23 13 32.3**	**-0.3**
	14nm,0.6s,baz=241,slow=3.2,SNR=44						
KDAK	**Kodiak Island**	**78.30**	**14**	*e*P	**P**	**23 13 32.4**	**-0.3**
	17nm,0.6s						
MDPB	**Devils Postpil**	**78.39**	**44**	*e*P	**P**	**23 13 34.9**	**+1.0**
	20nm,0.7s						
CWC	**Cottonwood Cre**	**78.41**	**46**	P	**P**	**23 13 34.6**	**+0.6**
	baz=238						
OMMB	**Old Mammoth Mi**	**78.43**	**44**	*e*P	**P**	**23 13 34.9**	**+0.7**
	8.1nm,0.6s						
YBH	**Yreka Blue Hor**	**78.43**	**39**	P	**P**	**23 13 34.6**	**+0.7**
	11nm,0.6s,baz=204,slow=1.2,SNR=44						
YBH	**Yreka Blue Hor**	**78.43**	**39**	*e*P	**P**	**23 13 34.8**	**+0.9**
	12nm,0.6s						
MLAC	**Mammoth, Mammo**	**78.55**	**44**	P	**P**	**23 13 35.6**	**+0.8**
	baz=237						
BELC	**Belle Mtn. Jos**	**78.60**	**49**	P	**P**	**23 13 35.6**	**+0.6**
	baz=239,SNR=11						
MPMC	**Manual Prospec**	**78.62**	**46**	P	**P**	**23 13 35.7**	**+0.6**
	baz=238,SNR=11						
WAKR	**Walker**	**78.63**	**43**	*e*P	**P**	**23 13 36.2**	**+1.0**
	16nm,0.7s						
GSC	**Goldstone, Bar**	**78.69**	**47**	P	**P**	**23 13 36.0**	**+0.5**
	baz=239,SNR=5.3						
GSC	**Goldstone, Bar**	**78.69**	**47**	*e*P	**P**	**23 13 35.9**	**+0.5**
	5.8nm,0.8s						
HEC	**Hector,Ludlow**	**78.78**	**48**	P	**P**	**23 13 36.3**	**+0.4**
	baz=239,SNR=6.7						
BEKR	**Beckworth**	**78.80**	**42**	*e*P	**P**	**23 13 36.6**	**+0.5**
	15nm,0.6s						
BC3	**Big Chuckawall**	**78.81**	**49**	P	**P**	**23 13 36.8**	**+0.7**
	baz=240,SNR=6.4						
PNTR	**Pine Nut**	**78.85**	**43**	*e*P	**P**	**23 13 37.5**	**+1.1**
	31nm,0.8s						
VCNR	**Virginia City**	**78.93**	**43**	*e*P	**P**	**23 13 37.9**	**+1.1**
	9.5nm,0.7s						
GLA	**Glamis**	**78.97**	**50**	P	**P**	**23 13 37.5**	**+0.6**
	baz=240						
GLA	**Glamis**	**78.97**	**50**	*e*P	**P**	**23 13 38.4**	**+1.5**
	12nm,0.8s						
M04C	**Macdoel**	**78.99**	**39**	P	**P**	**23 13 37.5**	**+0.6**
	baz=234,SNR=9.0						
YERR	**Yerington**	**79.03**	**43**	*e*P	**P**	**23 13 37.9**	**+0.6**
	23nm,0.6s						
GRAC	**Grapevine Rang**	**79.19**	**45**	P	**P**	**23 13 38.8**	**+0.8**
	baz=238						
GMRC	**Granite Mounta**	**79.24**	**48**	P	**P**	**23 13 38.7**	**+0.4**
	baz=240						
I03D	**Drain, OR**	**79.24**	**37**	P	**P**	**23 13 38.7**	**+0.8**
	baz=233						
FURC	**Furnace Creek,**	**79.26**	**46**	P	**P**	**23 13 38.8**	**+0.6**
	baz=238,SNR=7.5						
IRM	**Iron Mountain**	**79.29**	**49**	P	**P**	**23 13 39.0**	**+0.4**
	baz=240,SNR=6.2						
RYN	**Ryan**	**79.30**	**44**	*e*P	**P**	**23 13 39.3**	**+0.6**
	7.4nm,0.7s						
PAHR	**Pah Rah Range**	**79.33**	**42**	*e*P	**P**	**23 13 39.3**	**+0.5**
	10nm,0.7s						
NV01	**Mina Array Sit**	**79.33**	**44**	*e*P	**P**	**23 13 39.3**	**+0.4**
NV01				*e*pP	**pP**	**23 15 41.5**	**+1.8**
NVAR	**Mina Array Bea**	**79.33**	**44**	P	**P**	**23 13 39.5**	**+0.5**
	11nm,0.7s,baz=224,slow=8.6,SNR=110						
NVAR				pP	**pP**	**23 15 38.8**	**-0.9**
	0.4nm,0.4s,baz=251,slow=5.6,SNR=2.1						
TUQ	**Turquoise Moun**	**79.38**	**47**	P	**P**	**23 13 39.8**	**+0.6**
	baz=239						
NV11	**Mina Array Sit**	**79.43**	**44**	*e*P	**P**	**23 13 40.0**	**+0.6**
	0.9nm,0.8s						
Y12C	**Blythe**	**79.53**	**50**	P	**P**	**23 13 40.4**	**+0.6**
	baz=240,SNR=8.5						
Y12C	**Blythe**	**79.53**	**50**	*e*P	**P**	**23 13 40.7**	**+0.9**
	11nm,0.7s						
113A	**Mohawk Valley,**	**79.61**	**51**	*e*P	**P**	**23 13 41.2**	**+1.0**
	9.9nm,1.0s						
J04D	**Umpqua Nationa**	**79.69**	**38**	P	**P**	**23 13 41.4**	**+0.7**
	baz=234,SNR=12						
KVN	**Kaiserville**	**79.81**	**43**	*e*P	**P**	**23 13 41.8**	**+0.4**
	12nm,0.7s						
I04A	**Tendick Farm,**	**79.84**	**38**	P	**P**	**23 13 41.9**	**+0.7**
	baz=233						
214A	**Organ Pipe Nat**	**79.93**	**52**	P	**P**	**23 13 42.4**	**+0.4**
	baz=242						
TPNV	**Topopah Spring**	**79.93**	**46**	P	**P**	**23 13 42.6**	**+0.6**
	baz=239,SNR=12						
TPNV	**Topopah Spring**	**79.93**	**46**	*e*P	**P**	**23 13 43.0**	**+1.0**
	8.2nm,0.8s						
NEE2	**Needles Airpor**	**79.97**	**49**	P	**P**	**23 13 42.8**	**+0.7**
	baz=240						
MOD	**Modoc Plateau**	**79.99**	**40**	*e*P	**P**	**23 13 42.7**	**+0.5**
	22nm,0.6s						
PDMCI	**Parker Dam,Lak**	**80.08**	**49**	P	**P**	**23 13 43.3**	**+0.7**
	baz=241						
K05A	**Summer Lake**	**80.11**	**39**	*e*P	**P**	**23 13 43.8**	**+0.9**
	23nm,0.8s						
CNPM	**China Poot**	**80.19**	**14**	*e*P	**P**	**23 13 42.4**	**-0.2**
	13nm,0.6s						
G03D	**McMinnville, O**	**80.21**	**36**	P	**P**	**23 13 44.1**	**+1.0**
	baz=232						
J05D	**Fort Rock, OR**	**80.23**	**38**	P	**P**	**23 13 43.9**	**+0.5**
	baz=234,SNR=36						
SHPR	**Sheep Range**	**80.46**	**47**	*e*P	**P**	**23 13 45.9**	**+1.1**
	8.1nm,1.1s						
BRLK	**Bradley Lake**	**80.48**	**14**	*e*P	**P**	**23 13 43.6**	**-0.6**
	21nm,0.6s						
H04A	**Detroit Lake**	**80.50**	**37**	*e*P	**P**	**23 13 44.8**	**+0.2**
	17nm,0.6s						
W13A	**Hualapai Mount**	**80.66**	**49**	*e*P	**P**	**23 13 46.7**	**+0.8**
	4.9nm,0.8s						
PINE	**Pine Mountain**	**80.70**	**38**	*e*P	**P**	**23 13 46.7**	**+0.8**
	23nm,0.8s						
SVW2	**Sparrevohn**	**80.74**	**11**	*e*P	**P**	**23 13 44.5**	**-1.0**
	4.3nm,0.7s						
I05D	**Terrebonne, OR**	**80.78**	**38**	P	**P**	**23 13 46.8**	**+0.7**
	baz=234						
R11A	**Troy Canyon, C**	**81.11**	**45**	P	**P**	**23 13 48.4**	**+0.3**
	baz=239						
BMN	**Battle Mountai**	**81.12**	**43**	*e*P	**P**	**23 13 48.3**	**+0.2**
	7.6nm,0.8s						
NLWA	**Neilton Lookou**	**81.22**	**34**	*e*P	**P**	**23 13 48.9**	**+0.7**
	8.3nm,0.7s						
WVOR	**Wild Horse Val**	**81.32**	**40**	*e*P	**P**	**23 13 49.7**	**+0.6**
	16nm,0.8s						
G05D	**Wamic, OR**	**81.33**	**37**	P	**P**	**23 13 49.7**	**+0.8**
	baz=234						
TUC	**Tucson**	**81.62**	**52**	P	**P**	**23 13 51.8**	**+1.1**
	baz=243						
TUC	**Tucson**	**81.62**	**52**	*e*P	**P**	**23 13 52.1**	**+1.3**
	14nm,0.9s						
I07A	**Izee**	**81.71**	**39**	*e*P	**P**	**23 13 52.0**	**+1.1**
	13nm,0.7s						
G06A	**Carlson Farm,**	**81.72**	**37**	*e*P	**P**	**23 13 51.1**	**+0.2**
	14nm,1.2s						
J08A	**Circle Bar Ran**	**81.93**	**40**	*e*P	**P**	**23 13 52.5**	**+0.5**
	18nm,0.6s						
LON	**Longmire**	**81.94**	**35**	*e*P	**P**	**23 13 52.2**	**+0.2**
	4.2nm,0.7s						
SUA	**Susitna One**	**82.04**	**13**	*e*P	**P**	**23 13 51.5**	**-0.7**
	20nm,0.8s						
LCMT	**Little Creek M**	**82.04**	**47**	*e*P	**P**	**23 13 53.7**	**+0.8**
	13nm,0.7s						
X16A	**Lo Mia Camp, P**	**82.10**	**50**	*e*P	**P**	**23 13 54.4**	**+1.1**
	15nm,0.8s						
BBB	**Bella Bella**	**82.22**	**29**	P	**P**	**23 13 53.1**	**0.0**
	6.0nm,0.6s,baz=247,slow=1.5,SNR=6.7						
CCUT	**Cedar City**	**82.22**	**47**	*e*P	**P**	**23 13 55.0**	**+1.1**
	11nm,0.8s						
SKT	**Skwentna**	**82.34**	**12**	*e*P	**P**	**23 13 52.6**	**-1.0**
	4.6nm,0.9s						
KNB	**Kanab**	**82.34**	**47**	*e*P	**P**	**23 13 55.5**	**+1.0**
	13nm,0.7s						
319A	**Douglas**	**82.34**	**54**	*e*P	**P**	**23 13 56.1**	**+1.6**
	20nm,0.8s						
PSUT	**Pine Spring**	**82.37**	**46**	*e*P	**P**	**23 13 55.2**	**+0.6**
	13nm,0.7s						
U15A	**North Rim**	**82.43**	**48**	*e*P	**P**	**23 13 56.2**	**+1.1**
	29nm,0.7s						
SZCU	**Shurtz Canyon**	**82.44**	**47**	*e*P	**P**	**23 13 55.9**	**+1.0**
	39nm,1.7s						
ELK	**Elko**	**82.57**	**43**	P	**P**	**23 13 59.4**	**+3.8**
	8.6nm,0.8s,baz=291,slow=5.0,SNR=38						
WUAZ	**Wupatki**	**82.66**	**49**	P	**P**	**23 13 56.5**	**+0.4**
	baz=242						
WUAZ	**Wupatki**	**82.66**	**49**	*e*P	**P**	**23 13 57.2**	**+1.2**
	14nm,0.9s						
B05A	**Bryant**	**82.70**	**34**	P	**P**	**23 13 56.2**	**+0.5**
	baz=233,SNR=6.7						
G08A	**Pilot Rock**	**82.72**	**38**	*e*P	**P**	**23 13 56.5**	**+0.4**
	12nm,0.6s						
LTY	**Liberty**	**82.87**	**35**	*e*P	**P**	**23 13 57.0**	**+0.2**
	6.4nm,0.7s						
SML	**Sawmill**	**82.88**	**14**	*e*P	**P**	**23 13 55.4**	**-0.9**
	9.0nm,0.6s						
DIV	**Divide**	**82.90**	**15**	*e*P	**P**	**23 13 55.8**	**-0.7**
	22nm,0.6s						
PKCU	**Pink Cliffs**	**82.90**	**47**	*e*P	**P**	**23 13 59.5**	**+2.1**
	10nm,0.8s						
PPLA	**Purkeypile**	**83.04**	**12**	*e*P	**P**	**23 13 56.6**	**-0.7**
	35nm,1.9s						
BMRM	**Bremner River**	**83.06**	**16**	*e*P	**P**	**23 13 56.6**	**-0.7**
	16nm,0.6s						
KLU	**Klutina**	**83.17**	**15**	*e*P	**P**	**23 13 57.4**	**-0.5**
	6.1nm,0.8s						
X18A	**Snowflake**	**83.24**	**51**	*e*P	**P**	**23 13 59.6**	**+0.6**
	8.3nm,0.6s						
MTPU	**Mount Pierson**	**83.28**	**47**	*e*P	**P**	**23 14 00.8**	**+1.4**
	11nm,0.8s						
HPIG		**83.35**	**59**	*e*P	**P**	**23 14 00.2**	**+0.5**
	7.1nm,0.7s						
BMO	**Blue Mountains**	**83.45**	**39**	*e*P	**P**	**23 13 59.7**	**0.0**
	5.2nm,0.8s						
MSU	**Marysvale**	**83.51**	**46**	*e*P	**P**	**23 14 02.4**	**+2.1**
CAST	**Castle Rocks**	**83.53**	**12**	*e*P	**P**	**23 13 57.6**	**-1.9**
	25nm,0.6s						
MFID	**Camas Ranch**	**83.58**	**41**	*e*P	**P**	**23 14 00.8**	**+0.4**
	8.8nm,0.8s						
SEY	**Seymchan**	**83.69**	**347**	P	**P**	**23 13 59.8**	**-0.5**
	11nm,0.5s,baz=152,slow=5.0,SNR=39						
D08A	**Wollman Farm,**	**83.73**	**36**	*e*P	**P**	**23 14 01.4**	**+0.5**
	12nm,0.7s						
DUG	**Dugway, Tooele**	**83.89**	**45**	P	**P**	**23 14 02.1**	**0.0**
	baz=241						
DUG	**Dugway, Tooele**	**83.89**	**45**	*e*P	**P**	**23 14 02.2**	**+0.2**
	14nm,1.8s						
PSI	**Prapat**	**83.91**	**275**	P	**P**	**23 14 02.0**	**-0.6**
	18nm,0.8s,baz=360,slow=0.7,SNR=17						
PSI	**Prapat**	**83.91**	**275**	*e*P	**P**	**23 14 02.0**	**-0.6**
	19nm,0.8s						
TRF	**Thorofare Moun**	**83.91**	**12**	*e*P	**P**	**23 14 00.2**	**-1.4**
	37nm,0.6s						
MAW	**Mawson**	**83.96**	**200**	P	**P**	**23 14 02.5**	**+0.9**
	baz=84,SNR=17						
MAW	**Mawson**	**83.96**	**200**	P	**P**	**23 14 02.3**	**+0.6**
	2.4nm,0.4s,baz=124,slow=3.1,SNR=22						
121A	**Cookes Peak, D**	**83.99**	**53**	P	**P**	**23 14 03.5**	**+0.7**
	baz=245,SNR=6.5						
BGU	**Big Grassy Mou**	**84.11**	**44**	*e*P	**P**	**23 14 03.8**	**+0.7**
	11nm,2.0s						
HARP	**HAARP**	**84.15**	**15**	*e*P	**P**	**23 14 02.4**	**-0.2**
	22nm,0.7s						
B08A	**Colville Reser**	**84.25**	**35**	*e*P	**P**	**23 14 03.2**	**-0.3**
	11nm,0.6s						
BPAW	**Bear Paw Mtn.**	**84.36**	**12**	*e*P	**P**	**23 14 01.9**	**-1.7**
	4.7nm,0.6s						
Q16A	**Castle Valley**	**84.39**	**46**	*e*P	**P**	**23 14 06.0**	**+1.4**
MCK	**McKinley**	**84.44**	**13**	*e*P	**P**	**23 14 03.3**	**-0.8**
	12nm,0.7s						
HLID	**Hailey**	**84.54**	**41**	P	**P**	**23 14 05.9**	**+0.7**
	baz=239						
HLID	**Hailey**	**84.54**	**41**	*e*P	**P**	**23 14 05.9**	**+0.7**
	9.1nm,0.8s						
TMUT	**Trail Mountain**	**84.55**	**46**	*e*P	**P**	**23 14 06.8**	**+1.3**
	9.2nm,0.7s						
SPUT	**South Promonto**	**84.68**	**44**	*e*P	**P**	**23 14 06.6**	**+0.7**
	3.7nm,0.9s						
HVU	**Hansel Valley**	**84.69**	**43**	*e*P	**P**	**23 14 06.3**	**+0.4**
	5.5nm,0.7s						
GSI	**Gunungsitoli**	**84.73**	**273**	*e*P	**P**	**23 14 06.8**	**+0.2**
	26nm,0.6s						
SRU	**San Rafael Swe**	**84.93**	**46**	*e*P	**P**	**23 14 07.9**	**+0.7**
	11nm,0.7s						
GYA	**Guiyang**	**85.02**	**300**	*e*P	**P**	**23 14 08.2**	**+0.4**
GYA				pP	pP	23 16 12.0	+1.2
GYA				sP	sP	23 17 09.5	+1.0
GYA				PP	**PP**	**23 17 38.8**	**+3.0**
GYA				SKS	**SKSac**	**23 23 35.5**	**-3.1**
GYA				S	**S**	**23 23 49.9**	**-0.4**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LAZ	**Ladron**	**85.28**	**52**	*e*P	**P**	**23 14 10.1**	**+1.1**
LENM	**Lemitar**	**85.30**	**52**	*e*P	**P**	**23 14 10.0**	**+0.9**
HWUT	**Hardware Ranch**	**85.40**	**44**	*e*P	**P**	**23 14 09.3**	**-0.1**
	5.6nm,0.9s						
NEW	**Newport**	**85.42**	**36**	P	**P**	**23 14 08.8**	**-0.3**
	7.9nm,0.7s,baz=247,slow=5.0,SNR=12						
NEW	**Newport**	**85.42**	**36**	P	**P**	**23 14 08.8**	**-0.3**
	baz=237,SNR=6.7						
CCB	**Clear Creek Bu**	**85.49**	**13**	*e*P	**P**	**23 14 07.5**	**-1.4**
	9.5nm,0.6s						
MVCO	**Mesa Verde**	**85.49**	**49**	P	**P**	**23 14 10.1**	**0.0**
	baz=244						
MNTX	**Cornudas Mount**	**85.50**	**55**	P	**P**	**23 14 10.1**	**+0.2**
	baz=246,SNR=12						
MNTX	**Cornudas Mount**	**85.50**	**55**	*e*P	**P**	**23 14 10.8**	**+0.9**
	6.4nm,0.8s						
BNM	**Barren Site**	**85.55**	**52**	*e*P	**P**	**23 14 11.2**	**+0.8**
IM3	**Indian Mountai**	**85.58**	**10**	*e*P	**P**	**23 14 08.6**	**-0.9**
PV09	**Paradox Valley**	**85.62**	**47**	*e*P	**P**	**23 14 11.4**	**+0.7**
MDM	**Murphy Dome**	**85.67**	**12**	*e*P	**P**	**23 14 08.8**	**-1.2**
	6.6nm,0.6s						
COLA	**College**	**85.68**	**13**	*e*P	**P**	**23 14 08.9**	**-1.0**
	13nm,0.6s						
PV04	**Paradox Valley**	**85.73**	**48**	*e*P	**P**	**23 14 11.1**	**+0.1**
	7.1nm,0.6s						
DLBC	**Dease Lake**	**85.73**	**23**	P	**P**	**23 14 10.0**	**-0.4**
	4.3nm,0.6s,baz=236,slow=4.3,SNR=10						
DLBC	**Dease Lake**	**85.73**	**23**	*e*P	**P**	**23 14 10.6**	**+0.1**
	5.0nm,0.8s						
ILAR	**Eielson Array**	**85.79**	**13**	P	**P**	**23 14 09.1**	**-1.4**
	3.8nm,0.6s,baz=225,slow=4.7,SNR=71						
ILAR				pP	**pP**	**23 16 14.2**	**+0.4**
	2.2nm,1.1s,baz=228,slow=6.3,SNR=5.1						
IL1	**Eielson Array**	**85.79**	**13**	*e*P	**P**	**23 14 08.9**	**-1.6**
IL1				*e*pP	**pP**	**23 16 14.1**	**+0.3**
PV01	**Paradox Valley**	**85.85**	**48**	*e*P	**P**	**23 14 12.1**	**+0.4**
	4.9nm,0.6s						
TX31	**Lajitas Ar. Si**	**85.92**	**58**	*e*P	**P**	**23 14 13.4**	**+1.4**
TXAR	**Lajitas Array**	**85.92**	**58**	P	**P**	**23 14 13.5**	**+1.4**
	13nm,0.7s,baz=217,slow=6.1,SNR=207						
TXAR				pP	**pP**	**23 16 14.7**	**-0.7**
	0.3nm,0.9s,baz=198,slow=8.5,SNR=1.5						
PV07	**Paradox Valley**	**85.93**	**48**	*e*P	**P**	**23 14 13.0**	**+0.9**
	3.0nm,0.6s						
PV15	**Paradox Valley**	**86.01**	**48**	*e*P	**P**	**23 14 13.0**	**+0.5**
	5.5nm,0.7s						
TASM	**ASL Pad, Albuq**	**86.01**	**52**	P	**P**	**23 14 12.7**	**+0.2**
	baz=245,SNR=6.2						
ANMO	**Albuquerque**	**86.01**	**52**	P	**P**	**23 14 12.8**	**+0.3**
	3.4nm,0.8s,baz=217,slow=7.7,SNR=12						
ANMO	**Albuquerque**	**86.01**	**52**	P	**P**	**23 14 12.5**	**0.0**
	baz=245						
ANMO	**Albuquerque**	**86.01**	**52**	*e*P	**P**	**23 14 12.8**	**+0.3**
	4.6nm,0.9s						
TASL	**Snake Pit, Alb**	**86.02**	**52**	P	**P**	**23 14 12.7**	**+0.2**
	baz=245,SNR=7.7						
MCMT	**McKenzie Canyo**	**86.15**	**40**	*e*P	**P**	**23 14 13.9**	**+0.9**
XAN	**Xi’an**	**86.23**	**307**	P	**P**	**23 14 14.4**	**+1.1**
XAN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
MSO	**Missoula**	**86.49**	**38**	P	**P**	**23 14 14.3**	**-0.1**
	baz=240,SNR=6.2						
MSO	**Missoula**	**86.49**	**38**	*e*P	**P**	**23 14 14.1**	**-0.3**
	4.4nm,0.6s						
DLMT	**Dillon**	**86.57**	**40**	*e*P	**P**	**23 14 15.4**	**+0.6**
	10nm,0.7s						
TPAW	**Teton Pass**	**86.70**	**42**	*e*P	**P**	**23 14 16.3**	**+0.6**
	7.6nm,0.8s						
REDW	**Red Top Meadow**	**86.70**	**42**	*e*P	**P**	**23 14 16.2**	**+0.6**
	17nm,1.1s						
FXWY	**Fox Creek**	**86.72**	**42**	*e*P	**P**	**23 14 16.2**	**+0.5**
	6.8nm,0.8s						
SNOW	**Snow King Moun**	**86.81**	**42**	*e*P	**P**	**23 14 16.9**	**+0.8**
	15nm,0.8s						
LRM	**Limekiln Ridge**	**86.88**	**40**	*e*P	**P**	**23 14 16.9**	**+0.5**
IMW	**Indian Meadow**	**86.90**	**42**	*e*P	**P**	**23 14 17.5**	**+0.9**
	15nm,0.7s						
S22A	**4UR Ranch, Cre**	**86.92**	**49**	P	**P**	**23 14 17.0**	**+0.1**
	baz=245,SNR=9.6						
S22A	**4UR Ranch, Cre**	**86.92**	**49**	*e*P	**P**	**23 14 17.5**	**+0.7**
	5.7nm,0.8s						
MOOW	**Moose Ponds**	**86.95**	**42**	*e*P	**P**	**23 14 17.4**	**+0.7**
	4.7nm,0.8s						
O20A	**White River Ci**	**86.96**	**46**	P	**P**	**23 14 17.1**	**+0.2**
	baz=244						
O20A	**White River Ci**	**86.96**	**46**	*e*P	**P**	**23 14 17.5**	**+0.6**
	6.1nm,0.8s						
LOHW	**Long Hollow**	**86.98**	**42**	*e*P	**P**	**23 14 17.2**	**+0.4**
	7.5nm,0.6s						
DAWY	**Dawson**	**86.99**	**16**	*e*P	**P**	**23 14 15.9**	**-0.3**
	14nm,1.4s						
QLMT	**Earthquake Lak**	**87.03**	**41**	*e*P	**P**	**23 14 18.2**	**+1.1**
EGAK	**Eagle**	**87.12**	**15**	*e*P	**P**	**23 14 16.2**	**-0.5**
	4.4nm,0.6s						
HHC	**Hu-ho-hao-te**	**87.23**	**314**	*e*P	**P**	**23 14 22.3**	**+4.3**
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,55nm,4.9s						
BW06	**Boulder Array**	**87.26**	**43**	P	**P**	**23 14 18.6**	**+0.3**
	baz=243,SNR=6.8						
PD31	**Pinedale Array**	**87.26**	**43**	*e*P	**P**	**23 14 18.2**	**0.0**
PDAR	**Pinedale Array**	**87.26**	**43**	P	**P**	**23 14 18.1**	**-0.1**
	7.5nm,0.6s,baz=218,slow=3.4,SNR=109						
PDAR				pP	**pP**	**23 16 22.3**	**+0.2**
	0.3nm,0.6s,baz=210,slow=5.0,SNR=2.9						
BOZ	**Bozeman (W)**	**87.28**	**40**	P	**P**	**23 14 18.7**	**+0.6**
	baz=241						
BOZ	**Bozeman (W)**	**87.28**	**40**	*e*P	**P**	**23 14 18.7**	**+0.6**
	3.7nm,0.7s						
COLD	**Coldfoot**	**87.32**	**11**	*e*P	**P**	**23 14 17.4**	**-0.2**
	5.5nm,0.6s						
H17A	**Grant Village**	**87.36**	**42**	P	**P**	**23 14 19.0**	**+0.3**
	baz=242						
WALA	**Waterton Lakes**	**87.64**	**36**	*e*P	**P**	**23 14 20.0**	**+0.3**
	7.1nm,0.6s						
FYU	**Fort Yukon**	**87.69**	**13**	*e*P	**P**	**23 14 18.2**	**-1.2**
	7.1nm,0.8s						
HRY	**Holter Researc**	**87.69**	**39**	*e*P	**P**	**23 14 20.6**	**+0.6**
LNIG	**Linares**	**87.76**	**63**	*e*P	**P**	**23 14 20.8**	**+0.1**
	20nm,1.0s						
KMI	**Kunming**	**87.82**	**297**	P	**P**	**23 14 19.7**	**-1.5**
KMI				pmax	pmax		
	comp=Z,5.0nm,0.6s						
SDCO	**Great Sand Dun**	**87.88**	**49**	P	**P**	**23 14 21.1**	**-0.3**
	baz=246,SNR=6.0						
SDCO	**Great Sand Dun**	**87.88**	**49**	*e*P	**P**	**23 14 21.8**	**+0.4**
	2.2nm,0.8s						
RWWY	**Rawlins**	**88.35**	**45**	*e*P	**P**	**23 14 23.7**	**+0.4**
	7.1nm,0.8s						
MSTX	**Muleshoe**	**88.41**	**54**	P	**P**	**23 14 23.9**	**+0.3**
	baz=247,SNR=8.7						
MSTX	**Muleshoe**	**88.41**	**54**	*e*P	**P**	**23 14 23.9**	**+0.3**
	13nm,0.8s						
T25A	**Trinidad**	**88.42**	**50**	P	**P**	**23 14 24.0**	**+0.2**
	baz=246						
T25A	**Trinidad**	**88.42**	**50**	*e*P	**P**	**23 14 23.9**	**+0.2**
	4.7nm,0.8s						
RLMT	**Red Lodge**	**88.52**	**41**	P	**P**	**23 14 24.5**	**+0.4**
	baz=243,SNR=5.6						
RLMT	**Red Lodge**	**88.52**	**41**	*e*P	**P**	**23 14 24.8**	**+0.7**
	7.7nm,0.9s						
Q24A	**Divide**	**88.63**	**48**	P	**P**	**23 14 24.9**	**+0.1**
	baz=246						
ISCO	**Idaho Springs**	**88.65**	**47**	P	**P**	**23 14 25.1**	**+0.2**
	baz=246						
ISCO	**Idaho Springs**	**88.65**	**47**	*e*P	**P**	**23 14 25.7**	**+0.8**
	15nm,1.8s						
CM01	**Chiang Mai Arr**	**88.86**	**290**	*e*P	**P**	**23 14 25.9**	**0.0**
N23A	**Red Feather La**	**88.87**	**46**	P	**P**	**23 14 26.3**	**+0.5**
	baz=245,SNR=6.4						
N23A	**Red Feather La**	**88.87**	**46**	*e*P	**P**	**23 14 26.8**	**+1.0**
	10.0nm,1.1s						
CMAR	**Chiang Mai Arr**	**88.88**	**290**	P	**P**	**23 14 27.1**	**+1.0**
	2.5nm,0.8s,baz=104,slow=3.3,SNR=16						
833A	**Chaparral WMA,**	**89.03**	**60**	P	**P**	**23 14 26.8**	**+0.3**
	baz=249						
K22A	**Casper**	**89.22**	**45**	P	**P**	**23 14 27.5**	**+0.2**
	baz=245						
K22A	**Casper**	**89.22**	**45**	*e*P	**P**	**23 14 27.8**	**+0.5**
	5.4nm,0.7s						
PHWY	**Pilot Hill**	**89.38**	**46**	*e*P	**P**	**23 14 28.6**	**+0.4**
	5.6nm,0.7s						

JCT	Junction City	89.46	58	P	P	23 14 28.7	+0.2
	baz=249						
JCT	Junction City	89.46	58	eP	P	23 14 29.0	+0.5
	9.9nm,0.6s						
AMTX	Amarillo	89.59	53	P	P	23 14 29.2	+0.1
	baz=248						
AMTX	Amarillo	89.59	53	eP	P	23 14 29.5	+0.4
	10.0nm,0.6s						
ABTX	Abilene, Hawle	90.35	56	P	P	23 14 32.7	+0.1
	baz=249						
ABTX	Abilene, Hawle	90.35	56	eP	P	23 14 33.2	+0.7
	15nm,0.7s						
SNAA	Sanae	90.69	179	P	P	23 14 33.3	-0.2
SNAA	Sanae	90.69	179	P	P	23 14 33.2	-0.2
	3.3nm,0.6s,baz=192,slow=4.4,SNR=15						
SNAA	Sanae	90.69	179	eP	P	23 14 33.5	0.0
	12nm,1.3s						
VNA3	Neumayer Olymp	90.83	176	P	P	23 14 34.2	+0.1
LZH	Lanzhou	90.86	308	eP	P	23 14 36.1	+1.1
LZH				pP	pP	23 16 40.4	+0.7
LZH				sP	sP	23 17 32.6	-4.2
LZH				PP	PP	23 18 20.2	-1.5
LZH				SKS	SKSac	23 24 11.5	-1.2
LZH				eS	ScS	23 24 48.0	+2.3
LZH				SS	SS	23 31 09.1	+4.1
LZH				pmax	pmax		
	comp=Z,27nm,1.4s						
LZH				pmax	pmax		
	comp=Z,140nm,4.1s						
LAO	LASA Array	91.12	41	P	P	23 14 36.8	+1.0
	baz=245						
LAO	LASA Array	91.12	41	eP	P	23 14 36.9	+1.1
	15nm,0.8s						
PLCA	Paso Flores	91.37	134	P	P	23 14 38.1	+0.9
	3.2nm,0.8s,baz=188,slow=7.4,SNR=3.6						
RSSD	Black Hills	91.48	44	P	P	23 14 37.8	0.0
	baz=247						
RSSD	Black Hills	91.48	44	eP	P	23 14 37.9	+0.1
	7.8nm,0.7s						
VNA1	Neumayer--Stat	91.50	177	P	P	23 14 37.9	+0.9
INK	Inuvik	91.79	15	P	P	23 14 37.5	-0.7
	5.2nm,0.7s,baz=213,slow=3.1,SNR=17						
INK	Inuvik	91.79	15	eP	P	23 14 37.6	-0.7
	6.2nm,0.7s						
YKA	Yellowknife Ar	94.23	25	P	P	23 14 48.2	-1.4
	2.3nm,0.6s,baz=245,slow=4.4,SNR=10						
YKA				pP	pP	23 16 55.0	+0.4
	0.5nm,0.7s,baz=239,slow=4.2,SNR=2.7						
KSU1	Kansas State U	94.87	51	P	P	23 14 53.8	+0.7
	baz=251						
T38A	Diamond	95.96	53	P	P	23 14 58.3	+0.3
	baz=252						
H32A	Carlson Farm,	96.03	45	P	P	23 14 57.9	-0.4
	baz=251						
ECSD	EROS Data Cent	96.34	46	P	P	23 14 59.2	-0.4
	baz=252						
ECSD	EROS Data Cent	96.34	46	eP	P	23 14 59.4	-0.2
	2.7nm,0.6s						
R38A	Fenwick Farm,	96.60	52	P	P	23 15 00.7	-0.1
	baz=253						
P37A	Lathrop	96.68	51	P	P	23 15 01.5	+0.2
	baz=253						
S39A	Bolivar	96.89	53	P	P	23 15 02.6	+0.4
	baz=253						
S39A	Bolivar	96.89	53	eP	P	23 15 03.4	+1.1
	2.7nm,0.8s						
R39A	Chumby, Stover	97.29	52	P	Pdif	23 15 03.9	-0.1
	baz=253						
P38A	Dawn	97.30	51	eP	P	23 15 04.3	+0.3
	4.1nm,0.8s						
S40A	Lebanon	97.49	53	P	Pdif	23 15 04.9	+0.1
	baz=253						
P39B	Salisbury	97.83	51	P	Pdif	23 15 06.3	0.0
	baz=254						
T41A	Mountain View	97.89	54	P	Pdif	23 15 06.7	0.0
	baz=254						
S41A	Jillco Farms,	98.06	53	P	P	23 15 07.9	+0.4
	baz=254						
F36A	Milaca	99.08	45	P	Pdif	23 15 12.0	+0.2
	baz=254						
F36A	Milaca	99.08	45	ePdif	Pdif	23 15 12.1	+0.4
	2.9nm,0.9s						
J39A	Decorah	99.64	48	P	Pdif	23 15 14.4	+0.1
	baz=255						
J40A	Soldiers Grove	100.34	48	P	Pdif	23 15 17.7	+0.3
	baz=255						
JFWS	Jewell Farm	100.57	48	P	Pdif	23 15 18.5	0.0
	baz=256						
JFWS	Jewell Farm	100.57	48	ePdif	Pdif	23 15 19.5	+1.1
J41A	Loganville	100.85	48	P	Pdif	23 15 19.8	+0.1
	baz=256						
H40A	Chili	100.89	47	P	Pdif	23 15 20.3	+0.5
	baz=256						
F40A	Park Falls	101.39	45	P	Pdif	23 15 22.2	+0.2
	baz=256						
E40A	Wakefield	101.66	45	P	Pdif	23 15 23.6	+0.3
	baz=257						
ZALV	Zalesovo Beam	108.18	322	PKiKP	PKiKP	23 19 53.6	-1.2
	0.8nm,0.5s,baz=204,slow=2.3,SNR=4.3						
MKAR	Makanchi Array	109.09	314	PKiKP	PKiKP	23 19 55.6	-1.2
	1.0nm,0.5s,baz=173,slow=0.7,SNR=17						
MKAR				PKKPbc	PKKPbc	23 31 05.3	-1.0
	0.9nm,0.8s,baz=282,slow=3.8,SNR=6.4						
KURK	Kurchatov	111.78	318	PKiKP	PKiKP	23 20 00.5	-1.2
KURBB	Kurchatov Arra	111.83	318	PKiKP	PKiKP	23 20 00.5	-1.3
	1.2nm,0.6s,baz=88,slow=1.7,SNR=13						
KSH	Kashi	113.05	306	ePKP	PKiKP	23 20 00.3	-4.4
KSH				PP	PP	23 21 08.0	+2.7
SCHQ	Schefferville	116.77	37	PKKPbc	PKKPbc	23 30 39.7	-1.5
	225nm,0.4s,baz=90,slow=20,SNR=421						
BVAR	Borovoye Array	116.79	321	PKP	PKPdf	23 20 10.2	-1.1
	2.0nm,0.6s,baz=113,slow=1.2,SNR=14						
BVAR				PKKPab	PKKPab	23 30 45.1	+0.2
	0.7nm,0.7s,baz=336,slow=3.2,SNR=5.4						
SPITS	Spitsbergen Ar	119.18	357	PKP	PKPdf	23 20 14.0	-1.2
	3.1nm,0.6s,baz=48,slow=2.1,SNR=4.6						
ARU	Arti	122.79	326	ePKPdf	PKPdf	23 20 22.0	-0.7
ARCES	ARCESS Array B	126.23	350	PKP	PKPdf	23 20 28.3	-0.6
	3.7nm,0.6s,baz=17,slow=1.0,SNR=22						
FINES	FINESS Array B	133.11	344	PKhKP	PKPpre	23 20 35.3	
	0.8nm,0.6s,baz=276,slow=5.6,SNR=4.0						
FINES				PKP	PKPdf	23 20 41.5	-0.7
	1.9nm,0.5s,baz=20,slow=4.4,SNR=14						
FINES				SKPbc	SKPbc	23 23 18.1	+0.9
	2.6nm,0.5s,baz=56,slow=2.5,SNR=15						
NB2	NORSAR Subarra	136.29	353	PKP	PKPpre	23 20 38.5	
	comp=Z,11nm,1.7s,baz=12,slow=4.0						
HFS	Hagfors	136.84	351	PKhKP	PKPpre	23 20 38.9	
	comp=Z,1.8nm,0.7s,baz=88,slow=5.0,SNR=6.5						
HFS				PKP	PKPdf	23 20 48.8	-0.4
	comp=Z,2.6nm,0.6s,baz=63,slow=3.9,SNR=5.4						
KMBO	Kilima Mbogo	140.20	245	SKPbc	SKPab	23 23 55.5	+2.4
	comp=Z,1.4nm,0.6s,baz=69,slow=8.6,SNR=4.4						
AKASG	Malin Array Be	140.49	332	PKhKP	PKPpre	23 20 48.9	
	comp=Z,0.8nm,0.4s,baz=44,slow=4.2,SNR=6.1						
AKASG				PKP	PKPdf	23 20 57.5	+1.4
	comp=Z,1.5nm,0.7s,baz=41,slow=3.2,SNR=4.5						
AKASG				SKPbc	SKPbc	23 23 39.1	0.0
	comp=Z,0.2nm,0.2s,baz=44,slow=3.5,SNR=5.1						
AKASG				SKPab	SKPab	23 23 53.0	+0.2
	comp=Z,1.1nm,0.6s,baz=44,slow=3.8,SNR=4.9						
LEOM	Leova	143.94	328	⇑iP	PKPab	23 21 01.9	0.0
KWP	Kalwaria Pacla	144.00	337	ePKP	PKPbc	23 21 01.8	-0.1
KWP	Kalwaria Pacla	144.00	337	ePKPbc	PKPbc	23 21 01.8	-0.1
TLCR		144.51	326	⇑iP	PKPbc	23 21 03.9	+0.4
BUR08	Bucovina Ar. S	144.53	332	ePKPdf	PKPbc	23 21 04.1	+0.4
OJC	Ojcow	144.54	340	ePKP	PKPdf	23 21 03.4	+0.1
OJC	Ojcow	144.54	340	ePKPdf	PKPdf	23 21 02.6	-0.7
BUR04	Bucovina Ar. S	144.55	332	ePKPdf	PKPbc	23 21 03.8	+0.1
TESR	Tescani	144.69	330	⇑iP	PKPbc	23 21 04.2	+0.1
BR131	Keskin Array S	144.74	315	ePKPdf	PKPbc	23 21 04.7	0.0
BRTR	Keskin Array B	144.74	315	PKP	PKPdf	23 21 04.5	+0.3
	comp=Z,3.1nm,0.6s,baz=123,slow=5.2,SNR=29						
BRTR				SKPbc	SKPbc	23 23 50.5	+0.4
	comp=Z,1.0nm,0.7s,baz=138,slow=4.1,SNR=4.7						
CFR	Carcaliu	144.88	327	⇓iP	PKPab	23 21 05.2	-0.3
KSP	Ksiaz	145.03	344	ePKP	PKPbc	23 21 05.3	+0.4
NIE	Niedzica	145.05	339	ePKP	PKPbc	23 21 05.5	+0.4
CRVS	Cervenica-Dubn	145.06	337	ePKP	PKPbc	23 21 05.1	0.0
VRI	Vrincioaia	145.12	329	⇑iP	PKPbc	23 21 05.3	-0.1
ASF	Jabal al Asfar	145.16	301	PKPbc	PKPdf	23 21 05.0	0.0
	comp=Z,2.4nm,0.9s,baz=72,slow=6.4,SNR=5.5						
PLOR	Plostina	145.16	329	⇓iP	PKPdf	23 21 04.2	-0.4
TIRR	Tirgusor	145.21	326	⇓iP	PKPbc	23 21 05.6	-0.1
ANTO	Ankara	145.24	316	⇑iP	PKPbc	23 21 06.3	+0.3
ANTO	Ankara	145.24	316	ePKPdf	PKPbc	23 21 06.5	+0.5
TLB	Topalu	145.32	326	⇓iP	PKPbc	23 21 06.1	+0.1
CLL	Collm	145.38	347	⇑iPKPbc	PKPbc	23 21 05.7	-0.2
	comp=Z,22nm,0.7s						
CLL	Collm	145.38	347	ePKPdf	PKPbc	23 21 05.5	-0.4
OKC	Ostrava-Krasne	145.40	341	ePKP	PKPbc	23 21 06.0	-0.1
UPC	Upice	145.41	344	ePKP	PKPbc	23 21 06.3	+0.2
DPC	Dobruska-Polom	145.47	343	ePKP	PKPbc	23 21 06.6	+0.3
LANS	Liptovska Anna	145.56	339	ePKP	PKPab	23 21 07.6	-0.6
BRG	Berggiesshubel	145.58	346	i PKP	PKPbc	23 21 06.4	-0.2
	comp=Z,11nm,0.8s						
KRLC	Kraliky	145.59	343	ePKP	PKPbc	23 21 06.7	0.0
DOPR	Dopca	145.69	330	⇓iP	PKPab	23 21 08.7	-0.1
ISR	Istrita	145.74	328	⇑iP	PKPbc	23 21 07.2	-0.1
PVCC	Panska Ves	145.76	345	ePKP	PKPbc	23 21 06.7	-0.4
MLR	Muntele Rosu	145.77	329	PKPbc	PKPdf	23 21 06.2	+0.5
	comp=Z,0.9nm,0.6s,baz=326,slow=7.3,SNR=14						
MLR	Muntele Rosu	145.77	329	⇑iP	PKPbc	23 21 07.1	-0.4
SECR		146.03	328	⇑iP	PKPbc	23 21 08.6	+0.6
MMAI	Mount Meron Ar	146.12	303	PKPbc	PKPbc	23 21 08.4	-0.3
	comp=Z,4.1nm,0.5s,baz=68,slow=5.6,SNR=15						
PRA	Prague	146.21	345	ePKP	PKPbc	23 21 08.7	+0.4
VOIR		146.24	330	⇑iP	PKPbc	23 21 09.6	+0.9
PRU	Pruhonice	146.26	345	ePKP	PKPbc	23 21 08.6	+0.1
PRU				ex	x	23 21 10.9	
GOPC	GO Pecny, Ondr	146.27	345	ePKP	PKPbc	23 21 08.8	+0.2
GOPC				ex	x	23 21 11.0	
VRAC	Vranov	146.33	342	ePKP	PKPbc	23 21 08.8	+0.1
VYHS	Vyhne	146.34	339	ePKP	PKPbc	23 21 08.9	+0.1
MTUR	Matau	146.39	329	⇑iP	PKPdf	23 21 00.5	-6.2
JAVC	Velka Javorina	146.40	341	ePKP	PKPbc	23 21 10.1	+1.1
ARR	Arges	146.49	330	⇓iP	PKPbc	23 21 10.0	+0.6
NKC	Novy Kostel	146.51	347	ePKP	PKPbc	23 21 09.1	-0.1
KRUC	Moravsky	146.61	342	ePKP	PKPbc	23 21 09.4	-0.1
MODS	Modra-Piesok	146.96	341	ePKP	PKPbc	23 21 10.9	+0.4
MEM	Membach	147.09	355	⇑PKP	PKPbc	23 21 10.4	-0.3
SRO2	Moca	147.12	339	ePKP	PKPbc	23 21 10.2	-0.6
GRFO	Grafenberg	147.27	348	ePKPbc	PKPbc	23 21 11.4	+0.2
KHC	Kasperske Hory	147.29	345	ePKP	PKPbc	23 21 11.7	+0.4
KHC				ex	x	23 21 15.2	
GERES	GERESS Array B	147.53	345	PKPbc	PKPbc	23 21 11.8	-0.2
	comp=Z,9.4nm,0.5s,baz=26,slow=3.2,SNR=135						
DOU	Dourbes	147.71	356	⇑PKP	PKPbc	23 21 12.2	-0.1
CONA	Conrad Observa	147.78	342	ePKiKP	PKPbc	23 21 13.0	+0.3
	comp=Z,11nm,0.6s,SNR=9.7						
HERR	Herculane	147.89	332	⇑iP	PKPbc	23 21 12.7	-0.2
WLF	Walferdange	148.02	354	⇓PKP	PKPbc	23 21 13.4	+0.3
WLF	Walferdange	148.02	354	ePKPbc	PKPbc	23 21 13.6	+0.5
MDVR	Moldovita	148.28	332	⇓iP	PKPbc	23 21 13.8	-0.2
MOA	Molln	148.31	344	ePKPbc	PKPbc	23 21 13.7	-0.3
	comp=Z,3.0nm,0.5s						
ARSA	Arzberg	148.50	342	ePKPbc	PKPbc	23 21 13.1	-1.3
	comp=Z,1.4nm,0.5s						
BFO	Black Forest	149.08	351	ePKPbc	PKPbc	23 21 15.6	-0.2
SOKA	Soboth	149.16	342	i PKPbc	PKPbc	23 21 15.4	-0.7
	comp=Z,2.7nm,0.5s,SNR=6.5						
PERS	Pernice	149.17	342	i PKPbc	PKPbc	23 21 15.3	-0.8
VTS	Vitosha	149.23	328	⇑iP	PKPbc	23 21 16.4	-0.1
VTS	Vitosha	149.23	328	ePKPbc	PKPbc	23 21 15.7	-0.8
KBA	Koelnbreinsper	149.26	344	ePKPbc	PKPbc	23 21 15.5	-1.0
	comp=Z,7.2nm,0.5s						
WATA	Walderalm	149.44	347	i PKiKP	PKiKP	23 21 17.4	-0.2
	comp=Z,7.1nm,0.5s,SNR=13						
OBKA	Obir	149.45	342	i PKPbc	PKPbc	23 21 15.6	-1.2
	comp=Z,2.2nm,0.7s						
WTTA	Wattenberg	149.50	347	ePKiKP	PKPbc	23 21 16.9	-0.2
	comp=Z,8.1nm,0.5s,SNR=5.3						
MOTA	Moosalm	149.53	347	ePKiKP	PKiKP	23 21 17.7	-0.2
	comp=Z,8.8nm,0.8s,SNR=7.8						
MYKA	Terra Mystica	149.59	344	ePKPbc	PKPbc	23 21 16.2	-1.0
	comp=Z,8.8nm,0.5s,SNR=7.5						
ABTA	Abfaltersbach	149.78	345	i PKPbc	PKPbc	23 21 16.7	-0.9
	comp=Z,16nm,0.6s,SNR=10						
LJU	Ljubljana	149.88	342	i PKPbc	PKPbc	23 21 17.3	-0.4
FETA	Feichten	149.92	348	i PKiKP	PKPbc	23 21 17.8	-0.3
	comp=Z,10.0nm,0.7s						
CRNS	Crni Vrh	149.92	342	i PKPbc	PKPbc	23 21 17.1	-0.8
BOJS	Bojanci	150.14	341	i PKPdf	PKPdf	23 21 12.9	+0.3
BOJS				i PKPbc	PKPbc	23 21 18.3	0.0
BLY	Banja Luka	150.15	337	ePKPbc	PKPbc	23 21 18.1	-0.3
DAVOX	Davos/Dischmat	150.32	349	PKPbc	PKPbc	23 21 19.0	-0.1
	comp=Z,25nm,0.6s,baz=234,slow=8.7,SNR=71						
TUE	Stuetta	150.72	349	ePKPbc	PKPbc	23 21 20.0	0.0
PDG	Podgorica	151.23	332	⇑iP	PKPbc	23 21 20.4	-0.5
TTG	Podgorica	151.23	332	ePKPbc	PKPbc	23 21 19.9	-1.1
FNA	Florina	151.49	327	ePKPbc	PKPbc	23 21 20.8	-0.9
IDI	Anoyia	152.98	315	PKPbc	PKPbc	23 21 25.8	+0.7
	comp=Z,2.7nm,0.6s,baz=15,slow=17,SNR=4.6						
ESDC	Sonseca Array	157.68	11	PKPab	PKPab	23 21 58.6	-0.8
	comp=Z,1.0nm,0.6s,baz=312,slow=3.2,SNR=9.4						
KEST	Kesra	160.88	341	PKPab	PKPab	23 22 13.0	-0.5
	comp=Z,1.4nm,0.6s,baz=90,slow=1.0,SNR=6.6						
MDT	Midelt	164.04	19	PKP	PKPdf	23 21 30.9	+0.5
	comp=Z,2.1nm,0.7s,baz=348,slow=6.8,SNR=5.9						
MDT				PKPab	PKPab	23 22 27.9	+0.4
	comp=Z,2.7nm,0.7s,baz=337,slow=2.4,SNR=5.5						
DBIC	Dimbokro	167.25	149	PKP	PKPdf	23 21 32.3	-1.0
	comp=Z,3.8nm,0.7s,baz=209,slow=4.1,SNR=4.0						
DBIC				PKPab	PKPab	23 22 42.0	+0.1
	comp=Z,3.3nm,0.7s,baz=168,slow=7.9,SNR=3.5						
KOWA	Kowa	173.66	121	PKPab	PKPab	23 23 10.2	-0.4
	comp=Z,6.7nm,0.5s,baz=265,slow=11,SNR=7.6						
TORD	Torodi Ar. Bea	175.36	181	PKP	PKPdf	23 21 36.2	-1.0
	comp=Z,1.5nm,0.8s,baz=332,slow=2.3						
TORD				PKPab	PKPab	23 23 18.4	+0.6
	baz=207,slow=3.8						

IDC ***01*** *23:17:06.1±0.5, 10°.96N×143°.17E, h0^{km}, mb4.2/15,*
mb1 4.4/16, mb1mx4.1/58, mbtmp4.2/16, ML4.5/1, MS3.0/8,
Ms1 3.0/8, ms1mx2.8/56, Error ellipse: s-maj=19.5km
s-min=12.8km az=78.0
BJI ***01*** *23:17:07.7, 11°.08N×143°.66E, h25^{km}, mb4.7/22, mB4.7/6*
ISCJB ***01*** *23:17:10.0±0.4, 10°.94N±0°.06×143°.24E±0°.06, h33^{km},*
mb4.5/32, Error ellipse: s-maj=9.1km s-min=8.1km
az=40.8
NEIC ***01*** *23:17:12.4±2.2, 10°.98N×143°.18E, h37^{km}±20^{km}, mb4.7/5,*
Error ellipse: s-maj=16.5km s-min=11.9km az=59.0

ISC 01 23:17:11.8±0.5, 10°.97N±0°.07×143°.30E±0°.08, h35^{km}, n54, σ1^{s}.52/52, mb4.6/32, 1C, South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	3.02	30	Pn	Pn	23 17 58.1	+0.9
	53nm,0.3s,baz=105,slow=1.2,SNR=18						
GUMO				Sn	Sn	23 18 33.4	+1.3
	191nm,0.3s,baz=167,slow=22,SNR=27						
GUMO				LR	LR	23 19 33.7	
	comp=Z,186nm,19.6s,baz=238,slow=48						
GUMO	Guam	3.02	30	ePn	Pn	23 17 58.2	+1.1
PATS	Pohnpei	15.39	104	ePn	P	23 20 50.5	-0.2
	83nm,1.1s						
CBIJ	Chichi jima	16.08	356	ePn	Pn	23 20 49.7	-5.5
	41nm,0.9s						
JHJ	Hachijo jima 2	22.28	352	LR	LR	23 30 42.3	
	comp=Z,28nm,18.2s,baz=96,slow=37						
JNU	Nakatsue	24.83	335	LR	LR	23 32 21.5	
	comp=Z,28nm,18.3s,baz=123,slow=37						
MJAR	Matsushiro Arr	25.87	351	P	P	23 22 38.1	-2.2
	1.0nm,0.6s,baz=174,slow=8.2,SNR=3.3						
MJAR				LR	LR	23 32 26.1	
	comp=Z,24nm,20.2s,baz=110,slow=36						
KSRS	Korea Array	29.78	335	LR	LR	23 34 50.3	
	comp=Z,27nm,18.9s,baz=188,slow=36						
NJ2	Nanjing	30.80	317	eP	P	23 23 24.3	0.0
NJ2				pmax	pmax		
	comp=Z,13nm,0.6s						
WRA	Warramunga Arr	31.96	196	P	P	23 23 32.5	-2.2
	2.3nm,0.7s,baz=19,slow=9.5,SNR=7.0						
ASAJ	Asahikawa	33.03	359	LR	LR	23 40 48.5	
	comp=Z,13nm,19.0s,baz=165,slow=43						
ASAR	Alice Springs	35.63	195	P	P	23 24 04.5	-2.1
	1.0nm,0.5s,baz=21,slow=11,SNR=19						
ASAR				PcP	PcP	23 26 34.9	0.0
	0.6nm,0.6s,baz=39,slow=2.4,SNR=6.3						
BJI	Beijing	37.62	325	⇑eP	P	23 24 23.6	+0.3
BJI				pmax	pmax		
	comp=Z,13nm,0.5s						
GYA	Guiyang	37.80	299	eP	P	23 24 26.8	+1.6
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KLR	Kul'dur	39.34	348	P	P	23 24 36.5	-1.1
	0.3nm,0.9s,baz=128,slow=11,SNR=7.6						
DZM	Mont Dzumac	39.92	145	P	P	23 24 44.1	+1.2
	12nm,0.6s,baz=309,slow=5.3,SNR=12						
HHC	Hu-ho-hao-te	40.82	322	eP	P	23 24 50.1	-0.1
HHC				sP	sP	23 25 05.2	+0.5
HHC				S	S	23 30 58.6	-0.5
HHC				sS	sS	23 31 14.5	-1.5
HHC				pmax	pmax		
	comp=Z,13nm,1.0s						
KMI	Kunming	40.88	296	P	P	23 24 52.7	+1.7
KMI				pmax	pmax		
	comp=Z,5.0nm,0.5s						
STKA	Stephens Creek	42.63	182	P	P	23 25 02.8	-2.1
	2.2nm,0.8s,baz=301,slow=19,SNR=3.6						
CM01	Chiang Mai Arr	43.44	285	eP	P	23 25 13.5	+1.8
CMAR	Chiang Mai Arr	43.45	285	P	P	23 25 11.7	-0.2
	1.2nm,0.7s,baz=87,slow=6.4,SNR=8.2						
LZH	Lanzhou	43.53	312	eP	P	23 25 12.5	+0.1
LZH				pP	sP	23 25 25.2	-1.8
LZH				sP	pP	23 25 29.1	+6.3
LZH				pmax	pmax		
	comp=Z,20nm,1.2s						
PETK	Petropavlovsk-	43.59	13	LR	LR	23 40 36.9	
	comp=Z,16nm,22.0s,baz=191,slow=32						
GTA	Gaotai	47.82	314	eP	P	23 25 47.5	+1.3
GTA				pP	pP	23 25 57.1	+0.4
GTA				sP	sP	23 26 01.3	+0.5
GTA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
SONM	Songino Array	48.03	327	P	P	23 25 47.0	-0.8
	0.9nm,0.6s,baz=142,slow=8.5,SNR=4.3						
SONA1	Songino Array	48.03	327	eP	P	23 25 47.4	-0.4
WMQ	Urumqi	57.86	315	P	P	23 27 02.4	+2.1
URZ	Urewera	58.28	149	LR	LR	23 50 03.1	
	comp=Z,104nm,18.5s,baz=58,slow=34						
PALK	Pallekele	61.83	272	eP	P	23 27 29.5	+1.5
	56nm,1.3s						
MK01	Makanchi Array	62.32	317	eP	P	23 27 30.7	0.0
MK31	Makanchi Array	62.33	317	eP	P	23 27 31.4	+0.5
MKAR	Makanchi Array	62.33	317	P	P	23 27 30.6	-0.2
	3.1nm,0.8s,baz=96,slow=5.6,SNR=20						
MKAR	Makanchi Array	62.33	317	eP	P	23 27 31.2	+0.4
	16nm,0.8s						
MAKZ	Makanchi	62.54	317	eP	P	23 27 32.6	+0.4
	5.9nm,0.9s						
ZALV	Zalesovo Beam	62.88	326	P	P	23 27 34.0	-0.2
	1.9nm,0.6s,baz=100,slow=6.3,SNR=8.0						
ZALV	Zalesovo Beam	62.88	326	eP	P	23 27 34.0	-0.2
RAR	Rarotonga	64.41	120	P	P	23 27 45.7	+0.9
	27nm,0.7s,baz=90,slow=1.0,SNR=3.3						
KURK	Kurchatov	65.61	321	eP	P	23 27 52.0	-0.2
	12nm,1.1s						
KSH	Kashi	65.63	308	eP	P	23 27 55.6	+2.8
KSH				sP	sP	23 28 10.8	+3.2
KSH				ePcP	PcP	23 28 27.7	+3.6
KSH				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KURBB	Kurchatov Arra	65.65	321	P	P	23 27 52.0	-0.5
	3.4nm,0.6s,baz=104,slow=6.7,SNR=24						
NIL	Nilore	67.43	302	eP	P	23 28 05.0	+0.7
	11nm,0.9s						
CAST	Castle Rocks	69.01	26	eP	P	23 28 12.6	-1.0
	6.0nm,1.1s						
BVAR	Borovoye Array	71.04	322	P	P	23 28 26.0	-0.2
	4.3nm,0.7s,baz=104,slow=7.9,SNR=31						
ILAR	Eielson Array	71.58	25	P	P	23 28 28.8	-0.4
	1.0nm,0.6s,baz=249,slow=5.7,SNR=13						
IL1	Eielson Array	71.58	25	eP	P	23 28 28.3	-0.9
ABKAR	Akbulak array	77.45	318	eP	P	23 29 03.8	+0.2
YKA	Yellowknife Ar	85.88	27	P	P	23 29 47.9	+0.1
	1.1nm,0.8s,baz=286,slow=5.7,SNR=3.7						
ARCES	ARCESS Array B	89.09	342	P	P	23 30 00.9	-2.2
	1.1nm,0.7s,baz=48,slow=12,SNR=3.5						
NV01	Mina Array Sit	89.75	51	eP	P	23 30 08.7	+1.5
NVAR	Mina Array Bea	89.75	51	P	P	23 30 07.1	-0.1
	2.9nm,0.7s,baz=265,slow=4.8,SNR=18						
NV11	Mina Array Sit	89.86	51	eP	P	23 30 09.8	+2.2
	0.3nm,1.0s						
BOZ	Bozeman (W)	92.56	43	P	P	23 30 21.0	+1.0
	6.5nm,0.1s						
TORD	Torodi Ar. Bea	134.99	301	PKP	PKPdf	23 36 27.6	-0.7
	0.7nm,1.1s,baz=62,slow=4.1						
LPAZ	La Paz	149.02	103	PKPbc	PKPbc	23 36 59.1	+1.1
	2.8nm,0.7s,baz=266,slow=1.2,SNR=14						

CSEM ***01*** *23:20:03.2, 37°.08N×28°.64E, h16^{km}, ML2.0*

ISK 01 23:20:03.2, 37°.08N×28°.64E, h16^{km}, ML2.0/4, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TURN	Turunc	0.21	188	PG	Pb	23 20 12.2	+3.6
TURN				SG	Sb	23 20 19.2	+7.0
TURN	Turunc	0.21	188	ePg	Pb	23 20 12.2	+3.6
TURN				eSg	Sb	23 20 19.2	+7.0
DALY	Dalyan (Mu˜la	0.26	177	PG	Pb	23 20 09.3	-0.2
DALY				SG	Sb	23 20 13.9	+0.2
DALY	Dalyan (Mu˜la	0.26	177	ePg	Pb	23 20 09.3	-0.2
DALY				eSg	Sb	23 20 13.9	+0.2
YER	Yerkesik	0.29	281	PG	Pb	23 20 09.8	-0.2
YER				SG	Sb	23 20 14.6	0.0
YER	Yerkesik	0.29	281	ePg	Pb	23 20 09.8	-0.2
YER				eSg	Sb	23 20 14.6	0.0
FETY	Fethiye	0.57	141	PG	Pb	23 20 14.9	+0.1
FETY	Fethiye	0.57	141	ePg	Pb	23 20 14.9	+0.1
MLSB	Milas	0.72	288	PG	Pb	23 20 17.6	+0.2
MLSB	Milas	0.72	288	ePg	Pb	23 20 17.6	+0.2
AYDB	Zeytinkoy-Aydi	1.05	326	PG	Pg	23 20 23.8	+0.2
AYDB	Zeytinkoy-Aydi	1.05	326	ePg	Pg	23 20 23.8	+0.2

BJI ***01*** *23:25:19.0, 21°.90S×169°.70E, h10^{km}, mb4.9/10, mB5.0/8*
IDC ***01*** *23:25:20.8±0.5, 21°.98S×168°.95E, h0^{km}, mb4.5/20,*
mb1 4.6/22, mb1mx4.4/45, mbtmp4.5/22, ML4.0/2, MS3.9/15,
Ms1 3.8/15, ms1mx3.5/41, Error ellipse: s-maj=16.2km
s-min=14.6km az=97.0
NEIC ***01*** *23:25:23.7±4.2, 21°.94S×168°.93E, h18^{km}±25^{km}, mb4.8/6,*
Error ellipse: s-maj=9.8km s-min=6.8km az=51.0
ISCJB ***01*** *23:25:24.0±0.4, 21°.99S±0°.07×168°.91E±0°.06, h31^{km},*
mb4.6/29, MS3.8/14, Error ellipse: s-maj=9.8km
s-min=8.0km az=6.6

ISC 01 23:25:25.8±0.5, 22°.00S±0°.10×168°.88E±0°.07, h31^{km}, n95, σ0^{s}.81/89, mb4.6/29, MS3.8/14, 2D, Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	2.27	268	Pn	Pn	23 26 00.5	-0.7
	64nm,0.3s,baz=87,slow=15,SNR=61						
DZM				Sn	Sn	23 26 28.9	+0.8
	43nm,0.3s,baz=112,slow=19,SNR=6.7						
DZM	Mont Dzumac	2.27	268	ePn	Pn	23 26 00.5	-0.7
	552nm,0.5s						
DZM				eSn	Sn	23 26 27.3	-0.8
	3μm,0.8s						
URZ	Urewera	17.69	158	P	Pn	23 29 29.8	0.0
	0.3nm,0.3s,baz=328,slow=8.9,SNR=7.0						
URZ				LR	LR	23 35 02.7	
	comp=Z,162nm,20.2s,baz=350,slow=33						
AFI	Afiamalu	20.06	70	LR	LR	23 36 19.7	
	comp=Z,262nm,20.6s,baz=250,slow=33						
CTA	Charters Tower	21.20	271	P	P	23 30 09.9	+0.9
	7.9nm,0.9s,baz=83,slow=12,SNR=5.0						
CTAO	Charters Tower	21.20	271	eP	P	23 30 09.0	-0.1
	11nm,0.9s						
RPZ	Rata Peaks	21.73	176	LR	LR	23 37 51.8	
	comp=Z,170nm,19.5s,baz=347,slow=34						
PMG	Port Moresby	24.33	298	P	P	23 30 40.7	-0.3
	16nm,0.8s,baz=115,slow=6.2,SNR=4.8						
PMG				LR	LR	23 39 29.5	
	comp=Z,296nm,19.2s,baz=122,slow=35						
STKA	Stephens Creek	26.18	242	P	P	23 30 58.8	+1.2
	11nm,1.1s,baz=76,slow=12,SNR=11						
STKA				LR	LR	23 40 12.4	
	comp=Z,378nm,21.6s,baz=39,slow=34						
RAR	Rarotonga	29.13	94	LR	LR	23 42 55.6	
	comp=Z,123nm,18.5s,baz=270,slow=36						
ASAR	Alice Springs	32.23	260	P	P	23 31 51.1	-0.5
	5.9nm,0.9s,baz=85,slow=8.9,SNR=33						
ASAR				PcP	PcP	23 34 39.5	-0.3
	2.1nm,1.0s,baz=118,slow=2.8,SNR=6.6						
ASAR				LR	LR	23 44 23.7	
	comp=Z,251nm,19.2s,baz=88,slow=35						
WRA	Warramunga Arr	32.28	267	P	P	23 31 50.8	-1.2
	2.0nm,0.8s,baz=94,slow=8.0,SNR=4.8						
WRA				LR	LR	23 45 13.4	
	comp=Z,542nm,18.5s,baz=105,slow=37						
TBI	Tubuai	38.37	100	eLR	LR	23 43 12.5	
	230nm,27.5s						

PPT2	Papeete2	39.25	91	*e*LR	LR	23 43 55.9	
	300nm,26.2s						
FITZ	Fitzroy Crossi	40.71	267	P	P	23 33 03.8	-0.1
	12nm,0.9s,baz=118,slow=12,SNR=4.3						
FITZ				LR	LR	23 50 34.3	
	comp=Z,347nm,18.4s,baz=92,slow=37						
GUMO	Guam	42.49	324	LR	LR	23 48 56.4	
	comp=Z,26nm,20.6s,baz=100,slow=33						
BATI	Baumata	44.84	278	LR	LR	23 54 13.3	
	comp=Z,253nm,18.5s,baz=146,slow=39						
NWAO	Narrogin (SRO)	46.70	245	P	P	23 33 51.7	-0.3
	8.8nm,0.8s,baz=117,slow=8.7,SNR=7.0						
NWAO				LR	LR	23 52 53.3	
	comp=Z,361nm,19.4s,baz=312,slow=35						
TAOE	Nuku Hiva Isla	50.62	83	*e*LR	LR	23 49 01.4	
	337nm,23.8s						
DAV	Davao City (W)	51.34	299	LR	LR	23 56 55.3	
	comp=Z,35nm,18.3s,baz=156,slow=37						
VNDA	Vanda	55.68	182	P	P	23 34 58.7	+0.1
	1.5nm,1.0s,baz=337,slow=4.5,SNR=6.0						
SBA	Scott Base	55.92	181	*e*P	P	23 35 01.0	+0.7
	13nm,1.1s						
MJAR	Matsushiro Arr	65.04	333	P	P	23 36 02.1	-1.0
	0.8nm,0.3s,baz=122,slow=10,SNR=3.8						
QSPA	South Pole Qui	68.07	180	P	P	23 36 22.1	-0.2
	5.2nm,0.8s,baz=40,slow=1.7,SNR=19						
QSPA	South Pole Qui	68.07	180	*e*P	P	23 36 22.3	0.0
ASAJ	Asahikawa	70.06	340	P	P	23 36 34.8	+0.1
	13nm,0.8s,baz=143,slow=20,SNR=5.7						
ASAJ				LR	LR	00 03 00.7	
	comp=Z,38nm,20.5s,baz=138,slow=32						
KSRS	Korea Array	70.60	326	P	P	23 36 38.0	-0.1
	1.0nm,0.6s,baz=145,slow=7.0,SNR=6.0						
KSAR	Wonju Array Be	70.61	326	P	P	23 36 38.0	-0.2
PSI	Prapat	72.57	280	LR	LR	00 11 01.5	
	comp=Z,92nm,18.6s,baz=90,slow=38						
USRK	Ussuriysk Ar.	74.03	333	P	P	23 36 58.0	-0.4
	10nm,1.1s,baz=116,slow=3.4						
SKNT	Sakolnakorn	74.42	296	P	P	23 37 01.8	+0.5
PETK	Petropavlovsk-	75.42	353	P	P	23 37 06.3	0.0
	5.1nm,0.9s,baz=143,slow=5.0						
NONG	Nongkai	75.64	296	P	P	23 37 09.1	+0.8
MAW	Mawson	75.77	202	P	P	23 37 09.0	+0.8
	7.2nm,1.1s,baz=106,slow=9.2,SNR=10						
ENH	Enshi	77.18	310	*e*P	P	23 37 16.6	-0.3
	10.0nm,0.9s						
CMAR	Chiang Mai Arr	79.34	295	P	P	23 37 30.4	+1.3
	3.8nm,0.8s,baz=136,slow=4.1,SNR=22						
CMMT	Chiang Mai	79.50	295	P	P	23 37 31.4	+1.5
CHTO	Chiang Mai	79.50	295	*e*P	P	23 37 30.0	+0.1
	4.8nm,1.0s						
CHTO	Chiang Mai	79.50	295	P	P	23 37 31.4	+1.5
XAN	Xi'an	79.73	313	P	P	23 37 31.1	+0.2
XAN				pP	PcP	23 37 37.0	-1.5
XAN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,54nm,5.1s						
LZH	Lanzhou	84.33	312	*e*P	P	23 37 56.9	+1.8
LZH				pmax	pmax		
	comp=Z,25nm,1.0s						
SNAA	Sanae	86.41	183	P	P	23 38 04.3	-0.6
SNAA	Sanae	86.41	183	P	P	23 38 04.2	-0.6
	9.7nm,0.9s,baz=184,slow=6.5,SNR=31						
VNA3	Neumayer Olymp	87.00	180	P	P	23 38 07.1	-0.6
VNA1	Neumayer--Stat	87.58	181	P	P	23 38 10.3	-0.2
GTA	Gaotai	88.78	314	*e*P	P	23 38 17.5	+0.7
GTA				pP	pP	23 38 24.1	-2.6
GTA				sP	sP	23 38 27.2	-3.1
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
SONM	Songino Array	89.22	323	P	P	23 38 19.0	+0.4
	2.7nm,0.9s,baz=142,slow=5.2,SNR=16						
CMB	Columbia Colle	89.23	48	*e*P	P	23 38 18.3	-0.5
	54nm,1.3s						
NVAR	Mina Array Bea	90.87	49	P	P	23 38 26.4	-0.3
	1.6nm,0.7s,baz=227,slow=7.9,SNR=16						
MOD	Modoc Plateau	91.15	45	*e*P	P	23 38 27.4	-0.4
	6.0nm,1.0s						
ILAR	Eielson Array	92.95	17	P	P	23 38 34.2	-1.2
	0.4nm,0.5s,baz=207,slow=6.4,SNR=5.8						
EGAK	Eagle	94.63	19	*e*P	P	23 38 41.7	-1.4
	4.2nm,1.0s						
PTGA	Pitinga	127.30	109	PKP	PKPdf	23 44 27.8	-0.4
	6.3nm,0.9s,baz=239,slow=4.9,SNR=9.5						
ARCES	ARCESS Array B	127.63	345	PKP	PKPdf	23 44 26.4	-0.8
	3.5nm,0.9s,baz=19,slow=4.1,SNR=9.1						
FINES	FINESS Array B	132.99	337	PKP	PKPdf	23 44 38.0	+0.4
	2.9nm,0.9s,baz=58,slow=3.4,SNR=7.9						
BRTR	Keskin Array B	138.19	305	PKhKP	PKPpre	23 44 43.1	
	0.4nm,0.6s,baz=40,slow=16,SNR=4.1						
CRVS	Cervenica-Dubn	142.74	324	*e*PKP	PKPdf	23 44 58.3	+2.4
VYHS	Vyhne	144.39	325	*e*PKP	PKPbc	23 44 58.0	+0.7
DPC	Dobruska-Polom	144.45	329	*e*PKP	PKPab	23 44 57.4	+0.2
UPC	Upice	144.49	330	*e*PKP	PKPdf	23 44 58.5	-0.4
JAVC	Velka Javorina	144.77	327	*e*PKP	PKPdf	23 45 00.9	+1.4
BUD	Budapest	144.89	324⇓	*e*PKPbc	PKPdf	23 44 59.5	-0.2
VRAC	Vranov	145.02	328	*e*PKP	PKPdf	23 45 00.3	+0.4
PVCC	Panska Ves	145.13	331	*e*PKP	PKPdf	23 45 00.7	+0.7
BRG	Berggiesshubel	145.16	332	*i* PKP	PKPab	23 44 60.0	+0.3
	44nm,1.1s						
CLL	Collm	145.25	333	*i* PKPbc	PKPbc	23 45 00.0	+0.1
	comp=Z,42nm,1.0s						
CLL				*i* PKiKP	PKiKP	23 45 05.2	+1.1
MODS	Modra-Piesok	145.28	326	*e*PKP	PKPdf	23 45 01.4	+1.0
KRUC	Moravsky	145.28	328	*e*PKP	PKPdf	23 45 01.0	+0.7
CSKK	Csˆ‡kako	145.38	324	*e*PKPbc	PKPab	23 45 01.3	+0.7
GOPC	GO Pecny, Ondr	145.47	330	*e*PKP	PKPab	23 45 01.6	+0.7
PRU	Pruhonice	145.53	330	*e*PKP	PKPab	23 45 01.2	+0.1
PRU				*e*pPKP	PKiKP	23 45 07.2	+2.5
MORH	Mˆ‡rˆ¡gy, Hung	145.84	322⇓	*e*PKPdf	PKPab	23 45 02.5	+0.2
CONA	Conrad Observa	146.29	327	*e*PKPab	PKPab	23 45 04.2	+0.1
	comp=Z,15nm,1.0s,SNR=18						
KHC	Kasperske Hory	146.58	330	*e*PKP	PKPab	23 45 04.9	-0.3
GERES	GERESS Array B	146.72	330	PKPbc	PKPbc	23 45 04.5	-0.1
	comp=Z,14nm,0.9s,baz=0.0,slow=1.5,SNR=73						
ARSA	Arzberg	146.90	326	*e*PKPab	PKPbc	23 45 05.6	+0.6
	comp=Z,5.4nm,1.3s						
MOA	Molln	147.14	328	*e*PKPab	PKPbc	23 45 05.9	+0.2
	comp=Z,9.4nm,1.2s						
PERS	Pernice	147.51	325	*i* PKPbc	PKPbc	23 45 06.5	-0.4
SOKA	Soboth	147.53	326	*e*PKPbc	PKPbc	23 45 06.8	-0.2
	comp=Z,10nm,1.0s,SNR=12						
OBKA	Obir	147.89	326	*e*PKPbc	PKPbc	23 45 08.1	+0.2
	comp=Z,7.7nm,1.1s						
KBA	Koelnbreinsper	148.13	328	*e*PKPbc	PKPbc	23 45 08.5	-0.1
	comp=Z,10nm,1.1s,SNR=6.3						
BOJS	Bojanci	148.16	324	*i* PKPbc	PKPbc	23 45 08.8	+0.3
LJU	Ljubljana	148.21	325	*e*PKPbc	PKPbc	23 45 08.7	+0.1
MYKA	Terra Mystica	148.28	327	*e*PKPbc	PKPbc	23 45 08.2	-0.8
	comp=Z,7.3nm,1.0s,SNR=5.4						
ABTA	Abfaltersbach	148.77	328	*e*PKPbc	PKPbc	23 45 10.0	-0.2
	comp=Z,11nm,0.9s,SNR=6.2						
WATA	Walderalm	148.80	330	*e*PKiKP	PKPbc	23 45 11.3	+1.0
	comp=Z,7.6nm,0.9s,SNR=7.7						
WTTA	Wattenberg	148.82	329	*e*PKiKP	PKPbc	23 45 11.0	+0.5
	comp=Z,16nm,1.0s						
MOTA	Moosalm	149.01	330	*e*pPKPdf	PKPbc	23 45 12.1	+1.2
	comp=Z,22nm,1.0s,SNR=16						
RETA	Reutte	149.07	331	*e*PKPbc	PKPbc	23 45 10.8	-0.1
	comp=Z,5.4nm,0.9s						
FETA	Feichten	149.43	330	*e*PKiKP	PKPbc	23 45 12.6	+0.7
	comp=Z,20nm,0.9s,SNR=12						
BFO	Black Forest	149.47	334	*e*PKPbc	PKPbc	23 45 11.6	-0.2
DAVA	Damuels	149.62	331	*e*pPKPdf	PKPbc	23 45 12.9	+0.5
	comp=Z,17nm,1.0s,SNR=7.3						
DAVOX	Davos/Dischmat	150.00	331	PKPbc	PKPbc	23 45 13.8	+0.4
	comp=Z,22nm,0.8s,baz=46,slow=5.1,SNR=37						
ESDC	Sonseca Array	161.35	343	PKPab	PKPab	23 46 06.9	-0.7
	comp=Z,0.8nm,0.7s,baz=13,slow=5.1,SNR=5.9						
TORD	Torodi Ar. Bea	164.95	236	PKP	PKPdf	23 45 26.7	-0.9
	comp=Z,1.5nm,0.9s,baz=42,slow=2.3						
TORD				PKPab	PKPab	23 46 21.8	-2.2
	baz=104,slow=6.1						

CSEM ***01*** *23:32:24.7±0.2, 40°.25N×19°.81E, h2^{km}, ML3.2, Error ellipse: s-maj=4.6km s-min=3.7km az=71.0*

TIR ***01*** *23:32:24.0, 40°.24N×19°.78E, h10^{km}, Md3.2/6*

THE ***01*** *23:32:24.0, 40°.28N×19°.77E, h0^{km}±1^{km}, ML2.2/12, Error ellipse: s-maj=1.8km s-min=0.7km az=286.0*

ISC 01 23:32:24.4±1.0**, 40°.27N**±0°.02×**19°.77E**±0°.02**, h7**^{km}±9^{km}**, n57,** σ**1^{s}22**/92**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLO	Vlora	0.29	314	*i* Pg	Pg	23 32 30.0	0.0
VLO	Vlora	0.29	314	*i* PG	Pg	23 32 29.9	0.0
VLO				*i* SG	Sb	23 32 39.2	+2.3
KEK	Kerkira	0.56	177	P	Pg	23 32 34.4	-0.7
KEK				S	Sg	23 32 43.4	+1.0
KEK	Kerkira	0.56	177	P	Pg	23 32 34.4	-0.7
KEK				S	Sg	23 32 43.4	+1.0
SGD	Sagiada	0.75	151	P	Pg	23 32 38.0	-0.8
SGD	Sagiada	0.75	151	P	Pg	23 32 38.0	-0.8
IGT	Igoumenitsa	0.86	149	P	Pg	23 32 39.8	-1.0
IGT				S	Sb	23 32 52.9	-0.4
IGT	Igoumenitsa	0.86	149	P	Pg	23 32 39.8	-1.0
IGT				S	Sb	23 32 52.9	-0.4
KBN	Korca	0.86	65	P	Pg	23 32 39.2	-1.7
KBN				S	Sg	23 32 52.0	0.0
KBN	Korca	0.86	65	P	Pg	23 32 39.2	-1.7
KBN	Korca	0.86	65	*i* Pg	Pg	23 32 40.6	-0.3
KBN				S	Sg	23 32 52.0	0.0
KBN				*i* Sg	Sb	23 32 54.3	+0.9
KBN	Korca	0.86	65	*i* PG	Pg	23 32 40.6	-0.3
KBN				*i* SG	Sb	23 32 54.3	+0.9
NEST	Nestorio	0.99	81	P	Pg	23 32 42.0	-1.4
NEST				S	Sb	23 32 57.2	-0.1
NEST	Nestorio	0.99	81	P	Pg	23 32 42.0	-1.4
NEST				S	Sb	23 32 57.2	-0.1
JAN	Janina	1.03	126	P	Pg	23 32 43.9	-0.3
JAN				S	Sb	23 32 58.6	+0.1
JAN	Janina	1.03	126	P	Pg	23 32 43.9	-0.3
JAN				S	Sb	23 32 58.6	+0.1
KPRO	Kipourio	1.27	104	P	Pg	23 32 48.0	-0.7
KPRO				S	Sn	23 33 06.4	+0.5
KPRO	Kipourio	1.27	104	P	Pg	23 32 48.0	-0.7
KPRO				S	Sn	23 33 06.4	+0.5
FNA	Florina	1.33	67	P	Pg	23 32 48.5	-1.4
FNA				S	Sn	23 33 08.7	+1.2
FNA	Florina	1.33	67	P	Pg	23 32 48.5	-1.4
FNA				S	Sn	23 33 08.7	+1.2
BIA	Bitola	1.40	57	P	Pn	23 32 50.2	-0.3
BIA				S	Sn	23 33 10.4	+1.1
BIA	Bitola	1.40	57	*e*Pn	Pn	23 32 49.4	-1.1
BIA	Bitola	1.40	57	P	Pn	23 32 50.2	-0.3
BIA				S	Sn	23 33 10.4	+1.1
PHP	Peshkopia	1.50	20	P	Pn	23 32 51.0	-0.9
PHP	Peshkopia	1.50	20	P	Pn	23 32 51.0	-0.9
PHP	Peshkopia	1.50	20	*i* Pn	Pg	23 32 53.9	+0.7
PHP				*i* Sn	Sg	23 33 15.1	+2.4
PHP	Peshkopia	1.50	20	*i* PN	Pg	23 32 53.9	+0.7
PHP				*i* SN	Sg	23 33 15.1	+2.3
DSL	Palaion Diasel	1.53	137	P	Pn	23 32 52.4	+0.2
DSL				S	Sg	23 33 14.1	+0.5
DSL	Palaion Diasel	1.53	137	P	Pn	23 32 52.4	+0.2
DSL				S	Sg	23 33 14.1	+0.5
KZN	Kozani	1.54	88	P	Pn	23 32 52.2	-0.1
KZN				S	Sg	23 33 13.8	+0.1
KZN	Kozani	1.54	88	P	Pn	23 32 52.2	-0.1
KZN				S	Sg	23 33 13.8	+0.1
KRUS	Krusevo	1.57	45	*e*Pn	Pb	23 32 53.2	-0.7
LKD2	Lefkada island	1.63	155	P	Pn	23 32 54.3	+0.7
LKD2				S	Sn	23 33 15.5	+0.6
LKD2	Lefkada island	1.63	155	P	Pn	23 32 54.3	+0.7
LKD2				S	Sn	23 33 15.5	+0.6
PUK	Puka	1.77	3	*i* Pn	Pg	23 32 57.3	-1.1
PUK	Puka	1.77	3	*i* PN	Pg	23 32 57.3	-1.1
THL	Klokotos Trika	1.87	111	P	Pn	23 32 56.9	+0.1
THL				S	Sn	23 33 21.7	+1.1
THL	Klokotos Trika	1.87	111	P	Pn	23 32 56.9	+0.1
THL				S	Sn	23 33 21.7	+1.1
FASA	Fasano	1.92	287	*e*Pn	Pb	23 32 59.6	-0.1
FASA	Fasano	1.92	287	*e*Pn	Pb	23 32 59.6	-0.1
PDO	Prodromos	2.00	146	P	Pn	23 32 58.8	+0.2
PDO				S	Sn	23 33 25.4	+1.5
PDO	Prodromos	2.00	146	P	Pn	23 32 58.8	+0.2
PDO				S	Sn	23 33 25.4	+1.5
MASS	Massafra	2.03	281	*e*Pn	Pg	23 33 02.1	-1.2
MASS	Massafra	2.03	281	*e*Pn	Pg	23 33 02.1	-1.2
BCI	Bajram Curri	2.11	6	*i* Pn	Pb	23 33 02.8	-0.2
BCI	Bajram Curri	2.11	6	*i* PN	Pb	23 33 02.8	-0.2
BCI				*i* SN	Sg	23 33 32.5	+0.3
PVO	Paravola	2.14	140	P	Pn	23 33 00.3	-0.3
PVO	Paravola	2.14	140	P	Pn	23 33 00.3	-0.3
STIP	Stip	2.32	51	*e*Pn	Pb	23 33 05.5	-1.1
SG1	Sgolgore (BA)	2.42	285	*e*Pn	Pg	23 33 09.5	-1.2
SG1	Sgolgore (BA)	2.42	285	*e*Pn	Pg	23 33 09.5	-1.2
SG1				Sn	Sg	23 33 46.9	+4.8
BARS	Barje	2.97	30	*e*Pn	Pn	23 33 13.2	+1.2
STON	Ston	3.03	330	*e*Pn	Pn	23 33 10.5	-2.2
STON				Sn	Sn	23 33 47.4	-1.8
MS1	Monte Sant'Ang	3.23	298	*e*Pn	Pn	23 33 11.8	-3.8
MS1	Monte Sant'Ang	3.23	298	*e*Pn	Pn	23 33 11.8	-3.8
BOVS	Bovan	3.66	23	*e*Pn	Pn	23 33 21.1	-0.4
UDBI	Udbina	5.18	326	*e*Pn	Pn	23 33 42.1	-0.4
UDBI				Sn	Sn	23 34 43.1	+0.5

ISCJB ***01*** *23:39:07.9±0.1, 28°.38S±0°.02×70°.93W±0°.04, h39^{km}, mb5.2/229, MS4.7/31, Error ellipse: s-maj=5.5km s-min=2.3km az=162.0*

MOS ***01*** *23:39:07.4±1.2, 28°.50S×70°.92W, h33^{km}, mb5.4/41, Error ellipse: s-maj=13.6km s-min=5.8km az=102.5*

GUC ***01*** *23:39:08.4±0.9, 28°.67S×70°.94W, h55^{km}±5^{km}, ML5.4*

NEIC ***01*** *23:39:08.8±0.1, 28°.56S×70°.88W, h35^{km}, mb5.2/215, MW5.3, MW5.4, ML5.4(GUC), Error ellipse: s-maj=5.2km s-min=3.0km az=77.0, Moment Tensor Solution. s9 Moment tensor: Scale 10^{17}Nm; M_{rr}0.51; $M_{\theta\theta}$-0.07; $M_{\phi\phi}$-0.44; $M_{r\theta}$0.01; $M_{\theta\phi}$0.10; $M_{\phi r}$-1.05; Best double couple: $M_0$1.20000×10^{17} NP1:ϕ_s178.00000°, δ78.00000°, λ95.00000°. NP2:ϕ_s337.00000°, δ13.00000°, λ70.00000°. Principal axes: T 1.1900, Plg57.0000°, Azm94.0000°; N -0.0600, Plg5.0000°, Azm357.0000°; P -1.1300, Plg32.0000°, Azm264.0000°; Moment Tensor Solution. s36 Moment tensor: Scale 10^{17} Nm; M_{rr}1.55; $M_{\theta\theta}$-0.04; $M_{\phi\phi}$-1.51; $M_{r\theta}$-0.03; $M_{\theta\phi}$-0.04; $M_{\phi r}$-0.34; Best double couple: $M_0$1.60000×10^{17} NP1:ϕ_s182.00000°, δ51.00000°, λ91.00000°. NP2:ϕ_s1.00000°, δ39.00000°, λ89.00000°. Principal axes: T 1.5900, Plg84.0000°, Azm97.0000°; N -0.0400, Plg1.0000°, Azm2.0000°; P -1.5500, Plg6.0000°, Azm272.0000°;*

NEIC Felt [V] at Huasco; [IV] at Copiapo, Tierra Amarilla and Vallenar; [III] at Alto del Carmen, Caldera, Coquimbo, Freirina, La Higuera and La Serena; [II] at Paiguano, Rio Hurtado and Vicuna.

GCMT ***01*** *23:39:08.8±0.2, 28°.66S×71°.52W, h40^{km}, MW5.3/99, Moment Tensor Solution. s90,c138; s99,c156; Duration: $1^{s}1$ Moment tensor: Scale 10^{17}Nm; M_{rr}0.85±.02; $M_{\theta\theta}$0.10±.01; $M_{\phi\phi}$-0.95±.02; $M_{r\theta}$0.32±.01; $M_{\theta\phi}$-0.07±.01; $M_{\phi r}$-0.50±.02; Best double couple: $M_0$1.08800×10^{17} NP1:ϕ_s165.00000°, δ62.00000°, λ70.00000°. NP2:ϕ_s23.00000°, δ34.00000°, λ123.00000°. Principal axes: T 1.0910, Plg67.0000°, Azm37.0000°; N -0.0070, Plg18.0000°, Azm175.0000°; P -1.0840, Plg15.0000°, Azm270.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

IDC ***01*** *23:39:09.1±0.4, 28°.54S×70°.99W, h42^{km}±2^{km}, mb4.5/25, mb1 4.6/29, mb1mx4.6/39, mbtmp4.7/29, ML4.4/4, MS4.6/26, Ms1 4.6/26, ms1mx4.4/35 Error ellipse: s-maj=14.4km s-min=9.5km az=77.0*

BJI ***01*** *23:39:11.0, 28°.70S×70°.80W, h40^{km}, mB5.1/14, Ms5.2/15, Ms7 5.0/15*

SJA ***01*** *23:39:13.7±1.2, 28°.85S×71°.09W, h53^{km}±20^{km}, ML5.2, MW5.1*

ISC 01 23:39:09.1±0.3**, 28°.55S**±0°.03×**71°.14W**±0°.05**, h36**^{km}±1^{km}**, h37**^{km}**:pP-P, n925,** σ**1^{s}16**/984**, mb5.2**/229**, MS4.8**/32**, 14C-10D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VACH	Vallenar	0.34	94	*i* S	Sn	23 39 24.5	+0.3
LCO	Las Campanas	0.60	140	*e*Pn	Pn	23 39 20.8	-0.7
LCO	Las Campanas	0.60	140	*e*P	Pn	23 39 20.8	-0.7
LCO				*i* S	Sn	23 39 29.2	-0.9
LCO				IAML		23 39 30.9	
	comp=N,202µm,0.5s						
LCO	Las Campanas	0.60	140	*e*P	Pn	23 39 20.8	-0.7
GO03	Copiap	1.25	40	*e*Pn	Pn	23 39 31.3	+1.2
GO03	Copiap	1.25	40⇓	*i*P	Pn	23 39 31.1	+1.0
GO03				*i* S	Sn	23 39 48.1	+2.4
GO03				IAML		23 39 53.3	
	comp=N,97µm,0.5s						
CPCH	Copiapo	1.38	31	*e*P	Pn	23 39 33.1	+1.3
CPCH				*i* S	Sn	23 39 52.2	+3.3
TLL	Tololo Astrono	1.64	170	*e*P	Pn	23 39 35.5	-0.1
TLL				*i* S	Sn	23 39 56.6	+1.0
TLL				IAML		23 40 04.0	
	comp=E,89µm,0.5s						
GO04	Tololo Observa	1.64	170	*e*Pn	Pn	23 39 35.5	-0.2
GO04	Tololo Observa	1.64	170	*e*P	Pn	23 39 35.4	-0.4
GO04				*i* S	Sn	23 39 55.3	-0.4
GO04				IAML		23 40 00.8	
	comp=N,194µm,0.6s						
AROD	Rodeo	2.17	138	*e*P	Pn	23 39 45.5	+2.5
AROD				*e*S	Sn	23 40 11.2	+2.3
ACDV	Cuesta del Vie	2.39	133	*e*P	Pn	23 39 49.7	+3.7
ACDV				IAML		23 40 04.0	
	comp=Z,9µm,0.3s						
ACDV				*e*S	Sn	23 40 16.0	+1.9
AGUA	GUANDACOL	2.50	113	*e*P	Pn	23 39 52.7	+5.3
VCA	Vinchina	2.59	95	*e*P	Pn	23 39 54.5	+5.9
VCA				IAML		23 40 35.0	
	comp=Z,7µm,0.5s						
AMOG	MOGNA	3.31	137	*e*P	Pn	23 40 02.5	+4.0
RTLL	Cerro Villicun	3.61	141	*e*P	Pn	23 40 06.0	+3.5
RTLL				IAML		23 41 07.5	
	comp=Z,6µm,0.8s						
GO02	Mina Guanaco	3.65	23	*e*Pn	Pn	23 40 04.2	+0.8
GO02	Mina Guanaco	3.65	23	*e*P	Pn	23 40 04.0	+0.7
GO02				*i* S	Sn	23 40 57.9	+13
ZON	Zonda	3.67	145	*e*P	Pn	23 40 06.2	+2.8
ZON				IAML		23 41 14.2	
	comp=Z,3µm,0.6s						
SJA	San Juan	3.72	144	*e*P	Pn	23 40 08.4	+4.4
SJA				IAML		23 41 02.9	
	comp=Z,3µm,0.9s						
AUSP	Uspallata	3.96	158	*e*P	Pn	23 40 12.0	+4.3
PB14	IPOC Station P	3.96	10	*e*P	Pn	23 40 07.7	0.0
PB14				*i* S	Sn	23 41 08.1	+15
RTCV	Cerro Valdivia	4.00	146	*e*P	Pn	23 40 11.7	+3.8
ROCH	El Roble	4.41	179	*i* P	Pn	23 40 13.2	-0.5
ROCH				*e*P	Pn	23 40 13.2	-0.5
ROCH				*i* S	Sn	23 41 13.4	+10
ROC1	El Roble	4.41	179	*e*Pn	Pn	23 40 13.1	-0.7
ROC1	El Roble	4.41	179	*e*P	Pn	23 40 17.1	+3.3
APLL	PUNTA DE LOS L	4.42	116	*e*P	Pn	23 40 15.8	+2.1
ASAL	Salagasta	4.49	154	*e*P	Pn	23 40 17.6	+2.9
PEL	Peldehue	4.59	175	*e*Pn	Pn	23 40 15.6	-0.5
PEL	Peldehue	4.59	175	*e*P	Pn	23 40 15.7	-0.5
PEL				*i* S	Sn	23 41 09.7	+1.4
PEL	Peldehue	4.59	175	*e*P	Pn	23 40 15.6	-0.5
ARCO	CERRO ARCO	4.68	157	*e*P	Pn	23 40 21.0	+3.6
ARCO				IAML		23 41 32.2	
	comp=Z,3µm,0.6s						
FCH	Farellones	4.82	171	*e*P	Pn	23 40 21.2	+1.8
FCH				*i* S	Sn	23 41 19.9	+5.8
CLCH	Cerro Calan	4.86	174	*e*P	Pn	23 40 19.9	+0.2
CLCH				*i* S	Sn	23 41 17.6	+2.8
AAGR	Agrelo	4.94	157	*e*P	Pn	23 40 24.8	+3.9
ACAN	Cantantal	5.04	138	*e*P	Pn	23 40 25.8	+3.5
MRA	San Martin	6.07	131	IAML		23 42 01.4	
	comp=Z,1µm,0.7s						
PB04	IPOC Station P	6.25	8	*e*Pn	Pn	23 40 36.6	-2.5
TCA	Tanti	6.32	118	IAML		23 42 17.4	
	comp=Z,1µm,0.5s						
GO05	HualaæØ	6.47	186	*e*Pn	Pn	23 40 38.7	-3.2
PLCA	Paso Flores	12.16	178	P	Pn	23 42 01.1	+1.2
	comp=Z,0.4nm,0.3s,baz=329,slow=7.0,SNR=4.1						
PLCA				LR	LR	23 46 54.6	
	comp=Z,5µm,20.8s,baz=11,slow=38						
TRQA	Tornquist	12.18	143	*e*Pn	Pn	23 41 58.6	-1.5
	comp=Z,142nm,0.8s						
TRQA	Tornquist	12.18	143	*e*P	Pn	23 41 58.6	-1.5
TRQA				pmax	pmax		
	comp=Z,142nm,0.8s						
CPUP	Villa Florida	12.47	83	P	Pn	23 42 02.1	-1.9
	comp=Z,0.4nm,0.3s,baz=252,slow=12,SNR=19						
CPUP				LR	LR	23 47 29.8	
	comp=Z,6µm,18.7s,baz=266,slow=41						
CPUP	Villa Florida	12.47	83	*e*Pn	Pn	23 42 02.5	-1.4
CPUP	Villa Florida	12.47	83	*e*P	Pn	23 42 02.6	-1.4
LPAZ	La Paz	12.52	13	P	Pn	23 42 03.7	-1.6
	comp=Z,3.4nm,0.3s,baz=202,slow=6.6,SNR=83						
LPAZ				LR	LR	23 47 22.6	
	comp=Z,3µm,19.4s,baz=184,slow=40						
LPAZ	La Paz	12.52	13	*e*Pn	Pn	23 42 03.3	-2.0
LPAZ	La Paz	12.52	13	*e*P	Pn	23 42 03.3	-2.0
SIV	San Ignacio	15.58	39	P	Pn	23 42 41.8	-4.4
	comp=Z,2.6nm,0.3s,baz=260,slow=8.8,SNR=46						
NNA	Nana	17.32	341	P	P	23 43 09.2	-0.1
	comp=Z,1.0nm,0.3s,baz=196,slow=8.0,SNR=4.1						
NNA				LR	LR	23 48 33.6	
	comp=Z,1µm,18.1s,baz=159,slow=32						
SAML	Samuel	20.89	23	*e*P	P	23 43 48.4	+0.1
	comp=Z,294nm,1.1s						
SAML	Samuel	20.89	23	*e*P	P	23 43 48.4	+0.1
SAML				pmax	pmax		
	comp=Z,294nm,1.1s						
SPB	Sao Paulo	21.85	82	*e*P	P	23 43 57.4	-1.2
	comp=Z,240nm,1.6s						
PMNB	Patos De Minas	24.70	72*c*	*i*P	P	23 44 24.3	-2.8
PMNB				*i*		23 44 25.1	
PMNB				*e*		23 44 31.4	
PMNB				*i*		23 44 35.9	
PMNB				*i*		23 44 39.0	
PMNB				*i* S	S	23 48 45.0	-1.7
BSCB	Bom Sucesso	25.06	78*c*	*i*P	P	23 44 25.4	-4.9
BSCB				*i*		23 44 30.2	
BSCB				*e*		23 44 40.7	
BSCB				*i*		23 44 44.5	
BSCB				*i* S	S	23 48 54.9	+2.5
EFI	East Falkland	25.09	161	*e*P	P	23 44 28.7	-1.5
	comp=Z,93nm,0.9s						
EFI	East Falkland	25.09	161⇓	*e*P	P	23 44 29.2	-1.0
OTAV	Otavalo	29.47	345	*e*P	P	23 45 12.2	+1.9
	comp=Z,40nm,1.4s						
OTAV	Otavalo	29.47	345	*e*P	P	23 45 11.7	+1.4
OTAV	Otavalo	29.47	345	*e*P	P	23 45 12.2	+1.9
OTAV				pmax	pmax		
	comp=Z,40nm,1.4s						
PTGA	Pitinga	29.66	23	P	P	23 45 10.5	-0.9
	comp=Z,11nm,0.8s,baz=215,slow=17,SNR=16						
PTGA	Pitinga	29.66	23	*e*P	P	23 45 10.6	-0.9
	comp=Z,103nm,1.3s						
GCUF	Volcan Galeras	30.20	348	*e*P	P	23 45 16.3	-0.5
FLOC	Florencia	30.27	351	*e*P	P	23 45 15.0	-1.9
PRAC	Prado	32.28	353	*e*P	P	23 45 36.3	+1.7
	comp=Z,94nm,1.0s						
PRAC	Prado	32.28	353	*e*P	P	23 45 34.3	-0.3
HORQ	Saladito	32.28	350	*e*P	P	23 45 30.9	-4.0
CHIC	Chingaza	33.08	355	*e*P	P	23 45 38.9	-3.1
ROSC	El Rosal	33.34	354	P	P	23 45 45.5	+1.2
	comp=Z,5.1nm,0.6s,baz=164,slow=10,SNR=6.1						
ROSC				LR	LR	23 59 18.9	
	comp=Z,444nm,21.6s,baz=201,slow=36						
ROSC	El Rosal	33.34	354	*e*P	P	23 45 46.3	+2.1
	comp=Z,19nm,1.0s						
ROSC	El Rosal	33.34	354	*e*P	P	23 45 50.2	+6.0
RPN	Rapa Nui	33.71	263	LR	LR	23 55 34.3	
	comp=Z,2µm,19.9s,baz=124,slow=29						
NORC	Norcasia	34.10	353	*e*P	P	23 45 51.5	+1.0
RUSC	La Rusia	34.29	357	*e*P	P	23 45 53.4	+0.8
	comp=Z,121nm,1.4s						
RUSC	La Rusia	34.29	357	*e*P	P	23 45 52.9	+0.2
HELC	Santa Helena	34.80	352	*e*P	P	23 45 57.2	+0.4
	comp=Z,108nm,1.2s						
HELC	Santa Helena	34.80	352	*e*P	P	23 45 52.9	-4.0
BARC	Barichara	34.99	356	*e*P	P	23 45 55.5	-2.9
PTBC	PUERTO BERRIO,	35.03	354	*e*P	P	23 45 56.2	-2.3
BRRC	Barranca, Sant	35.54	356	*e*P	P	23 45 54.9	-7.9
PMSA	Palmer Station	36.52	175	LR	LR	00 01 13.7	
	comp=Z,2µm,19.1s,baz=350,slow=36						
PMSA	Palmer Station	36.52	175	*e*P	P	23 46 09.2	-1.5
	comp=Z,271nm,1.6s						
SDV	Santo Domingo	37.22	1	P	P	23 46 15.7	-1.7
	comp=Z,6.2nm,0.7s,baz=195,slow=6.9,SNR=10						
SDV				LR	LR	00 03 04.0	
	comp=Z,875nm,20.1s,baz=214,slow=39						
SDV	Santo Domingo	37.22	1	*e*P	P	23 46 16.2	-1.2
	comp=Z,25nm,0.9s						
SDV	Santo Domingo	37.22	1	*e*P	P	23 46 15.5	-1.9
SJCC	San Jacinto, C	38.42	354	*e*P	P	23 46 26.8	-0.6
PCRV	Puerto La Cruz	39.01	10	P	P	23 46 30.9	-1.4

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      comp=Z,12nm,0.7s,baz=164,slow=5.9,SNR=7.4
PCRV                               LR     LR      00 03 22.2
      comp=Z,960nm,20.3s,baz=168,slow=37
RCBR  Riachuelo         40.29  63 eP      P       23 46 41.5 -1.6
      comp=Z,77nm,1.4s
RCBR  Riachuelo         40.29  63 eP      P       23 46 41.5 -1.6
RCBR                                pmax  pmax
      comp=Z,77nm,1.4s
ESPN  Las Esperanzas    42.46 341 eP      P       23 47 01.3 +0.6
      comp=Z,29nm,1.2s
CRPR  Cabo Rojo, PR     46.45   5 eP      P       23 47 31.2 -1.3
CRPR                              epP     sP      23 47 47.1 -0.4
OBIP  Obispado Ponce    46.53   6 eP      P       23 47 31.0 -2.2
      comp=Z,47nm,1.0s
SJG   San Juan          46.64   7 eP      P       23 47 32.3 -1.7
      comp=Z,40nm,0.8s
SJG   San Juan          46.64   7 eP      P       23 47 32.3 -1.7
SJG                                pmax   pmax
      comp=Z,40nm,0.8s
AOPR  Arecibo Observ    46.81   6 eP      P       23 47 35.3 -0.1
      comp=Z,210nm,2.0s
CBYP  Canovanas         46.83   7 eP      P       23 47 33.6 -2.0
CBYP                              epP     sP      23 47 49.4 -1.1
VNA3  Neumayer Olymp    54.14 159  P      P       23 48 29.3 -0.9
VNA1  Neumayer--Stat    54.41 159  P      P       23 48 32.4 +0.2
059Z  Ave Maria         55.46 349  P      P       23 48 40.3 +0.1
      baz=169
059A  Moore Haven       56.03 349  P      P       23 48 44.6 +0.3
      baz=169
058A  Arcadia           56.23 349  P      P       23 48 45.9 +0.3
      baz=168
SNAA  Sanae             56.36 159  P      P       23 48 45.0 -1.2
SNAA  Sanae             56.36 159  P      P       23 48 45.2 -1.1
      comp=Z,26nm,0.7s,baz=274,slow=8.1,SNR=94
SNAA  Sanae             56.36 159 eP      P       23 48 45.2 -1.1
      comp=Z,75nm,1.2s
SNAA  Sanae             56.36 159c iP     P       23 48 44.8 -1.5
859A  Kempfer Cattle    57.06 350  P      P       23 48 50.1 -1.5
      baz=170
RKT   Rikitea           57.12 260 eS      S       23 56 45.6 +0.4
      comp=Z,680nm,32.2s
RKT                               eLR     LR      00 05 39.1
      comp=Z,729nm,22.5s
RKT   Rikitea           57.12 260 eT      T       00 50 07.7
      comp=Z,14nm,0.2s
757A  Oxford            58.12 349  P      P       23 48 58.6 -0.3
      baz=168
656A  Willston          58.62 348  P      P       23 49 01.8 -0.6
      baz=168
657A  Interlachen       58.71 349  P      P       23 49 02.7 -0.4
      baz=169
655A  Horseshoe Beac    58.88 348  P      P       23 49 03.8 -0.5
      baz=167
557A  Orange Park       59.11 349  P      P       23 49 06.1 +0.2
      baz=169
556A  Lake Butler       59.21 349  P      P       23 49 06.6  0.0
      baz=168
ZAIG  Zacatecas         59.34 326 eP      P       23 49 09.8 +1.8
      comp=Z,19nm,1.3s
555A  McAlpin           59.43 348  P      P       23 49 07.5 -0.5
      baz=168
555A  McAlpin           59.43 348 eP      P       23 49 07.5 -0.5
      comp=Z,50nm,0.8s
554A  Perry             59.52 347  P      P       23 49 08.1 -0.7
      baz=167
LNIG  Linares           59.72 330 eP      P       23 49 09.9 -0.3
      comp=Z,9.9nm,0.8s
553A  Crawfordville     59.77 347  P      P       23 49 10.3 -0.2
      baz=166
456A  Hilliard          59.85 349  P      P       23 49 10.7 -0.3
      baz=169
456A  Hilliard          59.85 349 eP      P       23 49 10.4 -0.5
      comp=Z,53nm,1.0s
454A  Quitman           60.13 348  P      P       23 49 12.7 -0.2
      baz=167
453A  Whigham           60.40 347  P      P       23 49 14.5 -0.2
      baz=166
453A  Whigham           60.40 347 eP      P       23 49 14.3 -0.4
      comp=Z,56nm,0.9s
357A  Townsend          60.45 350  P      P       23 49 14.4 -0.6
      baz=169
452A  Marianna          60.57 346  P      P       23 49 15.6 -0.2
      baz=166
TIGA  Tifton            60.82 348  P      P       23 49 17.3 -0.3
      baz=167
353A  Camilla           60.85 347  P      P       23 49 17.1 -0.7
      baz=167,SNR=6.2
NVL   N'lazarevskaya    61.04 158 eP      P       23 49 18.0 -0.7
NVL                               eS      S       23 57 41.3 +6.8
NVL                                pmax   pmax
      comp=Z,34nm,1.2s
256A  Glennville        61.06 350  P      P       23 49 19.0 -0.2
      baz=169
351A  Pinckard          61.07 346  P      P       23 49 19.1 -0.2
      baz=165
255A  Hazlehurst        61.10 349  P      P       23 49 19.0 -0.5
      baz=168
352A  Blakely           61.12 347  P      P       23 49 19.2 -0.4
      baz=166
352A  Blakely           61.12 347 eP      P       23 49 19.4 -0.3
      comp=Z,43nm,0.9s
254A  Abbeville         61.26 348  P      P       23 49 19.5 -1.1
      baz=168,SNR=5.4
253A  Americus          61.53 347  P      P       23 49 21.4 -1.0
      baz=167
253A  Americus          61.53 347 eP      P       23 49 22.0 -0.4
      comp=Z,63nm,1.3s
QSPA  South Pole Qui    61.67 180  P      P       23 49 22.9 -0.4
      comp=Z,20nm,1.1s,baz=155,slow=5.8,SNR=46
QSPA  South Pole Qui    61.67 180 eP      P       23 49 23.0 -0.2
      comp=Z,349nm,1.5s
251A  Midway            61.82 346  P      P       23 49 23.2 -1.1
      baz=166,SNR=5.6
444A  Pine Grove        61.83 341  P      P       23 49 24.6 +0.1
      baz=160
347A  Saraland          61.88 343  P      P       23 49 24.8 +0.1
      baz=162
250A  Grady             61.89 345  P      P       23 49 24.2 -0.5
      baz=165
250A  Grady             61.89 345 eP      P       23 49 24.3 -0.5
      comp=Z,22nm,1.0s
NHSC  New Hope          61.92 351  P      P       23 49 25.1 +0.2
      baz=171
249A  Camden            62.08 345  P      P       23 49 25.7 -0.4
      baz=164
151A  Opelika           62.22 346  P      P       23 49 26.1 -1.0
      baz=166
150A  Eclectic          62.44 346  P      P       23 49 27.7 -0.9
      baz=165,SNR=6.1
Z54A  Sparta            62.44 349  P      P       23 49 27.5 -1.0
      baz=168
247A  Quitman           62.52 343  P      P       23 49 29.1 +0.1
      baz=162
344A  Westbrook Farm    62.52 341  P      P       23 49 29.7 +0.6
      baz=160
344A  Westbrook Farm    62.52 341 eP      P       23 49 30.1 +1.1
      comp=Z,66nm,1.0s
149A  Jones             62.60 345  P      P       23 49 28.4 -1.2
      baz=164
Z52A  Williamson        62.68 347  P      P       23 49 29.3 -0.8
      baz=167
833A  Chaparral WMA,    62.69 332  P      P       23 49 30.7 +0.5
      baz=152,SNR=6.6
833A  Chaparral WMA,    62.69 332 eP      P       23 49 31.3 +1.0
      comp=Z,49nm,0.8s
GOGA  Godfrey           62.72 348  P      P       23 49 29.1 -1.2
      baz=168
GOGA  Godfrey           62.72 348 eP      P       23 49 29.7 -0.7
      comp=Z,9.1nm,0.9s
GOGA  Godfrey           62.72 348 eP      P       23 49 29.7 -0.7
GOGA                               pmax   pmax
      comp=Z,9.0nm,0.9s
HKT   Hockley           62.77 336 eP      P       23 49 31.7 +1.0
      comp=Z,52nm,1.7s
HKT   Hockley           62.77 336 eP      P       23 49 31.7 +1.0
HKT                                pmax   pmax
      comp=Z,52nm,1.7s
245A  Little AP, Sta    62.83 342  P      P       23 49 31.2 +0.1
      baz=161
342A  Flagon Creek P    62.92 340  P      P       23 49 32.7 +1.0
      baz=159
342A  Flagon Creek P    62.92 340 eP      P       23 49 32.9 +1.2
342A                              epP     pP      23 49 44.6 +1.8
Y54A  Tignall           63.03 349  P      P       23 49 31.4 -1.0
      baz=168
Z50A  Ashland           63.05 346  P      P       23 49 31.9 -0.7
      baz=165,SNR=5.9
Z50A  Ashland           63.05 346 eP      P       23 49 31.6 -1.0
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      comp=Z,21nm,0.9s
244A  Avery, Jackson    63.06 341  P      P       23 49 33.0 +0.3
      baz=161
LRAL  Lakeview Retre    63.07 345  P      P       23 49 31.8 -0.9
      baz=164
LRAL  Lakeview Retre    63.07 345 eP      P       23 49 31.6 -1.1
      comp=Z,12nm,1.1s
Z49A  Columbiana        63.12 346  P      P       23 49 32.0 -1.0
      baz=165
SACV  Santiago Islan    63.13  53 eP      P       23 49 31.0 -2.5
      comp=Z,50nm,1.1s
341A  Kurthwood         63.14 339  P      P       23 49 33.7 +0.5
      baz=158
341A  Kurthwood         63.14 339 eP      P       23 49 32.9 -0.2
341A                              epP     pP      23 49 45.6 +1.4
Y53A  Monroe            63.18 348  P      P       23 49 32.6 -0.8
      baz=168
VBMS  Vicksburg         63.18 342  P      P       23 49 33.4  0.0
      baz=161
Y52A  Lilburn           63.27 348  P      P       23 49 33.0 -1.1
      baz=167
Y52A  Lilburn           63.27 348 eP      P       23 49 33.1 -0.9
Y52A                              epP     pP      23 49 45.1  0.0
Z47A  Carrollton        63.48 344  P      P       23 49 34.6 -0.8
      baz=163
Y51A  Rockmart          63.49 347  P      P       23 49 34.5 -1.0
      baz=166,SNR=6.5
242A  Grayson           63.50 340  P      P       23 49 35.7 +0.2
      baz=159
Z48A  Northport         63.53 345  P      P       23 49 34.8 -0.9
      baz=164
241A  Mo Tay, Goldon    63.70 339  P      P       23 49 37.2 +0.4
      baz=158
Y49A  Blount Mountai    63.73 346  P      P       23 49 36.2 -0.9
      baz=165
X53A  Estanollee        63.76 349  P      P       23 49 36.6 -0.6
      baz=168
143A  Socs Landing,     63.88 341  P      P       23 49 38.5 +0.5
      baz=160
143A  Socs Landing,     63.88 341 eP      P       23 49 39.2 +1.2
      comp=Z,162nm,1.2s
Y48A  Jasper            63.95 345  P      P       23 49 37.5 -1.0
      baz=164
X52A  Dahlonega         63.96 348  P      P       23 49 37.9 -0.7
      baz=167,SNR=6.3
240A  Hunter Patters    63.98 339  P      P       23 49 39.1 +0.4
      baz=158
240A  Hunter Patters    63.98 339 eP      P       23 49 39.4 +0.6
      comp=Z,40nm,0.7s
NATX  Nacogdoches       64.02 338  P      P       23 49 39.1 +0.2
      baz=157
NATX  Nacogdoches       64.02 338 eP      P       23 49 40.2 +1.3
      comp=Z,27nm,0.7s
Z45A  Winona            64.05 343  P      P       23 49 39.4 +0.3
      baz=162
Z45A  Winona            64.05 343 eP      P       23 49 40.0 +0.9
      comp=Z,172nm,1.8s
KMSC  Kings Mountain    64.08 351  P      P       23 49 38.8 -0.5
      baz=170
Y47A  UCPARC, Winfie    64.10 345  P      P       23 49 38.9 -0.5
      baz=164,SNR=9.3
X51A  Calhoun           64.10 347  P      P       23 49 39.0 -0.4
      baz=166,SNR=7.4
X51A  Calhoun           64.10 347 eP      P       23 49 39.2 -0.2
      comp=Z,55nm,0.9s
X50B  Fort Payne        64.16 347  P      P       23 49 38.9 -1.0
      baz=166,SNR=5.6
Y46A  Houston           64.32 344  P      P       23 49 40.3 -0.7
      baz=163,SNR=7.2
X49A  Woodville         64.34 346  P      P       23 49 40.2 -0.8
      baz=165
W53A  Cullowhee         64.39 349  P      P       23 49 40.6 -0.9
      baz=168,SNR=5.5
X48A  Hartselle         64.44 345  P      P       23 49 41.0 -0.6
      baz=164,SNR=6.7
X48A  Hartselle         64.44 345 eP      P       23 49 41.1 -0.6
      comp=Z,25nm,0.8s
W52A  Murphy            64.44 348  P      P       23 49 41.2 -0.5
      baz=167
140A  Cam and Jess,     64.48 339  P      P       23 49 41.4 -0.6
      baz=158
140A  Cam and Jess,     64.48 339 eP      P       23 49 42.5 +0.5
      comp=Z,108nm,1.4s
Y45A  Yeager Farm, C    64.48 343  P      P       23 49 41.4 -0.5
      baz=162
W51A  Cleveland         64.66 348  P      P       23 49 42.5 -0.7
      baz=167
X47A  Russelville       64.69 345  P      P       23 49 42.3 -1.0
      baz=164,SNR=14
JCT   Junction City     64.76 333  P      P       23 49 44.4 +0.5
      baz=152,SNR=9.6
JCT   Junction City     64.76 333 eP      P       23 49 44.7 +0.7
      comp=Z,28nm,0.8s
W50A  Signal Mountai    64.80 347  P      P       23 49 43.5 -0.6
      baz=166,SNR=14
W50A  Signal Mountai    64.80 347 eP      P       23 49 43.6 -0.6
      comp=Z,30nm,0.8s
Z41A  Richland Creek    64.81 340  P      P       23 49 44.0 -0.1
      baz=159
Z41A  Richland Creek    64.81 340 eP      P       23 49 45.3 +1.2
Z41A                              epP     pP      23 49 56.1 +0.9
V53A  Saluda            64.82 350  P      P       23 49 43.3 -0.9
      baz=168
Y43A  Makayla and Ka    64.89 342  P      P       23 49 45.2 +0.6
      baz=161
CPCT  Cooper Cave       64.90 348 eP      P       23 49 44.3 -0.3
      comp=Z,29nm,1.1s
X46A  Booneville        64.90 344  P      P       23 49 43.8 -0.9
      baz=163,SNR=5.9
W49A  Belvidere         64.92 346  P      P       23 49 44.0 -0.8
      baz=165
SWET  Sewanee           64.94 347 eP      P       23 49 44.3 -0.7
      comp=Z,28nm,0.8s
TKL   Tuckaleechee C    64.97 349  P      P       23 49 44.1 -1.1
      comp=Z,8.9nm,0.8s,baz=161,slow=8.4,SNR=15
TKL   Tuckaleechee C    64.97 349 eP      P       23 49 44.5 -0.6
      comp=Z,20nm,0.9s
TKL   Tuckaleechee C    64.97 349 eP      P       23 49 44.5 -0.6
TKL                                pmax   pmax
      comp=Z,20nm,0.9s
X45A  UM Field Stati    64.97 343  P      P       23 49 44.7 -0.4
      baz=162
Z40A  Long Farm, Mag    65.00 340  P      P       23 49 45.4 +0.1
      baz=158
OXF   Oxford            65.06 343  P      P       23 49 45.1 -0.6
      baz=162
OXF   Oxford            65.06 343 eP      P       23 49 45.3 -0.4
      comp=Z,45nm,1.0s
OXF   Oxford            65.06 343 eP      P       23 49 45.3 -0.4
OXF                                pmax   pmax
      comp=Z,45nm,1.0s
W48A  Pulaski           65.08 346  P      P       23 49 44.9 -0.9
      baz=164,SNR=5.9
V52A  Sevierville       65.11 349  P      P       23 49 45.2 -0.9
      baz=168,SNR=6.9
V52A  Sevierville       65.11 349 eP      P       23 49 45.1 -0.9
      comp=Z,24nm,0.9s
PLAL  Pickwick Lake     65.18 345 eP      P       23 49 45.4 -1.2
      comp=Z,17nm,0.9s
WHTX  Lake Whitney,     65.20 335  P      P       23 49 46.1 -0.6
      baz=154
V51A  Loudon            65.21 348  P      P       23 49 45.7 -1.0
      baz=167
V51A  Loudon            65.21 348 eP      P       23 49 46.1 -0.5
      comp=Z,28nm,1.1s
V50A  Pikevile          65.22 348  P      P       23 49 46.2 -0.6
      baz=166,SNR=12
X44A  Crenshaw          65.23 343  P      P       23 49 45.8 -1.0
      baz=161
Y41A  Eaglette Beard    65.34 340  P      P       23 49 47.9 +0.4
      baz=159,SNR=6.3
W46A  Michie            65.40 345  P      P       23 49 46.7 -1.2
      baz=163
TXAR  Lajitas Array     65.42 329  P      P       23 49 48.8 +0.5
      comp=Z,2.4nm,0.7s,baz=153,slow=8.2,SNR=38
TXAR                               pP     pP      23 50 00.4 +1.0
      comp=Z,5.3nm,0.7s,baz=148,slow=8.3,SNR=20
TXAR                               sP     sP      23 50 05.2 +1.6
      comp=Z,9.1nm,0.8s,baz=153,slow=7.2,SNR=20
TX31  Lajitas Ar. Si    65.42 329 eP      P       23 49 48.9 +0.5
X43A  Marvell           65.45 342  P      P       23 49 48.6 +0.4
      baz=161
X43A  Marvell           65.45 342 eP      P       23 49 49.1 +0.9
X43A                              epP     pP      23 50 00.6 +1.3
U53A  Fall Branch       65.46 350  P      P       23 49 47.4 -1.0
      baz=169
V49A  McMinnville       65.47 347  P      P       23 49 47.3 -1.1
      baz=166,SNR=11
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U52A  Thorn Hill        65.61 349  P      P       23 49 48.4 -0.9
      baz=168
W45A  Hickory Valley    65.62 344  P      P       23 49 48.7 -0.6
      baz=162
V48A  Smith Brothers    65.63 346  P      P       23 49 48.7 -0.8
      baz=165,SNR=8.8
V48A  Smith Brothers    65.63 346 eP      P       23 49 48.7 -0.8
      comp=Z,22nm,0.9s
Y40A  Okolona           65.66 340  P      P       23 49 49.8 +0.2
      baz=158
X42A  Stuttgart         65.68 342  P      P       23 49 49.7  0.0
      baz=160
U51A  La Follette       65.71 349  P      P       23 49 49.1 -0.9
      baz=167
TZTN  Tazewell          65.79 349  P      P       23 49 49.6 -0.8
      baz=168
TZTN  Tazewell          65.79 349 eP      P       23 49 49.7 -0.8
      comp=Z,17nm,1.1s
V47A  Nunnelly          65.87 345  P      P       23 49 49.8 -1.1
      baz=164
U50A  Jamestown         65.89 348  P      P       23 49 50.1 -1.0
      baz=167
X40A  Basin Creek Fa    65.97 340  P      P       23 49 50.7 -0.9
      baz=159
V46A  Holladay          65.98 345  P      P       23 49 50.4 -1.2
      baz=164,SNR=6.5
BLA   Blacksburg        65.99 352  P      P       23 49 50.8 -0.9
      baz=171
BLA   Blacksburg        65.99 352 eP      P       23 49 49.7 -2.1
BLA   Blacksburg        65.99 352 eP      P       23 49 49.7 -2.1
UALR  University of     66.09 341 eP      P       23 49 50.9 -1.5
UALR                              epP     pP      23 50 04.2 +0.7
V45A  Humboldt          66.12 344  P      P       23 49 51.8 -0.8
      baz=163
U49A  Red Boiling Sp    66.17 347  P      P       23 49 52.0 -0.8
      baz=166,SNR=8.3
WVT   Waverly           66.23 345  P      P       23 49 52.1 -1.2
      baz=164
WVT   Waverly           66.23 345 eP      P       23 49 52.3 -0.9
      comp=Z,22nm,0.8s
WVT   Waverly           66.23 345 eP      P       23 49 52.3 -0.9
WVT                                pmax   pmax
      comp=Z,23nm,0.8s
MIAR  Mount Ida         66.24 340  P      P       23 49 53.6 +0.2
      baz=158,SNR=9.5
MIAR  Mount Ida         66.24 340 eP      P       23 49 53.8 +0.4
      comp=Z,29nm,1.1s
MIAR  Mount Ida         66.24 340 eP      P       23 49 53.8 +0.4
MIAR                               pmax   pmax
      comp=Z,29nm,1.1s
T51A  Gray              66.27 349  P      P       23 49 52.6 -0.9
      baz=168
U48A  Cassie Pea, Po    66.32 346  P      P       23 49 53.1 -0.7
      baz=165,SNR=6.5
X39A  Fountain Ranch    66.38 339  P      P       23 49 54.0 -0.3
      baz=158,SNR=14
U47A  Clarksville       66.41 346  P      P       23 49 53.6 -0.7
      baz=164,SNR=14
W41B  Gary Mavity, V    66.44 341  P      P       23 49 54.2 -0.4
      baz=160,SNR=9.0
W41B  Gary Mavity, V    66.44 341 eP      P       23 49 54.6  0.0
      comp=Z,18nm,0.8s
IP01  Cuckoo            66.46 354 eP      P       23 49 55.5 +0.8
      comp=Z,113nm,1.7s
T50A  Nancy             66.48 348  P      P       23 49 54.1 -0.8
      baz=167,SNR=7.2
U46A  Springville       66.53 345  P      P       23 49 54.5 -0.6
      baz=164
IP03  Louisa            66.53 354 eP      P       23 49 55.9 +0.7
      comp=Z,25nm,0.8s
WHAR  Wooly Hollow      66.56 341 eP      P       23 49 55.7 +0.3
      comp=Z,18nm,0.8s
CVRD  Centerville Ro    66.56 354 eP      P       23 49 56.0 +0.7
      comp=Z,37nm,1.3s
ABTX  Abilene, Hawle    66.59 334  P      P       23 49 56.0 +0.3
      baz=153,SNR=7.4
ABTX  Abilene, Hawle    66.59 334 eP      P       23 49 56.2 +0.5
      comp=Z,65nm,1.2s
IP04  Greensprings      66.61 354 eP      P       23 49 56.4 +0.7
      comp=Z,26nm,1.0s
T49A  Edmonton          66.69 348  P      P       23 49 55.3 -0.9
      baz=166,SNR=16
W40A  Ferguson Farm,    66.69 341  P      P       23 49 56.3 +0.1
      baz=159
W40A  Ferguson Farm,    66.69 341 eP      P       23 49 57.1 +0.9
      comp=Z,27nm,0.9s
V42A  Cord              66.80 342  P      P       23 49 56.6 -0.3
      baz=160
T48A  Bowling Green     66.87 347  P      P       23 49 56.5 -0.8
      baz=165,SNR=6.8
T47A  Sharon Grove      66.89 346  P      P       23 49 56.8 -0.7
      baz=165,SNR=9.3
T47A  Sharon Grove      66.89 346 eP      P       23 49 56.6 -0.9
      comp=Z,26nm,0.8s
W39A  Magazine          66.91 340  P      P       23 49 58.0 +0.4
      baz=158,SNR=15
W39A  Magazine          66.91 340 eP      P       23 49 58.1 +0.4
      comp=Z,34nm,0.9s
V41A  Mountainview      66.99 342  P      P       23 49 57.1 -1.0
      baz=160,SNR=14
S50A  Richmond          67.05 349  P      P       23 49 57.7 -0.8
      baz=167
U43A  Rector            67.07 343  P      P       23 49 57.8 -0.8
      baz=162
T46A  Princeton         67.12 346  P      P       23 49 58.1 -0.7
      baz=164,SNR=13
V40A  Witts Springs     67.19 341  P      P       23 49 58.9 -0.5
      baz=159,SNR=7.6
V40A  Witts Springs     67.19 341 eP      P       23 49 59.2 -0.2
      comp=Z,10.0nm,0.8s
U42A  Revenden          67.27 342  P      P       23 49 59.2 -0.7
      baz=161,SNR=19
S49A  Springfield       67.31 348  P      P       23 49 59.1 -1.0
      baz=166
S48A  Wiedeman Farm,    67.33 347  P      P       23 49 59.1 -1.1
      baz=166
TAOE  Nuku Hiva Isla    67.41 272 eLR     LR      00 10 28.7
      comp=Z,720nm,24.5s
S47A  Hartford          67.43 347  P      P       23 49 59.5 -1.4
      baz=165
U41A  Viola             67.45 342  P      P       23 50 00.6 -0.4
      baz=160,SNR=12
PBMO  Poplar Bluff      67.47 343 eP      P       23 50 00.8 -0.3
      comp=Z,41nm,0.8s
V39A  Pettigrew         67.47 340  P      P       23 50 01.0 -0.2
      baz=158,SNR=12
T44A  Benton            67.55 344  P      P       23 50 01.4 -0.3
      baz=162
R50A  Paris             67.62 349  P      P       23 50 01.1 -0.9
      baz=167
S46A  Don Dixon Farm    67.70 346  P      P       23 50 01.5 -1.1
      baz=164
U40A  Yellville         67.72 341  P      P       23 50 02.3 -0.4
      baz=159,SNR=14
R49A  Shelbyville       67.78 348  P      P       23 50 02.3 -0.7
      baz=166
T42A  Van Buren         67.87 343  P      P       23 50 03.0 -0.7
      baz=161
S45A  Carrier Mills     67.88 345  P      P       23 50 03.1 -0.6
      baz=163,SNR=6.1
U39A  Green Forest      67.92 341  P      P       23 50 03.6 -0.5
      baz=159,SNR=14
WCI   Wyandotte Cave    67.93 347  P      P       23 50 03.0 -1.0
      baz=165
WCI   Wyandotte Cave    67.93 347 eP      P       23 50 02.8 -1.2
      comp=Z,16nm,0.9s
WCI   Wyandotte Cave    67.93 347 eP      P       23 50 02.8 -1.2
WCI                                pmax   pmax
      comp=Z,16nm,0.9s
HHAR  Hobbs             67.96 340 eP      P       23 50 04.3  0.0
      comp=Z,29nm,1.0s
R48A  Northridge Ran    68.01 348  P      P       23 50 03.7 -0.8
      baz=166
R47A  Wooly Knot Far    68.04 347  P      P       23 50 03.8 -0.9
      baz=165
S44A  Carbondale        68.05 345  P      P       23 50 04.1 -0.7
      baz=163,SNR=9.2
SIUC  Southern Illin    68.06 345 eP      P       23 50 04.4 -0.4
      comp=Z,31nm,0.8s
T41A  Mountain View     68.06 342  P      P       23 50 04.4 -0.5
      baz=160,SNR=22
S43A  Fulton Ridge,     68.13 344  P      P       23 50 04.6 -0.6
      baz=162,SNR=21
WMOK  Wichita Mounta    68.15 336  P      P       23 50 04.6 -0.9
      baz=154
WMOK  Wichita Mounta    68.15 336 eP      P       23 50 05.5  0.0
      comp=Z,11nm,1.1s
WMOK  Wichita Mounta    68.15 336 eP      P       23 50 05.5  0.0
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WMOK                                  pmax     pmax
          comp=Z,11nm,1.1s
R46A      Gibon Southern    68.16 346  P       P        23 50 04.1  -1.3
          baz=164
GDL2      Guadalupe Moun    68.17 330 eP       P        23 50 07.1  +1.3
TUL1      Leonard           68.19 339  P       P        23 50 05.6  -0.1
          baz=157,SNR=10
TUL1      Leonard           68.19 339 eP       P        23 50 05.6  -0.1
          comp=Z,42nm,0.8s
MNTX      Cornudas Mount    68.20 329  P       P        23 50 05.5  -0.4
          baz=148,SNR=12
MNTX      Cornudas Mount    68.20 329 eP       P        23 50 05.5  -0.4
          comp=Z,15nm,0.9s
MCWV      Mont Chateau      68.34 353  P       P        23 50 05.8  -0.8
          baz=172
T40A      Mansfield         68.37 342  P       P        23 50 06.3  -0.5
          baz=160,SNR=12
MVL       Millersville      68.37 356 eP       P        23 50 07.5  +0.8
          comp=Z,19nm,1.1s
MVL                                   epP      pP       23 50 18.6  +0.7
R45A      Skylar, Fairfi    68.40 346  P       P        23 50 05.9  -1.0
          baz=164
T39A      Clever            68.49 341  P       P        23 50 07.7  +0.1
          baz=159,SNR=6.0
S42A      Caledonia         68.50 343  P       P        23 50 06.7  -0.9
          baz=161,SNR=12
R44A      Waltonville       68.54 345  P       P        23 50 06.9  -0.9
          baz=163
SBA       Scott Base        68.55 191 eP       P        23 50 08.8  +1.3
          comp=Z,51nm,1.6s
SBA       Scott Base        68.55 191 eP       P        23 50 08.8  +1.3
SBA                                   pmax     pmax
          comp=Z,51nm,1.6s
S41A      Jillco Farms,     68.57 343  P       P        23 50 07.6  -0.4
          baz=160,SNR=27
FVM       French Village    68.61 344 eP       P        23 50 09.2  +0.9
          comp=Z,267nm,1.8s
FVM       French Village    68.61 344 eP       P        23 50 09.2  +0.9
FVM                                   pmax     pmax
          comp=Z,267nm,1.8s
Q47A      Bedord North L    68.64 347  P       P        23 50 07.5  -0.9
          baz=165
R43A      Red Bud           68.76 344  P       P        23 50 08.6  -0.6
          baz=162,SNR=5.4
T38A      Diamond           68.77 340  P       P        23 50 09.5  +0.2
          baz=158,SNR=35
S40A      Lebanon           68.78 342  P       P        23 50 09.4   0.0
          baz=160,SNR=14
O56A      Blue Knob Stat    68.81 354  P       P        23 50 09.7  +0.2
          baz=173,SNR=5.8
O56A      Blue Knob Stat    68.81 354 eP       P        23 50 09.8  +0.2
          comp=Z,52nm,1.6s
P50A      Jamestown         68.83 350  P       P        23 50 08.6  -1.0
          baz=168
CCM       Cathedral Cave    68.88 343  P       P        23 50 10.2  +0.3
          baz=161
CCM       Cathedral Cave    68.88 343 eP       P        23 50 10.7  +0.7
          comp=Z,45nm,0.9s
CCM       Cathedral Cave    68.88 343 eP       P        23 50 10.7  +0.7
CCM                                   pmax     pmax
          comp=Z,45nm,0.9s
Q45A      Warren Harvey,    68.95 346  P       P        23 50 09.5  -0.8
          baz=164,SNR=10
R42A      Luebbering        68.98 344  P       P        23 50 10.4  -0.2
          baz=161,SNR=12
MSTX      Muleshoe          69.02 332  P       P        23 50 11.1  +0.1
          baz=150,SNR=13
MSTX      Muleshoe          69.02 332 eP       P        23 50 10.9  -0.1
          comp=Z,57nm,0.9s
S39A      Bolivar           69.10 341  P       P        23 50 11.1  -0.2
          baz=159,SNR=21
S39A      Bolivar           69.10 341 eP       P        23 50 11.2  -0.2
          comp=Z,42nm,1.0s
SSPA      Standing Stone    69.12 355  P       P        23 50 11.0  -0.4
          baz=173
SSPA      Standing Stone    69.12 355 eP       P        23 50 11.5  +0.1
          comp=Z,19nm,1.1s
P47A      Martinsville      69.14 348  P       P        23 50 10.6  -1.0
          baz=166
R41A      Rosebud           69.14 343  P       P        23 50 11.5  -0.1
          baz=161,SNR=22
Q44A      Meyer Farm, Va    69.15 345  P       P        23 50 10.8  -0.8
          baz=163
SLM       Saint Louis       69.18 344 eP       P        23 50 11.9  +0.1
SLM                                   epP      pP       23 50 22.9  -0.1
SLM       Saint Louis       69.18 344 eP       P        23 50 11.9  +0.1
SLM                                   e*PP     pP       23 50 22.9  -0.1
S38A      Stockton          69.21 341  P       P        23 50 11.7  -0.3
          baz=158,SNR=27
N59A      State Game Lan    69.25 356  P       P        23 50 12.2   0.0
          baz=175,SNR=5.4
N59A      State Game Lan    69.25 356 eP       P        23 50 12.8  +0.6
          comp=Z,19nm,1.0s
ACSO      Alum Creek Sta    69.31 350  P       P        23 50 12.0  -0.5
          baz=169
ACSO      Alum Creek Sta    69.31 350 eP       P        23 50 12.1  -0.5
ACSO                                  epP      pP       23 50 22.8  -1.0
O50A      Cable             69.33 350  P       P        23 50 12.0  -0.7
          baz=168
Q43A      New Douglas       69.34 345  P       P        23 50 12.3  -0.5
          baz=162,SNR=6.4
R40A      Maddies Statio    69.37 342  P       P        23 50 12.9  -0.1
          baz=160,SNR=48
R40A      Maddies Statio    69.37 342 eP       P        23 50 12.9  -0.1
          comp=Z,73nm,1.0s
AMTX      Amarillo          69.38 333  P       P        23 50 13.3  +0.1
          baz=151
AMTX      Amarillo          69.38 333 eP       P        23 50 13.9  +0.7
          comp=Z,20nm,0.8s
TBI       Tubuai            69.45 254 eS       S        23 59 18.8  -0.2
          comp=Z,228nm,26.5s
TBI       Tubuai            69.45 254 eLR      LR       00 11 19.8
          comp=Z,683nm,28.5s
TBI       Tubuai            69.45 254 eT       T        01 05 30.8
          comp=Z,9.7nm,0.2s
P46A      Rosedale          69.45 347  P       P        23 50 12.3  -1.1
          baz=165
P45A      Graceland, Par    69.47 346  P       P        23 50 12.3  -1.3
          baz=164,SNR=8.6
P45A      Graceland, Par    69.47 346 eP       P        23 50 12.5  -1.1
          comp=Z,23nm,0.8s
Q42A      Golden Eagle      69.51 344  P       P        23 50 13.8  -0.1
          baz=162,SNR=27
VNDA      Vanda             69.58 191  P       P        23 50 14.4  +0.6
          comp=Z,1.8nm,0.9s,baz=120,slow=5.6,SNR=11
VNDA                                   LR      LR       00 17 03.4
          comp=Z,150nm,21.0s,baz=138,slow=33
VNDA      Vanda             69.58 191 eP       P        23 50 14.8  +0.9
          comp=Z,61nm,1.9s
VNDA      Vanda             69.58 191 eP       P        23 50 14.8  +0.9
VNDA                                  pmax     pmax
          comp=Z,61nm,1.9s
R39A      Chumby, Stover    69.60 342  P       P        23 50 14.3  -0.2
          baz=159,SNR=19
P44A      Sand Creek, Wi    69.60 346  P       P        23 50 13.3  -1.1
          baz=163
N54A      Moraine State     69.65 353  P       P        23 50 14.4  -0.2
          baz=172,SNR=5.1
N54A      Moraine State     69.65 353 eP       P        23 50 14.4  -0.2
          comp=Z,12nm,0.8s
R38A      Fenwick Farm,     69.72 341  P       P        23 50 14.7  -0.5
          baz=159,SNR=14
Q41A      Truxton           69.73 343  P       P        23 50 15.2   0.0
          baz=161,SNR=6.3
319A      Douglas           69.79 326 eP       P        23 50 17.5  +1.6
O47A      Sheridan          69.85 348  P       P        23 50 14.6  -1.3
          baz=166,SNR=6.1
KSPA      Keystone Colle    69.89 356 eP       P        23 50 16.7  +0.6
          comp=Z,55nm,1.7s
P43A      Skaggs, Pawnee    69.97 345  P       P        23 50 15.9  -0.8
          baz=163,SNR=14
Q40A      Laux Farm, Aux    69.98 343  P       P        23 50 16.4  -0.3
          baz=160,SNR=14
121A      Cookes Peak, D    70.01 328  P       P        23 50 17.2  -0.1
          baz=146
P42A      Winchester        70.11 344  P       P        23 50 16.8  -0.6
          baz=162,SNR=7.2
P42A      Winchester        70.11 344 eP       P        23 50 16.9  -0.6
          comp=Z,26nm,0.9s
BRYW      Bryant College    70.12 360 eP       P        23 50 18.5  +0.9
          comp=Z,108nm,1.7s
M54A      Oil Creek Stat    70.15 353  P       P        23 50 17.1  -0.7
          baz=172
M54A      Oil Creek Stat    70.15 353 eP       P        23 50 17.3  -0.5
          comp=Z,11nm,0.8s
O45A      Potomac           70.16 347  P       P        23 50 16.8  -1.0
          baz=164,SNR=15
SFIN      Lafayette         70.16 347  P       P        23 50 16.8  -1.0
          baz=165,SNR=5.4
SFIN      Lafayette         70.16 347 eP       P        23 50 16.5  -1.3
          comp=Z,15nm,0.8s
O44A      Mansfield         70.23 346  P       P        23 50 17.0  -1.2
          baz=164,SNR=6.1
Q39A      Willow Grove F    70.27 342  P       P        23 50 18.4  -0.1
          baz=160
Q38A      Cooks Store, C    70.36 342  P       P        23 50 19.1   0.0
          baz=159,SNR=19
P41A      Barry, Barry      70.37 344  P       P        23 50 18.4  -0.7
          baz=161,SNR=7.0
P40A      Paris             70.48 343  P       P        23 50 19.7  -0.1
          baz=160,SNR=9.5
P40A      Paris             70.48 343 eP       P        23 50 19.6  -0.1
          comp=Z,185nm,1.6s
Q37A      Longview Farm,    70.52 341  P       P        23 50 20.3  +0.3
          baz=158
O43A      Sugar Creek Fa    70.54 345  P       P        23 50 19.2  -0.9
          baz=163,SNR=5.5
BINY      Binghamton        70.54 356  P       P        23 50 20.1  -0.1
          baz=175,SNR=5.1
BINY      Binghamton        70.54 356 eP       P        23 50 20.7  +0.6
BINY                                  epP      pP       23 50 31.9  +0.6
N46A      Monticello        70.59 348  P       P        23 50 19.5  -0.9
          baz=165,SNR=6.9
P39B      Salisbury         70.62 342  P       P        23 50 20.2  -0.4
          baz=160,SNR=14
O42A      Bath              70.63 345  P       P        23 50 20.6   0.0
          baz=162
SYO       Syowa Base        70.65 159⇓eX       P        23 50 18.0  -2.5
N45A      Kentland          70.70 347  P       P        23 50 19.8  -1.3
          baz=165,SNR=5.2
HRV       Adam Dziewonsk    70.70 360  P       P        23 50 21.0   0.0
          baz=179
HRV       Adam Dziewonsk    70.70 360 eP       P        23 50 21.2  +0.1
          comp=Z,93nm,1.7s
HRV                                   epP      pP       23 50 34.0  +1.7
HRV       Adam Dziewonsk    70.70 360 eP       P        23 50 21.2  +0.1
HRV                                   e*PP     pP       23 50 34.0  +1.7
HRV                                    pmax    pmax
          comp=Z,93nm,1.7s
O41A      Passleys Farm,    70.74 344  P       P        23 50 20.7  -0.7
          baz=162,SNR=12
N44A      Piper City        70.77 346  P       P        23 50 20.3  -1.3
          baz=164
ERPA      Erie              70.79 353  P       P        23 50 20.6  -1.0
          baz=172
HDIL      Hopedale          70.79 345  P       P        23 50 20.8  -0.9
          baz=163,SNR=6.0
HDIL      Hopedale          70.79 345 eP       P        23 50 21.0  -0.7
          comp=Z,28nm,0.7s
BNM       Barren Site       70.83 329 eP       P        23 50 23.5  +1.2
P38A      Dawn              70.96 342  P       P        23 50 22.1  -0.6
          baz=159,SNR=7.9
P38A      Dawn              70.96 342 eP       P        23 50 22.3  -0.4
          comp=Z,36nm,1.1s
LPM       Los Pinos Moun    70.97 329 eP       P        23 50 23.9  +0.8
LPM                                   epP      pP       23 50 35.9  +1.6
TRY       Troy              70.97 358 eP       P        23 50 23.3  +0.6
          comp=Z,29nm,0.9s
O40A      La Belle          70.99 343  P       P        23 50 22.5  -0.4
          baz=161,SNR=9.0
LENM      Lemitar           71.00 329 eP       P        23 50 24.9  +1.6
LENM                                  epP      pP       23 50 36.0  +1.5
M46A      Old House Fiel    71.02 348  P       P        23 50 22.1  -0.9
          baz=166
M46A      Old House Fiel    71.02 348 eP       P        23 50 22.2  -0.8
M46A                                  epP      pP       23 50 33.1  -1.1
N43A      Stutzman Famil    71.13 346  P       P        23 50 23.1  -0.6
          baz=163,SNR=5.5
MMNY      Mt. Morris Dam    71.20 355 eP       P        23 50 24.4  +0.3
          comp=Z,121nm,1.7s
N42A      Yates City        71.22 345  P       P        23 50 23.3  -0.9
          baz=162
LAZ       Ladron            71.27 329 eP       P        23 50 26.3  +1.4
O39A      Kirksville        71.29 343  P       P        23 50 24.4  -0.3
          baz=160
TUC       Tucson            71.29 325  P       P        23 50 25.1  +0.1
          baz=144
TUC       Tucson            71.29 325 eP       P        23 50 26.2  +1.2
TUC                                   epP      pP       23 50 37.7  +1.5
TUC       Tucson            71.29 325 eP       P        23 50 26.2  +1.2
TUC                                   e*PP     pP       23 50 37.7  +1.5
N41A      Harden Midland    71.30 344  P       P        23 50 24.0  -0.7
          baz=162,SNR=11
N41A      Harden Midland    71.30 344 eP       P        23 50 24.1  -0.6
          comp=Z,38nm,1.0s
M44A      Midewin, Midew    71.33 347  P       P        23 50 23.7  -1.2
          baz=164
KSU1      Kansas State U    71.38 339  P       P        23 50 25.2  -0.1
          baz=156
KSU1      Kansas State U    71.38 339 eP       P        23 50 25.3  +0.1
          comp=Z,14nm,0.8s
O38A      Galt              71.41 342  P       P        23 50 24.7  -0.7
          baz=159
ANMO      Albuquerque       71.42 330  P       P        23 50 26.2  +0.3
          comp=Z,4.4nm,0.9s,baz=145,slow=9.4,SNR=17
ANMO      Albuquerque       71.42 330  P       P        23 50 26.0  +0.1
          baz=148
ANMO      Albuquerque       71.42 330 eP       P        23 50 26.8  +0.9
          comp=Z,26nm,1.5s
ANMO      Albuquerque       71.42 330c iP      P        23 50 26.8  +0.9
ANMO                                  pmax     pmax
          comp=Z,16nm,1.6s
TASL      Snake Pit, Alb    71.42 330  P       P        23 50 26.2  +0.4
          baz=148,SNR=10
TASM      ASL Pad, Albuq    71.42 330  P       P        23 50 26.4  +0.6
          baz=148,SNR=9.6
AAM       Ann Arbor         71.44 350  P       P        23 50 24.9  -0.7
          baz=168
M43A      Waltham Townsh    71.56 346  P       P        23 50 25.5  -0.8
          baz=163,SNR=5.2
ACCN      Adirondack Com    71.62 358 eP       P        23 50 27.0  +0.4
          comp=Z,52nm,1.7s
O37A      Wolven Farm, M    71.64 342  P       P        23 50 26.3  -0.5
          baz=159,SNR=6.5
N40A      Mertquake, Sal    71.64 344  P       P        23 50 26.1  -0.7
          baz=161
TIAR      Tiarei            71.69 260 eT       T        01 08 22.1
          comp=Z,2.8nm,0.2s
M41A      Milan             71.86 345  P       P        23 50 27.2  -0.8
          baz=162
N39A      Derby Farms, D    71.86 343  P       P        23 50 27.5  -0.7
          baz=160,SNR=7.9
N39A      Derby Farms, D    71.86 343 eP       P        23 50 27.4  -0.7
          comp=Z,24nm,0.8s
PPT2      Papeete2          71.88 259 eS       S        23 59 50.7  +3.1
          comp=Z,451nm,27.5s
PPT2      Papeete2          71.88 259 eLR      LR       00 12 27.8
          comp=Z,1µm,23.0s
PPT       Papeete           71.89 260  LR      LR       00 13 37.6
          comp=Z,636nm,19.1s,baz=152,slow=29
214A      Organ Pipe Nat    72.05 324  P       P        23 50 29.6  +0.1
          baz=142,SNR=8.1
M40A      Post Highland     72.11 344  P       P        23 50 28.8  -0.8
          baz=161,SNR=8.2
N37A      Lee Faris, Mou    72.20 342  P       P        23 50 30.0  -0.2
          baz=159
N37A      Lee Faris, Mou    72.20 342 eP       P        23 50 30.3  +0.1
          comp=Z,40nm,0.9s
NCB       Newcomb           72.22 358 eP       P        23 50 30.1  -0.2
NCB                                   epP      pP       23 50 41.8  +0.3
L43A      Garden Prairie    72.23 346  P       P        23 50 29.7  -0.6
          baz=164,SNR=6.1
L42A      Oliver, Polo      72.26 346  P       P        23 50 29.7  -0.8
          baz=163
L42A      Oliver, Polo      72.26 346 eP       P        23 50 29.8  -0.7
          comp=Z,18nm,1.0s
M39A      Webster           72.34 344  P       P        23 50 29.9  -1.1
          baz=160
LIC       Lamto             72.37  73 eP       P        23 50 30.8  -1.0
          comp=Z,76nm,1.1s
T25A      Trinidad          72.42 333  P       P        23 50 32.0  +0.2
          baz=150,SNR=16
T25A      Trinidad          72.42 333 eP       P        23 50 33.0  +1.1
          comp=Z,21nm,0.8s
WLVO      Wesleyville       72.43 355  P       P        23 50 31.6  +0.2
          baz=173,SNR=5.4
LBNH      Lisbon            72.44 359  P       P        23 50 30.6  -0.9
          baz=179
LBNH      Lisbon            72.44 359 eP       P        23 50 32.5  +1.0
          comp=Z,19nm,1.0s
LBNH                                  epP      pP       23 50 43.6  +0.9
LBNH      Lisbon            72.44 359 eP       P        23 50 32.5  +1.0
LBNH                                  e*PP     pP       23 50 43.6  +0.9
LBNH                                   pmax    pmax
          comp=Z,19nm,1.0s
N36A      Muff Farm, Cla    72.47 341  P       P        23 50 31.6  -0.1
          baz=158
L41A      Preston           72.51 345  P       P        23 50 31.1  -0.8
          baz=162
PKRO      Pickering         72.53 354  P       P        23 50 31.9  -0.1
          baz=172,SNR=5.5
M38A      Pleasantville     72.55 343  P       P        23 50 31.6  -0.6
          baz=160,SNR=11
TIC       Toumodi           72.60  72 eP       P        23 50 31.3  -1.9
K43A      Burlington        72.65 347  P       P        23 50 31.9  -0.9
          baz=164
L40A      Anamosa           72.67 344  P       P        23 50 32.2  -0.7
          baz=161,SNR=12
L40A      Anamosa           72.67 344 eP       P        23 50 32.1  -0.7
          comp=Z,46nm,0.9s
X18A      Snowflake         72.68 327 eP       P        23 50 34.6  +1.2
X18A                                  epP      pP       23 50 46.7  +2.1
KIC       Kosan Boka        72.68  73 eP       P        23 50 32.8  -0.9
          comp=Z,98nm,1.1s
DBIC      Dimbokro          72.75  72  P       P        23 50 32.6  -1.5
          comp=Z,16nm,0.9s,baz=218,slow=3.8,SNR=24
DBIC                                   pP      pP       23 50 46.0  +0.7
          comp=Z,40nm,1.0s,baz=212,slow=6.6,SNR=9.7
DBIC                                   LR      LR       00 19 42.4
          comp=Z,412nm,21.7s,baz=217,slow=34
DBIC      Dimbokro          72.75  72 eP       P        23 50 33.5  -0.5
          comp=Z,35nm,0.8s
DBIC                                   pP      pP       23 50 46.0  +0.7
DBIC      Dimbokro          72.75  72 eP       P        23 50 33.5  -0.5
DBIC                                   *PP     pP       23 50 46.0  +0.7
DBIC                                   pmax    pmax
          comp=Z,35nm,0.8s
M37A      Trindle Farm,     72.76 342  P       P        23 50 33.5   0.0
          baz=159,SNR=20
LONY      Lake Ozonia       72.88 357  P       P        23 50 32.8  -1.3
          baz=177
LONY      Lake Ozonia       72.88 357 eP       P        23 50 34.2  +0.1
LONY                                  epP      pP       23 50 46.1  +0.7
BWLO      Walkerton         72.89 352  P       P        23 50 33.9  -0.3
          baz=171,SNR=6.9
L39A      Vinton            72.91 344  P       P        23 50 33.3  -1.1
          baz=161,SNR=7.5
K42A      Prairie Point,    72.93 346  P       P        23 50 33.8  -0.6
          baz=163,SNR=9.7
DELO      Deloro Mine       72.95 355  P       P        23 50 33.1  -1.4
          baz=174,SNR=5.6
K41A      Shullsburg        72.97 345  P       P        23 50 34.0  -0.7
          baz=162
EMMW      East Machias      72.98   3 eP       P        23 50 35.3  +0.6
          comp=Z,36nm,1.2s
M36A      Felix, Anita      73.01 342  P       P        23 50 34.4  -0.6
          baz=158,SNR=9.3
L38A      Oak Wood Farm,    73.17 343  P       P        23 50 35.6  -0.3
          baz=160,SNR=7.7
K40A      Colesburg         73.25 345  P       P        23 50 35.3  -1.1
          baz=162,SNR=8.4
JFWS      Jewell Farm       73.25 345  P       P        23 50 35.7  -0.6
          baz=162,SNR=7.6
JFWS      Jewell Farm       73.25 345 eP       P        23 50 35.8  -0.6
          comp=Z,18nm,0.8s
JFWS      Jewell Farm       73.25 345 eP       P        23 50 35.8  -0.6
JFWS                                   pmax    pmax
          comp=Z,18nm,0.8s
X16A      Lo Mia Camp, P    73.31 326 eP       P        23 50 38.5  +1.3
J43A      Natural Harves    73.32 347  P       P        23 50 36.3  -0.4
          baz=164,SNR=6.0
SADO      Sadowa            73.33 354 eP       P        23 50 36.2  -0.6
          comp=Z,95nm,1.7s
KSCO      Kaye Shedlock’    73.36 335  P       P        23 50 36.3  -1.0
          baz=151
KSCO      Kaye Shedlock’    73.36 335 eP       P        23 50 38.7  +1.5
          comp=Z,130nm,1.8s
L37A      Phoenix Point,    73.36 343  P       P        23 50 36.7  -0.3
          baz=159,SNR=5.2
SDCO      Great Sand Dun    73.39 332  P       P        23 50 37.8  +0.1
          baz=149,SNR=22
SDCO      Great Sand Dun    73.39 332 eP       P        23 50 38.5  +0.8
          comp=Z,8.3nm,0.7s
J42A      Columbus          73.40 346  P       P        23 50 36.9  -0.3
          baz=163
K39A      Oelwein           73.43 344  P       P        23 50 36.6  -0.9
          baz=161,SNR=10.0
PLVO      Plevna            73.44 356  P       P        23 50 37.0  -0.4
          baz=174,SNR=5.7
PLVO      Plevna            73.44 356 eP       P        23 50 37.5  +0.2
          comp=Z,11nm,0.9s
PKME      Peaks-Kenny Pk    73.48   1  P       P        23 50 37.4  -0.2
          baz=181
PKME      Peaks-Kenny Pk    73.48   1 eP       P        23 50 38.3  +0.7
          comp=Z,13nm,0.9s
L36A      Harm Buss Farm    73.58 342  P       P        23 50 38.4  +0.1
          baz=158
K38A      Parkersburg       73.59 344  P       P        23 50 38.0  -0.4
          baz=160
K38A      Parkersburg       73.59 344 eP       P        23 50 37.9  -0.5
          comp=Z,25nm,1.0s
J41A      Loganville        73.63 346  P       P        23 50 37.9  -0.7
          baz=163,SNR=9.9
I43A      Langenfeld Bro    73.75 347  P       P        23 50 38.6  -0.6
          baz=164,SNR=6.1
J40A      Soldiers Grove    73.82 345  P       P        23 50 39.0  -0.7
          baz=162,SNR=19
ALFO      Alfred            73.90 357  P       P        23 50 40.8  +0.8
          baz=176,SNR=5.2
I42A      Draeger Farm,     73.91 347  P       P        23 50 39.8  -0.3
          baz=164,SNR=9.4
I42A      Draeger Farm,     73.91 347 eP       P        23 50 39.8  -0.3
          comp=Z,71nm,1.8s
K37A      Belmond           73.93 343  P       P        23 50 39.5  -0.8
          baz=159,SNR=5.2
S22A      4UR Ranch, Cre    73.94 331  P       P        23 50 40.8  -0.1
          baz=148,SNR=6.2
S22A      4UR Ranch, Cre    73.94 331 eP       P        23 50 42.0  +1.1
S22A                                  epP      pP       23 50 53.2  +1.0
BGNE      Belgrade          73.96 339  P       P        23 50 40.6   0.0
          baz=155
BGNE      Belgrade          73.96 339 eP       P        23 50 41.1  +0.6
          comp=Z,43nm,0.6s
J39A      Decorah           73.99 345  P       P        23 50 39.8  -0.8
          baz=161,SNR=15
KLBO      Killbear Provi    74.02 353  P       P        23 50 39.5  -1.3
          baz=172,SNR=24
K36A      Gilmore City      74.02 342  P       P        23 50 40.8  -0.1
          baz=159,SNR=6.0
BUKO      Buck Lake         74.02 354  P       P        23 50 40.9  +0.1
          baz=172,SNR=13
PEMO      Pembroke          74.08 356  P       P        23 50 40.9  -0.2
          baz=174,SNR=7.8
J38A      Wedel Dairy, R    74.15 344  P       P        23 50 40.9  -0.7
          baz=160,SNR=5.7
WUAZ      Wupatki           74.16 327  P       P        23 50 43.3  +1.2
          baz=144,SNR=6.7
WUAZ      Wupatki           74.16 327 eP       P        23 50 43.5  +1.4
          comp=Z,26nm,1.0s
MVCO      Mesa Verde        74.22 330  P       P        23 50 43.5  +1.0
          baz=146,SNR=9.4
MVCO      Mesa Verde        74.22 330 eP       P        23 50 43.5  +1.0
          comp=Z,26nm,0.9s
H43A      Windswept, Lux    74.24 348  P       P        23 50 41.5  -0.6
          baz=165,SNR=7.4
H43A      Windswept, Lux    74.24 348 eP       P        23 50 41.7  -0.4
          comp=Z,97nm,1.7s
I41A      Arkdale           74.27 346  P       P        23 50 41.8  -0.5
          baz=163
I40A      Norwalk           74.27 345  P       P        23 50 41.6  -0.7
          baz=162,SNR=5.6
Q24A      Divide            74.29 333  P       P        23 50 43.9  +0.9
          baz=149,SNR=10
Y12C      Blythe            74.35 324  P       P        23 50 43.1  +0.1
          baz=141
Y12C      Blythe            74.35 324 eP       P        23 50 44.6  +1.6
          comp=Z,16nm,1.1s
SWSC      Sam W. Stewart    74.40 322  P       P        23 50 42.8  -0.5
          baz=140
J37A      Redenius Farm,    74.41 343  P       P        23 50 42.3  -0.9
          baz=160,SNR=7.8
H42A      Shiocton          74.42 347  P       P        23 50 43.1  -0.1
          baz=164
I39A      Houston           74.44 345  P       P        23 50 43.1  -0.1
          baz=161
I39A      Houston           74.44 345 eP       P        23 50 43.3   0.0
          comp=Z,118nm,1.6s
TRQ       Mont Tremblant    74.48 358 eP       P        23 50 43.2  -0.4
PDMCI     Parker Dam,Lak    74.58 324  P       P        23 50 43.9  -0.4
          baz=141
J36A      Seneca 1, Swea    74.64 343  P       P        23 50 44.4   0.0
          baz=159,SNR=7.2
J36A      Seneca 1, Swea    74.64 343 eP       P        23 50 44.1  -0.4
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	comp=Z,34nm,1.1s						
BAR	**Barrett**	74.68	321	eP	P	23 50 45.5	+0.5
BAR				epP	PcP	23 50 58.0	-1.1
MONP2	**Monument Peak**	74.70	322	P	P	23 50 46.0	+0.6
	baz=140						
H41A	**Junction City**	74.75	346	P	P	23 50 44.7	-0.4
	baz=163						
BC3	**Big Chuckawall**	74.76	323	P	P	23 50 46.2	+0.6
	baz=140						
I38A	**Scanlan Farm,**	74.80	344	P	P	23 50 45.2	-0.2
	baz=161,SNR=14						
H40A	**Chili**	74.91	346	P	P	23 50 45.2	-0.8
	baz=162,SNR=12						
G43A	**Wallace**	74.98	348	P	P	23 50 45.2	-1.2
	baz=165,SNR=6.0						
G43A	**Wallace**	74.98	348	eP	P	23 50 45.8	-0.6
	comp=Z,11nm,0.6s						
IRM	**Iron Mountain**	74.99	323	P	P	23 50 46.6	-0.2
	baz=141,SNR=5.0						
F46A	**Macinaw City C**	75.00	350	P	P	23 50 45.8	-0.7
	baz=167						
PV01	**Paradox Valley**	75.02	330	eP	P	23 50 47.8	+0.7
	comp=Z,15nm,1.0s						
F45A	**CMU Biological**	75.03	350	P	P	23 50 46.0	-0.7
	baz=167						
I37A	**Lemond, Waseca**	75.04	344	P	P	23 50 46.5	-0.2
	baz=160,SNR=12						
I37A	**Lemond, Waseca**	75.04	344	eP	P	23 50 46.5	-0.2
	comp=Z,144nm,1.7s						
W13A	**Hualapai Mount**	75.07	325	eP	P	23 50 48.8	+1.3
G42A	**Mountain**	75.11	347	P	P	23 50 47.0	-0.2
	baz=164,SNR=18						
G42A	**Mountain**	75.11	347	eP	P	23 50 46.9	-0.3
	comp=Z,20nm,0.8s						
PV02	**Paradox Valley**	75.15	330	eP	P	23 50 49.3	+1.4
PV02				epP	pP	23 50 59.9	+0.8
PV15	**Paradox Valley**	75.15	330	eP	P	23 50 49.6	+1.8
	comp=Z,33nm,1.3s						
H39A	**Augusta**	75.16	345	P	P	23 50 47.3	-0.1
	baz=162						
ISCO	**Idaho Springs**	75.19	333	P	P	23 50 48.0	-0.1
	baz=149,SNR=11						
ISCO	**Idaho Springs**	75.19	333	eP	P	23 50 49.0	+0.9
	comp=Z,41nm,1.8s						
ISCO	**Idaho Springs**	75.19	333	eP	P	23 50 49.0	+0.9
ISCO				pmax	pmax		
	comp=Z,41nm,1.8s						
I36A	**Fitzsimmons Fa**	75.19	343	P	P	23 50 47.4	-0.3
	baz=159						
PV05	**Paradox Valley**	75.20	330	eP	P	23 50 49.4	+1.2
	comp=Z,19nm,0.9s						
PV03	**Paradox Valley**	75.24	330	eP	P	23 50 49.6	+1.3
	comp=Z,15nm,1.1s						
XPFO	**Piæon Flat**	75.27	322	eP	P	23 50 49.3	+0.8
	comp=Z,27nm,1.7s						
PFO	**Pinyon Flats O**	75.27	322	P	P	23 50 47.9	-0.6
	baz=140						
PFO	**Pinyon Flats O**	75.27	322	eP	P	23 50 50.4	+1.9
	comp=Z,12nm,1.1s						
PFO	**Pinyon Flats O**	75.27	322	eP	P	23 50 50.4	+1.9
PFO				pmax	pmax		
	comp=Z,12nm,1.1s						
PV07	**Paradox Valley**	75.30	330	eP	P	23 50 49.9	+1.2
	comp=Z,8.3nm,0.9s						
U15A	**North Rim**	75.33	327	eP	P	23 50 50.3	+1.3
	comp=Z,16nm,1.0s						
PV04	**Paradox Valley**	75.38	330	eP	P	23 50 50.2	+1.1
PV04				epP	PcP	23 51 01.8	-0.3
H38A	**Maiden Rock**	75.39	345	P	P	23 50 48.6	-0.2
	baz=161,SNR=5.4						
PV10	**Paradox Valley**	75.42	330	eP	P	23 50 50.5	+1.1
PV10				epP	PcP	23 51 02.0	-0.5
F43A	**Flat Rock, Esc**	75.45	348	P	P	23 50 48.3	-0.8
	baz=165,SNR=9.6						
H37A	**Dierke Farm, C**	75.45	344	P	P	23 50 49.1	0.0
	baz=160						
F44A	**Big Bay de Noc**	75.46	349	P	P	23 50 48.2	-0.9
	baz=166,SNR=6.6						
G40A	**Rib Lake**	75.49	346	P	P	23 50 49.1	-0.2
	baz=163,SNR=6.4						
G40A	**Rib Lake**	75.49	346	eP	P	23 50 48.9	-0.5
	comp=Z,33nm,1.6s						
PV09	**Paradox Valley**	75.56	330	eP	P	23 50 51.4	+1.1
ECSD	**EROS Data Cent**	75.63	341	P	P	23 50 50.1	0.0
	baz=157,SNR=42						
ECSD	**EROS Data Cent**	75.63	341	eP	P	23 50 50.2	0.0
	comp=Z,29nm,0.9s						
E45A	**Wooded Hills,**	75.63	350	P	P	23 50 49.9	-0.2
	baz=167						
MURC	**Murrieta**	75.66	322	P	P	23 50 50.1	-0.6
	baz=139						
H36A	**Jessenland, He**	75.70	343	P	P	23 50 50.6	+0.1
	baz=159,SNR=7.5						
G39A	**Holcombe**	75.72	346	P	P	23 50 50.2	-0.4
	baz=162						
F41A	**Three Lakes**	75.72	347	P	P	23 50 50.5	-0.2
	baz=164,SNR=9.9						
F41A	**Three Lakes**	75.72	347	eP	P	23 50 50.3	-0.3
	comp=Z,12nm,0.9s						
GMRC	**Granite Mounta**	75.74	323	P	P	23 50 50.5	-0.7
	baz=140,SNR=6.0						
G38A	**Ridgeland**	75.76	345	P	P	23 50 50.1	-0.7
	baz=161,SNR=8.7						
E43A	**Lone Tree Farm**	75.94	349	P	P	23 50 51.6	-0.3
	baz=166,SNR=15						
E43A	**Lone Tree Farm**	75.94	349	eP	P	23 50 51.5	-0.4
	comp=Z,14nm,0.8s						
SPMN	**Marine on St.**	76.03	344	P	P	23 50 51.9	-0.5
	baz=160,SNR=6.2						
SPMN	**Marine on St.**	76.03	344	eP	P	23 50 51.8	-0.5
	comp=Z,23nm,0.9s						
H35A	**Sunnyside Ranc**	76.04	343	P	P	23 50 52.3	-0.2
	baz=158,SNR=15						
KNB	**Kanab**	76.06	327	eP	P	23 50 54.7	+1.7
	comp=Z,32nm,1.2s						
KNB	**Kanab**	76.06	327	eP	P	23 50 54.7	+1.7
KNB				pmax	pmax		
	comp=Z,32nm,1.2s						
COWI	**Conover**	76.07	347	eP	P	23 50 52.4	-0.2
	comp=Z,59nm,1.8s						
F40A	**Park Falls**	76.09	346	P	P	23 50 52.6	-0.2
	baz=163,SNR=25						
HEC	**Hector,Ludlow**	76.13	323	P	P	23 50 53.6	+0.3
	baz=140						
E42A	**Champion**	76.16	348	P	P	23 50 53.0	-0.2
	baz=165,SNR=9.4						
N23A	**Red Feather La**	76.26	334	P	P	23 50 53.7	-0.5
	baz=149,SNR=7.3						
N23A	**Red Feather La**	76.26	334	eP	P	23 50 55.6	+1.4
	comp=Z,34nm,1.6s						
F39A	**Loretta**	76.26	346	P	P	23 50 53.2	-0.5
	baz=162,SNR=18						
LCMT	**Little Creek M**	76.26	326	eP	P	23 50 55.7	+1.6
LCMT				epP	pP	23 51 07.3	+2.0
G36A	**St. Michael**	76.27	344	P	P	23 50 53.6	-0.1
	baz=160						
E41A	**Kenton**	76.39	347	P	P	23 50 54.3	-0.1
	baz=164						
BFSC	**Mount Baldy Ra**	76.39	322	P	P	23 50 54.2	-0.7
	baz=139						
PHWY	**Pilot Hill**	76.42	334	eP	P	23 50 55.8	+0.7
	comp=Z,13nm,0.9s						
PHWY				epP	pP	23 51 07.9	+1.6
F37A	**Hinrichs Farm,**	76.46	345	P	P	23 50 54.9	+0.1
	baz=160						
F38A	**Pierce - Schro**	76.51	345	P	P	23 50 54.9	-0.2
	baz=161,SNR=18						
O20A	**White River Ci**	76.55	332	eP	P	23 50 56.9	+1.2
	comp=Z,33nm,0.9s						
E40A	**Wakefield**	76.55	347	P	P	23 50 55.1	-0.2
	baz=163,SNR=15						
H32A	**Carlson Farm,**	76.57	341	P	P	23 50 55.4	-0.1
	baz=156,SNR=8.3						
MTPU	**Mount Pierson**	76.58	328	eP	P	23 50 57.3	+1.1
	comp=Z,12nm,0.9s						
E39A	**Mellen**	76.62	346	P	P	23 50 55.6	-0.2
	baz=162,SNR=15						
SZCU	**Shurtz Canyon**	76.65	327	eP	P	23 50 58.1	+1.7
	comp=Z,61nm,2.0s						
GSC	**Goldstone, Bar**	76.74	323	P	P	23 50 56.9	+0.2
	baz=140						
GSC	**Goldstone, Bar**	76.74	323	eP	P	23 50 58.5	+1.7
GSC				epP	PcP	23 51 07.4	-0.6
GSC	**Goldstone, Bar**	76.74	323	eP	P	23 50 58.5	+1.7
GSC				e*PP	PcP	23 51 07.4	-0.6
CCUT	**Cedar City**	76.75	327	eP	P	23 50 58.7	+1.8
	comp=Z,21nm,1.0s						
F36A	**Milaca**	76.80	344	P	P	23 50 56.1	-0.6
	baz=160,SNR=16						
F36A	**Milaca**	76.80	344	eP	P	23 50 56.2	-0.6
	comp=Z,20nm,1.0s						
SHPR	**Sheep Range**	76.81	325	eP	P	23 50 58.6	+1.3
	comp=Z,21nm,1.3s						
Q16A	**Castle Valley**	76.82	329	eP	P	23 50 58.5	+1.2
	comp=Z,87nm,1.9s						
D41A	**Chassel**	76.89	348	P	P	23 50 57.0	-0.2
	baz=164,SNR=11						
D41A	**Chassel**	76.89	348	eP	P	23 50 57.4	+0.2
	comp=Z,41nm,0.9s						
G33A	**Ortonville**	76.93	342	P	P	23 50 57.2	-0.3
	baz=157						
MSU	**Marysvale**	76.95	328	eP	P	23 51 00.3	+2.3
MSU	**Marysvale**	76.95	328	eP	P	23 51 00.4	+2.3
SUSD	**Miller**	76.96	340	P	P	23 50 58.0	+0.3
	baz=155						
E38A	**The Farm, Brul**	77.05	346	P	P	23 50 57.6	-0.6
	baz=162						
F35A	**Swanville**	77.06	343	P	P	23 50 57.7	-0.5
	baz=159						
P17A	**Butcher Ranch,**	77.08	330	eP	P	23 50 59.7	+1.0
	comp=Z,29nm,1.1s						
TMUT	**Trail Mountain**	77.14	329	eP	P	23 51 00.6	+1.3
	comp=Z,62nm,2.0s						
G32A	**Webster**	77.28	341	P	P	23 50 59.3	-0.2
	baz=156						
E36A	**McGregor**	77.35	345	P	P	23 50 59.6	-0.2
	baz=160,SNR=17						
RWWY	**Rawlins**	77.43	333	eP	P	23 51 01.8	+1.1
	comp=Z,32nm,0.9s						
FURC	**Furnace Creek,**	77.66	324	P	P	23 51 01.6	-0.1
	baz=140						
E35A	**Pequot Lakes**	77.67	344	P	P	23 51 01.5	-0.1
	baz=159						
MPMC	**Manual Prospec**	77.67	323	P	P	23 51 01.6	-0.6
	baz=139						
KOWA	**Kowa**	77.71	66	P	P	23 51 01.9	-0.7
	comp=Z,16nm,0.5s,baz=237,slow=8.0,SNR=26						
KOWA				pP	pP	23 51 14.4	+0.6
	comp=Z,22nm,0.7s,baz=248,slow=5.8,SNR=8.8						
KOWA				LR	LR	00 24 24.1	
	comp=Z,626nm,20.8s,baz=224,slow=35						
TPNV	**Topopah Spring**	77.71	324	P	P	23 51 02.0	-0.3
	baz=140,SNR=5.0						
TPNV	**Topopah Spring**	77.71	324	eP	P	23 51 03.7	+1.4
	comp=Z,18nm,1.1s						
PSUT	**Pine Spring**	77.76	327	eP	P	23 51 04.0	+1.4
D37A	**Cotton**	77.77	345	P	P	23 51 01.8	-0.4
	baz=161,SNR=5.2						
E34A	**Wadena**	77.82	343	P	P	23 51 02.1	-0.3
	baz=158						
C40A	**Isle Royale Na**	77.82	348	P	P	23 51 02.2	-0.2
	baz=164						
DAC	**Darwin (Calif)**	77.90	323	eP	P	23 51 04.2	+0.8
	comp=Z,15nm,1.1s						
ISA	**Isabella, Lake**	77.90	322	P	P	23 51 02.7	-0.6
	baz=138						
ISA	**Isabella, Lake**	77.90	322	eP	P	23 51 03.9	+0.6
	comp=Z,8.5nm,0.7s						
C39A	**Grand Marais**	77.91	347	P	P	23 51 02.2	-0.7
	baz=163,SNR=26						
MPU	**Maple Canyon**	77.92	329	eP	P	23 51 04.4	+1.0
	comp=Z,26nm,1.1s						
K22A	**Casper**	77.98	334	P	P	23 51 03.8	+0.1
	baz=148,SNR=18						
K22A	**Casper**	77.98	334	eP	P	23 51 04.6	+0.9
	comp=Z,178nm,1.9s						
C38A	**Sawbill Land.**	78.05	346	P	P	23 51 02.6	-1.1
	baz=162,SNR=10.0						
PKM	**Mcpherson Peak**	78.06	321	P	P	23 51 04.9	+0.6
	baz=138						
D35A	**Remer**	78.07	344	P	P	23 51 03.6	-0.2
	baz=159,SNR=13						
MAW	**Mawson**	78.17	164	P	P	23 51 03.5	-0.8
	comp=Z,9.8nm,0.6s,baz=184,slow=6.8,SNR=41						
MAW				pP	pP	23 51 15.9	+0.3
	comp=Z,23nm,0.9s,baz=233,slow=4.4,SNR=16						
MAW				LR	LR	00 24 06.4	
	comp=Z,463nm,21.9s,baz=234,slow=34						
MAW	**Mawson**	78.17	164	eP	P	23 51 03.5	-0.8
	comp=Z,15nm,1.3s						
MAW				pP	pP	23 51 15.9	+0.3
MAW	**Mawson**	78.17	164	eP	P	23 51 03.5	-0.8
MAW				*PP	pP	23 51 15.9	+0.3
MAW				pmax	pmax		
	comp=Z,15nm,1.3s						
C37A	**Embarrass**	78.25	346	P	P	23 51 04.5	-0.3
	baz=161,SNR=6.9						
CWC	**Cottonwood Cre**	78.28	323	P	P	23 51 05.0	-0.5
	baz=139						
JLU	**Jordanelle**	78.31	330	eP	P	23 51 06.6	+1.0
	comp=Z,19nm,0.7s						
EYMN	**Ely**	78.31	346	P	P	23 51 04.9	-0.3
	baz=162,SNR=9.3						
EYMN	**Ely**	78.31	346	eP	P	23 51 04.5	-0.7
	comp=Z,67nm,1.8s						
RSSD	**Black Hills**	78.34	336	P	P	23 51 06.0	+0.4
	baz=151						
RSSD	**Black Hills**	78.34	336	eP	P	23 51 06.2	+0.5
	comp=Z,25nm,1.3s						
RSSD	**Black Hills**	78.34	336	eP	P	23 51 06.2	+0.5
RSSD				pmax	pmax		
	comp=Z,25nm,1.3s						
VES	**Vestal, Richgr**	78.37	322	P	P	23 51 06.2	+0.5
	baz=138						
C36A	**Pine Crest Far**	78.43	345	P	P	23 51 04.9	-0.8
	baz=160						
R11A	**Troy Canyon, C**	78.46	326	P	P	23 51 07.0	+0.5
	baz=141,SNR=12						
R11A	**Troy Canyon, C**	78.46	326	eP	P	23 51 07.7	+1.3
	comp=Z,11nm,1.1s						
DUG	**Dugway, Tooele**	78.60	329	P	P	23 51 07.6	+0.5
	baz=143,SNR=22						
DUG	**Dugway, Tooele**	78.60	329	eP	P	23 51 08.0	+0.9
	comp=Z,85nm,1.8s						
DUG	**Dugway, Tooele**	78.60	329	eP	P	23 51 08.0	+0.9
DUG				pmax	pmax		
	comp=Z,85nm,1.8s						
C35A	**Jirik Farms, M**	78.63	344	P	P	23 51 06.7	-0.3
	baz=159,SNR=11						
TCUT	**Toone Canyon**	78.71	330	eP	P	23 51 09.1	+1.2
	comp=Z,32nm,0.9s						
PAGB	**Antelope Grade**	78.92	321	eP	P	23 51 09.2	+0.3
	comp=Z,15nm,0.9s						
RAR	**Rarotonga**	79.01	252	LR	LR	00 17 26.4	
	comp=Z,467nm,19.3s,baz=111,slow=29						
HWUT	**Hardware Ranch**	79.18	330	eP	P	23 51 10.8	+0.5
	comp=Z,30nm,0.8s						
B35A	**Bob, Littlefor**	79.19	345	P	P	23 51 09.4	-0.6
	baz=160,SNR=9.4						
BGU	**Big Grassy Mou**	79.28	329	eP	P	23 51 11.6	+0.8
	comp=Z,40nm,1.6s						
BW06	**Boulder Array**	79.28	332	P	P	23 51 10.5	-0.5
	baz=146,SNR=7.4						
BW06	**Boulder Array**	79.28	332	eP	P	23 51 11.1	+0.1
	comp=Z,12nm,0.9s						
PD31	**Pinedale Array**	79.28	332	eP	P	23 51 11.1	+0.1
PDAR	**Pinedale Array**	79.28	332	P	P	23 51 11.0	+0.1
	comp=Z,4.5nm,0.6s,baz=127,slow=6.3,SNR=52						
PDAR				LR	LR	00 23 19.1	
	comp=Z,147nm,21.0s,baz=166,slow=33						
PDAR	**Pinedale Array**	79.28	332	eP	P	23 51 10.2	-0.7
SPUT	**South Promonto**	79.33	330	eP	P	23 51 11.6	+0.5
	comp=Z,24nm,0.9s						
B34A	**Aery, Baudette**	79.53	344	P	P	23 51 11.2	-0.6
	baz=159,SNR=8.1						
OMMB	**Old Mammoth Mi**	79.64	323	eP	P	23 51 14.2	+1.1
	comp=Z,12nm,1.1s						
AGMN	**Agassiz Nation**	79.65	344	P	P	23 51 12.2	-0.2
	baz=158,SNR=12						
AGMN	**Agassiz Nation**	79.65	344	eP	P	23 51 12.2	-0.2
	comp=Z,15nm,0.8s						
NV11	**Mina Array Sit**	79.82	324	eP	P	23 51 15.0	+1.1
	comp=Z,0.9nm,1.4s						
HVU	**Hansel Valley**	79.85	330	eP	P	23 51 14.3	+0.4
	comp=Z,15nm,0.8s						
HVU	**Hansel Valley**	79.85	330	eP	P	23 51 14.3	+0.4
HVU				pmax	pmax		
	comp=Z,15nm,0.8s						
NV01	**Mina Array Sit**	79.89	324	eP	P	23 51 14.9	+0.6
NVAR	**Mina Array Bea**	79.89	324	P	P	23 51 14.8	+0.5
	comp=Z,1.4nm,0.6s,baz=159,slow=6.2,SNR=13						
NVAR				LR	LR	00 20 32.6	
	comp=Z,119nm,21.0s,baz=250,slow=31						
AHID	**Auburn Hatcher**	79.93	331	eP	P	23 51 14.8	+0.4
	comp=Z,25nm,0.9s						
TSUM	**Tsumeb**	79.98	106	eP	P	23 51 15.1	-0.1
	comp=Z,38nm,1.1s						
A33A	**Warroad**	80.13	344	P	P	23 51 14.8	-0.3
	baz=158,SNR=11						
RYN	**Ryan**	80.16	324	eP	P	23 51 16.5	+0.8
	comp=Z,14nm,1.4s						
KVN	**Kaiserville**	80.26	325	eP	P	23 51 16.8	+0.5
	comp=Z,7.7nm,1.0s						
KVN	**Kaiserville**	80.26	325	eP	P	23 51 16.8	+0.5
KVN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
REDW	**Red Top Meadow**	80.31	332	eP	P	23 51 16.8	+0.3
	comp=Z,26nm,1.1s						
SNOW	**Snow King Moun**	80.35	332	eP	P	23 51 17.4	+0.7
	comp=Z,33nm,1.3s						
LOHW	**Long Hollow**	80.41	332	eP	P	23 51 17.5	+0.5
	comp=Z,27nm,1.3s						
TPAW	**Teton Pass**	80.46	332	eP	P	23 51 17.9	+0.5
	comp=Z,19nm,1.0s						
ANZ	**Anzar Road**	80.50	321	eP	P	23 51 20.4	+3.1
WAKR	**Walker**	80.54	324	eP	P	23 51 19.7	+1.9
	comp=Z,38nm,1.8s						
MOOW	**Moose Ponds**	80.58	332	eP	P	23 51 18.5	+0.6
	comp=Z,9.1nm,1.1s						
FXWY	**Fox Creek**	80.61	332	eP	P	23 51 18.9	+0.8
	comp=Z,11nm,1.1s						
CMB	**Columbia Colle**	80.69	323	eP	P	23 51 19.1	+0.8
	comp=Z,6.4nm,1.1s						
CMB	**Columbia Colle**	80.69	323	eP	P	23 51 19.2	+0.8
CMB				pmax	pmax		
	comp=Z,6.0nm,1.1s						
YERR	**Yerington**	80.79	324	eP	P	23 51 20.6	+1.5
YERR				epP	pP	23 51 32.1	+1.6
FLWY	**Flagg Ranch**	80.84	332	eP	P	23 51 20.6	+1.4
	comp=Z,34nm,1.0s						
PNTR	**Pine Nut**	81.06	324	eP	P	23 51 22.1	+1.5
	comp=Z,82nm,2.0s						
RLMT	**Red Lodge**	81.13	334	P	P	23 51 20.9	+0.1
	baz=146,SNR=13						
RLMT	**Red Lodge**	81.13	334	eP	P	23 51 21.3	+0.5
	comp=Z,93nm,2.0s						
LAO	**LASA Array**	81.33	336	P	P	23 51 21.4	-0.3
	baz=149						
LAO	**LASA Array**	81.33	336	eP	P	23 51 22.0	+0.4
LAO				epP	pP	23 51 33.8	+0.8
PAHR	**Pah Rah Range**	81.41	324	eP	P	23 51 23.4	+1.1
	comp=Z,24nm,1.2s						
ULM	**Lac du Bonnet**	81.46	344	P	P	23 51 21.6	-0.6
	comp=Z,12nm,0.8s,baz=166,slow=5.8,SNR=15						
ULM				pP	pP	23 51 33.3	-0.2
	comp=Z,29nm,1.0s,baz=153,slow=4.4,SNR=11						
ULM	**Lac du Bonnet**	81.46	344	eP	P	23 51 21.6	-0.6
	comp=Z,33nm,1.0s						
ULM				pP	pP	23 51 33.3	-0.2
ULM	**Lac du Bonnet**	81.46	344	eP	P	23 51 21.6	-0.6
ULM				*PP	pP	23 51 33.3	-0.2
ULM				pmax	pmax		
	comp=Z,33nm,1.0s						
TOA0	**Torodi Ar. Sit**	81.64	70	eP	P	23 51 23.1	-0.8
TORD	**Torodi Ar. Bea**	81.64	70	P	P	23 51 22.2	-1.7
	comp=Z,16nm,0.8s,baz=272,slow=4.6						
TORD				pP	pP	23 51 35.6	+0.3
TORD				LR	LR	00 26 07.0	
	comp=Z,580nm,20.6s,baz=265,slow=35						
AFDM	**Forest Hills D**	81.67	323	eP	P	23 51 24.4	+0.8
AFDM				epP	pP	23 51 36.3	+1.4
QLMT	**Earthquake Lak**	81.75	332	eP	P	23 51 25.0	+0.9
BOSA	**Boshof**	81.93	118	P	P	23 51 24.3	-1.2
	comp=Z,22nm,0.8s,baz=251,slow=3.8,SNR=57						
BOSA				pP	pP	23 51 36.8	-0.1
	comp=Z,15nm,0.8s,baz=207,slow=4.1,SNR=7.8						
BOSA				LR	LR	00 23 11.4	
	comp=Z,484nm,20.4s,baz=211,slow=32						
BOSA	**Boshof**	81.93	118	eP	P	23 51 24.4	-1.1
	comp=Z,55nm,1.4s						
BOSA				pP	pP	23 51 36.8	-0.1
BOSA	**Boshof**	81.93	118	eP	P	23 51 24.4	-1.1
BOSA				*PP	pP	23 51 36.8	-0.1
BOSA				pmax	pmax		
	comp=Z,55nm,1.4s						
HLID	**Hailey**	82.00	330	P	P	23 51 25.8	+0.4
	baz=142,SNR=16						
HLID	**Hailey**	82.00	330	eP	P	23 51 26.2	+0.8
	comp=Z,21nm,1.1s						
BEKR	**Beckworth**	82.03	324	eP	P	23 51 26.7	+1.1
	comp=Z,12nm,1.1s						
DGMT	**Dagmar**	82.19	339	P	P	23 51 26.2	+0.1
	baz=151						
DGMT	**Dagmar**	82.19	339	eP	P	23 51 26.6	+0.5
	comp=Z,47nm,0.8s						
MCMT	**McKenzie Canyo**	82.34	331	eP	P	23 51 28.2	+0.9
ORV	**Oroville**	82.39	323	eP	P	23 51 28.2	+0.9
	comp=Z,28nm,1.3s						
ORV	**Oroville**	82.39	323	eP	P	23 51 28.2	+0.9
ORV				pmax	pmax		
	comp=Z,28nm,1.3s						
MFID	**Camas Ranch**	82.52	329	eP	P	23 51 28.9	+0.8
	comp=Z,22nm,1.3s						
DLMT	**Dillon**	82.67	332	eP	P	23 51 28.8	0.0
	comp=Z,18nm,1.2s						
LRM	**Limekiln Ridge**	82.98	332	eP	P	23 51 31.1	+0.5
WVOR	**Wild Horse Val**	83.08	327	eP	P	23 51 31.6	+0.6
	comp=Z,9.2nm,1.1s						
WVOR	**Wild Horse Val**	83.08	327	eP	P	23 51 31.6	+0.6
WVOR				pmax	pmax		
	comp=Z,9.0nm,1.1s						
O03D	**Paynes Creek**	83.09	323	P	P	23 51 30.9	-0.1
	baz=137						
SCHQ	**Schefferville**	83.12	3	P	P	23 51 29.9	-0.8
	comp=Z,9.0nm,1.0s,baz=194,slow=1.7,SNR=5.2						
SCHQ				LR	LR	00 27 50.1	
	comp=Z,92nm,21.8s,baz=176,slow=35						
SCHQ	**Schefferville**	83.12	3	eP	P	23 51 30.6	-0.1
	comp=Z,27nm,1.2s						
MOD	**Modoc Plateau**	83.50	325	eP	P	23 51 33.8	+0.6
	comp=Z,13nm,0.9s						
J08A	**Circle Bar Ran**	83.71	327	eP	P	23 51 34.9	+0.7
	comp=Z,20nm,0.9s						
EGMT	**Eagleton**	83.74	335	P	P	23 51 34.2	0.0
	baz=146						
EGMT	**Eagleton**	83.74	335	eP	P	23 51 34.4	+0.2
	comp=Z,16nm,1.1s						
LBTB	**Lobatse**	83.90	115	eP	P	23 51 34.6	-1.1
	comp=Z,49nm,0.9s						
LBTB	**Lobatse**	83.90	115	eP	P	23 51 34.6	-1.1
LBTB				pmax	pmax		
	comp=Z,49nm,0.9s						
N02D	**Trinity Center**	84.06	323	P	P	23 51 35.1	-0.8
	baz=136						
M04C	**Macdoel**	84.19	324	P	P	23 51 36.2	-0.6
	baz=137						
BMO	**Blue Mountains**	84.31	329	eP	P	23 51 37.5	+0.4
	comp=Z,12nm,1.4s						
BMO	**Blue Mountains**	84.31	329	eP	P	23 51 37.5	+0.4
BMO				pmax	pmax		
	comp=Z,12nm,1.4s						
MSO	**Missoula**	84.40	332	P	P	23 51 37.4	-0.3
	baz=143						
MSO	**Missoula**	84.40	332	eP	P	23 51 39.4	+1.8
	comp=Z,34nm,1.9s						
K05A	**Summer Lake**	84.41	326	eP	P	23 51 38.6	+0.8
	comp=Z,34nm,1.1s						
M02C	**Callahan**	84.44	324	P	P	23 51 37.6	-0.3
	baz=136						
YBH	**Yreka Blue Hor**	84.61	324	P	P	23 51 38.0	-0.7
	comp=Z,2.3nm,0.6s,baz=90,slow=7.1,SNR=9.8						
YBH				LR	LR	00 23 33.5	
	comp=Z,112nm,20.6s,baz=144,slow=32						
YBH	**Yreka Blue Hor**	84.61	324	eP	P	23 51 38.4	-0.4
	comp=Z,20nm,1.4s						
YBH	**Yreka Blue Hor**	84.61	324	eP	P	23 51 38.4	-0.4
YBH				pmax	pmax		
	comp=Z,20nm,1.4s						
J05D	**Fort Rock, OR**	84.99	326	P	P	23 51 40.8	+0.1
	baz=137,SNR=5.9						
F10A	**Beach Ranch, E**	85.14	330	eP	P	23 51 42.5	+1.1
	comp=Z,14nm,1.1s						
PINE	**Pine Mountain**	85.22	326	eP	P	23 51 42.8	+0.9
	comp=Z,20nm,1.1s						
L02D	**Cave Junction,**	85.38	324	P	P	23 51 42.5	0.0
	baz=136						
G08A	**Pilot Rock**	85.40	328	eP	P	23 51 43.1	+0.4
G08A				epP	pP	23 51 55.3	+1.2
CASY	**Casey**	85.47	181	eP	P	23 51 42.5	-0.2
	comp=Z,82nm,1.4s						
I05D	**Terrebonne, OR**	85.82	326	P	P	23 51 44.5	-0.2
	baz=137						

I04A	Tendick Farm,	85.95	326	P	P	23 51 45.1	-0.2
	baz=136						
WALA	Waterton Lakes	86.17	333	eP	P	23 51 46.9	+0.5
I03D	Drain, OR	86.35	325	P	P	23 51 47.3	+0.1
	baz=136						
NEW	Newport	86.86	331	P	P	23 51 49.0	-0.7
	baz=141						
FFC	Flin Flon	87.08	343	eP	P	23 51 50.2	-0.4
	comp=Z,14nm,1.4s						
FFC	Flin Flon	87.08	343	eP	P	23 51 50.2	-0.4
FFC				pmax	pmax		
	comp=Z,14nm,1.4s						
MDT	Midelt	87.79	51	P	P	23 51 54.6	-0.1
	comp=Z,2.2nm,0.8s,baz=220,slow=1.8,SNR=3.5						
MDT				LR	LR	00 30 09.8	
	comp=Z,612nm,20.7s,baz=249,slow=35						
URZ	Urewera	87.90	227	P	P	23 51 55.2	+0.1
	comp=Z,5.8nm,0.8s,baz=76,slow=12,SNR=3.3						
LTZ	Lake Taylor	88.17	221	eP	P	23 51 56.5	+0.1
LTZ				epP	pP	23 52 09.5	+1.6
D05A	Enumclaw	88.22	328	eP	P	23 51 56.6	+0.5
D05A				epP	pP	23 52 07.9	+0.3
RPZ	Rata Peaks	88.29	220	P	P	23 51 57.5	+0.6
	comp=Z,22nm,0.8s,baz=210,slow=1.7,SNR=7.2						
RPZ	Rata Peaks	88.29	220	eP	P	23 51 57.2	+0.3
	comp=Z,95nm,1.4s						
E03A	Lebam	88.50	327	eP	P	23 51 58.7	+1.2
	comp=Z,44nm,1.1s						
B05A	Bryant	89.05	329	P	P	23 52 00.1	0.0
	baz=137						
FCC	Fort Churchill	89.06	348	eP	P	23 51 59.9	+0.1
FCC	Fort Churchill	89.06	348	eP	P	23 51 59.9	+0.1
TAM	Tamanrasset	89.77	64	eP	P	23 52 03.4	-0.8
TAM	Tamanrasset	89.77	64	eP	P	23 52 03.4	-0.8
LSZ	Lusaka	90.75	108	eP	P	23 52 09.2	+0.1
	comp=Z,62nm,1.4s						
LSZ	Lusaka	90.75	108	eP	P	23 52 09.2	+0.1
LSZ				pmax	pmax		
	comp=Z,62nm,1.4s						
ESDC	Sonseca Array	92.24	45	P	P	23 52 14.2	-1.1
	comp=Z,1.0nm,1.0s,baz=232,slow=6.3,SNR=4.1						
ESDC				LR	LR	00 30 40.5	
	comp=Z,511nm,21.4s,baz=240,slow=34						
ES19	SONSECA Array	92.29	45	eP	P	23 52 14.6	-0.8
AFI	Afiamalu	92.53	253	LR	LR	00 24 04.2	
	comp=Z,355nm,20.4s,baz=94,slow=29						
SFJD	Kangerlussuaq	96.51	8	LR	LR	00 37 56.5	
	comp=Z,80nm,19.3s,baz=227,slow=37						
YKA	Yellowknife Ar	97.16	341	P	P	23 52 35.0	-2.1
	comp=Z,1.0nm,0.7s,baz=143,slow=3.6,SNR=4.1						
YKA	Yellowknife Ar	97.16	341	P	P	23 52 35.0	-2.1
YKA	Yellowknife Ar	97.16	341	P	P	23 52 35.0	-2.1
KEST	Kesra	99.10	54	LR	LR	00 39 09.0	
	comp=Z,827nm,20.4s,baz=186,slow=36						
DLBC	Dease Lake	99.51	333	ePdif	Pdif	23 52 48.0	+0.1
DZM	Mont Dzumac	105.06	234	ePS	PS	00 06 51.7	+2.5
	comp=Z,222nm,31.0s						
DZM	Mont Dzumac	105.06	234	eLR	LR	00 27 45.3	
	comp=Z,492nm,25.4s						
CLL	Collm	108.29	41	ePP	PP	23 57 59.0	+1.3
CLL				eSP	SP	00 07 16.0	-1.1
CLL				Lm	MLR	00 42 00.0	
	comp=N,100nm,20.9s						
CLL				Lm	MLR	00 42 00.0	
	comp=E,200nm,20.0s						
CLL				Lm	MLR	00 42 00.0	
	comp=Z,300nm,20.2s						
PRU	Pruhonice	108.69	43	AMS	AMS	00 39 50.0	
	comp=Z,300nm,23.5s						
GOPC	GO Pecny, Ondr	108.81	43	AMS	AMS	00 41 40.0	
	comp=Z,200nm,18.9s						
PVCC	Panska Ves	108.91	42	AMS	AMS	00 41 40.0	
	comp=Z,300nm,20.5s						
UPC	Upice	109.76	43	AMS	AMS	00 40 30.0	
	comp=Z,300nm,24.8s						
DPC	Dobruska-Polom	109.89	43	AMS	AMS	00 42 30.0	
	comp=Z,200nm,16.4s						
COLA	College	110.09	334	⇑ePKIKP	PKiKP	23 57 38.1	+2.1
OKC	Ostrava-Krasne	110.81	44	AMS	AMS	00 41 40.0	
	comp=Z,300nm,22.6s						
APE	Apeiranthos	111.54	59	⇑iPKIKP	PKiKP	23 57 40.1	+0.4
KIEV	Kiev	117.87	45	ePKPdf	PKPdf	23 57 49.7	-1.6
KIEV	Kiev	117.87	45	⇑iPKIKP	PKPdf	23 57 49.4	-1.9
AKASG	Malin Array Be	117.88	45	PKP	PKPdf	23 57 49.2	-2.1
	comp=Z,0.7nm,0.3s,baz=264,slow=2.8,SNR=7.4						
AKASG				pPKP	pPKPdf	23 58 03.0	-0.2
	comp=Z,2.9nm,0.6s,baz=273,slow=2.4,SNR=4.5						
VSU	Vasula	117.90	36	c iPKIKP	PKPdf	23 57 51.2	+0.1
MMAI	Mount Meron Ar	117.93	66	PKP	PKPdf	23 57 50.6	-1.6
	comp=Z,0.6nm,0.4s,baz=90,slow=3.3,SNR=4.6						
BRTR	Keskin Array B	118.41	58	PKP	PKPdf	23 57 52.1	-0.9
	comp=Z,1.1nm,0.7s,baz=166,slow=1.3,SNR=6.9						
BRTR				pPKP	pPKPdf	23 58 05.2	+0.5
	comp=Z,4.0nm,0.8s,baz=208,slow=2.4,SNR=8.0						
ARCES	ARCESS Array B	118.75	23	PKP	PKPdf	23 57 51.5	-1.0
	comp=Z,2.2nm,1.1s,baz=222,slow=1.2,SNR=3.9						
ASAR	Alice Springs	122.75	207	PKP	PKPdf	23 58 00.1	-1.6
	comp=Z,2.2nm,0.5s,baz=141,slow=1.9,SNR=24						
ASAR				pPKP	pPKPdf	23 58 13.4	-0.2
	comp=Z,5.5nm,0.8s,baz=147,slow=2.2,SNR=14						
OBN	Obninsk	122.88	41	⇑ePKIKP	PKPdf	23 57 58.7	-2.1
OBN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
VSR	Storozhevoye	124.17	45	ePKIKP	PKPdf	23 58 01.8	-1.6
VSR				pmax	pmax		
	comp=Z,10.0nm,1.5s						
KLMR	Klimovskoe	124.51	34	ePKIKP	PKPdf	23 58 02.1	-1.7
KLMR				pmax	pmax		
	comp=Z,33nm,1.0s						
KLMR	Klimovskoe	124.51	34	ePKPdf	PKPdf	23 58 02.1	-1.7
KLMR				AMP		23 58 16.8	
	comp=Z,33nm,1.0s						
NEY	Neytrino	125.78	55	⇓iPKIKP	PKPdf	23 58 07.8	+0.7
KIV	Kislovodsk	125.84	55	i PKIKP	PKPdf	23 58 08.9	+1.9
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,158nm,22.0s						
WRA	Warramunga Arr	125.87	210	PKP	PKPdf	23 58 06.6	-1.2
	comp=Z,6.2nm,0.6s,baz=157,slow=1.7,SNR=41						
WRA				pPKP	pPKPdf	23 58 20.1	+0.5
	comp=Z,14nm,0.8s,baz=159,slow=1.5,SNR=18						
WRAB	Tennant Creek	125.87	210	ce PKIKP	PKPdf	23 58 07.1	-0.7
KBZ	Khabaz	125.97	55	PKP	PKPdf	23 58 05.4	-1.7
	comp=Z,3.5nm,0.9s,baz=270,slow=4.0,SNR=3.0						
NCK	Nalchik	126.44	55	⇓ePKIKP	PKPdf	23 58 08.0	-0.1
H11N3	WAKE ISLAND Hy	126.73	274	T	T	02 17 28.9	
	baz=113,slow=75,SNR=67						
H11N1	WAKE ISLAND Hy	126.74	274	T	T	02 17 35.3	
	baz=113,slow=75,SNR=35						
H11N2	WAKE ISLAND Hy	126.74	274	T	T	02 17 33.6	
	baz=113,slow=75,SNR=85						
GNI	Garni	126.85	60	⇓iPKIKP	PKPdf	23 58 10.2	+1.0
PRGR	Permogore	127.37	32	ePKIKP	PKPdf	23 58 08.4	-0.8
PRGR				pmax	pmax		
	comp=Z,24nm,1.0s						
BILL	Bilibino	128.22	336	de PKIKP	PKPdf	23 58 09.7	-1.0
BILL				i		23 58 22.1	
BILL				e		00 00 23.1	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.1s						
FITZ	Fitzroy Crossi	130.87	201	PKP	PKPdf	23 58 15.0	-2.3
	comp=Z,1.9nm,0.6s,baz=225,slow=5.7,SNR=9.8						
ARU	Arti	135.04	37	ePKPdf	PKPdf	23 58 24.1	+0.2
ARU	Arti	135.04	37	i PKIKP	PKPdf	23 58 24.3	+0.4
ARU				MLR	MLR		
	comp=Z,357nm,23.0s						
TIXI	Tiksi	135.46	351	⇓iPKIKP	PKPdf	23 58 25.6	+1.3
SEY	Seymchan	135.61	333	PKP	PKPdf	23 58 25.1	+0.3
	comp=Z,2.5nm,0.5s,baz=0.0,slow=20,SNR=11						
AKTO	Aktyubinsk	136.12	46	PKP	PKPdf	23 58 25.6	-0.6
	comp=Z,1.8nm,0.7s,baz=254,slow=7.4,SNR=5.5						
GEYT	Alibeck	137.00	64	PKP	PKPdf	23 58 27.9	-0.3
	comp=Z,0.8nm,0.5s,baz=260,slow=8.6,SNR=3.3						
TWSI	Taliwang, Sumb	142.13	193	PKP	PKPdf	23 58 42.0	+3.7
TWSI				PKP	pPKPdf	23 58 51.9	+1.8
BRVK	Borovoye	142.58	38	ePKPdf	PKPdf	23 58 38.2	+0.4
BVAR	Borovoye Array	142.65	38	PKP	PKPdf	23 58 34.6	-3.4
	comp=Z,1.1nm,0.6s,baz=344,slow=3.5,SNR=6.9						
SMRI	Semarang	144.57	183	PKP	PKPdf	23 58 45.6	+3.0
SMRI				PKP	pPKPdf	23 58 56.7	+2.3
NKL	Nikolayevsk	146.07	325	ePKP2	PKPbc	23 58 44.0	-0.8
NKL				pmax	pmax		
	comp=Z,34nm,1.0s						
NKL				pmax	pmax		
	comp=Z,500nm,7.0s						
TYV	Tymovskoe	146.21	321	ePKIKP	PKPdf	23 58 42.3	-1.9
TYV				pmax	pmax		
	comp=Z,400nm,3.6s						
TYV				pmax	pmax		
	comp=Z,30nm,0.9s						
YSS	Yuzh-Sakhalins	147.84	314	ePKP2	PKPbc	23 58 49.8	-0.2
YSS				pmax	pmax		
	comp=Z,20nm,0.7s						
NVS	Novosibirsk	147.85	28	⇑iPKIKP	PKPdf	23 58 47.4	+0.6
NVS				pmax	pmax		
	comp=Z,118nm,1.4s						
NVS				pmax	pmax		
	comp=N,11nm,1.3s						
NVS				pmax	pmax		
	comp=E,43nm,1.3s						
KURK	Kurchatov	148.23	37	ePKPdf	PKPdf	23 58 47.6	+0.1
KURK				ePKPbc	PKPbc	23 58 51.1	+0.1
KURK	Kurchatov	148.23	37	c iPKIKP	PKPdf	23 58 47.4	-0.2
KURBB	Kurchatov Arra	148.24	38	PKPbc	PKPdf	23 58 48.0	+0.4
	comp=E,14nm,0.5s,baz=304,slow=3.1,SNR=49						
ASAJ	Asahikawa	148.95	309	PKPbc	PKPbc	23 58 51.7	-1.3
	comp=E,6.6nm,0.7s,baz=76,slow=17,SNR=3.0						
FRU	Bishkek	148.99	53	ePKIKP	PKPdf	23 58 50.0	+0.8
FRU				pmax	pmax		
	comp=Z,120nm,2.0s						
ZALV	Zalesovo Beam	149.14	28	PKPbc	PKPbc	23 58 52.5	-0.7
	comp=Z,38nm,0.4s,baz=302,slow=3.4,SNR=93						
NIL	Nilore	149.19	71	ePKPbc	PKPbc	23 58 53.4	-0.6
GRNR	Gornyy	149.60	324	ePKP2	PKPab	23 59 02.9	+3.3
HYB	Hyderabad	150.06	105	i PKP	PKPbc	23 58 58.0	+1.4
HYB				epPKP	pPKPbc	23 59 11.0	+2.6
KRAR	Krasnoyarsk	150.27	18	⇓iPKIKP	PKPbc	23 58 55.6	-0.2
BOD	Bodaibo	150.52	354	ePKIKP	PKPbc	23 58 54.7	-1.7
BOD				pmax	pmax		
	comp=Z,51nm,1.2s						
KSH	Kashi	150.78	59	ePKPbc	PKPdf	23 58 51.4	-0.8
KSH				PKS	PKSdf	00 02 24.2	-2.8
KSH				PP	PP	00 02 34.6	-0.7
KSH				SKKS		00 09 19.2	
KSH				SS	SS	00 21 48.0	-6.2
KSH				AMB	AMB		
	comp=Z,170nm,4.1s						
ZEA	Zeya	151.45	337	ePKIKP	PKPbc	23 58 58.0	-0.7
ZEA				pmax	pmax		
	comp=Z,48nm,1.6s						
MKAR	Makanchi Array	152.39	42	PKPbc	PKPbc	23 59 00.4	-0.7
	comp=Z,11nm,0.5s,baz=302,slow=1.7,SNR=115						
PSI	Prapat	152.70	158	PKPbc	PKPbc	23 58 59.9	-3.1
	comp=Z,4.1nm,0.5s,baz=180,slow=6.1,SNR=4.8						
KLR	Kul'dur	152.91	326	PKPbc	PKPbc	23 59 01.4	-0.7
	comp=Z,0.4nm,0.4s,baz=19,slow=5.9,SNR=16						
KLR	Kul'dur	152.91	326	⇑ePKIKP	PKPdf	23 58 57.0	+2.1
DGZ	Jazzator, Alta	153.30	32	⇓ePKIKP	PKPbc	23 59 02.9	-0.3
MJAR	Matsushiro Arr	154.08	295	PKPbc	PKPbc	23 59 04.3	-0.9
	comp=Z,1.4nm,0.5s,baz=153,slow=2.8,SNR=3.2						
MJAR				PKPab	pPKPbc	23 59 17.9	+1.0
	comp=Z,2.3nm,0.6s,baz=121,slow=2.6,SNR=5.6						
MAJO	Matsushiro	154.08	295	⇑ePKIKP	PKPdf	23 58 58.0	+1.0
MOY	Mondy	156.17	12	ePKIKP	PKPdf	23 59 00.8	+1.3
MOY				pmax	pmax		
	comp=Z,44nm,3.4s						
WMQ	Urumqi	157.21	42	PKP	PKPdf	23 59 00.0	-1.1
WMQ				pPKP	pPKPdf	23 59 13.4	+0.5
WMQ				PKPab	PKPab	23 59 33.1	+1.1
WMQ				AMB	AMB		
	comp=Z,140nm,11.8s						
WMQ				LR	LR		
	comp=Z,330nm,28.1s						
WMQ				LR	LR		
	comp=Z,350nm,25.5s						
WMQ				LR	LR		
	comp=Z,340nm,30.1s						
ZAK	Zakamensk	157.79	9	ePKP2	PKPab	23 59 46.7	+12
ZAK				pmax	pmax		
	comp=Z,13nm,1.4s						
SONM	Songino Array	160.65	5	PKP	PKPdf	23 59 04.4	-0.7
	comp=Z,0.6nm,0.6s,baz=297,slow=0.6,SNR=4.1						
SONM				PKPab	PKPab	23 59 44.9	-1.9
	comp=Z,0.6nm,0.3s,baz=354,slow=2.6,SNR=5.2						
KSRS	Korea Array	161.73	304	PKP	PKPdf	23 59 05.8	-0.6
	comp=Z,0.4nm,0.3s,baz=90,slow=2.4,SNR=5.2						
KSRS				pPKP	pPKPdf	23 59 20.4	+2.2
	comp=Z,2.9nm,1.0s,baz=163,slow=0.6,SNR=4.4						
KSAR	Wonju Array Be	161.77	304	PKP	PKPdf	23 59 05.8	-0.6
KSAR				pPKP	pPKPdf	23 59 20.4	+2.2
KSAR	Wonju Array Be	161.77	304	PKIKP	PKPdf	23 59 05.8	-0.6
KSAR						23 59 20.4	
CMAR	Chiang Mai Arr	166.46	136	PKP	PKPdf	23 59 10.3	-0.9
	comp=Z,0.5nm,0.3s,baz=253,slow=0.9,SNR=3.0						
CMAR				pPKP	pPKPdf	23 59 22.7	-0.4
	comp=Z,0.8nm,0.3s,baz=239,slow=1.5,SNR=3.3						
GTA	Gaotai	166.83	32	PKP	PKPdf	23 59 11.4	+0.3
GTA				pPKP	pPKPdf	23 59 24.2	+1.3
GTA				sPKP		23 59 29.1	
GTA				SKKS		00 10 46.2	
GTA				AMB	AMB		
	comp=Z,130nm,6.0s						
GTA				LR	LR		
	comp=Z,170nm,19.2s						
GTA				LR	LR		
	comp=Z,180nm,19.2s						
GTA				LR	LR		
	comp=Z,200nm,21.6s						
BJI	Beijing	167.05	334	PKP	PKPdf	23 59 21.6	+11
HHC	Hu-ho-hao-te	167.53	350	ePKP	PKPdf	23 59 11.3	-0.2
HHC				SKS	SKSdf	00 06 09.4	-3.2
HHC				SKKS	SKKSac	00 10 56.1	+6.0
HHC				SS	SS	00 24 50.8	+2.1
HHC				AMB	AMB		
	comp=Z,62nm,8.6s						
HHC				LR	LR		
	comp=Z,120nm,21.4s						
HHC				LR	LR		
	comp=Z,90nm,19.2s						
HHC				LR	LR		
	comp=Z,84nm,19.6s						
LZH	Lanzhou	171.37	28	ePKP	PKPdf	23 59 16.2	+2.2
LZH				pPKP	pPKPdf	23 59 26.3	+0.4
LZH				sPKP		23 59 32.1	
LZH				PKPab	PKPab	00 00 35.8	+1.3
LZH				AMB	AMB		
	comp=Z,270nm,5.2s						
LZH				LR	LR		
	comp=Z,200nm,16.9s						
LZH				LR	LR		
	comp=Z,300nm,18.1s						
LZH				LR	LR		
	comp=Z,480nm,20.8s						
KMI	Kunming	173.56	121	PKP	PKPdf	23 59 13.3	-2.1
CD2	Chengdu	174.98	61	PKP	PKPdf	23 59 10.5	-5.0
GYA	Guiyang	177.15	136	ePKP	PKPdf	23 59 14.0	-2.2
GYA				PKPab	PKPab	00 01 00.8	+0.4
GYA				PKS	PKSdf	00 02 45.5	-3.0
GYA				PP	PP	00 04 53.2	+0.1
GYA				AMB	AMB		
	comp=Z,130nm,8.5s						

IDC ***01*** *23:45:43.6±1.1, 33°.10S×179°.01W, h0^{km}, mb4.2/3, mb1 4.4/5, mb1mx4.0/46, mbtmp4.3/5, ML4.5/2, MS3.5/1, Ms1 3.5/1, ms1mx2.8/38, Error ellipse: s-maj=34.3km s-min=25.4km az=97.0*

ISCJB ***01*** *23:45:45.4±0.7, 33°.28S±0°.05×178°.7W±0°.2, h45^{km}, mb4.0/8, Error ellipse: s-maj=19.3km s-min=4.0km az=18.3*

NEIC ***01*** *23:45:45.4±0.6, 33°.18S×179°.15W, h10^{km}, mb4.1/6, Error ellipse: s-maj=17.4km s-min=9.1km az=112.0*

WEL ***01*** *23:45:46.8±0.9, 33°S±8°×17°9W±1°7, h144^{km}±30^{km}*

ISC 01 23:45:48.7±0.7**, 33°.24S**±0°.06×**178°.8W**±0°.1**, h45**^{km}**, n49, σ2^{s}.22**/54**, mb4.0**/8**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	4.04	11	P	Pn	23 46 45.9	-2.0
RAO	Raoul Island	4.04	11	Pn	Pn	23 46 47.4	-0.8
	35nm,0.3s,baz=150,slow=20,SNR=2.8						
RAO				Sn	Sn	23 47 33.2	-1.1
	25nm,0.3s,baz=90,slow=20,SNR=1.9						
MXZ	Matakaoa Point	4.92	208	P	Pn	23 47 00.8	+0.7
WMGZ	Waiomatatini S	5.11	206	P	Pn	23 47 02.5	-0.2
WMGZ				S	Sn	23 48 00.8	+0.5
HAZ	Te Kaha	5.30	211	P	Pn	23 47 05.1	-0.3
HAZ				S	Sn	23 48 07.5	+2.3
PUZ	Puketiti	5.39	206	P	Pn	23 47 05.8	-0.8
PUZ				S	Sn	23 48 07.2	-0.1
RUGZ	Raukumara Rang	5.52	210	P	Pn	23 47 07.8	-0.7
TWGZ	Tauwhareparae	5.58	207	P	Pn	23 47 08.3	-0.9
TWGZ				S	Sn	23 48 12.9	+0.8
CNGZ	Carnagh Statio	5.77	204	P	Pn	23 47 10.8	-1.0
CNGZ				S	Sn	23 48 18.7	+2.0
URZ	Urewera	6.01	212	Pn	Pn	23 47 12.9	-2.2
	8.7nm,0.3s,baz=90,slow=10,SNR=22						
URZ				Sn	Sn	23 48 21.4	-1.2
	5.7nm,0.3s,baz=163,slow=19,SNR=5.7						
RTZ	Ruatahuna	6.37	211	P	Pn	23 47 19.3	-0.7
TOZ	Tahuroa Road	6.46	224	P	Pn	23 47 20.9	-0.3
OUZ	Omahuta	6.61	250	P	Pn	23 47 24.5	+1.3
MCHZ	McNeill Hill	7.18	209	P	Pn	23 47 32.2	+1.1
HIZ	Hauiti	7.37	223	P	Pn	23 47 35.4	+1.8
WTVZ	West Tongariro	7.42	216	P	Pn	23 47 33.5	-0.9
NGZ	Ngauruhoe	7.46	216	P	Pn	23 47 34.3	-0.8
KRHZ	Kereru	7.48	210	P	Pn	23 47 32.6	-2.7
KRHZ				S	Sn	23 48 55.0	-3.9
BHHZ	Black Hill Sta	7.49	212	P	Pn	23 47 34.4	-1.0
BHHZ				S	Sn	23 48 56.2	-2.8
WHVZ	Whangaehu Hut	7.55	215	P	Pn	23 47 35.2	-1.1
MOVZ	Moawhango	7.56	214	P	Pn	23 47 35.6	-0.9
PXZ	Pawanui	7.62	206	P	Pn	23 47 35.3	-1.9
PNHZ	Pukenui	7.78	210	P	Pn	23 47 36.2	-3.2
PRHZ	Porangahau	7.91	206	P	Pn	23 47 39.4	-1.7
BFZ	Birch Farm	8.42	207	P	Pn	23 47 43.8	-4.3
MRZ	Mangatainoka R	8.67	210	P	Pn	23 47 46.8	-4.7
HOWZ	Holdsworth Sta	8.89	209	P	Pn	23 47 50.1	-4.5
TMWZ	Te Maipa	8.92	207	P	Pn	23 47 51.3	-3.7
OGWZ	Otaki Gorge	8.97	211	P	Pn	23 47 51.4	-4.2
KIW	Kapiti Island	9.12	212	P	Pn	23 47 52.7	-5.0
MTW	Mount Morrison	9.12	208	P	Pn	23 47 53.8	-3.8
TCW	Tory Channel	9.68	213	P	Pn	23 47 59.7	-5.7
NNZ	Nelson	10.11	216	P	Pn	23 48 06.1	-5.2
RPZ	Rata Peaks	13.13	214	Pn	Pn	23 48 48.5	-3.9
	1.0nm,0.3s,baz=2.1,slow=18,SNR=5.2						
RPZ				Sn	Sn	23 51 02.3	-15
	1.2nm,0.3s,baz=3.5,slow=19,SNR=6.8						
DZM	Mont Dzumac	17.15	307	LR	LR	23 55 14.1	
	comp=Z,156nm,18.1s,baz=232,slow=34						
AFI	Afiamalu	20.28	20	P	P	23 50 21.7	+1.0
	5.5nm,0.4s						
TAU	Tasmania Unive	28.21	240	P	P	23 51 36.5	-0.7
	0.2nm,0.3s						
HNR	Honiara	30.75	316	P	P	23 51 59.0	-0.9
	3.4nm,0.3s						
ASAR	Alice Springs	42.37	270	P	P	23 53 38.6	-0.1
	0.9nm,0.4s,baz=116,slow=7.4,SNR=9.2						
WRAB	Tennant Creek	43.61	276	P	P	23 53 47.6	-1.3
	2.3nm,0.9s						
WRA	Warramunga Arr	43.61	276	P	P	23 53 48.5	-0.4
	2.0nm,0.7s,baz=116,slow=8.0,SNR=9.1						
CASY	Casey	52.33	209	P	P	23 54 55.9	+0.4
	1.0nm,0.7s						
QSPA	South Pole Qui	56.88	180	P	P	23 55 32.0	+3.3
	4.2nm,0.7s,baz=10,slow=3.6,SNR=11						
QSPA	South Pole Qui	56.88	180	eP	P	23 55 31.8	+3.0
TRQA	Tornquist	87.91	135	P	P	23 58 38.1	+4.4
	3.1nm,1.0s						
FINES	FINESS Array B	147.54	338	PKPbc	PKPbc	00 05 27.2	0.0
	2.1nm,0.6s,baz=33,slow=3.3,SNR=7.6						
NB2	NORSAR Subarra	151.43	350	PKP	PKPbc	00 05 37.1	+0.2
	comp=Z,1.0nm,0.7s,baz=14,slow=4.0						
HFS	Hagfors	151.87	347	PKPbc	PKPbc	00 05 37.9	0.0
	comp=Z,1.8nm,0.7s,baz=0.0,slow=0.3,SNR=8.2						
TORD	Torodi Ar. Bea	160.00	181	PKPab	PKPab	00 06 24.6	+1.6
	baz=172,slow=2.9						

SOME ***02*** *00:03:32.7, 39°.48N×71°.88E, h0^{km}*

NNC ***02*** *00:03:36.1±1.4, 39°.59N×71°.95E, h0^{km}, mb3.6, mpv3.4, Error ellipse: s-maj=17.6km s-min=7.5km az=169.0*

ISCJB ***02*** *00:03:38.5±1.2, 39°.08N±0°.08×72°.09E±0°.07, h33^{km}, Error ellipse: s-maj=11.7km s-min=8.1km az=179.5*

ISC 02 00:03:37.5±2.0**, 39°.0N**±0°.1×**72°.20E**±0°.06**, h33**^{km}**, n20, σ1^{s}.84**/25**, 7C-5D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	1.45	44	⇑P	Pn	00 04 00.2	-1.5
	22nm,0.3s						
SFK				⇑S	Sn	00 04 17.9	-1.8
	49nm,0.3s						
DZET	Dzherino	2.63	267	Pn	Pn	00 04 18.9	+1.1
	12nm,0.4s						
DZET				Lg	Lg	00 04 55.2	
	90nm,0.6s						
AML	Almayashu	3.35	19	P	Pn	00 04 29.7	+1.8
	SNR=19						
MNAS	Manas	3.52	4	⇑Pg	Pn	00 04 29.9	-0.1
	4.7nm,0.4s						
MNAS				⇓Lg	Lg	00 05 11.3	
	18nm,0.5s						
IUG	Iuzhnay	3.57	333	eP	Pn	00 04 31.2	+0.4
	16nm,0.3s						
IUG				eS	Sn	00 05 12.0	+0.2
	46nm,0.9s						
UCH	Uchtor	3.70	28	P	Pn	00 04 34.4	+1.6
	SNR=10						
MRKS	Merke	3.85	11	⇓iP	Pn	00 04 35.4	+0.9
	13nm,0.5s						
MRKS				⇓iS	Sn	00 05 20.3	+1.7
	17nm,0.8s						
EKS2	Erkin-Say	3.87	18	P	Pn	00 04 37.3	+2.4
	SNR=8.9						
KZA	Kyzart	3.88	36	P	Pn	00 04 38.4	+3.2
	SNR=6.5						
AAK	Ala-Archa	4.05	25	⇑Pg	Pn	00 04 39.5	+2.1
	6.4nm,0.5s						
AAK				⇓Lg	Lg	00 05 29.1	
	20nm,0.8s						
AAK	Ala-Archa	4.05	25	P	Pn	00 04 39.3	+1.9
	SNR=9.5						
KBK	Karagaybulak	4.23	29	P	Pn	00 04 42.6	+2.8
	SNR=8.0						
KK31	Karatay Array	4.32	343	⇑Pg	Pn	00 04 40.6	-0.2
	0.9nm,0.2s,baz=152,slow=12						
KK31				⇓Lg	Lg	00 05 34.5	
	14nm,0.5s,baz=160,slow=29						
BRLS	Borolday	4.43	337	eP	Pn	00 04 43.0	+0.6
	0.7nm,0.6s						
BRLS				eS	Sn	00 05 32.0	-0.8
	11nm,0.7s						
CHMS	Chumysh	4.46	25	P	Pn	00 04 45.0	+2.1
	SNR=9.1						
USP	Ospenovka	4.63	21	P	Pn	00 04 46.6	+1.4
	SNR=14						
TKM2	Tokmak 2	4.71	32	⇑Pn	Pn	00 04 45.7	-0.8
	3.5nm,0.4s						
TKM2				⇑Lg	Lg	00 05 55.3	
	5.3nm,0.5s						
TKM2	Tokmak 2	4.71	32	P	Pn	00 04 48.8	+2.3
	SNR=8.3						
KST	Kastek	4.96	34	eP	Pb	00 05 01.9	-1.9
	5.2nm,0.4s						
KST				eS	Sb	00 06 05.5	+2.6
	15nm,0.8s						
DGS	Degeres	5.05	31	eP	Pb	00 05 00.7	-4.4
	4.4nm,0.7s						
DGS				eS	Sb	00 06 03.5	-1.8
	21nm,0.8s						

ISCJB ***02*** *00:12:43.6±0.6, 32°.21N±0°.03×115°.33W±0°.04, h13^{km}±6^{km}, Error ellipse: s-maj=6.7km s-min=4.6km az=150.5*

ECX ***02*** *00:12:44.8±0.5, 32°.20N×115°.32W, h6^{km}, MD2.4, ML2.6*

MEX ***02*** *00:12:45.2±0.3, 32°.24N×115°.31W, h10^{km}±12^{km}, MD3.7*

ISC 02 00:12:43.2±1.0**, 32°.19N**±0°.03×**115°.35W**±0°.03**, h13**^{km}±11^{km}**, n21, σ0^{s}.74**/29**, 1C-2D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPBX	Cerro Prieto	0.23	10	eP	Pg	00 12 47.9	-0.3
CPBX				eS	Sg	00 12 51.3	-0.3
CPBX				IAML		00 12 53.0	
	comp=E,4µm,0.2s						
CPBX				⇑e		00 12 53.0	
CPBX				e		00 12 53.7	
CPBX				IAML		00 12 53.7	
	comp=N,3µm,0.1s						
MBIG	Mexicali	0.25	31	eP	Pg	00 12 49.4	+0.7
MBIG	Mexicali	0.25	31	eP	Pg	00 12 48.8	+0.2
MBIG				eS	Sg	00 12 51.8	-0.4

SGL	Mount Signal	0.56	326	⇓iP	Pg	00 12 54.8	+0.6
ERPC	Ernies Place	0.61	335	eP	Pg	00 12 56.2	+0.9
EMSC	East Mesa	0.63	29	eP	Pg	00 12 55.8	+0.2
WESC	Westside Schoo	0.65	331	eP	Pg	00 12 56.6	+0.6
YUH	Yuha Desert	0.67	314	⇓iP	Pg	00 12 56.6	+0.4
COA	Coachella	0.70	16	eP	Pg	00 12 56.7	-0.2
RMX	La Rumorosa	0.74	304	eP	Pg	00 12 57.3	-0.4
RMX				eS	Sg	00 13 06.5	-0.9
ECBX	El Chinero	0.76	160	eP	Pg	00 12 58.3	+0.4
ECBX				eS	Sg	00 13 08.7	+0.8
YMD	Yuma Desert	0.78	62	eP	Pg	00 12 57.5	-0.7
IKP	In-Ko-Pah, Jac	0.79	306	eP	Pg	00 12 58.9	+0.3
ZAX	El Zacaton	1.03	230	eP	Pg	00 13 03.3	+0.1
ZAX				eS	Sg	00 13 17.9	+1.2
ZAX				e		00 13 20.1	
ZAX				IAML		00 13 20.1	
	comp=E,111nm,0.8s						
CBX	Cerro Bola	1.12	277	eP	Pg	00 13 05.0	+0.2
CBX				eS	Sg	00 13 20.4	+1.0
CBX				IAML		00 13 21.9	
	comp=N,140nm,0.2s						
SPIG	San Pedro Mart	1.14	185	eP	Pg	00 13 04.9	-0.4
SPIG	San Pedro Mart	1.14	185	eP	Pg	00 13 04.5	-0.8
SPIG				eS	Sg	00 13 19.8	-0.4
SPX	San Pedro Mart	1.14	185	eP	Pg	00 13 05.2	-0.1
TJIG	Tijuana	1.15	283	eP	Pg	00 13 04.1	-1.2
TJIG				eS	Sg	00 13 18.4	-1.9
ECNX	Esteban Cantu	1.18	244	eP	Pb	00 13 05.8	+0.1
BAR	Barrett	1.22	294	eP	Pn	00 13 06.2	+0.1

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*KRNET **02** 00:16:30.0±0.1, 39°.19N×71°.98E, h16^{km}, mb3.4*

*SOME **02** 00:16:29.8, 39°.45N×71°.82E, h5^{km}*

*NNC **02** 00:16:33.2±4.5, 39°.10N×72°.29E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=34.9km s-min=17.7km az=173.0*

ISC 02 00:16:33.4±1.2**, 39°.33N**±0°.06×**72°.00E**±0°.03**, h10^{km}, n38, σ2^{s}.48**/61**, 29C-20D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	0.22	313	⇑iP	Pg	00 16 36.6	-1.4
	baz=35						
DRK				⇑iS	Sg	00 16 41.3	+0.1
	baz=35						
BTK	Batken	1.17	309	⇑iP	Pb	00 16 53.1	-2.6
	baz=14						
BTK				⇑iS	Sb	00 17 10.1	-0.8
	baz=14						
SFK	Sufi-Kurgan	1.34	59	⇓P	Pg	00 16 57.4	-1.7
	20nm,0.3s						
SFK				⇑S	Sg	00 17 15.6	-1.0
	42nm,0.3s						
SFK	Sufi-Kurgan	1.34	59	⇓iP	Pb	00 16 56.6	-2.2
	baz=54						
SFK				⇓iS	Sg	00 17 15.7	-1.0
	baz=54						
ARSB	Arslanbob	2.12	20	⇓iP	Pb	00 17 10.2	-1.9
	baz=19						
ARSB				⇓iS	Sg	00 17 39.2	-2.5
	baz=19						
ARK	Arkit	2.46	359	⇓iP	Pn	00 17 13.6	-0.1
	baz=60						
ARK				⇓iS	Sb	00 17 45.9	-2.4
	baz=60						
TAS	Tashkent	2.88	315	⇑iP	Pn	00 17 19.7	+0.3
	baz=17						
TAS				⇑iS	Sn	00 17 56.0	+1.9
	baz=17						
AML	Almayashu	3.08	24	P	Pb	00 17 26.9	-1.5
	SNR=18						
AML	Almayashu	3.08	24	⇑iP	Pb	00 17 24.2	-4.3
	baz=23						
AML				⇑iS	Sb	00 18 02.8	-3.4
	baz=23						
MNAS	Manas	3.17	7	⇓Pn	Pb	00 17 27.1	-2.9
	3.8nm,0.4s						
MNAS				⇓Sn	Sb	00 18 07.5	-1.3
	12nm,0.6s						
MNAS	Manas	3.17	7	⇑iP	Pb	00 17 25.1	-4.9
	baz=7.0						
MNAS				⇑iS	Sb	00 18 04.8	-4.0
	baz=7.0						
IUG	Iuzhnay	3.19	333	eP	Pb	00 17 26.6	-3.5
	9.3nm,0.2s						
IUG				eS	Sb	00 18 06.4	-2.7
	40nm,0.4s						
UCH	Uchtor	3.46	33	P	Pb	00 17 31.9	-3.2
	SNR=8.1						
UCH	Uchtor	3.46	33	⇑iP	Pn	00 17 28.6	+0.8
	baz=32						
UCH				⇑iS	Sn	00 18 11.0	+1.9
	baz=32						
MRKS	Merke	3.53	15	eP	Pb	00 17 32.2	-3.9
	13nm,0.4s						
MRKS				⇑iS	Sb	00 18 17.1	-1.9
	14nm,0.5s						
EKS2	Erkin-Say	3.59	21	P	Pb	00 17 32.8	-4.2
	SNR=7.2						
EKS2	Erkin-Say	3.59	21	⇑iP	Pn	00 17 30.5	+1.3
	baz=21						
EKS2				⇑iS	Sn	00 18 13.4	+1.7
	baz=21						
KZA	Kyzart	3.69	41	P	Pb	00 17 34.7	-4.2
	SNR=8.0						
KZA	Kyzart	3.69	41	⇑iP	Pn	00 17 32.1	+1.3
	baz=40						
KZA				⇑iS	Sn	00 18 16.6	+2.0
	baz=40						
NRN	Naryn	3.70	54	⇑iP	Pn	00 17 31.8	+0.8
	baz=53						
NRN				⇑iS	Sn	00 18 15.8	+1.0
	baz=53						
AAK	Ala-Archa	3.80	29	⇑Pn	Pb	00 17 36.5	-4.2
	6.3nm,0.5s						
AAK				⇑Sn	Sb	00 18 25.9	-0.9
	5.8nm,0.5s						
AAK	Ala-Archa	3.80	29	P	Pb	00 17 37.1	-3.6
	SNR=9.7						
AAK	Ala-Archa	3.80	29	⇓eP	Pn	00 17 33.5	+1.3
	baz=28						
AAK				⇓iS	Sn	00 18 19.0	+2.0
	baz=28						
KK31	Karatay Array	3.93	344	⇓Pn	Pb	00 17 37.2	-5.6
	1.6nm,0.3s,baz=155,slow=12						
KK31				⇓Sn	Sb	00 18 30.2	-0.3
	10nm,0.5s,baz=162,slow=29						
KBK	Karagaybulak	4.00	33	P	Pb	00 17 39.8	-4.3
	SNR=8.1						
KBK	Karagaybulak	4.00	33	⇓iP	Pn	00 17 36.4	+1.5
	baz=32						
KBK				⇓iS	Sn	00 18 23.1	+1.2
	baz=32						
FRU1	Bishkek	4.00	29	⇑iP	Pn	00 17 35.1	+0.3
	baz=28						
FRU1				⇑iS	Sn	00 18 22.0	+0.2
	baz=28						
BRLS	Borolday	4.04	337	eP	Pn	00 17 37.0	+1.7
	0.6nm,0.3s						
BRLS				eS	Sn	00 18 24.3	+1.6
	8.5nm,0.4s						
CHMS	Chumysh	4.21	29	P	Pb	00 17 41.9	-5.7
	SNR=25						
CHMS	Chumysh	4.21	29	⇑iP	Pn	00 17 39.2	+1.6
	baz=28						
CHMS				⇑iS	Sn	00 18 28.1	+1.2
	baz=28						
ULHL	Ulahol	4.34	47	⇓iP	Pn	00 17 41.0	+1.4
	baz=45						
ULHL				⇓iS	Sn	00 18 31.3	+1.0
	baz=45						
USP	Ospenovka	4.36	25	P	Pb	00 17 43.7	-6.3
	SNR=16						
USP	Ospenovka	4.36	25	⇓eP	Pn	00 17 41.1	+1.4
	baz=24						
USP				⇓iS	Sn	00 18 32.6	+2.1
	baz=24						
TKM2	Tokmak 2	4.50	36	⇑Pn	Pb	00 17 45.2	-7.4
	3.0nm,0.4s						
TKM2				⇓Sn	Sb	00 18 41.8	-5.0
	3.1nm,0.5s						
TKM2	Tokmak 2	4.50	36	P	Pb	00 17 45.9	-6.6
	SNR=11						
TKM2	Tokmak 2	4.50	36	⇑iP	Pn	00 17 42.6	+0.8
	baz=35						
TKM2				⇑iS	Sn	00 18 37.3	+3.1
	baz=35						
KST	Kastek	4.76	38	eP	Pb	00 17 57.1	+0.2
	1.3nm,0.3s						
KST				eS	Sg	00 19 00.5	-5.7
	8.4nm,0.7s						
DGS	Degeres	4.83	35	eP	Pb	00 17 57.5	-0.6
	2.9nm,0.7s						
DGS				eS	Sb	00 18 59.8	+3.5
	10nm,0.8s						

IDC 02 00:19:27.7±72.0**, 22°.76S×179°.91W, h0^{km}, mb4.0**/3**, mb1 4.1**/3**, mb1mx3.7**/43**, mbtmp4.0**/3**, Error ellipse: s-maj=1295.0km s-min=169.9km az=86.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	35.24	247	P	P	00 26 24.4	+0.4
	1.3nm,0.5s,baz=73,slow=11,SNR=4.4						
ASAR	Alice Springs	42.32	259	P	P	00 27 23.2	-0.4
	1.3nm,0.8s,baz=93,slow=8.1,SNR=10						
WRA	Warramunga Arr	42.58	265	P	P	00 27 25.6	-0.2
	1.2nm,0.6s,baz=104,slow=8.6,SNR=4.8						

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*ISCJB **02** 00:55:04.9±0.6, 17°.9S±0°.2×178°.6W±0°.1, h579^{km}, mb4.0/11, Error ellipse: s-maj=28.5km s-min=13.3km az=150.4*

*IDC **02** 00:55:06.0±4.4, 17°.89S×178°.58W, h580^{km}±53^{km}, mb3.5/10, mb1 3.7/11, mb1mx3.3/44, mbtmp4.4/11, Error ellipse: s-maj=29.3km s-min=18.0km az=134.0*

ISC 02 00:55:05.8±0.8**, 17°.9S**±0°.2×**178°.6W**±0°.1**, h579^{km}, n14, σ0^{s}.65**/14**, mb3.7**/11**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.67	251	P	P	00 58 11.3	-0.2
	1.6nm,0.3s,baz=76,slow=18,SNR=12						
PMG	Port Moresby	34.28	280	P	P	01 01 05.9	+0.8
	20nm,0.8s,baz=94,slow=17,SNR=5.1						
STKA	Stephens Creek	38.49	241	P	P	01 01 40.0	+0.6
	11nm,0.5s,baz=88,slow=9.8,SNR=38						
WRA	Warramunga Arr	44.47	260	P	P	01 02 25.9	-0.8
	5.2nm,0.5s,baz=94,slow=7.0,SNR=42						
ASAR	Alice Springs	44.63	254	P	P	01 02 28.0	0.0
	51nm,0.6s,baz=85,slow=8.5,SNR=90						
QSPA	South Pole Qui	72.18	180	P	P	01 05 32.5	0.0
	1.6nm,0.8s,baz=279,slow=7.0,SNR=4.1						
YBH	Yreka Blue Hor	78.61	39	P	P	01 06 08.6	+0.1
	2.0nm,0.7s,baz=300,slow=5.9,SNR=4.6						
NVAR	Mina Array Bea	79.52	44	P	P	01 06 13.9	+0.3
	1.5nm,0.7s,baz=222,slow=9.7,SNR=12						
MAW	Mawson	83.83	200	P	P	01 06 34.2	-0.5
	0.8nm,0.5s,baz=129,slow=6.5,SNR=4.0						
ILAR	Eielson Array	85.89	13	P	P	01 06 43.4	-1.2
	0.6nm,0.4s,baz=222,slow=5.3,SNR=12						
TXAR	Lajitas Array	86.13	58	P	P	01 06 47.6	+0.9
	1.7nm,0.8s,baz=222,slow=6.1,SNR=17						
PDAR	Pinedale Array	87.45	43	P	P	01 06 52.7	0.0
	0.9nm,0.6s,baz=220,slow=3.5,SNR=12						
BRTR	Keskin Array B	144.63	315	PKP	PKPdf	01 13 37.0	-0.6
	0.7nm,0.8s,baz=79,slow=2.6,SNR=3.7						
MMAI	Mount Meron Ar	145.98	303	PKPbc	PKPbc	01 13 42.2	+0.3
	1.3nm,0.6s,baz=88,slow=4.5,SNR=3.2						

MEX 02 01:05:30.1±0.4**, 15°.95N×96°.13W, h30^{km}**±5^{km}**, MD3.8, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	0.18	172	i P	Pb	01 05 34.6	-1.6
HUIG				eS	Sb	01 05 38.8	-1.4
VHO	Vista Hermosa	1.26	333	eP	Pn	01 05 49.8	-2.1
VHO				i S	Sn	01 06 05.1	-2.8
TPIG	Tehuac#an	2.73	335	i P	Pn	01 06 10.0	-2.0
TPIG				i S	Sn	01 06 42.3	-1.8
PCIG		2.81	94	i P	Pn	01 06 11.6	-1.5
PCIG				i S	Sn	01 06 43.6	-2.4
TLIG	Tlapa	2.83	305	i P	Pn	01 06 12.0	-1.4
TLIG				i S	Sn	01 06 45.0	-1.7

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*IDC **02** 01:05:28.7±3.0, 3°.96S×135°.02E, h0^{km}, mb3.9/4, mb1 4.2/6, mb1mx3.7/45, mbtmp4.1/6, ML4.3/1, MS3.7/1, Ms1 3.7/1, ms1mx2.6/44, Error ellipse: s-maj=135.6km s-min=27.4km az=87.0*

*ISCJB **02** 01:05:30.2±1.2, 4°.25S±0°.09×134°.6E±0°.2, h23^{km}, mb3.8/4, MS3.6/1, Error ellipse: s-maj=34.9km s-min=11.2km az=10.7*

ISC 02 01:05:33.0±1.5**, 4°.2S**±0°.1×**134°.5E**±0°.3**, h23^{km}, n8,** σ1^{s}.**75**/8**, mb4.0**/4**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.62	181	Pn	Pn	01 09 09.6	-2.2
	0.5nm,0.3s,baz=5.2,slow=12,SNR=5.5						
WRA				Sn	Sn	01 11 56.2	-8.2
	0.2nm,0.3s,baz=6.9,slow=23,SNR=2.9						
FITZ	Fitzroy Crossi	16.30	212	Pn	P	01 09 24.7	+1.2
	baz=35,slow=13						
FITZ				Sn	Sn	01 12 20.1	-0.9
	0.4nm,0.3s,baz=241,slow=17,SNR=1.4						
ASAR	Alice Springs	19.33	182	P	P	01 09 59.2	+2.3
	0.8nm,0.3s,baz=5.0,slow=12,SNR=41						
KSRS	Korea Array	41.93	352	LR	LR	01 30 42.8	
	comp=Z,91nm,20.4s,baz=306,slow=36						
MKAR	Makanchi Array	68.52	324	P	P	01 16 33.9	+0.2
	1.0nm,0.7s,baz=115,slow=7.3,SNR=8.3						
ZALV	Zalesovo Beam	71.22	332	P	P	01 16 48.5	-1.6
	0.8nm,0.6s,baz=133,slow=6.3,SNR=4.3						
KURBB	Kurchatov Arra	72.62	326	P	P	01 16 58.8	+0.1
	0.8nm,0.5s,baz=117,slow=5.0,SNR=8.1						
BVAR	Borovoye Array	78.22	326	P	P	01 17 30.3	-0.5
	0.8nm,0.7s,baz=121,slow=5.6,SNR=6.4						

IDC 02 01:18:10.6±4.1**, 4°.83S×151°.03E, h0^{km}, mb3.4**/2**, mb1 3.8**/2**, mb1mx3.2**/42**, mbtmp3.5**/2**, Error ellipse: s-maj=175.0km s-min=48.9km az=116.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.13	226	P	P	01 23 07.3	-0.8
	0.7nm,0.5s,baz=52,slow=10,SNR=5.7						
ASAR	Alice Springs	24.96	220	P	P	01 23 36.7	+0.6
	1.0nm,0.7s,baz=54,slow=8.7,SNR=7.3						
TORD	Torodi Ar. Bea	148.64	287	PKPbc	PKPbc	01 38 00.1	-0.7
	baz=77,slow=2.2						

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*IDC **02** 01:47:44.3±0.8, 29°.90N×87°.90E, h0^{km}, mb3.8/14, mb1 4.0/16, mb1mx3.7/69, mbtmp3.8/16, ML3.5/2, MS3.3/5, Ms1 3.3/5, ms1mx2.7/63, Error ellipse: s-maj=22.8km s-min=16.7km az=49.0*

*ISCJB **02** 01:47:47.8±0.4, 29°.87N±0°.06×87°.82E±0°.07, h37^{km}, mb4.0/20, MS3.4/4, Error ellipse: s-maj=10.9km s-min=6.2km az=139.1*

*NEIC **02** 01:47:47.7±1.8, 29°.89N×87°.87E, h21^{km}±13^{km}, mb4.3/8, Error ellipse: s-maj=8.0km s-min=4.6km az=47.0*

ISC 02 01:47:49.6±0.6**, 29°.94N**±0°.09×**87°.97E**±0°.08**, h37^{km}, n44,** σ1^{s}.**40**/42**, mb4.0**/20**, MS3.3**/4**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSA	Lhasa	2.78	94	ePn	Pn	01 48 33.1	+1.2
LSA				eSn	Sn	01 48 59.8	-4.7
SHL	Shillong	5.57	140	eP	Pn	01 49 11.0	+0.9
CM31	Chiang Mai Arr	15.18	136	ePn	Pn	01 51 21.0	-0.3
CMAR	Chiang Mai Arr	15.18	136	Pn	Pn	01 51 21.0	-0.3
	0.1nm,0.3s,baz=316,slow=11,SNR=3.9						
CMAR				LR	LR	01 57 14.5	
	comp=Z,30nm,19.8s,baz=28,slow=38						
KBL	Kabul	16.65	291	ePn	Pn	01 51 37.9	-2.4
	4.7nm,0.6s						
MK01	Makanchi Array	17.38	347	ePn	P	01 51 50.4	+0.2
MK31	Makanchi Array	17.40	347	ePn	Pn	01 51 50.2	+0.7
MK32	Makanchi Array	17.40	347	ePn	Pn	01 51 48.1	-1.3
MKAR	Makanchi Array	17.40	347	P	Pn	01 51 48.1	-1.3
	0.1nm,0.3s,baz=155,slow=12,SNR=11						
MKAR	Makanchi Array	17.40	347	ePn	P	01 51 50.6	+0.2
	11nm,0.8s						
KURBB	Kurchatov Arra	21.85	344	P	P	01 52 38.7	0.0
	2.7nm,0.8s,baz=156,slow=11,SNR=11						
KURK	Kurchatov	21.91	344	eP	P	01 52 38.7	-0.7
	8.8nm,1.3s						
SONA0	Songino Array	22.82	33	eP	P	01 52 49.9	+0.6
SONM	Songino Array	22.82	33	P	P	01 52 49.9	+0.6
	2.4nm,0.7s,baz=222,slow=11,SNR=17						
SONA1	Songino Array	22.83	33	eP	P	01 52 53.0	+3.5
ZALV	Zalesovo Beam	24.10	355	P	P	01 53 01.5	0.0
	0.4nm,0.4s,baz=190,slow=7.3,SNR=4.0						
ZALV	Zalesovo Beam	24.10	355	eP	P	01 52 59.9	-1.7
ZAA1	Zalesovo Array	24.11	355	eP	P	01 53 01.5	-0.1
KSRS	Korea Array	33.88	66	LR	LR	02 09 19.5	
	comp=Z,23nm,21.1s,baz=200,slow=38						
MAJO	Matsushiro	42.15	67	eP	P	01 55 39.5	+1.0
MJAR	Matsushiro Arr	42.15	67	P	P	01 55 39.5	+1.0
	0.6nm,0.3s,baz=290,slow=7.1,SNR=5.5						
ATD	Arta Tunnel	45.66	256	LR	LR	02 16 16.6	
	comp=Z,34nm,18.0s,baz=312,slow=38						
AKASG	Malin Array Be	47.96	313	P	P	01 56 24.7	+0.3
	0.6nm,0.5s,baz=88,slow=6.0,SNR=5.3						
AKBB	Malin Array Si	47.96	313	eP	P	01 56 21.5	-3.0
	16nm,1.9s						
KIEV	Kiev	47.97	313	eP	P	01 56 21.6	-3.0
	14nm,1.9s						
MLR	Muntele Rosu	50.26	306	P	P	01 56 41.9	-0.4
	0.6nm,0.9s,baz=94,slow=15,SNR=5.9						
ARA0	ARCESS Array S	52.70	337	eP	P	01 57 00.7	+0.6
ARCES	ARCESS Array B	52.70	337	P	P	01 57 00.7	+0.6
	1.8nm,1.0s,baz=97,slow=7.5,SNR=3.1						
AGG	Agios Georgios	53.82	298	eP	P	01 57 09.4	+0.6
	60nm,1.4s						
GEC2	GERESS Array S	58.11	312	eP	P	01 57 40.1	+0.7
	4.1nm,1.4s						
GERES	GERESS Array B	58.11	312	P	P	01 57 40.1	+0.7
	0.5nm,0.6s,baz=70,slow=5.8,SNR=6.6						
GERES				LR	LR	02 27 03.5	
	comp=Z,25nm,18.7s,baz=89,slow=41						
GEA0	GERESS Array S	58.11	311	eP	P	01 57 40.6	+1.2
WRA	Warramunga Arr	66.73	132	P	P	01 58 37.5	+0.3
	0.9nm,0.6s,baz=326,slow=6.6,SNR=6.7						
WR1	Warramunga Arr	66.73	132	eP	P	01 58 37.5	+0.3
	35nm,1.6s						
AS31	Alice Springs	69.19	135	eP	P	01 58 53.2	+0.6
	1.6nm,1.2s						
ASAR	Alice Springs	69.19	135	P	P	01 58 53.2	+0.6
	0.4nm,0.5s,baz=318,slow=6.2,SNR=5.3						
IL1	Eielson Array	76.44	21	eP	P	01 59 35.2	+0.1
ILAR	Eielson Array	76.44	21	P	P	01 59 35.4	+0.3
	0.8nm,0.9s,baz=300,slow=4.5,SNR=7.7						
ILB	Eielson Array	76.44	21	eP	P	01 59 35.4	+0.3
TOA1	Torodi Ar. Sit	80.37	280	eP	P	01 59 57.3	-0.3
TORD	Torodi Ar. Bea	80.37	280	P	P	01 59 57.3	-0.3
	1.0nm,1.0s,baz=49,slow=4.6						
BOSA	Boshof	83.49	232	P	P	02 00 14.1	+0.3
	2.6nm,0.9s,baz=113,slow=4.8,SNR=3.4						
KOWA	Kowa	84.58	284	LR	LR	02 40 38.2	
	comp=Z,64nm,18.2s,baz=46,slow=38						
YKA	Yellowknife Ar	86.12	10	P	P	02 00 26.8	+0.4
	0.8nm,0.8s,baz=335,slow=5.1,SNR=5.6						

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*NIED **02** 02:06:00, 40°.00N×142°.00E, h5^{km}, Mw4.2 Best double couple: M$_0$2.53000×10^{15} NP1:φ$_s$94.00000°, δ28.00000°, λ-83.00000°. NP2:φ$_s$265.00000°, δ62.00000°, λ-94.00000°.*

*IDC **02** 02:06:19.4±0.7, 39°.99N×142°.12E, h0^{km}, mb3.9/17, mb1 4.0/22, mb1mx3.9/70, mbtmp3.9/22, ML3.5/4, MS3.3/16, Ms1 3.3/16, ms1mx3.0/66, Error ellipse: s-maj=18.8km s-min=14.2km az=97.0*

*ISCJB **02** 02:06:20.1±0.8, 40°.03N±0°.02×142°.04E±0°.04, h13^{km}±4^{km}, mb4.1/25, MS3.5/10, Error ellipse: s-maj=5.8km s-min=3.7km az=10.4*

*JMA **02** 02:06:21.3, 40°.03N×141°.96E, h9^{km}, M4.5 Broadband fault plane solution: P waves. NP1:φ$_s$269.00000°, δ51.00000°, λ-83.00000°. NP2:φ$_s$78.00000°, δ39.00000°, λ-98.00000°. Principal axes: T Plg6.0000°, Azm354.0000°; N Plg5.0000°, Azm85.0000°; P Plg82.0000°, Azm214.0000°;*

JMA Felt IV J1.

*NEIC **02** 02:06:25.1±0.8, 40°.00N×142°.13E, h40^{km}±6^{km}, mb4.5/9 Error ellipse: s-maj=7.8km s-min=5.8km az=106.0*

NEIC Recorded [4 JMA] in Iwate.

ISC 02 02:06:20.6±1.4**, 40°.03N**±0°.03×**142°.05E**±0°.05**, h6^{km}**±8^{km}**, n81,** σ1^{s}.**21**/86**, mb4.2**/25**, MS3.6**/10**, 5C-2D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	0.17	237	P	Pg	02 06 24.0	+0.1
JTH				S	Sg	02 06 25.8	-0.4
MIYJ	Miyakonagasawa	0.48	201	⇑P	Pg	02 06 30.4	+0.5
MIYJ				eS	Sg	02 06 36.8	+0.6
JANG	Nango	0.53	310	⇑P	Pg	02 06 30.8	0.0
JANG				eS	Sg	02 06 37.4	-0.4
JKZ	Kuzumaki	0.55	266	⇓P	Pg	02 06 30.8	-0.4
JOM	Ohasama	0.81	227	⇑P	Pg	02 06 35.4	-0.6
JOM				S	Sg	02 06 45.6	-0.8
OFUJ	Ofunato	0.99	197	⇑P	Pg	02 06 39.1	-0.5
OFUJ				eS	Sg	02 06 51.9	-0.6
JTM	Tenmabayashi	1.06	316	⇑P	Pg	02 06 40.1	-0.9
JTM				eS	Sg	02 06 53.5	-1.3
JAH	Hinai	1.09	279	⇓P	Pg	02 06 40.8	-0.7
JAH				eS	Sg	02 06 54.3	-1.4
ASAJ	Asahikawa	4.10	6	Pn	Pn	02 07 25.4	+1.5
	3.6nm,0.3s,baz=202,slow=10,SNR=7.7						
ASAJ				Sn	Sn	02 08 13.1	+0.9
	baz=24,slow=26,SNR=1.9						
ASAJ				LR	LR	02 09 19.8	
	comp=Z,472nm,21.6s,baz=193,slow=44						
MAJO	Matsushiro	4.61	222	ePn	Pn	02 07 32.7	+1.8
MAJO				eSn	Sn	02 08 24.5	-0.3
MAT	Matsushiro	4.61	222	P	Pn	02 07 32.2	+1.4
MAT				eS	Sn	02 08 26.3	+1.6
MJAR	Matsushiro Arr	4.61	222	Pn	Pn	02 07 31.7	+0.8
	1.8nm,0.3s,baz=17,slow=8.2,SNR=29						
MJAR				Sn	Sn	02 08 24.5	-0.3
	0.7nm,0.3s,baz=45,slow=17,SNR=3.0						
MJAR				LR	LR	02 09 30.4	
	comp=Z,425nm,20.0s,baz=35,slow=41						
MJB9	Matsu-Tunnel	4.61	222	ePn	Pn	02 07 32.9	+2.0
INU	Inuyama	6.14	222	ePn	Pn	02 07 55.4	+3.5
JHJ	Hachijo jima 2	7.13	195	Pn	Pn	02 08 04.7	-0.8
	1.2nm,0.3s,baz=58,slow=19,SNR=3.6						
JHJ				Sn	Sn	02 09 23.8	-3.0
	4.0nm,0.3s,baz=37,slow=22,SNR=1.3						
JHJ				LR	LR	02 10 53.2	
	comp=Z,140nm,20.6s,baz=86,slow=38						
USRK	Ussuriysk Ar.	8.56	302	Pn	Pn	02 08 25.0	0.0
	baz=114,slow=14						
USRK				Sn	Sn	02 10 01.4	-0.5
	baz=114,slow=27						
USRK				LR	LR	02 11 51.6	
	comp=Z,98nm,19.2s,baz=119,slow=38						
JNU	Nakatsue	11.31	236	LR	LR	02 14 07.2	
	comp=Z,100nm,19.4s,baz=84,slow=41						
KSRS	Korea Array	11.33	261	Pn	Pn	02 09 05.3	+2.4
	0.3nm,0.3s,baz=68,slow=14,SNR=3.7						
KS15	Wonju Array Si	11.36	261	ePn	Pn	02 09 05.3	+1.9
KSAR	Wonju Array Be	11.36	261	Pn	Pn	02 09 05.3	+1.9
PETK	Petropavlovsk-	16.89	34	LR	LR	02 17 11.5	
	comp=Z,76nm,18.8s,baz=186,slow=39						
SEY	Seymchan	23.76	12	P	P	02 11 33.3	-0.1
	1.5nm,0.5s,baz=168,slow=4.1,SNR=6.3						
SONA0	Songino Array	26.65	299	eP	P	02 12 00.4	+0.3
SONM	Songino Array	26.65	299	P	P	02 12 00.4	+0.3
	0.3nm,0.3s,baz=111,slow=7.9,SNR=3.4						
SONM				LR	LR	02 22 59.4	
	comp=Z,35nm,18.3s,baz=84,slow=37						
H11N2	WAKE ISLAND Hy	29.39	126	T	T	02 43 02.5	
	baz=318,slow=75,SNR=1264						
H11N1	WAKE ISLAND Hy	29.39	126	T	T	02 43 06.5	
	baz=318,slow=75,SNR=736						
H11N3	WAKE ISLAND Hy	29.40	126	T	T	02 43 00.6	
	baz=318,slow=75,SNR=778						
H11S1	WAKE ISLAND Hy	30.19	128	T	T	02 44 11.0	
	baz=321,slow=76,SNR=73						
H11S3	WAKE ISLAND Hy	30.20	128	T	T	02 44 13.8	
	baz=321,slow=76,SNR=54						
H11S2	WAKE ISLAND Hy	30.21	128	T	T	02 44 14.9	
	baz=321,slow=76,SNR=54						
ZAA1	Zalesovo Array	40.32	310	eP	P	02 13 57.6	-1.0
ZAA1				ePcP	PcP	02 16 01.9	0.0
ZALV	Zalesovo Beam	40.32	310	P	P	02 13 57.6	-1.0

	1.8nm,0.6s,baz=79,slow=7.2,SNR=7.2						
ZALV				PcP	**PcP**	**02 16 01.9**	**0.0**
	0.6nm,0.3s,baz=93,slow=2.9,SNR=3.1						
ZALV	**Zalesovo Beam**	**40.32**	**310**	*e*P	**P**	**02 13 59.6**	**+1.0**
ZALV				PcP	**PcP**	**02 16 01.9**	**0.0**
CM31	**Chiang Mai Arr**	**42.80**	**253**	*e*P	**P**	**02 14 19.7**	**+0.4**
CMAR	**Chiang Mai Arr**	**42.80**	**253**	P	**P**	**02 14 19.7**	**+0.4**
	0.7nm,0.5s,baz=46,slow=6.4,SNR=3.0						
MK01	**Makanchi Array**	**43.01**	**299**	*e*P	**P**	**02 14 19.6**	**-1.2**
MK31	**Makanchi Array**	**43.01**	**300**	*e*P	**P**	**02 14 21.0**	**+0.2**
MK32	**Makanchi Array**	**43.01**	**300**	*e*P	**P**	**02 14 20.5**	**-0.3**
MK32				*e*PcP	**PcP**	**02 16 10.6**	**-0.3**
MKAR	**Makanchi Array**	**43.01**	**300**	P	**P**	**02 14 20.5**	**-0.3**
	1.0nm,0.8s,baz=80,slow=10.0,SNR=8.3						
MKAR				PcP	**PcP**	**02 16 10.6**	**-0.3**
	0.2nm,0.4s,baz=91,slow=3.9,SNR=2.9						
MKAR	**Makanchi Array**	**43.01**	**300**	*e*P	**P**	**02 14 21.1**	**+0.3**
	10nm,0.8s						
MKAR				PcP	**PcP**	**02 16 10.6**	**-0.3**
IM3	**Indian Mountai**	**43.84**	**32**	*e*P	**P**	**02 14 29.9**	**+2.8**
KURK	**Kurchatov**	**44.53**	**306**	*e*P	**P**	**02 14 32.7**	**-0.2**
	6.3nm,0.9s						
KURK				*e*PcP	**PcP**	**02 16 15.7**	**-0.2**
KURBB	**Kurchatov Arra**	**44.60**	**306**	P	**P**	**02 14 32.7**	**-0.8**
	3.3nm,0.4s,baz=79,slow=8.5,SNR=31						
KURBB				PcP	**PcP**	**02 16 15.7**	**-0.5**
	0.5nm,0.8s,baz=75,slow=3.4,SNR=4.4						
ILAR	**Eielson Array**	**46.72**	**34**	P	**P**	**02 14 49.6**	**-0.4**
	0.4nm,0.6s,baz=260,slow=6.1,SNR=3.7						
ILB	**Eielson Array**	**46.72**	**34**	*e*P	**P**	**02 14 49.6**	**-0.4**
BVAR	**Borovoye Array**	**48.97**	**311**	P	**P**	**02 15 07.5**	**-0.1**
	1.8nm,0.5s,baz=73,slow=9.2,SNR=12						
BVAR				LR	LR	02 35 27.2	
	comp=Z,29nm,20.3s,baz=302,slow=36						
KK31	**Karatay Array**	**52.10**	**298**	*e*P	**P**	**02 15 31.5**	**+0.1**
KKAR	**Karatay Array**	**52.10**	**298**	*e*P	**P**	**02 15 31.5**	**+0.1**
ABKAR	**Akbulak array**	**56.42**	**309**	*e*P	**P**	**02 16 05.5**	**+2.8**
SPITS	**Spitsbergen Ar**	**57.69**	**349**	LR	LR	02 42 21.8	
	comp=Z,17nm,18.5s,baz=195,slow=38						
WR1	**Warramunga Arr**	**60.09**	**188**	*e*P	**P**	**02 16 27.6**	**-1.0**
	14nm,1.3s						
WRA	**Warramunga Arr**	**60.09**	**188**	P	**P**	**02 16 27.6**	**-1.0**
	5.0nm,0.8s,baz=5.2,slow=7.2,SNR=20						
ARA0	**ARCESS Array S**	**61.38**	**339**	*e*P	**P**	**02 16 38.1**	**+1.2**
ARCES	**ARCESS Array B**	**61.38**	**339**	P	**P**	**02 16 38.1**	**+1.2**
	1.2nm,0.8s,baz=65,slow=7.1,SNR=4.0						
AS01	**Alice Springs**	**63.81**	**188**	*e*P	**P**	**02 16 53.0**	**-0.7**
AS31	**Alice Springs**	**63.82**	**188**	*e*P	**P**	**02 16 53.6**	**-0.1**
	1.3nm,1.0s						
ASAR	**Alice Springs**	**63.82**	**188**	P	**P**	**02 16 53.6**	**-0.1**
	1.8nm,0.8s,baz=14,slow=6.1,SNR=12						
FIA0	**FINESS Array S**	**66.40**	**332**	*e*P	**P**	**02 17 11.7**	**+1.6**
FINES	**FINESS Array B**	**66.40**	**332**	P	**P**	**02 17 11.7**	**+1.6**
	1.6nm,0.6s,baz=31,slow=11,SNR=7.2						
FINES				LR	LR	02 47 46.2	
	comp=Z,46nm,21.3s,baz=64,slow=37						
GDXM	**Geysers**	**69.76**	**56**	*e*P	**P**	**02 17 30.5**	**-1.2**
	14nm,1.3s						
HFS	**Hagfors**	**71.57**	**336**	P	**P**	**02 17 42.1**	**-0.1**
	1.0nm,0.5s,baz=52,slow=7.8,SNR=6.6						
HFS				LR	LR	02 52 18.2	
	comp=Z,46nm,19.4s,baz=359,slow=38						
NB2	**NORSAR Subarra**	**71.62**	**337**	P	**P**	**02 17 44.2**	**+1.6**
	comp=Z,2.1nm,0.9s,baz=35,slow=6.2						
NOA	**NORSAR Array B**	**71.62**	**337**	LR	LR	02 54 00.7	
	comp=Z,27nm,18.3s,baz=50,slow=40						
AKASG	**Malin Array Be**	**72.24**	**322**	P	**P**	**02 17 46.2**	**-0.3**
	comp=Z,0.6nm,0.4s,baz=45,slow=6.0,SNR=3.9						
AKBB	**Malin Array Si**	**72.24**	**322**	*e*P	**P**	**02 17 46.1**	**-0.3**
	comp=Z,4.1nm,1.2s						
NV01	**Mina Array Sit**	**72.81**	**54**	*e*P	**P**	**02 17 49.9**	**-0.5**
NVAR	**Mina Array Bea**	**72.81**	**54**	P	**P**	**02 17 49.9**	**-0.5**
	comp=Z,0.2nm,0.4s,baz=298,slow=6.0,SNR=2.2						
SFJD	**Kangerlussuaq**	**72.86**	**5**	LR	LR	02 51 17.4	
	comp=Z,43nm,18.4s,baz=344,slow=37						
BR101	**Keskin Array S**	**77.24**	**311**	*e*P	**P**	**02 18 16.0**	**+0.2**
BRTR	**Keskin Array B**	**77.24**	**311**	P	**P**	**02 18 16.0**	**+0.2**
	comp=Z,0.8nm,1.0s,baz=29,slow=6.6,SNR=2.6						
MLR	**Muntele Rosu**	**77.42**	**320**	LR	LR	02 53 19.7	
	comp=Z,9.1nm,20.8s,baz=55,slow=36						
PV21	**Cone Mtn., Par**	**78.35**	**49**	*e*P	**P**	**02 18 18.0**	**-4.2**
	comp=Z,4.7nm,1.0s						
GEC2	**GERESS Array S**	**80.43**	**328**	*e*P	**P**	**02 18 32.5**	**-0.6**
	comp=Z,2.1nm,1.2s						
GERES	**GERESS Array B**	**80.43**	**328**	P	**P**	**02 18 32.5**	**-0.6**
	comp=Z,0.2nm,0.5s,baz=48,slow=2.0,SNR=3.9						
KSCO	**Kaye Shedlock'**	**81.62**	**45**	*e*P	**P**	**02 18 37.3**	**-2.4**
	comp=Z,17nm,0.7s						
SCHQ	**Schefferville**	**82.33**	**16**	LR	LR	02 57 29.4	
	comp=Z,30nm,18.0s,baz=12,slow=37						
ESDC	**Sonseca Array**	**94.82**	**334**	LR	LR	03 06 23.4	
	comp=Z,23nm,19.7s,baz=125,slow=38						
TOA1	**Torodi Ar. Sit**	**115.54**	**316**	*e*PKPdf	**PKPdf**	**02 25 04.0**	**-0.1**
TORD	**Torodi Ar. Bea**	**115.54**	**316**	PKP	**PKPdf**	**02 25 04.0**	**-0.1**
	comp=Z,0.2nm,0.8s,baz=49,slow=1.0						
SNAA	**Sanae**	**143.75**	**198**	PKP	PKPab	02 25 52.8	+0.5
	comp=Z,1.9nm,0.6s,baz=209,slow=1.7,SNR=11						
SNAA	**Sanae**	**143.75**	**198**	*e*PKPdf	PKPbc	02 25 53.0	-0.1

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*ISCJB **02** 02:25:33.8±0.7, 48°.8S±0°.1×126°.7E±0°.4, h13^{km}, mb4.0/5, MS3.5/15, Error ellipse: s-maj=38.6km s-min=12.4km az=14.1*

*IDC **02** 02:25:34.0±0.9, 48°.74S×126°.73E, h0^{km}, mb4.0/6, mb1 4.2/6, mb1mx4.0/44, mbtmp4.0/6, MS3.5/15, Ms1 3.5/15, ms1mx3.3/41, Error ellipse: s-maj=48.7km s-min=19.3km az=100.0*

ISC 02 02:25:36.0±0.9, 48°.7S±0°.1×126°.7E±0°.3, h13^{km}, n27, σ0^{s}32/11, mb4.1/5, MS3.5/15, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W1	**Cape Leeuwin H**	**16.67**	**321**	T	T	02 46 25.6	
	baz=148,slow=74,SNR=25						
H01W2	**Cape Leeuwin H**	**16.67**	**321**	T	T	02 46 25.3	
	baz=148,slow=74,SNR=24						
H01W3	**Cape Leeuwin H**	**16.68**	**321**	T	T	02 46 22.4	
	baz=148,slow=74,SNR=22						
STKA	**Stephens Creek**	**20.25**	**39**	P	**P**	**02 30 11.1**	**+0.2**
	1.2nm,0.6s,baz=186,slow=12,SNR=2.2						
STKA				LR	LR	02 36 30.5	
	comp=Z,163nm,21.4s,baz=204,slow=32						
ASAR	**Alice Springs**	**25.66**	**15**	P	**P**	**02 31 05.6**	**+0.1**
	6.1nm,0.8s,baz=187,slow=9.9,SNR=43						
ASAR				LR	LR	02 39 51.1	
	comp=Z,86nm,21.4s,baz=200,slow=33						
WRA	**Warramunga Arr**	**29.38**	**15**	P	**P**	**02 31 38.5**	**-0.3**
	1.8nm,1.0s,baz=194,slow=8.8,SNR=3.6						
WRA				LR	LR	02 42 57.4	
	comp=Z,139nm,19.5s,baz=195,slow=36						
FITZ	**Fitzroy Crossi**	**30.57**	**358**	LR	LR	02 43 30.8	
	comp=Z,158nm,19.0s,baz=180,slow=35						
VNDA	**Vanda**	**31.86**	**166**	P	**P**	**02 32 00.0**	**-0.2**
	1.1nm,0.7s,baz=313,slow=9.2,SNR=9.2						
VNDA				LR	LR	02 44 07.3	
	comp=Z,135nm,18.3s,baz=328,slow=35						
MAW	**Mawson**	**36.47**	**215**	LR	LR	02 45 31.3	
	comp=Z,34nm,20.2s,baz=61,slow=33						
BATI	**Baumata**	**38.49**	**355**	LR	LR	02 49 37.3	
	comp=Z,166nm,18.3s,baz=148,slow=38						
DZM	**Mont Dzumac**	**41.22**	**64**	LR	LR	02 46 30.4	
	comp=Z,60nm,19.6s,baz=210,slow=30						
QSPA	**South Pole Qui**	**41.38**	**180**	LR	LR	02 50 16.3	
	comp=Z,79nm,18.1s,baz=329,slow=36						
PMG	**Port Moresby**	**42.80**	**30**	LR	LR	02 52 42.2	
	comp=Z,61nm,18.2s,baz=193,slow=38						
LEM	**Lembang**	**44.79**	**333**	LR	LR	02 54 38.7	
	comp=Z,34nm,18.6s,baz=107,slow=39						
HNR	**Honiara**	**48.06**	**47**	LR	LR	02 52 37.9	
	comp=Z,68nm,19.9s,baz=150,slow=34						
SNAA	**Sanae**	**54.72**	**197**	P	**P**	**02 35 04.4**	**0.0**
SNAA	**Sanae**	**54.72**	**197**	P	**P**	**02 35 04.4**	**0.0**
	1.6nm,0.8s,baz=138,slow=10.0,SNR=6.8						
SNAA				LR	LR	02 57 01.5	
	comp=Z,164nm,20.8s,baz=179,slow=34						
VNA3	**Neumayer Olymp**	**56.35**	**196**	P	**P**	**02 35 16.3**	**+0.2**
VNA1	**Neumayer--Stat**	**56.59**	**196**	P	**P**	**02 35 17.6**	**-0.1**
CMAR	**Chiang Mai Arr**	**71.33**	**332**	P	**P**	**02 36 54.9**	**-0.3**
	0.9nm,0.4s,baz=186,slow=5.4,SNR=3.5						
CMAR				LR	LR	03 09 32.0	
	comp=Z,6.2nm,18.2s,baz=175,slow=37						
KSRS	**Korea Array**	**85.82**	**1**	LR	LR	03 16 58.7	
	comp=Z,6.8nm,20.6s,baz=100,slow=36						
H10S2	**ASCENSION HYDR**	**113.26**	**222**	T	T	04 48 18.7	
	baz=151						
H10S3	**ASCENSION HYDR**	**113.27**	**222**	T	T	04 48 16.8	
	baz=151						
H10S1	**ASCENSION HYDR**	**113.28**	**222**	T	T	04 48 20.5	
	baz=151						
TORD	**Torodi Ar. Bea**	**122.64**	**251**	PKP	**PKPdf**	**02 44 31.7**	**+0.2**
	0.3nm,0.6s,baz=122,slow=1.7						
YKA	**Yellowknife Ar**	**144.23**	**44**	PKP	PKPbc	02 45 09.1	+0.6
	0.8nm,1.0s,baz=282,slow=3.1,SNR=4.3						
EKA	**Eskdalemuir Ar**	**149.04**	**302**	PKPbc	**PKPbc**	**02 45 23.4**	**+0.7**
	2.6nm,0.8s,baz=90,slow=2.8,SNR=4.9						

SJA 02 02:38:59.5±0.9, 27°.88S×68°.32W, h150^{km}±13^{km}, ML3.7, MW3.7, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VCA	**Vinchina**	**0.86**	**173**	*e*P	Pn	02 39 22.2	-1.1
VCA				*e*S	Sn	02 39 38.5	-2.9
VCA				IAML		02 39 38.9	
	comp=Z,234nm,0.2s						
AGUA	**GUANDACOL**	**1.60**	**185**	*e*P	Pn	02 39 31.3	+1.0
AGUA				*e*S	Sn	02 39 54.0	+0.1
ACLC	**CERRO LA CRUZ**	**1.95**	**142**	*e*P	Pn	02 39 35.4	+1.1
ACLC				*e*S	Sn	02 40 01.6	+0.6
ACLC				IAML		02 40 04.1	
	comp=Z,35µm,0.4s						
CYA	**Choya**	**2.29**	**105**	*e*P	Pn	02 39 39.1	+1.0
CYA				*e*S	Sn	02 40 07.5	-0.4
APLL	**PUNTA DE LOS L**	**2.95**	**148**	*e*P	Pn	02 39 47.3	+1.0
APLL				*e*S	Sn	02 40 22.6	+0.1
APLL				IAML		02 40 23.4	
	comp=Z,8.2nm,0.4s						
AMOG	**MOGNA**	**3.05**	**183**	*e*P	Pn	02 39 49.1	+1.6
RTCV	**Cerro Valdivia**	**3.97**	**183**	*e*P	Pn	02 40 00.9	+1.6
RTCV				*e*S	Sn	02 40 32.0	-14
RTLS	**Leoncito**	**3.99**	**192**	*e*P	Pn	02 40 00.6	+0.7

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*ISCJB **02** 02:52:33.4±0.6, 32°.23N±0°.03×115°.30W±0°.05, h13^{km}±6^{km}, Error ellipse: s-maj=7.8km s-min=4.8km az=146.7*

*ECX **02** 02:52:34.6±0.5, 32°.21N×115°.28W, h6^{km}, MD2.4, ML2.6*

*MEX **02** 02:52:35.7±0.5, 32°.30N×115°.22W, h16^{km}±44^{km}, MD3.7*

ISC 02 02:52:32.4±1.2, 32°.24N±0°.03×115°.29W±0°.03, h14^{km}±11^{km}, n19, σ0^{s}49/28, 2C-3D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPBX	**Cerro Prieto**	**0.18**	**356**	⇓*e*P	**Pb**	**02 52 37.4**	**-0.1**
CPBX				*e*S	**Sb**	**02 52 40.7**	**-0.1**
CPBX				IAML		02 52 41.7	
	comp=N,3µm,0.4s						
MBIG	**Mexicali**	**0.18**	**25**	*e*P	**Pb**	**02 52 38.6**	**+1.1**
MBIG	**Mexicali**	**0.18**	**25**	*e*P	**Pb**	**02 52 38.3**	**+0.7**
MBIG				*e*S	**Sb**	**02 52 41.0**	**0.0**
ERPC	**Ernies Place**	**0.59**	**328**	*e*P	**Pn**	**02 52 46.0**	**-0.3**
COA	**Coachella**	**0.64**	**13**	*e*P	**Pn**	**02 52 46.4**	**-0.6**
WESC	**Westside Schoo**	**0.64**	**324**	*e*P	**Pn**	**02 52 46.4**	**-0.5**
YUH	**Yuha Desert**	**0.67**	**307**	⇓*i*P	**Pn**	**02 52 46.8**	**-0.7**
YMD	**Yuma Desert**	**0.70**	**63**	⇑*i*P	**Pn**	**02 52 47.0**	**-0.8**
RMX	**La Rumorosa**	**0.76**	**299**	*e*P	**Pb**	**02 52 47.4**	**0.0**
RMX				*e*S	**Sg**	**02 52 57.0**	**-0.2**
ECBX	**El Chinero**	**0.79**	**165**	*e*P	**Pb**	**02 52 47.8**	**0.0**
ECBX				*e*S	**Sb**	**02 52 58.6**	**+0.2**
IKP	**In-Ko-Pah, Jac**	**0.81**	**301**	*e*P	**Pn**	**02 52 49.2**	**-0.1**
ZAX	**El Zacaton**	**1.11**	**229**	*e*P	**Pn**	**02 52 53.6**	**+0.2**
ZAX				*e*S	**Sg**	**02 53 08.7**	**+0.5**
CBX	**Cerro Bola**	**1.17**	**274**	*e*P	**Pg**	**02 52 55.4**	**+0.5**
CBX				*e*S	**Sn**	**02 53 10.8**	**+0.7**
CBX				IAML		02 53 12.5	
	comp=E,191nm,0.2s						
CBX				⇑*e*		02 53 12.5	
CBX	**Cerro Bola**	**1.17**	**274**	*e*P	**Pg**	**02 52 54.8**	**-0.1**
CBX				*e*S	**Sb**	**02 53 08.8**	**-0.5**
TJIG	**Tijuana**	**1.19**	**280**	*e*P	**Pb**	**02 52 54.9**	**+0.3**
TJIG				*e*S	**Sb**	**02 53 09.2**	**-0.7**
SPIG	**San Pedro Mart**	**1.20**	**187**	*e*P	**Pg**	**02 52 55.1**	**-0.4**
SPIG	**San Pedro Mart**	**1.20**	**187**	*e*P	**Pg**	**02 52 55.1**	**-0.4**
SPIG				*e*S	**Sb**	**02 53 10.7**	**+0.3**
SPX	**San Pedro Mart**	**1.20**	**187**	*e*P	**Pg**	**02 52 55.4**	**-0.2**
SPX				IAML		02 53 13.4	
	comp=E,58nm,0.2s						
SPX				⇓*e*		02 53 13.4	
SPX				IAML		02 53 14.3	
	comp=N,80nm,0.2s						
SPX				*e*		02 53 14.3	
BAR	**Barrett**	**1.25**	**291**	*e*P	**Pg**	**02 52 56.5**	**0.0**

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*ISCJB **02** 03:28:30.9±0.8, 32°.04S±0°.04×68°.49W±0°.04, h135^{km}±8^{km}, Error ellipse: s-maj=6.8km s-min=5.6km az=143.6*

*GUC **02** 03:28:30.5±0.6, 31°.82S×68°.76W, h143^{km}±47^{km}, ML3.6*

*SJA **02** 03:28:30.2±0.8, 32°.07S×68°.50W, h138^{km}±4^{km}, ML3.6, MW4.1*

ISC 02 03:28:31.3±1.5, 32°.05S±0°.04×68°.49W±0°.04, h134^{km}±10^{km}, n23, σ0^{s}65/32, 6C-4D, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTCV	**Cerro Valdivia**	**0.20**	**347**	*i*P	**Pn**	**03 28 49.7**	**-0.1**
ASAL	**Salagasta**	**0.61**	**209**	*i*P	**Pn**	**03 28 51.3**	**-0.4**
RTLL	**Cerro Villicun**	**0.72**	**1**	*i*P	**Pn**	**03 28 52.7**	**+0.3**
RTLL				*i*S	**Sn**	**03 29 08.6**	**+0.2**
RTLS	**Leoncito**	**0.73**	**290**	*i*P	**Pn**	**03 28 52.5**	**-0.2**
RTLS				IAML		03 28 52.6	
	comp=Z,1µm,0.3s						
RTLS				*i*S	**Sn**	**03 29 09.5**	**+0.6**
AUSP	**Uspallata**	**0.78**	**257**	⇓*i*P	**Pn**	**03 28 53.6**	**+0.6**
ARCO	**CERRO ARCO**	**0.87**	**205**	*i*P	**Pn**	**03 28 53.2**	**-0.5**
ARCO				*i*S	**Sn**	**03 29 10.5**	**-0.2**
ARCO				IAML		03 29 11.1	
	comp=Z,2µm,0.3s						
AAGR	**Agrelo**	**1.07**	**195**	⇓*i*P	**Pn**	**03 28 55.3**	**-0.1**
AVIZ	**Vizcacheras**	**1.42**	**181**	⇓*i*P	**Pn**	**03 28 59.0**	**+0.2**
ACDV	**Cuesta del Vie**	**1.95**	**344**	*i*P	**Pn**	**03 29 05.5**	**+0.3**
ACDV				IAML		03 29 05.9	
	comp=Z,353nm,0.3s						
FCH	**Farellones**	**1.98**	**230**	⇑*i*P	**Pn**	**03 29 06.0**	**+0.5**
FCH				*i*S	**Sn**	**03 29 33.5**	**+1.7**
AROD	**Rodeo**	**2.06**	**336**	*i*P	**Pn**	**03 29 07.1**	**+0.5**
PEL	**Peldehue**	**2.15**	**239**	⇑*i*P	**Pn**	**03 29 07.3**	**-0.1**
PEL				*i*S	**Sn**	**03 29 34.6**	**-0.5**
CLCH	**Cerro Calan**	**2.19**	**232**	*e*P	**Pn**	**03 29 08.1**	**+0.2**
CLCH				*i*S	**Sn**	**03 29 36.4**	**+0.6**
CLCH				IAML		03 29 37.4	
	comp=N,368nm,0.6s						
LMEL	**Las Melosas**	**2.30**	**218**	⇑*i*P	**Pn**	**03 29 09.9**	**+0.6**
LMEL				IAML		03 29 54.5	
	comp=N,117nm,0.1s						
ROCH	**El Roble**	**2.32**	**246**	⇑*i*P	**Pn**	**03 29 09.1**	**-0.6**
ROCH				*i*S	**Sn**	**03 29 38.2**	**-0.9**
ROCH				IAML		03 29 41.0	
	comp=N,526nm,0.3s						
ROC1	**El Roble**	**2.33**	**246**	*i*P	**Pn**	**03 29 09.0**	**-0.7**
APLL	**PUNTA DE LOS L**	**2.36**	**46**	*i*P	**Pn**	**03 29 09.8**	**-0.1**
APLL				IAML		03 29 41.4	
	comp=Z,186nm,0.5s						
MRA	**San Martin**	**2.38**	**100**	*i*P	**Pn**	**03 29 10.4**	**+0.1**
MRA				*i*S	**Sn**	**03 29 39.8**	**-0.4**
MRA				IAML		03 29 41.6	
	comp=Z,198nm,0.6s						
GO04	**Tololo Observa**	**2.73**	**313**	*i*S	**Sn**	**03 29 46.9**	**-1.4**
TLL	**Tololo Astrono**	**2.73**	**313**	⇑*i*P	**Pn**	**03 29 15.4**	**+0.5**
TLL				*i*S	**Sn**	**03 29 47.4**	**-1.1**
VCA	**Vinchina**	**3.31**	**4**	*i*P	**Pn**	**03 29 23.0**	**+0.7**
VCA				IAML		03 30 03.1	
	comp=Z,71nm,0.2s						
VCA	**Vinchina**	**3.31**	**4**	⇑*i*P	**Pn**	**03 29 23.0**	**+0.7**
TCA	**Tanti**	**3.39**	**79**	⇓*i*P	**Pn**	**03 29 23.1**	**-0.2**
TCA				IAML		03 30 03.0	
	comp=Z,103nm,0.8s						

MAN 02 03:38:54.6, 9°.52N×122°.60E, h21^{km}, mb4.4, ML3.2, MS2.9, 2C-4D, Negros

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNPH	**Sibulan**	**0.65**	**106**	⇓*i*P	Pb	03 39 06.7	-0.6
SNPH				*i*S	Sb	03 39 15.8	-0.2
GUIM	**Jordan**	**1.10**	**359**	*e*P	Pn	03 39 13.6	-1.1
GUIM				*e*S	Sn	03 39 29.2	0.0
DCPH	**Dipolog City**	**1.19**	**142**	⇑*e*P	Pn	03 39 15.6	-0.5
DCPH				*i*S	Sb	03 39 31.1	-0.3
TBP	**Tagbilaran**	**1.25**	**82**	*e*P	Pn	03 39 16.7	-0.2
TBP				*i*S	Sb	03 39 34.0	+0.8
JAP	**San Jose, Anti**	**1.38**	**332**	⇓*e*P	Pb	03 39 22.8	+3.1
JAP				*e*S	Sb	03 39 58.1	+21
LLP	**Lapu-Lapu**	**1.56**	**59**	*e*P	Pn	03 39 21.1	0.0
LLP				*i*S	Sn	03 39 41.0	+0.3
PAGZ	**Pagadian**	**1.83**	**155**	*e*P	Pn	03 39 25.1	+0.2
RCP	**Roxas**	**2.03**	**4**	⇑*e*P	Pn	03 39 28.6	+1.0
RCP				*e*S	Sn	03 39 53.0	+0.7
CUYO	**Cuyo Island**	**2.04**	**310**	*e*P	Pn	03 39 28.2	+0.4
CGP	**Cagayan de Oro**	**2.32**	**117**	⇓*e*P	Pn	03 39 33.7	+2.1
OCLP	**Ormoc**	**2.49**	**52**	*e*P	Pn	03 39 35.4	+1.5
PLP	**Palo**	**2.85**	**55**	⇓*e*P	Pn	03 39 38.5	-0.3
PLP				*e*S	Sn	03 40 11.0	-1.6
OTRP	**Odiongan**	**2.88**	**349**	*e*P	Pn	03 39 41.1	+1.8
BUKP	**Musuan**	**2.93**	**124**	*e*P	Pn	03 39 42.0	+2.0
BUSP	**Coron**	**3.42**	**316**	*e*P	Pn	03 39 47.1	+0.5

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*ISCJB **02** 03:52:30.9±0.5, 36°.97N±0°.08×135°.54E±0°.06, h350^{km}, mb3.4/3, Error ellipse: s-maj=10.5km s-min=6.8km az=175.6*

*JMA **02** 03:52:30.0±0.2, 36°.91N×135°.50E, h365^{km}±2^{km}, M2.9*

*IDC **02** 03:52:31.3±1.7, 36°.86N×135°.50E, h355^{km}±13^{km}, mb3.0/3, mb1 3.1/6, mb1mx2.7/74, mbtmp3.6/6, Error ellipse: s-maj=54.1km s-min=21.0km az=9.0*

ISC 02 03:52:31.2±0.9, 36°.89N±0°.10×135°.57E±0°.07, h350^{km}, n25, σ1^{s}05/30, mb3.4/3, Sea of Japan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKY	**Yasaka**	**1.31**	**197**	P	**Pn**	**03 53 18.9**	**+0.4**
JKSM	**Kasumi**	**1.49**	**210**	P	**Pn**	**03 53 19.5**	**+0.1**
JWT	**Wachi**	**1.61**	**185**	P	**Pn**	**03 53 20.6**	**+0.5**
MAT	**Matsushiro**	**2.14**	**98**	P	**Pn**	**03 53 24.5**	**+0.9**
MAT				S	**S**	**03 54 07.2**	**+1.6**
MJAR	**Matsushiro Arr**	**2.15**	**98**	P	**Pn**	**03 53 24.7**	**+1.1**
	1.1nm,0.3s,baz=274,slow=10,SNR=23						
MJAR				S	**S**	**03 54 08.1**	**+2.5**
	0.2nm,0.3s,baz=273,slow=20,SNR=4.5						
JSD	**Sado**	**2.43**	**61**	P	**Pn**	**03 53 26.5**	**+0.9**
JIE	**Ise**	**2.66**	**159**	P	**Pn**	**03 53 28.8**	**+1.1**
JWY	**Kouya**	**2.66**	**180**	P	**Pn**	**03 53 27.9**	**+0.1**
JHS	**Saijyo**	**2.74**	**227**	P	**Pn**	**03 53 28.3**	**-0.1**
JYT	**Yasato**	**3.78**	**99**	P	**Pn**	**03 53 38.3**	**+0.4**
JYS	**Shirataka**	**3.81**	**68**	P	**Pn**	**03 53 39.2**	**+1.0**
JFT	**Otama**	**3.85**	**79**	P	**Pn**	**03 53 39.8**	**+1.1**
JHO	**Hitachi**	**4.02**	**92**	P	**Pn**	**03 53 40.3**	**-0.1**
JHO				*e*S	**S**	**03 54 33.5**	**-2.7**
JHYU	**Hitachinakayam**	**4.07**	**96**	P	**Pn**	**03 53 41.3**	**+0.4**
JFK	**Kawauchi**	**4.26**	**82**	P	**Pn**	**03 53 42.6**	**-0.3**
JFK				S	**S**	**03 54 38.8**	**-2.0**
JMM	**Marumori**	**4.27**	**75**	P	**Pn**	**03 53 43.4**	**+0.5**
JYK	**Kaneyama**	**4.29**	**60**	P	**Pn**	**03 53 44.0**	**+0.8**
JIO	**Ouri**	**4.84**	**69**	P	**Pn**	**03 53 48.7**	**-0.3**
JMK	**Ichinoseki**	**4.92**	**64**	P	**Pn**	**03 53 50.1**	**+0.3**
BSO1	**Boso 1**	**4.93**	**115**	P	**Pn**	**03 53 49.4**	**-0.1**
KSRS	**Korea Array**	**6.13**	**278**	P	**Pn**	**03 54 04.0**	**+0.5**
	0.4nm,0.3s,baz=99,slow=12,SNR=18						
USRK	**Ussuriysk Ar.**	**7.80**	**341**	P	**Pn**	**03 54 23.1**	**+0.3**
	baz=160,slow=8.8						
ARCES	**ARCESS Array B**	**62.44**	**338**	P	**P**	**04 02 17.2**	**-0.4**
	1.3nm,1.0s,baz=51,slow=10,SNR=3.6						
YKA	**Yellowknife Ar**	**66.23**	**29**	P	**P**	**04 02 42.2**	**+0.2**
	0.2nm,0.6s,baz=306,slow=4.5,SNR=2.9						
FINES	**FINESS Array B**	**66.70**	**330**	P	**P**	**04 02 44.2**	**-0.8**
	1.3nm,0.9s,baz=58,slow=5.0,SNR=6.4						
FINES				pP	**pP**	**04 04 01.7**	**-0.1**
	0.4nm,0.3s,baz=46,slow=5.5,SNR=1.8						

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*ISCJB **02** 03:53:31.8±0.3, 16°.90S±0°.07×174°.08W±0°.09, h100^{km}, mb4.2/47, Error ellipse: s-maj=14.6km s-min=6.9km az=37.6*

*NEIC **02** 03:53:31.6±1.1, 16°.90S×174°.05W, h86^{km}±9^{km}, mb4.4/35, Error ellipse: s-maj=10.9km s-min=5.0km az=128.0*

*IDC **02** 03:53:31.0±3.0, 16°.91S×174°.04W, h84^{km}±26^{km}, mb3.9/12, mb1 4.1/13, mb1mx3.8/49, mbtmp4.2/13, MS3.5/2, Ms1 3.5/2, ms1mx2.8/44, Error ellipse: s-maj=25.4km s-min=13.4km az=123.0*

ISC 02 03:53:32.5±0.5, 16°.8S±0°.1×174°.0W±0°.1, h100^{km}, n96, σ1^{s}59/96, mb4.3/47, 1C, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.60**	**37**	P	**Pn**	**03 54 26.2**	**-0.2**
	35nm,0.3s,baz=111,slow=2.3,SNR=20						
AFI				S	**Sn**	**03 55 04.9**	**-3.2**
	222nm,0.3s,baz=234,slow=12,SNR=15						
AFI				LR	LR	03 55 30.7	
	comp=Z,131nm,18.2s,baz=265,slow=32						
AFI	**Afiamalu**	**3.60**	**37**	*e*Pn	**Pn**	**03 54 26.4**	**-0.1**
AFI				*e*Sn	**Sn**	**03 55 03.0**	**-5.2**
URZ	**Urewera**	**22.75**	**198**	P	**P**	**03 58 24.9**	**-1.4**
	8.8nm,0.5s,baz=75,slow=4.3,SNR=11						
HIZ	**Hauiti**	**23.73**	**202**	*e*P	**P**	**03 58 36.7**	**+1.2**
BKZ	**Black Stump Fm**	**23.77**	**199**	*e*P	**P**	**03 58 35.7**	**-0.2**
KHZ	**Kahutara**	**27.66**	**200**	*e*P	**P**	**03 59 10.7**	**-0.2**
H11S2	**WAKE ISLAND Hy**	**39.87**	**331**	T	T	04 42 34.8	
	baz=148,slow=74,SNR=12						
H11S3	**WAKE ISLAND Hy**	**39.89**	**331**	T	T	04 42 28.2	
	baz=148,slow=74,SNR=9.8						
H11S1	**WAKE ISLAND Hy**	**39.89**	**331**	T	T	04 42 30.3	
	baz=148						
KHLU	**Kahalu'u**	**40.32**	**27**	*e*P	**P**	**04 01 01.3**	**+0.8**
STKA	**Stephens Creek**	**42.83**	**241**	P	**P**	**04 01 20.6**	**-0.2**
	2.6nm,0.9s,baz=81,slow=11,SNR=4.6						
STKA	**Stephens Creek**	**42.83**	**241**	*e*P	**P**	**04 01 20.6**	**-0.2**
	6.5nm,2.0s						
WR1	**Warramunga Arr**	**48.96**	**258**	*e*P	**P**	**04 02 08.7**	**-0.5**
	55nm,1.9s						
WRA	**Warramunga Arr**	**48.96**	**258**	P	**P**	**04 02 08.7**	**-0.5**
	0.4nm,0.5s,baz=96,slow=7.5,SNR=5.1						
WRA				sP	**sP**	**04 02 39.4**	**-4.9**
	1.3nm,0.7s,baz=98,slow=6.6,SNR=3.7						
AS31	**Alice Springs**	**49.12**	**253**	*e*P	**P**	**04 02 09.8**	**-0.6**
	2.1nm,0.8s						
ASAR	**Alice Springs**	**49.12**	**253**	P	**P**	**04 02 09.8**	**-0.6**
	2.8nm,0.6s,baz=87,slow=8.3,SNR=27						
ASAR				sP	**sP**	**04 02 39.9**	**-5.6**
	8.1nm,0.6s,baz=89,slow=8.4,SNR=11						
VNDA	**Vanda**	**61.93**	**186**	P	**P**	**04 03 41.7**	**+0.5**
	1.2nm,0.9s,baz=0.4,slow=6.9,SNR=7.3						
QSPA	**South Pole Qui**	**73.25**	**180**	P	**P**	**04 04 52.3**	**-0.4**
	2.4nm,0.8s,baz=14,slow=2.2,SNR=7.4						
QSPA	**South Pole Qui**	**73.25**	**180**	*e*P	**P**	**04 04 52.4**	**-0.3**
PETK	**Petropavlovsk-**	**73.78**	**343**	P	**P**	**04 04 56.8**	**+1.1**
	3.6nm,0.7s,baz=120,slow=8.5						
PEA1	**Petropavlovsk-**	**73.79**	**343**	*e*P	**P**	**04 04 56.8**	**+1.0**
CMB	**Columbia Colle**	**74.21**	**41**	*e*P	**P**	**04 04 59.9**	**+1.3**
	2.4nm,0.9s						
AFDM	**Forest Hills D**	**74.39**	**40**	*e*P	**P**	**04 05 01.3**	**+1.6**
	3.4nm,1.0s						
YBH	**Yreka Blue Hor**	**75.07**	**37**	*e*P	**P**	**04 05 05.6**	**+2.0**
	6.8nm,1.0s						
LGBM	**Gray Butte**	**75.13**	**38**	*e*P	**P**	**04 05 02.5**	**-1.7**
BEKR	**Beckworth**	**75.32**	**40**	*e*P	**P**	**04 05 06.5**	**+1.3**
	3.4nm,0.8s						
YERR	**Yerington**	**75.49**	**41**	*e*P	**P**	**04 05 07.6**	**+1.3**
	4.6nm,1.0s						
NV01	**Mina Array Sit**	**75.77**	**42**	*e*P	**P**	**04 05 07.9**	**+0.1**
NVAR	**Mina Array Bea**	**75.77**	**42**	P	**P**	**04 05 08.7**	**+0.9**
	2.4nm,0.7s,baz=224,slow=9.1,SNR=15						
NV11	**Mina Array Sit**	**75.86**	**42**	*e*P	**P**	**04 05 09.7**	**+1.4**
	0.4nm,1.1s						
KVN	**Kaiserville**	**76.25**	**42**	*e*P	**P**	**04 05 11.8**	**+1.3**
	2.6nm,0.8s						
MOD	**Modoc Plateau**	**76.59**	**38**	*e*P	**P**	**04 05 13.3**	**+1.0**
	7.3nm,1.1s						
KSRS	**Korea Array**	**76.75**	**316**	P	**P**	**04 05 16.4**	**+3.4**
	1.7nm,1.0s,baz=118,slow=7.2,SNR=4.8						
KS15	**Wonju Array Si**	**76.76**	**316**	*e*P	**P**	**04 05 16.4**	**+3.2**
KSAR	**Wonju Array Be**	**76.76**	**316**	P	**P**	**04 05 16.4**	**+3.2**
PINE	**Pine Mountain**	**77.38**	**36**	*e*P	**P**	**04 05 17.5**	**+0.8**
	16nm,1.4s						
X16A	**Lo Mia Camp, P**	**78.29**	**49**	*e*P	**P**	**04 05 23.6**	**+1.6**
	2.9nm,1.0s						
CCUT	**Cedar City**	**78.54**	**45**	*e*P	**P**	**04 05 25.1**	**+1.7**
	6.0nm,1.3s						
J08A	**Circle Bar Ran**	**78.54**	**38**	*e*P	**P**	**04 05 24.6**	**+1.5**
	6.6nm,1.2s						

U15A	**North Rim**	**78.70**	**46**	*e*P	**P**	**04 05 26.0**	**+1.7**
	3.7nm,1.0s						
MTPU	**Mount Pierson**	**79.59**	**45**	*e*P	**P**	**04 05 31.6**	**+2.4**
	14nm,2.0s						
F10A	**Beach Ranch, E**	**80.80**	**36**	*e*P	**P**	**04 05 35.7**	**+0.5**
	4.7nm,0.8s						
HLID	**Hailey**	**81.09**	**39**	*e*P	**P**	**04 05 38.4**	**+1.4**
	3.0nm,1.0s						
MNTX	**Cornudas Mount**	**81.54**	**53**	*e*P	**P**	**04 05 40.5**	**+1.1**
	4.1nm,1.4s						
TX31	**Lajitas Ar. Si**	**81.89**	**56**	*e*P	**P**	**04 05 42.3**	**+0.9**
TXAR	**Lajitas Array**	**81.89**	**56**	P	**P**	**04 05 42.3**	**+1.0**
	1.0nm,1.0s,baz=220,slow=7.5,SNR=6.2						
PV12	**Saucer Basin,**	**82.05**	**46**	*e*P	**P**	**04 05 44.1**	**+1.9**
	14nm,1.5s						
TRF	**Thorofare Moun**	**82.11**	**11**	*e*P	**P**	**04 05 42.6**	**+0.8**
	5.8nm,0.8s						
MCK	**McKinley**	**82.61**	**11**	*e*P	**P**	**04 05 45.4**	**+1.2**
	9.9nm,0.9s						
DLMT	**Dillon**	**83.15**	**39**	*e*P	**P**	**04 05 49.0**	**+1.4**
	5.2nm,1.0s						
S22A	**4UR Ranch, Cre**	**83.16**	**47**	*e*P	**P**	**04 05 49.0**	**+1.0**
	3.3nm,0.9s						
REDW	**Red Top Meadow**	**83.18**	**41**	*e*P	**P**	**04 05 49.5**	**+1.6**
	4.4nm,1.0s						
TPAW	**Teton Pass**	**83.19**	**41**	*e*P	**P**	**04 05 49.7**	**+1.7**
	5.2nm,1.2s						
FXWY	**Fox Creek**	**83.21**	**41**	*e*P	**P**	**04 05 49.9**	**+1.8**
	6.3nm,1.5s						
HDA	**Harding Lake**	**83.59**	**11**	*e*P	**P**	**04 05 48.9**	**-0.4**
	35nm,1.0s						
CCB	**Clear Creek Bu**	**83.65**	**11**	*e*P	**P**	**04 05 50.5**	**+1.0**
	12nm,1.1s						
PD31	**Pinedale Array**	**83.70**	**42**	*e*P	**P**	**04 05 51.1**	**+0.5**
PDAR	**Pinedale Array**	**83.70**	**42**	P	**P**	**04 05 50.9**	**+0.2**
	1.3nm,0.6s,baz=215,slow=3.5,SNR=16						
PDAR	**Pinedale Array**	**83.70**	**42**	*e*P	**P**	**04 05 50.6**	**0.0**
BOZ	**Bozeman (W)**	**83.86**	**39**	*e*P	**P**	**04 05 52.4**	**+1.2**
	3.8nm,1.0s						
MDM	**Murphy Dome**	**83.86**	**11**	*e*P	**P**	**04 05 51.5**	**+0.9**
	9.8nm,1.1s						
IL1	**Eielson Array**	**83.93**	**11**	*e*P	**P**	**04 05 51.4**	**+0.5**
ILAR	**Eielson Array**	**83.93**	**11**	P	**P**	**04 05 51.5**	**+0.5**
	2.3nm,0.9s,baz=209,slow=6.0,SNR=21						
ILB	**Eielson Array**	**83.93**	**11**	*e*P	**P**	**04 05 51.9**	**+0.9**
IM3	**Indian Mountai**	**83.94**	**8**	*e*P	**P**	**04 05 52.3**	**+1.4**
HRY	**Holter Researc**	**84.32**	**38**	*e*P	**P**	**04 05 54.6**	**+1.1**
DAWY	**Dawson**	**84.92**	**15**	*e*P	**P**	**04 05 57.7**	**+1.7**
	7.6nm,0.9s						
EGAK	**Eagle**	**85.12**	**13**	*e*P	**P**	**04 05 58.5**	**+1.6**
	6.0nm,0.9s						
COLD	**Coldfoot**	**85.62**	**9**	*e*P	**P**	**04 06 01.6**	**+2.2**
	5.2nm,0.8s						
MAW	**Mawson**	**86.28**	**199**	P	**P**	**04 06 01.9**	**-0.9**
	1.7nm,0.8s,baz=84,slow=3.8,SNR=5.0						
YAK	**Yakutsk**	**90.16**	**337**	LR	LR	04 44 44.1	
	comp=Z,89nm,19.4s,baz=283,slow=34						
BVAR	**Borovoye Array**	**118.61**	**322**	PKP	**PKPdf**	**04 12 08.6**	**0.0**
	1.0nm,0.7s,baz=117,slow=1.6,SNR=5.6						
ARA0	**ARCESS Array S**	**125.91**	**352**	*e*PKPdf	**PKPdf**	**04 12 22.6**	**+0.4**
ARCES	**ARCESS Array B**	**125.91**	**352**	PKP	**PKPdf**	**04 12 22.6**	**+0.4**
	0.3nm,0.5s,baz=48,slow=1.8,SNR=4.8						
CLL	**Collm**	**145.12**	**352**	⇑*i*PKPbc	**PKPdf**	**04 12 58.6**	**+0.4**
	comp=Z,8.0nm,0.8s						
CLL				L	L	04 37 00.0	
	comp=Z,100nm,21.1s						
VRAC	**Vranov**	**146.45**	**347**	*e*PKP	**PKPab**	**04 13 03.2**	**+0.1**
KRUC	**Moravsky**	**146.73**	**347**	*e*PKP	**PKPab**	**04 13 04.1**	**-0.1**
BR101	**Keskin Array S**	**146.84**	**319**	*e*PKPbc	**PKPab**	**04 13 04.6**	**-0.6**
BRTR	**Keskin Array B**	**146.84**	**319**	PKPbc	**PKPab**	**04 13 04.6**	**-0.6**
	comp=Z,2.3nm,0.8s,baz=131,slow=2.8,SNR=11						
KHC	**Kasperske Hory**	**147.17**	**351**	*e*PKP	**PKPab**	**04 13 05.0**	**-1.0**
GEC2	**GERESS Array S**	**147.43**	**351**	*e*PKPbc	**PKPab**	**04 13 05.7**	**-1.3**
GERES	**GERESS Array B**	**147.43**	**351**	PKPbc	**PKPab**	**04 13 05.7**	**-1.3**
	comp=Z,0.9nm,0.7s,baz=20,slow=4.3,SNR=8.7						
CONA	**Conrad Observa**	**147.92**	**347**	*i* PKPbc	**PKPab**	**04 13 07.3**	**-1.7**
	comp=Z,5.5nm,0.9s						
MOA	**Molln**	**148.30**	**349**	*i* PKPbc	**PKPab**	**04 13 07.8**	**-2.7**
	comp=Z,4.6nm,1.2s						
ARSA	**Arzberg**	**148.63**	**347**	*i* PKiKP	**PKPab**	**04 13 09.6**	**-2.2**
	comp=Z,2.4nm,0.7s						
RETA	**Reutte**	**149.15**	**354**	*i* PKPbc	**PKPbc**	**04 13 10.3**	**+0.8**
	comp=Z,2.1nm,0.6s						
KBA	**Koelnbreinsper**	**149.20**	**350**	*i* PKiKP	**PKiKP**	**04 13 10.5**	**-0.4**
	comp=Z,2.5nm,0.6s						
WATA	**Walderalm**	**149.21**	**353**	*i* PKiKP	**PKiKP**	**04 13 11.4**	**+0.5**
	comp=Z,2.6nm,0.5s						
MOTA	**Moosalm**	**149.25**	**353**	*i* PKPbc	**PKPbc**	**04 13 10.2**	**+0.4**
	comp=Z,2.9nm,0.8s						
WTTA	**Wattenberg**	**149.27**	**352**	*i* PKPbc	**PKPbc**	**04 13 10.0**	**+0.1**
	comp=Z,5.6nm,0.5s						
SOKA	**Soboth**	**149.28**	**348**	*i* PKPbc	**PKPbc**	**04 13 10.2**	**+0.4**
	comp=Z,6.7nm,1.4s						
DAVA	**Damuels**	**149.43**	**355**	*i* PKiKP	**PKiKP**	**04 13 11.2**	**-0.1**
	comp=Z,7.9nm,1.1s						
OBKA	**Obir**	**149.54**	**348**	*i* PKPbc	**PKPbc**	**04 13 10.6**	**+0.2**
	comp=Z,2.9nm,0.7s						
MYKA	**Terra Mystica**	**149.59**	**350**	*i* PKPbc	**PKPbc**	**04 13 10.2**	**-0.3**
	comp=Z,2.7nm,0.6s						
FETA	**Feichten**	**149.61**	**354**	*i* PKPbc	**PKPbc**	**04 13 09.6**	**-1.1**
	comp=Z,7.7nm,1.1s						
ABTA	**Abfaltersbach**	**149.66**	**351**	*i* PKPbc	**PKPbc**	**04 13 10.9**	**+0.2**
	comp=Z,6.6nm,0.6s						

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*MOS **02** 03:59:23.1±2.1, 49°.07N×101°.90E, h9km, mb4.9/1, Error ellipse: s-maj=20.2km s-min=9.5km az=77.6*

BYKL 02 03:59:23.3±0.6**, 49°.05N**×**101°.94E, 1C-10D, Mongolia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAK	**Zakamensk**	**1.59**	**33**	⇓*i*Pg	Pn	03 59 51.9	-0.9
	282nm,0.7s						
ZAK				⇓*i*Pg	Pn	03 59 51.9	-0.9
	194nm,0.7s						
ZAK				⇓*i*Pg	Pn	03 59 51.9	-0.9
	269nm,0.7s						
ZAK				Pmax		03 59 53.0	
	582nm,0.3s						
ZAK				*e*Sg	Sn	04 00 13.4	-0.8
ZAK				*e*		04 00 17.1	
ZAK				max		04 00 18.0	
	3μm,0.6s						
ZAK	**Zakamensk**	**1.59**	**33**	*e*PN	Pn	03 59 51.8	-1.0
ZAK				*e*		04 00 12.9	
ZAK				pmax	pmax		
	comp=Z,648nm,0.2s						
ZAK				smax	smax		
	comp=E,3μm,0.5s						
MOY	**Mondy**	**2.69**	**347**	*e*Pn	Pn	04 00 07.9	0.0
MOY				⇑*i*Pg	Pb	04 00 11.1	-1.3
MOY				Pmax		04 00 11.7	
	comp=E,627nm,0.7s						
MOY				*e*Sg	Sb	04 00 46.6	+0.7
MOY				Smax		04 00 49.5	
	comp=E,4μm,1.0s						
MOY	**Mondy**	**2.69**	**347**	*e*PN	Pn	04 00 08.1	+0.2
MOY				*e*		04 00 11.1	
MOY				*e*		04 00 46.6	
MOY				pmax	pmax		
	comp=Z,626nm,0.6s						
MOY				smax	smax		
	comp=E,4μm,0.5s						
TLY	**Talaya**	**2.85**	**22**	⇓*i*Pg	Pb	04 00 14.4	-0.7
TLY				Pmax		04 00 14.8	
	comp=E,337nm,0.5s						
TLY				*e*Sg	Sb	04 00 52.0	+1.5
TLY				Smax		04 00 54.7	
	comp=E,2μm,0.5s						
TLY				*e*SgSg	SnSn	04 01 00.1	+3.9
TLY	**Talaya**	**2.85**	**22**	*de*PN	Pn	04 00 09.8	-0.3
TLY				*i*		04 00 14.3	
TLY				*e*		04 00 51.1	
TLY				pmax	pmax		
	comp=Z,371nm,0.4s						
TLY				smax	smax		
	comp=N,2μm,0.3s						
ARS	**Arshan**	**2.89**	**6**	*e*Pn	Pn	04 00 10.4	-0.2
ARS				*e*Pg	Pb	04 00 14.8	-1.0
ARS				Pmax		04 00 28.5	
	comp=N,184nm,0.5s						
ARS				*e*Sg	Sb	04 00 53.4	+1.7
ARS				Smax		04 00 56.5	
	comp=N,2μm,1.1s						
ARS	**Arshan**	**2.89**	**6**	*e*PN	Pb	04 00 14.6	-1.2
ARS				*e*		04 00 53.3	
ARS				pmax	pmax		
	comp=Z,183nm,0.7s						
ARS				smax	smax		
	comp=N,2μm,1.2s						
IVK	**Ivanovka**	**3.18**	**29**	⇓*i*Pn	Pn	04 00 14.5	0.0
IVK				*e*Pg	Pb	04 00 20.1	-0.5
IVK				*e*PgPg	PgPg	04 00 25.0	+0.9
IVK				max		04 00 30.9	
	comp=N,99nm,1.0s						
IVK				*e*		04 00 40.5	
IVK				*e*Sg	Sb	04 01 01.3	+1.5
IVK				Smax		04 01 11.5	
	comp=N,932nm,1.0s						
KNGR	**Kungurtug, Tuv**	**3.26**	**300**	*e*Pn	Pn	04 00 16.1	+0.3
KNGR				⇓*i*Pg	Pb	04 00 22.5	+0.4
KNGR				*e*Sg	Sg	04 01 06.4	-1.6
LSTR	**Listvyanka**	**3.37**	**32**	*e*Pn	Pn	04 00 16.8	-0.4
LSTR				*e*Pg	Pb	04 00 23.6	-0.3
LSTR				Pmax		04 00 32.7	
	comp=N,92nm,0.5s						
LSTR				*e*		04 00 47.8	
LSTR				*e*Sg	Sb	04 01 08.3	+2.8
LSTR				Smax		04 01 14.1	
	comp=N,445nm,1.5s						
IRK	**Irkutsk**	**3.52**	**24**	*e*Pg	Pb	04 00 26.3	-0.2
IRK				Pmax		04 00 30.2	
	comp=N,352nm,0.1s						
IRK				*e*Sg	Sb	04 01 12.5	+2.7
IRK				Smax		04 01 17.6	
	comp=N,4μm,0.8s						
IRK	**Irkutsk**	**3.52**	**24**	*e*PN	Pb	04 00 25.9	-0.6
IRK				*e*		04 01 12.2	
IRK				pmax	pmax		
	comp=Z,352nm,0.1s						
IRK				smax	smax		
	comp=E,4μm,1.0s						
BGT	**Bolshoye Golou**	**3.73**	**35**	*e*Pg	Pb	04 00 30.1	+0.2
BGT				Pmax		04 00 32.6	
	comp=E,176nm,0.5s						
BGT				*e*		04 00 50.8	
BGT				*e*		04 00 57.8	
BGT				*e*Sg	Sb	04 01 18.9	+3.3
BGT				Smax		04 01 26.0	
	comp=E,584nm,0.5s						
ORL	**Orlik**	**3.75**	**340**	⇓*i*Pn	Pn	04 00 22.5	+0.1
ORL				*e*Pg	Pb	04 00 30.2	-0.2
ORL				Pmax		04 00 32.1	
	comp=E,217nm,0.6s						
ORL				*i* Sg	Sb	04 01 19.1	+2.8
ORL				*e*		04 01 26.5	
ORL				max		04 01 27.6	
	comp=E,664nm,1.0s						
ORL	**Orlik**	**3.75**	**340**	*e*PN	Pb	04 00 30.0	-0.4
ORL				*e*		04 01 18.6	
ORL				pmax	pmax		
	comp=Z,218nm,0.5s						
ORL				smax	smax		
	comp=E,671nm,1.0s						
HRMR	**Khuramsha**	**4.12**	**49**	*e*Pn	Pn	04 00 26.9	-0.6
HRMR				*e*Pg	Pb	04 00 36.7	0.0
HRMR				Pmax		04 00 38.8	
	comp=E,406nm,0.4s						
HRMR				*e*Sg	Sb	04 01 30.8	+3.8
HRMR				Smax		04 01 52.8	
	comp=E,2μm,1.2s						
KAB	**Kabansk**	**4.25**	**43**	*e*	Pb	04 00 36.5	-2.4
KAB				max		04 00 47.9	
	comp=E,333nm,0.9s						
KAB				*e*Sg	Sg	04 01 35.9	-3.8
KAB				Smax		04 02 03.0	
	comp=E,1μm,0.9s						
ERNS	**Erzin**	**4.57**	**288**	*e*Pn	Pn	04 00 32.9	-0.9
ERNS				*e*		04 00 40.0	
ERNS				*e*Pg	Pb	04 00 45.4	+1.0
ERNS				*e*		04 01 18.7	
ERNS				*e*Sg	Sg	04 01 46.6	-3.5
UUDB	**Ulan-Yde**	**4.62**	**50**	*e*Pn	Pn	04 00 33.8	-0.5
UUDB				*e*Pg	Pb	04 00 45.9	+0.8
UUDB				Pmax		04 00 52.7	
	comp=E,257nm,0.6s						
UUDB				*e*Sg	Sg	04 01 47.1	-4.4
UUDB				Smax		04 02 11.6	
	comp=E,592nm,1.6s						
TRG	**Tyrgan**	**4.64**	**35**	*e*Pn	Pn	04 00 35.2	+0.5
TRG				*e*		04 00 40.2	
TRG				*e*Pg	Pb	04 00 46.4	+0.8
TRG				Pmax		04 00 48.2	
	comp=E,68nm,0.3s						
TRG				*e*Sg	Sb	04 01 46.7	+4.6
TRG				Smax		04 01 51.7	
	comp=E,577nm,0.8s						
TRG				*e*		04 01 56.4	
TRG	**Tyrgan**	**4.64**	**35**	*e*PN	Pn	04 00 33.6	-1.1
TRG				*e*		04 00 46.5	
TRG				*e*S	Sn	04 01 27.6	-1.7
TRG				*e*		04 01 46.9	
TRG				pmax	pmax		
	comp=Z,66nm,0.3s						
TRG				smax	smax		
	comp=E,574nm,0.8s						
KELR	**Kotokel**	**5.37**	**44**	*e*Pg	Pb	04 00 59.9	+1.9
KELR				*e*Sg	Sg	04 02 10.8	-5.0
KELR				*e*		04 02 14.8	
KZLR	**Kyzyl**	**5.48**	**302**	Sg	Sg	04 02 13.0	-6.1
HVS	**Khovu-Aksy**	**5.70**	**295**	⇓*e*PN	Pn	04 00 48.3	-0.9
OGRR	**Ongureny**	**5.80**	**35**	*e*Pn	Pn	04 00 51.7	+1.1
OGRR				*e*		04 00 58.9	
OGRR				*e*Pg	Pb	04 01 07.4	+2.1
OGRR				Pmax		04 01 14.5	
	comp=E,48nm,0.8s						
OGRR				*e*Sg	Sg	04 02 23.7	-5.9
OGRR				Smax		04 02 28.5	
	comp=E,371nm,0.7s						
OGRR	**Ongureny**	**5.80**	**35**	*e*PN	Pn	04 00 51.8	+1.2
OGRR				*e*		04 01 08.6	
OGRR				*e*		04 02 20.9	
OGRR				pmax	pmax		
	comp=Z,48nm,1.0s						
OGRR				smax	smax		
	comp=E,368nm,0.8s						
MXMB	**Maximikha**	**6.01**	**43**	*e*Pg	Pb	04 01 10.8	+2.0
MXMB				*e*Sg	Sg	04 02 30.2	-6.0
SYVR	**Suvo**	**6.84**	**45**	*e*Pn	Pn	04 01 04.8	0.0
SYVR				*e*Pg	Pb	04 01 26.2	+3.3
SYVR				Pmax		04 01 28.0	
	comp=E,47nm,0.7s						
SYVR				Sg	Sg	04 02 55.3	-7.4
SYVR				Smax		04 03 29.0	
	comp=E,123nm,1.1s						
SYVR	**Suvo**	**6.84**	**45**	*e*PN	Pn	04 01 04.7	-0.1
KPC	**Khapcheranga**	**6.85**	**81**	*e*Pn	Pn	04 01 02.6	-2.4
KPC				*e*Pg	Pb	04 01 26.9	+3.7
KPC				Pmax		04 01 28.7	
	comp=E,34nm,0.8s						
KPC				*e*		04 01 33.6	
KPC				*e*Sg	Sg	04 02 56.7	-6.4
KPC				Smax		04 03 11.6	
	comp=E,593nm,1.1s						
KPC	**Khapcheranga**	**6.85**	**81**	*e*PN	Pn	04 01 02.8	-2.2
KPC				*e*		04 01 26.7	
KPC				*e*		04 02 57.1	
KPC				pmax	pmax		
	comp=Z,34nm,0.7s						
KPC				smax	smax		
	comp=N,590nm,1.3s						
CIT	**Chita**	**7.97**	**64**	*e*		04 03 22.4	
CIT				*e*Sg	Sg	04 03 29.1	-10
CIT				*e*		04 03 31.6	
CIT				max		04 03 50.4	
	comp=N,191nm,1.1s						
YLYR	**Ulyunkhan**	**8.15**	**41**	*e*Pn	Pn	04 01 22.8	0.0
YLYR				*e*		04 01 29.7	
YLYR				*e*Pg	Pb	04 01 49.7	+4.5
YLYR				Pmax		04 01 54.5	
	comp=N,10.0nm,1.0s						
YLYR				*e*Sg	Sg	04 03 34.7	-10
YLYR				*e*		04 03 48.0	
YLYR				max		04 03 48.8	
	comp=N,117nm,1.6s						
NIZ	**Nizh Angarsk**	**8.18**	**32**	Pg	Pb	04 01 49.8	+4.1
NIZ				Pmax		04 01 55.3	
	comp=N,10.0nm,0.8s						
NIZ				*e*Sn	Sn	04 02 50.1	-6.1
NIZ				*e*		04 03 03.2	
NIZ				*e*Sg	Sg	04 03 35.0	-11
NIZ				Smax		04 03 46.7	
	comp=N,186nm,1.8s						
KMO	**Kumora**	**8.87**	**36**	*e*	Pn	04 01 34.5	+1.8
KMO				max		04 02 25.4	
	comp=N,10.0nm,0.5s						
KMO				*e*Sg	Sg	04 03 59.8	-8.1
KMO				*e*		04 04 12.0	
KMO				Smax		04 04 18.6	
	comp=N,190nm,1.3s						
YOA	**Uoyan**	**9.25**	**36**	*e*Sg	Sn	04 04 11.1	+48
YOA				*e*		04 04 37.2	
YOA				max		04 05 01.1	
	comp=N,790nm,1.7s						
UKT	**Uakit**	**9.63**	**44**	*e*Sg	Sn	04 04 21.3	+49
UKT				Smax		04 04 40.6	
	comp=N,58nm,1.5s						
SVKR	**Severomuysk**	**9.99**	**41**	Sg	Sn	04 04 33.4	+53
SVKR				*e*		04 04 35.8	
SVKR				max		04 05 01.7	
	comp=N,183nm,1.3s						
NLYR	**Nelyaty**	**11.17**	**43**	*e*Pn	Pn	04 02 04.0	-0.1
NLYR				Sg	Sn	04 05 09.0	+59
NLYR				Smax		04 05 42.3	
	comp=N,145nm,1.4s						
BOD	**Bodaibo**	**11.34**	**35**	*e*Sg		04 05 15.5	
BOD				*e*		04 05 29.4	
BOD				max		04 05 30.3	
	comp=N,73nm,1.5s						
HIA	**Hailar**	**11.66**	**82**	*e*		04 04 28.4	
HIA				*e*Sg		04 05 26.2	
HIA				*e*		04 05 39.2	
TUP	**Tupik**	**12.38**	**57**	*e*Pn	Pn	04 02 19.3	-1.4
TUP				*e*		04 02 27.4	
TUP				max		04 02 53.3	
	comp=N,2.0nm,1.5s						
TUP				*e*		04 03 24.0	
TUP				*e*Sg		04 05 43.8	
TUP				*e*		04 05 54.5	
TUP				max		04 06 10.9	
	comp=N,177nm,1.3s						
KURK	**Kurchatov**	**15.11**	**285**	⇓*e*P	Pn	04 02 55.2	-2.7

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*IDC **02** 04:06:07.9±4.0, 66°.97N×168°.69W, h0km, mb3.7/2, mb1 4.1/3, mb1mx3.3/73, mbtmp3.7/3, ML3.3/1, Error ellipse: s-maj=157.5km s-min=53.1km az=179.0*

*ISCJB **02** 04:06:10.7±1.1, 67°.40N±0°.07×167°.0W±0°.2, h10km, mb3.4/3, Error ellipse: s-maj=13.4km s-min=6.0km az=136.0*

*NEIC **02** 04:06:11.6±0.0, 67°.44N×167°.24W, h20km, ML3.3(AEIC), After AEIC.*

ISC 02 04:06:12.2±1.5**, 67°.45N**±0°.09×**167°.2W**±0°.1**, h10km, n12, σ1s.38**/17**, mb3.6**/3**, Bering Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RDOG	**Red Dog Mine**	**1.74**	**68**	P	**Pn**	**04 06 40.9**	**-1.6**
RDOG				S	**Sn**	**04 07 03.6**	**-1.1**
ANM	**Nome**	**2.99**	**165**	P	**Pn**	**04 06 58.4**	**-1.3**
ANM				S	**Sn**	**04 07 35.5**	**0.0**
GAMB	**Gambell**	**4.14**	**209**	P	**Pn**	**04 07 12.3**	**-3.0**
GAMB				S	**Sn**	**04 08 03.8**	**+0.1**
GCSA	**Galena City Sc**	**5.00**	**118**	P	**Pn**	**04 07 26.7**	**-0.4**
IM3	**Indian Mountai**	**5.53**	**99**	P	**Pn**	**04 07 33.8**	**-0.7**
IM3				S	**Sn**	**04 08 37.3**	**-0.7**
TT01	**Tatalina**	**6.54**	**129**	P	**Pn**	**04 07 47.6**	**-0.8**
COLD	**Coldfoot**	**6.57**	**84**	P	**Pn**	**04 07 47.8**	**-0.9**
TOLK	**Toolik Lake Re**	**6.71**	**72**	P	**Pn**	**04 07 49.4**	**-1.2**
ILAR	**Eielson Array**	**8.65**	**99**	Pn	**Pn**	**04 08 16.7**	**-0.6**
	0.3nm,0.3s,baz=293,slow=14,SNR=24						
ILAR				Sn	**Sn**	**04 09 53.6**	**-1.1**
	0.1nm,0.3s,baz=295,slow=22,SNR=3.4						
YKA	**Yellowknife Ar**	**22.19**	**78**	P	**P**	**04 11 10.1**	**+2.1**
	0.3nm,0.5s,baz=304,slow=9.9,SNR=2.6						
PDAR	**Pinedale Array**	**39.08**	**99**	P	**P**	**04 13 40.9**	**+1.6**
	0.8nm,0.5s,baz=338,slow=8.7,SNR=9.9						
TXAR	**Lajitas Array**	**53.14**	**102**	P	**P**	**04 15 30.2**	**+0.2**
	0.6nm,0.8s,baz=333,slow=5.7,SNR=7.2						

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*KRSC **02** 04:15:24.8±1.0, 56°.04N×164°.71E, h60km±18km, ML4.5*

*IDC **02** 04:15:25.0±0.8, 56°.30N×164°.52E, h0km, mb3.8/12, mb1 4.0/14, mb1mx3.7/74, mbtmp3.8/14, ML4.1/1, MS3.3/11, Ms1 3.3/11, ms1mx2.9/65, Error ellipse: s-maj=33.6km s-min=13.4km az=164.0*

*NEIC **02** 04:15:26.4±0.2, 56°.22N×164°.51E, h10km, mb4.4/17, Error ellipse: s-maj=10.5km s-min=3.7km az=154.0*

*MOS **02** 04:15:27.8±0.8, 56°.02N×164°.54E, h47km, mb4.4/8, Error ellipse: s-maj=8.0km s-min=5.4km az=50.3*

ISC 02 04:15:23.9±1.4**, 56°.07N**±0°.04×**164°.62E**±0°.03**, h1km**±9km**, n156, σ1s.37**/160**, mb4.3**/30**, MS3.2**/10**, 1D, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**1.02**	**279**	*e*P	**Pb**	**04 15 43.9**	**-0.4**
KBTR				*e*S	**Sb**	**04 15 57.4**	**-0.8**
KBTR	**Krutoberegovo**	**1.02**	**279**	PN	**Pb**	**04 15 43.9**	**-0.4**
KBTR				S	**Sb**	**04 15 57.4**	**-0.8**
KBG	**Krutoberegovo**	**1.09**	**281**	*i* P	**Pg**	**04 15 44.6**	**-0.1**
KBG				*e*S	**Sb**	**04 15 59.4**	**-0.8**
KBG	**Krutoberegovo**	**1.09**	**281**	PN	**Pg**	**04 15 44.6**	**-0.1**
KBG				S	**Sb**	**04 15 59.4**	**-0.8**
BKI	**Bering**	**1.16**	**138**	*e*P	**Pn**	**04 15 46.9**	**-0.3**
BKI				*e*S	**Sg**	**04 16 01.6**	**+0.6**
BKI	**Bering**	**1.16**	**138**	PN	**Pn**	**04 15 46.9**	**-0.3**
BKI				S	**Sg**	**04 16 01.6**	**+0.6**
SMKR	**Semkarok**	**1.83**	**288**	*e*P	**Pb**	**04 15 56.7**	**-1.5**
SMKR				*e*S	**Sb**	**04 16 20.1**	**-1.5**
SMKR	**Semkarok**	**1.83**	**288**	PN	**Pb**	**04 15 56.7**	**-1.5**
SMKR				S	**Sb**	**04 16 20.1**	**-1.5**
BDR	**Baidarnaya**	**1.96**	**286**	*e*P	**Pb**	**04 15 59.3**	**-1.2**
BDR				*e*S	**Sb**	**04 16 23.7**	**-1.8**
BDR	**Baidarnaya**	**1.96**	**286**	PN	**Pb**	**04 15 59.3**	**-1.2**
BDR				S	**Sb**	**04 16 23.7**	**-1.8**
SRKR	**Sorokina**	**2.01**	**288**	*e*P	**Pb**	**04 15 59.6**	**-1.7**
SRKR				*e*S	**Sb**	**04 16 25.1**	**-1.7**
SRKR	**Sorokina**	**2.01**	**288**	PN	**Pb**	**04 15 59.6**	**-1.7**
SRKR				S	**Sb**	**04 16 25.1**	**-1.7**
ZLN	**Zelenaya**	**2.14**	**270**	*e*P	**Pn**	**04 16 01.5**	**+0.6**
ZLN				*e*S	**Sn**	**04 16 27.0**	**-1.1**
ZLN	**Zelenaya**	**2.14**	**270**	PN	**Pn**	**04 16 01.5**	**+0.6**
ZLN				S	**Sn**	**04 16 27.0**	**-1.1**
CIRR	**Tsirk**	**2.17**	**273**	*e*P	**Pn**	**04 16 01.5**	**+0.2**
CIRR	**Tsirk**	**2.17**	**273**	PN	**Pn**	**04 16 01.5**	**+0.2**
LGNR	**Loginova**	**2.20**	**272**	*e*P	**Pn**	**04 16 03.1**	**+1.2**
LGNR	**Loginova**	**2.20**	**272**	PN	**Pn**	**04 16 03.1**	**+1.2**
KLY	**Klyuchi**	**2.23**	**278**	*e*P	**Pn**	**04 16 01.2**	**-0.8**
KLY	**Klyuchi**	**2.23**	**278**	PN	**Pn**	**04 16 01.2**	**-0.8**
MKZ	**Mys Kozlova**	**2.24**	**229**	*e*P	**Pn**	**04 16 01.5**	**-0.6**
MKZ				*e*S	**Sn**	**04 16 28.1**	**-2.3**
MKZ	**Mys Kozlova**	**2.24**	**229**	PN	**Pn**	**04 16 01.5**	**-0.6**
MKZ				S	**Sn**	**04 16 28.1**	**-2.3**
KRSR	**Krestovskiy**	**2.27**	**275**	*e*P	**Pn**	**04 16 03.7**	**+1.0**
KRSR	**Krestovskiy**	**2.27**	**275**	PN	**Pn**	**04 16 03.7**	**+1.0**
BZWR	**Bezymyannyi-We**	**2.32**	**269**	*e*P	**Pn**	**04 16 04.6**	**+1.3**
BZWR	**Bezymyannyi-We**	**2.32**	**269**	PN	**Pn**	**04 16 04.6**	**+1.3**
BZMR	**Bezymyannaya**	**2.32**	**268**	*e*P	**Pn**	**04 16 04.1**	**+0.7**
BZMR	**Bezymyannaya**	**2.32**	**268**	PN	**Pn**	**04 16 04.1**	**+0.7**
KIRR	**Kirishev**	**2.41**	**269**	*e*P	**Pn**	**04 16 05.8**	**+1.3**
KIRR	**Kirishev**	**2.41**	**269**	PN	**Pn**	**04 16 05.8**	**+1.3**
KPT	**Kopyto**	**2.47**	**269**	*e*P	**Pn**	**04 16 06.6**	**+1.2**
KPT	**Kopyto**	**2.47**	**269**	PN	**Pn**	**04 16 06.6**	**+1.2**
KMNR	**Kamenistaya**	**2.49**	**265**	*e*P	**Pb**	**04 16 07.7**	**-1.7**
KMNR	**Kamenistaya**	**2.49**	**265**	PN	**Pb**	**04 16 07.7**	**-1.7**
TUMD	**Tumrok D**	**2.54**	**252**	*e*P	**Pn**	**04 16 07.7**	**+1.4**
TUMD				*e*S	**Sn**	**04 16 38.4**	**+0.5**
KZV	**Kizimen**	**2.63**	**250**	*e*P	**Pn**	**04 16 09.1**	**+1.4**
KZV	**Kizimen**	**2.63**	**250**	PN	**Pn**	**04 16 09.1**	**+1.4**
TUMR	**Tumrok**	**2.65**	**255**	*e*P	**Pn**	**04 16 09.9**	**+2.0**
TUMR	**Tumrok**	**2.65**	**255**	PN	**Pn**	**04 16 07.7**	**-0.2**
TUMR				S	**Sn**	**04 16 38.4**	**-2.3**
KOZ	**Kozyrevsk**	**2.66**	**272**	*e*P	**Pn**	**04 16 09.5**	**+1.6**
KOZ	**Kozyrevsk**	**2.66**	**272**	PN	**Pn**	**04 16 09.5**	**+1.6**
OSSR	**Ossora**	**3.30**	**346**	*e*P	**Pn**	**04 16 16.7**	**+0.1**
OSSR	**Ossora**	**3.30**	**346**	PN	**Pn**	**04 16 16.7**	**+0.1**
KII	**Karymskiy**	**3.60**	**238**	*e*P	**Pn**	**04 16 21.5**	**+0.6**
KII	**Karymskiy**	**3.60**	**238**	PN	**Pn**	**04 16 21.5**	**+0.6**
PALN	**Palana**	**3.93**	**322**	*e*P	**Pn**	**04 16 26.6**	**+1.3**

PALN	Palana	3.93	322	PN	Pn	04 16 26.6	+1.3
SPN	Mys Shipunski	4.00	224	*e*P	Pn	04 16 25.4	-0.9
SPN	Mys Shipunski	4.00	224	PN	Pn	04 16 25.4	-0.9
NLC	Nalytchevo	4.22	229	*e*P	Pn	04 16 29.5	+0.2
NLC				*e*S	Sn	04 17 16.9	-2.3
NLC	Nalytchevo	4.22	229	PN	Pn	04 16 29.5	+0.2
NLC				S	Sn	04 17 16.9	-2.3
SDLR	Sedlovina	4.35	232	*e*P	Pn	04 16 31.9	+0.7
SDLR	Sedlovina	4.35	232	PN	Pn	04 16 31.9	+0.7
KRER	Koryakskii	4.39	233	*e*P	Pn	04 16 33.3	+1.5
KRER	Koryakskii	4.39	233	PN	Pn	04 16 33.3	+1.5
KRX	Arik	4.40	234	*e*P	Pn	04 16 33.6	+1.7
KRX	Arik	4.40	234	PN	Pn	04 16 33.6	+1.7
UGLR	Uglovaya	4.42	232	*e*P	Pn	04 16 33.5	+1.3
UGLR	Uglovaya	4.42	232	PN	Pn	04 16 33.5	+1.3
KOK	Koryaka	4.45	234	P	Pn	04 16 31.5	-1.1
KOK	Koryaka	4.45	234	PN	Pn	04 16 31.5	-1.1
TILK	Tilichiki	4.46	10	*e*P	Pn	04 16 33.4	+0.8
TILK				*e*S	Sn	04 17 22.6	-2.5
TILK	Tilichiki	4.46	10	PN	Pn	04 16 33.4	+0.8
GNL	Ganaly	4.53	241	*e*P	Pn	04 16 34.9	+1.2
GNL	Ganaly	4.53	241	PN	Pn	04 16 34.9	+1.2
DALK	Dalny	4.57	231	*e*P	Pn	04 16 35.9	+1.7
DALK	Dalny	4.57	231	PN	Pn	04 16 35.9	+1.7
PET	Petropavlovsk	4.62	231	*e*Pn	Pn	04 16 35.9	+1.1
PET				*e*Sn	Sn	04 17 26.9	-2.1
PET	Petropavlovsk	4.62	231	*e*PN	Pn	04 16 36.9	+2.1
PET				*e*S	Sn	04 17 28.4	-0.7
PET				smax	smax		
	comp=E,117nm,0.8s						
PET				MLR	MLR		
	comp=Z,300nm,17.0s						
KRMR	Karymshinskiy	4.99	232	*e*P	Pn	04 16 40.4	+0.6
KRMR	Karymshinskiy	4.99	232	PN	Pn	04 16 40.4	+0.6
PEA1	Petropavlovsk-	5.00	237	*e*Pn	Pn	04 16 41.4	+1.4
PETK	Petropavlovsk-	5.00	236	Pn	Pn	04 16 41.4	+1.4
	baz=52,slow=15						
RUS	Russkaya	5.11	227	*e*P	Pn	04 16 41.7	+0.2
RUS	Russkaya	5.11	227	PN	Pn	04 16 41.7	+0.2
MTVR	Mutnovka	5.21	229	*e*P	Pn	04 16 43.4	+0.4
MTVR	Mutnovka	5.21	229	PN	Pn	04 16 43.4	+0.4
APC	Apacha	5.37	237	*e*P	Pn	04 16 45.6	+0.5
APC	Apacha	5.37	237	PN	Pn	04 16 45.6	+0.5
KDTR	Khodutka, Kamc	5.75	225	*e*P	Pn	04 16 50.2	-0.2
MIPR	Malaya Ipel'ka	5.98	234	P	Pn	04 16 54.6	+1.1
MIPR	Malaya Ipel'ka	5.98	234	PN	Pn	04 16 54.6	+1.1
SKR	Severo-Kuril's	7.41	227⇓	*e*PN	Pn	04 17 24.4	+11
MA2	Magadan	8.18	301	LR	LR	04 20 58.9	
	comp=Z,109nm,19.4s,baz=122,slow=42						
ATKA	Atka Island	12.99	98	*e*Pn	Pn	04 18 28.4	-1.0
ASAJ	Asahikawa	18.41	239	P	Pn	04 19 42.1	+1.8
	comp=Z,1.1nm,0.3s,baz=58,slow=13,SNR=3.6						
ASAJ	Asahikawa	18.41	239	*e*P	Pn	04 19 42.1	+1.8
	comp=Z,79nm,1.8s						
YAK	Yakutsk	18.75	303	LR	LR	04 26 49.4	
	comp=Z,48nm,20.4s,baz=95,slow=37						
KLR	Kul'dur	20.93	265	LR	LR	04 29 08.3	
	comp=Z,6.7nm,18.3s,baz=70,slow=39						
TIXI	Tiksi	21.65	330	LR	LR	04 28 31.3	
	comp=Z,35nm,21.1s,baz=90,slow=37						
IM3	Indian Mountai	22.03	46	*e*P	P	04 20 20.8	+1.4
BPAW	Bear Paw Mtn.	23.10	52	*e*P	P	04 20 32.9	+2.1
	comp=Z,12nm,1.4s						
KDAK	Kodiak Island	23.14	68	P	P	04 20 32.9	+1.7
	comp=Z,1.6nm,0.5s,baz=273,slow=4.7,SNR=4.9						
KDAK				LR	LR	04 29 23.1	
	comp=Z,65nm,18.3s,baz=284,slow=36						
KDAK	Kodiak Island	23.14	68	*e*P	P	04 20 31.6	+0.4
	comp=Z,5.1nm,0.9s						
KDAK	Kodiak Island	23.14	68	*e*P	P	04 20 31.6	+0.4
KDAK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SUA	Susitna One	23.38	58	*e*P	P	04 20 34.6	+0.8
	comp=Z,12nm,1.0s						
TRF	Thorofare Moun	23.43	53	*e*P	P	04 20 36.5	+2.2
	comp=Z,8.6nm,0.9s						
CNPM	China Poot	23.44	63	*e*P	P	04 20 35.3	+0.9
	comp=Z,12nm,0.8s						
COLD	Coldfoot	23.58	44	*e*P	P	04 20 43.0	+7.4
	comp=Z,5.6nm,0.8s						
TOLK	Toolik Lake Re	23.99	40	*e*P	P	04 20 40.5	+0.8
	comp=Z,14nm,0.8s						
MDM	Murphy Dome	24.28	49	*e*P	P	04 20 45.2	+2.8
	comp=Z,7.4nm,1.0s						
WRH	Wood River Hil	24.35	51	*e*P	P	04 20 42.6	-0.4
	comp=Z,7.4nm,0.8s						
CCB	Clear Creek Bu	24.47	50	*e*P	P	04 20 45.0	+0.9
	comp=Z,12nm,0.7s						
SML	Sawmill	24.48	57	*e*P	P	04 20 45.2	+1.0
	comp=Z,8.7nm,0.7s						
SML	Sawmill	24.48	57	*e*P	P	04 20 45.2	+1.0
SML				pmax	pmax		
	comp=Z,9.0nm,0.7s						
ILAR	Eielson Array	24.86	50	P	P	04 20 47.5	0.0
	comp=Z,0.7nm,0.8s,baz=264,slow=8.6,SNR=7.3						
ILB	Eielson Array	24.86	50	*e*P	P	04 20 47.5	0.0
SCM	Sheep Creek Mo	24.95	57	*e*P	P	04 20 49.4	+0.9
	comp=Z,19nm,0.8s						
SCM	Sheep Creek Mo	24.95	57	*e*P	P	04 20 49.4	+0.9
SCM				pmax	pmax		
	comp=Z,19nm,0.8s						
RIDG	Independ'e Rid	25.83	52	*e*P	P	04 20 52.1	-4.3
	comp=Z,28nm,1.6s						
MJA0	Matsu Arr-Jizo	26.43	233	*e*P	P	04 21 11.9	+10
MJA0				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MJB9	Matsu-Tunnel	26.45	234	*e*P	P	04 21 04.0	+1.8
	comp=Z,7.9nm,0.8s						
MJAR	Matsushiro Arr	26.45	234	P	P	04 21 05.1	+2.9
	comp=Z,1.1nm,0.3s,baz=30,slow=8.6,SNR=4.1						
MAJO	Matsushiro	26.45	234	*e*P	P	04 21 05.1	+2.9
MAJO	Matsushiro	26.45	234	*e*P	P	04 21 05.1	+2.9
INK	Inuvik	29.89	41	LR	LR	04 33 15.2	
	comp=Z,56nm,18.2s,baz=242,slow=36						
JNU	Nakatsue	32.69	240	LR	LR	04 34 56.5	
	comp=Z,33nm,20.9s,baz=301,slow=36						
DLBC	Dease Lake	34.19	58	*e*P	P	04 22 12.8	+2.3
	comp=Z,3.9nm,0.8s						
SONA0	Songino Array	35.83	282	*e*P	P	04 22 24.9	+0.1
SONM	Songino Array	35.83	282	P	P	04 22 24.9	+0.1
	comp=Z,0.5nm,0.6s,baz=56,slow=7.9,SNR=3.8						
SONM				LR	LR	04 38 26.9	
	comp=Z,44nm,19.1s,baz=68,slow=39						
H11N2	WAKE ISLAND Hy	36.32	176	T	T	05 00 21.7	
	baz=358,slow=76,SNR=361						
H11N3	WAKE ISLAND Hy	36.34	176	T	T	05 00 36.0	
	baz=358,slow=76,SNR=199						
H11N1	WAKE ISLAND Hy	36.34	176	T	T	05 00 32.7	
	baz=358,slow=76,SNR=282						
H11S1	WAKE ISLAND Hy	37.53	177	T	T	05 01 52.7	
	baz=353,slow=74,SNR=8.6						
H11S3	WAKE ISLAND Hy	37.54	177	T	T	05 01 55.5	
	baz=353,slow=74,SNR=3.7						
H11S2	WAKE ISLAND Hy	37.55	177	T	T	05 01 57.2	
	baz=353,slow=74,SNR=6.2						
YKA	Yellowknife Ar	39.19	46	P	P	04 22 53.3	+0.3
	comp=Z,0.4nm,0.6s,baz=300,slow=8.3,SNR=5.4						
RES	Resolute Bay	39.55	24	*e*P	P	04 22 54.5	-1.3
	comp=Z,24nm,2.0s						
RES	Resolute Bay	39.55	24	*e*P	P	04 22 54.5	-1.3
RES				pmax	pmax		
	comp=Z,24nm,2.0s						
VALT	Mount Saint He	44.89	70	*e*P	P	04 23 36.2	-3.7
KURK	Kurchatov	48.40	302	*e*P	P	04 24 07.5	+0.4
KURK	Kurchatov	48.40	302	P	P	04 24 07.5	+0.4
KURK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KURBB	Kurchatov Arra	48.50	302	P	P	04 24 07.5	-0.4
	comp=Z,1.2nm,0.8s,baz=54,slow=8.0,SNR=12						
MK32	Makanchi Array	49.23	296	*e*P	P	04 24 13.1	-0.5
MKAR	Makanchi Array	49.23	296	P	P	04 24 13.1	-0.5
	comp=Z,0.4nm,0.5s,baz=54,slow=7.4,SNR=5.9						
MK01	Makanchi Array	49.24	296	*e*P	P	04 24 13.1	-0.6
BVAR	Borovoye Array	50.59	309	P	P	04 24 24.2	+0.4
	comp=Z,2.0nm,0.5s,baz=60,slow=8.8,SNR=8.6						
BVAR				LR	LR	04 48 26.0	
	comp=Z,51nm,19.0s,baz=66,slow=39						
ARCES	ARCESS Array B	51.25	343	*e*P	P	04 24 39.4	+11
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NV01	Mina Array Sit	52.34	75	*e*P	P	04 24 38.4	+1.0
NVAR	Mina Array Bea	52.34	75	P	P	04 24 38.4	+1.0
	comp=Z,0.1nm,0.3s,baz=301,slow=7.0,SNR=3.3						
MLHM	Little Hot Cre	52.60	76	*e*P	P	04 24 40.6	+1.2
PD31	Pinedale Array	53.83	65	*e*P	P	04 24 49.0	+0.7
PDAR	Pinedale Array	53.83	65	P	P	04 24 49.0	+0.7
	comp=Z,0.7nm,0.7s,baz=339,slow=3.8,SNR=7.0						
PDAR	Pinedale Array	53.83	65	*e*P	P	04 24 49.0	+0.7
KK31	Karatay Array	57.70	300	*e*P	P	04 25 16.8	+0.9
KK31	Karatay Array	57.70	300	*e*P	P	04 25 16.8	+0.9
KKAR	Karatay Array	57.70	300	*e*P	P	04 25 16.8	+0.9
KKAR	Karatay Array	57.70	300	*e*P	P	04 25 16.8	+0.9
CM31	Chiang Mai Arr	61.33	260	*e*P	P	04 25 42.1	+1.0
CMAR	Chiang Mai Arr	61.33	260	P	P	04 25 42.1	+1.0
	comp=Z,1.3nm,0.3s,baz=13,slow=7.4,SNR=4.9						
CMAR	Chiang Mai Arr	61.33	260	P	P	04 25 42.1	+1.0
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
NB2	NORSAR Subarra	61.37	346	P	P	04 25 50.5	+10
	comp=Z,0.9nm,0.5s,baz=18,slow=6.9						
TXAR	Lajitas Array	67.11	71	P	P	04 26 19.9	+0.7
	comp=Z,0.7nm,0.7s,baz=297,slow=4.0,SNR=6.8						
TXAR				LR	LR	04 55 09.9	
	comp=Z,32nm,18.4s,baz=0.0,slow=36						
GNI	Garni	71.48	315	LR	LR	05 02 44.7	
	comp=Z,43nm,18.6s,baz=26,slow=40						
GERES	GERESS Array B	72.67	340	LR	LR	05 02 08.0	
	comp=Z,18nm,18.5s,baz=102,slow=39						
ILGA	Ilgaz	74.69	324	*e*P	P	04 27 01.5	-3.7
	comp=Z,41nm,0.8s						

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*ISCJB **02** 04:17:03.3±0.9, 3°.81S±0°.07×135°.24E±0°.07, h20^{km}, mb3.8/3, Error ellipse: s-maj=10.0km s-min=9.3km az=34.8*

*IDC **02** 04:17:03.1±3.1, 3°.53S×135°.22E, h0^{km}, mb4.0/4, mb1 4.1/5, mb1mx3.6/49, mbtmp4.0/5, ML3.6/1, Error ellipse: s-maj=132.8km s-min=26.7km az=87.0*

*DJA **02** 04:17:07.2±1.0, 4°S±6°×13°5E±°, h10^{km}, M4.1/4, MLv4.1/4*

ISC 02 04:17:04.3±0.8**, 3°.86S**±0°.06×**135°.28E**±0°.06**, h20**^{km}**, n12, σ3^s.37**/17**, mb4.0**/3**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMPI	Kaimana, Papua	1.58	277	P	Pb	04 17 34.0	+1.2
KMPI				S	Sn	04 17 48.8	-2.2
SRPI	Serui, Papua	2.20	26	P	Sn	04 18 00.7	-5.7
RKPI	Ransiki, Papua	2.58	335	P	Pn	04 17 45.3	+0.4
RKPI				S	Sn	04 18 13.4	-2.3
BAKI	Biak	2.78	17	P	Pn	04 17 47.5	-0.2
FAKI	Fak Fak	3.16	287	P	Pn	04 17 53.8	+0.8
FAKI				S	Sn	04 18 29.5	-0.7
GENI	Genyem	5.04	76	P	Sb	04 19 35.8	+3.6
WRA	Warramunga Arr	16.01	183	Pn	Pn	04 20 49.1	+0.6
	0.1nm,0.3s,baz=357,slow=13,SNR=4.8						
WRA				Sn	Sn	04 23 38.8	-6.9
	0.2nm,0.3s,baz=6.1,slow=23,SNR=4.3						
FITZ	Fitzroy Crossi	17.01	213	P	P	04 21 04.9	+2.0
	0.2nm,0.3s,baz=24,slow=12,SNR=9.8						
FITZ				S	Sn	04 24 04.0	-5.8
	0.3nm,0.3s,baz=203,slow=12,SNR=5.4						
ASAR	Alice Springs	19.73	184	P	Pn	04 21 38.5	+4.0
	12nm,0.8s,baz=9.2,slow=11,SNR=72						
MKAR	Makanchi Array	68.65	324	P	P	04 28 07.1	+0.8
	0.9nm,0.5s,baz=108,slow=8.6,SNR=10						
ZALV	Zalesovo Beam	71.24	331	P	P	04 28 21.5	-0.5
	0.6nm,0.5s,baz=132,slow=10,SNR=2.6						
KURBB	Kurchatov Arra	72.72	326	P	P	04 28 31.2	+0.3
	0.4nm,0.5s,baz=121,slow=4.8,SNR=5.1						

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*TEH **02** 04:21:06.8, 35°.79N×52°.02E, h8^{km}, ML3.6*

*CSEM **02** 04:21:08.7±0.2, 35°.83N×52°.01E, h10^{km}, ML3.7, Error ellipse: s-maj=6.5km s-min=4.7km az=3.0*

*THR **02** 04:21:08.3±0.6, 35°.77N×51°.94E, h13^{km}±3^{km}, ML3.7*

ISC 02 04:21:08.1±1.1**, 35°.84N**±0°.03×**52°.01E**±0°.02**, h6**^{km}±12^{km}**, n64, σ0^s.90**/74**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAMV	Damavand	0.21	188	*e*Pg	Pg	04 21 12.3	0.0
DAMV	Damavand	0.21	188	*e*Pg	Pg	04 21 12.4	0.0
DAMV	Damavand	0.21	188	*e*Pg	Pg	04 21 12.4	0.0
IAFJ	Afjeh	0.24	274	*e*Pg	Pg	04 21 13.3	+0.4
IAFJ				*e*		04 21 18.8	
	comp=Z,1231µm,0.2s						
IAFJ				*e*		04 21 19.2	
	comp=N,2963µm,0.2s						
IAFJ				*e*		04 21 19.4	
	comp=E,2973µm,0.1s						
IAFJ	Afjeh	0.24	274	*e*Pg	Pg	04 21 13.3	+0.4
IDMV	Damavand	0.26	176	*e*Pg	Pg	04 21 13.3	0.0
IDMV				*e*Sg	Sg	04 21 17.2	+0.3
IDMV				*e*		04 21 17.4	
	comp=N,1108µm,0.2s						
IDMV				*e*		04 21 17.4	
	comp=Z,73µm,0.1s						
IDMV				*e*		04 21 17.4	
	comp=E,57µm,0.1s						
IDMV	Damavand	0.26	176	*e*Pg	Pg	04 21 13.3	0.0
IDMV				*e*Sg	Sg	04 21 17.2	+0.3
IPRN	Peran	0.48	34	*e*Pg	Pb	04 21 18.8	-0.3
IPRN				*e*		04 21 27.1	
	comp=N,23µm,0.2s						
IPRN				*e*		04 21 27.4	
	comp=E,66µm,0.2s						
IPRN				*e*		04 21 28.2	
	comp=Z,44µm,0.2s						
IFIR	Firoozkooh	0.64	108	*e*Pg	Pg	04 21 20.2	-0.2
IFIR				*e*		04 21 31.5	
	comp=Z,59µm,0.1s						
IFIR				*e*		04 21 32.7	
	comp=E,84µm,0.1s						
IFIR				*e*		04 21 34.4	
	comp=N,86µm,0.1s						
IFIR	Firoozkooh	0.64	108	*e*Pg	Pg	04 21 20.2	-0.2
IALA	Alasht	0.69	69	*e*Pg	Pg	04 21 21.8	+0.3
IALA				*e*		04 21 25.9	
	comp=Z,44µm,0.1s						
IALA				*e*Sg	Sb	04 21 32.2	-0.6
IALA				*e*		04 21 38.0	
	comp=E,61µm,0.1s						
IALA	Alasht	0.69	69	*e*Pg	Pg	04 21 21.8	+0.3
IALA				*e*Sg	Sb	04 21 32.2	-0.6
CHTH	Charan	0.72	276	*e*Pg	Pg	04 21 21.7	-0.3
CHTH				*e*Sg	Sg	04 21 31.3	0.0
CHTH				IAML		04 21 32.2	
	comp=N,2µm,0.4s						
CHTH	Charan	0.72	276	*e*Pg	Pg	04 21 21.7	-0.3
CHTH	Charan	0.72	276	*e*Pg	Pg	04 21 21.7	-0.3
CHTH				*e*Sg	Sg	04 21 31.3	0.0
ILAS	Lasjerd	0.90	120	*e*Pg	Pg	04 21 24.8	-0.6
ILAS				*e*Sg	Sg	04 21 37.0	-0.1
ILAS				*e*		04 21 37.8	
	comp=E,99µm,0.1s						
ILAS	Lasjerd	0.90	120	*e*Pg	Pg	04 21 24.8	-0.6
ILAS				*e*Sg	Sg	04 21 37.0	-0.1
THKV	Tehran--Karaj	0.92	275	*e*Pg	Pg	04 21 25.9	+0.1
THKV				IAML		04 21 41.3	
	comp=N,2µm,0.4s						
THKV	Tehran--Karaj	0.92	275	*e*Pg	Pg	04 21 25.9	+0.1
THKV	Tehran--Karaj	0.92	275	*e*Pg	Pg	04 21 25.9	+0.1
ISHM	Shahmirzad	1.04	91	*e*Pg	Pg	04 21 27.8	-0.3
ISHM				*e*		04 21 33.9	
	comp=N,174nm,0.0s						
ISHM				*e*		04 21 48.7	
	comp=E,12µm,0.1s						
ISHM				*e*		04 21 50.2	
	comp=Z,33µm,0.2s						
IMHD	Mahdasht	1.10	262	*e*Pg	Pg	04 21 28.6	-0.6
IMHD				*e*		04 21 29.2	
	comp=Z,60µm,0.2s						
IMHD				*e*		04 21 29.3	
	comp=E,80µm,0.1s						
IMHD				*e*		04 21 30.6	
	comp=N,17µm,0.1s						
IMHD	Mahdasht	1.10	262	*e*Pg	Pg	04 21 28.6	-0.6
QALM	Alamut, Qazvin	1.25	299	*e*Pg	Pn	04 21 32.7	+0.3
QALM				*e*		04 21 36.8	
	comp=Z,99nm,0.1s						
QALM	Alamut, Qazvin	1.25	299	*e*Pg	Pn	04 21 32.7	+0.3
IKIA	Kiasar	1.41	74	*e*Pg	Pn	04 21 34.4	-0.1
IKIA				*e*		04 21 36.4	
	comp=Z,6µm,0.1s						
IKIA				*e*		04 21 37.4	
	comp=E,13µm,0.1s						
IKIA				*e*		04 21 37.6	
	comp=N,9µm,0.1s						
IKIA	Kiasar	1.41	74	*e*Pg	Pn	04 21 34.4	-0.1
GHVR	GHOM	1.48	204	*e*Pg	Pn	04 21 35.0	-0.3
GHVR				*e*Sg	Sg	04 21 55.1	-0.5
GHVR				IAML		04 22 00.9	
	comp=E,2µm,0.6s						
GHVR	GHOM	1.48	204	*e*Pg	Pn	04 21 35.0	-0.3
GHVR	GHOM	1.48	204	*e*Pg	Pn	04 21 35.0	-0.3
GHVR				*e*Sg	Sg	04 21 55.1	-0.5
IGZV	Ghazvin	1.55	291	*e*Pn	Pn	04 21 36.6	+0.1
IGZV				*e*		04 22 01.0	
	comp=N,10µm,0.1s						
IGZV				*e*		04 22 03.1	
	comp=E,10µm,0.2s						
IGZV				*e*		04 22 03.5	
	comp=Z,6µm,0.2s						
IGZV	Ghazvin	1.55	291	*e*Pn	Pn	04 21 36.6	+0.1
IANJ	Anjilo	1.60	103	*e*Pn	Pn	04 21 37.6	+0.5
IANJ				*e*		04 22 01.9	
	comp=Z,14µm,0.2s						
IANJ	Anjilo	1.60	103	*e*Pn	Pn	04 21 37.6	+0.5
IGLO	Ghaloghah	1.61	65	*e*Pn	Pg	04 21 39.4	+0.3
IGLO				*e*		04 22 08.6	
	comp=Z,15µm,0.2s						
IGLO				*e*		04 22 08.8	
	comp=E,21µm,0.1s						
IGLO				*e*		04 22 10.1	
	comp=N,33µm,0.3s						
QABG	Abgarm-Qazvin	1.98	267	*e*Pn	Pb	04 21 43.9	-0.8
QABG				*e*		04 21 47.5	
	comp=Z,99nm,0.1s						
QABG	Abgarm-Qazvin	1.98	267	*e*Pn	Pb	04 21 43.9	-0.8
ASAO	Ashtian	2.07	232	*e*Pn	Pn	04 21 44.0	+0.3
ASAO	Ashtian	2.07	232	*e*Pn	Pn	04 21 44.0	+0.3
ASAO	Ashtian	2.07	232	*e*Pn	Pn	04 21 44.0	+0.3
IKLH	Kolahrood	2.54	188	*e*Pn	Pn	04 21 50.8	+0.7
IKLH				*e*		04 22 25.9	
	comp=E,11µm,0.1s						
IKLH				*e*		04 22 26.2	
	comp=N,14µm,0.1s						
IKLH				*e*		04 22 28.1	
	comp=Z,8µm,0.1s						
IKLH	Kolahrood	2.54	188	*e*Pn	Pn	04 21 50.8	+0.7
HAGD	Aghdareh	2.56	247	*e*Pn	Pn	04 21 51.4	+1.1
HAGD				*e*		04 21 55.2	
	comp=Z,99nm,0.1s						
HAGD				*e*		04 22 29.6	
	comp=N,99nm,0.1s						
HAGD				*e*		04 22 33.9	
	comp=E,99nm,0.1s						
HAGD	Aghdareh	2.56	247	*e*Pn	Pn	04 21 51.4	+1.1
HKZM	Kohzaman	2.57	261	*e*Pn	Pn	04 21 51.5	+0.9
HKZM				*e*		04 21 55.8	
	comp=Z,99nm,0.1s						
HKZM				*e*		04 22 35.2	
	comp=E,99nm,0.2s						
HKZM				*e*		04 22 37.9	
	comp=N,99nm,0.1s						
HKZM	Kohzaman	2.57	261	*e*Pn	Pn	04 21 51.5	+0.9
IZEF	Zefreh	2.95	175	*e*Pn	Pn	04 21 56.4	+0.6
IZEF				*e*		04 22 40.2	
	comp=N,1µm,0.1s						
IZEF				*e*		04 22 47.2	
	comp=Z,1µm,0.2s						
IZEF				*e*		04 22 48.5	
	comp=E,2µm,0.2s						
IZEF	Zefreh	2.95	175	*e*Pn	Pn	04 21 56.4	+0.6
ANAR	Anarak	3.00	151	*e*Pn	Pn	04 21 57.1	+0.8
ANAR				*e*		04 22 52.5	
	comp=Z,99nm,0.3s						
ANAR				*e*		04 22 53.0	
	comp=N,99nm,0.2s						
ANAR				*e*		04 22 54.2	
	comp=E,99nm,0.2s						
ANAR	Anarak	3.00	151	*e*Pn	Pn	04 21 57.1	+0.8
IMND	Minoodasht	3.08	62	*e*		04 22 07.3	
	comp=Z,1µm,0.1s						
IMND				*e*Pn	Pb	04 22 02.1	-1.2
IMND				*e*		04 22 52.3	
	comp=E,2µm,0.2s						
IMND				*e*		04 22 53.7	
	comp=N,2µm,0.1s						
NASN	Na'in	3.10	167	*e*Pn	Pn	04 21 58.5	+0.6
NASN	Na'in	3.10	167	*e*Pn	Pn	04 21 58.6	+0.6
NASN	Na'in	3.10	167	*e*Pn	Pn	04 21 58.6	+0.6
HSAM	Samen	3.23	241	*e*Pn	Pn	04 22 01.8	+2.1
HSAM				*e*		04 22 54.4	
	comp=N,99nm,0.2s						
HSAM				*e*		04 22 54.7	
	comp=E,99nm,0.1s						
HSAM	Samen	3.23	241	*e*Pn	Pn	04 22 01.8	+2.1
SHRO	Shahrood	3.25	86	*e*Pn	Pn	04 22 01.8	+2.0
SHRO	Shahrood	3.25	86	*e*Pn	Pn	04 22 01.8	+2.0
SHRO	Shahrood	3.25	86	*e*Pn	Pn	04 22 01.8	+2.0
IPIR	Pirpir	3.28	197	*e*Pn	Pn	04 22 02.9	+2.5
IPIR				*e*		04 22 51.0	
	comp=Z,2µm,0.2s						
IPIR				*e*		04 22 57.0	
	comp=N,2µm,0.2s						
IPIR				*e*		04 22 58.6	
	comp=E,3µm,0.2s						
IPIR	Pirpir	3.28	197	*e*Pn	Pn	04 22 02.9	+2.5
IGAR	Gharneh	3.43	180	*e*		04 22 04.7	
	comp=Z,712nm,0.1s						
IGAR				*e*Pn	Pn	04 22 03.9	+1.6
IGAR				*e*		04 23 07.9	
	comp=N,1µm,0.1s						
IRAM	Ramesheh	4.03	175	*e*Pn	Pn	04 22 11.9	+1.3
IRAM				*e*		04 23 24.6	
	comp=N,487nm,0.2s						
IRAM				*e*		04 23 25.5	
	comp=Z,422nm,0.3s						
IRAM				*e*		04 23 29.4	
	comp=E,426nm,0.4s						
IRAM	Ramesheh	4.03	175	*e*Pn	Pn	04 22 11.9	+1.3

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*IDC **02** 04:22:07.2±0.9, 57°.92N×32°.37W, h0^{km}, mb3.6/10, mb1 3.8/11, mb1mx3.6/64, mbtmp3.6/11, ML2.4/1, MS3.5/23, Ms1 3.5/23, ms1mx3.3/56, Error ellipse: s-maj=29.5km s-min=15.9km az=18.0*

*ISCJB **02** 04:22:08.0±0.7, 57°.9N±0°.2×32°.4W±0°.2, h18^{km}, mb3.6/10, MS3.5/21, Error ellipse: s-maj=22.5km s-min=11.4km az=12.8*

ISC 02 04:22:10.0±0.9**, 57°.9N**±0°.2×**32°.3W**±0°.1**, h18**^{km}**, n29, σ1^s.15**/11**, mb3.7**/10**, MS3.5**/21**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFJD	Kangerlussuaq	12.36	325	LR	LR	04 29 03.9	
	comp=Z,382nm,18.4s,baz=180,slow=34						
SCHQ	Schefferville	19.23	276	P	P	04 26 34.1	+1.3
	0.1nm,0.3s,baz=80,slow=11,SNR=3.7						
SCHQ				LR	LR	04 32 46.6	
	comp=Z,265nm,18.6s,baz=48,slow=33						
ESDC	Sonseca Array	25.82	123	P	P	04 27 40.9	+0.9
	0.3nm,0.5s,baz=320,slow=11,SNR=4.2						
ESDC				LR	LR	04 35 58.6	
	comp=Z,77nm,18.6s,baz=210,slow=32						
ARCES	ARCESS Array B	26.92	41	P	P	04 27 49.7	+0.1
	0.8nm,0.6s,baz=280,slow=8.5,SNR=5.6						
DAVOX	Davos/Dischmat	27.63	95	LR	LR	04 37 34.7	
	comp=Z,242nm,20.0s,slow=34						
GERES	GERESS Array B	28.40	88	LR	LR	04 38 50.1	
	comp=Z,105nm,19.3s,baz=299,slow=35						
FINES	FINESS Array B	28.83	58	LR	LR	04 39 00.3	
	comp=Z,66nm,18.9s,baz=293,slow=35						
KEST	Kesra	35.32	111	LR	LR	04 41 51.9	
	comp=Z,120nm,18.7s,baz=292,slow=34						
AKASG	Malin Array Be	35.48	74	P	P	04 29 03.6	-1.4
	1.5nm,0.8s,baz=306,slow=7.5,SNR=4.8						
VAE	Valguarnera	36.55	103	LR	LR	04 42 44.3	
	comp=Z,112nm,18.2s,baz=319,slow=34						
MLR	Muntele Rosu	37.01	84	LR	LR	04 43 59.5	
	comp=Z,31nm,21.7s,baz=346,slow=35						
YKA	Yellowknife Ar	38.52	312	P	P	04 29 29.5	-1.2
	0.3nm,0.6s,baz=60,slow=9.2,SNR=4.0						
YKA				LR	LR	04 44 43.9	
	comp=Z,24nm,18.5s,baz=49,slow=35						
BRTR	Keskin Array B	45.09	84	P	P	04 30 25.6	+0.7
	0.7nm,0.8s,baz=350,slow=4.1,SNR=3.7						
BRTR				LR	LR	04 49 41.4	
	comp=Z,36nm,19.9s,baz=289,slow=37						
SJG	San Juan	46.93	226	LR	LR	04 45 54.7	
	comp=Z,23nm,21.1s,baz=106,slow=30						
ILAR	Eielson Array	48.00	328	P	P	04 30 48.7	+1.5
	0.7nm,0.9s,baz=30,slow=7.3,SNR=6.4						

ILAR				LR	LR	04 50 23.6	
	comp=Z,42nm,18.2s,baz=26,slow=35						
KOWA	Kowa	48.29	142	LR	LR	04 48 32.5	
	comp=Z,54nm,19.2s,baz=24,slow=33						
PDAR	Pinedale Array	48.77	287	P	P	04 30 52.6	-1.1
	0.4nm,0.3s,baz=46,slow=6.4,SNR=3.8						
PDAR				LR	LR	04 50 22.7	
	comp=Z,85nm,18.6s,baz=37,slow=35						
TORD	Torodi Ar. Bea	51.55	136	P	P	04 31 14.3	-0.4
	0.7nm,0.8s,baz=336,slow=6.6						
TORD				LR	LR	04 49 28.1	
	comp=Z,61nm,22.0s,baz=310,slow=32						
KDAK	Kodiak Island	55.23	326	LR	LR	04 55 34.2	
	comp=Z,46nm,18.8s,baz=45,slow=36						
YBH	Yreka Blue Hor	56.07	296	LR	LR	04 54 20.9	
	comp=Z,76nm,20.6s,baz=36,slow=34						
NVAR	Mina Array Bea	56.43	290	P	P	04 31 49.8	-0.6
	0.6nm,0.6s,baz=60,slow=5.7,SNR=5.2						
NVAR				LR	LR	04 54 16.8	
	comp=Z,77nm,18.9s,baz=292,slow=34						
ROSC	El Rosal	62.22	229	LR	LR	04 57 30.1	
	comp=Z,24nm,20.0s,baz=177,slow=34						
MKAR	Makanchi Array	62.49	45	P	P	04 32 32.3	+0.4
	0.6nm,0.6s,baz=334,slow=6.2,SNR=7.9						
LPIG	La Paz	63.58	274	LR	LR	04 59 23.8	
	comp=Z,55nm,18.1s,baz=50,slow=35						
TLY	Talaya	64.97	29	LR	LR	05 01 33.4	
	comp=Z,10nm,18.5s,baz=10.0,slow=36						
H10S1	ASCENSION HYDR	68.19	161	T	T	05 47 01.0	
	baz=350						
H10S3	ASCENSION HYDR	68.19	161	T	T	05 47 03.2	
	baz=350						
H10S2	ASCENSION HYDR	68.20	161	T	T	05 47 08.5	
	baz=350						
CPUP	Villa Florida	86.52	202	LR	LR	05 06 54.6	
	comp=Z,27nm,19.3s,baz=32,slow=31						

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*CSEM **02** 04:31:55.6, 39°.51N×29°.77W, h5^{km}, ML2.3*

PDA 02 04:31:55.6±0.4**, 39°.51N×29°.77W, h5^{km}, MD3.6, ML2.3, Error ellipse: s-maj=7.9km s-min=3.2km az=59.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCED	Cedros	1.21	136	*e*S	Sg	04 32 28.1	-6.5
PCED				A	A	04 32 28.7	
	17nm,0.2s						
PCED	Cedros	1.21	136	*e*S	Sg	04 32 28.1	-6.5
CALA	Caldeira	1.25	138	*e*S	Sg	04 32 29.5	-6.2
CALA	Caldeira	1.25	138	*e*S	Sg	04 32 29.5	-6.2
HOR	Horta	1.33	137	*e*S	Sg	04 32 31.0	-7.2
HOR				A	A	04 32 32.5	
	60nm,0.2s						
HOR	Horta	1.33	137	*e*S	Sg	04 32 31.0	-7.2
ROSA	Rosais	1.43	123	*e*P	Pn	04 32 17.3	-4.9
ROSA				*e*S	Sb	04 32 33.5	-7.7
ROSA	Rosais	1.43	123	*e*P	Pn	04 32 17.3	-4.9
ROSA				*e*S	Sb	04 32 33.5	-7.7
PCAN	Candelaria	1.45	136	*e*P	Pn	04 32 17.6	-4.9
PCAN				*e*S	Sb	04 32 34.2	-7.6
PCAN				A	A	04 32 37.6	
	28nm,0.1s						
PCAN	Candelaria	1.45	136	*e*P	Pn	04 32 17.6	-4.9
PCAN				*e*S	Sb	04 32 34.2	-7.6
PICO	Pico	1.46	133	*e*P	Pn	04 32 17.8	-4.8
PICO				*e*S	Sb	04 32 34.5	-7.5
PICO				A	A	04 32 37.7	
	41nm,0.1s						
PICO	Pico	1.46	133	*e*P	Pn	04 32 17.8	-4.8
PICO				*e*S	Sb	04 32 34.5	-7.5
PMAN	Manadas	1.58	123	*e*P	Pn	04 32 19.4	-4.8
PMAN				*e*S	Sn	04 32 37.3	-7.7
PMAN				A	A	04 32 41.6	
	9.9nm,0.4s						
PMAN	Manadas	1.58	123	*e*P	Pn	04 32 19.4	-4.8
PMAN				*e*S	Sn	04 32 37.3	-7.7

MEX 02 04:33:39.5±0.6**, 16°.00N×90°.37W, h15^{km}, MD3.8, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CCIG	Comitan	1.73	280	*i* P	Pn	04 34 05.7	-3.5
CCIG				*i* S	Sn	04 34 27.2	-3.9
PCIG		2.76	264	*i* P	Pn	04 34 19.6	-3.7
PCIG				*i* S	Sn	04 34 52.0	-4.4

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*KRSC **02** 04:46:47.7±1.6, 56°.02N×164°.67E, h65^{km}±26^{km}, ML4.2*

*IDC **02** 04:46:47.5±1.6, 56°.23N×164°.54E, h0^{km}, mb3.5/8, mb1 3.6/9, mb1mx3.4/72, mbtmp3.5/9, MS2.8/4, Ms1 2.8/4, ms1mx2.5/53, Error ellipse: s-maj=54.2km s-min=17.0km az=170.0*

*MOS **02** 04:46:49.7±1.0, 56°.02N×164°.67E, h35^{km}, mb4.3/2, Error ellipse: s-maj=8.2km s-min=5.7km az=136.3*

ISC 02 04:46:47.5±3.1**, 56°.04N**±0°.04×**164°.64E**±0°.03**, h8^{km}**±21^{km}**, n98, σ1^{s}.48**/117**, mb3.7**/9**, MS2.8**/3**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	Krutoberegovo	1.03	280	*e*P	Pb	04 47 06.5	-1.0
KBTR				*e*S	Sb	04 47 19.8	-1.4
KBTR	Krutoberegovo	1.03	280	PN	Pb	04 47 06.5	-1.0
KBTR				S	Sb	04 47 19.8	-1.4
KBG	Krutoberegovo	1.10	282	*e*P	Pb	04 47 07.8	-0.9
KBG				*e*S	Sb	04 47 22.2	-1.0
KBG	Krutoberegovo	1.10	282	PN	Pb	04 47 07.8	-0.9
KBG				S	Sb	04 47 22.2	-1.0
BKI	Bering	1.12	137	*e*P	Pn	04 47 09.7	+0.3
BKI				*e*S	Sb	04 47 24.1	+0.3
BKI	Bering	1.12	137	PN	Pn	04 47 09.7	+0.3
BKI				S	Sb	04 47 24.1	+0.3
SMKR	Semkarok	1.85	289	*e*P	Pn	04 47 19.6	+0.1
SMKR				*e*S	Sn	04 47 42.8	-0.3
SMKR	Semkarok	1.85	289	PN	Pn	04 47 19.6	+0.1
SMKR				S	Sn	04 47 42.8	-0.3
BDR	Baidarnaya	1.99	287	*e*P	Pn	04 47 21.8	+0.5
BDR				*e*S	Sn	04 47 46.3	-0.1
BDR	Baidarnaya	1.99	287	PN	Pn	04 47 21.8	+0.5
BDR				S	Sn	04 47 46.3	-0.1
SRKR	Sorokina	2.03	289	*e*P	Pn	04 47 22.3	+0.4
SRKR				*e*S	Sn	04 47 47.3	-0.2
SRKR	Sorokina	2.03	289	PN	Pn	04 47 22.3	+0.4
SRKR				S	Sn	04 47 47.3	-0.2
ZLN	Zelenaya	2.15	271	*e*P	Pn	04 47 24.4	+0.7
ZLN	Zelenaya	2.15	271	PN	Pn	04 47 24.4	+0.7
CIRR	Tsirk	2.18	274	*e*P	Pn	04 47 25.9	+1.8
CIRR	Tsirk	2.18	274	PN	Pn	04 47 25.9	+1.8
LGNR	Loginova	2.21	273	*e*P	Pn	04 47 26.4	+1.7
LGNR	Loginova	2.21	273	PN	Pn	04 47 26.4	+1.7
MKZ	Mys Kozlova	2.23	230	*e*P	Pn	04 47 23.9	-0.7
MKZ				*e*S	Sn	04 47 50.1	-2.1
MKZ	Mys Kozlova	2.23	230	PN	Pn	04 47 23.9	-0.7
MKZ				S	Sn	04 47 50.1	-2.1
KLY	Klyuchi	2.25	279	*e*P	Pn	04 47 24.0	-0.8
KLY				*e*S	Sn	04 47 50.7	-2.0
KLY	Klyuchi	2.25	279	PN	Pn	04 47 24.0	-0.8
KLY				S	Sn	04 47 50.7	-2.0
KRSR	Krestovskiy	2.29	276	*e*P	Pn	04 47 26.5	+1.0
KRSR	Krestovskiy	2.29	276	PN	Pn	04 47 26.5	+1.0
BZWR	Bezymyannyi-We	2.33	270	*e*P	Pn	04 47 28.0	+1.9
BZWR	Bezymyannyi-We	2.33	270	PN	Pn	04 47 28.0	+1.9
BZMR	Bezymyannaya	2.33	269	*e*P	Pn	04 47 27.8	+1.6
BZMR	Bezymyannaya	2.33	269	PN	Pn	04 47 27.8	+1.6
KIRR	Kirishev	2.42	270	*e*P	Pn	04 47 29.1	+1.8
KIRR				*e*S	Sn	04 47 58.3	+1.2
KIRR	Kirishev	2.42	270	PN	Pn	04 47 29.1	+1.8
KIRR				S	Sn	04 47 58.3	+1.2
KPT	Kopyto	2.48	270	*e*P	Pn	04 47 30.0	+1.8
KPT	Kopyto	2.48	270	PN	Pn	04 47 30.0	+1.8
KMNR	Kamenistaya	2.50	265	*e*P	Pn	04 47 30.5	+2.1
KMNR	Kamenistaya	2.50	265	PN	Pn	04 47 30.5	+2.1
TUMD	Tumrok D	2.54	253	*e*P	Pn	04 47 30.1	+1.1
TUMD				*e*S	Sn	04 47 58.4	-1.7
KZV	Kizimen	2.63	251	*e*P	Pn	04 47 31.5	+1.2
KZV	Kizimen	2.63	251	PN	Pn	04 47 31.5	+1.2
TUMR	Tumrok	2.66	255	*e*P	Pn	04 47 32.0	+1.4
TUMR	Tumrok	2.66	255	PN	Pn	04 47 30.1	-0.5
KOZ	Kozyrevsk	2.67	272	*e*P	Pn	04 47 33.0	+2.3
KOZ				*e*S	Sn	04 48 03.3	0.0
KOZ	Kozyrevsk	2.67	272	PN	Pn	04 47 33.0	+2.3
KOZ				S	Sn	04 48 03.3	0.0
OSSR	Ossora	3.33	346	*e*P	Pn	04 47 39.0	-0.8
OSSR				*e*S	Sn	04 48 15.1	-4.4
OSSR	Ossora	3.33	346	PN	Pn	04 47 39.0	-0.8
ESO	Esso	3.34	271	*e*P	Pn	04 47 40.2	+0.3
ESO	Esso	3.34	271	PN	Pn	04 47 40.2	+0.3
KII	Karymskiy	3.60	238	*e*P	Pn	04 47 44.2	+0.7
KII	Karymskiy	3.60	238	PN	Pn	04 47 44.2	+0.7
PALN	Palana	3.96	323	*e*P	Pn	04 47 48.9	+0.5
PALN	Palana	3.96	323	PN	Pn	04 47 48.9	+0.5
SPN	Mys Shipunski	3.98	224	*e*P	Pn	04 47 48.0	-0.7
SPN				*e*S	Sn	04 48 31.2	-4.3
SPN	Mys Shipunski	3.98	224	PN	Pn	04 47 48.0	-0.7
NLC	Nalytchevo	4.21	229	*e*P	Pn	04 47 51.8	0.0
NLC				*e*S	Sn	04 48 38.9	-2.1
NLC	Nalytchevo	4.21	229	PN	Pn	04 47 51.8	0.0
SDLR	Sedlovina	4.33	233	*e*P	Pn	04 47 53.8	+0.1
SDLR	Sedlovina	4.33	233	PN	Pn	04 47 53.8	+0.1
KRER	Koryakskii	4.38	234	*e*P	Pn	04 47 56.1	+1.8
KRER	Koryakskii	4.38	234	PN	Pn	04 47 56.1	+1.8
AVH	Avacha	4.41	233	*e*P	Pn	04 47 55.9	+1.3
AVH	Avacha	4.41	233	PN	Pn	04 47 55.9	+1.3
UGLR	Uglovaya	4.41	232	*e*P	Pn	04 47 56.0	+1.3
UGLR	Uglovaya	4.41	232	PN	Pn	04 47 56.0	+1.3
GNL	Ganaly	4.52	242	*e*P	Pn	04 47 58.3	+2.1
GNL	Ganaly	4.52	242	PN	Pn	04 47 58.3	+2.1
DALK	Dalny	4.56	231	*e*P	Pn	04 47 57.8	+1.2
DALK	Dalny	4.56	231	PN	Pn	04 47 57.8	+1.2
PET	Petropavlovsk	4.61	232	*e*P	Pn	04 47 58.0	+0.7
PET				*e*S	Sn	04 48 49.1	-1.8
PET	Petropavlovsk	4.61	232	*e*PN	Pn	04 47 59.5	+2.2
PET				MLR	MLR		
	comp=Z,100nm,18.0s						
KRMR	Karymshinskiy	4.97	232	*e*P	Pn	04 48 03.3	+1.0
KRMR	Karymshinskiy	4.97	232	PN	Pn	04 48 03.3	+1.0
PETK	Petropavlovsk-	4.99	237	Pn	Pn	04 48 04.5	+1.9
	baz=82,slow=19						
RUS	Russkaya	5.09	227	*e*P	Pn	04 48 04.7	+0.8
RUS	Russkaya	5.09	227	PN	Pn	04 48 04.7	+0.8
MTVR	Mutnovka	5.19	229	*e*P	Pn	04 48 06.0	+0.5
MTVR	Mutnovka	5.19	229	PN	Pn	04 48 06.0	+0.5
APC	Apacha	5.36	238	*e*P	Pn	04 48 10.2	+2.6
APC	Apacha	5.36	238	PN	Pn	04 48 10.2	+2.6
ASAK	Asacha	5.39	230	*e*P	Pn	04 48 10.4	+2.3
ASAK	Asacha	5.39	230	PN	Pn	04 48 10.4	+2.3
KDTR	Khodutka, Kamc	5.74	225	*e*P	Pn	04 48 13.0	+0.2
KDTR				*e*S	Sn	04 49 14.6	-4.1
MIPR	Malaya Ipel'ka	5.97	234	*e*P	Pn	04 48 18.5	+2.5
MIPR	Malaya Ipel'ka	5.97	234	PN	Pn	04 48 18.5	+2.5
ASAJ	Asahikawa	18.41	239	LR	LR	04 58 45.8	
	comp=Z,24nm,19.4s,baz=359,slow=39						
KDAK	Kodiak Island	23.14	68	P	P	04 51 54.5	+0.9
	comp=Z,1.4nm,0.6s,baz=284,slow=12,SNR=4.1						
ILAR	Eielson Array	24.87	50	P	P	04 52 10.3	+0.2
	comp=Z,0.3nm,0.8s,baz=270,slow=9.1,SNR=4.7						
MJAR	Matsushiro Arr	26.44	234	LR	LR	05 03 04.4	
	comp=Z,27nm,20.3s,baz=25,slow=37						
KSRS	Korea Array	30.77	248	LR	LR	05 04 25.0	
	comp=Z,15nm,18.6s,baz=44,slow=34						
SONM	Songino Array	35.84	282	P	P	04 53 47.8	+0.4
	comp=Z,0.2nm,0.4s,baz=64,slow=10,SNR=2.3						
H11N2	WAKE ISLAND Hy	36.29	176	T	T	05 31 52.1	
	baz=358						
H11N3	WAKE ISLAND Hy	36.30	176	T	T	05 31 53.8	
	baz=358						
H11N1	WAKE ISLAND Hy	36.30	176	T	T	05 31 53.9	
	baz=358						
YKA	Yellowknife Ar	39.21	46	P	P	04 54 16.0	+0.6
	comp=Z,0.2nm,0.5s,baz=297,slow=7.9,SNR=4.3						
ZALV	Zalesovo Beam	43.43	302	LR	LR	05 12 56.8	
	comp=Z,15nm,20.0s,baz=72,slow=36						
KURK	Kurchatov	48.42	302	P	P	04 55 30.4	+0.8
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KURBB	Kurchatov Arra	48.53	302	P	P	04 55 30.4	0.0
	comp=Z,0.6nm,0.5s,baz=55,slow=7.8,SNR=6.4						
MKAR	Makanchi Array	49.26	296	P	P	04 55 35.7	-0.4
	comp=Z,0.4nm,0.4s,baz=54,slow=6.3,SNR=4.5						
BVAR	Borovoye Array	50.62	309	P	P	04 55 47.0	+0.6
	comp=Z,1.7nm,0.5s,baz=60,slow=8.5,SNR=11						
BVAR	Borovoye Array	50.62	309	P	P	04 55 47.0	+0.6
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.5s						
PDAR	Pinedale Array	53.83	65	P	P	04 56 12.0	+1.4
	comp=Z,0.2nm,0.5s,baz=328,slow=3.2,SNR=2.9						

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*IDC **02** 04:55:50.6±2.0, 79°.30N×4°.27E, h0^{km}, mb3.2/1, mb1 3.6/4, mb1mx3.2/66, mbtmp3.5/4, ML2.8/2, MS2.7/4, Ms1 2.8/4, ms1mx2.5/36, Error ellipse: s-maj=48.0km s-min=20.0km az=43.0*

*BER **02** 04:55:50.7±2.9, 79°.04N×3°.79E, h10^{km}, ML2.7, ML3.3(NAO)*

*NAO **02** 04:55:56.6±2.8, 78°.90N×6°.15E, ML3.3*

ISC 02 04:55:49.3±1.2**, 79°.0N**±0°.1×**3°.72E**±0°.08**, h10^{km}, n19, σ1^{s}.82**/18**, 1C, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	Kingsbay	1.58	89	Pg	Pn	04 56 17.0	-0.3
KBS				Lg	Lg	04 56 35.3	
KBS	Kingsbay	1.58	89	⇑*i*P	Pn	04 56 16.8	-0.5
KBS				*e*S	Sn	04 56 35.4	-2.4
KBS				IAML		04 56 40.2	
	comp=Z,182nm,0.3s						
SPA0	Spitsbergen Ar	2.65	102	Pn	Pn	04 56 32.7	+0.8
	baz=292,slow=16						
SPA0				Lg	Lg	04 57 03.9	
	baz=326,slow=28						
SPA0	Spitsbergen Ar	2.65	102	Pn	Pn	04 56 32.7	+0.8
	baz=292,slow=16						
SPA0				*e*S	Sn	04 57 03.0	-0.9
SPA0				IAML		04 57 08.6	
	comp=Z,56nm,0.4s						
SPITS	Spitsbergen Ar	2.65	102	Pn	Pn	04 56 32.6	+0.7
	baz=301,slow=11,SNR=510						
SPITS				Sn	Sn	04 57 03.8	-0.2
	baz=274,slow=24,SNR=9.2						
SPITS				LR	LR	04 57 08.1	
	comp=Z,54nm,21.2s,baz=95,slow=30						
HOPEN	Hopen	5.15	108	*e*P	Pn	04 57 05.9	-0.3
HOPEN				*e*S	Sn	04 58 03.8	-1.8
HOPEN				IAML		04 58 07.4	
	comp=Z,28nm,0.4s						
DAG	Danmarks Havn	5.19	256	*i* P	Pn	04 57 01.6	-5.2
JNW	Jan Mayen West	8.58	207	*e*P	Pn	04 57 51.5	-1.8
JNE	Jan Mayen East	8.61	207	*e*P	Pn	04 57 51.8	-1.8
JMIC	Jan Mayen	8.63	208	*e*P	Pn	04 57 51.9	-2.0
ARA0	ARCESS Array S	11.07	137	Pn	Pn	04 58 28.1	+0.8
	baz=347,slow=16						
ARA0	ARCESS Array S	11.07	137	Pn	Pn	04 58 28.1	+0.8
	baz=347,slow=16						
ARCES	ARCESS Array B	11.07	137	Pn	Pn	04 58 28.6	+1.3
	comp=Z,0.1nm,0.3s,baz=342,slow=11,SNR=5.0						
SUMG	Summit	11.86	260	*i* P	Pn	04 58 32.9	-5.5
SUMG				*e*S	Sn	05 00 32.5	-18
NOA	NORSAR Array B	18.20	168	LR	LR	05 06 10.2	
	comp=Z,28nm,19.0s,baz=340,slow=34						
FINES	FINESS Array B	18.92	146	P	Pn	05 00 15.2	+4.9
	comp=Z,0.1nm,0.3s,baz=329,slow=13,SNR=2.6						
AKTO	Aktyubinsk	34.30	113	LR	LR	05 18 15.2	
	comp=Z,18nm,18.3s,baz=40,slow=39						
ILAR	Eielson Array	35.41	339	P	P	05 02 45.2	+0.6
	comp=Z,0.3nm,0.9s,baz=2.1,slow=7.5,SNR=4.1						
MKAR	Makanchi Array	42.34	90	LR	LR	05 24 33.3	
	comp=Z,16nm,19.0s,baz=222,slow=41						

IDC 02 05:06:50.3±16.0**, 6°.29S×128°.82E, h182^{km}**±177^{km}**, mb2.9**/1**, mb1 3.3**/4**, mb1mx3.0**/48**, mbtmp3.7**/4**, ML3.6**/3**, Error ellipse: s-maj=145.4km s-min=52.4km az=44.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	12.14	195	P	Pn	05 09 37.7	+0.2
	0.2nm,0.3s,baz=30,slow=12,SNR=12						
FITZ				S	Sn	05 11 45.5	-7.1
	0.1nm,0.3s,baz=277,slow=23,SNR=1.9						
WRA	Warramunga Arr	14.59	159	P	Pn	05 10 07.9	-0.5
	0.3nm,0.3s,baz=333,slow=13,SNR=12						
ASAR	Alice Springs	17.95	165	P	P	05 10 47.1	+0.1
	0.5nm,0.3s,baz=343,slow=11,SNR=21						
MKAR	Makanchi Array	67.00	327	P	P	05 17 23.7	0.0
	0.2nm,0.4s,baz=110,slow=8.6,SNR=2.7						

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*CSEM **02** 05:13:03.8±0.4, 38°.56N×43°.23E, h24^{km}±4^{km}, ML2.3, Error ellipse: s-maj=9.6km s-min=5.5km az=138.0*

*ISK **02** 05:13:03.8, 38°.63N×43°.20E, h20^{km}, ML2.3/3*

*ISCJB **02** 05:13:04.3±0.9, 38°.57N±0°.06×43°.24E±0°.06, h29^{km}±6^{km}, Error ellipse: s-maj=10.3km s-min=6.5km az=145.6*

*DDA **02** 05:13:05.3, 38°.62N×43°.18E, h7^{km}, Ml2.8*

ISC 02 05:13:04.9±1.0**, 38°.61N**±0°.03×**43°.18E**±0°.02**, h18^{km}**±4^{km}**, n16, σ0^{s}.67**/30**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VANB	Van	0.17	94	PG	Pb	05 13 09.2	-0.1
VANB				SG	Sg	05 13 13.1	+0.6
VANB	Van	0.17	94	*e*Pg	Pb	05 13 09.2	-0.1
VANB				*e*Sg	Sg	05 13 13.1	+0.6
TVAN	Van	0.20	114	*i* P	Pb	05 13 09.1	-0.8
TVAN				*i* S	Sb	05 13 13.1	-0.1
TVAN	Van	0.20	114	P	Pb	05 13 09.1	-0.8
TVAN				S	Sb	05 13 13.1	-0.1
GEVA	Gevas	0.31	197	*i* P	Pg	05 13 11.2	-0.5
GEVA				*i* S	Sb	05 13 18.0	+1.3
GEVA	Gevas	0.31	197	P	Pg	05 13 11.2	-0.5
GEVA				S	Sb	05 13 18.0	+1.3
ADCV	BITLIS_Adilcev	0.41	300	*i* P	Pg	05 13 13.2	-0.2
ADCV				*i* S	Sb	05 13 20.1	+0.4
ADCV	BITLIS_Adilcev	0.41	300	P	Pg	05 13 13.2	-0.2
ADCV				S	Sb	05 13 20.1	+0.4
VMUR	Van-Muradiye	0.49	39	*i* P	Pg	05 13 14.7	-0.2
VMUR				*i* S	Sb	05 13 23.3	+1.2
VMUR	Van-Muradiye	0.49	39	P	Pg	05 13 14.7	-0.2
VMUR				S	Sb	05 13 23.3	+1.2
TUTA	Tutak	0.84	341	*i* P	Pb	05 13 20.4	-0.8
TUTA	Tutak	0.84	341	P	Pb	05 13 20.4	-0.8
GURO	Guroymak-BITLI	0.90	267	PG	Pb	05 13 21.8	-0.2
GURO				SG	Sn	05 13 35.3	-0.1
GURO	Guroymak-BITLI	0.90	267	*e*Pg	Pb	05 13 21.8	-0.2
GURO				*e*Sg	Sn	05 13 35.3	-0.1
AGRB	Hanur-Agry	0.98	352	PG	Pb	05 13 22.7	-0.7
AGRB				SG	Sb	05 13 36.5	+0.4
AGRB	Hanur-Agry	0.98	352	*e*Pg	Pb	05 13 22.7	-0.7
AGRB				*e*Sg	Sb	05 13 36.5	+0.4

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*DDA **02** 05:26:03.9, 38°.74N×43°.24E, h7^{km}, Ml2.7*

*ISK **02** 05:26:03.1, 38°.69N×43°.22E, h21^{km}, ML2.3/2*

*CSEM **02** 05:26:04.0±0.3, 38°.72N×43°.18E, h10^{km}, ML2.7, Error ellipse: s-maj=6.1km s-min=5.0km az=66.0*

ISC 02 05:26:03.9±1.0**, 38°.71N**±0°.03×**43°.20E**±0°.03**, h16^{km}**±8^{km}**, n16, σ0^{s}.56**/30**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VANB	Van	0.19	128	PG	Pb	05 26 09.1	-0.1
VANB				SG	Sb	05 26 13.6	+0.9
VANB	Van	0.19	128	*e*Pg	Pb	05 26 09.1	-0.1
VANB				*e*Sg	Sb	05 26 13.6	+0.9
TVAN	Van	0.25	138	*i* P	Pg	05 26 09.2	-0.3
TVAN				*i* S	Sg	05 26 13.7	+0.4
TVAN	Van	0.25	138	P	Pg	05 26 09.2	-0.3
TVAN				S	Sg	05 26 13.7	+0.4
ADCV	BITLIS_Adilcev	0.38	284	*i* P	Pg	05 26 12.2	+0.4
ADCV				*i* S	Sb	05 26 18.6	+0.3
ADCV	BITLIS_Adilcev	0.38	284	P	Pg	05 26 12.2	+0.4
ADCV				S	Sb	05 26 18.5	+0.3
VMUR	Van-Muradiye	0.40	47	*i* P	Pg	05 26 11.3	-0.9
VMUR				*i* S	Sb	05 26 19.8	+1.0
VMUR	Van-Muradiye	0.40	47	P	Pg	05 26 11.3	-0.9
VMUR				S	Sb	05 26 19.8	+1.0
GEVA	Gevas	0.41	195	*i* P	Pg	05 26 11.6	-0.8
GEVA				*i* S	Sb	05 26 19.3	+0.1
GEVA	Gevas	0.41	195	P	Pg	05 26 11.6	-0.8
GEVA				S	Sb	05 26 19.3	+0.1
TUTA	Tutak	0.75	337	*i* P	Pg	05 26 18.1	-0.5
TUTA				*i* S	Sb	05 26 29.0	+0.1
TUTA	Tutak	0.75	337	P	Pg	05 26 18.1	-0.5
TUTA				S	Sb	05 26 29.0	+0.1
AGRB	Hanur-Agry	0.88	350	PG	Pg	05 26 20.8	-0.2
AGRB				SG	Sn	05 26 34.1	-0.3
AGRB	Hanur-Agry	0.88	350	*e*Pg	Pg	05 26 20.8	-0.2
AGRB				*e*Sg	Sn	05 26 34.1	-0.3
GURO	Guroymak-BITLI	0.93	260	PG	Pb	05 26 21.6	-0.1
GURO	Guroymak-BITLI	0.93	260	*e*Pg	Pb	05 26 21.6	-0.1

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*ISCJB **02** 05:40:26.1±0.5, 32°.22N±0°.02×115°.22W±0°.02, h12^{km}±3^{km}, Error ellipse: s-maj=3.2km s-min=2.7km az=20.7*

*NEIC **02** 05:40:27.9±0.0, 32°.20N×115°.27W, h6^{km}, ML2.7(ECX), ML2.9(PAS), After ECX.*

*ECX **02** 05:40:27.9±0.6, 32°.20N×115°.27W, h6^{km}, MD2.7, ML3.0*

*MEX **02** 05:40:29.0±0.6, 32°.28N×115°.21W, h15^{km}±78^{km}, MD3.9*

ISC 02 05:40:25.7±1.0**, 32°.21N**±0°.02×**115°.28W**±0°.02**, h16^{km}**±7^{km}**, n61, σ1^{s}.27**/98**, 3C-5D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MBIG	Mexicali	0.20	19	*e*P	Pb	05 40 31.9	+0.7
MBIG	Mexicali	0.20	19	*e*P	Pb	05 40 31.8	+0.7
MBIG				*e*S	Sg	05 40 34.2	+0.5
CPBX	Cerro Prieto	0.20	353	*e*P	Pb	05 40 30.8	-0.3
CPBX				*e*S	Sg	05 40 33.8	+0.1
CPBX				IAML		05 40 38.4	
	comp=N,10μm,0.2s						
CPBX				⇓*e*		05 40 38.4	
ERPC	Ernies Place	0.62	328	*e*P	Pn	05 40 39.6	-0.3
COA	Coachella	0.66	11	⇓*i*P	Pn	05 40 39.8	-0.6
WESC	Westside Schoo	0.67	325	⇓*i*P	Pn	05 40 40.2	-0.3
YUH	Yuha Desert	0.70	308	⇑*i*P	Pn	05 40 40.3	-0.7
YMD	Yuma Desert	0.70	61	⇑*i*P	Pn	05 40 40.4	-0.7
ECBX	El Chinero	0.76	166	*e*P	Pn	05 40 41.0	-0.9
ECBX				*e*S	Sn	05 40 51.8	-1.3
RMX	La Rumorosa	0.78	300	*e*P	Pb	05 40 40.9	-0.2
RMX				*e*S	Sg	05 40 50.7	-0.6
RMX				IAML		05 40 52.5	
	comp=E,512nm,0.2s						
IKP	In-Ko-Pah, Jac	0.83	302	P	Pn	05 40 42.8	-0.1
	baz=122,SNR=18						
IKP				S	Sb	05 40 53.8	+1.0
	baz=122						
IKP	In-Ko-Pah, Jac	0.83	302	⇑*i*P	Pn	05 40 42.7	-0.1
SWSC	Sam W. Stewart	0.85	329	P	Pb	05 40 42.5	+0.3
	baz=149,SNR=15						
SWSC				S	Sb	05 40 53.9	+0.5
	baz=149						
GLA	Glamis	0.92	24	P	Pb	05 40 43.4	+0.1
	baz=204,SNR=24						
GLA				S	Sg	05 40 55.1	-0.5
	baz=204						
GLA	Glamis	0.92	24	*e*Pg	Pb	05 40 43.1	-0.2
GLA				*e*Sg	Sb	05 40 55.2	0.0
ZAX	El Zacaton	1.10	231	*e*P	Pn	05 40 47.2	+0.6
ZAX				*e*S	Sn	05 41 02.1	+0.6
ZAX				⇓*e*		05 41 03.3	
ZAX				IAML		05 41 03.3	
	comp=E,453nm,0.2s						
SPIG	San Pedro Mart	1.18	188	*e*P	Pn	05 40 47.9	0.0
SPIG	San Pedro Mart	1.18	188	*e*P	Pn	05 40 48.5	+0.6
SPIG				*e*S	Sn	05 41 03.5	-0.2
SPIG	San Pedro Mart	1.18	188	*e*P	Pn	05 40 48.5	+0.6
SPIG				*e*S	Sn	05 41 03.5	-0.2
SPX	San Pedro Mart	1.18	188	*e*P	Pn	05 40 48.6	+0.7
SPX				⇓*e*		05 41 07.5	
SPX				IAML		05 41 07.5	
	comp=N,193nm,0.2s						
SPX	San Pedro Mart	1.18	188	*e*P	Pn	05 40 48.3	+0.5
SPX				*e*S	Sn	05 41 03.5	-0.2
CBX	Cerro Bola	1.18	275	*e*P	Pg	05 40 48.7	+0.1
CBX				*e*S	Sn	05 41 04.6	+1.1
CBX	Cerro Bola	1.18	275	*e*P	Pg	05 40 48.6	+0.1
CBX				*e*S	Sb	05 41 02.3	-0.7
CBX	Cerro Bola	1.18	275	*e*P	Pg	05 40 48.6	+0.1
CBX				*e*S	Sb	05 41 02.3	-0.7
MONP2	Monument Peak	1.18	305	P	Pg	05 40 48.2	-0.3
	baz=125,SNR=16						
MONP2				S	Sb	05 41 03.2	+0.1

	baz=125						
TJIG	Tijuana	1.21	281	*e*P	Pg	05 40 48.6	-0.3
TJIG				*e*S	Sb	05 41 03.0	-0.6
ECNX	Esteban Cantu	1.25	244	*e*P	Pg	05 40 49.7	-0.2
BAR	Barrett	1.27	292	*e*P	Pg	05 40 49.9	-0.3
BAR	Barrett	1.27	292	*e*Pn	Pn	05 40 48.6	-0.3
BAR				*e*Sn	Sg	05 41 06.7	-0.1
113A	Mohawk Valley,	1.39	66	*e*Pn	Pn	05 40 50.2	-0.3
113A				*e*Sn	Sn	05 41 07.7	-0.8
BC3	Big Chuckawall	1.45	354	P	Pn	05 40 51.3	-0.1
	baz=174,SNR=23						
HWB	Hans Werner Br	1.64	300	*e*Pn	Pb	05 40 55.4	-0.1
HWB				*e*Sn	Sg	05 41 18.3	-0.1
Y12C	Blythe	1.66	22	*e*Pn	Pg	05 40 57.1	-0.5
109C	Camp Elliot, M	1.69	294	P	Pb	05 40 55.6	-0.8
	baz=113,SNR=10						
109C				Sb	Sg	05 41 19.2	-0.8
	baz=113						
CPE	Camp Elliot	1.69	294	*e*Pn	Pb	05 40 56.4	0.0
CPE				*e*Sn	Sb	05 41 18.7	+1.3
CPE				*e*Sn	Sg	05 41 19.3	-0.8
XPFO	Piæon Flat	1.71	325	*e*Pn	Pn	05 40 54.7	-0.3
XPFO				*e*Sn	Sg	05 41 20.2	-0.6
XPFO				*e*Sg	Sb	05 41 20.3	+2.1
PFO	Pinyon Flats O	1.71	325	P	Pn	05 40 55.0	-0.1
	baz=144						
PFO				S	Sn	05 41 16.0	-0.8
	baz=144						
PFO	Pinyon Flats O	1.71	325	*e*Pn	Pn	05 40 55.0	-0.1
PFO				*e*Sn	Sn	05 41 15.4	-1.3
PFO				*e*Sn	Sg	05 41 20.2	-0.7
SNDA	J Saunders Pla	1.75	320	*e*Pn	Pn	05 40 56.3	+0.7
SNDA				*e*Sn	Sg	05 41 22.5	+0.6
CRY	Cary Ranch	1.82	318	*e*Pn	Pn	05 40 56.7	+0.2
IRM	Iron Mountain	1.94	3	Pb	Pb	05 41 00.3	-0.5
	baz=183,SNR=23						
214A	Organ Pipe Nat	2.11	96	P	Pn	05 41 00.1	-0.3
	baz=277						
214A				S	Sn	05 41 26.2	-0.1
	baz=277						
MURC	Murrieta	2.13	311	Sb	Sg	05 41 33.0	-1.2
	baz=130						
BBRC	Big Bear Solar	2.46	326	S	Sn	05 41 34.8	-0.7
	baz=146						
Y14A	Wickenburg	2.57	47	*e*Pn	Pn	05 41 07.7	+0.9
Y14A				*e*Pg	Pg	05 41 13.6	-1.3
Y14A				*e*Sn	Sg	05 41 45.1	-3.1
NEE2	Needles Airpor	2.60	12	S	Sn	05 41 37.5	-1.0
	baz=192						
BFSC	Mount Baldy Ra	2.84	316	Sb	Sb	05 41 53.5	+2.8
	baz=135						
LDFC	Landfair	2.86	3	*e*Pn	Pn	05 41 12.6	+1.8
CIS	Catalina Islan	2.90	295	Sb	Sb	05 41 55.1	+2.8
	baz=114						
MWC	Mount Wilson	3.08	311	*e*Pn	Pn	05 41 12.7	-1.2
MWC				*e*Pg	Pg	05 41 23.6	-1.1
MWC				*e*Sg	Sg	05 42 02.4	-2.1
W13A	Hualapai Mount	3.10	22	*e*Pn	Pn	05 41 14.9	+0.7
W13A				*e*Pg	Pg	05 41 23.8	-1.4
W13A				*e*Sg	Sg	05 42 03.0	-2.4
DECC	Green Verdugo	3.27	309	Sb	Sb	05 42 06.0	+2.9
	baz=128						
EDW2	Edwards Air Fo	3.50	320	Sb	Sb	05 42 13.4	+3.9
	baz=139						
TUC	Tucson	3.81	87	S	Sn	05 42 08.1	-0.2
	baz=270						
X16A	Lo Mia Camp, P	3.89	55	*e*Pn	Pn	05 41 27.1	+2.1
WASM	Alta Sierra Ca	4.45	323	*e*Pn	Pn	05 41 30.9	-1.8
WASM				*e*Sg	Sg	05 42 46.5	-2.0
WUAZ	Wupatki	4.62	44	*e*Pn	Pn	05 41 38.0	+2.8
U15A	North Rim	4.87	30	*e*Pn	Pn	05 41 41.8	+3.1
X18A	Snowflake	5.02	61	*e*Pn	Pn	05 41 42.9	+2.3
LCMT	Little Creek M	5.07	19	*e*Pn	Pn	05 41 44.3	+3.1
W18A	Petrified Fore	5.45	56	*e*Pn	Pn	05 41 49.4	+2.9

MEX 02 05:41:46.0±0.3**, 15°.08N**×**92°.98W, h74**^{km}±5^{km}**, MD3.7, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.67	340	*e*P	Pn	05 41 59.5	-1.4
PCIG				*e*S	Sn	05 42 10.0	-1.8
CCIG	Comitan	1.45	34	*e*P	Pn	05 42 09.2	-1.4
CCIG				*e*S	Sn	05 42 26.9	-2.3
TGIG		1.70	355	*i* P	Pn	05 42 13.3	-0.5
TGIG				*e*S	Sn	05 42 33.1	-1.8

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*IDC **02** 05:49:21.7±1.5, 53°.57N×165°.78W, h0^{km}, mb3.8/8, mb1 4.0/10, mb1mx3.6/82, mbtmp3.8/10, ML3.4/2, MS3.0/4, Ms1 3.0/4, ms1mx2.5/75, Error ellipse: s-maj=31.3km s-min=21.5km az=19.0*

*ISCJB **02** 05:49:26.2±0.8, 53°.45N±0°.04×165°.23W±0°.04, h27^{km}±6^{km}, mb4.2/39, MS2.8/4, Error ellipse: s-maj=7.1km s-min=4.0km az=160.0*

*NEIC **02** 05:49:26.9±0.0, 53°.43N×165°.28W, h26^{km}, mb4.2/34, ML3.7(AEIC), After AEIC.*

ISC 02 05:49:24.3±1.6**, 53°.41N**±0°.07×**165°.39W**±0°.04**, h9**^{km}±10^{km}**, n117, σ1^{s}62**/109**, mb4.3**/39**, MS2.8**/4**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKSA	Akutan Strait	0.75	346	*e*Pg	Pn	05 49 40.9	-0.2
AKUT	Akutan	0.76	343	*e*Pg	Pn	05 49 41.3	+0.1
AKUT				*e*Sg	Sn	05 49 51.5	-1.3
ZRO	Akutan Zero	0.77	333	*e*Pg	Pn	05 49 41.6	+0.2
AKMO	Akutan Morgan	0.78	332	*e*Pg	Pn	05 49 41.6	+0.2
AKMO				*e*Sn	Sn	05 49 53.0	-0.3
UNV	Unalaska Valle	0.80	304	*e*Pg	Pn	05 49 42.1	+0.4
UNV				*e*Sg	Sn	05 49 53.2	-0.4
HSB	Akutan Spr’s B	0.84	338	P	Pn	05 49 42.2	-0.1
MREP	Makushin Rep’t	0.90	297	P	Pn	05 49 44.0	+0.7
MTBL	Makushin Table	0.95	306	*e*Pg	Pn	05 49 44.8	+0.9
MSW	Makushin Switc	0.97	302	*e*Pg	Pn	05 49 45.0	+0.8
MSOM	Makushin Julie	1.02	294	*e*Pg	Pn	05 49 45.5	+0.8
MCIR	Makushin Cirqu	1.05	302	*e*Pg	Pn	05 49 46.5	+1.3
WESP	Westdahl Peak	1.15	20	*e*Pg	Pg	05 49 47.2	+0.7
WESP				*e*Sg	Sn	05 50 01.8	-0.8
WESE	West Dahl East	1.16	24	*e*Pg	Pg	05 49 46.6	0.0
OKID	Okmok Mt. Idak	1.46	274	P	Pg	05 49 52.3	+0.1
OKTU	Okmok Mt. Tuli	1.59	270	*e*Pn	Pg	05 49 54.3	-0.5
OKER	Okmok East Rim	1.59	273	*e*Pn	Pg	05 49 54.4	-0.5
OKAK	Okmok	1.78	277	*e*Pn	Pg	05 49 56.7	-1.8
FALS	False Pass	1.85	38	*e*Pn	Pn	05 49 55.6	-0.7
FALS				*e*Sn	Sn	05 50 18.4	-1.4
NIKH	Nikolski High	2.13	259	*e*Pn	Pb	05 50 01.1	-2.0
SDPT	Sand Point	3.46	54	*e*Pn	Pn	05 50 19.0	+0.6
VNWF	Veniaminof 8	4.35	49	P	Pn	05 50 32.1	+1.5
VNFG	Veniaminof 2	4.43	47	P	Pn	05 50 33.9	+2.1
VNHG	Veniaminof 1	4.57	49	P	Pn	05 50 35.0	+1.3
SPIA	Saint Paul Isl	4.69	326	*e*Pn	Pn	05 50 38.5	+3.4
CHGN	Chignik	4.96	51	*e*Pn	Pn	05 50 40.2	+1.3
KOFP	Korovin Flat P	5.40	261	*e*Pn	Pn	05 50 48.9	+3.8
ATKA	Atka Island	5.48	261	*e*Pn	Pn	05 50 49.7	+3.7
OHAK	Old Harbor	7.88	56	*e*Pn	Pn	05 51 19.0	0.0
KDAK	Kodiak Island	8.46	54	Pn	Pn	05 51 26.5	-0.4
	1.0nm,0.3s,baz=236,slow=6.9,SNR=20						
KDAK				Sn	Sn	05 52 56.7	-5.8
	0.3nm,0.3s,baz=136,slow=22,SNR=3.4						
KDAK	Kodiak Island	8.46	54	*e*Pn	Pn	05 51 27.3	+0.3
SVW2	Sparrevohn	9.35	31	*e*Pn	Pn	05 51 41.4	+2.3
RSO	Redoubt South	9.86	39	*e*Pn	Pn	05 51 49.3	+3.0
CNPM	China Poot	9.93	46	*e*Pn	Pn	05 51 48.0	+0.9
ANM	Nome	11.19	0	*e*Pn	Pn	05 52 06.9	+2.7
SUA	Susitna One	11.26	38	*e*Pn	Pn	05 52 05.3	-0.1
SKT	Skwentna	11.32	35	*e*Pn	Pn	05 52 08.2	+2.2
RC01	Rabbit Creek A	11.42	41	*e*Pn	Pn	05 52 07.7	+0.3
PPLA	Purkeypile	11.76	31	*e*Pn	Pn	05 52 15.8	+3.6
MID	Middleton Isla	12.12	53	*e*Pn	Pn	05 52 18.7	+1.7
GHO	Glory Hole Cre	12.14	40	*e*Pn	Pn	05 52 16.1	-1.2
CAST	Castle Rocks	12.19	29	*e*Pn	Pn	05 52 20.0	+2.1
SMY	Shemya	12.36	275	*e*Pn	Pn	05 52 22.1	+1.9
SML	Sawmill	12.39	40	*e*Pn	Pn	05 52 20.7	0.0
TRF	Thorofare Moun	12.76	32	*e*Pn	Pn	05 52 27.4	+1.5
SCM	Sheep Creek Mo	12.80	42	*e*Pn	Pn	05 52 25.3	-1.0
BPAW	Bear Paw Mtn.	13.02	29	*e*Pn	Pn	05 52 30.3	+0.9
DIV	Divide	13.09	46	*e*Pn	Pn	05 52 29.0	-1.2
KLU	Klutina	13.20	44	*e*Pn	Pn	05 52 29.7	-2.0
RAGM	Ragged Mountai	13.26	50	*e*Pn	Pn	05 52 31.7	-0.9
BMRM	Bremner River	13.53	48	*e*Pn	Pn	05 52 35.9	-0.3
IM3	Indian Mountai	13.87	20	*e*Pn	P	05 52 44.0	-5.2
HARP	HAARP	13.97	42	*e*Pn	Pn	05 52 42.3	+0.1
PAX	Paxson	14.15	40	*e*Pn	Pn	05 52 43.3	-1.4
WRH	Wood River Hil	14.17	32	*e*Pn	Pn	05 52 43.7	-1.2
TGL	Tana Glacier	14.24	50	*e*Pn	Pn	05 52 44.7	-1.4
CCB	Clear Creek Bu	14.38	32	*e*Pn	Pn	05 52 46.1	-1.7
IL1	Eielson Array	14.75	32	*e*Pn	Pn	05 52 52.3	-0.6
ILAR	Eielson Array	14.75	32	Pn	Pn	05 52 50.3	-2.6
	0.1nm,0.3s,baz=226,slow=14,SNR=4.1						
RIDG	Independ’e Rid	14.81	38	*e*Pn	Pn	05 52 53.6	-0.2
COLD	Coldfoot	15.69	22	*e*Pn	P	05 53 09.9	+0.5
	2.7nm,0.6s						
FYU	Fort Yukon	16.48	29	*e*Pn	P	05 53 19.8	+1.7
	2.5nm,0.8s						
EGAK	Eagle	16.73	38	*e*Pn	P	05 53 22.4	+1.5
	3.9nm,0.6s						
TOLK	Toolik Lake Re	16.99	20	*e*Pn	P	05 53 24.3	+0.5
	2.6nm,0.7s						
DAWY	Dawson	17.05	41	*e*Pn	P	05 53 24.2	-0.3
	5.1nm,0.8s						
INK	Inuvik	21.15	33	P	P	05 54 06.4	-2.8
	2.2nm,0.5s,baz=238,slow=12,SNR=6.6						
INK				LR	LR	06 02 40.2	
	comp=Z,35nm,19.1s,baz=153,slow=38						
INK	Inuvik	21.15	33	*e*P	P	05 54 08.0	-1.3
	4.4nm,0.6s						
PEA0B	Petropavlovsk-	21.93	284	*e*P	P	05 54 20.2	+2.4
	16nm,1.1s						
BBB	Bella Bella	22.41	78	LR	LR	06 01 52.1	
	comp=Z,33nm,19.2s,baz=198,slow=33						
MA2	Magadan	24.60	302	LR	LR	06 03 12.7	
	comp=Z,19nm,20.2s,baz=122,slow=34						
PGC	Sidney	26.51	83	*e*P	P	05 55 04.1	+2.3
	12nm,0.9s						
YKW3	Yellowknife Ar	27.71	50	*e*P	P	05 55 14.3	+1.8
	1.5nm,0.8s						
YKA	Yellowknife Ar	27.73	51	P	P	05 55 12.8	+0.2
	0.8nm,0.7s,baz=273,slow=8.9,SNR=12						
H04A	Detroit Lake	29.23	90	*e*P	P	05 55 28.3	+2.0
	4.1nm,0.6s						
K05A	Summer Lake	31.11	92	*e*P	P	05 55 44.9	+1.8
	5.9nm,0.9s						
MOD	Modoc Plateau	31.95	93	*e*P	P	05 55 52.5	+2.1
	2.0nm,0.8s						
PAHR	Pah Rah Range	33.85	95	*e*P	P	05 56 08.5	+1.4
	2.5nm,0.6s						
PNTR	Pine Nut	34.12	96	*e*P	P	05 56 11.9	+2.5
	4.1nm,0.7s						
YERR	Yerington	34.40	96	*e*P	P	05 56 14.3	+2.4
	4.3nm,1.0s						
WAKR	Walker	34.59	97	*e*P	P	05 56 15.9	+2.4
	2.2nm,0.6s						
BOZ	Bozeman (W)	35.03	81	*e*P	P	05 56 18.5	+1.3
	0.5nm,0.9s						
KVN	Kaiserville	35.03	95	*e*P	P	05 56 15.2	-2.2
	3.0nm,1.2s						
RYN	Ryan	35.06	96	*e*P	P	05 56 15.3	-2.2
	5.2nm,0.9s						
NVAR	Mina Array Bea	35.31	96	P	P	05 56 21.0	+1.2
	2.2nm,0.7s,baz=293,slow=9.0,SNR=9.8						
PMCM	McMillan Canyo	35.91	101	*e*P	P	05 56 25.1	+0.4
ISA	Isabella, Lake	37.07	99	*e*P	P	05 56 34.6	0.0
	1.7nm,0.7s						
TPNV	Topopah Spring	37.52	96	*e*P	P	05 56 39.6	+1.1
	1.9nm,0.7s						
LAO	LASA Array	37.60	76	*e*P	P	05 56 38.1	-1.0
	53nm,0.6s						
BW06	Boulder Array	37.86	83	*e*P	P	05 56 40.8	-0.7
	1.6nm,0.6s						
PDAR	Pinedale Array	37.86	83	P	P	05 56 41.7	+0.2
	0.5nm,0.9s,baz=316,slow=4.1,SNR=4.3						
PSUT	Pine Spring	37.91	92	*e*P	P	05 56 43.6	+1.7
	1.1nm,0.8s						
H11N2	WAKE ISLAND Hy	39.82	223	T	T	06 39 44.8	
	baz=25,slow=76,SNR=134						
H11N3	WAKE ISLAND Hy	39.83	223	T	T	06 39 36.7	
	baz=25,slow=76,SNR=187						
H11N1	WAKE ISLAND Hy	39.84	223	T	T	06 39 39.6	
	baz=25,slow=76,SNR=108						
O20A	White River Ci	40.24	85	*e*P	P	05 57 02.2	+0.8
	5.5nm,0.8s						
H11S1	WAKE ISLAND Hy	41.00	223	T	T	06 41 02.1	
	baz=24,slow=76,SNR=63						
H11S2	WAKE ISLAND Hy	41.01	223	T	T	06 41 07.8	
	baz=24,slow=76,SNR=62						
H11S3	WAKE ISLAND Hy	41.02	223	T	T	06 41 08.0	
	baz=24,slow=76,SNR=48						
MAJO	Matsushiro	42.13	270	*e*P	P	05 57 23.5	+6.7
	12nm,0.8s						
ECSD	EROS Data Cent	44.85	73	*e*P	P	05 57 39.1	+0.5
	0.9nm,0.5s						
C40A	Isle Royale Na	46.49	64	*e*P	P	05 57 52.4	+1.0
	3.2nm,1.1s						
MNTX	Cornudas Mount	47.63	92	*e*P	P	05 58 02.1	+1.6
	0.9nm,0.7s						
I39A	Houston	47.67	70	*e*P	P	05 58 01.0	+0.2
	2.2nm,0.6s						
N37A	Lee Faris, Mou	48.11	75	*e*P	P	05 58 04.1	-0.1
	8.9nm,0.6s						
P40A	Paris	50.17	75	*e*P	P	05 58 18.8	-1.2
	9.8nm,0.6s						
TX31	Lajitas Ar. Si	50.35	93	*e*P	P	05 58 22.1	+0.6
TXAR	Lajitas Array	50.35	93	P	P	05 58 21.9	+0.3
	1.1nm,0.6s,baz=305,slow=5.4,SNR=19						
R40A	Maddies Statio	50.87	76	*e*P	P	05 58 23.1	-2.2
	3.5nm,0.6s						
HDIL	Hopedale	51.07	72	*e*P	P	05 58 25.9	-0.8
	7.5nm,0.9s						
HHC	Hu-ho-hao-te	54.77	293	*e*P	P	05 58 54.9	+0.7
HHC				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HHC				pmax	pmax		
	comp=Z,41nm,8.5s						
WVT	Waverly	54.92	75	*e*P	P	05 58 54.6	-0.6
	comp=Z,2.7nm,0.9s						
ARU	Arti	64.75	335	LR	LR	06 31 18.8	
	comp=Z,16nm,18.3s,baz=144,slow=39						
MK32	Makanchi Array	64.80	315	*e*P	P	05 59 59.8	-3.2
MKAR	Makanchi Array	64.80	315	P	P	05 59 59.8	-3.2
	comp=Z,0.1nm,0.3s,baz=42,slow=6.9,SNR=4.7						
FIA0	FINESS Array S	65.13	354	*e*P	P	06 00 02.9	-2.0
FINES	FINESS Array B	65.13	354	P	P	06 00 02.9	-2.0
	comp=Z,1.0nm,0.7s,baz=357,slow=7.6,SNR=3.5						
HFS	Hagfors	66.80	1	P	P	06 00 13.3	-2.3
	comp=Z,1.1nm,0.4s,baz=358,slow=4.3,SNR=9.9						
GYA	Guiyang	68.03	285	*e*P	P	06 00 27.3	+3.2
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						

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*KRNET **02** 05:57:51.2±0.1, 39°.02N×77°.64E, mb2.6*

*ISCJB **02** 05:57:52.5±1.3, 39°.12N±0°.07×77°.57E±0°.07, h16^{km}, Error ellipse: s-maj=10.7km s-min=8.1km az=172.3*

ISC 02 05:57:53.9±2.6**, 39°.1N**±0°.1×**77°.55E**±0°.08**, h16**^{km}**, n9, σ0^{s}78**/17**, 4C-12D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRN	Naryn	2.58	333	⇓*i*P	Pn	05 58 35.3	-0.1
	baz=32						
NRN				⇓*i*S	Sn	05 59 06.9	+0.3
	baz=32						
TARG	Taragay, Kyrgy	2.60	4	⇑*i*P	Pn	05 58 35.1	-0.6
	baz=3.0						
TARG				⇑*i*S	Sn	05 59 07.6	+0.4
	baz=3.0						
SFK	Sufi-Kurgan	3.25	287	⇑*i*P	Pn	05 58 44.0	-0.4
	baz=89						
SFK				⇑*i*S	Sn	05 59 22.7	-0.1
	baz=89						
ULHL	Ulahol	3.27	343	⇓*i*P	Pn	05 58 44.6	0.0
	baz=42						
ULHL				⇓*i*S	Sn	05 59 23.7	+0.4
	baz=42						
KZA	Kyzart	3.42	330	⇓*i*P	Pn	05 58 46.7	-0.3
	baz=30						
KZA				⇓*i*S	Sn	05 59 27.8	+0.4
	baz=30						
BOOM	Boomskoye usch	3.57	341	⇓*e*P	Pn	05 58 48.8	0.0
	baz=40						
BOOM				⇓*e*S	Sn	05 59 30.7	0.0
	baz=40						
UCH	Uchtor	3.86	324	⇓*i*P	Pn	05 58 53.0	0.0
	baz=24						
UCH				⇓*i*S	Sn	05 59 38.0	-0.2
	baz=24						
PDGK	Podgornoye	4.44	19	⇓*e*P	Pn	05 59 00.3	-0.4
	baz=17						
PDGK				⇓*i*S	Sn	05 59 50.4	-1.8
	baz=17						
WMQ	Urumqi	8.94	55	P	Pn	06 00 04.4	+2.0
WMQ				pmax	pmax		
	comp=Z,19nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,100nm,4.1s						

IDC 02 05:59:02.2±3.7**, 4°.65S**×**152°.78E, h0**^{km}**, mb3.6**/2**, mb1 3.9**/2**, mb1mx3.3**/46**, mbtmp3.6**/2**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.3**/41**, Error ellipse: s-maj=170.3km s-min=47.0km az=121.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	21.80	144	LR	LR	06 11 51.5	
	comp=Z,67nm,18.9s,baz=50,slow=35						
WRA	Warramunga Arr	23.53	228	P	P	06 04 13.8	-0.5
	1.1nm,0.5s,baz=53,slow=9.8,SNR=13						
ASAR	Alice Springs	26.25	222	P	P	06 04 39.6	+0.3
	0.4nm,0.5s,baz=57,slow=9.0,SNR=4.2						
TORD	Torodi Ar. Bea	150.24	288	PKPbc	PKPbc	06 18 56.2	-0.3
	baz=96,slow=2.8						

MAN 02 06:01:11.5, 7°.77N×**124°.75E, h64**^{km}**, mb3.5, ML2.2, MS1.6, 1C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUKP	Musuan	0.33	71	*e*P	Pn	06 01 24.1	+1.8
BUKP				*e*S	Sn	06 01 33.0	+2.8
CGP	Cagayan de Oro	0.68	356	⇑*e*P	Pn	06 01 28.1	+2.3
CGP				*i* S	Sn	06 01 39.8	+3.5
SKMP	Bagumbayan, Su	1.26	189	*e*P	Pn	06 01 34.7	+1.6
PAGZ	Pagadian	1.35	273	*e*P	Pn	06 01 34.3	-0.1

MEX 02 06:18:33.8±0.3**, 18°.58N**×**103°.54W, h14**^{km}±5^{km}**, MD3.7, Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMIG	Aquila	0.34	148	*e*P	Pg	06 18 40.1	-0.7
MMIG				*e*S	Sg	06 18 45.3	-0.2
R15V		0.72	324	*e*P	Pg	06 18 45.7	-2.2
R15V				*e*S	Sg	06 18 55.0	-2.4
EZ5V		0.90	356	*e*P	Pg	06 18 48.5	-2.7
EZ5V				*e*S	Sg	06 18 59.6	-3.5

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*NIED **02** 06:23:00, 37°.50N×141°.70E, h44^{km}, Mw4.4 Best double couple: $M_0$4.66000×10^{15} NP1:ϕ_s199.00000°, δ16.00000°, λ86.00000°. NP2:ϕ_s23.00000°, δ74.00000°, λ91.00000°.*

*BJI **02** 06:23:25.3, 37°.42N×141°.64E, h50^{km}, mb4.8/55, mB4.8/31, Ms3.9/24, Ms7 3.7/23*

*MOS **02** 06:23:26.2±0.8, 37°.72N×141°.45E, h33^{km}, mb4.7/35, Error ellipse: s-maj=8.6km s-min=5.7km az=103.3*

*ISCJB **02** 06:23:26.6±0.4, 37°.48N±0°.03×141°.57E±0°.03, h51^{km}±3^{km}, mb4.5/112, MS3.5/31, Error ellipse: s-maj=5.1km s-min=3.5km az=40.4*

*JMA **02** 06:23:26.9±0.1, 37°.48N×141°.59E, h46^{km}±2^{km}, M4.4*

JMA Felt III J1.

*IDC **02** 06:23:27.7±0.5, 37°.45N×141°.54E, h46^{km}±4^{km}, mb4.2/26, mb1 4.3/30, mb1mx4.1/74, mbtmp4.5/30, MS3.4/33, Ms1 3.4/33, ms1mx3.3/67, Error ellipse: s-maj=11.9km s-min=9.0km az=107.0*

*NEIC **02** 06:23:29.1±0.5, 37°.48N×141°.49E, h58^{km}±4^{km}, mb4.4/59, Error ellipse: s-maj=4.9km s-min=3.6km az=134.0*

NEIC Recorded [3 JMA] in Fukushima.

ISC 02 06:23:27.3±0.5**, 37°.48N**±0°.04×**141°.66E**±0°.04**, h44**^{km}±4^{km}**, h44**^{km}**:pP-P, n278, σ1^{s}40**/293**, mb4.5**/112**, MS3.5**/32**, 9C-16D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	0.63	260	P	Pn	06 23 39.0	-1.0
JFK				S	Sn	06 23 47.2	-1.9
ONAJ	Iwakimizuishiy	0.78	242	P	Pn	06 23 40.9	-1.1
ONAJ				S	Sn	06 23 50.7	-1.9
JMM	Marumori	0.79	300	P	Pn	06 23 41.2	-0.8
JMM				S	Sn	06 23 51.5	-1.2
JFFD	Fukushimafurud	0.95	246	P	Pn	06 23 43.4	-0.9
JFFD				*e*S	Sn	06 23 54.7	-2.1
JIO	Ouri	1.00	346	P	Pn	06 23 44.4	-0.6
JIO				S	Sn	06 23 56.0	-2.0
JFT	Otama	1.05	273	P	Pn	06 23 45.4	-0.2
JFT				S	Sn	06 23 57.7	-1.4
JOU	Okura	1.18	319	P	Pn	06 23 46.9	-0.6
JOU				S	Sn	06 24 03.0	+0.6
JYS	Shirataka	1.46	301	P	Pn	06 23 50.9	-0.3
JMK	Ichinoseki	1.51	347	P	Pn	06 23 51.8	-0.1
JFY	Yanaizu	1.56	268	P	Pn	06 23 52.2	-0.3
JFY				S	Sn	06 24 12.0	+0.5
JYK	Kaneyama	1.76	325	P	Pn	06 23 55.3	-0.1
MJAR	Matsushiro Arr	2.91	252	P	Pn	06 24 11.7	+0.5
	36nm,0.3s,baz=76,slow=15,SNR=83						
MJAR				LR	LR	06 25 34.7	
	comp=Z,954nm,19.8s,baz=75,slow=46						
MAJO	Matsushiro	2.92	252	*e*Pn	Pn	06 24 11.9	+0.7
MAJO	Matsushiro	2.92	252	*d i*P	Pn	06 24 11.8	+0.7
MAT	Matsushiro	2.92	252	P	Pn	06 24 11.8	+0.6
MAT				S	Sn	06 24 47.7	+2.7
MJB9	Matsu-Tunnel	2.92	252	*e*Pn	Pn	06 24 11.9	+0.7
INU	Inuyama	4.30	242	*e*Pn	Pn	06 24 31.6	+1.3
JHJ2	Mitsune	4.61	200	*e*Pn	Pn	06 24 34.4	-0.1
JHJ2				*e*Sn	Sn	06 25 28.1	+1.4
JHJ	Hachijo jima 2	4.61	200	P	Pn	06 24 34.4	-0.1
	60nm,0.3s,baz=307,slow=16,SNR=27						
JHJ				S	Sn	06 25 24.3	-2.5
	139nm,0.3s,baz=244,slow=23,SNR=13						
ASAJ	Asahikawa	6.67	6	P	Pn	06 25 02.1	-0.6
	4.7nm,0.3s,baz=216,slow=15,SNR=8.8						
ASAJ	Asahikawa	6.67	6	*e*Pn	Pn	06 25 02.3	-0.4
YUK	Yuzh-Kuril’sk	7.29	25	*e*P	Pn	06 25 12.8	+1.7
YUK				*i* S	Sn	06 26 28.5	-3.9
YUK				pmax	pmax		
	comp=Z,133nm,0.3s						
SHO	Shikotan	7.50	30	*e*P	Pn	06 25 14.8	+0.8
SHO				*e*S	Sn	06 26 32.0	-5.6
SHO				pmax	pmax		
	comp=Z,18nm,0.6s						
SHO				pmax	pmax		
	comp=N,13nm,0.3s						
SHO				pmax	pmax		
	comp=E,12nm,0.4s						
TEY	Ternei	8.45	335	*e*P	Pn	06 25 39.0	+12
TEY				pmax	pmax		
	comp=N,40nm,0.7s						
TEY				pmax	pmax		
	comp=E,20nm,0.7s						
TEY				pmax	pmax		
	comp=Z,50nm,0.5s						
KUR	Kuril’sk	9.04	29	*e*P	Pn	06 25 36.4	+1.2
KUR				*i* S	Sn	06 27 09.9	-5.7
KUR				pmax	pmax		
	comp=Z,22nm,0.4s						
KUR				pmax	pmax		
	comp=N,21nm,0.1s						
KUR				pmax	pmax		
	comp=E,13nm,0.1s						
YSS	Yuzh-Sakhalins	9.51	5	*e*P	Pn	06 25 41.7	+0.2
YSS				*e*S	Sn	06 27 22.3	-4.6
YSS				pmax	pmax		
	comp=Z,30nm,0.4s						
YSS				MLR	MLR		
	comp=Z,200nm,16.0s						
MSHR	Mys Shultsa	9.53	306	*ce*P	Pn	06 25 41.7	-0.1
JNU	Nakatsue	9.82	247	P	Pn	06 25 48.1	+2.2
	comp=Z,0.6nm,0.3s,baz=118,slow=3.9,SNR=5.0						
JNU				LR	LR	06 29 56.7	
	comp=Z,283nm,19.8s,baz=124,slow=40						
JNU	Nakatsue	9.82	247	*e*Pn	Pn	06 25 46.7	+0.7
USRK	Ussuriysk Ar.	9.93	316	P	Pn	06 25 48.1	+0.8
	baz=122,slow=14						
USRK				LR	LR	06 29 22.8	
	comp=Z,285nm,18.6s,baz=126,slow=36						
CBIJ	Chichi jima	10.36	177	*e*Pn	Pn	06 25 50.8	-2.6
KSRS	Korea Array	10.92	274	P	Pn	06 26 03.9	+3.0
	comp=Z,0.8nm,0.3s,baz=89,slow=13,SNR=27						

KSRS				LR	LR	06 30 05.1	
	comp=Z,225nm,18.6s,baz=79,slow=37						
KS01	Wonju Array Si	10.94	274	*e*Pn	Pn	06 26 02.9	+1.7
KS15	Wonju Array Si	10.95	274	*e*Pn	Pn	06 26 01.1	-0.2
KSAR	Wonju Array Be	10.95	274	P	Pn	06 26 03.9	+2.6
KSAR	Wonju Array Be	10.95	274	P	Pn	06 26 03.9	+2.6
MDJ	Mudanjiang	11.56	312	P	Pn	06 26 11.6	+2.0
MDJ				pmax	pmax		
	comp=Z,26nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,180nm,3.3s						
MDJ	Mudanjiang	11.56	312	*e*Pn	Pn	06 26 09.2	-0.4
KLR	Kul'dur	13.77	332	P	Pn	06 26 40.6	+0.9
	comp=Z,0.0nm,0.3s,baz=150,slow=18,SNR=5.9						
KLR				LR	LR	06 31 47.3	
	comp=Z,18nm,19.4s,baz=156,slow=36						
KLR	Kul'dur	13.77	332	*i* P	Pn	06 26 41.6	+1.9
ZEA	Zeya	19.07	333	*e*P	P	06 27 45.2	-0.6
ZEA				pmax	pmax		
	comp=Z,26nm,0.8s						
PETK	Petropavlovsk-	19.21	30	LR	LR	06 34 53.6	
	comp=Z,38nm,21.5s,baz=220,slow=36						
PETK	Petropavlovsk-	19.21	30	*e*P	P	06 27 48.3	+1.0
PETK	Petropavlovsk-	19.21	30	*e*P	P	06 27 48.3	+1.0
NJ2	Nanjing	19.48	261	*e*P	P	06 27 49.9	-0.6
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
TIA	Tai'an	19.66	274	P	Pn	06 27 55.1	+0.9
TIA				pmax	pmax		
	comp=Z,29nm,1.0s						
BJI	Beijing	20.02	285	⇓*e*P	P	06 27 54.8	-1.4
BJI				pP	pP	06 28 04.3	-2.6
BJI				pmax	pmax		
	comp=Z,20nm,0.9s						
YHNB	Yeheng	21.50	239	*e*P	P	06 28 10.9	-1.6
	comp=Z,9.3nm,0.8s						
SSLB	Suanglung	22.38	238	*e*P	P	06 28 18.1	-3.7
	comp=Z,8.3nm,1.0s						
YULB	Yu-li	22.41	237	*e*P	P	06 28 19.6	-2.6
	comp=Z,8.4nm,1.1s						
MA2	Magadan	22.88	12	LR	LR	06 37 43.7	
	comp=Z,31nm,18.6s,baz=198,slow=37						
TPUB	Ta-pu	22.92	238	*e*P	P	06 28 24.3	-3.3
	comp=Z,13nm,0.7s						
HHC	Hu-ho-hao-te	23.52	288	*e*P	P	06 28 32.7	-0.7
HHC				S	S	06 32 39.4	-4.7
HHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,37nm,5.5s						
WHN	Wuhan	23.62	261	P	P	06 28 33.8	-0.5
GUMO	Guam	23.96	172	LR	LR	06 38 15.0	
	comp=Z,20nm,21.2s,baz=92,slow=37						
YAK	Yakutsk	25.68	347	P	P	06 28 52.3	-0.5
	comp=Z,24nm,0.3s,baz=242,slow=1.7,SNR=4.4						
YAK				LR	LR	06 39 23.0	
	comp=Z,107nm,18.7s,baz=160,slow=37						
YAK	Yakutsk	25.68	347	*e*P	P	06 28 52.3	-0.5
	comp=Z,30nm,0.7s						
YAK	Yakutsk	25.68	347	P	P	06 28 52.3	-0.5
YAK				pmax	pmax		
	comp=Z,15nm,0.3s						
YAK				MLR	MLR		
	comp=Z,107nm,18.7s						
SEY	Seymchan	26.32	11	c*e*P	P	06 28 57.8	-0.8
XAN	Xi'an	26.71	273	P	P	06 29 01.0	-1.5
XAN				pP	pP	06 29 12.8	-1.4
XAN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,84nm,5.1s						
BOD	Bodaibo	27.26	327	*e*P	P	06 29 06.4	-0.7
BOD				pmax	pmax		
	comp=Z,7.0nm,1.5s						
ENH	Enshi	27.57	264	*e*P	P	06 29 09.0	-1.1
	comp=Z,33nm,0.8s						
SONA1	Songino Array	27.70	303	*e*P	P	06 29 10.4	-0.9
SONA0	Songino Array	27.70	303	*e*P	P	06 29 10.7	-0.6
SONM	Songino Array	27.70	303	P	P	06 29 10.7	-0.6
	comp=Z,4.6nm,0.5s,baz=102,slow=9.0,SNR=31						
SONM				LR	LR	06 39 53.9	
	comp=Z,53nm,21.8s,baz=119,slow=36						
H11N2	WAKE ISLAND Hy	28.21	122	T	T	06 59 31.2	
	baz=314,slow=75,SNR=832						
H11N1	WAKE ISLAND Hy	28.22	122	T	T	06 59 28.2	
	baz=314,slow=75,SNR=1074						
H11N3	WAKE ISLAND Hy	28.23	122	T	T	06 59 32.5	
	baz=314,slow=75,SNR=1091						
H11S1	WAKE ISLAND Hy	28.94	124	T	T	07 00 26.3	
	baz=316,slow=76,SNR=550						
H11S3	WAKE ISLAND Hy	28.94	124	T	T	07 00 24.3	
	baz=316,slow=76,SNR=582						
H11S2	WAKE ISLAND Hy	28.96	124	T	T	07 00 25.3	
	baz=316,slow=76,SNR=498						
ZAK	Zakamensk	30.15	308	*e*P	P	06 29 32.2	-0.8
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
LZH	Lanzhou	30.19	279	*e*P	P	06 29 38.0	+4.4
LZH				pP	sP	06 29 51.8	+1.1
LZH				PP	PP	06 30 37.3	-4.8
LZH				pmax	pmax		
	comp=Z,35nm,1.2s						
LZH				pmax	pmax		
	comp=Z,140nm,4.1s						
LZH				LR	LR		
	comp=Z,320nm,13.6s						
LZH				LR	LR		
	comp=Z,340nm,13.3s						
LZH				LR	LR		
	comp=Z,440nm,15.7s						
TLY	Talaya	30.19	310	P	P	06 29 33.2	-0.1
	comp=Z,3.0nm,0.5s,baz=91,slow=10,SNR=5.9						
TLY	Talaya	30.19	310	*e*P	P	06 29 32.4	-0.8
	comp=Z,4.8nm,0.7s						
TLY	Talaya	30.19	310	*e*P	P	06 29 33.1	-0.1
TLY				*e*		06 30 28.2	
TLY				pmax	pmax		
	comp=Z,6.0nm,0.9s						
TLY				MLR	MLR		
	comp=Z,107nm,18.0s						
GYA	Guiyang	31.49	260	P	P	06 29 43.8	-1.3
GYA				pP	pP	06 29 58.6	+1.7
GYA				PP	PnPn	06 30 50.0	+0.8
GYA				S	S	06 34 48.4	-1.9
GYA				sS	sS	06 35 10.0	-0.2
GYA				SS	SnSn	06 36 37.3	-0.5
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,4.9s						
GYA				LR	LR		
	comp=Z,460nm,17.8s						
GYA				LR	LR		
	comp=Z,410nm,18.0s						
GYA				LR	LR		
	comp=Z,440nm,18.2s						
GTA	Gaotai	32.62	287	*e*P	P	06 29 54.4	-0.5
GTA				pP	pP	06 30 06.2	-0.6
GTA				sP	sP	06 30 11.3	-0.8
GTA				PcP	PcP	06 32 40.1	-0.1
GTA				S	S	06 35 07.4	-0.4
GTA				sS	sS	06 35 26.3	-1.4
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,44nm,6.2s						
GTA				LR	LR		
	comp=Z,50nm,16.1s						
GTA				LR	LR		
	comp=Z,100nm,17.2s						
GTA				LR	LR		
	comp=Z,100nm,19.6s						
DAV	Davao City (W)	33.61	210	LR	LR	06 41 17.5	
	comp=Z,51nm,20.8s,baz=38,slow=32						
KMI	Kunming	35.22	261	P	P	06 30 17.6	-0.1
KMI				pmax	pmax		
	comp=Z,20nm,0.8s						
NONG	Nongkai	38.84	251	P	P	06 30 49.1	+0.9
	comp=Z,0.3nm,1.1s						
SKNT	Sakolnakorn	38.89	249	P	P	06 30 49.8	+1.2
	comp=Z,4.7nm,1.1s						
DGZ	Jazzator, Alta	40.29	305	*i* P	P	06 31 00.9	+0.7
WMQ	Urumqi	40.81	296	P	P	06 31 04.8	+0.3
WMQ				pP	pP	06 31 14.4	-2.2
WMQ				pmax	pmax		
	comp=Z,30nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,130nm,4.1s						
WMQ				LR	LR		
	comp=Z,120nm,24.3s						
WMQ				LR	LR		
	comp=Z,120nm,31.5s						
ZAA1	Zalesovo Array	41.76	312	*e*P	P	06 31 11.5	-0.5
ZAA1				*e*PcP	PcP	06 33 07.5	0.0
ZAA1				*e*		06 33 21.1	
ZALV	Zalesovo Beam	41.76	312	P	P	06 31 11.5	-0.5
	comp=Z,9.7nm,0.8s,baz=90,slow=7.4,SNR=27						
ZALV				PcP	PcP	06 33 07.5	0.0
	comp=Z,1.5nm,0.5s,baz=96,slow=4.5,SNR=4.3						
ZALV				pPcP		06 33 21.1	
	comp=Z,1.2nm,0.4s,baz=99,slow=5.4,SNR=4.4						
CM31	Chiang Mai Arr	41.80	255	*e*P	P	06 31 12.2	-0.5
CMAR	Chiang Mai Arr	41.80	255	P	P	06 31 13.6	+0.9
	comp=Z,1.4nm,0.4s,baz=51,slow=6.7,SNR=5.9						
CMAR				LR	LR	06 49 33.4	
	comp=Z,52nm,19.9s,baz=60,slow=38						
NVS	Novosibirsk	42.67	313	*e*P	P	06 31 19.4	0.0
NVS				pmax	pmax		
	comp=Z,12nm,0.9s						
NVS				pmax	pmax		
	comp=E,9.0nm,1.0s						
MK01	Makanchi Array	44.05	302	*e*P	P	06 31 30.2	-0.5
MK31	Makanchi Array	44.05	302	*e*P	P	06 31 30.0	-0.7
MK31	Makanchi Array	44.05	302	*i* P	P	06 31 30.0	-0.7
MK31				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MK32	Makanchi Array	44.05	302	*e*P	P	06 31 30.4	-0.3
MK32				*e*pP	pP	06 31 43.2	+0.3
MKAR	Makanchi Array	44.05	302	P	P	06 31 30.4	-0.3
	comp=Z,6.8nm,0.6s,baz=85,slow=9.6,SNR=87						
MKAR				pP	pP	06 31 43.2	+0.3
	comp=Z,4.4nm,0.7s,baz=91,slow=10,SNR=8.7						
MKAR				LR	LR	06 51 06.4	
	comp=Z,40nm,19.0s,baz=68,slow=38						
MKAR	Makanchi Array	44.05	302	*e*P	P	06 31 30.0	-0.6
	comp=Z,61nm,0.6s						
MKAR				pP	pP	06 31 43.2	+0.3
MAKZ	Makanchi	44.26	302	*e*P	P	06 31 32.0	-0.3
	comp=Z,8.1nm,0.4s						
MAKZ	Makanchi	44.26	302	*e*P	P	06 31 32.1	-0.3
MAKZ				pmax	pmax		
	comp=Z,8.0nm,0.4s						
SVW2	Sparrevohn	45.05	38	*e*P	P	06 31 38.0	-0.5
	comp=Z,2.5nm,0.7s						
BRDH	Bariadhala	45.22	266	LR	LR	06 52 50.3	
	comp=Z,80nm,18.8s,baz=130,slow=39						
KURK	Kurchatov	45.81	308	*e*P	P	06 31 44.1	-0.4
	comp=Z,22nm,0.7s						
KURK	Kurchatov	45.81	308	c*e*P	P	06 31 43.9	-0.7
KURK				pmax	pmax		
	comp=Z,21nm,0.7s						
KURBB	Kurchatov Arra	45.88	308	P	P	06 31 44.6	-0.5
	comp=Z,15nm,0.6s,baz=83,slow=8.2,SNR=117						
IM3	Indian Mountai	46.17	31	*e*P	P	06 31 48.3	+1.1
OHAK	Old Harbor	46.30	43	*e*P	P	06 31 47.7	-0.5
	comp=Z,4.0nm,0.9s						
ODAN	Odare	46.58	273	*e*P	P	06 31 50.9	-0.3
KDAK	Kodiak Island	46.64	42	P	P	06 31 51.3	+0.4
	comp=Z,3.9nm,0.6s,baz=265,slow=6.5,SNR=11						
KDAK	Kodiak Island	46.64	42	*e*P	P	06 31 51.3	+0.4
	comp=Z,6.8nm,0.8s						
PPLA	Purkeypile	46.69	35	*e*P	P	06 31 53.8	+2.3
	comp=Z,2.1nm,0.8s						
CAST	Castle Rocks	46.75	34	*e*P	P	06 31 53.3	+1.5
	comp=Z,2.6nm,1.0s						
RAMN	Ramite	47.17	274	*e*P	P	06 31 55.5	-0.3
JIRN	Jiri	47.17	275	*e*P	P	06 31 56.1	+0.1
BPAW	Bear Paw Mtn.	47.25	34	*e*P	P	06 31 57.7	+2.0
	comp=Z,1.5nm,0.8s						
KTH	Kantishna Hill	47.27	34	*e*P	P	06 31 58.1	+2.2
	comp=Z,2.8nm,0.7s						
GUN	Gumba	47.31	275	*e*P	P	06 31 56.9	-0.1
TRF	Thorofare Moun	47.56	34	*e*P	P	06 31 59.4	+1.1
	comp=Z,2.7nm,0.9s						
KKN	Kakani	47.83	276	*e*P	P	06 32 00.5	-0.5
	comp=Z,22nm,0.5s						
PKIN	Phulchoki	47.84	275	*e*P	P	06 32 00.5	-0.5
	comp=Z,10nm,0.5s						
TOLK	Toolik Lake Re	47.99	27	*e*P	P	06 32 01.4	0.0
	comp=Z,3.9nm,0.8s						
GHO	Glory Hole Cre	48.24	37	*e*P	P	06 32 04.6	+1.1
	comp=Z,4.7nm,0.7s						
GKN	Gorkha	48.25	276	*e*P	P	06 32 03.8	-0.3
	comp=Z,59nm,0.9s						
TARG	Taragay, Kyrgy	48.38	296	*e*P	P	06 32 05.2	0.0
	comp=Z,9.4nm,0.7s						
WRH	Wood River Hil	48.51	33	*e*P	P	06 32 06.8	+1.4
	comp=Z,1.9nm,0.8s						
CCB	Clear Creek Bu	48.63	33	*e*P	P	06 32 06.3	0.0
	comp=Z,0.9nm,0.7s						
DANN	Dangsing	48.79	277	*e*P	P	06 32 08.6	+0.2
	comp=Z,110nm,0.7s						
SCM	Sheep Creek Mo	48.99	36	*e*P	P	06 32 10.6	+1.4
	comp=Z,5.7nm,1.1s						
HDA	Harding Lake	49.01	33	*e*P	P	06 32 08.8	-0.4
	comp=Z,21nm,1.0s						
IL1	Eielson Array	49.02	33	*e*P	P	06 32 09.7	+0.4
ILAR	Eielson Array	49.02	33	P	P	06 32 09.6	+0.4
	comp=Z,1.9nm,0.7s,baz=268,slow=6.4,SNR=28						
ILAR				pP	pP	06 32 21.5	-0.1
	comp=Z,1.4nm,0.6s,baz=266,slow=5.6,SNR=6.7						
ILB	Eielson Array	49.02	33	*e*P	P	06 32 09.8	+0.5
KOLN	Koldanda	49.17	276	*e*P	P	06 32 11.0	-0.2
PYUN	Piuthan	49.51	277	*e*P	P	06 32 13.6	-0.2
	comp=Z,97nm,1.0s						
FYU	Fort Yukon	49.63	30	*e*P	P	06 32 16.4	+2.5
	comp=Z,2.6nm,0.8s						
HNR	Honiara	49.71	156	LR	LR	06 52 22.7	
	comp=Z,32nm,19.9s,baz=326,slow=35						
KSH	Kashi	50.40	294	P	P	06 32 23.3	+3.0
KSH				sP	sP	06 32 41.7	+3.8
KSH				PcP	PcP	06 33 41.2	+2.9
KSH				PP	PP	06 34 21.3	+5.3
KSH				PcS	PcS	06 37 36.7	+1.1
KSH				S	S	06 39 31.8	+1.2
KSH				pmax	pmax		
	comp=Z,5.0nm,0.4s						
KSH				pmax	pmax		
	comp=Z,150nm,4.9s						
BVAR	Borovoye Array	50.42	312	P	P	06 32 19.8	-0.3
	comp=Z,4.4nm,0.6s,baz=67,slow=8.2,SNR=19						
BVAR				PcP	PcP	06 33 37.7	-0.2
	comp=Z,2.7nm,0.6s,baz=63,slow=3.9,SNR=4.5						
BVAR				pPcP		06 33 51.9	
	comp=Z,2.9nm,0.7s,baz=57,slow=6.2,SNR=5.3						
BVAR				LR	LR	06 54 42.0	
	comp=Z,70nm,18.8s,baz=92,slow=37						
AAK	Ala-Archa	50.45	298	P	P	06 32 19.9	-0.8
AAK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
EGAK	Eagle	51.46	32	*e*P	P	06 32 28.7	+0.9
	comp=Z,1.2nm,0.7s						
PSI	Prapat	52.19	239	LR	LR	06 55 15.3	
	comp=Z,31nm,21.5s,baz=269,slow=37						
KK31	Karatay Array	53.07	300	*e*P	P	06 32 39.7	-0.4
KK31	Karatay Array	53.07	300	*e*P	P	06 32 39.7	-0.4
KKAR	Karatay Array	53.07	300	*e*P	P	06 32 39.7	-0.4
KKAR	Karatay Array	53.07	300	*e*P	P	06 32 39.7	-0.4
INK	Inuvik	53.90	27	P	P	06 32 47.0	+1.3
	comp=Z,1.6nm,0.5s,baz=291,slow=7.7,SNR=8.5						
INK				pP	pP	06 32 59.7	+1.5
	comp=Z,3.6nm,1.0s,baz=323,slow=13,SNR=4.1						
GSI	Gunungsitoli	54.19	239	*e*P	P	06 32 49.4	+0.9
	comp=Z,28nm,0.8s						
LEM	Lembang	54.33	223	LR	LR	06 55 40.4	
	comp=Z,40nm,21.4s,baz=168,slow=36						
SVE	Sverdlovsk	54.94	318	⇓*e*P	P	06 32 53.4	-0.1
SVE				pmax	pmax		
	comp=Z,28nm,1.0s						
ARU	Arti	56.16	318	P	P	06 33 01.8	-0.4
	comp=Z,14nm,0.4s,baz=79,slow=3.5,SNR=25						
ARU	Arti	56.16	318	*e*P	P	06 33 01.9	-0.2
	comp=Z,27nm,1.0s						
ARU	Arti	56.16	318	c *i*P	P	06 33 01.8	-0.4
ARU				*PP	pP	06 33 16.5	+1.8
ARU						06 35 03.6	
ARU				S	S	06 40 47.7	-0.3
ARU				SS	SS	06 44 31.0	-3.3
ARU				pmax	pmax		
	comp=Z,27nm,1.0s						
WRAB	Tennant Creek	57.52	188	*e*P	P	06 33 12.0	-0.1
	comp=Z,6.3nm,1.1s						
WB2	Warramunga Arr	57.52	188	*e*P	P	06 33 11.5	-0.7
	comp=Z,4.8nm,0.9s						
WR1	Warramunga Arr	57.53	188	*e*P	P	06 33 11.7	-0.5
	comp=Z,3.4nm,0.6s						
WRA	Warramunga Arr	57.53	188	P	P	06 33 11.7	-0.5
	comp=Z,2.4nm,0.5s,baz=5.6,slow=7.1,SNR=44						
AB31	Akbulak array	57.80	310	P	P	06 33 12.6	-1.3
AB31				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ABKAR	Akbulak array	57.80	310	*e*P	P	06 33 13.3	-0.6
AKTO	Aktyubinsk	58.52	312	P	P	06 33 18.4	-0.5
	comp=Z,2.6nm,0.3s,baz=73,slow=6.7,SNR=9.0						
AKTO				LR	LR	06 59 40.2	
	comp=Z,49nm,18.8s,baz=59,slow=37						
PRGR	Permogore	60.50	327	*e*P	P	06 33 31.6	-0.7
PRGR				pmax	pmax		
	comp=Z,8.0nm,0.5s						
AS01	Alice Springs	61.25	188	*e*P	P	06 33 38.3	+0.5
ASAR	Alice Springs	61.25	188	P	P	06 33 37.6	-0.3
	comp=Z,1.5nm,0.7s,baz=12,slow=6.9,SNR=11						
MBWA	Marble Bar	61.87	203	*e*P	P	06 33 42.3	+0.2
	comp=Z,6.5nm,0.8s						
RES	Resolute Bay	62.12	15	*e*P	P	06 33 43.5	+0.3
	comp=Z,5.2nm,1.0s						
RES	Resolute Bay	62.12	15	*e*P	P	06 33 43.5	+0.3
RES				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KEV	Kevo	63.10	339	*e*P	P	06 33 49.9	+0.2
	comp=Z,3.8nm,0.9s						
KEV	Kevo	63.10	339	*e*P	P	06 33 49.9	+0.2
KEV				pmax	pmax		
	comp=Z,4.0nm,0.9s						
YKW3	Yellowknife Ar	63.29	30	*e*P	P	06 33 52.2	+1.1
	comp=Z,1.0nm,0.7s						
YKA	Yellowknife Ar	63.33	30	P	P	06 33 51.9	+0.6
	comp=Z,0.9nm,0.7s,baz=302,slow=6.4,SNR=12						
YKA				pP	pP	06 34 04.7	+0.7
	comp=Z,0.4nm,0.6s,baz=78,slow=17,SNR=5.4						
ARA0	ARCESS Array S	63.65	339	*e*P	P	06 33 53.4	0.0
ARCES	ARCESS Array B	63.65	339	P	P	06 33 53.4	0.0
	comp=Z,3.4nm,0.9s,baz=56,slow=6.5,SNR=16						
ARCES				LR	LR	07 05 22.5	
	comp=Z,31nm,18.1s,baz=80,slow=40						
ARCES	ARCESS Array B	63.65	339	*e*P	P	06 33 53.0	-0.4
ARCES	ARCESS Array B	63.65	339	*e*P	P	06 33 53.0	-0.4
ARE0	ARCESS Array S	63.65	339	*e*P	P	06 33 53.3	-0.1
	comp=Z,1.6nm,0.7s						
AFI	Afiamalu	67.27	130	LR	LR	07 00 25.6	
	comp=Z,18nm,20.8s,baz=236,slow=33						
FIA1	FINESS Array S	68.51	332	*e*P	P	06 34 24.6	0.0
	comp=Z,8.4nm,0.7s						
FIA0	FINESS Array S	68.51	332	*e*P	P	06 34 24.4	-0.3
FIA0	FINESS Array S	68.51	332	*e*P	P	06 34 24.4	-0.3
FINES	FINESS Array B	68.51	332	P	P	06 34 24.4	-0.3
	comp=Z,5.2nm,0.6s,baz=38,slow=7.9,SNR=20						
FINES				LR	LR	07 06 33.1	
	comp=Z,31nm,18.2s,baz=23,slow=38						
VSR	Storozhevoye	68.73	319	*e*P	P	06 34 25.3	-0.9
VSR				pmax	pmax		
	comp=Z,9.0nm,0.5s						
STKA	Stephens Creek	69.00	180	P	P	06 34 28.5	+0.6
	comp=Z,1.7nm,0.6s,baz=337,slow=11,SNR=5.3						
STKA	Stephens Creek	69.00	180	*e*P	P	06 34 28.5	+0.6
	comp=Z,0.4nm,0.8s						
FORT	Forrest	69.08	193	*e*P	P	06 34 29.0	+0.5
	comp=Z,9.5nm,0.6s						
PINE	Pine Mountain	69.90	50	*e*P	P	06 34 36.1	+2.2
	comp=Z,4.1nm,0.8s						
K05A	Summer Lake	70.51	51	*e*P	P	06 34 39.6	+2.0
	comp=Z,3.0nm,1.1s						
KBZ	Khabaz	70.76	311	P	P	06 34 38.8	0.0
	comp=Z,3.5nm,0.8s,baz=59,slow=5.1,SNR=4.9						
KBZ				LR	LR	07 10 39.6	
	comp=Z,24nm,18.1s,baz=100,slow=40						
KBZ	Khabaz	70.76	311	P	P	06 34 38.8	0.0
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KBZ				MLR	MLR		
	comp=Z,24nm,18.1s						
KIV	Kislovodsk	70.76	311	*e*P	P	06 34 40.3	+1.3
KIV				pmax	pmax		
	comp=Z,11nm,1.1s						
NEY	Neytrino	71.13	310	*i* P	P	06 34 41.4	0.0
NEY				pmax	pmax		
	comp=Z,2.0nm,1.1s						
GNI	Garni	71.60	307	LR	LR	07 08 49.0	
	comp=Z,28nm,18.0s,baz=90,slow=38						
GNI	Garni	71.60	307	*i* P	P	06 34 46.0	+1.8
GNI				pmax	pmax		
	comp=Z,25nm,1.0s						
J08A	Circle Bar Ran	71.64	49	*e*P	P	06 34 45.2	+0.9
	comp=Z,1.5nm,0.8s						
UOSS	Minazif	71.86	288	*e*P	P	06 34 46.0	+0.2
	comp=Z,7.4nm,0.9s						
BEKR	Beckworth	72.44	53	*e*P	P	06 34 51.1	+1.9
	comp=Z,1.2nm,0.8s						
NC405	NORSAR Array S	73.64	337	*e*P	P	06 34 55.9	+0.1
LRM	Limekiln Ridge	73.69	44	*e*P	P	06 34 58.1	+1.5
HFS	Hagfors	73.76	336	P	P	06 34 56.0	-0.4
	comp=Z,2.5nm,0.4s,baz=40,slow=4.7,SNR=15						
HFS				LR	LR	07 09 52.6	
	comp=Z,67nm,19.9s,baz=60,slow=38						
NC204	NORSAR Array S	73.81	338	*e*P	P	06 34 56.9	+0.1
NB201	NORSAR Array S	73.82	337	*e*P	P	06 34 56.9	0.0
NB2	NORSAR Subarra	73.85	337	P	P	06 34 56.9	-0.2
	comp=Z,5.9nm,0.7s,baz=40,slow=6.2						
NOA	NORSAR Array B	73.85	337	LR	LR	07 10 55.2	
	comp=Z,39nm,19.1s,baz=40,slow=39						
DLMT	Dillon	73.89	45	*e*P	P	06 34 59.3	+1.6
	comp=Z,2.2nm,0.6s						
AKASG	Malin Array Be	74.06	322	P	P	06 34 57.8	-0.6
	comp=Z,4.8nm,0.5s,baz=45,slow=6.2,SNR=30						
AKASG				LR	LR	07 11 13.7	
	comp=Z,25nm,18.1s,baz=250,slow=39						
AKBB	Malin Array Si	74.06	322	*e*P	P	06 34 58.0	-0.4
	comp=Z,8.0nm,0.5s						
AKBB	Malin Array Si	74.06	322	*e*P	P	06 34 58.0	-0.4
AKBB				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KIEV	Kiev	74.08	322	*e*P	P	06 34 58.0	-0.5
	comp=Z,7.7nm,0.5s						
KIEV	Kiev	74.08	322	*e*P	P	06 34 58.0	-0.5
KIEV				pmax	pmax		
	comp=Z,8.0nm,0.5s						
NAO01	NORSAR Array S	74.11	337	*e*P	P	06 34 59.0	+0.5
AK11	Malin Array Si	74.11	322	*e*P	P	06 34 58.6	-0.1
BOZ	Bozeman (W)	74.29	44	*e*P	P	06 35 00.7	+0.7
	comp=Z,2.0nm,1.0s						
BOZ	Bozeman (W)	74.29	44	*e*P	P	06 35 00.7	+0.7
BOZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KVN	Kaiserville	74.33	53	*e*P	P	06 35 01.9	+1.4
	comp=Z,1.7nm,1.1s						
KVN	Kaiserville	74.33	53	*e*P	P	06 35 01.9	+1.4
KVN				pmax	pmax		
	comp=Z,2.0nm,1.1s						
NV01	Mina Array Sit	74.57	53	*e*P	P	06 35 03.3	+1.5
NVAR	Mina Array Bea	74.57	53	P	P	06 35 03.3	+1.5
	comp=Z,1.0nm,0.7s,baz=288,slow=5.5,SNR=6.3						
DUG	Dugway, Tooele	76.92	49	*e*P	P	06 35 17.0	+1.8
	comp=Z,1.6nm,0.6s						
DUG	Dugway, Tooele	76.92	49	*e*P	P	06 35 17.0	+1.8
DUG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
PD31	Pinedale Array	77.22	46	*e*P	P	06 35 17.8	+0.9
PDAR	Pinedale Array	77.22	46	P	P	06 35 17.5	+0.6
	comp=Z,0.7nm,0.5s,baz=252,slow=2.1,SNR=11						
BUR08	Bucovina Ar. S	78.07	322	*e*P	P	06 35 22.1	+0.6
BURAR	Bucovina Array	78.08	322	⇓*i*P	P	06 35 21.6	+0.1
BURAR	Bucovina Array	78.08	322	P	P	06 35 21.6	+0.1
BIZ	Bicaz	78.10	321	⇑*i*P	P	06 35 21.7	+0.2
VRI	Vrincioaia	78.51	320	⇓*i*P	P	06 35 25.2	+1.4
VRI	Vrincioaia	78.51	320	⇓P	P	06 35 25.2	+1.4
HARR	Harsova	78.68	318	⇓*i*P	P	06 35 25.2	+0.6
HARR	Harsova	78.68	318	⇓P	P	06 35 25.2	+0.6
TLB	Topalu	78.69	318	⇓*i*P	P	06 35 25.0	+0.3
TLB	Topalu	78.69	318	⇓P	P	06 35 25.0	+0.3
BRTR	Keskin Array B	78.70	312	LR	LR	07 12 46.8	
	comp=Z,13nm,18.1s,baz=90,slow=38						
UZH	Uzhgorod	78.78	324	*e*P	P	06 35 25.6	+0.5
UZH				*e*		06 35 36.4	
SRU	San Rafael Swe	78.97	49	*e*P	P	06 35 28.0	+1.4
	comp=Z,2.1nm,0.6s						
SRU	San Rafael Swe	78.97	49	*e*P	P	06 35 28.0	+1.4
SRU				pmax	pmax		
	comp=Z,2.0nm,0.6s						

MLR	Muntele Rosu	79.17	320	LR	LR	07 13 59.4	
	comp=Z,14nm,18.0s,baz=30,slow=38						
MLR	Muntele Rosu	79.17	320	⇑iP	P	06 35 26.0	-1.5
MLR	Muntele Rosu	79.17	320	⇑P	P	06 35 26.0	-1.5
VOIR		79.67	320	⇓iP	P	06 35 31.2	+1.0
VOIR		79.67	320	⇓P	P	06 35 31.2	+1.0
DRGR		79.88	322	⇓iP	P	06 35 31.2	-0.1
DRGR		79.88	322	⇓P	P	06 35 31.2	-0.1
ARR	Arges	79.93	320	⇓iP	P	06 35 32.9	+1.3
DPC	Dobruska-Polom	80.19	328	eP	P	06 35 33.6	+0.8
DPC	Dobruska-Polom	80.19	328	eP	P	06 35 33.6	+0.8
PV14	Lion Creek, Pa	80.35	49	eP	P	06 35 35.7	+1.5
	comp=Z,2.6nm,0.6s						
PV17	East Wray Mesa	80.44	49	eP	P	06 35 36.8	+2.1
	comp=Z,1.9nm,0.6s						
CLL	Collm	80.81	330	eP	P	06 35 36.0	-0.1
BZS	Buzias	81.25	322	⇓iP	P	06 35 37.9	-0.7
BZS	Buzias	81.25	322	P	P	06 35 37.9	-0.7
MMAI	Mount Meron Ar	81.87	305	LR	LR	07 14 38.1	
	comp=Z,34nm,20.4s,baz=280,slow=38						
CSS	Mathiatis	81.94	308	eP	P	06 35 42.0	-0.4
	comp=Z,14nm,1.1s						
CONA	Conrad Observa	82.22	327	eP	P	06 35 41.7	-2.0
	comp=Z,6.0nm,1.3s						
KHC	Kasperske Hory	82.27	329	eP	P	06 35 44.0	+0.1
KHC	Kasperske Hory	82.27	329	eP	P	06 35 44.0	+0.1
GERES	GERESS Array B	82.44	328	P	P	06 35 44.5	-0.4
	comp=Z,0.7nm,0.4s,baz=46,slow=5.8,SNR=6.5						
GERES				pP	pP	06 35 57.9	-0.1
	comp=Z,1.1nm,0.7s,baz=20,slow=4.3,SNR=3.3						
GERES				LR	LR	07 14 28.0	
	comp=Z,23nm,18.4s,baz=102,slow=37						
GEA0	GERESS Array S	82.44	328	eP	P	06 35 44.5	-0.3
VTS	Vitosha	82.61	319	eP	P	06 35 46.8	+0.9
	comp=Z,5.3nm,1.1s						
VTS	Vitosha	82.61	319	eP	P	06 35 46.8	+0.9
VTS				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ARSA	Arzberg	82.88	326	eP	P	06 35 44.0	-3.1
	comp=Z,2.0nm,0.8s						
MOA	Molln	82.97	327	P	P	06 35 45.4	-2.2
	comp=Z,1.8nm,0.7s						
SOKA	Soboth	83.53	326	i P	P	06 35 48.1	-2.5
	comp=Z,3.6nm,0.9s						
OBKA	Obir	83.88	326	eP	P	06 35 49.1	-3.3
	comp=Z,1.2nm,0.5s						
ANMO	Albuquerque	84.15	50	ceP	P	06 35 55.9	+1.8
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.3s						
WTTA	Wattenberg	84.54	328	eP	P	06 35 50.3	-5.5
	comp=Z,6.2nm,0.9s						
D41A	Chassel	84.60	32	eP	P	06 35 56.9	+1.0
	comp=Z,5.0nm,1.0s						
MOTA	Moosalm	84.69	329	eP	P	06 35 52.5	-4.0
	comp=Z,2.0nm,0.5s						
RETA	Reutte	84.72	329	eP	P	06 35 56.2	-0.4
	comp=Z,5.6nm,1.2s						
PDG	Podgorica	84.74	321	⇑iP	P	06 35 56.5	-0.1
BFO	Black Forest	85.01	331	i P	P	06 35 58.9	+0.9
FETA	Feichten	85.11	329	eP	P	06 35 53.4	-5.2
	comp=Z,4.0nm,1.0s						
DAVA	Damuels	85.24	329	P	P	06 35 56.4	-2.9
	comp=Z,3.0nm,0.7s						
DAVOX	Davos/Dischmat	85.65	329	LR	LR	07 17 46.4	
	comp=Z,33nm,19.1s,baz=224,slow=38						
G42A	Mountain	86.09	33	eP	P	06 36 03.9	+0.5
	comp=Z,3.6nm,0.8s						
H43A	Windswept, Lux	86.99	33	eP	P	06 36 08.6	+0.8
	comp=Z,3.7nm,0.7s						
TX31	Lajitas Ar. Si	89.70	53	eP	P	06 36 22.0	+1.0
TXAR	Lajitas Array	89.70	53	P	P	06 36 21.8	+0.7
	comp=Z,0.9nm,0.5s,baz=289,slow=3.0,SNR=15						
WHAR	Wooly Hollow	91.98	41	eP	P	06 36 32.4	+1.0
	comp=Z,3.0nm,0.8s						
TKL	Tuckaleechee C	95.91	36	LR	LR	07 24 28.8	
	comp=Z,14nm,18.5s,baz=358,slow=38						
TOA0	Torodi Ar. Sit	117.16	315	ePKPdf	PKPdf	06 42 06.9	-1.1
QSPA	South Pole Qui	127.22	180	ePKPdf	PKPdf	06 42 26.4	+0.5
LPAZ	La Paz	146.30	59	PKPbc	PKPbc	06 43 04.5	+0.3
	comp=Z,1.5nm,0.5s,baz=343,slow=2.3,SNR=17						
LPAZ				pPKPbc	pPKPbc	06 43 18.9	+1.0
	comp=Z,2.3nm,0.6s,baz=326,slow=2.4,SNR=5.7						
LPAZ	La Paz	146.30	59	ePKPdf	PKPbc	06 43 04.4	+0.1
LPAZ				ePKPbc	PKPab	06 43 04.7	-0.4
LPAZ				pPKPbc	pPKPbc	06 43 18.9	+1.0

IDC 02 06:39:52.3±5.4**, 9°.04S×124°.55E, h83**^{km}±91^{km}**, mb3.9**/1**, mb1 3.4**/4**, mb1mx3.1**/47**, mbtmp3.5**/4**, ML3.2**/3**, Error ellipse: s-maj=80.5km s-min=32.6km az=46.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	1.45	217	P	Pn	06 40 17.6	+0.4
	9.0nm,0.3s,baz=102,slow=14,SNR=4.9						
BATI				S	Sn	06 40 35.8	-0.2
	14nm,0.3s,baz=339,slow=21,SNR=5.3						
FITZ	Fitzroy Crossi	9.07	173	P	Pn	06 41 59.7	-0.7
	0.3nm,0.3s,baz=348,slow=12,SNR=17						
FITZ				S	Sn	06 43 33.9	-6.9
	0.5nm,0.3s,baz=260,slow=17,SNR=10						
WRA	Warramunga Arr	14.39	140	P	Pn	06 43 12.2	+0.2
	0.1nm,0.3s,baz=316,slow=13,SNR=4.9						
WRA				S	Sn	06 45 44.8	-5.6
	0.3nm,0.3s,baz=320,slow=25,SNR=7.8						
ASAR	Alice Springs	17.08	150	P	P	06 43 46.4	0.0
	0.1nm,0.3s,baz=318,slow=11,SNR=4.2						
MJAR	Matsushiro Arr	47.12	15	P	P	06 48 15.9	-0.2
	2.3nm,0.6s,baz=206,slow=6.2,SNR=5.5						

IDC 02 07:35:16.1±1.4**, 32°.36N×141°.73E, h0**^{km}**, mb3.5**/3**, mb1 3.7**/4**, mb1mx3.4**/62**, mbtmp3.5**/4**, ML3.3**/1**, MS2.6**/2**, Ms1 2.6**/2**, ms1mx2.2**/53**, Error ellipse: s-maj=34.7km s-min=26.8km az=61.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	1.80	295	Pn	Pn	07 35 47.3	-1.1
	18nm,0.3s,baz=267,slow=23,SNR=7.6						
MJAR	Matsushiro Arr	5.08	326	Pn	Pn	07 36 35.1	+1.5
	1.1nm,0.3s,baz=152,slow=10,SNR=5.6						
JNU	Nakatsue	9.17	278	LR	LR	07 41 03.6	
	comp=Z,28nm,18.5s,baz=121,slow=38						
KSRS	Korea Array	12.41	298	LR	LR	07 43 08.9	
	comp=Z,27nm,18.6s,baz=107,slow=38						
MKAR	Makanchi Array	46.94	306	P	P	07 43 48.4	-0.2
	0.3nm,0.3s,baz=93,slow=9.3,SNR=4.2						
WRA	Warramunga Arr	52.49	189	P	P	07 44 31.1	+0.1
	0.4nm,0.4s,baz=5.8,slow=7.7,SNR=7.3						
YKA	Yellowknife Ar	67.73	29	P	P	07 46 14.9	-0.2
	0.2nm,0.6s,baz=295,slow=6.4,SNR=3.3						

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*ISCJB **02** 07:39:29.0±1.1, 33°.48S±0°.07×178°.0W±0°.2, h41^{km}, mb4.3/3, MS3.4/2, Error ellipse: s-maj=28.9km s-min=4.8km az=19.0*

*IDC **02** 07:39:30.5±1.8, 33°.23S×178°.66W, h0^{km}, mb4.3/3, mb1 4.6/4, mb1mx3.9/45, mbtmp4.4/4, ML4.3/1, MS3.3/3, Ms1 3.3/3, ms1mx2.7/45, Error ellipse: s-maj=46.3km s-min=33.2km az=60.0*

*WEL **02** 07:39:31.8±0.9, 33°S±10°×17°8W±2°5, h33^{km}, ML4.8/19*

ISC 02 07:39:30.5±1.8**, 33°.5S**±0°.1×**177°.8W**±0°.3**, h41**^{km}**, n34, σ1**^{s}**.33**/43**, mb4.3**/3**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	4.22	359	P	Pn	07 40 31.8	-0.6
GLKZ				S	Sn	07 41 18.8	-1.7
MXZ	Matakaoa Point	5.14	217	P	Pn	07 40 44.9	0.0
MXZ				S	Sn	07 41 40.9	-1.9
WMGZ	Waiomatatini S	5.29	214	P	Pn	07 40 48.9	+2.0
WMGZ				S	Sn	07 41 47.6	+1.0
HAZ	Te Kaha	5.55	219	P	Pn	07 40 51.9	+1.3
PUZ	Puketiti	5.56	214	P	Pn	07 40 50.2	-0.6
PUZ				S	Sn	07 41 53.1	-0.3
RUGZ	Raukumara Rang	5.76	218	P	Pn	07 40 53.0	-0.6
TWGZ	Tauwhareparae	5.78	215	P	Pn	07 40 53.2	-0.5
TWGZ				S	Sn	07 41 58.9	+0.2
CNGZ	Carnagh Statio	5.92	212	P	Pn	07 40 55.8	+0.1
CNGZ				S	Sn	07 42 03.5	+1.2
TKGZ	Te Karaka	6.05	214	P	Pn	07 40 57.3	-0.1
TKGZ				S	Sn	07 42 04.0	-1.3
MWZ	Matawai	6.12	217	P	Pn	07 40 56.9	-1.5
MWZ				S	Sn	07 42 06.5	-0.8
URZ	Urewera	6.28	219	Pn	Pn	07 41 00.2	-0.4
	7.6nm,0.3s,baz=313,slow=3.1,SNR=47						
URZ				Sn	Sn	07 42 07.9	-3.1
	5.8nm,0.3s,baz=303,slow=4.1,SNR=12						
URZ	Urewera	6.28	219	P	Pn	07 41 00.2	-0.4
URZ				S	Sn	07 42 08.8	-2.3
OPRZ	Ohinepanea	6.30	225	P	Pn	07 41 01.8	+1.0
RAGZ	Rawiri	6.30	216	P	Pn	07 40 59.2	-1.8
RAGZ				S	Sn	07 42 09.2	-2.5
RIGZ	Rimuhau	6.30	213	P	Pn	07 40 59.8	-1.1
RIGZ				S	Sn	07 42 10.3	-1.4
MARZ	Manawahe	6.33	223	P	Pn	07 41 01.9	+0.6
PRGZ	Paritu Road	6.43	211	P	Pn	07 41 01.6	-1.0
SNGZ	Shannon Statio	6.56	215	P	Pn	07 41 03.9	-0.6
MHGZ	Mahia Peninsul	6.61	210	P	Pn	07 41 04.6	-0.5
RTZ	Ruatahuna	6.62	218	P	Pn	07 41 04.5	-0.7
RRRZ	Republican Roa	6.66	222	P	Pn	07 41 07.4	+1.6
RAHZ	Arahi	6.79	216	P	Pn	07 41 08.3	+0.7
MTHZ	Maungataniwha	6.87	217	P	Pn	07 41 08.8	+0.2
TOZ	Tahuroa Road	6.88	230	P	Pn	07 41 10.6	+1.7
NMHZ	Naumai	7.07	216	P	Pn	07 41 11.6	+0.2
MRHZ	Matea Rd	7.07	220	P	Pn	07 41 11.0	-0.5
BKZ	Black Stump Fm	7.28	217	P	Pn	07 41 13.7	-0.7
DZM	Mont Dzumac	17.96	305	LR	LR	07 48 32.9	
	comp=Z,73nm,18.5s,baz=195,slow=32						
STKA	Stephens Creek	34.04	261	LR	LR	07 59 19.4	
	comp=Z,70nm,18.8s,baz=23,slow=36						
ASAR	Alice Springs	43.18	270	P	P	07 47 27.8	+0.3
	4.7nm,0.7s,baz=110,slow=7.3,SNR=59						
ASAR				PcP	PcP	07 49 19.6	+3.1
	1.0nm,0.8s,baz=121,slow=3.0,SNR=6.2						
WRA	Warramunga Arr	44.45	275	P	P	07 47 37.8	0.0
	5.4nm,0.7s,baz=116,slow=7.8,SNR=47						
QSPA	South Pole Qui	56.62	180	P	P	07 49 17.2	+8.1
	1.4nm,0.7s,baz=358,slow=2.5,SNR=7.1						
MA2	Magadan	96.31	345	LR	LR	08 30 54.6	
	comp=Z,11nm,19.3s,baz=178,slow=32						
FINES	FINESS Array B	148.09	338	PKPbc	PKPab	07 59 15.1	+1.4
	1.9nm,0.7s,baz=31,slow=5.1,SNR=4.7						

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*ISCJB **02** 08:10:17.4±0.7, 27°.5N±0°.2×139°.8E±0°.2, h450^{km}, mb3.5/10, Error ellipse: s-maj=24.8km s-min=13.9km az=38.7*

*IDC **02** 08:10:18.5±0.7, 27°.51N×140°.06E, h454^{km}±11^{km}, mb3.3/9, mb1 3.3/9, mb1mx3.0/64, mbtmp4.1/9, Error ellipse: s-maj=30.5km s-min=19.8km az=74.0*

ISC 02 08:10:18.6±0.9**, 27°.5N**±0°.2×**139°.9E**±0°.2**, h450**^{km}**, n11, σ0**^{s}**.75**/12**, mb3.6**/10**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	2.06	101	P	P	08 11 20.4	+1.0
	baz=291,slow=17						
JCJ				S	S	08 12 08.2	-0.6
	41nm,0.3s,baz=111,slow=23,SNR=11						
KLR	Kul'dur	22.59	346	P	P	08 14 44.2	+1.0
	0.1nm,0.4s,baz=166,slow=9.1,SNR=4.9						
WRA	Warramunga Arr	47.48	187	P	P	08 18 11.3	-0.1
	0.2nm,0.4s,baz=5.8,slow=7.6,SNR=5.4						
ZALV	Zalesovo Beam	47.85	319	P	P	08 18 13.4	-0.5
	1.3nm,0.5s,baz=120,slow=8.8,SNR=3.3						
MKAR	Makanchi Array	48.65	309	P	P	08 18 20.6	+0.6
	0.3nm,0.3s,baz=85,slow=7.4,SNR=5.8						
KURBB	Kurchatov Arra	51.31	314	P	P	08 18 39.7	+0.2
	4.5nm,0.6s,baz=92,slow=8.2,SNR=27						
BVAR	Borovoye Array	56.37	317	P	P	08 19 15.8	+0.3
	7.0nm,0.4s,baz=91,slow=7.1,SNR=47						
ARCES	ARCESS Array B	72.48	340	P	P	08 20 58.2	+0.3
	0.7nm,0.5s,baz=68,slow=9.7,SNR=6.9						
YKA	Yellowknife Ar	72.73	28	P	P	08 20 58.9	-0.5
	0.3nm,0.6s,baz=298,slow=6.2,SNR=5.3						
FINES	FINESS Array B	76.68	333	P	P	08 21 21.3	-0.4
	2.9nm,0.5s,baz=54,slow=5.4,SNR=16						
HFS	Hagfors	82.24	336	P	P	08 21 50.1	-1.2
	0.7nm,0.4s,baz=90,slow=2.9,SNR=4.0						

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*ISCJB **02** 08:20:08.2±0.7, 32°.23N±0°.04×115°.31W±0°.05, h11^{km}±8^{km}, Error ellipse: s-maj=8.0km s-min=5.3km az=151.7*

*ECX **02** 08:20:09.7±0.5, 32°.21N×115°.30W, h6^{km}, MD2.4, ML2.6*

*MEX **02** 08:20:10.5±0.4, 32°.32N×115°.20W, h16^{km}±17^{km}, MD3.7*

ISC 02 08:20:08.1±1.7**, 32°.20N**±0°.03×**115°.33W**±0°.04**, h9**^{km}±28^{km}**, n18, σ0**^{s}**.63**/26**, 1C-5D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPBX	Cerro Prieto	0.22	5	eP	Pg	08 20 12.5	0.0
CPBX				eS	Sg	08 20 15.8	+0.3
CPBX				⇓e		08 20 18.5	
CPBX				IAML		08 20 18.5	
	comp=N,3µm,0.1s						
MBIG	Mexicali	0.23	28	eP	Pg	08 20 12.8	0.0
MBIG				eS	Sg	08 20 15.2	-0.8
ERPC	Ernies Place	0.61	332	eP	Pg	08 20 21.0	+1.1
WESC	Westside Schoo	0.65	328	⇓iP	Pg	08 20 21.6	+0.9
YUH	Yuha Desert	0.67	312	⇓iP	Pg	08 20 21.5	+0.4
COA	Coachella	0.68	15	eP	Pg	08 20 21.5	+0.2
YMD	Yuma Desert	0.75	62	⇑iP	Pg	08 20 22.3	-0.2
RMX	La Rumorosa	0.75	302	eP	Pg	08 20 22.6	0.0
RMX				eS	Sg	08 20 32.5	+0.1
RMX				IAML		08 20 34.2	
	comp=E,235nm,0.1s						
RMX				e		08 20 34.2	
RMX				IAML		08 20 34.2	
	comp=N,168nm,0.1s						
RMX				⇓e		08 20 34.2	
ECBX	El Chinero	0.76	162	eP	Pg	08 20 22.9	+0.1
IKP	In-Ko-Pah, Jac	0.80	304	eP	Pg	08 20 23.8	+0.3
ZAX	El Zacaton	1.06	230	eP	Pg	08 20 28.5	+0.1
ZAX				eS	Sg	08 20 43.3	+1.1
ZAX				IAML		08 20 43.9	
	comp=N,146nm,0.3s						
ZAX				e		08 20 43.9	
CBX	Cerro Bola	1.14	276	eP	Pg	08 20 29.8	-0.2
CBX				eS	Sg	08 20 45.5	+0.7
CBX				IAML		08 20 47.0	
	comp=E,161nm,0.2s						
CBX				e		08 20 47.0	
CBX	Cerro Bola	1.14	276	eP	Pg	08 20 29.7	-0.2
CBX				eS	Sg	08 20 44.1	-0.7
SPIG	San Pedro Mart	1.16	186	eP	Pg	08 20 30.3	-0.1
SPIG	San Pedro Mart	1.16	186	eP	Pg	08 20 30.6	+0.2
SPIG				eS	Sg	08 20 45.5	+0.1
SPX	San Pedro Mart	1.16	186	eP	Pg	08 20 30.4	0.0
SPX				⇓e		08 20 48.9	
SPX				IAML		08 20 48.9	
	comp=E,84nm,0.3s						
TJIG	Tijuana	1.17	282	eP	Pg	08 20 29.5	-0.9
TJIG				eS	Sg	08 20 44.2	-1.4
BAR	Barrett	1.23	293	eP	Pg	08 20 31.2	-0.5

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*DDA **02** 09:33:20.2, 39°.13N×26°.49E, h7^{km}, Ml2.7*

*ISK **02** 09:33:20.0, 39°.12N×26°.47E, h5^{km}, ML3.3/12*

*CSEM **02** 09:33:20.8±0.1, 39°.15N×26°.49E, h5^{km}, ML2.7, Error ellipse: s-maj=3.3km s-min=2.3km az=68.0*

*ISCJB **02** 09:33:20.7±0.4, 39°.14N±0°.02×26°.50E±0°.02, h5^{km}±3^{km}, Error ellipse: s-maj=3.3km s-min=2.4km az=158.4*

*ATH **02** 09:33:20.3, 39°.17N×26°.57E, h10^{km}±4^{km}, ML2.8/6, Error ellipse: s-maj=4.7km s-min=1.1km az=251.0*

*THE **02** 09:33:22.3, 39°.13N×26°.36E, h12^{km}±1^{km}, ML2.7/6, Error ellipse: s-maj=2.8km s-min=0.9km az=265.0*

ISC 02 09:33:20.9±0.8**, 39°.14N**±0°.01×**26°.49E**±0°.02**, h13**^{km}±6^{km}**, n98, σ0**^{s}**.71**/137**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRK	Paraskevi	0.20	303	P	Pg	09 33 25.0	-0.4
PRK				S	Sg	09 33 28.4	0.0
PRK				AML	AML	09 33 31.4	
	comp=E,10050µm,0.5s						
PRK				AML	AML	09 33 32.7	
	comp=N,8969µm,0.5s						
PRK	Paraskevi	0.20	303	P	Pg	09 33 25.2	-0.2
PRK				S	Sg	09 33 28.9	+0.4
PRK	Paraskevi	0.20	303	P	Pg	09 33 25.2	-0.2
PRK				S	Sg	09 33 28.7	+0.2
AYVA	Ayvalik	0.23	42	i P	Pg	09 33 25.4	-0.5
AYVA				i S	Sg	09 33 29.0	-0.3
AYVA	Ayvalik	0.23	42	P	Pg	09 33 25.5	-0.5
AYVA				S	Sg	09 33 29.0	-0.3
DKL	Dikili	0.33	101	PG	Pg	09 33 27.5	-0.2
DKL				SG	Sg	09 33 32.5	+0.3
DKL	Dikili	0.33	101	ePg	Pg	09 33 27.5	-0.2
DKL				eSg	Sg	09 33 32.5	+0.3
GPNR	Gulpinar-Canak	0.42	319	PG	Pg	09 33 28.5	-0.8
GPNR	Gulpinar-Canak	0.42	319	ePg	Pg	09 33 28.5	-0.8
FOCM	Fo˘§a	0.46	156	PG	Pg	09 33 29.8	-0.3
FOCM	Fo˘§a	0.46	156	ePg	Pg	09 33 29.8	-0.3
KRBN	Karaburun	0.54	175	PG	Pg	09 33 30.4	-1.2
KRBN	Karaburun	0.54	175	ePg	Pg	09 33 30.4	-1.2
BAYC	CANAKKALE_Bayr	0.61	4	i P	Pg	09 33 31.7	-1.1
BAYC	CANAKKALE_Bayr	0.61	4	P	Pg	09 33 31.7	-1.1
EZN	Ezine	0.70	350	PG	Pb	09 33 34.6	-0.5
EZN	Ezine	0.70	350	P	Pb	09 33 34.5	-0.5
EZN				S	Sn	09 33 47.0	-0.3
EZN	Ezine	0.70	350	P	Pb	09 33 34.5	-0.5
URLA	Izmir	0.78	174	PG	Pg	09 33 35.3	-0.7
URLA	Izmir	0.78	174	i P	Pg	09 33 34.9	-1.1
URLA				i S	Sb	09 33 47.4	+0.5
URLA	Izmir	0.78	174	P	Pg	09 33 34.9	-1.1
URLA	Izmir	0.78	174	ePg	Pg	09 33 35.3	-0.7
URLA				S	Sb	09 33 47.4	+0.5
BOZC	Bozcaada	0.78	335	PG	Pg	09 33 35.7	-0.4
BOZC	Bozcaada	0.78	335	i P	Pg	09 33 35.5	-0.6
BOZC				i S	Sb	09 33 48.2	+1.2
BOZC	Bozcaada	0.78	335	ePg	Pg	09 33 35.7	-0.4
CHOS	Chios island	0.82	205	P	Pg	09 33 36.2	-0.6
CHOS				S	Sb	09 33 48.9	+0.8
CHOS				AML	AML	09 33 49.7	
	comp=N,1264µm,0.7s						
CHOS				AML	AML	09 33 51.1	
	comp=E,1778µm,0.3s						
CHOS	Chios island	0.82	205	P	Pg	09 33 36.4	-0.5
CHOS				S	Sb	09 33 48.8	+0.7
CHOS	Chios island	0.82	205	P	Pg	09 33 36.4	-0.5
CHOS				S	Sb	09 33 48.8	+0.7
BLCB	Balcova	0.86	150	PG	Pg	09 33 36.8	-0.9
BLCB	Balcova	0.86	150	ePg	Pg	09 33 36.8	-0.9
ZEY	˜zmir	0.90	179	i P	Pg	09 33 36.6	-1.6
ZEY				i S	Sb	09 33 51.2	+1.0
PSRA	Psara	0.93	231	P	Pn	09 33 40.7	+1.0
PSRA				S	Sn	09 33 52.9	-0.1
PSRA	Psara	0.93	231	P	Pn	09 33 40.0	+0.2
PSRA				S	Sn	09 33 53.1	+0.1
STEP	BALIKESIR_Sava	0.98	75	i P	Pb	09 33 39.8	-0.1
STEP				i S	Sb	09 33 53.0	+0.2
STEP	BALIKESIR_Sava	0.98	75	P	Pb	09 33 39.8	-0.1
STEP				S	Sb	09 33 53.0	+0.2
AKS	Akhisar	1.06	104	PG	Pb	09 33 41.2	0.0
AKS	Akhisar	1.06	104	ePg	Pb	09 33 41.2	0.0
AKHS	Akhisar	1.06	104	i P	Pg	09 33 40.7	-0.8
AKHS				i S	Sb	09 33 55.4	+0.3
AKHS	Akhisar	1.06	104	P	Pg	09 33 40.7	-0.8
AKHS				S	Sb	09 33 55.4	+0.3
DGB	˜zmir	1.12	164	i P	Pg	09 33 40.7	-1.9
DGB				i S	Sb	09 33 56.9	+0.1
GADA	Gvkgeada	1.15	337	PN	Pb	09 33 42.7	0.0
GADA	Gvkgeada	1.15	337	P	Pb	09 33 42.5	-0.2
GADA				S	Sb	09 33 58.0	+0.5
GADA	Gvkgeada	1.15	337	P	Pb	09 33 42.5	-0.2
GADA				S	Sb	09 33 58.0	+0.5
GOKC	Gokceada-Canak	1.15	338	PN	Pg	09 33 42.2	-0.9
GOKC	Gokceada-Canak	1.15	338	ePn	Pg	09 33 42.2	-0.9
LPK	Lapseki	1.25	10	PN	Pg	09 33 44.5	-0.6
LPK	Lapseki	1.25	10	ePn	Pg	09 33 44.5	-0.6
GELI	Tayfur-Gelibol	1.26	360	PN	Pn	09 33 44.2	-0.1
GELI	Tayfur-Gelibol	1.26	360	ePn	Pn	09 33 44.2	-0.1
LIA	Limnos Island	1.27	307	P	Pn	09 33 44.4	0.0
LIA				AML	AML	09 34 02.4	
	comp=N,465µm,0.6s						
LIA				S	Sn	09 34 02.5	+1.3
LIA				AML	AML	09 34 03.5	
	comp=E,730µm,0.5s						
LIA	Limnos Island	1.27	307	P	Pg	09 33 44.6	-0.7
LIA				S	Sb	09 34 00.4	-0.4
LIA	Limnos Island	1.27	307	P	Pg	09 33 44.6	-0.7
LIA				S	Sb	09 34 00.4	-0.4
KRBG	Karabiga-Canak	1.40	26	PN	Pg	09 33 47.1	-0.8
KRBG	Karabiga-Canak	1.40	26	ePn	Pg	09 33 47.1	-0.8
SMG	Samos	1.45	169	P	Pg	09 33 48.2	-0.6
SMG				AML	AML	09 34 11.3	
	comp=N,978µm,0.6s						
SMG				AML	AML	09 34 11.5	
	comp=E,1017µm,0.4s						
SMG	Samos	1.45	169	P	Pb	09 33 47.7	-0.1
SMG				S	Sg	09 34 07.8	+0.1
SMG	Samos	1.45	169	P	Pb	09 33 47.7	-0.1
SMG				S	Sg	09 34 07.8	+0.1
SMTH	Samothraki Isl	1.52	331	P	Pg	09 33 49.6	-0.6
SMTH				S	Sg	09 34 09.4	-0.6
SMTH				AML	AML	09 34 10.4	
	comp=N,312µm,0.5s						
SMTH				AML	AML	09 34 11.2	
	comp=E,299µm,0.7s						
SMTH	Samothraki Isl	1.52	331	P	Pn	09 33 48.2	+0.3
SMTH				S	Sn	09 34 07.7	+0.1
SMTH	Samothraki Isl	1.52	331	P	Pn	09 33 48.2	+0.3
SMTH				S	Sn	09 34 07.7	+0.1
ERIK	Erikli-Kesan	1.53	1	PN	Pb	09 33 48.8	-0.4
ERIK	Erikli-Kesan	1.53	1	ePn	Pb	09 33 48.8	-0.4
GCAM	G?zelcaml?	1.55	158	PN	Pb	09 33 48.9	-0.6
GCAM	G?zelcaml?	1.55	158	i P	Pb	09 33 48.9	-0.6
GCAM	G?zelcaml?	1.55	158	P	Pb	09 33 48.9	-0.6
DURS	Dursunbey	1.61	73	i P	Pn	09 33 48.4	-0.7
DURS				i S	Sb	09 34 11.5	+0.7
DURS	Dursunbey	1.61	73	P	Pn	09 33 48.4	-0.7
DURS				S	Sb	09 34 11.5	+0.7
EDC	Edincik	1.61	41	PN	Pn	09 33 49.3	+0.2
EDC	Edincik	1.61	41	ePn	Pn	09 33 49.3	+0.2
AYDB	Zeytinkoy-Aydi	1.62	137	PN	Pn	09 33 49.3	0.0
AYDB	Zeytinkoy-Aydi	1.62	137	ePn	Pn	09 33 49.3	0.0
ENEZ	Enez	1.62	351	PN	Pb	09 33 50.3	-0.4
ENEZ	Enez	1.62	351	ePn	Pb	09 33 50.3	-0.4
RKY	Sarkoy-Tekirda	1.64	19	PN	Pb	09 33 50.8	-0.3
RKY	Sarkoy-Tekirda	1.64	19	ePn	Pb	09 33 50.8	-0.3
DEMI	Demirci	1.74	92	i P	Pn	09 33 50.6	-0.3
DEMI	Demirci	1.74	92	P	Pn	09 33 50.6	-0.3
MANT	Manisa	1.74	111	i P	Pg	09 33 54.3	-0.1
MANT				i S	Sb	09 34 14.8	+0.1
MANT	Manisa	1.74	111	P	Pg	09 33 54.3	-0.1
MANT				S	Sb	09 34 14.8	+0.1
ALN	Alexandroupoli	1.79	349	PN	Pn	09 33 52.6	+1.0
ALN	Alexandroupoli	1.79	349	P	Pb	09 33 52.7	-0.9
ALN				S	Sg	09 34 17.4	-1.1
ALN				AML	AML	09 34 19.4	
	comp=E,239µm,0.5s						
ALN				AML	AML	09 34 23.0	
	comp=N,148µm,0.9s						
ALN	Alexandroupoli	1.79	349	P	Pn	09 33 52.0	+0.4
ALN				S	Sn	09 34 14.8	+0.6
ALN	Alexandroupoli	1.79	349	P	Pn	09 33 52.0	+0.4
ALN	Alexandroupoli	1.79	349	ePn	Pn	09 33 52.6	+1.0
ALN				S	Sn	09 34 14.8	+0.6
KULA	Kula-Manisa	1.81	109	PN	Pn	09 33 52.8	+0.9
KULA	Kula-Manisa	1.81	109	ePn	Pn	09 33 52.8	+0.9
KCTX	Karacabey (Bur	1.83	51	PN	Pn	09 33 52.6	+0.5
KCTX	Karacabey (Bur	1.83	51	ePn	Pn	09 33 52.6	+0.5
AYDN	Tasoluk	1.83	143	i P	Pg	09 33 55.3	-0.8
AYDN	Tasoluk	1.83	143	P	Pg	09 33 55.3	-0.8
SBT3	Marmara-Eregli	2.09	33	PN	Pb	09 33 57.6	-1.0
SBT3	Marmara-Eregli	2.09	33	ePn	Pb	09 33 57.6	-1.0
RDO	Rodhopi	2.14	340	PN	Pn	09 33 57.8	+1.5
RDO	Rodhopi	2.14	340	ePn	Pn	09 33 57.8	+1.5
SBT5	Esenkoy-Cinarc	2.37	50	PN	Pn	09 34 01.1	+1.6
SBT5	Esenkoy-Cinarc	2.37	50	ePn	Pn	09 34 01.1	+1.6
CTKS	Kestanelik-??a	2.61	36	PN	Pn	09 34 04.2	+1.4
CTKS	Kestanelik-??a	2.61	36	ePn	Pn	09 34 04.2	+1.4

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*ISCJB **02** 10:07:11.6±0.6, 28°.58N±0°.04×76°.27E±0°.05, h10^{km}, Error ellipse: s-maj=7.7km s-min=4.7km az=39.0*

*NDI **02** 10:07:12.7±2.0, 28°.55N×76°.30E, h10^{km}, ML3.3*

ISC 02 10:07:11.3±1.0**, 28°.53N**±0°.05×**76°.22E**±0°.06**, h10**^{km}**, n8, σ1**^{s}**.39**/16**, Northern India**

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

KHET	Khetri	0.58	219	eP	Pn	10 07 25.8	+0.2
KHET				eS	Sb	10 07 32.9	+1.2
KHET				IAML		10 07 36.5	
	comp=E,214nm,0.1s						
KHET				IAML		10 07 36.6	
	comp=N,225nm,0.2s						
NDI	New Delhi	0.89	80	eP	Pb	10 07 29.0	+0.1
NDI				eS	Sg	10 07 39.0	-1.2
DDI	Dehra Dun	2.40	41	eP	Pn	10 07 51.7	+1.0
DDI				eS	Sn	10 08 19.3	-1.0
DDI				IAML		10 08 27.4	
	comp=E,260nm,0.0s						
DDI				IAML		10 08 27.4	
	comp=N,221nm,0.1s						
SMLA	Simla	2.72	17	eS	Sn	10 08 27.0	-1.0
SMLA				eS	Sn	10 08 27.0	-1.0
SMLA				IAML		10 08 41.0	
	comp=N,244nm,0.3s						
SMLA				IAML		10 08 41.3	
	comp=E,294nm,0.4s						
JOSI	Joshimath	3.55	54	eP	Pn	10 08 07.3	+0.7
JOSI				eS	Sn	10 08 47.7	-1.0
JOSI				IAML		10 09 04.3	
	comp=E,269nm,0.6s						
JOSI				IAML		10 09 04.6	
	comp=N,391nm,0.6s						
DHRM	DHARAMSHALA	3.71	1	eP	Pn	10 08 11.1	+2.2
DHRM				eS	Sn	10 08 52.7	-0.1
DHRM				IAML		10 09 08.6	
	comp=N,124nm,0.1s						
DHRM				IAML		10 09 10.7	
	comp=E,189nm,0.6s						
BHPL	Bhopal	5.38	168	eP	Pn	10 08 32.3	+0.7
BHPL				eS	Sn	10 09 32.9	-0.7
CEP	Cherat	6.44	326	P	Pn	10 08 47.9	+1.6
CEP				S	Sn	10 09 57.0	-3.0

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*SOME **02** 10:09:48.7, 41°.20N×71°.02E, h0^{km}*

*KRNET **02** 10:09:50.1±0.1, 41°.39N×71°.02E, h16^{km}, mb2.2*

*NNC **02** 10:09:50.5±1.5, 41°.25N×70°.99E, h0^{km}, mb2.8, mpv2.5, Error ellipse: s-maj=12.9km s-min=8.0km az=50.0*

ISC 02 10:09:50.4±1.4, **41°.30N**±0°.03×**71°.04E**±0°.04, **h1**^{km}±13^{km}, **n12,** σ1^{s}**17**/23, **12C-6D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARK	Arkit	0.85	54	⇑iP	Pg	10 10 06.2	-0.5
	baz=61						
ARK				⇑iS	Sg	10 10 17.9	+0.1
	baz=61						
IUG	Iuzhnay	1.14	318	eP	Pb	10 10 11.5	-1.4
	24nm,0.3s						
IUG				eS	Sb	10 10 28.1	-0.1
	17nm,0.6s						
BTK	Batken	1.25	188	⇑iP	Pg	10 10 15.2	+0.7
	baz=87						
BTK				⇑iS	Sn	10 10 34.6	+1.9
	baz=87						
ARSB	Arslanbob	1.46	88	⇓iP	Pb	10 10 18.1	-0.4
	baz=92						
ARSB				⇓iS	Sg	10 10 38.2	+0.8
	baz=92						
MNAS	Manas	1.61	42	⇓Pn	Pb	10 10 20.9	-0.1
	1.2nm,0.3s						
MNAS				⇓Sn	Sg	10 10 44.9	+2.7
	6.8nm,0.7s						
MNAS	Manas	1.61	42	⇑eP	Pn	10 10 19.3	-0.8
	baz=45						
MNAS				⇑iS	Sb	10 10 41.0	-0.9
	baz=45						
KK31	Karatay Array	1.84	348	⇓Pn	Pb	10 10 24.5	-0.4
	2.7nm,0.3s,baz=170,slow=18,SNR=58						
KK31				⇑Sn	Sg	10 10 49.3	-0.4
	11nm,0.5s,baz=165,slow=28,SNR=16						
BRLS	Borolday	1.95	333	eP	Pn	10 10 25.0	+0.3
	0.4nm,0.2s						
BRLS				eS	Sb	10 10 50.8	-0.6
	6.2nm,0.5s						
AML	Almayashu	2.15	66	⇑iP	Pb	10 10 29.4	-1.0
	baz=69						
AML				⇑iS	Sb	10 10 57.6	-0.1
	baz=69						
MRKS	Merke	2.17	48	eP	Pb	10 10 31.1	+0.5
	6.4nm,0.3s						
MRKS				eS	Sg	10 11 01.9	+1.6
	8.1nm,0.4s						
SFK	Sufi-Kurgan	2.27	124	⇓Pn	Pb	10 10 30.3	-2.1
	0.7nm,0.3s						
SFK				⇑Lg	Lg	10 11 00.4	
	3.6nm,0.5s						
SFK	Sufi-Kurgan	2.27	124	⇑iP	Pb	10 10 32.0	-0.3
	baz=25						
SFK				⇑iS	Sg	10 11 02.4	-1.0
	baz=25						

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*NORS **02** 10:11:29.9±0.0, 41°.52N×46°.85E, h14^{km}±1^{km}*

*MOS **02** 10:11:29.9±0.0, 41°.53N×46°.76E, h9^{km}, MPVA4.1*

*CSEM **02** 10:11:30.8±0.3, 41°.48N×46°.76E, h2^{km}, mb3.9, Error ellipse: s-maj=6.1km s-min=4.2km az=147.0*

*NSSP **02** 10:11:30.0, 41°.47N×46°.60E, h12^{km}, Ms3.1*

*MOS **02** 10:11:31.2±1.1, 41°.48N×46°.82E, h14^{km}, mb3.9/1, Error ellipse: s-maj=10.2km s-min=5.8km az=91.6*

*DRS **02** 10:11:32.3±0.0, 41°.58N×46°.70E, h14^{km}*

ISC 02 10:11:31.1±1.0, **41°.48N**±0°.02×**46°.77E**±0°.02, **h9**^{km}±8^{km}, **n67,** σ1^{s}**29**/125, **7C-6D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDFL	Dedoflistskaro	0.49	266	P	Pn	10 11 43.7	-0.6
DDFL				S	Sb	10 11 55.5	+6.3
KMKR	Kumukh	0.70	20	⇑iPG	Pg	10 11 43.8	-0.8
KMKR				eS	Sg	10 11 54.2	+0.5
KMKR				pmax	pmax		
	comp=Z,206nm,0.2s						
KMKR	Kumukh	0.70	20	i Pg	Pg	10 11 43.8	-0.8
	comp=Z,206nm,0.2s						
KMKR				eSg	Sg	10 11 54.2	+0.5
KMKR	Kumukh	0.70	20	i Pg	Pg	10 11 43.8	-0.8
KMKR				eSg	Sg	10 11 54.2	+0.5
AKT	Akhty	0.72	90	ePG	Pg	10 11 44.6	-0.4
AKT				eS	Sg	10 11 54.6	+0.2
AKT				pmax	pmax		
	comp=Z,75nm,0.5s						
AKT	Akhty	0.72	90	ePg	Pg	10 11 44.6	-0.4
	comp=Z,75nm,0.5s						
AKT				eSg	Sg	10 11 54.6	+0.2
AKT	Akhty	0.72	90	ePg	Pg	10 11 44.6	-0.4
AKT				eSg	Sg	10 11 54.3	-0.1
GNBR	Gunib	0.92	9	⇑iPG	Pg	10 11 48.3	-0.5
GNBR				eS	Sb	10 12 01.3	-0.3
GNBR	Gunib	0.92	9	i Pg	Pg	10 11 48.3	-0.5
GNBR				eSg	Sb	10 12 01.3	-0.3
GNBR	Gunib	0.92	9	i Pg	Pg	10 11 47.9	-0.9
GNBR				eSg	Sb	10 12 01.2	-0.4
URKR	Urkarakh	0.94	43	⇓iPG	Pg	10 11 49.0	-0.2
URKR				eS	Sn	10 12 03.0	-1.2
URKR				pmax	pmax		
	comp=Z,272nm,0.2s						
URKR	Urkarakh	0.94	43	i Pg	Pg	10 11 49.0	-0.2
	comp=Z,272nm,0.2s						
URKR				eSg	Sn	10 12 03.0	-1.2
URKR	Urkarakh	0.94	43	i Pg	Pg	10 11 49.0	-0.2
URKR				eSg	Sn	10 12 03.0	-1.2
DGRG	David-gareji	1.05	269	P	Pg	10 11 50.9	-0.4
DGRG				S	Sn	10 12 07.2	+0.3
DGRG	David-gareji	1.05	269	ePG	Pg	10 11 50.9	-0.4
DGRG				eS	Sn	10 12 07.1	+0.3
DGRG	David-gareji	1.05	269	ePg	Pg	10 11 50.9	-0.4
DGRG				eSg	Sn	10 12 07.1	+0.3
DGRG	David-gareji	1.05	269	ePg	Pg	10 11 50.9	-0.4
DGRG				eSg	Sn	10 12 07.1	+0.3
XNZR	Khunzakh	1.06	357	⇑iPG	Pb	10 11 50.8	-0.9
XNZR				eS	Sg	10 12 05.7	+0.3
XNZR	Khunzakh	1.06	357	i Pg	Pb	10 11 50.8	-0.9
XNZR				eSg	Sg	10 12 05.7	+0.3
XNZR	Khunzakh	1.06	357	ePg	Pb	10 11 50.8	-0.9
XNZR				eSg	Sg	10 12 05.7	+0.3
ARKR	Arakani	1.14	8	⇓iPG	Pg	10 11 52.8	-0.1
ARKR				eS	Sn	10 12 08.8	-0.1
ARKR				pmax	pmax		
	comp=Z,89nm,0.2s						
ARKR	Arakani	1.14	8	i Pg	Pg	10 11 52.8	-0.1
	comp=Z,89nm,0.2s						
ARKR				eSg	Sn	10 12 08.8	-0.1
ARKR	Arakani	1.14	8	i Pg	Pg	10 11 52.8	-0.1
ARKR				eSg	Sn	10 12 08.8	-0.1
UNCR	Uncukul	1.23	1	i PG	Pn	10 11 53.5	-1.0
UNCR				eS	Sg	10 12 11.2	+0.4
UNCR				pmax	pmax		
	comp=Z,205nm,0.3s						
UNCR	Uncukul	1.23	1	i Pg	Pn	10 11 53.5	-1.0
	comp=Z,205nm,0.3s						
UNCR				eSg	Sg	10 12 11.2	+0.4
UNCR	Uncukul	1.23	1	i Pg	Pn	10 11 53.5	-1.0
UNCR				eSg	Sg	10 12 11.2	+0.4
BTLR	Botlikh	1.25	341	i PG	Pn	10 11 53.7	-1.1
BTLR				eS	Sg	10 12 15.0	+3.6
BTLR				pmax	pmax		
	comp=Z,32nm,0.5s						
BTLR	Botlikh	1.25	341	i Pg	Pn	10 11 53.7	-1.1
	comp=Z,32nm,0.5s						
BTLR				eSg	Sg	10 12 15.0	+3.6
BTLR	Botlikh	1.25	341	i Pg	Pn	10 11 53.5	-1.3
BTLR				eSg	Sb	10 12 10.2	-1.0
DRN	Derbent	1.29	64	⇓iPG	Pg	10 11 56.0	+0.2
DRN				eS	Sg	10 12 14.5	+2.0
DRN				pmax	pmax		
	comp=Z,125nm,0.4s						
DRN	Derbent	1.29	64	i Pg	Pg	10 11 56.0	+0.2
	comp=Z,125nm,0.4s						
DRN				eSg	Sg	10 12 14.5	+2.0
DRN	Derbent	1.29	64	ePg	Pg	10 11 55.8	0.0
DRN				eSg	Sg	10 12 14.3	+1.7
KRNR	Karanay	1.35	4	⇑iPG	Pb	10 11 56.5	-0.1
KRNR						10 12 18.5	
KRNR	Karanay	1.35	4	i Pg	Pb	10 11 56.5	-0.1
KRNR				Sg	Sg	10 12 18.5	+4.0
KRNR	Karanay	1.35	4	i Pg	Pb	10 11 56.5	-0.1
KRNR				eSg	Sg	10 12 18.5	+4.0
SEAG	Tbilisi Sea	1.50	282	P	Pg	10 11 59.3	-0.6
SEAG				S	Sg	10 12 19.5	+0.1
DBC	Dubki	1.54	2	⇓iPG	Pb	10 11 59.1	-0.7
DBC				eS	Sg	10 12 20.1	-0.5
DBC	Dubki	1.54	2	i Pg	Pb	10 11 59.1	-0.7
DBC				eSg	Sg	10 12 20.1	-0.5
DBC	Dubki	1.54	2	i Pg	Pb	10 11 59.0	-0.7
DBC				i Sg	Sg	10 12 20.6	0.0
TBLG	Delisi	1.55	280	P	Pb	10 11 58.7	-1.1
TBLG				S	Sb	10 12 19.0	-0.5
TBLG	Delisi	1.55	280	ePG	Pb	10 11 58.7	-1.1
TBLG	Delisi	1.55	280	ePg	Pb	10 11 58.7	-1.1
TBLG	Delisi	1.55	280	ePg	Pb	10 11 58.7	-1.1
TBLG				eSg	Sb	10 12 19.0	-0.5
DVE	Vedeno	1.55	342	ePG	Pg	10 12 00.9	0.0
DVE				eS	Sg	10 12 22.1	+1.1
DVE	Vedeno	1.55	342	ePg	Pg	10 12 00.9	0.0
DVE				eSg	Sg	10 12 22.1	+1.1
DVE	Vedeno	1.55	342	ePg	Pg	10 12 00.9	0.0
DVE				eSg	Sg	10 12 22.1	+1.1
DLMR	Dylym	1.59	356	PG	Pn	10 11 57.0	-2.4
DLMR				S	Sg	10 12 22.0	-0.3
DLMR	Dylym	1.59	356	Pg	Pn	10 11 57.0	-2.4
DLMR				Sg	Sg	10 12 22.0	-0.3
DLMR	Dylym	1.59	356	ePg	Pn	10 11 57.0	-2.4
DLMR				eSg	Sg	10 12 22.0	-0.3
DUS	Dusheti	1.66	292	P	Pb	10 12 01.5	-0.5
DUS				S	Sg	10 12 24.1	-0.5
DUS	Dusheti	1.66	292	ePN	Pb	10 12 01.4	-0.5
DUS				eS	Sg	10 12 24.0	-0.5
DUS	Dusheti	1.66	292	ePn	Pb	10 12 01.4	-0.5
DUS				eSg	Sg	10 12 24.0	-0.5
STEZ	Stepenevan	1.85	256	eP	Pn	10 12 02.0	-1.1
STEZ				S	Sn	10 12 26.0	-0.7
STE	Stepanavan	1.87	256	P	Pn	10 12 02.0	-1.4
STE				S	Sn	10 12 26.0	-1.2
GUDG	Gudauri	1.97	301	P	Pg	10 12 07.7	-1.2
GUDG				S	Sg	10 12 33.0	-1.6
GNI	Garni	2.04	230	⇑iP	Pb	10 12 07.4	-0.9
GNI				⇑iS	Sb	10 12 34.0	+0.2
GNI	Garni	2.04	230	d iPN	Pb	10 12 07.4	-0.9
GNI	Garni	2.04	230	⇑P	Pb	10 12 07.4	-0.9
GNI				S	Sb	10 12 34.0	+0.2
KMGR	Komgaron	2.12	319	i Pg	Pg	10 12 10.6	-1.1
KMGR				eSg	Sb	10 12 37.1	+1.1
LACR	Lac	2.28	307	ePN	Pb	10 12 11.2	-1.3
LACR				eS	Sb	10 12 41.1	+0.3
LACR	Lac	2.28	307	ePn	Pb	10 12 11.2	-1.3
LACR				eSn	Sb	10 12 41.1	+0.3
LACR	Lac	2.28	307	ePg	Pb	10 12 11.2	-1.3
LACR				eSg	Sb	10 12 41.1	+0.3
KIV	Kislovodsk	3.90	311	ePN	Pn	10 12 34.2	+3.0
KIV				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KIV	Kislovodsk	3.90	311	ePn	Pn	10 12 34.2	+3.0
	comp=Z,7.0nm,0.9s						
OBN	Obninsk	15.21	337	⇓eP	Pn	10 15 07.2	+1.3
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,12nm,15.0s						
OBN	Obninsk	15.21	337	eP	Pn	10 15 07.2	+1.3
	comp=Z,12nm,15.0s						
DGZ	Jazzator, Alta	29.32	60	i P	P	10 17 34.3	+0.4
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.0s						

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*ISCJB **02** 10:15:54.8±0.2, 22°.52S±0°.04×172°.97E±0°.05, h32^{km}, mb4.7/59, MS4.0/28, Error ellipse: s-maj=6.4km s-min=5.4km az=36.3*

*BJI **02** 10:15:59.0, 22°.50S×173°.00E, h60^{km}, mb4.7/19, mB4.9/10, Ms4.4/3, Ms7 4.2/3*

*IDC **02** 10:16:00.5±3.6, 22°.56S×172°.93E, h71^{km}±31^{km}, mb4.2/19, mb1 4.3/21, mb1mx4.2/44, mbtmp4.4/21, MS3.9/30, Ms1 3.9/30, ms1mx3.8/46, Error ellipse: s-maj=19.8km s-min=13.5km az=77.0*

*NEIC **02** 10:16:00.7±1.1, 22°.53S×172°.95E, h73^{km}±9^{km}, mb4.8/49, Error ellipse: s-maj=6.2km s-min=5.6km az=96.0*

*GCMT **02** 10:16:00.7±0.3, 22°.78S×173°.06E, h27^{km}±1^{km}, MW5.0/69, Moment Tensor Solution. s29,c33; s69,c95; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.80±.30; $M_{\theta\theta}$-4.29±.18; $M_{\phi\phi}$0.48±.18; $M_{r\theta}$1.73±.25; $M_{\theta\phi}$-0.10±.12; $M_{\phi r}$-0.50±.38; Best double couple: $M_0$4.43400×10^{16} NP1:ϕ_s97.00000°, δ57.00000°, λ99.00000°. NP2: ϕ_s260.00000°, δ34.00000°, λ76.00000°. Principal axes: T 4.2240, Plg76.0000°, Azm34.0000°; N 0.4180, Plg8.0000°, Azm272.0000°; P -4.6440, Plg12.0000°, Azm180.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 02 10:15:56.6±0.4, **22°.62S**±0°.07×**173°.09E**±0°.06, **h32**^{km}**, n140,** σ1^{s}**52**/126, **mb4.8**/59, **MS4.1**/28, **1C, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	6.18	274	P	Pn	10 17 25.6	-0.1
	2.0nm,0.3s,baz=128,slow=12,SNR=44						
DZM				S	Sn	10 18 34.5	-0.8
	4.3nm,0.3s,baz=96,slow=19,SNR=3.4						
DZM	Mont Dzumac	6.18	274	ePn	Pn	10 17 26.0	+0.3
	24nm,0.3s						
DZM				eSn	Sn	10 18 36.4	+1.1
	28nm,0.3s						
DZM				eLR	LR	10 18 55.0	
	2μm,21.4s						
DZM	Mont Dzumac	6.18	274	ePn	Pn	10 17 25.9	+0.3
DZM				eSn	Sn	10 18 34.5	-0.8
RAO	Raoul Island	10.44	131	LR	LR	10 21 40.8	
	comp=Z,629nm,18.7s,baz=44,slow=32						
HIZ	Hauiti	15.91	175	ePn	P	10 19 41.8	+0.3
	70nm,1.0s						
URZ	Urewera	15.97	168	P	P	10 19 43.6	+1.5
	0.2nm,0.3s,baz=354,slow=9.3,SNR=5.1						
URZ				LR	LR	10 25 00.3	
	comp=Z,764nm,19.2s,baz=15,slow=34						
URZ	Urewera	15.97	168	ePn	P	10 19 42.9	+0.8
	39nm,1.0s						
URZ				ePn	P	10 19 43.6	+1.5
BKZ	Black Stump Fm	16.75	171	ePn	Pn	10 19 50.2	+1.4
	56nm,1.2s						
AFI	Afiamalu	16.77	61	LR	LR	10 25 07.1	
	comp=Z,656nm,19.2s,baz=240,slow=32						
AFI	Afiamalu	16.77	61	ePn	P	10 19 51.5	+0.4
	77nm,1.4s						
HNR	Honiara	18.19	314	P	P	10 20 10.0	+3.2
	7.8nm,0.3s,baz=191,slow=3.9,SNR=9.4						
HNR				LR	LR	10 26 17.4	
	comp=Z,431nm,18.9s,baz=148,slow=34						
HNR	Honiara	18.19	314	eP	P	10 20 11.0	+4.2
HNR	Honiara	18.19	314	eP	P	10 20 07.9	+1.1
	171nm,0.9s						
HNR				eP	P	10 20 10.0	+3.2
KHZ	Kahutara	19.75	179	eP	P	10 20 25.5	+1.9
	138nm,1.5s						
LTZ	Lake Taylor	20.12	182	eP	P	10 20 29.2	+1.4
	112nm,1.2s						
EIDS	Eidsvold	20.29	258	eP	P	10 20 30.7	+0.9
	37nm,1.0s						
OXZ	Oxford	20.67	182	eP	P	10 20 34.9	+1.2
	70nm,0.8s						
FOZ	Fox Glacier	21.03	187	eP	P	10 20 39.5	+1.9
	96nm,1.1s						
RPZ	Rata Peaks	21.11	184	P	P	10 20 41.6	+3.2
	39nm,0.9s,baz=318,slow=3.4,SNR=7.0						
RPZ				LR	LR	10 28 06.1	
	comp=Z,988nm,20.8s,baz=6.5,slow=34						
RPZ	Rata Peaks	21.11	184	eP	P	10 20 41.4	+3.0
	71nm,1.0s						
RPZ				eP	P	10 20 41.6	+3.2
LBZ	Lake Benmore	21.84	186	eP	P	10 20 49.2	+2.9
	94nm,1.4s						
MLZ	Mavora Lakes	23.05	189	eP	P	10 21 02.1	+3.0
	112nm,1.2s						
WHZ	Wether Hill Ro	23.59	189	eP	P	10 21 05.8	+1.4
	98nm,1.7s						
RAR	Rarotonga	25.20	92	LR	LR	10 31 33.7	
	comp=Z,106nm,18.3s,baz=262,slow=37						
STKA	Stephens Creek	29.39	245	P	P	10 21 57.2	+0.2
	6.0nm,0.9s,baz=61,slow=10,SNR=9.2						
STKA				LR	LR	10 32 51.8	
	comp=Z,422nm,20.3s,baz=73,slow=34						
STKA	Stephens Creek	29.39	245	eP	P	10 21 57.6	+0.6
	5.5nm,1.5s						
BBOO	Buckleboo	34.17	245	eP	P	10 22 38.8	-0.2
	30nm,1.0s						
TBI	Tubuai	34.42	99	eLR	LR	10 31 43.0	
	148nm,24.5s						
PPT2	Papeete2	35.35	89	eLR	LR	10 32 02.7	
	200nm,23.2s						
PPT	Papeete	35.36	89	LR	LR	10 33 38.2	
	comp=Z,165nm,21.2s,baz=222,slow=30						
AS01	Alice Springs	35.93	261	eP	P	10 22 52.8	-1.5
AS31	Alice Springs	35.97	260	eP	P	10 22 53.8	-0.9
	3.0nm,0.9s						
ASAR	Alice Springs	35.97	260	P	P	10 22 53.4	-1.3
	3.1nm,0.8s,baz=90,slow=9.5,SNR=27						
ASAR				LR	LR	10 37 22.2	
	comp=Z,267nm,21.3s,baz=100,slow=36						
WR1	Warramunga Arr	36.14	267	eP	P	10 22 53.9	-2.2
	30nm,1.5s						
WRA	Warramunga Arr	36.14	267	P	P	10 22 53.9	-2.2
	2.2nm,0.7s,baz=96,slow=8.5,SNR=12						
FORT	Forrest	40.82	249	eP	P	10 23 34.6	-0.8
	41nm,0.7s						
H11S2	WAKE ISLAND Hy	41.33	351	T	T	11 08 16.6	
	baz=171,slow=76,SNR=9.9						
H11S3	WAKE ISLAND Hy	41.34	351	T	T	11 08 12.9	
	baz=171,slow=76,SNR=7.6						
H11S1	WAKE ISLAND Hy	41.35	351	T	T	11 07 53.3	
	baz=171,slow=76,SNR=8.6						
GUMO	Guam	45.38	320	LR	LR	10 44 35.0	
	comp=Z,80nm,18.8s,baz=130,slow=38						
TAOE	Nuku Hiva Isla	46.84	81	eLR	LR	10 37 31.9	
	294nm,24.0s						
BATI	Baumata	48.78	276	LR	LR	10 47 16.8	
	comp=Z,454nm,18.1s,baz=117,slow=39						
NWAO	Narrogin (SRO)	49.98	245	P	P	10 24 46.2	-1.7
	7.9nm,0.8s,baz=341,slow=7.6,SNR=4.2						
DAV	Davao City (W)	55.06	297	LR	LR	10 49 17.4	
	comp=Z,32nm,19.0s,baz=157,slow=36						
VNDA	Vanda	55.22	183	P	P	10 25 26.3	+0.3
	2.2nm,0.7s,baz=14,slow=7.7,SNR=12						
VNDA				LR	LR	10 45 15.3	
	comp=Z,294nm,21.6s,baz=10,slow=32						
VNDA	Vanda	55.22	183	eP	P	10 25 26.5	+0.5
SBA	Scott Base	55.37	182	eP	P	10 25 28.2	+1.2
	34nm,1.3s						
CASY	Casey	58.53	205	eP	P	10 25 49.6	0.0
	25nm,1.4s						
JHJ	Hachijo jima 2	63.89	329	LR	LR	10 51 43.3	
	comp=Z,16nm,19.8s,baz=116,slow=34						
LEM	Lembang	64.78	273	LR	LR	10 54 28.4	
	comp=Z,139nm,21.8s,baz=122,slow=36						
MJAR	Matsushiro Arr	67.44	330	P	P	10 26 48.9	-0.2
	2.9nm,0.9s,baz=171,slow=7.7,SNR=5.8						
MJAR				LR	LR	10 51 35.9	
	comp=Z,27nm,21.8s,baz=125,slow=32						
MAJO	Matsushiro	67.44	330	eP	P	10 26 48.7	-0.5
	44nm,1.8s						
MAT	Matsushiro	67.44	330	P	P	10 26 48.7	-0.4
MJB9	Matsu-Tunnel	67.44	330	eP	P	10 26 48.5	-0.6
	43nm,1.8s						
QSPA	South Pole Qui	67.45	180	P	P	10 26 48.4	-0.6
	20nm,1.0s,baz=7.1,slow=1.3,SNR=37						
JNU	Nakatsue	68.51	323	LR	LR	10 52 56.0	
	comp=Z,31nm,21.3s,baz=123,slow=32						
ASAJ	Asahikawa	72.05	337	LR	LR	10 53 27.9	
	comp=Z,124nm,20.8s,baz=160,slow=31						
KSRS	Korea Array	73.33	324	P	P	10 27 25.1	0.0
	0.9nm,0.8s,baz=143,slow=4.8,SNR=4.6						
KSRS				LR	LR	10 58 20.9	
	comp=Z,19nm,18.4s,baz=145,slow=35						
KSAR	Wonju Array Be	73.34	324	P	P	10 27 25.1	-0.1
KS01	Wonju Array Si	73.36	324	eP	P	10 27 24.5	-0.8
NJ2	Nanjing	75.13	315	eP	P	10 27 37.2	+1.5
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
USRK	Ussuriysk Ar.	76.40	331	P	P	10 27 41.6	-1.1
	2.2nm,0.6s,baz=91,slow=8.6						
PSI	Prapat	76.51	279	LR	LR	11 03 56.9	
	comp=Z,85nm,18.7s,baz=97,slow=38						
PETK	Petropavlovsk-	76.59	351	P	P	10 27 44.2	+0.6
	9.6nm,0.7s,baz=134,slow=8.1						
PETK				LR	LR	10 56 51.9	
	comp=Z,104nm,20.0s,baz=135,slow=32						
PEA1	Petropavlovsk-	76.59	351	eP	P	10 27 44.1	+0.6
MAW	Mawson	76.65	202	P	P	10 27 43.4	-0.5
	13nm,0.8s,baz=106,slow=6.6,SNR=22						
MAW				LR	LR	10 58 56.6	
	comp=Z,88nm,18.1s,baz=62,slow=34						
MAW	Mawson	76.65	202	eP	P	10 27 43.7	-0.1
	3.0nm,0.8s						
WHN	Wuhan	77.27	311	eP	P	10 27 56.0	+8.1
GYA	Guiyang	80.69	304	eP	P	10 28 08.2	+1.3
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
SYO	Syowa Base	82.67	195	⇑eP	P	10 28 14.8	-1.7
HHC	Hu-ho-hao-te	85.12	318	eP	P	10 28 27.4	-2.2
HHC				sP	sP	10 28 57.2	+14
HHC				S	S	10 38 47.5	-10
HHC				pmax	pmax		
	comp=Z,14nm,0.9s						
HHC				pmax	pmax		
	comp=Z,41nm,5.5s						
HHC				LR	LR		
	comp=N,41nm,17.2s						
HHC				LR	LR		
	comp=E,43nm,16.0s						
HHC				LR	LR		
	comp=Z,27nm,15.7s						
SNAA	Sanae	85.92	181	P	P	10 28 31.0	-2.1
SNAA	Sanae	85.92	181	P	P	10 28 31.3	-1.8
	3.8nm,0.8s,baz=178,slow=4.2,SNR=18						
SNAA	Sanae	85.92	181	eP	P	10 28 31.3	-1.8
	10nm,1.0s						
VNA3	Neumayer Olymp	86.37	179	P	P	10 28 33.4	-1.9
CMB	Columbia Colle	86.79	47	eP	P	10 28 37.0	-0.8
	8.7nm,1.3s						
ORV	Oroville	86.86	45	eP	P	10 28 37.6	-0.4
	5.7nm,1.1s						
ISA	Isabella, Lake	86.87	49	eP	P	10 28 37.9	-0.4
	6.8nm,1.0s						
AFDM	Forest Hills D	86.88	45	eP	P	10 28 38.1	-0.1
AFDM				epP	sP	10 28 57.7	+5.6
VNA1	Neumayer--Stat	86.98	180	P	P	10 28 27.2	-11
YBH	Yreka Blue Hor	87.28	42	P	P	10 28 39.2	-1.0
	1.3nm,0.8s,baz=149,slow=5.9,SNR=3.4						
YBH				LR	LR	11 00 31.0	

	comp=Z,147nm,20.3s,baz=231,slow=31						
MDPB	Devils Postpil	87.46	47	*e*P	P	10 28 40.6	-0.7
	5.7nm,1.1s						
LZH	Lanzhou	87.65	311	*e*P	P	10 28 46.1	+3.9
LZH				pP	sP	10 29 04.2	+8.1
LZH				pmax	pmax		
	comp=Z,21nm,1.2s						
PNTR	Pine Nut	87.87	46	*e*P	P	10 28 42.9	-0.3
	7.4nm,0.9s						
PAHR	Pah Rah Range	88.33	45	*e*P	P	10 28 44.9	-0.4
	5.5nm,1.1s						
NV01	Mina Array Sit	88.39	47	*e*P	P	10 28 45.1	-0.6
NVAR	Mina Array Bea	88.39	47	P	P	10 28 44.7	-1.1
	1.9nm,1.0s,baz=227,slow=7.4,SNR=7.6						
NVAR				LR	LR	11 00 18.8	
	comp=Z,75nm,20.6s,baz=98,slow=30						
KVN	Kaiserville	88.85	47	*e*P	P	10 28 47.2	-0.6
	4.1nm,1.1s						
MOD	Modoc Plateau	88.89	43	*e*P	P	10 28 47.7	-0.2
	6.3nm,1.1s						
TPNV	Topopah Spring	89.07	49	*e*P	P	10 28 48.4	-0.4
	3.8nm,0.9s						
PINE	Pine Mountain	89.50	41	*e*P	P	10 28 50.8	0.0
	6.9nm,1.1s						
BMN	Battle Mountai	90.13	46	*e*P	P	10 28 53.0	-0.8
	6.9nm,1.0s						
WVOR	Wild Horse Val	90.22	43	*e*P	P	10 28 54.1	0.0
	4.7nm,1.1s						
J08A	Circle Bar Ran	90.80	43	*e*P	P	10 28 56.1	-0.6
	4.3nm,1.0s						
LCMT	Little Creek M	91.22	50	*e*P	P	10 28 58.5	-0.3
	2.1nm,0.9s						
BWN	Browne	91.28	15	*e*P	P	10 28 59.4	+1.1
	76nm,1.1s						
X16A	Lo Mia Camp, P	91.35	53	*e*P	P	10 28 59.8	+0.2
	3.3nm,1.1s						
CCUT	Cedar City	91.38	50	*e*P	P	10 28 60.0	+0.3
	4.4nm,1.2s						
U15A	North Rim	91.63	51	*e*P	P	10 29 00.9	-0.1
	4.6nm,0.8s						
WUAZ	Wupatki	91.89	52	*e*P	P	10 29 01.2	-0.9
	3.0nm,0.9s						
SONA0	Songino Array	92.08	322	*e*P	P	10 29 00.8	-1.8
SONM	Songino Array	92.08	322	P	P	10 29 00.8	-1.8
	0.6nm,0.7s,baz=144,slow=5.2,SNR=4.4						
SONM				LR	LR	11 09 36.8	
	comp=Z,23nm,19.9s,baz=110,slow=35						
CCB	Clear Creek Bu	92.09	16	*e*P	P	10 29 00.3	-1.7
	3.0nm,0.9s						
MDM	Murphy Dome	92.24	15	*e*P	P	10 29 00.9	-1.9
	5.5nm,1.2s						
IL1	Eielson Array	92.42	16	*e*P	P	10 29 00.9	-2.7
ILAR	Eielson Array	92.42	16	P	P	10 29 00.9	-2.7
	1.6nm,0.9s,baz=232,slow=6.4,SNR=16						
ILAR				LR	LR	11 04 49.5	
	comp=Z,108nm,20.2s,baz=230,slow=32						
ILB	Eielson Array	92.42	16	*e*P	P	10 29 00.8	-2.7
MTPU	Mount Pierson	92.43	50	*e*P	P	10 29 04.2	-0.5
	3.0nm,1.0s						
PLCA	Paso Flores	93.62	137	P	P	10 29 10.1	+0.1
	5.7nm,0.8s,baz=236,slow=7.5,SNR=10						
PLCA	Paso Flores	93.62	137	*e*P	P	10 29 10.1	+0.1
	70nm,1.9s						
COLD	Coldfoot	93.66	13	*e*P	P	10 29 08.8	-0.5
	2.6nm,1.0s						
EGAK	Eagle	93.97	18	*e*P	P	10 29 10.2	-0.6
	4.3nm,1.0s						
PALK	Pallekele	94.95	276	LR	LR	11 11 42.5	
	comp=Z,92nm,21.4s,baz=84,slow=35						
TXAR	Lajitas Array	95.25	61	P	P	10 29 17.0	-0.6
	0.5nm,1.0s,baz=189,slow=2.4,SNR=3.7						
TXAR				LR	LR	11 04 57.4	
	comp=Z,77nm,19.1s,baz=0.0,slow=31						
ANMO	Albuquerque	95.29	54	LR	LR	11 06 16.8	
	comp=Z,96nm,18.1s,baz=230,slow=32						
PDAR	Pinedale Array	96.30	46	LR	LR	11 06 09.1	
	comp=Z,89nm,19.4s,baz=256,slow=31						
WMQ	Urumqi	102.13	312	P	Pdif	10 29 48.1	0.0
WMQ				pmax	pmax		
	comp=Z,60nm,3.9s						
WMQ				LR	LR		
	comp=N,130nm,39.0s						
WMQ				LR	LR		
	comp=E,340nm,39.3s						
WMQ				LR	LR		
	comp=Z,69nm,18.7s						
ARA0	ARCESS Array S	129.22	346	*e*PKPdf	PKPdf	10 34 59.0	-1.9
ARCES	ARCESS Array B	129.22	346	PKP	PKPdf	10 34 59.0	-1.9
	0.9nm,0.5s,baz=83,slow=2.2,SNR=9.7						
BUR04	Bucovina Ar. S	144.20	322	*e*PKPdf	PKPab	10 35 26.2	-0.8
MLR	Muntele Rosu	144.87	318	*e*PKPdf	PKPab	10 35 29.4	-0.2
KOLS	Kolonicke sedl	145.03	326	*e*PKP	PKPab	10 35 29.3	-0.6
CRVS	Cervenica-Dubn	145.47	326	*e*PKP	PKPbc	10 35 30.0	-1.3
NIE	Niedzica	145.72	328	*e*PKP	PKPdf	10 35 31.0	-0.8
DPC	Dobruska-Polom	146.88	332	*e*PKP	PKPdf	10 35 34.1	+0.4
VYHS	Vyhne	147.05	328	*e*PKP	PKPdf	10 35 33.1	-0.9
EKA	Eskdalemuir Ar	147.21	356	PKPbc	PKPdf	10 35 34.7	+0.8
	4.9nm,0.6s,baz=356,slow=2.6,SNR=16						
JAVC	Velka Javorina	147.36	329	*e*PKP	PKPbc	10 35 36.6	-0.4
BRG	Berggiesshubel	147.45	335	*e*PKP	PKPdf	10 35 35.4	+0.8
	4.9nm,0.8s						
CLL	Collm	147.46	337	*i* PKPbc	PKPdf	10 35 35.1	+0.6
	comp=Z,8.0nm,1.0s						
CLL				*i* PKPab	PKPab	10 35 38.0	-1.1
	comp=Z,4.0nm,0.7s						
CLL				*i*		10 35 48.4	
CLL				*i* pPKPbc	sPKPab	10 35 54.4	+1.3
CLL	Collm	147.46	337	*e*PKPdf	PKPdf	10 35 34.8	+0.3
VRAC	Vranov	147.53	331	*e*PKP	PKPdf	10 35 35.4	+0.6
KRUC	Moravsky	147.80	331	*e*PKP	PKPbc	10 35 36.6	-1.5
KHC	Kasperske Hory	148.97	334	*e*PKP	PKPbc	10 35 39.5	-1.7
KHC				*e*x	x	10 35 44.7	
GEC2	GERESS Array S	149.14	333	*e*PKPbc	PKPdf	10 35 38.9	+1.4
GERES	GERESS Array B	149.14	333	PKPbc	PKPdf	10 35 38.9	+1.4
	comp=Z,1.5nm,0.8s,baz=34,slow=3.7,SNR=9.0						
GEA0	GERESS Array S	149.15	333	*e*PKPdf	PKPdf	10 35 36.2	-1.3
FNA	Florina	150.08	314	*e*PKPbc	PKPbc	10 35 41.9	-2.3
TORD	Torodi Ar. Bea	167.52	222	PKPab	PKPab	10 37 04.9	-1.0
	baz=138,slow=5.4						
TOA1	Torodi Ar. Sit	167.53	222	*e*PKPab	PKPab	10 37 04.9	-1.0

DJA 02 10:50:00.3±1.1**,6°S**±6°×**10°2E**±°**,h10**^{km}**,M3.6**/6**,MLv3.6**/6**,**
Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNAI	Manna	2.11	15	P	Pn	10 50 35.0	-0.7
MNAI				S	Sn	10 51 02.9	+0.9
LWLI	Liwa	2.15	50	P	Pn	10 50 37.0	+0.7
KASI	Kota Agung	2.25	67	P	Pn	10 50 38.1	+0.4
KASI				S	Sn	10 51 05.5	-0.1
MDSI	Maura Dua	2.60	43	P	Pn	10 50 43.2	+0.8
CGJI	Cibinong	3.27	94	P	Pn	10 50 51.2	-0.4

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*IDC **02** 10:58:36.6±3.3, 39°.07N×78°.80E, h0^{km}, mb3.3/2, mb1 3.9/3, mb1mx3.4/61, mbtmp3.7/3, ML4.4/1, Error ellipse: s-maj=66.4km s-min=47.1km az=111.0*
*ISCJB **02** 10:58:37.4±1.1, 38°.98N±0°.08×79°.2E±0°.1, h10^{km}, mb3.4/2, Error ellipse: s-maj=12.9km s-min=11.1km az=12.3*
*BJI **02** 10:58:38.0, 38°.99N×79°.13E, h5^{km}, mb3.9/1, ML3.8/8*
*NNC **02** 10:58:39.6±4.6, 39°.08N×79°.09E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=39.1km s-min=19.8km az=142.0*
ISC 02 10:58:38.9±1.3**,38°.9N**±0°.1×**79°.10E**±0°.06**,h10**^{km}**,n13,**
σ**2**^{s}**.20**/18**,10C-6D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	Kashi	2.49	284	Pn	Pb	10 59 24.2	+0.3
KSH				Sn	Sg	10 59 57.1	-1.9
KSH				smax	smax		
	comp=N,880nm,0.4s						
KSH				smax	smax		
	comp=E,770nm,0.3s						
PDGK	Podgornoye	4.39	4	⇑Pn	Pn	10 59 46.6	+0.9
	8.4nm,0.4s						
PDGK				⇑Sn	Sn	11 00 37.6	+0.5
	26nm,0.5s						
PDGK				⇑Lg	Lg	11 00 51.7	
	76nm,0.8s						
SFK	Sufi-Kurgan	4.46	286	⇑Pn	Pn	10 59 47.5	+0.7
	1.5nm,0.3s						
SFK				⇑Pg	Pb	10 59 58.9	+1.5
	14nm,0.3s						
SFK				⇓Lg	Lg	11 00 57.8	
	67nm,0.5s						
TKM2	Tokmak 2	4.78	327	⇑Pn	Pn	10 59 55.4	+4.2
	1.3nm,0.4s						
TKM2				⇓Pg	Pb	11 00 04.8	+1.9
	6.2nm,0.6s						
TKM2				⇑Lg	Lg	11 01 08.0	
	35nm,0.8s						
AAK	Ala-Archa	5.08	318	⇑Pg	Pb	11 00 06.8	-1.2
	12nm,0.7s						
AAK				⇓Lg	Lg	11 01 15.3	
	32nm,0.9s						
MNAS	Manas	6.13	307	⇓Pg	Pb	11 00 29.6	+3.7
	2.1nm,0.4s						
MNAS				⇓Lg	Lg	11 01 52.2	
	6.6nm,1.0s						
KK31	Karatay Array	7.71	305	Pg	Pb	11 00 58.2	+5.6
	1.0nm,0.5s,baz=122,slow=16,SNR=12						
KK31				⇓Lg	Lg	11 02 39.3	
	0.9nm,0.3s,baz=118,slow=28						
WMQ	Urumqi	8.09	50	P	Pn	11 00 34.5	-2.0
WMQ				S	Sn	11 02 12.6	+4.5
WMQ				smax	smax		
	comp=N,42nm,0.7s						
WMQ				smax	smax		
	comp=E,49nm,0.7s						
MK31	Makanchi Array	8.19	16	⇑Pn	Pn	11 00 38.2	+0.5
	2.6nm,0.3s,baz=185,slow=13,SNR=293						
MK31				⇑Sn	Sn	11 02 09.4	-1.0
	4.7nm,0.6s,baz=189,slow=24,SNR=8.4						
MKAR	Makanchi Array	8.19	16	Pn	Pn	11 00 38.4	+0.6
	5.2nm,0.3s,baz=198,slow=13,SNR=303						
MKAR				Sn	Sn	11 02 06.3	-4.0
	1.6nm,0.3s,baz=198,slow=23,SNR=9.8						
LZH	Lanzhou	19.82	91	*e*P	Pn	11 03 10.2	-1.2
LZH				pP	sP	11 03 16.1	+2.2
LZH				sP	pP	11 03 20.0	+7.4
SONM	Songino Array	21.65	57	P	P	11 03 30.1	+0.7
	0.6nm,0.4s,baz=255,slow=10,SNR=4.6						
YKA	Yellowknife Ar	78.31	6	P	P	11 10 37.3	-1.5
	0.2nm,0.5s,baz=345,slow=5.9,SNR=5.0						

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*ISCJB **02** 12:02:24.5±0.6, 32°.21N±0°.03×115°.28W±0°.05, h11^{km}±7^{km}, Error ellipse: s-maj=7.5km s-min=4.8km az=150.0*
*ECX **02** 12:02:25.8±0.6, 32°.20N×115°.26W, h6^{km}, MD2.5, ML2.7*
*MEX **02** 12:02:26.7±0.5, 32°.28N×115°.18W, h14^{km}±37^{km}, MD3.8*
ISC 02 12:02:24.3±1.0**,32°.20N**±0°.04×**115°.28W**±0°.04**,**
h12^{km}±11^{km}**,n19,**σ**0**^{s}**.57**/28**,3D,California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPBX	Cerro Prieto	0.22	355	*e*P	Pg	12 02 28.7	-0.3
CPBX				*e*S	Sg	12 02 32.0	-0.2
MBIG	Mexicali	0.22	19	*e*P	Pg	12 02 29.3	+0.3
MBIG				*e*S	Sg	12 02 32.3	+0.1
DREC	Desert Rsrch C	0.62	347	*e*P	Pg	12 02 37.4	+1.0
ERPC	Ernies Place	0.63	329	*e*P	Pg	12 02 37.5	+1.0
COA	Coachella	0.68	11	*e*P	Pg	12 02 37.5	+0.1
WESC	Westside Schoo	0.68	326	⇓*i*P	Pg	12 02 38.2	+0.8
YUH	Yuha Desert	0.70	310	⇓*i*P	Pg	12 02 38.2	+0.3
YMD	Yuma Desert	0.72	60	*e*P	Pg	12 02 38.0	-0.2
ECBX	El Chinero	0.75	165	*e*P	Pg	12 02 38.8	0.0
ECBX				*e*S	Sg	12 02 49.3	+0.7
RMX	La Rumorosa	0.79	301	*e*P	Pg	12 02 39.0	-0.5
RMX				*e*S	Sg	12 02 48.9	-0.9
IKP	In-Ko-Pah, Jac	0.83	303	*e*P	Pg	12 02 40.7	+0.3
ZAX	El Zacaton	1.08	231	*e*P	Pb	12 02 45.1	0.0
ZAX				*e*S	Sb	12 02 59.9	+0.6
ZAX				IAML		12 03 01.6	
	comp=E,203nm,0.5s						
ZAX				*e*		12 03 01.6	
SPIG	San Pedro Mart	1.16	188	*e*P	Pb	12 02 46.3	-0.2
SPIG	San Pedro Mart	1.16	188	*e*P	Pb	12 02 46.3	-0.2
SPIG				*e*S	Sb	12 03 01.5	-0.1
SPX	San Pedro Mart	1.16	188	*e*P	Pb	12 02 46.4	-0.1
SPX				IAML		12 03 05.4	
	comp=N,129nm,0.2s						
CBX	Cerro Bola	1.18	276	*e*P	Pn	12 02 46.9	+0.2
CBX				*e*S	Sb	12 03 02.9	+1.0
CBX				⇓*e*		12 03 04.0	
CBX				IAML		12 03 04.0	
	comp=N,203nm,0.5s						
CBX	Cerro Bola	1.18	276	*e*P	Pn	12 02 46.7	-0.1
CBX				*e*S	Sb	12 03 01.3	-0.6
TJIG	Tijuana	1.20	282	*e*P	Pn	12 02 46.6	-0.3
TJIG				*e*S	Sb	12 03 01.5	-1.1
BAR	Barrett	1.27	293	*e*P	Pn	12 02 48.1	+0.1

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*CSEM **02** 12:03:24.9±0.2, 38°.73N×43°.08E, h12^{km}, ML2.8, Error ellipse: s-maj=4.1km s-min=4.0km az=8.0*
*ISK **02** 12:03:24.3, 38°.71N×43°.05E, h5^{km}, ML2.8/4*
*ISCJB **02** 12:03:25.2±0.5, 38°.72N±0°.04×43°.06E±0°.03, h13^{km}±5^{km}, Error ellipse: s-maj=5.9km s-min=4.2km az=10.8*
*DDA **02** 12:03:25.1, 38°.73N×43°.11E, h7^{km}, Ml2.9*
ISC 02 12:03:25.0±1.0**,38°.71N**±0°.03×**43°.07E**±0°.02**,h12**^{km}±10^{km}**,**
n28,σ**0**^{s}**.62**/42**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	Van	0.27	115	PG	Pb	12 03 31.4	-0.6
VANB				SG	Sb	12 03 36.6	-0.1
VANB	Van	0.27	115	*e*Pg	Pb	12 03 31.4	-0.6
VANB				*e*Sg	Sb	12 03 36.6	-0.1
ADCV	BITLIS_Adilcev	0.29	289	*i* P	Pb	12 03 31.8	-0.5
ADCV				*i* S	Sb	12 03 37.2	+0.1
ADCV	BITLIS_Adilcev	0.29	289	P	Pb	12 03 31.8	-0.5
ADCV				S	Sb	12 03 37.2	+0.1
TVAN	Van	0.32	125	*i* P	Pg	12 03 31.1	-0.5
TVAN				*i* S	Sg	12 03 37.0	+1.0
TVAN	Van	0.32	125	P	Pg	12 03 31.1	-0.5
TVAN				S	Sg	12 03 37.0	+1.0
GEVA	Gevas	0.40	182	*i* P	Pg	12 03 32.4	-0.6
GEVA				*i* S	Sb	12 03 40.1	-0.2
GEVA	Gevas	0.40	182	P	Pg	12 03 32.4	-0.6
GEVA				S	Sb	12 03 40.1	-0.2
VMUR	Van-Muradiye	0.48	55	*i* P	Pg	12 03 34.4	0.0
VMUR				*i* S	Sb	12 03 42.5	-0.1
VMUR	Van-Muradiye	0.48	55	P	Pg	12 03 34.4	0.0
VMUR				S	Sb	12 03 42.5	-0.1
TUTA	Tutak	0.72	344	*i* P	Pg	12 03 38.8	-0.2
TUTA	Tutak	0.72	344	P	Pg	12 03 38.8	-0.2
CLDR	Caldiran	0.79	57	*i* P	Pg	12 03 39.1	-1.2
CLDR				*i* S	Sb	12 03 51.4	-0.1
CLDR	Caldiran	0.79	57	P	Pg	12 03 39.1	-1.2
CLDR				S	Sb	12 03 51.4	-0.1
GURO	Guroymak-BITLI	0.83	259	PG	Pg	12 03 40.6	-0.5
GURO				SG	Sg	12 03 51.8	-0.2
GURO	Guroymak-BITLI	0.83	259	*e*Pg	Pg	12 03 40.6	-0.5
GURO				*e*Sg	Sg	12 03 51.8	-0.2
AGRB	Hanur-Agry	0.86	356	PG	Pg	12 03 41.4	-0.3
AGRB	Hanur-Agry	0.86	356	*e*Pg	Pg	12 03 41.4	-0.3
EKAR	Karacoban	0.95	305	*i* P	Pb	12 03 43.9	+0.2
EKAR	Karacoban	0.95	305	P	Pb	12 03 43.9	+0.2
EATA	Eleskirt	1.23	339	*i* P	Pg	12 03 47.6	-1.2
EATA	Eleskirt	1.23	339	P	Pg	12 03 47.6	-1.2
SIRT	Sirnak	1.31	203	PN	Pn	12 03 49.7	+0.4
SIRT	Sirnak	1.31	203	*e*Pn	Pn	12 03 49.7	+0.4
CUKT	Cukurca	1.52	164	PN	Pn	12 03 52.9	+0.7
CUKT	Cukurca	1.52	164	*e*Pn	Pn	12 03 52.9	+0.7
MAZI	Mazidag	2.42	240	PN	Pn	12 04 05.6	+1.0
MAZI	Mazidag	2.42	240	*e*Pn	Pn	12 04 05.6	+1.0

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*NNC **02** 12:15:20.9±2.8, 53°.86N×87°.69E, h4^{km}±25^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=27.8km s-min=12.5km az=48.0, Suspected Mining explosion.*
IDC 02 12:15:28.5±2.5**,54°.12N**×**87°.02E,h0**^{km}**,mb1 3.1**/3**,**
mb1mx2.9/81**,mbtmp3.1**/3**,ML2.8**/3**,3C-8D,Error ellipse: s-maj=21.0km s-min=13.3km az=64.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.31	263	*i*		12 24 10.0	
	baz=85,slow=320,SNR=2.5						
ZAA0	Zalesovo Array	1.31	263	⇓P	Pg	12 15 50.8	-2.8
	13nm,0.7s						
ZAA0				⇑S	Sn	12 16 14.1	+1.8
	64nm,0.8s						
ZALV	Zalesovo Beam	1.31	263	Pg	Pg	12 15 51.6	-2.0
	3.7nm,0.3s,baz=83,slow=16,SNR=30						
ZALV				Lg	Lg	12 16 12.3	
	6.0nm,0.3s,baz=77,slow=27,SNR=13						
KURK	Kurchatov	6.17	240	⇓Pn	Pn	12 16 56.0	-4.7
	3.1nm,0.9s						
KURK				⇓Sn	Sn	12 18 08.5	-3.5
	2.1nm,0.9s						
KURK				⇑Lg	Lg	12 18 41.8	
	8.1nm,1.0s						
KURBB	Kurchatov Arra	6.27	239	Pn	Pn	12 17 02.5	+0.3
	0.1nm,0.3s,baz=58,slow=14,SNR=12						
KURBB				Sn	Sn	12 18 12.8	-1.6
	0.1nm,0.3s,baz=267,slow=37,SNR=3.7						
KURBB				Lg	Lg	12 18 48.7	
	0.1nm,0.3s,baz=48,slow=28,SNR=6.4						
KURBB	Kurchatov Arra	6.27	239	⇓Pn	Pn	12 16 58.2	-4.0
	4.9nm,0.8s						
KURBB				⇓Sn	Sn	12 18 12.0	-2.5
	6.5nm,0.7s						
KURBB				⇓Lg	Lg	12 18 45.1	
	18nm,0.9s						
MK31	Makanchi Array	7.93	204	⇓Pn	Pn	12 17 17.0	-8.0
	0.3nm,0.6s,baz=26,slow=14						
MK31				⇑Sn	Sn	12 18 48.3	-7.1
	1.0nm,0.6s,baz=24,slow=26						
MK31				⇓Lg	Lg	12 19 33.8	
	11nm,1.0s,baz=27,slow=30						
MKAR	Makanchi Array	7.93	204	Pn	Pn	12 17 26.9	+1.9
	0.1nm,0.3s,baz=25,slow=14,SNR=5.3						
MKAR				Sn	Sn	12 18 54.9	-0.5
	0.1nm,0.3s,baz=27,slow=24,SNR=4.5						
MKAR				Lg	Lg	12 19 38.8	
	0.1nm,0.3s,baz=17,slow=30,SNR=8.9						
BVAR	Borovoye Array	9.96	270	Pn	Pn	12 17 52.5	-0.2
	0.2nm,0.3s,baz=74,slow=15,SNR=2.4						
BVAR				Sn	Sn	12 19 39.6	-5.5
	0.4nm,0.3s,baz=69,slow=25,SNR=6.1						

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*IDC **02** 12:23:56.5±0.7, 35°.65N×68°.91E, h0^{km}, mb4.1/23, mb1 4.3/27, mb1mx4.1/71, mbtmp4.1/27, ML3.8/4, MS3.3/14, Ms1 3.3/14, ms1mx3.0/62, Error ellipse: s-maj=16.7km s-min=11.5km az=13.0*
*BJI **02** 12:23:57.4, 35°.75N×68°.70E, h18^{km}, mb4.6/27, mB4.6/17, ML4.6/2, Ms4.0/8, Ms7 3.8/7*
*MOS **02** 12:23:59.4±1.1, 35°.93N×68°.91E, h21^{km}, mb4.5/26, Error ellipse: s-maj=7.3km s-min=4.7km az=85.0*
*ISCJB **02** 12:24:00.7±0.2, 35°.90N±0°.02×68°.94E±0°.03, h35^{km}, mb4.3/50, MS3.5/14, Error ellipse: s-maj=4.0km s-min=2.9km az=43.9*
*NNC **02** 12:24:00.8±3.3, 36°.16N×68°.44E, h0^{km}, mb4.8, mpv4.6, Error ellipse: s-maj=29.4km s-min=18.4km az=170.0*
*NEIC **02** 12:24:01.0±1.8, 35°.80N×68°.90E, h28^{km}±13^{km}, mb4.5/13, Error ellipse: s-maj=6.9km s-min=4.8km az=181.0*
ISC 02 12:24:02.5±0.4**,35°.91N**±0°.04×**68°.85E**±0°.04**,h35**^{km}**,n174,**
σ**2**^{s}**.22**/196**,mb4.4**/50**,MS3.4**/14**,13C-8D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	1.38	173	*e*Pn	Pn	12 24 24.5	-1.0
KBL				*e*Sn	Sn	12 24 41.0	-1.6
KBL	Kabul	1.38	173	*e*PG	Pn	12 24 24.5	-1.0
KBL				*e*		12 24 41.0	
CEP	Cherat	3.27	129	P	Pn	12 24 54.7	+3.3
CEP				S	Sn	12 25 34.0	+4.8
CEP	Cherat	3.27	129	P	Sn	12 25 34.5	+5.3
THW	Thamme Wali	3.93	142	P	Pn	12 25 03.0	+2.6
NIL	Nilore	4.27	121	*e*Pn	Pn	12 25 08.2	+3.1
NIL	Nilore	4.27	121	*e*PN	Pn	12 25 08.2	+3.1
CHCP	Chirah Chowk	4.28	120	P	Pn	12 25 07.9	+2.7
SFK	Sufi-Kurgan	5.50	41	⇓Pn	Pn	12 25 26.0	+3.7
	22nm,0.3s						
SFK				⇓Sn	Sn	12 26 30.6	+6.2
	77nm,0.7s						
SFK	Sufi-Kurgan	5.50	41	PN	Pn	12 25 25.9	+3.7
SFK						12 26 30.6	
SFK				pmax	pmax		
	comp=Z,22nm,0.3s						
SFK				smax	smax		
	comp=N,77nm,0.7s						
KSH	Kashi	6.70	55	Pn	Pn	12 25 36.1	-2.4
KSH				Sn	Sn	12 26 47.7	-5.9
KSH				smax	smax		
	comp=N,820nm,0.7s						
KSH				smax	smax		
	comp=N,760nm,1.0s						
MNAS	Manas	7.15	22	⇑Pn	Pn	12 25 45.7	+0.9
	comp=N,15nm,0.4s						
MNAS				⇑Sn	Sn	12 27 06.3	+1.5
	comp=N,21nm,0.5s						
MNAS	Manas	7.15	22	PN	Pn	12 25 45.6	+0.9
MNAS						12 27 06.3	
MNAS				pmax	pmax		
	comp=Z,15nm,0.4s						
MNAS				smax	smax		
	comp=N,21nm,0.5s						
DHRM	DHARAMSHALA	7.18	118	*e*P	Pn	12 25 47.7	+2.4
DHRM				*e*S	Sn	12 27 05.2	-0.6
DHRM				IAML		12 27 10.8	
	comp=E,363nm,0.4s						
DHRM				IAML		12 27 10.9	
	comp=N,278nm,0.4s						
KK31	Karatay Array	7.30	10	Pn	Pn	12 25 47.9	+1.3
	comp=N,7.2nm,0.3s,baz=201,slow=16,SNR=105						
KK31				Sn	Sn	12 27 11.1	+2.9
	comp=N,10nm,0.3s,baz=194,slow=24,SNR=4.5						
KK31	Karatay Array	7.30	10	*e*Pn	Pn	12 25 48.0	+1.3
KK31	Karatay Array	7.30	10	*i* P	Pn	12 25 47.8	+1.3
KK31						12 27 11.1	
KK31				pmax	pmax		
	comp=Z,7.0nm,0.4s						
KK31				smax	smax		
	comp=N,10.0nm,0.4s						
KKAR	Karatay Array	7.30	10	*e*Pn	Pn	12 25 48.0	+1.4
KKAR	Karatay Array	7.30	10	*e*P	Pn	12 25 48.0	+1.4
AAK	Ala-Archa	8.02	31	⇑Pn	Pn	12 25 54.8	-1.9
	comp=N,22nm,0.5s						
AAK				⇓Sn	Sn	12 27 30.5	+4.4
	comp=N,46nm,0.8s						
AAK	Ala-Archa	8.02	31	P	Pn	12 25 54.7	-1.9
AAK						12 27 30.5	
AAK				pmax	pmax		
	comp=Z,22nm,0.5s						
AAK				smax	smax		
	comp=N,47nm,0.8s						
FRU1	Bishkek	8.21	31	*e*Pn	Pn	12 25 59.1	-0.1
FRU	Bishkek	8.23	31	*e*P	Pn	12 25 59.5	+0.1
FRU				*e*		12 27 37.0	
FRU				pmax	pmax		
	comp=Z,42nm,1.6s						
FRU				smax	smax		
	comp=E,160nm,1.6s						
SMLA	Simla	8.43	122	*e*P	Pn	12 26 02.7	+0.6
SMLA				*e*S	Sn	12 27 33.8	-2.2
SMLA				IAML		12 27 40.0	
	comp=E,231nm,0.2s						
SMLA				IAML		12 27 40.9	
	comp=N,194nm,0.5s						
TKM2	Tokmak 2	8.73	35	⇑Pn	Pn	12 26 07.6	+1.1
	comp=N,21nm,0.7s						
TKM2				⇑Sn	Sn	12 27 51.1	+7.3
	comp=N,21nm,0.8s						
TKM2	Tokmak 2	8.73	35	P	Pn	12 26 07.5	+1.1
TKM2				pmax	pmax		
	comp=Z,21nm,0.7s						
GEYT	Alibeck	8.82	286	Pn	Pn	12 26 07.0	-0.7
	comp=Z,4.7nm,0.3s,baz=113,slow=11,SNR=7.5						
GEYT				Sn	Sn	12 27 45.7	-0.1
	comp=Z,4.5nm,0.3s,baz=138,slow=24,SNR=5.0						
GEYT				Lg	Lg	12 28 50.3	
	baz=330,slow=38,SNR=1.9						
GEYT				LR	LR	12 30 27.9	
	comp=Z,112nm,18.2s,baz=65,slow=44						
GYA0B	ALIBECK ARRAY	8.82	286	*e*Pn	Pn	12 26 06.9	-0.7
GYA0B				*e*Sn	Sn	12 27 45.0	-0.8
TARG	Taragay, Kyrgy	9.09	48	*e*Pn	Pn	12 26 11.2	-0.4
JASL	Jaisalmer	9.13	168	*e*x	Sn	12 27 57.4	+4.0
DDI	Dehra Dun	9.52	123	*e*P	Pn	12 26 19.0	+1.8
DDI				*e*S	Sn	12 27 59.1	-4.0
DDI				IAML		12 28 17.3	
	comp=N,148nm,0.6s						
DDI				IAML		12 28 22.1	

	comp=E,134nm,0.2s						
KHET	**Khetri**	**9.79**	**141**	*e*P	Pn	12 26 26.7	+5.8
KHET				*e*S	**Sn**	**12 28 06.4**	**-3.3**
PRZ	**Przheval'sk**	**9.90**	**46**	*e*Pn	**Pn**	**12 26 22.6**	**+0.2**
PRZ	**Przheval'sk**	**9.90**	**46**	*e*P	**Pn**	**12 26 22.6**	**+0.2**
BHGR	**Bahadurgarh**	**9.94**	**134**	*e*P	**Pn**	**12 26 23.8**	**+1.0**
BHGR				*e*S	**Sn**	**12 28 06.6**	**-6.5**
JOSI	**Joshimath**	**10.44**	**118**	*e*P	**Pn**	**12 26 31.2**	**+1.3**
JOSI				*e*S	**Sn**	**12 28 18.1**	**-7.6**
JOSI				IAML		12 28 35.2	
	comp=N,234nm,0.6s						
JOSI				IAML		12 28 39.2	
	comp=E,186nm,0.5s						
PDGK	**Podgornoye**	**11.05**	**45**	P	**Pn**	**12 26 38.3**	**+0.1**
PDGK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
PYUN	**Piuthan**	**14.30**	**119**	*e*P	**Pn**	**12 27 20.5**	**-2.2**
MAKZ	**Makanchi**	**14.66**	**38**	*e*Pn	**Pn**	**12 27 27.6**	**+0.2**
MAKZ	**Makanchi**	**14.66**	**38**	*e*P	**Pn**	**12 27 27.6**	**+0.2**
DANN	**Dangsing**	**14.71**	**117**	*e*P	**Pn**	**12 27 24.9**	**-3.4**
MK01	**Makanchi Array**	**14.80**	**39**	*e*Pn	**Pn**	**12 27 28.2**	**-1.0**
MK31	**Makanchi Array**	**14.81**	**39**	*e*Pn	**Pn**	**12 27 28.8**	**-0.6**
MK31	**Makanchi Array**	**14.81**	**39**	*e*P	**Pn**	**12 27 28.3**	**-1.1**
MK31				pmax	pmax		
	comp=Z,5.0nm,0.5s						
MK32	**Makanchi Array**	**14.81**	**39**	*e*Pn	**Pn**	**12 27 28.2**	**-1.2**
MKAR	**Makanchi Array**	**14.81**	**39**	Pn	**Pn**	**12 27 28.2**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=228,slow=14,SNR=9.3						
MKAR				LR	LR	12 33 44.8	
	comp=Z,78nm,19.6s,baz=218,slow=39						
MKAR	**Makanchi Array**	**14.81**	**39**	*e*Pn	**Pn**	**12 27 28.8**	**-0.6**
AB31	**Akbulak array**	**14.84**	**337**	⇑P	**Pn**	**12 27 26.7**	**-3.1**
	comp=Z,4.4nm,0.4s						
AB31				⇑S	**Sn**	**12 30 09.5**	**-3.4**
	comp=Z,14nm,0.6s						
AB31	**Akbulak array**	**14.84**	**337**	P	**Pn**	**12 27 26.6**	**-3.1**
AB31				pmax	pmax		
	comp=Z,4.0nm,0.4s						
ABKAR	**Akbulak array**	**14.84**	**337**	*e*Pn	**Pn**	**12 27 26.7**	**-3.0**
KOLN	**Koldanda**	**14.93**	**119**	*e*P	**Pn**	**12 27 28.1**	**-3.1**
GKN	**Gorkha**	**15.54**	**116**	*e*P	**Pn**	**12 27 36.8**	**-2.4**
DMN	**Daman**	**16.10**	**116**	*e*P	**Pn**	**12 27 44.2**	**-2.3**
KKN	**Kakani**	**16.13**	**116**	*e*P	**Pn**	**12 27 43.5**	**-3.3**
KURBB	**Kurchatov Arra**	**16.29**	**22**	Pn	**Pn**	**12 27 44.8**	**-3.6**
	comp=Z,0.0nm,0.3s,baz=211,slow=12,SNR=10						
KURBB				Lg	Lg	12 32 44.2	
	comp=Z,0.0nm,0.3s,baz=213,slow=32,SNR=3.2						
PKIN	**Phulchoki**	**16.33**	**116**	*e*P	**Pn**	**12 27 46.7**	**-2.8**
KURK	**Kurchatov**	**16.39**	**22**	*e*Pn	**Pn**	**12 27 44.8**	**-5.0**
KURK				*e*Pn	**P**	**12 27 49.9**	**-2.4**
KURK				Lg	Lg	12 32 44.2	
KURK	**Kurchatov**	**16.39**	**22**	P	**Pn**	**12 27 44.8**	**-5.0**
WMQ	**Urumqi**	**16.46**	**56**	P	**P**	**12 27 52.3**	**-0.9**
WMQ				pP	Pn	12 27 55.7	+4.9
WMQ				sP	pP	12 28 00.2	-2.1
WMQ				pmax	pmax		
	comp=Z,25nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,190nm,4.1s						
AKTO	**Aktyubinsk**	**16.50**	**335**	Pn	**Pn**	**12 27 51.2**	**+0.1**
	comp=Z,1.2nm,0.3s,baz=153,slow=12,SNR=20						
AKTO				Sn	**Sn**	**12 30 49.0**	**-4.0**
	comp=Z,0.8nm,0.3s,baz=346,slow=22,SNR=6.3						
AKTO				LR	LR	12 34 59.1	
	comp=Z,128nm,18.1s,baz=150,slow=40						
AKTO	**Aktyubinsk**	**16.50**	**335**	⇑P	**Pn**	**12 27 50.9**	**-0.2**
	comp=Z,6.5nm,0.6s						
AKTO				⇑S	**Sn**	**12 30 47.6**	**-5.4**
	comp=Z,12nm,0.8s						
GUN	**Gumba**	**16.50**	**114**	*e*P	**Pn**	**12 27 50.9**	**-0.8**
JIRN	**Jiri**	**16.87**	**114**	*e*P	**Pn**	**12 27 54.1**	**-2.2**
BVA0	**Borovoye Array**	**17.14**	**3**	*i* P	**Pn**	**12 27 57.4**	**-1.8**
BVA0				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BVAR	**Borovoye Array**	**17.14**	**3**	P	**Pn**	**12 27 57.8**	**-1.4**
	comp=Z,2.0nm,0.3s,baz=171,slow=13,SNR=12						
BVAR				S	**Sn**	**12 31 01.4**	**-7.2**
	comp=Z,0.4nm,0.3s,baz=170,slow=25,SNR=5.7						
BVAR				LR	LR	12 35 58.5	
	comp=Z,33nm,18.1s,baz=201,slow=42						
RAMN	**Ramite**	**17.57**	**116**	*e*P	**Pn**	**12 28 03.9**	**-1.0**
TAPN	**Taplejung**	**18.17**	**113**	*e*P	**P**	**12 28 11.3**	**-1.1**
ODAN	**Odare**	**18.20**	**115**	*e*P	**Pn**	**12 28 11.2**	**-1.5**
BOK	**Bokaro**	**19.05**	**125**	*e*P	**Pn**	**12 28 24.3**	**+1.5**
DGZ	**Jazzator, Alta**	**19.31**	**39**	*i* P	**Pn**	**12 28 26.4**	**+0.5**
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GNI	**Garni**	**19.43**	**290**	*e*P	**P**	**12 28 25.8**	**-0.3**
	comp=Z,14nm,0.8s						
GNI	**Garni**	**19.43**	**290**	*ce*P	**Pn**	**12 28 29.8**	**+2.4**
GNI				pmax	pmax		
	comp=Z,38nm,0.9s						
LSA	**Lhasa**	**19.73**	**102**	*e*P	**P**	**12 28 28.4**	**-1.2**
	comp=Z,15nm,1.0s						
LSA	**Lhasa**	**19.73**	**102**	*e*P	**P**	**12 28 28.4**	**-1.2**
LSA				pmax	pmax		
	comp=Z,15nm,1.0s						
AKH	**Akhalkalaki**	**20.51**	**293**	*e*P	**P**	**12 28 37.0**	**-0.8**
	comp=Z,14nm,0.8s						
AKH	**Akhalkalaki**	**20.51**	**293**	*e*P	**P**	**12 28 37.0**	**-0.8**
AKH				pmax	pmax		
	comp=Z,14nm,0.8s						
NCK	**Nalchik**	**20.80**	**299**	*i* P	Pn	12 28 43.2	-0.1
ZAA0	**Zalesovo Array**	**21.20**	**27**	*e*P	**P**	**12 28 44.7**	**-0.1**
	comp=Z,19nm,0.6s						
ZALV	**Zalesovo Beam**	**21.20**	**27**	P	**P**	**12 28 44.7**	**-0.1**
	comp=Z,12nm,0.3s,baz=221,slow=11,SNR=57						
ZALV	**Zalesovo Beam**	**21.20**	**27**	*e*P	**P**	**12 28 44.5**	**-0.3**
ZALV	**Zalesovo Beam**	**21.20**	**27**	*e*P	**P**	**12 28 44.5**	**-0.3**
ZAA1	**Zalesovo Array**	**21.20**	**27**	*e*P	**P**	**12 28 44.7**	**-0.2**
NVS	**Novosibirsk**	**21.38**	**23**	*e*P	**P**	**12 28 46.6**	**-0.2**
NVS				*e*		12 32 48.5	
NVS				pmax	pmax		
	comp=Z,20nm,0.6s						
NVS				pmax	pmax		
	comp=N,18nm,0.6s						
NVS				pmax	pmax		
	comp=E,14nm,1.0s						
KVAR	**Kislovodsk Arr**	**21.54**	**300**	P	**P**	**12 28 49.3**	**+0.6**
	comp=E,7.5nm,0.7s,baz=261,slow=14,SNR=2.8						
KIV	**Kislovodsk**	**21.54**	**300**	*e*P	**P**	**12 28 49.1**	**+0.3**
	comp=E,10.0nm,0.8s						
KIV	**Kislovodsk**	**21.54**	**300**	*e*P	**P**	**12 28 50.8**	**+2.0**
KIV				pmax	pmax		
	comp=Z,12nm,1.0s						
KIV				MLR	MLR		
	comp=Z,67nm,14.0s						
SVE	**Sverdlovsk**	**21.64**	**348**	*e*P	**P**	**12 28 50.9**	**+1.3**
SVE				*e*S	**S**	**12 32 44.0**	**-3.2**
ARU	**Arti**	**21.68**	**344**	P	**P**	**12 28 51.1**	**+1.2**
ARU	**Arti**	**21.68**	**344**	*e*P	**P**	**12 28 50.0**	**+0.1**
	comp=Z,22nm,0.6s						
ARU	**Arti**	**21.68**	**344**	*d i*P	**P**	**12 28 51.1**	**+1.2**
ARU				PPP	PPP	12 29 19.5	
ARU				S	**S**	**12 32 50.2**	**+2.4**
ARU				SS	**SnSn**	**12 33 14.0**	**+0.8**
ARU				pmax	pmax		
	comp=Z,17nm,0.8s						
SHL	**Shillong**	**22.28**	**111**	*e*P	**P**	**12 28 55.9**	**-1.0**
ZIRO	**ZIRO**	**22.81**	**104**	*e*P	**P**	**12 29 03.7**	**+1.2**
MOKO	**MOKOCHONG**	**23.91**	**106**	*e*P	**P**	**12 29 14.5**	**+1.2**
VORD	**Divnogorie**	**25.98**	**315**	*e*P	**P**	**12 29 31.6**	**-0.2**
VORD				pmax	pmax		
	comp=Z,5.0nm,0.4s						
VSR	**Storozhevoye**	**26.16**	**315**	*e*P	**P**	**12 29 33.8**	**+0.5**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BR101	**Keskin Array S**	**27.96**	**288**	*e*P	**P**	**12 29 51.2**	**+1.3**
BRTR	**Keskin Array B**	**27.96**	**288**	P	**P**	**12 29 51.2**	**+1.3**
	comp=Z,1.0nm,0.8s,baz=78,slow=9.3,SNR=3.7						
LZH	**Lanzhou**	**28.23**	**79**	*e*P	**P**	**12 29 55.2**	**+2.9**
LZH				pP	pP	12 30 01.3	-1.0
LZH				sP	sP	12 30 04.6	-2.0
LZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ZAK	**Zakamensk**	**28.69**	**49**	*e*P	**P**	**12 29 58.3**	**+2.1**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.3s						
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.4s						
OBN	**Obninsk**	**29.27**	**321**	*c i*P	**P**	**12 30 02.2**	**+1.1**
OBN				*e*		12 30 55.7	
OBN				*e*S	**S**	**12 34 51.7**	**+0.1**
OBN				pmax	pmax		
	comp=Z,20nm,0.7s						
OBN				MLR	MLR		
	comp=Z,81nm,17.0s						
PRGR	**Permogore**	**29.62**	**338**	*e*P	**P**	**12 30 04.1**	**0.0**
PRGR				pmax	pmax		
	comp=Z,12nm,0.5s						
SONA0	**Songino Array**	**30.10**	**55**	*e*P	**P**	**12 30 10.2**	**+1.4**
SONM	**Songino Array**	**30.10**	**55**	P	**P**	**12 30 10.2**	**+1.4**
	comp=Z,1.4nm,0.6s,baz=256,slow=10,SNR=8.8						
SONM				LR	LR	12 43 19.7	
	comp=Z,58nm,20.5s,baz=263,slow=38						
PALK	**Pallekele**	**30.50**	**156**	LR	LR	12 43 22.5	
	comp=Z,89nm,20.1s,baz=292,slow=39						
KLMR	**Klimovskoe**	**31.17**	**332**	*e*P	**P**	**12 30 17.0**	**-0.8**
KLMR				*e*		12 31 17.4	
KLMR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KLMR	**Klimovskoe**	**31.17**	**332**	*e*P	**P**	**12 30 17.1**	**-0.8**
KLMR				AMP		12 30 18.2	
	comp=Z,7.0nm,1.0s						
KLMR				*e*PP	**PnPn**	**12 31 17.4**	**-2.7**
CMAR	**Chiang Mai Arr**	**31.74**	**115**	P	**P**	**12 30 22.9**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=313,slow=8.1,SNR=5.4						
CMAR				LR	LR	12 44 36.2	
	comp=Z,29nm,19.5s,baz=266,slow=39						
AKASG	**Malin Array Be**	**31.97**	**310**	P	**P**	**12 30 26.1**	**+1.1**
	comp=Z,1.3nm,0.5s,baz=88,slow=7.3,SNR=14						
AKBB	**Malin Array Si**	**31.97**	**310**	*e*P	**P**	**12 30 25.5**	**+0.5**
	comp=Z,6.6nm,1.0s						
AKBB	**Malin Array Si**	**31.97**	**310**	*e*P	**P**	**12 30 25.5**	**+0.5**
AKBB				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KIEV	**Kiev**	**31.98**	**310**	*e*P	**P**	**12 30 26.0**	**+0.9**
	comp=Z,6.3nm,1.0s						
KIEV	**Kiev**	**31.98**	**310**	*d i*P	**P**	**12 30 26.2**	**+1.1**
KIEV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
PLOR	**Plostina**	**33.07**	**301**	⇓*i*P	**P**	**12 30 37.6**	**+2.8**
GYA	**Guiyang**	**33.52**	**96**	*e*P	**P**	**12 30 40.0**	**+0.9**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MLR	**Muntele Rosu**	**33.55**	**300**	P	**P**	**12 30 41.4**	**+2.3**
	comp=Z,1.9nm,0.6s,baz=100,slow=2.5,SNR=11						
MLR				LR	LR	12 47 26.8	
	comp=Z,22nm,18.8s,baz=47,slow=42						
MLR	**Muntele Rosu**	**33.55**	**300**	⇓*i*P	**P**	**12 30 42.4**	**+3.3**
MLR	**Muntele Rosu**	**33.55**	**300**	*e*P	**P**	**12 30 40.2**	**+1.1**
	comp=Z,11nm,0.8s						
MLR				*e*P	**P**	**12 30 41.4**	**+2.3**
MLR	**Muntele Rosu**	**33.55**	**300**	*e*P	**P**	**12 30 40.2**	**+1.1**
MLR				pmax	pmax		
	comp=Z,11nm,0.8s						
HHC	**Hu-ho-hao-te**	**33.60**	**68**	*e*P	**P**	**12 30 39.4**	**-0.2**
HHC				S	**S**	**12 36 02.2**	**+2.4**
HHC				sS	sS	12 36 09.6	-6.9
HHC				pmax	pmax		
	comp=Z,12nm,0.9s						
HHC				pmax	pmax		
	comp=Z,36nm,5.5s						
HHC				LR	LR		
	comp=Z,540nm,13.3s						
HHC				LR	LR		
	comp=Z,450nm,13.9s						
HHC				LR	LR		
	comp=Z,450nm,11.2s						
BURAR	**Bucovina Array**	**34.15**	**304**	⇑*i*P	**P**	**12 30 46.0**	**+1.8**
BUR04	**Bucovina Ar. S**	**34.15**	**304**	*e*P	**P**	**12 30 45.3**	**+1.0**
BUR08	**Bucovina Ar. S**	**34.16**	**304**	*e*P	**P**	**12 30 45.0**	**+0.7**
VSU	**Vasula**	**35.58**	**323**	*ce*P	**P**	**12 30 57.4**	**+1.2**
VSU				pmax	pmax		
	comp=Z,52nm,1.7s						
UZH	**Uzhgorod**	**36.17**	**305**	*e*P	**P**	**12 31 03.8**	**+2.4**
UZH				*e*		12 31 05.8	
UZH				*e*		12 31 12.8	
BOD	**Bodaibo**	**36.90**	**39**	*e*P	**P**	**12 31 07.3**	**-0.3**
BOD				pmax	pmax		
	comp=Z,6.0nm,1.2s						
FIA0	**FINESS Array S**	**37.02**	**327**	*e*P	**P**	**12 31 09.7**	**+1.2**
FIA0	**FINESS Array S**	**37.02**	**327**	*e*P	**P**	**12 31 09.7**	**+1.2**
FINES	**FINESS Array B**	**37.02**	**327**	P	**P**	**12 31 09.7**	**+1.2**
	comp=Z,3.7nm,0.6s,baz=134,slow=10,SNR=14						
FINES				LR	LR	12 47 13.9	
	comp=Z,37nm,19.0s,baz=75,slow=38						
FINES	**FINESS Array B**	**37.02**	**327**	*e*P	**P**	**12 31 08.7**	**+0.2**
DIVS	**Divibare**	**37.83**	**298**	*e*P	**P**	**12 31 16.4**	**+0.6**
	comp=Z,2.6nm,0.7s						
DPC	**Dobruska-Polom**	**40.11**	**308**	*e*P	**P**	**12 31 36.9**	**+2.2**
DPC	**Dobruska-Polom**	**40.11**	**308**	*e*P	**P**	**12 31 36.9**	**+2.2**
ARA0	**ARCESS Array S**	**41.03**	**338**	*e*P	**P**	**12 31 42.9**	**+0.9**
ARCES	**ARCESS Array B**	**41.03**	**338**	P	**P**	**12 31 42.9**	**+0.9**
	comp=Z,2.4nm,0.6s,baz=120,slow=7.2,SNR=12						
ARCES	**ARCESS Array B**	**41.03**	**338**	*e*P	**P**	**12 31 42.7**	**+0.7**
NJ2	**Nanjing**	**41.29**	**80**	*e*P	**P**	**12 31 44.6**	**0.0**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
GERES	**GERESS Array B**	**41.85**	**306**	P	**P**	**12 31 50.7**	**+1.6**
	comp=Z,0.3nm,0.3s,baz=82,slow=8.0,SNR=4.9						
HFS	**Hagfors**	**42.46**	**323**	P	**P**	**12 31 54.7**	**+0.9**
	comp=Z,7.4nm,0.7s,baz=98,slow=9.0,SNR=20						
HFS				LR	LR	12 53 13.2	
	comp=Z,59nm,18.0s,baz=145,slow=41						
NC303	**NORSAR Array S**	**43.76**	**324**	*e*P	**P**	**12 32 05.2**	**+0.9**
NB2	**NORSAR Subarra**	**43.81**	**324**	P	**P**	**12 32 04.6**	**-0.1**
	comp=Z,1.9nm,0.5s,baz=99,slow=8.6						
NOA	**NORSAR Array B**	**43.81**	**324**	LR	LR	12 53 40.0	
	comp=Z,48nm,18.1s,baz=105,slow=40						
YAK	**Yakutsk**	**45.45**	**35**	*i* P	P	12 32 22.6	+4.9
YAK				pmax	pmax		
	comp=Z,11nm,0.8s						
SENIN	**Lac Senin/Sane**	**46.44**	**303**	*e*P	**P**	**12 32 26.8**	**+0.7**
	comp=Z,6.0nm,0.8s						
KSAR	**Wonju Array Be**	**46.69**	**70**	P	**P**	**12 32 27.2**	**-0.7**
KSAR	**Wonju Array Be**	**46.69**	**70**	P	**P**	**12 32 27.2**	**-0.7**
KSRS	**Korea Array**	**46.72**	**70**	P	**P**	**12 32 27.2**	**-0.8**
	comp=Z,0.9nm,0.5s,baz=276,slow=6.5,SNR=7.7						
KLR	**Kul'dur**	**46.89**	**53**	P	**P**	**12 32 29.4**	**+0.1**
	comp=Z,0.1nm,0.5s,baz=308,slow=4.2,SNR=6.7						
KLR	**Kul'dur**	**46.89**	**53**	*i* P	**P**	**12 32 29.1**	**-0.2**
TIXI	**Tiksi**	**46.97**	**22**	*e*P	**P**	**12 32 31.8**	**+2.3**
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.2s						
SPITS	**Spitsbergen Ar**	**47.67**	**347**	P	**P**	**12 32 36.4**	**+1.4**
	comp=Z,0.9nm,0.3s,baz=90,slow=7.2,SNR=11						
EKA	**Eskdalemuir Ar**	**51.50**	**316**	P	**P**	**12 33 05.6**	**+1.2**
	comp=Z,0.8nm,0.4s,baz=87,slow=7.5,SNR=11						
YSS	**Yuzh-Sakhalins**	**54.58**	**54**	*e*P	**P**	**12 33 27.3**	**+0.1**
YSS				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ASAJ	**Asahikawa**	**55.34**	**57**	LR	LR	12 59 53.4	
	comp=Z,51nm,18.8s,baz=344,slow=39						
ESDC	**Sonseca Array**	**56.19**	**297**	P	**P**	**12 33 39.2**	**+0.2**
	comp=Z,0.5nm,0.4s,baz=57,slow=8.1,SNR=7.6						
BILL	**Bilibino**	**59.89**	**26**	⇓*e*P	**P**	**12 34 04.5**	**+0.1**
BILL				*e*		12 34 54.5	
BILL				*e*		12 36 14.3	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BILL				MLR	MLR		
	comp=Z,74nm,17.0s						
PEA1	**Petropavlovsk-**	**61.59**	**43**	*e*P	**P**	**12 34 15.7**	**-0.6**
PETK	**Petropavlovsk-**	**61.60**	**43**	P	**P**	**12 34 15.7**	**-0.6**
	comp=Z,1.7nm,0.7s,baz=261,slow=5.4						
TOA0	**Torodi Ar. Sit**	**63.96**	**268**	*e*P	**P**	**12 34 29.5**	**-3.0**
TOA0				*e*P	**P**	**12 34 30.6**	**-1.9**
TOA1	**Torodi Ar. Sit**	**63.96**	**268**	*e*P	**P**	**12 34 30.2**	**-2.3**
TORD	**Torodi Ar. Bea**	**63.96**	**268**	P	**P**	**12 34 30.2**	**-2.3**
	comp=Z,5.2nm,0.8s,baz=46,slow=5.6						
KOWA	**Kowa**	**67.86**	**272**	P	**P**	**12 34 56.8**	**-0.8**
	comp=Z,6.5nm,0.7s,baz=56,slow=8.3,SNR=12						
KOWA	**Kowa**	**67.86**	**272**	*e*P	**P**	**12 34 56.8**	**-0.8**
KOWA				*e*P	**P**	**12 34 57.2**	**-0.4**
SIJI	**Sorong**	**68.47**	**108**	LR	LR	13 07 30.2	
	comp=Z,26nm,18.1s,baz=32,slow=38						
DBIC	**Dimbokro**	**72.92**	**266**	LR	LR	13 11 21.9	
	comp=Z,53nm,18.3s,baz=109,slow=39						
INK	**Inuvik**	**74.75**	**8**	P	**P**	**12 35 40.4**	**+2.0**
	comp=Z,1.3nm,0.6s,baz=348,slow=5.6,SNR=3.4						
INK	**Inuvik**	**74.75**	**8**	*e*P	**P**	**12 35 38.6**	**+0.2**
	comp=Z,2.7nm,1.1s						
INK	**Inuvik**	**74.75**	**8**	*e*P	**P**	**12 35 38.6**	**+0.2**
INK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ILAR	**Eielson Array**	**75.81**	**15**	P	**P**	**12 35 44.0**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=304,slow=4.5,SNR=4.3						
ILAR	**Eielson Array**	**75.81**	**15**	P	**P**	**12 35 44.0**	**-0.6**
YKA	**Yellowknife Ar**	**81.89**	**2**	P	**P**	**12 36 17.4**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=352,slow=4.9,SNR=7.1						
WR1	**Warramunga Arr**	**83.18**	**120**	*e*P	**P**	**12 36 23.6**	**-1.7**
	comp=Z,4.1nm,0.8s						
WRA	**Warramunga Arr**	**83.18**	**120**	P	**P**	**12 36 23.6**	**-1.7**
	comp=Z,1.7nm,0.5s,baz=325,slow=4.7,SNR=22						
ASAR	**Alice Springs**	**85.37**	**123**	P	**P**	**12 36 35.0**	**-1.3**
	comp=Z,1.3nm,0.6s,baz=308,slow=4.9,SNR=14						
AS01	**Alice Springs**	**85.40**	**123**	*e*P	**P**	**12 36 34.7**	**-1.8**

*SJA **02** 12:25:58.4±0.7, 33°.01S×71°.46W, h72^{km}±4^{km}, ML2.6, MW3.5*

*GUC **02** 12:26:01.1±0.5, 32°.80S×70°.97W, h70^{km}±5^{km}, ML3.1*

ISC 02 12:25:57.8±3.3**, 33°.2S**±0°.1×**71°.6W**±0°.2**, h68^{km}**±14^{km}**, n11, σ1^{s}.25**/19**, 1C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROC1	**El Roble**	**0.49**	**68**	*i* P	**Pn**	**12 26 11.8**	**+1.0**
ROC1				*i* S	**Sn**	**12 26 20.6**	**+0.5**
ROCH	**El Roble**	**0.50**	**67**	⇓*i*P	**Pn**	**12 26 11.9**	**+1.1**
ROCH				*i* S	**Sn**	**12 26 19.6**	**-0.5**
ROCH				IAML		12 26 20.5	
	comp=N,2µm,0.3s						
PEL	**Peldehue**	**0.73**	**89**	*e*P	**Pn**	**12 26 12.8**	**-0.2**
PEL				*i* S	**Sn**	**12 26 22.2**	**-2.1**
CLCH	**Cerro Calan**	**0.89**	**105**	⇑*i*P	**Pn**	**12 26 16.0**	**+1.1**
CLCH				*i* S	**Sn**	**12 26 27.1**	**-0.5**
CLCH				IAML		12 26 28.1	
	comp=E,2µm,0.3s						
FCH	**Farellones**	**1.08**	**99**	*e*P	**Pn**	**12 26 17.4**	**-0.1**
FCH				*i* S	**Sn**	**12 26 29.8**	**-2.4**
FCH				IAML		12 26 30.5	
	comp=E,899nm,0.2s						
AUSP	**Uspallata**	**2.06**	**63**	*i* P	**Pn**	**12 26 31.3**	**+0.8**
AUSP				*i* S	**Sn**	**12 26 55.9**	**+0.5**
ARCO	**CERRO ARCO**	**2.23**	**82**	*i* P	**Pn**	**12 26 33.9**	**+1.2**
ARCO				IAML		12 27 15.6	
	comp=Z,29nm,0.6s						
AAGR	**Agrelo**	**2.29**	**89**	*i* P	**Pn**	**12 26 34.6**	**+1.1**
RTLS	**Leoncito**	**2.35**	**55**	*i* P	**Pn**	**12 26 34.8**	**+0.4**
RTLS				*i* S	**Sn**	**12 27 02.3**	**-0.1**
RTLS				IAML		12 27 03.3	
	comp=Z,44nm,0.8s						
ASAL	**Salagasta**	**2.36**	**77**	*i* P	**Pn**	**12 26 35.4**	**+1.0**
GO04	**Tololo Observa**	**3.05**	**12**	*i* P	**Pn**	**12 26 44.4**	**+0.4**
GO04				*i* S	**Sn**	**12 27 17.5**	**-2.0**

IDC 02 12:43:05.4±999.0**, 46°.62N×47°.80E, h0^{km}, Error ellipse: s-maj=479.3km s-min=207.2km az=129.0, Ukraine-Moldova-Southwestern Russia region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**12.05**	**331**	*i*		13 58 50.0	
	baz=142,slow=376,SNR=0.5						
I26DE	**FREYUNG INFRAS**	**22.93**	**288**	*i*		15 04 30.0	
	baz=84,slow=375,SNR=0.7						
I48TN	**KESRA INFRASON**	**30.61**	**263**	*i*		15 48 40.0	
	baz=55,slow=360,SNR=0.5						

MAN 02 12:45:45.0, 12°.85N×123°.58E, h37^{km}, mb4.2, ML3.1, MS2.8, 1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PVCP	**Virac**	**0.93**	**37**	*e*P	Pn	12 46 01.5	-0.1
AUQP	**San Andres**	**1.00**	**298**	*e*P	Pn	12 46 04.5	+2.0
AUQP				*e*S	Sn	12 46 21.6	+6.1
CNP	**Catarman**	**1.11**	**107**	*e*P	Pn	12 46 03.8	-0.2
CNP				*e*S	Sn	12 46 19.7	+1.7
RCP	**Roxas**	**1.52**	**213**	⇓*e*P	Pn	12 46 08.6	-1.0
RCP				*e*S	Sn	12 46 29.4	+1.3
OTRP	**Odiongan**	**1.60**	**253**	*e*P	Pn	12 46 11.0	+0.2
BOAC	**Boac**	**1.80**	**290**	*e*P	Pn	12 46 14.4	+0.9
BOAC				*e*S	Sn	12 46 43.1	+8.0
GUIM	**Jordan**	**2.41**	**204**	*e*P	Pn	12 46 22.9	+1.0

CSEM 02 12:51:28.6, 27°.69N×18°.14W, h18^{km}, ML3.6, Canary Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CORC	**Orchilla, El H**	**0.01**	**331**	P	Pg	12 51 31.7	-0.1
	6µm,0.1s,SNR=18						
CORC				S	Sg	12 51 34.6	+0.6
	5µm,0.1s,SNR=7.9						
CJUL	**El Julon, El H**	**0.06**	**54**	P	Pg	12 51 32.1	-0.1
	2µm,0.1s,SNR=18						
CJUL				S	Sg	12 51 34.8	+0.2
	11µm,0.1s,SNR=7.9						
CTAD	**Las Tabladas,**	**0.07**	**40**	P	Pg	12 51 31.9	-0.2
	2µm,0.1s,SNR=18						
CTAD				S	Sg	12 51 34.4	-0.1
	8µm,0.1s,SNR=7.9						
CTAN	**El Hierro**	**0.10**	**51**	P	Pg	12 51 32.1	-0.2
	315nm,0.1s,SNR=18						
CTAN				S	Sg	12 51 34.7	-0.1
	2µm,0.1s,SNR=7.9						
CMCL	**Mercadel, El H**	**0.11**	**79**	P	Pg	12 51 32.4	-0.1
	1µm,0.1s,SNR=7.9						
CMCL				S	Sg	12 51 35.7	+0.5
	6µm,0.1s,SNR=7.9						
CCUM	**Cumbre, El Hie**	**0.11**	**61**	P	Pg	12 51 32.3	-0.2
	549nm,0.1s,SNR=18						
CCUM				S	Sg	12 51 35.0	-0.1
	1µm,0.1s,SNR=7.9						
CRST	**La Restinga, E**	**0.15**	**110**	P	Pg	12 51 32.6	-0.2
	93nm,0.2s,SNR=7.9						
CRST				S	Sg	12 51 34.9	-0.8
	5µm,0.1s,SNR=7.9						
CHIE	**El Hierro**	**0.16**	**78**	P	Pg	12 51 32.9	-0.1
	113nm,0.2s,SNR=18						
CTIG	**El Hierro**	**0.21**	**64**	P	Pb	12 51 33.6	+0.1
	20nm,0.0s,SNR=7.9						
CTIG				S	Sg	12 51 37.4	+0.1
	968nm,0.1s,SNR=7.9						

*ISCJB **02** 12:58:13.7±1.2, 5°.36S±0°.09×147°.3E±0°.2, h170^{km}, mb3.8/4, Error ellipse: s-maj=32.0km s-min=12.1km az=179.7*

*IDC **02** 12:58:16.1±3.4, 5°.53S×147°.48E, h189^{km}±39^{km}, mb3.5/4, mb1 3.8/6, mb1mx3.3/45, mbtmp4.1/6, MS3.2/3, Ms1 3.2/3, ms1mx2.6/34, Error ellipse: s-maj=56.1km s-min=23.1km az=131.0*

ISC 02 12:58:14.7±1.3**, 5°.4S**±0°.1×**147°.3E**±0°.3**, h170^{km}, n9, σ1^{s}.13**/8**, mb3.7**/4**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.03**	**182**	P	**Pn**	**12 59 17.6**	**+1.7**
	6.6nm,0.3s,baz=329,slow=6.5,SNR=21						
PMG				S	**Sn**	**13 00 02.1**	**-1.6**
	4.1nm,0.3s,baz=256,slow=6.6,SNR=4.3						
WRA	**Warramunga Arr**	**19.23**	**220**	P	**P**	**13 02 25.8**	**-0.2**
	2.5nm,0.3s,baz=46,slow=12,SNR=125						
ASAR	**Alice Springs**	**22.32**	**214**	P	**P**	**13 02 58.5**	**-0.2**
	3.7nm,0.8s,baz=52,slow=8.2,SNR=51						
ASAR				LR	LR	13 12 01.4	
	comp=Z,52nm,20.6s,baz=288,slow=37						
FITZ	**Fitzroy Crossi**	**24.67**	**237**	P	**P**	**13 03 19.9**	**-0.1**
	12nm,0.4s,baz=65,slow=10,SNR=67						
URZ	**Urewera**	**42.49**	**145**	LR	LR	13 24 28.7	
	comp=Z,22nm,18.3s,baz=0.0,slow=37						
SONM	**Songino Array**	**64.00**	**331**	LR	LR	13 35 39.4	
	comp=Z,28nm,22.0s,baz=56,slow=35						
MKAR	**Makanchi Array**	**77.20**	**320**	P	**P**	**13 09 50.4**	**+0.4**
	0.2nm,0.4s,baz=116,slow=6.6,SNR=2.8						
ILAR	**Eielson Array**	**84.77**	**23**	P	**P**	**13 10 29.1**	**-0.5**
	0.4nm,0.6s,baz=259,slow=5.1,SNR=7.8						
TORD	**Torodi Ar. Bea**	**145.23**	**285**	PKPbc	**PKPdf**	**13 17 32.5**	**-0.7**
	baz=70,slow=4.0						

CSEM 02 13:22:34.4, 27°.69N×18°.15W, h21^{km}, ML3.5, Canary Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CORC	**Orchilla, El H**	**0.01**	**25**	P	Pb	13 22 37.8	-0.3
	SNR=18						
CORC				S	Sb	13 22 40.7	+0.1

	SNR=7.9						
CJUL	**El Julon, El H**	0.07	58	P	Pb	13 22 38.2	-0.3
	2µm,0.1s,SNR=18						
CTAD	**Las Tabladas,**	0.08	46	P	Pb	13 22 38.1	-0.3
	2µm,0.1s,SNR=18						
CTAD				S	Sb	13 22 40.9	-0.2
	7µm,0.1s,SNR=7.9						
CTAN	**El Hierro**	0.11	54	P	Pb	13 22 38.3	-2.8
	403nm,0.1s,SNR=18						
CTAN				S	Sb	13 22 41.0	-4.9
	1µm,0.1s,SNR=7.9						
CMCL	**Mercadel, El H**	0.12	80	P	Pb	13 22 38.6	-2.3
	810nm,0.1s,SNR=18						
CMCL				S	Sb	13 22 41.8	-3.8
	5µm,0.1s,SNR=7.9						
CCUM	**Cumbre, El Hie**	0.12	63	P	Pb	13 22 38.5	-2.4
	527nm,0.1s,SNR=18						
CCUM				S	Sb	13 22 41.3	-4.2
	4µm,0.2s,SNR=7.9						
CRST	**La Restinga, E**	0.16	108	P	Pb	13 22 38.7	-1.7
	334nm,0.1s,SNR=18						
CRST				S	Sb	13 22 42.2	-2.4
	4µm,0.1s,SNR=7.9						
CHIE	**El Hierro**	0.17	78	P	Pb	13 22 39.0	-1.3
	56nm,0.1s,SNR=7.9						
CHIE				S	Sb	13 22 42.5	-2.0
	156nm,0.1s,SNR=7.9						
CTIG	**El Hierro**	0.23	65	P	Pb	13 22 39.6	-0.8
	155nm,0.1s,SNR=18						
CTIG				S	Sb	13 22 43.5	-1.1
	1µm,0.1s,SNR=7.9						
EHIG	**Higuera**	0.92	19	S	Sb	13 23 01.3	-2.1
	265nm,0.1s,SNR=7.9						
EGOM	**La Gomera**	0.95	61	S	Sb	13 23 01.0	-3.4
	143nm,0.1s,SNR=7.9						
CRAJ	**Montana Rajada**	1.49	67	S	Sn	13 23 13.8	-5.4
	361nm,0.2s,SNR=6.9						
EOSO	**Osorio**	2.33	80	S	Sn	13 23 32.4	-7.3
	3.6nm,0.1s,SNR=7.9						
CFUE	**Fuerteventura**	3.84	75	S	Sn	13 24 09.4	-7.4
	15nm,0.1s,SNR=7.9						

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*CSEM **02** 13:26:30.6±0.1, 41.°80N×22.°92E, h2^{km}, MD2.8, Error ellipse: s-maj=4.1km s-min=2.6km az=71.0*
*SKO **02** 13:26:30.1, 41.°79N×22.°97E, h15^{km}, M2.4, ML2.8*
*ATH **02** 13:26:31.2, 41.°76N×23.°02E, h20^{km}±3^{km}, ML2.7/6, Error ellipse: s-maj=3.9km s-min=1.5km az=177.0*
*THE **02** 13:26:31.0, 41.°79N×23.°01E, h2^{km}±1^{km}, ML2.7/7, Error ellipse: s-maj=1.9km s-min=0.8km az=288.0*
*BEO **02** 13:26:31.9±0.3, 41.°79N×22.°93E, h10^{km}±3^{km}, ML2.6/6*
*SOF **02** 13:26:32.2, 41.°80N×23.°12E, h3^{km}, MD2.8*

ISC 02 13:26:30.5±1.0**, 41.°80N**±0.°01×**22.°94E**±0.°02**, h7**^{km}±8^{km}**, n94, σ1.^{s}59**/137**, 9C-5D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KKB	**Krupnik**	0.13	58	*i* P	Pg	13 26 33.1	-0.1
KKB	**Krupnik**	0.13	58	*i* P	Pg	13 26 33.1	-0.1
VAY	**Valandovo**	0.55	210	*e*Pg	Pg	13 26 42.2	+1.0
VAY				*e*Sg	Sb	13 26 50.1	-0.6
VAY	**Valandovo**	0.55	210	P	Pg	13 26 42.2	+1.0
VAY				S	Sb	13 26 50.1	-0.6
VAY	**Valandovo**	0.55	210	*i* Pg	Pg	13 26 42.2	+1.0
VAY				*i* Sg	Sb	13 26 50.2	-0.5
VAY				*e*Lg	Lg	13 26 50.4	
	comp=E,492nm,0.5s						
VAY				*e*Lg	Lg	13 26 51.2	
	comp=N,324nm,0.4s						
VAY	**Valandovo**	0.55	210	P	Pg	13 26 42.2	+1.0
VAY				S	Sb	13 26 50.1	-0.6
STIP	**Stip**	0.57	260	*i* Pg	Pg	13 26 38.1	-3.5
STIP				*i* Sg	Sg	13 26 43.9	-5.2
MMB	**Musomiste**	0.63	109	*i* P	Pg	13 26 42.8	+0.2
MMB	**Musomiste**	0.63	109	*i* P	Pg	13 26 42.8	+0.2
KNT	**Kendrikon**	0.64	183	P	Pg	13 26 43.0	+0.1
KNT				S	Sb	13 26 52.6	-0.5
KNT				AML	AML	13 26 52.9	
	comp=E,1720µm,0.1s						
KNT				AML	AML	13 26 53.5	
	comp=N,2226µm,0.2s						
KNT	**Kendrikon**	0.64	183	P	Pg	13 26 43.1	+0.3
KNT				S	Sg	13 26 52.1	+1.0
KNT	**Kendrikon**	0.64	183	P	Pg	13 26 43.1	+0.3
KNT				S	Sg	13 26 52.1	+1.0
VTS	**Vitosha**	0.82	14	*e*Pg	Pg	13 26 46.3	+0.1
VTS				*e*Sg	Sb	13 26 58.2	-0.2
VTS	**Vitosha**	0.82	14	⇑*i*P	Pg	13 26 46.3	+0.1
VTS				S	Sg	13 26 56.4	-0.4
VTS	**Vitosha**	0.82	14	P	Pg	13 26 46.2	+0.1
VTS				S	Sb	13 26 57.8	-0.6
VTS	**Vitosha**	0.82	14	*e*Pg	Pg	13 26 46.3	+0.1
VTS				S	Sb	13 26 57.8	-0.6
VTS				*e*Sg	Sb	13 26 58.2	-0.2
NVR	**Nevrokopi**	0.82	123	P	Pg	13 26 46.0	-0.3
NVR				S	Sg	13 26 57.0	0.0
NVR	**Nevrokopi**	0.82	123	P	Pg	13 26 45.9	-0.5
NVR				S	Sg	13 26 56.5	-0.6
NVR	**Nevrokopi**	0.82	123	P	Pg	13 26 46.0	-0.3
NVR				S	Sg	13 26 56.5	-0.6
SRS	**Serrai**	0.84	144	P	Pg	13 26 46.2	-0.4
SRS	**Serrai**	0.84	144	P	Pg	13 26 46.2	-0.4
SRS				S	Sb	13 26 58.3	-0.7
SRS	**Serrai**	0.84	144	P	Pg	13 26 46.3	-0.4
SRS				S	Sb	13 26 58.3	-0.7
GRG	**Griva**	0.94	206	P	Pg	13 26 48.7	+0.3
GRG				S	Sn	13 27 03.2	-0.7
GRG				AML	AML	13 27 06.6	
	comp=N,501µm,0.4s						
GRG				AML	AML	13 27 07.2	
	comp=E,948µm,0.3s						
GRG	**Griva**	0.94	206	P	Pg	13 26 48.8	+0.3
GRG				S	Sb	13 27 02.1	+0.4
GRG	**Griva**	0.94	206	P	Pg	13 26 48.9	+0.4
GRG				S	Sb	13 27 02.1	+0.4
THE	**Thessaloniki**	1.17	179	P	Pb	13 26 52.9	-0.1
THE				S	Sg	13 27 06.9	-1.1
THE				AML	AML	13 27 12.0	
	comp=E,452µm,0.5s						
THE				AML	AML	13 27 13.1	
	comp=N,503µm,0.4s						
THE	**Thessaloniki**	1.17	179	P	Pb	13 26 52.9	-0.1
THE				S	Sb	13 27 08.8	+0.5
THE	**Thessaloniki**	1.17	179	P	Pb	13 26 52.9	-0.1
THE				S	Sb	13 27 08.8	+0.5
PGB	**Panagyurishte**	1.18	50	*i* P	Pg	13 26 52.9	-0.3
PGB	**Panagyurishte**	1.18	50	*i* P	Pg	13 26 52.9	-0.3
HORT	**Hortiatis**	1.21	174	P	Pn	13 26 54.2	+0.2
HORT				S	Sg	13 27 08.9	-0.4
HORT				AML	AML	13 27 10.7	
	comp=N,596µm,0.4s						
HORT				AML	AML	13 27 10.9	
	comp=E,591µm,0.6s						
HORT	**Hortiatis**	1.21	174	P	Pb	13 26 53.6	-0.2
HORT				S	Sb	13 27 09.8	+0.2
HORT	**Hortiatis**	1.21	174	P	Pb	13 26 53.8	0.0
HORT				S	Sb	13 27 09.8	+0.2
BARS	**Barje**	1.31	321	*e*Pg	Pn	13 26 55.6	+0.2
BARS				*e*Sg	Sb	13 27 13.0	+0.3
BARS	**Barje**	1.31	321	*e*Pg	Pn	13 26 55.6	+0.2
BARS				*e*Sg	Sb	13 27 13.0	+0.3
RZN	**Rozhen**	1.33	94	*i* P	Pn	13 26 55.2	-0.6
RZN	**Rozhen**	1.33	94	*i* P	Pn	13 26 55.2	-0.6
KRUS	**Krusevo**	1.34	252	*e*Pg	Pb	13 26 56.5	+0.5
KRUS				*i* Sg	Sg	13 27 16.1	+2.5
PLD	**Plovdiv**	1.35	76	*e*Pg	Pg	13 26 56.6	+0.2
PLD				*e*Sg	Sg	13 27 15.2	+1.3
PLD	**Plovdiv**	1.35	76	*i* P	Pg	13 26 56.6	+0.2
PLD	**Plovdiv**	1.35	76	*i* P	Pg	13 26 56.6	+0.2
PLD				*e*Sg	Sg	13 27 15.2	+1.3
PLG	**Polygyros**	1.48	165	P	Pb	13 26 58.3	0.0
PLG				S	Sg	13 27 18.6	+0.6
PLG	**Polygyros**	1.48	165	P	Pn	13 26 57.9	+0.3
PLG				S	Sg	13 27 18.1	+0.2
PLG	**Polygyros**	1.48	165	P	Pn	13 26 57.9	+0.3
PLG				S	Sg	13 27 18.1	+0.2
ZAPS	**Zavoj**	1.49	351	*e*Pg	Pg	13 26 59.6	+0.5
ZAPS				*e*Sg	Sg	13 27 20.8	+2.4
OUR	**Ouranopolis**	1.66	151	P	Pn	13 26 58.2	-1.9
OUR				S	Sb	13 27 22.2	-0.4
OUR	**Ouranopolis**	1.66	151	P	Pn	13 26 58.2	-1.9
OUR				S	Sb	13 27 22.2	-0.4
KDZ	**Kurdzhali**	1.86	94	*i* P	Pn	13 27 03.2	+0.4
KDZ	**Kurdzhali**	1.86	94	*i* P	Pn	13 27 03.2	+0.4
DIM	**Dimitrovgrad**	1.95	82	*i* P	Pb	13 27 06.5	+0.1
DIM	**Dimitrovgrad**	1.95	82	*i* P	Pb	13 27 06.5	+0.1
PAIG	**Paliouri**	1.95	163	P	Pn	13 27 04.6	+0.6
PAIG	**Paliouri**	1.95	163	P	Pn	13 27 04.6	+0.6
PAIG	**Paliouri**	1.95	163	P	Pn	13 27 04.7	+0.6
SELS	**Selova**	1.96	317	*e*Pg	Pb	13 27 06.4	-0.1
SELS				*e*Sg	Sg	13 27 34.8	+1.4
BOVS	**Bovan**	2.05	334	*e*Pg	Pb	13 27 08.1	+0.1
BOVS				*e*Sg	Sg	13 27 37.1	+0.8
BOVS	**Bovan**	2.05	334	*e*Pg	Pb	13 27 08.1	+0.1
BOVS				*e*Sg	Sg	13 27 37.1	+0.8
RDO	**Rodhopi**	2.06	108	P	Pn	13 27 06.5	+1.0
RDO				AML	AML	13 27 39.0	
	comp=E,475µm,0.4s						
RDO				AML	AML	13 27 39.3	
	comp=N,601µm,0.4s						
RDO	**Rodhopi**	2.06	108	P	Pn	13 27 06.3	+0.8
ZAGS	**Zajecar**	2.08	346	*e*Pg	Pb	13 27 08.9	+0.3
ZAGS				*e*Sg	Sg	13 27 37.9	+0.6
ZAGS	**Zajecar**	2.08	346	*e*Pg	Pb	13 27 08.9	+0.3
ZAGS				*e*Sg	Sg	13 27 37.9	+0.6
ALN	**Alexandroupoli**	2.51	110	P	Pn	13 27 11.9	+0.2
ALN				AML	AML	13 27 55.5	
	comp=E,141µm,0.6s						
ALN				AML	AML	13 27 56.9	
	comp=N,174µm,0.9s						
ALN	**Alexandroupoli**	2.51	110	P	Pn	13 27 12.2	+0.5
SJES	**Sjenica**	2.63	305	*e*Pg	Pb	13 27 19.7	+1.6
GRUS	**Gruza**	2.65	323	*e*Pn	Pn	13 27 14.7	+1.0
GRUS	**Gruza**	2.65	323	*e*Pn	Pn	13 27 14.7	+1.0
KUBS	**Kucevo**	2.77	341	*e*Pn	Pn	13 27 15.6	+0.2
KUBS	**Kucevo**	2.77	341	*e*Pn	Pn	13 27 15.6	+0.2
TRUS	**Trudelj**	3.05	323	*e*Pn	Pn	13 27 20.2	+1.0
TRUS	**Trudelj**	3.05	323	*e*Pn	Pn	13 27 20.2	+1.0
MDVR	**Moldovita**	3.11	344	⇑*i*P	Pn	13 27 20.3	+0.2
MDVR	**Moldovita**	3.11	344	S	Sn	13 27 52.8	-4.8
MDVR	**Moldovita**	3.11	344	⇑*i*P	Pn	13 27 20.3	+0.2
DIVS	**Divibare**	3.16	318	*e*Pn	Pn	13 27 21.7	+1.0
DIVS	**Divibare**	3.16	318	*e*Pn	Pn	13 27 21.7	+1.0
SGRR	**Singureni**	3.29	42	S	Sb	13 28 06.9	-2.5
SGRR	**Singureni**	3.29	42	S	Sb	13 28 06.9	-2.5
TEKS	**Tekeris**	3.71	319	*e*Pn	Pn	13 27 29.5	+1.2
TEKS	**Tekeris**	3.71	319	*e*Pn	Pn	13 27 29.5	+1.2
BZS	**Buzias**	3.93	346	⇓*i*P	Pn	13 27 31.7	+0.4
BZS	**Buzias**	3.93	346	S	Sn	13 28 12.8	-4.9
BZS	**Buzias**	3.93	346	⇓*i*P	Pn	13 27 31.7	+0.4
VOIR		3.94	22	⇑*i*P	Pn	13 27 33.4	+1.8
VOIR		3.94	22	⇑*i*P	Pn	13 27 33.4	+1.8
MLR	**Muntele Rosu**	4.29	30	⇓*i*P	Pn	13 27 39.3	+3.0
MLR	**Muntele Rosu**	4.29	30	⇓*i*P	Pn	13 27 39.3	+3.0
MLR				S	Sn	13 28 27.8	+1.2
TLB	**Topalu**	4.65	52	⇑*i*P	Pn	13 27 43.1	+1.9
TLB	**Topalu**	4.65	52	S	Sb	13 28 42.3	-6.4
TLB	**Topalu**	4.65	52	⇑*i*P	Pn	13 27 43.1	+1.9
TIRR	**Tirgusor**	4.80	55	S	Sb	13 28 46.5	-6.5
VRI	**Vrincioaia**	4.90	33	⇑*i*P	Pn	13 27 47.8	+3.2
VRI	**Vrincioaia**	4.90	33	⇑*i*P	Pn	13 27 47.8	+3.2
CFR	**Carcaliu**	5.07	46	⇓*i*P	Pn	13 27 53.0	+6.1
CFR	**Carcaliu**	5.07	46	S	Sn	13 28 52.2	+6.6

MAN 02 13:45:04.6, 11.°58N×125.°44E, h19^{km}**, mb4.1, ML2.9, MS2.6, 1C, Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	**Borongan**	0.03	7	*e*P	Pg	13 45 08.1	+0.2
BESP				*e*S	Sg	13 45 13.5	+3.4
PLP	**Palo**	0.61	228	⇑*i*P	Pg	13 45 17.0	+0.4
PLP				*e*S	Sn	13 45 27.8	+0.3
CNP	**Catarman**	1.20	321	*e*P	Pn	13 45 25.4	-0.9
CNP				*e*S	Sg	13 45 43.0	-0.4
MSLP	**Maasin**	1.54	202	*e*P	Pn	13 45 31.6	+0.5
MSLP				*e*S	Sg	13 45 55.9	+1.5

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*ISCJB **02** 13:58:23.6±1.1, 32.°49N±0.°06×141.°8E±0.°1, h26^{km}, mb3.4/3, MS2.3/1, Error ellipse: s-maj=13.4km s-min=8.7km az=172.5*
*JMA **02** 13:58:23.8±0.3, 32.°40N×141.°78E, h50^{km}, M3.1*
*IDC **02** 13:58:25.1±3.5, 32.°07N×141.°01E, h0^{km}, mb3.3/3, mb1 3.4/4, mb1mx3.2/60, mbtmp3.2/4, ML2.6/1, MS2.4/2, Ms1 2.4/2, ms1mx2.1/27, Error ellipse: s-maj=120.7km s-min=19.1km az=64.0*

ISC 02 13:58:25.9±1.4**, 32.°49N**±0.°08×**141.°7E**±0.°1**, h26**^{km}**, n13, σ1.^{s}50**/13**, mb3.4**/3**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	**Mitsune**	1.67	292	P	Pn	13 58 53.2	-0.3
JHCJ	**Hachijojimakas**	1.68	291	P	Pn	13 58 53.3	-0.3
JHJ	**Hachijo jima 2**	1.70	292	Pn	Pn	13 58 52.8	-1.1
	10nm,0.3s,baz=9.0,slow=22,SNR=20						
JHJ				Sn	Sn	13 59 15.1	+0.2
	16nm,0.3s,baz=52,slow=19,SNR=2.5						
JHO	**Hitachi**	4.21	348	P	Pn	13 59 28.9	+0.5
JHO				S	Sn	14 00 17.1	+0.3
JAG	**Ashikaga**	4.33	336	P	Pn	13 59 31.3	+1.2
JFK	**Kawauchi**	4.91	353	*e*S	Sn	14 00 30.6	-3.5
MJAR	**Matsushiro Arr**	4.95	326	Pn	Pn	13 59 40.2	+1.6
	0.2nm,0.3s,baz=157,slow=11,SNR=1.9						
JFT	**Otama**	5.14	348	S	Sn	14 00 38.0	-1.6
KSRS	**Korea Array**	12.31	298	LR	LR	14 06 14.2	
	comp=Z,15nm,19.4s,baz=115,slow=39						
PETK	**Petropavlovsk-**	23.63	25	LR	LR	14 16 41.3	
	comp=Z,11nm,18.5s,baz=66,slow=45						
MKAR	**Makanchi Array**	46.83	306	P	P	14 06 54.8	+1.3
	0.2nm,0.4s,baz=82,slow=12,SNR=2.2						
WRA	**Warramunga Arr**	52.60	189	P	P	14 07 37.2	-0.4
	0.4nm,0.7s,baz=4.6,slow=7.5,SNR=6.8						
ASAR	**Alice Springs**	56.33	189	P	P	14 08 04.1	-0.6
	0.4nm,1.0s,baz=355,slow=9.8,SNR=1.7						

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*DDA **02** 14:15:10.5, 39.°19N×26.°45E, h7^{km}, Ml3.0*
*ATH **02** 14:15:11.8, 39.°16N×26.°53E, h13^{km}±3^{km}, ML2.6/7, Error ellipse: s-maj=4.0km s-min=1.0km az=253.0*
*ISK **02** 14:15:12.1, 39.°10N×26.°48E, h9^{km}, ML3.0/15*
*CSEM **02** 14:15:12.6±0.1, 39.°12N×26.°49E, h8^{km}, ML2.5, Error ellipse: s-maj=3.0km s-min=2.0km az=71.0*
*ISCJB **02** 14:15:12.3±0.4, 39.°12N±0.°02×26.°50E±0.°03, h6^{km}±3^{km}, Error ellipse: s-maj=3.9km s-min=2.5km az=161.5*
*THE **02** 14:15:13.4, 39.°11N×26.°42E, h10^{km}, ML2.5/6, Error ellipse: s-maj=1.6km s-min=0.5km az=264.0*

ISC 02 14:15:12.7±0.8**, 39.°12N**±0.°01×**26.°49E**±0.°02**, h14**^{km}±6^{km}**, n87, σ0.^{s}67**/121**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRK	**Paraskevi**	0.21	307	P	Pg	14 15 17.4	0.0
PRK				AML	AML	14 15 21.2	
	comp=E,9598µm,0.4s						
PRK				S	Sg	14 15 21.3	+0.7
PRK				AML	AML	14 15 24.6	
	comp=N,5920µm,0.5s						
PRK	**Paraskevi**	0.21	307	P	Pg	14 15 17.1	-0.3
PRK				S	Sg	14 15 20.7	+0.1
PRK	**Paraskevi**	0.21	307	P	Pg	14 15 17.1	-0.3
PRK				S	Sg	14 15 20.7	+0.1
DKL	**Dikili**	0.33	99	PG	Pg	14 15 19.1	-0.4
DKL				SG	Sg	14 15 24.3	+0.2
DKL	**Dikili**	0.33	99	*e*Pg	Pg	14 15 19.1	-0.4
DKL				*e*Sg	Sg	14 15 24.3	+0.2
FOCM	**Foˆ§a**	0.45	155	PG	Pg	14 15 20.9	-0.8
FOCM				SG	Sg	14 15 27.7	0.0
FOCM	**Foˆ§a**	0.45	155	*e*Pg	Pg	14 15 20.9	-0.8
FOCM				*e*Sg	Sg	14 15 27.7	0.0
KRBN	**Karaburun**	0.53	174	PG	Pg	14 15 22.2	-0.9
KRBN	**Karaburun**	0.53	174	*e*Pg	Pg	14 15 22.2	-0.9
BAYC	**CANAKKALE_Bayr**	0.62	4	*i* P	Pg	14 15 24.0	-0.9
BAYC	**CANAKKALE_Bayr**	0.62	4	P	Pg	14 15 24.0	-0.9
EZN	**Ezine**	0.71	350	PG	Pb	14 15 26.8	-0.1
EZN	**Ezine**	0.71	350	P	Pb	14 15 27.2	+0.3
EZN				S	Sb	14 15 37.8	+1.2
EZN	**Ezine**	0.71	350	*e*Pg	Pb	14 15 26.8	-0.1
EZN	**Ezine**	0.71	350	P	Pb	14 15 27.2	+0.3
EZN				S	Sb	14 15 37.8	+1.2
URLA	**Izmir**	0.77	174	PG	Pg	14 15 26.6	-1.0
URLA	**Izmir**	0.77	174	*i* P	Pg	14 15 26.7	-0.8
URLA				*i* S	Sb	14 15 38.6	+0.6
URLA	**Izmir**	0.77	174	P	Pg	14 15 26.7	-0.8
URLA				S	Sb	14 15 38.6	+0.6
BOZC	**Bozcaada**	0.79	335	PG	Pb	14 15 28.1	-0.2
BOZC	**Bozcaada**	0.79	335	*i* P	Pg	14 15 27.3	-0.8
BOZC	**Bozcaada**	0.79	335	*e*Pg	Pb	14 15 28.1	-0.2
CHOS	**Chios island**	0.81	205	PG	Pb	14 15 28.0	-0.5
CHOS	**Chios island**	0.81	205	P	Pg	14 15 27.8	-0.6
CHOS				S	Sb	14 15 38.7	-0.6
CHOS				AML	AML	14 15 41.5	
	comp=N,448µm,0.3s						
CHOS				AML	AML	14 15 47.3	
	comp=E,974µm,0.4s						
CHOS	**Chios island**	0.81	205	P	Pb	14 15 27.9	-0.5
CHOS				S	Sb	14 15 39.5	+0.2
CHOS	**Chios island**	0.81	205	*e*Pg	Pb	14 15 28.0	-0.5
CHOS				S	Sb	14 15 39.3	0.0
BLCB	**Balcova**	0.85	149	PG	Pg	14 15 28.5	-0.7
BLCB	**Balcova**	0.85	149	*e*Pg	Pg	14 15 28.5	-0.7
ZEY	**˜zmir**	0.88	179	*i* P	Pg	14 15 29.2	-0.6
ZEY				*i* S	Sb	14 15 42.4	+1.1
PSRA	**Psara**	0.92	232	P	Pn	14 15 31.1	-0.1
PSRA				S	Sn	14 15 43.7	-0.5
PSRA				AML	AML	14 15 46.0	
	comp=N,678µm,0.3s						
PSRA				AML	AML	14 15 47.2	
	comp=E,819µm,0.2s						
PSRA	**Psara**	0.92	232	P	Pb	14 15 30.7	+0.3
PSRA				S	Sn	14 15 43.7	-0.5
STEP	**BALIKESIR_Sava**	0.99	75	*i* P	Pg	14 15 30.6	-1.3
STEP	**BALIKESIR_Sava**	0.99	75	P	Pg	14 15 30.6	-1.3
AKS	**Akhisar**	1.06	103	PG	Pb	14 15 32.9	+0.1
AKS	**Akhisar**	1.06	103	*e*Pg	Pb	14 15 32.9	+0.1
AKHS	**Akhisar**	1.06	103	*i* P	Pg	14 15 32.1	-1.1
AKHS				*i* S	Sb	14 15 47.2	+0.6
AKHS	**Akhisar**	1.06	103	P	Pg	14 15 32.1	-1.1
AKHS				S	Sb	14 15 47.2	+0.6
DGB	**˜zmir**	1.11	164	*i* P	Pg	14 15 33.2	-1.0
DGB				*i* S	Sb	14 15 48.5	+0.6
GADA	**Gvkgeada**	1.16	337	PN	Pn	14 15 34.9	+0.4
GADA	**Gvkgeada**	1.16	337	P	Pb	14 15 34.3	-0.2
GADA				S	Sn	14 15 50.2	+0.1
GADA	**Gvkgeada**	1.16	337	P	Pb	14 15 34.3	-0.2
GADA	**Gvkgeada**	1.16	337	*e*Pn	Pn	14 15 34.9	+0.4
GADA				S	Sn	14 15 50.2	+0.1
LPK	**Lapseki**	1.27	10	PN	Pg	14 15 36.8	-0.3
LPK	**Lapseki**	1.27	10	*e*Pn	Pg	14 15 36.8	-0.3
LIA	**Limnos Island**	1.27	308	P	Pb	14 15 36.1	-0.3
LIA				S	Sn	14 15 53.2	+0.3
LIA				AML	AML	14 15 56.4	
	comp=E,502µm,0.5s						
LIA				AML	AML	14 15 57.6	
	comp=N,355µm,0.5s						
LIA	**Limnos Island**	1.27	308	P	Pn	14 15 35.3	-0.7
LIA				S	Sn	14 15 53.3	+0.5
LIA	**Limnos Island**	1.27	308	P	Pn	14 15 36.0	0.0
LIA				S	Sn	14 15 53.3	+0.5
GELI	**Tayfur-Gelibol**	1.27	360	PN	Pg	14 15 37.5	+0.2
GELI	**Tayfur-Gelibol**	1.27	360	*e*Pn	Pg	14 15 37.5	+0.2
GONE	**Gonen-Balikesi**	1.31	45	PN	Pg	14 15 37.3	-0.6
GONE	**Gonen-Balikesi**	1.31	45	*e*Pn	Pg	14 15 37.3	-0.6
KRBG	**Karabiga-Canak**	1.42	26	PN	Pb	14 15 38.9	0.0
KRBG	**Karabiga-Canak**	1.42	26	*e*Pn	Pb	14 15 38.9	0.0
SMG	**Samos**	1.44	169	P	Pb	14 15 39.0	-0.3
SMG				S	Sg	14 16 00.9	+1.9
SMG				AML	AML	14 16 01.4	
	comp=E,415µm,0.3s						
SMG				AML	AML	14 16 03.1	
	comp=N,469µm,0.6s						
SMG	**Samos**	1.44	169	P	Pb	14 15 39.1	-0.1
SMG				S	Sb	14 15 57.5	+0.1
SMG	**Samos**	1.44	169	P	Pb	14 15 39.1	-0.1
SMG				S	Sb	14 15 57.5	+0.1
SMTH	**Samothraki Isl**	1.54	332	P	Pn	14 15 38.8	-0.9
SMTH				S	Sb	14 16 00.8	+0.6
SMTH				AML	AML	14 16 01.6	
	comp=E,232µm,0.4s						
SMTH				AML	AML	14 16 02.3	
	comp=N,211µm,0.6s						
SMTH	**Samothraki Isl**	1.54	332	P	Pn	14 15 39.6	-0.1
SMTH				S	Sb	14 16 00.3	+0.1
SMTH	**Samothraki Isl**	1.54	332	P	Pn	14 15 39.6	-0.1
SMTH				S	Sb	14 16 00.3	+0.1
ERIK	**Erikli-Kesan**	1.55	1	PN	Pb	14 15 40.6	-0.5
ERIK	**Erikli-Kesan**	1.55	1	*e*Pn	Pb	14 15 40.6	-0.5
AYDB	**Zeytinkoy-Aydi**	1.61	136	PN	Pn	14 15 41.4	+0.6
AYDB	**Zeytinkoy-Aydi**	1.61	136	*e*Pn	Pn	14 15 41.4	+0.6
DURS	**Dursunbey**	1.61	72	*i* P	Pn	14 15 40.4	-0.4
DURS	**Dursunbey**	1.61	72	P	Pn	14 15 40.4	-0.4
EDC	**Edincik**	1.62	41	PN	Pb	14 15 41.9	-0.5
EDC	**Edincik**	1.62	41	*e*Pn	Pb	14 15 41.9	-0.5
ENEZ	**Enez**	1.63	351	PN	Pb	14 15 42.1	-0.5
ENEZ	**Enez**	1.63	351	*e*Pn	Pb	14 15 42.1	-0.5
RKY	**Sarkoy-Tekirda**	1.65	19	PN	Pb	14 15 42.3	-0.6
RKY	**Sarkoy-Tekirda**	1.65	19	*e*Pn	Pb	14 15 42.3	-0.6
SART	**Tekirdag**	1.65	19	*i* P	Pn	14 15 40.5	-0.8
SART	**Tekirdag**	1.65	19	P	Pn	14 15 40.5	-0.8
KESN	**Edirne-Kesan**	1.71	5	*i* P	Pn	14 15 42.0	-0.4
KESN	**Edirne-Kesan**	1.71	5	P	Pn	14 15 42.0	-0.4
KULA	**Kula-Manisa**	1.80	109	PN	Pn	14 15 44.4	+1.0
KULA	**Kula-Manisa**	1.80	109	*e*Pn	Pn	14 15 44.4	+1.0
ALN	**Alexandroupoli**	1.81	349	PN	Pb	14 15 44.7	-0.8
ALN	**Alexandroupoli**	1.81	349	P	Pn	14 15 43.7	+0.4
ALN				S	Sg	14 16 09.4	-1.4
ALN				AML	AML	14 16 11.2	
	comp=E,197µm,0.5s						
ALN				AML	AML	14 16 11.6	
	comp=N,158µm,1.0s						
ALN	**Alexandroupoli**	1.81	349	P	Pn	14 15 44.0	+0.7
ALN				S	Sn	14 16 07.2	+1.2
ALN	**Alexandroupoli**	1.81	349	P	Pn	14 15 44.0	+0.7
ALN	**Alexandroupoli**	1.81	349	*e*Pn	Pb	14 15 44.7	-0.8
ALN				S	Sn	14 16 07.2	+1.2
AYDN	**Tasoluk**	1.82	143	*i* P	Pb	14 15 45.9	0.0
AYDN	**Tasoluk**	1.82	143	P	Pb	14 15 45.9	0.0
SBT3	**Marmara-Eregli**	2.10	33	PN	Pb	14 15 48.9	-1.5
SBT3	**Marmara-Eregli**	2.10	33	*e*Pn	Pb	14 15 48.9	-1.5
TVSB	**Tavsanli**	2.33	81	PN	Pn	14 15 51.7	+1.0
TVSB	**Tavsanli**	2.33	81	*e*Pn	Pn	14 15 51.7	+1.0

IDC 02 14:23:06.8±390.0**, 47.°17N×46.°70E, h0**^{km}**, Error ellipse: s-maj=163.7km s-min=135.5km az=169.0, Ukraine-Moldova-Southwestern Russia region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I31KZ	**AKTYUBINSK INF**	8.16	62	*i*		15 16 40.0	
	baz=251,slow=316,SNR=1.1						
I43RU	**DUBNA INFRASON**	11.20	332	*i*		15 30 40.0	
	baz=142,slow=321,SNR=1.2						
I26DE	**FREYUNG INFRAS**	22.04	287	*i*		16 39 30.0	
	baz=81,slow=309,SNR=1.1						
I48TN	**KESRA INFRASON**	29.94	261	*i*		17 24 00.0	
	baz=59,slow=311,SNR=0.5						

IDC 02 14:38:35.9±4.0**, 20.°60S×168.°00E, h0**^{km}**, mb3.4**/2**, mb1 3.7**/3**, mb1mx3.4**/47**, mbtmp3.4**/3**, ML3.5**/1**, MS3.0**/1**, Ms1 3.0**/1**, ms1mx2.3**/25**, Error ellipse: s-maj=106.5km s-min=33.2km az=124.0, Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	2.06	224	Pn	Pn	14 39 11.6	-0.3
	15nm,0.3s,baz=131,slow=4.6,SNR=546						
DZM				Sn	Sb	14 39 40.0	-0.6
	33nm,0.3s,baz=174,slow=23,SNR=13						
WRA	**Warramunga Arr**	31.55	265	P	P	14 45 00.6	+0.4
	0.3nm,0.6s,baz=96,slow=8.5,SNR=2.1						
ASAR	**Alice Springs**	31.69	258	P	P	14 45 01.1	-0.4
	0.3nm,0.7s,baz=82,slow=8.8,SNR=8.8						
GUMO	**Guam**	40.88	324	LR	LR	15 00 08.0	
	comp=Z,22nm,19.8s,baz=202,slow=32						
GERES	**GERESS Array B**	145.10	330	PKPbc	PKPbc	14 58 14.2	-0.7
	0.8nm,0.7s,baz=32,slow=3.8,SNR=4.1						

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*IDC **02** 14:48:48.2±0.6, 1.°59N×126.°77E, h0^{km}, mb4.2/16, mb1 4.3/17, mb1mx4.1/59, mbtmp4.2/17, ML3.9/1, MS3.3/7, Ms1 3.3/7, ms1mx2.7/59, Error ellipse: s-maj=33.3km*

s-min=11.5km az=80.0

*NEIC **02** 14:48:53.3±0.3, 1°.60N×126°.86E, h35^{km}, mb4.7/1, Error ellipse: s-maj=17.3km s-min=5.5km az=80.0*

*ISCJB **02** 14:48:58.4±0.4, 1°.58N±0°.07×126°.9E±0°.2, h103^{km}, mb4.2/17, Error ellipse: s-maj=27.0km s-min=8.4km az=170.9*

ISC 02 14:49:00.5±0.6**, 1°.56N**±0°.09×**127°.0E**±0°.3**, h103**^{km}**, n27, σ1^{s}01**/22**, mb4.2**/17**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.94**	**119**	LR	LR	14 52 30.1	
	comp=Z,349nm,19.4s,baz=246,slow=43						
FITZ	**Fitzroy Crossi**	**19.57**	**184**	P	**P**	**14 53 18.6**	**-1.9**
	0.3nm,0.3s,baz=9.2,slow=9.8,SNR=7.2						
WRAB	**Tennant Creek**	**22.56**	**162**	*e*P	**P**	**14 53 51.4**	**-1.0**
	17nm,0.5s						
WRA	**Warramunga Arr**	**22.56**	**162**	P	**P**	**14 53 51.0**	**-1.4**
	22nm,0.5s,baz=338,slow=11,SNR=106						
PMG	**Port Moresby**	**22.89**	**119**	LR	LR	15 05 32.6	
	comp=Z,72nm,21.2s,baz=334,slow=44						
ASAR	**Alice Springs**	**25.97**	**165**	P	**P**	**14 54 23.6**	**-0.2**
	5.3nm,0.4s,baz=341,slow=7.5,SNR=117						
CMAR	**Chiang Mai Arr**	**32.20**	**303**	LR	LR	15 09 48.5	
	comp=Z,27nm,18.1s,baz=171,slow=39						
NWAO	**Narrogin (SRO)**	**35.51**	**194**	P	**P**	**14 55 47.4**	**-0.1**
	3.6nm,0.7s,baz=258,slow=13,SNR=4.1						
KSAR	**Wonju Array Be**	**35.72**	**1**	P	**P**	**14 55 48.7**	**-0.5**
KSRS	**Korea Array**	**35.73**	**1**	P	**P**	**14 55 48.7**	**-0.6**
	1.6nm,0.8s,baz=178,slow=9.4,SNR=10.0						
STKA	**Stephens Creek**	**36.04**	**159**	P	**P**	**14 55 51.6**	**-0.4**
	2.6nm,0.5s,baz=331,slow=9.0,SNR=18						
STKA				LR	LR	15 12 59.4	
	comp=Z,47nm,21.8s,baz=31,slow=40						
MJAR	**Matsushiro Arr**	**36.34**	**15**	P	**P**	**14 55 53.5**	**-1.1**
	1.3nm,0.6s,baz=195,slow=11,SNR=5.1						
USRK	**Ussuriysk Ar.**	**42.70**	**5**	P	**P**	**14 56 47.7**	**+0.5**
	2.6nm,0.6s,baz=134,slow=5.4						
DZM	**Mont Dzumac**	**45.13**	**124**	LR	LR	15 18 17.2	
	comp=Z,42nm,18.0s,baz=23,slow=39						
SONM	**Songino Array**	**49.41**	**342**	P	**P**	**14 57 40.0**	**-0.1**
	1.2nm,0.6s,baz=158,slow=8.5,SNR=5.7						
PETK	**Petropavlovsk-**	**57.35**	**21**	P	**P**	**14 58 37.9**	**+0.1**
	1.9nm,0.9s,baz=254,slow=2.2						
MKAR	**Makanchi Array**	**59.46**	**326**	P	**P**	**14 58 51.5**	**-1.1**
	1.2nm,0.4s,baz=127,slow=9.5,SNR=10.0						
ZALV	**Zalesovo Beam**	**62.61**	**333**	P	**P**	**14 59 13.1**	**-0.7**
	0.7nm,0.4s,baz=140,slow=5.4,SNR=3.9						
KURBB	**Kurchatov Arra**	**63.68**	**328**	P	**P**	**14 59 19.9**	**-1.0**
	1.8nm,0.6s,baz=128,slow=6.3,SNR=24						
KURK	**Kurchatov**	**63.68**	**328**	*e*P	**P**	**14 59 20.1**	**-0.8**
BVAR	**Borovoye Array**	**69.25**	**327**	P	**P**	**14 59 56.2**	**-0.2**
	0.8nm,0.5s,baz=131,slow=5.9,SNR=7.0						
AKTO	**Aktyubinsk**	**75.49**	**322**	P	**P**	**15 00 34.1**	**+0.6**
	2.9nm,0.6s,baz=121,slow=5.9,SNR=10						
VNDA	**Vanda**	**81.26**	**173**	P	**P**	**15 01 05.8**	**+1.1**
	1.0nm,0.5s,baz=316,slow=6.3,SNR=19						
VNDA				LR	LR	15 36 17.0	
	comp=Z,15nm,18.3s,baz=311,slow=35						
MAW	**Mawson**	**81.81**	**200**	P	**P**	**15 01 08.7**	**+1.0**
	1.7nm,0.6s,baz=84,slow=4.6,SNR=3.6						
HFS	**Hagfors**	**100.03**	**332**	LR	LR	15 53 19.5	
	comp=Z,19nm,18.2s,baz=136,slow=39						
TXAR	**Lajitas Array**	**122.73**	**53**	PKP	**PKPdf**	**15 07 47.3**	**+2.1**
	0.2nm,0.7s,baz=354,slow=7.3,SNR=2.6						
TORD	**Torodi Ar. Bea**	**123.78**	**287**	PKP	**PKPdf**	**15 07 48.0**	**+0.6**
	0.5nm,0.7s,baz=121,slow=2.5						

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*ISCJB **02** 15:15:07.0±1.5, 38°.47N±0°.07×43°.60E±0°.08, h1^{km}±9^{km}, Error ellipse: s-maj=12.7km s-min=10.6km az=151.1*

*DDA **02** 15:15:06.4, 38°.44N×43°.59E, h7^{km}, Ml2.9*

*CSEM **02** 15:15:08.1±0.4, 38°.50N×43°.47E, h2^{km}, ML2.9, Error ellipse: s-maj=11.6km s-min=6.4km az=113.0*

*ISK **02** 15:15:08.5, 38°.47N×43°.45E, h5^{km}, ML2.5/3*

ISC 02 15:15:08.1±1.9**, 38°.48N**±0°.05×**43°.52E**±0°.07**, h4**^{km}±10^{km}**, n16, σ0^{s}73**/22**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TVAN	**Van**	**0.10**	**299**	*i* P	**Pg**	**15 15 09.9**	**-0.4**
TVAN				*i* S	**Sg**	**15 15 12.6**	**+0.8**
TVAN	**Van**	**0.10**	**299**	P	**Pg**	**15 15 09.9**	**-0.4**
TVAN				S	**Sg**	**15 15 12.6**	**+0.8**
VANB	**Van**	**0.16**	**318**	PG	**Pg**	**15 15 09.8**	**-1.4**
VANB	**Van**	**0.16**	**318**	*i* Pg	**Pg**	**15 15 09.8**	**-1.4**
GEVA	**Gevas**	**0.40**	**246**	*i* P	**Pg**	**15 15 15.2**	**-0.7**
GEVA				*i* S	**Sb**	**15 15 25.4**	**+0.9**
GEVA	**Gevas**	**0.40**	**246**	P	**Pg**	**15 15 15.1**	**-0.7**
VMUR	**Van-Muradiye**	**0.51**	**4**	*i* P	**Pg**	**15 15 17.4**	**-0.5**
VMUR	**Van-Muradiye**	**0.51**	**4**	P	**Pg**	**15 15 17.4**	**-0.5**
ADCV	**BITLIS_Adilcev**	**0.71**	**298**	*i* P	**Pg**	**15 15 21.4**	**-0.3**
ADCV				*i* S	**Sb**	**15 15 33.1**	**-0.2**
ADCV	**BITLIS_Adilcev**	**0.71**	**298**	P	**Pg**	**15 15 21.4**	**-0.3**
AGRB	**Hanur-Agry**	**1.17**	**339**	PN	**Pn**	**15 15 32.2**	**+0.7**
AGRB	**Hanur-Agry**	**1.17**	**339**	*e*Pn	**Pn**	**15 15 32.2**	**+0.7**
GURO	**Guroymak-BITLI**	**1.17**	**274**	PN	**Pn**	**15 15 31.4**	**-0.1**
GURO				SN	**Sn**	**15 15 47.5**	**-0.5**
GURO	**Guroymak-BITLI**	**1.17**	**274**	*e*Pn	**Pn**	**15 15 31.4**	**-0.1**
GURO				*e*Sn	**Sn**	**15 15 47.5**	**-0.5**
SIRT	**Sirnak**	**1.30**	**222**	PN	**Pn**	**15 15 33.4**	**+0.3**
SIRT	**Sirnak**	**1.30**	**222**	*e*Pn	**Pn**	**15 15 33.4**	**+0.3**

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*ISCJB **02** 15:26:13.6±0.5, 23°.99N±0°.01×122°.32E±0°.01, h9^{km}±3^{km}, Error ellipse: s-maj=2.5km s-min=2.1km az=139.8*

*JMA **02** 15:26:13.4±0.2, 23°.93N×122°.33E, h8^{km}±4^{km}, M2.5*

*TAP **02** 15:26:15.5, 24°.08N×122°.21E, h14^{km}, ML2.4, C*

ISC 02 15:26:14.0±1.0**, 24°.02N**±0°.02×**122°.29E**±0°.02**, h15**^{km}±8^{km}**, n61, σ0^{s}91**/121**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.55**	**344**	*i* P	**Pg**	**15 26 25.2**	**+0.3**
	baz=351						
EOS1				S	**Sb**	**15 26 33.0**	**+0.1**
	baz=351						
ENAH	**Nanao**	**0.61**	**315**	*e*P	**Pb**	**15 26 26.1**	**-0.3**
	baz=328						
ENAH				*e*S	**Sb**	**15 26 35.2**	**+0.4**
	baz=328						
ENLB	**Shoufeng**	**0.64**	**260**	*e*P	**Pb**	**15 26 28.0**	**+1.2**
	baz=234						
ENLB				*e*S	**Sn**	**15 26 37.7**	**-0.7**
	baz=234						
NANB	**Nanao**	**0.64**	**310**	P	**Pb**	**15 26 26.6**	**-0.2**
	baz=322						
NANB				*e*S	**Sb**	**15 26 35.7**	**+0.1**
	baz=322						
ENA	**Nanau**	**0.65**	**309**	P	**Pb**	**15 26 26.7**	**-0.3**
	baz=322						
ENA				*e*S	**Sb**	**15 26 35.4**	**-0.4**
	baz=322						
NACB	**Ninganchiao**	**0.65**	**284**	*e*P	**Pb**	**15 26 27.4**	**+0.3**
	baz=279						
NACB				*e*S	**Sn**	**15 26 36.9**	**-1.9**
	baz=279						
TWC	**Suao**	**0.71**	**326**	P	**Pg**	**15 26 27.5**	**-0.4**
	baz=338						
TWC				*e*S	**Sb**	**15 26 36.8**	**-0.9**
	baz=338						
JYNG	**Yonagunijimaku**	**0.74**	**54**	P	**Pg**	**15 26 28.0**	**-0.4**
JYNG				*e*S	**Sg**	**15 26 39.0**	**+0.9**
YOJ	**Yonaguni jima**	**0.79**	**56**	*e*P	**Pg**	**15 26 29.1**	**-0.3**
	baz=55						
YOJ				*e*S	**Sg**	**15 26 40.1**	**+0.2**
	baz=55						
YOJ	**Yonaguni jima**	**0.79**	**56**	P	**Pg**	**15 26 29.1**	**-0.3**
YOJ				*e*S	**Sg**	**15 26 39.8**	**-0.1**
ESL	**Shilin**	**0.81**	**256**	*e*P	**Pg**	**15 26 30.3**	**+0.6**
	baz=234						
ESL				*e*S	**Sb**	**15 26 40.9**	**+0.4**
	baz=234						
EGFH	**Guangfu**	**0.86**	**246**	*e*P	**Pg**	**15 26 30.4**	**-0.3**
	baz=224						
EGFH				*e*S	**Sb**	**15 26 42.6**	**+0.6**
	baz=224						
EGS		**0.89**	**338**	*e*P	**Pb**	**15 26 31.5**	**+0.5**
	baz=342						
EGS				*e*S	**Sb**	**15 26 42.6**	**-0.1**
	baz=342						
TWE	**Neicheng**	**0.90**	**321**	*e*P	**Pg**	**15 26 31.2**	**-0.2**
	baz=331						
TWE				*e*S	**Sb**	**15 26 43.2**	**+0.1**
	baz=331						
ENTT	**Nioudou**	**0.91**	**313**	*e*P	**Pb**	**15 26 31.7**	**+0.3**
	baz=325						
ENTT				*e*S	**Sn**	**15 26 43.9**	**-1.1**
	baz=325						
NNSB	**Datong**	**0.92**	**296**	*e*P	**Pb**	**15 26 32.0**	**+0.3**
	baz=295						
NNSB				*e*S	**Sn**	**15 26 44.8**	**-0.7**
	baz=295						
NNSH	**Datong**	**0.92**	**296**	*e*P	**Pb**	**15 26 32.0**	**+0.2**
	baz=295						
NNSH				*e*S	**Sn**	**15 26 44.9**	**-0.7**
	baz=295						
NTC	**Toucheng**	**0.93**	**333**	*e*P	**Pb**	**15 26 32.4**	**+0.6**
	baz=345						
NTC				*e*S	**Sn**	**15 26 45.2**	**-0.4**
	baz=345						
NNS	**Nan Shan**	**0.94**	**297**	*e*P	**Pb**	**15 26 32.5**	**+0.5**
	baz=295						
NNS				*e*S	**Sn**	**15 26 44.7**	**-1.2**
	baz=295						
SLBB	**Yuanshan**	**0.95**	**321**	*e*P	**Pb**	**15 26 32.3**	**+0.2**
	baz=331						
SLBB				*e*S	**Sn**	**15 26 45.2**	**-0.8**
	baz=331						
HGSD	**Ruisui**	**0.95**	**237**	*e*P	**Pb**	**15 26 32.4**	**+0.3**
	baz=230						
HGSD				*e*S	**Sg**	**15 26 45.8**	**+0.9**
	baz=230						
CHGB	**Renai**	**1.02**	**273**	P	**Pb**	**15 26 33.2**	**-0.2**
	baz=268						
CHGB				*e*S	**Sn**	**15 26 47.8**	**-0.3**
	baz=268						
EHY	**Hungye**	**1.02**	**240**	*e*P	**Pb**	**15 26 33.1**	**-0.3**
	baz=221						
EHY				*e*S	**Sb**	**15 26 47.1**	**+0.5**
	baz=221						
TWB1	**Santiao Chiao**	**1.02**	**344**	*e*P	**Pn**	**15 26 34.1**	**+0.4**
	baz=348						
TWB1				*e*S	**Sg**	**15 26 46.9**	**-0.3**
	baz=348						
TIPB	**Shuangxi**	**1.04**	**336**	P	**Pb**	**15 26 33.9**	**+0.2**
	baz=339						
TIPB				*e*S	**Sg**	**15 26 46.7**	**-1.1**
	baz=339						
NWLT	**Wulai**	**1.04**	**317**	*e*P	**Pg**	**15 26 34.0**	**-0.2**
	baz=325						
NWLT				*e*S	**Sn**	**15 26 48.1**	**-0.3**
	baz=325						
YHNB	**Yeheng**	**1.06**	**308**	*e*P	**Pn**	**15 26 34.5**	**+0.2**
	baz=320						
YHNB				*e*S	**Sn**	**15 26 47.9**	**-0.9**
	baz=320						
NSK	**Sanguang**	**1.07**	**308**	*e*P	**Pn**	**15 26 35.1**	**+0.6**
	baz=320						
NSK				*e*S	**Sn**	**15 26 49.3**	**+0.1**
	baz=320						
VWDT	**VWDT**	**1.08**	**256**	*e*P	**Pb**	**15 26 34.2**	**-0.2**
	baz=234						
VWDT				*e*S	**Sb**	**15 26 48.4**	**+0.1**
	baz=234						
YULB	**Yu-li**	**1.10**	**236**	*e*P	**Pb**	**15 26 34.2**	**-0.5**
	baz=214						
YULB				*e*S	**Sb**	**15 26 48.1**	**-0.8**
	baz=214						
TWF1	**Yuli**	**1.13**	**234**	*e*P	**Pb**	**15 26 34.5**	**-0.6**
	baz=212						
TWF1				*e*S	**Sb**	**15 26 49.6**	**0.0**
	baz=212						
NWF	**Wu-fen Shan**	**1.15**	**336**	*e*P	**Pn**	**15 26 36.1**	**+0.6**
	baz=357						
NWF				*e*S	**Sg**	**15 26 50.2**	**-0.9**
	baz=357						
WFSB	**Wu-fen Shan**	**1.15**	**336**	*e*P	**Pg**	**15 26 36.0**	**-0.1**
	baz=356						
WFSB				*e*S	**Sn**	**15 26 50.4**	**-0.5**
	baz=356						
TATO	**Taipei**	**1.20**	**323**	*e*P	**Pg**	**15 26 37.5**	**+0.3**
	baz=325						
TATO				*e*S	**Sn**	**15 26 53.8**	**+1.5**
	baz=325						
FULB	**Fuli**	**1.22**	**228**	*e*P	**Pn**	**15 26 35.3**	**-1.3**
	baz=207						
FULB				*e*S	**Sb**	**15 26 52.0**	**-0.4**
	baz=207						
SSLB	**Suanglung**	**1.24**	**260**	*e*P	**Pn**	**15 26 36.9**	**+0.1**
	baz=255						
SSLB				*e*S	**Sn**	**15 26 53.7**	**+0.3**
	baz=255						
CHKT	**Chengkung**	**1.25**	**223**	*e*P	**Pn**	**15 26 35.4**	**-1.5**
	baz=202						
CHKT				*e*S	**Sb**	**15 26 50.6**	**-2.5**
	baz=202						
DPDB	**Guoxing**	**1.25**	**271**	*e*P	**Pn**	**15 26 37.3**	**+0.4**
	baz=267						
DPDB				*e*S	**Sg**	**15 26 54.0**	**-0.3**
	baz=267						
SMLT	**Sun Moon Lake**	**1.28**	**264**	*e*P	**Pn**	**15 26 37.9**	**+0.5**
	baz=259						
SMLT				*e*S	**Sb**	**15 26 54.1**	**0.0**
	baz=259						
YM07	**YM07**	**1.30**	**332**	*e*P	**Pg**	**15 26 38.9**	**-0.2**
	baz=350						
YM07				*e*S	**Sg**	**15 26 54.8**	**-1.4**
	baz=350						
TYC	**Yuchr**	**1.32**	**265**	*e*P	**Pn**	**15 26 38.5**	**+0.7**
	baz=261						
TYC				*e*S	**Sg**	**15 26 55.8**	**-0.7**
	baz=261						
LIOB	**Emei**	**1.32**	**299**	*e*P	**Pg**	**15 26 39.5**	**+0.1**
	baz=299						
LIOB				*e*S	**Sg**	**15 26 56.8**	**+0.2**
	baz=299						
YM04	**YM04**	**1.32**	**329**	*e*P	**Pg**	**15 26 39.3**	**-0.1**
	baz=346						
YM04				*e*S	**Sg**	**15 26 55.8**	**-1.0**
	baz=346						
IRIF	**Iriomote-Funau**	**1.35**	**76**	P	**Pn**	**15 26 38.3**	**0.0**
IRIF				S	**Sn**	**15 26 56.6**	**+0.7**
HATJ	**Hateruma jima**	**1.39**	**88**	P	**Pn**	**15 26 38.3**	**-0.4**
HATJ				*e*S	**Sn**	**15 26 56.9**	**+0.1**
ELDTW	**Lidau**	**1.43**	**235**	*e*P	**Pn**	**15 26 39.0**	**-0.4**
	baz=214						
ELDTW				*e*S	**Sn**	**15 26 55.9**	**-2.1**
	baz=214						
WJS	**Zhushan**	**1.44**	**263**	*e*P	**Pb**	**15 26 41.0**	**+0.5**
	baz=258						
WJS				*e*S	**Sg**	**15 27 01.5**	**+1.0**
	baz=258						
ALS	**Alishan**	**1.45**	**250**	*e*P	**Pn**	**15 26 40.1**	**+0.2**
	baz=245						
ALS				*e*S	**Sn**	**15 26 58.8**	**0.0**
	baz=245						
TWH	**Lutao**	**1.50**	**210**	*e*P	**Pn**	**15 26 39.0**	**-1.3**
	baz=205						
TWH				*e*S	**Sn**	**15 26 56.7**	**-2.9**
	baz=205						
JKRS	**Kuro-shima**	**1.59**	**82**	P	**Pn**	**15 26 42.7**	**+1.2**
JKRS				*e*S	**Sn**	**15 27 03.0**	**+1.3**
TPUB	**Ta-pu**	**1.68**	**245**	*e*P	**Pn**	**15 26 44.5**	**+1.7**
	baz=240						
TPUB				*e*S	**Sb**	**15 27 06.3**	**+0.7**
	baz=240						
JIJ	**Ishigaki jima**	**1.73**	**78**	P	**Pn**	**15 26 43.4**	**0.0**
JIJ				*e*S	**Sn**	**15 27 05.1**	**-0.1**
TWK	**Hsinying**	**1.81**	**246**	*e*P	**Pn**	**15 26 46.6**	**+1.9**
	baz=241						
TWK				*e*S	**Sb**	**15 27 09.5**	**+0.1**
	baz=241						
CHN1	**Nanshi**	**1.82**	**243**	*e*P	**Pn**	**15 26 46.5**	**+1.8**
	baz=238						
CHN1				*e*S	**Sb**	**15 27 10.0**	**+0.5**
	baz=238						
SLGT	**Liugui**	**1.82**	**236**	*e*P	**Pn**	**15 26 46.5**	**+1.7**
	baz=219						
SLGT				*e*S	**Sb**	**15 27 10.2**	**+0.6**
	baz=219						
ECL	**Taimali**	**1.87**	**221**	*e*P	**Pn**	**15 26 45.6**	**+0.1**
	baz=217						
ECL				*e*S	**Sn**	**15 27 06.3**	**-2.5**
	baz=217						
JISG	**Ishigakijimahi**	**1.93**	**72**	P	**Pn**	**15 26 45.5**	**-0.7**
SSD	**Sandimen**	**1.98**	**231**	*e*P	**Pn**	**15 26 48.8**	**+1.8**
	baz=217						
SSD				*e*S	**Sn**	**15 27 13.8**	**+2.4**
	baz=217						
MASBT	**Mashibuluo**	**2.07**	**228**	*e*P	**Pn**	**15 26 49.2**	**+1.1**
	baz=214						
MASBT				*e*S	**Sn**	**15 27 16.2**	**+2.5**
	baz=214						
LAY	**Lan-yu**	**2.08**	**199**	*e*P	**Pn**	**15 26 49.0**	**+0.6**
	baz=196						
LAY				*e*S	**Sn**	**15 27 14.3**	**+0.3**
	baz=196						
EAST	**Anshuo**	**2.10**	**219**	*e*P	**Pn**	**15 26 49.2**	**+0.6**
	baz=216						
EAST				*e*S	**Sn**	**15 27 14.0**	**-0.4**
	baz=216						

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*ISCJB **02** 15:39:22.7±0.6, 37°.12N±0°.04×37°.17E±0°.06, h0^{km}, Error ellipse: s-maj=6.6km s-min=5.9km az=163.1*

*CSEM **02** 15:39:22.9±0.2, 37°.12N×37°.17E, h1^{km}, ML2.3, Error ellipse: s-maj=4.4km s-min=4.0km az=131.0, Suspected Mining explosion.*

*DDA **02** 15:39:23.2, 37°.08N×37°.16E, h7^{km}, Ml2.7*

*ISK **02** 15:39:23.0, 37°.16N×37°.16E, h6^{km}, ML2.3/7, Suspected Mining explosion.*

ISC 02 15:39:22.7±1.0**, 37°.12N**±0°.03×**37°.23E**±0°.05**, h0**^{km}**, n25, σ0^{s}49**/27**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAZ	**Gaziantep**	**0.06**	**344**	PG	**Pg**	**15 39 24.7**	**+0.9**
GAZ	**Gaziantep**	**0.06**	**344**	*e*Pg	**Pg**	**15 39 24.7**	**+0.9**
KUZU	**Kuzuini**	**0.37**	**200**	*i* P	**Pg**	**15 39 29.6**	**-0.1**
KUZU	**Kuzuini**	**0.37**	**200**	P	**Pg**	**15 39 29.6**	**-0.1**
KMRS	**Kahramanmaras**	**0.47**	**326**	PG	**Pg**	**15 39 31.5**	**-0.1**
KMRS				SG	**Sg**	**15 39 37.6**	**-0.1**
KMRS	**Kahramanmaras**	**0.47**	**326**	*e*Pg	**Pg**	**15 39 31.5**	**-0.1**
KMRS				*e*Sg	**Sg**	**15 39 37.6**	**-0.1**
ANDN	**Andirin**	**0.84**	**303**	*i* P	**Pg**	**15 39 39.1**	**+0.3**
ANDN	**Andirin**	**0.84**	**303**	P	**Pg**	**15 39 39.1**	**+0.3**
ATAB	**Bozova**	**0.92**	**67**	*i* P	**Pb**	**15 39 42.0**	**+0.5**
ATAB	**Bozova**	**0.92**	**67**	P	**Pb**	**15 39 42.0**	**+0.5**
TAHT	**Tahtakopru-Hat**	**1.12**	**229**	PN	**Pg**	**15 39 44.5**	**+0.4**
TAHT	**Tahtakopru-Hat**	**1.12**	**229**	*e*Pn	**Pg**	**15 39 44.5**	**+0.4**
SURC	**SANLIURFA_SURC**	**1.13**	**102**	*i* P	**Pb**	**15 39 45.9**	**+0.7**
SURC	**SANLIURFA_SURC**	**1.13**	**102**	P	**Pb**	**15 39 45.9**	**+0.7**
AKCD	**Akcadag**	**1.30**	**25**	*i* P	**Pg**	**15 39 47.2**	**-0.4**
AKCD	**Akcadag**	**1.30**	**25**	P	**Pg**	**15 39 47.2**	**-0.4**
URFA	**Urfa**	**1.31**	**75**	PN	**Pb**	**15 39 48.7**	**+0.5**
URFA	**Urfa**	**1.31**	**75**	*e*Pn	**Pb**	**15 39 48.7**	**+0.5**
YAYL	**Yayladag**	**1.41**	**220**	PN	**Pg**	**15 39 49.9**	**+0.2**
YAYL	**Yayladag**	**1.41**	**220**	*e*Pn	**Pg**	**15 39 49.9**	**+0.2**
SARI	**SarD1z-Kayseri**	**1.44**	**334**	PN	**Pn**	**15 39 49.2**	**-1.0**
DARE	**Darende-Malaty**	**1.46**	**8**	PN	**Pn**	**15 39 50.1**	**-0.4**
DARE	**Darende-Malaty**	**1.46**	**8**	*e*Pn	**Pn**	**15 39 50.1**	**-0.4**
MALT	**Malatya**	**1.52**	**38**	PN	**Pb**	**15 39 52.0**	**+0.1**
MALT	**Malatya**	**1.52**	**38**	*e*Pn	**Pb**	**15 39 52.0**	**+0.1**

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*IDC **02** 16:03:43.0±7.9, 31°.71S×179°.68E, h465^{km}±102^{km}, mb2.5/2, mb1 3.0/3, mb1mx2.7/45, mbtmp3.8/3, Error ellipse: s-maj=110.3km s-min=48.3km az=6.0*

*WEL **02** 16:03:43.9±0.8, 32°S±9°×18°0W±2°4, h366^{km}±13^{km}*

ISC 02 16:03:37.7±1.1**, 31°.42S**±0°.09×**179°.6W**±0°.2**, h450**^{km}**, n31, σ2^{s}55**/41**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**2.60**	**35**	P	**P**	**16 04 41.8**	**-0.2**
GLKZ				S	**S**	**16 05 31.1**	**-3.0**
MXZ	**Matakaoa Point**	**6.37**	**195**	P	**P**	**16 05 19.4**	**+3.7**
WMGZ	**Waiomatatini S**	**6.59**	**194**	P	**P**	**16 05 21.3**	**+3.3**
WMGZ				S	**S**	**16 06 39.1**	**-1.0**
HAZ	**Te Kaha**	**6.68**	**198**	P	**P**	**16 05 22.1**	**+3.2**
HAZ				S	**S**	**16 06 39.3**	**-2.4**
WCZ	**Waipu Caves**	**6.75**	**226**	P	**P**	**16 05 21.7**	**+1.9**
PUZ	**Puketiti**	**6.87**	**194**	P	**P**	**16 05 22.9**	**+2.0**
PUZ				S	**S**	**16 06 42.7**	**-2.8**
RUGZ	**Raukumara Rang**	**6.90**	**198**	P	**P**	**16 05 23.1**	**+1.7**
TWGZ	**Tauwhareparae**	**7.03**	**196**	P	**P**	**16 05 25.4**	**+2.8**
TWGZ				S	**S**	**16 06 47.6**	**-1.0**
OPRZ	**Ohinepanea**	**7.14**	**205**	P	**P**	**16 05 28.5**	**+4.7**
CNGZ	**Carnagh Statio**	**7.27**	**194**	P	**P**	**16 05 28.5**	**+3.3**
MWZ	**Matawai**	**7.29**	**198**	P	**P**	**16 05 27.5**	**+2.1**
MWZ				S	**S**	**16 06 51.7**	**-2.0**
TKGZ	**Te Karaka**	**7.31**	**196**	P	**P**	**16 05 27.4**	**+1.9**
TKGZ				S	**S**	**16 06 51.6**	**-2.3**
URZ	**Urewera**	**7.34**	**201**	P	**P**	**16 05 27.4**	**+1.6**
	12nm,0.3s,baz=270,slow=5.2,SNR=84						
URZ				S	**S**	**16 06 50.8**	**-3.8**
	4.5nm,0.3s,baz=186,slow=24,SNR=14						
URZ	**Urewera**	**7.34**	**201**	P	**P**	**16 05 27.1**	**+1.2**
URZ				S	**S**	**16 06 52.5**	**-2.1**
RAGZ	**Rawiri**	**7.47**	**198**	P	**P**	**16 05 29.8**	**+2.4**
RIGZ	**Rimuhau**	**7.58**	**196**	P	**P**	**16 05 30.8**	**+2.2**
RRRZ	**Republican Roa**	**7.60**	**204**	P	**P**	**16 05 32.2**	**+3.4**
MUGZ	**Murupara**	**7.64**	**202**	P	**P**	**16 05 32.1**	**+2.9**
MUGZ				S	**S**	**16 06 57.7**	**-2.9**
SNGZ	**Shannon Statio**	**7.76**	**198**	P	**P**	**16 05 33.7**	**+3.3**
RAHZ	**Arahi**	**7.95**	**199**	P	**P**	**16 05 34.5**	**+2.0**
MTHZ	**Maungataniwha**	**7.96**	**200**	P	**P**	**16 05 35.5**	**+2.9**
NMHZ	**Naumai**	**8.20**	**200**	P	**P**	**16 05 37.4**	**+2.2**
BKZ	**Black Stump Fm**	**8.36**	**201**	P	**P**	**16 05 38.3**	**+1.3**
MCHZ	**McNeill Hill**	**8.55**	**200**	P	**P**	**16 05 41.1**	**+2.1**
KWHZ	**Kaweka Forest**	**8.62**	**201**	P	**P**	**16 05 41.7**	**+2.0**
KAHZ	**Kahuranaki**	**8.83**	**198**	P	**P**	**16 05 44.4**	**+2.3**
KRHZ	**Kereru**	**8.83**	**201**	P	**P**	**16 05 43.8**	**+1.8**
PXZ	**Pawanui**	**9.06**	**197**	P	**P**	**16 05 47.1**	**+2.7**
ASAR	**Alice Springs**	**41.68**	**269**	P	**P**	**16 10 45.2**	**-0.5**
	0.4nm,1.0s,baz=102,slow=7.8,SNR=4.2						
WRA	**Warramunga Arr**	**42.76**	**274**	P	**P**	**16 10 53.7**	**-0.6**
	0.3nm,0.4s,baz=111,slow=8.1,SNR=5.1						
FINES	**FINESS Array B**	**145.59**	**338**	PKPbc	**PKPab**	**16 22 27.1**	**+1.7**
	1.5nm,0.7s,baz=56,slow=3.4,SNR=3.8						

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*NEIC **02** 16:06:04.5±0.0, 16°.54N×98°.59W, h8^{km}, MD4.0(MEX), After MEX.*

MEX 02 16:06:04.5±0.5**, 16°.54N×98°.59W, h8**^{km}±5^{km}**, MD4.0, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLIG	**Tlapa**	**1.01**	**1**	*i* P	Pg	16 06 21.0	-3.0
TLIG				*i* S	Sg	16 06 34.1	-3.1
TLIG	**Tlapa**	**1.01**	**1**	*i* P	Pg	16 06 21.0	-3.0
TLIG				*i* S	Sg	16 06 34.1	-3.1
HMTT	**Tlapaneco**	**1.25**	**1**	*i* P	Pn	16 06 25.2	-3.2
HMTT				*i* S	Sg	16 06 39.6	-5.1
ACX	**Acapulco**	**1.26**	**285**	*e*P	Pn	16 06 23.4	-5.1
ACX				*i* S	Sb	16 06 39.8	-5.2
ACX	**Acapulco**	**1.26**	**285**	*e*P	Pn	16 06 23.4	-5.1
ACX				*i* S	Sb	16 06 39.8	-5.2
ACP2	**Acapulco**	**1.29**	**285**	*e*P	Pn	16 06 25.0	-3.8
ACP2				*e*S	Sb	16 06 40.9	-4.8
CAIG	**El Cayaco**	**1.69**	**288**	*e*P	Pn	16 06 30.5	-3.8
CAIG				*i* S	Sn	16 06 51.7	-4.5
CAIG	**El Cayaco**	**1.69**	**288**	*e*P	Pn	16 06 30.5	-3.8
CAIG				*i* S	Sn	16 06 51.7	-4.5
MEIG	**Mezcala**	**1.69**	**324**	*e*P	Pn	16 06 31.1	-3.4
MEIG				*e*S	Sn	16 06 51.8	-4.7
MEIG	**Mezcala**	**1.69**	**324**	*e*P	Pn	16 06 31.1	-3.4
MEIG				*e*S	Sn	16 06 51.8	-4.7
VHO	**Vista Hermosa**	**1.85**	**73**	*e*P	Pn	16 06 33.4	-3.4
VHO				*e*S	Sn	16 06 56.1	-4.5
VHO	**Vista Hermosa**	**1.85**	**73**	*e*P	Pn	16 06 33.4	-3.4
VHO				*e*S	Sn	16 06 56.1	-4.5
TPIG	**Tehuac#an**	**2.20**	**32**	*i* P	Pn	16 06 39.1	-2.6
TPIG				*i* S	Sn	16 07 04.8	-4.4
TPIG	**Tehuac#an**	**2.20**	**32**	*i* P	Pn	16 06 39.1	-2.6
TPIG				*i* S	Sn	16 07 04.8	-4.4
YAIG	**Yautepec**	**2.35**	**349**	*e*P	Pn	16 06 40.1	-3.5
YAIG				*i* S	Sn	16 07 08.4	-4.4
YAIG	**Yautepec**	**2.35**	**349**	*e*P	Pn	16 06 40.1	-3.5
YAIG				*i* S	Sn	16 07 08.4	-4.4
ARIG	**Puente Sto Nin**	**2.41**	**316**	*e*P	Pn	16 06 41.5	-2.9
ARIG				*e*S	Sn	16 07 10.5	-3.6
ARIG	**Puente Sto Nin**	**2.41**	**316**	*e*P	Pn	16 06 41.5	-2.9
ARIG				*e*S	Sn	16 07 10.5	-3.6
HUIG	**Huatulco**	**2.50**	**108**	*i* P	Pn	16 06 41.8	-3.9
HUIG				*i* S	Sn	16 07 12.2	-4.2
HUIG	**Huatulco**	**2.50**	**108**	*i* P	Pn	16 06 41.8	-3.9
HUIG				*i* S	Sn	16 07 12.2	-4.2

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*ISCJB **02** 16:25:04.1±0.6, 32°.19N±0°.03×115°.31W±0°.05, h2^{km}±10^{km},*

Error ellipse: s-maj=7.6km s-min=4.4km az=152.5
*ECX **02** 16:25:05.7±0.6, 32°.20N×115°.25W, h6^{km}, MD2.4, ML2.6*
*MEX **02** 16:25:06.8±0.4, 32°.29N×115°.15W, h16^{km}±51^{km}, MD3.7*
ISC 02 16:25:04.3±0.9**, 32°.20N**±0°.04×**115°.29W**±0°.05**, h12**^{km}±11^{km}**, n18, σ0^{s}55**/26**, 2C-4D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPBX	Cerro Prieto	0.22	357	*e*P	Pg	16 25 08.6	-0.3
CPBX				*e*S	Sg	16 25 11.8	-0.3
CPBX				*e*		16 25 14.4	
CPBX				IAML		16 25 14.4	
	comp=E,3µm,0.1s						
MBIG	Mexicali	0.22	20	*e*P	Pg	16 25 09.7	+0.7
MBIG	Mexicali	0.22	20	*e*P	Pg	16 25 09.6	+0.6
MBIG				*e*S	Sg	16 25 11.9	-0.3
WESC	Westside Schoo	0.67	326	⇓*i*P	Pg	16 25 18.3	+0.9
COA	Coachella	0.68	12	*e*P	Pg	16 25 17.6	+0.2
YUH	Yuha Desert	0.70	310	⇓*i*P	Pg	16 25 18.3	+0.4
YMD	Yuma Desert	0.72	60	⇓*i*P	Pg	16 25 18.1	-0.2
ECBX	El Chinero	0.75	164	*e*P	Pg	16 25 18.9	0.0
ECBX				*e*S	Sg	16 25 29.2	+0.4
RMX	La Rumorosa	0.78	301	*e*P	Pg	16 25 18.8	-0.6
RMX				*e*S	Sg	16 25 29.0	-0.7
RMX				IAML		16 25 29.7	
	comp=N,190nm,0.2s						
RMX				⇑*e*		16 25 29.7	
IKP	In-Ko-Pah, Jac	0.83	303	*e*P	Pg	16 25 20.7	+0.4
ZAX	El Zacaton	1.08	231	*e*S	Sb	16 25 40.0	+0.9
ZAX				⇓*e*		16 25 41.6	
ZAX				IAML		16 25 41.6	
	comp=N,136nm,0.3s						
SPIG	San Pedro Mart	1.16	188	*e*P	Pb	16 25 26.4	-0.1
SPIG	San Pedro Mart	1.16	188	*e*P	Pb	16 25 26.2	-0.2
SPIG				*e*S	Sb	16 25 41.3	-0.3
SPX	San Pedro Mart	1.16	187	*e*P	Pb	16 25 26.3	-0.2
SPX				⇑*e*		16 25 44.1	
SPX				IAML		16 25 44.1	
	comp=E,90nm,0.5s						
CBX	Cerro Bola	1.17	276	*e*P	Pn	16 25 26.8	+0.2
CBX				*e*S	Sb	16 25 42.9	+1.1
CBX				*e*		16 25 44.3	
CBX				IAML		16 25 44.3	
	comp=E,136nm,0.5s						
CBX	Cerro Bola	1.17	276	*e*P	Pn	16 25 26.6	0.0
CBX				*e*S	Sb	16 25 41.2	-0.5
TJIG	Tijuana	1.20	282	*e*P	Pn	16 25 26.6	-0.3
TJIG				*e*S	Sb	16 25 41.6	-0.7
BAR	Barrett	1.26	293	*e*P	Pn	16 25 28.1	+0.3

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*ISCJB **02** 16:36:26.9±0.3, 63°.11N±0°.02×150°.75W±0°.06, h129^{km}±3^{km}, mb3.4/5, Error ellipse: s-maj=4.4km s-min=3.8km az=5.9*
*NEIC **02** 16:36:28.3±0.0, 63°.11N×150°.80W, h119^{km}, ML3.2(AEIC), After AEIC.*
*IDC **02** 16:36:28.7±4.1, 63°.16N×150°.43W, h132^{km}±36^{km}, mb3.3/5, mb1 3.3/7, mb1mx3.0/70, mbtmp3.6/7, MS1.9/1, Ms1 2.0/1, ms1mx1.9/29, Error ellipse: s-maj=46.4km s-min=33.7km az=34.0*
ISC 02 16:36:28.0±0.8**, 63°.11N**±0°.03×**150°.76W**±0°.04**, h122**^{km}±6^{km}**, n75, σ0^{s}55**/87**, mb3.6**/5**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRF	Thorofare Moun	0.41	31	P	Pn	16 36 46.0	+0.2
TRF				S	Sn	16 36 59.4	0.0
KTH	Kantishna Hill	0.46	351	P	Pn	16 36 46.0	0.0
KTH				S	Sn	16 36 59.2	-0.4
HUR	Hurricane	0.53	104	P	Pn	16 36 46.4	+0.1
CAST	Castle Rocks	0.68	298	P	Pn	16 36 47.2	-0.1
CAST				S	Sn	16 37 01.0	-1.0
PPLA	Purkeypile	0.68	253	P	Pn	16 36 47.8	+0.2
PPLA				S	Sn	16 37 02.3	0.0
TRAP	Trapper Creek	0.81	163	P	Pn	16 36 48.6	+0.3
TRAP				S	Sn	16 37 04.9	+1.1
BPAW	Bear Paw Mtn.	1.00	354	P	Pn	16 36 50.1	-0.1
BPAW				S	Sn	16 37 06.6	-0.5
MCK	McKinley	1.03	52	P	Pn	16 36 50.9	+0.4
MCK				S	Sn	16 37 07.5	-0.1
SKT	Skwentna	1.19	198	P	Pn	16 36 51.6	-0.4
SKT				S	Sn	16 37 10.0	-0.3
BWN	Browne	1.22	28	P	Pn	16 36 53.4	+1.0
DHY	Denali Highway	1.54	90	P	Pn	16 36 56.5	+0.4
DHY				S	Sn	16 37 17.9	+0.4
GHO	Glory Hole Cre	1.59	147	P	Pn	16 36 56.9	+0.2
SUA	Susitna One	1.65	180	P	Pn	16 36 57.5	+0.1
NEA	Nenana	1.66	26	P	Pn	16 36 57.4	+0.1
NEA				S	Sn	16 37 19.1	-0.5
PMR	Palmer	1.70	153	P	Pn	16 36 57.7	-0.1
SML	Sawmill	1.72	138	P	Pn	16 36 57.9	-0.2
SML				S	Sn	16 37 21.6	+0.4
WRH	Wood River Hil	1.81	40	P	Pn	16 36 59.4	+0.2
SPCG	Spurr Capps Gl	1.91	199	P	Pn	16 37 00.4	-0.1
MLY	Manley	1.93	0	P	Pn	16 37 00.7	0.0
SPCP	Crater Peak Br	1.96	200	P	Pn	16 37 01.2	+0.1
FIB	Fire Island	1.97	172	P	Pn	16 37 02.0	+1.0
KNK	Knik Glacier	2.01	147	P	Pn	16 37 01.8	+0.1
CCB	Clear Creek Bu	2.03	39	P	Pn	16 37 01.7	0.0
SCM	Sheep Creek Mo	2.04	127	P	Pn	16 37 01.6	-0.5
RC01	Rabbit Creek A	2.08	166	P	Pn	16 37 02.6	+0.1
MDM	Murphy Dome	2.17	30	P	Pn	16 37 03.7	+0.1
COLA	College	2.19	35	P	Pn	16 37 04.2	+0.4
ILAR	Eielson Array	2.39	44	P	Pn	16 37 06.7	+0.3
	4.0nm,0.3s,baz=226,slow=12,SNR=80						
ILAR				S	Sn	16 37 34.6	-1.3
	4.7nm,0.3s,baz=225,slow=25,SNR=12						
ILAR				LR	LR	16 38 01.3	
	comp=Z,25nm,18.3s,baz=245,slow=41						
ILB	Eielson Array	2.39	44	P	Pn	16 37 06.7	+0.3
GLM	Gilmore Dome	2.40	37	P	Pn	16 37 07.1	+0.5
TT01	Tatalina	2.41	268	P	Pn	16 37 06.2	-0.4
PAX	Paxson	2.42	91	P	Pn	16 37 07.3	+0.5
HARP	HAARP	2.67	103	P	Pn	16 37 10.7	+0.6
RDJH	Redoubt Jeurge	2.70	202	P	Pn	16 37 11.0	+0.5
KLU	Klutina	2.78	123	P	Pn	16 37 10.8	-0.7
RDWB	Redoubt West	2.81	202	P	Pn	16 37 12.4	+0.5
SVW2	Sparrevohn	3.03	231	P	Pn	16 37 14.6	-0.1
DOT	Dot Lake	3.06	77	P	Pn	16 37 15.3	+0.2
DIV	Divide	3.07	128	P	Pn	16 37 14.2	-1.1
IM3	Indian Mountai	3.17	337	P	Pn	16 37 16.4	+0.1
PRP	Porcupine Dome	3.33	41	P	Pn	16 37 19.5	+0.8
BRLK	Bradley Lake	3.35	181	P	Pn	16 37 18.9	-0.1
CNPM	China Poot	3.60	184	P	Pn	16 37 22.2	0.0
BMRM	Bremner River	3.61	124	P	Pn	16 37 21.4	-0.9
VRDI	Verde Repeater	3.91	116	P	Pn	16 37 25.9	-0.6
RAGM	Ragged Mountai	3.98	131	P	Pn	16 37 27.5	+0.3
MCARA	McCarthy VSAT	4.01	112	P	Pn	16 37 27.9	+0.3
BCA3	Beaver Creek A	4.08	87	P	Pn	16 37 28.2	-0.3
COLD	Coldfoot	4.15	3	P	Pn	16 37 30.0	+0.6
NICHA	Nichawak Mount	4.33	129	P	Pn	16 37 31.7	-0.2
PTPK	Patty Peak	4.34	113	P	Pn	16 37 32.2	0.0
KHIT	Khitrov Hills	4.46	123	P	Pn	16 37 33.8	+0.2
BALM	Baldy	4.47	114	P	Pn	16 37 33.2	-0.7
KIAG	Kiagna River	4.52	115	P	Pn	16 37 33.6	-1.0
EGAK	Eagle	4.55	64	P	Pn	16 37 35.4	+0.5
ISLE	Juniper Island	4.71	118	P	Pn	16 37 36.0	-1.1
BARN	Barnard Glacie	4.74	112	P	Pn	16 37 38.0	+0.3
BARK	Barkley Ridge	4.77	121	P	Pn	16 37 37.5	-0.4
KULT	Kultieth River	4.78	123	P	Pn	16 37 37.7	-0.3
KAPH	Katmai Pasha	4.85	203	P	Pn	16 37 39.3	+0.3
GRNC	Granite Creek	4.88	115	P	Pn	16 37 38.6	-0.8
BAGL	Bagley Icefiel	4.88	119	P	Pn	16 37 38.5	-0.7
CTGM	Chitina Glacie	4.93	112	P	Pn	16 37 40.5	+0.5
BM3	Burnt Mountain	5.04	28	P	Pn	16 37 41.6	+0.2
KDAK	Kodiak Island	5.42	190	P	Pn	16 37 45.2	-1.3
CAHL	Cahill	5.54	206	P	Pn	16 37 48.8	+0.6
PNL	Peninsula	6.45	117	P	Pn	16 38 00.4	0.0
YKA	Yellowknife Ar	16.41	76	P	Pn	16 40 09.6	-1.1
	0.1nm,0.3s,baz=282,slow=10,SNR=3.3						
KSRS	Korea Array	53.56	282	P	P	16 45 36.8	+0.9
	0.2nm,0.5s,baz=27,slow=7.3,SNR=4.6						
KSAR	Wonju Array Be	53.59	282	P	P	16 45 36.8	+0.7
ZALV	Zalesovo Beam	55.50	324	P	P	16 45 49.7	+0.1
	0.5nm,0.4s,baz=23,slow=7.8,SNR=2.5						
BVAR	Borovoye Array	59.81	333	P	P	16 46 20.3	+0.5
	0.3nm,0.4s,baz=17,slow=10,SNR=3.2						
KURK	Kurchatov	60.05	326	P	P	16 46 21.9	+0.4
KURBB	Kurchatov Arra	60.16	326	P	P	16 46 21.8	-0.3
	0.3nm,0.5s,baz=27,slow=6.9,SNR=3.2						
MKAR	Makanchi Array	62.66	322	P	P	16 46 38.3	-0.8
	0.4nm,0.5s,baz=38,slow=6.8,SNR=6.9						

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*IDC **02** 16:43:34.1±6.1, 29°.92S×179°.23W, h326^{km}±54^{km}, mb3.2/3, mb1 3.4/4, mb1mx3.1/42, mbtmp4.0/4, Error ellipse: s-maj=55.2km s-min=27.7km az=21.0*
ISC 02 16:43:33.5±1.2**, 30°.2S**±0°.1×**179°.4W**±0°.2**, h300**^{km}**, n13, σ1^{s}96**/13**, mb3.5**/3**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	8.55	199	P	P	16 45 38.3	-0.6
	1.0nm,0.3s,baz=280,slow=5.3,SNR=8.8						
URZ				S	S	16 47 12.4	+1.0
	1.3nm,0.3s,baz=270,slow=17,SNR=11						
STKA	Stephens Creek	33.33	257	P	P	16 49 44.8	+0.9
	1.0nm,0.7s,baz=90,slow=11,SNR=4.3						
ASAR	Alice Springs	41.90	267	P	P	16 50 54.8	-0.6
	0.6nm,0.6s,baz=104,slow=7.3,SNR=11						
WRA	Warramunga Arr	42.86	273	P	P	16 51 02.1	-1.0
	2.1nm,0.6s,baz=111,slow=7.7,SNR=30						
KURBB	Kurchatov Arra	120.05	314	PKP	PKPdf	17 01 45.5	-2.6
	0.3nm,0.5s,baz=131,slow=2.0,SNR=4.6						
BVAR	Borovoye Array	125.40	316	PKP	PKPdf	17 01 56.2	-2.2
	0.2nm,0.3s,baz=129,slow=2.0,SNR=3.3						
FINES	FINESS Array B	144.51	339	PKP	PKPbc	17 02 30.3	-2.6
	3.2nm,0.4s,baz=51,slow=4.4,SNR=35						
NB2	NORSAR Subarra	148.34	350	PKP	PKPdf	17 02 41.1	+1.1
	comp=Z,1.3nm,0.8s,baz=17,slow=2.6						
HFS	Hagfors	148.78	347	PKPbc	PKPdf	17 02 41.1	+0.5
	comp=Z,2.1nm,0.8s,baz=40,slow=2.5,SNR=6.9						
MMAI	Mount Meron Ar	150.29	285	PKPbc	PKPbc	17 02 48.7	-0.9
	comp=Z,1.0nm,0.5s,baz=86,slow=4.8,SNR=3.1						
AKASG	Malin Array Be	150.38	322	PKPbc	PKPdf	17 02 46.0	+2.5
	comp=Z,1.1nm,0.5s,baz=50,slow=2.6,SNR=6.4						
BRTR	Keskin Array B	151.42	298	PKPbc	PKPdf	17 02 49.0	+3.3
	comp=Z,0.4nm,0.5s,baz=134,slow=4.2,SNR=2.6						
TORD	Torodi Ar. Bea	163.02	184	PKPab	PKPab	17 03 49.9	-1.9
	baz=159,slow=4.5						

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*ISCJB **02** 16:56:11.4±0.3, 24°.28N±0°.03×122°.96E±0°.02, h44^{km}±7^{km}, Error ellipse: s-maj=4.6km s-min=2.4km az=176.4*
*JMA **02** 16:56:11.7±0.1, 24°.35N×122°.98E, h49^{km}±1^{km}, M3.2*
*TAP **02** 16:56:12.8, 24°.29N×122°.83E, h33^{km}±1^{km}, ML3.4, C*
ISC 02 16:56:11.5±1.2**, 24°.24N**±0°.04×**122°.97E**±0°.02**, h43**^{km}±8^{km}**, n78, σ1^{s}63**/145**, 1C-1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	Yonagunijimaku	0.21	354	P	Pn	16 56 19.3	+0.1
JYNG				S	Sn	16 56 24.6	0.0
YOJ	Yonaguni jima	0.23	10	⇑*e*P	Pn	16 56 19.5	+0.2
	baz=41						
YOJ				*e*S	Sn	16 56 24.5	-0.3
	baz=41						
YOJ	Yonaguni jima	0.23	10	P	Pn	16 56 19.5	+0.2
YOJ				S	Sn	16 56 24.8	0.0
IRIF	Iriomote-Funau	0.70	82	P	Pn	16 56 25.1	+0.1
IRIF				S	Sn	16 56 35.0	+0.2
HATJ	Hateruma jima	0.79	103	P	Pn	16 56 26.8	+0.6
EOS1	EOS1	0.83	292	*e*P	Pn	16 56 26.5	-0.2
	baz=296						
EOS1				*e*S	Sn	16 56 36.4	-1.3
	baz=296						
JKRS	Kuro-shima	0.95	90	P	Pn	16 56 29.0	+0.6
JKRS				S	Sn	16 56 42.0	+1.2
JIJ	Ishigaki jima	1.08	83	P	Pn	16 56 30.1	-0.1
JIJ				S	Sn	16 56 43.7	-0.3
TWC	Suao	1.08	290	P	Pn	16 56 29.6	-0.7
	baz=302						
TWC				*e*S	Sn	16 56 42.2	-1.9
	baz=302						
EGS		1.12	303	*e*P	Pn	16 56 30.6	-0.2
	baz=304						
NANB	Nanao	1.13	280	*e*P	Pn	16 56 30.8	0.0
	baz=289						
NANB				*e*S	Sn	16 56 43.4	-1.7
	baz=289						
ENA	Nanau	1.14	280	*e*P	Pn	16 56 31.1	+0.2
	baz=289						
ENA				*e*S	Sn	16 56 43.9	-1.4
	baz=289						
TWB1	Santiao Chiao	1.18	311	*e*P	Pn	16 56 30.9	-0.6
	baz=325						
TWB1				*e*S	Sn	16 56 42.3	-4.1
	baz=325						
NACB	Ninganchiao	1.26	267	*e*P	Pn	16 56 33.0	+0.4
	baz=250						
NACB				*e*S	Sn	16 56 47.5	-0.8
	baz=250						
TWD	Chiawan	1.26	263	*e*P	Pn	16 56 33.0	+0.3
	baz=245						
TWD				*e*S	Sn	16 56 48.5	0.0
	baz=245						
TIPB	Shuangxi	1.27	305	⇓*e*P	Pn	16 56 32.4	-0.4
	baz=307						
TIPB				*e*S	Sn	16 56 45.6	-3.2
	baz=307						
JISG	Ishigakijimahi	1.27	74	P	Pn	16 56 32.6	-0.2
JISG				S	Sn	16 56 47.7	-1.0
TWE	Neicheng	1.28	292	*e*P	Pn	16 56 33.0	+0.1
	baz=304						
TWE				*e*S	Sn	16 56 47.0	-1.9
	baz=304						
ENLB	Shoufeng	1.29	255	*e*P	Pn	16 56 34.0	+0.9
	baz=239						
ENLB				*e*S	Sn	16 56 49.6	+0.4
	baz=239						
SLBB	Yuanshan	1.32	293	P	Pn	16 56 33.8	+0.2
	baz=304						
SLBB				*e*S	Sn	16 56 49.5	-0.4
	baz=304						
ENTT	Nioudou	1.34	288	*e*P	Pn	16 56 34.3	+0.5
	baz=297						
ENTT				*e*S	Sn	16 56 49.1	-1.3
	baz=297						
NWF	Wu-fen Shan	1.36	308	*e*P	Pn	16 56 33.8	-0.4
	baz=309						
NWF				*e*S	Sn	16 56 49.0	-2.1
	baz=309						
WFSB	Wu-fen Shan	1.36	308	*e*P	Pn	16 56 33.9	-0.2
	baz=309						
WFSB				*e*S	Sn	16 56 48.6	-2.3
	baz=309						
NNSB	Datong	1.46	278	*e*P	Pn	16 56 36.4	+0.9
	baz=264						
NNSB				*e*S	Sn	16 56 53.6	+0.1
	baz=264						
ESL	Shilin	1.47	254	P	Pn	16 56 35.4	-0.1
	baz=239						
ESL				*e*S	Sn	16 56 52.3	-1.2
	baz=239						
NNS	Nan Shan	1.47	278	*e*P	Pn	16 56 36.6	+1.0
	baz=264						
NNS				*e*S	Sn	16 56 53.9	+0.2
	baz=264						
YHNB	Yeheng	1.51	287	P	Pn	16 56 36.7	+0.5
	baz=297						
YHNB				*e*S	Sn	16 56 54.7	-0.1
	baz=297						
EGFH	Guangfu	1.52	248	*e*P	Pn	16 56 36.4	+0.1
	baz=245						
EGFH				*e*S	Sn	16 56 51.9	-2.9
	baz=245						
NSK	Sanguang	1.53	287	*e*P	Pn	16 56 38.2	+1.8
	baz=297						
NSK				*e*S	Sn	16 56 55.4	+0.2
	baz=297						
TATO	Taipei	1.54	299	*e*P	Pn	16 56 36.3	-0.1
	baz=299						
YM07	YM07	1.54	308	*e*P	Pn	16 56 36.2	-0.4
	baz=308						
YM04	YM04	1.59	305	*e*P	Pn	16 56 36.8	-0.4
	baz=306						
HGSD	Ruisui	1.60	243	*e*P	Pn	16 56 37.2	-0.1
	baz=239						
HGSD				*e*S	Sn	16 56 53.2	-3.5
	baz=239						
JTJ	Tarama	1.63	75	P	Pn	16 56 38.1	+0.4
JTJ				S	Sn	16 56 57.4	-0.1
TWT	Tachien	1.64	271	*e*P	Pn	16 56 39.9	+2.0
	baz=257						
CHGB	Renai	1.65	264	*e*P	Pn	16 56 39.0	+0.8
	baz=249						
CHGB				*e*S	Sn	16 56 58.0	-0.3
	baz=249						
TDCB	Techi	1.65	271	*e*P	Pn	16 56 39.8	+1.6
	baz=270						
TDCB				*e*S	Sn	16 56 58.2	-0.1
	baz=270						
TWS1	Kuangyinshan	1.65	302	*e*P	Pn	16 56 39.2	+1.1
	baz=303						
TWS1				*e*S	Sn	16 56 56.9	-1.1
	baz=303						
EHY	Hungye	1.67	245	P	Pn	16 56 38.5	+0.2
	baz=241						
EHY				*e*S	Sn	16 56 57.0	-1.7
	baz=241						
VWDT	VWDT	1.74	254	*e*P	Pn	16 56 40.1	+0.9
	baz=252						
VWDT				*e*S	Sn	16 57 00.7	+0.5
	baz=252						
YULB	Yu-li	1.75	242	*e*P	Pn	16 56 39.7	+0.4
	baz=227						
YULB				*e*S	Sn	16 56 59.7	-0.7
	baz=227						
TWF1	Yuli	1.77	240	P	Pn	16 56 40.0	+0.4
	baz=237						
TWF1				*e*S	Sn	16 56 58.3	-2.6
	baz=237						
LIOB	Emei	1.83	283	*e*P	Pn	16 56 42.5	+2.0
	baz=282						
NSTT	Nanjuang	1.83	283	*e*P	Pn	16 56 42.6	+2.0
	baz=283						
NSTT				*e*S	Sn	16 57 03.1	+0.5
	baz=283						
FULB	Fuli	1.85	236	*e*P	Pn	16 56 40.6	-0.2
	baz=223						
FULB				*e*S	Sn	16 57 02.0	-1.0
	baz=223						
CHKT	Chengkung	1.85	233	P	Pn	16 56 40.5	-0.3
	baz=219						
CHKT				*e*S	Sn	16 57 00.0	-3.0
	baz=219						
DPDB	Guoxing	1.88	264	*e*P	Pn	16 56 42.6	+1.4
	baz=252						
DPDB				*e*S	Sn	16 57 03.6	0.0
	baz=252						
SSLB	Suanglung	1.90	257	*e*P	Pn	16 56 42.4	+1.0
	baz=255						
SSLB				*e*S	Sn	16 57 01.0	-3.1
	baz=255						
SMLT	Sun Moon Lake	1.92	260	P	Pn	16 56 43.1	+1.2
	baz=258						
SMLT				*e*S	Sn	16 57 05.4	+0.5
	baz=258						
TYC	Yuchr	1.96	261	*e*P	Pn	16 56 43.5	+1.3
	baz=247						
TYC				*e*S	Sn	16 57 05.6	0.0
	baz=247						
TWH	Lutao	2.04	222	*e*P	Pn	16 56 43.4	0.0
	baz=218						
TWH				*e*S	Sn	16 57 04.6	-3.1
	baz=218						
ELDTW	Lidau	2.07	240	*e*P	Pn	16 56 44.1	+0.2
	baz=237						
ELDTW				*e*S	Sn	16 57 03.9	-4.6
	baz=237						
WJS	Zhushan	2.09	259	*e*P	Pn	16 56 46.7	+2.7
	baz=258						
WJS				*e*S	Sn	16 57 11.7	+2.9
	baz=258						
JIRB	Irabujima	2.09	73	P	Pn	16 56 44.4	+0.3
JIRB				S	Sn	16 57 08.8	-0.1
ALS	Alishan	2.11	250	*e*P	Pn	16 56 46.2	+1.6
	baz=248						
ALS				*e*S	Sn	16 57 08.8	-0.9
	baz=248						
WNT	Mingjian	2.12	261	*e*P	Pn	16 56 47.0	+2.6
	baz=260						
WNT				*e*S	Sn	16 57 11.7	+2.2
	baz=260						
CHN5	Tsauling	2.19	254	P	Pn	16 56 47.5	+2.0
	baz=241						
CHN5				*e*S	Sn	16 57 12.9	+1.5
	baz=241						
TTN	Taitung	2.23	229	*e*P	Pn	16 56 46.6	+0.7
	baz=216						
TTN				*e*S	Sn	16 57 12.3	0.0
	baz=216						
TWGBT	Beinan	2.24	231	*e*P	Pn	16 56 46.5	+0.4
	baz=241						
TWGBT				*e*S	Sn	16 57 09.2	-3.3
	baz=241						
TWG	Pinlang	2.24	231	*e*P	Pn	16 56 46.5	+0.3
	baz=241						
TWG				*e*S	Sn	16 57 10.9	-1.6
	baz=241						
WGK	Gukeng	2.27	257	*e*P	Pn	16 56 49.2	+2.7
	baz=255						
WGK				*e*S	Sn	16 57 15.2	+2.0
	baz=255						
TPUB	Ta-pu	2.34	247	P	Pn	16 56 49.5	+2.0
	baz=245						
TPUB				*e*S	Sn	16 57 15.8	+0.8
	baz=245						
WTP	Ta-pu	2.37	246	*e*P	Pn	16 56 50.2	+2.2
	baz=243						
WTP				*e*S	Sn	16 57 18.1	+2.2
	baz=243						
RLNB	Erlin	2.41	262	*e*P	Pn	16 56 50.4	+2.0
	baz=262						
RLNB				*e*S	Sn	16 57 19.2	+2.5
	baz=262						
ECL	Taimali	2.47	229	*e*P	Pn	16 56 49.5	+0.3
	baz=237						
ECL				*e*S	Sn	16 57 13.7	-4.4
	baz=237						
CHN1	Nanshi	2.47	245	P	Pn	16 56 51.7	+2.4
	baz=243						
CHN1				*e*S	Sn	16 57 20.9	+2.7
	baz=243						
TWK	Hsinying	2.47	247	*e*P	Pn	16 56 51.5	+2.2
	baz=245						
TWK				*e*S	Sn	16 57 19.6	+1.3
	baz=245						
SGST	Jiashian	2.47	243	*e*P	Pn	16 56 52.2	+2.9
	baz=240						
SGST				*e*S	Sn	16 57 20.9	+2.6
	baz=240						
LAY	Lan-yu	2.55	211	*e*P	Pn	16 56 49.7	-0.7
	baz=208						
LAY				*e*S	Sn	16 57 16.1	-4.1
	baz=208						
WSF	Szhu	2.58	257	*e*P	Pn	16 56 53.0	+2.2
	baz=256						
WSF				*e*S	Sn	16 57 22.7	+1.7
	baz=256						
SSD	Sandimen	2.61	236	*e*P	Pn	16 56 53.4	+2.2
	baz=228						
SSD				*e*S	Sn	16 57 22.8	+1.2
	baz=228						
EAST	Anshuo	2.68	227	*e*P	Pn	16 56 52.5	+0.2
	baz=233						
EAST				*e*S	Sn	16 57 19.6	-4.0
	baz=233						
MASBT	Mashibuluo	2.69	233	*e*P	Pn	16 56 53.5	+1.3
	baz=222						
MASBT				*e*S	Sn	16 57 24.2	+0.6
	baz=222						
SCZT	Fangliau	2.85	230	*e*P	Pn	16 56 57.3	+2.8
	baz=220						
SCZT				*e*S	Sn	16 57 28.2	+0.7
	baz=220						
WDGT	Dungji	3.18	253	*e*P	Pn	16 57 00.5	+1.4
	baz=250						
PNG	Penghu	3.19	259	*e*P	Pn	16 57 00.2	+1.0
	baz=256						
VWUC	VWUC	3.29	284	*e*P	Pn	16 57 00.7	+0.2
	baz=284						
VCHM	Qimei	3.40	253	*e*P	Pn	16 57 02.7	+0.6
	baz=251						

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*IDC **02** 17:14:29.3±1.3, 14°.82S×166°.57E, h0^{km}, mb4.1/6, mb1 4.3/7, mb1mx3.9/46, mbtmp4.1/7, ML4.0/1, MS3.4/8, Ms1 3.4/8, ms1mx2.9/48, Error ellipse: s-maj=38.3km s-min=26.9km az=136.0*
*ISCJB **02** 17:14:33.4±1.0, 15°.20S±0°.07×166°.6E±0°.2, h36^{km}, mb4.1/9, MS3.6/5, Error ellipse: s-maj=24.8km s-min=9.6km az=176.5*

ISC 02 17:14:35.5±0.9**, 15°.14S**±0°.09×**166°.6E**±0°.2**, h36**^{km}**, n15, σ1^{s}35**/12**, mb4.0**/9**, MS3.5**/5**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**6.90**	**181**	Pn	**Pn**	**17 16 14.4**	**+0.1**
	2.8nm,0.3s,baz=316,slow=9.1,SNR=42						
DZM				Sn	**Sn**	**17 17 30.9**	**-0.7**
	0.4nm,0.3s,baz=288,slow=20,SNR=2.7						
DZM				LR	LR	17 18 48.5	
	comp=Z,212nm,19.0s,baz=358,slow=36						
HNR	**Honiara**	**8.62**	**310**	LR	LR	17 19 44.5	
	comp=Z,132nm,19.0s,baz=166,slow=38						
PMG	**Port Moresby**	**19.82**	**284**	LR	LR	17 25 47.4	
	comp=Z,42nm,18.6s,baz=108,slow=34						
STKA	**Stephens Creek**	**28.24**	**229**	P	**P**	**17 20 25.0**	**-0.3**
	0.8nm,0.5s,baz=45,slow=14,SNR=5.7						
STKA				LR	LR	17 30 24.5	
	comp=Z,91nm,18.9s,baz=30,slow=34						
WRA	**Warramunga Arr**	**31.10**	**256**	P	**P**	**17 20 50.0**	**-0.7**
	1.4nm,0.8s,baz=81,slow=7.1,SNR=10						
ASAR	**Alice Springs**	**31.92**	**249**	P	**P**	**17 20 57.8**	**-0.2**
	1.6nm,0.7s,baz=73,slow=9.2,SNR=32						
ASAR				LR	LR	17 33 14.5	
	comp=Z,102nm,19.1s,baz=89,slow=35						
FITZ	**Fitzroy Crossi**	**39.30**	**260**	P	**P**	**17 22 00.8**	**-0.5**
	9.3nm,1.0s,baz=86,slow=8.5,SNR=5.8						
FITZ				LR	LR	17 37 35.9	
	comp=Z,93nm,20.2s,baz=86,slow=35						
MJAR	**Matsushiro Arr**	**57.97**	**333**	P	**P**	**17 24 24.7**	**+0.2**
	1.0nm,0.6s,baz=172,slow=10,SNR=4.4						
PETK	**Petropavlovsk-**	**68.39**	**354**	P	**P**	**17 25 34.0**	**+0.8**
	3.1nm,0.8s,baz=131,slow=7.9						
ILAR	**Eielson Array**	**87.11**	**18**	P	**P**	**17 27 14.6**	**-2.7**
	0.6nm,0.7s,baz=233,slow=5.2,SNR=6.0						
BBB	**Bella Bella**	**87.47**	**34**	LR	LR	18 05 21.2	
	comp=Z,20nm,18.8s,baz=171,slow=35						
NVAR	**Mina Array Bea**	**88.03**	**49**	LR	LR	17 58 26.7	
	comp=Z,34nm,21.4s,baz=130,slow=30						
SNAA	**Sanae**	**93.11**	**183**	P	**P**	**17 27 47.5**	**+2.1**
	1.0nm,0.7s,baz=198,slow=9.6,SNR=5.8						
MKAR	**Makanchi Array**	**97.05**	**316**	P	**P**	**17 28 05.3**	**+1.6**
	0.5nm,0.8s,baz=151,slow=2.8,SNR=4.6						
ARCES	**ARCESS Array B**	**120.48**	**345**	PKP	**PKPdf**	**17 33 21.9**	**-0.7**
	0.5nm,0.5s,baz=79,slow=1.4,SNR=7.8						

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*ISCJB **02** 17:25:27.0±0.5, 22°.32S±0°.05×68°.70W±0°.08, h114^{km}±6^{km}, mb3.9/9, Error ellipse: s-maj=12.1km s-min=7.4km az=7.0*

*GUC **02** 17:25:28.9±0.6, 22°.30S×68°.90W, h112^{km}±4^{km}, ML4.3*

*IDC **02** 17:25:29.4±0.7, 22°.29S×68°.51W, h116^{km}±6^{km}, mb3.7/9, mb1 3.8/13, mb1mx3.6/47, mbtmp4.0/13, Error ellipse: s-maj=20.9km s-min=15.1km az=90.0*

ISC 02 17:25:28.5±0.6**, 22°.32S**±0°.05×**68°.73W**±0°.07**, h113**^{km}±5^{km}**, n27, σ1^{s}09**/40**, mb4.1**/10**, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	**IPOC Station P**	**0.70**	**317**	*e*P	**Pn**	**17 25 47.5**	**+0.1**
PB09				*i* S	**Sn**	**17 26 01.3**	**-0.3**
PB09				IAML		17 26 02.2	
	comp=E,17µm,0.5s						
PB06	**IPOC Station P**	**0.87**	**243**	*e*P	**Pn**	**17 25 48.4**	**-0.4**
PB06				*i* S	**Sn**	**17 26 03.0**	**-1.1**
PB06				IAML		17 26 03.9	
	comp=E,8µm,0.2s						
PB03	**IPOC Station P**	**0.99**	**286**	*e*P	**Pn**	**17 25 49.5**	**-0.5**
PB03				*i* S	**Sn**	**17 26 04.8**	**-1.4**
PB03				IAML		17 26 07.0	
	comp=N,7µm,0.2s						
PB15	**IPOC Station P**	**1.12**	**218**	*e*P	**Pn**	**17 25 51.3**	**-0.1**
PB15				*i* S	**Sn**	**17 26 08.9**	**+0.1**
PB07	**IPOC Station P**	**1.22**	**298**	*e*P	**Pn**	**17 25 52.1**	**-0.4**
PB07				*i* S	**Sn**	**17 26 09.2**	**-1.4**
PB07				IAML		17 26 10.2	
	comp=N,14µm,0.2s						
PB04	**IPOC Station P**	**1.31**	**269**	*e*P	**Pn**	**17 25 52.9**	**-0.6**
PB04				*i* S	**Sn**	**17 26 11.1**	**-1.4**
PB04				IAML		17 26 15.3	
	comp=N,7µm,0.3s						
PB01	**IPOC Station P**	**1.45**	**331**	*e*P	**Pn**	**17 25 54.6**	**-0.4**
PB01				*i* S	**Sn**	**17 26 14.4**	**-0.7**
PB01				IAML		17 26 15.2	
	comp=E,11µm,0.3s						
PB05	**IPOC Station P**	**1.46**	**248**	*e*P	**Pn**	**17 25 54.4**	**-0.7**
PB05				*i* S	**Sn**	**17 26 13.7**	**-1.7**
PB05				IAML		17 26 14.3	
	comp=N,4µm,0.5s						
PB02	**IPOC Station P**	**1.47**	**312**	*e*P	**Pn**	**17 25 54.7**	**-0.5**
PB02				*i* S	**Sn**	**17 26 13.8**	**-1.7**
PB02				IAML		17 26 16.0	
	comp=E,8µm,0.6s						
LPAZ	**La Paz**	**6.02**	**5**	P	**Pn**	**17 26 57.2**	**+1.4**
	comp=E,1.6nm,0.3s,baz=204,slow=6.8,SNR=56						
SIV	**San Ignacio**	**9.59**	**50**	P	**Pn**	**17 27 40.8**	**-2.7**
	comp=E,3.4nm,0.3s,baz=258,slow=9.6,SNR=47						
SIV				S	Sn	17 29 20.3	-9.2
	comp=E,1.7nm,0.3s,baz=164,slow=20,SNR=4.6						
CPUP	**Villa Florida**	**11.13**	**113**	P	**Pn**	**17 28 03.1**	**-1.2**
	comp=E,0.2nm,0.3s,baz=287,slow=11,SNR=9.3						
PLCA	**Paso Flores**	**18.43**	**184**	P	**Pn**	**17 29 35.6**	**-0.9**
	comp=E,0.2nm,0.3s,baz=14,slow=10,SNR=7.1						
PTGA	**Pitinga**	**23.09**	**23**	P	**P**	**17 30 23.8**	**-0.7**
	comp=E,3.4nm,0.4s,baz=220,slow=20,SNR=7.8						
TXAR	**Lajitas Array**	**61.39**	**325**	P	**P**	**17 35 34.1**	**+1.2**
	comp=E,0.3nm,0.8s,baz=140,slow=5.9,SNR=2.6						
TXAR				pP	**pP**	**17 36 01.5**	**+1.0**
	comp=E,0.2nm,0.5s,baz=149,slow=7.4,SNR=3.1						
SNAA	**Sanae**	**61.46**	**161**	P	**P**	**17 35 31.7**	**-1.0**
	comp=E,0.7nm,0.6s,baz=315,slow=10.0,SNR=7.2						
QSPA	**South Pole Qui**	**67.88**	**180**	P	**P**	**17 36 16.4**	**+1.9**
	comp=E,1.7nm,0.5s,baz=159,slow=2.6,SNR=9.7						
DBIC	**Dimbokro**	**68.81**	**73**	P	**P**	**17 36 20.8**	**-0.3**
	comp=E,5.8nm,0.8s,baz=225,slow=13,SNR=2.6						
KOWA	**Kowa**	**73.19**	**66**	P	**P**	**17 36 46.5**	**-1.0**
	comp=E,2.2nm,0.7s,baz=243,slow=14,SNR=3.2						
PDAR	**Pinedale Array**	**74.90**	**330**	P	**P**	**17 36 58.0**	**+0.8**
	comp=E,0.2nm,0.5s,baz=136,slow=7.1,SNR=2.9						
NVAR	**Mina Array Bea**	**76.24**	**322**	pP	pP	17 37 35.1	+1.6
	comp=E,1.1nm,0.9s,baz=157,slow=6.6,SNR=5.9						
TORD	**Torodi Ar. Bea**	**77.47**	**70**	P	**P**	**17 37 11.4**	**-0.6**
	comp=E,2.7nm,0.6s,baz=258,slow=5.0						
TORD				pP	**pP**	**17 37 41.4**	**+0.7**
	baz=254,slow=5.4						
YKA	**Yellowknife Ar**	**92.01**	**341**	P	**P**	**17 38 23.8**	**-0.3**
	comp=E,0.6nm,0.7s,baz=142,slow=5.2,SNR=3.6						
YKA				pP	**pP**	**17 38 55.0**	**+1.5**
	comp=E,0.7nm,0.7s,baz=139,slow=4.3,SNR=3.8						
ASAR	**Alice Springs**	**129.27**	**207**	PKP	**PKPdf**	**17 44 25.1**	**+0.8**
	comp=E,0.8nm,1.0s,baz=129,slow=1.8,SNR=3.8						
ASAR				pPKP	**pPKPdf**	**17 44 55.4**	**+0.4**
	comp=E,0.5nm,0.9s,baz=127,slow=2.4,SNR=2.7						
WRA	**Warramunga Arr**	**132.34**	**210**	PKP	**PKPdf**	**17 44 30.6**	**+0.4**
	comp=E,0.2nm,0.4s,baz=150,slow=1.5,SNR=4.8						
ZALV	**Zalesovo Beam**	**142.62**	**26**	PKP	**PKPdf**	**17 44 48.8**	**+0.8**
	comp=E,0.6nm,0.5s,baz=298,slow=6.4,SNR=3.0						
ZALV				pPKP	**pPKPdf**	**17 45 19.8**	**+1.1**
	comp=E,0.5nm,0.5s,baz=42,slow=2.3,SNR=1.7						
MKAR	**Makanchi Array**	**146.19**	**37**	PKPbc	**PKPbc**	**17 44 55.5**	**-0.1**
	comp=E,0.8nm,0.7s,baz=313,slow=2.6,SNR=7.0						

IDC 02 17:26:26.5±3.0**, 6°.06S**×**130°.06E, h105**^{km}±41^{km}**, mb3.3**/1**, mb1 3.5**/5**, mb1mx3.1**/53**, mbtmp3.8**/5**, Error ellipse: s-maj=80.9km s-min=21.5km az=88.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.29**	**13**	P	Pn	17 27 43.2	-0.1
	4.0nm,0.3s,baz=237,slow=23,SNR=63						
SIJI				S	Sn	17 28 38.8	-4.2
	2.8nm,0.3s,baz=227,slow=22,SNR=11						
FITZ	**Fitzroy Crossi**	**12.72**	**199**	P	Pn	17 29 24.5	+0.8
	0.2nm,0.3s,baz=34,slow=12,SNR=20						
FITZ				S	Sn	17 31 38.2	-5.5
	0.2nm,0.3s,baz=227,slow=18,SNR=4.2						
WRA	**Warramunga Arr**	**14.42**	**164**	P	Pn	17 29 44.8	-0.9
	0.3nm,0.3s,baz=333,slow=14,SNR=9.2						
WRA				S	Sn	17 32 12.9	-12
	0.4nm,0.3s,baz=333,slow=22,SNR=10						
ASAR	**Alice Springs**	**17.89**	**168**	P	P	17 30 27.9	0.0
	0.3nm,0.3s,baz=345,slow=11,SNR=51						
ASAR				S	S	17 33 38.9	-9.4
	0.1nm,0.3s,baz=351,slow=27,SNR=5.4						
MKAR	**Makanchi Array**	**67.48**	**327**	P	P	17 37 11.2	0.0
	0.3nm,0.4s,baz=117,slow=6.6,SNR=6.2						

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*GUC **02** 17:28:46.2±0.7, 32°.83S×71°.94W, h19^{km}±7^{km}, ML3.2*

*SJA **02** 17:28:46.0±0.6, 32°.86S×71°.95W, h4^{km}±7^{km}, ML3.0, MW3.7*

ISC 02 17:28:45.9±2.6**, 32°.58S**±0°.06×**71°.9W**±0°.1**, h8**^{km}±13^{km}**, n12, σ0^{s}75**/20**, 2C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROC1	**El Roble**	**0.81**	**119**	*i* P	**Pb**	**17 29 02.1**	**-0.3**
ROC1				*i* S	**Sb**	**17 29 14.5**	**+0.9**
ROCH	**El Roble**	**0.81**	**119**	⇓*e*P	**Pg**	**17 29 02.0**	**+0.5**
ROCH				*i* S	**Sb**	**17 29 14.6**	**+1.0**
ROCH				IAML		17 29 16.6	
	comp=E,1µm,0.5s						
PEL	**Peldehue**	**1.13**	**120**	⇓*i*P	**Pg**	**17 29 07.1**	**-0.6**
PEL				*i* S	**Sb**	**17 29 23.1**	**+0.3**
PEL				IAML		17 29 28.9	
	comp=E,2µm,0.2s						
CLCH	**Cerro Calan**	**1.37**	**127**	*e*P	**Pn**	**17 29 10.9**	**-0.6**
CLCH				*i* S	**Sg**	**17 29 31.0**	**+0.9**
CLCH				IAML		17 29 41.4	
	comp=E,886nm,0.4s						
FCH	**Farellones**	**1.51**	**120**	⇑*i*P	**Pn**	**17 29 13.4**	**-0.2**
FCH				*i* S	**Sg**	**17 29 34.7**	**+0.2**
FCH				*e*		17 29 35.8	
FCH				IAML		17 29 37.7	
	comp=N,605nm,0.5s						
LMEL	**Las Melosas**	**1.87**	**133**	⇑*i*P	**Pn**	**17 29 18.4**	**0.0**
LMEL				*i* S	**Sn**	**17 29 42.4**	**0.0**
LMEL				IAML		17 29 48.4	
	comp=N,610nm,0.2s						
AUSP	**Uspallata**	**2.12**	**81**	*i* P	**Pg**	**17 29 27.3**	**+0.7**
ARCO	**CERRO ARCO**	**2.48**	**97**	*i* P	**Pb**	**17 29 31.0**	**+0.2**
ARCO				*i* S	**Sg**	**17 30 03.7**	**-1.8**
ARCO				IAML		17 30 12.8	
	comp=Z,66nm,0.4s						
ASAL	**Salagasta**	**2.55**	**91**	*i* P	**Pb**	**17 29 32.2**	**+0.2**
GO04	**Tololo Observa**	**2.56**	**21**	*e*P	**Pb**	**17 29 32.2**	**-0.2**
GO04				*i* S	**Sg**	**17 30 08.5**	**+0.1**
AAGR	**Agrelo**	**2.59**	**102**	*i* P	**Pb**	**17 29 31.8**	**-1.0**
AMOG	**MOGNA**	**3.30**	**61**	*i* P	**Pb**	**17 29 44.2**	**-0.5**

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*IDC **02** 17:33:05.6±0.7, 15°.19S×173°.43W, h0^{km}, mb3.9/9, mb1 4.2/9, mb1mx3.9/53, mbtmp3.9/9, MS3.1/7, Ms1 3.1/7, ms1mx2.8/49, Error ellipse: s-maj=35.3km s-min=18.9km az=136.0*

*NEIC **02** 17:33:06.9±0.6, 15°.14S×173°.34W, h10^{km}, mb4.4/1, Error ellipse: s-maj=29.4km s-min=12.1km az=142.0*

*ISCJB **02** 17:33:08.1±0.6, 15°.1S±0°.2×173°.4W±0°.1, h30^{km}, mb3.9/10, MS3.1/6, Error ellipse: s-maj=30.6km s-min=12.5km az=143.5*

ISC 02 17:33:10.3±0.8**, 15°.2S**±0°.2×**173°.5W**±0°.2**, h30**^{km}**, n24, σ0^{s}67**/12**, mb3.9**/10**, MS3.1**/6**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.06**	**53**	Pn	Pn	17 33 37.8	-5.1
	117nm,0.3s,baz=71,slow=0.9,SNR=68						
AFI				LR	LR	17 33 52.9	
	comp=Z,170nm,19.9s,baz=162,slow=23						
AFI				Sn	Sn	17 33 57.8	-10
	112nm,0.3s,baz=53,slow=22,SNR=4.3						
DZM	**Mont Dzumac**	**20.23**	**247**	LR	LR	17 44 22.5	
	comp=Z,80nm,19.1s,baz=78,slow=33						
URZ	**Urewera**	**24.46**	**198**	LR	LR	17 46 05.5	
	comp=Z,81nm,20.4s,baz=26,slow=32						
HNR	**Honiara**	**26.58**	**279**	LR	LR	17 47 17.3	
	comp=Z,43nm,19.9s,baz=154,slow=32						
H11S2	**WAKE ISLAND Hy**	**38.73**	**329**	T	T	18 22 00.1	
	baz=149,slow=76,SNR=12						
H11S3	**WAKE ISLAND Hy**	**38.74**	**329**	T	T	18 21 56.2	
	baz=149,slow=76,SNR=14						
H11S1	**WAKE ISLAND Hy**	**38.75**	**329**	T	T	18 22 14.3	
	baz=149,slow=76,SNR=19						
H11N3	**WAKE ISLAND Hy**	**39.67**	**330**	T	T	18 23 07.8	
	baz=150,slow=76,SNR=6.4						
H11N1	**WAKE ISLAND Hy**	**39.68**	**330**	T	T	18 23 07.7	
	baz=150,slow=76,SNR=8.7						
H11N2	**WAKE ISLAND Hy**	**39.69**	**330**	T	T	18 23 22.2	
	baz=150,slow=76,SNR=7.0						
STKA	**Stephens Creek**	**44.10**	**240**	P	**P**	**17 41 15.4**	**-0.6**
	1.7nm,0.8s,baz=83,slow=13,SNR=6.4						
WRAB	**Tennant Creek**	**49.83**	**257**	*e*P	**P**	**17 42 01.8**	**+0.9**
	5.0nm,1.0s						
WRA	**Warramunga Arr**	**49.83**	**257**	P	**P**	**17 42 00.6**	**-0.4**
	0.9nm,0.6s,baz=92,slow=6.9,SNR=12						
ASAR	**Alice Springs**	**50.12**	**252**	P	**P**	**17 42 02.8**	**-0.4**
	2.7nm,0.6s,baz=90,slow=7.7,SNR=79						
ASAR				LR	LR	18 04 24.4	
	comp=Z,20nm,18.4s,baz=130,slow=38						
GUMO	**Guam**	**50.15**	**303**	LR	LR	18 03 33.1	
	comp=Z,11nm,18.1s,baz=111,slow=36						
VNDA	**Vanda**	**63.60**	**186**	P	**P**	**17 43 38.5**	**+0.7**
	0.6nm,0.8s,baz=45,slow=7.1,SNR=3.9						
MJAR	**Matsushiro Arr**	**68.72**	**320**	LR	LR	18 09 39.4	
	comp=Z,12nm,21.3s,baz=185,slow=32						
NVAR	**Mina Array Bea**	**74.20**	**42**	P	**P**	**17 44 43.8**	**-0.8**
	0.2nm,0.5s,baz=224,slow=11,SNR=2.8						
QSPA	**South Pole Qui**	**74.88**	**180**	P	**P**	**17 44 47.7**	**-0.3**
	2.6nm,0.8s,baz=19,slow=3.4,SNR=8.1						
TXAR	**Lajitas Array**	**80.54**	**56**	P	**P**	**17 45 19.6**	**-0.6**
	0.5nm,0.9s,baz=222,slow=4.9,SNR=4.0						
PDAR	**Pinedale Array**	**82.13**	**42**	P	**P**	**17 45 29.4**	**+0.9**
	0.3nm,0.6s,baz=224,slow=6.2,SNR=3.8						
ILAR	**Eielson Array**	**82.23**	**11**	P	**P**	**17 45 28.4**	**+0.2**
	0.7nm,0.5s,baz=226,slow=6.5,SNR=7.7						
GERES	**GERESS Array B**	**145.90**	**352**	PKPbc	**PKPab**	**17 52 47.6**	**+0.2**
	0.5nm,0.7s,baz=48,slow=1.5,SNR=4.1						
BRTR	**Keskin Array B**	**145.93**	**321**	PKPbc	**PKPab**	**17 52 48.3**	**+0.4**
	0.9nm,0.7s,baz=129,slow=3.1,SNR=4.5						

IDC 02 17:35:18.6±528.0**, 62°.38N**×**87°.51W, h0**^{km}**, Error ellipse: s-maj=239.5km s-min=195.2km az=35.0, Hudson Bay**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I10CA	**LAC DU BONNET**	**13.07**	**205**	*i*		18 57 00.0	
	baz=17,slow=315,SNR=0.9						
I18DK	**QAANAAQ INFRAS**	**16.26**	**14**	*i*		19 15 40.0	
	baz=212,slow=318,SNR=0.7						
I53US	**FAIRBANKS INFR**	**26.04**	**302**	*i*		20 15 10.0	
	baz=68,slow=319,SNR=1.0						

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*CASC **02** 17:42:57.4±0.6, 14°.14N×91°.09W, h76^{km}±10^{km}, ML4.5, mb4.4(NEIC)*

*NEIC **02** 17:42:58.3±0.9, 14°.22N×90°.61W, h77^{km}±5^{km}, mb4.4/4, MD4.5(MEX), Error ellipse: s-maj=23.5km s-min=10.4km az=47.0*

*IDC **02** 17:42:58.8±0.9, 14°.35N×90°.46W, h77^{km}±5^{km}, mb3.8/11, mb1 4.0/12, mb1mx3.7/52, mbtmp4.1/12, MS3.4/19, Ms1 3.4/19, ms1mx3.2/40, Error ellipse: s-maj=28.0km s-min=15.5km az=45.0*

*MEX **02** 17:43:02.9±0.5, 14°.23N×91°.31W, h111^{km}±9^{km}, MD4.5*

ISC 02 17:42:55.6±0.7**, 13°.95N**±0°.08×**91°.16W**±0°.05**, h56**^{km}±3^{km}**, n190, σ1^{s}57**/189**, mb4.3**/17**, MS3.4**/19**, 1C-2D, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IXG	**Ixpaco**	**0.72**	**72**	⇑*i*P	**Pn**	**17 43 12.4**	**+2.3**
RTR	**El Retiro**	**1.47**	**92**	*e*P	**Pn**	**17 43 22.5**	**+2.5**
SBLS	**San Blas**	**1.50**	**94**	*e*P	**Pn**	**17 43 22.5**	**+2.1**
SNJE	**San Jose**	**1.51**	**93**	*e*P	**Pn**	**17 43 22.5**	**+1.9**
CEDA	**San Andres**	**1.72**	**95**	*e*P	**Pn**	**17 43 25.9**	**+2.6**
CEDA				*e*S	**Sn**	**17 43 47.5**	**+3.3**
CEDA				IAML		17 44 09.0	
	comp=Z,10µm,0.8s						
MTO3	**Montecristo**	**1.80**	**75**	⇓*i*P	**Pn**	**17 43 25.8**	**+1.3**
MTO3				*e*S	**Sn**	**17 43 48.6**	**+2.2**
COLS	**Colinas**	**1.83**	**99**	*e*P	**Pn**	**17 43 26.8**	**+1.9**
COLS				*e*S	**Sn**	**17 43 49.8**	**+2.8**
BOQS	**Boqueron**	**1.84**	**96**	*e*P	**Pn**	**17 43 27.1**	**+2.1**
SNET	**Serv Nac Est T**	**1.89**	**98**	IAML		17 44 01.3	
	comp=Z,4µm,0.6s						
LOMA	**San Marcos**	**1.95**	**99**	*e*P	**Pn**	**17 43 28.5**	**+2.1**
LOMA				*e*S	**Sn**	**17 43 53.5**	**+3.7**
LOMA				IAML		17 43 58.2	
	comp=Z,8µm,0.3s						
LFU	**La Fuente**	**2.00**	**96**	⇓*e*P	**Pn**	**17 43 29.0**	**+1.9**
LFRS	**El Faro**	**2.06**	**99**	*e*P	**Pn**	**17 43 30.2**	**+2.2**
LBRS	**Las Brisas**	**2.07**	**96**	*e*P	**Pn**	**17 43 30.1**	**+2.1**
CCIG	**Comitan**	**2.50**	**338**	*e*P	**Pn**	**17 43 37.4**	**+3.3**
CCIG				*i* S	**Sn**	**17 44 04.2**	**+0.7**
CCIG	**Comitan**	**2.50**	**338**	*e*P	**Pn**	**17 43 37.4**	**+3.3**
CCIG				*i* S	**Sn**	**17 44 04.2**	**+0.7**
TECA	**Tecapa**	**2.62**	**100**	*e*P	**Pn**	**17 43 37.9**	**+2.2**
PCIG		**2.65**	**311**	*i* P	**Pn**	**17 43 39.5**	**+3.7**
PCIG				*e*S	**Sn**	**17 44 07.8**	**+1.0**
PCIG		**2.65**	**311**	*i* P	**Pn**	**17 43 39.5**	**+3.7**
PCIG				*e*S	**Sn**	**17 44 07.8**	**+1.0**
TGIG		**3.39**	**326**	*e*P	**Pn**	**17 43 48.6**	**+2.5**
TGIG				*i* S	**Sn**	**17 44 24.9**	**-0.3**
TGIG		**3.39**	**326**	*e*P	**Pn**	**17 43 48.6**	**+2.5**
TGIG				*i* S	**Sn**	**17 44 24.9**	**-0.3**
JTS	**JuntasAbangare**	**7.08**	**120**	*e*Pn	Pn	17 44 39.1	+2.4
	comp=Z,53nm,0.8s						
061Z	**Ochoppi**	**15.27**	**38**	P	**P**	**17 46 33.3**	**+1.8**
	baz=220						
059Z	**Ave Maria**	**15.32**	**35**	P	**P**	**17 46 33.3**	**+1.2**
	baz=217						
060Z	**West Palm Beac**	**15.88**	**37**	P	**P**	**17 46 40.1**	**+1.7**
	baz=220						
957A	**Wimauma**	**15.99**	**30**	P	**P**	**17 46 41.1**	**+1.6**
	baz=212						
857A	**Zephyrhills**	**16.49**	**29**	P	**Pn**	**17 46 43.7**	**+0.4**
	baz=211						
HKT	**Hockley**	**16.50**	**346**	*e*P	**P**	**17 46 44.8**	**-0.3**
	comp=Z,18nm,0.6s						
DWPF	**Disney Wildern**	**16.75**	**31**	P	**P**	**17 46 48.7**	**+0.8**
	baz=213						
757A	**Oxford**	**17.14**	**28**	P	**P**	**17 46 52.5**	**+0.3**
	baz=210						
656A	**Willston**	**17.30**	**26**	P	**P**	**17 46 54.7**	**+0.7**
	baz=208						
553A	**Crawfordville**	**17.31**	**20**	P	**Pn**	**17 46 53.1**	**-0.3**
	baz=201						
347A	**Saraland**	**17.54**	**7**	P	**P**	**17 46 58.9**	**+2.3**
	baz=187						
452A	**Marianna**	**17.70**	**17**	P	**P**	**17 46 59.5**	**+1.1**
	baz=198						
349A	**Repton**	**17.70**	**11**	P	**P**	**17 47 01.2**	**+2.8**
	baz=191						
657A	**Interlachen**	**17.78**	**27**	P	**P**	**17 47 01.1**	**+1.9**
	baz=210						
555A	**McAlpin**	**17.78**	**24**	P	**P**	**17 47 00.3**	**+1.0**
	baz=206						
556A	**Lake Butler**	**17.90**	**25**	P	**Pn**	**17 47 01.6**	**+0.9**
	baz=207						
453A	**Whigham**	**17.96**	**19**	P	**Pn**	**17 47 03.7**	**+2.3**
	baz=201						
454A	**Quitman**	**18.07**	**21**	P	**Pn**	**17 47 04.4**	**+1.7**
	baz=203						
JCT	**Junction City**	**18.28**	**336**	*e*P	**Pn**	**17 47 08.2**	**+2.9**
353A	**Camilla**	**18.45**	**19**	P	**Pn**	**17 47 08.4**	**+1.1**
	baz=200						
147A	**Livingston**	**18.82**	**8**	P	**P**	**17 47 10.1**	**-0.7**
	baz=187,SNR=5.6						
148A	**Greensboro**	**18.90**	**9**	P	**Pn**	**17 47 13.3**	**+0.7**
	baz=189						
252A	**Lumpkin**	**18.90**	**17**	P	**Pn**	**17 47 13.3**	**+0.5**
	baz=198						
150A	**Eclectic**	**19.15**	**13**	P	**Pn**	**17 47 15.8**	**0.0**
	baz=194						
TXAR	**Lajitas Array**	**19.20**	**325**	P	**Pn**	**17 47 18.3**	**+1.9**
	comp=Z,0.3nm,0.3s,baz=145,slow=14,SNR=28						
TXAR				PcP	**PcP**	**17 51 36.1**	**-0.7**
	comp=Z,0.0nm,0.3s,baz=142,slow=4.5,SNR=4.1						
TXAR				ScP	**ScP**	**17 55 07.2**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=145,slow=4.6,SNR=4.4						
151A	**Opelika**	**19.24**	**15**	P	**Pn**	**17 47 16.8**	**-0.1**
	baz=196,SNR=5.7						
Z46A	**Louisville**	**19.26**	**6**	P	**P**	**17 47 14.7**	**-0.8**
	baz=185						
254A	**Abbeville**	**19.31**	**21**	P	**Pn**	**17 47 17.2**	**-0.4**
	baz=202						
Z47A	**Carrollton**	**19.37**	**8**	P	**P**	**17 47 17.7**	**+1.0**
	baz=188						
LRAL	**Lakeview Retre**	**19.37**	**11**	P	**P**	**17 47 16.8**	**0.0**
	baz=191,SNR=8.0						
LRAL	**Lakeview Retre**	**19.37**	**11**	*e*P	**Pn**	**17 47 19.3**	**+1.0**
	comp=Z,34nm,1.1s						
152A	**Waverly Hall**	**19.54**	**16**	P	**P**	**17 47 19.3**	**+0.7**
	baz=198						
Z48A	**Northport**	**19.61**	**9**	P	**P**	**17 47 19.6**	**+0.2**
	baz=189,SNR=12						
Z49A	**Columbiana**	**19.61**	**12**	P	**P**	**17 47 20.0**	**+0.6**
	baz=192,SNR=12						
Z50A	**Ashland**	**19.80**	**13**	P	**P**	**17 47 21.7**	**+0.3**
	baz=194						
256A	**Glennville**	**19.85**	**24**	P	**Pn**	**17 47 24.5**	**+0.5**
	baz=206						
Y46A	**Houston**	**19.95**	**6**	P	**P**	**17 47 24.2**	**+1.1**
	baz=185						
Z51A	**Franklin**	**20.03**	**15**	P	Pn	17 47 25.5	-0.7
	baz=196						
Y40A	**Okolona**	**20.07**	**355**	P	**P**	**17 47 24.5**	**+0.2**
	baz=172						
Y47A	**UCPARC, Winfie**	**20.09**	**8**	P	**P**	**17 47 25.6**	**+1.1**
	baz=188						
Z52A	**Williamson**	**20.11**	**17**	P	**P**	**17 47 25.3**	**+0.5**
	baz=198,SNR=6.7						
ABTX	**Abilene, Hawle**	**20.14**	**339**	P	**P**	**17 47 25.2**	**+0.1**
	baz=154						
Y48A	**Jasper**	**20.20**	**10**	P	**P**	**17 47 25.2**	**-0.6**
	baz=190,SNR=7.6						
155A	**Kite**	**20.21**	**22**	P	**P**	**17 47 27.0**	**+1.2**
	baz=204						
Y49A	**Blount Mountai**	**20.28**	**11**	P	**P**	**17 47 27.4**	**+0.7**
	baz=192,SNR=7.3						
Z53A	**Monticello**	**20.44**	**18**	P	**P**	**17 47 28.3**	**-0.1**
	baz=200,SNR=6.2						
Y50A	**Piedmont**	**20.45**	**13**	P	**P**	**17 47 30.0**	**+1.5**
	baz=194						
X40A	**Basin Creek Fa**	**20.50**	**356**	P	**P**	**17 47 29.0**	**0.0**
	baz=174						
GOGA	**Godfrey**	**20.60**	**19**	P	**P**	**17 47 30.6**	**+0.5**
	baz=200						
156A	**Sylvania**	**20.60**	**24**	P	**P**	**17 47 31.3**	**+1.2**
	baz=206						
Y51A	**Rockmart**	**20.62**	**15**	P	**P**	**17 47 30.5**	**+0.2**
	baz=196,SNR=15						
MIAR	**Mount Ida**	**20.62**	**354**	P	**P**	**17 47 29.0**	**-1.4**
	baz=172						
MIAR	**Mount Ida**	**20.62**	**354**	*e*P	**P**	**17 47 28.9**	**-1.4**
	comp=Z,14nm,0.8s						
Z54A	**Sparta**	**20.64**	**20**	P	**P**	**17 47 31.7**	**+1.2**
	baz=202						
X47A	**Russelville**	**20.69**	**8**	P	**P**	**17 47 30.9**	**-0.2**
	baz=188						
LPIG	**La Paz**	**20.70**	**302**	LR	LR	17 54 43.3	
	comp=Z,69nm,18.6s,baz=34,slow=33						
X48A	**Hartselle**	**20.75**	**10**	P	**P**	**17 47 31.4**	**-0.3**
	baz=190,SNR=7.5						
Y52A	**Lilburn**	**20.84**	**17**	P	**P**	**17 47 32.7**	**-0.1**
	baz=198,SNR=6.2						
X49A	**Woodville**	**20.93**	**11**	P	**P**	**17 47 32.9**	**-0.8**
	baz=192,SNR=7.4						
Y53A	**Monroe**	**20.98**	**18**	P	**P**	**17 47 34.5**	**+0.4**
	baz=200						
X50B	**Fort Payne**	**21.02**	**13**	P	**P**	**17 47 34.6**	**-0.1**
	baz=194,SNR=7.0						
W41B	**Gary Mavity, V**	**21.15**	**358**	P	**P**	**17 47 36.0**	**-0.1**
	baz=176						
Y54A	**Tignall**	**21.26**	**20**	P	**P**	**17 47 38.1**	**+0.9**
	baz=202						
W39A	**Magazine**	**21.29**	**354**	P	**P**	**17 47 38.0**	**+0.6**
	baz=172						
X51A	**Calhoun**	**21.30**	**14**	P	**P**	**17 47 39.4**	**+1.7**
	baz=196						
W48A	**Pulaski**	**21.44**	**10**	P	**P**	**17 47 39.8**	**+0.7**
	baz=190						
W49A	**Belvidere**	**21.54**	**11**	P	**P**	**17 47 40.7**	**+0.5**
	baz=192						
X52A	**Dahlonega**	**21.59**	**16**	P	**P**	**17 47 40.5**	**-0.3**
	baz=198,SNR=6.4						
X53A	**Estanollee**	**21.66**	**18**	P	**P**	**17 47 41.1**	**-0.4**
	baz=200						
V41A	**Mountainview**	**21.76**	**358**	P	**P**	**17 47 40.7**	**-1.9**
	baz=176,SNR=7.8						
V42A	**Cord**	**21.76**	**359**	P	**P**	**17 47 41.2**	**-1.4**
	baz=178						
W50A	**Signal Mountai**	**21.80**	**13**	P	**P**	**17 47 43.2**	**+0.1**
	baz=194						
V40A	**Witts Springs**	**21.81**	**356**	P	**P**	**17 47 41.6**	**-1.5**
	baz=174,SNR=5.3						
V39A	**Pettigrew**	**21.91**	**355**	P	**P**	**17 47 43.8**	**-0.4**
	baz=172						

V46A	Holladay baz=187	21.93	7	P	P	17 47 44.1	-0.2
MNTX	Cornudas Mount baz=139,SNR=10	21.95	326	P	P	17 47 43.8	-0.9
MNTX	Cornudas Mount comp=Z,53nm,1.7s	21.95	326	*e*P	P	17 47 45.7	+1.0
V47A	Nunnelly baz=188	22.03	8	P	P	17 47 45.3	-0.1
W52A	Murphy baz=198	22.04	16	P	P	17 47 47.2	+1.6
V48A	Smith Brothers baz=190	22.04	9	P	P	17 47 46.5	+0.9
V49A	McMinnville baz=192	22.23	11	P	P	17 47 47.1	-0.6
WVT	Waverly baz=187	22.29	7	P	P	17 47 48.0	-0.2
V50A	Pikevile baz=194	22.30	13	P	P	17 47 48.2	-0.2
U42A	Revenden baz=178	22.31	360	P	P	17 47 48.5	+0.1
U41A	Viola baz=177	22.31	358	P	P	17 47 47.8	-0.6
W53A	Cullowhee baz=200	22.32	17	P	P	17 47 48.7	-0.1
U40A	Yellville baz=174	22.36	356	P	P	17 47 47.6	-1.4
U39A	Green Forest baz=173	22.43	355	P	P	17 47 48.9	-0.9
V51A	Loudon baz=196	22.60	15	P	P	17 47 51.4	-0.2
TKL	Tuckaleechee C comp=Z,14nm,0.8s,baz=183,slow=11,SNR=10	22.61	16	P	P	17 47 51.5	-0.2
TKL	comp=Z,97nm,21.9s,baz=232,slow=39			LR	LR	17 57 17.4	
U47A	Clarksville baz=188	22.66	8	P	P	17 47 51.6	-0.6
V52A	Sevierville baz=198,SNR=5.8	22.83	16	P	P	17 47 53.5	-0.5
U48A	Cassie Pea, Po baz=190	22.84	10	P	P	17 47 53.7	-0.4
KMSC	Kings Mountain baz=204	22.89	21	P	P	17 47 54.4	-0.2
V53A	Saluda baz=200	22.89	18	P	P	17 47 54.2	-0.4
AMTX	Amarillo baz=152	22.91	337	P	P	17 47 53.6	-1.3
T41A	Mountain View baz=177	23.00	359	P	P	17 47 55.0	-0.8
T39A	Clever baz=173,SNR=6.9	23.06	355	P	P	17 47 53.7	-2.6
T44A	Benton baz=183	23.08	3	P	P	17 47 55.9	-0.6
T40A	Mansfield baz=175	23.14	357	P	P	17 47 55.6	-1.4
T38A	Diamond baz=171	23.16	354	P	P	17 47 56.2	-1.1
T46A	Princeton baz=187	23.18	7	P	P	17 47 56.6	-0.8
T47A	Sharon Grove baz=189	23.23	8	P	P	17 47 57.1	-0.8
T48A	Bowling Green baz=190	23.45	10	P	P	17 47 59.1	-1.0
TZTN	Tazewell baz=198,SNR=7.5	23.51	16	P	P	17 47 59.1	-1.5
S43A	Fulton Ridge, baz=181	23.54	2	P	P	17 47 59.4	-1.5
S41A	Jillco Farms, baz=177,SNR=5.9	23.55	359	P	P	17 47 58.8	-2.1
S40A	Lebanon baz=175,SNR=11	23.58	357	P	P	17 47 58.7	-2.6
T49A	Edmonton baz=192	23.60	11	P	P	17 47 59.9	-1.5
T50A	Nancy baz=194,SNR=6.3	23.66	13	P	P	17 48 00.2	-1.7
S44A	Carbondale baz=183	23.71	4	P	P	17 48 02.9	+0.5
S38A	Stockton baz=172,SNR=7.7	23.71	355	P	P	17 48 00.1	-2.3
S39A	Bolivar baz=173,SNR=18	23.72	356	P	P	17 48 00.6	-2.0
121A	Cookes Peak, D baz=136	23.93	323	P	P	17 48 04.5	-0.2
CCM	Cathedral Cave baz=178	24.01	360	P	P	17 48 04.5	-0.6
R41A	Rosebud baz=178,SNR=6.5	24.25	360	P	P	17 48 05.1	-2.3
R38A	Fenwick Farm, baz=172,SNR=11	24.26	355	P	P	17 48 04.9	-2.6
R40A	Maddies Statio baz=176,SNR=7.6	24.26	358	P	P	17 48 05.5	-2.0
R39A	Chumby, Stover baz=174,SNR=12	24.32	356	P	P	17 48 06.9	-1.1
SJG	San Juan comp=Z,69nm,20.5s,baz=157,slow=36	24.38	77	LR	LR	17 57 17.6	
WCI	Wyandotte Cave baz=190	24.56	9	P	P	17 48 09.0	-1.2
R47A	Wooly Knot Far baz=190	24.59	9	P	P	17 48 08.9	-1.5
Q41A	Truxton baz=179	24.90	360	P	P	17 48 11.4	-1.9
Q38A	Cooks Store, C baz=173,SNR=12	25.01	355	P	P	17 48 11.8	-2.4
Q39A	Willow Grove F baz=175	25.05	357	P	P	17 48 13.0	-1.6
BLA	Blacksburg baz=204	25.07	21	P	P	17 48 14.4	-0.5
P39B	Salisbury baz=175	25.48	357	P	P	17 48 17.1	-1.4
P40A	Paris baz=177	25.49	358	P	P	17 48 17.1	-1.5
O40A	La Belle baz=177	26.08	359	P	P	17 48 22.6	-1.3
O56A	Blue Knob Stat baz=205	28.45	21	P	P	17 48 44.1	-1.1
N54A	Moraine State baz=202	28.62	18	P	P	17 48 44.9	-1.8
SSPA	Standing Stone baz=206	29.01	21	P	P	17 48 49.0	-1.1
N59A	State Game Lan baz=210	30.04	24	P	P	17 48 58.9	-0.4
GMRC	Granite Mounta baz=126	30.32	317	P	P	17 49 03.1	+1.1
PAL	Palisades baz=213	30.87	26	P	P	17 49 06.8	+0.2
MPMC	Manual Prospec baz=125	32.28	318	P	P	17 49 20.6	+1.3
SADO	Sadowa comp=Z,6.2nm,0.6s,baz=241,slow=13,SNR=2.4	32.38	16	P	P	17 49 14.9	-4.9
E40A	Wakefield baz=181	32.41	2	P	P	17 49 17.8	-2.3
PDAR	Pinedale Array comp=Z,0.4nm,0.6s,baz=111,slow=4.9,SNR=5.0	32.81	335	ScP	ScP	17 55 46.6	-0.7
C38A	Sawbill Land. baz=179	33.66	360	P	P	17 49 26.5	-4.6
LONY	Lake Ozonia baz=209	33.67	22	P	P	17 49 29.0	-2.1
ELK	Elko comp=Z,1.9nm,0.8s,baz=183,slow=9.8,SNR=7.8	33.98	326	P	P	17 49 36.2	+2.1
PTGA	Pitinga comp=Z,1.7nm,0.5s,baz=309,slow=12,SNR=5.6	34.17	113	P	P	17 49 33.4	-2.4
NVAR	Mina Array Bea comp=Z,2.9nm,0.6s,baz=133,slow=8.3,SNR=13	34.23	320	P	P	17 49 39.0	+2.7
NVAR	comp=Z,2.7nm,0.7s,baz=134,slow=8.8,SNR=5.3			pP	sP	17 49 57.5	+0.3
NVAR	comp=Z,2.5nm,0.8s,baz=139,slow=4.2,SNR=7.2			PcP	PcP	17 52 13.2	+1.2
NVAR	comp=Z,0.5nm,0.7s,baz=126,slow=4.6,SNR=3.8			ScP	ScP	17 55 51.5	-1.0
ULM	Lac du Bonnet comp=Z,7.6nm,0.9s,baz=171,slow=9.1,SNR=5.7	36.40	355	pP	pP	17 50 11.1	+2.2
ULM	comp=Z,38nm,19.1s,baz=138,slow=42			LR	LR	18 08 03.4	
LPAZ	La Paz comp=Z,0.8nm,0.7s,baz=304,slow=11,SNR=3.5	37.69	142	P	P	17 50 06.9	+0.3
LPAZ	comp=Z,48nm,21.4s,baz=304,slow=36			LR	LR	18 05 41.6	
YBH	Yreka Blue Hor comp=Z,0.9nm,0.5s,baz=68,slow=5.4,SNR=3.1	38.91	321	P	P	17 50 16.1	+0.2
YBH	comp=Z,46nm,18.9s,baz=156,slow=38			LR	LR	18 07 49.1	
NEW	Newport comp=Z,51nm,18.6s,baz=146,slow=39	40.40	333	LR	LR	18 08 55.4	
SCHQ	Schefferville comp=Z,6.6nm,0.8s,baz=202,slow=6.4,SNR=8.3	44.99	20	P	P	17 51 02.5	-2.7
SCHQ	comp=Z,94nm,19.2s,baz=262,slow=38			LR	LR	18 10 60.0	
YKA	Yellowknife Ar comp=Z,0.8nm,0.7s,baz=153,slow=7.6,SNR=4.0	51.26	346	P	P	17 51 53.2	-0.3
YKA	comp=Z,1.0nm,0.6s,baz=143,slow=7.4,SNR=4.7			pP	sP	17 52 11.7	-3.2
CPUP	Villa Florida comp=Z,36nm,20.9s,baz=224,slow=35	51.82	141	LR	LR	18 13 17.5	
DLBC	Dease Lake comp=Z,0.9nm,0.3s,baz=135,slow=19,SNR=4.6	53.03	336	P	P	17 52 07.7	+0.9
PLCA	Paso Flores comp=Z,32nm,18.2s,baz=281,slow=32	57.67	162	LR	LR	18 13 25.3	
SFJD	Kangerlussuaq comp=Z,76nm,22.0s,baz=230,slow=36	59.32	17	LR	LR	18 18 17.9	
ILAR	Eielson Array comp=Z,0.9nm,1.0s,baz=123,slow=4.4,SNR=4.5	63.21	337	P	P	17 53 19.1	+1.3
ILAR	comp=Z,0.5nm,0.6s,baz=101,slow=4.7,SNR=1.8			pP	sP	17 53 37.2	-2.2
EKA	Eskdalemuir Ar comp=Z,0.8nm,0.7s,baz=272,slow=4.9,SNR=3.7	77.53	36	P	P	17 54 41.3	-4.0
EKA	comp=Z,7.1nm,0.9s,baz=269,slow=6.1,SNR=8.2			pP	sP	17 55 02.8	-4.5
ESDC	Sonseca Array comp=Z,0.8nm,0.5s,baz=291,slow=5.8,SNR=4.7	79.11	52	pP	pP	17 55 12.4	+2.1
ESDC	comp=Z,15nm,18.2s,baz=120,slow=34			LR	LR	18 27 33.5	
SPITS	Spitsbergen Ar comp=Z,49nm,19.6s,baz=10.0,slow=37	79.97	12	LR	LR	18 31 42.4	
NOA	NORSAR Array B comp=Z,10nm,20.4s,baz=285,slow=35	83.80	29	LR	LR	18 31 50.5	
KOWA	Kowa comp=Z,23nm,18.3s,baz=225,slow=35	83.89	77	LR	LR	18 31 43.6	
DBIC	Dimbokro comp=Z,25nm,21.7s,baz=144,slow=31	84.85	84	LR	LR	18 26 24.0	
HFS	Hagfors comp=Z,14nm,18.2s,baz=326,slow=37	85.25	29	LR	LR	18 35 25.8	
CLL	Collm comp=Z,5.0nm,1.0s	87.86	38	*i* pP	pP	17 55 58.5	+3.4
GERES	GERESS Array B comp=Z,1.0nm,0.9s,baz=256,slow=4.0,SNR=4.8	89.12	40	pP	pP	17 56 05.0	+3.8
TORD	Torodi Ar. Bea comp=Z,21nm,20.4s,baz=180,slow=34	89.60	77	LR	LR	18 33 08.1	
FINES	FINESS Array B comp=Z,26nm,18.0s,baz=288,slow=36	90.19	25	LR	LR	18 36 50.4	
WRA	Warramunga Arr comp=Z,1.0nm,0.9s,baz=87,slow=2.5,SNR=6.9	136.17	256	PKP	PKPdf	18 02 12.1	+0.5
WRA	comp=Z,1.2nm,0.8s,baz=90,slow=2.7,SNR=3.7			pPKP	sPKPdf	18 02 35.8	+1.5
ASAR	Alice Springs comp=Z,0.4nm,0.7s,baz=88,slow=2.1,SNR=5.7	136.42	250	PKP	PKPdf	18 02 12.7	+0.7
CMAR	Chiang Mai Arr comp=Z,3.7nm,1.0s,baz=344,slow=3.4,SNR=19	146.29	343	PKPbc	PKPdf	18 02 29.6	-0.2

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*ISCJB **02** 17:51:01.1±0.9, 51°.16N±0°.06×174°.08W±0°.09, h38^{km}, mb3.4/3, MS2.7/2, Error ellipse: s-maj=9.3km s-min=8.2km az=169.6*

*NEIC **02** 17:51:01.5±0.0, 51°.21N×174°.11W, h26^{km}, ML3.3(AEIC), After AEIC.*

*IDC **02** 17:51:03.3±3.2, 52°.11N×174°.45W, h0^{km}, mb3.3/3, mb1 3.6/4, mb1mx3.2/85, mbtmp3.3/4, ML3.8/1, MS2.8/2, Ms1 2.8/2, ms1mx2.3/33, Error ellipse: s-maj=91.2km s-min=32.6km az=2.0*

ISC 02 17:51:05.0±1.2**, 51°.34N**±0°.09×**174°.19W**±0°.06**, h38**^{km}**, n21, σ1^s.60**/17**, mb3.4**/3**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATKA	Atka Island	0.86	360	P	Pn	17 51 18.2	-2.3
ATKA				S	Sn	17 51 32.0	+0.1
KOFP	Korovin Flat P	0.94	3	P	Pn	17 51 20.8	-0.9
KOFP				S	Sn	17 51 34.9	+1.0
KOKL	Mount Kliuchef	0.98	360	P	Pn	17 51 21.5	-0.8
KOWE	Korovin West	1.03	358	P	Pn	17 51 22.2	-0.6
KOWE				S	Sn	17 51 38.4	+2.3
NIKH	Nikolski High	3.67	61	P	Pn	17 51 57.8	-1.3
NIKH				S	Sn	17 52 39.5	-1.5
AMKA	Amchitka	4.08	273	P	Pn	17 52 03.7	-1.1
MSW	Makushin Switc	5.20	57	P	Pn	17 52 19.7	-0.4
UNV	Unalaska Valle	5.31	59	P	Pn	17 52 21.5	-0.2
ILAR	Eielson Array 0.3nm,0.3s,baz=232,slow=9.4,SNR=8.6	19.52	36	P	P	17 55 26.3	-2.3
MA2	Magadan comp=Z,20nm,18.8s,baz=112,slow=38	21.29	306	LR	LR	18 04 03.0	
YAK	Yakutsk comp=Z,23nm,18.3s,baz=83,slow=36	31.61	312	LR	LR	18 09 43.5	
H11N2	WAKE ISLAND Hy baz=20	34.88	212	T	T	18 36 13.6	
H11N3	WAKE ISLAND Hy baz=20	34.89	212	T	T	18 36 02.0	
H11N1	WAKE ISLAND Hy baz=20	34.90	212	T	T	18 35 56.0	
H11S1	WAKE ISLAND Hy baz=18	36.09	212	T	T	18 37 19.3	
H11S2	WAKE ISLAND Hy baz=18	36.10	212	T	T	18 37 17.1	
H11S3	WAKE ISLAND Hy baz=18	36.10	212	T	T	18 37 16.7	
PDAR	Pinedale Array 0.2nm,0.5s,baz=319,slow=2.6,SNR=3.7	43.55	75	P	P	17 59 08.3	+3.2
KURK	Kurchatov	61.09	316	P	P	18 01 14.7	0.0
KURBB	Kurchatov Arra 0.2nm,0.5s,baz=45,slow=6.1,SNR=2.2	61.20	316	P	P	18 01 14.7	-0.7
MKAR	Makanchi Array 0.1nm,0.3s,baz=38,slow=7.2,SNR=1.6	62.28	311	P	P	18 01 22.7	-0.1

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*JMA **02** 17:54:11.1±0.3, 32°.16N×137°.97E, h409^{km}±3^{km}, M3.1*

*ISCJB **02** 17:54:12.6±0.5, 32°.28N±0°.05×137°.89E±0°.07, h400^{km}, mb3.0/7, Error ellipse: s-maj=8.1km s-min=7.0km az=169.7*

*IDC **02** 17:54:14.7±0.8, 32°.29N×137°.62E, h394^{km}±10^{km}, mb2.9/7, mb1 3.0/11, mb1mx2.8/74, mbtmp3.7/11, Error ellipse: s-maj=22.6km s-min=14.2km az=67.0*

ISC 02 17:54:13.3±1.0**, 32°.24N**±0°.08×**137°.86E**±0°.09**, h400**^{km}**, n24, σ1^s.46**/28**, mb3.2**/7**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2 13nm,0.3s,baz=329,slow=20,SNR=19	1.84	61	P	Pn	17 55 09.8	+1.5
JHJ	11nm,0.3s,baz=124,slow=23,SNR=5.5			S	S	17 55 55.5	+2.8
JWZ	Kozaga	2.22	306	P	Pn	17 55 10.3	-0.3
JKN2	Miekihoku	2.40	327	P	Pn	17 55 11.6	-0.2
JWY	Kouya	2.74	317	P	Pn	17 55 14.2	-0.3
JAI	Aioi	3.25	299	P	Pn	17 55 18.2	-0.4
BSO3	Boso 3	3.38	40	P	Pn	17 55 18.5	-0.8
BSO3				S	S	17 56 11.3	-1.6
BSO4	Boso 4	3.43	36	P	Pn	17 55 19.0	-1.0
BSO4				S	S	17 56 12.6	-1.5
BSO1	Boso 1	3.55	46	P	Pn	17 55 20.1	-0.4
BSO1				S	S	17 56 14.1	-1.0
JWT	Wachi	3.66	327	P	Pn	17 55 21.9	-0.2
MJAR	Matsushiro Arr 1.9nm,0.3s,baz=184,slow=11,SNR=22	4.30	4	P	Pn	17 55 27.9	-0.3
MJAR	0.2nm,0.3s,baz=172,slow=17,SNR=3.2			S	S	17 56 25.3	-3.7
MAT	Matsushiro	4.30	4	P	Pn	17 55 27.6	-0.6
MAT	Matsushiro	4.30	4	P	Pn	17 55 28.0	-0.2
JAG	Ashikaga	4.38	17	P	Pn	17 55 27.7	-1.2
JYT	Yasato	4.42	25	P	Pn	17 55 28.4	-0.9
JCJ	Chichijima baz=299,slow=19	6.36	143	P	Pn	17 55 50.0	+0.1
JCJ	16nm,0.3s,baz=287,slow=19,SNR=12			S	S	17 57 05.3	-3.4
KSRS	Korea Array 0.6nm,0.3s,baz=119,slow=11,SNR=16	9.68	305	P	Pn	17 56 27.6	+0.1
ASAJ	Asahikawa 0.9nm,0.3s,baz=229,slow=12,SNR=13	12.43	16	P	Pn	17 56 59.8	+0.6
ZALV	Zalesovo Beam 0.5nm,0.3s,baz=114,slow=6.6,SNR=3.1	43.16	316	P	P	18 01 36.8	+0.5
MKAR	Makanchi Array 0.7nm,0.5s,baz=86,slow=10.0,SNR=8.4	44.36	306	P	P	18 01 45.8	-0.1
KURBB	Kurchatov Arra 0.6nm,0.3s,baz=91,slow=9.3,SNR=11	46.80	311	P	P	18 02 04.9	+0.4
BVAR	Borovoye Array 0.2nm,0.3s,baz=86,slow=7.7,SNR=4.9	51.74	315	P	P	18 02 41.9	+0.4
WRA	Warramunga Arr 0.6nm,1.0s,baz=360,slow=7.6,SNR=6.1	52.00	184	P	P	18 02 45.9	+2.2
ILAR	Eielson Array 0.3nm,0.3s,baz=283,slow=6.2,SNR=3.8	55.10	30	P	P	18 03 07.7	+2.4
ASAR	Alice Springs 0.3nm,0.8s,baz=5.7,slow=7.9,SNR=6.2	55.72	184	P	P	18 03 12.3	+2.1

KRSC 02 18:48:36.2±1.4**, 53°.83N**×**168°.68E, h33**^{km}±25^{km}**, ML4.0, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	Bering	2.10	312	*e*P	Pn	18 49 10.6	+1.6
BKI				*e*S	Sb	18 49 36.6	-2.6
KBTR	Krutoberegovo	4.13	308	*e*P	Pn	18 49 40.5	+3.5
MKZ	Mys Kozlova	4.15	283	*e*P	Pn	18 49 41.3	+4.1
MKZ				*e*S	Sn	18 50 30.1	+5.7
SMKR	Semkarok	4.97	307	*e*P	Pn	18 49 54.0	+5.5
KZV	Kizimen	5.06	288	*e*P	Pn	18 49 54.3	+4.5
TUMR	Tumrok	5.18	290	*e*P	Pn	18 49 56.8	+5.4
SPN	Mys Shipunski	5.22	265	*e*P	Pn	18 49 57.1	+5.1
SPN				*e*S	Sn	18 50 57.1	+6.1
KMNR	Kamenistaya	5.25	295	P	Pn	18 49 57.0	+4.5
KOZ	Kozyrevsk	5.55	297	P	Pn	18 50 01.7	+5.3
NLC	Nalytchevo	5.61	267	*e*P	Pn	18 50 01.7	+4.4
NLC				*e*S	Sn	18 51 05.7	+5.2
SDLR	Sedlovina	5.87	269	*e*P	Pn	18 50 06.3	+5.4
UGLR	Uglovaya	5.91	268	*e*P	Pn	18 50 07.2	+5.7
KRER	Koryakskii	5.94	269	*e*P	Pn	18 50 07.6	+5.6
AVH	Avacha	5.95	269	*e*P	Pn	18 50 06.8	+4.7
KRX	Arik	5.99	270	P	Pn	18 50 06.8	+4.1
RUS	Russkaya	6.28	261	*e*P	Pn	18 50 11.6	+5.2
GNL	Ganaly	6.37	273	*e*P	Pn	18 50 14.0	+6.2
KRMR	Karymshinskiy	6.40	265	*e*P	Pn	18 50 13.0	+4.9
KRMR				*e*S	Sn	18 51 24.2	+4.3
ASAK	Asacha	6.65	262	*e*P	Pn	18 50 17.5	+5.9
KDTR	Khodutka, Kamc	6.74	257	*e*P	Pn	18 50 17.3	+4.6
KDTR				*e*S	Sn	18 51 33.2	+5.0

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*NNC **02** 18:49:01.0±4.7, 37°.06N×70°.88E, h126^{km}±111^{km}, mb2.6, mpv3.4, Error ellipse: s-maj=42.1km s-min=37.5km az=87.0*

ISC 02 18:48:55.3±1.8**, 36°.70N**±0°.08×**71°.2E**±0°.2**, h188**^{km}**, n7, σ2^s.50**/14**, 7C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan 1.1nm,0.3s	3.75	28	⇑P	Pn	18 49 55.9	+2.1
SFK	16nm,0.3s			⇓S	Sn	18 50 38.1	-1.5
MNAS	Manas 1.6nm,0.3s	5.86	9	⇓P	Pn	18 50 22.2	+1.6
MNAS	9.5nm,0.6s			⇑S	Sn	18 51 24.8	-3.2
DHRM	DHARAMSHALA	6.10	135	*e*P	Pn	18 50 25.9	+1.9
DHRM				*e*S	Sn	18 51 31.7	-2.1
DHRM	comp=E,43nm,0.1s			IAML		18 51 34.6	
DHRM	comp=N,35nm,0.3s			IAML		18 51 35.0	
KK31	Karatay Array comp=N,2.5nm,0.4s,baz=174,slow=12	6.42	355	⇑P	Pn	18 50 29.3	+1.5
KK31	comp=N,3.6nm,0.3s,baz=183,slow=24			⇑S	Sn	18 51 37.6	-3.3
AAK	Ala-Archa comp=N,2.9nm,0.8s	6.43	22	⇓P	Pn	18 50 29.7	+1.5
AAK	comp=N,4.6nm,0.8s			⇑S	Sn	18 51 39.1	-2.5
TKM2	Tokmak 2 comp=N,2.4nm,0.6s	7.06	27	⇑P	Pn	18 50 37.9	+1.5
TKM2	comp=N,2.0nm,1.0s			⇑S	Sn	18 51 58.2	+1.9
SMLA	Simla	7.42	137	*e*P	Pn	18 50 42.3	+1.2
SMLA				*e*S	Sn	18 52 01.4	-3.4
SMLA	comp=N,8.8nm,0.3s			IAML		18 52 06.7	
SMLA	comp=E,12nm,0.1s			IAML		18 52 07.0	

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*ISCJB **02** 18:53:25.6±0.6, 33°.63S±0°.04×179°.1W±0°.1, h100^{km}, mb4.5/10, Error ellipse: s-maj=14.0km s-min=4.5km az=16.7*

*IDC **02** 18:53:26.9±1.5, 33°.36S×179°.44W, h82^{km}±13^{km}, mb4.2/9, mb1 4.4/11, mb1mx3.9/44, mbtmp4.5/11, MS3.1/3, Ms1 3.1/3, ms1mx2.6/48, Error ellipse: s-maj=17.6km s-min=10.3km az=117.0*

*WEL **02** 18:53:27.0, 33°.39S×179°.34W, h87^{km}*

*NEIC **02** 18:53:27.3±1.3, 33°.39S×179°.34W, h87^{km}±11^{km}, mb5.4/2, Error ellipse: s-maj=16.0km s-min=11.5km az=116.0*

ISC 02 18:53:28.1±0.6**, 33°.49S**±0°.06×**179°.24W**±0°.09**, h100**^{km}**, n115, σ2^s.10**/98**, mb4.6**/10**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	4.36	15	P	Pn	18 54 28.5	-3.7
RAO	Raoul Island 77nm,0.3s,baz=252,slow=20,SNR=4.0	4.38	15	P	Pn	18 54 31.2	-1.1
RAO	205nm,0.3s,baz=55,slow=20,SNR=6.3			S	Sn	18 55 18.4	-3.8
RIZ	Raoul Island	4.38	15	P	Pn	18 54 30.8	-1.6
MXZ	Matakaoa Point	4.53	206	P	Pn	18 54 34.3	-0.1
WMGZ	Waiomatatini S	4.72	203	P	Pn	18 54 35.4	-1.5
WMGZ				S	Sn	18 55 28.5	-2.0
HAZ	Te Kaha	4.90	209	P	Pn	18 54 38.7	-0.7
PUZ	Puketiti	5.00	203	P	Pn	18 54 38.3	-2.5
RUGZ	Raukumara Rang	5.12	208	P	Pn	18 54 40.4	-2.1
GRZ	Great Barrier	5.15	236	P	Pn	18 54 42.9	+0.1
TWGZ	Tauwhareparae	5.19	205	P	Pn	18 54 41.1	-2.3
TWGZ				S	Sn	18 55 40.0	-2.1
TWGZ	Tauwhareparae	5.19	205	P	Sn	18 55 40.6	-1.4
CNGZ	Carnagh Statio	5.39	202	P	Pn	18 54 44.3	-1.8
TKGZ	Te Karaka	5.47	205	P	Pn	18 54 46.0	-1.1
MWZ	Matawai	5.50	208	P	Pn	18 54 46.0	-1.6
OPRZ	Ohinepanea	5.53	217	P	Pn	18 54 47.6	-0.3
MARZ	Manawahe	5.58	215	P	Pn	18 54 48.8	+0.2
URZ	Urewera 19nm,0.3s,baz=285,slow=2.6,SNR=80	5.60	211	P	Pn	18 54 46.6	-2.3
URZ	15nm,0.3s,baz=149,slow=22,SNR=8.9			S	Sn	18 55 49.6	-2.4
URZ	Urewera	5.60	211	P	Pn	18 54 46.6	-2.3
URZ				S	Sn	18 55 49.6	-2.4
RAGZ	Rawiri	5.68	208	P	Pn	18 54 48.4	-1.7
RIGZ	Rimuhau	5.74	204	P	Pn	18 54 49.5	-1.3
WCZ	Waipu Caves	5.82	243	P	Pn	18 54 51.7	-0.2
KARZ	Kaharoa	5.82	218	P	Pn	18 54 52.5	+0.6
OMRZ	Omania	5.82	216	P	Pn	18 54 53.0	+1.0
MKAZ	Moumakai	5.83	230	P	Pn	18 54 52.7	+0.7
TARZ	Mount Tarawera	5.86	215	P	Pn	18 54 53.3	+0.7
PRGZ	Paritu Road	5.90	202	P	Pn	18 54 52.3	-0.7
MUGZ	Murupara	5.93	212	P	Pn	18 54 51.6	-1.9
RTZ	Ruatahuna	5.96	210	P	Pn	18 54 50.9	-3.0
SNGZ	Shannon Statio	5.96	207	P	Pn	18 54 52.3	-1.5
KNZ	Kokohu	6.06	203	P	Pn	18 54 53.1	-1.9
MHGZ	Mahia Peninsul	6.10	201	P	Pn	18 54 53.5	-2.2
RAHZ	Arahi	6.17	208	P	Pn	18 54 55.7	-1.0
RAHZ				S	Sn	18 56 02.3	-3.6
ALRZ	Allen Road	6.20	214	P	Pn	18 54 55.6	-1.4
MTHZ	Maungataniwha	6.22	210	P	Pn	18 54 55.1	-2.2
WHHZ	Waihua	6.26	206	P	Pn	18 54 55.5	-2.3
WHHZ				S	Sn	18 56 03.7	-4.2
MRHZ	Matea Rd	6.38	212	P	Pn	18 54 56.6	-2.9
MRHZ				S	Sn	18 56 07.1	-4.0
KUTZ	Kaahu Road	6.39	217	P	Pn	18 54 59.6	-0.1
NMHZ	Naumai	6.44	209	P	Pn	18 54 57.8	-2.6
NMHZ				S	Sn	18 56 09.8	-2.6
ARHZ	Aropaoanui	6.51	207	P	Pn	18 54 58.8	-2.4
WATZ	Wairara	6.61	217	P	Pn	18 55 02.1	-0.5
BKZ	Black Stump Fm	6.63	210	P	Pn	18 54 59.6	-3.3
RITZ	Rihia Road	6.76	214	P	Pn	18 55 04.0	-0.7
MCHZ	McNeill Hill	6.78	208	P	Pn	18 55 02.2	-2.8
CKHZ	Cape Kidnapper	6.83	205	P	Pn	18 55 04.4	-1.2
KWHZ	Kaweka Forest	6.87	209	P	Pn	18 55 03.6	-2.7
HIZ	Hauiti	6.93	222	P	Pn	18 55 07.0	+0.1
KAHZ	Kahuranaki	7.02	205	P	Pn	18 55 04.9	-3.3
TWVZ	Taurewa	7.03	216	P	Pn	18 55 19.0	+11
NGZ	Ngauruhoe	7.04	215	P	Pn	18 55 06.8	-1.7
BHHZ	Black Hill Sta	7.08	211	P	Pn	18 55 05.8	-3.2
KRHZ	Kereru	7.08	209	P	Pn	18 55 04.5	-4.5
TUVZ	Tukino	7.08	214	P	Pn	18 55 07.1	-2.1
FWVZ	Far West T-bar	7.12	215	P	Pn	18 55 07.7	-2.1
WHVZ	Whangaehu Hut	7.12	214	P	Pn	18 55 07.7	-2.1
MOVZ	Moawhango	7.15	213	P	Pn	18 55 06.7	-3.3
PXZ	Pawanui	7.24	204	P	Pn	18 55 07.2	-3.9
PKVZ	Pokaka	7.25	215	P	Pn	18 55 08.9	-2.4
BFZ	Birch Farm	8.03	205	P	Pn	18 55 16.2	-5.7
MRZ	Mangatainoka R	8.27	209	P	Pn	18 55 18.4	-6.7
HOWZ	Holdsworth Sta	8.49	208	P	Pn	18 55 21.7	-6.5
OGWZ	Otaki Gorge	8.56	210	P	Pn	18 55 23.5	-5.6

KIW	Kapiti Island	8.71	211	P	Pn	18 55 24.9	-6.2
MTW	Mount Morrison	8.72	207	P	Pn	18 55 24.6	-6.7
CAW	Cannon Point	8.85	209	P	Pn	18 55 26.5	-6.6
PAWZ	Paruwai Farm	8.94	207	P	Pn	18 55 28.4	-6.0
MSWZ	Moikau Station	9.04	207	P	Pn	18 55 29.3	-6.3
DUWZ	D’Urville Isla	9.11	215	P	Pn	18 55 31.2	-5.5
PLWZ	Palliser	9.17	207	P	Pn	18 55 31.4	-6.1
TCW	Tory Channel	9.27	212	P	Pn	18 55 32.3	-6.5
TUWZ	Tuamarina	9.60	212	P	Pn	18 55 36.6	-6.6
NNZ	Nelson	9.69	215	P	Pn	18 55 37.9	-6.6
BSWZ	Blackbirch Sta	9.86	212	P	Pn	18 55 40.1	-6.7
THZ	Tophouse	10.34	215	P	Pn	18 55 46.5	-6.8
KHZ	Kahutara	10.57	210	P	Pn	18 55 49.2	-7.2
LTZ	Lake Taylor	11.43	213	P	Pn	18 55 59.5	-8.5
INZ	Inchbonnie	11.77	216	P	Pn	18 56 05.5	-7.1
OKCZ	Okains Bay	11.85	208	P	Pn	18 56 06.5	-7.2
OXZ	Oxford	11.96	212	P	Pn	18 56 06.1	-9.0
MQZ	McQueen’s Vall	12.00	209	P	Pn	18 56 06.5	-9.2
AKCZ	Akaroa Harbour	12.04	208	P	Pn	18 56 09.1	-7.1
RPZ	Rata Peaks	12.71	214	P	Pn	18 56 17.7	-7.3
	0.7nm,0.3s,baz=235,slow=1.0,SNR=9.2						
RPZ				S	Sn	18 58 28.3	-16
	1.0nm,0.3s,baz=314,slow=23,SNR=7.5						
RPZ	Rata Peaks	12.71	214	P	Pn	18 56 17.7	-7.3
ODZ	Otahua Downs	13.93	211	P	Pn	18 56 33.1	-7.9
DZM	Mont Dzumac	17.00	308	LR	LR	19 02 28.1	
	comp=Z,59nm,21.4s,baz=142,slow=32						
RAR	Rarotonga	21.14	60	LR	LR	19 07 48.7	
	comp=Z,40nm,18.1s,baz=264,slow=41						
STKA	Stephens Creek	32.87	262	P	P	18 59 53.0	+0.5
	1.3nm,0.8s,baz=116,slow=13,SNR=3.1						
STKA				LR	LR	19 11 01.4	
	comp=Z,45nm,19.2s,baz=28,slow=32						
CTA	Charters Tower	33.40	285	P	P	18 59 57.5	+0.3
	5.0nm,0.6s,baz=180,slow=7.8,SNR=9.6						
CTAO	Charters Tower	33.40	285	eP	P	18 59 59.0	+1.8
	37nm,0.7s						
ASAR	Alice Springs	41.99	271	P	P	19 01 09.5	-0.1
	12nm,0.5s,baz=108,slow=7.6,SNR=281						
ASAR				PcP	PcP	19 03 02.2	-0.8
	0.5nm,0.8s,baz=119,slow=3.9,SNR=4.4						
ASAR				S	S	19 07 19.3	-1.9
	0.7nm,0.9s,baz=129,slow=15,SNR=4.1						
WRAB	Tennant Creek	43.26	276	eP	P	19 01 19.7	-0.2
WRA	Warramunga Arr	43.27	276	P	P	19 01 19.8	-0.1
	7.0nm,0.3s,baz=117,slow=7.7,SNR=138						
WRA				PcP	PcP	19 03 06.5	-0.9
	0.6nm,0.6s,baz=121,slow=3.2,SNR=3.5						
FITZ	Fitzroy Crossi	51.38	273	P	P	19 02 22.5	-0.3
	7.1nm,0.5s,baz=126,slow=8.7,SNR=35						
QSPA	South Pole Qui	56.63	180	P	P	19 03 04.9	+4.4
	7.7nm,0.6s,baz=118,slow=0.3						
QSPA	South Pole Qui	56.63	180	eP	P	19 03 04.6	+4.1
	28nm,0.6s						
MAW	Mawson	69.05	201	P	P	19 04 24.1	+1.6
	2.7nm,0.5s,baz=133,slow=6.6,SNR=10						
SNAA	Sanae	75.10	179	P	P	19 05 01.8	+3.1
SNAA	Sanae	75.10	179	P	P	19 05 01.4	+2.7
	1.0nm,0.4s,baz=180,slow=8.1,SNR=13						
VNA3	Neumayer Olymp	75.30	177	P	P	19 05 02.5	+2.7
VNA1	Neumayer--Stat	75.95	177	P	P	19 05 06.3	+2.9
PETK	Petropavlovsk-	88.55	346	P	P	19 06 09.0	0.0
	1.7nm,0.6s,baz=120,slow=8.0						
NVAR	Mina Array Bea	91.21	43	P	P	19 06 23.2	+1.1
	0.2nm,0.3s,baz=231,slow=5.7,SNR=3.4						
MKAR	Makanchi Array	118.92	309	PKP	PKPdf	19 12 03.9	-0.7
	0.3nm,0.6s,baz=91,slow=1.2,SNR=4.7						
ZALV	Zalesovo Beam	119.61	317	PKP	PKPdf	19 12 05.3	-0.3
	0.5nm,0.5s,baz=107,slow=1.5,SNR=2.8						
KURK	Kurchatov	122.39	313	PKP	PKPdf	19 12 10.8	-0.2
KURBB	Kurchatov Arra	122.42	312	PKP	PKPdf	19 12 10.8	-0.3
	1.3nm,0.7s,baz=119,slow=1.8,SNR=14						
BVAR	Borovoye Array	127.84	314	PKP	PKPdf	19 12 22.3	+0.9
	0.7nm,0.5s,baz=135,slow=3.0,SNR=4.9						
ARCES	ARCESS Array B	141.36	346	PKP	PKPdf	19 12 45.3	-0.9
	1.1nm,0.7s,baz=20,slow=3.9,SNR=5.1						
KBZ	Khabaz	145.85	300	PKPbc	PKPab	19 12 55.4	-0.8
	3.3nm,0.8s,baz=108,slow=4.5,SNR=5.0						
FINES	FINESS Array B	147.63	337	PKPbc	PKPab	19 12 59.8	-2.8
	3.7nm,0.7s,baz=36,slow=4.3,SNR=19						
MMAI	Mount Meron Ar	151.10	279	PKPbc	PKPbc	19 13 10.1	+0.4
	2.1nm,0.5s,baz=77,slow=6.4,SNR=5.1						
NB2	NORSAR Subarra	151.61	349	PKP	PKPbc	19 13 10.3	+0.4
	comp=Z,0.5nm,0.4s,baz=18,slow=2.6						
HFS	Hagfors	152.02	346	PKPbc	PKPbc	19 13 11.0	+0.2
	comp=Z,2.1nm,0.6s,baz=48,slow=2.1,SNR=10.0						
BRTR	Keskin Array B	152.98	293	PKPbc	PKPbc	19 13 13.6	-0.3
	comp=Z,1.0nm,0.5s,baz=150,slow=4.3,SNR=7.9						
AKASG	Malin Array Be	153.00	318	PKPbc	PKPbc	19 13 13.6	+0.3
	comp=Z,0.5nm,0.3s,baz=61,slow=2.8,SNR=6.5						
TORD	Torodi Ar. Bea	159.73	183	PKPab	PKPab	19 13 56.6	+1.8
	baz=177,slow=3.8						

MEX 02 19:01:45.8±0.4, 17°.37N×101°.13W, h18$^{\text{km}}$±308$^{\text{km}}$, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAIG	El Cayaco	0.88	111	eP	Pb	19 01 59.8	-2.8
CAIG				i S	Sb	19 02 10.3	-3.8
ARIG	Puente Sto Nin	1.17	39	eP	Pn	19 02 03.8	-3.5
ARIG				eS	Sb	19 02 17.6	-4.8
MEIG	Mezcala	1.54	69	eP	Pn	19 02 09.4	-3.1
MEIG				eS	Sn	19 02 27.8	-4.3
TLIG	Tlapa	2.45	85	i P	Pn	19 02 23.1	-1.9
TLIG				eS	Sn	19 02 51.5	-3.1
YAIG	Yautepec	2.46	53	i P	Pn	19 02 22.6	-2.6
YAIG				i S	Sn	19 02 51.9	-3.0

MEX 02 19:12:48.5±0.3, 14°.61N×93°.22W, h16$^{\text{km}}$±36$^{\text{km}}$, MD3.5, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		1.09	0	eP	Pb	19 13 05.1	-3.9
PCIG				eS	Sb	19 13 18.9	-4.1
CCIG	Comitan	1.96	32	i P	Pn	19 13 18.0	-3.4
CCIG				eS	Sn	19 13 41.3	-4.5

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*BJI **02** 19:25:16.0, 17°.20S×172°.90W, h5$^{\text{km}}$, mb4.7/5, mB5.2/3, Ms4.7/1, Ms7 4.4/1*
*IDC **02** 19:25:16.6±0.3, 17°.20S×173°.21W, h0$^{\text{km}}$, mb4.7/33, mb1 4.8/34, mb1mx4.7/54, mbtmp4.7/34, ML3.5/1, MS4.2/41, Ms1 4.2/41, ms1mx4.1/55, Error ellipse: s-maj=14.4km s-min=11.0km az=131.0*
*WEL **02** 19:25:18.0, 17°.17S×173°.20W, h10$^{\text{km}}$*
*NEIC **02** 19:25:18.0±0.2, 17°.17S×173°.20W, h10$^{\text{km}}$, mb4.8/16, Error ellipse: s-maj=9.3km s-min=5.9km az=137.0*
*ISCJB **02** 19:25:21.4±0.2, 17°.08S±0°.04×173°.21W±0°.07, h41$^{\text{km}}$, mb4.7/56, MS4.2/42, Error ellipse: s-maj=9.8km s-min=5.0km az=25.1*

ISC 02 19:25:22.9±0.3, 17°.15S±0°.07×173°.21W±0°.08, h41$^{\text{km}}$, n221, σ1$^{\text{s}}$.36/196, mb4.7/56, MS4.2/43, 16C-7D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	3.51	23	Pn	Pn	19 26 07.5	-7.6
	46nm,0.3s,baz=152,slow=1.5,SNR=20						
AFI				Sn	Sn	19 26 44.9	-10
	134nm,0.3s,baz=28,slow=21,SNR=5.4						
AFI				LR	LR	19 27 30.4	
	comp=Z,3µm,18.4s,baz=180,slow=38						
AFI	Afiamalu	3.51	23	eP	Pn	19 26 06.5	-8.5
AFI				Sn	Sn	19 26 44.9	-10
NIUE	Niue	3.67	122	P	Pn	19 26 08.9	-8.2
	baz=3.2,SNR=302						
RAO	Raoul Island	12.79	199	LR	LR	19 32 39.0	
	comp=Z,576nm,18.9s,baz=74,slow=35						
RAR	Rarotonga	13.32	110	Pn	Pn	19 28 21.4	-8.2
	16nm,0.3s,baz=238,slow=5.8,SNR=17						
RAR				Sn	Sn	19 30 36.9	-19
	4.2nm,0.3s,baz=118,slow=17,SNR=3.4						
RAR				LR	LR	19 32 14.1	
	comp=Z,1µm,21.9s,baz=326,slow=31						
RAR	Rarotonga	13.32	110	eP	Pn	19 28 20.5	-9.1
RAR				Sn	Sn	19 30 36.9	-19
DZM	Mont Dzumac	19.77	252	P	P	19 29 49.2	-0.6
	0.1nm,0.3s,baz=90,slow=20,SNR=3.3						
DZM				LR	LR	19 36 22.8	
	comp=Z,1µm,20.2s,baz=82,slow=34						
DZM	Mont Dzumac	19.77	252	eLR	LR	19 34 50.0	
	2µm,23.9s						
WMGZ	Waiomatatini S	21.87	198	P	P	19 30 13.9	+1.8
HAZ	Te Kaha	22.00	199	P	P	19 30 13.7	+0.1
HAZ				S	S	19 34 12.1	-2.0
PUZ	Puketiti	22.15	198	P	P	19 30 14.4	-0.8
RUGZ	Raukumara Rang	22.23	199	P	P	19 30 16.4	+0.2
TWGZ	Tauwhareparae	22.33	199	P	P	19 30 19.3	+2.1
TWGZ				S	S	19 34 23.7	+3.5
OPRZ	Ohinepanea	22.49	202	P	P	19 30 20.4	+1.5
CNGZ	Carnagh Statio	22.54	198	P	P	19 30 23.0	+3.6
PPT2	Papeete2	22.56	95	eLQ	LQ	19 34 27.7	
	629nm,24.2s						
PPT2				eLR	LR	19 35 35.0	
	1µm,24.0s,baz=258						
PPT	Papeete	22.56	95	LR	LR	19 36 27.5	
	comp=Z,560nm,21.1s,baz=222,slow=30						
MWZ	Matawai	22.61	199	P	P	19 30 19.7	-0.5
MWZ				S	S	19 34 26.4	+1.2
URZ	Urewera	22.68	200	P	P	19 30 18.9	-2.0
	50nm,0.5s,baz=67,slow=7.4,SNR=28						
URZ	Urewera	22.68	200	P	P	19 30 19.4	-1.5
KARZ	Kaharoa	22.76	202	P	P	19 30 21.3	-0.4
TOZ	Tahuroa Road	22.78	204	P	P	19 30 22.2	+0.2
RAGZ	Rawiri	22.80	199	P	P	19 30 23.1	+1.0
RIGZ	Rimuhau	22.88	198	P	P	19 30 25.1	+2.1
MUGZ	Murupara	22.99	200	P	P	19 30 24.0	-0.1
RTZ	Ruatahuna	23.04	200	P	P	19 30 23.4	-1.4
SNGZ	Shannon Statio	23.08	199	P	P	19 30 27.3	+2.2
SNGZ				S	S	19 34 37.2	+4.0
TBI	Tubuai	23.11	109	eLR	LR	19 35 43.9	
	2µm,26.5s,baz=283						
TBI	Tubuai	23.11	109	eT	T	19 53 44.9	
	20nm,0.4s						
MHGZ	Mahia Peninsul	23.25	198	P	P	19 30 29.3	+2.6
MRHZ	Matea Rd	23.43	201	P	P	19 30 28.8	+0.3
HNR	Honiara	27.20	283	P	P	19 31 03.5	+0.5
	9.3nm,0.3s,baz=153,slow=4.5,SNR=2.4						
HNR				LR	LR	19 40 10.0	
	comp=Z,2µm,21.2s,baz=142,slow=33						
RPZ	Rata Peaks	29.64	203	P	P	19 31 24.2	-0.4
	16nm,0.7s,baz=270,slow=1.0,SNR=3.8						
RPZ				LR	LR	19 42 41.7	
	comp=Z,500nm,21.6s,baz=30,slow=35						
TAOE	Nuku Hiva Isla	33.21	80	eLR	LR	19 40 23.7	
	784nm,25.5s						
RKT	Rikitea	36.32	106	eLR	LR	19 41 56.0	
	1µm,25.0s						
RKT	Rikitea	36.32	106	eT	T	20 10 02.4	
	9.3nm,0.3s						
CTA	Charters Tower	38.46	259	P	P	19 32 38.5	-2.7
	8.0nm,0.7s,baz=0.6,slow=2.7,SNR=6.1						
PMG	Port Moresby	39.27	276	LR	LR	19 48 23.9	
	comp=Z,228nm,18.1s,baz=100,slow=35						
CMSA	Cobar Meteorol	39.84	241	P	P	19 32 54.2	+1.6
	baz=40,SNR=12						
MTSU	Mount Surprise	40.42	262	P	P	19 33 00.7	+3.1
	baz=41,SNR=5.1						
TOO	Toolangi	41.52	232	P	P	19 33 07.1	+0.7
	baz=42,SNR=7.8						
STKA	Stephens Creek	43.34	242	P	P	19 33 20.6	-0.7
	baz=44,SNR=5.6						
STKA	Stephens Creek	43.34	242	P	P	19 33 19.8	-1.5
	3.4nm,0.6s,baz=89,slow=10.0,SNR=8.2						
STKA				LR	LR	19 51 00.6	
	comp=Z,450nm,18.0s,baz=51,slow=36						
JAY	Jayapura	47.52	283	P	P	19 33 51.8	-2.8
	10nm,0.9s,baz=96,slow=10,SNR=3.4						
WRAB	Tennant Creek	49.63	258	eP	P	19 34 07.4	-3.4
	14nm,0.7s						
WRA	Warramunga Arr	49.64	258	P	P	19 34 08.6	-2.3
	7.3nm,0.9s,baz=97,slow=7.3,SNR=42						
WRA				LR	LR	19 54 55.8	
	comp=Z,389nm,18.8s,baz=80,slow=36						
ASAR	Alice Springs	49.76	253	P	P	19 34 09.7	-2.1
	14nm,0.6s,baz=90,slow=8.2,SNR=259						
ASAR				PcP	PcP	19 35 32.6	+0.3
	6.2nm,1.0s,baz=105,slow=3.6,SNR=2.1						
ASAR				S	S	19 41 12.4	-6.1
	3.6nm,1.2s,baz=89,slow=16,SNR=7.3						
ASAR				LR	LR	19 55 03.4	
	comp=Z,253nm,18.3s,baz=95,slow=36						
GUMO	Guam	51.44	304	LR	LR	19 53 36.7	
	comp=Z,162nm,18.7s,baz=100,slow=33						
KDU	Kakadu	52.54	267	P	P	19 34 35.5	+2.8
	baz=53,SNR=3.9						
SIJI	Sorong	56.93	280	P	P	19 35 03.5	-1.1
	6.7nm,0.3s,baz=144,slow=19,SNR=3.9						
FITZ	Fitzroy Crossi	58.04	259	P	P	19 35 14.5	+2.3
	baz=58,SNR=6.6						
FITZ	Fitzroy Crossi	58.04	259	P	P	19 35 11.0	-1.3
	3.1nm,0.9s,baz=92,slow=8.0,SNR=4.2						
FITZ				LR	LR	19 59 57.0	
	comp=Z,354nm,18.6s,baz=102,slow=36						
RPN	Rapa Nui	59.47	112	LR	LR	19 54 08.5	
	comp=Z,142nm,21.4s,baz=29,slow=29						
BATI	Baumata	61.51	268	LR	LR	20 00 26.8	
	comp=Z,349nm,21.8s,baz=122,slow=34						
SBA	Scott Base	61.53	185	eP	P	19 35 36.5	+1.2
	26nm,0.8s						
VNDA	Vanda	61.66	186	P	P	19 35 36.6	+0.4
	10nm,0.9s,baz=8.6,slow=6.3,SNR=57						
VNDA				LR	LR	19 57 19.6	
	comp=Z,64nm,21.5s,baz=16,slow=31						
MBWA	Marble Bar	63.06	255	eP	P	19 35 45.8	-0.7
MUN	Mundaring	64.87	242	P	P	19 35 58.2	0.0
	baz=65,SNR=5.4						
JHJ	Hachijo jima 2	67.18	318	LR	LR	19 59 16.6	
	comp=Z,83nm,21.7s,baz=126,slow=30						
CASY	Casey	68.90	205	eP	P	19 36 23.1	-0.1
	13nm,0.9s						
MJAR	Matsushiro Arr	70.39	320	P	P	19 36 36.0	+3.1
	1.2nm,0.5s,baz=161,slow=6.6,SNR=5.4						
MJAR				LR	LR	20 01 50.0	
	comp=Z,202nm,22.0s,baz=110,slow=31						
JOW	Kunigami	71.66	307	LR	LR	20 02 34.8	
	comp=Z,259nm,21.9s,baz=122,slow=31						
TGY	Tagaytay City	72.03	291	LR	LR	20 04 27.3	
	comp=Z,361nm,20.6s,baz=98,slow=33						
QSPA	South Pole Qui	72.90	180	P	P	19 36 47.4	-0.3
	38nm,0.9s,baz=43,slow=3.1,SNR=84						
QSPA	South Pole Qui	72.90	180	eP	P	19 36 47.3	-0.5
ASAJ	Asahikawa	73.11	328	P	P	19 36 50.6	+1.6
	5.3nm,0.8s,baz=68,slow=14,SNR=2.6						
ASAJ				LR	LR	20 03 01.8	
	comp=Z,148nm,22.0s,baz=169,slow=31						
JNU	Nakatsue	73.12	313	P	P	19 36 49.9	+0.5
	3.9nm,0.7s,baz=114,slow=10.0,SNR=2.0						
LPIG	La Paz	73.80	58	LR	LR	20 04 50.4	
	comp=Z,71nm,18.6s,baz=216,slow=32						
PETK	Petropavlovsk-	74.34	342	P	P	19 36 56.3	+0.2
	2.7nm,0.7s,baz=142,slow=7.3						
PETK				LR	LR	20 08 30.5	
	comp=Z,40nm,18.6s,baz=159,slow=35						
YBH	Yreka Blue Hor	74.88	37	P	P	19 36 59.4	-0.1
	5.7nm,0.9s,baz=173,slow=8.1,SNR=7.9						
YBH				LR	LR	20 01 57.0	
	comp=Z,142nm,21.7s,baz=236,slow=29						
NVAR	Mina Array Bea	75.51	42	P	P	19 37 03.0	-0.4
	4.7nm,0.8s,baz=226,slow=9.8,SNR=19						
NVAR				LR	LR	20 03 03.2	
	comp=Z,112nm,20.7s,baz=103,slow=30						
MOD	Modoc Plateau	76.38	38	eP	P	19 37 07.7	-0.5
	7.6nm,0.8s						
KDAK	Kodiak Island	76.59	11	P	P	19 37 08.4	-0.4
	8.6nm,0.7s,baz=204,slow=1.3,SNR=6.6						
KDAK				LR	LR	20 04 20.1	
	comp=Z,203nm,20.9s,baz=195,slow=31						
BMN	Battle Mountai	77.36	40	eP	P	19 37 12.9	-0.8
	4.5nm,0.9s						
TUC	Tucson	77.36	50	eP	P	19 37 14.0	+0.1
	8.6nm,1.1s						
KSRS	Korea Array	77.53	316	P	P	19 37 14.9	+0.4
	0.4nm,0.5s,baz=44,slow=38,SNR=2.8						
KSRS				LR	LR	20 08 51.1	
	comp=Z,109nm,18.9s,baz=126,slow=34						
KSAR	Wonju Array Be	77.55	316	P	P	19 37 14.9	+0.3
WVOR	Wild Horse Val	77.69	38	eP	P	19 37 12.2	-3.3
	102nm,0.8s						
LEM	Lembang	77.70	267	P	P	19 37 18.2	+1.9
	41nm,0.7s,baz=18,slow=20,SNR=2.6						
LEM				LR	LR	20 11 43.1	
	comp=Z,103nm,21.0s,baz=112,slow=36						
NLWA	Neilton Lookou	77.98	32	eP	P	19 37 17.0	+0.1
	8.3nm,1.1s						
ELK	Elko	78.78	41	LR	LR	20 05 29.1	
	comp=Z,124nm,19.2s,baz=244,slow=31						
USRK	Ussuriysk Ar.	78.88	323	LR	LR	20 06 24.8	
	comp=Z,234nm,21.5s,baz=126,slow=31						
BMO	Blue Mountains	79.91	37	eP	P	19 37 26.9	-0.8
	4.1nm,0.8s						
MFID	Camas Ranch	79.93	39	eP	P	19 37 27.3	-0.5
	6.9nm,0.8s						
HLID	Hailey	80.86	39	eP	P	19 37 32.7	-0.2
	9.2nm,0.8s						
MNTX	Cornudas Mount	81.13	53	eP	P	19 37 33.8	-0.6
	8.7nm,1.1s						
TXAR	Lajitas Array	81.44	56	P	P	19 37 36.2	0.0
	6.0nm,1.0s,baz=223,slow=6.8,SNR=9.7						
TXAR				LR	LR	20 05 35.2	
	comp=Z,72nm,21.0s,baz=0.0,slow=30						
ANMO	Albuquerque	81.79	50	P	P	19 37 38.0	0.0
	2.7nm,0.9s,baz=240,slow=8.1,SNR=2.8						
ANMO				LR	LR	20 06 09.9	
	comp=Z,86nm,20.7s,baz=246,slow=30						
MA2	Magadan	81.88	342	P	P	19 37 37.9	+0.2
	1.6nm,0.5s,baz=138,slow=16,SNR=2.1						
NEW	Newport	82.05	34	LR	LR	20 05 21.8	
	comp=Z,70nm,21.3s,baz=198,slow=29						
KLR	Kul’dur	82.08	327	LR	LR	20 08 41.9	
	comp=Z,8.0nm,21.7s,slow=32						
CN2	Changchun	82.54	320	eP	P	19 37 51.0	+10
DLBC	Dease Lake	83.26	21	P	P	19 37 44.8	-0.1
	3.5nm,0.8s,baz=216,slow=7.0,SNR=5.6						
BW06	Boulder Array	83.44	42	eP	P	19 37 45.6	-0.9
PDAR	Pinedale Array	83.44	42	P	P	19 37 45.9	-0.6
	7.4nm,0.8s,baz=214,slow=3.6,SNR=27						
PDAR				LR	LR	20 07 54.2	
	comp=Z,80nm,20.7s,baz=239,slow=31						
BOZ	Bozeman (W)	83.64	38	eP	P	19 37 47.1	-0.2
	7.5nm,0.8s						
SDCO	Great Sand Dun	83.75	48	eP	P	19 37 48.0	-0.3
	3.8nm,0.9s						
ILAR	Eielson Array	84.12	11	P	P	19 37 48.2	-0.9
	2.4nm,0.8s,baz=209,slow=5.5,SNR=15						
ILAR				LR	LR	20 12 45.0	
	comp=Z,80nm,18.1s,baz=193,slow=34						
SEY	Seymchan	84.25	345	P	P	19 37 49.7	-0.1
	2.3nm,0.7s,baz=126,slow=7.5,SNR=6.8						
RLMT	Red Lodge	84.82	40	eP	P	19 37 53.6	+0.1
	9.0nm,1.0s						
DAWY	Dawson	85.06	14	eP	P	19 37 54.1	+0.1
EGAK	Eagle	85.27	13	eP	P	19 37 54.9	-0.1
MAW	Mawson	86.20	199	P	P	19 38 00.0	+0.3
	baz=86,SNR=26						
MAW	Mawson	86.20	199	P	P	19 37 59.5	-0.1
	9.7nm,0.7s,baz=135,slow=5.9,SNR=35						
BILL	Bilibino	86.26	352	eP	P	19 37 59.8	0.0
	7.8nm,0.9s						
RSSD	Black Hills	87.62	42	eP	P	19 38 06.0	-1.3
	4.9nm,1.0s						
PLCA	Paso Flores	88.21	132	P	P	19 38 09.9	-0.2
	5.9nm,0.9s,baz=270,slow=5.4,SNR=7.7						
PSI	Prapat	88.77	273	P	P	19 38 13.9	+0.6
	4.6nm,0.7s,baz=180,slow=3.2,SNR=3.0						
XAN	Xi’an	89.79	306	P	P	19 38 27.9	+10
XAN				pP	sP	19 38 32.7	-2.0
XAN				pmax	pmax		
	comp=Z,7.0nm,1.4s						
INK	Inuvik	89.92	14	P	P	19 38 16.6	-0.6
	comp=Z,2.0nm,0.8s,baz=196,slow=7.4,SNR=3.3						
VNA3	Neumayer Olymp	91.11	175	P	P	19 38 22.5	-0.5
SNAA	Sanae	91.16	177	P	P	19 38 22.6	-0.6
SNAA	Sanae	91.16	177	P	P	19 38 22.7	-0.6
	comp=Z,11nm,0.8s,baz=187,slow=4.4,SNR=42						
YKA	Yellowknife Ar	91.62	23	P	P	19 38 24.9	-0.4
	comp=Z,2.3nm,0.8s,baz=237,slow=4.0,SNR=9.2						
YKA				LR	LR	20 12 55.9	
	comp=Z,10.0nm,20.9s,baz=240,slow=31						
VNA1	Neumayer--Stat	91.80	175	P	P	19 38 26.1	-0.1
NNA	Nana	92.48	103	LR	LR	20 11 30.1	
	comp=Z,85nm,19.7s,baz=244,slow=30						
CMAR	Chiang Mai Arr	93.33	288	P	P	19 38 33.5	-0.7
	comp=Z,0.6nm,0.8s,baz=116,slow=2.3,SNR=2.9						
CMAR				LR	LR	20 16 36.1	
	comp=Z,93nm,20.9s,baz=94,slow=33						
ULM	Lac du Bonnet	95.17	39	P	P	19 38 40.0	-1.9
	comp=Z,3.3nm,0.6s,baz=242,slow=1.5,SNR=3.1						
ULM				LR	LR	20 14 34.2	
	comp=Z,153nm,21.7s,baz=287,slow=31						
SONM	Songino Array	96.26	318	P	P	19 38 51.9	+4.7
	comp=Z,0.3nm,0.4s,baz=64,slow=3.4,SNR=2.2						
SONM				LR	LR	20 17 07.0	
	comp=Z,62nm,21.3s,baz=76,slow=32						
GTA	Gaotai	98.41	309	eP	Pdif	19 39 07.1	+10
GTA				pP	sP	19 39 12.4	-1.8
GTA				sP	pP	19 39 15.2	+5.6
GTA				pmax	pmax		
	comp=Z,2.0nm,1.3s						
LPAZ	La Paz	99.05	110	LR	LR	20 13 28.5	
	comp=Z,124nm,21.9s,baz=188,slow=29						
ROSC	El Rosal	99.90	88	LR	LR	20 17 16.4	
	comp=Z,48nm,18.7s,baz=180,slow=31						
ZALV	Zalesovo Beam	110.71	322	PKiKP	PKiKP	19 43 50.5	-0.6
	comp=Z,0.4nm,0.3s,baz=323,slow=0.7,SNR=3.7						
MKAR	Makanchi Array	112.17	314	PKiKP	PKiKP	19 43 53.6	-0.5
	comp=Z,1.7nm,0.6s,baz=76,slow=0.4,SNR=16						
KURK	Kurchatov	114.56	318	PKP	PKPdf	19 43 58.4	-0.2
KURBB	Kurchatov Arra	114.63	318	PKP	PKPdf	19 43 58.3	-0.3
	comp=Z,1.9nm,0.6s,baz=91,slow=1.8,SNR=20						
SPITS	Spitsbergen Ar	118.76	358	PKP	PKPdf	19 44 05.9	0.0
	comp=Z,5.5nm,0.9s,baz=132,slow=8.7,SNR=3.5						
BVAR	Borovoye Array	119.36	322	PKP	PKPdf	19 44 07.6	-0.1
	comp=Z,4.6nm,0.8s,baz=90,slow=1.4,SNR=34						
ARU	Arti	124.91	328	ePKPdf	PKPdf	19 44 17.7	-0.5
ARCES	ARCESS Array B	126.36	352	PKP	PKPdf	19 44 20.7	0.0
	comp=Z,2.9nm,0.7s,baz=5.0,slow=2.4,SNR=11						
AKTO	Aktyubinsk	127.46	321	PKP	PKPdf	19 44 23.6	+0.3
	comp=Z,2.0nm,0.8s,baz=50,slow=2.5,SNR=6.5						
GEYT	Alibeck	130.68	306	PKP	PKPdf	19 44 30.2	+0.3
	comp=Z,0.6nm,0.5s,baz=252,slow=8.7,SNR=4.8						
FINES	FINESS Array B	133.68	347	PKP	PKPdf	19 44 34.2	-0.5
	comp=Z,2.1nm,0.8s,baz=11,slow=3.0,SNR=4.7						
AKASG	Malin Array Be	142.01	337	PKhKP	PKPpre	19 44 46.9	
	comp=Z,0.8nm,0.5s,baz=40,slow=3.7,SNR=5.9						
KWP	Kalwaria Pacla	145.13	342	ePKP	PKPdf	19 44 56.3	+0.3
OJC	Ojcow	145.39	345	ePKP	PKPab	19 44 56.9	+0.4
KSP	Ksiaz	145.54	349	ePKP	PKPab	19 44 57.6	+0.6
CLL	Collm	145.56	353	i PKPbc	PKPab	19 44 57.1	0.0
	comp=Z,11nm,0.9s						
CLL				L	L	20 53 00.0	
	comp=Z,100nm,20.2s						
BRG	Berggiesshubel	145.87	352	ePKP	PKPab	19 44 58.1	-0.1
	comp=Z,11nm,1.2s						
KOLS	Kolonicke sedl	145.88	342	ePKP	PKPab	19 45 00.0	+1.6
NIE	Niedzica	146.00	344	ePKP	PKPab	19 44 59.4	+0.5
DPC	Dobruska-Polom	146.00	349	ePKP	PKPab	19 44 59.2	+0.4
DPC				ex	x	19 45 07.5	
BURAR	Bucovina Array	146.05	337	⇑iP	PKPab	19 44 59.5	+0.3
PVCC	Panska Ves	146.12	351	ePKP	PKPab	19 45 04.4	+5.2
OKC	Ostrava-Krasne	146.13	347	ePKP	PKPab	19 44 59.8	+0.6
CRVS	Cervenica-Dubn	146.15	343	ePKP	PKPab	19 45 03.1	+3.7
KRLC	Kraliky	146.18	348	ePKP	PKPab	19 45 01.1	+1.6
BIZ	Bicaz	146.27	336	⇓iP	PKPab	19 45 00.0	+0.1
MORC	Moravsky Berou	146.31	347	ePKP	PKPab	19 45 00.3	+0.3
TESR	Tescani	146.41	335	⇑iP	PKPab	19 45 00.4	-0.1
LANS	Liptovska Anna	146.46	345	ePKP	PKPab	19 45 01.1	+0.5
TLCR		146.51	331	⇑iP	PKPab	19 45 01.4	+0.5
TRPA	Tarpa	146.52	341	⇑iP	PKPab	19 45 00.6	-0.2
PRU	Pruhonice	146.65	351	ePKP	PKPbc	19 44 59.7	-0.4
PRU				AMS	AMS	20 49 00.0	
	comp=Z,100nm,18.1s						
GOPC	GO Pecny, Ondr	146.69	351	ePKP	PKPab	19 45 01.0	-0.4
GOPC				AMS	AMS	20 49 20.0	
	comp=Z,100nm,21.6s						
CFR	Carcaliu	146.82	332	⇓iP	PKPdf	19 44 58.7	-0.2
VRI	Vrincioaia	146.89	334	⇓iP	PKPbc	19 45 01.7	+0.7
PLOR	Plostina	146.94	334	⇑iP	PKPbc	19 45 01.8	+0.6
VRAC	Vranov	146.95	348	ePKP	PKPab	19 45 02.4	-0.1
JAVC	Velka Javorina	147.15	347	ePKP	PKPab	19 45 04.1	+0.8
KRUC	Moravsky	147.22	348	ePKP	PKPbc	19 45 02.3	+0.5
VYHS	Vyhne	147.22	345	ePKP	PKPab	19 45 02.8	-0.8
TIRR	Tirgusor	147.25	331	⇓iP	PKPbc	19 45 02.7	+0.7
HARR	Harsova	147.29	332	⇑iP	PKPab	19 45 03.4	-0.5
TLB	Topalu	147.32	331	⇓iP	PKPab	19 45 03.2	-0.8
DOPR	Dopca	147.35	336	⇑iP	PKPab	19 45 04.9	+0.7
MLR	Muntele Rosu	147.52	335	PKPbc	PKPbc	19 45 03.4	+0.5
	comp=Z,2.2nm,0.9s,baz=3.9,slow=3.7,SNR=15						
MLR	Muntele Rosu	147.52	335	⇑iP	PKPbc	19 45 03.8	+0.9
ISR	Istrita	147.57	333	⇑iP	PKPbc	19 45 03.9	+0.9
BRTR	Keskin Array B	147.61	319	PKPbc	PKPbc	19 45 03.9	+0.5
	comp=Z,9.0nm,0.8s,baz=132,slow=3.0,SNR=36						
KHC	Kasperske Hory	147.63	352	ePKP	PKPbc	19 45 03.9	+0.9

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KHC                                 ex      x        19 45 11.7
KHC                                  AMS    AMS      20 49 30.0
      comp=Z,100nm,20.8s
DRGR                     147.63 339⇑iP      PKPbc    19 45 03.8 +0.7
MODS  Modra-Piesok       147.70 347 ePKP    PKPab    19 45 04.6 -0.9
GERES GERESS Array B     147.89 351  PKPbc  PKPbc    19 45 04.1 +0.4
      comp=Z,3.6nm,0.7s,baz=39,slow=2.6,SNR=34
VOIR                     147.93 335⇑iP      PKPab    19 45 05.3 -1.3
ANTO  Ankara             148.04 320⇓iP      PKPbc    19 45 05.3 +0.9
ANTO  Ankara             148.04 320 ePKPbc  PKPbc    19 45 05.2 +0.8
ARR   Arges              148.15 336⇑iP      PKPab    19 45 06.3 -1.1
CONA  Conrad Observa     148.41 348 i PKiKP PKiKP    19 45 06.0 -0.7
      comp=Z,9.0nm,0.9s,SNR=6.9
MOA   Molln              148.77 350 i PKiKP PKPbc    19 45 06.5 +0.5
      comp=Z,4.0nm,0.6s
BFO   Black Forest       148.88 358 ePKPbc  PKPbc    19 45 06.7 +0.5
ASF   Jabal al Asfar     148.95 304  PKPbc  PKPbc    19 45 07.9 +0.9
      comp=Z,3.4nm,0.8s,baz=69,slow=2.0,SNR=7.7
BZS   Buzias             149.03 340⇑iP      PKPbc    19 45 07.4 +0.7
ARSA  Arzberg            149.13 348 i PKPbc PKPbc    19 45 05.7 -1.2
      comp=Z,1.9nm,0.7s
HERR  Herculane          149.40 338⇑iP      PKPbc    19 45 08.2 +0.6
RETA  Reutte             149.57 355 i PKiKP PKPbc    19 45 08.4 +0.3
      comp=Z,7.6nm,0.8s
WATA  Walderalm          149.64 354 i PKiKP PKiKP    19 45 09.5 +0.1
      comp=Z,5.3nm,0.5s,SNR=5.7
KBA   Koelnbreinsper     149.67 351 i PKiKP PKPbc    19 45 08.5  0.0
      comp=Z,5.0nm,0.6s
MOTA  Moosalm            149.68 354 i PKiKP PKiKP    19 45 09.5  0.0
      comp=Z,14nm,1.0s,SNR=8.5
WTTA  Wattenberg         149.70 353 i PKiKP PKPbc    19 45 08.9 +0.4
      comp=Z,8.1nm,0.5s
MDVR  Moldovita          149.73 339⇑iP      PKPbc    19 45 08.6 +0.1
SOKA  Soboth             149.77 349 ePKiKP  PKPbc    19 45 08.5 -0.1
      comp=Z,14nm,1.3s,SNR=6.4
MMAI  Mount Meron Ar     149.78 307  PKPbc  PKPbc    19 45 10.0 +1.0
      comp=Z,6.3nm,0.7s,baz=64,slow=6.6,SNR=10
PERS  Pernice            149.80 349 i PKPdf PKPbc    19 45 08.3 -0.4
DAVA  Damuels            149.84 356 i PKiKP PKPbc    19 45 09.4 +0.5
      comp=Z,20nm,1.1s,SNR=5.6
OBKA  Obir               150.02 349 ePKiKP  PKPbc    19 45 09.0 -0.3
      comp=Z,4.3nm,0.8s
FETA  Feichten           150.03 355 i PKiKP PKiKP    19 45 10.0 -0.3
      comp=Z,17nm,1.0s,SNR=5.9
MYKA  Terra Mystica      150.06 351 ePKPbc  PKPbc    19 45 08.9 -0.4
      comp=Z,6.7nm,0.9s
ABTA  Abfaltersbach      150.11 352 i PKiKP PKPbc    19 45 09.2 -0.2
      comp=Z,9.7nm,0.6s,SNR=8.2
DAVOX Davos/Dischmat     150.34 356  PKP    PKPdf    19 45 05.9 +1.0
      comp=Z,12nm,0.7s,baz=76,slow=4.2,SNR=3.1
DAVOX                                PKPbc  PKiKP    19 45 10.7 -0.2
      comp=Z,13nm,0.8s,baz=338,slow=5.4,SNR=14
VISS  Visnje             150.65 348 i PKPdf PKPbc    19 45 10.8 +0.1
JAVS  Javornik           150.71 350 i PKPdf PKPbc    19 45 10.8  0.0
BOJS  Bojanci            150.86 348 i PKPdf PKPbc    19 45 11.9 +0.8
BLY   Banja Luka         151.13 345⇑iP      PKPbc    19 45 11.8  0.0
PGAV  Gavieira, Arco     152.10  24 ePKPbc  PKPbc    19 45 14.7 +0.4
PCAB  Cabril             152.42  24 ePKPbc  PKPbc    19 45 15.6 +0.7
PDG   Podgorica          152.64 340⇓iP      PKPbc    19 45 15.1 -0.2
POLO  Lamas de Olo       152.79  24 ePKPbc  PKPbc    19 45 16.3 +0.5
POLO  Lamas de Olo       152.79  24 ePKPab  PKPab    19 45 26.2 -0.5
PBRG  Braganca           152.82  23 ePKPbc  PKPbc    19 45 15.8  0.0
PVRL  Vila Real          152.91  24 ePKPbc  PKPbc    19 45 16.5 +0.5
MVO   Moncorvo           153.27  24 ePKPbc  PKPbc    19 45 17.3 +0.5
PVIS  Viseu              153.31  25 ePKPbc  PKPbc    19 45 17.1 +0.2
PCAS  Casmilo, Conde     153.61  27 ePKPbc  PKPbc    19 45 18.4 +0.9
MTE   Manteigas          153.72  25 ePKPbc  PKPbc    19 45 18.1 +0.3
PTOM  Tomar              154.00  28 ePKPbc  PKPbc    19 45 18.7 +0.3
PCBR  Castelo Branco     154.22  26 ePKPbc  PKPbc    19 45 19.1 +0.3
ESDC  Sonseca Array      155.69  20  PKP    PKPdf    19 45 13.2 +0.5
      comp=Z,0.4nm,0.5s,baz=324,slow=3.4,SNR=3.7
ESDC                                 PKPbc  pPKPdf   19 45 22.0 -3.7
      comp=Z,0.3nm,0.4s,baz=333,slow=3.3,SNR=6.5
DBIC  Dimbokro           164.57 131  PKPab  PKPab    19 46 17.2 -1.1
      comp=Z,6.3nm,0.8s,baz=246,slow=10.0,SNR=3.7
KOWA  Kowa               169.27 103  PKPab  PKPab    19 46 38.4 -0.8
      comp=Z,6.1nm,0.8s,baz=274,slow=6.8,SNR=7.5
TORD  Torodi Ar. Bea     173.68 128  PKP    PKPdf    19 45 27.0 -1.9
      comp=Z,1.9nm,1.0s,baz=322,slow=1.9
TORD                                 PKPab  PKPab    19 46 57.2 -1.4
      baz=280,slow=4.5
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BJI ***02*** *19:26:13.4, 52.°00N×173.°70W, h17^{km}, mb4.7/24, mB4.8/15, Ms4.3/7, Ms7 4.1/7*

ISCJB ***02*** *19:26:13.3±0.1, 52.°03N±0.°03×173.°59W±0.°03, h10^{km}, mb4.7/197, MS3.7/21, Error ellipse: s-maj=4.9km s-min=2.3km az=172.3*

IDC ***02*** *19:26:14.4±0.4, 52.°25N×173.°64W, h0^{km}, mb4.4/36, mb1 4.5/38, mb1mx4.4/81, mbtmp4.4/38, ML4.2/1, MS3.7/21, Ms1 3.7/21, ms1mx3.4/72, Error ellipse: s-maj=13.5km s-min=9.5km az=163.0*

NEIC ***02*** *19:26:16.0±0.0, 51.°87N×173.°64W, h21^{km}, mb4.8/182, ML4.5(AEIC), After AEIC.*

GCMT ***02*** *19:26:16.0±0.5, 52.°31N×173.°43W, h21^{km}±1^{km}, MW4.8/70, Moment Tensor Solution. s27,c33; s70,c86; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.05±.15; $M_{\theta\theta}$0.69±.10; $M_{\phi\phi}$1.36±.10; $M_{r\theta}$0.69±.21; $M_{\theta\phi}$-0.43±.07; $M_{\phi r}$-0.58±.15; Best double couple: $M_0$2.01400×10^{16} NP1:ϕ_s325.00000°, δ58.00000°, λ-98.00000°. NP2: ϕ_s159.00000°, δ33.00000°, λ-78.00000°. Principal axes: T 1.7560, Plg12.0000°, Azm60.0000°; N 0.5190, Plg6.0000°, Azm329.0000°; P -2.2720, Plg76.0000°, Azm212.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

MOS ***02*** *19:26:18.5±0.9, 52.°33N×173.°76W, h34^{km}, mb4.8/43 Error ellipse: s-maj=7.9km s-min=7.2km az=63.3*

ISC 02 19:26:16.5±1.0**, 52.°09N**±0.°06×**173.°63W**±0.°03**, h14**^{km}±5^{km}**, n577, σ1.^{s}63**/593**, mb4.8**/196**, MS3.8**/22**, 12C-6D,**
Andreanof Islands

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Code  Station Name          Δ°   AZ°   Phase ID          Time     Res
                                      Op     ISC       h  m  s    ISC
NIKH  Nikolski High        3.05  71  P      Pn       19 27 04.0 -0.2
NIKH                                 S      Sn       19 27 42.0 +1.6
OKAK  Okmok                3.52  63  P      Pn       19 27 11.3 +0.5
OKTU  Okmok Mt. Tuli       3.63  67  P      Pn       19 27 13.3 +1.0
OKER  Okmok East Rim       3.65  66  P      Pn       19 27 13.8 +1.2
CETU  Semis' Tuman         4.25 271  P      Pn       19 27 20.4 -0.4
AMKA  Amchitka             4.45 264  P      Pn       19 27 23.6 +0.1
AMKA                                 S      Sn       19 28 14.1 -1.0
MCIR  Makushin Cirqu       4.47  63  P      Pn       19 27 25.1 +1.2
MTBL  Makushin Table       4.59  63  P      Pn       19 27 26.9 +1.3
UNV   Unalaska Valle       4.65  65  P      Pn       19 27 27.5 +1.3
UNV                                  S      Sn       19 28 23.1 +3.1
AKMO  Akutan Morgan        5.01  63  P      Pn       19 27 33.5 +2.4
HSB   Akutan Spr's B       5.09  63  P      Pn       19 27 34.7 +2.3
AKUT  Akutan               5.15  64  P      Pn       19 27 35.5 +2.4
SPIA  Saint Paul Isl       5.46  20  P      Pn       19 27 38.7 +1.4
WESP  Westdahl Peak        5.86  62  P      Pn       19 27 44.7 +1.9
WESE  West Dahl East       5.92  63  P      Pn       19 27 46.1 +2.3
FALS  False Pass           6.69  62  P      Pn       19 27 57.1 +2.8
SMY   Shemya               7.54 280  P      Pn       19 28 06.8 +1.0
SMY   Shemya               7.54 280  P      Pn       19 28 06.8 +1.0
SDPT  Sand Point           8.45  62  P      Pn       19 28 19.2 +0.8
CHGN  Chignik              9.86  59 ePn     Pn       19 28 37.7 +0.1
OHAK  Old Harbor          12.82  58 ePn     Pn       19 29 23.7 +5.5
KDAK  Kodiak Island       13.34  56  Pn     Pn       19 29 22.3 -2.9
      0.9nm,0.3s,baz=238,slow=6.7,SNR=9.2
KDAK                                 Sn     Sn       19 31 50.1 -3.0
      baz=108,slow=20,SNR=2.0
KDAK                                 LR     LR       19 35 25.7
      comp=Z,2µm,18.3s,baz=242,slow=42
KDAK  Kodiak Island       13.34  56ceP      Pn       19 29 23.8 -1.4
SVW2  Sparrevohn          13.38  41 ePn     Pn       19 29 26.4 +0.7
CNPM  China Poot          14.57  51 ePn     P        19 29 46.8 -1.7
BRLK  Bradley Lake        14.82  50 ePn     P        19 29 48.8 -2.5
SKT   Skwentna            15.49  42 ePn     P        19 29 57.4 -1.3
      70nm,0.9s
SUA   Susitna One         15.58  44 ePn     Pn       19 29 57.8 +2.3
      28nm,1.0s
PPLA  Purkeypile          15.71  38 ePn     P        19 30 00.2 -1.1
      64nm,1.1s
RC01  Rabbit Creek A      15.86  46 ePn     Pn       19 30 00.8 +1.8
      75nm,1.7s
CAST  Castle Rocks        16.05  37 ePn     P        19 30 03.6 -1.3
      107nm,1.3s
GHO   Glory Hole Cre      16.49  44 ePn     Pn       19 30 08.5 +1.3
      33nm,1.2s
KTH   Kantishna Hill      16.55  37 ePn     P        19 30 09.9 -0.7
      135nm,0.9s
TRF   Thorofare Moun      16.74  38 ePn     P        19 30 12.6 -0.1
      43nm,1.0s
SML   Sawmill             16.77  45 ePn     Pn       19 30 10.5 -0.1
      20nm,0.8s
SML   Sawmill             16.77  45 eP      Pn       19 30 10.5 -0.1
SML                                  pmax   pmax
      comp=Z,20nm,0.8s
RDOG  Red Dog Mine        16.83  14 ePn     P        19 30 12.7 -0.8
      comp=Z,57nm,1.7s
BPAW  Bear Paw Mtn.       16.84  36 ePn     P        19 30 13.3 -0.3
      comp=Z,108nm,1.4s
PET   Petropavlovsk       16.84 284c iP     Pn       19 30 08.9 -2.7
PET                                 eS      Sn       19 33 14.0 -4.4
PET                                  pmax   pmax
      comp=Z,100nm,11.1s
PET                                  MLR    MLR
      comp=Z,200nm,14.0s
PET                                  MLR    MLR
      comp=Z,200nm,18.0s
IM3   Indian Mountai      17.15  28 ePn     P        19 30 18.3 +1.3
SCM   Sheep Creek Mo      17.21  45 ePn     Pn       19 30 16.0 -0.3
      comp=Z,21nm,0.8s
SCM   Sheep Creek Mo      17.21  45 eP      Pn       19 30 16.0 -0.3
SCM                                  pmax   pmax
      comp=Z,21nm,0.8s
PETK  Petropavlovsk-      17.40 285  P      Pn       19 30 17.6 -1.0
      baz=78,slow=16
PETK                                 LR     LR       19 37 11.8
      comp=Z,122nm,19.8s,baz=93,slow=38
MCK   McKinley            17.40  38 ePn     P        19 30 19.8 -0.1
      comp=Z,48nm,1.1s
MCK   McKinley            17.40  38 eP      P        19 30 19.8 -0.1
MCK                                  pmax   pmax
      comp=Z,48nm,1.1s
BWN   Browne              17.43  37 ePn     P        19 30 21.3 +1.1
      comp=Z,107nm,1.1s
MLY   Manley              17.48  33 ePn     P        19 30 20.9 +0.2
      comp=Z,67nm,1.2s
DIV   Divide              17.67  48 ePn     Pn       19 30 22.4 +0.5
      comp=Z,13nm,0.8s
DHY   Denali Highway      17.71  41 ePn     Pn       19 30 22.6 +0.1
      comp=Z,80nm,1.5s
KLU   Klutina             17.72  47 ePn     Pn       19 30 22.7 +0.1
      comp=Z,27nm,1.3s
RAGM  Ragged Mountai      17.97  51 eP      P        19 30 27.6 +1.4
      comp=Z,17nm,0.9s
WRH   Wood River Hil      18.10  37 ePn     Pn       19 30 26.7 -0.5
      comp=Z,27nm,1.0s
BMRM  Bremner River       18.16  49 ePn     Pn       19 30 26.9 -1.2
      comp=Z,24nm,1.1s
CCB   Clear Creek Bu      18.30  37 eP      Pn       19 30 28.9 -0.6
      comp=Z,31nm,1.1s
MDM   Murphy Dome         18.31  36 eP      Pn       19 30 29.8  0.0
      comp=Z,62nm,1.0s
HARP  HAARP               18.38  45 eP      Pn       19 30 31.1 +0.5
      comp=Z,64nm,1.0s
COLA  College             18.40  36 eP      Pn       19 30 31.9 +1.1
      comp=Z,87nm,1.3s
PAX   Paxson              18.45  43 eP      P        19 30 30.5 -1.0
      comp=Z,20nm,1.0s
PAX   Paxson              18.45  43 eP      P        19 30 30.5 -1.0
PAX                                  pmax   pmax
      comp=Z,20nm,1.0s
HDA   Harding Lake        18.50  38 eP      P        19 30 31.6 -0.4
HDA                                 ePn     Pn       19 30 32.2 +0.2
IL1   Eielson Array       18.70  37 eP      P        19 30 32.1 -2.0
ILAR  Eielson Array       18.70  37  P      P        19 30 32.8 -1.3
      comp=Z,0.8nm,0.3s,baz=234,slow=8.9,SNR=35
ILAR                                 LR     LR       19 38 25.2
      comp=Z,351nm,20.6s,baz=248,slow=39
ILB   Eielson Array       18.70  37 eP      P        19 30 32.5 -1.6
BILL  Bilibino            18.71 336 eP      Pn       19 30 36.9 +2.3
      comp=Z,34nm,1.0s
BILL  Bilibino            18.71 336deP      Pn       19 30 36.9 +2.3
BILL                                 pmax   pmax
      comp=Z,36nm,1.0s
BILL                                 MLR    MLR
      comp=Z,267nm,15.0s
CRQM  Cirque              18.80  51 eP      P        19 30 33.0 -2.4
      comp=Z,32nm,1.1s
SKR   Severo-Kuril's      18.87 278 eP      Pn       19 30 39.4 +2.7
SKR                                 eS      Sn       19 33 58.9 -8.6
SKR                                  pmax   pmax
      comp=Z,100nm,7.7s
SKR                                  MLR    MLR
      comp=Z,200nm,18.0s
TGL   Tana Glacier        18.95  51 eP      Pn       19 30 38.5 +0.8
      comp=Z,19nm,0.9s
RIDG  Independ'e Rid      19.02  41 eP      Pn       19 30 38.6 +0.1
COLD  Coldfoot            19.04  28 eP      Pn       19 30 39.6 +1.1
      comp=Z,52nm,1.6s
BALM  Baldy               19.24  50 eP      P        19 30 39.1 -1.1
      comp=Z,12nm,0.8s
BALM  Baldy               19.24  50 eP      P        19 30 39.1 -1.1
BALM                                 pmax   pmax
      comp=Z,12nm,0.8s
DOT   Dot Lake            19.30  42 eP      Pn       19 30 43.3 +1.4
      comp=Z,87nm,1.0s
SCRK  Sand Creek          19.47  41 eP      P        19 30 41.7 -0.9
      comp=Z,41nm,0.8s
TOLK  Toolik Lake Re      20.17  26  P      Pn       19 30 51.4 -0.6
      baz=227,SNR=39
TOLK  Toolik Lake Re      20.17  26 eP      Pn       19 30 52.0 -0.1
      comp=Z,148nm,1.0s
FYU   Fort Yukon          20.22  33 eP      Pn       19 30 51.8 -0.8
      comp=Z,75nm,1.0s
EGAK  Eagle               20.91  40 eP      P        19 30 57.7 -0.5
      comp=Z,200nm,0.8s
SEY   Seymchan            20.96 314  P      P        19 30 60.0 +1.3
      comp=Z,24nm,0.9s,baz=103,slow=11,SNR=53
SEY                                  ScP    ScP      19 38 41.0 -0.6
      comp=Z,2.6nm,0.6s,baz=141,slow=5.5,SNR=4.7
SEY   Seymchan            20.96 314⇑iP      P        19 30 59.5 +0.8
MA2   Magadan             21.13 305  P      P        19 31 03.4 +2.8
      comp=Z,22nm,0.9s,baz=90,slow=9.5,SNR=21
MA2                                  LR     LR       19 39 14.9
      comp=Z,156nm,19.0s,baz=104,slow=37
MA2   Magadan             21.13 305 eP      P        19 31 03.8 +3.1
      comp=Z,25nm,0.9s
DAWY  Dawson              21.39  43 eP      P        19 31 05.2 +1.8
      comp=Z,46nm,1.1s
SKAG  Skagway             22.50  56 eP      P        19 31 12.6 -2.7
      comp=Z,188nm,0.8s
INK   Inuvik              25.04  34  P      P        19 31 38.9 -0.8
      comp=Z,12nm,0.5s,baz=257,slow=8.9,SNR=24
INK                                  LR     LR       19 42 31.8
      comp=Z,317nm,18.9s,baz=293,slow=39
INK   Inuvik              25.04  34 eP      P        19 31 39.0 -0.7
      comp=Z,29nm,1.3s
INK   Inuvik              25.04  34 eP      P        19 31 39.0 -0.7
INK                                  pmax   pmax
      comp=Z,29nm,1.3s
DLBC  Dease Lake          25.27  58  LR     LR       19 42 46.0
      comp=Z,154nm,19.2s,baz=334,slow=39
SHO   Shikotan            27.43 268 eP      P        19 32 02.7 +1.2
YSS   Yuzh-Sakhalins      28.44 277 eP      P        19 32 10.0 -0.6
ASAJ  Asahikawa           29.91 272  P      P        19 32 24.2 +0.6
      comp=Z,7.3nm,0.8s,baz=91,slow=5.4,SNR=6.1
ASAJ                                 LR     LR       19 42 29.8
      comp=Z,51nm,21.5s,baz=77,slow=33
YAK   Yakutsk             31.37 311⇑iP      P        19 32 36.4 +0.1
YAK                                  pmax   pmax
      comp=Z,6.0nm,0.9s
TIXI  Tiksi               31.63 329d iP     P        19 32 38.1 -0.4
TIXI                                 pmax   pmax
      comp=Z,3.0nm,1.3s
YKA   Yellowknife Ar      32.38  48  P      P        19 32 44.1 -1.1
      comp=Z,0.7nm,0.3s,baz=274,slow=9.3,SNR=7.2
YKA                                  PcP    PcP      19 35 32.0 -0.3
      comp=Z,1.0nm,0.6s,baz=284,slow=3.2,SNR=6.6
YKA                                  ScP    ScP      19 39 15.7 +0.3
      comp=Z,1.1nm,0.7s,baz=285,slow=3.8,SNR=3.2
YKA                                  LR     LR       19 47 20.7
      comp=Z,44nm,18.5s,baz=284,slow=39
B05A  Bryant              32.65  76  P      P        19 32 45.7 -2.0
      baz=296
LON   Longmire            33.52  78 eP      P        19 32 57.6 +2.1
      comp=Z,5.6nm,1.0s
LON   Longmire            33.52  78 eP      P        19 32 57.6 +2.1
LON                                  pmax   pmax
      comp=Z,6.0nm,1.0s
KLR   Kul'dur             34.06 287⇓iP      P        19 32 59.1 -0.9
KLR                                 i *SP   pP       19 33 04.3  0.0
KLR                                 e                19 34 12.7
B08A  Colville Reser      34.26  74 eP      P        19 33 02.5 +0.8
      comp=Z,9.8nm,0.8s
H04A  Detroit Lake        34.32  82 eP      P        19 33 03.5 +1.1
      comp=Z,19nm,1.0s
G05D  Wamic, OR           34.57  80  P      P        19 33 02.0 -2.4
      baz=300
I04A  Tendick Farm,       34.65  83  P      P        19 33 04.4 -0.9
      baz=302
ZEA   Zeya                34.80 297 eP      P        19 33 05.8 -0.5
L02D  Cave Junction,      34.82  86  P      P        19 33 04.2 -2.5
      baz=304
I05D  Terrebonne, OR      35.02  82  P      P        19 33 06.8 -1.7
      baz=301
HAWA  Hanford             35.07  77 eP      P        19 33 08.5 -0.3
      comp=Z,18nm,1.1s
F07A  Phinny Hill Vi      35.08  78 eP      P        19 33 09.6 +0.7
      comp=Z,17nm,0.8s
D08A  Wollman Farm,       35.11  76 eP      P        19 33 11.8 +2.6
      comp=Z,9.9nm,1.0s
J04D  Umpqua Nationa      35.14  84  P      P        19 33 07.3 -2.3
      baz=303
C09A  Chrisman Ranch      35.14  74 eP      P        19 33 11.7 +2.3
      comp=Z,8.3nm,0.8s
PINE  Pine Mountain       35.55  82 eP      P        19 33 14.0 +0.8
      comp=Z,12nm,1.1s
NEW   Newport             35.61  73  P      P        19 33 13.2 -0.3
      baz=298
NEW   Newport             35.61  73 eP      P        19 33 15.8 +2.4
      comp=Z,9.9nm,0.8s
NEW   Newport             35.61  73 eP      P        19 33 15.8 +2.4
NEW                                  pmax   pmax
      comp=Z,10.0nm,0.8s
YBH   Yreka Blue Hor      35.61  86  P      P        19 33 15.5 +2.0
      comp=Z,4.7nm,0.9s,baz=295,slow=6.9,SNR=5.3
YBH                                  LR     LR       19 44 45.0
      comp=Z,71nm,18.1s,baz=258,slow=31
YBH   Yreka Blue Hor      35.61  86 eP      P        19 33 15.8 +2.2
      comp=Z,5.2nm,1.0s
J05D  Fort Rock, OR       35.65  83  P      P        19 33 12.9 -1.0
      baz=303,SNR=5.2
H11N2 WAKE ISLAND Hy      35.71 213  T      T        20 11 01.8
      baz=21,slow=76,SNR=8590
H11N3 WAKE ISLAND Hy      35.71 213  T      T        20 11 02.4
      baz=21,slow=76,SNR=6750
H11N1 WAKE ISLAND Hy      35.72 213  T      T        20 11 03.2
      baz=21,slow=76,SNR=6639
E09A  Wood Farm, Sta      35.84  76 eP      P        19 33 15.7 +0.3
      comp=Z,15nm,1.1s
M04C  Macdoel             36.11  86  P      P        19 33 14.7 -3.2
      baz=304
K05A  Summer Lake         36.17  84 eP      P        19 33 20.4 +1.9
      comp=Z,24nm,1.1s
I07A  Izee                36.28  81 eP      P        19 33 20.9 +1.6
      comp=Z,9.0nm,1.0s
USRK  Ussuriysk Ar.       36.37 280  P      P        19 33 20.6 +0.7
      comp=Z,2.9nm,0.6s,baz=60,slow=11
USRK                                 PcP    PcP      19 35 44.7 +0.6
      baz=51,slow=4.3
H11S1 WAKE ISLAND Hy      36.91 212  T      T        20 12 28.5
      baz=20,slow=76
H11S2 WAKE ISLAND Hy      36.92 212  T      T        20 12 30.3
      baz=20,slow=76
H11S3 WAKE ISLAND Hy      36.93 212  T      T        20 12 32.6
      baz=20,slow=76,SNR=3351
MOD   Modoc Plateau       36.99  84 eP      P        19 33 29.0 +3.5
      comp=Z,12nm,1.1s
O03D  Paynes Creek        37.00  88  P      P        19 33 23.2 -2.2
      baz=306
MAJO  Matsushiro          37.06 265 eP      P        19 33 27.0 +1.1
      comp=Z,40nm,1.0s
MAJO                                ePcP    PcP      19 35 46.7 +0.3
MAJO  Matsushiro          37.06 265d iP     P        19 33 26.9 +0.9
MAJO                                i                19 35 46.9
MAJO                                 pmax   pmax
      comp=Z,32nm,0.9s
MAT   Matsushiro          37.06 265  P      P        19 33 26.7 +0.7
MAT                                 eS      S        19 39 12.8 +1.5
MJAR  Matsushiro Arr      37.06 265  P      P        19 33 26.7 +0.8
      comp=Z,12nm,0.8s,baz=47,slow=6.8,SNR=38
MJAR                                 PcP    PcP      19 35 46.6 +0.3
      comp=Z,5.7nm,0.9s,baz=244,slow=1.5,SNR=12
MJB9  Matsu-Tunnel        37.06 265 eP      P        19 33 27.0 +1.1
      comp=Z,39nm,1.0s
MJB9                                ePcP    PcP      19 35 47.0 +0.6
BMO   Blue Mountains      37.20  78 eP      P        19 33 28.2 +1.1
      comp=Z,9.6nm,1.4s
BMO   Blue Mountains      37.20  78 eP      P        19 33 28.2 +1.1
BMO                                  pmax   pmax
      comp=Z,10.0nm,1.4s
J08A  Circle Bar Ran      37.30  81 eP      P        19 33 29.0 +1.0
      comp=Z,18nm,1.1s
WVOR  Wild Horse Val      37.71  82 eP      P        19 33 32.7 +1.2
      comp=Z,14nm,0.9s
WVOR  Wild Horse Val      37.71  82 eP      P        19 33 32.7 +1.2
WVOR                                 pmax   pmax
      comp=Z,14nm,0.9s
MSO   Missoula            38.19  73  P      P        19 33 33.2 -2.3
      baz=300
MSO   Missoula            38.19  73 eP      P        19 33 38.9 +3.4
      comp=Z,13nm,1.1s
MSO                                 ePcP    PcP      19 35 50.1 +0.3
PAHR  Pah Rah Range       38.84  87 eP      P        19 33 43.1 +2.0
      comp=Z,15nm,1.1s
PNTR  Pine Nut            39.08  87 eP      P        19 33 47.6 +4.4
      comp=Z,17nm,0.7s
YERR  Yerington           39.37  87 eP      P        19 33 49.5 +4.0
      comp=Z,8.2nm,1.0s
HLID  Hailey              39.65  78  P      P        19 33 46.7 -1.1
      baz=304,SNR=7.7
HLID  Hailey              39.65  78 eP      P        19 33 48.5 +0.7
      comp=Z,12nm,1.3s
BMN   Battle Mountai      39.74  84 eP      P        19 33 49.5 +0.9
      comp=Z,8.7nm,1.1s
BMN   Battle Mountai      39.74  84 eP      P        19 33 49.5 +0.9
BMN                                  pmax   pmax
      comp=Z,9.0nm,1.1s
MCMT  McKenzie Canyo      39.89  76 eP      P        19 33 50.6 +0.7
PCCM  Crazy Canyon        40.00  92 eP      P        19 33 53.3 +2.7
KVN   Kaiserville         40.03  86 eP      P        19 33 53.3 +2.3
      comp=Z,8.2nm,1.2s
EGMT  Eagleton            40.03  70  P      P        19 33 48.6 -2.2
      baz=300
EGMT  Eagleton            40.03  70 eP      P        19 33 54.7 +3.9
      comp=Z,12nm,0.9s
BOD   Bodaibo             40.11 308 eP      P        19 33 51.3 +0.1
BOD                                  pmax   pmax
      comp=Z,7.0nm,2.0s
BOZ   Bozeman (W)         40.20  74  P      P        19 33 50.6 -1.7
      baz=302
BOZ   Bozeman (W)         40.20  74 eP      P        19 33 52.7 +0.3
      comp=Z,10nm,1.1s
BOZ   Bozeman (W)         40.20  74 eP      P        19 33 52.7 +0.3
BOZ                                  pmax   pmax
      comp=Z,10.0nm,1.1s
NV01  Mina Array Sit      40.29  87 eP      P        19 33 54.3 +1.1
NV01                                ePcP    PcP      19 35 57.4 +0.7
NVAR  Mina Array Bea      40.29  87  P      P        19 33 54.1 +0.9
      comp=Z,2.9nm,0.9s,baz=294,slow=8.8,SNR=11
NVAR                                 PcP    PcP      19 35 57.0 +0.3
      comp=Z,1.8nm,0.7s,baz=273,slow=2.7,SNR=6.1
NVAR                                 ScP    ScP      19 39 44.9 -0.3
      comp=Z,2.8nm,0.8s,baz=279,slow=4.0,SNR=10
MDPB  Devils Postpil      40.30  89 eP      P        19 33 54.2 +0.8
      comp=Z,12nm,1.3s
NV11  Mina Array Sit      40.38  87 eP      P        19 33 53.4 -0.5
      comp=Z,0.3nm,0.9s
FFC   Flin Flon           41.09  57 eP      P        19 33 58.3 -1.0
      comp=Z,5.7nm,1.1s
FFC   Flin Flon           41.09  57 eP      P        19 33 58.3 -1.0
FFC                                  pmax   pmax
      comp=Z,6.0nm,1.1s
H17A  Grant Village       41.48  75  P      P        19 34 01.7 -1.4
      baz=304
H17A  Grant Village       41.48  75 eP      P        19 34 04.9 +1.8
      comp=Z,13nm,1.1s
IMW   Indian Meadow       41.55  76 eP      P        19 34 04.1 +0.4
      comp=Z,5.8nm,0.8s
PKM   Mcpherson Peak      41.62  93  P      P        19 34 02.5 -1.7
      baz=311
HVU   Hansel Valley       41.66  79 eP      P        19 34 05.5 +1.1
      comp=Z,7.1nm,0.8s
HVU   Hansel Valley       41.66  79 eP      P        19 34 05.5 +1.1
HVU                                  pmax   pmax
      comp=Z,7.0nm,0.8s
MOOW  Moose Ponds         41.75  76 eP      P        19 34 05.6 +0.4
      comp=Z,2.5nm,1.0s
TPAW  Teton Pass          41.77  76 eP      P        19 34 05.2 -0.2
      comp=Z,8.3nm,1.1s
RLMT  Red Lodge           41.86  73  P      P        19 34 05.2 -0.8
      baz=303
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RLMT Red Lodge          41.86  73 eP    P      19 34 06.3 +0.2
     comp=Z,12nm,0.9s
ISA  Isabella, Lake     41.94  91  P    P      19 34 04.3 -2.4
     baz=310
BGU  Big Grassy Mou     42.01  81 eP    P      19 34 10.5 +3.2
     comp=Z,9.2nm,1.2s
R11A Troy Canyon, C     42.01  85  P    P      19 34 05.9 -1.4
     baz=308,SNR=19
R11A Troy Canyon, C     42.01  85 eP    P      19 34 08.1 +0.8
     comp=Z,8.9nm,1.0s
DAC  Darwin (Calif)     42.08  89 eP    P      19 34 11.8 +3.9
     comp=Z,4.1nm,1.0s
DAC  Darwin (Calif)     42.08  89 eP    P      19 34 11.9 +3.9
DAC                                pmax pmax
     comp=Z,4.0nm,1.0s
MPMC Manual Prospec     42.29  89  P    P      19 34 08.2 -1.5
     baz=310
TPNV Topopah Spring     42.48  88  P    P      19 34 11.2  0.0
     baz=310
TPNV Topopah Spring     42.48  88 eP    P      19 34 12.5 +1.3
     comp=Z,13nm,1.2s
TPNV Topopah Spring     42.48  88 eP    P      19 34 12.5 +1.3
TPNV                               pmax pmax
     comp=Z,13nm,1.2s
HWUT Hardware Ranch     42.49  79 eP    P      19 34 14.5 +3.3
     comp=Z,18nm,1.5s
DUG  Dugway, Tooele     42.58  81  P    P      19 34 10.5 -1.4
     baz=307,SNR=6.9
DUG  Dugway, Tooele     42.58  81 eP    P      19 34 12.8 +0.9
     comp=Z,32nm,1.3s
DUG  Dugway, Tooele     42.58  81 eP    P      19 34 12.8 +0.9
DUG                                pmax pmax
     comp=Z,32nm,1.3s
KSRS Korea Array        42.82 274  P    P      19 34 13.9 +0.2
     comp=Z,1.9nm,0.8s,baz=57,slow=7.8,SNR=8.3
KSRS                               PcP  PcP    19 36 05.3 +0.7
     comp=Z,2.1nm,0.8s,baz=52,slow=4.0,SNR=6.7
KSRS                               ScP  ScP    19 39 54.7 -0.3
     comp=Z,1.3nm,0.8s,baz=52,slow=4.8,SNR=6.0
PSUT Pine Spring        42.96  84 eP    P      19 34 16.2 +1.1
     comp=Z,9.3nm,1.0s
BW06 Boulder Array      43.02  76  P    P      19 34 15.0 -0.6
     baz=305,SNR=18
BW06 Boulder Array      43.02  76 eP    P      19 34 15.8 +0.2
     comp=Z,11nm,0.9s
PD31 Pinedale Array     43.02  76 eP    P      19 34 15.8 +0.1
PDAR Pinedale Array     43.02  76  P    P      19 34 15.7 +0.1
     comp=Z,4.4nm,0.7s,baz=288,slow=6.1,SNR=24
PDAR                               PcP  PcP    19 36 05.2 -0.4
     comp=Z,0.7nm,0.5s,baz=232,slow=1.0,SNR=4.8
PDAR                               ScP  ScP    19 39 55.2 -0.9
     comp=Z,1.5nm,0.8s,baz=0.0,slow=0.3,SNR=5.6
PDAR Pinedale Array     43.02  76 eP    P      19 34 14.3 -1.3
JLU  Jordanelle         43.16  80 eP    P      19 34 15.7 -1.0
     comp=Z,9.5nm,0.9s
GSC  Goldstone, Bar     43.20  90  P    P      19 34 15.9 -1.1
     baz=311
GSC  Goldstone, Bar     43.20  90 eP    P      19 34 18.0 +1.0
     comp=Z,25nm,1.6s
GSC  Goldstone, Bar     43.20  90 eP    P      19 34 18.0 +1.0
GSC                                pmax pmax
     comp=Z,25nm,1.6s
BFSC Mount Baldy Ra     43.38  92  P    P      19 34 17.1 -1.4
     baz=312
MPU  Maple Canyon       43.40  81 eP    P      19 34 19.8 +1.1
     comp=Z,9.1nm,1.0s
JNU  Nakatsue           43.84 267  P    P      19 34 22.4 +0.4
     comp=Z,26nm,0.9s,baz=59,slow=5.9,SNR=10
JNU  Nakatsue           43.84 267 eP    P      19 34 22.7 +0.6
     comp=Z,26nm,0.9s
TJN  Taejon             43.85 273⇓eP    P      19 34 23.0 +0.9
CCUT Cedar City         43.88  85 eP    P      19 34 23.9 +1.4
     comp=Z,8.6nm,1.2s
MSU  Marysvale          44.00  83 eP    P      19 34 25.0 +1.5
MSU  Marysvale          44.00  83 eP    P      19 34 25.0 +1.5
SZCU Shurtz Canyon      44.02  84 eP    P      19 34 23.8 +0.1
     comp=Z,11nm,0.7s
TMUT Trail Mountain     44.10  81 eP    P      19 34 25.4 +0.9
     comp=Z,19nm,1.0s
GMRC Granite Mounta     44.25  89  P    P      19 34 21.9 -3.6
     baz=311
P17A Butcher Ranch,     44.28  81 eP    P      19 34 26.5 +0.8
     comp=Z,15nm,1.1s
MTPU Mount Pierson      44.29  83 eP    P      19 34 27.4 +1.4
     comp=Z,13nm,1.1s
LCMT Little Creek M     44.29  85 eP    P      19 34 25.8  0.0
     comp=Z,11nm,1.1s
Q16A Castle Valley      44.36  82 eP    P      19 34 27.8 +1.5
     comp=Z,23nm,1.2s
P18A Preston Nutter     44.48  80 eP    P      19 34 27.5  0.0
     comp=Z,22nm,1.3s
KNB  Kanab              44.55  85 eP    P      19 34 29.5 +1.6
     comp=Z,18nm,1.3s
KNB  Kanab              44.55  85 eP    P      19 34 29.5 +1.6
KNB                                pmax pmax
     comp=Z,18nm,1.3s
BELC Belle Mtn. Jos     44.56  91  P    P      19 34 25.4 -2.6
     baz=312
SRU  San Rafael Swe     44.64  81 eP    P      19 34 30.1 +1.5
     comp=Z,17nm,1.1s
SRU  San Rafael Swe     44.64  81 eP    P      19 34 30.1 +1.5
SRU                                pmax pmax
     comp=Z,17nm,1.1s
IRM  Iron Mountain      44.98  90  P    P      19 34 29.2 -2.0
     baz=312
W13A Hualapai Mount     45.14  88 eP    P      19 34 33.4 +0.7
     comp=Z,7.1nm,1.1s
U15A North Rim          45.25  85 eP    P      19 34 34.8 +1.2
     comp=Z,12nm,0.8s
O20A White River Ci     45.39  78  P    P      19 34 34.2 -0.4
     baz=308,SNR=11
O20A White River Ci     45.39  78 eP    P      19 34 34.5  0.0
     comp=Z,30nm,1.1s
PDMCI Parker Dam,Lak    45.51  89  P    P      19 34 33.3 -2.0
     baz=312
PV09 Paradox Valley     45.87  81 eP    P      19 34 39.0 +0.6
MDND Maddock            45.89  64  P    P      19 34 37.9 -0.3
     baz=304,SNR=7.2
MDND Maddock            45.89  64 eP    P      19 34 39.4 +1.3
     comp=Z,97nm,1.2s
PV10 Paradox Valley     46.00  81 eP    P      19 34 40.1 +0.6
     comp=Z,19nm,0.9s
PV04 Paradox Valley     46.07  81 eP    P      19 34 40.8 +0.9
     comp=Z,16nm,1.0s
PV05 Paradox Valley     46.15  81 eP    P      19 34 41.7 +1.1
     comp=Z,14nm,0.9s
PV03 Paradox Valley     46.19  81 eP    P      19 34 41.4 +0.4
     comp=Z,20nm,1.1s
PV07 Paradox Valley     46.20  80 eP    P      19 34 44.1 +3.1
     comp=Z,10nm,1.1s
PV02 Paradox Valley     46.29  81 eP    P      19 34 42.3 +0.5
     comp=Z,23nm,1.1s
PV15 Paradox Valley     46.36  80 eP    P      19 34 43.1 +0.8
     comp=Z,13nm,1.0s
WUAZ Wupatki            46.41  85  P    P      19 34 41.5 -1.2
     baz=311
WUAZ Wupatki            46.41  85 eP    P      19 34 44.0 +1.4
     comp=Z,9.2nm,0.8s
PV01 Paradox Valley     46.44  81 eP    P      19 34 43.1 +0.2
     comp=Z,21nm,1.1s
ULM  Lac du Bonnet      46.57  60  P    P      19 34 42.9 -0.6
     comp=Z,3.5nm,0.4s,baz=313,slow=9.2,SNR=6.4
ULM                                LR   LR     19 55 44.1
     comp=Z,159nm,18.2s,baz=10,slow=38
ULM  Lac du Bonnet      46.57  60 eP    P      19 34 45.4 +1.9
     comp=Z,18nm,1.3s
MVCO Mesa Verde         47.07  82  P    P      19 34 46.4 -1.5
     baz=310
MVCO Mesa Verde         47.07  82 eP    P      19 34 51.3 +3.4
     comp=Z,12nm,1.3s
X16A Lo Mia Camp, P     47.09  87 eP    P      19 34 48.6 +0.6
     comp=Z,7.4nm,1.1s
A33A Warroad            47.58  61  P    P      19 34 48.9 -2.5
     baz=305
AGMN Agassiz Nation     47.69  62  P    P      19 34 50.6 -1.6
     baz=305,SNR=8.1
AGMN Agassiz Nation     47.69  62 eP    P      19 34 51.5 -0.8
     comp=Z,33nm,1.1s
S22A 4UR Ranch, Cre     47.74  80  P    P      19 34 52.4 -0.8
     baz=310
S22A 4UR Ranch, Cre     47.74  80 eP    P      19 34 52.5 -0.7
     comp=Z,20nm,1.5s
B34A Aery, Baudette     48.24  61  P    P      19 34 55.1 -1.4
     baz=306,SNR=5.1
TLY  Talaya             48.36 304 eP    P      19 35 09.3  +12
TLY                               e            19 36 25.7
TLY                               eS    S      19 42 07.6  +11
TLY                                pmax pmax
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     comp=Z,4.0nm,0.6s
TLY                                MLR  MLR
     comp=Z,57nm,15.0s
SDCO Great Sand Dun     48.55  79 eP    P      19 35 00.3 +0.9
     comp=Z,11nm,1.0s
ULN  Ulaanbaatar        48.79 298⇓iP    P      19 35 00.2 -0.7
ULN                               i            19 36 25.5
ULN                                pmax pmax
     comp=Z,1.0nm,1.0s
B35A Bob, Littlefor     48.81  61  P    P      19 34 59.3 -1.6
     baz=306,SNR=7.3
B35A Bob, Littlefor     48.81  61 eP    P      19 34 59.5 -1.4
     comp=Z,16nm,1.0s
TUC  Tucson             48.92  88  P    P      19 34 59.6 -2.5
     baz=313
TUC  Tucson             48.92  88 eP    P      19 35 05.4 +3.3
     comp=Z,14nm,1.4s
TUC  Tucson             48.92  88 eP    P      19 35 05.4 +3.3
TUC                                pmax pmax
     comp=Z,14nm,1.4s
C35A Jirik Farms, M     49.07  62  P    P      19 35 00.2 -2.7
     baz=306,SNR=6.5
SONM Songino Array      49.16 299  P    P      19 35 02.9 -0.8
     comp=Z,0.7nm,0.5s,baz=63,slow=7.5,SNR=4.3
SONM                               PcP  PcP    19 36 26.2 -0.7
     comp=Z,1.5nm,0.8s,baz=46,slow=5.1,SNR=4.6
ZAK  Zakamensk          49.30 303 eP    P      19 34 53.9  -11
ZAK                                pmax pmax
     comp=Z,3.0nm,1.6s
D35A Remer              49.40  62  P    P      19 35 03.7 -1.7
     baz=307,SNR=17
F34A Alexandria         49.51  64  P    P      19 35 04.2 -2.0
     baz=307
E35A Pequot Lakes       49.52  63  P    P      19 35 04.7 -1.7
     baz=307,SNR=7.4
T25A Trinidad           49.60  79  P    P      19 35 05.8 -1.5
     baz=311,SNR=6.3
T25A Trinidad           49.60  79 eP    P      19 35 08.6 +1.2
     comp=Z,30nm,1.1s
C36A Pine Crest Far     49.65  61  P    P      19 35 05.8 -1.5
     baz=307
LAZ  Ladron             49.75  83 eP    P      19 35 09.9 +1.4
TASM ASL Pad, Albuq     49.80  82  P    P      19 35 07.7 -1.2
     baz=312
ANMO Albuquerque        49.80  82  P    P      19 35 07.5 -1.4
     baz=312
ANMO Albuquerque        49.80  82 eP    P      19 35 09.8 +0.9
     comp=Z,6.6nm,1.0s
ANMO Albuquerque        49.80  82ceP    P      19 35 10.8 +1.9
ANMO                               pmax pmax
     comp=Z,7.0nm,1.3s
TASL Snake Pit, Alb     49.80  82  P    P      19 35 08.0 -0.9
     baz=312
D36A Goodland           49.82  62  P    P      19 35 07.4 -1.3
     baz=307
D36A Goodland           49.82  62 eP    P      19 35 08.8 +0.1
     comp=Z,17nm,1.0s
SPITS Spitsbergen Ar    49.85 357  P    P      19 35 08.5 +0.1
     comp=Z,2.6nm,0.7s,baz=347,slow=12,SNR=3.8
SPITS                              LR   LR     19 56 05.4
     comp=Z,58nm,19.2s,baz=340,slow=36
F35A Swanville          49.85  64  P    P      19 35 07.3 -1.6
     baz=307
LENM Lemitar            50.01  84 eP    P      19 35 11.9 +1.4
ECSD EROS Data Cent     50.01  67  P    P      19 35 09.2 -0.9
     baz=308,SNR=6.5
ECSD EROS Data Cent     50.01  67 eP    P      19 35 12.1 +2.0
     comp=Z,11nm,1.3s
C37A Embarrass          50.02  61  P    P      19 35 08.4 -1.8
     baz=307
E36A McGregor           50.17  62  P    P      19 35 09.3 -2.0
     baz=308,SNR=5.8
D37A Cotton             50.23  61  P    P      19 35 10.0 -1.8
     baz=307
EYMN Ely                50.25  60  P    P      19 35 10.3 -1.6
     baz=307
EYMN Ely                50.25  60 eP    P      19 35 10.7 -1.2
     comp=Z,15nm,1.1s
F36A Milaca             50.43  63  P    P      19 35 11.1 -2.1
     baz=308,SNR=7.2
F36A Milaca             50.43  63 eP    P      19 35 12.9 -0.3
     comp=Z,16nm,1.3s
C38A Sawbill Land.      50.51  60  P    P      19 35 12.4 -1.5
     baz=307
HHC  Hu-ho-hao-te       50.55 289 eP    P      19 35 14.4  0.0
HHC                                sP   sP     19 35 21.8 +1.3
HHC                                PP   PP     19 37 06.4 -3.5
HHC                                S    S      19 42 26.2 -1.9
HHC                                pmax pmax
     comp=Z,18nm,0.9s
HHC                                pmax pmax
     comp=Z,38nm,6.5s
HHC                                LR   LR
     comp=Z,53nm,10.8s
HHC                                LR   LR
     comp=Z,62nm,14.1s
HHC                                LR   LR
     comp=Z,38nm,13.3s
121A Cookes Peak, D     50.62  86  P    P      19 35 14.2 -0.9
     baz=313
H36A Jessenland, He     51.00  65  P    P      19 35 15.9 -1.6
     baz=308
F37A Hinrichs Farm,     51.01  63  P    P      19 35 16.3 -1.3
     baz=308
E38A The Farm, Brul     51.04  61  P    P      19 35 15.7 -2.1
     baz=308,SNR=6.2
E38A The Farm, Brul     51.04  61 eP    P      19 35 19.4 +1.6
     comp=Z,55nm,1.3s
SPMN Marine on St.      51.22  64 eP    P      19 35 18.4 -0.9
     comp=Z,20nm,1.3s
F38A Pierce - Schro     51.27  62  P    P      19 35 17.9 -1.6
     baz=308,SNR=7.0
J36A Seneca 1, Swea     51.55  66  P    P      19 35 20.4 -1.4
     baz=309
J36A Seneca 1, Swea     51.55  66 eP    P      19 35 24.5 +2.8
     comp=Z,12nm,0.9s
I37A Lemond, Waseca     51.65  65  P    P      19 35 20.5 -1.9
     baz=309,SNR=6.0
I37A Lemond, Waseca     51.65  65 eP    P      19 35 21.5 -0.9
     comp=Z,33nm,1.0s
E39A Mellen             51.73  61  P    P      19 35 21.0 -2.0
     baz=309
G38A Ridgeland          51.78  63  P    P      19 35 21.7 -1.7
     baz=309,SNR=6.9
F39A Loretta            51.82  62  P    P      19 35 21.8 -1.9
     baz=309,SNR=5.3
H38A Maiden Rock        51.85  64  P    P      19 35 22.6 -1.4
     baz=309
NJ2  Nanjing            51.98 275 eP    P      19 35 25.9 +0.9
NJ2                                pmax pmax
     comp=Z,6.0nm,0.5s
J37A Redenius Farm,     52.01  66  P    P      19 35 23.8 -1.4
     baz=309
E40A Wakefield          52.04  61  P    P      19 35 24.3 -1.1
     baz=309,SNR=5.6
G39A Holcombe           52.08  63  P    P      19 35 23.5 -2.2
     baz=309,SNR=6.2
F40A Park Falls         52.25  61  P    P      19 35 24.9 -2.0
     baz=309
K37A Belmond            52.31  66  P    P      19 35 26.0 -1.3
     baz=310
D41A Chassel            52.36  59  P    P      19 35 26.4 -1.3
     baz=309
H39A Augusta            52.40  63  P    P      19 35 26.2 -1.8
     baz=309
E41A Kenton             52.53  60  P    P      19 35 27.4 -1.6
     baz=309
J38A Wedel Dairy, R     52.61  65  P    P      19 35 29.2 -0.4
     baz=310
G40A Rib Lake           52.62  62  P    P      19 35 27.7 -2.0
     baz=309,SNR=7.2
G40A Rib Lake           52.62  62 eP    P      19 35 28.3 -1.3
     comp=Z,22nm,1.1s
L37A Phoenix Point,     52.65  67  P    P      19 35 28.1 -1.8
     baz=310
COWI Conover            52.66  61 eP    P      19 35 28.5 -1.5
     comp=Z,18nm,1.3s
MNTX Cornudas Mount     52.67  85  P    P      19 35 30.8 +0.6
     baz=314,SNR=7.5
MNTX Cornudas Mount     52.67  85 eP    P      19 35 31.0 +0.8
     comp=Z,12nm,1.0s
MSTX Muleshoe           52.71  81  P    P      19 35 29.1 -1.5
     baz=313
MSTX Muleshoe           52.71  81 eP    P      19 35 30.6  0.0
     comp=Z,38nm,1.4s
I39A Houston            52.80  64  P    P      19 35 29.9 -1.1
     baz=310
I39A Houston            52.80  64 eP    P      19 35 31.0 +0.1
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     comp=Z,12nm,0.8s
F41A Three Lakes        52.91  61  P    P      19 35 30.3 -1.5
     baz=310,SNR=12
F41A Three Lakes        52.91  61 eP    P      19 35 30.4 -1.5
     comp=Z,23nm,1.1s
H40A Chili              52.93  63  P    P      19 35 30.8 -1.2
     baz=310,SNR=7.2
M37A Trindle Farm,      52.95  68  P    P      19 35 30.3 -1.8
     baz=310
J39A Decorah            53.03  65  P    P      19 35 30.6 -2.1
     baz=310
L38A Oak Wood Farm,     53.09  67  P    P      19 35 31.8 -1.4
     baz=310,SNR=5.2
E42A Champion           53.11  60  P    P      19 35 32.2 -1.1
     baz=310
I40A Norwalk            53.27  64  P    P      19 35 32.7 -1.8
     baz=310
N37A Lee Faris, Mou     53.28  69 eP    P      19 35 38.0 +3.4
     comp=Z,66nm,1.3s
H41A Junction City      53.34  62  P    P      19 35 32.8 -2.2
     baz=310,SNR=6.4
H41A Junction City      53.34  62 eP    P      19 35 36.8 +1.9
     comp=Z,16nm,0.9s
G42A Mountain           53.60  61  P    P      19 35 35.2 -1.6
     baz=310,SNR=5.7
G42A Mountain           53.60  61 eP    P      19 35 35.4 -1.4
     comp=Z,32nm,1.3s
E43A Lone Tree Farm     53.63  59  P    P      19 35 35.8 -1.3
     baz=310,SNR=5.3
E43A Lone Tree Farm     53.63  59 eP    P      19 35 36.0 -1.1
     comp=Z,29nm,1.3s
L39A Vinton             53.65  66  P    P      19 35 35.7 -1.6
     baz=311,SNR=5.8
SFJD Kangerlussuaq      53.73  24  LR   LR     20 02 07.6
     comp=Z,88nm,18.3s,baz=290,slow=40
F43A Flat Rock, Esc     53.89  60  P    P      19 35 36.9 -2.1
     baz=310
J41A Loganville         53.95  64  P    P      19 35 37.8 -1.7
     baz=310,SNR=6.0
P37A Lathrop            53.97  70  P    P      19 35 37.1 -2.6
     baz=311
M39A Webster            53.97  67  P    P      19 35 38.4 -1.2
     baz=311,SNR=6.8
G43A Wallace            53.99  61  P    P      19 35 38.1 -1.6
     baz=310,SNR=5.5
G43A Wallace            53.99  61 eP    P      19 35 41.4 +1.7
     comp=Z,7.2nm,0.6s
H42A Shiocton           54.02  62 eP    P      19 35 42.1 +2.2
     comp=Z,11nm,0.5s
E44A Grand Marais A     54.04  58  P    P      19 35 38.1 -2.0
     baz=310
JFWS Jewell Farm        54.11  64 eP    P      19 35 42.8 +2.1
     comp=Z,42nm,0.8s
JFWS Jewell Farm        54.11  64 eP    P      19 35 42.8 +2.1
JFWS                               pmax pmax
     comp=Z,42nm,0.8s
O38A Galt               54.12  69  P    P      19 35 38.9 -1.8
     baz=311
N39A Derby Farms, D     54.18  68  P    P      19 35 39.2 -1.9
     baz=311,SNR=7.2
N39A Derby Farms, D     54.18  68 eP    P      19 35 41.0 -0.1
     comp=Z,36nm,1.1s
F44A Big Bay de Noc     54.20  59  P    P      19 35 38.8 -2.4
     baz=310
I42A Draeger Farm,      54.21  63  P    P      19 35 40.0 -1.3
     baz=311
I42A Draeger Farm,      54.21  63 eP    P      19 35 39.9 -1.4
     comp=Z,25nm,1.2s
P38A Dawn               54.42  69  P    P      19 35 41.1 -1.8
     baz=312
P38A Dawn               54.42  69 eP    P      19 35 43.1 +0.2
     comp=Z,13nm,0.8s
H43A Windswept, Lux     54.45  61  P    P      19 35 41.0 -2.1
     baz=311
J42A Columbus           54.47  63  P    P      19 35 41.7 -1.6
     baz=311
WMOK Wichita Mounta     54.60  77 eP    P      19 35 45.1 +0.7
     comp=Z,6.0nm,0.9s
WMOK Wichita Mounta     54.60  77 eP    P      19 35 45.1 +0.7
WMOK                               pmax pmax
     comp=Z,6.0nm,0.9s
I43A Langenfeld Bro     54.63  62  P    P      19 35 43.0 -1.5
     baz=311,SNR=6.4
J43A Natural Harves     54.82  63  P    P      19 35 44.2 -1.6
     baz=311
P39B Salisbury          54.96  69  P    P      19 35 45.0 -1.8
     baz=312
O40A La Belle           55.04  68  P    P      19 35 45.6 -1.8
     baz=312
Q39A Willow Grove F     55.12  69  P    P      19 35 45.7 -2.3
     baz=312
R38A Fenwick Farm,      55.16  71  P    P      19 35 47.0 -1.3
     baz=312
N41A Harden Midland     55.23  67  P    P      19 35 48.4 -0.4
     baz=312
K43A Burlington         55.31  63  P    P      19 35 48.0 -1.3
     baz=312
P40A Paris              55.33  68  P    P      19 35 48.5 -1.1
     baz=312
P40A Paris              55.33  68 eP    P      19 35 49.0 -0.5
     comp=Z,12nm,0.8s
TX31 Lajitas Ar. Si     55.38  85 eP    P      19 35 49.7 -0.4
TXAR Lajitas Array      55.38  85  P    P      19 35 50.3 +0.2
     comp=Z,8.4nm,0.9s,baz=299,slow=5.4,SNR=41
TXAR                               ScP  ScP    19 40 48.1 -0.4
     comp=Z,2.7nm,0.8s,baz=279,slow=2.9,SNR=15
L43A Garden Prairie     55.43  64  P    P      19 35 49.4 -0.8
     baz=312
ABTX Abilene, Hawle     55.53  80  P    P      19 35 50.0 -1.2
     baz=314
ABTX Abilene, Hawle     55.53  80 eP    P      19 35 51.5 +0.4
     comp=Z,18nm,1.1s
S38A Stockton           55.53  71  P    P      19 35 49.7 -1.4
     baz=312
O41A Passleys Farm,     55.61  67  P    P      19 35 49.7 -1.8
     baz=312
Q40A Laux Farm, Aux     55.68  69  P    P      19 35 50.7 -1.3
     baz=312
P41A Barry, Barry       55.80  68  P    P      19 35 51.3 -1.6
     baz=312
M43A Waltham Townsh     55.81  65  P    P      19 35 51.6 -1.3
     baz=312
ZALV Zalesovo Beam      55.82 316  P    P      19 35 52.2 -0.6
     comp=Z,0.5nm,0.6s,baz=60,slow=8.5,SNR=2.7
ZALV                               PcP  PcP    19 36 51.3 -0.3
     comp=Z,1.2nm,0.8s,baz=43,slow=6.7,SNR=3.6
N43A Stutzman Famil     56.02  65  P    P      19 35 52.8 -1.6
     baz=312
R40A Maddies Statio     56.04  70  P    P      19 35 52.4 -2.2
     baz=312
Q41A Truxton            56.19  68  P    P      19 35 53.5 -2.2
     baz=312
T39A Clever             56.26  72  P    P      19 35 53.7 -2.5
     baz=313
M44A Midewin, Midew     56.35  64  P    P      19 35 55.2 -1.6
     baz=312
M44A Midewin, Midew     56.35  64 eP    P      19 35 59.0 +2.2
     comp=Z,48nm,1.4s
S40A Lebanon            56.38  70  P    P      19 35 55.0 -2.1
     baz=313
R41A Rosebud            56.55  69  P    P      19 35 57.2 -1.1
     baz=313,SNR=5.1
SSLB Suanglung          56.58 266 eP    P      19 35 57.8 -0.9
     comp=Z,16nm,0.7s
Q42A Golden Eagle       56.62  68  P    P      19 35 56.7 -2.0
     baz=313
U39A Green Forest       56.63  72  P    P      19 35 57.0 -2.0
     baz=313
N44A Piper City         56.70  65  P    P      19 35 58.2 -1.1
     baz=312
CCM  Cathedral Cave     56.79  69  P    P      19 35 58.2 -1.8
     baz=313
S41A Jillco Farms,      56.82  70  P    P      19 35 58.9 -1.4
     baz=313
V39A Pettigrew          56.91  73  P    P      19 35 59.5 -1.4
     baz=313
JCT  Junction City      56.94  82  P    P      19 35 59.3 -1.9
     baz=315
JCT  Junction City      56.94  82 eP    P      19 36 01.1 -0.1
     comp=Z,34nm,1.5s
JCT  Junction City      56.94  82 eP    P      19 36 01.1 -0.1
JCT                                pmax pmax
     comp=Z,34nm,1.5s
N45A Kentland           57.01  64  P    P      19 35 59.7 -1.8
     baz=313
U40A Yellville          57.02  72  P    P      19 35 59.2 -2.5
     baz=313
T41A Mountain View      57.18  70  P    P      19 36 00.7 -2.1
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	baz=313						
BELQ	**Belleterre**	**57.22**	**54**	P	**P**	**19 36 01.7**	**-1.2**
	baz=313						
TOBO	**Tobermory, Bru**	**57.26**	**57**	P	**P**	**19 36 01.9**	**-1.3**
	baz=313						
W39A	**Magazine**	**57.27**	**73**	P	**P**	**19 36 02.3**	**-1.1**
	baz=314						
W39A	**Magazine**	**57.27**	**73**	*e*P	**P**	**19 36 03.5**	**+0.1**
	comp=Z,22nm,1.6s						
O45A	**Potomac**	**57.30**	**65**	P	**P**	**19 36 02.2**	**-1.3**
	baz=313						
WHTX	**Lake Whitney,**	**57.30**	**79**	P	**P**	**19 36 02.6**	**-1.1**
	baz=314						
P44A	**Sand Creek, Wi**	**57.33**	**66**	P	**P**	**19 36 01.9**	**-1.9**
	baz=313						
R43A	**Red Bud**	**57.40**	**68**	P	**P**	**19 36 03.2**	**-1.1**
	baz=313						
SCHQ	**Schefferville**	**57.40**	**41**	P	**P**	**19 36 03.0**	**-1.1**
	comp=Z,1.3nm,0.6s,baz=308,slow=9.4,SNR=3.2						
SCHQ				LR	LR	20 01 54.7	
	comp=Z,100nm,19.0s,baz=286,slow=37						
N46A	**Monticello**	**57.41**	**64**	P	**P**	**19 36 02.3**	**-2.0**
	baz=313						
V40A	**Witts Springs**	**57.42**	**72**	P	**P**	**19 36 02.4**	**-2.1**
	baz=314						
V40A	**Witts Springs**	**57.42**	**72**	*e*P	**P**	**19 36 06.2**	**+1.7**
	comp=Z,4.4nm,0.8s						
Q44A	**Meyer Farm, Va**	**57.49**	**67**	P	**P**	**19 36 03.0**	**-1.9**
	baz=313						
X39A	**Fountain Ranch**	**57.55**	**74**	P	**P**	**19 36 04.1**	**-1.3**
	baz=314						
SFIN	**Lafayette**	**57.56**	**65**	P	**P**	**19 36 04.4**	**-1.0**
	baz=313,SNR=5.0						
SFIN	**Lafayette**	**57.56**	**65**	*e*P	**P**	**19 36 04.9**	**-0.5**
	comp=Z,13nm,0.8s						
DGZ	**Jazzator, Alta**	**57.57**	**311**	⇑*i*P	**P**	**19 36 05.6**	**+0.1**
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.9s						
U41A	**Viola**	**57.57**	**71**	P	**P**	**19 36 04.5**	**-1.1**
	baz=314						
T42A	**Van Buren**	**57.58**	**70**	*e*P	**P**	**19 36 04.1**	**-1.4**
	comp=Z,3.7nm,0.8s						
S43A	**Fulton Ridge,**	**57.80**	**69**	P	**P**	**19 36 05.8**	**-1.3**
	baz=314,SNR=5.1						
V41A	**Mountainview**	**57.82**	**72**	P	**P**	**19 36 06.5**	**-0.9**
	baz=314						
MIAR	**Mount Ida**	**57.84**	**74**	P	**P**	**19 36 06.6**	**-0.8**
	baz=314						
MIAR	**Mount Ida**	**57.84**	**74**	*e*P	**P**	**19 36 08.0**	**+0.5**
	comp=Z,14nm,1.1s						
MIAR	**Mount Ida**	**57.84**	**74**	*e*P	**P**	**19 36 08.0**	**+0.5**
MIAR				pmax	pmax		
	comp=Z,14nm,1.1s						
KLBO	**Killbear Provi**	**57.85**	**56**	P	**P**	**19 36 05.3**	**-2.0**
	baz=313						
ARCES	**ARCESS Array B**	**57.88**	**352**	P	**P**	**19 36 06.4**	**-0.8**
	comp=Z,1.1nm,0.6s,baz=17,slow=8.9,SNR=5.1						
Q45A	**Warren Harvey,**	**57.98**	**67**	P	**P**	**19 36 07.3**	**-1.1**
	baz=313						
T43A	**Greenville**	**58.01**	**69**	P	**P**	**19 36 07.0**	**-1.6**
	baz=314,SNR=8.1						
O47A	**Sheridan**	**58.17**	**64**	P	**P**	**19 36 08.2**	**-1.5**
	baz=313						
W41B	**Gary Mavity, V**	**58.19**	**72**	P	**P**	**19 36 08.8**	**-1.1**
	baz=314						
W41B	**Gary Mavity, V**	**58.19**	**72**	*e*P	**P**	**19 36 09.9**	**0.0**
	comp=Z,6.2nm,0.8s						
GTA	**Gaotai**	**58.24**	**295**	*e*P	**P**	**19 36 11.3**	**+0.9**
GTA				pP	pP	19 36 16.5	+1.7
GTA				sP	sP	19 36 19.4	+2.9
GTA				S	**S**	**19 44 15.1**	**+3.3**
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,65nm,4.5s						
GTA				LR	LR		
	comp=Z,150nm,20.3s						
GTA				LR	LR		
	comp=Z,140nm,18.2s						
GTA				LR	LR		
	comp=Z,150nm,16.5s						
V42A	**Cord**	**58.26**	**71**	P	**P**	**19 36 09.3**	**-1.1**
	baz=314						
CLWO	**Collingwood**	**58.43**	**57**	P	**P**	**19 36 10.9**	**-0.6**
	baz=314						
R47A	**Wooly Knot Far**	**59.32**	**66**	P	**P**	**19 36 15.4**	**-2.3**
	baz=314						
T46A	**Princeton**	**59.42**	**68**	P	**P**	**19 36 17.1**	**-1.3**
	baz=314						
N50A	**Nevada**	**59.47**	**62**	P	**P**	**19 36 16.9**	**-1.8**
	baz=314						
O50A	**Cable**	**59.64**	**63**	P	**P**	**19 36 18.6**	**-1.3**
	baz=314						
T47A	**Sharon Grove**	**59.90**	**67**	P	**P**	**19 36 20.4**	**-1.3**
	baz=314						
T47A	**Sharon Grove**	**59.90**	**67**	*e*P	**P**	**19 36 24.8**	**+3.0**
	comp=Z,20nm,1.3s						
P50A	**Jamestown**	**59.92**	**63**	P	**P**	**19 36 20.1**	**-1.8**
	baz=314						
ACSO	**Alum Creek Sta**	**59.93**	**62**	P	**P**	**19 36 20.6**	**-1.3**
	baz=314						
S48A	**Wiedeman Farm,**	**60.03**	**66**	P	**P**	**19 36 21.3**	**-1.3**
	baz=314						
WVT	**Waverly**	**60.09**	**69**	P	**P**	**19 36 22.2**	**-0.8**
	baz=315						
OXF	**Oxford**	**60.32**	**71**	P	**P**	**19 36 22.5**	**-2.1**
	baz=315						
ALLY	**Alegheny Colle**	**60.46**	**59**	*e*P	**P**	**19 36 27.2**	**+1.7**
	comp=Z,46nm,1.1s						
U48A	**Cassie Pea, Po**	**60.56**	**68**	P	**P**	**19 36 25.0**	**-1.3**
	baz=315						
T49A	**Edmonton**	**60.71**	**66**	P	**P**	**19 36 26.2**	**-1.1**
	baz=315						
KURK	**Kurchatov**	**60.80**	**316**	⇑*i*P	**P**	**19 36 27.1**	**-0.5**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
M54A	**Oil Creek Stat**	**60.82**	**59**	P	**P**	**19 36 26.4**	**-1.5**
	baz=315						
M54A	**Oil Creek Stat**	**60.82**	**59**	*e*P	**P**	**19 36 29.6**	**+1.6**
	comp=Z,14nm,1.1s						
KURBB	**Kurchatov Arra**	**60.90**	**316**	P	**P**	**19 36 27.3**	**-1.0**
	comp=Z,3.1nm,0.8s,baz=47,slow=6.6,SNR=24						
V48A	**Smith Brothers**	**60.95**	**68**	P	**P**	**19 36 27.8**	**-1.1**
	baz=315						
N54A	**Moraine State**	**61.03**	**60**	P	**P**	**19 36 28.4**	**-1.0**
	baz=315						
N54A	**Moraine State**	**61.03**	**60**	*e*P	**P**	**19 36 31.6**	**+2.2**
	comp=Z,28nm,1.3s						
Y46A	**Houston**	**61.09**	**71**	P	**P**	**19 36 27.6**	**-2.2**
	baz=315						
T50A	**Nancy**	**61.17**	**66**	P	**P**	**19 36 29.1**	**-1.3**
	baz=315						
LONY	**Lake Ozonia**	**61.21**	**54**	P	**P**	**19 36 29.0**	**-1.5**
	baz=316						
W48A	**Pulaski**	**61.31**	**69**	P	**P**	**19 36 29.6**	**-1.8**
	baz=315						
WMQ	**Urumqi**	**61.60**	**306**	P	**P**	**19 36 35.2**	**+1.9**
WMQ				pP	pP	19 36 40.7	+2.9
WMQ				pmax	pmax		
	comp=Z,22nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,59nm,3.7s						
WMQ				LR	LR		
	comp=Z,200nm,28.1s						
WMQ				LR	LR		
	comp=Z,99nm,21.1s						
Y47A	**UCPARC, Winfie**	**61.66**	**70**	P	**P**	**19 36 32.2**	**-1.5**
	baz=316						
W49A	**Belvidere**	**61.71**	**68**	P	**P**	**19 36 31.9**	**-2.1**
	baz=316						
X48A	**Hartselle**	**61.73**	**69**	P	**P**	**19 36 32.2**	**-2.0**
	baz=316						
MK31	**Makanchi Array**	**62.05**	**311**	*e*P	**P**	**19 36 35.2**	**-1.0**
MK31	**Makanchi Array**	**62.05**	**311**	*e*P	**P**	**19 36 35.2**	**-1.0**
MKAR	**Makanchi Array**	**62.05**	**311**	P	**P**	**19 36 35.1**	**-1.1**
	comp=Z,1.3nm,0.8s,baz=54,slow=6.2,SNR=15						
MKAR	**Makanchi Array**	**62.05**	**311**	*e*P	**P**	**19 36 35.2**	**-1.1**
	comp=Z,9.8nm,0.8s						
MK01	**Makanchi Array**	**62.06**	**311**	*e*P	**P**	**19 36 34.8**	**-1.5**
X49A	**Woodville**	**62.10**	**69**	P	**P**	**19 36 34.2**	**-2.5**
	baz=316						
W50A	**Signal Mountai**	**62.19**	**68**	P	**P**	**19 36 35.1**	**-2.3**
	baz=316						
Z48A	**Northport**	**62.20**	**71**	P	**P**	**19 36 35.3**	**-2.1**
	baz=316						
TZTN	**Tazewell**	**62.23**	**66**	P	**P**	**19 36 35.7**	**-1.9**
	baz=316						
O56A	**Blue Knob Stat**	**62.28**	**59**	P	**P**	**19 36 35.9**	**-2.0**
	baz=316						
BVAR	**Borovoye Array**	**62.36**	**322**	P	**P**	**19 36 37.7**	**-0.4**
	comp=Z,5.9nm,0.8s,baz=51,slow=7.6,SNR=33						
SSPA	**Standing Stone**	**62.38**	**59**	P	**P**	**19 36 37.5**	**-1.0**
	baz=316						
SSPA	**Standing Stone**	**62.38**	**59**	*e*P	**P**	**19 36 37.6**	**-0.9**
	comp=Z,24nm,1.2s						
X50B	**Fort Payne**	**62.53**	**69**	P	**P**	**19 36 37.3**	**-2.3**
	baz=316						
V52A	**Sevierville**	**62.71**	**66**	P	**P**	**19 36 40.0**	**-0.8**
	baz=316						
KSPA	**Keystone Colle**	**62.82**	**57**	*e*P	**P**	**19 36 41.5**	**0.0**
	comp=Z,9.9nm,1.0s						
Z49A	**Columbiana**	**62.93**	**70**	P	**P**	**19 36 41.0**	**-1.2**
	baz=316						
Z50A	**Ashland**	**63.24**	**70**	P	**P**	**19 36 42.1**	**-2.2**
	baz=316						
Z50A	**Ashland**	**63.24**	**70**	*e*P	**P**	**19 36 42.8**	**-1.5**
	comp=Z,15nm,1.4s						
Y51A	**Rockmart**	**63.27**	**69**	P	**P**	**19 36 41.8**	**-2.7**
	baz=316						
V53A	**Saluda**	**63.27**	**66**	P	**P**	**19 36 42.8**	**-1.8**
	baz=316						
N59A	**State Game Lan**	**63.28**	**57**	P	**P**	**19 36 43.0**	**-1.5**
	baz=317						
N59A	**State Game Lan**	**63.28**	**57**	*e*P	**P**	**19 36 43.9**	**-0.6**
	comp=Z,22nm,1.1s						
GYA	**Guiyang**	**63.41**	**279**	*e*P	**P**	**19 36 47.0**	**+1.3**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
X52A	**Dahlonega**	**63.43**	**67**	P	**P**	**19 36 44.8**	**-0.8**
	baz=316						
BLA	**Blacksburg**	**63.49**	**63**	P	**P**	**19 36 44.4**	**-1.6**
	baz=316						
BLA	**Blacksburg**	**63.49**	**63**	*e*P	**P**	**19 36 49.1**	**+3.2**
	comp=Z,17nm,1.0s						
BLA	**Blacksburg**	**63.49**	**63**	*e*P	**P**	**19 36 49.2**	**+3.2**
BLA				pmax	pmax		
	comp=Z,17nm,1.0s						
ARU	**Arti**	**63.62**	**331**	*c i*P	**P**	**19 36 45.8**	**-0.7**
ARU						19 37 19.0	
ARU						19 39 01.4	
ARU				S	**S**	**19 45 20.6**	**+1.0**
ARU				SS	**SS**	**19 49 25.0**	**-1.0**
ARU				pmax	pmax		
	comp=Z,6.0nm,1.7s						
LUPA	**Lehigh Univers**	**63.72**	**57**	*e*P	**P**	**19 36 46.9**	**-0.5**
	comp=Z,3.8nm,1.4s						
ODNJ	**Ogdensburg**	**63.76**	**56**	*e*P	**P**	**19 36 49.6**	**+1.9**
	comp=Z,12nm,1.0s						
Y52A	**Lilburn**	**63.87**	**68**	P	**P**	**19 36 46.7**	**-1.7**
	baz=316						
TGY	**Tagaytay City**	**63.94**	**259**	P	**P**	**19 36 50.5**	**+1.4**
	comp=Z,63nm,0.4s,baz=63,slow=2.3,SNR=4.5						
BRNJ	**Basking Ridge**	**64.08**	**57**	*e*P	**P**	**19 36 51.9**	**+2.2**
	comp=Z,17nm,0.6s						
IP04	**Greensprings**	**64.11**	**61**	*e*P	**P**	**19 36 50.6**	**+0.6**
	comp=Z,14nm,0.9s						
Z52A	**Williamson**	**64.16**	**69**	P	**P**	**19 36 48.6**	**-1.7**
	baz=317						
PAL	**Palisades**	**64.18**	**56**	P	**P**	**19 36 48.4**	**-1.9**
	baz=317						
PAL	**Palisades**	**64.18**	**56**	*e*P	**P**	**19 36 53.4**	**+3.1**
	comp=Z,19nm,0.9s						
PAL	**Palisades**	**64.18**	**56**	*e*P	**P**	**19 36 53.4**	**+3.1**
PAL				pmax	pmax		
	comp=Z,19nm,0.9s						
IP03	**Louisa**	**64.21**	**61**	*e*P	**P**	**19 36 51.1**	**+0.5**
	comp=Z,38nm,1.2s						
IP07	**Quail**	**64.28**	**61**	*e*P	**P**	**19 36 50.7**	**-0.3**
	comp=Z,60nm,1.3s						
IP06	**Yanceyville**	**64.29**	**61**	*e*P	**P**	**19 36 51.2**	**+0.1**
	comp=Z,25nm,1.0s						
KMSC	**Kings Mountain**	**64.49**	**65**	*e*P	**P**	**19 36 55.3**	**+2.8**
	comp=Z,34nm,0.4s						
IP05	**Hopewell Churc**	**64.49**	**61**	*e*P	**P**	**19 36 53.5**	**+1.0**
	comp=Z,18nm,0.7s						
GOGA	**Godfrey**	**64.54**	**68**	P	**P**	**19 36 52.1**	**-0.7**
	baz=317						
Z53A	**Monticello**	**64.58**	**68**	P	**P**	**19 36 51.0**	**-2.1**
	baz=317						
Y54A	**Tignall**	**64.65**	**67**	P	**P**	**19 36 52.6**	**-1.0**
	baz=317						
Z54A	**Sparta**	**65.02**	**68**	P	**P**	**19 36 53.7**	**-2.3**
	baz=317						
HNR	**Honiara**	**65.36**	**209**	LR	LR	20 01 19.9	
	comp=Z,57nm,19.9s,baz=176,slow=32						
FINES	**FINESS Array B**	**65.72**	**350**	P	**P**	**19 36 59.1**	**-1.0**
	comp=Z,1.9nm,0.8s,baz=1.9,slow=11,SNR=4.9						
FINES				LR	LR	20 09 26.3	
	comp=Z,42nm,18.3s,baz=17,slow=40						
PDGK	**Podgornoye**	**65.96**	**310**	*e*P	**P**	**19 37 01.9**	**-0.2**
KMI	**Kunming**	**66.78**	**281**	P	**P**	**19 37 08.1**	**+0.4**
KMI				pP	sP	19 37 17.5	+3.6
KMI				pmax	pmax		
	comp=Z,13nm,0.8s						
NOA	**NORSAR Array B**	**67.15**	**357**	LR	LR	20 07 08.0	
	comp=Z,23nm,18.7s,baz=30,slow=37						
HFS	**Hagfors**	**67.97**	**356**	P	**P**	**19 37 13.7**	**-0.7**
	comp=Z,1.2nm,0.6s,baz=53,slow=5.6,SNR=6.1						
VSU	**Vasula**	**68.56**	**349**	⇑*e*P	**P**	**19 37 18.9**	**+0.8**
VSU				*e*		19 37 42.7	
VSU				pmax	pmax		
	comp=Z,18nm,0.9s						
AAK	**Ala-Archa**	**68.81**	**313**	*e*P	**P**	**19 37 20.1**	**-0.1**
	comp=Z,5.2nm,0.8s						
AAK	**Ala-Archa**	**68.81**	**313**	*e*P	**P**	**19 37 20.1**	**-0.1**
AAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
AKTO	**Aktyubinsk**	**68.89**	**327**	P	**P**	**19 37 19.8**	**-0.6**
	comp=Z,5.3nm,0.7s,baz=40,slow=7.6,SNR=22						
ABKAR	**Akbulak array**	**69.24**	**326**	*e*P	**P**	**19 37 22.1**	**-0.4**
PMG	**Port Moresby**	**69.89**	**222**	P	**P**	**19 37 27.8**	**+0.9**
	comp=Z,26nm,0.9s,baz=180,slow=6.6,SNR=3.0						
SIJI	**Sorong**	**70.06**	**241**	P	**P**	**19 37 28.6**	**+0.6**
	comp=Z,18nm,0.8s,baz=158,slow=22,SNR=3.6						
KK31	**Karatay Array**	**70.20**	**316**	*e*P	**P**	**19 37 27.3**	**-1.3**
KK31	**Karatay Array**	**70.20**	**316**	*e*P	**P**	**19 37 27.3**	**-1.3**
KKAR	**Karatay Array**	**70.20**	**316**	*e*P	**P**	**19 37 27.3**	**-1.3**
KKAR	**Karatay Array**	**70.20**	**316**	*e*P	**P**	**19 37 27.3**	**-1.3**
KSH	**Kashi**	**70.58**	**310**	P	**P**	**19 37 34.0**	**+2.9**
KSH				sP	sP	19 37 40.8	+3.5
KSH				*e*PcP	**PcP**	**19 37 55.6**	**+3.4**
KSH				PP	**PP**	**19 40 13.2**	**+6.3**
KSH				S	**S**	**19 46 46.1**	**+1.8**
KSH				ScS	**SKKSac**	**19 47 32.3**	**-0.4**
KSH				SS	**SS**	**19 51 20.4**	**+5.6**
KSH				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KSH				pmax	pmax		
	comp=Z,63nm,4.9s						
SFK	**Sufi-Kurgan**	**71.34**	**312**	*e*P	**P**	**19 37 35.8**	**-0.1**
RAR	**Rarotonga**	**73.99**	**167**	LR	LR	20 02 31.7	
	comp=Z,90nm,21.5s,baz=40,slow=29						
CMAR	**Chiang Mai Arr**	**74.10**	**280**	P	**P**	**19 37 52.1**	**-0.1**
	comp=Z,2.3nm,0.8s,baz=28,slow=7.0,SNR=12						
CM01	**Chiang Mai Arr**	**74.12**	**280**	*e*P	**P**	**19 37 51.8**	**-0.5**
AKASG	**Malin Array Be**	**75.77**	**345**	P	**P**	**19 38 00.5**	**-0.9**
	comp=Z,0.8nm,0.3s,baz=18,slow=6.1,SNR=4.8						
KIEV	**Kiev**	**75.78**	**345**	*c i*P	**P**	**19 38 00.6**	**-0.8**
KIEV				pmax	pmax		
	comp=Z,1.0nm,1.0s						
DZM	**Mont Dzumac**	**75.88**	**199**	P	**P**	**19 38 03.8**	**+1.5**
	comp=Z,22nm,1.0s,baz=72,slow=14,SNR=9.7						
DZM				LR	LR	20 09 37.3	
	comp=Z,72nm,18.7s,baz=16,slow=34						
DZM	**Mont Dzumac**	**75.88**	**199**	*e*P	**P**	**19 38 03.0**	**+0.7**
	comp=Z,20nm,0.9s						
BRG	**Berggiesshubel**	**77.21**	**355**	*e*(P)	**P**	**19 38 09.5**	**0.0**
	comp=Z,9.7nm,1.5s						
BRG				*e*		19 41 12.2	
	comp=Z,11nm,0.7s						
BRG	**Berggiesshubel**	**77.21**	**355**	*e*P	**P**	**19 38 09.5**	**0.0**
BRG				pmax	pmax		
	comp=Z,10.0nm,1.5s						
BRG				pmax	pmax		
	comp=Z,11nm,0.7s						
GERES	**GERESS Array B**	**79.24**	**355**	P	**P**	**19 38 20.5**	**-0.5**
	comp=Z,0.7nm,0.7s,baz=33,slow=3.2,SNR=7.4						
GEA0	**GERESS Array S**	**79.25**	**355**	*e*P	**P**	**19 38 19.9**	**-1.1**
GEYT	**Alibeck**	**79.65**	**321**	P	**P**	**19 38 22.3**	**-1.0**
	comp=Z,1.6nm,1.1s,baz=293,slow=8.7,SNR=5.2						
CTA	**Charters Tower**	**79.94**	**218**	P	**P**	**19 38 25.6**	**+0.8**
	comp=Z,9.8nm,0.8s,baz=0.3,slow=6.3,SNR=5.1						
BFO	**Black Forest**	**79.94**	**359**	*ce*P	**P**	**19 38 26.4**	**+1.7**
WRAB	**Tennant Creek**	**84.81**	**228**	*ce*P	**P**	**19 38 51.8**	**+1.5**
WRAB				pmax	pmax		
	comp=Z,23nm,2.5s						
WB2	**Warramunga Arr**	**84.82**	**228**	*e*P	**P**	**19 38 47.9**	**-2.5**
WRA	**Warramunga Arr**	**84.82**	**228**	P	**P**	**19 38 50.3**	**-0.1**
	comp=Z,3.2nm,0.6s,baz=36,slow=6.3,SNR=11						
WRA	**Warramunga Arr**	**84.82**	**228**	P	**P**	**19 38 50.3**	**-0.1**
WRA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BRTR	**Keskin Array B**	**85.52**	**339**	P	**P**	**19 38 53.3**	**-0.7**
	comp=Z,0.6nm,0.7s,baz=46,slow=6.2,SNR=2.8						
PSI	**Prapat**	**86.24**	**270**	P	**P**	**19 38 58.0**	**+0.2**
	comp=Z,15nm,0.5s,baz=360,slow=7.2,SNR=15						
PSI	**Prapat**	**86.24**	**270**	*e*P	**P**	**19 38 57.2**	**-0.6**
	comp=Z,24nm,0.7s						
PSI	**Prapat**	**86.24**	**270**	*e*P	**P**	**19 38 57.2**	**-0.6**
PSI				pmax	pmax		
	comp=Z,24nm,0.7s						
AS01	**Alice Springs**	**88.23**	**227**	*e*P	**P**	**19 39 07.3**	**+0.3**
AS31	**Alice Springs**	**88.25**	**227**	*e*P	**P**	**19 39 08.1**	**+1.0**
	comp=Z,3.4nm,0.8s						
ASAR	**Alice Springs**	**88.25**	**227**	P	**P**	**19 39 07.8**	**+0.7**
	comp=Z,10.0nm,0.8s,baz=31,slow=4.7,SNR=32						
ASAR				LR	LR	20 17 14.6	
	comp=Z,51nm,18.9s,baz=44,slow=35						
ZARC	**Zaragoza, Cauc**	**89.50**	**79**	*e*P	**P**	**19 39 09.9**	**-3.5**
PTBC	**PUERTO BERRIO,**	**90.50**	**79**	*e*P	**P**	**19 39 16.2**	**-1.8**
PAMC	**Pamplona, Colo**	**90.92**	**77**	*e*P	P	19 39 12.6	-7.9
BARC	**Barichara**	**91.22**	**78**	*e*P	**P**	**19 39 19.7**	**-2.0**
RUSC	**La Rusia**	**91.84**	**78**	*e*P	P	19 39 19.8	-5.0
STKA	**Stephens Creek**	**92.35**	**217**	P	**P**	**19 39 26.9**	**+0.8**
	comp=Z,5.2nm,0.8s,baz=352,slow=9.4,SNR=7.5						
STKA				LR	LR	20 18 43.7	
	comp=Z,62nm,21.1s,baz=22,slow=34						
STKA	**Stephens Creek**	**92.35**	**217**	*e*P	**P**	**19 39 26.6**	**+0.6**
	comp=Z,2.3nm,1.1s						
STKA	**Stephens Creek**	**92.35**	**217**	*e*P	**P**	**19 39 26.6**	**+0.6**
STKA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
PALK	**Pallekele**	**93.80**	**287**	LR	LR	20 27 37.6	
	comp=Z,23nm,19.2s,baz=80,slow=39						
KMBO	**Kilima Mbogo**	**123.01**	**322**	PKP	**PKPdf**	**19 45 11.8**	**-1.1**
	comp=Z,17nm,0.9s,baz=69,slow=5.0,SNR=45						
PLCA	**Paso Flores**	**128.14**	**110**	PKP	**PKPdf**	**19 45 21.6**	**0.0**
	comp=Z,3.0nm,0.9s,baz=84,slow=3.2,SNR=3.2						
QSPA	**South Pole Qui**	**141.85**	**180**	PKhKP	PKPpre	19 45 41.1	
	comp=Z,2.4nm,0.6s,baz=319,slow=1.4,SNR=17						
MAW	**Mawson**	**149.03**	**218**	PKPbc	**PKPbc**	**19 46 02.7**	**+0.2**
	comp=Z,8.2nm,0.7s,baz=74,slow=2.4,SNR=22						
MAW	**Mawson**	**149.03**	**218**	*e*PKPbc	**PKPbc**	**19 46 03.1**	**+0.6**
BOSA	**Boshof**	**152.65**	**322**	PKPbc	**PKPbc**	**19 46 11.9**	**-0.6**
	comp=Z,1.6nm,0.4s,baz=24,slow=3.7,SNR=6.6						
SNAA	**Sanae**	**159.93**	**172**	PKPab	**PKPab**	**19 46 53.0**	**-0.1**
	comp=Z,3.6nm,0.9s,baz=212,slow=5.0,SNR=9.8						
SNAA	**Sanae**	**159.93**	**172**	*e*PKPab	**PKPab**	**19 46 53.2**	**0.0**

IDC 02 19:33:17.8±5.5**, 5°.60S**×**147°.43E, h195**^{km}±57^{km}**, mb3.4**/2**, mb1 3.5**/4**, mb1mx3.1**/46**, mbtmp3.9**/4**, Error ellipse: s-maj=92.2km s-min=44.0km az=129.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.79**	**184**	P	Pn	19 34 17.8	+1.0
	5.6nm,0.3s,baz=5.7,slow=11,SNR=39						
PMG				S	Sn	19 35 03.1	-0.1
	8.8nm,0.3s,baz=225,slow=16,SNR=10						
WRA	**Warramunga Arr**	**19.11**	**221**	P	P	19 37 26.2	0.0
	1.0nm,0.3s,baz=37,slow=11,SNR=20						
ASAR	**Alice Springs**	**22.19**	**215**	P	P	19 37 59.0	+0.5
	1.2nm,0.8s,baz=54,slow=8.5,SNR=5.5						
FITZ	**Fitzroy Crossi**	**24.64**	**238**	P	P	19 38 20.3	-0.4
	3.5nm,0.5s,baz=56,slow=9.4,SNR=9.6						
TORD	**Torodi Ar. Bea**	**145.41**	**285**	PKPbc	PKPdf	19 52 33.1	-0.5
	baz=54,slow=4.0						

SKO ***02*** *19:42:09.5, 40°.50N×21°.66E, h1*^{km}*, ML1.8*

ISCJB ***02*** *19:42:10.7±0.4, 40°.59N±0°.02×21°.58E±0°.04, h7*^{km}*±7*^{km}*, Error ellipse: s-maj=4.7km s-min=3.6km az=169.8*

CSEM ***02*** *19:42:10.5±0.1, 40°.59N×21°.58E, h10*^{km}*, ML2.1, Error ellipse: s-maj=2.5km s-min=2.2km az=27.0*

THE ***02*** *19:42:10.8, 40°.59N×21°.58E, h12*^{km}*±1*^{km}*, ML1.8/7, Error ellipse: s-maj=1.2km s-min=0.3km az=324.0*

ATH ***02*** *19:42:10.1, 40°.59N×21°.58E, h20*^{km}*±4*^{km}*, ML2.1/3, Error ellipse: s-maj=4.7km s-min=1.2km az=310.0*

ISC 02 19:42:10.7±0.9**, 40°.59N**±0°.02×**21°.57E**±0°.02**, h15**^{km}±7^{km}**, n32, σ0**^{s}**.49**/58**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FNA	**Florina**	**0.25**	**323**	P	**Pg**	**19 42 15.7**	**-0.4**
FNA				S	**Sg**	**19 42 20.3**	**+0.5**
FNA				AML	AML	19 42 20.6	
	comp=E,1464µm,0.2s						
FNA				AML	AML	19 42 20.7	
	comp=N,1238µm,0.2s						
FNA	**Florina**	**0.25**	**323**	P	**Pg**	**19 42 15.8**	**-0.3**
FNA				S	**Sg**	**19 42 20.0**	**+0.2**
FNA	**Florina**	**0.25**	**323**	P	**Pg**	**19 42 15.8**	**-0.3**
FNA				S	**Sg**	**19 42 20.0**	**+0.2**
KZN	**Kozani**	**0.32**	**151**	P	**Pg**	**19 42 16.8**	**-0.5**
KZN				S	**Sb**	**19 42 22.4**	**-0.8**
KZN				AML	AML	19 42 22.9	
	comp=N,1750µm,0.5s						
KZN				AML	AML	19 42 23.2	
	comp=E,1186µm,0.3s						
KZN	**Kozani**	**0.32**	**151**	P	**Pg**	**19 42 17.1**	**-0.2**
KZN				S	**Sg**	**19 42 22.1**	**+0.3**
KZN	**Kozani**	**0.32**	**151**	P	**Pg**	**19 42 17.0**	**-0.2**
KZN				S	**Sg**	**19 42 22.1**	**+0.3**
NEST	**Nestorio**	**0.43**	**247**	P	**Pg**	**19 42 18.9**	**-0.4**
NEST				S	**Sg**	**19 42 25.7**	**+0.5**
NEST				AML	AML	19 42 26.7	
	comp=E,250µm,0.2s						
NEST				AML	AML	19 42 27.0	
	comp=N,223µm,0.2s						
NEST	**Nestorio**	**0.43**	**247**	P	**Pg**	**19 42 19.0**	**-0.4**
NEST				S	**Sg**	**19 42 25.8**	**+0.5**
NEST	**Nestorio**	**0.43**	**247**	P	**Pg**	**19 42 19.0**	**-0.4**
NEST				S	**Sg**	**19 42 25.7**	**+0.5**
KTI	**Kastanea**	**0.46**	**115**	P	**Pg**	**19 42 19.2**	**-0.6**
KTI	**Kastanea**	**0.46**	**115**	P	**Pg**	**19 42 19.2**	**-0.6**
BIA	**Bitola**	**0.47**	**337**	P	**Pg**	**19 42 20.1**	**0.0**
BIA				S	**Sb**	**19 42 27.0**	**-0.6**
BIA	**Bitola**	**0.47**	**337**	*i* Pg	**Pg**	**19 42 20.1**	**0.0**
BIA				*i* Sg	**Sb**	**19 42 28.7**	**+1.1**
BIA	**Bitola**	**0.47**	**337**	P	**Pg**	**19 42 20.1**	**0.0**
BIA				S	**Sb**	**19 42 27.0**	**-0.6**
PENT	**Pentalofos**	**0.51**	**220**	P	**Pg**	**19 42 20.3**	**-0.5**
PENT	**Pentalofos**	**0.51**	**220**	P	**Pg**	**19 42 20.5**	**-0.3**
PENT				S	**Sb**	**19 42 28.4**	**-0.3**
PENT	**Pentalofos**	**0.51**	**220**	P	**Pg**	**19 42 20.5**	**-0.3**
PENT				S	**Sb**	**19 42 28.4**	**-0.3**
KBN	**Korca**	**0.60**	**274**	P	**Pg**	**19 42 22.2**	**-0.2**
KBN				S	**Sb**	**19 42 31.0**	**-0.2**
KBN	**Korca**	**0.60**	**274**	P	**Pg**	**19 42 22.2**	**-0.2**
KBN				S	**Sb**	**19 42 31.0**	**-0.2**
KPRO	**Kipourio**	**0.65**	**194**	P	**Pg**	**19 42 23.3**	**-0.1**
KPRO	**Kipourio**	**0.65**	**194**	P	**Pg**	**19 42 23.4**	**0.0**
KPRO				S	**Sb**	**19 42 32.9**	**+0.2**
KPRO	**Kipourio**	**0.65**	**194**	P	**Pg**	**19 42 23.1**	**-0.3**
KPRO				S	**Sb**	**19 42 32.9**	**+0.2**
GRG	**Griva**	**0.73**	**59**	P	**Pg**	**19 42 24.2**	**-0.6**
GRG	**Griva**	**0.73**	**59**	P	**Pg**	**19 42 24.4**	**-0.5**
GRG				S	**Sb**	**19 42 35.2**	**+0.2**
GRG	**Griva**	**0.73**	**59**	P	**Pg**	**19 42 24.3**	**-0.6**
GRG				S	**Sb**	**19 42 35.2**	**+0.2**
OHR	**Ohrid**	**0.79**	**312**	*i* Pg	**Pg**	**19 42 25.2**	**-0.7**
OHR				*i* Sg	**Sn**	**19 42 38.3**	**-0.5**
KRUS	**Krusevo**	**0.82**	**343**	*i* Pg	**Pg**	**19 42 26.4**	**-0.2**
KRUS				*i* Sg	**Sb**	**19 42 38.3**	**+0.7**
LIT	**Litokhoron**	**0.85**	**124**	P	**Pg**	**19 42 26.7**	**-0.5**
LIT	**Litokhoron**	**0.85**	**124**	P	**Pg**	**19 42 26.6**	**-0.6**
LIT				S	**Sb**	**19 42 39.5**	**+1.0**
LIT	**Litokhoron**	**0.85**	**124**	P	**Pg**	**19 42 26.6**	**-0.6**
LIT				S	**Sb**	**19 42 39.5**	**+1.0**
THL	**Klokotos Trika**	**1.08**	**161**	P	**Pb**	**19 42 30.8**	**-0.2**
THL				S	**Sn**	**19 42 46.4**	**+0.5**
THL	**Klokotos Trika**	**1.08**	**161**	P	**Pb**	**19 42 30.8**	**-0.2**
THL				S	**Sn**	**19 42 46.4**	**+0.5**

*ECX **02** 19:53:55.0±0.5, 32°.20N×115°.32W, h6^{km}, MD2.8, ML3.0*
*MEX **02** 19:53:56.2±0.4, 32°.26N×115°.23W, h16^{km}±5^{km}, MD3.8*
ISC 02 19:53:52.8±1.0, 32°.25N±0°.04×115°.27W±0°.04, h25^{km}±8^{km}, n21, σ0^{s}50/30, 2C-3D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBIG	Mexicali	0.17	19	eP	Pn	19 53 59.6	-0.2
MBIG	Mexicali	0.17	19	eP	Pn	19 53 59.3	-0.6
MBIG				eS	Sb	19 54 01.9	+0.2
CPBX	Cerro Prieto	0.17	349	eP	Pb	19 53 58.2	0.0
CPBX				eS	Sb	19 54 01.7	-0.2
CPBX				⇑e		19 54 04.2	
CPBX				IAML		19 54 04.2	
	comp=E,7µm,0.3s						
EMSC	East Mesa	0.55	26	eP	Pn	19 54 06.0	+1.0
SGL	Mount Signal	0.56	316	⇓iP	Pn	19 54 05.0	-0.2
WESC	Westside Schoo	0.65	322	eP	Pn	19 54 07.0	+0.6
YMD	Yuma Desert	0.68	63	eP	Pn	19 54 07.5	+0.6
YUH	Yuha Desert	0.69	306	⇓iP	Pn	19 54 06.8	-0.1
RMX	La Rumorosa	0.78	298	eP	Pb	19 54 07.4	-0.3
RMX				eS	Sb	19 54 16.8	-1.1
RMX				⇑e		19 54 17.1	
RMX				IAML		19 54 17.1	
	comp=E,716nm,0.3s						
RMX				e		19 54 18.3	
RMX				IAML		19 54 18.3	
	comp=N,816nm,0.2s						
ECBX	El Chinero	0.79	167	eP	Pn	19 54 08.0	-0.4
ECBX				eS	Sn	19 54 18.9	-0.5
IKP	In-Ko-Pah, Jac	0.82	300	eP	Pn	19 54 09.2	+0.4
ZAX	El Zacaton	1.13	230	eP	Pn	19 54 13.4	+0.3
ZAX				eS	Sn	19 54 28.2	+0.4
CBX	Cerro Bola	1.19	274	eP	Pb	19 54 14.9	+0.2
CBX				eS	Sb	19 54 30.7	+1.0
CBX				⇓e		19 54 32.2	
CBX				IAML		19 54 32.2	
	comp=N,390nm,0.3s						
CBX	Cerro Bola	1.19	274	eP	Pb	19 54 14.9	+0.2
CBX				eS	Sn	19 54 28.9	-0.5
TJIG	Tijuana	1.21	279	eP	Pb	19 54 15.2	+0.2
TJIG				eS	Sn	19 54 29.4	-0.3
SPIG	San Pedro Mart	1.21	188	eP	Pb	19 54 15.4	+0.1
SPIG	San Pedro Mart	1.21	188	eP	Pb	19 54 15.3	+0.1
SPIG				eS	Sn	19 54 29.7	-0.5
SPX	San Pedro Mart	1.21	188	eP	Pb	19 54 15.4	+0.1
BAR	Barrett	1.27	290	eP	Pb	19 54 16.3	+0.3
ECNX	Esteban Cantu	1.28	243	eP	Pn	19 54 15.7	+0.5
PBX	Punta Banda	1.34	248	eP	Pb	19 54 16.9	-0.4

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*IDC **02** 19:53:58.5±1.2, 25°.75N×141°.87E, h0^{km}, mb3.7/5, mb1 3.9/5, mb1mx3.4/67, mbtmp3.7/5, MS3.5/2, Ms1 3.5/2, ms1mx2.8/44, Error ellipse: s-maj=51.5km s-min=16.4km az=93.0*
*ISCJB **02** 19:54:01.8±1.0, 25°.70N±0°.09×141°.7E±0°.3, h33^{km}, mb3.5/6, MS3.6/2, Error ellipse: s-maj=34.0km s-min=10.1km az=16.0*
ISC 02 19:54:03.4±1.4, 25°.7N±0°.1×141°.9E±0°.4, h35^{km}, n9, σ1^{s}08/8, mb3.5/6, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	1.38	10	Pn	Pn	19 54 24.8	-1.4
	baz=180,slow=12						
JCJ				Sn	Sn	19 54 45.1	+1.8
	baz=287,slow=20						
KLR	Kul’dur	24.77	344	P	P	19 59 21.9	+0.2
	0.1nm,0.6s,baz=139,slow=9.3,SNR=3.6						
WRA	Warramunga Arr	45.99	190	P	P	20 02 23.9	+0.4
	1.3nm,0.4s,baz=12,slow=8.5,SNR=17						
ASAR	Alice Springs	49.71	190	P	P	20 02 52.5	+0.3
	0.2nm,0.5s,baz=15,slow=9.7,SNR=7.5						
MKAR	Makanchi Array	51.17	310	LR	LR	20 26 49.9	
	comp=Z,85nm,21.4s,baz=86,slow=39						
KURBB	Kurchatov Arra	53.83	315	P	P	20 03 22.9	+0.2
	0.2nm,0.5s,baz=90,slow=8.0,SNR=4.5						
BVAR	Borovoye Array	58.89	318	P	P	20 03 58.3	-0.5
	0.3nm,0.5s,baz=99,slow=8.9,SNR=3.4						
AKTO	Aktyubinsk	66.85	316	LR	LR	20 36 11.9	
	comp=Z,26nm,21.6s,baz=71,slow=38						
FINES	FINESS Array B	79.07	334	P	P	20 06 03.9	+0.1
	1.7nm,0.6s,baz=73,slow=4.7,SNR=7.7						

DJA 02 19:59:43.3±0.7, 5°S±3°×10°2E±°, h10^{km}, M3.5/5, MLv3.5/5, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASI	Maura Aman, Be	1.68	14	P	Pn	20 00 12.0	-0.8
MASI				S	Sn	20 00 33.3	-1.0
MDSI	Maura Dua	2.35	83	P	Pn	20 00 22.7	+0.7
MDSI				S	Sn	20 00 51.8	+0.9
KRJI	Kerinci	2.70	352	P	Pn	20 00 27.3	+0.4
KRJI				S	Sn	20 01 01.1	+1.4
KASI	Kota Agung	2.75	106	P	Pn	20 00 27.9	+0.4

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*SJA **02** 20:05:49.1±0.5, 30°.99S×72°.05W, h13^{km}±8^{km}, ML3.1, MW3.7*
*GUC **02** 20:05:51.5±0.8, 30°.94S×71°.66W, h20^{km}±118^{km}, ML3.0*
ISC 02 20:05:47.0±2.6, 30°.93S±0°.05×71°.9W±0°.1, h2^{km}±14^{km}, n12, σ1^{s}17/22, 1C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO04	Tololo Observa	1.20	51	⇑iP	Pn	20 06 12.3	+1.4
GO04				eP	Pn	20 06 12.3	+1.4
GO04				i S	Sn	20 06 27.0	-0.8
GO04				i S	Sg	20 06 27.6	+2.1
GO04				IAML		20 06 31.1	
	comp=E,1µm,0.5s						
TLL	Tololo Astrono	1.20	51	eP	Pn	20 06 12.4	+1.4
TLL				i S	Sn	20 06 28.0	+0.1
TLL				IAML		20 06 30.8	
	comp=N,552nm,0.4s						
ROCH	El Roble	2.17	160	eP	Pb	20 06 26.8	-0.3
ROCH				i S	Sg	20 06 56.7	0.0
ROCH				IAML		20 06 59.8	
	comp=N,176nm,0.5s						
ROC1	El Roble	2.17	161	i P	Pb	20 06 27.0	-0.1
ROC1				i S	Sg	20 06 56.1	-0.7
RTLS	Leoncito	2.37	112	i P	Pg	20 06 32.2	-0.2
RTLS				IAML		20 07 03.2	
	comp=Z,64nm,0.3s						
RTLS				i S	Sg	20 07 04.5	+1.2
PEL	Peldehue	2.43	156	i S	Sb	20 07 02.2	+0.3
PEL				IAML		20 07 09.5	
	comp=E,102nm,1.2s						
AUSP	Uspallata	2.49	122	i P	Pg	20 06 33.9	-0.8
FCH	Farellones	2.75	151	eP	Pb	20 06 36.7	-0.3
FCH				i S	Sb	20 07 11.7	+0.5
FCH				IAML		20 07 18.1	
	comp=E,82nm,0.2s						
AMOG	MOGNA	2.91	91	i P	Pb	20 06 40.0	+0.4
ARCO	CERRO ARCO	3.15	128	i P	Pb	20 06 42.7	-1.1
ARCO				i S	Sb	20 07 21.9	-0.8
ARCO				IAML		20 07 33.2	
	comp=Z,34nm,0.6s						
AGUA	GUANDACOL	3.26	65	i P	Pb	20 06 45.2	-0.5
VCA	Vinchina	3.87	57	i P	Pb	20 06 53.8	-2.2
VCA				i S	Sb	20 07 41.4	-1.9
VCA				IAML		20 07 53.4	
	comp=Z,49nm,0.4s						

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*IDC **02** 20:23:09.0±0.4, 59°.25S×25°.81W, h0^{km}, mb4.8/15, mb1 4.8/17, mb1mx4.7/31, mbtmp4.8/17, ML4.7/2, MS4.1/16, Ms1 4.0/16, ms1mx3.9/29, Error ellipse: s-maj=16.9km s-min=13.8km az=77.0*
*ISCJB **02** 20:23:13.3±0.3, 59°.34S±0°.06×25°.7W±0°.1, h40^{km}, mb4.9/33, MS4.1/15, Error ellipse: s-maj=9.1km s-min=7.0km az=139.2*
*NEIC **02** 20:23:14.4±2.6, 59°.30S×25°.65W, h34^{km}±17^{km}, mb4.9/23, Error ellipse: s-maj=8.7km s-min=6.2km az=216.0*
ISC 02 20:23:15.2±0.3, 59°.34S±0°.08×25°.85W±0°.08, h40^{km}, n171, σ1^{s}08/178, mb4.9/32, MS4.2/16, 1C-1D, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	Neumayer--Stat	13.49	154	P	Pn	20 26 21.4	-2.2
VNA3	Neumayer Olymp	13.65	158	P	Pn	20 26 22.9	-3.0
VNA3				S	Sn	20 28 45.1	-11
SNAA	Sanae	15.46	152	P	Pn	20 26 47.4	-2.7
SNAA				S	Sn	20 29 25.1	-15
SNAA	Sanae	15.46	152	Pn	Pn	20 26 47.9	-2.2
	18nm,0.3s,baz=310,slow=14,SNR=407						
SNAA				Sn	Sn	20 29 25.3	-15
	1.3nm,0.3s,baz=321,slow=18,SNR=4.6						
SNAA				LR	LR	20 31 41.6	
	comp=Z,642nm,19.4s,baz=350,slow=33						
SNAA	Sanae	15.46	152	ePn	Pn	20 26 47.2	-3.0
	73nm,0.5s						
SNAA				Sn	Sn	20 29 25.3	-15
PMSA	Palmer Station	18.48	237	P	P	20 27 26.4	-0.9
	0.4nm,0.3s,baz=141,slow=6.5,SNR=1.9						
PMSA				LR	LR	20 33 59.2	
	comp=Z,607nm,18.7s,baz=75,slow=35						
EFI	East Falkland	19.63	279	eP	Pn	20 27 42.9	+1.3
	90nm,0.8s						
SYO	Syowa Base	28.63	137	⇓eX	P	20 29 10.2	+2.9
SYO	Syowa Base	28.63	137	⇑epP	pP	20 29 22.0	+3.8
QSPA	South Pole Qui	30.91	180	P	P	20 29 28.7	+1.0
	13nm,0.6s,baz=202,slow=1.1,SNR=84						
QSPA				PcP	PcP	20 32 23.3	+0.2
	9.6nm,0.8s,baz=173,slow=3.1,SNR=4.5						
TRQA	Tornquist	31.36	297	eP	P	20 29 32.8	+0.9
	102nm,1.5s						
PLCA	Paso Flores	33.39	284	P	P	20 29 49.5	-0.1
	12nm,0.5s,baz=167,slow=6.9,SNR=56						
PLCA				LR	LR	20 42 25.4	
	comp=Z,149nm,20.2s,baz=164,slow=35						
PLCA	Paso Flores	33.39	284	eP	P	20 29 49.9	+0.3
	57nm,1.4s						
MAW	Mawson	37.11	141	P	P	20 30 20.8	-0.4
	7.6nm,1.0s,baz=250,slow=9.4,SNR=11						
MAW				PcP	PcP	20 32 40.5	0.0
	4.1nm,0.8s,baz=292,slow=4.9,SNR=5.3						
MAW				LR	LR	20 44 02.5	
	comp=Z,384nm,19.5s,baz=241,slow=34						
MAW	Mawson	37.11	141	eP	P	20 30 21.4	+0.3
	3.3nm,1.0s						
MAW				PcP	PcP	20 32 40.5	0.0
GO05	HualaæØ	38.53	288	eP	P	20 30 33.6	0.0
	28nm,0.8s						
PEL	Peldehue	39.45	291	eP	P	20 30 42.1	+0.8
	292nm,0.8s						
CPUP	Villa Florida	39.55	313	P	P	20 30 40.8	-1.3
	1.1nm,0.4s,baz=159,slow=10,SNR=4.1						
CPUP				LR	LR	20 46 55.0	
	comp=Z,149nm,20.3s,baz=162,slow=36						
ROC1	El Roble	39.75	291	eP	P	20 30 47.1	+3.1
	66nm,1.4s						
SUR	Sutherland	40.95	70	P	P	20 30 53.4	-0.5
	3.0nm,0.9s,baz=243,slow=11,SNR=1.9						
SBA	Scott Base	42.84	184	eP	P	20 31 11.0	+2.4
	11nm,0.9s						
VNDA	Vanda	43.31	182	P	P	20 31 13.3	+1.0
	15nm,0.9s,baz=184,slow=7.0,SNR=36						
VNDA				PcP	PcP	20 32 60.0	-0.5
	3.2nm,0.8s,baz=211,slow=5.0,SNR=3.8						
VNDA				LR	LR	20 47 57.1	
	comp=Z,99nm,21.8s,baz=168,slow=34						
VNDA	Vanda	43.31	182	eP	P	20 31 14.0	+1.6
	12nm,0.8s						
VNDA				PcP	PcP	20 32 60.0	-0.5
GO02	Mina Guanaco	45.68	299	eP	P	20 31 32.5	+0.3
	94nm,1.5s						
BOSA	Boshof	46.21	71	P	P	20 31 35.6	-0.6
	3.0nm,0.8s,baz=200,slow=6.9,SNR=4.5						
BOSA				LR	LR	20 47 42.0	
	comp=Z,219nm,18.6s,baz=180,slow=32						
PB01	IPOC Station P	49.23	302	eP	P	20 31 59.8	+0.2
	19nm,0.9s						
LBTB	Lobatse	49.39	69	eP	P	20 31 59.9	-0.9
	15nm,1.2s						
CASY	Casey	50.57	159	eP	P	20 32 10.0	+0.9
	7.7nm,0.9s						
MNMC	Minye Minye	50.97	303	eP	P	20 32 11.9	-1.1
	28nm,0.8s						
H10S2	ASCENSION HYDR	50.98	14	T	T	21 26 47.8	
	baz=188,slow=75,SNR=27						
H10S3	ASCENSION HYDR	50.99	14	T	T	21 26 48.1	
	baz=188,slow=75,SNR=29						
H10S1	ASCENSION HYDR	51.00	14	T	T	21 26 48.2	
	baz=188,slow=75,SNR=29						
H10N1	ASCENSION HYDR	52.10	14	T	T	21 28 11.1	
	baz=188,slow=77						
H10N3	ASCENSION HYDR	52.10	14	T	T	21 28 11.7	
	baz=188,slow=77						
H10N2	ASCENSION HYDR	52.12	14	T	T	21 28 12.6	
	baz=188,slow=77						
LPAZ	La Paz	52.88	306	P	P	20 32 27.3	-0.3
	3.4nm,0.4s,baz=154,slow=5.2,SNR=26						
LPAZ				LR	LR	20 55 42.8	
	comp=Z,72nm,20.6s,baz=153,slow=37						
LPAZ	La Paz	52.88	306	eP	P	20 32 27.6	0.0
	8.3nm,0.8s						
SAML	Samuel	57.63	315	eP	P	20 32 59.8	-1.3
	9.5nm,1.0s						
LSZ	Lusaka	58.98	66	eP	P	20 33 10.6	-0.1
	6.0nm,0.9s						
NNA	Nana	60.47	299	LR	LR	20 57 11.8	
	comp=Z,91nm,21.9s,baz=175,slow=34						
OPO	Ambohidratompo	65.56	85	LR	LR	20 56 50.6	
	comp=Z,174nm,19.3s,baz=187,slow=31						
LIC	Lamto	67.43	22	eP	P	20 34 06.5	0.0
	99nm,1.2s						
KIC	Kosan Boka	67.62	23	eP	P	20 34 07.6	-0.1
	67nm,1.2s						
TIC	Toumodi	67.84	22	eP	P	20 34 08.6	-0.5
DBIC	Dimbokro	67.90	23	P	P	20 34 08.9	-0.4
	12nm,0.7s,baz=172,slow=6.7,SNR=8.4						
OTAV	Otavalo	72.08	303	eP	P	20 34 35.9	+0.3
	9.2nm,0.9s						
ROSC	El Rosal	74.54	309	LR	LR	21 10 29.6	
	comp=Z,63nm,19.2s,baz=181,slow=38						
KMBO	Kilima Mbogo	75.60	67	LR	LR	21 05 35.1	
	comp=Z,324nm,19.2s,baz=122,slow=34						
TOA0	Torodi Ar. Sit	75.60	28	eP	P	20 34 54.4	-1.3
TORD	Torodi Ar. Bea	75.60	28	P	P	20 34 54.5	-1.1
	18nm,0.8s,baz=199,slow=6.3						
KOWA	Kowa	75.69	22	P	P	20 34 55.9	-0.1
	9.5nm,0.8s,baz=191,slow=4.5,SNR=12						
KOWA	Kowa	75.69	22	eP	P	20 34 57.0	+1.0
	34nm,1.4s						
PCRV	Puerto La Cruz	75.96	321	LR	LR	21 09 10.2	
	comp=Z,194nm,20.1s,baz=120,slow=36						
TAM	Tamanrasset	85.81	29	eP	P	20 35 52.0	+1.9
	5.8nm,1.0s						
FORT	Forrest	87.65	158	eP	P	20 35 59.3	+0.2
	36nm,0.7s						
STKA	Stephens Creek	88.53	169	P	P	20 36 03.5	+0.2
	8.8nm,0.8s,baz=158,slow=5.6,SNR=22						
STKA	Stephens Creek	88.53	169	eP	P	20 36 03.6	+0.3
	1.9nm,0.8s						
ATD	Arta Tunnel	89.31	66	LR	LR	21 13 26.1	
	comp=Z,98nm,19.8s,baz=319,slow=34						
PPT	Papeete	90.80	233	LR	LR	21 08 28.6	
	comp=Z,88nm,18.4s,baz=174,slow=30						
MDT	Midelt	93.49	18	P	P	20 36 27.0	+0.8
	2.7nm,0.9s,baz=234,slow=9.3,SNR=5.6						
MDT				LR	LR	21 12 20.1	
	comp=Z,132nm,21.8s,baz=189,slow=32						
ASAR	Alice Springs	95.63	161	P	P	20 36 35.7	-0.7
	6.0nm,0.8s,baz=183,slow=4.1,SNR=53						
ASAR				PKKPbc	PKKPbc	20 53 24.2	+0.5
	1.5nm,0.5s,baz=16,slow=2.2,SNR=20						
AS31	Alice Springs	95.63	161	eP	P	20 36 35.8	-0.6
	1.9nm,0.8s						
AS01	Alice Springs	95.64	161	eP	P	20 36 35.2	-1.2
WRA	Warramunga Arr	99.35	161	P	Pdif	20 36 52.2	-1.0
	3.5nm,1.2s,baz=195,slow=4.2,SNR=6.4						
WRA				PKiKP	PKiKP	20 41 22.4	-0.2
	0.8nm,0.9s,baz=205,slow=1.4,SNR=3.7						
WRA				PKKPbc	PKKPdf	20 53 14.8	-1.3
	1.2nm,0.6s,baz=355,slow=2.9,SNR=19						
ESDC	Sonseca Array	100.31	17	P	Pdif	20 36 56.7	0.0
	0.2nm,0.3s,baz=194,slow=2.4,SNR=4.6						
EKA	Eskdalemuir Ar	115.75	14	PKKPbc	PKKPbc	20 52 24.2	+0.8
	0.3nm,0.4s,baz=350,slow=2.6,SNR=4.8						
AK11	Malin Array Si	118.39	36	ePKPdf	PKPdf	20 41 55.9	-1.1
AKASG	Malin Array Be	118.43	36	PKP	PKPdf	20 41 55.8	-1.3
	0.9nm,0.5s,baz=232,slow=1.5,SNR=5.8						
SCHQ	Schefferville	118.46	334	PKP	PKPdf	20 41 56.3	-0.7
	3.5nm,0.4s,baz=153,slow=4.5,SNR=6.6						
DGR	Domenigoni Val	118.83	288	ePKPdf	PKPdf	20 41 58.0	-0.4
SHPR	Sheep Range	120.24	291	ePKPdf	PKPdf	20 42 02.4	+1.1
WBSM	Bird Springs	120.90	288	ePKPdf	PKPdf	20 42 02.9	+0.2
PSUT	Pine Spring	121.25	294	ePKPdf	PKPdf	20 42 04.2	+1.0
TCUT	Toone Canyon	122.18	297	ePKPdf	PKPdf	20 42 04.1	-0.8
PDAR	Pinedale Array	122.66	300	PKP	PKPdf	20 42 04.4	-1.4
	0.5nm,0.4s,baz=134,slow=2.6,SNR=5.0						
BGU	Big Grassy Mou	122.77	296	ePKPdf	PKPdf	20 42 06.7	+0.7
HFS	Hagfors	123.06	22	PKP	PKPdf	20 42 04.1	-1.5
	2.5nm,0.6s,baz=205,slow=2.8,SNR=7.7						
ULM	Lac du Bonnet	123.09	314	PKP	PKPdf	20 42 04.8	-1.3
	4.0nm,0.5s,baz=165,slow=1.2,SNR=4.6						
CM01	Chiang Mai Arr	123.19	111	ePKPdf	PKPdf	20 42 06.1	-1.1
NV11	Mina Array Sit	123.21	290	ePKPdf	PKPdf	20 42 08.1	+1.2
CM31	Chiang Mai Arr	123.22	111	ePKPdf	PKPdf	20 42 07.5	+0.2
CMAR	Chiang Mai Arr	123.22	111	PKP	PKPdf	20 42 07.2	-0.2
	3.8nm,0.8s,baz=230,slow=3.8,SNR=26						
NV01	Mina Array Sit	123.28	290	ePKPdf	PKPdf	20 42 07.4	+0.3
NVAR	Mina Array Bea	123.28	290	PKP	PKPdf	20 42 07.8	+0.7
	1.6nm,0.7s,baz=136,slow=2.2,SNR=9.8						
NB2	NORSAR Subarra	123.44	21	PKPdf	PKPdf	20 42 05.8	-0.6
	comp=Z,1.2nm,0.7s,baz=200,slow=1.8						
KVN	Kaiserville	123.67	291	ePKPdf	PKPdf	20 42 08.8	+1.0
TPAW	Teton Pass	123.85	299	ePKPdf	PKPdf	20 42 08.8	+0.7
MOOW	Moose Ponds	123.96	300	ePKPdf	PKPdf	20 42 08.7	+0.5
FXWY	Fox Creek	124.00	299	ePKPdf	PKPdf	20 42 08.5	+0.2
YERR	Yerington	124.17	290	ePKPdf	PKPdf	20 42 10.5	+1.7
BMN	Battle Mountai	124.34	292	ePKPdf	PKPdf	20 42 09.8	+0.8
AFDM	Forest Hills D	124.98	289	ePKPdf	PKPdf	20 42 11.1	+1.0
HLID	Hailey	125.47	297	ePKPdf	PKPdf	20 42 12.1	+1.0
DLMT	Dillon	126.05	299	ePKPdf	PKPdf	20 42 12.9	+0.8
LRM	Limekiln Ridge	126.34	300	ePKPdf	PKPdf	20 42 13.4	+0.6
WVOR	Wild Horse Val	126.56	293	ePKPdf	PKPdf	20 42 14.2	+1.0
MOD	Modoc Plateau	126.95	291	ePKPdf	PKPdf	20 42 15.2	+1.3
FINES	FINESS Array B	126.95	28	PKP	PKPdf	20 42 12.5	-0.5
	comp=Z,3.4nm,0.6s,baz=82,slow=0.4,SNR=15						
J08A	Circle Bar Ran	127.20	294	ePKPdf	PKPdf	20 42 15.4	+1.1
MSO	Missoula	127.78	300	ePKPdf	PKPdf	20 42 15.9	+0.6
BMO	Blue Mountains	127.80	296	ePKPdf	PKPdf	20 42 15.4	0.0
K05A	Summer Lake	127.86	292	ePKPdf	PKPdf	20 42 17.1	+1.4
ABKAR	Akbulak array	128.61	57	ePKPdf	PKPdf	20 42 16.3	-0.3
AKTO	Aktyubinsk	128.69	55	PKP	PKPdf	20 42 16.6	-0.2
	comp=Z,10nm,0.9s,baz=172,slow=2.5,SNR=24						
PINE	Pine Mountain	128.69	292	ePKPpre	PKPpre	20 42 08.8	
PINE				ePKPdf	PKiKP	20 42 18.3	+0.4
KSH	Kashi	128.71	76	ePKP	PKPdf	20 42 17.0	-0.3
KSH				PP	PP	20 44 26.2	+1.6
KSH				PKS	PKSdf	20 45 52.3	-1.6
KSH				SKS	SKSdf	20 49 24.3	-1.2
KSH				AMB	AMB		
	comp=Z,110nm,5.4s						
G08A	Pilot Rock	128.89	295	ePKPdf	PKPdf	20 42 18.5	+1.0
FFC	Flin Flon	128.91	314	ePKPdf	PKPdf	20 42 17.1	+0.1
AAK	Ala-Archa	130.35	72	ePKPdf	PKPdf	20 42 21.1	+0.7
KMI	Kunming	130.72	111	PKP	PKPdf	20 42 22.5	+0.8
KMI				AMB	AMB		
	comp=Z,90nm,6.2s						
CBSW	Chelan Butte S	131.26	297	ePKPpre	PKPpre	20 42 13.0	
CBSW				ePKPdf	PKiKP	20 42 22.1	-0.7
SUMG	Summit	131.92	355	ePKPdf	PKPdf	20 42 23.8	+1.1
ARU	Arti	133.33	49	ePKPdf	PKPdf	20 42 25.9	+0.6
GYA	Guiyang	133.71	114	ePdif	Pdif	20 39 26.0	+0.3
GYA				PKP	PKiKP	20 42 28.2	-0.3
GYA				PP	PP	20 45 01.0	+4.3
GYA				AMB	AMB		
	comp=Z,120nm,7.8s						
ARCES	ARCESS Array B	133.73	22	PKhKP	PKPpre	20 42 11.6	
	comp=Z,0.8nm,0.6s,baz=222,slow=1.5,SNR=3.8						
ARCES				PKP	PKPdf	20 42 25.4	-0.3
	comp=Z,3.8nm,0.7s,baz=193,slow=1.8,SNR=20						
ARCES				SKPbc	SKPab	20 45 53.3	-0.2
	comp=Z,2.0nm,0.9s,baz=197,slow=2.8,SNR=4.1						
BVAR	Borovoye Array	135.88	60	PKhKP	PKPpre	20 42 17.0	
	comp=Z,0.6nm,0.8s,baz=204,slow=3.2,SNR=3.2						
BVAR				PKP	PKPdf	20 42 30.3	0.0
	comp=Z,6.0nm,0.8s,baz=222,slow=1.7,SNR=23						
CD2	Chengdu	136.03	107	PKP	PKPdf	20 42 31.5	+0.2
MK31	Makanchi Array	137.18	74	ePKPdf	PKPdf	20 42 32.1	-0.8
MKAR	Makanchi Array	137.18	74	PKhKP	PKPpre	20 42 22.2	
	comp=Z,0.4nm,0.6s,baz=241,slow=4.8,SNR=3.2						
MKAR				PKP	PKPdf	20 42 30.9	-2.1
	comp=Z,2.5nm,0.9s,baz=242,slow=2.6,SNR=11						
MKAR				SKPbc	SKPbc	20 46 01.8	-0.7
	comp=Z,1.0nm,1.0s,baz=238,slow=3.9,SNR=5.0						
MKAR	Makanchi Array	137.18	74	PKPpre	PKPpre	20 42 22.2	
MKAR				ePKPdf	PKPdf	20 42 32.1	-0.8
MKAR				SKPbc	SKPbc	20 46 01.8	-0.7
WMQ	Urumqi	137.79	81	PKP	PKPdf	20 42 35.7	+1.5
WMQ				AMB	AMB		
	comp=Z,200nm,5.5s						
WMQ				LR	LR		
	comp=Z,99nm,34.9s						
WMQ				LR	LR		
	comp=Z,80nm,29.5s						
WMQ				LR	LR		
	comp=Z,75nm,21.5s						
KURBB	Kurchatov Arra	137.99	67	PKhKP	PKPpre	20 42 25.0	
	comp=Z,0.7nm,0.7s,baz=232,slow=3.3,SNR=8.9						
KURBB				PKP	PKPdf	20 42 34.1	-0.1
	comp=Z,2.9nm,0.8s,baz=234,slow=2.5,SNR=18						
KURK	Kurchatov	138.09	67	PKPpre	PKPpre	20 42 25.1	
KURK				PKP	PKPdf	20 42 34.1	-0.3
YKA	Yellowknife Ar	139.06	315	PKP	PKPdf	20 42 35.4	-0.4
	comp=Z,12nm,0.7s,baz=128,slow=2.3,SNR=30						
YKA				SKPbc	SKPbc	20 46 07.6	+0.3
	comp=Z,1.9nm,0.7s,baz=125,slow=2.4,SNR=6.1						
SPITS	Spitsbergen Ar	139.64	12	PKhKP	PKPpre	20 42 27.8	
	comp=Z,4.3nm,0.8s,baz=188,slow=3.8,SNR=4.2						
SPITS				PKP	PKPdf	20 42 36.0	-0.5
	comp=Z,4.8nm,0.8s,baz=206,slow=3.2,SNR=4.0						
LZH	Lanzhou	140.24	103	ePKP	PKPdf	20 42 42.7	+3.7
LZH				sPKP		20 43 00.5	
LZH				LR	LR		
	comp=Z,76nm,16.0s						
LZH				LR	LR		
	comp=Z,98nm,15.1s						
LZH				LR	LR		
	comp=Z,120nm,17.8s						
WHN	Wuhan	140.71	119	PKP	PKPdf	20 42 42.3	+2.5
GTA	Gaotai	140.75	96	ePKP	PKPdf	20 42 39.8	0.0
XAN	Xi’an	141.09	110	PKP	PKPdf	20 42 42.6	+2.1
XAN				sPKP		20 42 57.7	
XAN				AMB	AMB		
	comp=Z,63nm,4.1s						
RES	Resolute Bay	141.18	337	ePKPpre	PKPpre	20 42 34.4	
DLBC	Dease Lake	142.78	303	ePKPdf	PKPdf	20 42 44.0	+1.3
ZALV	Zalesovo Beam	143.08	67	PKhKP	PKPpre	20 42 38.9	
	comp=Z,1.6nm,0.3s,baz=228,slow=4.2,SNR=9.5						
NJ2	Nanjing	143.97	123	ePKP	PKPdf	20 42 45.3	-0.3
JIS	Juneau Island	144.60	300	ePKPdf	PKPbc	20 42 44.7	+0.1
BESE	Bessie Mountai	144.97	300	ePKPbc	PKPab	20 42 45.8	-0.2
TIA	Tai’an	146.72	117	PKPbc	PKPbc	20 42 51.9	0.0
HHC	Hu-ho-hao-te	147.75	106	ePKPbc	PKPbc	20 42 54.5	-0.3
INK	Inuvik	148.76	317	PKPbc	PKPbc	20 42 55.5	-0.9
	comp=Z,5.7nm,0.5s,baz=71,slow=4.1,SNR=18						
INK	Inuvik	148.76	317	ePKPdf	PKPdf	20 42 51.4	-1.1
BJI	Beijing	149.36	112	PKPbc	PKPbc	20 42 58.6	-0.2
DAWY	Dawson	149.45	308	ePKPdf	PKPdf	20 42 52.2	-1.7
SONM	Songino Array	150.07	91	PKP	PKPdf	20 42 54.7	-0.8
	comp=Z,1.9nm,1.0s,baz=195,slow=4.6,SNR=5.5						
SONM				PKPbc	PKPbc	20 43 00.1	-0.4
	comp=Z,16nm,1.0s,baz=214,slow=2.7,SNR=58						
SONA1	Songino Array	150.09	91	ePKPdf	PKPdf	20 42 54.8	-0.7
EGAK	Eagle	150.43	308	ePKPbc	PKPbc	20 42 59.9	-0.8
ULN	Ulaanbaatar	150.43	92	ePKPbc	PKPbc	20 43 01.2	-0.2
BMRM	Bremner River	150.44	300	ePKPbc	PKPbc	20 43 02.2	+1.4
DIV	Divide	151.03	300	ePKPbc	PKPbc	20 43 02.5	+0.3
TLY	Talaya	151.03	83	eP	PKPbc	20 43 02.5	0.0
KLU	Klutina	151.24	300	ePKPdf	PKPdf	20 42 55.1	-1.6
SCM	Sheep Creek Mo	151.99	301	ePKPbc	PKPbc	20 43 04.7	+0.2
KSAR	Wonju Array Be	152.33	131	PKP	PKPdf	20 42 58.5	-0.5
KSAR				PKPbc	PKiKP	20 43 05.7	-0.4
KSAR				PKPab	sPKPdf	20 43 16.2	0.0
KSRS	Korea Array	152.36	131	PKP	PKPdf	20 42 58.5	-0.5
	comp=Z,0.3nm,0.3s,baz=273,slow=25,SNR=4.0						
KSRS				PKPbc	PKiKP	20 43 05.7	-0.5
	comp=Z,4.0nm,0.9s,baz=197,slow=1.9,SNR=14						
KSRS				PKPab	sPKPdf	20 43 16.2	0.0
	comp=Z,3.4nm,0.9s,baz=206,slow=3.9,SNR=8.5						
KS01	Wonju Array Si	152.36	131	ePKPbc	PKPbc	20 43 04.4	-1.5
SML	Sawmill	152.42	300	ePKPbc	PKPbc	20 43 04.6	-0.7
FYU	Fort Yukon	152.57	311	ePKPbc	PKPbc	20 43 06.0	+0.5
ILAR	Eielson Array	152.76	307	PKP	PKPdf	20 42 59.4	+0.5
	comp=Z,1.1nm,1.0s,baz=220,slow=0.9,SNR=6.7						

ILAR				PKPbc	PKPbc	20 43 05.8	-0.2
	comp=Z,12nm,0.9s,baz=133,slow=1.2,SNR=12						
ILB	Eielson Array	152.76	307	ePKPbc	PKPbc	20 43 05.5	-0.4
KDAK	Kodiak Island	152.78	290	ePKPbc	PKPbc	20 43 05.9	-0.3
RC01	Rabbit Creek A	152.79	298	ePKPbc	PKPbc	20 43 06.2	0.0
CCB	Clear Creek Bu	153.10	306	ePKPbc	PKPbc	20 43 05.9	-0.8
MCK	McKinley	153.31	304	ePKPbc	PKPbc	20 43 07.3	0.0
MDM	Murphy Dome	153.36	307	ePKPbc	PKPbc	20 43 06.5	-0.8
SUA	Susitna One	153.38	298	ePKPbc	PKPbc	20 43 08.1	+0.5
TRF	Thorofare Moun	153.81	303	ePKPbc	PKPbc	20 43 08.2	-0.3
BPAW	Bear Paw Mtn.	154.29	304	ePKPbc	PKPbc	20 43 09.0	-0.4
MLY	Manley	154.41	306	ePKPbc	PKPbc	20 43 09.2	-0.4
CAST	Castle Rocks	154.58	302	ePKPbc	PKPbc	20 43 09.3	-0.7
TOLK	Toolik Lake Re	154.59	315	ePKPbc	PKPbc	20 43 10.5	+0.6
COLD	Coldfoot	154.62	311	ePKPbc	PKPbc	20 43 10.4	+0.4
MJAR	Matsushiro Arr	154.95	149	PKP	PKPdf	20 43 02.3	-0.6
	comp=Z,0.4nm,0.5s,baz=303,slow=2.4,SNR=3.0						
MJAR				PKPbc	PKiKP	20 43 11.5	-0.2
	comp=Z,1.6nm,0.7s,baz=150,slow=2.4,SNR=4.9						
MJAR				PKPab	PKPab	20 43 27.0	-0.2
	comp=Z,0.6nm,0.4s,baz=186,slow=5.0,SNR=6.8						
PETK	Petropavlovsk-	173.45	199	PKPab	PKPab	20 44 48.0	+0.2
	baz=123,slow=5.3						

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*NIED **02** 20:34:00, 37°.50N×144°.10E, h5^{km}, Mw3.5 Best double couple: $M_0$2.31000×10^{14} NP1:ϕ_s7.00000°, δ25.00000°, λ-90.00000°. NP2:ϕ_s186.00000°, δ65.00000°, λ-90.00000°.*

JMA 02 20:34:55.4±0.2**, 37°.55N×144°.08E, h37^{km}, M4.0, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIO	Ouri	2.34	294	P	Pn	20 35 33.2	+2.0
JIO				eS	Sn	20 36 00.6	+1.9
OFUJ	Ofunato	2.44	310	P	Pn	20 35 34.2	+1.6
OFUJ				eS	Sn	20 36 02.8	+1.7
JMK	Ichinoseki	2.65	303	P	Pn	20 35 37.4	+1.9
JMK				eS	Sn	20 36 08.7	+2.3
JOU	Okura	2.82	288	P	Pn	20 35 39.8	+1.9
JOU				eS	Sn	20 36 13.5	+2.9
JOM	Ohasama	2.91	312	P	Pn	20 35 41.2	+2.1
JOM				eS	Sn	20 36 14.4	+1.6
JFT	Otama	2.98	271	P	Pn	20 35 42.7	+2.7
JFT				eS	Sn	20 36 17.6	+3.1
JYK	Kaneyama	3.23	296	P	Pn	20 35 45.6	+2.0
JYK				eS	Sn	20 36 23.9	+3.1
JRG	Rokugo	3.27	305	P	Pn	20 35 46.9	+2.8
JRG				eS	Sn	20 36 24.6	+2.8
JANG	Nango	3.46	325	P	Pn	20 35 48.6	+2.0
JANG				eS	Sn	20 36 27.2	+0.9
JTM	Tenmabayashi	3.99	325	P	Pn	20 35 56.9	+2.9
JTM				eS	Sn	20 36 38.7	-0.7
JRY	Ryogami san	4.43	251	P	Pn	20 36 01.2	+1.2
JRY				eS	Sn	20 36 51.1	+0.7
JOT	Ohata	4.49	329	P	Pn	20 36 03.1	+2.3
MAT	Matsushiro	4.80	260	P	Pn	20 36 08.7	+3.5
MAT				S	Sn	20 37 03.1	+3.5

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*NEIC **02** 20:43:31.8±0.0, 16°.62N×98°.44W, h18^{km}, MD4.0(MEX), After MEX.*

MEX 02 20:43:31.8±0.5**, 16°.62N×98°.44W, h18^{km}**±234^{km}**, MD4.0, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLIG	Tlapa	0.95	352	eP	Pb	20 43 46.3	-3.4
TLIG				i S	Sb	20 43 59.0	-3.0
TLIG	Tlapa	0.95	352	eP	Pb	20 43 46.3	-3.4
TLIG				i S	Sb	20 43 59.0	-3.0
HMTT	Tlapaneco	1.18	354	i P	Pn	20 43 50.0	-3.4
HMTT				i S	Sb	20 44 03.4	-5.3
ACP2	Acapulco	1.41	281	i P	Pn	20 43 54.0	-2.5
ACP2				i S	Sn	20 44 09.5	-5.2
VHO	Vista Hermosa	1.69	74	eP	Pn	20 43 57.2	-3.4
VHO				eS	Sn	20 44 17.8	-4.1
VHO	Vista Hermosa	1.69	74	eP	Pn	20 43 57.2	-3.4
VHO				eS	Sn	20 44 17.8	-4.1
MEIG	Mezcala	1.72	319	eP	Pn	20 43 58.0	-2.9
MEIG				eS	Sn	20 44 17.8	-4.8
MEIG	Mezcala	1.72	319	eP	Pn	20 43 58.0	-2.9
MEIG				eS	Sn	20 44 17.8	-4.8
CAIG	El Cayaco	1.81	284	eP	Pn	20 43 59.0	-3.0
CAIG				eS	Sn	20 44 20.1	-4.3
CAIG	El Cayaco	1.81	284	eP	Pn	20 43 59.0	-3.0
CAIG				eS	Sn	20 44 20.1	-4.3
TPIG	Tehuac#an	2.06	30	i P	Pn	20 44 03.2	-2.5
TPIG				i S	Sn	20 44 26.6	-4.4
TPIG	Tehuac#an	2.06	30	i P	Pn	20 44 03.2	-2.5
TPIG				i S	Sn	20 44 26.6	-4.4
YAIG	Yautepec	2.31	345	eP	Pn	20 44 06.7	-2.4
YAIG				i S	Sn	20 44 33.3	-3.9
YAIG	Yautepec	2.31	345	eP	Pn	20 44 06.7	-2.4
YAIG				i S	Sn	20 44 33.3	-3.9
HUIG	Huatulco	2.39	110	i P	Pn	20 44 08.2	-1.8
HUIG				i S	Sn	20 44 35.0	-3.9
HUIG	Huatulco	2.39	110	i P	Pn	20 44 08.2	-1.8
HUIG				i S	Sn	20 44 35.0	-3.9
ARIG	Puente Sto Nin	2.46	312	eP	Pn	20 44 09.0	-2.1
ARIG				eS	Sn	20 44 36.3	-4.4
ARIG	Puente Sto Nin	2.46	312	eP	Pn	20 44 09.0	-2.1
ARIG				eS	Sn	20 44 36.3	-4.4

IDC 02 20:48:24.1±3.9**, 15°.17S×172°.80W, h0^{km}, mb3.8**/3**, mb1 3.9**/3**, mb1mx3.5**/51**, mbtmp3.8**/3**, MS4.1**/1**, Ms1 4.0**/1**, ms1mx2.7**/46**, Error ellipse: s-maj=193.5km s-min=23.8km az=139.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	1.60	38	Pn	Pn	20 48 53.7	0.0
	16nm,0.3s,baz=218,slow=8.7,SNR=12						
AFI				Sn	Sn	20 49 11.5	-3.6
	61nm,0.3s,baz=226,slow=18,SNR=20						
H11S2	WAKE ISLAND Hy	39.07	328	T	T	21 36 36.1	
	baz=146,slow=75,SNR=4.5						
H11S3	WAKE ISLAND Hy	39.08	328	T	T	21 36 37.6	
	baz=146,slow=75,SNR=4.1						
H11S1	WAKE ISLAND Hy	39.09	328	T	T	21 36 38.5	
	baz=146,slow=75,SNR=4.7						
STKA	Stephens Creek	44.65	240	P	P	20 56 38.4	-0.5
	0.5nm,0.5s,baz=80,slow=11,SNR=3.0						
STKA				LR	LR	21 14 15.9	
	comp=Z,205nm,18.4s,baz=204,slow=35						
WRA	Warramunga Arr	50.46	257	P	P	20 57 24.1	-0.1
	0.5nm,0.6s,baz=92,slow=6.8,SNR=7.2						
ASAR	Alice Springs	50.73	252	P	P	20 57 26.4	+0.1
	1.2nm,0.6s,baz=88,slow=7.8,SNR=14						

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*ISCJB **02** 20:51:02.5±0.6, 35°.94N±0°.05×70°.33E±0°.06, h110^{km}, mb3.4/1, Error ellipse: s-maj=7.5km s-min=6.2km az=139.5*

*IDC **02** 20:51:02.8±4.8, 35°.86N×70°.34E, h90^{km}±51^{km}, mb3.6/2, mb1 3.5/8, mb1mx3.1/69, mbtmp3.7/8, ML3.5/6, MS3.7/2, Ms1 3.7/2, ms1mx2.5/62, Error ellipse: s-maj=44.4km s-min=23.8km az=154.0*

*NNC **02** 20:51:08.7±4.9, 36°.47N×70°.00E, h101^{km}±126^{km}, mb3.4, mpv3.9, Error ellipse: s-maj=42.1km s-min=37.2km az=117.0*

ISC 02 20:51:03.5±1.2**, 35°.94N**±0°.08×**70°.5E**±0°.1**, h110^{km}, n33, σ2^{s}.16**/37**, 8C-6D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	4.69	29	⇓P	Pn	20 52 14.9	+2.7
	9.8nm,0.4s						
SFK				⇓S	Sn	20 53 06.4	+0.8
	23nm,0.4s						
AML	Almayashu	6.65	21	P	Pn	20 52 39.9	+1.0
	SNR=16						
MNAS	Manas	6.71	13	⇑P	Pn	20 52 39.7	+0.3
	3.1nm,0.4s						
MNAS				⇓S	Sn	20 53 52.2	-2.2
	20nm,1.0s						
UCH	Uchtor	6.99	25	P	Pn	20 52 44.8	+1.2
	SNR=9.5						
KZA	Kyzart	7.13	29	P	Pn	20 52 48.0	+2.5
	SNR=6.4						
KK31	Karatay Array	7.15	360	⇑P	Pn	20 52 45.0	-0.3
	5.3nm,0.5s,baz=182,slow=13						
KK31				⇑S	Sn	20 54 00.5	-4.5
	5.5nm,0.3s,baz=193,slow=23						
EKS2	Erkin-Say	7.16	19	P	Pn	20 52 46.5	+0.9
	SNR=6.5						
AAK	Ala-Archa	7.35	23	P	Pn	20 52 49.2	+1.0
	2.6nm,0.3s,baz=192,slow=8.7,SNR=9.9						
AAK				S	Sn	20 54 07.3	-2.8
	1.0nm,0.3s,baz=108,slow=20,SNR=3.4						
AAK	Ala-Archa	7.35	23	⇑P	Pn	20 52 48.6	+0.4
	5.9nm,0.6s						
AAK				⇑S	Sn	20 54 07.2	-2.8
	7.6nm,0.7s						
AAK	Ala-Archa	7.35	23	P	Pn	20 52 49.2	+1.0
	SNR=7.1						
ULHL	Ulahol	7.69	33	P	Pn	20 52 54.7	+1.8
	SNR=5.3						
CHMS	Chumysh	7.76	23	P	Pn	20 52 54.8	+1.1
	SNR=6.2						
USP	Ospenovka	7.92	21	P	Pn	20 52 57.3	+1.5
	SNR=11						
TKM2	Tokmak 2	7.99	28	⇓P	Pn	20 52 57.6	+0.7
	4.0nm,0.5s						
TKM2				⇓S	Sn	20 54 23.1	-2.5
	3.2nm,0.9s						
TKM2	Tokmak 2	7.99	28	P	Pn	20 52 58.1	+1.2
	SNR=11						
GEYT	Alibeck	10.14	285	P	Pn	20 53 24.5	-1.5
	0.2nm,0.3s,baz=98,slow=10,SNR=4.4						
GEYT				S	Sn	20 55 12.9	-5.0
	1.1nm,0.3s,baz=109,slow=26,SNR=12						
PYUN	Piuthan	13.13	123	eP	Pn	20 54 02.9	-3.0
PYUN				eS	Sn	20 56 25.3	-5.3
DANN	Dangsing	13.51	120	eP	Pn	20 54 11.9	+1.0
KOLN	Koldanda	13.76	123	eP	Pn	20 54 11.6	-2.5
MKAR	Makanchi Array	13.96	35	P	Pn	20 54 18.5	+2.2
	0.1nm,0.3s,baz=229,slow=15,SNR=6.1						
GKN	Gorkha	14.33	120	eP	Pn	20 54 22.4	+1.0
DMN	Daman	14.90	120	eP	Pn	20 54 29.9	+1.2
KKN	Kakani	14.91	119	eP	Pn	20 54 30.7	+1.8
PKIN	Phulchoki	15.13	119	eP	Pn	20 54 33.4	+1.8
AB31	Akbulak array	15.40	333	⇓P	Pn	20 54 33.7	-0.9
	1.6nm,0.3s,baz=152,slow=13,SNR=28						
AB31				⇑S	Sn	20 57 13.2	-12
	0.6nm,0.4s,baz=158,slow=24,SNR=3.9						
KURBB	Kurchatov Arra	15.77	19	P	Pn	20 54 41.7	+2.6
	0.1nm,0.3s,baz=209,slow=10,SNR=7.7						
BVAR	Borovoye Array	17.08	360	P	P	20 54 57.4	+2.2
	0.4nm,0.3s,baz=162,slow=12,SNR=13						
AKTO	Aktyubinsk	17.09	332	P	P	20 54 56.4	+1.0
	0.3nm,0.3s,baz=131,slow=17,SNR=4.6						
AKTO	Aktyubinsk	17.09	332	⇑P	P	20 54 54.4	-1.0
	1.4nm,0.7s						
AKTO				⇑S	Sn	20 57 52.4	-13
	1.0nm,0.6s						
ZALV	Zalesovo Beam	20.57	25	P	P	20 55 35.5	+2.2
	6.8nm,0.5s,baz=217,slow=11,SNR=34						
PSI	Prapat	42.14	135	LR	LR	21 18 24.0	
	comp=Z,152nm,18.4s,baz=269,slow=39						
DAVOX	Davos/Dischmat	45.75	303	LR	LR	21 22 08.8	
	comp=Z,62nm,20.2s,baz=240,slow=41						
WRA	Warramunga Arr	82.01	122	P	P	21 03 13.7	+2.2
	0.5nm,0.9s,baz=326,slow=4.8,SNR=3.8						

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*IDC **02** 20:50:59.2±0.7, 6°.62S×102°.05E, h0^{km}, mb4.0/13, mb1 4.1/14, mb1mx3.8/64, mbtmp4.0/14, ML4.7/1, Error ellipse: s-maj=26.7km s-min=14.2km az=56.0*

*ISCJB **02** 20:51:01.0±0.5, 6°.50S±0°.05×102°.22E±0°.04, h24^{km}, mb4.0/14, Error ellipse: s-maj=7.1km s-min=5.0km az=21.5*

*NEIC **02** 20:51:04.6±0.4, 6°.57S×102°.14E, h35^{km}, mb4.1/1, Error ellipse: s-maj=14.8km s-min=8.1km az=44.0*

*DJA **02** 20:51:04.8±0.5, 6°S±5°×10°2E±°, h57^{km}±20^{km}, M4.8/17, mb4.9/7, mB5.8/3, MLv4.7/17, Mw(mB)5.3/3*

ISC 02 20:51:03.1±0.7**, 6°.49S**±0°.08×**102°.25E**±0°.07**, h24^{km}, n46, σ1^{s}.18**/46**, mb4.0**/14**, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LWLI	Liwa	2.32	51	P	Pn	20 51 40.3	+0.4
KASI	Kota Agung	2.43	67	P	Pn	20 51 41.2	-0.1
KASI				S	Sn	20 52 08.1	-2.2
MDSI	Maura Dua	2.77	44	P	Pn	20 51 46.6	+0.7
MDSI				S	Sn	20 52 17.8	-0.8
KLI	Kotabumi	3.06	58	P	Pn	20 51 50.5	+0.6
BLSI	Bandar Lampung	3.18	70	P	Pn	20 51 52.3	+0.7
BLSI				S	Sn	20 52 27.2	-1.6
MASI	Maura Aman, Be	3.33	360	P	Pn	20 51 54.5	+0.7
CGJI	Cibinong	3.42	92	P	Pn	20 51 54.6	-0.3
CGJI				S	Sn	20 52 31.3	-3.4
SBJI	Serang	3.87	85	P	Pn	20 52 01.9	+0.8
SKJI	Sukabumi	4.30	97	P	Pn	20 52 07.5	+0.4
PPSI	Pulau Pagai	4.33	329	P	Pn	20 52 06.2	-1.2
PMBI	Palembang	4.34	35	P	Pn	20 52 08.7	+1.1
TNG	Tangerang	4.38	86	P	Pn	20 52 09.0	+0.8
TNG				P	Pn	20 52 08.9	+0.8
KRJI	Kerinci	4.44	350	P	Pn	20 52 08.4	-0.7
DBJI	Dramaga	4.47	91	P	Pn	20 52 10.2	+0.8
LEM	Lembang	5.34	94	Pn	Pn	20 52 23.3	+1.8
	23nm,0.3s,baz=170,slow=14,SNR=14						
LEM				Sn	Sn	20 53 24.9	+2.6
	13nm,0.3s,baz=120,slow=20,SNR=2.4						
LEM	Lembang	5.34	94	P	Pn	20 52 23.2	+1.8
CISI	Cisompet, Garu	5.62	101	P	Pn	20 52 24.4	-0.9
PDSI	Padang	5.83	342	P	Pn	20 52 26.0	-2.1
	20nm,0.6s,0.7nm						
CMJI	Cimerak	6.28	102	P	Pn	20 52 34.2	-0.1
	171nm,0.5s,5µm1.1nm						
KPJI	Karang Pucung	6.68	98	P	Pn	20 52 41.5	+1.7
UGM	Wanagama	8.32	100	P	Pn	20 53 02.1	-0.3
PCJI	Pacitan	9.01	101	P	Pn	20 53 11.3	-0.5
PWJI	Pagerwojo	9.60	100	P	Pn	20 53 19.1	-0.7
JAGI	Jajag, Banyuwa	11.96	100	P	Pn	20 53 51.0	-1.2
BATI	Baumata	21.50	101	P	P	20 55 52.0	+1.6
	26nm,0.6s,baz=282,slow=6.3,SNR=4.6						
CMAR	Chiang Mai Arr	25.01	353	P	P	20 56 25.8	+0.4
	3.0nm,0.6s,baz=183,slow=8.8,SNR=18						
H08S2	Diego Garcia H	29.55	266	T	T	21 28 27.5	
	baz=88,slow=74,SNR=3.8						
H08S3	Diego Garcia H	29.56	266	T	T	21 28 27.2	
	baz=88,slow=74,SNR=12						
H08S1	Diego Carcia H	29.57	266	T	T	21 28 19.7	
	baz=88						
H01W3	Cape Leeuwin H	30.30	160	T	T	21 29 10.2	
	baz=338,slow=76,SNR=9.4						
H01W2	Cape Leeuwin H	30.32	160	T	T	21 29 30.4	
	baz=338,slow=76,SNR=9.9						
H01W1	Cape Leeuwin H	30.32	160	T	T	21 29 00.2	
	baz=338,slow=76,SNR=9.4						
WRA	Warramunga Arr	33.89	116	P	P	20 57 45.1	+0.7
	0.7nm,0.7s,baz=287,slow=12,SNR=5.7						
WRAB	Tennant Creek	33.90	116	eP	P	20 57 45.2	+0.7
	1.6nm,0.7s						
ASAR	Alice Springs	34.87	123	P	P	20 57 53.1	+0.2
	0.3nm,0.4s,baz=296,slow=7.8,SNR=6.5						
STKA	Stephens Creek	44.53	130	P	P	20 59 13.3	+0.1
	1.4nm,0.5s,baz=295,slow=7.5,SNR=7.7						
SONM	Songino Array	54.22	3	P	P	21 00 28.5	+1.6
	2.0nm,0.7s,baz=187,slow=9.6,SNR=14						
MKAR	Makanchi Array	55.94	344	P	P	21 00 39.4	+0.1
	0.6nm,0.6s,baz=150,slow=9.1,SNR=7.9						
KURBB	Kurchatov Arra	60.47	343	P	P	21 01 10.5	-0.3
	0.4nm,0.6s,baz=162,slow=6.8,SNR=3.9						
KURK	Kurchatov	60.53	343	P	P	21 01 10.5	-0.7
ZALV	Zalesovo Beam	61.98	348	P	P	21 01 21.1	0.0
	1.1nm,0.4s,baz=166,slow=6.7,SNR=7.4						
BVAR	Borovoye Array	65.15	339	P	P	21 01 41.7	-0.3
	0.7nm,0.4s,baz=149,slow=7.9,SNR=9.0						
LSZ	Lusaka	72.98	256	P	P	21 02 30.8	-0.8
	0.9nm,0.6s,baz=101,slow=5.2,SNR=3.8						
VNDA	Vanda	77.35	169	P	P	21 02 55.0	-0.5
	0.9nm,0.9s,baz=306,slow=7.5,SNR=5.4						
QSPA	South Pole Qui	83.50	180	P	P	21 03 28.2	-0.6
	0.6nm,0.5s,baz=244,slow=8.1,SNR=3.3						
TXAR	Lajitas Array	146.63	44	PKPbc	PKPab	21 10 44.2	-0.4
	0.2nm,0.6s,baz=349,slow=2.8,SNR=5.4						

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*IDC **02** 21:00:59.9±1.8, 6°.74S×101°.95E, h0^{km}, mb3.6/8, mb1 3.8/9, mb1mx3.5/61, mbtmp3.7/9, ML4.2/1, Error ellipse: s-maj=69.4km s-min=17.3km az=51.0*

*ISCJB **02** 21:01:03.1±1.3, 6°.7S±0°.2×102°.1E±0°.2, h33^{km}, mb3.7/8, Error ellipse: s-maj=39.1km s-min=13.2km az=135.4*

ISC 02 21:01:05.5±1.5**, 6°.7S**±0°.2×**102°.1E**±0°.2**, h35^{km}, n10, σ0^{s}.27**/10**, mb3.6**/8**, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LEM	Lembang	5.51	92	Pn	Pn	21 02 25.2	0.0
	6.7nm,0.3s,baz=300,slow=20,SNR=6.0						
CMAR	Chiang Mai Arr	25.15	353	P	P	21 06 27.6	0.0
	1.1nm,0.7s,baz=183,slow=9.0,SNR=8.1						
WRA	Warramunga Arr	33.97	116	P	P	21 07 45.6	-0.4
	0.7nm,0.9s,baz=287,slow=12,SNR=3.4						
ASAR	Alice Springs	34.93	122	P	P	21 07 54.2	-0.1
	0.3nm,0.7s,baz=300,slow=8.5,SNR=2.7						
STKA	Stephens Creek	44.56	130	P	P	21 09 14.6	+0.3
	1.3nm,0.6s,baz=305,slow=7.0,SNR=4.1						
SONM	Songino Array	54.40	4	P	P	21 10 29.4	+0.3
	0.8nm,0.7s,baz=184,slow=9.1,SNR=5.9						
MKAR	Makanchi Array	56.05	344	P	P	21 10 40.9	0.0
	0.4nm,0.8s,baz=154,slow=7.2,SNR=3.6						
ZALV	Zalesovo Beam	62.11	349	P	P	21 11 22.8	+0.1
	0.5nm,0.4s,baz=139,slow=5.2,SNR=3.8						
BVAR	Borovoye Array	65.25	340	P	P	21 11 43.2	-0.3
	0.3nm,0.5s,baz=145,slow=5.3,SNR=3.6						
TXAR	Lajitas Array	146.88	44	PKPbc	PKPbc	21 20 45.0	0.0
	0.3nm,0.8s,baz=222,slow=1.7,SNR=3.8						

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*IDC **02** 21:09:41.9±2.3, 35°.91N×141°.60E, h0^{km}, mb3.6/4, mb1 3.5/6, mb1mx3.3/64, mbtmp3.5/6, ML2.8/2, MS2.3/2, Ms1 2.3/2, ms1mx2.0/60, Error ellipse: s-maj=62.0km s-min=22.6km az=65.0*

*ISCJB **02** 21:09:45.3±1.0, 35°.75N±0°.06×141°.4E±0°.1, h26^{km}, mb3.6/4, Error ellipse: s-maj=12.2km s-min=7.8km az=170.4*

*JMA **02** 21:09:48.7±0.1, 35°.75N×141°.04E, h35^{km}±1^{km}, M2.5*

ISC 02 21:09:47.6±1.4**, 35°.81N**±0°.05×**141°.2E**±0°.1**, h26^{km}, n19, σ1^{s}.08**/15**, mb3.6**/4**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.26	247	P	Pb	21 09 54.9	+0.8
CHOJ				eS	Sb	21 09 59.4	+0.9
JHYU	Hitachinakayam	0.70	320	P	Pn	21 10 02.3	+0.5
JYT	Yasato	0.88	299	P	Pn	21 10 04.0	-0.3
JHO	Hitachi	0.93	330	P	Pb	21 10 05.7	+0.6
BSO3	Boso 3	1.13	208	P	Pn	21 10 07.5	+0.1
MJAR	Matsushiro Arr	2.49	288	Pn	Pn	21 10 27.7	+1.2
	1.3nm,0.3s,baz=110,slow=4.3,SNR=10						
MJAR				LR	LR	21 11 31.0	
	comp=Z,36nm,21.0s,baz=130,slow=39						
MAT	Matsushiro	2.49	288	P	Pn	21 10 27.5	+1.1
MAT				eS	Sn	21 10 53.5	-2.5
JHJ	Hachijo jima 2	2.91	203	Pn	Pn	21 10 32.9	+0.8
	3.8nm,0.3s,baz=312,slow=15,SNR=3.6						
JHJ				Sn	Sn	21 11 05.1	-1.1
	9.6nm,0.3s,baz=105,slow=20,SNR=5.1						
KSRS	Korea Array	10.76	283	LR	LR	21 17 01.4	
	comp=Z,21nm,18.1s,baz=145,slow=40						
H11N2	WAKE ISLAND Hy	27.73	118	T	T	21 44 35.0	
	baz=311						
H11N1	WAKE ISLAND Hy	27.73	118	T	T	21 44 35.7	
	baz=311						
H11N3	WAKE ISLAND Hy	27.75	118	T	T	21 44 40.1	
	baz=311						
H11S1	WAKE ISLAND Hy	28.39	121	T	T	21 45 27.3	
	baz=312,slow=74						
H11S3	WAKE ISLAND Hy	28.39	121	T	T	21 45 27.0	
	baz=312,slow=74						
H11S2	WAKE ISLAND Hy	28.41	121	T	T	21 45 26.8	
	baz=312						
MKAR	Makanchi Array	44.60	303	P	P	21 17 57.5	0.0
	0.9nm,0.7s,baz=90,slow=9.1,SNR=7.0						
KURBB	Kurchatov Arra	46.60	309	P	P	21 18 13.2	0.0
	0.6nm,0.5s,baz=84,slow=7.7,SNR=7.4						
WRA	Warramunga Arr	55.82	188	P	P	21 19 22.2	-0.4
	0.4nm,0.7s,baz=6.2,slow=7.7,SNR=2.9						
ASAR	Alice Springs	59.55	188	P	P	21 19 48.0	-0.8
	0.3nm,0.8s,baz=14,slow=7.8,SNR=2.8						

MAN 02 21:11:15.9, 9°.86N×123°.69E, h55^{km}, mb3.7, ML2.4, MS1.9, 1C, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNPH	Sibulan	0.68	221	⇑iP	Pn	21 11 31.8	+2.1
SNPH				i S	Sn	21 11 42.8	+3.1
GUIM	Jordan	1.32	305	eP	Pn	21 11 39.1	+1.0
GUIM				eS	Sn	21 11 56.0	+1.3
PAGZ	Pagadian	2.02	189	eP	Pn	21 11 48.7	+1.2
PAGZ				eS	Sn	21 12 12.5	+0.8

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*ISCJB **02** 21:18:13.0±0.7, 36°.1S±0°.1×100°.2W±0°.1, h14^{km}, mb4.0/19, MS3.5/7, Error ellipse: s-maj=18.0km s-min=13.3km az=142.7*

*IDC **02** 21:18:12.4±1.0, 36°.13S×100°.14W, h0^{km}, mb4.0/8, mb1 4.3/8, mb1mx4.0/35, mbtmp4.0/8, MS3.5/7, Ms1 3.5/7, ms1mx3.2/36, Error ellipse: s-maj=29.4km s-min=22.4km az=79.0*

*NEIC **02** 21:18:13.9±0.4, 36°.14S×100°.14W, h10^{km}, mb4.3/10, Error ellipse: s-maj=11.3km s-min=8.3km az=54.0*

ISC 02 21:18:14.6±0.9**, 36°.2S**±0°.1×**100°.2W**±0°.2**, h14^{km}, n27, σ0^{s}.47**/19**, mb4.1**/19**, MS3.4**/7**, Southeast of Easter Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLCA	Paso Flores	23.57	110	P	P	21 23 25.1	+0.3
	2.6nm,0.9s,baz=280,slow=12,SNR=3.4						
PLCA				LR	LR	21 30 10.3	
	comp=Z,109nm,18.3s,baz=260,slow=30						
LCO	Las Campanas	25.75	82	P	P	21 23 44.8	-0.3
	2.3nm,0.6s						
TRQA	Tornquist	30.36	105	P	P	21 24 25.9	0.0
	2.0nm,0.9s						
NNA	Nana	31.94	47	LR	LR	21 34 03.5	
	comp=Z,87nm,20.6s,baz=248,slow=30						
NNA	Nana	31.94	47	P	P	21 24 41.0	+0.9
	11nm,0.6s						
LPAZ	La Paz	34.63	64	P	P	21 25 04.7	+0.5
	2.6nm,0.9s,baz=224,slow=13,SNR=6.9						
LPAZ				LR	LR	21 35 17.4	
	comp=Z,71nm,21.4s,baz=256,slow=30						
CPUP	Villa Florida	37.64	87	LR	LR	21 39 31.0	
	comp=Z,47nm,18.2s,baz=184,slow=34						
SIV	San Ignacio	40.08	70	P	P	21 25 49.0	-0.8
	3.7nm,0.8s,baz=244,slow=9.9,SNR=14						
SAML	Samuel	43.14	60	eP	P	21 26 14.2	-0.5
	0.9nm,0.6s						
ROSC	El Rosal	47.41	36	LR	LR	21 43 02.9	
	comp=Z,54nm,18.3s,baz=169,slow=31						
RAR	Rarotonga	53.62	269	LR	LR	21 44 12.5	
	comp=Z,107nm,21.9s,baz=267,slow=29						
QSPA	South Pole Qui	54.07	180	P	P	21 27 38.9	+0.5
	1.4nm,1.0s,baz=127,slow=5.2,SNR=3.8						
VNDA	Vanda	56.72	195	LR	LR	21 45 56.9	
	comp=Z,30nm,20.9s,baz=148,slow=29						
TXAR	Lajitas Array	65.22	357	P	P	21 28 55.4	-0.1
	1.2nm,1.1s,baz=187,slow=9.6,SNR=5.2						
MIAR	Mount Ida	70.59	6	P	P	21 29 28.8	-0.3
	0.5nm,0.3s						
ANMO	Albuquerque	70.97	355	P	P	21 29 31.7	0.0
	0.8nm,0.9s						
OXF	Oxford	71.00	9	P	P	21 29 31.9	+0.2
	7.3nm,0.7s						
MAW	Mawson	75.77	173	P	P	21 29 59.5	+0.1
	2.0nm,0.9s,baz=225,slow=7.1,SNR=3.9						
NVAR	Mina Array Bea	76.08	345	P	P	21 30 02.1	+0.4
	1.6nm,0.8s,baz=175,slow=7.6,SNR=7.7						
CMB	Columbia Colle	76.15	344	P	P	21 30 02.2	+0.3
	2.9nm,0.5s						
PDAR	Pinedale Array	79.01	353	P	P	21 30 18.0	0.0
	0.7nm,0.7s,baz=170,slow=5.5,SNR=8.3						
HLID	Hailey	80.39	350	eP	P	21 30 25.3	-0.1
	0.1nm,0.5s						
WALA	Waterton Lakes	85.71	351	eP	P	21 30 52.1	-0.7
	1.0nm,0.5s						
SUR	Sutherland	92.25	133	eP	P	21 31 24.1	-0.5
	12nm,1.2s						
H01W1	Cape Leeuwin H	102.43	208	T	T	23 27 15.7	
	baz=151,slow=76,SNR=22						
H01W2	Cape Leeuwin H	102.43	208	T	T	23 27 16.5	
	baz=151,slow=76,SNR=20						
H01W3	Cape Leeuwin H	102.44	208	T	T	23 27 16.9	
	baz=151,slow=76,SNR=19						

*CSEM **02** 21:19:49.5±0.2, 37°.77N×29°.21E, h2km, ML2.3, Error ellipse: s-maj=5.2km s-min=4.3km az=176.0*
*ISK **02** 21:19:49.9, 37°.76N×29°.15E, h6km, ML2.3/7*
*DDA **02** 21:19:49.4, 37°.75N×29°.22E, h5km, Ml2.5*
ISC 02 21:19:49.5±1.2, **37°.76N**±0°.03×**29°.22E**±0°.03, **h1**km±13km, **n36**, σ**0s.73**/45, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DENT	Denizli	0.15	269	PG	Pg	21 19 52.3	-0.1
DENT	Denizli	0.15	269	*e*Pg	Pg	21 19 52.3	-0.1
DNZL	Cakiroluk	0.15	244	*i* P	Pg	21 19 52.7	+0.1
DNZL				*i* S	Sg	21 19 55.4	+0.8
DNZL	Cakiroluk	0.15	244	P	Pg	21 19 52.7	+0.1
DNZL				S	Sg	21 19 55.4	+0.8
TAVA	DENIZLI_Tavas	0.38	220	*i* P	Pg	21 19 55.7	-1.1
TAVA	DENIZLI_Tavas	0.38	220	P	Pg	21 19 55.7	-1.1
GOLH	Golhisar	0.59	152	*i* P	Pg	21 20 00.4	-0.3
GOLH	Golhisar	0.59	152	P	Pg	21 20 00.4	-0.3
BRDR	BURDUR-Merkez	0.67	95	*i* P	Pg	21 20 02.7	+0.3
BRDR	BURDUR-Merkez	0.67	95	P	Pg	21 20 02.7	+0.3
KULA	Kula-Manisa	0.88	330	PG	Pb	21 20 07.1	-0.5
KULA	Kula-Manisa	0.88	330	*e*Pg	Pb	21 20 07.1	-0.5
KZIL	AFYON_Kizioren	0.88	55	*i* P	Pg	21 20 05.8	-0.6
KZIL	AFYON_Kizioren	0.88	55	P	Pg	21 20 05.8	-0.6
YER	Yerkesik	0.97	230	PG	Pg	21 20 07.7	-0.4
YER				SG	Sb	21 20 21.9	-0.6
YER	Yerkesik	0.97	230	*e*Pg	Pg	21 20 07.7	-0.4
YER				*e*Sg	Sb	21 20 21.9	-0.6
TURN	Turunc	1.01	209	PN	Pn	21 20 13.0	+2.2
TURN	Turunc	1.01	209	*e*Pn	Pn	21 20 13.0	+2.2
DALY	Dalyan (Mu˜la	1.04	206	PG	Pg	21 20 09.6	+0.1
DALY				SG	Sb	21 20 24.6	+0.2
DALY	Dalyan (Mu˜la	1.04	206	*i* P	Pg	21 20 08.8	-0.7
DALY				*i* S	Sb	21 20 24.6	+0.2
DALY	Dalyan (Mu˜la	1.04	206	P	Pg	21 20 08.8	-0.7
DALY	Dalyan (Mu˜la	1.04	206	*e*Pg	Pg	21 20 09.6	+0.1
DALY				S	Sb	21 20 24.6	+0.2
AYDN	Tasoluk	1.07	265	*i* P	Pg	21 20 09.6	-0.4
AYDN				*i* S	Sg	21 20 23.8	0.0
AYDN	Tasoluk	1.07	265	P	Pg	21 20 09.6	-0.4
AYDN				S	Sg	21 20 23.8	0.0
AYDB	Zeytinkoy-Aydi	1.07	281	PG	Pg	21 20 09.6	-0.4
AYDB	Zeytinkoy-Aydi	1.07	281	*e*Pg	Pg	21 20 09.6	-0.4
FETY	Fethiye	1.12	186	PN	Pn	21 20 11.7	-0.7
FETY	Fethiye	1.12	186	P	Pb	21 20 11.6	-0.2
ELL	Elmali	1.15	151	PN	Pn	21 20 13.0	+0.2
ELL	Elmali	1.15	151	*e*Pn	Pn	21 20 13.0	+0.2
KORT	Korkueli	1.18	130	PN	Pn	21 20 13.6	+0.4
KORT	Korkueli	1.18	130	*e*Pn	Pn	21 20 13.6	+0.4
AKAS	Kas	1.55	168	PN	Pb	21 20 18.9	-0.2
AKAS	Kas	1.55	168	*e*Pn	Pb	21 20 18.9	-0.2
ARG	Arkhangelos	1.77	210	PN	Pb	21 20 21.6	-1.1
ARG	Arkhangelos	1.77	210	*e*Pn	Pb	21 20 21.6	-1.1

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*IDC **02** 21:23:10.7±0.6, 6°.62S×153°.62E, h0km, mb4.4/20, mb1 4.6/21, mb1mx4.4/49, mbtmp4.5/21, ML3.8/1, MS3.4/13, Ms1 3.4/13, ms1mx3.1/45, Error ellipse: s-maj=22.0km s-min=12.7km az=93.0*
*ISCJB **02** 21:23:13.9±0.3, 6°.67S±0°.05×153°.59E±0°.05, h29km, mb4.6/47, MS3.5/11, Error ellipse: s-maj=8.6km s-min=6.1km az=37.9*
*BJI **02** 21:23:14.9, 6°.34S×153°.84E, h36km, mb4.8/44, mB4.9/29, Ms4.7/10, Ms7 4.4/3*
*NEIC **02** 21:23:17.0±1.2, 6°.65S×153°.54E, h41km±10km, mb4.6/22, Error ellipse: s-maj=8.7km s-min=5.9km az=104.0*
ISC 02 21:23:15.4±0.4, **6°.67S**±0°.06×**153°.69E**±0°.07, **h29**km, **n112**, σ**1s.18**/111, **mb4.7**/47, **MS3.5**/11, **1C**, **New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	2.89	328	*e*Pn	Pn	21 23 59.0	-0.5
HNR	Honiara	6.78	114	LR	LR	21 27 28.0	
	comp=Z,280nm,19.1s,baz=276,slow=38						
PMG	Port Moresby	7.01	247	Pn	Pn	21 24 56.8	+0.6
	18nm,0.3s,baz=51,slow=10,SNR=32						
PMG				Sn	Sn	21 26 15.6	+0.5
	2.2nm,0.3s,baz=308,slow=12,SNR=4.3						
PMG				LR	LR	21 27 37.0	
	comp=Z,331nm,20.2s,baz=1.0,slow=38						
PMG	Port Moresby	7.01	247	*e*Pn	Pn	21 24 57.2	+1.0
PMG				Sn	Sn	21 26 15.6	+0.5
DZM	Mont Dzumac	19.66	142	P	P	21 27 42.9	+0.8
	0.3nm,0.3s,baz=51,slow=6.9,SNR=10						
DZM				LR	LR	21 34 31.3	
	comp=Z,115nm,18.4s,baz=0.5,slow=34						
DZM	Mont Dzumac	19.66	142	*e*P	Pn	21 27 43.3	-0.4
	31nm,1.1s						
WB2	Warramunga Arr	22.95	233	*e*P	P	21 28 16.7	-0.8
	15nm,0.9s						
WRA	Warramunga Arr	22.95	233	P	P	21 28 16.6	-1.1
	4.4nm,0.6s,baz=55,slow=9.5,SNR=18						
WRA				PcP	PcP	21 32 07.5	+0.1
	2.4nm,1.0s,baz=58,slow=2.4,SNR=6.7						
AS01	Alice Springs	25.40	226	*e*P	P	21 28 39.6	-1.0
AS31	Alice Springs	25.44	226	*e*P	P	21 28 40.3	-0.6
	5.5nm,1.3s						
ASAR	Alice Springs	25.44	226	P	P	21 28 40.4	-0.6
	6.8nm,0.8s,baz=59,slow=8.7,SNR=41						
ASAR				PcP	PcP	21 32 12.8	0.0
	0.6nm,0.7s,baz=50,slow=2.5,SNR=4.3						
ASAR				LR	LR	21 38 20.7	
	comp=Z,119nm,19.3s,baz=60,slow=36						
STKA	Stephens Creek	27.51	203	P	P	21 28 58.2	-1.3
	3.3nm,0.7s,baz=31,slow=14,SNR=7.0						
H11S3	WAKE ISLAND Hy	28.10	27	T	T	21 57 36.8	
	baz=208,slow=76,SNR=8.0						
H11S2	WAKE ISLAND Hy	28.10	27	T	T	21 57 30.5	
	baz=208,slow=76,SNR=7.6						
H11S1	WAKE ISLAND Hy	28.12	27	T	T	21 57 36.1	
	baz=208,slow=76,SNR=6.3						
FITZ	Fitzroy Crossi	29.61	245	P	P	21 29 16.9	-1.4
	8.3nm,0.7s,baz=49,slow=9.1,SNR=15						
FITZ				LR	LR	21 41 03.7	
	comp=Z,109nm,20.0s,baz=72,slow=36						
BATI	Baumata	29.90	261	LR	LR	21 44 15.2	
	comp=Z,77nm,20.4s,baz=131,slow=42						
DAV	Davao City (W)	31.18	295	LR	LR	21 40 49.3	
	comp=Z,8.8nm,18.5s,baz=139,slow=34						
FORT	Forrest	33.95	222	*e*P	P	21 29 55.0	-1.3
	13nm,0.7s						
AFI	Afiamalu	34.70	105	LR	LR	21 41 18.7	
	comp=Z,97nm,19.7s,baz=175,slow=31						
NWAO	Narrogin (SRO)	42.75	227	LR	LR	21 48 03.1	
	comp=Z,130nm,19.9s,baz=315,slow=35						
MJAR	Matsushiro Arr	45.36	342	P	P	21 31 28.9	-2.3
	1.2nm,0.6s,baz=174,slow=6.5,SNR=5.3						
LEM	Lembang	45.74	267	LR	LR	21 54 05.8	
	comp=Z,57nm,18.1s,baz=149,slow=41						
KSRS	Korea Array	50.05	333	P	P	21 32 07.0	-0.6
	6.3nm,0.8s,baz=148,slow=8.7,SNR=25						
KSAR	Wonju Array Be	50.06	333	P	P	21 32 07.0	-0.6
KS01	Wonju Array Si	50.08	333	*e*P	P	21 32 06.7	-1.0
NJ2	Nanjing	50.84	321	*e*P	P	21 32 15.5	+1.9
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
ASAJ	Asahikawa	51.53	350	P	P	21 32 18.1	-0.5
	6.7nm,0.8s,baz=158,slow=5.4,SNR=5.2						
USRK	Ussuriysk Ar.	54.29	341	P	P	21 32 38.0	-0.9
	7.3nm,0.9s,baz=157,slow=7.7						
ENH	Enshi	56.06	313	*e*P	P	21 32 51.7	-0.4
	14nm,1.0s						
GYA	Guiyang	56.22	308	*e*P	P	21 32 55.0	+1.6
GYA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BJI	Beijing	57.92	327⇑	*e*P	P	21 33 04.5	-0.5
BJI				pmax	pmax		
	comp=Z,6.0nm,0.6s						
XAN	Xi’an	58.57	317	P	P	21 33 08.6	-1.1
XAN				pP	pP	21 33 16.1	-2.6
XAN				pmax	pmax		
	comp=Z,9.0nm,0.7s						
XAN				pmax	pmax		
	comp=Z,120nm,4.9s						
CM01	Chiang Mai Arr	59.44	296	*e*P	P	21 33 15.5	-0.5
CM31	Chiang Mai Arr	59.47	296	*e*P	P	21 33 15.9	-0.3
CMAR	Chiang Mai Arr	59.47	296	P	P	21 33 16.5	+0.2
	7.7nm,0.8s,baz=119,slow=5.5,SNR=43						
CMMT	Chiang Mai	59.59	296	P	P	21 33 17.4	+0.4
CHTO	Chiang Mai	59.59	296	*e*P	P	21 33 17.0	0.0
	13nm,1.1s						
CHTO	Chiang Mai	59.59	296	P	P	21 33 17.5	+0.5
PETK	Petropavlovsk-	59.64	3	P	P	21 33 17.3	+0.6
	5.6nm,0.7s,baz=142,slow=7.3						
PETK	Petropavlovsk-	59.64	3	*e*P	P	21 33 16.2	-0.5
HHC	Hu-ho-hao-te	61.07	324	*e*P	P	21 33 28.2	+1.4
HHC				sP	sP	21 33 45.1	+5.8
HHC				S	S	21 41 47.7	+3.6
HHC				pmax	pmax		
	comp=Z,19nm,0.9s						
HHC				pmax	pmax		
	comp=Z,37nm,5.5s						
HHC				LR	LR		
	comp=N,41nm,11.0s						
HHC				LR	LR		
	comp=E,50nm,14.1s						
LZH	Lanzhou	63.17	316	*e*P	P	21 33 41.9	+0.7
LZH				pP	sP	21 33 54.7	+1.1
LZH				sP	pP	21 34 00.6	+10
LZH				pmax	pmax		
	comp=Z,23nm,1.2s						
GTA	Gaotai	67.62	317	P	P	21 34 10.0	+0.2
GTA				pP	sP	21 34 22.5	+0.2
GTA				sP	pP	21 34 27.2	+8.3
GTA				pmax	pmax		
	comp=Z,4.0nm,1.5s						
ULN	Ulaanbaatar	68.03	328	*e*P	P	21 34 13.0	+0.7
	10nm,1.2s						
SONM	Songino Array	68.36	328	P	P	21 34 14.3	-0.1
	5.0nm,0.9s,baz=131,slow=5.6,SNR=24						
SONA1	Songino Array	68.36	328	*e*P	P	21 34 14.6	+0.2
LSA	Lhasa	70.02	305	*e*P	P	21 34 25.4	+0.1
	4.7nm,1.0s						
VNDA	Vanda	70.95	178	P	P	21 34 29.9	+0.3
	2.1nm,0.7s,baz=327,slow=6.8,SNR=16						
VNDA	Vanda	70.95	178	*e*P	P	21 34 30.1	+0.5
	2.3nm,0.8s						
ODAN	Odare	72.25	301	*e*P	P	21 34 38.3	-0.4
	41nm,1.1s						
RAMN	Ramite	72.95	301	*e*P	P	21 34 42.6	-0.3
JIRN	Jiri	73.50	301	*e*P	P	21 34 46.4	+0.1
GUN	Gumba	73.84	301	*e*P	P	21 34 48.0	-0.2
	38nm,1.0s						
PALK	Pallekele	74.11	279	LR	LR	22 11 21.4	
	comp=Z,23nm,18.0s,baz=185,slow=39						
PKIN	Phulchoki	74.15	301	*e*P	P	21 34 49.4	-0.6
	38nm,1.4s						
KKN	Kakani	74.31	301	*e*P	P	21 34 50.9	+0.1
DMN	Daman	74.41	301	*e*P	P	21 34 51.5	0.0
	32nm,0.8s						
GKN	Gorkha	74.92	301	*e*P	P	21 34 54.2	-0.1
	38nm,0.9s						
BILL	Bilibino	75.06	5	*e*P	P	21 34 53.1	-0.9
	8.2nm,0.9s						
DANN	Dangsing	75.76	301	*e*P	P	21 34 59.0	-0.3
	27nm,1.1s						
PYUN	Piuthan	76.34	301	*e*P	P	21 35 01.8	-0.7
	39nm,0.9s						
WMQ	Urumqi	77.70	317	P	P	21 35 09.6	0.0
WMQ				pmax	pmax		
	comp=Z,22nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,140nm,4.3s						
SUA	Susitna One	80.30	24	*e*P	P	21 35 23.9	+0.4
	4.9nm,1.0s						
CAST	Castle Rocks	80.90	22	*e*P	P	21 35 27.9	+1.3
	4.7nm,0.8s						
IM3	Indian Mountai	81.84	19	*e*P	P	21 35 30.9	-0.6
MCK	McKinley	82.24	22	*e*P	P	21 35 34.6	+0.9
	6.4nm,0.8s						
KLU	Klutina	82.28	25	*e*P	P	21 35 36.6	+2.5
	7.8nm,1.0s						
MK01	Makanchi Array	82.29	319	*e*P	P	21 35 33.8	-0.5
MLY	Manley	82.30	21	*e*P	P	21 35 34.9	+0.9
	9.5nm,1.4s						
MK31	Makanchi Array	82.30	319	*e*P	P	21 35 34.4	0.0
MKAR	Makanchi Array	82.30	319	P	P	21 35 34.0	-0.4
	3.1nm,0.8s,baz=104,slow=5.9,SNR=26						
MKAR	Makanchi Array	82.30	319	*e*P	P	21 35 34.4	0.0
	27nm,1.1s						
CCB	Clear Creek Bu	83.15	22	*e*P	P	21 35 38.6	+0.3
	3.0nm,0.9s						
ZAA0	Zalesovo Array	83.18	326	*e*P	P	21 35 37.9	-0.9
	3.2nm,0.8s						
ZALV	Zalesovo Beam	83.18	326	P	P	21 35 37.7	-1.0
	2.8nm,0.6s,baz=109,slow=5.6,SNR=12						
ZALV	Zalesovo Beam	83.18	326	*e*P	P	21 35 37.3	-1.4
QSPA	South Pole Qui	83.31	180	P	P	21 35 39.6	+0.3
	10nm,0.8s,baz=53,slow=0.6,SNR=25						
QSPA	South Pole Qui	83.31	180	*e*P	P	21 35 39.7	+0.3
	91nm,1.2s						
IL1	Eielson Array	83.55	22	*e*P	P	21 35 38.1	-2.3
ILAR	Eielson Array	83.55	22	P	P	21 35 39.2	-1.2
	2.3nm,0.7s,baz=253,slow=5.1,SNR=23						
ILAR				LR	LR	22 11 23.1	
	comp=Z,20nm,18.6s,baz=262,slow=35						
ILB	Eielson Array	83.55	22	*e*P	P	21 35 40.9	+0.4
MAW	Mawson	84.20	203	P	P	21 35 43.8	+0.1
	3.6nm,0.9s,baz=84,slow=4.0,SNR=7.2						
MAW	Mawson	84.20	203	*e*P	P	21 35 44.2	+0.5
	1.4nm,1.1s						
KSH	Kashi	84.81	311	P	P	21 35 48.7	+1.1
KSH				sP	sP	21 36 06.3	+6.1
KSH				PP	PP	21 39 07.7	+3.5
KSH				SKS	SKSac	21 46 03.5	-6.7
KSH				S	SKSac	21 46 10.5	+0.3
KSH				SS	SS	21 51 47.3	+0.4
KSH				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KSH				pmax	pmax		
	comp=Z,58nm,5.8s						
KSH				LR	LR		
	comp=N,57nm,4.3s						
KSH				LR	LR		
	comp=E,96nm,5.7s						
EGAK	Eagle	85.72	23	*e*P	P	21 35 53.0	+1.7
	5.3nm,0.9s						
NIL	Nilore	85.75	304	*e*P	P	21 35 51.4	-0.9
	6.1nm,0.8s						
KURK	Kurchatov	85.77	322	P	P	21 35 51.2	-0.7
KURBB	Kurchatov Arra	85.80	322	P	P	21 35 51.2	-0.9
	0.9nm,0.6s,baz=97,slow=5.8,SNR=14						
TKM2	Tokmak 2	85.85	314	P	P	21 35 52.5	-0.3
	SNR=6.7						
KZA	Kyzart	85.91	313	P	P	21 35 54.6	+1.2
	SNR=7.4						
DAWY	Dawson	86.12	24	*e*P	P	21 35 54.2	+0.8
	3.5nm,1.3s						
CHMS	Chumysh	86.47	314	P	P	21 35 55.7	+0.1
	SNR=5.0						
UCH	Uchtor	86.48	313	P	P	21 35 57.2	+1.0
	SNR=6.9						
AML	Almayashu	87.06	313	P	P	21 35 59.2	+0.2
	SNR=8.2						
WENL	Wente Vineyard	89.73	52	*e*P	P	21 36 13.2	+2.0
LRDM	Redding Peak	90.38	49	*e*P	P	21 36 15.8	+1.5
BVAR	Borovoye Array	91.25	323	P	P	21 36 16.4	-1.6
	1.8nm,0.7s,baz=52,slow=9.3,SNR=6.0						
NVAR	Mina Array Bea	92.54	52	P	P	21 36 24.1	-0.5
	0.2nm,0.3s,baz=204,slow=3.3,SNR=3.7						
EML	El Monte Cty P	93.13	57	*e*P	P	21 36 27.8	+0.7
PDAR	Pinedale Array	99.44	48	LR	LR	22 23 15.8	
	comp=Z,13nm,18.4s,baz=258,slow=36						
DIVS	Divibare	125.05	320	*e*PKPdf	PKPdf	21 42 13.1	-0.2
GERES	GERESS Array B	126.09	328	PKP	PKPdf	21 42 14.8	-0.4
	1.0nm,0.7s,baz=42,slow=2.2,SNR=9.4						
GEA0	GERESS Array S	126.10	328	*e*PKPdf	PKPdf	21 42 15.1	-0.1
CPUP	Villa Florida	135.49	139	PKP	PKPdf	21 42 34.5	+1.0
	0.6nm,0.5s,baz=335,slow=3.1,SNR=3.3						
SDV	Santo Domingo	136.05	84	PKP	PKPdf	21 42 35.4	+0.3
	3.7nm,0.4s,baz=301,slow=4.2,SNR=5.2						
TAM	Tamanrasset	145.41	301	*e*PKPbc	PKPab	21 42 51.9	+0.1
PTGA	Pitinga	145.62	101	*e*PKPdf	PKPbc	21 42 52.4	+0.1
MDT	Midelt	147.07	325	PKPbc	PKPbc	21 42 56.2	-0.1
	2.1nm,0.7s,baz=90,slow=2.0,SNR=4.9						
TOA0	Torodi Ar. Sit	151.69	285	*e*PKPdf	PKPdf	21 43 02.9	+1.0
TOA0				*e*PKPbc	PKPbc	21 43 07.4	-0.8
TORD	Torodi Ar. Bea	151.69	285	PKPbc	PKPbc	21 43 07.0	-1.2
	baz=86,slow=2.5						
KOWA	Kowa	156.76	291	PKPab	PKPab	21 43 37.6	-0.9
	2.8nm,0.6s,baz=36,slow=3.2,SNR=9.0						

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*ISCJB **02** 21:31:43.8±0.6, 37°.83N±0°.04×27°.37E±0°.05, h8km±7km, Error ellipse: s-maj=6.6km s-min=5.7km az=39.3*
*DDA **02** 21:31:43.4, 37°.83N×27°.36E, h7km, Ml2.6*
*ISK **02** 21:31:43.4, 37°.82N×27°.40E, h2km, ML2.1/8*
*CSEM **02** 21:31:44.2±0.3, 37°.81N×27°.38E, h10km, ML2.1, Error ellipse: s-maj=6.8km s-min=5.5km az=116.0*
ISC 02 21:31:43.9±0.9, **37°.80N**±0°.03×**27°.38E**±0°.03, **h11**km±8km, **n26**, σ**0s.52**/33, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GCAM	G?zelcaml?	0.16	228	PG	Pg	21 31 47.3	-0.1
GCAM				SG	Sg	21 31 50.1	+0.3
GCAM	G?zelcaml?	0.16	228	*i* P	Pg	21 31 47.0	-0.4
GCAM				*i* S	Sg	21 31 50.0	+0.1
GCAM	G?zelcaml?	0.16	228	P	Pg	21 31 47.0	-0.4
GCAM	G?zelcaml?	0.16	228	*e*Pg	Pg	21 31 47.3	-0.1
GCAM				*e*Sg	Sg	21 31 50.1	+0.3
AYDN	Tasoluk	0.42	110	*i* P	Pb	21 31 52.5	-1.0
AYDN	Tasoluk	0.42	110	P	Pb	21 31 52.5	-1.0
AYDB	Zeytinkoy-Aydi	0.43	70	PG	Pg	21 31 52.4	0.0
AYDB				SG	Sg	21 31 58.6	+0.5
AYDB	Zeytinkoy-Aydi	0.43	70	*e*Pg	Pg	21 31 52.4	0.0
AYDB				*e*Sg	Sg	21 31 58.6	+0.5
DGB	˜zmir	0.47	302	*i* P	Pg	21 31 52.1	-1.0
MLSB	Milas	0.60	148	PG	Pb	21 31 56.1	-0.4
MLSB	Milas	0.60	148	*e*Pg	Pb	21 31 56.1	-0.4
BLCB	Balcova	0.64	335	PG	Pb	21 31 57.4	+0.2
BLCB	Balcova	0.64	335	*e*Pg	Pb	21 31 57.4	+0.2
BDRM	Kayabasi	0.74	176	*i* P	Pn	21 32 00.4	0.0
BDRM	Kayabasi	0.74	176	P	Pn	21 32 00.4	0.0
BODT	Bodrum	0.74	184	PG	Pb	21 31 58.9	0.0
BODT				SG	Sb	21 32 10.1	+1.0
BODT	Bodrum	0.74	184	*e*Pg	Pb	21 31 58.9	0.0
BODT				*e*Sg	Sb	21 32 10.1	+1.0
ZEY	˜zmir	0.82	302	*i* P	Pg	21 31 58.8	-1.0
YER	Yerkesik	0.98	133	PG	Pn	21 32 03.4	-0.4
YER	Yerkesik	0.98	133	*e*Pg	Pn	21 32 03.4	-0.4
DAT	Datca	1.08	172	PN	Pn	21 32 05.3	+0.1
DAT	Datca	1.08	172	*i* P	Pg	21 32 04.4	-0.4
DAT	Datca	1.08	172	P	Pg	21 32 04.4	-0.4
DAT	Datca	1.08	172	*e*Pn	Pn	21 32 05.3	+0.1
KULA	Kula-Manisa	1.23	55	PN	Pn	21 32 07.4	+0.1
KULA	Kula-Manisa	1.23	55	*e*Pn	Pn	21 32 07.4	+0.1

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*ISCJB **02** 21:38:12.9±0.5, 39°.66N±0°.02×26°.09E±0°.04, h9km±4km, Error ellipse: s-maj=5.5km s-min=3.4km az=168.6*
*ATH **02** 21:38:12.4, 39°.68N×26°.12E, h24km±2km, ML1.8/3, Error ellipse: s-maj=2.2km s-min=0.9km az=274.0*
*DDA **02** 21:38:12.9, 39°.66N×26°.12E, h7km, Ml2.7*
*ISK **02** 21:38:12.2, 39°.63N×26°.09E, h8km, ML2.6/15*
*CSEM **02** 21:38:13.0±0.2, 39°.65N×26°.07E, h10km, ML2.6, Error ellipse: s-maj=4.4km s-min=2.6km az=80.0*
ISC 02 21:38:13.2±0.8, **39°.65N**±0°.02×**26°.09E**±0°.03, **h14**km±6km, **n61**, σ**0s.64**/74, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOZC	Bozcaada	0.19	351	PG	Pg	21 38 17.6	-0.1
BOZC				SG	Sg	21 38 20.7	0.0
BOZC	Bozcaada	0.19	351	*i* P	Pg	21 38 17.3	-0.4
BOZC				*i* S	Sg	21 38 20.5	-0.2
BOZC	Bozcaada	0.19	351	*e*Pg	Pg	21 38 17.6	-0.1
BOZC				*e*Sg	Sg	21 38 20.7	0.0
EZN	Ezine	0.25	46	PG	Pg	21 38 18.6	0.0
EZN				SG	Sg	21 38 22.6	+0.3
EZN	Ezine	0.25	46	*e*Pg	Pg	21 38 18.6	0.0
EZN				*e*Sg	Sg	21 38 22.6	+0.3
BAYC	CANAKKALE_Bayr	0.36	76	*i* P	Pb	21 38 20.6	-0.7
BAYC	CANAKKALE_Bayr	0.36	76	P	Pb	21 38 20.6	-0.7
PRK	Paraskevi	0.43	161	P	Pg	21 38 22.0	+0.2
PRK				S	Sb	21 38 28.4	-0.3
PRK				AML	AML	21 38 28.9	
	comp=N,335µm,0.2s						
PRK				AML	AML	21 38 30.2	
	comp=E,459µm,0.3s						
PRK	Paraskevi	0.43	161	P	Pg	21 38 21.9	+0.2
PRK				S	Sb	21 38 28.5	-0.3
SIGR	SIGRI	0.48	203	PG	Pg	21 38 21.6	-1.0
SIGR	SIGRI	0.48	203	*e*Pg	Pg	21 38 21.6	-1.0
GADA	Gvkgeada	0.56	345	PG	Pg	21 38 23.8	-0.4
GADA	Gvkgeada	0.56	345	*e*Pg	Pg	21 38 23.8	-0.4
AYVA	Ayvalik	0.58	126	*i* P	Pg	21 38 23.9	-0.6
AYVA	Ayvalik	0.58	126	P	Pg	21 38 23.9	-0.6
LIA	Limnos Island	0.74	290	P	Pg	21 38 27.2	-0.4
LIA				S	Sg	21 38 37.4	0.0
LIA				AML	AML	21 38 39.6	
	comp=E,181µm,0.4s						
LIA				AML	AML	21 38 40.5	
	comp=N,152µm,0.3s						
GELI	Tayfur-Gelibol	0.80	21	PG	Pg	21 38 28.3	-0.4
GELI	Tayfur-Gelibol	0.80	21	*e*Pg	Pg	21 38 28.3	-0.4
DKL	Dikili	0.86	132	PG	Pg	21 38 28.6	-1.2
DKL	Dikili	0.86	132	*e*Pg	Pg	21 38 28.6	-1.2
LPK	Lapseki	0.89	35	PG	Pg	21 38 29.6	-0.7
LPK	Lapseki	0.89	35	*e*Pg	Pg	21 38 29.6	-0.7
SMTH	Samothraki Isl	0.93	332	P	Pb	21 38 31.0	0.0
SMTH				S	Sg	21 38 42.8	-0.4
SMTH				AML	AML	21 38 43.9	
	comp=N,100µm,0.2s						
SMTH				AML	AML	21 38 44.5	
	comp=E,114µm,0.2s						
ERIK	Erikli-Kesan	1.07	17	PN	Pb	21 38 33.3	-0.1
ERIK	Erikli-Kesan	1.07	17	*e*Pn	Pb	21 38 33.3	-0.1
ENEZ	Enez	1.08	2	PN	Pn	21 38 33.9	0.0
ENEZ	Enez	1.08	2	*e*Pn	Pn	21 38 33.9	0.0
KRBG	Karabiga-Canak	1.19	51	PN	Pb	21 38 35.2	-0.2
KRBG	Karabiga-Canak	1.19	51	*e*Pn	Pb	21 38 35.2	-0.2
ALN	Alexandroupoli	1.25	358	PN	Pn	21 38 36.1	0.0
ALN	Alexandroupoli	1.25	358	P	Pn	21 38 35.6	-0.5
ALN				S	Sb	21 38 51.7	-0.6
ALN	Alexandroupoli	1.25	358	*e*Pn	Pn	21 38 36.1	0.0
ALN				S	Sb	21 38 52.0	-0.3
KESN	Edirne-Kesan	1.26	21	*i* P	Pb	21 38 36.0	-0.8
KESN	Edirne-Kesan	1.26	21	P	Pb	21 38 36.0	-0.8
CHOS	Chios island	1.26	181	PN	Pn	21 38 36.6	+0.2
CHOS	Chios island	1.26	181	P	Pn	21 38 36.8	+0.4
CHOS				S	Sn	21 38 55.0	+1.9
CHOS	Chios island	1.26	181	*e*Pn	Pn	21 38 36.6	+0.2
CHOS				S	Sn	21 38 54.9	+1.7
GONE	Gonen-Balikesi	1.29	72	PN	Pg	21 38 37.3	-0.7
GONE	Gonen-Balikesi	1.29	72	*e*Pn	Pg	21 38 37.3	-0.7
RKY	Sarkoy-Tekirda	1.33	38	PN	Pg	21 38 37.9	-0.8
RKY	Sarkoy-Tekirda	1.33	38	*e*Pn	Pg	21 38 37.9	-0.8
URLA	Izmir	1.35	163	PN	Pn	21 38 37.3	-0.2
URLA	Izmir	1.35	163	*e*Pn	Pn	21 38 37.3	-0.2
BLCB	Balcova	1.47	149	PN	Pn	21 38 39.2	+0.1
BLCB	Balcova	1.47	149	*e*Pn	Pn	21 38 39.2	+0.1
EDC	Edincik	1.53	62	PN	Pb	21 38 40.8	-0.4
EDC	Edincik	1.53	62	*e*Pn	Pb	21 38 40.8	-0.4
AKHS	Akhisar	1.54	119	*i* P	Pg	21 38 42.0	-0.8
AKHS	Akhisar	1.54	119	P	Pg	21 38 42.0	-0.8
RDO	Rodhopi	1.55	344	PN	Pb	21 38 41.7	+0.1
RDO	Rodhopi	1.55	344	P	Pn	21 38 39.9	-0.4
RDO	Rodhopi	1.55	344	P	Pn	21 38 40.1	-0.2
RDO	Rodhopi	1.55	344	*e*Pn	Pb	21 38 41.7	+0.1
KCTX	Karacabey (Bur	1.85	70	PN	Pn	21 38 45.0	+0.6
KCTX	Karacabey (Bur	1.85	70	*e*Pn	Pn	21 38 45.0	+0.6
SBT3	Marmara-Eregli	1.90	49	PN	Pb	21 38 46.6	-0.8
SBT3	Marmara-Eregli	1.90	49	*e*Pn	Pb	21 38 46.6	-0.8
TVSB	Tavsanli	2.61	93	PN	Pn	21 38 56.2	+1.2
TVSB	Tavsanli	2.61	93	*e*Pn	Pn	21 38 56.2	+1.2
YLV	Yalova	2.68	69	PN	Pn	21 38 56.9	+1.1
YLV	Yalova	2.68	69	*e*Pn	Pn	21 38 56.9	+1.1

WEL 02 21:39:53.4, **40°.9S**±0°.5×**175°.6E**±0°.7, **h17**km, **ML3.8**/21, **North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOWZ	Holdsworth Sta	0.07	266	P	Pg	21 39 57.4	+0.7
HOWZ				S	Sg	21 40 00.0	+1.2
MRZ	Mangatainoka R	0.23	354	P	Pb	21 39 59.4	+0.2
MRZ				S	Sb	21 40 03.5	+0.4
TIWZ	Tintock	0.24	61	P	Pb	21 39 59.4	+0.1
TIWZ				S	Sb	21 40 03.5	+0.2
MTW	Mount Morrison	0.28	197	P	Pb	21 40 00.0	+0.1
TMWZ	Te Maipa	0.30	135	P	Pb	21 40 00.6	+0.2
TMWZ				S	Sb	21 40 06.0	+0.9
OGWZ	Otaki Gorge	0.34	283	P	Pb	21 40 01.5	+0.5
OGWZ				S	Sb	21 40 06.9	+0.7

PRWZ	Pori Road	0.43	39	P	Pb	21 40 03.0	+0.4
CPWZ	Castlepoint	0.45	92	P	Pn	21 40 04.1	-1.0
CAW	Cannon Point	0.46	242	P	Pb	21 40 03.5	+0.4
CAW				S	Sb	21 40 10.1	+0.3
PAWZ	Paruwai Farm	0.51	196	P	Pb	21 40 04.4	+0.5
TRWZ	Traveller	0.51	173	P	Pb	21 40 04.7	+0.8
TRWZ				S	Sn	21 40 13.7	-0.7
POWZ	Post Office Ro	0.52	14	P	Pb	21 40 04.2	+0.2
BFZ	Birch Farm	0.53	67	P	Pb	21 40 04.8	+0.6
KIW	Kapiti Island	0.53	273	P	Pb	21 40 04.9	+0.7
MSWZ	Moikau Station	0.59	207	P	Pb	21 40 05.6	+0.3
OHWZ	Ohakea	0.72	342	P	Pn	21 40 08.8	0.0
PLWZ	Palliser	0.73	201	P	Pb	21 40 08.0	+0.3
DVHZ	Dannevirke	0.73	36	P	Pb	21 40 07.9	+0.2
BHW	Baring Head	0.76	227	P	Pg	21 40 08.5	+0.3
ANWZ	Angora Road	0.79	57	P	Pn	21 40 09.3	-0.4
TSZ	Takapari Road	0.88	18	P	Pg	21 40 10.3	-0.1
PRHZ	Porangahau	1.00	52	P	Pb	21 40 12.1	-0.2
WPHZ	Waipukurau	1.04	38	P	Pn	21 40 13.3	0.0
TCW	Tory Channel	1.06	252	P	Pn	21 40 13.6	+0.1
PNHZ	Pukenui	1.08	25	P	Pn	21 40 13.8	0.0
WAZ	Wanganui	1.23	337	P	Pg	21 40 18.0	+0.8
DUWZ	D'Urville Isla	1.28	273	P	Pg	21 40 17.7	-0.4
PXZ	Pawanui	1.29	48	P	Pn	21 40 16.1	-0.5
CMWZ	Cape Campbell	1.35	230	P	Pg	21 40 19.6	+0.1
TUWZ	Tuamarina	1.37	246	P	Pn	21 40 17.9	+0.2
KRHZ	Kereru	1.38	25	P	Pn	21 40 17.8	-0.1
BHHZ	Black Hill Sta	1.44	14	P	Pb	21 40 19.4	-0.5
KAHZ	Kahuranaki	1.46	42	P	Pn	21 40 18.4	-0.7
MOVZ	Moawhango	1.49	4	P	Pb	21 40 20.3	-0.3
MTVZ	Mangateitei	1.51	356	P	Pg	21 40 21.8	-0.6
BSWZ	Blackbirch Sta	1.54	237	P	Pn	21 40 19.8	-0.4
TRVZ	Turoa	1.59	358	P	Pb	21 40 22.9	+0.4
WHVZ	Whangaehu Hut	1.61	359	P	Pb	21 40 22.7	-0.1
DRZ	Dome Shelter	1.62	359	P	Pb	21 40 23.2	+0.2
TUVZ	Tukino	1.62	1	P	Pb	21 40 23.1	+0.1
FWVZ	Far West T-bar	1.64	358	P	Pb	21 40 23.0	-0.2
LREZ	Lake Rotokare	1.70	327	P	Pg	21 40 25.9	-0.2
NGZ	Ngauruhoe	1.71	360	P	Pb	21 40 23.9	-0.6
NNZ	Nelson	1.72	258	P	Pn	21 40 22.9	+0.4
WTVZ	West Tongariro	1.77	360	P	Pb	21 40 25.1	-0.5
BKZ	Black Stump Fm	1.85	22	P	Pn	21 40 24.0	-0.5
VRZ	Vera Road	1.88	339	P	Pb	21 40 27.4	+0.1
KHEZ	Kahui Hut	2.01	322	P	Pb	21 40 30.1	+0.6
MRHZ	Matea Rd	2.15	17	P	Pn	21 40 28.2	-0.4
KHZ	Kahutara	2.17	225	P	Pn	21 40 27.3	-1.5
THZ	Tophouse	2.21	246	P	Pn	21 40 29.3	-0.2
MTHZ	Maungataniwha	2.25	25	P	Pn	21 40 29.3	-0.6
QRZ	Quartz Range	2.34	271	P	Pb	21 40 33.7	-1.4
HIZ	Hauiti	2.45	346	P	Pb	21 40 36.3	-0.6
RTZ	Ruatahuna	2.51	25	P	Pg	21 40 41.4	-0.1
MUGZ	Murupara	2.57	21	P	Pg	21 40 42.3	-0.4

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*ISCJB **02** 21:43:14.7±0.8, 39°.76N±0°.04×44°.35E±0°.07, h8^{km}±7^{km}, Error ellipse: s-maj=9.3km s-min=5.7km az=29.8*

*CSEM **02** 21:43:14.7±0.2, 39°.77N×44°.32E, h10^{km}, ML2.0, Error ellipse: s-maj=5.7km s-min=3.1km az=123.0*

*ISK **02** 21:43:14.5, 39°.74N×44°.38E, h5^{km}, ML2.0/2*

*DDA **02** 21:43:16.7, 39°.78N×43°.99E, h14^{km}, Ml2.5*

ISC 02 21:43:15.0±1.2, **39°.77N**±0°.04×**44°.32E**±0°.04, **h10**^{km}±9^{km}, **n11**, σ**0^{s}.49**/20, **Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IGDI	IGDIR	0.21	298	*i* P	Pg	21 43 19.1	-0.4
IGDI				*i* S	Sg	21 43 23.2	+0.8
GNI	Garni	0.50	40	PG	Pg	21 43 24.6	-0.2
GNI				SG	Sg	21 43 31.8	+0.3
GNI	Garni	0.50	40	*e*Pg	Pg	21 43 24.6	-0.2
GNI				*e*Sg	Sg	21 43 31.8	+0.3
CLDR	Caldiran	0.70	207	PG	Pg	21 43 28.4	-0.1
CLDR				SG	Sb	21 43 38.6	-0.5
CLDR	Caldiran	0.70	207	*e*Pg	Pg	21 43 28.4	-0.1
CLDR				*e*Sg	Sb	21 43 38.6	-0.5
AGRB	Hanur-Agry	1.04	260	PN	Pn	21 43 35.6	-0.2
AGRB				SN	Sn	21 43 51.2	+0.7
AGRB	Hanur-Agry	1.04	260	*e*Pn	Pn	21 43 35.6	-0.2
AGRB				*e*Sn	Sn	21 43 51.2	+0.7
EAK	Akyaka	1.07	330	*i* P	Pg	21 43 34.8	-0.7
EAK				*i* S	Sb	21 43 49.8	+0.1
EAK	Akyaka	1.07	330	P	Pg	21 43 34.8	-0.7
EAK				S	Sb	21 43 49.8	+0.1
TUTA	Tutak	1.22	253	*i* P	Pg	21 43 38.1	-0.3
TUTA	Tutak	1.22	253	P	Pg	21 43 38.1	-0.3

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*IDC **02** 21:44:54.9±1.2, 31°.99S×178°.57W, h0^{km}, mb4.3/6, mb1 4.4/7, mb1mx4.0/48, mbtmp4.3/7, ML4.2/1, MS3.2/3, Ms1 3.2/3, ms1mx2.7/46, Error ellipse: s-maj=32.5km s-min=25.6km az=42.0*

*NEIC **02** 21:44:56.4±0.3, 31°.97S×178°.56W, h10^{km}, mb4.4/9, Error ellipse: s-maj=9.3km s-min=6.8km az=124.0*

*ISCJB **02** 21:44:58.9±0.6, 31°.88S±0°.09×178°.5W±0°.1, h45^{km}, mb4.5/14, MS3.2/2, Error ellipse: s-maj=14.6km s-min=10.6km az=40.3*

ISC 02 21:45:00.9±0.6, **31°.95S**±0°.09×**178°.6W**±0°.1, **h45**^{km}, **n28**, σ**1^{s}.09**/25, **mb4.6**/14, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	2.74	12	Sn	Sn	21 46 24.1	+10
	110nm,0.3s,baz=108,slow=20,SNR=3.5						
RAO	Raoul Island	2.74	12	*e*Pn	Pn	21 45 40.2	-2.1
RAO				Sn	Sn	21 46 24.1	+10
URZ	Urewera	7.23	208	Pn	Pn	21 46 40.4	-3.6
	3.8nm,0.3s,baz=279,slow=1.6,SNR=39						
URZ				Sn	Sn	21 47 54.7	-10
	8.0nm,0.3s,baz=101,slow=20,SNR=9.4						
RPZ	Rata Peaks	14.32	212	Pn	Pn	21 48 10.4	-10
	0.6nm,0.3s,baz=224,slow=1.6,SNR=3.0						
RPZ				Sn	Sn	21 50 36.4	-22
	0.6nm,0.3s,baz=302,slow=21,SNR=6.3						
DZM	Mont Dzumac	16.58	303	LR	LR	21 54 09.7	
	comp=Z,74nm,18.5s,baz=186,slow=33						
AFI	Afiamalu	18.99	21	P	P	21 49 18.6	-0.2
	5.2nm,0.6s						
RAR	Rarotonga	19.88	62	P	P	21 49 28.4	0.0
TAU	Tasmania Unive	29.05	238	P	P	21 50 56.9	+0.2
	2.7nm,0.5s						
CTA	Charters Tower	33.62	282	P	P	21 51 38.3	+1.1
	2.9nm,0.5s,baz=180,slow=4.7,SNR=4.7						
CTAO	Charters Tower	33.62	282	P	P	21 51 37.9	+0.8
	13nm,0.8s						
STKA	Stephens Creek	33.70	259	P	P	21 51 38.6	+0.8
	0.7nm,0.6s,baz=112,slow=11,SNR=3.9						
STKA				LR	LR	22 03 45.1	
	comp=Z,42nm,19.2s,baz=196,slow=34						
PMG	Port Moresby	38.87	298	P	P	21 52 22.0	-0.1
	14nm,1.0s						
ASAR	Alice Springs	42.58	269	P	P	21 52 52.1	-0.6
	1.0nm,0.3s,baz=107,slow=7.6,SNR=29						
WRAB	Tennant Creek	43.70	274	*e*P	P	21 53 01.5	-0.3
	2.2nm,0.2s						
WRA	Warramunga Arr	43.71	274	P	P	21 53 01.4	-0.4
	4.5nm,0.3s,baz=112,slow=8.0,SNR=141						
SBA	Scott Base	46.47	184	P	P	21 53 23.6	+0.8
	0.5nm,0.6s						
FITZ	Fitzroy Crossi	51.91	271	P	P	21 54 04.6	-0.6
	2.3nm,0.7s,baz=110,slow=5.9,SNR=7.2						
FITZ				LR	LR	22 14 43.8	
	comp=Z,24nm,18.0s,baz=60,slow=34						
CASY	Casey	53.56	208	P	P	21 54 16.9	+0.1
	0.4nm,0.6s						
MBWA	Marble Bar	55.60	265	P	P	21 54 32.4	+0.1
	21nm,1.0s						
QSPA	South Pole Qui	58.17	180	P	P	21 54 50.6	+0.6
	3.6nm,0.6s,baz=318,slow=1.3,SNR=15						
QSPA	South Pole Qui	58.17	180	*e*P	P	21 54 50.6	+0.6
	5.8nm,0.6s						
COCO	West Island	79.14	262	P	P	21 57 02.2	+1.0
	107nm,0.5s						
EFI	East Falkland	81.75	147	P	P	21 57 15.6	+0.9
	91nm,1.4s						
FINES	FINESS Array B	146.42	339	PKPbc	PKPbc	22 04 36.6	+0.4
	1.7nm,0.6s,baz=42,slow=5.5,SNR=12						
NB2	NORSAR Subarra	150.20	350	PKP	PKPbc	22 04 46.9	+0.7
	comp=Z,0.7nm,0.5s,baz=16,slow=2.6						
HFS	Hagfors	150.65	347	PKPbc	PKPbc	22 04 47.7	+0.4
	comp=Z,1.1nm,0.5s,baz=64,slow=3.4,SNR=10						
BRTR	Keskin Array B	152.88	296	PKPbc	PKPbc	22 04 54.2	+1.0
	comp=Z,0.6nm,0.8s,baz=96,slow=4.2,SNR=3.1						
TORD	Torodi Ar. Bea	161.29	181	PKPab	PKPab	22 05 40.2	-0.6
	baz=174,slow=5.3						

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*IDC **02** 22:05:40.7±0.7, 18°.88S×174°.33W, h0^{km}, mb4.2/12, mb1 4.4/13, mb1mx4.1/55, mbtmp4.2/13, ML4.0/1, MS3.3/6, Ms1 3.3/6, ms1mx2.8/49, Error ellipse: s-maj=26.6km s-min=16.3km az=129.0*

*NEIC **02** 22:05:42.3±0.4, 18°.86S×174°.36W, h10^{km}, mb4.6/5, Error ellipse: s-maj=10.8km s-min=7.1km az=116.0*

ISC 02 22:05:41.7±0.7, **18°.77S**±0°.09×**174°.2W**±0°.1, **h10**^{km}, **n31**, σ**1^{s}.96**/24, **mb4.3**/15, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	5.35	26	Pn	Pn	22 07 04.1	+2.4
	4.7nm,0.3s,baz=68,slow=16,SNR=4.9						
AFI				Sn	Sn	22 07 58.5	-5.0
	14nm,0.3s,baz=244,slow=23,SNR=3.4						
FUNA	Funafuti	12.05	327	Pn	Pn	22 08 33.8	+0.1
RAR	Rarotonga	13.74	103	LR	LR	22 14 12.7	
	comp=Z,62nm,18.2s,baz=319,slow=37						
DZM	Mont Dzumac	18.47	256	P	P	22 10 01.7	+3.8
	1.0nm,0.3s,baz=79,slow=19,SNR=11						
DZM				LR	LR	22 15 44.6	
	comp=Z,64nm,21.1s,baz=152,slow=33						
DZM	Mont Dzumac	18.47	256	*e*P	P	22 10 01.4	+3.5
	25nm,1.1s						
DZM				*e*LR	LR	22 14 37.3	
	140nm,25.8s						
URZ	Urewera	20.85	200	P	P	22 10 21.8	-1.9
	14nm,0.4s,baz=45,slow=1.4,SNR=19						
PAE	Paea	23.38	91	*e*T	T	22 34 56.8	
	20nm,0.2s						
PPT2	Papeete2	23.39	91	*e*LR	LR	22 16 07.8	
	146nm,27.5s						
PPT2	Papeete2	23.39	91	*e*T	T	22 34 48.5	
	13nm,0.3s						
PPT	Papeete	23.39	91	LR	LR	22 16 55.8	
	comp=Z,69nm,21.8s,baz=324,slow=29						
TBI	Tubuai	23.49	105	*e*T	T	22 34 54.6	
	23nm,0.3s						
RPZ	Rata Peaks	27.80	203	P	P	22 11 31.2	+0.3
	8.1nm,0.6s,baz=38,slow=2.9,SNR=7.4						
CTA	Charters Tower	37.29	261	P	P	22 12 53.6	-0.6
	8.0nm,0.3s,baz=0.0,slow=3.0,SNR=21						
CTAO	Charters Tower	37.29	261	*e*P	P	22 12 53.3	-0.9
	6.0nm,0.5s						
STKA	Stephens Creek	41.79	243	P	P	22 13 29.9	-1.7
	0.7nm,0.3s,baz=86,slow=8.3,SNR=5.5						
STKA				LR	LR	22 28 24.4	
	comp=Z,43nm,18.7s,baz=68,slow=33						
WRAB	Tennant Creek	48.43	260	*e*P	P	22 14 23.7	-0.9
	1.2nm,0.3s						
WRA	Warramunga Arr	48.44	260	P	P	22 14 22.9	-1.8
	2.4nm,0.3s,baz=97,slow=7.4,SNR=107						
ASAR	Alice Springs	48.45	255	P	P	22 14 23.6	-1.1
	3.9nm,0.5s,baz=91,slow=8.1,SNR=53						
FITZ	Fitzroy Crossi	56.86	260	P	P	22 15 26.6	-0.4
	2.1nm,0.6s,baz=87,slow=4.3,SNR=5.9						
SBA	Scott Base	59.85	185	*e*P	P	22 15 47.1	+0.1
	2.6nm,1.2s						
VNDA	Vanda	59.96	186	P	P	22 15 48.2	+0.4
	0.8nm,0.8s,baz=34,slow=5.6,SNR=5.3						
MBWA	Marble Bar	61.77	256	*e*P	P	22 15 59.9	-1.1
	6.9nm,0.6s						
NWAO	Narrogin (SRO)	62.37	242	P	P	22 16 04.2	-0.6
	6.8nm,0.9s						
QSPA	South Pole Qui	71.29	180	P	P	22 17 00.9	-0.3
	1.6nm,0.9s,baz=53,slow=2.7,SNR=5.2						
JOW	Kunigami	71.91	308	LR	LR	22 45 07.3	
	comp=Z,30nm,18.5s,baz=132,slow=33						
NVAR	Mina Array Bea	77.31	42	P	P	22 17 37.7	+0.8
	1.3nm,1.0s,baz=231,slow=11,SNR=4.9						
BBB	Bella Bella	81.21	27	LR	LR	22 52 05.4	
	comp=Z,23nm,18.5s,baz=197,slow=34						
PDAR	Pinedale Array	85.25	42	P	P	22 18 20.3	+1.3
	0.3nm,0.7s,baz=172,slow=1.8,SNR=3.1						
ILAR	Eielson Array	85.88	11	P	P	22 18 22.7	+1.5
	0.3nm,0.6s,baz=231,slow=5.7,SNR=4.6						
BRTR	Keskin Array B	148.21	317	PKPbc	PKPab	22 25 30.4	-1.0
	0.7nm,0.6s,baz=96,slow=1.0,SNR=4.3						
GERES	GERESS Array B	149.33	350	PKPbc	PKPbc	22 25 32.4	+1.5
	0.3nm,0.6s,baz=28,slow=3.8,SNR=3.9						

CSEM 02 22:10:42.5, 27°.71N×18°.15W, h19^{km}, ML3.6, Canary Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CORC	Orchilla, El H	0.01	172	P	Pg	22 10 45.7	-0.2
	SNR=7.9						
CORC				S	Sg	22 10 48.4	+0.3
	SNR=7.9						
CJUL	El Julon, El H	0.06	70	P	Pg	22 10 46.0	-0.3
	SNR=7.9						
CJUL				S	Sg	22 10 48.7	-0.1
	SNR=7.9						
CTAD	Las Tabladas,	0.07	53	P	Pg	22 10 46.0	-0.1
	SNR=7.9						
CTAD				S	Sg	22 10 48.5	-0.1
	SNR=7.9						
CTAN	El Hierro	0.09	61	P	Pg	22 10 46.1	-0.2
	SNR=7.9						
CTAN				S	Sg	22 10 48.7	-0.2
	SNR=7.9						
CCUM	Cumbre, El Hie	0.11	70	P	Pg	22 10 46.3	-0.2
	SNR=7.9						
CCUM				S	Sg	22 10 49.1	-0.1
	SNR=7.9						
CMCL	Mercadel, El H	0.11	88	P	Pg	22 10 46.4	-0.2
	SNR=7.9						
CMCL				S	Sg	22 10 49.5	+0.1
	SNR=7.9						
CRST	La Restinga, E	0.16	115	P	Pg	22 10 46.6	-0.4
	SNR=7.9						
CRST				S	Sg	22 10 50.0	-0.1
	SNR=7.9						
CTIG	El Hierro	0.21	68	P	Pb	22 10 47.5	+0.2
	SNR=18						
CTIG				S	Sg	22 10 51.3	-0.1
	931nm,0.1s,SNR=7.9						

CSEM 02 22:10:48.5, 27°.70N×18°.15W, h20^{km}, ML3.7, Canary Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CORC	Orchilla, El H	0.01	8	P	Pg	22 10 51.7	-0.3
	SNR=7.9						
CORC				S	Sg	22 10 54.5	+0.2
	20µm,0.1s,SNR=7.9						
CJUL	El Julon, El H	0.07	60	P	Pg	22 10 52.1	-0.3
	SNR=7.9						
CJUL				S	Sg	22 10 54.9	-0.1
	29µm,0.1s,SNR=7.9						
CTAD	Las Tabladas,	0.07	46	P	Pg	22 10 52.0	-0.3
	SNR=7.9						
CTAD				S	Sg	22 10 54.7	-0.1
	10µm,0.1s,SNR=7.9						
CTAN	El Hierro	0.10	55	P	Pg	22 10 52.2	-0.3
	SNR=7.9						
CTAN				S	Sg	22 10 54.9	-0.2
	8µm,0.2s,SNR=7.9						
CMCL	Mercadel, El H	0.11	82	P	Pg	22 10 52.6	-0.1
	SNR=7.9						
CMCL				S	Sg	22 10 55.8	+0.2
	11µm,0.1s,SNR=7.9						
CCUM	Cumbre, El Hie	0.11	65	P	Pb	22 10 52.3	+0.2
	SNR=7.9						
CCUM				S	Sg	22 10 55.2	-0.2
	10µm,0.1s,SNR=7.9						
CRST	La Restinga, E	0.15	111	P	Pb	22 10 52.7	0.0
	SNR=7.9						
CRST				S	Sb	22 10 55.8	+0.3
	6µm,0.1s,SNR=7.9						
CTIG	El Hierro	0.22	65	P	Pb	22 10 53.8	0.0
	SNR=7.9						
CTIG				S	Sb	22 10 57.4	0.0
	2µm,0.1s,SNR=7.9						

IDC 02 22:15:32.4±2.9, **17°.16N×147°.40E, h0**^{km}, **mb3.7**/7, **mb1 3.8**/7, **mb1mx3.6**/61, **mbtmp3.7**/7, **MS3.8**/1, **Ms1 3.8**/1, **ms1mx2.4**/51, **Error ellipse: s-maj=93.9km s-min=24.3km az=82.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	39.03	200	P	P	22 22 59.1	-2.0
	0.4nm,0.6s,baz=19,slow=8.8,SNR=4.1						
FITZ	Fitzroy Crossi	41.06	212	LR	LR	22 40 17.0	
	comp=Z,138nm,21.0s,baz=81,slow=36						
ASAR	Alice Springs	42.66	198	P	P	22 23 32.6	+1.6
	0.5nm,1.0s,baz=15,slow=8.0,SNR=3.4						
SONM	Songino Array	45.35	322	P	P	22 23 53.0	+0.5
	0.3nm,0.4s,baz=129,slow=7.3,SNR=3.3						
CMAR	Chiang Mai Arr	46.04	279	P	P	22 23 58.7	+0.5
	0.7nm,0.3s,baz=71,slow=6.8,SNR=5.7						
MKAR	Makanchi Array	60.69	314	P	P	22 25 45.4	-0.2
	0.3nm,0.5s,baz=89,slow=5.9,SNR=4.4						
KURBB	Kurchatov Arra	63.54	318	P	P	22 26 04.2	-0.4
	0.4nm,0.4s,baz=98,slow=6.7,SNR=6.4						
BVAR	Borovoye Array	68.69	321	P	P	22 26 37.5	-0.1
	0.9nm,0.7s,baz=90,slow=8.6,SNR=3.5						

CSEM 02 22:25:53.1, 27°.70N×18°.14W, h18^{km}, ML3.6, Canary Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CORC	Orchilla, El H	0.01	331	P	Pg	22 25 56.2	-0.1
	SNR=7.9						
CORC				S	Sg	22 25 58.7	+0.2
	SNR=7.9						
CJUL	El Julon, El H	0.06	60	P	Pg	22 25 56.5	-0.2
	SNR=7.9						
CJUL				S	Sg	22 25 58.9	-0.2
	SNR=7.9						
CTAD	Las Tabladas,	0.07	45	P	Pg	22 25 56.4	-0.2
	SNR=7.9						
CTAD				S	Sg	22 25 59.0	+0.1
	4µm,0.0s,SNR=7.9						
CTAN	El Hierro	0.10	55	P	Pg	22 25 56.6	-0.2
	SNR=7.9						
CTAN				S	Sg	22 25 59.4	+0.1
	SNR=7.9						
CCUM	Cumbre, El Hie	0.11	65	P	Pg	22 25 56.8	-0.2
	SNR=7.9						
CCUM				S	Sg	22 25 59.5	-0.1
	SNR=7.9						
CRST	La Restinga, E	0.15	112	P	Pg	22 25 57.2	-0.2
	SNR=7.9						
CHIE	El Hierro	0.16	80	P	Pg	22 25 57.4	-0.2
	SNR=7.9						
CTIG	El Hierro	0.21	66	P	Pb	22 25 58.0	-0.1
	SNR=7.9						
CTIG				S	Sg	22 26 01.9	+0.1
	3µm,0.2s,SNR=7.9						

MEX 02 22:32:46.9±0.4, **14°.29N×92°.18W, h14**^{km}±115^{km}, **MD3.9, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		1.73	325	*e*P	Pn	22 33 13.3	-3.2
PCIG				*e*S	Sn	22 33 33.3	-5.1
CCIG	Comitan	1.98	1	*i* P	Pn	22 33 17.0	-3.2
CCIG				*e*S	Sn	22 33 40.7	-4.3
TGIG		2.64	340	*i* P	Pn	22 33 27.1	-2.0
TGIG				*e*S	Sn	22 33 56.4	-4.5

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*UPP **02** 22:36:14.5±2.3, 65°.88N×13°.13E, h0^{km}, ML2.5*

*HEL **02** 22:36:14.5, 65°.88N×13°.13E, h10^{km}, ML2.5(UPP)*

*IDC **02** 22:36:16.4±1.3, 66°.07N×13°.41E, h0^{km}, mb1 3.4/5, mb1mx3.2/72, mbtmp3.4/5, ML3.3/5, Error ellipse: s-maj=17.0km s-min=7.4km az=116.0*

*NAO **02** 22:36:16.2±1.1, 66°.06N×13°.32E, ML3.1*

*BER **02** 22:36:16.9±0.8, 66°.08N×13°.36E, h5^{km}, ML2.4, ML3.1(NAO)*

*CSEM **02** 22:36:17.7±0.2, 66°.02N×13°.53E, h10^{km}, ML2.7, Error ellipse: s-maj=5.5km s-min=2.4km az=124.0*

ISC 02 22:36:15.8±1.2, **66°.04N**±0°.02×**13°.35E**±0°.03, **h1**^{km}±9^{km}, **n121**, σ**1^{s}.66**/219, **1D, Northern Norway**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STOK	Stokkvaagen	0.32	336	*i* P	Pg	22 36 21.7	-0.3
STOK				*i* S	Sg	22 36 25.8	-0.4
STOK	Stokkvaagen	0.32	336	*e*P	Pg	22 36 21.7	-0.3
STOK				*e*S	Sg	22 36 25.8	-0.4
MOR8	Moi Rana	0.47	73	*i* P	Pg	22 36 27.1	+2.4
MOR8				*i* S	Sb	22 36 35.4	+1.3
MOR8				IAML		22 36 45.4	
	comp=Z,222nm,0.6s						
MOR8	Moi Rana	0.47	73	*i* P	Pg	22 36 27.1	+2.4
MOR8				*i* S	Sb	22 36 35.4	+1.3
MOR8	Moi Rana	0.47	73	*e*P	Pg	22 36 27.1	+2.4
MOR8				*e*S	Sb	22 36 35.4	+1.3
MOR8				IAML		22 36 45.4	
	comp=Z,222nm,0.6s						
KONS	Konsvik	0.47	349	*i* P	Pg	22 36 24.5	-0.3
KONS				*i* S	Sg	22 36 31.0	0.0
KONS				IAML		22 36 31.7	
	comp=Z,285nm,0.4s						
KONS	Konsvik	0.47	349	*e*P	Pg	22 36 24.5	-0.3
KONS				*e*S	Sg	22 36 31.0	0.0
KONS				IAML		22 36 31.7	
	comp=Z,285nm,0.4s						
NSS	Namsos	1.62	202	*e*P	Pn	22 36 45.1	-0.3
NSS				*e*S	Sn	22 37 05.7	-1.2
NSS				IAML		22 37 08.6	
	comp=Z,73nm,0.4s						
NSS	Namsos	1.62	202	*e*P	Pn	22 36 45.2	-0.3
NSS				*e*S	Sn	22 37 05.7	-1.2
NSS	Namsos	1.62	202	*e*P	Pn	22 36 45.1	-0.3
NSS				*e*S	Sn	22 37 05.7	-1.2
NSS				IAML		22 37 08.6	
	comp=Z,73nm,0.4s						
STEI	Steigen	2.04	21	*e*PB	Pn	22 36 51.8	+0.6
STEI				*e*SG	Sb	22 37 20.5	+1.1
STEI				IAML		22 37 25.1	
	comp=Z,106nm,0.5s						
STEI	Steigen	2.04	21	*e*Pg	Pn	22 36 51.8	+0.6
STEI				*e*Sg	Sb	22 37 20.5	+1.1
STEI				IAML		22 37 25.1	
	comp=Z,106nm,0.5s						
LOF	Lofoten	2.10	2	*e*P	Pn	22 36 50.2	-1.9
LOF				*e*S	Sn	22 37 16.0	-2.8
LOF				IAML		22 37 25.5	
	comp=Z,63nm,0.6s						
LOF	Lofoten	2.10	2	*e*P	Pn	22 36 50.2	-1.9
LOF				*e*S	Sn	22 37 16.0	-2.8
LOF				IAML		22 37 25.5	
	comp=Z,63nm,0.6s						
SALU	Saltoluokta	2.45	54	P	Pn	22 36 57.7	+0.8
SALU				S	Sb	22 37 30.3	-1.0
SALU	Saltoluokta	2.45	54	*e*P	Pn	22 36 57.7	+0.8
SALU	Saltoluokta	2.45	54	*e*P	Pn	22 36 57.7	+0.8
SALU				S	Sb	22 37 30.3	-1.0
NIKU	Nikkaluokta	2.89	48	P	Pn	22 37 03.6	+0.7
NIKU	Nikkaluokta	2.89	48	*e*P	Pn	22 37 03.6	+0.7
NIKU	Nikkaluokta	2.89	48	*e*P	Pn	22 37 03.7	+0.7
RATU	Laukkuluspa	3.04	51	P	Pn	22 37 06.8	+1.8
RATU				S	Sn	22 37 45.1	+3.1
RATU	Laukkuluspa	3.04	51	*e*P	Pn	22 37 06.8	+1.8
RATU	Laukkuluspa	3.04	51	*e*P	Pn	22 37 06.8	+1.8
RATU				S	Sn	22 37 45.1	+3.1
DUNU	Dundret	3.08	66	P	Pn	22 37 06.8	+1.3
DUNU	Dundret	3.08	66	*e*P	Pn	22 37 06.8	+1.3
DUNU	Dundret	3.08	66	*e*P	Pn	22 37 06.8	+1.3
HARU	Harads	3.11	84	P	Pn	22 37 05.9	0.0
HARU				S	Sn	22 37 44.6	+1.1
HARU	Harads	3.11	84	*e*P	Pn	22 37 05.9	0.0
HARU				*e*S	Sn	22 37 44.6	+1.1
HARU	Harads	3.11	84	*e*P	Pn	22 37 05.9	0.0
HARU				*e*S	Sn	22 37 44.6	+1.1
KUA	Kurravaara	3.35	52	P	Pn	22 37 10.2	+1.0
KUA	Kurravaara	3.35	52	*e*P	Pn	22 37 10.2	+1.0
KUA	Kurravaara	3.35	52	*e*P	Pn	22 37 10.2	+1.0
ERTU	Ertsjaerv	3.61	78	*e*P	Pn	22 37 12.4	-0.4
ERTU				*e*S	Sn	22 37 55.0	-0.9
ERTU	Ertsjaerv	3.61	78	*e*P	Pn	22 37 12.4	-0.4
ERTU				*e*S	Sn	22 37 55.0	-0.9
BURU	Burvik	3.67	110	*e*P	Pn	22 37 14.4	+0.8
BURU				*e*PG	Pb	22 37 22.0	+0.7

BURU				eS	Sn	22 37 56.6	-0.8
BURU	Burvik	3.67	110	eP	Pn	22 37 14.4	+0.8
LANU	Lannavaara	3.94	55	P	Pn	22 37 18.2	+0.9
LANU				S	Sn	22 38 05.9	+1.8
LANU	Lannavaara	3.94	55	eP	Pn	22 37 18.2	+0.9
LANU				eS	Sn	22 38 02.9	-1.2
LANU	Lannavaara	3.94	55	eP	Pn	22 37 18.2	+0.9
LANU				eS	Sn	22 38 02.9	-1.2
KALU	Kalix	4.10	88	eP	Pn	22 37 18.8	-0.7
KALU				eS	Sn	22 38 06.6	-1.4
KALU	Kalix	4.10	88	eP	Pn	22 37 18.8	-0.7
KALU				eS	Sn	22 38 06.6	-1.4
KIF	Kilpisjarvi	4.13	40	eP	Pn	22 37 20.7	+0.8
KIF				MSG		22 38 29.0	
	comp=Z,21nm,0.3s						
KIF	Kilpisjarvi	4.13	40	eP	Pn	22 37 21.4	+1.6
KIF				ePg	Pb	22 37 30.6	+1.5
TRO	Tromso	4.18	28	eP	Pn	22 37 21.5	+0.9
TRO	Tromso	4.18	28	eP	Pn	22 37 21.5	+0.9
TRO	Tromso	4.18	28	eP	Pn	22 37 21.5	+0.9
DOMB	Dombas	4.43	207	eP	Pn	22 37 24.8	+0.7
DOMB				IAML		22 38 34.6	
	comp=Z,16nm,0.5s						
DOMB	Dombas	4.43	207	eP	Pn	22 37 24.8	+0.7
DOMB	Dombas	4.43	207	eP	Pn	22 37 24.8	+0.7
DOMB				IAML		22 38 34.6	
	comp=Z,16nm,0.5s						
TOF	Tornio	4.47	84	eP	Pn	22 37 23.7	-0.9
TOF				eS	Sn	22 38 16.5	-0.7
TOF				MSG		22 38 40.1	
	comp=Z,13nm,0.4s						
TOF	Tornio	4.47	84	eP	Pn	22 37 23.7	-0.9
TOF				eS	Sn	22 38 16.5	-0.7
HEF	Hetta	4.66	55	eP	Pn	22 37 27.7	+0.5
HEF				eS	Sn	22 38 19.9	-1.9
HEF				MSG		22 38 43.9	
	comp=Z,13nm,0.3s						
HEF	Hetta	4.66	55	eP	Pn	22 37 27.7	+0.5
HEF				eS	Sn	22 38 19.9	-1.9
HEF	Hetta	4.66	55	eP	Pn	22 37 27.9	+0.7
AKN	Aaknes	4.77	219	Pn	Pn	22 37 30.3	+1.6
AKN				Sn	Sn	22 38 23.3	-1.2
AKN	Aaknes	4.77	219	eP	Pn	22 37 30.3	+1.6
AKN				eS	Sn	22 38 23.3	-1.2
AKN	Aaknes	4.77	219	eP	Pn	22 37 30.3	+1.6
AKN				eS	Sn	22 38 23.3	-1.2
AKN	Aaknes	4.77	219	Pn	Pn	22 37 30.3	+1.6
AKN				Sn	Sn	22 38 23.3	-1.2
KTK1	Kautokeino	4.83	47	eP	Pn	22 37 30.3	+0.9
KTK1				eS	Sn	22 38 25.3	-0.6
KTK1	Kautokeino	4.83	47	eP	Pn	22 37 30.3	+0.9
KTK1				eS	Sn	22 38 25.3	-0.6
KTK1	Kautokeino	4.83	47	eP	Pn	22 37 30.3	+0.9
KTK1				eS	Sn	22 38 25.3	-0.6
NC3	NORSAR Subarra	4.87	191	Pn	Pn	22 37 31.6	+1.5
NC3				Sn	Sn	22 38 28.0	+0.9
NC3				Lg	Lg	22 38 46.5	
NC3	NORSAR Subarra	4.87	191	eP	Pn	22 37 31.6	+1.5
NC3				eS	Sn	22 38 28.0	+0.9
NC3				eSG	Sb	22 38 46.5	+5.6
NC3	NORSAR Subarra	4.87	191	eP	Pn	22 37 31.6	+1.5
NC3				eS	Sn	22 38 28.0	+0.9
NC3				eSg	Sb	22 38 46.5	+5.6
NC3	NORSAR Subarra	4.87	191	Pn	Pn	22 37 31.6	+1.5
NC3				Sn	Sn	22 38 28.0	+0.9
NC3				Lg	Lg	22 38 46.5	
NC2	NORSAR Subarra	4.91	194	Pn	Pn	22 37 32.1	+1.4
NC2				Sn	Sn	22 38 29.3	+1.3
NC2				Lg	Lg	22 38 49.2	
NC2	NORSAR Subarra	4.91	194	eP	Pn	22 37 32.1	+1.4
NC2				eS	Sn	22 38 29.3	+1.3
NC2				eSG	Sg	22 38 49.2	-4.0
NC2	NORSAR Subarra	4.91	194	Pn	Pn	22 37 32.1	+1.4
NC2				Sn	Sn	22 38 29.3	+1.3
NC2				Lg	Lg	22 38 49.2	
VAF	Ylistaro	5.02	122	eP	Pn	22 37 32.4	+0.3
VAF				eS	Sn	22 38 30.8	+0.1
VAF				MSG		22 39 01.3	
	comp=Z,11nm,0.4s						
VAF	Ylistaro	5.02	122	eP	Pn	22 37 32.4	+0.3
VAF				eS	Sn	22 38 30.8	+0.1
NC4	NORSAR Subarra	5.03	189	Pn	Pn	22 37 33.5	+1.2
NC4				Sn	Sn	22 38 31.2	+0.2
NC4				Lg	Lg	22 38 50.6	
NC4	NORSAR Subarra	5.03	189	eP	Pn	22 37 33.5	+1.2
NC4				eS	Sn	22 38 31.2	+0.2
NC4				eSG	Sb	22 38 50.6	+5.1
NC4	NORSAR Subarra	5.03	189	Pn	Pn	22 37 33.5	+1.2
NC4				Sn	Sn	22 38 31.2	+0.2
NC4				Lg	Lg	22 38 50.6	
OUF	Merijarvi	5.08	104	eP	Pn	22 37 31.6	-1.3
OUF				eS	Sn	22 38 29.9	-2.1
OUF	Merijarvi	5.08	104	eP	Pn	22 37 31.6	-1.3
OUF				eS	Sn	22 38 29.9	-2.1
NB2	NORSAR Subarra	5.11	192	Pn	Pn	22 37 33.9	+0.5
	baz=9.8,slow=14						
NB2				Sn	Sn	22 38 34.5	+1.6
	baz=13,slow=22						
NB2	NORSAR Subarra	5.11	192	eP	Pn	22 37 33.9	+0.5
NB2				eS	Sn	22 38 34.5	+1.6
NB2	NORSAR Subarra	5.11	192	Pn	Pn	22 37 33.9	+0.5
	baz=9.8,slow=14						
NB2				Sn	Sn	22 38 34.5	+1.6
	baz=13,slow=22						
RNF	Rovaniemi	5.14	78	eP	Pn	22 37 32.4	-1.3
RNF				eS	Sn	22 38 30.1	-3.5
NBO	NORSAR Subarra	5.16	194	Pn	Pn	22 37 35.0	+1.0
NBO				Sn	Sn	22 38 36.6	+2.5
NBO	NORSAR Subarra	5.16	194	eP	Pn	22 37 35.0	+1.0
NBO	NORSAR Subarra	5.16	194	Pn	Pn	22 37 35.0	+1.0
NBO				Sn	Sn	22 38 36.6	+2.5
OUL	Oulu	5.30	95	eP	Pn	22 37 35.0	-0.9
OUL				eS	Sn	22 38 35.2	-2.3
NAO	NORSAR Subarra	5.36	193	Pn	Pn	22 37 37.4	+0.7
NAO	NORSAR Subarra	5.36	193	eP	Pn	22 37 37.4	+0.7
NAO	NORSAR Subarra	5.36	193	eP	Pn	22 37 37.4	+0.7
NAO	NORSAR Subarra	5.36	193	Pn	Pn	22 37 37.4	+0.7
NC6	NORSAR Subarra	5.38	190	Pn	Pn	22 37 38.0	+1.0
NC6				Sn	Sn	22 38 37.9	-1.7
NC6				Lg	Lg	22 39 04.4	
NC6	NORSAR Subarra	5.38	190	eP	Pn	22 37 38.0	+1.0
NC6				eS	Sn	22 38 37.9	-1.7
NC6				eSG	Sg	22 39 04.4	-4.0
NC6	NORSAR Subarra	5.38	190	eP	Pn	22 37 38.0	+1.0
NC6				eS	Sn	22 38 37.9	-1.7
NC6				Lg	Lg	22 39 04.4	
NC6	NORSAR Subarra	5.38	190	Pn	Pn	22 37 38.0	+1.0
NC6				Sn	Sn	22 38 37.9	-1.7
NC6				Lg	Lg	22 39 04.4	
NRA0	NORESS Array S	5.39	189	Pn	Pn	22 37 38.0	+0.8
	baz=3.8,slow=14						
NRA0				Sn	Sn	22 38 39.2	-0.5
	baz=14,slow=28						
NRA0	NORESS Array S	5.39	189	eP	Pn	22 37 38.0	+0.8
NRA0				eS	Sn	22 38 39.2	-0.5
NRA0	NORESS Array S	5.39	189	eP	Pn	22 37 38.0	+0.8
NRA0				eS	Sn	22 38 39.2	-0.5
NRA0	NORESS Array S	5.39	189	Pn	Pn	22 37 38.0	+0.8
	baz=3.8,slow=14						
NRA0				Sn	Sn	22 38 39.2	-0.5
	baz=14,slow=28						
SGF	Sodankyl	5.41	69	eP	Pn	22 37 36.8	-0.6
SGF				eS	Sn	22 38 39.0	-1.2
SGF	Sodankyl	5.41	69	eP	Pn	22 37 36.8	-0.6
SGF				eS	Sn	22 38 39.0	-1.2
ARA0	ARCESS Array S	5.79	47	Pn	Pn	22 37 42.2	-0.5
	baz=232,slow=14						
ARA0				Sn	Sn	22 38 46.1	-3.5
	baz=234,slow=22						
ARA0				Lg	Lg	22 39 14.2	
	baz=244,slow=37						
ARA0	ARCESS Array S	5.79	47	Pn	Pn	22 37 42.2	-0.5
	baz=232,slow=14						
ARA0				Sn	Sn	22 38 46.1	-3.5
	baz=234,slow=22						
ARA0				Lg	Lg	22 39 14.2	
	baz=244,slow=37						
ARCES	ARCESS Array B	5.79	47	Pn	Pn	22 37 42.1	-0.6
	comp=Z,1.1nm,0.3s,baz=233,slow=13,SNR=53						
ARCES				Pg	Pb	22 37 58.6	+1.2
	comp=Z,1.1nm,0.3s,baz=236,slow=14,SNR=9.0						
ARCES				Sn	Sn	22 38 46.7	-2.9
	comp=Z,2.1nm,0.3s,baz=233,slow=22,SNR=7.1						
ARCES				Lg	Lg	22 39 14.4	
	comp=Z,2.7nm,0.3s,baz=238,slow=29,SNR=8.2						
ARE0	ARCESS Array S	5.79	47	eP	Pn	22 37 42.2	-0.5
ARE0				eS	Sn	22 38 46.6	-3.0
ARE0	ARCESS Array S	5.79	47	eP	Pn	22 37 42.4	-0.3
ARE0				IAML		22 38 49.7	
	comp=Z,5.6nm,0.5s						
HFS	Hagfors	5.93	178	Pn	Pn	22 37 44.7	+0.1
	comp=Z,0.7nm,0.3s,baz=2.1,slow=12,SNR=24						
HFS				Sn	Sn	22 38 53.4	+0.3
	comp=Z,1.3nm,0.3s,baz=357,slow=24,SNR=10						
HFS				Lg	Lg	22 39 21.3	
	comp=Z,2.0nm,0.3s,baz=3.5,slow=27,SNR=8.1						
HFS	Hagfors	5.93	178	Pn	Pn	22 37 46.1	+1.5
	slow=12						
HFS				Sn	Sn	22 38 53.7	+0.6
	slow=28						
HFS				Lg	Lg	22 39 21.1	
	slow=28						
HFS	Hagfors	5.93	178	eP	Pn	22 37 46.1	+1.5
HFS				eS	Sn	22 38 53.7	+0.6
HFS				eSG	Sg	22 39 21.1	-5.0
HFS	Hagfors	5.93	178	eP	Pn	22 37 46.1	+1.5
HFS				eS	Sn	22 38 53.7	+0.6
HFS				Lg	Lg	22 39 21.1	
	SNR=5.7						
HFS	Hagfors	5.93	178	Pn	Pn	22 37 46.1	+1.5
	slow=12						
HFS				Sn	Sn	22 38 53.7	+0.6
	slow=28						
HFS				Lg	Lg	22 39 21.1	
	slow=28						
HAMF	Hammerfest	5.99	35	eP	Pn	22 37 46.7	+1.3
HAMF	Hammerfest	5.99	35	eP	Pn	22 37 46.7	+1.3
RAF	Rauma	6.28	139	eP	Pn	22 37 49.6	+0.2
RAF				eS	Sn	22 39 00.5	-1.2
RAF	Rauma	6.28	139	eP	Pn	22 37 49.6	+0.2
RAF				eS	Sn	22 39 00.5	-1.2
AAL	Aland	6.61	150	eP	Pn	22 37 54.7	+0.9
AAL				eS	Sn	22 39 07.4	-2.2
AAL	Aland	6.61	150	eP	Pn	22 37 54.7	+0.9
AAL				eS	Sn	22 39 07.4	-2.2
FIA0	FINESS Array S	7.28	123	Pn	Pn	22 38 02.9	-0.2
	baz=324,slow=14						
FIA0				Sn	Sn	22 39 24.7	-1.6
	baz=315,slow=28						
FIA0				Lg	Lg	22 40 01.5	
	baz=317,slow=28						
FIA0	FINESS Array S	7.28	123	eP	Pn	22 38 02.9	-0.2
FIA0				eS	Sn	22 39 24.7	-1.6
FIA0				eSG	Sg	22 40 01.5	-7.8
FIA0	FINESS Array S	7.28	123	Pn	Pn	22 38 02.9	-0.2
	baz=324,slow=14						
FIA0				Sn	Sn	22 39 24.7	-1.6
	baz=315,slow=28						
FIA0				Lg	Lg	22 40 01.5	
	baz=317,slow=28						
FINES	FINESS Array B	7.28	123	Pn	Pn	22 38 02.7	-0.4
	comp=Z,0.5nm,0.3s,baz=321,slow=13,SNR=22						
FINES				Sn	Sn	22 39 24.7	-1.6
	comp=Z,0.6nm,0.3s,baz=320,slow=22,SNR=5.8						
FINES				Lg	Lg	22 40 01.3	
	comp=Z,1.2nm,0.3s,baz=318,slow=23,SNR=13						
MTSE	Matsula	8.80	142	eS	Sn	22 39 59.0	-4.5
KLMR	Klimovskoe	12.74	102	ePn	Pn	22 39 14.1	-3.7
KLMR				AMP		22 39 28.1	
	comp=Z,3.0nm,1.0s						
KLMR				⇓Lg	Lg	22 42 49.0	
GERES	GERESS Array B	17.24	179	P	P	22 40 20.1	+0.9
	comp=Z,0.1nm,0.3s,baz=6.3,slow=9.9,SNR=2.6						
AKASG	Malin Array Be	17.39	144	P	Pn	22 40 19.3	-0.1
	comp=Z,0.5nm,0.3s,baz=334,slow=12,SNR=2.9						

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*IDC **02** 22:39:24.6±0.9, 51.°92N×173.°45W, h0^{km}, mb3.9/7, mb1 4.2/8, mb1mx3.6/80, mbtmp3.9/8, ML3.7/1, MS3.1/2, Ms1 3.1/2, ms1mx2.4/66, Error ellipse: s-maj=33.9km s-min=20.4km az=147.0*

*ISCJB **02** 22:39:25.4±0.4, 52.°00N±0.°06×173.°46W±0.°04, h10^{km}, mb3.9/9, MS3.3/1, Error ellipse: s-maj=8.7km s-min=2.8km az=168.8*

*NEIC **02** 22:39:27.2±0.0, 52.°07N×173.°56W, h11^{km}, mb4.0/10, ML3.8(AEIC), After AEIC.*

ISC 02 22:39:26.3±0.7**, 51.°97N**±0.°09×**173.°53W**±0.°04**, h10**^{km}**, n67, σ0.s93**/64**, mb4.0**/9**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOFP	Korovin Flat P	0.46	311	P	Pb	22 39 36.3	-0.3
ATKA	Atka Island	0.47	299	ePg	Pg	22 39 35.5	-0.1
ATKA				eSg	Sg	22 39 41.7	-0.1
KOKL	Mount Kliuchef	0.54	310	P	Pb	22 39 37.4	-0.6
KOWE	Korovin West	0.59	312	P	Pb	22 39 38.4	-0.4
GSTR	Great Sitkin T	1.57	275	ePn	Pn	22 39 54.2	0.0
GSTD	Great Sitkin T	1.62	274	P	Pn	22 39 54.9	-0.1
GSTD				S	Sn	22 40 16.4	+0.5
ETKA	Kagalaska Isla	1.79	268	P	Pn	22 39 57.3	+0.1
ETKA				S	Sn	22 40 19.6	-0.4
ADAG	Mount Adagdak	1.90	271	P	Pn	22 39 59.5	+0.7
KIRH	Kanaga Island	2.21	269	P	Pn	22 40 04.3	+1.3
KIWB	Kanaga Island	2.25	268	ePn	Pn	22 40 04.2	+0.6
KIKV	Kanaga Island	2.26	269	P	Pn	22 40 04.5	+0.8
KICM	Kanaga Island	2.27	270	P	Pn	22 40 04.6	+0.7
TAPA	Tanaga Point A	2.66	268	P	Pn	22 40 10.5	+1.2
TAFP	Tanaga Falls P	2.76	270	P	Pn	22 40 12.0	+1.4
TAFP				S	Sn	22 40 45.1	+1.2
TASE	Tanaga Southea	2.80	269	P	Pn	22 40 12.1	+1.0
NIKH	Nikolski High	3.03	69	ePn	Pn	22 40 13.7	-0.6
GAEA	Gareloi East	3.24	269	P	Pn	22 40 17.4	+0.2
OKAK	Okmok	3.53	61	P	Pn	22 40 21.3	+0.2
OKTU	Okmok Mt. Tuli	3.62	65	P	Pn	22 40 23.3	+0.8
OKER	Okmok East Rim	3.65	64	P	Pn	22 40 24.3	+1.5
CESW	Semis' Southwe	4.28	272	P	Pn	22 40 32.1	+0.6
MSOM	Makushin Julie	4.39	63	P	Pn	22 40 34.2	+1.2
MGOD	Makushin Gods	4.42	63	P	Pn	22 40 34.4	+0.9
AMKA	Amchitka	4.50	265	P	Pn	22 40 35.1	+0.6
MTBL	Makushin Table	4.60	62	P	Pn	22 40 37.6	+1.8
UNV	Unalaska Valle	4.65	63	ePn	Pn	22 40 37.3	+0.8
LSPA	Little Sitkin	4.89	273	P	Pn	22 40 40.1	+0.3
AKMO	Akutan Morgan	5.01	62	P	Pn	22 40 42.8	+1.3
AKUT	Akutan	5.15	62	ePn	Pn	22 40 45.7	+2.2
SPIA	Saint Paul Isl	5.55	19	ePn	Pn	22 40 47.9	-1.0
KDAK	Kodiak Island	13.36	56	Pn	Pn	22 42 34.0	-1.7
	0.3nm,0.3s,baz=274,slow=2.1,SNR=2.3						
KDAK				LR	LR	22 47 56.4	
	comp=Z,60nm,21.6s,baz=257,slow=38						
SVW2	Sparrevohn	13.43	40	ePn	Pn	22 42 36.0	-0.7
SKT	Skwentna	15.54	41	ePn	Pn	22 43 06.3	+1.0
	11nm,0.8s						
CAST	Castle Rocks	16.11	36	ePn	Pn	22 43 13.2	+0.6
	6.4nm,0.8s						
BPAW	Bear Paw Mtn.	16.90	35	ePn	P	22 43 24.0	-0.7
	5.5nm,0.8s						
IM3	Indian Mountai	17.23	28	ePn	P	22 43 28.0	-0.3
SCM	Sheep Creek Mo	17.25	45	ePn	Pn	22 43 25.5	-1.7
	2.9nm,0.9s						
MLY	Manley	17.54	33	ePn	P	22 43 32.2	+0.4
	3.7nm,0.8s						
DHY	Denali Highway	17.76	41	ePn	Pn	22 43 32.5	-1.0
	2.5nm,0.7s						
WRH	Wood River Hil	18.16	37	ePn	Pn	22 43 37.0	-1.3
	3.4nm,0.8s						
CCB	Clear Creek Bu	18.36	36	ePn	Pn	22 43 39.6	-1.1
	3.1nm,0.8s						
MDM	Murphy Dome	18.37	35	ePn	P	22 43 41.4	+0.5
	5.7nm,1.1s						
IL1	Eielson Array	18.76	37	eP	Pn	22 43 46.9	+1.3
ILAR	Eielson Array	18.76	37	P	P	22 43 44.1	-1.0
	0.2nm,0.3s,baz=241,slow=8.8,SNR=13						
ILB	Eielson Array	18.76	37	eP	P	22 43 44.1	-1.0
TOLK	Toolik Lake Re	20.25	25	eP	P	22 44 02.0	+0.5
	13nm,0.8s						
FYU	Fort Yukon	20.29	33	eP	P	22 44 01.7	0.0
	18nm,1.2s						
EGAK	Eagle	20.96	40	eP	P	22 44 08.0	-1.1
	30nm,0.8s						
SEY	Seymchan	21.09	315	P	P	22 44 11.3	+0.8
	1.5nm,0.2s,baz=136,slow=11,SNR=6.4						
DAWY	Dawson	21.44	42	eP	P	22 44 15.1	+0.8
	3.8nm,0.8s						
INK	Inuvik	25.10	34	P	P	22 44 50.0	-0.7
	2.7nm,0.6s,baz=254,slow=5.3,SNR=9.8						
YKA	Yellowknife Ar	32.42	48	P	P	22 45 56.9	+1.0
	1.0nm,0.7s,baz=274,slow=9.2,SNR=3.5						
H11N2	WAKE ISLAND Hy	35.64	213	T	T	23 24 11.1	
	baz=21,slow=76,SNR=476						
H11N3	WAKE ISLAND Hy	35.65	213	T	T	23 24 12.1	
	baz=21,slow=76,SNR=841						
H11N1	WAKE ISLAND Hy	35.66	213	T	T	23 24 12.4	
	baz=21,slow=76,SNR=699						
H11S1	WAKE ISLAND Hy	36.84	212	T	T	23 25 39.3	
	baz=20,slow=76,SNR=521						
H11S2	WAKE ISLAND Hy	36.86	212	T	T	23 25 39.6	
	baz=20,slow=76,SNR=381						
H11S3	WAKE ISLAND Hy	36.86	212	T	T	23 25 39.7	
	baz=20,slow=76,SNR=157						
PDAR	Pinedale Array	42.99	76	P	P	22 47 25.0	-0.7
	0.4nm,0.6s,baz=305,slow=3.2,SNR=6.0						
PDAR	Pinedale Array	42.99	76	eP	P	22 47 24.9	-0.9
AGMN	Agassiz Nation	47.69	62	eP	P	22 48 03.8	+1.1
	5.6nm,1.1s						
SFJD	Kangerlussuaq	53.81	24	LR	LR	23 14 18.1	
	comp=Z,25nm,18.9s,baz=196,slow=39						
TX31	Lajitas Ar. Si	55.32	85	eP	P	22 48 59.7	-0.5
TXAR	Lajitas Array	55.32	85	P	P	22 48 59.8	-0.4
	1.2nm,0.8s,baz=297,slow=4.7,SNR=11						
WRA	Warramunga Arr	84.79	228	P	P	22 51 59.9	-0.8
	0.3nm,0.5s,baz=33,slow=5.8,SNR=5.2						
ASAR	Alice Springs	88.22	227	P	P	22 52 17.7	+0.2
	0.9nm,0.6s,baz=26,slow=3.4,SNR=6.4						
MAW	Mawson	148.97	218	PKPbc	PKPbc	22 59 12.6	-0.2
	0.9nm,0.7s,baz=85,slow=5.4,SNR=6.2						

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*ISCJB **02** 22:42:35.7±0.7, 27.°94N±0.°09×18.°20W±0.°07, h25^{km}±12^{km}, Error ellipse: s-maj=14.7km s-min=10.3km az=1.4*

*CSEM **02** 22:42:37.5±0.1, 27.°82N×18.°11W, h20^{km}, ML4.4, Error ellipse: s-maj=7.0km s-min=3.9km az=96.0*

*INMG **02** 22:42:39.4±0.9, 27.°65N×18.°20W, h17^{km}±4^{km}, ML3.4, Error ellipse: s-maj=4.8km s-min=4.1km az=85.0*

ISC 02 22:42:36.3±1.5**, 27.°8N**±0.°1×**18.°20W**±0.°09**, h29**^{km}±11^{km}**, n18, σ1.s34**/32**, Canary Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTAD	Las Tabladas,	0.12	126	P	Pb	22 42 42.4	+0.7
	SNR=18						
CTAD				S	Sb	22 42 44.8	-0.6
	63µm,0.2s,SNR=7.9						
CORC	Orchilla, El H	0.13	158	P	Pb	22 42 42.1	+0.4
	SNR=18						
CORC				S	Sb	22 42 44.4	-1.0
	20µm,0.1s,SNR=7.9						
CJUL	El Julon, El H	0.14	132	P	Pb	22 42 42.4	+0.4
	SNR=18						
CJUL				S	Sb	22 42 45.2	-0.7
	36µm,0.1s,SNR=7.9						
CTAN	El Hierro	0.15	118	P	Pb	22 42 42.5	+0.6
	SNR=18						
CTAN				S	Sb	22 42 45.0	-0.7
	23µm,0.2s,SNR=7.9						
CCUM	Cumbre, El Hie	0.17	117	P	Pb	22 42 42.7	+0.6
	SNR=18						
CCUM				S	Sb	22 42 45.4	-0.7
	43µm,0.2s,SNR=7.9						
CMCL	Mercadel, El H	0.19	125	P	Pb	22 42 42.8	+0.3
	SNR=18						
CMCL				S	Sb	22 42 45.7	-1.0
	37µm,0.2s,SNR=7.9						
CHIE	El Hierro	0.23	115	P	Pb	22 42 43.5	+0.7
	SNR=7.9						
CTIG	El Hierro	0.25	98	P	Pb	22 42 43.9	+0.9
	10µm,0.2s,SNR=18						
CTIG				S	Sb	22 42 47.6	+0.1
	20µm,0.2s,SNR=7.9						
CRST	La Restinga, E	0.26	133	P	Pb	22 42 43.0	-0.2
	SNR=18						
CRST				S	Sb	22 42 46.3	-1.5
	55µm,0.2s,SNR=7.9						
EGOM	La Gomera	0.94	69	S	Sb	22 43 05.4	-0.6
	378nm,0.1s,SNR=7.9						
CRAJ	Montana Rajada	1.48	72	S	Sn	22 43 19.1	-0.8
	600nm,0.2s,SNR=7.9						
FUL	Funchal	4.94	13	eP	Pn	22 43 50.3	+1.8
FUL				eS	Sn	22 44 42.5	-2.2
FUL				A	A	22 44 44.9	
	44nm,0.5s						
PMAR	Madeira	5.01	13	eP	Pn	22 43 51.2	+1.5
PMAR				eS	Sn	22 44 44.6	-2.1
PMAR				A	A	22 44 51.5	
	42nm,0.2s						
PMAR	Madeira	5.01	13	eP	Pn	22 43 51.2	+1.5
PMAR				eS	Sn	22 44 44.6	-2.1
PMOZ	Porto Moniz, M	5.06	10	eP	Pn	22 43 52.1	+1.8
PMOZ				eS	Sn	22 44 45.9	-1.9
PMOZ				A	A	22 44 51.4	
	115nm,0.3s						
PMOZ	Porto Moniz, M	5.06	10	eP	Pn	22 43 52.1	+1.8
PMOZ				eS	Sn	22 44 45.9	-1.9
PMPS	Porto Santo	5.46	17	eP	Pn	22 43 57.1	+1.4
PMPS				eS	Sn	22 44 56.4	-1.1
PMPS				A	A	22 44 59.6	
	22nm,0.6s						
PMPS	Porto Santo	5.46	17	eP	Pn	22 43 57.1	+1.4

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*ISCJB **02** 22:53:07.4±0.4, 28.°84N±0.°05×140.°1E±0.°1, h480^{km}, mb3.6/15, Error ellipse: s-maj=13.9km s-min=5.6km az=160.6*

*JMA **02** 22:53:07.5±0.1, 28.°85N×140.°10E, h480^{km}, M3.8*

*IDC **02** 22:53:07.8±0.7, 28.°72N×139.°61E, h453^{km}±13^{km}, mb3.3/13, mb1 3.4/17, mb1mx3.1/70, mbtmp4.2/17, Error ellipse: s-maj=37.8km s-min=9.4km az=75.0*

ISC 02 22:53:08.5±0.7**, 28.°86N**±0.°08×**140.°2E**±0.°2**, h480**^{km}**, n32, σ1.s13**/39**, mb3.7**/15**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.48	135	P	P	22 54 14.3	-0.2
CBIJ				S	S	22 55 06.8	-1.3
JCJ	Chichijima	2.48	135	P	P	22 54 14.4	-0.2
	baz=270,slow=19						
JCJ				S	S	22 55 06.7	-1.4
	36nm,0.3s,baz=270,slow=22,SNR=3.9						
JHHJ	Haha-jima-NKT	2.83	141	P	P	22 54 16.4	-0.4
JHHJ				eS	S	22 55 10.8	-1.4
JHJ	Hachijo jima 2	4.26	355	P	P	22 54 27.8	+0.2
	28nm,0.3s,baz=280,slow=24,SNR=8.7						
JHJ				S	S	22 55 30.0	-2.2
	18nm,0.3s,baz=64,slow=22,SNR=2.4						
BSO1	Boso 1	5.81	6	P	P	22 54 43.1	+1.8
BSO3	Boso 3	5.93	2	P	P	22 54 43.8	+1.0
BSO4	Boso 4	6.11	1	P	P	22 54 45.9	+1.1
BSO4				eS	S	22 56 02.6	-1.0
JIE	Ise	6.27	332	P	P	22 54 46.7	+0.2
JKN2	Miekihoku	6.32	329	P	P	22 54 47.0	0.0
HMMJ	Hamamatsu 2	6.34	341	P	P	22 54 47.2	0.0
JOD2	Odawara 2	6.45	352	P	P	22 54 48.4	+0.1
JNY	Yasuok	6.77	344	P	P	22 54 51.7	+0.1
JRY	Ryogami san	7.22	352	P	P	22 54 56.2	+0.1
JAG	Ashikaga	7.57	355	P	P	22 54 59.3	-0.4
JAG				eS	S	22 56 27.9	-3.1
MJAR	Matsushiro Arr	7.84	348	P	P	22 55 02.0	-0.5
	1.5nm,0.3s,baz=177,slow=12,SNR=5.2						
MAT	Matsushiro	7.84	348	P	P	22 55 02.4	-0.2
USRK	Ussuriysk Ar.	16.65	339	P	P	22 56 37.6	+1.4
	baz=144,slow=11						
KLR	Kul'dur	21.34	345	P	P	22 57 22.2	+2.1
	0.2nm,0.5s,baz=163,slow=8.2,SNR=10						
SONM	Songino Array	32.23	315	P	P	22 58 55.0	-1.2
	1.6nm,0.6s,baz=132,slow=9.3,SNR=8.5						
ZALV	Zalesovo Beam	47.01	318	P	P	23 00 54.6	-0.5
	0.6nm,0.3s,baz=116,slow=3.4,SNR=2.4						
MKAR	Makanchi Array	48.00	308	P	P	23 01 01.5	-1.3
	1.3nm,0.6s,baz=95,slow=9.2,SNR=13						
MKAR				PcP	PcP	23 02 22.9	+1.1
	0.2nm,0.5s,baz=74,slow=9.2,SNR=3.0						
WRA	Warramunga Arr	48.85	187	P	P	23 01 09.2	-0.1
	3.3nm,0.4s,baz=2.5,slow=7.7,SNR=45						
KURBB	Kurchatov Arra	50.56	313	P	P	23 01 20.7	-1.0
	2.7nm,0.4s,baz=91,slow=8.2,SNR=22						
ASAR	Alice Springs	52.58	187	P	P	23 01 36.7	+0.1
	0.8nm,0.4s,baz=16,slow=11,SNR=19						
BVAR	Borovoye Array	55.56	317	P	P	23 01 57.1	-0.3
	1.5nm,0.4s,baz=89,slow=7.5,SNR=15						
AKTO	Aktyubinsk	63.55	315	P	P	23 02 50.2	-0.7
	1.3nm,0.6s,baz=80,slow=14,SNR=3.0						

ARCES	ARCESS Array B	71.30	340	P	P	23 03 39.8	+1.5
	1.0nm,0.5s,baz=67,slow=7.9,SNR=9.4						
KBZ	Khabaz	75.53	312	P	P	23 04 03.6	+0.7
	2.0nm,0.8s,baz=66,slow=1.5,SNR=3.6						
FINES	FINESS Array B	75.59	333	P	P	23 04 04.0	+1.1
	1.2nm,0.3s,baz=70,slow=5.4,SNR=28						
AKASG	Malin Array Be	80.16	323	P	P	23 04 28.2	+0.4
	0.4nm,0.4s,baz=62,slow=6.4,SNR=3.3						
HFS	Hagfors	81.11	336	P	P	23 04 33.6	+1.0
	0.6nm,0.4s,baz=51,slow=9.6,SNR=7.2						
NB2	NORSAR Subarra	81.32	338	P	P	23 04 34.8	+1.0
	comp=Z,1.0nm,0.6s,baz=48,slow=5.1						

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*NIED **02** 23:07:00, 38°.50N×142°.30E, h92^{km}, Mw3.6 Best double couple: $M_0$3.22000×10^{14} NP1:ϕ_s100.00000°,δ34.00000°, λ-113.00000°. NP2:ϕ_s307.00000°,δ59.00000°, λ-75.00000°.*

JMA 02 23:07:33.8±0.1**, 38°.46N×142°.26E, h24**^{km}±1^{km}**, M3.5, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIO	Ouri	0.71	270	P	Pb	23 07 47.5	-0.1
JIO				S	Sb	23 07 56.8	-0.2
OFUJ	Ofunato	0.77	323	P	Pb	23 07 48.5	-0.1
OFUJ				*e*S	Sb	23 07 58.5	-0.2
JMK	Ichinoseki	0.95	301	P	Pb	23 07 51.3	-0.3
JMK				*e*S	Sb	23 08 04.0	+0.2
JOU	Okura	1.26	266	P	Pb	23 07 56.4	-0.4
JOU				S	Sb	23 08 12.7	+0.1
JOM	Ohasama	1.26	324	P	Pn	23 07 56.1	+0.2
JOM				S	Sn	23 08 12.2	+0.1
JMM	Marumori	1.30	243	P	Pn	23 07 55.7	-0.7
JMM				S	Sn	23 08 12.2	-0.8
JFK	Kawauchi	1.55	226	P	Pn	23 07 58.6	-1.3
JFK				S	Sn	23 08 16.9	-2.3
JYK	Kaneyama	1.56	288	P	Pn	23 08 00.7	+0.7
JYK				*e*S	Sb	23 08 20.6	-0.6
JRG	Rokugo	1.58	307	P	Pb	23 08 01.5	-0.8
JRG				*e*S	Sb	23 08 22.1	+0.4
MAT	Matsushiro	3.75	241	P	Pn	23 08 34.1	+4.0
MAT				*e*S	Sn	23 09 17.0	+3.5

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*ISCJB **02** 23:24:06.4±0.4, 37°.13N±0°.04×55°.27E±0°.04, h24^{km}, Error ellipse: s-maj=6.5km s-min=3.6km az=19.7*
*TEH **02** 23:24:07.4, 36°.77N×55°.44E, h10^{km}, ML3.4*
*CSEM **02** 23:24:08.2±0.5, 37°.07N×55°.29E, h20^{km}, ML3.2, Error ellipse: s-maj=9.1km s-min=8.3km az=167.0*
*AZER **02** 23:24:10.8±0.9, 36°.96N×55°.12E, h60^{km}, ml3.5/2, Error ellipse: s-maj=23.2km s-min=7.4km az=43.0*

ISC 02 23:24:07.2±1.1**, 36°.98N**±0°.06×**55°.34E**±0°.05**, h24**^{km}**, n43, σ1^{s}29**/57**, 22C-8D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IMND	Minoodasht	0.29	12	*e*Pg	Pn	23 24 15.0	-0.9
IMND				*e*		23 24 16.5	
	comp=Z,29µm,0.1s						
IMND				*e*Sg	Sn	23 24 22.7	+1.3
IMND				*e*		23 24 23.7	
	comp=N,48µm,0.1s						
IMND				*e*		23 24 24.3	
	comp=E,44µm,0.1s						
MRVT	Maraveh tapeh	0.91	41	*e*Pg	Pb	23 24 24.1	-0.3
MRVT	Maraveh tapeh	0.91	41	*e*Pg	Pb	23 24 24.0	-0.3
SHRO	Shahrood	1.12	151	*e*Pg	Pn	23 24 21.1	-6.4
BJRD	Bojnurd	1.80	66	*e*Sg	Sb	23 25 02.9	+1.1
IANJ	Anjilo	1.89	218	*e*Pn	Pn	23 24 37.7	-0.5
IANJ				*e*		23 25 06.6	
	comp=Z,5µm,0.1s						
ISHM	Shahmirzad	2.02	235	*e*Pn	Pn	23 24 40.2	+0.2
ISHM				*e*		23 24 51.0	
	comp=E,477nm,0.1s						
ISHM				*e*		23 25 13.1	
	comp=Z,7µm,0.2s						
ISFR	Sfrayin	2.13	87	*e*Pn	Pn	23 24 42.2	+0.6
ISFR				*e*		23 24 46.5	
	comp=Z,3µm,0.2s						
ISFR				*e*		23 25 16.7	
	comp=N,8µm,0.3s						
ISFR				*e*		23 25 17.8	
	comp=E,13µm,0.2s						
IFIR	Firoozkooh	2.47	238	*e*Pn	Pn	23 24 47.6	+1.4
IFIR				*e*		23 24 51.4	
	comp=Z,4µm,0.1s						
IFIR				*e*		23 24 53.3	
	comp=N,3µm,0.2s						
IFIR				*e*		23 25 29.6	
	comp=E,5µm,0.2s						
ILAS	Lasjerd	2.50	231	*e*Pn	Pn	23 24 47.0	+0.5
ILAS				*e*		23 25 35.0	
	comp=E,3µm,0.2s						
IKRD	Kardeh	2.56	94	*e*Pn	Pb	23 24 59.4	+6.9
IKRD				*e*		23 25 11.1	
	comp=Z,520nm,0.1s						
IKRD				*e*		23 25 20.7	
	comp=E,694nm,0.2s						
IKRD				*e*		23 26 08.3	
	comp=N,597nm,0.2s						
IAKL	Akhelmad	2.77	97	*e*Pn	Pn	23 24 49.9	-0.4
IAKL				*e*		23 25 33.8	
	comp=N,2µm,0.2s						
IAKL				*e*		23 25 38.8	
	comp=Z,1µm,0.3s						
IAKL				*e*		23 25 48.6	
	comp=E,1µm,0.2s						
IPAY	Payeh	2.99	99	*e*Pn	Pn	23 24 53.5	+0.2
IPAY				*e*		23 25 03.0	
	comp=Z,670nm,0.1s						
IPAY				*e*		23 25 07.5	
	comp=E,1µm,0.3s						
IPAY				*e*		23 25 44.3	
	comp=N,1µm,0.2s						
IDMV	Damavand	3.01	243	*e*Pn	Pn	23 24 56.8	+3.2
IDMV				*e*		23 25 03.9	
	comp=Z,1µm,0.3s						
IDMV				*e*		23 25 47.8	
	comp=E,2µm,0.2s						
IDMV				*e*		23 25 53.0	
	comp=N,2µm,0.1s						
DAMV	Damavand	3.03	245	*e*Pn	Pn	23 24 55.6	+1.7
DAMV	Damavand	3.03	245	*e*Pn	Pn	23 24 55.6	+1.7
IMOG	Moghan	3.34	104	*e*Pn	Pn	23 24 58.3	+0.2
IMOG				*e*		23 25 11.3	
	comp=Z,908nm,0.3s						
IMOG				*e*		23 25 14.8	
	comp=E,940nm,0.3s						
IMOG				*e*		23 25 47.7	
	comp=N,805nm,0.2s						
ISRO	Mashad	3.39	100	*e*Pn	Pn	23 24 58.9	+0.2
ISRO				*e*		23 26 21.0	
	comp=E,371nm,0.5s						
ISRO				*e*		23 26 24.1	
	comp=N,2µm,0.5s						
ISRO				*e*		23 26 31.8	
	comp=Z,1µm,0.6s						
CHTH	Charan	3.56	254	*e*Pn	Pn	23 25 03.8	+2.7
CHTH	Charan	3.56	254	*e*Pn	Pn	23 25 03.8	+2.7
TABS	Tabas	3.63	156	*e*Pn	Pn	23 24 59.6	-2.3
IMYA	Miami	3.88	98	*e*		23 25 20.7	
	comp=Z,554nm,0.2s						
IMYA				*e*Pn	Pn	23 25 05.7	+0.2
IMYA				*e*		23 25 22.2	
	comp=E,819nm,0.2s						
IMYA				*e*		23 26 15.0	
	comp=N,778nm,0.4s						
GHVR	GHOM	4.12	234	*e*Pn	Pn	23 25 09.6	+0.9
GHVR	GHOM	4.12	234	*e*Pn	Pn	23 25 09.6	+0.9
IGZV	Ghazvin	4.16	263	*e*Pn	Pn	23 25 11.7	+2.4
IGZV				*e*		23 25 28.5	
	comp=Z,524nm,0.2s						
IGZV				*e*		23 26 24.2	
	comp=E,830nm,0.2s						
IGZV				*e*		23 26 24.4	
	comp=N,1µm,0.2s						
IRAZ	Razeghan	4.64	252	*e*Pn	Pn	23 25 18.2	+2.2
IRAZ				*e*		23 26 41.4	
	comp=Z,393nm,0.3s						
IRAZ				*e*		23 26 41.5	
	comp=E,624nm,0.3s						
IRAZ				*e*		23 26 53.2	
	comp=N,255nm,0.4s						
ASTR	Astara	5.42	289	⇑P	Pn	23 25 26.3	-0.2
	SNR=5.6						
ASTR				⇑S	Sn	23 26 26.0	-2.1
ASTR	Astara	5.42	289	⇑P	Pn	23 25 26.3	-0.2
	SNR=5.6						
ASTR				⇑S	Sn	23 26 26.0	-2.1
LKRN	Lenkeran, Azer	5.47	290	⇑S	Sn	23 26 28.7	-0.6
LKRN	Lenkeran, Azer	5.47	290	⇑S	Sn	23 26 28.7	-0.6
LRK	Lerik	5.78	289	P	Pn	23 25 32.5	+0.9
	SNR=9.2						
LRK				⇑S	Sn	23 26 36.7	-0.5
LRK	Lerik	5.78	289	P	Pn	23 25 32.5	+0.9
	SNR=9.2						
LRK				⇑S	Sn	23 26 36.7	-0.5
GLBA	Clilabad	5.92	295	⇓P	Pn	23 25 34.2	+0.9
	SNR=6.2						
GLBA				⇑S	Sn	23 26 39.1	-1.3
GLBA	Clilabad	5.92	295	⇓P	Pn	23 25 34.2	+0.9
	SNR=6.2						
GLBA				⇑S	Sn	23 26 39.1	-1.3
XNQ	Khinaliq	6.99	309	⇑P	Pn	23 25 49.2	+1.0
	SNR=3.0						
XNQ				⇑S	Sn	23 27 06.6	-0.4
XNQ	Khinaliq	6.99	309	⇑P	Pn	23 25 49.2	+1.0
	SNR=3.0						
XNQ				⇑S	Sn	23 27 06.6	-0.4
QSAR	Qusar	7.12	312	⇑P	Pn	23 25 51.0	+1.2
	SNR=36						
QSAR				⇑S	Sn	23 27 09.9	0.0
QSAR	Qusar	7.12	312	⇑P	Pn	23 25 51.0	+1.2
	SNR=36						
QSAR				⇑S	Sn	23 27 09.9	0.0
GANJ	Ganja	7.93	300	⇑P	Pn	23 26 01.3	+0.3
GANJ				⇑S	Sn	23 27 28.4	-1.5
GANJ	Ganja	7.93	300	⇑P	Pn	23 26 01.3	+0.3
GANJ				⇑S	Sn	23 27 28.4	-1.5
ZKTA	Zakatala	8.20	307	⇓P	Pn	23 26 05.2	+0.5
	SNR=3.7						
ZKTA				⇓S	Sn	23 27 35.5	-1.1
GDB	GEDABAY	8.36	299	⇓P	Pn	23 26 06.7	-0.2
	SNR=4.0						
GDB				⇓S	Sn	23 27 38.7	-1.9
GDB	GEDABAY	8.36	299	⇓P	Pn	23 26 06.7	-0.2
	SNR=4.0						
GDB				⇓S	Sn	23 27 38.7	-1.9

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*IDC **02** 23:31:31.4±0.3, 14°.39S×75°.91W, h0^{km}, mb5.3/32, mb1 5.4/32, mb1mx5.4/38, mbtmp5.3/32, MS5.2/35, Ms1 5.2/35, ms1mx5.2/38, Error ellipse: s-maj=11.2km s-min=7.6km az=80.0*
*MOS **02** 23:31:35.8±1.1, 14°.39S×75°.75W, h33^{km}, mb5.9/84, MS5.2/37, Error ellipse: s-maj=9.7km s-min=4.8km az=108.1*
*ISCJB **02** 23:31:36.0±0.1, 14°.39S±0°.02×75°.60W±0°.03, h43^{km}, mb5.8/485, MS5.3/185, Error ellipse: s-maj=4.2km s-min=2.3km az=150.7*
*BJI **02** 23:31:36.5, 14°.40S×75°.60W, h35^{km}, mB5.6/60, Ms5.7/65, Ms7 5.5/60*
*GCMT **02** 23:31:37.9±0.1, 14°.53S×76°.02W, h38^{km}, MW5.8/125, Moment Tensor Solution. s117,c228; s125,c303; Duration: 1^{s}9 Moment tensor: Scale 10^{17}Nm; M_{rr}3.82±.05; $M_{\theta\theta}$0.07±.04; $M_{\phi\phi}$-3.89±.05; $M_{r\theta}$0.17±.05; $M_{\theta\phi}$1.69±.03; $M_{\phi r}$-3.76±.08; Best double couple: $M_0$5.63200×10^{17} NP1:ϕ_s172.00000°,δ67.00000°, λ102.00000°. NP2:ϕ_s325.00000°,δ26.00000°,λ65.00000°. Principal axes: T 5.3950, Plg66.0000°, Azm104.0000°; N 0.4730, Plg11.0000°, Azm348.0000°; P -5.8690, Plg21.0000°, Azm254.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*NEIC **02** 23:31:37.9±0.5, 14°.42S×75°.60W, h40^{km}±4^{km}, mb6.0/298, MS5.2/132, MW5.6, MW5.7, ML5.6(ARE) Error ellipse: s-maj=4.6km s-min=2.7km az=65.0, Moment Tensor Solution. s54 Moment tensor: Scale 10^{17}Nm; M_{rr}2.42; $M_{\theta\theta}$0.00; $M_{\phi\phi}$-2.43; $M_{r\theta}$-0.04; $M_{\theta\phi}$0.34; $M_{\phi r}$-2.42; Best double couple: $M_0$3.50000×10^{17} NP1:ϕ_s178.00000°, δ67.00000°, λ95.00000°. NP2:ϕ_s346.00000°,δ23.00000°, λ78.00000°. Principal axes: T 3.4400, Plg67.0000°, Azm97.0000°; N 0.0200, Plg5.0000°, Azm357.0000°; P -3.4600, Plg22.0000°, Azm265.0000°;*
NEIC Felt [IV] at Ica and [II] at Lima.
*NEIC **02** 23:31:37.0±0.0, 14°.64S×75°.97W, h35^{km}, Moment Tensor Solution. s25 Moment tensor: Scale 10^{17}Nm; M_{rr}2.89; $M_{\theta\theta}$-0.96; $M_{\phi\phi}$-1.93; $M_{r\theta}$-0.02; $M_{\theta\phi}$1.30; $M_{\phi r}$-4.03; Best double couple: $M_0$4.90000×10^{17} NP1:ϕ_s172.00000°, δ73.00000°, λ105.00000°. NP2:ϕ_s310.00000°,δ22.00000°, λ50.00000°. Principal axes: T 5.2500, Plg59.0000°, Azm102.0000°; N -0.6800, Plg13.0000°, Azm347.0000°; P -4.5700, Plg26.0000°, Azm250.0000°;*

ISC 02 23:31:37.7±0.2**, 14°.49S**±0°.03×**75°.66W**±0°.04**, h38**^{km}±1^{km}**, h39**^{km}**:pP-P, n1669, σ1^{s}53**/1685**, mb5.9**/477**, MS5.3**/186**, 73C-10D, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	2.74	335	Pn	Pn	23 32 17.9	-1.3
	169nm,0.3s,baz=160,slow=14,SNR=73						
NNA				Lg	Lg	23 32 56.8	
	2µm,0.3s,baz=165,slow=12,SNR=10						
NNA				LR	LR	23 33 08.3	
	comp=Z,14µm,20.6s,baz=166,slow=38						
NNA	Nana	2.74	335	*e*Pn	Pn	23 32 17.3	-1.9
NNA				*e*Sn	Sn	23 32 53.2	+2.1
NNA	Nana	2.74	335	*e*P	Pn	23 32 17.3	-1.9
NNA				*e*		23 32 53.2	
PB12	IPOC Station P	6.55	129	⇑*i*P	Pn	23 33 10.6	-1.0
PB16	IPOC Station P	7.03	124	⇑*i*P	Pn	23 33 20.0	+1.3
I08BO	LAS PENAS INFR	7.16	105	*i*		00 17 10.0	
	baz=282,slow=319,SNR=0.8						
MNMC	Minye Minye	7.42	129	*e*Pn	Pn	23 33 23.1	-0.6
MNMC	Minye Minye	7.42	129	⇑*i*P	Pn	23 33 22.6	-1.0
LPAZ	La Paz	7.48	105	Pn	Pn	23 33 28.9	+4.0
	45nm,0.3s,baz=300,slow=7.8,SNR=942						
LPAZ				Sn	Sn	23 34 57.4	+8.7
	baz=317,slow=8.6,SNR=1.5						
LPAZ				LR	LR	23 36 46.8	
	comp=Z,28µm,21.9s,baz=287,slow=41						
LPAZ	La Paz	7.48	105	*e*Pn	Pn	23 33 28.3	+3.5
LPAZ				Sn	Sn	23 34 57.4	+8.7
LPAZ	La Paz	7.48	105	*e*P	Pn	23 33 28.3	+3.5
LPAZ						23 34 57.4	
LPB	La Paz	7.57	107	*e*P	Pn	23 33 28.3	+2.5
PB08	IPOC Station P	8.38	133	⇑*i*P	Pn	23 33 36.1	-0.9
PB02	IPOC Station P	8.73	142	⇑*i*P	Pn	23 33 41.4	-0.2
PB01	IPOC Station P	8.78	139	*e*Pn	Pn	23 33 41.2	-1.0
PB01	IPOC Station P	8.78	139	⇑*i*P	Pn	23 33 42.1	0.0
PB07	IPOC Station P	9.05	144	⇑*i*P	Pn	23 33 44.5	-1.4
PB03	IPOC Station P	9.38	144	⇑*i*P	Pn	23 33 50.0	-0.5
PB04	IPOC Station P	9.39	147	*e*Pn	Pn	23 33 49.6	-1.0
PB04	IPOC Station P	9.39	147	⇑*i*P	Pn	23 33 49.6	-1.0
PB09	IPOC Station P	9.49	141	⇑*i*P	Pn	23 33 52.4	+0.5
PB05	IPOC Station P	9.79	149	⇑*i*P	Pn	23 33 54.9	-1.3
PB06	IPOC Station P	10.00	146	⇓*i*P	Pn	23 33 58.9	-0.1
PB10	IPOC Station P	10.19	152	⇓*i*P	Pn	23 34 00.7	-0.8
PB15	IPOC Station P	10.46	147	⇑*i*P	Pn	23 34 04.8	-0.6
PB14	IPOC Station P	11.23	155	⇑*i*P	Pn	23 34 15.4	-0.6
GO02	Mina Guanaco	12.05	153	*e*Pn	Pn	23 34 27.2	0.0
SAML	Samuel	13.40	67	*e*Pn	Pn	23 34 43.0	-2.4
SAML	Samuel	13.40	67	*e*P	Pn	23 34 43.0	-2.4
GO03	Copiap	13.98	160	*e*Pn	Pn	23 34 53.9	+0.6
SIV	San Ignacio	14.16	98	Pn	Pn	23 34 54.0	-1.7
	8.6nm,0.3s,baz=282,slow=13,SNR=100						
SIV				Sn	Sn	23 37 40.7	+9.1
	1.8nm,0.3s,baz=294,slow=15,SNR=3.5						
OTAV	Otavalo	14.89	349	*e*Pn	Pn	23 35 08.0	+1.9
OTAV	Otavalo	14.89	349	*e*P	P	23 35 10.0	-1.3
OTAV	Otavalo	14.89	349	*e*P	Pn	23 35 08.0	+1.9
OTAV	Otavalo	14.89	349	*e*P	Pn	23 35 08.0	+1.9
LCO	Las Campanas	15.16	163	*e*Pn	Pn	23 35 10.5	+1.1
	487nm,1.4s						
LCO	Las Campanas	15.16	163	*e*P	Pn	23 35 10.5	+1.1
LCO				pmax	pmax		
	comp=Z,487nm,1.4s						
CMBC	Cumbal	15.48	352	*e*P	P	23 35 18.8	+1.0
CPAS2	Pasto	15.69	354	*e*P	P	23 35 19.4	-0.6
GCUF	Volcan Galeras	15.70	354	*e*P	P	23 35 20.0	-0.3
FLOC	Florencia	15.97	0	*e*P	Pn	23 35 19.4	-0.3
CRUC	La Cruz	16.01	355	*e*P	Pn	23 35 21.1	+0.7
GO04	Tololo Observa	16.24	165	*e*Pn	Pn	23 35 23.5	+0.3
	comp=Z,569nm,0.9s						
TUMC	Tumaco	16.49	349	*e*P	P	23 35 28.8	+0.2
SOTA	Rioblanco	16.55	357	*e*P	P	23 35 28.8	-0.9
PCON	Cinco Dias	16.73	357	*e*P	Pn	23 35 29.9	+0.2
POPC	Popayan, Colom	16.95	357	*e*P	Pn	23 35 32.9	+0.6
BETC	Betania	17.06	1	*e*P	P	23 35 34.8	-0.2
MARP	Paez Belalcaza	17.22	359	*e*P	Pn	23 35 35.8	+0.1
GRGC	Isla de Gorgon	17.56	352	*e*P	Pn	23 35 39.3	-0.3
SJAC	San Juan de Ar	17.73	6	*e*P	P	23 35 42.8	+0.5
HORQ	Saladito	17.88	357	*e*P	Pn	23 35 42.9	-1.0
PRAC	Prado	18.10	2	*e*Pn	P	23 35 46.7	+0.3
	comp=Z,474nm,1.2s						
PRAC	Prado	18.10	2	*e*P	Pn	23 35 45.2	-1.1
YOTC	Yotoco, Valle	18.37	358	*e*P	P	23 35 48.1	-1.3
MALC	Bahia Malaga	18.46	355	*e*P	P	23 35 41.7	-8.6
VILC	Villavicencio,	18.58	6	*e*P	Pn	23 35 54.0	+1.7
ROC1	El Roble	18.88	168	*e*P	Pn	23 35 55.9	-0.1
	comp=Z,375nm,1.5s						
TOLC	Tolima	18.95	1	*e*P	Pn	23 35 57.5	+0.6
CHIC	Chingaza	19.09	6	*e*P	Pn	23 35 59.3	+0.6
PEL	Peldehue	19.11	167	*e*P	Pn	23 35 58.4	-0.1
	comp=Z,1µm,1.2s						
PEL	Peldehue	19.11	167	*e*P	Pn	23 35 58.4	-0.1
PEL				pmax	pmax		
	comp=Z,1µm,1.2s						
ROSC	El Rosal	19.25	4	P	Pn	23 36 01.9	+1.4
	comp=Z,6.0nm,0.3s,baz=179,slow=6.0,SNR=23						
ROSC				S	S	23 39 49.2	+13
	baz=185,slow=22,SNR=1.7						
ROSC	El Rosal	19.25	4	*e*P	Pn	23 36 03.2	+2.6
	comp=Z,437nm,1.3s						
ROSC				S	S	23 39 49.2	+13
ROSC	El Rosal	19.25	4	*e*P	Pn	23 36 01.6	+1.1
ROSC	El Rosal	19.25	4	*e*P	Pn	23 36 03.2	+2.6
PLMC	San Josˆ' del	19.28	358	*e*P	Pn	23 35 59.9	-0.7
GUYC	Guyana, Colomb	19.59	1	*e*P	Pn	23 36 05.8	+1.1
NORC	Norcasia	19.94	2	*e*P	Pn	23 36 08.2	-0.2
PAYG	Puerto Ayora	19.94	312	*e*P	Pn	23 36 09.7	+1.3
	comp=Z,429nm,1.2s						
YOPC	Yopal, Colombi	19.98	9	*e*P	Pn	23 36 08.1	-0.8
RUSC	La Rusia	20.41	7	*e*P	Pn	23 36 14.1	-0.3
	comp=Z,1µm,1.5s						
RUSC	La Rusia	20.41	7	*e*P	Pn	23 36 14.0	-0.4
HELC	Santa Helena	20.55	0	*e*P	P	23 36 13.6	+0.1
	comp=Z,983nm,1.2s						
HELC	Santa Helena	20.55	0	*e*P	P	23 36 13.4	-0.1
SOLC	Bahia Solano	20.66	355	*e*P	P	23 36 14.0	-0.3
PTGA	Pitinga	20.68	50	P	P	23 36 15.3	+0.7
	comp=Z,294nm,0.7s,baz=228,slow=12,SNR=526						
PTGA				S	S	23 40 05.6	+1.9
	comp=Z,83nm,1.1s,baz=128,slow=16,SNR=2.6						
PTGA				Lg	Lg	23 42 25.7	
	comp=Z,127nm,1.1s,baz=148,slow=23,SNR=1.9						
PTGA				LR	LR	23 45 30.6	
	comp=Z,5µm,19.2s,baz=232,slow=40						
PTGA	Pitinga	20.68	50	*e*P	P	23 36 15.0	+0.4
	comp=Z,2µm,1.6s						
PTGA				S	S	23 40 05.6	+1.9
PTGA				LR	LR		
	comp=Z,10µm,19.0s						
GO05	HualaæØ	20.71	171	*e*P	P	23 36 15.7	+1.0
	comp=Z,555nm,1.7s						
CPUP	Villa Florida	20.80	127	P	P	23 36 16.5	+0.7
	comp=Z,170nm,1.1s,baz=308,slow=11,SNR=125						
CPUP				S	Sn	23 40 17.6	+5.2
	comp=Z,12nm,1.0s,baz=97,slow=3.7,SNR=2.5						
CPUP				LR	LR	23 45 51.5	
	comp=Z,9µm,18.5s,baz=303,slow=41						
CPUP	Villa Florida	20.80	127	*e*P	P	23 36 16.6	+0.8
	comp=Z,570nm,1.4s						
CPUP				S	Sn	23 40 17.6	+5.2
PTBC	PUERTO BERRIO,	20.93	3	*e*P	P	23 36 15.7	-1.5
BARC	Barichara	21.09	7	*e*P	P	23 36 20.0	+0.8
TAMC	Tame, Arauca	21.14	11	*e*P	P	23 36 19.8	+0.3
BRRC	Barranca, Sant	21.54	5	*e*P	P	23 36 22.8	-1.0
ZARC	Zaragoza, Cauc	21.86	2	*e*P	P	23 36 26.9	-0.3
PAMC	Pamplona, Colo	21.89	8	*e*P	P	23 36 26.9	-1.1
UREC	San Josˆ' de U	22.10	0	*e*P	P	23 36 29.6	-0.2
AZU	Azuero	22.61	348	*e*P	P	23 36 35.3	+0.1
CAPC	Capurgana	23.04	356	*e*P	P	23 36 39.8	+0.1
MOTC	Monteria, Cord	23.12	360	*e*P	P	23 36 40.4	-0.1
UPA	Univ. de Panam	23.63	350	*e*P	P	23 36 46.4	+0.9
ZANG	Zanguenga, Cho	23.66	350	*e*P	P	23 36 46.9	+1.0
SDV	Santo Domingo	23.75	12	P	P	23 36 47.1	+0.2
	comp=Z,183nm,1.0s,baz=197,slow=7.9,SNR=89						
SDV				S	S	23 41 08.1	+8.1
	comp=Z,20nm,0.8s,baz=31,slow=22,SNR=1.4						
SDV				Lg	Lg	23 44 12.3	
	comp=Z,84nm,1.0s,baz=260,slow=12,SNR=2.7						
SDV				LR	LR	23 47 04.5	
	comp=Z,15µm,19.5s,baz=193,slow=39						
SDV	Santo Domingo	23.75	12	*e*P	P	23 36 47.1	+0.2
	comp=Z,1µm,1.4s						
SDV				S	S	23 41 08.1	+8.1
SDV				LR	LR		
	comp=Z,6µm,21.0s						
SDV	Santo Domingo	23.75	12	*e*P	P	23 36 47.1	+0.2
BCIP	Isla Barro Col	23.87	350	*e*P	P	23 36 49.3	+1.6
	comp=Z,212nm,1.0s						
BCIP				LR	LR		
	comp=Z,6µm,21.0s						
BCIP	Isla Barro Col	23.87	350	*e*P	P	23 36 48.6	+0.9
FRIJ	El Hiral	23.90	350	*e*P	P	23 36 48.9	+0.8
TBS2		24.15	343	*e*P	P	23 36 51.6	+1.1
SJCC	San Jacinto, C	24.23	1	*e*P	P	23 36 51.5	+0.4
SJCC	San Jacinto, C	24.23	1	⇑*e*P	P	23 36 49.5	-1.7
CODC	Agustˆ›n Codaz	24.37	5	*e*P	P	23 36 51.1	-1.2
EDPN	Palmar Norte	24.55	341	*e*P	P	23 36 56.7	+2.7
DRK0	Durika	24.77	342	⇑*i*P	P	23 36 57.2	+1.0
EDDO	Dominical	24.95	340	*e*P	P	23 36 58.9	+1.3
BUS	Buena Vista	25.20	341	*e*P	P	23 37 02.7	+2.2
QCR1	Quepos	25.21	340	*e*P	P	23 37 01.6	+1.5
LCR2	La Lucha 2	25.46	341	*e*P	P	23 37 04.0	+1.5
URSC	Urasca	25.47	341	*e*P	P	23 37 04.7	+2.1
CVTR	Volcan Turrial	25.64	341	*e*P	P	23 37 05.3	+0.9
HDC	Heredia	25.74	341	*e*P	P	23 37 07.8	+2.9
	comp=Z,819nm,1.1s						
HDC	Heredia	25.74	341	*e*P	P	23 37 06.4	+1.5
LPA	La Plata	25.86	145	*ce*P	P	23 37 06.0	+0.3
LPA				sP	sP	23 37 23.0	+2.1
LPA				PPS	PPS	23 41 48.0	
LPA				SCS		23 48 04.0	
CGA2	Cerro Gallo 2	25.87	340	*e*P	P	23 37 08.7	+2.5
SRA1	San Ramˆ‡n	25.93	340	*e*P	P	23 37 08.1	+1.4
JTS	JuntasAbangare	26.29	339	*e*P	P	23 37 11.8	+2.0
	comp=Z,541nm,1.5s						
JTS				LR	LR		
	comp=Z,8µm,22.0s						
TRQA	Tornquist	26.42	155	*e*P	P	23 37 10.1	-0.8
	comp=Z,248nm,1.5s						
TRQA				LR	LR		
	comp=Z,4µm,20.0s						
TRQA	Tornquist	26.42	155	*e*P	P	23 37 10.1	-0.8
TRQA				pmax	pmax		
	comp=Z,248nm,1.5s						
TRQA				MLR	MLR		
	comp=Z,4µm,20.0s						
PLCA	Paso Flores	26.52	171	P	P	23 37 11.5	-0.3
	comp=Z,46nm,1.0s,baz=7.6,slow=9.5,SNR=36						
PLCA				PcP	PcP	23 40 36.6	+0.7
	comp=Z,15nm,1.0s,baz=356,slow=5.9,SNR=2.9						
PLCA				LR	LR	23 45 32.5	
	comp=Z,4µm,20.5s,baz=8.5,slow=32						
PLCA	Paso Flores	26.52	171	*e*P	P	23 37 11.7	-0.1
	comp=Z,220nm,1.4s						
PLCA				PcP	PcP	23 40 36.6	+0.7
CUI	Cuipilapa	26.70	339	*e*P	P	23 37 14.4	+0.9
MESS	Mesas	26.79	339	*e*P	P	23 37 16.1	+1.7
PCRV	Puerto La Cruz	26.83	25	P	P	23 37 15.6	+0.8
	comp=Z,44nm,0.8s,baz=196,slow=4.9,SNR=24						
PCRV				S	S	23 41 50.9	+2.1
	comp=Z,28nm,1.3s,baz=140,slow=12,SNR=1.4						
PCRV				Lg	Lg	23 45 45.6	
	comp=Z,68nm,1.1s,baz=177,slow=23,SNR=3.7						
PCRV				LR	LR	23 48 34.5	
	comp=Z,15µm,19.4s,baz=200,slow=38						
SPB	Sao Paulo	28.13	113	*e*P	P	23 37 25.7	-0.6
	comp=Z,564nm,1.5s						
PRVC	Isla de Provid	28.26	348	*e*P	P	23 37 23.8	-3.6
RCON	San Juan de Ri	29.67	339	*e*P	P	23 37 39.9	-0.3
GRGR	Grenville	29.87	28	*e*P	P	23 37 41.5	-0.3

	comp=Z,2µm,2.0s						
GRGR				LR	LR		
	comp=Z,5µm,19.0s						
GRGR	**Grenville**	**29.87**	**28**	*e*P	P	23 37 34.9	-6.8
TGUH	**Tegucigalpa,Un**	**30.60**	**337**	*e*P	**P**	**23 37 49.6**	**+1.4**
	comp=Z,506nm,1.2s						
SVCV	**St. Vincent, C**	**31.10**	**28**	*e*P	**P**	**23 37 56.4**	**+3.7**
SSV	**Crater Summit**	**31.13**	**28**	*e*P	P	23 37 45.7	-7.3
MCLT	**Moule a Chique**	**31.58**	**28**	*e*P	P	23 37 50.4	-6.5
BBGH	**Gun Hill**	**31.75**	**31**	PFAKE		23 38 10.0	+12
BBGH				LR	LR		
	comp=Z,9µm,21.0s						
FDF	**Fort de France**	**32.39**	**27**	*e*P	**P**	**23 38 01.3**	**-2.7**
	comp=Z,379nm,1.4s						
FDF	**Fort de France**	**32.39**	**27**	*e*P	**P**	**23 37 59.9**	**-4.1**
FDF	**Fort de France**	**32.39**	**27**	*e*P	**P**	**23 38 01.3**	**-2.7**
FDF				pmax	pmax		
	comp=Z,379nm,1.4s						
MTDJ	**Mount Denham**	**32.56**	**357**	*e*P	**P**	**23 38 05.7**	**+0.2**
	comp=Z,503nm,1.4s						
MTDJ				LR	LR		
	comp=Z,2µm,22.0s						
LGNH	**LØogne**	**32.93**	**5**	*e*P	**P**	**23 38 07.0**	**-1.6**
	comp=Z,378nm,1.3s						
BBL	**Barber's Block**	**32.96**	**26**	*e*P	**P**	**23 38 06.0**	**-3.0**
SDD	**Santo Domingo**	**33.23**	**10**	*e*P	**P**	**23 38 10.6**	**-0.6**
	comp=Z,1µm,1.4s						
CRPR	**Cabo Rojo, PR**	**33.37**	**15**	*e*P	**P**	**23 38 12.7**	**+0.2**
	comp=Z,673nm,1.3s						
ICMP	**Isla Caja de M**	**33.41**	**16**	*e*P	**P**	**23 38 13.1**	**+0.3**
OBIP	**Obispado Ponce**	**33.54**	**16**	*e*P	**P**	**23 38 13.6**	**-0.3**
	comp=Z,523nm,1.4s						
SDDR	**Presa de Saban**	**33.54**	**8**	*e*P	**P**	**23 38 14.6**	**+0.6**
	comp=Z,97nm,1.1s						
SDDR				LR	LR		
	comp=Z,7µm,22.0s						
MPR	**Mayaguez**	**33.56**	**15**	*e*P	**P**	**23 38 14.4**	**+0.3**
	comp=Z,452nm,1.2s						
SJG	**San Juan**	**33.73**	**16**	P	**P**	**23 38 14.5**	**-1.1**
	comp=Z,85nm,0.9s,baz=220,slow=7.9,SNR=18						
SJG				S	**S**	**23 43 36.2**	**-0.3**
	comp=Z,3.4nm,0.5s,baz=105,slow=20,SNR=1.9						
SJG				LR	LR	23 52 53.8	
	comp=Z,5µm,21.2s,baz=196,slow=38						
SJG	**San Juan**	**33.73**	**16**	*e*P	**P**	**23 38 14.8**	**-0.7**
	comp=Z,363nm,1.3s						
SJG				S	**S**	**23 43 36.2**	**-0.3**
SJG				LR	LR		
	comp=Z,6µm,21.0s						
MLYT	**Lee's Yard**	**33.74**	**24**	*e*P	**P**	**23 38 13.0**	**-2.8**
RPN	**Rapa Nui**	**33.78**	**243**	LR	LR	23 48 57.7	
	comp=Z,5µm,18.4s,baz=74,slow=31						
AOPR	**Arecibo Observ**	**33.79**	**15**	*e*P	**P**	**23 38 15.4**	**-0.8**
	comp=Z,582nm,1.4s						
CDVI	**St. Croix**	**33.79**	**19**	*e*P	**P**	**23 38 15.6**	**-0.5**
	comp=Z,218nm,1.1s						
HUMP	**Col San Antoni**	**33.84**	**17**	*e*P	**P**	**23 38 15.0**	**-1.5**
	comp=Z,322nm,1.7s						
MTP	**Monte Pirata**	**33.88**	**17**	*e*P	**P**	**23 38 15.5**	**-1.4**
	comp=Z,138nm,1.1s						
CBYP	**Canovanas**	**33.96**	**17**	*e*P	**P**	**23 38 16.7**	**-1.0**
	comp=Z,213nm,1.1s						
FSCY	**Frank Sound, G**	**34.03**	**351**	*e*P	**P**	**23 38 20.0**	**+1.8**
FSCY				*e*pP	**pP**	**23 38 29.2**	**+0.2**
SEUS	**St. Eustatius**	**34.15**	**22**	*e*P	P	23 38 26.2	+6.9
BPA	**Boggy Peak**	**34.17**	**24**	*e*P	**P**	**23 38 17.6**	**-1.9**
SABA	**Saba**	**34.18**	**21**	*e*P	P	23 38 11.8	-7.7
GTBY	**Guantanamo Bay**	**34.20**	**1**	*e*P	**P**	**23 38 19.2**	**-0.5**
	comp=Z,206nm,1.2s						
GTBY				LR	LR		
	comp=Z,3µm,20.0s						
CBCY	**The Bluff, Cay**	**34.25**	**353**	*e*P	**P**	**23 38 22.0**	**+1.9**
	comp=Z,621nm,1.4s						
STVI	**Saint Thomas**	**34.30**	**18**	*e*P	**P**	**23 38 18.4**	**-2.1**
	comp=Z,246nm,1.7s						
SMRT	**St. Maarten**	**34.63**	**21**	*e*P	**P**	**23 38 22.1**	**-1.4**
	comp=Z,463nm,1.3s						
SMRT	**St. Maarten**	**34.63**	**21**	*e*P	**P**	**23 38 19.7**	**-3.8**
CCIG	**Comitan**	**34.64**	**331**	*e*P	**P**	**23 38 24.5**	**+0.8**
	comp=Z,262nm,1.9s						
ANWB	**Willy Bob**	**34.76**	**24**	*e*P	**P**	**23 38 21.9**	**-2.7**
	comp=Z,4µm,1.8s						
ANWB				LR	LR		
	comp=Z,5µm,19.0s						
ANWB	**Willy Bob**	**34.76**	**24**	*e*P	**P**	**23 38 21.0**	**-3.6**
GRTK	**Grand Turk**	**36.05**	**7**	P	**P**	**23 38 34.6**	**-1.0**
	comp=Z,235nm,1.2s						
GRTK				LR	LR		
	comp=Z,7µm,22.0s						
CMIG	**Matias Romero**	**36.67**	**328**	P	**P**	**23 38 40.9**	**0.0**
	comp=Z,11nm,0.8s,baz=151,slow=4.5,SNR=11						
CMIG				S	**S**	**23 44 22.7**	**+0.8**
	comp=Z,0.9nm,0.3s,baz=92,slow=22,SNR=3.3						
062Z	**Marathon**	**39.33**	**352**	P	**P**	**23 39 03.0**	**-0.3**
	baz=172						
LVIG	**Laguna Verde**	**39.66**	**328**	*e*P	**P**	**23 39 06.7**	**+0.6**
	comp=Z,97nm,1.5s						
EFI	**East Falkland**	**39.70**	**163**	PFAKE		23 39 20.0	+14
EFI				LR	LR		
	comp=Z,6µm,20.0s						
EFI	**East Falkland**	**39.70**	**163**	*i* P	**P**	**23 39 06.1**	**0.0**
EFI				pmax	pmax		
	comp=Z,32nm,1.4s						
RCBR	**Riachuelo**	**40.02**	**82**	*e*P	**P**	**23 39 09.9**	**+0.6**
	comp=Z,384nm,1.6s						
RCBR				LR	LR		
	comp=Z,33µm,22.0s						
RCBR	**Riachuelo**	**40.02**	**82**	*e*P	**P**	**23 39 09.9**	**+0.6**
RCBR				pmax	pmax		
	comp=Z,384nm,1.6s						
RCBR				MLR	MLR		
	comp=Z,33µm,22.0s						
061Z	**Ochoppi**	**40.44**	**353**	P	**P**	**23 39 12.1**	**-0.4**
	baz=172						
060Z	**West Palm Beac**	**40.93**	**353**	P	**P**	**23 39 16.3**	**-0.2**
	baz=173						
059Z	**Ave Maria**	**40.97**	**352**	P	**P**	**23 39 16.2**	**-0.7**
	baz=171						
060A	**Indiantown**	**41.53**	**354**	P	**P**	**23 39 21.1**	**-0.3**
	baz=173						
060A	**Indiantown**	**41.53**	**354**	*e*P	**P**	**23 39 20.9**	**-0.5**
	comp=Z,470nm,1.4s						
059A	**Moore Haven**	**41.55**	**353**	P	**P**	**23 39 21.1**	**-0.5**
	baz=172						
059A	**Moore Haven**	**41.55**	**353**	*e*P	**P**	**23 39 21.5**	**-0.1**
	comp=Z,174nm,1.3s						
058A	**Arcadia**	**41.73**	**352**	P	**P**	**23 39 22.4**	**-0.6**
	baz=171						
959A	**Okeechobee**	**42.07**	**353**	P	**P**	**23 39 25.5**	**-0.4**
	baz=172						
MOIG	**Morelia**	**42.24**	**323**	*e*P	**P**	**23 39 28.1**	**+0.5**
	comp=Z,492nm,1.8s						
958A	**Wauchula**	**42.24**	**352**	P	**P**	**23 39 26.2**	**-1.1**
	baz=171						
957A	**Wimauma**	**42.39**	**351**	P	**P**	**23 39 27.8**	**-0.7**
	baz=170						
957A	**Wimauma**	**42.39**	**351**	*e*P	**P**	**23 39 28.3**	**-0.2**
	comp=Z,344nm,1.3s						
859A	**Kempfer Cattle**	**42.60**	**353**	P	**P**	**23 39 29.5**	**-0.7**
	baz=172						
DWPF	**Disney Wildern**	**42.72**	**352**	P	**P**	**23 39 30.3**	**-0.8**
	baz=172						
DWPF	**Disney Wildern**	**42.72**	**352**	*e*P	**P**	**23 39 28.3**	**-2.8**
	comp=Z,172nm,1.4s						
858A	**St. Cloud**	**42.81**	**353**	P	**P**	**23 39 31.0**	**-0.8**
	baz=172						
857A	**Zephyrhills**	**42.98**	**351**	P	**P**	**23 39 32.1**	**-1.1**
	baz=171						
758A	**Lake Helen**	**43.53**	**353**	P	**P**	**23 39 36.9**	**-0.8**
	baz=172						
757A	**Oxford**	**43.62**	**352**	P	**P**	**23 39 37.7**	**-0.7**
	baz=171						
658A	**Bunnell**	**43.99**	**353**	P	**P**	**23 39 40.5**	**-0.9**
	baz=172						
656A	**Willston**	**44.10**	**351**	P	**P**	**23 39 41.4**	**-0.9**
	baz=170,SNR=5.6						
656A	**Willston**	**44.10**	**351**	*e*P	**P**	**23 39 42.0**	**-0.3**
	comp=Z,284nm,1.3s						
657A	**Interlachen**	**44.23**	**352**	P	**P**	**23 39 42.4**	**-0.8**
	baz=171						
655A	**Horseshoe Beac**	**44.35**	**351**	P	**P**	**23 39 43.3**	**-0.9**
	baz=169						
557A	**Orange Park**	**44.63**	**353**	P	**P**	**23 39 45.5**	**-1.0**
	baz=172						
556A	**Lake Butler**	**44.71**	**352**	P	**P**	**23 39 46.2**	**-0.9**
	baz=171,SNR=6.7						
555A	**McAlpin**	**44.91**	**351**	P	**P**	**23 39 47.6**	**-1.1**
	baz=170						
554A	**Perry**	**44.98**	**350**	P	**P**	**23 39 48.3**	**-1.0**
	baz=169,SNR=7.3						
457A	**Yulee**	**45.21**	**353**	P	**P**	**23 39 50.3**	**-0.7**
	baz=172						
553A	**Crawfordville**	**45.22**	**349**	P	**P**	**23 39 50.7**	**-0.5**
	baz=168,SNR=5.9						
552A	**Lynn Haven**	**45.32**	**348**	P	**P**	**23 39 51.6**	**-0.4**
	baz=167						
456A	**Hilliard**	**45.37**	**352**	P	**P**	**23 39 51.9**	**-0.4**
	baz=171						
456A	**Hilliard**	**45.37**	**352**	*e*P	**P**	**23 39 52.4**	**+0.1**
	comp=Z,272nm,1.3s						
ZAIG	**Zacatecas**	**45.45**	**324**	*e*P	**P**	**23 39 55.1**	**+1.6**
	comp=Z,267nm,1.7s						
LNIG	**Linares**	**45.52**	**329**	*e*P	**P**	**23 39 53.2**	**-0.4**
	comp=Z,112nm,1.3s						
454A	**Quitman**	**45.59**	**350**	P	**P**	**23 39 53.1**	**-1.0**
	baz=169						
453A	**Whigham**	**45.84**	**350**	P	**P**	**23 39 55.1**	**-1.0**
	baz=168,SNR=7.2						
453A				S	**S**	**23 46 36.1**	**-1.6**
	baz=168						
453A	**Whigham**	**45.84**	**350**	*e*P	**P**	**23 39 55.4**	**-0.7**
	comp=Z,422nm,1.3s						
451A	**Vernon**	**45.88**	**348**	P	**P**	**23 39 55.9**	**-0.5**
	baz=166,SNR=5.4						
451A	**Vernon**	**45.88**	**348**	*e*P	**P**	**23 39 56.4**	**-0.1**
	comp=Z,630nm,1.4s						
356A	**Blackshear**	**45.97**	**352**	P	**P**	**23 39 56.3**	**-0.8**
	baz=171						
357A	**Townsend**	**45.99**	**353**	P	**P**	**23 39 56.3**	**-0.9**
	baz=172						
452A	**Marianna**	**46.00**	**349**	P	**P**	**23 39 56.5**	**-0.8**
	baz=167,SNR=7.9						
645A	**Chauvin**	**46.01**	**342**	P	**P**	**23 39 58.7**	**+1.2**
	baz=160						
355A	**Pearson**	**46.09**	**351**	P	**P**	**23 39 57.0**	**-1.1**
	baz=170						
450A	**Crestview**	**46.24**	**347**	P	**P**	**23 39 58.1**	**-1.1**
	baz=165						
TIGA	**Tifton**	**46.30**	**351**	P	**P**	**23 39 58.6**	**-1.1**
	baz=169						
353A	**Camilla**	**46.31**	**350**	P	**P**	**23 39 58.6**	**-1.1**
	baz=168,SNR=6.0						
449A	**Pace**	**46.34**	**346**	P	**P**	**23 39 59.0**	**-1.0**
	baz=164						
546A	**Slidell**	**46.48**	**343**	P	**P**	**23 40 01.7**	**+0.5**
	baz=161						
257A	**Skidaway Islan**	**46.48**	**354**	P	**P**	**23 40 00.7**	**-0.5**
	baz=173						
257A	**Skidaway Islan**	**46.48**	**354**	*e*P	**P**	**23 40 01.0**	**-0.1**
	comp=Z,319nm,1.4s						
351A	**Pinckard**	**46.49**	**348**	P	**P**	**23 40 00.2**	**-1.0**
	baz=167,SNR=6.9						
545A	**Edgard**	**46.53**	**342**	P	**P**	**23 40 02.4**	**+0.9**
	baz=160						
352A	**Blakely**	**46.56**	**349**	P	**P**	**23 40 00.8**	**-1.0**
	baz=168,SNR=6.8						
352A	**Blakely**	**46.56**	**349**	*e*P	**P**	**23 40 01.3**	**-0.5**
	comp=Z,295nm,1.3s						
256A	**Glennville**	**46.59**	**353**	P	**P**	**23 40 01.0**	**-1.0**
	baz=172,SNR=5.5						
255A	**Hazlehurst**	**46.61**	**352**	P	**P**	**23 40 01.1**	**-1.1**
	baz=171,SNR=7.3						
255A	**Hazlehurst**	**46.61**	**352**	*e*P	**P**	**23 40 01.4**	**-0.7**
	comp=Z,409nm,1.4s						
448A	**Bay Minette**	**46.66**	**346**	P	**P**	**23 40 01.7**	**-0.8**
	baz=164						
BRAL	**Brewton**	**46.70**	**347**	P	**P**	**23 40 02.3**	**-0.5**
	baz=165						
BRAL	**Brewton**	**46.70**	**347**	*e*P	**P**	**23 40 02.7**	**-0.1**
	comp=Z,477nm,1.3s						
BRAL				LR	LR		
	comp=Z,2µm,20.0s						
447A	**Lucedale**	**46.73**	**345**	P	**P**	**23 40 02.2**	**-0.8**
	baz=163						
447A	**Lucedale**	**46.73**	**345**	*e*P	**P**	**23 40 04.5**	**+1.5**
	comp=Z,360nm,1.4s						
254A	**Abbeville**	**46.75**	**351**	P	**P**	**23 40 02.2**	**-1.0**
	baz=170,SNR=14						
350A	**Dozier**	**46.78**	**347**	P	**P**	**23 40 02.7**	**-0.8**
	baz=166,SNR=5.5						
544A	**White Castle**	**46.79**	**341**	P	**P**	**23 40 04.9**	**+1.3**
	baz=159						
349A	**Repton**	**46.90**	**346**	P	**P**	**23 40 04.0**	**-0.5**
	baz=165,SNR=13						
446A	**Poplarville**	**46.91**	**344**	P	**P**	**23 40 04.8**	**+0.3**
	baz=162,SNR=6.2						
253A	**Americus**	**46.99**	**350**	P	**P**	**23 40 04.0**	**-1.1**
	baz=169,SNR=6.6						
253A	**Americus**	**46.99**	**350**	*e*P	**P**	**23 40 04.5**	**-0.6**
	comp=Z,452nm,1.4s						
KVTX	**Kingsville**	**47.02**	**333**	*e*P	**P**	**23 40 07.4**	**+1.9**
	comp=Z,604nm,1.4s						
KVTX				LR	LR		
	comp=Z,942nm,19.0s						
252A	**Lumpkin**	**47.03**	**349**	P	**P**	**23 40 04.1**	**-1.3**
	baz=168,SNR=11						
445A	**Amite**	**47.12**	**343**	P	**P**	**23 40 06.7**	**+0.5**
	baz=160,SNR=8.1						
348A	**Jackson**	**47.13**	**346**	P	**P**	**23 40 05.3**	**-0.9**
	baz=164						
348A	**Jackson**	**47.13**	**346**	*e*P	**P**	**23 40 06.3**	**+0.1**
	comp=Z,346nm,1.3s						
156A	**Sylvania**	**47.21**	**353**	P	**P**	**23 40 06.5**	**-0.3**
	baz=172,SNR=5.9						
444A	**Pine Grove**	**47.23**	**342**	P	**P**	**23 40 07.7**	**+0.7**
	baz=160,SNR=5.5						
542A	**Morse**	**47.25**	**340**	P	**P**	**23 40 08.5**	**+1.3**
	baz=158						
251A	**Midway**	**47.25**	**349**	P	**P**	**23 40 05.9**	**-1.2**
	baz=167,SNR=22						
347A	**Saraland**	**47.28**	**345**	P	**P**	**23 40 06.9**	**-0.5**
	baz=163						
155A	**Kite**	**47.30**	**352**	P	**P**	**23 40 06.6**	**-0.8**
	baz=171,SNR=16						
250A	**Grady**	**47.31**	**348**	P	**P**	**23 40 06.4**	**-1.2**
	baz=166,SNR=6.6						
250A	**Grady**	**47.31**	**348**	*e*P	**P**	**23 40 07.2**	**-0.3**
	comp=Z,708nm,1.5s						
154A	**Montrose**	**47.38**	**351**	P	**P**	**23 40 07.3**	**-0.8**
	baz=170,SNR=9.9						
154A	**Montrose**	**47.38**	**351**	*e*P	**P**	**23 40 07.6**	**-0.5**
	comp=Z,638nm,1.2s						
CSU	**Charleston Sou**	**47.40**	**355**	*e*P	**P**	**23 40 08.6**	**+0.4**
541A	**Lake Charles**	**47.40**	**339**	P	**P**	**23 40 09.6**	**+1.2**
	baz=157						
541A	**Lake Charles**	**47.40**	**339**	*e*P	**P**	**23 40 09.0**	**+0.7**
	comp=Z,550nm,1.4s						
249A	**Camden**	**47.49**	**347**	P	**P**	**23 40 08.3**	**-0.7**
	baz=165,SNR=20						
346A	**Big Creek Wild**	**47.50**	**344**	P	**P**	**23 40 08.8**	**-0.4**
	baz=162,SNR=5.7						
346A	**Big Creek Wild**	**47.50**	**344**	*e*P	**P**	**23 40 08.7**	**-0.4**
	comp=Z,405nm,1.3s						
153A	**Fort Valley**	**47.52**	**351**	P	**P**	**23 40 08.3**	**-1.0**
	baz=169						
NHSC	**New Hope**	**47.52**	**355**	P	**P**	**23 40 08.6**	**-0.6**
	baz=174,SNR=7.4						
NHSC	**New Hope**	**47.52**	**355**	*e*P	**P**	**23 40 09.5**	**+0.3**
	comp=Z,433nm,1.2s						
NHSC				LR	LR		
	comp=Z,2µm,21.0s						
345A	**Thompson Farm,**	**47.58**	**343**	P	**P**	**23 40 09.7**	**0.0**
	baz=161						
443A	**Delano Plantat**	**47.59**	**341**	P	**P**	**23 40 10.5**	**+0.7**
	baz=159						
151A	**Opelika**	**47.66**	**349**	P	**P**	**23 40 09.0**	**-1.3**
	baz=167,SNR=8.9						
152A	**Waverly Hall**	**47.69**	**350**	P	**P**	**23 40 09.0**	**-1.6**
	baz=168,SNR=12						
152A	**Waverly Hall**	**47.69**	**350**	*e*P	**P**	**23 40 09.2**	**-1.3**
	comp=Z,247nm,1.4s						
248A	**Dixon Mills**	**47.74**	**346**	P	**P**	**23 40 10.1**	**-0.8**
	baz=164,SNR=9.0						
442A	**Mamou**	**47.75**	**340**	P	**P**	**23 40 12.0**	**+1.0**
	baz=158						
BBSR	**BB Station**	**47.76**	**13**	*e*P	**P**	**23 40 11.3**	**+0.2**
	comp=Z,312nm,1.4s						
BBSR				LR	LR		
	comp=Z,2µm,19.0s						
Z55A	**Blythe**	**47.84**	**353**	P	**P**	**23 40 10.9**	**-0.8**
	baz=172						
150A	**Eclectic**	**47.87**	**348**	P	**P**	**23 40 10.9**	**-1.0**
	baz=166,SNR=19						
247A	**Quitman**	**47.91**	**345**	P	**P**	**23 40 11.5**	**-0.8**
	baz=163,SNR=8.0						
344A	**Westbrook Farm**	**47.92**	**343**	P	**P**	**23 40 12.1**	**-0.2**
	baz=160,SNR=7.2						
344A	**Westbrook Farm**	**47.92**	**343**	*e*P	**P**	**23 40 12.9**	**+0.6**
	comp=Z,426nm,1.3s						
Z54A	**Sparta**	**47.95**	**352**	P	**P**	**23 40 11.4**	**-1.2**
	baz=171,SNR=22						
246A	**Jackson Lee, B**	**48.01**	**345**	P	**P**	**23 40 11.9**	**-1.1**
	baz=162						
149A	**Jones**	**48.02**	**347**	P	**P**	**23 40 11.5**	**-1.5**
	baz=165,SNR=11						
343A	**Vidalia**	**48.02**	**342**	P	**P**	**23 40 13.1**	**0.0**
	baz=159						
441A	**DeRidder**	**48.04**	**340**	P	**P**	**23 40 13.5**	**+0.2**
	baz=157						
Z53A	**Monticello**	**48.10**	**351**	P	**P**	**23 40 12.2**	**-1.5**
	baz=170,SNR=20						
Z52A	**Williamson**	**48.14**	**350**	P	**P**	**23 40 12.9**	**-1.2**
	baz=168,SNR=23						
GOGA	**Godfrey**	**48.21**	**351**	P	**P**	**23 40 13.4**	**-1.2**
	baz=170,SNR=15						
GOGA	**Godfrey**	**48.21**	**351**	*e*P	**P**	**23 40 13.4**	**-1.2**
	comp=Z,201nm,1.3s						
GOGA				LR	LR		
	comp=Z,2µm,19.0s						
GOGA	**Godfrey**	**48.21**	**351**	*e*P	**P**	**23 40 13.4**	**-1.2**
GOGA				pmax	pmax		
	comp=Z,201nm,1.3s						
GOGA				MLR	MLR		
	comp=Z,2µm,19.0s						
245A	**Little AP, Sta**	**48.23**	**344**	P	**P**	**23 40 14.2**	**-0.5**
	baz=161,SNR=8.4						
148A	**Greensboro**	**48.24**	**347**	P	**P**	**23 40 13.4**	**-1.3**
	baz=164,SNR=6.1						
HKT	**Hockley**	**48.27**	**336**	*e*P	**P**	**23 40 15.2**	**+0.2**
	comp=Z,282nm,1.5s						
HKT	**Hockley**	**48.27**	**336**	*e*P	**P**	**23 40 15.2**	**+0.2**
HKT				pmax	pmax		
	comp=Z,282nm,1.5s						
342A	**Flagon Creek P**	**48.33**	**341**	P	**P**	**23 40 15.8**	**+0.3**
	baz=158,SNR=8.8						
342A	**Flagon Creek P**	**48.33**	**341**	*e*P	**P**	**23 40 16.6**	**+1.1**
	comp=Z,1µm,1.4s						
833A	**Chaparral WMA,**	**48.37**	**332**	P	**P**	**23 40 15.7**	**-0.1**
	baz=149						
833A	**Chaparral WMA,**	**48.37**	**332**	*e*P	**P**	**23 40 16.6**	**+0.7**
	comp=Z,206nm,1.4s						
Z51A	**Franklin**	**48.40**	**349**	P	**P**	**23 40 14.8**	**-1.3**
	baz=168,SNR=5.7						
147A	**Livingston**	**48.42**	**346**	P	**P**	**23 40 15.0**	**-1.2**
	baz=164,SNR=9.5						
147A	**Livingston**	**48.42**	**346**	*e*P	**P**	**23 40 15.2**	**-1.0**
	comp=Z,451nm,1.4s						
244A	**Avery, Jackson**	**48.46**	**343**	P	**P**	**23 40 16.0**	**-0.5**
	baz=160,SNR=7.8						
Z50A	**Ashland**	**48.48**	**348**	P	**P**	**23 40 15.4**	**-1.3**
	baz=167,SNR=36						
Z50A	**Ashland**	**48.48**	**348**	*e*P	**P**	**23 40 15.2**	**-1.4**
	comp=Z,388nm,1.4s						
LRAL	**Lakeview Retre**	**48.48**	**347**	P	**P**	**23 40 15.4**	**-1.2**
	baz=165,SNR=17						
LRAL	**Lakeview Retre**	**48.48**	**347**	*e*P	**P**	**23 40 15.5**	**-1.2**
	comp=Z,333nm,1.4s						
243A	**Waterproof**	**48.54**	**342**	P	**P**	**23 40 17.0**	**-0.1**
	baz=159,SNR=7.6						
Z49A	**Columbiana**	**48.54**	**348**	P	**P**	**23 40 15.6**	**-1.5**
	baz=166,SNR=24						
Y54A	**Tignall**	**48.55**	**352**	P	**P**	**23 40 16.1**	**-1.0**
	baz=171,SNR=28						
341A	**Kurthwood**	**48.56**	**340**	P	**P**	**23 40 17.4**	**+0.1**
	baz=157,SNR=7.1						
341A	**Kurthwood**	**48.56**	**340**	*e*P	**P**	**23 40 17.4**	**+0.1**
	comp=Z,677nm,1.4s						
VBMS	**Vicksburg**	**48.58**	**343**	P	**P**	**23 40 17.0**	**-0.4**
	baz=161						
146A	**Union**	**48.58**	**345**	P	**P**	**23 40 16.6**	**-0.8**
	baz=163,SNR=9.1						
146A	**Union**	**48.58**	**345**	*e*P	**P**	**23 40 17.2**	**-0.2**
	comp=Z,552nm,1.3s						
Y52A	**Lilburn**	**48.75**	**351**	P	**P**	**23 40 17.4**	**-1.2**
	baz=169,SNR=12						
Y52A	**Lilburn**	**48.75**	**351**	*e*P	**P**	**23 40 17.5**	**-1.2**
	comp=Z,178nm,1.4s						
145A	**Houston Renfro**	**48.78**	**344**	P	**P**	**23 40 18.1**	**-0.8**
	baz=162,SNR=6.8						
JSC	**Jenkinsville**	**48.79**	**354**	*e*P	**P**	**23 40 18.4**	**-0.6**
	comp=Z,146nm,1.4s						
JSC	**Jenkinsville**	**48.79**	**354**	*e*P	**P**	**23 40 18.4**	**-0.6**
JSC				pmax	pmax		
	comp=Z,146nm,1.4s						
HODGE	**Hodges**	**48.86**	**353**	*e*P	**P**	**23 40 19.0**	**-0.5**
	comp=Z,29nm,1.2s						
Z47A	**Carrollton**	**48.88**	**346**	P	**P**	**23 40 18.6**	**-1.1**
	baz=164,SNR=8.5						
242A	**Grayson**	**48.91**	**341**	P	**P**	**23 40 20.0**	**0.0**
	baz=159,SNR=6.1						
Z48A	**Northport**	**48.93**	**347**	P	**P**	**23 40 18.7**	**-1.4**
	baz=165,SNR=32						
144A	**Alexander Plac**	**48.94**	**343**	P	**P**	**23 40 19.5**	**-0.7**
	baz=161						
Y51A	**Rockmart**	**48.95**	**350**	P	**P**	**23 40 18.8**	**-1.4**
	baz=168,SNR=37						
Y50A	**Piedmont**	**49.06**	**349**	P	**P**	**23 40 19.5**	**-1.6**
	baz=167,SNR=14						
Z46A	**Louisville**	**49.08**	**345**	P	**P**	**23 40 20.5**	**-0.7**
	baz=163,SNR=6.7						
241A	**Mo Tay, Goldon**	**49.12**	**341**	P	**P**	**23 40 21.6**	**0.0**
	baz=158,SNR=7.2						
241A	**Mo Tay, Goldon**	**49.12**	**341**	*e*P	**P**	**23 40 22.2**	**+0.6**
	comp=Z,256nm,1.2s						
Y49A	**Blount Mountai**	**49.16**	**348**	P	**P**	**23 40 20.4**	**-1.4**
	baz=166,SNR=14						
Y49A	**Blount Mountai**	**49.16**	**348**	*e*P	**P**	**23 40 20.2**	**-1.6**
	comp=Z,149nm,1.4s						
X53A	**Estanollee**	**49.26**	**352**	P	**P**	**23 40 21.2**	**-1.4**
	baz=170,SNR=10						
143A	**Socs Landing,**	**49.28**	**342**	P	**P**	**23 40 22.1**	**-0.7**
	baz=160,SNR=7.3						
143A	**Socs Landing,**	**49.28**	**342**	*e*P	**P**	**23 40 22.8**	**0.0**
	comp=Z,423nm,1.4s						
142A	**Monroe**	**49.30**	**342**	P	**P**	**23 40 22.7**	**-0.2**
	baz=159,SNR=7.0						
Y48A	**Jasper**	**49.37**	**347**	P	**P**	**23 40 21.6**	**-1.8**
	baz=165,SNR=10						
PAULI	**Pauline**	**49.39**	**353**	*e*P	**P**	**23 40 23.7**	**+0.2**
	comp=Z,68nm,1.3s						
240A	**Hunter Patters**	**49.41**	**340**	P	**P**	**23 40 24.3**	**+0.5**
	baz=157,SNR=9.6						
240A	**Hunter Patters**	**49.41**	**340**	*e*P	**P**	**23 40 24.8**	**+1.0**
	comp=Z,566nm,1.3s						
Z45A	**Winona**	**49.44**	**345**	P	**P**	**23 40 23.5**	**-0.5**
	baz=162,SNR=8.4						
Z45A	**Winona**	**49.44**	**345**	*e*P	**P**	**23 40 23.9**	**-0.1**
	comp=Z,1µm,1.4s						
X52A	**Dahlonega**	**49.45**	**351**	P	**P**	**23 40 22.5**	**-1.6**
	baz=169,SNR=16						
NATX	**Nacogdoches**	**49.47**	**339**	P	**P**	**23 40 24.5**	**+0.2**
	baz=156,SNR=7.1						
NATX	**Nacogdoches**	**49.47**	**339**	*e*P	**P**	**23 40 25.1**	**+0.8**
NATX				*e*pP	**pP**	**23 40 34.7**	**-0.7**
NATX				LR	LR		
	comp=Z,2µm,22.0s						
CNNC	**Cliffs of the**	**49.50**	**358**	P	**P**	**23 40 23.9**	**-0.5**
	baz=177						
CNNC	**Cliffs of the**	**49.50**	**358**	PFAKE		23 40 40.0	+16
CNNC				LR	LR		
	comp=Z,2µm,21.0s						
Y47A	**UCPARC, Winfie**	**49.50**	**347**	P	**P**	**23 40 23.2**	**-1.2**
	baz=164,SNR=32						
Z44A	**Pea Ridge, Bel**	**49.55**	**344**	P	**P**	**23 40 24.2**	**-0.6**
	baz=161,SNR=5.8						
X51A	**Calhoun**	**49.56**	**350**	P	**P**	**23 40 23.5**	**-1.4**
	baz=168						
X51A	**Calhoun**	**49.56**	**350**	*e*P	**P**	**23 40 24.1**	**-0.8**
	comp=Z,346nm,1.4s						
141A	**Papa Simpson,**	**49.65**	**341**	P	**P**	**23 40 25.9**	**+0.3**
	baz=158,SNR=7.1						
KMSC	**Kings Mountain**	**49.65**	**354**	P	**P**	**23 40 24.6**	**-1.0**
	baz=173,SNR=33						
KMSC	**Kings Mountain**	**49.65**	**354**	*e*P	**P**	**23 40 24.9**	**-0.7**
	comp=Z,218nm,1.3s						
BG3	**Lake Jocassee**	**49.69**	**352**	*e*P	**P**	**23 40 25.3**	**-0.7**
	comp=Z,160nm,1.3s						
435B	**Jarrell**	**49.71**	**335**	P	**P**	**23 40 25.8**	**-0.3**
	baz=152						
435B	**Jarrell**	**49.71**	**335**	*e*P	**P**	**23 40 26.5**	**+0.4**
	comp=Z,419nm,2.0s						
Z43A	**Armstrong Fami**	**49.71**	**343**	P	**P**	**23 40 25.2**	**-0.9**
	baz=160						

Y46A	**Houston**	49.72	346	P	P	23 40 24.7	-1.4
	baz=163,SNR=17						
X49A	**Woodville**	49.77	348	P	P	23 40 25.0	-1.5
	baz=166,SNR=29						
X48A	**Hartselle**	49.86	348	P	P	23 40 25.6	-1.6
	baz=166,SNR=22						
X48A	**Hartselle**	49.86	348	*e*P	P	23 40 25.7	-1.6
	comp=Z,247nm,1.3s						
Y45A	**Yeager Farm, C**	49.87	345	P	P	23 40 26.7	-0.6
	baz=162,SNR=7.5						
W53A	**Cullowhee**	49.90	352	P	P	23 40 26.7	-0.9
	baz=170,SNR=29						
140A	**Cam and Jess,**	49.90	340	P	P	23 40 27.8	+0.3
	baz=157,SNR=7.3						
140A	**Cam and Jess,**	49.90	340	*e*P	P	23 40 28.6	+1.1
140A				*e*pP	pP	23 40 38.1	-0.5
W52A	**Murphy**	49.93	351	P	P	23 40 26.7	-1.1
	baz=170,SNR=6.4						
W52A	**Murphy**	49.93	351	*e*P	P	23 40 27.2	-0.6
	comp=Z,187nm,1.1s						
Z42A	**Norrel Spur, H**	49.98	342	P	P	23 40 27.2	-0.9
	baz=159,SNR=6.1						
HOPE	**Hope Point**	50.08	151	PFAKE		23 40 40.0	+11
HOPE				LR	LR		
	comp=Z,2µm,21.0s						
X47A	**Russelville**	50.10	347	P	P	23 40 27.0	-2.0
	baz=164,SNR=22						
Y44A	**Strider, Charl**	50.14	344	P	P	23 40 28.0	-1.3
	baz=162						
Z41A	**Richland Creek**	50.22	341	P	P	23 40 29.9	-0.1
	baz=158,SNR=11						
Z41A	**Richland Creek**	50.22	341	*e*P	P	23 40 30.2	+0.2
	comp=Z,1µm,1.4s						
Y43A	**Makayla and Ka**	50.28	343	P	P	23 40 29.7	-0.7
	baz=161						
X46A	**Booneville**	50.30	346	P	P	23 40 28.7	-1.8
	baz=164,SNR=5.5						
V53A	**Saluda**	50.34	352	P	P	23 40 29.7	-1.2
	baz=171,SNR=17						
W49A	**Belvidere**	50.35	349	P	P	23 40 29.1	-1.8
	baz=167,SNR=19						
X45A	**UM Field Stati**	50.37	345	P	P	23 40 29.3	-1.7
	baz=163,SNR=6.9						
CPCT	**Cooper Cave**	50.37	351	*e*P	P	23 40 30.3	-0.8
	comp=Z,183nm,1.4s						
SWET	**Sewanee**	50.38	349	*e*P	P	23 40 29.8	-1.5
	comp=Z,293nm,1.4s						
JCT	**Junction City**	50.39	333	P	P	23 40 30.6	-0.7
	baz=149						
JCT	**Junction City**	50.39	333	*e*P	P	23 40 31.3	0.0
	comp=Z,93nm,1.3s						
JCT				LR	LR		
	comp=Z,884nm,19.0s						
Z40A	**Long Farm, Mag**	50.41	341	P	P	23 40 31.7	+0.3
	baz=158,SNR=7.0						
NCAT	**North Carolina**	50.44	356	*e*P	P	23 40 31.0	-0.6
	comp=Z,196nm,1.3s						
HPIG		50.45	325	*e*P	P	23 40 31.6	-0.4
	comp=Z,560nm,1.9s						
OXF	**Oxford**	50.45	345	P	P	23 40 29.6	-2.1
	baz=163,SNR=7.0						
OXF	**Oxford**	50.45	345	*e*P	P	23 40 31.0	-0.7
	comp=Z,429nm,1.3s						
OXF	**Oxford**	50.45	345	*e*P	P	23 40 31.0	-0.7
OXF				pmax	pmax		
	comp=Z,429nm,1.3s						
Y42A	**Garnett, Star**	50.45	343	P	P	23 40 31.3	-0.4
	baz=160,SNR=7.8						
TKL	**Tuckaleechee C**	50.46	351	P	P	23 40 30.3	-1.5
	comp=Z,28nm,1.1s,baz=162,slow=6.8,SNR=26						
TKL				S	S	23 47 39.1	-3.8
	comp=Z,2.4nm,1.0s,baz=43,slow=19,SNR=1.4						
TKL				LR	LR	00 02 56.3	
	comp=Z,2µm,19.0s,baz=168,slow=38						
TKL	**Tuckaleechee C**	50.46	351	*e*P	P	23 40 30.8	-1.0
	comp=Z,255nm,1.3s						
TKL				S	S	23 47 39.1	-3.8
W48A	**Pulaski**	50.50	348	P	P	23 40 30.2	-1.9
	baz=166						
CCAR	**Cane Creek**	50.53	343	*e*P	P	23 40 32.3	+0.1
	comp=Z,894nm,1.5s						
PLAL	**Pickwick Lake**	50.59	347	*e*P	P	23 40 30.7	-2.0
	comp=Z,166nm,1.2s						
V52A	**Sevierville**	50.62	352	P	P	23 40 31.6	-1.3
	baz=170,SNR=32						
V52A	**Sevierville**	50.62	352	*e*P	P	23 40 31.6	-1.3
	comp=Z,246nm,1.1s						
X44A	**Crenshaw**	50.63	344	P	P	23 40 31.0	-1.9
	baz=162						
V50A	**Pikevile**	50.68	350	P	P	23 40 32.1	-1.3
	baz=168,SNR=17						
V51A	**Loudon**	50.69	351	P	P	23 40 32.2	-1.3
	baz=169,SNR=18						
V51A	**Loudon**	50.69	351	*e*P	P	23 40 32.1	-1.3
	comp=Z,182nm,1.2s						
WHTX	**Lake Whitney,**	50.72	336	P	P	23 40 33.3	-0.5
	baz=152						
WHTX	**Lake Whitney,**	50.72	336	*e*P	P	23 40 33.9	+0.1
WHTX				*e*pP	pP	23 40 43.5	-1.5
Y41A	**Eaglette Beard**	50.74	342	P	P	23 40 33.6	-0.2
	baz=159,SNR=6.9						
W47A	**Westpoint**	50.75	347	P	P	23 40 31.7	-2.2
	baz=165,SNR=18						
W46A	**Michie**	50.80	347	P	P	23 40 32.0	-2.3
	baz=164						
X43A	**Marvell**	50.84	344	P	P	23 40 33.8	-0.8
	baz=161						
PMSA	**Palmer Station**	50.86	174	P	P	23 40 34.4	+0.1
	comp=Z,90nm,1.1s,baz=33,slow=4.9,SNR=5.2						
PMSA				LR	LR	23 59 03.0	
	comp=Z,1µm,20.2s,baz=348,slow=32						
PMSA	**Palmer Station**	50.86	174	*e*P	P	23 40 34.4	+0.1
	comp=Z,142nm,1.1s						
PMSA				LR	LR		
	comp=Z,2µm,19.0s						
V49A	**McMinnville**	50.91	349	P	P	23 40 33.2	-2.0
	baz=167,SNR=24						
U53A	**Fall Branch**	51.00	353	P	P	23 40 34.2	-1.6
	baz=171,SNR=18						
W45A	**Hickory Valley**	51.02	346	P	P	23 40 34.0	-1.9
	baz=163,SNR=5.3						
V48A	**Smith Brothers**	51.06	348	P	P	23 40 34.7	-1.5
	baz=166,SNR=48						
V48A	**Smith Brothers**	51.06	348	*e*P	P	23 40 34.5	-1.7
	comp=Z,377nm,1.3s						
Y40A	**Okolona**	51.07	341	P	P	23 40 36.2	-0.2
	baz=158,SNR=9.3						
X42A	**Stuttgart**	51.08	343	P	P	23 40 35.5	-0.9
	baz=160						
W44A	**Shelby Farms P**	51.15	345	P	P	23 40 35.3	-1.6
	baz=162						
LPIG	**La Paz**	51.16	318	P	P	23 40 37.5	+0.4
	comp=Z,21nm,0.3s,baz=34,slow=3.6,SNR=3.3						
LPIG				LR	LR	23 57 40.5	
	comp=Z,1µm,20.0s,baz=126,slow=31						
MET	**Memphis--Engin**	51.16	345	*e*P	P	23 40 36.1	-0.9
	comp=Z,1µm,1.3s						
TXAR	**Lajitas Array**	51.28	328	P	P	23 40 37.7	-0.4
	comp=Z,12nm,0.9s,baz=145,slow=9.2,SNR=50						
TXAR				LR	LR	00 01 12.7	
	comp=Z,2µm,19.5s,baz=0.0,slow=35						
TXAR				PKP2bc		00 11 25.2	
	comp=Z,0.6nm,0.9s,baz=90,slow=2.5,SNR=4.4						
TX31	**Lajitas Ar. Si**	51.28	328	*e*P	P	23 40 37.8	-0.3
X41A	**Kaden, Bauxite**	51.28	342	P	P	23 40 37.0	-0.9
	baz=159						
V47A	**Nunnelly**	51.29	348	P	P	23 40 35.5	-2.4
	baz=165,SNR=13						
TZTN	**Tazewell**	51.30	352	P	P	23 40 36.6	-1.5
	baz=170,SNR=26						
TZTN	**Tazewell**	51.30	352	*e*P	P	23 40 37.1	-0.9
	comp=Z,73nm,1.1s						
W43A	**Forest City**	51.33	344	P	P	23 40 37.1	-1.2
	baz=161						
X40A	**Basin Creek Fa**	51.37	342	P	P	23 40 37.6	-1.0
	baz=158						
X40A	**Basin Creek Fa**	51.37	342	*e*P	P	23 40 36.2	-2.4
	comp=Z,56nm,0.4s						
V46A	**Holladay**	51.39	347	P	P	23 40 36.2	-2.5
	baz=164,SNR=13						
UALR	**University of**	51.49	342	*e*P	P	23 40 38.7	-0.7
	comp=Z,431nm,1.4s						
V45A	**Humboldt**	51.52	346	P	P	23 40 37.5	-2.1
	baz=163,SNR=5.3						
BLA	**Blacksburg**	51.62	355	P	P	23 40 39.8	-0.7
	baz=174,SNR=11						
BLA	**Blacksburg**	51.62	355	*e*P	P	23 40 40.0	-0.4
	comp=Z,353nm,1.8s						
BLA				LR	LR		
	comp=Z,3µm,22.0s						
U49A	**Red Boiling Sp**	51.62	350	P	P	23 40 38.4	-2.0
	baz=167,SNR=12						
WVT	**Waverly**	51.64	347	P	P	23 40 38.3	-2.3
	baz=165						
WVT	**Waverly**	51.64	347	*e*P	P	23 40 38.3	-2.3
	comp=Z,181nm,1.3s						
WVT	**Waverly**	51.64	347	*e*P	P	23 40 38.3	-2.3
WVT				pmax	pmax		
	comp=Z,181nm,1.3s						
MIAR	**Mount Ida**	51.65	341	P	P	23 40 40.0	-0.6
	baz=158,SNR=28						
MIAR	**Mount Ida**	51.65	341	*e*P	P	23 40 40.1	-0.6
	comp=Z,136nm,1.1s						
MIAR				LR	LR		
	comp=Z,1µm,22.0s						
MIAR	**Mount Ida**	51.65	341	*e*P	P	23 40 40.1	-0.6
MIAR				pmax	pmax		
	comp=Z,136nm,1.1s						
MIAR				MLR	MLR		
	comp=Z,1µm,22.0s						
W42A	**Bald Knob**	51.73	343	P	P	23 40 40.2	-1.1
	baz=160						
U48A	**Cassie Pea, Po**	51.76	349	P	P	23 40 39.6	-1.9
	baz=166,SNR=19						
HBAR	**Harrisburg**	51.76	344	*e*P	P	23 40 40.8	-0.6
	comp=Z,662nm,1.5s						
HALT	**Halls**	51.77	346	*e*P	P	23 40 39.9	-1.7
	comp=Z,286nm,1.3s						
T52A	**Hallie**	51.78	353	P	P	23 40 40.3	-1.4
	baz=171,SNR=9.8						
X39A	**Fountain Ranch**	51.79	341	P	P	23 40 41.5	-0.3
	baz=157,SNR=25						
URVA	**University of**	51.81	358	*e*P	P	23 40 40.6	-1.2
V44A	**Blytheville**	51.83	345	P	P	23 40 40.2	-1.8
	baz=162						
U47A	**Clarksville**	51.83	348	P	P	23 40 39.7	-2.3
	baz=166,SNR=19						
W41B	**Gary Mavity, V**	51.84	343	P	P	23 40 41.2	-0.9
	baz=159,SNR=36						
W41B	**Gary Mavity, V**	51.84	343	*e*P	P	23 40 41.2	-0.9
	comp=Z,234nm,1.3s						
U46A	**Springville**	51.94	347	P	P	23 40 40.7	-2.1
	baz=164						
V43A	**Jonesboro**	51.95	345	P	P	23 40 41.5	-1.3
	baz=162						
T50A	**Nancy**	51.96	351	P	P	23 40 41.3	-1.6
	baz=169,SNR=16						
WHAR	**Wooly Hollow**	51.96	343	*e*P	P	23 40 42.2	-0.8
	comp=Z,411nm,1.4s						
GNAR	**Gosnell**	51.99	345	*e*P	P	23 40 42.5	-0.6
U45A	**Rockin P Farm,**	52.06	347	P	P	23 40 41.5	-2.1
	baz=164						
UTMT	**University of**	52.07	346	*e*P	P	23 40 42.1	-1.6
	comp=Z,462nm,1.3s						
IP05	**Hopewell Churc**	52.08	358	*e*P	P	23 40 44.2	+0.4
	comp=Z,169nm,1.4s						
W40A	**Ferguson Farm,**	52.10	342	P	P	23 40 43.9	-0.1
	baz=158,SNR=31						
W40A	**Ferguson Farm,**	52.10	342	*e*P	P	23 40 43.9	-0.1
	comp=Z,489nm,1.4s						
GLAT	**Glass**	52.10	346	*e*P	P	23 40 42.0	-2.0
	comp=Z,462nm,1.4s						
T49A	**Edmonton**	52.15	350	P	P	23 40 42.8	-1.6
	baz=168,SNR=35						
ABTX	**Abilene, Hawle**	52.16	334	P	P	23 40 44.3	-0.3
	baz=150,SNR=17						
ABTX	**Abilene, Hawle**	52.16	334	*e*P	P	23 40 44.2	-0.3
	comp=Z,374nm,1.4s						
IP07	**Quail**	52.18	358	*e*P	P	23 40 44.5	0.0
	comp=Z,152nm,1.1s						
U44B	**Burton Farm, H**	52.18	346	P	P	23 40 42.9	-1.7
	baz=163						
IP06	**Yanceyville**	52.19	358	*e*P	P	23 40 44.7	+0.1
	comp=Z,82nm,1.0s						
V42A	**Cord**	52.19	344	P	P	23 40 43.0	-1.6
	baz=161,SNR=9.0						
IP01	**Cuckoo**	52.21	358	*e*P	P	23 40 44.7	0.0
	comp=Z,146nm,1.0s						
IP03	**Louisa**	52.28	358	*e*P	P	23 40 45.3	0.0
	comp=Z,195nm,1.2s						
CVRD	**Centerville Ro**	52.32	358	*e*P	P	23 40 45.5	0.0
	comp=Z,168nm,1.1s						
W39A	**Magazine**	52.32	341	P	P	23 40 45.5	-0.2
	baz=158,SNR=37						
W39A	**Magazine**	52.32	341	*e*P	P	23 40 45.4	-0.2
	comp=Z,302nm,1.6s						
T47A	**Sharon Grove**	52.33	348	P	P	23 40 43.7	-1.9
	baz=166,SNR=18						
T47A	**Sharon Grove**	52.33	348	*e*P	P	23 40 43.8	-1.9
	comp=Z,152nm,1.2s						
IP04	**Greensprings**	52.35	358	*e*P	P	23 40 46.0	+0.2
	comp=Z,230nm,1.3s						
S52A	**Salyersville**	52.36	353	P	P	23 40 44.3	-1.6
	baz=171						
PTRD	**Partlow Road**	52.36	358	*e*P	P	23 40 45.5	-0.4
V41A	**Mountainview**	52.38	343	P	P	23 40 44.8	-1.3
	baz=160,SNR=36						
S51A	**Beattyville**	52.38	352	P	P	23 40 44.7	-1.3
	baz=170,SNR=14						
U44A	**Portageville**	52.42	346	P	P	23 40 44.9	-1.4
	baz=163						
CBN	**Corbin Frederi**	52.44	358	P	P	23 40 45.8	-0.6
	baz=178						
CBN	**Corbin Frederi**	52.44	358	*e*P	P	23 40 45.5	-1.0
	comp=Z,98nm,1.0s						
CBN				LR	LR		
	comp=Z,1µm,21.0s						
U43A	**Rector**	52.47	345	P	P	23 40 45.3	-1.4
	baz=162						
T46A	**Princeton**	52.54	348	P	P	23 40 45.2	-2.0
	baz=165,SNR=18						
PARMO	**Parma**	52.59	346	*e*P	P	23 40 47.0	-0.6
	comp=Z,370nm,1.0s						
V40A	**Witts Springs**	52.59	342	P	P	23 40 46.8	-0.9
	baz=159,SNR=56						
V40A	**Witts Springs**	52.59	342	*e*P	P	23 40 46.8	-0.9
	comp=Z,317nm,1.5s						
U42A	**Revenden**	52.66	344	P	P	23 40 46.7	-1.5
	baz=161,SNR=73						
T45A	**Paducah**	52.67	347	P	P	23 40 46.3	-1.9
	baz=164						
T45A	**Paducah**	52.67	347	*e*P	P	23 40 46.0	-2.3
	comp=Z,338nm,1.3s						
S48A	**Wiedeman Farm,**	52.78	350	P	P	23 40 47.0	-2.1
	baz=167						
U41A	**Viola**	52.84	344	P	P	23 40 48.1	-1.4
	baz=160,SNR=47						
PBMO	**Poplar Bluff**	52.86	345	*e*P	P	23 40 48.0	-1.6
	comp=Z,238nm,1.5s						
V39A	**Pettigrew**	52.87	342	P	P	23 40 48.9	-0.9
	baz=158,SNR=23						
T44A	**Benton**	52.95	346	P	P	23 40 48.5	-1.8
	baz=163,SNR=5.5						
T43A	**Greenville**	53.12	345	P	P	23 40 49.8	-1.7
	baz=162,SNR=16						
U40A	**Yellville**	53.12	343	P	P	23 40 50.5	-1.0
	baz=159,SNR=61						
S46A	**Don Dixon Farm**	53.12	348	P	P	23 40 49.5	-2.0
	baz=165,SNR=16						
T42A	**Van Buren**	53.27	345	P	P	23 40 50.8	-1.9
	baz=161,SNR=33						
T42A	**Van Buren**	53.27	345	*e*P	P	23 40 50.7	-1.9
	comp=Z,163nm,1.5s						
S45A	**Carrier Mills**	53.29	347	P	P	23 40 51.1	-1.7
	baz=164,SNR=10						
U39A	**Green Forest**	53.32	342	P	P	23 40 51.9	-1.2
	baz=158,SNR=33						
HHAR	**Hobbs**	53.37	342	*e*P	P	23 40 52.7	-0.7
	comp=Z,416nm,1.8s						
WCI	**Wyandotte Cave**	53.38	350	P	P	23 40 51.7	-1.7
	baz=167						
WCI	**Wyandotte Cave**	53.38	350	*e*P	P	23 40 51.7	-1.7
	comp=Z,203nm,1.0s						
WCI	**Wyandotte Cave**	53.38	350	*e*P	P	23 40 51.7	-1.7
WCI				pmax	pmax		
	comp=Z,203nm,1.0s						
USIN	**University of**	53.38	348	*e*P	P	23 40 52.1	-1.3
	comp=Z,468nm,1.4s						
S44A	**Carbondale**	53.46	347	P	P	23 40 52.4	-1.5
	baz=164,SNR=18						
T41A	**Mountain View**	53.46	344	P	P	23 40 52.7	-1.4
	baz=160,SNR=28						
SIUC	**Southern Illin**	53.47	347	*e*P	P	23 40 52.5	-1.6
	comp=Z,245nm,1.3s						
R48A	**Northridge Ran**	53.47	350	P	P	23 40 52.6	-1.5
	baz=168,SNR=19						
R47A	**Wooly Knot Far**	53.49	349	P	P	23 40 52.2	-2.0
	baz=167,SNR=17						
S43A	**Fulton Ridge,**	53.53	346	P	P	23 40 52.5	-2.0
	baz=162,SNR=16						
R46A	**Gibon Southern**	53.59	348	P	P	23 40 52.9	-2.0
	baz=166,SNR=14						
TUL1	**Leonard**	53.62	340	P	P	23 40 54.4	-0.9
	baz=156,SNR=31						
TUL1	**Leonard**	53.62	340	*e*P	P	23 40 54.4	-0.9
	comp=Z,237nm,1.1s						
WMOK	**Wichita Mounta**	53.66	336	P	P	23 40 54.3	-1.3
	baz=152,SNR=6.7						
WMOK	**Wichita Mounta**	53.66	336	*e*P	P	23 40 54.3	-1.3
	comp=Z,190nm,1.8s						
WMOK				LR	LR		
	comp=Z,1µm,22.0s						
WMOK	**Wichita Mounta**	53.66	336	*e*P	P	23 40 54.3	-1.3
WMOK				pmax	pmax		
	comp=Z,190nm,1.8s						
WMOK				MLR	MLR		
	comp=Z,1µm,22.0s						
T40A	**Mansfield**	53.76	343	P	P	23 40 55.0	-1.2
	baz=160						
R45A	**Skylar, Fairfi**	53.82	348	P	P	23 40 55.1	-1.5
	baz=165,SNR=24						
T39A	**Clever**	53.89	342	P	P	23 40 56.0	-1.2
	baz=159,SNR=38						
S42A	**Caledonia**	53.89	345	P	P	23 40 55.0	-2.2
	baz=162,SNR=14						
R44A	**Waltonville**	53.95	347	P	P	23 40 56.0	-1.6
	baz=164,SNR=25						
S41A	**Jillco Farms,**	53.96	344	P	P	23 40 56.2	-1.6
	baz=161,SNR=79						
FVM	**French Village**	54.01	346	*e*P	P	23 40 57.6	-0.4
	comp=Z,165nm,1.4s						
FVM	**French Village**	54.01	346	*e*P	P	23 40 57.6	-0.4
FVM				pmax	pmax		
	comp=Z,165nm,1.4s						
MCWV	**Mont Chateau**	54.01	356	P	P	23 40 57.1	-0.9
	baz=175						
MCWV	**Mont Chateau**	54.01	356	*e*P	P	23 40 57.6	-0.4
	comp=Z,115nm,1.4s						
MNTX	**Cornudas Mount**	54.06	329	P	P	23 40 57.3	-1.3
	baz=144,SNR=32						
MNTX	**Cornudas Mount**	54.06	329	*e*P	P	23 40 57.4	-1.1
	comp=Z,224nm,1.8s						
MNTX				LR	LR		
	comp=Z,2µm,19.0s						
Q47A	**Bedord North L**	54.09	350	P	P	23 40 56.9	-1.7
	baz=167,SNR=25						
PSUB	**Penn St. - Bra**	54.14	0	*e*P	P	23 40 58.8	-0.1
	comp=Z,181nm,1.4s						
R43A	**Red Bud**	54.17	346	P	P	23 40 57.6	-1.5
	baz=163,SNR=15						
T38A	**Diamond**	54.17	342	P	P	23 40 58.3	-1.0
	baz=158,SNR=30						
S40A	**Lebanon**	54.18	344	P	P	23 40 58.0	-1.3
	baz=160,SNR=58						
OLIL	**Olney**	54.21	348	*e*P	P	23 40 57.8	-1.7
	comp=Z,365nm,1.4s						
MVL	**Millersville**	54.21	359	*e*P	P	23 40 59.8	+0.4
	comp=Z,279nm,1.4s						
CCM	**Cathedral Cave**	54.28	345	P	P	23 40 59.3	-0.7
	baz=161						
CCM	**Cathedral Cave**	54.28	345	*e*P	P	23 40 59.1	-0.8
	comp=Z,75nm,0.9s						
BLO	**Bloomington**	54.34	350	*e*P	P	23 40 58.8	-1.6
	comp=Z,322nm,1.5s						
BLO	**Bloomington**	54.34	350	*e*P	P	23 40 58.8	-1.6
BLO				pmax	pmax		
	comp=Z,322nm,1.5s						
Q46A	**CEJHS Indians,**	54.34	349	P	P	23 40 58.6	-1.8
	baz=166						
P50A	**Jamestown**	54.35	352	P	P	23 40 58.8	-1.7
	baz=170,SNR=14						
Q45A	**Warren Harvey,**	54.38	348	P	P	23 40 59.1	-1.6
	baz=165,SNR=36						
R42A	**Luebbering**	54.38	345	P	P	23 40 59.1	-1.6
	baz=162,SNR=15						
S39A	**Bolivar**	54.49	343	P	P	23 41 00.5	-1.1
	baz=159,SNR=68						
S39A	**Bolivar**	54.49	343	*e*P	P	23 41 00.5	-1.1
	comp=Z,126nm,1.1s						
R41A	**Rosebud**	54.54	345	P	P	23 41 00.5	-1.4
	baz=161,SNR=44						
O56A	**Blue Knob Stat**	54.54	357	P	P	23 41 01.6	-0.3
	baz=176,SNR=26						
O56A	**Blue Knob Stat**	54.54	357	*e*P	P	23 41 01.7	-0.3
	comp=Z,110nm,1.1s						
Q44A	**Meyer Farm, Va**	54.56	347	P	P	23 41 00.4	-1.7
	baz=164,SNR=40						
SLM	**Saint Louis**	54.58	346	*e*P	P	23 41 01.4	-0.8
	comp=Z,384nm,1.8s						
SLM	**Saint Louis**	54.58	346	*e*P	P	23 41 01.4	-0.8
SLM				pmax	pmax		
	comp=Z,384nm,1.8s						
P47A	**Martinsville**	54.60	350	P	P	23 41 00.3	-2.0
	baz=167,SNR=11						
S38A	**Stockton**	54.61	342	P	P	23 41 01.1	-1.3
	baz=158,SNR=33						
MSTX	**Muleshoe**	54.67	332	P	P	23 41 02.0	-1.1
	baz=147,SNR=11						
MSTX	**Muleshoe**	54.67	332	*e*P	P	23 41 02.0	-1.1
	comp=Z,102nm,1.1s						
EPT	**El Paso**	54.69	328	*e*P	P	23 41 03.0	-0.2
	comp=Z,177nm,1.5s						
Q43A	**New Douglas**	54.75	347	P	P	23 41 01.9	-1.5
	baz=163,SNR=8.9						
R40A	**Maddies Statio**	54.76	344	P	P	23 41 02.0	-1.5
	baz=160,SNR=54						
R40A	**Maddies Statio**	54.76	344	*e*P	P	23 41 02.1	-1.4
	comp=Z,236nm,1.4s						
LUPA	**Lehigh Univers**	54.81	0	*e*P	P	23 41 04.3	+0.5
	comp=Z,12nm,1.3s						
O50A	**Cable**	54.86	353	P	P	23 41 02.5	-1.7
	baz=170,SNR=16						
ACSO	**Alum Creek Sta**	54.86	353	P	P	23 41 02.3	-1.9
	baz=171,SNR=19						
ACSO	**Alum Creek Sta**	54.86	353	*e*P	P	23 41 02.6	-1.6
	comp=Z,158nm,1.0s						
ACSO				LR	LR		
	comp=Z,3µm,19.0s						
SSPA	**Standing Stone**	54.88	358	P	P	23 41 03.9	-0.4
	baz=177						
SSPA	**Standing Stone**	54.88	358	*e*P	P	23 41 03.9	-0.4
	comp=Z,369nm,1.8s						
P46A	**Rosedale**	54.89	349	P	P	23 41 02.4	-2.0
	baz=166,SNR=11						
BRNJ	**Basking Ridge**	54.90	1	*e*P	P	23 41 05.1	+0.7
	comp=Z,49nm,0.9s						
P45A	**Graceland, Par**	54.91	349	P	P	23 41 02.4	-2.0
	baz=166,SNR=19						
P45A	**Graceland, Par**	54.91	349	*e*P	P	23 41 02.5	-2.0
	comp=Z,231nm,1.1s						
Q42A	**Golden Eagle**	54.91	346	P	P	23 41 03.3	-1.3
	baz=162,SNR=15						
AMTX	**Amarillo**	54.97	334	P	P	23 41 04.0	-1.2
	baz=149						
AMTX	**Amarillo**	54.97	334	*e*P	P	23 41 04.6	-0.6
	comp=Z,88nm,1.2s						
R39A	**Chumby, Stover**	54.99	343	P	P	23 41 03.9	-1.3
	baz=159,SNR=23						
CPNY	**Central Park**	55.02	2	*e*P	P	23 41 05.6	+0.3
	comp=Z,242nm,1.7s						
P44A	**Sand Creek, Wi**	55.02	348	P	P	23 41 03.4	-2.0
	baz=165,SNR=11						
HSIG		55.08	322	*e*P	P	23 41 06.3	+0.3
	comp=Z,360nm,2.0s						
Q41A	**Truxton**	55.12	345	P	P	23 41 04.6	-1.5
	baz=162,SNR=25						
R38A	**Fenwick Farm,**	55.12	342	P	P	23 41 04.7	-1.4
	baz=158,SNR=17						
N59A	**State Game Lan**	55.12	360	P	P	23 41 06.4	+0.3
	baz=180,SNR=32						
N59A	**State Game Lan**	55.12	360	*e*P	P	23 41 06.5	+0.3
	comp=Z,283nm,1.6s						
PAL	**Palisades**	55.24	2	P	P	23 41 06.7	-0.2
	baz=182,SNR=8.6						
PAL	**Palisades**	55.24	2	*e*P	P	23 41 06.6	-0.2
PAL				*e*pP	pP	23 41 16.9	-1.2
PAL	**Palisades**	55.24	2	*e*P	P	23 41 06.6	-0.2
PAL				*e**PP	pP	23 41 16.9	-1.2
ODNJ	**Ogdensburg**	55.30	1	*e*P	P	23 41 07.7	+0.4
	comp=Z,198nm,1.7s						
N54A	**Moraine State**	55.31	356	P	P	23 41 06.5	-1.0
	baz=175,SNR=15						
N54A	**Moraine State**	55.31	356	*e*P	P	23 41 06.5	-1.0
	comp=Z,141nm,1.3s						

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O47A Sheridan         55.32 350  P     P     23 41 05.3 -2.2
     baz=168,SNR=11
Q40A Laux Farm, Aux   55.38 344  P     P     23 41 06.4 -1.5
     baz=161,SNR=5.8
P43A Skaggs, Pawnee   55.38 347  P     P     23 41 06.3 -1.6
     baz=164,SNR=14
N50A Nevada           55.42 353  P     P     23 41 06.4 -1.8
     baz=171,SNR=12
P42A Winchester       55.51 346  P     P     23 41 07.1 -1.8
     baz=163,SNR=15
P42A Winchester       55.51 346 eP     P     23 41 07.0 -1.8
     comp=Z,122nm,1.1s
YLE  Yale             55.58   2 eP     P     23 41 11.2 +1.9
     comp=Z,395nm,1.4s
O45A Potomac          55.60 349  P     P     23 41 07.1 -2.5
     baz=166,SNR=14
SFIN Lafayette        55.61 349  P     P     23 41 07.1 -2.5
     baz=166,SNR=21
SFIN Lafayette        55.61 349 eP     P     23 41 07.0 -2.5
     comp=Z,114nm,1.1s
O44A Mansfield        55.65 348  P     P     23 41 07.6 -2.3
     baz=165
Q39A Willow Grove F   55.66 344  P     P     23 41 08.7 -1.2
     baz=160,SNR=18
Q38A Cooks Store, C   55.76 343  P     P     23 41 09.7 -1.0
     baz=159,SNR=81
KSPA Keystone Colle   55.76 360 eP     P     23 41 10.9 +0.2
     comp=Z,448nm,1.7s
P41A Barry, Barry     55.77 346  P     P     23 41 09.1 -1.6
     baz=162,SNR=16
M54A Oil Creek Stat   55.84 356  P     P     23 41 10.0 -1.2
     baz=175,SNR=22
M54A Oil Creek Stat   55.84 356 eP     P     23 41 10.1 -1.2
     comp=Z,149nm,1.3s
319A Douglas          55.87 325 eP     P     23 41 12.1 +0.3
     comp=Z,497nm,1.8s
P40A Paris            55.87 345  P     P     23 41 10.0 -1.5
     baz=161,SNR=10
P40A Paris            55.87 345 eP     P     23 41 10.2 -1.3
     comp=Z,56nm,1.0s
Q37A Longview Farm,   55.92 342  P     P     23 41 10.6 -1.3
     baz=158,SNR=7.7
O43A Sugar Creek Fa   55.95 347  P     P     23 41 09.9 -2.1
     baz=164
121A Cookes Peak, D   55.95 327  P     P     23 41 12.9 +0.5
     baz=142,SNR=27
M65A Busby, Falmout   55.96   5  P     P     23 41 11.5 -0.6
     baz=186
ALLY Alegheny Colle   56.01 356 eP     P     23 41 11.2 -1.2
     comp=Z,139nm,1.1s
P39B Salisbury        56.02 344  P     P     23 41 11.2 -1.3
     baz=160,SNR=52
O42A Bath             56.03 347  P     P     23 41 10.8 -1.8
     baz=163
N46A Monticello       56.05 350  P     P     23 41 10.3 -2.4
     baz=167,SNR=21
O41A Passleys Farm,   56.14 346  P     P     23 41 11.4 -2.0
     baz=162,SNR=13
N45A Kentland         56.14 349  P     P     23 41 10.9 -2.5
     baz=166,SNR=9.0
N44A Piper City       56.21 349  P     P     23 41 11.4 -2.4
     baz=165,SNR=10
HDIL Hopedale         56.21 348  P     P     23 41 11.8 -2.1
     baz=164,SNR=9.2
HDIL Hopedale         56.21 348  PFAKE       23 41 30.0 +16
HDIL                             LR    LR
     comp=Z,2µm,20.0s
BRYW Bryant College   56.25   4 eP     P     23 41 14.2 +0.1
     comp=Z,346nm,1.4s
P38A Dawn             56.35 343  P     P     23 41 13.6 -1.3
     baz=159,SNR=8.9
P38A Dawn             56.35 343 eP     P     23 41 13.7 -1.3
     comp=Z,160nm,1.2s
O40A La Belle         56.39 345  P     P     23 41 13.5 -1.7
     baz=161,SNR=19
BINY Binghamton       56.41 360  P     P     23 41 15.3  0.0
     baz=180,SNR=18
BINY Binghamton       56.41 360 eP     P     23 41 15.3  0.0
     comp=Z,280nm,1.4s
BINY                             LR    LR
     comp=Z,1µm,20.0s
ERPA Erie             56.47 356  P     P     23 41 14.4 -1.3
     baz=175,SNR=10
ERPA Erie             56.47 356 eP     P     23 41 14.8 -0.9
     comp=Z,182nm,1.3s
RKT  Rikitea          56.48 252 eS     S     23 49 05.0 -0.2
     comp=Z,6µm,28.2s
RKT                             eSS    SS    23 52 52.7 -0.2
     comp=Z,920nm,28.5s
RKT                             eLQ    LQ    23 55 16.3
     comp=Z,818nm,25.5s
RKT                             eLR    LR    23 57 37.4
     comp=Z,4µm,27.2s,baz=85
RKT  Rikitea          56.48 252 eT     T     00 41 33.4
     comp=Z,16nm,0.2s
M46A Old House Fiel   56.49 350  P     P     23 41 13.4 -2.4
     baz=168
M46A Old House Fiel   56.49 350 eP     P     23 41 14.6 -1.2
     comp=Z,189nm,1.1s
P37A Lathrop          56.55 343  P     P     23 41 14.7 -1.6
     baz=158,SNR=18
N43A Stutzman Famil   56.55 348  P     P     23 41 14.3 -2.0
     baz=164,SNR=8.0
QUA2 Belchertown      56.57   3 eP     P     23 41 16.2 -0.2
     comp=Z,176nm,1.6s
M45A Boilermakers S   56.62 350  P     P     23 41 14.1 -2.7
     baz=166
N42A Yates City       56.63 347  P     P     23 41 14.8 -2.1
     baz=163,SNR=11
O39A Kirksville       56.68 345  P     P     23 41 15.9 -1.4
     baz=160,SNR=7.1
BCX  Boston College   56.69   4 eP     P     23 41 17.7 +0.4
     comp=Z,124nm,1.5s
N41A Harden Midland   56.70 346  P     P     23 41 15.2 -2.1
     baz=162,SNR=7.8
N41A Harden Midland   56.70 346 eP     P     23 41 15.5 -1.8
     comp=Z,96nm,0.9s
Y22D IRIS PASSCAL I   56.73 329  P     P     23 41 17.7 -0.2
     baz=143
Y22E IRIS PASSCAL I   56.73 329  P     P     23 41 17.9  0.0
     baz=143
WES  Weston           56.73   4 eP     P     23 41 17.4 -0.1
     comp=Z,179nm,1.4s
WES  Weston           56.73   4 eP     P     23 41 17.4 -0.1
WES                              pmax  pmax
     comp=Z,179nm,1.4s
M44A Midewin, Midew   56.76 349  P     P     23 41 15.1 -2.6
     baz=166
M44A Midewin, Midew   56.76 349 eP     P     23 41 15.2 -2.6
     comp=Z,96nm,1.2s
KSU1 Kansas State U   56.79 341  P     P     23 41 16.7 -1.4
     baz=156,SNR=6.6
KSU1 Kansas State U   56.79 341 eP     P     23 41 17.0 -1.1
     comp=Z,74nm,1.1s
KSU1                             LR    LR
     comp=Z,862nm,20.0s
O38A Galt             56.80 344  P     P     23 41 16.6 -1.5
     baz=159
HRV  Adam Dziewonsk   56.84   4  P     P     23 41 18.4 +0.1
     baz=185
HRV  Adam Dziewonsk   56.84   4 eP     P     23 41 18.4 +0.1
     comp=Z,235nm,1.4s
TRY  Troy             56.97   2 eP     P     23 41 19.7 +0.5
     comp=Z,273nm,1.3s
MMNY Mt. Morris Dam   56.98 358 eP     P     23 41 18.9 -0.4
     comp=Z,125nm,1.2s
AAM  Ann Arbor        56.99 353  P     P     23 41 17.5 -1.9
     baz=171
AAM  Ann Arbor        56.99 353 eP     P     23 41 18.1 -1.2
     comp=Z,81nm,1.1s
AAM                              LR    LR
     comp=Z,3µm,22.0s
AAM  Ann Arbor        56.99 353 eP     P     23 41 18.1 -1.2
AAM                              pmax  pmax
     comp=Z,81nm,1.1s
AAM                              MLR   MLR
     comp=Z,3µm,22.0s
M43A Waltham Townsh   56.99 348  P     P     23 41 17.1 -2.3
     baz=165,SNR=7.3
O37A Wolven Farm, M   57.03 343  P     P     23 41 18.3 -1.4
     baz=158,SNR=11
N40A Mertquake, Sal   57.04 346  P     P     23 41 17.6 -2.2
     baz=162,SNR=7.0
M42A Sheffield        57.17 347  P     P     23 41 18.4 -2.2
     baz=164
TASL Snake Pit, Alb   57.20 330  P     P     23 41 21.0 -0.3
     baz=144,SNR=43
ANMO Albuquerque      57.20 330  P     P     23 41 20.9 -0.3
     comp=Z,19nm,0.9s,baz=145,slow=11,SNR=35
ANMO                             S     S     23 49 13.7 -0.8
     comp=Z,0.2nm,0.3s,baz=20,slow=12,SNR=1.3
ANMO                             LR    LR    00 03 49.1
     comp=Z,2µm,21.9s,baz=136,slow=34
ANMO Albuquerque      57.20 330  P     P     23 41 21.0 -0.3
     baz=144
ANMO Albuquerque      57.20 330 eP     P     23 41 21.0 -0.3
     comp=Z,52nm,1.1s
ANMO                             S     S     23 49 13.7 -0.8
ANMO                             LR    LR
     comp=Z,1µm,20.0s
ANMO Albuquerque      57.20 330ceP     P     23 41 20.5 -0.8
ANMO                             pmax  pmax
     comp=Z,28nm,1.1s
TASM ASL Pad, Albuq   57.20 330  P     P     23 41 21.2 -0.1
     baz=144,SNR=37
N39A Derby Farms, D   57.26 345  P     P     23 41 19.7 -1.6
     baz=160,SNR=12
N39A Derby Farms, D   57.26 345 eP     P     23 41 19.6 -1.6
     comp=Z,142nm,1.4s
M41A Milan            57.26 347  P     P     23 41 19.1 -2.2
     baz=163
N38A Joes South For   57.37 344  P     P     23 41 20.7 -1.4
     baz=160,SNR=6.6
TUC  Tucson           57.41 325  P     P     23 41 22.5 -0.2
     baz=139
TUC  Tucson           57.41 325  PFAKE       23 41 40.0 +17
TUC                              LR    LR
     comp=Z,4µm,22.0s
MEDO Medina           57.43 358  P     P     23 41 21.3 -1.1
     baz=177
TYNO Tyneside         57.43 356  P     P     23 41 21.3 -1.1
     baz=175
L44A Lake County Fo   57.51 349  P     P     23 41 20.6 -2.4
     baz=166
STCO Saint Catharin   57.51 357  P     P     23 41 22.7 -0.3
     baz=176
M40A Post Highland    57.52 346  P     P     23 41 21.0 -2.1
     baz=162,SNR=8.5
N37A Lee Faris, Mou   57.60 343  P     P     23 41 22.3 -1.5
     baz=159
N37A Lee Faris, Mou   57.60 343 eP     P     23 41 22.9 -0.8
     comp=Z,171nm,1.1s
CBKS Cedar Bluff      57.61 338  P     P     23 41 23.2 -0.7
     baz=152,SNR=7.2
CBKS Cedar Bluff      57.61 338 eP     P     23 41 23.7 -0.2
     comp=Z,128nm,1.0s
CBKS                             LR    LR
     comp=Z,1µm,22.0s
CBKS Cedar Bluff      57.61 338 eP     P     23 41 23.7 -0.2
CBKS                             pmax  pmax
     comp=Z,129nm,1.0s
CBKS                             MLR   MLR
     comp=Z,1µm,22.0s
ACCN Adirondack Com   57.62   2 eP     P     23 41 24.2 +0.4
     comp=Z,287nm,1.3s
ELFO Elginfield       57.63 355  P     P     23 41 22.1 -1.8
     baz=174
L43A Garden Prairie   57.66 349  P     P     23 41 22.1 -2.0
     baz=165,SNR=15
L42A Oliver, Polo     57.68 348  P     P     23 41 21.9 -2.3
     baz=164,SNR=6.8
L42A Oliver, Polo     57.68 348 eP     P     23 41 22.4 -1.8
     comp=Z,121nm,1.3s
M39A Webster          57.74 345  P     P     23 41 22.6 -2.1
     baz=161
FFD  Franklin Falls   57.79   3 eP     P     23 41 25.3 +0.3
     comp=Z,163nm,1.5s
N36A Muff Farm, Cla   57.86 343  P     P     23 41 24.3 -1.3
     baz=158,SNR=8.7
L41A Preston          57.92 347  P     P     23 41 23.7 -2.3
     baz=163,SNR=12
M38A Pleasantville    57.94 344  P     P     23 41 24.3 -1.8
     baz=160,SNR=17
ACTO Acton            57.95 356  P     P     23 41 24.7 -1.5
     baz=175
T25A Trinidad         58.05 333  P     P     23 41 27.0 -0.3
     baz=147,SNR=24
T25A Trinidad         58.05 333 eP     P     23 41 26.5 -0.8
     comp=Z,151nm,1.5s
L40A Anamosa          58.07 346  P     P     23 41 24.9 -2.1
     baz=162,SNR=16
L40A Anamosa          58.07 346 eP     P     23 41 25.0 -2.1
     comp=Z,191nm,1.5s
K43A Burlington       58.09 349  P     P     23 41 25.0 -2.1
     baz=166,SNR=10
K43A Burlington       58.09 349 eP     P     23 41 25.1 -2.0
     comp=Z,206nm,1.1s
DRWO Darlington Wes   58.15 357  P     P     23 41 25.9 -1.6
     baz=176
DRCO St. Marys Ceme   58.15 357  P     P     23 41 26.4 -1.1
     baz=176
M37A Trindle Farm,    58.16 344  P     P     23 41 26.5 -1.2
     baz=159,SNR=26
WLVO Wesleyville      58.18 358  P     P     23 41 26.1 -1.6
     baz=177
NCB  Newcomb          58.19   1 eP     P     23 41 27.7 -0.1
     comp=Z,87nm,1.1s
PKRO Pickering        58.25 357  P     P     23 41 27.1 -1.1
     baz=176
L39A Vinton           58.31 346  P     P     23 41 26.7 -2.0
     baz=161,SNR=6.7
214A Organ Pipe Nat   58.31 323  P     P     23 41 29.2 +0.3
     baz=137,SNR=14
K42A Prairie Point,   58.36 348  P     P     23 41 27.0 -2.0
     baz=164,SNR=10
K41A Shullsburg       58.39 347  P     P     23 41 27.1 -2.1
     baz=163
SCIA State Center     58.41 345  P     P     23 41 27.6 -1.7
     baz=160
SCIA State Center     58.41 345 eP     P     23 41 28.5 -0.9
     comp=Z,89nm,0.3s
SCIA                             LR    LR
     comp=Z,1µm,22.0s
M36A Felix, Anita     58.41 343  P     P     23 41 27.9 -1.5
     baz=158,SNR=8.5
BASO Ashfield         58.48 355  P     P     23 41 28.7 -1.1
     baz=173
BWLO Walkerton        58.54 355  P     P     23 41 28.6 -1.6
     baz=174
LBNH Lisbon           58.54   3  P     P     23 41 30.6 +0.4
     baz=184,SNR=8.6
LBNH Lisbon           58.54   3 eP     P     23 41 31.2 +0.9
     comp=Z,202nm,1.4s
L38A Oak Wood Farm,   58.56 345  P     P     23 41 28.5 -1.9
     baz=160,SNR=16
VT1  Waterbury        58.60   2 eP     P     23 41 30.7 +0.1
     comp=Z,134nm,1.6s
X18A Snowflake        58.64 327 eP     P     23 41 32.3 +0.9
     comp=Z,67nm,1.4s
K40A Colesburg        58.66 347  P     P     23 41 28.9 -2.1
     baz=162,SNR=6.9
JFWS Jewell Farm      58.67 347  P     P     23 41 29.2 -2.0
     baz=163,SNR=6.1
JFWS Jewell Farm      58.67 347 eP     P     23 41 29.8 -1.4
     comp=Z,144nm,1.4s
JFWS                             LR    LR
     comp=Z,1µm,22.0s
JFWS Jewell Farm      58.67 347 eP     P     23 41 29.8 -1.4
JFWS                             pmax  pmax
     comp=Z,144nm,1.4s
JFWS                             MLR   MLR
     comp=Z,1µm,22.0s
BRCO Bruce Peninsul   58.69 355  P     P     23 41 29.7 -1.6
     baz=173
DELO Deloro Mine      58.75 358  P     P     23 41 30.2 -1.4
     baz=178
L37A Phoenix Point,   58.75 344  P     P     23 41 30.1 -1.7
     baz=159,SNR=7.2
J43A Natural Harves   58.76 349  P     P     23 41 30.0 -1.8
     baz=166,SNR=17
CLWO Collingwood      58.81 356  P     P     23 41 30.5 -1.6
     baz=175
J42A Columbus         58.83 349  P     P     23 41 30.4 -1.9
     baz=165,SNR=9.2
LONY Lake Ozonia      58.83   1  P     P     23 41 32.0 -0.3
     baz=181,SNR=30
LONY Lake Ozonia      58.83   1 eP     P     23 41 32.1 -0.2
     comp=Z,128nm,1.1s
LONY                             LR    LR
     comp=Z,2µm,21.0s
K39A Oelwein          58.84 346  P     P     23 41 30.1 -2.2
     baz=162,SNR=11
KSCO Kaye Shedlock’   58.89 336  P     P     23 41 32.3 -0.6
     baz=149
KSCO Kaye Shedlock’   58.89 336 eP     P     23 41 32.9 -0.1
     comp=Z,295nm,1.7s
L36A Harm Buss Farm   58.97 344  P     P     23 41 32.1 -1.2
     baz=158,SNR=20
W18A Petrified Fore   58.98 328  P     P     23 41 34.0 +0.2
     baz=141,SNR=26
W18A Petrified Fore   58.98 328 eP     P     23 41 34.1 +0.4
     comp=Z,236nm,1.4s
K38A Parkersburg      58.99 345  P     P     23 41 31.5 -1.9
     baz=161
K38A Parkersburg      58.99 345 eP     P     23 41 32.1 -1.3
     comp=Z,82nm,1.3s
BMRO Meriville Lake   59.02 355  P     P     23 41 31.9 -1.6
     baz=174
WVL  Waterville       59.02   5 eP     P     23 41 34.1 +0.6
     comp=Z,55nm,1.0s
SDCO Great Sand Dun   59.04 333  P     P     23 41 33.8 -0.4
     baz=146,SNR=116
SDCO Great Sand Dun   59.04 333 eP     P     23 41 33.8 -0.4
     comp=Z,97nm,1.3s
SDCO                             LR    LR
     comp=Z,1µm,20.0s
J41A Loganville       59.05 348  P     P     23 41 31.9 -1.9
     baz=164,SNR=20
SADO Sadowa           59.06 357  P     P     23 41 32.0 -1.8
     comp=Z,21nm,0.9s,baz=203,slow=6.1,SNR=27
SADO Sadowa           59.06 357 eP     P     23 41 32.2 -1.7
     comp=Z,144nm,1.5s
FRNY Flat Rock        59.07   2 eP     P     23 41 34.0 +0.1
     comp=Z,234nm,1.3s
I43A Langenfeld Bro   59.20 350  P     P     23 41 33.1 -1.7
     baz=166,SNR=18
SACV Santiago Islan   59.21  63 eP     P     23 41 34.1 -1.4
     comp=Z,88nm,1.1s
SACV                             LR    LR
     comp=Z,910nm,20.0s
J40A Soldiers Grove   59.24 347  P     P     23 41 33.2 -1.9
     baz=163,SNR=13
PLVO Plevna           59.26 359  P     P     23 41 34.1 -1.1
     baz=178
PLVO Plevna           59.26 359 eP     P     23 41 34.4 -0.9
     comp=Z,78nm,1.1s
BANO Bancroft         59.26 358  P     P     23 41 33.6 -1.6
     baz=177
K37A Belmond          59.32 345  P     P     23 41 33.8 -1.9
     baz=160,SNR=15
I42A Draeger Farm,    59.35 349  P     P     23 41 34.3 -1.6
     baz=165,SNR=17
I42A Draeger Farm,    59.35 349 eP     P     23 41 34.4 -1.4
     comp=Z,128nm,1.2s
X16A Lo Mia Camp, P   59.35 326 eP     P     23 41 36.9 +0.5
     comp=Z,67nm,1.1s
BGNE Belgrade         59.38 340  P     P     23 41 35.2 -0.9
     baz=154,SNR=7.0
BGNE Belgrade         59.38 340 eP     P     23 41 35.8 -0.4
     comp=Z,305nm,1.0s
EMMW East Machias     59.39   7 eP     P     23 41 36.6 +0.5
     comp=Z,127nm,1.4s
J39A Decorah          59.39 346  P     P     23 41 34.0 -2.2
     baz=162,SNR=11
K36A Gilmore City     59.41 344  P     P     23 41 35.3 -1.1
     baz=159,SNR=12
113A Mohawk Valley,   59.46 323 eP     P     23 41 37.4 +0.5
     comp=Z,216nm,1.8s
J38A Wedel Dairy, R   59.55 346  P     P     23 41 35.1 -2.2
     baz=161
S22A 4UR Ranch, Cre   59.64 332  P     P     23 41 38.0 -0.4
     baz=144,SNR=30
S22A 4UR Ranch, Cre   59.64 332 eP     P     23 41 38.1 -0.3
     comp=Z,75nm,1.3s
ORIO Orleans, Innes   59.66   0  P     P     23 41 37.1 -0.8
     baz=180
TOBO Tobermory, Bru   59.67 355  P     P     23 41 35.8 -2.2
     baz=173
I40A Norwalk          59.68 348  P     P     23 41 36.5 -1.7
     baz=163,SNR=12
I41A Arkdale          59.69 348  P     P     23 41 36.6 -1.6
     baz=164,SNR=9.8
I41A Arkdale          59.69 348 eP     P     23 41 36.8 -1.5
     comp=Z,111nm,1.1s
H43A Windswept, Lux   59.70 350  P     P     23 41 36.5 -1.8
     baz=166,SNR=16
H43A Windswept, Lux   59.70 350 eP     P     23 41 36.1 -2.1
     comp=Z,87nm,0.9s
KLBO Killbear Provi   59.70 356  P     P     23 41 35.4 -2.8
     baz=175
BUKO Buck Lake        59.74 357  P     P     23 41 36.8 -1.8
     baz=176
PKME Peaks-Kenny Pk   59.75   5  P     P     23 41 38.7 +0.2
     baz=187,SNR=20
PKME Peaks-Kenny Pk   59.75   5  PFAKE       23 41 50.0 +11
PKME                             LR    LR
     comp=Z,2µm,21.0s
J37A Redenius Farm,   59.81 345  P     P     23 41 37.5 -1.6
     baz=160,SNR=11
ALFO Alfred           59.84   1  P     P     23 41 38.8 -0.3
     baz=181
I39A Houston          59.84 347  P     P     23 41 37.6 -1.7
     baz=162,SNR=14
I39A Houston          59.84 347 eP     P     23 41 37.6 -1.7
     comp=Z,183nm,1.5s
Y14A Wickenburg       59.87 324 eP     P     23 41 40.0 +0.3
     comp=Z,272nm,1.8s
H42A Shiocton         59.87 349  P     P     23 41 37.7 -1.8
     baz=166
Q24A Divide           59.90 334  P     P     23 41 39.7 -0.5
     baz=147,SNR=19
PEMO Pembroke         59.90 359  P     P     23 41 38.8 -0.8
     baz=178
MVCO Mesa Verde       60.00 330  P     P     23 41 40.3 -0.5
     baz=143,SNR=14
MVCO Mesa Verde       60.00 330 eP     P     23 41 40.4 -0.4
     comp=Z,88nm,1.1s
MVCO                             LR    LR
     comp=Z,1µm,22.0s
J36A Seneca 1, Swea   60.03 344  P     P     23 41 39.2 -1.4
     baz=159,SNR=22
J36A Seneca 1, Swea   60.03 344 eP     P     23 41 39.2 -1.4
     comp=Z,187nm,1.1s
WUAZ Wupatki          60.15 327  P     P     23 41 42.1 +0.3
     baz=139,SNR=40
WUAZ Wupatki          60.15 327 eP     P     23 41 42.0 +0.3
     comp=Z,184nm,1.5s
WUAZ                             LR    LR
     comp=Z,2µm,21.0s
H41A Junction City    60.19 349  P     P     23 41 40.0 -1.6
     baz=164,SNR=8.3
H41A Junction City    60.19 349 eP     P     23 41 40.0 -1.6
     comp=Z,87nm,1.3s
I38A Scanlan Farm,    60.20 346  P     P     23 41 40.0 -1.7
     baz=161,SNR=15
GLA  Glamis           60.28 322  P     P     23 41 42.6  0.0
     baz=135
GLA  Glamis           60.28 322 eP     P     23 41 43.8 +1.2
     comp=Z,131nm,1.6s
GLA  Glamis           60.28 322 eP     P     23 41 43.8 +1.2
GLA                              pmax  pmax
     comp=Z,131nm,1.6s
OGNE Ogallala         60.33 337  P     P     23 41 41.9 -0.9
     baz=150,SNR=7.3
OGNE Ogallala         60.33 337 eP     P     23 41 42.9 +0.1
     comp=Z,260nm,1.4s
OGNE                             LR    LR
     comp=Z,921nm,20.0s
H40A Chili            60.34 348  P     P     23 41 41.0 -1.6
     baz=164,SNR=23
ASCN Ascension        60.34  91  PFAKE       23 42 00.0 +17
ASCN                             LR    LR
     comp=Z,6µm,21.0s
I37A Lemond, Waseca   60.43 345  P     P     23 41 41.7 -1.6
     baz=160,SNR=6.5
I37A Lemond, Waseca   60.43 345 eP     P     23 41 41.8 -1.6
     comp=Z,210nm,1.4s
TRQ  Mont Tremblant   60.44   1 eP     P     23 41 42.6 -0.7
G43A Wallace          60.46 350  P     P     23 41 41.6 -1.8
     baz=167,SNR=16
G43A Wallace          60.46 350 eP     P     23 41 41.6 -1.8
     comp=Z,120nm,1.4s
F46A Macinaw City C   60.54 353  P     P     23 41 42.0 -2.0
     baz=170
F45A CMU Biological   60.55 352  P     P     23 41 41.9 -2.1
     baz=169,SNR=7.5
G42A Mountain         60.57 350  P     P     23 41 42.6 -1.6
     baz=166
H39A Augusta          60.58 347  P     P     23 41 42.8 -1.5
     baz=163,SNR=12
I36A Fitzsimmons Fa   60.59 345  P     P     23 41 42.7 -1.7
     baz=160
Y12C Blythe           60.60 323  P     P     23 41 44.9 +0.2
     baz=136,SNR=15
```

Y12C	**Blythe**	**60.60**	**323**	*e*P	**P**	**23 41 45.5**	**+0.8**
	comp=Z,154nm,1.5s						
G41A	**Antigo**	**60.67**	**349**	P	**P**	**23 41 43.2**	**-1.7**
	baz=165						
PV01	**Paradox Valley**	**60.77**	**331**	*e*P	**P**	**23 41 46.1**	**+0.1**
	comp=Z,90nm,1.3s						
IKP	**In-Ko-Pah, Jac**	**60.77**	**321**	P	**P**	**23 41 46.4**	**+0.4**
	baz=134						
PDMCI	**Parker Dam,Lak**	**60.78**	**324**	P	**P**	**23 41 46.0**	**+0.1**
	baz=136						
SWSC	**Sam W. Stewart**	**60.79**	**322**	P	**P**	**23 41 46.1**	**+0.2**
	baz=134						
ISCO	**Idaho Springs**	**60.79**	**334**	P	**P**	**23 41 45.8**	**-0.4**
	baz=146,SNR=24						
ISCO	**Idaho Springs**	**60.79**	**334**	*e*P	**P**	**23 41 45.8**	**-0.4**
	comp=Z,159nm,1.8s						
ISCO				LR	LR		
	comp=Z,2µm,22.0s						
ISCO	**Idaho Springs**	**60.79**	**334**	*e*P	**P**	**23 41 45.8**	**-0.4**
ISCO				pmax	pmax		
	comp=Z,159nm,1.8s						
ISCO				MLR	MLR		
	comp=Z,2µm,22.0s						
H38A	**Maiden Rock**	**60.79**	**346**	P	**P**	**23 41 44.4**	**-1.3**
	baz=162,SNR=9.1						
H37A	**Dierke Farm, C**	**60.85**	**346**	P	**P**	**23 41 44.7**	**-1.5**
	baz=161,SNR=5.0						
SMCO	**Snowmass**	**60.87**	**332**	*e*P	**P**	**23 41 46.6**	**-0.3**
	comp=Z,63nm,1.1s						
PV15	**Paradox Valley**	**60.89**	**331**	*e*P	**P**	**23 41 47.0**	**+0.1**
	comp=Z,111nm,1.1s						
PV02	**Paradox Valley**	**60.91**	**331**	*e*P	**P**	**23 41 47.3**	**+0.3**
	comp=Z,109nm,1.3s						
G40A	**Rib Lake**	**60.92**	**348**	P	**P**	**23 41 45.0**	**-1.6**
	baz=164,SNR=8.7						
G40A	**Rib Lake**	**60.92**	**348**	*e*P	**P**	**23 41 45.0**	**-1.6**
	comp=Z,75nm,1.3s						
F44A	**Big Bay de Noc**	**60.96**	**351**	P	**P**	**23 41 44.9**	**-2.0**
	baz=168,SNR=9.6						
PV05	**Paradox Valley**	**60.98**	**330**	*e*P	**P**	**23 41 47.5**	**0.0**
	comp=Z,318nm,1.9s						
PV03	**Paradox Valley**	**61.00**	**330**	*e*P	**P**	**23 41 47.6**	**0.0**
	comp=Z,254nm,1.9s						
F42A	**Maple Grove Fa**	**61.02**	**350**	P	**P**	**23 41 45.7**	**-1.6**
	baz=166						
ECSD	**EROS Data Cent**	**61.03**	**343**	P	**P**	**23 41 45.9**	**-1.4**
	baz=157,SNR=78						
ECSD	**EROS Data Cent**	**61.03**	**343**	*e*P	**P**	**23 41 46.0**	**-1.4**
	comp=Z,132nm,1.1s						
ECSD				LR	LR		
	comp=Z,1µm,22.0s						
PV07	**Paradox Valley**	**61.05**	**331**	*e*P	**P**	**23 41 48.1**	**+0.2**
	comp=Z,124nm,1.6s						
BC3	**Big Chuckawall**	**61.08**	**322**	P	**P**	**23 41 48.3**	**+0.2**
	baz=135,SNR=15						
H36A	**Jessenland, He**	**61.09**	**345**	P	**P**	**23 41 46.7**	**-1.1**
	baz=160,SNR=8.1						
MONP2	**Monument Peak**	**61.13**	**321**	P	**P**	**23 41 48.9**	**+0.3**
	baz=134						
BAR	**Barrett**	**61.13**	**321**	*e*P	**P**	**23 41 49.0**	**+0.6**
	comp=Z,148nm,1.6s						
G39A	**Holcombe**	**61.13**	**348**	P	**P**	**23 41 46.4**	**-1.7**
	baz=163,SNR=13						
PV04	**Paradox Valley**	**61.13**	**331**	*e*P	**P**	**23 41 48.6**	**+0.2**
	comp=Z,203nm,1.8s						
E45A	**Wooded Hills,**	**61.17**	**352**	P	**P**	**23 41 46.5**	**-1.8**
	baz=169,SNR=7.0						
F41A	**Three Lakes**	**61.17**	**349**	P	**P**	**23 41 46.6**	**-1.6**
	baz=165,SNR=11						
F41A	**Three Lakes**	**61.17**	**349**	*e*P	**P**	**23 41 46.8**	**-1.5**
	comp=Z,67nm,1.3s						
G38A	**Ridgeland**	**61.17**	**347**	P	**P**	**23 41 46.7**	**-1.6**
	baz=162,SNR=15						
PV10	**Paradox Valley**	**61.18**	**330**	*e*P	**P**	**23 41 48.5**	**-0.3**
	comp=Z,226nm,2.0s						
W13A	**Hualapai Mount**	**61.21**	**325**	*e*P	**P**	**23 41 49.7**	**+0.6**
	comp=Z,194nm,1.7s						
IRM	**Iron Mountain**	**61.25**	**323**	P	**P**	**23 41 49.5**	**+0.4**
	baz=135,SNR=37						
PQI	**Presque Isle**	**61.26**	**6**	*e*P	**P**	**23 41 49.2**	**+0.3**
	comp=Z,115nm,1.1s						
U15A	**North Rim**	**61.32**	**327**	*e*P	**P**	**23 41 50.2**	**+0.3**
	comp=Z,218nm,1.8s						
PV09	**Paradox Valley**	**61.33**	**330**	*e*P	**P**	**23 41 50.0**	**+0.1**
NEE2	**Needles Airpor**	**61.38**	**324**	P	**P**	**23 41 50.1**	**+0.1**
	baz=136						
SPMN	**Marine on St.**	**61.43**	**346**	P	**P**	**23 41 48.7**	**-1.4**
	baz=161,SNR=17						
SPMN	**Marine on St.**	**61.43**	**346**	*e*P	**P**	**23 41 48.8**	**-1.4**
	comp=Z,128nm,1.0s						
H35A	**Sunnyside Ranc**	**61.43**	**345**	P	**P**	**23 41 48.8**	**-1.3**
	baz=159,SNR=14						
E43A	**Lone Tree Farm**	**61.44**	**351**	P	**P**	**23 41 48.1**	**-2.0**
	baz=167,SNR=11						
E43A	**Lone Tree Farm**	**61.44**	**351**	*e*P	**P**	**23 41 48.6**	**-1.5**
	comp=Z,40nm,1.0s						
COWI	**Conover**	**61.52**	**349**	*e*P	**P**	**23 41 49.2**	**-1.4**
	comp=Z,96nm,1.4s						
COWI				LR	LR		
	comp=Z,2µm,22.0s						
E44A	**Grand Marais A**	**61.52**	**352**	P	**P**	**23 41 49.3**	**-1.4**
	baz=169						
F40A	**Park Falls**	**61.53**	**349**	P	**P**	**23 41 49.2**	**-1.6**
	baz=164,SNR=20						
109C	**Camp Elliot, M**	**61.54**	**321**	P	**P**	**23 41 50.3**	**-0.7**
	baz=133						
E42A	**Champion**	**61.63**	**350**	P	**P**	**23 41 49.9**	**-1.6**
	baz=166,SNR=7.1						
BELC	**Belle Mtn. Jos**	**61.64**	**322**	P	**P**	**23 41 52.4**	**+0.4**
	baz=135,SNR=20						
XPFO	**Piæon Flat**	**61.64**	**322**	*e*P	**P**	**23 41 52.8**	**+0.9**
	comp=Z,107nm,1.3s						
PFO	**Pinyon Flats O**	**61.65**	**322**	P	**P**	**23 41 52.3**	**+0.4**
	baz=134,SNR=23						
PFO	**Pinyon Flats O**	**61.65**	**322**	*e*P	**P**	**23 41 52.8**	**+0.9**
	comp=Z,125nm,1.3s						
PFO				LR	LR		
	comp=Z,2µm,22.0s						
PFO	**Pinyon Flats O**	**61.65**	**322**	*e*P	**P**	**23 41 52.8**	**+0.9**
PFO				pmax	pmax		
	comp=Z,125nm,1.3s						
PFO				MLR	MLR		
	comp=Z,2µm,22.0s						
BELQ	**Belleterre**	**61.66**	**358**	P	**P**	**23 41 50.0**	**-1.6**
	baz=177						
G36A	**St. Michael**	**61.66**	**346**	P	**P**	**23 41 50.6**	**-1.0**
	baz=160,SNR=9.0						
F39A	**Loretta**	**61.68**	**348**	P	**P**	**23 41 50.2**	**-1.6**
	baz=163,SNR=17						
G35A	**Watkins**	**61.83**	**345**	P	**P**	**23 41 51.4**	**-1.4**
	baz=159,SNR=5.4						
N23A	**Red Feather La**	**61.84**	**334**	P	**P**	**23 41 52.9**	**-0.3**
	baz=146						
E41A	**Kenton**	**61.84**	**350**	P	**P**	**23 41 51.0**	**-1.8**
	baz=165,SNR=12						
F37A	**Hinrichs Farm,**	**61.87**	**347**	P	**P**	**23 41 51.9**	**-1.1**
	baz=161,SNR=6.0						
F38A	**Pierce - Schro**	**61.92**	**347**	P	**P**	**23 41 52.0**	**-1.3**
	baz=162,SNR=8.8						
H32A	**Carlson Farm,**	**61.97**	**342**	P	**P**	**23 41 52.6**	**-1.1**
	baz=156,SNR=21						
PHWY	**Pilot Hill**	**61.98**	**335**	*e*P	**P**	**23 41 54.2**	**0.0**
	comp=Z,90nm,1.4s						
E40A	**Wakefield**	**61.99**	**349**	P	**P**	**23 41 52.6**	**-1.2**
	baz=164,SNR=34						
GMRC	**Granite Mounta**	**62.00**	**323**	P	**P**	**23 41 54.5**	**+0.2**
	baz=135,SNR=20						
KNB	**Kanab**	**62.05**	**327**	*e*P	**P**	**23 41 54.8**	**+0.2**
	comp=Z,331nm,1.6s						
KNB	**Kanab**	**62.05**	**327**	*e*P	**P**	**23 41 54.8**	**+0.2**
KNB				pmax	pmax		
	comp=Z,331nm,1.6s						
E39A	**Mellen**	**62.05**	**348**	P	**P**	**23 41 53.1**	**-1.2**
	baz=164,SNR=31						
MURC	**Murrieta**	**62.08**	**321**	P	**P**	**23 41 55.2**	**+0.4**
	baz=133,SNR=5.4						
PKCU	**Pink Cliffs**	**62.10**	**327**	*e*P	**P**	**23 41 56.3**	**+1.1**
	comp=Z,142nm,1.6s						
G34A	**Benson**	**62.15**	**344**	P	**P**	**23 41 53.4**	**-1.5**
	baz=158,SNR=6.9						
F36A	**Milaca**	**62.20**	**346**	P	**P**	**23 41 54.1**	**-1.1**
	baz=160,SNR=53						
F36A	**Milaca**	**62.20**	**346**	*e*P	**P**	**23 41 54.0**	**-1.3**
	comp=Z,231nm,1.3s						
O20A	**White River Ci**	**62.22**	**332**	P	**P**	**23 41 55.6**	**-0.2**
	baz=144,SNR=20						
O20A	**White River Ci**	**62.22**	**332**	*e*P	**P**	**23 41 55.5**	**-0.3**
	comp=Z,274nm,2.0s						
LCMT	**Little Creek M**	**62.27**	**327**	*e*P	**P**	**23 41 54.3**	**-1.8**
	comp=Z,155nm,1.8s						
G33A	**Ortonville**	**62.32**	**344**	P	**P**	**23 41 54.8**	**-1.2**
	baz=157,SNR=14						
D41A	**Chassel**	**62.35**	**350**	P	**P**	**23 41 55.1**	**-1.1**
	baz=166,SNR=15						
D41A	**Chassel**	**62.35**	**350**	*e*P	**P**	**23 41 55.5**	**-0.7**
	comp=Z,85nm,0.9s						
SUSD	**Miller**	**62.37**	**341**	P	**P**	**23 41 55.0**	**-1.4**
	baz=154						
BBRC	**Big Bear Solar**	**62.37**	**322**	P	**P**	**23 41 57.8**	**+0.8**
	baz=134						
HEC	**Hector,Ludlow**	**62.42**	**323**	P	**P**	**23 41 57.7**	**+0.6**
	baz=135						
F35A	**Swanville**	**62.45**	**345**	P	**P**	**23 41 55.9**	**-1.0**
	baz=159,SNR=11						
E38A	**The Farm, Brul**	**62.47**	**348**	P	**P**	**23 41 55.7**	**-1.4**
	baz=163						
SRU	**San Rafael Swe**	**62.48**	**330**	*e*P	**P**	**23 41 57.7**	**+0.2**
	comp=Z,157nm,1.6s						
SRU	**San Rafael Swe**	**62.48**	**330**	*e*P	**P**	**23 41 57.7**	**+0.2**
SRU				pmax	pmax		
	comp=Z,157nm,1.6s						
MTPU	**Mount Pierson**	**62.48**	**328**	*e*P	**P**	**23 41 57.8**	**+0.1**
	comp=Z,29nm,1.1s						
SCI2	**San Clemente I**	**62.50**	**320**	P	**P**	**23 41 55.9**	**-1.5**
	baz=132						
F34A	**Alexandria**	**62.56**	**345**	P	**P**	**23 41 56.8**	**-0.9**
	baz=158,SNR=9.4						
TUQ	**Turquoise Moun**	**62.61**	**324**	P	**P**	**23 41 58.4**	**0.0**
	baz=135						
E37A	**Wrenshall**	**62.61**	**347**	P	**P**	**23 41 57.2**	**-0.8**
	baz=162						
SZCU	**Shurtz Canyon**	**62.62**	**327**	*e*P	**P**	**23 41 59.5**	**+1.0**
	comp=Z,162nm,1.9s						
Q16A	**Castle Valley**	**62.65**	**329**	*e*P	**P**	**23 41 58.7**	**+0.1**
	comp=Z,116nm,1.5s						
G32A	**Webster**	**62.67**	**343**	P	**P**	**23 41 56.9**	**-1.5**
	baz=156						
G32A	**Webster**	**62.67**	**343**	*e*P	**P**	**23 41 57.2**	**-1.2**
	comp=Z,130nm,1.1s						
CIS	**Catalina Islan**	**62.70**	**320**	P	**P**	**23 42 00.3**	**+1.4**
	baz=132						
CCUT	**Cedar City**	**62.73**	**327**	*e*P	**P**	**23 42 00.1**	**+0.9**
	comp=Z,192nm,1.9s						
E36A	**McGregor**	**62.76**	**346**	P	**P**	**23 41 58.0**	**-0.9**
	baz=161,SNR=45						
BFSC	**Mount Baldy Ra**	**62.80**	**321**	P	**P**	**23 41 59.7**	**0.0**
	baz=133,SNR=25						
FMP	**Fort Macarthur**	**62.83**	**321**	P	**P**	**23 42 00.4**	**+0.8**
	baz=132						
MSU	**Marysvale**	**62.84**	**328**	*e*P	**P**	**23 42 00.1**	**+0.2**
MSU	**Marysvale**	**62.84**	**328**	*e*P	**P**	**23 42 00.1**	**+0.2**
RRX	**Edison Barstow**	**62.84**	**322**	P	**P**	**23 42 00.2**	**+0.5**
	baz=134						
P17A	**Butcher Ranch,**	**62.87**	**330**	*e*P	**P**	**23 42 00.0**	**0.0**
	comp=Z,171nm,1.5s						
SHPR	**Sheep Range**	**62.94**	**325**	*e*P	**P**	**23 42 01.1**	**+0.5**
	comp=Z,222nm,1.9s						
TMUT	**Trail Mountain**	**62.96**	**330**	*e*P	**P**	**23 42 00.8**	**0.0**
	comp=Z,33nm,0.9s						
GSC	**Goldstone, Bar**	**63.03**	**323**	P	**P**	**23 42 01.7**	**+0.6**
	baz=134,SNR=12						
GSC	**Goldstone, Bar**	**63.03**	**323**	*e*P	**P**	**23 42 01.9**	**+0.8**
	comp=Z,280nm,2.0s						
GSC	**Goldstone, Bar**	**63.03**	**323**	*e*P	**P**	**23 42 01.9**	**+0.8**
GSC				pmax	pmax		
	comp=Z,281nm,2.0s						
MWC	**Mount Wilson**	**63.03**	**321**	*e*P	**P**	**23 42 02.1**	**+0.8**
	comp=Z,400nm,1.8s						
MWC	**Mount Wilson**	**63.03**	**321**	*e*P	**P**	**23 42 02.1**	**+0.8**
MWC				pmax	pmax		
	comp=Z,400nm,1.8s						
E35A	**Pequot Lakes**	**63.06**	**346**	P	**P**	**23 42 00.2**	**-0.8**
	baz=160,SNR=18						
PASC	**Pasadena Art C**	**63.07**	**321**	*e*P	**P**	**23 42 02.9**	**+1.5**
	comp=Z,255nm,1.6s						
F32A	**Veblen**	**63.13**	**343**	P	**P**	**23 42 00.2**	**-1.3**
	baz=157						
SHOC	**Shoshone, Teco**	**63.14**	**324**	P	**P**	**23 42 01.8**	**+0.1**
	baz=135						
D37A	**Cotton**	**63.18**	**347**	P	**P**	**23 42 00.6**	**-1.1**
	baz=162,SNR=22						
E34A	**Wadena**	**63.21**	**345**	P	**P**	**23 42 01.2**	**-0.8**
	baz=159,SNR=6.5						
DECC	**Green Verdugo**	**63.22**	**321**	P	**P**	**23 42 02.2**	**-0.1**
	baz=133						
TAOE	**Nuku Hiva Isla**	**63.24**	**267**	*e*S	**S**	**23 50 35.6**	**+3.0**
	comp=Z,2µm,29.2s						
TAOE	**Nuku Hiva Isla**	**63.24**	**267**	*e*LR	LR	00 01 01.4	
	comp=Z,12µm,25.1s,baz=103						
C40A	**Isle Royale Na**	**63.28**	**350**	P	**P**	**23 42 01.1**	**-1.3**
	baz=165,SNR=7.5						
C40A	**Isle Royale Na**	**63.28**	**350**	*e*P	**P**	**23 42 01.5**	**-0.9**
	comp=Z,188nm,1.5s						
SNCC	**San Nicolas Is**	**63.29**	**319**	P	**P**	**23 42 01.7**	**-1.0**
	baz=131						
D36A	**Goodland**	**63.36**	**347**	P	**P**	**23 42 01.6**	**-1.3**
	baz=161,SNR=6.3						
D36A	**Goodland**	**63.36**	**347**	*e*P	**P**	**23 42 02.2**	**-0.8**
	comp=Z,53nm,1.0s						
EDW2	**Edwards Air Fo**	**63.44**	**322**	P	**P**	**23 42 03.8**	**-0.1**
	baz=133,SNR=13						
D35A	**Remer**	**63.47**	**346**	P	**P**	**23 42 02.3**	**-1.3**
	baz=160						
C38A	**Sawbill Land.**	**63.48**	**348**	P	**P**	**23 42 01.9**	**-1.8**
	baz=163,SNR=14						
K22A	**Casper**	**63.54**	**335**	P	**P**	**23 42 03.9**	**-0.5**
	baz=146,SNR=19						
K22A	**Casper**	**63.54**	**335**	*e*P	**P**	**23 42 04.0**	**-0.4**
	comp=Z,95nm,0.8s						
BLG	**Laguna Peak, P**	**63.57**	**320**	P	**P**	**23 42 04.1**	**-0.5**
	baz=132						
LRMC	**Laurel Mtn Rad**	**63.67**	**322**	P	**P**	**23 42 04.9**	**-0.5**
	baz=134						
C37A	**Embarrass**	**63.67**	**348**	P	**P**	**23 42 03.8**	**-1.2**
	baz=162,SNR=27						
OSI	**Osito Audit: C**	**63.70**	**321**	P	**P**	**23 42 05.5**	**0.0**
	baz=132						
MPU	**Maple Canyon**	**63.72**	**330**	*e*P	**P**	**23 42 06.2**	**+0.5**
	comp=Z,80nm,1.5s						
PSUT	**Pine Spring**	**63.72**	**327**	*e*P	**P**	**23 42 06.3**	**+0.6**
	comp=Z,78nm,1.2s						
EYMN	**Ely**	**63.74**	**348**	P	**P**	**23 42 03.9**	**-1.6**
	baz=163,SNR=24						
EYMN	**Ely**	**63.74**	**348**	*e*P	**P**	**23 42 04.0**	**-1.4**
	comp=Z,132nm,1.4s						
EYMN				LR	LR		
	comp=Z,992nm,20.0s						
RSSD	**Black Hills**	**63.81**	**338**	P	**P**	**23 42 06.0**	**-0.3**
	baz=149						
RSSD	**Black Hills**	**63.81**	**338**	*e*P	**P**	**23 42 06.0**	**-0.3**
	comp=Z,83nm,1.2s						
RSSD	**Black Hills**	**63.81**	**338**	*e*P	**P**	**23 42 06.0**	**-0.3**
RSSD				pmax	pmax		
	comp=Z,83nm,1.2s						
C36A	**Pine Crest Far**	**63.84**	**347**	P	**P**	**23 42 05.0**	**-1.0**
	baz=161,SNR=27						
SCZ2	**Santa Cruz Isl**	**63.85**	**320**	P	**P**	**23 42 05.8**	**-0.7**
	baz=132						
TPNV	**Topopah Spring**	**63.87**	**325**	P	**P**	**23 42 07.3**	**+0.5**
	baz=135,SNR=35						
TPNV	**Topopah Spring**	**63.87**	**325**	*e*P	**P**	**23 42 07.4**	**+0.7**
	comp=Z,62nm,1.1s						
TPNV	**Topopah Spring**	**63.87**	**325**	*e*P	**P**	**23 42 07.4**	**+0.7**
TPNV				pmax	pmax		
	comp=Z,62nm,1.1s						
FURC	**Furnace Creek,**	**63.88**	**324**	P	**P**	**23 42 07.1**	**+0.6**
	baz=135,SNR=24						
MPMC	**Manual Prospec**	**63.95**	**323**	P	**P**	**23 42 07.2**	**-0.1**
	baz=134,SNR=31						
MATQ	**Matagami**	**63.99**	**359**	P	**P**	**23 42 05.8**	**-1.2**
	baz=178						
C35A	**Jirik Farms, M**	**64.04**	**346**	P	**P**	**23 42 06.2**	**-1.2**
	baz=160						
JLU	**Jordanelle**	**64.08**	**330**	*e*P	**P**	**23 42 08.5**	**+0.3**
	comp=Z,267nm,1.7s						
ARVC	**Arvin**	**64.11**	**321**	P	**P**	**23 42 08.3**	**+0.2**
	baz=133						
CHGQ	**Chibougamau**	**64.13**	**1**	P	**P**	**23 42 07.1**	**-0.8**
	baz=181						
DAC	**Darwin (Calif)**	**64.17**	**323**	*e*P	**P**	**23 42 09.2**	**+0.5**
	comp=Z,56nm,1.3s						
DAC	**Darwin (Calif)**	**64.17**	**323**	*e*P	**P**	**23 42 09.2**	**+0.5**
DAC				pmax	pmax		
	comp=Z,56nm,1.3s						
SBC	**Santa Barbara**	**64.19**	**320**	P	**P**	**23 42 09.6**	**+1.0**
	baz=132						
C34A	**RKJ Ranch, Bem**	**64.21**	**346**	P	**P**	**23 42 07.4**	**-1.1**
	baz=159						
ISA	**Isabella, Lake**	**64.26**	**322**	P	**P**	**23 42 09.7**	**+0.5**
	baz=133,SNR=12						
ISA	**Isabella, Lake**	**64.26**	**322**	*e*P	**P**	**23 42 10.1**	**+0.9**
	comp=Z,55nm,1.3s						
ISA	**Isabella, Lake**	**64.26**	**322**	*e*P	**P**	**23 42 10.1**	**+0.9**
ISA				pmax	pmax		
	comp=Z,55nm,1.3s						
CTU	**Camp Tracy**	**64.30**	**330**	*e*P	**P**	**23 42 09.9**	**+0.4**
	comp=Z,83nm,1.5s						
DUG	**Dugway, Tooele**	**64.44**	**329**	P	**P**	**23 42 10.8**	**+0.5**
	baz=140,SNR=73						
DUG	**Dugway, Tooele**	**64.44**	**329**	*e*P	**P**	**23 42 10.5**	**+0.1**
	comp=Z,79nm,1.0s						
DUG				LR	LR		
	comp=Z,2µm,19.0s						
DUG	**Dugway, Tooele**	**64.44**	**329**	*e*P	**P**	**23 42 10.5**	**+0.1**
DUG				pmax	pmax		
	comp=Z,79nm,1.0s						
DUG				MLR	MLR		
	comp=Z,2µm,19.0s						
TCUT	**Toone Canyon**	**64.47**	**331**	*e*P	**P**	**23 42 10.7**	**+0.1**
	comp=Z,478nm,1.6s						
R11A	**Troy Canyon, C**	**64.51**	**326**	P	**P**	**23 42 11.5**	**+0.6**
	baz=136,SNR=89						
R11A	**Troy Canyon, C**	**64.51**	**326**	*e*P	**P**	**23 42 11.3**	**+0.4**
	comp=Z,164nm,1.8s						
C33A	**Trail**	**64.52**	**345**	P	**P**	**23 42 09.4**	**-1.2**
	baz=158						
GRAC	**Grapevine Rang**	**64.53**	**324**	P	**P**	**23 42 11.5**	**+0.5**
	baz=134						
PKM	**Mcpherson Peak**	**64.55**	**321**	P	**P**	**23 42 11.8**	**+0.6**
	baz=132,SNR=9.1						
CWC	**Cottonwood Cre**	**64.56**	**323**	P	**P**	**23 42 11.6**	**+0.4**
	baz=134						
B35A	**Bob, Littlefor**	**64.60**	**347**	P	**P**	**23 42 09.8**	**-1.3**
	baz=161,SNR=30						
B35A	**Bob, Littlefor**	**64.60**	**347**	*e*P	**P**	**23 42 09.7**	**-1.4**
	comp=Z,114nm,1.3s						
VES	**Vestal, Richgr**	**64.75**	**322**	P	**P**	**23 42 12.6**	**+0.3**
	baz=133,SNR=9.6						
HWUT	**Hardware Ranch**	**64.92**	**331**	*e*P	**P**	**23 42 13.0**	**-0.6**
	comp=Z,90nm,1.0s						
HWUT				LR	LR		
	comp=Z,2µm,19.0s						
BW06	**Boulder Array**	**64.92**	**333**	P	**P**	**23 42 12.6**	**-1.0**
	baz=143,SNR=17						
BW06	**Boulder Array**	**64.92**	**333**	PFAKE		23 42 30.0	+16
BW06				LR	LR		
	comp=Z,857nm,21.0s						
PD31	**Pinedale Array**	**64.92**	**333**	*e*P	**P**	**23 42 12.7**	**-0.9**
PDAR	**Pinedale Array**	**64.92**	**333**	P	**P**	**23 42 12.2**	**-1.3**
	comp=Z,11nm,1.0s,baz=144,slow=5.5,SNR=56						
PDAR				S	**S**	**23 50 50.1**	**-2.6**
	comp=Z,0.1nm,0.5s,baz=277,slow=39,SNR=1.4						
PDAR				LR	LR	00 11 46.3	
	comp=Z,726nm,18.3s,baz=147,slow=37						
PDAR	**Pinedale Array**	**64.92**	**333**	*e*P	**P**	**23 42 11.7**	**-1.9**
PDAR				S	**S**	**23 50 50.1**	**-2.6**
B34A	**Aery, Baudette**	**64.93**	**346**	P	**P**	**23 42 12.2**	**-1.0**
	baz=160						
SMMC	**Simmler**	**64.94**	**321**	P	**P**	**23 42 14.3**	**+0.7**
	baz=132,SNR=9.2						
AGMN	**Agassiz Nation**	**65.05**	**345**	P	**P**	**23 42 13.0**	**-0.9**
	baz=158,SNR=24						
AGMN	**Agassiz Nation**	**65.05**	**345**	*e*P	**P**	**23 42 13.1**	**-0.9**
	comp=Z,104nm,1.0s						
AGMN				LR	LR		
	comp=Z,1µm,20.0s						
TIN	**Tinemaha, Big**	**65.07**	**323**	P	**P**	**23 42 14.9**	**+0.4**
	baz=134						
BGU	**Big Grassy Mou**	**65.10**	**330**	*e*P	**P**	**23 42 14.1**	**-0.6**
	comp=Z,75nm,1.3s						
SPUT	**South Promonto**	**65.11**	**330**	*e*P	**P**	**23 42 14.5**	**-0.2**
	comp=Z,173nm,1.6s						
PAGB	**Antelope Grade**	**65.38**	**321**	*e*P	**P**	**23 42 17.4**	**+1.0**
	comp=Z,164nm,1.7s						
A33A	**Warroad**	**65.53**	**346**	P	**P**	**23 42 16.3**	**-0.7**
	baz=159,SNR=47						
AHID	**Auburn Hatcher**	**65.61**	**332**	*e*P	**P**	**23 42 17.8**	**-0.2**
	comp=Z,132nm,1.6s						
AHID				LR	LR		
	comp=Z,2µm,22.0s						
HVU	**Hansel Valley**	**65.63**	**330**	*e*P	**P**	**23 42 18.1**	**0.0**
	comp=Z,103nm,1.4s						
HVU	**Hansel Valley**	**65.63**	**330**	*e*P	**P**	**23 42 18.1**	**0.0**
HVU				pmax	pmax		
	comp=Z,103nm,1.4s						
MDND	**Maddock**	**65.64**	**343**	P	**P**	**23 42 17.7**	**-0.2**
	baz=154,SNR=25						
MDND	**Maddock**	**65.64**	**343**	*e*P	**P**	**23 42 17.6**	**-0.2**
	comp=Z,375nm,1.1s						
MLAC	**Mammoth, Mammo**	**65.82**	**323**	P	**P**	**23 42 19.5**	**0.0**
	baz=133						
OMMB	**Old Mammoth Mi**	**65.90**	**323**	*e*P	**P**	**23 42 20.7**	**+0.6**
	comp=Z,138nm,1.3s						
MDPB	**Devils Postpil**	**65.96**	**323**	*e*P	**P**	**23 42 21.2**	**+0.7**
	comp=Z,74nm,1.2s						
REDW	**Red Top Meadow**	**65.97**	**333**	*e*P	**P**	**23 42 19.9**	**-0.5**
	comp=Z,123nm,1.4s						
NV11	**Mina Array Sit**	**65.98**	**324**	*e*P	**P**	**23 42 20.4**	**-0.1**
	comp=Z,14nm,1.8s						
SNOW	**Snow King Moun**	**66.01**	**333**	*e*P	**P**	**23 42 20.8**	**+0.2**
	comp=Z,168nm,1.8s						
PMPB	**Monarch Peak**	**66.03**	**321**	*e*P	**P**	**23 42 23.5**	**+2.8**
	comp=Z,191nm,1.4s						
LOHW	**Long Hollow**	**66.06**	**333**	*e*P	**P**	**23 42 20.5**	**-0.4**
	comp=Z,102nm,1.8s						
NV01	**Mina Array Sit**	**66.07**	**324**	*e*P	**P**	**23 42 20.6**	**-0.5**
NVAR	**Mina Array Bea**	**66.07**	**324**	P	**P**	**23 42 20.8**	**-0.3**
	comp=Z,18nm,1.0s,baz=142,slow=6.3,SNR=41						
NVAR				LR	LR	00 07 32.2	
	comp=Z,1µm,20.7s,baz=227,slow=33						
NVAR				PKP2bc		00 10 56.5	
	comp=Z,3.4nm,1.1s,baz=256,slow=1.8,SNR=8.2						
ELK	**Elko**	**66.07**	**328**	P	**P**	**23 42 24.2**	**+3.1**
	comp=Z,20nm,1.0s,baz=178,slow=3.4,SNR=36						
ELK				S	**S**	**23 51 10.8**	**+4.0**
	comp=Z,0.2nm,0.3s,baz=223,slow=20,SNR=1.1						
TPAW	**Teton Pass**	**66.12**	**333**	*e*P	**P**	**23 42 21.5**	**+0.2**
	comp=Z,36nm,1.0s						
MOOW	**Moose Ponds**	**66.23**	**333**	*e*P	**P**	**23 42 21.6**	**-0.4**
	comp=Z,74nm,1.4s						
FXWY	**Fox Creek**	**66.27**	**333**	*e*P	**P**	**23 42 21.8**	**-0.5**
	comp=Z,54nm,1.2s						
RYN	**Ryan**	**66.33**	**324**	*e*P	**P**	**23 42 23.4**	**+0.7**
	comp=Z,144nm,1.8s						
KVN	**Kaiserville**	**66.39**	**325**	*e*P	**P**	**23 42 23.4**	**+0.4**
	comp=Z,108nm,1.5s						
KVN	**Kaiserville**	**66.39**	**325**	*e*P	**P**	**23 42 23.4**	**+0.4**
KVN				pmax	pmax		
	comp=Z,108nm,1.5s						
IMW	**Indian Meadow**	**66.43**	**333**	*e*P	**P**	**23 42 23.6**	**+0.2**
	comp=Z,76nm,1.3s						
FLWY	**Flagg Ranch**	**66.47**	**333**	*e*P	**P**	**23 42 23.7**	**+0.2**
	comp=Z,121nm,1.0s						
H17A	**Grant Village**	**66.67**	**333**	P	**P**	**23 42 25.3**	**+0.4**
	baz=143						
H17A	**Grant Village**	**66.67**	**333**	*e*P	**P**	**23 42 28.3**	**+3.5**
	comp=Z,58nm,1.3s						
YPP	**Pitchstone Pla**	**66.67**	**333**	*e*P	**P**	**23 42 25.7**	**+0.8**
	comp=Z,54nm,1.2s						
RLMT	**Red Lodge**	**66.70**	**335**	P	**P**	**23 42 24.7**	**-0.3**
	baz=144,SNR=18						
RLMT	**Red Lodge**	**66.70**	**335**	*e*P	**P**	**23 42 24.6**	**-0.3**
	comp=Z,91nm,1.3s						
RLMT				LR	LR		
	comp=Z,338nm,19.0s						
LKWY	**Lake**	**66.73**	**334**	PFAKE		23 42 40.0	+15
LKWY				LR	LR		
	comp=Z,1µm,22.0s						
WAKR	**Walker**	**66.76**	**324**	*e*P	**P**	**23 42 26.8**	**+1.3**
	comp=Z,144nm,1.6s						
LAO	**LASA Array**	**66.81**	**338**	P	**P**	**23 42 24.9**	**-0.6**
	baz=148,SNR=12						
LAO	**LASA Array**	**66.81**	**338**	*e*P	**P**	**23 42 25.3**	**-0.1**
	comp=Z,40nm,0.8s						
LAO				LR	LR		
	comp=Z,2µm,22.0s						
YFT	**Old Faithful**	**66.83**	**333**	*e*P	**P**	**23 42 27.6**	**+1.8**
	comp=Z,74nm,1.2s						
ULM	**Lac du Bonnet**	**66.87**	**346**	P	**P**	**23 42 24.3**	**-1.3**
	comp=Z,64nm,0.9s,baz=158,slow=6.3,SNR=70						
ULM				S	**S**	**23 51 10.3**	**-5.2**
	comp=Z,0.9nm,0.4s,baz=160,slow=6.7,SNR=1.3						
ULM				PKP2bc		00 10 54.0	
	comp=Z,3.7nm,0.8s,baz=142,slow=2.6,SNR=3.9						

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ULM                                LR      LR      00 15 41.4
      comp=Z,657nm,18.7s,baz=150,slow=40
ULM   Lac du Bonnet     66.87 346 eP      P       23 42 24.4 -1.3
      comp=Z,516nm,1.8s
ULM                                S       S       23 51 10.3 -5.2
ULM                              ⇑e                00 10 54.0
BMN   Battle Mountai    66.88 327 eP      P       23 42 26.7 +0.6
      comp=Z,83nm,1.6s
BMN   Battle Mountai    66.88 327 eP      P       23 42 26.7 +0.6
BMN                                pmax    pmax
      comp=Z,83nm,1.6s
YNR   Norris Junctio    66.97 334 eP      P       23 42 28.2 +1.5
      comp=Z,47nm,1.2s
YERR  Yerington         66.98 324 eP      P       23 42 27.6 +0.7
      comp=Z,174nm,1.5s
CMB   Columbia Colle    66.99 323 eP      P       23 42 27.1 +0.3
      comp=Z,31nm,1.0s
CMB   Columbia Colle    66.99 323 eP      P       23 42 27.1 +0.3
CMB                                pmax    pmax
      comp=Z,31nm,1.0s
YMR   Madison River     67.06 333 eP      P       23 42 28.6 +1.3
      comp=Z,169nm,1.5s
SHEL  Horse Pasture     67.18 101  PFAKE          23 42 40.0  +12
SHEL                               LR      LR
      comp=Z,2µm,21.0s
YHB   Horse Butte       67.22 333 eP      P       23 42 29.4 +1.1
      comp=Z,110nm,1.1s
PNTR  Pine Nut          67.25 324 eP      P       23 42 29.9 +1.3
      comp=Z,156nm,1.3s
QLMT  Earthquake Lak    67.39 333 eP      P       23 42 30.5 +1.2
GCMT  Greycliff         67.41 335 eP      P       23 42 29.1 -0.3
VCNR  Virginia City     67.42 324 eP      P       23 42 30.9 +1.2
      comp=Z,71nm,1.1s
PAHR  Pah Rah Range     67.56 325 eP      P       23 42 31.1 +0.6
      comp=Z,317nm,1.5s
DGMT  Dagmar            67.62 340  P      P       23 42 30.6 +0.1
      baz=150,SNR=14
DGMT  Dagmar            67.62 340 eP      P       23 42 31.1 +0.6
      comp=Z,138nm,1.1s
DGMT                               LR      LR
      comp=Z,839nm,21.0s
HLID  Hailey            67.77 331  P      P       23 42 32.0 +0.2
      baz=139,SNR=47
HLID  Hailey            67.77 331  PFAKE          23 42 40.0 +8.3
HLID                               LR      LR
      comp=Z,1µm,20.0s
AFDM  Forest Hills D    67.94 323 eP      P       23 42 33.2 +0.5
      comp=Z,135nm,1.6s
MCMT  McKenzie Canyo    68.01 332 eP      P       23 42 33.7 +0.4
BOZ   Bozeman (W)       68.08 334  P      P       23 42 33.5 -0.1
      baz=142,SNR=36
BOZ   Bozeman (W)       68.08 334 eP      P       23 42 33.2 -0.3
      comp=Z,45nm,1.1s
BOZ                                LR      LR
      comp=Z,1µm,21.0s
BOZ   Bozeman (W)       68.08 334 eP      P       23 42 33.3 -0.3
BOZ                                pmax    pmax
      comp=Z,45nm,1.1s
BOZ                                MLR     MLR
      comp=Z,1µm,21.0s
BEKR  Beckworth         68.21 324 eP      P       23 42 35.5 +0.9
      comp=Z,106nm,1.4s
DLMT  Dillon            68.32 333 eP      P       23 42 35.2 +0.1
      comp=Z,77nm,1.2s
MFID  Camas Ranch       68.34 330 eP      P       23 42 35.5 +0.3
      comp=Z,142nm,1.2s
LRM   Limekiln Ridge    68.61 333 eP      P       23 42 37.0 -0.1
ORV   Oroville          68.66 323 eP      P       23 42 38.4 +1.2
      comp=Z,197nm,1.1s
ORV   Oroville          68.66 323 eP      P       23 42 38.4 +1.2
ORV                                pmax    pmax
      comp=Z,197nm,1.1s
VNA3  Neumayer Olymp    68.73 162  P      P       23 42 37.5 +0.3
VNA1  Neumayer--Stat    68.99 161  P      P       23 42 39.6 +0.8
ROSA  Rosais            69.04  38 eP      P       23 42 41.0 +1.5
      comp=Z,339nm,1.5s
HRY   Holter Researc    69.05 334 eP      P       23 42 40.0 +0.5
WVOR  Wild Horse Val    69.06 327 eP      P       23 42 39.9 +0.1
      comp=Z,105nm,1.7s
WVOR                               LR      LR
      comp=Z,1µm,19.0s
WVOR  Wild Horse Val    69.06 327 eP      P       23 42 39.9 +0.1
WVOR                               pmax    pmax
      comp=Z,105nm,1.7s
WVOR                               MLR     MLR
      comp=Z,1µm,19.0s
VAH   Vaihoa            69.24 259 eP      P       23 42 48.0 +6.7
      comp=Z,138nm,1.3s
EGMT  Eagleton          69.26 336  P      P       23 42 40.4 -0.4
      baz=144,SNR=17
EGMT  Eagleton          69.26 336 eP      P       23 42 40.4 -0.4
      comp=Z,121nm,1.3s
EGMT                               LR      LR
      comp=Z,1µm,20.0s
O03D  Paynes Creek      69.32 324  P      P       23 42 40.3 -1.1
      baz=132,SNR=13
SCHQ  Schefferville     69.45   5  P      P       23 42 41.2 -0.6
      comp=Z,63nm,0.8s,baz=188,slow=5.2,SNR=73
SCHQ                               LR      LR      00 15 11.2
      comp=Z,924nm,19.6s,baz=208,slow=38
SCHQ  Schefferville     69.45   5 eP      P       23 42 41.1 -0.6
      comp=Z,82nm,0.9s
PMOR  Pomariorio Ree    69.54 259 eP      P       23 42 49.8 +6.7
      comp=Z,193nm,1.3s
MOD   Modoc Plateau     69.57 326 eP      P       23 42 42.8 -0.2
      comp=Z,290nm,1.9s
J08A  Circle Bar Ran    69.63 328 eP      P       23 42 43.5 +0.3
      comp=Z,18nm,0.9s
TBI   Tubuai            69.74 250 eS      S       23 51 53.8 +2.9
      comp=Z,5µm,28.5s
TBI   Tubuai            69.74 250 eLR     LR      00 03 46.1
      comp=Z,6µm,26.2s,baz=91
TBI   Tubuai            69.74 250 eT      T       00 58 06.6
      comp=Z,24nm,0.3s
WDC   Whiskeytown Da    69.93 324 eP      P       23 42 44.1 -0.9
      comp=Z,153nm,2.0s
WDC   Whiskeytown Da    69.93 324 eP      P       23 42 44.1 -0.9
WDC                                pmax    pmax
      comp=Z,153nm,2.0s
KCPM  Cahto Peak        69.96 322 eP      P       23 42 49.0 +3.6
KCPM                              epP     pP      23 42 57.0 +0.1
MSO   Missoula          70.04 333  P      P       23 42 46.1 +0.4
      baz=140,SNR=44
MSO   Missoula          70.04 333 eP      P       23 42 46.1 +0.4
      comp=Z,120nm,1.4s
CMLA  Cha da Macela     70.10  40  PFAKE          23 43 00.0  +14
CMLA                               LR      LR
      comp=Z,2µm,20.0s
CMLA  Cha da Macela     70.10  40 i P     P       23 42 48.1 +2.0
BMO   Blue Mountains    70.12 330 eP      P       23 42 45.7 -0.5
      comp=Z,30nm,1.1s
BMO                                LR      LR
      comp=Z,2µm,20.0s
BMO   Blue Mountains    70.12 330 eP      P       23 42 45.7 -0.5
BMO                                pmax    pmax
      comp=Z,31nm,1.1s
BMO                                MLR     MLR
      comp=Z,2µm,20.0s
N02D  Trinity Center    70.28 324  P      P       23 42 46.4 -0.9
      baz=131
M04C  Macdoel           70.33 325  P      P       23 42 47.6  0.0
      baz=132,SNR=16
KMRM  Mail Ridge        70.38 323 eP      P       23 42 49.6 +1.7
      comp=Z,104nm,1.2s
K05A  Summer Lake       70.45 326 eP      P       23 42 48.4  0.0
      comp=Z,276nm,1.5s
TIAR  Tiarei            70.48 256 eT      T       00 59 02.0
      comp=Z,3.9nm,0.3s
M02C  Callahan          70.64 324  P      P       23 42 48.7 -0.8
      baz=131,SNR=9.1
I07A  Izee              70.67 328 eP      P       23 42 50.6 +1.0
      comp=Z,98nm,1.5s
PPT2  Papeete2          70.69 256 eS      S       23 52 03.7 +1.3
      comp=Z,5µm,27.2s
PPT2  Papeete2          70.69 256 eLR     LR      00 04 13.4
      comp=Z,4µm,27.0s,baz=100
PPT   Papeete           70.69 256 LR      LR      00 08 06.1
      comp=Z,1µm,18.0s,baz=120,slow=31
YBH   Yreka Blue Hor    70.79 325  P      P       23 42 49.3 -1.1
      comp=Z,11nm,0.9s,baz=89,slow=3.0,SNR=18
YBH                                S       S       23 52 00.6 -2.0
      comp=Z,0.3nm,0.4s,baz=80,slow=18,SNR=1.2
YBH                                LR      LR      00 13 30.4
      comp=Z,903nm,19.5s,baz=140,slow=36
YBH   Yreka Blue Hor    70.79 325 eP      P       23 42 49.1 -1.2
      comp=Z,30nm,1.0s
YBH                                S       S       23 52 00.6 -2.0
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YBH   Yreka Blue Hor    70.79 325 eP      P       23 42 49.1 -1.2
YBH                                S       S       23 52 00.6 -2.0
YBH                                pmax    pmax
      comp=Z,30nm,1.0s
KHMM  Horse Mountain    70.81 323 eP      P       23 42 51.7 +1.1
      comp=Z,222nm,2.0s
K04D  Chiloquin, OR     70.85 326  P      P       23 42 50.9 +0.1
      baz=132
JTMT  Jette             70.90 334 eP      P       23 42 51.8 +0.9
      comp=Z,84nm,1.4s
F10A  Beach Ranch, E    70.90 331 eP      P       23 42 51.1 +0.1
      comp=Z,75nm,1.2s
SNAA  Sanae             70.95 161  P      P       23 42 51.0 +0.2
SNAA  Sanae             70.95 161  P      P       23 42 51.1 +0.2
      comp=Z,55nm,0.9s,baz=280,slow=5.5,SNR=143
SNAA                               S       S       23 52 03.2 -0.5
      comp=Z,3.8nm,1.4s,baz=219,slow=12,SNR=1.9
SNAA                               LR      LR      00 09 52.9
      comp=Z,1µm,21.9s,baz=292,slow=32
SNAA  Sanae             70.95 161 eP      P       23 42 51.2 +0.3
      comp=Z,134nm,1.1s
SNAA                               S       S       23 52 03.2 -0.5
SNAA  Sanae             70.95 161c iP     P       23 42 50.8 -0.1
J05D  Fort Rock, OR     71.02 327  P      P       23 42 52.1 +0.3
      baz=133,SNR=19
PINE  Pine Mountain     71.21 327 eP      P       23 42 53.4 +0.4
      comp=Z,111nm,1.4s
G08A  Pilot Rock        71.25 329 eP      P       23 42 53.3 +0.2
      comp=Z,40nm,1.1s
MACI  Morro de la Ar    71.27  53 eP      P       23 42 56.0 +2.3
      comp=Z,356nm,1.3s
J04D  Umpqua Nationa    71.46 326  P      P       23 42 54.5 -0.1
      baz=132
HUMO  Hull Mountain     71.50 325 eP      P       23 42 54.1 -0.5
      comp=Z,22nm,1.2s
L02D  Cave Junction,    71.57 324  P      P       23 42 55.3 +0.3
      baz=131,SNR=13
E09A  Wood Farm, Sta    71.73 331 eP      P       23 42 56.0 +0.2
      comp=Z,40nm,1.0s
WALA  Waterton Lakes    71.76 335 eP      P       23 42 56.0 -0.1
      comp=Z,49nm,1.0s
I05D  Terrebonne, OR    71.80 327  P      P       23 42 56.8 +0.5
      baz=133,SNR=14
KBO   Bosley Butte      71.96 324 eP      P       23 42 59.2 +1.8
      comp=Z,305nm,1.8s
I04A  Tendick Farm,     71.99 326  P      P       23 42 57.0 -0.5
      baz=132,SNR=17
G06A  Carlson Farm,     72.05 328 eP      P       23 42 59.1 +1.3
      comp=Z,108nm,1.6s
E08A  Dider Farm, El    72.15 330 eP      P       23 42 58.6 +0.3
      comp=Z,22nm,1.0s
HAWA  Hanford           72.31 330  PFAKE          23 43 10.0  +11
HAWA                               LR      LR
      comp=Z,2µm,21.0s
G05D  Wamic, OR         72.40 328  P      P       23 43 00.9 +1.0
      baz=133,SNR=8.2
I03D  Drain, OR         72.44 326  P      P       23 43 00.4 +0.3
      baz=131,SNR=11
KEBM  Edson Butte       72.44 325 eP      P       23 43 02.0 +1.8
H04A  Detroit Lake      72.47 327 eP      P       23 43 00.6 +0.3
      comp=Z,53nm,1.2s
FFC   Flin Flon         72.48 344 eP      P       23 42 59.2 -0.9
      comp=Z,109nm,1.8s
FFC                                LR      LR
      comp=Z,785nm,20.0s
FFC   Flin Flon         72.48 344 eP      P       23 42 59.2 -0.9
FFC                                pmax    pmax
      comp=Z,109nm,1.8s
FFC                                MLR     MLR
      comp=Z,785nm,20.0s
D08A  Wollman Farm,     72.49 331 eP      P       23 43 01.1 +0.7
      comp=Z,81nm,1.4s
NEW   Newport           72.54 332  P      P       23 43 00.6 -0.1
      comp=Z,19nm,1.0s,baz=131,slow=6.6,SNR=24
NEW                                S       S       23 52 23.7 +1.2
      comp=Z,2.7nm,0.8s,baz=113,slow=5.6,SNR=3.1
NEW   Newport           72.54 332  P      P       23 43 00.6 -0.1
      baz=138,SNR=13
NEW   Newport           72.54 332 eP      P       23 43 01.0 +0.3
      comp=Z,93nm,1.4s
NEW                                S       S       23 52 23.7 +1.2
NEW                                LR      LR
      comp=Z,1µm,20.0s
C09A  Chrisman Ranch    72.73 331 eP      P       23 43 02.8 +1.0
      comp=Z,177nm,1.8s
LIC   Lamto             72.99  79 eP      P       23 43 02.4 -1.6
      comp=Z,254nm,1.4s
PMOZ  Porto Moniz, M    73.00  49 eP      P       23 43 05.3 +1.5
PMOZ  Porto Moniz, M    73.00  49 eLR     LR      00 09 57.4
      comp=Z,960nm,18.0s
COR   Corvallis         73.00 326 eP      P       23 43 04.6 +1.2
      comp=Z,340nm,1.8s
COR   Corvallis         73.00 326 eP      P       23 43 04.6 +1.2
COR                                pmax    pmax
      comp=Z,340nm,1.8s
TIC   Toumodi           73.12  78 eP      P       23 43 03.6 -1.2
DBIC  Dimbokro          73.28  78  P      P       23 43 05.8 +0.1
      comp=Z,64nm,1.0s,baz=226,slow=6.1,SNR=28
DBIC                               LR      LR      00 13 36.0
      comp=Z,7µm,20.1s,baz=220,slow=34
DBIC  Dimbokro          73.28  78 eP      P       23 43 06.0 +0.2
      comp=Z,114nm,1.1s
KIC   Kosan Boka        73.30  79 eP      P       23 43 04.4 -1.5
      comp=Z,432nm,1.3s
G03D  McMinnville, O    73.39 327  P      P       23 43 06.3 +0.6
      baz=132
LTY   Liberty           73.48 330 eP      P       23 43 06.6 +0.3
      comp=Z,225nm,2.0s
B08A  Colville Reser    73.62 331 eP      P       23 43 07.1  0.0
LON   Longmire          73.69 329 eP      P       23 43 07.4 -0.1
      comp=Z,20nm,1.1s
LON   Longmire          73.69 329 eP      P       23 43 07.4 -0.1
LON                                pmax    pmax
      comp=Z,20nm,1.1s
F04D  Rainier, OR       73.84 328  P      P       23 43 09.0 +0.7
      baz=132
C06D  Leavenworth       74.05 330  P      P       23 43 09.8 +0.2
      baz=134
D05A  Enumclaw          74.08 329 eP      P       23 43 10.3 +0.6
      comp=Z,52nm,0.8s
E03A  Lebam             74.44 328 eP      P       23 43 12.9 +1.2
FCC   Fort Churchill    74.53 350 eP      P       23 43 11.5 -0.5
      comp=Z,96nm,1.2s
FCC   Fort Churchill    74.53 350 eP      P       23 43 11.5 -0.5
FCC                                pmax    pmax
      comp=Z,96nm,1.2s
B06A  Marblemount       74.75 330 eP      P       23 43 13.9 +0.4
      comp=Z,194nm,1.7s
B05A  Bryant            74.87 330  P      P       23 43 13.9 -0.3
      baz=133,SNR=16
NLWA  Neilton Lookou    75.16 328 eP      P       23 43 17.1 +1.1
      comp=Z,193nm,1.5s
NLWA                               LR      LR
      comp=Z,2µm,21.0s
A04D  Lummi Island      75.48 330  P      P       23 43 18.2 +0.5
      baz=133,SNR=9.2
NVL   N'lazarevskaya    75.60 160⇑iP      P       23 43 18.1 -0.1
NVL                               e*PP    pP      23 43 27.5 -2.4
NVL                               e               23 43 33.2
NVL                               eS      S       23 52 53.1 -3.1
NVL                               e               23 53 21.0
NVL                                MLR     MLR
      comp=Z,1µm,20.0s
QSPA  South Pole Qui    75.66 180  P      P       23 43 18.7 -0.1
      comp=Z,40nm,1.0s,baz=147,slow=4.1,SNR=46
QSPA                               S       S       23 52 55.9 -1.3
      comp=Z,1.0nm,0.8s,baz=245,slow=21,SNR=1.8
QSPA  South Pole Qui    75.66 180 eP      P       23 43 19.4 +0.6
      comp=Z,682nm,1.4s
QSPA                               S       S       23 52 55.9 -1.3
QSPA                               LR      LR
      comp=Z,849nm,20.0s
LLLB  Lillooet          76.39 332 eP      P       23 43 23.6 +0.6
      comp=Z,79nm,1.3s
KOWA  Kowa              76.49  71  P      P       23 43 24.2 -0.1
      comp=Z,84nm,0.8s,baz=251,slow=5.4,SNR=149
KOWA                               LR      LR      00 16 11.9
      comp=Z,3µm,19.4s,baz=244,slow=35
KOWA  Kowa              76.49  71 eP      P       23 43 24.7 +0.5
      comp=Z,108nm,0.8s
IVI   Ivigtut           78.55  13 eP      P       23 43 35.0 +0.3
      comp=Z,166nm,1.1s
NRS   Narsarsuaq        79.15  14 i P     P       23 43 37.5 -0.5
      comp=Z,50nm,1.1s
RAR   Rarotonga         79.50 251  LR     LR      00 09 32.8
      comp=Z,2µm,21.6s,baz=113,slow=29
RAR   Rarotonga         79.50 251  PFAKE          23 43 50.0 +9.0
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RAR                                LR      LR
      comp=Z,3µm,20.0s
BBB   Bella Bella       80.36 330 eP      P       23 43 46.5 +1.7
BBB                               epP     pP      23 43 56.6 +0.1
PFVI  Vila Bisbo        81.08  48⇑iP      P       23 43 50.6 +1.6
      comp=Z,221nm,1.8s
PFVI                              epP     sP      23 44 04.2 -1.0
PFVI  Vila Bisbo        81.08  48 eS      S       23 54 05.0 +9.0
PFVI  Vila Bisbo        81.08  48 eP      P       23 43 50.8 +1.7
      comp=Z,575nm,2.0s
MORF  Marmelete         81.28  48 eP      P       23 43 49.3 -0.9
MORF                              eS      S       23 53 57.4 -0.9
MORF                               AMS     AMS     00 23 10.7
      comp=Z,1µm,23.5s
MORF  Marmelete         81.28  48⇑iP      P       23 43 52.0 +1.8
      comp=Z,272nm,1.8s
MORF                              epP     sP      23 44 05.2 -1.1
MORF  Marmelete         81.28  48 eS      S       23 54 06.4 +8.2
MORF  Marmelete         81.28  48 eP      P       23 43 49.2 -0.9
MORF                              eS      S       23 53 57.3 -0.9
PTEO  Sao Teotonio      81.33  48⇑iP      P       23 43 52.2 +1.8
      comp=Z,341nm,1.8s
PTEO                              epP     sP      23 44 06.2 -0.3
TOA0  Torodi Ar. Sit    81.35  74 eP      P       23 43 51.3 +0.3
TORD  Torodi Ar. Bea    81.35  74  P      P       23 43 49.1 -1.9
      comp=Z,168nm,1.0s,baz=264,slow=5.4
TORD                               LR      LR      00 18 10.3
      comp=Z,2µm,21.3s,baz=280,slow=34
SBA   Scott Base        81.49 191 eP      P       23 43 51.7 +1.1
      comp=Z,76nm,1.4s
SBA                                LR      LR
      comp=Z,2µm,20.0s
SBA   Scott Base        81.49 191 eP      P       23 43 51.7 +1.1
SBA                                pmax    pmax
      comp=Z,76nm,1.4s
SBA                                MLR     MLR
      comp=Z,2µm,20.0s
PMST  Lisbon--Monsan    81.53  46⇑iP      P       23 43 52.9 +1.5
      comp=Z,188nm,1.9s
PMST                              epP     sP      23 44 06.5 -1.0
PMAFR Mafra             81.55  46⇑iP      P       23 43 52.8 +1.3
      comp=Z,332nm,1.7s
PMAFR                             epP     sP      23 44 06.2 -1.5
PMAFR Mafra             81.55  46 eS      S       23 54 13.1  +12
PBDV  Barranco-do-Ve    81.77  48⇑iP      P       23 43 54.6 +1.8
      comp=Z,210nm,1.6s
PBDV                              epP     sP      23 44 08.0 -0.9
PBDV  Barranco-do-Ve    81.77  48 eS      S       23 54 13.6  +10
MESJ  Messejana         81.82  48 eP      P       23 43 52.1 -0.9
MESJ                              eS      S       23 54 02.9 -0.7
MESJ                               AMS     AMS     00 20 01.2
      comp=Z,1µm,19.7s
MESJ  Messejana         81.82  48⇑iP      P       23 43 54.6 +1.7
      comp=Z,192nm,1.8s
MESJ                              epP     sP      23 44 07.8 -1.3
MESJ  Messejana         81.82  48 eP      P       23 43 52.0 -0.9
MESJ                              eS      S       23 54 02.9 -0.7
PCVE  Castro Verde      81.86  48⇑iP      P       23 43 54.9 +1.7
      comp=Z,259nm,1.7s
PCVE                              epP     sP      23 44 08.5 -0.8
PCVE  Castro Verde      81.86  48 eS      S       23 54 15.5  +11
ALMR  Almeirim          82.13  46 eP      P       23 43 53.7 -0.8
ALMR                              eS      S       23 54 06.0 -0.9
ALMR                               AMS     AMS     00 17 43.3
      comp=Z,3µm,21.3s
ALMR  Almeirim          82.13  46⇑iP      P       23 43 56.0 +1.4
      comp=Z,498nm,1.7s
ALMR                              epP     sP      23 44 09.5 -1.2
ALMR  Almeirim          82.13  46 eP      P       23 43 53.7 -0.8
ALMR                              eS      S       23 54 05.9 -0.9
PBEJ  Beja              82.15  48⇑iP      P       23 43 57.4 +2.7
      comp=Z,239nm,1.9s
PBEJ                              epP     sP      23 44 11.6 +0.8
EVO   Evora             82.26  47⇑iP      P       23 43 56.7 +1.4
      comp=Z,228nm,1.9s
EVO                               epP     sP      23 44 10.1 -1.3
PMTG  Montargil         82.34  46⇑iP      P       23 43 57.0 +1.3
      comp=Z,411nm,1.8s
PMTG                              epP     sP      23 44 10.7 -1.1
PMTG  Montargil         82.34  46 eS      S       23 54 16.3 +7.3
PTOM  Tomar             82.45  46⇑iP      P       23 43 57.2 +1.0
      comp=Z,366nm,1.9s
PTOM                              epP     pP      23 44 08.3 +0.3
MDT   Midelt            82.48  53  P      P       23 43 58.1 +1.4
      comp=Z,24nm,1.1s,baz=253,slow=6.0,SNR=32
MDT                                LR      LR      00 18 10.4
      comp=Z,2µm,20.2s,baz=268,slow=34
YKA   Yellowknife Ar    82.56 343  P      P       23 43 55.2 -1.0
      comp=Z,23nm,0.9s,baz=136,slow=5.2,SNR=71
YKA                                LR      LR      00 22 47.7
      comp=Z,91nm,19.6s,baz=127,slow=37
VNDA  Vanda             82.56 191  P      P       23 43 57.1 +1.0
      comp=Z,14nm,1.0s,baz=128,slow=4.6,SNR=48
VNDA                               S       S       23 54 12.0 +1.9
      comp=Z,0.9nm,1.1s,baz=260,slow=7.0,SNR=2.5
VNDA                               LR      LR      00 13 42.7
      comp=Z,2µm,20.6s,baz=123,slow=31
VNDA  Vanda             82.56 191 eP      P       23 43 57.1 +1.0
      comp=Z,39nm,1.2s
VNDA                               S       S       23 54 12.0 +1.9
PCAS  Casmilo, Conde    82.58  46⇑iP      P       23 43 58.2 +1.3
      comp=Z,321nm,1.8s
PCAS                              epP     sP      23 44 11.8 -1.2
PCAS  Casmilo, Conde    82.58  46 eS      S       23 54 13.0 +1.6
YKW3  Yellowknife Ar    82.61 343 eP      P       23 43 55.7 -0.8
COI   Coimbra           82.70  45⇑iP      P       23 43 58.8 +1.3
      comp=Z,539nm,1.9s
COI                               epP     sP      23 44 12.7 -1.0
PESTR Estremoz          82.70  47⇑iP      P       23 43 58.7 +1.1
      comp=Z,295nm,1.8s
PESTR Estremoz          82.70  47 eS      S       23 54 18.1 +5.4
PESTR Estremoz          82.70  47 eP      P       23 43 58.3 +0.7
      comp=Z,201nm,1.6s
PTO   Porto             82.98  44 eP      P       23 44 00.3 +1.4
      comp=Z,432nm,1.9s
PMRV  Marv??o           83.08  46⇑iP      P       23 44 00.1 +0.6
      comp=Z,121nm,1.7s
PMRV                              epP     sP      23 44 13.7 -2.0
PMRV  Marv??o           83.08  46 eS      S       23 54 24.4 +7.9
PMRV  Marv??o           83.08  46 eLR     LR      00 13 52.3
      comp=Z,3µm,20.0s
DIB   Dawson Inlet,     83.09 330 eP      P       23 44 00.1 +1.0
      comp=Z,87nm,1.4s
PCBR  Castelo Branco    83.19  46⇑iP      P       23 44 00.8 +0.7
      comp=Z,173nm,1.8s
PCBR                              epP     sP      23 44 15.1 -1.1
PVIS  Viseu             83.28  45⇑iP      P       23 44 01.1 +0.5
      comp=Z,350nm,1.8s
PVIS                              epP     sP      23 44 15.6 -1.1
SFJD  Kangerlussuaq     83.32  10  P      P       23 43 59.3 -0.8
      comp=Z,20nm,0.9s,baz=225,slow=5.9,SNR=8.0
SFJD                               LR      LR      00 21 27.3
      comp=Z,907nm,22.0s,baz=208,slow=36
SFJD  Kangerlussuaq     83.32  10 eP      P       23 44 00.2 +0.1
      comp=Z,64nm,1.1s
SFJD                               LR      LR
      comp=Z,919nm,21.0s
SFJD  Kangerlussuaq     83.32  10⇑iP      P       23 43 58.9 -1.2
      comp=Z,33nm,1.1s
MTE   Manteigas         83.39  46⇑iP      P       23 44 01.8 +0.7
      comp=Z,222nm,1.5s
MTE                               epP     sP      23 44 15.5 -1.8
MTE   Manteigas         83.39  46 eS      S       23 54 17.1 -2.6
MTE   Manteigas         83.39  46 eLR     LR      00 14 06.3
      comp=Z,3µm,20.0s
MTE   Manteigas         83.39  46 eP      P       23 44 01.9 +0.8
      comp=Z,300nm,1.6s
PGAV  Gavieira, Arco    83.57  44⇑iP      P       23 44 02.5 +0.4
      comp=Z,184nm,1.6s
PGAV                              epP     sP      23 44 16.5 -1.7
PGAV  Gavieira, Arco    83.57  44 eS      S       23 54 23.4 +1.9
PGAV  Gavieira, Arco    83.57  44 eLR     LR      00 14 25.6
      comp=Z,2µm,20.0s
PCAB  Cabril            83.62  44⇑iP      P       23 44 02.8 +0.5
      comp=Z,288nm,1.8s
PCAB                              epP     sP      23 44 17.2 -1.2
POLO  Lamas de Olo      83.63  45⇑iP      P       23 44 02.9 +0.5
      comp=Z,110nm,1.8s
POLO                              epP     sP      23 44 16.7 -1.9
POLO  Lamas de Olo      83.63  45 eS      S       23 54 23.1 +0.9
PVRL  Vila Real         83.64  45⇑iP      P       23 44 03.2 +0.8
      comp=Z,216nm,1.7s
PVRL                              epP     sP      23 44 17.5 -1.1
MVO   Moncorvo          84.06  45⇑iP      P       23 44 05.4 +0.8
      comp=Z,246nm,1.7s
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MVO				*e*pP	**sP**	**23 44 19.1**	**-1.7**
MVO	**Moncorvo**	**84.06**	**45**	*e*S	**S**	**23 54 33.2**	**+6.7**
MVO	**Moncorvo**	**84.06**	**45**	*e*LR	LR	00 14 36.7	
	comp=Z,2µm,20.0s						
PBRG	**Braganca**	**84.53**	**44**	⇑*i*P	**P**	**23 44 07.7**	**+0.8**
	comp=Z,222nm,1.7s						
PBRG				*e*pP	**sP**	**23 44 21.3**	**-1.8**
PBRG	**Braganca**	**84.53**	**44**	*e*S	**S**	**23 54 37.7**	**+6.6**
CRAG	**Craig**	**84.71**	**331**	*e*P	**P**	**23 44 08.0**	**+0.6**
	comp=Z,84nm,1.4s						
ANGG	**Ammassalik, Gr**	**84.80**	**15**	*e*P	**P**	**23 44 07.2**	**-0.4**
	comp=Z,53nm,1.2s						
WRAK	**Wrangell Islan**	**84.90**	**332**	PFAKE		23 44 20.0	+12
WRAK				LR	LR		
	comp=Z,1µm,19.0s						
DLBC	**Dease Lake**	**85.10**	**335**	*e*P	**P**	**23 44 10.0**	**+0.5**
	comp=Z,154nm,1.4s						
SYO	**Syowa Base**	**85.24**	**161**	⇓*e*P	**P**	**23 44 09.8**	**-0.1**
SYO	**Syowa Base**	**85.24**	**161**	⇑*i*PcP	**PcP**	**23 44 12.0**	**-1.0**
PAB	**San Pablo**	**85.28**	**47**	*e*P	**P**	**23 44 11.4**	**+0.6**
	comp=Z,173nm,1.5s						
PAB				LR	LR		
	comp=Z,2µm,20.0s						
PAB	**San Pablo**	**85.28**	**47**	*e*P	**P**	**23 44 11.4**	**+0.6**
PAB				pmax	pmax		
	comp=Z,173nm,1.5s						
PAB				MLR	MLR		
	comp=Z,2µm,20.0s						
ILULI	**Ilulissat**	**85.28**	**9**	⇑*i*P	**P**	**23 44 09.1**	**-0.9**
	comp=Z,110nm,1.3s						
POHA	**Pohakuloa**	**85.59**	**292**	PFAKE		23 44 20.0	+7.1
POHA				LR	LR		
	comp=Z,2µm,19.0s						
ESDC	**Sonseca Array**	**85.60**	**47**	P	**P**	**23 44 12.4**	**0.0**
	comp=Z,3.0nm,0.6s,baz=257,slow=4.3,SNR=42						
ESDC				LR	LR	00 19 55.4	
	comp=Z,2µm,19.5s,baz=260,slow=34						
ESLA	**Sonseca Array**	**85.60**	**47**	*e*P	**P**	**23 44 13.0**	**+0.7**
	comp=Z,249nm,1.8s						
ES19	**SONSECA Array**	**85.66**	**47**	*e*P	**P**	**23 44 13.1**	**+0.4**
KHLU	**Kahalu‘u**	**85.87**	**291**	*e*P	**P**	**23 44 17.1**	**+3.0**
	comp=Z,303nm,1.2s						
JIS	**Juneau Island**	**86.87**	**333**	*e*P	**P**	**23 44 18.9**	**+0.8**
	comp=Z,118nm,1.4s						
VAL	**Valentia**	**86.89**	**34**	⇓*i*P	**P**	**23 44 19.4**	**+1.1**
VAL	**Valentia**	**86.89**	**34**	*i* S	**S**	**23 54 57.5**	**+3.8**
BESE	**Bessie Mountai**	**87.25**	**333**	*e*P	**P**	**23 44 20.9**	**+0.9**
	comp=Z,206nm,1.4s						
TAM	**Tamanrasset**	**87.64**	**66**	*e*P	**P**	**23 44 24.1**	**+1.3**
	comp=Z,135nm,1.3s						
TAM	**Tamanrasset**	**87.64**	**66**	*e*P	**P**	**23 44 24.1**	**+1.3**
TAM				pmax	pmax		
	comp=Z,135nm,1.3s						
SUR	**Sutherland**	**87.70**	**123**	PFAKE		23 44 30.0	+6.9
SUR				LR	LR		
	comp=Z,4µm,19.0s						
SKAG	**Skagway**	**87.94**	**334**	*e*P	**P**	**23 44 23.9**	**+0.7**
	comp=Z,111nm,1.4s						
EANR	**’Ain N’Sour**	**88.01**	**52**	P	**P**	**23 44 22.2**	**-2.0**
KIP	**Kipapa**	**88.29**	**293**	PFAKE		23 44 40.0	+14
KIP				LR	LR		
	comp=Z,3µm,20.0s						
TSUM	**Tsumeb**	**88.31**	**109**	*e*P	**P**	**23 44 26.4**	**+0.2**
	comp=Z,81nm,1.4s						
TSUM				LR	LR		
	comp=Z,2µm,20.0s						
BORG	**Borgarnes**	**88.99**	**20**	*e*P	**P**	**23 44 29.6**	**+1.6**
	comp=Z,276nm,1.3s						
BORG				LR	LR		
	comp=Z,575nm,20.0s						
BORG	**Borgarnes**	**88.99**	**20**	*e*P	**P**	**23 44 29.6**	**+1.6**
BORG				pmax	pmax		
	comp=Z,276nm,1.3s						
BORG				MLR	MLR		
	comp=Z,575nm,20.0s						
EMHD	**Djebel Mahouad**	**89.52**	**52**	P	**P**	**23 44 31.4**	**0.0**
KULLO	**Kullorsuaq**	**89.64**	**5**	⇑*i*P	**P**	**23 44 30.9**	**0.0**
	comp=Z,166nm,1.2s						
RES	**Resolute Bay**	**89.81**	**355**	P	**P**	**23 44 31.6**	**-0.1**
	comp=Z,57nm,0.9s,baz=178,slow=7.4,SNR=71						
RES	**Resolute Bay**	**89.81**	**355**	*e*P	**P**	**23 44 31.5**	**-0.1**
	comp=Z,98nm,1.0s						
RES	**Resolute Bay**	**89.81**	**355**	*e*P	**P**	**23 44 31.5**	**-0.1**
RES				pmax	pmax		
	comp=Z,98nm,1.0s						
SUMG	**Summit**	**90.27**	**10**	*e*P	**P**	**23 44 34.6**	**+0.2**
	comp=Z,228nm,1.2s						
SUMG	**Summit**	**90.27**	**10**	⇑*i*P	**P**	**23 44 34.8**	**+0.4**
	comp=Z,162nm,1.1s						
SUMG	**Summit**	**90.27**	**10**	*e*P	**P**	**23 44 34.6**	**+0.2**
SUMG				pmax	pmax		
	comp=Z,228nm,1.2s						
TULEG	**Thule**	**90.94**	**2**	*e*P	**P**	**23 44 37.1**	**+0.2**
	comp=Z,159nm,1.4s						
TGL	**Tana Glacier**	**91.84**	**333**	*e*P	**P**	**23 44 41.7**	**+0.1**
	comp=Z,78nm,1.3s						
DAWY	**Dawson**	**92.00**	**337**	*e*P	**P**	**23 44 41.5**	**-0.6**
	comp=Z,68nm,1.3s						
ESK	**Eskdalemuir**	**92.13**	**33**	PFAKE		23 44 50.0	+7.1
ESK				LR	LR		
	comp=Z,1µm,20.0s						
INK	**Inuvik**	**92.25**	**342**	P	**P**	**23 44 42.3**	**-0.8**
	comp=Z,33nm,1.0s,baz=117,slow=4.6,SNR=49						
INK	**Inuvik**	**92.25**	**342**	*e*P	**P**	**23 44 42.5**	**-0.6**
	comp=Z,74nm,1.1s						
AFI	**Afiamalu**	**92.34**	**255**	LR	LR	00 18 07.6	
	comp=Z,989nm,18.1s,baz=82,slow=30						
AFI	**Afiamalu**	**92.34**	**255**	PFAKE		23 45 00.0	+15
AFI				LR	LR		
	comp=Z,2µm,20.0s						
BOSA	**Boshof**	**92.45**	**120**	P	**P**	**23 44 44.4**	**-0.9**
	comp=Z,14nm,1.0s,baz=232,slow=3.9,SNR=9.9						
BOSA				LR	LR	00 23 01.7	
	comp=Z,2µm,21.9s,baz=256,slow=33						
BOSA	**Boshof**	**92.45**	**120**	*e*P	**P**	**23 44 45.3**	**0.0**
	comp=Z,63nm,1.4s						
BOSA	**Boshof**	**92.45**	**120**	P	**P**	**23 44 44.4**	**-0.9**
BOSA				pmax	pmax		
	comp=Z,20nm,1.2s						
RAGM	**Ragged Mountai**	**92.50**	**332**	*e*P	**P**	**23 44 45.2**	**+0.7**
	comp=Z,38nm,1.2s						
BMRM	**Bremner River**	**92.71**	**333**	*e*P	**P**	**23 44 45.2**	**-0.3**
	comp=Z,62nm,1.3s						
MAW	**Mawson**	**92.78**	**165**	P	**P**	**23 44 45.1**	**-0.7**
	comp=Z,34nm,1.2s,baz=224,slow=6.4,SNR=24						
MAW				LR	LR	00 24 00.4	
	comp=Z,2µm,20.8s,baz=232,slow=34						
MAW	**Mawson**	**92.78**	**165**	*e*P	**P**	**23 44 45.8**	**+0.1**
	comp=Z,17nm,1.4s						
EGAK	**Eagle**	**93.01**	**337**	*e*P	**P**	**23 44 46.0**	**-0.8**
	comp=Z,51nm,1.1s						
EGAK				LR	LR		
	comp=Z,1µm,21.0s						
DIV	**Divide**	**93.30**	**333**	*e*P	**P**	**23 44 47.6**	**-0.6**
	comp=Z,94nm,1.8s						
RAO	**Raoul Island**	**93.37**	**239**	PFAKE		23 45 00.0	+11
RAO				LR	LR		
	comp=Z,3µm,22.0s						
KLU	**Klutina**	**93.51**	**333**	*e*P	**P**	**23 44 48.9**	**-0.3**
	comp=Z,56nm,1.1s						
HARP	**HAARP**	**93.56**	**334**	*e*P	**P**	**23 44 49.7**	**+0.3**
	comp=Z,74nm,1.4s						
THTN	**Thala**	**93.80**	**54**	*e*P	**P**	**23 44 51.8**	**+0.6**
	comp=Z,67nm,1.7s						
LBTB	**Lobatse**	**93.84**	**117**	*e*P	**P**	**23 44 52.2**	**+0.5**
	comp=Z,81nm,1.5s						
LBTB	**Lobatse**	**93.84**	**117**	*e*P	**P**	**23 44 52.2**	**+0.5**
LBTB				pmax	pmax		
	comp=Z,81nm,1.5s						
SCM	**Sheep Creek Mo**	**94.26**	**333**	*e*P	**P**	**23 44 52.2**	**-0.5**
	comp=Z,139nm,1.7s						
SCM	**Sheep Creek Mo**	**94.26**	**333**	*e*P	**P**	**23 44 52.2**	**-0.5**
SCM				pmax	pmax		
	comp=Z,139nm,1.7s						
KEST	**Kesra**	**94.36**	**54**	P	**P**	**23 44 51.0**	**-2.8**
	comp=Z,12nm,1.1s,baz=218,slow=5.9,SNR=2.9						
KEST				LR	LR	00 27 42.1	
	comp=Z,1µm,19.8s,baz=214,slow=36						
SNZO	**South Karori**	**94.68**	**225**	PFAKE		23 45 10.0	+15
SNZO				LR	LR		
	comp=Z,4µm,19.0s						
DHY	**Denali Highway**	**94.76**	**334**	*e*P	**P**	**23 44 54.4**	**-0.7**
	comp=Z,46nm,1.3s						
BNI	**Bardonecchia**	**94.81**	**45**	*e*P	**P**	**23 44 56.5**	**+0.8**
DOU	**Dourbes**	**94.86**	**40**	⇑P	**P**	**23 44 55.1**	**-0.4**
	comp=Z,22nm,1.9s						
DOU				⇑AP	**pP**	**23 45 06.2**	**-1.3**
DOU				⇑XP	**sP**	**23 45 10.1**	**-1.7**
UCC	**Uccle**	**94.91**	**39**	⇑P	**P**	**23 44 55.3**	**-0.5**
UCC				⇑XP	**sP**	**23 45 10.0**	**-2.0**
	comp=Z,19nm,2.5s						
GHO	**Glory Hole Cre**	**94.94**	**333**	*e*P	**P**	**23 44 55.1**	**-0.7**
RC01	**Rabbit Creek A**	**95.06**	**332**	*e*P	**P**	**23 44 55.8**	**-0.4**
BRLK	**Bradley Lake**	**95.13**	**331**	*e*P	**P**	**23 44 56.5**	**-0.1**
	comp=Z,23nm,0.8s						
IL1	**Eielson Array**	**95.22**	**336**	*e*P	**P**	**23 44 54.4**	**-2.5**
ILAR	**Eielson Array**	**95.22**	**336**	P	**P**	**23 44 55.5**	**-1.4**
	comp=Z,5.7nm,0.8s,baz=152,slow=3.4,SNR=47						
ILAR				PP	**PP**	**23 48 43.2**	**-4.2**
	comp=Z,2.0nm,1.1s,baz=94,slow=5.8,SNR=4.0						
ILAR				LR	LR	00 30 06.4	
	comp=Z,763nm,20.8s,baz=114,slow=37						
ILB	**Eielson Array**	**95.22**	**336**	*e*P	**P**	**23 44 56.0**	**-0.9**
KDAK	**Kodiak Island**	**95.31**	**328**	PFAKE		23 45 10.0	+13
KDAK				LR	LR		
	comp=Z,262nm,19.0s						
FYU	**Fort Yukon**	**95.32**	**338**	*e*P	**P**	**23 44 55.9**	**-1.4**
	comp=Z,167nm,1.4s						
BCLA	**Clavier**	**95.38**	**39**	⇑P	**P**	**23 44 57.6**	**-0.4**
	comp=Z,19nm,2.0s						
BCLA				⇑AP	**pP**	**23 45 08.7**	**-1.2**
BCLA				⇑XP	**sP**	**23 45 11.9**	**-2.2**
CCB	**Clear Creek Bu**	**95.54**	**336**	*e*P	**P**	**23 44 57.4**	**-0.9**
COLA	**College**	**95.64**	**336**	*e*P	**P**	**23 44 57.8**	**-1.0**
	comp=Z,40nm,1.0s						
COLA	**College**	**95.64**	**336**	*e*P	**P**	**23 44 57.8**	**-1.0**
COLA				pmax	pmax		
	comp=Z,40nm,1.0s						
SUA	**Susitna One**	**95.64**	**332**	*e*P	**P**	**23 44 58.7**	**-0.4**
	comp=Z,26nm,0.9s						
MCK	**McKinley**	**95.66**	**335**	*e*P	**P**	**23 44 58.5**	**-0.4**
	comp=Z,38nm,1.3s						
MCK	**McKinley**	**95.66**	**335**	*e*P	**P**	**23 44 58.5**	**-0.4**
MCK				pmax	pmax		
	comp=Z,38nm,1.3s						
WLF	**Walferdange**	**95.70**	**40**	⇓P	**P**	**23 44 59.6**	**+0.1**
WLF				⇓AP	**pP**	**23 45 10.3**	**-1.1**
WLF				⇓XP	**sP**	**23 45 14.1**	**-1.6**
	comp=Z,47nm,1.6s						
WLF	**Walferdange**	**95.70**	**40**	*e*P	**P**	**23 44 59.7**	**+0.3**
	comp=Z,113nm,1.5s						
BEBN	**Eben Emael**	**95.72**	**39**	⇑P	**P**	**23 44 59.5**	**0.0**
MDM	**Murphy Dome**	**95.83**	**336**	*e*P	**P**	**23 44 58.8**	**-0.9**
	comp=Z,72nm,1.1s						
MEM	**Membach**	**95.87**	**39**	⇑P	**P**	**23 45 00.1**	**0.0**
	comp=Z,14nm,2.2s						
MEM				⇑AP	**pP**	**23 45 10.9**	**-1.2**
MEM				⇑XP	**sP**	**23 45 14.2**	**-2.2**
ECH	**Echery**	**95.96**	**42**	*e*P	**P**	**23 45 00.5**	**-0.2**
ECH	**Echery**	**95.96**	**42**	*e*P	**P**	**23 45 00.5**	**-0.2**
BWN	**Browne**	**96.04**	**335**	*e*P	**P**	**23 45 00.0**	**-0.6**
	comp=Z,57nm,1.0s						
TRF	**Thorofare Moun**	**96.13**	**334**	*e*P	**P**	**23 45 00.5**	**-0.8**
	comp=Z,32nm,1.3s						
SKT	**Skwentna**	**96.17**	**333**	*e*P	**P**	**23 45 00.0**	**-1.3**
	comp=Z,24nm,0.9s						
BPAW	**Bear Paw Mtn.**	**96.64**	**335**	*e*P	**P**	**23 45 02.2**	**-1.2**
	comp=Z,36nm,1.1s						
BFO	**Black Forest**	**96.75**	**42**	*e*P	**P**	**23 45 04.2**	**-0.1**
BFO				*e*pP	**pP**	**23 45 17.4**	**+1.2**
BFO	**Black Forest**	**96.75**	**42**	*ce*P	**P**	**23 45 04.2**	**-0.1**
PPLA	**Purkeypile**	**96.76**	**333**	*e*P	**P**	**23 45 03.0**	**-1.2**
	comp=Z,76nm,1.3s						
MLY	**Manley**	**96.85**	**336**	*e*P	**P**	**23 45 03.4**	**-1.0**
CAST	**Castle Rocks**	**96.88**	**334**	*e*P	**P**	**23 45 03.0**	**-1.5**
	comp=Z,47nm,1.2s						
DAG	**Danmarks Havn**	**96.92**	**11**	⇑*i*P	**P**	**23 45 03.3**	**-1.1**
	comp=Z,16nm,1.3s						
TUE	**Stuetta**	**96.98**	**44**	*e*P	**P**	**23 45 05.7**	**+0.1**
	comp=Z,104nm,1.7s						
COLD	**Coldfoot**	**97.38**	**338**	*e*P	Pdif	23 45 06.7	0.0
DAVOX	**Davos/Dischmat**	**97.40**	**44**	P	Pdif	23 45 07.8	+0.2
	comp=Z,16nm,0.9s,baz=272,slow=4.8,SNR=22						
DAVOX				PP	**PP**	**23 49 01.1**	**-3.8**
	comp=Z,1.0nm,0.4s,baz=238,slow=5.9,SNR=3.6						
DAVOX				LR	LR	00 28 19.3	
	comp=Z,2µm,18.8s,baz=253,slow=35						
STU	**Stuttgart**	**97.41**	**42**	*e*P	Pdif	23 45 07.7	+0.4
	comp=Z,97nm,1.6s						
STU	**Stuttgart**	**97.41**	**42**	*e*P	Pdif	23 45 07.7	+0.4
STU				pmax	pmax		
	comp=Z,97nm,1.6s						
DAVA	**Damuels**	**97.52**	**43**	*i* PcP	Pdif	23 45 08.3	+0.3
	comp=Z,33nm,1.1s,SNR=12						
TOLK	**Toolik Lake Re**	**97.64**	**339**	P	**P**	**23 45 07.1**	**-0.8**
	baz=110						
JOHN	**Johnston Islan**	**97.69**	**285**	PFAKE		23 45 20.0	+11
JOHN				LR	LR		
	comp=Z,152nm,19.0s						
SVW2	**Sparrevohn**	**97.76**	**331**	*e*P	**P**	**23 45 07.1**	**-1.4**
	comp=Z,24nm,1.4s						
CHGN	**Chignik**	**97.95**	**326**	*e*P	Pdif	23 45 10.4	+1.0
	comp=Z,23nm,1.1s						
FETA	**Feichten**	**98.03**	**44**	*i* PcP	Pdif	23 45 10.4	+0.1
	comp=Z,39nm,1.4s,SNR=16						
RETA	**Reutte**	**98.15**	**43**	*i* PcP	Pdif	23 45 10.8	+0.1
	comp=Z,36nm,1.3s,SNR=18						
IM3	**Indian Mountai**	**98.34**	**336**	*e*P	**P**	**23 45 08.9**	**-2.1**
MOTA	**Moosalm**	**98.34**	**43**	*i* Pdiff	Pdif	23 45 12.7	+1.0
	comp=Z,29nm,0.9s,SNR=30						
WATA	**Walderalm**	**98.66**	**43**	*i* Pdiff	Pdif	23 45 14.2	+1.1
	comp=Z,63nm,1.5s,SNR=16						
WTTA	**Wattenberg**	**98.68**	**43**	*i* Pdiff	Pdif	23 45 13.6	+0.4
	comp=Z,54nm,1.3s,SNR=12						
GRFO	**Grafenberg**	**98.91**	**41**	*e*P	Pdif	23 45 14.8	+0.9
	comp=Z,121nm,2.0s						
GRFO	**Grafenberg**	**98.91**	**41**	*e*P	Pdif	23 45 14.9	+1.0
GRFO				pmax	pmax		
	comp=Z,121nm,2.0s						
AQU	**L’Aquila**	**98.93**	**49**	*e*P	Pdif	23 45 15.1	+0.8
	comp=Z,46nm,1.3s						
AQU	**L’Aquila**	**98.93**	**49**	*e*P	Pdif	23 45 15.1	+0.8
AQU				pmax	pmax		
	comp=Z,46nm,1.3s						
LSZ	**Lusaka**	**99.13**	**108**	*e*P	**Pdif**	**23 45 17.1**	**+1.2**
	comp=Z,13nm,1.4s						
LSZ				LR	LR		
	comp=Z,4µm,20.0s						
LSZ	**Lusaka**	**99.13**	**108**	*e*P	**Pdif**	**23 45 17.1**	**+1.2**
LSZ				pmax	pmax		
	comp=Z,13nm,1.4s						
LSZ				MLR	MLR		
	comp=Z,4µm,20.0s						
ABTA	**Abfaltersbach**	**99.17**	**44**	*i* Pdiff	**Pdif**	**23 45 15.6**	**+0.3**
	comp=Z,49nm,1.3s,SNR=22						
CASY	**Casey**	**99.33**	**183**	*e*P	**Pdif**	**23 45 16.1**	**+0.6**
	comp=Z,16nm,1.2s						
CASY				LR	LR		
	comp=Z,214nm,20.0s						
KBA	**Koelnbreinsper**	**99.79**	**44**	*i* Pdiff	**Pdif**	**23 45 18.1**	**-0.1**
	comp=Z,27nm,1.5s,SNR=9.2						
NKC	**Novy Kostel**	**99.79**	**41**	*e*PDIFF	**Pdif**	**23 45 18.6**	**+0.7**
NKC				*e*PP	PKiKP	23 49 34.9	-11
NKC				*e*x	x	23 56 16.8	
NKC	**Novy Kostel**	**99.79**	**41**	*i* P	**Pdif**	**23 45 18.6**	**+0.7**
MYKA	**Terra Mystica**	**99.91**	**44**	*i* Pdiff	**Pdif**	**23 45 18.8**	**+0.2**
	comp=Z,31nm,1.5s,SNR=15						
JAVS	**Javornik**	**100.06**	**45**	*i* P	**Pdif**	**23 45 19.5**	**+0.3**
KHC	**Kasperske Hory**	**100.31**	**42**	*e*PDIFF	**Pdif**	**23 45 18.7**	**-1.6**
KHC				*e*pP	**pPdif**	**23 45 31.0**	**-1.2**
KHC				*e*PP	**PP**	**23 49 21.5**	**-5.4**
KHC				*e*x	x	23 56 17.0	
KHC				AMS	AMS	00 31 50.0	
	comp=Z,1µm,17.1s						
KHC	**Kasperske Hory**	**100.31**	**42**	*i* P	**Pdif**	**23 45 18.7**	**-1.6**
KHC				MLR	MLR		
	comp=Z,1µm,17.1s						
CLL	**Collm**	**100.33**	**40**	*i* Pdif	**Pdif**	**23 45 20.7**	**+0.5**
	comp=Z,44nm,1.9s						
CLL				*i* pPdif	**pPdif**	**23 45 30.8**	**-1.3**
CLL				*i* sPdif	sPdif	23 45 35.4	-1.1
	comp=Z,37nm,1.6s						
CLL				*e*(PP)		23 49 33.0	
	comp=Z,56nm,2.0s						
CLL				*e*PPP	PPP	23 51 42.0	
CLL				*e*SKSac	**SKSac**	**23 56 02.0**	**+6.0**
CLL				*e*Sdif	**Sdif**	**23 56 54.0**	**+0.7**
CLL				*e*PS	**PS**	**23 58 33.0**	**+5.5**
CLL				*e*PPS	PPS	23 59 18.0	
CLL				*e*SS	**SS**	**00 03 48.0**	**-1.1**
CLL				*e*SSS	SSS	00 07 42.0	
GEA0	**GERESS Array S**	**100.34**	**42**	*e*Pdif	**Pdif**	**23 45 20.0**	**-0.5**
GERES	**GERESS Array B**	**100.34**	**42**	P	**Pdif**	**23 45 20.4**	**-0.1**
	comp=Z,5.7nm,0.8s,baz=253,slow=3.6,SNR=44						
GERES				PP	**PP**	**23 49 21.2**	**-6.0**
	comp=Z,3.4nm,1.2s,baz=266,slow=3.7,SNR=4.6						
OBKA	**Obir**	**100.50**	**45**	*i* Pdiff	**Pdif**	**23 45 21.6**	**+0.3**
	comp=Z,22nm,1.8s,SNR=6.9						
MOA	**Molln**	**100.54**	**43**	*i* Pdiff	**Pdif**	**23 45 21.6**	**+0.3**
	comp=Z,40nm,1.4s,SNR=18						
VISS	**Visnje**	**100.58**	**45**	*e*P	**Pdif**	**23 45 21.3**	**-0.2**
BOJS	**Bojanci**	**100.81**	**46**	*i* P	**Pdif**	**23 45 22.8**	**+0.3**
BRG	**Berggiesshubel**	**100.84**	**40**	PDIFF	**Pdif**	**23 45 16.0**	**-6.5**
BRG				*e*		23 45 33.5	
	comp=Z,50nm,1.6s						
BRG				PP	PP	23 49 19.0	-12
BRG				SKS		23 55 58.0	
BRG				SDIFF	**Sdif**	**23 56 59.0**	**+1.4**
BRG				SS	**SS**	**00 03 48.0**	**-8.2**
BRG				*e*PKPPKP	P’P’df	00 10 00.1	+8.5
	comp=Z,19nm,2.1s						
	comp=N,129nm,18.5s						
	comp=E,174nm,20.4s						
	comp=Z,186nm,15.6s						
BRG	**Berggiesshubel**	**100.84**	**40**	P	**Pdif**	**23 45 16.0**	**-6.5**
BRG						23 55 58.0	
BRG				S	**Sdif**	**23 56 59.0**	**+1.4**
BRG				pmax	pmax		
	comp=Z,50nm,1.6s						
BRG				pmax	pmax		
	comp=Z,19nm,2.1s						
BRG				MLR	MLR		
	comp=N,129nm,18.5s						
BRG				MLR	MLR		
	comp=E,174nm,20.4s						
BRG				MLR	MLR		
	comp=Z,186nm,15.6s						
SOKA	**Soboth**	**100.86**	**45**	*i* Pdiff	**Pdif**	**23 45 22.8**	**0.0**
	comp=Z,11nm,1.8s						
PERS	**Pernice**	**100.91**	**45**	*e*P	**Pdif**	**23 45 22.0**	**-1.0**
PRA	**Prague**	**101.02**	**41**	AMS	AMS	00 31 10.0	
	comp=Z,800nm,17.3s						
NB2	**NORSAR Subarra**	**101.04**	**30**	P	**Pdif**	**23 45 22.9**	**-0.3**
	comp=Z,51nm,2.5s,baz=258,slow=4.6						
NB2	**NORSAR Subarra**	**101.04**	**30**	P	**Pdif**	**23 45 22.9**	**-0.3**
	baz=258,slow=4.6						
PRU	**Pruhonice**	**101.08**	**41**	*e*PDIFF	**Pdif**	**23 45 20.2**	**-3.4**
PRU				*e*PP	PP	23 49 24.4	-8.2
PRU				AMS	AMS	00 32 00.0	
	comp=Z,900nm,18.2s						
PRU	**Pruhonice**	**101.08**	**41**	*i* P	**Pdif**	**23 45 20.2**	**-3.4**
PRU				MLR	MLR		
	comp=Z,900nm,18.2s						
PVCC	**Panska Ves**	**101.18**	**41**	*e*PP	PP	23 49 29.5	-3.9
PVCC				AMS	AMS	00 28 20.0	
	comp=Z,800nm,18.2s						
GOPC	**GO Pecny, Ondr**	**101.22**	**41**	*e*PDIFF	**Pdif**	**23 45 38.9**	**+15**
GOPC				*e*PP	**PP**	**23 49 40.4**	**+6.7**
GOPC				*e*x	x	23 56 22.2	
GOPC				*e*x	x	23 57 24.7	
GOPC				AMS	AMS	00 32 10.0	
	comp=Z,1µm,17.4s						
ARSA	**Arzberg**	**101.28**	**44**	*i* Pdiff	**Pdif**	**23 45 24.8**	**+0.2**
	comp=Z,17nm,1.7s,SNR=7.4						
CONA	**Conrad Observa**	**101.61**	**43**	*i* Pdiff	**Pdif**	**23 45 26.7**	**+0.6**
	comp=Z,33nm,1.7s,SNR=16						
UPC	**Upice**	**102.09**	**41**	*e*PKP	**PKiKP**	**23 49 50.3**	**-0.1**
UPC				*e*x	x	23 56 27.5	
UPC				AMS	AMS	00 32 20.0	
	comp=Z,1µm,16.9s						
KRUC	**Moravsky**	**102.13**	**42**	*e*PDIFF	**Pdif**	**23 45 28.6**	**+0.3**
DPC	**Dobruska-Polom**	**102.26**	**41**	*e*PDIFF	**Pdif**	**23 45 29.9**	**+1.0**
DPC				*e*PP	**PKiKP**	**23 49 47.8**	**-2.9**
DPC				AMS	AMS	00 33 00.0	
	comp=Z,1µm,18.5s						
DPC	**Dobruska-Polom**	**102.26**	**41**	*i* P	**Pdif**	**23 45 29.9**	**+1.0**
DPC				*e*		23 49 47.8	
DPC				MLR	MLR		
	comp=Z,1µm,18.5s						
VRAC	**Vranov**	**102.29**	**42**	*e*PDIFF	**Pdif**	**23 45 29.5**	**+0.5**
VRAC				*e*PP	**PP**	**23 49 38.1**	**-3.7**
VRAC				*e*		23 49 52.1	
KSP	**Ksiaz**	**102.31**	**40**	*e*P	**Pdif**	**23 45 30.3**	**+1.2**
KSP				*e*PP	**PP**	**23 49 39.7**	**-2.2**
KSP	**Ksiaz**	**102.31**	**40**	*e*P	**Pdif**	**23 45 30.3**	**+1.2**
KSP				*e*		23 49 39.7	
FUNA	**Funafuti**	**102.34**	**258**	PFAKE		23 45 40.0	+10
FUNA				LR	LR		
	comp=Z,10µm,19.0s						
MODS	**Modra-Piesok**	**102.62**	**43**	*i* P	**Pdif**	**23 45 31.0**	**+0.5**
MODS				*e*		23 49 40.6	
MODS	**Modra-Piesok**	**102.62**	**43**	*e*PDIFF	**Pdif**	**23 45 31.0**	**+0.5**
MODS				*e*PP	**PP**	**23 49 40.6**	**-3.6**
JAVC	**Velka Javorina**	**102.94**	**43**	*e*PDIFF	**Pdif**	**23 45 33.2**	**+1.2**
MORC	**Moravsky Berou**	**102.97**	**42**	*e*PDIFF	**Pdif**	**23 45 33.1**	**+1.0**
OKC	**Ostrava-Krasne**	**103.36**	**42**	AMS	AMS	00 33 40.0	
	comp=Z,800nm,19.1s						
KBS	**Kingsbay**	**103.66**	**11**	PFAKE		23 45 50.0	+16
KBS				LR	LR		
	comp=Z,1µm,21.0s						
VYHS	**Vyhne**	**103.66**	**43**	*i* P	**Pdif**	**23 45 35.8**	**+0.7**
VYHS				*e*		23 49 47.9	
VYHS	**Vyhne**	**103.66**	**43**	*e*PDIFF	**Pdif**	**23 45 35.8**	**+0.7**
VYHS				*e*PP	**PP**	**23 49 47.9**	**-4.2**
LANS	**Liptovska Anna**	**104.15**	**42**	*i* P	**Pdif**	**23 45 38.5**	**+1.2**
LANS	**Liptovska Anna**	**104.15**	**42**	*e*PDIFF	**Pdif**	**23 45 38.5**	**+1.2**
OJC	**Ojcow**	**104.46**	**41**	*e*P	**Pdif**	**23 45 39.8**	**+1.2**
OJC				*e*PP	**PKiKP**	**23 49 54.6**	**-0.1**
OJC	**Ojcow**	**104.46**	**41**	*e*P	**Pdif**	**23 45 39.8**	**+1.2**
OJC				*e*		23 49 54.6	
NIE	**Niedzica**	**104.71**	**42**	*e*P	**Pdif**	**23 45 41.5**	**+1.7**
NIE				*e*PP	**PP**	**23 49 58.1**	**-1.8**
NIE	**Niedzica**	**104.71**	**42**	*e*P	**Pdif**	**23 45 41.5**	**+1.7**
NIE				*e*		23 49 58.1	
MIDW	**Midway**	**106.88**	**295**	PFAKE		23 50 10.0	
MIDW				LR	LR		
	comp=Z,1µm,20.0s						
ARCES	**ARCESS Array B**	**107.38**	**21**	PKKPab	PKKPab	00 01 23.8	-5.2
	comp=Z,1.6nm,0.8s,baz=70,slow=5.8,SNR=4.3						
KEV	**Kevo**	**107.88**	**21**	PFAKE		23 50 10.0	
KEV				LR	LR		
	comp=Z,660nm,20.0s						
FINES	**FINESS Array B**	**108.22**	**30**	PKKPab	PKKPab	00 01 22.4	-3.0
	comp=Z,1.9nm,0.9s,baz=78,slow=3.4,SNR=4.2						
MLR	**Muntele Rosu**	**108.29**	**47**	PKiKP	**PKiKP**	**23 50 00.8**	**-1.3**
	baz=293,slow=7.7						
MLR				PP	**PP**	**23 50 22.2**	**-4.2**
	comp=Z,2.7nm,1.1s,baz=261,slow=5.3,SNR=7.8						
DZM	**Mont Dzumac**	**109.11**	**240**	*e*PS	PS	23 59 59.3	-0.7
	comp=Z,491nm,25.8s						
DZM				*e*SS	SS	00 05 54.5	+4.3
	comp=Z,2µm,27.3s						
DZM	**Mont Dzumac**	**109.11**	**240**	*e*LR	LR	00 22 01.2	
	comp=Z,3µm,27.9s						
MICGM	**Minsk**	**109.53**	**37**	*e*	**PKiKP**	**23 50 08.0**	**+4.0**
MICGM				*e*LR	LR	00 30 04.0	
MICGM				LRM	MLR	00 35 16.0	
	comp=E,1.7nm,18.0s						
MICGM				LRM	MLR	00 35 30.0	
	comp=Z,2.7nm,18.0s						
KIS	**Kishinev**	**110.31**	**45**	*e*PKP		23 50 36.0	
KIS	**Kishinev**	**110.31**	**45**	*i* PP	PP	23 50 50.0	+9.2
	comp=Z,200nm,2.0s						
KIS				*e*SKKS		23 58 02.0	
KIS	**Kishinev**	**110.31**	**45**	*e*PS	PS	00 00 25.0	+14
KIS	**Kishinev**	**110.31**	**45**	*e*PPS	PPS	00 01 24.0	
KIS				LRM	MLR	00 33 00.0	
	comp=Z,600nm,20.0s						
KIEV	**Kiev**	**110.48**	**41**	PFAKE		23 50 20.0	
KIEV				LR	LR		
	comp=Z,412nm,19.0s						
KIEV	**Kiev**	**110.48**	**41**	P	**PKiKP**	**23 50 03.9**	**-1.9**
KIEV	**Kiev**	**110.48**	**41**	*i* PKIKP	**PKiKP**	**23 50 05.0**	**-0.9**
AKASG	**Malin Array Be**	**110.49**	**41**	PKiKP	**PKiKP**	**23 50 04.5**	**-1.4**
	comp=Z,1.5nm,0.5s,baz=268,slow=3.3,SNR=7.8						
AKASG				PP	PP	23 50 34.0	-8.0
	comp=Z,0.2nm,0.3s,baz=267,slow=6.2,SNR=3.7						
AKASG				PKKPab	**PKKPab**	**00 01 16.1**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=67,slow=5.3,SNR=4.9						
APA	**Apatity**	**110.55**	**23**	⇓*i*PKIKP	**PKiKP**	**23 50 08.3**	**+2.8**
APA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
TARA	**Tarawa**	**111.06**	**266**	PFAKE		23 50 20.0	
TARA				LR	LR		
	comp=Z,147nm,19.0s						
KMBO	**Kilima Mbogo**	**111.85**	**97**	PFAKE		23 50 20.0	
KMBO				LR	LR		
	comp=Z,2µm,19.0s						

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ANTO  Ankara            113.25  53   PFAKE              23 50 20.0
ANTO                                 LR       LR
      comp=Z,500nm,19.0s
BILL  Bilibino          113.69 339   PFAKE              23 50 20.0
BILL                                 LR       LR
      comp=Z,624nm,22.0s
BILL  Bilibino          113.69 339⇑ iPKIKP    PKiKP     23 50 11.7 +0.2
BILL                                i                   23 51 04.3
BILL                                iSS       SS        00 06 58.6 +9.4
BILL                                 pmax     pmax
      comp=Z,4.0nm,1.4s
BILL                                 MLR      MLR
      comp=Z,927nm,24.0s
BRTR  Keskin Array B    113.90  53   PKP      PKiKP     23 50 11.7 -1.3
      comp=Z,4.8nm,0.9s,baz=187,slow=3.0,SNR=18
OBN   Obninsk           114.46  36   PFAKE              23 50 20.0 +6.7
OBN                                  LR       LR
      comp=Z,726nm,22.0s
OBN   Obninsk           114.46  36⇓ iPKIKP    PKiKP     23 50 12.9 -0.4
OBN                                 i                   23 51 06.8
OBN                                  MLR      MLR
      comp=Z,730nm,17.0s
ABPO  Ambohimpanom      114.65 119   PFAKE              23 50 30.0  +15
ABPO                                 LR       LR
      comp=Z,908nm,20.0s
KLMR  Klimovskoe        114.74  29  ePKIKP    PKiKP     23 50 12.1 -1.6
KLMR                                 pmax     pmax
      comp=Z,22nm,1.3s
KLMR  Klimovskoe        114.74  29  ePKPdf    PKPdf     23 50 12.1 -1.6
KLMR                                 AMP                23 50 25.4
      comp=Z,22nm,1.3s
MOS   Moscow            114.94  35  ePKIKP    PKPdf     23 50 11.2 -3.0
MOS                                 e                   23 51 12.1
MOS                                  MLR      MLR
      comp=Z,1µm,19.0s
MMAI  Mount Meron Ar    115.30  60   PKP      PKPdf     23 50 15.6 -0.1
      comp=Z,3.9nm,0.6s,baz=236,slow=1.6,SNR=8.9
ANN   Anapa             116.43  47  iPKIKP    PKPdf     23 50 15.9 -1.5
ANN                                 e                   23 51 22.8
ANN                                 e                   23 57 00.4
ANN                                  pmax     pmax
      comp=Z,43nm,1.6s
VSR   Storozhevoye      116.69  40  ePKIKP    PKPdf     23 50 16.5 -1.2
VSR                                  pmax     pmax
      comp=Z,10.0nm,0.9s
PRGR  Permogore         117.30  27  ePKIKP    PKPdf     23 50 18.1 -0.5
PRGR                                 pmax     pmax
      comp=Z,18nm,0.5s
KOPT  Kop Dagi          119.16  52  iP        PKPdf     23 50 24.5 +1.3
DBOC  Borcka            119.90  50  iP        PKPdf     23 50 24.5 +0.2
DBAD  Bademkaya         119.96  51  iP        PKPdf     23 50 24.7 +0.2
HNR   Honiara           119.96 250   PFAKE              23 50 40.0  +15
HNR                                  LR       LR
      comp=Z,799nm,19.0s
ARTV  Artvin            120.11  51  iP        PKPdf     23 50 25.0 +0.1
H11N3 WAKE ISLAND Hy120.25 285       T        T         02 01 27.3
      baz=96,slow=74,SNR=209
H11N2 WAKE ISLAND Hy120.26 285       T        T         02 01 28.9
      baz=96,slow=74,SNR=177
H11N1 WAKE ISLAND Hy120.27 285       T        T         02 01 28.9
      baz=96,slow=74,SNR=61
KIV   Kislovodsk        120.27  47  ePKPdf    PKPdf     23 50 24.9 -0.1
KIV                                 epPKPdf   pPKPdf    23 50 36.5 -0.7
KIV                                  LR       LR
      comp=Z,502nm,22.0s
KIV   Kislovodsk        120.27  47   P        PKPdf     23 50 25.2 +0.2
KIV   Kislovodsk        120.27  47  iP        Pdif      23 46 48.6 -0.6
KIV                                 i                   23 50 24.6
KIV                                 e                   23 51 50.4
KIV                                 ePS       PS        00 01 42.2  0.0
KIV                                 eSS       SS        00 08 18.9 +2.3
KIV                                  pmax     pmax
      comp=Z,14nm,1.0s
H11S2 WAKE ISLAND Hy120.31 283       T        T         02 01 37.1
      baz=97,slow=75,SNR=107
H11S1 WAKE ISLAND Hy120.32 283       T        T         02 01 35.2
      baz=97,slow=75,SNR=26
H11S3 WAKE ISLAND Hy120.33 283       T        T         02 01 38.4
      baz=97,slow=75,SNR=11
NEY   Neytrino          120.41  48  iPKIKP    PKPdf     23 50 24.6 -0.8
WAKE  Wake Island       120.44 284   PFAKE              23 50 40.0  +14
WAKE                                 LR       LR
      comp=Z,2µm,20.0s
KBZ   Khabaz            120.46  48   PKP      PKPdf     23 50 25.1 -0.1
      comp=Z,16nm,0.9s,baz=249,slow=2.6,SNR=23
KBZ                                  PP       PP        23 51 57.0 +4.7
      comp=Z,3.2nm,1.1s,baz=250,slow=11,SNR=1.8
TIXI  Tiksi             121.00 351   PFAKE              23 50 40.0  +15
TIXI                                 LR       LR
      comp=Z,980nm,21.0s
TIXI  Tiksi             121.00 351  iPKIKP    PKPdf     23 50 22.3 -3.1
TIXI                                 pmax     pmax
      comp=Z,3.0nm,1.1s
NCK   Nalchik           121.00  48  iPKIKP    PKPdf     23 50 25.8 -0.5
SEY   Seymchan          121.15 337c iPKIKP    PKPdf     23 50 26.5 +0.5
DIGO  Kars              121.30  51  iP        PKPdf     23 50 28.1 +0.8
ZEI   Tsey              121.34  49  iPKIKP    PKPdf     23 50 25.1 -2.1
ZEI                                  pmax     pmax
      comp=Z,10.0nm,0.6s
EAK   Akyaka            121.44  51  iP        PKPdf     23 50 26.8 -0.7
STKA  Stephens Creek    121.68 217   PKP      PKPdf     23 50 27.8 -0.3
      comp=Z,3.9nm,0.8s,baz=118,slow=6.1,SNR=7.6
GNI   Garni             122.37  52   PFAKE              23 50 40.0  +11
GNI                                  LR       LR
      comp=Z,433nm,19.0s
GNI   Garni             122.37  52c iPKIKP    PKPdf     23 50 29.2 -0.1
GNI                                  pmax     pmax
      comp=Z,63nm,1.7s
GROC  Groznyy           122.63  48  iPKIKP    PKPdf     23 50 28.2 -1.2
GROC                                e                   23 52 06.2
GROC                                e                   23 57 34.4
GROC                                eSP       SP        00 01 57.6  0.0
GROC                                 pmax     pmax
      comp=Z,22nm,1.2s
PET   Petropavlovsk     122.65 324   PFAKE              23 50 40.0  +11
PET                                  LR       LR
      comp=Z,467nm,20.0s
PETK  Petropavlovsk-    123.15 325   PKP      PKPdf     23 50 30.0 -0.1
      comp=Z,3.7nm,0.8s,baz=82,slow=10
PETK  Petropavlovsk-    123.15 325   PKIKP    PKPdf     23 50 30.0 -0.1
PETK                                 pmax     pmax
      comp=Z,4.0nm,0.8s
MA2   Magadan           123.63 334   PFAKE              23 50 40.0 +9.2
MA2                                  LR       LR
      comp=Z,732nm,22.0s
MAK   Makhachkala       123.91  48  iPKIKP    PKPdf     23 50 31.2 -0.6
MAK                                  pmax     pmax
      comp=Z,49nm,1.4s
RAYN  Ar Rayn           123.97  71  ePKPdf    PKPdf     23 50 32.8 +0.1
RAYN                                epPKPdf   pPKPdf    23 50 44.2 -0.7
RAYN                                 LR       LR
      comp=Z,2µm,20.0s
RAYN  Ar Rayn           123.97  71  iP        PKPdf     23 50 33.2 +0.5
      SNR=22
RAYN  Ar Rayn           123.97  71  ePKIKP    PKPdf     23 50 32.8 +0.1
RAYN                                e                   23 50 44.2
RAYN                                 MLR      MLR
      comp=Z,2µm,20.0s
AKT   Akhty             124.38  49  iPKIKP    PKPdf     23 50 33.4 +0.4
AKT                                 e                   23 52 19.0
AKT                                  pmax     pmax
      comp=Z,32nm,1.2s
ARU   Arti              125.59  29  ePKPdf    PKPdf     23 50 34.8 +0.1
ARU                                 epPKPdf   pPKPdf    23 50 46.1 -0.9
ARU                                  LR       LR
      comp=Z,1µm,20.0s
ARU   Arti              125.59  29  iPKIKP    PKPdf     23 50 34.8 +0.1
ARU                                                     23 52 27.9
ARU                                                     23 57 43.3
ARU                                  SP       SP        00 02 27.7 +5.1
ARU                                  SS       SS        00 09 19.7 -3.0
ARU                                  MLR      MLR
      comp=Z,1µm,19.0s
CTAO  Charters Tower    126.34 231   PFAKE              23 50 50.0  +13
CTAO                                 LR       LR
      comp=Z,1µm,20.0s
SVE   Sverdlovsk        126.34  28  iPKIKP    PKPdf     23 50 36.4 +0.3
SVE                                  pmax     pmax
      comp=Z,35nm,1.6s
MSEY  Mahe Island       127.95 108   PFAKE              23 50 50.0 +9.4
MSEY                                 LR       LR
      comp=Z,2µm,21.0s
AKTO  Aktyubinsk        128.24  36   PKP      PKPdf     23 50 39.9  0.0
      comp=Z,25nm,0.9s,baz=311,slow=2.8,SNR=60
YAK   Yakutsk           129.20 345   PFAKE              23 50 50.0 +8.6
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YAK                                  LR       LR
      comp=Z,473nm,20.0s
NWAO  Narrogin (SRO)    131.27 194   PKP      PKPdf     23 50 44.4 -2.0
      comp=Z,21nm,1.2s,baz=69,slow=2.5,SNR=4.5
NWAO  Narrogin (SRO)    131.27 194   PKP      PKPdf     23 50 44.4 -2.0
NWAO                                 LR       LR
      comp=Z,518nm,19.0s
MZR   Muzera            131.30  72   P        PKPdf     23 50 47.2 +0.6
PMG   Port Moresby      131.35 243   PFAKE              23 51 00.0  +13
PMG                                  LR       LR
      comp=Z,846nm,21.0s
NKL   Nikolayevsk       131.94 331  ePKIKP    PKPpre    23 50 41.5
KUR   Kuril'sk          132.24 319  iPKIKP    PKPdf     23 50 45.3 -2.3
KUR                                 e                   23 53 11.4
ASAR  Alice Springs     132.31 218   PKP      PKPdf     23 50 47.8 -0.9
      comp=Z,13nm,1.0s,baz=138,slow=2.5,SNR=49
AJN   Ajban             132.63  70  iP        PKPdf     23 50 49.4 +0.4
      SNR=5.5
ASUD  Al Ashush, Dub    132.94  70   P        PKPdf     23 50 52.0 +2.3
      SNR=5.7
ASUD  Al Ashush, Dub    132.94  70  iP        PKPdf     23 50 50.0 +0.4
      SNR=6.0
GEYT  Alibeck           133.01  51   PKP      PKPdf     23 50 48.8 -0.7
      comp=Z,2.7nm,0.7s,baz=318,slow=2.4,SNR=15
BVAR  Borovoye Array    133.12  28   PKP      PKPdf     23 50 49.8 +0.7
      comp=Z,15nm,1.0s,baz=299,slow=1.5,SNR=55
BVAR                                 PP       PP        23 53 16.2 +0.9
      comp=Z,4.2nm,1.0s,baz=303,slow=8.4,SNR=4.5
NAZ   Nazwa, Dubai      133.22  69   P        PKPdf     23 50 49.9 -0.3
ALNE  Al Ain            133.35  71  iP        PKPdf     23 50 50.0 -0.4
      SNR=7.7
SHME  Shamm             133.58  68   P        PKPdf     23 50 50.0 -0.9
MSFE  Esma-Masafi       133.65  69  iP        PKPdf     23 50 50.8 -0.2
      SNR=7.6
HATD  Hatta, Dubai      133.66  69   P        PKPdf     23 50 52.0 +1.0
      SNR=13
HATD  Hatta, Dubai      133.66  69  iP        PKPdf     23 50 50.4 -0.6
      SNR=8.0
UOSS  Minazif           133.72  69   P        PKPdf     23 50 50.3 -0.8
BANOM Banah             133.73  68   P        PKPdf     23 50 50.7 -0.4
MDH   Madha             133.78  69  iP        PKPdf     23 50 50.3 -0.9
      SNR=9.8
YUK   Yuzh-Kuril'sk     134.05 318  ePKIKP    PKPdf     23 50 55.9 +4.8
YUK                                  MLR      MLR
      comp=Z,622nm,17.0s
SOHO  SOHO              134.06  70  iP        PKPdf     23 50 51.2 -0.5
      SNR=15
YSS   Yuzh-Sakhalins    134.51 323   PFAKE              23 51 00.0 +8.1
YSS                                  LR       LR
      comp=Z,413nm,19.0s
YSS   Yuzh-Sakhalins    134.51 323  ePKIKP    PKPdf     23 50 51.8 -0.1
YSS                                 i                   23 51 02.5
YSS                                 e                   23 57 57.0
YSS                                  pmax     pmax
      comp=Z,40nm,1.5s
YSS                                  pmax     pmax
      comp=Z,300nm,7.0s
WRA   Warramunga Arr    134.82 222   PKP      PKPdf     23 50 53.0 -0.4
      comp=Z,13nm,0.8s,baz=143,slow=1.4,SNR=35
WRAB  Tennant Creek     134.82 222  ePKPdf    PKPdf     23 50 53.2 -0.2
WRAB                                epPKPdf   pPKPdf    23 51 04.7 -1.0
WRAB                                 LR       LR
      comp=Z,1µm,20.0s
WRAB  Tennant Creek     134.82 222c iPKIKP    PKPdf     23 50 53.8 +0.4
WRAB                                 pmax     pmax
      comp=Z,69nm,1.7s
GRNR  Gornyy            135.50 331  ePKIKP    PKPdf     23 50 56.0 +2.3
BIDO  Bidbid            135.55  71   P        PKPdf     23 50 57.0 +2.4
      SNR=8.5
ASAJ  Asahikawa         136.08 320   PKP      PKPdf     23 50 55.4 +0.4
      comp=Z,15nm,1.0s,baz=82,slow=4.9,SNR=6.5
BOD   Bodaibo           136.14 353  ePKHKP    PKPpre    23 50 41.9
BOD                                  pmax     pmax
      comp=Z,26nm,1.8s
NVS   Novosibirsk       136.51  18  ePKIKP    PKPdf     23 50 55.4  0.0
NVS                                 e                   23 51 05.1
NVS                                 e                   23 53 35.2
NVS                                  pmax     pmax
      comp=Z,72nm,1.9s
NVS                                  pmax     pmax
      comp=E,17nm,1.8s
ZEA   Zeya              136.89 340  iPKIKP    PKPdf     23 50 51.8 -4.3
ZEA                                 e                   23 53 38.0
ZEA                                  pmax     pmax
      comp=Z,100nm,2.0s
ZALV  Zalesovo Beam     137.75  17   PKhKP    PKPpre    23 50 46.1
      comp=Z,0.6nm,0.4s,baz=321,slow=5.0,SNR=7.0
ZALV                                 PKP      PKPdf     23 50 58.0 +0.3
      comp=Z,57nm,0.9s,baz=304,slow=2.1,SNR=17
ZALV  Zalesovo Beam     137.75  17   PKIKP    PKPdf     23 50 58.0 +0.3
KURK  Kurchatov         138.30  25   PKP      PKPdf     23 50 58.8  0.0
KURK                                 PP       PP        23 53 43.9 -3.9
KURK  Kurchatov         138.30  25c iPKIKP    PKPdf     23 50 59.2 +0.4
KURBB Kurchatov Arra    138.34  25   PKhKP    PKPpre    23 50 48.2
      comp=Z,0.9nm,0.9s,baz=313,slow=3.5,SNR=5.4
KURBB                                PKP      PKPdf     23 50 58.8 -0.1
      comp=Z,25nm,0.9s,baz=316,slow=2.5,SNR=86
KURBB                                PP       PP        23 53 43.9 -4.1
      comp=Z,4.1nm,1.2s,baz=318,slow=6.4,SNR=5.3
KLR   Kul'dur           138.71 333c iPKIKP    PKPdf     23 50 59.5 -0.1
GUMO  Guam              140.71 274   PFAKE              23 51 20.0  +16
GUMO                                 LR       LR
      comp=Z,834nm,20.0s
FITZ  Fitzroy Crossi    141.40 214   PKhKP    PKPpre    23 51 00.2
      comp=Z,3.9nm,0.7s,baz=83,slow=8.1,SNR=4.7
MBWA  Marble Bar        141.48 203   PFAKE              23 51 20.0  +14
MBWA                                 LR       LR
      comp=Z,901nm,20.0s
EKS2  Erkin-Say         141.54  37   P        PKPdf     23 51 09.5 +4.3
      SNR=9.1
USP   Ospenovka         141.59  36   P        PKPdf     23 51 06.3 +1.2
      SNR=8.4
DGAR  Diego Garcia      141.61 122   PFAKE              23 51 20.0  +14
DGAR                                 LR       LR
      comp=Z,884nm,20.0s
CHMS  Chumysh           141.90  36   P        PKPpre    23 51 00.9
      SNR=5.9
FRU   Bishkek           141.93  36  iPKIKP    PKPpre    23 51 02.0
FRU                                 e                   23 51 18.0
FRU                                 e                   23 54 19.0
FRU                                  pmax     pmax
      comp=Z,90nm,1.6s
USRK  Ussuriysk Ar.     142.17 327   PKhKP    PKPpre    23 51 01.6
      baz=157,slow=1.1
KBK   Karagaybulak      142.22  36   P        PKPpre    23 51 02.6
      SNR=10
UCH   Uchtor            142.24  37   P        PKPdf     23 51 04.3 -2.5
      SNR=13
DGZ   Jazzator, Alta    142.26  18  iPKIKP    PKPpre    23 51 01.8
IRK   Irkutsk           142.34   0  ePKHKP    PKPpre    23 51 01.1
IRK                                  pmax     pmax
      comp=Z,963nm,1.8s
TKM2  Tokmak 2          142.42  35   P        PKPpre    23 51 02.4
      SNR=9.2
MJAR  Matsushiro Arr    142.66 312   PKhKP    PKPpre    23 51 01.9
      comp=Z,8.5nm,0.9s,baz=167,slow=1.8,SNR=15
MAJO  Matsushiro        142.66 312  ePKPdf    PKPpre    23 51 03.2
MAJO                                 LR       LR
      comp=Z,2µm,21.0s
MAJO  Matsushiro        142.66 312  iPKIKP    PKPpre    23 51 02.6
MAT   Matsushiro        142.66 312   PKP      PKPpre    23 51 02.3
KZA   Kyzart            142.76  37   P        PKPdf     23 51 06.0 -1.7
      SNR=8.6
MOY   Mondy             142.82   3  ePKIKP    PKPpre    23 51 03.9
MOY                                  pmax     pmax
      comp=Z,66nm,1.8s
MKAR  Makanchi Array    142.89  25   PKhKP    PKPpre    23 51 03.3
      comp=Z,9.1nm,0.8s,baz=332,slow=2.1,SNR=29
TLY   Talaya            142.90   1  ePKPdf    PKPdf     23 51 04.3 -2.8
TLY                                  LR       LR
      comp=Z,439nm,21.0s
TLY   Talaya            142.90   1   P        PKPdf     23 51 04.6 -2.6
      SNR=24
TLY   Talaya            142.90   1  ePKHKP    PKPpre    23 51 01.4
TLY                                 e                   23 54 16.1
TLY                                 eSSS      SSS       00 18 11.3
TLY                                  pmax     pmax
      comp=Z,34nm,1.5s
TLY                                  MLR      MLR
      comp=Z,736nm,24.0s
HIA   Hailar            143.09 343   PFAKE              23 51 20.0  +12
HIA                                  LR       LR
      comp=Z,812nm,20.0s
MDJ   Mudanjiang        143.10 330   PKP      PKPab     23 51 01.5 -1.6
MDJ                                  pPKP     pPKPdf    23 51 16.2 -3.8
MDJ                                  sPKP               23 51 20.9
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MDJ                                  PP       PP        23 54 17.6 +0.3
MDJ                                  AMB      AMB
      comp=Z,310nm,7.1s
MDJ   Mudanjiang        143.10 330  ePKPdf    PKPdf     23 51 08.8 +1.1
MDJ                                  LR       LR
      comp=Z,938nm,22.0s
ULHL  Ulahol            143.22  36   P        PKPdf     23 51 10.4 +2.1
      SNR=9.2
MSHR  Mys Shultsa       143.71 326  iPKIKP    PKPbc     23 51 06.8 +0.4
ZAK   Zakamensk         144.19   1  ePKIKP    PKPab     23 51 07.4 +0.1
ZAK                                  pmax     pmax
      comp=Z,126nm,1.4s
ZAK                                  pmax     pmax
      comp=Z,15nm,1.3s
KSH   Kashi             144.77  40  ePKP      PKPdf     23 51 10.9 -0.1
KSH                                  pPKP     pPKPdf    23 51 21.7 -1.5
KSH                                  sPKP               23 51 25.0
KSH                                  PP       PP        23 54 32.0 +4.1
KSH                                  PKS      PKSdf     23 54 44.7 -1.9
KSH                                  SKKS               00 01 16.0
KSH                                  AMB      AMB
      comp=Z,300nm,5.2s
KSH                                  LR       LR
      comp=Z,59nm,6.9s
KSH                                  LR       LR
      comp=Z,110nm,8.1s
CN2   Changchun         145.67 332  ePKPbc    PKPdf     23 51 10.2 -2.0
CN2                                 ePP       PP        23 54 33.5 +0.9
CN2                                 eSS       SS        00 13 20.9 -1.8
CN2                                  AMB      AMB
      comp=Z,200nm,5.0s
CN2                                  LR       LR
      comp=Z,510nm,21.0s
CN2                                  LR       LR
      comp=Z,760nm,21.0s
CN2                                  LR       LR
      comp=Z,730nm,22.0s
NIL   Nilore            146.00  50  ePKPdf    PKPbc     23 51 13.5 -0.4
NIL                                 epPKPdf   pPKPdf    23 51 25.2 -0.2
NIL                                  LR       LR
      comp=Z,419nm,22.0s
NIL   Nilore            146.00  50  ePKP2     PKPbc     23 51 13.5 -0.4
NIL                                  MLR      MLR
      comp=Z,419nm,22.0s
BHJ   Bhuj              146.11  70  eP        PKPdf     23 51 13.7 +0.1
BHJ                                  IAMs_20  IAMs_20   23 59 05.7
      comp=Z,949nm,2.6s
ULN   Ulaanbaatar       146.65 357  ePKPdf    PKPdf     23 51 14.5 +0.5
ULN                                 epPKPdf   pPKPbc    23 51 27.0 -0.7
ULN                                  LR       LR
      comp=Z,662nm,20.0s
ULN   Ulaanbaatar       146.65 357   P        PKPbc     23 51 14.7 -0.9
      SNR=141
ULN   Ulaanbaatar       146.65 357  iPKP2     PKPdf     23 51 14.0 +0.1
SONM  Songino Array     146.71 357   PKPbc    PKPbc     23 51 15.2 -0.5
      comp=Z,60nm,0.9s,baz=329,slow=1.2,SNR=123
SONM                                 PP       PP        23 54 36.6 -1.8
      comp=Z,7.6nm,1.1s,baz=336,slow=3.2,SNR=5.7
WMQ   Urumqi            147.49  23   PKPbc    PKPdf     23 51 15.8 +0.4
WMQ                                  PKPab    PKPbc     23 51 18.4 +0.5
WMQ                                  sPKP               23 51 29.3
WMQ                                  PP       PP        23 54 47.5 +4.2
WMQ                                  SKKS               00 01 35.9
WMQ                                  SS       SS        00 13 45.1 +1.8
WMQ                                  AMB      AMB
      comp=Z,410nm,11.7s
WMQ                                  LR       LR
      comp=Z,790nm,21.7s
WMQ                                  LR       LR
      comp=Z,960nm,20.3s
WMQ                                  LR       LR
      comp=Z,1µm,27.3s
BATI  Baumata           148.87 219   PKPbc    PKPbc     23 51 23.1 +0.7
      comp=Z,38nm,0.7s,baz=129,slow=6.5,SNR=4.8
DHRM  DHARAMSHALA       148.92  50  eP        PKPdf     23 51 19.0 +0.7
DHRM                                 IAMs_20  IAMs_20   23 59 00.7
      comp=Z,351nm,3.6s
KSRS  Korea Array       148.98 322   PKPbc    PKPdf     23 51 18.3 +0.4
      comp=Z,31nm,1.0s,baz=16,slow=1.6,SNR=33
KSAR  Wonju Array Be    149.01 322   PKPbc    PKPdf     23 51 18.3 +0.4
KSAR  Wonju Array Be    149.01 322   PKIKP    PKPdf     23 51 18.3 +0.4
SIJI  Sorong            149.29 242   PKPbc    PKPdf     23 51 20.7 +1.6
      comp=Z,20nm,0.9s,baz=117,slow=5.3,SNR=3.6
JNU   Nakatsue          149.59 312   PKPbc    PKPbc     23 51 22.2 -1.4
      comp=Z,18nm,0.9s,baz=50,slow=8.5,SNR=4.4
INCN  Inchon            149.72 323   PFAKE              23 51 30.0 +0.9
INCN                                 LR       LR
      comp=Z,1µm,19.0s
TJN   Taejon            150.02 321c iPKP2     PKPbc     23 51 24.1 -0.4
SMLA  Simla             150.09  52  eP        PKPdf     23 51 20.2 +0.4
SMLA                                 IAmb     IAmb      23 51 26.2
      comp=Z,157nm,1.1s
SMLA                                 IAMs_20  IAMs_20   00 00 08.8
      comp=Z,224nm,5.0s
POO   Poona             150.51  78  ex        PKPdf     23 51 21.6 +0.7
POO                                  IAmb     IAmb      23 51 28.1
      comp=Z,166nm,1.0s
GOA   Goa               150.52  84  eP        PKPdf     23 51 19.3 -1.6
DDI   Dehra Dun         151.14  52  eP        PKPdf     23 51 20.5 -1.1
NDI   New Delhi         151.19  56  eP        PKPdf     23 51 20.0 -1.6
DL2   Dalian            151.30 331   PKPbc    PKPdf     23 51 20.9 -0.6
DL2                                  AMB      AMB
      comp=Z,260nm,9.3s
DL2                                  LR       LR
      comp=Z,410nm,21.6s
DL2                                  LR       LR
      comp=Z,400nm,18.4s
DL2                                  LR       LR
      comp=Z,610nm,23.1s
BJI   Beijing           152.51 340   PKPbc    PKPdf     23 51 23.9 +0.6
BJI                                  pPKP     PKPbc     23 51 29.8 -0.4
BJI                                  PP       PP        23 55 11.1 -1.0
BJI                                  LR       LR
      comp=Z,900nm,21.9s
BJI                                  LR       LR
      comp=Z,550nm,17.6s
TRD   Trivandrum        152.53  99  eP        PKPdf     23 51 22.0 -2.0
TRD                               ⇓eP        PKPdf     23 51 22.2 -1.8
BJT   Baijiatuau        152.54 340  ePKPbc    PKPbc     23 51 30.2  0.0
BJT                                  LR       LR
      comp=Z,691nm,19.0s
HHC   Hu-ho-hao-te      152.99 348  ePKPbc    PKPdf     23 51 24.1  0.0
HHC                                  pPKP     PKiKP     23 51 31.7 +0.1
HHC                                  sPKP               23 51 36.5
HHC                                  PP       PP        23 55 14.7 -0.1
HHC                                  SS       SS        00 14 43.4 -0.7
HHC                                  AMB      AMB
      comp=Z,58nm,7.8s
HHC                                  LR       LR
      comp=Z,390nm,19.3s
HHC                                  LR       LR
      comp=Z,330nm,18.5s
HHC                                  LR       LR
      comp=Z,510nm,19.0s
BHPL  Bhopal            153.12  67  eP        PKPdf     23 51 23.1 -1.7
BHPL                                 IAMs_20  IAMs_20   23 59 11.7
      comp=Z,559nm,3.9s
KLRI  Killari           153.15  79  ePKiKP    PKPbc     23 51 31.9 -0.5
BTO   Baotou            153.51 350  ePKPbc    PKPdf     23 51 25.8 +0.9
URV   Uravakonda        153.81  86  ePKPdf    PKPdf     23 51 24.2 -1.7
URV                                 ePKiKP    PKPbc     23 51 33.0 -0.8
SRSP  Sriramsagar       154.72  76  ePKPbc    PKPbc     23 51 34.4 -1.2
SRSP                                ePKPab    PKPab     23 51 49.7 -0.9
GTA   Gaotai            154.86   8⇑ PKPbc     PKPdf     23 51 27.4 +0.6
GTA                                  pPKP     PKPbc     23 51 35.1 -0.4
GTA                                  sPKP               23 51 38.3
GTA                                  PP       PP        23 55 29.8 +4.5
GTA                                  SS       SS        00 15 05.7 +1.3
GTA                                  AMB      AMB
      comp=Z,200nm,8.2s
GTA                                  LR       LR
      comp=Z,700nm,21.6s
GTA                                  LR       LR
      comp=Z,430nm,20.6s
GTA                                  LR       LR
      comp=Z,1µm,21.0s
HYBB  Hyderabad (bro    155.04  80  ePKPab    PKPab     23 51 50.9 -1.2
HYB   Hyderabad         155.04  80  iPKP      PKPdf     23 51 35.0 +7.4
HYB   Hyderabad         155.04  80  eP        PKPdf     23 51 27.5 -0.1
HYB                                  IAMs_20  IAMs_20   23 59 18.7
      comp=Z,535nm,3.7s
KAPI  Kappang           155.32 219   PFAKE              23 51 40.0  +12
KAPI                                 LR       LR
      comp=Z,725nm,20.0s
SRLM  Srisailam         155.41  83  ePKPbc    PKPdf     23 51 36.2 +8.2
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JBP	Jabalpur	155.41	66	*e*x	PKPab	23 51 53.5	+0.1
TIA	Tai'an	155.53	334	PKP	PKPdf	23 51 27.9	+0.2
TIA				PP	PP	23 55 28.9	-0.3
TIA				AMB	AMB		
	comp=Z,190nm,6.7s						
TIA				LR	LR		
	comp=Z,570nm,20.6s						
TIA				LR	LR		
	comp=Z,330nm,17.7s						
TIA				LR	LR		
	comp=Z,690nm,20.6s						
RPR	Rampur	155.63	76	*e*PKPab	PKPab	23 51 53.1	-1.4
TIY	Taiyuan	155.78	344	PKP	PKPdf	23 51 27.2	-0.9
TIY				PKPab	PKPab	23 51 58.6	+4.1
TIY				PP	PP	23 55 28.2	-2.3
TIY				SS	SS	00 15 17.3	+2.9
TIY				AMB	AMB		
	comp=Z,260nm,7.7s						
TIY				LR	LR		
	comp=Z,570nm,23.2s						
TIY				LR	LR		
	comp=Z,360nm,19.3s						
TIY				LR	LR		
	comp=Z,850nm,23.4s						
NJS	Nagarjunasagar	155.80	82	*e*PKPab	PKPab	23 51 55.3	+0.1
PYUN	Piuthan	155.99	52	*e*P	PKPdf	23 51 28.5	-0.3
ADKI	Addanki	156.44	84	*e*PKPdf	PKPdf	23 51 28.3	-1.1
DANN	Dangsing	156.45	51	*e*P	PKPdf	23 51 29.6	+0.1
KOLN	Koldanda	156.62	52	*e*P	PKPdf	23 51 29.1	-0.5
GKN	Gorkha	157.29	51	*e*P	PKPdf	23 51 30.0	-0.4
SSE	Sheshan	157.37	320	PKP	PKPdf	23 51 29.2	-1.0
SSE				PP	PP	23 55 41.6	+1.6
SSE				AMB	AMB		
	comp=Z,160nm,6.1s						
SSE				LR	LR		
	comp=Z,160nm,19.0s						
SSE				LR	LR		
	comp=Z,300nm,18.2s						
DMN	Daman	157.85	51	*e*P	PKPdf	23 51 30.9	-0.4
KKN	Kakani	157.88	50	*e*P	PKPdf	23 51 30.8	-0.4
DAV	Davao City (W)	157.88	253	PFAKE		23 51 40.0	+8.7
DAV				LR	LR		
	comp=Z,552nm,22.0s						
PVM	Polavaram	157.98	80	*e*PKPab	PKPab	23 52 05.4	+0.8
NJ2	Nanjing	158.06	325	*e*PKP	PKPdf	23 51 30.6	-0.4
NJ2				LR	LR		
	comp=Z,850nm,17.3s						
NJ2				LR	LR		
	comp=Z,560nm,19.0s						
NJ2				LR	LR		
	comp=Z,1µm,21.4s						
PKIN	Phulchoki	158.08	51	*e*P	PKPdf	23 51 30.8	-0.8
GUN	Gumba	158.26	49	*e*P	PKPdf	23 51 31.6	-0.3
LZH	Lanzhou	158.49	1	*e*PKP	PKPdf	23 51 32.7	+1.0
LZH				pPKP	pPKPdf	23 51 43.0	-1.0
LZH				sPKP		23 51 47.7	
LZH				PP	PP	23 55 46.0	+0.7
LZH				SKKS		00 02 35.8	
LZH				SS	SS	00 15 42.1	-1.2
LZH				AMB	AMB		
	comp=Z,770nm,7.1s						
LZH				LR	LR		
	comp=Z,1µm,15.6s						
LZH				LR	LR		
	comp=Z,1µm,17.2s						
LZH				LR	LR		
	comp=Z,2µm,18.3s						
LEM	Lembang	158.57	189	PKP	PKPdf	23 51 33.0	+0.6
	comp=Z,27nm,0.8s,baz=280,slow=4.5,SNR=3.9						
LEM				PP	PP	23 55 50.0	+4.2
	comp=Z,18nm,0.7s,baz=153,slow=2.3,SNR=3.3						
JIRN	Jiri	158.62	49	*e*P	PKPdf	23 51 31.7	-0.6
RAMN	Ramite	159.32	50	*e*P	PKPdf	23 51 32.9	-0.1
VIS	Vishakhapatnam	159.56	78	*e*P	PKPdf	23 51 30.1	-3.1
TAPN	Taplejung	159.91	48	*e*P	PKPdf	23 51 33.8	0.0
ODAN	Odare	159.96	49	*e*P	PKPdf	23 51 33.5	-0.2
XAN	Xi'an	160.10	349	PKP	PKPdf	23 51 33.6	+0.2
XAN				pPKP	pPKPdf	23 51 43.6	-2.2
XAN				PP	PP	23 55 51.6	-2.4
XAN				SKKS		00 02 36.6	
XAN				AMB	AMB		
	comp=Z,290nm,7.6s						
XAN				LR	LR		
	comp=Z,730nm,22.4s						
XAN				LR	LR		
	comp=Z,210nm,17.3s						
XAN				LR	LR		
	comp=Z,840nm,22.0s						
CHLP	Challavanipeta	160.15	76	*e*PKPdf	PKPdf	23 51 31.2	-2.6
BOK	Bokaro	160.28	59	*e*P	PKPdf	23 51 33.8	-0.1
BOK				IAMs_20	IAMs_20	23 59 49.6	
	comp=Z,318nm,4.0s						
LSA	Lhasa	160.57	37	PKP	PKPdf	23 51 35.3	+0.7
LSA	Lhasa	160.57	37	*e*PKPdf	PKPdf	23 51 35.0	+0.4
LSA				*e*pPKPdf	pPKPdf	23 51 47.1	+0.1
LSA				LR	LR		
	comp=Z,862nm,19.0s						
LSA	Lhasa	160.57	37	P	PKPdf	23 51 35.9	+1.2
LSA	Lhasa	160.57	37	*e*PKIKP	PKPdf	23 51 35.0	+0.4
LSA				*e*		23 51 47.1	
LSA				MLR	MLR		
	comp=Z,862nm,19.0s						
TATO	Taipei	160.80	306	PFAKE		23 51 50.0	+16
TATO				LR	LR		
	comp=Z,623nm,20.0s						
WHN	Wuhan	161.56	332	*i* PKP	PKPdf	23 51 35.4	+0.4
WHN				pPKP	pPKPdf	23 51 46.1	-1.2
WHN				PKPab	PKPab	23 52 18.1	-1.6
WHN				PP	PP	23 56 02.0	-0.2
WHN				LR	LR		
	comp=Z,3µm,24.7s						
WHN				LR	LR		
	comp=Z,930nm,21.1s						
WHN				LR	LR		
	comp=Z,2µm,21.5s						
QZH	Quanzhou	163.04	310	*i* PKP	PKPdf	23 51 37.3	+0.6
QZH				pPKP	pPKPdf	23 51 47.2	-1.8
QZH				PP	PP	23 56 14.5	+3.5
QZH				SS	SS	00 16 34.4	+1.1
QZH				LR	LR		
	comp=Z,310nm,20.4s						
QZH				LR	LR		
	comp=Z,590nm,18.5s						
QZH				LR	LR		
	comp=Z,810nm,19.0s						
ENH	Enshi	163.59	344	*e*PKPdf	PKPdf	23 51 37.2	+0.1
ENH				*e*pPKPdf	pPKPdf	23 51 48.3	-1.1
ENH				LR	LR		
	comp=Z,984nm,22.0s						
CD2	Chengdu	163.65	2	PKP	PKPdf	23 51 36.0	-1.2
CD2				pPKP	pPKPdf	23 51 47.4	-2.1
CD2				sPKP		23 51 51.5	
CD2				PP	PP	23 56 11.2	-1.7
CD2				SKKS		00 02 57.8	
CD2				SS	SS	00 16 38.7	+1.6
CD2				AMB	AMB		
	comp=Z,580nm,6.6s						
CD2				LR	LR		
	comp=Z,690nm,22.7s						
CD2				LR	LR		
	comp=Z,670nm,23.3s						
CD2				LR	LR		
	comp=Z,500nm,22.9s						
SHL	Shillong	163.94	45	*e*x	PKPpre	23 51 33.3	
SHL				*e*x	x	23 56 19.0	
PSI	Prapat	167.21	155	PKP	PKPdf	23 51 39.3	-1.4
	comp=Z,29nm,1.2s,baz=180,slow=1.5,SNR=15						
GYA	Guiyang	167.90	350	*i* PKP	PKPdf	23 51 40.7	-0.1
GYA				pPKP	pPKPdf	23 51 52.3	-0.9
GYA				PKPab	PKPab	23 52 49.9	+2.2
GYA				PKS	PKSdf	23 55 10.0	-3.7
GYA				PP	PP	23 56 32.9	-2.1
GYA				SKKS		00 03 19.2	
GYA				SS	SS	00 17 20.8	+0.2
GYA				AMB	AMB		
	comp=Z,160nm,7.5s						
GYA				LR	LR		
	comp=Z,350nm,20.5s						
GYA				LR	LR		
	comp=Z,390nm,20.8s						
GYA				LR	LR		
	comp=Z,360nm,21.0s						
GZH	Guangzhou	167.93	316	PKP	PKPdf	23 51 41.8	+1.0
GZH				PP	PP	23 56 42.3	+6.2
GZH				AMB	AMB		
	comp=Z,450nm,5.8s						
GZH				LR	LR		
	comp=Z,320nm,17.3s						
GZH				LR	LR		
	comp=Z,530nm,17.5s						
PBA	Port Blair	168.36	103	*e*x	PKPpre	23 51 36.4	
KMI	Kunming	169.31	8	PKP	PKPdf	23 51 42.3	+0.4
KMI				pPKP	pPKPdf	23 51 53.4	-0.9
KMI				sPKP		23 51 57.8	
TRTT	Trang	171.97	145	PKP	PKPdf	23 51 43.7	+0.3
QIZ	Qiongzhong	173.06	311	PKP	PKPdf	23 51 43.6	-0.1
QIZ				PP	PP	23 56 59.6	-2.5
QIZ				SS	SS	00 18 15.1	+1.2
QIZ				AMB	AMB		
	comp=Z,160nm,6.4s						
QIZ				LR	LR		
	comp=Z,440nm,25.0s						
QIZ				LR	LR		
	comp=Z,410nm,18.1s						
QIZ				LR	LR		
	comp=Z,820nm,21.1s						
QIZ	Qiongzhong	173.06	311	PFAKE		23 51 50.0	+6.3
QIZ				LR	LR		
	comp=Z,740nm,22.0s						
CHTO	Chiang Mai	173.28	50	PFAKE		23 51 50.0	+6.2
CHTO				LR	LR		
	comp=Z,1µm,22.0s						
CHTO	Chiang Mai	173.28	50	P	PKPdf	23 51 43.9	+0.1
	SNR=12						
CHTO	Chiang Mai	173.28	50	PKP	PKPdf	23 51 43.6	-0.2
CMMT	Chiang Mai	173.28	50	PKP	PKPdf	23 51 43.5	-0.3
CMAR	Chiang Mai Arr	173.49	52	PKP	PKPdf	23 51 43.6	-0.2
	comp=Z,10nm,1.1s,baz=324,slow=1.5,SNR=36						
CMAR				PKPab	PKPab	23 53 12.8	0.0
	comp=Z,2.6nm,0.8s,baz=305,slow=5.6,SNR=5.3						
CMAR				PP	PP	23 57 07.7	+3.3
	comp=Z,3.4nm,1.0s,baz=295,slow=8.3,SNR=6.0						
UMPA	Umpang Tak	174.45	71	PKP	PKPdf	23 51 45.7	+1.4
SRDT	SRDT	174.94	91	PKP	PKPdf	23 51 45.5	+1.1
UTHA	Uthaitani	175.15	77	PKP	PKPdf	23 51 44.9	+0.4
PHIT	Phitsanulok	175.37	54	PKP	PKPdf	23 51 45.2	+0.7
PBKT	Sadao Pong	176.15	57	PKP	PKPdf	23 51 44.6	-0.1
NONG	Nongkai	176.27	18	PKP	PKPdf	23 51 45.0	+0.3
SKNT	Sakolnakorn	177.51	8	PKP	PKPdf	23 51 45.3	+0.4
UBPT	Khong Chiam	178.65	306	PKP	PKPdf	23 51 46.3	+1.2

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*IDC **02** 23:36:19.2±1.0, 37°.94N×20°.53E, h0^{km}, mb3.9/10, mb1 3.8/15, mb1mx3.7/67, mbtmp3.7/15, ML3.6/5, Error ellipse: s-maj=21.2km s-min=17.3km az=148.0*

*CSEM **02** 23:36:22.0±0.2, 37°.96N×20°.36E, h10^{km}, mb4.0/7, Error ellipse: s-maj=4.4km s-min=2.5km az=37.0*

*ISCJB **02** 23:36:22.4±0.4, 38°.02N±0°.02×20°.31E±0°.02, h27^{km}±3^{km}, mb3.9/18, Error ellipse: s-maj=3.9km s-min=2.1km az=42.3*

*PDG **02** 23:36:22.3±0.6, 38°.03N×20°.33E, h16^{km}±2^{km}, ML4.0/12, Error ellipse: s-maj=1.5km s-min=1.4km az=90.0*

*ATH **02** 23:36:23.3, 37°.97N×20°.54E, h20^{km}, ML3.7/22, Error ellipse: s-maj=2.4km s-min=0.9km az=58.0*

*NEIC **02** 23:36:23.3±0.0, 37°.97N×20°.54E, h20^{km}, mb4.0/10, ML3.7(ATH), After ATH.*

*THE **02** 23:36:24.3, 37°.98N×20°.54E, h0^{km}±2^{km}, ML3.7/11, Error ellipse: s-maj=2.1km s-min=0.5km az=231.0*

ISC 02 23:36:22.0±0.8**, 37°.97N**±0°.02×**20°.47E**±0°.02**, h18**^{km}±4^{km}**, n370, σ1^{s}.50**/449**, mb3.9**/18**, 25C-19D, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLS	Valsamata	0.23	25	P	Pb	23 36 28.0	+0.6
VLS				S	Sb	23 36 31.9	+0.7
VLS				AML	AML	23 36 32.7	
	comp=E,50492µm,0.2s						
VLS				AML	AML	23 36 33.0	
	comp=N,93730µm,0.2s						
VLS	Valsamata	0.23	25	P	Pb	23 36 28.1	+0.6
VLS				S	Sg	23 36 31.0	-0.1
VLS	Valsamata	0.23	25	P	Pb	23 36 28.1	+0.6
VLS				S	Sg	23 36 31.0	-0.1
KFL	Anninata	0.29	61	P	Pb	23 36 29.0	+0.3
KFL				S	Sb	23 36 33.5	+0.4
KFL	Anninata	0.29	61	P	Pb	23 36 29.0	+0.3
KFL				S	Sb	23 36 33.2	+0.1
KFL	Anninata	0.29	61	P	Pb	23 36 29.0	+0.3
KFL				S	Sb	23 36 33.2	+0.1
ZKS	Zakynthos	0.37	137	P	Pg	23 36 29.7	0.0
ZKS				S	Sb	23 36 35.4	-0.2
FSK	Fiskardo	0.49	9	P	Pb	23 36 32.5	+0.3
FSK				S	Sb	23 36 40.4	+1.3
FSK	Fiskardo	0.49	9	P	Pb	23 36 32.8	+0.6
FSK				S	Sn	23 36 41.3	-1.0
VTN	Vitineika	0.57	95	P	Pb	23 36 33.9	+0.5
VTN				S	Sg	23 36 40.6	-0.4
VTN	Vitineika	0.57	95	P	Pb	23 36 33.9	+0.5
VTN	Vitineika	0.57	95	P	Pb	23 36 33.9	+0.5
VTN				S	Sg	23 36 40.8	-0.2
MGNA	Meganis„,	0.73	20	P	Pn	23 36 38.2	+0.8
MGNA				AML	AML	23 36 56.1	
	comp=E,10253µm,0.3s						
MGNA				AML	AML	23 36 57.7	
	comp=N,6616µm,0.6s						
MGNA	Meganis„,	0.73	20	P	Pn	23 36 37.7	+0.3
RLS	Riolos of Patr	0.80	83	P	Pn	23 36 38.2	-0.1
RLS				AML	AML	23 36 57.1	
	comp=E,6713µm,0.4s						
RLS				AML	AML	23 36 57.5	
	comp=N,7514µm,0.3s						
RLS	Riolos of Patr	0.80	83	P	Pg	23 36 38.0	+0.5
RLS				S	Sn	23 36 49.5	-0.2
RLS	Riolos of Patr	0.80	83	P	Pg	23 36 38.0	+0.5
RLS				S	Sn	23 36 49.5	-0.2
LKD2	Lefkada island	0.83	10	P	Pg	23 36 38.3	0.0
LKD2				AML	AML	23 36 59.6	
	comp=E,12321µm,0.4s						
LKD2				AML	AML	23 37 00.9	
	comp=N,12729µm,0.7s						
LKD2	Lefkada island	0.83	10	P	Pn	23 36 39.8	+0.9
LKD2				S	Sn	23 36 52.5	+1.8
LKD2	Lefkada island	0.83	10	P	Pn	23 36 38.7	-0.2
LKD2				S	Sn	23 36 52.5	+1.8
PDO	Prodromos	0.84	42	P	Pn	23 36 38.9	-0.1
PDO				AML	AML	23 36 57.6	
	comp=E,16150µm,0.3s						
PDO				AML	AML	23 37 00.4	
	comp=N,22717µm,0.3s						
PDO	Prodromos	0.84	42	P	Pn	23 36 39.2	+0.2
PDO				S	Sn	23 36 51.7	+0.7
PDO	Prodromos	0.84	42	P	Pg	23 36 38.7	+0.2
PDO				S	Sn	23 36 51.7	+0.7
DRO	Drossia	0.98	91	P	Pb	23 36 40.1	-0.4
DRO				AML	AML	23 37 04.7	
	comp=E,17326µm,0.4s						
DRO				AML	AML	23 37 06.4	
	comp=N,14811µm,0.6s						
DRO	Drossia	0.98	91	P	Pn	23 36 41.3	+0.4
DRO	Drossia	0.98	91	P	Pn	23 36 41.3	+0.4
PVO	Paravola	1.05	52	P	Pg	23 36 43.2	+0.7
PVO				AML	AML	23 37 05.6	
	comp=N,7643µm,0.3s						
PVO				AML	AML	23 37 08.2	
	comp=E,8128µm,0.4s						
PVO	Paravola	1.05	52	P	Pg	23 36 43.1	+0.7
PVO				S	Sn	23 36 58.0	+1.9
PVO	Paravola	1.05	52	P	Pg	23 36 42.8	+0.4
PVO				S	Sn	23 36 58.0	+1.9
AMT	Artemida-Makis	1.08	114	P	Pg	23 36 43.7	+0.8
AMT				AML	AML	23 37 10.8	
	comp=N,10451µm,0.5s						
AMT				AML	AML	23 37 11.2	
	comp=E,7880µm,0.7s						
AMT	Artemida-Makis	1.08	114	P	Pg	23 36 44.2	+1.3
AMT				S	Sn	23 36 58.3	+1.6
AMT	Artemida-Makis	1.08	114	P	Pg	23 36 43.3	+0.4
AMT				S	Sn	23 36 58.5	+1.8
UPR	University Cam	1.09	73	P	Pg	23 36 43.5	+0.4
UPR	University Cam	1.09	73	P	Pg	23 36 44.4	+1.3
UPR	University Cam	1.09	73	P	Pg	23 36 43.2	+0.1
MES3	Kyparissia	1.20	127	P	Pg	23 36 46.0	+0.9
MES3	Kyparissia	1.20	127	P	Pg	23 36 45.7	+0.6
EFP	Efpalio	1.22	68	P	Pn	23 36 44.4	+0.2
EFP				AML	AML	23 37 07.9	
	comp=N,5217µm,0.5s						
EFP				AML	AML	23 37 10.3	
	comp=E,5550µm,0.8s						
EFP	Efpalio	1.22	68	P	Pg	23 36 46.0	+0.4
EFP				S	Sg	23 37 03.0	+1.4
EFP	Efpalio	1.22	68	P	Pg	23 36 46.0	+0.4
EFP				S	Sg	23 37 03.0	+1.4
LAKA	Lakka	1.22	77	P	Pb	23 36 45.2	+0.6
LAKA	Lakka	1.22	77	P	Pg	23 36 45.9	+0.3
LAKA				S	Sg	23 37 02.4	+0.7
LAKA	Lakka	1.22	77	P	Pg	23 36 45.9	+0.3
LAKA				S	Sg	23 37 02.4	+0.7
DSL	Palaion Diasel	1.26	23	P	Pg	23 36 46.3	-0.1
DSL				AML	AML	23 37 10.8	
	comp=N,7426µm,0.5s						
DSL				AML	AML	23 37 13.8	
	comp=E,7128µm,0.5s						
DSL	Palaion Diasel	1.26	23	P	Pg	23 36 47.8	+1.4
DSL				S	Sg	23 37 05.1	+2.2
DSL	Palaion Diasel	1.26	23	P	Pg	23 36 46.5	+0.1
DSL				S	Sg	23 37 05.1	+2.2
ANX	Ano Chora	1.30	61	P	Pb	23 36 46.5	+0.5
ANX				AML	AML	23 37 14.5	
	comp=E,7602µm,0.5s						
ANX				AML	AML	23 37 16.4	
	comp=N,8104µm,0.5s						
ANX	Ano Chora	1.30	61	P	Pg	23 36 48.5	+1.3
ANX	Ano Chora	1.30	61	P	Pg	23 36 46.8	-0.4
TRIZ	Trizonia	1.33	72	P	Pg	23 36 47.1	-0.5
TRIZ	Trizonia	1.33	72	P	Pg	23 36 47.8	+0.2
TRIZ	Trizonia	1.33	72	P	Pg	23 36 47.2	-0.4
SERG	Sergoula	1.33	70	P	Pb	23 36 46.4	0.0
SERG				AML	AML	23 37 18.5	
	comp=E,4522µm,0.7s						
SERG				AML	AML	23 37 18.8	
	comp=N,5238µm,0.5s						
SERG	Sergoula	1.33	70	P	Pb	23 36 46.9	+0.5
KLV	Kalavryta, Ach	1.33	86	P	Pg	23 36 47.5	-0.2
KLV				AML	AML	23 37 14.2	
	comp=N,3985µm,0.4s						
KLV				AML	AML	23 37 18.5	
	comp=E,2470µm,0.8s						
KLV	Kalavryta, Ach	1.33	86	P	Pg	23 36 47.7	0.0
KLV	Kalavryta, Ach	1.33	86	P	Pg	23 36 47.7	0.0
ITM	Ithomi	1.40	124	P	Pg	23 36 49.7	+0.7
ITM				S	Sg	23 37 07.9	+0.6
ITM	Ithomi	1.40	124	P	Pg	23 36 50.2	+1.2
ITM				AML	AML	23 37 15.9	
	comp=E,2533µm,0.4s						
ITM				AML	AML	23 37 21.8	
	comp=N,3013µm,0.6s						
ITM	Ithomi	1.40	124	P	Pg	23 36 50.2	+1.2
ITM	Ithomi	1.40	124	P	Pg	23 36 48.7	-0.3
EVR	Evrytania	1.42	48	P	Pg	23 36 49.5	+0.1
EVR				AML	AML	23 37 17.1	
	comp=E,2496µm,0.4s						
EVR				AML	AML	23 37 19.7	
	comp=N,2809µm,0.5s						
EVR	Evrytania	1.42	48	P	Pg	23 36 50.4	+1.1
EVR	Evrytania	1.42	48	P	Pg	23 36 49.4	+0.1
PYL	PYLOS	1.48	136	P	Pb	23 36 48.7	-0.2
PYL	PYLOS	1.48	136	P	Pg	23 36 51.3	+0.9
PYL	PYLOS	1.48	136	P	Pg	23 36 49.9	-0.5
GUR	Goura	1.48	91	P	Pg	23 36 51.4	+0.9
GUR				AML	AML	23 37 18.8	
	comp=N,7896µm,0.5s						
GUR				AML	AML	23 37 27.0	
	comp=E,5204µm,0.6s						
GUR	Goura	1.48	91	P	Pg	23 36 50.3	-0.3
GUR	Goura	1.48	91	P	Pg	23 36 50.3	-0.3
TRIP	Tripoli	1.50	107	P	Pg	23 36 50.6	-0.2
TRIP	Tripoli	1.50	107	P	Pg	23 36 50.6	-0.2
MES2	Methoni	1.51	139	P	Pb	23 36 50.3	+0.8
MES2	Methoni	1.51	139	P	Pg	23 36 50.6	-0.5
IGT	Igoumenitsa	1.56	356	P	Pg	23 36 52.5	+0.4
IGT				AML	AML	23 37 23.5	
	comp=N,1977µm,0.7s						
IGT				AML	AML	23 37 25.6	
	comp=E,3334µm,0.6s						
IGT	Igoumenitsa	1.56	356	P	Pg	23 36 53.4	+1.3
IGT	Igoumenitsa	1.56	356	P	Pg	23 36 52.4	+0.3
VLX	Vlachokerasia	1.63	111	P	Pg	23 36 53.5	+0.1
VLX	Vlachokerasia	1.63	111	P	Pg	23 36 53.0	-0.4
VLX	Vlachokerasia	1.63	111	P	Pg	23 36 53.0	-0.4
SGD	Sagiada	1.65	354	P	Pg	23 36 54.5	+0.8
SGD	Sagiada	1.65	354	P	Pg	23 36 54.4	+0.7
SGD	Sagiada	1.65	354	P	Pg	23 36 54.4	+0.7
DLFA	Delphi	1.68	72	P	Pg	23 36 54.4	+0.2
DLFA	Delphi	1.68	72	P	Pg	23 36 53.7	-0.6
DSF	Desfina	1.68	74	P	Pg	23 36 54.5	+0.2
DSF	Desfina	1.68	74	P	Pg	23 36 54.1	-0.3
DSF	Desfina	1.68	74	P	Pg	23 36 53.8	-0.6
JAN	Janina	1.71	10	P	Pg	23 36 55.2	+0.3
JAN	Janina	1.71	10	P	Pg	23 36 54.6	-0.3
JAN	Janina	1.71	10	P	Pg	23 36 54.6	-0.3
THAL	Thalero	1.74	87	P	Pg	23 36 54.8	-0.6
THAL	Thalero	1.74	87	P	Pb	23 36 54.1	+0.8
THAL	Thalero	1.74	87	P	Pb	23 36 54.1	+0.8
AGG	Agios Georgios	1.80	54	P	Pb	23 36 54.7	+0.2
AGG	Agios Georgios	1.80	54	P	Pg	23 36 56.0	-0.6
AGG				AML	AML	23 37 32.7	
	comp=E,4678µm,0.8s						
AGG				AML	AML	23 37 33.2	
	comp=N,4921µm,0.4s						
AGG	Agios Georgios	1.80	54	P	Pg	23 36 56.0	-0.6
AGG	Agios Georgios	1.80	54	P	Pb	23 36 55.5	+1.0
KEK	Kerkira	1.82	344	P	Pb	23 36 55.1	+0.3
KEK	Kerkira	1.82	344	P	Pg	23 36 57.2	+0.3
KEK	Kerkira	1.82	344	P	Pb	23 36 55.5	+0.8
KASA	Kassiopi	1.82	347	P	Pb	23 36 55.1	+0.3
KASA	Kassiopi	1.82	347	P	Pb	23 36 55.5	+0.7
DYR	Agios Nikonas	1.92	128	P	Pb	23 36 56.5	+0.1
DYR	Agios Nikonas	1.92	128	P	Pb	23 36 57.7	+1.3
DYR	Agios Nikonas	1.92	128	P	Pb	23 36 56.5	+0.1
PROD	Prodromos	1.94	81	P	Pb	23 36 57.3	+0.5
PROD	Prodromos	1.94	81	P	Pb	23 36 57.0	+0.2
LTK	Loutraki	1.98	88	P	Pb	23 36 56.4	-1.1
LTK				AML	AML	23 37 37.1	
	comp=N,1796µm,0.6s						
LTK				AML	AML	23 37 37.6	
	comp=E,1400µm,0.4s						
LTK	Loutraki	1.98	88	P	Pb	23 36 56.9	-0.5
LTK	Loutraki	1.98	88	P	Pb	23 36 56.9	-0.5
LOUT	Loutraki	1.98	89	P	Pb	23 36 56.9	-0.7
LOUT	Loutraki	1.98	89	P	Pb	23 36 57.0	-0.5
LOUT	Loutraki	1.98	89	P	Pb	23 36 57.1	-0.5
THL	Klokotos Trika	2.00	37	P	Pg	23 36 59.6	-0.8
THL	Klokotos Trika	2.00	37	P	Pb	23 36 59.0	+1.2
THL	Klokotos Trika	2.00	37	P	Pb	23 36 58.7	+0.9
KPRO	Kipourio	2.10	19	P	Pb	23 36 59.7	+0.1
KPRO				AML	AML	23 37 45.7	
	comp=N,1923µm,0.7s						
KPRO				AML	AML	23 37 50.9	
	comp=E,1828µm,0.9s						
KPRO	Kipourio	2.10	19	P	Pb	23 36 59.4	-0.2
KPRO	Kipourio	2.10	19	P	Pb	23 36 59.4	-0.2
LKR	Lokris	2.11	70	P	Pb	23 36 58.8	-0.8
LKR	Lokris	2.11	70	P	Pb	23 36 59.5	-0.1
LKR	Lokris	2.11	70	P	Pb	23 36 58.9	-0.8
KRND	KRANIDI	2.21	105	P	Pb	23 37 01.1	-0.3
KRND	KRANIDI	2.21	105	P	Pb	23 37 01.1	-0.3
VIL2	Platees	2.22	83	P	Pb	23 37 00.2	-1.5
VIL2				AML	AML	23 37 44.0	
	comp=E,1321µm,0.7s						
VIL2				AML	AML	23 37 50.9	
	comp=N,1767µm,0.9s						
DID	Didima	2.25	101	P	Pn	23 36 59.8	+1.6
DID				AML	AML	23 37 41.7	
	comp=E,2179µm,0.8s						
DID				AML	AML	23 37 44.2	
	comp=N,2058µm,0.7s						
DID	Didima	2.25	101	P	Pb	23 37 02.3	+0.3
DID	Didima	2.25	101	P	Pb	23 37 00.4	-1.6
VILL	Villia	2.25	84	P	Pb	23 37 00.9	-1.3
VILL	Villia	2.25	84	P	Pb	23 37 00.9	-1.3
LRSO	Larissa Observ	2.27	41	P	Pb	23 37 02.3	-0.1
LRSO	Larissa Observ	2.27	41	P	Pb	23 37 01.9	-0.5
LRSO	Larissa Observ	2.27	41	P	Pb	23 37 01.9	-0.5
PENT	Pentalofos	2.28	13	P	Pb	23 37 04.2	+1.4
PENT	Pentalofos	2.28	13	P	Pb	23 37 03.1	+0.4
PENT	Pentalofos	2.28	13	P	Pb	23 37 03.1	+0.4
VLI	Veliai	2.33	122	P	Pb	23 37 03.3	-0.2

VLI	Veliai	2.33	122	P	Pb	23 37 03.6	+0.1
VLI	Veliai	2.33	122	P	Pb	23 37 02.9	-0.6
SMIA	Simia	2.34	66	P	Pb	23 37 02.5	-1.1
SMIA	Simia	2.34	66	P	Pb	23 37 02.5	-1.1
FYTO	Fytoko, Volos	2.41	53	P	Pb	23 37 03.6	-1.2
FYTO	Fytoko, Volos	2.41	53	P	Pb	23 37 03.8	-1.0
FYTO	Fytoko, Volos	2.41	53	P	Pb	23 37 03.5	-1.3
NEST	Nestorio	2.48	10	P	Pb	23 37 06.1	0.0
NEST	Nestorio	2.48	10	P	Pb	23 37 05.6	-0.6
NEST	Nestorio	2.48	10	P	Pb	23 37 05.5	-0.6
NEO	Neokhori	2.54	57	P	Pb	23 37 06.6	-0.5
NEO	Neokhori	2.54	57	P	Pb	23 37 05.9	-1.1
NEO	Neokhori	2.54	57	P	Pb	23 37 05.9	-1.1
KZN	Kozani	2.54	23	P	Pn	23 37 04.7	+2.3
KZN	Kozani	2.54	23	P	Pb	23 37 06.9	-0.3
KZN	Kozani	2.54	23	P	Pb	23 37 05.2	-2.0
XOR	Xorichti	2.55	56	P	Pn	23 37 04.2	+1.8
XOR	Xorichti	2.55	56	P	Pb	23 37 05.9	-1.3
XOR	Xorichti	2.55	56	P	Pn	23 37 04.8	+2.3
ATH	Athens Observa	2.57	89	P	Pn	23 37 04.3	+1.6
ATH	Athens Observa	2.57	89	P	Pb	23 37 05.4	-2.1
ATH	Athens Observa	2.57	89	P	Pn	23 37 04.9	+2.2
ATHU	Athens Univers	2.62	89	P	Pn	23 37 05.7	+2.3
ATHU	Athens Univers	2.62	89	P	Pn	23 37 06.0	+2.6
VLY	Voula,Athens	2.63	92	P	Pn	23 37 06.2	+2.7
VLY	Voula,Athens	2.63	92	P	Pn	23 37 06.3	+2.7
SKIA	Skiathos	2.64	62	P	Pn	23 37 05.3	+1.7
SKIA	Skiathos	2.64	62	P	Pn	23 37 05.9	+2.2
LIT	Litokhoron	2.65	36	P	Pb	23 37 07.9	-1.0
LIT	Litokhoron	2.65	36	P	Pb	23 37 07.9	-1.0
KBN	Korca	2.66	5	P	Pb	23 37 07.9	-1.3
KBN	Korca	2.66	5	P	Pb	23 37 07.9	-1.3
KYTH	Kithira	2.67	129	P	Pn	23 37 06.9	+2.7
PTL	Penteli	2.69	87	P	Pn	23 37 06.0	+1.7
PTL	Penteli	2.69	87	P	Pn	23 37 06.6	+2.3
DION	Dionisos Attik	2.74	87	P	Pn	23 37 06.8	+1.7
DION	Dionisos Attik	2.74	87	P	Pn	23 37 07.4	+2.3
FNA	Florina	2.90	14	P	Pn	23 37 09.6	+2.3
FNA	Florina	2.90	14	P	Pn	23 37 09.2	+2.0
FNA	Florina	2.90	14	P	Pb	23 37 10.5	-2.7
FNA	Florina	2.90	14	P	Pn	23 37 10.0	+2.7
AOS	Alonnisos	2.93	65	P	Pn	23 37 08.9	+1.2
AOS	Alonnisos	2.93	65	P	Pn	23 37 08.4	+0.7
AOS	Alonnisos	2.93	65	P	Pn	23 37 09.5	+1.8
ANKY	Antikythira Is	3.09	132	P	Pn	23 37 12.7	+2.8
ANKY	Antikythira Is	3.09	132	P	Pn	23 37 12.9	+3.0
BIA	Bitola	3.12	12	P	Pb	23 37 14.0	-2.9
BIA	Bitola	3.12	12	P	Pb	23 37 14.0	-2.9
TIP	Timpagrande	3.15	294	⇑iP	Pn	23 37 11.9	+1.2
TIP	Timpagrande	3.15	294	P	Pn	23 37 11.5	+0.8
TIP	Timpagrande	3.15	294	P	Pn	23 37 11.5	+0.8
PAIG	Paliouri	3.18	51	P	Pn	23 37 12.2	+1.1
PAIG	Paliouri	3.18	51	P	Pn	23 37 13.2	+2.1
HORT	Hortiatis	3.33	37	P	Pn	23 37 14.7	+1.5
HORT	Hortiatis	3.33	37	P	Pn	23 37 14.4	+1.2
HORT	Hortiatis	3.33	37	P	Pn	23 37 16.8	+3.6
HORT	Hortiatis	3.33	37	P	Pn	23 37 15.4	+2.2
PLG	Polygyros	3.34	43	P	Pn	23 37 14.9	+1.6
PLG	Polygyros	3.34	43	P	Pn	23 37 16.2	+2.9
PLG	Polygyros	3.34	43	P	Pn	23 37 15.7	+2.4
GRG	Griva	3.34	26	P	Pn	23 37 15.4	+2.1
GRG	Griva	3.34	26	P	Pn	23 37 14.8	+1.4
GRG	Griva	3.34	26	P	Pn	23 37 16.8	+3.5
GRG	Griva	3.34	26	P	Pn	23 37 15.8	+2.5
CGL1	Ceglie Messapi	3.54	320	ePn	Pn	23 37 17.1	+1.0
CGL1				Sn	Sn	23 38 00.5	+2.9
CGL1	Ceglie Messapi	3.54	320	ePn	Pn	23 37 17.1	+1.0
CGL1				Sn	Sn	23 38 00.5	+2.9
TAR1	Taranto	3.55	317	ePn	Pn	23 37 17.5	+1.3
TAR1				Sn	Sn	23 38 00.4	+2.7
TAR1	Taranto	3.55	317	ePn	Pn	23 37 17.5	+1.3
TAR1				Sn	Sn	23 38 00.4	+2.7
OUR	Ouranopolis	3.61	48	P	Pn	23 37 17.3	+0.3
MASS	Massafra	3.70	317	ePn	Pn	23 37 19.5	+1.2
MASS	Massafra	3.70	317	ePn	Pn	23 37 19.5	+1.2
FASA	Fasano	3.73	321	ePn	Pn	23 37 19.4	+0.8
FASA				Sn	Sn	23 38 04.1	+2.1
FASA	Fasano	3.73	321	ePn	Pn	23 37 19.4	+0.8
FASA				(Sn)	Sn	23 38 04.1	+2.1
SRS	Serrai	3.96	37	P	Pn	23 37 22.9	+1.0
SRS	Serrai	3.96	37	P	Pn	23 37 24.1	+2.2
ULC	Ulcinj	4.10	347	⇓iPn	Pn	23 37 24.7	+1.0
ULC				eSn	Sn	23 38 12.2	+1.0
ULC	Ulcinj	4.10	347	⇓iPn	Pn	23 37 24.7	+1.0
ULC				eSn	Sn	23 38 12.2	+1.0
SG1	Sgolgore (BA)	4.10	316	ePn	Pn	23 37 25.3	+1.5
SG1				Sn	Sn	23 38 11.8	+0.5
SG1	Sgolgore (BA)	4.10	316	ePn	Pn	23 37 25.3	+1.5
SG1				Sn	Sn	23 38 11.8	+0.5
APE	Apeiranthos	4.13	101	eP	Pn	23 37 27.2	+3.0
BAI	Bari	4.18	320	ePn	Pn	23 37 26.0	+1.1
BAI				Sn	Sn	23 38 15.3	+2.0
BAI	Bari	4.18	320	ePn	Pn	23 37 26.0	+1.1
BAI				Sn	Sn	23 38 15.3	+2.0
NVR	Nevrokopi	4.27	37	P	Pn	23 37 30.3	+4.2
NVR	Nevrokopi	4.27	37	P	Pn	23 37 30.1	+3.9
DRME	Dracevica, Mon	4.33	347	⇓iPn	Pn	23 37 27.5	+0.7
DRME				eSn	Sn	23 38 17.2	+0.4
DRME	Dracevica, Mon	4.33	347	⇓iPn	Pn	23 37 27.5	+0.7
DRME				eSn	Sn	23 38 17.2	+0.4
KKB	Krupnik	4.38	27	P	Pn	23 37 30.5	+2.9
SIGR	SIGRI	4.40	72	eP	Pn	23 37 30.1	+2.2
MMB	Musomiste	4.40	34	P	Pn	23 37 31.8	+3.9
CHOS	Chios island	4.42	83	eP	Pn	23 37 30.4	+2.1
IDI	Anoyia	4.45	126	Pn	Pn	23 37 30.4	+1.7
	comp=N,1.0nm,0.3s,baz=305,slow=9.6,SNR=9.8						
IDI				Sn	Sn	23 38 17.6	-2.5
	comp=N,2.8nm,0.3s,baz=62,slow=22,SNR=3.5						
IDI	Anoyia	4.45	126	eP	Pn	23 37 33.6	+4.9
BUM	Brajici-Budva	4.49	345	ePn	Pn	23 37 29.5	+0.3
BUM				eSn	Sn	23 38 20.5	-0.5
BUM	Brajici-Budva	4.49	345	ePn	Pn	23 37 29.5	+0.3
BUM				eSn	Sn	23 38 20.5	-0.5
PDG	Podgorica	4.55	349	⇑iP	Pn	23 37 30.9	+1.0
PDG	Podgorica	4.55	349	⇓iPn	Pn	23 37 30.8	+0.9
PDG				eSn	Sn	23 38 23.1	+0.8
TTG	Podgorica	4.55	349	⇓iPn	Pn	23 37 30.8	+0.9
TTG				eSn	Sn	23 38 23.1	+0.8
PVY	Plav	4.64	355	ePn	Pn	23 37 32.7	+1.5
PVY				eSn	Sn	23 38 25.3	+0.6
PVY	Plav	4.64	355	ePn	Pn	23 37 32.7	+1.5
PVY				eSn	Sn	23 38 25.3	+0.6
HCY	Herceg Novi	4.72	342	⇑iPn	Pn	23 37 32.5	+0.2
HCY				eSn	Sn	23 38 26.1	-0.4
HCY	Herceg Novi	4.72	342	⇑iPn	Pn	23 37 32.5	+0.2
HCY				eSn	Sn	23 38 26.1	-0.4
CEME	Cevo	4.72	346	⇑iPn	Pn	23 37 32.5	+0.1
CEME				eSn	Sn	23 38 26.9	+0.2
CEME	Cevo	4.72	346	⇑iPn	Pn	23 37 32.5	+0.1
CEME				eSn	Sn	23 38 26.9	+0.2
BOZC	Bozcaada	4.74	65	eP	Pn	23 37 35.0	+2.4
GADA	Gvkgeada	4.77	61	eP	Pn	23 37 34.7	+1.7
VAE	Valguarnera	4.82	266	Pn	Pn	23 37 38.1	+4.4
	comp=N,2.4nm,0.3s,baz=168,slow=9.5,SNR=3.0						
VAE				Sn	Sn	23 38 30.7	+1.5
	comp=N,1.0nm,0.3s,baz=200,slow=0.8,SNR=3.2						
URLA	Izmir	4.85	84	eP	Pn	23 37 37.1	+3.1
BEY	Berane	4.92	355	⇓iPn	Pn	23 37 36.1	+1.1
BEY				eSn	Sn	23 38 31.9	+0.4
IVA	Berane	4.92	355	⇓iPn	Pn	23 37 36.1	+1.1
IVA				eSn	Sn	23 38 31.9	+0.4
KOME	Kolasin	4.93	352	⇑iPn	Pn	23 37 36.4	+1.2
KOME				eSn	Sn	23 38 32.1	+0.3
KOME	Kolasin	4.93	352	⇑iPn	Pn	23 37 36.4	+1.2
KOME				eSn	Sn	23 38 32.1	+0.3
NKME	Niksic	4.93	347	⇑iPn	Pn	23 37 36.1	+0.9
NKME				eSn	Sn	23 38 32.4	+0.6
NKME	Niksic	4.93	347	⇑iPn	Pn	23 37 36.1	+0.9
NKME				eSn	Sn	23 38 32.4	+0.6
RZN	Rozhen	4.95	40	P	Pn	23 37 39.2	+3.6
BARS	Barje	4.95	12	ePn	Pn	23 37 36.5	+1.1
NKY	Niksic	4.97	347	ePn	Pn	23 37 35.9	+0.1
NKY				eSn	Sn	23 38 33.0	+0.2
NKY	Niksic	4.97	347	ePn	Pn	23 37 35.9	+0.1
NKY				eSn	Sn	23 38 33.0	+0.2
TREB	Trebinje	5.01	342	ePn	Pn	23 37 35.7	-0.5
RDO	Rodhopi	5.04	49	eP	Pn	23 37 38.9	+2.2
VTS	Vitosha	5.07	24	⇑iP	Pn	23 37 39.8	+2.6
VTS	Vitosha	5.07	24	P	Pn	23 37 40.5	+3.3
VTS	Vitosha	5.07	24	⇑iP	Pn	23 37 39.8	+2.6
MS1	Monte Sant'Ang	5.10	318	ePn	Pn	23 37 38.4	+0.8
MS1				Sn	Sn	23 38 33.5	-2.6
MS1	Monte Sant'Ang	5.10	318	ePn	Pn	23 37 38.4	+0.8
MS1				Sn	Sn	23 38 33.5	-2.6
BRY	Bratogost	5.14	344	⇑iPn	Pn	23 37 38.4	+0.2
BRY				eSn	Sn	23 38 36.9	-0.2
BRY	Bratogost	5.14	344	⇑iPn	Pn	23 37 38.4	+0.2
BRY				eSn	Sn	23 38 36.9	-0.2
ENEZ	Enez	5.20	56	eP	Pn	23 37 41.4	+2.5
ALN	Alexandroupoli	5.22	54	eP	Pn	23 37 40.4	+1.3
PLD	Plovdiv	5.26	37	eP	Pn	23 37 42.5	+2.9
KDZ	Kurdzhali	5.29	44	P	Pn	23 37 41.6	+1.4
SJES	Sjenica	5.30	356	ePn	Pn	23 37 41.6	+1.3
STON	Ston	5.33	338	i Pn	Pn	23 37 40.7	+0.1
STON				Sn	Sn	23 38 39.3	-2.2
STON	Ston	5.33	338	⇓iPn	Pn	23 37 40.7	+0.1
UPM	Unac-Piva	5.36	348	⇓iPn	Pn	23 37 42.2	+1.0
UPM				eSn	Sn	23 38 42.4	-0.2
UPM	Unac-Piva	5.36	348	⇓iPn	Pn	23 37 42.2	+1.0
UPM				eSn	Sn	23 38 42.4	-0.2
ERIK	Erikli-Kesan	5.41	58	eP	Pn	23 37 44.5	+2.8
PLE	Pljevlja	5.42	352	ePn	Pn	23 37 43.1	+1.2
PLE				eSn	Sn	23 38 43.1	-0.8
PLE	Pljevlja	5.42	352	ePn	Pn	23 37 43.1	+1.2
PLE				eSn	Sn	23 38 43.1	-0.8
BODT	Bodrum	5.52	97	eP	Pn	23 37 47.5	+4.3
IVAS	Ivanjica	5.61	358	ePn	Pn	23 37 45.0	+0.5
BOVS	Bovan	5.74	9	ePn	Pn	23 37 46.7	+0.5
DAT	Datca	5.80	100	eP	Pn	23 37 51.5	+4.3
AYDB	Zeytinkoy-Aydi	5.87	88	eP	Pn	23 37 51.7	+3.5
GRUS	Gruza	5.92	2	ePn	Pn	23 37 49.5	+0.8
BBLS	Lazići	5.95	353	ePn	Pn	23 37 49.2	0.0
ZAGS	Zajecar	5.99	12	ePn	Pn	23 37 50.7	+1.0
DIVS	Divibare	6.13	357	ePn	Pn	23 37 51.5	-0.3
EDRB	Edirne	6.19	49	eP	Pn	23 37 55.1	+2.7
HAPS	Han Pijesak,BI	6.22	350	⇑iPn	Pn	23 37 52.3	-0.6
TRUS	Trudelj	6.25	360	ePn	Pn	23 37 53.8	+0.5
ARG	Arkhangelos	6.37	104	eP	Pn	23 37 59.6	+4.7
KUBS	Kucevo	6.50	8	ePn	Pn	23 37 55.7	-1.0
TURN	Turunc	6.57	97	eP	Pn	23 37 58.6	+1.0
TEKS	Tekeris	6.61	354	ePn	Pn	23 37 58.2	-0.1
DALY	Dalyan (Mu˜la	6.62	98	eP	Pn	23 38 02.8	+4.5
HERR	Herculane	7.06	11	⇑iP	Pn	23 38 06.3	+1.9
HERR	Herculane	7.06	11	⇑iP	Pn	23 38 06.3	+1.9
FGSL	Fruska Gora	7.20	356	ePn	Pn	23 38 06.0	-0.3
BLY	Banja Luka	7.21	341	ePn	Pn	23 38 07.9	+1.5
UDBI	Udbina	7.45	333	i Pn	Pn	23 38 11.2	+1.4
UDBI				Sn	Sn	23 39 32.2	-1.5
BZS	Buzias	7.69	6	⇑iP	Pn	23 38 15.8	+2.8
BZS	Buzias	7.69	6	⇑iP	Pn	23 38 15.8	+2.8
NVLJ	Novalja	7.82	329	ePn	Pn	23 38 15.7	+1.0
NVLJ				Sn	Sn	23 39 40.7	-2.1
LOT	Lotru	7.87	17	⇑iP	Pn	23 38 17.4	+1.8
LOT	Lotru	7.87	17	⇑iP	Pn	23 38 17.4	+1.8
ARR	Arges	8.02	22	⇓iP	Pn	23 38 17.7	+0.1
ARR	Arges	8.02	22	⇓iP	Pn	23 38 17.7	+0.1
VOIR		8.21	23	⇓iP	Pn	23 38 21.4	+1.2
VOIR		8.21	23	⇓iP	Pn	23 38 21.4	+1.2
BOJS	Bojanci	8.47	334	ePn	Pn	23 38 24.6	+0.8
BOJS				i Sn	Sn	23 39 56.0	-3.0
BOJS	Bojanci	8.47	334	ePn	Pn	23 38 24.6	+0.8
OZLJ	Ozalj	8.50	336	ePn	Pn	23 38 25.3	+1.2
MLR	Muntele Rosu	8.56	27	Pn	Pn	23 38 27.5	+2.5
	comp=N,0.0nm,0.3s,baz=173,slow=8.1,SNR=3.7						
MLR	Muntele Rosu	8.56	27	⇓iP	Pn	23 38 26.4	+1.4
MLR	Muntele Rosu	8.56	27	⇓iP	Pn	23 38 26.4	+1.4
CRES	Cresnjev	8.69	336	ePn	Pn	23 38 26.7	-0.1
TLB	Topalu	8.73	38	⇓iP	Pn	23 38 27.5	+0.3
TLB	Topalu	8.73	38	⇓iP	Pn	23 38 27.5	+0.3
VISS	Visnje	8.88	334	ePn	Pn	23 38 30.7	+1.4
VISS				eSn	Sn	23 40 05.0	-3.8
VISS	Visnje	8.88	334	ePn	Pn	23 38 30.7	+1.4
CEY	Cerknica	8.97	332	ePn	Pn	23 38 30.6	0.0
PLOR	Plostina	9.12	28	⇑iP	Pn	23 38 33.6	+0.9
PLOR	Plostina	9.12	28	⇑iP	Pn	23 38 33.6	+0.9
VRI	Vrincioaia	9.16	29	⇑iP	Pn	23 38 35.2	+1.9
VRI	Vrincioaia	9.16	29	⇑iP	Pn	23 38 35.2	+1.9
KEST	Kesra	9.19	259	Pn	Pn	23 38 34.4	+0.7
	comp=N,0.2nm,0.3s,baz=51,slow=4.6,SNR=5.6						
KEST				Sn	Sn	23 40 16.5	-0.2
	comp=N,0.1nm,0.3s,baz=60,slow=22,SNR=2.8						
LJU	Ljubljana	9.20	333	ePn	Pn	23 38 34.1	+0.4
JAVS	Javornik	9.24	331	ePn	Pn	23 38 35.2	+0.9
JAVS				i Sn	Sn	23 40 14.2	-3.7
JAVS	Javornik	9.24	331	ePn	Pn	23 38 35.2	+0.9
PERS	Pernice	9.52	337	i Pn	Pn	23 38 37.8	-0.4
PERS				i Sn	Sn	23 40 18.5	-6.2
PERS	Pernice	9.52	337	i Pn	Pn	23 38 37.8	-0.4
SOKA	Soboth	9.58	337	i Pn	Pn	23 38 39.0	-0.1
	comp=N,7.0nm,0.4s,SNR=25						
SOKA	Soboth	9.58	337	Pn	Pn	23 38 39.0	-0.1
	comp=N,7.0nm,0.4s,SNR=25						
OBKA	Obir	9.59	335	i Pn	Pn	23 38 40.3	+1.1
	comp=N,1.8nm,0.2s						
OBKA				i Sn	Sn	23 40 25.0	-1.5
	comp=N,6.3nm,0.5s						
OBKA	Obir	9.59	335	Pn	Pn	23 38 40.3	+1.1
	comp=N,1.8nm,0.2s						
ANTO	Ankara	9.79	75	Pn	Pn	23 38 40.8	-1.2
ANTO	Ankara	9.79	75	Pn	Pn	23 38 40.8	-1.2
ARSA	Arzberg	9.96	340	i Pn	Pn	23 38 46.2	+2.0
	comp=N,1.6nm,0.3s						
ARSA	Arzberg	9.96	340	Pn	Pn	23 38 46.2	+2.0
	comp=N,1.6nm,0.3s						
BRTR	Keskin Array B	10.43	76	Pn	Pn	23 38 55.6	+5.0
	comp=N,0.2nm,0.3s,baz=257,slow=12,SNR=7.2						
ABTA	Abfaltersbach	10.56	329	i Sn	Sn	23 40 47.4	-2.7
	comp=N,1.6nm,0.3s						
VYHS	Vyhne	10.59	354	ePN	Pn	23 38 57.2	+4.5
VYHS				eSN	Sn	23 40 49.1	-1.7
MOA	Molln	10.87	337	i Pn	Pn	23 38 57.7	+1.2
	comp=N,2.2nm,0.3s,SNR=6.5						
MOA	Molln	10.87	337	Pn	Pn	23 38 57.7	+1.2
	comp=N,2.2nm,0.3s,SNR=6.5						
GERES	GERESS Array B	11.93	338	Pn	Pn	23 39 11.3	+0.2
	comp=N,0.2nm,0.3s,baz=162,slow=13,SNR=6.4						
GERES				Sn	Sn	23 41 18.3	-5.4
	comp=N,0.3nm,0.3s,baz=152,slow=22,SNR=3.2						
AKASG	Malin Array Be	14.17	23	Pn	P	23 39 49.2	+0.1
	comp=N,1.9nm,0.3s,baz=210,slow=8.5,SNR=5.0						
EIL	Elat	14.60	120	Pn	Pn	23 39 46.5	-1.1
	comp=N,0.3nm,0.3s,baz=339,slow=18,SNR=4.8						
KIV	Kislovodsk	17.79	63	Pn	Pn	23 40 27.8	-0.9
	comp=N,3.1nm,1.3s						
KIV	Kislovodsk	17.79	63	Pn	Pn	23 40 27.8	-0.9
	comp=N,3.1nm,1.3s						
GNI	Garni	18.97	76	P	P	23 40 42.1	-0.3
	comp=N,2.4nm,0.4s						
GNI	Garni	18.97	76	P	P	23 40 42.1	-0.3
	comp=N,2.4nm,0.4s						
ESDC	Sonseca Array	19.10	283	P	Pn	23 40 45.6	+1.0
	comp=N,0.2nm,0.3s,baz=79,slow=9.9,SNR=3.5						
OBN	Obninsk	20.33	27	P	P	23 40 56.8	-0.1
	comp=N,7.8nm,0.5s						
HFS	Hagfors	22.60	351	P	P	23 41 21.5	+0.1
	comp=N,4.6nm,0.4s,baz=156,slow=11,SNR=50						
ESK	Eskdalemuir	23.58	325	P	P	23 41 32.3	+0.9
	comp=N,14nm,1.2s						
FINES	FINESS Array B	23.76	7	P	P	23 41 33.4	+0.4
	comp=N,2.0nm,0.6s,baz=169,slow=11,SNR=12						
NB2	NORSAR Subarra	23.81	349	P	P	23 41 33.8	+0.2
	comp=Z,1.0nm,0.5s,baz=158,slow=9.3						
AKTO	Aktyubinsk	29.34	53	P	P	23 42 23.2	-0.4
	comp=Z,0.5nm,0.3s,baz=214,slow=7.3,SNR=2.5						
TORD	Torodi Ar. Bea	29.84	219	P	P	23 42 28.2	-0.1
	comp=Z,0.2nm,0.3s,baz=24,slow=10						
ARU	Arti	31.24	41	P	P	23 42 39.8	-0.5
	comp=Z,0.5nm,0.3s						
ARCES	ARCESS Array B	31.74	3	P	P	23 42 44.6	0.0
	comp=Z,1.6nm,0.5s,baz=189,slow=10,SNR=22						
BORG	Borgarnes	36.27	331	P	P	23 43 25.0	+1.2
	comp=Z,1.0nm,0.7s						
BVAR	Borovoye Array	37.28	50	P	P	23 43 32.6	-0.1
	comp=Z,0.3nm,0.5s,baz=272,slow=7.7,SNR=3.1						
KURBB	Kurchatov Arra	42.39	53	P	P	23 44 14.6	-0.5
	comp=Z,0.5nm,0.5s,baz=279,slow=8.9,SNR=5.9						
KURK	Kurchatov	42.44	53	P	P	23 44 14.6	-0.9
MKAR	Makanchi Array	45.45	58	P	P	23 44 39.2	-0.5
	comp=Z,0.8nm,0.4s,baz=274,slow=7.7,SNR=16						
ZALV	Zalesovo Beam	45.86	48	P	P	23 44 42.6	-0.3
	comp=Z,3.4nm,0.5s,baz=276,slow=8.8,SNR=18						
TSUM	Tsumeb	56.93	183	P	P	23 46 05.6	-0.6
	comp=Z,6.6nm,1.2s						
TLY	Talaya	57.46	47	P	P	23 46 10.1	+0.4
	comp=Z,0.5nm,0.5s						
SONM	Songino Array	60.62	50	P	P	23 46 31.6	-0.1
	comp=Z,0.5nm,0.6s,baz=256,slow=5.8,SNR=3.0						
PALK	Pallekele	62.21	103	P	P	23 46 39.7	-3.1
	comp=Z,5.5nm,1.1s						
FCC	Fort Churchill	69.41	330	eP	P	23 47 28.2	-0.2
	comp=Z,0.7nm,0.5s						

GUC 02 23:39:13.0±0.7, 21°.75S×69°.19W, h83^{km}±4^{km}, ML3.5, 4C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.07	223	⇓eP	Pn	23 39 25.6	+0.6
PB09				i S	Sn	23 39 34.5	+0.6
PB09				IAML		23 39 35.4	
	comp=E,6µm,0.5s						
PB03	IPOC Station P	0.60	240	⇑eP	Pn	23 39 28.3	+0.2
PB03				i S	Sn	23 39 39.8	+0.5
PB03				IAML		23 39 40.5	
	comp=E,3µm,0.2s						
PB07	IPOC Station P	0.65	272	⇑eP	Pn	23 39 29.0	+0.4
PB07				i S	Sn	23 39 40.9	+0.8
PB07				IAML		23 39 42.5	
	comp=N,4µm,0.2s						
PB02	IPOC Station P	0.78	303	eP	Pn	23 39 30.3	+0.4
PB02				⇓iS	Sn	23 39 43.0	+0.6
PB06	IPOC Station P	1.02	200	⇑eP	Pn	23 39 33.0	+0.4
PB06				i S	Sn	23 39 48.3	+1.0
PB06				IAML		23 39 50.1	
	comp=N,2µm,0.2s						
PB04	IPOC Station P	1.06	236	⇑eP	Pn	23 39 33.3	+0.2
PB04				i S	Sn	23 39 49.9	+1.7
PB04				IAML		23 39 52.2	
	comp=N,2µm,0.1s						
PB15	IPOC Station P	1.48	190	eP	Pn	23 39 38.9	+0.6
PB15				i S	Sn	23 39 59.8	+2.4

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*SJA **02** 23:50:47.4±0.4, 21°.82S×67°.04W, h195^{km}±27^{km}, ML4.5, MW3.7*

*ISCJB **02** 23:50:50.5±0.2, 22°.15S±0°.02×67°.18W±0°.03, h179^{km}±3^{km}, mb4.0/23, Error ellipse: s-maj=4.2km s-min=3.4km az=23.5*

*IDC **02** 23:50:52.8±1.6, 21°.97S×67°.05W, h183^{km}±15^{km}, mb3.8/13, mb1 4.0/18, mb1mx3.8/39, mbtmp4.3/18, Error ellipse: s-maj=17.9km s-min=10.9km az=69.0*

*NEIC **02** 23:50:53.0±0.0, 22°.04S×67°.74W, h218^{km}, mb4.3/8, ML4.6(GUC), After GUC.*

*GUC **02** 23:50:53.1±0.6, 22°.04S×67°.74W, h218^{km}±8^{km}, ML4.6*

*SCB **02** 23:50:54.5±1.8, 21°.90S×67°.18W, h10^{km}±9^{km}, ML4.3/7, Error ellipse: s-maj=5.6km s-min=2.3km az=0.0*

ISC 02 23:50:50.6±0.7, **22°.14S**±0°.04×**67°.16W**±0°.03, **h166**^{km}±6^{km}, **n81**, **σ1^{s}.48**/108, **mb4.2**/23, **9C**, **Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	1.96	280	⇑iP	Pn	23 51 29.3	+2.8
PB09				i S	Sn	23 51 56.7	+2.6
PB06	IPOC Station P	2.30	255	P	Pn	23 51 31.9	+1.6
PB06	IPOC Station P	2.30	255	⇑iP	Pn	23 51 32.4	+2.0
PB06				i S	Sn	23 52 02.7	+1.7
PB06				IAML		23 52 05.2	
	comp=E,2µm,0.2s						
BS01	CO. Balcˆ‡n	2.31	53	P	Pn	23 51 31.1	+0.5
PB03	IPOC Station P	2.41	272	⇑iP	Pn	23 51 33.2	+1.6
PB03				i S	Sn	23 52 03.8	+0.5
PB03				IAML		23 52 05.3	
	comp=E,2µm,0.5s						
PB01	IPOC Station P	2.42	296	ePn	Pn	23 51 33.5	+1.7
PB01	IPOC Station P	2.42	296	P	Pn	23 51 32.3	+0.5
PB01				S	Sn	23 52 00.7	-2.9
PB01				AML	AML	23 52 06.6	
	comp=E,899nm,0.4s						
PB01	IPOC Station P	2.42	296	⇑iP	Pn	23 51 33.5	+1.7
PB01				i S	Sn	23 52 04.2	+0.7
PB01				IAML		23 52 07.3	
	comp=N,2µm,0.2s						
PB07	IPOC Station P	2.56	279	⇑iP	Pn	23 51 35.0	+1.5
PB07				i S	Sn	23 52 06.6	0.0
PB07				IAML		23 52 07.1	
	comp=N,3µm,0.5s						
PB02	IPOC Station P	2.67	287	P	Pn	23 51 34.9	+0.2
PB02				S	Sn	23 52 07.9	-1.0
PB02				AML	AML	23 52 09.7	
	comp=N,887nm,0.2s						
PB02	IPOC Station P	2.67	287	⇑iP	Pn	23 51 36.1	+1.3
PB02				i S	Sn	23 52 08.4	-0.5
PB02				IAML		23 52 09.6	
	comp=E,3µm,0.3s						
PB08	IPOC Station P	2.72	317	P	Pn	23 51 36.9	+1.2
PB08				S	Sn	23 52 06.6	-3.9
PB08	IPOC Station P	2.72	317	⇑iP	Pn	23 51 38.2	+2.6
PB08				i S	Sn	23 52 12.2	+1.7
PB08				IAML		23 52 14.9	
	comp=N,1µm,0.3s						
PB04	IPOC Station P	2.78	265	P	Pn	23 51 37.3	+1.3
PB04				S	Sn	23 52 11.8	+0.6
PB04				AML	AML	23 52 15.1	
	comp=N,661nm,0.5s						
PB04	IPOC Station P	2.78	265	⇑iP	Pn	23 51 37.4	+1.3
PB04				i S	Sn	23 52 10.8	-0.4
PB04				IAML		23 52 12.0	
	comp=N,2µm,0.6s						
PB05	IPOC Station P	2.90	255	⇑iP	Pn	23 51 39.0	+1.5
PB05				i S	Sn	23 52 13.5	-0.4
PB05				IAML		23 52 14.3	
	comp=N,1µm,0.3s						
BB05	Carapari	3.19	85	P	Pn	23 51 44.0	+2.9
BB05				S	Sn	23 52 22.0	+1.7
BB05				AML	AML	23 52 24.4	
	comp=N,835nm,0.5s						
BS02	Patallajta	3.59	33	P	Pn	23 51 47.9	+1.5
BS02				S	Sn	23 52 27.7	-2.1
GO02	Mina Guanaco	3.74	216	ePn	Pn	23 51 50.8	+2.5
PSGC	Pisagua	3.75	312	P	Pn	23 51 47.7	-0.6
MNMC	Minye Minye	3.76	322	ePn	Pn	23 51 49.3	+0.7
MNMC	Minye Minye	3.76	322	P	Pn	23 51 48.8	+0.2
MNMC				S	Sn	23 52 32.8	-0.9
MNMC				AML	AML	23 52 35.0	
	comp=N,628nm,0.3s						
BS03	Mojotorillo	3.83	43	P	Pn	23 51 51.7	+2.1
BS03				S	Sn	23 52 35.6	+0.2
BS03				AML	AML	23 52 38.0	
	comp=N,998nm,0.6s						
BS06	Camiri	3.99	59	P	Pn	23 51 52.3	+1.0
BS06				S	Sn	23 52 38.2	-0.4
BS06				AML	AML	23 52 41.9	
	comp=N,848nm,0.5s						
BB04	Tambo Quemado	4.21	335	P	Pn	23 51 56.3	+1.6
BB01	Montecillos	4.42	24	P	Pn	23 51 58.8	+1.7
BB01				S	Sn	23 52 47.6	-1.4
BS08	Valle Grande	4.62	39	P	Pn	23 52 00.4	+0.8
BS10	CO. Tuti	4.82	15	P	Pn	23 52 03.5	+1.0
BBOJ	La Paz, Jacaqu	5.23	349	P	Pn	23 52 10.3	+2.4
BB02	La Guardia	5.55	41	P	Pn	23 52 12.3	+0.6
BBOD	La Paz, Gloria	5.64	346	P	Pn	23 52 15.3	+2.0
LPAZ	La Paz	5.89	351	P	Pn	23 52 18.7	+2.0
	comp=N,8.9nm,0.3s,baz=151,slow=6.0,SNR=178						
LPAZ				S	Sn	23 53 24.5	+0.4
	comp=N,1.6nm,0.3s,baz=357,slow=13,SNR=2.9						
LPAZ	La Paz	5.89	351	ePn	Pn	23 52 17.9	+1.1
LPAZ				S	Sn	23 53 24.5	+0.4
LPAZ	La Paz	5.89	351	P	Pn	23 52 18.6	+1.9
LPAZ				S	Sn	23 53 24.1	0.0
BBOB	La Paz, Bander	6.04	351	P	Pn	23 52 20.2	+1.7
GO03	Copiap	6.11	207	ePn	Pn	23 52 18.7	-0.2
AGUA	GUANDACOL	7.41	189	i P	Pn	23 52 38.2	+2.0
AGUA				i S	Sn	23 53 59.8	+0.3
LCO	Las Campanas	7.55	204	ePn	Pn	23 52 37.1	-1.1
APLL	PUNTA DE LOS L	8.24	176	i P	Pn	23 52 48.1	+0.9
APLL				i S	Sn	23 54 18.4	-0.8
APLL				IAML		23 54 19.2	
	comp=Z,31nm,0.5s						
SIV	San Ignacio	8.40	44	P	Pn	23 52 48.1	-1.3
	comp=Z,39nm,0.3s,baz=238,slow=11,SNR=423						
SIV				S	Sn	23 54 15.9	-7.3
	comp=Z,7.9nm,0.3s,baz=143,slow=20,SNR=7.9						
GO04	Tololo Observa	8.64	201	ePn	Pn	23 52 51.3	-1.4

RTLL	Cerro Villicun	9.23	187	i P	Pn	23 53 01.5	+1.2
RTLL				i S	Sn	23 54 40.4	-2.5
TCA	Tanti	9.44	167	i P	Pn	23 53 03.9	+0.8
TCA				IAML		23 53 05.8	
	comp=Z,11nm,0.2s						
TCA				i S	Sn	23 54 44.1	-4.0
CPUP	Villa Florida	9.89	117	P	Pn	23 53 10.8	+1.8
	comp=Z,0.8nm,0.3s,baz=301,slow=12,SNR=11						
MRA	San Martin	10.32	173	i P	Pn	23 53 15.1	+0.4
MRA				i S	Sn	23 55 04.7	-4.5
MRA				IAML		23 55 09.4	
	comp=Z,7.9nm,0.5s						
ROC1	El Roble	11.32	197	ePn	Pn	23 53 27.6	-0.3
SAML	Samuel	13.66	17	ePn	Pn	23 53 58.2	+0.4
NNA	Nana	13.69	316	P	Pn	23 53 58.2	+0.1
	comp=Z,1.4nm,0.3s,baz=115,slow=13,SNR=2.4						
TRQA	Tornquist	16.48	165	eP	Pn	23 54 32.6	+0.2
	comp=Z,12nm,0.5s						
PLCA	Paso Flores	18.76	188	P	Pn	23 54 58.3	-1.1
	comp=Z,0.5nm,0.3s,baz=30,slow=11,SNR=15						
TKL	Tuckaleechee C	59.60	344	P	P	00 00 35.9	-1.1
	comp=Z,2.9nm,0.6s,baz=142,slow=5.6,SNR=5.3						
SWET	Sewanee	59.76	342	eP	P	00 00 37.2	-0.9
	comp=Z,6.0nm,0.6s						
V48A	Smith Brothers	60.50	342	eP	P	00 00 42.4	-0.7
	comp=Z,4.3nm,0.7s						
SNAA	Sanae	61.15	161	P	P	00 00 48.6	+1.5
	comp=Z,2.3nm,0.7s,baz=284,slow=6.4,SNR=8.4						
WVT	Waverly	61.16	341	eP	P	00 00 46.4	-1.1
	comp=Z,3.8nm,0.7s						
TXAR	Lajitas Array	62.09	324	P	P	00 00 53.3	-0.8
	comp=Z,0.3nm,0.7s,baz=150,slow=7.3,SNR=2.4						
WMOK	Wichita Mounta	64.05	331	eP	P	00 01 06.0	-0.7
	comp=Z,3.4nm,1.0s						
S39A	Bolivar	64.41	337	eP	P	00 01 08.5	-0.5
	comp=Z,3.0nm,0.7s						
DBIC	Dimbokro	67.37	72	P	P	00 01 28.0	-0.4
	comp=Z,3.7nm,1.0s,baz=217,slow=7.2,SNR=4.9						
QSPA	South Pole Qui	68.06	180	P	P	00 01 33.8	+1.7
	comp=Z,5.1nm,0.5s,baz=164,slow=1.6,SNR=15						
SDCO	Great Sand Dun	69.63	328	eP	P	00 01 43.3	+1.0
	comp=Z,2.2nm,1.0s						
SMCO	Snowmass	71.47	328	eP	P	00 01 54.9	+1.3
	comp=Z,1.6nm,0.7s						
KOWA	Kowa	71.79	65	P	P	00 01 55.1	-0.4
	comp=Z,2.6nm,0.7s,baz=235,slow=7.9,SNR=9.0						
BBSC	Beaumont Base	73.19	318	eP	P	00 02 02.7	-0.8
SRU	San Rafael Swe	73.20	326	eP	P	00 02 04.3	+0.7
	comp=Z,5.5nm,0.7s						
MTPU	Mount Pierson	73.29	324	eP	P	00 02 05.3	+1.0
	comp=Z,1.4nm,0.8s						
PDAR	Pinedale Array	75.48	329	P	P	00 02 17.0	+0.2
	comp=Z,0.5nm,0.6s,baz=123,slow=6.7,SNR=6.9						
SPUT	South Promonto	75.82	326	eP	P	00 02 19.7	+1.0
	comp=Z,2.2nm,0.7s						
TOA0	Torodi Ar. Sit	76.05	69	eP	P	00 02 20.0	-0.3
TORD	Torodi Ar. Bea	76.05	69	P	P	00 02 18.3	-2.0
	comp=Z,7.6nm,0.5s,baz=255,slow=5.7						
ULM	Lac du Bonnet	76.42	342	P	P	00 02 20.8	-0.8
	comp=Z,2.7nm,0.5s,baz=141,slow=3.2,SNR=3.6						
NVAR	Mina Array Bea	77.00	321	P	P	00 02 25.1	-0.3
	comp=Z,0.4nm,0.6s,baz=116,slow=6.8,SNR=4.3						
MCMT	McKenzie Canyo	78.60	329	eP	P	00 02 35.4	+1.3
BOSA	Boshof	81.71	117	P	P	00 02 51.8	+0.6
	comp=Z,1.5nm,0.4s,baz=248,slow=4.5,SNR=7.8						
MAW	Mawson	83.25	163	P	P	00 02 59.3	+1.2
	comp=Z,1.7nm,0.6s,baz=215,slow=4.8,SNR=8.1						
YKA	Yellowknife Ar	92.33	340	P	P	00 03 41.6	0.0
	comp=Z,0.6nm,0.5s,baz=133,slow=4.9,SNR=4.5						
ASAR	Alice Springs	130.07	206	PKP	PKPdf	00 09 41.5	-0.1
	comp=Z,1.0nm,0.7s,baz=135,slow=2.6,SNR=7.8						
WRA	Warramunga Arr	133.19	208	PKP	PKPdf	00 09 47.6	+0.1
	comp=Z,0.9nm,0.6s,baz=160,slow=1.9,SNR=6.8						
BVAR	Borovoye Array	135.39	35	PKP	PKPdf	00 09 51.1	+0.6
	comp=Z,0.2nm,0.4s,baz=336,slow=2.4,SNR=2.4						
ZALV	Zalesovo Beam	141.82	27	PKP	PKPdf	00 10 02.4	+0.2
	comp=Z,0.8nm,0.5s,baz=327,slow=3.4,SNR=4.3						
MKAR	Makanchi Array	145.17	38	PKP	PKPdf	00 10 08.5	+0.1
	comp=Z,2.5nm,0.9s,baz=319,slow=3.7,SNR=14						

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*IDC **03** 00:23:22.6±7.8, 52°.08N×179°.35E, h104^{km}±71^{km}, mb3.6/11, mb1 3.8/12, mb1mx3.4/74, mbtmp4.0/12, ML4.5/1, MS4.2/1, Ms1 4.2/1, ms1mx3.1/51, Error ellipse: s-maj=38.7km s-min=17.1km az=11.0*

*ISCJB **03** 00:23:24.9±0.4, 51°.90N±0°.08×179°.37E±0°.05, h145^{km}±3^{km}, mb4.0/35, Error ellipse: s-maj=13.8km s-min=5.2km az=4.3*

*NEIC **03** 00:23:26.7±0.0, 51°.94N×179°.43E, h146^{km}, mb4.2/31, After AEIC.*

ISC 03 00:23:26.0±0.7**, 51°.9N**±0°.1×**179°.42E**±0°.04**, h146**^{km}±6^{km}**, n84,** σ1^{s}.**16**/84**, mb4.1**/35**, Rat Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CETU	Semis' Tuman	0.06	55	P	Pn	00 23 45.3	-0.2
CESW	Semis' Southwe	0.10	110	P	Pn	00 23 45.1	-0.5
CEAP	Semis' Anvil P	0.12	55	P	Pn	00 23 45.5	-0.1
CEAP				S	Sn	00 23 59.1	-1.4
LSPA	Little Sitkin	0.52	273	P	Pn	00 23 47.1	+0.2
LSPA				S	Sn	00 24 03.9	+1.0
LSNW	Little Sitkin	0.56	274	P	Pn	00 23 47.1	0.0
AMKA	Amchitka	0.56	187	P	Pn	00 23 47.1	-0.1
AMKA				S	Sn	00 24 02.0	-1.2
GALAA	Gareloi Lava P	1.14	98	P	Pn	00 23 51.6	0.0
GALAA				S	Sn	00 24 11.5	+0.5
GAEA	Gareloi East	1.15	97	P	Pn	00 23 51.5	-0.2
TAPA	Tanaga Point A	1.72	93	P	Pn	00 23 57.3	-0.4
KICM	Kanaga Island	2.10	89	P	Pn	00 24 01.9	-0.1
KICM				S	Sn	00 24 29.6	0.0
KIKV	Kanaga Island	2.11	90	P	Pn	00 24 01.8	-0.4
KIWB	Kanaga Island	2.13	91	ePn	Pn	00 24 02.1	-0.2
KIWB				eSn	Sn	00 24 29.5	-0.7
KIRH	Kanaga Island	2.16	90	P	Pn	00 24 02.3	-0.4
ADAG	Mount Adagdak	2.46	87	P	Pn	00 24 05.8	-0.6
ETKA	Kagalaska Isla	2.59	90	P	Pn	00 24 07.2	-0.8
GSTD	Great Sitkin T	2.75	86	P	Pn	00 24 09.1	-0.8
GSTD				S	Sn	00 24 41.9	-2.0
GSTR	Great Sitkin T	2.80	85	ePn	Pn	00 24 10.2	-0.4
SMY	Shemya	3.36	286	P	Pn	00 24 17.7	0.0
SMY				S	Sn	00 24 56.4	-1.3
ATKA	Atka Island	3.95	84	ePn	Pn	00 24 25.4	0.0
NIKH	Nikolski High	7.25	77	ePn	Pn	00 25 10.7	+1.5
SDPT	Sand Point	12.40	66	ePn	Pn	00 26 15.7	-1.7
KDAK	Kodiak Island	17.07	59	P	P	00 27 12.4	-2.6
	1.8nm,0.3s,baz=226,slow=1.6,SNR=42						
KDAK				S	Sn	00 30 14.3	-12
	0.1nm,0.3s,baz=344,slow=19,SNR=2.9						
SKT	Skwentna	18.60	46	eP	Pn	00 27 34.1	+0.4
	21nm,0.8s						
PPLA	Purkeypile	18.64	43	eP	Pn	00 27 35.8	+1.4
	4.9nm,0.7s						
SUA	Susitna One	18.79	48	eP	P	00 27 34.7	+0.8
	10nm,0.7s						
CAST	Castle Rocks	18.90	42	eP	Pn	00 27 37.4	+0.2
	2.9nm,0.7s						
IM3	Indian Mountai	19.50	34	eP	P	00 27 42.2	+0.7
BPAW	Bear Paw Mtn.	19.62	40	eP	P	00 27 44.4	+1.6
	5.5nm,0.8s						
TRF	Thorofare Moun	19.65	42	eP	P	00 27 45.5	+2.2
	8.7nm,1.0s						
GHO	Glory Hole Cre	19.71	48	eP	P	00 27 46.2	+2.4
	9.8nm,0.6s						
SML	Sawmill	19.99	48	eP	P	00 27 48.2	+1.4
	9.7nm,0.9s						
MCK	McKinley	20.32	42	eP	P	00 27 53.1	+2.8
	5.3nm,0.8s						
SCM	Sheep Creek Mo	20.46	48	eP	P	00 27 52.1	+0.3
	14nm,0.6s						
DHY	Denali Highway	20.77	45	eP	P	00 27 55.8	+0.6
	15nm,1.0s						
KLU	Klutina	21.04	49	eP	P	00 27 58.9	+0.8
	7.7nm,0.6s						
DIV	Divide	21.04	50	eP	P	00 27 59.2	+1.1
	9.1nm,0.9s						
MDM	Murphy Dome	21.06	39	eP	P	00 27 59.1	+0.9
	5.4nm,0.7s						
CCB	Clear Creek Bu	21.11	40	eP	P	00 28 00.4	+1.8
	1.9nm,0.8s						
RAGM	Ragged Mountai	21.46	53	eP	P	00 28 04.3	+1.7
	34nm,0.8s						
IL1	Eielson Array	21.52	40	eP	P	00 28 03.7	+0.6
ILAR	Eielson Array	21.52	40	P	P	00 28 01.5	-1.6
	0.8nm,0.5s,baz=228,slow=8.6,SNR=16						
ILB	Eielson Array	21.52	40	eP	P	00 28 03.3	+0.1
BMRM	Bremner River	21.58	51	eP	P	00 28 05.6	+1.8
	10nm,1.0s						
BALM	Baldy	22.68	51	eP	P	00 28 15.0	+0.1
	5.9nm,0.8s						
EGAK	Eagle	23.87	42	eP	P	00 28 26.1	+0.5
	11nm,0.8s						
DAWY	Dawson	24.47	44	eP	P	00 28 32.1	+1.0
	7.9nm,0.6s						
INK	Inuvik	27.65	36	P	P	00 28 59.9	+0.4
	0.9nm,0.4s,baz=250,slow=10,SNR=5.6						
KLR	Kul'dur	29.96	284	P	P	00 29 20.6	+0.3
	0.1nm,0.4s,baz=66,slow=5.1,SNR=4.6						
H11N2	WAKE ISLAND Hy	33.60	202	T	T	01 06 05.6	
	baz=17						
H11N3	WAKE ISLAND Hy	33.61	202	T	T	01 06 00.3	
	baz=17						
H11N1	WAKE ISLAND Hy	33.62	202	T	T	01 06 00.1	
	baz=17						
H11S1	WAKE ISLAND Hy	34.83	201	T	T	01 07 57.5	
	baz=18						
H11S2	WAKE ISLAND Hy	34.84	201	T	T	01 08 00.5	
	baz=18						
H11S3	WAKE ISLAND Hy	34.84	201	T	T	01 07 56.7	
	baz=18						
YKW3	Yellowknife Ar	35.63	47	eP	P	00 30 08.3	-1.0
	9.9nm,1.4s						
YKA	Yellowknife Ar	35.66	47	P	P	00 30 10.2	+0.7
	0.9nm,0.4s,baz=283,slow=7.7,SNR=7.3						
LTY	Liberty	38.15	73	eP	P	00 30 33.2	+2.3
	8.5nm,0.5s						
JNU	Nakatsue	39.55	261	LR	LR	00 47 13.2	
	comp=Z,362nm,21.5s,baz=121,slow=36						
YBH	Yreka Blue Hor	39.90	81	P	P	00 30 47.5	+2.0
	1.5nm,0.7s,baz=22,slow=12,SNR=4.4						
HRY	Holter Researc	43.60	68	eP	P	00 31 15.7	+0.2
MCMT	McKenzie Canyo	44.05	71	eP	P	00 31 19.2	-0.1
KVN	Kaiserville	44.32	81	eP	P	00 31 23.1	+1.6
	1.8nm,0.7s						
BOZ	Bozeman (W)	44.33	70	eP	P	00 31 21.1	-0.3
	3.0nm,0.6s						
NVAR	Mina Array Bea	44.58	82	P	P	00 31 25.1	+1.6
	1.7nm,0.6s,baz=297,slow=7.2,SNR=17						
NV01	Mina Array Sit	44.58	82	eP	P	00 31 24.9	+1.4
R11A	Troy Canyon, C	46.29	80	eP	P	00 31 38.1	+1.2
	1.4nm,0.7s						
HHC	Hu-ho-hao-te	46.47	284	eP	P	00 31 31.8	-6.4
HHC				sP	sP	00 32 21.1	-6.2
HHC				PP	PcP	00 33 12.6	+2.3
HHC				S	S	00 38 05.1	-10
HHC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,46nm,5.4s						
TPNV	Topopah Spring	46.78	82	eP	P	00 31 42.4	+1.7
	comp=Z,4.1nm,0.8s						
DUG	Dugway, Tooele	46.82	76	eP	P	00 31 41.9	+0.9
	comp=Z,2.6nm,0.5s						
BW06	Boulder Array	47.19	72	eP	P	00 31 44.1	+0.1
	comp=Z,5.8nm,1.4s						
PD31	Pinedale Array	47.19	72	eP	P	00 31 43.9	-0.1
PDAR	Pinedale Array	47.19	72	P	P	00 31 43.9	-0.1
	comp=Z,2.1nm,0.5s,baz=312,slow=3.4,SNR=38						
PDAR	Pinedale Array	47.19	72	eP	P	00 31 43.6	-0.3
GSC	Goldstone, Bar	47.50	84	eP	P	00 31 47.8	+1.5
	comp=Z,4.0nm,0.9s						
TMUT	Trail Mountain	48.35	76	eP	P	00 31 54.4	+1.4
	comp=Z,2.4nm,0.6s						
SPITS	Spitsbergen Ar	49.74	355	P	P	00 32 02.6	-0.1
	comp=Z,2.2nm,0.7s,baz=354,slow=8.7,SNR=7.9						
ULM	Lac du Bonnet	50.30	56	P	P	00 32 06.9	-0.4
	comp=Z,2.0nm,0.5s,baz=306,slow=8.7,SNR=3.1						
WMQ	Urumqi	58.10	302	P	P	00 32 59.7	-4.2
WMQ				pmax	pmax		
	comp=Z,12nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,250nm,7.3s						
WMQ				LR	LR		
	comp=N,990nm,25.5s						
WMQ				LR	LR		
	comp=E,940nm,27.3s						
WMQ				LR	LR		
	comp=Z,1μm,25.5s						
MKAR	Makanchi Array	58.81	307	P	P	00 33 08.7	-0.1
	comp=Z,0.2nm,0.5s,baz=60,slow=8.5,SNR=2.7						
GYA	Guiyang	59.17	274	eP	P	00 33 06.2	-5.3
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TXAR	Lajitas Array	59.66	80	P	P	00 33 14.2	-0.7
	comp=Z,1.0nm,0.8s,baz=316,slow=5.2,SNR=4.2						
V40A	Witts Springs	61.51	68	eP	P	00 33 26.5	-0.7
	comp=Z,3.4nm,0.7s						
KSH	Kashi	67.27	305	P	P	00 34 03.1	-1.7
KSH				PcP	PcP	00 34 30.1	-1.4
KSH				sP	sP	00 34 47.2	-8.3
HFS	Hagfors	67.69	352	P	P	00 34 06.2	-0.7
	comp=Z,0.6nm,0.4s,baz=8.1,slow=2.0,SNR=5.5						

MEX 03 00:24:05.0±0.4**, 13°.98N×93°.83W, h20**^{km}±15^{km}**, MD4.0, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.81	19	eP	Pn	00 24 32.4	-2.7
PCIG				eS	Sn	00 24 53.1	-4.4
CCIG	Comitan	2.81	35	i P	Pn	00 24 45.9	-3.1
CCIG				eS	Sn	00 25 18.7	-3.8
TGIG		2.87	14	eP	Pn	00 24 47.7	-1.9
TGIG				eS	Sn	00 25 20.6	-3.0

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*NIED **03** 00:46:00, 37°.30N×142°.00E, h23^{km}, Mw4.4 Best double couple: $M_0$3.88000×10^{15} NP1:ϕ_s69.00000°, δ26.00000°, λ-36.00000°. NP2:ϕ_s192.00000°, δ75.00000°, λ-111.00000°.*

*IDC **03** 00:46:10.8±0.5, 37°.30N×142°.11E, h0^{km}, mb4.4/32, mb1 4.5/38, mb1mx4.3/77, mbtmp4.4/38, ML4.1/5, MS4.1/2, Ms1 4.1/2, ms1mx3.2/70, Error ellipse: s-maj=13.5km s-min=10.7km az=124.0*

*ISCJB **03** 00:46:12.7±0.7, 37°.35N±0°.03×142°.05E±0°.03, h15^{km}±4^{km}, mb4.5/148, MS4.2/5, Error ellipse: s-maj=4.7km s-min=3.4km az=157.0*

*JMA **03** 00:46:14.5±0.2, 37°.35N×142°.00E, h36^{km}±4^{km}, M4.6*

JMA Felt II J1.

*BJI **03** 00:46:15.6, 37°.30N×142°.07E, h47^{km}, mb4.8/46, mB4.9/27, Ms4.4/19, Ms7 4.3/19*

*MOS **03** 00:46:15.0±1.3, 37°.42N×142°.12E, h33^{km}, mb4.7/47, Error ellipse: s-maj=7.6km s-min=5.7km az=94.9*

*NEIC **03** 00:46:17.8±0.5, 37°.28N×141°.98E, h44^{km}±4^{km}, mb4.6/91, Error ellipse: s-maj=5.6km s-min=4.0km az=149.0*

NEIC Felt at Yokosuka. Recorded [2 JMA] in Fukushima and Miyagi.

ISC 03 00:46:13.5±0.8**, 37°.35N**±0°.04×**142°.06E**±0°.03**, h14**^{km}±4^{km}**, n286,** σ1^{s}.**80**/307**, mb4.6**/151**, MS4.2**/5**, 9C-6D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	0.94	272	P	Pg	00 46 30.8	-1.0
JFK				S	Sg	00 46 41.9	-2.3
ONAJ	Iwakimizuishiy	1.04	257	P	Pg	00 46 32.1	-1.5
ONAJ				eS	Sg	00 46 44.3	-2.8
JMM	Marumori	1.13	298	P	Pg	00 46 33.7	-1.7
JFFD	Fukushimafurud	1.22	258	P	Pb	00 46 34.8	-1.7
JFFD				S	Sg	00 46 49.0	-4.1
JIO	Ouri	1.24	333	P	Pn	00 46 35.5	-1.0
JIO				S	Sb	00 46 50.0	-2.6
JFT	Otama	1.38	278	P	Pn	00 46 38.2	-0.2
JFT				S	Sb	00 46 54.4	-2.3
JOU	Okura	1.50	313	P	Pn	00 46 39.8	-0.3
JOU				S	Sn	00 46 58.5	-1.0
JMK	Ichinoseki	1.73	338	P	Pn	00 46 43.1	-0.2
JMK				eS	Sn	00 47 03.7	-1.5
JYS	Shirataka	1.81	300	P	Pn	00 46 44.1	-0.2
JYS				eS	Sn	00 47 06.6	-0.4
JFY	Yanaizu	1.88	273	P	Pn	00 46 45.2	-0.1
JFY				S	Sn	00 47 07.9	-0.9
JYK	Kaneyama	2.06	320	P	Pn	00 46 47.8	0.0
JYK				eS	Sn	00 47 13.1	-0.2
MJAR	Matsushiro Arr	3.19	257	Pn	Pn	00 47 03.4	+0.1
	16nm,0.3s,baz=44,slow=15,SNR=87						
MJAR				Sn	Sb	00 47 45.4	-3.2
	23nm,0.3s,baz=87,slow=12,SNR=7.9						
MJAR				LR	LR	00 48 34.5	
	comp=Z,2μm,18.7s,baz=85,slow=45						
MAJO	Matsushiro	3.19	257	ePn	Pn	00 47 04.2	+0.8
MAJO	Matsushiro	3.19	257	c iP	Pn	00 47 04.1	+0.8
MAT	Matsushiro	3.19	257	P	Pn	00 47 04.2	+0.9
MAT				S	Sn	00 47 43.0	+1.9
MJB9	Matsu-Tunnel	3.19	257	ePn	Pn	00 47 04.7	+1.4
INU	Inuyama	4.53	245	ePn	Pn	00 47 23.8	+2.0
JHJ2	Mitsune	4.61	204	ePn	Pn	00 47 22.6	-0.1
JHJ	Hachijo jima 2	4.61	205	Pn	Pn	00 47 21.9	-0.9
	29nm,0.3s,baz=149,slow=21,SNR=15						
JHJ				Sn	Sn	00 48 13.3	-2.9
	100nm,0.3s,baz=82,slow=22,SNR=7.2						
ASAJ	Asahikawa	6.78	3	Pn	Pn	00 47 52.1	-0.4
	4.1nm,0.3s,baz=217,slow=10,SNR=9.0						
ASAJ				Sn	Sn	00 49 08.7	-0.8
	2.5nm,0.3s,baz=270,slow=20,SNR=3.4						
ASAJ	Asahikawa	6.78	3	ePn	Pn	00 47 53.2	+0.7
ASAJ				Sn	Sn	00 49 08.7	-0.8
YUK	Yuzh-Kuril'sk	7.28	22	eP	Pn	00 47 59.2	-0.2
YUK				i S	Sn	00 49 16.1	-5.7
SHO	Shikotan	7.46	28	d iP	Pn	00 48 00.2	-1.6
SHO				i S	Sn	00 49 18.2	-8.0
SHO				pmax	pmax		
	comp=Z,38nm,0.6s						
SHO				pmax	pmax		
	comp=N,19nm,0.3s						
SHO				pmax	pmax		
	comp=E,28nm,0.3s						
KUR	Kuril'sk	9.01	27	d iP	Pn	00 48 22.3	-0.8
KUR				i S	Sn	00 49 57.3	-7.0
KUR				pmax	pmax		
	comp=Z,70nm,0.5s						
KUR				pmax	pmax		
	comp=N,42nm,0.3s						
KUR				pmax	pmax		
	comp=E,28nm,0.3s						
YSS	Yuzh-Sakhalins	9.62	3	⇑eP	Pn	00 48 38.1	+6.7
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
YSS				MLR	MLR		
	comp=Z,520nm,16.0s						
MSHR	Mys Shultsa	9.87	305	ceP	Pn	00 48 40.3	+5.4
JNU	Nakatsue	10.07	249	Pn	Pn	00 48 39.1	+1.3
	comp=Z,0.8nm,0.3s,baz=58,slow=8.3,SNR=5.7						
CBIJ	Chichi jima	10.22	179	Pn	Pn	00 48 38.6	-1.2
CBIJ				Sn	Sn	00 50 23.5	-11
JCJ	Chichijima	10.22	179	Pn	Pn	00 48 38.6	-1.2
	comp=Z,5.8nm,0.3s,baz=355,slow=14,SNR=4.1						
JCJ				Sn	Sn	00 50 23.5	-11
	comp=Z,6.5nm,0.3s,baz=270,slow=20,SNR=4.2						
USRK	Ussuriysk Ar.	10.25	315	Pn	Pn	00 48 42.4	+2.2
	baz=119,slow=15						
KSRS	Korea Array	11.25	275	Pn	Pn	00 48 58.2	+4.4
	comp=Z,0.8nm,0.3s,baz=89,slow=13,SNR=26						
KS01	Wonju Array Si	11.27	275	ePn	Pn	00 48 56.9	+2.7
KS15	Wonju Array Si	11.28	275	ePn	Pn	00 48 58.5	+4.3
KSAR	Wonju Array Be	11.28	275	Pn	Pn	00 48 58.2	+3.9
KSAR	Wonju Array Be	11.28	275	P	Pn	00 48 58.2	+3.9
MDJ	Mudanjiang	11.89	312	P	Pn	00 49 05.7	+3.2
MDJ				pP		00 49 13.3	
MDJ				sP		00 49 20.5	
MDJ				pmax	pmax		
	comp=Z,18nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,230nm,10.4s						
MDJ	Mudanjiang	11.89	312	ePn	Pn	00 49 05.8	+3.2
	comp=Z,36nm,0.9s						
TYV	Tymovskoe	13.52	2	eP	P	00 49 31.6	-2.4
TYV				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KLR	Kul'dur	14.04	331	Pn	Pn	00 49 31.0	-0.8
	comp=Z,0.0nm,0.3s,baz=149,slow=14,SNR=5.3						
KLR	Kul'dur	14.04	331	d iP	P	00 49 36.8	-2.9
CN2	Changchun	14.17	302	eP	Pn	00 49 36.9	+3.2
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PETK	Petropavlovsk-	19.16	30	P	P	00 50 36.0	-0.4
	baz=224,slow=4.0						
PETK	Petropavlovsk-	19.16	30	eP	P	00 50 37.4	+1.1
PETK	Petropavlovsk-	19.16	30	P	P	00 50 36.0	-0.4
ZEA	Zeya	19.33	333	eP	P	00 50 37.4	-0.8
ZEA				pmax	pmax		
	comp=Z,20nm,0.8s						
NJ2	Nanjing	19.78	261	eP	Pn	00 50 45.7	+0.9
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
TIA	Tai'an	20.00	274	P	Pn	00 50 47.0	-0.4
TIA				pmax	pmax		
	comp=Z,19nm,0.9s						
BJT	Baijiatuau	20.37	286	eP	Pn	00 50 51.7	0.0
	comp=Z,18nm,0.8s						
BJT	Baijiatuau	20.37	286	eP	Pn	00 50 51.7	0.0
BJT				pmax	pmax		
	comp=Z,18nm,0.8s						
MA2	Magadan	22.94	11	P	P	00 51 16.8	-0.3
	comp=Z,8.1nm,0.5s,baz=190,slow=9.5,SNR=9.5						
MA2	Magadan	22.94	11	eP	P	00 51 17.8	+0.7
	comp=Z,14nm,0.9s						
MA2	Magadan	22.94	11	eP	P	00 51 17.8	+0.7
MA2				pmax	pmax		
	comp=Z,14nm,0.9s						
HHC	Hu-ho-hao-te	23.86	288	eP	P	00 51 27.5	+0.9
HHC				sP	sP	00 51 44.5	+12
HHC				PP	PnPn	00 52 04.3	+10
HHC				S	S	00 55 39.0	-3.3
HHC				sS	sS	00 55 52.7	+3.4
HHC				pmax	pmax		
	comp=Z,12nm,1.0s						
HHC				pmax	pmax		
	comp=Z,27nm,5.2s						
HHC				LR	LR		
	comp=Z,500nm,19.8s						
HHC				LR	LR		
	comp=Z,120nm,17.5s						
HHC				LR	LR		
	comp=Z,430nm,18.2s						
WHN	Wuhan	23.92	262	P	P	00 51 25.9	-1.1
YAK	Yakutsk	25.88	347	eP	P	00 51 43.8	-0.8
YAK				e*PP	sP	00 51 56.0	+5.4
YAK				eS	S	00 56 14.8	+1.0
YAK				e*SS	sS	00 56 33.4	+13
YAK				pmax	pmax		
	comp=Z,19nm,0.9s						
YAK				pmax	pmax		
	comp=N,3.0nm,0.9s						
YAK				smax	smax		
	comp=N,71nm,2.8s						
YAK				smax	smax		
	comp=E,25nm,1.9s						
SEY	Seymchan	26.39	11	P	P	00 51 49.6	+0.5
	comp=E,8.1nm,0.6s,baz=197,slow=7.3,SNR=20						
SEY	Seymchan	26.39	11	ceP	P	00 51 50.4	+1.2
XAN	Xi'an	27.04	273	P	P	00 51 54.9	-0.5
XAN				pmax	pmax		
	comp=E,10.0nm,0.7s						
XAN				pmax	pmax		
	comp=E,200nm,3.7s						
ULN	Ulaanbaatar	27.61	304	eP	P	00 52 01.1	+0.5
	comp=E,10nm,1.0s						
ULN	Ulaanbaatar	27.61	304	ceP	P	00 52 01.0	+0.5
ULN				pmax	pmax		
	comp=Z,15nm,1.3s						
H11N2	WAKE ISLAND Hy	27.87	122	T	T	01 21 14.9	
	baz=315,slow=75,SNR=772						
ENH	Enshi	27.87	265	eP	P	00 52 02.9	0.0
	comp=Z,24nm,0.7s						
H11N1	WAKE ISLAND Hy	27.88	122	T	T	01 21 15.6	
	baz=315,slow=75,SNR=776						
H11N3	WAKE ISLAND Hy	27.89	122	T	T	01 21 16.3	
	baz=315,slow=75,SNR=614						
SONA1	Songino Array	28.04	303	eP	P	00 52 04.4	0.0
SONM	Songino Array	28.04	303	P	P	00 52 04.8	+0.4
	comp=Z,5.5nm,0.6s,baz=103,slow=9.2,SNR=21						
H11S1	WAKE ISLAND Hy	28.60	124	T	T	01 22 12.9	
	baz=316,slow=76,SNR=524						
H11S3	WAKE ISLAND Hy	28.60	124	T	T	01 22 13.1	
	baz=316,slow=76,SNR=407						
H11S2	WAKE ISLAND Hy	28.62	124	T	T	01 22 14.2	
	baz=316,slow=76,SNR=318						
ZAK	Zakamensk	30.48	308	eP	P	00 52 25.3	-0.7
ZAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
TLY	Talaya	30.52	310	P	P	00 52 27.0	+0.9
	comp=Z,2.6nm,0.4s,baz=341,slow=15,SNR=4.7						

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TLY   Talaya             30.52 310  eP     P       00 52 26.3 +0.1
      comp=Z,4.2nm,0.9s
TLY   Talaya             30.52 310⇑ eP     P       00 52 27.1 +0.9
TLY                                 pmax   pmax
      comp=Z,4.0nm,0.8s
LZH   Lanzhou            30.52 279  eP     P       00 52 30.2 +3.6
LZH                                 pP     sP      00 52 42.0 +9.4
LZH                                 sP     pP      00 52 48.3  +17
LZH                                 pmax   pmax
      comp=Z,21nm,1.1s
GYA   Guiyang            31.78 260⇑ iP     P       00 52 37.1 -0.6
GYA                                 pP     sP      00 52 52.0 +8.3
GYA                                 PP     PP      00 53 46.4 -3.0
GYA                                 S      S       00 57 44.8 -2.7
GYA                                 sS     sS      00 58 06.0  +11
GYA                                 SS     SnSn    00 59 36.2 +1.4
GYA                                 pmax   pmax
      comp=Z,20nm,0.8s
GYA                                 pmax   pmax
      comp=Z,110nm,4.8s
GYA                                 LR     LR
      comp=Z,350nm,16.5s
GYA                                 LR     LR
      comp=Z,390nm,16.8s
GYA                                 LR     LR
      comp=Z,360nm,17.0s
CD2   Chengdu            32.19 270  eP     P       00 52 41.0 -0.1
CD2                                 pmax   pmax
      comp=Z,10.0nm,0.5s
GTA   Gaotai             32.97 287  P      P       00 52 53.4 +5.4
GTA                                 pP     sP      00 53 04.9  +11
GTA                                 sP     pP      00 53 10.6  +18
GTA                                 pmax   pmax
      comp=Z,7.0nm,1.1s
BILL  Bilibino           33.58  16  eP     P       00 52 51.6 -1.3
      comp=Z,17nm,1.5s
BILL  Bilibino           33.58  16  i P    P       00 52 50.9 -1.9
BILL                                i              00 54 11.8
BILL                                i              00 55 32.1
BILL                                pmax   pmax
      comp=Z,8.0nm,1.3s
KMI   Kunming            35.52 261  P      P       00 53 12.1 +1.8
KMI                                 pmax   pmax
      comp=Z,18nm,0.7s
KMI                                 pmax   pmax
      comp=Z,68nm,4.3s
NONG  Nongkai            39.10 251  P      P       00 53 43.7 +3.2
      comp=Z,0.3nm,0.7s,comp=Z,103nm
DGZ   Jazzator, Alta     40.63 306  i P    P       00 53 53.8 +0.7
DGZ                                 pmax   pmax
      comp=Z,11nm,0.8s
WMQ   Urumqi             41.16 297  P      P       00 53 59.5 +2.1
WMQ                                 pP     sP      00 54 05.4 +1.9
WMQ                                 pmax   pmax
      comp=Z,23nm,0.7s
WMQ                                 pmax   pmax
      comp=Z,850nm,11.7s
WMQ                                 LR     LR
      comp=Z,450nm,22.1s
WMQ                                 LR     LR
      comp=Z,650nm,24.3s
WMQ                                 LR     LR
      comp=Z,610nm,17.9s
CMAR  Chiang Mai Arr     42.08 256  P      P       00 54 06.4 +1.3
      comp=Z,1.1nm,0.3s,baz=48,slow=7.5,SNR=5.9
CM01  Chiang Mai Arr     42.08 255  eP     P       00 54 07.0 +1.8
ZAA0  Zalesovo Array     42.09 312  eP     P       00 54 04.7 -0.1
      comp=Z,7.1nm,0.8s
ZALV  Zalesovo Beam      42.09 312  P      P       00 54 04.6 -0.2
      comp=Z,5.2nm,0.5s,baz=90,slow=7.3,SNR=21
SRAK  Srakaew            42.46 248  P      P       00 54 15.5 +7.3
      comp=Z,37nm,0.9s
LSA   Lhasa              42.70 275  eP     P       00 54 12.4 +1.8
      comp=Z,5.5nm,0.8s
LSA   Lhasa              42.70 275  eP     P       00 54 12.4 +1.8
LSA                                 pmax   pmax
      comp=Z,6.0nm,0.8s
NVS   Novosibirsk        43.00 313  eP     P       00 54 11.6 -0.6
MK01  Makanchi Array     44.39 302  eP     P       00 54 22.8 -0.7
MK31  Makanchi Array     44.39 302  eP     P       00 54 23.3 -0.3
MK31  Makanchi Array     44.39 302  eP     P       00 54 23.3 -0.3
MKAR  Makanchi Array     44.39 302  P      P       00 54 23.0 -0.5
      comp=Z,7.1nm,0.8s,baz=84,slow=9.6,SNR=43
MKAR  Makanchi Array     44.39 302  eP     P       00 54 23.3 -0.3
      comp=Z,44nm,0.7s
SVW2  Sparrevohn         44.96  38  eP     P       00 54 29.6 +1.7
      comp=Z,8.8nm,0.9s
IM3   Indian Mountai     46.12  31  eP     P       00 54 37.4 +0.5
KURK  Kurchatov          46.15 308  P      P       00 54 37.5 +0.1
KURK  Kurchatov          46.15 308ceP      P       00 54 36.8 -0.6
KURK                                pmax   pmax
      comp=Z,30nm,1.0s
KURBB Kurchatov Arra     46.22 308  P      P       00 54 37.5 -0.5
      comp=Z,17nm,0.6s,baz=82,slow=8.0,SNR=97
TAPN  Taplejung          46.43 274  ePn    P       00 54 43.2 +2.9
      comp=Z,13nm,0.4s
KDAK  Kodiak Island      46.52  42  P      P       00 54 40.4 +0.2
      comp=Z,15nm,0.7s,baz=266,slow=4.3,SNR=13
KDAK  Kodiak Island      46.52  42  eP     P       00 54 40.7 +0.5
      comp=Z,21nm,0.8s
KDAK  Kodiak Island      46.52  42  i P    P       00 54 40.2  0.0
CAST  Castle Rocks       46.68  34  eP     P       00 54 43.2 +1.8
      comp=Z,5.5nm,0.8s
ODAN  Odare              46.91 274  eP     P       00 54 44.8 +0.8
SKT   Skwentna           46.92  36  eP     P       00 54 44.7 +1.4
      comp=Z,4.9nm,1.0s
BPAW  Bear Paw Mtn.      47.18  33  eP     P       00 54 46.8 +1.4
      comp=Z,4.3nm,0.8s
KTH   Kantishna Hill     47.20  34  eP     P       00 54 46.7 +1.1
      comp=Z,13nm,0.9s
SUA   Susitna One        47.30  37  eP     P       00 54 48.4 +2.0
      comp=Z,15nm,1.0s
MLY   Manley             47.31  32  eP     P       00 54 48.0 +1.7
      comp=Z,6.8nm,0.8s
TRF   Thorofare Moun     47.48  34  eP     P       00 54 49.2 +1.3
      comp=Z,6.3nm,0.8s
RAMN  Ramite             47.50 274  eP     P       00 54 49.3 +0.7
JIRN  Jiri               47.50 275  eP     P       00 54 51.0 +2.2
GUN   Gumba              47.64 276  eP     P       00 54 51.9 +2.1
RC01  Rabbit Creek A     47.80  38  eP     P       00 54 50.8 +0.7
      comp=Z,12nm,0.9s
PMR   Palmer             48.07  37  eP     P       00 54 52.5 +0.3
      comp=Z,9.9nm,0.9s
PMR   Palmer             48.07  37  eP     P       00 54 52.5 +0.3
PMR                                 pmax   pmax
      comp=Z,10.0nm,0.9s
MCK   McKinley           48.09  34  eP     P       00 54 53.2 +0.8
      comp=Z,7.7nm,0.8s
MCK   McKinley           48.09  34  eP     P       00 54 53.2 +0.8
MCK                                 pmax   pmax
      comp=Z,8.0nm,0.8s
GHO   Glory Hole Cre     48.16  37  eP     P       00 54 53.7 +0.7
      comp=Z,14nm,0.8s
KKN   Kakani             48.17 276  eP     P       00 54 55.4 +1.7
PKIN  Phulchoki          48.17 276  eP     P       00 54 54.9 +1.1
MDM   Murphy Dome        48.38  32  eP     P       00 54 56.1 +1.5
      comp=Z,12nm,0.8s
SML   Sawmill            48.43  37  eP     P       00 54 56.1 +1.0
      comp=Z,12nm,0.8s
SML   Sawmill            48.43  37  eP     P       00 54 56.1 +1.0
SML                                 pmax   pmax
      comp=Z,12nm,0.8s
CCB   Clear Creek Bu     48.56  33  eP     P       00 54 57.0 +1.0
      comp=Z,2.2nm,0.6s
GKN   Gorkha             48.58 276  eP     P       00 54 57.6 +0.7
DHY   Denali Highway     48.81  35  eP     P       00 54 59.2 +1.1
      comp=Z,4.3nm,0.8s
SCM   Sheep Creek Mo     48.91  36  eP     P       00 54 59.9 +1.1
      comp=Z,17nm,1.0s
IL1   Eielson Array      48.95  33  eP     P       00 54 58.9 -0.1
ILAR  Eielson Array      48.95  33  P      P       00 54 59.1 +0.1
      comp=Z,6.4nm,0.8s,baz=269,slow=6.3,SNR=81
ILB   Eielson Array      48.95  33  eP     P       00 54 59.4 +0.3
DANN  Dangsing           49.12 277  eP     P       00 55 01.2  0.0
KOLN  Koldanda           49.51 277  eP     P       00 55 04.0  0.0
KLU   Klutina            49.61  37  eP     P       00 55 05.1 +1.0
      comp=Z,18nm,1.2s
DIV   Divide             49.72  37  eP     P       00 55 06.3 +1.4
      comp=Z,20nm,1.1s
PYUN  Piuthan            49.84 277  eP     P       00 55 05.9 -0.7
HARP  HAARP              49.88  36  eP     P       00 55 07.4 +1.3
      comp=Z,12nm,0.7s
BMRM  Bremner River      50.30  37  eP     P       00 55 10.8 +1.5
      comp=Z,13nm,1.0s
RAGM  Ragged Mountai     50.34  38  eP     P       00 55 11.3 +1.7
      comp=Z,16nm,1.0s
BVAR  Borovoye Array     50.74 312  P      P       00 55 12.3 -0.5
      comp=Z,1.4nm,0.5s,baz=61,slow=8.0,SNR=8.2
KSH   Kashi              50.75 294  P      P       00 55 17.7 +4.5
KSH                                 pP     sP      00 55 30.7  +11
KSH                                 PP     PP      00 57 15.6 +6.5
KSH                                 S      S       01 02 29.5 +1.1
KSH                                 ScS    ScS     01 05 00.7 -3.1
KSH                                 SS     SS      01 06 02.3 -0.3
KSH                                 pmax   pmax
      comp=Z,5.0nm,0.8s
KSH                                 pmax   pmax
      comp=Z,75nm,5.3s
KSH                                 LR     LR
      comp=Z,39nm,8.2s
KSH                                 LR     LR
      comp=Z,110nm,10.0s
KSH                                 LR     LR
      comp=Z,91nm,10.9s
AAK   Ala-Archa          50.80 298  P      P       00 55 13.7 +0.2
      comp=Z,2.1nm,0.3s,baz=214,slow=3.6,SNR=2.7
BALM  Baldy              51.38  37  eP     P       00 55 18.0 +0.4
      comp=Z,5.0nm,0.8s
BALM  Baldy              51.38  37  eP     P       00 55 18.0 +0.4
BALM                                pmax   pmax
      comp=Z,5.0nm,0.8s
EGAK  Eagle              51.40  32  eP     P       00 55 18.1 +0.6
      comp=Z,2.5nm,0.6s
KK31  Karatay Array      53.41 300  eP     P       00 55 34.2 +1.4
KK31  Karatay Array      53.41 300  eP     P       00 55 34.2 +1.4
KKAR  Karatay Array      53.41 300  eP     P       00 55 34.2 +1.4
KKAR  Karatay Array      53.41 300  eP     P       00 55 34.2 +1.4
INK   Inuvik             53.87  27  P      P       00 55 35.4 -0.3
      comp=Z,6.0nm,0.8s,baz=283,slow=7.5,SNR=12
INK   Inuvik             53.87  27  eP     P       00 55 36.6 +0.8
      comp=Z,8.7nm,1.0s
NIL   Nilore             55.01 288  eP     P       00 55 45.0 +0.4
      comp=Z,9.3nm,0.6s
NIL   Nilore             55.01 288  eP     P       00 55 45.0 +0.4
NIL                                 pmax   pmax
      comp=Z,9.0nm,0.6s
SKAG  Skagway            55.13  38  eP     P       00 55 46.9 +1.9
      comp=Z,5.8nm,0.8s
SVE   Sverdlovsk         55.26 319  eP     P       00 55 47.0 +1.0
SVE                                 pmax   pmax
      comp=Z,11nm,0.8s
BESE  Bessie Mountai     55.61  39  eP     P       00 55 49.9 +1.3
      comp=Z,7.3nm,1.0s
JIS   Juneau Island      55.94  39  eP     P       00 55 53.0 +2.2
      comp=Z,9.2nm,1.0s
ARU   Arti               56.47 319  eP     P       00 55 53.9 -0.7
      comp=Z,11nm,0.8s
ARU   Arti               56.47 319d iP     P       00 55 54.1 -0.6
ARU                                 *PP    sP      00 56 01.6 +0.7
ARU                                                00 56 48.6
ARU                                                00 57 55.5
ARU                                 S      S       01 03 44.2 -1.0
ARU                                 SS     SS      01 07 24.5 -7.3
ARU                                 pmax   pmax
      comp=Z,9.0nm,1.7s
FITZ  Fitzroy Crossi     57.28 199  P      P       00 55 58.4 -2.4
      comp=Z,4.2nm,0.9s,baz=323,slow=11,SNR=2.6
WB2   Warramunga Arr     57.44 189  eP     P       00 56 00.7 -1.2
WRA   Warramunga Arr     57.44 189  P      P       00 56 00.9 -1.0
      comp=Z,1.8nm,0.6s,baz=5.8,slow=7.4,SNR=15
WRAK  Wrangell Islan     57.57  41  eP     P       00 56 03.4 +0.9
      comp=Z,18nm,1.3s
DLBC  Dease Lake         58.06  38  P      P       00 56 05.3 -0.7
      comp=Z,4.7nm,0.9s,baz=306,slow=7.3,SNR=7.3
DLBC  Dease Lake         58.06  38  eP     P       00 56 08.3 +2.3
      comp=Z,10nm,1.1s
ABKAR Akbulak array      58.13 310  eP     P       00 56 06.0 -0.6
SPITS Spitsbergen Ar     60.32 349  P      P       00 56 20.5 -0.8
      comp=Z,2.5nm,0.8s,baz=122,slow=38,SNR=4.2
PRGR  Permogore          60.78 327  eP     P       00 56 24.9 +0.3
PRGR                                pmax   pmax
      comp=Z,4.0nm,0.7s
AS01  Alice Springs      61.16 188  eP     P       00 56 26.6 -1.0
ASAR  Alice Springs      61.17 189  P      P       00 56 27.3 -0.4
      comp=Z,1.1nm,0.7s,baz=14,slow=6.1,SNR=7.3
RES   Resolute Bay       62.17  15  P      P       00 56 33.4 -0.4
      comp=Z,2.9nm,0.6s,baz=338,slow=19,SNR=5.5
YKA   Yellowknife Ar     63.28  30  P      P       00 56 41.4 +0.1
      comp=Z,2.5nm,0.7s,baz=305,slow=6.8,SNR=8.0
OBN   Obninsk            68.15 323  i P    P       00 57 15.1 +2.2
OBN                                 pmax   pmax
      comp=Z,4.0nm,0.7s
B08A  Colville Reser     68.25  45  eP     P       00 57 12.7 -1.1
      comp=Z,3.4nm,1.0s
FINES FINESS Array B     68.78 332  P      P       00 57 16.7  0.0
      comp=Z,2.1nm,0.7s,baz=41,slow=7.3,SNR=8.7
STKA  Stephens Creek     68.87 180  P      P       00 57 16.7 -0.8
      comp=Z,2.1nm,0.7s,baz=18,slow=8.3,SNR=4.5
FORT  Forrest            69.03 193  eP     P       00 57 17.5 -1.0
      comp=Z,27nm,0.6s
PINE  Pine Mountain      69.74  50  eP     P       00 57 25.1 +1.8
      comp=Z,13nm,0.8s
K05A  Summer Lake        70.35  51  eP     P       00 57 27.3 +0.3
      comp=Z,9.6nm,0.9s
SUMG  Summit             70.37   0⇓ iP     P       00 57 27.2 +0.3
      comp=Z,3.7nm,0.7s
SUMG                                i              00 57 59.7
SUMG  Summit             70.37   0⇓ iP     P       00 57 27.2 +0.3
SUMG                                pmax   pmax
      comp=Z,4.0nm,0.7s
WALA  Waterton Lakes     70.86  42  eP     P       00 57 30.5 +0.6
      comp=Z,4.7nm,0.8s
KBZ   Khabaz             71.09 311  P      P       00 57 32.4 +1.1
      comp=Z,2.2nm,0.8s,baz=56,slow=11,SNR=2.8
KIV   Kislovodsk         71.09 311  epP    pP      00 57 45.8  +10
KIV   Kislovodsk         71.09 311  eP     P       00 57 34.4 +3.0
KIV                                 pmax   pmax
      comp=Z,8.0nm,1.1s
BMO   Blue Mountains     71.34  48  eP     P       00 57 34.0 +1.1
      comp=Z,5.6nm,1.0s
BMO   Blue Mountains     71.34  48  eP     P       00 57 34.0 +1.1
BMO                                 pmax   pmax
      comp=Z,6.0nm,1.0s
J08A  Circle Bar Ran     71.48  49  eP     P       00 57 34.9 +1.1
      comp=Z,5.8nm,1.0s
BEKR  Beckworth          72.26  53  eP     P       00 57 39.5 +0.8
      comp=Z,4.5nm,0.8s
MFID  Camas Ranch        73.03  48  eP     P       00 57 44.2 +1.1
      comp=Z,5.8nm,1.0s
FFC   Flin Flon          73.16  33  eP     P       00 57 43.7 +0.2
      comp=Z,9.0nm,0.9s
FFC   Flin Flon          73.16  33  eP     P       00 57 43.7 +0.2
FFC                                 pmax   pmax
      comp=Z,9.0nm,0.9s
LRM   Limekiln Ridge     73.56  45  eP     P       00 57 46.9 +0.6
EGMT  Eagleton           73.69  42  eP     P       00 57 47.1 +0.2
      comp=Z,8.2nm,1.0s
DLMT  Dillon             73.76  45  eP     P       00 57 48.5 +1.1
      comp=Z,6.2nm,0.8s
HLID  Hailey             73.78  47  eP     P       00 57 48.5 +0.9
BMN   Battle Mountai     73.91  51  eP     P       00 57 49.8 +1.4
      comp=Z,3.4nm,0.8s
MCMT  McKenzie Canyo     73.93  46  eP     P       00 57 48.8 +0.3
HFS   Hagfors            74.02 336  P      P       00 57 47.5 -0.9
      comp=Z,2.0nm,0.8s,baz=309,slow=6.9,SNR=7.0
NB2   NORSAR Subarra     74.10 337  P      P       00 57 48.4 -0.5
      comp=Z,8.7nm,1.2s,baz=39,slow=6.2
RYN   Ryan               74.13  53  eP     P       00 57 50.9 +1.2
      comp=Z,4.1nm,1.0s
BOZ   Bozeman (W)        74.16  44  eP     P       00 57 50.4 +0.7
      comp=Z,6.6nm,0.9s
KVN   Kaiserville        74.16  53  eP     P       00 57 51.1 +1.2
      comp=Z,9.3nm,1.1s
AKASG Malin Array Be     74.36 323  P      P       00 57 50.3 -0.3
      comp=Z,2.0nm,0.5s,baz=46,slow=6.1,SNR=8.5
KIEV  Kiev               74.38 323  i P    P       00 57 52.2 +1.5
KIEV                                pmax   pmax
      comp=Z,2.0nm,0.8s
NV01  Mina Array Sit     74.39  54  eP     P       00 57 51.9 +0.6
NVAR  Mina Array Bea     74.39  54  P      P       00 57 51.6 +0.4
      comp=Z,3.5nm,0.8s,baz=281,slow=6.0,SNR=27
NV11  Mina Array Sit     74.48  53  eP     P       00 57 52.9 +1.1
      comp=Z,0.3nm,1.1s
GCMT  Greycliff          75.12  43  eP     P       00 57 56.5 +1.2
H17A  Grant Village      75.48  45  eP     P       00 58 00.4 +2.9
      comp=Z,11nm,0.8s
FXWY  Fox Creek          75.70  46  eP     P       00 58 00.3 +1.6
      comp=Z,4.9nm,1.0s
MOOW  Moose Ponds        75.79  46  eP     P       00 58 00.9 +1.6
      comp=Z,7.3nm,1.5s
HVU   Hansel Valley      75.82  48  eP     P       00 58 00.7 +1.3
      comp=Z,6.0nm,1.2s
HVU   Hansel Valley      75.82  48  eP     P       00 58 00.7 +1.3
HVU                                 pmax   pmax
      comp=Z,6.0nm,1.2s
TPAW  Teton Pass         75.83  46  eP     P       00 58 01.3 +1.7
      comp=Z,4.0nm,0.8s
REDW  Red Top Meadow     75.97  46  eP     P       00 58 01.5 +1.2
      comp=Z,7.2nm,1.2s
REDW                                epP    PcP     00 58 13.6 +0.9
BGU   Big Grassy Mou     76.18  49  eP     P       00 58 02.7 +1.2
      comp=Z,1.8nm,0.9s
LAO   LASA Array         76.40  41  eP     P       00 58 03.6 +1.1
      comp=Z,5.7nm,0.8s
TPNV  Topopah Spring     76.57  54  eP     P       00 58 04.8 +1.0
      comp=Z,10nm,1.2s
TPNV  Topopah Spring     76.57  54  eP     P       00 58 04.8 +1.0
TPNV                                pmax   pmax
      comp=Z,10.0nm,1.2s
HWUT  Hardware Ranch     76.64  48  eP     P       00 58 05.4 +1.3
      comp=Z,11nm,1.4s
HWUT                                epP    PcP     00 58 16.1 +0.5
DUG   Dugway, Tooele     76.76  49  eP     P       00 58 05.8 +1.1
      comp=Z,7.0nm,1.2s
DUG   Dugway, Tooele     76.76  49  eP     P       00 58 05.8 +1.1
DUG                                 pmax   pmax
      comp=Z,7.0nm,1.2s
CHFC  Chilao Flat St     76.96  57  eP     P       00 58 06.6 +0.5
PD31  Pinedale Array     77.08  46  eP     P       00 58 07.0 +0.4
PDAR  Pinedale Array     77.08  46  P      P       00 58 06.8 +0.1
      comp=Z,1.8nm,0.7s,baz=268,slow=1.7,SNR=23
PDAR  Pinedale Array     77.08  46  eP     P       00 58 06.5 -0.1
PSUT  Pine Spring        77.14  51  eP     P       00 58 08.1 +1.1
      comp=Z,3.9nm,1.0s
SHPR  Sheep Range        77.54  54  eP     P       00 58 10.6 +1.4
      comp=Z,4.7nm,1.0s
MPU   Maple Canyon       77.58  49  eP     P       00 58 10.6 +1.2
      comp=Z,3.8nm,0.7s
CCUT  Cedar City         78.04  52  eP     P       00 58 13.4 +1.4
      comp=Z,5.5nm,1.2s
KWP   Kalwaria Pacla     78.18 325  eP     P       00 58 13.2 +1.0
      comp=Z,52nm,0.9s
KWP   Kalwaria Pacla     78.18 325  eP     P       00 58 13.3 +1.0
KWP                                 pmax   pmax
      comp=Z,52nm,0.9s
MSU   Marysvale          78.19  50  eP     P       00 58 14.5 +1.7
BUR08 Bucovina Ar. S     78.37 322  eP     P       00 58 14.1 +0.6
BUR04 Bucovina Ar. S     78.39 322  eP     P       00 58 13.8 +0.1
LCMT  Little Creek M     78.45  52  eP     P       00 58 16.1 +1.9
      comp=Z,4.9nm,1.0s
MTPU  Mount Pierson      78.47  51  eP     P       00 58 16.3 +1.7
      comp=Z,4.6nm,0.9s
KNB   Kanab              78.71  52  eP     P       00 58 17.4 +1.6
      comp=Z,11nm,1.3s
SRU   San Rafael Swe     78.82  49  eP     P       00 58 17.3 +1.0
      comp=Z,8.8nm,1.1s
ULM   Lac du Bonnet      78.96  34  P      P       00 58 14.5 -2.1
      comp=Z,4.1nm,0.6s,baz=15,slow=4.2,SNR=4.4
BRTR  Keskin Array B     79.03 312  P      P       00 58 17.1 -0.2
      comp=Z,0.4nm,0.5s,baz=77,slow=4.3,SNR=2.9
U15A  North Rim          79.41  52  eP     P       00 58 20.8 +1.1
      comp=Z,2.7nm,0.8s
PV05  Paradox Valley     80.33  49  eP     P       00 58 26.0 +1.4
      comp=Z,14nm,1.2s
PV03  Paradox Valley     80.37  49  eP     P       00 58 26.0 +1.2
      comp=Z,6.9nm,1.2s
WUAZ  Wupatki            80.56  52  eP     P       00 58 27.2 +1.4
      comp=Z,3.9nm,0.9s
WUAZ                                epP    PcP     00 58 37.7 +5.0
VYHS  Vyhne              80.76 326  eP     P       00 58 26.8 +0.4
VYHS  Vyhne              80.76 326  eP     P       00 58 26.8 +0.4
CLL   Collm              81.08 330⇑ iP     P       00 58 27.7 -0.3
      comp=Z,4.0nm,0.9s
CLL                                 i              00 58 32.4
CLL                                 i              00 58 38.0
X16A  Lo Mia Camp, P     81.21  53  eP     P       00 58 30.7 +1.4
      comp=Z,4.1nm,1.0s
S22A  4UR Ranch, Cre     81.91  48  eP     P       00 58 34.6 +1.5
      comp=Z,3.3nm,1.1s
MMAI  Mount Meron Ar     82.20 306  LR     LR      01 40 29.4
      comp=Z,94nm,18.5s,baz=200,slow=40
CONA  Conrad Observa     82.50 327  i P    P       00 58 36.3 +0.6
      comp=Z,0.4nm,0.3s
KHC   Kasperske Hory     82.55 329  eP     P       00 58 35.6 -0.3
KHC   Kasperske Hory     82.55 329  eP     P       00 58 35.9  0.0
      comp=Z,1.1nm,0.9s
KHC   Kasperske Hory     82.55 329  eP     P       00 58 35.6 -0.3
GERES GERESS Array B     82.72 329  P      P       00 58 36.2 -0.6
      comp=Z,0.7nm,0.5s,baz=34,slow=5.8,SNR=8.7
GEA0  GERESS Array S     82.72 329  eP     P       00 58 36.2 -0.7
ARSA  Arzberg            83.17 327  eP     P       00 58 38.0 -1.1
      comp=Z,0.7nm,0.3s
ECSD  EROS Data Cent     83.35  39  eP     P       00 58 40.1  0.0
      comp=Z,2.9nm,0.8s
SOKA  Soboth             83.82 326  eP     P       00 58 42.4 -0.2
      comp=Z,0.8nm,0.5s
ANMO  Albuquerque        83.99  50  eP     P       00 58 44.3 +0.5
      comp=Z,4.2nm,1.1s
ANMO                                epP    PcP     00 58 54.6 +6.8
ANMO  Albuquerque        83.99  50  eP     P       00 58 44.3 +0.5
ANMO                                e*PP   PcP     00 58 54.6 +6.8
ANMO                                pmax   pmax
      comp=Z,4.0nm,1.1s
KBA   Koelnbreinsper     84.24 328  eP     P       00 58 44.8  0.0
      comp=Z,0.8nm,0.3s
MYKA  Terra Mystica      84.47 327  ePcP   P       00 58 47.2 +1.3
      comp=Z,0.9nm,0.3s
I37A  Lemond, Waseca     84.71  37  eP     P       00 58 47.6 +0.6
      comp=Z,16nm,1.0s
WATA  Walderalm          84.78 329  ePcP   P       00 58 49.2 +1.6
      comp=Z,1.4nm,0.3s
WTTA  Wattenberg         84.82 329  eP     P       00 58 44.6 -3.1
      comp=Z,3.3nm,0.5s
ABTA  Abfaltersbach      84.86 328  eP     P       00 58 45.9 -1.9
      comp=Z,1.0nm,0.7s
SCHQ  Schefferville      84.89  16  P      P       00 58 47.8 +0.1
      comp=Z,2.6nm,0.7s,baz=34,slow=5.2,SNR=3.9
RETA  Reutte             85.00 329  eP     P       00 58 47.2 -1.3
      comp=Z,0.2nm,0.2s
BFO   Black Forest       85.28 331  i P    P       00 58 50.0 +0.2
F41A  Three Lakes        85.34  33  eP     P       00 58 50.4 +0.2
      comp=Z,13nm,1.4s
FETA  Feichten           85.39 329  eP     P       00 58 50.4 -0.1
      comp=Z,0.5nm,0.4s
DAVA  Damuels            85.52 330  ePcP   P       00 58 51.5 +0.3
      comp=Z,1.7nm,0.5s
L40A  Anamosa            87.23  37  eP     P       00 58 59.2 -0.3
      comp=Z,8.8nm,1.2s
TXAR  Lajitas Array      89.52  53  P      P       00 59 10.0 -0.8
      comp=Z,1.0nm,0.7s,baz=241,slow=2.6,SNR=5.2
MIAR  Mount Ida          91.74  43  eP     P       00 59 21.3 +0.4
      comp=Z,5.2nm,0.9s
MIAR  Mount Ida          91.74  43  eP     P       00 59 21.3 +0.4
MIAR                                pmax   pmax
      comp=Z,5.0nm,0.9s
TORD  Torodi Ar. Bea    117.47 316  PKP    PKPdf   01 04 56.9 -2.6
      comp=Z,0.6nm,0.9s,baz=351,slow=1.9
BOSA  Boshof            127.14 260  PKP    PKPdf   01 05 15.2 -2.5
      comp=Z,1.0nm,0.6s,baz=20,slow=6.6,SNR=3.7
LPAZ  La Paz            146.09  60  PKPbc  PKPdf   01 05 54.0 +0.5
      comp=Z,4.2nm,0.9s,baz=327,slow=3.9,SNR=15
LPAZ  La Paz            146.09  60  PKP2   PKPdf   01 05 54.0 +0.5
LPAZ                                pmax   pmax
      comp=Z,4.0nm,0.9s
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GUC 03 00:47:10.4±0.8,21.°94S×68.°71W,h126km±6km,ML3.5,8C, Chile-Bolivia border region

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Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                     Op      ISC      h  m  s    ISC
PB09  IPOC Station P     0.52 285⇑ iP      Pn       00 47 29.9 +0.6
PB09                               i S     Sn       00 47 44.8 +1.3
PB09                                IAML            00 47 46.5
      comp=N,833nm,0.3s
PB03  IPOC Station P     0.98 263⇑ iP      Pn       00 47 33.5 +0.6
PB03                               i S     Sn       00 47 51.1 +1.1
PB03                                IAML            00 47 53.5
      comp=N,1µm,0.1s
PB06  IPOC Station P     1.11 226⇑ iP      Pn       00 47 34.7 +0.5
PB06                               i S     Sn       00 47 53.0 +0.8
PB06                                IAML            00 47 54.3
      comp=E,1µm,0.1s
PB07  IPOC Station P     1.12 280⇑ iP      Pn       00 47 35.2 +0.9
PB07                               i S     Sn       00 47 53.7 +1.4
PB07                                IAML            00 47 55.1
      comp=N,2µm,0.2s
PB01  IPOC Station P     1.15 321⇑ iP      Pn       00 47 34.9 +0.4
PB01                               i S     Sn       00 47 53.7 +0.9
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Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PB01				IAML		00 47 55.0	
	comp=E,2μm,0.3s						
PB02	**IPOC Station P**	**1.27**	**299**	⇑*i*P	Pn	00 47 36.5	+0.7
PB02				*i* S	Sn	00 47 55.9	+0.9
PB02				IAML		00 47 56.6	
	comp=E,2μm,0.4s						
PB04	**IPOC Station P**	**1.40**	**253**	⇑*i*P	Pn	00 47 38.0	+0.8
PB04				*i* S	Sn	00 47 58.5	+0.9
PB04				IAML		00 48 02.3	
	comp=N,680nm,0.0s						
PB15	**IPOC Station P**	**1.45**	**209**	*i* S	Sn	00 47 60.0	+1.1
PB05	**IPOC Station P**	**1.66**	**236**	⇑*i*P	Pn	00 47 40.7	+0.5
PB05				*i* S	Sn	00 48 03.3	+0.4
PB05				IAML		00 48 04.0	
	comp=N,289nm,0.4s						
PB08	**IPOC Station P**	**1.83**	**347**	*e*P	Pn	00 47 43.6	+1.0
PB08				*i* S	Sn	00 48 08.2	+1.2
PB08				IAML		00 48 10.3	
	comp=E,369nm,0.7s						

SJA 03 01:05:06.3±0.9**, 31°.70S**×**72°.07W, h30^{km}, ML2.9, MW3.6,**
Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROC1	**El Roble**	**1.56**	**145**	*i* P	Pb	01 05 33.6	-1.0
AUSP	**Uspallata**	**2.34**	**104**	*i* P	Pb	01 05 46.0	-2.0
AUSP				*i* S	Sb	01 06 14.9	-1.7
RTLS	**Leoncito**	**2.37**	**93**	*i* P	Pn	01 05 45.5	+2.2
RTLS				*i* S	Sb	01 06 15.3	-2.0
RTLS				IAML		01 06 15.3	
	comp=Z,75nm,0.5s						
ASAL	**Salagasta**	**2.88**	**109**	*i* P	Pn	01 05 53.1	+2.8
ARCO	**CERRO ARCO**	**2.89**	**114**	*i* P	Pn	01 05 53.5	+3.0
ARCO				IAML		01 06 05.1	
	comp=Z,28nm,0.3s						
ARCO				*i* S	Sb	01 06 28.5	-3.8
RTCV	**Cerro Valdivia**	**3.01**	**94**	*i* P	Pn	01 05 54.9	+2.9
AAGR	**Agrelo**	**3.07**	**118**	*i* P	Pn	01 05 56.1	+3.2
RTLL	**Cerro Villicun**	**3.09**	**84**	*i* P	Pn	01 05 56.2	+3.1
AMOG	**MOGNA**	**3.15**	**77**	*i* P	Pn	01 05 57.0	+3.0

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*ISCJB **03** 01:30:45.0±0.4, 17°.49S±0°.06×41°.60E±0°.05, h10^{km}, mb4.4/45, MS3.3/1, Error ellipse: s-maj=8.9km s-min=6.8km az=159.8*

*IDC **03** 01:30:45.8±0.7, 17°.37S×41°.68E, h0^{km}, mb4.3/21, mb1 4.3/24, mb1mx4.1/58, mbtmp4.3/24, ML4.5/3, MS3.5/2, Ms1 3.5/2, ms1mx2.8/61, Error ellipse: s-maj=20.1km s-min=14.9km az=140.0*

*NEIC **03** 01:30:49.0±3.9, 17°.32S×41°.72E, h18^{km}±24^{km}, mb4.6/20, Error ellipse: s-maj=8.9km s-min=8.4km az=156.0*

ISC 03 01:30:46.7±0.4**, 17°.59S**±0°.08×**41°.68E**±0°.05**, h10^{km}, n104,**
σ1ˢ.49/111**, mb4.5**/45**, 5C-7D, Mozambique Channel**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**5.33**	**101**	Pn	**Pn**	**01 32 07.9**	**+1.4**
	30nm,0.3s,baz=267,slow=13,SNR=170						
OPO				Sn	**Sn**	**01 33 06.1**	**-2.0**
	13nm,0.3s,baz=184,slow=15,SNR=3.7						
ABPO	**Ambohimpanom**	**5.46**	**106**	*e*Pn	**Pn**	**01 32 10.2**	**+1.9**
ABPO				*e*Sn	**Sn**	**01 33 06.8**	**-4.4**
LSZ	**Lusaka**	**13.15**	**278**	Pn	**Pn**	**01 33 52.2**	**-1.5**
	0.7nm,0.3s,baz=121,slow=11,SNR=16						
LSZ				Sn	Sn	01 36 10.2	-10
	0.5nm,0.3s,baz=90,slow=3.0,SNR=3.9						
LSZ	**Lusaka**	**13.15**	**278**	*e*Pn	**Pn**	**01 33 52.7**	**-1.1**
LSZ				*e*Sn	Sn	01 36 09.0	-11
LBTB	**Lobatse**	**16.70**	**241**	Pn	**Pn**	**01 34 37.8**	**-3.2**
	0.1nm,0.3s,baz=52,slow=12,SNR=4.0						
LBTB				Sn	Sn	01 37 38.0	-8.6
	1.1nm,0.3s,baz=347,slow=6.8,SNR=7.4						
LBTB				LR	LR	01 41 35.2	
	comp=Z,170nm,18.6s,baz=62,slow=39						
LBTB	**Lobatse**	**16.70**	**241**	*e*Pn	**Pn**	**01 34 37.8**	**-3.2**
	8.9nm,0.8s						
LBTB				*e*Sn	Sn	01 37 38.0	-8.6
KMBO	**Kilima Mbogo**	**16.93**	**345**	Pn	P	01 34 55.0	+9.0
	0.1nm,0.3s,baz=147,slow=12,SNR=9.2						
KMBO				Sn	**S**	**01 38 03.8**	**+0.9**
	0.2nm,0.3s,baz=52,slow=19,SNR=1.9						
BOSA	**Boshof**	**18.65**	**231**	P	**P**	**01 35 07.0**	**+2.2**
	0.7nm,0.3s,baz=54,slow=10,SNR=12						
BOSA				S	**Sn**	**01 38 28.1**	**-5.8**
	0.2nm,0.3s,baz=310,slow=19,SNR=2.5						
MBAR	**Mbarara**	**20.02**	**326**	*e*P	**Pn**	**01 35 19.4**	**-2.3**
	6.0nm,0.7s						
TSUM	**Tsumeb**	**22.92**	**262**	P	**P**	**01 35 51.3**	**+0.1**
	4.6nm,0.6s,baz=102,slow=7.9,SNR=15						
TSUM				S	**S**	**01 40 03.0**	**+1.5**
	1.1nm,0.7s,baz=281,slow=18,SNR=2.1						
TSUM	**Tsumeb**	**22.92**	**262**	*e*P	**P**	**01 35 53.7**	**+2.5**
	12nm,1.2s						
TSUM				S	**S**	**01 40 03.0**	**+1.5**
SUR	**Sutherland**	**23.91**	**228**	P	**P**	**01 36 03.2**	**+2.2**
	15nm,0.6s,baz=60,slow=9.2,SNR=30						
SUR				LR	LR	01 44 13.9	
	comp=Z,108nm,20.5s,baz=65,slow=34						
SUR	**Sutherland**	**23.91**	**228**	*e*P	**P**	**01 36 05.3**	**+4.3**
	172nm,1.9s						
UOSS	**Minazif**	**44.58**	**19**	*e*P	**P**	**01 38 57.3**	**-1.8**
	10nm,1.3s						
ASF	**Jabal al Asfar**	**49.69**	**355**	P	**P**	**01 39 37.6**	**-1.4**
	2.6nm,0.7s,baz=222,slow=10,SNR=7.1						
TOA0	**Torodi Ar. Sit**	**49.91**	**305**	*e*P	**P**	**01 39 40.4**	**-0.5**
TORD	**Torodi Ar. Bea**	**49.91**	**305**	P	**P**	**01 39 39.4**	**-1.5**
	1.6nm,0.6s,baz=136,slow=6.6						
TORD				PcP	**PcP**	**01 41 01.4**	**+0.1**
	baz=114,slow=3.6						
TOA1	**Torodi Ar. Sit**	**49.91**	**305**	*e*P	**P**	**01 39 39.4**	**-1.5**
TOA1				*e*PcP	**PcP**	**01 41 01.4**	**+0.1**
DBIC	**Dimbokro**	**51.90**	**294**	P	**P**	**01 39 56.1**	**+0.2**
	3.7nm,0.4s,baz=104,slow=8.8,SNR=20						
DBIC	**Dimbokro**	**51.90**	**294**	*e*P	**P**	**01 39 56.1**	**+0.2**
	55nm,1.7s						
TAM	**Tamanrasset**	**53.49**	**317**	*e*P	**P**	**01 40 09.2**	**+1.6**
	4.6nm,1.0s						
KOWA	**Kowa**	**55.21**	**302**	P	**P**	**01 40 21.4**	**+1.2**
	2.1nm,0.6s,baz=112,slow=6.3,SNR=3.7						
KOWA	**Kowa**	**55.21**	**302**	*e*P	**P**	**01 40 20.1**	**-0.1**
	47nm,1.8s						
BR101	**Keskin Array S**	**57.51**	**353**	*e*P	**P**	**01 40 35.6**	**-0.6**
BRTR	**Keskin Array B**	**57.51**	**353**	P	**P**	**01 40 35.6**	**-0.6**
	1.1nm,0.7s,baz=168,slow=9.9,SNR=7.2						
ITM	**Ithomi**	**57.57**	**341**	*e*P	**P**	**01 40 37.0**	**+0.3**
	18nm,0.6s						
AGG	**Agios Georgios**	**59.16**	**343**	*e*P	**P**	**01 40 44.9**	**-2.8**
	116nm,1.8s						
FNA	**Florina**	**61.06**	**342**	*e*P	**P**	**01 41 02.6**	**+1.8**
	5.2nm,1.1s						
TIP	**Timpagrande**	**61.10**	**338**	*e*P	**P**	**01 41 03.6**	**+2.5**
	2.7nm,0.8s						
THTN	**Thala**	**61.42**	**330**	*e*P	**P**	**01 41 05.5**	**+2.2**
	9.7nm,0.9s						
MATE	**Matera**	**62.42**	**339**	⇓*i*P	**P**	**01 41 10.2**	**+0.4**
CFR	**Carcaliu**	**63.67**	**349**	⇑*i*P	**P**	**01 41 17.7**	**-0.3**
MLR	**Muntele Rosu**	**64.39**	**348**	P	**P**	**01 41 22.8**	**-0.1**
	0.5nm,0.8s,baz=114,slow=19,SNR=5.4						
MLR	**Muntele Rosu**	**64.39**	**348**	⇓*i*P	**P**	**01 41 23.6**	**+0.7**
DIVS	**Divibare**	**64.52**	**343**	*e*P	**P**	**01 41 23.8**	**0.0**
	6.3nm,1.3s						
VOIR		**64.52**	**347**	⇓*i*P	**P**	**01 41 23.1**	**-0.7**
ARR	**Arges**	**64.54**	**347**	⇓*i*P	**P**	**01 41 23.4**	**-0.5**
PLOR	**Plostina**	**64.59**	**348**	⇓*i*P	**P**	**01 41 23.7**	**-0.5**
VRI	**Vrincioaia**	**64.59**	**348**	⇑*i*P	**P**	**01 41 24.3**	**+0.2**
LOT	**Lotru**	**64.81**	**346**	⇓*i*P	**P**	**01 41 25.5**	**-0.2**
BZS	**Buzias**	**65.49**	**345**	⇑*i*P	**P**	**01 41 30.2**	**+0.3**
KK31	**Karatay Array**	**65.95**	**23**	*e*P	**P**	**01 41 32.9**	**-0.1**
KKAR	**Karatay Array**	**65.95**	**23**	*e*P	**P**	**01 41 32.9**	**-0.1**
ARCR	**ARCALIA**	**66.24**	**347**	⇑*i*P	**P**	**01 41 34.7**	**-0.1**
BURAR	**Bucovina Array**	**66.57**	**348**	⇓*i*P	**P**	**01 41 37.7**	**+0.7**
BUR04	**Bucovina Ar. S**	**66.57**	**348**	*e*P	**P**	**01 41 37.1**	**+0.1**
TRPA	**Tarpa**	**67.63**	**346**	⇑*i*P	**P**	**01 41 43.3**	**-0.2**
SOKA	**Soboth**	**68.34**	**341**	*e*P	**P**	**01 41 48.2**	**0.0**
	3.6nm,1.0s						
OBKA	**Obir**	**68.34**	**340**	*e*P	**P**	**01 41 48.9**	**+0.7**
	2.9nm,0.6s						
ABKAR	**Akbulak array**	**68.50**	**13**	*e*P	**P**	**01 41 48.2**	**-0.7**
AKASG	**Malin Array Be**	**68.87**	**352**	P	**P**	**01 41 48.0**	**-3.3**
	0.5nm,0.4s,baz=159,slow=5.5,SNR=4.8						
AKBB	**Malin Array Si**	**68.87**	**352**	*e*P	**P**	**01 41 48.0**	**-3.3**
	12nm,1.6s						
CONA	**Conrad Observa**	**69.20**	**342**	*e*P	**P**	**01 41 52.8**	**-0.7**
	3.4nm,1.0s						
AKTO	**Aktyubinsk**	**69.24**	**11**	P	**P**	**01 41 52.3**	**-1.4**
	2.1nm,0.5s,baz=181,slow=11,SNR=11						
MOA	**Molln**	**69.62**	**341**	*e*P	**P**	**01 41 55.0**	**-1.0**
	2.7nm,0.6s						
WATA	**Walderalm**	**70.06**	**339**	*e*P	**P**	**01 42 00.1**	**+1.2**
	1.9nm,0.4s						
FETA	**Feichten**	**70.09**	**338**	*e*P	**P**	**01 42 00.2**	**+1.1**
	4.8nm,1.2s						
TUE	**Stuetta**	**70.13**	**337**	*e*P	**P**	**01 41 59.7**	**+0.2**
	4.4nm,0.6s						
DAVOX	**Davos/Dischmat**	**70.19**	**337**	P	**P**	**01 41 59.1**	**-0.7**
	2.4nm,0.6s,baz=192,slow=9.3,SNR=4.9						
MORC	**Moravsky Berou**	**70.39**	**344**	*e*P	**P**	**01 41 59.9**	**-0.8**
	34nm,2.0s						
RETA	**Reutte**	**70.47**	**338**	*e*P	**P**	**01 42 00.4**	**-0.9**
	3.7nm,0.9s						
DAVA	**Damuels**	**70.62**	**338**	*e*P	**P**	**01 42 00.3**	**-2.1**
	1.8nm,0.5s						
GEA0	**GERESS Array S**	**70.67**	**341**	*e*P	**P**	**01 42 01.3**	**-1.2**
GEC2	**GERESS Array S**	**70.67**	**341**	*e*P	**P**	**01 42 01.1**	**-1.5**
	8.1nm,1.6s						
GERES	**GERESS Array B**	**70.67**	**341**	P	**P**	**01 42 01.1**	**-1.5**
	1.1nm,0.7s,baz=150,slow=5.6,SNR=9.9						
ES19	**SONSECA Array**	**71.10**	**324**	*e*P	**P**	**01 42 06.3**	**+1.0**
ESDC	**Sonseca Array**	**71.12**	**324**	P	**P**	**01 42 05.9**	**+0.5**
	2.0nm,0.6s,baz=132,slow=5.5,SNR=20						
MK01	**Makanchi Array**	**73.77**	**28**	*e*P	**P**	**01 42 20.5**	**-0.6**
MK31	**Makanchi Array**	**73.78**	**28**	*e*P	**P**	**01 42 21.0**	**-0.1**
MK32	**Makanchi Array**	**73.78**	**28**	*e*P	**P**	**01 42 21.0**	**-0.2**
MKAR	**Makanchi Array**	**73.78**	**28**	P	**P**	**01 42 21.0**	**-0.2**
	2.1nm,0.6s,baz=216,slow=6.7,SNR=18						
BVAR	**Borovoye Array**	**74.58**	**18**	P	**P**	**01 42 25.2**	**-0.4**
	1.7nm,0.6s,baz=212,slow=5.1,SNR=9.5						
ARU	**Arti**	**75.09**	**10**	*e*P	**P**	**01 42 27.9**	**-0.6**
	4.5nm,0.6s						
KURBB	**Kurchatov Arra**	**75.25**	**23**	P	**P**	**01 42 29.1**	**-0.4**
	2.2nm,0.8s,baz=224,slow=6.7,SNR=14						
KURK	**Kurchatov**	**75.36**	**23**	*e*P	**P**	**01 42 29.1**	**-1.0**
FIA0	**FINESS Array S**	**79.75**	**352**	*e*P	**P**	**01 42 53.4**	**-1.0**
FINES	**FINESS Array B**	**79.75**	**352**	P	**P**	**01 42 53.4**	**-1.0**
	1.2nm,0.8s,baz=176,slow=24,SNR=2.6						
ZAA0	**Zalesovo Array**	**80.26**	**24**	*e*P	**P**	**01 42 57.2**	**-0.2**
	3.6nm,0.9s						
ZALV	**Zalesovo Beam**	**80.26**	**24**	P	**P**	**01 42 56.8**	**-0.6**
	2.3nm,0.6s,baz=232,slow=6.1,SNR=8.7						
ZAA1	**Zalesovo Array**	**80.27**	**24**	*e*P	**P**	**01 42 56.8**	**-0.6**
HFS	**Hagfors**	**80.70**	**346**	P	**P**	**01 42 59.3**	**-0.4**
	2.5nm,0.8s,baz=134,slow=8.3,SNR=5.7						
PMSA	**Palmer Station**	**80.76**	**205**	P	**P**	**01 43 00.5**	**+0.5**
	6.3nm,0.4s,baz=302,slow=9.3,SNR=6.3						
NB2	**NORSAR Subarra**	**82.08**	**346**	P	**P**	**01 43 07.2**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=128,slow=9.3						
ASAR	**Alice Springs**	**85.07**	**113**	P	**P**	**01 43 24.9**	**+1.6**
	comp=Z,0.5nm,0.6s,baz=260,slow=4.6,SNR=4.0						
AS31	**Alice Springs**	**85.07**	**113**	*e*P	**P**	**01 43 24.9**	**+1.6**
	comp=Z,1.2nm,0.9s						
ARA0	**ARCESS Array S**	**87.65**	**354**	*e*P	**P**	**01 43 33.7**	**-1.2**
ARCES	**ARCESS Array B**	**87.65**	**354**	P	**P**	**01 43 33.7**	**-1.2**
	comp=Z,2.3nm,0.6s,baz=144,slow=4.3,SNR=13						
ILAR	**Eielson Array**	**132.50**	**5**	PKP	**PKPdf**	**01 50 00.9**	**-0.1**
	comp=Z,0.3nm,0.7s,baz=308,slow=6.9,SNR=4.0						
ILB	**Eielson Array**	**132.50**	**5**	*e*PKPdf	**PKPdf**	**01 50 00.9**	**-0.1**
T25A	**Trinidad**	**144.41**	**310**	*e*PKPdf	**PKPdf**	**01 50 24.8**	**+0.9**
SDCO	**Great Sand Dun**	**144.94**	**312**	*e*PKPdf	**PKPdf**	**01 50 25.8**	**+1.0**
DLMT	**Dillon**	**144.97**	**328**	*e*PKPdf	**PKPdf**	**01 50 25.7**	**+1.2**
PD31	**Pinedale Array**	**144.98**	**322**	*e*PKPdf	**PKPdf**	**01 50 24.8**	**0.0**
PDAR	**Pinedale Array**	**144.98**	**322**	PKP	PKPbc	01 50 24.4	+0.4
	comp=Z,1.2nm,0.8s,baz=74,slow=5.3,SNR=9.7						
O20A	**White River Ci**	**145.65**	**317**	*e*PKPdf	**PKPab**	**01 50 27.1**	**+0.6**
AHID	**Auburn Hatcher**	**145.88**	**323**	*e*PKPdf	**PKPab**	**01 50 27.4**	**+0.2**
TXAR	**Lajitas Array**	**146.26**	**297**	PKPbc	**PKPab**	**01 50 29.4**	**+0.4**
	comp=Z,2.0nm,0.9s,baz=103,slow=4.0,SNR=7.8						
HWUT	**Hardware Ranch**	**146.87**	**322**	*e*PKPdf	**PKPdf**	**01 50 29.1**	**+1.1**
MNTX	**Cornudas Mount**	**147.08**	**301**	*e*PKPdf	**PKPdf**	**01 50 29.8**	**+1.4**
HVU	**Hansel Valley**	**147.46**	**323**	*e*PKPbc	**PKPbc**	**01 50 31.8**	**+0.5**
BMO	**Blue Mountains**	**147.61**	**332**	*e*PKPdf	**PKPdf**	**01 50 30.0**	**+1.1**
SRU	**San Rafael Swe**	**147.69**	**317**	*e*PKPbc	**PKPbc**	**01 50 32.0**	**-0.1**
NV01	**Mina Array Sit**	**152.85**	**324**	*e*PKPbc	**PKPbc**	**01 50 46.4**	**+1.7**
NVAR	**Mina Array Bea**	**152.85**	**324**	PKP	**PKPdf**	**01 50 37.4**	**-0.1**
	comp=Z,0.9nm,0.9s,baz=58,slow=1.9,SNR=4.7						
NVAR				PKPbc	**PKiKP**	**01 50 46.4**	**+1.5**
	comp=Z,2.2nm,0.8s,baz=81,slow=2.3,SNR=15						

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*IDC **03** 01:55:29.1±1.5, 0°.10S×97°.00E, h0^{km}, mb3.7/7, mb1 3.9/9, mb1mx3.6/67, mbtmp3.7/9, ML4.7/1, Error ellipse: s-maj=52.1km s-min=20.2km az=59.0*

*ISCJB **03** 01:55:30.3±0.8, 0°.12S±0°.05×97°.11E±0°.05, h22^{km}, mb3.8/7, Error ellipse: s-maj=8.8km s-min=5.7km az=144.5*

*DJA **03** 01:55:33.0±0.7, 0°S±3°×9°7E±°, h44^{km}±40^{km}, M3.7/7, MLv3.7/7*

ISC 03 01:55:32.6±1.0**, 0°.10S**±0°.06×**97°.17E**±0°.08**, h22^{km}, n22,**
σ1ˢ.07/21**, mb3.9**/7**, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBSI	**Pulau Batu**	**1.11**	**88**	P	**Pn**	**01 55 52.4**	**-0.4**
PBSI				S	**Sb**	**01 56 07.1**	**0.0**
GSI	**Gunungsitoli**	**1.45**	**16**	P	**Pn**	**01 55 57.1**	**-0.5**
GSI				S	**Sn**	**01 56 15.9**	**-0.1**
SISI	**Saibi**	**2.27**	**122**	P	**Pn**	**01 56 08.4**	**-0.4**
SISI				S	**Sn**	**01 56 35.0**	**-1.1**
MNSI	**Mandailing Nat**	**2.57**	**70**	P	**Pn**	**01 56 12.9**	**0.0**
MNSI				S	**Sn**	**01 56 43.2**	**-0.2**
PSI	**Prapat**	**3.37**	**31**	Pn	**Pn**	**01 56 22.1**	**-2.0**
	1.0nm,0.3s,baz=180,slow=16,SNR=3.5						
PSI				Sn	Sn	01 56 51.3	-12
	1.0nm,0.3s,baz=180,slow=19,SNR=4.2						
KCSI	**Kotacane, Aceh**	**3.65**	**9**	P	**Pn**	**01 56 27.2**	**-0.6**
KCSI				S	**Sn**	**01 57 09.5**	**-0.7**
PPSI	**Pulau Pagai**	**3.88**	**133**	P	**Pn**	**01 56 29.4**	**-1.5**
CMAR	**Chiang Mai Arr**	**18.52**	**5**	P	**P**	**01 59 48.2**	**+0.5**
	0.9nm,0.3s,baz=197,slow=12,SNR=5.1						
H08S2	**Diego Garcia H**	**25.72**	**252**	T	T	02 27 50.8	
	baz=73,slow=74,SNR=30						
H08S3	**Diego Garcia H**	**25.73**	**253**	T	T	02 27 48.2	
	baz=73,slow=74,SNR=108						
H08S1	**Diego Carcia H**	**25.74**	**253**	T	T	02 27 48.4	
	baz=73,slow=74,SNR=7.8						
H01W3	**Cape Leeuwin H**	**38.06**	**157**	T	T	02 43 06.7	
	baz=334,slow=76,SNR=56						
H01W2	**Cape Leeuwin H**	**38.07**	**157**	T	T	02 43 07.7	
	baz=334,slow=76,SNR=66						
H01W1	**Cape Leeuwin H**	**38.08**	**157**	T	T	02 43 15.6	
	baz=334,slow=76,SNR=44						
WRA	**Warramunga Arr**	**41.39**	**121**	P	**P**	**02 03 17.9**	**+0.4**
	2.2nm,1.0s,baz=304,slow=8.8,SNR=5.4						
ASAR	**Alice Springs**	**42.65**	**126**	P	**P**	**02 03 29.4**	**+1.5**
	0.8nm,0.8s,baz=321,slow=9.7,SNR=5.3						
SONM	**Songino Array**	**48.41**	**8**	P	**P**	**02 04 13.6**	**+0.4**
	0.7nm,0.5s,baz=346,slow=36,SNR=2.5						
MKAR	**Makanchi Array**	**48.49**	**346**	P	**P**	**02 04 14.7**	**+1.0**
	0.7nm,0.7s,baz=170,slow=7.6,SNR=6.2						
KURBB	**Kurchatov Arra**	**52.97**	**345**	P	**P**	**02 04 45.6**	**-1.7**
	0.5nm,0.2s,baz=150,slow=6.9,SNR=4.5						
ZALV	**Zalesovo Beam**	**54.83**	**351**	P	**P**	**02 05 01.6**	**+0.7**
	0.8nm,0.4s,baz=170,slow=5.7,SNR=4.7						
BVAR	**Borovoye Array**	**57.46**	**341**	P	**P**	**02 05 18.1**	**-1.7**
	0.1nm,0.3s,baz=142,slow=7.3,SNR=2.2						
TXAR	**Lajitas Array**	**144.78**	**33**	PKP	**PKPab**	**02 15 08.8**	**+1.3**
	0.3nm,0.8s,baz=308,slow=2.1,SNR=2.2						

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*NEIC **03** 01:57:23.1±0.0, 16°.45N×96°.19W, h32^{km}, MD4.2(MEX), After MEX.*

MEX 03 01:57:23.1±0.5**, 16°.45N**×**96°.19W, h32^{km}**±6^{km}**, MD4.2,**
Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.68**	**173**	*e*P	Pb	01 57 34.2	-2.3
HUIG				*e*S	Sb	01 57 43.0	-2.7
HUIG	**Huatulco**	**0.68**	**173**	*e*P	Pb	01 57 34.2	-2.3
HUIG				*e*S	Sb	01 57 43.0	-2.7
OXBJ	**Oaxaca**	**0.80**	**321**	*i* P	Pn	01 57 36.0	-2.4
OXBJ				*e*S	Sb	01 57 47.0	-2.4
VHO	**Vista Hermosa**	**0.81**	**320**	*i* P	Pn	01 57 36.2	-2.3
VHO				*e*S	Sn	01 57 46.1	-3.5
VHO	**Vista Hermosa**	**0.81**	**320**	*i* P	Pn	01 57 36.2	-2.3
VHO				*e*S	Sn	01 57 46.1	-3.5
TPIG	**Tehuac#an**	**2.26**	**331**	*i* P	Pn	01 57 56.0	-2.4
TPIG				*i* S	Sn	01 58 23.1	-2.3
TPIG	**Tehuac#an**	**2.26**	**331**	*i* P	Pn	01 57 56.0	-2.4
TPIG				*i* S	Sn	01 58 23.1	-2.3
TLIG	**Tlapa**	**2.53**	**296**	*e*P	Pn	01 58 00.6	-1.5
TLIG				*e*S	Sn	01 58 29.5	-2.5
TLIG	**Tlapa**	**2.53**	**296**	*e*P	Pn	01 58 00.6	-1.5
TLIG				*e*S	Sn	01 58 29.5	-2.5
PCIG		**2.95**	**104**	*i* P	Pn	01 58 05.9	-1.9
PCIG				*i* S	Sn	01 58 39.9	-2.3
PCIG		**2.95**	**104**	*i* P	Pn	01 58 05.9	-1.9
PCIG				*i* S	Sn	01 58 39.9	-2.3
MEIG	**Mezcala**	**3.59**	**295**	*e*P	Pn	01 58 15.8	-0.9
MEIG				*e*S	Sn	01 58 55.9	-2.3
MEIG	**Mezcala**	**3.59**	**295**	*e*P	Pn	01 58 15.8	-0.9
MEIG				*e*S	Sn	01 58 55.9	-2.3
YAIG	**Yautepec**	**3.65**	**312**	*i* P	Pn	01 58 15.9	-1.7
YAIG				*i* S	Sn	01 58 56.5	-3.0
YAIG	**Yautepec**	**3.65**	**312**	*i* P	Pn	01 58 15.9	-1.7
YAIG				*i* S	Sn	01 58 56.5	-3.0
PLIG	**Platanillo**	**3.71**	**302**	*e*P	Pn	01 58 17.1	-1.2
PLIG	**Platanillo**	**3.71**	**302**	*e*P	Pn	01 58 17.1	-1.2
CAIG	**El Cayaco**	**3.95**	**279**	*e*P	Pn	01 58 19.4	-2.1
CAIG				*e*S	Sn	01 59 04.6	-2.3
CAIG	**El Cayaco**	**3.95**	**279**	*e*P	Pn	01 58 19.4	-2.1
CAIG				*e*S	Sn	01 59 04.6	-2.3

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*BJI **03** 02:02:15.6, 13°.48N×145°.02E, h134^{km}, mb4.6/13, mB4.7/9*

*ISCJB **03** 02:02:20.9±0.2, 13°.79N±0°.03×144°.68E±0°.06, h150^{km}, mb4.4/55, Error ellipse: s-maj=8.3km s-min=4.3km az=175.1*

*IDC **03** 02:02:20.8±0.3, 13°.82N×144°.71E, h132^{km}±3^{km}, mb3.9/20, mb1 4.0/21, mb1mx3.8/58, mbtmp4.3/21, MS2.9/1, Ms1 2.9/1, ms1mx2.3/61, Error ellipse: s-maj=19.9km s-min=9.2km az=81.0*

*NEIC **03** 02:02:21.1±0.8, 13°.85N×144°.70E, h140^{km}±7^{km}, mb4.8/32, Error ellipse: s-maj=9.0km s-min=5.3km az=93.0*

NEIC Felt at Andersen AFB, Barrigada, Dededo, Mangilao, Santa Rita and Yigo.

ISC 03 02:02:19.6±0.3**, 13°.89N**±0°.06×**144°.91E**±0°.07**, h125^{km},**
n109, σ1ˢ.59/116**, mb4.5**/55**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.30**	**187**	P	**Pn**	**02 02 40.7**	**+3.5**
	2μm,0.3s,baz=360,slow=0.4,SNR=891						
GUMO				S	**Sn**	**02 02 54.4**	**+4.0**
	2μm,0.3s,baz=61,slow=19,SNR=46						
GUMO	**Guam**	**0.30**	**187**	*e*Pn	**Pn**	**02 02 40.8**	**+3.5**
GUMO				*e*Sn	**Sn**	**02 02 53.1**	**+2.7**
PATS	**Pohnpei**	**14.93**	**117**	*e*P	**P**	**02 05 48.1**	**+1.2**
	126nm,1.3s						
PATS				*e*Sn	**Sn**	**02 08 23.5**	**-6.3**
SIJI	**Sorong**	**19.94**	**224**	P	**P**	**02 06 41.7**	**-0.3**
	1.1nm,0.3s,baz=22,slow=15,SNR=2.6						
FAKI	**Fak Fak**	**20.89**	**218**	*e*P	**P**	**02 06 52.1**	**-0.1**
	114nm,1.5s						
INU	**Inuyama**	**22.52**	**343**	*e*P	**P**	**02 07 08.1**	**-0.8**
	15nm,1.1s						
JNU	**Nakatsue**	**23.01**	**329**	P	**P**	**02 07 13.5**	**-0.3**
	9.2nm,0.8s,baz=213,slow=22,SNR=3.9						
JNU	**Nakatsue**	**23.01**	**329**	*e*P	**P**	**02 07 13.5**	**-0.3**
	31nm,1.1s						
PMG	**Port Moresby**	**23.26**	**174**	P	**P**	**02 07 15.9**	**-0.3**
	14nm,0.4s,baz=30,slow=5.8,SNR=4.4						
PMG	**Port Moresby**	**23.26**	**174**	*e*P	**P**	**02 07 15.5**	**-0.6**
	40nm,1.0s						
MJAR	**Matsushiro Arr**	**23.34**	**346**	P	**P**	**02 07 16.5**	**-0.3**
	1.3nm,0.5s,baz=169,slow=9.3,SNR=4.3						
MAJO	**Matsushiro**	**23.34**	**346**	*e*P	**P**	**02 07 16.5**	**-0.3**
MAT	**Matsushiro**	**23.34**	**346**	P	**P**	**02 07 17.2**	**+0.4**
YULB	**Yu-li**	**24.25**	**296**	*e*P	**P**	**02 07 22.1**	**-3.1**
	12nm,1.3s						
LUWI	**Luwuk**	**26.48**	**238**	*e*P	**P**	**02 07 43.0**	**-2.4**
	54nm,0.7s						
COEN	**Coen**	**27.72**	**184**	P	**P**	**02 07 55.0**	**-1.5**
	baz=21,SNR=8.2						
COEN	**Coen**	**27.72**	**184**	*e*P	**P**	**02 07 56.2**	**-0.3**
	26nm,1.3s						
KSRS	**Korea Array**	**27.92**	**330**	P	**P**	**02 07 58.5**	**+0.5**
	0.8nm,0.4s,baz=137,slow=9.5,SNR=4.9						
KS15	**Wonju Array Si**	**27.93**	**330**	*e*P	**P**	**02 07 58.5**	**+0.4**
KS01	**Wonju Array Si**	**27.95**	**330**	*e*P	**P**	**02 07 57.3**	**-1.0**
KDU	**Kakadu**	**29.14**	**206**	P	**P**	**02 08 07.6**	**-1.4**
	baz=23,SNR=3.8						
MTN	**Manton Dam**	**29.86**	**208**	P	**P**	**02 08 14.4**	**-1.1**
	baz=23,SNR=5.2						
MTN	**Manton Dam**	**29.86**	**208**	*e*P	**P**	**02 08 13.7**	**-1.8**
	59nm,1.4s						
NJ2	**Nanjing**	**29.90**	**312**	*e*P	**P**	**02 08 15.2**	**-0.5**
NJ2				pmax	pmax		
	comp=Z,13nm,0.6s						
ASAJ	**Asahikawa**	**30.18**	**357**	LR	LR	02 19 32.4	
	comp=Z,23nm,21.2s,baz=113,slow=34						
MTSU	**Mount Surprise**	**31.83**	**181**	P	**P**	**02 08 33.7**	**+0.9**
	baz=25						
KNRA	**Kununurra**	**33.44**	**209**	P	**P**	**02 08 46.1**	**-0.7**
	baz=27,SNR=3.6						
CTA	**Charters Tower**	**33.79**	**178**	P	**P**	**02 08 49.8**	**0.0**
	baz=27						
CTA	**Charters Tower**	**33.79**	**178**	P	**P**	**02 08 49.9**	**+0.1**
	3.0nm,0.5s,baz=352,slow=8.8,SNR=6.9						
CTAO	**Charters Tower**	**33.79**	**178**	*e*P	**P**	**02 08 50.2**	**+0.4**
	14nm,1.3s						
QIS	**Mount Isa**	**34.63**	**189**	P	**P**	**02 08 56.6**	**-0.4**
	baz=28,SNR=7.0						
WB7	**Warramunga Arr**	**35.09**	**197**	P	**P**	**02 08 59.9**	**-1.1**
	baz=28						
WRAB	**Tennant Creek**	**35.18**	**197**	*e*P	**P**	**02 09 01.2**	**-0.6**
	32nm,0.8s						
WB2	**Warramunga Arr**	**35.19**	**197**	*e*P	**P**	**02 09 01.0**	**-0.9**
	35nm,0.7s						
WR1	**Warramunga Arr**	**35.19**	**197**	*e*P	**P**	**02 09 00.4**	**-1.5**
	42nm,0.8s						
WRA	**Warramunga Arr**	**35.19**	**197**	P	**P**	**02 09 00.4**	**-1.5**
	19nm,0.5s,baz=17,slow=9.0,SNR=54						
WC3	**Warramunga Arr**	**35.20**	**197**	*e*P	**P**	**02 09 01.2**	**-0.8**
	33nm,0.7s						
KLR	**Kul'dur**	**36.86**	**346**	P	**P**	**02 09 15.8**	**+0.1**
	0.1nm,0.4s,baz=167,slow=14,SNR=3.4						
FITZ	**Fitzroy Crossi**	**37.03**	**211**	P	**P**	**02 09 16.7**	**-0.9**
	baz=31,SNR=5.1						
FITZ	**Fitzroy Crossi**	**37.03**	**211**	P	**P**	**02 09 16.8**	**-0.7**
	12nm,0.8s,baz=18,slow=11,SNR=20						
FITZ	**Fitzroy Crossi**	**37.03**	**211**	*e*P	**P**	**02 09 16.6**	**-0.9**
	15nm,0.9s						
GYA	**Guiyang**	**37.86**	**295**	*e*P	**P**	**02 09 24.0**	**-0.7**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
AS16	**Alice Springs**	**38.81**	**196**	P	**P**	**02 09 31.9**	**-0.6**
	baz=32						
AS01	**Alice Springs**	**38.83**	**196**	*e*P	**P**	**02 09 31.3**	**-1.4**
AS31	**Alice Springs**	**38.85**	**196**	*e*P	**P**	**02 09 32.1**	**-0.6**
	7.4nm,0.5s						
ASAR	**Alice Springs**	**38.85**	**196**	P	**P**	**02 09 31.9**	**-1.0**
	6.4nm,0.5s,baz=18,slow=12,SNR=119						
EIDS	**Eidsvold**	**39.49**	**171**	P	**P**	**02 09 38.1**	**0.0**
	baz=33,SNR=3.8						
EIDS	**Eidsvold**	**39.49**	**171**	*e*P	**P**	**02 09 37.8**	**-0.2**
	14nm,1.2s						
HHC	**Hu-ho-hao-te**	**39.57**	**319**	*e*P	**P**	**02 09 39.3**	**+0.6**
HHC				PP	**PnPn**	**02 11 16.8**	**+0.5**
HHC				S	**S**	**02 15 30.7**	**-1.5**
HHC				sS	sS	02 16 25.1	+4.3
HHC				SS	**SS**	**02 18 24.6**	**-7.5**
HHC				pmax	pmax		
	comp=Z,3.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,34nm,5.3s						
QLP	**Quilpie**	**40.24**	**181**	P	**P**	**02 09 43.2**	**-1.0**
	baz=34,SNR=4.2						
KMI	**Kunming**	**41.13**	**292**	P	**P**	**02 09 51.3**	**-0.7**
KMI				pmax	pmax		
	comp=Z,12nm,0.5s						
KMI				pmax	pmax		
	comp=Z,75nm,4.1s						
DZM	**Mont Dzumac**	**41.52**	**149**	P	**P**	**02 09 56.6**	**+1.7**
	14nm,0.6s,baz=338,slow=5.0,SNR=10						
DZM	**Mont Dzumac**	**41.52**	**149**	*e*P	**P**	**02 09 56.6**	**+1.7**
	16nm,0.8s						
WRKA	**Warakurna**	**41.95**	**203**	P	**P**	**02 09 57.5**	**-0.9**
	baz=35,SNR=112						
MBWA	**Marble Bar**	**42.72**	**216**	*e*P	**P**	**02 10 03.4**	**-1.1**
	24nm,1.3s						

ARMA	**Armidale**	44.53	172	P	P	02 10 19.5	+0.5
	baz=38,SNR=5.2						
ARMA	**Armidale**	44.53	172	*e*P	P	02 10 18.1	-0.9
	21nm,1.3s						
CMSA	**Cobar Meteorol**	45.18	179	P	P	02 10 23.3	-0.7
	baz=39						
STKA	**Stephens Creek**	45.62	184	P	P	02 10 26.7	-0.8
	baz=39,SNR=22						
STKA	**Stephens Creek**	45.62	184	P	P	02 10 26.6	-0.8
	3.3nm,0.3s,baz=24,slow=7.7,SNR=22						
STKA	**Stephens Creek**	45.62	184	*e*P	P	02 10 25.9	-1.6
	1.8nm,0.9s						
SONA0	**Songino Array**	46.51	325	*e*P	P	02 10 36.1	+1.6
SONM	**Songino Array**	46.51	325	P	P	02 10 36.1	+1.6
	0.4nm,0.4s,baz=138,slow=5.6,SNR=3.2						
GTA	**Gaotai**	47.00	311	*e*P	P	02 10 41.0	+2.5
GTA				pP	sP	02 11 14.1	-7.2
GTA				sP	pP	02 11 28.3	+21
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BBOO	**Buckleboo**	47.20	190	P	P	02 10 39.2	-0.6
	baz=40,SNR=71						
BBOO	**Buckleboo**	47.20	190	*e*P	P	02 10 39.3	-0.6
	31nm,0.6s						
FORT	**Forrest**	47.28	200	P	P	02 10 40.0	-0.5
	baz=41,SNR=44						
FORT	**Forrest**	47.28	200	*e*P	P	02 10 40.0	-0.5
	38nm,0.7s						
HTT	**Hallett**	47.40	187	P	P	02 10 41.1	-0.4
	baz=41,SNR=3.8						
YAK	**Yakutsk**	49.29	351	*e*P	P	02 10 56.4	+0.8
	32nm,0.5s						
ATKA	**Atka Island**	50.22	32	*e*P	P	02 11 02.9	+0.1
	73nm,1.2s						
ARPS	**Mount Arapiles**	50.47	183	P	P	02 11 05.2	+0.5
	baz=44,SNR=12						
TOO	**Toolangi**	51.19	179	P	P	02 11 11.4	+1.2
	baz=45,SNR=7.0						
BLDU	**Ballidu**	51.91	211	P	P	02 11 13.8	-1.8
	baz=46,SNR=11						
NWAO	**Narrogin (SRO)**	53.54	209	P	P	02 11 26.4	-1.2
	4.0nm,0.6s,baz=29,slow=7.8,SNR=3.5						
UNV	**Unalaska Valle**	55.05	33	*e*P	P	02 11 38.4	+0.2
	30nm,1.2s						
WMQ	**Urumqi**	56.95	313	P	P	02 11 52.1	0.0
WMQ				pP	pP	02 12 24.4	+2.5
WMQ				pmax	pmax		
	comp=Z,26nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,190nm,4.7s						
HMH	**Humu‘ula Sheep**	57.13	76	*e*P	P	02 11 52.5	-1.5
	125nm,1.4s						
MK32	**Makanchi Array**	61.30	316	*e*P	P	02 12 22.3	+0.4
MKAR	**Makanchi Array**	61.30	316	P	P	02 12 22.3	+0.4
	0.9nm,0.5s,baz=92,slow=9.1,SNR=8.7						
RPZ	**Rata Peaks**	62.11	159	P	P	02 12 26.5	-0.8
	7.6nm,0.8s,baz=0.0,slow=5.1,SNR=3.0						
KURK	**Kurchatov**	64.38	320	*e*P	P	02 12 42.3	+0.2
KURBB	**Kurchatov Arra**	64.42	320	P	P	02 12 42.3	-0.1
	1.5nm,0.5s,baz=101,slow=6.9,SNR=12						
KSH	**Kashi**	65.09	307	P	P	02 12 49.1	+1.9
KSH				*e*PcP	PcP	02 13 21.6	+2.6
KSH				sP	sP	02 13 38.5	+7.2
ILAR	**Eielson Array**	68.28	25	P	P	02 13 05.0	-1.8
	1.0nm,0.4s,baz=250,slow=5.6,SNR=28						
ILB	**Eielson Array**	68.28	25	*e*P	P	02 13 05.0	-1.8
BVAR	**Borovoye Array**	69.71	322	P	P	02 13 16.0	+0.1
	0.9nm,0.4s,baz=108,slow=7.4,SNR=8.8						
YKA	**Yellowknife Ar**	82.58	27	P	P	02 14 26.4	-2.1
	0.6nm,0.4s,baz=286,slow=5.2,SNR=7.4						
PINE	**Pine Mountain**	83.48	47	*e*P	P	02 14 35.3	+1.5
	3.4nm,0.6s						
SPA0	**Spitsbergen Ar**	83.76	351	*e*P	P	02 14 34.1	-0.2
SPITS	**Spitsbergen Ar**	83.76	351	P	P	02 14 34.1	-0.2
	1.0nm,0.6s,baz=74,slow=11,SNR=3.6						
BMO	**Blue Mountains**	85.75	45	*e*P	P	02 14 46.0	+0.9
	2.4nm,1.0s						
KVN	**Kaiserville**	86.70	51	*e*P	P	02 14 51.6	+1.6
	1.5nm,0.8s						
NV01	**Mina Array Sit**	86.70	51	*e*P	P	02 14 51.1	+1.1
NVAR	**Mina Array Bea**	86.70	51	P	P	02 14 51.4	+1.4
	1.0nm,0.5s,baz=274,slow=5.9,SNR=13						
ARA0	**ARCESS Array S**	86.81	342	*e*P	P	02 14 50.0	+0.3
ARCES	**ARCESS Array B**	86.81	342	P	P	02 14 50.0	+0.3
	1.9nm,0.8s,baz=72,slow=5.8,SNR=3.3						
MFID	**Camas Ranch**	87.17	46	*e*P	P	02 14 53.3	+1.2
	2.5nm,1.0s						
HLID	**Hailey**	88.11	46	*e*P	P	02 14 58.9	+2.3
	2.0nm,1.0s						
CCCA	**Chr Cany lake**	88.20	54	*e*P	P	02 14 59.3	+2.3
FIA0	**FINESS Array S**	90.90	335	*e*P	P	02 15 07.4	-1.6
FINES	**FINESS Array B**	90.90	335	P	P	02 15 07.4	-1.6
	1.4nm,0.8s,baz=86,slow=5.9,SNR=3.9						
PD31	**Pinedale Array**	91.73	45	*e*P	P	02 15 13.9	+0.4
PDAR	**Pinedale Array**	91.73	45	P	P	02 15 13.9	+0.4
	0.2nm,0.5s,baz=191,slow=4.4,SNR=2.7						
VNDA	**Vanda**	91.77	176	*e*P	P	02 15 13.3	+0.7
	2.8nm,0.9s						
SNAA	**Sanae**	119.09	191	PKP	PKPdf	02 20 52.5	-0.6
	0.8nm,0.6s,baz=146,slow=3.6,SNR=5.1						
TOA1	**Torodi Ar. Sit**	134.72	305	*e*PKPdf	PKPdf	02 21 25.8	+1.2
TORD	**Torodi Ar. Bea**	134.72	305	PKP	PKPdf	02 21 25.8	+1.2
	0.3nm,0.8s,baz=2.0,slow=3.7						
LPAZ	**La Paz**	148.03	99	PKPbc	PKPbc	02 21 53.6	+1.3
	2.1nm,0.7s,baz=296,slow=2.2,SNR=11						

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*ISCJB **03** 02:06:25.7±0.6, 24°.63S±0°.08×179°.59E±0°.09, h531^{km}, mb4.0/14, Error ellipse: s-maj=11.2km s-min=10.2km az=159.0*

*IDC **03** 02:06:26.0±1.9, 24°.48S×179°.63E, h526^{km}±20^{km}, mb3.5/15, mb1 3.7/16, mb1mx3.4/48, mbtmp4.4/16, Error ellipse: s-maj=16.7km s-min=13.4km az=179.0*

ISC 03 02:06:26.3±0.6, **24°.70S**±0°.09×**179°.68E**±0°.10, **h531**^{km}, **n36**, σ**1^{s}.15**/40, **mb4.0**/14, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	12.43	279	P	P	02 09 09.5	+0.1
	1.3nm,0.3s,baz=88,slow=17,SNR=15						
URZ	**Urewera**	13.69	189	P	P	02 09 20.5	-1.7
	0.9nm,0.3s,baz=265,slow=23,SNR=6.2						
URZ				S	S	02 11 44.5	-2.8
	0.5nm,0.3s,baz=233,slow=20,SNR=4.1						
RPZ	**Rata Peaks**	20.24	198	P	P	02 10 27.1	+1.8
	6.8nm,0.5s,baz=102,slow=1.5,SNR=5.7						
EIDS	**Eidsvold**	25.90	262	P	P	02 11 16.0	0.0
	baz=30						
CTA	**Charters Tower**	31.19	272	P	P	02 12 02.7	+0.5
	baz=36						
CTA	**Charters Tower**	31.19	272	P	P	02 12 01.6	-0.6
	26nm,0.5s,baz=94,slow=12,SNR=38						
QLP	**Quilpie**	31.95	259	P	P	02 12 09.2	+0.7
	baz=36,SNR=5.0						
MTSU	**Mount Surprise**	33.49	274	P	P	02 12 22.9	+1.1
	baz=38,SNR=25						
STKA	**Stephens Creek**	34.16	249	P	P	02 12 28.5	+1.3
	baz=39,SNR=5.7						
STKA	**Stephens Creek**	34.16	249	P	P	02 12 28.1	+0.9
	2.7nm,0.4s,baz=98,slow=12,SNR=7.8						
BBOO	**Buckleboo**	38.87	248	P	P	02 13 06.3	+0.3
	baz=43,SNR=6.4						
ASAR	**Alice Springs**	41.62	262	P	P	02 13 28.0	-0.2
	1.7nm,0.3s,baz=95,slow=6.8,SNR=16						
ASAR				S	S	02 19 07.0	+0.6
	0.9nm,0.8s,baz=96,slow=16,SNR=2.5						
WC3	**Warramunga Arr**	42.03	267	P	P	02 13 31.2	-0.3
	baz=47						
WRA	**Warramunga Arr**	42.06	267	P	P	02 13 31.5	-0.2
	6.3nm,0.5s,baz=98,slow=8.3,SNR=37						
WRA				ScP	ScP	02 18 17.1	+2.9
	2.1nm,0.9s,baz=99,slow=3.6,SNR=6.8						
JAY	**Jayapura**	43.56	294	P	P	02 13 42.5	-1.1
	9.0nm,0.6s,baz=142,slow=5.4,SNR=7.0						
FORT	**Forrest**	45.76	250	P	P	02 13 60.0	-0.2
	baz=50,SNR=11						
KDU	**Kakadu**	46.07	276	P	P	02 14 02.4	-0.3
	baz=50						
WRKA	**Warakurna**	46.38	258	P	P	02 14 05.2	+0.2
	baz=51,SNR=10						
KNRA	**Kununurra**	48.39	271	P	P	02 14 19.6	-0.6
	baz=53,SNR=4.1						
FITZ	**Fitzroy Crossi**	50.48	266	P	P	02 14 35.8	+0.2
	baz=55,SNR=4.6						
FITZ	**Fitzroy Crossi**	50.48	266	P	P	02 14 35.5	-0.1
	4.4nm,0.7s,baz=110,slow=12,SNR=7.4						
SIJI	**Sorong**	52.41	289	P	P	02 14 49.1	-0.5
	19nm,0.6s,baz=98,slow=9.8,SNR=5.0						
QSPA	**South Pole Qui**	65.39	180	P	P	02 16 18.1	+2.1
	3.8nm,1.0s,baz=31,slow=1.7,SNR=6.3						
MAW	**Mawson**	76.90	201	P	P	02 17 24.7	+1.4
	1.6nm,0.9s,baz=44,slow=5.9,SNR=3.6						
SNAA	**Sanae**	83.88	179	P	P	02 18 00.3	+0.6
	0.9nm,0.7s,baz=266,slow=12,SNR=4.0						
NVAR	**Mina Array Bea**	85.53	44	P	P	02 18 08.8	+0.3
	0.9nm,0.8s,baz=226,slow=8.8,SNR=6.0						
TXAR	**Lajitas Array**	91.10	58	P	P	02 18 36.0	+1.4
	1.2nm,0.8s,baz=217,slow=7.5,SNR=9.9						
ILAR	**Eielson Array**	92.87	14	P	P	02 18 39.8	-2.0
	0.2nm,0.6s,baz=230,slow=5.6,SNR=3.1						
PDAR	**Pinedale Array**	93.47	44	P	P	02 18 45.2	-0.1
	0.2nm,0.5s,baz=108,slow=2.9,SNR=2.8						
BVAR	**Borovoye Array**	120.84	318	PKP	PKPdf	02 24 15.9	-1.8
	0.2nm,0.3s,baz=93,slow=5.8,SNR=2.7						
ARCES	**ARCESS Array B**	132.60	348	PKP	PKPdf	02 24 39.8	+0.1
	2.2nm,0.9s,baz=283,slow=16,SNR=4.4						
ARCES				SKPbc	SKPab	02 27 20.2	+0.8
	1.5nm,0.8s,baz=18,slow=4.2,SNR=4.4						
FINES	**FINESS Array B**	139.10	341	PKhKP	PKPpre	02 24 43.4	
	0.5nm,0.6s,baz=8.5,slow=2.8,SNR=2.9						
FINES				SKPbc	SKiKP	02 27 39.0	-1.0
	1.2nm,0.4s,baz=48,slow=4.2,SNR=12						
HFS	**Hagfors**	143.27	348	PKP	PKPab	02 24 57.3	-0.2
	2.6nm,0.3s,baz=60,slow=3.5,SNR=38						
AKASG	**Malin Array Be**	145.47	326	PKPbc	PKPdf	02 25 02.8	-0.8
	0.5nm,0.4s,baz=45,slow=4.0,SNR=2.8						
BRTR	**Keskin Array B**	147.81	306	PKPbc	PKPbc	02 25 11.2	-0.6
	0.6nm,0.9s,baz=135,slow=4.4,SNR=3.0						
TORD	**Torodi Ar. Bea**	168.35	190	PKPab	PKPab	02 26 44.5	-0.6
	baz=160,slow=4.6						

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*MDD **03** 02:08:17.0±2.5, 35°.57N×11°.47W, h0^{km}, mb3.5/6, Error ellipse: s-maj=26.0km s-min=19.0km az=121.0, PRXIMO PROFUNDIDAD POBRE*

*IGIL **03** 02:08:17.7, 35°.36N×11°.60W, h74^{km}, ML2.0*

*INMG **03** 02:08:18.1±1.0, 35°.29N×11°.54W, h31^{km}, ML2.0, Error ellipse: s-maj=8.4km s-min=4.2km az=92.0*

*CSEM **03** 02:08:20.3±0.5, 35°.51N×11°.25W, h30^{km}, mb3.5, Error ellipse: s-maj=12.8km s-min=8.6km az=128.0*

ISC 03 02:08:13.6±4.1, **35°.5N**±0°.2×**11°.6W**±0°.2, **h10**^{km}, **n54**, σ**2^{s}.32**/79, **Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	2.73	53	P	Pn	02 08 59.9	+2.3
	2.6nm,0.1s,SNR=4.0						
PFVI				S	Sn	02 09 29.8	-0.9
	4.9nm,0.1s,SNR=7.9						
PFVI	**Vila Bisbo**	2.73	53	P	Pn	02 08 59.9	+2.3
	2.6nm,0.1s,SNR=4.0						
PFVI				S	Sn	02 09 29.8	-0.9
	4.9nm,0.1s,SNR=7.9						
PTEO	**Sao Teotonio**	3.05	48	*e*Sn	Sn	02 09 39.5	+1.0
PTEO				A	A	02 09 40.4	
	6.1nm,0.8s						
PTEO	**Sao Teotonio**	3.05	48	S	Sn	02 09 39.5	+1.0
	3.1nm,0.8s						
PTEO	**Sao Teotonio**	3.05	48	S	Sn	02 09 39.5	+1.0
	3.1nm,0.8s						
PBDV	**Barranco-do-Ve**	3.40	59	*e*Pn	Pn	02 09 08.9	+2.2
PBDV				*e*Sn	Sn	02 09 46.5	-0.6
PBDV				A	A	02 09 52.4	
	1.7nm,0.2s						
PBDV	**Barranco-do-Ve**	3.40	59	P	Pn	02 09 08.9	+2.2
PBDV				S	Sn	02 09 46.5	-0.6
	1.7nm,0.2s						
PBDV	**Barranco-do-Ve**	3.40	59	P	Pn	02 09 08.9	+2.2
PBDV				S	Sn	02 09 46.5	-0.6
	1.7nm,0.2s						
PCVE	**Castro Verde**	3.53	53	*e*Pn	Pn	02 09 11.3	+2.7
PCVE				*e*Sn	Sn	02 09 50.9	+0.5
PCVE				A	A	02 09 53.2	
	1.8nm,0.2s						
PCVE	**Castro Verde**	3.53	53	P	Pn	02 09 11.3	+2.7
PCVE				S	Sn	02 09 50.9	+0.5
	1.8nm,0.2s						
PCVE	**Castro Verde**	3.53	53	P	Pn	02 09 11.3	+2.7
PCVE				S	Sn	02 09 50.9	+0.5
	1.8nm,0.2s						
MESJ	**Messejana**	3.55	49	*e*P	Pn	02 09 10.7	+2.0
MESJ				*e*S	Sn	02 09 49.3	-1.4
MESJ				AML	AML	02 09 53.0	
	comp=N,3.5nm,0.5s						
MESJ	**Messejana**	3.55	49	*e*Pn	Pn	02 09 10.8	+2.1
MESJ				*e*Sn	Sn	02 09 51.0	+0.3
MESJ				A	A	02 09 52.1	
	comp=N,3.0nm,0.7s						
MESJ	**Messejana**	3.55	49	P	Pn	02 09 10.8	+2.1
MESJ				S	Sn	02 09 51.0	+0.3
	comp=N,3.0nm,0.7s						
MESJ	**Messejana**	3.55	49	P	Pn	02 09 10.8	+2.1
MESJ				S	Sn	02 09 51.0	+0.3
	comp=N,3.0nm,0.7s						
EGRO	**El Granado**	3.85	58	P	Pn	02 09 15.1	+2.1
	comp=N,0.2nm,0.1s,SNR=7.9						
EGRO				S	Sn	02 09 56.7	-1.6
	comp=N,1.1nm,0.1s,SNR=7.9						
EGRO	**El Granado**	3.85	58	P	Pn	02 09 15.1	+2.1
	comp=N,0.2nm,0.1s,SNR=7.9						
EGRO				S	Sn	02 09 56.7	-1.6
	comp=N,1.1nm,0.1s,SNR=7.9						
PMAFR	**Mafra**	3.88	27	S	Sn	02 09 57.3	-1.6
	comp=N,1.4nm,0.1s,SNR=7.9						
PBEJ	**Beja**	3.88	49	*e*Sn	Sn	02 09 59.8	+0.8
PBEJ	**Beja**	3.88	49	S	Sn	02 09 59.8	+0.8
PBEJ	**Beja**	3.88	49	S	Sn	02 09 59.8	+0.8
EVO	**Evora**	4.13	43	*e*Sn	Sn	02 10 05.0	-0.2
EVO	**Evora**	4.13	43	S	Sn	02 10 05.0	-0.2
EVO	**Evora**	4.13	43	S	Sn	02 10 05.0	-0.2
ALMR	**Almeirim**	4.33	33	*e*Sn	Sn	02 10 11.1	+1.0
ALMR				A	A	02 10 15.1	
	comp=N,6.7nm,0.6s						
ALMR	**Almeirim**	4.33	33	S	Sn	02 10 11.1	+1.0
	comp=N,3.3nm,0.6s						
ALMR	**Almeirim**	4.33	33	S	Sn	02 10 11.1	+1.0
	comp=N,3.3nm,0.6s						
PMTG	**Montargil**	4.43	36	*e*Pn	Pn	02 09 23.0	+2.2
PMTG				*e*Sn	Sn	02 10 12.6	+0.2
PMTG				A	A	02 10 13.0	
	comp=N,1.3nm,0.1s						
PMTG	**Montargil**	4.43	36	*e*Pn	Pn	02 09 23.0	+2.2
PMTG				*e*Sn	Sn	02 10 12.6	+0.2
EMIN	**Mina Concepcio**	4.53	59	P	Pn	02 09 24.2	+2.0
	comp=N,0.3nm,0.2s,SNR=7.9						
EMIN				S	Sn	02 10 13.8	-1.2
	comp=N,0.5nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	4.53	59	P	Pn	02 09 24.2	+2.0
	comp=N,0.3nm,0.2s,SNR=7.9						
EMIN				S	Sn	02 10 13.8	-1.2
	comp=N,0.5nm,0.1s,SNR=7.9						
PESTR	**Estremoz**	4.60	43	*e*Sn	Sn	02 10 16.5	-0.3
PESTR				A	A	02 10 19.7	
	comp=N,1.2nm,0.6s						
PESTR	**Estremoz**	4.60	43	*e*Sn	Sn	02 10 16.5	-0.3
PTOM	**Tomar**	4.79	31	*e*Sn	Sn	02 10 22.0	+0.6
PTOM	**Tomar**	4.79	31	S	Sn	02 10 22.0	+0.6
PTOM	**Tomar**	4.79	31	S	Sn	02 10 22.0	+0.6
EBAD	**Badajoz**	4.86	47	P	Pn	02 09 22.4	-4.4
	comp=N,0.3nm,0.1s,SNR=4.3						
EBAD				S	Sn	02 10 22.2	-0.9
	comp=N,2.5nm,0.2s,SNR=7.9						
PMRV	**Marv??o**	5.12	39	*e*Pn	Pn	02 09 32.3	+2.0
PMRV				*e*Sn	Sn	02 10 28.5	-1.0
PMRV				A	A	02 10 31.2	
	comp=N,1.6nm,0.8s						
PMRV	**Marv??o**	5.12	39	P	Pn	02 09 32.3	+2.0
PMRV				S	Sn	02 10 28.5	-1.0
	comp=N,1.6nm,0.8s						
PMRV	**Marv??o**	5.12	39	P	Pn	02 09 32.3	+2.0
PMRV				S	Sn	02 10 28.5	-1.0
	comp=N,1.6nm,0.8s						
ECAB	**El Cabril**	5.55	61	P	Pn	02 09 37.7	+1.4
	comp=N,0.3nm,0.1s,SNR=6.2						
ECAB				S	Sn	02 10 36.9	-3.3
	comp=N,0.4nm,0.2s,SNR=7.9						
ECAB	**El Cabril**	5.55	61	P	Pn	02 09 37.7	+1.4
	comp=N,0.3nm,0.1s,SNR=6.2						
ECAB				S	Sn	02 10 36.9	-3.3
	comp=N,0.4nm,0.2s,SNR=7.9						
EADA	**Adamuz**	6.20	63	P	Pn	02 09 46.4	+1.2
	comp=N,0.4nm,0.1s,SNR=7.9						
EADA				S	Sn	02 10 53.1	-3.0
	comp=N,0.8nm,0.1s,SNR=7.9						
EADA	**Adamuz**	6.20	63	P	Pn	02 09 46.4	+1.2
	comp=N,0.4nm,0.1s,SNR=7.9						
EADA				S	Sn	02 10 53.1	-3.0
	comp=N,0.8nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	6.66	31	*e*Sn	Sn	02 11 06.4	-1.2
MVO				A	A	02 11 12.4	
	comp=N,1.2nm,0.6s						
MVO	**Moncorvo**	6.66	31	S	Sn	02 11 03.8	-3.8
	comp=N,0.3nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	6.66	31	*e*Sn	Sn	02 11 06.4	-1.2
ELOB	**Lobios**	6.90	22	S	Sn	02 11 06.0	-7.3
	comp=N,0.4nm,0.1s,SNR=7.9						
PGAV	**Gavieira, Arco**	6.92	21	*e*Sn	Sn	02 11 06.9	-7.2
EQES	**Quesada**	7.20	69	S	Sn	02 11 17.2	-3.7
	comp=N,0.2nm,0.2s,SNR=7.9						
EQES	**Quesada**	7.20	69	S	Sn	02 11 17.2	-3.7
	comp=N,0.2nm,0.2s,SNR=7.9						
EMAZ	**Mazaricos**	7.68	14	S	Sn	02 11 26.3	-6.2
	comp=N,0.8nm,0.1s,SNR=7.9						
ETOB	**Tobarra**	8.59	66	S	Sn	02 11 50.5	-4.6
	comp=N,0.2nm,0.2s,SNR=4.0						
ETOB	**Tobarra**	8.59	66	S	Sn	02 11 50.5	-4.6
	comp=N,0.2nm,0.2s,SNR=4.0						

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*IDC **03** 02:10:14.7±1.3, 12°.03S×166°.16E, h0^{km}, mb4.1/6, mb1 4.1/7, mb1mx3.7/57, mbtmp4.0/7, ML3.8/1, MS3.4/2, Ms1 3.4/2, ms1mx2.9/42, Error ellipse: s-maj=41.4km s-min=28.8km az=99.0*

*ISCJB **03** 02:10:17.9±1.0, 12°.22S±0°.10×166°.1E±0°.2, h30^{km}, mb4.0/6, MS3.9/1, Error ellipse: s-maj=30.1km s-min=13.7km az=173.7*

ISC 03 02:10:19.3±1.2, **12°.1S**±0°.1×**166°.2E**±0°.3, **h30**^{km}, **n9**, σ**1^{s}.52**/8, **mb3.9**/6, **Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	9.90	178	Pn	Pn	02 12 41.6	+1.9
	0.9nm,0.3s,baz=356,slow=19,SNR=6.6						
DZM				Sn	Sn	02 14 27.7	-2.2
	0.1nm,0.3s,baz=292,slow=19,SNR=1.5						
PMG	**Port Moresby**	18.86	276	LR	LR	02 20 26.6	
	comp=Z,42nm,21.7s,baz=160,slow=32						
WRA	**Warramunga Arr**	31.51	252	P	P	02 16 39.2	+0.3
	1.0nm,0.9s,baz=84,slow=7.9,SNR=2.7						
ASAR	**Alice Springs**	32.69	245	P	P	02 16 48.4	-0.9
	0.6nm,0.7s,baz=71,slow=9.4,SNR=4.2						
MA2	**Magadan**	72.53	352	LR	LR	02 48 47.9	
	comp=Z,66nm,19.2s,baz=178,slow=32						
QSPA	**South Pole Qui**	77.89	180	P	P	02 22 14.4	+0.3
	2.0nm,0.8s,baz=20,slow=5.8,SNR=3.8						
ILAR	**Eielson Array**	84.40	18	P	P	02 22 47.6	-0.9
	0.5nm,0.9s,baz=239,slow=5.1,SNR=4.0						
MKAR	**Makanchi Array**	94.58	317	P	P	02 23 38.2	+1.0
	1.7nm,0.6s,baz=96,slow=5.7,SNR=10						
ZALV	**Zalesovo Beam**	94.66	324	P	P	02 23 36.9	-0.5
	0.5nm,0.4s,baz=104,slow=6.1,SNR=2.8						

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*IDC **03** 02:10:42.7±0.7, 3°.27N×92°.80E, h0^{km}, mb4.2/22, mb1 4.3/25, mb1mx4.0/71, mbtmp4.2/25, ML4.0/3, MS3.9/15, Ms1 3.9/15, ms1mx3.5/62, Error ellipse: s-maj=25.1km s-min=13.9km az=38.0*

*DJA **03** 02:10:43.4±2.3, 3°N±14°×9°3E±2°0, h10^{km}, M5.2/5, mB4.8/1, mb5.3/3, MLv5.2/5, Mw(mB)4.1/1*

*NEIC **03** 02:10:44.6±4.6, 3°.31N×92°.98E, h13^{km}±28^{km}, mb4.8/22, Error ellipse: s-maj=10.6km s-min=5.5km az=54.0*

*BJI **03** 02:10:44.0, 3°.30N×93°.00E, h15^{km}, mb4.5/9, mB4.7/7, Ms4.1/3, Ms7 3.9/3*

*ISCJB **03** 02:10:45.8±0.3, 3°.25N±0°.04×92°.97E±0°.03, h33^{km}, mb4.4/47, MS3.9/14, Error ellipse: s-maj=6.3km s-min=3.7km az=36.4*

ISC 03 02:10:47.4±0.4, **3°.24N**±0°.07×**92°.97E**±0°.05, **h35**^{km}, **n157**, σ**1^{s}.73**/137, **mb4.5**/51, **MS4.0**/14, **Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNSI	**Sinabang, Aceh**	3.45	104	P	Pn	02 11 38.7	0.0
SNSI				S	Sn	02 12 10.4	-8.0
LHMI	**Lhok Sumawe**	4.43	63	*e*Pg	Pn	02 12 01.1	+8.8
KCSI	**Kotacane, Aceh**	4.80	86	P	Pn	02 11 59.0	+1.7
KCSI				S	Sn	02 12 42.8	-9.0
GSI	**Gunungsitoli**	4.99	113	P	Pn	02 12 00.2	+0.3
	318nm,0.6s						
GSI				S	Sn	02 12 47.0	-9.3
	318nm,0.6s						
GSI	**Gunungsitoli**	4.99	113	*e*Pn	Pn	02 12 00.1	+0.3
GSI				*e*Sn	Sn	02 12 50.1	-6.2
PSI	**Prapat**	5.96	94	Pn	Pn	02 12 13.8	+0.4
	4.0nm,0.3s,baz=359,slow=3.1,SNR=30						
PSI				Sn	Sn	02 13 18.4	-2.1
	10nm,0.3s,baz=180,slow=8.1,SNR=4.6						
PSI	**Prapat**	5.96	94	*e*Pn	Pn	02 12 14.3	+0.9
PBSI	**Pulau Batu**	6.23	122	P	Pn	02 12 16.1	-0.9
PBSI				S	Sn	02 13 29.3	+2.3
PKDT	**Phuket**	7.07	49	P	Pn	02 12 36.8	+8.4
KRAB	**Krabi**	7.93	51	P	Pn	02 12 40.3	0.0
	111nm,0.6s,16µm1.2nm						
TRTT	**Trang**	8.10	55	P	Pn	02 12 44.9	+2.3
	33nm,0.7s,428nm0.1nm						
BKNI	**Bangkinang**	8.57	110	*e*Pn	Pn	02 12 48.9	-0.1
BKNI				*e*Sn	Sn	02 14 23.5	-1.0
SRDT	**SRDT**	12.60	28	P	P	02 13 55.7	+0.4
PALK	**Pallekele**	12.86	289	Pn	Pn	02 13 42.5	-5.3
	0.4nm,0.3s,baz=119,slow=19,SNR=2.7						
PALK				Sn	Sn	02 15 57.6	-12
	5.4nm,0.3s,baz=116,slow=6.7,SNR=18						
PALK	**Pallekele**	12.86	289	*e*Pn	Pn	02 13 45.9	-1.9
UTHA	**Uthaitani**	13.81	27	P	P	02 14 18.8	+10
SRAK	**Srakaew**	13.96	39	P	P	02 14 19.3	+8.9
PBKT	**Sadao Pong**	15.41	30	P	Pn	02 14 24.4	+2.1
	14nm,1.4s						
PHIT	**Phitsanulok**	15.68	27	P	P	02 14 41.4	+12
CM01	**Chiang Mai Arr**	16.19	21	*e*Pn	Pn	02 14 28.2	-4.2
CM31	**Chiang Mai Arr**	16.22	21	*e*Pn	Pn	02 14 31.1	-1.7
CMAR	**Chiang Mai Arr**	16.22	21	Pn	Pn	02 14 31.1	-1.7
	0.3nm,0.3s,baz=215,slow=13,SNR=15						
CHTO	**Chiang Mai**	16.55	20	*e*Pn	Pn	02 14 34.6	-2.4
	15nm,1.0s						
CHTO	**Chiang Mai**	16.55	20	P	P	02 14 38.9	-0.3
	40nm,0.8s						
CMMT	**Chiang Mai**	16.55	20	P	P	02 14 38.9	-0.3
	11nm,1.3s,471nm						
SKHT	**Srikalahasti**	16.75	309	*e*P	P	02 14 42.5	+1.1
SKHT				IAmb	IAmb	02 14 43.0	
	comp=Z,32nm,1.2s						
SKHT				*e*S	Sn	02 17 27.6	-17
UBPT	**Khong Chiam**	17.17	45	P	Pn	02 14 45.4	+0.6
	comp=Z,42nm,1.2s						
SKNT	**Sakolnakorn**	17.42	38	P	P	02 14 49.2	+0.4
	comp=Z,8.1nm,0.9s						
CHLP	**Challavanipeta**	17.51	331	*e*P	Pn	02 14 48.3	-0.6
CHLP				IAmb	IAmb	02 14 57.9	
	comp=Z,63nm,1.1s						
CHLP				*e*S	Sn	02 17 45.5	-17
CMAI	**Chiengmai2**	17.62	19	P	P	02 14 53.5	+2.3
	comp=Z,1.7nm,0.9s						
LEM	**Lembang**	17.71	124	LR	LR	02 21 58.4	
	comp=Z,286nm,18.6s,baz=272,slow=38						
NONG	**Nongkai**	17.79	33	P	Pn	02 14 51.8	-0.7
	comp=Z,0.5nm,1.0s,comp=Z,38nm						
PVM	**Polavaram**	17.83	322	*e*P	Pn	02 14 52.9	0.0
PVM				IAmb	IAmb	02 14 55.5	
	comp=Z,21nm,1.1s						
PVM				*e*S	Sn	02 17 51.4	-19
BWNR	**Bhubaneshwar**	18.34	338	*e*P	P	02 14 57.5	-1.4
SRLM	**Srisailam**	18.85	314	*e*S	Sn	02 18 18.5	-17
NJS	**Nagarjunasagar**	18.86	315	*e*P	P	02 15 04.7	+0.1
NJS				IAmb	IAmb	02 15 05.5	
	comp=Z,15nm,1.0s						
NJS				*e*S	Sn	02 18 17.2	-18
SAIH	**SAIHA**	19.14	0	*e*P	Pn	02 15 09.1	+0.2
SAIH				IAmb	IAmb	02 15 13.5	
	comp=Z,30nm,0.5s						
BRDH	**Bariadhala**	19.37	356	LR	LR	02 25 23.4	
	comp=Z,418nm,18.0s,baz=184,slow=46						
URV	**Uravakonda**	19.37	308	*e*S	S	02 18 33.7	-14
HYBB	**Hyderabad (bro**	19.97	316	*e*		02 18 42.7	
HYBB				*e*S	S	02 18 59.2	-0.7

SMRI	**Semarang**	**20.21**	**120**	*e*P	**P**	**02 15 18.8**	**-0.7**
	comp=Z,106nm,1.2s						
SRSP	**Sriramsagar**	**21.16**	**319**	*e*P	**P**	**02 15 29.4**	**-0.4**
SRSP				IAmb	IAmb	02 15 31.2	
	comp=Z,16nm,0.9s						
SRSP				*e*S	**S**	**02 19 19.0**	**-4.5**
IMP	**Imphal**	**21.49**	**2**	*e*P	**P**	**02 15 32.6**	**-0.7**
IMP				IAmb	IAmb	02 15 36.9	
	comp=Z,26nm,0.6s						
BOK	**Bokaro**	**21.56**	**342**	*e*P	**P**	**02 15 34.9**	**+1.0**
KLRI	**Killari**	**21.79**	**314**	*e*P	**P**	**02 15 35.9**	**-0.7**
KLRI				IAmb	IAmb	02 15 39.9	
	comp=Z,33nm,1.1s						
KLRI				*e*S	**S**	**02 19 25.8**	**-10**
SHL	**Shillong**	**22.23**	**357**	*e*P	**P**	**02 15 40.4**	**-1.0**
KOHI	**KOHIMA**	**22.38**	**3**	*e*P	**P**	**02 15 41.9**	**-1.1**
GUWA	**GUWAHATI**	**22.86**	**357**	*e*x	**P**	**02 15 50.6**	**+2.8**
MOKO	**MOKOCHONG**	**23.00**	**4**	*e*P	**P**	**02 15 48.6**	**-0.9**
TEZP	**TEZPUR**	**23.25**	**360**	*e*P	**P**	**02 15 50.5**	**-1.2**
ITAN	**ITANAGAR**	**23.79**	**2**	*e*P	**P**	**02 15 57.3**	**+0.3**
ODAN	**Odare**	**24.09**	**348**	*e*P	**P**	**02 16 00.8**	**+0.7**
	comp=Z,174nm,1.5s						
LKP	**Lekhapani**	**24.12**	**6**	*e*P	**P**	**02 15 57.9**	**-2.2**
ZIRO	**ZIRO**	**24.17**	**2**	*e*P	**P**	**02 15 58.4**	**-2.3**
RAMN	**Ramite**	**24.36**	**346**	*e*P	**P**	**02 16 03.6**	**+1.1**
	comp=Z,40nm,0.9s						
JIRN	**Jiri**	**25.14**	**346**	*e*P	**P**	**02 16 10.4**	**+0.6**
	comp=Z,103nm,1.1s						
PKIN	**Phulchoki**	**25.27**	**344**	*e*P	**P**	**02 16 11.7**	**+0.9**
	comp=Z,80nm,1.4s						
DMN	**Daman**	**25.38**	**344**	*e*P	**P**	**02 16 12.0**	**+0.2**
	comp=Z,34nm,0.8s						
GUN	**Gumba**	**25.45**	**345**	*e*P	**P**	**02 16 13.1**	**+0.5**
	comp=Z,112nm,1.3s						
KKN	**Kakani**	**25.50**	**344**	*e*P	**P**	**02 16 13.1**	**+0.2**
	comp=Z,118nm,1.4s						
GKN	**Gorkha**	**25.88**	**343**	*e*P	**P**	**02 16 16.8**	**+0.5**
	comp=Z,53nm,0.9s						
KOLN	**Koldanda**	**25.99**	**341**	*e*P	**P**	**02 16 17.9**	**+0.6**
	comp=Z,22nm,0.8s						
LSA	**Lhasa**	**26.38**	**356**	*e*P	**P**	**02 16 21.2**	**+0.1**
	comp=Z,46nm,1.4s						
DANN	**Dangsing**	**26.47**	**342**	*e*P	**P**	**02 16 22.1**	**+0.3**
	comp=Z,46nm,0.9s						
PYUN	**Piuthan**	**26.50**	**340**	*e*P	**P**	**02 16 22.1**	**+0.2**
	comp=Z,49nm,1.1s						
SMLA	**Simla**	**31.50**	**333**	*e*P	**P**	**02 17 06.6**	**+0.5**
SMLA				IAmb	IAmb	02 17 07.6	
	comp=Z,29nm,1.5s						
DAV	**Davao City (W)**	**32.69**	**82**	LR	LR	02 34 56.7	
	comp=Z,121nm,18.4s,baz=337,slow=44						
BATI	**Baumata**	**33.35**	**114**	LR	LR	02 32 44.8	
	comp=Z,337nm,20.2s,baz=194,slow=39						
XAN	**Xi’an**	**34.07**	**24**	P	**P**	**02 17 28.2**	**-0.4**
XAN				pP	pP	02 17 36.5	-2.2
XAN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
NIL	**Nilore**	**35.42**	**331**	*e*P	**P**	**02 17 40.4**	**+0.1**
	comp=Z,19nm,0.8s						
GTA	**Gaotai**	**36.54**	**9**	*e*P	**P**	**02 17 50.7**	**+0.8**
GTA				pP	pP	02 18 00.5	+0.4
GTA				sP	sP	02 18 04.6	+0.3
GTA				pmax	pmax		
	comp=Z,5.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,41nm,4.9s						
GTA				LR	LR		
	comp=Z,140nm,16.8s						
GTA				LR	LR		
	comp=Z,130nm,15.1s						
GTA				LR	LR		
	comp=Z,130nm,16.5s						
FITZ	**Fitzroy Crossi**	**38.55**	**125**	P	**P**	**02 18 09.1**	**+2.1**
	comp=Z,4.6nm,0.8s,baz=270,slow=10,SNR=3.7						
AAK	**Ala-Archa**	**42.56**	**340**	LR	LR	02 36 48.4	
	comp=Z,172nm,21.5s,baz=146,slow=37						
AAK	**Ala-Archa**	**42.56**	**340**	*e*P	**P**	**02 18 39.3**	**-0.7**
	comp=Z,18nm,1.6s						
NWAO	**Narrogin (SRO)**	**42.68**	**149**	LR	LR	02 34 47.2	
	comp=Z,192nm,20.2s,baz=186,slow=34						
H01W3	**Cape Leeuwin H**	**42.82**	**154**	T	T	03 05 00.8	
	baz=331,slow=76,SNR=9.2						
H01W2	**Cape Leeuwin H**	**42.83**	**154**	T	T	03 05 02.1	
	baz=331,slow=76,SNR=4.0						
H01W1	**Cape Leeuwin H**	**42.83**	**154**	T	T	03 05 12.3	
	baz=331,slow=76,SNR=5.1						
MK01	**Makanchi Array**	**44.35**	**350**	*e*P	**P**	**02 18 54.5**	**+0.3**
MK31	**Makanchi Array**	**44.37**	**350**	*e*P	**P**	**02 18 54.8**	**+0.3**
MK32	**Makanchi Array**	**44.37**	**350**	*e*P	**P**	**02 18 54.8**	**+0.3**
MKAR	**Makanchi Array**	**44.37**	**350**	P	**P**	**02 18 54.8**	**+0.3**
	comp=Z,3.6nm,0.6s,baz=166,slow=8.5,SNR=31						
MKAR				LR	LR	02 41 58.0	
	comp=Z,59nm,18.9s,baz=180,slow=42						
MKAR	**Makanchi Array**	**44.37**	**350**	*e*P	**P**	**02 18 54.8**	**+0.3**
	comp=Z,37nm,1.0s						
KK31	**Karatay Array**	**44.44**	**336**	*e*P	**P**	**02 18 55.4**	**+0.4**
KKAR	**Karatay Array**	**44.44**	**336**	*e*P	**P**	**02 18 55.4**	**+0.4**
SONA0	**Songino Array**	**45.91**	**13**	*e*P	**P**	**02 19 07.4**	**+0.6**
SONM	**Songino Array**	**45.91**	**13**	P	**P**	**02 19 07.4**	**+0.6**
	comp=Z,1.7nm,0.8s,baz=202,slow=3.2,SNR=6.1						
SONA1	**Songino Array**	**45.93**	**13**	*e*P	**P**	**02 19 07.2**	**+0.3**
WRA	**Warramunga Arr**	**46.69**	**121**	P	**P**	**02 19 14.9**	**+1.6**
	comp=Z,1.2nm,0.8s,baz=297,slow=8.9,SNR=4.7						
WR1	**Warramunga Arr**	**46.70**	**121**	*e*P	**P**	**02 19 14.8**	**+1.6**
	comp=Z,14nm,1.1s						
KS15	**Wonju Array Si**	**46.72**	**39**	*e*P	**P**	**02 19 12.5**	**-0.6**
KSAR	**Wonju Array Be**	**46.72**	**39**	P	**P**	**02 19 15.3**	**+2.2**
WC3	**Warramunga Arr**	**46.73**	**121**	*e*P	**P**	**02 19 13.0**	**-0.5**
	comp=Z,37nm,1.5s						
KSRS	**Korea Array**	**46.75**	**39**	P	**P**	**02 19 15.3**	**+1.9**
	comp=Z,0.4nm,0.3s,baz=212,slow=9.6,SNR=3.0						
GEYT	**Alibeck**	**46.98**	**322**	P	**P**	**02 19 15.1**	**-0.2**
	comp=Z,2.7nm,0.6s,baz=198,slow=12,SNR=7.5						
GEYT				LR	LR	02 39 25.3	
	comp=Z,65nm,21.3s,baz=255,slow=37						
GYA0B	**ALIBECK ARRAY**	**46.98**	**322**	*e*P	**P**	**02 19 14.4**	**-0.8**
	comp=Z,8.1nm,1.0s						
ASAR	**Alice Springs**	**47.99**	**126**	P	**P**	**02 19 24.5**	**+1.1**
	comp=Z,0.5nm,0.7s,baz=307,slow=9.5,SNR=3.6						
AS31	**Alice Springs**	**47.99**	**126**	*e*P	**P**	**02 19 24.4**	**+1.1**
	comp=Z,2.5nm,1.3s						
KURBB	**Kurchatov Arra**	**48.77**	**348**	P	**P**	**02 19 29.1**	**+0.4**
	comp=Z,2.7nm,0.7s,baz=171,slow=7.0,SNR=30						
KURK	**Kurchatov**	**48.84**	**348**	*e*P	**P**	**02 19 29.1**	**-0.2**
DAMY	**Dhamar**	**49.19**	**286**	*e*P	**P**	**02 19 33.9**	**+1.0**
	comp=Z,93nm,2.0s						
OPO	**Ambohidratompo**	**50.00**	**243**	LR	LR	02 37 46.4	
	comp=Z,166nm,18.5s,baz=360,slow=33						
RAYN	**Ar Rayn**	**50.08**	**298**	*e*P	**P**	**02 19 40.4**	**+1.1**
	comp=Z,7.8nm,0.8s						
ZAA0	**Zalesovo Array**	**50.99**	**354**	*e*P	**P**	**02 19 46.2**	**+0.6**
	comp=Z,4.5nm,0.7s						
ZALV	**Zalesovo Beam**	**50.99**	**354**	P	**P**	**02 19 46.1**	**+0.5**
	comp=Z,2.9nm,0.5s,baz=185,slow=8.6,SNR=13						
ZAA1	**Zalesovo Array**	**51.00**	**354**	*e*P	**P**	**02 19 46.1**	**+0.5**
BVAR	**Borovoye Array**	**53.02**	**343**	P	**P**	**02 20 00.6**	**-0.2**
	comp=Z,2.5nm,0.7s,baz=152,slow=7.7,SNR=18						
ABKAR	**Akbulak array**	**53.78**	**334**	*e*P	**P**	**02 20 06.2**	**-0.2**
AKTO	**Aktyubinsk**	**55.50**	**334**	P	**P**	**02 20 18.1**	**-0.7**
	comp=Z,0.5nm,0.4s,baz=104,slow=8.5,SNR=4.8						
STKA	**Stephens Creek**	**57.86**	**131**	LR	LR	02 47 14.3	
	comp=Z,62nm,18.4s,baz=352,slow=38						
STKA	**Stephens Creek**	**57.86**	**131**	*e*P	**P**	**02 20 36.9**	**+0.9**
	comp=Z,4.4nm,1.7s						
KBZ	**Khabaz**	**59.79**	**320**	P	**P**	**02 20 49.5**	**+0.3**
	comp=Z,2.4nm,0.8s,baz=100,slow=6.4,SNR=4.2						
BR101	**Keskin Array S**	**64.63**	**313**	*e*P	**P**	**02 21 21.6**	**-0.2**
BRTR	**Keskin Array B**	**64.63**	**313**	P	**P**	**02 21 21.6**	**-0.2**
	comp=Z,1.6nm,0.8s,baz=120,slow=6.9,SNR=8.6						
LBTB	**Lobatse**	**71.04**	**242**	*e*P	**P**	**02 22 04.2**	**+1.7**
	comp=Z,24nm,1.4s						
AKASG	**Malin Array Be**	**71.09**	**323**	P	**P**	**02 22 00.4**	**-1.7**
	comp=Z,1.4nm,0.6s,baz=85,slow=5.6,SNR=5.8						
AKBB	**Malin Array Si**	**71.09**	**323**	*e*P	**P**	**02 22 00.4**	**-1.7**
	comp=Z,17nm,1.9s						
MLR	**Muntele Rosu**	**71.70**	**317**	P	**P**	**02 22 06.2**	**+0.1**
	comp=Z,1.4nm,0.8s,baz=45,slow=4.3,SNR=9.6						
MLR	**Muntele Rosu**	**71.70**	**317**	*e*P	**P**	**02 22 06.9**	**+0.8**
	comp=Z,14nm,1.2s						
TIXI	**Tiksi**	**71.98**	**11**	P	**P**	**02 22 07.1**	**0.0**
	comp=Z,2.5nm,0.5s,baz=262,slow=5.0,SNR=5.5						
BOSA	**Boshof**	**72.17**	**239**	LR	LR	02 51 00.7	
	comp=Z,74nm,19.0s,baz=73,slow=34						
BOSA	**Boshof**	**72.17**	**239**	*e*P	**P**	**02 22 09.7**	**+0.5**
	comp=Z,37nm,1.9s						
BUR04	**Bucovina Ar. S**	**72.72**	**319**	*e*P	**P**	**02 22 12.7**	**+0.6**
BUR08	**Bucovina Ar. S**	**72.74**	**319**	*e*P	**P**	**02 22 13.2**	**+1.0**
VTS	**Vitosha**	**72.97**	**314**	*e*P	**P**	**02 22 09.7**	**-4.1**
	comp=Z,5.9nm,1.2s						
MAW	**Mawson**	**73.78**	**192**	*e*P	**P**	**02 22 17.2**	**-0.6**
	comp=Z,2.1nm,1.6s						
FIA0	**FINESS Array S**	**76.27**	**333**	*e*P	**P**	**02 22 31.8**	**-0.4**
FINES	**FINESS Array B**	**76.27**	**333**	P	**P**	**02 22 31.8**	**-0.4**
	comp=Z,1.3nm,0.9s,baz=114,slow=8.4,SNR=4.5						
VYHS	**Vyhne**	**77.09**	**319**	*e*P	**P**	**02 22 37.7**	**+0.4**
CONA	**Conrad Observa**	**78.97**	**318**	*e*P	**P**	**02 22 48.6**	**+0.8**
	comp=Z,3.1nm,1.2s						
ARSA	**Arzberg**	**79.11**	**317**	*e*P	**P**	**02 22 49.8**	**+1.2**
	comp=Z,7.3nm,1.0s						
SOKA	**Soboth**	**79.38**	**317**	*e*P	**P**	**02 22 50.9**	**+0.8**
	comp=Z,7.3nm,1.1s						
GEA0	**GERESS Array S**	**80.51**	**319**	*e*P	**P**	**02 22 56.6**	**+0.5**
GEC2	**GERESS Array S**	**80.51**	**319**	*e*P	**P**	**02 22 57.2**	**+1.0**
	comp=Z,8.2nm,1.1s						
GERES	**GERESS Array B**	**80.51**	**319**	P	**P**	**02 22 57.1**	**+1.0**
	comp=Z,3.3nm,0.9s,baz=91,slow=5.5,SNR=21						
MOTA	**Moosalm**	**82.12**	**317**	*i* P	**P**	**02 23 06.1**	**+1.3**
	comp=Z,4.1nm,0.9s						
FETA	**Feichten**	**82.35**	**317**	*i* P	**P**	**02 23 06.0**	**0.0**
	comp=Z,3.0nm,0.9s						
RETA	**Reutte**	**82.36**	**317**	*i* P	**P**	**02 23 06.0**	**+0.1**
	comp=Z,6.1nm,1.1s						
DAVOX	**Davos/Dischmat**	**82.92**	**317**	P	**P**	**02 23 09.4**	**+0.4**
	comp=Z,2.9nm,0.6s,baz=180,slow=7.1,SNR=5.8						
DAVA	**Damuels**	**82.94**	**317**	*i* P	**P**	**02 23 09.8**	**+0.6**
	comp=Z,4.7nm,1.0s						
KEST	**Kesra**	**82.95**	**305**	P	**P**	**02 23 10.9**	**+1.7**
	comp=Z,4.8nm,0.9s,baz=8.1,slow=13,SNR=4.4						
KEST	**Kesra**	**82.95**	**305**	*e*P	**P**	**02 23 10.9**	**+1.7**
	comp=Z,27nm,1.8s						
SPA0	**Spitsbergen Ar**	**84.11**	**348**	*e*P	**P**	**02 23 13.9**	**-0.5**
SPITS	**Spitsbergen Ar**	**84.11**	**348**	P	**P**	**02 23 13.9**	**-0.5**
	comp=Z,5.0nm,0.9s,baz=120,slow=20,SNR=3.3						
SPITS				LR	LR	03 04 15.0	
	comp=Z,77nm,22.0s,baz=20,slow=38						
VNDA	**Vanda**	**88.65**	**168**	LR	LR	02 58 24.6	
	comp=Z,93nm,18.4s,baz=303,slow=32						
VNDA	**Vanda**	**88.65**	**168**	*e*P	P	02 23 30.8	-5.7
TORD	**Torodi Ar. Bea**	**90.51**	**283**	P	**P**	**02 23 46.6**	**+0.1**
	comp=Z,0.4nm,0.9s,baz=60,slow=5.7						
TOA1	**Torodi Ar. Sit**	**90.52**	**283**	*e*P	**P**	**02 23 46.6**	**+0.1**
QSPA	**South Pole Qui**	**93.17**	**180**	LR	LR	03 00 51.8	
	comp=Z,106nm,18.9s,baz=315,slow=32						
DBIC	**Dimbokro**	**97.39**	**277**	LR	LR	03 06 01.6	
	comp=Z,57nm,19.6s,baz=51,slow=34						
NV01	**Mina Array Sit**	**129.46**	**32**	*e*PKPdf	**PKPdf**	**02 29 54.8**	**+1.6**
NVAR	**Mina Array Bea**	**129.46**	**32**	PKP	**PKPdf**	**02 29 54.8**	**+1.6**
	comp=Z,0.4nm,0.8s,baz=262,slow=6.3,SNR=2.9						
GATR	**Gnd/Air Tx Cnt**	**130.98**	**37**	*e*PKPpre	PKPpre	02 29 46.5	
DEVC	**Devers**	**133.71**	**35**	*e*PKPpre	PKPpre	02 29 50.0	
PV14	**Lion Creek, Pa**	**133.87**	**24**	*e*PKPdf	**PKPdf**	**02 30 00.8**	**-0.9**
GLA	**Glamis**	**135.34**	**34**	*e*PKPdf	**PKPdf**	**02 30 04.2**	**-0.1**
TXAR	**Lajitas Array**	**143.90**	**25**	PKP	PKPbc	02 30 18.6	+0.9
	comp=Z,0.2nm,0.6s,baz=241,slow=0.6,SNR=3.7						

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*IDC **03** 02:20:53.6±1.0, 2°.58S×139°.00E, h0^{km}, mb3.6/5, mb1 3.9/6, mb1mx3.5/53, mbtmp3.7/6, ML3.8/1, Error ellipse: s-maj=23.5km s-min=13.8km az=175.0*

*DJA **03** 02:20:58.6±1.2, 2°S±8°×13°9E±°, h15^{km}±10^{km}, M4.1/5, MLv4.1/5*

ISC 03 02:20:59.6±0.9**, 2°.38S**±0°.09×**139°.02E**±0°.04**, h37**^{km}**, n13, σ2^{s}.98**/16**, mb3.6**/4**, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	**Genyem**	**1.17**	**100**	P	**Pn**	**02 21 18.7**	**-0.7**
GENI				S	**Sn**	**02 21 41.0**	**+6.9**
WAMI	**Wamena**	**1.53**	**192**	P	**Pn**	**02 21 26.4**	**+2.1**
JAY	**Jayapura**	**1.69**	**95**	Pg	**Pn**	**02 21 24.3**	**-2.4**
	40nm,0.3s,baz=266,slow=6.9,SNR=74						
JAY				Lg	Lg	02 21 48.5	
	14nm,0.3s,baz=317,slow=23,SNR=3.6						
JAY	**Jayapura**	**1.69**	**95**	P	**Pn**	**02 21 26.7**	**+0.1**
JAY				S	**Sn**	**02 21 50.2**	**+3.1**
SRPI	**Serui, Papua**	**2.82**	**280**	P	**Pn**	**02 21 43.2**	**+1.0**
SRPI				S	**Sn**	**02 22 16.4**	**+1.5**
BAKI	**Biak**	**3.14**	**292**	P	**Pn**	**02 21 47.0**	**+0.5**
RKPI	**Ransiki, Papua**	**4.91**	**280**	P	**Pn**	**02 22 12.2**	**+1.2**
WRA	**Warramunga Arr**	**18.04**	**194**	P	**P**	**02 25 03.2**	**-4.5**
	0.3nm,0.3s,baz=18,slow=12,SNR=7.7						
FITZ	**Fitzroy Crossi**	**20.40**	**219**	P	**P**	**02 25 30.9**	**-2.6**
	2.7nm,0.8s,baz=55,slow=18,SNR=2.4						
ASAR	**Alice Springs**	**21.73**	**193**	P	**P**	**02 25 44.2**	**-3.6**
	1.4nm,0.6s,baz=14,slow=11,SNR=10						
MKAR	**Makanchi Array**	**69.72**	**322**	P	**P**	**02 32 07.2**	**+1.4**
	0.6nm,0.4s,baz=114,slow=7.2,SNR=7.7						
KURBB	**Kurchatov Arra**	**73.64**	**325**	P	**P**	**02 32 29.6**	**+0.3**
	0.4nm,0.9s,baz=115,slow=4.2,SNR=3.8						
ILAR	**Eielson Array**	**85.41**	**24**	P	**P**	**02 33 32.3**	**-0.6**
	0.3nm,0.8s,baz=266,slow=5.2,SNR=2.7						

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*ISCJB **03** 02:26:48.5±0.8, 28°.03N±0°.02×18°.2W±0°.1, h10^{km}, Error ellipse: s-maj=14.6km s-min=3.0km az=174.2*

*CSEM **03** 02:26:51.9, 27°.69N×18°.14W, h20^{km}, ML3.8*

ISC 03 02:26:49.6±1.5**, 27°.94N**±0°.06×**18°.2W**±0°.1**, h10**^{km}**, n13, σ1^{s}.16**/21**, Canary Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTAD	**Las Tabladas,**	**0.24**	**145**	P	**Pg**	**02 26 55.5**	**+1.0**
	SNR=18						
CTAD				S	**Sg**	**02 26 58.1**	**+0.3**
	20µm,0.1s,SNR=7.9						
CTAN	**El Hierro**	**0.25**	**139**	P	**Pg**	**02 26 55.6**	**+0.9**
	SNR=18						
CTAN				S	**Sg**	**02 26 58.2**	**+0.1**
	5µm,0.1s,SNR=7.9						
CORC	**Orchilla, El H**	**0.25**	**161**	P	**Pg**	**02 26 55.3**	**+0.5**
	SNR=18						
CORC				S	**Sg**	**02 26 57.9**	**-0.3**
	21µm,0.1s,SNR=7.9						
CJUL	**El Julon, El H**	**0.25**	**147**	P	**Pg**	**02 26 55.7**	**+0.8**
	SNR=18						
CJUL				S	**Sg**	**02 26 58.5**	**+0.1**
	21µm,0.1s,SNR=7.9						
CCUM	**Cumbre, El Hie**	**0.27**	**137**	P	**Pg**	**02 26 55.8**	**+0.7**
	SNR=18						
CCUM				S	**Sg**	**02 26 58.8**	**0.0**
	19µm,0.2s,SNR=7.9						
CMCL	**Mercadel, El H**	**0.30**	**140**	P	**Pg**	**02 26 55.9**	**+0.2**
	SNR=18						
CMCL				S	**Sg**	**02 26 59.1**	**-0.7**
	17µm,0.1s,SNR=7.9						
CTIG	**El Hierro**	**0.32**	**119**	P	**Pg**	**02 26 57.1**	**+1.1**
	SNR=18						
CTIG				S	**Sg**	**02 27 01.0**	**+0.7**
	6µm,0.3s,SNR=7.9						
CHIE	**El Hierro**	**0.33**	**131**	P	**Pg**	**02 26 56.1**	**-0.1**
	SNR=7.9						
CRST	**La Restinga, E**	**0.38**	**143**	P	**Pg**	**02 26 56.1**	**-1.0**
	SNR=18						
CRST				S	**Sg**	**02 26 59.2**	**-2.9**
	22µm,0.1s,SNR=7.9						
FUL	**Funchal**	**4.83**	**14**	*e*S	Sn	02 28 56.0	-2.4
FUL				A	A	02 29 02.5	
	31nm,0.2s						
PMAR	**Madeira**	**4.90**	**13**	*e*P	**Pn**	**02 28 04.2**	**+0.6**
PMAR				*e*S	Sn	02 28 58.0	-2.4
PMAR				A	A	02 29 02.7	
	42nm,0.2s						
PMOZ	**Porto Moniz, M**	**4.95**	**10**	*e*P	**Pn**	**02 28 05.6**	**+1.5**
PMOZ				*e*S	**Sn**	**02 29 00.0**	**-1.5**
PMOZ				A	A	02 29 11.6	
	62nm,0.5s						
PMPS	**Porto Santo**	**5.36**	**17**	*e*S	**Sn**	**02 29 09.1**	**-2.3**
PMPS				A	A	02 29 11.1	
	17nm,0.1s						

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*IDC **03** 02:27:20.2±3.4, 3°.73N×93°.27E, h0^{km}, mb3.8/3, mb1 3.9/6, mb1mx3.5/70, mbtmp3.9/6, ML3.8/3, Error ellipse: s-maj=72.8km s-min=27.5km az=22.0*

*DJA **03** 02:27:45.8±1.0, 4°N±4°×9°5E±°, h10^{km}, M4.3/6, mb4.7/2, MLv4.0/6*

ISC 03 02:27:21.9±1.1**, 3°.6N**±0°.1×**93°.29E**±0°.08**, h19**^{km}**, n17, σ3^{s}.07**/15**, mb3.8**/3**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLSI	**Meulaboh, Aceh**	**3.17**	**78**	P	**Pb**	**02 28 15.1**	**-2.6**
MLSI				S	Sn	02 28 38.7	-10
SNSI	**Sinabang, Aceh**	**3.25**	**111**	P	**Pb**	**02 28 20.9**	**+1.8**
SNSI				S	**Sn**	**02 28 44.9**	**-5.2**
KCSI	**Kotacane, Aceh**	**4.47**	**91**	P	**Pn**	**02 28 32.4**	**+3.7**
KCSI				S	Sn	02 29 03.6	-17
GSI	**Gunungsitoli**	**4.85**	**118**	P	**Pb**	**02 28 42.1**	**-4.2**
GSI				S	**Sn**	**02 29 26.7**	**-2.9**
PSI	**Prapat**	**5.68**	**98**	Pn	**Pn**	**02 28 47.2**	**+1.8**
	1.2nm,0.3s,baz=0.0,slow=5.8,SNR=9.2						
PSI				Sn	**Sn**	**02 29 53.1**	**+2.9**
	1.1nm,0.3s,baz=180,slow=12,SNR=1.8						
PBSI	**Pulau Batu**	**6.17**	**126**	P	Pb	02 29 00.5	-8.2
	102nm,0.8s,0.5nm						
PBSI				S	Sn	02 29 46.8	-15
	102nm,0.8s,0.5nm						
MNSI	**Mandailing Nat**	**6.87**	**114**	P	**Pn**	**02 29 06.4**	**+4.7**
MNSI				S	**Sn**	**02 30 19.3**	**-0.2**
KRAB	**Krabi**	**7.45**	**52**	P	Pb	02 29 23.9	-6.8
TRTT	**Trang**	**7.63**	**56**	P	Pb	02 29 25.3	-8.4
	19nm,0.6s,0.1nm						
PALK	**Pallekele**	**13.05**	**287**	Pn	**Pn**	**02 30 26.0**	**-0.5**
	0.4nm,0.3s,baz=116,slow=16,SNR=2.0						
PALK				Sn	Sn	02 32 33.0	-18
	1.3nm,0.3s,baz=295,slow=1.8,SNR=7.1						
CMAR	**Chiang Mai Arr**	**15.77**	**20**	Pn	**Pn**	**02 31 02.0**	**-1.1**
	0.4nm,0.3s,baz=220,slow=11,SNR=2.6						
H01W3	**Cape Leeuwin H**	**43.00**	**155**	T	T	03 21 43.4	
	baz=332						
H01W2	**Cape Leeuwin H**	**43.02**	**155**	T	T	03 21 49.1	
	baz=332						
H01W1	**Cape Leeuwin H**	**43.02**	**155**	T	T	03 21 47.9	
	baz=332						
MKAR	**Makanchi Array**	**44.07**	**349**	P	**P**	**02 35 29.1**	**+0.3**
	0.8nm,0.6s,baz=166,slow=8.4,SNR=7.8						
KURBB	**Kurchatov Arra**	**48.48**	**347**	P	**P**	**02 36 02.8**	**-0.5**
	0.5nm,0.5s,baz=168,slow=6.5,SNR=5.1						
ZALV	**Zalesovo Beam**	**50.67**	**354**	P	**P**	**02 36 20.7**	**+0.8**
	0.8nm,0.4s,baz=163,slow=7.3,SNR=3.6						

CSEM 03 02:29:54.9, 27°.69N×18°.15W, h21^{km}, ML3.8, Canary Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CORC	**Orchilla, El H**	**0.01**	**32**	P	Pb	02 29 58.2	-0.3
	SNR=7.9						
CORC				S	Sb	02 30 01.0	+0.1
	12µm,0.2s,SNR=7.9						
CJUL	**El Julon, El H**	**0.07**	**60**	P	Pb	02 29 58.7	-0.2
	SNR=7.9						
CJUL				S	Sb	02 30 01.5	-0.2
	53µm,0.3s,SNR=7.9						
CTAD	**Las Tabladas,**	**0.08**	**47**	P	Pb	02 29 58.5	-0.3
	SNR=7.9						
CTAN	**El Hierro**	**0.11**	**55**	P	Pb	02 29 58.7	-2.7
	SNR=7.9						
CMCL	**Mercadel, El H**	**0.12**	**81**	P	Pb	02 29 59.0	-2.3
	SNR=7.9						
CCUM	**Cumbre, El Hie**	**0.12**	**64**	P	Pb	02 29 58.9	-2.3
	SNR=7.9						
CCUM				S	Sb	02 30 01.7	-4.0
	14µm,0.2s,SNR=7.9						
CRST	**La Restinga, E**	**0.16**	**109**	P	Pb	02 29 59.1	-1.7
	SNR=7.9						
CRST				S	Sb	02 30 02.5	-2.4
	17µm,0.2s,SNR=7.9						
CHIE	**El Hierro**	**0.17**	**79**	P	Pb	02 29 59.6	-1.2
	SNR=7.9						
CTIG	**El Hierro**	**0.23**	**65**	P	Pb	02 30 00.1	-0.7
	SNR=18						
CTIG				S	Sb	02 30 04.1	-0.9
	2µm,0.1s,SNR=7.9						

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*CSEM **03** 02:31:02.6, 27°.69N×18°.17W, h21^{km}, ML4.2*

*MDD **03** 02:31:02.6±0.5, 27°.69N×18°.17W, h21^{km}±3^{km}, mbLg4.2/1, Error ellipse: s-maj=4.6km s-min=3.6km az=65.0, PRXIMO TT-model: canary*

ISC 03 02:31:00.2±1.9**, 27°.9N**±0°.2×**18°.2W**±0°.1**, h29**^{km}±19^{km}**, n14, σ1^{s}.52**/22**, 2D, Canary Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTAD	**Las Tabladas,**	**0.16**	**138**	P	**Pb**	**02 31 06.4**	**+0.5**
	SNR=18						
CTAD				S	**Sb**	**02 31 09.3**	**-0.5**
	71µm,0.2s,SNR=7.9						
CJUL	**El Julon, El H**	**0.17**	**142**	P	**Pb**	**02 31 06.5**	**+0.3**
	SNR=18						
CJUL				S	**Sb**	**02 31 09.5**	**-0.8**
	75µm,0.2s,SNR=7.9						
CTAN	**El Hierro**	**0.17**	**130**	P	**Pb**	**02 31 06.5**	**+0.4**
	SNR=18						
CTAN				S	**Sb**	**02 31 09.3**	**-0.8**
	14µm,0.2s,SNR=7.9						
CCUM	**Cumbre, El Hie**	**0.20**	**128**	P	**Pb**	**02 31 06.7**	**+0.3**
	SNR=18						
CCUM				S	**Sb**	**02 31 09.6**	**-0.9**
	33µm,0.2s,SNR=7.9						
CMCL	**Mercadel, El H**	**0.22**	**133**	P	**Pb**	**02 31 06.9**	**+0.1**
	SNR=18						
CMCL				S	**Sb**	**02 31 10.4**	**-0.8**
	30µm,0.1s,SNR=7.9						
CHIE	**El Hierro**	**0.26**	**123**	⇓P	**Pb**	**02 31 07.3**	**+0.3**
	SNR=18						
CHIE	**El Hierro**	**0.26**	**123**	P	**Pb**	**02 31 07.3**	**+0.3**
	SNR=18						
CTIG	**El Hierro**	**0.26**	**107**	⇓P	**Pb**	**02 31 08.0**	**+0.9**
	SNR=18						
CTIG				S	**Sb**	**02 31 11.9**	**+0.2**
	12µm,0.2s,SNR=7.9						
CTIG	**El Hierro**	**0.26**	**107**	P	**Pb**	**02 31 08.0**	**+0.9**
	SNR=18						
CTIG				S	**Sb**	**02 31 11.9**	**+0.2**
	12µm,0.2s,SNR=7.9						
CRST	**La Restinga, E**	**0.30**	**139**	P	Pb	02 31 07.0	-0.6
	SNR=18						
CRST				S	**Sb**	**02 31 10.6**	**-1.9**
	20µm,0.1s,SNR=7.9						
FUL	**Funchal**	**4.90**	**13**	*e*P	**Pn**	**02 32 14.7**	**+2.8**
FUL				*e*S	**Sn**	**02 33 06.4**	**-1.2**
FUL				A	A	02 33 12.0	
	76nm,0.2s						
PMAR	**Madeira**	**4.97**	**13**	*e*S	**Sn**	**02 33 06.7**	**-2.9**
PMAR				A	A	02 33 13.7	
	87nm,0.2s						
PMOZ	**Porto Moniz, M**	**5.02**	**10**	*e*S	**Sn**	**02 33 08.4**	**-2.3**
PMOZ				A	A	02 33 15.8	
	156nm,0.3s						
PMPS	**Porto Santo**	**5.42**	**17**	*e*S	**Sn**	**02 33 17.3**	**-3.1**
PMPS				A	A	02 33 26.1	
	25nm,0.5s						

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*BJI **03** 02:30:55.1, 34°.77N×140°.46E, h85^{km}, mb5.1/57, mB5.0/34, Ms4.3/50, Ms7 4.1/44*

*NIED **03** 02:31:00, 35°.00N×139°.80E, h89^{km}, Mw5.1 Best double couple: M$_0$4.75000×10^{16} NP1:φ$_s$333.00000°, δ26.00000°, λ60.00000°. NP2:φ$_s$186.00000°, δ68.00000°, λ104.00000°.*

*MOS **03** 02:31:01.4±0.9, 34°.96N×139°.79E, h85^{km}, mb5.3/115, Error ellipse: s-maj=6.4km s-min=3.8km az=114.0*

*JMA **03** 02:31:02.3±0.2, 35°.00N×139°.87E, h88^{km}±2^{km}, M5.2 Broadband fault plane solution: P waves. NP1: φ$_s$201.00000°, δ79.00000°, λ97.00000°. NP2: φ$_s$347.00000°, δ13.00000°, λ56.00000°. Principal axes: T Plg55.0000°, Azm120.0000°; N Plg7.0000°, Azm20.0000°; P Plg34.0000°, Azm285.0000°;*

JMA Felt IV J1.

*ISCJB **03** 02:31:02.3±0.2, 34°.94N±0°.02×139°.77E±0°.02, h92^{km}±1^{km}, mb5.2/462 Error ellipse: s-maj=3.1km s-min=2.2km az=174.3*

*IDC **03** 02:31:03.8±0.5, 34°.94N×139°.70E, h94^{km}±4^{km}, mb4.9/59, mb1 4.9/62, mb1mx4.9/74, mbtmp5.2/62, MS3.9/44, Ms1 3.9/44, ms1mx3.8/63, Error ellipse: s-maj=7.5km s-min=4.2km az=76.0*

*NEIC **03** 02:31:03.1±0.1, 34°.93N×139°.74E, mb5.3/296, Error ellipse: s-maj=2.7km s-min=1.9km az=156.0*

NEIC Felt [IV] at Saitama, Tokyo, Yokohama and Yokosuka. Felt widely in southeastern Honshu. Recorded [4 JMA] in Chiba, Kanagawa and Shizuoka.

*GCMT **03** 02:31:03.1±0.2, 34°.99N×139°.89E, $h82^{km}\pm2^{km}$, MW5.1/105, Moment Tensor Solution. s57,c78; s105,c180; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.73±.17; $M_{\theta\theta}$3.66±.15; $M_{\phi\phi}$-5.39±.15; $M_{r\theta}$0.00±.10; $M_{\theta\phi}$1.58±.15; $M_{\phi r}$-3.94±.09; Best double couple: $M_0$5.82900×10^{16} NP1:ϕ_s208.00000°,δ85.00000°, λ140.00000°. NP2:ϕ_s302.00000°,δ50.00000°,λ6.00000°. Principal axes: T 4.3260, Plg31.0000°, Azm157.0000°; N 3.0040, Plg50.0000°, Azm23.0000°; P -7.3310, Plg23.0000°, Azm262.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 03 02:31:02.9±0.3**, 34°.96N**±0°.02×**139°.91E**±0°.03**, $h89^{km}\pm2^{km}$, $h89^{km}$:pP-P, n1399, $\sigma1^{s}.39$**/1543**, mb5.3**/470**, 69C-49D,**
Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TATJ	**Tateyama 2**	0.07	346	⇑P	Pn	02 31 15.2	-0.2
JYO	**Yokosk**	0.33	322	⇑P	Pn	02 31 15.9	-0.5
JYO				eS	Sn	02 31 25.5	-0.8
JIM2	**Oshima 3**	0.47	238	⇑P	Pn	02 31 16.5	-0.8
JIM2				S	Sn	02 31 26.4	-1.6
I30JP	**ISUMI INFRASON**	0.48	44	P	Pn	02 31 17.4	+0.1
	baz=222,slow=12,SNR=2.6						
I30JP				S	Sn	02 31 29.6	+1.6
	baz=182,slow=371						
I30JP				i		02 34 50.0	
	baz=276,slow=322,SNR=0.7						
BSO3	**Boso 3**	0.52	108	⇓P	Pn	02 31 17.7	+0.3
JOD2	**Odawara 2**	0.74	294	⇑P	Pn	02 31 18.5	-1.2
JOD2				eS	Sn	02 31 30.3	-1.9
JIZS	**Izushimoda**	0.88	254	⇑P	Pn	02 31 20.8	-0.4
JIZS				S	Sn	02 31 34.4	-0.5
BSO1	**Boso 1**	0.93	109	⇓P	Pn	02 31 21.5	+0.3
JMKN	**Mikurajimanish**	1.10	194	P	Pn	02 31 24.3	+0.6
JYN	**Shimob**	1.24	296	⇑P	Pn	02 31 24.9	-0.5
JRY	**Ryogami san**	1.33	322	⇑P	Pn	02 31 25.8	-0.8
JRY				S	Sn	02 31 43.0	-1.4
JAG	**Ashikaga**	1.50	346	⇑P	Pn	02 31 27.4	-1.3
JHJ	**Hachijo jima 2**	1.84	183	P	Pn	02 31 34.5	+1.4
	11μm,0.3s,baz=354,slow=5.9,SNR=1202						
JHJ				S	Sn	02 31 57.1	+1.2
	11μm,0.3s,baz=220,slow=22,SNR=42						
JHJ2	**Mitsune**	1.85	182	ePn	Pn	02 31 34.4	+1.3
JHJ2				eSn	Sn	02 31 59.0	+2.9
MJAR	**Matsushiro Arr**	2.10	319	P	Pn	02 31 35.9	-0.5
	897nm,0.3s,baz=155,slow=12,SNR=5525						
MJAR				S	Sn	02 32 00.3	-1.6
	713nm,0.3s,baz=143,slow=17,SNR=9.9						
MAJO	**Matsushiro**	2.10	319	ePn	Pn	02 31 36.3	-0.1
MAJO				eSn	Sn	02 32 00.4	-1.5
MAJO	**Matsushiro**	2.10	319	c iP	Pn	02 31 36.2	-0.2
MAT	**Matsushiro**	2.10	319	P	Pn	02 31 36.2	-0.2
MAT				S	Sn	02 32 00.5	-1.4
MJB9	**Matsu-Tunnel**	2.10	319	ePn	Pn	02 31 36.4	-0.1
MJB9				eSn	Sn	02 32 00.8	-1.2
INU	**Inuyama**	2.40	280	ePn	Pn	02 31 40.9	+0.5
INU				eSn	Sn	02 32 05.9	-3.2
JNU	**Nakatsue**	7.72	259	P	Pn	02 32 54.1	+1.5
	39nm,0.3s,baz=69,slow=7.8,SNR=87						
JNU	**Nakatsue**	7.72	259	ePn	Pn	02 32 54.2	+1.6
CBIJ	**Chichi jima**	8.08	165	ePn	Pn	02 32 54.0	-3.6
CBIJ				eSn	Sn	02 34 19.7	-7.7
JCJ	**Chichijima**	8.08	165	P	Pn	02 32 54.2	-3.4
	263nm,0.3s,baz=15,slow=6.2,SNR=129						
JCJ				S	Sn	02 34 18.9	-8.4
	baz=288,slow=20						
ASAJ	**Asahikawa**	9.37	12	P	Pn	02 33 10.2	-4.9
	5.5nm,0.3s,baz=207,slow=10.0,SNR=21						
ASAJ				S	Sn	02 34 50.9	-7.7
	6.6nm,0.3s,baz=28,slow=18,SNR=4.0						
GLVR	**Golovnino**	9.78	25	eP	Pn	02 33 17.5	-3.0
GLVR				pmax	pmax		
	comp=Z,133nm,0.7s						
GLVR				pmax	pmax		
	comp=N,275nm,0.9s						
GLVR				pmax	pmax		
	comp=E,121nm,0.3s						
KSRS	**Korea Array**	10.00	288	P	Pn	02 33 23.9	+0.3
	comp=E,4.3nm,0.3s,baz=104,slow=12,SNR=192						
KSRS				LR	LR	02 37 13.5	
	comp=E,926nm,20.6s,baz=94,slow=37						
KSRS				PcP	PcP	02 39 28.1	+1.1
	comp=E,0.2nm,0.3s,baz=82,slow=1.0,SNR=5.3						
KS01	**Wonju Array Si**	10.03	288	ePn	Pn	02 33 25.0	+1.0
KS15	**Wonju Array Si**	10.03	288	ePn	Pn	02 33 26.7	+2.7
KS15				ePcP	PcP	02 39 28.1	+1.0
KSAR	**Wonju Array Be**	10.03	288	P	Pn	02 33 23.9	-0.1
KSAR	**Wonju Array Be**	10.03	288	P	Pn	02 33 23.9	-0.1
GRPR	**Tuman**	10.09	25	⇓iP	Pn	02 33 20.8	-4.0
GRPR				pmax	pmax		
	comp=Z,218nm,0.4s						
GRPR				pmax	pmax		
	comp=N,194nm,0.3s						
GRPR				pmax	pmax		
	comp=E,165nm,0.2s						
LAGR	**Lagunnoye**	10.15	25	d iP	Pn	02 33 23.5	-2.1
LAGR				pmax	pmax		
	comp=N,82nm,0.5s						
LAGR				pmax	pmax		
	comp=Z,391nm,0.5s						
LAGR				pmax	pmax		
	comp=E,355nm,0.4s						
YUK	**Yuzh-Kuril'sk**	10.15	25	d iP	Pn	02 33 21.9	-3.8
YUK				pmax	pmax		
	comp=Z,297nm,0.7s						
YUK				pmax	pmax		
	comp=N,116nm,0.3s						
YUK				pmax	pmax		
	comp=E,91nm,0.4s						
YUK				MLR	MLR		
	comp=Z,499nm,19.0s						
MSHR	**Mys Shultsa**	10.22	321	ceP	Pn	02 33 27.8	+1.2
TJN	**Taejon**	10.30	281	deP	Pn	02 33 30.4	+2.6
TEY	**Ternei**	10.37	347	eP	Pn	02 33 46.2	+18
SHO	**Shikotan**	10.38	29	c iP	Pn	02 33 24.7	-4.0
SHO				pmax	pmax		
	comp=Z,56nm,0.3s						
SHO				pmax	pmax		
	comp=N,21nm,0.2s						
SHO				pmax	pmax		
	comp=E,29nm,0.2s						
SHO				MLR	MLR		
	comp=Z,405nm,14.0s						
USA0B	**Ussuriysk Arra**	11.06	329	ePn	Pn	02 33 39.1	+1.1
USRK	**Ussuriysk Ar.**	11.06	329	P	Pn	02 33 38.3	+0.3
	baz=137,slow=13						
USRK				LR	LR	02 38 00.4	
	comp=Z,263nm,18.1s,baz=130,slow=38						
KUR	**Kuril'sk**	11.92	28	⇓iP	Pn	02 33 46.0	-3.6
KUR				pmax	pmax		
	comp=Z,91nm,0.8s						
KUR				pmax	pmax		
	comp=N,48nm,0.4s						
KUR				MLR	MLR		
	comp=E,456nm,11.0s						
KUR				MLR	MLR		
	comp=Z,350nm,11.0s						
YSS	**Yuzh-Sakhalins**	12.17	9	ePn	Pn	02 33 48.5	-4.5
YSS	**Yuzh-Sakhalins**	12.17	9	⇑eP	Pn	02 33 49.0	-3.9
YSS				eS	Sn	02 36 02.6	-4.0
YSS				pmax	pmax		
	comp=N,80nm,0.8s						
YSS				pmax	pmax		
	comp=Z,100nm,0.8s						
YSS				MLR	MLR		
	comp=Z,500nm,19.0s						
MDJ	**Mudanjiang**	12.47	324	P	Pn	02 33 55.7	-1.4
MDJ				S	Sn	02 36 15.2	+1.1
MDJ				ScS	ScS	02 46 26.0	-4.6
MDJ				pmax	pmax		
	comp=Z,250nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,580nm,3.6s						
MDJ	**Mudanjiang**	12.47	324	ePn	Pn	02 33 58.8	+1.7
JOW	**Kunigami**	12.86	234	P	Pn	02 34 02.9	+0.5
	comp=Z,1.4nm,0.3s,baz=44,slow=14,SNR=11						
JOW	**Kunigami**	12.86	234	ePn	Pn	02 34 03.1	+0.8
UGL	**Uglegorsk**	14.19	6	eP	P	02 34 23.3	-1.0
UGL				S	Sn	02 37 01.2	+5.6
UGL				pmax	pmax		
	comp=Z,123nm,0.8s						
UGL				smax	smax		
	comp=E,100nm,2.1s						
CN2	**Changchun**	14.23	313	eP	Pn	02 34 20.5	+0.3
CN2				eS	Sn	02 37 01.5	+4.8
CN2				pmax	pmax		
	comp=E,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=E,200nm,3.0s						
CN2				LR	LR		
	comp=E,800nm,19.0s						
CN2				LR	LR		
	comp=E,600nm,19.0s						
CN2				LR	LR		
	comp=E,700nm,21.0s						
DL2	**Dalian**	15.14	290	⇓iP	Pn	02 34 32.5	+0.7
DL2				S	Sn	02 37 20.0	+1.3
DL2				pmax	pmax		
	comp=E,140nm,0.9s						
DL2				pmax	pmax		
	comp=E,550nm,6.7s						
DL2				LR	LR		
	comp=E,730nm,16.3s						
DL2				LR	LR		
	comp=E,320nm,12.1s						
DL2				LR	LR		
	comp=E,840nm,17.1s						
KLR	**Kul'dur**	15.47	340	P	Pn	02 34 30.7	-5.3
	comp=E,0.2nm,0.3s,baz=140,slow=9.7,SNR=40						
KLR				S	Sn	02 37 26.4	-0.3
	baz=262,slow=18,SNR=1.9						
KLR				LR	LR	02 40 42.0	
	comp=E,17nm,20.8s,baz=134,slow=37						
GRNR	**Gornyy**	16.00	352	eP	Pn	02 34 40.8	-1.8
TYV	**Tymovskoe**	16.02	6	eP	Pn	02 34 39.7	-3.1
TYV				eS	Sn	02 37 33.1	-6.6
TYV				pmax	pmax		
	comp=Z,500nm,2.0s						
TYV				pmax	pmax		
	comp=Z,141nm,1.0s						
TYV				smax	smax		
	comp=N,11nm,1.0s						
YOJ	**Yonaguni jima**	18.00	239	eP	P	02 35 05.9	-0.8
YOJ				ePn	Pn	02 35 06.1	-1.2
YOJ	**Yonaguni jima**	18.00	239	eP	P	02 35 05.9	-0.8
NKL	**Nikolayevsk**	18.19	1	eP	P	02 35 03.0	-5.5
NKL				pmax	pmax		
	comp=N,26nm,1.0s						
NKL				pmax	pmax		
	comp=Z,40nm,1.0s						
TIA	**Tai'an**	18.57	280	P	P	02 35 11.9	-1.0
TIA				S	Sn	02 38 48.0	+6.4
TIA				pmax	pmax		
	comp=Z,9.0nm,0.6s						
TIA				LR	LR		
	comp=Z,580nm,14.7s						
TIA				LR	LR		
	comp=Z,710nm,14.0s						
YHNB	**Yeheng**	19.05	242	eP	P	02 35 17.0	-1.2
	comp=Z,42nm,1.0s						
NACB	**Ninganchiao**	19.19	241	eP	P	02 35 18.7	-1.0
	comp=Z,37nm,0.7s						
BJI	**Beijing**	19.48	292	P	P	02 35 20.2	-2.5
BJT	**Baijiatuau**	19.48	292	eP	P	02 35 22.3	-0.4
	comp=Z,65nm,1.1s						
BJT	**Baijiatuau**	19.48	292	eP	P	02 35 22.3	-0.4
BJT				pmax	pmax		
	comp=Z,65nm,1.1s						
SKR	**Severo-Kuril's**	19.63	32	eP	P	02 35 23.7	-0.5
SKR				eS	Sn	02 39 04.6	-2.0
SKR				pmax	pmax		
	comp=Z,200nm,6.6s						
SKR				pmax	pmax		
	comp=Z,400nm,6.0s						
SKR				pmax	pmax		
	comp=Z,108nm,0.8s						
SKR				MLR	MLR		
	comp=Z,200nm,17.0s						
SKR				MLR	MLR		
	comp=Z,300nm,16.0s						
SSLB	**Suanglung**	19.89	241	eP	P	02 35 25.8	-1.5
	comp=Z,49nm,1.0s						
SSLB				eS	S	02 39 07.1	+0.7
YULB	**Yu-li**	19.89	240	eP	P	02 35 25.4	-2.0
	comp=Z,40nm,1.0s						
YULB				eS	S	02 39 03.5	-2.9
TWG	**Pinlang**	20.41	239	eP	P	02 35 32.9	-0.1
	comp=Z,174nm,0.8s						
TPUB	**Ta-pu**	20.42	240	eP	P	02 35 31.4	-1.7
	comp=Z,111nm,1.4s						
ZEA	**Zeya**	20.78	338	eP	P	02 35 34.0	-2.6
ZEA				eS	S	02 39 15.0	-8.4
ZEA				eSS	SnSn	02 40 00.5	+10
ZEA				pmax	pmax		
	comp=N,100nm,0.8s						
ZEA				pmax	pmax		
	comp=E,52nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,160nm,0.8s						
ZEA				smax	smax		
	comp=E,800nm,7.0s						
ZEA				smax	smax		
	comp=N,400nm,6.0s						
ZEA				MLR	MLR		
	comp=Z,300nm,14.0s						
ZEA				MLR	MLR		
	comp=N,200nm,10.0s						
ZEA				MLR	MLR		
	comp=E,200nm,10.0s						
QZH	**Quanzhou**	20.96	247	P	Pn	02 35 52.3	+10
QZH				S	Sn	02 39 44.1	+5.2
QZH				pmax	pmax		
	comp=Z,490nm,6.2s						
QZH				LR	LR		
	comp=N,410nm,16.5s						
QZH				LR	LR		
	comp=E,390nm,12.9s						
QZH				LR	LR		
	comp=Z,420nm,14.3s						
GUMO	**Guam**	21.75	167	P	P	02 35 46.4	-0.8
	comp=Z,280nm,0.8s,baz=347,slow=2.0,SNR=12						
GUMO	**Guam**	21.75	167	eP	P	02 35 46.7	-0.6
GUMO	**Guam**	21.75	167	eP	P	02 35 46.7	-0.6
WHN	**Wuhan**	21.92	266	⇑iP	P	02 35 48.8	-0.2
WHN				S	S	02 39 41.1	-4.9
WHN				LR	LR		
	comp=Z,830nm,11.5s						
WHN				LR	LR		
	comp=Z,900nm,10.2s						
WHN				LR	LR		
	comp=Z,1μm,14.3s						
PEA0B	**Petropavlovsk-**	22.09	29	eP	P	02 35 51.1	+0.5
	comp=Z,116nm,1.3s						
PETK	**Petropavlovsk-**	22.09	29	P	P	02 35 50.7	+0.2
	comp=Z,39nm,1.0s,baz=251,slow=4.0						
PETK				PcP	PcP	02 39 45.5	+0.8
	baz=130,slow=2.3						
PETK	**Petropavlovsk-**	22.09	29	eP	P	02 35 50.5	-0.1
PEA1	**Petropavlovsk-**	22.09	29	eP	P	02 35 50.7	+0.1
PEA1				ePcP	PcP	02 39 45.5	+0.8
TIY	**Taiyuan**	22.27	285	eP	P	02 35 55.8	+3.0
TIY				S	S	02 39 48.0	-4.2
TIY				sS	sS	02 40 25.4	+2.9
TIY				pmax	pmax		
	comp=Z,61nm,1.2s						
TIY				pmax	pmax		
	comp=Z,150nm,3.7s						
TIY				LR	LR		
	comp=Z,420nm,12.9s						
TIY				LR	LR		
	comp=Z,330nm,13.0s						
TIY				LR	LR		
	comp=Z,420nm,13.6s						
PET	**Petropavlovsk**	22.41	31	eP	P	02 35 54.5	+0.5
	comp=Z,110nm,1.4s						
PET	**Petropavlovsk**	22.41	31	eP	P	02 35 53.9	-0.1
PET				eS	S	02 39 53.7	-0.3
PET				pmax	pmax		
	comp=Z,500nm,2.6s						
PET				pmax	pmax		
	comp=Z,200nm,5.7s						
PET				pmax	pmax		
	comp=Z,76nm,1.6s						
PET				MLR	MLR		
	comp=Z,300nm,18.0s						
PET				MLR	MLR		
	comp=Z,300nm,18.0s						
CLNS	**Chul'man**	24.14	340	eP	P	02 36 11.0	+0.6
CLNS				e*PP	sP	02 36 59.7	+19
CLNS				eS	S	02 40 14.1	-7.7
CLNS				e*SS	sS	02 41 38.5	+42
CLNS				pmax	pmax		
	comp=Z,29nm,0.8s						
CLNS				pmax	pmax		
	comp=N,18nm,0.8s						
CLNS				pmax	pmax		
	comp=E,9.0nm,0.8s						
CLNS				smax	smax		
	comp=N,218nm,11.9s						
CLNS				smax	smax		
	comp=E,258nm,12.3s						
BTO	**Baotou**	24.22	292	eP	P	02 36 09.8	-1.6
XAN	**Xi'an**	25.51	277	P	P	02 36 21.5	-1.6
XAN				pmax	pmax		
	comp=E,41nm,0.7s						
XAN				pmax	pmax		
	comp=E,220nm,5.0s						
MA2	**Magadan**	25.63	13	P	P	02 36 24.3	+0.4
	comp=E,82nm,0.6s,baz=201,slow=7.0,SNR=28						
MA2	**Magadan**	25.63	13	eP	P	02 36 23.9	0.0
	comp=E,85nm,0.7s						
MA2	**Magadan**	25.63	13	eP	P	02 36 23.9	0.0
MA2				pmax	pmax		
	comp=Z,85nm,0.7s						
GZH	**Guangzhou**	25.99	250	P	P	02 36 22.9	-4.6
GZH				S	S	02 40 46.4	-5.3
GZH				LR	LR		
	comp=Z,640nm,14.4s						
GZH				LR	LR		
	comp=Z,410nm,14.5s						
ENH	**Enshi**	26.00	268	eP	P	02 36 25.8	-1.7
	comp=Z,63nm,0.8s						
ULN	**Ulaanbaatar**	27.59	308	eP	P	02 36 40.9	-0.9
	comp=Z,26nm,1.1s						
ULN				ePcP	PcP	02 39 58.3	+1.0
ULN	**Ulaanbaatar**	27.59	308	P	P	02 36 41.4	-0.5
	SNR=14						
ULN	**Ulaanbaatar**	27.59	308	ceP	P	02 36 41.3	-0.5
ULN				pmax	pmax		
	comp=Z,40nm,1.7s						
YAK	**Yakutsk**	27.85	350	P	P	02 36 42.9	-0.9
	comp=Z,52nm,0.5s,baz=191,slow=1.0,SNR=7.2						
YAK				S	S	02 41 16.0	-4.3
	comp=Z,41nm,0.4s,baz=150,slow=3.9,SNR=2.9						
YAK	**Yakutsk**	27.85	350	eP	P	02 36 43.0	-0.8
	comp=Z,68nm,0.5s						
YAK				eS	S	02 41 16.0	-4.3
YAK	**Yakutsk**	27.85	350	eP	P	02 36 42.7	-1.1
YAK				e*PP	pP	02 37 03.2	-0.7
YAK				e		02 39 56.2	
YAK				eS	S	02 41 20.6	+0.3
YAK				eSS	SnSn	02 42 44.9	+2.0
YAK				e		02 47 17.2	
YAK				pmax	pmax		
	comp=Z,49nm,0.9s						
YAK				pmax	pmax		
	comp=N,24nm,1.0s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,77nm,1.5s						
YAK				pmax	pmax		
	comp=N,72nm,1.5s						
YAK				pmax	pmax		
	comp=E,44nm,1.5s						
YAK				smax	smax		
	comp=N,596nm,3.1s						
YAK				smax	smax		
	comp=E,606nm,2.7s						
YAK				MLR	MLR		
	comp=Z,224nm,18.0s						
YAK				MLR	MLR		
	comp=N,256nm,18.0s						
YAK				MLR	MLR		
	comp=E,255nm,18.0s						
SONA1	**Songino Array**	28.00	308	eP	P	02 36 44.6	-0.9
SONA1				ePcP	PcP	02 39 59.0	+0.8
SONA0	**Songino Array**	28.00	308	eP	P	02 36 44.4	-1.1
SONA0				ePcP	PcP	02 39 58.2	-0.1
SONA0				eScP	ScP	02 43 30.5	-0.6
SONM	**Songino Array**	28.00	308	P	P	02 36 44.4	-1.1
	comp=E,20nm,1.0s,baz=111,slow=9.1,SNR=31						
SONM				PcP	PcP	02 39 58.2	-0.1
	comp=E,4.9nm,0.7s,baz=138,slow=2.6,SNR=5.0						
SONM				ScP	ScP	02 43 30.5	-0.6
	comp=E,3.0nm,1.0s,baz=114,slow=3.6,SNR=6.4						
SONM				LR	LR	02 48 33.7	
	comp=E,560nm,18.4s,baz=96,slow=38						
H11N2	**WAKE ISLAND Hy**	28.25	115	T	T	03 06 39.1	
	baz=308,slow=75,SNR=857						
H11N1	**WAKE ISLAND Hy**	28.26	115	T	T	03 06 38.0	
	baz=308,slow=75,SNR=737						
H11N3	**WAKE ISLAND Hy**	28.27	115	T	T	03 06 48.9	
	baz=308,slow=75,SNR=781						
BOD	**Bodaibo**	28.68	331	eP	P	02 36 50.8	-0.4
BOD				pmax	pmax		
	comp=Z,70nm,1.1s						
H11S1	**WAKE ISLAND Hy**	28.87	118	T	T	03 07 32.3	
	baz=310,slow=75,SNR=237						
H11S3	**WAKE ISLAND Hy**	28.87	118	T	T	03 07 22.7	
	baz=310,slow=75,SNR=248						
H11S2	**WAKE ISLAND Hy**	28.89	118	T	T	03 07 25.4	
	baz=310,slow=75,SNR=278						
SEY	**Seymchan**	29.06	12	P	P	02 36 55.2	+0.7
	comp=Z,15nm,1.0s,baz=211,slow=6.1,SNR=16						
LZH	**Lanzhou**	29.27	283	eP	P	02 36 55.5	-1.4
LZH				pmax	pmax		
	comp=Z,25nm,1.0s						
LZH				pmax	pmax		
	comp=Z,96nm,4.1s						
LZH				LR	LR		
	comp=Z,830nm,9.8s						
LZH				LR	LR		
	comp=Z,720nm,8.7s						
LZH				LR	LR		
	comp=Z,730nm,10.8s						
CD2	**Chengdu**	30.50	273	⇑P	P	02 37 06.1	-1.6
CD2				sP	sP	02 37 37.8	-0.5
CD2				PP	PP	02 38 16.1	-1.9
CD2				S	S	02 42 00.2	-2.6
CD2				sS	sS	02 42 36.8	-1.0
CD2				pmax	pmax		
	comp=Z,40nm,0.7s						
CD2				pmax	pmax		
	comp=Z,220nm,5.2s						
CD2				LR	LR		
	comp=Z,840nm,11.1s						
CD2				LR	LR		
	comp=Z,1μm,15.7s						
CD2				LR	LR		
	comp=Z,960nm,14.9s						
ZAK	**Zakamensk**	30.66	311	eP	P	02 37 07.6	-1.3
ZAK				e		02 40 02.8	
ZAK				pmax	pmax		
	comp=Z,14nm,1.0s						
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.5s						
DAV	**Davao City (W)**	30.73	209	LR	LR	02 48 52.2	
	comp=Z,96nm,21.2s,baz=339,slow=35						
TLY	**Talaya**	30.83	314	eP	P	02 37 09.9	-0.4
	comp=Z,15nm,0.9s						
TLY	**Talaya**	30.83	314	P	P	02 37 12.4	+2.1
	SNR=11						
TLY	**Talaya**	30.83	314	eP	P	02 37 09.0	-1.3
TLY				eS	S	02 42 01.9	-5.5
TLY				e		02 44 19.3	
TLY				pmax	pmax		
	comp=Z,17nm,0.9s						
TLY				MLR	MLR		
	comp=Z,316nm,17.0s						
GTA	**Gaotai**	32.06	290	⇑P	P	02 37 21.4	-0.1
GTA				PcP	PcP	02 40 10.0	+1.0
GTA				S	S	02 42 35.0	+7.9
GTA				SS	SnSn	02 44 34.6	+8.9
GTA				pmax	pmax		
	comp=Z,24nm,0.8s						
GTA				pmax	pmax		
	comp=Z,120nm,5.0s						
GTA				LR	LR		
	comp=Z,320nm,16.5s						
GTA				LR	LR		
	comp=Z,250nm,18.6s						
GTA				LR	LR		
	comp=Z,530nm,19.2s						
MOY	**Mondy**	32.40	313	eP	P	02 37 26.8	+2.6

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MOY                                pmax    pmax
       comp=Z,21nm,1.4s
PATS   Pohnpei           32.72 145 eP      P         02 37 29.5 +2.3
       comp=Z,173nm,1.2s
KIWB   Kanaga Island     34.87  48 eP      P         02 37 46.9 +1.3
BILL   Bilibino          36.35  16ceP      P         02 37 57.9 -0.1
BILL                               pmax    pmax
       comp=Z,9.0nm,1.0s
UBPT   Khong Chiam       36.57 246 P       P         02 37 59.5 -0.9
       comp=Z,43nm,0.8s
SKNT   Sakolnakorn       36.68 250 P       P         02 38 00.5 -0.9
       comp=Z,15nm,1.2s
NONG   Nongkai           36.70 252 P       P         02 38 00.5 -1.0
       comp=Z,2.1nm,0.9s
ATKA   Atka Island       36.73  48 eP      P         02 38 02.3 +1.0
       comp=Z,120nm,1.2s
HVS    Khovu-Aksy        36.76 311 i P     P         02 38 03.7 +1.9
HVS                                pmax    pmax
       comp=Z,69nm,1.2s
TIXI   Tiksi             37.21 354 P       P         02 38 04.5 -0.7
       comp=Z,15nm,0.6s,baz=154,slow=6.0,SNR=20
TIXI                               PcP     PcP       02 40 23.2 +0.1
       comp=Z,8.3nm,0.9s,baz=45,slow=2.5,SNR=3.4
TIXI   Tiksi             37.21 354ceP      P         02 38 04.4 -0.7
TIXI                               pmax    pmax
       comp=Z,14nm,0.7s
FAKI   Fak Fak           38.36 192 eP      P         02 38 15.8 +0.3
       comp=Z,48nm,0.9s
PAYA   Payao             38.59 257 P       P         02 38 17.9 +0.5
       comp=Z,7.1nm,1.3s
CMAI   Chiengmai2        38.95 258 P       P         02 38 22.4 +1.8
       comp=Z,6.6nm,1.2s
PBKT   Sadao Pong        39.26 252 P       P         02 38 21.9 -1.1
       comp=Z,79nm,1.1s,comp=Z,1µm
PHIT   Phitsanulok       39.34 254 P       P         02 38 24.4 +0.7
       comp=Z,29nm,1.1s
CMMT   Chiang Mai        39.62 257 P       P         02 38 25.0 -1.0
       comp=Z,36nm,1.0s,comp=Z,574nm
CHTO   Chiang Mai        39.62 257 eP      P         02 38 25.1 -0.9
       comp=Z,27nm,0.9s
CHTO   Chiang Mai        39.62 257 P       P         02 38 25.1 -0.9
       SNR=11
CHTO   Chiang Mai        39.62 257 eP      P         02 38 25.1 -0.9
CHTO                               pmax    pmax
       comp=Z,27nm,0.9s
CHTO   Chiang Mai        39.62 257 P       P         02 38 25.0 -1.0
       comp=Z,158nm,1.1s,comp=Z,2µm
CM31   Chiang Mai Arr    39.81 256 eP      P         02 38 25.9 -1.7
CM31                               ePcP    PcP       02 40 32.6 +0.5
CMAR   Chiang Mai Arr    39.81 256 P       P         02 38 25.9 -1.7
       comp=Z,12nm,0.7s,baz=51,slow=7.0,SNR=40
CMAR                               PcP     PcP       02 40 32.6 +0.5
       comp=Z,3.9nm,0.7s,baz=2.3,slow=1.1,SNR=6.1
CMAR                               LR      LR        02 54 56.6
       comp=Z,204nm,20.5s,baz=63,slow=36
CM01   Chiang Mai Arr    39.82 256 eP      P         02 38 26.3 -1.4
CM01                               ePcP    PcP       02 40 33.3 +1.2
NIKH   Nikolski High     40.06  47 eP      P         02 38 30.5 +1.2
       comp=Z,53nm,0.8s
CHBT   CHBT              40.52 246 P       P         02 38 35.3 +1.8
       comp=Z,39nm,0.5s,comp=Z,559µm
DGZ    Jazzator, Alta    40.65 308 i P     P         02 38 35.1 +0.7
DGZ                                pmax    pmax
       comp=Z,133nm,0.9s
WMQ    Urumqi            40.72 299 P       P         02 38 35.1 +0.1
WMQ                                pP      pP        02 38 49.8 -6.1
WMQ                                PcP     PcP       02 40 35.7 +0.9
WMQ                                ScP     ScP       02 44 12.2 -4.1
WMQ                                S       S         02 44 38.9 +0.1
WMQ                                LR      LR
       comp=Z,700nm,23.3s
WMQ                                LR      LR
       comp=Z,510nm,30.1s
WMQ                                LR      LR
       comp=Z,450nm,29.1s
UTHA   Uthaitani         41.03 252 P       P         02 38 37.4 -0.3
       comp=Z,8.4nm,1.2s,comp=Z,91nm
UMPA   Umpang Tak        41.12 254 P       P         02 38 39.2 +0.7
       comp=Z,16nm,1.1s,comp=Z,1µm
LSA    Lhasa             41.21 277 P       P         02 38 39.2 -0.4
LSA    Lhasa             41.21 277 eP      P         02 38 41.5 +1.9
       comp=Z,36nm,1.1s
LSA    Lhasa             41.21 277 i P     P         02 38 41.1 +1.5
       SNR=6.4
LSA    Lhasa             41.21 277 eP      P         02 38 41.5 +1.9
LSA                                pmax    pmax
       comp=Z,36nm,1.1s
SRDT   SRDT              42.00 251 P       P         02 38 45.0 -0.6
       comp=Z,52nm,1.2s
ZAA0   Zalesovo Array    42.44 314 eP      P         02 38 48.8 +0.1
       comp=Z,161nm,1.0s
ZAA1   Zalesovo Array    42.44 314 eP      P         02 38 48.7  0.0
ZAA1                               ePcP    PcP       02 40 40.0 -0.1
ZAA1                               eScP    ScP       02 44 22.4 -0.4
ZALV   Zalesovo Beam     42.44 314 P       P         02 38 48.7  0.0
       comp=Z,109nm,0.8s,baz=95,slow=6.4,SNR=130
ZALV                               PcP     PcP       02 40 40.0 -0.1
       comp=Z,23nm,0.6s,baz=109,slow=3.1,SNR=8.0
ZALV                               ScP     ScP       02 44 22.4 -0.4
       comp=Z,1.3nm,0.5s,baz=72,slow=1.8,SNR=2.6
ZALV                               LR      LR        02 56 13.8
       comp=Z,157nm,20.5s,baz=71,slow=36
ZALV   Zalesovo Beam     42.44 314 eP      P         02 38 48.3 -0.5
ZALV                               ePcP    PcP       02 40 39.9 -0.2
NVS    Novosibirsk       43.42 315 eP      P         02 38 56.5 -0.1
NVS                                e*PP    pP        02 39 19.4 +1.7
NVS                                eS      S         02 45 18.2 +0.2
NVS                                pmax    pmax
       comp=Z,193nm,1.2s
NVS                                pmax    pmax
       comp=N,21nm,1.0s
NVS                                pmax    pmax
       comp=E,135nm,1.2s
NVS                                smax    smax
       comp=E,20nm,1.6s
BRDH   Bariadhala        43.65 267 LR      LR        02 59 12.3
       comp=E,218nm,18.4s,baz=144,slow=39
MK01   Makanchi Array    44.21 304 eP      P         02 39 02.4 -0.8
MK31   Makanchi Array    44.22 304 eP      P         02 39 03.2  0.0
MK31   Makanchi Array    44.22 304 eP      P         02 39 03.2  0.0
MK32   Makanchi Array    44.22 304 eP      P         02 39 02.9 -0.3
MK32                               ePcP    PcP       02 40 45.6 -0.7
MK32                               eScP    ScP       02 44 29.7 -0.6
MKAR   Makanchi Array    44.22 304 P       P         02 39 02.9 -0.3
       comp=E,50nm,0.8s,baz=90,slow=9.9,SNR=188
MKAR                               PcP     PcP       02 40 45.7 -0.7
       comp=E,6.4nm,0.8s,baz=69,slow=3.5,SNR=2.5
MKAR                               ScP     ScP       02 44 29.7 -0.6
       comp=E,3.8nm,1.0s,baz=78,slow=11,SNR=3.9
MKAR                               LR      LR        02 58 25.1
       comp=E,168nm,19.1s,baz=87,slow=37
MKAR   Makanchi Array    44.22 304 eP      P         02 39 03.2  0.0
       comp=E,369nm,0.8s
TAPN   Taplejung         44.89 275 eP      P         02 39 06.9 -2.2
       comp=E,81nm,0.4s
SDPT   Sand Point        45.12  44 eP      P         02 39 11.3 +1.1
       comp=E,54nm,1.0s
ODAN   Odare             45.35 275 eP      P         02 39 11.3 -1.4
       comp=E,62nm,0.4s
TRTT   Trang             45.68 243 P       P         02 39 16.3 +1.2
       comp=E,17nm,1.5s
KRAB   Krabi             45.79 244 P       P         02 39 15.5 -0.5
       comp=E,84nm,0.8s
RDOG   Red Dog Mine      45.90  26 eP      P         02 39 16.4 +0.3
       comp=E,66nm,1.0s
RAMN   Ramite            45.96 275 eP      P         02 39 16.1 -1.4
       comp=E,316nm,0.8s
JIRN   Jiri              46.01 276 eP      P         02 39 17.3 -0.8
       comp=E,282nm,0.4s
GUN    Gumba             46.17 277 eP      P         02 39 18.5 -0.8
       comp=E,218nm,0.8s
KURK   Kurchatov         46.28 310 eP      P         02 39 19.5 +0.2
KURK   Kurchatov         46.28 310ceP      P         02 39 18.9 -0.4
KURK                               pmax    pmax
       comp=Z,188nm,1.3s
KURBB  Kurchatov Arra    46.34 309 P       P         02 39 19.5 -0.3
       comp=Z,55nm,0.7s,baz=82,slow=7.6,SNR=307
KURBB                              S       S         02 45 57.2 -3.1
       comp=Z,0.6nm,0.8s,baz=90,slow=16,SNR=4.1
PKIN   Phulchoki         46.69 277 eP      P         02 39 21.8 -1.5
       comp=Z,77nm,0.7s
PDGK   Podgornoye        46.69 299 P       P         02 39 22.2 -0.7
PDGK                               pmax    pmax
       comp=Z,228nm,0.9s
KKN    Kakani            46.70 277 eP      P         02 39 22.1 -1.2
       comp=Z,128nm,0.9s
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DMN    Daman             46.92 277 eP      P         02 39 23.8 -1.2
       comp=Z,142nm,1.0s
GKN    Gorkha            47.14 278 eP      P         02 39 25.6 -1.1
       comp=Z,341nm,1.0s
BATI   Baumata           47.49 202 P       P         02 39 28.0 -1.1
       comp=Z,61nm,0.7s,baz=56,slow=3.6,SNR=5.0
DANN   Dangsing          47.72 278 eP      P         02 39 30.5 -0.8
       comp=Z,380nm,0.8s
SVW2   Sparrevohn        47.91  36 eP      P         02 39 33.7 +1.8
       comp=Z,50nm,1.1s
HNR    Honiara           48.05 153 LR      LR        02 58 40.3
       comp=Z,98nm,21.1s,baz=336,slow=34
KOLN   Koldanda          48.08 278 eP      P         02 39 33.1 -0.9
       comp=Z,140nm,1.1s
TARG   Taragay, Kyrgy    48.25 298 eP      P         02 39 36.0 +0.7
       comp=Z,106nm,0.9s
MTN    Manton Dam        48.27 192 eP      P         02 39 32.2 -2.9
       comp=Z,38nm,0.8s
PYUN   Piuthan           48.45 278 eP      P         02 39 36.1 -0.7
       comp=Z,651nm,1.3s
COEN   Coen              48.75 176 eP      P         02 39 39.5 +0.7
       comp=Z,46nm,0.9s
IM3    Indian Mountai    49.05  30 eP      P         02 39 41.5 +0.9
IM3                                ePcP    PcP       02 41 05.5 +2.5
OHAK   Old Harbor        49.10  41 eP      P         02 39 40.6 -0.5
       comp=Z,22nm,1.0s
ULHL   Ulahol            49.26 299 P       P         02 39 43.1 +0.3
       SNR=14
KDAK   Kodiak Island     49.45  41 eP      P         02 39 44.1 +0.3
       comp=Z,36nm,1.0s
KDAK                               epP     pP        02 40 07.0 +1.7
KDAK   Kodiak Island     49.45  41 eP      P         02 39 44.1 +0.3
KDAK                               e*PP    pP        02 40 07.0 +1.7
KDAK                               pmax    pmax
       comp=Z,36nm,1.0s
PPLA   Purkeypile        49.56  34 eP      P         02 39 45.5 +0.8
       comp=Z,73nm,1.2s
TKM2   Tokmak 2          49.56 300 P       P         02 39 45.8 +0.6
       SNR=161
CAST   Castle Rocks      49.62  33 eP      P         02 39 45.9 +0.9
       comp=Z,36nm,1.0s
PSI    Prapat            49.69 239 P       P         02 39 44.2 -2.1
       comp=Z,14nm,0.8s,baz=0.2,slow=8.9,SNR=13
PSI                                LR      LR        03 03 28.1
       comp=Z,106nm,18.1s,baz=356,slow=39
PSI    Prapat            49.69 239 eP      P         02 39 44.3 -1.9
       comp=Z,17nm,0.9s
PSI    Prapat            49.69 239 eP      P         02 39 44.3 -1.9
PSI                                pmax    pmax
       comp=Z,17nm,0.9s
HOM    Homer             49.86  38 eP      P         02 39 47.1 +0.3
       comp=Z,134nm,1.0s
SKT    Skwentna          49.86  35 eP      P         02 39 46.7 -0.2
       comp=Z,36nm,1.2s
KZA    Kyzart            50.02 299 P       P         02 39 50.1 +1.3
       SNR=31
KBK    Karagaybulak      50.09 299 P       P         02 39 49.5 +0.4
       SNR=98
BPAW   Bear Paw Mtn.     50.12  32 eP      P         02 39 50.2 +1.4
       comp=Z,48nm,1.3s
KTH    Kantishna Hill    50.14  33 eP      P         02 39 50.4 +1.3
       comp=Z,76nm,1.2s
CHMS   Chumysh           50.15 300 P       P         02 39 49.6 +0.3
       SNR=25
BRLK   Bradley Lake      50.24  38 eP      P         02 39 49.8  0.0
       comp=Z,39nm,1.0s
SUA    Susitna One       50.24  36 eP      P         02 39 50.3 +0.4
       comp=Z,32nm,0.8s
MLY    Manley            50.25  31 eP      P         02 39 51.5 +1.7
       comp=Z,47nm,0.7s
USP    Ospenovka         50.26 300 P       P         02 39 50.3 +0.1
       SNR=32
FRU    Bishkek           50.28 300⇑eP      P         02 39 51.0 +0.6
FRU                                e                 02 40 17.0
FRU                                e                 02 41 13.0
FRU                                eS      S         02 46 57.0 +0.7
FRU                                pmax    pmax
       comp=Z,180nm,1.5s
FRU                                smax    smax
       comp=E,125nm,2.2s
AAK    Ala-Archa         50.42 299 P       P         02 39 51.2 -0.3
       comp=E,53nm,0.8s,baz=105,slow=5.8,SNR=41
AAK    Ala-Archa         50.42 299 P       P         02 39 51.6 +0.1
       SNR=27
TRF    Thorofare Moun    50.43  33 eP      P         02 39 51.8 +0.5
       comp=E,16nm,0.8s
UCH    Uchtor            50.51 299 P       P         02 39 53.1 +0.5
       SNR=58
COLD   Coldfoot          50.55  28 eP      P         02 39 50.2 -1.7
       comp=E,15nm,1.2s
OTUK   Ortayu            50.67 307 P       P         02 39 52.4 -0.8
OTUK                               pmax    pmax
       comp=Z,53nm,0.9s
RC01   Rabbit Creek A    50.74  36 eP      P         02 39 53.4 -0.1
       comp=Z,55nm,1.0s
BWN    Browne            50.79  32 eP      P         02 39 56.3 +2.5
       comp=Z,175nm,1.1s
TOLK   Toolik Lake Re    50.86  26 P       P         02 39 55.5 +1.2
       baz=267
TOLK   Toolik Lake Re    50.86  26 eP      P         02 39 54.8 +0.4
       comp=Z,52nm,1.1s
EKS2   Erkin-Say         50.93 300 P       P         02 39 55.3  0.0
       SNR=34
PMR    Palmer            51.01  36 eP      P         02 39 55.8 +0.3
       comp=Z,37nm,0.9s
MCK    McKinley          51.03  33 eP      P         02 39 55.6 +0.1
       comp=Z,39nm,0.8s
MCK    McKinley          51.03  33 eP      P         02 39 55.7 +0.1
MCK                                pmax    pmax
       comp=Z,39nm,0.8s
BVA0   Borovoye Array    51.08 313 P       P         02 39 55.0 -1.1
BVA0                               pmax    pmax
       comp=Z,34nm,0.8s
BVAR   Borovoye Array    51.08 313 P       P         02 39 55.9 -0.3
       comp=Z,41nm,0.7s,baz=79,slow=7.5,SNR=69
BVAR                               PcP     PcP       02 41 11.1 +0.4
       comp=Z,13nm,0.7s,baz=78,slow=3.4,SNR=3.4
BVAR                               S       S         02 47 03.9 -3.0
       comp=Z,3.5nm,0.7s,baz=241,slow=36,SNR=4.9
BVAR                               LR      LR        03 02 04.9
       comp=Z,157nm,21.1s,baz=76,slow=36
GHO    Glory Hole Cre    51.10  35 eP      P         02 39 56.9 +0.7
       comp=Z,51nm,0.8s
AML    Almayashu         51.12 299 P       P         02 39 58.0 +0.9
       SNR=45
MDM    Murphy Dome       51.31  31 eP      P         02 39 57.8  0.0
SML    Sawmill           51.38  35 eP      P         02 39 58.6 +0.3
       comp=Z,59nm,0.9s
SML    Sawmill           51.38  35 eP      P         02 39 58.6 +0.3
SML                                pmax    pmax
       comp=Z,59nm,0.9s
WRH    Wood River Hil    51.38  32 eP      P         02 39 58.1 -0.1
       comp=Z,24nm,0.8s
WRH                                ePcP    PcP       02 41 13.0 +1.4
COLA   College           51.48  31 eP      P         02 39 59.6 +0.8
       comp=Z,46nm,0.9s
COLA   College           51.48  31 eP      P         02 39 59.6 +0.8
COLA                               pmax    pmax
       comp=Z,46nm,0.9s
CCB    Clear Creek Bu    51.50  32 eP      P         02 40 00.0 +1.0
       comp=Z,29nm,1.3s
CCB                                ePcP    PcP       02 41 12.4 +0.3
LEM    Lembang           51.53 223 P       P         02 39 57.9 -2.2
       comp=Z,89nm,0.7s,baz=167,slow=20,SNR=14
KLI    Kotabumi          51.54 227 P       P         02 39 57.6 -2.4
MDSI   Maura Dua         51.66 228 P       P         02 39 58.7 -2.1
GSI    Gunungsitoli      51.69 239 eP      P         02 39 59.3 -1.9
       comp=Z,247nm,1.4s
DHY    Denali Highway    51.76  34 eP      P         02 40 02.2 +1.0
       comp=Z,44nm,1.3s
SFK    Sufi-Kurgan       51.84 296 P       P         02 40 02.4 +0.1
SFK                                pmax    pmax
       comp=Z,70nm,1.0s
SCM    Sheep Creek Mo    51.85  35 eP      P         02 40 03.0 +1.1
       comp=Z,64nm,0.8s
HDA    Harding Lake      51.88  32 eP      P         02 40 02.2 +0.3
       comp=Z,47nm,0.9s
MNAS   Manas             51.88 300 P       P         02 40 02.6 +0.1
MNAS                               pmax    pmax
       comp=Z,105nm,1.2s
IL1    Eielson Array     51.89  31 eP      P         02 40 02.1 +0.1
ILAR   Eielson Array     51.89  31 P       P         02 40 02.2 +0.2
       comp=Z,23nm,0.9s,baz=273,slow=6.0,SNR=166
ILAR                               PcP     PcP       02 41 13.0 -0.5
       comp=Z,4.6nm,0.8s,baz=286,slow=3.6,SNR=1.7
ILAR                               LR      LR        03 03 46.8
       comp=Z,61nm,20.9s,baz=290,slow=38
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ILB    Eielson Array     51.89  31 eP      P         02 40 02.2 +0.2
ILB                                ePcP    PcP       02 41 13.0 -0.5
FYU    Fort Yukon        52.51  29 eP      P         02 40 08.5 +2.0
       comp=Z,87nm,1.1s
KLU    Klutina           52.55  36 eP      P         02 40 08.2 +1.1
       comp=Z,40nm,0.9s
DIV    Divide            52.66  36 eP      P         02 40 09.1 +1.3
       comp=Z,56nm,0.9s
HARP   HAARP             52.82  34 eP      P         02 40 10.9 +1.9
       comp=Z,81nm,0.8s
RIDG   Independ'e Rid    52.85  33 eP      P         02 40 09.5 +0.3
       comp=Z,17nm,0.6s
NDI    New Delhi         52.88 282 eP      P         02 40 08.0 -1.9
KK31   Karatay Array     53.12 301 eP      P         02 40 11.6 +0.1
KK31   Karatay Array     53.12 301 eP      P         02 40 11.6 +0.1
KKAR   Karatay Array     53.12 301 eP      P         02 40 11.6 +0.1
KKAR   Karatay Array     53.12 301 eP      P         02 40 11.6 +0.1
DOT    Dot Lake          53.20  33 eP      P         02 40 13.1 +1.4
       comp=Z,80nm,0.7s
SCRK   Sand Creek        53.20  32 eP      P         02 40 12.4 +0.6
       comp=Z,68nm,1.2s
BMRM   Bremner River     53.24  36 eP      P         02 40 13.5 +1.4
       comp=Z,51nm,0.9s
RAGM   Ragged Mountai    53.28  37 eP      P         02 40 14.0 +1.6
       comp=Z,57nm,1.2s
NIL    Nilore            54.12 289 eP      P         02 40 19.5 +0.6
       comp=Z,241nm,0.8s
NIL    Nilore            54.12 289 eP      P         02 40 19.5 +0.6
NIL                                pmax    pmax
       comp=Z,241nm,0.8s
TGL    Tana Glacier      54.13  36 eP      P         02 40 20.4 +1.7
       comp=Z,44nm,1.1s
EGAK   Eagle             54.34  31 eP      P         02 40 20.4 +0.4
       comp=Z,20nm,0.6s
FITZ   Fitzroy Crossi    54.48 197 P       P         02 40 21.1 -0.4
       comp=Z,17nm,0.8s,baz=21,slow=8.5,SNR=18
WRAB   Tennant Creek     54.85 186 eP      P         02 40 23.5 -0.6
       comp=Z,154nm,0.8s
WRAB   Tennant Creek     54.85 186ceP      P         02 40 23.4 -0.7
WRAB                               pmax    pmax
       comp=Z,166nm,0.8s
WB2    Warramunga Arr    54.86 186 eP      P         02 40 23.6 -0.6
       comp=Z,163nm,0.8s
WR1    Warramunga Arr    54.86 186 eP      P         02 40 23.5 -0.7
       comp=Z,156nm,0.8s
WR1                                ePcP    PcP       02 41 26.2 +0.9
WRA    Warramunga Arr    54.86 186 P       P         02 40 23.5 -0.7
       comp=Z,154nm,0.8s,baz=3.2,slow=7.6,SNR=240
WRA                                PcP     PcP       02 41 26.2 +0.9
       comp=Z,16nm,0.7s,baz=0.5,slow=3.7,SNR=3.4
WRA                                S       S         02 47 55.1 -3.6
       comp=Z,2.4nm,0.8s,baz=5.3,slow=13,SNR=5.0
WRA    Warramunga Arr    54.86 186 P       P         02 40 23.5 -0.7
WRA                                                  02 41 26.2
WRA                                S       S         02 47 55.1 -3.6
WRA                                pmax    pmax
       comp=Z,160nm,0.8s
WRA                                pmax    pmax
       comp=Z,16nm,0.7s
WRA                                smax    smax
       comp=N,2.0nm,0.8s
CTA    Charters Tower    55.08 173 P       P         02 40 25.5 -0.3
       comp=N,12nm,0.6s,baz=356,slow=9.5,SNR=12
CTAO   Charters Tower    55.08 173 eP      P         02 40 25.9 +0.2
       comp=N,17nm,0.8s
CTAO   Charters Tower    55.08 173 eP      P         02 40 25.9 +0.2
CTAO                               pmax    pmax
       comp=Z,17nm,0.8s
DAWY   Dawson            55.20  32 eP      P         02 40 27.3 +1.0
       comp=Z,7.8nm,0.7s
SVE    Sverdlovsk        55.90 319⇑iP      P         02 40 31.7 +0.4
SVE                                pmax    pmax
       comp=Z,94nm,1.1s
INK    Inuvik            56.78  26 P       P         02 40 38.1 +0.8
       comp=Z,28nm,0.9s,baz=283,slow=6.0,SNR=43
INK    Inuvik            56.78  26 eP      P         02 40 38.1 +0.8
       comp=Z,29nm,0.8s
INK                                epP     pP        02 41 01.5 +2.2
INK    Inuvik            56.78  26 eP      P         02 40 38.1 +0.8
INK                                e*PP    pP        02 41 01.5 +2.2
INK                                pmax    pmax
       comp=Z,29nm,0.8s
KBL    Kabul             57.03 292 eP      P         02 40 39.7 -0.3
       comp=Z,125nm,1.0s
ARU    Arti              57.11 319 eP      P         02 40 38.6 -1.3
       comp=Z,42nm,0.8s
ARU    Arti              57.11 319c iP     P         02 40 39.5 -0.4
ARU                                *PP     pP        02 40 59.8 -2.1
ARU                                                  02 41 32.6
ARU                                                  02 42 47.7
ARU                                S       S         02 48 29.6 +1.6
ARU                                SS      SS        02 52 16.1 -1.3
ARU                                pmax    pmax
       comp=Z,74nm,1.2s
SKAG   Skagway           58.08  37 eP      P         02 40 48.9 +2.3
       comp=Z,38nm,1.0s
AB31   Akbulak array     58.35 311 P       P         02 40 48.1 -0.6
AB31                               pmax    pmax
       comp=Z,30nm,0.6s
ABKAR  Akbulak array     58.35 311 eP      P         02 40 48.2 -0.5
BESE   Bessie Mountai    58.56  38 eP      P         02 40 52.1 +2.1
       comp=Z,39nm,1.1s
AS01   Alice Springs     58.58 186 eP      P         02 40 49.8 -0.7
AS31   Alice Springs     58.59 186 eP      P         02 40 50.2 -0.3
       comp=Z,16nm,0.4s
AS31                               ePcP    PcP       02 41 41.2 +1.3
AS31                               eS      S         02 48 47.0 -0.8
ASAR   Alice Springs     58.59 186 P       P         02 40 50.1 -0.4
       comp=Z,32nm,0.9s,baz=7.4,slow=5.4,SNR=127
ASAR                               PcP     PcP       02 41 41.2 +1.3
       comp=Z,13nm,0.8s,baz=16,slow=5.5,SNR=5.1
ASAR                               S       S         02 48 45.8 -2.0
       comp=Z,8.7nm,1.1s,baz=16,slow=16,SNR=20
ASAR                               PKP2bc            03 10 39.5
       comp=Z,4.7nm,0.9s,baz=93,slow=1.5,SNR=6.6
JIS    Juneau Island     58.88  38 eP      P         02 40 54.1 +2.0
       comp=Z,45nm,1.0s
MBWA   Marble Bar        59.01 202 eP      P         02 40 52.6 -0.9
       comp=Z,34nm,0.7s
AKTO   Aktyubinsk        59.16 312 P       P         02 40 53.8 -0.5
       comp=Z,47nm,0.9s,baz=77,slow=13,SNR=77
AKTO                               LR      LR        03 07 27.7
       comp=Z,167nm,19.5s,baz=71,slow=37
AKTO   Aktyubinsk        59.16 312 P       P         02 40 54.1 -0.2
AKTO                               pmax    pmax
       comp=Z,61nm,0.9s
CRAG   Craig             60.42  41 eP      P         02 41 04.9 +2.1
       comp=Z,37nm,1.3s
WRAK   Wrangell Islan    60.51  40 eP      P         02 41 05.7 +2.3
       comp=Z,32nm,1.2s
PALK   Pallekele         60.73 258 P       P         02 41 04.7 -0.9
       comp=Z,22nm,0.8s,baz=117,slow=4.1,SNR=6.5
PALK                               LR      LR        03 08 52.3
       comp=Z,134nm,20.5s,baz=78,slow=38
PALK   Pallekele         60.73 258 eP      P         02 41 04.7 -0.9
       comp=Z,26nm,0.8s
EIDS   Eidsvold          60.93 168 eP      P         02 41 07.0 +0.5
       comp=Z,26nm,0.8s
DLBC   Dease Lake        61.01  37 P       P         02 41 08.1 +1.2
       comp=Z,13nm,0.9s,baz=285,slow=7.7,SNR=20
DLBC   Dease Lake        61.01  37 eP      P         02 41 09.2 +2.4
       comp=Z,33nm,1.1s
DIB    Dawson Inlet,     61.56  43 eP      P         02 41 12.3 +1.8
       comp=Z,36nm,1.2s
DIB                                epP     pP        02 41 34.2 +1.4
PRGR   Permogore         61.84 327⇓iP      P         02 41 12.2 -0.1
PRGR                               e                 02 41 52.6
PRGR                               pmax    pmax
       comp=Z,46nm,1.1s
DZM    Mont Dzumac       62.06 152 P       P         02 41 15.9 +1.6
       comp=Z,33nm,1.0s,baz=0.3,slow=8.9,SNR=12
DZM                                LR      LR        03 06 24.8
       comp=Z,57nm,21.0s,baz=30,slow=34
DZM    Mont Dzumac       62.06 152 eLR     LR        02 59 45.8
       comp=Z,226nm,28.8s
DZM    Mont Dzumac       62.06 152 eP      P         02 41 15.3 +1.0
       comp=Z,67nm,1.2s
SPA0   Spitsbergen Ar    62.31 349 eP      P         02 41 16.1 +0.8
SPA0   Spitsbergen Ar    62.31 349 eP      P         02 41 16.3 +1.0
SPITS  Spitsbergen Ar    62.31 349 P       P         02 41 15.5 +0.2
       comp=Z,10nm,0.6s,baz=79,slow=9.0,SNR=14
KBS    Kingsbay          62.48 350 eP      P         02 41 17.4 +1.0
       comp=Z,34nm,0.9s
KBS    Kingsbay          62.48 350 eP      P         02 41 17.4 +1.0
KBS                                pmax    pmax
       comp=Z,34nm,0.9s
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KBS    Kingsbay           62.48 350 eP     P      02 41 16.9 +0.6
HSPB   Hornsund (broa     63.21 348 eP     P      02 41 21.8 +0.6
GEYT   Alibeck            63.77 299  P     P      02 41 24.9 -0.8
       comp=Z,12nm,0.8s,baz=77,slow=15,SNR=24
GEYT                                LR     LR     03 10 00.4
       comp=Z,86nm,20.1s,baz=60,slow=37
GYA0B  ALIBECK ARRAY      63.77 299 eP     P      02 41 26.1 +0.4
       comp=Z,31nm,0.9s
BBB    Bella Bella        64.40  43  P     P      02 41 29.5 +0.1
       comp=Z,12nm,0.9s,baz=307,slow=8.3,SNR=4.3
KLMR   Klimovskoe         64.85 328 eP     P      02 41 30.3 -1.9
KLMR                                 pmax  pmax
       comp=Z,27nm,0.8s
KLMR   Klimovskoe         64.85 328 eP     P      02 41 30.3 -1.9
KLMR                                 AMP          02 41 32.2
       comp=Z,27nm,0.8s
RES    Resolute Bay       64.90  14  P     P      02 41 32.6 +0.4
       comp=Z,56nm,0.8s,baz=315,slow=6.4,SNR=94
RES    Resolute Bay       64.90  14 eP     P      02 41 32.7 +0.4
       comp=Z,64nm,0.8s
RES                                 epP    pP     02 41 54.2 -0.6
KEV    Kevo               64.94 339 eP     P      02 41 32.1 -0.4
       comp=Z,22nm,0.8s
KEV    Kevo               64.94 339 eP     P      02 41 32.2 -0.4
KEV                                  pmax  pmax
       comp=Z,22nm,0.8s
HAMF   Hammerfest         65.37 341 eP     P      02 41 35.5 +0.2
ARA0   ARCESS Array S     65.50 339 eP     P      02 41 36.4 +0.1
ARCES  ARCESS Array B     65.50 339  P     P      02 41 36.4 +0.1
       comp=Z,10.0nm,0.6s,baz=57,slow=9.0,SNR=28
ARCES  ARCESS Array B     65.50 339 eP     P      02 41 36.1 -0.2
ARE0   ARCESS Array S     65.50 339 eP     P      02 41 36.5 +0.3
       comp=Z,14nm,0.8s
ARMA   Armidale           65.97 169 eP     P      02 41 40.8 +1.0
       comp=Z,18nm,0.9s
YKW3   Yellowknife Ar     66.17  29 eP     P      02 41 40.3 -0.3
       comp=Z,30nm,1.1s
YKA    Yellowknife Ar     66.21  29  P     P      02 41 41.0 +0.2
       comp=Z,12nm,0.7s,baz=300,slow=6.6,SNR=64
FORT   Forrest            66.34 191 eP     P      02 41 42.1 +0.1
       comp=Z,124nm,0.8s
KTK1   Kautokeino         66.46 339 eP     P      02 41 42.9 +0.4
STKA   Stephens Creek     66.51 178  P     P      02 41 43.0  0.0
       comp=Z,33nm,0.8s,baz=344,slow=7.3,SNR=48
STKA                                LR     LR     03 09 16.0
       comp=Z,31nm,21.4s,baz=23,slow=34
STKA   Stephens Creek     66.51 178 eP     P      02 41 43.2 +0.1
       comp=Z,7.5nm,0.8s
STKA                                epP    pP     02 42 05.2 -0.4
STKA   Stephens Creek     66.51 178 eP     P      02 41 43.2 +0.1
STKA                                e*PP   pP     02 42 05.3 -0.4
STKA                                 pmax  pmax
       comp=Z,8.0nm,0.8s
HEF    Hetta              66.70 339 eP     P      02 41 44.5 +0.5
AFI    Afiamalu           66.79 128 LR     LR     03 06 16.3
       comp=Z,52nm,21.1s,baz=249,slow=32
KIF    Kilpisjarvi        67.16 340 eP     P      02 41 47.0 +0.2
TRO    Tromso             67.27 341 eP     P      02 41 47.3 -0.2
TULEG  Thule              67.30   7 eP     P      02 41 47.3 -0.4
       comp=Z,73nm,1.4s
TULEG                               epP    pP     02 42 10.6 +0.4
BBOO   Buckleboo          67.52 184 eP     P      02 41 49.5  0.0
       comp=Z,36nm,0.8s
DAG    Danmarks Havn      67.72 355⇑iP     P      02 41 50.1 -0.2
       comp=Z,32nm,1.0s
DAG                                 i             02 42 12.9
DAG    Danmarks Havn      67.72 355⇑iP     P      02 41 50.1 -0.2
DAG                                 i             02 42 12.9
DAG                                  pmax  pmax
       comp=Z,32nm,1.0s
MOS    Moscow             68.18 323 eP     P      02 41 53.3 -0.2
MOS                                 e*PP   pP     02 42 14.3 -1.8
MOS                                 i S    S      02 50 45.3 -1.2
MOS                                  pmax  pmax
       comp=Z,89nm,1.0s
MOS                                  pmax  pmax
       comp=Z,100nm,1.3s
LLLB   Lillooet           68.59  43 eP     P      02 41 57.7 +1.5
       comp=Z,36nm,1.1s
PGC    Sidney             68.65  45 eP     P      02 41 58.2 +1.7
       comp=Z,28nm,0.9s
MAK    Makhachkala        68.77 308 eP     P      02 41 59.4 +2.0
MAK                                 e*PP   pP     02 42 20.3 +0.2
MAK                                 e             02 44 38.0
MAK                                 eS     S      02 50 59.7 +5.8
MAK                                 e*SS   sS     02 51 33.5 +0.9
MAK                                 eSS    SS     02 55 25.7 +6.0
MAK                                  pmax  pmax
       comp=Z,29nm,0.7s
MAK                                  MLR   MLR
       comp=Z,342nm,16.0s
NLWA   Neilton Lookou     69.02  46 eP     P      02 42 01.0 +2.1
       comp=Z,64nm,1.1s
NLWA                                epP    pP     02 42 21.6  0.0
OBN    Obninsk            69.02 323 eP     P      02 41 58.8 +0.1
       comp=Z,103nm,0.8s
OBN    Obninsk            69.02 323ceP     P      02 41 58.3 -0.4
OBN                                 i             02 42 20.0
OBN                                 e             02 44 33.3
OBN                                 eS     S      02 50 59.2 +2.8
OBN                                 eSS    SS     02 55 28.0 +5.2
OBN                                  pmax  pmax
       comp=Z,56nm,0.9s
OBN                                  MLR   MLR
       comp=Z,188nm,19.0s
A04D   Lummi Island       69.05  45  P     P      02 42 00.2 +1.2
       baz=299
AKT    Akhty              69.33 307 eP     P      02 42 00.5 -0.6
AKT                                 e             02 42 23.4
AKT                                 eS     S      02 51 01.3 +0.5
AKT                                  pmax  pmax
       comp=Z,34nm,0.5s
STEI   Steigen            69.41 341 eP     P      02 42 01.0 +0.1
E03A   Lebam              69.61  47 eP     P      02 42 04.4 +1.9
       comp=Z,41nm,1.0s
E03A                                epP    pP     02 42 25.9 +0.7
B05A   Bryant             69.63  45  P     P      02 42 04.0 +1.4
       baz=300,SNR=19
VSR    Storozhevoye       69.68 319 eP     P      02 42 02.1 -0.8
VSR                                  pmax  pmax
       comp=Z,90nm,0.9s
GROC   Groznyy            69.75 309 eP     P      02 42 02.0 -1.5
GROC                                e*PP   PcP    02 42 22.1 -3.5
GROC                                e             02 42 24.0
GROC                                e*SP   sP     02 42 31.6 -4.3
GROC                                e             02 44 37.5
GROC                                eS     S      02 51 05.0 -0.5
GROC                                 pmax  pmax
       comp=Z,36nm,1.0s
JCW    Jim Creek          69.76  45 eP     P      02 42 05.0 +1.6
B06A   Marblemount        69.85  44 eP     P      02 42 05.4 +1.5
       comp=Z,47nm,1.0s
FIA1   FINESS Array S     70.07 332 eP     P      02 42 04.9 -0.1
FIA0   FINESS Array S     70.07 332 eP     P      02 42 04.5 -0.5
FIA0   FINESS Array S     70.07 332 eP     P      02 42 04.6 -0.5
FINES  FINESS Array B     70.07 332  P     P      02 42 04.5 -0.5
       comp=Z,21nm,0.8s,baz=59,slow=5.9,SNR=63
FINES                               LR     LR     03 14 26.8
       comp=Z,89nm,20.4s,baz=54,slow=37
KULLO  Kullorsuaq         70.14   5⇑iP     P      02 42 05.3  0.0
       comp=Z,27nm,0.8s
KULLO                               i             02 42 28.1
KULLO  Kullorsuaq         70.14   5⇑eP     P      02 42 05.3  0.0
KULLO                               i             02 42 28.1
KULLO                                pmax  pmax
       comp=Z,27nm,0.8s
F04D   Rainier, OR        70.17  47  P     P      02 42 07.2 +1.3
       baz=300
WSAR   Wadi Sarin         70.22 285  P     P      02 42 06.6 -0.1
       comp=Z,65nm,0.9s,baz=90,slow=6.8,SNR=29
WSAR                                LR     LR     03 16 29.9
       comp=Z,64nm,18.1s,baz=78,slow=39
D05A   Enumclaw           70.23  46 eP     P      02 42 08.7 +2.4
       comp=Z,50nm,1.1s
G03D   McMinnville, O     70.46  48  P     P      02 42 09.2 +1.5
       baz=300
BIDO   Bidbid             70.48 285  P     P      02 42 10.0 +1.7
       SNR=13
C06D   Leavenworth        70.50  45  P     P      02 42 09.2 +1.3
       baz=301
LON    Longmire           70.56  46 eP     P      02 42 09.8 +1.4
       comp=Z,16nm,1.2s
BANOM  Banah              70.71 289  P     P      02 42 12.7 +3.0
       SNR=6.8
BANOM  Banah              70.71 289 i P    P      02 42 10.1 +0.4
       SNR=16
COR    Corvallis          70.75  49 eP     P      02 42 12.6 +3.1
       comp=Z,40nm,0.9s
COR    Corvallis          70.75  49 eP     P      02 42 12.6 +3.1
COR                                  pmax  pmax
       comp=Z,40nm,0.9s
SHME   Shamm              70.77 289 i P    P      02 42 10.3 +0.3
       SNR=16
NWAO   Narrogin (SRO)     70.81 200  P     P      02 42 09.5 -0.3
       comp=Z,75nm,0.8s,baz=264,slow=8.0,SNR=39
NWAO   Narrogin (SRO)     70.81 200 eP     P      02 42 09.8  0.0
NWAO   Narrogin (SRO)     70.81 200 eP     P      02 42 09.8  0.0
MOR8   Moi Rana           70.87 339 eP     P      02 42 08.9 -0.9
KEBM   Edson Butte        70.96  51 eP     P      02 42 13.8 +2.9
       comp=Z,77nm,1.0s
LTY    Liberty            70.97  45 eP     P      02 42 11.8 +1.0
       comp=Z,29nm,1.0s
NCK    Nalchik            71.00 310 eP     P      02 42 10.1 -1.0
NCK                                  pmax  pmax
       comp=Z,24nm,0.9s
MDH    Madha              71.02 288  P     P      02 42 11.6 +0.1
HOQ    Hoqain             71.09 286  P     P      02 42 15.0 +3.0
       SNR=9.8
MSFE   Esma-Masafi        71.10 288 i P    P      02 42 12.5 +0.5
       SNR=22
TBLG   Delisi             71.16 308 eP     P      02 42 13.0 +0.9
       comp=Z,26nm,1.0s
TBLG   Delisi             71.16 308 eP     P      02 42 13.0 +0.9
TBLG                                 pmax  pmax
       comp=Z,27nm,1.0s
B08A   Colville Reser     71.17  44 eP     P      02 42 13.1 +1.0
       comp=Z,49nm,1.0s
ZEI    Tsey               71.17 309 i P    P      02 42 09.9 -2.4
ZEI                                  pmax  pmax
       comp=Z,12nm,0.6s
I03D   Drain, OR          71.17  50  P     P      02 42 14.0 +1.9
       baz=301,SNR=19
UOSS   Minazif            71.28 288 eP     P      02 42 13.2 +0.1
       comp=Z,72nm,1.1s
UOSS   Minazif            71.28 288 i P    P      02 42 13.0  0.0
       SNR=22
KBZ    Khabaz             71.32 311  P     P      02 42 13.7 +0.8
       comp=Z,54nm,0.8s,baz=71,slow=3.6,SNR=74
KBZ                                 LR     LR     03 17 51.2
       comp=Z,127nm,18.9s,baz=58,slow=39
KIV    Kislovodsk         71.34 311 eP     P      02 42 13.5 +0.3
       comp=Z,86nm,0.8s
KIV    Kislovodsk         71.34 311  P     P      02 42 13.9 +0.7
       SNR=26
KIV    Kislovodsk         71.34 311 i P    P      02 42 13.7 +0.5
       SNR=30
KIV    Kislovodsk         71.34 311 eP     P      02 42 13.7 +0.5
KIV                                  pmax  pmax
       comp=Z,127nm,1.1s
KIV                                  MLR   MLR
       comp=Z,97nm,18.0s
H04A   Detroit Lake       71.38  48 eP     P      02 42 14.8 +1.4
       comp=Z,29nm,0.9s
HATD   Hatta, Dubai       71.39 288  P     P      02 42 15.0 +1.2
       SNR=19
HATD   Hatta, Dubai       71.39 288 i P    P      02 42 14.1 +0.4
       SNR=34
SOHO   SOHO               71.43 287 i P    P      02 42 14.0 +0.1
       SNR=39
VSU    Vasula             71.61 329ceP     P      02 42 14.8 +0.4
VSU                                  pmax  pmax
       comp=Z,113nm,1.0s
G05D   Wamic, OR          71.62  47  P     P      02 42 16.2 +1.4
       baz=301
NEY    Neytrino           71.68 310 eP     P      02 42 16.3 +0.9
NEY                                  pmax  pmax
       comp=Z,8.0nm,0.8s
NAZ    Nazwa, Dubai       71.68 288  P     P      02 42 19.0 +3.5
       SNR=6.2
NAZ    Nazwa, Dubai       71.68 288 i P    P      02 42 15.8 +0.3
       SNR=9.8
I04A   Tendick Farm,      71.70  49  P     P      02 42 16.7 +1.4
       baz=301,SNR=16
L02D   Cave Junction,     71.79  51  P     P      02 42 17.4 +1.5
       baz=301,SNR=5.7
GNI    Garni              71.96 307  P     P      02 42 17.7 +0.6
       comp=Z,20nm,0.8s,baz=102,slow=5.1,SNR=8.8
GNI                                 LR     LR     03 15 43.6
       comp=Z,152nm,21.5s,baz=56,slow=37
GNI    Garni              71.96 307  P     P      02 42 19.4 +2.3
       SNR=5.9
GNI    Garni              71.96 307 eP     P      02 42 17.6 +0.5
GNI                                  pmax  pmax
       comp=Z,109nm,1.1s
HUMO   Hull Mountain      71.97  50 eP     P      02 42 19.0 +2.0
       comp=Z,7.7nm,1.1s
G06A   Carlson Farm,      72.04  47 eP     P      02 42 19.0 +1.7
       comp=Z,28nm,1.3s
C09A   Chrisman Ranch     72.06  44 eP     P      02 42 18.5 +1.1
I05D   Terrebonne, OR     72.08  48  P     P      02 42 19.0 +1.4
       baz=302
ALNE   Al Ain             72.08 287 i P    P      02 42 18.2 +0.4
       SNR=8.4
HAWA   Hanford            72.08  46 eP     P      02 42 19.4 +1.9
       comp=Z,30nm,1.0s
D08A   Wollman Farm,      72.09  45 eP     P      02 42 18.8 +1.3
       comp=Z,32nm,0.8s
ASUD   Al Ashush, Dub     72.12 288  P     P      02 42 21.1 +3.0
       SNR=6.0
ASUD   Al Ashush, Dub     72.12 288 i P    P      02 42 18.4 +0.3
       SNR=13
AKH    Akhalkalaki        72.13 308 eP     P      02 42 19.4 +1.3
       comp=Z,22nm,0.8s
AKH    Akhalkalaki        72.13 308 eP     P      02 42 19.4 +1.3
AKH                                  pmax  pmax
       comp=Z,22nm,0.8s
J04D   Umpqua Nationa     72.18  49  P     P      02 42 19.8 +1.4
       baz=302
E08A   Dider Farm, El     72.31  45 eP     P      02 42 20.4 +1.6
       comp=Z,24nm,0.8s
KHMM   Horse Mountain     72.37  52 eP     P      02 42 22.5 +3.0
       comp=Z,27nm,1.1s
NEW    Newport            72.47  43  P     P      02 42 21.2 +1.4
       comp=Z,28nm,0.9s,baz=296,slow=5.4,SNR=31
NEW    Newport            72.47  43  P     P      02 42 20.7 +0.9
       baz=303,SNR=23
NEW    Newport            72.47  43 eP     P      02 42 20.8 +0.9
       comp=Z,34nm,0.9s
NEW    Newport            72.47  43 eP     P      02 42 20.8 +1.0
NEW                                  pmax  pmax
       comp=Z,34nm,0.9s
YBH    Yreka Blue Hor     72.58  51  P     P      02 42 22.4 +1.7
       comp=Z,9.2nm,0.9s,baz=316,slow=2.1,SNR=21
YBH                                 LR     LR     03 09 02.6
       comp=Z,36nm,21.4s,baz=333,slow=31
YBH    Yreka Blue Hor     72.58  51 eP     P      02 42 22.5 +1.8
       comp=Z,13nm,0.9s
PINE   Pine Mountain      72.61  49 eP     P      02 42 22.8 +1.9
       comp=Z,59nm,0.9s
M02C   Callahan           72.67  51  P     P      02 42 22.9 +1.7
       baz=302,SNR=8.5
J05D   Fort Rock, OR      72.70  49  P     P      02 42 22.9 +1.4
       baz=302,SNR=17
K04D   Chiloquin, OR      72.72  50  P     P      02 42 23.1 +1.5
       baz=302
SUMG   Summit             72.74 359 eP     P      02 42 21.9 +0.5
       comp=Z,38nm,0.8s
SUMG                                epP    pP     02 42 45.2 +0.8
SUMG   Summit             72.74 359⇑iP     P      02 42 22.4 +0.9
       comp=Z,41nm,0.9s
SUMG                                i             02 42 45.5
SUMG   Summit             72.74 359⇑iP     P      02 42 22.4 +0.9
SUMG                                i             02 42 45.5
SUMG                                 pmax  pmax
       comp=Z,41nm,0.9s
E09A   Wood Farm, Sta     72.83  45 eP     P      02 42 23.6 +1.7
       comp=Z,41nm,0.9s
N02D   Trinity Center     72.98  52  P     P      02 42 24.7 +1.7
       baz=302,SNR=6.1
G08A   Pilot Rock         73.01  46 eP     P      02 42 24.8 +1.6
       comp=Z,20nm,1.4s
KCPM   Cahto Peak         73.08  53 eP     P      02 42 26.0 +2.2
       comp=Z,80nm,1.2s
M04C   Macdoel            73.11  51  P     P      02 42 25.3 +1.4
       baz=302,SNR=10
K05A   Summer Lake        73.21  49 eP     P      02 42 26.4 +2.0
       comp=Z,51nm,1.0s
WDC    Whiskeytown Da     73.29  52 eP     P      02 42 26.7 +1.9
       comp=Z,32nm,1.3s
WDC    Whiskeytown Da     73.29  52 eP     P      02 42 26.7 +1.9
WDC                                  pmax  pmax
       comp=Z,32nm,1.3s
SOC    Sochi              73.36 312 eP     P      02 42 23.8 -1.3
SOC                                 e             02 45 06.9
SOC                                 ePPP   PPP    02 46 53.0
SOC                                 eS     S      02 51 46.2 -0.8
SOC                                 eSS    SS     02 56 38.1 +8.1
SOC                                  pmax  pmax
       comp=Z,58nm,0.9s
IZAR   Zarasai            73.49 327 eP     P      02 42 25.8 +0.2
IZAR                                 IAmb  IAmb   02 42 49.2
       comp=Z,11nm,0.5s
MICGM  Minsk              73.52 326⇓eP     P      02 42 26.0 +0.2
MICGM                                PM           02 42 27.0
       comp=Z,0.1nm,1.0s
MICGM                               e             02 42 48.0
MNK    Minsk              73.52 326⇓eP     P      02 42 26.0 +0.2
MNK                                 e             03 42 48.0
MNK                                  pmax  pmax
       comp=Z,1µm,1.0s
ISAL   Salakas            73.66 327 eP     P      02 42 26.6 -0.1
ISAL                                 IAmb  IAmb   02 42 50.4
       comp=Z,22nm,0.6s
F10A   Beach Ranch, E     73.66  45 eP     P      02 42 28.0 +1.0
       comp=Z,16nm,0.8s
IIGN   Ignalina           73.75 327 eP     P      02 42 27.2  0.0
IIGN                                 IAmb  IAmb   02 42 50.8
       comp=Z,18nm,0.8s
NACGM  Naroch             73.78 326 e      P      02 42 27.0 -0.3
WALA   Waterton Lakes     73.79  41 eP     P      02 42 28.8 +1.1
       comp=Z,30nm,1.0s
O03D   Paynes Creek       73.92  52  P     P      02 42 29.5 +0.9
       baz=302
MOD    Modoc Plateau      74.02  50 eP     P      02 42 30.6 +1.4
       comp=Z,17nm,1.0s
ANN    Anapa              74.08 314 eP     P      02 42 28.8 -0.5
ANN                                 e*PP   pP     02 42 50.0 -2.2
ANN                                 eS     S      02 51 57.7 +2.7
ANN                                  pmax  pmax
       comp=Z,122nm,1.5s
BMO    Blue Mountains     74.23  46 eP     P      02 42 31.5 +1.2
BMO    Blue Mountains     74.23  46 eP     P      02 42 31.5 +1.2
JTMT   Jette              74.34  42 eP     P      02 42 32.6 +1.7
       comp=Z,43nm,0.8s
J08A   Circle Bar Ran     74.36  48 eP     P      02 42 32.7 +1.6
       comp=Z,70nm,1.4s
ORV    Oroville           74.51  52 eP     P      02 42 33.3 +1.3
       comp=Z,24nm,1.0s
ORV    Oroville           74.51  52 eP     P      02 42 33.3 +1.3
ORV                                  pmax  pmax
       comp=Z,24nm,1.0s
WVOR   Wild Horse Val     74.77  49 eP     P      02 42 35.3 +1.8
       comp=Z,40nm,1.3s
MSO    Missoula           75.06  43  P     P      02 42 35.5 +0.4
       baz=305,SNR=15
MSO    Missoula           75.06  43 eP     P      02 42 35.7 +0.6
       comp=Z,23nm,1.1s
BEKR   Beckworth          75.08  52 eP     P      02 42 36.8 +1.3
       comp=Z,40nm,1.0s
AKASG  Malin Array Be     75.18 322  P     P      02 42 34.9 -0.6
       comp=Z,17nm,0.6s,baz=48,slow=6.1,SNR=76
AKASG                               LR     LR     03 17 41.8
       comp=Z,175nm,19.8s,baz=50,slow=37
AKASG  Malin Array Be     75.18 322  P     P      02 42 34.9 -0.6
AKASG                                pmax  pmax
       comp=Z,18nm,0.6s
AKASG                                MLR   MLR
       comp=Z,175nm,19.8s
AKBB   Malin Array Si     75.18 322 eP     P      02 42 35.0 -0.5
       comp=Z,39nm,0.8s
AFDM   Forest Hills D     75.19  53 eP     P      02 42 37.4 +1.5
       comp=Z,30nm,1.3s
KIEV   Kiev               75.19 322 eP     P      02 42 34.0 -1.6
       comp=Z,40nm,0.9s
KIEV   Kiev               75.19 322 i P    P      02 42 35.1 -0.5
       SNR=25
KIEV   Kiev               75.19 322d iP    P      02 42 35.3 -0.3
KIEV                                 pmax  pmax
       comp=Z,27nm,0.9s
AK11   Malin Array Si     75.22 322 eP     P      02 42 35.1 -0.7
NC405  NORSAR Array S     75.40 337 eP     P      02 42 36.5 -0.1
NC303  NORSAR Array S     75.42 337 eP     P      02 42 36.9 +0.1
HFS    Hagfors            75.46 335  P     P      02 42 36.9 -0.1
       comp=Z,7.3nm,0.5s,baz=83,slow=3.3,SNR=62
HFS                                 LR     LR     03 17 05.4
       comp=Z,99nm,20.7s,baz=42,slow=37
KELT   Kelkit             75.52 309 i P    P      02 42 38.0  0.0
NC204  NORSAR Array S     75.58 337 eP     P      02 42 37.6 -0.1
NB201  NORSAR Array S     75.58 337 eP     P      02 42 37.6  0.0
NB2    NORSAR Subarra     75.61 337  P     P      02 42 37.2 -0.7
       comp=Z,4.9nm,0.6s,baz=41,slow=5.9
NOA    NORSAR Array B     75.61 337 LR     LR     03 20 52.7
       comp=Z,77nm,18.8s,baz=70,slow=40
NBO00  NORSAR Array S     75.76 337 eP     P      02 42 38.7  0.0
PAHR   Pah Rah Range      75.80  51 eP     P      02 42 41.2 +1.7
       comp=Z,33nm,1.1s
ILULI  Ilulissat          75.81   4 eP     P      02 42 39.2 +0.4
       comp=Z,24nm,0.9s
ILULI  Ilulissat          75.81   4 i P    P      02 42 39.7 +0.9
       comp=Z,25nm,0.9s
ILULI  Ilulissat          75.81   4 i P    P      02 42 39.7 +0.9
ILULI                                pmax  pmax
       comp=Z,25nm,0.9s
VCNR   Virginia City      75.86  52 eP     P      02 42 41.9 +2.0
       comp=Z,16nm,0.9s
MFID   Camas Ranch        75.92  47 eP     P      02 42 41.6 +1.5
       comp=Z,45nm,1.1s
SIM    Simferopol’        75.94 315deP     P      02 42 40.3 +0.3
SIM                                 e*PP   pP     02 43 03.2 +0.1
SIM                                 eS     S      02 52 13.0 -2.6
SIM                                  pmax  pmax
       comp=Z,52nm,0.8s
SUW    Suwalki            75.97 327 eP     P      02 42 39.8 -0.2
SUW    Suwalki            75.97 327 eP     P      02 42 40.4 +0.4
       comp=Z,41nm,0.9s
SUW                                 epP    pP     02 43 02.2 -0.8
SUW    Suwalki            75.97 327 eP     P      02 42 40.4 +0.4
SUW                                 e*PP   pP     02 43 02.2 -0.8
SUW                                  pmax  pmax
       comp=Z,41nm,0.9s
PNTR   Pine Nut           76.00  52 eP     P      02 42 42.7 +1.9
       comp=Z,35nm,1.1s
CMB    Columbia Colle     76.07  53 eP     P      02 42 42.4 +1.5
       comp=Z,58nm,1.3s
CMB    Columbia Colle     76.07  53 eP     P      02 42 42.4 +1.5
CMB                                  pmax  pmax
       comp=Z,58nm,1.3s
FFC    Flin Flon          76.10  32 eP     P      02 42 41.1 +0.4
       comp=Z,22nm,0.8s
FFC    Flin Flon          76.10  32 eP     P      02 42 41.1 +0.4
FFC                                  pmax  pmax
       comp=Z,22nm,0.8s
YERR   Yerington          76.29  52 eP     P      02 42 43.9 +1.5
       comp=Z,38nm,0.8s
HRY    Holter Researc     76.30  42 eP     P      02 42 43.1 +1.0
FCC    Fort Churchill     76.39  26 eP     P      02 42 42.8 +0.5
       comp=Z,44nm,1.0s
FCC    Fort Churchill     76.39  26 eP     P      02 42 42.8 +0.5
FCC                                  pmax  pmax
       comp=Z,43nm,1.0s
WAKR   Walker             76.43  52 eP     P      02 42 44.9 +1.7
       comp=Z,30nm,1.0s
LRM    Limekiln Ridge     76.48  43 eP     P      02 42 44.4 +1.0
LRM                                 epP    pP     02 43 06.2 -0.3
KEMA   Kemaliye           76.50 309 i P    P      02 42 43.8 +0.4
CUZAR  Zara_SIVAS         76.61 309 i P    P      02 42 40.2 -3.9
EGMT   Eagleton           76.63  40  P     P      02 42 44.7 +0.8
       baz=308,SNR=19
EGMT   Eagleton           76.63  40 eP     P      02 42 44.9 +0.9
       comp=Z,55nm,1.0s
DLMT   Dillon             76.67  44 eP     P      02 42 45.9 +1.5
       comp=Z,40nm,1.0s
HLID   Hailey             76.68  46  P     P      02 42 45.8 +1.3
       baz=306
HLID   Hailey             76.68  46 eP     P      02 42 45.8 +1.3
       comp=Z,23nm,1.0s
BMN    Battle Mountai     76.77  50 eP     P      02 42 46.7 +1.7
       comp=Z,46nm,1.0s
BMN    Battle Mountai     76.77  50 eP     P      02 42 46.7 +1.7
BMN                                  pmax  pmax
       comp=Z,46nm,1.0s
LCCM   Lewis and Clar     76.79  43 eP     P      02 42 46.1 +1.1
MCMT   McKenzie Canyo     76.84  44 eP     P      02 42 46.6 +1.1
RYN    Ryan               76.96  52 eP     P      02 42 47.7 +1.6
       comp=Z,27nm,0.9s
KVN    Kaiserville        76.99  51 eP     P      02 42 47.8 +1.5
       comp=Z,44nm,0.8s
KVN                                 epP    pP     02 43 12.5 +3.1
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SCER	sogukcermik	77.04	310	iP	P	02 42 47.3	+0.8
HEKM	Malatya_Hekimh	77.06	308	iP	P	02 42 48.7	+2.0
BOZ	Bozeman (W)	77.08	43	P	P	02 42 47.5	+0.8
	baz=307,SNR=38						
BOZ	Bozeman (W)	77.08	43	eP	P	02 42 47.6	+1.0
	comp=Z,31nm,1.1s						
BOZ	Bozeman (W)	77.08	43	eP	P	02 42 47.6	+1.0
BOZ				pmax	pmax		
	comp=Z,31nm,1.1s						
CUKAN	kangal_SIVAS	77.13	309	iP	P	02 42 47.9	+0.9
MDPB	Devils Postpil	77.15	53	eP	P	02 42 48.7	+1.4
	comp=Z,20nm,1.1s						
TOKA	Tokat	77.18	310	iP	P	02 42 47.5	+0.3
SORM	Soroca	77.21	320	⇑iP	P	02 42 46.4	-0.7
SORM	Soroca	77.21	320	⇑P	P	02 42 46.4	-0.7
NV01	Mina Array Sit	77.21	52	eP	P	02 42 48.4	+0.8
NV01				epP	pP	02 43 10.1	-0.6
NVAR	Mina Array Bea	77.21	52	P	P	02 42 49.1	+1.5
	comp=Z,25nm,0.8s,baz=288,slow=5.6,SNR=145						
NVAR				LR	LR	03 11 02.8	
	comp=Z,80nm,21.9s,baz=91,slow=31						
OMMB	Old Mammoth Mi	77.22	53	eP	P	02 42 49.5	+1.8
	comp=Z,25nm,1.2s						
NV11	Mina Array Sit	77.31	52	eP	P	02 42 49.4	+1.4
	comp=Z,1.8nm,1.1s						
MLAC	Mammoth, Mammo	77.31	53	P	P	02 42 49.8	+1.5
	baz=304						
SANL	SANLIURFA_Merk	77.35	307	iP	P	02 42 49.1	+0.9
PAGB	Antelope Grade	77.44	55	eP	P	02 42 50.8	+2.2
	comp=Z,60nm,1.0s						
CUGUR	Gurin_S˜VAS	77.59	309	iP	P	02 42 50.1	+0.5
CUALT	Altinyayla-SIV	77.61	309	iP	P	02 42 51.0	+1.3
QLMT	Earthquake Lak	77.65	44	eP	P	02 42 51.7	+1.7
KIS	Kishinev	77.67	319	eP	P	02 42 50.0	+0.3
SURC	SANLIURFA_SURC	77.77	306	iP	P	02 42 50.8	+0.3
ELK	Elko	77.82	49	P	P	02 42 56.2	+5.3
	comp=Z,25nm,1.0s,baz=352,slow=4.6,SNR=74						
YHB	Horse Butte	77.83	44	eP	P	02 42 52.6	+1.6
	comp=Z,30nm,1.0s						
SMMC	Simmler	77.84	55	P	P	02 42 52.4	+1.5
	baz=304						
CUSAR	Sarkisla-SIVAS	77.85	310	iP	P	02 42 51.5	+0.5
GATR	Gnd/Air Tx Cnt	77.93	56	eP	P	02 42 52.4	+1.0
YMR	Madison River	78.01	44	eP	P	02 42 54.1	+2.2
	comp=Z,30nm,1.1s						
TIN	Tinemaha, Big	78.04	53	P	P	02 42 53.3	+1.2
	baz=305						
SFJD	Kangerlussuaq	78.04	4	P	P	02 42 51.6	+0.3
	comp=Z,19nm,0.8s,baz=342,slow=11,SNR=4.0						
SFJD				LR	LR	03 20 32.6	
	comp=Z,57nm,18.9s,baz=346,slow=38						
GCMT	Greycliff	78.05	42	eP	P	02 42 50.5	-1.5
COAL	Corum-Alaca	78.15	311	iP	P	02 42 52.8	+0.2
VES	Vestal, Richgr	78.16	55	P	P	02 42 53.2	+0.6
	baz=305,SNR=12						
PKM	Mcpherson Peak	78.21	56	P	P	02 42 54.5	+1.4
	baz=304,SNR=7.5						
YFT	Old Faithful	78.22	44	eP	P	02 42 51.9	-1.2
	comp=Z,22nm,0.9s						
LEOM	Leova	78.30	319	⇓iP	P	02 42 53.3	+0.1
LEOM	Leova	78.30	319	⇓P	P	02 42 53.3	+0.1
LVV	L'vov	78.32	323	eP	P	02 42 53.4	+0.2
LVV				e		02 43 16.3	
LVV				eS	S	02 52 45.6	+4.3
LVV				MLR	MLR		
	comp=Z,100nm,19.5s						
LVV				MLR	MLR		
	comp=N,80nm,18.6s						
LVV				MLR	MLR		
	comp=E,70nm,18.7s						
YPP	Pitchstone Pla	78.35	44	eP	P	02 42 56.8	+2.9
	comp=E,11nm,0.9s						
H17A	Grant Village	78.40	44	P	P	02 42 56.9	+2.8
	baz=308,SNR=26						
H17A	Grant Village	78.40	44	eP	P	02 42 56.6	+2.4
	comp=E,52nm,1.0s						
CWC	Cottonwood Cre	78.49	54	P	P	02 42 55.7	+1.1
	baz=305						
IMW	Indian Meadow	78.50	44	eP	P	02 42 56.6	+1.9
	comp=E,28nm,0.9s						
BEL	Belsk	78.50	326	eP	P	02 42 54.5	+0.3
BEL	Belsk	78.50	326	eP	P	02 42 54.5	+0.3
FLWY	Flagg Ranch	78.52	44	eP	P	02 42 56.9	+2.2
	comp=E,47nm,1.2s						
SBC	Santa Barbara	78.53	56	P	P	02 42 56.1	+1.5
	baz=305						
FXWY	Fox Creek	78.61	44	eP	P	02 42 56.9	+1.7
	comp=E,18nm,1.0s						
GRAC	Grapevine Rang	78.64	53	P	P	02 42 56.6	+1.2
	baz=305						
ISA	Isabella, Lake	78.67	54	P	P	02 42 55.7	+0.1
	baz=305,SNR=7.7						
ISA	Isabella, Lake	78.67	54	eP	P	02 42 56.3	+0.7
	comp=E,14nm,1.1s						
ISA	Isabella, Lake	78.67	54	eP	P	02 42 56.3	+0.7
ISA				pmax	pmax		
	comp=Z,14nm,1.1s						
BSD	Bornholm Skovb	78.68	331	iP	P	02 42 54.8	-0.3
BSD				i		02 43 17.4	
BSD	Bornholm Skovb	78.68	331	iP	P	02 42 54.8	-0.3
BSD				i		02 43 17.4	
RLMT	Red Lodge	78.69	42	P	P	02 42 56.8	+1.2
	baz=309,SNR=17						
RLMT	Red Lodge	78.69	42	eP	P	02 42 56.9	+1.2
	comp=Z,29nm,1.1s						
MOOW	Moose Ponds	78.70	44	eP	P	02 42 57.5	+1.7
	comp=Z,14nm,1.0s						
HVU	Hansel Valley	78.71	47	eP	P	02 42 57.4	+1.7
	comp=Z,31nm,0.8s						
ARVC	Arvin	78.74	55	P	P	02 42 56.4	+0.6
	baz=305						
TPAW	Teton Pass	78.74	45	eP	P	02 42 57.8	+1.8
	comp=Z,19nm,0.8s						
SAIM	ADANA	78.79	309	iP	P	02 42 56.5	+0.3
TLCR		78.80	318	⇓iP	P	02 42 56.4	+0.5
TLCR		78.80	318	⇓P	P	02 42 56.4	+0.5
PRAR	RASCA	78.81	321	⇑iP	P	02 42 56.1	+0.1
SCZ2	Santa Cruz Isl	78.83	56	P	P	02 42 57.2	+0.8
	baz=305						
ANDN	Andirin	78.85	308	iP	P	02 42 57.1	+0.6
LOHW	Long Hollow	78.86	44	eP	P	02 42 58.5	+1.9
	comp=Z,13nm,1.0s						
SNOW	Snow King Moun	78.87	44	eP	P	02 42 58.6	+1.9
	comp=Z,19nm,0.9s						
REDW	Red Top Meadow	78.88	45	eP	P	02 42 58.2	+1.5
	comp=Z,28nm,1.2s						
DAC	Darwin (Calif)	78.90	54	eP	P	02 42 58.0	+1.0
	comp=Z,17nm,1.0s						
CDAG	Cicekdag	78.91	311	iP	P	02 42 57.1	+0.3
R11A	Troy Canyon, C	79.00	51	P	P	02 42 58.6	+1.2
	baz=306,SNR=39						
R11A	Troy Canyon, C	79.00	51	eP	P	02 42 58.8	+1.4
	comp=Z,35nm,1.0s						
FRB	Frobisher Bay	79.06	12	P	P	02 42 57.3	+0.3
	comp=Z,33nm,0.8s,baz=339,slow=6.2,SNR=40						
BGU	Big Grassy Mou	79.06	48	eP	P	02 42 59.3	+1.6
	comp=Z,14nm,0.8s						
AVNS	Nevsehir-Avano	79.09	310	iP	P	02 42 58.3	+0.5
KWP	Kalwaria Pacla	79.09	324	eP	P	02 42 58.0	+0.5
KWP	Kalwaria Pacla	79.09	324	eP	P	02 42 57.5	0.0
	comp=Z,588nm,1.1s						
KWP	Kalwaria Pacla	79.09	324	eP	P	02 42 58.0	+0.5
AHID	Auburn Hatcher	79.10	45	eP	P	02 42 59.5	+1.5
	comp=Z,17nm,0.9s						
MPMC	Manual Prospec	79.10	54	P	P	02 42 58.9	+0.9
	baz=306,SNR=16						
TESR	Tescani	79.13	320	⇓iP	P	02 42 57.9	+0.1
BIZ	Bicaz	79.14	320	⇑iP	P	02 42 58.2	+0.4
BLG	Laguna Peak, P	79.16	56	P	P	02 42 58.9	+0.7
	baz=305						
BUR08	Bucovina Ar. S	79.16	321	eP	P	02 42 58.6	+0.6
BUR04	Bucovina Ar. S	79.17	321	eP	P	02 42 58.0	-0.1
BURAR	Bucovina Array	79.17	321	⇑iP	P	02 42 58.3	+0.2
BURAR	Bucovina Array	79.17	321	⇑P	P	02 42 58.3	+0.2
CFR	Carcaliu	79.17	318	⇓iP	P	02 42 57.9	-0.1
CFR	Carcaliu	79.17	318	⇓P	P	02 42 57.9	-0.1
YAHY	KAYSERI_Yahyal	79.18	309	iP	P	02 42 58.4	+0.1
SPUT	South Promonto	79.19	47	eP	P	02 42 59.9	+1.5
	comp=Z,28nm,1.2s						
COP	Copenhagen	79.21	333	iP	P	02 42 58.0	0.0
COP	Copenhagen	79.21	333	iP	P	02 42 58.0	0.0
DGMT	Dagmar	79.22	38	P	P	02 42 58.5	+0.3
	baz=311						
FURC	Furnace Creek,	79.27	53	P	P	02 42 59.8	+1.1
	baz=306,SNR=10.0						
BR101	Keskin Array S	79.30	311	eP	P	02 42 59.1	+0.1
BR101				ePP	PP	02 45 59.8	+0.4
BR131	Keskin Array S	79.30	311	eP	P	02 42 59.4	+0.4
BR131				epP	pP	02 43 23.4	+1.2
BRTR	Keskin Array B	79.30	311	P	P	02 42 59.1	+0.1
	comp=Z,16nm,0.8s,baz=113,slow=4.6,SNR=58						
BRTR				PP	PP	02 45 59.8	+0.4
	comp=Z,3.8nm,0.9s,baz=76,slow=6.1,SNR=4.6						
BRTR				LR	LR	03 21 00.4	
	comp=Z,56nm,20.6s,baz=50,slow=38						
LRMC	Laurel Mtn Rad	79.30	54	P	P	02 42 59.9	+0.9
	baz=306						
PETR	Petresti	79.32	319	⇑iP	P	02 42 59.8	+1.0
SNCC	San Nicolas Is	79.33	57	P	P	02 43 00.5	+1.4
	baz=305						
LAO	LASA Array	79.34	40	P	P	02 42 59.9	+0.9
	baz=310,SNR=19						
LAO	LASA Array	79.34	40	eP	P	02 43 00.4	+1.5
	comp=Z,44nm,1.0s						
TPNV	Topopah Spring	79.39	52	P	P	02 43 00.6	+1.0
	baz=306						
TPNV	Topopah Spring	79.39	52	eP	P	02 43 00.8	+1.3
	comp=Z,35nm,0.8s						
TPNV	Topopah Spring	79.39	52	eP	P	02 43 00.9	+1.3
TPNV				pmax	pmax		
	comp=Z,35nm,0.8s						
EDW2	Edwards Air Fo	79.44	55	P	P	02 43 01.1	+1.3
	baz=305,SNR=9.7						
TIRR	Tirgusor	79.48	317	⇓iP	P	02 42 59.6	0.0
TIRR	Tirgusor	79.48	317	eP	P	02 42 59.8	+0.2
	comp=Z,15nm,0.9s						
TIRR	Tirgusor	79.48	317	⇓P	P	02 42 59.6	0.0
VRI	Vrincioaia	79.50	319	⇓iP	P	02 43 00.7	+0.9
VRI	Vrincioaia	79.50	319	⇓P	P	02 43 00.7	+0.9
BORG	Borgarnes	79.53	352	eP	P	02 43 01.9	+2.4
	comp=Z,26nm,1.0s						
HWUT	Hardware Ranch	79.53	46	eP	P	02 43 01.8	+1.6
	comp=Z,55nm,1.0s						
PLOR	Plostina	79.55	319	⇓iP	P	02 43 00.4	+0.3
PLOR	Plostina	79.55	319	⇓P	P	02 43 00.4	+0.3
LLD	Lille Linde	79.56	333	iP	P	02 42 59.5	-0.3
LLD	Lille Linde	79.56	333	eP	P	02 42 59.5	-0.3
DECC	Green Verdugo	79.57	56	P	P	02 43 01.2	+0.8
	baz=305						
HARR	Harsova	79.60	318	⇑iP	P	02 43 00.7	+0.4
HARR	Harsova	79.60	318	⇑P	P	02 43 00.7	+0.4
TLB	Topalu	79.60	318	⇑iP	P	02 43 00.4	+0.1
TLB	Topalu	79.60	318	⇑P	P	02 43 00.4	+0.1
DUG	Dugway, Tooele	79.64	48	P	P	02 43 02.2	+1.4
	baz=307,SNR=58						
DUG	Dugway, Tooele	79.64	48	eP	P	02 43 02.2	+1.4
	comp=Z,38nm,0.8s						
DUG	Dugway, Tooele	79.64	48	eP	P	02 43 02.3	+1.4
DUG				pmax	pmax		
	comp=Z,38nm,0.8s						
PASC	Pasadena Art C	79.72	56	eP	P	02 43 04.6	+3.4
ANGG	Ammassalik, Gr	79.73	359	eP	P	02 43 01.1	+0.6
	comp=Z,27nm,1.1s						
ANGG				epP	pP	02 43 24.0	+0.2
ANTO	Ankara	79.73	312	⇑iP	P	02 43 01.1	-0.2
ANTO	Ankara	79.73	312	eP	P	02 43 01.5	+0.2
	comp=Z,26nm,0.8s						
ANTO	Ankara	79.73	312	⇑P	P	02 43 01.1	-0.2
YURE	YUREGIR	79.75	308	iP	P	02 43 00.8	-0.5
BR231	Keskin MP Arra	79.76	312	eP	P	02 43 02.2	+0.8
MWC	Mount Wilson	79.78	55	eP	P	02 43 02.9	+1.2
	comp=Z,63nm,1.4s						
MWC	Mount Wilson	79.78	55	eP	P	02 43 02.9	+1.2
MWC				pmax	pmax		
	comp=Z,63nm,1.4s						
MUD	Monsted U'grnd	79.81	335	iP	P	02 43 00.8	-0.4
	comp=Z,23nm,1.1s						
MUD	Monsted U'grnd	79.81	335	iP	P	02 43 00.8	-0.4
MUD				pmax	pmax		
	comp=Z,23nm,1.1s						
AKSY	AKSARAY - Alti	79.86	310	iP	P	02 43 02.3	+0.3
YAYL	Yayladag	79.90	307	iP	P	02 43 03.2	+0.9
FMP	Fort Macarthur	79.91	56	P	P	02 43 03.0	+0.9
	baz=305						
TCUT	Toone Canyon	79.92	47	eP	P	02 43 04.0	+1.5
	comp=Z,52nm,0.8s						
ARCR	ARCALIA	79.96	321	⇑iP	P	02 43 03.2	+1.0
RAR	Rarotonga	79.96	125	LR	LR	03 12 14.3	
	comp=Z,81nm,20.6s,baz=313,slow=31						
UZH	Uzhgorod	79.96	323	d iP	P	02 43 03.0	+0.8
UZH				e		02 43 09.6	
UZH				e		02 43 23.0	
UZH				i		02 43 34.8	
PGOR	Pogoanele	79.98	318	⇓iP	P	02 43 03.9	+1.6
CTU	Camp Tracy	79.98	47	eP	P	02 43 04.4	+1.7
	comp=Z,24nm,0.9s						
BW06	Boulder Array	79.99	44	P	P	02 43 03.3	+0.5
	baz=309						
BW06	Boulder Array	79.99	44	eP	P	02 43 03.3	+0.5
	comp=Z,14nm,0.9s						
GSC	Goldstone, Bar	79.99	54	P	P	02 43 03.7	+0.9
	baz=306,SNR=13						
GSC	Goldstone, Bar	79.99	54	eP	P	02 43 03.8	+1.0
	comp=Z,35nm,1.3s						
GSC	Goldstone, Bar	79.99	54	eP	P	02 43 03.8	+1.0
GSC				pmax	pmax		
	comp=Z,35nm,1.3s						
PD31	Pinedale Array	79.99	44	eP	P	02 43 03.3	+0.5
PDAR	Pinedale Array	79.99	44	P	P	02 43 03.3	+0.5
	comp=Z,6.6nm,0.6s,baz=264,slow=1.9,SNR=78						
PDAR				PKKPbc	PKKPbc	03 01 46.4	+0.2
	comp=Z,0.3nm,0.7s,baz=187,slow=1.5,SNR=4.0						
PDAR				LR	LR	03 13 06.2	
	comp=Z,40nm,21.4s,baz=334,slow=32						
PDAR	Pinedale Array	79.99	44	eP	P	02 43 02.6	-0.2
PSUT	Pine Spring	79.99	50	eP	P	02 43 04.2	+1.4
	comp=Z,36nm,1.1s						
SHOC	Shoshone, Teco	79.99	53	P	P	02 43 03.6	+1.0
	baz=306						
BMR	Baia Mare	80.00	322	⇓iP	P	02 43 05.3	+2.8
BMR	Baia Mare	80.00	322	⇓P	P	02 43 05.3	+2.8
CIS	Catalina Islan	80.00	56	P	P	02 43 03.1	+0.4
	baz=305						
ICOR	Ion Corvin	80.03	317	⇑iP	P	02 43 03.4	+0.8
GULE	Gulek	80.03	309	iP	P	02 43 03.0	0.0
BFSC	Mount Baldy Ra	80.04	55	P	P	02 43 03.8	+0.8
	baz=306,SNR=6.6						
OJC	Ojcow	80.07	326	eP	P	02 43 03.0	+0.2
OJC	Ojcow	80.07	326	eP	P	02 43 02.9	+0.2
	comp=Z,36nm,1.0s						
OJC	Ojcow	80.07	326	eP	P	02 43 02.9	+0.1
OJC				pmax	pmax		
	comp=Z,36nm,1.0s						
BREC	Barre Substati	80.07	56	eP	P	02 43 06.0	+2.9
ISR	Istrita	80.08	319	⇑iP	P	02 43 04.3	+1.3
ISR	Istrita	80.08	319	⇑P	P	02 43 04.4	+1.4
RRX	Edison Barstow	80.11	54	P	P	02 43 04.5	+1.1
	baz=306						
DOPR	Dopca	80.15	320	⇓iP	P	02 43 05.5	+2.2
MLR	Muntele Rosu	80.16	319	P	P	02 43 03.7	+0.2
	comp=Z,2.1nm,0.9s,baz=28,slow=5.0,SNR=11						
MLR				LR	LR	03 22 11.0	
	comp=Z,32nm,18.4s,baz=46,slow=38						
MLR	Muntele Rosu	80.16	319	⇓iP	P	02 43 04.2	+0.7
MLR	Muntele Rosu	80.16	319	eP	P	02 43 03.6	+0.1
	comp=Z,38nm,1.4s						
MLR	Muntele Rosu	80.16	319	⇓P	P	02 43 04.2	+0.7
TRPA	Tarpa	80.18	323	⇑iP	P	02 43 04.0	+0.6
TRPA	Tarpa	80.18	323	⇓eP	P	02 43 04.6	+1.2
CRVS	Cervenica-Dubn	80.18	324	eP	P	02 43 03.9	+0.5
CRVS				pmax	pmax		
	comp=Z,19nm,1.2s						
CRVS	Cervenica-Dubn	80.18	324	eP	P	02 43 03.9	+0.5
NLU	North Lily Min	80.23	48	eP	P	02 43 06.0	+1.9
	comp=Z,26nm,0.9s						
RAYN	Ar Rayn	80.30	292	eP	P	02 43 04.6	+0.1
	comp=Z,68nm,1.0s						
RAYN	Ar Rayn	80.30	292	iP	P	02 43 04.8	+0.2
	SNR=7.2						
RAYN	Ar Rayn	80.30	292	eP	P	02 43 04.6	+0.1
RAYN				pmax	pmax		
	comp=Z,68nm,1.0s						
SHPR	Sheep Range	80.36	52	eP	P	02 43 06.4	+1.5
	comp=Z,26nm,0.9s						
KERG	Konya-Eregli	80.37	309	iP	P	02 43 04.9	+0.1
NIE	Niedzica	80.39	325	eP	P	02 43 05.1	+0.6
NIE	Niedzica	80.39	325	eP	P	02 43 05.1	+0.6
SECR		80.39	319	⇓iP	P	02 43 05.6	+1.0
MPU	Maple Canyon	80.46	48	eP	P	02 43 06.8	+1.5
	comp=Z,36nm,0.8s						
TUQ	Turquoise Moun	80.49	53	P	P	02 43 06.5	+1.0
	baz=306,SNR=9.5						
HEC	Hector,Ludlow	80.58	54	P	P	02 43 06.9	+1.0
	baz=306,SNR=15						
VOIR		80.68	320	⇑iP	P	02 43 06.4	+0.2
VOIR		80.68	320	⇑P	P	02 43 06.4	+0.2
MURC	Murrieta	80.72	56	P	P	02 43 07.3	+0.7
	baz=306						
CCUT	Cedar City	80.89	50	eP	P	02 43 09.2	+1.5
	comp=Z,28nm,1.0s						
KIZK	Mersin	80.92	308	iP	P	02 43 04.7	-2.8
ARR	Arges	80.94	320	⇓iP	P	02 43 08.7	+1.1
LANS	Liptovska Anna	80.96	325	eP	P	02 43 09.0	+1.4
LANS	Liptovska Anna	80.96	325	eP	P	02 43 09.0	+1.4
KDHN	Kadinhani	80.97	311	iP	P	02 43 06.7	-1.3
DRGR		80.99	322	⇑iP	P	02 43 07.7	-0.2
DRGR		80.99	322	⇑P	P	02 43 07.7	-0.2
SZCU	Shurtz Canyon	81.04	50	eP	P	02 43 09.8	+1.3
	comp=Z,22nm,1.0s						
MSU	Marysvale	81.05	49	eP	P	02 43 10.4	+1.9
GMRC	Granite Mounta	81.05	54	P	P	02 43 09.5	+1.0
	baz=307,SNR=18						
TMUT	Trail Mountain	81.16	48	eP	P	02 43 10.6	+1.4
	comp=Z,34nm,1.4s						
KONT	Konya--Tatoy	81.17	310	iP	P	02 43 08.6	-0.4
109C	Camp Elliot, M	81.20	56	P	P	02 43 10.0	+0.9
	baz=306						
KSP	Ksiaz	81.21	328	eP	P	02 43 08.9	+0.1
KSP	Ksiaz	81.21	328	eP	P	02 43 08.9	+0.1
PFO	Pinyon Flats O	81.21	55	P	P	02 43 10.1	+0.8
	baz=306,SNR=8.8						
PFO	Pinyon Flats O	81.21	55	eP	P	02 43 10.3	+1.0
	comp=Z,43nm,1.4s						
PFO	Pinyon Flats O	81.21	55	eP	P	02 43 10.3	+1.0
PFO				pmax	pmax		
	comp=Z,43nm,1.4s						
XPFO	Piæon Flat	81.21	55	eP	P	02 43 10.3	+1.0
	comp=Z,37nm,1.4s						
LDFC	Landfair	81.24	53	eP	P	02 43 10.6	+1.1
	comp=Z,38nm,1.0s						
KMER	Konya-Meram	81.27	310	iP	P	02 43 09.4	-0.1
LCMT	Little Creek M	81.29	51	eP	P	02 43 11.3	+1.6
	comp=Z,43nm,0.9s						
BELC	Belle Mtn. Jos	81.29	55	P	P	02 43 10.4	+0.6
	baz=306,SNR=10						
MTPU	Mount Pierson	81.33	49	eP	P	02 43 12.1	+1.9
	comp=Z,44nm,1.0s						
P17A	Butcher Ranch,	81.34	48	eP	P	02 43 11.5	+1.5
	comp=Z,55nm,0.8s						
LOT	Lotru	81.35	320	⇑iP	P	02 43 10.6	+0.8
MORC	Moravsky Berou	81.41	326	⇑iP	P	02 43 10.3	+0.3
MORC	Moravsky Berou	81.41	326	eP	P	02 43 10.5	+0.5
	comp=Z,59nm,1.0s						
MORC	Moravsky Berou	81.41	326	⇑P	P	02 43 10.3	+0.3
MORC	Moravsky Berou	81.41	326	eP	P	02 43 09.9	-0.1
MORC				e		02 43 33.1	
Q16A	Castle Valley	81.42	48	eP	P	02 43 12.2	+1.7
	comp=Z,41nm,1.1s						
GULN	MERSIN_Gulnar	81.48	308	iP	P	02 43 08.9	-1.6
P18A	Preston Nutter	81.54	47	eP	P	02 43 12.7	+1.5
	comp=Z,68nm,1.3s						
KRLC	Kraliky	81.54	327	eP	P	02 43 11.2	+0.5
KRLC	Kraliky	81.54	327	eP	P	02 43 11.2	+0.5
DPC	Dobruska-Polom	81.55	327	eP	P	02 43 11.4	+0.7
DPC	Dobruska-Polom	81.55	327	eP	P	02 43 11.4	+0.7
KNB	Kanab	81.56	51	eP	P	02 43 12.3	+1.1
	comp=Z,61nm,1.0s						
KNB	Kanab	81.56	51	eP	P	02 43 12.3	+1.1
KNB				pmax	pmax		
	comp=Z,61nm,1.0s						
UPC	Upice	81.57	328	eP	P	02 43 11.6	+0.8
UPC	Upice	81.57	328	eP	P	02 43 11.6	+0.8
ERMK	Ermenek	81.61	309	iP	P	02 43 10.7	-0.8
BAR	Barrett	81.61	56	eP	P	02 43 12.5	+1.2
	comp=Z,15nm,0.9s						
PKCU	Pink Cliffs	81.62	50	eP	P	02 43 14.2	+2.5
	comp=Z,17nm,0.8s						
PSZ	Piszkesteto	81.62	324	⇑iP	P	02 43 11.9	+0.7
PSZ	Piszkesteto	81.62	324	⇓eP	P	02 43 12.5	+1.3
PSZ	Piszkesteto	81.62	324	eP	P	02 43 11.9	+0.7
	comp=Z,22nm,0.9s						
PSZ	Piszkesteto	81.62	324	⇑P	P	02 43 11.9	+0.7
ASF	Jabal al Asfar	81.64	303	P	P	02 43 12.0	+0.4
	comp=Z,12nm,0.8s,baz=20,slow=1.1,SNR=29						
ASF	Jabal al Asfar	81.64	303	P	P	02 43 12.0	+0.4
ASF				pmax	pmax		
	comp=Z,12nm,0.8s						
MONP2	Monument Peak	81.66	56	P	P	02 43 12.5	+0.7
	baz=306						
ZIMR		81.67	318	⇑iP	P	02 43 11.9	+0.5
ZIMR		81.67	318	P	P	02 43 11.9	+0.5
SRU	San Rafael Swe	81.70	48	eP	P	02 43 13.1	+1.2
	comp=Z,48nm,0.7s						
SRU				epP	pP	02 43 36.6	+1.4
VYHS	Vyhne	81.72	325	eP	P	02 43 12.0	+0.4
VYHS				pmax	pmax		
	comp=Z,9.0nm,1.0s						
VYHS	Vyhne	81.72	325	eP	P	02 43 12.0	+0.4
NEE2	Needles Airpor	81.75	53	P	P	02 43 12.9	+0.9
	baz=307						
IRM	Iron Mountain	81.77	54	P	P	02 43 13.1	+1.0
	baz=307,SNR=9.7						
K22A	Casper	81.79	43	P	P	02 43 12.4	+0.2
	baz=311						
K22A	Casper	81.79	43	eP	P	02 43 13.1	+0.8
	comp=Z,23nm,1.0s						
BC3	Big Chuckawall	81.86	55	P	P	02 43 13.7	+0.9
	baz=307,SNR=12						
MDND	Maddock	81.89	36	P	P	02 43 13.1	+0.5
	baz=315,SNR=8.6						
MDND	Maddock	81.89	36	eP	P	02 43 13.2	+0.6
	comp=Z,57nm,0.8s						
ULM	Lac du Bonnet	81.90	32	P	P	02 43 12.2	-0.3
	comp=Z,19nm,0.9s,baz=314,slow=6.2,SNR=18						
ULM	Lac du Bonnet	81.90	32	eP	P	02 43 12.3	-0.2
	comp=Z,26nm,0.9s						
ULM	Lac du Bonnet	81.90	32	eP	P	02 43 12.3	-0.2
ULM				pmax	pmax		
	comp=Z,26nm,0.9s						
JAVC	Velka Javorina	82.01	326	eP	P	02 43 14.4	+1.2
IKP	In-Ko-Pah, Jac	82.02	56	P	P	02 43 14.5	+0.9
	baz=307,SNR=7.5						
RWWY	Rawlins	82.02	44	eP	P	02 43 14.3	+0.7
	comp=Z,37nm,0.8s						
W13A	Hualapai Mount	82.03	53	eP	P	02 43 14.8	+1.1
	comp=Z,12nm,1.1s						
SWSC	Sam W. Stewart	82.05	55	P	P	02 43 14.2	+0.7
	baz=307						
MMAI	Mount Meron Ar	82.15	305	P	P	02 43 14.2	0.0
	comp=Z,9.8nm,0.7s,baz=55,slow=5.5,SNR=13						
MMAI				LR	LR	03 22 13.7	
	comp=Z,101nm,21.5s,baz=205,slow=37						
VRAC	Vranov	82.18	326	⇑iP	P	02 43 14.3	+0.3
VRAC	Vranov	82.18	326	⇑P	P	02 43 14.3	+0.3
VRAC	Vranov	82.18	326	eP	P	02 43 14.1	+0.1
RSSD	Black Hills	82.19	41	P	P	02 43 14.4	0.0
	baz=312						
RSSD	Black Hills	82.19	41	eP	P	02 43 15.0	+0.6
	comp=Z,17nm,1.3s						
RSSD	Black Hills	82.19	41	eP	P	02 43 15.0	+0.6
RSSD				pmax	pmax		
	comp=Z,17nm,1.3s						
PVCC	Panska Ves	82.19	328	eP	P	02 43 15.0	+1.0
PVCC	Panska Ves	82.19	328	eP	P	02 43 15.0	+1.0
BRG	Berggiesshubel	82.20	329	iP	P	02 43 14.0	0.0
	comp=Z,9.7nm,0.9s						
BRG				e		02 43 37.1	
	comp=Z,15nm,1.1s						
BRG				ePP	PP	02 46 25.4	+2.7
	comp=Z,12nm,1.4s						
BRG				S	S	02 53 21.0	-0.9
BRG				SS	SS	02 58 30.0	-12
	comp=N,130nm,12.1s						
	comp=E,62nm,11.9s						
	comp=Z,125nm,15.9s						
BRG	Berggiesshubel	82.20	329	iP	P	02 43 14.0	0.0
BRG				e		02 43 37.1	
BRG				e		02 46 25.4	
BRG				S	S	02 53 21.0	-0.9
BRG				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BRG				pmax	pmax		
	comp=Z,15nm,1.1s						
BRG				pmax	pmax		
	comp=Z,12nm,1.4s						
BRG				MLR	MLR		

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            comp=N,130nm,12.1s
BRG                                  MLR      MLR
            comp=E,62nm,11.9s
BRG                                  MLR      MLR
            comp=Z,125nm,15.9s
U15A  North Rim          82.25  51   eP       P        02 43 16.6 +1.6
            comp=Z,25nm,1.0s
CLL   Collm              82.27 330   i P      P        02 43 13.9 -0.5
            comp=Z,23nm,1.0s
CLL                                  i pP     pP       02 43 37.6 -0.1
            comp=Z,26nm,1.0s
CLL                                  ePP      PP       02 46 26.0 +2.7
            comp=Z,10.0nm,1.1s
CLL                                  eS       S        02 53 22.0 -0.5
CLL                                  eSS      SS       02 58 42.0 -1.2
CLL                                  LmH               03 22 00.0
            comp=N,100nm,18.8s
CLL                                  LmH               03 22 00.0
            comp=E,200nm,20.6s
CLL   Collm              82.27 330   eP       P        02 43 14.1 -0.3
            comp=E,18nm,0.8s
CLL   Collm              82.27 330   eP       P        02 43 14.1 -0.3
CLL                                  pmax     pmax
            comp=Z,18nm,0.8s
MAMC  Mammari            82.31 308   P        P        02 43 15.7 +0.8
BUD   Budapest           82.34 324⇓eP       P        02 43 15.9 +1.1
PDMCI Parker Dam,Lak     82.34  53   P        P        02 43 16.0 +0.9
            baz=307,SNR=5.9
BZS   Buzias             82.35 321⇑iP       P        02 43 14.4 -0.5
BZS   Buzias             82.35 321 ⇑P       P        02 43 14.4 -0.5
CSS   Mathiatis          82.36 307   eP       P        02 43 15.2 -0.1
            comp=Z,11nm,0.8s
CSS   Mathiatis          82.36 307   P        P        02 43 15.5 +0.3
CSS   Mathiatis          82.36 307   P        P        02 43 15.1 -0.1
SMOL  Smolenice          82.37 326   eP       P        02 43 16.4 +1.4
SMOL  Smolenice          82.37 326   eP       P        02 43 16.4 +1.4
O20A  White River Ci     82.42  46   P        P        02 43 16.5 +0.9
            baz=310,SNR=24
O20A  White River Ci     82.42  46   eP       P        02 43 16.5 +0.9
            comp=Z,38nm,0.9s
Y12C  Blythe             82.42  54   P        P        02 43 16.5 +1.0
            baz=307
Y12C  Blythe             82.42  54   eP       P        02 43 17.1 +1.6
            comp=Z,34nm,1.4s
HERR  Herculane          82.44 320⇓iP       P        02 43 15.2 -0.2
KRUC  Moravsky           82.45 326   eP       P        02 43 15.4  0.0
MODS  Modra-Piesok       82.54 326   eP       P        02 43 16.6 +0.7
MODS                                 pmax     pmax
            comp=Z,245nm,3.3s
MODS  Modra-Piesok       82.54 326   eP       P        02 43 16.6 +0.7
GOPC  GO Pecny, Ondr     82.54 328   eP       P        02 43 16.2 +0.3
GOPC  GO Pecny, Ondr     82.54 328   eP       P        02 43 16.2 +0.3
PRU   Pruhonice          82.60 328   eP       P        02 43 16.5 +0.4
PRU                                  AMS      AMS      03 24 10.0
            comp=Z,100nm,17.7s
PRU   Pruhonice          82.60 328   eP       P        02 43 16.5 +0.4
PRU                                  MLR      MLR
            comp=Z,100nm,17.7s
GLA   Glamis             82.64  55   P        P        02 43 17.8 +1.1
            baz=307
GLA   Glamis             82.64  55   eP       P        02 43 18.3 +1.6
            comp=Z,39nm,1.3s
GLA   Glamis             82.64  55   eP       P        02 43 18.3 +1.6
GLA                                  pmax     pmax
            comp=Z,39nm,1.3s
ALFC  Alefka             82.72 308   P        P        02 43 17.2 +0.1
SZAC  Souni              82.78 307   P        P        02 43 18.1 +0.7
CSKK  Csˆ‡kako           82.80 324⇓eP       P        02 43 17.9 +0.7
MDVR  Moldovita          82.87 321⇓iP       P        02 43 17.6 -0.1
PV09  Paradox Valley     82.92  48   eP       P        02 43 19.8 +1.4
PV09                                 epP      pP       02 43 42.7 +0.9
KDZ   Kurdzhali          82.96 317   P        P        02 43 19.0 +0.8
AKMC  Akamas             82.97 308   P        P        02 43 18.1 -0.3
PV21  Cone Mtn., Par     82.98  47   eP       P        02 43 20.0 +1.3
            comp=Z,62nm,0.8s
PV21                                 epP      pP       02 43 43.1 +1.0
PV23  Carpenter Ridg     83.03  48   eP       P        02 43 20.4 +1.4
            comp=Z,126nm,1.0s
PPCY  Paphos             83.05 308   P        P        02 43 18.3 -0.4
PV10  Paradox Valley     83.06  48   eP       P        02 43 20.9 +1.8
            comp=Z,162nm,0.8s
PV14  Lion Creek, Pa     83.07  48   eP       P        02 43 20.5 +1.4
            comp=Z,124nm,0.9s
A33A  Warroad            83.07  33   P        P        02 43 18.0 -0.6
            baz=317
ALN   Alexandroupoli     83.10 316   eP       P        02 43 19.6 +0.7
            comp=Z,11nm,0.9s
ALN   Alexandroupoli     83.10 316   eP       P        02 43 19.6 +0.7
ALN                                  pmax     pmax
            comp=Z,11nm,0.9s
PV22  Blue Mesa, Par     83.11  47   eP       P        02 43 20.6 +1.3
            comp=Z,58nm,1.0s
PV20  West Nyswonger     83.13  48   eP       P        02 43 21.0 +1.6
            comp=Z,107nm,0.9s
PV20                                 epP      pP       02 43 44.8 +2.0
PV04  Paradox Valley     83.13  48   eP       P        02 43 20.7 +1.4
            comp=Z,84nm,1.1s
PV19  Morning Glory      83.14  48   eP       P        02 43 20.8 +1.3
            comp=Z,94nm,0.9s
PV17  East Wray Mesa     83.17  48   eP       P        02 43 21.1 +1.5
            comp=Z,116nm,0.9s
PV16  Nyswonger Mesa     83.18  48   eP       P        02 43 21.0 +1.3
            comp=Z,64nm,0.9s
PV11  David Mesa, Pa     83.21  48   eP       P        02 43 21.2 +1.4
            comp=Z,92nm,1.0s
PV05  Paradox Valley     83.21  48   eP       P        02 43 21.3 +1.5
            comp=Z,131nm,0.8s
PV18  Skein Mesa, Pa     83.22  48   eP       P        02 43 21.2 +1.4
            comp=Z,88nm,0.9s
RDO   Rodhopi            83.22 316   P        P        02 43 19.5  0.0
RDO   Rodhopi            83.22 316   P        P        02 43 19.5  0.0
PV12  Saucer Basin,      83.24  48   eP       P        02 43 21.7 +1.7
            comp=Z,68nm,0.9s
PV03  Paradox Valley     83.25  48   eP       P        02 43 21.3 +1.3
            comp=Z,85nm,1.1s
PV07  Paradox Valley     83.26  47   eP       P        02 43 21.6 +1.5
            comp=Z,42nm,1.3s
N23A  Red Feather La     83.26  44   eP       P        02 43 21.6 +1.5
            comp=Z,67nm,1.1s
PHWY  Pilot Hill         83.27  44   eP       P        02 43 21.2 +1.1
            comp=Z,20nm,1.0s
Y14A  Wickenburg         83.31  53   eP       P        02 43 21.7 +1.5
            comp=Z,21nm,1.0s
AGMN  Agassiz Nation     83.33  34   P        P        02 43 19.4 -0.6
            baz=317,SNR=11
AGMN  Agassiz Nation     83.33  34   eP       P        02 43 19.5 -0.4
            comp=Z,18nm,0.9s
PV13  Radium Mtn., P     83.33  48   eP       P        02 43 21.8 +1.3
            comp=Z,89nm,0.9s
PV13                                 epP      pP       02 43 45.0 +1.1
PV02  Paradox Valley     83.35  48   eP       P        02 43 21.9 +1.4
            comp=Z,64nm,1.1s
SOP   Sopron             83.37 325⇓eP       P        02 43 21.6 +1.4
WUAZ  Wupatki            83.40  51   P        P        02 43 22.1 +1.3
            baz=309,SNR=44
WUAZ  Wupatki            83.40  51   eP       P        02 43 22.1 +1.3
            comp=Z,46nm,1.0s
PV15  Paradox Valley     83.42  47   eP       P        02 43 22.2 +1.2
            comp=Z,46nm,1.1s
MORH  Mˆ‡rˆ¡gy, Hung     83.42 323⇓eP       P        02 43 20.9 +0.5
PV01  Paradox Valley     83.50  48   eP       P        02 43 22.3 +1.0
            comp=Z,66nm,0.9s
CONA  Conrad Observa     83.52 326   i PcP    P        02 43 21.8 +0.8
            comp=Z,12nm,1.1s,SNR=20
113A  Mohawk Valley,     83.52  54   eP       P        02 43 22.4 +1.2
            comp=Z,14nm,0.9s
VTS   Vitosha            83.56 318⇑iP       P        02 43 22.0 +0.5
VTS   Vitosha            83.56 318   eP       P        02 43 21.9 +0.5
            comp=Z,61nm,1.2s
VTS   Vitosha            83.56 318   P        P        02 43 21.0 -0.4
VTS   Vitosha            83.56 318   P        P        02 43 21.9 +0.5
VTS   Vitosha            83.56 318 ⇑P       P        02 43 22.0 +0.5
LBZ   Lake Benmore       83.63 159   eP       P        02 43 21.9 +0.7
            comp=Z,39nm,1.1s
KHC   Kasperske Hory     83.65 328   eP       P        02 43 21.9 +0.3
KHC                                  epP      pP       02 43 46.1 +1.0
KHC                                  ePP      PP       02 46 40.0 +5.3
KHC                                  AMS      AMS      03 26 10.0
            comp=Z,200nm,14.9s
KHC   Kasperske Hory     83.65 328   eP       P        02 43 21.8 +0.1
            comp=Z,6.8nm,0.9s
KHC   Kasperske Hory     83.65 328   eP       P        02 43 21.9 +0.3
KHC                                  e                 02 43 46.1
KHC                                  e                 02 46 40.0
KHC                                  MLR      MLR
            comp=Z,200nm,14.9s
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B34A  Aery, Baudette     83.74  33   P        P        02 43 21.5 -0.5
            baz=318
C33A  Trail              83.76  34   P        P        02 43 21.6 -0.6
            baz=317
SMCO  Snowmass           83.78  46   eP       P        02 43 24.2 +1.3
            comp=Z,35nm,1.0s
GEC2  GERESS Array S     83.81 328   eP       P        02 43 22.6 +0.1
            comp=Z,8.9nm,0.8s
GEC2  GERESS Array S     83.81 328   eP       P        02 43 22.6 +0.1
GEC2                                 pmax     pmax
            comp=Z,9.0nm,0.8s
GERES GERESS Array B     83.81 328   P        P        02 43 22.5 -0.1
            comp=Z,7.1nm,0.8s,baz=35,slow=4.9,SNR=50
GERES                                PKKPbc   PKKPbc   03 01 38.1 +0.5
            comp=Z,0.3nm,0.6s,baz=188,slow=5.4,SNR=5.0
GERES                                LR       LR       03 24 52.8
            comp=Z,141nm,18.0s,baz=70,slow=39
GEA0  GERESS Array S     83.82 328   eP       P        02 43 22.1 -0.5
IVI   Ivigtut            83.95   4   eP       P        02 43 23.4 +0.6
            comp=Z,25nm,1.0s
IVI                                  epP      pP       02 43 47.1 +0.9
KSL   Kastellorizon      84.02 310   P        P        02 43 22.8 -0.9
KSL   Kastellorizon      84.02 310   P        P        02 43 22.8 -0.9
NVR   Nevrokopi          84.03 317   P        P        02 43 23.8 +0.1
NVR   Nevrokopi          84.03 317   P        P        02 43 23.8 +0.1
X16A  Lo Mia Camp, P     84.04  52   eP       P        02 43 25.5 +1.4
            comp=Z,26nm,1.0s
KKB   Krupnik            84.12 318   P        P        02 43 24.0 -0.1
MVCO  Mesa Verde         84.13  48   P        P        02 43 25.6 +1.0
            baz=310,SNR=26
MVCO  Mesa Verde         84.13  48   eP       P        02 43 25.8 +1.2
            comp=Z,37nm,0.9s
MVCO                                 epP      pP       02 43 49.1 +1.1
BEHE  Becsehely          84.15 324⇓eP       P        02 43 24.9 +0.8
ARSA  Arzberg            84.17 326   i P      P        02 43 24.7 +0.5
            comp=Z,6.6nm,0.8s,SNR=12
ISCO  Idaho Springs      84.17  45   P        P        02 43 25.9 +1.1
            baz=312,SNR=16
ISCO  Idaho Springs      84.17  45   eP       P        02 43 25.7 +0.9
            comp=Z,16nm,0.9s
ISCO  Idaho Springs      84.17  45   eP       P        02 43 25.7 +0.9
ISCO                                 pmax     pmax
            comp=Z,16nm,0.9s
YER   Yerkesik           84.20 312   P        P        02 43 25.1 +0.4
YER   Yerkesik           84.20 312   P        P        02 43 25.1 +0.4
DIVS  Divibare           84.23 321   eP       P        02 43 24.5 -0.2
            comp=Z,39nm,0.9s
DIVS                                 epP      pP       02 43 48.0 -0.2
C34A  RKJ Ranch, Bem     84.24  34   P        P        02 43 23.9 -0.7
            baz=318
GRFO  Grafenberg         84.24 329   eP       P        02 43 24.5 -0.1
            comp=Z,26nm,0.9s
GRFO  Grafenberg         84.24 329   eP       P        02 43 24.5 -0.1
GRFO                                 pmax     pmax
            comp=Z,27nm,0.9s
B35A  Bob, Littlefor     84.24  33   P        P        02 43 24.4 -0.2
            baz=318,SNR=16
B35A  Bob, Littlefor     84.24  33   eP       P        02 43 24.4 -0.2
            comp=Z,30nm,1.0s
MOA   Molln              84.30 327   i PcP    P        02 43 26.1 +1.1
            comp=Z,9.0nm,0.8s,SNR=16
SRS   Serrai             84.34 317   P        P        02 43 24.8 -0.5
SRS   Serrai             84.34 317   P        P        02 43 24.8 -0.5
SRS   Serrai             84.34 317   P        P        02 43 24.8 -0.5
PMOR  Pomariorio Ree     84.50 112   eT       T        04 16 01.6
            comp=Z,38nm,0.2s
F32A  Veblen             84.50  36   P        P        02 43 25.5 -0.5
            baz=316
SUSD  Miller             84.61  38   P        P        02 43 26.0 -0.6
            baz=315
C35A  Jirik Farms, M     84.62  33   P        P        02 43 26.0 -0.6
            baz=318,SNR=8.9
214A  Organ Pipe Nat     84.66  55   P        P        02 43 27.8 +0.7
            baz=308
W18A  Petrified Fore     84.69  51   P        P        02 43 28.2 +0.9
            baz=310
STIP  Stip               84.73 318   i P      P        02 43 26.1 -1.1
G32A  Webster            84.76  37   P        P        02 43 27.3  0.0
            baz=316
G32A  Webster            84.76  37   eP       P        02 43 28.0 +0.7
            comp=Z,75nm,1.0s
VAY   Valandovo          84.77 318   i P      P        02 43 28.3 +0.9
S22A  4UR Ranch, Cre     84.80  47   P        P        02 43 29.4 +1.4
            baz=311
S22A  4UR Ranch, Cre     84.80  47   eP       P        02 43 29.2 +1.2
            comp=Z,29nm,0.9s
PERS  Pernice            84.81 325   i P      P        02 43 27.3 -0.3
PERS                                 i pP     pP       02 43 50.1 -0.9
SOKA  Soboth             84.82 325   i P      P        02 43 27.6  0.0
            comp=Z,24nm,0.8s,SNR=36
PPT2  Papeete2           84.84 115   eLR      LR       03 09 41.0
            comp=Z,674nm,34.0s,baz=302
PPT2  Papeete2           84.84 115   eT       T        04 16 22.3
            comp=Z,8.2nm,0.3s
PLG   Polygyros          84.92 317   P        P        02 43 28.1 -0.1
PLG   Polygyros          84.92 317   P        P        02 43 28.1 -0.1
PLG   Polygyros          84.92 317   P        P        02 43 28.1 -0.1
X18A  Snowflake          84.93  51   eP       P        02 43 30.1 +1.5
            comp=Z,22nm,1.3s
SKO   Skopje             84.94 319   i P      P        02 43 29.3 +1.0
E34A  Wadena             84.96  35   P        P        02 43 27.3 -0.9
            baz=318
TIAR  Tiarei             84.99 115   eT       T        04 16 33.7
            comp=Z,5.3nm,0.3s
Q24A  Divide             84.99  45   P        P        02 43 29.7 +0.7
            baz=312,SNR=15
GOLS  Golise             85.03 325   i P      P        02 43 28.2 -0.4
GOLS                                 i pP     pP       02 43 51.5 -0.6
D35A  Remer              85.05  34   P        P        02 43 28.1 -0.6
            baz=318
C36A  Pine Crest Far     85.09  33   P        P        02 43 28.4 -0.5
            baz=319,SNR=7.9
OBKA  Obir               85.17 326   i P      P        02 43 29.2 -0.2
            comp=Z,8.4nm,0.7s
BLY   Banja Luka         85.19 323⇑iP       P        02 43 28.0 -1.4
BLY   Banja Luka         85.19 323   eP       P        02 43 28.9 -0.5
            comp=Z,16nm,0.9s
E35A  Pequot Lakes       85.28  34   P        P        02 43 29.2 -0.6
            baz=318
KBA   Koelnbreinsper     85.29 327   i P      P        02 43 30.1 -0.1
            comp=Z,12nm,0.7s,SNR=9.3
G33A  Ortonville         85.32  36   P        P        02 43 30.1  0.0
            baz=317,SNR=17
H32A  Carlson Farm,      85.33  37   P        P        02 43 29.7 -0.5
            baz=316
D36A  Goodland           85.38  33   P        P        02 43 29.5 -0.9
            baz=319
D36A  Goodland           85.38  33   eP       P        02 43 30.2 -0.2
            comp=Z,16nm,0.9s
OZLJ  Ozalj              85.39 324   P        P        02 43 30.1 -0.3
C37A  Embarrass          85.40  32   P        P        02 43 29.6 -0.8
            baz=320
OGNE  Ogallala           85.42  42   P        P        02 43 30.8  0.0
            baz=314
F34A  Alexandria         85.44  35   P        P        02 43 30.6 -0.1
            baz=318,SNR=5.0
KRUS  Krusevo            85.46 319   i P      P        02 43 30.8 -0.2
MYKA  Terra Mystica      85.49 326   i P      P        02 43 30.2 -0.8
            comp=Z,8.9nm,0.5s,SNR=8.6
LJU   Ljubljana          85.52 325   i P      P        02 43 30.4 -0.7
LJU                                  i pP     pP       02 43 53.6 -1.0
EYMN  Ely                85.53  32   P        P        02 43 30.9 -0.2
            baz=320,SNR=9.6
EYMN  Ely                85.53  32   eP       P        02 43 31.4 +0.3
            comp=Z,24nm,0.9s
SDCO  Great Sand Dun     85.59  46   P        P        02 43 33.0 +1.1
            baz=312,SNR=34
SDCO  Great Sand Dun     85.59  46   eP       P        02 43 33.1 +1.1
            comp=Z,22nm,1.0s
MEM   Membach            85.59 333 ⇓P       P        02 43 31.1 -0.2
            comp=Z,15nm,1.1s
LIT   Litokhoron         85.65 317   eP       P        02 43 31.4 -0.4
            comp=Z,28nm,0.8s
LIT                                  epP      pP       02 43 55.3 -0.1
LIT   Litokhoron         85.65 317   P        P        02 43 30.9 -0.9
G34A  Benson             85.67  36   P        P        02 43 31.9 +0.1
            baz=317,SNR=12
F35A  Swanville          85.72  35   P        P        02 43 31.6 -0.4
            baz=318
D37A  Cotton             85.73  33   P        P        02 43 31.6 -0.4
            baz=320
TUC   Tucson             85.78  53   P        P        02 43 33.7 +1.0
            baz=309
TUC   Tucson             85.78  53   eP       P        02 43 34.0 +1.3
            comp=Z,9.3nm,0.9s
PDG   Podgorica          85.79 320⇑iP       P        02 43 31.7 -0.7
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PDG   Podgorica          85.79 320   P        P        02 43 32.0 -0.4
TTG   Podgorica          85.79 320   eP       P        02 43 31.4 -1.0
            comp=Z,26nm,0.9s
TTG   Podgorica          85.79 320   eP       P        02 43 31.4 -1.0
TTG                                  pmax     pmax
            comp=Z,27nm,0.9s
FNA   Florina            85.80 318   eP       P        02 43 32.4 -0.2
            comp=Z,6.2nm,0.9s
C38A  Sawbill Land.      85.81  32   P        P        02 43 32.1 -0.4
            baz=320,SNR=6.9
E36A  McGregor           85.84  34   P        P        02 43 32.5 -0.1
            baz=319
WATA  Walderalm          85.89 328   ePcP     P        02 43 36.1 +3.1
            comp=Z,8.4nm,0.9s
KZN   Kozani             85.91 317   P        P        02 43 32.0 -1.2
KZN   Kozani             85.91 317   P        P        02 43 32.0 -1.2
KZN   Kozani             85.91 317   P        P        02 43 32.0 -1.2
WTTA  Wattenberg         85.92 328   ePcP     P        02 43 34.9 +1.7
            comp=Z,4.4nm,0.7s
ABTA  Abfaltersbach      85.92 327   i P      P        02 43 32.5 -0.6
            comp=Z,9.4nm,0.8s,SNR=7.1
BCLA  Clavier            86.01 333 ⇓P       P        02 43 33.1 -0.3
MOTA  Moosalm            86.09 328   i PcP    P        02 43 35.3 +1.3
            comp=Z,2.5nm,0.5s
RETA  Reutte             86.13 328   i PcP    P        02 43 34.1  0.0
            comp=Z,6.1nm,0.7s,SNR=7.0
DAMY  Dhamar             86.21 285   eP       P        02 43 37.3 +1.9
            comp=Z,38nm,1.2s
F36A  Milaca             86.21  34   P        P        02 43 33.7 -0.7
            baz=319
F36A  Milaca             86.21  34   eP       P        02 43 34.4 -0.1
            comp=Z,6.9nm,1.0s
C39A  Grand Marais       86.22  31   P        P        02 43 33.9 -0.6
            baz=321
KBN   Korca              86.23 318   P        P        02 43 33.7 -1.1
KBN   Korca              86.23 318   P        P        02 43 33.7 -1.1
KBN   Korca              86.23 318   P        P        02 43 33.7 -1.1
G35A  Watkins            86.24  35   P        P        02 43 34.9 +0.3
            baz=318,SNR=6.6
G35A  Watkins            86.24  35   eP       P        02 43 35.5 +0.8
            comp=Z,39nm,0.9s
STON  Ston               86.28 321   P        P        02 43 33.4 -1.4
ECSD  EROS Data Cent     86.30  37   P        P        02 43 34.7 -0.3
            baz=317,SNR=22
ECSD  EROS Data Cent     86.30  37   eP       P        02 43 35.0  0.0
            comp=Z,16nm,0.8s
WLF   Walferdange        86.30 332 ⇓P       P        02 43 35.6 +0.8
SNF   Seneffe            86.32 333 ⇑P       P        02 43 34.6 -0.3
KSCO  Kaye Shedlock’     86.41  44   P        P        02 43 35.9 +0.1
            baz=313
KSCO  Kaye Shedlock’     86.41  44   eP       P        02 43 36.7 +0.9
            comp=Z,48nm,1.3s
NVLJ  Novalja            86.45 324   P        P        02 43 35.2 -0.5
H35A  Sunnyside Ranc     86.46  36   P        P        02 43 36.1 +0.4
            baz=318,SNR=21
AGG   Agios Georgios     86.47 316   eP       P        02 43 35.1 -0.8
            comp=Z,31nm,0.9s
AGG   Agios Georgios     86.47 316   eP       P        02 43 35.1 -0.8
AGG                                  pmax     pmax
            comp=Z,31nm,0.9s
BFO   Black Forest       86.50 330   eP       P        02 43 35.5 -0.4
            comp=Z,4.5nm,1.2s
BFO   Black Forest       86.50 330   i P      P        02 43 36.0 +0.1
FETA  Feichten           86.50 328   i PcP    P        02 43 35.8 -0.3
            comp=Z,5.5nm,0.8s,SNR=5.6
E38A  The Farm, Brul     86.53  33   P        P        02 43 35.8 -0.2
            baz=320
E38A  The Farm, Brul     86.53  33   eP       P        02 43 36.2 +0.1
            comp=Z,45nm,0.8s
DOU   Dourbes            86.54 333 ⇓P       P        02 43 35.7 -0.3
C40A  Isle Royale Na     86.56  31   P        P        02 43 35.4 -0.7
            baz=322
G36A  St. Michael        86.57  35   P        P        02 43 35.9 -0.4
            baz=319
T25A  Trinidad           86.64  46   P        P        02 43 37.8 +0.8
            baz=312,SNR=15
T25A  Trinidad           86.64  46   eP       P        02 43 38.0 +1.0
            comp=Z,26nm,1.0s
DAVA  Damuels            86.66 329   i PcP    P        02 43 36.6 -0.2
            comp=Z,7.6nm,1.0s,SNR=6.1
F37A  Hinrichs Farm,     86.72  34   P        P        02 43 36.6 -0.3
            baz=319
TASM  ASL Pad, Albuq     86.86  49   P        P        02 43 39.1 +1.0
            baz=311,SNR=12
ANMO  Albuquerque        86.86  49   P        P        02 43 39.3 +1.2
            comp=Z,6.3nm,1.0s,baz=301,slow=5.5,SNR=18
ANMO                                 LR       LR       03 17 05.4
            comp=Z,36nm,21.2s,baz=303,slow=32
ANMO  Albuquerque        86.86  49   P        P        02 43 39.0 +0.9
            baz=311
ANMO  Albuquerque        86.86  49   eP       P        02 43 39.2 +1.1
            comp=Z,12nm,1.1s
ANMO                                 epP      pP       02 44 00.6 -1.0
ANMO  Albuquerque        86.86  49 ceP      P        02 43 38.6 +0.5
ANMO                                 pmax     pmax
            comp=Z,14nm,1.3s
TASL  Snake Pit, Alb     86.86  49   P        P        02 43 39.1 +1.0
            baz=311,SNR=13
TAOE  Nuku Hiva Isla     86.88 103   eLR      LR       03 11 13.4
            comp=Z,440nm,30.1s
F38A  Pierce - Schro     86.89  33   P        P        02 43 38.0 +0.2
            baz=320,SNR=23
H36A  Jessenland, He     86.98  35   P        P        02 43 39.0 +0.8
            baz=319,SNR=12
SPMN  Marine on St.      87.02  34   P        P        02 43 38.3 -0.2
            baz=319
SPMN  Marine on St.      87.02  34   eP       P        02 43 38.9 +0.4
            comp=Z,24nm,0.9s
DAVOX Davos/Dischmat     87.06 328   P        P        02 43 38.7 -0.1
            comp=Z,8.2nm,0.8s,baz=19,slow=8.9,SNR=12
DAVOX                                LR       LR       03 25 51.4
            comp=Z,89nm,18.8s,baz=29,slow=38
ECH   Echery             87.06 331   eP       P        02 43 38.2 -0.4
ECH   Echery             87.06 331   eP       P        02 43 38.2 -0.4
E39A  Mellen             87.15  32   P        P        02 43 38.9 -0.1
            baz=321,SNR=14
BGNE  Belgrade           87.19  40   P        P        02 43 39.2 -0.2
            baz=316,SNR=6.5
BGNE  Belgrade           87.19  40   eP       P        02 43 39.6 +0.3
            comp=Z,67nm,0.6s
F39A  Loretta            87.35  33   P        P        02 43 39.7 -0.3
            baz=321,SNR=14
I36A  Fitzsimmons Fa     87.36  36   P        P        02 43 40.1 +0.1
            baz=319
319A  Douglas            87.36  53   eP       P        02 43 42.2 +1.7
            comp=Z,7.4nm,0.8s
E40A  Wakefield          87.39  32   P        P        02 43 40.7 +0.6
            baz=321,SNR=37
KEK   Kerkira            87.41 318   P        P        02 43 38.9 -1.5
KEK   Kerkira            87.41 318   P        P        02 43 38.9 -1.5
PDO   Prodromos          87.41 317   P        P        02 43 39.6 -0.8
H37A  Dierke Farm, C     87.45  35   P        P        02 43 40.7 +0.2
            baz=319
D41A  Chassel            87.47  31   P        P        02 43 40.8 +0.2
            baz=322
D41A  Chassel            87.47  31   eP       P        02 43 41.4 +0.8
            comp=Z,22nm,0.9s
IDI   Anoyia             87.48 312   P        P        02 43 40.1 -0.8
            comp=Z,15nm,0.7s,baz=20,slow=18,SNR=5.5
IDI   Anoyia             87.48 312   eP       P        02 43 40.1 -0.8
            comp=Z,27nm,0.9s
G38A  Ridgeland          87.50  34   P        P        02 43 40.4 -0.3
            baz=320,SNR=9.1
TUE   Stuetta            87.53 328   eP       P        02 43 40.8 -0.3
            comp=Z,9.1nm,0.9s
I37A  Lemond, Waseca     87.65  35   P        P        02 43 42.0 +0.5
            baz=319,SNR=18
I37A  Lemond, Waseca     87.65  35   eP       P        02 43 42.2 +0.7
            comp=Z,62nm,0.8s
I37A                                 epP      pP       02 44 06.2 +1.1
SCHQ  Schefferville      87.65  15   P        P        02 43 42.0 +0.7
            comp=Z,28nm,0.8s,baz=350,slow=4.8,SNR=38
SCHQ                                 LR       LR       03 26 23.7
            comp=Z,40nm,19.8s,baz=343,slow=38
SCHQ  Schefferville      87.65  15   eP       P        02 43 41.9 +0.6
            comp=Z,29nm,0.8s
H38A  Maiden Rock        87.68  34   P        P        02 43 41.7 +0.1
            baz=320,SNR=13
F40A  Park Falls         87.70  32   P        P        02 43 41.5 -0.2
            baz=321,SNR=20
J36A  Seneca 1, Swea     87.71  36   P        P        02 43 41.7 -0.1
            baz=318,SNR=5.5
J36A  Seneca 1, Swea     87.71  36   eP       P        02 43 41.6 -0.1
            comp=Z,25nm,0.9s
G39A  Holcombe           87.72  33   P        P        02 43 41.5 -0.3
            baz=320,SNR=7.9
E41A  Kenton             87.77  31   P        P        02 43 42.1 +0.1
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      baz=322
ITM   Ithomi           87.97 315 eP     P      02 43 42.2 -0.9
      comp=Z,30nm,0.7s
COWI  Conover          87.98  32 eP     P      02 43 43.1 +0.1
      comp=Z,25nm,0.9s
MSEY  Mahe Island      88.09 263 i P    P      02 43 40.8 -3.3
J37A  Redenius Farm,   88.11  36  P     P      02 43 43.8 +0.1
      baz=319,SNR=6.5
H39A  Augusta          88.13  34  P     P      02 43 43.6 -0.2
      baz=320,SNR=12
I38A  Scanlan Farm,    88.14  35  P     P      02 43 43.8  0.0
      baz=320,SNR=13
G40A  Rib Lake         88.17  33  P     P      02 43 44.1 +0.2
      baz=321,SNR=30
G40A  Rib Lake         88.17  33 eP     P      02 43 44.2 +0.3
      comp=Z,37nm,0.8s
CBKS  Cedar Bluff      88.17  42  P     P      02 43 43.9 -0.3
      baz=315
K36A  Gilmore City     88.17  37  P     P      02 43 44.0  0.0
      baz=318
E42A  Champion         88.25  31  P     P      02 43 44.5 +0.2
      baz=323,SNR=11
PYL   PYLOS            88.27 315  P     P      02 43 41.0 -3.5
PYL   PYLOS            88.27 315  P     P      02 43 41.0 -3.5
F41A  Three Lakes      88.28  32  P     P      02 43 44.8 +0.3
      baz=322,SNR=23
F41A  Three Lakes      88.28  32 eP     P      02 43 44.9 +0.4
      comp=Z,37nm,0.8s
L36A  Harm Buss Farm   88.47  37  P     P      02 43 45.4  0.0
      baz=318
K37A  Belmond          88.47  36  P     P      02 43 45.4  0.0
      baz=319,SNR=7.7
SENIN Lac Senin/Sane   88.48 329 eP     P      02 43 45.6 -0.1
      comp=Z,5.2nm,0.9s
TBI   Tubuai           88.54 120 eLR    LR     03 11 13.7
      comp=Z,233nm,36.0s,baz=302
TBI   Tubuai           88.54 120 eT     T      04 20 50.9
      comp=Z,14nm,0.3s
H40A  Chili            88.58  33  P     P      02 43 46.1 +0.2
      baz=321,SNR=19
J38A  Wedel Dairy, R   88.62  35  P     P      02 43 45.9 -0.1
      baz=320,SNR=7.9
I39A  Houston          88.66  34  P     P      02 43 46.0 -0.2
      baz=320,SNR=5.9
I39A  Houston          88.66  34 eP     P      02 43 46.4 +0.2
      comp=Z,27nm,0.7s
G41A  Antigo           88.66  32  P     P      02 43 46.2 -0.1
      baz=322
E43A  Lone Tree Farm   88.67  30  P     P      02 43 46.4 +0.2
      baz=323,SNR=11
E43A  Lone Tree Farm   88.67  30 eP     P      02 43 46.9 +0.6
      comp=Z,32nm,0.8s
F42A  Maple Grove Fa   88.69  31  P     P      02 43 46.4 +0.1
      baz=322
AQU   L'Aquila         88.81 323 eP     P      02 43 47.5 +0.4
      comp=Z,41nm,0.8s
AQU                              epP    pP     02 44 09.3 -1.4
AQU   L'Aquila         88.81 323 eP     P      02 43 47.5 +0.4
AQU                              e*PP   pP     02 44 09.3 -1.4
AQU                               pmax  pmax
      comp=Z,41nm,0.8s
M36A  Felix, Anita     88.88  38  P     P      02 43 47.5 +0.1
      baz=318,SNR=7.5
L37A  Phoenix Point,   88.90  37  P     P      02 43 47.6 +0.1
      baz=319,SNR=6.1
E44A  Grand Marais A   88.92  30  P     P      02 43 47.7 +0.3
      baz=324
E44A  Grand Marais A   88.92  30 eP     P      02 43 48.6 +1.2
      comp=Z,52nm,0.8s
H41A  Junction City    88.92  33  P     P      02 43 47.2 -0.2
      baz=322,SNR=6.7
H41A  Junction City    88.92  33 eP     P      02 43 48.1 +0.7
      comp=Z,28nm,1.0s
G42A  Mountain         88.97  32  P     P      02 43 48.1 +0.4
      baz=322,SNR=12
G42A  Mountain         88.97  32 eP     P      02 43 48.0 +0.4
      comp=Z,34nm,0.8s
J39A  Decorah          88.97  35  P     P      02 43 47.2 -0.5
      baz=320,SNR=16
K38A  Parkersburg      88.98  36  P     P      02 43 47.9 +0.1
      baz=319
F43A  Flat Rock, Esc   89.04  31  P     P      02 43 48.3 +0.4
      baz=323,SNR=16
I40A  Norwalk          89.05  34  P     P      02 43 48.0 -0.1
      baz=321
ATD   Arta Tunnel      89.18 283  LR    LR     03 27 13.5
      comp=Z,13nm,20.6s,baz=354,slow=38
F44A  Big Bay de Noc   89.23  30  P     P      02 43 49.3 +0.4
      baz=324,SNR=20
I41A  Arkdale          89.26  33  P     P      02 43 49.2 +0.1
      baz=321,SNR=5.7
I41A  Arkdale          89.26  33 eP     P      02 43 49.5 +0.4
      comp=Z,26nm,0.8s
N36A  Muff Farm, Cla   89.27  38  P     P      02 43 49.4 +0.2
      baz=318
G43A  Wallace          89.28  31  P     P      02 43 49.5 +0.4
      baz=323,SNR=18
G43A  Wallace          89.28  31 eP     P      02 43 49.8 +0.7
      comp=Z,38nm,0.8s
L38A  Oak Wood Farm,   89.28  36  P     P      02 43 49.3 +0.2
      baz=319
M37A  Trindle Farm,    89.29  37  P     P      02 43 49.8 +0.5
      baz=319
MATQ  Matagami         89.32  23  P     P      02 43 49.0 -0.2
      baz=330
SCIA  State Center     89.33  37  P     P      02 43 49.8 +0.4
      baz=319
SCIA  State Center     89.33  37 eP     P      02 43 50.6 +1.2
      comp=Z,26nm,1.0s
K39A  Oelwein          89.36  35  P     P      02 43 49.1 -0.5
      baz=320,SNR=9.5
J40A  Soldiers Grove   89.37  34  P     P      02 43 49.3 -0.3
      baz=321,SNR=7.0
E45A  Wooded Hills,    89.43  29  P     P      02 43 50.1 +0.3
      baz=325,SNR=5.8
TIP   Timpagrande      89.44 319 eP     P      02 43 49.9 -0.2
      comp=Z,6.8nm,1.0s
H42A  Shiocton         89.50  32  P     P      02 43 50.2  0.0
      baz=322
H42A  Shiocton         89.50  32 eP     P      02 43 51.0 +0.8
      comp=Z,21nm,0.8s
KSU1  Kansas State U   89.67  40  P     P      02 43 51.1  0.0
      baz=317,SNR=11
KSU1  Kansas State U   89.67  40 eP     P      02 43 51.5 +0.4
MNTX  Cornudas Mount   89.67  51  P     P      02 43 51.8 +0.5
      baz=312
MNTX  Cornudas Mount   89.67  51 eP     P      02 43 51.8 +0.5
      comp=Z,6.9nm,1.3s
N37A  Lee Faris, Mou   89.69  38  P     P      02 43 51.6 +0.4
      baz=318
N37A  Lee Faris, Mou   89.69  38 eP     P      02 43 52.1 +0.9
      comp=Z,28nm,0.8s
M38A  Pleasantville    89.71  37  P     P      02 43 51.4 +0.2
      baz=319,SNR=8.8
K40A  Colesburg        89.72  35  P     P      02 43 51.1 -0.1
      baz=320,SNR=8.7
J41A  Loganville       89.73  34  P     P      02 43 51.2 -0.1
      baz=321,SNR=8.6
L39A  Vinton           89.75  36  P     P      02 43 51.5 +0.1
      baz=320,SNR=16
MSTX  Muleshoe         89.77  48  P     P      02 43 52.6 +0.8
      baz=313
MSTX  Muleshoe         89.77  48 eP     P      02 43 52.4 +0.6
      comp=Z,6.6nm,0.9s
BNI   Bardonecchia     89.79 329 eP     P      02 43 53.0 +1.3
      comp=Z,7.2nm,0.8s
BNI                              epP    pP     02 44 14.7 -0.7
AMTX  Amarillo         89.80  46  P     P      02 43 52.7 +0.8
      baz=314
AMTX  Amarillo         89.80  46 eP     P      02 43 53.0 +1.1
      comp=Z,24nm,0.8s
I42A  Draeger Farm,    89.82  33  P     P      02 43 51.9 +0.2
      baz=322,SNR=8.1
I42A  Draeger Farm,    89.82  33 eP     P      02 43 52.3 +0.6
      comp=Z,19nm,0.8s
I42A                             epP    pP     02 44 17.3 +2.0
F45A  CMU Biological   89.84  30  P     P      02 43 52.1 +0.3
      baz=324,SNR=13
H43A  Windswept, Lux   89.86  32  P     P      02 43 52.2 +0.3
      baz=323,SNR=6.8
H43A  Windswept, Lux   89.86  32 eP     P      02 43 52.7 +0.8
      comp=Z,25nm,0.8s
JFWS  Jewell Farm      89.97  34  P     P      02 43 52.2 -0.2
      baz=321,SNR=5.4
JFWS  Jewell Farm      89.97  34 eP     P      02 43 52.7 +0.3
      comp=Z,13nm,0.6s
JFWS  Jewell Farm      89.97  34 eP     P      02 43 52.7 +0.3
JFWS                              pmax  pmax
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      comp=Z,13nm,0.6s
F46A  Macinaw City C   90.08  29  P     P      02 43 52.9 +0.1
      baz=325
N38A  Joes South For   90.16  37  P     P      02 43 53.5 +0.2
      baz=319
M39A  Webster          90.16  36  P     P      02 43 53.6 +0.2
      baz=320,SNR=9.8
I43A  Langenfeld Bro   90.16  33  P     P      02 43 53.3  0.0
      baz=322
O37A  Wolven Farm, M   90.17  38  P     P      02 43 53.5 +0.1
      baz=318
J42A  Columbus         90.17  33  P     P      02 43 53.3 -0.1
      baz=322
L40A  Anamosa          90.17  35  P     P      02 43 53.2 -0.1
      baz=320,SNR=7.4
L40A  Anamosa          90.17  35 eP     P      02 43 53.6 +0.3
      comp=Z,21nm,1.0s
K41A  Shullsburg       90.19  35  P     P      02 43 53.2 -0.2
      baz=321,SNR=11
CHGQ  Chibougamau      90.20  21  P     P      02 43 53.2 -0.1
      baz=333
J43A  Natural Harves   90.44  33  P     P      02 43 54.5 -0.1
      baz=322,SNR=5.8
N39A  Derby Farms, D   90.46  37  P     P      02 43 54.9 +0.2
      baz=320,SNR=8.5
N39A  Derby Farms, D   90.46  37 eP     P      02 43 55.2 +0.5
      comp=Z,21nm,0.8s
K42A  Prairie Point,   90.49  34  P     P      02 43 54.6 -0.2
      baz=322,SNR=6.8
P37A  Lathrop          90.49  39  P     P      02 43 54.8 -0.1
      baz=318,SNR=5.9
L41A  Preston          90.51  35  P     P      02 43 54.8 -0.1
      baz=321,SNR=7.0
M40A  Post Highland    90.54  36  P     P      02 43 55.2 +0.2
      baz=320,SNR=6.5
O38A  Galt             90.54  38  P     P      02 43 55.2 +0.1
      baz=319
P38A  Dawn             90.89  38  P     P      02 43 56.8 +0.1
      baz=319
P38A  Dawn             90.89  38 eP     P      02 43 57.4 +0.7
      comp=Z,13nm,0.8s
N40A  Mertquake, Sal   90.90  36  P     P      02 43 57.0 +0.2
      baz=320
O39A  Kirksville       90.91  37  P     P      02 43 57.1 +0.3
      baz=320
L42A  Oliver, Polo     90.95  35  P     P      02 43 56.6 -0.4
      baz=322,SNR=5.7
L42A  Oliver, Polo     90.95  35 eP     P      02 43 57.2 +0.2
      comp=Z,15nm,0.8s
Q37A  Longview Farm,   90.97  39  P     P      02 43 56.7 -0.5
      baz=318
BELQ  Belleterre       91.00  25  P     P      02 43 56.6 -0.5
      baz=329
K43A  Burlington       91.01  33  P     P      02 43 56.6 -0.7
      baz=322
M41A  Milan            91.03  35  P     P      02 43 57.2 -0.1
      baz=321,SNR=5.3
L43A  Garden Prairie   91.24  34  P     P      02 43 58.0 -0.3
      baz=322
LPIG  La Paz           91.28  59  LR    LR     03 25 13.1
      comp=Z,20nm,18.0s,baz=230,slow=36
M42A  Sheffield        91.34  35  P     P      02 43 58.5 -0.3
      baz=321
Q38A  Cooks Store, C   91.34  39  P     P      02 43 58.5 -0.3
      baz=319,SNR=6.6
O40A  La Belle         91.34  37  P     P      02 43 59.0 +0.2
      baz=320,SNR=8.5
P39B  Salisbury        91.38  38  P     P      02 43 59.0  0.0
      baz=319
N41A  Harden Midland   91.39  36  P     P      02 43 59.0 -0.1
      baz=321
N41A  Harden Midland   91.39  36 eP     P      02 43 59.5 +0.5
      comp=Z,21nm,0.9s
WMOK  Wichita Mounta   91.60  45  P     P      02 44 00.6 +0.4
      baz=316,SNR=14
WMOK  Wichita Mounta   91.60  45 eP     P      02 44 00.9 +0.7
      comp=Z,13nm,0.9s
WMOK  Wichita Mounta   91.60  45 eP     P      02 44 00.9 +0.7
WMOK                              pmax  pmax
      comp=Z,13nm,0.9s
Q39A  Willow Grove F   91.61  38  P     P      02 44 00.2 +0.1
      baz=319,SNR=14
L44A  Lake County Fo   91.62  33  P     P      02 43 60.0 -0.1
      baz=323
N42A  Yates City       91.69  36  P     P      02 44 00.4  0.0
      baz=321,SNR=5.1
P40A  Paris            91.71  38  P     P      02 44 00.8 +0.3
      baz=320,SNR=9.4
P40A  Paris            91.71  38 eP     P      02 44 01.0 +0.5
      comp=Z,21nm,1.0s
M43A  Waltham Townsh   91.72  35  P     P      02 44 00.6 +0.1
      baz=322
R38A  Fenwick Farm,    91.77  40  P     P      02 43 59.9 -0.9
      baz=319,SNR=6.6
SLBS  Sierra La Lagu   91.80  59 eP     P      02 44 03.5 +2.2
      comp=Z,18nm,1.0s
O41A  Passleys Farm,   91.83  36  P     P      02 44 01.2 +0.1
      baz=321,SNR=5.6
VAE   Valguarnera      91.94 320  LR    LR     03 30 51.8
      comp=Z,54nm,18.0s,baz=228,slow=39
N43A  Stutzman Famil   92.01  35  P     P      02 44 02.0  0.0
      baz=322
P41A  Barry, Barry     92.08  37  P     P      02 44 02.4 +0.1
      baz=320,SNR=8.8
Q40A  Laux Farm, Aux   92.10  38  P     P      02 44 02.3 -0.1
      baz=320
R39A  Chumby, Stover   92.12  39  P     P      02 44 02.1 -0.4
      baz=319,SNR=15
S38A  Stockton         92.18  40  P     P      02 44 01.9 -0.9
      baz=319
M44A  Midewin, Midew   92.19  34  P     P      02 44 02.5 -0.3
      baz=323
M44A  Midewin, Midew   92.19  34 eP     P      02 44 03.3 +0.6
      comp=Z,22nm,0.9s
KLBO  Killbear Provi   92.19  27  P     P      02 44 01.9 -0.8
      baz=328
HDIL  Hopedale         92.26  35  P     P      02 44 03.0 -0.1
      baz=322
HDIL  Hopedale         92.26  35 eP     P      02 44 03.6 +0.6
      comp=Z,22nm,0.9s
TX31  Lajitas Ar. Si   92.35  52 eP     P      02 44 04.1 +0.2
TXAR  Lajitas Array    92.35  52  P     P      02 44 04.7 +0.8
      comp=Z,4.5nm,0.5s,baz=291,slow=2.9,SNR=130
TXAR                              PKKPbc PKKPbc 03 01 16.0 -0.6
      comp=Z,0.5nm,0.9s,baz=131,slow=6.8,SNR=3.8
TXAR                              LR    LR     03 21 15.6
      comp=Z,74nm,20.5s,baz=0.0,slow=33
BUKO  Buck Lake        92.42  27  P     P      02 44 04.3 +0.5
      baz=329
T38A  Diamond          92.42  41  P     P      02 44 03.8 -0.1
      baz=318,SNR=15
TUL1  Leonard          92.44  42  P     P      02 44 04.1 +0.1
      baz=317
TUL1  Leonard          92.44  42 eP     P      02 44 04.8 +0.8
      comp=Z,22nm,1.0s
S39A  Bolivar          92.45  39  P     P      02 44 03.2 -0.8
      baz=319
BMRO  Meriville Lake   92.45  28  P     P      02 44 04.1 +0.2
      baz=328
O43A  Sugar Creek Fa   92.46  35  P     P      02 44 03.9 -0.1
      baz=322
P42A  Winchester       92.51  36  P     P      02 44 04.1 -0.1
      baz=321
P42A  Winchester       92.51  36 eP     P      02 44 05.3 +1.1
      comp=Z,40nm,1.0s
R40A  Maddies Statio   92.54  38  P     P      02 44 04.1 -0.3
      baz=320,SNR=8.4
R40A  Maddies Statio   92.54  38 eP     P      02 44 04.6 +0.2
      comp=Z,10nm,0.8s
Q41A  Truxton          92.56  37  P     P      02 44 04.6 +0.1
      baz=320
ABTX  Abilene, Hawle   92.59  47  P     P      02 44 05.3 +0.5
      baz=315
ABTX  Abilene, Hawle   92.59  47 eP     P      02 44 05.8 +1.0
      comp=Z,18nm,0.9s
N44A  Piper City       92.61  34  P     P      02 44 04.5 -0.2
      baz=322
HPIG                   92.64  54 eP     P      02 44 06.5 +1.1
      comp=Z,20nm,0.9s
BASO  Ashfield         92.77  29  P     P      02 44 06.4 +1.0
      baz=327
N45A  Kentland         92.86  34  P     P      02 44 06.0 +0.2
      baz=323
BWLO  Walkerton        92.89  28  P     P      02 44 06.4 +0.6
      baz=328
T39A  Clever           92.92  40  P     P      02 44 05.8 -0.4
      baz=319
CLWO  Collingwood      92.93  28  P     P      02 44 06.7 +0.6
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      baz=328
Q42A  Golden Eagle     92.93  37  P     P      02 44 06.3 +0.1
      baz=321
M46A  Old House Fiel   92.94  33  P     P      02 44 06.2  0.0
      baz=324
S40A  Lebanon          92.94  39  P     P      02 44 05.8 -0.5
      baz=320,SNR=6.6
O44A  Mansfield        92.96  35  P     P      02 44 06.1 -0.3
      baz=322
R41A  Rosebud          92.98  38  P     P      02 44 06.3 -0.2
      baz=320
PEMO  Pembroke         92.99  25  P     P      02 44 06.1 -0.2
      baz=330
HHAR  Hobbs            93.17  41 eP     P      02 44 07.6 +0.2
      comp=Z,11nm,1.1s
N46A  Monticello       93.18  34  P     P      02 44 07.0 -0.2
      baz=324
O45A  Potomac          93.24  34  P     P      02 44 07.6  0.0
      baz=323,SNR=6.4
CCM   Cathedral Cave   93.24  38  P     P      02 44 08.0 +0.3
      baz=320
CCM   Cathedral Cave   93.24  38 eP     P      02 44 08.8 +1.2
      comp=Z,11nm,0.9s
CCM   Cathedral Cave   93.24  38 eP     P      02 44 08.8 +1.2
CCM                               pmax  pmax
      comp=Z,11nm,0.9s
T40A  Mansfield        93.27  39  P     P      02 44 07.3 -0.5
      baz=320
R42A  Luebbering       93.29  38  P     P      02 44 07.8 -0.1
      baz=321
BANO  Bancroft         93.32  26  P     P      02 44 08.2 +0.3
      baz=330
Q43A  New Douglas      93.32  37  P     P      02 44 07.8 -0.2
      baz=321
U39A  Green Forest     93.34  40  P     P      02 44 08.0 -0.2
      baz=319,SNR=16
AAM   Ann Arbor        93.38  31  P     P      02 44 08.4 +0.2
      baz=326
TRQ   Mont Tremblant   93.41  23 eP     P      02 44 08.3 -0.1
SFIN  Lafayette        93.42  34  P     P      02 44 08.2 -0.2
      baz=323
P44A  Sand Creek, Wi   93.43  36  P     P      02 44 08.5  0.0
      baz=322,SNR=6.1
ELFO  Elginfield       93.59  29  P     P      02 44 10.3 +1.2
      baz=327
PLVO  Plevna           93.60  25  P     P      02 44 08.9 -0.2
      baz=330
V39A  Pettigrew        93.66  41  P     P      02 44 09.3 -0.4
      baz=319,SNR=8.1
Q44A  Meyer Farm, Va   93.68  36  P     P      02 44 09.4 -0.2
      baz=322
S42A  Caledonia        93.68  38  P     P      02 44 09.6 -0.1
      baz=321,SNR=7.7
U40A  Yellville        93.70  40  P     P      02 44 09.5 -0.3
      baz=319,SNR=16
R43A  Red Bud          93.72  37  P     P      02 44 09.5 -0.4
      baz=321
T41A  Mountain View    93.75  39  P     P      02 44 09.6 -0.4
      baz=320
ORIO  Orleans, Innes   93.78  24  P     P      02 44 09.6 -0.3
      baz=332
P45A  Graceland, Par   93.80  35  P     P      02 44 10.2  0.0
      baz=323
ALFO  Alfred           93.83  24  P     P      02 44 09.6 -0.6
      baz=332
O47A  Sheridan         93.96  34  P     P      02 44 10.5 -0.4
      baz=324
P46A  Rosedale         93.98  35  P     P      02 44 11.2 +0.2
      baz=323
JCT   Junction City    94.00  48  P     P      02 44 11.5 +0.2
      baz=315
JCT   Junction City    94.00  48 eP     P      02 44 11.7 +0.4
      comp=Z,13nm,0.8s
JCT   Junction City    94.00  48 eP     P      02 44 11.7 +0.4
JCT                               pmax  pmax
      comp=Z,13nm,0.8s
W39A  Magazine         94.07  41  P     P      02 44 11.2 -0.3
      baz=319
W39A  Magazine         94.07  41 eP     P      02 44 12.3 +0.8
      comp=Z,12nm,1.4s
T42A  Van Buren        94.10  39  P     P      02 44 11.4 -0.2
      baz=320,SNR=6.8
T42A  Van Buren        94.10  39 eP     P      02 44 11.8 +0.2
      comp=Z,8.6nm,1.0s
Q45A  Warren Harvey,   94.10  36  P     P      02 44 11.4 -0.1
      baz=322
V40A  Witts Springs    94.13  40  P     P      02 44 11.2 -0.7
      baz=319
R44A  Waltonville      94.17  37  P     P      02 44 11.7 -0.2
      baz=322
U41A  Viola            94.20  40  P     P      02 44 11.7 -0.3
      baz=320
S43A  Fulton Ridge,    94.20  38  P     P      02 44 11.9 -0.1
      baz=321
OLIL  Olney            94.26  36 eP     P      02 44 13.1 +0.8
      comp=Z,18nm,1.0s
WHTX  Lake Whitney,    94.33  46  P     P      02 44 13.3 +0.5
      baz=316
Q46A  CEJHS Indians,   94.38  35  P     P      02 44 12.6 -0.2
      baz=323
X39A  Fountain Ranch   94.40  42  P     P      02 44 13.3 +0.2
      baz=318
W40A  Ferguson Farm,   94.46  41  P     P      02 44 13.1 -0.2
      baz=319
T43A  Greenville       94.47  38  P     P      02 44 12.9 -0.4
      baz=321
V41A  Mountainview     94.50  40  P     P      02 44 13.0 -0.5
      baz=320,SNR=5.6
S44A  Carbondale       94.51  37  P     P      02 44 13.5  0.0
      baz=322
P47A  Martinsville     94.52  34  P     P      02 44 13.5  0.0
      baz=324
R45A  Skylar, Fairfi   94.52  36  P     P      02 44 13.5  0.0
      baz=322
U42A  Revenden         94.55  39  P     P      02 44 13.3 -0.4
      baz=320
PBMO  Poplar Bluff     94.63  38 eP     P      02 44 14.3 +0.3
      comp=Z,12nm,1.0s
MIAR  Mount Ida        94.67  42  P     P      02 44 14.4 +0.1
      baz=319
MIAR  Mount Ida        94.67  42 eP     P      02 44 13.4 -0.9
      comp=Z,17nm,1.3s
MIAR  Mount Ida        94.67  42 eP     P      02 44 13.4 -0.9
MIAR                              pmax  pmax
      comp=Z,17nm,1.3s
WHAR  Wooly Hollow     94.80  40 eP     P      02 44 15.1 +0.2
      comp=Z,7.4nm,1.0s
LONY  Lake Ozonia      94.82  24  P     P      02 44 14.5 -0.3
      baz=332
N50A  Nevada           94.86  31  P     P      02 44 14.9 -0.1
      baz=326
S45A  Carrier Mills    94.86  37  P     P      02 44 15.0 -0.1
      baz=322
V42A  Cord             94.88  40  P     P      02 44 15.2  0.0
      baz=320
Q47A  Bedord North L   94.89  34  P     P      02 44 15.1  0.0
      baz=324,SNR=6.6
W41B  Gary Mavity, V   94.91  40  P     P      02 44 15.1 -0.3
      baz=320
R46A  Gibon Southern   94.95  36  P     P      02 44 15.1 -0.4
      baz=323
ERPA  Erie             95.03  29  P     P      02 44 15.5 -0.3
      baz=328
X40A  Basin Creek Fa   95.11  41 eP     P      02 44 17.5 +1.2
      comp=Z,3.9nm,0.8s
435B  Jarrell          95.12  47  P     P      02 44 16.4  0.0
      baz=316
O50A  Cable            95.17  32  P     P      02 44 16.3 -0.2
      baz=326,SNR=7.2
Y40A  Okolona          95.23  42  P     P      02 44 16.5 -0.3
      baz=319
S46A  Don Dixon Farm   95.27  36  P     P      02 44 16.6 -0.4
      baz=323
R47A  Wooly Knot Far   95.35  35  P     P      02 44 17.1 -0.2
      baz=324
ACSO  Alum Creek Sta   95.37  32 eP     P      02 44 17.9 +0.5
      comp=Z,9.1nm,0.8s
WCI   Wyandotte Cave   95.52  35  P     P      02 44 17.8 -0.2
      baz=324
WCI   Wyandotte Cave   95.52  35 eP     P      02 44 17.7 -0.4
      comp=Z,25nm,0.6s
WCI   Wyandotte Cave   95.52  35 eP     P      02 44 17.7 -0.4
WCI                               pmax  pmax
      comp=Z,25nm,0.6s
P50A  Jamestown        95.53  32  P     P      02 44 17.9 -0.3
      baz=325
R48A  Northridge Ran   95.58  34  P     P      02 44 18.1 -0.2
      baz=324
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M54A	Oil Creek Stat	95.67	29	P	P	02 44 18.4	-0.3
	baz=328						
Y41A	Eaglette Beard	95.69	42	P	P	02 44 18.9	0.0
	baz=319						
T46A	Princeton	95.69	37	P	P	02 44 19.0	+0.1
	baz=322,SNR=5.2						
833A	Chaparral WMA,	95.76	50	P	P	02 44 19.8	+0.5
	baz=315						
KEST	Kesra	95.90	322	P	P	02 44 19.2	-0.8
	comp=Z,5.4nm,0.9s,baz=308,slow=18,SNR=4.3						
KEST				LR	LR	03 31 43.8	
	comp=Z,102nm,18.9s,baz=291,slow=38						
KEST	Kesra	95.90	322	*e*P	P	02 44 20.2	+0.2
	comp=Z,12nm,1.1s						
S48A	Wiedeman Farm,	96.09	35	P	P	02 44 20.4	-0.3
	baz=324						
T47A	Sharon Grove	96.12	36	P	P	02 44 20.6	-0.3
	baz=323						
T47A	Sharon Grove	96.12	36	*e*P	P	02 44 21.4	+0.5
	comp=Z,8.8nm,0.8s						
THTN	Thala	96.37	322	*e*P	P	02 44 22.7	+0.5
	comp=Z,12nm,1.1s						
WVT	Waverly	96.44	37	P	P	02 44 22.2	-0.2
	baz=322						
WVT	Waverly	96.44	37	*e*P	P	02 44 22.5	+0.2
	comp=Z,3.9nm,0.9s						
WVT	Waverly	96.44	37	*e*P	P	02 44 22.5	+0.2
WVT				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BINY	Binghamton	96.47	26	P	P	02 44 22.0	-0.3
	baz=331						
U47A	Clarksville	96.47	37	P	P	02 44 22.4	0.0
	baz=323						
W45A	Hickory Valley	96.53	39	P	P	02 44 22.7	0.0
	baz=322						
V46A	Holladay	96.56	37	P	P	02 44 22.7	-0.2
	baz=322						
U48A	Cassie Pea, Po	96.77	36	P	P	02 44 23.8	-0.1
	baz=323						
T49A	Edmonton	96.78	35	P	P	02 44 23.7	-0.1
	baz=324						
V47A	Nunnelly	96.84	37	P	P	02 44 24.1	0.0
	baz=323						
X45A	UM Field Stati	96.99	39	P	P	02 44 23.8	-1.0
	baz=321						
SSPA	Standing Stone	97.11	28	P	P	02 44 25.1	-0.2
	baz=330						
U49A	Red Boiling Sp	97.14	36	P	P	02 44 25.3	-0.2
	baz=324						
T50A	Nancy	97.17	35	P	P	02 44 25.3	-0.3
	baz=325						
S51A	Beattyville	97.24	33	P	P	02 44 25.4	-0.5
	baz=326						
V48A	Smith Brothers	97.25	37	P	P	02 44 25.3	-0.6
	baz=323						
V48A	Smith Brothers	97.25	37	*e*P	Pdif	02 44 26.1	0.0
	comp=Z,5.7nm,0.9s						
W47A	Westpoint	97.26	37	P	P	02 44 25.5	-0.5
	baz=323						
N59A	State Game Lan	97.66	26	P	P	02 44 26.7	-1.0
	baz=331						
W48A	Pulaski	97.67	37	P	P	02 44 27.4	-0.5
	baz=323						
V49A	McMinnville	97.68	36	P	P	02 44 27.4	-0.5
	baz=324						
HRV	Adam Dziewonsk	97.70	23	P	P	02 44 27.2	-0.7
	baz=335						
X47A	Russelville	97.70	38	P	P	02 44 27.2	-0.8
	baz=322						
W49A	Belvidere	98.02	37	P	P	02 44 28.9	-0.5
	baz=324						
LNIG	Linares	98.11	52	*e*P	Pdif	02 44 30.2	+0.2
	comp=Z,15nm,1.5s						
244A	Avery, Jackson	98.14	42	P	P	02 44 29.8	-0.2
	baz=320						
V50A	Pikevile	98.14	36	P	P	02 44 29.4	-0.6
	baz=324						
TZTN	Tazewell	98.16	34	P	P	02 44 29.8	-0.3
	baz=325						
ESDC	Sonseca Array	98.58	333	P	P	02 44 31.6	-0.4
	comp=Z,0.3nm,0.6s,baz=269,slow=30,SNR=3.9						
ESDC				PP	PP	02 48 34.6	+2.0
	comp=Z,0.9nm,0.8s,baz=26,slow=6.7,SNR=4.7						
ESDC				LR	LR	03 33 49.4	
	comp=Z,43nm,18.5s,baz=280,slow=38						
V52A	Sevierville	98.71	34	Pdiff	P	02 44 32.3	-0.3
	baz=325						
U53A	Fall Branch	98.75	33	Pdiff	P	02 44 32.1	-0.6
	baz=326						
TKL	Tuckaleechee C	98.78	35	P	P	02 44 32.6	-0.2
	comp=Z,2.6nm,0.5s,baz=55,slow=3.0,SNR=5.2						
TKL				LR	LR	03 28 26.7	
	comp=Z,34nm,21.8s,baz=3.5,slow=35						
TKL	Tuckaleechee C	98.78	35	*e*P	P	02 44 32.6	-0.2
	comp=Z,4.1nm,0.8s						
BLA	Blacksburg	98.99	32	Pdiff	P	02 44 33.2	-0.7
	baz=328						
RKT	Rikitea	99.11	112	*e*LR	LR	03 16 09.0	
	comp=Z,308nm,31.8s						
W53A	Cullowhee	99.46	35	Pdiff	Pdif	02 44 35.6	-0.4
	baz=326						
Y51A	Rockmart	99.59	37	Pdiff	Pdif	02 44 35.8	-0.7
	baz=324						
Z50A	Ashland	99.68	38	Pdiff	Pdif	02 44 36.2	-0.7
	baz=324						
Z50A	Ashland	99.68	38	*e*Pdif	Pdif	02 44 37.3	+0.3
	comp=Z,4.2nm,0.8s						
Y54A	Tignall	100.76	35	Pdiff	Pdif	02 44 41.8	+0.1
	baz=326						
451A	Vernon	101.88	39	Pdiff	Pdif	02 44 46.3	-0.4
	baz=323						
MAW	Mawson	117.15	205	PKP	PKPdf	02 49 36.8	+0.2
	comp=Z,3.5nm,0.8s,baz=5.5,slow=1.6,SNR=11						
MAW	Mawson	117.15	205	*e*PKPdf	PKPdf	02 49 37.3	+0.7
MAW	Mawson	117.15	205	*e*PKIKP	PKPdf	02 49 37.3	+0.7
TOA1	Torodi Ar. Sit	117.88	313	*e*PKPdf	PKPdf	02 49 38.0	-1.8
TOA0	Torodi Ar. Sit	117.88	313	*e*PKPdf	PKPdf	02 49 39.4	-0.3
TORD	Torodi Ar. Bea	117.88	313	PKP	PKPdf	02 49 38.0	-1.8
	comp=Z,4.3nm,0.6s,baz=23,slow=1.9						
KOWA	Kowa	120.07	319	PKP	PKPdf	02 49 43.6	-0.3
	comp=Z,9.5nm,0.7s,baz=77,slow=2.5,SNR=25						
KOWA				PP	PP	02 51 05.2	-3.5
	comp=Z,5.7nm,0.8s,baz=45,slow=7.1,SNR=4.0						
KOWA	Kowa	120.07	319	*e*PKPdf	PKPdf	02 49 43.6	-0.3
KOWA				*e*PKPdf	PKiKP	02 49 44.3	+0.3
KOWA				*e*PP	PP	02 51 05.2	-3.5
LBTB	Lobatse	123.14	261	*e*PKPdf	PKPdf	02 49 50.3	+0.7
LBTB	Lobatse	123.14	261	*e*PKIKP	PKPdf	02 49 50.3	+0.7
QSPA	South Pole Qui	124.71	180	PKP	PKPdf	02 49 50.8	-0.5
	comp=Z,11nm,0.8s,baz=299,slow=1.5,SNR=39						
QSPA	South Pole Qui	124.71	180	*e*PKPdf	PKPdf	02 49 50.8	-0.5
QSPA				*e*PKPdf	PKiKP	02 49 51.2	-0.4
BOSA	Boshof	124.96	257	PKP	PKPdf	02 49 52.4	-0.7
	comp=Z,3.6nm,0.9s,baz=293,slow=2.2,SNR=5.5						
DBIC	Dimbokro	126.91	314	PKP	PKPdf	02 49 56.5	-0.5
	comp=Z,9.4nm,0.7s,baz=79,slow=1.4,SNR=10						
TSUM	Tsumeb	126.98	271	*e*PKPdf	PKPdf	02 49 58.4	+1.2
TIC	Toumodi	127.03	314	*e*PKIKP	PKPdf	02 49 57.0	-0.3
KIC	Kosan Boka	127.09	314	*e*PKIKP	PKPdf	02 49 57.2	-0.2
	comp=Z,28nm,0.9s						
LIC	Lamto	127.37	314	*e*PKIKP	PKPdf	02 49 57.6	-0.4
	comp=Z,105nm,1.8s						
SDV	Santo Domingo	127.69	39	PKP	PKPdf	02 49 59.3	+0.5
	comp=Z,32nm,0.8s,baz=293,slow=0.6,SNR=22						
SDV	Santo Domingo	127.69	39	*e*PKPdf	PKPdf	02 49 57.9	-1.0
RUSC	La Rusia	128.84	44	*e*PKPdf	PKPdf	02 50 00.9	-0.5
ROSC	El Rosal	128.97	46	PKP	PKPdf	02 50 02.3	+0.8
	comp=Z,17nm,0.9s,baz=150,slow=2.8,SNR=8.7						
ROSC	El Rosal	128.97	46	*e*PKPdf	PKPdf	02 50 03.0	+1.5
PRAC	Prado	129.52	48	*e*PKPdf	PKPdf	02 50 02.5	+0.4
OTAV	Otavalo	129.91	54	*e*PKPdf	PKPdf	02 50 04.8	+1.4
OTAV	Otavalo	129.91	54	*e*PKIKP	PKPdf	02 50 04.8	+1.4
NVL	N'lazarevskaya	134.92	202	⇓*i*PKIKP	PKPdf	02 50 11.2	+0.7
NVL				pmax	pmax		
	comp=Z,8.0nm,0.6s						
SNAA	Sanae	138.42	197	PKhKP	PKPpre	02 50 06.6	
	comp=Z,1.1nm,0.3s,baz=199,slow=6.2,SNR=9.2						
SNAA				PKP	PKPdf	02 50 16.5	-0.5
	comp=Z,4.3nm,0.8s,baz=53,slow=1.4,SNR=11						
SNAA				PP	PP	02 53 07.8	-0.4
	comp=Z,3.8nm,0.9s,baz=140,slow=8.2,SNR=5.5						
SNAA	Sanae	138.42	197	*e*PKPpre	PKPpre	02 50 09.0	
SNAA				*e*PKPdf	PKPdf	02 50 16.5	-0.5
SNAA				*e*PP	PP	02 53 07.9	-0.3
NNA	Nana	139.61	65	PKP	PKPdf	02 50 21.5	+0.6
	comp=Z,15nm,0.7s,baz=15,slow=4.1,SNR=3.7						
PTGA	Pitinga	141.22	33	PKhKP	PKPpre	02 50 18.7	
	comp=Z,6.3nm,0.6s,baz=357,slow=2.9,SNR=13						
PTGA	Pitinga	141.22	33	*e*PKPpre	PKPpre	02 50 19.2	
SAML	Samuel	146.57	45	*e*PKPdf	PKPdf	02 50 33.8	+0.7
SAML	Samuel	146.57	45	*e*PKP2	PKPdf	02 50 33.8	+0.7
PMSA	Palmer Station	146.83	161	PKPbc	PKPdf	02 50 32.3	+0.4
	comp=Z,6.4nm,0.6s,baz=213,slow=4.1,SNR=3.0						
LPAZ	La Paz	148.78	61	PKP	PKPdf	02 50 38.2	+0.7
	comp=Z,25nm,0.7s,baz=337,slow=3.6,SNR=59						
LPAZ				PKPbc	PKiKP	02 50 42.3	-0.5
	comp=Z,31nm,0.7s,baz=345,slow=4.0,SNR=68						
LPAZ	La Paz	148.78	61	*e*PKPdf	PKPdf	02 50 38.8	+1.3
LPAZ	La Paz	148.78	61	PKIKP	PKPdf	02 50 38.2	+0.7
LPAZ						02 50 42.3	
LPAZ				pmax	pmax		
	comp=Z,31nm,0.7s						
LPAZ				pmax	pmax		
	comp=Z,31nm,0.7s						
MNMC	Minye Minye	149.50	67	*e*PKPdf	PKPdf	02 50 39.6	+1.5
RCBR	Riachuelo	150.75	351	*e*PKPbc	PKPbc	02 50 45.9	+0.3
RCBR	Riachuelo	150.75	351	*e*PKIKP	PKPbc	02 50 45.9	+0.3
SIV	San Ignacio	153.35	50	PKP	PKPdf	02 50 44.5	+0.8
	comp=Z,4.0nm,0.9s,baz=206,slow=1.1,SNR=13						
SIV				PKPbc	PKiKP	02 50 51.6	+0.2
	comp=Z,16nm,0.9s,baz=329,slow=1.7,SNR=31						
PLCA	Paso Flores	155.34	113	PKPbc	PKPdf	02 50 55.7	+10
	comp=Z,2.5nm,0.6s,baz=274,slow=3.3,SNR=11						
PLCA				PKPab	PKPab	02 51 12.1	+0.5
	comp=Z,8.5nm,0.9s,baz=273,slow=3.0,SNR=6.5						
PLCA	Paso Flores	155.34	113	*e*PKPdif	PKPdf	02 50 56.0	+10
PLCA				*e*PKPab	PKPab	02 51 13.8	+2.2
CPUP	Villa Florida	162.87	65	PKP	PKPdf	02 50 55.8	+0.8
	comp=Z,3.4nm,0.9s,baz=49,slow=0.2,SNR=4.1						
CPUP				PKPab	PKPab	02 51 44.9	+0.3
	comp=Z,3.6nm,0.9s,baz=322,slow=4.4,SNR=4.1						

JMA 03 02:32:55.3, 37°.10N×140°.49E, h11^{km}±1^{km}, M4.2, 1C-1D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFFD	Fukushimafurud	0.06	99	P	Pg	02 32 57.6	0.0
JFFD				S	Sg	02 32 59.1	-0.1
ONAJ	Iwakimizuishiy	0.25	90	P	Pg	02 33 00.6	+0.2
ONAJ				S	Sg	02 33 04.4	+0.5
JFK	Kawauchi	0.41	49	P	Pg	02 33 03.2	-0.2
JFK				S	Sg	02 33 08.8	0.0
JFT	Otama	0.43	344	P	Pg	02 33 04.2	+0.3
JFT				S	Sg	02 33 10.3	+0.6
JSB	Shiboa	0.47	254	P	Pb	02 33 05.2	-0.5
JSB				S	Sb	02 33 12.0	-0.7
JHO	Hitachi	0.49	173	⇑P	Pg	02 33 04.6	-0.3
JHO				S	Sg	02 33 11.3	-0.1
JFY	Yanaizu	0.70	296	⇓P	Pg	02 33 08.7	-0.1
JFY				S	Sg	02 33 17.8	-0.2
JMM	Marumori	0.80	17	P	Pg	02 33 10.3	-0.5
JMM				S	Sg	02 33 20.6	-0.7
JKT	Katashina	1.05	252	S	Sg	02 33 28.6	-0.5

MEX 03 02:36:23.6±0.3, 18°.23N×103°.43W, h11^{km}±2^{km}, MD3.7, Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMIG	Aquila	0.10	51	*i* P	Pg	02 36 25.7	-0.7
MMIG				*e*S	Sg	02 36 27.6	-0.7
R15V		1.08	331	*e*P	Pb	02 36 40.7	-3.6
R15V				*e*S	Sg	02 36 54.4	-4.1
EZ5V		1.26	352	*i* P	Pn	02 36 43.9	-3.6
EZ5V				*e*S	Sb	02 36 59.3	-4.6
CJM	Chamela	1.99	310	*e*P	Pn	02 36 54.0	-3.1
CJM				*e*S	Sn	02 37 17.2	-4.8
ARIG	Puente Sto Nin	2.93	88	*e*P	Pn	02 37 07.4	-2.7
ARIG				*e*S	Sn	02 37 41.5	-3.8

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*IDC **03** 02:47:19.8±1.4, 36°.86N×141°.30E, h0^{km}, mb3.6/5, mb1 3.7/7, mb1mx3.5/61, mbtmp3.6/7, ML2.8/2, Error ellipse: s-maj=27.6km s-min=22.1km az=105.0*

*ISCJB **03** 02:47:20.0±1.1, 36°.86N±0°.03×141°.43E±0°.06, h15^{km}±7^{km}, mb3.6/5, Error ellipse: s-maj=8.7km s-min=5.3km az=8.6*

*JMA **03** 02:47:21.3, 36°.87N×141°.35E, h29^{km}±1^{km}, M3.4*

ISC 03 02:47:20.1±1.8, 36°.87N±0°.03×141°.31E±0°.07, h2^{km}±11^{km}, n24, σ0^{s}.52/31, mb3.6/5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.47	299	P	Pb	02 47 31.2	+0.1
ONAJ				S	Sb	02 47 38.6	+0.2
JFK	Kawauchi	0.60	325	P	Pb	02 47 33.3	-0.1
JFK				S	Sb	02 47 41.5	-0.8
JFFD	Fukushimafurud	0.64	290	P	Pb	02 47 34.0	+0.1
JFFD				S	Sb	02 47 42.9	-0.4
JHO	Hitachi	0.65	247	P	Pb	02 47 34.2	+0.1
JHO				S	Sb	02 47 43.7	+0.1
JHYU	Hitachinakayam	0.79	228	P	Pb	02 47 36.3	-0.1
JHYU				S	Sb	02 47 47.0	-0.5
JFT	Otama	1.01	310	P	Pb	02 47 40.6	+0.3
JFT				S	Sb	02 47 54.0	0.0
JMM	Marumori	1.07	338	P	Pg	02 47 40.7	0.0
JMM				S	Sg	02 47 54.6	0.0
JYT	Yasato	1.10	235	P	Pg	02 47 41.0	-0.2
JYT				S	Sg	02 47 55.7	+0.2
JSB	Shiboa	1.12	275	P	Pn	02 47 42.6	-0.1
JSB				S	Sb	02 47 58.0	+0.9
JFY	Yanaizu	1.39	293	P	Pn	02 47 46.5	+0.1
JFY				S	Sb	02 48 04.2	-0.7
MJAR	Matsushiro Arr	2.51	263	Pn	Pn	02 48 02.6	+0.7
	1.4nm,0.3s,baz=92,slow=14,SNR=18						
MJAR				Sn	Sn	02 48 33.7	+0.6
	4.1nm,0.3s,baz=79,slow=13,SNR=5.1						
MAT	Matsushiro	2.51	263	P	Pn	02 48 02.5	+0.6
MAT				S	Sb	02 48 36.1	-1.2
JHJ	Hachijo jima 2	3.95	199	Pn	Pn	02 48 22.2	+0.6
	3.0nm,0.3s,baz=270,slow=20,SNR=2.0						
JHJ				Sn	Sn	02 49 08.7	+0.3
	6.4nm,0.3s,baz=233,slow=20,SNR=2.9						
H11N2	WAKE ISLAND Hy	28.14	120	T	T	03 22 38.8	
	baz=313,slow=75,SNR=30						
H11N1	WAKE ISLAND Hy	28.15	120	T	T	03 22 39.9	
	baz=313,slow=75,SNR=38						
H11N3	WAKE ISLAND Hy	28.16	120	T	T	03 22 40.7	
	baz=313,slow=75,SNR=33						
H11S1	WAKE ISLAND Hy	28.84	122	T	T	03 23 31.9	
	baz=315,slow=76,SNR=17						
H11S3	WAKE ISLAND Hy	28.84	123	T	T	03 23 31.2	
	baz=315,slow=76,SNR=18						
H11S2	WAKE ISLAND Hy	28.86	123	T	T	03 23 31.7	
	baz=315,slow=76,SNR=16						
ZALV	Zalesovo Beam	41.96	313	P	P	02 55 11.8	-0.2
	0.5nm,0.4s,baz=98,slow=9.2,SNR=2.8						
MKAR	Makanchi Array	44.13	302	P	P	02 55 29.1	-0.7
	0.6nm,0.6s,baz=90,slow=9.7,SNR=5.6						
KURBB	Kurchatov Arra	46.03	308	P	P	02 55 44.6	-0.2
	1.1nm,0.8s,baz=83,slow=8.1,SNR=7.6						
ILAR	Eielson Array	49.68	32	P	P	02 56 13.6	+0.7
	0.4nm,0.9s,baz=270,slow=6.4,SNR=4.6						
WRA	Warramunga Arr	56.89	188	P	P	02 57 05.7	-0.7
	0.7nm,0.8s,baz=4.4,slow=7.4,SNR=3.3						

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*ISCJB **03** 03:04:14.4±0.2, 4°.90S±0°.03×145°.66E±0°.05, h100^{km}, mb4.5/47, Error ellipse: s-maj=6.5km s-min=3.7km az=13.1*

*IDC **03** 03:04:18.5±2.1, 4°.95S×145°.58E, h128^{km}±19^{km}, mb4.0/18, mb1 4.1/22, mb1mx4.0/45, mbtmp4.5/22, MS3.1/1, Ms1 3.1/1, ms1mx2.3/40, Error ellipse: s-maj=20.6km s-min=10.1km az=84.0*

*NEIC **03** 03:04:19.5±0.7, 4°.93S×145°.50E, h135^{km}±6^{km}, mb4.6/35, Error ellipse: s-maj=7.1km s-min=4.4km az=99.0*

*DJA **03** 03:04:19.1±0.9, 5°S±8°×14°6E±°, h88^{km}±23^{km}, M5.2/6, mb5.3/6, mB5.3/3, MLv5.1/3, Mw(mB)4.7/3*

ISC 03 03:04:16.0±0.5, 4°.93S±0°.05×145°.60E±0°.08, h100^{km}, n88, σ1^{s}.88/94, mb4.6/46, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	Manus Island	3.37	32	*e*Pn	Pn	03 05 14.2	+7.5
PMG	Port Moresby	4.71	161	P	Pn	03 05 27.0	+2.3
	38nm,0.3s,baz=354,slow=4.3,SNR=50						
PMG				S	Sn	03 06 17.0	-1.2
	32nm,0.3s,baz=20,slow=11,SNR=3.9						
PMG	Port Moresby	4.71	161	*e*Pn	Pn	03 05 27.1	+2.3
PMG				*e*		03 06 17.1	
PMG				*e*Sn	Sn	03 06 18.0	-0.2
JAY	Jayapura	5.45	296	P	Pn	03 05 36.5	+1.6
	28nm,0.3s,baz=147,slow=9.3,SNR=48						
JAY	Jayapura	5.45	296	P	Pn	03 05 37.7	+2.9
	573nm,0.7s,9µm2.6nm						
GENI	Genyem	5.90	293	P	Pn	03 05 44.1	+3.2
	226nm,0.8s,3µm0.8nm						
COEN	Coen	9.28	195	*e*Pn	Pn	03 06 30.1	+3.2
COEN				*e*Sn	Sn	03 08 11.2	+1.6
SRPI	Serui, Papua	9.83	288	P	Pn	03 06 36.1	+1.7
RKPI	Ransiki, Papua	11.90	286	P	Pn	03 07 05.6	+3.2
	98nm,0.6s						
FAKI	Fak Fak	13.47	278	*e*Pn	Pn	03 07 22.9	-0.3
SIJI	Sorong	14.87	285	P	Pn	03 07 42.3	+1.1
	6.4nm,0.3s,baz=73,slow=9.5,SNR=12						
CTA	Charters Tower	15.08	178	P	P	03 07 52.0	+5.3
	4.6nm,0.3s,baz=359,slow=14,SNR=26						
WRAB	Tennant Creek	18.50	215	*e*P	P	03 08 25.6	+1.1
	12nm,0.7s						
WB2	Warramunga Arr	18.51	215	*e*P	P	03 08 25.8	+1.2
	10nm,0.8s						
WB2				*e*S	S	03 11 44.3	-6.4
WR1	Warramunga Arr	18.52	215	*e*P	P	03 08 25.4	+0.7
	8.9nm,0.6s						
WR1				*e*S	S	03 11 47.9	-2.9
WRA	Warramunga Arr	18.52	215	P	P	03 08 25.4	+0.7
	1.1nm,0.3s,baz=35,slow=11,SNR=27						
WRA				S	S	03 11 47.9	-2.9
	0.2nm,0.3s,baz=33,slow=21,SNR=3.4						
EIDS	Eidsvold	20.99	166	*e*P	P	03 08 52.3	+0.9
	7.1nm,1.0s						
SOEI	Soe	21.69	256	*e*P	P	03 08 58.4	-0.7
	43nm,0.7s						
AS01	Alice Springs	21.75	210	*e*P	P	03 09 01.8	+2.3
AS31	Alice Springs	21.77	210	*e*P	P	03 09 00.1	+0.3
	2.0nm,0.8s						
AS31				*e*S	S	03 12 47.7	-7.3
ASAR	Alice Springs	21.78	210	P	P	03 09 00.3	+0.5
	1.7nm,0.4s,baz=44,slow=8.1,SNR=29						
ASAR				S	S	03 12 47.7	-7.3
	1.2nm,0.9s,baz=32,slow=17,SNR=3.0						
FITZ	Fitzroy Crossi	23.50	235	P	P	03 09 16.9	-0.1
	5.4nm,0.4s,baz=50,slow=7.8,SNR=20						
FITZ				LR	LR	03 20 37.5	
	comp=Z,50nm,19.4s,baz=18,slow=42						
FITZ	Fitzroy Crossi	23.50	235	*e*P	P	03 09 16.9	-0.1
	15nm,1.1s						
DZM	Mont Dzumac	26.41	132	P	P	03 09 43.1	-0.4
	2.7nm,0.5s,baz=309,slow=8.0,SNR=3.0						
DZM	Mont Dzumac	26.41	132	*e*P	P	03 09 43.1	-0.4
	11nm,1.3s						
STKA	Stephens Creek	27.07	188	P	P	03 09 50.0	+0.8
	2.4nm,0.6s,baz=351,slow=8.7,SNR=5.7						
STKA	Stephens Creek	27.07	188	*e*P	P	03 09 50.0	+0.8
	0.6nm,0.8s						
BBOO	Buckleboo	29.13	197	*e*P	P	03 10 08.4	+0.8
	21nm,1.4s						
FORT	Forrest	30.56	211	*e*P	P	03 10 20.1	-0.1
	24nm,1.4s						
CBIJ	Chichi jima	32.01	354	*e*P	P	03 10 31.7	-1.2
	133nm,1.3s						
MJAR	Matsushiro Arr	41.83	351	P	P	03 11 55.1	-0.9
	4.4nm,0.9s,baz=183,slow=8.3,SNR=11						
MAJO	Matsushiro	41.83	351	*e*P	P	03 11 55.1	-0.9
MAT	Matsushiro	41.83	351	P	P	03 11 55.1	-1.0
RPZ	Rata Peaks	44.67	154	*e*P	P	03 12 20.1	+1.3
	39nm,1.4s						
BFZ	Birch Farm	44.98	147	*e*P	P	03 12 21.3	0.0
	66nm,1.3s						
KSRS	Korea Array	45.27	340	P	P	03 12 24.0	+0.4
	4.4nm,0.9s,baz=158,slow=9.1,SNR=12						
KS15	Wonju Array Si	45.27	340	*e*P	P	03 12 24.0	+0.4
KSAR	Wonju Array Be	45.27	340	P	P	03 12 24.0	+0.4
KS01	Wonju Array Si	45.30	340	*e*P	P	03 12 23.5	-0.3
ASAJ	Asahikawa	48.90	357	P	P	03 12 52.5	+0.9
	9.2nm,0.7s,baz=74,slow=3.2,SNR=6.6						
ASAJ	Asahikawa	48.90	357	*e*P	P	03 12 52.7	+1.0
	14nm,1.0s						
USA0B	Ussuriysk Arra	50.42	347	*e*P	P	03 13 03.8	+0.6
	13nm,0.8s						
USRK	Ussuriysk Ar.	50.42	347	P	P	03 13 03.2	-0.1
	14nm,0.8s,baz=172,slow=6.2						
PETK	Petropavlovsk-	58.72	8	P	P	03 14 04.1	+1.0
	12nm,0.8s,baz=159,slow=8.3						
PETK	Petropavlovsk-	58.72	8	*e*P	P	03 14 04.0	+0.9
PEA1	Petropavlovsk-	58.73	8	*e*P	P	03 14 04.1	+1.0
SONA0	Songino Array	62.80	331	*e*P	P	03 14 30.6	-0.5
SONM	Songino Array	62.80	331	P	P	03 14 30.6	-0.5
	1.0nm,0.5s,baz=165,slow=6.8,SNR=7.3						
SONA1	Songino Array	62.81	331	*e*P	P	03 14 31.3	+0.2
CASY	Casey	65.92	195	*e*P	P	03 14 50.1	-0.8
	7.5nm,0.9s						
VNDA	Vanda	73.06	176	P	P	03 15 34.4	-0.3
	2.7nm,0.6s,baz=332,slow=6.7,SNR=27						
MK01	Makanchi Array	75.78	321	*e*P	P	03 15 50.2	-0.8
MK32	Makanchi Array	75.80	321	*e*P	P	03 15 50.7	-0.4
MKAR	Makanchi Array	75.80	321	P	P	03 15 50.7	-0.4
	1.1nm,0.6s,baz=96,slow=7.8,SNR=11						
ZALV	Zalesovo Beam	77.37	328	P	P	03 15 58.2	-1.6
	1.0nm,0.3s,baz=110,slow=6.5,SNR=7.8						
ZAA1	Zalesovo Array	77.38	328	*e*P	P	03 15 58.2	-1.6
KURK	Kurchatov	79.53	323	*e*P	P	03 16 10.6	-1.1
KURBB	Kurchatov Arra	79.55	323	P	P	03 16 10.6	-1.3
	0.7nm,0.5s,baz=119,slow=4.6,SNR=5.5						
SVW2	Sparrevohn	79.86	25	*e*P	P	03 16 14.6	+1.2
	7.1nm,0.8s						
RDOG	Red Dog Mine	81.14	17	*e*P	P	03 16 21.0	+1.0
	11nm,0.7s						
MAW	Mawson	82.69	203	P	P	03 16 27.2	-1.0
	2.9nm,0.6s,baz=83,slow=6.1,SNR=6.9						
MAW	Mawson	82.69	203	*e*P	P	03 16 27.4	-0.7
	0.4nm,0.6s						
IM3	Indian Mountai	82.99	21	*e*P	P	03 16 29.7	-0.1
BPAW	Bear Paw Mtn.	83.16	23	*e*P	P	03 16 30.3	-0.4
	4.3nm,0.8s						
SML	Sawmill	83.29	26	*e*P	P	03 16 31.6	+0.1
	15nm,0.9s						
MLY	Manley	83.67	23	*e*P	P	03 16 33.6	+0.3
	9.6nm,0.8s						
SCM	Sheep Creek Mo	83.74	26	*e*P	P	03 16 34.0	+0.2
	10nm,1.1s						
MCK	McKinley	83.82	24	*e*P	P	03 16 33.5	-0.6
	12nm,0.8s						
DIV	Divide	84.17	27	*e*P	P	03 16 36.4	+0.5
	8.4nm,0.8s						
DHY	Denali Highway	84.20	25	*e*P	P	03 16 36.2	0.0
	9.6nm,0.8s						
KLU	Klutina	84.23	27	*e*P	P	03 16 36.7	+0.5
	7.1nm,1.0s						
CCB	Clear Creek Bu	84.64	23	*e*P	P	03 16 36.9	-1.2
	10nm,0.7s						
BMRM	Bremner River	84.64	27	*e*P	P	03 16 38.5	+0.2
	12nm,1.1s						
COLA	College	84.72	23	*e*P	P	03 16 37.0	-1.4
	13nm,0.8s						
COLD	Coldfoot	84.83	21	*e*P	P	03 16 39.9	+0.8
	3.2nm,0.7s						
HDA	Harding Lake	84.89	24	*e*P	P	03 16 38.4	-1.0
	4.3nm,0.8s						
QSPA	South Pole Qui	85.03	180	P	P	03 16 39.0	-1.2
	4.3nm,0.7s,baz=45,slow=0.9,SNR=14						
IL1	Eielson Array	85.06	23	*e*P	P	03 16 38.4	-1.8
ILAR	Eielson Array	85.06	23	P	P	03 16 38.5	-1.7
	9.8nm,0.7s,baz=250,slow=5.2,SNR=134						
ILB	Eielson Array	85.06	23	*e*P	P	03 16 38.5	-1.7
BVAR	Borovoye Array	85.09	324	P	P	03 16 39.4	-1.3
	1.0nm,0.6s,baz=83,slow=6.3,SNR=5.4						
RIDG	Independ'e Rid	85.51	25	*e*P	P	03 16 42.5	-0.1
	11nm,1.1s						
SCRK	Sand Creek	85.94	25	*e*P	P	03 16 44.7	-0.1
	2.3nm,0.8s						
EGAK	Eagle	87.37	24	*e*P	P	03 16 51.7	+0.1
	3.4nm,0.7s						
DAWY	Dawson	87.90	25	*e*P	P	03 16 54.8	+0.6
	5.7nm,0.8s						
GATR	Gnd/Air Tx Cnt	95.97	56	*e*P	P	03 17 31.2	-1.0
PASC	Pasadena Art C	97.88	56	*e*P	Pdif	03 17 45.2	+4.3
EML	El Monte Cty P	98.99	58	*e*P	Pdif	03 17 42.7	-3.1

NNC 03 03:08:43.7±1.7, 38°.76N×70°.47E, h0^{km}, mb3.6, mpv3.2, 6C-1D, Error ellipse: s-maj=12.4km s-min=7.6km

az=31.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**2.66**	**61**	⇑Pn	Pn	03 09 27.7	-0.4
	4.8nm,0.3s						
SFK				⇑Sn	Sn	03 10 02.5	+1.4
	19nm,0.3s						
MNAS	**Manas**	**4.03**	**22**	⇓Pn	Pn	03 09 46.6	-0.2
	1.9nm,0.4s						
MNAS				⇑Sn	Sn	03 10 35.2	+0.4
	7.9nm,0.7s						
KK31	**Karatay Array**	**4.34**	**0**	⇑Pn	Pn	03 09 51.2	+0.2
	1.1nm,0.4s,baz=180,slow=14,SNR=11						
KK31				⇑Sn	Sn	03 10 44.2	+2.0
	0.9nm,0.3s,baz=178,slow=30,SNR=6.1						
KK31				⇑Lg	Lg	03 10 59.4	
	1.7nm,0.3s,baz=190,slow=30,SNR=4.6						
AAK	**Ala-Archa**	**4.93**	**37**	Pn	Pn	03 09 59.5	+0.3
	2.4nm,0.4s						
AAK				Sn	Sn	03 10 58.5	+1.4
	2.1nm,0.5s						
AAK				Lg	Lg	03 11 18.8	
	4.8nm,0.7s						

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*ISCJB **03** 03:14:20.1±0.5, 50°.11N±0°.03×18°.38E±0°.03, h0^{km}, Error ellipse: s-maj=4.3km s-min=2.5km az=18.4*

*IPEC **03** 03:14:21.3±0.3, 50°.09N×18°.47E, h1^{km}±2^{km}, ML1.7/4, Error ellipse: s-maj=1.8km s-min=1.5km az=70.0*

*CSEM **03** 03:14:21.3±0.2, 50°.09N×18°.42E, h2^{km}, ML2.6/8, Error ellipse: s-maj=4.4km s-min=2.6km az=15.0*

*WAR **03** 03:14:21.7, 50°.06N×18°.44E, h1^{km}, Mw2.4*

*PRU **03** 03:14:22.2, 50°.06N×18°.38E, h0^{km}*

ISC 03 03:14:21.4±0.8, 50°.08N±0°.03×18°.43E±0°.02, h0^{km}, n43, σ0^{s}.65/75, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAC	**Raciborz**	**0.15**	**272**	*e*Pg	**Pg**	**03 14 25.8**	**+1.5**
RAC				*e*Sg	**Sg**	**03 14 29.1**	**+2.8**
OKC	**Ostrava-Krasne**	**0.30**	**217**	*e*PG	**Pg**	**03 14 28.0**	**+0.8**
OKC				*e*SG	**Sg**	**03 14 31.0**	**-0.1**
	comp=Z,48nm,0.4s						
OKC	**Ostrava-Krasne**	**0.30**	**217**	Pg	**Pg**	**03 14 28.0**	**+0.8**
OKC				Sg	**Sg**	**03 14 31.0**	**-0.1**
	48nm,0.4s						
MORC	**Moravsky Berou**	**0.65**	**243**	*e*Pg	**Pg**	**03 14 34.2**	**+0.4**
MORC				*e*Sg	**Sg**	**03 14 42.6**	**+0.4**
	16nm,0.2s						
MORC	**Moravsky Berou**	**0.65**	**243**	*e*PG	**Pg**	**03 14 34.2**	**+0.4**
MORC				*e*SG	**Sg**	**03 14 42.6**	**+0.4**
MORC	**Moravsky Berou**	**0.65**	**243**	*e*Pg	**Pg**	**03 14 34.2**	**+0.4**
	baz=62						
MORC				*e*Sg	**Sg**	**03 14 42.6**	**+0.4**
	16nm,0.2s,baz=62						
OJC	**Ojcow**	**0.89**	**80**	*e*Pg	**Pg**	**03 14 38.6**	**+0.1**
OJC				*e*Sg	**Sg**	**03 14 50.5**	**+0.5**
OJC	**Ojcow**	**0.89**	**80**	*e*Pg	**Pg**	**03 14 38.6**	**+0.1**
OJC				*e*Sg	**Sg**	**03 14 50.5**	**+0.5**
OJC	**Ojcow**	**0.89**	**80**	*e*Pg	**Pg**	**03 14 38.6**	**+0.1**
OJC				*e*Sg	**Sg**	**03 14 50.5**	**+0.5**
KRLC	**Kraliky**	**1.06**	**270**	*e*PG	**Pg**	**03 14 41.2**	**-0.6**
KRLC				*e*SG	**Sg**	**03 14 55.0**	**-0.5**
KRLC	**Kraliky**	**1.06**	**270**	Pg	**Pg**	**03 14 41.2**	**-0.6**
KRLC				Sg	**Sg**	**03 14 55.0**	**-0.5**
LANS	**Liptovska Anna**	**1.15**	**144**	*e*PG	**Pb**	**03 14 43.8**	**-0.4**
LANS				*e*SG	**Sb**	**03 15 00.2**	**+0.6**
LANS	**Liptovska Anna**	**1.15**	**144**	*e*Pg	**Pb**	**03 14 43.9**	**-0.3**
LANS				*e*Sg	**Sb**	**03 15 00.2**	**+0.6**
JAVC	**Velka Javorina**	**1.32**	**202**	*e*Pg	**Pg**	**03 14 46.6**	**-0.1**
JAVC				*e*Sg	**Sg**	**03 15 03.2**	**-0.5**
	9.7nm,0.4s						
JAVC	**Velka Javorina**	**1.32**	**202**	*e*PG	**Pg**	**03 14 46.6**	**-0.1**
JAVC				*e*SG	**Sg**	**03 15 03.2**	**-0.5**
JAVC	**Velka Javorina**	**1.32**	**202**	*e*Pg	**Pg**	**03 14 46.6**	**-0.1**
	baz=23						
JAVC				*e*Sg	**Sg**	**03 15 03.2**	**-0.5**
	9.7nm,0.4s,baz=23						
NIE	**Niedzica**	**1.38**	**118**	*e*Pg	**Pb**	**03 14 48.0**	**-0.1**
NIE				*e*Sg	**Sn**	**03 15 06.9**	**-0.1**
NIE	**Niedzica**	**1.38**	**118**	*e*Pg	**Pb**	**03 14 48.0**	**-0.1**
NIE				*e*Sg	**Sn**	**03 15 06.9**	**-0.1**
NIE	**Niedzica**	**1.38**	**118**	*e*Pg	**Pb**	**03 14 48.0**	**-0.1**
NIE				*e*Sg	**Sn**	**03 15 06.9**	**-0.1**
DPC	**Dobruska-Polom**	**1.38**	**282**	*e*PG	**Pg**	**03 14 47.6**	**-0.3**
DPC				*e*SG	**Sg**	**03 15 05.8**	**0.0**
	comp=Z,13nm,0.3s						
DPC	**Dobruska-Polom**	**1.38**	**282**	Pg	**Pg**	**03 14 47.6**	**-0.3**
DPC				Sg	**Sg**	**03 15 05.8**	**0.0**
	13nm,0.3s						
VRAC	**Vranov**	**1.42**	**238**	*e*Pg	**Pn**	**03 14 47.9**	**-0.6**
VRAC				*e*Sg	**Sg**	**03 15 06.8**	**-0.2**
	9.5nm,0.3s						
VRAC	**Vranov**	**1.42**	**238**	*e*PG	**Pn**	**03 14 48.0**	**-0.6**
VRAC				*e*SG	**Sg**	**03 15 06.9**	**-0.1**
VRAC	**Vranov**	**1.42**	**238**	*e*Pg	**Pn**	**03 14 47.9**	**-0.6**
	baz=56						
VRAC				*e*Sg	**Sg**	**03 15 06.8**	**-0.2**
	9.5nm,0.3s,baz=56						
KSP	**Ksiaz**	**1.57**	**300**	*e*Pg	**Pn**	**03 14 49.8**	**-0.7**
KSP				*e*Sg	**Sg**	**03 15 12.4**	**+0.7**
KSP	**Ksiaz**	**1.57**	**300**	*e*Pg	**Pn**	**03 14 49.8**	**-0.7**
KSP				*e*Sg	**Sg**	**03 15 12.4**	**+0.7**
KSP	**Ksiaz**	**1.57**	**300**	*e*Pg	**Pn**	**03 14 49.8**	**-0.7**
KSP				*e*Sg	**Sg**	**03 15 12.4**	**+0.7**
VYHS	**Vyhne**	**1.61**	**170**	*e*PG	**Pn**	**03 14 51.3**	**+0.2**
VYHS				*e*SG	**Sn**	**03 15 12.4**	**-0.1**
VYHS				*e*LG	Lg	03 15 13.3	
VYHS	**Vyhne**	**1.61**	**170**	*e*Pg	**Pn**	**03 14 51.3**	**+0.2**
VYHS				*e*Sn	**Sn**	**03 15 12.4**	**-0.1**
UPC	**Upice**	**1.61**	**286**	*e*SG	**Sg**	**03 15 13.1**	**0.0**
	comp=Z,9.0nm,0.4s						
UPC	**Upice**	**1.61**	**286**	Sg	**Sg**	**03 15 13.1**	**0.0**
	9.0nm,0.4s						
KRUC	**Moravsky**	**1.67**	**233**	*e*Pn	**Pn**	**03 14 52.0**	**+0.1**
KRUC				*e*Sg	**Sb**	**03 15 14.5**	**-0.1**
	5.3nm,0.2s						
KRUC	**Moravsky**	**1.67**	**233**	*e*PN	**Pn**	**03 14 52.0**	**+0.1**
KRUC				*e*SG	**Sb**	**03 15 14.5**	**-0.1**
KRUC	**Moravsky**	**1.67**	**233**	*e*Pn	**Pn**	**03 14 52.0**	**+0.1**
	baz=52						
KRUC				*e*Sg	**Sb**	**03 15 14.5**	**-0.1**
	5.3nm,0.2s,baz=52						
CRVS	**Cervenica-Dubn**	**2.30**	**120**	*e*SN	**Sg**	**03 15 35.0**	**-0.3**
GOPC	**GO Pecny, Ondr**	**2.36**	**267**	*e*SG	**Sb**	**03 15 35.0**	**+0.6**
GOPC	**GO Pecny, Ondr**	**2.36**	**267**	Sg	**Sb**	**03 15 35.0**	**+0.6**
PRU	**Pruhonice**	**2.51**	**269**	*e*SG	**Sb**	**03 15 39.0**	**+0.2**
	comp=Z,3.3nm,0.3s						
PVCC	**Panska Ves**	**2.52**	**282**	*e*SG	**Sg**	**03 15 41.8**	**-0.4**
	comp=Z,10nm,0.2s						
PVCC	**Panska Ves**	**2.52**	**282**	Sg	**Sg**	**03 15 41.8**	**-0.4**
	10nm,0.2s						
BRG	**Berggiesshubel**	**2.98**	**287**	SG	**Sg**	**03 15 55.6**	**-1.4**
	3.8nm,0.4s						
KHC	**Kasperske Hory**	**3.30**	**255**	*e*SG	**Sb**	**03 16 03.9**	**+2.5**
CLL	**Collm**	**3.66**	**292**	*e*Sg	**Sg**	**03 16 18.0**	**-1.1**

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*NIED **03** 03:31:00, 38°.40N×142°.10E, h5^{km}, Mw3.4 Best double couple: $M_0$1.41000×10^{14} NP1:ϕ_s290.00000°,δ65.00000°, λ-180.00000°. NP2:ϕ_s200.00000°,δ90.00000°, λ-25.00000°.*

JMA 03 03:31:58.2±0.1, 38°.43N×142°.09E, h27^{km}±1^{km}, M3.5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIO	**Ouri**	**0.58**	**273**	P	Pb	03 32 09.5	-0.4
JIO				S	Sb	03 32 17.4	-0.4
OFUJ	**Ofunato**	**0.73**	**333**	P	Pb	03 32 11.9	-0.4
OFUJ				S	Sb	03 32 21.9	0.0
JMK	**Ichinoseki**	**0.86**	**308**	P	Pb	03 32 14.1	-0.4
JMK				S	Sb	03 32 25.5	-0.1
JOU	**Okura**	**1.12**	**267**	P	Pn	03 32 18.0	-0.2
JOU				S	Sn	03 32 32.4	-0.3
JOM	**Ohasama**	**1.21**	**329**	P	Pn	03 32 19.9	+0.5
JOM				S	Sb	03 32 35.4	-0.4

IDC 03 03:43:20.0±1.5, 1°.19N×125°.67E, h0^{km}, mb3.7/5, mb1 3.8/5, mb1mx3.4/57, mbtmp3.7/5, Error ellipse: s-maj=174.5km s-min=19.1km az=64.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.66**	**158**	P	P	03 48 23.5	+0.5
	0.8nm,0.4s,baz=336,slow=10,SNR=8.8						
ASAR	**Alice Springs**	**25.97**	**163**	P	P	03 48 54.9	+0.3
	0.4nm,0.4s,baz=344,slow=7.7,SNR=11						
STKA	**Stephens Creek**	**36.19**	**157**	P	P	03 50 23.3	-1.2
	1.9nm,0.8s,baz=318,slow=8.1,SNR=3.4						
MKAR	**Makanchi Array**	**59.05**	**327**	P	P	03 53 22.5	+0.5
	0.2nm,0.4s,baz=113,slow=8.2,SNR=3.9						
KURBB	**Kurchatov Arra**	**63.32**	**328**	P	P	03 53 50.4	-0.4
	0.3nm,0.3s,baz=132,slow=6.5,SNR=3.4						

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*IDC **03** 03:46:49.5±2.4, 9°.21S×113°.33E, h0^{km}, mb3.8/4, mb1 3.9/5, mb1mx3.5/58, mbtmp3.8/5, MS4.6/1, Ms1 4.6/1, ms1mx2.8/54, Error ellipse: s-maj=158.2km s-min=22.8km az=49.0*

*ISCJB **03** 03:46:53.2±1.0, 9°.81S±0°.06×112°.93E±0°.09, h33^{km}, mb3.8/4, MS4.5/1, Error ellipse: s-maj=12.7km s-min=8.6km az=0.2*

*DJA **03** 03:46:54.5±0.6, 10°S±5°×11°3E±°, h10^{km}, M3.7/9, MLv3.7/9*

ISC 03 03:46:53.9±1.1, 9°.77S±0°.08×112°.92E±0°.08, h35^{km}, n12, σ1^{s}.46/13, mb3.8/4, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GMJI	**Gumukmas**	**1.57**	**19**	P	**Pn**	**03 47 18.8**	**-0.5**
GMJI				S	**Sn**	**03 47 38.0**	**-0.5**
JAGI	**Jajag, Banyuwa**	**1.78**	**43**	P	**Pn**	**03 47 22.7**	**+0.6**
JAGI				S	**Sn**	**03 47 44.6**	**+1.1**
BLJI	**Banyuglugur**	**2.12**	**18**	P	**Pn**	**03 47 28.4**	**+1.6**
WOJI	**Wonogiri, Jawa**	**2.75**	**314**	P	**Pn**	**03 47 36.9**	**+1.4**
SRBI	**Singaraja**	**2.82**	**54**	P	**Pn**	**03 47 37.2**	**+0.7**
TWSI	**Taliwang, Sumb**	**4.05**	**76**	P	**Pn**	**03 47 54.9**	**+1.6**
FITZ	**Fitzroy Crossi**	**14.86**	**125**	Pn	**Pn**	**03 50 19.1**	**-2.4**
	baz=294,slow=10.0						
FITZ				Sn	Sn	03 52 52.2	-13
	baz=270,slow=12						
WRA	**Warramunga Arr**	**23.02**	**119**	P	**P**	**03 51 55.9**	**-0.1**
	1.4nm,0.8s,baz=302,slow=11,SNR=6.2						
ASAR	**Alice Springs**	**24.34**	**127**	P	**P**	**03 52 09.2**	**+0.5**
	2.1nm,0.7s,baz=303,slow=8.9,SNR=24						
JAY	**Jayapura**	**28.53**	**77**	LR	LR	04 06 33.2	
	comp=Z,1μm,18.4s,baz=17,slow=42						
STKA	**Stephens Creek**	**34.48**	**134**	P	**P**	**03 53 40.5**	**+1.9**
	1.8nm,0.6s,baz=311,slow=8.6,SNR=7.7						
MKAR	**Makanchi Array**	**62.59**	**337**	P	**P**	**03 57 13.0**	**-1.5**
	0.3nm,0.5s,baz=138,slow=7.6,SNR=3.1						

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*ISCJB **03** 03:49:31.5±1.0, 10°.80S±0°.03×163°.29E±0°.02, h89^{km}±8^{km}, mb5.5/348, Error ellipse: s-maj=4.4km s-min=3.6km az=173.2*

*BJI **03** 03:49:32.8, 10°.37S×163°.48E, h92^{km}, mb5.4/78, mB5.4/57*

*NEIC **03** 03:49:33.0±0.0, 10°.76S×163°.21E, h100^{km}, Moment Tensor Solution. s31 Moment tensor: Scale 10^{17}Nm; M_{rr}2.00; $M_{\theta\theta}$0.05; $M_{\phi\phi}$-2.06; $M_{r\theta}$0.22; $M_{\theta\phi}$0.52; $M_{\phi r}$-0.64; Best double couple: $M_0$2.20000×10^{17} NP1:ϕ_s165.00000°, δ54.00000°,λ88.00000°. NP2:ϕ_s349.00000°,δ36.00000°, λ93.00000°. Principal axes: T 2.1100, Plg80.0000°, Azm64.0000°; N 0.1700, Plg1.0000°, Azm166.0000°; P -2.2800, Plg8.0000°, Azm256.0000°;*

*NEIC **03** 03:49:33.0±0.1, 10°.82S×163°.33E, h92^{km}, mb5.6/293, ME5.0, MW5.5, MW5.5 Error ellipse: s-maj=3.5km s-min=2.9km az=141.0, Moment Tensor Solution. s34 Moment tensor: Scale 10^{17}Nm; M_{rr}2.54; $M_{\theta\theta}$-0.49; $M_{\phi\phi}$-2.05; $M_{r\theta}$0.41; $M_{\theta\phi}$0.86; $M_{\phi r}$-0.53; Best double couple: $M_0$2.60000×10^{17} NP1:ϕ_s153.00000°,δ52.00000°, λ86.00000°. NP2:ϕ_s339.00000°,δ38.00000°,λ95.00000°. Principal axes: T 2.6300, Plg82.0000°, Azm42.0000°; N -0.1200, Plg3.0000°, Azm155.0000°; P -2.5100, Plg7.0000°, Azm246.0000°; Broadband fault plane solution: P waves. NP1:ϕ_s345.00000°,δ30.00000°, λ90.00000°. NP2:ϕ_s165.00000°,δ60.00000°,λ90.00000°. Principal axes: T Plg75.0000°, Azm75.0000°; N Plg0.0000°, Azm0.0000°; P Plg15.0000°, Azm255.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

*MOS **03** 03:49:33.1±1.0, 10°.64S×163°.32E, h97^{km}, mb5.6/60, MS4.4/10 Error ellipse: s-maj=7.4km s-min=6.3km az=87.5*

*GCMT **03** 03:49:33.0±0.1, 10°.86S×163°.41E, h111^{km}, MW5.5/125, Moment Tensor Solution. s125,c209; s121,c252; Duration: 1^{s}.4 Moment tensor: Scale 10^{17}Nm; M_{rr}2.29±.03; $M_{\theta\theta}$0.20±.03; $M_{\phi\phi}$-2.49±.03; $M_{r\theta}$0.27±.03; $M_{\theta\phi}$0.65±.03; $M_{\phi r}$-0.70±.03; Best double couple: $M_0$2.57600×10^{17} NP1:ϕ_s164.00000°,δ53.00000°, λ87.00000°. NP2:ϕ_s350.00000°,δ37.00000°,λ95.00000°. Principal axes: T 2.4050, Plg81.0000°, Azm58.0000°; N 0.3420, Plg3.0000°, Azm166.0000°; P -2.7470, Plg8.0000°, Azm257.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*IDC **03** 03:49:34.5±1.4, 10°.85S×163°.39E, h107^{km}±12^{km}, mb5.0/36, mb1 5.0/40, mb1mx5.0/53, mbtmp5.3/40, MS4.3/27, Ms1 4.3/27, ms1mx4.2/40 Error ellipse: s-maj=9.5km s-min=8.0km az=82.0*

ISC 03 03:49:33.5±0.3, 10°.84S±0°.03×163°.41E±0°.04, h98^{km}±2^{km}, h99^{km}:pP-P, n1076, σ1^{s}.30/1153, mb5.5/341, 46C-22D, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**3.68**	**292**	P	**Pn**	**03 50 30.6**	**+2.2**
	476nm,0.3s,baz=162,slow=2.7,SNR=107						
HNR				S	**Sn**	**03 51 12.8**	**+2.0**
	298nm,0.3s,baz=205,slow=22,SNR=4.5						
HNR	**Honiara**	**3.68**	**292**	*i* P	**Pn**	**03 50 31.5**	**+3.1**
HNR				*i* S	**Sn**	**03 51 15.0**	**+4.1**
HNR	**Honiara**	**3.68**	**292**	*e*Pn	**Pn**	**03 50 30.7**	**+2.3**
HNR				*e*Sn	**Sn**	**03 51 11.9**	**+1.1**
DZM	**Mont Dzumac**	**11.55**	**166**	P	**Pn**	**03 52 17.0**	**+1.7**
	2.1nm,0.3s,baz=145,slow=21,SNR=20						
DZM				S	**Sn**	**03 54 22.9**	**+0.6**
	1.1nm,0.3s,baz=198,slow=20,SNR=2.2						
DZM	**Mont Dzumac**	**11.55**	**166**	*e*P	**Pn**	**03 52 18.5**	**+3.2**
	126nm,1.4s						
DZM				*e*LR	LR	03 54 57.7	
	5μm,28.6s						
DZM	**Mont Dzumac**	**11.55**	**166**	*e*Pn	**Pn**	**03 52 17.8**	**+2.6**
DZM				*e*Sn	**Sn**	**03 54 21.0**	**-1.3**
TARA	**Tarawa**	**15.37**	**39**	*e*Pn	**P**	**03 53 12.6**	**+5.0**
	158nm,0.8s						
PMG	**Port Moresby**	**16.06**	**274**	P	**P**	**03 53 15.5**	**+0.3**
	1.2nm,0.3s,baz=153,slow=3.2,SNR=5.2						
PMG				LR	LR	03 58 47.2	
	comp=Z,4μm,22.0s,baz=113,slow=34						
PMG	**Port Moresby**	**16.06**	**274**	*e*Pn	**P**	**03 53 17.6**	**+2.4**
	237nm,1.3s						
MANU	**Manus Island**	**18.16**	**298**	*e*P	**Pn**	**03 53 40.5**	**+1.1**
	605nm,1.4s						
PATS	**Pohnpei**	**18.27**	**344**	P	**Pn**	**03 53 41.3**	**+0.6**
	baz=18						
PATS	**Pohnpei**	**18.27**	**344**	*e*P	**Pn**	**03 53 42.5**	**+1.7**
	313nm,1.0s						
EIDS	**Eidsvold**	**18.58**	**217**	P	**Pn**	**03 53 45.6**	**+1.3**
	baz=19,SNR=23						
EIDS	**Eidsvold**	**18.58**	**217**	*e*P	**Pn**	**03 53 45.7**	**+1.3**
	62nm,0.9s						
CTA	**Charters Tower**	**18.90**	**239**	P	**Pn**	**03 53 48.4**	**+0.2**
	baz=19						
CTA	**Charters Tower**	**18.90**	**239**	P	**Pn**	**03 53 48.5**	**+0.2**
	32nm,0.3s,baz=66,slow=12,SNR=295						
CTA				S	**S**	**03 57 16.4**	**+0.1**
	0.3nm,0.3s,baz=348,slow=20,SNR=5.7						
CTA				LR	LR	04 01 02.5	
	comp=Z,1μm,19.1s,baz=62,slow=36						
CTAO	**Charters Tower**	**18.90**	**239**	*e*P	**Pn**	**03 53 48.4**	**+0.2**
	146nm,0.5s						
CTAO	**Charters Tower**	**18.90**	**239**	*e*P	**Pn**	**03 53 48.4**	**+0.2**
CTAO				pmax	pmax		
	comp=Z,146nm,0.5s						
MTSU	**Mount Surprise**	**19.84**	**246**	P	**Pn**	**03 53 58.8**	**-0.5**
	baz=20,SNR=56						
COEN	**Coen**	**20.00**	**259**	P	Pn	03 54 00.4	-0.7
	baz=20,SNR=41						
COEN	**Coen**	**20.00**	**259**	*e*P	Pn	03 54 00.5	-0.6
	comp=Z,86nm,0.9s						
RMQ	**Roma**	**20.82**	**220**	P	Pn	03 54 09.4	-1.2
	baz=21,SNR=19						
ARMA	**Armidale**	**22.35**	**208**	P	**P**	**03 54 24.9**	**+1.2**
	baz=22,SNR=15						
ARMA	**Armidale**	**22.35**	**208**	*e*P	**P**	**03 54 25.1**	**+1.5**
	comp=Z,72nm,1.2s						
QLP	**Quilpie**	**23.93**	**226**	P	**P**	**03 54 39.1**	**+0.5**
	baz=24,SNR=4.4						
JAY	**Jayapura**	**24.00**	**289**	P	**P**	**03 54 38.6**	**-0.7**
	comp=Z,29nm,1.0s,baz=95,slow=11,SNR=4.9						
AFI	**Afiamalu**	**24.43**	**100**	P	**P**	**03 54 42.8**	**-0.4**
	comp=Z,111nm,0.9s,baz=294,slow=8.6,SNR=8.2						
AFI				LR	LR	04 02 44.1	
	comp=Z,998nm,18.9s,baz=282,slow=32						
AFI	**Afiamalu**	**24.43**	**100**	*e*P	**P**	**03 54 43.9**	**+0.6**
	comp=Z,200nm,1.1s						
AFI	**Afiamalu**	**24.43**	**100**	*e*P	**P**	**03 54 43.9**	**+0.6**
AFI				pmax	pmax		
	comp=Z,200nm,1.1s						
QIS	**Mount Isa**	**24.84**	**244**	P	**P**	**03 54 46.6**	**-0.3**
	baz=25,SNR=18						
MGCD	**Mangrove Creek**	**24.97**	**205**	P	**P**	**03 54 50.0**	**+2.0**
	baz=25,SNR=5.3						
OUZ	**Omahuta**	**25.99**	**161**	*e*P	**P**	**03 54 58.6**	**+1.5**
	comp=Z,87nm,1.3s						
CMSA	**Cobar Meteorol**	**26.33**	**216**	P	**P**	**03 55 00.7**	**+0.4**
	baz=26,SNR=40						
YNG	**Young**	**27.09**	**208**	P	**P**	**03 55 08.4**	**+1.4**
	baz=27,SNR=6.6						
CNB	**Canberra Magne**	**27.52**	**205**	P	**P**	**03 55 12.6**	**+1.7**
	baz=28,SNR=5.8						
STKA	**Stephens Creek**	**29.06**	**221**	P	**P**	**03 55 25.1**	**+0.4**
	baz=29,SNR=18						
STKA	**Stephens Creek**	**29.06**	**221**	P	**P**	**03 55 24.7**	**0.0**
	comp=Z,7.2nm,0.5s,baz=40,slow=12,SNR=18						
STKA				PcP	**PcP**	**03 58 30.7**	**0.0**
	comp=Z,8.2nm,0.8s,baz=36,slow=1.4,SNR=3.8						
STKA	**Stephens Creek**	**29.06**	**221**	*e*P	**P**	**03 55 24.9**	**+0.4**
	comp=Z,2.5nm,0.8s						
STKA				*e*PcP	**PcP**	**03 58 30.7**	**0.0**
STKA	**Stephens Creek**	**29.06**	**221**	*e*P	**P**	**03 55 25.0**	**+0.4**
STKA				*e*		03 58 30.7	
STKA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
H11S2	**WAKE ISLAND Hy**	**29.32**	**6**	T	T	04 26 57.1	
	baz=188,slow=76,SNR=914						
H11S3	**WAKE ISLAND Hy**	**29.32**	**6**	T	T	04 26 42.5	
	baz=188,slow=76,SNR=417						
H11S1	**WAKE ISLAND Hy**	**29.34**	**6**	T	T	04 26 56.2	
	baz=188,slow=76,SNR=294						
WRAB	**Tennant Creek**	**29.40**	**249**	*e*P	**P**	**03 55 27.1**	**-0.7**
	comp=Z,25nm,0.9s						
WRAB	**Tennant Creek**	**29.40**	**249**	*de*P	**P**	**03 55 26.8**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,39nm,1.3s						
WB2	**Warramunga Arr**	**29.40**	**249**	*e*P	**P**	**03 55 27.1**	**-0.7**
	comp=Z,32nm,1.1s						
WR1	**Warramunga Arr**	**29.41**	**249**	*e*P	**P**	**03 55 27.1**	**-0.8**
	comp=Z,34nm,1.0s						
WR1				*e*PcP	**PcP**	**03 58 31.8**	**0.0**
WR1				*e*S	**S**	**04 00 11.6**	**-3.4**
WR1				*e*ScP	**ScP**	**04 02 05.1**	**+0.3**
WRA	**Warramunga Arr**	**29.41**	**249**	P	**P**	**03 55 27.1**	**-0.8**
	comp=Z,19nm,0.6s,baz=79,slow=9.1,SNR=84						
WRA				PcP	**PcP**	**03 58 31.8**	**0.0**
	comp=Z,12nm,0.8s,baz=75,slow=3.0,SNR=9.9						
WRA				S	**S**	**04 00 11.6**	**-3.4**
	comp=Z,39nm,1.3s,baz=77,slow=15,SNR=15						
WRA				ScP	**ScP**	**04 02 05.1**	**+0.3**
	comp=Z,2.5nm,1.0s,baz=60,slow=2.5,SNR=4.0						
WRA				PKiKP	**PKiKP**	**04 06 03.1**	**-2.1**
	comp=Z,0.9nm,1.0s,baz=326,slow=0.6,SNR=5.3						
WRA				LR	LR	04 07 04.6	
	comp=Z,3μm,18.6s,baz=75,slow=36						
URZ	**Urewera**	**29.94**	**158**	P	**P**	**03 55 32.7**	**+0.4**
	comp=Z,25nm,1.0s,baz=292,slow=1.0,SNR=8.2						
URZ	**Urewera**	**29.94**	**158**	*e*P	**P**	**03 55 32.8**	**+0.5**
WAKE	**Wake Island**	**30.10**	**6**	*e*P	**P**	**03 55 34.3**	**+0.5**
	comp=Z,127nm,1.0s						
KDU	**Kakadu**	**30.33**	**263**	P	**P**	**03 55 35.0**	**-1.1**
	baz=30,SNR=22						
BKZ	**Black Stump Fm**	**30.53**	**160**	*e*P	**P**	**03 55 37.6**	**0.0**
	comp=Z,46nm,0.8s						
H11N1	**WAKE ISLAND Hy**	**30.55**	**6**	T	T	04 28 29.3	
	baz=188,slow=76,SNR=177						
H11N3	**WAKE ISLAND Hy**	**30.56**	**7**	T	T	04 28 32.8	
	baz=188,slow=76,SNR=161						
H11N2	**WAKE ISLAND Hy**	**30.57**	**6**	T	T	04 28 27.9	
	baz=188,slow=76,SNR=151						
AS01	**Alice Springs**	**30.81**	**242**	*e*P	**P**	**03 55 39.2**	**-1.1**
AS01				*e*PcP	**PcP**	**03 58 34.5**	**-0.9**
AS31	**Alice Springs**	**30.85**	**242**	*e*P	**P**	**03 55 39.2**	**-1.4**
	comp=Z,17nm,1.5s						
AS31				*e*PcP	**PcP**	**03 58 35.4**	**-0.2**
AS31				*e*S	**S**	**04 00 32.5**	**-4.9**
AS31				*e*ScP	**ScP**	**04 02 10.0**	**+0.5**
ASAR	**Alice Springs**	**30.85**	**242**	P	**P**	**03 55 39.0**	**-1.6**
	comp=Z,12nm,0.5s,baz=62,slow=10,SNR=97						
ASAR				PcP	**PcP**	**03 58 35.4**	**-0.2**
	comp=Z,12nm,0.8s,baz=68,slow=3.2,SNR=12						
ASAR				S	**S**	**04 00 32.5**	**-5.0**
	comp=Z,3.4nm,1.1s,baz=68,slow=18,SNR=4.4						
ASAR				ScP	**ScP**	**04 02 10.0**	**+0.5**
	comp=Z,3.2nm,1.0s,baz=87,slow=3.4,SNR=7.0						
TOO	**Toolangi**	**31.11**	**208**	P	**P**	**03 55 44.4**	**+1.6**
	baz=31,SNR=14						
MTN	**Manton Dam**	**31.64**	**263**	P	**P**	**03 55 47.5**	**-0.1**
	baz=32,SNR=11						
MTN	**Manton Dam**	**31.64**	**263**	*e*P	**P**	**03 55 47.0**	**-0.6**
	comp=Z,64nm,1.5s						
MTN				*e*PcP	**PcP**	**03 58 37.7**	**0.0**
HTT	**Hallett**	**31.78**	**221**	P	**P**	**03 55 49.5**	**+0.8**
	baz=32,SNR=9.9						
BFZ	**Birch Farm**	**31.82**	**161**	*e*P	**P**	**03 55 49.1**	**+0.3**
	comp=Z,66nm,0.9s						
THZ	**Tophouse**	**31.92**	**166**	*e*P	**P**	**03 55 50.9**	**+1.1**
	comp=Z,34nm,0.7s						
ARPS	**Mount Arapiles**	**32.34**	**213**	P	**P**	**03 55 54.4**	**+0.9**
	baz=32,SNR=7.3						
LTZ	**Lake Taylor**	**32.75**	**168**	*e*P	**P**	**03 55 57.7**	**+0.7**
	comp=Z,20nm,0.8s						
FOZ	**Fox Glacier**	**33.05**	**171**	*e*P	**P**	**03 56 00.6**	**+1.1**
	comp=Z,77nm,0.8s						
OXZ	**Oxford**	**33.23**	**168**	*e*P	**P**	**03 56 01.7**	**+0.5**
	comp=Z,268nm,1.4s						
BBOO	**Buckleboo**	**33.33**	**225**	P	**P**	**03 56 01.7**	**-0.5**
	baz=34,SNR=16						
BBOO	**Buckleboo**	**33.33**	**225**	*e*P	**P**	**03 56 01.6**	**-0.5**
	comp=Z,28nm,1.0s						
RPZ	**Rata Peaks**	**33.42**	**170**	P	**P**	**03 56 03.5**	**+0.7**
	comp=Z,107nm,0.6s,baz=345,slow=2.3,SNR=61						
RPZ	**Rata Peaks**	**33.42**	**170**	*e*P	**P**	**03 56 03.5**	**+0.7**
	comp=Z,118nm,0.7s						
MQZ	**McQueen’s Vall**	**33.72**	**168**	*e*P	**P**	**03 56 06.0**	**+0.7**
	comp=Z,66nm,1.2s						
LBZ	**Lake Benmore**	**33.94**	**171**	*e*P	**P**	**03 56 08.6**	**+1.3**
	comp=Z,24nm,0.6s						
KNRA	**Kununurra**	**34.03**	**258**	P	**P**	**03 56 07.8**	**-0.7**
	baz=34,SNR=14						
WKZ	**Wanaka**	**34.21**	**173**	*e*P	**P**	**03 56 11.2**	**+1.5**
	comp=Z,171nm,1.4s						
MOO	**Moorlands**	**34.53**	**201**	P	**P**	**03 56 13.6**	**+1.1**
	baz=35,SNR=3.3						
MLZ	**Mavora Lakes**	**34.65**	**174**	*e*P	**P**	**03 56 14.6**	**+1.1**
	comp=Z,37nm,1.2s						
WHZ	**Wether Hill Ro**	**35.15**	**174**	*e*P	**P**	**03 56 18.1**	**+0.3**
	comp=Z,36nm,0.9s						
WRKA	**Warakurna**	**36.14**	**242**	P	**P**	**03 56 25.2**	**-1.3**
	baz=36,SNR=26						
RAR	**Rarotonga**	**36.78**	**111**	LR	LR	04 09 50.0	
	comp=Z,133nm,19.5s,baz=281,slow=33						
FITZ	**Fitzroy Crossi**	**37.22**	**254**	P	**P**	**03 56 34.6**	**-1.1**
	baz=37,SNR=10						
FITZ	**Fitzroy Crossi**	**37.22**	**254**	P	**P**	**03 56 34.9**	**-0.8**
	comp=Z,14nm,0.5s,baz=74,slow=7.4,SNR=56						
FITZ				LR	LR	04 11 52.0	
	comp=Z,801nm,19.2s,baz=13,slow=36						
FITZ	**Fitzroy Crossi**	**37.22**	**254**	*e*P	**P**	**03 56 34.6**	**-1.1**
	comp=Z,15nm,0.6s						
FORT	**Forrest**	**38.30**	**233**	P	**P**	**03 56 44.5**	**-0.2**
	baz=38,SNR=14						
FORT	**Forrest**	**38.30**	**233**	*e*P	**P**	**03 56 44.2**	**-0.5**
	comp=Z,50nm,0.8s						
BATI	**Baumata**	**39.06**	**267**	P	**P**	**03 56 52.0**	**+0.7**
	comp=Z,52nm,0.5s,baz=124,slow=4.5,SNR=6.3						
JCJ	**Chichijima**	**42.96**	**332**	P	**P**	**03 57 22.1**	**-0.9**

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       comp=Z,187nm,0.8s,baz=141,slow=13,SNR=7.4
CBIJ   Chichi jima       42.96 332  eP      P       03 57 22.1 -0.9
       comp=Z,297nm,1.0s
MBWA   Marble Bar        43.09 251  eP      P       03 57 23.6 -0.7
       comp=Z,87nm,1.3s
MBWA                                epP     pP      03 57 46.8 -0.5
PPT    Papeete           45.98 104   LR     LR      04 13 15.8
       comp=Z,344nm,18.5s,baz=272,slow=31
PPT2   Papeete2          45.98 104  eLQ     LQ      04 09 08.7
       comp=Z,3µm,27.5s
PPT2                                eLR     LR      04 10 53.3
       comp=Z,2µm,36.2s
TBI    Tubuai            46.54 112  eLQ     LQ      04 09 23.7
       comp=Z,2µm,35.8s
TBI                                 eLR     LR      04 11 21.8
       comp=Z,2µm,34.8s
KLBR   Kellerberrin      46.89 237   P      P       03 57 53.4 -0.8
       baz=47,SNR=4.8
BLDU   Ballidu           47.51 238   P      P       03 57 58.3 -0.7
       baz=48,SNR=5.3
NWAO   Narrogin (SRO)    47.69 235   P      P       03 57 59.3 -1.0
       comp=Z,12nm,0.9s,baz=336,slow=6.4,SNR=4.7
NWAO                                 LR     LR      04 18 58.0
       comp=Z,788nm,18.7s,baz=310,slow=37
MORW   Morawa            47.72 241   P      P       03 58 00.4 -0.3
       baz=48,SNR=5.8
GIRL   Giralia           48.33 249   P      P       03 58 06.2 +0.7
       baz=48,SNR=4.7
JHJ2   Mitsune           49.15 334  eP      P       03 58 12.3 +0.9
       comp=Z,224nm,0.8s
JHJ    Hachijo jima 2    49.17 334   P      P       03 58 11.7 +0.1
       comp=Z,229nm,0.8s,baz=168,slow=11,SNR=8.0
KIP    Kipapa            49.63  50ceP       P       03 58 16.8 +1.5
KIP                                  pmax   pmax
       comp=Z,1µm,2.5s
OPA    Opana             49.79  49  eP      P       03 58 17.4 +0.9
       comp=Z,295nm,1.1s
OPA    Opana             49.79  49  eP      P       03 58 17.4 +0.9
OPA                                  pmax   pmax
       comp=Z,295nm,1.1s
KHU    Kahuku            50.24  54  eP      P       03 58 20.1 -0.2
       comp=Z,186nm,1.0s
KHU    Kahuku            50.24  54  eP      P       03 58 20.1 -0.2
KHU                                  pmax   pmax
       comp=Z,186nm,1.0s
HUH    Hualalai          50.31  53  eP      P       03 58 20.6 -0.3
       comp=Z,180nm,1.1s
HMH    Humu‘ula Sheep    50.54  53  eP      P       03 58 23.6 +1.0
       comp=Z,269nm,0.9s
POHA   Pohakuloa         50.59  53  eP      P       03 58 23.5 +0.7
       comp=Z,170nm,0.8s
HPAH   Hawaii Prepara    50.61  53  eP      P       03 58 23.7 +0.9
       comp=Z,105nm,0.8s
JOW    Kunigami          50.65 318   P      P       03 58 22.7 -0.3
       comp=Z,37nm,0.8s,baz=150,slow=9.3,SNR=6.2
JOW    Kunigami          50.65 318  eP      P       03 58 22.7 -0.3
       comp=Z,50nm,1.0s
INU    Inuyama           52.28 333  eP      P       03 58 35.0 +0.1
       comp=Z,119nm,1.2s
MJAR   Matsushiro Arr    52.76 334   P      P       03 58 38.1 -0.4
       comp=Z,32nm,0.9s,baz=172,slow=8.7,SNR=69
MAJO   Matsushiro        52.76 334  eP      P       03 58 38.0 -0.5
       comp=Z,106nm,1.3s
MAJO   Matsushiro        52.76 334c iP      P       03 58 38.4 -0.1
MAJO                                 pmax   pmax
       comp=Z,51nm,1.1s
MAT    Matsushiro        52.76 334   P      P       03 58 37.6 -0.9
MAT                                  S      S       04 05 57.2 -2.1
MJB9   Matsu-Tunnel      52.77 334  eP      P       03 58 38.2 -0.3
       comp=Z,108nm,1.3s
YOJ    Yonaguni jima     52.78 312  eP      P       03 58 39.6 +0.8
       comp=Z,125nm,0.9s
TWG    Pinlang           53.27 309  eP      P       03 58 42.6 +0.1
       comp=Z,102nm,1.0s
YULB   Yu-li             53.42 310  eP      P       03 58 43.5 -0.1
       comp=Z,55nm,0.7s
JNU    Nakatsue          53.59 326   P      P       03 58 44.8  0.0
       comp=Z,60nm,0.8s,baz=114,slow=3.7,SNR=4.0
JNU                                  LR     LR      04 18 22.1
       comp=Z,176nm,21.7s,baz=122,slow=32
JNU    Nakatsue          53.59 326  eP      P       03 58 45.3 +0.6
       comp=Z,135nm,1.1s
NACB   Ninganchiao       53.65 311  eP      P       03 58 46.1 +0.9
       comp=Z,77nm,0.9s
TPUB   Ta-pu             53.88 309  eP      P       03 58 45.9 -1.0
       comp=Z,112nm,0.8s
SSLB   Suanglung         53.91 310  eP      P       03 58 46.7 -0.5
       comp=Z,47nm,0.7s
YHNB   Yeheng            54.10 311  eP      P       03 58 48.9 +0.2
       comp=Z,112nm,1.0s
TATO   Taipei            54.20 312  eP      P       03 58 50.4 +1.2
       comp=Z,231nm,1.4s
TAOE   Nuku Hiva Isla    55.59  93  eS      S       04 06 46.4 +8.1
       comp=Z,450nm,23.4s
TAOE                                eLR     LR      04 15 11.1
       comp=Z,825nm,29.8s
QZH    Quanzhou          56.34 310⇑iP       P       03 59 05.1 +0.5
QZH                                  pP     pP      03 59 28.8 +0.2
QZH                                  S      S       04 06 48.2 +0.6
QZH                                  sS     sS      04 07 28.7 -0.2
QZH                                  pmax   pmax
       comp=Z,92nm,0.6s
QZH                                  LR     LR
       comp=Z,360nm,20.2s
QZH                                  LR     LR
       comp=Z,360nm,18.7s
QZH                                  LR     LR
       comp=Z,440nm,16.9s
SHO    Shikotan          56.50 346  eP      P       03 58 58.2 -7.1
YUK    Yuzh-Kuril’sk     56.89 345c iP      P       03 59 06.7 -1.4
YUK                                 i *PP   pP      03 59 29.9 -2.3
YUK                                 e               04 00 01.8
YUK                                 e               04 01 15.4
YUK                                 i S     S       04 06 52.6 -1.6
YUK                                                 04 08 46.1
YUK                                  pmax   pmax
       comp=N,133nm,0.9s
YUK                                  pmax   pmax
       comp=Z,278nm,0.9s
YUK                                  pmax   pmax
       comp=Z,245nm,1.6s
KUR    Kuril’sk          57.55 347  eP      P       03 59 12.2 -0.5
KUR                                 i               04 00 04.6
KUR                                 eS      S       04 07 07.9 +5.1
KUR                                  MLR    MLR
       comp=Z,394nm,17.0s
KUR                                  MLR    MLR
       comp=N,389nm,15.0s
ASAJ   Asahikawa         57.87 342   P      P       03 59 15.9 +0.9
       comp=N,144nm,0.8s,baz=220,slow=11,SNR=113
ASAJ   Asahikawa         57.87 342  eP      P       03 59 15.9 +0.9
       comp=N,196nm,1.0s
TJN    Taejon            57.94 326ceP       P       03 59 16.1 +0.4
SSE    Sheshan           58.12 317   P      P       03 59 18.0 +1.0
SSE                                  S      S       04 07 12.4 +1.6
SSE                                  pmax   pmax
       comp=N,42nm,1.0s
SSE                                  pmax   pmax
       comp=N,150nm,4.7s
SSE                                  LR     LR
       comp=N,180nm,16.3s
SSE                                  LR     LR
       comp=N,140nm,17.3s
KSRS   Korea Array       58.43 327   P      P       03 59 19.7 +0.7
       comp=N,32nm,0.9s,baz=141,slow=7.2,SNR=83
KS15   Wonju Array Si    58.44 327  eP      P       03 59 19.8 +0.7
KSAR   Wonju Array Be    58.44 327   P      P       03 59 19.7 +0.6
KSAR   Wonju Array Be    58.44 327   P      P       03 59 19.7 +0.6
KS01   Wonju Array Si    58.46 327  eP      P       03 59 19.3  0.0
GZH    Guangzhou         59.47 305   P      P       03 59 27.9 +1.4
GZH                                  pP     pP      03 59 50.1 -0.7
GZH                                  sP     sP      04 00 01.2 -0.5
GZH                                  PcP    PcP     04 00 11.2 -2.0
GZH                                  PP     PP      04 01 40.9 +1.8
GZH                                  S      S       04 07 28.6 -0.1
GZH                                  sS     sS      04 08 06.3 -4.0
GZH                                  ScS    ScS     04 09 04.9 -3.0
GZH                                  pmax   pmax
       comp=N,290nm,2.6s
RKT    Rikitea           59.81 110  eS      S       04 07 38.6 +5.4
       comp=N,865nm,26.0s
RKT                                 eLQ     LQ      04 14 57.9
       comp=N,1µm,34.8s
RKT                                 eLR     LR      04 17 30.8
       comp=N,1µm,35.8s
NJ2    Nanjing           60.27 317  eP      P       03 59 32.8 +0.9
NJ2                                  pP     pP      03 59 57.2 +1.0
NJ2                                  S      S       04 07 42.2 +3.6
NJ2                                  sS     sS      04 08 22.1 +1.8
NJ2                                  pmax   pmax
       comp=N,62nm,1.1s
NJ2                                  pmax   pmax
       comp=N,410nm,3.8s
NJ2                                  LR     LR
       comp=N,410nm,15.7s
NJ2                                  LR     LR
       comp=N,320nm,18.4s
NJ2                                  LR     LR
       comp=N,500nm,17.4s
YSS    Yuzh-Sakhalins    60.42 344  eP      P       03 59 33.2 +0.7
       comp=N,175nm,1.3s
YSS    Yuzh-Sakhalins    60.42 344αeP       P       03 59 33.2 +0.7
YSS                                 e*SP    sP      04 00 06.4 -1.3
YSS                                 e               04 00 16.9
YSS                                 e               04 01 46.5
YSS                                 eS      S       04 07 38.9 -1.0
YSS                                 ePS     PnS     04 07 55.5  -13
YSS                                 ePPS    PPS     04 08 09.4
YSS                                 e               04 09 11.4
YSS                                 eSS     SS      04 11 39.8 +0.1
YSS                                  pmax   pmax
       comp=Z,90nm,1.1s
YSS                                  pmax   pmax
       comp=N,50nm,1.5s
YSS                                  pmax   pmax
       comp=Z,230nm,3.7s
YSS                                  pmax   pmax
       comp=N,140nm,3.1s
YSS                                  pmax   pmax
       comp=E,180nm,4.0s
YSS                                  smax   smax
       comp=N,250nm,9.1s
YSS                                  MLR    MLR
       comp=Z,320nm,19.0s
QIZ    Qiongzhong        60.56 299   P      P       03 59 34.8 +0.7
QIZ                                  S      S       04 07 45.9 +3.1
QIZ                                  pmax   pmax
       comp=Z,16nm,1.2s
QIZ                                  LR     LR
       comp=Z,210nm,22.1s
QIZ                                  LR     LR
       comp=Z,230nm,18.6s
QIZ                                  LR     LR
       comp=Z,340nm,23.5s
QIZ    Qiongzhong        60.56 299  eP      P       03 59 35.7 +1.6
       comp=Z,38nm,1.1s
MSHR   Mys Shultsa       60.81 333ceP       P       03 59 37.0 +1.7
SKR    Severo-Kuril’s    61.59 355  eP      P       03 59 39.4 -0.9
SKR                                 eS      S       04 07 52.0 -2.6
SKR                                 eSS     SS      04 12 03.2 +5.4
SKR                                 eSSS    SSS     04 14 29.9
SKR                                  pmax   pmax
       comp=Z,500nm,3.1s
SKR                                  pmax   pmax
       comp=Z,75nm,1.0s
SKR                                  pmax   pmax
       comp=Z,100nm,4.8s
SKR                                  MLR    MLR
       comp=Z,200nm,16.0s
SKR                                  MLR    MLR
       comp=Z,200nm,19.0s
USA0B  Ussuriysk Arra    61.76 335  eP      P       03 59 42.7 +1.1
       comp=Z,188nm,1.1s
USRK   Ussuriysk Ar.     61.76 335   P      P       03 59 42.4 +0.8
       comp=Z,91nm,1.0s,baz=142,slow=5.4
USRK                                 LR     LR      04 27 08.1
       comp=Z,148nm,19.1s,baz=131,slow=36
WHN    Wuhan             62.55 313⇑iP       P       03 59 47.4 +0.2
WHN                                  pP     pP      04 00 11.4 -0.3
WHN                                  S      S       04 08 07.2 -0.3
WHN                                  sS     sS      04 08 50.5 +1.1
WHN                                  pmax   pmax
       comp=Z,110nm,1.1s
WHN                                  pmax   pmax
       comp=Z,510nm,11.3s
WHN                                  LR     LR
       comp=Z,1µm,16.5s
WHN                                  LR     LR
       comp=Z,810nm,20.4s
WHN                                  LR     LR
       comp=Z,1µm,18.0s
DL2    Dalian            62.95 324⇑iP       P       03 59 49.8 +0.1
DL2                                  pP     pP      04 00 15.8 +1.6
DL2                                  S      S       04 08 13.8 +1.6
DL2                                  pmax   pmax
       comp=Z,80nm,0.7s
DL2                                  pmax   pmax
       comp=Z,240nm,6.1s
UBPT   Khong Chiam       62.97 293   P      P       03 59 52.3 +2.0
       comp=Z,7.8nm,1.4s
MDJ    Mudanjiang        63.12 334   P      P       03 59 49.1 -1.6
MDJ                                  pP     pP      04 00 12.6 -2.6
MDJ                                  sP     sP      04 00 24.6 -1.4
MDJ                                  S      S       04 08 16.4 +2.3
MDJ                                  sS     sS      04 08 53.8 -2.3
MDJ                                  ScS    ScS     04 09 34.7 +0.3
MDJ                                  pmax   pmax
       comp=Z,61nm,0.9s
MDJ                                  LR     LR
       comp=Z,240nm,15.5s
MDJ                                  LR     LR
       comp=Z,280nm,16.9s
MDJ                                  LR     LR
       comp=Z,320nm,22.6s
MDJ    Mudanjiang        63.12 334  eP      P       03 59 52.0 +1.3
       comp=Z,119nm,1.3s
PET    Petropavlovsk     63.73 357  eP      P       03 59 54.6  0.0
       comp=Z,112nm,1.1s
PET    Petropavlovsk     63.73 357  eP      P       03 59 54.1 -0.5
PET                                 e*PP    pP      04 00 17.1 -2.0
PET                                 eS      S       04 08 15.4 -5.9
PET                                 eSS     SS      04 12 32.4 +1.1
PET                                  pmax   pmax
       comp=Z,400nm,3.4s
PET                                  pmax   pmax
       comp=Z,108nm,0.9s
PET                                  pmax   pmax
       comp=Z,200nm,16.4s
PET                                  MLR    MLR
       comp=Z,200nm,21.0s
PET                                  MLR    MLR
       comp=Z,200nm,18.0s
PEA0B  Petropavlovsk-    63.88 356  eP      P       03 59 56.4 +0.8
       comp=Z,181nm,1.3s
PETK   Petropavlovsk-    63.88 356   P      P       03 59 55.9 +0.3
       comp=Z,58nm,0.9s,baz=133,slow=6.3
PETK   Petropavlovsk-    63.88 356  eP      P       03 59 55.7 +0.1
PEA1   Petropavlovsk-    63.88 356  eP      P       03 59 55.9 +0.3
SMY    Shemya            63.97   7  eP      P       03 59 56.9 +0.8
       comp=Z,112nm,1.0s
SMY    Shemya            63.97   7  eP      P       03 59 56.9 +0.8
SMY                                  pmax   pmax
       comp=Z,112nm,1.0s
TYV    Tymovskoe         64.04 346  eP      P       03 59 57.2 +0.6
TYV                                  pmax   pmax
       comp=Z,400nm,3.4s
TYV                                  pmax   pmax
       comp=Z,46nm,1.0s
CN2    Changchun         64.40 330  eP      P       03 59 59.0 -0.2
CN2                                 eS      S       04 08 33.9 +3.8
CN2                                  SS     SS      04 12 38.7 -3.5
CN2                                  pmax   pmax
       comp=Z,20nm,0.9s
CN2                                  pmax   pmax
       comp=Z,200nm,3.0s
CN2                                  LR     LR
       comp=Z,200nm,16.0s
CN2                                  LR     LR
       comp=Z,100nm,16.0s
CN2                                  LR     LR
       comp=Z,300nm,17.0s
KIWB   Kanaga Island     64.65  13  eP      P       04 00 01.9 +1.2
SKNT   Sakolnakorn       64.91 295   P      P       04 00 03.4 +0.4
       comp=Z,21nm,1.1s,comp=Z,991nm
GSTR   Great Sitkin T    65.13  14  eP      P       04 00 06.8 +3.1
PSI    Prapat            65.57 278   P      P       04 00 06.2 -1.3
       comp=Z,8.1nm,1.0s,baz=180,slow=7.8,SNR=5.4
PSI    Prapat            65.57 278  eP      P       04 00 06.2 -1.3
       comp=Z,18nm,1.2s
PSI    Prapat            65.57 278   P      P       04 00 06.2 -1.3
PSI                                  pmax   pmax
       comp=Z,2.0nm,0.3s
CASY   Casey             65.75 201  eP      P       04 00 07.9 +0.4
       comp=Z,105nm,1.5s
KLR    Kul’dur           65.97 338   P      P       04 00 09.7 +0.4
       comp=Z,4.2nm,1.0s,baz=131,slow=2.9,SNR=99
KLR    Kul’dur           65.97 338c iP      P       04 00 09.3 +0.1
ENH    Enshi             65.99 310  eP      P       04 00 09.8  0.0
       comp=Z,128nm,1.0s
NONG   Nongkai           66.04 295   P      P       04 00 10.9 +0.6
       comp=Z,0.8nm,1.0s
GYA    Guiyang           66.41 305⇑iP       P       04 00 13.0 +0.3
GYA                                  pP     pP      04 00 38.6 +1.2
GYA                                  sP     sP      04 00 49.8 +1.7
GYA                                  PP     PP      04 02 44.6 +4.4
GYA                                  S      S       04 08 57.0 +1.5
GYA                                  sS     sS      04 09 37.7 -0.1
GYA                                  SKS    SKSac   04 09 58.0 -2.5
GYA                                  pmax   pmax
       comp=Z,40nm,0.7s
GYA                                  pmax   pmax
       comp=Z,160nm,5.4s
GYA                                  LR     LR
       comp=Z,850nm,18.5s
GYA                                  LR     LR
       comp=Z,790nm,18.8s
GYA                                  LR     LR
       comp=Z,760nm,18.0s
NKL    Nikolayevsk       66.63 345  eP      P       04 00 13.0 -0.3
NKL                                  pmax   pmax
       comp=N,43nm,1.0s
NKL                                  pmax   pmax
       comp=Z,100nm,1.0s
VNDA   Vanda             66.68 180   P      P       04 00 14.2 +0.9
       comp=Z,20nm,0.7s,baz=347,slow=6.5,SNR=136
VNDA   Vanda             66.68 180  eP      P       04 00 14.3 +0.9
       comp=Z,28nm,0.8s
VNDA   Vanda             66.68 180  eP      P       04 00 14.3 +0.9
VNDA                                 pmax   pmax
       comp=Z,28nm,0.8s
BJT    Baijiatuau        66.88 322  eP      P       04 00 15.7 +0.5
       comp=Z,73nm,1.3s
BJT    Baijiatuau        66.88 322  eP      P       04 00 15.7 +0.5
BJT                                  pmax   pmax
       comp=Z,73nm,1.3s
SBA    Scott Base        67.03 179  eP      P       04 00 17.1 +1.5
       comp=Z,140nm,1.4s
SBA    Scott Base        67.03 179  eP      P       04 00 17.1 +1.5
SBA                                  pmax   pmax
       comp=Z,140nm,1.4s
PBKT   Sadao Pong        67.48 293   P      P       04 00 20.3 +0.9
       comp=Z,42nm,1.2s,comp=Z,7µm
PHIT   Phitsanulok       68.19 293   P      P       04 00 27.2 +3.3
       comp=Z,19nm,1.0s
SRDT   SRDT              68.46 290   P      P       04 00 27.7 +2.1
       comp=Z,36nm,1.3s,comp=Z,3µm
NANT   Nan               68.47 295   P      P       04 00 26.2 +0.5
       comp=Z,12nm,0.8s,comp=Z,122nm
UTHA   Uthaitani         68.54 291   P      P       04 00 27.7 +1.6
       comp=Z,5.6nm,0.9s,comp=Z,81nm
KMI    Kunming           69.06 302   P      P       04 00 30.8 +1.3
KMI                                  pP     pP      04 00 55.4 +1.0
KMI                                  sP     sP      04 01 05.8 +0.7
KMI                                  PP     PP      04 03 05.6 +2.2
KMI                                  S      S       04 09 28.2 +0.8
KMI                                  sS     SKiKP   04 10 10.6 -0.4
KMI                                  SS     SS      04 13 55.6 +0.1
KMI                                  pmax   pmax
       comp=Z,87nm,1.2s
KMI                                  pmax   pmax
       comp=Z,370nm,4.0s
KMI                                  LR     LR
       comp=Z,170nm,18.1s
KMI                                  LR     LR
       comp=Z,300nm,17.2s
KMI                                  LR     LR
       comp=Z,300nm,19.5s
UNV    Unalaska Valle    69.32  19  eP      P       04 00 30.0 -0.1
       comp=Z,67nm,1.0s
PAYA   Payao             69.40 295   P      P       04 00 32.7 +1.3
       comp=Z,8.9nm,1.1s
CM01   Chiang Mai Arr    69.90 294  eP      P       04 00 35.0 +0.5
CM31   Chiang Mai Arr    69.93 294  eP      P       04 00 36.4 +1.7
CMAR   Chiang Mai Arr    69.93 294   P      P       04 00 35.6 +1.0
       comp=Z,17nm,1.0s,baz=118,slow=4.5,SNR=42
CMAR   Chiang Mai Arr    69.93 294   P      P       04 00 35.7 +1.0
CMAR                                 pmax   pmax
       comp=Z,13nm,0.9s
CMMT   Chiang Mai        70.04 295   P      P       04 00 36.5 +1.1
       comp=Z,21nm,1.2s,comp=Z,491nm
CHTO   Chiang Mai        70.04 295  eP      P       04 00 34.5 -0.9
       comp=Z,8.8nm,0.8s
CHTO   Chiang Mai        70.04 295  eP      P       04 00 34.5 -0.9
CHTO                                 pmax   pmax
       comp=Z,9.0nm,0.8s
CHTO   Chiang Mai        70.04 295   P      P       04 00 36.6 +1.2
       comp=Z,90nm,1.2s
HHC    Hu-ho-hao-te      70.20 321  eP      P       04 00 36.9 +0.9
HHC                                  pP     pP      04 01 02.6 +1.6
HHC                                  sP     sP      04 01 13.5 +1.8
HHC                                  PP     PP      04 03 17.0 +4.2
HHC                                  S      S       04 09 41.4 +1.4
HHC                                  sS     sS      04 10 24.2 +1.5
HHC                                  pmax   pmax
       comp=Z,54nm,1.1s
HHC                                  pmax   pmax
       comp=Z,220nm,8.7s
HHC                                  LR     LR
       comp=Z,210nm,14.7s
HHC                                  LR     LR
       comp=Z,190nm,16.7s
HHC                                  LR     LR
       comp=Z,220nm,15.1s
CMAI   Chiengmai2        70.33 296   P      P       04 00 38.8 +1.5
CD2    Chengdu           70.66 308 ⇓P       P       04 00 39.7 +0.8
CD2                                  pP     pP      04 01 03.3 -0.6
CD2                                  sP     sP      04 01 13.6 -1.0
CD2                                  PP     PP      04 03 17.4 +0.5
CD2                                  S      S       04 09 45.3 -0.3
CD2                                  SKS    SKKSac  04 10 33.0 +0.6
CD2                                  SS     SS      04 14 22.6 +3.0
CD2                                  pmax   pmax
       comp=Z,150nm,0.6s
CD2                                  pmax   pmax
       comp=Z,460nm,4.4s
CD2                                  LR     LR
       comp=Z,350nm,19.4s
CD2                                  LR     LR
       comp=Z,510nm,21.9s
CD2                                  LR     LR
       comp=Z,380nm,18.4s
MA2    Magadan           70.91 353  eP      P       04 00 39.2 -0.5
       comp=Z,47nm,0.9s
MA2    Magadan           70.91 353  eP      P       04 00 39.2 -0.5
MA2                                  pmax   pmax
       comp=Z,47nm,0.9s
HIA    Hailar            71.07 331  eP      P       04 00 41.8 +0.8
       comp=Z,98nm,1.1s
HIA    Hailar            71.07 331  eP      P       04 00 41.8 +0.8
HIA                                  pmax   pmax
       comp=Z,98nm,1.1s
ZEA    Zeya              71.28 338ceP       P       04 00 42.8 +0.7
ZEA                                 e               04 10 18.0
ZEA                                  pmax   pmax
       comp=N,110nm,1.0s
ZEA                                  pmax   pmax
       comp=E,47nm,1.0s
ZEA                                  pmax   pmax
       comp=Z,200nm,1.2s
SDPT   Sand Point        72.54  21  eP      P       04 00 48.8 -0.8
       comp=Z,85nm,0.7s
LZH    Lanzhou           72.93 313  eP      P       04 00 53.9 +1.3
LZH                                  pP     pP      04 01 18.5 +0.8
LZH                                  sP     sP      04 01 29.8 +1.5
LZH                                  S      S       04 10 13.0 +1.4
LZH                                  sS     ScS     04 10 52.0 +0.1
LZH                                  pmax   pmax
       comp=Z,130nm,1.0s
LZH                                  pmax   pmax
       comp=Z,790nm,4.9s
LZH                                  LR     LR
       comp=Z,320nm,10.8s
LZH                                  LR     LR
       comp=Z,490nm,10.9s
LZH                                  LR     LR
       comp=Z,560nm,12.5s
CHGN   Chignik           74.02  21  eP      P       04 00 57.4 -0.8
       comp=Z,47nm,0.7s
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SEY    Seymchan          74.04 355ceP     P      04 00 58.7 +0.5
CLNS   Chul'man          74.55 339 eP     P      04 01 01.9 +0.5
CLNS                               e             04 01 15.7
CLNS                               e             04 03 45.6
CLNS                               ePPP   PPP    04 05 34.3
CLNS                               eS     S      04 10 27.4 -1.4
CLNS                               e             04 11 13.9
CLNS                                pmax  pmax
       comp=Z,69nm,0.9s
CLNS                                pmax  pmax
       comp=N,28nm,1.0s
CLNS                                pmax  pmax
       comp=E,14nm,0.9s
CLNS                                pmax  pmax
       comp=N,8.0nm,1.0s
CLNS                                pmax  pmax
       comp=Z,5.0nm,0.9s
CLNS                                pmax  pmax
       comp=E,6.0nm,1.0s
CLNS                                smax  smax
       comp=E,103nm,11.7s
CLNS                                smax  smax
       comp=N,275nm,12.4s
CIT    Chita             75.84 331 eP     P      04 01 09.4 +0.4
CIT                                e             04 01 22.6
CIT                                e             04 01 39.0
CIT                                 pmax  pmax
       comp=Z,189nm,1.1s
OHAK   Old Harbor        76.58  23 eP     P      04 01 11.7 -1.2
       comp=Z,81nm,1.0s
ULN    Ulaanbaatar       76.80 325 eP     P      04 01 15.1 +0.5
       comp=Z,109nm,1.2s
ULN    Ulaanbaatar       76.80 325ceP     P      04 01 15.2 +0.6
ULN                                 pmax  pmax
       comp=Z,75nm,1.2s
SONA0  Songino Array     77.15 325 eP     P      04 01 17.1 +0.5
SONM   Songino Array     77.15 325  P     P      04 01 17.1 +0.5
       comp=Z,29nm,0.9s,baz=140,slow=6.4,SNR=99
SONM                                LR    LR     04 33 28.0
       comp=Z,218nm,21.8s,baz=110,slow=34
SONA1  Songino Array     77.15 325 eP     P      04 01 16.4 -0.2
KDAK   Kodiak Island     77.24  22 eP     P      04 01 16.6  0.0
       comp=Z,94nm,0.9s
KDAK   Kodiak Island     77.24  22 eP     P      04 01 16.6  0.0
KDAK                                pmax  pmax
       comp=Z,95nm,0.9s
YAK    Yakutsk           77.26 344 eP     P      04 01 16.9 +0.3
       comp=Z,95nm,0.9s
YAK    Yakutsk           77.26 344c iP    P      04 01 16.5 -0.1
YAK                                e             04 01 28.7
YAK                                e*PP   pP     04 01 40.6 -1.4
YAK                                ePPP   PPP    04 05 58.6
YAK                                eS     S      04 10 58.2  0.0
YAK                                e             04 11 24.3
YAK                                e*SS   sS     04 11 45.4 +3.7
YAK                                 pmax  pmax
       comp=Z,55nm,0.8s
YAK                                 pmax  pmax
       comp=N,13nm,0.9s
YAK                                 pmax  pmax
       comp=E,9.0nm,1.1s
YAK                                 pmax  pmax
       comp=Z,70nm,2.3s
YAK                                 pmax  pmax
       comp=N,57nm,1.8s
YAK                                 pmax  pmax
       comp=E,23nm,2.2s
YAK                                 smax  smax
       comp=N,47nm,4.7s
YAK                                 smax  smax
       comp=E,82nm,4.5s
GTA    Gaotai            77.27 315 ⇑P     P      04 01 18.2 +0.8
GTA                                 pP    pP     04 01 43.0 +0.2
GTA                                 sP    sP     04 01 52.8 -0.6
GTA                                 S     S      04 11 02.0 +2.4
GTA                                 SKS   SKSac  04 11 18.2 -3.4
GTA                                 sS    sS     04 11 45.7 +2.7
GTA                                 SS    SS     04 16 03.1 +3.1
GTA                                 pmax  pmax
       comp=E,53nm,1.2s
GTA                                 pmax  pmax
       comp=E,330nm,6.7s
GTA                                 LR    LR
       comp=E,130nm,19.2s
GTA                                 LR    LR
       comp=E,160nm,19.9s
GTA                                 LR    LR
       comp=E,220nm,19.6s
BRDH   Bariadhala        77.74 296  LR    LR     04 36 01.2
       comp=E,52nm,20.4s,baz=96,slow=36
SVW2   Sparrevohn        78.64  19 eP     P      04 01 24.8 +0.4
       comp=E,186nm,1.0s
BILL   Bilibino          78.70   1 eP     P      04 01 24.5  0.0
       comp=E,280nm,1.1s
BILL   Bilibino          78.70   1ceP     P      04 01 24.3 -0.2
BILL                               i             04 01 33.5
BILL                               i             04 04 29.2
BILL                                pmax  pmax
       comp=Z,257nm,1.0s
CNPM   China Poot        78.98  22 eP     P      04 01 26.8 +0.5
       comp=Z,162nm,1.0s
QSPA   South Pole Qui    79.17 180  P     P      04 01 27.8 +0.4
       comp=Z,54nm,0.8s,baz=3.6,slow=3.0,SNR=114
QSPA   South Pole Qui    79.17 180 eP     P      04 01 27.6 +0.2
       comp=Z,121nm,1.2s
BRLK   Bradley Lake      79.27  22 eP     P      04 01 27.3 -0.5
       comp=Z,107nm,0.9s
BOD    Bodaibo           79.38 336 eP     P      04 01 27.8 -0.6
BOD                                 pmax  pmax
       comp=Z,57nm,1.4s
ZAK    Zakamensk         80.22 326 eP     P      04 01 32.8 -0.5
ZAK                                e             04 04 36.0
ZAK                                 pmax  pmax
       comp=Z,39nm,1.4s
ZAK                                 pmax  pmax
       comp=Z,7.0nm,1.8s
LSA    Lhasa             80.30 303  P     P      04 01 35.2 +0.5
LSA    Lhasa             80.30 303 eP     P      04 01 35.8 +1.1
       comp=Z,50nm,1.4s
SUA    Susitna One       80.52  20 eP     P      04 01 34.8 +0.1
       comp=Z,77nm,1.0s
RC01   Rabbit Creek A    80.61  21 eP     P      04 01 35.1 +0.1
       comp=Z,48nm,0.9s
SKT    Skwentna          80.62  20 eP     P      04 01 34.1 -1.0
       comp=Z,21nm,1.2s
SKT                                epP    pP     04 01 56.4 -4.2
TLY    Talaya            80.69 327 eP     P      04 01 35.6  0.0
       comp=Z,53nm,1.2s
TLY    Talaya            80.69 327 eP     P      04 01 36.0 +0.4
TLY                                e             04 02 02.0
TLY                                eS     S      04 11 36.5 +1.4
TLY                                 pmax  pmax
       comp=Z,66nm,1.5s
TLY                                 MLR   MLR
       comp=Z,144nm,21.0s
PPLA   Purkeypile        81.06  19 eP     P      04 01 38.3 +0.7
       comp=Z,82nm,1.4s
PMR    Palmer            81.17  21 eP     P      04 01 37.9  0.0
       comp=Z,64nm,1.1s
PMR    Palmer            81.17  21 eP     P      04 01 37.9  0.0
PMR                                 pmax  pmax
       comp=Z,64nm,1.1s
GHO    Glory Hole Cre    81.36  21 eP     P      04 01 39.7 +0.6
       comp=Z,77nm,1.0s
CAST   Castle Rocks      81.47  19 eP     P      04 01 39.2 -0.4
       comp=Z,79nm,1.0s
SML    Sawmill           81.59  21 eP     P      04 01 40.6 +0.4
       comp=Z,69nm,1.0s
SML    Sawmill           81.59  21 eP     P      04 01 40.6 +0.4
SML                                 pmax  pmax
       comp=Z,69nm,1.0s
SCM    Sheep Creek Mo    81.96  21 eP     P      04 01 42.6 +0.4
       comp=Z,91nm,0.9s
SCM    Sheep Creek Mo    81.96  21 eP     P      04 01 42.6 +0.4
SCM                                 pmax  pmax
       comp=Z,91nm,0.9s
RAGM   Ragged Mountai    82.02  23 eP     P      04 01 43.6 +1.0
       comp=Z,72nm,1.0s
TRF    Thorofare Moun    82.06  19 eP     P      04 01 42.0 -0.8
       comp=Z,35nm,0.8s
DIV    Divide            82.07  22 eP     P      04 01 43.0 +0.1
       comp=Z,74nm,1.0s
MOY    Mondy             82.11 326 eP     P      04 01 44.1 +0.8
MOY                                 pmax  pmax
       comp=Z,87nm,3.7s
KLU    Klutina           82.25  22 eP     P      04 01 44.3 +0.5
       comp=Z,56nm,0.9s
RDOG   Red Dog Mine      82.29  12 eP     P      04 01 44.5 +0.8
       comp=Z,138nm,1.2s
RDOG                               epP    pP     04 02 07.4 -1.9
BPAW   Bear Paw Mtn.     82.30  18 eP     P      04 01 42.7 -1.2
       comp=Z,51nm,1.4s
BMRM   Bremner River     82.41  23 eP     P      04 01 45.0 +0.4
       comp=Z,69nm,1.0s
TAPN   Taplejung         82.50 300 ePn    P      04 01 46.6 +0.5
TAPN   Taplejung         82.50 300 eP     P      04 01 45.7 -0.4
ODAN   Odare             82.64 299 eP     P      04 01 46.9 +0.1
       comp=Z,198nm,0.9s
ODAN   Odare             82.64 299 eP     P      04 01 47.1 +0.3
       comp=Z,198nm,0.9s
MCK    McKinley          82.69  19 eP     P      04 01 45.6 -0.3
       comp=Z,135nm,1.0s
MCK    McKinley          82.69  19 eP     P      04 01 45.6 -0.3
MCK                                 pmax  pmax
       comp=Z,135nm,1.0s
RPN    Rapa Nui          82.73 116  LR    LR     04 31 47.8
       comp=Z,168nm,21.6s,baz=60,slow=31
DHY    Denali Highway    82.77  20 eP     P      04 01 46.4 -0.2
       comp=Z,39nm,0.9s
BWN    Browne            82.83  19 eP     P      04 01 46.5 -0.1
       comp=Z,168nm,1.1s
IM3    Indian Mountai    82.85  16 eP     P      04 01 46.1 -0.5
TGL    Tana Glacier      82.97  24 eP     P      04 01 48.1 +0.6
       comp=Z,146nm,1.3s
MLY    Manley            83.03  18 eP     P      04 01 47.8 +0.1
       comp=Z,102nm,1.3s
HARP   HAARP             83.12  22 eP     P      04 01 49.2 +1.1
       comp=Z,134nm,0.9s
RAMN   Ramite            83.34 299 eP     P      04 01 50.3 -0.1
RAMN   Ramite            83.34 299 eP     P      04 01 51.0 +0.6
       comp=Z,195nm,1.5s
CCB    Clear Creek Bu    83.68  19 eP     P      04 01 49.9 -1.0
       comp=Z,51nm,0.7s
DIB    Dawson Inlet,     83.75  33 eP     P      04 01 52.2 +0.7
       comp=Z,96nm,1.0s
MDM    Murphy Dome       83.75  19 eP     P      04 01 50.5 -0.8
       comp=Z,122nm,1.0s
HDA    Harding Lake      83.80  19 eP     P      04 01 51.2 -0.3
       comp=Z,195nm,1.0s
COLA   College           83.82  19 eP     P      04 01 51.2 -0.4
       comp=Z,164nm,0.8s
COLA                               epP    pP     04 02 17.2 -0.1
COLA   College           83.82  19 eP     P      04 01 51.2 -0.4
COLA                               e*PP   pP     04 02 17.2 -0.1
COLA                                pmax  pmax
       comp=Z,164nm,0.8s
JIRN   Jiri              83.88 300 eP     P      04 01 53.4 +0.1
       comp=Z,212nm,1.0s
JIRN   Jiri              83.88 300 eP     P      04 01 53.4 +0.1
       comp=Z,212nm,1.0s
MAW    Mawson            84.05 202  P     P      04 01 53.4 +0.5
       baz=84,SNR=28
MAW    Mawson            84.05 202  P     P      04 01 53.7 +0.8
       comp=Z,33nm,0.9s,baz=106,slow=6.5,SNR=49
MAW                                 LR    LR     04 33 32.2
       comp=Z,165nm,22.0s,baz=67,slow=31
MAW    Mawson            84.05 202 eP     P      04 01 53.4 +0.5
       comp=Z,22nm,1.3s
IL1    Eielson Array     84.06  19 eP     P      04 01 51.1 -1.8
ILAR   Eielson Array     84.06  19  P     P      04 01 51.9 -1.0
       comp=Z,24nm,0.7s,baz=233,slow=4.0,SNR=156
ILAR                                LR    LR     04 34 27.2
       comp=Z,134nm,20.7s,baz=234,slow=32
ILB    Eielson Array     84.06  19 eP     P      04 01 51.8 -1.1
RIDG   Independ'e Rid    84.07  21 eP     P      04 01 53.5 +0.4
       comp=Z,165nm,1.4s
KCPM   Cahto Peak        84.11  48 eP     P      04 01 55.0 +1.1
       comp=Z,135nm,1.2s
KMRM   Mail Ridge        84.19  47 eP     P      04 01 55.9 +1.7
       comp=Z,206nm,1.3s
GUN    Gumba             84.21 300 eP     P      04 01 55.0  0.0
       comp=Z,130nm,0.8s
GUN    Gumba             84.21 300 eP     P      04 01 55.0  0.0
       comp=Z,130nm,0.8s
PALK   Pallekele         84.25 279  LR    LR     04 44 35.9
       comp=Z,123nm,18.4s,baz=101,slow=39
PALK   Pallekele         84.25 279 i P    P      04 01 57.0 +2.0
HOPS   Hopland Field     84.25  49 eP     P      04 01 55.7 +1.2
       comp=Z,160nm,1.3s
DOT    Dot Lake          84.29  21 eP     P      04 01 55.1 +1.0
       comp=Z,64nm,0.8s
KHMM   Horse Mountain    84.39  47 eP     P      04 01 56.6 +1.2
       comp=Z,92nm,1.0s
GDXM   Geysers           84.40  49 eP     P      04 01 56.6 +1.3
       comp=Z,70nm,1.1s
CRAG   Craig             84.47  31 eP     P      04 01 55.5 +0.4
       comp=Z,54nm,1.1s
KBO    Bosley Butte      84.49  45 eP     P      04 01 57.3 +1.6
       comp=Z,79nm,1.2s
SCRK   Sand Creek        84.52  21 eP     P      04 01 55.7 +0.3
       comp=Z,59nm,0.8s
PKIN   Phulchoki         84.54 299 eP     P      04 01 56.2 -0.3
       comp=Z,141nm,0.9s
PKIN   Phulchoki         84.54 299 eP     P      04 01 56.2 -0.3
       comp=Z,141nm,0.9s
KEBM   Edson Butte       84.64  45 eP     P      04 01 57.8 +1.4
       comp=Z,78nm,1.0s
KKN    Kakani            84.69 299 eP     P      04 01 57.1 -0.1
       comp=Z,134nm,1.0s
KKN    Kakani            84.69 299 eP     P      04 01 57.2  0.0
       comp=Z,134nm,1.0s
COLD   Coldfoot          84.74  16 eP     P      04 01 57.3 +1.1
       comp=Z,36nm,0.9s
SAO    San Andreas Ge    84.78  51 eP     P      04 01 57.6 +0.4
       comp=Z,81nm,1.1s
SAO    San Andreas Ge    84.78  51 eP     P      04 01 57.6 +0.4
SAO                                 pmax  pmax
       comp=Z,81nm,1.1s
DMN    Daman             84.80 299 eP     P      04 01 57.8  0.0
       comp=Z,339nm,1.2s
DMN    Daman             84.80 299 eP     P      04 01 57.8  0.0
       comp=Z,339nm,1.2s
L02D   Cave Junction,    84.91  46  P     P      04 01 58.2 +0.5
       baz=251,SNR=15
PMPB   Monarch Peak      85.12  52 eP     P      04 02 00.4 +1.4
       comp=Z,70nm,1.0s
BESE   Bessie Mountai    85.15  28 eP     P      04 01 59.1 +0.5
       comp=Z,72nm,1.0s
WDC    Whiskeytown Da    85.15  47 eP     P      04 01 59.7 +0.8
       comp=Z,138nm,1.5s
N02D   Trinity Center    85.16  47  P     P      04 01 59.8 +0.7
       baz=251,SNR=19
M02C   Callahan          85.19  46  P     P      04 01 60.0 +0.8
       baz=251,SNR=44
JIS    Juneau Island     85.21  28 eP     P      04 01 59.5 +0.8
       comp=Z,75nm,1.3s
SNCC   San Nicolas Is    85.28  55  P     P      04 01 59.7 -0.1
       baz=254
GKN    Gorkha            85.30 300 eP     P      04 01 59.8 -0.4
       comp=Z,192nm,1.2s
GKN    Gorkha            85.30 300 eP     P      04 01 59.7 -0.4
       comp=Z,192nm,1.2s
WRAK   Wrangell Islan    85.30  30 eP     P      04 01 59.4 +0.2
       comp=Z,53nm,1.0s
SKAG   Skagway           85.38  27 eP     P      04 02 00.2 +0.6
       comp=Z,56nm,1.0s
YBH    Yreka Blue Hor    85.40  46  P     P      04 02 01.2 +0.9
       comp=Z,56nm,1.0s,baz=183,slow=5.0,SNR=94
YBH                                 LR    LR     04 32 11.4
       comp=Z,186nm,20.9s,baz=246,slow=30
YBH    Yreka Blue Hor    85.40  46 eP     P      04 02 00.9 +0.7
       comp=Z,93nm,1.1s
YBH    Yreka Blue Hor    85.40  46 eP     P      04 02 00.9 +0.7
YBH                                 pmax  pmax
       comp=Z,93nm,1.1s
SCZ2   Santa Cruz Isl    85.40  54  P     P      04 02 00.2 -0.2
       baz=254
PAGB   Antelope Grade    85.40  52 eP     P      04 02 01.5 +1.2
       comp=Z,58nm,0.9s
TIXI   Tiksi             85.46 350 eP     P      04 01 58.9 -0.8
       comp=Z,85nm,1.3s
TIXI   Tiksi             85.46 350ceP     P      04 01 58.9 -0.8
TIXI                                pmax  pmax
       comp=Z,35nm,1.1s
SBC    Santa Barbara     85.46  54  P     P      04 02 01.1 +0.5
       baz=254
SMMC   Simmler           85.48  53  P     P      04 02 01.7 +0.9
       baz=253
HUMO   Hull Mountain     85.51  45 eP     P      04 02 01.4 +0.7
       comp=Z,82nm,1.0s
PKM    Mcpherson Peak    85.51  53  P     P      04 02 01.5 +0.4
       baz=254
ORV    Oroville          85.59  49 eP     P      04 02 01.7 +0.5
       comp=Z,60nm,1.0s
ORV    Oroville          85.59  49 eP     P      04 02 01.7 +0.5
ORV                                 pmax  pmax
       comp=Z,60nm,1.0s
I03D   Drain, OR         85.59  44  P     P      04 02 01.3 +0.2
       baz=251,SNR=15
O03D   Paynes Creek      85.59  48  P     P      04 02 01.1 -0.1
       baz=252,SNR=49
O03D   Paynes Creek      85.59  48 eP     P      04 02 01.3 +0.1
FYU    Fort Yukon        85.75  18 eP     P      04 02 01.6 +0.3
       comp=Z,38nm,1.0s
AFDM   Forest Hills D    85.80  49 eP     P      04 02 02.8 +0.5
       comp=Z,122nm,1.2s
BLG    Laguna Peak, P    85.88  54  P     P      04 02 02.4 -0.3
       baz=254
TOLK   Toolik Lake Re    85.90  16  P     P      04 02 02.6 +0.5
       baz=226
TOLK   Toolik Lake Re    85.90  16 eP     P      04 02 03.0 +0.9
       comp=Z,55nm,1.1s
COR    Corvallis         85.92  43 eP     P      04 02 04.5 +1.9
       comp=Z,122nm,1.4s
CMB    Columbia Colle    85.97  50 eP     P      04 02 03.1  0.0
       comp=Z,68nm,1.1s
CMB    Columbia Colle    85.97  50 eP     P      04 02 03.1  0.0
CMB                                 pmax  pmax
       comp=Z,68nm,1.1s
EGAK   Eagle             85.98  21 eP     P      04 02 02.8 +0.4
       comp=Z,249nm,1.1s
SCI2   San Clemente I    86.00  56  P     P      04 02 03.8 +0.5
       baz=254
M04C   Macdoel           86.03  46  P     P      04 02 03.6 +0.1
       baz=252,SNR=33
KOLN   Koldanda          86.13 299 eP     P      04 02 03.4 -0.9
       comp=Z,30nm,0.8s
KOLN   Koldanda          86.13 299 eP     P      04 02 03.4 -0.9
       comp=Z,30nm,0.8s
DANN   Dangsing          86.14 300 eP     P      04 02 03.4 -1.1
       comp=Z,56nm,0.8s
DANN   Dangsing          86.14 300 eP     P      04 02 03.4 -1.1
       comp=Z,56nm,0.8s
G03D   McMinnville, O    86.15  43  P     P      04 02 04.3 +0.6
       baz=251
F03A   Seaside           86.20  42 eP     P      04 02 05.0 +1.0
       comp=Z,123nm,1.0s
DAWY   Dawson            86.20  22 eP     P      04 02 03.9 +0.2
       comp=Z,108nm,1.3s
CIS    Catalina Islan    86.21  55  P     P      04 02 03.8 -0.6
       baz=254
I04A   Tendick Farm,     86.27  44  P     P      04 02 04.3 -0.1
       baz=251,SNR=27
OSI    Osito Audit: C    86.29  54  P     P      04 02 04.9 +0.1
       baz=254
J04D   Umpqua Nationa    86.30  45  P     P      04 02 05.1 +0.3
       baz=252,SNR=22
VES    Vestal, Richgr    86.34  53  P     P      04 02 04.7 -0.2
       baz=254,SNR=16
ARVC   Arvin             86.35  53  P     P      04 02 05.3 +0.3
       baz=254,SNR=12
K04D   Chiloquin, OR     86.35  46  P     P      04 02 05.0  0.0
       baz=252
FMP    Fort Macarthur    86.39  55  P     P      04 02 05.2  0.0
       baz=254
E03A   Lebam             86.40  41 eP     P      04 02 06.0 +1.1
       comp=Z,196nm,0.9s
RUBR   Rubicon Trail     86.44  49 eP     P      04 02 06.7 +1.1
       comp=Z,119nm,1.2s
NLWA   Neilton Lookou    86.49  41 eP     P      04 02 06.5 +1.0
       comp=Z,72nm,1.2s
DECC   Green Verdugo     86.51  54  P     P      04 02 05.5 -0.3
       baz=254
BEKR   Beckworth         86.52  48 eP     P      04 02 06.2 +0.2
       comp=Z,105nm,1.4s
PASC   Pasadena Art C    86.60  54 eP     P      04 02 06.7 +0.5
       comp=Z,160nm,1.4s
F04D   Rainier, OR       86.61  42  P     P      04 02 06.3 +0.3
       baz=251
H04A   Detroit Lake      86.70  43 eP     P      04 02 06.8 +0.2
       comp=Z,78nm,1.3s
MWC    Mount Wilson      86.72  54 eP     P      04 02 07.4 +0.3
       comp=Z,199nm,1.1s
MWC    Mount Wilson      86.72  54 eP     P      04 02 07.4 +0.3
MWC                                 pmax  pmax
       comp=Z,199nm,1.1s
PYUN   Piuthan           86.73 299 eP     P      04 02 06.0 -1.3
       comp=Z,68nm,0.9s
PYUN   Piuthan           86.73 299 eP     P      04 02 06.8 -0.5
       comp=Z,68nm,0.9s
ISA    Isabella, Lake    86.77  53  P     P      04 02 07.2 +0.1
       baz=254,SNR=22
ISA    Isabella, Lake    86.77  53 eP     P      04 02 07.6 +0.5
       comp=Z,67nm,1.1s
ISA    Isabella, Lake    86.77  53 eP     P      04 02 07.6 +0.5
ISA                                 pmax  pmax
       comp=Z,67nm,1.1s
WAKR   Walker            86.82  50 eP     P      04 02 08.4 +0.9
       comp=Z,153nm,1.5s
MDPB   Devils Postpil    86.84  51 eP     P      04 02 07.7  0.0
       comp=Z,87nm,1.1s
PNTR   Pine Nut          86.86  49 eP     P      04 02 08.4 +0.8
       comp=Z,83nm,1.1s
VCNR   Virginia City     86.88  49 eP     P      04 02 08.9 +1.1
       comp=Z,40nm,1.0s
OMMB   Old Mammoth Mi    86.90  51 eP     P      04 02 08.7 +0.7
       comp=Z,67nm,1.2s
J05D   Fort Rock, OR     86.92  45  P     P      04 02 08.3 +0.5
       baz=252,SNR=63
EDW2   Edwards Air Fo    86.94  54  P     P      04 02 08.2 +0.2
       baz=255,SNR=56
K05A   Summer Lake       86.99  46 eP     P      04 02 08.8 +0.6
       comp=Z,111nm,1.0s
MLAC   Mammoth, Mammo87.03  51  P     P      04 02 08.4 -0.2
       baz=254
MLAC   Mammoth, Mammo87.03  51 eP     P      04 02 06.2 -2.3
BFSC   Mount Baldy Ra    87.04  55  P     P      04 02 08.5 -0.1
       baz=255,SNR=46
YERR   Yerington         87.10  50 eP     P      04 02 09.7 +0.9
       comp=Z,29nm,1.0s
109C   Camp Elliot, M    87.14  56  P     P      04 02 08.9  0.0
       baz=255,SNR=11
CPE    Camp Elliot       87.14  56 eP     P      04 02 09.4 +0.5
       comp=Z,104nm,1.2s
MOD    Modoc Plateau     87.16  47 eP     P      04 02 09.3 +0.3
       comp=Z,47nm,0.8s
I05D   Terrebonne, OR    87.17  44  P     P      04 02 09.2 +0.3
       baz=252,SNR=27
PGC    Sidney            87.18  39 eP     P      04 02 10.0 +1.3
       comp=Z,88nm,1.4s
PAHR   Pah Rah Range     87.19  49 eP     P      04 02 09.8 +0.6
       comp=Z,80nm,1.1s
MURC   Murrieta          87.25  55  P     P      04 02 09.4  0.0
       baz=255,SNR=16
PINE   Pine Mountain     87.28  45 eP     P      04 02 10.1 +0.5
       comp=Z,157nm,1.3s
CWC    Cottonwood Cre    87.29  52  P     P      04 02 09.7  0.0
       baz=254
HWB    Hans Werner Br    87.30  56 eP     P      04 02 08.0 -1.7
HWB                                ePcP   PcP    04 02 11.8 +0.1
DLBC   Dease Lake        87.33  29 eP     P      04 02 09.8 +0.5
       comp=Z,40nm,1.1s
WMQ    Urumqi            87.33 315  P     P      04 02 10.2 +0.6
WMQ                                 pP    pP     04 02 34.5 -1.0
WMQ                                 SKS   SKSac  04 12 24.2 -4.2
WMQ                                 S     S      04 12 40.8 -1.2
WMQ                                 SS    SS     04 18 30.9 +1.9
WMQ                                 pmax  pmax
       comp=Z,84nm,1.9s
WMQ                                 pmax  pmax
       comp=Z,710nm,5.5s
WMQ                                 LR    LR
       comp=Z,330nm,25.9s
WMQ                                 LR    LR
       comp=Z,550nm,28.5s
WMQ                                 LR    LR
       comp=Z,370nm,25.9s
TIN    Tinemaha, Big     87.34  52  P     P      04 02 10.1 +0.2
       baz=254,SNR=5.5
LRMC   Laurel Mtn Rad    87.35  53  P     P      04 02 10.2 +0.2
       baz=255,SNR=12
BAR    Barrett           87.44  56 eP     P      04 02 10.9 +0.5
       comp=Z,68nm,1.3s
G05D   Wamic, OR         87.47  43  P     P      04 02 10.3 +0.1
       baz=252,SNR=8.9
RYN    Ryan              87.54  50 eP     P      04 02 11.5 +0.6
       comp=Z,53nm,0.9s
LON    Longmire          87.61  42 eP     P      04 02 11.2 +0.3
       comp=Z,11nm,0.8s
LON    Longmire          87.61  42 eP     P      04 02 11.2 +0.3
LON                                 pmax  pmax
       comp=Z,11nm,0.8s
```

DAC	**Darwin (Calif)**	**87.62**	**53**	*e*P	**P**	**04 02 11.9**	**+0.5**
	comp=Z,227nm,1.9s						
DAC	**Darwin (Calif)**	**87.62**	**53**	*e*P	**P**	**04 02 11.9**	**+0.5**
DAC				pmax	pmax		
	comp=Z,227nm,1.9s						
D05A	**Enumclaw**	**87.63**	**41**	*e*P	**P**	**04 02 12.5**	**+1.6**
	comp=Z,174nm,1.4s						
BBRC	**Big Bear Solar**	**87.64**	**55**	P	**P**	**04 02 11.3**	**-0.2**
	baz=255						
MPMC	**Manual Prospec**	**87.65**	**53**	P	**P**	**04 02 11.7**	**+0.2**
	baz=255,SNR=25						
NV01	**Mina Array Sit**	**87.65**	**50**	*e*P	**P**	**04 02 11.7**	**+0.2**
NV01				*e*PP	**PP**	**04 05 37.3**	**-1.0**
NVAR	**Mina Array Bea**	**87.65**	**50**	P	**P**	**04 02 12.1**	**+0.5**
	comp=Z,37nm,0.8s,baz=233,slow=7.8,SNR=179						
NVAR				PP	**PP**	**04 05 37.2**	**-1.1**
	comp=Z,0.4nm,0.6s,baz=247,slow=8.5,SNR=4.1						
NVAR				PKKPbc	**PKKPbc**	**04 19 59.9**	**-0.7**
	comp=Z,0.3nm,0.5s,baz=82,slow=3.7,SNR=4.1						
NVAR				LR	LR	04 33 16.9	
	comp=Z,177nm,20.7s,baz=96,slow=30						
A04D	**Lummi Island**	**87.67**	**40**	P	**P**	**04 02 11.6**	**+0.5**
	baz=251,SNR=19						
MONP2	**Monument Peak**	**87.70**	**56**	P	**P**	**04 02 12.3**	**+0.4**
	baz=256,SNR=41						
NV11	**Mina Array Sit**	**87.76**	**50**	*e*P	**P**	**04 02 12.1**	**+0.2**
	comp=Z,6.8nm,1.1s						
PFO	**Pinyon Flats O**	**87.85**	**55**	P	**P**	**04 02 12.5**	**+0.1**
	baz=256,SNR=22						
PFO	**Pinyon Flats O**	**87.85**	**55**	*e*P	**P**	**04 02 12.6**	**+0.2**
	comp=Z,33nm,0.8s						
PFO	**Pinyon Flats O**	**87.85**	**55**	*e*P	**P**	**04 02 12.6**	**+0.2**
PFO				pmax	pmax		
	comp=Z,33nm,0.8s						
XPFO	**Piæon Flat**	**87.85**	**55**	*e*P	**P**	**04 02 12.6**	**+0.2**
	comp=Z,34nm,0.8s						
IKP	**In-Ko-Pah, Jac**	**87.89**	**56**	P	**P**	**04 02 12.8**	**+0.2**
	baz=256,SNR=20						
B05A	**Bryant**	**87.91**	**40**	P	**P**	**04 02 12.5**	**+0.3**
	baz=251,SNR=15						
G06A	**Carlson Farm,**	**87.92**	**43**	*e*P	**P**	**04 02 13.6**	**+1.1**
	comp=Z,59nm,1.4s						
KVN	**Kaiserville**	**87.97**	**50**	*e*P	**P**	**04 02 13.5**	**+0.5**
	comp=Z,34nm,0.9s						
KVN	**Kaiserville**	**87.97**	**50**	*e*P	**P**	**04 02 13.5**	**+0.5**
KVN				pmax	pmax		
	comp=Z,35nm,0.9s						
GRAC	**Grapevine Rang**	**87.99**	**52**	P	**P**	**04 02 13.0**	**+0.1**
	baz=255,SNR=38						
GSC	**Goldstone, Bar**	**87.99**	**54**	P	**P**	**04 02 12.8**	**-0.2**
	baz=255,SNR=21						
GSC	**Goldstone, Bar**	**87.99**	**54**	*e*P	**P**	**04 02 13.9**	**+0.9**
	comp=Z,26nm,1.2s						
GSC	**Goldstone, Bar**	**87.99**	**54**	*e*P	**P**	**04 02 13.9**	**+0.9**
GSC				pmax	pmax		
	comp=Z,26nm,1.2s						
SWSC	**Sam W. Stewart**	**88.22**	**56**	P	**P**	**04 02 14.2**	**+0.1**
	baz=256,SNR=31						
FURC	**Furnace Creek,**	**88.24**	**53**	P	**P**	**04 02 14.2**	**+0.2**
	baz=255,SNR=31						
HEC	**Hector,Ludlow**	**88.25**	**54**	P	**P**	**04 02 14.2**	**0.0**
	baz=256,SNR=20						
BELC	**Belle Mtn. Jos**	**88.31**	**55**	P	**P**	**04 02 15.1**	**+0.4**
	baz=256,SNR=59						
I07A	**Izee**	**88.36**	**45**	*e*P	**P**	**04 02 14.7**	**+0.1**
	comp=Z,46nm,0.9s						
B06A	**Marblemount**	**88.38**	**40**	*e*P	**P**	**04 02 16.1**	**+1.7**
	comp=Z,44nm,1.3s						
WVOR	**Wild Horse Val**	**88.50**	**46**	*e*P	**P**	**04 02 16.2**	**+1.0**
	comp=Z,104nm,1.1s						
WVOR	**Wild Horse Val**	**88.50**	**46**	*e*P	**P**	**04 02 16.3**	**+1.0**
WVOR				pmax	pmax		
	comp=Z,104nm,1.1s						
LTY	**Liberty**	**88.51**	**41**	*e*P	**P**	**04 02 16.3**	**+1.2**
	comp=Z,26nm,1.4s						
SHOC	**Shoshone, Teco**	**88.56**	**53**	P	**P**	**04 02 15.6**	**0.0**
	baz=256,SNR=21						
F07A	**Phinny Hill Vi**	**88.59**	**43**	*e*P	**P**	**04 02 17.2**	**+1.7**
	comp=Z,53nm,1.1s						
BC3	**Big Chuckawall**	**88.67**	**56**	P	**P**	**04 02 16.8**	**+0.5**
	baz=256,SNR=39						
PAT2	**Paterson 2**	**88.70**	**43**	*e*P	**P**	**04 02 17.4**	**+1.4**
TUQ	**Turquoise Moun**	**88.72**	**54**	P	**P**	**04 02 16.6**	**+0.1**
	baz=256,SNR=16						
GMRC	**Granite Mounta**	**88.78**	**54**	P	**P**	**04 02 17.0**	**+0.2**
	baz=256,SNR=40						
TPNV	**Topopah Spring**	**88.84**	**52**	P	**P**	**04 02 17.3**	**+0.3**
	baz=256,SNR=51						
TPNV	**Topopah Spring**	**88.84**	**52**	*e*P	**P**	**04 02 17.4**	**+0.3**
	comp=Z,79nm,1.2s						
TPNV	**Topopah Spring**	**88.84**	**52**	*e*P	**P**	**04 02 17.4**	**+0.3**
TPNV				pmax	pmax		
	comp=Z,79nm,1.2s						
J08A	**Circle Bar Ran**	**88.87**	**46**	*e*P	**P**	**04 02 17.4**	**+0.4**
	comp=Z,105nm,1.0s						
BMN	**Battle Mountai**	**88.99**	**49**	*e*P	**P**	**04 02 18.5**	**+0.8**
	comp=Z,26nm,1.1s						
BMN	**Battle Mountai**	**88.99**	**49**	*e*P	**P**	**04 02 18.5**	**+0.8**
BMN				pmax	pmax		
	comp=Z,26nm,1.1s						
HAWA	**Hanford**	**89.00**	**42**	*e*P	**P**	**04 02 19.1**	**+1.7**
	comp=Z,48nm,1.1s						
GLA	**Glamis**	**89.04**	**56**	P	**P**	**04 02 18.9**	**+1.0**
	baz=256,SNR=24						
GLA	**Glamis**	**89.04**	**56**	*e*P	**P**	**04 02 19.1**	**+1.1**
	comp=Z,129nm,1.1s						
GLA	**Glamis**	**89.04**	**56**	*e*P	**P**	**04 02 19.1**	**+1.1**
GLA				pmax	pmax		
	comp=Z,129nm,1.1s						
IRM	**Iron Mountain**	**89.04**	**55**	P	**P**	**04 02 18.4**	**+0.4**
	baz=256,SNR=49						
G08A	**Pilot Rock**	**89.07**	**44**	*e*P	**P**	**04 02 18.6**	**+0.7**
	comp=Z,77nm,1.3s						
DGZ	**Jazzator, Alta**	**89.28**	**321**	*i* P	**P**	**04 02 18.2**	**-0.6**
DGZ				pmax	pmax		
	comp=Z,9.0nm,1.2s						
LDFC	**Landfair**	**89.28**	**54**	*e*P	**P**	**04 02 20.2**	**+1.0**
	comp=Z,194nm,1.3s						
E08A	**Dider Farm, El**	**89.34**	**42**	*e*P	**P**	**04 02 20.3**	**+1.3**
	comp=Z,104nm,1.3s						
Y12C	**Blythe**	**89.45**	**56**	P	**P**	**04 02 20.1**	**+0.3**
	baz=257,SNR=24						
Y12C	**Blythe**	**89.45**	**56**	*e*P	**P**	**04 02 20.5**	**+0.7**
	comp=Z,84nm,1.0s						
SHPR	**Sheep Range**	**89.58**	**53**	*e*P	**P**	**04 02 21.3**	**+0.7**
	comp=Z,110nm,1.3s						
D08A	**Wollman Farm,**	**89.59**	**42**	*e*P	**P**	**04 02 21.2**	**+1.1**
	comp=Z,79nm,1.4s						
NEE2	**Needles Airpor**	**89.61**	**55**	P	**P**	**04 02 20.7**	**+0.2**
	baz=257						
B08A	**Colville Reser**	**89.69**	**41**	*e*P	**P**	**04 02 21.1**	**+0.5**
	comp=Z,22nm,1.0s						
R11A	**Troy Canyon, C**	**89.69**	**51**	P	**P**	**04 02 21.3**	**+0.2**
	baz=256,SNR=90						
R11A	**Troy Canyon, C**	**89.69**	**51**	*e*P	**P**	**04 02 21.2**	**+0.1**
	comp=Z,72nm,1.2s						
113A	**Mohawk Valley,**	**89.84**	**57**	*e*P	**P**	**04 02 23.0**	**+1.4**
	comp=Z,60nm,1.3s						
PDMCI	**Parker Dam,Lak**	**89.88**	**55**	P	**P**	**04 02 22.0**	**+0.2**
	baz=257,SNR=29						
E09A	**Wood Farm, Sta**	**89.95**	**43**	*e*P	**P**	**04 02 22.6**	**+0.8**
	comp=Z,67nm,1.2s						
BMO	**Blue Mountains**	**90.08**	**44**	*e*P	**P**	**04 02 22.8**	**+0.2**
	comp=Z,91nm,1.3s						
BMO	**Blue Mountains**	**90.08**	**44**	*e*P	**P**	**04 02 22.8**	**+0.2**
BMO				pmax	pmax		
	comp=Z,91nm,1.3s						
C09A	**Chrisman Ranch**	**90.22**	**41**	*e*P	**P**	**04 02 23.5**	**+0.4**
	comp=Z,15nm,0.9s						
W13A	**Hualapai Mount**	**90.27**	**54**	*e*P	**P**	**04 02 24.4**	**+0.6**
	comp=Z,48nm,1.4s						
F10A	**Beach Ranch, E**	**90.42**	**43**	*e*P	**P**	**04 02 24.6**	**+0.3**
	comp=Z,81nm,1.0s						
214A	**Organ Pipe Nat**	**90.45**	**58**	P	**P**	**04 02 25.2**	**+0.6**
	baz=258						
INK	**Inuvik**	**90.46**	**19**	*e*P	**P**	**04 02 23.4**	**-0.2**
	comp=Z,69nm,1.4s						
INK	**Inuvik**	**90.46**	**19**	*e*P	**P**	**04 02 23.4**	**-0.2**
INK				pmax	pmax		
	comp=Z,69nm,1.4s						
Y14A	**Wickenburg**	**90.72**	**56**	*e*P	**P**	**04 02 26.8**	**+0.9**
	comp=Z,19nm,1.2s						
MFID	**Camas Ranch**	**90.75**	**46**	*e*P	**P**	**04 02 26.3**	**+0.6**
	comp=Z,79nm,1.1s						
LPIG	**La Paz**	**91.01**	**66**	LR	LR	04 38 31.4	
	comp=Z,142nm,18.2s,baz=232,slow=32						
PSUT	**Pine Spring**	**91.06**	**51**	*e*P	**P**	**04 02 28.3**	**+0.8**
	comp=Z,78nm,1.3s						
NEW	**Newport**	**91.09**	**41**	P	**P**	**04 02 26.9**	**-0.3**
	baz=255,SNR=22						
NEW	**Newport**	**91.09**	**41**	*e*P	**P**	**04 02 27.3**	**+0.1**
	comp=Z,51nm,1.1s						
NEW	**Newport**	**91.09**	**41**	*e*P	**P**	**04 02 27.3**	**+0.1**
NEW				pmax	pmax		
	comp=Z,51nm,1.1s						
LCMT	**Little Creek M**	**91.20**	**53**	*e*P	**P**	**04 02 28.9**	**+0.9**
	comp=Z,64nm,1.2s						
CCUT	**Cedar City**	**91.22**	**52**	*e*P	**P**	**04 02 29.1**	**+0.9**
	comp=Z,77nm,1.2s						
SLBS	**Sierra La Lagu**	**91.26**	**66**	*e*P	**P**	**04 02 29.5**	**+1.0**
	comp=Z,84nm,1.3s						
HSIG		**91.42**	**61**	*e*P	**P**	**04 02 29.4**	**+0.3**
	comp=Z,64nm,1.1s						
KNB	**Kanab**	**91.53**	**53**	*e*P	**P**	**04 02 30.7**	**+1.0**
	comp=Z,103nm,1.3s						
HLID	**Hailey**	**91.78**	**46**	P	**P**	**04 02 31.3**	**+0.6**
	baz=257						
HLID	**Hailey**	**91.78**	**46**	*e*P	**P**	**04 02 31.3**	**+0.6**
	comp=Z,74nm,1.2s						
MK01	**Makanchi Array**	**91.79**	**317**	*e*P	**P**	**04 02 29.4**	**-1.1**
MK31	**Makanchi Array**	**91.80**	**317**	*e*P	**P**	**04 02 30.2**	**-0.3**
MK32	**Makanchi Array**	**91.80**	**317**	*e*P	**P**	**04 02 30.2**	**-0.3**
MK32				*e*PP	**PP**	**04 06 08.9**	**-1.9**
MKAR	**Makanchi Array**	**91.80**	**317**	P	**P**	**04 02 30.2**	**-0.3**
	comp=Z,26nm,0.8s,baz=98,slow=6.3,SNR=142						
MKAR				PP	**PP**	**04 06 08.9**	**-1.9**
	comp=Z,3.5nm,1.0s,baz=103,slow=10,SNR=5.7						
MKAR				PKKP	**PKKPdf**	**04 19 46.6**	**-1.0**
	comp=Z,0.8nm,0.7s,baz=260,slow=3.6,SNR=4.5						
MKAR				LR	LR	04 45 58.4	
	comp=Z,86nm,18.8s,baz=94,slow=37						
MKAR	**Makanchi Array**	**91.80**	**317**	*e*P	**P**	**04 02 30.2**	**-0.3**
	comp=Z,154nm,0.9s						
U15A	**North Rim**	**91.82**	**53**	*e*P	**P**	**04 02 31.7**	**+0.6**
	comp=Z,49nm,1.1s						
PKCU	**Pink Cliffs**	**92.02**	**52**	*e*P	**P**	**04 02 35.3**	**+3.2**
	comp=Z,67nm,1.4s						
ZAA0	**Zalesovo Array**	**92.05**	**325**	*e*P	**P**	**04 02 30.4**	**-1.0**
	comp=Z,56nm,1.4s						
ZALV	**Zalesovo Beam**	**92.05**	**325**	P	**P**	**04 02 30.4**	**-1.0**
	comp=Z,13nm,0.8s,baz=110,slow=5.2,SNR=30						
ZALV				LR	LR	04 41 52.3	
	comp=Z,114nm,21.6s,baz=70,slow=34						
ZALV	**Zalesovo Beam**	**92.05**	**325**	*e*P	**P**	**04 02 29.9**	**-1.5**
ZALV	**Zalesovo Beam**	**92.05**	**325**	*e*P	**P**	**04 02 29.9**	**-1.5**
ZAA1	**Zalesovo Array**	**92.05**	**325**	*e*P	**P**	**04 02 30.4**	**-1.0**
X16A	**Lo Mia Camp, P**	**92.09**	**56**	*e*P	**P**	**04 02 33.1**	**+0.8**
	comp=Z,9.3nm,0.9s						
BGU	**Big Grassy Mou**	**92.20**	**49**	*e*P	**P**	**04 02 33.4**	**+0.7**
	comp=Z,74nm,1.4s						
DUG	**Dugway, Tooele**	**92.21**	**50**	P	**P**	**04 02 32.8**	**+0.1**
	baz=258						
DUG	**Dugway, Tooele**	**92.21**	**50**	*e*P	**P**	**04 02 33.3**	**+0.6**
	comp=Z,40nm,1.4s						
DUG	**Dugway, Tooele**	**92.21**	**50**	*e*P	**P**	**04 02 33.3**	**+0.6**
DUG				pmax	pmax		
	comp=Z,40nm,1.4s						
TUC	**Tucson**	**92.21**	**58**	P	**P**	**04 02 33.1**	**+0.3**
	baz=259						
TUC	**Tucson**	**92.21**	**58**	*e*P	**P**	**04 02 33.7**	**+0.9**
	comp=Z,9.9nm,0.9s						
TUC	**Tucson**	**92.21**	**58**	*e*P	**P**	**04 02 33.7**	**+0.9**
TUC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MTPU	**Mount Pierson**	**92.24**	**52**	*e*P	**P**	**04 02 34.6**	**+1.5**
	comp=Z,76nm,1.3s						
MSU	**Marysvale**	**92.34**	**51**	*e*P	**P**	**04 02 34.3**	**+0.9**
MSU	**Marysvale**	**92.34**	**51**	*e*P	**P**	**04 02 34.3**	**+0.9**
WUAZ	**Wupatki**	**92.36**	**54**	P	**P**	**04 02 33.9**	**+0.4**
	baz=258						
WUAZ	**Wupatki**	**92.36**	**54**	*e*P	**P**	**04 02 34.3**	**+0.8**
	comp=Z,34nm,1.5s						
HVU	**Hansel Valley**	**92.57**	**48**	*e*P	**P**	**04 02 35.0**	**+0.7**
	comp=Z,99nm,1.2s						
HVU	**Hansel Valley**	**92.57**	**48**	*e*P	**P**	**04 02 35.0**	**+0.7**
HVU				pmax	pmax		
	comp=Z,99nm,1.2s						
SPUT	**South Promonto**	**92.71**	**49**	*e*P	**P**	**04 02 36.2**	**+1.2**
	comp=Z,17nm,0.9s						
NLU	**North Lily Min**	**92.71**	**50**	*e*P	**P**	**04 02 36.2**	**+1.1**
	comp=Z,60nm,1.4s						
JTMT	**Jette**	**92.81**	**42**	*e*P	**P**	**04 02 35.8**	**+0.5**
	comp=Z,34nm,1.5s						
MSO	**Missoula**	**92.84**	**43**	P	**P**	**04 02 34.8**	**-0.5**
	baz=257,SNR=7.5						
MSO	**Missoula**	**92.84**	**43**	*e*P	**P**	**04 02 35.8**	**+0.4**
	comp=Z,16nm,1.3s						
MPU	**Maple Canyon**	**93.06**	**50**	*e*P	**P**	**04 02 38.3**	**+1.6**
	comp=Z,50nm,1.5s						
CTU	**Camp Tracy**	**93.11**	**49**	*e*P	**P**	**04 02 37.9**	**+1.0**
	comp=Z,48nm,1.4s						
MCMT	**McKenzie Canyo**	**93.16**	**45**	*e*P	**P**	**04 02 37.6**	**+0.6**
NVS	**Novosibirsk**	**93.17**	**325**	⇑*i*P	**P**	**04 02 36.0**	**-0.5**
NVS				*e*		04 02 58.4	
NVS				pmax	pmax		
	comp=Z,74nm,1.7s						
NVS				pmax	pmax		
	comp=N,13nm,1.4s						
NVS				pmax	pmax		
	comp=E,30nm,1.5s						
Q16A	**Castle Valley**	**93.19**	**51**	*e*P	**P**	**04 02 35.2**	**-2.1**
	comp=E,29nm,0.5s						
TMUT	**Trail Mountain**	**93.24**	**51**	*e*P	**P**	**04 02 38.9**	**+1.2**
	comp=E,33nm,1.4s						
319A	**Douglas**	**93.29**	**59**	*e*P	**P**	**04 02 39.1**	**+1.3**
	comp=E,20nm,0.9s						
JLU	**Jordanelle**	**93.31**	**49**	*e*P	**P**	**04 02 38.9**	**+1.0**
	comp=E,14nm,1.1s						
X18A	**Snowflake**	**93.32**	**56**	*e*P	**P**	**04 02 38.7**	**+0.7**
	comp=E,19nm,1.0s						
WALA	**Waterton Lakes**	**93.34**	**41**	*e*P	**P**	**04 02 38.3**	**+0.6**
	comp=E,67nm,1.4s						
HWUT	**Hardware Ranch**	**93.42**	**48**	*e*P	**P**	**04 02 38.5**	**+0.2**
	comp=E,20nm,0.9s						
DLMT	**Dillon**	**93.44**	**45**	*e*P	**P**	**04 02 38.8**	**+0.6**
	comp=E,86nm,1.1s						
TCUT	**Toone Canyon**	**93.44**	**49**	*e*P	**P**	**04 02 40.1**	**+1.6**
	comp=E,36nm,0.9s						
W18A	**Petrified Fore**	**93.60**	**55**	P	**P**	**04 02 39.3**	**0.0**
	baz=259						
W18A	**Petrified Fore**	**93.60**	**55**	*e*P	**P**	**04 02 39.4**	**0.0**
	comp=E,22nm,1.0s						
P17A	**Butcher Ranch,**	**93.63**	**51**	*e*P	**P**	**04 02 40.5**	**+1.2**
	comp=E,25nm,1.4s						
LRM	**Limekiln Ridge**	**93.64**	**44**	*e*P	**P**	**04 02 39.4**	**+0.1**
SRU	**San Rafael Swe**	**93.72**	**51**	*e*P	**P**	**04 02 40.6**	**+0.9**
	comp=E,6.0nm,0.9s						
SRU	**San Rafael Swe**	**93.72**	**51**	*e*P	**P**	**04 02 40.6**	**+0.9**
SRU				pmax	pmax		
	comp=Z,6.0nm,0.9s						
AHID	**Auburn Hatcher**	**93.99**	**47**	*e*P	**P**	**04 02 41.5**	**+0.6**
	comp=Z,12nm,0.8s						
P18A	**Preston Nutter**	**94.03**	**51**	*e*P	**P**	**04 02 42.4**	**+1.0**
	comp=Z,7.8nm,0.8s						
QLMT	**Earthquake Lak**	**94.15**	**45**	*e*P	**P**	**04 02 43.6**	**+2.0**
BOZ	**Bozeman (W)**	**94.15**	**45**	P	**P**	**04 02 41.8**	**+0.3**
	baz=259,SNR=50						
BOZ	**Bozeman (W)**	**94.15**	**45**	*e*P	**P**	**04 02 41.9**	**+0.3**
	comp=Z,38nm,1.1s						
BOZ	**Bozeman (W)**	**94.15**	**45**	*e*P	**P**	**04 02 41.9**	**+0.3**
BOZ				pmax	pmax		
	comp=Z,38nm,1.1s						
FXWY	**Fox Creek**	**94.20**	**47**	*e*P	**P**	**04 02 41.5**	**-0.4**
	comp=Z,16nm,0.9s						
TPAW	**Teton Pass**	**94.23**	**47**	*e*P	**P**	**04 02 43.1**	**+1.1**
	comp=Z,17nm,1.1s						
HRY	**Holter Researc**	**94.23**	**43**	*e*P	**P**	**04 02 42.1**	**+0.3**
REDW	**Red Top Meadow**	**94.28**	**47**	*e*P	**P**	**04 02 43.3**	**+1.0**
	comp=Z,39nm,1.4s						
YHB	**Horse Butte**	**94.30**	**45**	*e*P	**P**	**04 02 44.0**	**+1.7**
	comp=Z,34nm,1.1s						
IMW	**Indian Meadow**	**94.31**	**46**	*e*P	**P**	**04 02 43.7**	**+1.2**
	comp=Z,22nm,1.1s						
SNOW	**Snow King Moun**	**94.36**	**47**	*e*P	**P**	**04 02 43.9**	**+1.2**
	comp=Z,21nm,1.0s						
MOOW	**Moose Ponds**	**94.42**	**46**	*e*P	**P**	**04 02 44.2**	**+1.3**
	comp=Z,16nm,1.1s						
YMR	**Madison River**	**94.44**	**46**	*e*P	**P**	**04 02 43.7**	**+0.7**
	comp=Z,18nm,0.8s						
YPP	**Pitchstone Pla**	**94.48**	**46**	*e*P	**P**	**04 02 45.3**	**+2.1**
	comp=Z,9.3nm,1.4s						
YFT	**Old Faithful**	**94.49**	**46**	*e*P	**P**	**04 02 46.2**	**+3.0**
	comp=Z,21nm,1.1s						
FLWY	**Flagg Ranch**	**94.52**	**46**	*e*P	**P**	**04 02 45.1**	**+1.7**
	comp=Z,19nm,1.0s						
PV05	**Paradox Valley**	**94.64**	**52**	*e*P	**P**	**04 02 46.7**	**+2.7**
	comp=Z,28nm,1.2s						
H17A	**Grant Village**	**94.66**	**46**	P	**P**	**04 02 45.0**	**+1.0**
	baz=260,SNR=11						
H17A	**Grant Village**	**94.66**	**46**	*e*P	**P**	**04 02 45.9**	**+1.9**
	comp=Z,15nm,1.0s						
PV09	**Paradox Valley**	**94.68**	**52**	*e*P	**P**	**04 02 45.4**	**+1.1**
PV10	**Paradox Valley**	**94.73**	**52**	*e*P	**P**	**04 02 47.0**	**+2.5**
	comp=Z,20nm,1.0s						
121A	**Cookes Peak, D**	**94.74**	**58**	P	**P**	**04 02 44.5**	**0.0**
	baz=260,SNR=8.3						
PV14	**Lion Creek, Pa**	**94.75**	**52**	*e*P	**P**	**04 02 45.2**	**+0.7**
	comp=Z,17nm,1.0s						
PV19	**Morning Glory**	**94.77**	**52**	*e*P	**P**	**04 02 45.9**	**+1.4**
	comp=Z,42nm,1.5s						
PV23	**Carpenter Ridg**	**94.77**	**52**	*e*P	**P**	**04 02 45.5**	**+0.8**
	comp=Z,21nm,0.9s						
PV17	**East Wray Mesa**	**94.78**	**52**	*e*P	**P**	**04 02 45.6**	**+1.0**
	comp=Z,23nm,1.1s						
PV20	**West Nyswonger**	**94.78**	**52**	*e*P	**P**	**04 02 46.6**	**+2.0**
	comp=Z,32nm,1.4s						
PV18	**Skein Mesa, Pa**	**94.81**	**52**	*e*P	**P**	**04 02 47.0**	**+2.2**
	comp=Z,16nm,0.9s						
PV21	**Cone Mtn., Par**	**94.81**	**52**	*e*P	**P**	**04 02 45.5**	**+0.7**
	comp=Z,21nm,1.2s						
PV16	**Nyswonger Mesa**	**94.82**	**52**	*e*P	**P**	**04 02 45.6**	**+0.8**
	comp=Z,14nm,1.1s						
KSH	**Kashi**	**94.84**	**309**	P	**P**	**04 02 46.5**	**+1.7**
KSH				*e*sP	sP	04 03 22.6	+1.4
KSH				PP	**PP**	**04 06 39.4**	**+4.5**
KSH				pmax	pmax		
	comp=Z,7.0nm,0.6s						
PV04	**Paradox Valley**	**94.84**	**52**	*e*P	**P**	**04 02 46.0**	**+1.1**
	comp=Z,28nm,1.3s						
PV11	**David Mesa, Pa**	**94.85**	**52**	*e*P	**P**	**04 02 46.7**	**+1.7**
	comp=Z,18nm,0.9s						
PV03	**Paradox Valley**	**94.86**	**52**	*e*P	**P**	**04 02 45.8**	**+0.7**
	comp=Z,48nm,1.9s						
PV13	**Radium Mtn., P**	**94.87**	**52**	*e*P	**P**	**04 02 45.8**	**+0.7**
	comp=Z,20nm,1.4s						
PV12	**Saucer Basin,**	**94.91**	**52**	*e*P	**P**	**04 02 45.9**	**+0.7**
	comp=Z,21nm,0.9s						
PV02	**Paradox Valley**	**94.94**	**52**	*e*P	**P**	**04 02 46.2**	**+0.8**
	comp=Z,14nm,1.2s						
MVCO	**Mesa Verde**	**94.96**	**53**	P	**P**	**04 02 45.7**	**+0.2**
	baz=260						
MVCO	**Mesa Verde**	**94.96**	**53**	*e*P	**P**	**04 02 46.4**	**+0.9**
	comp=Z,4.6nm,0.9s						
PV22	**Blue Mesa, Par**	**94.96**	**52**	*e*P	**P**	**04 02 46.0**	**+0.6**
	comp=Z,14nm,1.1s						
KURK	**Kurchatov**	**95.02**	**321**	*e*P	**P**	**04 02 44.4**	**-0.7**
KURK	**Kurchatov**	**95.02**	**321**	*ce*P	**P**	**04 02 44.7**	**-0.4**
KURK				pmax	pmax		
	comp=Z,29nm,1.3s						
PV07	**Paradox Valley**	**95.05**	**52**	*e*P	**P**	**04 02 46.7**	**+0.9**
	comp=Z,22nm,1.3s						
KURBB	**Kurchatov Arra**	**95.05**	**320**	P	**P**	**04 02 44.4**	**-0.8**
	comp=Z,4.6nm,1.0s,baz=101,slow=3.8,SNR=28						
PV01	**Paradox Valley**	**95.06**	**52**	*e*P	**P**	**04 02 46.4**	**+0.5**
	comp=Z,16nm,1.2s						
BW06	**Boulder Array**	**95.10**	**48**	P	**P**	**04 02 45.7**	**-0.3**
	baz=260,SNR=19						
BW06	**Boulder Array**	**95.10**	**48**	*e*P	**P**	**04 02 46.4**	**+0.3**
	comp=Z,19nm,1.2s						
PD31	**Pinedale Array**	**95.10**	**48**	*e*P	**P**	**04 02 46.2**	**+0.2**
PD31				*e*PP	**PP**	**04 06 31.5**	**-5.5**
PDAR	**Pinedale Array**	**95.10**	**48**	P	**P**	**04 02 45.7**	**-0.3**
	comp=Z,12nm,1.1s,baz=228,slow=1.8,SNR=50						
PDAR				PP	**PP**	**04 06 31.5**	**-5.5**
	comp=Z,0.7nm,0.8s,baz=252,slow=3.0,SNR=3.9						
PDAR				LR	LR	04 39 10.6	
	comp=Z,86nm,20.3s,baz=256,slow=31						
PDAR	**Pinedale Array**	**95.10**	**48**	*e*P	**P**	**04 02 44.6**	**-1.5**
PV15	**Paradox Valley**	**95.16**	**52**	*e*P	**P**	**04 02 48.6**	**+2.2**
	comp=Z,19nm,1.2s						
GCMT	**Greycliff**	**95.54**	**45**	*e*P	**P**	**04 02 49.8**	**+1.9**
O20A	**White River Ci**	**95.64**	**50**	P	**P**	**04 02 48.4**	**-0.1**
	baz=261,SNR=6.3						
O20A	**White River Ci**	**95.64**	**50**	*e*P	**P**	**04 02 48.9**	**+0.4**
	comp=Z,8.2nm,0.9s						
RLMT	**Red Lodge**	**95.71**	**45**	P	**P**	**04 02 49.3**	**+0.6**
	baz=260,SNR=8.9						
RLMT	**Red Lodge**	**95.71**	**45**	*e*P	**P**	**04 02 50.0**	**+1.2**
	comp=Z,22nm,1.4s						
Y22D	**IRIS PASSCAL I**	**95.71**	**57**	P	**P**	**04 02 49.3**	**+0.4**
	baz=261						
Y22E	**IRIS PASSCAL I**	**95.71**	**57**	P	**P**	**04 02 49.1**	**+0.1**
	baz=261						
YKA	**Yellowknife Ar**	**95.84**	**28**	P	**P**	**04 02 47.5**	**-1.1**
	comp=Z,17nm,0.8s,baz=256,slow=4.6,SNR=49						
YKB5	**Yellowknife Ar**	**95.84**	**28**	*e*P	**P**	**04 02 47.5**	**-1.1**
YKW3	**Yellowknife Ar**	**95.86**	**27**	*e*P	**P**	**04 02 47.6**	**-1.0**
	comp=Z,31nm,1.0s						
EGMT	**Eagleton**	**95.86**	**42**	P	**P**	**04 02 49.7**	**+0.5**
	baz=260						
EGMT	**Eagleton**	**95.86**	**42**	*e*P	**P**	**04 02 49.0**	**-0.1**
	comp=Z,59nm,1.1s						
NIL	**Nilore**	**96.04**	**303**	*e*P	**P**	**04 02 49.6**	**-0.7**
	comp=Z,16nm,1.0s						
NIL	**Nilore**	**96.04**	**303**	*e*P	**P**	**04 02 49.6**	**-0.7**
NIL				pmax	pmax		
	comp=Z,16nm,1.0s						
TASM	**ASL Pad, Albuq**	**96.22**	**56**	P	**P**	**04 02 51.3**	**0.0**
	baz=261,SNR=7.1						
ANMO	**Albuquerque**	**96.22**	**56**	LR	LR	04 44 01.6	
	comp=Z,97nm,18.0s,baz=250,slow=34						
ANMO	**Albuquerque**	**96.22**	**56**	P	**P**	**04 02 50.9**	**-0.3**
	baz=261						
ANMO	**Albuquerque**	**96.22**	**56**	*e*P	**P**	**04 02 51.2**	**-0.1**
	comp=Z,7.2nm,0.9s						
ANMO	**Albuquerque**	**96.22**	**56**	*ce*P	**P**	**04 02 51.7**	**+0.4**
ANMO				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TASL	**Snake Pit, Alb**	**96.22**	**56**	P	**P**	**04 02 51.0**	**-0.3**
	baz=261,SNR=12						
S22A	**4UR Ranch, Cre**	**96.35**	**53**	P	**P**	**04 02 52.0**	**0.0**
	baz=261,SNR=12						
S22A	**4UR Ranch, Cre**	**96.35**	**53**	*e*P	**P**	**04 02 53.1**	**+1.1**
	comp=Z,14nm,1.3s						
SMCO	**Snowmass**	**96.46**	**51**	*e*P	**P**	**04 02 53.0**	**+0.5**
	comp=Z,6.9nm,1.0s						
MNTX	**Cornudas Mount**	**96.62**	**59**	P	**P**	**04 02 52.9**	**0.0**
	baz=261						
MNTX	**Cornudas Mount**	**96.62**	**59**	*e*P	**P**	**04 02 53.2**	**+0.3**
	comp=Z,5.0nm,1.1s						
PMSA	**Palmer Station**	**96.66**	**161**	LR	LR	04 40 19.6	
	comp=Z,103nm,20.9s,baz=232,slow=32						
SNAA	**Sanae**	**97.17**	**184**	P	**P**	**04 02 53.8**	**-0.9**
SNAA	**Sanae**	**97.17**	**184**	P	**P**	**04 02 53.8**	**-0.9**
	comp=Z,4.6nm,0.9s,baz=162,slow=7.2,SNR=10						
SNAA				LR	LR	04 45 03.7	
	comp=Z,160nm,19.2s,baz=178,slow=34						
SNAA	**Sanae**	**97.17**	**184**	*e*P	**P**	**04 02 54.5**	**-0.1**
	comp=Z,11nm,1.1s						
SNAA	**Sanae**	**97.17**	**184**	*d i*P	**P**	**04 02 54.3**	**-0.4**
K22A	**Casper**	**97.29**	**48**	P	**P**	**04 02 55.8**	**-0.1**
	baz=262						
SDCO	**Great Sand Dun**	**97.39**	**53**	P	Pdif	04 02 56.8	+0.1
	baz=262						
SDCO	**Great Sand Dun**	**97.39**	**53**	*e*P	Pdif	04 02 57.0	+0.3
	comp=Z,4.3nm,1.4s						
N23A	**Red Feather La**	**97.48**	**50**	*e*P	Pdif	04 02 58.1	+1.1
	comp=Z,7.7nm,0.9s						
ISCO	**Idaho Springs**	**97.59**	**51**	P	**P**	**04 02 57.3**	**-0.2**
	baz=262						
ISCO	**Idaho Springs**	**97.59**	**51**	*e*P	Pdif	04 02 58.3	+0.8
	comp=Z,2.9nm,1.0s						
ISCO	**Idaho Springs**	**97.59**	**51**	*e*P	Pdif	04 02 58.3	+0.8
ISCO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
TX31	**Lajitas Ar. Si**	**97.75**	**62**	*e*P	Pdif	04 02 58.8	+0.6
TXAR	**Lajitas Array**	**97.75**	**62**	P	Pdif	04 02 58.4	+0.2
	comp=Z,1.6nm,0.8s,baz=237,slow=4.9,SNR=20						
TXAR				PP	**PP**	**04 06 56.0**	**-1.7**
	comp=Z,1.6nm,1.1s,baz=251,slow=7.8,SNR=7.7						
TXAR				PKKPbc	**PKKPbc**	**04 19 33.9**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=100,slow=4.0,SNR=15						
TXAR				LR	LR	04 42 46.5	
	comp=Z,141nm,18.3s,baz=0.0,slow=33						
TXAR	**Lajitas Array**	**97.75**	**62**	P	Pdif	04 02 58.4	+0.2
TXAR						04 06 56.0	
TXAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TXAR				pmax	pmax		
	comp=Z,2.0nm,1.1s						
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						

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Q24A  Divide            97.83  52   P         P        04 02 58.5 -0.1
      baz=262
VNA3  Neumayer Olymp    97.98 182   P         P        04 02 57.3 -1.0
LAO   LASA Array        98.04  44   Pdiff     Pdif     04 02 59.6 +0.6
      baz=263
LAO   LASA Array        98.04  44  eP         Pdif     04 03 00.4 +1.3
      comp=Z,48nm,1.1s
T25A  Trinidad          98.17  54   Pdiff     Pdif     04 03 00.1  0.0
      baz=263
VNA1  Neumayer--Stat    98.51 183   Pdiff     P        04 02 59.6 -0.9
MSTX  Muleshoe          99.11  57   Pdiff     Pdif     04 03 03.3 -0.9
      baz=263
MSTX  Muleshoe          99.11  57  eP         Pdif     04 03 04.8 +0.6
      comp=Z,6.8nm,0.9s
RSSD  Black Hills       99.27  47   Pdiff     Pdif     04 03 04.1 -0.7
      baz=264
RSSD  Black Hills       99.27  47  eP         Pdif     04 03 06.0 +1.2
      comp=Z,8.6nm,1.3s
KK31  Karatay Array     99.41 312  eP         Pdif     04 03 04.6 -0.6
KK31  Karatay Array     99.41 312  eP         Pdif     04 03 04.6 -0.6
KKAR  Karatay Array     99.41 312  eP         Pdif     04 03 04.6 -0.6
KKAR  Karatay Array     99.41 312  eP         Pdif     04 03 04.6 -0.6
DGMT  Dagmar            99.60  42   Pdiff     Pdif     04 03 05.7 -0.2
      baz=265
DGMT  Dagmar            99.60  42  ePdif      Pdif     04 03 06.2 +0.3
      comp=Z,38nm,0.9s
AMTX  Amarillo         100.11  56   Pdiff     Pdif     04 03 08.1 -0.5
      baz=264
AMTX  Amarillo         100.11  56  ePdif      Pdif     04 03 09.3 +0.7
BVAR  Borovoye Array   100.38 322   P         Pdif     04 03 08.1 -1.1
      comp=Z,2.8nm,0.5s,baz=99,slow=4.5,SNR=22
OGNE  Ogallala         100.43  50   Pdiff     Pdif     04 03 09.5 -0.4
      baz=265
JCT   Junction City    101.22  61   Pdiff     Pdif     04 03 12.7 -0.9
      baz=264
FFC   Flin Flon        101.42  36  ePdif      Pdif     04 03 13.2 -0.6
FFC   Flin Flon        101.42  36  eP         Pdif     04 03 13.2 -0.6
ABTX  Abilene, Hawle   101.57  59   Pdiff     Pdif     04 03 14.1 -0.9
      baz=264
CBKS  Cedar Bluff      102.02  52   Pdiff     Pdif     04 03 16.0 -0.9
      baz=266
WMOK  Wichita Mounta   102.47  57   Pdiff     Pdif     04 03 18.3 -0.7
      baz=265
MDND  Maddock          102.63  43   Pdiff     Pdif     04 03 18.9 -0.4
      baz=268
SUSD  Miller           102.94  47   Pdiff     Pdif     04 03 20.2 -0.7
      baz=268
R41A  Rosebud          108.55  53   PKiKP     PKiKP    04 07 50.0 -1.1
      baz=271
V42A  Cord             108.55  56   PKiKP     PKiKP    04 07 49.9 -1.3
      baz=270
L40A  Anamosa          108.58  49   PKiKP     PKiKP    04 07 50.1 -1.0
      baz=272
K40A  Colesburg        108.61  49   PKiKP     PKiKP    04 07 49.9 -1.2
      baz=272
Q41A  Truxton          108.66  53   PKiKP     PKiKP    04 07 50.4 -0.9
      baz=271
T42A  Van Buren        108.79  55   PKiKP     PKiKP    04 07 50.5 -1.1
      baz=270
H40A  Chili            109.06  47   PKiKP     PKiKP    04 07 50.8 -1.1
      baz=274
244A  Avery, Jackson   109.10  60   PKiKP     PKiKP    04 07 50.9 -1.4
      baz=269
J41A  Loganville       109.40  48   PKiKP     PKiKP    04 07 51.2 -1.4
      baz=274
T43A  Greenville       109.43  54   PKiKP     PKiKP    04 07 51.4 -1.4
      baz=271
L42A  Oliver, Polo     109.74  49   PKiKP     PKiKP    04 07 52.1 -1.1
      baz=273
M43A  Waltham Townsh   110.30  50   PKiKP     PKiKP    04 07 53.1 -1.2
      baz=274
R44A  Waltonville      110.36  53   PKiKP     PKiKP    04 07 53.1 -1.5
      baz=272
SPA0  Spitsbergen Ar   110.65 353  ePKiKP     PKiKP    04 07 53.7 -0.3
SPITS Spitsbergen Ar   110.65 353   PKiKP     PKiKP    04 07 53.7 -0.3
      comp=Z,2.3nm,0.6s,baz=130,slow=7.8,SNR=7.4
P44A  Sand Creek, Wi   110.66  52   PKiKP     PKiKP    04 07 53.7 -1.4
      baz=273
I43A  Langenfeld Bro   110.72  47   PKiKP     PKiKP    04 07 53.5 -1.5
      baz=275
H43A  Windswept, Lux   110.94  47   PKiKP     PKiKP    04 07 54.1 -1.3
      baz=276
N44A  Piper City       110.96  50   PKiKP     PKiKP    04 07 54.6 -1.0
      baz=274
R45A  Skylar, Fairfi   110.99  53   PKiKP     PKiKP    04 07 54.7 -1.0
      baz=273
Q45A  Warren Harvey,   111.05  52   PKiKP     PKiKP    04 07 55.0 -0.8
      baz=273
P45A  Graceland, Par   111.34  52   PKiKP     PKiKP    04 07 55.5 -0.9
      baz=274
T46A  Princeton        111.35  54   PKiKP     PKiKP    04 07 55.4 -1.0
      baz=272
Y47A  UCPARC, Winfie   111.48  58   PKiKP     PKiKP    04 07 55.4 -1.4
      baz=271
F44A  Big Bay de Noc   111.72  45   PKiKP     PKiKP    04 07 55.9 -1.0
      baz=277
T47A  Sharon Grove     111.98  54   PKiKP     PKiKP    04 07 56.4 -1.2
      baz=273
N46A  Monticello       112.01  50   PKiKP     PKiKP    04 07 56.4 -1.2
      baz=275
LRAL  Lakeview Retre   112.22  59   PKiKP     PKiKP    04 07 57.3 -0.9
      baz=271
R47A  Wooly Knot Far   112.36  53   PKiKP     PKiKP    04 07 57.3 -1.1
      baz=274
F45A  CMU Biological   112.39  45   PKiKP     PKiKP    04 07 57.1 -1.0
      baz=278
149A  Jones            112.40  59   PKiKP     PKiKP    04 07 57.5 -1.1
      baz=271
U48A  Cassie Pea, Po   112.46  55   PKiKP     PKiKP    04 07 57.4 -1.2
      baz=273
WCI   Wyandotte Cave   112.55  53   PKiKP     PKiKP    04 07 57.7 -1.0
      baz=274
Z49A  Columbiana       112.60  59   PKiKP     PKiKP    04 07 57.7 -1.2
      baz=272
X49A  Woodville        112.73  57   PKiKP     PKiKP    04 07 57.9 -1.2
      baz=272
W49A  Belvidere        112.75  56   PKiKP     PKiKP    04 07 58.0 -1.2
      baz=273
S48A  Wiedeman Farm,   112.78  54   PKiKP     PKiKP    04 07 58.0 -1.2
      baz=274
250A  Grady            112.86  60   PKiKP     PKiKP    04 07 58.2 -1.3
      baz=271
V49A  McMinnville      113.02  56   PKiKP     PKiKP    04 07 58.1 -1.6
      baz=273
150A  Eclectic         113.05  59   PKiKP     PKiKP    04 07 58.8 -1.0
      baz=272
U49A  Red Boiling Sp   113.07  55   PKiKP     PKiKP    04 07 58.5 -1.3
      baz=274
Z50A  Ashland          113.11  58   PKiKP     PKiKP    04 07 59.0 -1.0
      baz=272
T49A  Edmonton         113.23  54   PKiKP     PKiKP    04 07 58.9 -1.1
      baz=274
351A  Pinckard         113.44  61   PKiKP     PKiKP    04 07 59.6 -1.0
      baz=271
W50A  Signal Mountai   113.53  56   PKiKP     PKiKP    04 07 59.5 -1.2
      baz=273
251A  Midway           113.58  60   PKiKP     PKiKP    04 07 60.0 -0.9
      baz=272
151A  Opelika          113.64  59   PKiKP     PKiKP    04 07 59.9 -1.1
      baz=272
V50A  Pikevile         113.67  56   PKiKP     PKiKP    04 07 59.8 -1.2
      baz=274
Z51A  Franklin         113.73  58   PKiKP     PKiKP    04 08 00.2 -0.9
      baz=273
T50A  Nancy            113.79  54   PKiKP     PKiKP    04 08 00.1 -1.1
      baz=274
152A  Waverly Hall     114.14  59   PKiKP     PKPdf    04 08 01.1 -0.8
      baz=272
252A  Lumpkin          114.16  60   PKiKP     PKPdf    04 08 01.0 -1.0
      baz=272
V51A  Loudon           114.27  56   PKiKP     PKPdf    04 08 01.1 -1.0
      baz=274
Z52A  Williamson       114.37  58   PKiKP     PKPdf    04 08 01.4 -1.0
      baz=273
O50A  Cable            114.45  51   PKiKP     PKPdf    04 08 01.1 -1.2
      baz=277
APA   Apatity          114.51 341⇓iPKIKP     PKPdf    04 08 00.9 -0.7
APA                                 pmax      pmax
      comp=Z,4.0nm,1.1s
S51A  Beattyville      114.73  54   PKiKP     PKPdf    04 08 02.2 -0.7
      baz=276
TKL   Tuckaleechee C   114.75  56   PKP       PKPdf    04 08 01.9 -1.1
      comp=Z,6.9nm,0.9s,baz=207,slow=4.2,SNR=9.9
TKL   Tuckaleechee C   114.75  56  ePKIKP     PKPdf    04 08 02.0 -1.0
TZTN  Tazewell         114.86  55   PKiKP     PKPdf    04 08 02.6 -0.6
      baz=275
V52A  Sevierville      114.88  56   PKiKP     PKPdf    04 08 02.7 -0.5
      baz=275
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ACSO  Alum Creek Sta   114.92  51   PKiKP     PKiKP    04 08 02.6 -0.6
      baz=277
Y53A  Monroe           115.03  58   PKiKP     PKPdf    04 08 02.8 -0.8
      baz=274
Z53A  Monticello       115.08  58   PKiKP     PKPdf    04 08 02.8 -0.8
      baz=273
TIGA  Tifton           115.16  60   PKiKP     PKPdf    04 08 03.3 -0.6
      baz=273
GOGA  Godfrey          115.16  58   PKiKP     PKPdf    04 08 02.8 -1.0
      baz=274
TOBO  Tobermory, Bru   115.23  45   P         PKPdf    04 08 02.9 -0.7
      baz=280
T52A  Hallie           115.26  54   PKiKP     PKiKP    04 08 03.5 -0.5
      baz=276
W53A  Cullowhee        115.29  56   PKiKP     PKPdf    04 08 03.7 -0.6
      baz=275
BASO  Ashfield         115.34  46   P         PKPdf    04 08 03.1 -0.8
      baz=280
BG3   Lake Jocassee    115.49  56  ePKPdf     PKPdf    04 08 04.2 -0.2
V53A  Saluda           115.53  56   PKiKP     PKPdf    04 08 04.0 -0.6
      baz=275
KLMR  Klimovskoe       115.53 333  ePKIKP     PKPdf    04 08 01.7 -1.9
KLMR                               e                   04 09 05.1
KLMR                                pmax      pmax
      comp=Z,16nm,1.5s
KLMR  Klimovskoe       115.53 333  ePKPdf     PKPdf    04 08 01.8 -1.9
KLMR                                AMP                04 08 03.7
      comp=Z,16nm,1.5s
KLMR                               ePP        PP       04 09 05.2 -1.6
ARA0  ARCESS Array S   115.54 345  ePKPdf     PKPdf    04 08 02.9 -0.6
ARA0                               ePKKPbc    PKKPbc   04 18 36.7 -3.1
ARCES ARCESS Array B   115.54 345   PKP       PKPdf    04 08 02.9 -0.6
      comp=Z,8.7nm,0.6s,baz=75,slow=1.9,SNR=60
ARCES                               PKKPbc    PKKPbc   04 18 36.7 -3.1
      comp=Z,0.9nm,0.5s,baz=252,slow=2.4,SNR=8.4
ARCES ARCESS Array B   115.54 345  ePKPdf     PKPdf    04 08 02.2 -1.3
BMRO  Meriville Lake   115.56  46   P         PKPdf    04 08 03.2 -1.0
      baz=280
U53A  Fall Branch      115.66  55   PKiKP     PKPdf    04 08 04.2 -0.6
      baz=276
Z54A  Sparta           115.69  58   PKiKP     PKPdf    04 08 04.1 -0.8
      baz=274
BWLO  Walkerton        115.70  46   P         PKPdf    04 08 03.3 -1.3
      baz=280
ELFO  Elginfield       115.73  47   P         PKPdf    04 08 03.7 -1.0
      baz=280
Y54A  Tignall          115.78  58   PKiKP     PKPdf    04 08 04.4 -0.6
      baz=274
155A  Kite             116.05  59   PKiKP     PKPdf    04 08 05.0 -0.5
      baz=274
CLWO  Collingwood      116.23  46   P         PKPdf    04 08 04.6 -1.0
      baz=281
556A  Lake Butler      116.24  62   PKiKP     PKPdf    04 08 05.5 -0.5
      baz=272
456A  Hilliard         116.53  61   PKiKP     PKPdf    04 08 06.1 -0.4
      baz=273
BELQ  Belleterre       116.71  42   P         PKPdf    04 08 05.0 -1.4
      baz=284
KMSC  Kings Mountain   116.78  56   PKiKP     PKPdf    04 08 06.4 -0.5
      baz=276
KMSC  Kings Mountain   116.78  56  ePKPdf     PKPdf    04 08 06.2 -0.7
557A  Orange Park      116.82  62   PKiKP     PKPdf    04 08 06.3 -0.8
      baz=273
SADO  Sadowa           116.98  45  ePKPdf     PKPdf    04 08 05.9 -1.1
N54A  Moraine State    117.07  50   PKiKP     PKPdf    04 08 06.7 -0.7
      baz=280
N54A  Moraine State    117.07  50  ePKPdf     PKPdf    04 08 06.7 -0.7
M54A  Oil Creek Stat   117.22  49   PKiKP     PKPdf    04 08 06.8 -0.8
      baz=280
M54A  Oil Creek Stat   117.22  49  ePKPdf     PKPdf    04 08 06.5 -1.1
BLA   Blacksburg       117.28  54   PKiKP     PKPdf    04 08 07.1 -0.8
      baz=277
BLA   Blacksburg       117.28  54  ePKPdf     PKPdf    04 08 07.2 -0.8
BLA   Blacksburg       117.28  54  ePKIKP     PKPdf    04 08 07.2 -0.7
BANO  Bancroft         117.77  45   P         PKPdf    04 08 07.5 -1.0
      baz=283
PEMO  Pembroke         118.08  44   P         PKPdf    04 08 07.8 -1.3
      baz=284
O56A  Blue Knob Stat   118.26  50   PKiKP     PKPdf    04 08 09.0 -0.7
      baz=280
O56A  Blue Knob Stat   118.26  50  ePKPdf     PKPdf    04 08 09.1 -0.6
PLVO  Plevna           118.35  45   P         PKPdf    04 08 08.6 -1.1
      baz=284
PLVO  Plevna           118.35  45  ePKPdf     PKPdf    04 08 09.0 -0.6
SSPA  Standing Stone   118.70  50   PKiKP     PKPdf    04 08 09.6 -0.8
      baz=281
SSPA  Standing Stone   118.70  50  ePKPdf     PKPdf    04 08 09.3 -1.2
CHGQ  Chibougamau      118.76  39   P         PKPdf    04 08 08.5 -1.8
      baz=289
ZEI   Tsey             118.85 313  i PKIKP    PKPdf    04 08 10.3 -0.7
ZEI                                 pmax      pmax
      comp=Z,6.0nm,0.8s
IP04  Greensprings     118.99  52  ePKPdf     PKPdf    04 08 10.2 -0.9
IP03  Louisa           119.06  53  ePKPdf     PKPdf    04 08 10.3 -0.9
IP05  Hopewell Churc   119.29  53  ePKPdf     PKPdf    04 08 11.2 -0.5
ORIO  Orleans, Innes   119.32  44   P         PKPdf    04 08 10.2 -1.2
      baz=285
KBZ   Khabaz           119.35 314   PKP       PKPdf    04 08 10.6 -1.0
      comp=Z,2.7nm,0.9s,baz=153,slow=5.9,SNR=3.9
KBZ   Khabaz           119.35 314   PKIKP     PKPdf    04 08 10.6 -1.0
KBZ                                 pmax      pmax
      comp=Z,2.0nm,0.8s
OBN   Obninsk          119.42 328⇑iPKIKP     PKPdf    04 08 10.7 -0.6
OBN                                i                   04 09 34.2
OBN                                ePS        PS       04 19 14.5 -9.4
OBN                                eSS        SS       04 25 52.7 +3.9
OBN                                 pmax      pmax
      comp=Z,16nm,0.9s
AKH   Akhalkalaki      119.44 312⇑iP         PKPdf    04 08 12.5 +0.4
KIV   Kislovodsk       119.45 315  i PKIKP    PKPdf    04 08 11.7 -0.2
KIV                                e                   04 09 34.6
KIV                                ePS        PS       04 19 16.2 -8.8
KIV                                eSS        SS       04 25 50.6 +0.3
KIV                                 pmax      pmax
      comp=Z,9.0nm,1.1s
KIV                                 MLR       MLR
      comp=Z,94nm,22.0s
URVA  University of    119.51  53  ePKPdf     PKPdf    04 08 11.7 -0.4
VSR   Storozhevoye     119.53 323  ePKIKP     PKPdf    04 08 09.5 -2.2
VSR                                 pmax      pmax
      comp=Z,10.0nm,0.8s
VORD  Divnogorie       119.54 323  ePKIKP     PKPdf    04 08 09.0 -2.7
VORD                                pmax      pmax
      comp=Z,5.0nm,0.5s
CNNC  Cliffs of the    119.57  56   PKiKP     PKPdf    04 08 11.5 -0.8
      baz=278
ALFO  Alfred           119.70  43   P         PKPdf    04 08 10.9 -1.3
      baz=286
RAYN  Ar Rayn          119.74 291  ePKPdf     PKPdf    04 08 13.0  0.0
BINY  Binghamton       119.78  47   PKiKP     PKPdf    04 08 11.8 -0.7
      baz=283
BINY  Binghamton       119.78  47  ePKPdf     PKPdf    04 08 11.6 -0.9
MVL   Millersville     119.98  50  ePKPdf     PKPdf    04 08 12.4 -0.4
LONY  Lake Ozonia      120.17  44   PKiKP     PKPdf    04 08 12.3 -0.9
      baz=286
LONY  Lake Ozonia      120.17  44  ePKPdf     PKPdf    04 08 12.2 -0.9
N59A  State Game Lan   120.22  49   PKiKP     PKPdf    04 08 12.8 -0.6
      baz=283
N59A  State Game Lan   120.22  49  ePKPdf     PKPdf    04 08 13.0 -0.4
NCB   Newcomb          120.59  45  ePKPdf     PKPdf    04 08 13.4 -0.7
PSUB  Penn St. - Bra   120.67  50  ePKPdf     PKPdf    04 08 13.6 -0.7
FIA1  FINESS Array S   120.72 338  ePKPdf     PKPdf    04 08 12.7 -0.9
FIA1                               ePKPdf     PKiKP    04 08 13.2 -0.6
FIA0  FINESS Array S   120.72 338  ePKPdf     PKPdf    04 08 13.0 -0.6
FIA0  FINESS Array S   120.72 338  ePKIKP     PKPdf    04 08 13.0 -0.6
FINES FINESS Array B   120.72 338   PKP       PKPdf    04 08 13.0 -0.6
      comp=Z,7.0nm,0.8s,baz=72,slow=2.2,SNR=26
FRNY  Flat Rock        120.80  44  ePKPdf     PKPdf    04 08 13.3 -1.1
ODNJ  Ogdensburg       121.04  48  ePKPdf     PKPdf    04 08 13.9 -1.0
SCHQ  Schefferville    121.06  31   PKP       PKPdf    04 08 14.2 -0.4
      comp=Z,3.9nm,0.9s,baz=228,slow=4.6,SNR=5.4
SCHQ                                PKKPbc    PKKPab   04 18 17.8 -0.5
      comp=Z,1.8nm,0.6s,baz=58,slow=3.2,SNR=4.6
BRNJ  Basking Ridge    121.16  49  ePKPdf     PKPdf    04 08 14.8 -0.3
TRY   Troy             121.31  46  ePKPdf     PKPdf    04 08 15.2 -0.2
VT1   Waterbury        121.51  44  ePKPdf     PKPdf    04 08 15.3 -0.5
PAL   Palisades        121.57  48   PKiKP     PKPdf    04 08 15.4 -0.6
      baz=284
PAL   Palisades        121.57  48  ePKPdf     PKPdf    04 08 15.5 -0.4
PAL   Palisades        121.57  48  ePKIKP     PKPdf    04 08 15.5 -0.4
HELC  Santa Helena     121.60  89  ePKPdf     PKPdf    04 08 16.7 -0.6
PRAC  Prado            121.82  92  ePKPdf     PKPdf    04 08 16.2 -1.1
LBNH  Lisbon           122.11  44   PKiKP     PKPdf    04 08 16.5 -0.4
      baz=288
LBNH  Lisbon           122.11  44  ePKPdf     PKPdf    04 08 16.8 -0.1
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LBNH  Lisbon           122.11  44  ePKIKP     PKPdf    04 08 16.8 -0.1
VSU   Vasula           122.31 335  i PKIKP    PKPdf    04 08 15.6 -1.2
LPAZ  La Paz           122.33 117   PKP       PKPdf    04 08 18.4 -0.4
      comp=Z,6.0nm,0.7s,baz=294,slow=1.4,SNR=26
LPAZ                                PKKPbc    PKKPbc   04 18 13.5 -0.9
      comp=Z,0.8nm,1.0s,baz=95,slow=2.2,SNR=3.7
QUA2  Belchertown      122.37  47  ePKPdf     PKPdf    04 08 17.2 -0.3
ANN   Anapa            122.82 317  i PKIKP    PKPpre   04 08 05.8
ANN                                 pmax      pmax
      comp=Z,33nm,1.0s
HRV   Adam Dziewonsk   122.87  46   PKiKP     PKPdf    04 08 17.9 -0.5
      baz=287
BRYW  Bryant College   123.05  47  ePKPdf     PKPdf    04 08 18.2 -0.6
WES   Weston           123.08  46  ePKPdf     PKPdf    04 08 18.8  0.0
WES   Weston           123.08  46  ePKIKP     PKPdf    04 08 18.8  0.0
PKME  Peaks-Kenny Pk   123.55  42   PKiKP     PKPdf    04 08 19.3 -0.2
      baz=290
PKME  Peaks-Kenny Pk   123.55  42  ePKPdf     PKPdf    04 08 19.4 -0.2
BOSA  Boshof           123.67 225   PKP       PKPdf    04 08 19.4 -1.2
      comp=Z,5.4nm,0.7s,baz=131,slow=1.7,SNR=22
PQI   Presque Isle     123.87  40  ePKPdf     PKPdf    04 08 18.9 -1.3
RUSC  La Rusia         123.96  90  ePKPdf     PKPdf    04 08 19.7 -2.3
IZAR  Zarasai          124.15 332  eP         PKPdf    04 08 19.9 -0.5
IZAR                                IAmb      IAmb     04 08 21.9
      comp=Z,13nm,1.1s
ISAL  Salakas          124.31 332  eP         PKPdf    04 08 20.6 -0.1
ISAL                                IAmb      IAmb     04 08 22.3
      comp=Z,12nm,1.2s
NACGM Naroch           124.39 331  e          PKPdf    04 08 20.0 -0.9
IIGN  Ignalina         124.39 332  eP         PKPdf    04 08 20.9 -0.1
IIGN                                IAmb      IAmb     04 08 22.3
      comp=Z,13nm,0.7s
IVI   Ivigtut          124.65  18  ePKPdf     PKPdf    04 08 20.4 -0.8
AKASG Malin Array Be   125.42 326   PKP       PKPdf    04 08 22.2 -0.8
      comp=Z,10.0nm,0.8s,baz=58,slow=2.3,SNR=20
AKBB  Malin Array Si   125.42 326  ePKPdf     PKPdf    04 08 22.2 -0.8
KIEV  Kiev             125.43 326  ePKPdf     PKPdf    04 08 22.2 -0.8
KIEV  Kiev             125.43 326  i PKIKP    PKPdf    04 08 22.5 -0.5
AK11  Malin Array Si   125.46 326  ePKPdf     PKPdf    04 08 22.3 -0.8
NC303 NORSAR Array S   125.68 344  ePKPdf     PKPdf    04 08 22.9 -0.3
CPUP  Villa Florida    125.85 134   PKP       PKPdf    04 08 23.6 -1.1
      comp=Z,7.5nm,0.7s,baz=289,slow=2.5,SNR=16
CPUP  Villa Florida    125.85 134  ePKPdf     PKPdf    04 08 24.3 -0.3
CPUP  Villa Florida    125.85 134  ePKIKP     PKPdf    04 08 24.3 -0.3
NB2   NORSAR Subarra   125.88 344   PKPdf     PKPdf    04 08 22.8 -0.9
      comp=Z,20nm,1.1s,baz=31,slow=1.9
NB2   NORSAR Subarra   125.88 344   PKPdf     PKPdf    04 08 22.8 -0.9
      baz=31,slow=1.9
HFS   Hagfors          125.89 342   PKP       PKPdf    04 08 22.7 -1.0
      comp=Z,12nm,0.8s,baz=132,slow=2.1,SNR=23
NBO00 NORSAR Array S   126.00 344  ePKPdf     PKPdf    04 08 23.8 -0.1
NC602 NORSAR Array S   126.04 343  ePKPdf     PKPdf    04 08 23.7 -0.2
NAO01 NORSAR Array S   126.13 344  ePKPdf     PKPdf    04 08 24.6 +0.5
SUW   Suwalki          126.61 332  ePKP       PKPdf    04 08 25.6 +0.4
SUW   Suwalki          126.61 332  ePKPdf     PKPdf    04 08 24.6 -0.6
SUW   Suwalki          126.61 332  ePKIKP     PKPdf    04 08 25.6 +0.4
SDV   Santo Domingo    126.78  87  ePKPdf     PKPdf    04 08 26.0 -0.9
BR101 Keskin Array S   127.12 312  ePKPdf     PKPdf    04 08 26.9  0.0
BR101                              ePP        PP       04 10 25.1 -1.4
BR131 Keskin Array S   127.12 312  ePKPdf     PKPdf    04 08 27.0 +0.2
BRTR  Keskin Array B   127.12 312   PKP       PKPdf    04 08 26.9  0.0
      comp=Z,4.2nm,0.9s,baz=96,slow=2.5,SNR=17
BRTR                                PP        PP       04 10 25.1 -1.5
      comp=Z,3.6nm,1.1s,baz=99,slow=3.1,SNR=5.2
SORM  Soroca           127.19 324⇑iP         PKPdf    04 08 26.4 -0.1
SORM  Soroca           127.19 324 ⇑PKIKP     PKPdf    04 08 26.4 -0.1
KIS   Kishinev         127.46 322  eP         PKPdf    04 08 27.0  0.0
KIS   Kishinev         127.46 322  ePKIKP     PKPdf    04 08 27.0  0.0
ANTO  Ankara           127.69 312⇓iP         PKPdf    04 08 28.8 +1.0
ANTO  Ankara           127.69 312  ePKPdf     PKPdf    04 08 28.5 +0.7
ANTO  Ankara           127.69 312 ⇓PKIKP     PKPdf    04 08 28.8 +1.0
TLCR                   128.30 320⇓iP         PKPdf    04 08 29.0 +0.3
TLCR                   128.30 320 ⇓PKIKP     PKPdf    04 08 29.0 +0.3
LSZ   Lusaka           128.61 240  ePKPdf     PKPdf    04 08 30.2 -0.2
LVV   L’vov            128.70 327  ePKIKP     PKPdf    04 08 28.6 -0.7
CFR   Carcaliu         128.73 320⇓iP         PKPdf    04 08 30.0 +0.5
CFR   Carcaliu         128.73 320 ⇓PKIKP     PKPdf    04 08 30.0 +0.5
TIRR  Tirgusor         128.88 319⇑iP         PKPdf    04 08 29.8  0.0
TIRR  Tirgusor         128.88 319  ePKPdf     PKPdf    04 08 29.6 -0.2
TIRR  Tirgusor         128.88 319 ⇑PKIKP     PKPdf    04 08 29.8  0.0
TLB   Topalu           129.06 320⇓iP         PKPdf    04 08 31.0 +0.8
TLB   Topalu           129.06 320 ⇓PKIKP     PKPdf    04 08 31.0 +0.8
HARR  Harsova          129.09 320⇑iP         PKPdf    04 08 31.5 +1.3
HARR  Harsova          129.09 320 ⇑PKIKP     PKPdf    04 08 31.5 +1.3
BIZ   Bicaz            129.11 323⇓iP         PKPdf    04 08 31.3 +1.1
BUR08 Bucovina Ar. S   129.26 324  ePKPdf     PKPdf    04 08 31.9 +1.3
BURAR Bucovina Array   129.27 324⇑iP         PKPdf    04 08 32.0 +1.4
BURAR Bucovina Array   129.27 324 ⇑PKIKP     PKPdf    04 08 32.0 +1.4
BUR04 Bucovina Ar. S   129.27 324  ePKPdf     PKPdf    04 08 31.0 +0.4
VRI   Vrincioaia       129.27 322⇓iP         PKPdf    04 08 30.9 +0.3
VRI   Vrincioaia       129.27 322 ⇓PKIKP     PKPdf    04 08 30.9 +0.3
KWP   Kalwaria Pacla   129.51 328  ePKP       PKPdf    04 08 32.0 +1.1
KWP   Kalwaria Pacla   129.51 328  ePKPdf     PKPdf    04 08 31.2 +0.3
KWP   Kalwaria Pacla   129.51 328  ePKIKP     PKPdf    04 08 32.0 +1.1
SAML  Samuel           129.65 111  ePKPdf     PKPdf    04 08 31.4 -0.8
SAML  Samuel           129.65 111  ePKIKP     PKPdf    04 08 31.4 -0.8
GKP   Gorka Klasztor   129.75 334  ePKP       PKPdf    04 08 32.6 +1.4
GKP   Gorka Klasztor   129.75 334  ePKIKP     PKPdf    04 08 32.6 +1.4
MLR   Muntele Rosu     129.94 322   PKP       PKPdf    04 08 31.9 -0.1
      comp=Z,1.3nm,1.0s,baz=216,slow=3.5,SNR=8.3
MLR   Muntele Rosu     129.94 322⇓iP         PKPdf    04 08 32.2 +0.2
MLR   Muntele Rosu     129.94 322  ePKPdf     PKPdf    04 08 31.9 -0.1
MLR                                ePKPdf     PKPdf    04 08 32.1 +0.2
MLR   Muntele Rosu     129.94 322 ⇓PKIKP     PKPdf    04 08 32.2 +0.2
DOPR  Dopca            130.03 322⇑iP         PKPdf    04 08 34.4 +2.4
UZH   Uzhgorod         130.32 327c iPKIKP     PKPdf    04 08 33.0 +0.6
VOIR                   130.51 322⇑iP         PKPdf    04 08 33.8 +0.8
VOIR                   130.51 322 ⇑PKIKP     PKPdf    04 08 33.8 +0.8
CRVS  Cervenica-Dubn   130.60 328  ePKIKP     PKPdf    04 08 34.0 +1.0
CRVS  Cervenica-Dubn   130.60 328  ePKP       PKPdf    04 08 34.0 +1.0
OJC   Ojcow            130.63 330  ePKP       PKPdf    04 08 33.3 +0.4
OJC   Ojcow            130.63 330  ePKPdf     PKPdf    04 08 33.4 +0.4
OJC   Ojcow            130.63 330  ePKIKP     PKPdf    04 08 33.4 +0.4
NIE   Niedzica         130.88 329  ePKP       PKPdf    04 08 35.6 +2.0
NIE   Niedzica         130.88 329  ePKIKP     PKPdf    04 08 35.6 +2.0
HUMR  Humele           131.01 321⇑iP         PKPdf    04 08 34.4 +0.5
DRGR                   131.15 325⇓iP         PKPdf    04 08 34.0 -0.2
DRGR                   131.15 325 ⇓PKIKP     PKPdf    04 08 34.0 -0.2
LOT   Lotru            131.27 323⇓iP         PKPdf    04 08 34.3 -0.2
LANS  Liptovska Anna   131.48 329  ePKIKP     PKPdf    04 08 35.8 +1.1
LANS  Liptovska Anna   131.48 329  ePKP       PKPdf    04 08 35.8 +1.1
OKC   Ostrava-Krasne   131.69 330  ePKPdf     PKPdf    04 08 35.9 +0.9
OKC   Ostrava-Krasne   131.69 330  ePKIKP     PKPdf    04 08 35.9 +0.9
KSP   Ksiaz            131.87 332  ePKP       PKPdf    04 08 35.8 +0.5
KSP   Ksiaz            131.87 332  ePKIKP     PKPdf    04 08 35.8 +0.5
HUMP  Col San Antoni   131.88  75  ePKPdf     PKPdf    04 08 35.9 -0.3
MORC  Moravsky Berou   132.02 331⇑iP         PKPdf    04 08 36.2 +0.5
MORC  Moravsky Berou   132.02 331  ePKPdf     PKPdf    04 08 35.7  0.0
MORC  Moravsky Berou   132.02 331 ⇑PKIKP     PKPdf    04 08 36.2 +0.5
MORC  Moravsky Berou   132.02 331  ePKP       PKPdf    04 08 35.5 -0.2
MORC                               ePP        PP       04 10 58.2 +0.6
PSZ   Piszkesteto      132.03 327  ePKPdf     PKPdf    04 08 37.9 +2.1
KRLC  Kraliky          132.18 331  ePKPdf     PKPdf    04 08 36.0  0.0
KRLC  Kraliky          132.18 331  ePKIKP     PKPdf    04 08 36.0  0.0
DPC   Dobruska-Polom   132.20 332  ePKPdf     PKPdf    04 08 36.5 +0.5
DPC   Dobruska-Polom   132.20 332  ePKIKP     PKPdf    04 08 36.5 +0.5
VYHS  Vyhne            132.22 329  ePKIKP     PKPdf    04 08 36.3 +0.2
VYHS  Vyhne            132.22 329  ePKP       PKPdf    04 08 36.3 +0.2
UPC   Upice            132.23 332  ePKPdf     PKPdf    04 08 36.9 +0.9
UPC   Upice            132.23 332  ePKIKP     PKPdf    04 08 36.9 +0.9
HERR  Herculane        132.38 323⇓iP         PKPdf    04 08 36.2 -0.3
BZS   Buzias           132.44 324⇑iP         PKPdf    04 08 36.6  0.0
BZS   Buzias           132.44 324 ⇑PKIKP     PKPdf    04 08 36.6  0.0
JAVC  Velka Javorina   132.57 330  ePKP       PKPdf    04 08 38.0 +1.2
VRAC  Vranov           132.79 331  ePKP       PKPdf    04 08 37.1  0.0
VRAC                               ePP        PP       04 11 04.5 +2.0
PVCC  Panska Ves       132.87 333  ePKPdf     PKPdf    04 08 37.8 +0.6
PVCC  Panska Ves       132.87 333  ePKIKP     PKPdf    04 08 37.8 +0.6
BRG   Berggiesshubel   132.89 334  ePKP       PKPdf    04 08 37.5 +0.3
      comp=Z,8.1nm,0.9s
BRG   Berggiesshubel   132.89 334  ePKIKP     PKPdf    04 08 37.5 +0.3
BRG                                 pmax      pmax
      comp=Z,8.0nm,0.9s
CLL   Collm            132.97 335  ePKPdf     PKPdf    04 08 38.0 +0.6
      comp=Z,9.0nm,0.7s
CLL                                ePP        PP       04 11 07.0 +3.5
      comp=Z,100nm,21.5s
CLL   Collm            132.97 335  ePKPdf     PKPdf    04 08 37.1 -0.3
CLL   Collm            132.97 335  ePKIKP     PKPdf    04 08 37.1 -0.3
KRUC  Moravsky         133.05 331  ePKP       PKPdf    04 08 36.9 -0.7
KRUC                               ePP        PP       04 11 06.1 +1.9
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MODS	Modra-Piesok	133.08	329	*e*PKIKP	PKPdf	04 08 38.3	+0.6
MODS	Modra-Piesok	133.08	329	*e*PKP	PKPdf	04 08 38.3	+0.6
VTS	Vitosha	133.10	320	⇑*i*P	PKPdf	04 08 38.9	+0.8
VTS	Vitosha	133.10	320	*e*PKPdf	PKPdf	04 08 38.5	+0.4
VTS	Vitosha	133.10	320	⇑PKIKP	PKPdf	04 08 38.9	+0.8
GOPC	GO Pecny, Ondr	133.21	332	*e*PKPdf	PKPdf	04 08 38.2	+0.3
GOPC	GO Pecny, Ondr	133.21	332	*e*PKIKP	PKPdf	04 08 38.2	+0.3
PRA	Prague	133.26	333	*e*PKPdf	PKPdf	04 08 39.4	+1.5
PRA	Prague	133.26	333	*e*PKIKP	PKPdf	04 08 39.4	+1.5
PRU	Pruhonice	133.27	333	*e*PKPdf	PKPdf	04 08 37.8	-0.2
PRU	Pruhonice	133.27	333	*e*PKIKP	PKPdf	04 08 37.8	-0.2
NKC	Novy Kostel	134.01	334	*e*PKPdf	PKPdf	04 08 41.0	+1.6
NKC	Novy Kostel	134.01	334	*e*PKIKP	PKPdf	04 08 41.0	+1.6
CONA	Conrad Observa	134.09	330	*i* PKiKP	PKPdf	04 08 40.1	+0.4
	comp=Z,9.1nm,0.7s						
DIVS	Divibare	134.26	323	*e*PKPdf	PKPdf	04 08 40.1	0.0
KHC	Kasperske Hory	134.32	333	*e*PKPdf	PKPdf	04 08 40.4	+0.3
KHC	Kasperske Hory	134.32	333	*e*PKPdf	PKPdf	04 08 40.0	-0.1
KHC	Kasperske Hory	134.32	333	*e*PKIKP	PKPdf	04 08 40.4	+0.3
GEC2	GERESS Array S	134.47	332	*e*PKPdf	PKPdf	04 08 40.8	+0.3
GERES	GERESS Array B	134.47	332	PKP	PKPdf	04 08 39.6	-0.8
	comp=Z,4.9nm,0.6s,baz=72,slow=1.7,SNR=4.6						
GEA0	GERESS Array S	134.48	332	*e*PKPdf	PKPdf	04 08 39.6	-0.8
ARSA	Arzberg	134.71	329	*i* PKiKP	PKPdf	04 08 41.2	+0.4
	comp=Z,3.4nm,0.7s						
MOA	Molln	134.92	331	*i* PKPdf	PKPdf	04 08 40.4	-0.7
	comp=Z,3.9nm,0.6s						
TSUM	Tsumeb	134.99	229	*e*PKPdf	PKPdf	04 08 43.8	+1.5
IDI	Anoyia	135.19	310	PKP	PKPdf	04 08 42.4	+0.2
	comp=Z,18nm,0.8s,baz=275,slow=11,SNR=5.1						
FNA	Florina	135.20	318	*e*PKPdf	PKPdf	04 08 41.6	-0.3
SOKA	Soboth	135.35	329	*i* PKiKP	PKPdf	04 08 42.6	+0.5
	comp=Z,10nm,1.1s						
PTGA	Pitinga	135.37	102	*e*PKPdf	PKPdf	04 08 42.7	-0.3
OBKA	Obir	135.71	329	*i* PKiKP	PKiKP	04 08 43.7	-0.7
	comp=Z,8.9nm,1.1s						
KBA	Koelnbreinsper	135.90	331	*i* PKPdf	PKPdf	04 08 43.3	+0.1
	comp=Z,8.4nm,0.7s						
MYKA	Terra Mystica	136.08	330	*i* PKPdf	PKPdf	04 08 42.9	-0.5
	comp=Z,7.2nm,0.7s						
MEM	Membach	136.21	339	⇑P	PKPdf	04 08 44.9	+1.5
ABTA	Abfaltersbach	136.54	331	*i* PKiKP	PKPdf	04 08 44.8	+0.5
	comp=Z,12nm,0.7s						
WATA	Walderalm	136.55	332	*i* PKiKP	PKiKP	04 08 46.6	+0.4
	comp=Z,7.1nm,0.5s						
WTTA	Wattenberg	136.57	332	*i* PKiKP	PKPdf	04 08 44.7	+0.2
	comp=Z,12nm,0.9s						
BCLA	Clavier	136.61	340	⇑PKP	PKPdf	04 08 46.2	+2.1
MOTA	Moosalm	136.76	333	*i* PKiKP	PKPdf	04 08 45.6	+0.8
	comp=Z,7.8nm,0.6s						
RETA	Reutte	136.80	333	*i* PKPdf	PKPdf	04 08 45.0	+0.2
	comp=Z,4.1nm,0.7s						
WLF	Walferdange	136.94	338	⇑PKP	PKPdf	04 08 47.5	+2.6
WLF	Walferdange	136.94	338	*e*PKPdf	PKPdf	04 08 47.0	+2.1
DOU	Dourbes	137.12	340	⇓PKP	PKPdf	04 08 47.3	+2.2
FETA	Feichten	137.17	332	*i* PKPdf	PKPdf	04 08 45.7	+0.1
	comp=Z,12nm,1.1s						
BFO	Black Forest	137.19	336	*i* PKIKP	PKPdf	04 08 47.5	+2.1
DAVA	Damuels	137.35	333	*i* PKPdf	PKPdf	04 08 45.9	0.0
	comp=Z,11nm,0.7s						
DAVOX	Davos/Dischmat	137.73	333	PKhKP	PKPpre	04 08 39.1	
	comp=Z,5.5nm,0.6s,baz=216,slow=6.8,SNR=9.1						
DAVOX				PKP	PKPdf	04 08 46.7	0.0
	comp=Z,14nm,0.7s,baz=226,slow=4.6,SNR=12						
TUE	Stuetta	138.21	333	*e*PKPdf	PKPdf	04 08 46.8	-0.8
TIP	Timpagrande	139.06	319	*e*PKPpre	PKPpre	04 08 40.4	
SENIN	Lac Senin/Sane	139.18	335	*e*PKPpre	PKPpre	04 08 42.9	
BNI	Bardonecchia	140.48	334	*e*PKPpre	PKPpre	04 08 45.9	
BNI	Bardonecchia	140.48	334	*e*PKHKP	PKPpre	04 08 45.9	
TAMR	Tamra	145.11	323	*e*PKPbc	PKPdf	04 08 59.9	0.0
KEST	Kesra	145.83	321	PKPbc	PKPbc	04 09 02.0	0.0
	comp=Z,64nm,0.8s,baz=279,slow=1.0,SNR=58						
KEST	Kesra	145.83	321	*e*PKPdf	PKPbc	04 09 02.1	+0.1
THTN	Thala	146.35	321	*e*PKPdf	PKPbc	04 09 03.8	+0.2
CMAH	Djebel Manchou	146.39	324	P	PKPbc	04 09 03.3	-0.3
ABSA	Djebel Ababsia	146.60	323	P	PKPbc	04 09 04.7	+0.4
CKFL	Kef-Lekhel	146.95	324	P	PKPbc	04 09 05.3	0.0
CASM	Ain Smara	147.18	324	P	PKPbc	04 09 06.1	+0.2
DFRA	Djebel Bou Aff	147.33	325	P	PKPbc	04 09 07.0	+0.7
CTEI	Djebel Teioual	147.37	324	P	PKPbc	04 09 06.8	+0.3
SET	Setif	147.84	325	P	PKPbc	04 09 08.0	+0.3
CKHR	Kef el Ahmar	147.91	325	P	PKPbc	04 09 08.1	+0.1
PBRG	Braganca	147.96	346	*e*PKP	PKPbc	04 09 08.0	+0.2
PGAV	Gavieira, Arco	148.14	348	*e*PKP	PKPbc	04 09 08.5	+0.2
PCAB	Cabril	148.34	348	*e*PKP	PKPbc	04 09 09.5	+0.7
POLO	Lamas de Olo	148.61	347	*e*PKP	PKPbc	04 09 09.9	+0.3
MVO	Moncorvo	148.64	346	*e*PKP	PKPbc	04 09 09.9	+0.3
PVRL	Vila Real	148.69	347	*e*PKP	PKPbc	04 09 10.3	+0.6
H07S1	FLORES T-PHASE	148.74	22	*e*PKP	PKPab	04 09 15.3	+1.6
PTO	Porto	149.00	348	*e*PKP	PKPbc	04 09 10.6	+0.2
ES19	SONSECA Array	149.12	341	*e*PKPdf	PKPdf	04 09 07.1	+0.5
ESDC	Sonseca Array	149.16	341	PKPbc	PKPbc	04 09 10.3	-0.6
	comp=Z,7.9nm,0.7s,baz=350,slow=1.9,SNR=49						
ESDC				PP	PP	04 12 41.7	-0.3
	comp=Z,2.0nm,1.0s,baz=24,slow=5.7,SNR=5.8						
ESLA	Sonseca Array	149.16	341	*e*PKPbc	PKPbc	04 09 11.0	0.0
EMHD	Djebel Mahouad	149.16	328	P	PKPbc	04 09 12.3	+1.1
PVIS	Viseu	149.26	347	*e*PKP	PKPbc	04 09 11.6	+0.4
PVIS	Viseu	149.26	347	*e*PP	PP	04 12 43.5	+1.1
PAB	San Pablo	149.40	341	*e*PKPdf	PKPdf	04 09 07.9	+0.8
MTE	Manteigas	149.48	346	*e*PKPdf	PKPdf	04 09 07.5	+0.3
EBNR	Beni Rached	149.81	330	P	PKPbc	04 09 13.0	+0.3
COI	Coimbra	149.86	347	*e*PKP	PKPbc	04 09 12.8	+0.2
COI	Coimbra	149.86	347	*e*PP	PP	04 12 47.5	+1.7
CART	Cartagena	149.90	335	*e*PKPbc	PKPbc	04 09 12.1	-0.7
PCBR	Castelo Branco	150.00	346	*e*PKP	PKPbc	04 09 13.2	+0.3
ECHA	Ech Chlef	150.00	330	P	PKPbc	04 09 13.7	+0.7
PCAS	Casmilo, Conde	150.03	348	*e*PKP	PKPbc	04 09 13.1	+0.1
PCAS	Casmilo, Conde	150.03	348	*e*PP	PP	04 12 48.1	+1.3
PGRA	Graciosa	150.14	18	*e*PKP	PKPbc	04 09 14.3	+1.0
PCED	Cedros	150.28	19	*e*PKP	PKPbc	04 09 15.5	+1.9
EANR	'Ain N'Sour	150.29	330	P	PKPbc	04 09 14.4	+0.6
ROSA	Rosais	150.34	19	*e*PKP	PKPbc	04 09 11.2	-2.6
ROSA	Rosais	150.34	19	*e*PKPbc	PKPbc	04 09 14.5	+0.7
PMRV	Marv??o	150.37	345	*e*PKP	PKPbc	04 09 13.7	-0.2
PTOM	Tomar	150.43	347	*e*PKP	PKPbc	04 09 14.1	+0.2
PMAN	Manadas	150.47	18	*e*PKP	PKPbc	04 09 15.1	+1.0
PICO	Pico	150.49	19	*e*PKP	PKPbc	04 09 14.4	+0.2
PCAN	Candelaria	150.50	19	*e*PKP	PKPbc	04 09 15.1	+0.9
ETRT	Tiaret	150.64	329	P	PKPab	04 09 19.0	-2.8
ADH	Angra Heroismo	150.71	17	*e*PKP	PKPbc	04 09 15.9	+1.3
ALMR	Almeirim	150.91	347	*e*PKP	PKPbc	04 09 14.7	-0.4
PMTG	Montargil	150.91	347	*e*PKP	PKPbc	04 09 15.0	-0.1
PESTR	Estremoz	150.95	345	*e*PKP	PKPbc	04 09 15.3	+0.1
PESTR	Estremoz	150.95	345	*e*PKPbc	PKPbc	04 09 15.0	-0.3
PMAFR	Mafra	151.25	348	*e*PKP	PKPbc	04 09 16.2	+0.3
EVO	Evora	151.37	346	*e*PKP	PKPbc	04 09 16.6	+0.4
PMST	Lisbon--Monsan	151.44	348	*e*PKP	PKPbc	04 09 16.9	+0.6
PBEJ	Beja	151.81	345	*e*PKP	PKPbc	04 09 18.5	+1.3
PSET	Sete Cidades	151.90	15	*e*PKP	PKPbc	04 09 15.1	-2.4
PDA	Ponta Delgada	151.99	15	*e*PKP	PKPbc	04 09 17.9	+0.3
CMLA	Cha da Macela	152.01	15	*e*PKP	PKPbc	04 09 17.1	-0.6
CMLA	Cha da Macela	152.01	15	*e*PKPab	PKPab	04 09 29.4	+2.2
MESJ	Messejana	152.08	346	*e*PKP	PKPbc	04 09 18.0	+0.2
BART	Pico Bartolome	152.09	15	*e*PKP	PKPdf	04 09 11.1	-0.2
PCVE	Castro Verde	152.23	345	*e*PKP	PKPbc	04 09 18.5	+0.3
PTEO	Sao Teotonio	152.48	346	*e*PKP	PKPbc	04 09 19.1	+0.4
PBDV	Barranco-do-Ve	152.57	345	*e*PKP	PKPbc	04 09 19.9	+0.9
PBDV	Barranco-do-Ve	152.57	345	*e*PP	PP	04 13 02.3	+0.9
MORF	Marmelete	152.69	346	*e*PKP	PKPbc	04 09 20.1	+0.8
PSMN	Pico do Norte,	152.85	15	*e*PKP	PKPdf	04 09 08.6	-3.7
MDT	Midelt	155.50	335	PKP	PKPdf	04 09 14.9	-1.4
	comp=Z,3.4nm,0.9s,baz=11,slow=6.6,SNR=3.9						
MDT				PKPab	PKPab	04 09 42.7	+0.4
	comp=Z,8.7nm,0.8s,baz=59,slow=6.2,SNR=7.7						
TAM	Tamanrasset	155.76	302	*e*PKPdf	PKPdf	04 09 18.0	+1.0
TAM				*e*PKPab	pPKPdf	04 09 44.8	+0.6
TAM	Tamanrasset	155.76	302	*e*PKIKP	PKPdf	04 09 18.0	+1.0
TAM				*e*		04 09 44.8	
TOA0	Torodi Ar. Sit	161.96	279	*e*PKPdf	PKPdf	04 09 22.8	-1.5
TOA0				*e*PKPdf	PKPdf	04 09 23.4	-0.9
TOA0				*e*PKPab	PKPab	04 10 10.2	-0.7
TOA0				*e*PKPab	PKPab	04 10 12.3	+1.4
TORD	Torodi Ar. Bea	161.96	279	PKP	PKPdf	04 09 22.9	-1.4
	comp=Z,7.4nm,1.0s,baz=42,slow=0.8						
TORD				PKPab	PKPab	04 10 10.6	-0.3
	baz=38,slow=2.3						
TOA1	Torodi Ar. Sit	161.97	279	*e*PKPdf	PKPdf	04 09 22.9	-1.4
TOA1				*e*PKPab	PKPab	04 10 10.6	-0.3
KOWA	Kowa	167.20	288	PKP	PKPdf	04 09 27.5	-1.4
	comp=Z,7.8nm,1.2s,baz=103,slow=5.4,SNR=4.8						
KOWA				PKPab	PKPab	04 10 33.6	-0.3
	comp=Z,14nm,0.8s,baz=98,slow=4.9,SNR=18						
KOWA	Kowa	167.20	288	*e*PKPdf	PKPdf	04 09 27.5	-1.4
KOWA				*e*PKPdf	PKPdf	04 09 29.7	+0.9
KOWA				*e*PKPab	PKPab	04 10 33.6	-0.3
KOWA				*e*PKPab	PKPab	04 10 34.2	+0.2

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*IDC **03** 04:09:41.0±2.5, 6°.57S×154°.95E, h75^{km}±22^{km}, mb4.1/21, mb1 4.2/24, mb1mx4.1/54, mbtmp4.4/24, MS3.5/4, Ms1 3.5/4, ms1mx3.0/49, Error ellipse: s-maj=15.1km s-min=12.0km az=91.0*

*ISCJB **03** 04:09:42.2±0.8, 6°.70S±0°.04×154°.98E±0°.04, h100^{km}±7^{km}, mb4.4/47, Error ellipse: s-maj=7.1km s-min=6.3km az=36.6*

*NEIC **03** 04:09:44.0±0.7, 6°.67S×154°.97E, h103^{km}±6^{km}, mb4.4/26, Error ellipse: s-maj=6.2km s-min=4.9km az=110.0*

ISC 03 04:09:43.6±1.0, 6°.71S±0°.06×154°.95E±0°.06, h99^{km}±9^{km}, n107, σ1^{s}09/112, mb4.4/47, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	Rabaul	3.74	312	*e*Pn	Pn	04 10 40.4	+1.2
RABL				*e*Sn	Sn	04 11 24.4	+2.1
HNR	Honiara	5.64	119	P	Pn	04 11 04.2	-0.8
	31nm,0.3s,baz=256,slow=4.2,SNR=3.4						
HNR				S	Sn	04 12 07.6	-0.8
	12nm,0.3s,baz=8.1,slow=19,SNR=2.4						
HNR				LR	LR	04 13 12.8	
	comp=Z,432nm,19.5s,baz=299,slow=37						
PMG	Port Moresby	8.17	250	P	Pn	04 11 36.8	-2.5
	4.0nm,0.3s,baz=112,slow=7.8,SNR=6.6						
PMG				S	Sn	04 13 08.6	-1.5
	baz=56,slow=18,SNR=2.0						
PMG	Port Moresby	8.17	250	*e*Pn	Pn	04 11 40.0	+0.6
PATS	Pohnpei	13.87	14	*e*Pn	Pn	04 12 55.7	-0.3
CTA	Charters Tower	15.75	212	P	P	04 13 22.5	+0.7
	0.4nm,0.3s,baz=53,slow=10,SNR=3.6						
DZM	Mont Dzumac	18.88	145	P	P	04 13 57.0	+0.7
	0.7nm,0.3s,baz=315,slow=14,SNR=7.5						
DZM				LR	LR	04 19 46.4	
	comp=Z,115nm,21.4s,baz=248,slow=32						
DZM	Mont Dzumac	18.88	145	*e*P	P	04 13 57.0	+0.7
	28nm,1.5s						
WRAB	Tennant Creek	23.93	235	*e*P	P	04 14 48.2	-0.5
	12nm,0.8s						
WB2	Warramunga Arr	23.93	235	*e*P	P	04 14 49.5	+0.7
	26nm,1.5s						
WR1	Warramunga Arr	23.94	235	*e*P	P	04 14 49.0	+0.2
	7.3nm,0.6s						
WR1				*e*PcP	PcP	04 18 30.0	+1.1
WRA	Warramunga Arr	23.94	235	P	P	04 14 49.0	+0.2
	2.1nm,0.4s,baz=60,slow=9.8,SNR=30						
WRA				PcP	PcP	04 18 30.0	+1.1
	4.1nm,0.6s,baz=58,slow=2.3,SNR=20						
AS01	Alice Springs	26.29	228	*e*PcP	PcP	04 18 34.8	+0.7
AS31	Alice Springs	26.33	228	*e*P	P	04 15 10.6	+0.2
AS31				*e*pP	pP	04 15 22.5	-10
AS31				*e*PcP	PcP	04 18 35.5	+1.2
ASAR	Alice Springs	26.33	228	P	P	04 15 10.6	+0.2
	0.8nm,0.4s,baz=57,slow=9.3,SNR=14						
ASAR				PcP	PcP	04 18 35.5	+1.2
	1.8nm,0.7s,baz=70,slow=2.1,SNR=11						
H11S3	WAKE ISLAND Hy	27.59	25	T	T	04 43 36.1	
	baz=204,slow=75,SNR=80						
H11S2	WAKE ISLAND Hy	27.60	25	T	T	04 43 32.0	
	baz=204,slow=75,SNR=73						
H11S1	WAKE ISLAND Hy	27.61	25	T	T	04 43 31.4	
	baz=204,slow=75,SNR=56						
STKA	Stephens Creek	27.97	205	P	P	04 15 24.5	-0.5
	0.9nm,0.6s,baz=52,slow=15,SNR=2.9						
STKA				PcP	PcP	04 18 38.6	+0.6
	2.3nm,0.7s,baz=312,slow=2.1,SNR=4.7						
STKA	Stephens Creek	27.97	205	*e*P	P	04 15 24.5	-0.5
	0.3nm,0.8s						
STKA				*e*PcP	PcP	04 18 38.6	+0.6
WAKE	Wake Island	28.29	24	*e*P	P	04 15 27.8	-0.1
	172nm,1.1s						
FITZ	Fitzroy Crossi	30.73	246	P	P	04 15 49.6	+0.1
	4.9nm,1.0s,baz=58,slow=11,SNR=8.1						
FITZ	Fitzroy Crossi	30.73	246	*e*P	P	04 15 49.6	+0.1
	14nm,1.3s						
BBOO	Buckleboo	31.35	212	*e*P	P	04 15 54.4	-0.5
	12nm,1.3s						
DAV	Davao City (W)	32.34	295	*e*P	P	04 16 09.2	+5.4
	279nm,0.4s						
AFI	Afiamalu	33.48	105	LR	LR	04 27 25.3	
	comp=Z,54nm,19.2s,baz=284,slow=32						
URZ	Urewera	37.27	151	P	P	04 16 46.8	+0.9
	6.9nm,0.6s,baz=323,slow=10,SNR=4.6						
BKZ	Black Stump Fm	37.70	152	*e*P	P	04 16 49.5	-0.1
	17nm,1.1s						
THZ	Tophouse	38.38	158	*e*P	P	04 16 54.9	-0.3
	64nm,1.2s						
RPZ	Rata Peaks	39.48	162	P	P	04 17 09.0	+4.7
	5.2nm,0.4s,baz=343,slow=4.4,SNR=4.6						
JOW	Kunigami	42.19	323	LR	LR	04 32 53.0	
	comp=Z,88nm,20.9s,baz=319,slow=33						
KSRS	Korea Array	50.67	332	P	P	04 18 31.6	-1.3
	1.8nm,0.8s,baz=143,slow=8.0,SNR=6.8						
KS15	Wonju Array Si	50.68	332	*e*P	P	04 18 31.6	-1.4
KSAR	Wonju Array Be	50.68	332	P	P	04 18 31.6	-1.4
KLR	Kul'dur	59.28	343	P	P	04 19 34.0	-0.7
	0.2nm,0.7s,baz=112,slow=1.4,SNR=6.9						
PETK	Petropavlovsk-	59.64	2	P	P	04 19 36.6	-0.5
	5.0nm,0.6s,baz=153,slow=7.7						
PEA1	Petropavlovsk-	59.64	2	*e*P	P	04 19 36.6	-0.6
CM01	Chiang Mai Arr	60.60	295	*e*P	P	04 19 45.4	+1.0
CM31	Chiang Mai Arr	60.62	295	*e*P	P	04 19 46.1	+1.5
CMAR	Chiang Mai Arr	60.62	295	P	P	04 19 45.6	+1.1
	12nm,0.7s,baz=121,slow=5.1,SNR=43						
CHTO	Chiang Mai	60.74	296	*e*P	P	04 19 46.4	+1.0
	8.8nm,0.9s						
MA2	Magadan	66.16	358	P	P	04 20 19.6	-0.6
	2.1nm,0.3s,baz=151,slow=19,SNR=3.9						
SONA0	Songino Array	69.08	327	*e*P	P	04 20 38.8	-0.2
SONM	Songino Array	69.08	327	P	P	04 20 38.8	-0.2
	1.6nm,0.5s,baz=135,slow=6.6,SNR=11						
SONA1	Songino Array	69.08	327	*e*P	P	04 20 38.6	-0.4
SEY	Seymchan	69.47	359	P	P	04 20 41.1	+0.2
	1.1nm,0.5s,baz=190,slow=14,SNR=3.5						
VNDA	Vanda	70.86	178	P	P	04 20 50.5	+1.1
	1.2nm,0.8s,baz=323,slow=6.1,SNR=9.7						
VNDA	Vanda	70.86	178	*e*P	P	04 20 50.4	+1.0
	1.6nm,0.9s						
ODAN	Odare	73.35	300	*e*P	P	04 21 05.7	+0.3
	37nm,0.7s						
RAMN	Ramite	74.05	300	*e*P	P	04 21 09.9	+0.4
JIRN	Jiri	74.60	301	*e*P	P	04 21 13.4	+0.6
GUN	Gumba	74.93	301	*e*P	P	04 21 15.1	+0.4
	22nm,0.6s						
PKIN	Phulchoki	75.25	301	*e*P	P	04 21 17.4	+0.9
DMN	Daman	75.51	301	*e*P	P	04 21 18.8	+0.9
GKN	Gorkha	76.02	301	*e*P	P	04 21 21.2	+0.5
	12nm,0.6s						
KOLN	Koldanda	76.84	300	*e*P	P	04 21 25.5	+0.1
	10nm,0.6s						
DANN	Dangsing	76.86	301	*e*P	P	04 21 25.7	+0.1
	16nm,0.7s						
PYUN	Piuthan	77.45	301	*e*P	P	04 21 28.7	-0.1
CNPM	China Poot	78.52	25	*e*P	P	04 21 34.1	+0.3
	15nm,0.8s						
RC01	Rabbit Creek A	80.03	24	*e*P	P	04 21 41.8	-0.1
	7.2nm,0.4s						
PMR	Palmer	80.55	24	*e*P	P	04 21 43.4	-1.3
	4.1nm,0.6s						
SML	Sawmill	80.98	24	*e*P	P	04 21 47.3	+0.2
	7.8nm,0.8s						
IM3	Indian Mountai	81.47	19	*e*P	P	04 21 49.5	-0.1
KLU	Klutina	81.80	25	*e*P	P	04 21 52.1	+0.6
	4.4nm,0.8s						
BMRM	Bremner River	82.09	25	*e*P	P	04 21 53.5	+0.6
	4.2nm,0.6s						
CCB	Clear Creek Bu	82.73	21	*e*P	P	04 21 55.0	-1.1
	2.9nm,1.2s						
HDA	Harding Lake	82.91	22	*e*P	P	04 21 56.8	-0.3
	3.2nm,0.4s						
IL1	Eielson Array	83.13	22	*e*P	P	04 21 56.0	-2.2
ILAR	Eielson Array	83.13	22	P	P	04 21 56.4	-1.9
	0.8nm,0.3s,baz=242,slow=5.5,SNR=21						
ILB	Eielson Array	83.13	22	*e*P	P	04 21 57.1	-1.1
MK01	Makanchi Array	83.15	319	*e*P	P	04 21 58.4	-0.4
MK31	Makanchi Array	83.16	319	*e*P	P	04 21 58.8	0.0
MK32	Makanchi Array	83.16	319	*e*P	P	04 21 58.2	-0.7
MKAR	Makanchi Array	83.16	319	P	P	04 21 58.2	-0.7
	2.5nm,0.8s,baz=103,slow=5.2,SNR=12						
QSPA	South Pole Qui	83.26	180	P	P	04 22 00.2	+1.1
	5.2nm,0.6s,baz=330,slow=2.4,SNR=25						
SCRK	Sand Creek	83.81	23	*e*P	P	04 22 01.6	-0.3
	1.6nm,0.8s						
ZALV	Zalesovo Beam	83.92	326	P	P	04 22 00.8	-1.6
	0.6nm,0.3s,baz=123,slow=5.3,SNR=3.6						
ZAA1	Zalesovo Array	83.92	326	*e*P	P	04 22 00.8	-1.6
TOLK	Toolik Lake Re	84.36	18	*e*P	P	04 22 05.2	+0.7
	5.2nm,1.2s						
MAW	Mawson	84.64	203	P	P	04 22 07.0	+1.1
	2.9nm,0.8s,baz=98,slow=8.7,SNR=7.8						
MAW	Mawson	84.64	203	*e*P	P	04 22 07.4	+1.5
	0.8nm,0.9s						
EGAK	Eagle	85.27	23	*e*P	P	04 22 10.0	+0.9
	2.6nm,0.8s						
DAWY	Dawson	85.66	24	*e*P	P	04 22 11.9	+0.8
	2.1nm,0.9s						
DLBC	Dease Lake	87.92	31	*e*P	P	04 22 23.4	+1.2
	3.8nm,0.9s						
F03A	Seaside	88.89	44	*e*P	P	04 22 30.0	+3.1
	60nm,1.5s						
INK	Inuvik	89.47	21	P	P	04 22 29.4	+0.2
	1.1nm,0.5s,baz=280,slow=6.3,SNR=6.8						
INK	Inuvik	89.47	21	*e*P	P	04 22 29.3	+0.2
	5.5nm,1.3s						
NV01	Mina Array Sit	91.58	52	*e*P	P	04 22 40.5	+0.6
NVAR	Mina Array Bea	91.58	52	P	P	04 22 39.3	-0.7
	1.5nm,0.7s,baz=246,slow=6.0,SNR=9.6						
KVN	Kaiserville	91.82	51	*e*P	P	04 22 41.9	+0.9
	6.0nm,1.4s						
DPP	Dos Picos Cty	92.03	57	*e*P	P	04 22 46.6	+4.7
YKA	Yellowknife Ar	96.11	28	P	P	04 22 59.8	0.0
	1.3nm,0.5s,baz=268,slow=4.7,SNR=16						
YKA				PKKP	PKKPbc	04 39 46.6	-2.9
	0.5nm,0.7s,baz=82,slow=1.3,SNR=4.2						
YKB5	Yellowknife Ar	96.11	28	*e*P	P	04 22 59.9	0.0
PD31	Pinedale Array	98.54	48	*e*P	P	04 23 10.9	-0.8
PDAR	Pinedale Array	98.54	48	P	P	04 23 10.9	-0.8
	0.4nm,0.8s,baz=247,slow=3.1,SNR=3.5						
AKASG	Malin Array Be	117.28	324	PKP	PKPdf	04 28 16.2	-1.2
	0.2nm,0.4s,baz=58,slow=2.2,SNR=2.6						
AKBB	Malin Array Si	117.28	324	*e*PKPdf	PKPdf	04 28 16.2	-1.2
TKL	Tuckaleechee C	119.16	53	PKP	PKPdf	04 28 21.3	-0.3
	2.1nm,0.6s,baz=0.0,slow=4.0,SNR=5.8						
HFS	Hagfors	119.22	339	PKP	PKPdf	04 28 20.1	-0.8
	1.3nm,0.8s,baz=72,slow=4.7,SNR=3.3						
BOSA	Boshof	120.16	231	PKP	PKPdf	04 28 24.5	+0.6
	1.6nm,0.6s,baz=127,slow=2.9,SNR=7.6						
SSPA	Standing Stone	122.14	46	*e*PKPdf	PKPdf	04 28 26.7	-0.4
GEC2	GERESS Array S	126.79	329	*e*PKPdf	PKPdf	04 28 36.4	+0.4
GERES	GERESS Array B	126.79	329	PKP	PKPdf	04 28 36.4	+0.4
	0.2nm,0.4s,baz=119,slow=1.7,SNR=5.5						
TORD	Torodi Ar. Bea	152.91	286	PKPbc	PKPbc	04 29 28.5	-1.9
	baz=102,slow=2.5						
TORD				PKPab	PKPab	04 29 41.4	-0.4
	baz=72,slow=3.5						
TOA1	Torodi Ar. Sit	152.91	286	*e*PKPbc	PKPbc	04 29 28.5	-1.9
TOA1				*e*PKPab	PKPab	04 29 41.4	-0.4
KOWA	Kowa	157.94	292	PKPab	PKPab	04 30 03.6	+0.2
	2.7nm,0.5s,baz=65,slow=5.8,SNR=17						
DBIC	Dimbokro	159.94	271	PKPab	PKPab	04 30 11.4	-0.8
	4.0nm,0.9s,baz=98,slow=3.0,SNR=4.3						

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*IDC **03** 04:10:47.7±1.1, 38°.14N×142°.47E, h0^{km}, mb3.5/4, mb1 3.8/7, mb1mx3.5/67, mbtmp3.6/7, ML3.5/2, MS3.8/3, Ms1 3.8/3, ms1mx3.0/58, Error ellipse: s-maj=29.9km s-min=25.0km az=111.0*

*ISCJB **03** 04:10:50.0±0.8, 38°.02N±0°.05×141°.89E±0°.08, h30^{km}, mb3.5/4, MS3.8/3, Error ellipse: s-maj=9.5km s-min=6.7km az=162.9*

*JMA **03** 04:10:49.1±0.1, 38°.01N×141°.97E, h52^{km}±1^{km}, M2.6*

ISC 03 04:10:51.1±1.0, 38°.06N±0°.05×141°.93E±0°.07, h30^{km}, n28, σ2^{s}17/23, mb3.7/4, MS3.8/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	Ouri	0.60	311	P	Pn	04 11 02.4	-1.3
JMM	Marumori	0.92	258	P	Pn	04 11 06.0	-2.0
JOU	Okura	1.04	287	P	Pn	04 11 08.4	-1.3
JOU				*e*S	Sn	04 11 22.2	-1.1
JMK	Ichinoseki	1.05	328	P	Pn	04 11 08.8	-1.0
JMK				*e*S	Sn	04 11 22.5	-0.9
JFK	Kawauchi	1.09	231	P	Pn	04 11 08.1	-2.3
JFT	Otama	1.38	247	P	Pn	04 11 13.0	-1.3
JYS	Shirataka	1.48	277	P	Pn	04 11 14.6	-1.1
JOM	Ohasama	1.50	341	P	Pn	04 11 15.2	-0.7
JYK	Kaneyama	1.50	305	P	Pn	04 11 14.8	-1.2
JYK				*e*S	Sn	04 11 34.1	-0.5
JRG	Rokugo	1.68	323	P	Pn	04 11 17.9	-0.5
JYA	Atsumi	1.82	288	P	Pn	04 11 19.3	-1.1
MJAR	Matsushiro Arr	3.33	244	Pn	Pb	04 11 48.5	-1.1
	2.3nm,0.3s,baz=62,slow=10,SNR=18						
MJAR				Sn	Sb	04 12 29.9	+0.3
	1.7nm,0.3s,baz=39,slow=32,SNR=4.1						
MAT	Matsushiro	3.33	244	P	Pb	04 11 47.3	-2.3
MAT				S	Sn	04 12 27.2	+7.4
JHJ	Hachijo jima 2	5.23	200	Pn	Pn	04 12 11.4	+4.1
	7.0nm,0.3s,baz=78,slow=20,SNR=4.9						
JHJ				Sn	Sn	04 13 05.1	-1.5
	6.2nm,0.3s,baz=73,slow=19,SNR=2.5						
USRK	Ussuriysk Ar.	9.69	312	Pn	Pn	04 13 13.4	+5.1
	baz=126,slow=15						
H11N2	WAKE ISLAND Hy	28.34	123	T	T	04 47 06.6	
	baz=316,slow=75,SNR=15						
H11N1	WAKE ISLAND Hy	28.35	123	T	T	04 47 00.6	
	baz=316,slow=75,SNR=16						
H11N3	WAKE ISLAND Hy	28.36	123	T	T	04 47 06.3	
	baz=316,slow=75,SNR=2.6						
H11S1	WAKE ISLAND Hy	29.09	125	T	T	04 47 51.3	
	baz=317						
H11S3	WAKE ISLAND Hy	29.09	125	T	T	04 48 00.9	
	baz=317						
H11S2	WAKE ISLAND Hy	29.11	125	T	T	04 48 03.1	
	baz=317						
TIXI	Tiksi	34.32	353	LR	LR	04 32 45.0	
	comp=Z,97nm,18.6s,baz=160,slow=38						
KURBB	Kurchatov Arra	45.70	307	P	P	04 19 11.1	+2.0
	0.4nm,0.4s,baz=81,slow=8.2,SNR=3.0						
WRA	Warramunga Arr	58.13	188	P	P	04 20 43.4	+1.4
	0.6nm,0.8s,baz=6.5,slow=7.8,SNR=3.5						
SPITS	Spitsbergen Ar	59.60	349	LR	LR	04 49 11.2	
	comp=Z,60nm,18.2s,baz=15,slow=39						
SFJD	Kangerlussuaq	74.83	5	LR	LR	04 58 13.3	
	comp=Z,72nm,18.4s,baz=304,slow=38						
PDAR	Pinedale Array	76.65	46	P	P	04 22 40.4	+1.0
	0.1nm,0.5s,baz=292,slow=2.4,SNR=3.4						
TXAR	Lajitas Array	89.17	53	P	P	04 23 42.8	-1.3
	0.3nm,0.7s,baz=284,slow=3.6,SNR=3.5						

JMA 03 04:10:55.8±0.1, 38°.03N×141°.90E, h49^{km}±1^{km}, M3.8, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	Ouri	0.61	314	P	Pn	04 11 08.4	+0.1
JIO				S	Sn	04 11 17.2	-0.1
JMM	Marumori	0.89	260	P	Pn	04 11 12.1	+0.1
JOU	Okura	1.03	289	P	Pn	04 11 14.3	+0.4
JOU				*e*S	Sn	04 11 27.9	+0.6
JFK	Kawauchi	1.05	231	P	Pn	04 11 14.1	-0.1
JMK	Ichinoseki	1.06	330	P	Pn	04 11 14.7	+0.3
JMK				S	Sn	04 11 28.2	+0.1
JFT	Otama	1.34	248	P	Pn	04 11 19.2	+1.1
JFT				S	Sn	04 11 36.3	+1.5
JYS	Shirataka	1.46	278	P	Pn	04 11 20.5	+0.8
JYK	Kaneyama	1.50	307	P	Pn	04 11 20.8	+0.5
JYK				S	Sn	04 11 39.5	+0.8
JOM	Ohasama	1.52	342	P	Pn	04 11 21.1	+0.6
JRG	Rokugo	1.69	324	P	Pn	04 11 23.7	+0.9
JRG				*e*S	Sn	04 11 44.5	+1.2
JYA	Atsumi	1.81	289	P	Pn	04 11 25.2	+0.7
JYA				*e*S	Sn	04 11 46.5	+0.2
JFY	Yanaizu	1.85	251	P	Pn	04 11 26.1	+1.0
JFY				S	Sn	04 11 48.5	+1.2

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*NIED **03** 04:22:00, 38°.00N×141°.90E, h47^{km}, Mw4.4 Best double couple: M$_0$4.40000×10^{15} NP1:ϕ_s174.00000°, δ25.00000°, λ126.00000°. NP2:ϕ_s315.00000°, δ70.00000°, λ75.00000°.*

*BJI **03** 04:22:14.3, 37°.85N×142°.21E, h50^{km}, mb4.6/31, mB4.8/15,* *Ms4.2/8, Ms7 4.0/8*

*ISCJB **03** 04:22:15.3±0.5, 38°.00N±0°.02×142°.05E±0°.04, h41^{km}±4^{km}, mb4.3/51, MS3.6/6, Error ellipse: s-maj=5.2km s-min=3.5km az=21.5*

*MOS **03** 04:22:15.5±1.1, 38°.01N×142°.04E, h42^{km}, mb4.4/25, Error ellipse: s-maj=9.4km s-min=6.1km az=86.6*

*IDC **03** 04:22:17.8±0.6, 38°.01N×141°.90E, h44^{km}±5^{km}, mb3.9/25, mb1 4.1/32, mb1mx3.9/70, mbtmp4.2/32, ML4.2/5, MS3.6/6, Ms1 3.5/6, ms1mx3.1/69, Error ellipse: s-maj=13.0km s-min=9.7km az=107.0*

*NEIC **03** 04:22:17.5±0.3, 38°.01N×142°.04E, mb4.5/16, Error ellipse: s-maj=6.6km s-min=4.8km az=120.0*

NEIC Felt at Atsugi. Recorded [2 JMA] in Iwate and Miyagi.

*JMA **03** 04:22:17.3±0.1, 38°.03N×141°.87E, h46^{km}±1^{km}, M4.4*

JMA Felt II J1.

ISC 03 04:22:17.4±0.5**, 38°.02N**±0°.04×**142°.03E**±0°.05**, h43**^{km}±4^{km}**, h43**^{km}**:pP-P, n152,** σ**1^{s}52**/174**, mb4.3**/52**, MS3.7**/6**, 8C-2D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIO	Ouri	0.69	309	P	Pn	04 22 29.6	-1.1
JIO				S	Sn	04 22 37.5	-2.8
JMM	Marumori	0.99	261	P	Pn	04 22 33.1	-1.7
JMM				S	Sn	04 22 44.6	-2.9
JFK	Kawauchi	1.12	235	P	Pn	04 22 35.3	-1.4
JFK				S	Sn	04 22 48.1	-2.8
JMK	Ichinoseki	1.13	326	P	Pn	04 22 35.9	-0.8
JMK				S	Sn	04 22 49.3	-1.7
JOU	Okura	1.13	288	P	Pn	04 22 35.5	-1.2
JOU				S	Sn	04 22 48.7	-2.4
JFT	Otama	1.43	250	P	Pn	04 22 40.1	-0.7
JYS	Shirataka	1.56	278	P	Pn	04 22 41.5	-1.1
JYS				S	Sn	04 23 00.3	-1.3
JOM	Ohasama	1.56	339	P	Pn	04 22 42.6	0.0
JOM				S	Sn	04 23 01.3	-0.4
JYK	Kaneyama	1.59	305	P	Pn	04 22 42.1	-0.9
JYK				S	Sn	04 23 00.8	-1.5
JRG	Rokugo	1.75	322	P	Pn	04 22 44.9	-0.4
JRG				eS	Sn	04 23 06.0	-0.4
JYA	Atsumi	1.91	288	P	Pn	04 22 46.4	-1.0
JFY	Yanaizu	1.94	252	P	Pn	04 22 47.2	-0.7
MJAR	Matsushiro Arr	3.38	245	P	Pn	04 23 07.8	+0.1
	9.3nm,0.3s,baz=62,slow=9.4,SNR=83						
MJAR				S	Sn	04 23 48.2	+1.6
	8.3nm,0.3s,baz=58,slow=21,SNR=3.6						
MJAR				LR	LR	04 24 38.1	
	comp=Z,989nm,20.8s,baz=90,slow=43						
MAJO	Matsushiro	3.38	245	ePn	Pn	04 23 08.5	+0.8
MAJO				eSn	Sn	04 23 43.0	-3.6
MAJO	Matsushiro	3.38	245	i P	Pn	04 23 08.0	+0.3
MAT	Matsushiro	3.38	245	P	Pn	04 23 08.0	+0.3
MAT				S	Sn	04 23 50.2	+3.6
MJB9	Matsu-Tunnel	3.38	245	ePn	Pn	04 23 08.7	+1.0
MJB9				eSn	Sn	04 23 47.2	+0.5
INU	Inuyama	4.83	238	ePn	Pn	04 23 28.7	+1.2
INU				eSn	Sn	04 24 23.6	+1.4
JHJ2	Mitsune	5.22	201	ePn	Pn	04 23 34.1	+1.3
JHJ2				eSn	Sn	04 24 29.6	-2.1
JHJ	Hachijo jima 2	5.22	201	P	Pn	04 23 33.0	+0.2
	62nm,0.3s,baz=83,slow=13,SNR=17						
JHJ				S	Sn	04 24 29.4	-2.3
	45nm,0.3s,baz=50,slow=23,SNR=6.6						
ASAJ	Asahikawa	6.11	4	P	Pn	04 23 44.8	-0.3
	6.4nm,0.3s,baz=244,slow=15,SNR=14						
ASAJ				S	Sn	04 24 51.9	-1.6
	6.7nm,0.3s,baz=258,slow=20,SNR=3.6						
YUK	Yuzh-Kuril'sk	6.67	25c	iP	Pn	04 23 53.0	+0.3
YUK				i S	Sn	04 25 04.0	-3.4
YUK				pmax	pmax		
	comp=Z,351nm,0.4s						
YUK				pmax	pmax		
	comp=N,93nm,0.1s						
YUK				pmax	pmax		
	comp=E,140nm,0.1s						
YUK				MLR	MLR		
	comp=Z,219nm,14.0s						
SHO	Shikotan	6.88	30d	iP	Pn	04 23 54.5	-1.1
SHO				i S	Sn	04 25 06.2	-6.4
SHO				pmax	pmax		
	comp=Z,56nm,0.4s						
SHO				pmax	pmax		
	comp=N,25nm,0.2s						
SHO				pmax	pmax		
	comp=E,40nm,0.2s						
SHO				MLR	MLR		
	comp=Z,337nm,15.0s						
KUR	Kuril'sk	8.43	29⇓	iP	Pn	04 24 16.6	-0.2
KUR				i S	Sn	04 25 47.0	-3.6
KUR				pmax	pmax		
	comp=Z,11nm,0.1s						
KUR				pmax	pmax		
	comp=N,71nm,0.4s						
KUR				pmax	pmax		
	comp=E,21nm,0.2s						
KUR				MLR	MLR		
	comp=Z,317nm,15.0s						
YSS	Yuzh-Sakhalins	8.95	3	ePn	Pn	04 24 21.8	-2.1
YSS	Yuzh-Sakhalins	8.95	3⇑	eP	Pn	04 24 24.5	+0.6
YSS				eS	Sn	04 26 03.9	+0.7
YSS				pmax	pmax		
	comp=Z,40nm,0.7s						
YSS				MLR	MLR		
	comp=Z,240nm,15.0s						
USA0B	Ussuriysk Arra	9.77	312	ePn	Pn	04 24 36.9	+1.7
USRK	Ussuriysk Ar.	9.77	312	P	Pn	04 24 35.7	+0.5
	baz=118,slow=15						
JNU	Nakatsue	10.31	245	P	Pn	04 24 43.5	+0.8
	comp=Z,0.7nm,0.3s,baz=60,slow=7.3,SNR=6.8						
JNU				LR	LR	04 29 00.8	
	comp=Z,556nm,19.4s,baz=121,slow=40						
CBIJ	Chichi jima	10.89	179	ePn	Pn	04 24 49.0	-1.7
CBIJ				eSn	Sn	04 26 42.5	-8.6
JCJ	Chichijima	10.89	179	P	Pn	04 24 49.0	-1.7
	comp=Z,5.2nm,0.3s,baz=307,slow=20,SNR=4.5						
JCJ				S	Sn	04 26 42.5	-8.6
	baz=280,slow=18						
KSRS	Korea Array	11.19	271	P	Pn	04 24 57.2	+2.6
	comp=Z,0.2nm,0.3s,baz=82,slow=14,SNR=11						
KS15	Wonju Array Si	11.22	271	ePn	Pn	04 24 57.2	+2.2
KSAR	Wonju Array Be	11.22	271	P	Pn	04 24 57.2	+2.2
KSAR	Wonju Array Be	11.22	271	P	Pn	04 24 57.2	+2.2
MDJ	Mudanjiang	11.43	309	P	Pn	04 24 59.2	+1.2
MDJ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,170nm,6.3s						
KLR	Kul'dur	13.44	330	P	Pn	04 25 28.5	+3.2
	comp=Z,0.0nm,0.3s,baz=126,slow=10,SNR=2.8						
KLR	Kul'dur	13.44	330	i P	Pn	04 25 26.6	+1.3
PETK	Petropavlovsk-	18.59	31	P	P	04 26 30.1	-0.6
	baz=193,slow=5.9						
PEA1	Petropavlovsk-	18.60	31	eP	P	04 26 30.1	-0.7
ZEA	Zeya	18.73	332	eP	Pn	04 26 34.8	+1.9
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NJ2	Nanjing	19.86	260	eP	P	04 26 43.2	-1.6
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MA2	Magadan	22.29	12	P	P	04 27 11.8	+1.1
	comp=Z,4.7nm,0.6s,baz=175,slow=13,SNR=3.0						
MA2				LR	LR	04 37 07.5	
	comp=Z,87nm,18.9s,baz=247,slow=40						
HHC	Hu-ho-hao-te	23.64	286	eP	P	04 27 24.6	-0.1
HHC				sP	sP	04 27 45.2	+4.1
HHC				S	S	04 31 33.5	-2.9
HHC				pmax	pmax		
	comp=Z,20nm,1.0s						
HHC				pmax	pmax		
	comp=Z,160nm,5.5s						
HHC				LR	LR		
	comp=Z,420nm,12.0s						
HHC				LR	LR		
	comp=Z,410nm,11.6s						
HHC				LR	LR		
	comp=Z,490nm,12.6s						
SEY	Seymchan	25.73	11	P	P	04 27 45.4	+1.9
	comp=Z,2.9nm,0.8s,baz=200,slow=13,SNR=6.1						
BOD	Bodaibo	26.97	326	eP	P	04 27 49.1	-5.6
ULN	Ulaanbaatar	27.22	302c	eP	P	04 27 58.3	+1.0
ULN				pmax	pmax		
	comp=Z,6.0nm,2.5s						
SONA1	Songino Array	27.65	302	eP	P	04 28 01.0	-0.1
SONA0	Songino Array	27.66	302	eP	P	04 28 01.2	+0.1
SONM	Songino Array	27.66	302	P	P	04 28 01.2	+0.1
	comp=Z,2.4nm,0.8s,baz=99,slow=7.5,SNR=11						
ENH	Enshi	27.91	264	eP	P	04 28 02.1	-1.3
	comp=Z,35nm,1.0s						
H11N2	WAKE ISLAND Hy	28.25	123	T	T	04 58 22.3	
	baz=316,slow=75,SNR=1565						
H11N1	WAKE ISLAND Hy	28.26	123	T	T	04 58 22.4	
	baz=316,slow=75,SNR=1352						
H11N3	WAKE ISLAND Hy	28.27	123	T	T	04 58 22.9	
	baz=316,slow=75,SNR=1348						
H11S1	WAKE ISLAND Hy	29.01	125	T	T	04 59 18.9	
	baz=318,slow=76,SNR=374						
H11S3	WAKE ISLAND Hy	29.01	125	T	T	04 59 18.1	
	baz=318,slow=76,SNR=474						
H11S2	WAKE ISLAND Hy	29.02	125	T	T	04 59 19.2	
	baz=318,slow=76,SNR=391						
ZAK	Zakamensk	30.06	307	eP	P	04 28 19.4	-3.0
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.3s						
LZH	Lanzhou	30.40	278	eP	P	04 28 29.9	+4.3
LZH				pmax	pmax		
	comp=Z,20nm,1.2s						
GYA	Guiyang	31.88	259	eP	P	04 28 38.9	+0.3
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CD2	Chengdu	32.17	269	eP	P	04 28 40.0	-1.1
BILL	Bilibino	32.95	16	i P	P	04 28 47.6	+0.2
BILL				i		04 28 57.4	
BILL				pmax	pmax		
	comp=Z,7.0nm,1.8s						
DAV	Davao City (W)	34.23	210	LR	LR	04 42 01.0	
	comp=Z,45nm,20.2s,baz=332,slow=35						
KMI	Kunming	35.60	260	P	P	04 29 11.0	-0.1
KMI				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KMI				pmax	pmax		
	comp=Z,93nm,5.1s						
WMQ	Urumqi	40.84	296	P	P	04 29 55.3	+0.4
WMQ				sP	sP	04 30 11.2	-0.6
WMQ				pmax	pmax		
	comp=Z,29nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,360nm,4.3s						
WMQ				LR	LR		
	comp=Z,310nm,29.1s						
WMQ				LR	LR		
	comp=Z,210nm,27.7s						
ZAA0	Zalesovo Array	41.62	312	eP	P	04 29 59.6	-1.4
	comp=Z,3.4nm,0.8s						
ZAA1	Zalesovo Array	41.62	312	eP	P	04 30 00.3	-0.7
ZALV	Zalesovo Beam	41.62	312	P	P	04 30 00.3	-0.7
	comp=Z,1.5nm,0.5s,baz=87,slow=7.6,SNR=7.2						
ZALV	Zalesovo Beam	41.62	312	eP	P	04 30 00.6	-0.4
ZALV	Zalesovo Beam	41.62	312	eP	P	04 30 00.6	-0.4
CM31	Chiang Mai Arr	42.22	255	eP	P	04 30 05.8	-0.6
CMAR	Chiang Mai Arr	42.22	255	P	P	04 30 05.8	-0.6
	comp=Z,1.1nm,0.3s,baz=40,slow=7.4,SNR=3.6						
MK01	Makanchi Array	44.02	301	eP	P	04 30 19.7	-0.9
MK31	Makanchi Array	44.02	301	eP	P	04 30 20.4	-0.2
MK31	Makanchi Array	44.02	301	eP	P	04 30 20.4	-0.2
MK32	Makanchi Array	44.02	301	eP	P	04 30 20.1	-0.4
MKAR	Makanchi Array	44.02	301	P	P	04 30 20.1	-0.4
	comp=Z,1.4nm,0.7s,baz=91,slow=7.3,SNR=10						
MKAR	Makanchi Array	44.02	301	eP	P	04 30 20.7	+0.1
	comp=Z,23nm,0.6s						
MKAR	Makanchi Array	44.02	301	eP	P	04 30 20.7	+0.1
MKAR				pmax	pmax		
	comp=Z,23nm,0.6s						
KURK	Kurchatov	45.72	307	eP	P	04 30 33.6	-0.3
KURK	Kurchatov	45.72	307c	eP	P	04 30 33.7	-0.3
KURK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KURBB	Kurchatov Arra	45.79	307	P	P	04 30 33.6	-0.9
	comp=Z,3.0nm,0.6s,baz=82,slow=8.3,SNR=27						
KDAK	Kodiak Island	46.04	43c	eP	P	04 30 37.5	+1.1
RAMN	Ramite	47.42	274	eP	P	04 30 47.3	-0.7
GUN	Gumba	47.55	275	eP	P	04 30 48.4	-0.7
KKN	Kakani	48.08	275	eP	P	04 30 52.5	-0.5
	comp=Z,27nm,0.8s						
PKIN	Phulchoki	48.08	275	eP	P	04 30 52.1	-1.0
DMN	Daman	48.30	275	eP	P	04 30 54.7	-0.1
IL1	Eielson Array	48.40	33	eP	P	04 30 55.0	+0.3
ILAR	Eielson Array	48.40	33	P	P	04 30 55.8	+1.0
	comp=Z,1.8nm,0.7s,baz=268,slow=6.5,SNR=28						
GKN	Gorkha	48.48	276	eP	P	04 30 55.5	-0.6
DANN	Dangsing	49.01	277	eP	P	04 31 00.1	-0.2
	comp=Z,62nm,0.8s						
KOLN	Koldanda	49.41	276	eP	P	04 31 02.7	-0.5
SCRK	Sand Creek	49.72	34	eP	P	04 31 06.2	+1.3
	comp=Z,1.6nm,0.6s						
PYUN	Piuthan	49.73	277	eP	P	04 31 05.1	-0.6
	comp=Z,28nm,0.8s						
BVAR	Borovoye Array	50.28	312	P	P	04 31 08.9	-0.3
	comp=Z,0.7nm,0.6s,baz=69,slow=7.9,SNR=3.9						
KSH	Kashi	50.45	294	P	P	04 31 13.3	+2.4
KSH				sP	sP	04 31 31.8	+3.7
KSH				PcP	PcP	04 32 31.3	+2.6
KSH				ePP	PP	04 33 11.2	+4.5
KSH				pmax	pmax		
	comp=Z,5.0nm,0.4s						
PSI	Prapat	52.72	239	P	P	04 31 26.6	-1.5
	comp=Z,5.2nm,0.7s,baz=0.1,slow=5.8,SNR=3.7						
PSI	Prapat	52.72	239	eP	P	04 31 26.6	-1.5
	comp=Z,5.7nm,0.7s						
ARU	Arti	55.95	318c	iP	P	04 31 50.8	-0.1
ARU				*PP	pP	04 32 01.8	-1.3
ARU						04 32 44.0	
ARU						04 33 54.1	
ARU				S	S	04 39 35.9	+0.4
ARU				SS	SS	04 43 18.7	-2.6
ARU				pmax	pmax		
	comp=Z,8.0nm,1.2s						
ABKAR	Akbulak array	57.68	310	eP	P	04 32 02.6	-0.7
FITZ	Fitzroy Crossi	57.91	198	P	P	04 32 06.0	+1.0
	comp=Z,5.5nm,0.9s,baz=36,slow=8.7,SNR=3.9						
FITZ	Fitzroy Crossi	57.91	198	eP	P	04 32 06.0	+1.0
	comp=Z,15nm,1.1s						
WRAB	Tennant Creek	58.09	189c	eP	P	04 32 06.2	-0.2
WRAB				pmax	pmax		
	comp=Z,36nm,2.5s						
WB2	Warramunga Arr	58.10	189	eP	P	04 32 06.3	-0.2
	comp=Z,14nm,0.8s						
WR1	Warramunga Arr	58.10	189	eP	P	04 32 06.2	-0.2
	comp=Z,14nm,0.8s						
WRA	Warramunga Arr	58.10	189	P	P	04 32 06.2	-0.2
	comp=Z,10nm,0.7s,baz=6.8,slow=7.4,SNR=65						
WRA				pP	pP	04 32 19.6	+0.8
	comp=Z,3.7nm,0.6s,baz=6.0,slow=7.2,SNR=5.6						
AKTO	Aktyubinsk	58.38	312	P	P	04 32 07.7	-0.5
	comp=Z,2.2nm,0.8s,baz=73,slow=13,SNR=7.3						
PRGR	Permogore	60.21	327	eP	P	04 32 19.5	-1.0
PRGR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
AS01	Alice Springs	61.82	188	eP	P	04 32 31.8	-0.2
AS31	Alice Springs	61.83	188	eP	P	04 32 32.1	+0.2
	comp=Z,1.4nm,0.8s						
ASAR	Alice Springs	61.83	188	P	P	04 32 32.1	+0.2
	comp=Z,3.0nm,0.7s,baz=9.7,slow=5.4,SNR=25						
YKA	Yellowknife Ar	62.71	31	P	P	04 32 37.8	+0.3
	comp=Z,0.4nm,0.6s,baz=300,slow=6.0,SNR=3.0						
ARA0	ARCESS Array S	63.25	339	eP	P	04 32 42.7	+1.8
ARCES	ARCESS Array B	63.25	339	P	P	04 32 42.7	+1.8
	comp=Z,1.0nm,0.7s,baz=57,slow=9.8,SNR=2.8						
FIA0	FINESS Array S	68.17	332	eP	P	04 33 12.4	-0.3
FIA0	FINESS Array S	68.17	332	eP	P	04 33 12.4	-0.3
FINES	FINESS Array B	68.17	332	P	P	04 33 12.4	-0.3
	comp=Z,1.8nm,0.7s,baz=51,slow=7.6,SNR=6.5						
JMIC	Jan Mayen	69.26	350	LR	LR	05 05 28.7	
	comp=Z,40nm,19.0s,baz=56,slow=37						
STKA	Stephens Creek	69.54	180	P	P	04 33 21.9	+0.4
	comp=Z,2.6nm,0.8s,baz=342,slow=9.7,SNR=5.1						
STKA				LR	LR	05 06 15.2	
	comp=Z,43nm,18.1s,baz=200,slow=38						
STKA	Stephens Creek	69.54	180	eP	P	04 33 21.9	+0.4
	comp=Z,1.0nm,0.9s						
STKA	Stephens Creek	69.54	180	P	P	04 33 21.9	+0.4
STKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
STKA				MLR	MLR		
	comp=Z,43nm,18.2s						
FORT	Forrest	69.67	193	eP	P	04 33 22.8	+0.5
	comp=Z,25nm,0.8s						
SUMG	Summit	69.70	0	eP	P	04 33 23.4	+0.8
	comp=Z,4.7nm,0.8s						
SUMG	Summit	69.70	0	eP	P	04 33 23.4	+0.8
SUMG				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KIV	Kislovodsk	70.63	311	eP	P	04 33 29.5	+1.1
KIV				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KBZ	Khabaz	70.63	311	P	P	04 33 27.9	-0.4
	comp=Z,4.3nm,1.1s,baz=63,slow=4.5,SNR=5.0						
HFS	Hagfors	73.39	336	P	P	04 33 44.8	+0.3
	comp=Z,1.5nm,0.8s,baz=57,slow=5.3,SNR=3.4						
HFS				pP	pP	04 33 57.4	+0.2
	comp=Z,1.6nm,0.5s,baz=59,slow=5.7,SNR=4.5						
NB2	NORSAR Subarra	73.47	337	P	P	04 33 44.8	-0.2
	comp=Z,2.2nm,0.8s,baz=41,slow=5.9						
AKASG	Malin Array Be	73.82	322	P	P	04 33 46.1	-1.0
	comp=Z,1.0nm,0.5s,baz=44,slow=5.8,SNR=6.0						
AKBB	Malin Array Si	73.82	322	eP	P	04 33 45.8	-1.4
	comp=Z,3.6nm,0.9s						
KIEV	Kiev	73.83	322	eP	P	04 33 45.5	-1.7
	comp=Z,3.4nm,0.9s						
KIEV	Kiev	73.83	322	i P	P	04 33 46.4	-0.8
KIEV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
NV01	Mina Array Sit	74.01	54	eP	P	04 33 50.1	+1.3
NVAR	Mina Array Bea	74.01	54	P	P	04 33 50.1	+1.3
	comp=Z,0.5nm,0.8s,baz=284,slow=3.6,SNR=3.4						
BW06	Boulder Array	76.63	46	eP	P	04 34 04.6	+0.8
	comp=Z,1.8nm,0.6s						
PD31	Pinedale Array	76.63	46	eP	P	04 34 02.4	-1.4
PDAR	Pinedale Array	76.63	46	P	P	04 34 04.3	+0.5
	comp=Z,0.9nm,0.6s,baz=295,slow=1.4,SNR=11						
PDAR				pP	pP	04 34 17.6	+1.1
	comp=Z,1.1nm,0.5s,baz=245,slow=1.1,SNR=9.4						
PDAR	Pinedale Array	76.63	46	eP	P	04 34 04.7	+0.9
PDAR				pP	pP	04 34 17.6	+1.1
BUR04	Bucovina Ar. S	77.84	322	eP	P	04 34 09.2	-1.1
BRTR	Keskin Array B	78.56	312	pP	pP	04 34 27.6	+0.3
	comp=Z,1.0nm,0.7s,baz=45,slow=4.8,SNR=3.4						
CLL	Collm	80.48	330	epP	pP	04 34 38.0	+0.6
GEC2	GERESS Array S	82.13	328	eP	P	04 34 33.5	0.0
	comp=Z,2.6nm,0.9s						
GEC2	GERESS Array S	82.13	328	eP	P	04 34 33.5	0.0
GEC2				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GERES	GERESS Array B	82.13	328	P	P	04 34 33.5	0.0
	comp=Z,0.3nm,0.5s,baz=45,slow=4.0,SNR=4.1						
GERES				pP	pP	04 34 46.0	-0.3
	comp=Z,0.8nm,0.8s,baz=60,slow=6.3,SNR=3.4						
ANMO	Albuquerque	83.58	50c	eP	P	04 34 43.1	+1.7
ANMO				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TX31	Lajitas Ar. Si	89.14	53	eP	P	04 35 08.9	+0.3
TXAR	Lajitas Array	89.14	53	P	P	04 35 09.6	+1.0
	comp=Z,0.4nm,0.6s,baz=301,slow=2.5,SNR=7.5						
TXAR				pP	pP	04 35 22.5	+0.9
	comp=Z,1.0nm,0.7s,baz=300,slow=3.3,SNR=8.2						
SNAA	Sanae	141.83	197	PKhKP	PKPpre	04 41 37.2	
	comp=Z,1.0nm,0.8s,baz=204,slow=10.0,SNR=5.0						
LPAZ	La Paz	145.77	59	PKPbc	PKPdf	04 41 52.5	+0.1
	comp=Z,3.2nm,0.9s,baz=334,slow=5.1,SNR=12						
LPAZ	La Paz	145.77	59	ePKPdf	PKPbc	04 41 53.1	+0.2
LPAZ	La Paz	145.77	59	ePKP2	PKPbc	04 41 53.1	+0.2

DJA 03 04:30:30.7±0.4**, 0°S**±7°×**12°5E**±°**, h10**^{km}**, M3.8**/7**, MLv3.8**/7**, Southern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	Cibinong	1.66	305	P	Pn	04 30 59.7	-0.1
SANI	Sanana	1.77	158	P	Pn	04 31 00.7	-0.8
LBMI	Labuha	2.19	96	P	Pn	04 31 06.7	-0.4
TNTI	Ternate	2.34	60	P	Pn	04 31 09.0	-0.3
LUWI	Luwuk	2.64	256	P	Pn	04 31 13.8	+0.4
MRSI	Marisa	3.50	284	P	Pn	04 31 24.2	-1.0
APSI	Ampana	3.72	262	P	Pn	04 31 28.9	+0.7

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*IDC **03** 04:32:25.6±0.9, 14°.50N×119°.04E, h0^{km}, mb3.9/6, mb1 4.0/6, mb1mx3.6/59, mbtmp3.9/6, Error ellipse: s-maj=32.0km s-min=16.2km az=54.0*

*MAN **03** 04:32:26.5, 14°.59N×118°.92E, h33^{km}, mb4.0, ML2.8, MS2.4*

*ISCJB **03** 04:32:27.8±2.8, 14°.55N±0°.04×119°.06E±0°.07, h32^{km}±22^{km}, mb3.7/8, Error ellipse: s-maj=11.2km s-min=6.7km az=17.2*

ISC 03 04:32:27.7±1.4**, 14°.52N**±0°.04×**119°.17E**±0°.06**, h19**^{km}±4^{km}**, n18,** σ**1^{s}39**/24**, mb3.6**/8**, 1C, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUBP	Lubang	1.30	127	eP	Pb	04 32 51.8	+0.3
SCZP	Santa Cruz	1.44	30	eP	Pn	04 32 52.0	-0.7
SCZP				eS	Sn	04 33 09.4	-1.6
TGY	Tagaytay City	1.76	103	Pn	Pg	04 33 00.3	-1.3
	187nm,0.3s,baz=312,slow=3.4,SNR=27						
TGY				Sn	Sg	04 33 24.1	-0.3
	124nm,0.3s,baz=144,slow=17,SNR=7.1						
BOLP	Bolinao	1.98	21	eP	Pn	04 32 53.0	-7.3
BOLP				eS	Sn	04 33 22.9	-1.7
PCPH	Palayan	2.13	61⇑	eP	Pn	04 33 03.2	+1.0
PCPH				eS	Sb	04 33 30.6	-1.0
BALP	Baler	2.62	62	eP	Pn	04 33 10.9	+1.9
BUSP	Coron	2.69	158	eP	Pn	04 33 10.1	+0.1
BUSP				eS	Sn	04 33 39.2	-2.9
SJMP	San Jose	2.79	137	eP	Pn	04 33 13.1	+1.8
SJMP				eS	Sn	04 33 43.8	-0.5
ENPP	El Nido	3.30	176	eP	Pn	04 33 18.5	+0.1
APYP	Conner	3.87	31	eP	Pg	04 33 51.1	+9.1
APYP				eS	Sn	04 34 11.7	+0.5
SONM	Songino Array	34.87	345	P	P	04 39 18.6	+0.8
	0.4nm,0.4s,baz=168,slow=9.7,SNR=3.1						
KLR	Kul'dur	36.12	14	P	P	04 39 29.1	+0.7
	0.1nm,0.5s,baz=196,slow=7.4,SNR=4.7						
WRA	Warramunga Arr	37.35	156	P	P	04 39 39.5	+0.3
	0.8nm,0.7s,baz=338,slow=9.4,SNR=5.9						
WRA				PcP	PcP	04 41 59.6	+1.3
	0.3nm,0.5s,baz=339,slow=3.1,SNR=3.4						
ASAR	Alice Springs	40.59	159	P	P	04 40 07.6	+1.3
	2.0nm,0.5s,baz=339,slow=7.0,SNR=20						
MKAR	Makanchi Array	44.50	324	P	P	04 40 35.4	-2.6
	0.8nm,0.8s,baz=126,slow=9.3,SNR=3.3						
KURBB	Kurchatov Arra	48.69	326	P	P	04 41 11.3	+0.6
	0.3nm,0.6s,baz=118,slow=8.9,SNR=4.2						
BVAR	Borovoye Array	54.27	326	P	P	04 41 53.6	+1.2
	1.5nm,0.7s,baz=102,slow=12,SNR=6.5						
HFS	Hagfors	85.05	331	P	P	04 45 01.9	0.0
	1.1nm,0.5s,baz=68,slow=3.9,SNR=7.5						

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*NIED **03** 04:52:00, 41°.50N×141°.90E, h53^{km}, Mw4.1 Best double couple: $M_0$1.54000×10^{15} NP1:ϕ_s108.00000°, δ47.00000°, λ112.00000°. NP2:ϕ_s257.00000°, δ47.00000°, λ68.00000°.*

*ISCJB **03** 04:52:48.4±0.3, 41°.47N±0°.02×141°.99E±0°.03, h60^{km}±3^{km}, mb4.0/23, Error ellipse: s-maj=5.1km s-min=2.8km az=43.7*

*MOS **03** 04:52:48.1±1.0, 41°.45N×141°.93E, h56^{km}, mb4.3/15, Error ellipse: s-maj=13.4km s-min=6.8km az=69.5*

*JMA **03** 04:52:49.0±0.1, 41°.46N×141°.94E, h55^{km}±2^{km}, M4.1 Broadband fault plane solution: P waves. NP1: ϕ_s101.00000°, δ47.00000°, λ90.00000°. NP2: ϕ_s281.00000°, δ43.00000°, λ90.00000°. Principal axes: T Plg88.0000°, Azm11.0000°; N Plg0.0000°, Azm101.0000°; P Plg2.0000°, Azm191.0000°;*

JMA Felt III J1.

*IDC **03** 04:52:50.2±0.8, 41°.41N×141°.90E, h63^{km}±6^{km}, mb3.7/20, mb1 3.9/23, mb1mx3.7/74, mbtmp4.1/23, MS2.8/8, Ms1 2.8/8, ms1mx2.6/69 Error ellipse: s-maj=14.4km s-min=12.4km az=113.0*

ISC 03 04:52:49.3±0.6**, 41°.44N**±0°.04×**141°.98E**±0°.04**, h53**^{km}±5^{km}**, n70,** σ**1^{s}48**/87**, mb4.0**/23**, 8C-15D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAHD	Aomorihigashid	0.52	250	P	Pn	04 53 00.9	0.0
JAHD				S	Sn	04 53 09.4	+0.1
JARK	Aomorirokkasho	0.64	227	P	Pn	04 53 01.9	-0.5
JARK				S	Sn	04 53 11.3	-0.5
JOT	Ohata	0.71	266	⇑P	Pn	04 53 02.5	-0.8
JOT				S	Sn	04 53 12.9	-0.5
JKB	Kayabe	0.84	302	⇓P	Pn	04 53 04.1	-0.9
JKB				S	Sn	04 53 15.3	-1.2
JTM	Tenmabayashi	0.95	227	⇓P	Pn	04 53 06.5	0.0

JTM				S	Sn	04 53 19.0	-0.1
JNBK	Urakawa-nobuka	1.02	34	⇓P	Pn	04 53 06.6	-0.7
JNBK				eS	Sn	04 53 21.3	+0.7
JEM	Erimo	1.05	56	P	Pn	04 53 07.7	-0.1
JEM				S	Sn	04 53 21.4	0.0
JANG	Nango	1.12	199	⇓P	Pn	04 53 08.6	-0.2
JANG				S	Sn	04 53 23.2	0.0
JSR	Shiriuchi	1.18	275	⇑P	Pn	04 53 09.3	-0.2
JSR				S	Sn	04 53 24.9	+0.4
JNB	Noboribetsu	1.25	326	⇓P	Pn	04 53 09.2	-1.2
JNB				S	Sn	04 53 24.4	-1.7
JBT2	Biratori 2	1.37	12	⇓P	Pn	04 53 12.0	-0.1
JYM2	Yakumo 2	1.38	300	⇓P	Pn	04 53 12.1	-0.2
JYM2				S	Sn	04 53 29.9	+0.4
JEW	Eniwo	1.45	344	⇓P	Pn	04 53 12.7	-0.5
JEW				S	Sn	04 53 30.3	-0.9
JCH	Churui	1.56	41	⇓P	Pn	04 53 15.3	+0.6
JCH				eS	Sn	04 53 35.2	+1.5
JAH	Hinai	1.62	220	⇓P	Pn	04 53 15.9	+0.5
JAH				S	Sn	04 53 36.6	+1.5
JIW	Iwasaki	1.72	241	⇓P	Pn	04 53 16.8	-0.1
JFR	Furan	1.78	15	⇓P	Pn	04 53 17.3	-0.4
JFR				eS	Sn	04 53 38.7	-0.5
ASAJ	Asahikawa	2.71	9	P	Pn	04 53 30.9	+0.5
	59nm,0.3s,baz=227,slow=12,SNR=96						
ASAJ				S	Sn	04 54 02.6	+0.6
	21nm,0.3s,baz=255,slow=20,SNR=4.3						
ASAJ				LR	LR	04 55 02.2	
	comp=Z,272nm,21.8s,baz=186,slow=48						
GLVR	Golovnino	3.48	47	⇑iP	Pn	04 53 41.4	+0.5
GLVR				eS	Sn	04 54 19.9	-0.8
GLVR				pmax	pmax		
	comp=Z,116nm,0.3s						
GLVR				pmax	pmax		
	comp=E,236nm,0.5s						
GLVR				pmax	pmax		
	comp=N,134nm,0.7s						
GLVR				smax	smax		
	comp=N,1µm,0.3s						
GLVR				smax	smax		
	comp=E,1µm,0.3s						
GRPR	Tuman	3.78	46	⇑iP	Pn	04 53 45.7	+0.7
GRPR				i S	Sn	04 54 27.4	-0.8
GRPR				pmax	pmax		
	comp=N,92nm,0.3s						
GRPR				pmax	pmax		
	comp=E,219nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,160nm,0.3s						
GRPR				smax	smax		
	comp=N,1µm,0.3s						
GRPR				smax	smax		
	comp=E,512nm,0.3s						
LAGR	Lagunnoye	3.83	46	⇑iP	Pn	04 53 46.8	+1.1
LAGR				i S	Sn	04 54 29.4	0.0
LAGR				pmax	pmax		
	comp=Z,490nm,0.5s						
LAGR				pmax	pmax		
	comp=N,392nm,0.6s						
LAGR				pmax	pmax		
	comp=E,552nm,0.5s						
LAGR				smax	smax		
	comp=N,829nm,0.6s						
LAGR				smax	smax		
	comp=E,574nm,0.6s						
YUK	Yuzh-Kuril'sk	3.86	46	⇓iP	Pn	04 53 46.6	+0.5
YUK				i S	Sn	04 54 28.9	-1.2
YUK				pmax	pmax		
	comp=Z,136nm,0.5s						
YUK				pmax	pmax		
	comp=N,252nm,0.4s						
YUK				pmax	pmax		
	comp=E,162nm,0.4s						
YUK				smax	smax		
	comp=E,981nm,0.5s						
YUK				smax	smax		
	comp=N,642nm,0.3s						
SHO	Shikotan	4.32	54	c iP	Pn	04 53 52.1	-0.3
SHO				i S	Sn	04 54 38.8	-2.7
SHO				pmax	pmax		
	comp=Z,50nm,0.3s						
SHO				pmax	pmax		
	comp=E,38nm,0.4s						
SHO				pmax	pmax		
	comp=N,18nm,0.2s						
SHO				smax	smax		
	comp=E,180nm,0.2s						
SHO				smax	smax		
	comp=N,575nm,0.4s						
YSS	Yuzh-Sakhalins	5.54	5	⇑eP	Pn	04 54 13.2	+4.1
YSS				pmax	pmax		
	comp=Z,30nm,0.7s						
YSS				MLR	MLR		
	comp=Z,100nm,14.0s						
MAJO	Matsushiro	5.71	212	c iP	Pn	04 54 13.8	+2.3
MAT	Matsushiro	5.71	212	P	Pn	04 54 14.1	+2.6
MAT				S	Sn	04 55 18.3	+2.6
MJAR	Matsushiro Arr	5.71	212	P	Pn	04 54 13.4	+1.8
	comp=Z,5.7nm,0.3s,baz=34,slow=12,SNR=48						
MJAR				LR	LR	04 56 46.5	
	comp=Z,125nm,19.0s,baz=0.0,slow=42						
KUR	Kuril'sk	5.72	47	eP	Pn	04 54 13.5	+1.8
KUR				eS	Sn	04 55 16.2	+0.2
KUR				pmax	pmax		
	comp=Z,49nm,0.5s						
KUR				pmax	pmax		
	comp=E,23nm,0.4s						
KUR				smax	smax		
	comp=N,99nm,0.3s						
KUR				smax	smax		
	comp=E,44nm,0.4s						
USRK	Ussuriysk Ar.	7.85	294	P	Pn	04 54 43.7	+2.9
	baz=92,slow=14						
USRK				LR	LR	04 57 40.5	
	comp=E,69nm,21.6s,baz=50,slow=37						
JHJ	Hachijo jima 2	8.49	193	P	Pn	04 54 49.1	-0.6
	comp=E,14nm,0.3s,baz=77,slow=18,SNR=3.8						
JHJ				S	Sn	04 56 19.0	-5.0
	comp=E,4.5nm,0.3s,baz=90,slow=20,SNR=2.3						
KLR	Kul'dur	10.60	321	P	Pn	04 55 20.1	+1.7
	comp=E,0.0nm,0.3s,baz=122,slow=15,SNR=5.5						
KLR				LR	LR	04 59 18.2	
	comp=E,7.5nm,19.7s,baz=154,slow=37						
KLR	Kul'dur	10.60	321	⇓eP	Pn	04 55 19.0	+0.6
KSRS	Korea Array	11.58	254	P	Pn	04 55 36.8	+5.0
	comp=E,0.5nm,0.3s,baz=66,slow=14,SNR=10						
KSRS				S	Sn	04 57 45.8	+6.3
	comp=E,0.7nm,0.3s,baz=68,slow=24,SNR=10						
KSRS				LR	LR	04 59 27.0	
	comp=E,62nm,18.6s,baz=27,slow=34						
JNU	Nakatsue	12.12	230	LR	LR	05 00 06.5	
	comp=E,59nm,18.6s,baz=120,slow=36						
PETK	Petropavlovsk-	15.77	37	P	Pn	04 56 26.7	-1.1
	baz=199,slow=8.5						
ZEA	Zeya	15.77	326	eP	P	04 56 33.0	+2.2
ZEA				pmax	pmax		
	comp=Z,12nm,1.0s						
JOW	Kunigami	18.43	222	LR	LR	05 04 23.2	
	comp=Z,43nm,21.7s,baz=134,slow=38						
SEY	Seymchan	22.39	13	P	P	04 57 41.0	-1.9
	comp=Z,3.3nm,0.2s,baz=182,slow=22,SNR=6.6						
SEY	Seymchan	22.39	13	⇓eP	P	04 57 53.0	+10
SONM	Songino Array	25.95	296	P	P	04 58 17.1	+0.3
	comp=Z,0.6nm,0.5s,baz=73,slow=9.1,SNR=4.4						
GUMO	Guam	27.86	174	LR	LR	05 09 23.9	
	comp=Z,23nm,21.8s,baz=76,slow=36						
H11N2	WAKE ISLAND Hy	30.27	128	T	T	05 30 49.1	
	baz=321,slow=75,SNR=196						
H11N1	WAKE ISLAND Hy	30.29	128	T	T	05 30 59.8	
	baz=321,slow=75,SNR=116						
H11N3	WAKE ISLAND Hy	30.29	128	T	T	05 30 42.0	
	baz=321,slow=75,SNR=77						
H11S1	WAKE ISLAND Hy	31.12	130	T	T	05 32 21.2	
	baz=322,slow=76,SNR=100						
H11S3	WAKE ISLAND Hy	31.12	130	T	T	05 32 21.5	
	baz=322,slow=76,SNR=85						
H11S2	WAKE ISLAND Hy	31.13	130	T	T	05 32 23.6	
	baz=322,slow=76,SNR=63						
ZALV	Zalesovo Beam	39.40	309	P	P	05 00 13.2	-0.4
	comp=Z,1.3nm,0.5s,baz=101,slow=6.8,SNR=4.0						
MKAR	Makanchi Array	42.29	298	P	P	05 00 37.0	-0.6
	comp=Z,0.5nm,0.4s,baz=73,slow=9.6,SNR=4.1						
KURK	Kurchatov	43.68	305	P	P	05 00 48.6	-0.1
KURK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KURBB	Kurchatov Arra	43.75	305	P	P	05 00 48.6	-0.7
	comp=Z,1.5nm,0.5s,baz=78,slow=9.1,SNR=10						
ILAR	Eielson Array	45.58	35	P	P	05 01 04.2	+0.5
	comp=Z,1.3nm,0.6s,baz=275,slow=6.5,SNR=16						
BVAR	Borovoye Array	48.02	310	P	P	05 01 22.8	-0.2
	comp=Z,1.0nm,0.4s,baz=79,slow=7.5,SNR=6.3						
INK	Inuvik	50.29	29	P	P	05 01 40.6	+0.6
	comp=Z,3.6nm,0.5s,baz=290,slow=5.4,SNR=27						
RES	Resolute Bay	58.23	15	P	P	05 02 37.1	-0.5
	comp=Z,1.3nm,0.6s,baz=305,slow=4.4,SNR=5.6						
YKA	Yellowknife Ar	59.80	32	P	P	05 02 48.8	+0.2
	comp=Z,0.4nm,0.5s,baz=306,slow=6.6,SNR=7.1						
WRA	Warramunga Arr	61.48	188	P	P	05 02 59.5	-1.0
	comp=Z,0.9nm,0.6s,baz=6.7,slow=7.1,SNR=11						
FINES	FINESS Array B	65.14	332	P	P	05 03 23.1	-1.1
	comp=Z,1.6nm,0.6s,baz=57,slow=7.7,SNR=8.0						
ASAR	Alice Springs	65.21	188	P	P	05 03 24.9	-0.2
	comp=Z,0.3nm,0.4s,baz=19,slow=8.9,SNR=3.3						
HFS	Hagfors	70.27	335	P	P	05 03 55.9	-0.7
	comp=Z,0.7nm,0.3s,baz=54,slow=7.7,SNR=6.7						
NB2	NORSAR Subarra	70.30	337	P	P	05 03 55.9	-1.0
	comp=Z,0.6nm,0.8s,baz=37,slow=6.2						
AKASG	Malin Array Be	71.10	322	P	P	05 04 01.1	-0.7
	comp=Z,0.9nm,0.3s,baz=42,slow=6.5,SNR=5.7						
NVAR	Mina Array Bea	72.03	54	P	P	05 04 08.9	+1.0
	comp=Z,1.5nm,0.8s,baz=296,slow=6.4,SNR=10.0						
FRB	Frobisher Bay	72.39	14	P	P	05 04 09.0	-0.3
	comp=Z,2.1nm,0.6s,baz=356,slow=15,SNR=4.0						
FRB				pP	PcP	05 04 25.6	-1.4
	comp=Z,3.9nm,0.6s,baz=330,slow=5.0,SNR=3.7						
PDAR	Pinedale Array	74.29	47	P	P	05 04 21.4	+0.2
	comp=Z,1.5nm,0.7s,baz=263,slow=2.8,SNR=19						
PDAR				pP	pP	05 04 38.2	+2.2
	comp=Z,1.0nm,0.8s,baz=318,slow=2.0,SNR=5.5						
BRTR	Keskin Array B	76.28	311	P	P	05 04 32.6	+0.1
	comp=Z,0.7nm,0.6s,baz=46,slow=4.2,SNR=3.0						
ANMO	Albuquerque	81.43	51	P	P	05 05 01.5	+0.6
	comp=Z,1.1nm,1.0s,baz=293,slow=7.7,SNR=3.5						
TXAR	Lajitas Array	87.09	53	P	P	05 05 29.6	0.0
	comp=Z,0.5nm,0.7s,baz=298,slow=4.5,SNR=8.3						
TXAR				pP	sP	05 05 48.3	-2.4
	comp=Z,0.4nm,0.8s,baz=291,slow=3.9,SNR=3.7						
SNAA	Sanae	145.07	199	PKPbc	PKPab	05 12 18.5	-0.7
	comp=Z,2.0nm,0.6s,baz=127,slow=5.1,SNR=12						
PMSA	Palmer Station	152.28	156	PKPbc	PKPbc	05 12 35.5	-2.5
	comp=Z,27nm,0.6s,baz=333,slow=2.3,SNR=6.9						

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*PDG **03** 05:03:38.4±0.3, 33°.86N×15°.48E, h5^{km}±1^{km}, ML5.0/11, Error ellipse: s-maj=10.8km s-min=3.9km az=90.0*

*BJI **03** 05:03:38.8, 34°.13N×14°.14E, h10^{km}, mb4.7/23, mB4.9/12, Ms4.7/3, Ms7 4.4/2*

*IDC **03** 05:03:40.8±0.5, 33°.98N×14°.72E, h0^{km}, mb4.2/23, mb1 4.3/36, mb1mx4.2/70, mbtmp4.2/36, ML4.1/12, MS3.7/30, Ms1 3.7/30, ms1mx3.5/69, Error ellipse: s-maj=13.9km s-min=11.4km az=141.0*

*TUN **03** 05:03:40.8, 34°.09N×14°.05E, h2^{km}, MD5.5*

*GCMT **03** 05:03:40.7±0.5, 33°.91N×14°.71E, h14^{km}±3^{km}, MW4.8/60, Moment Tensor Solution. s16,c18; s60,c91; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.29±.12; $M_{\theta\theta}$1.50±.11; $M_{\phi\phi}$-1.79±.14; $M_{r\theta}$0.10±.24; $M_{\theta\phi}$-0.30±.09; $M_{\phi r}$0.39±.28; Best double couple: $M_0$1.71000×10^{16} NP1:ϕ_s230.00000°,δ85.00000°,λ-170.00000°. NP2: ϕ_s140.00000°,δ80.00000°,λ-5.00000°. Principal axes: T 1.5310, Plg3.0000°, Azm5.0000°; N 0.3540, Plg79.0000°, Azm257.0000°; P -1.8900, Plg10.0000°, Azm95.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*ISCJB **03** 05:03:40.6±0.2, 34°.14N±0°.02×14°.69E±0°.02, h10^{km}, mb4.4/61, MS3.7/25 Error ellipse: s-maj=3.4km s-min=1.9km az=167.1*

*NEIC **03** 05:03:40.6±1.5, 34°.00N×14°.67E, h1^{km}±9^{km}, mb4.5/30, Error ellipse: s-maj=4.9km s-min=3.0km az=176.0*

NEIC Felt at Valletta, Malta.

*CSEM **03** 05:03:42.2±0.1, 34°.10N×14°.68E, h10^{km}, mb4.5/36, Error ellipse: s-maj=4.4km s-min=2.5km az=161.0*

*CRAAG **03** 05:03:43.9, 34°.06N×14°.71E, Mb4.7*

*MOS **03** 05:03:45.8±1.2, 34°.29N×14°.78E, h32^{km}, mb4.5/34, Error ellipse: s-maj=8.0km s-min=3.3km az=68.5*

ISC 03 05:03:42.4±0.4, **34°.05N**±0°.05×**14°.68E**±0°.03, **h10^{km}, n611, σ1^{s}76**/648, **mb4.5**/65, **MS3.6**/26, **29C-34D, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAE	Valguarnera	3.43	357	Pn	Pn	05 04 37.0	+1.1
	125nm,0.3s,baz=148,slow=15,SNR=48						
VAE				Sn	Sn	05 05 19.0	+2.2
	140nm,0.3s,baz=106,slow=19,SNR=5.1						
VAE				LR	LR	05 06 23.5	
	comp=Z,2µm,18.2s,baz=329,slow=47						
CLTB	Caltabellotta	3.72	342	ePn	Pn	05 04 39.5	-0.4
CLTB				eSn	Sn	05 05 23.7	-0.2
CLTB	Caltabellotta	3.72	342	ePn	Pn	05 04 39.5	-0.4
CLTB				eSn	Sn	05 05 23.7	-0.2
TATN	Tataouine	3.77	248	i P	Pn	05 04 38.6	-1.9
BTHT	Jabal bu Thady	3.78	288	i P	Pn	05 04 39.6	-1.1
MBZ	Menzel Bouzelf	4.20	310	i P	Pn	05 04 45.8	-0.6
MBZ	Menzel Bouzelf	4.20	310	i P	Pn	05 04 45.8	-0.6
CEL	Celeste	4.32	13	ePn	Pn	05 04 48.3	+0.1
CEL				eSn	Sn	05 05 37.6	-1.0
CEL	Celeste	4.32	13	ePn	Pn	05 04 48.3	+0.1
CEL				eSn	Sn	05 05 37.6	-1.0
ZGN	Zaghouan	4.41	303	i P	Pn	05 04 48.4	-0.9
ZGN	Zaghouan	4.41	303	i P	Pn	05 04 48.4	-0.9
TROT	Trozza	4.44	291	i P	Pn	05 04 46.0	-3.9
KEST	Kesra	4.69	293	Pn	Pn	05 04 52.8	-0.5
	62nm,0.3s,baz=76,slow=7.5,SNR=518						
KEST				Sn	Sn	05 05 46.1	-1.7
	36nm,0.3s,baz=68,slow=19,SNR=11						
KEST				LR	LR	05 07 20.7	
	comp=Z,772nm,20.5s,baz=115,slow=46						
KEST	Kesra	4.69	293	ePn	Pn	05 04 52.8	-0.5
KEST				eSn	Sn	05 05 44.8	-3.0
KEST	Kesra	4.69	293	ePn	Pn	05 04 52.8	-0.5
KEST				eSn	Sn	05 05 44.8	-3.0
BERT	Berda	4.70	274	i P	Pn	05 04 51.5	-1.9
SYA	Sidi Yaiche	4.90	280	i P	Pn	05 04 54.2	-1.9
KCHT	Kechabta	4.92	310	i P	Pn	05 04 56.4	0.0
KRIT	Krib	5.12	298	i P	Pn	05 04 58.8	-0.4
THTN	Thala	5.15	289	ePn	Pn	05 04 59.6	0.0
THTN				eSn	Sn	05 05 51.2	-8.1
THTN	Thala	5.15	289	i P	Pn	05 04 59.6	0.0
THTN				eSn	Sn	05 05 51.2	-8.1
OAR	Oum El Arais	5.22	277	i P	Pn	05 04 59.9	-0.6
TIP	Timpagrande	5.39	18	ePn	Pn	05 05 02.6	-0.3
TIP	Timpagrande	5.39	18	P	Pn	05 05 02.7	-0.3
TIP	Timpagrande	5.39	18	ePn	Pn	05 05 02.6	-0.3
TAMR	Tamra	5.44	305	ePn	Pn	05 05 03.5	0.0
TAMR				eSn	Sn	05 06 01.7	-4.4
TAMR	Tamra	5.44	305	i P	Pn	05 05 03.5	0.0
TAMR				eSn	Sn	05 06 01.7	-4.4
GHAT	Ghardimaou	5.76	297	i P	Pn	05 05 06.3	-1.6
CUC	Castrocucco	6.01	8	ePn	Pn	05 05 11.3	0.0
CUC	Castrocucco	6.01	8	ePn	Pn	05 05 11.3	0.0
ABSA	Djebel Ababsia	6.30	293	P	Pn	05 05 15.1	-0.3
ABSA	Djebel Ababsia	6.30	293	P	Pn	05 05 15.1	-0.3
VLS	Valsamata	6.32	48	P	Pn	05 05 13.7	-1.9
VLS	Valsamata	6.32	48	P	Pn	05 05 13.7	-1.9
VLS	Valsamata	6.32	48	P	Pn	05 05 13.7	-1.9
VLS	Valsamata	6.32	48	P	Pn	05 05 13.7	-1.9
KFL	Anninata	6.40	49	P	Pn	05 05 15.9	-0.8
KFL	Anninata	6.40	49	P	Pn	05 05 15.9	-0.8
PYL	PYLOS	6.43	62	P	Pn	05 05 14.3	-2.8
PYL	PYLOS	6.43	62	P	Pn	05 05 14.3	-2.8
PYL	PYLOS	6.43	62	P	Pn	05 05 14.3	-2.8
CMAH	Djebel Manchou	6.46	296	P	Pn	05 05 16.8	-0.8
CMAH	Djebel Manchou	6.46	296	P	Pn	05 05 16.8	-0.8
FSK	Fiskardo	6.48	46	P	Pn	05 05 16.0	-1.8
ITM	Ithomi	6.68	60	P	Pn	05 05 18.5	-2.1
ITM				S	Pg	05 05 50.5	+0.2
ITM	Ithomi	6.68	60	ePn	Pn	05 05 20.4	-0.2
ITM	Ithomi	6.68	60	ePn	Pn	05 05 20.4	-0.2
LKD2	Lefkada island	6.76	44	P	Pn	05 05 20.3	-1.3
LKD2	Lefkada island	6.76	44	P	Pn	05 05 20.3	-1.3
LKD2	Lefkada island	6.76	44	P	Pn	05 05 20.3	-1.3
MATE	Matera	6.79	13	⇓iP	Pn	05 05 21.6	-0.4
MATE	Matera	6.79	13	⇓iP	Pn	05 05 21.6	-0.4
TAR1	Taranto	6.79	17	ePn	Pn	05 05 21.8	-0.3
TAR1	Taranto	6.79	17	ePn	Pn	05 05 21.8	-0.3
MASS	Massafra	6.86	16	ePn	Pn	05 05 22.2	-0.9
MASS	Massafra	6.86	16	ePn	Pn	05 05 22.2	-0.9
CAEH	'Ain El Ouahch	6.95	295	P	Pn	05 05 23.4	-0.8
CAEH	'Ain El Ouahch	6.95	295	P	Pn	05 05 23.4	-0.8
CGL1	Ceglie Messapi	6.96	18	ePn	Pn	05 05 24.6	+0.2
CGL1	Ceglie Messapi	6.96	18	ePn	Pn	05 05 24.6	+0.2
SG1	Sgolgore (BA)	6.97	13	ePn	Pn	05 05 23.4	-1.1
SG1	Sgolgore (BA)	6.97	13	ePn	Pn	05 05 23.4	-1.1
KEK	Kerkira	6.99	34	P	Pn	05 05 22.9	-1.9
KEK	Kerkira	6.99	34	P	Pn	05 05 22.9	-1.9
KEK	Kerkira	6.99	34	P	Pn	05 05 22.9	-1.9
CASM	Ain Smara	7.06	291	P	Pn	05 05 25.2	-0.6
CASM	Ain Smara	7.06	291	P	Pn	05 05 25.2	-0.6
CTEI	Djebel Teioual	7.07	289	P	Pn	05 05 25.6	-0.5
CTEI	Djebel Teioual	7.07	289	P	Pn	05 05 25.6	-0.5
FASA	Fasano	7.09	17	ePn	Pn	05 05 25.7	-0.4
FASA	Fasano	7.09	17	ePn	Pn	05 05 25.7	-0.4
IGT	Igoumenitsa	7.11	38	P	Pn	05 05 25.8	-0.7
IGT	Igoumenitsa	7.11	38	P	Pn	05 05 25.8	-0.7
SGD	Sagiada	7.12	37	P	Pn	05 05 25.1	-1.5
SGD	Sagiada	7.12	37	P	Pn	05 05 25.1	-1.5
PVO	Paravola	7.17	49	P	Pn	05 05 26.6	-0.6
PVO	Paravola	7.17	49	P	Pn	05 05 26.6	-0.6
LAKA	Lakka	7.24	53	P	Pn	05 05 27.4	-0.9
LAKA	Lakka	7.24	53	P	Pn	05 05 27.4	-0.9
LAKA	Lakka	7.24	53	P	Pn	05 05 27.4	-0.9
DSL	Palaion Diasel	7.24	44	P	Pn	05 05 27.4	-0.9
DSL	Palaion Diasel	7.24	44	P	Pn	05 05 27.4	-0.9
KLV	Kalavryta, Ach	7.25	54	P	Pn	05 05 27.6	-0.8
KLV	Kalavryta, Ach	7.25	54	P	Pn	05 05 27.6	-0.8
KLV	Kalavryta, Ach	7.25	54	P	Pn	05 05 27.6	-0.8
BAI	Bari	7.26	13	ePn	Pn	05 05 28.2	-0.3
BAI	Bari	7.26	13	ePn	Pn	05 05 28.2	-0.3
EFP	Efpalio	7.30	51	P	Pn	05 05 29.3	+0.3
EFP	Efpalio	7.30	51	P	Pn	05 05 29.3	+0.3
GUR	Goura	7.33	56	P	Pn	05 05 30.4	+0.9
GUR	Goura	7.33	56	P	Pn	05 05 30.4	+0.9
GUR	Goura	7.33	56	P	Pn	05 05 30.4	+0.9
TRIZ	Trizonia	7.37	52	P	Pn	05 05 31.0	+1.0
TRIZ	Trizonia	7.37	52	P	Pn	05 05 31.0	+1.0
SERG	Sergoula	7.39	52	P	Pn	05 05 30.0	-0.3
SERG	Sergoula	7.39	52	P	Pn	05 05 30.0	-0.3
ANX	Ano Chora	7.40	50	P	Pn	05 05 30.2	-0.3
ANX	Ano Chora	7.40	50	P	Pn	05 05 30.2	-0.3
EVR	Evrytania	7.53	48	P	Pn	05 05 32.9	+0.7
EVR	Evrytania	7.53	48	P	Pn	05 05 32.9	+0.7
DFRA	Djebel Bou Aff	7.61	292	P	Pn	05 05 33.1	-0.4
DFRA	Djebel Bou Aff	7.61	292	P	Pn	05 05 33.1	-0.4
MS1	Monte Sant'Ang	7.71	7	ePn	Pn	05 05 37.9	+3.1
GVDS	Gavdos	7.82	82	P	Pn	05 05 33.5	-2.7
GVDS	Gavdos	7.82	82	P	Pn	05 05 33.5	-2.7
SET	Setif	7.90	288	P	Pn	05 05 38.0	+0.7
SET	Setif	7.90	288	P	Pn	05 05 38.0	+0.7
AGG	Agios Georgios	7.91	49	P	Pn	05 05 37.3	-0.2
AGG	Agios Georgios	7.91	49	ePn	Pn	05 05 37.2	-0.2
AGG	Agios Georgios	7.91	49	P	Pn	05 05 37.1	-0.4
AGG	Agios Georgios	7.91	49	eP	Pn	05 05 37.3	-0.2
AGG	Agios Georgios	7.91	49	P	Pn	05 05 37.1	-0.4
KPRO	Kipourio	7.96	40	P	Pn	05 05 38.6	+0.4
KPRO	Kipourio	7.96	40	P	Pn	05 05 38.6	+0.4
PENT	Pentalofos	8.02	38	P	Pn	05 05 38.7	-0.3
PENT	Pentalofos	8.02	38	P	Pn	05 05 38.7	-0.3
THL	Klokotos Trika	8.06	45	P	Pn	05 05 38.5	-1.0
THL	Klokotos Trika	8.06	45	P	Pn	05 05 38.5	-1.0
KBN	Korca	8.17	35	P	Pn	05 05 41.5	+0.4
KBN	Korca	8.17	35	P	Pn	05 05 41.5	+0.4
AQU	L'Aquila	8.36	353	ePn	Pn	05 05 43.0	-0.6
AQU	L'Aquila	8.36	353	eP	Pn	05 05 43.0	-0.6
AQU	L'Aquila	8.36	353	eP	Pn	05 05 43.0	-0.6
IDI	Anoyia	8.51	79	Pn	Pn	05 05 43.3	-2.4
	3.0nm,0.3s,baz=303,slow=8.6,SNR=12						
IDI				Sn	Sn	05 07 17.6	-4.2
	1.9nm,0.3s,baz=308,slow=19,SNR=2.3						
IDI	Anoyia	8.51	79	P	Pn	05 05 50.4	+4.7
IDI	Anoyia	8.51	79	ePn	Pn	05 05 44.5	-1.2
IDI				eSn	Sn	05 07 17.6	-4.2
IDI	Anoyia	8.51	79	ePn	Pn	05 05 44.5	-1.2
IDI				eSn	Sn	05 07 17.6	-4.2
OHR	Ohrid	8.56	33	i Pn	Pn	05 05 46.2	-0.3
FNA	Florina	8.58	36	P	Pn	05 05 51.9	+5.2
FNA	Florina	8.58	36	ePn	Pn	05 05 46.5	-0.2
FNA				eSn	Sn	05 07 17.5	-6.0
FNA	Florina	8.58	36	eP	Pn	05 05 46.5	-0.2
FNA				e		05 07 17.5	
FNA	Florina	8.58	36	eP	Pn	05 05 46.5	-0.2
FNA				eSn	Sn	05 07 17.5	-6.0
NEO	Neokhori	8.64	50	P	Pn	05 05 49.5	+2.0
NEO	Neokhori	8.64	50	P	Pn	05 05 49.5	+2.0
ULC	Ulcinj	8.69	23	ePn	Pn	05 05 45.8	-2.3
ULC				eSn	Sn	05 07 23.0	-3.1
ULC	Ulcinj	8.69	23	ePn	Pn	05 05 45.8	-2.3
ULC				eSn	Sn	05 07 23.0	-3.1
LIT	Litokhoron	8.69	44	ePn	Pn	05 05 48.2	+0.1
LIT	Litokhoron	8.69	44	P	Pn	05 05 48.7	+0.6
LIT	Litokhoron	8.69	44	eP	Pn	05 05 48.2	+0.1
LIT	Litokhoron	8.69	44	eP	Pn	05 05 48.2	+0.1
BIA	Bitola	8.74	35	ePn	Pn	05 05 47.5	-1.3
DRME	Dracevica, Mon	8.87	22	⇑iPn	Pn	05 05 48.1	-2.5
DRME				eSn	Sn	05 07 26.6	-3.9
DRME	Dracevica, Mon	8.87	22	ePn	Pn	05 05 47.6	-3.0
PHP	Peshkopia	8.88	29	P	Pn	05 05 48.8	-2.0
PHP	Peshkopia	8.88	29	P	Pn	05 05 48.8	-2.0
PHP	Peshkopia	8.88	29	P	Pn	05 05 48.8	-2.0
PHP	Peshkopia	8.88	29	P	Pn	05 05 48.8	-2.0
BUM	Brajici-Budva	8.88	21	⇓iPn	Pn	05 05 49.1	-1.7
BUM				eSn	Sn	05 07 28.0	-3.0
BUM	Brajici-Budva	8.88	21	⇓iPn	Pn	05 05 49.1	-1.7
BUM				eSn	Sn	05 07 28.0	-3.0
HCY	Herceg Novi	8.91	19	⇑iPn	Pn	05 05 51.2	+0.1
HCY				eSn	Sn	05 07 28.4	-3.1
HCY	Herceg Novi	8.91	19	⇑iPn	Pn	05 05 51.2	+0.1
HCY				eSn	Sn	05 07 28.4	-3.1
KRUS	Krusevo	8.97	34	i Pn	Pn	05 05 50.5	-1.6
AOS	Alonnisos	8.99	53	P	Pn	05 05 51.3	-1.0
PDG	Podgorica	9.11	22	⇑iPn	Pn	05 05 52.8	-1.1
TTG	Podgorica	9.11	22	⇑iPn	Pn	05 05 52.8	-1.1
TTG				eSn	Sn	05 07 32.8	-3.7
TTG	Podgorica	9.11	22	ePn	Pn	05 05 51.9	-2.0
TTG	Podgorica	9.11	22	eP	Pn	05 05 51.9	-2.0
TTG	Podgorica	9.11	22	eP	Pn	05 05 51.9	-2.0
CEME	Cevo	9.12	20	⇓iPn	Pn	05 05 52.4	-1.6
CEME				eSn	Sn	05 07 33.4	-3.3
CEME	Cevo	9.12	20	⇓iPn	Pn	05 05 52.4	-1.6
CEME				eSn	Sn	05 07 33.4	-3.3
TREB	Trebinje	9.12	17	ePn	Pn	05 05 52.0	-2.1
STON	Ston	9.13	14	ePn	Pn	05 05 53.3	-0.8
STON				Sn	Sn	05 07 31.2	-5.6
STON	Ston	9.13	14	ePn	Pn	05 05 53.1	-0.9
GRG	Griva	9.23	39	eP	Pn	05 05 58.8	+3.2
NKME	Niksic	9.33	20	⇑iPn	Pn	05 05 55.3	-1.6
NKME				eSn	Sn	05 07 38.9	-3.1
NKME	Niksic	9.33	20	⇑iPn	Pn	05 05 55.3	-1.6
NKME				eSn	Sn	05 07 38.9	-3.1
APE	Apeiranthos	9.35	68	eP	Pn	05 05 57.9	+0.8
APE	Apeiranthos	9.35	68	i P	Pn	05 05 59.4	+2.2
BRY	Bratogost	9.35	18	⇓iPn	Pn	05 05 56.2	-1.0
BRY				eSn	Sn	05 07 39.7	-2.8
BRY	Bratogost	9.35	18	⇓iPn	Pn	05 05 56.2	-1.0
BRY				eSn	Sn	05 07 39.7	-2.8
NKY	Niksic	9.38	20	⇓iPn	Pn	05 05 56.9	-0.8
NKY				eSn	Sn	05 07 40.0	-3.4
NKY	Niksic	9.38	20	⇓iPn	Pn	05 05 56.9	-0.8
NKY				eSn	Sn	05 07 40.0	-3.4
PLG	Polygyros	9.42	45	P	Pn	05 05 56.5	-1.7
PLG	Polygyros	9.42	45	P	Pn	05 05 56.5	-1.7
PVY	Plav	9.49	24	⇓iPn	Pn	05 05 57.5	-1.7
PVY				eSn	Sn	05 07 41.3	-4.7
PVY	Plav	9.49	24	⇓iPn	Pn	05 05 57.5	-1.7
SKO	Skopje	9.54	32	i Pn	Pn	05 05 58.2	-1.6
KOME	Kolasin	9.57	22	ePn	Pn	05 05 58.9	-1.4
KOME				eSn	Sn	05 07 44.1	-3.9
KOME	Kolasin	9.57	22	ePn	Pn	05 05 58.9	-1.4
VAY	Valandovo	9.58	38	i Pn	Pn	05 05 59.2	-1.1
STIP	Stip	9.67	36	ePn	Pn	05 06 01.1	-0.5
BEY	Berane	9.71	23	ePn	Pn	05 06 00.8	-1.4
IVA	Berane	9.71	23	ePn	Pn	05 06 00.8	-1.4
IVA				eSn	Sn	05 07 47.4	-4.0
OUR	Ouranopolis	9.72	47	P	Pn	05 05 59.8	-2.4
OUR	Ouranopolis	9.72	47	P	Pn	05 05 59.8	-2.4

UPM	Unac-Piva	9.72	19	*e*Pn	Pn	05 06 01.6	-0.8
UPM				*e*Sn	Sn	05 07 49.2	-2.6
UPM	Unac-Piva	9.72	19	*e*Pn	Pn	05 06 01.6	-0.8
UPM				*e*Sn	Sn	05 07 49.2	-2.6
EMHD	Djebel Mahouad	9.84	286	P	Pn	05 06 13.8	+10
PLE	Pljevlja	9.97	20	⇑*i*Pn	Pn	05 06 04.8	-1.0
PLE				*e*Sn	Sn	05 07 54.4	-3.4
PLE	Pljevlja	9.97	20	⇑*i*Pn	Pn	05 06 04.8	-1.0
PLE				*e*Sn	Sn	05 07 54.4	-3.4
SRS	Serrai	9.99	42	*e*Pn	Pn	05 06 04.9	-1.1
SRS	Serrai	9.99	42	P	Pn	05 06 04.9	-1.1
SRS	Serrai	9.99	42	*e*P	Pn	05 06 04.9	-1.1
SRS	Serrai	9.99	42	*e*P	Pn	05 06 04.9	-1.1
SJES	Sjenica	10.09	23	*e*Pn	Pn	05 06 05.2	-2.2
CHOS	Chios island	10.16	62	*e*P	Pn	05 06 08.3	-0.1
SIGR	SIGRI	10.36	57	*e*P	Pn	05 06 09.7	-1.2
BARS	Barje	10.39	30	*e*Pn	Pn	05 06 09.8	-1.6
IVAS	Ivanjica	10.43	23	*e*Pn	Pn	05 06 09.6	-2.4
BBLS	Lazići	10.47	19	*e*Pn	Pn	05 06 10.7	-1.9
NVLJ	Novalja	10.51	1	*e*Pn	Pn	05 06 14.0	+1.1
URLA	Izmir	10.55	62	*e*P	Pn	05 06 13.2	-0.4
HAPS	Han Pijesak,BI	10.56	17	*e*Pn	Pn	05 06 14.8	+1.0
BODT	Bodrum	10.72	70	*e*P	Pn	05 06 17.7	+1.7
BOZC	Bozcaada	10.78	54	*e*P	Pn	05 06 16.9	+0.1
VTS	Vitosha	10.85	36	⇑*i*P	Pn	05 06 18.2	+0.4
VTS	Vitosha	10.85	36	*e*Pn	Pn	05 06 17.1	-0.6
VTS	Vitosha	10.85	36	⇑P	Pn	05 06 18.2	+0.4
VTS	Vitosha	10.85	36	*e*Pn	Pn	05 06 17.1	-0.6
VTS	Vitosha	10.85	36	P	Pn	05 06 18.2	+0.4
DIVS	Divibare	10.85	21	*e*Pn	Pn	05 06 16.7	-1.1
DIVS	Divibare	10.85	21	*e*Pn	Pn	05 06 16.7	-1.1
GADA	Gvkgeada	10.86	52	*e*P	Pn	05 06 17.9	+0.1
BLY	Banja Luka	10.86	10	⇓*i*P	Pn	05 06 20.0	+2.1
BLY	Banja Luka	10.86	10	*e*Pn	Pn	05 06 17.7	-0.1
BLY	Banja Luka	10.86	10	*e*Pn	Pn	05 06 17.7	-0.1
DAT	Datca	10.87	72	*e*P	Pn	05 06 18.8	+0.7
GRUS	Gruza	10.89	24	*e*Pn	Pn	05 06 17.3	-1.0
EZN	Ezine	10.96	55	*e*P	Pn	05 06 18.8	-0.4
EBNR	Beni Rached	10.99	285	P	Pn	05 06 18.8	-0.9
EBNR	Beni Rached	10.99	285	P	Pn	05 06 18.8	-0.9
BOVS	Bovan	11.03	28	*e*Pn	Pn	05 06 17.5	-2.6
ZAPS	Zavoj	11.11	32	*e*Pn	Pn	05 06 19.6	-1.7
TEKS	Tekeris	11.14	18	*e*Pn	Pn	05 06 19.3	-2.4
RDO	Rodhopi	11.15	47	*e*P	Pn	05 06 22.4	+0.6
RDO	Rodhopi	11.15	47	P	Pn	05 06 20.7	-1.1
RDO	Rodhopi	11.15	47	P	Pn	05 06 20.7	-1.1
ENEZ	Enez	11.31	50	*e*P	Pn	05 06 23.0	-0.9
ALN	Alexandroupoli	11.33	50	*e*P	Pn	05 06 23.8	-0.4
ALN	Alexandroupoli	11.33	50	*e*Pn	Pn	05 06 23.9	-0.2
ALN	Alexandroupoli	11.33	50	*e*P	Pn	05 06 24.0	-0.2
ALN	Alexandroupoli	11.33	50	*e*P	Pn	05 06 24.0	-0.2
GELI	Tayfur-Gelibol	11.34	53	*e*P	Pn	05 06 23.6	-0.8
ZAGS	Zajecar	11.38	29	⇑*i*Pn	Pn	05 06 23.0	-2.0
AYDB	Zeytinkoy-Aydi	11.39	66	*e*P	Pn	05 06 25.9	+0.7
YER	Yerkesik	11.50	71	*e*P	Pn	05 06 27.6	+0.9
ERIK	Erikli-Kesan	11.50	51	*e*P	Pn	05 06 26.2	-0.4
LPK	Lapseki	11.52	53	*e*P	Pn	05 06 26.4	-0.4
TURN	Turunc	11.70	72	*e*P	Pn	05 06 26.8	-2.6
FGSL	Fruska Gora	11.78	18	*e*Pn	Pn	05 06 27.3	-3.1
KRBG	Karabiga-Canak	11.88	54	*e*P	Pn	05 06 30.9	-0.9
RKY	Sarkoy-Tekirda	11.95	53	*e*P	Pn	05 06 31.3	-1.5
MDVR	Moldovita	12.02	25	⇑*i*P	Pn	05 06 31.6	-2.1
MDVR	Moldovita	12.02	25	⇑*i*P	Pn	05 06 31.6	-2.1
EDRB	Edirne	12.30	47	*e*P	Pn	05 06 38.0	+0.5
HERR	Herculane	12.36	27	⇓*i*P	Pn	05 06 36.6	-1.7
HERR	Herculane	12.36	27	⇓*i*P	Pn	05 06 36.6	-1.7
OBKA	Obir	12.45	360	*i* P	Pn	05 06 44.3	+4.6
	23nm,1.4s						
MYKA	Terra Mystica	12.60	357	*i* P	Pn	05 06 45.1	+3.5
	31nm,1.6s						
BNI	Bardonecchia	12.60	333	*e*Pn	Pn	05 06 43.1	+1.4
BNI	Bardonecchia	12.60	333	*e*P	Pn	05 06 43.1	+1.4
BNI	Bardonecchia	12.60	333	*e*P	Pn	05 06 43.1	+1.4
SOKA	Soboth	12.62	1	*i* P	Pn	05 06 46.9	+4.9
	12nm,1.0s						
ELL	Elmali	12.72	73	*e*P	Pn	05 06 44.4	+1.0
BZS	Buzias	12.72	23	⇓*i*P	Pn	05 06 41.7	-1.6
BZS	Buzias	12.72	23	⇓P	Pn	05 06 41.7	-1.6
BZS	Buzias	12.72	23	P	Pn	05 06 41.7	-1.6
ABTA	Abfaltersbach	12.79	353	*i* P	Pn	05 06 48.9	+4.5
	42nm,1.5s						
TVSB	Tavsanli	13.02	61	*e*P	Pn	05 06 46.6	-0.9
TUE	Stuetta	13.06	343	*e*Pn	Pn	05 06 49.0	+0.9
TUE	Stuetta	13.06	343	*e*Pn	Pn	05 06 49.0	+0.9
KBA	Koelnbreinsper	13.06	356	*i* P	P	05 06 56.6	-1.9
	33nm,1.5s						
KORT	Korkueli	13.11	73	*e*P	Pn	05 06 49.9	+1.2
ARSA	Arzberg	13.21	3	*i* P	Pn	05 06 54.6	+4.7
	7.0nm,0.8s						
DAVOX	Davos/Dischmat	13.23	345	Pn	Pn	05 06 52.9	+2.5
	0.3nm,0.3s,baz=140,slow=17,SNR=2.3						
DAVOX				LR	LR	05 12 32.4	
	comp=Z,258nm,18.5s,baz=172,slow=40						
FETA	Feichten	13.30	348	*i* P	Pn	05 06 55.8	+4.5
	47nm,0.9s						
ISP	Isparta	13.38	69	*i* P	Pn	05 06 53.6	+1.2
ISP	Isparta	13.38	69	*i* P	Pn	05 06 53.6	+1.2
WTTA	Wattenberg	13.40	351	*i* P	P	05 07 00.8	-1.5
	9.5nm,0.8s						
WATA	Walderalm	13.48	351	*i* P	P	05 07 02.1	-1.0
	26nm,0.7s						
SENIN	Lac Senin/Sane	13.52	338	*e*Pn	Pn	05 06 56.3	+1.9
SENIN	Lac Senin/Sane	13.52	338	*e*Pn	Pn	05 06 56.3	+1.9
MOTA	Moosalm	13.56	350	*i* P	Pn	05 06 59.2	+4.4
	12nm,0.7s						
ARR	Arges	13.65	31	⇑*i*P	Pn	05 06 55.4	-0.6
ARR	Arges	13.65	31	⇑*i*P	Pn	05 06 55.4	-0.6
SUTC	Sutluce-Ispart	13.69	71	*e*P	Pn	05 06 57.3	+0.6
DAVA	Damuels	13.71	346	*i* P	P	05 07 02.4	-3.3
	14nm,0.8s						
RETA	Reutte	13.75	349	*i* P	P	05 07 03.2	-2.9
	16nm,1.1s						
TAM	Tamanrasset	13.79	218	*e*Pn	Pn	05 06 58.1	0.0
TAM	Tamanrasset	13.79	218	*e*P	Pn	05 06 58.2	0.0
TAM	Tamanrasset	13.79	218	*e*P	Pn	05 06 58.2	0.0
MOA	Molln	13.79	359	*i* P	Pn	05 07 00.7	+2.8
	25nm,1.2s						
VOIR		13.88	32	⇓*i*P	Pn	05 06 58.7	-0.5
VOIR		13.88	32	⇓P	Pn	05 06 58.7	-0.5
VOIR		13.88	32	P	Pn	05 06 58.7	-0.5
CONA	Conrad Observa	13.90	3	*i* Pn	Pn	05 07 01.6	+2.2
	8.8nm,1.1s						
DRGR		14.12	23	⇑*i*P	Pn	05 07 01.9	-0.5
DRGR		14.12	23	⇑P	Pn	05 07 01.9	-0.5
DRGR		14.12	23	P	Pn	05 07 01.9	-0.5
MLR	Muntele Rosu	14.33	34	Pn	Pn	05 07 05.4	+0.1
	0.1nm,0.3s,baz=272,slow=5.4,SNR=9.5						
MLR				Sn	Sn	05 09 43.3	-1.0
	0.1nm,0.3s,baz=215,slow=12,SNR=2.4						
MLR				LR	LR	05 14 22.7	
	comp=Z,113nm,20.1s,baz=216,slow=45						
MLR	Muntele Rosu	14.33	34	⇑*i*P	Pn	05 07 06.2	+0.9
MLR	Muntele Rosu	14.33	34	*e*Pn	Pn	05 07 05.1	-0.2
MLR				*e*Sn	Sn	05 09 43.3	-1.0
MLR	Muntele Rosu	14.33	34	*e*P	Pn	05 07 05.1	-0.2
MLR				*e*		05 09 43.3	
MLR	Muntele Rosu	14.33	34	*e*Pn	Pn	05 07 05.1	-0.2
MLR				*e*Sn	Sn	05 09 43.3	-1.0
ISR	Istrita	14.34	36	⇓*i*P	Pn	05 07 06.1	+0.7
ISR	Istrita	14.34	36	⇓P	Pn	05 07 06.1	+0.7
CJR	Cluj-Napoca	14.35	26	⇓*i*P	Pn	05 07 05.5	-0.1
CJR	Cluj-Napoca	14.35	26	⇓P	Pn	05 07 05.5	-0.1
PSZ	Piszkesteto	14.40	14	*e*Pn	Pn	05 07 07.1	+0.8
PSZ	Piszkesteto	14.40	14	*e*P	Pn	05 07 07.1	+0.8
PSZ	Piszkesteto	14.40	14	*e*Pn	Pn	05 07 07.1	+0.8
TLB	Topalu	14.74	40	⇑*i*P	P	05 07 15.1	-1.8
TLB	Topalu	14.74	40	⇑P	P	05 07 15.1	-1.8
TLB	Topalu	14.74	40	P	P	05 07 15.1	-1.8
VYHS	Vyhne	14.77	11	*e*P	P	05 07 16.8	-0.5
VYHS	Vyhne	14.77	11	*e*P	P	05 07 16.8	-0.5
VYHS	Vyhne	14.77	11	*e*P	P	05 07 16.8	-0.5
GEA0	GERESS Array S	14.80	357	*e*Pn	Pn	05 07 12.3	+0.6
GEA0	GERESS Array S	14.80	357	*e*Pn	Pn	05 07 12.3	+0.6
GEC2	GERESS Array S	14.81	357	*e*Pn	Pn	05 07 12.3	+0.6
GEC2	GERESS Array S	14.81	357	*e*P	Pn	05 07 12.4	+0.6
GEC2	GERESS Array S	14.81	357	*e*Pn	Pn	05 07 12.4	+0.6
GERES	GERESS Array B	14.81	357	Pn	Pn	05 07 13.0	+1.2
	0.3nm,0.3s,baz=172,slow=12,SNR=27						
GERES				LR	LR	05 14 03.1	
	comp=Z,293nm,18.2s,baz=179,slow=42						
TIRR	Tirgusor	14.86	42	⇓*i*P	Pn	05 07 14.0	+1.6
TIRR	Tirgusor	14.86	42	*e*Pn	Pn	05 07 13.1	+0.7
TIRR	Tirgusor	14.86	42	⇓P	Pn	05 07 14.0	+1.6
TIRR	Tirgusor	14.86	42	*e*Pn	Pn	05 07 13.1	+0.7
PLOR	Plostina	14.93	34	⇓*i*P	Pn	05 07 13.8	+0.4
PLOR	Plostina	14.93	34	⇓P	Pn	05 07 13.8	+0.4
JAVC	Velka Javorina	14.97	8	*e*PN	P	05 07 20.7	+1.1
VRI	Vrincioaia	14.97	34	⇑*i*P	Pn	05 07 14.2	+0.2
VRI	Vrincioaia	14.97	34	⇑P	Pn	05 07 14.2	+0.2
BFO	Black Forest	15.04	343	*e*Pn	Pn	05 07 14.4	-0.5
	2.6nm,0.9s						
BFO	Black Forest	15.04	343	*e*P	Pn	05 07 14.4	-0.5
BFO				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BFO	Black Forest	15.04	343	*e*Pn	Pn	05 07 14.4	-0.5
	comp=Z,2.6nm,0.9s						
KRUC	Moravsky	15.06	4	*e*PN	Pn	05 07 17.6	+2.5
KECS	Kecovo	15.06	15	*e*P	P	05 07 22.2	+1.6
KECS	Kecovo	15.06	15	*e*P	P	05 07 22.2	+1.6
KECS	Kecovo	15.06	15	*e*P	P	05 07 22.2	+1.6
KHC	Kasperske Hory	15.10	357	*e*P	Pn	05 07 16.7	+1.0
KHC				*e*x	x	05 08 04.0	
KHC				AMS	AMS	05 17 40.0	
	comp=Z,400nm,12.4s						
KHC	Kasperske Hory	15.10	357	*e*Pn	Pn	05 07 15.9	+0.2
	comp=Z,12nm,1.1s						
KHC	Kasperske Hory	15.10	357	*e*P	Pn	05 07 15.9	+0.2
KHC				pmax	pmax		
	comp=Z,12nm,1.1s						
KHC	Kasperske Hory	15.10	357	*e*Pn	Pn	05 07 15.9	+0.2
	comp=Z,12nm,1.1s						
CFR	Carcaliu	15.18	39	⇓*i*P	Pn	05 07 17.2	+0.4
CFR	Carcaliu	15.18	39	⇓P	Pn	05 07 17.2	+0.4
ECH	Echery	15.24	341	*e*Pn	Pn	05 07 16.9	-0.6
	comp=Z,12nm,0.9s						
ECH	Echery	15.24	341	*e*P	Pn	05 07 16.9	-0.6
ECH				pmax	pmax		
	comp=Z,12nm,0.9s						
ECH	Echery	15.24	341	*e*Pn	Pn	05 07 16.9	-0.6
	comp=Z,12nm,0.9s						
VRAC	Vranov	15.32	5	⇑*i*P	Pn	05 07 21.0	+2.4
VRAC	Vranov	15.32	5	⇑P	Pn	05 07 21.0	+2.4
VRAC	Vranov	15.32	5	P	Pn	05 07 21.0	+2.4
VRAC	Vranov	15.32	5	*e*PN	P	05 07 23.1	-0.3
LANS	Liptovska Anna	15.51	12	*e*P	P	05 07 27.0	+1.5
LANS	Liptovska Anna	15.51	12	*e*P	P	05 07 27.0	+1.5
LANS	Liptovska Anna	15.51	12	*e*P	P	05 07 27.0	+1.5
BIZ	Bicaz	15.52	31	⇑*i*P	Pn	05 07 23.3	+2.1
BIZ	Bicaz	15.52	31	⇑*i*P	Pn	05 07 23.3	+2.1
UZH	Uzhgorod	15.64	19	*c* *i*P	P	05 07 26.4	-0.5
UZH				*e*S	Sn	05 10 21.6	+5.5
UZH				MLR	MLR		
	comp=Z,90nm,11.0s						
UZH	Uzhgorod	15.64	19	*i* P	P	05 07 26.4	-0.5
	comp=Z,90nm,11.0s						
CRVS	Cervenica-Dubn	15.68	17	*e*P	P	05 07 28.6	+1.2
CRVS	Cervenica-Dubn	15.68	17	*e*P	P	05 07 28.6	+1.2
CRVS	Cervenica-Dubn	15.68	17	*e*P	P	05 07 28.6	+1.2
BURAR	Bucovina Array	15.71	27	⇓*i*P	Pn	05 07 24.7	+0.9
BURAR	Bucovina Array	15.71	27	⇓P	Pn	05 07 24.7	+0.9
BUR04	Bucovina Ar. S	15.71	27	*e*Pn	Pn	05 07 23.7	-0.1
BUR04	Bucovina Ar. S	15.71	27	*e*Pn	Pn	05 07 23.7	-0.1
BUR08	Bucovina Ar. S	15.73	27	*e*Pn	Pn	05 07 24.2	+0.2
BUR08	Bucovina Ar. S	15.73	27	*e*Pn	Pn	05 07 24.2	+0.2
GRFO	Grafenberg	15.84	352	*e*Pn	Pn	05 07 25.5	+0.1
	comp=Z,19nm,0.9s						
GRFO	Grafenberg	15.84	352	*e*P	Pn	05 07 25.5	+0.1
GRFO				pmax	pmax		
	comp=Z,19nm,0.9s						
GRFO	Grafenberg	15.84	352	*e*Pn	Pn	05 07 25.5	+0.1
	comp=Z,19nm,0.9s						
GOPC	GO Pecny, Ondr	15.86	0	*e*P	P	05 07 31.9	+2.5
GOPC	GO Pecny, Ondr	15.86	0	*e*P	P	05 07 31.9	+2.5
MORC	Moravsky Berou	15.86	7	*e*Pn	Pn	05 07 26.7	+1.0
	comp=Z,54nm,1.0s						
MORC	Moravsky Berou	15.86	7	*e*P	Pn	05 07 26.7	+1.0
MORC				pmax	pmax		
	comp=Z,54nm,1.0s						
MORC	Moravsky Berou	15.86	7	*e*Pn	Pn	05 07 26.3	+0.6
MORC	Moravsky Berou	15.86	7	*e*P	Pn	05 07 26.7	+1.0
	comp=Z,54nm,1.0s						
MORC	Moravsky Berou	15.86	7	*e*PN	Pn	05 07 26.3	+0.6
ES19	SONSECA Array	15.89	296	*e*Pn	Pn	05 07 26.2	+0.1
ES19	SONSECA Array	15.89	296	*e*Pn	Pn	05 07 26.2	+0.1
NIE	Niedzica	15.92	13	*e*P	P	05 07 32.0	+2.0
NIE	Niedzica	15.92	13	*e*P	P	05 07 32.0	+2.0
NIE	Niedzica	15.92	13	*e*P	P	05 07 32.0	+2.0
ESDC	Sonseca Array	15.93	296	Pn	Pn	05 07 26.2	-0.5
	comp=Z,2.8nm,0.3s,baz=107,slow=12,SNR=24						
ESDC				Sn	Sn	05 10 19.6	-3.7
	comp=Z,0.2nm,0.3s,baz=105,slow=25,SNR=2.8						
ESDC				LR	LR	05 13 36.7	
	comp=Z,354nm,20.9s,baz=110,slow=37						
ESLA	Sonseca Array	15.93	296	*e*Pn	Pn	05 07 26.2	-0.5
	comp=Z,12nm,1.0s						
ESLA	Sonseca Array	15.93	296	*e*Pn	Pn	05 07 26.2	-0.5
	comp=Z,12nm,1.0s						
PRU	Pruhonice	15.93	360	AMS	AMS	05 14 30.0	
	comp=Z,300nm,16.3s						
OKC	Ostrava-Krasne	15.99	8	AMS	AMS	05 15 30.0	
	comp=Z,300nm,16.1s						
KRLC	Kraliky	16.09	5	*e*P	P	05 07 34.5	+2.5
KRLC	Kraliky	16.09	5	*e*P	P	05 07 34.5	+2.5
MDT	Midelt	16.15	271	Pn	Pn	05 07 28.8	-0.8
	comp=Z,0.4nm,0.3s,baz=160,slow=2.7,SNR=9.9						
MDT				LR	LR	05 14 37.8	
	comp=Z,577nm,18.9s,baz=106,slow=41						
BR101	Keskin Array S	16.19	64	*e*Pn	Pn	05 07 31.6	+1.6
BR101	Keskin Array S	16.19	64	*e*Pn	Pn	05 07 31.6	+1.6
BR131	Keskin Array S	16.19	64	*e*Pn	Pn	05 07 30.7	+0.7
BR131	Keskin Array S	16.19	64	*e*Pn	Pn	05 07 30.7	+0.7
BRTR	Keskin Array B	16.19	64	Pn	Pn	05 07 31.6	+1.6
	comp=Z,0.2nm,0.3s,baz=242,slow=11,SNR=15						
PAB	San Pablo	16.19	295	*e*Pn	Pn	05 07 29.1	-0.9
	comp=Z,31nm,1.1s						
PAB	San Pablo	16.19	295	*e*P	Pn	05 07 29.1	-0.9
PAB				pmax	pmax		
	comp=Z,31nm,1.1s						
PAB	San Pablo	16.19	295	*e*Pn	Pn	05 07 29.1	-0.9
	comp=Z,31nm,1.1s						
NKC	Novy Kostel	16.26	355	AMS	AMS	05 14 40.0	
	comp=Z,600nm,17.6s						
PVCC	Panska Ves	16.47	360	AMS	AMS	05 14 50.0	
	comp=Z,300nm,18.0s						
UPC	Upice	16.48	3	AMS	AMS	05 15 10.0	
	comp=Z,400nm,13.8s						
OJC	Ojcow	16.60	12	*e*P	P	05 07 38.4	+0.8
OJC	Ojcow	16.60	12	*e*Pn	Pn	05 07 35.6	+0.6
	comp=Z,12nm,0.9s						
OJC	Ojcow	16.60	12	*e*P	Pn	05 07 35.6	+0.6
OJC				pmax	pmax		
	comp=Z,12nm,0.9s						
OJC	Ojcow	16.60	12	*e*P	Pn	05 07 35.6	+0.6
	comp=Z,12nm,0.9s						
KWP	Kalwaria Pacla	16.67	18	*e*P	P	05 07 42.1	+3.8
KWP	Kalwaria Pacla	16.67	18	*e*Pn	Pn	05 07 37.0	+1.1
	comp=Z,273nm,1.0s						
KWP	Kalwaria Pacla	16.67	18	*e*P	Pn	05 07 37.1	+1.1
KWP				pmax	pmax		
	comp=Z,273nm,1.0s						
KWP	Kalwaria Pacla	16.67	18	*e*P	Pn	05 07 37.1	+1.1
	comp=Z,273nm,1.0s						
KIS	Kishinev	16.79	35	*e*P	P	05 07 45.0	+5.3
KIS	Kishinev	16.79	35	*e*P	P	05 07 45.0	+5.3
BRG	Berggiesshubel	16.83	358	*e*P	Pn	05 07 38.6	+0.7
	comp=Z,5.3nm,0.9s						
BRG				*e*	Pn	05 07 38.2	+0.3
	comp=Z,13nm,1.0s comp=N,312nm,14.8s comp=E,416nm,18.8s comp=Z,371nm,21.7s						
BRG	Berggiesshubel	16.83	358	*e*P	Pn	05 07 38.6	+0.7
BRG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BRG				pmax	pmax		
	comp=Z,13nm,1.0s						
BRG				MLR	MLR		
	comp=N,312nm,14.8s						
BRG				MLR	MLR		
	comp=E,416nm,18.8s						
BRG				MLR	MLR		
	comp=Z,371nm,21.7s						
BRG	Berggiesshubel	16.83	358	*e*P	Pn	05 07 38.6	+0.7
	comp=Z,371nm,21.7s						
WLF	Walferdange	16.83	341	*e*Pn	Pn	05 07 37.7	-0.3
	comp=Z,19nm,1.0s						
WLF	Walferdange	16.83	341	*e*P	Pn	05 07 37.7	-0.3
WLF				pmax	pmax		
	comp=Z,19nm,1.0s						
WLF	Walferdange	16.83	341	*e*P	Pn	05 07 37.7	-0.3
	comp=Z,19nm,1.0s						
LVV	L'vov	17.21	21	*e*P	Pn	05 07 35.8	-6.9
CLL	Collm	17.30	356	*i* P	P	05 07 45.0	-0.2
	comp=Z,45nm,1.5s						
CLL				*i*		05 07 48.5	
CLL	Collm	17.30	356	*e*Pn	Pn	05 07 44.2	+0.4
	comp=Z,21nm,0.8s						
CLL	Collm	17.30	356	*e*P	Pn	05 07 44.2	+0.4
CLL				pmax	pmax		
	comp=Z,21nm,0.8s						
CLL	Collm	17.30	356	*e*P	Pn	05 07 44.2	+0.4
	comp=Z,21nm,0.8s						
MMAI	Mount Meron Ar	17.32	88	P	Pn	05 07 44.4	+0.2
	comp=Z,1.5nm,0.3s,baz=276,slow=13,SNR=3.5						
MMAI				S	Sn	05 10 42.6	-14
	comp=Z,0.9nm,0.3s,baz=274,slow=22,SNR=2.3						
SORM	Soroca	17.41	32	⇓*i*P	P	05 07 46.8	+0.3
SORM	Soroca	17.41	32	⇓P	P	05 07 46.8	+0.3
SORM	Soroca	17.41	32	P	P	05 07 46.8	+0.3
EIL	Elat	17.76	99	P	Pn	05 07 48.8	-1.0
	comp=Z,0.3nm,0.3s,baz=316,slow=6.2,SNR=7.8						
EIL				S	Sn	05 11 06.7	-1.1
	comp=Z,0.4nm,0.3s,baz=353,slow=19,SNR=2.2						
EIL				LR	LR	05 15 36.6	
	comp=Z,163nm,20.3s,baz=257,slow=40						
PMRV	Marv??o	18.47	293	*e*P	Pn	05 07 58.7	+0.3
	comp=Z,30nm,1.8s						
PMRV				*e*LR	LR	05 13 51.5	
	comp=Z,476nm,16.0s						
PMRV	Marv??o	18.47	293	*e*P	Pn	05 07 58.7	+0.3
PESTR	Estremoz	18.53	291	*e*P	P	05 07 57.4	-1.6
	comp=Z,43nm,1.3s						
PESTR	Estremoz	18.53	291	*e*P	P	05 07 56.2	-2.8
	comp=Z,19nm,1.0s						
PESTR	Estremoz	18.53	291	*e*P	P	05 07 57.4	-1.6
PBRG	Braganca	18.56	301	*e*P	Pn	05 08 00.1	+0.6
	comp=Z,20nm,1.7s						
PBRG	Braganca	18.56	301	*e*P	Pn	05 08 00.1	+0.6
MVO	Moncorvo	18.58	299	*e*P	Pn	05 07 59.8	0.0
	comp=Z,32nm,1.3s						
MVO				*e*LR	LR	05 13 49.5	
	comp=Z,489nm,16.0s						
MVO	Moncorvo	18.58	299	*e*P	Pn	05 07 59.8	0.0
PCBR	Castelo Branco	18.61	295	*e*P	Pn	05 08 00.2	+0.1
	comp=Z,32nm,1.4s						
PCBR	Castelo Branco	18.61	295	*e*P	Pn	05 08 00.2	+0.1
PBDV	Barranco-do-Ve	18.64	286	*e*P	P	05 08 00.1	-0.1
	comp=Z,48nm,1.4s						
PBDV	Barranco-do-Ve	18.64	286	*e*P	P	05 08 00.1	-0.1
PBEJ	Beja	18.65	289	*e*P	Pn	05 08 02.4	+1.8
	comp=Z,32nm,1.7s						
PBEJ	Beja	18.65	289	*e*P	Pn	05 08 02.4	+1.8
ASF	Jabal al Asfar	18.71	90	P	Pn	05 08 02.1	+0.7
	comp=Z,0.4nm,0.3s,baz=263,slow=2.2,SNR=3.7						
ASF				S	Sn	05 11 22.6	-8.2
	comp=Z,0.2nm,0.3s,baz=349,slow=16,SNR=2.6						
PCVE	Castro Verde	18.75	288	*e*P	P	05 08 01.3	-0.1
	comp=Z,37nm,1.7s						
PCVE	Castro Verde	18.75	288	*e*P	P	05 08 01.3	-0.1
MTE	Manteigas	18.77	296	*e*P	P	05 08 01.5	-0.2
	comp=Z,18nm,1.7s						
MTE				*e*LR	LR	05 13 25.7	
	comp=Z,413nm,18.0s						
MTE	Manteigas	18.77	296	*e*P	P	05 08 01.5	-0.2
EVO	Evora	18.82	290	*e*P	P	05 08 00.5	-1.6
	comp=Z,37nm,1.3s						
EVO	Evora	18.82	290	*e*P	P	05 08 00.5	-1.6
MESJ	Messejana	18.91	288	*e*P	P	05 08 03.0	-0.1
	comp=Z,29nm,1.6s						
MESJ	Messejana	18.91	288	*e*P	P	05 08 03.0	-0.1
PMTG	Montargil	19.05	292	*e*P	P	05 08 03.4	-1.3
	comp=Z,41nm,1.3s						
PMTG	Montargil	19.05	292	*e*P	P	05 08 03.4	-1.3
PVIS	Viseu	19.11	297	*e*P	Pn	05 08 05.8	-0.4
	comp=Z,20nm,1.8s						
PVIS	Viseu	19.11	297	*e*P	Pn	05 08 05.8	-0.4
PVRL	Vila Real	19.11	299	*e*P	P	05 08 05.3	-0.1
	comp=Z,32nm,1.4s						
PVRL	Vila Real	19.11	299	*e*P	P	05 08 05.3	-0.1
POLO	Lamas de Olo	19.19	299	*e*P	P	05 08 06.3	0.0
	comp=Z,14nm,1.4s						
POLO	Lamas de Olo	19.19	299	*e*P	P	05 08 06.3	0.0
PTOM	Tomar	19.28	293	*e*P	Pn	05 08 08.5	+0.3
	comp=Z,57nm,1.3s						
PTOM	Tomar	19.28	293	*e*P	Pn	05 08 08.5	+0.3
COI	Coimbra	19.39	295	*e*P	P	05 08 07.9	-0.4
	comp=Z,66nm,1.9s						
COI	Coimbra	19.39	295	*e*P	P	05 08 07.9	-0.4
PCAB	Cabril	19.45	300	*e*P	P	05 08 09.6	+0.5
	comp=Z,49nm,1.8s						
PCAB	Cabril	19.45	300	*e*P	P	05 08 09.6	+0.5
PGAV	Gavieira, Arco	19.70	300	*e*P	P	05 08 12.2	+0.4
	comp=Z,27nm,2.2s						
PGAV				*e*LR	LR	05 13 46.3	
	comp=Z,393nm,18.0s						
PGAV	Gavieira, Arco	19.70	300	*e*P	P	05 08 12.2	+0.4
AK11	Malin Array Si	19.71	28	*e*P	P	05 08 11.2	-0.6
AK11	Malin Array Si	19.71	28	*e*P	P	05 08 11.2	-0.6
KIEV	Kiev	19.74	28	*e*P	P	05 08 11.2	-0.9
	comp=Z,30nm,0.9s						
KIEV	Kiev	19.74	28	*e*P	Pn	05 08 13.5	-0.1
KIEV				pmax	pmax		
	comp=Z,19nm,1.2s						
KIEV	Kiev	19.74	28	*e*P	P	05 08 11.2	-0.9
	comp=Z,30nm,0.9s						
AKASG	Malin Array Be	19.75	28	P	P	05 08 11.1	-1.1
	comp=Z,1.6nm,0.3s,baz=218,slow=11,SNR=34						
AKBB	Malin Array Si	19.75	28	*e*P	P	05 08 11.6	-0.7
	comp=Z,29nm,0.8s						
AKBB	Malin Array Si	19.75	28	*e*P	P	05 08 11.6	-0.7
AKBB				pmax	pmax		
	comp=Z,29nm,0.8s						
AKBB	Malin Array Si	19.75	28	*e*P	P	05 08 11.6	-0.7
	comp=Z,29nm,0.8s						
ANN	Anapa	20.54	52	*e*P	P	05 08 20.9	+0.1
ANN				*e*S	S	05 12 11.4	+1.0
ANN				pmax	pmax		
	comp=Z,28nm,1.1s						
ANN	Anapa	20.54	52	*e*P	P	05 08 20.9	+0.1
	comp=Z,28nm,1.1s						
ANN				*e*S	S	05 12 11.4	+1.0
SUW	Suwalki	20.85	14	*e*P	P	05 08 24.1	0.0
SUW	Suwalki	20.85	14	*e*P	P	05 08 24.2	+0.1
	comp=Z,232nm,1.0s						
SUW	Suwalki	20.85	14	*e*P	P	05 08 24.2	+0.1
SUW				pmax	pmax		
	comp=Z,232nm,1.0s						
SUW	Suwalki	20.85	14	*e*P	P	05 08 24.2	+0.1
	comp=Z,232nm,1.0s						
KLNR	Kaliningrad	20.92	9	*i* P	P	05 08 26.0	+1.1
KLNR	Kaliningrad	20.92	9	*i* P	P	05 08 26.0	+1.1
SOC	Sochi	21.64	57	*e*P	P	05 08 32.9	+0.1
SOC				*e*		05 08 54.4	
SOC				*e*S	S	05 12 36.6	+4.2
SOC				*e*SS	SnSn	05 13 05.9	+10
SOC				pmax	pmax		
	comp=Z,15nm,0.9s						
SOC	Sochi	21.64	57	*e*P	P	05 08 32.9	+0.1
	comp=Z,15nm,0.9s						
MICGM	Minsk	22.46	20	*e*P	P	05 08 38.0	-3.4
MNK	Minsk	22.46	20	*e*P	P	05 08 38.0	-3.4
NACGM	Naroch	22.51	18	*e*	P	05 08 39.0	-3.0
IIGN	Ignalina	22.77	17	*e*P	P	05 08 43.6	-1.1
IIGN				IAmb	IAmb	05 08 56.0	
	comp=Z,51nm,1.1s						
IIGN	Ignalina	22.77	17	*e*P	P	05 08 43.6	-1.1
IDID	Didziasalis	22.87	18	*e*P	P	05 08 43.0	-2.7
IDID				IAmb	IAmb	05 08 51.5	
	comp=Z,19nm,0.8s						
ISAL	Salakas	22.95	17	*e*P	P	05 08 44.6	-1.9
ISAL				IAmb	IAmb	05 08 57.6	
	comp=Z,47nm,1.0s						
IZAR	Zarasai	23.14	17	*e*P	P	05 08 46.5	-2.0
IZAR				IAmb	IAmb	05 08 59.6	
	comp=Z,69nm,1.2s						
NEY	Neytrino	23.66	59	*i* P	P	05 08 56.3	+2.1
NEY				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NEY	Neytrino	23.66	59	*i* P	P	05 08 56.3	+2.1
	comp=Z,2.0nm,0.9s						
KIV	Kislovodsk	23.81	57	*e*P	P	05 08 55.5	0.0
	comp=Z,11nm,0.7s						

KIV	Kislovodsk	23.81	57	*e*P	P	05 08 54.5	-1.0
KIV				*e*S	S	05 13 12.4	+1.2
KIV				pmax	pmax		
	comp=Z,11nm,1.0s						
KIV				MLR	MLR		
	comp=Z,81nm,14.0s						
KIV	Kislovodsk	23.81	57	*e*P	P	05 08 55.5	0.0
	comp=Z,11nm,0.7s						
KIV				*e*S	S	05 13 12.4	+1.2
	comp=Z,81nm,14.0s						
KVAR	Kislovodsk Arr	23.82	57	P	P	05 08 56.1	+0.5
	comp=Z,2.5nm,0.4s,baz=300,slow=8.1,SNR=3.2						
KVAR				LR	LR	05 20 02.6	
	comp=Z,123nm,19.5s,baz=200,slow=41						
AKH	Akhalkalaki	23.88	64	*e*P	P	05 08 56.5	+0.3
	comp=Z,15nm,0.8s						
AKH	Akhalkalaki	23.88	64	*e*P	P	05 08 56.5	+0.3
AKH				pmax	pmax		
	comp=Z,15nm,0.8s						
AKH	Akhalkalaki	23.88	64	*e*P	P	05 08 56.5	+0.3
	comp=Z,15nm,0.8s						
KBZ	Khabaz	23.90	58	P	P	05 08 56.9	+0.7
	comp=Z,1.7nm,0.5s,baz=237,slow=11,SNR=6.2						
TOA1	Torodi Ar. Sit	23.91	213	*e*P	P	05 08 54.5	-2.0
TOA1	Torodi Ar. Sit	23.91	213	*e*P	P	05 08 54.5	-2.0
TOA0	Torodi Ar. Sit	23.92	213	*e*P	P	05 08 55.4	-1.1
TORD	Torodi Ar. Bea	23.92	213	P	P	05 08 54.5	-2.1
	comp=Z,3.0nm,1.1s,baz=40,slow=7.9						
NCK	Nalchik	24.34	59	*i* P	P	05 09 02.4	+2.1
NCK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
NCK	Nalchik	24.34	59	*i* P	P	05 09 02.4	+2.1
	comp=Z,9.0nm,0.9s						
ZEI	Tsey	24.41	60	*e*P	P	05 09 02.2	+1.0
ZEI				pmax	pmax		
	comp=Z,16nm,1.0s						
ESK	Eskdalemuir	24.64	335	*e*P	P	05 09 08.5	+5.7
	comp=Z,16nm,0.8s						
GNI	Garni	24.67	67	P	P	05 09 06.6	+3.0
	comp=Z,4.1nm,0.5s,baz=217,slow=20,SNR=2.2						
GNI				LR	LR	05 20 22.8	
	comp=Z,246nm,21.9s,baz=280,slow=41						
GNI	Garni	24.67	67	*e*P	P	05 09 03.5	0.0
	comp=Z,11nm,1.0s						
GNI	Garni	24.67	67	*i* P	P	05 09 04.2	+0.6
GNI				pmax	pmax		
	comp=Z,14nm,1.0s						
GNI	Garni	24.67	67	*e*P	P	05 09 03.5	0.0
	comp=Z,11nm,1.0s						
VSR	Storozhevoye	24.70	39	*e*P	P	05 09 04.0	+0.5
VSR				pmax	pmax		
	comp=Z,10.0nm,1.5s						
VSR	Storozhevoye	24.70	39	*e*P	P	05 09 04.0	+0.5
	comp=Z,10.0nm,1.5s						
TBLG	Delisi	24.85	63	*e*P	P	05 09 04.7	-0.3
	comp=Z,21nm,1.1s						
TBLG	Delisi	24.85	63	*e*P	P	05 09 04.7	-0.3
TBLG				pmax	pmax		
	comp=Z,21nm,1.1s						
TBLG	Delisi	24.85	63	*e*P	P	05 09 04.7	-0.3
	comp=Z,21nm,1.1s						
VSU	Vasula	25.73	15	*e*P	P	05 09 11.7	-0.9
KOWA	Kowa	25.78	226	P	P	05 09 13.5	-0.1
	comp=Z,2.1nm,0.7s,baz=27,slow=11,SNR=3.3						
GROC	Groznyy	25.85	60	*e*P	P	05 09 18.0	+4.0
GROC				*e*		05 09 53.9	
GROC				*e*		05 12 44.8	
GROC				pmax	pmax		
	comp=Z,15nm,0.5s						
GROC	Groznyy	25.85	60	*e*PcP	PcP	05 12 44.8	+1.7
OBN	Obninsk	26.00	29	*e*P	P	05 09 15.4	+0.2
OBN				*e*		05 09 55.4	
OBN				*e*SS	S	05 14 39.5	+54
OBN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,115nm,16.0s						
HFS	Hagfors	26.11	359	P	P	05 09 15.2	-1.0
	comp=Z,6.3nm,0.7s,baz=165,slow=12,SNR=12						
HFS				LR	LR	05 21 01.0	
	comp=Z,177nm,19.8s,baz=202,slow=40						
MOS	Moscow	26.87	29	*e*P	P	05 09 24.4	+1.3
MOS				*e*		05 10 24.8	
MOS				*e*		05 12 48.5	
MOS				pmax	pmax		
	comp=Z,62nm,0.9s						
NC403	NORSAR Array S	27.09	357	*e*P	P	05 09 24.7	-0.3
NB2	NORSAR Subarra	27.10	356	P	P	05 09 24.9	-0.3
	comp=Z,5.0nm,0.8s,baz=174,slow=9.3						
NOA	NORSAR Array B	27.10	356	LR	LR	05 21 38.5	
	comp=Z,108nm,19.8s,baz=160,slow=40						
NC405	NORSAR Array S	27.15	357	*e*P	P	05 09 25.5	0.0
FIA0	FINESS Array S	28.38	12	*e*P	P	05 09 35.6	-0.9
FIA0	FINESS Array S	28.38	12	*e*P	P	05 09 35.6	-0.9
FINES	FINESS Array B	28.38	12	P	P	05 09 35.6	-0.9
	comp=Z,4.0nm,0.6s,baz=181,slow=11,SNR=13						
FINES				LR	LR	05 23 21.6	
	comp=Z,154nm,18.0s,baz=178,slow=42						
FINES	FINESS Array B	28.38	12	P	P	05 09 35.6	-0.9
FINES				pmax	pmax		
	comp=Z,9.0nm,0.7s						
FINES				MLR	MLR		
	comp=Z,154nm,18.0s						
FIA1	FINESS Array S	28.38	12	*e*P	P	05 09 35.6	-0.9
KLMR	Klimovskoe	31.26	23	*e*P	P	05 10 00.6	-1.4
KLMR				*e*		05 12 55.7	
KLMR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KLMR	Klimovskoe	31.26	23	*e*P	P	05 10 00.7	-1.3
KLMR				AMP		05 10 18.3	
	comp=Z,9.0nm,0.9s						
KLMR				*e*PcP	PcP	05 12 55.7	-0.4
KLMR				LQ	LQ	05 20 51.7	
DBIC	Dimbokro	32.69	218	P	P	05 10 15.0	0.0
	comp=Z,7.0nm,1.1s,baz=19,slow=11,SNR=3.6						
DBIC				LR	LR	05 22 57.3	
	comp=Z,287nm,19.6s,baz=6.0,slow=35						
DBIC	Dimbokro	32.69	218	P	P	05 10 15.0	0.0
DBIC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
DBIC				MLR	MLR		
	comp=Z,287nm,19.6s						
PRGR	Permogore	33.94	26	*e*P	P	05 10 23.9	-1.5
PRGR				pmax	pmax		
	comp=Z,11nm,1.0s						
ATD	Arta Tunnel	34.10	124	LR	LR	05 24 12.2	
	comp=Z,219nm,18.1s,baz=322,slow=36						
GEYT	Alibeck	35.13	71	LR	LR	05 29 07.4	
	comp=Z,70nm,18.6s,baz=255,slow=44						
APA	Apatity	35.28	12⇓	*i*P	P	05 10 34.4	-2.5
APA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
APA				MLR	MLR		
	comp=Z,500nm,14.0s						
ARA0	ARCESS Array S	36.05	6	*e*P	P	05 10 41.6	-2.0
ARCES	ARCESS Array B	36.05	6	P	P	05 10 41.6	-2.0
	comp=Z,1.3nm,0.5s,baz=190,slow=6.2,SNR=11						
ARCES				LR	LR	05 27 29.3	
	comp=Z,153nm,18.3s,baz=246,slow=40						
ABKAR	Akbulak array	36.50	51	*e*P	P	05 10 48.9	+1.2
UOSS	Minazif	37.06	93	*e*P	P	05 10 52.4	-0.3
	comp=Z,15nm,1.1s						
ARU	Arti	37.27	39	LR	LR	05 28 06.4	
	comp=Z,112nm,22.0s,baz=250,slow=39						
ARU	Arti	37.27	39*c*	*i*P	P	05 10 53.2	-0.9
ARU						05 12 17.2	
ARU						05 13 08.1	
ARU				S	S	05 16 42.7	+1.5
ARU				pmax	pmax		
	comp=Z,12nm,2.5s						
SVE	Sverdlovsk	38.48	39	*e*P	P	05 11 05.1	+0.7
SVE				pmax	pmax		
	comp=Z,21nm,1.1s						
WSAR	Wadi Sarin	39.78	94	LR	LR	05 33 01.2	
	comp=Z,70nm,18.1s,baz=315,slow=44						
BVAR	Borovoye Array	43.39	47	P	P	05 11 44.7	-0.2
	comp=Z,2.0nm,0.8s,baz=288,slow=7.0,SNR=7.2						
SPA0	Spitsbergen Ar	44.24	1	*e*P	P	05 11 51.8	+0.4
SPITS	Spitsbergen Ar	44.24	1	P	P	05 11 51.8	+0.4
	comp=Z,1.6nm,0.4s,baz=182,slow=5.0,SNR=22						
SPITS				LR	LR	05 30 30.7	
	comp=Z,66nm,20.0s,baz=110,slow=36						
KURBB	Kurchatov Arra	48.50	50	P	P	05 12 24.6	-0.6
	comp=Z,3.0nm,0.7s,baz=280,slow=8.3,SNR=16						
KURK	Kurchatov	48.55	50	*e*P	P	05 12 24.6	-1.0
KURK	Kurchatov	48.55	50	P	P	05 12 24.6	-1.0
KURK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KSH	Kashi	48.58	65	*e*P	P	05 12 23.5	-2.6
KSH				*e*PcP	PcP	05 13 50.8	-1.0
NVS	Novosibirsk	50.94	44	*e*P	P	05 12 44.3	+0.6
MK31	Makanchi Array	51.53	54	*e*P	P	05 12 48.7	+0.4
MK31	Makanchi Array	51.53	54	*e*P	P	05 12 48.7	+0.4
MK32	Makanchi Array	51.53	54	*e*P	P	05 12 47.7	-0.6
MKAR	Makanchi Array	51.53	54	P	P	05 12 47.7	-0.6
	comp=Z,5.3nm,0.7s,baz=280,slow=6.9,SNR=24						
MKAR	Makanchi Array	51.53	54	*e*P	P	05 12 48.7	+0.4
	comp=Z,34nm,0.6s						
MK01	Makanchi Array	51.54	54	*e*P	P	05 12 47.9	-0.5
ZAA0	Zalesovo Array	51.96	45	*e*P	P	05 12 51.2	-0.2
	comp=Z,6.6nm,0.8s						
ZAA1	Zalesovo Array	51.96	45	*e*P	P	05 12 51.3	-0.1
ZALV	Zalesovo Beam	51.96	45	P	P	05 12 51.3	-0.1
	comp=Z,5.6nm,0.7s,baz=280,slow=8.4,SNR=14						
ZALV				LR	LR	05 37 58.0	
	comp=Z,56nm,18.6s,baz=250,slow=40						
ZALV	Zalesovo Beam	51.96	45	*e*P	P	05 12 50.9	-0.5
ZALV	Zalesovo Beam	51.96	45	*e*P	P	05 12 50.9	-0.5
WMQ	Urumqi	55.94	57	*e*P	P	05 13 23.1	+2.4
WMQ				sP	sP	05 13 29.3	+4.1
WMQ				pmax	pmax		
	comp=Z,19nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,200nm,4.5s						
WMQ				LR	LR		
	comp=Z,210nm,30.9s						
FRB	Frobisher Bay	57.13	328	P	P	05 13 29.8	+1.1
	comp=Z,7.5nm,1.2s,baz=67,slow=10,SNR=3.6						
SCHQ	Schefferville	58.30	318	P	P	05 13 38.2	+1.0
	comp=Z,2.5nm,0.7s,baz=90,slow=2.7,SNR=5.2						
SCHQ	Schefferville	58.30	318	*e*P	P	05 13 37.8	+0.6
	comp=Z,6.0nm,0.9s						
BOSA	Boshof	63.12	170	P	P	05 14 09.8	-0.4
	comp=Z,2.9nm,0.9s,baz=344,slow=7.2,SNR=2.6						
TIXI	Tiksi	65.12	19	P	P	05 14 23.2	+0.4
	comp=Z,1.6nm,0.6s,baz=352,slow=6.9,SNR=3.1						
GTA	Gaotai	65.99	58	*e*P	P	05 14 30.5	+1.3
GTA				pP	sP	05 14 35.1	+1.4
GTA				sP	pP	05 14 37.4	+5.0
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
PALK	Pallekele	66.12	98	LR	LR	05 43 57.3	
	comp=Z,60nm,20.7s,baz=256,slow=37						
BOD	Bodaibo	66.50	35	*e*P	P	05 14 25.9	-6.1
BOD				pmax	pmax		
	comp=Z,6.0nm,1.5s						
SONA0	Songino Array	66.73	47	*e*P	P	05 14 34.0	+0.2
SONA1	Songino Array	66.73	47	*e*P	P	05 14 33.6	-0.2
SONM	Songino Array	66.73	47	P	P	05 14 34.0	+0.2
	comp=Z,3.1nm,1.0s,baz=302,slow=8.5,SNR=10						
O56A	Blue Knob Stat	71.16	306	*e*P	P	05 15 01.3	-0.1
	comp=Z,4.1nm,1.0s						
HHC	Hu-ho-hao-te	73.29	52	*e*P	P	05 15 14.6	+0.4
HHC				pmax	pmax		
	comp=Z,12nm,1.0s						
HHC				pmax	pmax		
	comp=Z,100nm,4.8s						
XAN	Xi’an	74.96	59	P	P	05 15 24.2	+0.2
XAN				pP	PcP	05 15 34.9	-2.9
XAN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
CMAR	Chiang Mai Arr	75.28	78	P	P	05 15 27.5	+1.5
	comp=Z,1.5nm,0.3s,baz=318,slow=9.0,SNR=4.3						
CMAR				LR	LR	05 53 36.4	
	comp=Z,28nm,18.8s,baz=273,slow=40						
CMAR	Chiang Mai Arr	75.28	78	P	P	05 15 27.5	+1.5
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
CMAR				MLR	MLR		
	comp=Z,28nm,18.8s						
YKA	Yellowknife Ar	75.55	338	P	P	05 15 26.9	+0.2
	comp=Z,0.9nm,0.6s,baz=39,slow=5.9,SNR=9.0						
YKA				LR	LR	05 48 49.8	
	comp=Z,5.8nm,18.3s,baz=44,slow=36						
ULM	Lac du Bonnet	76.11	322	P	P	05 15 32.1	+1.9
	comp=Z,2.1nm,0.6s,baz=115,slow=3.4,SNR=1.7						
GYA	Guiyang	77.23	67	*e*P	P	05 15 38.2	+1.1
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
W52A	Murphy	77.46	304	*e*P	P	05 15 41.6	+3.4
	comp=Z,40nm,0.2s						
T47A	Sharon Grove	78.57	307	*e*P	P	05 15 44.2	-0.1
	comp=Z,8.4nm,0.9s						
CN2	Changchun	80.15	43	*e*P	P	05 15 53.0	+0.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ILAR	Eielson Array	80.45	352	P	P	05 15 55.0	+1.0
	comp=Z,0.5nm,0.9s,baz=5.9,slow=4.8,SNR=3.8						
ILAR	Eielson Array	80.45	352	P	P	05 15 55.0	+1.0
ILAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ECSD	EROS Data Cent	80.48	317	*e*P	P	05 15 54.8	+0.3
	comp=Z,3.0nm,0.8s						
CCM	Cathedral Cave	80.66	310	*e*P	P	05 15 55.8	+0.2
	comp=Z,3.7nm,0.9s						
CCM	Cathedral Cave	80.66	310	*e*P	P	05 15 55.8	+0.2
CCM				pmax	pmax		
	comp=Z,4.0nm,0.9s						
P38A	Dawn	81.16	312	*e*P	P	05 15 57.8	-0.5
	comp=Z,4.7nm,0.8s						
R40A	Maddies Statio	81.17	310	*e*P	P	05 15 58.5	+0.2
	comp=Z,4.7nm,0.8s						
NJ2	Nanjing	83.02	56	*e*P	P	05 16 07.8	-0.3
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
USRK	Ussuriysk Ar.	83.50	40	LR	LR	05 58 15.8	
	comp=Z,54nm,18.1s,baz=228,slow=39						
KSAR	Wonju Array Be	85.59	47	P	P	05 16 21.6	+0.6
KSAR	Wonju Array Be	85.59	47	P	P	05 16 21.7	+0.6
KSRS	Korea Array	85.61	47	P	P	05 16 21.6	+0.5
	comp=Z,0.8nm,0.6s,baz=313,slow=4.5,SNR=3.4						
PETK	Petropavlovsk-	87.44	21	LR	LR	05 59 22.7	
	comp=Z,39nm,21.0s,baz=331,slow=38						
PDAR	Pinedale Array	88.11	322	P	P	05 16 34.7	+1.1
	comp=Z,0.4nm,0.9s,baz=52,slow=7.3,SNR=3.1						
ASAJ	Asahikawa	88.91	35	LR	LR	05 59 18.0	
	comp=Z,28nm,21.4s,baz=317,slow=38						
TXAR	Lajitas Array	94.16	310	LR	LR	05 58 08.8	
	comp=Z,79nm,20.0s,baz=0.0,slow=35						
JHJ	Hachijo jima 2	95.61	44	LR	LR	06 02 48.7	
	comp=Z,90nm,21.8s,baz=54,slow=37						
CCCA	Chr Cany lake	97.54	322	*e*P	Pdif	05 17 18.8	+1.7
NNA	Nana	97.85	261	LR	LR	06 03 51.0	
	comp=Z,44nm,18.1s,baz=105,slow=37						
CRY	Cary Ranch	98.74	321	*e*P	P	05 17 21.9	-0.6
WRA	Warramunga Arr	125.14	92	PKP	PKPdf	05 22 43.3	-0.2
	comp=Z,0.4nm,0.5s,baz=315,slow=1.8,SNR=3.3						
WRA	Warramunga Arr	125.14	92	PKIKP	PKPdf	05 22 43.3	-0.2
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WR1	Warramunga Arr	125.14	92	*e*PKPdf	PKPdf	05 22 43.3	-0.2
HPAH	Hawaii Prepara	125.45	349	*e*PKPdf	PKPdf	05 22 46.5	+2.2
ASAR	Alice Springs	126.45	96	PKP	PKPdf	05 22 45.8	-0.3
	comp=Z,0.5nm,0.7s,baz=297,slow=2.2,SNR=4.1						

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*NIED **03** 05:17:00,37°.10N×142°.00E,h26^{km},Mw3.5 Best double couple: $M_0$1.87000×10^{14} NP1:ϕ_s310.00000°,δ24.00000°, λ-117.00000°. NP2:ϕ_s159.00000°,δ69.00000°, λ-79.00000°.*

*IDC **03** 05:17:50.4±1.4,36°.92N×142°.25E,h0^{km},mb3.4/3, mb1 3.6/4,mb1mx3.3/65,mbtmp3.4/4,ML3.3/1,MS2.4/1, Ms1 2.4/1,ms1mx2.0/41,Error ellipse: s-maj=31.1km s-min=26.4km az=135.0*

*ISCJB **03** 05:17:53.1±1.1,37°.22N±0°.05×142°.05E±0°.07,h19^{km}, mb3.5/3,Error ellipse: s-maj=9.3km s-min=7.0km az=35.7*

*JMA **03** 05:17:53.6±0.2,37°.09N×141°.96E,h34^{km}±4^{km},M3.5*

ISC 03 05:17:53.5±1.2,**37°.18N**±0°.06×**142°.01E**±0°.08,**h19**^{km}**,n15,** σ**1^{s}85**/21,**mb3.6**/3,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	Kawauchi	0.92	282	P	Pb	05 18 10.1	-0.8
JFK				S	Sb	05 18 22.1	-0.7
ONAJ	Iwakimizuishiy	0.97	266	P	Pb	05 18 10.4	-1.3
JFFD	Fukushimafurud	1.16	266	P	Pn	05 18 13.4	-1.3
JMM	Marumori	1.19	306	P	Pn	05 18 14.5	-0.6
JMM				S	Sn	05 18 29.5	-1.2
JHO	Hitachi	1.28	244	*e*S	Sn	05 18 29.4	-3.7
JFT	Otama	1.37	285	P	Pn	05 18 17.6	-0.1
JIO	Ouri	1.38	338	P	Pn	05 18 17.2	-0.5
JIO				*e*S	Sn	05 18 33.7	-1.7
JOU	Okura	1.59	318	P	Pn	05 18 21.4	+0.7
JOU				*e*S	Sn	05 18 41.2	+0.4
JFY	Yanaizu	1.85	278	P	Pn	05 18 25.0	+0.7
JMK	Ichinoseki	1.88	341	P	Pn	05 18 26.2	+1.6
MJAR	Matsushiro Arr	3.11	259	Pn	Pn	05 18 43.2	+1.6
	3.0nm,0.3s,baz=85,slow=14,SNR=20						
MJAR				Sn	Sn	05 19 21.8	+3.5
	2.8nm,0.3s,baz=86,slow=30,SNR=6.4						
MJAR				LR	LR	05 20 03.2	
	comp=Z,62nm,20.5s,baz=95,slow=41						
MAT	Matsushiro	3.11	259	P	Pn	05 18 43.1	+1.5
MAT				S	Sn	05 19 21.6	+3.3
KURBB	Kurchatov Arra	46.29	308	P	P	05 26 19.6	+1.9
	0.3nm,0.4s,baz=85,slow=8.2,SNR=6.4						
ILAR	Eielson Array	49.12	32	P	P	05 26 39.9	+0.4
	0.2nm,0.7s,baz=279,slow=5.9,SNR=3.9						
WRA	Warramunga Arr	57.27	189	P	P	05 27 38.4	-1.5
	0.5nm,0.8s,baz=4.9,slow=7.3,SNR=3.1						

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*IDC **03** 05:31:30.2±14.0,14°.07N×89°.61W,h0^{km},mb3.3/3, mb1 3.8/3,mb1mx3.4/38,mbtmp3.4/3,Error ellipse: s-maj=293.3km s-min=103.0km az=1.0*

*ISCJB **03** 05:31:38.2±1.0,13°.7N±0°.1×90°.93W±0°.06,h33^{km},mb3.6/2, Error ellipse: s-maj=17.9km s-min=7.5km az=13.5*

*CASC **03** 05:31:40.8±0.8,13°.92N×90°.73W,h64^{km}±12^{km},ML3.5*

ISC 03 05:31:38.8±1.4,**13°.8N**±0°.1×**90°.91W**±0°.09,**h35**^{km}**,n23,** σ**0^{s}99**/26,**1D,Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IXG	Ixpaco	0.58	49	*e*P	Pn	05 31 52.1	+1.4
RTR	El Retiro	1.23	85	*e*P	Pn	05 32 00.5	+0.9
RTR				*e*S	Sn	05 32 15.6	+0.4
SBLS	San Blas	1.25	88	*e*P	Pn	05 32 00.4	+0.4
SBLS				*e*S	Sn	05 32 15.3	-0.4
SNJE	San Jose	1.27	87	*e*P	Pn	05 32 00.8	+0.5
CEDA	San Andres	1.47	90	*e*P	Pn	05 32 03.2	+0.3
CEDA				*e*S	Sn	05 32 20.9	0.0
CEDA				IAML		05 32 24.1	
	comp=Z,2μm,0.3s						
COLS	Colinas	1.57	95	*e*P	Pn	05 32 04.5	+0.3
BOQS	Boqueron	1.58	92	*e*P	Pn	05 32 05.0	+0.5
MTO3	Montecristo	1.61	68⇓	*i*P	Pn	05 32 05.3	+0.3
MTO3				IAML		05 32 29.8	
	comp=Z,180nm,0.3s						
UEES	San Salvador	1.62	92	*e*P	Pn	05 32 05.2	+0.3
UEES				IAML		05 32 28.2	
	comp=Z,1μm,0.2s						
SNET	Serv Nac Est T	1.63	94	*e*P	Pn	05 32 05.0	-0.1
SNET				*e*S	Sn	05 32 24.8	-0.1
SNET				IAML		05 32 27.6	
	comp=Z,1μm,0.3s						
OPAM	San Salvador	1.66	93	*e*P	Pn	05 32 06.3	+0.8
OPAM				IAML		05 32 29.7	
	comp=Z,898nm,0.3s						
LFU	La Fuente	1.74	91	*e*P	Pn	05 32 07.0	+0.3
LFRS	El Faro	1.80	95	*e*P	Pn	05 32 07.6	+0.1
LBRS	Las Brisas	1.81	92	*e*P	Pn	05 32 07.8	+0.2
SNVI	San Vicente	2.02	95	*e*P	Pn	05 32 11.0	+0.5
CNGN	Cerro Negro	4.30	107	IAML		05 33 43.6	
	comp=N,64nm,0.5s						
ESTN	Estel	4.47	98	*e*P	Pn	05 32 44.4	+0.2
MOMN	Momotombo	4.47	107	*e*P	Pn	05 32 45.9	+1.7
COPN	Copaltepe	4.50	110	*e*P	Pn	05 32 45.6	+1.0
RCON	San Juan de Ri	4.63	93	*e*P	Pn	05 32 46.6	+0.2
TXAR	Lajitas Array	19.46	325	P	Pn	05 36 04.9	+0.8
	comp=N,0.3nm,0.7s,baz=143,slow=11,SNR=4.3						
NVAR	Mina Array Bea	34.50	320	P	P	05 38 25.5	+1.6
	comp=N,0.8nm,0.7s,baz=129,slow=8.6,SNR=7.6						
YKA	Yellowknife Ar	51.47	346	P	P	05 40 37.3	-3.2
	comp=N,0.5nm,0.8s,baz=148,slow=8.0,SNR=2.8						

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*NIED **03** 05:39:00,25°.00N×125°.70E,h65^{km},Mw4.1 Best double couple: $M_0$1.67000×10^{15} NP1:ϕ_s7.00000°,δ43.00000°, λ39.00000°. NP2:ϕ_s247.00000°,δ64.00000°,λ126.00000°.*

*IDC **03** 05:39:28.3±0.8,25°.02N×125°.39E,h0^{km},mb3.9/15, mb1 4.0/16,mb1mx3.8/60,mbtmp3.9/16,ML3.2/1,MS2.9/7, Ms1 2.9/7,ms1mx2.6/61,Error ellipse: s-maj=27.4km s-min=17.4km az=64.0*

*ISCJB **03** 05:39:34.3±0.3,25°.03N±0°.05×125°.56E±0°.05,h58^{km}±3^{km}, mb3.9/20,MS3.0/4,Error ellipse: s-maj=10.0km s-min=4.3km az=143.6*

*JMA **03** 05:39:34.3±0.1,24°.99N×125°.62E,h55^{km}±1^{km},M3.8*

JMA Felt I J1.

*NEIC **03** 05:39:36.6±0.7,25°.02N×125°.49E,h64^{km}±6^{km},mb4.2/5, Error ellipse: s-maj=9.4km s-min=6.2km az=138.0*

NEIC Recorded [1 JMA] on Miyako-jima.

ISC 03 05:39:34.9±0.8,**24°.97N**±0°.08×**125°.62E**±0°.06,**h51**^{km}±6^{km}, **n64,**σ**0^{s}93**/71,**mb3.9**/20,**MS3.1**/4,**Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOGS	Gusukube	0.28	223	P	Pn	05 39 43.8	-0.1
JOGS				S	Sn	05 39 51.0	+0.6
JMJ	Miyako jima 2	0.33	242	P	Pn	05 39 44.3	-0.1
JMJ				S	Sn	05 39 51.5	+0.3
JIKM	Ikemajima	0.34	262	P	Pn	05 39 44.3	-0.1
JIKM				S	Sn	05 39 51.5	+0.2
JIRB	Irabujima	0.43	251	P	Pn	05 39 45.0	-0.4
JIRB				S	Sn	05 39 52.8	-0.1
JTJ	Tarama	0.90	249	P	Pn	05 39 51.3	+0.1
JTJ				S	Sn	05 40 03.9	+0.7
JISG	Ishigakijimahi	1.25	252	P	Pn	05 39 56.1	+0.1
JISG				S	Sn	05 40 11.2	-0.5
JIJ	Ishigaki jima	1.47	246	P	Pn	05 39 59.2	+0.2
JIJ				S	Sn	05 40 17.0	-0.2
JKRS	Kuro-shima	1.64	244	P	Pn	05 40 01.9	+0.6
JKRS				S	Sn	05 40 21.4	+0.2
JKE	Kume jima 2	1.71	38	P	Pn	05 40 02.0	-0.3
JKE				S	Sn	05 40 23.1	+0.1
IRIF	Iriomote-Funau	1.83	250	P	Pn	05 40 04.4	+0.5
HATJ	Hateruma jima	1.89	242	P	Pn	05 40 05.6	+0.9
JAGN	Aguni-jima	2.18	42	P	Pn	05 40 08.5	-0.1
YOJ	Yonaguni jima	2.43	258	*e*Pn	Pn	05 40 12.3	+0.3
JOW	Kunigami	3.03	52	Pn	Pn	05 40 20.1	-0.1
	5.3nm,0.3s,baz=177,slow=14,SNR=11						
JOW				Sn	Sn	05 40 56.2	+0.9
	24nm,0.3s,baz=156,slow=24,SNR=4.3						
JOW	Kunigami	3.03	52	*e*Pn	Pn	05 40 20.5	+0.2
JOW				*e*Sn	Sn	05 40 56.2	+0.9
TATO	Taipei	3.75	271	*e*Pn	Pn	05 40 33.1	+2.9
YHNB	Yeheng	3.87	266	*e*Pn	Pn	05 40 34.3	+2.4
YULB	Yu-li	4.25	249	*e*Pn	Pn	05 40 35.7	-1.4
SSLB	Suanglung	4.41	255	*e*Pn	Pn	05 40 39.4	0.0
TWG	Pinlang	4.68	244	*e*Pn	Pn	05 40 43.0	0.0
TPUB	Ta-pu	4.85	251	*e*Pn	Pn	05 40 46.3	+0.9
JNU	Nakatsue	9.33	28	LR	LR	05 44 52.3	
	comp=Z,21nm,20.8s,baz=301,slow=34						
KS15	Wonju Array Si	12.58	8	*e*Pn	Pn	05 42 31.9	+0.8
KSAR	Wonju Array Be	12.58	8	Pn	Pn	05 42 31.9	+0.8
KSRS	Korea Array	12.60	8	Pn	Pn	05 42 31.9	+0.6
	0.2nm,0.3s,baz=192,slow=13,SNR=3.1						
KSRS				LR	LR	05 47 35.6	
	comp=Z,41nm,18.4s,baz=162,slow=39						
MAJO	Matsushiro	15.80	40	*e*Pn	P	05 43 17.1	0.0
MJAR	Matsushiro Arr	15.80	40	Pn	P	05 43 17.1	0.0
	0.5nm,0.3s,baz=210,slow=7.0,SNR=3.5						
DAV	Davao City (W)	17.80	180	LR	LR	05 50 41.5	
	comp=Z,25nm,19.9s,baz=336,slow=38						
GUMO	Guam	21.38	118	LR	LR	05 51 42.4	
	comp=Z,16nm,20.0s,baz=137,slow=34						
SONA0	Songino Array	27.42	331	*e*P	P	05 45 13.8	-2.0
SONM	Songino Array	27.42	331	P	P	05 45 13.8	-2.0
	0.5nm,0.5s,baz=140,slow=7.8,SNR=3.6						
SONM				LR	LR	05 57 09.7	
	comp=Z,64nm,20.3s,baz=136,slow=39						
MK32	Makanchi Array	40.66	314	*e*P	P	05 47 09.1	-1.1
MKAR	Makanchi Array	40.66	314	P	P	05 47 09.1	-1.1
	0.6nm,0.5s,baz=98,slow=10,SNR=6.4						
ZALV	Zalesovo Beam	41.86	325	P	P	05 47 18.1	-1.8
	1.8nm,0.6s,baz=116,slow=8.4,SNR=7.1						
ZAA1	Zalesovo Array	41.87	325	*e*P	P	05 47 18.1	-1.8
KURK	Kurchatov	44.15	318	*e*P	P	05 47 37.3	-1.1
KURBB	Kurchatov Arra	44.17	318	P	P	05 47 37.3	-1.3
	0.9nm,0.6s,baz=107,slow=8.4,SNR=8.9						
WR1	Warramunga Arr	45.44	168	*e*P	P	05 47 49.5	+0.5

WRA	Warramunga Arr	45.44	168	P	P	05 47 49.5	+0.5
	1.1nm,0.6s,baz=349,slow=8.8,SNR=10.0						
AS31	Alice Springs	49.01	170	*e*P	P	05 48 17.6	+0.8
	0.7nm,0.5s						
ASAR	Alice Springs	49.01	170	P	P	05 48 17.6	+0.8
	0.8nm,0.6s,baz=356,slow=7.3,SNR=9.9						
ASAR				LR	LR	06 12 18.5	
	comp=Z,18nm,18.1s,baz=327,slow=40						
BVAR	Borovoye Array	49.67	319	P	P	05 48 20.3	-1.1
	0.4nm,0.4s,baz=92,slow=10,SNR=2.8						
ABKAR	Akbulak array	55.80	314	*e*P	P	05 49 06.9	+0.1
MLY	Manley	64.99	28	*e*P	P	05 50 10.8	+1.5
	3.2nm,1.2s						
MDM	Murphy Dome	66.06	28	*e*P	P	05 50 17.8	+1.6
	5.0nm,0.9s						
ILAR	Eielson Array	66.65	28	P	P	05 50 21.2	+1.3
	0.5nm,0.8s,baz=257,slow=5.4,SNR=6.3						
ILB	Eielson Array	66.65	28	*e*P	P	05 50 21.2	+1.3
ARA0	ARCESS Array S	70.31	338	*e*P	P	05 50 42.1	-0.6
ARCES	ARCESS Array B	70.31	338	P	P	05 50 42.1	-0.6
	0.5nm,0.4s,baz=82,slow=9.2,SNR=4.6						
FIA0	FINESS Array S	72.79	330	*e*P	P	05 50 57.6	-0.1
FINES	FINESS Array B	72.79	330	P	P	05 50 57.6	-0.1
	0.6nm,0.4s,baz=72,slow=6.2,SNR=5.7						
AKASG	Malin Array Be	74.95	319	P	P	05 51 09.9	-0.6
	0.3nm,0.3s,baz=57,slow=6.1,SNR=4.2						
AKBB	Malin Array Si	74.95	319	*e*P	P	05 51 09.9	-0.6
	1.9nm,0.4s						
BR101	Keskin Array S	75.93	307	*e*P	P	05 51 16.6	0.0
BRTR	Keskin Array B	75.93	307	P	P	05 51 16.6	0.0
	2.7nm,1.0s,baz=79,slow=6.4,SNR=6.1						
HFS	Hagfors	78.82	332	P	P	05 51 32.6	+0.4
	1.6nm,0.8s,baz=46,slow=10,SNR=3.6						
NB2	NORSAR Subarra	79.38	333	P	P	05 51 35.1	-0.2
	comp=Z,0.4nm,0.5s,baz=56,slow=5.6						
NOA	NORSAR Array B	79.38	333	LR	LR	06 30 13.5	
	comp=Z,15nm,19.6s,baz=235,slow=38						
YKA	Yellowknife Ar	80.64	24	P	P	05 51 42.4	+0.4
	comp=Z,0.6nm,0.7s,baz=300,slow=5.5,SNR=3.5						
YKB5	Yellowknife Ar	80.64	24	*e*P	P	05 51 42.5	+0.4
CLL	Collm	83.82	324	*e*P	P	05 51 59.0	+0.2
GEC2	GERESS Array S	84.76	322	*e*P	P	05 52 04.4	+0.6
	comp=Z,1.4nm,0.7s						
GERES	GERESS Array B	84.76	322	P	P	05 52 04.4	+0.6
	comp=Z,0.6nm,0.5s,baz=42,slow=2.2,SNR=6.3						
PLM	Palomar	96.96	48	*e*P	P	05 53 01.1	-0.5

SJA ***03*** *05:47:26.5±0.6, 27°.62S×71°.16W, h71^{km}±9^{km}, ML4.7, MW5.2*

ISCJB ***03*** *05:47:34.4±0.3, 28°.13S±0°.03×70°.42W±0°.06, h73^{km}±2^{km}, mb4.2/63, Error ellipse: s-maj=8.6km s-min=4.7km az=0.1*

GUC ***03*** *05:47:34.9±0.5, 28°.16S×70°.48W, h53^{km}±6^{km}, ML4.6*

NEIC ***03*** *05:47:35.0±0.0, 28°.17S×70°.42W, h62^{km}, mb4.4/54, ML4.6(GUC), After GUC.*

NEIC Felt [V] at Caldera, Copiapo and Tierra Amarilla; [IV] at Huasco, La Higuera and Vallenar; [III] at Alto del Carmen, Freirina and La Serena; [II] at Paihuano and Rio Hurtado.

IDC ***03*** *05:47:35.3±0.5, 28°.09S×70°.37W, h67^{km}±4^{km}, mb4.0/14, mb1 4.2/17, mb1mx4.0/35, mbtmp4.3/17, MS3.6/10, Ms1 3.6/10, ms1mx3.3/31, Error ellipse: s-maj=19.7km s-min=12.0km az=74.0*

ISC 03 05:47:34.7±0.4**, 28°.11S**±0°.04×**70°.61W**±0°.05**, h67^{km}**±3^{km}**, h67^{km}:pP-P, n142,** σ**1^{s}.81**/167**, mb4.4**/63**, 5C-1D, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VACH	Vallenar	0.48	196	⇑*i*P	Pn	05 47 47.7	+0.6
VACH				*i* S	Sn	05 47 56.0	-0.3
GO03	Copiap	0.61	33	*e*Pn	Pn	05 47 48.9	+0.4
GO03				*e*Sn	Sn	05 47 59.2	+0.6
GO03	Copiap	0.61	33	⇑*i*P	Pn	05 47 48.5	+0.1
GO03				*i* P	Pn	05 47 48.8	+0.4
GO03				*i* S	Sn	05 47 58.8	+0.3
GO03				*i* S	Sn	05 47 58.9	+0.3
GO03				IAML		05 48 00.2	
	comp=N,85μm,0.2s						
CPCH	Copiapo	0.78	17	⇓*i*P	Pn	05 47 51.3	+1.0
CPCH				*i* S	Sn	05 48 03.1	+1.2
LCO	Las Campanas	0.90	185	*e*Pn	Pn	05 47 52.7	+0.6
LCO				*e*Sn	Sn	05 48 05.8	+0.8
LCO	Las Campanas	0.90	185	*i* P	Pn	05 47 52.3	+0.1
LCO	Las Campanas	0.90	185	⇑*i*P	Pn	05 47 52.6	+0.5
LCO				*i* S	Sn	05 48 06.1	+1.0
LCO				IAML		05 48 09.6	
	comp=N,21μm,0.5s						
VCA	Vinchina	2.21	107	*i* P	Pn	05 48 12.2	+2.9
VCA				IAML		05 48 50.0	
	comp=Z,2μm,0.3s						
AROD	Rodeo	2.28	154	*i* P	Pn	05 48 13.5	+3.1
AGUA	GUANDACOL	2.31	127	*i* P	Pn	05 48 13.9	+3.3
GO02	Mina Guanaco	3.07	17	*e*Pn	Pn	05 48 21.9	+0.7
GO02				*e*Sn	Sn	05 48 40.2	-17
GO02	Mina Guanaco	3.07	17	*e*P	Pn	05 48 22.0	+0.8
GO02				*i* S	Sn	05 48 59.6	+2.7
RTLL	Cerro Villicun	3.71	151	*i* P	Pn	05 48 32.4	+2.8
RTLS	Leoncito	3.85	163	*i* P	Pn	05 48 34.4	+2.6
RTLS				IAML		05 50 00.1	
	comp=Z,1μm,0.6s						
RTCV	Cerro Valdivia	4.15	155	*i* P	Pn	05 48 38.4	+2.8
CYA	Choya	4.25	96	*i* P	Pn	05 48 37.8	+0.8
CYA				IAML		05 48 40.1	
	comp=Z,443nm,0.4s						
CYA				*i* S	Sn	05 49 31.2	+5.8
PB10	IPOC Station P	4.58	1	*e*Pn	Pn	05 48 39.9	-1.5
ROCH	El Roble	4.86	184	*e*P	Pn	05 48 45.3	-0.2
ROC1	El Roble	4.87	184	*e*Pn	Pn	05 48 45.6	0.0
ROC1	El Roble	4.87	184	*i* P	Pn	05 48 45.6	0.0
PEL	Peldehue	5.02	181	*e*Pn	Pn	05 48 48.0	+0.4
PB04	IPOC Station P	5.76	4	*e*Pn	Pn	05 48 55.5	-2.4
GO05	HualaæØ	6.97	189	*e*Pn	Pn	05 49 11.9	-2.3
PB01	IPOC Station P	7.11	8	*e*Pn	Pn	05 49 13.5	-2.7
MNMC	Minye Minye	8.98	6	*e*Pn	Pn	05 49 38.3	-3.7
CPUP	Villa Florida	11.95	85	P	Pn	05 50 19.5	-2.7
	comp=Z,0.8nm,0.3s,baz=260,slow=11,SNR=24						
CPUP				S	Sn	05 52 27.8	-6.1
	baz=275,slow=18,SNR=1.7						
LPAZ	La Paz	11.98	12	P	Pn	05 50 21.4	-1.9
	comp=Z,1.6nm,0.3s,baz=217,slow=5.6,SNR=53						
LPAZ				LR	LR	05 55 19.2	
	comp=Z,244nm,21.2s,baz=170,slow=39						
LPAZ	La Paz	11.98	12	*e*Pn	Pn	05 50 21.1	-2.2
LPAZ				*e*		05 50 21.4	
TRQA	Tornquist	12.27	146	*e*Pn	Pn	05 50 26.0	-0.6
PLCA	Paso Flores	12.60	180	P	Pn	05 50 30.3	-0.8
	comp=Z,0.2nm,0.3s,baz=5.5,slow=9.9,SNR=7.8						
PLCA				LR	LR	05 55 43.5	
	comp=Z,189nm,20.0s,baz=45,slow=39						
SIV	San Ignacio	14.94	38	P	Pn	05 50 56.4	-5.8
	comp=Z,3.3nm,0.3s,baz=242,slow=9.6,SNR=67						
SAML	Samuel	20.30	22	*e*P	P	05 52 04.4	-0.9
	comp=Z,28nm,0.8s						
SPB	Sao Paulo	21.33	83	*e*P	P	05 52 15.5	-0.7
	comp=Z,16nm,0.8s						
SPB				*e*pP	pP	05 52 30.6	+0.1
PTGA	Pitinga	29.07	22	P	P	05 53 28.4	-0.5
	comp=Z,3.1nm,0.5s,baz=186,slow=11,SNR=7.7						
PTGA				LR	LR	06 05 20.0	
	comp=Z,76nm,20.1s,baz=198,slow=37						
PTGA	Pitinga	29.07	22	*e*P	P	05 53 27.8	-1.1
	comp=Z,4.7nm,0.8s						
PRAC	Prado	31.90	352	*e*P	P	05 53 54.3	+0.3
	comp=Z,11nm,1.0s						
RPN	Rapa Nui	34.23	262	LR	LR	06 03 23.5	
	comp=Z,48nm,20.0s,baz=54,slow=28						
HELC	Santa Helena	34.43	351	*e*P	P	05 54 17.8	+1.4
	comp=Z,19nm,0.6s						
PMSA	Palmer Station	36.91	175	LR	LR	06 09 53.7	
	comp=Z,126nm,18.0s,baz=356,slow=36						
VNA3	Neumayer Olymp	54.39	160	P	P	05 56 55.2	+0.8
SNAA	Sanae	56.61	159	P	P	05 57 10.7	+0.3
SNAA	Sanae	56.61	159	P	P	05 57 11.1	+0.7
	comp=Z,5.1nm,0.9s,baz=288,slow=9.4,SNR=15						
SNAA				pP	pP	05 57 27.9	+0.2
	comp=Z,10nm,1.0s,baz=278,slow=5.8,SNR=11						
SNAA				sP	sP	05 57 35.7	+0.4
	comp=Z,14nm,0.9s,baz=268,slow=9.4,SNR=9.8						
QSPA	South Pole Qui	62.11	180	P	P	05 57 49.4	+0.9
	comp=Z,11nm,0.9s,baz=151,slow=3.2,SNR=21						
QSPA	South Pole Qui	62.11	180	*e*P	P	05 57 49.4	+0.9
QSPA				*e*P	P	05 57 49.6	+1.1
833A	Chaparral WMA,	62.53	331	*e*P	P	05 57 53.2	+1.7
	comp=Z,9.0nm,0.9s						
143A	Socs Landing,	63.62	340	*e*P	P	05 58 00.5	+1.9
	comp=Z,10nm,0.8s						
X48A	Hartselle	64.14	345	*e*P	P	05 58 02.7	+0.7
	comp=Z,5.7nm,1.1s						
HPIG		64.25	325	*e*P	P	05 58 04.8	+1.6
	comp=Z,4.3nm,1.0s						
W50A	Signal Mountai	64.48	347	*e*P	P	05 58 05.2	+0.9
	comp=Z,3.2nm,0.8s						
W50A				*e*pP	pP	05 58 24.3	+2.3
SWET	Sewanee	64.62	346	*e*P	P	05 58 06.0	+0.8
	comp=Z,4.3nm,1.0s						
SWET				*e*pP	pP	05 58 24.2	+1.3
TKL	Tuckaleechee C	64.63	348	P	P	05 58 05.4	+0.2
	comp=Z,0.8nm,0.4s,baz=157,slow=7.7,SNR=3.4						
TKL	Tuckaleechee C	64.63	348	*e*P	P	05 58 05.4	+0.2
	comp=Z,3.8nm,1.0s						
TXAR	Lajitas Array	65.29	328	P	P	05 58 11.5	+1.8
	comp=Z,1.0nm,0.8s,baz=145,slow=7.8,SNR=11						
TXAR				pP	pP	05 58 29.6	+2.1
	comp=Z,0.5nm,0.6s,baz=160,slow=8.6,SNR=5.6						
TX31	Lajitas Ar. Si	65.29	328	*e*P	P	05 58 11.5	+1.8
PBMO	Poplar Bluff	67.18	343	*e*P	P	05 58 22.5	+0.9
PBMO				*e*pP	pP	05 58 40.4	+1.0
MNTX	Cornudas Mount	68.07	328	*e*P	P	05 58 28.4	+1.1
	comp=Z,2.3nm,0.9s						
MNTX				*e*pP	pP	05 58 46.2	+1.0
FVM	French Village	68.32	343	*e*P	P	05 58 29.6	+0.9
	comp=Z,13nm,1.1s						
CCM	Cathedral Cave	68.60	343	*e*P	P	05 58 32.2	+1.8
	comp=Z,9.3nm,1.1s						
CCM				*e*pP	pP	05 58 50.2	+1.9
S39A	Bolivar	68.83	341	*e*P	P	05 58 33.3	+1.4
	comp=Z,6.6nm,0.9s						
MSTX	Muleshoe	68.85	332	*e*P	P	05 58 33.4	+1.1
	comp=Z,7.7nm,0.9s						
MSTX				*e*pP	PcP	05 58 53.9	-2.4
R40A	Maddies Statio	69.09	342	*e*P	P	05 58 34.4	+0.9
	comp=Z,8.6nm,0.8s						
R40A				*e*pP	pP	05 58 52.6	+1.2
P40A	Paris	70.20	343	*e*P	P	05 58 41.2	+1.0
	comp=Z,8.4nm,0.9s						
P40A				*e*pP	PcP	05 59 02.1	+0.4
SYO	Syowa Base	70.90	159	⇑*e*P	P	05 58 44.0	-0.2
SYO	Syowa Base	70.90	159	⇑*e*pP	pP	05 58 59.0	-3.2
N39A	Derby Farms, D	71.58	343	*e*P	P	05 58 49.1	+0.5
	comp=Z,4.8nm,0.6s						
DBIC	Dimbokro	72.16	72	P	P	05 58 52.9	+0.1
	comp=Z,4.1nm,0.6s,baz=208,slow=6.8,SNR=7.0						
DBIC				LR	LR	06 27 20.1	
	comp=Z,26nm,20.8s,baz=164,slow=33						
DBIC	Dimbokro	72.16	72	*e*P	P	05 58 52.5	-0.2
	comp=Z,8.2nm,0.8s						
T25A	Trinidad	72.25	332	*e*P	P	05 58 54.3	+1.3
	comp=Z,2.8nm,0.8s						
X16A	Lo Mia Camp, P	73.21	326	*e*P	P	05 59 00.6	+1.9
	comp=Z,4.4nm,1.1s						
SDCO	Great Sand Dun	73.22	332	*e*P	P	05 59 00.5	+1.6
	comp=Z,0.9nm,0.8s						
WUAZ	Wupatki	74.05	326	*e*P	P	05 59 05.5	+1.9
PV13	Radium Mtn., P	75.00	330	*e*P	P	05 59 10.8	+1.6
	comp=Z,3.4nm,0.9s						
SMCO	Snowmass	75.05	332	*e*P	P	05 59 11.8	+2.2
	comp=Z,4.7nm,1.0s						
U15A	North Rim	75.23	326	*e*P	P	05 59 12.7	+2.2
	comp=Z,4.5nm,1.0s						
ECSD	EROS Data Cent	75.37	341	*e*P	P	05 59 12.2	+1.4
	comp=Z,3.7nm,1.1s						
ECSD				*e*PcP	PcP	05 59 24.3	+0.5
BBSC	Beaumont Base	75.73	322	*e*P	P	05 59 15.6	+2.4
KNB	Kanab	75.95	326	*e*P	P	05 59 16.5	+1.9
	comp=Z,5.9nm,1.0s						
KNB				*e*PcP	PcP	05 59 29.5	+2.9
O20A	White River Ci	76.38	331	*e*P	P	05 59 19.0	+2.0
	comp=Z,8.8nm,1.1s						
MTPU	Mount Pierson	76.46	327	*e*P	P	05 59 19.0	+1.3
SRU	San Rafael Swe	76.55	329	*e*P	P	05 59 19.6	+1.8
	comp=Z,6.6nm,1.2s						
CCUT	Cedar City	76.64	326	*e*P	P	05 59 20.7	+2.2
	comp=Z,4.7nm,0.9s						
SHPR	Sheep Range	76.73	324	*e*P	P	05 59 20.7	+1.8
	comp=Z,4.5nm,1.1s						
MSU	Marysvale	76.83	328	*e*P	P	05 59 21.6	+2.0
P18A	Preston Nutter	76.84	330	*e*P	P	05 59 21.3	+1.6
	comp=Z,4.4nm,1.1s						
P17A	Butcher Ranch,	76.94	329	*e*P	P	05 59 19.5	-0.5
	comp=Z,4.7nm,0.9s						
KOWA	Kowa	77.09	66	P	P	05 59 21.1	-0.1
	comp=Z,4.7nm,0.7s,baz=244,slow=7.5,SNR=12						
RWWY	Rawlins	77.25	333	*e*P	P	05 59 23.0	+1.1
	comp=Z,7.6nm,1.1s						
PSUT	Pine Spring	77.65	327	*e*P	P	05 59 25.7	+1.6
	comp=Z,4.1nm,1.0s						
MPU	Maple Canyon	77.78	329	*e*P	P	05 59 26.2	+1.4
	comp=Z,5.7nm,1.2s						
JLU	Jordanelle	78.17	329	*e*P	P	05 59 28.8	+1.8
	comp=Z,3.6nm,0.9s						
R11A	Troy Canyon, C	78.36	325	*e*P	P	05 59 29.9	+1.9
	comp=Z,1.0nm,0.8s						
MAW	Mawson	78.47	164	P	P	05 59 28.6	+0.6
	comp=Z,2.3nm,0.7s,baz=216,slow=8.5,SNR=9.5						
MAW				pP	pP	05 59 46.5	+0.3
	comp=Z,3.6nm,0.8s,baz=228,slow=9.8,SNR=5.0						
MAW	Mawson	78.47	164	*e*P	P	05 59 29.2	+1.2
MAW				*e*pP	pP	05 59 46.8	+0.5
DUG	Dugway, Tooele	78.47	328	*e*P	P	05 59 30.2	+1.7
	comp=Z,2.9nm,0.9s						
HWUT	Hardware Ranch	79.03	330	*e*P	P	05 59 33.6	+1.9
	comp=Z,5.5nm,0.8s						
HWUT				*e*pP	pP	05 59 52.9	+3.0
BW06	Boulder Array	79.12	332	*e*P	P	05 59 33.0	+0.8
	comp=Z,1.9nm,1.1s						
PD31	Pinedale Array	79.12	332	*e*P	P	05 59 33.4	+1.3
PDAR	Pinedale Array	79.12	332	P	P	05 59 33.5	+1.3
	comp=Z,1.9nm,1.0s,baz=129,slow=4.7,SNR=12						
BGU	Big Grassy Mou	79.15	329	*e*P	P	05 59 33.7	+1.5
	comp=Z,2.7nm,1.1s						
SPUT	South Promonto	79.19	329	*e*P	P	05 59 34.0	+1.5
	comp=Z,5.8nm,1.0s						
TSUM	Tsumeb	79.66	106	*e*P	P	05 59 36.5	+0.8
	comp=Z,3.9nm,0.8s						
TSUM				*e*pP	pP	05 59 55.0	+1.1
HVU	Hansel Valley	79.71	329	*e*P	P	05 59 36.4	+1.1
	comp=Z,6.9nm,1.2s						
HVU				*e*pP	sP	05 59 57.9	-3.0
NV01	Mina Array Sit	79.81	324	*e*P	P	05 59 36.8	+0.8
NVAR	Mina Array Bea	79.81	324	P	P	05 59 36.8	+0.8
	comp=Z,0.7nm,0.8s,baz=146,slow=6.6,SNR=5.8						
REDW	Red Top Meadow	80.15	331	*e*P	P	05 59 38.9	+1.2
	comp=Z,3.9nm,1.1s						
TPAW	Teton Pass	80.29	331	*e*P	P	05 59 39.9	+1.3
	comp=Z,3.4nm,1.0s						
FXWY	Fox Creek	80.45	331	*e*P	P	05 59 40.4	+1.1
	comp=Z,2.1nm,1.1s						
TOA0	Torodi Ar. Sit	81.04	70	*e*P	P	05 59 42.5	-0.4
TORD	Torodi Ar. Bea	81.04	70	P	P	05 59 41.1	-1.8
	comp=Z,2.3nm,0.8s,baz=249,slow=4.4						
TORD				LR	LR	06 34 05.1	
	comp=Z,29nm,20.9s,baz=295,slow=34						
TOA1	Torodi Ar. Sit	81.05	70	*e*P	P	05 59 41.1	-1.8
LAO	LASA Array	81.12	336	*e*P	P	05 59 44.0	+1.4
	comp=Z,7.6nm,1.0s						
ULM	Lac du Bonnet	81.17	344	P	P	05 59 43.0	+0.4
	comp=Z,2.9nm,0.7s,baz=169,slow=1.9,SNR=2.8						
BOSA	Boshof	81.72	118	P	P	05 59 46.5	0.0
	comp=Z,2.6nm,0.8s,baz=277,slow=8.2,SNR=4.5						
BOSA				pP	pP	06 00 04.3	-0.5
	comp=Z,3.5nm,0.7s,baz=244,slow=2.9,SNR=4.1						
HLID	Hailey	81.86	329	*e*P	P	05 59 48.6	+1.8
	comp=Z,2.8nm,1.1s						
MCMT	McKenzie Canyo	82.18	331	*e*P	P	05 59 50.1	+1.6
J08A	Circle Bar Ran	83.59	327	*e*P	P	05 59 57.5	+1.8
	comp=Z,3.0nm,0.8s						
MDT	Midelt	87.14	50	LR	LR	06 37 34.4	
	comp=Z,30nm,20.7s,baz=252,slow=34						
AFI	Afiamalu	93.11	253	LR	LR	06 32 04.1	
	comp=Z,29nm,18.4s,baz=106,slow=29						
YKA	Yellowknife Ar	96.89	341	P	P	06 00 58.5	+0.6
	comp=Z,0.5nm,0.7s,baz=150,slow=5.2,SNR=2.8						
KEST	Kesra	98.46	54	LR	LR	06 46 47.1	
	comp=Z,70nm,20.2s,baz=284,slow=36						
ASAR	Alice Springs	123.36	207	PKP	PKPdf	06 06 24.2	-0.6
	comp=Z,0.9nm,0.6s,baz=123,slow=1.4,SNR=8.5						
AS31	Alice Springs	123.36	207	*e*PKPdf	PKPdf	06 06 24.2	-0.6
WR1	Warramunga Arr	126.48	210	*e*PKPdf	PKPdf	06 06 30.9	+0.1
WRA	Warramunga Arr	126.48	210	PKP	PKPdf	06 06 30.9	+0.1
	comp=Z,1.3nm,0.5s,baz=159,slow=1.7,SNR=17						
H11S2	WAKE ISLAND Hy	126.91	273	T	T	08 26 02.0	
	baz=112,slow=75,SNR=71						
H11S1	WAKE ISLAND Hy	126.92	273	T	T	08 26 02.9	
	baz=112,slow=75,SNR=86						
H11S3	WAKE ISLAND Hy	126.92	273	T	T	08 26 03.4	
	baz=112,slow=75,SNR=83						
H11N3	WAKE ISLAND Hy	127.17	274	T	T	08 26 19.8	
	baz=113,slow=75,SNR=8.5						
H11N1	WAKE ISLAND Hy	127.18	274	T	T	08 26 20.9	
	baz=113,slow=75,SNR=8.5						
H11N2	WAKE ISLAND Hy	127.18	274	T	T	08 26 20.9	
	baz=113,slow=75,SNR=11						
KURK	Kurchatov	147.59	37	*e*PKPdf	PKPbc	06 07 10.1	-1.0
KURBB	Kurchatov Arra	147.60	38	PKPbc	PKPbc	06 07 10.1	-1.0
	comp=Z,2.5nm,0.6s,baz=304,slow=3.3,SNR=20						
ZAA1	Zalesovo Array	148.53	28	*e*PKPdf	PKPdf	06 07 10.2	+0.4
ZAA1				*e*PKPbc	PKPbc	06 07 14.1	+0.6
ZALV	Zalesovo Beam	148.53	28	PKP	PKPdf	06 07 10.2	+0.4
	comp=Z,10nm,0.6s,baz=306,slow=3.4,SNR=7.0						
ZALV				PKPbc	PKPbc	06 07 14.1	+0.6
	comp=Z,10nm,0.6s,baz=300,slow=3.6,SNR=28						
KSH	Kashi	150.15	59	*e*PKPbc	PKPdf	06 07 09.7	-3.4
KSH				*e*pPKP	pPKPbc	06 07 36.9	-0.5
KSH				sPKP		06 07 46.5	
KSH				PKS	PKSdf	06 10 42.7	-5.3
KSH				PP	PP	06 10 51.8	-2.0
KSH				SKS	SKSdf	06 14 05.9	-9.4
KSH				AMB	AMB		
	comp=Z,140nm,4.8s						
KSH				LR	LR		
	comp=N,59nm,7.2s						
KSH				LR	LR		
	comp=E,140nm,8.7s						
MK32	Makanchi Array	151.74	41	*e*PKPbc	PKPbc	06 07 22.2	+0.7
MKAR	Makanchi Array	151.74	41	PKPbc	PKPbc	06 07 22.2	+0.7
	comp=E,3.2nm,0.6s,baz=316,slow=1.8,SNR=31						
MKAR				pPKPbc	pPKPbc	06 07 40.9	+0.1
	comp=E,2.3nm,0.6s,baz=305,slow=2.0,SNR=7.1						
KLR	Kul’dur	152.81	327	PKPbc	PKPbc	06 07 23.7	-0.1
	comp=E,0.1nm,0.6s,baz=348,slow=9.3,SNR=3.2						
MJAR	Matsushiro Arr	154.31	296	PKPab	PKPab	06 07 42.8	+1.0
	comp=E,0.6nm,0.3s,baz=110,slow=1.4,SNR=4.5						
MAJO	Matsushiro	154.31	296	*e*PKPab	PKPab	06 07 42.8	+1.0
SONA0	Songino Array	160.17	6	*e*PKPab	PKPab	06 08 08.6	+1.9
SONM	Songino Array	160.17	6	PKPab	PKPab	06 08 08.6	+1.9
	comp=E,0.6nm,0.7s,baz=0.0,slow=1.4,SNR=4.0						

MOS ***03*** *05:51:23.7±0.9, 53°.96N×169°.18E, h9^{km}, mb4.2/14, Error ellipse: s-maj=9.7km s-min=6.3km az=27.1*

IDC ***03*** *05:51:25.2±0.9, 54°.22N×169°.16E, h0^{km}, mb3.9/18, mb1 4.0/19, mb1mx3.8/73, mbtmp3.9/19, MS3.4/2, Ms1 3.4/2, ms1mx2.5/69, Error ellipse: s-maj=25.2km s-min=15.2km az=180.0*

ISCJB ***03*** *05:51:26.1±0.3, 53°.95N±0°.04×168°.98E±0°.03, h25^{km}, mb3.9/25, MS3.5/2, Error ellipse: s-maj=6.2km s-min=2.7km az=1.1*

NEIC ***03*** *05:51:26.9±0.3, 54°.20N×169°.17E, h10^{km}, mb4.0/9, Error ellipse: s-maj=7.5km s-min=4.0km az=177.0*

KRSC ***03*** *05:51:27.0±1.3, 53°.87N×168°.39E, h7^{km}±34^{km}, ML4.1*

ISC 03 05:51:27.8±0.5**, 53°.92N**±0°.06×**169°.02E**±0°.05**, h25^{km}, n121,** σ**1^{s}.32**/135**, mb4.0**/25**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	Bering	2.19	307	*e*P	Pn	05 52 01.8	-0.8
BKI				*e*S	Sn	05 52 26.8	-2.1
BKI	Bering	2.19	307	PN	Pn	05 52 01.8	-0.8
BKI				S	Sn	05 52 26.8	-2.1
SMY	Shemya	3.27	109	*e*Pn	Pn	05 52 17.4	0.0
SMY	Shemya	3.27	109	*e*PN	Pn	05 52 17.4	0.0
KBTR	Krutoberegovo	4.24	305	*e*P	Pn	05 52 31.4	+0.7
KBTR				*e*S	Sn	05 53 19.7	+0.3
KBTR	Krutoberegovo	4.24	305	PN	Pn	05 52 31.4	+0.7
MKZ	Mys Kozlova	4.33	281	*e*P	Pn	05 52 32.1	+0.2
MKZ				*e*S	Sn	05 53 19.1	-2.3
MKZ	Mys Kozlova	4.33	281	PN	Pn	05 52 32.1	+0.2
SMKR	Semkarok	5.08	305	*e*P	Pn	05 52 43.9	+1.6
SMKR				*e*S	Sn	05 53 41.6	+1.4
SMKR	Semkarok	5.08	305	PN	Pn	05 52 43.9	+1.6
ZLN	Zelenaya	5.18	297	*e*S	Sn	05 53 43.5	+0.8
BDR	Baidarnaya	5.20	304	*e*P	Pn	05 52 45.8	+1.8
BDR				*e*S	Sn	05 53 44.1	+1.0
BDR	Baidarnaya	5.20	304	PN	Pn	05 52 45.8	+1.8
KZV	Kizimen	5.22	287	*e*P	Pn	05 52 44.6	+0.2
KZV				*e*S	Sn	05 53 42.3	-1.5
KZV	Kizimen	5.22	287	PN	Pn	05 52 44.6	+0.2
SRKR	Sorokina	5.26	305	*e*P	Pn	05 52 46.6	+1.8
SRKR				*e*S	Sn	05 53 45.3	+0.7
SRKR	Sorokina	5.26	305	PN	Pn	05 52 46.6	+1.8
BZMR	Bezymyannaya	5.32	296	*e*P	Pn	05 52 46.6	+0.9
BZMR	Bezymyannaya	5.32	296	PN	Pn	05 52 46.6	+0.9
BZWR	Bezymyannyi-We	5.33	296	*e*P	Pn	05 52 47.1	+1.3
BZWR	Bezymyannyi-We	5.33	296	PN	Pn	05 52 47.1	+1.3
TUMR	Tumrok	5.34	288	*e*P	Pn	05 52 46.7	+0.8
TUMR				*e*S	Sn	05 53 45.1	-1.5
TUMR	Tumrok	5.34	288	PN	Pn	05 52 46.7	+0.8
KLY	Klyuchi	5.37	300	*e*P	Pn	05 52 47.3	+1.1
KLY	Klyuchi	5.37	300	PN	Pn	05 52 47.3	+1.1
KMNR	Kamenistaya	5.40	293	*e*P	Pn	05 52 47.3	+0.5
KMNR				*e*S	Sn	05 53 46.0	-2.1
KMNR	Kamenistaya	5.40	293	PN	Pn	05 52 47.3	+0.5
SPN	Mys Shipunski	5.43	265	*e*P	Pn	05 52 47.9	+0.8
SPN				*e*S	Sn	05 53 47.1	-1.7
SPN	Mys Shipunski	5.43	265	PN	Pn	05 52 47.9	+0.8
KPT	Kopyto	5.47	296	*e*P	Pn	05 52 49.3	+1.6
KPT				*e*S	Sn	05 53 48.9	-0.9
KPT	Kopyto	5.47	296	PN	Pn	05 52 49.3	+1.6
KII	Karymskiy	5.65	275	*e*P	Pn	05 52 51.1	+0.9
KII	Karymskiy	5.65	275	PN	Pn	05 52 51.1	+0.9
NLC	Nalytchevo	5.82	267	*e*P	Pn	05 52 52.8	+0.4
NLC				*e*S	Sn	05 53 56.1	-2.1
NLC	Nalytchevo	5.82	267	PN	Pn	05 52 52.8	+0.4
SDLR	Sedlovina	6.07	268	*e*P	Pn	05 52 56.7	+0.7
SDLR	Sedlovina	6.07	268	PN	Pn	05 52 56.7	+0.7
UGLR	Uglovaya	6.12	267	*e*P	Pn	05 52 56.8	+0.2
UGLR	Uglovaya	6.12	267	PN	Pn	05 52 56.8	+0.2
KRER	Koryakskii	6.15	268	*e*P	Pn	05 52 58.8	+1.7
KRER	Koryakskii	6.15	268	PN	Pn	05 52 58.8	+1.7
AVH	Avacha	6.16	268	*e*P	Pn	05 52 57.4	+0.3
AVH	Avacha	6.16	268	PN	Pn	05 52 57.4	+0.3
PET	Petropavlovsk	6.26	266	*e*P	Pn	05 52 59.1	+0.7
PET				*e*S	Sn	05 54 06.4	-2.6
PET	Petropavlovsk	6.26	266	PN	Pn	05 52 59.1	+0.7
ESO	Esso	6.28	293	*e*P	Pn	05 53 00.6	+1.8
ESO	Esso	6.28	293	PN	Pn	05 53 00.6	+1.8
RUS	Russkaya	6.49	261	*e*P	Pn	05 53 02.4	+0.8
RUS				*e*S	Sn	05 54 11.4	-3.4
RUS	Russkaya	6.49	261	PN	Pn	05 53 02.4	+0.8
GNL	Ganaly	6.57	273	*e*P	Pn	05 53 04.5	+1.7
GNL				*e*S	Sn	05 54 16.2	-0.7
GNL	Ganaly	6.57	273	PN	Pn	05 53 04.5	+1.7
KRMR	Karymshinskiy	6.61	265	*e*P	Pn	05 53 04.7	+1.5
KRMR				*e*S	Sn	05 54 16.0	-1.7
KRMR	Karymshinskiy	6.61	265	PN	Pn	05 53 04.7	+1.5
MTVR	Mutnovka	6.67	262	*e*P	Pn	05 53 05.4	+1.2
MTVR				*e*S	Sn	05 54 18.3	-1.1
MTVR	Mutnovka	6.67	262	PN	Pn	05 53 05.4	+1.2
PEA1	Petropavlovsk-	6.80	268	*e*Pn	Pn	05 53 08.5	+2.6
PEA1				*e*Sn	Sn	05 54 23.6	+1.1
PEA0B	Petropavlovsk-	6.80	268	*e*Pn	Pn	05 53 08.6	+2.7
PETK	Petropavlovsk-	6.80	268	Pn	Pn	05 53 08.5	+2.5
	baz=98,slow=20						
PETK				Sn	Sn	05 54 23.6	+1.1
	baz=61,slow=26						
PETK	Petropavlovsk-	6.80	268	*e*PN	Pn	05 53 08.3	+2.4
ASAK	Asacha	6.87	262	*e*P	Pn	05 53 07.5	+0.7
ASAK	Asacha	6.87	262	PN	Pn	05 53 07.5	+0.7
KDTR	Khodutka, Kamc	6.96	257	*e*P	Pn	05 53 09.0	+1.0
KDTR				*e*S	Sn	05 54 24.5	-1.7
PAU	Pauzhetka	7.82	257	*e*P	Pn	05 53 21.1	+1.3
PAU	Pauzhetka	7.82	257	PN	Pn	05 53 21.1	+1.3
ATKA	Atka Island	10.25	93	*e*Pn	Pn	05 53 53.0	-0.1
KDAK	Kodiak Island	21.69	64	P	P	05 56 15.2	-1.2
	3.5nm,0.8s,baz=299,slow=10,SNR=4.4						
KDAK	Kodiak Island	21.69	64	*e*P	P	05 56 15.2	-1.2
	6.6nm,1.1s						
PPLA	Purkeypile	21.89	50	*e*P	P	05 56 20.5	+1.9
	6.4nm,1.1s						
TRF	Thorofare Moun	22.80	49	*e*P	P	05 56 27.8	-0.6
	4.4nm,1.1s						

TRF				eSn	Sn	06 00 55.0	+3.6
COLD	Coldfoot	23.50	40	eP	P	05 56 34.4	-0.9
	3.0nm,0.6s						
TOLK	Toolik Lake Re	24.11	36	eP	P	05 56 40.4	-0.8
	11nm,0.6s						
IL1	Eielson Array	24.42	46	eP	P	05 56 43.5	-0.4
ILAR	Eielson Array	24.42	46	P	P	05 56 42.0	-1.8
	0.8nm,0.5s,baz=252,slow=7.4,SNR=17						
ILB	Eielson Array	24.42	46	eP	P	05 56 42.4	-1.5
TIXI	Tiksi	24.77	331	P	P	05 56 46.7	-0.4
	2.2nm,0.5s,baz=125,slow=14,SNR=3.6						
EGAK	Eagle	26.87	46	eP	P	05 57 04.3	-1.7
	3.0nm,0.8s						
INK	Inuvik	29.91	39	P	P	05 57 31.7	-1.4
	1.5nm,0.7s,baz=259,slow=8.5,SNR=4.2						
H11N2	WAKE ISLAND Hy	34.16	184	T	T	06 34 39.0	
	baz=2.5,slow=76,SNR=408						
H11N3	WAKE ISLAND Hy	34.18	184	T	T	06 34 40.0	
	baz=2.5,slow=76,SNR=280						
H11N1	WAKE ISLAND Hy	34.18	184	T	T	06 34 34.7	
	baz=2.5,slow=76,SNR=643						
H11S1	WAKE ISLAND Hy	35.39	184	T	T	06 36 08.5	
	baz=2.6,slow=76,SNR=213						
H11S3	WAKE ISLAND Hy	35.40	184	T	T	06 36 11.9	
	baz=2.6,slow=76,SNR=62						
H11S2	WAKE ISLAND Hy	35.40	184	T	T	06 36 10.1	
	baz=2.6,slow=76,SNR=121						
YKA	Yellowknife Ar	38.85	46	P	P	05 58 49.5	-0.8
	0.4nm,0.7s,baz=291,slow=7.3,SNR=3.1						
YKA	Yellowknife Ar	38.85	46	P	P	05 58 49.5	-0.8
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
YKB5	Yellowknife Ar	38.85	46	eP	P	05 58 49.5	-0.8
GUMO	Guam	44.51	215	LR	LR	06 16 53.2	
	comp=Z,17nm,20.8s,baz=125,slow=34						
SPA0	Spitsbergen Ar	47.11	353	eP	P	05 59 55.6	-1.4
SPITS	Spitsbergen Ar	47.11	353	P	P	05 59 55.6	-1.4
	comp=Z,1.9nm,0.7s,baz=19,slow=9.2,SNR=4.1						
SPITS	Spitsbergen Ar	47.11	353	P	P	05 59 55.6	-1.4
SPITS				pmax	pmax		
	comp=Z,1.0nm,0.6s						
NV01	Mina Array Sit	50.40	77	eP	P	06 00 23.4	+0.3
NVAR	Mina Array Bea	50.40	77	P	P	06 00 23.4	+0.4
	comp=Z,0.4nm,0.7s,baz=300,slow=7.2,SNR=4.2						
MDPB	Devils Postpil	50.49	78	eP	P	06 00 26.3	+2.5
KURK	Kurchatov	51.70	306	eP	P	06 00 33.5	+1.1
KURK	Kurchatov	51.70	306	P	P	06 00 33.5	+1.1
KURBB	Kurchatov Arra	51.81	306	P	P	06 00 33.5	+0.3
	comp=Z,0.4nm,0.7s,baz=55,slow=7.4,SNR=4.0						
PD31	Pinedale Array	52.38	67	eP	P	06 00 38.1	+0.3
PDAR	Pinedale Array	52.38	67	P	P	06 00 38.1	+0.3
	comp=Z,0.9nm,0.7s,baz=339,slow=4.3,SNR=3.7						
BVAR	Borovoye Array	53.92	312	P	P	06 00 49.6	+0.9
	comp=Z,0.7nm,0.6s,baz=71,slow=9.3,SNR=5.2						
ARA0	ARCESS Array S	54.02	345	eP	P	06 00 48.1	-1.1
ARCES	ARCESS Array B	54.02	345	P	P	06 00 48.1	-1.1
	comp=Z,3.4nm,1.1s,baz=8.8,slow=8.7,SNR=5.1						
EML	El Monte Cty P	55.12	81	eP	P	06 00 56.7	-1.0
FIA0	FINESS Array S	61.30	341	eP	P	06 01 39.8	-0.6
FIA0	FINESS Array S	61.30	341	eP	P	06 01 39.8	-0.6
FINES	FINESS Array B	61.30	341	P	P	06 01 39.8	-0.6
	comp=Z,1.0nm,0.7s,baz=8.7,slow=13,SNR=2.9						
SCHQ	Schefferville	62.26	33	P	P	06 01 46.0	-1.1
	comp=Z,2.0nm,0.8s,baz=293,slow=7.7,SNR=4.3						
NB2	NORSAR Subarra	64.04	348	P	P	06 01 58.2	-0.6
	comp=Z,0.6nm,0.5s,baz=15,slow=6.9						
HFS	Hagfors	64.60	347	P	P	06 02 01.4	-1.0
	comp=Z,0.9nm,0.6s,baz=60,slow=8.5,SNR=4.4						
TX31	Lajitas Ar. Si	65.34	74	eP	P	06 02 08.3	+0.5
TX31				eP	P	06 02 08.8	+0.9
LTX	Lajitas	65.34	74	eP	P	06 02 08.5	+0.7
LTX	Lajitas	65.34	74	eP	P	06 02 08.5	+0.7
TXAR	Lajitas Array	65.34	74	P	P	06 02 08.5	+0.7
	comp=Z,1.8nm,0.6s,baz=304,slow=5.0,SNR=30						
AKASG	Malin Array Be	70.43	334	P	P	06 02 39.1	-0.2
	comp=Z,1.5nm,0.6s,baz=25,slow=6.3,SNR=3.5						
AKBB	Malin Array Si	70.43	334	eP	P	06 02 39.1	-0.3
	comp=Z,2.2nm,1.0s						
AKBB	Malin Array Si	70.43	334	eP	P	06 02 39.1	-0.3
AKBB				pmax	pmax		
	comp=Z,2.0nm,1.0s						
PSI	Prapat	76.10	255	LR	LR	06 39 47.7	
	comp=Z,68nm,18.1s,baz=270,slow=38						
BR101	Keskin Array S	79.14	327	eP	P	06 03 30.7	+0.6
BRTR	Keskin Array B	79.14	327	P	P	06 03 30.7	+0.6
	comp=Z,0.9nm,0.7s,baz=36,slow=3.4,SNR=3.3						
WR1	Warramunga Arr	79.38	213	eP	P	06 03 34.0	+2.6
WRA	Warramunga Arr	79.38	213	P	P	06 03 34.0	+2.6
	comp=Z,1.0nm,0.9s,baz=26,slow=6.2,SNR=2.8						
WRA	Warramunga Arr	79.38	213	P	P	06 03 34.0	+2.6
WRA				pmax	pmax		
	comp=Z,1.0nm,1.0s						

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*SKO **03** 05:52:20.5, 41°.27N×20°.26E, h11^{km}, M2.1, ML2.6*
*TIR **03** 05:52:21.0, 41°.26N×20°.40E, h2^{km}, Md3.0/4*
*ATH **03** 05:52:21.4, 41°.34N×20°.36E, h10^{km}±3^{km}, ML2.2/4, Error ellipse: s-maj=4.0km s-min=1.7km az=142.0*
*PDG **03** 05:52:22.4±0.1, 41°.25N×20°.34E, h3^{km}, ML2.7/10, Error ellipse: s-maj=0.3km s-min=0.4km az=0.0*
*THE **03** 05:52:23.5, 41°.26N×20°.38E, h0^{km}±3^{km}, ML2.3/3, Error ellipse: s-maj=3.6km s-min=1.0km az=78.0*
*CSEM **03** 05:52:23.4±0.2, 41°.25N×20°.36E, h2^{km}, ML2.3, Error ellipse: s-maj=7.0km s-min=3.3km az=60.0*
ISC 03 05:52:22.7±1.0, **41°.30N**±0°.02×**20°.36E**±0°.02, **h13**^{km}±9^{km}, **n93, σ1^{s}.83**/143, **18C-9D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHR	Ohrid	0.38	119	iPg	Pg	05 52 29.9	-0.5
OHR				iSg	Sb	05 52 36.3	-1.0
OHR				eLg	Lg	05 52 37.5	
	comp=N,531nm,0.3s						
PHP	Peshkopia	0.39	9	P	Pb	05 52 31.1	-0.5
PHP				S	Sb	05 52 38.4	+0.8
PHP	Peshkopia	0.39	9	iPg	Pb	05 52 30.0	-1.6
PHP	Peshkopia	0.39	9	P	Pb	05 52 31.1	-0.5
PHP				iSg	Sb	05 52 38.0	+0.4
PHP	Peshkopia	0.39	9	iPG	Pb	05 52 30.0	-1.6
PHP				iSG	Sb	05 52 38.0	+0.4
KRUS	Krusevo	0.67	84	iPg	Pb	05 52 34.8	-1.7
KRUS				iSg	Sb	05 52 46.0	+0.3
KBN	Korca	0.75	154	P	Pb	05 52 37.0	-0.7
KBN				S	Sb	05 52 48.1	+0.2
KBN	Korca	0.75	154	P	Pb	05 52 37.0	-0.7
KBN				S	Sb	05 52 48.1	+0.2
BIA	Bitola	0.78	111	P	Pb	05 52 37.4	-0.8
BIA				S	Sb	05 52 49.0	+0.2
BIA	Bitola	0.78	111	iPg	Pb	05 52 37.4	-0.8
BIA	Bitola	0.78	111	P	Pb	05 52 37.4	-0.8
PUK	Puka	0.82	335	iPg	Pn	05 52 38.0	-2.1
PUK				iSg	Sn	05 52 52.0	-0.2
PUK	Puka	0.82	335	iPG	Pn	05 52 38.0	-2.1
PUK				iSG	Sn	05 52 52.0	-0.2
FNA	Florina	0.93	123	P	Pg	05 52 39.3	-1.4
FNA				S	Sb	05 52 52.9	-0.1
FNA				AML	AML	05 52 57.3	
	comp=N,1087µm,0.3s						
FNA				AML	AML	05 52 58.8	
	comp=E,928µm,0.4s						
FNA	Florina	0.93	123	P	Pg	05 52 39.4	-1.2
FNA				S	Sn	05 52 54.2	-0.6
FNA	Florina	0.93	123	P	Pg	05 52 39.4	-1.2
FNA				S	Sb	05 52 52.8	-0.2
NEST	Nestorio	1.03	149	P	Pg	05 52 41.4	-1.2
NEST				S	Sg	05 52 55.3	-0.7
NEST				AML	AML	05 53 00.2	
	comp=E,190µm,0.3s						
NEST				AML	AML	05 53 00.2	
	comp=N,191µm,0.3s						
NEST	Nestorio	1.03	149	P	Pg	05 52 41.5	-1.1
NEST				S	Sn	05 52 57.2	-0.1
NEST	Nestorio	1.03	149	P	Pg	05 52 41.5	-1.1
NEST				S	Sg	05 52 55.7	-0.3
SKO	Skopje	1.05	50	P	Pn	05 52 45.1	+1.8
SKO	Skopje	1.05	50	ePg	Pn	05 52 42.4	-0.9
SKO				eSg	Sn	05 52 58.3	+0.5
SKO	Skopje	1.05	50	P	Pn	05 52 45.1	+1.8
ULC	Ulcinj	1.07	309	⇑iPg	Pn	05 52 42.3	-1.2
ULC				eSg	Sn	05 52 59.5	+1.3
ULC	Ulcinj	1.07	309	⇑iPg	Pn	05 52 42.3	-1.2
ULC				eSg	Sn	05 52 59.5	+1.3
BCI	Bajram Curri	1.09	349	iPN	Pn	05 52 52.4	+8.7
BCI				iSN	Sn	05 53 20.0	+21
DRME	Dracevica, Mon	1.25	316	⇑iPg	Pg	05 52 46.0	-0.8
DRME				eSg	Sn	05 53 06.0	+3.4
DRME	Dracevica, Mon	1.25	316	ePn	Pg	05 52 45.7	-1.1
DRME	Dracevica, Mon	1.25	316	⇑iPg	Pg	05 52 46.0	-0.8
DRME				eSg	Sn	05 53 06.0	+3.4
PENT	Pentalofos	1.25	151	P	Pg	05 52 46.6	-0.2
PENT				S	Sn	05 53 03.3	+0.4
PENT				AML	AML	05 53 12.0	
	comp=N,113µm,0.6s						
PENT				AML	AML	05 53 12.5	
	comp=E,96µm,0.5s						
PENT	Pentalofos	1.25	151	P	Pg	05 52 46.1	-0.7
PENT				S	Sn	05 53 03.3	+0.4
PVY	Plav	1.33	347	⇑iPg	Pg	05 52 47.7	-0.6
PVY				eSg	Sn	05 53 09.3	+4.5
PVY	Plav	1.33	347	⇑iPg	Pg	05 52 47.7	-0.6
PVY				eSg	Sn	05 53 09.3	+4.5
PDG	Podgorica	1.40	324	P	Pg	05 52 48.9	-0.7
PDG				S	Sg	05 53 11.7	+3.9
PDG	Podgorica	1.40	324	ePn	Pg	05 52 48.7	-0.9
PDG				eSg	Sg	05 53 11.1	+3.3
TTG	Podgorica	1.40	324	⇓iPg	Pg	05 52 48.9	-0.7
TTG				eSg	Sg	05 53 11.1	+3.3
STIP	Stip	1.43	73	ePn	Pg	05 52 51.6	+1.4
STIP				iSg	Sg	05 53 15.6	+6.9
KZN	Kozani	1.46	132	P	Pg	05 52 49.8	-1.1
KZN	Kozani	1.46	132	P	Pg	05 52 49.7	-1.1
BUM	Brajici-Budva	1.48	313	⇑iPg	Pg	05 52 50.1	-1.1
BUM				eSg	Sg	05 53 14.0	+3.5
BUM	Brajici-Budva	1.48	313	⇑iPg	Pg	05 52 50.1	-1.1
BUM				eSg	Sg	05 53 14.0	+3.5
KPRO	Kipourio	1.55	150	P	Pn	05 52 48.6	-1.5
KPRO	Kipourio	1.55	150	P	Pn	05 52 49.8	-0.3
GRG	Griva	1.58	102	P	Pg	05 52 51.7	-1.4
GRG	Griva	1.58	102	P	Pg	05 52 51.5	-1.6
GRG	Griva	1.58	102	P	Pg	05 52 51.5	-1.6
BEY	Berane	1.61	348	⇑iPn	Pg	05 52 53.1	-0.5
BEY				eSn	Sg	05 53 17.8	+3.3
IVA	Berane	1.61	348	⇑iPn	Pg	05 52 53.1	-0.5
IVA				eSn	Sg	05 53 17.8	+3.3
KEK	Kerkira	1.64	195	P	Pb	05 52 52.4	-0.5
KEK				S	Sg	05 53 16.8	+1.2
KEK				AML	AML	05 53 23.0	
	comp=N,89µm,0.8s						
KEK				AML	AML	05 53 26.6	
	comp=E,119µm,0.8s						
KEK	Kerkira	1.64	195	P	Pb	05 52 52.7	-0.2
KEK				S	Sg	05 53 16.4	+0.9
CEME	Cevo	1.65	320	⇓iPn	Pg	05 52 53.0	-1.3
CEME				eSn	Sg	05 53 18.6	+2.9
CEME	Cevo	1.65	320	⇓iPn	Pg	05 52 53.0	-1.3
CEME				eSn	Sg	05 53 18.6	+2.9
VAY	Valandovo	1.67	89	iPn	Pg	05 52 53.0	-1.7
VAY				eLg	Lg	05 53 17.8	
	comp=N,54nm,0.8s						
VAY				eLg	Lg	05 53 18.3	
	comp=E,30nm,0.6s						
KOME	Kolasin	1.67	338	⇓iPn	Pg	05 52 53.8	-1.1
KOME				eSn	Sg	05 53 19.0	+2.4
KOME	Kolasin	1.67	338	⇓iPn	Pg	05 52 53.8	-1.1
KOME				eSn	Sg	05 53 19.0	+2.4
IGT	Igoumenitsa	1.77	181	P	Pg	05 52 55.9	-0.7
IGT	Igoumenitsa	1.77	181	P	Pb	05 52 55.3	+0.3
NKME	Niksic	1.80	325	⇑iPn	Pg	05 52 55.7	-1.6
NKME				eSn	Sg	05 53 22.2	+1.5
NKME	Niksic	1.80	325	⇑iPn	Pg	05 52 55.7	-1.6
NKME				eSn	Sg	05 53 22.2	+1.5
HCY	Herceg Novi	1.80	310	⇑iPn	Pg	05 52 55.9	-1.5
HCY				eSn	Sg	05 53 22.1	+1.3
HCY	Herceg Novi	1.80	310	⇑iPn	Pg	05 52 55.9	-1.5
HCY				eSn	Sg	05 53 22.1	+1.3
NKY	Niksic	1.82	327	⇓iPn	Pg	05 52 56.1	-1.6
NKY				eSn	Sg	05 53 22.7	+1.3
NKY	Niksic	1.82	327	⇓iPn	Pg	05 52 56.1	-1.6
NKY				eSn	Sg	05 53 22.7	+1.3
BARS	Barje	1.86	35	ePn	Pg	05 52 57.6	-0.9
KNT	Kendrikon	1.92	93	P	Pb	05 52 55.5	-2.2
KNT	Kendrikon	1.92	93	P	Pb	05 52 55.9	-1.7
SJES	Sjenica	1.98	352	ePn	Pg	05 53 01.4	+0.6
TREB	Trebinje	2.06	314	ePn	Pg	05 52 59.6	-2.7
BRY	Bratogost	2.10	320	⇓iPn	Pb	05 53 00.0	-0.7
BRY				eSn	Sg	05 53 29.2	-1.0
BRY	Bratogost	2.10	320	⇓iPn	Pb	05 53 00.0	-0.7
BRY				eSn	Sg	05 53 29.2	-1.0
PLE	Pljevlja	2.15	341	⇑iPn	Pg	05 53 01.0	-3.0
PLE				eSn	Sg	05 53 30.9	-1.1
PLE	Pljevlja	2.15	341	⇑iPn	Pg	05 53 01.0	-3.0
PLE				eSn	Sg	05 53 30.9	-1.1
UPM	Unac-Piva	2.19	331	⇑iPn	Pb	05 53 01.4	-0.9
UPM				eSn	Sg	05 53 31.6	-1.5
UPM	Unac-Piva	2.19	331	⇑iPn	Pb	05 53 01.4	-0.9
UPM				eSn	Sg	05 53 31.6	-1.5
DSL	Palaion Diasel	2.24	165	P	Pb	05 53 01.3	-1.7
DSL	Palaion Diasel	2.24	165	P	Pb	05 53 01.3	-1.7
IVAS	Ivanjica	2.28	356	ePn	Pg	05 53 04.2	-2.3
LKD2	Lefkada island	2.52	175	P	Pn	05 53 04.2	+0.8
LKD2	Lefkada island	2.52	175	P	Pn	05 53 04.8	+1.4
STON	Ston	2.53	309	ePn	Pb	05 53 05.7	-2.3
STON	Ston	2.53	309	ePn	Pg	05 53 08.6	-2.6
BOVS	Bovan	2.54	23	ePn	Pg	05 53 08.4	-3.0
ZAPS	Zavoj	2.60	40	ePn	Pb	05 53 06.5	-2.7
EVR	Evrytania	2.63	154	P	Pb	05 53 07.9	-1.9
EVR	Evrytania	2.63	154	P	Pb	05 53 07.3	-2.5
BBLS	Lazići	2.66	345	ePn	Pb	05 53 09.1	-1.2
DIVS	Divibare	2.81	355	ePn	Pb	05 53 11.8	-1.1
FSK	Fiskardo	2.84	177	P	Pn	05 53 09.4	+1.6
ZAGS	Zajecar	2.87	28	ePn	Pb	05 53 10.4	-3.4
ANX	Ano Chora	2.96	156	P	Pn	05 53 11.8	+2.3
ANX	Ano Chora	2.96	156	P	Pn	05 53 11.6	+2.1
KUBS	Kucevo	3.26	17	ePn	Pn	05 53 12.7	-0.9
TEKS	Tekeris	3.31	350	ePn	Pb	05 53 17.5	-3.8
NVLJ	Novalja	5.18	311	iPn	Pn	05 53 41.4	+1.5

RSNC 03 05:53:52.5±0.8, **6°.01N×73°.72W, h108**^{km}±5^{km}, **ML2.5, 1C-1D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RUSC	La Rusia	0.65	100	eP	Pn	05 54 10.6	-0.2
	16nm,0.6s						
RUSC	La Rusia	0.65	100	⇓iP	Pn	05 54 10.8	+0.1
RUSC				eS	Sn	05 54 24.0	-0.4
RUSC				i		05 54 26.6	
	comp=Z,65nm,0.2s						
BARC	Barichara	0.79	43	iP	Pn	05 54 11.7	0.0
BARC				eS	Sn	05 54 26.1	-0.1
BARC				i		05 54 28.5	
	comp=Z,189nm,0.3s						
PTBC	PUERTO BERRIO,	0.90	306	eP	Pn	05 54 11.7	-0.8
PTBC				eS	Sn	05 54 27.1	-0.5
BRRC	Barranca, Sant	1.09	1	⇑iP	Pn	05 54 14.0	-0.5
BRRC				i		05 54 14.6	
	comp=Z,44nm,0.2s						
BRRC				eS	Sn	05 54 31.5	+0.4
NORC	Norcasia	1.22	249	eP	Pn	05 54 15.8	-0.2
NORC				eS	Sn	05 54 33.7	0.0
CHIC	Chingaza	1.37	180	eP	Pn	05 54 18.0	-0.1
CHIC				eS	Sn	05 54 37.4	0.0
YOPC	Yopal, Colombi	1.45	117	eP	Pn	05 54 18.4	-0.3
YOPC				eS	Sn	05 54 38.3	-0.3
YOPC				i		05 54 41.3	
	comp=Z,27nm,0.1s						
ZARC	Zaragoza, Cauc	1.86	323	eP	Pn	05 54 22.6	-1.0
ZARC				eS	Sn	05 54 46.7	-0.6
ZARC				i		05 54 51.1	
	comp=Z,26nm,0.1s						
TAMC	Tame, Arauca	1.97	77	eP	Pn	05 54 23.9	-1.1
TOLC	Tolima	2.13	228	eP	Pn	05 54 27.7	+0.3
OCAC	Ocana	2.25	10	eS	Sn	05 54 56.4	-0.2
OCAC				i		05 55 05.9	
	comp=Z,44nm,0.1s						
PRAC	Prado	2.56	207	eP	Pn	05 54 32.4	-0.3
PRAC				eS	Sn	05 55 02.4	-1.1

IDC 03 06:41:35.7±2.0, **7°.43S×129°.92E, h0**^{km}, **mb3.6**/1, **mb1 3.6**/4, **mb1mx3.3**/52, **mbtmp3.4**/4, **ML3.3**/3, **Error ellipse: s-maj=61.1km s-min=29.1km az=78.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	11.39	201	Pn	Pn	06 44 20.3	+0.4
	0.1nm,0.3s,baz=15,slow=16,SNR=7.2						
FITZ				Sn	Sn	06 46 17.7	-10
	0.4nm,0.3s,baz=348,slow=20,SNR=4.9						
WRA	Warramunga Arr	13.15	161	Pn	Pn	06 44 42.0	-2.0
	0.2nm,0.3s,baz=341,slow=14,SNR=7.4						
WRA				Sn	Sn	06 47 00.1	-11
	0.5nm,0.3s,baz=346,slow=21,SNR=7.9						
ASAR	Alice Springs	16.59	167	Pn	P	06 45 31.6	-1.0
	0.1nm,0.3s,baz=348,slow=8.7,SNR=3.3						
MKAR	Makanchi Array	68.54	327	P	P	06 52 40.2	0.0
	0.3nm,0.5s,baz=130,slow=7.6,SNR=4.9						

IDC 03 06:43:35.2±1.3, **55°.48S×28°.30W, h0**^{km}, **mb3.7**/2, **mb1 3.9**/3, **mb1mx3.6**/31, **mbtmp3.8**/3, **ML4.0**/1, **Error ellipse: s-maj=51.6km s-min=33.5km az=59.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNAA	Sanae	19.52	156	P	P	06 48 04.0	+0.2
	0.5nm,0.3s,baz=272,slow=14,SNR=15						
LPAZ	La Paz	49.53	306	P	P	06 52 28.4	+0.2
	0.6nm,0.6s,baz=180,slow=6.1,SNR=5.1						
TORD	Torodi Ar. Bea	72.88	31	P	P	06 55 05.9	+0.1
	0.6nm,0.7s,baz=200,slow=5.7						
ILAR	Eielson Array	149.27	313	PKPbc	PKPbc	07 03 23.2	-1.0
	0.4nm,0.6s,baz=124,slow=2.0,SNR=6.2						

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*ISCJB **03** 06:59:34.7±0.5, 37°.01N±0°.03×27°.64E±0°.04, h0^{km}, Error ellipse: s-maj=4.1km s-min=3.9km az=10.5*
*CSEM **03** 06:59:34.8±0.1, 37°.01N×27°.63E, h1^{km}, ML2.6, Error ellipse: s-maj=3.0km s-min=2.6km az=99.0, Suspected Mining explosion.*
*DDA **03** 06:59:34.3, 36°.99N×27°.62E, h7^{km}, Ml2.6*
*ISK **03** 06:59:34.0, 37°.01N×27°.62E, h5^{km}, ML2.2/4*
ISC 03 06:59:34.0±1.1, **37°.00N**±0°.02×**27°.69E**±0°.02, **h0**^{km}, **n22, σ1^{s}.87**/36, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BDRM	Kayabasi	0.21	288	iP	Pg	06 59 37.8	-0.2
BDRM				iS	Sg	06 59 40.7	0.0
BDRM	Kayabasi	0.21	288	P	Pg	06 59 37.8	-0.2
BDRM				S	Sg	06 59 40.7	0.0
DATC	Datca-Mugla	0.24	186	PG	Pg	06 59 40.1	+1.5
DATC				SG	Sg	06 59 43.5	+1.7
DATC	Datca-Mugla	0.24	186	ePg	Pg	06 59 40.1	+1.5
DATC				eSg	Sg	06 59 43.5	+1.7
DAT	Datca	0.29	199	PG	Pg	06 59 39.7	+0.2
DAT	Datca	0.29	199	iP	Pg	06 59 37.8	-1.7
DAT				iS	Sg	06 59 44.0	+0.8
DAT	Datca	0.29	199	ePg	Pg	06 59 39.7	+0.2
DAT				S	Sg	06 59 44.0	+0.8
MLSB	Milas	0.30	13	PG	Pg	06 59 40.7	+0.9
MLSB	Milas	0.30	13	ePg	Pg	06 59 40.7	+0.9
BODT	Bodrum	0.31	281	PG	Pg	06 59 39.8	-0.2
BODT				SG	Sg	06 59 43.7	-0.3
BODT	Bodrum	0.31	281	ePg	Pg	06 59 39.8	-0.2
BODT				eSg	Sg	06 59 43.7	-0.3
YER	Yerkesik	0.49	74	PG	Pg	06 59 44.7	+1.3
YER				SG	Sg	06 59 53.1	+3.4
YER	Yerkesik	0.49	74	ePg	Pg	06 59 44.7	+1.3
YER				eSg	Sg	06 59 53.1	+3.4
MRSB	Marmaris-Mugla	0.49	125	PG	Pg	06 59 45.7	+2.2
MRSB	Marmaris-Mugla	0.49	125	ePg	Pg	06 59 45.7	+2.2
AYDN	Tasoluk	0.68	13	iP	Pg	06 59 47.9	+0.9
AYDN				iS	Sb	06 59 57.9	-0.7
AYDN	Tasoluk	0.68	13	P	Pg	06 59 47.8	+0.9
AYDN				S	Sb	06 59 57.9	-0.7
TURN	Turunc	0.74	100	PG	Pg	06 59 45.5	-2.7
TURN				SG	Sg	06 59 53.6	-4.2
TURN	Turunc	0.74	100	iP	Pg	06 59 46.0	-2.2
TURN				iS	Sg	06 59 53.0	-4.8
TURN	Turunc	0.74	100	ePg	Pg	06 59 45.5	-2.7
AYDB	Zeytinkoy-Aydi	0.96	9	PG	Pg	06 59 52.9	+0.6
AYDB	Zeytinkoy-Aydi	0.96	9	ePg	Pg	06 59 52.9	+0.6

IDC 03 07:00:29.6±1.8, **2°.68N×127°.71E, h0**^{km}, **mb3.6**/4, **mb1 3.7**/4, **mb1mx3.4**/56, **mbtmp3.6**/4, **Error ellipse: s-maj=149.0km s-min=21.5km az=68.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	23.41	164	P	P	07 05 40.8	+0.3
	0.5nm,0.5s,baz=344,slow=10,SNR=7.4						
ASAR	Alice Springs	26.88	167	P	P	07 06 11.7	-0.7
	0.4nm,0.4s,baz=353,slow=7.4,SNR=8.4						
MKAR	Makanchi Array	58.97	325	P	P	07 10 31.8	+0.8
	0.4nm,0.5s,baz=118,slow=8.5,SNR=4.7						
KURBB	Kurchatov Arra	63.14	327	P	P	07 10 58.9	-0.3
	0.6nm,0.5s,baz=126,slow=6.0,SNR=6.9						

NNC 03 07:05:38.5±5.4, **36°.87N×70°.65E, h0**^{km}, **mb3.6, mpv3.2, 5C-1D, Error ellipse: s-maj=42.1km s-min=36.3km az=164.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	3.86	35	⇑Pn	Pn	07 06 40.7	+1.5
	1.3nm,0.4s						
SFK				⇑Sn	Sn	07 07 26.3	+0.8
	1.1nm,0.2s						
MNAS	Manas	5.79	14	⇑Pn	Pn	07 07 04.1	-1.7
	1.2nm,0.4s						
MNAS				⇓Sn	Sn	07 08 13.5	+0.6
	4.8nm,0.6s						
KK31	Karatay Array	6.23	359	⇑Pn	Pn	07 07 10.8	-0.9
	0.9nm,0.3s,baz=174,slow=12,SNR=23						
KK31				⇑Sn	Sn	07 08 26.6	+3.1
	4.2nm,0.5s,baz=180,slow=22,SNR=10						

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*NIED **03** 07:17:00, 24°.00N×122°.50E, h23^{km}, Mw4.5 Best double couple: M$_0$5.98000×10^{15} NP1:φ$_s$1.00000°, δ1.00000°, λ-22.00000°. NP2:φ$_s$113.00000°, δ90.00000°, λ-91.00000°.*
*IDC **03** 07:17:51.9±0.5, 24°.10N×122°.61E, h0^{km}, mb4.2/24, mb1 4.2/26, mb1mx4.1/60, mbtmp4.2/26, ML4.0/2, MS3.7/35, Ms1 3.7/35, ms1mx3.5/67, Error ellipse: s-maj=15.4km s-min=11.4km az=81.0*
*MOS **03** 07:17:54.2±1.1, 24°.03N×122°.60E, h25^{km}, mb4.7/7, Error ellipse: s-maj=11.4km s-min=7.7km az=94.2*
*BJI **03** 07:17:54.4, 24°.03N×122°.42E, h8^{km}, mb4.4/36, mB4.6/29, ML4.1/6, Ms4.1/31, Ms7 3.9/31*
*JMA **03** 07:17:55.8±0.2, 23°.98N×122°.54E, h20^{km}±4^{km}, M4.8*
*NEIC **03** 07:17:55.6±1.1, 24°.06N×122°.59E, h22^{km}±8^{km}, mb4.8/14, Error ellipse: s-maj=5.3km s-min=4.7km az=107.0*
*TAP **03** 07:17:56.1, 24°.00N×122°.57E, h33^{km}, ML4.7, C*
ISC 03 07:17:54.9±0.9, **23°.93N**±0°.02×**122°.58E**±0°.01, **h16**^{km}±5^{km}, **n253, σ1^{s}.53**/339, **mb4.3**/52, **MS3.7**/36, **58C-8D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	Yonagunijimaku	0.61	33	P	Pn	07 18 07.5	-1.4
JYNG				S	Sb	07 18 15.1	-0.5
YOJ	Yonaguni jima	0.66	36	⇑iP	Pn	07 18 08.5	-1.0
	baz=40						
YOJ				iS	Sb	07 18 16.5	-0.4
	baz=40						
YOJ	Yonaguni jima	0.66	36	ePn	Pn	07 18 08.3	-1.2
YOJ				eSg	Sb	07 18 17.5	+0.6
YOJ	Yonaguni jima	0.66	36	P	Pn	07 18 08.3	-1.2
YOJ				eS	Sb	07 18 16.6	-0.2
YOJ	Yonaguni jima	0.66	36	eP	Pn	07 18 08.3	-1.2
YOJ				e		07 18 17.5	
EOS1	EOS1	0.74	326	⇓P	Pb	07 18 09.4	0.0
	baz=323						
EOS1				eS	Sb	07 18 19.5	+0.2
	baz=323						
ENAH	Nanao	0.87	306	eP	Pb	07 18 11.7	0.0
	baz=302						

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ENAH                                   eS     Sb     07 18 23.5 +0.3
       baz=302
HWA    Hwalien           0.90 273     eP     Pb     07 18 11.9 -0.2
       baz=268
ENLB   Shoufeng          0.90 268   ⇑P     Pn     07 18 12.3 -0.6
       baz=251
ENLB                                    S     Sg     07 18 23.8 -0.4
       baz=251
NANB   Nanao             0.91 303   ⇓P     Pb     07 18 12.0 -0.3
       baz=299
NANB                                    S     Sb     07 18 24.2 +0.1
       baz=299
ENA    Nanau             0.91 303      P     Pb     07 18 12.4  0.0
       baz=299
NACB   Ninganchiao       0.94 285   ⇑P     Pb     07 18 12.4 -0.3
       baz=267
NACB                                    S     Sg     07 18 24.4 -1.0
       baz=267
NACB   Ninganchiao       0.94 285     ePg    Pg     07 18 12.2 -0.9
NACB                                   eSn    Sg     07 18 22.8 -2.6
TWC    Suao              0.95 315⇓iP     Pg     07 18 12.4 -0.9
       baz=302
TWC                                     S     Sg     07 18 24.9 -0.9
       baz=302
ESL    Shilin            1.06 264   ⇑P     Pb     07 18 13.8 -1.1
       baz=260
EGS                      1.08 327   ⇓P     Pb     07 18 14.9 -0.4
       baz=312
EGS                                     S     Sb     07 18 29.0 -0.2
       baz=312
EGFH   Guangfu           1.09 256   ⇑P     Pb     07 18 14.6 -0.9
       baz=252
EGFH                                   eS     Sb     07 18 28.5 -0.9
       baz=252
IRIF   Iriomote-Funau    1.12  69      P     Pn     07 18 16.7 +0.8
IRIF                                    S     Sn     07 18 32.0 +1.0
HATJ   Hateruma jima     1.12  83      P     Pn     07 18 17.1 +1.1
HATJ                                    S     Sn     07 18 32.3 +1.2
ILA    Ilan              1.13 318     eP     Pn     07 18 16.1  0.0
       baz=316
NTC    Toucheng          1.15 323   ⇓P     Pg     07 18 16.2 -0.8
       baz=322
NTC                                    eS     Sb     07 18 30.6 -0.3
       baz=322
TWE    Neicheng          1.15 313     eP     Pn     07 18 16.1 -0.2
       baz=311
HGSD   Ruisui            1.15 248   ⇑P     Pb     07 18 15.6 -0.8
       baz=244
HGSD                                   eS     Sb     07 18 30.6 -0.6
       baz=244
ENTT   Nioudou           1.17 307      P     Pn     07 18 16.4 -0.2
       baz=291
ENTT                                   eS     Sb     07 18 31.6  0.0
       baz=291
TWB1   Santiao Chiao     1.20 333   ⇓P     Pn     07 18 16.4 -0.7
       baz=347
TWB1                                   eS     Sb     07 18 31.2 -1.4
       baz=347
NNSB   Datong            1.20 294   ⇑P     Pn     07 18 16.8 -0.4
       baz=280
NNSB                                   eS     Sb     07 18 31.6 -1.1
       baz=280
NNSH   Datong            1.20 294   ⇑P     Pn     07 18 16.8 -0.4
       baz=280
NNSH                                   eS     Sb     07 18 31.8 -1.0
       baz=280
NNS    Nan Shan          1.22 295   ⇑P     Pn     07 18 17.0 -0.4
       baz=281
NNS                                    eS     Sb     07 18 31.0 -2.2
       baz=281
EHY    Hungye            1.23 250⇑iP     Pn     07 18 16.9 -0.5
       baz=246
EHY                                     S     Sb     07 18 32.5 -0.9
       baz=246
TIPB   Shuangxi          1.24 326   ⇑P     Pn     07 18 17.4 -0.3
       baz=325
TIPB                                    S     Sb     07 18 32.9 -0.9
       baz=325
CHGB   Renai             1.30 276   ⇑P     Pn     07 18 18.2 -0.3
       baz=262
CHGB                                   eS     Sb     07 18 34.0 -1.6
       baz=262
NWLT   Wulai             1.30 311   ⇑P     Pb     07 18 18.4 -0.5
       baz=308
YULB   Yu-li             1.30 246   ⇑P     Pn     07 18 17.9 -0.5
       baz=232
YULB                                   eS     Sb     07 18 33.4 -1.9
       baz=232
YULB   Yu-li             1.30 246     ePn    Pn     07 18 17.9 -0.5
YULB                                   eSn    Sb     07 18 34.4 -1.0
TWF1   Yuli              1.31 244   ⇑P     Pn     07 18 18.2 -0.4
       baz=240
TWF1                                    S     Sb     07 18 34.5 -1.3
       baz=240
YHNB   Yeheng            1.32 304   ⇑P     Pn     07 18 18.7 -0.1
       baz=289
YHNB   Yeheng            1.32 304     ePn    Pn     07 18 18.8 -0.1
TWT    Tachien           1.33 284     eP     Pn     07 18 19.0  0.0
       baz=269
TWT                                    eS     Sb     07 18 35.3 -1.0
       baz=269
VWDT   VWDT              1.33 263   ⇑P     Pn     07 18 18.7 -0.1
       baz=259
VWDT                                    S     Sb     07 18 34.9 -1.5
       baz=259
JKRS   Kuro-shima        1.34  77      P     Pg     07 18 20.3 -0.4
JKRS                                    S     Sg     07 18 38.5 +0.4
NSK    Sanguang          1.34 304⇑iP     Pn     07 18 18.9 -0.1
       baz=289
TDCB   Techi             1.34 284   ⇑P     Pn     07 18 19.0 -0.1
       baz=271
NWF    Wu-fen Shan       1.35 327   ⇑P     Pn     07 18 18.8 -0.3
       baz=326
WFSB   Wu-fen Shan       1.35 327   ⇑P     Pn     07 18 18.9 -0.2
       baz=326
WFSB                                   eS     Sb     07 18 35.5 -1.3
       baz=326
FULB   Fuli              1.39 239   ⇑P     Pn     07 18 18.9 -0.8
       baz=225
FULB                                   eS     Sn     07 18 35.5 -2.3
       baz=225
CHKT   Chengkung         1.39 234   ⇑P     Pn     07 18 18.6 -1.1
       baz=220
CHKT                                   eS     Sn     07 18 34.8 -2.9
       baz=220
TATO   Taipei            1.44 316     eP     Pb     07 18 20.8 -0.5
       baz=332
TATO                                    S     Sn     07 18 38.7 -0.3
       baz=332
TATO   Taipei            1.44 316     ePn    Pb     07 18 20.6 -0.7
TAP1   Taipei            1.47 319     eP     Pn     07 18 20.5 -0.2
       baz=333
TAP1                                   eS     Sn     07 18 39.3 -0.2
       baz=333
JIJ    Ishigaki jima     1.49  73      P     Pb     07 18 21.5 -0.7
JIJ                                     S     Sg     07 18 41.2 -1.7
SSLB   Suanglung         1.50 265   ⇑P     Pn     07 18 20.9 -0.2
       baz=262
SSLB   Suanglung         1.50 265     ePn    Pn     07 18 21.0 -0.2
SSLB                                   eSn    Sn     07 18 40.1 -0.4
YM07   YM07              1.52 325     eP     Pn     07 18 21.0 -0.4
       baz=324
YM07                                   eS     Sn     07 18 39.3 -1.6
       baz=324
DPDB   Guoxing           1.52 274   ⇑P     Pn     07 18 21.8 +0.4
       baz=263
DPDB                                   eS     Sn     07 18 40.7 -0.2
       baz=263
WLTB   Daxi              1.52 307     eP     Pb     07 18 22.0 -0.7
       baz=292
WLTB                                   eS     Sn     07 18 41.2 +0.4
       baz=292
YM10   YM10              1.53 323     eP     Pn     07 18 21.3 -0.4
       baz=322
YM11   YM11              1.53 323     eP     Pb     07 18 22.0 -1.0
       baz=322
SMLT   Sun Moon Lake     1.54 268⇑iP     Pn     07 18 22.1 +0.3
       baz=265
SMLT                                   eS     Sn     07 18 40.3 -1.3
       baz=265
YM08   YM08              1.54 324     eP     Pn     07 18 21.5 -0.3
       baz=323
YM04   YM04              1.54 322     eP     Pn     07 18 21.7 -0.1
       baz=321
YM03   YM03              1.56 323     eP     Pn     07 18 22.3 +0.2
       baz=321
TWS1   Kuangyinshan      1.57 318     eP     Pn     07 18 21.9 -0.3
       baz=332
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TYC    Yuchr             1.58 269   ⇑P     Pn     07 18 22.6 +0.3
       baz=266
TWH    Lutao             1.59 220   ⇑P     Pn     07 18 22.0 -0.4
       baz=216
TWH                                    eS     Sn     07 18 40.2 -2.3
       baz=216
LIOB   Emei              1.60 297   ⇑P     Pb     07 18 23.6 -0.5
       baz=294
LIOB                                   eS     Sn     07 18 42.8  0.0
       baz=294
NSTT   Nanjuang          1.60 296   ⇑P     Pb     07 18 23.5 -0.6
       baz=293
NSTT                                   eS     Sn     07 18 42.8 -0.2
       baz=293
NTST   Danshui           1.60 320     eP     Pb     07 18 23.2 -0.9
       baz=319
TWY    Chenhua           1.61 326     eP     Pn     07 18 22.8 +0.2
       baz=326
ELDTW  Lidau             1.62 243⇑iP     Pn     07 18 22.4 -0.5
       baz=239
ELDTW                                  eS     Sn     07 18 41.0 -2.5
       baz=239
NCU    National Centr    1.64 309     eP     Pn     07 18 23.5 +0.4
       baz=308
NCUH   Zhongli           1.64 309     eP     Pn     07 18 23.1 +0.1
       baz=308
ALS    Alishan           1.68 256⇑iP     Pb     07 18 24.6 -1.1
       baz=252
ALS                                    eS     Sn     07 18 44.8 -0.5
       baz=252
SBCB   Hsinchu           1.69 301     eP     Pn     07 18 23.5 -0.2
       baz=299
WJS    Zhushan           1.70 267     eP     Pb     07 18 25.3 -0.5
       baz=264
JISG   Ishigakijimahi    1.71  67      P     Pn     07 18 23.5 -0.5
HSN    Hsinchu           1.71 301     eP     Pn     07 18 24.4 +0.4
       baz=300
NSY    Sanyi             1.73 286   ⇑P     Pb     07 18 25.9 -0.5
       baz=284
WNT    Mingjian          1.74 269     eP     Pb     07 18 25.7 -0.7
       baz=266
NMLH   Miaoli            1.74 291     eP     Pn     07 18 25.2 +0.6
       baz=288
TTN    Taitung           1.77 229     eP     Pn     07 18 25.1 +0.3
       baz=216
TTN                                    eS     Sn     07 18 46.2 -0.7
       baz=216
TWGBT  Beinan            1.77 232   ⇑P     Pn     07 18 24.4 -0.5
       baz=220
TWGBT                                  eS     Sn     07 18 45.9 -1.3
       baz=220
TWG    Pinlang           1.78 232     eP     Pn     07 18 24.6 -0.3
       baz=220
TWG                                    eS     Sn     07 18 45.4 -1.9
       baz=220
TWG    Pinlang           1.78 232     ePn    Pn     07 18 24.4 -0.5
CHN5   Tsauling          1.78 260   ⇑P     Pb     07 18 26.2 -0.9
       baz=247
CHN5                                   eS     Sn     07 18 47.9 +0.5
       baz=247
PTSB   Yuanli            1.79 287     eP     Pb     07 18 26.2 -1.2
       baz=284
PTSB                                   eS     Sn     07 18 48.1 +0.5
       baz=284
STYT   Tauyuan           1.84 246   ⇑P     Pn     07 18 26.6 +0.6
       baz=235
STYT                                   eS     Sn     07 18 48.5 -0.5
       baz=235
WCHH   Zhanghua          1.86 275     eP     Pb     07 18 27.6 -0.9
       baz=272
WCHH                                   eS     Sb     07 18 51.4 -0.1
       baz=272
WGK    Gukeng            1.87 263     eP     Pn     07 18 27.0 +0.8
       baz=260
WDLH   Douliu            1.89 263     eP     Pb     07 18 27.8 -1.2
       baz=260
TPUB   Ta-pu             1.90 251   ⇑P     Pb     07 18 28.1 -1.2
       baz=238
TPUB                                    S     Sn     07 18 51.1 +0.8
       baz=238
TPUB   Ta-pu             1.90 251     ePn    Pb     07 18 28.0 -1.2
CHN4   Tsaushan          1.92 253   ⇑P     Pb     07 18 28.4 -1.1
       baz=249
CHN4                                   eS     Sb     07 18 52.5 -0.7
       baz=249
WTP    Ta-pu             1.93 250   ⇑P     Pb     07 18 28.5 -1.3
       baz=237
WTP                                     S     Sn     07 18 52.6 +1.5
       baz=237
CHN2   Minshiung         1.97 259     eP     Pb     07 18 29.6 -0.8
       baz=255
CHN2                                   eS     Sb     07 18 54.3 -0.5
       baz=255
ECL    Taimali           2.00 229     eP     Pn     07 18 27.3 -0.8
       baz=236
ECL                                    eS     Sn     07 18 49.9 -2.9
       baz=236
SLGT   Liugui            2.01 243⇑eP     Pb     07 18 29.4 -1.7
       baz=233
SLGT                                   eS     Sn     07 18 54.5 +1.5
       baz=233
SGST   Jiashian          2.02 246      P     Pb     07 18 29.8 -1.5
       baz=234
SGST                                    S     Sb     07 18 55.5 -0.8
       baz=234
CHY    Chiayi            2.03 258⇑eP     Pb     07 18 29.9 -1.4
       baz=254
CHY                                    eS     Sb     07 18 55.5 -0.9
       baz=254
CHN1   Nanshi            2.03 249   ⇑P     Pb     07 18 30.3 -1.1
       baz=245
CHN1                                   eS     Sb     07 18 55.2 -1.2
       baz=245
TWK    Hsinying          2.03 251   ⇑P     Pb     07 18 30.3 -1.2
       baz=248
TWK                                    eS     Sn     07 18 55.1 +1.4
       baz=248
RLNB   Erlin             2.04 269   ⇑P     Pb     07 18 30.2 -1.3
       baz=279
RLNB                                    S     Sn     07 18 55.0 +1.4
       baz=279
JTJ    Tarama            2.06  70      P     Pn     07 18 29.5 +0.7
JTJ                                     S     Sb     07 18 55.9 -1.3
WTCT   Ta-ch'eng         2.11 269     eP     Pb     07 18 31.1 -1.6
       baz=278
WTCT                                   eS     Sb     07 18 57.8 -0.9
       baz=278
LAY    Lan-yu            2.11 207   ⇑P     Pn     07 18 28.6 -1.0
       baz=204
LAY                                    eS     Sn     07 18 52.8 -2.8
       baz=204
SSD    Sandimen          2.15 237     eP     Pn     07 18 31.0 +0.9
       baz=228
WSF    Szhu              2.18 263     eP     Pn     07 18 31.9 +1.3
       baz=260
TAW    Tawu              2.21 225     eP     Pn     07 18 31.6 +0.8
       baz=233
EAST   Anshuo            2.22 226     eP     Pn     07 18 30.8 -0.3
       baz=224
MASBT  Mashibuluo        2.23 234   ⇑P     Pn     07 18 31.6 +0.5
       baz=225
MASBT                                  eS     Sn     07 18 59.1 +0.8
       baz=225
CHN8   Yiju              2.25 255      P     Pn     07 18 32.9 +1.4
       baz=252
CHN8                                   eS     Sn     07 19 00.7 +1.8
       baz=252
SGLT   Jiouru            2.27 238     eP     Pb     07 18 34.3 -1.2
       baz=229
TAI1   Yung-k'ang        2.34 248     eP     Pb     07 18 35.2 -1.4
       baz=246
SCZT   Fangliau          2.38 230     eP     Pn     07 18 34.1 +0.8
       baz=221
JIRB   Irabujima         2.52  69      P     Pn     07 18 36.2 +1.0
JIRB                                   eS     Sn     07 19 07.0 +1.4
TSEB   Hengchuen, Pin    2.55 218     eP     Pn     07 18 36.8 +1.2
       baz=224
TSEB                                   eS     Sn     07 19 07.1 +0.8
       baz=224
HEN    Hengchun          2.56 222     eP     Pn     07 18 36.5 +0.7
       baz=219
HEN                                    eS     Sn     07 19 07.7 +1.1
       baz=219
TWKBT  Hengchun          2.57 220      P     Pn     07 18 36.4 +0.6
       baz=217
TWKBT                                   S     Sn     07 19 07.0 +0.3
       baz=217
WLCH   Liuqiu            2.57 233     eP     Pb     07 18 38.4 -2.2
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       baz=245
TWK1   Hengchun          2.57 220     eP     Pn     07 18 36.5 +0.6
       baz=217
TWK1                                   eS     Sn     07 19 07.7 +0.8
       baz=217
TWP    Hsiaoliuchiu      2.58 233     eP     Pb     07 18 39.9 -1.0
       baz=245
JIKM   Ikemajima         2.62  67      P     Pn     07 18 38.1 +1.5
JIKM                                    S     Sb     07 19 10.5 -2.9
JMJ    Miyako jima 2     2.62  70     eP     Pb     07 18 38.6 -3.0
       baz=71
JMJ    Miyako jima 2     2.62  70      P     Pn     07 18 37.9 +1.3
JMJ                                    eS     Sb     07 19 10.3 -3.2
JOGS   Gusukube          2.70  72      P     Pn     07 18 39.5 +1.8
JOGS                                   eS     Sn     07 19 11.1 +1.0
WDGT   Dungji            2.77 257   ⇑P     Pn     07 18 39.4 +0.8
       baz=253
WDGT                                   eS     Sn     07 19 11.2 -0.4
       baz=253
PHUB   P'eng-hu          2.79 262   ⇑P     Pn     07 18 39.6 +0.7
       baz=274
PHUB                                   eS     Sn     07 19 11.6 -0.6
       baz=274
PNG    Penghu            2.80 263   ⇑P     Pn     07 18 39.6 +0.6
       baz=260
PNG                                    eS     Sn     07 19 12.5  0.0
       baz=260
VCHM   Qimei             2.98 257      P     Pn     07 18 42.3 +0.8
       baz=253
VCHM                                   eS     Sn     07 19 15.9 -1.1
       baz=253
VWUC   VWUC              3.04 291⇑eP     Pn     07 18 41.9 -0.5
       baz=289
MATB   Ma-tsu            3.26 313     eP     Pn     07 18 44.4 -1.0
       baz=300
BBP    Basco             3.52 190⇑eP     Pn     07 18 47.7 -1.3
BBP                                    eS     Sn     07 19 27.7 -2.6
QZH    Quanzhou          3.77 286⇑iPn    Pn     07 18 51.7 -0.7
QZH                                    Sn     Sn     07 19 30.7 -5.8
QZH                                    LR     LR
       comp=N,2µm,13.5s
QZH                                    LR     LR
       comp=E,1µm,14.7s
QZH                                    LR     LR
       comp=Z,1µm,13.4s
KNM    Kinmen            3.82 278     eP     Pn     07 18 54.3 +1.2
       baz=275
KNMB   Chin-men Tao      3.87 279⇑eP     Pn     07 18 53.2 -0.5
       baz=276
JOW    Kunigami          5.90  60     Pn     Pn     07 19 20.6 -1.0
       13nm,0.3s,baz=226,slow=11,SNR=18
JOW                                    Sn     Sn     07 20 28.2 -0.8
       5.3nm,0.3s,baz=126,slow=19,SNR=2.3
JOW    Kunigami          5.90  60⇑eP     Pn     07 19 20.8 -0.8
       baz=62
APYP   Conner            6.17 192     eP     Pn     07 19 26.5 +1.1
APYP                                   eS     Sn     07 20 33.8 -1.9
VDOS   Pratas Island     6.30 240     eP     Pn     07 19 29.4 +2.2
       baz=236
ABRA   Dolores           6.49 196     eP     Pn     07 19 30.4 +0.6
NJ2    Nanjing           8.73 339     eP     Pn     07 19 59.7 -0.8
NJ2                                    sP            07 20 07.5
NJ2                                     S     Sn     07 21 38.5 -0.2
NJ2                                    pmax   pmax
       comp=Z,20nm,0.7s
NJ2                                    smax   smax
       comp=N,70nm,0.9s
NJ2                                    smax   smax
       comp=E,60nm,0.9s
NJ2                                    LR     LR
       comp=N,1µm,10.5s
NJ2                                    LR     LR
       comp=E,720nm,11.4s
NJ2                                    LR     LR
       comp=Z,1µm,10.9s
WHN    Wuhan             9.85 314      P     Pn     07 20 23.8 +8.0
WHN                                     S     Sn     07 22 11.1 +5.0
WHN                                    LR     LR
       comp=N,2µm,7.3s
WHN                                    LR     LR
       comp=E,1µm,6.9s
WHN                                    LR     LR
       comp=Z,1µm,20.7s
TGY    Tagaytay City     9.90 189     LR     LR     07 24 13.5
       comp=Z,340nm,20.7s,baz=352,slow=38
JNU    Nakatsue         11.70  37     Pn     Pn     07 20 41.2  0.0
       comp=Z,0.3nm,0.3s,baz=225,slow=18,SNR=2.3
JNU                                    LR     LR     07 25 15.9
       comp=Z,592nm,21.1s,baz=118,slow=38
QIZ    Qiongzhong       12.82 250      P     Pn     07 20 57.7 +1.1
QIZ                                     S     Sn     07 23 18.6 -0.5
QIZ                                    LR     LR
       comp=Z,550nm,19.6s
QIZ                                    LR     LR
       comp=Z,330nm,18.6s
QIZ                                    LR     LR
       comp=Z,470nm,17.2s
TJN    Taejon           13.07  17⇑eP     Pn     07 21 01.0 +1.1
KS15   Wonju Array Si   14.21  17     eP     P      07 21 21.1 -1.8
KSAR   Wonju Array Be   14.21  17     Pn     Pn     07 21 18.8 +3.3
KSAR   Wonju Array Be   14.21  17      P     Pn     07 21 18.8 +3.3
KSRS   Korea Array      14.23  18     Pn     Pn     07 21 18.8 +3.0
       comp=Z,2.2nm,0.3s,baz=198,slow=12,SNR=18
KSRS                                   LR     LR     07 27 28.6
       comp=Z,418nm,18.8s,baz=194,slow=41
GYA    Guiyang          14.63 283     eP     Pn     07 21 21.5 +0.1
GYA                                    pP     P      07 21 27.8 +0.1
GYA                                     S     Sn     07 24 04.0 +0.6
GYA                                    sS     S      07 24 12.2  -10
GYA                                    SS     SnSn   07 24 21.6 +5.7
GYA                                    pmax   pmax
       comp=Z,10.0nm,0.7s
GYA                                    pmax   pmax
       comp=Z,110nm,4.7s
GYA                                    LR     LR
       comp=Z,1µm,12.5s
GYA                                    LR     LR
       comp=Z,1µm,13.8s
GYA                                    LR     LR
       comp=Z,1µm,13.0s
XAN    Xi'an            15.62 313      P     Pn     07 21 35.4 +1.0
XAN                                    pP     sP     07 21 42.6 -2.5
XAN                                    pmax   pmax
       comp=Z,5.0nm,2.3s
DAV    Davao City (W)   17.01 170     LR     LR     07 29 21.2
       comp=Z,163nm,18.4s,baz=343,slow=40
JHJ    Hachijo jima 2   17.65  55      P     P      07 22 04.8 +3.8
       comp=Z,5.3nm,0.3s,baz=221,slow=13,SNR=5.6
CD2    Chengdu          18.09 297      P     Pn     07 22 05.6  0.0
CD2                                     S     Sn     07 25 26.3 -0.9
CD2                                    pmax   pmax
       comp=Z,20nm,0.5s
CD2                                    pmax   pmax
       comp=Z,120nm,4.6s
CD2                                    LR     LR
       comp=Z,570nm,7.4s
CD2                                    LR     LR
       comp=Z,410nm,9.4s
CD2                                    LR     LR
       comp=Z,530nm,9.9s
KMI    Kunming          18.10 278      P     P      07 22 06.5 +0.2
KMI                                    pP     sP     07 22 12.0 -0.9
KMI                                    sP     pP     07 22 14.7 +3.9
KMI                                    pmax   pmax
       comp=Z,14nm,0.6s
KMI                                    pmax   pmax
       comp=Z,100nm,4.4s
KMI                                    LR     LR
       comp=Z,540nm,18.2s
KMI                                    LR     LR
       comp=Z,550nm,15.4s
KMI                                    LR     LR
       comp=Z,670nm,16.4s
UBPT   Khong Chiam      18.26 245      P     P      07 22 12.2 +4.3
       comp=Z,18nm,1.3s
MJAR   Matsushiro Arr   18.41  43      P     P      07 22 08.0 -1.4
       comp=Z,0.2nm,0.3s,baz=244,slow=12,SNR=5.6
MJAR                                   LR     LR     07 29 32.4
       comp=Z,327nm,21.6s,baz=210,slow=38
SKNT   Sakolnakorn      18.75 252      P     Pn     07 22 19.1 +5.4
       comp=Z,4.1nm,2.2s
NONG   Nongkai          19.06 256      P     Pn     07 22 24.5 +7.1
       comp=Z,0.3nm,0.8s,comp=Z,35nm
HHC    Hu-ho-hao-te     19.23 334     eP     Pn     07 22 20.7 +1.2
HHC                                    sP     sP     07 22 33.2 +8.0
HHC                                     S     Sn     07 25 54.8 -0.1
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HHC				sS	sS	07 26 01.4	-1.8
HHC				pmax	pmax		
	comp=Z,30nm,1.0s						
HHC				pmax	pmax		
	comp=Z,260nm,6.2s						
HHC				LR	LR		
	comp=Z,500nm,12.6s						
HHC				LR	LR		
	comp=Z,410nm,13.1s						
HHC				LR	LR		
	comp=Z,810nm,12.0s						
CN2	**Changchun**	**19.96**	**6**	*e*P	**P**	**07 22 24.1**	**-2.2**
CN2				*e*S	**S**	**07 26 08.2**	**-2.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.4s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,700nm,15.0s						
CN2				LR	LR		
	comp=E,300nm,15.0s						
CN2				LR	LR		
	comp=Z,800nm,16.0s						
LZH	**Lanzhou**	**20.21**	**311**	*e*P	Pn	07 22 33.6	+2.4
LZH				pP	sP	07 22 39.9	+4.0
LZH				sP	pP	07 22 43.6	+10
LZH				PP	**PnPn**	**07 22 51.6**	**+5.7**
LZH				S	**S**	**07 26 12.2**	**-3.5**
LZH				sS	sS	07 26 20.3	-2.6
LZH				pmax	pmax		
	comp=Z,35nm,1.2s						
LZH				pmax	pmax		
	comp=Z,150nm,4.0s						
MDJ	**Mudanjiang**	**21.41**	**14**	P	**P**	**07 22 42.5**	**+0.5**
MDJ				pP	sP	07 22 48.7	0.0
MDJ				ScS	ScS	07 34 06.2	+0.6
MDJ				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MDJ				pmax	pmax		
	comp=Z,88nm,5.7s						
MDJ				LR	LR		
	comp=Z,520nm,13.9s						
MDJ				LR	LR		
	comp=Z,380nm,12.7s						
MDJ				LR	LR		
	comp=Z,740nm,14.7s						
PBKT	**Sadao Pong**	**21.54**	**254**	P	**P**	**07 22 46.6**	**+3.0**
	comp=Z,14nm,1.9s						
PAYA	**Payao**	**21.59**	**262**	P	**P**	**07 22 48.0**	**+3.8**
	comp=Z,6.2nm,1.1s						
USRK	**Ussuriysk Ar.**	**21.64**	**19**	P	**P**	**07 22 42.2**	**-2.2**
	comp=Z,5.0nm,0.7s,baz=203,slow=10						
USRK				LR	LR	07 31 50.5	
	comp=Z,375nm,18.2s,baz=181,slow=39						
CHTO	**Chiang Mai**	**22.58**	**262**	*e*P	**P**	**07 22 56.7**	**+1.9**
	comp=Z,4.5nm,0.9s						
CHTO	**Chiang Mai**	**22.58**	**262**	*e*P	**P**	**07 22 56.7**	**+1.9**
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CHTO	**Chiang Mai**	**22.58**	**262**	P	**P**	**07 22 58.9**	**+4.1**
	comp=Z,53nm,1.9s						
CM01	**Chiang Mai Arr**	**22.69**	**261**	*e*P	**P**	**07 22 58.6**	**+2.7**
CMAR	**Chiang Mai Arr**	**22.69**	**261**	P	**P**	**07 22 57.2**	**+1.2**
	comp=Z,4.1nm,0.9s,baz=62,slow=8.4,SNR=13						
CMAR				LR	LR	07 32 48.3	
	comp=Z,209nm,18.9s,baz=66,slow=39						
GUMO	**Guam**	**23.44**	**112**	LR	LR	07 30 50.0	
	comp=Z,90nm,21.2s,baz=304,slow=33						
GTA	**Gaotai**	**24.67**	**314**	P	**P**	**07 23 14.4**	**-0.8**
GTA				pP	sP	07 23 19.9	-2.2
GTA				sP	pP	07 23 22.8	+2.7
GTA				S	**S**	**07 27 35.1**	**-1.2**
GTA				sS	sS	07 27 44.3	0.0
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,31nm,4.3s						
GTA				LR	LR		
	comp=Z,210nm,13.4s						
GTA				LR	LR		
	comp=Z,210nm,15.9s						
GTA				LR	LR		
	comp=Z,280nm,15.5s						
MTKI	**Muara Teweh, K**	**25.83**	**198**	P	**P**	**07 23 27.2**	**+1.5**
	comp=Z,137nm,0.4s						
ASAJ	**Asahikawa**	**25.96**	**34**	P	**P**	**07 23 24.4**	**-2.2**
	comp=Z,4.9nm,0.6s,baz=300,slow=9.6,SNR=4.6						
ASAJ				LR	LR	07 33 31.6	
	comp=Z,262nm,20.9s,baz=192,slow=36						
SIJI	**Sorong**	**26.06**	**160**	LR	LR	07 32 23.2	
	comp=Z,58nm,20.3s,baz=318,slow=33						
KLR	**Kul’dur**	**26.26**	**14**	P	**P**	**07 23 27.7**	**-1.6**
	comp=Z,0.3nm,0.7s,baz=212,slow=7.3,SNR=8.3						
KLR				LR	LR	07 35 03.6	
	comp=Z,40nm,18.0s,baz=195,slow=40						
ULN	**Ulaanbaatar**	**26.89**	**337**	*e*P	**P**	**07 23 34.3**	**-0.9**
	comp=Z,3.6nm,1.1s						
ULN	**Ulaanbaatar**	**26.89**	**337**	⇑*e*P	**P**	**07 23 34.7**	**-0.5**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SONM	**Songino Array**	**27.11**	**336**	P	**P**	**07 23 35.6**	**-1.6**
	comp=Z,4.5nm,0.8s,baz=149,slow=10,SNR=21						
SONM				LR	LR	07 35 33.5	
	comp=Z,340nm,18.3s,baz=152,slow=39						
SONA1	**Songino Array**	**27.11**	**336**	*e*P	**P**	**07 23 36.0**	**-1.3**
YSS	**Yuzh-Sakhalins**	**28.08**	**30**	P	**P**	**07 23 46.8**	**+1.1**
YSS				*e*		07 23 58.9	
YSS				MLR	MLR		
	comp=Z,150nm,17.0s						
YSS				MLR	MLR		
	comp=N,230nm,18.0s						
YSS				MLR	MLR		
	comp=Z,140nm,17.0s						
YSS				MLR	MLR		
	comp=N,200nm,15.0s						
YSS				MLR	MLR		
	comp=E,100nm,15.0s						
KUR	**Kuril’sk**	**29.53**	**38**	⇓P	**P**	**07 23 55.6**	**-3.0**
ZAK	**Zakamensk**	**30.37**	**335**	*e*P	**P**	**07 24 05.8**	**-0.3**
ZAK				pmax	pmax		
	comp=Z,1.0nm,1.2s						
PSI	**Prapat**	**31.05**	**231**	P	**P**	**07 24 13.4**	**+0.9**
	comp=Z,9.6nm,0.9s,baz=360,slow=4.0,SNR=6.9						
PSI				LR	LR	07 37 32.3	
	comp=Z,204nm,18.4s,baz=77,slow=38						
PSI	**Prapat**	**31.05**	**231**	*e*P	**P**	**07 24 13.2**	**+0.8**
	comp=Z,16nm,1.0s						
PSI	**Prapat**	**31.05**	**231**	*e*P	**P**	**07 24 13.2**	**+0.8**
PSI				pmax	pmax		
	comp=Z,16nm,1.0s						
TLY	**Talaya**	**31.29**	**337**	*e*P	**P**	**07 24 15.3**	**+1.2**
TLY				*e*S	**S**	**07 29 16.1**	**-4.1**
TLY				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TLY				MLR	MLR		
	comp=Z,297nm,15.0s						
LEM	**Lembang**	**33.88**	**207**	P	**P**	**07 24 38.7**	**+1.4**
	comp=Z,12nm,0.3s,baz=306,slow=11,SNR=4.2						
WMQ	**Urumqi**	**34.75**	**313**	P	**P**	**07 24 44.3**	**-0.2**
WMQ				pP	sP	07 24 49.3	-2.2
WMQ				pmax	pmax		
	comp=Z,17nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,120nm,4.5s						
WMQ				LR	LR		
	comp=Z,200nm,31.9s						
WMQ				LR	LR		
	comp=Z,130nm,18.7s						
MTN	**Manton Dam**	**37.49**	**166**	*e*P	**P**	**07 25 07.5**	**-0.6**
	comp=Z,27nm,0.6s						
PETK	**Petropavlovsk-**	**39.37**	**33**	LR	LR	07 41 52.3	
	comp=Z,198nm,19.7s,baz=234,slow=37						
MK01	**Makanchi Array**	**39.39**	**316**	*e*P	**P**	**07 25 22.4**	**-1.5**
MK31	**Makanchi Array**	**39.41**	**316**	*e*P	**P**	**07 25 22.9**	**-1.1**
MK31	**Makanchi Array**	**39.41**	**316**	*e*P	**P**	**07 25 22.9**	**-1.1**
MKAR	**Makanchi Array**	**39.41**	**316**	P	**P**	**07 25 22.8**	**-1.2**
	comp=Z,4.4nm,0.8s,baz=104,slow=10,SNR=29						
MKAR				LR	LR	07 43 04.3	
	comp=Z,112nm,18.5s,baz=100,slow=38						
MKAR	**Makanchi Array**	**39.41**	**316**	*e*P	**P**	**07 25 22.8**	**-1.2**
	comp=Z,17nm,0.8s						
MKAR	**Makanchi Array**	**39.41**	**316**	*e*P	**P**	**07 25 22.8**	**-1.2**
MKAR				pmax	pmax		
	comp=Z,17nm,0.8s						
ZALV	**Zalesovo Beam**	**41.15**	**327**	P	**P**	**07 25 35.9**	**-2.4**
	comp=Z,2.9nm,0.7s,baz=106,slow=8.8,SNR=6.6						
ZALV	**Zalesovo Beam**	**41.15**	**327**	*e*P	**P**	**07 25 35.5**	**-2.8**
ZALV				*e*sP	**P**	**07 25 36.6**	**-1.6**
ZALV	**Zalesovo Beam**	**41.15**	**327**	*e*P	**P**	**07 25 35.5**	**-2.8**
FITZ	**Fitzroy Crossi**	**41.88**	**176**	P	**P**	**07 25 44.0**	**-0.6**
	comp=Z,8.5nm,0.9s,baz=359,slow=3.3,SNR=6.6						
FITZ	**Fitzroy Crossi**	**41.88**	**176**	*e*P	**P**	**07 25 43.8**	**-0.7**
	comp=Z,16nm,1.1s						
KSH	**Kashi**	**42.11**	**303**	P	**P**	**07 25 49.7**	**+3.2**
KSH				sP	sP	07 26 00.1	+6.6
KSH				*e*PcP	**PcP**	**07 27 44.7**	**+3.7**
KSH				S	**S**	**07 32 08.4**	**+2.8**
KSH				SS	**SS**	**07 35 11.6**	**-1.6**
KSH				ScS	**ScS**	**07 35 48.4**	**-0.3**
KSH				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KSH				pmax	pmax		
	comp=Z,44nm,3.9s						
COEN	**Coen**	**42.70**	**150**	*e*P	**P**	**07 25 52.7**	**+1.4**
	comp=Z,20nm,0.9s						
KURK	**Kurchatov**	**43.11**	**320**	P	**P**	**07 25 52.2**	**-2.1**
KURK	**Kurchatov**	**43.11**	**320**	⇑*e*P	**P**	**07 25 54.7**	**+0.4**
KURK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KURBB	**Kurchatov Arra**	**43.12**	**320**	P	**P**	**07 25 52.2**	**-2.2**
	comp=Z,1.5nm,0.8s,baz=111,slow=8.1,SNR=8.5						
PALK	**Pallekele**	**43.40**	**255**	LR	LR	07 44 07.6	
	comp=Z,80nm,20.7s,baz=107,slow=36						
AAK	**Ala-Archa**	**43.67**	**307**	P	**P**	**07 25 58.2**	**-1.0**
	comp=Z,2.9nm,0.6s,baz=89,slow=3.7,SNR=5.6						
AAK				LR	LR	07 46 56.3	
	comp=Z,69nm,21.2s,baz=160,slow=40						
WRAB	**Tennant Creek**	**45.08**	**164**	*d i*P	**P**	**07 26 10.9**	**+0.5**
WRAB				pmax	pmax		
	comp=Z,18nm,0.9s						
WRA	**Warramunga Arr**	**45.09**	**164**	P	**P**	**07 26 10.9**	**+0.4**
	comp=Z,15nm,0.8s,baz=346,slow=8.8,SNR=59						
WB2	**Warramunga Arr**	**45.09**	**164**	*e*P	**P**	**07 26 11.0**	**+0.6**
	comp=Z,19nm,0.8s						
TIXI	**Tiksi**	**47.88**	**3**	LR	LR	07 49 09.0	
	comp=Z,399nm,19.8s,baz=196,slow=39						
TIXI	**Tiksi**	**47.88**	**3**	⇑*e*P	**P**	**07 26 32.1**	**+0.4**
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
AS31	**Alice Springs**	**48.58**	**166**	*e*P	**P**	**07 26 38.3**	**+0.6**
	comp=Z,2.6nm,0.6s						
ASAR	**Alice Springs**	**48.58**	**166**	P	**P**	**07 26 38.9**	**+1.2**
	comp=Z,3.7nm,0.5s,baz=355,slow=15,SNR=38						
AS01	**Alice Springs**	**48.58**	**166**	*e*P	**P**	**07 26 38.8**	**+1.0**
BVAR	**Borovoye Array**	**48.68**	**321**	P	**P**	**07 26 36.5**	**-1.8**
	comp=Z,0.6nm,0.5s,baz=86,slow=9.4,SNR=3.4						
BVAR				PcP	**PcP**	**07 28 01.4**	**-2.0**
	comp=Z,0.8nm,0.5s,baz=106,slow=3.1,SNR=3.7						
BVAR				LR	LR	07 49 34.5	
	comp=Z,52nm,18.3s,baz=117,slow=39						
ABKAR	**Akbulak array**	**54.53**	**314**	*e*P	**P**	**07 27 20.6**	**-1.4**
FORT	**Forrest**	**54.65**	**174**	*e*P	**P**	**07 27 24.1**	**+1.1**
	comp=Z,34nm,1.0s						
AKTO	**Aktyubinsk**	**55.85**	**316**	P	**P**	**07 27 30.6**	**-0.9**
	comp=Z,0.7nm,0.5s,baz=72,slow=9.6,SNR=2.6						
GEYT	**Alibeck**	**56.03**	**301**	P	**P**	**07 27 33.0**	**0.0**
	comp=Z,4.8nm,0.9s,baz=228,slow=5.8,SNR=9.5						
GEYT				LR	LR	07 55 48.7	
	comp=Z,64nm,18.3s,baz=290,slow=41						
EIDS	**Eidsvold**	**56.25**	**149**	*e*P	**P**	**07 27 35.8**	**+1.2**
	comp=Z,3.8nm,0.6s						
BBOO	**Buckleboo**	**57.87**	**167**	*e*P	**P**	**07 27 46.6**	**+0.7**
	comp=Z,22nm,1.1s						
STKA	**Stephens Creek**	**58.40**	**161**	P	**P**	**07 27 50.0**	**+0.4**
	comp=Z,5.1nm,0.7s,baz=340,slow=6.6,SNR=18						
STKA	**Stephens Creek**	**58.40**	**161**	*e*P	**P**	**07 27 50.4**	**+0.7**
	comp=Z,1.2nm,0.7s						
STKA	**Stephens Creek**	**58.40**	**161**	*e*P	**P**	**07 27 50.4**	**+0.7**
STKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GNI	**Garni**	**66.00**	**305**	LR	LR	08 01 36.3	
	comp=Z,24nm,21.1s,baz=78,slow=40						
ZEI	**Tsey**	**66.09**	**308**	*e*P	**P**	**07 28 40.2**	**-1.4**
ZEI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KBZ	**Khabaz**	**66.63**	**309**	LR	LR	07 59 45.5	
	comp=Z,50nm,19.9s,baz=79,slow=38						
KIV	**Kislovodsk**	**66.74**	**309**	*e*P	**P**	**07 28 44.9**	**-0.6**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,29nm,17.0s						
ILAR	**Eielson Array**	**68.85**	**27**	P	**P**	**07 28 57.2**	**-1.2**
	comp=Z,0.2nm,0.5s,baz=286,slow=5.8,SNR=4.2						
ILAR				LR	LR	08 01 09.5	
	comp=Z,40nm,18.4s,baz=286,slow=38						
SPITS	**Spitsbergen Ar**	**70.00**	**348**	LR	LR	08 04 05.6	
	comp=Z,98nm,18.1s,baz=50,slow=40						
FIA1	**FINESS Array S**	**72.30**	**330**	*e*P	**P**	**07 29 19.0**	**-0.4**
FINES	**FINESS Array B**	**72.31**	**330**	P	**P**	**07 29 18.1**	**-1.3**
	comp=Z,0.8nm,0.6s,baz=64,slow=4.4,SNR=4.0						
FINES				LR	LR	08 04 24.6	
	comp=Z,151nm,18.3s,baz=78,slow=39						
AKASG	**Malin Array Be**	**73.91**	**319**	P	**P**	**07 29 27.1**	**-2.0**
	comp=Z,0.3nm,0.4s,baz=58,slow=6.5,SNR=3.9						
ASF	**Jabal al Asfar**	**74.21**	**298**	P	**P**	**07 29 31.5**	**+0.1**
	comp=Z,3.2nm,0.7s,baz=41,slow=7.9,SNR=5.4						
BRTR	**Keskin Array B**	**74.35**	**307**	P	**P**	**07 29 31.4**	**-0.7**
	comp=Z,1.9nm,0.9s,baz=126,slow=6.4,SNR=7.0						
MMAI	**Mount Meron Ar**	**75.13**	**300**	LR	LR	08 08 20.6	
	comp=Z,41nm,19.0s,baz=285,slow=40						
MLR	**Muntele Rosu**	**77.74**	**314**	LR	LR	08 08 18.1	
	comp=Z,11nm,19.2s,baz=46,slow=39						
HFS	**Hagfors**	**78.41**	**331**	P	**P**	**07 29 52.9**	**-1.7**
	comp=Z,1.8nm,0.8s,baz=32,slow=8.5,SNR=3.8						
HFS				LR	LR	08 07 54.6	
	comp=Z,118nm,19.7s,baz=66,slow=38						
NB2	**NORSAR Subarra**	**79.04**	**333**	P	**P**	**07 29 56.1**	**-2.0**
	comp=Z,0.5nm,0.6s,baz=56,slow=5.6						
NOA	**NORSAR Array B**	**79.04**	**333**	LR	LR	08 08 30.5	
	comp=Z,75nm,18.5s,baz=125,slow=38						
BFZ	**Birch Farm**	**81.35**	**142**	*e*P	**P**	**07 30 11.2**	**+0.5**
	comp=Z,48nm,1.1s						
YKA	**Yellowknife Ar**	**82.70**	**23**	P	**P**	**07 30 16.1**	**-1.4**
	comp=Z,1.2nm,0.7s,baz=311,slow=5.0,SNR=8.2						
YKA				LR	LR	08 11 25.9	
	comp=Z,4.9nm,18.1s,baz=342,slow=39						
GERES	**GERESS Array B**	**83.84**	**321**	P	**P**	**07 30 23.2**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=56,slow=5.0,SNR=7.4						
GERES				LR	LR	08 11 22.6	
	comp=Z,48nm,18.0s,baz=42,slow=38						
GEA0	**GERESS Array S**	**83.85**	**321**	*e*P	**P**	**07 30 23.3**	**-0.6**
DAVOX	**Davos/Dischmat**	**87.11**	**321**	LR	LR	08 13 40.9	
	comp=Z,48nm,18.7s,baz=86,slow=38						
YBH	**Yreka Blue Hor**	**91.07**	**43**	LR	LR	08 13 19.2	
	comp=Z,13nm,18.1s,baz=306,slow=37						
NVAR	**Mina Array Bea**	**95.74**	**44**	P	**P**	**07 31 20.1**	**-0.6**
	comp=Z,0.2nm,0.5s,baz=308,slow=4.5,SNR=3.2						
NVAR				LR	LR	08 10 32.1	
	comp=Z,29nm,20.6s,baz=90,slow=33						
ULM	**Lac du Bonnet**	**98.67**	**24**	LR	LR	08 21 16.6	
	comp=Z,45nm,18.2s,baz=26,slow=39						
RUSC	**La Rusia**	**146.65**	**29**	*e*PKPdf	**PKPbc**	**07 37 36.6**	**-0.7**

SJA 03 07:28:12.5±0.8, 32°.03S×68°.27W, h23^{km}±3^{km}, ML2.9, MW3.8, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTCV	**Cerro Valdivia**	**0.29**	**306**	*i* P	Pb	07 28 19.7	+0.5
SJA	**San Juan**	**0.56**	**334**	*i* P	Pb	07 28 24.3	+0.5
SJA				*i* S	Sn	07 28 33.0	-0.7
SJA				IAML		07 28 33.1	
	comp=Z,1μm,0.1s						
RTLL	**Cerro Villicun**	**0.72**	**346**	*i* P	Pb	07 28 26.8	+0.4
RTLL				*i* S	Sn	07 28 37.9	+0.2
ASAL	**Salagasta**	**0.74**	**221**	*i* P	Pn	07 28 27.5	-0.1
RTLS	**Leoncito**	**0.91**	**285**	*i* P	Pn	07 28 30.0	-0.1
RTLS				*i* S	Sn	07 28 44.0	+1.4
RTLS				IAML		07 28 46.4	
	comp=Z,154nm,0.3s						
ACAN	**Cantantal**	**0.95**	**105**	*i* P	Pn	07 28 30.5	+0.1
AUSP	**Uspallata**	**0.97**	**258**	*i* P	Pn	07 28 32.3	+1.3
ARCO	**CERRO ARCO**	**0.98**	**215**	*i* P	Pn	07 28 31.8	+0.8
ARCO				IAML		07 28 51.5	
	comp=Z,490nm,0.3s						
AMOG	**MOGNA**	**1.11**	**350**	*i* P	Pb	07 28 33.6	+0.6
AAGR	**Agrelo**	**1.15**	**204**	*i* P	Pb	07 28 35.0	+1.2
AVIZ	**Vizcacheras**	**1.45**	**188**	*i* P	Pb	07 28 39.5	+0.6
AROD	**Rodeo**	**2.13**	**331**	*i* P	Pb	07 28 50.0	-0.6
MRA	**San Martin**	**2.20**	**101**	*i* P	Pb	07 28 50.3	-1.3
APLL	**PUNTA DE LOS L**	**2.21**	**43**	*i* P	Pb	07 28 50.1	-1.7

NNC 03 07:40:20.1±2.8, 38°.61N×70°.13E, h0^{km}, mb3.5, mpv3.1, 5C-4D, Error ellipse: s-maj=22.7km s-min=19.7km az=60.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**2.97**	**61**	⇓Pn	Pn	07 41 09.0	+0.2
	11nm,0.4s						
SFK				⇓Lg	Lg	07 41 53.1	
	25nm,0.4s						
MNAS	**Manas**	**4.28**	**24**	⇑Pn	Pn	07 41 27.4	+0.8
	1.0nm,0.5s						
MNAS				⇓Pg	Pb	07 41 36.3	+0.1
	1.6nm,0.4s						
MNAS				⇑Sn	Sn	07 42 19.9	+2.6
	2.9nm,0.5s						
MNAS				⇑Lg	Lg	07 42 33.9	
	20nm,1.1s						
KK31	**Karatay Array**	**4.50**	**4**	⇓Pn	Pn	07 41 29.1	-0.5
	0.9nm,0.3s,baz=184,slow=12,SNR=12						
KK31				⇑Pg	Pb	07 41 41.1	+1.1
	1.0nm,0.3s,baz=182,slow=18,SNR=5.2						
KK31				⇑Lg	Lg	07 42 41.9	
	5.8nm,0.8s,baz=178,slow=33,SNR=5.1						

MEX 03 08:08:52.6±0.7, 17°.14N×97°.01W, h56^{km}±7^{km}, MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VHO	**Vista Hermosa**	**0.27**	**104**	*i* P	Pn	08 09 00.6	-1.8
VHO				*i* S	Sn	08 09 07.8	-1.5
TPIG	**Tehuac#an**	**1.32**	**345**	*i* P	Pn	08 09 13.6	-1.4
TPIG				*i* S	Sn	08 09 29.3	-2.2
TLIG	**Tlapa**	**1.54**	**286**	*e*P	Pn	08 09 16.5	-1.5
TLIG				*e*S	Sn	08 09 34.5	-2.6
HUIG	**Huatulco**	**1.61**	**147**	*e*P	Pn	08 09 17.8	-1.0
HUIG				*e*S	Sn	08 09 35.8	-2.7
YAIG	**Yautepec**	**2.60**	**312**	*i* P	Pn	08 09 30.3	-2.1
YAIG				*i* S	Sn	08 10 00.7	-2.2

NNC 03 08:36:48.6±4.3, 37°.10N×70°.64E, h0^{km}, mb4.2, mpv3.8, 4C-3D, Error ellipse: s-maj=33.5km s-min=28.6km az=160.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**3.68**	**37**	⇑Pn	Pn	08 37 46.9	-0.1
	29nm,0.3s						
SFK				⇑Sn	Sn	08 38 32.8	+1.6
	6.9nm,0.4s						
MNAS	**Manas**	**5.57**	**14**	⇓Pn	Pn	08 38 13.2	+0.2
	6.1nm,0.8s						
MNAS				⇓Sn	Sn	08 39 18.9	+1.1
	7.0nm,0.5s						
KK31	**Karatay Array**	**6.00**	**359**	Pn	Pn	08 38 20.2	+1.5
	1.5nm,0.3s,baz=176,slow=12,SNR=62						
KK31				⇑Sn	Sn	08 39 30.4	+2.2
	1.6nm,0.3s,baz=183,slow=26,SNR=7.7						
AAK	**Ala-Archa**	**6.28**	**27**	⇓Pn	Pn	08 38 21.6	-1.1
	4.9nm,0.5s						
AAK				⇑Sn	Sn	08 39 34.2	-1.0
	2.3nm,0.5s						

MAN 03 08:39:50.9, 11°.44N×125°.39E, h36^{km}, mb3.7, ML2.4, MS1.9, 1D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.17**	**17**	*e*P	Pn	08 39 58.6	-1.8
BESP				*e*S	Sn	08 40 04.6	-4.8
PLP	**Palo**	**0.48**	**236**	⇓*e*P	Pn	08 40 02.8	+1.5
PLP				*e*S	Sn	08 40 11.0	+2.5
CNP	**Catarman**	**1.28**	**326**	*e*P	Pn	08 40 12.8	+0.5
CNP				*e*S	Sn	08 40 29.1	+0.9

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*IDC **03** 08:49:41.5±0.6, 27°.89S×176°.88W, h0^{km}, mb4.2/14, mb1 4.4/14, mb1mx4.2/41, mbtmp4.2/14, MS3.6/16, Ms1 3.6/16, ms1mx3.3/43, Error ellipse: s-maj=20.6km s-min=16.2km az=119.0*

*NEIC **03** 08:49:42.1±3.8, 27°.95S×176°.86W, h7^{km}±23^{km}, mb4.4/16, Error ellipse: s-maj=13.1km s-min=9.0km az=110.0*

*ISCJB **03** 08:49:47.1±0.5, 28°.00S±0°.06×177°.1W±0°.1, h49^{km}, mb4.3/22, MS3.6/14, Error ellipse: s-maj=13.0km s-min=8.0km az=16.0*

ISC 03 08:49:48.0±0.5, 27°.97S±0°.07×176°.9W±0°.1, h49^{km}, n88, σ1^{s}.29/65, mb4.3/22, MS3.6/14, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.57**	**215**	Pn	**Pn**	**08 50 12.8**	**-0.6**
	806nm,0.3s,baz=90,slow=6.2,SNR=37						
RAO				Sn	**Sn**	**08 50 32.5**	**-0.2**
	2μm,0.3s,baz=73,slow=19,SNR=15						
RAO				LR	LR	08 50 54.3	
	comp=Z,557nm,20.7s,baz=5.0,slow=45						
RAO	**Raoul Island**	**1.57**	**215**	*e*Pn	**Pn**	**08 50 12.9**	**-0.6**
RAO				*e*Sn	**Sn**	**08 50 33.3**	**+0.6**
OUZ	**Omahuta**	**10.87**	**226**	*e*Pn	Pn	08 52 26.6	+5.8
URZ	**Urewera**	**11.43**	**205**	Pn	Pn	08 52 18.9	-10
	0.2nm,0.3s,baz=98,slow=18,SNR=4.3						
URZ				Sn	Sn	08 54 25.5	-9.2
	0.7nm,0.3s,baz=351,slow=18,SNR=4.7						
BKZ	**Black Stump Fm**	**12.46**	**205**	*e*Pn	**Pn**	**08 52 38.3**	**-4.2**
HIZ	**Hauiti**	**12.58**	**211**	*e*Pn	Pn	08 52 39.0	-5.3
BFZ	**Birch Farm**	**13.89**	**202**	*e*Pn	Pn	08 52 55.9	-6.2
AFI	**Afiamalu**	**14.77**	**20**	Pn	Pn	08 53 08.3	-5.7
	2.4nm,0.3s,baz=195,slow=11,SNR=5.2						
AFI				Sn	Sn	08 55 39.2	-17
	1.7nm,0.3s,baz=232,slow=19,SNR=3.3						
AFI	**Afiamalu**	**14.77**	**20**	*e*Pn	**Pn**	**08 53 10.2**	**-3.8**
AFI				*e*Sn	Sn	08 55 43.1	-13
THZ	**Tophouse**	**16.10**	**209**	*e*Pn	**Pn**	**08 53 29.2**	**-1.8**
	42nm,1.3s						
DZM	**Mont Dzumac**	**16.21**	**288**	Pn	P	08 53 41.2	+6.2
	0.4nm,0.3s,baz=112,slow=9.5,SNR=8.2						
DZM				LR	LR	08 58 30.9	
	comp=Z,280nm,20.5s,baz=142,slow=33						
DZM	**Mont Dzumac**	**16.21**	**288**	*e*P	**P**	**08 53 36.0**	**+1.0**
	20nm,0.9s						
DZM				*e*LR	LR	08 57 02.3	
	518nm,25.0s						
KHZ	**Kahutara**	**16.39**	**206**	*e*Pn	**Pn**	**08 53 34.4**	**-0.2**
	28nm,0.9s						
RAR	**Rarotonga**	**16.94**	**70**	LR	LR	08 58 13.6	
	comp=Z,186nm,21.2s,baz=258,slow=30						
OXZ	**Oxford**	**17.75**	**207**	*e*Pn	**Pn**	**08 53 49.7**	**-1.8**
	30nm,1.3s						
RPZ	**Rata Peaks**	**18.48**	**209**	*e*P	**Pn**	**08 54 00.3**	**0.0**
	26nm,1.2s						
LBZ	**Lake Benmore**	**19.39**	**209**	*e*P	**P**	**08 54 09.1**	**-0.7**
	7.4nm,1.0s						
TBI	**Tubuai**	**25.11**	**86**	*e*LR	LR	09 01 08.8	
	278nm,26.8s						
TBI	**Tubuai**	**25.11**	**86**	*e*T	T	09 20 50.1	
	14nm,0.3s						
PAE	**Paea**	**27.11**	**74**	*e*T	T	09 23 21.3	
	14nm,0.3s						
PPT2	**Papeete2**	**27.15**	**73**	*e*LR	LR	09 02 11.6	
	271nm,26.5s						
PPT2	**Papeete2**	**27.15**	**73**	*e*T	T	09 23 26.2	
	4.5nm,0.3s						
PPT	**Papeete**	**27.16**	**73**	LR	LR	09 03 28.2	
	comp=Z,69nm,19.3s,baz=269,slow=30						
HNR	**Honiara**	**28.57**	**306**	LR	LR	09 05 58.5	
	comp=Z,67nm,18.5s,baz=228,slow=34						
VAH	**Vaihoa**	**29.91**	**71**	*e*T	T	09 26 45.1	
	17nm,0.3s						
CTA	**Charters Tower**	**34.48**	**275**	P	**P**	**08 56 33.1**	**+1.7**
	5.6nm,0.6s,baz=103,slow=12,SNR=8.1						
CTAO	**Charters Tower**	**34.48**	**275**	*e*P	**P**	**08 56 33.1**	**+1.7**
	6.8nm,0.9s						
STKA	**Stephens Creek**	**36.05**	**253**	P	**P**	**08 56 45.9**	**+1.1**
	2.5nm,0.8s,baz=112,slow=1.7,SNR=5.7						
STKA				LR	LR	09 10 16.5	
	comp=Z,125nm,18.1s,baz=31,slow=34						
STKA	**Stephens Creek**	**36.05**	**253**	*e*P	**P**	**08 56 45.7**	**+0.9**
	1.9nm,1.5s						
TAOE	**Nuku Hiva Isla**	**39.47**	**68**	*e*LR	LR	09 07 51.5	

	128nm,24.4s						
AS01	Alice Springs	44.24	264	*e*P	P	08 57 53.2	+0.4
AS31	Alice Springs	44.28	264	*e*P	P	08 57 52.1	-1.0
	2.1nm,1.3s						
ASAR	Alice Springs	44.28	264	P	P	08 57 52.1	-1.0
	2.5nm,0.6s,baz=93,slow=7.2,SNR=40						
ASAR				PcP	PP	08 59 36.3	-0.7
	0.4nm,0.4s,baz=118,slow=4.2,SNR=4.1						
ASAR				LR	LR	09 15 22.8	
	comp=Z,119nm,18.1s,baz=110,slow=35						
WB2	Warramunga Arr	45.04	269	*e*P	P	08 57 58.4	-0.8
	6.4nm,0.8s						
WRAB	Tennant Creek	45.05	269	*e*P	P	08 57 58.6	-0.6
	3.2nm,0.8s						
WR1	Warramunga Arr	45.05	269	*e*P	P	08 57 58.1	-1.1
	12nm,1.2s						
WRA	Warramunga Arr	45.05	269	P	P	08 57 58.1	-1.2
	2.6nm,0.7s,baz=108,slow=7.8,SNR=34						
FORT	Forrest	47.66	253	*e*P	P	08 58 17.5	-2.2
	8.9nm,0.8s						
SBA	Scott Base	50.53	184	*e*P	P	08 58 44.5	+3.7
	4.1nm,0.9s						
VNDA	Vanda	50.61	186	P	P	08 58 43.4	+2.0
	0.5nm,0.6s,baz=24,slow=5.1,SNR=4.4						
VNDA	Vanda	50.61	186	*e*P	P	08 58 42.5	+1.0
FITZ	Fitzroy Crossi	53.40	268	P	P	08 59 03.8	+0.8
	3.0nm,0.8s,baz=111,slow=8.6,SNR=3.0						
GUMO	Guam	55.50	313	LR	LR	09 20 48.9	
	comp=Z,26nm,19.7s,baz=152,slow=34						
NWAO	Narrogin (SRO)	56.20	247	LR	LR	09 21 52.4	
	comp=Z,92nm,18.1s,baz=332,slow=34						
CASY	Casey	57.74	207	*e*P	P	08 59 32.8	-0.7
	13nm,1.4s						
QSPA	South Pole Qui	62.13	180	P	P	09 00 04.6	+0.8
	2.2nm,0.7s,baz=80,slow=6.1,SNR=7.5						
QSPA	South Pole Qui	62.13	180	*e*P	P	09 00 05.2	+1.4
	3.8nm,0.8s						
LEM	Lembang	74.04	271	LR	LR	09 33 45.4	
	comp=Z,71nm,19.0s,baz=236,slow=36						
MAW	Mawson	74.92	200	P	P	09 01 23.9	+0.6
	2.8nm,0.7s,baz=130,slow=8.8,SNR=12						
MAW	Mawson	74.92	200	*e*P	P	09 01 23.9	+0.6
	0.9nm,0.8s						
MJAR	Matsushiro Arr	76.83	324	P	P	09 01 34.5	-0.1
	5.7nm,0.8s,baz=168,slow=6.0,SNR=3.5						
MAJO	Matsushiro	76.83	324	*e*P	P	09 01 34.5	-0.1
MAT	Matsushiro	76.83	324	P	P	09 01 39.1	+4.5
TATO	Taipei	79.31	306	*e*P	P	09 01 49.1	+0.6
	53nm,1.2s						
SNAA	Sanae	80.55	178	LR	LR	09 33 13.1	
	comp=Z,18nm,22.0s,baz=179,slow=32						
VNA3	Neumayer Olymp	80.66	176	P	P	09 01 54.8	-0.4
ASAJ	Asahikawa	80.76	332	P	P	09 01 57.5	+1.5
	3.0nm,0.7s,baz=101,slow=4.5,SNR=3.6						
ASAJ				LR	LR	09 31 04.5	
	comp=Z,48nm,21.9s,baz=181,slow=31						
VNA1	Neumayer--Stat	81.33	176	P	P	09 01 57.5	-1.2
LPIG	La Paz	82.42	58	LR	LR	09 35 01.1	
	comp=Z,28nm,18.1s,baz=210,slow=33						
PETK	Petropavlovsk-	83.72	345	P	P	09 02 11.3	+0.1
	1.2nm,0.5s,baz=112,slow=7.0						
PEA1	Petropavlovsk-	83.72	345	*e*P	P	09 02 11.3	+0.1
YBH	Yreka Blue Hor	85.51	37	LR	LR	09 31 13.1	
	comp=Z,19nm,21.3s,baz=206,slow=29						
NVAR	Mina Array Bea	85.79	42	P	P	09 02 23.8	+1.5
	1.2nm,0.8s,baz=223,slow=8.4,SNR=8.6						
TXAR	Lajitas Array	90.24	57	P	P	09 02 45.3	+1.6
	0.6nm,0.9s,baz=214,slow=4.2,SNR=5.1						
TXAR				LR	LR	09 33 59.6	
	comp=Z,20nm,21.6s,baz=0.0,slow=30						
ANMO	Albuquerque	91.29	51	LR	LR	09 39 49.7	
	comp=Z,26nm,18.2s,baz=218,slow=33						
PDAR	Pinedale Array	93.69	43	P	P	09 03 01.1	+1.6
	0.2nm,0.5s,baz=181,slow=3.6,SNR=2.6						
PDAR				LR	LR	09 38 32.3	
	comp=Z,16nm,19.0s,baz=230,slow=31						
MK01	Makanchi Array	116.94	311	*e*PKPdf	PKPdf	09 08 26.9	-0.1
MK32	Makanchi Array	116.95	311	*e*PKPdf	PKPdf	09 08 26.1	-1.0
MKAR	Makanchi Array	116.95	311	PKP	PKPdf	09 08 26.1	-1.0
	0.2nm,0.3s,baz=153,slow=1.0,SNR=3.1						
KURK	Kurchatov	120.06	315	*e*PKPdf	PKPdf	09 08 32.2	-0.6
KURBB	Kurchatov Arra	120.11	315	PKP	PKPdf	09 08 32.2	-0.7
	0.3nm,0.6s,baz=84,slow=1.7,SNR=3.2						
BVAR	Borovoye Array	125.33	317	PKP	PKPdf	09 08 42.8	-0.1
	1.0nm,0.6s,baz=101,slow=2.2,SNR=3.4						
ARA0	ARCESS Array S	136.41	349	*e*PKPdf	PKPdf	09 09 02.9	-0.5
ARCES	ARCESS Array B	136.41	349	PKP	PKPdf	09 09 02.9	-0.5
	2.7nm,0.9s,baz=5.7,slow=1.8,SNR=4.7						
FIA0	FINESS Array S	143.18	342	*e*PKPpre	PKPpre	09 09 12.2	
FINES	FINESS Array B	143.18	342	PKhKP	PKPpre	09 09 12.2	
	0.8nm,0.4s,baz=38,slow=6.0,SNR=11						
NC303	NORSAR Array S	146.29	353	*e*PKPdf	PKPab	09 09 23.0	-0.4
NB2	NORSAR Subarra	146.48	353	PKP	PKPbc	09 09 23.3	+0.1
	comp=Z,1.4nm,0.7s,baz=27,slow=3.6						
HFS	Hagfors	147.04	350	PKPbc	PKPbc	09 09 24.0	-0.7
	comp=Z,1.3nm,0.4s,baz=56,slow=5.7,SNR=11						
AKASG	Malin Array Be	149.90	326	PKPbc	PKPbc	09 09 32.0	-0.4
	comp=Z,1.2nm,0.5s,baz=47,slow=2.9,SNR=6.8						
AKBB	Malin Array Si	149.90	326	*e*PKPbc	PKPbc	09 09 32.0	-0.4
AK11	Malin Array Si	149.94	326	*e*PKPbc	PKPbc	09 09 32.8	+0.3
ASF	Jabal al Asfar	150.54	287	PKPbc	PKPbc	09 09 35.9	+1.1
	comp=Z,1.4nm,0.4s,baz=126,slow=2.3,SNR=2.0						
MMAI	Mount Meron Ar	151.80	288	PKPbc	PKPbc	09 09 38.8	+1.2
	comp=Z,1.0nm,0.3s,baz=69,slow=7.9,SNR=2.7						
BR101	Keskin Array S	152.21	303	*e*PKPbc	PKPbc	09 09 38.1	-0.3
BRTR	Keskin Array B	152.21	303	PKPbc	PKPbc	09 09 38.1	-0.3
	comp=Z,0.6nm,0.4s,baz=140,slow=4.6,SNR=3.6						
TORD	Torodi Ar. Bea	165.19	175	PKPab	PKPab	09 10 43.7	-1.0
	baz=163,slow=3.4						
TOA1	Torodi Ar. Sit	165.20	175	*e*PKPab	PKPab	09 10 43.7	-1.0

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*ISCJB **03** 09:02:18.3±1.1, 38°.23N±0°.07×38°.19E±0°.03, h0^{km}, Error ellipse: s-maj=9.8km s-min=3.7km az=0.2*

*CSEM **03** 09:02:18.1, 38°.23N×38°.19E, h7^{km}, ML2.8, Suspected Mining explosion.*

*DDA **03** 09:02:18.1, 38°.23N×38°.19E, h7^{km}, Ml2.8, Suspected Mining explosion.*

ISC 03 09:02:19.1±1.0**, 38°.36N**±0°.05×**38°.20E**±0°.02**, h0**^{km}**, n11, **σ**0^{s}.85**/22**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MALT	Malatya	0.18	103	*i* PG	Pg	09 02 23.1	+0.5
MALT				SG	Sg	09 02 26.7	+1.8
AKCD	Akcadag	0.23	255	*i* P	Pg	09 02 22.8	-0.7
AKCD				*i* S	Sg	09 02 26.8	+0.4
AKCD	Akcadag	0.23	255	P	Pg	09 02 22.8	-0.7
AKCD				S	Sg	09 02 26.8	+0.4
HEKM	Malatya_Hekimh	0.56	340	*i* P	Pb	09 02 31.6	-0.3
HEKM				*i* S	Sb	09 02 41.6	+1.1
HEKM	Malatya_Hekimh	0.56	340	P	Pb	09 02 31.6	-0.3
HEKM				S	Sb	09 02 41.6	+1.1
DARE	Darende-Malaty	0.60	291	*e*PG	Pg	09 02 30.9	+0.2
DARE				SG	Sg	09 02 40.0	+1.5
ELZG	Elazig	0.63	77	*e*P	Pg	09 02 30.5	-0.7
ELZG				*i* S	Sb	09 02 42.3	-0.3
ELZG	Elazig	0.63	77	P	Pg	09 02 30.5	-0.7
ELZG				S	Sb	09 02 42.3	-0.3
KEMA	Kemaliye	0.94	14	*e*P	Pg	09 02 36.6	-0.5
KEMA				*i* S	Sn	09 02 53.0	-0.9
KEMA	Kemaliye	0.94	14	P	Pg	09 02 36.6	-0.5
KEMA				S	Sn	09 02 53.0	-0.9
PTK	Pertek	1.07	60	*e*PG	Pb	09 02 40.3	-0.4
PTK				SG	Sb	09 02 56.3	+0.9

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*ISK **03** 09:08:05.0, 38°.87N×38°.64E, h5^{km}, ML2.4/6*

*ISCJB **03** 09:08:06.6±0.4, 38°.87N±0°.02×38°.66E±0°.03, h8^{km}±5^{km}, Error ellipse: s-maj=4.1km s-min=4.1km az=42.0*

*CSEM **03** 09:08:06.5±0.2, 38°.87N×38°.65E, h10^{km}, ML2.9, Error ellipse: s-maj=3.3km s-min=3.1km az=13.0*

*DDA **03** 09:08:06.6, 38°.87N×38°.64E, h7^{km}, Ml2.9*

ISC 03 09:08:06.6±1.1**, 38°.87N**±0°.02×**38°.65E**±0°.02**, h12**^{km}±10^{km}**, n26, **σ**0^{s}.46**/44**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEMA	Kemaliye	0.42	343	*i* P	Pg	09 08 14.3	-0.6
KEMA				*i* S	Sg	09 08 21.0	+0.4
KEMA	Kemaliye	0.42	343	P	Pg	09 08 14.3	-0.6
KEMA				S	Sg	09 08 21.0	+0.4
ELZG	Elazig	0.45	145	*i* P	Pg	09 08 15.5	0.0
ELZG				*i* S	Sb	09 08 23.1	-0.3
ELZG	Elazig	0.45	145	P	Pg	09 08 15.5	0.0
ELZG				S	Sb	09 08 23.1	-0.3
HEKM	Malatya_Hekimh	0.54	271	*i* P	Pg	09 08 17.4	+0.2
HEKM				*i* S	Sb	09 08 26.6	+0.6
HEKM	Malatya_Hekimh	0.54	271	P	Pg	09 08 17.4	+0.2
HEKM				S	Sb	09 08 26.6	+0.6
PTK	Pertek	0.58	87	PG	Pg	09 08 17.5	-0.4
PTK				SG	Sb	09 08 26.8	-0.2
PTK	Pertek	0.58	87	*e*Pg	Pg	09 08 17.5	-0.4
PTK				*e*Sg	Sb	09 08 26.8	-0.2
MALT	Malatya	0.58	198	PG	Pg	09 08 17.4	-0.6
MALT				SG	Sb	09 08 26.6	-0.4
MALT	Malatya	0.58	198	*e*Pg	Pg	09 08 17.4	-0.6
MALT				*e*Sg	Sb	09 08 26.6	-0.4
ILIC	ilic-Erzincan	0.59	354	PG	Pg	09 08 17.3	-0.8
ILIC				SG	Sb	09 08 26.8	-0.4
ILIC	ilic-Erzincan	0.59	354	*e*Pg	Pg	09 08 17.3	-0.8
ILIC				*e*Sg	Sb	09 08 26.8	-0.4
SVRC	Sivrice-ELAZID	0.71	133	PG	Pg	09 08 19.9	-0.5
SVRC	Sivrice-ELAZID	0.71	133	*e*Pg	Pg	09 08 19.9	-0.5
TNCL	Tunceli-Merkez	0.74	70	*i* P	Pg	09 08 20.8	-0.1
TNCL				*i* S	Sb	09 08 32.3	+0.8
TNCL	Tunceli-Merkez	0.74	70	P	Pg	09 08 20.8	-0.1
TNCL				S	Sb	09 08 32.3	+0.8
AKCD	Akcadag	0.81	225	*i* P	Pg	09 08 21.6	-0.7
AKCD				*i* S	Sb	09 08 33.9	+0.2
AKCD	Akcadag	0.81	225	P	Pg	09 08 21.6	-0.7
AKCD				S	Sb	09 08 33.8	+0.2
DARE	Darende-Malaty	0.96	252	PG	Pg	09 08 24.8	-0.3
DARE	Darende-Malaty	0.96	252	*e*Pg	Pg	09 08 24.8	-0.3
CUKAN	kangal_SIVAS	1.02	296	*i* P	Pb	09 08 26.4	+0.1
CUKAN				*i* S	Sn	09 08 41.1	-0.3
CUKAN	kangal_SIVAS	1.02	296	P	Pb	09 08 26.5	+0.1
CUKAN				S	Sn	09 08 41.1	-0.3
EZC	Erzincan	1.04	31	*e*Pn	Pn	09 08 27.4	+0.3
ERZN	Erzincan	1.10	49	PN	Pg	09 08 27.4	-0.3
URFA	Urfa	1.43	175	PN	Pb	09 08 33.5	+0.2
URFA	Urfa	1.43	175	*e*Pn	Pb	09 08 33.5	+0.2

MEX 03 09:16:06.5±0.4**, 15°.17N**×**93°.09W, h71**^{km}±9^{km}**, MD3.8, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.55	347	*i* P	Pn	09 16 18.5	-1.4
PCIG				*e*S	Sn	09 16 28.1	-1.7
TGIG		1.60	359	*e*P	Pn	09 16 31.6	-1.4
TGIG				*e*S	Sn	09 16 50.8	-2.1

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*NIED **03** 09:37:00, 25°.80N×142°.80E, h5^{km}, Mw4.1 Best double couple: $M_0$1.59000×10^{15} NP1:ϕ_s194.00000°, δ14.00000°, λ93.00000°. NP2:ϕ_s12.00000°, δ76.00000°, λ89.00000°.*

*ISCJB **03** 09:37:10.4±0.6, 25°.78N±0°.07×142°.4E±0°.2, h36^{km}, mb3.9/14, MS3.1/4, Error ellipse: s-maj=24.6km s-min=10.0km az=175.4*

*IDC **03** 09:37:13.3±2.2, 25°.83N×142°.42E, h46^{km}±21^{km}, mb3.6/15, mb1 3.8/16, mb1mx3.6/67, mbtmp3.9/16, ML3.5/1, MS3.1/9, Ms1 3.1/9, ms1mx2.7/63, Error ellipse: s-maj=29.3km s-min=13.9km az=89.0*

ISC 03 09:37:12.1±0.8**, 25°.75N**±0°.08×**142°.5E**±0°.2**, h36**^{km}**, n27, **σ**1^{s}.09**/18**, mb4.0**/14**, MS3.1**/4**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	1.36	350	P	Pn	09 37 34.4	-0.2
	160nm,0.3s,baz=126,slow=24,SNR=124						
JCJ				S	Sn	09 37 54.4	+3.1
	272nm,0.3s,baz=270,slow=20,SNR=20						
MJAR	Matsushiro Arr	11.35	342	P	Pn	09 39 51.0	-0.7
	0.4nm,0.3s,baz=162,slow=12,SNR=4.3						
MJAR				LR	LR	09 44 19.2	
	comp=Z,54nm,18.2s,baz=200,slow=38						
GUMO	Guam	12.31	169	LR	LR	09 44 12.2	
	comp=Z,48nm,20.8s,baz=349,slow=34						
JNU	Nakatsue	12.47	309	LR	LR	09 44 36.5	
	comp=Z,58nm,18.2s,baz=122,slow=36						
JOW	Kunigami	12.76	278	LR	LR	09 44 32.0	
	comp=Z,67nm,20.2s,baz=194,slow=34						
KSRS	Korea Array	16.98	317	LR	LR	09 47 17.8	
	comp=Z,91nm,18.7s,baz=125,slow=36						
USRK	Ussuriysk Ar.	20.27	338	P	P	09 41 44.4	-0.1
	0.6nm,0.4s,baz=171,slow=9.8						
TGY	Tagaytay City	23.27	244	LR	LR	09 50 33.4	
	comp=Z,33nm,20.3s,baz=186,slow=34						
H11N2	WAKE ISLAND Hy	23.31	100	T	T	10 06 03.8	
	baz=290,slow=75,SNR=8.2						
H11N1	WAKE ISLAND Hy	23.31	100	T	T	10 06 08.5	
	baz=290,slow=75,SNR=7.5						
H11N3	WAKE ISLAND Hy	23.33	100	T	T	10 06 05.0	
	baz=290,slow=75,SNR=8.8						
KLR	Kul'dur	24.88	343	P	P	09 42 32.0	+0.7
	0.3nm,0.5s,baz=140,slow=7.1,SNR=12						
SIJI	Sorong	28.59	204	LR	LR	09 51 56.9	
	comp=Z,33nm,20.3s,baz=80,slow=31						
SONM	Songino Array	35.85	317	LR	LR	09 59 19.7	
	comp=Z,42nm,19.1s,baz=262,slow=37						
WRA	Warramunga Arr	46.10	191	P	P	09 45 33.5	+0.6
	3.9nm,0.5s,baz=11,slow=8.4,SNR=45						
FITZ	Fitzroy Crossi	46.55	202	P	P	09 45 37.2	+0.8
	4.6nm,0.9s,baz=355,slow=6.0,SNR=4.2						
ASAR	Alice Springs	49.82	190	P	P	09 46 02.1	+0.5
	0.9nm,0.6s,baz=16,slow=9.9,SNR=17						
MKAR	Makanchi Array	51.52	310	P	P	09 46 14.6	+0.3
	0.3nm,0.3s,baz=110,slow=7.1,SNR=4.3						
KURBB	Kurchatov Arra	54.15	315	P	P	09 46 32.0	-1.6
	0.6nm,0.4s,baz=91,slow=7.8,SNR=6.0						
STKA	Stephens Creek	57.31	181	P	P	09 46 57.2	+0.8
	2.0nm,0.8s,baz=346,slow=8.3,SNR=3.1						
ILAR	Eielson Array	58.78	28	P	P	09 47 05.3	-1.0
	0.4nm,0.8s,baz=255,slow=6.0,SNR=4.5						
BVAR	Borovoye Array	59.19	318	P	P	09 47 08.7	-0.7
	0.7nm,0.5s,baz=78,slow=7.5,SNR=4.0						
BVAR				LR	LR	10 15 01.3	
	comp=Z,26nm,18.2s,baz=78,slow=38						
YKA	Yellowknife Ar	73.21	28	P	P	09 48 38.7	-0.3
	0.5nm,0.7s,baz=285,slow=6.1,SNR=4.5						
FINES	FINESS Array B	79.25	334	P	P	09 49 13.7	+0.3
	2.6nm,0.6s,baz=79,slow=5.2,SNR=8.6						
NVAR	Mina Array Bea	81.16	52	P	P	09 49 25.0	+0.5
	0.6nm,0.8s,baz=294,slow=6.0,SNR=4.8						
AKASG	Malin Array Be	83.84	324	P	P	09 49 37.2	-0.7
	0.3nm,0.4s,baz=50,slow=5.6,SNR=2.9						
HFS	Hagfors	84.75	337	P	P	09 49 41.6	-0.7
	3.2nm,0.8s,baz=78,slow=2.1,SNR=5.5						

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*CSEM **03** 09:44:57.5±0.1, 47°.35N×11°.64E, h10^{km}, ML2.8/9, Error ellipse: s-maj=2.9km s-min=2.3km az=165.0*

*VIE **03** 09:44:57.5±0.2, 47°.27N×11°.62E, h14^{km}±1^{km}, mb1.9/10, ml2.8/18, Error ellipse: s-maj=1.5km s-min=1.1km az=161.0 8 km E of Hall in Tirol felt 4 ems98 at Wattens / Tyrol*

*BGR **03** 09:44:58.5±0.3, 47°.34N×11°.64E, h10^{km}, ML2.5/10, Error ellipse: s-maj=5.6km s-min=4.4km az=167.0*

BGR Felt in Innsbruck-Wattens.

*ROM **03** 09:44:58.9±0.6, 47°.23N±0°.03×11°.58E±0°.03, h10^{km}, ML2.3/10*

*PRU **03** 09:44:59.3, 47°.35N×11°.68E, h0^{km}*

ISC 03 09:44:58.1±0.8**, 47°.32N**±0°.02×**11°.63E**±0°.02**, h15**^{km}±4^{km}**, n63, **σ**0^{s}.93**/101**, Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WATA	Walderalm	0.04	296	*i* Pg	Pg	09 45 01.1	+0.1
	SNR=762						
WATA				*e*Sg	Sg	09 45 02.8	-0.2
	896nm,0.1s						
WATA	Walderalm	0.04	296	Pg	Pg	09 45 01.1	+0.1
	SNR=762						
WATA				Sg	Sg	09 45 02.8	-0.2
	896nm,0.1s						
WTTA	Wattenberg	0.06	173	*e*Pg	Pg	09 45 00.4	-0.7
WTTA				*e*Sg	Sg	09 45 02.3	-0.9
WTTA	Wattenberg	0.06	173	*i* Pg	Pg	09 45 00.4	-0.7
	187nm,0.1s,SNR=1461						
WTTA				*i* Sg	Sg	09 45 02.2	-0.9
	3µm,0.1s						
WTTA	Wattenberg	0.06	173	Pg	Pg	09 45 00.3	-0.9
WTTA				Sg	Sg	09 45 02.1	-1.1
SQTA	Sankt Quirin	0.30	251	*e*Pg	Pg	09 45 04.3	-0.2
SQTA				*e*Sg	Sg	09 45 08.6	-0.3
SQTA	Sankt Quirin	0.30	251	Pg	Pg	09 45 04.3	-0.2
SQTA				Sg	Sg	09 45 08.6	-0.3
MOTA	Moosalm	0.36	274	*i* Pg	Pg	09 45 04.9	-0.5
	11nm,0.1s,SNR=22						
MOTA				*e*Sg	Sg	09 45 10.3	-0.2
	37nm,0.1s						
MOTA	Moosalm	0.36	274	Pg	Pg	09 45 04.9	-0.5
	11nm,0.1s,SNR=22						
MOTA				Sg	Sg	09 45 10.3	-0.2
	37nm,0.1s						
ROSI	Rosskopf	0.42	201	P	Pg	09 45 05.3	-1.3
ROSI				AML	AML		
	comp=E,494µm,0.8s						
ROSI				AML	AML		
	comp=N,594µm,0.3s						
ROSI				AML	AML		
	comp=E,494µm,0.8s						
ROSI				AML	AML		
	comp=N,594µm,0.3s						
ROSI				AML	AML		
	comp=E,494µm,0.8s						
ROSI				AML	AML		
	comp=N,594µm,0.3s						
RISI	Rein	0.48	140	P	Pg	09 45 07.1	-0.6
RISI				AML	AML		
	comp=E,1385µm,0.3s						
RISI				AML	AML		
	comp=N,1815µm,1.5s						
RISI				AML	AML		
	comp=E,1385µm,0.3s						
RISI				AML	AML		
	comp=N,1810µm,1.5s						
RISI				AML	AML		
	comp=E,1385µm,0.3s						
RISI				AML	AML		
	comp=N,1810µm,1.5s						
RETA	Reutte	0.61	286	Pg	Pg	09 45 09.2	-0.9
	comp=N,1.6nm,0.1s						
RETA				Sg	Sg	09 45 17.8	-0.5
	comp=N,12nm,0.2s,SNR=9.8						
RETA	Reutte	0.61	286	Pg	Pg	09 45 09.2	-0.9
	comp=N,1.6nm,0.1s						
RETA				Sg	Sg	09 45 17.8	-0.5
	comp=N,12nm,0.2s,SNR=9.8						
ABSI	Aberstueckl	0.63	200	P	Pg	09 45 09.3	-1.1
ABSI				AML	AML		
	comp=E,759µm,0.3s						
ABSI				AML	AML		
	comp=N,479µm,0.4s						
ABSI				AML	AML		
	comp=E,760µm,0.3s						
ABSI				AML	AML		
	comp=N,479µm,0.4s						
ABSI				AML	AML		
	comp=E,760µm,0.3s						
ABSI				AML	AML		
	comp=N,479µm,0.4s						
FETA	Feichten	0.68	244	*e*Pg	Pg	09 45 09.8	-1.6
	comp=N,8.3nm,0.2s,SNR=27						
FETA				*e*Sg	Sg	09 45 18.4	-2.1
	comp=N,17nm,0.1s						
FETA	Feichten	0.68	244	Pg	Pg	09 45 09.8	-1.6
	comp=N,8.3nm,0.2s,SNR=27						
FETA				Sg	Sg	09 45 18.4	-2.1
	comp=N,17nm,0.1s						
ABTA	Abfaltersbach	0.83	133	*e*Pg	Pg	09 45 13.8	-0.5
	comp=N,0.9nm,0.1s						
ABTA				*e*Sg	Sg	09 45 24.0	-1.2
	comp=N,4.0nm,0.1s,SNR=7.2						
ABTA	Abfaltersbach	0.83	133	Pg	Pg	09 45 13.8	-0.5
	comp=N,0.9nm,0.1s						
ABTA				Sg	Sg	09 45 24.0	-1.2
	comp=N,4.0nm,0.1s,SNR=7.2						
KOSI	Kohlern	0.87	191	P	Pg	09 45 13.8	-1.2
KOSI				AML	AML		
	comp=E,238µm,0.3s						
KOSI				AML	AML		
	comp=N,310µm,0.5s						
KOSI				AML	AML		
	comp=E,238µm,0.3s						
KOSI				AML	AML		
	comp=N,310µm,0.5s						
KOSI				AML	AML		
	comp=E,238µm,0.3s						
KOSI				AML	AML		
	comp=N,310µm,0.5s						
APPI	Appiano	0.88	198	P	Pg	09 45 14.0	-1.2
APPI				AML	AML		
	comp=E,423µm,0.4s						
APPI				AML	AML		
	comp=N,370µm,0.4s						
APPI				AML	AML		
	comp=E,423µm,0.4s						
APPI				AML	AML		
	comp=N,370µm,0.4s						
APPI				AML	AML		
	comp=N,370µm,0.4s						
APPI				AML	AML		
	comp=E,423µm,0.4s						
AGOR	Agordo	1.08	164	*e*P	Pg	09 45 18.4	-0.4
AGOR				AML	AML		
	comp=E,175µm,0.3s						
AGOR				AML	AML		
	comp=N,252µm,0.3s						
AGOR				AML	AML		
	comp=N,252µm,0.3s						
AGOR				AML	AML		
	comp=E,175µm,0.3s						
DAVA	Damuels	1.19	269	*e*Pg	Pg	09 45 20.3	-0.7
DAVA				*e*Sg	Sn	09 45 38.2	+1.9
DAVA	Damuels	1.19	269	*e*Pg	Pg	09 45 20.3	-0.7
	comp=E,1.7nm,0.1s,SNR=15						
DAVA				Sg	Sn	09 45 38.1	+1.8
	comp=E,21nm,0.3s						
DAVA	Damuels	1.19	269	Pg	Pg	09 45 20.3	-0.7
	comp=E,1.7nm,0.1s,SNR=15						
DAVA				Sg	Sn	09 45 38.2	+1.9
KBA	Koelnbreinsper	1.20	101	*e*Pg	Pn	09 45 20.9	+0.5
KBA				*e*Sg	Sb	09 45 36.5	+0.6
KBA	Koelnbreinsper	1.20	101	Pg	Pn	09 45 21.1	+0.7
	comp=E,2.5nm,0.1s,SNR=7.8						
KBA				*e*Sg	Sg	09 45 35.8	-0.9
	comp=E,6.9nm,0.2s						
KBA	Koelnbreinsper	1.20	101	Pg	Pn	09 45 20.9	+0.5
KBA				Sg	Sb	09 45 36.5	+0.6
POLC	Polcenigo	1.43	155	AML	AML		
	comp=N,230µm,0.5s						
POLC				AML	AML		
	comp=E,299µm,1.4s						
POLC				AML	AML		
	comp=N,230µm,0.5s						
POLC				AML	AML		
	comp=E,299µm,1.4s						
CGRP	Cima Grappa	1.44	175	AML	AML		
	comp=E,196µm,0.4s						
CGRP				AML	AML		
	comp=E,196µm,0.4s						
CGRP				AML	AML		
	comp=N,160µm,0.3s						
CGRP				AML	AML		
	comp=N,160µm,0.3s						
MABI	Malga Bissina	1.48	212	P	Pn	09 45 24.6	+0.2
MABI				AML	AML		
	comp=E,31µm,0.5s						
MABI				AML	AML		
	comp=N,46µm,1.1s						
MABI				AML	AML		
	comp=E,31µm,0.5s						
MABI				AML	AML		
	comp=N,46µm,1.1s						
PTCC	Patocco-Chiusa	1.50	127	P	Pg	09 45 26.4	-0.5
PTCC				AML	AML		
	comp=E,48µm,0.7s						
PTCC				AML	AML		
	comp=N,37µm,1.4s						
PTCC				AML	AML		
	comp=N,37µm,1.4s						
PTCC				AML	AML		
	comp=E,48µm,0.7s						
ACOM	Acomizza, Ital	1.50	120	P	Pg	09 45 26.8	-0.2
ACOM				AML	AML		
	comp=E,93µm,0.4s						
ACOM				AML	AML		
	comp=N,110µm,0.8s						
ACOM				AML	AML		
	comp=E,93µm,0.4s						

ACOM				AML	AML		
	comp=N,110µm,0.8s						
MYKA	**Terra Mystica**	**1.54**	**116**	*e*Pg	**Pg**	**09 45 27.7**	**0.0**
	comp=N,4.4nm,0.2s						
MYKA				Sn	**Sb**	**09 45 46.4**	**+0.7**
	comp=N,7.9nm,0.3s						
MYKA	**Terra Mystica**	**1.54**	**116**	Pg	**Pg**	**09 45 27.7**	**0.0**
	comp=N,4.4nm,0.2s						
MYKA				Sn	**Sb**	**09 45 46.4**	**+0.7**
	comp=N,7.9nm,0.3s						
VINO	**Villanova**	**1.56**	**132**	P	**Pg**	**09 45 27.6**	**-0.4**
VINO				AML	AML		
	comp=E,50µm,0.3s						
VINO				AML	AML		
	comp=N,54µm,1.2s						
VINO				AML	AML		
	comp=N,54µm,1.2s						
VINO				AML	AML		
	comp=E,50µm,0.3s						
GRC2	**Grafenberg Arr**	**1.56**	**354**	*e*Pn	**Pn**	**09 45 24.9**	**-0.4**
GRC2				*e*Sg	**Sn**	**09 45 45.8**	**+0.6**
GRC2	**Grafenberg Arr**	**1.56**	**354**	Pn	**Pn**	**09 45 24.9**	**-0.4**
GRC2				Sg	**Sn**	**09 45 45.8**	**+0.6**
GRC3	**Grafenberg Arr**	**1.57**	**359**	*e*Pn	**Pn**	**09 45 25.1**	**-0.3**
GRC3				*e*Sg	**Sn**	**09 45 45.9**	**+0.4**
GRC3	**Grafenberg Arr**	**1.57**	**359**	Pn	**Pn**	**09 45 25.1**	**-0.3**
GRC3				Sg	**Sn**	**09 45 45.9**	**+0.4**
MAGA	**Magasa**	**1.69**	**204**	AML	AML		
	comp=N,166µm,0.3s						
MAGA				AML	AML		
	comp=E,174µm,0.6s						
MAGA				AML	AML		
	comp=N,166µm,0.3s						
MAGA				AML	AML		
	comp=E,174µm,0.6s						
GRC4	**Grafenberg Arr**	**1.77**	**358**	*e*Pn	**Pn**	**09 45 27.8**	**-0.4**
GRC4				*e*Pg	**Pg**	**09 45 31.9**	**-0.2**
GRC4	**Grafenberg Arr**	**1.77**	**358**	Pn	**Pn**	**09 45 27.8**	**-0.4**
GRB5	**Grafenberg Arr**	**1.79**	**1**	*e*Pn	**Pn**	**09 45 28.1**	**-0.4**
GRB5	**Grafenberg Arr**	**1.79**	**1**	Pn	**Pn**	**09 45 28.1**	**-0.4**
MOA	**Molln**	**1.86**	**72**	*e*Pg	**Pg**	**09 45 32.7**	**-1.1**
MOA				*e*Sg	**Sb**	**09 45 55.4**	**+0.4**
MOA	**Molln**	**1.86**	**72**	*e*Pg	**Pb**	**09 45 32.5**	**+0.7**
	comp=E,3.7nm,0.2s,SNR=9.4						
MOA				Sn	**Sb**	**09 45 55.3**	**+0.4**
	comp=E,26nm,0.3s,SNR=5.8						
MOA	**Molln**	**1.86**	**72**	Pg	**Pg**	**09 45 32.7**	**-1.1**
MOA				Sg	**Sb**	**09 45 55.4**	**+0.4**
WET	**Wettzell**	**2.01**	**24**	*e*Pn	**Pn**	**09 45 31.7**	**+0.3**
WET				*e*Sn	**Sn**	**09 45 56.8**	**+0.5**
WET	**Wettzell**	**2.01**	**24**	Pn	**Pn**	**09 45 31.7**	**+0.3**
WET				Sn	**Sn**	**09 45 56.8**	**+0.5**
GRB3	**Grafenberg Arr**	**2.03**	**3**	*e*Pn	**Pn**	**09 45 31.2**	**-0.5**
GRB3	**Grafenberg Arr**	**2.03**	**3**	Pn	**Pn**	**09 45 31.2**	**-0.5**
GEC2	**GERESS Array S**	**2.07**	**42**	*e*Pn	**Pn**	**09 45 32.7**	**+0.4**
GEC2				*e*Sn	**Sn**	**09 45 59.2**	**+1.4**
GEC2				*e*Sg	**Sg**	**09 46 03.7**	**-0.8**
GEC2	**GERESS Array S**	**2.07**	**42**	Pn	**Pn**	**09 45 32.7**	**+0.4**
GEC2				Sn	**Sn**	**09 45 59.2**	**+1.4**
GEC2				Sg	**Sg**	**09 46 03.7**	**-0.8**
OBKA	**Obir**	**2.16**	**111**	Pg	**Pg**	**09 45 38.9**	**-0.6**
OBKA	**Obir**	**2.16**	**111**	Pg	**Pg**	**09 45 38.9**	**-0.6**
KHC	**Kasperske Hory**	**2.23**	**35**	*e*PG	**Pb**	**09 45 38.6**	**+0.5**
KHC				*e*SG	**Sg**	**09 46 09.1**	**-0.8**
	comp=E,16nm,0.3s						
KHC	**Kasperske Hory**	**2.23**	**35**	Pg	**Pb**	**09 45 38.6**	**+0.5**
KHC				Sg	**Sg**	**09 46 09.1**	**-0.8**
	comp=E,16nm,0.3s						
CONA	**Conrad Observa**	**2.93**	**76**	Sn	**Sn**	**09 46 19.3**	**+0.2**
	comp=E,0.9nm,0.2s						
CONA				*e*Sg	**Sg**	**09 46 33.0**	**+0.9**
	comp=E,3.7nm,0.2s						
PRU	**Pruhonice**	**3.30**	**35**	*e*SG	**Sg**	**09 46 43.0**	**-0.9**
	comp=E,5.0nm,0.3s						
PRU	**Pruhonice**	**3.30**	**35**	Sg	**Sg**	**09 46 43.0**	**-0.9**
	comp=E,5.0nm,0.3s						
GOPC	**GO Pecny, Ondr**	**3.34**	**38**	*e*SG	**Sg**	**09 46 42.6**	**-2.6**
	comp=E,4.7nm,0.3s						
GOPC	**GO Pecny, Ondr**	**3.34**	**38**	Sg	**Sg**	**09 46 42.6**	**-2.6**
	comp=E,4.7nm,0.3s						
KRUC	**Moravsky**	**3.63**	**60**	*e*SN	**Sn**	**09 46 36.1**	**-0.3**
KRUC				*e*SG	**Sg**	**09 46 52.3**	**-2.5**

IDC 03 09:47:25.7±1.9**,16°.41S**×**178°.70W,h0**^{km}**,mb3.6**/5**,** **mb1 3.9**/5**,mb1mx3.5**/51**,mbtmp3.6**/5**,MS2.5**/1**,Ms1 2.5**/1**,** **ms1mx2.2**/44**,Error ellipse: s-maj=110.8km s-min=27.0km az=147.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**21.93**	**286**	LR	LR	09 59 24.2	
	comp=Z,12nm,18.5s,baz=8.5,slow=33						
STKA	**Stephens Creek**	**39.12**	**239**	P	P	09 54 55.2	0.0
	1.0nm,0.5s,baz=78,slow=8.3,SNR=5.9						
WRA	**Warramunga Arr**	**44.65**	**258**	P	P	09 55 40.3	-0.2
	0.4nm,0.9s,baz=91,slow=8.1,SNR=5.9						
ASAR	**Alice Springs**	**44.95**	**253**	P	P	09 55 42.6	-0.2
	1.9nm,0.6s,baz=89,slow=8.1,SNR=34						
ILAR	**Eielson Array**	**84.50**	**13**	P	P	10 00 00.0	-0.1
	0.2nm,0.7s,baz=194,slow=5.6,SNR=4.5						
TXAR	**Lajitas Array**	**85.44**	**58**	P	P	10 00 05.9	+0.1
	0.1nm,0.6s,baz=215,slow=7.6,SNR=2.9						

IDC 03 09:48:42.2±2.5**,24°.65N**×**141°.62E,h237**^{km}±76^{km}**,mb3.2**/5**,** **mb1 3.4**/6**,mb1mx2.9**/67**,mbtmp3.8**/6**,Error ellipse: s-maj=203.7km s-min=15.7km az=74.0,Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**2.49**	**12**	P	Pn	09 49 30.1	+1.8
	20nm,0.3s,baz=304,slow=3.6,SNR=11						
JCJ				S	S	09 50 04.9	+0.1
	44nm,0.3s,baz=287,slow=19,SNR=30						
WRA	**Warramunga Arr**	**44.89**	**190**	P	P	09 56 33.5	+0.1
	2.7nm,0.3s,baz=7.9,slow=8.7,SNR=85						
ASAR	**Alice Springs**	**48.61**	**189**	P	P	09 57 01.5	-0.7
	0.2nm,0.5s,baz=14,slow=12,SNR=3.3						
MKAR	**Makanchi Array**	**51.66**	**311**	P	P	09 57 25.5	+0.6
	0.6nm,0.4s,baz=94,slow=9.3,SNR=6.9						
KURBB	**Kurchatov Arra**	**54.40**	**316**	P	P	09 57 44.5	-0.1
	0.7nm,0.8s,baz=102,slow=7.1,SNR=5.4						
BVAR	**Borovoye Array**	**59.51**	**318**	P	P	09 58 19.6	-0.8
	0.6nm,0.4s,baz=87,slow=7.7,SNR=4.8						

ISCJB ***03*** *09:54:20.5±0.6,2°.46N±0°.06×95°.73E±0°.06,h25*^{km}*, mb3.9/12,MS3.4/1,Error ellipse: s-maj=11.6km s-min=5.3km az=138.0*

IDC ***03*** *09:54:24.8±5.0,2°.43N×95°.86E,h46*^{km}*±42*^{km}*,mb3.6/11, mb1 3.7/13,mb1mx3.5/71,mbtmp3.9/13,ML4.0/2,MS3.3/3, Ms1 3.3/3,ms1mx2.6/66,Error ellipse: s-maj=50.0km s-min=18.2km az=55.0*

NEIC ***03*** *09:54:25.7±1.4,2°.50N×95°.95E,h53*^{km}*±11*^{km}*,mb4.2/2, Error ellipse: s-maj=18.7km s-min=6.2km az=62.0*

DJA ***03*** *09:54:27.7±0.4,3°N±2°×9°6E±°,h10*^{km}*,M4.3/11,mb4.7/1, MLv4.1/11*

ISC 03 09:54:22.5±0.8**,2°.42N**±0°.05×**95°.90E**±0°.07**,h25**^{km}**,n51,** σ**1**^{s}**.74**/47**,mb4.0**/12**,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNSI	**Sinabang, Aceh**	**0.43**	**91**	P	**Pb**	**09 54 31.8**	**+0.2**
TPTI		**1.53**	**57**	P	**Pn**	**09 54 47.7**	**-0.6**
MLSI	**Meulaboh, Aceh**	**1.91**	**15**	P	**Pn**	**09 54 52.8**	**-0.6**
MLSI				S	**Sb**	**09 55 19.1**	**-0.9**
MLSI				Sg	**Sn**	**09 55 24.5**	**+7.8**
GSI	**Gunungsitoli**	**2.01**	**123**	P	**Pb**	**09 54 58.3**	**-0.1**
GSI				S	**Sb**	**09 55 21.6**	**-1.4**
GSI	**Gunungsitoli**	**2.01**	**123**	*e*Pn	**Pb**	**09 54 57.7**	**-0.7**
KCSI	**Kotacane, Aceh**	**2.17**	**60**	P	**Pn**	**09 54 57.6**	**+0.5**
LHMI	**Lhok Sumawe**	**2.98**	**21**	P	**Pn**	**09 55 11.2**	**+2.9**
LHMI	**Lhok Sumawe**	**2.98**	**21**	*e*Pn	**Pn**	**09 55 09.2**	**+1.0**
PSI	**Prapat**	**3.05**	**83**	P	**Pn**	**09 55 11.2**	**+1.9**
	4.0nm,0.3s,baz=359,slow=2.4,SNR=14						
PSI				S	**Sn**	**09 55 43.9**	**-1.2**
	6.4nm,0.3s,baz=360,slow=5.6,SNR=5.8						
PSI				LR	LR	09 56 42.5	
	comp=Z,389nm,18.3s,baz=270,slow=45						
BSI	**Banda Aceh**	**3.12**	**349**	P	**Pb**	**09 55 16.9**	**-0.4**
PBSI	**Pulau Batu**	**3.42**	**136**	P	**Pb**	**09 55 19.7**	**-2.8**
MNSI	**Mandailing Nat**	**4.02**	**114**	P	**Pn**	**09 55 25.5**	**+3.0**
SISI	**Saibi**	**4.90**	**139**	P	**Pn**	**09 55 38.6**	**+4.0**
BKNI	**Bangkinang**	**5.55**	**112**	P	**Pn**	**09 55 46.9**	**+3.4**
PALK	**Pallekele**	**15.88**	**288**	LR	LR	10 03 03.3	
	comp=Z,81nm,21.0s,baz=115,slow=33						
CM01	**Chiang Mai Arr**	**16.19**	**10**	*e*Pn	**Pn**	**09 58 08.3**	**-0.2**
CM31	**Chiang Mai Arr**	**16.22**	**10**	*e*Pn	**Pn**	**09 58 07.8**	**-1.0**
CMAR	**Chiang Mai Arr**	**16.22**	**10**	P	**Pn**	**09 58 07.8**	**-1.1**
	0.5nm,0.3s,baz=195,slow=11,SNR=9.6						
H08S2	**Diego Garcia H**	**25.40**	**247**	T	T	10 26 07.1	
	baz=70,slow=74						
H08S3	**Diego Garcia H**	**25.40**	**247**	T	T	10 26 10.4	
	baz=70,slow=74						
H08S1	**Diego Carcia H**	**25.41**	**247**	T	T	10 26 06.4	
	baz=70						
H01W3	**Cape Leeuwin H**	**40.86**	**157**	T	T	10 45 26.8	
	baz=332,slow=76,SNR=288						
H01W2	**Cape Leeuwin H**	**40.88**	**157**	T	T	10 45 27.5	
	baz=332,slow=76,SNR=234						
H01W1	**Cape Leeuwin H**	**40.88**	**157**	T	T	10 45 27.7	
	baz=332,slow=76,SNR=235						
WRA	**Warramunga Arr**	**43.78**	**122**	P	**P**	**10 02 25.7**	**-0.9**
	0.4nm,0.3s,baz=299,slow=9.4,SNR=5.3						
WR1	**Warramunga Arr**	**43.78**	**122**	*e*P	**P**	**10 02 25.7**	**-0.9**
ASAR	**Alice Springs**	**45.16**	**127**	P	**P**	**10 02 38.5**	**+1.0**
	0.4nm,0.6s,baz=307,slow=8.7,SNR=5.9						
AS31	**Alice Springs**	**45.16**	**127**	*e*P	**P**	**10 02 37.9**	**+0.3**
	0.7nm,1.0s						
KS15	**Wonju Array Si**	**45.59**	**36**	*e*P	**P**	**10 02 39.9**	**-0.8**
KSAR	**Wonju Array Be**	**45.59**	**36**	P	**P**	**10 02 40.2**	**-0.4**
KSRS	**Korea Array**	**45.62**	**36**	P	**P**	**10 02 40.2**	**-0.7**
	0.4nm,0.5s,baz=235,slow=9.8,SNR=6.6						
KSRS				LR	LR	10 23 51.9	
	comp=Z,38nm,18.4s,baz=250,slow=39						
MK01	**Makanchi Array**	**45.74**	**347**	*e*P	**P**	**10 02 41.5**	**-0.3**
MK31	**Makanchi Array**	**45.76**	**347**	*e*P	**P**	**10 02 42.0**	**0.0**
MK32	**Makanchi Array**	**45.76**	**347**	*e*P	**P**	**10 02 41.8**	**-0.2**
MKAR	**Makanchi Array**	**45.76**	**347**	P	**P**	**10 02 41.8**	**-0.2**
	2.5nm,0.7s,baz=164,slow=8.3,SNR=22						
MKAR	**Makanchi Array**	**45.76**	**347**	*e*P	**P**	**10 02 41.9**	**0.0**
	14nm,0.6s						
SONA0	**Songino Array**	**46.15**	**10**	*e*P	**P**	**10 02 44.7**	**-0.4**
SONM	**Songino Array**	**46.15**	**10**	P	**P**	**10 02 44.7**	**-0.4**
	1.6nm,0.5s,baz=191,slow=9.0,SNR=10						
SONA1	**Songino Array**	**46.16**	**10**	*e*P	**P**	**10 02 45.1**	**0.0**
KURBB	**Kurchatov Arra**	**50.23**	**346**	P	**P**	**10 03 16.4**	**+0.1**
	1.8nm,0.7s,baz=167,slow=6.8,SNR=18						
KURK	**Kurchatov**	**50.30**	**346**	*e*P	**P**	**10 03 16.4**	**-0.4**
ZALV	**Zalesovo Beam**	**52.17**	**352**	P	**P**	**10 03 30.6**	**-0.2**
	2.2nm,0.5s,baz=185,slow=6.1,SNR=10						
ZALV	**Zalesovo Beam**	**52.17**	**352**	*e*P	**P**	**10 03 30.5**	**-0.3**
ZAA1	**Zalesovo Array**	**52.17**	**352**	*e*P	**P**	**10 03 30.6**	**-0.2**
BVAR	**Borovoye Array**	**54.69**	**341**	P	**P**	**10 03 48.9**	**-0.5**
	1.7nm,0.8s,baz=134,slow=8.3,SNR=7.9						
KLR	**Kul'dur**	**55.77**	**28**	P	**P**	**10 03 57.3**	**0.0**
	0.1nm,0.7s,baz=241,slow=7.1,SNR=5.6						
ABKAR	**Akbulak array**	**55.84**	**332**	*e*P	**P**	**10 03 58.0**	**+0.2**
AKTO	**Aktyubinsk**	**57.55**	**332**	P	**P**	**10 04 08.8**	**-1.2**
	1.0nm,0.5s,baz=98,slow=7.1,SNR=2.8						
FIA0	**FINESS Array S**	**78.33**	**333**	*e*P	**P**	**10 06 19.7**	**-0.6**
FINES	**FINESS Array B**	**78.33**	**333**	P	**P**	**10 06 19.7**	**-0.6**
	1.0nm,0.7s,baz=101,slow=7.2,SNR=3.7						
TXAR	**Lajitas Array**	**143.29**	**29**	PKP	PKPbc	10 13 52.6	+0.1
	0.3nm,0.8s,baz=198,slow=2.5,SNR=3.7						

KRAR ***03*** *10:03:54.7±0.3,53°.57N×87°.76E,M2.2,Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

NNC ***03*** *10:03:56.6±2.3,53°.57N×87°.67E,h0*^{km}*,mb3.7,mpv3.4, Error ellipse: s-maj=21.4km s-min=9.6km az=46.0, Suspected Mining explosion.*

IDC 03 10:03:55.7±3.3**,53°.55N**×**87°.78E,h0**^{km}**,mb1 3.3**/1**,** **mb1mx2.8**/68**,mbtmp3.3**/1**,ML3.2**/1**,4C-5D,Error ellipse: s-maj=29.8km s-min=15.7km az=61.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	**1.80**	**284**	*i*		10 14 40.0	
	baz=104,slow=326,SNR=3.1						
ZAA0	**Zalesovo Array**	**1.80**	**284**	⇑P	Pn	10 04 27.3	-0.7
	7.2nm,0.3s						
ZAA0				⇓S	Sn	10 04 51.1	-0.4
	10nm,0.3s						
ZALV	**Zalesovo Beam**	**1.80**	**284**	Pn	Pn	10 04 27.4	-0.7
	7.3nm,0.3s,baz=105,slow=14,SNR=44						
ZALV				Lg	Lg	10 04 52.9	
	10.0nm,0.3s,baz=108,slow=26,SNR=14						
KURK	**Kurchatov**	**6.31**	**247**	⇑Pn	Pn	10 05 31.5	+1.6
	9.7nm,1.0s						
KURK				⇓Lg	Lg	10 07 16.2	
	15nm,1.3s						
KURBB	**Kurchatov Arra**	**6.41**	**247**	Lg	Lg	10 07 17.5	
	0.1nm,0.3s,baz=63,slow=32,SNR=4.3						
KURBB	**Kurchatov Arra**	**6.41**	**247**	⇓Pn	Pn	10 05 31.9	+0.6
	12nm,0.8s						
KURBB				⇓Lg	Lg	10 07 16.7	
	18nm,0.8s						
MK31	**Makanchi Array**	**7.62**	**210**	⇑Pn	Pn	10 05 49.8	+1.8
	0.1nm,0.2s,baz=29,slow=14,SNR=10						
MK31				⇓Sn	Sn	10 07 15.8	+0.8
	0.3nm,0.3s,baz=30,slow=26,SNR=4.3						
MK31				⇑Lg	Lg	10 07 56.3	
	3.4nm,0.8s,baz=36,slow=30,SNR=4.4						
MKAR	**Makanchi Array**	**7.62**	**210**	Pn	Pn	10 05 49.2	+1.2
	0.4nm,0.3s,baz=29,slow=14,SNR=11						
MKAR				Sn	Sn	10 07 15.7	+0.7
	0.2nm,0.3s,baz=28,slow=27,SNR=6.4						
MKAR				Lg	Lg	10 07 55.3	
	0.1nm,0.3s,baz=32,slow=31,SNR=5.6						

NDI 03 10:28:08.8±2.5**,25°.03N**×**92°.02E,h23**^{km}±12^{km}**,ML3.1, India-Bangladesh border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHL	**Shillong**	**0.55**	**347**	*e*PG	Pb	10 28 20.5	+0.5
SHL				*e*SG	Sb	10 28 28.5	+0.9
GUWA	**GUWAHATI**	**1.20**	**346**	*e*P	Pb	10 28 30.8	-0.1
GUWA				*e*S	Sb	10 28 46.6	+0.6
GUWA				IAML		10 28 47.7	
	comp=E,291nm,0.2s						
GUWA				IAML		10 28 47.9	
	comp=N,307nm,0.2s						
AGT	**Agartala**	**1.34**	**212**	*e*S	Sb	10 28 51.0	+1.2
TURI	**Tura**	**1.62**	**289**	*e*P	Pn	10 28 35.6	-0.3
TURI				*e*S	Sb	10 28 59.5	+1.5
TURI				IAML		10 29 03.9	
	comp=N,303nm,0.1s						
TURI				IAML		10 29 04.8	
	comp=E,274nm,0.1s						
TEZP	**TEZPUR**	**1.73**	**24**	*e*P	Pn	10 28 37.5	0.0
TEZP				*e*S	Sn	10 28 58.0	-0.9
TEZP				IAML		10 28 59.4	
	comp=E,379nm,0.1s						
TEZP				IAML		10 28 59.9	
	comp=N,246nm,0.7s						
KOHI	**KOHIMA**	**2.01**	**69**	*e*P	Pb	10 28 47.4	+2.6
KOHI				*e*S	Sb	10 29 14.5	+5.1
KOHI				IAML		10 29 21.3	
	comp=N,95nm,0.6s						
KOHI				IAML		10 29 22.5	
	comp=E,142nm,0.9s						
MOKO	**MOKOCHONG**	**2.59**	**60**	*e*S	Sn	10 29 21.1	+0.6
MOKO				IAML		10 29 33.7	
	comp=N,61nm,0.4s						
MOKO				IAML		10 29 34.1	
	comp=E,80nm,0.5s						
SAIH	**SAIHA**	**2.67**	**160**	*e*S	Sn	10 29 20.1	-2.3
ZIRO	**ZIRO**	**2.98**	**33**	*e*S	Sn	10 29 28.6	-1.4
ZIRO				IAML		10 29 31.0	
	comp=N,180nm,0.1s						
ZIRO				IAML		10 29 31.2	
	comp=E,199nm,0.3s						
GTK	**Tadong**	**3.83**	**307**	*e*x	Sn	10 29 54.2	+3.3
LKP	**Lekhapani**	**4.13**	**55**	*e*x	Sn	10 30 04.2	+6.0

ISCJB ***03*** *10:28:50.6±0.5,3°.15S±0°.05×130°.25E±0°.05,h25*^{km}*, mb3.8/4,MS4.1/2,Error ellipse: s-maj=8.2km s-min=5.9km az=32.0*

DJA ***03*** *10:28:52.8±2.5,3°S±5°×13°0E±°,h29*^{km}*±27*^{km}*,M3.9/8, MLv3.9/8*

IDC ***03*** *10:28:55.1±3.1,3°.14S×130°.59E,h53*^{km}*±34*^{km}*,mb3.7/5, mb1 3.9/8,mb1mx3.5/55,mbtmp3.9/8,ML3.9/3,MS3.7/3, Ms1 3.7/3,ms1mx3.1/60,Error ellipse: s-maj=43.8km s-min=12.1km az=80.0*

ISC 03 10:28:51.2±0.7**,2°.98S**±0°.05×**130°.18E**±0°.05**,h25**^{km}**,n16,** σ**2**^{s}**.27**/19**,mb3.9**/4**,Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**1.30**	**254**	P	**Pb**	**10 29 14.5**	**-0.5**
MSAI				S	**Sn**	**10 29 30.6**	**+0.2**
BNDI	**Bandanaira**	**1.55**	**190**	P	**Pb**	**10 29 19.7**	**+0.4**
BNDI				S	**Sb**	**10 29 41.0**	**+2.5**
FAKI	**Fak Fak**	**2.06**	**88**	P	**Pb**	**10 29 27.5**	**-0.5**
AAI	**Ambon**	**2.10**	**251**	P	**Pn**	**10 29 25.8**	**+1.0**
SIJI	**Sorong**	**2.36**	**27**	P	**Pn**	**10 29 29.4**	**+1.1**
	7.2nm,0.3s,baz=139,slow=20,SNR=43						
SIJI				S	**Sb**	**10 29 59.8**	**-2.0**
	20nm,0.3s,baz=218,slow=19,SNR=10.0						
SIJI				LR	LR	10 30 50.8	
	comp=Z,249nm,19.8s,baz=240,slow=49						
LBMI	**Labuha**	**3.55**	**311**	P	**Pn**	**10 29 43.9**	**-0.9**
RKPI	**Ransiki, Papua**	**4.25**	**70**	P	**Pn**	**10 29 56.5**	**+2.1**
FITZ	**Fitzroy Crossi**	**15.67**	**196**	P	**Pn**	**10 32 30.7**	**+0.2**
	0.5nm,0.3s,baz=35,slow=10,SNR=12						
FITZ				S	**Sn**	**10 35 20.5**	**-2.9**
	0.1nm,0.3s,baz=24,slow=20,SNR=2.5						
WRA	**Warramunga Arr**	**17.34**	**167**	P	**Pn**	**10 32 49.9**	**-1.8**
	0.6nm,0.3s,baz=350,slow=12,SNR=24						
WRA				S	Sn	10 35 52.4	-12
	0.1nm,0.3s,baz=349,slow=19,SNR=4.0						
ASAR	**Alice Springs**	**20.88**	**170**	P	**P**	**10 33 31.6**	**0.0**
	7.8nm,0.6s,baz=350,slow=11,SNR=85						
ASAR				S	**S**	**10 37 17.6**	**-5.7**
	0.9nm,0.8s,baz=353,slow=22,SNR=4.5						
CTA	**Charters Tower**	**23.13**	**139**	P	**P**	**10 33 54.0**	**-1.6**
	3.6nm,0.9s,baz=322,slow=13,SNR=3.5						
STKA	**Stephens Creek**	**30.68**	**161**	P	**P**	**10 35 04.2**	**+0.2**
	0.9nm,0.5s,baz=341,slow=11,SNR=2.7						
MA2	**Magadan**	**64.45**	**11**	LR	LR	11 07 33.0	
	comp=Z,126nm,19.4s,baz=10.0,slow=36						
MKAR	**Makanchi Array**	**65.01**	**326**	P	**P**	**10 39 32.5**	**+3.3**
	0.3nm,0.5s,baz=131,slow=7.2,SNR=3.6						
AAK	**Ala-Archa**	**67.64**	**319**	LR	LR	11 12 51.2	
	comp=Z,100nm,18.9s,baz=305,slow=39						
KURBB	**Kurchatov Arra**	**69.22**	**328**	P	**P**	**10 39 58.3**	**+2.5**
	0.8nm,0.5s,baz=132,slow=6.0,SNR=7.7						

MOS ***03*** *10:36:14.1±1.3,39°.94S×173°.69E,h227*^{km}*,mb5.9/43, Error ellipse: s-maj=9.5km s-min=7.1km az=95.5*

WEL ***03*** *10:36:14.2,40°S±4°×17°4E±°,h241*^{km}*±5*^{km}

ISCJB ***03*** *10:36:14.1±0.1,40°.03S±0°.02×173°.64E±0°.02,h230*^{km}*±1*^{km}*, mb5.7/207,Error ellipse: s-maj=3.4km s-min=2.3km az=44.4*

GCMT ***03*** *10:36:15.5±0.1,40°.05S×173°.63E,h230*^{km}*,MW6.3/147, Moment Tensor Solution. s147,c360; s143,c572; Duration: 3*^{s}*5 Moment tensor: Scale 10*^{18}*Nm; M*$_{rr}$*0.36±.01; M*$_{\theta\theta}$*0.88±.02; M*$_{\phi\phi}$*-1.25±.02; M*$_{r\theta}$*2.80±.01; M*$_{\theta\phi}$*0.31±.02; M*$_{\phi r}$*-2.07±.01; Best double couple: M*$_0$*3.66600×10*^{18} *NP1:φ*$_s$*128.00000°,δ87.00000°, λ72.00000°. NP2:φ*$_s$*30.00000°,δ18.00000°,λ172.00000°. Principal axes: T 3.7380, Plg45.0000°, Azm21.0000°; N -0.1480, Plg18.0000°, Azm129.0000°; P -3.5940, Plg40.0000°, Azm235.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

BJI ***03*** *10:36:15.1,39°.86S×173°.74E,h236*^{km}*,mb5.4/33, mB5.5/58*

NEIC ***03*** *10:36:15.5±0.0,40°.02S×173°.76E,h230*^{km}*,mb5.9/90, ME6.0,MW6.3,MW6.3,MW6.3,Moment Tensor Solution. s25 Moment tensor: Scale 10*^{18}*Nm; M*$_{rr}$*0.08; M*$_{\theta\theta}$*0.94; M*$_{\phi\phi}$*-1.02; M*$_{r\theta}$*2.74; M*$_{\theta\phi}$*-0.55; M*$_{\phi r}$*-2.08; Best double couple: M*$_0$*3.60000×10*^{18} *NP1:φ*$_s$*311.00000°,δ88.00000°, λ-75.00000°. NP2:φ*$_s$*49.00000°,δ15.00000°, λ-172.00000°. Principal axes: T 3.9500, Plg41.0000°, Azm28.0000°; N -0.7900, Plg15.0000°, Azm131.0000°; P -3.1700, Plg45.0000°, Azm236.0000°; Broadband fault plane solution: P waves. NP1:φ*$_s$*22.00000°,δ16.00000°, λ161.00000°. NP2:φ*$_s$*130.00000°,δ85.00000°,λ75.00000°. Principal axes: T Plg48.0000°, Azm24.0000°; N Plg0.0000°, Azm0.0000°; P Plg38.0000°, Azm233.0000°; Depth from broadband displacement seismograms. Energy computed from BB mechanism. After WEL.*

NEIC Felt [V] at Blenheim, Kapiti and Porirua. Felt in most of New Zealand from Auckland and Bay of Plenty to Otago and Southland.

NEIC ***03*** *10:36:16.0±0.0,40°.06S×173°.70E,h230*^{km}*,Moment Tensor Solution. s21 Moment tensor: Scale 10*^{18}*Nm; M*$_{rr}$*0.29; M*$_{\theta\theta}$*1.13; M*$_{\phi\phi}$*-1.42; M*$_{r\theta}$*2.85; M*$_{\theta\phi}$*0.28; M*$_{\phi r}$*-2.12; Best double couple: M*$_0$*3.80000×10*^{18} *NP1:φ*$_s$*129.00000°, δ88.00000°,λ70.00000°. NP2:φ*$_s$*34.00000°,δ20.00000°, λ175.00000°. Principal axes: T 3.8800, Plg43.0000°, Azm19.0000°; N -0.1800, Plg20.0000°, Azm129.0000°; P -3.6900, Plg39.0000°, Azm237.0000°;*

IDC ***03*** *10:36:16.5±0.3,40°.04S×173°.65E,h240*^{km}*±2*^{km}*,mb5.5/35, mb1 5.4/37,mb1mx5.4/40,mbtmp6.0/37 Error ellipse: s-maj=6.9km s-min=5.3km az=47.0*

NEIC ***03*** *10:36:47.0±0.0,39°.17S×173°.68E,h267*^{km}*,Moment Tensor Solution. s13 Moment tensor: Scale 10*^{18}*Nm; M*$_{rr}$*0.34; M*$_{\theta\theta}$*0.93; M*$_{\phi\phi}$*-1.27; M*$_{r\theta}$*2.18; M*$_{\theta\phi}$*0.74; M*$_{\phi r}$*-1.55; Best double couple: M*$_0$*3.00000×10*^{18} *NP1:φ*$_s$*125.00000°, δ86.00000°,λ65.00000°. NP2:φ*$_s$*26.00000°,δ26.00000°, λ170.00000°. Principal axes: T 2.8900, Plg43.0000°, Azm10.0000°; N 0.2000, Plg25.0000°, Azm127.0000°; P -3.1000, Plg36.0000°, Azm237.0000°;*

ISC 03 10:36:15.9±0.2**,40°.06S**±0°.02×**173°.66E**±0°.02**,h239**^{km}±1^{km}**,** **h239**^{km}**:pP-P,n1258,** σ**1**^{s}**.93**/1599**,mb5.8**/206**,55C-24D, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NMEZ	**Namu Road**	**0.67**	**15**	Pn	**Pn**	**10 36 46.4**	**-1.8**
NMEZ				Sn	**S**	**10 37 10.0**	**-3.4**
NMEZ	**Namu Road**	**0.67**	**15**	P	**Pn**	**10 36 46.7**	**-1.5**
NMEZ				S	**S**	**10 37 10.1**	**-3.3**
DUWZ	**D'Urville Isla**	**0.77**	**165**	*e*Pn	**Pn**	**10 36 47.4**	**-1.1**
DUWZ				*e*S	**S**	**10 37 10.4**	**-3.8**
DUWZ	**D'Urville Isla**	**0.77**	**165**	P	**Pn**	**10 36 47.6**	**-0.9**
DUWZ				S	**S**	**10 37 11.5**	**-2.7**
NWEZ	**Newall Road**	**0.80**	**12**	*e*Pn	**Pn**	**10 36 46.9**	**-1.8**
NWEZ				*e*S	**S**	**10 37 11.2**	**-3.3**
NWEZ	**Newall Road**	**0.80**	**12**	P	**Pn**	**10 36 47.2**	**-1.5**
KHEZ	**Kahui Hut**	**0.81**	**20**	Pn	**Pn**	**10 36 47.1**	**-1.8**
KHEZ				Sn	**S**	**10 37 10.8**	**-4.0**
KHEZ	**Kahui Hut**	**0.81**	**20**	P	**Pn**	**10 36 47.1**	**-1.8**
KHEZ				S	**S**	**10 37 11.2**	**-3.6**
PREZ	**Palmer Road**	**0.81**	**28**	Pn	**Pn**	**10 36 47.0**	**-1.9**
PREZ				Sn	**S**	**10 37 10.4**	**-4.3**
PREZ	**Palmer Road**	**0.81**	**28**	P	**Pn**	**10 36 47.1**	**-1.7**
LREZ	**Lake Rotokare**	**0.83**	**44**	P	**Pn**	**10 36 47.3**	**-1.5**
LREZ				S	**S**	**10 37 11.6**	**-3.1**
NEZ	**North Egmont**	**0.86**	**23**	*e*Pn	**Pn**	**10 36 46.9**	**-2.2**
NEZ	**North Egmont**	**0.86**	**23**	P	**Pn**	**10 36 47.0**	**-2.2**
PKE	**Pukeiti**	**0.90**	**16**	*e*Pn	**Pn**	**10 36 47.3**	**-2.0**
PKE	**Pukeiti**	**0.90**	**16**	P	**Pn**	**10 36 47.4**	**-1.9**
DREZ	**Durham Road**	**0.96**	**26**	*e*Pn	**Pn**	**10 36 47.6**	**-2.0**
DREZ	**Durham Road**	**0.96**	**26**	P	**Pn**	**10 36 47.8**	**-1.8**
WAZ	**Wanganui**	**1.06**	**74**	P	**Pn**	**10 36 49.4**	**-0.8**
MHEZ	**Mangahewa**	**1.11**	**28**	*e*Pn	**Pn**	**10 36 48.6**	**-1.9**
QRZ	**Quartz Range**	**1.15**	**228**	P	**Pn**	**10 36 49.0**	**-1.7**
NNZ	**Nelson**	**1.18**	**190**	*e*Pn	**Pn**	**10 36 48.5**	**-2.2**
NNZ	**Nelson**	**1.18**	**190**	P	**Pn**	**10 36 49.5**	**-1.2**
TCW	**Tory Channel**	**1.24**	**158**	*e*Pn	**Pn**	**10 36 50.4**	**-0.8**
TCW	**Tory Channel**	**1.24**	**158**	P	**Pn**	**10 36 50.5**	**-0.7**
KIW	**Kapiti Island**	**1.25**	**130**	*e*Pn	**Pn**	**10 36 50.0**	**-1.3**
KIW				Sn	**S**	**10 37 14.3**	**-4.7**
KIW	**Kapiti Island**	**1.25**	**130**	P	**Pn**	**10 36 49.9**	**-1.3**
VRZ	**Vera Road**	**1.26**	**43**	*e*Pn	**Pn**	**10 36 47.6**	**-3.8**
VRZ				*e*S	**S**	**10 37 15.4**	**-3.9**
VRZ	**Vera Road**	**1.26**	**43**	P	**Pn**	**10 36 49.1**	**-2.3**
OHWZ	**Ohakea**	**1.28**	**97**	P	**Pn**	**10 36 50.5**	**-0.9**
OHWZ				S	**S**	**10 37 16.1**	**-3.2**

OGWZ	Otaki Gorge	1.38	124	ePn	Pn	10 36 51.1	-1.1
TUWZ	Tuamarina	1.39	171	ePn	Pn	10 36 51.3	-0.9
SNZO	South Karori	1.48	148	ePn	Pn	10 36 51.8	-1.1
SNZO				eS	S	10 37 11.3	-11
WEL	Wellington	1.48	146	ePn	Pn	10 36 51.3	-1.7
WEL	Wellington	1.48	146	eP	Pn	10 36 51.3	-1.7
CAW	Cannon Point	1.50	135	ePn	Pn	10 36 52.0	-1.1
PKVZ	Pokaka	1.51	60	ePn	Pn	10 36 51.2	-2.1
MTVZ	Mangateitei	1.55	65	ePn	Pn	10 36 51.7	-1.9
MTVZ	Mangateitei	1.55	65	P	S	10 37 19.8	-3.4
MRZ	Mangatainoka R	1.58	113	ePn	Pn	10 36 51.6	-2.2
BHW	Baring Head	1.63	146	ePn	Pn	10 36 52.7	-1.4
TRVZ	Turoa	1.64	63	ePn	Pn	10 36 51.8	-2.8
TRVZ	Turoa	1.64	63	P	S	10 37 20.4	-4.5
HOWZ	Holdsworth Sta	1.64	121	ePn	Pn	10 36 53.0	-1.3
POWZ	Post Office Ro	1.65	102	ePn	Pn	10 36 52.9	-1.4
BSWZ	Blackbirch Sta	1.66	174	ePn	Pn	10 36 53.6	-0.8
DRZ	Dome Shelter	1.67	63	ePn	Pn	10 36 52.9	-2.0
WNVZ	Wahianoa	1.67	65	ePn	Pn	10 36 52.8	-1.9
TWVZ	Taurewa	1.69	55	ePn	Pn	10 36 52.5	-2.4
TWVZ	Taurewa	1.69	55	P	Pn	10 36 52.6	-2.3
TUVZ	Tukino	1.73	63	ePn	Pn	10 36 53.4	-1.8
CMWZ	Cape Campbell	1.74	166	ePn	Pn	10 36 54.5	-0.6
NGZ	Ngauruhoe	1.74	60	ePn	Pn	10 36 53.3	-2.1
MOVZ	Moawhango	1.74	69	ePn	Pn	10 36 53.0	-2.2
WTVZ	West Tongariro	1.77	58	ePn	Pn	10 36 53.4	-2.1
TSZ	Takapari Road	1.77	91	ePn	Pn	10 36 52.7	-2.6
TSZ	Takapari Road	1.77	91	P	S	10 37 22.9	-3.5
OTVZ	Oturere	1.79	61	ePn	Pn	10 36 52.7	-3.1
THZ	Tophouse	1.79	198	ePn	Pn	10 36 54.7	-0.9
THZ				eS	S	10 37 25.5	-1.4
HIZ	Hauiti	1.80	31	ePn	Pn	10 36 51.9	-3.8
HIZ				ePn	Pn	10 36 53.1	-2.6
KRVZ	Karewarewa	1.81	58	ePn	Pn	10 36 53.8	-2.1
MSWZ	Moikau Station	1.81	139	ePn	Pn	10 36 54.4	-1.3
PRWZ	Pori Road	1.83	106	Pn	Pn	10 36 54.9	-1.0
TIWZ	Tintock	1.84	114	ePn	Pn	10 36 54.9	-1.2
KATZ	Kakaramea	1.91	56	ePn	Pn	10 36 54.8	-2.0
PLWZ	Palliser	1.93	142	ePn	Pn	10 36 55.5	-1.3
DVHZ	Dannevirke	1.94	98	ePn	Pn	10 36 55.5	-1.4
DVHZ	Dannevirke	1.94	98	P	S	10 37 25.7	-3.3
BHHZ	Black Hill Sta	1.94	74	ePn	Pn	10 36 54.6	-2.3
PNHZ	Pukenui	1.96	87	ePn	Pn	10 36 55.6	-1.5
PNHZ	Pukenui	1.96	87	P	S	10 37 25.5	-3.8
TMWZ	Te Maipa	2.00	122	ePn	Pn	10 36 56.4	-1.0
RITZ	Rihia Road	2.02	58	ePn	Pn	10 36 55.5	-2.1
RATZ	Rangitukua	2.02	55	ePn	Pn	10 36 55.1	-2.7
TRWZ	Traveller	2.04	132	ePn	Pn	10 36 56.8	-1.0
BFZ	Birch Farm	2.07	108	ePn	Pn	10 36 56.0	-2.1
BFZ				ePn	Pn	10 36 57.1	-1.0
BFZ				eS	S	10 37 27.3	-3.9
WATZ	Wairara	2.10	51	ePn	Pn	10 36 56.2	-2.3
CPWZ	Castlepoint	2.12	114	Pn	Pn	10 36 58.0	-0.5
WPHZ	Waipukurau	2.13	91	ePn	Pn	10 36 57.5	-1.2
ANWZ	Angora Road	2.19	101	P	S	10 37 29.5	-3.7
DSZ	Denniston Nort	2.19	219	P	Pn	10 36 57.9	-1.4
DSZ				S	S	10 37 29.4	-4.1
HATZ	Hinemaiaia	2.21	59	ePn	Pn	10 36 56.9	-2.6
WHTZ	Whakaora	2.26	53	ePn	Pn	10 36 57.9	-2.2
PRHZ	Porangahau	2.29	96	ePn	Pn	10 36 59.2	-1.0
KUTZ	Kaahu Road	2.30	48	Pn	Pn	10 36 58.0	-2.4
KHZ	Kahutara	2.36	182	ePn	Pn	10 36 59.7	-1.0
KHZ				eS	S	10 37 28.7	-7.4
KHZ	Kahutara	2.36	182	P	Pn	10 36 59.6	-1.2
KHZ				S	S	10 37 33.5	-2.7
BKZ	Black Stump Fm	2.36	69	ePn	Pn	10 36 57.7	-3.3
BKZ				ePn	Pn	10 36 59.0	-2.0
PXZ	Pawanui	2.46	90	ePn	Pn	10 36 59.7	-2.1
WPRZ	Whakapapatarin	2.48	52	ePn	Pn	10 36 59.5	-2.7
GRRZ	Galatos Road	2.56	49	P	Pn	10 37 00.7	-2.4
ALRZ	Allen Road	2.56	55	P	Pn	10 37 00.2	-2.9
PRRZ	Plateau Road	2.63	55	P	Pn	10 37 00.8	-3.0
HRRZ	Handcock Road	2.63	52	P	Pn	10 37 01.3	-2.6
HSRZ	Hossack Road	2.66	50	P	Pn	10 37 01.6	-2.5
HSRZ	Hossack Road	2.66	50	P	Pn	10 37 01.6	-2.5
UTU	Utuhina	2.72	47	P	Pn	10 37 02.4	-2.4
UTU	Utuhina	2.72	47	P	Pn	10 37 02.4	-2.4
TOZ	Tahuroa Road	2.73	32	ePn	Pn	10 37 01.1	-3.8
TOZ	Tahuroa Road	2.73	32	P	Pn	10 37 01.9	-2.9
TOZ	Tahuroa Road	2.73	32	P	Pn	10 37 01.9	-2.9
HLRZ	Highlands Stat	2.76	50	P	Pn	10 37 03.1	-2.1
HLRZ	Highlands Stat	2.76	50	P	Pn	10 37 03.1	-2.1
NGRZ	Ngongotaha	2.77	46	P	Pn	10 37 02.8	-2.5
NGRZ	Ngongotaha	2.77	46	P	Pn	10 37 02.8	-2.5
RRRZ	Republican Roa	2.81	53	P	Pn	10 37 02.8	-2.9
RRRZ	Republican Roa	2.81	53	P	Pn	10 37 02.8	-2.9
KMRZ	Kaimai	2.84	40	P	Pn	10 37 03.6	-2.4
KMRZ	Kaimai	2.84	40	P	Pn	10 37 03.6	-2.4
KARZ	Kaharoa	2.86	45	P	Pn	10 37 03.6	-2.6
KARZ	Kaharoa	2.86	45	P	Pn	10 37 03.6	-2.6
TARZ	Mount Tarawera	2.87	51	P	Pn	10 37 03.7	-2.6
TARZ	Mount Tarawera	2.87	51	P	Pn	10 37 03.7	-2.6
OMRZ	Omania	2.87	48	P	Pn	10 37 03.6	-2.8
OMRZ	Omania	2.87	48	P	Pn	10 37 03.6	-2.8
MUGZ	Murupara	2.89	58	P	Pn	10 37 03.4	-3.1
LTZ	Lake Taylor	2.91	201	ePn	Pn	10 37 05.5	-1.2
LTZ				eS	S	10 37 39.1	-7.7
LTZ	Lake Taylor	2.91	201	P	Pn	10 37 05.4	-1.3
LIRZ	Lichensteins R	2.95	47	P	Pn	10 37 05.1	-2.1
LIRZ	Lichensteins R	2.95	47	P	Pn	10 37 05.1	-2.1
TGRZ	Tauranga	3.09	42	P	Pn	10 37 06.4	-2.3
TGRZ	Tauranga	3.09	42	P	Pn	10 37 06.4	-2.3
AWAZ	Awhitu Peninsu	3.09	15	P	Pn	10 37 06.6	-2.1
AWAZ	Awhitu Peninsu	3.09	15	P	Pn	10 37 06.6	-2.1
EDRZ	Edgecumbe	3.09	52	P	Pn	10 37 05.9	-2.9
EDRZ	Edgecumbe	3.09	52	P	Pn	10 37 05.9	-2.9
KBAZ	Karaka Road Bo	3.11	18	P	Pn	10 37 07.1	-1.9
KBAZ	Karaka Road Bo	3.11	18	P	Pn	10 37 07.1	-1.9
MARZ	Manawahe	3.13	50	P	Pn	10 37 06.3	-2.9
MARZ	Manawahe	3.13	50	P	Pn	10 37 06.3	-2.9
INZ	Inchbonnie	3.14	211	P	Pn	10 37 07.5	-1.7
OPRZ	Ohinepanea	3.16	46	P	Pn	10 37 06.5	-3.0
OPRZ	Ohinepanea	3.16	46	P	Pn	10 37 06.5	-3.0
MKAZ	Moumakai	3.18	22	P	Pn	10 37 07.6	-2.1
MKAZ	Moumakai	3.18	22	P	Pn	10 37 07.6	-2.1
WTAZ	Waiatarua	3.20	13	P	Pn	10 37 08.2	-1.8
WTAZ	Waiatarua	3.20	13	P	Pn	10 37 08.2	-1.8
URZ	Urewera	3.23	57	P	Pn	10 37 06.7	-3.5
	5µm,0.3s,baz=246,slow=5.2,SNR=8366						
URZ				S	S	10 37 45.3	-7.8
	8µm,0.3s,baz=4.6,slow=19,SNR=19						
URZ	Urewera	3.23	57	ePn	Pn	10 37 05.8	-4.5
URZ				ePn	Pn	10 37 06.9	-3.3
URZ				eS	S	10 37 45.3	-7.8
URZ				eS	S	10 37 45.7	-7.4
URZ	Urewera	3.23	57	P	Pn	10 37 06.7	-3.5
ETAZ	East Tamaki Re	3.26	18	P	Pn	10 37 08.5	-2.1
ETAZ	East Tamaki Re	3.26	18	P	Pn	10 37 08.5	-2.1
EPAZ	Eden Park BICE	3.29	15	P	Pn	10 37 09.2	-1.8
EPAZ	Eden Park BICE	3.29	15	P	Pn	10 37 09.2	-1.8
RAGZ	Rawiri	3.31	63	P	Pn	10 37 08.7	-2.6
HBAZ	Herne Bay Bore	3.31	15	P	Pn	10 37 09.2	-2.0
HBAZ	Herne Bay Bore	3.31	15	P	Pn	10 37 09.2	-2.0
RVAZ	Riverhead Bore	3.36	13	P	Pn	10 37 09.7	-2.1
RVAZ	Riverhead Bore	3.36	13	P	Pn	10 37 09.7	-2.1
WHRZ	Whale Island	3.39	51	P	Pn	10 37 09.3	-2.9
WHRZ	Whale Island	3.39	51	P	Pn	10 37 10.4	-1.7
RIGZ	Rimuhau	3.45	68	P	Pn	10 37 10.6	-2.2
WIAZ	Waiheke Island	3.46	20	P	Pn	10 37 11.0	-1.9
WIAZ	Waiheke Island	3.46	20	P	Pn	10 37 11.0	-1.9
MWZ	Matawai	3.46	61	ePn	Pn	10 37 09.0	-4.0
MWZ	Matawai	3.46	61	P	Pn	10 37 09.9	-3.1
OXZ	Oxford	3.48	200	ePn	Pn	10 37 11.3	-1.7
OXZ				eS	S	10 37 52.5	-5.7
OXZ	Oxford	3.48	200	P	Pn	10 37 11.2	-1.8
EYCZ	Eyrewell	3.50	196	P	Pn	10 37 11.5	-1.7
ABAZ	Army Bay	3.58	15	Pn	Pn	10 37 12.3	-1.9
ABAZ	Army Bay	3.58	15	P	Pn	10 37 12.4	-1.9
ABAZ	Army Bay	3.58	15	P	Pn	10 37 12.4	-1.9
TKGZ	Te Karaka	3.63	65	P	Pn	10 37 12.5	-2.3
OKCZ	Okains Bay	3.69	187	P	Pn	10 37 13.5	-1.9
MQZ	McQueen's Vall	3.72	191	ePn	Pn	10 37 13.4	-2.3
MQZ				eS	S	10 37 57.9	-5.3
MQZ	McQueen's Vall	3.72	191	P	Pn	10 37 13.2	-2.6
WVZ	Waitaha Valley	3.73	215	ePn	Pn	10 37 13.4	-2.4
WVZ	Waitaha Valley	3.73	215	P	Pn	10 37 13.9	-1.9
WIZ	White Island	3.74	49	P	Pn	10 37 13.8	-2.3
WIZ	White Island	3.74	49	P	Pn	10 37 13.8	-2.3
RUGZ	Raukumara Rang	3.76	58	P	Pn	10 37 12.7	-3.9
AKCZ	Akaroa Harbour	3.85	188	P	Pn	10 37 15.1	-2.2
TWGZ	Tauwhareparae	3.85	62	P	Pn	10 37 14.9	-2.6
CNGZ	Carnagh Statio	3.86	67	P	Pn	10 37 15.5	-2.1
HAZ	Te Kaha	3.95	56	P	Pn	10 37 14.4	-4.2
GRZ	Great Barrier	4.06	21	P	Pn	10 37 17.9	-2.1
GRZ	Great Barrier	4.06	21	P	Pn	10 37 17.9	-2.1
PUZ	Puketiti	4.09	62	ePn	Pn	10 37 16.5	-3.9
PUZ	Puketiti	4.09	62	P	Pn	10 37 17.2	-3.1
RPZ	Rata Peaks	4.14	207	P	Pn	10 37 18.6	-2.1
	2µm,0.3s,baz=360,slow=2.1,SNR=3858						
RPZ				S	S	10 38 06.4	-5.8
	3µm,0.3s,baz=132,slow=24,SNR=18						
RPZ	Rata Peaks	4.14	207	ePn	Pn	10 37 18.5	-2.3
RPZ				ePn	Pn	10 37 18.9	-1.9
RPZ				eS	S	10 38 05.9	-6.3
RPZ				eS	S	10 38 06.4	-5.8
RPZ	Rata Peaks	4.14	207	P	Pn	10 37 18.7	-2.1
WCZ	Waipu Caves	4.15	8	ePn	Pn	10 37 18.2	-2.8
WCZ	Waipu Caves	4.15	8	P	Pn	10 37 19.0	-2.0
WCZ	Waipu Caves	4.15	8	P	Pn	10 37 19.0	-2.0
WMGZ	Waiomatatini S	4.33	60	P	Pn	10 37 20.0	-3.2
MXZ	Matakaoa Point	4.40	57	ePn	Pn	10 37 20.6	-3.4
MXZ				ePn	Pn	10 37 20.8	-3.2
MXZ	Matakaoa Point	4.40	57	P	Pn	10 37 20.8	-3.2
MXZ	Matakaoa Point	4.40	57	P	Pn	10 37 20.8	-3.2
FOZ	Fox Glacier	4.50	218	ePn	Pn	10 37 22.3	-2.8
FOZ				ePn	Pn	10 37 22.9	-2.2
FOZ				eS	S	10 38 15.3	-4.8
FOZ	Fox Glacier	4.50	218	P	Pn	10 37 22.8	-2.4
OUZ	Omahuta	4.83	359	ePn	Pn	10 37 27.0	-2.3
OUZ				ePn	Pn	10 37 28.0	-1.3
OUZ	Omahuta	4.83	359	P	Pn	10 37 27.8	-1.5
LBZ	Lake Benmore	5.03	210	ePn	Pn	10 37 29.3	-2.4
LBZ				eS	S	10 38 24.5	-7.5
LBZ	Lake Benmore	5.03	210	P	Pn	10 37 29.2	-2.4
JCZ	Jackson Bay	5.41	221	ePn	Pn	10 37 33.8	-2.6
JCZ	Jackson Bay	5.41	221	P	Pn	10 37 34.0	-2.3
ODZ	Otahua Downs	5.46	203	ePn	Pn	10 37 35.5	-1.4
ODZ				eS	S	10 38 37.0	-4.4
ODZ	Otahua Downs	5.46	203	P	Pn	10 37 35.3	-1.5
WKZ	Wanaka	5.87	214	ePn	Pn	10 37 39.5	-2.6
WKZ				eS	S	10 38 44.9	-6.0
WKZ	Wanaka	5.87	214	P	Pn	10 37 39.1	-3.0
EAZ	Earnscleugh	6.08	210	ePn	Pn	10 37 41.5	-3.2
EAZ	Earnscleugh	6.08	210	P	Pn	10 37 41.8	-2.9
HHSZ	Highcliff Hill	6.24	200	ePn	Pn	10 37 46.0	-0.7
MSZ	Milford Sound	6.27	221	ePn	Pn	10 37 44.1	-2.9
MSZ	Milford Sound	6.27	221	eP	Pn	10 37 44.1	-2.9
MSZ	Milford Sound	6.27	221	P	Pn	10 37 44.4	-2.6
TUZ	Tuapeka	6.59	205	ePn	Pn	10 37 49.2	-1.9
MLZ	Mavora Lakes	6.69	216	ePn	Pn	10 37 49.5	-2.9
MLZ				ePn	Pn	10 37 50.7	-1.7
WHZ	Wether Hill Ro	7.18	214	ePn	Pn	10 37 55.5	-3.1
WHZ				ePn	Pn	10 37 55.9	-2.6
WHZ				eS	S	10 39 14.0	-6.8
DCZ	Deep Cove	7.22	219	ePn	Pn	10 37 55.0	-4.0
DCZ				ePn	Pn	10 37 55.8	-3.2
APZ	The Paps	7.92	209	ePn	Pn	10 38 05.4	-2.7
I36NZ	CHATHAM INFRAS	8.29	121	P	Pn	10 38 10.9	-1.9
	baz=293,slow=17,SNR=0.3						
I36NZ				S	S	10 39 53.5	+6.8
	baz=272,slow=107						
I36NZ				i		11 13 10.0	
	baz=306,slow=312,SNR=0.7						
NFK	Norfolk Island	11.96	335	P	Pn	10 38 57.4	-1.8
	baz=12,SNR=8.4						
RAO	Raoul Island	12.81	35	P	Pn	10 39 08.6	-1.2
	104nm,0.3s,baz=256,slow=21,SNR=4.1						
RAO				S	S	10 41 17.5	-14
	348nm,0.3s,baz=90,slow=23,SNR=9.2						
LHI	Lord Howe Isla	14.58	301	ePn	Pn	10 39 29.5	-1.9
MCQ	Macquarie Isla	17.50	209	P	P	10 40 03.3	-0.2
	baz=18,SNR=8.8						
MCQ	Macquarie Isla	17.50	209	eP	Pn	10 40 08.6	+2.8
	3µm,2.0s						
MCQ	Macquarie Isla	17.50	209	eP	Pn	10 40 08.6	+2.8
MCQ				pmax	pmax		
	comp=Z,3µm,2.0s						
DZM	Mont Dzumac	18.95	339	P	P	10 40 20.6	+1.0
	comp=Z,17nm,0.3s,baz=186,slow=10,SNR=158						
DZM	Mont Dzumac	18.95	339	eP	P	10 40 20.6	+1.0
	comp=Z,4µm,1.4s						
DZM				eS	S	10 43 38.0	-4.1
	comp=Z,62µm,27.2s						
DZM	Mont Dzumac	18.95	339	eP	P	10 40 20.5	+1.0
	comp=Z,4µm,1.6s						
RIV	Riverview	19.01	282	P	Pn	10 40 22.1	-1.6
	baz=19,SNR=10						
MGCD	Mangrove Creek	19.32	284	P	Pn	10 40 25.9	-1.5
	baz=20,SNR=25						
MILA	Mila	19.38	271	P	Pn	10 40 26.4	-1.9
	baz=20,SNR=181						
CNB	Canberra Magne	19.78	276	P	Pn	10 40 30.9	-2.1
	baz=20,SNR=43						
TAU	Tasmania Unive	19.91	253	eP	P	10 40 30.6	+1.2
	comp=Z,557nm,1.2s						
TAU	Tasmania Unive	19.91	253	eP	P	10 40 30.7	+1.2
TAU				pmax	pmax		
	comp=Z,557nm,1.2s						
MOO	Moorlands	20.02	255	P	P	10 40 32.4	+1.7
	baz=20,SNR=45						
CAN	Canberra	20.06	276	eP	P	10 40 32.5	+1.2
	comp=Z,1µm,1.5s						
CAN	Canberra	20.06	276	eP	P	10 40 32.5	+1.2
CAN				pmax	pmax		
	comp=Z,1µm,1.5s						
ARMA	Armidale	20.36	291	P	P	10 40 36.8	+2.3
	baz=21,SNR=56						
ARMA	Armidale	20.36	291	eP	P	10 40 36.9	+2.3
	comp=Z,299nm,1.3s						
YNG	Young	20.90	278	P	P	10 40 42.0	+1.8
	baz=21,SNR=21						
TOO	Toolangi	22.05	267	P	P	10 40 53.1	+1.9
	baz=22,SNR=162						
EIDS	Eidsvold	23.90	301	P	P	10 41 09.0	+0.9
	baz=24,SNR=54						
EIDS	Eidsvold	23.90	301	eP	P	10 41 09.7	+1.6
	comp=Z,150nm,0.8s						
CMSA	Cobar Meteorol	24.15	282	P	P	10 41 11.5	+1.2
	baz=24,SNR=77						
RMQ	Roma	24.73	296	P	P	10 41 17.4	+1.7
	baz=25,SNR=34						
ARPS	Mount Arapiles	25.08	267	P	P	10 41 20.3	+1.6
	baz=25,SNR=33						
STKA	Stephens Creek	27.09	277	P	P	10 41 38.1	+1.3
	baz=27,SNR=96						
STKA	Stephens Creek	27.09	277	P	P	10 41 38.5	+1.8
	comp=Z,282nm,1.1s,baz=108,slow=10,SNR=124						
STKA				pP	pP	10 42 26.9	+3.1
	comp=Z,266nm,1.1s,baz=128,slow=9.6,SNR=1.9						
STKA				S	S	10 45 58.5	+1.7
	comp=Z,11nm,0.8s,baz=127,slow=18,SNR=1.6						
STKA				ScP	ScP	10 48 06.7	-1.5
	comp=Z,15nm,0.8s,baz=113,slow=4.7,SNR=3.2						
STKA	Stephens Creek	27.09	277	eP	P	10 41 37.7	+1.0
STKA				epP	pP	10 42 26.9	+3.1
STKA				S	S	10 45 58.5	+1.7
QLP	Quilpie	27.88	290	P	P	10 41 45.2	+1.5
	baz=28,SNR=94						
HTT	Hallett	28.48	272	P	P	10 41 50.4	+1.3
	baz=29,SNR=72						
AFI	Afiamalu	29.02	30	P	P	10 41 53.7	-0.2
	comp=Z,214nm,0.9s,baz=298,slow=3.6,SNR=18						
AFI				pP	pP	10 42 43.7	+2.4
	comp=Z,283nm,1.2s,baz=84,slow=21,SNR=1.8						
AFI	Afiamalu	29.02	30	eP	P	10 41 51.7	-2.2
AFI				e		10 41 52.0	
AFI				epP	pP	10 42 43.7	+2.4
AFI	Afiamalu	29.02	30	eP	P	10 41 51.7	-2.2
RAR	Rarotonga	29.41	58	P	P	10 41 57.2	-0.1
	comp=Z,335nm,1.0s,baz=240,slow=6.0,SNR=21						
RAR	Rarotonga	29.41	58	eP	P	10 41 57.2	-0.1
	comp=Z,736nm,1.3s						
CTA	Charters Tower	30.76	302	P	P	10 42 09.6	+0.4
	comp=Z,82nm,1.0s,baz=131,slow=12,SNR=22						
CTA				pP	pP	10 42 59.3	+2.4
	comp=Z,32nm,0.8s,baz=141,slow=9.9,SNR=1.9						
CTA				S	S	10 46 56.6	+2.2
	comp=Z,7.5nm,0.8s,baz=80,slow=11,SNR=2.0						
CTAO	Charters Tower	30.76	302	eP	P	10 42 10.4	+1.2
	comp=Z,95nm,0.9s						
CTAO	Charters Tower	30.76	302	eP	P	10 42 10.4	+1.2
CTAO				pmax	pmax		
	comp=Z,95nm,0.9s						
BBOO	Buckleboo	30.93	272	P	P	10 42 11.2	+0.6
	baz=31,SNR=133						
BBOO	Buckleboo	30.93	272	eP	P	10 42 11.2	+0.6
	comp=Z,1µm,1.5s						
FUNA	Funafuti	31.79	10	eP	P	10 42 17.6	-0.6
	comp=Z,146nm,1.0s						
HNR	Honiara	32.86	334	P	P	10 42 27.3	-0.1
	comp=Z,528nm,0.7s,baz=82,slow=0.8,SNR=18						
HNR				S	S	10 47 27.7	+0.8
	comp=Z,40nm,0.3s,baz=189,slow=10,SNR=4.2						
HNR	Honiara	32.86	334	eP	P	10 42 28.0	+0.6
HNR	Honiara	32.86	334	eP	P	10 42 27.3	-0.1
HNR				eP	P	10 42 27.6	+0.1
HNR				eS	S	10 47 27.7	+0.8
MTSU	Mount Surprise	33.43	302	P	P	10 42 33.8	+1.3
	baz=34,SNR=62						
QIS	Mount Isa	34.95	294	P	P	10 42 46.2	+0.8
	baz=35,SNR=39						
TBI	Tubuai	35.23	73	eP	P	10 42 49.3	+1.6
	comp=Z,835nm,0.8s						
TBI				epP	pP	10 43 34.7	-1.4
	comp=Z,481nm,1.2s						
TBI				eS	S	10 48 05.9	+2.7
	comp=Z,5µm,24.4s						
AS01	Alice Springs	37.13	284	eP	P	10 43 04.0	+0.1
AS31	Alice Springs	37.17	284	eP	P	10 43 04.5	+0.3
	comp=Z,240nm,1.6s						
AS31				epP	pP	10 43 52.5	-0.6
ASAR	Alice Springs	37.17	284	P	P	10 43 04.4	+0.2
	comp=Z,96nm,0.4s,baz=123,slow=6.7,SNR=965						
ASAR				pP	pP	10 43 52.5	-0.6
	comp=Z,111nm,0.9s,baz=115,slow=6.5,SNR=1.6						
ASAR				PcP	PcP	10 45 18.8	0.0
	comp=Z,28nm,0.6s,baz=117,slow=3.6,SNR=2.6						
ASAR				S	S	10 48 32.8	0.0
	comp=Z,56nm,0.9s,baz=131,slow=15,SNR=14						
ASAR				PKP2ab		11 17 09.7	
	comp=Z,0.5nm,0.5s,baz=340,slow=11,SNR=5.4						
ASAR	Alice Springs	37.17	284	P	P	10 43 04.4	+0.2
ASAR				*PP	pP	10 43 52.5	-0.6
ASAR						10 45 18.8	
ASAR				S	S	10 48 32.8	0.0
ASAR				pmax	pmax		
	comp=Z,97nm,0.4s						
ASAR				pmax	pmax		
	comp=Z,40nm,0.7s						
ASAR				pmax	pmax		
	comp=Z,28nm,0.6s						
ASAR				smax	smax		
	comp=N,56nm,0.9s						
COEN	Coen	37.27	306	P	P	10 43 06.0	+0.9
	baz=38,SNR=53						
COEN	Coen	37.27	306	eP	P	10 43 05.8	+0.7
	comp=N,192nm,1.1s						
VNDA	Vanda	37.90	184	P	P	10 43 11.6	+2.1
	comp=N,171nm,0.7s,baz=4.0,slow=8.3,SNR=429						
VNDA				pP	pP	10 43 58.9	+0.4
	comp=N,59nm,0.9s,baz=131,slow=8.9,SNR=1.2						
VNDA	Vanda	37.90	184	eP	P	10 43 11.5	+1.9
VNDA				e		10 43 11.7	
VNDA				epP	pP	10 43 58.9	+0.4
FORT	Forrest	37.95	270	P	P	10 43 11.1	+0.4
	baz=38,SNR=212						
FORT	Forrest	37.95	270	eP	P	10 43 11.0	+0.4
	comp=N,798nm,0.8s						
SBA	Scott Base	38.01	182	eP	P	10 43 13.8	+3.3
	comp=N,2µm,1.3s						
SBA	Scott Base	38.01	182	eP	P	10 43 13.8	+3.3
SBA				pmax	pmax		
	comp=Z,2µm,1.3s						
PMG	Port Moresby	38.57	315	P	P	10 43 17.5	+1.6
	comp=Z,174nm,0.7s,baz=104,slow=5.1,SNR=30						
PMG				pP	pP	10 44 06.5	+1.4
	comp=Z,72nm,1.0s,baz=165,slow=12,SNR=1.7						
PMG				S	S	10 48 56.3	+2.4
	comp=Z,13nm,0.7s,baz=205,slow=18,SNR=3.2						
PMG				PKP2ab		11 17 18.1	
	comp=Z,24nm,0.9s,baz=276,slow=8.1,SNR=3.7						
PMG	Port Moresby	38.57	315	eP	P	10 43 17.5	+1.6
	comp=Z,172nm,0.7s						
PMG				epP	pP	10 44 06.5	+1.4
PMG				eS	S	10 48 56.3	+2.4
PAE	Paea	38.78	66	eP	P	10 43 19.9	+2.3
	comp=Z,466nm,1.1s						
PPT2	Papeete2	38.83	66	eP	P	10 43 19.7	+1.6
	comp=Z,2µm,1.3s						
PPT2				eS	S	10 48 59.8	+2.0
	comp=Z,4µm,25.5s						
PPTF	Pamatai, Papee	38.84	66	eP	P	10 43 19.7	+1.5
	comp=Z,3µm,1.2s						
PPT	Papeete	38.84	66	P	P	10 43 19.6	+1.4
	comp=Z,1µm,0.7s,baz=135,slow=2.0,SNR=71						
TVO	Taravao	38.93	66	eP	P	10 43 20.4	+1.5
	comp=Z,465nm,1.2s						
TIAR	Tiarei	39.01	66	eP	P	10 43 21.2	+1.6
	comp=Z,583nm,0.9s						
WB2	Warramunga Arr	39.10	289	eP	P	10 43 20.4	+0.1
	comp=Z,328nm,0.6s						
WB2				eP	P	10 43 23.7	+3.4
WRAB	Tennant Creek	39.11	289	eP	P	10 43 20.5	+0.1
	comp=Z,310nm,0.6s						
WRAB	Tennant Creek	39.11	289d	iP	P	10 43 20.4	+0.1
WRAB				pmax	pmax		
	comp=Z,307nm,0.7s						
WR1	Warramunga Arr	39.11	289	eP	P	10 43 20.1	-0.3
	comp=Z,358nm,0.6s						
WR1				epP	pP	10 44 10.2	+0.6
WR1				ePcP	PcP	10 45 26.2	+1.3
WR1				eS	S	10 49 01.5	-0.4
WRA	Warramunga Arr	39.11	289	P	P	10 43 20.1	-0.3
	comp=Z,221nm,0.6s,baz=127,slow=7.8,SNR=501						
WRA				pP	pP	10 44 10.2	+0.6
	comp=Z,135nm,1.2s,baz=127,slow=8.1,SNR=1.9						
WRA				PcP	PcP	10 45 26.2	+1.2
	comp=Z,34nm,1.0s,baz=125,slow=3.1,SNR=2.9						
WRA				ScP	ScP	10 48 48.0	-2.2
	comp=Z,14nm,0.8s,baz=131,slow=3.9,SNR=6.0						
WRA				S	S	10 49 01.5	-0.4
	comp=Z,61nm,1.1s,baz=129,slow=15,SNR=14						
WRA	Warramunga Arr	39.11	289	P	P	10 43 20.1	-0.3
WRA				*PP	pP	10 44 10.2	+0.6
WRA						10 45 26.2	
WRA				S	S	10 49 01.5	-0.4
WRA				pmax	pmax		
	comp=Z,87nm,0.6s						
WRA				pmax	pmax		
	comp=Z,135nm,1.2s						
WRA				pmax	pmax		
	comp=Z,34nm,1.0s						
WRA				pmax	pmax		
	comp=N,14nm,0.8s						
WRA				smax	smax		
	comp=N,61nm,1.1s						
KNTN	Kanton	39.41	23	eP	P	10 43 21.6	-1.2
	comp=N,588nm,1.1s						
WRKA	Warakurna	40.63	278	P	P	10 43 32.4	-0.4
	baz=41,SNR=1000						
RABL	Rabaul	40.65	326	eP	P	10 43 34.6	+1.6
	comp=N,5µm,1.4s						
TARA	Tarawa	41.22	359	eP	P	10 43 36.7	-0.9
	comp=N,2µm,0.9s						
PMOR	Pomariorio Ree	41.77	64	eP	P	10 43 43.2	+1.1
	comp=N,2µm,1.4s						
VAH	Vaihoa	41.80	65	eP	P	10 43 43.0	+0.7
KMBL	Kambalda	42.42	265	P	P	10 43 47.3	+0.1
	baz=43,SNR=142						
CASY	Casey	43.40	212	eP	P	10 43 53.2	-1.3
	comp=N,179nm,0.8s						
MANU	Manus Island	44.74	321	eP	P	10 44 06.2	+0.4
	comp=N,689nm,1.5s						
NWAO	Narrogin (SRO)	45.27	261	P	P	10 44 09.6	-0.3
	baz=45,SNR=151						
NWAO	Narrogin (SRO)	45.27	261	P	P	10 44 09.6	-0.3
	comp=N,158nm,0.6s,baz=352,slow=6.3,SNR=68						
NWAO				pP	pP	10 45 00.4	0.0
	comp=N,70nm,0.8s,baz=355,slow=7.9,SNR=2.7						
NWAO				S	S	10 50 31.6	0.0
	comp=N,18nm,0.9s,baz=166,slow=12,SNR=2.5						
NWAO	Narrogin (SRO)	45.27	261	eP	P	10 44 09.5	-0.3
	comp=N,145nm,0.8s						
NWAO				epP	pP	10 45 00.4	0.0
NWAO				eS	S	10 50 31.6	0.0
KDU	Kakadu	45.29	295	P	P	10 44 10.1	0.0
	baz=46,SNR=36						
KLBR	Kellerberrin	45.47	262	P	P	10 44 11.2	-0.2
	baz=46,SNR=305						
KNRA	Kununurra	45.91	289	P	P	10 44 15.5	+0.6
	baz=46,SNR=83						

MTN	Manton Dam	46.11	294	P	P	10 44 16.9	+0.3
	baz=46,SNR=17						
MTN	Manton Dam	46.11	294	eP	P	10 44 16.6	+0.1
	comp=N,194nm,0.6s						
RKT	Rikitea	46.26	85	eP	P	10 44 19.9	+2.3
	comp=N,117nm,0.9s						
RKT				eS	S	10 50 47.9	+2.1
	comp=N,8µm,27.5s						
RKT	Rikitea	46.26	85	eT	T	11 31 59.0	
	comp=N,8.5nm,0.3s						
FITZ	Fitzroy Crossi	46.67	284	P	P	10 44 21.4	+0.6
	baz=47,SNR=553						
FITZ	Fitzroy Crossi	46.67	284	P	P	10 44 21.4	+0.6
	comp=N,291nm,0.6s,baz=140,slow=5.8,SNR=266						
FITZ				S	S	10 50 51.6	-0.1
	comp=N,6.8nm,1.0s,baz=264,slow=22,SNR=5.7						
FITZ	Fitzroy Crossi	46.67	284	eP	P	10 44 21.2	+0.4
FITZ				e		10 44 21.4	
FITZ				eS	S	10 50 51.6	-0.1
BLDU	Ballidu	46.71	263	P	P	10 44 20.7	-0.4
	baz=47,SNR=186						
JAY	Jayapura	47.83	313	S	S	10 51 08.7	+0.4
	comp=N,14nm,0.9s,baz=114,slow=20,SNR=2.0						
JAY	Jayapura	47.83	313	P	P	10 44 30.5	+0.7
	comp=N,730nm,1.3s,comp=N,8µm						
MORW	Morawa	47.96	265	P	P	10 44 30.6	0.0
	baz=48,SNR=110						
GENI	Genyem	48.07	312	P	P	10 44 32.5	+0.9
	comp=N,83nm,0.9s						
PATS	Pohnpei	48.77	340	P	P	10 44 38.1	+1.2
	baz=49,SNR=11						
PATS	Pohnpei	48.77	340	eP	P	10 44 37.4	+0.6
	comp=N,307nm,1.0s						
MBWA	Marble Bar	49.32	276	eP	P	10 44 40.6	-0.5
	comp=N,240nm,0.8s						
XMAS	Kiritimati	49.55	39	eP	P	10 44 41.8	-1.0
	comp=N,362nm,1.3s						
QSPA	South Pole Qui	50.07	180	P	P	10 44 48.4	+2.1
	comp=N,1µm,0.9s,baz=29,slow=2.0,SNR=829						
QSPA				pP	pP	10 45 38.3	+0.5
	comp=N,318nm,0.9s,baz=23,slow=6.1,SNR=2.4						
QSPA				S	S	10 51 40.4	+2.0
	comp=N,11nm,1.1s,baz=90,slow=1.0,SNR=2.5						
QSPA	South Pole Qui	50.07	180	eP	P	10 44 48.4	+2.1
QSPA				eP	P	10 44 48.7	+2.4
QSPA				epP	pP	10 45 38.4	+0.5
QSPA				eS	S	10 51 40.4	+2.0
SRPI	Serui, Papua	50.95	309	P	P	10 44 54.1	+0.8
TAOE	Nuku Hiva Isla	51.46	66	eP	P	10 44 59.0	+1.8
	comp=N,681nm,1.3s						
TAOE				eS	S	10 51 59.5	+0.9
	comp=N,4µm,26.5s						
TAOE	Nuku Hiva Isla	51.46	66	eP	P	10 44 54.5	-2.7
	comp=N,169nm,0.8s						
BAKI	Biak	51.57	309	P	P	10 44 57.4	-0.5
	comp=N,245nm,0.7s,comp=N,4µm						
RKPI	Ransiki, Papua	52.49	307	P	P	10 45 03.7	-0.9
	comp=N,123nm,0.8s,comp=N,5µm						
FAKI	Fak Fak	52.60	304	P	P	10 45 05.0	-0.5
	comp=N,94nm,0.7s						
FAKI	Fak Fak	52.60	304	eP	P	10 45 04.4	-1.2
	comp=N,79nm,0.9s						
GIRL	Giralia	52.70	271	P	P	10 45 07.1	+1.0
	baz=53,SNR=97						
SOEI	Soe	53.11	291	P	P	10 45 10.9	+1.6
	comp=N,315nm,1.3s,comp=N,4µm						
SOEI	Soe	53.11	291	eP	P	10 45 10.6	+1.3
	comp=N,600nm,1.1s						
BATI	Baumata	53.24	290	P	P	10 45 11.2	+1.1
	comp=N,105nm,0.5s,baz=114,slow=20,SNR=6.2						
BATI				pP	pP	10 46 01.1	-1.4
	comp=N,44nm,0.6s,baz=97,slow=8.1,SNR=1.2						
BATI				S	S	10 52 25.1	+2.5
	comp=N,9.5nm,0.3s,baz=102,slow=20,SNR=1.6						
BATI	Baumata	53.24	290	P	P	10 45 12.1	+1.9
	comp=N,104nm,1.2s,comp=N,1µm						
MMRI	Maumere	55.33	290	P	P	10 45 25.4	+0.2
	comp=N,254nm,1.9s,comp=N,4µm						
MMRI	Maumere	55.33	290	eP	P	10 45 24.8	-0.4
	comp=N,837nm,1.4s						
BASI	Baing, Sumba	55.47	287	P	P	10 45 28.6	+2.4
	comp=N,611nm,1.3s,comp=N,11µm						
EDFI	Ende, Flores	55.65	289	P	P	10 45 27.7	+0.1
	comp=N,96nm,1.4s,comp=N,2µm						
WSI	Waingapu	56.04	287	P	P	10 45 31.4	+1.1
	comp=N,642nm,0.5s						
WBSI	Waikabubak, Su	56.73	287	P	P	10 45 36.2	+1.1
	comp=N,206nm,0.8s,comp=N,3µm						
SANI	Sanana	57.37	299	P	P	10 45 38.5	-1.0
	comp=N,70nm,0.7s,comp=N,2µm						
KDI	Kendari	58.31	294	P	P	10 45 46.7	+0.7
	comp=N,57nm,1.2s,comp=N,2µm						
PLAI	Plampang	58.45	286	P	P	10 45 47.9	+0.8
	comp=N,184nm,1.2s,comp=N,3µm						
TNTI	Ternate	58.55	302	eP	P	10 45 48.0	+0.3
TNTI				epP	pP	10 46 44.8	+3.7
H11S2	WAKE ISLAND Hy	58.61	352	P	P	10 45 38.8	-8.8
	baz=192,slow=6.3,SNR=6.9						
H11S3	WAKE ISLAND Hy	58.61	352	P	P	10 45 47.5	-0.2
	baz=192,slow=6.3,SNR=4.7						
H11S1	WAKE ISLAND Hy	58.62	352	P	P	10 45 47.5	-0.3
	baz=192,slow=6.3,SNR=7.4						
JOHN	Johnston Islan	58.63	19	eP	P	10 45 47.6	-0.5
	comp=N,614nm,0.9s						
BKSI	Bulukumba	59.12	291	P	P	10 45 50.7	-0.9
	comp=N,31nm,0.9s,comp=N,958nm						
TWSI	Taliwang, Sumb	59.17	286	P	P	10 45 52.1	+0.1
	comp=N,92nm,0.7s,comp=N,3µm						
WAKE	Wake Island	59.40	352	eP	P	10 45 53.4	+0.1
	comp=N,865nm,0.9s						
GUMO	Guam	59.71	327	P	P	10 45 55.3	-0.2
	comp=N,166nm,0.9s,baz=76,slow=4.2,SNR=5.6						
GUMO				S	S	10 53 48.2	+1.0
	comp=N,24nm,0.8s,baz=180,slow=19,SNR=1.8						
H11N1	WAKE ISLAND Hy	59.80	353	P	P	10 45 55.9	+0.2
	baz=184,slow=10,SNR=23						
H11N3	WAKE ISLAND Hy	59.80	353	P	P	10 45 56.0	+0.2
	baz=184,slow=10,SNR=12						
H11N2	WAKE ISLAND Hy	59.81	353	P	P	10 45 55.8	-0.1
	baz=184,slow=10,SNR=15						
LUWI	Luwuk	60.29	297	P	P	10 46 01.5	+1.9
	comp=N,183nm,0.9s,comp=N,6µm						
LUWI	Luwuk	60.29	297	eP	P	10 45 59.8	+0.3
	comp=N,824nm,1.3s						
SPSI	Sidrap Palu	60.31	292	P	P	10 46 00.4	+0.6
	comp=N,46nm,1.0s,comp=N,2µm						
DNP	Denpasar	60.45	284	P	P	10 46 01.5	+0.8
	comp=N,550nm,1.2s						
KMSI	Cibinong	60.65	299	P	P	10 46 02.2	+0.2
	comp=N,186nm,0.8s						
MAW	Mawson	60.81	204	P	P	10 46 02.2	0.0
	baz=61,SNR=154						
MAW	Mawson	60.81	204	P	P	10 46 02.2	0.0
	comp=N,75nm,0.4s,baz=126,slow=7.6,SNR=241						
MAW				pP	pP	10 46 56.0	0.0
	comp=N,140nm,1.2s,baz=106,slow=9.4,SNR=2.9						
MAW				S	S	10 53 58.6	-1.2
	comp=N,1.4nm,0.9s,baz=97,slow=17,SNR=1.3						
MAW	Mawson	60.81	204	eP	P	10 46 02.3	0.0
	comp=N,113nm,1.3s						
MAW				epP	pP	10 46 56.0	0.0
MAW				eS	S	10 53 58.6	-1.2
MAW	Mawson	60.81	204	eP	P	10 46 02.3	0.0
MAW				e*PP	pP	10 46 56.0	0.0
MAW				eS	S	10 53 58.6	-1.2
MAW				pmax	pmax		
	comp=Z,113nm,1.3s						
SRBI	Singaraja	60.84	285	P	P	10 46 03.5	+0.2
	comp=Z,100nm,1.2s,comp=Z,3µm						
TTSI	Tana Toraja	60.92	293	P	P	10 46 03.9	+0.1
	comp=Z,94nm,0.8s,comp=Z,2µm						
JAGI	Jajag, Banyuwa	61.38	284	eP	P	10 46 06.7	-0.2
	comp=Z,167nm,1.0s						
MRSI	Marisa	61.96	297	P	P	10 46 10.6	-0.1
	comp=Z,34nm,0.6s,comp=Z,1µm						
GMJI	Gumukmas	62.03	283	P	P	10 46 11.3	0.0
	comp=Z,247nm,1.1s,comp=Z,5µm						
BLJI	Banyuglugur	62.27	284	P	P	10 46 13.4	+0.6
	comp=Z,513nm,0.8s,comp=Z,9µm						
MPSI	Mapaga	63.26	295	P	P	10 46 19.1	-0.3
	comp=Z,49nm,0.9s,comp=Z,1µm						
KBKI	Kotabaru	63.36	290	P	P	10 46 21.2	+1.2
	comp=Z,31nm,1.0s,comp=Z,1µm						
PWJI	Pagerwojo	63.42	282	P	P	10 46 20.5	+0.1
	comp=Z,345nm,1.1s,comp=Z,6µm						
RPN	Rapa Nui	63.61	104	P	P	10 46 23.4	+1.9
	comp=Z,81nm,0.5s,baz=209,slow=2.7,SNR=2.6						
GRJI	Gresik	63.64	284	P	P	10 46 21.3	-0.6
	comp=Z,141nm,0.6s,comp=Z,2µm						
PCJI	Pacitan	63.78	282	P	P	10 46 24.0	+1.2
	comp=Z,290nm,1.1s,comp=Z,7µm						
NGJI	Ngawi	64.11	283	P	P	10 46 26.9	+2.0
	comp=Z,271nm,0.8s,comp=Z,6µm						
WOJI	Wonogiri, Jawa	64.20	282	P	P	10 46 26.2	+0.7
	comp=Z,236nm,1.0s,comp=Z,7µm						
UGM	Wanagama	64.46	282	P	P	10 46 27.4	+0.1
	comp=Z,265nm,0.7s						
UGM	Wanagama	64.46	282	eP	P	10 46 27.3	+0.1
	comp=Z,503nm,1.1s						
DAV	Davao City (W)	64.50	305	S	S	10 54 45.2	-1.9
	comp=Z,182nm,0.5s,baz=96,slow=10,SNR=2.3						
SMRI	Semarang	65.08	282	P	P	10 46 31.6	+0.4
	comp=Z,199nm,0.9s						
SMRI	Semarang	65.08	282	eP	P	10 46 31.3	+0.1
	comp=Z,449nm,1.1s						
KHU	Kahuku	65.59	32	eP	P	10 46 33.8	-0.7
	comp=Z,714nm,1.9s						
KHU	Kahuku	65.59	32	eP	P	10 46 33.8	-0.7
KHU				pmax	pmax		
	comp=Z,714nm,1.9s						
HLP	Hilina Pali	65.76	32	eP	P	10 46 34.9	-0.5
	comp=Z,649nm,1.5s						
AIN	Ainahou	65.77	32	eP	P	10 46 34.7	-0.8
	comp=Z,567nm,1.6s						
KHLU	Kahalu‘u	65.79	32	eP	P	10 46 35.0	-0.6
	comp=Z,229nm,1.1s						
PUH	Pauahi	65.87	32	eP	P	10 46 35.7	-0.5
	comp=Z,284nm,1.0s						
HUH	Hualalai	65.89	32	eP	P	10 46 35.3	-1.2
	comp=Z,192nm,1.1s						
MTKI	Muara Teweh, K	65.89	291	P	P	10 46 36.8	+0.4
	comp=Z,291nm,0.8s,comp=Z,7µm						
MLH	Mauna Loa	65.90	32	eP	P	10 46 35.3	-1.2
	comp=Z,252nm,1.2s						
MLH	Mauna Loa	65.90	32	eP	P	10 46 35.3	-1.2
MLH				pmax	pmax		
	comp=Z,252nm,1.2s						
STCH	Steam Cracks	65.91	32	eP	P	10 46 36.0	-0.4
	comp=Z,364nm,1.3s						
HMH	Humu‘ula Sheep	65.96	32	eP	P	10 46 36.4	-0.6
	comp=Z,536nm,1.2s						
HULD	Heiheiahulu Di	66.00	33	eP	P	10 46 36.1	-0.8
	comp=Z,133nm,0.6s						
KPJI	Karang Pucung	66.03	281	P	P	10 46 37.7	+0.5
	comp=Z,664nm,0.7s,comp=Z,9µm						
SYO	Syowa Base	66.07	196	⇑iP	P	10 46 35.6	-1.0
POHA	Pohakuloa	66.08	32	eP	P	10 46 37.1	-0.6
	comp=Z,157nm,0.8s						
CMJI	Cimerak	66.10	280	P	P	10 46 37.3	-0.4
	comp=Z,463nm,0.8s,comp=Z,8µm						
PMSA	Palmer Station	66.20	157	P	P	10 46 39.6	+2.1
	comp=Z,108nm,0.8s,baz=221,slow=4.0,SNR=14						
PMSA				pP	pP	10 47 32.3	+0.2
	comp=Z,185nm,1.1s,baz=204,slow=6.5,SNR=5.4						
PMSA	Palmer Station	66.20	157	eP	P	10 46 39.1	+1.5
PMSA				eP	P	10 46 39.6	+2.1
PMSA				epP	pP	10 47 32.4	+0.2
PMSA				epP	pP	10 47 32.5	+0.3
HPAH	Hawaii Prepara	66.26	32	eP	P	10 46 37.6	-0.9
	comp=Z,377nm,1.3s						
KEKH	Kekaha	66.53	27	eP	P	10 46 39.6	-0.6
	comp=Z,530nm,1.4s						
KIP	Kipapa	66.63	29	eP	P	10 46 40.8	0.0
	comp=Z,537nm,1.8s						
KIP	Kipapa	66.63	29	⇑iP	P	10 46 40.3	-0.5
KIP				pmax	pmax		
	comp=Z,2µm,1.8s						
CISI	Cisompet, Garu	66.73	280	P	P	10 46 41.3	-0.4
CISI	Cisompet, Garu	66.73	280	eP	P	10 46 41.9	+0.1
	comp=Z,3µm,1.6s						
KHLH	Kahului Airpor	66.75	30	eP	P	10 46 42.0	+0.4
	comp=Z,299nm,1.6s						
OPA	Opana	66.87	29	eP	P	10 46 41.6	-0.7
	comp=Z,212nm,0.9s						
OPA	Opana	66.87	29	eP	P	10 46 41.6	-0.7
OPA				pmax	pmax		
	comp=Z,212nm,0.9s						
PBKI	Pangkalan Bun	67.04	287	P	P	10 46 43.9	+0.3
	comp=Z,374nm,1.0s,comp=Z,5µm						
LEM	Lembang	67.35	280	P	P	10 46 47.0	+1.3
	comp=Z,417nm,0.6s,baz=108,slow=6.0,SNR=35						
LEM				pP	pP	10 47 40.1	-0.5
	comp=Z,284nm,0.8s,baz=94,slow=8.1,SNR=3.8						
LEM	Lembang	67.35	280	P	P	10 46 46.4	+0.6
	comp=Z,5µm,0.9s,comp=Z,69µm						
SKJI	Sukabumi	68.03	280	P	P	10 46 49.8	-0.1
	comp=Z,833nm,0.8s,comp=Z,7µm						
DBJI	Dramaga	68.18	280	P	P	10 46 51.1	+0.3
	comp=Z,723nm,0.7s,comp=Z,10µm						
PAF	Port-aux-Franc	68.39	223	eP	P	10 46 51.9	+0.4
	comp=Z,557nm,1.3s						
PAF	Port-aux-Franc	68.39	223	eP	P	10 46 51.9	+0.4
PAF				pmax	pmax		
	comp=Z,557nm,1.3s						
MIDW	Midway	68.44	9	eP	P	10 46 51.3	-0.6
	comp=Z,330nm,0.9s						
SNAA	Sanae	68.55	181	P	P	10 46 52.4	+0.1
SNAA	Sanae	68.55	181	P	P	10 46 52.4	+0.1
	comp=Z,137nm,0.6s,baz=202,slow=6.8,SNR=659						
SNAA				pP	pP	10 47 45.4	-1.9
	comp=Z,407nm,1.2s,baz=156,slow=5.1,SNR=5.8						
SNAA				S	S	10 55 33.3	-1.0
	comp=Z,3.0nm,0.9s,baz=180,slow=20,SNR=1.9						
SNAA				PKP2bc		11 14 56.3	
	comp=Z,2.4nm,1.0s,baz=34,slow=1.1,SNR=4.9						
SNAA	Sanae	68.55	181	eP	P	10 46 52.2	0.0
SNAA				e		10 46 52.4	
SNAA				epP	pP	10 47 45.4	-1.9
SNAA				S	S	10 55 33.3	-1.0
NVL	N’lazarevskaya	68.70	186	⇓iP	P	10 46 52.5	-0.6
NVL				e*PP	pP	10 47 46.3	-1.9
NVL				eS	S	10 55 31.1	-4.9
NVL				e		10 56 25.5	
NVL				pmax	pmax		
	comp=Z,93nm,0.6s						
SBJI	Serang	68.93	280	P	P	10 46 55.6	+0.2
	comp=Z,494nm,1.1s,comp=Z,13µm						
CGJI	Cibinong	68.94	279	P	P	10 46 55.8	+0.4
	comp=Z,234nm,1.0s,comp=Z,10µm						
VNA3	Neumayer Olymp	68.98	179	P	P	10 46 55.1	+0.2
STKI	Sintang	69.06	289	P	P	10 46 56.8	+0.6
	comp=Z,108nm,0.9s						
VNA1	Neumayer--Stat	69.59	179	P	P	10 46 59.2	+0.7
TPI	Tanjungpandan	69.98	284	P	P	10 47 03.0	+1.2
	comp=Z,4.3nm,0.6s,comp=Z,98nm						
BLSI	Bandar Lampung	70.08	280	P	P	10 47 02.6	+0.2
	comp=Z,362nm,1.1s						
KASI	Kota Agung	70.55	279	P	P	10 47 05.2	0.0
	comp=Z,230nm,0.9s,comp=Z,5µm						
KLI	Kotabumi	70.70	280	P	P	10 47 06.0	-0.2
	comp=Z,369nm,0.7s,comp=Z,8µm						
LWLI	Liwa	71.20	279	P	P	10 47 09.3	0.0
	comp=Z,275nm,0.9s,comp=Z,7µm						
MDSI	Maura Dua	71.46	280	P	P	10 47 10.3	-0.4
	comp=Z,394nm,0.7s,comp=Z,6µm						
PPBI	Pangkal Pinang	71.50	283	P	P	10 47 10.8	-0.2
	comp=Z,3.2nm,0.7s						
PMBI	Palembang	72.03	282	P	P	10 47 14.4	+0.3
	comp=Z,267nm,0.5s						
MNAI	Manna	72.46	279	P	P	10 47 16.3	-0.4
TGY	Tagaytay City	72.79	306	P	P	10 47 20.6	+2.0
	comp=Z,250nm,0.8s,baz=108,slow=16,SNR=3.7						
TGY				S	S	10 56 23.6	-1.0
	comp=Z,82nm,0.3s,baz=256,slow=19,SNR=1.9						
CBIJ	Chichi jima	72.96	331	eP	P	10 47 18.5	-0.7
	comp=Z,427nm,1.2s						
CBIJ				S	S	10 56 23.3	-2.5
JCJ	Chichijima	72.96	331	S	S	10 56 23.3	-2.5
	comp=Z,24nm,0.6s,baz=270,slow=20,SNR=2.2						
MASI	Maura Aman, Be	73.80	280	P	P	10 47 24.6	+0.1
	comp=Z,3µm,0.6s,comp=Z,27µm						
KRJI	Kerinci	75.06	280	P	P	10 47 31.9	0.0
	comp=Z,2µm,0.7s,comp=Z,19µm						
PPSI	Pulau Pagai	75.73	279	P	P	10 47 37.2	+1.7
	comp=Z,966nm,1.0s,comp=Z,10µm						
BKNI	Bangkinang	76.96	282	P	P	10 47 41.8	-0.6
	comp=Z,428nm,0.9s,comp=Z,4µm						
BKNI	Bangkinang	76.96	282	eP	P	10 47 42.0	-0.4
BKNI				epP	pP	10 48 37.6	-1.2
SISI	Saibi	77.36	279	P	P	10 47 46.3	+1.7
	comp=Z,300nm,1.3s,comp=Z,5µm						
EFI	East Falkland	78.14	150	eP	P	10 47 49.6	+1.3
EFI				epP	pP	10 48 45.5	+0.7
EFI	East Falkland	78.14	150	⇑eP	P	10 47 49.6	+1.3
EFI				pmax	pmax		
	comp=Z,157nm,1.0s						
MNSI	Mandailing Nat	78.37	281	P	P	10 47 49.3	-0.9
	comp=Z,236nm,0.7s,comp=Z,3µm						
PBSI	Pulau Batu	78.79	279	P	P	10 47 53.9	+1.4
	comp=Z,506nm,1.0s,comp=Z,6µm						
JOW	Kunigami	78.82	320	P	P	10 47 53.1	+0.8
	comp=Z,12nm,0.4s,baz=201,slow=8.6,SNR=4.0						
JOW				pP	pP	10 48 49.2	+0.3
	comp=Z,27nm,1.0s,baz=320,slow=7.3,SNR=2.2						
JOW				S	S	10 57 29.2	-0.7
	comp=Z,8.4nm,0.6s,baz=76,slow=18,SNR=1.8						
JHJ2	Mitsune	79.25	332	eP	P	10 47 54.8	+0.3
	comp=Z,263nm,0.9s						
JHJ	Hachijo jima 2	79.27	332	P	P	10 47 54.2	-0.3
	comp=Z,162nm,0.6s,baz=270,slow=23,SNR=8.9						
TWG	Pinlang	79.45	312	eP	P	10 47 55.0	-0.8
	comp=Z,190nm,1.1s						
YULB	Yu-li	79.77	312	eP	P	10 47 56.1	-1.4
	comp=Z,20nm,0.8s						
TPUB	Ta-pu	80.08	312	eP	P	10 47 59.3	+0.1
	comp=Z,117nm,1.6s						
PSI	Prapat	80.17	282	P	P	10 47 59.2	-0.9
	comp=Z,117nm,0.7s,baz=180,slow=4.9,SNR=48						
PSI				pP	pP	10 48 55.6	-1.2
	comp=Z,155nm,1.1s,baz=178,slow=0.6,SNR=4.4						
PSI				S	S	10 57 38.7	-6.3
	comp=Z,3.7nm,0.6s,baz=180,slow=7.1,SNR=3.2						
GSI	Gunungsitoli	80.21	280	P	P	10 48 01.4	+1.3
	comp=Z,1µm,1.2s,comp=Z,10µm						
GSI	Gunungsitoli	80.21	280	eP	P	10 48 00.9	+0.8
	comp=Z,783nm,0.8s						
SSLB	Suanglung	80.28	312	eP	P	10 48 00.0	-0.2
	comp=Z,45nm,1.0s						
PLCA	Paso Flores	80.62	136	P	P	10 48 04.0	+2.0
	comp=Z,47nm,0.8s,baz=247,slow=6.1,SNR=37						
PLCA				pP	pP	10 48 58.4	-0.5
	comp=Z,85nm,1.0s,baz=282,slow=5.3,SNR=5.7						
PLCA				PKPPKP	P’P’df	11 14 40.2	-6.9
	comp=Z,3.5nm,0.9s,baz=255,slow=5.0,SNR=3.1						
YHNB	Yeheng	80.73	313	eP	P	10 48 02.7	0.0
	comp=Z,148nm,1.6s						
TATO	Taipei	80.91	313	eP	P	10 48 03.9	+0.4
	comp=Z,70nm,0.8s						
KCSI	Kotacane, Aceh	81.51	282	P	P	10 48 06.3	-0.7
	comp=Z,442nm,1.1s,comp=Z,4µm						
TPTI		81.78	281	P	P	10 48 07.8	-0.6
	comp=Z,636nm,1.0s,comp=Z,7µm						
SNSI	Sinabang, Aceh	81.87	280	P	P	10 48 07.3	-1.5
	comp=Z,526nm,1.1s,comp=Z,7µm						
INU	Inuyama	82.29	331	eP	P	10 48 10.9	+0.5
	comp=Z,180nm,1.0s						
HOPE	Hope Point	82.52	163	eP	P	10 48 12.4	+0.9
	comp=Z,257nm,0.9s						
HOPE				epP	pP	10 49 06.9	-1.7
QZH	Quanzhou	82.53	311	⇑iP	P	10 48 12.4	+0.5
QZH				pP	pP	10 49 10.8	+1.8
QZH				S	S	10 58 08.3	+0.1
QZH				sS	sS	10 59 49.4	+0.9
QZH				pmax	pmax		
	comp=Z,46nm,0.7s						
QZH				pmax	pmax		
	comp=Z,610nm,4.9s						
QZH				LR	LR		
	comp=Z,600nm,13.9s						
QZH				LR	LR		
	comp=Z,1µm,19.0s						
QZH				LR	LR		
	comp=Z,950nm,18.0s						
JNU	Nakatsue	82.87	325	P	P	10 48 13.7	+0.1
	comp=Z,41nm,0.5s,baz=171,slow=2.7,SNR=22						
JNU				pP	pP	10 49 10.2	-0.6
	comp=Z,51nm,1.0s,baz=170,slow=4.9,SNR=3.3						
JNU				S	S	10 58 11.0	-0.5
	comp=Z,8.1nm,1.0s,baz=221,slow=19,SNR=2.5						
MJAR	Matsushiro Arr	82.91	332	P	P	10 48 13.6	0.0
	comp=Z,67nm,1.1s,baz=175,slow=6.6,SNR=40						
MJAR				pP	pP	10 49 11.3	+0.5
	comp=Z,48nm,1.1s,baz=166,slow=7.0,SNR=4.8						
MJAR				S	S	10 58 12.4	+0.7
	comp=Z,0.7nm,0.4s,baz=175,slow=15,SNR=2.2						
MAJO	Matsushiro	82.91	332	eP	P	10 48 13.8	+0.2
	comp=Z,174nm,1.3s						
MAJO				epP	pP	10 49 11.3	+0.5
MAJO				eS	S	10 58 12.4	+0.7
MAJO	Matsushiro	82.91	332	eP	P	10 48 13.8	+0.2
MAJO				e*PP	pP	10 49 11.3	+0.5
MAJO				eS	S	10 58 12.4	+0.7
MAJO				pmax	pmax		
	comp=Z,174nm,1.3s						
MAT	Matsushiro	82.91	332	P	P	10 48 13.7	+0.1
MAT				S	S	10 58 09.2	-2.5
MJB9	Matsu-Tunnel	82.91	332	eP	P	10 48 13.9	+0.2
	comp=Z,178nm,1.3s						
TRTT	Trang	82.92	286	P	P	10 48 14.8	+0.6
	comp=Z,113nm,1.2s,comp=Z,1µm						
MLSI	Meulaboh, Aceh	83.02	281	P	P	10 48 14.4	-0.4
	comp=Z,957nm,1.1s,comp=Z,9µm						
LHMI	Lhok Sumawe	83.24	283	P	P	10 48 15.9	0.0
	comp=Z,240nm,1.2s,comp=Z,5µm						
QIZ	Qiongzhong	83.53	301	P	P	10 48 20.2	+3.0
QIZ				S	S	10 58 18.2	-0.5
QIZ				sS	sS	11 00 02.3	+3.1
QIZ				LR	LR		
	comp=Z,2µm,16.7s						
QIZ				LR	LR		
	comp=Z,2µm,19.6s						
QIZ				LR	LR		
	comp=Z,1µm,16.2s						
KRAB	Krabi	83.55	286	P	P	10 48 18.2	+0.8
	comp=Z,426nm,0.7s,comp=Z,3µm						
GO05	HualaæØ	83.93	131	eP	P	10 48 20.1	+0.9
GO05				epP	pP	10 49 17.2	+0.7
PKDT	Phuket	83.96	285	P	P	10 48 21.4	+1.9
	comp=Z,103nm,1.1s,comp=Z,2µm						
GZH	Guangzhou	84.26	306	P	P	10 48 24.2	+3.5
GZH				pP	pP	10 49 18.3	+0.2
GZH				sP	sP	10 49 41.7	-1.5
GZH				PP	PP	10 51 43.0	+3.7
GZH				SKS	S	10 58 22.8	-2.9
GZH				S	SKKSac	10 58 30.0	+2.8
GZH				sS	sS	11 00 03.8	-2.5
GZH				pmax	pmax		
	comp=Z,510nm,4.8s						
SURT	Suratani	84.33	287	P	P	10 48 26.2	+4.9
	comp=Z,0.1nm,1.0s						
BSI	Banda Aceh	84.66	282	P	P	10 48 21.6	-1.5
SSE	Sheshan	85.89	317	P	P	10 48 32.0	+3.3
SSE				pmax	pmax		
	comp=Z,230nm,3.5s						
SSE				LR	LR		
	comp=Z,1µm,21.7s						
PEL	Peldehue	85.98	131	eP	P	10 48 30.4	+1.0
	comp=Z,351nm,1.1s						
PEL	Peldehue	85.98	131	eP	P	10 48 30.4	+1.0
PEL				pmax	pmax		
	comp=Z,351nm,1.1s						
PHET	Kaeng Krachan	86.36	290	P	P	10 48 32.6	+1.3
	comp=Z,38nm,0.8s,comp=Z,414nm						
TRQA	Tornquist	87.04	139	eP	P	10 48 36.1	+1.6
	comp=Z,204nm,1.0s						
TRQA	Tornquist	87.04	139	eP	P	10 48 36.1	+1.6
TRQA				pmax	pmax		
	comp=Z,204nm,1.0s						
TJN	Taejon	87.17	324	deP	P	10 48 36.3	+1.6
NONG	Nongkai	87.36	296	P	P	10 48 36.7	+0.6
	comp=Z,3.8nm,0.9s,comp=Z,51nm						
YUK	Yuzh-Kuril’sk	87.39	340	d iP	P	10 48 36.4	+0.9
YUK				i *PP	pP	10 49 33.6	+0.3
YUK				i		10 52 04.6	
YUK				eS	SKSac	10 58 41.2	+1.6
YUK				e*SS	sS	11 00 27.1	-9.4
YUK				pmax	pmax		
	comp=Z,409nm,1.4s						
YUK				pmax	pmax		
	comp=Z,267nm,1.2s						
YUK				pmax	pmax		
	comp=N,51nm,0.6s						
YUK				pmax	pmax		
	comp=E,104nm,0.8s						
SRDT	SRDT	87.68	291	P	P	10 48 39.1	+1.5
	comp=E,75nm,1.2s,comp=E,2µm						
KSRS	Korea Array	87.82	325	P	P	10 48 39.2	+1.5
	comp=E,131nm,1.0s,baz=144,slow=5.7,SNR=107						
KSRS				pP	pP	10 49 36.5	+0.9
	comp=E,14nm,0.9s,baz=144,slow=5.0,SNR=1.8						
KS15	Wonju Array Si	87.82	325	eP	P	10 48 39.4	+1.6

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KS15                              epP      pP      10 49 36.5 +0.9
KSAR  Wonju Array Be   87.82 325   P       P       10 48 39.2 +1.4
KSAR                               pP      pP      10 49 36.5 +0.9
KSAR  Wonju Array Be   87.82 325   P       P       10 48 39.2 +1.4
KSAR                               *PP     pP      10 49 36.6 +0.9
KS01  Wonju Array Si   87.85 325  eP       P       10 48 39.3 +1.4
PBKT  Sadao Pong       87.86 294   P       P       10 48 39.8 +1.4
      comp=E,58nm,1.2s,comp=E,3µm
NJ2   Nanjing          87.88 316  eP       P       10 48 38.9 +0.7
NJ2                                pP      pP      10 49 33.5  -2.6
NJ2                                PP      PP      10 52 15.7 +7.4
NJ2                                S       S       10 59 03.7 +3.4
NJ2                                sS      sS      11 00 45.6 +3.8
NJ2                                pmax    pmax
      comp=E,440nm,4.9s
NJ2                                LR      LR
      comp=E,2µm,16.8s
NJ2                                LR      LR
      comp=E,3µm,21.7s
NJ2                                LR      LR
      comp=E,1µm,22.0s
KUR   Kuril'sk         88.01 342  eP       P       10 48 36.1  -2.3
KUR                               i                10 52 07.0
KUR                               i S      SKSac   10 58 42.0  -1.3
KUR                               eSS      SS      11 04 56.9 +0.9
KUR                                pmax    pmax
      comp=Z,493nm,1.3s
KUR                                pmax    pmax
      comp=E,101nm,1.2s
KUR                                pmax    pmax
      comp=N,81nm,0.8s
KUR                                pmax    pmax
      comp=Z,1µm,3.5s
ASAJ  Asahikawa        88.35 338   P       P       10 48 42.0 +2.0
      comp=Z,112nm,0.8s,baz=220,slow=9.9,SNR=55
ASAJ                               pP      pP      10 49 39.0 +0.9
      comp=Z,31nm,0.9s,baz=192,slow=8.6,SNR=1.7
ASAJ                               S       SKSac   10 58 43.6  -1.7
      comp=Z,1.2nm,0.7s,baz=144,slow=17,SNR=2.0
ASAJ  Asahikawa        88.35 338  eP       P       10 48 42.0 +2.0
      comp=Z,124nm,0.9s
ASAJ                              epP      pP      10 49 39.0 +0.9
ASAJ                               S       SKSac   10 58 43.6  -1.7
PHIT  Phitsanulok      88.67 294   P       P       10 48 46.0 +3.8
      comp=Z,43nm,1.1s
LCO   Las Campanas     88.94 128  eP       P       10 48 45.5 +1.6
LCO                               epP      pP      10 49 42.3 +0.5
LCO   Las Campanas     88.94 128  eP       P       10 48 45.5 +1.6
LCO                               e*PP     pP      10 49 42.3 +0.5
UMPA  Umpang Tak       89.11 292   P       P       10 48 46.1 +1.7
      comp=Z,30nm,1.0s,comp=Z,848nm
WHN   Wuhan            89.21 312⇑iP        P       10 48 45.3 +0.8
WHN                                pP      pP      10 49 42.2  -0.3
WHN                                PP      PP      10 52 21.6 +2.6
WHN                                SKS     SKSac   10 58 52.2 +1.1
WHN                                S       ScS     10 59 15.3  -1.6
WHN                                sS      sS      11 00 51.7  -3.0
WHN                                pmax    pmax
      comp=Z,84nm,1.0s
WHN                                pmax    pmax
      comp=Z,640nm,5.0s
WHN                                LR      LR
      comp=Z,1µm,18.2s
PAYA  Payao            90.51 295   P       P       10 48 54.4 +3.6
      comp=Z,9.5nm,0.9s
CM01  Chiang Mai Arr   90.52 294  eP       P       10 48 51.7 +0.8
CM31  Chiang Mai Arr   90.56 294  eP       P       10 48 52.1 +1.1
CM31                              epP      pP      10 49 49.8 +0.6
CMAR  Chiang Mai Arr   90.56 294   P       P       10 48 52.2 +1.2
      comp=Z,29nm,0.6s,baz=146,slow=3.6,SNR=37
CMAR                               pP      pP      10 49 49.8 +0.6
      comp=Z,18nm,0.7s,baz=145,slow=3.4,SNR=4.5
CMAR                               PP      PP      10 52 31.3 +1.5
      comp=Z,3.3nm,0.5s,baz=153,slow=5.0,SNR=2.9
CMAR                               PKKPbc  PKKPbc  11 06 19.6 +3.8
      comp=Z,1.0nm,0.4s,baz=300,slow=3.0,SNR=4.4
CMMT  Chiang Mai       90.79 294   P       P       10 48 54.3 +2.2
      comp=Z,32nm,1.0s,comp=Z,1µm
CHTO  Chiang Mai       90.79 294  eP       P       10 48 53.1 +1.0
      comp=Z,56nm,1.4s
CHTO  Chiang Mai       90.79 294  eP       P       10 48 53.1 +1.0
CHTO                               pmax    pmax
      comp=Z,56nm,1.4s
CHTO  Chiang Mai       90.79 294   P       P       10 48 54.4 +2.3
MSHR  Mys Shultsa      90.82 330ceP        P       10 48 53.4 +1.8
GYA   Guiyang          90.87 304⇓iP        P       10 48 52.7 +0.2
GYA                                pP      pP      10 49 52.2 +1.6
GYA                                sP      sP      10 50 17.0 +1.5
GYA                                PP      PP      10 52 36.6 +4.2
GYA                                SKS     SKSac   10 58 59.8  -1.4
GYA                                S       ScS     10 59 29.9  -1.3
GYA                                sS      sS      11 01 11.0 +0.3
GYA                                SS      SS      11 05 42.4 +4.3
GYA                                pmax    pmax
      comp=Z,260nm,7.1s
GYA                                LR      LR
      comp=Z,6µm,20.5s
GYA                                LR      LR
      comp=Z,5µm,20.8s
GYA                                LR      LR
      comp=Z,5µm,20.0s
YSS   Yuzh-Sakhalins   90.91 339  eP       P       10 48 53.7 +1.8
      comp=Z,158nm,0.8s
YSS                               epP      pP      10 49 52.4 +2.4
YSS   Yuzh-Sakhalins   90.91 339αiP        P       10 48 53.9 +2.0
YSS                               e*SP     sP      10 50 09.0  -5.9
YSS                               i                10 52 32.1
YSS                               i                10 58 58.0
YSS                               eS       S       10 59 27.7 +0.1
YSS                               ePS      PS      11 01 02.6  -5.5
YSS                               eSS      SS      11 05 45.0 +7.2
YSS                                pmax    pmax
      comp=Z,110nm,1.1s
YSS                                pmax    pmax
      comp=Z,600nm,12.0s
YSS                                smax    smax
      comp=N,3µm,8.5s
YSS                                smax    smax
      comp=E,9µm,9.9s
YSS                                MLR     MLR
      comp=Z,850nm,18.0s
YSS                                MLR     MLR
      comp=N,740nm,16.0s
CMAI  Chiengmai2       91.47 295   P       P       10 48 57.9 +2.4
      comp=N,5.7nm,1.1s,comp=N,455nm
SKR   Severo-Kuril's   91.67 349  eP       P       10 48 54.5  -0.8
SKR                               e                10 49 51.6
SKR                               eS       SKSac   10 58 58.3  -5.9
SKR                               e                10 59 37.7
SKR                                pmax    pmax
      comp=Z,500nm,9.5s
SKR                                pmax    pmax
      comp=Z,1µm,9.8s
SKR                                pmax    pmax
      comp=Z,111nm,0.9s
SKR                                pmax    pmax
      comp=Z,600nm,13.0s
SKR                                pmax    pmax
      comp=Z,800nm,10.4s
ENH   Enshi            91.85 309  eP       P       10 48 57.8 +1.0
      comp=Z,86nm,1.2s
DL2   Dalian           91.87 322⇑iP        P       10 48 56.7 +0.1
DL2                                pP      pP      10 49 56.4 +1.7
DL2                                S       S       10 59 40.2 +3.7
DL2                                SS      SS      11 05 53.0 +1.2
DL2                                pmax    pmax
      comp=Z,320nm,6.4s
KIWB  Kanaga Island    91.89   6  eP       P       10 48 56.3  -0.1
KIWB                              epP      pP      10 49 55.9 +1.4
USA0B Ussuriysk Arra   91.89 331  eP       P       10 48 57.4 +0.8
      comp=Z,35nm,1.0s
USRK  Ussuriysk Ar.    91.89 331   P       P       10 48 57.2 +0.7
      comp=Z,25nm,0.9s
USRK                               pP      pP      10 49 57.1 +2.4
      baz=178,slow=3.8
USRK                               PP      PP      10 52 42.0 +2.1
      baz=129,slow=6.1
TIA   Tai'an           91.99 318   P       P       10 48 58.0 +0.7
TIA                                PP      PP      10 52 47.7 +6.8
TIA                                S       S       10 59 41.9 +4.0
TIA                                pmax    pmax
      comp=Z,26nm,1.0s
TIA                                LR      LR
      comp=Z,1µm,19.8s
TIA                                LR      LR
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      comp=Z,2µm,19.5s
TIA                                LR      LR
      comp=Z,1µm,15.6s
SMY   Shemya           92.42   0  eP       P       10 48 58.2  -0.5
      comp=Z,166nm,0.8s
SMY   Shemya           92.42   0  eP       P       10 48 58.2  -0.5
SMY                                pmax    pmax
      comp=Z,166nm,0.8s
KMI   Kunming          92.48 301   P       P       10 49 03.7 +3.6
KMI                                pP      pP      10 50 00.7 +2.5
KMI                                sP      sP      10 50 24.7 +1.6
KMI                                PP      PP      10 52 48.2 +3.1
KMI                                SKS     SKSac   10 59 10.5  0.0
KMI                                S       S       10 59 43.5 +0.4
KMI                                sS      sS      11 01 21.3  -4.4
KMI                                SS      SS      11 06 05.3 +3.9
KMI                                pmax    pmax
      comp=Z,23nm,0.8s
KMI                                pmax    pmax
      comp=Z,310nm,4.6s
KMI                                LR      LR
      comp=Z,630nm,17.5s
KMI                                LR      LR
      comp=Z,810nm,18.9s
KMI                                LR      LR
      comp=Z,770nm,16.9s
MDJ   Mudanjiang       93.15 330   P       P       10 49 00.6  -1.7
MDJ                                pP      pP      10 49 58.8  -1.7
MDJ                                sP      sP      10 50 22.5  -2.9
MDJ                                PP      PP      10 52 52.4 +2.6
MDJ                                S       S       10 59 52.4 +4.8
MDJ                                SS      SS      11 06 07.7  -2.2
MDJ                                pmax    pmax
      comp=Z,350nm,0.9s
MDJ                                pmax    pmax
      comp=Z,550nm,12.0s
MDJ   Mudanjiang       93.15 330  eP       P       10 49 02.2  -0.1
      comp=Z,30nm,1.0s
SNY   Shenyang         93.32 325 ⇑P        P       10 49 02.5  -0.7
SNY                                PP      PP      10 52 49.5  -1.6
SNY                                SKS     SKSac   10 59 08.2  -5.6
SNY                                S       S       10 59 48.6  -0.6
SNY                                pmax    pmax
      comp=Z,330nm,5.5s
SNY                                LR      LR
      comp=Z,940nm,20.6s
SNY                                LR      LR
      comp=Z,2µm,23.0s
SNY                                LR      LR
      comp=Z,1µm,37.3s
PET   Petropavlovsk    93.62 351  eP       P       10 49 03.7  -0.5
      comp=Z,29nm,0.6s
PET   Petropavlovsk    93.62 351αiP        P       10 49 03.6  -0.6
PET                               e*PP     pP      10 50 00.6  -1.8
PET                               e*SP     sP      10 50 23.6  -3.7
PET                               e                10 52 51.8
PET                               eS       S       10 59 49.0  -2.2
PET                               e                11 01 04.0
PET                               ePS      PS      11 01 38.6 +0.9
PET                               ePPS     PPS     11 02 15.3
PET                                pmax    pmax
      comp=Z,700nm,9.2s
PET                                pmax    pmax
      comp=Z,47nm,0.9s
PET                                pmax    pmax
      comp=Z,700nm,15.3s
PEA0B Petropavlovsk-   93.82 350  eP       P       10 49 05.2  0.0
      comp=Z,115nm,1.1s
PETK  Petropavlovsk-   93.82 350   P       P       10 49 05.2  0.0
      comp=Z,53nm,0.8s
PETK                               pP      pP      10 50 02.5  -0.9
      baz=151,slow=3.3
PETK                               PP      PP      10 52 51.0  -3.8
      baz=136,slow=7.5
PETK  Petropavlovsk-   93.82 350  eP       P       10 49 04.7  -0.5
PETK                               pP      pP      10 50 02.5  -0.9
PETK                               PP      PP      10 52 51.0  -3.8
PEA1  Petropavlovsk-   93.82 350  eP       P       10 49 05.2  -0.1
PEA1                              epP      pP      10 50 02.5  -1.0
PEA1                              ePP      PP      10 52 51.0  -3.8
CN2   Changchun        94.12 327  eP       P       10 49 06.3  -0.5
CN2                               esP      sP      10 50 25.1  -4.8
CN2                               ePP      PP      10 52 58.0 +0.7
CN2                               eS       S       10 59 57.9 +1.8
CN2                                SS      SS      11 06 28.8 +5.0
CN2                                pmax    pmax
      comp=Z,200nm,3.0s
CN2                                LR      LR
      comp=Z,400nm,20.0s
CN2                                LR      LR
      comp=Z,800nm,20.0s
CN2                                LR      LR
      comp=Z,500nm,20.0s
TYV   Tymovskoe        94.53 341  eP       P       10 49 08.5  0.0
TYV                               eS       S       10 59 54.8  -4.5
TYV                                pmax    pmax
      comp=Z,500nm,9.8s
TYV                                pmax    pmax
      comp=Z,41nm,1.0s
TYV                                smax    smax
      comp=E,5µm,10.2s
TYV                                smax    smax
      comp=E,17nm,1.7s
XAN   Xi'an            94.89 311   P       P       10 49 11.5 +0.8
XAN                                pP      pP      10 50 08.4  -0.5
XAN                                SKS     SKSac   10 59 18.0  -4.8
XAN                                S       ScS     11 00 04.3 +0.1
XAN                                pmax    pmax
      comp=E,270nm,6.7s
XAN                                LR      LR
      comp=E,470nm,18.6s
XAN                                LR      LR
      comp=E,790nm,18.1s
XAN                                LR      LR
      comp=E,810nm,19.6s
SLBS  Sierra La Lagu   95.20  63  eP       P       10 49 13.0 +0.7
SLBS                              epP      pP      10 50 14.6 +4.0
LPIG  La Paz           95.22  63   P       P       10 49 12.7 +0.3
      comp=E,7.8nm,0.5s,baz=206,slow=6.6,SNR=3.1
BJT   Baijiatuau       95.38 319  eP       P       10 49 13.5 +0.8
      comp=E,22nm,1.0s
BJT   Baijiatuau       95.38 319  eP       P       10 49 13.5 +0.8
BJT                                pmax    pmax
      comp=Z,22nm,1.0s
BJI   Beijing          95.40 319   P       P       10 49 15.2 +2.5
BJI                                pP      pP      10 50 11.5 +0.5
BJI                                S       S       11 00 09.2 +1.8
BJI                                SS      SS      11 06 37.5  -4.5
BJI                                pmax    pmax
      comp=Z,330nm,4.3s
TIY   Taiyuan          95.59 316  eP       P       10 49 15.6 +1.8
TIY                                pP      pP      10 50 10.1  -2.0
TIY                                sP      sP      10 50 33.9  -3.0
TIY                                PP      PP      10 53 07.7  -1.3
TIY                                SKS     SKSac   10 59 25.9  -0.5
TIY                                S       ScS     11 00 13.6 +3.7
TIY                                LR      LR
      comp=Z,460nm,12.8s
TIY                                LR      LR
      comp=Z,300nm,12.5s
TIY                                LR      LR
      comp=Z,680nm,21.0s
CD2   Chengdu          95.80 306   P       P       10 49 15.0 +0.1
CD2                                pP      pP      10 50 11.3  -1.8
CD2                                sP      sP      10 50 35.5  -2.5
CD2                                SKS     SKSac   10 59 27.2  -0.6
CD2                                S       S       11 00 11.0  -0.4
CD2                                sS      sS      11 01 52.9  -1.6
CD2                                SS      SS      11 06 50.5 +2.5
CD2                                pmax    pmax
      comp=Z,20nm,0.5s
CD2                                pmax    pmax
      comp=Z,210nm,6.4s
CD2                                LR      LR
      comp=Z,3µm,24.8s
CD2                                LR      LR
      comp=Z,4µm,28.3s
CD2                                LR      LR
      comp=Z,1µm,18.9s
GRNR  Gornyy           96.16 337  eP       P       10 49 18.7 +2.7
GRNR                              e                10 53 11.2
GRNR                               pmax    pmax
      comp=Z,75nm,1.3s
KLR   Kul'dur          96.30 334   P       P       10 49 16.9 +0.3
      comp=Z,1.8nm,1.0s,baz=144,slow=0.9,SNR=26
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KLR                                PP      PP      10 53 11.2  -2.9
      comp=Z,0.8nm,1.1s,baz=131,slow=9.0,SNR=4.0
KLR                                S       SKSac   10 59 25.4  -4.0
      comp=Z,0.0nm,0.4s,baz=229,slow=19,SNR=2.7
BAR   Barrett          96.87  53  eP       P       10 49 20.6 +0.9
      comp=Z,49nm,1.4s
PALK  Pallekele        96.89 274   P       P       10 49 20.8 +0.6
      comp=Z,53nm,0.9s,baz=116,slow=3.9,SNR=13
PALK                               PP      PP      10 53 18.2  -0.8
      comp=Z,15nm,0.9s,baz=116,slow=16,SNR=3.5
PALK  Pallekele        96.89 274  eP       P       10 49 20.8 +0.6
      comp=Z,61nm,0.9s
PALK                              ePP      PP      10 53 18.2  -0.8
PALK  Pallekele        96.89 274  i P      P       10 49 20.5 +0.3
      SNR=7.9
PALK  Pallekele        96.89 274  i P      P       10 49 21.2 +0.9
NKL   Nikolayevsk      97.12 341  eP       P       10 49 18.0  -2.2
NKL                               e                10 53 20.0
NKL                               eS       SKSac   10 59 30.0  -3.3
NKL                               e                11 00 28.0
NKL                               e                11 01 42.0
NKL                                pmax    pmax
      comp=Z,18nm,0.5s
NKL                                pmax    pmax
      comp=Z,500nm,12.0s
MONP2 Monument Peak    97.17  53   P       Pdif    10 49 21.3  0.0
      baz=226
MURC  Murrieta         97.18  52   P       Pdif    10 49 21.8 +0.7
      baz=226
IKP   In-Ko-Pah, Jac   97.19  53   P       Pdif    10 49 22.0 +0.7
      baz=227
PLM   Palomar          97.22  52  eP       Pdif    10 49 23.1 +1.7
PLM   Palomar          97.22  52  eP       Pdif    10 49 23.1 +1.6
BFSC  Mount Baldy Ra   97.35  51   P       P       10 49 20.1  -1.9
      baz=226
CRY   Cary Ranch       97.44  52  eP       P       10 49 21.8  -0.5
SWSC  Sam W. Stewart   97.58  53   P       Pdif    10 49 23.5 +0.7
      baz=227
EDW2  Edwards Air Fo   97.59  50   P       P       10 49 22.7  -0.2
      baz=226
TPFO  Pinon Flats      97.64  52   P       Pdif    10 49 23.6 +0.3
      baz=226
PFO   Pinyon Flats O   97.64  52   P       Pdif    10 49 23.6 +0.3
      baz=226
ISA   Isabella, Lake   97.85  50   P       P       10 49 23.9  -0.2
      baz=226
ISA   Isabella, Lake   97.85  50  eP       Pdif    10 49 24.4 +0.3
      comp=Z,65nm,1.8s
ISA   Isabella, Lake   97.85  50  eP       Pdif    10 49 24.4 +0.3
ISA                                pmax    pmax
      comp=Z,65nm,1.8s
BELC  Belle Mtn. Jos   98.18  52   P       Pdif    10 49 25.7  0.0
      baz=227
GLA   Glamis           98.25  54   P       Pdif    10 49 26.2 +0.3
      baz=227
GLA   Glamis           98.25  54  eP       Pdif    10 49 26.1 +0.1
      comp=Z,25nm,0.9s
GLA   Glamis           98.25  54  eP       Pdif    10 49 26.1 +0.2
GLA                                pmax    pmax
      comp=Z,25nm,0.9s
BC3   Big Chuckawall   98.28  53   P       Pdif    10 49 27.5 +1.4
      baz=227
HHC   Hu-ho-hao-te     98.35 317  eP       P       10 49 30.6 +4.4
HHC                                sP      sP      10 50 51.4 +2.0
HHC                                SKS     SKSac   10 59 41.5 +1.0
HHC                                S       ScS     11 00 36.0 +3.1
HHC                                sS      sS      11 02 13.2  -3.0
HHC                                pmax    pmax
      comp=Z,20nm,0.9s
HHC                                pmax    pmax
      comp=Z,160nm,6.1s
CCCA  Chr Cany lake    98.41  50  eP       Pdif    10 49 24.8  -1.7
GSC   Goldstone, Bar   98.59  51   P       P       10 49 28.5 +1.1
      baz=226
CWC   Cottonwood Cre   98.62  49   P       P       10 49 28.5 +0.9
      baz=226
CPUP  Villa Florida    98.67 135   P       P       10 49 28.8 +0.7
      comp=Z,5.7nm,0.9s,baz=222,slow=7.2,SNR=8.4
CPUP                               pP      pP      10 50 25.6  -0.8
      comp=Z,8.8nm,0.8s,baz=234,slow=4.0,SNR=6.3
CPUP                               PKKPbc  PKKPdf  11 05 55.4  -0.7
      comp=Z,1.2nm,0.5s,baz=240,slow=2.7,SNR=3.0
CPUP  Villa Florida    98.67 135  eP       P       10 49 29.3 +1.2
CPUP                              epP      pP      10 50 25.5  -0.8
CPUP  Villa Florida    98.67 135  eP       P       10 49 29.3 +1.2
CPUP                              e*PP     pP      10 50 25.5  -0.8
MPMC  Manual Prospec   98.70  50   P       P       10 49 29.0 +0.9
      baz=226
IRM   Iron Mountain    98.81  53   P       P       10 49 28.7 +0.3
      baz=227
Y12C  Blythe           98.91  53   P       P       10 49 31.2 +2.4
      baz=227
Y12C  Blythe           98.91  53  eP       Pdif    10 49 28.6  -0.2
      comp=Z,15nm,1.1s
GMRC  Granite Mounta   98.92  52   P       P       10 49 29.9 +0.9
      baz=227
MLAC  Mammoth, Mammo99.01  48   P       Pdif    10 49 30.7 +1.3
      baz=226
TUQ   Turquoise Moun   99.20  51   P       Pdif    10 49 31.4 +1.1
      baz=227
O03D  Paynes Creek     99.24  44   P       Pdif    10 49 31.5 +1.3
      baz=224
N02D  Trinity Center   99.25  43   P       Pdif    10 49 30.8 +0.6
      baz=224
LZH   Lanzhou          99.29 310  eP       Pdif    10 49 35.1 +4.5
LZH                                sP      sP      10 50 59.4 +5.6
LZH                                SKS     SKSac   10 59 46.1 +0.5
LZH                                S       ScS     11 00 40.8  -0.3
LZH                                sS      sS      11 02 19.0  -5.5
LZH                                pmax    pmax
      comp=Z,32nm,1.3s
LZH                                pmax    pmax
      comp=Z,170nm,4.8s
SHOC  Shoshone, Teco   99.31  51   P       Pdif    10 49 31.7 +1.2
      baz=227
FURC  Furnace Creek,   99.35  50   P       Pdif    10 49 31.9 +1.3
      baz=227
GRAC  Grapevine Rang   99.42  49   P       Pdif    10 49 33.9 +2.9
      baz=226
M02C  Callahan         99.47  43   P       Pdif    10 49 34.8 +3.7
      baz=224
PDMCI Parker Dam,Lak   99.52  53   P       Pdif    10 49 33.5 +2.0
      baz=228
LPAZ  La Paz           99.77 121   P       Pdif    10 49 35.2 +1.4
      comp=Z,2.0nm,0.9s,baz=195,slow=6.5,SNR=4.7
LPAZ                               pP      pP      10 50 34.4 +2.2
      comp=Z,4.9nm,1.1s,baz=54,slow=2.4,SNR=3.2
LPAZ                               S       SKSac   10 59 48.8  -1.2
      comp=Z,3.1nm,0.9s,baz=28,slow=17,SNR=4.5
LPAZ                               PKKPbc  PKKPbc  11 05 51.1  -0.5
      comp=Z,1.3nm,0.4s,baz=330,slow=9.0,SNR=9.7
LPAZ  La Paz           99.77 121  ePdif    Pdif    10 49 35.3 +1.4
      comp=Z,6.3nm,0.9s
LPAZ                               pP      pP      10 50 34.4 +2.2
LPAZ                               S       SKSac   10 59 48.8  -1.2
LPAZ  La Paz           99.77 121   P       Pdif    10 49 35.3 +1.4
LPAZ                               *PP     pP      10 50 34.4 +2.2
LPAZ                               S       SKSac   10 59 48.8  -1.2
LPAZ                               pmax    pmax
      comp=Z,2.0nm,0.9s
LPAZ                               pmax    pmax
      comp=Z,4.0nm,1.0s
LPAZ                               smax    smax
      comp=N,3.0nm,0.9s
LPAZ                               pmax    pmax
      comp=Z,1.0nm,0.4s
YBH   Yreka Blue Hor   99.79  43   PP      PP      10 53 43.2 +2.2
      comp=Z,3.2nm,1.0s,baz=181,slow=5.7,SNR=2.3
YBH                                S       SKSac   10 59 42.4  -5.2
      comp=Z,0.8nm,0.3s,baz=201,slow=11,SNR=7.7
NV01  Mina Array Sit   99.87  48  ePdif    Pdif    10 49 31.1  -2.0
NVAR  Mina Array Bea   99.87  48   P       Pdif    10 49 33.8 +0.6
      comp=Z,1.0nm,0.9s,baz=224,slow=7.6,SNR=4.6
NVAR                               PP      PP      10 53 42.6 +0.9
      comp=Z,7.7nm,1.2s,baz=226,slow=7.9,SNR=3.5
NVAR                               PKKPbc  PKKPbc  11 05 48.8  -3.3
      comp=Z,0.9nm,0.8s,baz=60,slow=5.6,SNR=2.4
TPNV  Topopah Spring  100.04  50   P       Pdif    10 49 36.8 +2.8
      baz=227
W13A  Hualapai Mount  100.21  53  ePdif    Pdif    10 49 35.2 +0.5
TUC   Tucson          100.31  56   P       Pdif    10 49 36.9 +1.8
      baz=229
MA2   Magadan         101.07 348   P       Pdif    10 49 39.7 +2.0
      comp=Z,11nm,1.0s,baz=188,slow=4.7,SNR=4.9
MA2                                PP      PP      10 53 48.3  -1.8
      comp=Z,3.9nm,0.8s,baz=148,slow=14,SNR=2.7
```

MA2	**Magadan**	**101.07**	**348**	P	**Pdif**	**10 49 39.7**	**+2.0**
MA2						10 53 48.3	
MA2				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MA2				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KDAK	**Kodiak Island**	**101.51**	**18**	PP	PP	10 53 49.0	-4.4
	comp=Z,14nm,1.2s,baz=170,slow=7.6,SNR=4.0						
ZEA	**Zeya**	**101.61**	**334**	*e*P	**Pdif**	**10 49 42.2**	**+2.0**
ZEA				*e*		10 53 54.0	
ZEA				*e*S	**SKSac**	**10 59 52.0**	**-3.6**
ZEA				*e*PS	**Sdif**	**11 01 05.0**	**+5.8**
ZEA				*e*		11 02 37.0	
ZEA				pmax	pmax		
	comp=Z,28nm,1.2s						
ZEA				smax	smax		
	comp=N,800nm,13.0s						
CMIG	**Matias Romero**	**101.88**	**78**	P	**Pdif**	**10 49 48.3**	**+6.0**
	comp=N,2.5nm,0.9s,baz=266,slow=7.9,SNR=3.1						
CMIG				PP	**PP**	**10 53 57.6**	**+0.8**
	comp=N,5.9nm,1.1s,baz=255,slow=8.3,SNR=3.0						
TX31	**Lajitas Ar. Si**	**103.12**	**63**	*e*Pdif	**Pdif**	**10 49 47.4**	**-0.4**
TXAR	**Lajitas Array**	**103.12**	**63**	Pdiff	**Pdif**	**10 49 48.0**	**+0.3**
	comp=N,0.7nm,0.9s,baz=197,slow=3.9,SNR=7.5						
TXAR				PKiKP	**PKiKP**	**10 54 06.8**	**+0.6**
	comp=N,1.5nm,0.9s,baz=227,slow=7.3,SNR=3.8						
TXAR				PKKPbc	**PKKPbc**	**11 05 42.6**	**+0.6**
	comp=N,1.3nm,0.8s,baz=74,slow=3.0,SNR=9.0						
TXAR	**Lajitas Array**	**103.12**	**63**	P	**Pdif**	**10 49 48.0**	**+0.3**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MNTX	**Cornudas Mount**	**103.44**	**60**	P	**Pdif**	**10 49 48.8**	**-0.2**
	baz=231						
MNTX	**Cornudas Mount**	**103.44**	**60**	*e*Pdif	**Pdif**	**10 49 49.2**	**+0.2**
SEY	**Seymchan**	**104.06**	**350**	Pdiff	**Pdif**	**10 49 50.6**	**-0.3**
	comp=Z,4.0nm,0.8s,baz=126,slow=3.7,SNR=3.6						
SEY				PP	**PKiKP**	**10 54 02.4**	**-4.2**
	comp=Z,7.1nm,1.0s,baz=153,slow=9.8,SNR=4.2						
SEY				PKKPbc	**PKKPbc**	**11 05 38.8**	**-1.7**
	comp=Z,1.3nm,0.6s,baz=225,slow=4.3,SNR=3.9						
SEY				PKKPab	**PKKPab**	**11 05 58.4**	**+3.0**
	comp=Z,4.8nm,1.0s,baz=308,slow=7.8,SNR=5.4						
SIV	**San Ignacio**	**104.52**	**126**	Pdiff	**Pdif**	**10 50 00.6**	**+6.3**
	comp=Z,0.9nm,0.9s,baz=227,slow=15,SNR=3.1						
ANMO	**Albuquerque**	**104.76**	**57**	Pdiff	**Pdif**	**10 49 55.2**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=233,slow=7.6,SNR=3.1						
ANMO				PP	**PP**	**10 54 17.7**	**-0.6**
	comp=Z,2.0nm,0.9s,baz=230,slow=6.7,SNR=7.1						
ANMO				PKKPbc	**PKKPbc**	**11 05 37.5**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=96,slow=4.0,SNR=3.9						
ANMO				PKKPab	**PKKPab**	**11 05 57.1**	**+2.7**
	comp=Z,2.3nm,0.9s,baz=82,slow=4.7,SNR=7.2						
ANMO	**Albuquerque**	**104.76**	**57**	*e*Pdif	**Pdif**	**10 49 56.8**	**+1.8**
ANMO				PP	**PP**	**10 54 17.7**	**-0.6**
ANMO				PKKPab	**PKKPab**	**11 05 57.1**	**+2.7**
ANMO	**Albuquerque**	**104.76**	**57**	*e*P	**Pdif**	**10 49 56.8**	**+1.8**
ANMO						10 54 17.7	
TASL	**Snake Pit, Alb**	**104.76**	**57**	P	**Pdif**	**10 49 55.8**	**+0.7**
	baz=231						
BOSA	**Boshof**	**105.63**	**209**	Pdiff	**Pdif**	**10 49 58.1**	**-1.0**
	comp=Z,3.3nm,0.7s,baz=153,slow=5.7,SNR=7.1						
BOSA				PP	**PP**	**10 54 21.7**	**-1.5**
	comp=Z,9.3nm,0.9s,baz=158,slow=9.9,SNR=5.9						
BOSA				PKKPbc	**PKKPbc**	**11 05 34.1**	**-0.3**
	comp=Z,2.2nm,0.7s,baz=274,slow=5.1,SNR=4.4						
BOSA				PKKPab	**PKKPab**	**11 05 54.9**	**-1.6**
	comp=Z,1.6nm,0.8s,baz=62,slow=3.4,SNR=3.6						
SONA0	**Songino Array**	**105.89**	**320**	*e*Pdif	**Pdif**	**10 49 59.7**	**0.0**
SONA0				*e*PKiKP	**PKiKP**	**10 54 04.8**	**-5.9**
SONA0				*e*PP	**PP**	**10 54 27.5**	**+1.1**
SONM	**Songino Array**	**105.89**	**320**	Pdiff	**Pdif**	**10 49 59.7**	**0.0**
	comp=Z,2.5nm,0.8s,baz=156,slow=4.0,SNR=9.8						
SONM				PKiKP	**PKiKP**	**10 54 04.8**	**-5.9**
	comp=Z,3.5nm,1.1s,baz=103,slow=3.1,SNR=5.2						
SONM				PP	**PP**	**10 54 27.5**	**+1.1**
	comp=Z,5.6nm,1.1s,baz=160,slow=4.7,SNR=5.7						
SONM				PKKPbc	**PKKPbc**	**11 05 35.1**	**+0.6**
	comp=Z,2.0nm,0.6s,baz=281,slow=2.7,SNR=7.5						
SONM				PKKPab	**PKKPab**	**11 05 48.8**	**+0.4**
	comp=Z,0.8nm,0.6s,baz=306,slow=2.3,SNR=4.1						
SONA1	**Songino Array**	**105.90**	**320**	*e*Pdif	**Pdif**	**10 50 00.2**	**+0.6**
FLOC	**Florencia**	**106.78**	**102**	*e*P	**PP**	**10 54 32.4**	**-0.4**
PD31	**Pinedale Array**	**107.73**	**49**	*e*Pdif	**Pdif**	**10 50 09.3**	**+1.2**
PD31				*e*PKiKP	PKiKP	10 54 22.7	+8.3
PDAR	**Pinedale Array**	**107.73**	**49**	Pdiff	**Pdif**	**10 50 09.3**	**+1.2**
	comp=Z,0.1nm,0.4s,baz=223,slow=3.7,SNR=2.9						
PDAR				PKiKP	PKiKP	10 54 22.7	+8.3
	comp=Z,1.4nm,1.1s,baz=213,slow=4.8,SNR=2.3						
PDAR				PP	**PP**	**10 54 37.8**	**-2.2**
	comp=Z,5.2nm,1.2s,baz=215,slow=4.9,SNR=4.7						
PDAR				PKKPbc	**PKKPbc**	**11 05 27.9**	**-0.8**
	comp=Z,2.0nm,0.9s,baz=77,slow=4.7,SNR=6.6						
PDAR				PKKP	**PKKPdf**	**11 05 41.8**	**-0.6**
	comp=Z,3.6nm,0.8s,baz=84,slow=3.0,SNR=8.2						
YOTC	**Yotoco, Valle**	**107.82**	**100**	*e*P	**PP**	**10 54 44.6**	**+4.0**
BCIP	**Isla Barro Col**	**108.47**	**94**	*e*P	PP	10 54 31.0	-14
DLBC	**Dease Lake**	**108.74**	**28**	PKKPbc	PKKPbc	11 05 25.5	-0.4
	comp=Z,0.6nm,0.4s,baz=135,slow=7.1,SNR=2.2						
DLBC				PKKP	**PKKPab**	**11 05 37.9**	**+2.7**
	comp=Z,3.2nm,0.8s,baz=296,slow=7.7,SNR=4.2						
ILAR	**Eielson Array**	**108.98**	**17**	Pdiff	**Pdif**	**10 50 12.6**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=230,slow=5.4,SNR=7.3						
ILAR				PKiKP	**PKiKP**	**10 54 13.8**	**-1.9**
	comp=Z,1.6nm,0.8s,baz=294,slow=3.4,SNR=11						
ILAR				PP	**PP**	**10 54 49.2**	**+0.9**
	comp=Z,19nm,1.0s,baz=221,slow=6.5,SNR=10						
ILAR				PKKPbc	**PKKPbc**	**11 05 22.9**	**-2.3**
	comp=Z,0.5nm,0.4s,baz=19,slow=2.9,SNR=7.3						
ILAR				PKKPab	**PKKPab**	**11 05 35.0**	**+1.2**
	comp=Z,7.0nm,1.1s,baz=6.5,slow=3.1,SNR=14						
ILB	**Eielson Array**	**108.98**	**17**	*e*Pdif	**Pdif**	**10 50 12.6**	**-0.1**
ILB				*e*PKiKP	**PKiKP**	**10 54 13.8**	**-1.9**
ZAK	**Zakamensk**	**109.11**	**320**	*e*P	**Pdif**	**10 50 13.0**	**-0.9**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.4s						
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.4s						
HELC	**Santa Helena**	**109.86**	**99**	*e*P	**PP**	**10 54 58.2**	**+2.6**
PRVC	**Isla de Provid**	**109.90**	**89**	*e*P	**PP**	**10 54 50.2**	**-5.4**
CHIC	**Chingaza**	**110.21**	**101**	*e*P	**PKiKP**	**10 54 20.3**	**+0.1**
PTBC	**PUERTO BERRIO,**	**110.90**	**99**	*e*P	**PP**	**10 55 01.1**	**-1.6**
ZARC	**Zaragoza, Cauc**	**111.21**	**98**	*e*P	**PP**	**10 55 06.0**	**+1.1**
RUSC	**La Rusia**	**111.52**	**101**	*e*P	**PP**	**10 55 03.6**	**-4.1**
TOLK	**Toolik Lake Re**	**111.79**	**14**	P	**PKiKP**	**10 54 22.2**	**+1.2**
	baz=210						
BARC	**Barichara**	**111.90**	**100**	*e*P	**PP**	**10 55 13.1**	**+3.0**
V39A	**Pettigrew**	**113.77**	**62**	P	**PKiKP**	**10 54 26.4**	**+0.6**
	baz=237						
WMQ	**Urumqi**	**113.78**	**308**	PKP	**PKiKP**	**10 54 26.8**	**+1.2**
WMQ				SKKS		11 01 51.0	
WMQ				LR	LR		
	comp=Z,2µm,19.1s						
WMQ				LR	LR		
	comp=Z,750nm,19.1s						
WMQ				LR	LR		
	comp=Z,1µm,27.7s						
T38A	**Diamond**	**113.98**	**61**	P	**PKiKP**	**10 54 26.3**	**+0.1**
	baz=237						
DGMT	**Dagmar**	**114.12**	**46**	P	PKPdf	10 54 24.5	-1.6
	baz=236						
V40A	**Witts Springs**	**114.31**	**63**	P	PKPdf	10 54 24.4	-2.4
	baz=237						
W41B	**Gary Mavity, V**	**114.36**	**64**	P	PKPdf	10 54 25.3	-1.6
	baz=237						
S38A	**Stockton**	**114.56**	**61**	P	PKPdf	10 54 25.2	-2.0
	baz=237						
U40A	**Yellville**	**114.58**	**62**	P	PKPdf	10 54 25.3	-2.0
	baz=237						
T39A	**Clever**	**114.59**	**62**	P	PKPdf	10 54 25.1	-2.2
	baz=237						
V41A	**Mountainview**	**114.75**	**63**	P	PKPdf	10 54 25.6	-2.1
	baz=237						
INK	**Inuvik**	**115.00**	**19**	PKP	**PKPdf**	**10 54 27.9**	**+0.8**
	comp=Z,6.7nm,0.9s,baz=188,slow=10.0,SNR=7.4						
INK				PP	**PP**	**10 55 24.8**	**-6.2**
	comp=Z,28nm,1.2s,baz=215,slow=8.4,SNR=11						
INK				PKKPab	**PKKPab**	**11 05 09.3**	**+2.2**
	comp=Z,13nm,0.9s,baz=40,slow=11,SNR=11						
SDV	**Santo Domingo**	**115.30**	**100**	PKP	**PKPdf**	**10 54 29.2**	**-0.3**
	comp=Z,3.2nm,0.4s,baz=300,slow=8.1,SNR=3.7						
SDV				PKKPab	**PKKPab**	**11 05 08.0**	**-2.7**
	comp=Z,4.8nm,0.5s,baz=0.0,slow=2.0,SNR=3.7						
TIXI	**Tiksi**	**115.82**	**346**	PKP	**PKPdf**	**10 54 27.7**	**-0.9**
	comp=Z,4.5nm,0.7s,baz=121,slow=8.0,SNR=3.6						
TIXI				PKKPab	**PKKPab**	**11 05 06.0**	**+2.5**
	comp=Z,7.8nm,0.8s,baz=108,slow=1.5,SNR=4.0						
ECSD	**EROS Data Cent**	**116.04**	**54**	*e*PKPdf	**PKPdf**	**10 54 29.8**	**-0.1**
T42A	**Van Buren**	**116.14**	**63**	*e*PKPdf	**PKPdf**	**10 54 30.2**	**0.0**
G32A	**Webster**	**116.28**	**52**	*e*PKPdf	**PKPdf**	**10 54 30.4**	**+0.1**
PTGA	**Pitinga**	**116.55**	**116**	*e*PKPdf	**PKPdf**	**10 54 32.1**	**+0.3**
P40A	**Paris**	**116.80**	**60**	*e*PKPdf	**PKPdf**	**10 54 29.6**	**-1.8**
LRAL	**Lakeview Retre**	**116.90**	**68**	*e*PKPdf	**PKPdf**	**10 54 30.9**	**-1.0**
DGZ	**Jazzator, Alta**	**117.05**	**313**	*i* PKIKP	**PKPdf**	**10 54 30.2**	**-1.6**
YKA	**Yellowknife Ar**	**117.14**	**30**	PKhKP	PKPpre	10 54 29.1	
	comp=Z,6.6nm,0.8s,baz=231,slow=1.6,SNR=24						
YKA				PKP	**PKiKP**	**10 54 32.2**	**+0.9**
	comp=Z,8.0nm,0.9s,baz=240,slow=1.6,SNR=24						
YKA				pPKP	pPKPdf	10 55 31.0	-1.3
	comp=Z,3.0nm,0.7s,baz=215,slow=1.9,SNR=2.6						
YKA				PP	**PP**	**10 55 38.7**	**-7.3**
	comp=Z,8.8nm,1.1s,baz=215,slow=1.9,SNR=6.9						
YKA				SKP		10 57 41.8	
	comp=Z,1.0nm,0.7s,baz=248,slow=1.9,SNR=2.7						
YKA				PKKPbc	**PKKPbc**	**11 04 55.7**	**-1.9**
	comp=Z,11nm,0.9s,baz=50,slow=4.0,SNR=47						
YKB5	**Yellowknife Ar**	**117.14**	**30**	*e*PKPdf	**PKPdf**	**10 54 32.2**	**+0.9**
YKB5				*e*PP	**pPKPdf**	**10 55 38.7**	**+6.3**
YKW3	**Yellowknife Ar**	**117.17**	**30**	*e*PKPdf	**PKPdf**	**10 54 29.2**	**-2.2**
J36A	**Seneca 1, Swea**	**117.25**	**55**	*e*PKPdf	**PKPdf**	**10 54 30.5**	**-1.7**
SIUC	**Southern Illin**	**117.77**	**63**	*e*PKPdf	**PKPdf**	**10 54 31.7**	**-1.7**
Z50A	**Ashland**	**117.78**	**69**	*e*PKPdf	**PKPdf**	**10 54 31.9**	**-1.6**
I37A	**Lemond, Waseca**	**118.18**	**55**	*e*PKPdf	**PKPdf**	**10 54 32.5**	**-1.4**
MK01	**Makanchi Array**	**118.56**	**309**	*e*PKPdf	**PKPdf**	**10 54 32.7**	**-1.9**
MK31	**Makanchi Array**	**118.58**	**309**	*e*PKPdf	**PKPdf**	**10 54 33.1**	**-1.5**
MK31	**Makanchi Array**	**118.58**	**309**	*e*PKIKP	**PKPdf**	**10 54 33.2**	**-1.5**
MK32	**Makanchi Array**	**118.58**	**309**	*e*PKPdf	**PKPdf**	**10 54 33.0**	**-1.8**
MK32				*e*PP	**sPKPdf**	**10 56 00.2**	**+0.3**
MKAR	**Makanchi Array**	**118.58**	**309**	PKP	**PKPdf**	**10 54 33.0**	**-1.8**
	comp=Z,19nm,0.9s,baz=132,slow=1.8,SNR=32						
MKAR				pPKP	**pPKPdf**	**10 55 32.2**	**-3.5**
	comp=Z,6.6nm,0.7s,baz=146,slow=1.0,SNR=3.6						
MKAR				PP	**sPKPdf**	**10 56 00.2**	**+0.3**
	comp=Z,7.3nm,0.8s,baz=77,slow=3.1,SNR=2.9						
MKAR				PKKPab	**PKKPab**	**11 04 53.5**	**+0.6**
	comp=Z,2.9nm,0.9s,baz=293,slow=3.4,SNR=6.9						
FFC	**Flin Flon**	**118.58**	**41**	*e*PKPdf	**PKPdf**	**10 54 32.8**	**-1.6**
FFC	**Flin Flon**	**118.58**	**41**	*e*PKIKP	**PKPdf**	**10 54 32.8**	**-1.6**
PDGK	**Podgornoye**	**118.62**	**304**	PKIKP	**PKPdf**	**10 54 33.4**	**-1.6**
PDGK				pmax	pmax		
	comp=Z,14nm,0.7s						
MAKZ	**Makanchi**	**118.78**	**308**	*e*PKPdf	**PKPdf**	**10 54 33.5**	**-1.6**
MAKZ	**Makanchi**	**118.78**	**308**	*e*PKIKP	**PKPdf**	**10 54 33.5**	**-1.6**
AGMN	**Agassiz Nation**	**118.78**	**50**	*e*PKPdf	**PKPdf**	**10 54 33.7**	**-1.3**
SWET	**Sewanee**	**118.79**	**67**	*e*PKPdf	**PKPdf**	**10 54 35.0**	**-0.5**
UZB	**Uzynbulak**	**118.83**	**304**	*i* PKP	**PKPdf**	**10 54 34.5**	**-1.0**
UZB				*i* pPKP	**pPKPdf**	**10 55 35.7**	**-0.7**
UZB				*i* PP	**PP**	**10 55 57.2**	**-1.2**
T47A	**Sharon Grove**	**118.86**	**64**	*e*PKPdf	**PKPdf**	**10 54 35.4**	**-0.1**
PRZ	**Przheval'sk**	**118.91**	**303**	*e*PKPdf	**PKPdf**	**10 54 35.5**	**-0.2**
TARG	**Taragay, Kyrgy**	**118.93**	**302**	*e*PKPdf	**PKPdf**	**10 54 35.5**	**-0.5**
F36A	**Milaca**	**119.01**	**53**	*e*PKPdf	**PKPdf**	**10 54 33.6**	**-1.9**
KSH	**Kashi**	**119.06**	**299**	PKP	**PKPdf**	**10 54 37.7**	**+1.7**
KSH				sPKP		10 55 58.8	
KSH				PP	**sPKPdf**	**10 56 06.5**	**+5.3**
KSH				PKS	**PKSdf**	**10 58 12.9**	**+0.2**
KSH				SKKS		11 02 35.1	
KSH				AMB	AMB		
	comp=Z,140nm,4.9s						
KSH				LR	LR		
	comp=Z,670nm,17.0s						
KSH				LR	LR		
	comp=Z,340nm,15.7s						
HDIL	**Hopedale**	**119.14**	**60**	*e*PKPdf	**PKPdf**	**10 54 35.6**	**-0.3**
SATY	**Saty**	**119.18**	**303**	*i* PKP	**PKPdf**	**10 54 35.3**	**-0.8**
SATY				*i* pPKP	**pPKPdf**	**10 55 36.5**	**-0.7**
SATY				*i* PP	**PP**	**10 55 59.6**	**-1.2**
KPKS	**Kokpek**	**119.20**	**304**	*i* PKP	**PKPdf**	**10 54 35.2**	**-0.9**
X51A	**Calhoun**	**119.22**	**68**	*e*PKPdf	**PKPdf**	**10 54 36.2**	**-0.1**
ZHN	**Zhinishke**	**119.22**	**303**	*i* PKP	**PKPdf**	**10 54 35.2**	**-1.0**
Y52A	**Lilburn**	**119.43**	**69**	*e*PKPdf	**PKPdf**	**10 54 35.5**	**-1.2**
GOGA	**Godfrey**	**119.63**	**70**	*e*PKPdf	**PKPdf**	**10 54 35.6**	**-1.5**
JFWS	**Jewell Farm**	**119.65**	**57**	*e*PKPdf	**PKPdf**	**10 54 34.9**	**-1.9**
P45A	**Graceland, Par**	**119.68**	**62**	*e*PKPdf	**PKPdf**	**10 54 36.2**	**-0.8**
ULM	**Lac du Bonnet**	**119.70**	**48**	PKhKP	PKPpre	10 54 34.0	
	comp=Z,2.7nm,0.5s,baz=212,slow=4.6,SNR=3.7						
ULM				PKP	**PKPdf**	**10 54 36.5**	**-0.2**
	comp=Z,3.3nm,0.6s,baz=186,slow=0.8,SNR=3.7						
ULM				pPKP	pPKPdf	10 55 36.6	-1.1
	comp=Z,3.1nm,0.5s,baz=232,slow=3.8,SNR=2.0						
ULM				PP	**PP**	**10 56 06.0**	**+2.0**
	comp=Z,11nm,0.9s,baz=257,slow=1.2,SNR=4.3						
ULM				PKKPbc	**PKKPab**	**11 04 45.8**	**-1.9**
	comp=Z,3.2nm,0.8s,baz=136,slow=1.4,SNR=3.4						
CPCT	**Cooper Cave**	**119.90**	**67**	*e*PKPdf	**PKPdf**	**10 54 35.9**	**-1.7**
WCI	**Wyandotte Cave**	**120.03**	**64**	*e*PKPdf	**PKPdf**	**10 54 36.2**	**-1.5**
MDOK	**Medeo**	**120.11**	**303**	*i* PKP	**PKPdf**	**10 54 37.2**	**-0.7**
MDOK				*i* PP	**PP**	**10 56 05.7**	**-1.4**
W52A	**Murphy**	**120.14**	**68**	*e*PKPdf	**PKPdf**	**10 54 37.6**	**-0.5**
ZALV	**Zalesovo Beam**	**120.52**	**317**	PKP	**PKPdf**	**10 54 35.6**	**-2.5**
	comp=Z,10.0nm,0.8s,baz=149,slow=2.9,SNR=16						
ZALV				pPKP	**pPKPdf**	**10 55 36.0**	**-3.1**
	comp=Z,2.9nm,0.6s,baz=184,slow=4.1,SNR=2.6						
ZALV				PP	**PP**	**10 56 09.7**	**+0.3**
	comp=Z,2.2nm,0.6s,baz=104,slow=0.6,SNR=2.3						
ZALV				PKKPbc	**PKKPbc**	**11 04 45.9**	**+0.8**
	comp=Z,0.8nm,0.3s,baz=298,slow=6.1,SNR=4.1						
ZAA1	**Zalesovo Array**	**120.53**	**317**	*e*PKPdf	**PKPdf**	**10 54 35.6**	**-2.5**
ZAA1				*e*PP	**PP**	**10 56 09.7**	**+0.2**
TKL	**Tuckaleechee C**	**120.53**	**67**	PKP	**PKPdf**	**10 54 37.0**	**-1.8**
	comp=Z,8.7nm,0.7s,baz=202,slow=5.4,SNR=15						
TKL				pPKP	**pPKPdf**	**10 55 40.3**	**+0.5**
	comp=Z,8.9nm,0.8s,baz=168,slow=4.5,SNR=3.4						
TKL	**Tuckaleechee C**	**120.53**	**67**	*e*PKPdf	**PKPdf**	**10 54 37.4**	**-1.4**
TKL	**Tuckaleechee C**	**120.53**	**67**	PKIKP	**PKPdf**	**10 54 37.0**	**-1.8**
TKL				pmax	pmax		
	comp=Z,9.0nm,0.7s						
TKL				pmax	pmax		
	comp=Z,9.0nm,0.9s						
V52A	**Sevierville**	**120.75**	**67**	*e*PKPdf	**PKPdf**	**10 54 38.1**	**-1.1**
KZA	**Kyzart**	**120.77**	**301**	P	**PKPdf**	**10 54 39.7**	**+0.2**
	SNR=6.7						
BG3	**Lake Jocassee**	**120.80**	**68**	*e*PKPdf	**PKPdf**	**10 54 38.2**	**-1.2**
KUU	**Kurty**	**120.90**	**303**	*i* PKP	**PKPdf**	**10 54 38.1**	**-1.2**
TKM2	**Tokmak 2**	**120.93**	**302**	P	**PKPdf**	**10 54 36.8**	**-2.8**
	SNR=8.0						
TKM2	**Tokmak 2**	**120.93**	**302**	PKIKP	**PKPdf**	**10 54 37.7**	**-1.9**
TKM2				pmax	pmax		
	comp=Z,12nm,0.7s						
SDDR	**Presa de Saban**	**120.98**	**91**	*e*PKPdf	**PKPdf**	**10 54 40.3**	**+0.1**
KBK	**Karagaybulak**	**121.24**	**301**	P	**PKPdf**	**10 54 36.5**	**-3.7**
	SNR=7.1						
UCH	**Uchtor**	**121.32**	**301**	P	**PKPdf**	**10 54 40.5**	**-0.2**
	SNR=15						
KBL	**Kabul**	**121.45**	**291**	*e*PKPdf	**PKPdf**	**10 54 40.5**	**-0.3**
PAULI	**Pauline**	**121.52**	**69**	*e*PKPdf	**PKPdf**	**10 54 40.6**	**-0.1**
CHMS	**Chumysh**	**121.52**	**302**	P	**PKPdf**	**10 54 39.8**	**-0.7**
	SNR=8.5						
AAK	**Ala-Archa**	**121.52**	**301**	PKP	**PKPdf**	**10 54 38.7**	**-2.0**
	comp=Z,4.9nm,0.4s,baz=97,slow=2.4,SNR=3.3						
AAK				pPKP	**pPKPdf**	**10 55 39.4**	**-2.3**
	comp=Z,2.8nm,0.4s,baz=96,slow=3.1,SNR=1.7						
AAK				PKKPbc	**PKKPbc**	**11 04 44.6**	**+3.4**
	comp=Z,3.5nm,0.7s,baz=262,slow=7.0,SNR=5.3						
AAK	**Ala-Archa**	**121.52**	**301**	*e*PKPdf	**PKPdf**	**10 54 38.7**	**-2.0**
AAK				*e*PKPdf	**PKiKP**	**10 54 40.3**	**-0.5**
FRU	**Bishkek**	**121.53**	**302**	*e*PKIKP	**PKPdf**	**10 54 40.0**	**-0.5**
FRU				*e*		10 55 41.0	
JSC	**Jenkinsville**	**121.65**	**70**	*e*PKPdf	**PKPdf**	**10 54 39.7**	**-1.3**
JSC	**Jenkinsville**	**121.65**	**70**	*e*PKIKP	**PKPdf**	**10 54 39.7**	**-1.3**
F41A	**Three Lakes**	**121.69**	**55**	*e*PKPdf	**PKPdf**	**10 54 40.3**	**-0.4**
NVS	**Novosibirsk**	**121.75**	**317**	*e*PKIKP	**PKPdf**	**10 54 38.4**	**-2.0**
NVS				*e*		10 55 38.0	
NVS				*e*		10 55 59.8	
NVS				pmax	pmax		
	comp=Z,13nm,0.7s						
NVS				pmax	pmax		
	comp=N,5.0nm,0.8s						
USP	**Ospenovka**	**121.81**	**302**	P	**PKPdf**	**10 54 42.3**	**+1.2**
	SNR=5.8						
COWI	**Conover**	**121.83**	**54**	*e*PKPdf	**PKPdf**	**10 54 39.0**	**-1.9**
EKS2	**Erkin-Say**	**122.01**	**301**	P	**PKPdf**	**10 54 41.2**	**-0.3**
	SNR=13						
KMSC	**Kings Mountain**	**122.02**	**69**	*e*PKPdf	**PKPdf**	**10 54 40.9**	**-0.8**
KURK	**Kurchatov**	**122.53**	**311**	*e*PKPdf	**PKPdf**	**10 54 40.2**	**-1.8**
KURK	**Kurchatov**	**122.53**	**311**	*d i*PKIKP	**PKPdf**	**10 54 40.8**	**-1.3**
KURK				pmax	pmax		
	comp=Z,38nm,0.8s						
KURBB	**Kurchatov Arra**	**122.54**	**311**	PKP	**PKPdf**	**10 54 40.2**	**-1.9**
	comp=Z,28nm,0.8s,baz=112,slow=1.8,SNR=52						
KURBB				pPKP	**pPKPdf**	**10 55 40.1**	**-3.0**
	comp=Z,12nm,0.7s,baz=118,slow=1.7,SNR=4.6						
KURBB				PKKPbc	**PKKPbc**	**11 04 38.9**	**+1.5**
	comp=Z,3.7nm,0.8s,baz=288,slow=4.2,SNR=11						
MNAS	**Manas**	**122.77**	**300**	PKIKP	**PKPdf**	**10 54 42.0**	**-1.1**
MNAS				pmax	pmax		
	comp=Z,27nm,0.8s						
BTLS	**Baital**	**122.89**	**304**	*i* PKP	**PKPdf**	**10 54 42.2**	**-0.8**
BTLS				*i* pPKP	**pPKPdf**	**10 55 43.5**	**-0.5**
BTLS				*i* PP	**PP**	**10 56 24.6**	**-1.1**
KMBO	**Kilima Mbogo**	**122.91**	**235**	PKP	PKPdf	10 54 58.2	+14
	comp=Z,6.1nm,1.0s,baz=76,slow=1.9,SNR=11						
ACSO	**Alum Creek Sta**	**123.24**	**63**	*e*PKPdf	**PKPdf**	**10 54 42.1**	**-1.7**
E43A	**Lone Tree Farm**	**123.29**	**55**	*e*PKPdf	**PKPdf**	**10 54 43.6**	**-0.1**
WSAR	**Wadi Sarin**	**123.38**	**274**	PKP	**PKPdf**	**10 54 45.1**	**+0.5**
	comp=Z,15nm,1.1s,baz=158,slow=5.4,SNR=4.4						
WSAR				PKKPbc	**PKKPab**	**11 04 35.0**	**+0.6**
	comp=Z,14nm,0.9s,baz=296,slow=6.1,SNR=6.0						
NCAT	**North Carolina**	**123.58**	**69**	*e*PKPdf	**PKPdf**	**10 54 45.4**	**+0.8**
BLA	**Blacksburg**	**123.65**	**67**	*e*PKPdf	**PKPdf**	**10 54 43.7**	**-1.1**
BLA	**Blacksburg**	**123.65**	**67**	*e*PKIKP	**PKPdf**	**10 54 43.7**	**-1.1**
KK31	**Karatay Array**	**124.36**	**300**	*e*PKPdf	**PKPdf**	**10 54 44.7**	**-1.2**
KK31	**Karatay Array**	**124.36**	**300**	*i* PKIKP	**PKPdf**	**10 54 44.9**	**-1.0**
KK31				pmax	pmax		
	comp=Z,19nm,0.8s						
KKAR	**Karatay Array**	**124.36**	**300**	*e*PKPdf	**PKPdf**	**10 54 44.7**	**-1.2**
KKAR	**Karatay Array**	**124.36**	**300**	*e*PKIKP	**PKPdf**	**10 54 44.7**	**-1.2**
HUMP	**Col San Antoni**	**124.66**	**95**	*e*PKPdf	**PKPdf**	**10 54 46.0**	**-1.2**
MTP	**Monte Pirata**	**124.86**	**95**	*e*PKPdf	**PKPdf**	**10 54 47.5**	**0.0**
SOHO	**SOHO**	**125.48**	**273**	*i* P	**PKPdf**	**10 54 47.7**	**-0.9**
	SNR=5.7						
N54A	**Moraine State**	**125.61**	**63**	*e*PKPdf	**PKPdf**	**10 54 46.8**	**-1.5**
IP07	**Quail**	**125.66**	**68**	*e*PKPdf	**PKPdf**	**10 54 47.1**	**-1.4**
IP04	**Greensprings**	**125.69**	**67**	*e*PKPdf	**PKPdf**	**10 54 47.2**	**-1.4**
IP06	**Yanceyville**	**125.70**	**68**	*e*PKPdf	**PKPdf**	**10 54 47.3**	**-1.3**
IP03	**Louisa**	**125.72**	**67**	*e*PKPdf	**PKPdf**	**10 54 47.2**	**-1.4**
BRZS	**Berezniki**	**125.73**	**309**	*i* PKP	**PKPdf**	**10 54 47.1**	**-1.2**
IP01	**Cuckoo**	**125.76**	**68**	*e*PKPdf	**PKPdf**	**10 54 47.1**	**-1.6**
ALLY	**Alegheny Colle**	**125.79**	**63**	*e*PKPdf	**PKPdf**	**10 54 48.9**	**+0.2**
IP05	**Hopewell Churc**	**125.82**	**68**	*e*PKPdf	**PKPdf**	**10 54 47.6**	**-1.2**
URVA	**University of**	**125.86**	**68**	*e*PKPdf	**PKPdf**	**10 54 48.6**	**-0.2**
CVRD	**Centerville Ro**	**125.89**	**67**	*e*PKPdf	**PKPdf**	**10 54 47.3**	**-1.6**
ALNE	**Al Ain**	**126.03**	**273**	P	**PKPdf**	**10 54 48.9**	**-0.8**
M54A	**Oil Creek Stat**	**126.06**	**63**	*e*PKPdf	**PKPdf**	**10 54 47.8**	**-1.4**
ERPA	**Erie**	**126.09**	**62**	*e*PKPdf	**PKPdf**	**10 54 47.9**	**-1.4**
HATD	**Hatta, Dubai**	**126.16**	**274**	*i* P	**PKPdf**	**10 54 49.2**	**-0.7**
	SNR=6.2						
UOSS	**Minazif**	**126.17**	**274**	*e*PKPdf	**PKPdf**	**10 54 48.5**	**-1.4**
UOSS	**Minazif**	**126.17**	**274**	P	**PKPdf**	**10 54 48.7**	**-1.3**
O56A	**Blue Knob Stat**	**126.30**	**65**	*e*PKPdf	**PKPdf**	**10 54 48.3**	**-1.5**
MSFE	**Esma-Masafi**	**126.42**	**274**	P	**PKPdf**	**10 54 49.7**	**-0.8**
BANOM	**Banah**	**126.61**	**275**	P	**PKPdf**	**10 54 49.9**	**-0.9**
ASUD	**Al Ashush, Dub**	**126.66**	**273**	P	**PKPdf**	**10 54 47.8**	**-3.1**
SMRT	**St. Maarten**	**126.72**	**97**	*e*PKPdf	**PKPdf**	**10 54 51.0**	**-0.1**
SSPA	**Standing Stone**	**126.92**	**65**	*e*PKPdf	**PKPdf**	**10 54 49.2**	**-1.7**
SADO	**Sadowa**	**127.70**	**59**	*e*PKPdf	**PKPdf**	**10 54 50.2**	**-2.0**
MVL	**Millersville**	**127.73**	**66**	*e*PKPdf	**PKPdf**	**10 54 51.3**	**-1.1**
MMNY	**Mt. Morris Dam**	**127.75**	**62**	*e*PKPdf	**PKPdf**	**10 54 51.6**	**-0.7**
BVAR	**Borovoye Array**	**128.12**	**312**	PKhKP	PKPpre	10 54 42.5	
	comp=Z,2.8nm,0.7s,baz=77,slow=3.2,SNR=4.3						
BVAR				PKP	**PKiKP**	**10 54 54.0**	**+0.6**
	comp=Z,13nm,0.7s,baz=102,slow=2.1,SNR=23						
BVAR				pPKP	pPKPdf	10 55 51.4	-2.3
	comp=Z,5.0nm,0.6s,baz=71,slow=1.3,SNR=2.6						
ATD	**Arta Tunnel**	**128.24**	**251**	PKhKP	PKPpre	10 54 49.5	
	comp=Z,2.4nm,0.4s,baz=52,slow=7.3,SNR=2.5						
PSUB	**Penn St. - Bra**	**128.33**	**66**	*e*PKPdf	**PKPdf**	**10 54 53.4**	**-0.1**
N59A	**State Game Lan**	**128.51**	**65**	*e*PKPdf	**PKPdf**	**10 54 52.6**	**-1.3**
RES	**Resolute Bay**	**128.54**	**20**	*e*PKPdf	**PKPdf**	**10 54 52.0**	**-0.9**
RES	**Resolute Bay**	**128.54**	**20**	*e*PKIKP	**PKPdf**	**10 54 52.0**	**-0.9**
LUPA	**Lehigh Univers**	**128.66**	**66**	*e*PKPdf	**PKPdf**	**10 54 52.8**	**-1.4**
KSPA	**Keystone Colle**	**128.76**	**64**	*e*PKPdf	**PKPdf**	**10 54 53.1**	**-1.3**
BINY	**Binghamton**	**128.86**	**63**	*e*PKPdf	**PKPdf**	**10 54 53.2**	**-1.3**
PLVO	**Plevna**	**129.17**	**60**	*e*PKPdf	**PKPdf**	**10 54 53.2**	**-1.8**
ODNJ	**Ogdensburg**	**129.38**	**65**	*e*PKPdf	**PKPdf**	**10 54 56.1**	**+0.5**
PAL	**Palisades**	**129.84**	**66**	*e*PKPdf	**PKPdf**	**10 54 56.0**	**-0.3**
PAL	**Palisades**	**129.84**	**66**	*e*PKIKP	**PKPdf**	**10 54 56.1**	**-0.3**
LONY	**Lake Ozonia**	**130.69**	**61**	*e*PKPdf	**PKPdf**	**10 54 57.1**	**-0.8**
NCB	**Newcomb**	**130.71**	**62**	*e*PKPdf	**PKPdf**	**10 54 57.2**	**-0.8**
GEYT	**Alibeck**	**130.85**	**289**	PKP	**PKPdf**	**10 54 59.9**	**+1.4**
	comp=Z,4.0nm,0.4s,baz=325,slow=1.8,SNR=3.7						
GEYT				pPKP	**pPKPdf**	**10 55 56.8**	**-2.7**
	comp=Z,2.2nm,0.3s,baz=225,slow=14,SNR=1.5						
GEYT				SKPbc	**SKPbc**	**10 57 58.7**	**-1.2**
	comp=Z,5.9nm,0.3s,baz=254,slow=5.5,SNR=6.0						
ACCN	**Adirondack Com**	**130.88**	**63**	*e*PKPdf	**PKPdf**	**10 54 58.9**	**+0.5**
QUA2	**Belchertown**	**131.39**	**65**	*e*PKPdf	**PKPdf**	**10 54 58.3**	**-1.0**
VT1	**Waterbury**	**131.82**	**62**	*e*PKPdf	**PKPdf**	**10 55 00.1**	**0.0**
LBNH	**Lisbon**	**132.35**	**62**	*e*PKPdf	**PKPdf**	**10 55 01.0**	**-0.1**
LBNH	**Lisbon**	**132.35**	**62**	*e*PKIKP	**PKPdf**	**10 55 01.0**	**-0.1**
AB31	**Akbulak array**	**133.36**	**304**	*i* PKIKP	**PKPdf**	**10 55 01.9**	**-0.9**
AB31				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ABKAR	**Akbulak array**	**133.36**	**304**	*e*PKPdf	**PKPdf**	**10 55 02.5**	**-0.2**
RAYN	**Ar Rayn**	**133.60**	**265**	*e*PKPdf	**PKPdf**	**10 55 03.4**	**-0.7**
RAYN	**Ar Rayn**	**133.60**	**265**	*e*PKIKP	**PKPdf**	**10 55 03.4**	**-0.7**
WVL	**Waterville**	**134.00**	**63**	*e*PKPdf	**PKPdf**	**10 55 03.9**	**-0.2**
PKME	**Peaks-Kenny Pk**	**134.45**	**62**	*e*PKPdf	**PKPdf**	**10 55 03.4**	**-1.5**
SVE	**Sverdlovsk**	**134.47**	**315**	*e*PKHKP	PKPpre	10 54 53.6	
SVE				pmax	pmax		
	comp=Z,23nm,1.0s						
AKTO	**Aktyubinsk**	**134.85**	**306**	PKhKP	PKPpre	10 54 54.0	
	comp=Z,5.9nm,0.8s,baz=125,slow=3.6,SNR=10						
AKTO				PKP	**PKiKP**	**10 55 06.4**	**-0.7**
	comp=Z,11nm,0.8s,baz=98,slow=1.4,SNR=13						
AKTO				pPKP	pPKPdf	10 56 02.7	-3.9
	comp=Z,7.4nm,0.7s,baz=111,slow=11,SNR=2.5						
AKTO				SKPbc	**SKPbc**	**10 58 10.3**	**-2.7**
	comp=Z,17nm,0.9s,baz=113,slow=3.0,SNR=7.1						
ARU	**Arti**	**135.55**	**314**	PKhKP	PKPpre	10 54 56.2	
	comp=Z,16nm,0.7s,baz=111,slow=0.5,SNR=18						
ARU				PKP	**PKPdf**	**10 55 06.7**	**+0.1**
	comp=Z,12nm,0.5s,baz=273,slow=2.2,SNR=9.9						
ARU				SKPbc	**SKPbc**	**10 58 11.4**	**-3.6**
	comp=Z,6.7nm,0.6s,baz=119,slow=2.1,SNR=3.0						
ARU	**Arti**	**135.55**	**314**	*i* PKHKP	PKPpre	10 54 56.7	
PQI	**Presque Isle**	**135.69**	**60**	*e*PKPdf	**PKPdf**	**10 55 06.1**	**-1.1**
FRB	**Frobisher Bay**	**137.17**	**35**	SKPbc	**SKPbc**	**10 58 17.6**	**-2.0**
	comp=Z,22nm,0.9s,baz=199,slow=1.7,SNR=4.5						
SCHQ	**Schefferville**	**137.87**	**49**	PKhKP	PKPpre	10 55 00.5	
	comp=Z,3.6nm,0.7s,baz=276,slow=1.8,SNR=5.1						
SCHQ				PKP	**PKPdf**	**10 55 10.8**	**-0.2**
	comp=Z,4.4nm,0.9s,baz=253,slow=6.8,SNR=4.6						
SCHQ				pPKP	pPKPdf	10 56 10.8	-1.2
	comp=Z,4.7nm,0.9s,baz=233,slow=15,SNR=2.0						
SCHQ				PP	**PP**	**10 57 58.7**	**-3.4**
	comp=Z,9.5nm,1.1s,baz=265,slow=8.5,SNR=3.5						
SCHQ				SKPbc	**SKPbc**	**10 58 18.6**	**-3.3**
	comp=Z,6.8nm,0.8s,baz=267,slow=10.0,SNR=2.5						
AKT	**Akhty**	**139.59**	**290**	*e*PKHKP	PKPpre	10 55 08.2	
AKT				*i*		10 55 16.5	
AKT				*e*		10 56 17.7	
AKT				*e*		10 58 12.8	
AKT				pmax	pmax		
	comp=Z,50nm,1.2s						
MAK	**Makhachkala**	**140.15**	**292**	*i* PKIKP	**PKPdf**	**10 55 17.0**	**+1.5**
MAK				*e*		10 58 16.9	
MAK				*e*SS	SS	11 16 20.5	+0.7
MAK				pmax	pmax		
	comp=Z,105nm,0.9s						
KBS	**Kingsbay**	**140.34**	**355**	*e*PKPpre	PKPpre	10 55 08.5	
SPA0	**Spitsbergen Ar**	**140.65**	**353**	*e*PKPpre	PKPpre	10 55 08.8	
SPA0				*e*PKPdf	**PKPdf**	**10 55 14.2**	**-1.3**
SPITS	**Spitsbergen Ar**	**140.65**	**353**	PKhKP	PKPpre	10 55 07.7	
	comp=Z,15nm,0.4s,baz=28,slow=3.8,SNR=59						
SPITS				PKP	**PKPdf**	**10 55 14.2**	**-1.3**
	comp=Z,15nm,0.5s,baz=56,slow=5.4,SNR=17						
SPITS				pPKP	pPKPdf	10 56 08.5	-8.1
	comp=Z,34nm,0.8s,baz=36,slow=3.5,SNR=3.4						
SPITS				SKP		10 58 26.7	
	comp=Z,29nm,0.7s,baz=73,slow=2.9,SNR=4.5						
GNI	**Garni**	**141.38**	**287**	PKP	**PKPdf**	**10 55 16.7**	**-1.3**
	comp=Z,15nm,0.6s,baz=11,slow=5.8,SNR=5.0						
GNI				PP	**PP**	**10 58 25.7**	**+1.4**
	comp=Z,22nm,0.8s,baz=71,slow=5.5,SNR=3.2						
GNI	**Garni**	**141.38**	**287**	*e*PKPdf	**PKPdf**	**10 55 16.3**	**-1.8**
GNI				*e*PKPdf	**PKPdf**	**10 55 16.7**	**-1.3**
GNI				*e*PP	**PP**	**10 58 25.7**	**+1.4**
GNI	**Garni**	**141.38**	**287**	P	**PKPdf**	**10 55 15.7**	**-2.4**
GNI	**Garni**	**141.38**	**287**	*de*PKIKP	**PKPdf**	**10 55 17.1**	**-1.0**
GROC	**Groznyy**	**141.42**	**292**	*e*PKHKP	PKPpre	10 55 13.8	
GROC				*e*		10 58 27.0	
GROC				pmax	pmax		
	comp=Z,37nm,0.5s						
PRGR	**Permogore**	**142.10**	**322**	*e*PKHKP	PKPpre	10 55 12.8	

PRGR				pmax	pmax		
	comp=Z,34nm,0.9s						
ILULI	Ilulissat	142.50	24	i P	PKPpre	10 55 11.0	
ILULI	Ilulissat	142.50	24	ePKHKP	PKPpre	10 55 11.0	
AKH	Akhalkalaki	142.64	289	⇑iP	PKPdf	10 55 17.8	-2.5
ZEI	Tsey	142.68	291	i PKHKP	PKPpre	10 55 15.2	
ZEI				pmax	pmax		
	comp=Z,69nm,1.1s						
DAG	Danmarks Havn	142.80	5	⇑iP	PKPpre	10 55 12.7	
DAG	Danmarks Havn	142.80	5	⇑iPKHKP	PKPpre	10 55 12.7	
KBZ	Khabaz	143.59	292	PKP	PKPab	10 55 19.3	+0.4
	comp=Z,163nm,0.8s,baz=119,slow=3.1,SNR=103						
KBZ				pPKP	pPKPdf	10 56 18.0	-4.7
	comp=Z,66nm,0.8s,baz=82,slow=3.8,SNR=3.1						
NEY	Neytrino	143.62	291	cePKIKP	PKPbc	10 55 20.2	0.0
SFJD	Kangerlussuaq	143.65	28	PKhKP	PKPpre	10 55 15.5	
	comp=Z,32nm,0.8s,baz=259,slow=2.1,SNR=9.6						
SFJD	Kangerlussuaq	143.65	28	i P	PKPab	10 55 15.3	-3.1
KVAR	Kislovodsk Arr	143.78	293	PKP	PKPbc	10 55 21.3	+0.7
	comp=Z,134nm,1.0s,baz=195,slow=1.4,SNR=19						
KIV	Kislovodsk	143.79	293	ePKPdf	PKPbc	10 55 21.2	+0.7
KIV	Kislovodsk	143.79	293	i P	PKPbc	10 55 20.4	-0.1
	SNR=20						
KIV	Kislovodsk	143.79	293	ePKHKP	PKPpre	10 55 16.3	
KIV				i		10 55 20.4	
KIV				e*PP	pPKPdf	10 56 18.5	-4.7
KIV				eSS	SS	11 16 57.3	-4.8
KIV				pmax	pmax		
	comp=Z,167nm,1.0s						
SUMG	Summit	143.81	16	⇑iP	PKPab	10 55 18.2	-1.2
	comp=Z,62nm,0.8s						
SUMG	Summit	143.81	16	⇑iPKHKP	PKPpre	10 55 18.2	
SUMG				pmax	pmax		
	comp=Z,62nm,0.8s						
ASF	Jabal al Asfar	144.48	271	PKP	PKPdf	10 55 23.8	+0.1
	comp=Z,143nm,1.1s,baz=129,slow=0.9,SNR=52						
ASF				pPKP	pPKPdf	10 56 21.8	-3.1
	comp=Z,57nm,1.0s,baz=84,slow=3.7,SNR=3.4						
ASF				PP	PP	10 58 44.6	+1.7
	comp=Z,7.8nm,0.8s,baz=139,slow=9.3,SNR=1.9						
ASF	Jabal al Asfar	144.48	271	PKIKP	PKPdf	10 55 23.8	+0.1
ASF						10 56 21.8	
ASF						10 58 44.6	
ASF				pmax	pmax		
	comp=Z,143nm,1.1s						
ASF				pmax	pmax		
	comp=Z,127nm,1.2s						
ASF				pmax	pmax		
	comp=Z,8.0nm,0.8s						
EIL	Elat	144.84	266	PKP	PKPdf	10 55 29.3	+5.0
	comp=Z,55nm,0.8s,baz=114,slow=1.2,SNR=51						
EIL				pPKP	pPKPdf	10 56 26.4	+1.0
	comp=Z,88nm,0.9s,baz=154,slow=4.0,SNR=2.8						
APA	Apatity	144.93	335	⇓iPKIKP	PKPbc	10 55 20.9	-2.2
APA				i		10 56 22.6	
APA				i		11 02 02.0	
APA				pmax	pmax		
	comp=Z,249nm,0.8s						
KLMR	Klimovskoe	145.15	322	ePKIKP	PKPdf	10 55 22.1	-1.7
KLMR				e		10 56 23.2	
KLMR				eSS	SS	11 17 11.6	-4.5
KLMR				pmax	pmax		
	comp=Z,870nm,1.2s						
KLMR	Klimovskoe	145.15	322	ePKPdf	PKPdf	10 55 22.2	-1.6
KLMR				AMP		10 55 26.6	
	comp=Z,870nm,1.2s						
KLMR				epPKPdf	pPKPab	10 56 23.3	-0.3
KLMR				eSKP		10 58 35.9	
KLMR				eSKKP		11 07 37.5	
KLMR				eSS	SS	11 17 11.7	-4.4
SLMH	Al Salmeh	145.24	278	eP	PKPab	10 55 26.6	+1.1
TOTH	TOTAH	145.33	273	eP	PKPab	10 55 26.4	+0.5
KEV	Kevo	145.50	340	ePKPdf	PKPdf	10 55 22.9	-1.3
KEV	Kevo	145.50	340	ePKIKP	PKPdf	10 55 22.9	-1.3
QASN	Qassioun	145.51	273	eP	PKPab	10 55 27.9	+1.1
BRBR	Barbar	145.71	272	eP	PKPab	10 55 29.4	+1.8
RCY	Rachaya	145.84	273	eP	PKPab	10 55 28.4	+0.4
SOC	Sochi	145.84	291	ePKP2	PKPbc	10 55 26.8	+0.2
SOC				e		10 58 47.3	
SOC				eSS	SS	11 17 24.1	-1.1
SOC				eSSS	SSS	11 22 56.3	
SOC				pmax	pmax		
	comp=Z,85nm,0.6s						
SOC				pmax	pmax		
	comp=Z,134nm,0.6s						
MMAI	Mount Meron Ar	145.97	271	PKPbc	PKPab	10 55 28.2	-0.2
	comp=Z,90nm,0.7s,baz=103,slow=7.2,SNR=61						
MMAI				pPKP	pPKPdf	10 56 26.5	-0.9
	comp=Z,41nm,0.7s,baz=97,slow=5.4,SNR=3.2						
ARA0	ARCESS Array S	146.04	341	ePKPdf	PKPdf	10 55 25.7	+0.6
ARCES	ARCESS Array B	146.04	341	PKPbc	PKPdf	10 55 25.7	+0.6
	comp=Z,154nm,0.7s,baz=66,slow=3.3,SNR=237						
ARCES				pPKP	pPKPdf	10 56 23.7	-2.5
	comp=Z,71nm,0.7s,baz=33,slow=2.9,SNR=4.8						
ARE0	ARCESS Array S	146.04	341	ePKPdf	PKPbc	10 55 25.9	-0.6
HWQ	Hawqa	146.05	274	eP	PKPbc	10 55 27.7	0.0
DQRL	Deir Qamar	146.12	273	eP	PKPab	10 55 28.5	-0.6
BHL	Bhannes	146.13	273	eP	PKPbc	10 55 28.1	+0.1
LIC	Lamto	146.29	182	ePKIKP	PKPdf	10 55 27.4	+0.1
	comp=Z,476nm,0.7s						
KIC	Kosan Boka	146.42	183	ePKIKP	PKPdf	10 55 27.4	-0.1
	comp=Z,363nm,0.8s						
TIC	Toumodi	146.71	182	ePKIKP	PKPdf	10 55 28.0	0.0
VORD	Divnogorie	146.72	305	ePKP2	PKPbc	10 55 28.3	-0.6
VORD				pmax	pmax		
	comp=Z,200nm,1.3s						
DBIC	Dimbokro	146.73	183	PKPbc	PKPdf	10 55 28.9	+0.9
	comp=Z,65nm,0.6s,baz=158,slow=3.7,SNR=58						
DBIC				pPKP	pPKPdf	10 56 27.4	-1.7
	comp=Z,146nm,1.0s,baz=142,slow=5.0,SNR=4.8						
DBIC	Dimbokro	146.73	183	ePKPdf	PKPbc	10 55 29.0	-1.0
VORR	Voronezh	146.75	306	ePKIKP	PKPdf	10 55 26.0	-0.8
VORR				pmax	pmax		
	comp=Z,750nm,1.6s						
VSR	Storozhevoye	146.79	305	ePKIKP	PKPdf	10 55 27.3	+0.4
VSR				pmax	pmax		
	comp=Z,80nm,0.5s						
IVI	Ivigtut	146.91	36	ePKPdf	PKPdf	10 55 27.0	+0.3
MOS	Moscow	147.26	313	ePKP2	PKPbc	10 55 29.6	-0.6
MOS				e		10 59 05.4	
MOS				pmax	pmax		
	comp=Z,228nm,1.1s						
MOS				pmax	pmax		
	comp=Z,400nm,1.3s						
ANN	Anapa	147.64	293	i PKP2	PKPbc	10 55 31.8	+0.2
ANN				e		10 59 03.9	
ANN				eSS	SS	11 17 41.3	-4.1
ANN				pmax	pmax		
	comp=Z,253nm,0.8s						
ANN				pmax	pmax		
	comp=N,50nm,0.9s						
ANN				pmax	pmax		
	comp=E,51nm,0.9s						
ANN				pmax	pmax		
	comp=Z,538nm,6.0s						
OBN	Obninsk	147.96	312	cePKIKP	PKPbc	10 55 30.5	-1.6
OBN				i		10 55 34.3	
OBN				e		10 58 59.8	
OBN				eSS	SS	11 17 52.1	+3.9
OBN				pmax	pmax		
	comp=Z,364nm,1.2s						
NRS	Narsarsuaq	148.16	35	ePKPdf	PKPdf	10 55 28.5	-0.3
NRS	Narsarsuaq	148.16	35	⇑iP	PKPdf	10 55 29.5	+0.7
NRS	Narsarsuaq	148.16	35	⇑iPKIKP	PKPdf	10 55 29.5	+0.7
CSS	Mathiatis	148.31	274	ePKPbc	PKPbc	10 55 34.2	+0.5
CSS	Mathiatis	148.31	274	P	PKPbc	10 55 34.2	+0.5
CSS	Mathiatis	148.31	274	P	PKPbc	10 55 33.8	+0.1
MAMC	Mammari	148.47	274	P	PKPbc	10 55 34.4	+0.3
SZAC	Souni	148.58	273	P	PKPbc	10 55 34.6	+0.2
ANGG	Ammassalik, Gr	148.81	25	ePKPdf	PKPdf	10 55 31.0	+1.3
ALFC	Alefka	148.94	273	P	PKPbc	10 55 35.1	-0.2
JMIC	Jan Mayen	148.98	1	PKPbc	PKPbc	10 55 34.1	-0.1
	comp=Z,80nm,0.8s,baz=104,slow=3.2,SNR=9.4						
PPCY	Paphos	149.04	273	P	PKPbc	10 55 36.6	+1.1
AKMC	Akamas	149.10	273	P	PKPbc	10 55 33.9	-1.8
BR101	Keskin Array S	149.50	282	ePKPbc	PKPbc	10 55 36.2	-0.5
BR101				ePKPab	PKPab	10 55 43.0	+0.4
BR131	Keskin Array S	149.50	282	ePKPdf	PKPdf	10 55 32.6	+0.7
BRTR	Keskin Array B	149.50	282	PKPbc	PKPbc	10 55 36.2	-0.5
	comp=Z,33nm,0.9s,baz=143,slow=3.6,SNR=15						
BRTR				PKPab	PKPab	10 55 43.0	+0.4
	comp=Z,149nm,0.9s,baz=135,slow=5.0,SNR=46						
BRTR				pPKP	pPKPdf	10 56 34.6	+1.5
	comp=Z,40nm,0.9s,baz=149,slow=7.5,SNR=3.1						
SIM	Simferopol’	150.00	293	ePKP2	PKPbc	10 55 38.2	+0.7
SIM				pmax	pmax		
	comp=Z,117nm,0.9s						
ANTO	Ankara	150.17	282	⇑iP	PKPbc	10 55 40.0	+1.8
ANTO	Ankara	150.17	282	ePKPdf	PKPdf	10 55 33.1	+0.2
ANTO	Ankara	150.17	282	⇑PKIKP	PKPbc	10 55 40.0	+1.8
SACV	Santiago Islan	150.80	144	ePKPdf	PKPdf	10 55 33.0	-1.4
FIA1	FINESS Array S	150.87	328	ePKPdf	PKPdf	10 55 34.7	+1.6
FIA1				ePKPdf	PKPdf	10 55 35.2	+2.1
FIA0	FINESS Array S	150.87	328	ePKPdf	PKPdf	10 55 34.5	+1.4
FIA0				ePKPbc	PKPbc	10 55 38.1	-0.9
FIA0				ePKPab	PKPab	10 55 48.2	+0.9
FIA0	FINESS Array S	150.87	328	ePKIKP	PKPdf	10 55 34.5	+1.4
FIA0				e		10 55 48.3	
FINES	FINESS Array B	150.87	328	PKP	PKPdf	10 55 34.5	+1.4
	comp=Z,22nm,0.6s,baz=85,slow=2.3,SNR=68						
FINES				PKPbc	PKPbc	10 55 38.1	-0.9
	comp=Z,38nm,0.5s,baz=44,slow=4.2,SNR=100						
FINES				PKPab	PKPab	10 55 48.2	+0.9
	comp=Z,81nm,0.6s,baz=92,slow=4.2,SNR=20						
FINES				pPKP	pPKPdf	10 56 35.5	+1.1
	comp=Z,42nm,0.8s,baz=72,slow=6.2,SNR=2.5						
FINES	FINESS Array B	150.87	328	PKIKP	PKPdf	10 55 34.5	+1.4
FINES						10 55 48.2	
FINES						10 56 35.5	
FINES				pmax	pmax		
	comp=Z,23nm,0.6s						
FINES				pmax	pmax		
	comp=Z,38nm,0.5s						
FINES				pmax	pmax		
	comp=Z,81nm,0.6s						
FINES				pmax	pmax		
	comp=Z,42nm,0.8s						
ISP	Isparta	151.37	277	⇑iP	PKPbc	10 55 40.5	-0.6
ISP	Isparta	151.37	277	ePKPdf	PKPdf	10 55 34.9	+0.1
ISP				ePKPbc	PKPbc	10 55 41.2	+0.1
ISP				ePKPab	PKPab	10 55 49.5	-0.9
ISP	Isparta	151.37	277	⇑PKIKP	PKPbc	10 55 40.5	-0.6
TOA0	Torodi Ar. Sit	152.27	197	ePKPdf	PKPdf	10 55 35.8	-0.9
TOA0				ePKPdf	PKPdf	10 55 36.8	+0.1
TOA0				ePKPbc	PKPbc	10 55 43.5	-0.1
TOA0				ePKPbc	PKPbc	10 55 43.7	+0.1
TOA0				ePKPab	PKPab	10 55 53.3	-1.1
TOA0				ePKPab	PKPab	10 55 53.5	-0.8
TORD	Torodi Ar. Bea	152.27	197	PKP	PKPdf	10 55 36.1	-0.6
	comp=Z,8.4nm,1.1s,baz=147,slow=8.6						
TORD				PKPbc	PKPbc	10 55 43.7	0.0
	baz=167,slow=3.6						
TORD				PKPab	PKPab	10 55 53.6	-0.7
	baz=158,slow=4.5						
TORD				pPKP	pPKPdf	10 56 38.8	+0.9
	baz=132,slow=2.1						
TORD				pPKPbc	pPKPbc	10 56 45.6	+1.2
	baz=132,slow=2.1						
TORD				pPKPab	pPKPab	10 56 54.0	+1.0
	baz=160,slow=4.6						
TORD				PP	PP	10 59 22.6	-3.9
	baz=160,slow=4.6						
TOA1	Torodi Ar. Sit	152.28	197	ePKPdf	PKPdf	10 55 36.1	-0.6
TOA1				ePKPbc	PKPbc	10 55 43.7	0.0
TOA1				ePKPab	PKPab	10 55 53.6	-0.7
TOA1				ePP	PP	10 59 22.6	-3.9
YER	Yerkesik	152.88	275	ePKPab	PKPab	10 55 55.6	-1.1
YER	Yerkesik	152.88	275	P	PKPab	10 55 55.6	-1.1
MICGM	Minsk	152.98	314	eP	PKPbc	10 55 45.0	+1.0
MNK	Minsk	152.98	314	ePKIKP	PKPbc	10 55 45.0	+1.0
MANT	Manisa	153.04	278	ePKPbc	PKPbc	10 55 46.5	+1.5
AKASG	Malin Array Be	153.09	305	PKP	PKPdf	10 55 37.2	+0.4
	comp=Z,0.6nm,0.4s,baz=64,slow=1.4,SNR=7.0						
AKASG				PKPbc	PKPbc	10 55 43.5	-0.8
	comp=Z,20nm,0.7s,baz=66,slow=2.5,SNR=38						
AKASG				PKPab	PKPab	10 55 58.1	+1.1
	comp=Z,39nm,0.7s,baz=65,slow=4.7,SNR=18						
AKASG				pPKPbc	pPKPbc	10 56 44.2	-0.9
	comp=Z,11nm,0.5s,baz=71,slow=3.0,SNR=2.7						
AKASG				PP	PP	10 59 30.4	-1.7
	comp=Z,2.9nm,0.9s,baz=90,slow=2.8,SNR=2.2						
AKBB	Malin Array Si	153.09	305	ePKPdf	PKPdf	10 55 37.2	+0.4
AKBB				ePKPbc	PKPbc	10 55 43.6	-0.7
AKBB				ePKPab	PKPab	10 55 57.0	0.0
KIEV	Kiev	153.11	305	ePKPdf	PKPdf	10 55 36.9	+0.1
KIEV				ePKPbc	PKPbc	10 55 43.6	-0.8
KIEV				ePKPab	PKPab	10 55 57.0	-0.1
KIEV	Kiev	153.11	305	i P	PKPdf	10 55 36.4	-0.3
	SNR=8.7						
KIEV	Kiev	153.11	305	ePKIKP	PKPdf	10 55 36.9	+0.1
KIEV				e		10 55 43.6	
KIEV				e		10 55 57.0	
AK11	Malin Array Si	153.13	305	ePKPdf	PKPdf	10 55 37.2	+0.4
AK11				ePKPbc	PKPbc	10 55 43.7	-0.8
AK11				ePKPab	PKPab	10 55 57.0	-0.2
IDID	Didziasalis	153.33	316	eP	PKPbc	10 55 44.2	-0.6
IDID				IAmb	IAmb	10 56 01.2	
	comp=Z,48nm,0.9s						
IZAR	Zarasai	153.43	317	eP	PKPbc	10 55 44.0	-0.9
IZAR				IAmb	IAmb	10 56 01.6	
	comp=Z,65nm,0.9s						
NACGM	Naroch	153.45	315	ePKP1	PKPbc	10 55 44.0	-1.0
NACGM				ePKP2	PKPab	10 56 01.0	+2.6
	comp=Z,0.4nm,1.0s						
NACGM				esPKP1		10 56 54.0	
NACGM				eSKKS		11 04 02.0	
NACGM				eSSS	SSS	11 18 45.0	
NACGM				eLQ	LQ	11 32 18.0	
ISAL	Salakas	153.56	317	eP	PKPbc	10 55 44.6	-0.6
ISAL				IAmb	IAmb	10 56 02.1	
	comp=Z,24nm,0.7s						
IIGN	Ignalina	153.59	316	eP	PKPbc	10 55 44.6	-0.7
IIGN				IAmb	IAmb	10 56 02.4	
	comp=Z,33nm,0.9s						
BODT	Bodrum	153.61	274	ePKPab	PKPab	10 55 59.4	-0.3
BODT	Bodrum	153.61	274	P	PKPab	10 55 59.4	-0.3
KIS	Kishinev	153.75	297	ePKP	PKPbc	10 55 47.0	+1.1
KIS	Kishinev	153.75	297	ePKP2	PKPab	10 56 01.0	+1.1
KIS				epPKP	pPKPbc	10 56 46.0	-0.8
KIS	Kishinev	153.75	297	ePP	PP	10 59 48.0	+12
KIS				eSKSP		11 09 32.0	
KIS				LRM	MLR	12 08 14.0	
	comp=Z,300nm,20.0s						
KIS	Kishinev	153.75	297	ePKIKP	PKPbc	10 55 47.0	+1.1
KIS				e		10 56 01.0	
KIS				e		10 56 46.0	
TLCR		153.77	293	⇓iP	PKPbc	10 55 51.1	+5.1
BORG	Borgarnes	153.78	15	ePKPbc	PKPbc	10 55 45.1	-0.3
BORG				ePKPab	PKPab	10 55 58.7	-0.7
SORM	Soroca	153.99	300	⇑iP	PKPbc	10 55 48.0	+1.6
TIRR	Tirgusor	154.03	291	⇑iP	PKPbc	10 55 48.7	+2.1
TIRR	Tirgusor	154.03	291	ePKPbc	PKPbc	10 55 46.5	-0.1
TIRR				ePKPab	PKPab	10 56 01.5	+0.3
LEOM	Leova	154.16	296	⇓iP	PKPab	10 56 02.5	+0.8
LEOM	Leova	154.16	296	⇓PKP2	PKPab	10 56 02.5	+0.8
CFR	Carcaliu	154.25	293	⇑iP	PKPab	10 56 03.2	+1.1
CFR	Carcaliu	154.25	293	⇑PKP2	PKPab	10 56 03.2	+1.1
TLB	Topalu	154.30	291	⇓iP	PKPbc	10 55 48.2	+1.1
NPS	Neapolis	154.34	269	ePKPab	PKPab	10 56 03.0	+0.2
NPS	Neapolis	154.34	269	P	PKPab	10 56 03.0	+0.2
LAST	Lasithi	154.40	269	P	PKPab	10 56 00.6	-2.6
KOWA	Kowa	154.45	185	PKP	PKPdf	10 55 39.0	-0.8
	comp=Z,4.7nm,0.9s,baz=308,slow=5.0,SNR=5.0						
KOWA				PKPbc	PKPbc	10 55 48.1	-0.3
	comp=Z,12nm,0.8s,baz=234,slow=2.0,SNR=11						
KOWA				PKPab	PKPab	10 56 03.0	-0.5
	comp=Z,35nm,0.5s,baz=133,slow=4.8,SNR=18						
KOWA				pPKP	pPKPdf	10 56 41.9	+0.8
	comp=Z,11nm,0.6s,baz=192,slow=2.2,SNR=1.4						
KOWA	Kowa	154.45	185	ePKPdf	PKPdf	10 55 39.0	-0.8
KOWA				ePKPdf	PKPdf	10 55 41.2	+1.4
KOWA				ePKPbc	PKPbc	10 55 48.1	-0.3
KOWA				ePKPab	PKPab	10 56 03.0	-0.5
ANAF	Anafi Island	154.57	272	P	PKPab	10 56 01.7	-2.1
PRD	Provadia	154.69	288	P	PKPab	10 56 05.0	+1.0
SANT	Santorini	154.82	272	ePKPab	PKPab	10 56 04.6	-0.3
SIVA	Sivas	154.87	268	ePKPab	PKPab	10 56 05.4	+0.3
SIVA	Sivas	154.87	268	P	PKPab	10 56 05.4	+0.3
PETR	Petresti	154.88	294	⇓iP	PKPab	10 56 07.2	+2.4
IDI	Anoyia	154.90	269	PKPbc	PKPbc	10 55 50.2	+1.4
	comp=Z,22nm,0.8s,baz=140,slow=3.8,SNR=5.1						
IDI				PKPab	PKPab	10 56 06.2	+0.8
	comp=Z,121nm,1.0s,baz=68,slow=9.4,SNR=5.9						
IDI				pPKPbc	pPKPbc	10 56 50.8	+1.1
	comp=Z,32nm,0.7s,baz=91,slow=2.3,SNR=1.7						
IDI	Anoyia	154.90	269	⇑iP	PKPab	10 55 57.2	-8.1
IDI	Anoyia	154.90	269	ePKPab	PKPab	10 56 05.7	+0.4
CHOS	Chios island	154.92	277	ePKPab	PKPab	10 56 06.0	+0.7
CHOS	Chios island	154.92	277	P	PKPab	10 56 06.0	+0.7
PRK	Paraskevi	154.95	279	ePKPab	PKPab	10 56 05.8	+0.5
PRK	Paraskevi	154.95	279	P	PKPab	10 56 05.8	+0.5
APE	Apeiranthos	154.97	273	⇑iP	PKPbc	10 55 56.0	+7.1
GRER		155.07	293	⇑iP	PKPab	10 56 07.6	+1.9
VRI	Vrincioaia	155.23	294	⇓iP	PKPab	10 56 08.0	+1.6
VRI	Vrincioaia	155.23	294	⇓PKP2	PKPab	10 56 08.0	+1.6
TESR	Tescani	155.26	296	⇓iP	PKPdf	10 55 52.5	+13
PLOR	Plostina	155.29	294	⇑iP	PKPab	10 56 08.7	+2.1
PLOR	Plostina	155.29	294	⇑PKP2	PKPab	10 56 08.7	+2.1
GADA	Gvkgeada	155.42	281	ePKPab	PKPab	10 56 07.8	+0.5
GADA	Gvkgeada	155.42	281	P	PKPab	10 56 07.8	+0.5
ALN	Alexandroupoli	155.42	283	ePKPab	PKPab	10 56 07.3	0.0
ALN				ePKPab	PKPab	10 56 07.4	+0.1
ALN	Alexandroupoli	155.42	283	P	PKPab	10 56 07.3	0.0
SULR		155.58	292	⇑iP	PKPab	10 56 10.5	+2.7
SUW	Suwalki	155.74	315	ePKPab	PKPab	10 56 08.0	-0.2
SUW	Suwalki	155.74	315	ePKP2	PKPab	10 56 08.0	-0.2
SMTH	Samothraki Isl	155.74	281	P	PKPab	10 56 04.3	-4.4
MLR	Muntele Rosu	155.79	294	PKP	PKPdf	10 55 40.4	-0.4
	comp=Z,1.5nm,0.9s,baz=108,slow=8.6,SNR=6.3						
MLR				PKPbc	PKPbc	10 55 53.6	
	comp=Z,1.7nm,0.6s,baz=17,slow=1.9,SNR=7.1						
MLR				PKPab	PKPab	10 56 07.6	-1.4
	comp=Z,5.9nm,0.8s,baz=132,slow=2.8,SNR=14						
MLR	Muntele Rosu	155.79	294	⇑iP	PKPab	10 56 08.0	-0.9
MLR	Muntele Rosu	155.79	294	ePKPdf	PKPdf	10 55 40.4	-0.4
MLR				ePKPdf	PKPdf	10 55 41.5	+0.6
MLR				ePKPdif	PKPdf	10 55 53.6	+13
MLR				ePKPab	PKPab	10 56 07.6	-1.4
RDO	Rodhopi	155.84	283	ePKPab	PKPab	10 56 09.0	-0.1
RDO	Rodhopi	155.84	283	P	PKPab	10 56 09.0	-0.1
BURAR	Bucovina Array	156.14	299	⇑iP	PKPab	10 56 11.9	+1.6
BURAR	Bucovina Array	156.14	299	⇑PKP2	PKPab	10 56 11.9	+1.6
BUR04	Bucovina Ar. S	156.14	299	ePKPdf	PKPdf	10 55 41.7	+0.5
BUR08	Bucovina Ar. S	156.15	299	ePKPdf	PKPdf	10 55 43.2	+1.9
ANKY	Antikythira Is	156.31	269	ePKPab	PKPab	10 56 11.5	+0.2
ANKY	Antikythira Is	156.31	269	P	PKPab	10 56 11.5	+0.2
HFS	Hagfors	156.33	335	PKP	PKPdf	10 55 39.2	-1.7
	comp=Z,2.7nm,0.9s,baz=343,slow=3.1,SNR=3.7						
HFS				PKPab	PKPab	10 56 10.1	-0.5
	comp=Z,23nm,0.4s,baz=74,slow=5.3,SNR=61						
HFS				pPKPab	pPKPab	10 57 09.1	-0.1
	comp=Z,13nm,0.6s,baz=64,slow=3.4,SNR=1.7						
NB201	NORSAR Array S	156.34	338	ePKPab	PKPab	10 56 10.4	-0.2
NB2	NORSAR Subarra	156.37	339	PKP	PKPab	10 56 10.0	-0.8
	comp=Z,100nm,0.9s,baz=34,slow=4.3						
NB2	NORSAR Subarra	156.37	339	PKP	PKPab	10 56 10.0	-0.8
	baz=34,slow=4.3						
NBO00	NORSAR Array S	156.50	339	ePKPdf	PKPdf	10 55 42.5	+1.4
RZN	Rozhen	156.52	284	P	PKPab	10 56 12.0	-0.3
LVV	L’vov	156.54	305	ePKP2	PKPab	10 56 06.1	-5.7
NAO01	NORSAR Array S	156.62	339	ePKPdf	PKPdf	10 55 42.2	+0.9
NAO01				ePKPab	PKPab	10 56 11.3	-0.5
ARR	Arges	156.72	293	⇑iP	PKPab	10 56 13.6	+0.7
DID	Didima	156.85	273	ePKPab	PKPab	10 56 11.9	-1.7
DID	Didima	156.85	273	P	PKPab	10 56 11.9	-1.7
VLI	Veliai	156.86	271	ePKPab	PKPab	10 56 12.9	-0.7
VLI	Veliai	156.86	271	P	PKPab	10 56 12.9	-0.7
OUR	Ouranopolis	156.89	281	ePKPab	PKPab	10 56 11.2	-2.4
OUR	Ouranopolis	156.89	281	P	PKPab	10 56 11.2	-2.4
PAIG	Paliouri	157.05	279	ePKPab	PKPab	10 56 13.8	-0.5
PAIG	Paliouri	157.05	279	P	PKPab	10 56 13.8	-0.5
NVR	Nevrokopi	157.12	283	ePKPab	PKPab	10 56 14.1	-0.6
NVR	Nevrokopi	157.12	283	P	PKPab	10 56 14.1	-0.6
LTK	Loutraki	157.19	274	ePKPab	PKPab	10 56 13.5	-1.6
LTK	Loutraki	157.19	274	P	PKPab	10 56 13.5	-1.6
SMIA	Simia	157.20	277	P	PKPab	10 56 14.5	-0.6
MMB	Musomiste	157.25	284	P	PKPab	10 56 15.0	-0.2
SRS	Serrai	157.29	282	ePKPab	PKPab	10 56 13.1	-2.3
SRS	Serrai	157.29	282	P	PKPab	10 56 13.1	-2.3
LKR	Lokris	157.31	276	ePKPab	PKPab	10 56 13.4	-2.1
LKR	Lokris	157.31	276	P	PKPab	10 56 13.4	-2.1
LOT	Lotru	157.32	294	⇑iP	PKPab	10 56 16.3	+0.8
DYR	Agios Nikonas	157.33	271	P	PKPab	10 56 14.7	-1.0
KWP	Kalwaria Pacla	157.41	305	ePKPab	PKPab	10 56 17.6	+2.0
KWP	Kalwaria Pacla	157.41	305	ePKP2	PKPab	10 56 17.6	+2.0
THAL	Thalero	157.43	274	P	PKPab	10 56 15.4	-0.6
VLX	Vlachokerasia	157.47	272	ePKPab	PKPab	10 56 16.0	-0.4
VLX	Vlachokerasia	157.47	272	P	PKPab	10 56 16.0	-0.4
HORT	Hortiatis	157.59	281	ePKPab	PKPab	10 56 16.0	-0.8
HORT	Hortiatis	157.59	281	P	PKPab	10 56 16.0	-0.8
DSF	Desfina	157.62	275	ePKPab	PKPab	10 56 15.4	-1.6
DSF	Desfina	157.62	275	P	PKPab	10 56 15.4	-1.6
GUR	Goura	157.65	274	ePKPab	PKPab	10 56 16.3	-0.9
GUR	Goura	157.65	274	P	PKPab	10 56 16.3	-0.9
VTS	Vitosha	157.72	286	⇑iP	PKPab	10 56 17.2	-0.2
VTS	Vitosha	157.72	286	ePKPab	PKPab	10 56 15.3	-2.1
VTS	Vitosha	157.72	286	P	PKPab	10 56 16.0	-1.4
VTS	Vitosha	157.72	286	P	PKPab	10 56 15.3	-2.1
VTS	Vitosha	157.72	286	⇑PKP2	PKPab	10 56 17.2	-0.2
KKB	Krupnik	157.75	284	P	PKPab	10 56 17.0	-0.4
ITM	Ithomi	157.76	272	ePKPab	PKPab	10 56 16.9	-0.7
ITM				ePKPab	PKPab	10 56 17.6	+0.1
ITM	Ithomi	157.76	272	P	PKPab	10 56 16.9	-0.7
KLV	Kalavryta, Ach	157.82	274	ePKPab	PKPab	10 56 16.9	-0.9
KLV	Kalavryta, Ach	157.82	274	P	PKPab	10 56 16.9	-0.9
PYL	PYLOS	157.83	271	ePKPab	PKPab	10 56 16.5	-1.3
PYL	PYLOS	157.83	271	P	PKPab	10 56 16.5	-1.3
AGG	Agios Georgios	157.90	277	ePKPab	PKPab	10 56 16.9	-1.2
AGG	Agios Georgios	157.90	277	P	PKPab	10 56 16.9	-1.2
BEL	Belsk	157.90	311	ePKPab	PKPab	10 56 18.5	+0.9
BEL	Belsk	157.90	311	ePKP2	PKPab	10 56 18.5	+0.9
UZH	Uzhgorod	157.91	302	ePKIKP	PKPdf	10 55 44.0	+0.7
UZH				e		10 56 45.2	
DRGR		157.94	297	⇑iP	PKPab	10 56 20.3	+2.2
DRGR		157.94	297	⇑PKP2	PKPab	10 56 20.3	+2.2
TRIZ	Trizonia	157.96	275	P	PKPab	10 56 17.2	-1.1
LIT	Litokhoron	157.98	279	ePKPab	PKPab	10 56 17.0	-1.4
LIT	Litokhoron	157.98	279	P	PKPab	10 56 17.0	-1.4
LAKA	Lakka	158.00	274	ePKPab	PKPab	10 56 16.5	-2.1
LAKA	Lakka	158.00	274	P	PKPab	10 56 16.5	-2.1
AMT	Artemida-Makis	158.03	272	P	PKPab	10 56 18.0	-0.7
VAY	Valandovo	158.08	283	eP	PKPab	10 56 18.2	-0.6
EFP	Efpalio	158.10	275	P	PKPab	10 56 18.9	0.0
DRO	Drossia	158.13	274	P	PKPab	10 56 19.5	+0.3
GRG	Griva	158.17	282	ePKPab	PKPab	10 56 18.5	-0.7
GRG	Griva	158.17	282	P	PKPab	10 56 18.5	-0.7
THL	Klokotos Trika	158.25	278	P	PKPab	10 56 18.2	-1.3
EVR	Evrytania	158.28	276	ePKPab	PKPab	10 56 19.2	-0.7
EVR	Evrytania	158.28	276	P	PKPab	10 56 19.2	-0.7
HERR	Herculane	158.31	292	⇑iP	PKPab	10 56 20.2	+0.5
RLS	Riolos of Patr	158.35	274	ePKPab	PKPab	10 56 19.9	-0.1
RLS	Riolos of Patr	158.35	274	P	PKPab	10 56 19.9	-0.1
STIP	Stip	158.41	284	eP	PKPab	10 56 18.6	-1.6
PVO	Paravola	158.43	275	P	PKPab	10 56 21.1	+0.7
KZN	Kozani	158.55	280	ePKPab	PKPab	10 56 19.8	-1.2
KZN	Kozani	158.55	280	P	PKPab	10 56 19.8	-1.2
PDO	Prodromos	158.69	275	P	PKPab	10 56 21.5	0.0
KPRO	Kipourio	158.81	279	P	PKPab	10 56 21.9	-0.2
MDVR	Moldovita	158.81	292	⇓iP	PKPab	10 56 23.2	+1.3
KFL	Anninata	158.88	273	P	PKPab	10 56 22.2	-0.2
FNA	Florina	158.92	281	ePKPdf	PKPdf	10 55 43.8	-1.0
FNA				ePKPab	PKPab	10 56 21.6	-0.9
FNA				ePKPab	PKPab	10 56 21.8	-0.7
FNA	Florina	158.92	281	P	PKPab	10 56 21.6	-0.9
FNA	Florina	158.92	281	ePKIKP	PKPdf	10 55 43.8	-1.0
FNA				e		10 56 21.6	
BIA	Bitola	158.98	282	eP	PKPab	10 56 25.2	+2.3
SKO	Skopje	158.98	284	ePKPab	PKPab	10 56 21.9	-0.8
SKO	Skopje	158.98	284	P	PKPab	10 56 21.9	-0.8
SKO	Skopje	158.98	284	eP	PKPab	10 56 23.2	+0.5
NIE	Niedzica	158.99	305	ePKPdf	PKPdf	10 55 45.8	+1.2
NIE				ePKPab	PKPab	10 56 25.0	+2.5
NIE				eSS	SS	11 19 47.0	-1.5
NIE	Niedzica	158.99	305	ePKIKP	PKPdf	10 55 45.8	+1.2
NIE				eSS	SS	11 19 47.0	-1.5
VLS	Valsamata	159.05	274	ePKPab	PKPab	10 56 23.2	+0.1
VLS	Valsamata	159.05	274	P	PKPab	10 56 23.2	+0.1
OJC	Ojcow	159.05	308	ePKPdf	PKPdf	10 55 43.8	-0.8
OJC				ePKPab	PKPab	10 56 24.6	+1.9
OJC				ePP	PP	11 00 05.6	+0.6
OJC				eSS	SS	11 19 45.0	-4.0
OJC	Ojcow	159.05	308	ePKPdf	PKPdf	10 55 45.1	+0.5
OJC				ePKPab	PKPab	10 56 22.4	-0.4
OJC	Ojcow	159.05	308	ePKIKP	PKPdf	10 55 43.8	-0.8
OJC				e		11 00 05.6	
OJC				eSS	SS	11 19 45.0	-4.0
KRUS	Krusevo	159.08	283	eP	PKPab	10 56 21.2	-2.0

NEST	Nestorio	159.11	280	P	PKPab	10 56 22.8	-0.7
LKD2	Lefkada island	159.13	275	ePKPab	PKPab	10 56 22.3	-1.2
LKD2	Lefkada island	159.13	275	P	PKPab	10 56 22.3	-1.2
JAN	Janina	159.15	278	ePKPab	PKPab	10 56 23.8	+0.3
JAN	Janina	159.15	278	P	PKPab	10 56 23.8	+0.3
GKP	Gorka Klasztor	159.24	317	ePKPab	PKPab	10 56 23.7	+0.4
GKP	Gorka Klasztor	159.24	317	ePKP2	PKPab	10 56 23.7	+0.4
OHR	Ohrid	159.39	282	eP	PKPab	10 56 23.7	-0.8
PSZ	Piszkesteto	159.62	301	⇓iP	PKPab	10 56 27.4	+2.0
PSZ	Piszkesteto	159.62	301	ePKPab	PKPab	10 56 27.0	+1.6
PSZ	Piszkesteto	159.62	301	⇓PKP2	PKPab	10 56 27.4	+2.0
PHP	Peshkopia	159.71	283	ePKPab	PKPab	10 56 25.0	-1.0
PHP	Peshkopia	159.71	283	P	PKPab	10 56 25.0	-1.0
KEK	Kerkira	159.96	277	ePKPab	PKPab	10 56 26.6	-0.4
KEK	Kerkira	159.96	277	P	PKPab	10 56 26.6	-0.4
TAM	Tamanrasset	160.06	214	ePKPdf	PKPdf	10 55 46.8	-0.1
TAM				ePKPab	PKPab	10 56 28.2	+0.3
TAM	Tamanrasset	160.06	214	ePKIKP	PKPdf	10 55 46.8	-0.1
TAM				e		10 56 28.2	
DIVS	Divibare	160.08	290	ePKPdf	PKPdf	10 55 44.9	-1.2
VYHS	Vyhne	160.17	303	ePKP2	PKPab	10 56 29.2	+1.5
VYHS	Vyhne	160.17	303	ePKP	PKPab	10 56 29.2	+1.5
VYHS				eSS	SS	11 19 50.8	-10
OKC	Ostrava-Krasne	160.18	308	ePKPDF	PKPdf	10 55 46.0	+0.1
OKC				ePP	PP	11 00 18.3	+7.3
OKC				ex	x	11 19 51.9	
OKC	Ostrava-Krasne	160.18	308	ePKIKP	PKPdf	10 55 46.0	+0.1
OKC				e		11 00 18.3	
BUD	Budapest	160.29	300	⇓ePKPdf	PKPab	10 56 30.2	+2.0
MORC	Moravsky Berou	160.57	308	⇑iP	PKPab	10 56 32.0	+2.6
MORC	Moravsky Berou	160.57	308	ePKPdf	PKPdf	10 55 47.0	+0.6
MORC				ePKPab	PKPab	10 56 30.8	+1.4
MORC	Moravsky Berou	160.57	308	ePKIKP	PKPdf	10 55 47.0	+0.6
MORC				e		10 56 30.8	
MORC	Moravsky Berou	160.57	308	ePKP	PKPdf	10 55 47.3	+0.9
MORC				e		10 56 30.9	
PDG	Podgorica	160.63	285	⇑iP	PKPab	10 56 29.7	-0.1
PDG	Podgorica	160.63	285	P	PKPab	10 56 29.6	-0.2
TTG	Podgorica	160.63	285	ePKPab	PKPab	10 56 29.6	-0.2
JAVC	Velka Javorina	160.80	305	ePKP	PKPdf	10 55 48.3	+1.6
JAVC				e		10 56 32.7	
JAVC				e		10 57 30.2	
CSKK	Csˆ‡kako	160.83	300	⇓ePKPdf	PKPab	10 56 33.4	+2.8
H07S1	FLORES T-PHASE	160.87	84	ePKP	PKPab	10 56 31.4	+0.3
KSP	Ksiaz	160.89	312	ePKPab	PKPab	10 56 33.5	+2.8
KSP				eSS	SS	11 20 05.5	-2.5
KSP	Ksiaz	160.89	312	ePKP2	PKPab	10 56 33.5	+2.8
KSP				eSS	SS	11 20 05.5	-2.5
KRLC	Kraliky	160.92	309	epPKP	pPKP	10 57 31.1	
UPC	Upice	161.19	311	ePKPDF	PKPdf	10 55 45.7	-1.3
UPC				ePKPAB	PKPab	10 56 34.5	+2.4
UPC				ePP	PP	11 00 18.3	+2.0
UPC				ex	x	11 20 04.9	
UPC	Upice	161.19	311	ePKIKP	PKPdf	10 55 45.7	-1.3
UPC				e		11 00 18.3	
UPC				eSS	SS	11 20 04.9	-6.4
VRAC	Vranov	161.32	307	⇑iP	PKPab	10 56 35.5	+2.8
VRAC	Vranov	161.32	307	⇑PKP2	PKPab	10 56 35.5	+2.8
VRAC	Vranov	161.32	307	ePKP	PKPdf	10 55 47.7	+0.5
VRAC				e		10 56 34.0	
VRAC				e		10 57 31.7	
KRUC	Moravsky	161.53	307	ePKP	PKPdf	10 55 47.9	+0.5
KRUC				e		10 56 34.8	
KRUC				e		10 57 32.4	
PVCC	Panska Ves	162.01	312	ePKPDF	PKPdf	10 55 46.4	-1.4
PVCC				ex	x	10 57 35.8	
PVCC	Panska Ves	162.01	312	ePKIKP	PKPdf	10 55 46.4	-1.4
BEHE	Becsehely	162.02	298	⇓ePKPdf	PKPab	10 56 38.1	+2.3
BLY	Banja Luka	162.03	293	⇑iP	PKPab	10 56 37.4	+1.5
BLY	Banja Luka	162.03	293	ePKPab	PKPab	10 56 38.2	+2.3
GOPC	GO Pecny, Ondr	162.16	310	ePKPDF	PKPdf	10 55 45.7	-2.3
GOPC				ePKPAB	PKPab	10 56 37.5	+1.2
GOPC				ePP	PP	11 00 24.8	+3.3
GOPC				ex	x	11 04 06.0	
GOPC				ex	x	11 10 29.3	
GOPC				eSS	SS	11 20 23.2	+1.9
GOPC	GO Pecny, Ondr	162.16	310	ePKIKP	PKPdf	10 55 45.7	-2.3
GOPC				e		10 56 37.5	
GOPC				e		11 00 24.8	
GOPC				e		11 04 06.0	
GOPC				eSS	SS	11 20 23.2	+1.9
TIP	Timpagrande	162.19	275	⇑iP	PKPab	10 56 37.5	+0.6
TIP	Timpagrande	162.19	275	ePKPdf	PKPdf	10 55 47.4	-1.1
TIP				ePKPab	PKPab	10 56 36.2	-0.7
TIP				ePKPab	PKPab	10 56 37.5	+0.6
TIP	Timpagrande	162.19	275	P	PKPab	10 56 36.2	-0.7
BRG	Berggiesshubel	162.19	314	ePKP	PKPdf	10 55 48.9	+0.9
	comp=Z,9.8nm,1.0s						
BRG				i pPKP	PKPab	10 56 36.6	+0.2
	comp=Z,47nm,1.0s						
BRG				i sPKP		10 57 30.1	
	comp=Z,60nm,1.2s						
BRG				PP	PP	10 59 47.0	-35
BRG				SS	SS	11 19 19.0	-62
	comp=N,559nm,23.0s						
	comp=E,605nm,24.6s						
	comp=Z,716nm,22.4s						
BRG	Berggiesshubel	162.19	314	ePKIKP	PKPdf	10 55 48.9	+0.9
BRG				i		10 56 36.6	
BRG				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BRG				pmax	pmax		
	comp=Z,47nm,1.0s						
BRG				pmax	pmax		
	comp=N,60nm,1.2s						
BRG				MLR	MLR		
	comp=N,559nm,23.0s						
BRG				MLR	MLR		
	comp=E,605nm,24.6s						
BRG				MLR	MLR		
	comp=Z,716nm,22.4s						
CONA	Conrad Observa	162.24	304	i PKPab	PKPab	10 56 39.2	+2.3
	comp=Z,20nm,1.2s						
CONA				i pPKPab	pPKPab	10 57 34.4	-0.9
	comp=Z,30nm,1.7s						
PRU	Pruhonice	162.27	311	ePKPDF	PKPdf	10 55 45.4	-2.7
PRU				ePKPAB	PKPab	10 56 37.4	+0.6
PRU				ex	x	10 57 38.7	
PRU				ePP	PP	11 00 24.2	+2.2
PRU				ex	x	11 04 00.5	
PRU				eSS	SS	11 20 19.3	-3.1
PRU	Pruhonice	162.27	311	ePKIKP	PKPdf	10 55 45.4	-2.7
PRU				e		10 56 37.4	
PRU				e		11 00 24.2	
PRU				eSS	SS	11 20 19.3	-3.1
MATE	Matera	162.43	279	⇓iP	PKPab	10 56 37.6	-0.2
CLL	Collm	162.48	316	i PKPdf	PKPdf	10 55 48.2	0.0
	comp=Z,12nm,1.4s						
CLL				i PKPab	PKPab	10 56 36.7	-0.9
	comp=Z,35nm,1.1s						
CLL				epPKPab	pPKPab	10 57 36.0	-0.1
	comp=Z,39nm,1.3s						
CLL				ePP	PP	11 00 25.0	+2.0
	comp=N,100nm,20.4s						
CLL				ePP	PP	11 00 25.0	+2.0
	comp=E,200nm,19.6s						
CLL				ePP	PP	11 00 25.0	+2.0
	comp=Z,500nm,17.6s						
CLL				epPP		11 01 22.0	
CLL				eSS	SS	11 20 24.0	-0.3
CLL				eSSS	SSS	11 26 36.0	
PCED	Cedros	162.65	88	ePKP	PKPab	10 56 39.8	+1.0
ARSA	Arzberg	162.66	302	i PKPab	PKPab	10 56 39.9	+1.2
	comp=Z,16nm,1.3s						
ARSA				i pPKPab	pPKPab	10 57 36.0	-1.1
	comp=Z,20nm,0.9s						
PCAN	Candelaria	162.78	88	ePKP	PKPab	10 56 39.8	+0.3
PICO	Pico	162.83	88	ePKP	PKPab	10 56 41.0	+1.2
ROSA	Rosais	163.02	87	ePKP	PKPab	10 56 41.5	+1.0
CUC	Castrocucco	163.03	277	ePKPab	PKPab	10 56 39.3	-1.3
PMAN	Manadas	163.12	88	ePKP	PKPab	10 56 42.4	+1.5
SOKA	Soboth	163.14	300	i PKPab	PKPab	10 56 43.2	+2.3
	comp=Z,16nm,1.2s						
KHC	Kasperske Hory	163.20	309	ePKPDF	PKPdf	10 55 47.0	-2.1
KHC				ex	x	10 56 24.0	
KHC				ePKPAB	PKPab	10 56 39.7	-1.3
KHC				epPKP	pPKPab	10 57 40.7	+1.2
KHC				ePP	PP	11 00 26.8	-0.3
KHC				ex	x	11 04 10.8	
KHC				eSS	SS	11 20 24.5	-7.8
KHC	Kasperske Hory	163.20	309	ePKPab	PKPab	10 56 41.6	+0.6
KHC	Kasperske Hory	163.20	309	ePKIKP	PKPdf	10 55 47.0	-2.1
KHC				e		10 56 39.7	
KHC				e		11 00 26.8	
KHC				eSS	SS	11 20 24.5	-7.8
GEC2	GERESS Array S	163.25	308	ePKPdf	PKPdf	10 55 49.3	+0.1
GEC2				ePKPab	PKPab	10 56 42.5	+1.2
GEC2	GERESS Array S	163.25	308	ePKIKP	PKPdf	10 55 49.3	+0.1
GEC2				e		10 56 42.5	
GERES	GERESS Array B	163.25	308	PKP	PKPdf	10 55 50.6	+1.4
	comp=Z,0.3nm,0.2s,baz=75,slow=1.5,SNR=5.8						
GERES				PKPab	PKPab	10 56 42.4	+1.1
	comp=Z,34nm,1.1s,baz=57,slow=4.9,SNR=26						
GERES				pPKPab	pPKPab	10 57 40.8	+1.1
	comp=Z,12nm,0.9s,baz=52,slow=5.2,SNR=6.3						
GERES				PP	PP	11 00 27.9	+0.5
	comp=Z,1.7nm,0.8s,baz=98,slow=6.1,SNR=2.9						
GEA0	GERESS Array S	163.25	308	ePKPdf	PKPdf	10 55 50.5	+1.2
BOJS	Bojanci	163.26	296	ePKPab	PKPab	10 56 45.1	+3.8
BOJS				epPKPab	pPKPab	10 57 38.7	-1.1
BOJS				ePP	PP	11 00 30.4	+2.8
BOJS				epPP		11 01 23.9	
BOJS				eSS	SS	11 20 29.9	-3.3
PGRA	Graciosa	163.28	87	ePKP	PKPab	10 56 41.2	-0.4
MOA	Molln	163.28	305	i PKPab	PKPab	10 56 42.4	+1.0
	comp=Z,18nm,0.7s,SNR=12						
MOA				i pPKPab	pPKPab	10 57 38.9	-0.9
	comp=Z,58nm,1.3s						
NKC	Novy Kostel	163.34	314	ePKPAB	PKPab	10 56 41.1	-0.4
NKC				eSS	SS	11 20 29.8	-3.6
NKC	Novy Kostel	163.34	314	ePKIKP	PKPdf	10 55 45.1	-4.1
NKC				e		10 56 41.1	
NKC				eSS	SS	11 20 29.8	-3.6
OBKA	Obir	163.50	300	i PKPab	PKPab	10 56 44.3	+1.9
	comp=Z,14nm,1.1s						
OBKA				i pPKPab	pPKPab	10 57 41.7	+0.7
	comp=Z,11nm,1.0s						
INVG	Invergeldie, C	163.55	355	eP	PKPpre	10 55 40.2	
VAE	Valguarnera	163.61	268	pPKP	PKPab	10 56 44.1	+0.9
	comp=Z,55nm,0.8s,baz=120,slow=3.0,SNR=7.2						
LJU	Ljubljana	163.64	298	ePKPab	PKPab	10 56 43.9	+0.9
LJU				epPKPab	pPKPab	10 57 40.2	-1.2
LJU				ePP	PP	11 00 32.1	+2.5
LJU				epPP		11 01 26.4	
LJU				eSS	SS	11 20 40.0	+2.9
PSCM	Serra do Cume	163.88	88	ePKP	PKPab	10 56 44.5	+0.2
MYKA	Terra Mystica	164.07	301	i PKPab	PKPab	10 56 45.4	+0.4
	comp=Z,8.3nm,0.9s						
CADS	Cadrg	164.12	299	ePKPdf	PKPdf	10 55 48.4	-1.7
CADS				ePKPab	PKPab	10 56 43.8	-1.4
CADS				epPKPab	pPKPab	10 57 39.8	-3.8
CADS				eSS	SS	11 20 45.9	+3.8
CADS				e		11 27 02.0	
CADS				e		11 31 33.1	
CADS				e		11 34 05.9	
KBA	Koelnbreinsper	164.12	303	i PKPab	PKPab	10 56 46.2	+1.0
	comp=Z,23nm,1.2s,SNR=5.7						
KBA				i pPKPab	pPKPab	10 57 42.9	-0.9
	comp=Z,13nm,0.9s						
PGBU	Glenifferbraes	164.19	356	eP	PKPdf	10 55 41.4	-8.3
ESK	Eskdalemuir	164.59	353	eP	PKPdf	10 55 41.3	-8.8
PSET	Sete Cidades	164.75	92	ePKP	PKPab	10 56 44.1	-4.1
ABTA	Abfaltersbach	164.77	302	i PKPab	PKPab	10 56 48.6	+0.5
	comp=Z,13nm,0.9s						
ABTA				i pPKPab	pPKPab	10 57 47.6	+1.1
	comp=Z,17nm,1.0s						
CMLA	Cha da Macela	164.89	93	ePKP	PKPab	10 56 35.1	-14
PSMA	Santa Maria	164.98	96	ePKP	PKPab	10 56 48.5	-0.6
WTSB	Winterswijk	165.03	327	eP	PKPab	10 56 48.3	-0.4
	comp=Z,40nm,1.0s						
PSMN	Pico do Norte,	165.03	96	ePKP	PKPab	10 56 48.1	-1.3
WTTA	Wattenberg	165.15	305	i pPKPdf	pPKPdf	10 56 51.2	-1.3
	comp=Z,20nm,0.9s						
WTTA				epPKPab	pPKPab	10 57 48.6	+0.4
	comp=Z,50nm,1.6s						
WATA	Walderalm	165.16	305	i pPKPdf	pPKPdf	10 56 51.9	-0.6
	comp=Z,35nm,1.1s						
BART	Pico Bartolome	165.16	93	ePKP	PKPab	10 56 45.5	-4.6
KESW	Keswick, Cumbr	165.30	353	eP	PKPpre	10 55 42.4	
MOTA	Moosalm	165.45	306	i pPKPdf	PKPab	10 56 51.3	+0.2
	comp=Z,9.2nm,0.6s						
MOTA				i pPKPab	pPKPab	10 57 50.4	+0.8
	comp=Z,42nm,1.0s						
RETA	Reutte	165.60	307	i pPKPdf	PKPab	10 56 50.6	-1.0
	comp=Z,11nm,0.9s						
RETA				i pPKPab	pPKPab	10 57 51.5	+1.3
	comp=Z,6.8nm,0.6s						
HPK	Haverah Park	165.73	349	eP	PKPpre	10 55 42.2	
IOMK	Kirk Michael	165.74	356	eP	PKPpre	10 55 43.1	
FETA	Feichten	165.81	305	i PKPab	PKPab	10 56 54.1	+1.4
	comp=Z,38nm,1.0s,SNR=8.7						
FETA				i pPKPab	pPKPab	10 57 50.5	-0.7
	comp=Z,32nm,1.2s						
DAVA	Damuels	166.23	307	i PKPab	PKPab	10 56 55.9	+1.4
	comp=Z,26nm,0.8s,SNR=7.2						
DAVA				epPKPab	pPKPab	10 57 54.0	+1.0
	comp=Z,30nm,1.0s						
HGN	Heimansgroeve	166.28	325	eP	PKPab	10 56 53.9	-0.4
	comp=Z,73nm,1.4s						
LBWR	Ladybower, Pea	166.29	348	eP	PKPpre	10 55 43.2	
MEM	Membach	166.36	325	⇑P	PKPab	10 56 55.7	+1.0
	comp=Z,38nm,1.0s						
DAVOX	Davos/Dischmat	166.44	305	PKP	PKPdf	10 55 52.0	-0.1
	comp=Z,2.5nm,0.7s,baz=55,slow=13,SNR=3.5						
DAVOX				PKPab	PKPab	10 56 57.9	+2.4
	comp=Z,28nm,0.8s,baz=14,slow=8.9,SNR=15						
DAVOX				pPKPab	pPKPab	10 57 53.0	-1.0
	comp=Z,30nm,0.9s,baz=262,slow=1.1,SNR=2.9						
DAVOX	Davos/Dischmat	166.44	305	PKIKP	PKPdf	10 55 52.0	-0.1
DAVOX				pmax	pmax		
	comp=Z,3.0nm,0.7s						
DAVOX				pmax	pmax		
	comp=Z,28nm,0.8s						
DAVOX				pmax	pmax		
	comp=Z,33nm,1.0s						
WACR	West Acre	166.46	342	eP	PKPpre	10 55 42.4	
WLF1	Llynfaes	166.70	355	eP	PKPpre	10 55 43.8	
BCLA	Clavier	166.80	326	⇑P	PKPab	10 56 56.1	-0.5
	comp=Z,42nm,1.3s						
CWF	Charnwood Fore	166.86	346	eP	PKPpre	10 55 43.5	
KEST	Kesra	166.88	256	PKP	PKPdf	10 55 52.9	+0.2
	comp=Z,3.1nm,0.9s,baz=352,slow=7.1,SNR=3.1						
KEST				PKPab	PKPab	10 56 58.4	+0.7
	comp=Z,49nm,1.1s,baz=104,slow=2.5,SNR=25						
KEST				pPKPab	pPKPab	10 57 54.7	-1.4
	comp=Z,8.6nm,0.6s,baz=185,slow=4.1,SNR=3.9						
KEST				PP	PP	11 00 45.4	-1.3
	comp=Z,76nm,1.3s,baz=100,slow=4.3,SNR=7.1						
KEST	Kesra	166.88	256	ePKPdf	PKPdf	10 55 52.5	-0.2
KEST				PKPab	PKPab	10 56 58.4	+0.7
KEST				PP	PP	11 00 45.4	-1.3
TUE	Stuetta	166.90	304	ePKPdf	PKPdf	10 55 52.6	+0.1
WLF	Walferdange	166.95	322	⇑P	PKPab	10 56 59.9	+2.5
	comp=Z,42nm,1.0s						
FOEL	Foel Wylfa	166.99	352	eP	PKPpre	10 55 43.9	
LLW	Llanuwychllyn	167.08	353	eP	PKPpre	10 55 44.2	
SNF	Seneffe	167.17	328	⇑P	PKPab	10 57 00.7	+2.4
	comp=Z,62nm,1.1s						
HLM1	Long Mynd	167.31	350	eP	PKPpre	10 55 42.9	
DOU	Dourbes	167.35	326	⇓P	PKPab	10 57 00.8	+1.7
	comp=Z,23nm,1.2s						
VAL	Valentia	167.81	12	eP	PKPdf	10 55 52.1	-0.6
MCH1	Michaelchurch	167.84	350	eP	PKPpre	10 55 44.0	
STRD	Stroud	167.93	348	eP	PKPpre	10 55 44.2	
MONM	Monmouth	167.97	349	eP	PKPpre	10 55 44.0	
PMOZ	Porto Moniz, M	168.67	126	ePKPdf	PKPdf	10 55 56.0	+1.9
HTL	Hartland	168.99	354	eP	PKPpre	10 55 45.6	
BNI	Bardonecchia	169.18	302	ePKPdf	PKPdf	10 55 54.9	+0.9
BNI	Bardonecchia	169.18	302	ePKIKP	PKPdf	10 55 54.9	+0.9
MDT	Midelt	172.64	191	PKP	PKPdf	10 55 58.1	+1.9
	comp=Z,2.3nm,0.9s,baz=212,slow=3.7,SNR=4.6						
MDT				pPKP	pPKPdf	10 56 59.7	+1.9
	comp=Z,6.4nm,1.0s,baz=13,slow=3.4,SNR=4.4						
MDT				PKPab	PKPab	10 57 23.0	-0.1
	comp=Z,18nm,0.9s,baz=166,slow=2.3,SNR=11						
MDT				pPKPab	pPKPab	10 58 22.3	+0.9
	comp=Z,24nm,1.0s,baz=168,slow=5.3,SNR=5.7						
PFVI	Vila Bisbo	176.49	146	ePKPdf	PKPdf	10 55 59.5	+2.4
PFVI				i P	pPKPab	10 58 37.6	-0.7
PFVI	Vila Bisbo	176.49	146	ePP	PP	11 01 34.1	+1.3
MORF	Marmelete	176.71	146	ePKP	PKPdf	10 55 57.3	+0.1
MORF	Marmelete	176.71	146	ePKPdf	PKPdf	10 56 02.1	+4.9
MORF				i P	pPKPab	10 58 39.2	-0.2
MORF	Marmelete	176.71	146	ePP	PP	11 01 35.3	+1.4
PBDV	Barranco-do-Ve	176.92	156	ePKPdf	PKPdf	10 56 00.0	+2.8
PBDV				i P	pPKPab	10 58 39.5	-0.7
PBDV	Barranco-do-Ve	176.92	156	ePP	PP	11 01 39.5	+4.8
PCVE	Castro Verde	177.24	151	ePKPdf	PKPdf	10 56 00.5	+3.3
PCVE				i P	pPKPab	10 58 40.9	-0.7
MESJ	Messejana	177.34	146	ePKP	PKPdf	10 55 57.3	+0.1
MESJ				ePP	PP	11 01 37.6	+0.8
MESJ	Messejana	177.34	146	ePKPdf	PKPdf	10 55 58.6	+1.4
MESJ				i P	pPKPab	10 58 41.9	-0.2
LIS	Lisbon	177.44	121	ePP	PP	11 01 38.0	0.0
PMAFR	Mafra	177.47	115	ePKPdf	PKPdf	10 56 01.2	+4.0
PMAFR	Mafra	177.47	115	ePP	PP	11 01 40.3	+2.0
PGAV	Gavieira, Arco	177.60	37	ePKPdf	PKPdf	10 55 58.9	+1.6
PGAV	Gavieira, Arco	177.60	37	ePP	PP	11 01 35.0	-3.3
PCAB	Cabril	177.91	37	ePP	PP	11 01 37.4	-2.3
EVO	Evora	178.00	139	ePKPdf	PKPdf	10 55 58.7	+1.4
EVO				i P	pPKPab	10 58 44.0	-1.0
EVO	Evora	178.00	139	ePP	PP	11 01 50.6	+11
ALMR	Almeirim	178.05	117	ePP	PP	11 01 40.9	0.0
ALMR	Almeirim	178.05	117	ePP	PP	11 01 49.8	+8.9
ESDC	Sonseca Array	178.13	259	PKP	PKPdf	10 55 57.0	-0.4
	comp=Z,3.5nm,0.9s,baz=352,slow=2.0,SNR=12						
ESDC				pPKP	pPKP	10 57 00.3	
	comp=Z,1.6nm,0.7s,baz=354,slow=1.3,SNR=2.7						
ESDC				PKPab	PKPab	10 57 46.5	
	comp=Z,32nm,1.0s,baz=91,slow=3.6,SNR=16						
ESDC				PP	PP	11 01 39.1	-2.6
	comp=Z,2.5nm,0.8s,baz=72,slow=3.7,SNR=6.0						
ESLA	Sonseca Array	178.13	259	ePKPdf	PKPdf	10 55 58.5	+1.1
PBRG	Braganca	178.23	10	ePKPdf	PKPdf	10 55 58.7	+1.4
PBRG				i P	sPKPab	10 58 59.9	-11
PBRG	Braganca	178.23	10	ePP	PP	11 01 36.8	-3.9
PMTG	Montargil	178.24	124	ePKPdf	PKPdf	10 55 58.8	+1.5
PMTG				i P	pPKPab	10 58 46.2	0.0
PMTG	Montargil	178.24	124	ePP	PP	11 01 46.3	+4.6
POLO	Lamas de Olo	178.28	40	ePKPdf	PKPdf	10 55 59.1	+1.7
POLO	Lamas de Olo	178.28	40	ePP	PP	11 01 38.6	-3.0
PCAS	Casmilo, Conde	178.34	90	ePKPdf	PKPdf	10 56 00.4	+3.1
PCAS	Casmilo, Conde	178.34	90	ePP	PP	11 01 42.1	-0.6
PTOM	Tomar	178.35	105	ePP	PP	11 01 44.0	+1.4
PAB	San Pablo	178.38	252	ePKPdf	PKPdf	10 55 59.4	+2.0
PAB	San Pablo	178.38	252	ePKIKP	PKPdf	10 55 59.4	+2.0
PVRL	Vila Real	178.40	40	ePP	PP	11 01 39.8	-2.3
COI	Coimbra	178.40	84	ePKPdf	PKPdf	10 56 01.1	+3.8
COI	Coimbra	178.40	84	ePP	PP	11 01 41.7	-1.2
PESTR	Estremoz	178.47	141	ePKPdf	PKPdf	10 55 58.7	+1.3
PESTR				i P	pPKPab	10 58 46.3	-0.8
PESTR	Estremoz	178.47	141	ePP	PP	11 01 42.6	+0.3
PVIS	Viseu	178.64	61	ePKPdf	PKPdf	10 55 59.6	+2.2
PVIS	Viseu	178.64	61	ePP	PP	11 01 44.7	+0.9
MVO	Moncorvo	178.78	25	ePKPdf	PKPdf	10 56 01.9	+4.5
MVO	Moncorvo	178.78	25	ePP	PP	11 01 40.4	-3.1
PMRV	Marv??o	178.97	128	ePKPdf	PKPdf	10 55 58.7	+1.3
PMRV				i P	pPKPab	10 58 48.6	-0.9
PMRV	Marv??o	178.97	128	ePP	PP	11 01 45.3	+0.3
MTE	Manteigas	179.02	69	ePKPdf	PKPdf	10 56 01.0	+3.6
MTE	Manteigas	179.02	69	ePP	PP	11 01 45.0	-0.7
PCBR	Castelo Branco	179.10	104	ePKPdf	PKPdf	10 55 59.2	+1.9
PCBR	Castelo Branco	179.10	104	ePP	PP	11 01 46.2	+0.1

ISCJB ***03*** *10:44:59.5±0.4, 40°.01S±0°.03×173°.64E±0°.05, h236^{km}±3^{km}, mb3.5/2, Error ellipse: s-maj=6.7km s-min=3.7km az=29.6*
IDC ***03*** *10:44:59.6±1.5, 40°.10S×173°.87E, h233^{km}±23^{km}, mb3.2/2, mb1 3.7/4, mbtmp4.1/4, mb1mx3.4/45, Error ellipse: s-maj=53.2km s-min=23.8km az=144.0*
WEL ***03*** *10:45:00.1, 40°S±3°×17°4E±°, h239^{km}±6^{km}*
NEIC ***03*** *10:45:01.3±0.0, 40°.03S×173°.72E, h228^{km}, ML4.6(WEL), After WEL.*
ISC 03 10:44:59.3±1.0, **40°.04S**±0°.04×**173°.70E**±0°.05, **h240**^{km}±6^{km}, **n171,**σ1^{s}**03**/186, **Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NMEZ	Namu Road	0.64	12	P	Pn	10 45 32.4	+0.8
NMEZ				S	S	10 45 56.1	-0.8
PREZ	Palmer Road	0.78	27	Pn	Pn	10 45 32.9	+0.6
PREZ				Sn	S	10 45 56.8	-1.3
PREZ	Palmer Road	0.78	27	P	Pn	10 45 32.9	+0.6
KHEZ	Kahui Hut	0.78	18	Pn	Pn	10 45 33.1	+0.8
KHEZ				Sn	S	10 45 56.9	-1.3
KHEZ	Kahui Hut	0.78	18	P	Pn	10 45 33.2	+0.8
KHEZ				S	S	10 45 57.3	-0.9
DUWZ	D’Urville Isla	0.78	168	P	Pn	10 45 33.2	+1.0
LREZ	Lake Rotokare	0.79	43	P	Pn	10 45 33.1	+0.8
LREZ				S	S	10 45 57.2	-0.8
NEZ	North Egmont	0.82	22	Pn	Pn	10 45 33.1	+0.5
PKE	Pukeiti	0.87	15	P	Pn	10 45 33.9	+1.2
DREZ	Durham Road	0.93	25	P	Pn	10 45 33.6	+0.6
DREZ				S	S	10 45 57.9	-1.5
WAZ	Wanganui	1.03	75	Pn	Pn	10 45 34.9	+1.4
WAZ	Wanganui	1.03	75	P	Pn	10 45 35.0	+1.5
MHEZ	Mangahewa	1.07	27	P	Pn	10 45 34.6	+0.8
MHEZ				S	S	10 45 59.6	-1.2
QRZ	Quartz Range	1.19	228	Pn	Pn	10 45 34.9	+0.4
QRZ				Sn	S	10 45 59.6	-2.5
QRZ	Quartz Range	1.19	228	P	Pn	10 45 34.9	+0.4
QRZ				S	S	10 45 59.5	-2.5
NNZ	Nelson	1.21	192	Pn	Pn	10 45 35.2	+0.7
NNZ				Sn	S	10 46 00.5	-1.8
NNZ	Nelson	1.21	192	P	Pn	10 45 35.4	+0.9
VRZ	Vera Road	1.22	42	Pn	Pn	10 45 34.7	0.0
VRZ				Sn	S	10 46 00.3	-2.2
VRZ	Vera Road	1.22	42	P	Pn	10 45 34.8	0.0
VRZ				S	S	10 46 00.3	-2.2
KIW	Kapiti Island	1.24	132	Pn	Pn	10 45 35.6	+0.8
KIW	Kapiti Island	1.24	132	P	Pn	10 45 35.5	+0.8
OHWZ	Ohakea	1.25	98	P	Pn	10 45 36.1	+1.3
TCW	Tory Channel	1.25	160	Pn	Pn	10 45 35.9	+1.1
TCW	Tory Channel	1.25	160	P	Pn	10 45 36.0	+1.1
OGWZ	Otaki Gorge	1.37	125	Pn	Pn	10 45 36.6	+1.0
OGWZ	Otaki Gorge	1.37	125	P	Pn	10 45 36.7	+1.0
TUWZ	Tuamarina	1.40	173	Pn	Pn	10 45 37.0	+1.1
TUWZ	Tuamarina	1.40	173	P	Pn	10 45 37.0	+1.1
PKVZ	Pokaka	1.47	60	Pn	Pn	10 45 37.0	+0.4
PKVZ	Pokaka	1.47	60	P	Pn	10 45 37.0	+0.4
SNZO	South Karori	1.48	149	ePn	Pn	10 45 37.4	+0.9
SNZO				eS	S	10 46 04.4	-1.4
WEL	Wellington	1.49	147	Pn	Pn	10 45 37.3	+0.8
CAW	Cannon Point	1.49	136	Pn	Pn	10 45 37.5	+0.9
CAW	Cannon Point	1.49	136	P	Pn	10 45 37.5	+0.9
MTVZ	Mangateitei	1.51	65	Pn	Pn	10 45 37.4	+0.5
MTVZ	Mangateitei	1.51	65	P	Pn	10 45 37.5	+0.5
MRZ	Mangatainoka R	1.56	114	Pn	Pn	10 45 37.9	+0.7
MRZ	Mangatainoka R	1.56	114	P	Pn	10 45 38.0	+0.8
TRVZ	Turoa	1.60	63	Pn	Pn	10 45 38.2	+0.4
TRVZ	Turoa	1.60	63	P	Pn	10 45 38.3	+0.4
POWZ	Post Office Ro	1.62	103	P	Pn	10 45 38.6	+0.9
WNVZ	Wahianoa	1.63	65	Pn	Pn	10 45 38.5	+0.6
DRZ	Dome Shelter	1.63	63	Pn	Pn	10 45 38.6	+0.5
DRZ	Dome Shelter	1.63	63	P	Pn	10 45 38.6	+0.5
FWVZ	Far West T-bar	1.63	62	Pn	Pn	10 45 38.3	+0.2
FWVZ	Far West T-bar	1.63	62	P	Pn	10 45 38.4	+0.3
HOWZ	Holdsworth Sta	1.63	122	Pn	Pn	10 45 38.4	+0.7
HOWZ	Holdsworth Sta	1.63	122	P	Pn	10 45 38.6	+0.8
BHW	Baring Head	1.63	147	Pn	Pn	10 45 38.3	+0.6
BHW	Baring Head	1.63	147	P	Pn	10 45 38.3	+0.6
WHVZ	Whangaehu Hut	1.64	63	Pn	Pn	10 45 38.5	+0.4
WHVZ	Whangaehu Hut	1.64	63	P	Pn	10 45 38.6	+0.4
COVZ	Chateau Observ	1.65	60	P	Pn	10 45 38.4	+0.3
TWVZ	Taurewa	1.65	55	Pn	Pn	10 45 38.2	+0.1
TWVZ	Taurewa	1.65	55	P	Pn	10 45 38.2	+0.1
BSWZ	Blackbirch Sta	1.68	176	P	Pn	10 45 39.2	+1.0
TUVZ	Tukino	1.69	64	Pn	Pn	10 45 39.1	+0.7
TUVZ	Tukino	1.69	64	P	Pn	10 45 39.2	+0.7
NGZ	Ngauruhoe	1.70	60	Pn	Pn	10 45 38.8	+0.3
NGZ	Ngauruhoe	1.70	60	P	Pn	10 45 38.9	+0.3
MOVZ	Moawhango	1.70	69	Pn	Pn	10 45 38.6	+0.2
MOVZ	Moawhango	1.70	69	P	Pn	10 45 38.7	+0.2
WTVZ	West Tongariro	1.73	58	P	Pn	10 45 39.1	+0.4
TSZ	Takapari Road	1.73	91	P	Pn	10 45 39.6	+1.0
CMWZ	Cape Campbell	1.75	167	P	Pn	10 45 39.8	+1.1
HIZ	Hauiti	1.77	31	Pn	Pn	10 45 38.5	-0.4
HIZ	Hauiti	1.77	31	P	Pn	10 45 38.7	-0.2
KRVZ	Karewarewa	1.77	59	P	Pn	10 45 39.5	+0.4
MTW	Mount Morrison	1.77	130	P	Pn	10 45 39.8	+0.9
MSWZ	Moikau Station	1.81	140	P	Pn	10 45 40.0	+0.8
PRWZ	Pori Road	1.81	107	P	Pn	10 45 40.7	+1.4
TIWZ	Tintock	1.82	115	P	Pn	10 45 40.4	+1.0
THZ	Tophouse	1.83	199	P	Pn	10 45 40.2	+0.8
KATZ	Kakaramea	1.87	56	P	Pn	10 45 40.6	+0.6

PAWZ	Paruwai Farm	1.88	136	P	Pn	10 45 40.7	+0.8
BHHZ	Black Hill Sta	1.90	74	Pn	Pn	10 45 40.2	+0.1
BHHZ	Black Hill Sta	1.90	74	P	Pn	10 45 40.3	+0.1
DVHZ	Dannevirke	1.91	99	Pn	Pn	10 45 41.1	+1.0
DVHZ	Dannevirke	1.91	99	P	Pn	10 45 41.2	+1.0
PNHZ	Pukenui	1.92	87	P	Pn	10 45 41.2	+0.9
PLWZ	Palliser	1.93	143	P	Pn	10 45 41.1	+0.8
RITZ	Rihia Road	1.98	58	P	Pn	10 45 41.5	+0.6
TMWZ	Te Maipa	1.98	123	Pn	Pn	10 45 41.9	+1.1
TMWZ	Te Maipa	1.98	123	P	Pn	10 45 41.9	+1.1
RATZ	Rangitukua	1.98	55	P	Pn	10 45 41.4	+0.5
TRWZ	Traveller	2.03	133	P	Pn	10 45 42.3	+1.0
BFZ	Birch Farm	2.05	109	P	Pn	10 45 42.5	+1.1
WATZ	Wairara	2.06	51	Pn	Pn	10 45 41.8	+0.2
WATZ	Wairara	2.06	51	P	Pn	10 45 41.9	+0.2
KRHZ	Kereru	2.09	80	P	Pn	10 45 42.3	+0.4
CPWZ	Castlepoint	2.10	115	Pn	Pn	10 45 43.5	+1.6
CPWZ	Castlepoint	2.10	115	P	Pn	10 45 43.5	+1.6
WPHZ	Waipukurau	2.10	92	P	Pn	10 45 43.2	+1.2
ANWZ	Angora Road	2.17	102	P	Pn	10 45 44.1	+1.6
HATZ	Hinemaiaia	2.18	59	P	Pn	10 45 42.6	-0.1
KWHZ	Kaweka Forest	2.19	75	P	Pn	10 45 43.8	+1.0
WHTZ	Whakaora	2.22	53	P	Pn	10 45 43.9	+0.7
DSZ	Denniston Nort	2.23	219	P	Pn	10 45 43.6	+0.5
KUTZ	Kaahu Road	2.26	48	P	Pn	10 45 43.8	+0.2
PRHZ	Porangahau	2.26	97	P	Pn	10 45 44.9	+1.4
BKZ	Black Stump Fm	2.33	69	P	Pn	10 45 44.5	+0.3
KHZ	Kahutara	2.38	183	P	Pn	10 45 45.1	+0.6
MCHZ	McNeill Hill	2.38	77	P	Pn	10 45 46.2	+1.5
MRHZ	Matea Rd	2.42	61	P	Pn	10 45 44.9	-0.3
PXZ	Pawanui	2.43	91	P	Pn	10 45 46.3	+1.2
WPRZ	Whakapapatarin	2.44	52	P	Pn	10 45 45.7	+0.4
KAHZ	Kahuranaki	2.46	85	P	Pn	10 45 47.0	+1.5
GRRZ	Galatos Road	2.52	49	P	Pn	10 45 46.3	+0.1
ALRZ	Allen Road	2.52	55	Pn	Pn	10 45 45.8	-0.3
ALRZ	Allen Road	2.52	55	P	Pn	10 45 45.8	-0.3
NMHZ	Naumai	2.58	70	P	Pn	10 45 48.1	+1.3
HRRZ	Handcock Road	2.59	51	P	Pn	10 45 47.1	+0.1
HSRZ	Hossack Road	2.62	50	P	Pn	10 45 47.1	-0.1
CKHZ	Cape Kidnapper	2.63	83	Pn	Pn	10 45 48.6	+1.5
CKHZ	Cape Kidnapper	2.63	83	P	Pn	10 45 48.7	+1.5
ARHZ	Aropaoanui	2.66	74	Pn	Pn	10 45 48.6	+1.1
ARHZ	Aropaoanui	2.66	74	P	Pn	10 45 48.7	+1.1
UTU	Utuhina	2.69	47	P	Pn	10 45 48.2	+0.4
TOZ	Tahuroa Road	2.70	32	P	Pn	10 45 47.5	-0.4
MTHZ	Maungataniwha	2.70	65	P	Pn	10 45 48.2	+0.2
HLRZ	Highlands Stat	2.73	50	P	Pn	10 45 48.9	+0.6
NGRZ	Ngongotaha	2.73	46	P	Pn	10 45 48.7	+0.3
RRRZ	Republican Roa	2.77	53	P	Pn	10 45 48.5	-0.2
OMRZ	Omania	2.83	48	P	Pn	10 45 49.4	-0.1
MUGZ	Murupara	2.85	58	P	Pn	10 45 49.0	-0.5
RAHZ	Arahi	2.85	68	P	Pn	10 45 50.3	+0.7
WHHZ	Waihua	2.90	72	P	Pn	10 45 51.1	+1.1
LTZ	Lake Taylor	2.95	201	P	Pn	10 45 50.9	+0.3
AWAZ	Awhitu Peninsu	3.06	14	P	Pn	10 45 52.2	+0.4
KBAZ	Karaka Road Bo	3.08	18	P	Pn	10 45 52.7	+0.6
SNGZ	Shannon Statio	3.08	67	P	Pn	10 45 52.9	+0.8
OPRZ	Ohinepanea	3.12	46	P	Pn	10 45 52.3	-0.3
MKAZ	Moumakai	3.14	22	P	Pn	10 45 53.1	+0.3
WTAZ	Waiatarua	3.17	13	P	Pn	10 45 53.8	+0.6
INZ	Inchbonnie	3.18	212	P	Pn	10 45 53.3	+0.2
URZ	Urewera	3.19	57	P	Pn	10 45 52.4	-0.9
	66nm,0.3s,baz=247,slow=3.2,SNR=164						
URZ				S	S	10 46 30.5	-5.4
	33nm,0.3s,baz=254,slow=20,SNR=12						
URZ	Urewera	3.19	57	P	Pn	10 45 52.5	-0.9
ETAZ	East Tamaki Re	3.23	18	P	Pn	10 45 54.0	+0.3
KNZ	Kokohu	3.23	73	P	Pn	10 45 54.4	+0.6
RAGZ	Rawiri	3.27	63	Pn	Pn	10 45 54.2	-0.1
RAGZ	Rawiri	3.27	63	P	Pn	10 45 54.2	-0.1
RVAZ	Riverhead Bore	3.33	12	P	Pn	10 45 55.4	+0.4
MHGZ	Mahia Peninsul	3.37	76	Pn	Pn	10 45 56.4	+1.1
MHGZ	Mahia Peninsul	3.37	76	P	Pn	10 45 56.5	+1.1
RIGZ	Rimuhau	3.42	68	P	Pn	10 45 56.4	+0.5
PRGZ	Paritu Road	3.42	72	P	Pn	10 45 56.7	+0.7
MWZ	Matawai	3.42	61	P	Pn	10 45 55.5	-0.5
WIAZ	Waiheke Island	3.43	20	P	Pn	10 45 56.5	+0.4
OXZ	Oxford	3.52	200	P	Pn	10 45 56.7	-0.2
EYCZ	Eyrewell	3.53	196	P	Pn	10 45 57.0	0.0
ABAZ	Army Bay	3.54	15	P	Pn	10 45 57.8	+0.4
TKGZ	Te Karaka	3.59	65	P	Pn	10 45 58.1	+0.2
OKCZ	Okains Bay	3.71	187	P	Pn	10 45 59.1	-0.1
RUGZ	Raukumara Rang	3.73	58	P	Pn	10 45 58.1	-1.5
MQZ	McQueen's Vall	3.75	192	P	Pn	10 45 59.1	-0.5
WVZ	Waitaha Valley	3.76	215	P	Pn	10 45 59.8	0.0
TWGZ	Tauwhareparae	3.81	62	P	Pn	10 46 00.5	0.0
CNGZ	Carnagh Statio	3.83	68	P	Pn	10 46 01.4	+0.7
AKCZ	Akaroa Harbour	3.88	188	P	Pn	10 46 01.0	-0.2
HAZ	Te Kaha	3.92	56	P	Pn	10 46 00.2	-1.5
PUZ	Puketiti	4.05	63	P	Pn	10 46 02.8	-0.5
RPZ	Rata Peaks	4.17	207	P	Pn	10 46 04.6	-0.1
	28nm,0.3s,baz=30,slow=3.5,SNR=65						
RPZ				S	S	10 46 52.2	-4.3
	33nm,0.3s,baz=20,slow=14,SNR=23						
RPZ	Rata Peaks	4.17	207	P	Pn	10 46 04.6	-0.1
WMGZ	Waiomatatini S	4.29	60	P	Pn	10 46 05.3	-0.8
MXZ	Matakaoa Point	4.36	57	Pn	Pn	10 46 06.3	-0.7
MXZ	Matakaoa Point	4.36	57	P	Pn	10 46 06.3	-0.7
FOZ	Fox Glacier	4.54	218	P	Pn	10 46 08.3	-0.7
OUZ	Omahuta	4.81	359	P	Pn	10 46 13.4	+0.9
ASAR	Alice Springs	37.19	284	P	P	10 51 50.1	+2.4
	0.7nm,0.7s,baz=110,slow=6.2,SNR=2.2						
WRA	Warramunga Arr	39.13	289	P	P	10 52 05.5	+1.6
	2.3nm,1.0s,baz=130,slow=6.7,SNR=2.7						
ARCES	ARCESS Array B	146.03	341	PKPbc	PKPbc	11 04 10.2	+0.5
	7.7nm,1.2s,baz=72,slow=2.9,SNR=6.5						

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*ISCJB **03** 10:50:11.9±0.7, 37°.05N±0°.03×16°.08E±0°.04, h23^{km}±5^{km}, Error ellipse: s-maj=6.1km s-min=4.6km az=153.9*

*ROM **03** 10:50:13.5±0.2, 37°.129N±0°.007×15°.94E±0°.01, h23^{km}±1^{km}, ML2.9/30*

*THE **03** 10:50:18.2, 37°.49N×16°.64E, h0^{km}±6^{km}, ML2.8/3, Error ellipse: s-maj=10.7km s-min=1.3km az=219.0*

ISC 03 10:50:12.1±1.5**, 37°.03N**±0°.06×**16°.07E**±0°.05**, h46**^{km}±38^{km}**, n44,** σ1^{s}.**68**/56**, Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGST	Augusta-Monte	0.71	289	P	Pn	10 50 25.5	-0.4
HAVL	Avola	0.76	265	*i* P	Pn	10 50 26.9	+0.3
HAVL				AML	AML		
	comp=E,3375µm,0.2s						
HAVL				AML	AML		
	comp=N,3430µm,0.2s						
HAVL				AML	AML		
	comp=E,3375µm,0.2s						
HAVL				AML	AML		
	comp=N,3430µm,0.2s						
HAVL				AML	AML		
	comp=E,3375µm,0.2s						
HAVL				AML	AML		
	comp=N,3430µm,0.2s						
HAVL				AML	AML		
	comp=N,3430µm,0.2s						
HAVL				AML	AML		
	comp=E,3375µm,0.2s						
HAGA	Augusta	0.78	290	*i* P	Pn	10 50 26.4	-0.3
HAGA				AML	AML		
	comp=E,998µm,0.5s						
HAGA				AML	AML		
	comp=N,922µm,0.5s						
HAGA				AML	AML		
	comp=E,998µm,0.5s						
HAGA				AML	AML		
	comp=N,922µm,0.5s						
HAGA				AML	AML		
	comp=E,998µm,0.5s						
HAGA				AML	AML		
	comp=N,922µm,0.5s						
HAGA				AML	AML		
	comp=E,998µm,0.5s						
HAGA				AML	AML		
	comp=N,922µm,0.5s						
SSY	Sortino	0.81	279	*e*P	Pn	10 50 27.5	+0.3
SSY				S	Sn	10 50 36.5	-1.7
SSY				AML	AML		
	comp=E,1211µm,0.5s						
SSY				AML	AML		
	comp=N,2325µm,0.4s						
SSY				AML	AML		
	comp=E,1211µm,0.5s						
SSY				AML	AML		
	comp=N,2325µm,0.4s						
SSY				AML	AML		
	comp=E,1211µm,0.5s						
SSY				AML	AML		
	comp=N,2325µm,0.4s						
HCRL	Carlentini	0.87	287	P	Pn	10 50 27.9	-0.1
HCRL				S	Sn	10 50 37.9	-1.7
HCRL				AML	AML		
	comp=E,7225µm,0.7s						
HCRL				AML	AML		
	comp=N,3240µm,0.1s						
HCRL				AML	AML		
	comp=E,7225µm,0.7s						
HCRL				AML	AML		
	comp=N,3240µm,0.1s						
HCRL				AML	AML		
	comp=E,7225µm,0.7s						
HCRL				AML	AML		
	comp=N,3240µm,0.1s						
MEU	Monte Lauro	0.92	275	P	Pn	10 50 29.8	+1.1
MPAZ	Palizzi	0.93	357	P	Pn	10 50 29.9	+1.1
MPAZ				AML	AML		
	comp=E,740µm,0.4s						
MPAZ				AML	AML		
	comp=N,696µm,0.4s						
MPAZ				AML	AML		
	comp=E,740µm,0.4s						
MPAZ				AML	AML		
	comp=N,696µm,0.4s						
MPAZ				AML	AML		
	comp=E,740µm,0.4s						
MPAZ				AML	AML		
	comp=N,696µm,0.4s						
MPAZ				AML	AML		
	comp=E,740µm,0.4s						
MPAZ				AML	AML		
	comp=N,696µm,0.4s						
HLNI	Lentini	1.01	289	P	Pn	10 50 29.9	0.0
HLNI				AML	AML		
	comp=E,3450µm,0.6s						
HLNI				AML	AML		
	comp=N,2945µm,0.2s						
HLNI				AML	AML		
	comp=E,3450µm,0.6s						
HLNI				AML	AML		
	comp=N,2945µm,0.2s						
HLNI				AML	AML		
	comp=E,3450µm,0.6s						
HLNI				AML	AML		
	comp=N,2945µm,0.2s						
HLNI				AML	AML		
	comp=N,2945µm,0.2s						
HLNI				AML	AML		
	comp=E,3450µm,0.6s						
MTTG	Motta San Giov	1.02	343	P	Pn	10 50 30.8	+0.7
MTTG				S	Sn	10 50 42.7	-0.6
MTTG				AML	AML		
	comp=E,291µm,1.0s						
MTTG				AML	AML		
	comp=N,278µm,0.5s						
MTTG				AML	AML		
	comp=E,291µm,1.0s						
MTTG				AML	AML		
	comp=N,278µm,0.5s						
MTTG				AML	AML		
	comp=N,278µm,0.5s						
MTTG				AML	AML		
	comp=E,291µm,1.0s						
HMDC	Modica	1.03	267	*i* P	Pn	10 50 30.8	+0.5
HMDC				AML	AML		
	comp=E,1415µm,0.6s						
HMDC				AML	AML		
	comp=N,926µm,0.2s						
HMDC				AML	AML		
	comp=E,1415µm,0.6s						
HMDC				AML	AML		
	comp=N,926µm,0.2s						
HMDC				AML	AML		
	comp=E,1415µm,0.6s						
HMDC				AML	AML		
	comp=N,926µm,0.2s						
HMDC				AML	AML		
	comp=E,1415µm,0.6s						
HMDC				AML	AML		
	comp=N,926µm,0.2s						
SOI	Samo	1.04	359	P	Pn	10 50 31.3	+1.0
SOI				S	Sn	10 50 44.7	+0.9
SOI				AML	AML		
	comp=E,388µm,1.2s						
SOI				AML	AML		
	comp=N,272µm,1.1s						
SOI				AML	AML		
	comp=E,388µm,1.2s						
SOI				AML	AML		
	comp=N,272µm,1.1s						
SOI				AML	AML		
	comp=E,388µm,1.2s						
SOI				AML	AML		
	comp=N,272µm,1.1s						
HVZN	Vizzini	1.10	278	P	Pn	10 50 31.5	+0.4
HVZN				AML	AML		
	comp=E,2000µm,0.5s						
HVZN				AML	AML		
	comp=N,3960µm,0.5s						
HVZN				AML	AML		
	comp=E,2000µm,0.5s						
HVZN				AML	AML		
	comp=N,3960µm,0.5s						
HVZN				AML	AML		
	comp=E,2000µm,0.5s						
HVZN				AML	AML		
	comp=N,3960µm,0.5s						
GMB	Gambarie	1.16	350	P	Pn	10 50 32.9	+0.9
GMB				S	Sn	10 50 46.7	-0.1
GMB				AML	AML		
	comp=E,5085µm,0.7s						
GMB				AML	AML		
	comp=N,2860µm,0.2s						
GMB				AML	AML		
	comp=E,5085µm,0.7s						
GMB				AML	AML		
	comp=N,2860µm,0.2s						
GMB				AML	AML		
	comp=E,5085µm,0.7s						
GMB				AML	AML		
	comp=N,2860µm,0.2s						
ECNV	Catenanuova	1.22	298	P	Pn	10 50 34.2	+1.4
MCSR	Castroreale	1.23	328	P	Pn	10 50 33.4	+0.5
MCSR				AML	AML		
	comp=E,972µm,0.3s						
MCSR				AML	AML		
	comp=N,983µm,0.3s						
MCSR				AML	AML		
	comp=E,972µm,0.3s						
MCSR				AML	AML		
	comp=N,983µm,0.3s						
MCSR				AML	AML		
	comp=N,983µm,0.3s						
MCSR				AML	AML		
	comp=E,972µm,0.3s						
MSCL	Scilla	1.23	350	P	Pn	10 50 33.8	+0.9
MSCL				AML	AML		
	comp=E,1040µm,0.8s						
MSCL				AML	AML		
	comp=N,1300µm,0.5s						
MSCL				AML	AML		
	comp=E,1040µm,0.8s						
MSCL				AML	AML		
	comp=N,1300µm,0.5s						
MSCL				AML	AML		
	comp=N,1300µm,0.5s						
MSCL				AML	AML		
	comp=E,1040µm,0.8s						
ATN	Antennamare	1.23	337	P	Pn	10 50 33.8	+0.8
ATN				S	Sn	10 50 49.1	+0.6
ATN				AML	AML		
	comp=E,946µm,0.3s						
ATN				AML	AML		
	comp=N,550µm,1.0s						
ATN				AML	AML		
	comp=E,946µm,0.3s						
ATN				AML	AML		
	comp=N,550µm,1.0s						
ATN				AML	AML		
	comp=E,946µm,0.3s						
ATN				AML	AML		
	comp=N,550µm,1.0s						
CEL	Celeste	1.24	354	P	Pn	10 50 34.4	+1.3
CEL				S	Sn	10 50 49.7	+1.0
NOV	Novara	1.25	324	P	Pn	10 50 33.8	+0.6
NOV				AML	AML		
	comp=E,348µm,1.5s						
NOV				AML	AML		
	comp=N,382µm,0.3s						
NOV				AML	AML		
	comp=E,348µm,1.5s						
NOV				AML	AML		
	comp=N,382µm,0.3s						
NOV				AML	AML		
	comp=N,382µm,0.3s						
NOV				AML	AML		
	comp=E,348µm,1.5s						
MPNC	Port Mandanici	1.25	333	P	Pn	10 50 33.9	+0.6
MPNC				AML	AML		
	comp=E,558µm,0.5s						
MPNC				AML	AML		
	comp=N,828µm,0.3s						
MPNC				AML	AML		
	comp=E,558µm,0.5s						
MPNC				AML	AML		
	comp=N,828µm,0.3s						
MPNC				AML	AML		
	comp=N,828µm,0.3s						
MPNC				AML	AML		
	comp=E,558µm,0.5s						
MSRU	Castanea	1.31	340	P	Pn	10 50 35.5	+1.5
MSRU				S	Sn	10 50 51.3	+0.9
MSRU				AML	AML		
	comp=E,692µm,0.4s						
MSRU				AML	AML		
	comp=N,582µm,0.3s						
MSRU				AML	AML		
	comp=E,692µm,0.4s						
MSRU				AML	AML		
	comp=N,582µm,0.3s						
MSRU				AML	AML		
	comp=N,582µm,0.3s						
MSRU				AML	AML		
	comp=E,692µm,0.4s						
GALF	Gagliano Caste	1.38	300	P	Pn	10 50 36.5	+1.5
GALF				S	Sn	10 50 53.8	+1.7
GALF				AML	AML		
	comp=E,390µm,0.6s						
GALF				AML	AML		
	comp=N,475µm,0.7s						
GALF				AML	AML		
	comp=E,390µm,0.6s						
GALF				AML	AML		
	comp=N,475µm,0.7s						
GALF				AML	AML		
	comp=E,390µm,0.6s						
GALF				AML	AML		
	comp=N,475µm,0.7s						
CAGR	Agira	1.39	296	P	Pn	10 50 36.9	+1.9
CAGR				AML	AML		
	comp=E,536µm,1.1s						
CAGR				AML	AML		
	comp=N,649µm,0.3s						
CAGR				AML	AML		
	comp=E,536µm,1.1s						
CAGR				AML	AML		
	comp=N,649µm,0.3s						
CAGR				AML	AML		
	comp=N,649µm,0.3s						
CAGR				AML	AML		
	comp=E,536µm,1.1s						
MILZ	Milazzo	1.41	332	P	Pn	10 50 36.4	+1.1
MILZ				S	Sn	10 50 53.1	+0.4
MILZ				AML	AML		
	comp=E,516µm,0.7s						
MILZ				AML	AML		
	comp=N,662µm,0.4s						
MILZ				AML	AML		
	comp=E,516µm,0.7s						
MILZ				AML	AML		
	comp=N,662µm,0.4s						
MILZ				AML	AML		
	comp=N,662µm,0.4s						
MILZ				AML	AML		
	comp=E,516µm,0.7s						
MNO	Monte Soro	1.42	310	P	Pn	10 50 37.2	+1.5
PLAC	Placanica	1.45	11	P	Pn	10 50 37.8	+1.9
PLAC				AML	AML		
	comp=E,140µm,0.5s						
PLAC				AML	AML		
	comp=N,125µm,0.5s						
PLAC				AML	AML		
	comp=E,140µm,0.5s						
PLAC				AML	AML		
	comp=N,125µm,0.5s						
PLAC				AML	AML		
	comp=N,125µm,0.5s						
PLAC				AML	AML		
	comp=E,140µm,0.5s						
MSFR	San Fratello	1.55	311	P	Pn	10 50 38.5	+1.2
MSFR				AML	AML		
	comp=E,123µm,1.0s						
MSFR				AML	AML		
	comp=N,115µm,1.2s						
MSFR				AML	AML		
	comp=E,123µm,1.0s						
MSFR				AML	AML		
	comp=N,115µm,1.2s						
MSFR				AML	AML		
	comp=E,123µm,1.0s						
MSFR				AML	AML		
	comp=N,115µm,1.2s						
JOPP	Joppolo	1.58	355	P	Pn	10 50 39.4	+1.7
JOPP				AML	AML		
	comp=E,159µm,0.5s						
JOPP				AML	AML		
	comp=N,194µm,0.2s						
JOPP				AML	AML		
	comp=E,159µm,0.5s						
JOPP				AML	AML		
	comp=N,193µm,0.2s						
JOPP				AML	AML		
	comp=E,159µm,0.5s						
JOPP				AML	AML		
	comp=N,193µm,0.2s						
VPL	Vulcano Piano	1.60	328	AML	AML		
	comp=E,2805µm,0.4s						
VPL				AML	AML		
	comp=E,2805µm,0.4s						
VPL				AML	AML		
	comp=N,1820µm,0.5s						
VPL				AML	AML		
	comp=E,2805µm,0.4s						
VPL				AML	AML		
	comp=N,1820µm,0.5s						
VPL				AML	AML		
	comp=N,1820µm,0.5s						
LLI	Lipari	1.67	328	AML	AML		
	comp=E,893µm,0.7s						
LLI				AML	AML		
	comp=N,986µm,0.5s						
LLI				AML	AML		
	comp=E,892µm,0.7s						
LLI				AML	AML		
	comp=N,986µm,0.5s						
LLI				AML	AML		
	comp=E,892µm,0.7s						
LLI				AML	AML		
	comp=N,986µm,0.5s						
RESU	Resuttano	1.72	292	P	Pn	10 50 42.1	+2.5
SERS	Sersale	2.06	13	P	Pn	10 50 46.5	+2.1
SERS				AML	AML		
	comp=E,60µm,1.5s						
SERS				AML	AML		
	comp=N,68µm,1.3s						
SERS				AML	AML		
	comp=N,68µm,1.3s						
SERS				AML	AML		
	comp=E,60µm,1.5s						
TIP	Timpagrande	2.22	14	P	Pn	10 50 48.1	+1.7
TIP				S	Sn	10 51 11.8	-0.9
TIP	Timpagrande	2.22	14	P	Pn	10 50 48.5	+2.0
TIP				AML	AML		
	comp=E,44µm,1.1s						
TIP				AML	AML		
	comp=N,61µm,0.7s						
TIP				AML	AML		
	comp=E,44µm,1.1s						

TIP				AML	AML		
	comp=N,61µm,0.7s						
LADO	San Nicola del	2.37	17	P	Pn	10 50 50.6	+2.1
LADO				AML	AML		
	comp=E,47µm,0.4s						
LADO				AML	AML		
	comp=N,25µm,1.5s						
LADO				AML	AML		
	comp=N,25µm,1.5s						
LADO				AML	AML		
	comp=E,47µm,0.4s						
CET2	Cetraro	2.50	358	AML	AML		
	comp=N,374µm,0.2s						
CET2				AML	AML		
	comp=E,316µm,1.4s						
CET2				AML	AML		
	comp=E,316µm,1.4s						
CET2				AML	AML		
	comp=N,374µm,0.2s						
CUC	Castrocucco	2.97	356	AML	AML		
	comp=E,70µm,0.9s						
CUC				AML	AML		
	comp=N,46µm,0.7s						
CUC				AML	AML		
	comp=E,70µm,0.9s						
CUC				AML	AML		
	comp=N,46µm,0.7s						
VLS	Valsamata	3.77	71	P	Pn	10 51 09.0	+1.3
FSK	Fiskardo	3.84	67	P	Pn	10 51 10.4	+1.8
FSK				S	Sn	10 51 50.1	-2.3
KFL	Anninata	3.90	72	P	Pn	10 51 11.4	+1.9
KFL				S	Sn	10 51 53.4	-0.6
KEK	Kerkira	3.97	46	P	Pn	10 51 10.7	+0.2
KEK				S	Sn	10 51 52.5	-3.3
LKD2	Lefkada island	4.03	63	P	Pn	10 51 13.1	+1.8
LKD2				S	Sn	10 51 55.3	-2.0
ANX	Ano Chora	4.89	70	P	Pn	10 51 26.2	+3.1
STON	Ston	5.97	12	*e*Pn	Pn	10 51 35.1	-2.7
STON				Sn	Sn	10 52 39.1	-5.8

MEX 03 10:53:23.4±0.4, 15°.00N×93°.18W, h57km±9km, MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.70	357	*i* P	Pn	10 53 35.9	-1.6
PCIG				*i* S	Sn	10 53 46.1	-1.7
CCIG	Comitan	1.62	38	*e*P	Pn	10 53 48.8	-1.0
CCIG				*e*S	Sn	10 54 07.6	-2.1
TGIG		1.77	2	*i* P	Pn	10 53 50.1	-1.6
TGIG				*i* S	Sn	10 54 11.2	-2.0

WEL 03 11:07:00.9, 44°S±2°×17°3E±°, h8km±1km, ML4.0/7, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MQZ	McQueen's Vall	0.18	199	P	Pg	11 07 07.0	+2.3
MQZ				S	Sg	11 07 10.5	+3.3
EYCZ	Eyrewell	0.30	292	P	Pb	11 07 09.3	+0.8
OKCZ	Okains Bay	0.30	129	P	Pb	11 07 08.3	-0.3
AKCZ	Akaroa Harbour	0.36	159	P	Pb	11 07 09.9	+0.3
OXZ	Oxford	0.55	292	P	Pb	11 07 13.7	+1.0
OXZ				S	Sn	11 07 22.6	-1.8
LTZ	Lake Taylor	0.82	336	P	Pn	11 07 18.3	-0.5
LTZ				S	Sn	11 07 30.0	-1.2
RPZ	Rata Peaks	1.23	261	P	Pg	11 07 25.2	+0.6
INZ	Inchbonnie	1.24	310	P	Pg	11 07 24.8	+0.1
KHZ	Kahutara	1.26	28	P	Pn	11 07 23.7	-1.1
WVZ	Waitaha Valley	1.53	287	P	Pb	11 07 29.7	+0.3
THZ	Tophouse	1.77	4	P	Pn	11 07 31.3	-0.6
DSZ	Denniston Nort	1.91	339	P	Pn	11 07 34.4	+0.6
BSWZ	Blackbirch Sta	2.00	25	P	Pn	11 07 34.4	-0.6
LBZ	Lake Benmore	2.03	244	P	Pb	11 07 36.7	-1.3
CMWZ	Cape Campbell	2.09	32	P	Pn	11 07 36.4	+0.1
FOZ	Fox Glacier	2.12	269	P	Pb	11 07 39.1	-0.4
ODZ	Otahua Downs	2.13	224	P	Pn	11 07 37.5	+0.7
TUWZ	Tuamarina	2.28	23	P	Pn	11 07 37.8	-1.1
NNZ	Nelson	2.36	12	P	Pn	11 07 40.0	+0.1
TCW	Tory Channel	2.59	27	P	Pn	11 07 41.7	-1.4
BHW	Baring Head	2.65	37	P	Pn	11 07 42.4	-1.4
PLWZ	Palliser	2.71	44	P	Pn	11 07 42.8	-1.9
QRZ	Quartz Range	2.71	357	P	Pn	11 07 44.9	+0.2
HHSZ	Highcliff Hill	2.80	212	P	Pn	11 07 46.7	+0.7
MSWZ	Moikau Station	2.82	42	P	Pn	11 07 44.2	-2.0
DUWZ	D'Urville Isla	2.87	18	P	Pn	11 07 46.8	-0.1
JCZ	Jackson Bay	2.91	258	P	Pn	11 07 49.3	+1.7
JCZ				P	Pb	11 07 50.7	-2.3
PAWZ	Paruwai Farm	2.93	44	P	Pn	11 07 45.7	-2.1
WKZ	Wanaka	2.97	243	P	Pn	11 07 49.5	+1.1
CAW	Cannon Point	2.98	36	P	Pn	11 07 46.7	-1.7
EAZ	Earnscleugh	2.99	234	P	Pn	11 07 49.4	+0.9
TRWZ	Traveller	3.05	47	P	Pn	11 07 47.6	-1.9
KIW	Kapiti Island	3.12	32	P	Pn	11 07 49.0	-1.4
MTW	Mount Morrison	3.14	42	P	Pn	11 07 48.4	-2.2
OGWZ	Otaki Gorge	3.26	35	P	Pn	11 07 50.7	-1.6
TUZ	Tuapeka	3.28	221	P	Pn	11 07 53.4	+0.8
HOWZ	Holdsworth Sta	3.35	39	P	Pn	11 07 51.7	-1.8
MRZ	Mangatainoka R	3.57	37	P	Pn	11 07 54.5	-2.0
TIWZ	Tintock	3.62	41	P	Pn	11 07 55.2	-2.0
MSZ	Milford Sound	3.65	250	P	Pn	11 07 58.9	+1.3
MLZ	Mavora Lakes	3.78	239	P	Pn	11 08 00.3	+0.8
PRWZ	Pori Road	3.83	40	P	Pn	11 07 58.1	-2.0
OHWZ	Ohakea	3.84	31	P	Pn	11 07 59.8	-0.5
BFZ	Birch Farm	3.87	44	P	Pn	11 07 58.0	-2.6
POWZ	Post Office Ro	3.87	37	P	Pn	11 07 59.2	-1.4
DVHZ	Dannevirke	4.12	40	P	Pn	11 08 01.5	-2.6
ANWZ	Angora Road	4.15	44	P	Pn	11 08 02.2	-2.2
WHZ	Wether Hill Ro	4.15	234	P	Pn	11 08 04.4	-0.1
NMEZ	Namu Road	4.21	12	P	Pn	11 08 06.6	+1.4
TSZ	Takapari Road	4.23	36	P	Pn	11 08 03.4	-2.2
PREZ	Palmer Road	4.32	15	P	Pn	11 08 08.2	+1.3
KHEZ	Kahui Hut	4.34	13	P	Pn	11 08 09.1	+1.8
DCZ	Deep Cove	4.43	242	P	Pn	11 08 09.3	+0.9
PNHZ	Pukenui	4.45	37	P	Pn	11 08 06.6	-2.1
DREZ	Durham Road	4.48	15	P	Pn	11 08 10.0	+1.0
VRZ	Vera Road	4.66	20	P	Pn	11 08 12.3	+0.8
PKVZ	Pokaka	4.67	26	P	Pn	11 08 12.2	+0.4
APZ	The Paps	4.70	224	P	Pn	11 08 13.3	+1.1
MOVZ	Moawhango	4.71	30	P	Pn	11 08 10.8	-1.4
TRVZ	Turoa	4.73	28	P	Pn	11 08 12.9	+0.2
KRHZ	Kereru	4.75	36	P	Pn	11 08 09.9	-2.9
BHHZ	Black Hill Sta	4.75	33	P	Pn	11 08 11.5	-1.4
DRZ	Dome Shelter	4.76	28	P	Pn	11 08 14.0	+0.8
WHVZ	Whangaehu Hut	4.76	28	P	Pn	11 08 12.9	-0.2
FWVZ	Far West T-bar	4.77	27	P	Pn	11 08 13.1	-0.1
TUVZ	Tukino	4.79	28	P	Pn	11 08 12.8	-0.7
COVZ	Chateau Observ	4.82	27	P	Pn	11 08 14.2	+0.4
KAHZ	Kahuranaki	4.86	41	P	Pn	11 08 12.5	-1.8

IDC 03 11:40:51.8±6.8, 18°.83S×177°.91W, h0km, mb3.6/3, mb1 4.0/3, mb1mx3.5/52, mbtmp3.6/3, MS4.0/1, Ms1 4.0/1, ms1mx3.0/56, Error ellipse: s-maj=295.9km s-min=36.2km az=144.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	35.08	281	LR	LR	11 59 39.3	
	comp=Z,215nm,18.8s,baz=129,slow=32						
WRA	Warramunga Arr	44.93	260	P	P	11 49 09.2	+0.3
	0.4nm,0.3s,baz=96,slow=7.6,SNR=22						
ASAR	Alice Springs	45.00	255	P	P	11 49 08.7	-0.7
	0.7nm,0.7s,baz=93,slow=7.7,SNR=8.4						
ILAR	Eielson Array	86.68	13	P	P	11 53 36.9	0.0
	0.2nm,0.6s,baz=190,slow=4.6,SNR=3.1						

JMA 03 11:56:33.8±0.1, 37°.38N×141°.90E, h45km±3km, M3.5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	0.82	269	P	Pn	11 56 49.0	0.0
JFK				*e*S	Sn	11 56 59.8	-0.2
ONAJ	Iwakimizuishiy	0.92	253	P	Pn	11 56 50.5	+0.1
ONAJ				S	Sn	11 57 01.9	-0.7
JMM	Marumori	1.00	299	P	Pn	11 56 51.7	+0.2
JMM				S	Sn	11 57 04.4	-0.1
JFFD	Fukushimafurud	1.11	255	P	Pn	11 56 53.0	+0.1
JFFD				S	Sn	11 57 06.9	-0.1
JIO	Ouri	1.16	338	P	Pn	11 56 53.8	+0.2
JIO				S	Sn	11 57 07.9	-0.3
JFT	Otama	1.25	277	P	Pn	11 56 56.0	+1.1
JFT				S	Sn	11 57 11.5	+0.9
JOU	Okura	1.39	316	P	Pn	11 56 57.5	+0.8
JOU				*e*S	Sn	11 57 15.3	+1.4
JMK	Ichinoseki	1.66	341	P	Pn	11 57 01.2	+0.8
JYS	Shirataka	1.68	301	P	Pn	11 57 01.9	+1.2
JFY	Yanaizu	1.75	272	P	Pn	11 57 02.7	+1.0
JFY				*e*S	Sn	11 57 24.2	+1.4
JYK	Kaneyama	1.96	322	P	Pn	11 57 05.5	+1.0
JYK				*e*S	Sn	11 57 28.8	+0.9
MAT	Matsushiro	3.07	255	P	Pn	11 57 21.0	+1.1
MAT				S	Sn	11 57 57.4	+2.0

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*BJI **03** 12:07:27.2, 19°.27S×177°.29W, h544km, mb4.6/21, mB4.6/12*

*ISCJB **03** 12:07:29.6±0.2, 19°.32S±0°.05×178°.07W±0°.03, h550km, mb4.5/223, Error ellipse: s-maj=6.5km s-min=3.6km az=153.4*

*NEIC **03** 12:07:29.5±0.7, 19°.28S×178°.04W, h539km±8km, mb4.6/195, Error ellipse: s-maj=5.4km s-min=3.4km az=156.0*

*IDC **03** 12:07:31.9±2.7, 19°.33S×177°.97W, h568km±30km, mb4.1/35, mb1 4.2/35, mb1mx4.0/58, mbtmp5.0/35, Error ellipse: s-maj=14.0km s-min=11.8km az=132.0*

ISC 03 12:07:30.0±0.3, 19°.39S±0°.06×177°.90W±0°.06, h550km, n540, σ0.98/561, mb4.6/223, 29C-13D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	8.01	48	P	P	12 09 21.1	-6.8
	30nm,0.3s,baz=161,slow=1.8,SNR=52						
AFI				S	S	12 10 50.5	-14
	14nm,0.3s,baz=35,slow=22,SNR=7.5						
AFI	Afiamalu	8.01	48	*e*P	P	12 09 21.1	-6.8
AFI				*e*		12 09 21.3	
AFI				*e*S	S	12 10 51.7	-13
DZM	Mont Dzumac	14.89	257	P	P	12 10 36.2	-2.3
	4.4nm,0.3s,baz=77,slow=17,SNR=52						
DZM	Mont Dzumac	14.89	257	*e*P	P	12 10 36.0	-2.5
RAR	Rarotonga	17.10	99	*e*P	P	12 10 59.0	-0.7
	57nm,1.0s						
OUZ	Omahuta	17.47	204	*e*P	P	12 11 04.1	+1.2
	51nm,0.8s						
MXZ	Matakaoa Point	18.41	190	*e*P	P	12 11 11.4	0.0
	105nm,1.2s						
URZ	Urewera	19.30	192	P	P	12 11 15.1	-4.4
	1.0nm,0.3s,baz=316,slow=3.5,SNR=7.7						
TARA	Tarawa	22.50	335	*e*P	P	12 11 46.4	-2.4
	86nm,0.8s						
HNR	Honiara	23.61	292	*e*P	P	12 11 56.8	-1.8
	50nm,1.1s						
RPZ	Rata Peaks	25.96	199	P	P	12 12 17.6	-1.4
	8.5nm,0.6s,baz=339,slow=3.1,SNR=6.8						
MLZ	Mavora Lakes	28.38	201	*e*P	P	12 12 40.7	+0.4
DCZ	Deep Cove	28.80	202	*e*P	P	12 12 43.7	-0.1
	49nm,1.2s						
WHZ	Wether Hill Ro	28.90	201	*e*P	P	12 12 45.2	+0.5
	46nm,0.8s						
EIDS	Eidsvold	29.25	253	*e*P	P	12 12 47.5	-0.6
	26nm,1.0s						
ARMA	Armidale	29.65	242	*e*P	P	12 12 51.8	+0.2
	25nm,0.6s						
CTA	Charters Tower	33.71	263	P	P	12 13 26.2	0.0
	67nm,0.5s,baz=92,slow=10,SNR=120						
CTAO	Charters Tower	33.71	263	*e*P	P	12 13 26.1	-0.2
	68nm,0.6s						
PMG	Port Moresby	35.21	281	P	P	12 13 38.9	+0.1
	51nm,0.8s,baz=69,slow=8.1,SNR=8.1						
PMG	Port Moresby	35.21	281	*e*P	P	12 13 38.8	0.0
	60nm,0.9s						
TAU	Tasmania Unive	37.49	224	*e*P	P	12 13 56.8	-0.4
	18nm,1.0s						
COEN	Coen	37.62	272	*e*P	P	12 13 58.6	-0.1
	56nm,0.8s						
STKA	Stephens Creek	38.37	243	P	P	12 14 04.9	+0.4
	23nm,0.9s,baz=92,slow=9.3,SNR=37						
STKA	Stephens Creek	38.37	243	*e*P	P	12 14 04.9	+0.4
	3.9nm,0.8s						
BBOO	Buckleboo	43.14	242	*e*P	P	12 14 42.3	-0.1
	36nm,0.9s						
JAY	Jayapura	43.80	287	P	P	12 14 48.4	+0.5
	15nm,0.6s,baz=158,slow=3.2,SNR=8.7						
AS01	Alice Springs	44.84	256	*e*P	P	12 14 55.3	-0.4
AS01				*e*S	S	12 20 53.0	-0.7
WB2	Warramunga Arr	44.85	261	*e*P	P	12 14 55.0	-0.9
	33nm,0.6s						
WB2				*e*P	P	12 14 55.7	-0.2
WRAB	Tennant Creek	44.85	261	*e*P	P	12 14 54.9	-1.0
	26nm,0.6s						
WR1	Warramunga Arr	44.86	261	*e*P	P	12 14 55.3	-0.6
WRA	Warramunga Arr	44.86	261	P	P	12 14 55.3	-0.6
	26nm,0.6s,baz=97,slow=5.6,SNR=459						
AS31	Alice Springs	44.88	256	*e*P	P	12 14 55.8	-0.3
	22nm,0.8s						
AS31				*e*S	S	12 20 54.4	+0.2
ASAR	Alice Springs	44.88	256	P	P	12 14 56.0	-0.1
	84nm,0.7s,baz=92,slow=8.5,SNR=1279						
KHLH	Kahului Airpor	45.22	29	*e*P	P	12 14 58.3	-0.3
	61nm,0.8s						
GUMO	Guam	49.18	309	P	P	12 15 28.0	-0.3
	75nm,0.7s,baz=166,slow=8.2,SNR=4.6						
MTN	Manton Dam	49.26	270	*e*P	P	12 15 28.2	-0.8
	24nm,0.7s						
FORT	Forrest	49.83	246	*e*P	P	12 15 32.6	-0.4
	54nm,0.8s						
SIJI	Sorong	53.06	284	P	P	12 15 56.9	+0.2
	5.2nm,0.5s,baz=63,slow=9.6,SNR=3.8						
FITZ	Fitzroy Crossi	53.28	262	P	P	12 15 58.1	0.0
	4.2nm,0.5s,baz=119,slow=4.5,SNR=6.8						
FITZ	Fitzroy Crossi	53.28	262	*e*P	P	12 15 58.3	+0.2
	4.7nm,0.7s						
SBA	Scott Base	58.98	184	*e*P	P	12 16 38.6	+2.2
	3.7nm,0.9s						
JHJ	Hachijo jima 2	66.03	322	P	P	12 17 22.1	-0.5
	46nm,0.4s,baz=68,slow=22,SNR=4.9						
MJAR	Matsushiro Arr	69.38	323	P	P	12 17 42.4	-0.7
	12nm,0.6s,baz=166,slow=6.2,SNR=32						
MAJO	Matsushiro	69.38	323	*e*P	P	12 17 42.6	-0.4
	15nm,0.6s						
MAT	Matsushiro	69.38	323	P	P	12 17 42.4	-0.6
MJB9	Matsu-Tunnel	69.39	323	*e*P	P	12 17 42.6	-0.4
	15nm,0.6s						
JOW	Kunigami	69.53	310	P	P	12 17 43.0	-1.1
	8.5nm,0.4s,baz=98,slow=21,SNR=7.6						
QSPA	South Pole Qui	70.67	180	P	P	12 17 51.5	+1.1
	8.7nm,0.9s,baz=20,slow=1.7,SNR=18						
QSPA	South Pole Qui	70.67	180	*e*P	P	12 17 51.5	+1.1
QSPA				*e*P	P	12 17 52.0	+1.7
QSPA				*e*pP	pP	12 19 41.1	-2.6
ASAJ	Asahikawa	72.81	331	P	P	12 18 03.8	+1.0
	22nm,0.9s,baz=219,slow=9.1,SNR=13						
ASAJ	Asahikawa	72.81	331	*e*P	P	12 18 03.3	+0.4
	31nm,1.0s						
NACB	Ninganchiao	73.14	304	*e*P	P	12 18 04.6	-0.7
	27nm,0.9s						
TPUB	Ta-pu	73.46	303	*e*P	P	12 18 05.8	-1.3
	31nm,0.8s						
YSS	Yuzh-Sakhalins	74.95	333	*e*P	P	12 18 16.0	+1.0
	45nm,1.0s						
PEA0B	Petropavlovsk-	75.23	345	*e*P	P	12 18 16.1	-0.3
	26nm,0.9s						
PETK	Petropavlovsk-	75.23	345	P	P	12 18 16.0	-0.4
	15nm,0.7s,baz=120,slow=6.9						
PETK	Petropavlovsk-	75.23	345	*e*P	P	12 18 15.9	-0.5
PEA1	Petropavlovsk-	75.23	345	*e*P	P	12 18 16.0	-0.4
KSRS	Korea Array	76.13	318	P	P	12 18 22.4	+0.7
	1.9nm,0.6s,baz=136,slow=5.8,SNR=8.8						
KS15	Wonju Array Si	76.14	318	*e*P	P	12 18 22.4	+0.6
KSAR	Wonju Array Be	76.14	318	P	P	12 18 22.4	+0.6
KS01	Wonju Array Si	76.16	318	*e*P	P	12 18 22.2	+0.3
SNCC	San Nicolas Is	76.42	47	P	P	12 18 24.7	+1.2
	baz=236						
SCZ2	Santa Cruz Isl	76.77	47	P	P	12 18 26.3	+0.9
	baz=236						
SBC	Santa Barbara	76.97	46	P	P	12 18 27.7	+1.3
	baz=236						
PKM	Mcpherson Peak	77.15	46	P	P	12 18 28.8	+1.2
	baz=235						
SMMC	Simmler	77.27	45	P	P	12 18 29.1	+1.0
	baz=235						
CIS	Catalina Islan	77.28	48	P	P	12 18 29.4	+1.2
	baz=236						
KMRM	Mail Ridge	77.84	39	*e*P	P	12 18 31.8	+0.7
	41nm,0.8s						
PASC	Pasadena Art C	77.86	47	*e*P	P	12 18 31.5	+0.3
	22nm,0.9s						
109C	Camp Elliot, M	77.92	49	P	P	12 18 32.2	+0.6
	baz=238						
ARVC	Arvin	77.95	46	P	P	12 18 32.4	+0.7
	baz=236						
MWC	Mount Wilson	77.98	47	*e*P	P	12 18 32.3	+0.2
	22nm,0.9s						
USA0B	Ussuriysk Arra	78.11	326	*e*P	P	12 18 33.0	+0.7
	18nm,1.0s						
USRK	Ussuriysk Ar.	78.11	326	P	P	12 18 33.5	+1.1
	9.9nm,0.9s,baz=126,slow=2.0						
BAR	Barrett	78.12	49	*e*P	P	12 18 33.5	+0.8
	7.0nm,0.9s						
VES	Vestal, Richgr	78.18	45	P	P	12 18 33.4	+0.5
	baz=236,SNR=6.0						
KHMM	Horse Mountain	78.23	39	*e*P	P	12 18 34.4	+1.1
	21nm,1.2s						
MURC	Murrieta	78.24	48	P	P	12 18 34.1	+0.7
	baz=237,SNR=6.1						
BFSC	Mount Baldy Ra	78.27	47	P	P	12 18 34.1	+0.5
	baz=237						
EDW2	Edwards Air Fo	78.39	47	P	P	12 18 35.0	+0.9
	baz=237,SNR=10						
MONP2	Monument Peak	78.41	49	P	P	12 18 35.6	+1.1
	baz=238,SNR=15						
ISA	Isabella, Lake	78.49	46	P	P	12 18 35.5	+0.8
	baz=236,SNR=14						
ISA	Isabella, Lake	78.49	46	*e*P	P	12 18 35.6	+0.9
	18nm,0.9s						
IKP	In-Ko-Pah, Jac	78.50	49	P	P	12 18 35.9	+1.1
	baz=238,SNR=7.6						
CMB	Columbia Colle	78.58	43	*e*P	P	12 18 35.6	+0.5
	18nm,0.9s						
AFDM	Forest Hills D	78.75	42	*e*P	P	12 18 36.5	+0.6
	18nm,1.0s						
WDC	Whiskeytown Da	78.76	40	*e*P	P	12 18 37.1	+1.2
	19nm,1.1s						
PFO	Pinyon Flats O	78.77	48	P	P	12 18 36.9	+0.7
	baz=238,SNR=5.3						
PFO	Pinyon Flats O	78.77	48	*e*P	P	12 18 37.2	+1.0
	12nm,1.0s						
XPFO	Piæon Flat	78.77	48	*e*P	P	12 18 37.0	+0.7
	14nm,1.1s						
ORV	Oroville	78.78	41	*e*P	P	12 18 36.8	+0.8
	19nm,1.0s						
BBRC	Big Bear Solar	78.79	48	P	P	12 18 37.2	+0.7
	baz=237						
SWSC	Sam W. Stewart	78.88	49	P	P	12 18 37.6	+0.9
	baz=238						
N02D	Trinity Center	78.91	39	P	P	12 18 37.9	+1.1
	baz=232,SNR=7.8						
LRMC	Laurel Mtn Rad	78.93	46	P	P	12 18 37.6	+0.5
	baz=237,SNR=6.0						
O03D	Paynes Creek	79.04	40	P	P	12 18 38.0	+0.5
	baz=233,SNR=6.6						
OHAK	Old Harbor	79.05	13	*e*P	P	12 18 35.8	-1.3
	22nm,0.7s						
RRX	Edison Barstow	79.07	47	P	P	12 18 38.3	+0.6
	baz=237						
M02C	Callahan	79.07	39	P	P	12 18 38.9	+1.2
	baz=232,SNR=11						
L02D	Cave Junction,	79.11	38	P	P	12 18 38.8	+1.0
	baz=231						
CWC	Cottonwood Cre	79.19	45	P	P	12 18 39.1	+0.6
	baz=236						
MDPB	Devils Postpil	79.20	44	*e*P	P	12 18 39.5	+0.9
	19nm,1.0s						
OMMB	Old Mammoth Mi	79.24	44	*e*P	P	12 18 39.8	+0.8
	13nm,1.1s						
NJ2	Nanjing	79.25	309	*e*P	P	12 18 39.9	+1.2
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
BELC	Belle Mtn. Jos	79.30	48	P	P	12 18 40.1	+1.0
	baz=238,SNR=12						
RUBR	Rubicon Trail	79.33	42	*e*P	P	12 18 40.0	+0.8
	15nm,0.9s						
MLAC	Mammoth, Mammo	79.36	44	P	P	12 18 40.2	+0.7
	baz=236						
YBH	Yreka Blue Hor	79.37	39	P	P	12 18 39.8	+0.6
	14nm,0.8s,baz=194,slow=3.2,SNR=37						
YBH	Yreka Blue Hor	79.37	39	*e*P	P	12 18 40.4	+1.2
	20nm,1.0s						
MPMC	Manual Prospec	79.38	46	P	P	12 18 40.2	+0.7
	baz=237,SNR=11						
DAC	Darwin (Calif)	79.43	46	*e*P	P	12 18 39.0	-0.8
	5.9nm,1.1s						
GSC	Goldstone, Bar	79.43	47	P	P	12 18 40.2	+0.5
	baz=237						
GSC	Goldstone, Bar	79.43	47	*e*P	P	12 18 40.5	+0.8
	6.7nm,1.0s						
TIN	Tinemaha, Big	79.43	45	P	P	12 18 40.6	+0.9
	baz=236						
WAKR	Walker	79.47	43	*e*P	P	12 18 41.0	+1.1
	26nm,1.0s						
BC3	Big Chuckawall	79.50	49	P	P	12 18 41.1	+0.9
	baz=238						
HEC	Hector,Ludlow	79.50	47	P	P	12 18 40.6	+0.5
	baz=238						
GLA	Glamis	79.63	50	P	P	12 18 42.0	+1.2
	baz=239						
GLA	Glamis	79.63	50	*e*P	P	12 18 42.2	+1.4
	24nm,1.1s						
MDJ	Mudanjiang	79.67	325	*e*P	P	12 18 41.4	+0.7
	30nm,1.1s						
BEKR	Beckworth	79.67	41	*e*P	P	12 18 41.6	+0.6
	20nm,1.1s						
PNTR	Pine Nut	79.70	42	*e*P	P	12 18 42.2	+1.0
	41nm,0.8s						
KDAK	Kodiak Island	79.72	13	P	P	12 18 40.3	-0.2
	18nm,1.0s,baz=215,slow=4.1,SNR=13						
KDAK	Kodiak Island	79.72	13	*e*P	P	12 18 40.5	0.0
	24nm,1.0s						
HUMO	Hull Mountain	79.76	38	*e*P	P	12 18 42.3	+1.1
	11nm,0.9s						
VCNR	Virginia City	79.79	42	*e*P	P	12 18 42.5	+0.8
	17nm,1.0s						
YERR	Yerington	79.87	43	*e*P	P	12 18 42.8	+0.7
	30nm,1.1s						
M04C	Macdoel	79.91	39	P	P	12 18 43.1	+1.0
	baz=233,SNR=9.1						
GMRC	Granite Mounta	79.95	48	P	P	12 18 43.3	+0.8
	baz=238,SNR=6.0						
GRAC	Grapevine Rang	79.98	45	P	P	12 18 43.6	+1.1
	baz=237,SNR=7.7						
IRM	Iron Mountain	79.98	48	P	P	12 18 43.7	+1.1
	baz=238,SNR=12						
IRM	Iron Mountain	79.98	48	*e*P	P	12 18 45.7	+3.1
FURC	Furnace Creek,	80.02	46	P	P	12 18 43.4	+0.8
	baz=237,SNR=5.5						
TUQ	Turquoise Moun	80.11	47	P	P	12 18 44.0	+0.7
	baz=238,SNR=5.2						
SHOC	Shoshone, Teco	80.12	46	P	P	12 18 43.7	+0.5
	baz=238						
RYN	Ryan	80.12	43	*e*P	P	12 18 44.1	+0.7
	9.0nm,1.0s						
NV01	Mina Array Sit	80.16	43	*e*P	P	12 18 44.2	+0.6
NVAR	Mina Array Bea	80.16	43	P	P	12 18 44.4	+0.8
	8.6nm,0.8s,baz=224,slow=8.8,SNR=55						
PAHR	Pah Rah Range	80.19	42	*e*P	P	12 18 44.4	+0.7
	16nm,1.0s						
Y12C	Blythe	80.21	49	P	P	12 18 44.9	+1.2
	baz=239						
Y12C	Blythe	80.21	49	*e*P	P	12 18 44.9	+1.2
	13nm,0.9s						
NV11	Mina Array Sit	80.25	43	*e*P	P	12 18 44.8	+0.8
	1.0nm,1.0s						
113A	Mohawk Valley,	80.25	50	*e*P	P	12 18 44.8	+0.9
	15nm,1.1s						
LDFC	Landfair	80.49	48	*e*P	P	12 18 46.6	+1.3
214A	Organ Pipe Nat	80.55	51	P	P	12 18 46.6	+1.0
	baz=240						
KVN	Kaiserville	80.64	43	*e*P	P	12 18 46.7	+0.7
	18nm,1.1s						
J04D	Umpqua Nationa	80.64	38	P	P	12 18 46.9	+0.9
	baz=232,SNR=6.1						
NEE2	Needles Airpor	80.67	48	P	P	12 18 47.0	+1.0
	baz=239						
TPNV	Topopah Spring	80.70	46	P	P	12 18 47.2	+0.8
	baz=237,SNR=13						
TPNV	Topopah Spring	80.70	46	*e*P	P	12 18 47.1	+0.8
	13nm,1.0s						
PDMCI	Parker Dam,Lak	80.77	49	P	P	12 18 48.0	+1.4
	baz=239						
I04A	Tendick Farm,	80.81	37	P	P	12 18 47.1	+0.5
	baz=232						

MOD	Modoc Plateau	80.91	40	*e*P	P	12 18 48.2	+0.8
	26nm,0.9s						
K05A	Summer Lake	81.04	39	*e*P	P	12 18 49.3	+1.2
	52nm,1.0s						
J05D	Fort Rock, OR	81.18	38	P	P	12 18 49.8	+1.1
	baz=233,SNR=29						
SHPR	Sheep Range	81.20	46	*e*P	P	12 18 50.4	+1.4
	2.9nm,0.9s						
W13A	Hualapai Mount	81.36	48	*e*P	P	12 18 51.0	+1.1
	6.0nm,0.9s						
Y14A	Wickenburg	81.39	50	*e*P	P	12 18 51.0	+1.1
	12nm,1.0s						
H04A	Detroit Lake	81.48	37	*e*P	P	12 18 50.6	+0.6
	15nm,0.8s						
CN2	Changchun	81.49	322	*e*P	P	12 18 50.7	+0.7
CN2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CNPM	China Poot	81.60	13	*e*P	P	12 18 50.0	-0.3
	22nm,1.0s						
PINE	Pine Mountain	81.65	38	*e*P	P	12 18 52.4	+1.2
	59nm,1.1s						
I05D	Terrebonne, OR	81.75	37	P	P	12 18 52.4	+0.9
	baz=233,SNR=7.3						
E03A	Lebam	81.89	34	*e*P	P	12 18 52.8	+0.8
	39nm,0.9s						
BRLK	Bradley Lake	81.90	13	*e*P	P	12 18 51.6	-0.2
	29nm,0.9s						
F04D	Rainier, OR	81.90	35	P	P	12 18 53.0	+0.9
	baz=231						
R11A	Troy Canyon, C	81.90	45	P	P	12 18 53.0	+0.4
	baz=238,SNR=16						
R11A	Troy Canyon, C	81.90	45	*e*P	P	12 18 52.9	+0.4
	9.6nm,1.1s						
BMN	Battle Mountai	81.97	42	*e*P	P	12 18 53.5	+0.7
	33nm,1.1s						
SVW2	Sparrevohn	82.20	11	*e*P	P	12 18 52.5	-0.7
	9.8nm,1.0s						
TUC	Tucson	82.22	52	P	P	12 18 55.9	+1.7
	baz=241						
TUC	Tucson	82.22	52	*e*P	P	12 18 56.0	+1.8
	32nm,1.1s						
WVOR	Wild Horse Val	82.22	40	*e*P	P	12 18 54.8	+0.7
	30nm,1.0s						
DIB	Dawson Inlet,	82.24	26	*e*P	P	12 18 53.7	+0.1
	14nm,0.9s						
NLWA	Neilton Lookou	82.27	34	*e*P	P	12 18 53.9	-0.1
	18nm,1.1s						
G05D	Wamic, OR	82.31	37	P	P	12 18 55.0	+0.8
	baz=233						
I07A	Izee	82.66	38	*e*P	P	12 18 57.2	+1.0
	17nm,0.9s						
G06A	Carlson Farm,	82.69	37	*e*P	P	12 18 56.9	+0.7
	20nm,1.1s						
MA2	Magadan	82.75	345	P	P	12 18 55.3	-0.7
	9.6nm,0.8s,baz=144,slow=7.0,SNR=5.8						
X16A	Lo Mia Camp, P	82.76	50	*e*P	P	12 18 58.4	+1.4
	21nm,1.1s						
LCMT	Little Creek M	82.78	47	*e*P	P	12 18 58.0	+1.0
	16nm,1.0s						
J08A	Circle Bar Ran	82.85	39	*e*P	P	12 18 58.1	+0.9
	32nm,1.1s						
UBPT	Khong Chiam	82.87	289	P	P	12 18 59.9	+2.2
319A	Douglas	82.91	53	*e*P	P	12 18 59.6	+1.9
	45nm,1.0s						
CCUT	Cedar City	82.97	46	*e*P	P	12 18 59.3	+1.3
	15nm,1.0s						
KNB	Kanab	83.07	47	*e*P	P	12 18 59.6	+1.1
	16nm,1.0s						
D05A	Enumclaw	83.13	35	*e*P	P	12 18 59.8	+1.5
	57nm,1.1s						
U15A	North Rim	83.15	48	*e*P	P	12 19 00.3	+1.3
	24nm,0.9s						
PSUT	Pine Spring	83.15	45	*e*P	P	12 18 59.6	+0.7
	10nm,1.0s						
SZCU	Shurtz Canyon	83.19	46	*e*P	P	12 19 00.6	+1.5
	17nm,1.1s						
PGC	Sidney	83.28	33	*e*P	P	12 18 59.5	+0.5
	22nm,0.9s						
RC01	Rabbit Creek A	83.34	13	*e*P	P	12 18 58.7	-0.3
	22nm,1.0s						
WUAZ	Wupatki	83.34	49	P	P	12 19 01.0	+1.1
	baz=241						
WUAZ	Wupatki	83.34	49	*e*P	P	12 19 01.4	+1.5
	17nm,1.1s						
BBB	Bella Bella	83.38	28	P	P	12 18 59.7	+0.3
	11nm,0.9s,baz=283,slow=5.2,SNR=5.9						
BBB	Bella Bella	83.38	28	*e*P	P	12 18 59.7	+0.3
	27nm,1.1s						
ELK	Elko	83.40	43	P	P	12 19 01.6	+1.4
	11nm,0.9s,baz=296,slow=5.3,SNR=36						
SUA	Susitna One	83.46	13	*e*P	P	12 18 59.2	-0.6
	31nm,0.7s						
G08A	Pilot Rock	83.68	37	*e*P	P	12 19 01.4	+0.1
	25nm,1.1s						
A04D	Lummi Island	83.71	33	P	P	12 19 01.9	+0.8
	baz=231						
B05A	Bryant	83.74	34	P	P	12 19 02.1	+0.8
	baz=232						
HPIG		83.77	59	*e*P	P	12 19 02.4	+0.2
	8.4nm,0.9s						
SKT	Skwentna	83.77	12	*e*P	P	12 18 59.3	-1.9
	11nm,1.0s						
X18A	Snowflake	83.89	50	*e*P	P	12 19 03.9	+1.3
	7.9nm,0.9s						
PMR	Palmer	83.92	13	*e*P	P	12 19 01.2	-0.6
	12nm,0.7s						
RAGM	Ragged Mountai	83.93	16	*e*P	P	12 19 01.7	-0.3
	36nm,1.2s						
HAWA	Hanford	84.00	36	*e*P	P	12 19 03.2	+0.6
	20nm,1.1s						
MTPU	Mount Pierson	84.03	46	*e*P	P	12 19 04.8	+1.3
	13nm,1.1s						
GHO	Glory Hole Cre	84.13	13	*e*P	P	12 19 02.7	-0.3
	48nm,0.7s						
MSU	Marysvale	84.27	46	*e*P	P	12 19 05.4	+0.9
SML	Sawmill	84.29	14	*e*P	P	12 19 03.4	-0.3
	9.3nm,0.8s						
DIV	Divide	84.29	15	*e*P	P	12 19 03.4	-0.4
	30nm,0.8s						
W18A	Petrified Fore	84.33	50	P	P	12 19 05.6	+0.9
	baz=242						
BMO	Blue Mountains	84.39	39	*e*P	P	12 19 05.2	+0.5
	7.8nm,0.9s						
BMRM	Bremner River	84.45	16	*e*P	P	12 19 04.2	-0.3
	28nm,0.8s						
MFID	Camas Ranch	84.48	40	*e*P	P	12 19 05.9	+0.7
	12nm,1.0s						
SCM	Sheep Creek Mo	84.54	14	*e*P	P	12 19 04.7	-0.3
	43nm,0.8s						
121A	Cookes Peak, D	84.57	53	P	P	12 19 07.6	+1.6
	baz=243						
KLU	Klutina	84.57	15	*e*P	P	12 19 05.1	-0.1
	12nm,1.0s						
WRAK	Wrangell Islan	84.67	23	*e*P	P	12 19 06.5	+0.9
DUG	Dugway, Tooele	84.69	44	P	P	12 19 06.9	+0.5
	baz=239						
TGL	Tana Glacier	84.73	16	*e*P	P	12 19 05.9	-0.1
	26nm,1.1s						
D08A	Wollman Farm,	84.73	36	*e*P	P	12 19 06.5	+0.3
	19nm,1.0s						
SKNT	Sakolnakorn	84.83	290	P	P	12 19 08.9	+1.6
CAST	Castle Rocks	84.98	11	*e*P	P	12 19 05.5	-1.6
	28nm,0.8s						
F10A	Beach Ranch, E	85.07	38	*e*P	P	12 19 08.2	+0.2
	27nm,0.9s						
Q16A	Castle Valley	85.15	46	*e*P	P	12 19 09.6	+0.9
	6.6nm,1.1s						
B08A	Colville Reser	85.27	35	*e*P	P	12 19 08.7	-0.1
	19nm,0.9s						
LLLB	Lillooet	85.31	32	*e*P	P	12 19 09.3	+0.4
	8.7nm,0.8s						
TMUT	Trail Mountain	85.31	46	*e*P	P	12 19 10.7	+1.1
	7.8nm,0.8s						
SEY	Seymchan	85.32	347	P	P	12 19 08.1	-0.6
	21nm,0.9s,baz=144,slow=4.6,SNR=19						
JIS	Juneau Island	85.32	21	*e*P	P	12 19 09.2	+0.4
	6.1nm,0.8s						
TRF	Thorofare Moun	85.35	12	*e*P	P	12 19 07.8	-1.2
	29nm,0.8s						
HLID	Hailey	85.43	41	P	P	12 19 10.8	+0.9
	baz=238						
HLID	Hailey	85.43	41	*e*P	P	12 19 10.8	+0.9
	9.4nm,0.9s						
SRU	San Rafael Swe	85.69	46	*e*P	P	12 19 11.9	+0.7
	7.6nm,0.8s						
BPAW	Bear Paw Mtn.	85.80	11	*e*P	P	12 19 09.5	-1.5
	3.4nm,0.8s						
MCK	McKinley	85.87	12	*e*P	P	12 19 10.8	-0.5
	39nm,1.1s						
MNTX	Cornudas Mount	86.03	55	P	P	12 19 14.1	+1.3
	baz=245						
MNTX	Cornudas Mount	86.03	55	*e*P	P	12 19 14.0	+1.2
	17nm,1.0s						
TCUT	Toone Canyon	86.08	44	*e*P	P	12 19 14.3	+1.1
	11nm,0.8s						
P18A	Preston Nutter	86.12	46	*e*P	P	12 19 13.9	+0.5
	4.0nm,0.9s						
BWN	Browne	86.16	12	*e*P	P	12 19 12.2	-0.5
	48nm,1.1s						
GYA	Guiyang	86.19	300	*e*P	P	12 19 14.2	+0.4
GYA				pP	pP	12 21 13.0	-0.4
GYA				sP	sP	12 22 07.3	-1.7
GYA				PP	PP	12 22 47.8	+2.8
GYA				SKS	SKSac	12 28 47.0	-1.0
GYA				S	S	12 29 03.9	+0.5
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MVCO	Mesa Verde	86.19	49	P	P	12 19 14.0	+0.3
	baz=242						
PV19	Morning Glory	86.36	47	*e*P	P	12 19 15.4	+0.9
	8.6nm,1.0s						
PV14	Lion Creek, Pa	86.36	47	*e*P	P	12 19 15.0	+0.5
	11nm,1.0s						
PV17	East Wray Mesa	86.36	47	*e*P	P	12 19 15.2	+0.7
	7.1nm,1.1s						
TX31	Lajitas Ar. Si	86.38	57	*e*P	P	12 19 16.3	+1.6
LTX	Lajitas	86.38	57	*e*P	P	12 19 14.3	-0.4
TXAR	Lajitas Array	86.38	57	P	P	12 19 14.3	-0.4
	10nm,0.8s,baz=218,slow=6.4,SNR=115						
PV13	Radium Mtn., P	86.41	48	*e*P	P	12 19 15.1	+0.3
	5.9nm,1.1s						
PV16	Nyswonger Mesa	86.41	47	*e*P	P	12 19 15.3	+0.5
	5.5nm,1.1s						
PV23	Carpenter Ridg	86.41	47	*e*P	P	12 19 15.8	+0.9
	11nm,0.9s						
NEW	Newport	86.42	36	P	P	12 19 14.0	-0.3
	2.9nm,0.7s,baz=191,slow=7.4,SNR=3.7						
NEW	Newport	86.42	36	P	P	12 19 14.4	+0.1
	baz=236						
PV11	David Mesa, Pa	86.43	47	*e*P	P	12 19 15.8	+1.0
	5.5nm,1.0s						
PV02	Paradox Valley	86.48	48	*e*P	P	12 19 15.9	+0.8
	5.7nm,1.1s						
PV21	Cone Mtn., Par	86.49	47	*e*P	P	12 19 15.8	+0.6
	8.3nm,1.0s						
PV12	Saucer Basin,	86.49	47	*e*P	P	12 19 16.0	+0.8
	12nm,1.1s						
PV22	Blue Mesa, Par	86.60	47	*e*P	P	12 19 15.5	-0.1
	8.3nm,1.1s						
TASM	ASL Pad, Albuq	86.64	51	P	P	12 19 16.6	+0.7
	baz=244						
ANMO	Albuquerque	86.64	51	P	P	12 19 16.3	+0.4
	7.1nm,0.9s,baz=211,slow=6.8,SNR=21						
ANMO	Albuquerque	86.64	51	P	P	12 19 16.6	+0.8
	baz=244						
ANMO	Albuquerque	86.64	51	*e*P	P	12 19 16.7	+0.8
	10.0nm,1.0s						
TASL	Snake Pit, Alb	86.64	51	P	P	12 19 16.5	+0.6
	baz=244						
MLY	Manley	86.69	11	*e*P	P	12 19 14.0	-1.2
	8.3nm,0.9s						
RIDG	Independ’e Rid	86.77	14	*e*P	P	12 19 15.1	-0.6
	8.4nm,1.0s						
HDA	Harding Lake	86.89	13	*e*P	P	12 19 15.3	-0.8
	16nm,0.7s						
CCB	Clear Creek Bu	86.92	12	*e*P	P	12 19 15.2	-1.0
	18nm,0.7s						
DLBC	Dease Lake	87.00	23	P	P	12 19 17.0	+0.2
	4.2nm,0.8s,baz=211,slow=6.0,SNR=10						
DLBC	Dease Lake	87.00	23	*e*P	P	12 19 17.2	+0.4
	8.1nm,1.0s						
MCMT	McKenzie Canyo	87.05	40	*e*P	P	12 19 18.5	+0.9
IM3	Indian Mountai	87.05	10	*e*P	P	12 19 16.6	-0.2
AHID	Auburn Hatcher	87.10	43	*e*P	P	12 19 18.5	+0.7
	3.9nm,0.9s						
MDM	Murphy Dome	87.11	12	*e*P	P	12 19 16.1	-1.1
	25nm,0.9s						
COLA	College	87.11	12	*e*P	P	12 19 16.4	-0.6
	34nm,0.8s						
SCRK	Sand Creek	87.17	14	*e*P	P	12 19 16.2	-1.4
	9.8nm,1.1s						
IL1	Eielson Array	87.22	13	*e*P	P	12 19 16.4	-1.2
ILAR	Eielson Array	87.22	13	P	P	12 19 16.6	-1.0
	8.3nm,0.8s,baz=226,slow=5.3,SNR=73						
ILAR				PP	PP	12 22 44.5	-7.7
	0.9nm,0.9s,baz=219,slow=6.9,SNR=3.7						
ILB	Eielson Array	87.22	13	*e*P	P	12 19 16.7	-0.9
MSO	Missoula	87.44	38	P	P	12 19 19.1	-0.2
	baz=238						
MSO	Missoula	87.44	38	*e*P	P	12 19 19.4	+0.2
	3.0nm,0.6s						
DLMT	Dillon	87.48	40	*e*P	P	12 19 20.4	+0.9
	21nm,1.1s						
REDW	Red Top Meadow	87.55	42	*e*P	P	12 19 21.1	+1.1
	25nm,1.1s						
TPAW	Teton Pass	87.55	42	*e*P	P	12 19 20.9	+0.9
	9.3nm,1.0s						
FXWY	Fox Creek	87.58	42	*e*P	P	12 19 20.9	+0.8
	10nm,1.1s						
S22A	4UR Ranch, Cre	87.61	49	P	P	12 19 21.3	+0.8
	baz=243						
S22A	4UR Ranch, Cre	87.61	49	*e*P	P	12 19 21.8	+1.2
	11nm,1.0s						
SNOW	Snow King Moun	87.66	42	*e*P	P	12 19 21.4	+0.8
	18nm,0.9s						
O20A	White River Ci	87.72	46	P	P	12 19 21.3	+0.4
	baz=242						
O20A	White River Ci	87.72	46	*e*P	P	12 19 21.8	+1.0
	5.5nm,0.9s						
IMW	Indian Meadow	87.76	42	*e*P	P	12 19 22.1	+1.0
	24nm,1.1s						
LRM	Limekiln Ridge	87.80	40	*e*P	P	12 19 21.7	+0.6
MOOW	Moose Ponds	87.81	42	*e*P	P	12 19 22.2	+1.0
	6.9nm,1.1s						
SYO	Syowa Base	87.82	193⥣	*e*P	P	12 19 20.0	-0.6
LOHW	Long Hollow	87.83	42	*e*P	P	12 19 21.9	+0.6
	5.8nm,0.9s						
QLMT	Earthquake Lak	87.92	41	*e*P	P	12 19 23.4	+1.8
BILL	Bilibino	87.95	354	*e*P	P	12 19 20.7	-0.3
	7.6nm,0.6s						
FLWY	Flagg Ranch	88.00	42	*e*P	P	12 19 23.3	+1.2
	25nm,1.0s						
YHB	Horse Butte	88.02	41	*e*P	P	12 19 23.6	+1.4
	30nm,1.1s						
YPP	Pitchstone Pla	88.03	41	*e*P	P	12 19 24.1	+1.8
	3.6nm,1.1s						
LNIG	Linares	88.06	63	*e*P	P	12 19 22.9	+0.3
	19nm,0.9s						
BW06	Boulder Array	88.09	43	P	P	12 19 22.7	+0.2
	baz=242						
BW06	Boulder Array	88.09	43	*e*P	P	12 19 22.6	+0.1
	8.4nm,0.9s						
PD31	Pinedale Array	88.09	43	*e*P	P	12 19 22.8	+0.3
PDAR	Pinedale Array	88.09	43	P	P	12 19 22.7	+0.1
	5.1nm,0.8s,baz=216,slow=3.1,SNR=39						
YFT	Old Faithful	88.10	41	*e*P	P	12 19 23.9	+1.3
	17nm,1.0s						
SMCO	Snowmass	88.16	47	*e*P	P	12 19 24.0	+0.8
	6.6nm,1.1s						
BOZ	Bozeman (W)	88.18	40	P	P	12 19 23.7	+0.8
	baz=240						
BOZ	Bozeman (W)	88.18	40	*e*P	P	12 19 23.6	+0.8
	21nm,1.1s						
H17A	Grant Village	88.23	41	*e*P	P	12 19 25.2	+2.0
	17nm,1.0s						
DAWY	Dawson	88.37	16	*e*P	P	12 19 23.1	0.0
	11nm,0.9s						
EGAK	Eagle	88.51	15	*e*P	P	12 19 23.6	-0.1
	17nm,0.8s						
SDCO	Great Sand Dun	88.56	49	P	P	12 19 25.3	+0.4
	baz=244						
SDCO	Great Sand Dun	88.56	49	*e*P	P	12 19 25.6	+0.7
	4.2nm,1.0s						
HRY	Holter Researc	88.62	39	*e*P	P	12 19 25.6	+0.8
WALA	Waterton Lakes	88.64	36	*e*P	P	12 19 25.4	+0.6
	5.0nm,0.8s						
HHC	Hu-ho-hao-te	88.65	314	*e*P	P	12 19 26.7	+1.7
HHC				PP	PP	12 23 07.8	+3.6
HHC				S	S	12 29 23.6	-2.1
HHC				sS	sS	12 32 57.5	-2.9
HHC				SS	SS	12 35 38.1	+3.8
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,28nm,6.0s						
COLD	Coldfoot	88.78	10	*e*P	P	12 19 25.0	+0.2
	17nm,0.9s						
MSTX	Muleshoe	88.98	53	P	P	12 19 27.3	+0.5
	baz=246						
T25A	Trinidad	89.08	50	P	P	12 19 27.5	+0.3
	baz=245						
T25A	Trinidad	89.08	50	*e*P	P	12 19 28.4	+1.2
	4.7nm,0.9s						
SNAA	Sanae	89.11	178	P	P	12 19 26.7	+0.1
SNAA	Sanae	89.11	178	P	P	12 19 26.7	+0.1
	2.2nm,1.0s,baz=196,slow=9.0,SNR=4.7						
RWWY	Rawlins	89.13	45	*e*P	P	12 19 28.0	+0.6
	15nm,1.0s						
CMIG	Matias Romero	89.23	72	P	P	12 19 29.0	+0.9
	3.9nm,0.9s,baz=269,slow=6.3,SNR=4.3						
VNA3	Neumayer Olymp	89.24	176	P	P	12 19 27.2	+0.1
ISCO	Idaho Springs	89.38	47	P	P	12 19 29.2	+0.6
	baz=244						
RLMT	Red Lodge	89.40	41	P	P	12 19 29.6	+1.0
	baz=242						
RLMT	Red Lodge	89.40	41	*e*P	P	12 19 29.5	+1.0
	14nm,1.0s						
833A	Chaparral WMA,	89.42	60	P	P	12 19 29.3	+0.6
	baz=248						
N23A	Red Feather La	89.63	46	*e*P	P	12 19 30.3	+0.5
	14nm,1.1s						
CM01	Chiang Mai Arr	89.81	290	*e*P	P	12 19 31.9	+1.1
CMAR	Chiang Mai Arr	89.84	290	P	P	12 19 31.9	+1.0
	4.8nm,0.9s,baz=112,slow=3.1,SNR=18						
VNA1	Neumayer--Stat	89.91	177	P	P	12 19 30.4	+0.2
JCT	Junction City	89.91	58	P	P	12 19 31.2	+0.2
	baz=248						
JCT	Junction City	89.91	58	*e*P	P	12 19 31.6	+0.6
	4.0nm,0.6s						
CMMT	Chiang Mai	89.96	290	P	P	12 19 33.2	+1.7
	12nm,0.9s						
CHTO	Chiang Mai	89.96	290	*e*P	P	12 19 32.5	+1.0
	7.1nm,0.8s						
CHTO	Chiang Mai	89.96	290	P	P	12 19 33.3	+1.8
	52nm,0.9s						
K22A	Casper	90.02	44	P	P	12 19 31.9	+0.5
	baz=244						
K22A	Casper	90.02	44	*e*P	P	12 19 32.3	+0.9
	14nm,1.1s						
TOLK	Toolik Lake Re	90.15	10	P	P	12 19 31.1	-0.2
	baz=207						
TOLK	Toolik Lake Re	90.15	10	*e*P	P	12 19 31.3	0.0
	7.4nm,0.9s						
AMTX	Amarillo	90.17	53	P	P	12 19 32.6	+0.4
	baz=246						
AMTX	Amarillo	90.17	53	*e*P	P	12 19 32.6	+0.4
	7.3nm,0.6s						
EGMT	Eagleton	90.50	39	P	P	12 19 33.8	+0.4
	baz=241						
ABTX	Abilene, Hawle	90.85	56	P	P	12 19 35.9	+0.5
	baz=248						
ABTX	Abilene, Hawle	90.85	56	*e*P	P	12 19 36.1	+0.8
	23nm,1.0s						
KSCO	Kaye Shedlock’	91.14	49	P	P	12 19 37.2	+0.5
	baz=246						
LAO	LASA Array	92.01	41	P	P	12 19 41.6	+1.2
	baz=244						
LAO	LASA Array	92.01	41	*e*P	P	12 19 42.1	+1.7
	14nm,0.9s						
RSSD	Black Hills	92.29	44	P	P	12 19 42.1	+0.1
	baz=245						
RSSD	Black Hills	92.29	44	*e*P	P	12 19 42.2	+0.3
	13nm,1.1s						
WHTX	Lake Whitney,	92.34	57	P	P	12 19 42.4	+0.2
	baz=249						
OGNE	Ogallala	92.34	47	P	P	12 19 42.3	+0.3
	baz=246						
CBKS	Cedar Bluff	93.13	50	P	P	12 19 46.1	+0.4
	baz=248						
CBKS	Cedar Bluff	93.13	50	*e*P	P	12 19 46.2	+0.5
	14nm,0.8s						
INK	Inuvik	93.18	15	P	P	12 19 44.4	-0.7
	7.3nm,0.9s,baz=210,slow=3.5,SNR=12						
INK	Inuvik	93.18	15	*e*P	P	12 19 44.3	-0.8
	12nm,1.0s						
DGMT	Dagmar	94.02	40	P	P	12 19 50.0	+0.6
	baz=245						
DGMT	Dagmar	94.02	40	*e*P	P	12 19 50.6	+1.1
	21nm,0.8s						
YKA	Yellowknife Ar	95.47	25	P	P	12 19 55.1	-0.5
	3.3nm,1.0s,baz=242,slow=4.3,SNR=15						
MIAR	Mount Ida	96.27	56	Pdiff	P	12 19 59.9	-0.1
	baz=251						
W39A	Magazine	96.32	55	Pdiff	P	12 20 00.5	+0.3
	baz=251						
U39A	Green Forest	96.94	54	Pdiff	P	12 20 03.0	+0.1
	baz=251						
S38A	Stockton	97.02	53	Pdiff	Pdif	12 20 04.0	+0.7
	baz=251						
ECSD	EROS Data Cent	97.10	46	Pdiff	Pdif	12 20 03.8	+0.3
	baz=250						
R38A	Fenwick Farm,	97.20	52	Pdiff	P	12 20 04.2	+0.2
	baz=251						
P37A	Lathrop	97.32	51	Pdiff	P	12 20 04.8	+0.2
	baz=251						
R39A	Chumby, Stover	97.89	52	Pdiff	P	12 20 07.6	+0.5
	baz=252						
T40A	Mansfield	97.91	54	Pdiff	P	12 20 08.1	+0.9
	baz=252						
T41A	Mountain View	98.45	54	Pdiff	P	12 20 10.5	+0.8
	baz=252						
P39B	Salisbury	98.46	51	Pdiff	P	12 20 10.2	+0.5
	baz=252						
O40A	La Belle	99.30	51	Pdiff	Pdif	12 20 14.5	+1.2
	baz=253						
S42A	Caledonia	99.41	53	Pdiff	Pdif	12 20 14.0	+0.1
	baz=253						
K38A	Parkersburg	99.42	48	Pdiff	Pdif	12 20 14.8	+1.0
	baz=253						
K39A	Oelwein	100.05	48	Pdiff	Pdif	12 20 17.2	+0.6
	baz=253						
E36A	McGregor	100.24	44	Pdiff	Pdif	12 20 17.9	+0.5
	baz=253						
D37A	Cotton	100.97	44	Pdiff	Pdif	12 20 21.7	+1.1
	baz=254						
G40A	Rib Lake	101.94	46	Pdiff	Pdif	12 20 26.3	+1.4
	baz=255						
H41A	Junction City	102.14	47	Pdiff	Pdif	12 20 26.5	+0.6
	baz=255						
F40A	Park Falls	102.16	46	Pdiff	Pdif	12 20 27.1	+1.2
	baz=255						
857A	Zephyrhills	103.75	65	Pdiff	Pdif	12 20 34.2	+0.8
	baz=255						
656A	Willston	103.77	63	Pdiff	Pdif	12 20 33.7	+0.3
	baz=256						
062Z	Marathon	103.86	68	Pdiff	Pdif	12 20 34.1	+0.2
	baz=255						
ZALV	Zalesovo Beam	109.69	321	PKiKP	PKiKP	12 24 57.8	-0.5
	1.1nm,0.4s,baz=210,slow=1.4,SNR=4.2						
ZAA1	Zalesovo Array	109.69	321	*e*PKiKP	PKiKP	12 24 57.8	-0.5
MK32	Makanchi Array	110.51	314	*e*PKiKP	PKiKP	12 24 59.5	-0.7
MKAR	Makanchi Array	110.51	314	PKiKP	PKiKP	12 24 59.5	-0.7
	1.6nm,0.6s,baz=197,slow=0.4,SNR=12						
KURK	Kurchatov	113.25	318	*e*PKiKP	PKiKP	12 25 04.5	-0.7
KURBB	Kurchatov Arra	113.30	318	PKiKP	PKiKP	12 25 04.5	-0.8
	2.1nm,0.5s,baz=102,slow=1.6,SNR=19						
KSH	Kashi	114.33	305	*e*PKP	PKPdf	12 25 06.5	-1.3
KSH				PP	PP	12 26 19.6	+5.3
KSH				PKS	PKSdf	12 28 41.6	-3.0
PKME	Peaks-Kenny Pk	116.51	48	PKiKP	PKiKP	12 25 13.7	+2.1
	baz=269						
BVAR	Borovoye Array	118.29	320	PKP	PKPdf	12 25 14.4	-0.4
	3.8nm,0.6s,baz=122,slow=2.1,SNR=16						
KK31	Karatay Array	118.63	309	*e*PKPdf	PKPdf	12 25 15.5	-0.3
KKAR	Karatay Array	118.63	309	*e*PKPdf	PKPdf	12 25 15.5	-0.3
SPA0	Spitsbergen Ar	120.77	357	*e*PKPdf	PKPdf	12 25 17.6	-1.4
SPITS	Spitsbergen Ar	120.77	357	PKP	PKPdf	12 25 17.6	-1.4
	6.0nm,0.7s,baz=82,slow=2.0,SNR=6.3						
ARU	Arti	124.35	326	*e*PKPdf	PKPdf	12 25 26.4	+0.1
ABKAR	Akbulak array	125.35	317	*e*PKPdf	PKPdf	12 25 28.4	0.0
AKTO	Aktyubinsk	126.30	319	PKP	PKPdf	12 25 30.6	+0.3
	3.6nm,0.7s,baz=89,slow=2.1,SNR=10						
ARA0	ARCESS Array S	127.85	350	*e*PKPdf	PKPdf	12 25 32.5	-0.2
ARCES	ARCESS Array B	127.85	350	PKP	PKPdf	12 25 32.5	-0.2
	5.3nm,0.6s,baz=348,slow=1.7,SNR=12						
NB2	NORSAR Subarra	137.90	353	PKP	PKPpre	12 25 42.1	
	comp=Z,1.8nm,0.8s,baz=17,slow=2.6						
AKBB	Malin Array Si	142.09	332	*e*PKPpre	PKPpre	12 25 55.1	
AKBB				*e*PKPdf	PKPdf	12 25 59.6	0.0
KIEV	Kiev	142.10	332	*e*PKPpre	PKPpre	12 25 55.2	
KIEV				*e*PKPdf	PKPdf	12 25 59.7	+0.1
AK11	Malin Array Si	142.13	332	*e*PKPpre	PKPpre	12 25 55.3	

INVG	Invergeldie, C	142.73	6	eP	PKPdf	12 25 57.5	-3.0
EAB	Aberfoyle	142.94	6	eP	PKPdf	12 25 58.5	-2.5
PGBU	Glenifferbraes	143.30	6	eP	PKPab	12 25 59.4	-0.3
EDI	Edinburgh	143.31	5	eP	PKPab	12 25 59.4	-0.3
ESY	Stoneypath	143.36	4	eP	PKPab	12 25 59.2	-0.7
IDGL	Inch Island, C	143.63	9	eP	PKPab	12 26 00.1	-0.9
ESK	Eskdalemuir	143.91	5	ePKPbc	PKPbc	12 26 01.6	-0.3
ESK	Eskdalemuir	143.91	5	eP	PKPbc	12 26 01.3	-0.7
GKP	Gorka Klasztor	144.21	344	ePKP	PKPdf	12 26 03.1	-0.1
SORM	Soroca	144.31	329	⇓iP	PKPbc	12 26 03.1	-0.3
BEL	Belsk	144.46	340	ePKP	PKPab	12 26 04.2	0.0
BBO1	Bothel	144.48	5	eP	PKPdf	12 26 03.4	-0.2
EDMD	Edmundbyers	144.49	4	eP	PKPdf	12 26 03.1	-0.6
KESW	Keswick, Cumbr	144.64	5	eP	PKPdf	12 26 03.9	-0.1
HPK	Haverah Park	145.38	4	eP	PKPbc	12 26 06.5	0.0
LEOM	Leova	145.51	327	⇓iP	PKPbc	12 26 06.8	-0.2
MBAR	Mbarara	145.59	238	ePKPdf	PKPab	12 26 09.9	-0.1
KWP	Kalwaria Pacla	145.62	336	ePKP	PKPbc	12 26 07.5	+0.2
KWP	Kalwaria Pacla	145.62	336	ePKPdf	PKPbc	12 26 07.7	+0.4
KWP				ePKPbc	PKPab	12 26 08.9	+0.1
WME	Myndd Eilian	145.70	7	eP	PKPbc	12 26 06.9	-0.5
WLF1	Llynfaes	145.79	7	eP	PKPbc	12 26 07.4	-0.2
WPM1	Penmaenmawr	145.88	6	eP	PKPbc	12 26 07.3	-0.6
LBWR	Ladybower, Pea	145.92	4	eP	PKPbc	12 26 07.6	-0.4
TLCR		146.06	325	⇓iP	PKPbc	12 26 08.8	+0.1
BUR08	Bucovina Ar. S	146.13	332	ePKPdf	PKPbc	12 26 09.7	+0.7
BUR08				ePKPbc	PKPab	12 26 10.7	-0.4
BUR04	Bucovina Ar. S	146.14	332	ePKPdf	PKPbc	12 26 08.5	-0.4
BURAR	Bucovina Array	146.14	332	⇓iP	PKPbc	12 26 09.8	+0.8
BR101	Keskin Array S	146.16	314	ePKPdf	PKPdf	12 26 07.9	+0.7
BR131	Keskin Array S	146.16	314	ePKPdf	PKPbc	12 26 08.4	-0.9
BRTR	Keskin Array B	146.16	314	PKPbc	PKPdf	12 26 07.9	+0.7
	comp=Z,8.7nm,0.8s,baz=130,slow=2.3,SNR=26						
OJC	Ojcow	146.16	339	ePKP	PKPbc	12 26 08.9	+0.1
OJC	Ojcow	146.16	339	ePKPdf	PKPbc	12 26 07.9	-0.9
BIZ	Bicaz	146.23	330	⇓iP	PKPbc	12 26 10.1	+1.0
TESR	Tescani	146.28	329	⇑iP	PKPbc	12 26 09.4	+0.1
LLW	Llanuwychllyn	146.31	6	eP	PKPbc	12 26 08.6	-0.5
FOEL	Foel Wylfa	146.31	6	eP	PKPbc	12 26 09.1	-0.1
ASF	Jabal al Asfar	146.34	299	PKPbc	PKPbc	12 26 09.3	-0.7
	comp=Z,6.4nm,0.8s,baz=131,slow=0.3,SNR=10						
CFR	Carcaliu	146.43	326	⇑iP	PKPbc	12 26 09.9	+0.2
KSP	Ksiaz	146.66	344	ePKP	PKPbc	12 26 10.8	+0.6
NIE	Niedzica	146.68	338	ePKP	PKPbc	12 26 10.9	+0.6
VRI	Vrincioaia	146.69	328	⇑iP	PKPbc	12 26 11.1	+0.7
HLM1	Long Mynd	146.71	6	eP	PKPbc	12 26 09.9	-0.3
PLOR	Plostina	146.74	328	⇓iP	PKPbc	12 26 10.1	-0.5
HARR	Harsova	146.86	325	⇑iP	PKPbc	12 26 11.3	+0.4
TLB	Topalu	146.87	325	⇓iP	PKPbc	12 26 10.9	0.0
ARCR	ARCALIA	146.93	332	⇓iP	PKPbc	12 26 12.3	+1.3
CLL	Collm	147.01	347	i PKPdf	PKPdf	12 26 08.5	+0.4
	comp=Z,5.0nm,0.8s						
CLL				⇑iPKPbc	PKPbc	12 26 11.3	+0.3
	comp=Z,44nm,1.0s						
CLL				i PKPab	PKPab	12 26 14.1	-0.2
	comp=Z,26nm,0.9s						
CLL	Collm	147.01	347	ePKPdf	PKPdf	12 26 08.4	+0.4
CLL				ePKPbc	PKPbc	12 26 11.3	+0.3
CLL				ePKPab	PKPab	12 26 14.3	0.0
UPC	Upice	147.04	344	⇑ePKP	PKPbc	12 26 11.7	+0.5
UPC				ePKPAB	PKPab	12 26 14.8	+0.3
BRG	Berggiesshubel	147.22	346	i PKP	PKPbc	12 26 12.0	+0.4
	comp=Z,18nm,0.8s						
BRG				i		12 26 15.2	
	comp=Z,15nm,0.8s						
MCH1	Michaelchurch	147.22	6	eP	PKPbc	12 26 11.0	-0.5
KRLC	Kraliky	147.22	342	ePKP	PKPbc	12 26 12.4	+0.7
MORC	Moravsky Berou	147.26	341	⇑iP	PKPbc	12 26 12.3	+0.4
MORC	Moravsky Berou	147.26	341	ePKPdf	PKPdf	12 26 08.7	0.0
MORC				ePKPbc	PKPbc	12 26 12.1	+0.3
MORC				ePKPab	PKPab	12 26 15.2	-0.2
MORC	Moravsky Berou	147.26	341	ePKP	PKPbc	12 26 12.0	+0.1
DOPR	Dopca	147.28	329	⇓iP	PKPab	12 26 14.2	-1.4
ISR	Istrita	147.30	327	⇑iP	PKPbc	12 26 12.5	+0.4
ICOR	Ion Corvin	147.31	325	⇓iP	PKPab	12 26 24.1	+8.3
MMAI	Mount Meron Ar	147.34	301	PKPbc	PKPbc	12 26 13.4	+0.8
	comp=Z,6.7nm,0.6s,baz=72,slow=4.7,SNR=8.2						
MLR	Muntele Rosu	147.34	328	PKPbc	PKPdf	12 26 09.4	+0.4
	comp=Z,2.6nm,0.7s,baz=270,slow=9.1,SNR=8.6						
MLR	Muntele Rosu	147.34	328	⇑iP	PKPbc	12 26 12.2	-0.1
MLR	Muntele Rosu	147.34	328	ePKPdf	PKPdf	12 26 09.4	+0.4
MLR				ePKPbc	PKPbc	12 26 12.3	0.0
MLR				ePKPab	PKPab	12 26 15.0	-1.1
MONM	Monmouth	147.39	6	eP	PKPbc	12 26 11.8	-0.2
PVCC	Panska Ves	147.39	345	⇑ePKP	PKPbc	12 26 13.3	+1.2
KECS	Kecovo	147.39	337	ePKP	PKPbc	12 26 12.5	+0.3
CJR	Cluj-Napoca	147.55	332	⇓iP	PKPbc	12 26 12.7	0.0
SECR		147.60	327	⇑iP	PKPbc	12 26 13.4	+0.6
VOIR		147.82	329	⇑iP	PKPbc	12 26 13.4	-0.1
PRA	Prague	147.85	345	⇑ePKP	PKPbc	12 26 14.3	+1.0
DRGR		147.88	333	⇑iP	PKPbc	12 26 13.9	+0.3
PRU	Pruhonice	147.90	345	⇑ePKP	PKPbc	12 26 14.1	+0.7
PRU				ePKPAB	PKPab	12 26 18.6	+0.7
GOPC	GO Pecny, Ondr	147.90	345	⇑ePKP	PKPbc	12 26 14.1	+0.6
GOPC				ePKPAB	PKPab	12 26 18.7	+0.7
VRAC	Vranov	147.96	342	⇓iP	PKPbc	12 26 13.7	+0.1
VRAC	Vranov	147.96	342	ePKP	PKPbc	12 26 13.8	+0.1
VRAC				e		12 26 18.9	
VYHS	Vyhne	147.97	339	ePKP	PKPbc	12 26 14.2	+0.5
JAVC	Velka Javorina	148.03	340	ePKP	PKPbc	12 26 15.3	+1.4
ARR	Arges	148.07	329	⇑iP	PKPbc	12 26 15.1	+1.0
PSZ	Piszkesteto	148.08	337	⇑iP	PKPbc	12 26 14.3	+0.3
PSZ	Piszkesteto	148.08	337	ePKPdf	PKPdf	12 26 10.2	+0.2
PSZ				ePKPbc	PKPbc	12 26 14.1	+0.1
PSZ				ePKPab	PKPab	12 26 18.9	0.0
NKC	Novy Kostel	148.14	347	⇑ePKP	PKPbc	12 26 14.5	+0.5
KRUC	Moravsky	148.24	342	ePKP	PKPbc	12 26 14.4	+0.1
KRUC				e		12 26 19.5	
LOT	Lotru	148.43	330	⇑iP	PKPbc	12 26 14.6	-0.4
MODS	Modra-Piesok	148.59	340	ePKP	PKPbc	12 26 16.3	+1.1
MEM	Membach	148.70	355	⇑PKP	PKPbc	12 26 15.4	0.0
KHC	Kasperske Hory	148.93	345	⇑ePKP	PKPbc	12 26 16.5	+0.5
KHC				ePKPAB	PKPab	12 26 23.1	+0.8
KHC	Kasperske Hory	148.93	345	ePKPbc	PKPbc	12 26 16.2	+0.1
GEC2	GERESS Array S	149.16	345	ePKPbc	PKPbc	12 26 16.9	+0.2
GERES	GERESS Array B	149.16	345	PKPbc	PKPbc	12 26 16.8	+0.2
	comp=Z,14nm,0.9s,baz=46,slow=2.8,SNR=60						
GEA0	GERESS Array S	149.17	345	ePKPdf	PKPdf	12 26 11.8	+0.1
GEA0				ePKPbc	PKPbc	12 26 16.9	+0.2
GEA0				ePKPab	PKPab	12 26 23.3	-0.1
BZS	Buzias	149.27	333	⇑iP	PKPbc	12 26 16.6	-0.3
DOU	Dourbes	149.30	357	⇑PKP	PKPbc	12 26 17.0	+0.2
CONA	Conrad Observa	149.42	342	ePKiKP	PKiKP	12 26 17.9	-0.2
	comp=Z,42nm,1.4s,SNR=14						
HERR	Herculane	149.48	331	⇓iP	PKPbc	12 26 17.6	+0.2
WLF	Walferdange	149.62	355	ePKPbc	PKPbc	12 26 17.0	-0.6
MDVR	Moldovita	149.88	332	⇑iP	PKPbc	12 26 18.3	-0.2
MOA	Molln	149.94	344	ePKPbc	PKPbc	12 26 18.4	-0.1
	comp=Z,9.2nm,0.8s						
ARSA	Arzberg	150.13	341	ePKPbc	PKPbc	12 26 19.0	+0.1
	comp=Z,12nm,1.2s						
MANT	Manisa	150.20	315	ePKPbc	PKPbc	12 26 19.3	-0.4
ALN	Alexandroupoli	150.37	322	ePKPbc	PKPbc	12 26 18.5	-1.1
BFO	Black Forest	150.69	351	ePKPbc	PKPbc	12 26 20.4	+0.2
SOKA	Soboth	150.79	342	ePKPbc	PKPbc	12 26 19.9	-0.7
	comp=Z,16nm,0.8s,SNR=7.5						
VTS	Vitosha	150.79	327	⇑iP	PKPbc	12 26 20.6	-0.2
VTS	Vitosha	150.79	327	ePKPbc	PKPbc	12 26 20.3	-0.5
KBA	Koelnbreinsper	150.89	344	ePKPbc	PKPbc	12 26 20.3	-0.6
	comp=Z,17nm,0.7s,SNR=8.0						
ECH	Echery	150.96	353	ePKPbc	PKPbc	12 26 20.3	-0.5
OBKA	Obir	151.08	342	ePKPbc	PKPbc	12 26 20.8	-0.4
	comp=Z,7.4nm,0.8s						
RETA	Reutte	151.10	348	ePKPbc	PKPbc	12 26 21.3	+0.1
	comp=Z,11nm,0.8s						
WTTA	Wattenberg	151.13	346	i PKiKP	PKiKP	12 26 21.7	-0.1
	comp=Z,30nm,0.8s,SNR=8.4						
DOBS	Dobrina	151.13	341	i PKPbc	PKPbc	12 26 21.0	-0.3
MOTA	Moosalm	151.16	347	i PKiKP	PKiKP	12 26 22.6	+0.8
	comp=Z,14nm,0.7s,SNR=8.2						
DIVS	Divibare	151.18	333	ePKPdf	PKPdf	12 26 15.7	+0.7
DIVS				ePKPbc	PKiKP	12 26 21.9	+0.1
DIVS				ePKPab	PKPab	12 26 31.6	-0.3
MYKA	Terra Mystica	151.23	343	ePKPbc	PKPbc	12 26 21.0	-0.6
	comp=Z,19nm,0.8s,SNR=6.8						
ABTA	Abfaltersbach	151.41	345	ePKPbc	PKPbc	12 26 21.5	-0.5
	comp=Z,32nm,0.7s,SNR=12						
DAVA	Damuels	151.46	349	ePKiKP	PKiKP	12 26 23.0	+0.5
	comp=Z,26nm,1.1s,SNR=8.5						
LJU	Ljubljana	151.51	342	i PKPbc	PKPbc	12 26 22.1	0.0
FETA	Feichten	151.55	348	ePKiKP	PKiKP	12 26 22.7	+0.1
	comp=Z,18nm,0.8s,SNR=8.0						
BLY	Banja Luka	151.77	337	⇑iP	PKPbc	12 26 24.0	+1.3
BOJS	Bojanci	151.77	340	i PKPbc	PKPbc	12 26 23.0	+0.3
DAVOX	Davos/Dischmat	151.95	349	PKPbc	PKPbc	12 26 23.4	+0.1
	comp=Z,25nm,0.6s,baz=0.0,slow=4.0,SNR=27						
TUE	Stuetta	152.34	349	ePKPbc	PKPbc	12 26 24.7	+0.5
LIT	Litokhoron	152.93	324	ePKPdf	PKPdf	12 26 17.0	-0.7
LIT				ePKPbc	PKPbc	12 26 24.7	-0.7
LIT				ePKPab	PKPab	12 26 39.2	-0.2
FNA	Florina	153.05	326	ePKPdf	PKPdf	12 26 16.8	-1.1
FNA				ePKPbc	PKPbc	12 26 25.2	-0.6
FNA				ePKPab	PKPab	12 26 39.9	-0.1
MATE	Matera	155.40	333	⇑iP	PKPpre	12 26 08.3	
PBRG	Braganca	156.42	17	ePKPab	PKPab	12 26 54.1	-0.2
MVO	Moncorvo	156.94	18	ePKPdf	PKPdf	12 26 23.6	+0.5
MVO	Moncorvo	156.94	18	ePKPab	PKPab	12 26 56.7	+0.1
PVIS	Viseu	157.08	20	ePKPab	PKPab	12 26 57.0	-0.2
PTOM	Tomar	157.90	22	ePKPab	PKPab	12 27 00.1	-0.6
ESDC	Sonseca Array	159.12	13	PKPab	PKPab	12 27 05.9	-0.2
	comp=Z,1.6nm,0.7s,baz=341,slow=4.4,SNR=10.0						
KEST	Kesra	162.51	340	PKPab	PKPab	12 27 21.2	+0.1
	comp=Z,5.3nm,0.8s,baz=281,slow=5.4,SNR=4.7						

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*MAN **03** 12:09:01.3, 10.°07N×126.°15E, h1km, mb5.3, ML4.3, MS4.4*

*ISCJB **03** 12:09:06.3±0.4, 10.°04N±0.°02×126.°03E±0.°04, h79km±3km, mb4.5/70, Error ellipse: s-maj=6.5km s-min=3.7km az=161.2*

*IDC **03** 12:09:08.0±2.3, 10.°00N×125.°81E, h82km±21km, mb4.3/35, mb1 4.4/38, mb1mx4.2/71, mbtmp4.7/38, MS3.5/6, Ms1 3.5/6, ms1mx3.1/64, Error ellipse: s-maj=15.7km s-min=8.9km az=77.0*

*NEIC **03** 12:09:08.7±0.6, 9.°96N×125.°82E, h88km±5km, mb4.8/37, Error ellipse: s-maj=6.0km s-min=3.4km az=75.0*

NEIC Felt [III PIVS] at Dapa and General Luna and [II PIVS] at Pilar and Surigao.

ISC 03 12:09:06.2±0.9**, 10.°07N**±0.°03×**126.°07E**±0.°05**, h63**km±8km**, n189, σ1.s61**/207**, mb4.7**/70**, 3C-8D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	0.64	243	⇓iP	Pn	12 09 17.3	-2.7
SCPH				i S	Sn	12 09 27.0	-3.1
BUTP	Butuan	1.18	202	eP	Pn	12 09 25.0	-1.8
BUTP				eS	Sn	12 09 42.9	+0.7
MSLP	Maasin	1.20	273	eP	Pn	12 09 26.3	-0.6
MSLP				eS	Sn	12 09 44.2	+1.7
PLP	Palo	1.53	315	⇓eP	Pn	12 09 30.9	-0.5
PLP				eS	Sn	12 09 53.1	+2.7
BESP	Borongan	1.64	338	eP	Pn	12 09 32.5	-0.4
BESP				eS	Sn	12 09 57.4	+4.3
OCLP	Ormoc	1.74	304	eP	Pn	12 09 34.4	+0.2
BIPH	Bislig	1.90	171	⇑eP	Pn	12 09 36.8	+0.4
BIPH				i S	Sn	12 09 59.5	+0.2
LLP	Lapu-Lapu	2.09	277	⇓eP	Pn	12 09 39.6	+0.7
LLP				eS	Sn	12 10 06.3	+2.4
CGP	Cagayan de Oro	2.11	220	⇑eP	Pn	12 09 39.0	-0.2
CGP				eS	Sn	12 10 05.1	+0.8
TBP	Tagbilaran	2.21	260	eP	Pn	12 09 41.4	+0.8
TBP				i S	Sn	12 10 10.5	+3.6
BUKP	Musuan	2.40	205	eP	Pn	12 09 43.6	+0.4
BUKP				eS	Sn	12 10 15.7	+4.2
CNP	Catarman	2.79	330	eP	Pn	12 09 48.9	+0.4
SNPH	Sibulan	2.89	256	⇓eP	Pn	12 09 50.6	+0.7
SNPH				i S	Sn	12 10 27.6	+4.1
DMPH	Davao City--Mi	3.02	191	⇓iP	Pn	12 09 53.4	+1.6
DMPH				i S	Sn	12 10 34.9	+8.1
DAV	Davao City (W)	3.02	189	P	Pn	12 09 53.0	+1.3
	98nm,0.3s,baz=23,slow=15,SNR=4.7						
DAV				S	Sn	12 10 34.0	+7.2
	62nm,0.3s,baz=271,slow=23,SNR=1.6						
DAV				LR	LR	12 11 25.6	
	comp=Z,2µm,18.2s,baz=347,slow=47						
DCPH	Dipolog City	3.07	241	eP	Pn	12 09 54.3	+2.0
DCPH				eS	Sn	12 10 31.9	+4.2
MATI	Mati	3.11	177	eP	Pn	12 09 54.1	+1.2
MATI				eS	Sn	12 10 31.9	+3.0
CTBH	Cotabato--PC H	3.36	213	⇑eP	Pn	12 09 56.7	+0.3
CTBH				i S	Sn	12 10 41.8	+6.8
PAGZ	Pagadian	3.46	230	eP	Pn	12 09 58.7	+1.1
GUIM	Jordan	3.47	279	eP	Pn	12 09 57.8	0.0
RCP	Roxas	3.59	295	⇓eP	Pn	12 10 00.6	+1.1
SKMP	Bagumbayan, Su	3.84	203	eP	Pn	12 10 02.5	-0.4
PVCP	Virac	3.97	332	eP	Pn	12 10 05.2	+0.5
JAP	San Jose, Anti	4.11	280	⇓eP	Pn	12 10 12.3	+5.7
OTRP	Odiongan	4.58	300	eP	Pn	12 10 14.3	+1.3
CUYO	Cuyo Island	5.03	279	eP	Pn	12 10 20.2	+1.0
GQP	Guinayangan	5.21	317	⇓eP	Pn	12 10 31.5	+10
SJMP	San Jose	5.41	296	eP	Pn	12 10 25.8	+1.4
BUSP	Coron	6.08	289	eP	Pn	12 10 34.6	+1.1
TGY	Tagaytay City	6.42	309	LR	LR	12 13 34.9	
	comp=Z,673nm,18.1s,baz=86,slow=43						
ENPP	El Nido	6.63	280	eP	Pn	12 10 41.5	+0.5
CAUP	Cauayan	7.98	329	eP	Pn	12 10 59.0	-0.6
YULB	Yu-li	14.01	342	ePn	Pn	12 12 23.3	+1.6
TPUB	Ta-pu	14.14	339	ePn	P	12 12 26.7	-2.5
SSLB	Suanglung	14.49	341	ePn	Pn	12 12 30.0	+2.0
NACB	Ninganchiao	14.66	344	ePn	Pn	12 12 31.5	+1.3
JOW	Kunigami	16.80	7	P	P	12 13 01.2	+2.6
	1.9nm,0.3s,baz=179,slow=2.4,SNR=5.4						
JOW	Kunigami	16.80	7	ePn	P	12 13 01.2	+2.6
	31nm,1.0s						
GUMO	Guam	18.72	77	LR	LR	12 20 31.0	
	comp=Z,67nm,20.4s,baz=318,slow=36						
JAY	Jayapura	19.20	130	P	Pn	12 13 26.6	-0.2
	0.7nm,0.3s,baz=236,slow=7.3,SNR=1.6						
BATI	Baumata	20.29	187	P	P	12 13 35.9	-1.1
	30nm,0.7s,baz=14,slow=4.2,SNR=2.7						
UBPT	Khong Chiam	20.75	287	P	Pn	12 13 47.2	+2.3
	11nm,1.5s,0.1nm						
SKNT	Sakolnakorn	22.53	290	P	P	12 14 02.1	+0.9
	5.6nm,0.8s,0.0nm						
MTN	Manton Dam	23.32	167	eP	P	12 14 09.7	+0.7
	38nm,1.1s						
NONG	Nongkai	23.59	292	P	P	12 14 11.1	-0.5
	0.4nm,1.2s,68nm0.0nm						
PBKT	Sadao Pong	25.25	287	P	P	12 14 28.8	+2.2
	11nm,1.3s,1µm						
PHIT	Phitsanulok	25.90	289	P	P	12 14 34.9	+2.4
	22nm,0.8s						
NANT	Nan	26.03	292	P	P	12 14 33.2	-0.5
	6.2nm,0.7s						
PAYA	Payao	26.94	293	P	P	12 14 42.3	+0.3
	13nm,0.7s						
KS15	Wonju Array Si	27.30	3	eP	P	12 14 45.1	+0.2
KSAR	Wonju Array Be	27.30	3	P	P	12 14 45.1	+0.2
KSRS	Korea Array	27.31	3	P	P	12 14 45.1	+0.1
	1.4nm,0.5s,baz=182,slow=10,SNR=10						
KSRS				LR	LR	12 25 20.4	
	comp=Z,27nm,19.8s,baz=320,slow=36						
CM01	Chiang Mai Arr	27.53	291	eP	P	12 14 45.9	-1.3
CM31	Chiang Mai Arr	27.55	291	eP	P	12 14 46.2	-1.3
CM31				ePcP	PcP	12 18 01.8	-2.5
CMAR	Chiang Mai Arr	27.55	291	P	P	12 14 46.2	-1.3
	3.7nm,0.8s,baz=88,slow=8.2,SNR=20						
CMAR				PcP	PcP	12 18 01.7	-2.5
	0.9nm,0.6s,baz=130,slow=1.4,SNR=5.1						
CMMT	Chiang Mai	27.63	291	P	P	12 14 48.6	+0.4
	6.2nm,0.8s						
CHTO	Chiang Mai	27.64	291	eP	P	12 14 47.3	-0.9
	5.3nm,0.9s						
CHTO	Chiang Mai	27.64	291	P	P	12 14 48.7	+0.5
	28nm,1.6s						
FITZ	Fitzroy Crossi	28.00	181	P	P	12 14 50.4	-0.9
	3.4nm,0.4s,baz=8.4,slow=7.5,SNR=30						
MAJO	Matsushiro	28.55	21	eP	P	12 14 54.2	-2.0
MJAR	Matsushiro Arr	28.55	21	P	P	12 14 54.2	-2.0
	1.7nm,0.7s,baz=192,slow=9.5,SNR=7.0						
WR1	Warramunga Arr	30.92	165	eP	P	12 15 14.9	-2.3
WR1				ePcP	PcP	12 18 11.8	-0.8
WRA	Warramunga Arr	30.92	165	P	P	12 15 14.9	-2.3
	3.7nm,0.6s,baz=342,slow=9.6,SNR=7.7						
WRA				PcP	PcP	12 18 11.8	-0.8
	1.8nm,0.7s,baz=335,slow=3.1,SNR=4.3						
ASAR	Alice Springs	34.40	167	P	P	12 15 46.4	-1.3
	2.6nm,0.5s,baz=350,slow=6.7,SNR=6.7						
ASAR				PcP	PcP	12 18 21.1	-1.1
	2.0nm,0.8s,baz=1.4,slow=2.1,SNR=4.2						
ASAJ	Asahikawa	36.82	20	P	P	12 16 09.3	+1.2
	4.7nm,0.7s,baz=218,slow=6.8,SNR=4.4						
ASAJ	Asahikawa	36.82	20	eP	P	12 16 09.3	+1.2
	7.3nm,1.1s						
HNR	Honiara	38.88	119	LR	LR	12 32 48.9	
	comp=Z,48nm,19.7s,baz=359,slow=36						
ODAN	Odare	40.11	300	eP	P	12 16 38.9	+2.6
	38nm,0.6s						
H11N1	WAKE ISLAND Hy	40.50	71	T	T	12 59 54.7	
	baz=263,slow=75,SNR=104						
H11N2	WAKE ISLAND Hy	40.51	71	T	T	12 59 50.1	
	baz=263,slow=75,SNR=0.7						
H11N3	WAKE ISLAND Hy	40.52	71	T	T	12 59 56.1	
	baz=263,slow=75,SNR=102						
FORT	Forrest	40.66	177	ePcP	P	12 16 40.4	0.0
RAMN	Ramite	40.81	300	eP	P	12 16 43.3	+1.2
	14nm,0.5s						
ULN	Ulaanbaatar	40.94	340	eP	P	12 16 43.1	+0.4
	8.9nm,0.7s						
SONA0	Songino Array	41.13	340	eP	P	12 16 44.4	+0.1
SONA0				ePcP	PcP	12 18 42.0	-0.7
SONM	Songino Array	41.13	340	P	P	12 16 44.4	+0.1
	3.4nm,0.6s,baz=160,slow=9.3,SNR=15						
SONM				PcP	PcP	12 18 42.0	-0.7
	1.5nm,0.8s,baz=162,slow=3.3,SNR=4.2						
SONA1	Songino Array	41.14	340	eP	P	12 16 44.2	-0.1
JIRN	Jiri	41.36	301	eP	P	12 16 46.9	+0.1
	33nm,0.5s						
GUN	Gumba	41.70	301	eP	P	12 16 50.2	+0.7
PKIN	Phulchoki	42.01	300	eP	P	12 16 51.7	-0.3
	9.7nm,0.6s						
PKIN	Phulchoki	42.01	300	eP	P	12 16 52.2	+0.2
	13nm,0.5s						
DMN	Daman	42.27	300	eP	P	12 16 54.7	+0.6
KOLN	Koldanda	43.60	300	eP	P	12 17 03.1	-1.7
	10nm,0.6s						
DANN	Dangsing	43.62	301	eP	P	12 17 04.3	-0.7
	22nm,0.6s						
BBOO	Buckleboo	43.70	168	eP	P	12 17 04.9	-0.2
	20nm,0.9s						
STKA	Stephens Creek	44.28	161	P	P	12 17 09.1	-0.7
	5.6nm,0.6s,baz=351,slow=5.7,SNR=11						
STKA	Stephens Creek	44.28	161	eP	P	12 17 09.6	-0.2
	1.4nm,0.6s						
TLY	Talaya	45.35	340	eP	P	12 17 18.6	+0.5
	9.7nm,0.9s						
PETK	Petropavlovsk-	49.90	24	P	P	12 17 54.6	+1.3
	3.9nm,0.6s,baz=210,slow=9.4						
PETK	Petropavlovsk-	49.90	24	eP	P	12 17 54.4	+1.1
PEA1	Petropavlovsk-	49.90	24	eP	P	12 17 54.6	+1.2
DZM	Mont Dzumac	50.87	129	P	P	12 18 02.1	+0.9
	22nm,0.7s,baz=272,slow=7.9,SNR=33						
DZM	Mont Dzumac	50.87	129	eP	P	12 18 01.9	+0.7
	24nm,0.7s						
YAK	Yakutsk	51.93	2	P	P	12 18 07.6	-0.8
	12nm,0.3s,baz=145,slow=0.8,SNR=9.2						
YAK	Yakutsk	51.93	2	eP	P	12 18 09.0	+0.6
	46nm,0.9s						
MK01	Makanchi Array	52.05	323	eP	P	12 18 08.9	-0.7
MK31	Makanchi Array	52.06	323	eP	P	12 18 09.3	-0.4
MK32	Makanchi Array	52.06	323	eP	P	12 18 09.1	-0.6
MK32				ePcP	PcP	12 19 20.8	-0.3
MKAR	Makanchi Array	52.06	323	P	P	12 18 09.1	-0.6
	9.0nm,0.7s,baz=122,slow=8.6,SNR=46						
MKAR				PcP	PcP	12 19 20.8	-0.3
	1.9nm,0.6s,baz=140,slow=2.5,SNR=3.6						
MKAR	Makanchi Array	52.06	323	eP	P	12 18 09.3	-0.4
	65nm,0.8s						
MKAR				PcP	PcP	12 19 20.8	-0.3
MAKZ	Makanchi	52.26	323	eP	P	12 18 10.8	-0.3
	10nm,1.0s						
MA2	Magadan	52.78	15	P	P	12 18 15.2	+0.5
	8.0nm,0.7s,baz=201,slow=7.0,SNR=8.8						
MA2	Magadan	52.78	15	eP	P	12 18 15.7	+1.0
	9.5nm,0.7s						
ZALV	Zalesovo Beam	54.70	331	P	P	12 18 27.5	-1.4
	2.3nm,0.3s,baz=120,slow=7.1,SNR=7.7						
ZAA1	Zalesovo Array	54.71	331	eP	P	12 18 27.5	-1.4
SEY	Seymchan	56.06	14	P	P	12 18 40.0	+1.6
	4.9nm,0.8s,baz=220,slow=5.5,SNR=18						
KURK	Kurchatov	56.12	326	eP	P	12 18 38.2	-0.9
KURBB	Kurchatov Arra	56.12	326	P	P	12 18 38.2	-0.9
	8.9nm,0.7s,baz=126,slow=7.0,SNR=64						
TIXI	Tiksi	61.55	1	P	P	12 19 16.5	+0.1
	18nm,0.8s,baz=193,slow=3.8,SNR=8.9						
TIXI	Tiksi	61.55	1	eP	P	12 19 16.5	+0.1
TIXI				eP	P	12 19 16.7	+0.3
BVAR	Borovoye Array	61.72	325	P	P	12 19 16.3	-1.6
	3.6nm,0.7s,baz=120,slow=8.5,SNR=17						
BVAR				PcP	PcP	12 19 57.8	-0.9
	3.0nm,0.7s,baz=93,slow=5.9,SNR=4.8						
BILL	Bilibino	63.64	16	eP	P	12 19 31.4	+0.9
	6.3nm,1.0s						
ABKAR	Akbulak array	66.90	319	eP	P	12 19 50.9	-0.9
RPZ	Rata Peaks	67.33	146	P	P	12 19 54.6	0.0
	8.3nm,0.6s,baz=240,slow=3.1,SNR=2.1						
AKTO	Aktyubinsk	68.35	320	P	P	12 19 59.6	-1.4
	1.7nm,0.4s,baz=93,slow=11,SNR=3.6						
ARU	Arti	69.28	327	eP	P	12 20 05.1	-1.5
	13nm,0.5s						
RDOG	Red Dog Mine	73.66	22	eP	P	12 20 34.6	+1.8
	6.8nm,0.8s						
IM3	Indian Mountai	76.86	24	eP	P	12 20 52.3	+1.1
KDAK	Kodiak Island	76.93	33	P	P	12 20 52.7	+0.9
	8.7nm,0.7s,baz=282,slow=5.3,SNR=11						
KDAK	Kodiak Island	76.93	33	eP	P	12 20 53.0	+1.3
	11nm,0.8s						
CASY	Casey	77.00	186	eP	P	12 20 51.8	0.0
	12nm,0.8s						
RAYN	Ar Rayn	77.46	292	eP	P	12 20 54.6	-0.9
	3.4nm,0.8s						
AKH	Akhalkalaki	77.87	310	eP	P	12 20 58.3	+0.7
	11nm,0.7s						
MLY	Manley	78.06	26	eP	P	12 20 59.2	+1.2
	11nm,0.6s						
KBZ	Khabaz	78.20	313	P	P	12 20 57.5	-1.6
	3.7nm,0.8s,baz=90,slow=2.4,SNR=6.0						
COLD	Coldfoot	78.35	23	eP	P	12 21 01.2	+1.7
	10nm,0.7s						
TOLK	Toolik Lake Re	78.63	22	eP	P	12 21 02.7	+1.6
	11nm,0.7s						
PMR	Palmer	78.74	29	eP	P	12 21 02.0	+0.3
	6.6nm,0.7s						
PMR	Palmer	78.74	29	epP	P	12 21 02.0	+0.3
MCK	McKinley	78.82	27	eP	P	12 21 02.9	+0.7
	21nm,0.6s						
SML	Sawmill	79.11	29	eP	P	12 21 04.8	+0.9
	11nm,0.8s						
SCM	Sheep Creek Mo	79.59	29	eP	P	12 21 07.6	+1.1
	13nm,0.9s						
KLMR	Klimovskoe	79.60	330	eP	P	12 21 03.4	-3.0
KLMR				AMP		12 21 06.3	
	comp=Z,6.0nm,0.8s						
ILAR	Eielson Array	79.70	26	P	P	12 21 06.2	-0.8
	comp=Z,3.0nm,0.7s,baz=239,slow=4.9,SNR=22						
DIV	Divide	80.37	29	eP	P	12 21 12.1	+1.4
	comp=Z,10nm,0.5s						
RIDG	Independ'e Rid	80.64	27	epP	P	12 21 12.9	+0.8
SCRK	Sand Creek	81.00	27	epP	P	12 21 14.9	+0.8
EGAK	Eagle	82.15	26	epP	P	12 21 20.9	+0.9
DAWY	Dawson	83.00	26	eP	P	12 21 25.7	+1.2
	comp=Z,4.6nm,0.8s						
SPA0	Spitsbergen Ar	84.17	349	eP	P	12 21 30.6	+0.4
SPITS	Spitsbergen Ar	84.17	349	P	P	12 21 30.3	+0.1
	comp=Z,14nm,0.8s,baz=37,slow=7.9,SNR=14						
ARA0	ARCESS Array S	84.31	340	eP	P	12 21 30.8	-0.3
ARCES	ARCESS Array B	84.31	340	P	P	12 21 30.8	-0.2
	comp=Z,3.2nm,0.5s,baz=77,slow=6.9,SNR=22						
INK	Inuvik	84.54	22	P	P	12 21 32.5	+0.4
	comp=Z,3.3nm,0.5s,baz=292,slow=4.1,SNR=19						
BR101	Keskin Array S	85.50	309	eP	P	12 21 36.8	-1.0
BR131	Keskin Array S	85.50	309	eP	P	12 21 36.9	-0.9
BRTR	Keskin Array B	85.50	309	P	P	12 21 36.8	-1.0
	comp=Z,3.3nm,0.8s,baz=101,slow=4.0,SNR=13						
SKAG	Skagway	85.74	30	eP	P	12 21 40.5	+2.1
	comp=Z,11nm,0.9s						
FIA1	FINESS Array S	85.97	332	eP	P	12 21 38.3	-1.1
FIA0	FINESS Array S	85.97	332	eP	P	12 21 37.8	-1.7
FINES	FINESS Array B	85.97	332	P	P	12 21 37.7	-1.7
	comp=Z,3.6nm,0.6s,baz=64,slow=6.3,SNR=26						
AKASG	Malin Array Be	86.59	321	P	P	12 21 41.2	-1.6
	comp=Z,0.8nm,0.4s,baz=66,slow=4.3,SNR=12						
AKBB	Malin Array Si	86.59	321	eP	P	12 21 41.7	-1.1
	comp=Z,5.5nm,0.8s						
KIEV	Kiev	86.60	321	eP	P	12 21 41.3	-1.5
	comp=Z,5.2nm,0.7s						
AK11	Malin Array Si	86.63	321	eP	P	12 21 41.8	-1.2
PPT	Papeete	87.69	108	LR	LR	12 51 27.5	
	comp=Z,52nm,21.5s,baz=322,slow=29						
MAW	Mawson	89.45	200	P	P	12 21 55.4	-0.4
	comp=Z,4.4nm,0.9s,baz=75,slow=8.4,SNR=6.6						

MAW	Mawson	89.45	200	eP	P	12 21 56.0	+0.2
	comp=Z,0.9nm,0.8s						
VNDA	Vanda	89.76	173	P	P	12 21 57.0	-0.1
	comp=Z,2.4nm,0.8s,baz=323,slow=5.8,SNR=9.3						
VNDA	Vanda	89.76	173	eP	P	12 21 57.5	+0.4
	comp=Z,2.8nm,0.9s						
BUR04	Bucovina Ar. S	89.86	318	eP	P	12 21 57.8	-0.7
BUR08	Bucovina Ar. S	89.86	318	eP	P	12 21 58.2	-0.3
KWP	Kalwaria Pacla	90.92	321	eP	P	12 22 03.2	0.0
	comp=Z,67nm,0.8s						
RES	Resolute Bay	91.72	10	P	P	12 22 06.5	0.0
	comp=Z,2.4nm,0.7s,baz=312,slow=5.2,SNR=11						
RES	Resolute Bay	91.72	10	eP	P	12 22 06.5	0.0
	comp=Z,4.4nm,0.8s						
HFS	Hagfors	92.13	332	P	P	12 22 07.0	-1.6
	comp=Z,1.6nm,0.6s,baz=64,slow=3.4,SNR=9.0						
NB2	NORSAR Subarra	92.85	334	P	P	12 22 10.0	-2.0
	comp=Z,1.7nm,0.8s,baz=64,slow=4.8						
YKW3	Yellowknife Ar	93.98	24	eP	P	12 22 17.0	0.0
	comp=Z,4.6nm,0.7s						
YKA	Yellowknife Ar	94.02	24	P	P	12 22 17.7	+0.5
	comp=Z,4.0nm,0.6s,baz=300,slow=4.5,SNR=31						
YKB5	Yellowknife Ar	94.02	24	eP	P	12 22 17.7	+0.5
GEC2	GERESS Array S	96.73	322	eP	P	12 22 29.4	-0.7
	comp=Z,2.6nm,0.8s						
GERES	GERESS Array B	96.73	322	P	P	12 22 29.4	-0.7
	comp=Z,0.8nm,0.5s,baz=75,slow=5.2,SNR=7.8						
GEA0	GERESS Array S	96.73	322	eP	P	12 22 29.2	-0.8
NV01	Mina Array Sit	103.12	47	ePdif	Pdif	12 22 59.6	+0.7
NVAR	Mina Array Bea	103.12	47	Pdiff	Pdif	12 22 59.7	+0.7
	comp=Z,0.3nm,0.6s,baz=280,slow=5.4,SNR=3.4						
MSTX	Muleshoe	116.23	44	ePKPdf	PKPdf	12 27 42.4	-0.8
LTX	Lajitas	118.10	49	ePKPdf	PKPdf	12 27 47.5	+0.6
TXAR	Lajitas Array	118.10	49	PKP	PKPdf	12 27 47.5	+0.6
	comp=Z,0.4nm,0.6s,baz=252,slow=0.6,SNR=7.3						
S39A	Bolivar	119.86	35	ePKPdf	PKPdf	12 27 49.9	0.0
TOA0	Torodi Ar. Sit	120.16	292	ePKPdf	PKPdf	12 27 49.5	-1.6
TORD	Torodi Ar. Bea	120.16	292	PKP	PKPdf	12 27 49.1	-1.9
	comp=Z,1.3nm,0.7s,baz=78,slow=1.8						
TOA1	Torodi Ar. Sit	120.16	292	ePKPdf	PKPdf	12 27 49.1	-1.9
V40A	Witts Springs	121.45	37	ePKPdf	PKPdf	12 27 53.0	0.0
T42A	Van Buren	121.59	35	ePKPdf	PKPdf	12 27 53.2	0.0
WVT	Waverly	124.03	33	ePKPdf	PKPdf	12 27 58.4	+0.4
KOWA	Kowa	124.82	295	PKP	PKPdf	12 27 59.0	-1.0
	comp=Z,2.0nm,0.5s,baz=70,slow=4.7,SNR=4.7						
TKL	Tuckaleechee C	126.50	30	PKP	PKPdf	12 28 03.3	+0.5
	comp=Z,1.7nm,0.6s,baz=243,slow=4.5,SNR=2.8						
PLCA	Paso Flores	146.10	157	PKPbc	PKPbc	12 28 39.8	+0.2
	comp=Z,6.0nm,0.9s,baz=226,slow=3.8,SNR=7.0						
PTGA	Pitinga	168.94	33	ePKPab	PKPab	12 30 18.4	+0.1

MEX 03 12:10:18.9±0.3,17°.16N×95°.72W,h101^{km}±10^{km},MD3.7, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VHO	Vista Hermosa	0.98	265	eP	Pn	12 10 38.2	-1.1
VHO				eS	Sn	12 10 53.0	-1.7
HUIG	Huatulco	1.44	195	eP	Pn	12 10 43.0	-1.4
HUIG				eS	Sn	12 11 02.4	-1.3
TPIG	Tehuac#an	2.00	309	i P	Pn	12 10 50.3	-1.5
TPIG				i S	Sn	12 11 16.0	-0.8
PCIG		2.80	121	i P	Pn	12 11 01.0	-1.0
PCIG				i S	Sn	12 11 33.9	-1.3

GUC 03 12:13:44.6±0.5,23°.34S×67°.30W,h235^{km}±17^{km},ML4.1, 11C-1D,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLA	San Lorenzo	2.14	130	⇓iP	Pn	12 14 21.0	-6.3
SLA				i S	S	12 14 49.4	-12
PB06	IPOC Station P	2.19	286	⇑iP	Pn	12 14 29.8	+1.9
PB06				i S	S	12 15 03.6	+1.9
PB06				IAML		12 15 04.3	
	comp=N,486nm,0.3s						
PB09	IPOC Station P	2.37	310	⇑iP	Pn	12 14 31.9	+2.3
PB09				i S	S	12 15 07.0	+2.0
PB09				IAML		12 15 11.0	
	comp=N,232nm,0.2s						
PB03	IPOC Station P	2.61	299	⇑iP	Pn	12 14 34.3	+2.1
PB03				i S	S	12 15 11.6	+2.2
PB05	IPOC Station P	2.72	280	⇑iP	Pn	12 14 35.2	+1.9
PB05				i S	S	12 15 13.8	+2.4
PB04	IPOC Station P	2.81	290	⇑iP	Pn	12 14 36.6	+2.2
PB04				i S	S	12 15 16.4	+3.0
PB04				IAML		12 15 20.1	
	comp=N,416nm,0.3s						
PB07	IPOC Station P	2.88	303	⇑iP	Pn	12 14 37.3	+2.2
PB07				i S	S	12 15 17.0	+2.2
PB10	IPOC Station P	3.00	266	⇑iP	Pn	12 14 38.3	+2.1
PB10				i S	S	12 15 18.4	+1.7
PB01	IPOC Station P	3.06	318	⇑iP	Pn	12 14 38.8	+1.8
PB01				i S	S	12 15 20.6	+2.5
PB14	IPOC Station P	3.12	245	⇑iP	Pn	12 14 38.6	+0.8
PB14				i S	S	12 15 19.0	-0.7
PB02	IPOC Station P	3.14	309	⇑iP	Pn	12 14 39.8	+1.9
PB02				i S	S	12 15 21.4	+1.6
PB08	IPOC Station P	3.62	331	⇑iP	Pn	12 14 46.1	+2.4
PB08				i S	S	12 15 33.8	+3.5

BEO 03 12:24:25.8±0.4,44°.14N×22°.15E,h0^{km},Ml1.8/9,Mining explosion.,Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUBS	Kucevo	0.44	309	ePg	Pg	12 24 31.6	-2.6
KUBS				eSg	Sg	12 24 38.4	-1.5
BOVS	Bovan	0.60	213	ePg	Pg	12 24 36.0	-1.2
BOVS				eSg	Sg	12 24 43.5	-1.5
ZAPS	Zavoj	0.93	158	ePg	Pg	12 24 42.4	-1.3
ZAPS				eSg	Sg	12 24 55.7	0.0
GRUS	Gruza	1.07	257	ePg	Pg	12 24 46.0	-0.2
GRUS				eSg	Sg	12 25 00.7	+0.7
SELS	Selova	1.19	220	ePg	Pg	12 24 46.3	-2.2
SELS				eSg	Sg	12 25 03.4	-0.5
TRUS	Trudelj	1.26	274	ePg	Pg	12 24 49.1	-0.8
TRUS				eSg	Sg	12 25 06.1	-0.1
BARS	Barje	1.34	191	ePg	Pg	12 24 50.0	-1.6
BARS				eSg	Sg	12 25 08.5	-0.5
BZS	Buzias	1.53	346	eSg	Sn	12 25 15.1	+0.2
IVAS	Ivanjica	1.55	249	ePg	Pn	12 24 54.4	-0.3
IVAS				eSg	Sn	12 25 15.0	-0.6
DIVS	Divibare	1.56	269	ePg	Pn	12 24 54.3	-0.5
DIVS				eSg	Sn	12 25 14.8	-1.0
SJES	Sjenica	1.81	242	eSg	Sb	12 25 23.2	+0.2

JMA 03 12:47:29.8±0.1,43°.07N×146°.18E,h41^{km}±1^{km},M3.4
JMA Felt I J1.
SKHL 03 12:47:31.1±0.9,43°.25N×146°.17E,h70^{km}±5^{km},mb4.4/6

ISC 03 12:47:28.0±2.1,43°.12N±0°.08×146°.22E±0°.05,h17^{km}±11^{km}, n13,σ0^{s}.80/25,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	0.43	305	P	Pn	12 47 39.6	+0.2
NEM2				eS	Sn	12 47 46.5	-0.3
GLVR	Golovnino	0.80	321	i P	Pn	12 47 45.0	+0.5
GLVR				AMB	AMB	12 47 46.0	
	176nm,0.2s						
GLVR				i S	Sn	12 47 56.0	-0.1
GLVR				A	A	12 48 00.0	
	2μm,0.2s						
GLVR				A	A	12 48 00.0	
	1μm,0.2s						
SHO	Shikotan	0.87	30	i P	Pn	12 47 46.0	+0.6
SHO				AMB	AMB	12 47 49.0	
	27nm,0.2s						
SHO				AMB	AMB	12 47 49.0	
	53nm,0.2s						
SHO				i S	Sg	12 47 57.0	+0.6
SHO				A	A	12 48 03.1	
	474nm,0.2s						
SHO				A	A	12 48 03.1	
	458nm,0.2s						
GRPR	Tuman	0.93	340	eP	Pb	12 47 46.0	+0.3
GRPR				AMB	AMB	12 47 49.0	
	187nm,0.3s						
GRPR				AMB	AMB	12 47 49.0	
	96nm,0.3s						
GRPR				AMB	AMB	12 47 49.0	
	239nm,0.3s						
GRPR				i S	Sg	12 47 58.0	-0.4
GRPR				A	A	12 47 59.7	
	3μm,0.4s						
GRPR				A	A	12 47 59.7	
	2μm,0.4s						
YUK	Yuzh-Kuril'sk	0.95	344	i P	Pn	12 47 47.2	+0.6
YUK				AMB	AMB	12 47 48.0	
	35nm,0.2s						
YUK				AMB	AMB	12 47 48.0	
	221nm,0.2s						
YUK				i S	Sg	12 47 58.6	-0.4
YUK				A	A	12 48 02.7	
	689nm,0.2s						
YUK				A	A	12 48 02.7	
	1μm,0.2s						
LAGR	Lagunnoye	0.99	341	i P	Pb	12 47 47.0	+0.4
LAGR				AMB	AMB	12 47 51.2	
	171nm,0.2s						
LAGR				AMB	AMB	12 47 51.2	
	204nm,0.2s						
LAGR				AMB	AMB	12 47 51.2	
	448nm,0.2s						
LAGR				i S	Sg	12 48 00.0	-0.2
LAGR				A	A	12 48 03.2	
	3μm,0.4s						
LAGR				A	A	12 48 03.2	
	3μm,0.4s						
JAK	Akkeshi	1.13	264	P	Pb	12 47 48.6	-0.4
JAK				eS	Sb	12 48 03.1	-0.2
JRA	Rausu	1.15	316	P	Pg	12 47 50.1	0.0
JRA				eS	Sg	12 48 04.7	-0.4
JNK	Nakash	1.19	294	P	Pn	12 47 50.0	+0.1
JNK				eS	Sb	12 48 04.4	-0.8
JAR	Ashorobuto	1.80	276	P	Pn	12 47 58.8	+0.5
JAR				eS	Sn	12 48 20.1	-0.6
JTKR	Abashiri--Toko	1.89	298	P	Pn	12 48 01.1	+1.7
JTKR				eS	Sn	12 48 24.1	+1.3
KUR	Kuril'sk	2.42	29	i P	Pn	12 48 07.4	+0.6
KUR				AMB	AMB	12 48 14.1	
	18nm,0.3s						
KUR				eS	Sn	12 48 33.9	-2.1
KUR				A	A	12 48 40.6	
	74nm,0.2s						
KUR				A	A	12 48 40.6	
	75nm,0.2s						
YSS	Yuzh-Sakhalins	4.55	329	eP	Pn	12 48 36.5	+0.4

MEX 03 13:05:01.0±0.5,20°.01N×105°.75W,h16^{km}±13^{km},MD3.8, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUVA	Puert Vallarta	0.79	39	i P	Pb	13 05 13.9	-2.5
PUVA				i S	Sb	13 05 23.2	-3.8
CJM	Chamela	0.84	127	eP	Pb	13 05 14.2	-3.0
CJM				eS	Sb	13 05 24.4	-3.8
R15V		1.86	116	eP	Pn	13 05 29.0	-3.3
R15V				eS	Sn	13 05 50.9	-4.7
EZ5V		2.09	104	eP	Pn	13 05 32.6	-3.0
EZ5V				eS	Sn	13 05 57.4	-4.1
MMIG	Aquila	2.84	127	i P	Pn	13 05 43.1	-2.6
MMIG				i S	Sn	13 06 15.6	-4.1

IDC 03 13:11:33.4±2.8,9°.81N×125°.90E,h0^{km},mb3.4/4, mb1 3.5/4,mb1mx3.3/56,mbtmp3.4/4,Error ellipse: s-maj=250.2km s-min=22.4km az=66.0
MAN 03 13:11:40.9,10°.10N×126°.13E,h14^{km},mb4.6,ML3.4, MS3.3

ISC 03 13:11:43.3±1.4,10°.03N±0°.04×126°.09E±0°.09,h54^{km}±15^{km}, n20,σ2^{s}.11/24,mb3.4/4,1C-2D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	0.64	247	⇓iP	Pn	13 11 54.6	-1.9
SCPH				i S	Sn	13 12 05.1	-1.0
BUTP	Butuan	1.16	204	eP	Pn	13 12 02.2	-1.1
BUTP				eS	Sn	13 12 20.4	+2.3
MSLP	Maasin	1.22	275	eP	Pn	13 12 03.6	-0.5
MSLP				eS	Sn	13 12 20.7	+1.2
PLP	Palo	1.57	316	⇓eP	Pn	13 12 07.3	-1.5
PLP				eS	Sn	13 12 29.2	+1.1
BESP	Borongan	1.68	338	eP	Pn	13 12 11.9	+1.5
BESP				eS	Sn	13 12 34.9	+4.0
OCLP	Ormoc	1.77	305	eP	Pn	13 12 12.2	+0.6
LLP	Lapu-Lapu	2.11	278	eP	Pn	13 12 15.6	-0.6
LLP				eS	Sn	13 12 44.4	+3.1
TBP	Tagbilaran	2.22	261	eP	Pn	13 12 18.7	+0.9
BUKP	Musuan	2.37	205	eP	Pn	13 12 21.3	+1.5
BUKP				eS	Sn	13 12 53.0	+5.2
CNP	Catarman	2.83	331	eP	Pn	13 12 25.8	-0.3
CNP				eS	Sn	13 12 59.3	+0.3
MATI	Mati	3.07	177	eP	Pn	13 12 45.0	+16
MATI				eS	Sn	13 13 04.8	-0.2
PAGZ	Pagadian	3.44	231	eP	Pn	13 12 35.6	+1.1
GUIM	Jordan	3.49	280	eP	Pn	13 12 35.4	+0.2
RCP	Roxas	3.62	295	⇑eP	Pn	13 12 38.5	+1.5
SKMP	Bagumbayan, Su	3.81	204	eP	Pn	13 12 48.8	+9.2
PVCP	Virac	4.01	332	eP	Pn	13 12 43.7	+1.4
WRA	Warramunga Arr	30.88	165	P	P	13 17 49.7	-5.1
	0.3nm,0.7s,baz=344,slow=9.0,SNR=3.2						
ASAR	Alice Springs	34.35	167	P	P	13 18 21.1	-4.2
	0.4nm,0.6s,baz=345,slow=6.9,SNR=6.0						
MKAR	Makanchi Array	52.11	323	P	P	13 20 45.6	-2.5
	0.2nm,0.5s,baz=114,slow=5.9,SNR=3.8						
KURBB	Kurchatov Arra	56.16	326	P	P	13 21 15.4	-2.1
	0.3nm,0.6s,baz=111,slow=6.9,SNR=3.6						

JMA 03 13:20:58.5,35°.39N×138°.96E,h18^{km}±1^{km},M3.2,3C-2D Broadband fault plane solution: P waves. NP1: ϕ_s36.00000°,δ61.00000°,λ122.00000°. NP2: ϕ_s163.00000°,δ43.00000°,λ46.00000°. Principal axes: T Plg60.0000°, Azm355.0000°; N Plg28.0000°, Azm198.0000°; P Plg10.0000°, Azm103.0000°; Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOD2	Odawara 2	0.16	140	⇑P	Pb	13 21 02.7	+0.2
JOD2				S	Sg	13 21 05.6	-0.4
JYN	Shimob	0.36	288	⇓P	Pg	13 21 06.0	0.0
JYN				S	Sg	13 21 11.2	0.0
JRY	Ryogami san	0.63	356	⇑P	Pb	13 21 10.6	-0.3
JRY				S	Sg	13 21 19.0	-0.4
JIZS	Izushimoda	0.67	186	⇑P	Pb	13 21 10.6	-1.1
JIZS				S	Sb	13 21 19.5	-1.2
SHZ3	Shizuoka 3	0.69	242	⇓P	Pb	13 21 11.7	-0.4
SHZ3				S	Sg	13 21 21.7	+0.3
JIM2	Oshima 3	0.77	150	P	Pb	13 21 12.3	-1.2
JIM2				S	Sb	13 21 22.5	-1.1
MAT	Matsushiro	1.30	332	P	Pb	13 21 22.3	-0.2
MAT				S	Sb	13 21 39.4	+0.5

KRNET 03 13:36:15.9±0.1,41°.09N×72°.34E,h14^{km},mb2.6
NNC 03 13:36:17.4±3.5,41°.11N×72°.34E,h0^{km},mb2.9,mpv2.7, Error ellipse: s-maj=29.1km s-min=22.5km az=93.0
SOME 03 13:36:20.1,41°.15N×72°.28E,h25^{km}

ISC 03 13:36:15.9±1.1,41°.09N±0°.04×72°.34E±0°.03,h17^{km}±10^{km}, n17,σ0^{s}.89/32,19C-6D,Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARSB	Arslanbob	0.54	64	⇑iP	Pg	13 36 26.4	-0.3
	baz=64						
ARSB				⇑iS	Sb	13 36 34.6	+0.1
	baz=64						
ARK	Arkit	0.76	338	⇑iP	Pb	13 36 30.3	-0.5
	baz=39						
ARK				⇑iS	Sb	13 36 40.8	-0.1
	baz=39						
TOKL	Toktogul	0.94	25	⇑iP	Pn	13 36 34.1	-0.3
	baz=25						
TOKL				⇑iS	Sn	13 36 46.9	-0.6
	baz=25						
MNAS	Manas	1.40	5	⇓P	Pg	13 36 42.0	-0.9
	1.9nm,0.4s						
MNAS				⇓S	Sg	13 37 02.8	+1.6
	16nm,0.4s						
MNAS	Manas	1.40	5	⇓iP	Pg	13 36 42.7	-0.2
	baz=5.0						
MNAS				⇓iS	Sg	13 37 02.2	+1.0
	baz=5.0						
AML	Almayashu	1.45	44	⇓iP	Pg	13 36 43.1	-0.9
	baz=44						
AML				⇓iS	Sg	13 37 03.8	+0.9
	baz=44						
BTK	Batken	1.55	229	⇑iP	Pg	13 36 45.4	-0.4
	baz=29						
BTK				⇑iS	Sg	13 37 06.7	+0.7
	baz=29						
MRKS	Merke	1.78	22	eP	Pg	13 36 50.9	+0.8
	20nm,0.5s						
MRKS				eS	Sg	13 37 13.2	-0.1
	49nm,0.4s						
EKS2	Erkin-Say	1.90	34	⇑iP	Pg	13 36 51.0	-1.4
	baz=34						
EKS2				⇑iS	Sg	13 37 17.1	-0.1
	baz=34						
UCH	Uchtor	1.99	54	⇑iP	Pb	13 36 52.6	+0.7
	baz=54						
UCH				⇑iS	Sg	13 37 19.8	-0.1
	baz=54						
IUG	Iuzhnay	2.03	302	eP	Pg	13 36 54.7	-0.1
	16nm,0.1s						
IUG				eS	Sg	13 37 20.0	-1.2
	42nm,0.2s						
AAK	Ala-Archa	2.23	45	⇑Pn	Pb	13 36 56.4	+0.5
	8.2nm,0.8s						
AAK				⇑Lg	Lg	13 37 28.9	
	11nm,0.6s						
AAK	Ala-Archa	2.23	45	⇑iP	Pb	13 36 55.8	-0.1
	baz=46						
AAK				⇑iS	Sb	13 37 25.2	+1.9
	baz=46						
KZA	Kyzart	2.40	65	⇑iP	Pb	13 36 58.2	-0.6
	baz=65						
KZA				⇑iS	Sb	13 37 29.9	+1.7
	baz=65						
KK31	Karatay Array	2.43	327	Pn	Pb	13 36 59.1	0.0
	0.8nm,0.2s,baz=135,slow=13,SNR=15						
KK31				⇑Lg	Lg	13 37 33.3	
	4.3nm,0.3s,baz=142,slow=26,SNR=12						
BRLS	Borolday	2.69	317	eP	Pb	13 37 04.6	+1.0
	0.5nm,0.2s						
BRLS				eS	Sb	13 37 36.5	+0.2
	10.0nm,0.2s						
KST	Kastek	3.33	53	eP	Pg	13 37 19.2	-0.5
	5.1nm,0.3s						
KST				eS	Sg	13 38 01.6	-1.3
	6.8nm,0.5s						

BJI 03 13:37:25.9,39°.68N×74°.14E,h7^{km},ML3.7/3
IDC 03 13:37:25.5±0.8,39°.47N×74°.19E,h0^{km},mb3.9/8, mb1 4.1/11,mb1mx3.7/72,mbtmp4.0/11,ML2.9/4,MS3.2/2, Ms1 3.2/2,ms1mx2.4/63,Error ellipse: s-maj=17.9km s-min=12.8km az=93.0
SOME 03 13:37:27.5,39°.57N×74°.30E,h10^{km}
NNC 03 13:37:28.4±1.3,39°.62N×74°.20E,h0^{km},mb4.4,mpv4.0, Error ellipse: s-maj=13.3km s-min=4.6km az=13.0
KRNET 03 13:37:30.3±0.1,39°.76N×74°.19E,h8^{km},mb4.1
NEIC 03 13:37:34.2±1.2,39°.66N×74°.20E,h63^{km}±12^{km},mb4.4/1, Error ellipse: s-maj=16.3km s-min=12.4km az=85.0

ISC 03 13:37:26.0±1.3,39°.66N±0°.04×74°.39E±0°.02,h0^{km}±9^{km}, n71,σ1^{s}.59/105,mb4.0/10,43C-18D,Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	0.77	297	⇑P	Pg	13 37 41.0	+0.3
	95nm,0.4s						
SFK				⇑S	Sg	13 37 50.9	+0.2
	330nm,0.3s						
SFK	Sufi-Kurgan	0.77	297	⇓iP	Pg	13 37 41.2	+0.5
	baz=96						
SFK				⇓iS	Sg	13 37 50.6	-0.1
	baz=96						
KSH	Kashi	1.23	96	Pg	Pg	13 37 48.6	-1.0
KSH				Sg	Sg	13 38 03.6	-1.9
KSH				smax	smax		
	comp=N,2μm,0.7s						
KSH				smax	smax		
	comp=E,1μm,0.4s						
ARSB	Arslanbob	1.98	328	⇓iP	Pg	13 38 04.2	+0.3
	baz=30						
ARSB				⇓iS	Sg	13 38 29.4	-0.1
	baz=30						
DRK	Karamyk	2.01	266	⇑iP	Pg	13 38 05.6	+1.1
	baz=62						
DRK				⇑iS	Sg	13 38 30.9	+0.3
	baz=62						
KZA	Kyzart	2.50	15	P	Pb	13 38 12.8	+0.9
	SNR=48						
KZA	Kyzart	2.50	15	⇑iP	Pg	13 38 13.2	-0.7
	baz=19						
KZA				⇑iS	Sg	13 38 45.9	-0.4
	baz=19						
AML	Almayashu	2.52	348	P	Pb	13 38 12.4	0.0
	SNR=31						
AML	Almayashu	2.52	348	⇑iP	Pb	13 38 12.6	+0.2
	baz=51						
AML				⇑iS	Sb	13 38 44.5	+0.4
	baz=51						
TOKL	Toktogul	2.55	334	⇑iP	Pb	13 38 12.5	-0.2
	baz=36						
TOKL				⇑iS	Sb	13 38 44.3	-0.3
	baz=36						
UCH	Uchtor	2.56	2	P	Pb	13 38 13.7	+0.6
	SNR=116						
UCH	Uchtor	2.56	2	⇑iP	Pb	13 38 13.9	+0.8
	baz=6.0						
UCH				⇑iS	Sb	13 38 46.4	+1.0
	baz=6.0						
BTK	Batken	2.78	279	⇑iP	Pb	13 38 16.3	-0.2
	baz=78						
BTK				⇑iS	Sb	13 38 49.0	-2.1
	baz=78						
ARK	Arkit	2.82	320	⇑iP	Pb	13 38 15.4	-1.9
	baz=21						
ARK				⇑iS	Sb	13 38 49.7	-2.7
	baz=21						
ULHL	Ulahol	2.94	28	P	Pb	13 38 19.0	-0.3
	SNR=12						
ULHL	Ulahol	2.94	28	⇑iP	Pb	13 38 20.3	+1.0
	baz=31						
ULHL				⇑iS	Sb	13 38 56.9	+1.0
	baz=31						
AAK	Ala-Archa	2.97	1	Pn	Pb	13 38 19.2	-0.7
	35nm,0.3s,baz=144,slow=7.1,SNR=50						
AAK				Sn	Sb	13 38 58.8	+2.0
	7.1nm,0.3s,baz=339,slow=19,SNR=7.4						
AAK	Ala-Archa	2.97	1	⇑Pn	Pb	13 38 19.3	-0.6
	126nm,0.5s						
AAK				⇓Lg	Lg	13 39 02.4	
	109nm,0.8s						
AAK	Ala-Archa	2.97	1	P	Pb	13 38 19.5	-0.4
	SNR=63						
AAK	Ala-Archa	2.97	1	⇓iP	Pb	13 38 19.4	-0.6
	baz=5.0						
AAK				⇓iS	Sb	13 38 55.9	-1.0
	baz=5.0						
KBK	Karagaybulak	3.02	8	P	Pb	13 38 20.5	-0.2
	SNR=49						
KBK	Karagaybulak	3.02	8	⇓iP	Pb	13 38 20.4	-0.3
	baz=11						
KBK				⇓iS	Sb	13 38 57.5	-0.7
	baz=11						
EKS2	Erkin-Say	3.03	351	P	Pb	13 38 19.8	-1.0
	SNR=28						
EKS2	Erkin-Say	3.03	351	⇓iP	Pb	13 38 19.9	-1.0
	baz=54						
EKS2				⇓iS	Sb	13 38 56.5	-2.0
	baz=54						
BOOM	Boomskoye usch	3.06	22	⇑iP	Pb	13 38 21.7	+0.3
	baz=25						
BOOM				⇑iS	Sb	13 38 59.8	+0.5
	baz=25						
FRU1	Bishkek	3.15	3	⇑iP	Pb	13 38 22.3	-0.6
	baz=6.0						
FRU1				⇑iS	Sb	13 38 59.9	-1.9
	baz=6.0						
MNAS	Manas	3.16	334	⇑Pn	Pb	13 38 20.7	-2.5
	26nm,0.5s						
MNAS				⇑Lg	Lg	13 39 07.1	
	143nm,0.7s						
MNAS	Manas	3.16	334	⇑iP	Pb	13 38 20.6	-2.5

	baz=36						
MNAS				⇑*i*S	Sb	13 38 58.8	-3.5
	baz=36						
MRKS	Merke	3.20	344	*e*P	Pb	13 38 23.9	+0.1
	74nm,0.3s						
MRKS				*e*S	Sb	13 39 03.6	+0.2
	188nm,0.4s						
TARG	Taragay, Kyrgy	3.32	50	⇑*i*P	Pb	13 38 26.8	+0.9
	baz=53						
TARG				⇑*i*S	Sb	13 39 08.4	+1.4
	baz=53						
CHMS	Chumysh	3.34	5	P	Pb	13 38 24.1	-2.1
	SNR=11						
CHMS	Chumysh	3.34	5	⇓*i*P	Pb	13 38 24.2	-2.0
	baz=7.0						
CHMS				⇓*i*S	Sb	13 39 04.7	-2.7
	baz=7.0						
TKM2	Tokmak 2	3.38	15	⇑Pn	Pb	13 38 25.2	-1.7
	21nm,0.3s						
TKM2				⇑Lg	Lg	13 39 16.6	
	41nm,0.6s						
TKM2	Tokmak 2	3.38	15	P	Pb	13 38 25.3	-1.5
	SNR=13						
TKM2	Tokmak 2	3.38	15	⇑*i*P	Pb	13 38 25.5	-1.4
	baz=18						
TKM2				⇑*i*S	Sb	13 39 06.8	-1.8
	baz=18						
KST	Kastek	3.58	19	*e*P	Pg	13 38 34.0	-0.6
	81nm,0.5s						
KST				*e*S	Sg	13 39 21.6	+0.7
	114nm,0.6s						
USP	Ospenovka	3.60	1	P	Pg	13 38 34.7	-0.3
	SNR=5.1						
USP	Ospenovka	3.60	1	⇑*i*P	Pb	13 38 28.6	-2.0
	baz=4.0						
USP				⇑*i*S	Sb	13 39 11.0	-3.8
	baz=4.0						
TNSS	Tian-Shan	3.88	29	⇑*i*P	Pg	13 38 40.3	-0.1
	93nm,0.4s						
TNSS				*e*S	Sg	13 39 32.4	+1.7
	67nm,0.6s						
AAA	Alma-Ata	4.02	27	*e*P	Pg	13 38 42.4	-0.6
	120nm,0.6s						
AAA				*e*S	Sg	13 39 36.2	+1.1
	88nm,0.5s						
MDOK	Medeo	4.03	29	⇑Pg	Pg	13 38 42.0	-1.2
	69nm,0.6s						
MDOK				⇑Lg	Lg	13 39 39.2	
	66nm,0.7s						
IUG	Iuzhnay	4.13	308	*e*P	Pg	13 38 43.1	-2.1
	45nm,0.4s						
IUG				*e*S	Sg	13 39 37.3	-1.5
	173nm,0.7s						
KUU	Kurty	4.47	18	⇓*i*P	Pg	13 38 50.5	-1.2
	21nm,0.5s						
KUU				⇑*i*S	Sg	13 39 49.8	+0.2
	52nm,0.7s						
KK31	Karatay Array	4.51	321	⇑Pn	Pn	13 38 37.8	+2.3
	2.8nm,0.4s,baz=133,slow=12,SNR=11						
KK31				⇓Pg	Pb	13 38 49.1	+3.1
	7.0nm,0.4s,baz=140,slow=15,SNR=16						
KK31				⇑Sn	Sn	13 39 29.9	+1.2
	7.9nm,0.4s,baz=194,slow=27,SNR=3.8						
KK31				⇑Lg	Lg	13 39 48.3	
	35nm,0.7s,baz=135,slow=28,SNR=4.7						
SATY	Saty	4.54	40	⇑*i*P	Pg	13 38 51.5	-1.5
	61nm,0.8s						
SATY				*e*S	Sg	13 39 52.3	+0.3
	44nm,0.5s						
CHKK	Chushkaly	4.62	24	*e*P	Pg	13 38 52.7	-1.8
	24nm,0.6s						
CHKK				*e*S	Sg	13 39 54.9	+0.7
	36nm,0.8s						
BRLS	Borolday	4.80	316	*e*P	Pb	13 38 53.2	+2.2
	1.9nm,0.4s						
BRLS				*e*S	Sb	13 39 54.4	+5.0
	43nm,0.7s						
UZB	Uzynbulak	4.92	44	*e*P	Pg	13 38 59.2	-1.1
	25nm,0.9s						
UZB				*e*S	Sg	13 40 05.9	+1.7
	18nm,0.7s						
KPKS	Kokpek	4.98	39	*e*P	Pg	13 38 59.1	-2.3
	38nm,0.8s						
KPKS				*e*S	Sg	13 40 05.6	-0.4
	113nm,0.6s						
PDGK	Podgornoye	5.30	45	⇓Pn	Pn	13 38 50.7	+4.2
	3.7nm,0.6s						
PDGK				⇓Pg	Pg	13 39 06.4	-1.1
	27nm,0.7s						
PDGK				⇓Lg	Lg	13 40 19.0	
	50nm,0.8s						
NIL	Nilore	6.07	189	*e*Pn	Pn	13 39 02.2	+5.3
	90nm,0.7s						
MKAR	Makanchi Array	9.16	36	Pn	Pn	13 39 44.0	+4.6
	0.1nm,0.3s,baz=214,slow=14,SNR=3.4						
MKAR				LR	LR	13 43 34.3	
	comp=Z,82nm,18.6s,baz=341,slow=39						
WMQ	Urumqi	10.77	63	*e*P	Pn	13 40 05.5	+4.0
KURBB	Kurchatov Arra	11.34	14	Pn	Pn	13 40 11.2	+2.0
	0.0nm,0.3s,baz=204,slow=12,SNR=2.8						
KURK	Kurchatov	11.45	14	Pn	Pn	13 40 11.2	+0.6
BVAR	Borovoye Array	13.65	350	Pn	Pn	13 40 40.8	+0.2
	0.2nm,0.3s,baz=153,slow=13,SNR=5.7						
AKTO	Aktyubinsk	15.77	318	Pn	Pn	13 41 08.0	-1.3
	0.2nm,0.3s,baz=134,slow=14,SNR=2.6						
ZALV	Zalesovo Beam	15.95	23	Pn	Pn	13 41 10.2	-1.3
	0.1nm,0.3s,baz=205,slow=13,SNR=2.2						
GNI	Garni	22.71	281	*e*P	P	13 42 27.1	-2.3
FINES	FINESS Array B	36.47	323	P	P	13 44 32.7	+0.4
	1.3nm,0.4s,baz=117,slow=9.5,SNR=16						
ARCES	ARCESS Array B	39.32	335	P	P	13 44 56.9	+0.5
	3.0nm,0.9s,baz=118,slow=9.8,SNR=4.0						
HFS	Hagfors	42.31	320	P	P	13 45 20.8	-0.3
	1.9nm,0.4s,baz=98,slow=10,SNR=12						
GERES	GERESS Array B	43.37	303	P	P	13 45 30.6	+0.6
	0.4nm,0.4s,baz=61,slow=8.0,SNR=3.4						
NB2	NORSAR Subarra	43.54	321	P	P	13 45 30.6	-0.5
	comp=Z,0.6nm,0.4s,baz=90,slow=7.9						
ASAJ	Asahikawa	49.65	61	LR	LR	14 09 25.5	
	comp=Z,41nm,18.5s,baz=18,slow=38						
TORD	Torodi Ar. Bea	68.45	269	P	P	13 48 26.9	-3.1
	comp=Z,0.6nm,0.5s,baz=42,slow=5.6						
YKA	Yellowknife Ar	77.93	4	P	P	13 49 25.3	0.0
	comp=Z,0.2nm,0.5s,baz=350,slow=5.5,SNR=2.8						
WRA	Warramunga Arr	81.48	125	P	P	13 49 44.9	-0.3
	comp=Z,1.5nm,0.7s,baz=326,slow=5.0,SNR=20						
WRAB	Tennant Creek	81.48	125	*e*P	P	13 49 44.5	-0.7
	comp=Z,2.8nm,0.6s						
ASAR	Alice Springs	83.95	127	P	P	13 49 57.6	-0.4
	comp=Z,0.6nm,0.6s,baz=312,slow=4.7,SNR=14						
CMIG	Matias Romero	122.66	348	PKP	PKPdf	13 56 24.9	+0.8
	comp=Z,7.0nm,0.8s,baz=90,slow=3.0,SNR=6.2						

IDC ***03*** *13:47:02.4±0.3, 4°.01S×76°.19W, h104^{km}±2^{km}, mb4.6/29, mb1 4.7/33, mb1mx4.6/44, mbtmp4.9/33, MS3.4/6, Ms1 3.4/6, ms1mx3.0/37, Error ellipse: s-maj=11.8km s-min=7.8km az=61.0*

MOS ***03*** *13:47:02.8±1.0, 4°.00S×76°.32W, h120^{km}, mb4.9/50, Error ellipse: s-maj=14.6km s-min=5.4km az=110.0*

GCMT ***03*** *13:47:03.2±0.4, 4°.05S×76°.17W, h114^{km}±5^{km}, MW4.9/64, Moment Tensor Solution. s22,c25; s64,c91; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.22±.16; $M_{\theta\theta}$1.78±.23; $M_{\phi\phi}$1.44±.31; $M_{r\theta}$0.45±.15; $M_{\theta\phi}$-1.32±.19; $M_{\phi r}$0.79±.22; Best double couple: $M_0$3.19200×10^{16} NP1:ϕ_s145.00000°, δ48.00000°, λ-72.00000°. NP2: ϕ_s298.00000°, δ45.00000°, λ-109.00000°. Principal axes: T 2.9470, Plg2.0000°, Azm222.0000°; N 0.4920, Plg13.0000°, Azm312.0000°; P -3.4380, Plg76.0000°, Azm125.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISCJB ***03*** *13:47:03.9±0.3, 3°.98S±0°.02×76°.27W±0°.03, h135^{km}±2^{km}, mb4.9/283 Error ellipse: s-maj=4.8km s-min=3.5km az=154.9*

NEIC ***03*** *13:47:03.2±0.1, 4°.04S×76°.15W, mb5.1/257, ML5.2(ARE), Error ellipse: s-maj=4.3km s-min=2.7km az=63.0*

NEIC Felt [II] at Bagua and Nueva Cajamarca.

IGQ ***03*** *13:47:04.2±0.3, 4°S±3°×7°6W±°, h123^{km}±6^{km}, mB5.2/3, mb5.2/7, MLv5.7/1, Mw(mB)4.6/4*

ISC 03 13:47:02.3±0.3, **4°.12S**±0°.04×**76°.14W**±0°.04, **h108**^{km}±2^{km}, **h108**^{km}**:pP-P, n1059,** σ**1^{s}38**/1269, **mb5.1**/298, **5C-6D, Northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BPAT	Tungurahua Vol	3.46	318	P	Pn	13 47 53.4	-1.6
ARRY	Arrayan	3.48	318	P	Pn	13 47 53.4	-1.6
BMAS	Trigal station	3.50	318	P	Pn	13 47 55.7	+0.4
RETU	Refugio	3.51	319	P	Pn	13 47 54.4	-1.2
COHC	Cochancay	3.52	298	P	Pn	13 47 54.6	-0.7
COHC				S	Sn	13 48 31.4	-4.7
RUN5	Runtun	3.52	319	P	Pn	13 47 54.6	-1.0
BIL2	Estacion Bilba	3.54	318	P	Pn	13 47 55.2	-0.7
JUI6	Juive	3.55	319	P	Pn	13 47 54.9	-1.0
PISA	Pisayambo	3.78	323	P	Pn	13 47 58.5	-0.7
MILO	Milagro-Astudi	3.87	298	P	Pn	13 47 59.0	-1.0
MILO				S	Sn	13 48 40.7	-3.9
BTAM	Cotopaxi Volca	4.10	326	P	Pn	13 48 03.3	-0.2
BVC2	Cotopaxi Volca	4.12	326	P	Pn	13 48 04.1	+0.2
ANTM	Antisana-La Mi	4.12	330	P	Pn	13 48 03.9	0.0
BREF	Cotopaxi Volca	4.12	326	P	Pn	13 48 08.1	+4.1
VC1	Cotopaxi 1	4.13	327	P	Pn	13 48 04.1	+0.2
ANTS	Antisana-Sarah	4.13	330	P	Pn	13 48 03.4	-0.6
BNAS	Cotopaxi Volca	4.15	326	P	Pn	13 48 04.6	+0.4
ANTG	Antisana-Guama	4.17	329	P	Pn	13 48 04.7	+0.2
PITA	Cotopaxi Volc	4.21	327	P	Pn	13 48 05.4	+0.4
PAST	Pastocalle	4.22	324	P	Pn	13 48 06.1	+1.0
CONE	Cono NE Rev Vo	4.29	339	P	Pn	13 48 05.5	-0.4
GGPC	Guagua Pichinc	4.62	328	P	Pn	13 48 12.2	+1.7
PINO	Pino	4.64	328	P	Pn	13 48 11.7	+0.8
YANA	Yana	4.66	328	P	Pn	13 48 12.5	+1.4
IMBA	Imbabura, San	4.83	335	P	Pn	13 48 15.9	+2.7
OTAV	Otavalo	4.90	332	*e*Pn	Pn	13 48 15.0	+0.7
OTAV	Otavalo	4.90	332	*e*P	Pn	13 48 16.1	+1.8
OTAV	Otavalo	4.90	332	P	Pn	13 48 15.6	+1.3
OTAV	Otavalo	4.90	332	*e*P	Pn	13 48 15.0	+0.7
CUIC	Cuicocha-Domo	4.92	333	P	Pn	13 48 16.6	+2.1
URCU	Urcuqui	5.00	335	P	Pn	13 48 17.8	+2.3
CMBC	Cumbal	5.30	341	*e*P	Pn	13 48 21.6	+1.9
LITE1	Lita	5.36	335	P	Pn	13 48 21.9	+1.7
MAG1	Magdalena	5.42	318	P	Pn	13 48 20.1	-0.8
GCUF	Volcan Galeras	5.44	347	*e*P	Pn	13 48 21.9	+0.2
FLOC	Florencia	5.68	5	*e*P	Pn	13 48 24.6	+0.2
CRUC	La Cruz	5.70	352	*e*P	Pn	13 48 24.9	-0.1
SOTA	Rioblanco	6.23	356	*e*P	Pn	13 48 33.2	+1.0
PCON	Cinco Dias	6.41	358	*e*P	Pn	13 48 36.3	+1.5
TUMC	Tumaco	6.44	336	*e*Pn	Pn	13 48 35.6	+0.9
BETC	Betania	6.79	6	*e*P	Pn	13 48 40.9	+1.4
MARP	Paez Belalcaza	6.91	1	*e*P	Pn	13 48 42.8	+1.4
GRGC	Isla de Gorgon	7.36	344	*e*P	Pn	13 48 47.3	+0.1
HORQ	Saladito	7.56	356	*e*P	Pn	13 48 52.2	+2.0
NNA	Nana	7.85	185	P	Pn	13 48 55.3	+1.3
	32nm,0.3s,baz=9.2,slow=12,SNR=33						
NNA				S	Sn	13 50 15.2	-6.1
	261nm,0.3s,baz=242,slow=18,SNR=16						
NNA	Nana	7.85	185	*e*Pn	Pn	13 48 54.4	+0.4
NNA				S	Sn	13 50 15.2	-6.1
NNA	Nana	7.85	185	P	Pn	13 48 54.8	+0.9
PRAC	Prado	7.88	9	*e*Pn	Pn	13 48 55.1	+0.9
PRAC	Prado	7.88	9	*e*P	Pn	13 48 55.2	+0.9
YOTC	Yotoco, Valle	8.05	359	*e*P	Pn	13 48 58.1	+1.5
TOLC	Tolima	8.68	5	*e*P	Pn	13 49 09.3	+3.9
PLMC	San Josˆ' del	8.96	359	*e*P	Pn	13 49 04.8	-4.2
CHIC	Chingaza	9.01	15	*e*P	Pn	13 49 11.3	+1.3
ROSC	El Rosal	9.08	12	P	Pn	13 49 12.6	+1.7
	2.4nm,0.3s,baz=180,slow=5.1,SNR=14						
ROSC	El Rosal	9.08	12	*e*Pn	Pn	13 49 12.1	+1.2
ROSC	El Rosal	9.08	12	*e*P	Pn	13 49 13.6	+2.7
NORC	Norcasia	9.70	8	*e*P	Pn	13 49 19.3	+0.4
YOPC	Yopal, Colombi	10.11	22	*e*P	Pn	13 49 26.5	+1.8
HELC	Santa Helena	10.26	3	*e*Pn	Pn	13 49 28.7	+1.8
HELC	Santa Helena	10.26	3	*e*P	Pn	13 49 28.9	+2.1
RUSC	La Rusia	10.40	17	*e*Pn	Pn	13 49 29.5	+0.6
RUSC	La Rusia	10.40	17	*e*P	Pn	13 49 30.0	+1.1
PTBC	PUERTO BERRIO,	10.71	9	*e*P	Pn	13 49 33.3	+0.6
BARC	Barichara	11.04	16	*e*P	Pn	13 49 38.6	+1.3
ZARC	Zaragoza, Cauc	11.60	6	*e*P	Pn	13 49 46.1	+1.4
PAMC	Pamplona, Colo	11.88	17	*e*P	Pn	13 49 50.5	+1.6
BCIP	Isla Barro Col	13.70	344	*e*P	P	13 50 17.1	0.0
SAML	Samuel	13.73	111	*e*Pn	Pn	13 50 11.3	-1.3
SAML	Samuel	13.73	111	P	Pn	13 50 11.5	-1.1
SAML	Samuel	13.73	111	*e*P	Pn	13 50 11.3	-1.3
SDV	Santo Domingo	14.03	23	P	Pn	13 50 16.7	0.0
	6.7nm,0.3s,baz=195,slow=9.8,SNR=35						
SDV				S	Sn	13 52 53.2	+1.7
	2.8nm,0.3s,baz=295,slow=19,SNR=1.8						
SDV				LR	LR	13 56 35.8	
	comp=Z,83nm,19.2s,baz=229,slow=41						
SDV	Santo Domingo	14.03	23	*e*P	Pn	13 50 16.9	+0.2
SDV	Santo Domingo	14.03	23	P	Pn	13 50 17.4	+0.7
CODC	Agustˆ›n Codaz	14.21	11	*e*P	P	13 50 21.9	-0.9
LPAZ	La Paz	14.43	148	P	Pn	13 50 19.0	-3.1
	1.5nm,0.3s,baz=340,slow=15,SNR=36						
LPAZ	La Paz	14.43	148	*e*Pn	Pn	13 50 19.4	-2.7
LPAZ	La Paz	14.43	148	P	Pn	13 50 21.3	-0.9
LPAZ	La Paz	14.43	148	*e*P	Pn	13 50 19.4	-2.7
PAYG	Puerto Ayora	14.54	283	*e*P	P	13 50 26.2	-0.4
PAYG	Puerto Ayora	14.54	283	P	Pn	13 50 23.1	0.0
HDC	Heredia	16.12	330	*e*Pn	P	13 50 44.2	0.0
	100nm,0.4s						
MNMC	Minye Minye	16.23	157	*e*Pn	Pn	13 50 45.0	+0.5
	270nm,1.2s						
MNMC	Minye Minye	16.23	157	P	P	13 50 45.9	+0.3
PSGC	Pisagua	16.47	160	P	P	13 50 51.7	+3.7
PTGA	Pitinga	16.50	79	P	Pn	13 50 45.5	-2.1
	11nm,0.3s,baz=269,slow=15,SNR=49						
PTGA				S	Sn	13 53 43.3	-7.6
	0.6nm,0.3s,baz=344,slow=20,SNR=2.5						
PTGA	Pitinga	16.50	79	*e*Pn	Pn	13 50 47.0	-0.6
	108nm,0.8s						
PTGA				S	Sn	13 53 43.3	-7.6
PB08	IPOC Station P	17.32	157	P	Pn	13 50 59.3	+1.4
PB01	IPOC Station P	18.03	160	*e*P	Pn	13 51 06.8	+0.7
	164nm,1.0s						
PB01	IPOC Station P	18.03	160	P	Pn	13 51 10.2	+4.1
PB02	IPOC Station P	18.14	161	P	Pn	13 51 10.0	+2.5
PCRV	Puerto La Cruz	18.24	39	P	Pn	13 51 08.4	-0.2
	3.6nm,0.3s,baz=181,slow=4.2,SNR=11						
PCRV				S	S	13 54 26.0	-4.9
	1.0nm,0.3s,baz=252,slow=20,SNR=2.3						
PB07	IPOC Station P	18.53	161	P	Pn	13 51 14.4	+2.2
PB09	IPOC Station P	18.81	160	P	Pn	13 51 17.5	+2.0
PB03	IPOC Station P	18.87	161	P	Pn	13 51 17.7	+1.5
SIV	San Ignacio	18.93	130	P	Pn	13 51 16.6	-0.3
	5.0nm,0.3s,baz=310,slow=11,SNR=107						
SIV				S	S	13 54 38.4	-6.2
	2.5nm,0.3s,baz=16,slow=18,SNR=2.4						
PB04	IPOC Station P	19.02	163	*e*P	Pn	13 51 18.5	+0.5
	169nm,0.9s						
PB04	IPOC Station P	19.02	163	P	Pn	13 51 19.5	+1.5
PB05	IPOC Station P	19.49	163	P	Pn	13 51 24.0	+0.6
PB06	IPOC Station P	19.54	162	P	Pn	13 51 24.6	+0.5
ESTN	Estel	19.90	329	*e*P	Pn	13 51 27.1	-1.1
	30nm,0.6s						
GO02	Mina Guanaco	21.85	164	*e*P	P	13 51 49.0	+2.4
	117nm,0.9s						
GTBY	Guantanamo Bay	23.91	2	*e*P	P	13 52 08.5	+2.2
	64nm,0.9s						
GTBY	Guantanamo Bay	23.91	2	P	P	13 51 58.0	-8.3
AOPR	Arecibo Observ	24.16	22	*e*P	P	13 52 07.5	-1.2
	47nm,0.7s						
SJG	San Juan	24.18	24	P	P	13 52 09.4	+0.6
	41nm,0.6s,baz=176,slow=4.9,SNR=16						
SJG	San Juan	24.18	24	*e*P	P	13 52 09.1	+0.3
	60nm,0.8s						
SJG	San Juan	24.18	24	P	P	13 52 09.6	+0.8
SJG	San Juan	24.18	24	*e*P	P	13 52 09.1	+0.3
SJG				pmax	pmax		
	comp=Z,59nm,0.8s						
CBYP	Canovanas	24.44	24	*e*P	P	13 52 11.1	-0.2
	comp=Z,38nm,0.6s						
CCIG	Comitan	25.71	322	*e*pP	pP	13 52 49.4	+2.7
GRTK	Grand Turk	25.93	11	*e*P	P	13 52 25.1	+0.4
CMIG	Matias Romero	28.05	319	P	P	13 52 43.4	-0.4
	comp=Z,6.1nm,0.7s,baz=143,slow=4.1,SNR=8.0						
CMIG				pP	pP	13 53 05.6	-1.9
	comp=Z,28nm,1.0s,baz=96,slow=6.0,SNR=8.5						
CMIG				PcP	PcP	13 55 56.0	0.0
	comp=Z,0.8nm,0.5s,baz=129,slow=5.0,SNR=3.8						
CPUP	Villa Florida	28.50	143	P	P	13 52 48.5	+0.9
	comp=Z,11nm,0.8s,baz=322,slow=9.6,SNR=20						
CPUP				PcP	PcP	13 55 58.1	+1.1
	comp=Z,2.2nm,0.8s,baz=305,slow=6.2,SNR=3.3						
CPUP	Villa Florida	28.50	143	*e*P	P	13 52 47.9	+0.2
	comp=Z,12nm,0.9s						
CPUP				PcP	PcP	13 55 58.1	+1.1
CPUP	Villa Florida	28.50	143	P	P	13 52 48.8	+1.1
060Z	West Palm Beac	30.64	352	P	P	13 53 07.0	+0.4
	baz=171						
059Z	Ave Maria	30.70	351	P	P	13 53 07.9	+0.8
	baz=170						
060A	Indiantown	31.24	353	P	P	13 53 12.3	+0.6
	baz=172						
059A	Moore Haven	31.28	351	P	P	13 53 12.8	+0.7
	baz=170						
957A	Wimauma	32.14	350	P	P	13 53 20.3	+0.5
	baz=169						
859A	Kempfer Cattle	32.31	352	P	P	13 53 22.1	+0.9
	baz=171						
DWPF	Disney Wildern	32.44	351	P	P	13 53 23.0	+0.7
	baz=170						
858A	St. Cloud	32.53	351	P	P	13 53 24.0	+0.9
	baz=170						
857A	Zephyrhills	32.73	350	P	P	13 53 25.3	+0.5
	baz=169						
758A	Lake Helen	33.24	352	P	P	13 53 30.4	+1.1
	baz=171						
757A	Oxford	33.36	351	P	P	13 53 31.2	+0.9
	baz=169						
656A	Willston	33.85	350	P	P	13 53 35.4	+0.8
	baz=169						
657A	Interlachen	33.96	351	P	P	13 53 36.5	+1.1
	baz=170						
655A	Horseshoe Beac	34.12	349	P	P	13 53 37.6	+0.7
	baz=167						
557A	Orange Park	34.36	351	P	P	13 53 39.4	+0.4
	baz=170						
556A	Lake Butler	34.45	350	P	P	13 53 40.4	+0.6
	baz=169						
555A	McAlpin	34.66	350	P	P	13 53 42.3	+0.7
	baz=168						
554A	Perry	34.77	348	P	P	13 53 42.8	+0.4
	baz=167						
553A	Crawfordville	35.02	347	P	P	13 53 45.4	+0.8
	baz=166						
356A	Blackshear	35.70	351	P	P	13 53 51.2	+0.8
	baz=170						
452A	Marianna	35.83	347	P	P	13 53 51.8	+0.3
	baz=164						
355A	Pearson	35.84	350	P	P	13 53 52.1	+0.5
	baz=169						
TIGA	Tifton	36.06	349	P	P	13 53 53.7	+0.1
	baz=167						
353A	Camilla	36.10	348	P	P	13 53 53.8	0.0
	baz=166						
450A	Crestview	36.13	345	P	P	13 53 54.3	+0.2
	baz=162						
TRQA	Tornquist	36.17	161	*e*P	P	13 53 55.1	+0.7
	comp=Z,32nm,1.3s						
TRQA	Tornquist	36.17	161	*e*P	P	13 53 55.2	+0.7
TRQA				pmax	pmax		
	comp=Z,32nm,1.3s						
257A	Skidaway Islan	36.19	353	P	P	13 53 55.6	+1.0
	baz=172						
256A	Glennville	36.31	352	P	P	13 53 56.3	+0.7
	baz=170						
255A	Hazlehurst	36.35	351	P	P	13 53 56.2	+0.3
	baz=169						
352A	Blakely	36.37	347	P	P	13 53 56.5	+0.3
	baz=165						
254A	Abbeville	36.50	350	P	P	13 53 57.7	+0.4
	baz=168						
BRAL	Brewton	36.60	344	P	P	13 53 58.1	0.0
	baz=162						
448A	Bay Minette	36.60	343	P	P	13 53 58.1	-0.1
	baz=160						
545A	Edgard	36.64	339	P	P	13 53 58.7	+0.2
	baz=156						
350A	Dozier	36.65	345	P	P	13 53 58.9	+0.3
	baz=163						
LNIG	Linares	36.69	323	*e*P	P	13 53 58.7	-0.3
	comp=Z,25nm,0.7s						
447A	Lucedale	36.72	342	P	P	13 53 59.4	+0.3
	baz=159						
253A	Americus	36.77	349	P	P	13 53 59.6	+0.1
	baz=167						
PLCA	Paso Flores	36.80	173	P	P	13 54 01.2	+1.4
	comp=Z,16nm,0.7s,baz=11,slow=9.8,SNR=39						
PLCA				PcP	PcP	13 56 20.5	+0.7
	comp=Z,4.9nm,0.8s,baz=17,slow=5.5,SNR=3.0						
PLCA	Paso Flores	36.80	173	*e*P	P	13 54 01.3	+1.4
	comp=Z,78nm,1.4s						
PLCA				PcP	PcP	13 56 20.5	+0.7
349A	Repton	36.81	344	P	P	13 54 00.1	+0.2
	baz=161						
252A	Lumpkin	36.83	348	P	P	13 53 59.8	-0.3
	baz=166						
446A	Poplarville	36.94	341	P	P	13 54 00.8	-0.2
	baz=158						
155A	Kite	37.03	351	P	P	13 54 02.3	+0.6
	baz=170						
251A	Midway	37.07	347	P	P	13 54 01.8	-0.3
	baz=165,SNR=5.3						
154A	Montrose	37.12	350	P	P	13 54 02.8	+0.3
	baz=168						
ZAIG	Zacatecas	37.16	317	*e*P	P	13 54 02.8	-0.5
	comp=Z,41nm,1.8s						
445A	Amite	37.21	340	P	P	13 54 03.9	+0.6
	baz=156						
NHSC	New Hope	37.22	354	P	P	13 54 04.4	+1.0
	baz=173						
347A	Saraland	37.25	342	P	P	13 54 03.2	-0.4
	baz=159						
153A	Fort Valley	37.29	349	P	P	13 54 04.0	+0.1
	baz=167						
444A	Pine Grove	37.34	339	P	P	13 54 05.0	+0.6
	baz=156						
249A	Camden	37.38	345	P	P	13 54 04.8	0.0
	baz=162						
151A	Opelika	37.47	347	P	P	13 54 05.0	-0.5
	baz=165						
152A	Waverly Hall	37.48	348	P	P	13 54 05.4	-0.2
	baz=166,SNR=5.6						
152A	Waverly Hall	37.48	348	*e*P	P	13 54 05.0	-0.6
	comp=Z,12nm,0.8s						
345A	Thompson Farm,	37.64	340	P	P	13 54 06.9	0.0
	baz=157						
248A	Dixon Mills	37.66	344	P	P	13 54 07.0	-0.1
	baz=161						
150A	Eclectic	37.71	346	P	P	13 54 07.0	-0.5
	baz=164,SNR=5.4						
443A	Delano Plantat	37.77	338	P	P	13 54 08.3	+0.3
	baz=154						
Z53A	Monticello	37.85	350	P	P	13 54 08.5	-0.2
	baz=168,SNR=5.9						
247A	Quitman	37.88	343	P	P	13 54 08.4	-0.5
	baz=160						
149A	Jones	37.89	345	P	P	13 54 08.4	-0.7
	baz=163						
Z52A	Williamson	37.92	349	P	P	13 54 09.2	-0.1
	baz=166,SNR=6.8						
GOGA	Godfrey	37.96	350	P	P	13 54 09.5	-0.1
	baz=168,SNR=5.3						
GOGA	Godfrey	37.96	350	*e*P	P	13 54 09.6	-0.1
	comp=Z,4.9nm,0.6s						
GOGA	Godfrey	37.96	350	*e*P	P	13 54 09.6	-0.1
GOGA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
344A	Westbrook Farm	38.01	340	P	P	13 54 10.0	0.0
	baz=156						
148A	Greensboro	38.14	344	P	P	13 54 10.7	-0.4
	baz=161						
343A	Vidalia	38.17	338	P	P	13 54 11.7	+0.3
	baz=155						
Z51A	Franklin	38.20	348	P	P	13 54 11.4	-0.2
	baz=165						
245A	Little AP, Sta	38.26	341	P	P	13 54 11.7	-0.4
	baz=158						
Y54A	Tignall	38.28	351	P	P	13 54 12.1	-0.1
	baz=170,SNR=8.2						
Z50A	Ashland	38.30	347	P	P	13 54 12.2	-0.3
	baz=164,SNR=12						
Z50A	Ashland	38.30	347	*e*P	P	13 54 11.4	-1.2
	comp=Z,26nm,1.1s						
Z50A				*e*PcP	PcP	13 56 23.9	-0.5
LRAL	Lakeview Retre	38.35	345	P	P	13 54 12.4	-0.5
	baz=162						
LRAL	Lakeview Retre	38.35	345	*e*P	P	13 54 11.9	-1.0
	comp=Z,13nm,0.9s						
147A	Livingston	38.36	343	P	P	13 54 11.9	-1.1
	baz=160						
Z49A	Columbiana	38.39	346	P	P	13 54 12.7	-0.5
	baz=163,SNR=7.6						
Y53A	Monroe	38.41	350	P	P	13 54 13.4	0.0

	baz=168						
Y52A	Lilburn	38.51	349	P	P	13 54 14.1	-0.2
	baz=167						
244A	Avery, Jackson	38.53	340	P	P	13 54 13.6	-0.8
	baz=156						
146A	Union	38.55	342	P	P	13 54 14.0	-0.6
	baz=159						
VBMS	Vicksburg	38.63	340	P	P	13 54 14.8	-0.4
	baz=157						
243A	Waterproof	38.66	339	P	P	13 54 15.1	-0.4
	baz=155						
Y51A	Rockmart	38.74	348	P	P	13 54 15.7	-0.5
	baz=166,SNR=8.6						
145A	Houston Renfro	38.79	341	P	P	13 54 15.8	-0.8
	baz=158						
Z47A	Carrollton	38.79	344	P	P	13 54 16.0	-0.6
	baz=161,SNR=6.1						
341A	Kurthwood	38.81	336	P	P	13 54 15.8	-0.9
	baz=152						
Z48A	Northport	38.82	345	P	P	13 54 16.0	-0.8
	baz=162,SNR=7.8						
Y50A	Piedmont	38.87	347	P	P	13 54 16.8	-0.5
	baz=165						
Y49A	Blount Mountai	39.00	346	P	P	13 54 17.4	-0.9
	baz=164,SNR=5.3						
Y49A	Blount Mountai	39.00	346	eP	P	13 54 17.4	-0.9
	comp=Z,8.3nm,0.6s						
X53A	Estanollee	39.00	351	P	P	13 54 18.3	0.0
	baz=169						
Z46A	Louisville	39.04	343	P	P	13 54 18.2	-0.4
	baz=160						
242A	Grayson	39.07	338	P	P	13 54 18.7	-0.2
	baz=154						
CNNC	Cliffs of the	39.18	358	P	P	13 54 20.2	+0.4
	baz=177						
X52A	Dahlonega	39.20	350	P	P	13 54 19.7	-0.3
	baz=168,SNR=5.8						
Y48A	Jasper	39.23	345	P	P	13 54 19.2	-1.0
	baz=162						
833A	Chaparral WMA,	39.26	327	eP	P	13 54 19.4	-1.2
	comp=Z,49nm,0.9s						
X51A	Calhoun	39.34	349	P	P	13 54 20.7	-0.5
	baz=166						
X51A	Calhoun	39.34	349	eP	P	13 54 20.4	-0.7
	comp=Z,14nm,0.9s						
X51A				ePcP	PcP	13 56 27.6	-0.1
KMSC	Kings Mountain	39.35	353	P	P	13 54 21.5	+0.2
	baz=172						
143A	Socs Landing,	39.38	340	P	P	13 54 20.4	-1.0
	baz=156						
Y47A	UCPARC, Winfie	39.40	345	P	P	13 54 20.8	-0.8
	baz=162,SNR=16						
X50B	Fort Payne	39.40	348	P	P	13 54 20.9	-0.8
	baz=165,SNR=11						
BG3	Lake Jocassee	39.42	351	eP	P	13 54 21.8	0.0
	comp=Z,16nm,0.8s						
BG3				ePcP	PcP	13 56 27.9	0.0
Z45A	Winona	39.43	342	P	P	13 54 21.4	-0.5
	baz=158						
142A	Monroe	39.43	339	P	P	13 54 21.4	-0.5
	baz=155						
Z44A	Pea Ridge, Bel	39.58	341	P	P	13 54 22.6	-0.5
	baz=157						
X49A	Woodville	39.60	347	P	P	13 54 22.6	-0.7
	baz=164,SNR=8.2						
W53A	Cullowhee	39.63	351	P	P	13 54 24.0	+0.3
	baz=169,SNR=21						
Y46A	Houston	39.66	343	P	P	13 54 22.8	-1.0
	baz=160,SNR=9.2						
240A	Hunter Patters	39.67	336	P	P	13 54 23.4	-0.5
	baz=152						
W52A	Murphy	39.68	350	P	P	13 54 23.8	-0.2
	baz=168,SNR=5.8						
W52A	Murphy	39.68	350	eP	P	13 54 23.9	-0.2
	comp=Z,16nm,0.8s						
W52A				ePcP	PcP	13 56 27.9	-0.9
X48A	Hartselle	39.72	346	P	P	13 54 23.4	-0.9
	baz=163,SNR=6.5						
X48A	Hartselle	39.72	346	eP	P	13 54 23.0	-1.2
	comp=Z,12nm,0.6s						
Z43A	Armstrong Fami	39.78	340	P	P	13 54 23.8	-1.0
	baz=156						
NATX	Nacogdoches	39.80	335	P	P	13 54 24.7	-0.3
	baz=150						
141A	Papa Simpson,	39.84	338	P	P	13 54 24.5	-0.7
	baz=153						
Y45A	Yeager Farm, C	39.84	342	P	P	13 54 24.7	-0.6
	baz=159						
X47A	Russelville	39.98	345	P	P	13 54 25.1	-1.3
	baz=162						
W50A	Signal Mountai	40.05	348	P	P	13 54 26.5	-0.5
	baz=166,SNR=11						
W50A	Signal Mountai	40.05	348	eP	P	13 54 26.1	-0.9
	comp=Z,24nm,0.8s						
V53A	Saluda	40.07	352	P	P	13 54 27.1	-0.1
	baz=170,SNR=9.4						
Z42A	Norrel Spur, H	40.09	339	P	P	13 54 26.3	-1.0
	baz=155						
140A	Cam and Jess,	40.13	337	P	P	13 54 27.1	-0.5
	baz=152						
CPCT	Cooper Cave	40.14	349	eP	P	13 54 27.3	-0.4
	comp=Z,21nm,0.8s						
Y44A	Strider, Charl	40.14	342	P	P	13 54 27.0	-0.7
	baz=158						
W49A	Belvidere	40.17	347	P	P	13 54 27.1	-1.0
	baz=164,SNR=5.7						
SWET	Sewanee	40.19	348	eP	P	13 54 27.3	-1.0
	comp=Z,20nm,0.8s						
TKL	Tuckaleechee C	40.21	350	P	P	13 54 27.8	-0.5
	comp=Z,6.3nm,0.8s,baz=300,slow=20,SNR=11						
TKL	Tuckaleechee C	40.21	350	eP	P	13 54 27.3	-1.0
	comp=Z,42nm,1.8s						
TKL	Tuckaleechee C	40.21	350	eP	P	13 54 27.3	-1.0
TKL				pmax	pmax		
	comp=Z,42nm,1.8s						
X46A	Booneville	40.21	344	P	P	13 54 27.1	-1.2
	baz=161						
435B	Jarrell	40.30	331	P	P	13 54 29.6	+0.5
	baz=146						
435B	Jarrell	40.30	331	eP	P	13 54 29.4	+0.2
	comp=Z,28nm,0.9s						
Y43A	Makayla and Ka	40.32	341	P	P	13 54 28.4	-0.9
	baz=157						
W48A	Pulaski	40.34	346	P	P	13 54 28.7	-0.8
	baz=163,SNR=11						
V52A	Sevierville	40.36	351	P	P	13 54 29.2	-0.3
	baz=168,SNR=8.7						
V52A	Sevierville	40.36	351	eP	P	13 54 29.3	-0.3
	comp=Z,23nm,0.9s						
Z41A	Richland Creek	40.38	338	P	P	13 54 28.9	-0.8
	baz=154						
OXF	Oxford	40.41	343	P	P	13 54 28.2	-1.8
	baz=159						
V51A	Loudon	40.45	350	P	P	13 54 30.0	-0.3
	baz=167,SNR=12						
V51A	Loudon	40.45	350	eP	P	13 54 29.9	-0.3
	comp=Z,27nm,0.8s						
V50A	Pikevile	40.46	349	P	P	13 54 30.0	-0.4
	baz=166,SNR=12						
PLAL	Pickwick Lake	40.48	345	eP	P	13 54 28.9	-1.7
	comp=Z,18nm,1.1s						
PLAL				epP	pP	13 54 55.5	+0.2
Y42A	Garnett, Star	40.54	340	P	P	13 54 30.1	-1.0
	baz=156						
W47A	Westpoint	40.61	346	P	P	13 54 30.5	-1.2
	baz=162,SNR=8.8						
V49A	McMinnville	40.72	348	P	P	13 54 31.5	-1.0
	baz=165,SNR=8.2						
U53A	Fall Branch	40.72	352	P	P	13 54 32.3	-0.3
	baz=170,SNR=6.1						
WLAR	White Oak Lake	40.88	338	eP	P	13 54 33.6	-0.2
	comp=Z,28nm,0.9s						
V48A	Smith Brothers	40.89	347	P	P	13 54 33.2	-0.8
	baz=164,SNR=18						
V48A	Smith Brothers	40.89	347	eP	P	13 54 33.1	-0.9
	comp=Z,42nm,0.8s						
W45A	Hickory Valley	40.95	344	P	P	13 54 33.0	-1.4
	baz=160						
TZTN	Tazewell	41.04	351	P	P	13 54 34.8	-0.3
	baz=169,SNR=14						
TZTN	Tazewell	41.04	351	eP	P	13 54 34.7	-0.4
	comp=Z,20nm,0.6s						
V47A	Nunnelly	41.14	346	P	P	13 54 34.3	-1.7
	baz=163						
JCT	Junction City	41.17	328	P	P	13 54 36.7	+0.3
	baz=143,SNR=6.1						
JCT	Junction City	41.17	328	eP	P	13 54 36.4	0.0
	comp=Z,24nm,0.8s						
JCT	Junction City	41.17	328	eP	P	13 54 36.4	0.0
JCT				pmax	pmax		
	comp=Z,24nm,0.8s						
Y40A	Okolona	41.23	338	P	P	13 54 36.3	-0.5
	baz=154						
WHTX	Lake Whitney,	41.24	332	P	P	13 54 37.0	+0.2
	baz=147,SNR=6.4						
WHTX	Lake Whitney,	41.24	332	eP	P	13 54 37.1	+0.3
	comp=Z,36nm,0.8s						
V46A	Holladay	41.27	345	P	P	13 54 34.8	-2.2
	baz=162						
BLA	Blacksburg	41.31	355	P	P	13 54 37.8	+0.5
	baz=174						
BLA	Blacksburg	41.31	355	eP	P	13 54 37.9	+0.5
	comp=Z,12nm,0.7s						
X41A	Kaden, Bauxite	41.39	339	P	P	13 54 36.6	-1.4
	baz=155						
U49A	Red Boiling Sp	41.41	348	P	P	13 54 37.1	-1.0
	baz=165,SNR=5.1						
V45A	Humboldt	41.43	344	P	P	13 54 36.4	-2.0
	baz=160						
X40A	Basin Creek Fa	41.50	339	eP	P	13 54 38.4	-0.5
	comp=Z,3.7nm,0.6s						
T52A	Hallie	41.50	352	P	P	13 54 38.7	-0.3
	baz=170,SNR=7.6						
WVT	Waverly	41.51	346	P	P	13 54 37.0	-2.0
	baz=162						
WVT	Waverly	41.51	346	eP	P	13 54 36.5	-2.4
	comp=Z,20nm,1.3s						
WVT	Waverly	41.51	346	eP	P	13 54 36.5	-2.4
WVT				pmax	pmax		
	comp=Z,20nm,1.3s						
U48A	Cassie Pea, Po	41.57	347	P	P	13 54 38.3	-1.1
	baz=164,SNR=6.0						
UALR	University of	41.58	340	eP	P	13 54 37.9	-1.7
UALR				epP	pP	13 55 04.8	+0.3
U47A	Clarksville	41.67	346	P	P	13 54 38.6	-1.7
	baz=163						
T50A	Nancy	41.72	350	P	P	13 54 39.7	-1.0
	baz=167,SNR=6.9						
IP05	Hopewell Churc	41.76	358	eP	P	13 54 41.1	+0.1
	comp=Z,64nm,0.1s						
V44A	Blytheville	41.77	343	P	P	13 54 39.7	-1.5
	baz=159						
U46A	Springville	41.81	345	P	P	13 54 39.5	-1.9
	baz=162						
MIAR	Mount Ida	41.82	338	P	P	13 54 40.3	-1.3
	baz=153						
MIAR	Mount Ida	41.82	338	eP	P	13 54 39.7	-1.8
	comp=Z,6.6nm,0.8s						
MIAR	Mount Ida	41.82	338	eP	P	13 54 39.7	-1.8
MIAR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
IP07	Quail	41.86	358	eP	P	13 54 40.3	-1.5
	comp=Z,17nm,1.2s						
IP01	Cuckoo	41.89	358	eP	P	13 54 41.3	-0.7
	comp=Z,9.1nm,0.9s						
W41B	Gary Mavity, V	41.91	340	P	P	13 54 40.9	-1.3
	baz=156,SNR=5.3						
W41B	Gary Mavity, V	41.91	340	eP	P	13 54 40.6	-1.6
	comp=Z,9.3nm,0.8s						
T49A	Edmonton	41.93	349	P	P	13 54 41.4	-1.0
	baz=166,SNR=7.9						
U45A	Rockin P Farm,	41.95	345	P	P	13 54 41.0	-1.6
	baz=161						
IP03	Louisa	41.96	358	eP	P	13 54 42.7	+0.1
	comp=Z,17nm,0.9s						
X39A	Fountain Ranch	41.99	338	P	P	13 54 42.3	-0.7
	baz=153,SNR=11						
CVRD	Centerville Ro	42.00	358	eP	P	13 54 43.0	+0.1
	comp=Z,20nm,1.2s						
IP04	Greensprings	42.03	358	eP	P	13 54 43.4	+0.2
	comp=Z,13nm,0.9s						
WHAR	Wooly Hollow	42.03	340	eP	P	13 54 41.5	-1.8
WHAR				epP	pP	13 55 07.9	-0.3
S52A	Salyersville	42.08	352	P	P	13 54 43.1	-0.5
	baz=170						
S51A	Beattyville	42.12	351	P	P	13 54 43.3	-0.6
	baz=169,SNR=10						
T47A	Sharon Grove	42.15	347	P	P	13 54 42.6	-1.6
	baz=164						
T47A	Sharon Grove	42.15	347	eP	P	13 54 42.3	-1.9
	comp=Z,17nm,0.8s						
T47A				epP	pP	13 55 09.4	+0.3
V42A	Cord	42.21	341	P	P	13 54 42.7	-2.0
	baz=157,SNR=5.1						
W40A	Ferguson Farm,	42.21	339	P	P	13 54 43.9	-0.8
	baz=154						
W40A	Ferguson Farm,	42.21	339	eP	P	13 54 43.7	-1.0
W40A				epP	pP	13 55 09.7	+0.1
T46A	Princeton	42.39	346	P	P	13 54 44.4	-1.7
	baz=162,SNR=7.9						
V41A	Mountainview	42.44	341	P	P	13 54 44.8	-1.8
	baz=156,SNR=16						
TXAR	Lajitas Array	42.47	323	P	P	13 54 47.1	+0.1
	comp=Z,3.0nm,0.7s,baz=146,slow=9.0,SNR=38						
TXAR				pP	pP	13 55 11.6	-0.4
	comp=Z,5.9nm,1.0s,baz=174,slow=15,SNR=8.2						
TXAR				PcP	PcP	13 56 38.8	+0.7
	comp=Z,8.4nm,0.7s,baz=147,slow=6.0,SNR=15						
TX31	Lajitas Ar. Si	42.48	323	eP	P	13 54 46.7	-0.4
W39A	Magazine	42.48	338	P	P	13 54 46.2	-0.7
	baz=154,SNR=6.3						
W39A	Magazine	42.48	338	eP	P	13 54 45.8	-1.1
	comp=Z,10nm,0.8s						
PARMO	Parma	42.52	344	eP	P	13 54 45.9	-1.2
	comp=Z,86nm,0.7s						
S48A	Wiedeman Farm,	42.57	348	P	P	13 54 45.9	-1.6
	baz=165,SNR=6.5						
U42A	Revenden	42.66	342	P	P	13 54 46.6	-1.8
	baz=158,SNR=6.6						
V40A	Witts Springs	42.68	340	P	P	13 54 47.3	-1.3
	baz=155,SNR=26						
V40A	Witts Springs	42.68	340	eP	P	13 54 46.9	-1.7
	comp=Z,25nm,0.6s						
ABTX	Abilene, Hawle	42.81	330	P	P	13 54 49.9	+0.3
	baz=144,SNR=9.6						
ABTX	Abilene, Hawle	42.81	330	eP	P	13 54 49.3	-0.4
ABTX				epP	pP	13 55 14.4	-0.2
T44A	Benton	42.87	344	P	P	13 54 48.2	-1.8
	baz=160						
U41A	Viola	42.87	341	P	P	13 54 48.3	-1.7
	baz=157,SNR=8.9						
S46A	Don Dixon Farm	42.96	346	P	P	13 54 48.9	-1.8
	baz=163						
V39A	Pettigrew	43.00	339	P	P	13 54 50.0	-1.2
	baz=154,SNR=7.4						
T43A	Greenville	43.06	343	P	P	13 54 49.9	-1.7
	baz=159,SNR=5.5						
S45A	Carrier Mills	43.16	346	P	P	13 54 50.4	-1.9
	baz=162						
WCI	Wyandotte Cave	43.17	348	P	P	13 54 50.8	-1.6
	baz=165						
WCI	Wyandotte Cave	43.17	348	eP	P	13 54 50.9	-1.6
	comp=Z,30nm,1.1s						
WCI	Wyandotte Cave	43.17	348	eP	P	13 54 50.9	-1.5
WCI				pmax	pmax		
	comp=Z,30nm,1.1s						
U40A	Yellville	43.19	340	P	P	13 54 51.2	-1.4
	baz=155,SNR=12						
USIN	University of	43.21	347	eP	P	13 54 50.9	-1.9
	comp=Z,43nm,0.9s						
T42A	Van Buren	43.24	342	P	P	13 54 51.1	-1.9
	baz=158						
T42A	Van Buren	43.24	342	eP	P	13 54 50.6	-2.4
	comp=Z,15nm,0.7s						
R48A	Northridge Ran	43.25	349	P	P	13 54 51.8	-1.3
	baz=166						
R47A	Wooly Knot Far	43.28	348	P	P	13 54 51.6	-1.7
	baz=165						
S44A	Carbondale	43.35	345	P	P	13 54 52.1	-1.7
	baz=161,SNR=5.8						
SIUC	Southern Illin	43.36	345	eP	P	13 54 52.1	-1.8
	comp=Z,30nm,0.8s						
SIUC				epP	pP	13 55 19.1	+0.1
R46A	Gibon Southern	43.41	347	P	P	13 54 52.7	-1.6
	baz=163						
U39A	Green Forest	43.43	340	P	P	13 54 53.0	-1.6
	baz=154						
S43A	Fulton Ridge,	43.45	344	P	P	13 54 52.8	-1.9
	baz=160						
T41A	Mountain View	43.46	342	P	P	13 54 52.9	-2.0
	baz=157,SNR=6.7						
HHAR	Hobbs	43.50	339	eP	P	13 54 53.4	-1.7
	comp=Z,24nm,1.1s						
LPIG	La Paz	43.52	312	LR	LR	14 09 30.7	
	comp=Z,50nm,19.9s,baz=37,slow=31						
R45A	Skylar, Fairfi	43.67	346	P	P	13 54 54.7	-1.8
	baz=162						
T40A	Mansfield	43.80	341	P	P	13 54 55.9	-1.7
	baz=156						
R44A	Waltonville	43.83	345	P	P	13 54 55.8	-1.8
	baz=161						
S42A	Caledonia	43.84	343	P	P	13 54 55.5	-2.3
	baz=159						
TUL1	Leonard	43.87	337	P	P	13 54 57.4	-0.7
	baz=151						
TUL1	Leonard	43.87	337	eP	P	13 54 57.0	-1.0
	comp=Z,22nm,0.8s						
Q47A	Bedord North L	43.88	348	P	P	13 54 56.7	-1.4
	baz=165,SNR=14						
MVL	Millersville	43.90	360	eP	P	13 54 59.1	+0.9
	comp=Z,24nm,0.8s						
FVM	French Village	43.94	344	eP	P	13 54 57.9	-0.7
	comp=Z,19nm,0.7s						
FVM	French Village	43.94	344	eP	P	13 54 57.9	-0.7
FVM				pmax	pmax		
	comp=Z,19nm,0.7s						
S41A	Jillco Farms,	43.96	342	P	P	13 54 56.8	-1.9
	baz=157,SNR=7.0						
T39A	Clever	43.97	340	P	P	13 54 57.2	-1.7
	baz=155						
OLIL	Olney	44.05	347	eP	P	13 54 57.5	-1.9
	comp=Z,22nm,0.8s						
OLIL				ePcP	PcP	13 56 42.6	-0.5
R43A	Red Bud	44.08	344	P	P	13 54 58.0	-1.7
	baz=160						
P50A	Jamestown	44.08	351	P	P	13 54 58.6	-1.1
	baz=169						
WMOK	Wichita Mounta	44.13	333	P	P	13 54 59.9	-0.4
	baz=147,SNR=27						
WMOK	Wichita Mounta	44.13	333	eP	P	13 54 59.5	-0.8
	comp=Z,37nm,0.8s						
WMOK	Wichita Mounta	44.13	333	eP	P	13 54 59.5	-0.8
WMOK				pmax	pmax		
	comp=Z,37nm,0.8s						
S40A	Lebanon	44.20	341	P	P	13 54 59.1	-1.6
	baz=156,SNR=11						
Q45A	Warren Harvey,	44.22	347	P	P	13 54 58.7	-2.0
	baz=163						
O56A	Blue Knob Stat	44.22	357	P	P	13 55 01.3	+0.4
	baz=177,SNR=10.0						
O56A	Blue Knob Stat	44.22	357	eP	P	13 55 01.1	+0.2
	comp=Z,33nm,1.0s						
CCM	Cathedral Cave	44.24	343	P	P	13 54 59.9	-1.1
	baz=158						
CCM	Cathedral Cave	44.24	343	eP	P	13 54 59.7	-1.3
CCM				ePcP	PcP	13 56 44.5	+0.7
CCM	Cathedral Cave	44.24	343	eP	P	13 54 59.7	-1.3
CCM				e		13 56 44.5	
T38A	Diamond	44.30	339	P	P	13 54 59.7	-1.8
	baz=154						
R42A	Luebbering	44.32	343	P	P	13 54 59.8	-1.8
	baz=159						
P47A	Martinsville	44.38	349	P	P	13 55 00.6	-1.5
	baz=166,SNR=6.2						
Q44A	Meyer Farm, Va	44.43	346	P	P	13 55 00.5	-1.9
	baz=162						
LUPA	Lehigh Univers	44.50	1	eP	P	13 55 03.9	+0.9
	comp=Z,1.6nm,0.7s						
R41A	Rosebud	44.50	343	P	P	13 55 01.1	-2.0
	baz=158						
S39A	Bolivar	44.56	340	P	P	13 55 01.7	-1.8
	baz=155,SNR=5.9						
S39A	Bolivar	44.56	340	eP	P	13 55 01.5	-2.0
	comp=Z,14nm,0.8s						
SSPA	Standing Stone	44.56	358	P	P	13 55 04.2	+0.7
	baz=178						
SSPA	Standing Stone	44.56	358	eP	P	13 55 03.7	+0.2
	comp=Z,37nm,0.9s						
ACSO	Alum Creek Sta	44.58	353	eP	P	13 55 00.3	-3.3
	comp=Z,27nm,0.5s						
O50A	Cable	44.58	352	P	P	13 55 02.3	-1.4
	baz=169						
Q43A	New Douglas	44.64	345	P	P	13 55 02.2	-1.9
	baz=161						
P46A	Rosedale	44.70	348	P	P	13 55 02.6	-2.0
	baz=164						
P45A	Graceland, Par	44.73	347	P	P	13 55 02.7	-2.1
	baz=164						
P45A	Graceland, Par	44.73	347	eP	P	13 55 02.8	-2.1
P45A				ePcP	PcP	13 56 45.3	-0.1
R40A	Maddies Statio	44.77	342	eP	P	13 55 02.9	-2.3
	comp=Z,7.4nm,0.5s						
N59A	State Game Lan	44.81	0	P	P	13 55 06.4	+0.9
	baz=180,SNR=7.3						
N59A	State Game Lan	44.81	0	eP	P	13 55 05.5	0.0
	comp=Z,19nm,0.8s						
PAL	Palisades	44.95	2	P	P	13 55 06.7	+0.1
	baz=183						
N54A	Moraine State	45.00	356	P	P	13 55 07.3	+0.3
	baz=175,SNR=6.6						
ODNJ	Ogdensburg	45.00	2	eP	P	13 55 06.9	-0.1
	comp=Z,7.7nm,0.7s						
R39A	Chumby, Stover	45.03	341	P	P	13 55 05.3	-1.9
	baz=156,SNR=5.8						
Q41A	Truxton	45.07	343	P	P	13 55 05.8	-1.7
	baz=158,SNR=5.7						
O47A	Sheridan	45.09	349	P	P	13 55 06.1	-1.6
	baz=166						
N50A	Nevada	45.13	352	P	P	13 55 07.0	-1.0
	baz=170						
R38A	Fenwick Farm,	45.20	340	P	P	13 55 06.6	-2.0
	baz=155						
MNTX	Cornudas Mount	45.20	324	P	P	13 55 08.5	-0.4
	baz=137,SNR=20						
MNTX	Cornudas Mount	45.20	324	eP	P	13 55 08.4	-0.4
MNTX				epP	pP	13 55 34.4	+0.4
P43A	Skaggs, Pawnee	45.25	345	P	P	13 55 07.3	-1.7
	baz=161						
Q40A	Laux Farm, Aux	45.35	342	P	P	13 55 07.7	-2.1
	baz=157,SNR=5.4						
SFIN	Lafayette	45.41	348	P	P	13 55 08.1	-2.2
	baz=165,SNR=6.2						
SFIN	Lafayette	45.41	348	eP	P	13 55 08.0	-2.2
	comp=Z,16nm,0.6s						
O45A	Potomac	45.41	348	P	P	13 55 08.2	-2.1
	baz=164						
P42A	Winchester	45.41	345	eP	P	13 55 07.3	-3.0
	comp=Z,26nm,0.8s						
KSPA	Keystone Colle	45.45	0	eP	P	13 55 10.4	-0.1
	comp=Z,13nm,0.6s						
MSTX	Muleshoe	45.47	328	P	P	13 55 10.8	-0.2
	baz=141,SNR=12						
MSTX	Muleshoe	45.47	328	eP	P	13 55 10.6	-0.4
MSTX				epP	pP	13 55 37.3	+1.2
M54A	Oil Creek Stat	45.52	356	P	P	13 55 11.2	+0.1
	baz=175,SNR=9.5						
M54A	Oil Creek Stat	45.52	356	eP	P	13 55 11.4	+0.3
	comp=Z,30nm,0.8s						
AMTX	Amarillo	45.63	330	P	P	13 55 12.0	-0.2
	baz=143						
AMTX	Amarillo	45.63	330	eP	P	13 55 12.0	-0.2
	comp=Z,60nm,0.8s						
AMTX				epP	pP	13 55 38.9	+1.4
Q39A	Willow Grove F	45.68	342	P	P	13 55 10.4	-1.9
	baz=156,SNR=7.9						
P41A	Barry, Barry	45.69	344	P	P	13 55 10.5	-2.0
	baz=159						
Q38A	Cooks Store, C	45.81	341	P	P	13 55 11.7	-1.7
	baz=155,SNR=5.2						
O43A	Sugar Creek Fa	45.81	346	P	P	13 55 11.2	-2.2
	baz=162						
P40A	Paris	45.84	343	eP	P	13 55 11.2	-2.5
	comp=Z,12nm,0.6s						
P40A				epP	pP	13 55 38.4	-0.5
N45A	Kentland	45.94	348	P	P	13 55 11.9	-2.5
	baz=164						
BRYW	Bryant College	46.01	5	epP	pP	13 55 42.5	+2.3
P39B	Salisbury	46.01	342	P	P	13 55 12.5	-2.5
	baz=157						
N44A	Piper City	46.02	347	P	P	13 55 12.8	-2.2
	baz=163,SNR=15						
O41A	Passleys Farm,	46.05	344	P	P	13 55 13.0	-2.3
	baz=159						
HDIL	Hopedale	46.06	346	P	P	13 55 13.4	-1.9
	baz=162,SNR=6.0						
HDIL	Hopedale	46.06	346	eP	P	13 55 13.3	-2.1
	comp=Z,46nm,0.6s						
BINY	Binghamton	46.09	0	P	P	13 55 16.7	+1.1
	baz=180						
BINY	Binghamton	46.09	0	eP	P	13 55 16.3	+0.6
	comp=Z,24nm,0.6s						
BINY				epP	pP	13 55 43.7	+2.8
ERPA	Erie	46.15	356	P	P	13 55 15.7	-0.4
	baz=175						

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ERPA  Erie              46.15 356 eP     P      13 55 15.8 -0.2
      comp=Z,24nm,0.8s
M46A  Old House Fiel    46.26 349  P     P      13 55 15.1 -1.8
      baz=166
M46A  Old House Fiel    46.26 349 eP     P      13 55 15.2 -1.6
      comp=Z,46nm,0.9s
QUA2  Belchertown       46.30   4 eP     P      13 55 16.6 -0.7
      comp=Z,22nm,0.8s
QUA2                              epP    pP     13 55 42.2 -0.3
O40A  La Belle          46.34 343  P     P      13 55 15.3 -2.3
      baz=158
P38A  Dawn              46.38 341  P     P      13 55 15.8 -2.1
      baz=156
N43A  Stutzman Famil    46.40 346  P     P      13 55 15.9 -2.0
      baz=162,SNR=6.8
M45A  Boilermakers S    46.41 348  P     P      13 55 15.7 -2.3
      baz=165
WES   Weston            46.49   5 eP     P      13 55 18.6  0.0
      comp=Z,12nm,0.8s
WES                               epP    pP     13 55 46.4 +2.5
WES   Weston            46.49   5 eP     P      13 55 18.6  0.0
WES                               e*PP   pP     13 55 46.4 +2.5
WES                                pmax  pmax
      comp=Z,12nm,0.8s
N42A  Yates City        46.50 345  P     P      13 55 17.0 -1.8
      baz=161,SNR=9.1
M44A  Midewin, Midew    46.57 348  P     P      13 55 16.8 -2.6
      baz=164
HRV   Adam Dziewonsk    46.59   5  P     P      13 55 19.8 +0.4
      baz=186
N41A  Harden Midland    46.60 345  P     P      13 55 17.5 -2.1
      baz=160
P37A  Lathrop           46.61 341  P     P      13 55 17.4 -2.3
      baz=155
O39A  Kirksville        46.65 343  P     P      13 55 18.3 -1.7
      baz=157
O38A  Galt              46.81 342  P     P      13 55 19.2 -2.1
      baz=156
M43A  Waltham Townsh    46.82 347  P     P      13 55 19.1 -2.2
      baz=162,SNR=6.4
N40A  Mertquake, Sal    46.96 344  P     P      13 55 20.3 -2.1
      baz=159
KSU1  Kansas State U    46.97 338  P     P      13 55 21.2 -1.3
      baz=152
KSU1  Kansas State U    46.97 338 eP     P      13 55 21.5 -1.0
      comp=Z,25nm,0.7s
KSU1                              epP    pP     13 55 49.1 +1.2
M42A  Sheffield         47.03 346  P     P      13 55 20.8 -2.1
      baz=161
O37A  Wolven Farm, M    47.07 341  P     P      13 55 21.2 -2.1
      baz=155
MEDO  Medina            47.11 358  P     P      13 55 23.6 +0.2
      baz=177
TYNO  Tyneside          47.11 356  P     P      13 55 23.9 +0.4
      baz=175
M41A  Milan             47.15 345  P     P      13 55 21.6 -2.2
      baz=160
STCO  Saint Catharin    47.19 357  P     P      13 55 24.8 +0.7
      baz=176
N39A  Derby Farms, D    47.22 343  P     P      13 55 22.4 -2.0
      baz=158
N39A  Derby Farms, D    47.22 343 eP     P      13 55 22.6 -1.8
      comp=Z,26nm,0.9s
N39A                              epP    pP     13 55 45.8 -3.9
121A  Cookes Peak, D    47.23 323  P     P      13 55 25.7 +0.8
      baz=135,SNR=14
ACCN  Adirondack Com    47.33   2 eP     P      13 55 25.4 +0.2
ACCN                              epP    pP     13 55 52.8 +2.2
N38A  Joes South For    47.36 342  P     P      13 55 23.7 -1.7
      baz=157
319A  Douglas           47.36 321 eP     P      13 55 26.1 +0.3
      comp=Z,44nm,1.0s
319A                              epP    pP     13 55 52.9 +1.7
M40A  Post Highland     47.43 344  P     P      13 55 24.2 -1.8
      baz=159
L43A  Garden Prairie    47.48 347  P     P      13 55 24.5 -1.9
      baz=163,SNR=8.6
L42A  Oliver, Polo      47.52 346  P     P      13 55 24.5 -2.2
      baz=162,SNR=6.1
L42A  Oliver, Polo      47.52 346 eP     P      13 55 24.2 -2.6
      comp=Z,76nm,1.5s
N37A  Lee Faris, Mou    47.63 341  P     P      13 55 25.7 -1.9
      baz=155
N37A  Lee Faris, Mou    47.63 341 eP     P      13 55 25.7 -1.9
      comp=Z,25nm,0.8s
N37A                              epP    pP     13 55 53.1 +0.2
M39A  Webster           47.68 344  P     P      13 55 26.1 -1.9
      baz=158
L41A  Preston           47.79 346  P     P      13 55 26.6 -2.2
      baz=161,SNR=6.2
DRWO  Darlington Wes    47.82 357  P     P      13 55 29.2 +0.3
      baz=176
DRCO  St. Marys Ceme    47.83 357  P     P      13 55 29.3 +0.3
      baz=177
WLVO  Wesleyville       47.86 358  P     P      13 55 29.4 +0.1
      baz=177
K43A  Burlington        47.90 348  P     P      13 55 27.5 -2.1
      baz=164
K43A  Burlington        47.90 348 eP     P      13 55 27.1 -2.5
      comp=Z,47nm,0.9s
NCB   Newcomb           47.90   2 eP     P      13 55 29.6  0.0
      comp=Z,18nm,0.7s
M38A  Pleasantville     47.92 343  P     P      13 55 27.9 -1.9
      baz=157
N36A  Muff Farm, Cla    47.92 341  P     P      13 55 28.2 -1.7
      baz=154
CBKS  Cedar Bluff       47.97 335  P     P      13 55 30.5 +0.2
      baz=148
CBKS  Cedar Bluff       47.97 335 eP     P      13 55 29.9 -0.4
CBKS                              epP    pP     13 55 57.0 +1.3
CBKS  Cedar Bluff       47.97 335 eP     P      13 55 29.9 -0.4
CBKS                              e*PP   pP     13 55 57.0 +1.3
L40A  Anamosa           47.97 345  P     P      13 55 28.0 -2.2
      baz=160,SNR=6.4
L40A  Anamosa           47.97 345 eP     P      13 55 28.2 -2.0
      comp=Z,45nm,1.1s
L40A                              epP    pP     13 55 54.7 -0.9
K42A  Prairie Point,    48.19 347  P     P      13 55 29.8 -2.1
      baz=162
TASL  Snake Pit, Alb    48.19 326  P     P      13 55 32.7 +0.5
      baz=138,SNR=44
ANMO  Albuquerque       48.19 326  P     P      13 55 32.7 +0.4
      comp=Z,32nm,0.7s,baz=139,slow=12,SNR=91
ANMO                               pP    pP     13 55 56.3 -1.4
      comp=Z,38nm,0.8s,baz=151,slow=9.6,SNR=7.9
ANMO  Albuquerque       48.19 326  P     P      13 55 33.0 +0.8
      baz=138
ANMO  Albuquerque       48.19 326 eP     P      13 55 32.6 +0.4
ANMO                              epP    pP     13 56 00.1 +2.4
ANMO  Albuquerque       48.19 326d iP    P      13 55 32.6 +0.4
ANMO                               pmax  pmax
      comp=Z,10.0nm,0.5s
TASM  ASL Pad, Albuq    48.19 326  P     P      13 55 32.7 +0.4
      baz=138,SNR=43
BWLO  Walkerton         48.22 355  P     P      13 55 31.6 -0.4
      baz=173
L39A  Vinton            48.23 344  P     P      13 55 29.9 -2.3
      baz=159
K41A  Shullsburg        48.25 346  P     P      13 55 30.2 -2.1
      baz=161
LBNH  Lisbon            48.28   4 eP     P      13 55 32.7 +0.2
LBNH                              epP    pP     13 55 59.3 +1.3
LBNH  Lisbon            48.28   4 eP     P      13 55 32.7 +0.2
LBNH                              e*PP   pP     13 55 59.3 +1.3
SCIA  State Center      48.37 343  P     P      13 55 31.3 -2.0
      baz=157
SCIA  State Center      48.37 343 eP     P      13 55 31.6 -1.6
SCIA                              epP    pP     13 55 59.0 +0.3
DELO  Deloro Mine       48.43 359  P     P      13 55 32.9 -0.7
      baz=178
M36A  Felix, Anita      48.45 341  P     P      13 55 31.7 -2.2
      baz=155
CLWO  Collingwood       48.49 356  P     P      13 55 34.0 -0.1
      baz=174
L38A  Oak Wood Farm,    48.51 343  P     P      13 55 32.2 -2.2
      baz=157
JFWS  Jewell Farm       48.52 346  P     P      13 55 32.5 -1.9
      baz=161
LONY  Lake Ozonia       48.53   1  P     P      13 55 34.9 +0.4
      baz=182,SNR=6.5
LONY  Lake Ozonia       48.53   1 eP     P      13 55 34.5  0.0
      comp=Z,20nm,1.1s
LONY                              epP    pP     13 55 58.9 -1.1
K40A  Colesburg         48.54 345  P     P      13 55 32.5 -2.0
      baz=160
J43A  Natural Harves    48.56 348  P     P      13 55 32.5 -2.2
      baz=164
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J42A  Columbus          48.65 347  P     P      13 55 33.4 -2.0
      baz=163
SADO  Sadowa            48.74 357 eP     P      13 55 34.9 -1.1
      comp=Z,38nm,1.4s
SADO                              epP    pP     13 56 03.3 +1.8
K39A  Oelwein           48.74 345  P     P      13 55 33.5 -2.6
      baz=159
T25A  Trinidad          48.77 330  P     P      13 55 37.4 +0.8
      baz=141,SNR=39
T25A  Trinidad          48.77 330 eP     P      13 55 37.2 +0.5
      comp=Z,41nm,0.8s
T25A                              epP    pP     13 56 03.6 +1.4
FRNY  Flat Rock         48.78   2 eP     P      13 55 37.0 +0.6
      comp=Z,33nm,0.8s
J41A  Loganville        48.90 347  P     P      13 55 35.3 -2.0
      baz=162
TUC   Tucson            48.94 320  P     P      13 55 38.0 +0.1
      baz=131
TUC   Tucson            48.94 320 eP     P      13 55 37.8 -0.1
TUC                               epP    pP     13 56 03.6 +0.2
TUC   Tucson            48.94 320 eP     P      13 55 37.8 -0.1
TUC                               e*PP   pP     13 56 03.6 +0.2
PLVO  Plevna            48.94 359  P     P      13 55 37.7 +0.1
      baz=179
I43A  Langenfeld Bro    48.99 348  P     P      13 55 36.3 -1.7
      baz=164
L36A  Harm Buss Farm    48.99 342  P     P      13 55 36.4 -1.6
      baz=155
J40A  Soldiers Grove    49.10 346  P     P      13 55 36.5 -2.3
      baz=161
I42A  Draeger Farm,     49.15 348  P     P      13 55 37.9 -1.3
      baz=163,SNR=6.6
J39A  Decorah           49.28 345  P     P      13 55 37.7 -2.5
      baz=159,SNR=6.7
K37A  Belmond           49.29 343  P     P      13 55 37.8 -2.4
      baz=157
KLBO  Killbear Provi    49.39 356  P     P      13 55 39.1 -1.8
      baz=175
KSCO  Kaye Shedlock’    49.40 333  P     P      13 55 41.5 +0.2
      baz=144,SNR=7.0
KSCO  Kaye Shedlock’    49.40 333 eP     P      13 55 41.3  0.0
      comp=Z,31nm,0.8s
K36A  Gilmore City      49.41 342  P     P      13 55 39.5 -1.7
      baz=156
BUKO  Buck Lake         49.42 357  P     P      13 55 40.9 -0.4
      baz=176
I41A  Arkdale           49.52 347  P     P      13 55 40.3 -1.8
      baz=162
I41A  Arkdale           49.52 347 eP     P      13 55 40.2 -1.8
      comp=Z,19nm,0.8s
I40A  Norwalk           49.53 346  P     P      13 55 40.1 -2.0
      baz=161
ALFO  Alfred            49.54   1  P     P      13 55 42.5 +0.5
      baz=182
PKME  Peaks-Kenny Pk    49.54   6  P     P      13 55 42.7 +0.7
      baz=189
PKME  Peaks-Kenny Pk    49.54   6 eP     P      13 55 42.8 +0.7
PKME                              epP    pP     13 56 07.5 -0.1
BGNE  Belgrade          49.56 338  P     P      13 55 41.2 -1.2
      baz=151
PEMO  Pembroke          49.58 359  P     P      13 55 42.5 +0.1
      baz=179
H42A  Shiocton          49.67 348  P     P      13 55 41.3 -1.8
      baz=164
I39A  Houston           49.72 345  P     P      13 55 41.7 -1.9
      baz=160
I39A  Houston           49.72 345 eP     P      13 55 41.6 -1.9
I39A                              epP    pP     13 56 09.0 -0.1
SDCO  Great Sand Dun    49.78 329  P     P      13 55 45.1 +0.6
      baz=140,SNR=65
SDCO  Great Sand Dun    49.78 329 eP     P      13 55 45.0 +0.4
      comp=Z,41nm,0.9s
X18A  Snowflake         49.91 323 eP     P      13 55 45.8 +0.4
      comp=Z,31nm,1.7s
X18A                              epP    pP     13 56 13.8 +2.8
H41A  Junction City     50.00 347  P     P      13 55 44.0 -1.6
      baz=162,SNR=6.2
H41A  Junction City     50.00 347 eP     P      13 55 43.9 -1.8
      comp=Z,27nm,0.8s
H41A                              epP    pP     13 56 10.3 -1.0
J36A  Seneca 1, Swea    50.01 343  P     P      13 55 43.5 -2.2
      baz=156
J36A  Seneca 1, Swea    50.01 343 eP     P      13 55 43.5 -2.2
J36A                              epP    pP     13 56 09.6 -1.7
J36A                              ePcP   PcP    13 57 04.1  0.0
214A  Organ Pipe Nat    50.02 319  P     P      13 55 46.5 +0.4
      baz=129
I38A  Scanlan Farm,     50.10 345  P     P      13 55 44.2 -2.2
      baz=159,SNR=7.6
TRQ   Mont Tremblant    50.14   1 eP     P      13 55 46.4 -0.3
TRQ                               epP    pP     13 56 13.1 +0.7
H40A  Chili             50.17 347  P     P      13 55 45.3 -1.7
      baz=161,SNR=11
W18A  Petrified Fore    50.19 324  P     P      13 55 48.0 +0.5
      baz=134,SNR=5.6
W18A  Petrified Fore    50.19 324 eP     P      13 55 47.6 +0.1
      comp=Z,47nm,1.1s
W18A                              epP    pP     13 56 16.2 +3.1
G43A  Wallace           50.22 349  P     P      13 55 45.6 -1.7
      baz=165
F46A  Macinaw City C    50.26 352  P     P      13 55 45.6 -2.0
      baz=169
F45A  CMU Biological    50.28 351  P     P      13 55 46.0 -1.6
      baz=168
G42A  Mountain          50.35 349  P     P      13 55 46.8 -1.5
      baz=164
H39A  Augusta           50.44 346  P     P      13 55 46.6 -2.4
      baz=160
S22A  4UR Ranch, Cre    50.47 328  P     P      13 55 50.0 +0.4
      baz=139,SNR=33
S22A  4UR Ranch, Cre    50.47 328 eP     P      13 55 49.7  0.0
      comp=Z,27nm,1.2s
S22A                              epP    pP     13 56 17.0 +1.6
G41A  Antigo            50.47 348  P     P      13 55 47.4 -1.8
      baz=163
Q24A  Divide            50.55 331  P     P      13 55 50.4 +0.1
      baz=141,SNR=6.0
H38A  Maiden Rock       50.68 345  P     P      13 55 48.8 -2.0
      baz=159
F44A  Big Bay de Noc    50.70 351  P     P      13 55 48.4 -2.4
      baz=167
OGNE  Ogallala          50.72 335  P     P      13 55 51.5 +0.2
      baz=146,SNR=8.0
OGNE  Ogallala          50.72 335 eP     P      13 55 51.2  0.0
      comp=Z,61nm,0.8s
OGNE                              epP    pP     13 56 16.9  0.0
X16A  Lo Mia Camp, P    50.74 322 eP     P      13 55 52.0 +0.4
      comp=Z,17nm,0.8s
G40A  Rib Lake          50.74 347  P     P      13 55 48.8 -2.4
      baz=162
G40A  Rib Lake          50.74 347 eP     P      13 55 49.5 -1.8
      comp=Z,13nm,1.0s
F42A  Maple Grove Fa    50.79 349  P     P      13 55 49.4 -2.2
      baz=164
F41A  Three Lakes       50.96 348  P     P      13 55 51.4 -1.5
      baz=163
MVCO  Mesa Verde        50.97 327  P     P      13 55 53.5 +0.1
      baz=137
MVCO  Mesa Verde        50.97 327 eP     P      13 55 53.2 -0.1
      comp=Z,17nm,1.0s
MVCO                              epP    pP     13 56 21.6 +2.6
G39A  Holcombe          50.98 346  P     P      13 55 51.5 -1.5
      baz=161,SNR=14
H36A  Jessenland, He    51.03 344  P     P      13 55 51.3 -2.1
      baz=157
G38A  Ridgeland         51.04 346  P     P      13 55 51.2 -2.2
      baz=160,SNR=11
PQI   Presque Isle      51.08   7 epP    pP     13 56 18.1 -1.3
ECSD  EROS Data Cent    51.08 341  P     P      13 55 51.8 -2.0
      baz=153,SNR=9.6
ECSD  EROS Data Cent    51.08 341 eP     P      13 55 51.4 -2.4
      comp=Z,9.3nm,0.8s
ECSD                              epP    pP     13 56 15.4 -4.1
113A  Mohawk Valley,    51.16 319 eP     P      13 55 53.7 -0.9
      comp=Z,11nm,0.7s
113A                              epP    pP     13 56 22.5 +2.3
E43A  Lone Tree Farm    51.19 350  P     P      13 55 52.2 -2.3
      baz=166
SPMN  Marine on St.     51.33 345  P     P      13 55 53.6 -1.9
      baz=159
SPMN  Marine on St.     51.33 345 eP     P      13 55 53.7 -1.9
      comp=Z,21nm,1.0s
SPMN                              epP    pP     13 56 21.8 +0.5
BELQ  Belleterre        51.34 358  P     P      13 55 55.1 -0.6
      baz=177
F40A  Park Falls        51.34 348  P     P      13 55 54.1 -1.6
      baz=162,SNR=7.1
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E42A  Champion          51.40 350  P     P      13 55 54.1 -2.0
      baz=165
Y14A  Wickenburg        51.41 320 eP     P      13 55 56.4 -0.1
      comp=Z,9.2nm,0.8s
Y14A                              epP    pP     13 56 25.0 +2.8
ISCO  Idaho Springs     51.43 331  P     P      13 55 56.9 +0.1
      baz=141,SNR=14
ISCO  Idaho Springs     51.43 331 eP     P      13 55 56.7 -0.1
      comp=Z,10nm,0.8s
ISCO  Idaho Springs     51.43 331 eP     P      13 55 56.7 -0.1
ISCO                               pmax  pmax
      comp=Z,10.0nm,0.8s
WUAZ  Wupatki           51.44 323  P     P      13 55 57.4 +0.5
      baz=133,SNR=17
WUAZ  Wupatki           51.44 323 eP     P      13 55 57.3 +0.5
WUAZ                              epP    pP     13 56 20.2 -2.3
WUAZ                              epP    pP     13 56 24.7 +2.2
F39A  Loretta           51.52 347  P     P      13 55 55.4 -1.7
      baz=161,SNR=8.4
SMCO  Snowmass          51.62 329 eP     P      13 55 58.5 +0.1
SMCO                              epP    pP     13 56 25.9 +1.7
E41A  Kenton            51.63 349  P     P      13 55 56.2 -1.6
      baz=164,SNR=5.7
PV01  Paradox Valley    51.68 327 eP     P      13 55 58.9 +0.2
      comp=Z,34nm,0.8s
PV01                              epP    pP     13 56 26.1 +1.7
F38A  Pierce - Schro    51.78 346  P     P      13 55 57.4 -1.6
      baz=160,SNR=10
PV15  Paradox Valley    51.78 328 eP     P      13 55 59.8 +0.3
PV15                              epP    pP     13 56 27.5 +2.3
E40A  Wakefield         51.80 348  P     P      13 55 57.5 -1.6
      baz=162,SNR=8.5
PV02  Paradox Valley    51.82 327 eP     P      13 56 00.1 +0.4
      comp=Z,52nm,0.7s
PV02                              epP    pP     13 56 27.8 +2.3
E39A  Mellen            51.88 347  P     P      13 55 58.3 -1.4
      baz=162,SNR=6.2
PV03  Paradox Valley    51.92 327 eP     P      13 56 00.4  0.0
      comp=Z,34nm,0.8s
PV03                              epP    pP     13 56 27.7 +1.5
PV05  Paradox Valley    51.93 327 eP     P      13 56 00.3 -0.1
      comp=Z,51nm,0.8s
PV05                              epP    pP     13 56 28.0 +1.8
PV07  Paradox Valley    51.95 328 eP     P      13 56 00.2 -0.4
      comp=Z,55nm,1.6s
PV07                              epP    pP     13 56 28.6 +2.3
H32A  Carlson Farm,     52.03 341  P     P      13 55 59.3 -1.6
      baz=153
PV04  Paradox Valley    52.05 327 eP     P      13 56 01.1 -0.3
      comp=Z,35nm,1.3s
F36A  Milaca            52.11 345  P     P      13 55 59.3 -2.1
      baz=158,SNR=6.3
F36A  Milaca            52.11 345 eP     P      13 55 59.5 -1.9
      comp=Z,14nm,1.0s
F36A                              epP    pP     13 56 26.6 -0.6
PV10  Paradox Valley    52.11 327 eP     P      13 56 01.1 -0.8
      comp=Z,32nm,1.0s
D41A  Chassel           52.13 349  P     P      13 56 00.0 -1.4
      baz=164
PV09  Paradox Valley    52.25 327 eP     P      13 56 02.5 -0.5
E38A  The Farm, Brul    52.31 347  P     P      13 56 00.8 -2.1
      baz=160
E38A  The Farm, Brul    52.31 347 eP     P      13 56 01.0 -1.9
      comp=Z,19nm,0.8s
E38A                              epP    pP     13 56 29.4 +0.7
G33A  Ortonville        52.33 342  P     P      13 56 00.9 -2.2
      baz=154
PDMCI Parker Dam,Lak    52.37 320  P     P      13 56 02.0 -1.5
      baz=129
F35A  Swanville         52.39 344  P     P      13 56 01.6 -1.8
      baz=157
E37A  Wrenshall         52.48 346  P     P      13 56 02.2 -1.9
      baz=159
SUSD  Miller            52.50 340  P     P      13 56 02.5 -1.8
      baz=151
F34A  Alexandria        52.52 343  P     P      13 56 02.3 -2.1
      baz=156
PHWY  Pilot Hill        52.53 332 eP     P      13 56 04.0 -0.9
      comp=Z,9.3nm,0.8s
PHWY                              epP    pP     13 56 31.3 +0.6
U15A  North Rim         52.60 323 eP     P      13 56 05.9 +0.4
      comp=Z,7.7nm,0.9s
SWSC  Sam W. Stewart    52.62 318  P     P      13 56 05.2 -0.3
      baz=127
E36A  McGregor          52.65 345  P     P      13 56 03.8 -1.5
      baz=158,SNR=12
IKP   In-Ko-Pah, Jac    52.66 317  P     P      13 56 05.6 -0.2
      baz=126
W13A  Hualapai Mount    52.71 321 eP     P      13 56 06.8 +0.5
W13A                              epP    pP     13 56 32.8 +0.6
G32A  Webster           52.72 341  P     P      13 56 04.5 -1.5
      baz=153
BC3   Big Chuckawall    52.82 318  P     P      13 56 07.1 +0.1
      baz=128
IRM   Iron Mountain     52.92 319  P     P      13 56 08.1 +0.4
      baz=128,SNR=6.3
E35A  Pequot Lakes      52.98 344  P     P      13 56 06.3 -1.5
      baz=157,SNR=5.0
O20A  White River Ci    52.99 329  P     P      13 56 08.3 +0.1
      baz=138,SNR=6.0
O20A  White River Ci    52.99 329 eP     P      13 56 08.8 +0.5
      comp=Z,18nm,1.1s
O20A                              epP    pP     13 56 37.1 +3.0
MONP2 Monument Peak     53.01 317  P     P      13 56 08.3 -0.3
      baz=126
D37A  Cotton            53.04 346  P     P      13 56 06.8 -1.4
      baz=160,SNR=11
BAR   Barrett           53.06 317 eP     P      13 56 07.4 -1.3
      comp=Z,9.2nm,0.9s
BAR                               epP    pP     13 56 36.5 +2.0
F32A  Veblen            53.15 342  P     P      13 56 07.3 -1.8
      baz=154,SNR=5.3
C39A  Grand Marais      53.16 348  P     P      13 56 07.2 -1.9
      baz=162
E34A  Wadena            53.16 344  P     P      13 56 07.6 -1.5
      baz=156
D36A  Goodland          53.24 346  P     P      13 56 08.0 -1.6
      baz=159,SNR=5.2
D36A  Goodland          53.24 346 eP     P      13 56 08.1 -1.6
      comp=Z,32nm,0.8s
D36A                              epP    pP     13 56 36.0 +0.5
C38A  Sawbill Land.     53.30 347  P     P      13 56 08.1 -2.1
      baz=161
KNB   Kanab             53.31 323 eP     P      13 56 10.6  0.0
      comp=Z,15nm,1.1s
KNB   Kanab             53.31 323 eP     P      13 56 10.6  0.0
KNB                                pmax  pmax
      comp=Z,15nm,1.1s
D35A  Remer             53.38 345  P     P      13 56 08.8 -1.9
      baz=158
BELC  Belle Mtn. Jos    53.39 318  P     P      13 56 11.5 +0.2
      baz=127
SRU   San Rafael Swe    53.44 327 eP     P      13 56 11.4 -0.2
      comp=Z,26nm,0.9s
XPFO  Piæon Flat        53.46 318 eP     P      13 56 11.3 -0.4
XPFO                              epP    pP     13 56 38.1 +0.5
PFO   Pinyon Flats O    53.46 318  P     P      13 56 11.7 -0.1
      baz=127
PFO   Pinyon Flats O    53.46 318 eP     P      13 56 11.4 -0.4
PFO                               epP    pP     13 56 38.1 +0.5
PFO   Pinyon Flats O    53.46 318 eP     P      13 56 11.4 -0.4
PFO                               e*PP   pP     13 56 38.1 +0.5
LDFC  Landfair          53.47 320 eP     P      13 56 12.5 +0.7
      comp=Z,21nm,0.8s
LDFC                              epP    pP     13 56 41.2 +3.5
C37A  Embarrass         53.52 347  P     P      13 56 09.8 -1.9
      baz=160,SNR=8.0
LCMT  Little Creek M    53.56 323 eP     P      13 56 12.7 +0.2
      comp=Z,12nm,1.0s
EYMN  Ely               53.57 347  P     P      13 56 10.0 -2.1
      baz=161
EYMN  Ely               53.57 347 eP     P      13 56 10.3 -1.8
      comp=Z,13nm,0.8s
MTPU  Mount Pierson     53.63 325 eP     P      13 56 13.0 -0.2
      comp=Z,7.0nm,0.7s
GMRC  Granite Mounta    53.64 319  P     P      13 56 13.4 +0.3
      baz=128,SNR=7.4
RWWY  Rawlins           53.66 331 eP     P      13 56 12.8 -0.3
      comp=Z,18nm,0.8s
RWWY                              epP    pP     13 56 38.0 -1.1
P18A  Preston Nutter    53.66 327 eP     P      13 56 13.3  0.0
      comp=Z,23nm,0.7s
Q16A  Castle Valley     53.66 326 eP     P      13 56 13.5 +0.3
      comp=Z,34nm,1.5s
MATQ  Matagami          53.67 359  P     P      13 56 12.1 -0.7
      baz=178
C36A  Pine Crest Far    53.70 346  P     P      13 56 11.8 -1.2
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     baz=159,SNR=12
P17A Butcher Ranch,   53.82 327 eP    P     13 56 14.2 -0.1
     comp=Z,30nm,0.9s
P17A                            epP   pP    13 56 42.0 +1.8
CHGQ Chibougamau      53.83   1  P    P     13 56 13.9 -0.1
     baz=182
SZCU Shurtz Canyon    53.85 324 eP    P     13 56 14.8 +0.1
     comp=Z,33nm,1.6s
SZCU                            epP   pP    13 56 43.2 +2.7
C35A Jirik Farms, M   53.93 345  P    P     13 56 12.9 -1.8
     baz=158
MSU  Marysvale        53.95 325 eP    P     13 56 15.6 +0.3
MSU                             epP   pP    13 56 43.8 +2.5
MSU                             ePcP  PcP   13 57 20.0 +0.7
MSU  Marysvale        53.95 325 eP    P     13 56 15.6 +0.3
MSU                             e*PP  pP    13 56 43.8 +2.5
MSU                             e           13 57 20.0
TMUT Trail Mountain   53.95 327 eP    P     13 56 15.3 -0.1
     comp=Z,16nm,0.8s
TMUT                            epP   pP    13 56 44.0 +2.6
MURC Murrieta         53.95 317  P    P     13 56 15.3 +0.1
     baz=126
CCUT Cedar City       53.99 324 eP    P     13 56 15.8 +0.2
     comp=Z,13nm,1.0s
CCUT                            epP   pP    13 56 42.4 +0.8
K22A Casper           54.08 333  P    P     13 56 16.1 -0.1
     baz=142
K22A Casper           54.08 333 eP    P     13 56 15.2 -0.9
     comp=Z,21nm,1.1s
K22A                            epP   pP    13 56 44.5 +2.4
HEC  Hector,Ludlow    54.11 319  P    P     13 56 17.0 +0.6
     baz=128,SNR=8.3
C34A RKJ Ranch, Bem   54.13 344  P    P     13 56 14.8 -1.4
     baz=157
BBRC Big Bear Solar   54.16 318  P    P     13 56 17.6 +0.6
     baz=127
RSSD Black Hills      54.17 335  P    P     13 56 17.0 +0.2
     baz=145
RSSD Black Hills      54.17 335 eP    P     13 56 16.6 -0.2
     comp=Z,28nm,0.8s
RSSD                            epP   pP    13 56 42.4 -0.4
RSSD Black Hills      54.17 335 eP    P     13 56 16.6 -0.2
RSSD                            e*PP  pP    13 56 42.4 -0.4
RSSD                             pmax pmax
     comp=Z,28nm,0.8s
TUQ  Turquoise Moun   54.22 320  P    P     13 56 17.3 +0.1
     baz=128
SHPR Sheep Range      54.40 321 eP    P     13 56 18.7 +0.1
     comp=Z,19nm,1.0s
SHPR                            epP   pP    13 56 45.2 +0.7
B35A Bob, Littlefor   54.48 346  P    P     13 56 16.9 -1.8
     baz=158,SNR=7.1
B35A Bob, Littlefor   54.48 346 eP    P     13 56 16.8 -1.8
     comp=Z,20nm,0.7s
B35A                            epP   pP    13 56 42.2 -2.5
BFSC Mount Baldy Ra   54.64 318  P    P     13 56 19.9 -0.4
     baz=126
MPU  Maple Canyon     54.69 327 eP    P     13 56 20.0 -0.7
     comp=Z,16nm,1.0s
MPU                             epP   pP    13 56 47.5 +0.8
GSC  Goldstone, Bar   54.70 319  P    P     13 56 21.1 +0.4
     baz=127,SNR=5.6
GSC  Goldstone, Bar   54.70 319 eP    P     13 56 20.8 +0.1
     comp=Z,18nm,0.8s
GSC                             epP   pP    13 56 46.6 -0.1
GSC  Goldstone, Bar   54.70 319 eP    P     13 56 20.8 +0.1
GSC                             e*PP  pP    13 56 46.6 -0.1
GSC                              pmax pmax
     comp=Z,18nm,0.8s
SHOC Shoshone, Teco   54.73 320  P    P     13 56 21.3 +0.6
     baz=128
CACC Caltech Cellar   54.89 317 eP    P     13 56 22.5 +0.5
MWC  Mount Wilson     54.90 317 epP   pP    13 56 48.6 +0.3
PSUT Pine Spring      54.93 324 eP    P     13 56 22.6 +0.2
     comp=Z,14nm,1.0s
PSUT                            epP   pP    13 56 45.8 -2.6
AGMN Agassiz Nation   54.98 344  P    P     13 56 21.1 -1.2
     baz=156,SNR=12
AGMN Agassiz Nation   54.98 344 eP    P     13 56 20.7 -1.6
     comp=Z,29nm,0.8s
AGMN                            epP   pP    13 56 45.0 -3.3
JLU  Jordanelle       55.01 328 eP    P     13 56 22.6 -0.3
JLU                             epP   pP    13 56 51.0 +2.0
EDW2 Edwards Air Fo   55.24 318  P    P     13 56 24.3 -0.2
     baz=126,SNR=8.0
TCUT Toone Canyon     55.35 328 eP    P     13 56 25.5  0.0
     comp=Z,54nm,0.7s
TCUT                            epP   pP    13 56 51.3 -0.2
TPNV Topopah Spring   55.36 321  P    P     13 56 26.1 +0.6
     baz=129,SNR=10
TPNV Topopah Spring   55.36 321 eP    P     13 56 25.8 +0.3
     comp=Z,21nm,0.8s
TPNV Topopah Spring   55.36 321 eP    P     13 56 25.8 +0.3
TPNV                             pmax pmax
     comp=Z,21nm,0.8s
LRMC Laurel Mtn Rad   55.38 319  P    P     13 56 25.6  0.0
     baz=127
A33A Warroad          55.44 345  P    P     13 56 24.1 -1.5
     baz=156,SNR=5.9
FURC Furnace Creek,   55.45 320  P    P     13 56 26.0 +0.1
     baz=128
DUG  Dugway, Tooele   55.46 326  P    P     13 56 26.6 +0.5
     baz=134,SNR=15
DUG  Dugway, Tooele   55.46 326 eP    P     13 56 26.5 +0.4
     comp=Z,87nm,1.6s
DUG  Dugway, Tooele   55.46 326 eP    P     13 56 26.5 +0.4
DUG                              pmax pmax
     comp=Z,87nm,1.6s
MPMC Manual Prospec   55.60 320  P    P     13 56 26.8 -0.5
     baz=127
PD31 Pinedale Array   55.61 331 eP    P     13 56 26.2 -1.1
PDAR Pinedale Array   55.61 331  P    P     13 56 25.8 -1.4
     comp=Z,7.4nm,0.9s,baz=134,slow=8.4,SNR=50
PDAR                             pP   pP    13 56 51.0 -2.4
     comp=Z,6.0nm,0.7s,baz=118,slow=9.8,SNR=9.6
PDAR                             PcP  PcP   13 57 25.0 -0.7
     comp=Z,3.1nm,0.6s,baz=129,slow=5.0,SNR=6.3
PDAR                             LR   LR    14 20 53.3
     comp=Z,24nm,21.8s,baz=128,slow=37
BW06 Boulder Array    55.61 331  P    P     13 56 26.5 -0.8
     baz=138,SNR=18
BW06 Boulder Array    55.61 331 eP    P     13 56 26.1 -1.2
     comp=Z,12nm,0.8s
MDND Maddock          55.70 341  P    P     13 56 27.0 -0.5
     baz=151
MDND Maddock          55.70 341 eP    P     13 56 26.9 -0.5
     comp=Z,54nm,0.9s
MDND                            epP   pP    13 56 54.9 +1.3
HWUT Hardware Ranch   55.78 328 eP    P     13 56 27.9 -0.6
     comp=Z,35nm,1.0s
DAC  Darwin (Calif)   55.80 320 epP   pP    13 56 54.8  0.0
R11A Troy Canyon, C   55.84 323  P    P     13 56 29.3 +0.4
     baz=130,SNR=15
R11A Troy Canyon, C   55.84 323 eP    P     13 56 28.9  0.0
     comp=Z,10.0nm,1.0s
ISA  Isabella, Lake   56.01 319  P    P     13 56 30.3 +0.2
     baz=126
ISA  Isabella, Lake   56.01 319 eP    P     13 56 30.0 -0.1
     comp=Z,11nm,0.9s
ISA                             epP   pP    13 56 56.1 -0.1
ISA  Isabella, Lake   56.01 319 eP    P     13 56 30.0 -0.1
ISA                             e*PP  pP    13 56 56.1 -0.1
ISA                              pmax pmax
     comp=Z,11nm,0.9s
BGU  Big Grassy Mou   56.09 327 eP    P     13 56 30.5 -0.1
     comp=Z,39nm,1.5s
BGU                             epP   pP    13 56 59.2 +2.5
GRAC Grapevine Rang   56.09 321  P    P     13 56 31.0 +0.4
     baz=128
CWC  Cottonwood Cre   56.21 320  P    P     13 56 31.7 +0.1
     baz=127
AHID Auburn Hatcher   56.38 330 eP    P     13 56 31.9 -0.8
AHID                            epP   pP    13 56 59.6 +0.8
PKM  Mcpherson Peak   56.47 317  P    P     13 56 33.0 -0.4
     baz=124
VES  Vestal, Richgr   56.52 318  P    P     13 56 33.4 -0.1
     baz=126
HVU  Hansel Valley    56.54 328 eP    P     13 56 33.1 -0.7
     comp=Z,23nm,1.5s
HVU                             epP   pP    13 57 02.6 +2.6
TIN  Tinemaha, Big    56.68 320  P    P     13 56 35.3 +0.5
     baz=127
REDW Red Top Meadow   56.69 330 eP    P     13 56 33.9 -1.0
REDW                            epP   pP    13 57 02.6 +1.5
LOHW Long Hollow      56.75 331 eP    P     13 56 34.6 -0.7
     comp=Z,12nm,0.8s
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ULM  Lac du Bonnet    56.77 345  P    P     13 56 33.4 -1.6
     comp=Z,19nm,0.8s,baz=156,slow=8.0,SNR=17
ULM                              pP   pP    13 56 58.3 -2.8
     comp=Z,15nm,0.7s,baz=163,slow=9.2,SNR=6.6
ULM                              PcP  PcP   13 57 29.1 -0.5
     comp=Z,9.2nm,0.6s,baz=175,slow=4.1,SNR=3.9
ULM  Lac du Bonnet    56.77 345 eP    P     13 56 33.0 -2.0
     comp=Z,23nm,0.9s
ULM                             epP   pP    13 56 58.1 -3.0
ULM                              PcP  PcP   13 57 29.1 -0.5
TPAW Teton Pass       56.83 330 eP    P     13 56 35.2 -0.8
TPAW                            epP   pP    13 57 03.3 +1.2
MOOW Moose Ponds      56.92 331 eP    P     13 56 36.1 -0.4
     comp=Z,12nm,1.0s
MOOW                            epP   pP    13 57 03.8 +1.1
FXWY Fox Creek        56.98 330 eP    P     13 56 36.4 -0.6
FXWY                            epP   pP    13 57 01.1 -2.1
FXWY                            epP   pP    13 57 04.5 +1.4
IMW  Indian Meadow    57.12 331 eP    P     13 56 37.5 -0.5
IMW                             epP   pP    13 57 05.6 +1.4
FLWY Flagg Ranch      57.14 331 eP    P     13 56 37.6 -0.5
     comp=Z,30nm,0.8s
LAO  LASA Array       57.15 336  P    P     13 56 37.3 -0.6
     baz=144
ELK  Elko             57.20 325  P    P     13 56 42.1 +3.5
     comp=Z,7.4nm,1.0s,baz=181,slow=5.8,SNR=19
RLMT Red Lodge        57.25 333  P    P     13 56 38.5 -0.3
     baz=140
RLMT Red Lodge        57.25 333 eP    P     13 56 37.9 -0.9
     comp=Z,47nm,1.7s
RLMT                            epP   pP    13 57 05.2 +0.2
H17A Grant Village    57.31 331  P    P     13 56 40.0 +0.6
     baz=138
H17A Grant Village    57.31 331 eP    P     13 56 39.3 -0.1
     comp=Z,13nm,1.1s
H17A                            epP   pP    13 57 08.1 +2.5
YPP  Pitchstone Pla   57.33 331 eP    P     13 56 39.3 -0.2
     comp=Z,8.5nm,1.0s
NV11 Mina Array Sit   57.46 321 eP    P     13 56 39.9 -0.5
     comp=Z,0.9nm,0.9s
NV11                            epP   pP    13 57 06.0 -0.6
YFT  Old Faithful     57.48 331 eP    P     13 56 40.6 +0.1
     comp=Z,16nm,1.0s
OMMB Old Mammoth Mi   57.50 320 eP    P     13 56 40.2 -0.7
     comp=Z,22nm,0.8s
OMMB                            epP   pP    13 57 06.4 -0.7
NV01 Mina Array Sit   57.55 321 eP    P     13 56 40.1 -1.0
NV01                            epP   pP    13 57 05.7 -1.7
NVAR Mina Array Bea   57.55 321  P    P     13 56 40.8 -0.3
     comp=Z,3.6nm,0.6s,baz=135,slow=7.0,SNR=33
NVAR                             pP   pP    13 57 05.9 -1.4
     comp=Z,12nm,0.8s,baz=143,slow=6.6,SNR=8.1
NVAR                             PcP  PcP   13 57 33.1 -0.2
     comp=Z,7.7nm,0.7s,baz=134,slow=5.2,SNR=7.9
NVAR                             PKP2bc     14 26 36.7
     comp=Z,0.5nm,0.7s,baz=46,slow=2.6,SNR=4.3
MDPB Devils Postpil   57.56 320 eP    P     13 56 40.7 -0.5
     comp=Z,17nm,0.8s
KVN  Kaiserville      57.81 322 eP    P     13 56 42.4 -0.4
     comp=Z,9.3nm,0.9s
KVN  Kaiserville      57.81 322 eP    P     13 56 42.4 -0.4
KVN                              pmax pmax
     comp=Z,9.0nm,0.9s
RYN  Ryan             57.81 321 eP    P     13 56 42.7 -0.1
     comp=Z,7.3nm,1.0s
DGMT Dagmar           57.82 338  P    P     13 56 42.4 -0.2
     baz=146,SNR=5.6
DGMT Dagmar           57.82 338 eP    P     13 56 42.5  0.0
     comp=Z,28nm,0.8s
DGMT                            epP   pP    13 57 10.9 +2.2
YHB  Horse Butte      57.88 331 eP    P     13 56 43.8 +0.5
     comp=Z,24nm,0.8s
YHB                             epP   pP    13 57 09.8 +0.3
QLMT Earthquake Lak   58.05 331 eP    P     13 56 45.0 +0.6
QLMT                            epP   pP    13 57 10.3 -0.4
BMN  Battle Mountai   58.14 324 eP    P     13 56 44.8 -0.3
     comp=Z,23nm,0.8s
BMN  Battle Mountai   58.14 324 eP    P     13 56 44.8 -0.3
BMN                              pmax pmax
     comp=Z,23nm,0.8s
WAKR Walker           58.31 321 eP    P     13 56 46.1 -0.3
     comp=Z,14nm,0.8s
WAKR                            epP   pP    13 57 12.2 -0.5
YERR Yerington        58.47 321 eP    P     13 56 46.8 -0.7
     comp=Z,53nm,1.9s
YERR                            epP   pP    13 57 16.6 +2.9
CMB  Columbia Colle   58.64 320 eP    P     13 56 47.5 -0.9
     comp=Z,6.3nm,0.8s
CMB                             epP   pP    13 57 17.1 +2.4
CMB  Columbia Colle   58.64 320 eP    P     13 56 47.5 -0.9
CMB                             e*PP  pP    13 57 17.1 +2.4
CMB                              pmax pmax
     comp=Z,6.0nm,0.8s
HLID Hailey           58.65 328  P    P     13 56 48.7 +0.1
     baz=134,SNR=21
HLID Hailey           58.65 328 eP    P     13 56 48.2 -0.4
     comp=Z,17nm,0.9s
BOZ  Bozeman (W)      58.71 332  P    P     13 56 48.8 -0.1
     baz=137,SNR=15
BOZ  Bozeman (W)      58.71 332 eP    P     13 56 48.1 -0.8
     comp=Z,22nm,0.8s
BOZ  Bozeman (W)      58.71 332 eP    P     13 56 48.1 -0.8
BOZ                              pmax pmax
     comp=Z,22nm,0.8s
MCMT McKenzie Canyo   58.74 330 eP    P     13 56 49.2 -0.1
PNTR Pine Nut         58.76 321 eP    P     13 56 49.0 -0.5
     comp=Z,12nm,0.8s
DLMT Dillon           59.00 331 eP    P     13 56 50.6 -0.4
     comp=Z,10nm,0.9s
SCHQ Schefferville    59.24   6  P    P     13 56 52.3  0.0
     comp=Z,15nm,0.8s,baz=194,slow=5.8,SNR=7.3
SCHQ                             pP   pP    13 57 17.1 -1.5
     comp=Z,14nm,0.8s,baz=175,slow=6.1,SNR=4.2
SCHQ Schefferville    59.24   6 eP    P     13 56 52.1 -0.2
     comp=Z,44nm,1.3s
SCHQ                            epP   pP    13 57 20.2 +1.6
LRM  Limekiln Ridge   59.26 331 eP    P     13 56 52.2 -0.7
LRM                             epP   pP    13 57 21.2 +2.0
MFID Camas Ranch      59.30 327 eP    P     13 56 53.3 +0.3
     comp=Z,51nm,0.9s
AFDM Forest Hills D   59.54 320 eP    P     13 56 54.0 -0.6
     comp=Z,8.2nm,0.9s
AFDM                            epP   pP    13 57 23.4 +2.4
HRY  Holter Researc   59.62 332 eP    P     13 56 55.0 -0.2
HRY                             epP   pP    13 57 23.7 +2.1
EGMT Eagleton         59.68 334  P    P     13 56 55.3 -0.2
     baz=140
BEKR Beckworth        59.69 322 eP    P     13 56 55.8  0.0
     comp=Z,12nm,0.9s
BEKR                            epP   pP    13 57 22.5 +0.3
ORV  Oroville         60.23 321 eP    P     13 56 59.6 +0.3
     comp=Z,31nm,1.0s
ORV                             epP   pP    13 57 26.6 +0.9
WVOR Wild Horse Val   60.23 325 eP    P     13 56 59.0 -0.4
     comp=Z,29nm,1.1s
WVOR                            epP   pP    13 57 26.7 +0.9
WVOR Wild Horse Val   60.23 325 eP    P     13 56 59.0 -0.4
WVOR                            e*PP  pP    13 57 26.7 +0.9
WVOR                             pmax pmax
     comp=Z,29nm,1.1s
GBGM Boggs Mountain   60.56 319 eP    P     13 57 01.6 -0.1
MSO  Missoula         60.71 331  P    P     13 57 02.6 +0.1
     baz=136,SNR=22
MSO  Missoula         60.71 331 eP    P     13 57 02.2 -0.4
     comp=Z,39nm,1.2s
MSO                             epP   pP    13 57 27.8 -1.2
J08A Circle Bar Ran   60.73 326 eP    P     13 57 02.2 -0.5
     comp=Z,51nm,1.6s
O03D Paynes Creek     60.84 321  P    P     13 57 02.8 -0.8
     baz=125
MOD  Modoc Plateau    60.88 323 eP    P     13 57 04.0 +0.1
MOD                             epP   pP    13 57 32.6 +2.2
BMO  Blue Mountains   61.06 328 eP    P     13 57 03.3 -1.6
     comp=Z,8.2nm,1.0s
BMO                             epP   pP    13 57 33.2 +1.8
BMO  Blue Mountains   61.06 328 eP    P     13 57 03.3 -1.6
BMO                             e*PP  pP    13 57 33.2 +1.8
BMO                              pmax pmax
     comp=Z,8.0nm,1.0s
JTMT Jette            61.52 332 eP    P     13 57 07.8 -0.3
     comp=Z,44nm,1.3s
JTMT                            epP   pP    13 57 37.5 +2.9
K05A Summer Lake      61.72 324 eP    P     13 57 08.9 -0.7
     comp=Z,81nm,1.5s
M04C Macdoel          61.73 323  P    P     13 57 09.4 -0.2
     baz=126,SNR=15
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F10A Beach Ranch, E   61.76 329 eP    P     13 57 09.5 -0.2
     comp=Z,21nm,0.9s
I07A Izee             61.76 326 eP    P     13 57 09.7  0.0
     comp=Z,20nm,1.0s
N02D Trinity Center   61.79 321  P    P     13 57 09.2 -0.8
     baz=125,SNR=5.2
M02C Callahan         62.12 322  P    P     13 57 11.4 -0.7
     baz=125
K04D Chiloquin, OR    62.17 323  P    P     13 57 12.8 +0.3
     baz=126
YBH  Yreka Blue Hor   62.23 322  P    P     13 57 11.4 -1.5
     comp=Z,9.6nm,0.8s,baz=82,slow=4.5,SNR=24
YBH                              pP   pP    13 57 37.8 -1.6
     comp=Z,6.9nm,0.8s,baz=294,slow=3.6,SNR=5.3
YBH  Yreka Blue Hor   62.23 322 eP    P     13 57 11.3 -1.5
     comp=Z,11nm,0.8s
YBH                              pP   pP    13 57 37.8 -1.6
G08A Pilot Rock       62.23 327 eP    P     13 57 12.7 -0.2
     comp=Z,36nm,1.0s
G08A                            epP   pP    13 57 42.2 +2.8
J05D Fort Rock, OR    62.26 324  P    P     13 57 13.2 +0.1
     baz=127,SNR=8.3
WALA Waterton Lakes   62.30 333 eP    P     13 57 12.8 -0.4
     comp=Z,12nm,0.8s
WALA                            epP   pP    13 57 41.4 +1.6
WALA Waterton Lakes   62.30 333 eP    P     13 57 13.1 -0.1
KHMM Horse Mountain   62.38 321 eP    P     13 57 14.2 +0.3
KHMM                            epP   pP    13 57 42.5 +1.9
PINE Pine Mountain    62.40 325 eP    P     13 57 14.1  0.0
     comp=Z,77nm,1.5s
FFC  Flin Flon        62.44 343 eP    P     13 57 12.9 -1.0
     comp=Z,19nm,0.8s
FFC                             epP   pP    13 57 39.5 -0.9
FFC  Flin Flon        62.44 343 eP    P     13 57 12.9 -1.0
FFC                             e*PP  pP    13 57 39.5 -0.9
FFC                              pmax pmax
     comp=Z,19nm,0.8s
JCC  Jacoby Creek,    62.54 321 eP    P     13 57 15.1 +0.3
     comp=Z,30nm,1.0s
J04D Umpqua Nationa   62.75 324  P    P     13 57 16.3 -0.1
     baz=126,SNR=8.0
I05D Terrebonne, OR   62.96 325  P    P     13 57 18.0 +0.4
     baz=127,SNR=8.9
L02D Cave Junction,   63.02 322  P    P     13 57 17.9 -0.1
     baz=124
G06A Carlson Farm,    63.11 326 eP    P     13 57 18.8 +0.2
     comp=Z,31nm,1.4s
I04A Tendick Farm,    63.25 324  P    P     13 57 19.0 -0.6
     baz=126
NEW  Newport          63.25 331  P    P     13 57 19.3 -0.2
     comp=Z,19nm,1.0s,baz=134,slow=8.2,SNR=13
NEW                              pP   pP    13 57 45.1 -1.0
     comp=Z,18nm,0.9s,baz=135,slow=3.5,SNR=8.6
NEW  Newport          63.25 331  P    P     13 57 19.1 -0.4
     baz=133,SNR=9.0
NEW  Newport          63.25 331 eP    P     13 57 18.7 -0.8
NEW                             epP   pP    13 57 46.1  0.0
D08A Wollman Farm,    63.35 329 epP   pP    13 57 49.5 +2.7
KBO  Bosley Butte     63.43 322 eP    P     13 57 20.6 -0.3
     comp=Z,31nm,0.9s
KBO                             epP   pP    13 57 49.7 +2.2
G05D Wamic, OR        63.49 326  P    P     13 57 21.8 +0.7
     baz=128
C09A Chrisman Ranch   63.51 330 eP    P     13 57 21.3 +0.2
     comp=Z,14nm,0.8s
H04A Detroit Lake     63.65 325 eP    P     13 57 21.8 -0.3
     comp=Z,25nm,1.1s
I03D Drain, OR        63.74 324  P    P     13 57 22.7  0.0
     baz=125
FCC  Fort Churchill   64.30 350 eP    P     13 57 24.5 -1.5
     comp=Z,37nm,1.1s
FCC                             epP   pP    13 57 51.3 -1.4
FCC  Fort Churchill   64.30 350 eP    P     13 57 24.5 -1.5
FCC                             e*PP  pP    13 57 51.3 -1.4
FCC                              pmax pmax
     comp=Z,37nm,1.1s
LTY  Liberty          64.40 328 eP    P     13 57 26.7 -0.4
     comp=Z,26nm,1.1s
B08A Colville Reser   64.41 330 eP    P     13 57 25.7 -1.4
     comp=Z,34nm,1.1s
B08A                            epP   pP    13 57 54.4 +0.6
LON  Longmire         64.69 327 eP    P     13 57 28.0 -1.0
LON                             epP   pP    13 57 55.7  0.0
LON  Longmire         64.69 327 eP    P     13 57 28.0 -1.0
LON                             e*PP  pP    13 57 55.7  0.0
D05A Enumclaw         65.06 327 eP    P     13 57 30.5 -0.7
D05A                            epP   pP    13 57 59.2 +1.2
B06A Marblemount      65.62 329 epP   pP    13 58 04.0 +2.4
B05A Bryant           65.78 328  P    P     13 57 35.4 -0.4
     baz=128
A04D Lummi Island     66.38 328  P    P     13 57 40.1 +0.5
     baz=128,SNR=5.3
PGC  Sidney           66.73 328 eP    P     13 57 40.3 -1.5
     comp=Z,37nm,1.0s
LLLB Lillooet         67.14 330 eP    P     13 57 43.7 -0.8
     comp=Z,30nm,1.0s
LLLB                            epP   PcP   13 58 13.3 +1.5
BBB  Bella Bella      71.21 329  P    P     13 58 09.0 -0.5
     comp=Z,8.6nm,1.0s,baz=110,slow=7.9,SNR=7.0
BBB                              pP   pP    13 58 35.7 -1.0
     comp=Z,17nm,0.9s,baz=125,slow=4.4,SNR=2.4
LIC  Lamto            71.73  82 eP    P     13 58 14.4 +0.9
     comp=Z,167nm,2.1s
TIC  Toumodi          71.79  82 eP    P     13 58 14.9 +1.0
DBIC Dimbokro         71.95  82  P    P     13 58 16.2 +1.4
     comp=Z,28nm,0.8s,baz=246,slow=5.8,SNR=19
DBIC                             pP   pP    13 58 40.1 -1.9
     comp=Z,9.0nm,0.5s,baz=224,slow=5.6,SNR=2.9
DBIC Dimbokro         71.95  82 eP    P     13 58 16.0 +1.2
     comp=Z,40nm,0.9s
DBIC                             pP   pP    13 58 40.1 -1.9
KIC  Kosan Boka       72.03  82 eP    P     13 58 16.2 +0.9
     comp=Z,96nm,1.0s
YKA  Yellowknife Ar   72.58 342  P    P     13 58 16.6 -0.8
     comp=Z,5.7nm,0.6s,baz=140,slow=5.8,SNR=71
YKA                              PcP  PcP   13 58 34.2 -0.3
     comp=Z,3.2nm,0.8s,baz=134,slow=4.4,SNR=4.9
YKA                              pP   pP    13 58 42.4 -2.3
     comp=Z,19nm,0.7s,baz=138,slow=5.7,SNR=14
YKW3 Yellowknife Ar   72.63 342 eP    P     13 58 16.9 -0.9
     comp=Z,23nm,0.7s
YKW3                            ePcP  pP    13 58 43.2 -1.8
KOWA Kowa             73.81  74  P    P     13 58 27.0 +1.3
     comp=Z,26nm,0.7s,baz=260,slow=9.8,SNR=37
KOWA                             pP   pP    13 58 52.1 -0.9
     comp=Z,25nm,0.5s,baz=244,slow=8.0,SNR=9.9
KOWA Kowa             73.81  74 eP    P     13 58 26.7 +1.0
     comp=Z,32nm,0.6s
KOWA                             pP   pP    13 58 52.1 -0.9
PFVI Vila Bisbo       74.65  50 eP    P     13 58 32.4 +2.2
     comp=Z,107nm,1.6s
PFVI                            epP   pP    13 59 01.2 +3.6
MORF Marmelete        74.84  50 eP    P     13 58 33.2 +1.8
     comp=Z,90nm,1.5s
MORF                            epP   pP    13 59 02.3 +3.5
PTEO Sao Teotonio     74.85  49 epP   pP    13 59 02.2 +3.4
ANGG Ammassalik, Gr   74.97  16 eP    P     13 58 30.8 -0.6
     comp=Z,19nm,0.8s
PCVE Castro Verde     75.40  50 eP    P     13 58 36.4 +1.9
     comp=Z,41nm,2.1s
PCVE                            epP   pP    13 59 05.4 +3.4
ALMR Almeirim         75.45  48 epP   pP    13 59 05.4 +3.2
WRAK Wrangell Islan   75.58 332 eP    P     13 58 34.7 -0.4
     comp=Z,14nm,0.9s
DLBC Dease Lake       75.61 334  P    P     13 58 36.0 +0.6
     comp=Z,7.5nm,0.9s,baz=154,slow=4.5,SNR=14
DLBC                             pP   pP    13 59 02.9 +0.1
     comp=Z,19nm,0.8s,baz=133,slow=5.5,SNR=13
DLBC Dease Lake       75.61 334 eP    P     13 58 35.3  0.0
     comp=Z,25nm,0.8s
DLBC                            epP   pP    13 59 04.1 +1.3
PMTG Montargil        75.68  48 eP    P     13 58 37.2 +1.1
     comp=Z,39nm,0.8s
PMTG                            epP   pP    13 59 06.4 +2.8
PTOM Tomar            75.71  48 epP   pP    13 59 06.4 +2.7
PCAS Casmilo, Conde   75.78  47 epP   pP    13 59 07.1 +3.0
COI  Coimbra          75.89  47 epP   pP    13 59 07.8 +3.1
PTO  Porto            76.04  46 epP   pP    13 59 08.3 +2.7
PESTR Estremoz        76.10  48 eP    P     13 58 39.7 +1.2
     comp=Z,43nm,1.2s
PESTR                           epP   pP    13 59 08.9 +2.9
PMRV Marv??o          76.41  48 epP   pP    13 59 09.6 +1.9
PVIS Viseu            76.42  47 eP    P     13 58 40.9 +0.6
PVIS                            epP   pP    13 59 10.4 +2.6
PCBR Castelo Branco   76.47  48 epP   pP    13 59 10.3 +2.3
PGAV Gavieira, Arco   76.54  45 epP   pP    13 59 11.1 +2.6
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MTE	**Manteigas**	76.58	47	*e*pP	pP	13 59 11.3	+2.5
MTE	**Manteigas**	76.58	47	*e*P	**P**	**13 58 41.4**	**+0.2**
MTE				*e*pP	**pP**	**13 59 10.6**	**+1.9**
PCAB	**Cabril**	76.63	46	*e*pP	pP	13 59 11.7	+2.7
POLO	**Lamas de Olo**	76.69	46	*e*P	**P**	**13 58 42.5**	**+0.6**
	comp=Z,21nm,1.2s						
POLO				*e*pP	**pP**	**13 59 11.9**	**+2.5**
PVRL	**Vila Real**	76.72	46	*e*P	**P**	**13 58 42.7**	**+0.7**
	comp=Z,30nm,0.8s						
PVRL				*e*pP	**pP**	**13 59 12.0**	**+2.5**
MDT	**Midelt**	76.83	55	P	**P**	**13 58 44.1**	**+1.2**
	comp=Z,2.5nm,0.7s,baz=280,slow=5.8,SNR=6.6						
MDT				pP	**pP**	**13 59 11.0**	**+0.6**
	comp=Z,13nm,0.8s,baz=279,slow=6.6,SNR=12						
MVO	**Moncorvo**	77.18	46	*e*P	**P**	**13 58 45.5**	**+0.9**
	comp=Z,52nm,0.7s						
MVO				*e*pP	**pP**	**13 59 15.0**	**+2.8**
JIS	**Juneau Island**	77.48	333	*e*P	**P**	**13 58 46.2**	**+0.5**
JIS				*e*pP	**pP**	**13 59 15.7**	**+2.4**
PBRG	**Braganca**	77.58	46	*e*P	**P**	**13 58 47.6**	**+0.8**
	comp=Z,35nm,1.7s						
PBRG				*e*pP	**pP**	**13 59 16.9**	**+2.5**
BESE	**Bessie Mountai**	77.84	333	*e*P	**P**	**13 58 47.9**	**0.0**
	comp=Z,31nm,0.8s						
VNA3	**Neumayer Olymp**	78.68	162	P	**P**	**13 58 53.5**	**+1.2**
PAB	**San Pablo**	78.70	49	*e*P	**P**	**13 58 52.8**	**-0.3**
	comp=Z,16nm,1.1s						
PAB	**San Pablo**	78.70	49	*e*P	**P**	**13 58 52.8**	**-0.3**
PAB				pmax	pmax		
	comp=Z,17nm,1.1s						
VNA1	**Neumayer--Stat**	78.91	162	P	**P**	**13 58 55.0**	**+1.6**
ESDC	**Sonseca Array**	79.03	48	P	**P**	**13 58 55.0**	**+0.2**
	comp=Z,1.2nm,0.6s,baz=258,slow=5.5,SNR=11						
ESDC				pP	**pP**	**13 59 21.4**	**-1.0**
	comp=Z,4.0nm,0.8s,baz=252,slow=5.9,SNR=5.8						
ESLA	**Sonseca Array**	79.03	48	*e*P	**P**	**13 58 55.1**	**+0.3**
	comp=Z,30nm,1.5s						
ES19	**SONSECA Array**	79.08	48	*e*P	**P**	**13 58 55.3**	**+0.1**
TOA0	**Torodi Ar. Sit**	79.12	76	*e*P	**P**	**13 58 56.0**	**+0.3**
TORD	**Torodi Ar. Bea**	79.12	76	P	**P**	**13 58 54.5**	**-1.3**
	comp=Z,6.2nm,0.6s,baz=280,slow=5.4						
TORD				LR	LR	14 33 06.1	
	comp=Z,33nm,18.2s,baz=290,slow=35						
RES	**Resolute Bay**	79.50	355	*e*P	**P**	**13 58 55.9**	**-0.6**
	comp=Z,17nm,1.0s						
RES				*e*pP	**pP**	**13 59 24.1**	**-0.2**
RES	**Resolute Bay**	79.50	355	*e*P	**P**	**13 58 55.9**	**-0.6**
RES				e*PP	**pP**	**13 59 24.1**	**-0.2**
RES				pmax	pmax		
	comp=Z,17nm,1.0s						
SUMG	**Summit**	80.22	11	*e*P	**P**	**13 59 01.0**	**0.0**
	comp=Z,100nm,0.8s						
SUMG	**Summit**	80.22	11	*i* P	**P**	**13 59 01.6**	**+0.6**
SUMG				*i*		13 59 29.8	
SUMG	**Summit**	80.22	11	*i* P	**P**	**13 59 01.6**	**+0.6**
SUMG				*i*		13 59 29.8	
SNAA	**Sanae**	80.89	162	P	**P**	**13 59 05.2**	**+0.9**
SNAA	**Sanae**	80.89	162	P	**P**	**13 59 05.1**	**+0.8**
	comp=Z,32nm,0.9s,baz=276,slow=5.4,SNR=96						
SNAA				pP	**pP**	**13 59 31.9**	**-0.1**
	comp=Z,5.3nm,0.5s,baz=306,slow=8.7,SNR=3.3						
SNAA	**Sanae**	80.89	162	*e*P	**P**	**13 59 05.2**	**+0.9**
	comp=Z,43nm,1.0s						
SNAA				pP	**pP**	**13 59 31.9**	**-0.1**
SNAA	**Sanae**	80.89	162	*e*P	**P**	**13 59 05.2**	**+0.9**
SNAA				*PP	**pP**	**13 59 31.9**	**-0.1**
SNAA				pmax	pmax		
	comp=Z,43nm,1.0s						
INK	**Inuvik**	82.32	342	*e*P	**P**	**13 59 11.6**	**0.0**
	comp=Z,47nm,0.8s						
INK	**Inuvik**	82.32	342	*e*P	**P**	**13 59 11.6**	**0.0**
INK				pmax	pmax		
	comp=Z,47nm,0.8s						
DAWY	**Dawson**	82.34	337	*e*P	**P**	**13 59 11.5**	**-0.5**
	comp=Z,18nm,0.8s						
TGL	**Tana Glacier**	82.43	333	*e*P	**P**	**13 59 12.7**	**+0.1**
	comp=Z,25nm,1.0s						
BMRM	**Bremner River**	83.32	333	*e*P	**P**	**13 59 17.1**	**0.0**
	comp=Z,36nm,1.0s						
EGAK	**Eagle**	83.33	337	*e*P	**P**	**13 59 16.6**	**-0.3**
	comp=Z,42nm,0.8s						
ESK	**Eskdalemuir**	83.75	33	*e*P	**P**	**13 59 19.0**	**-0.3**
ESK				*e*pP	**pP**	**13 59 49.0**	**+1.7**
ESK	**Eskdalemuir**	83.75	33	*e*P	**P**	**13 59 19.0**	**-0.3**
ESK				e*PP	**pP**	**13 59 49.0**	**+1.7**
DIV	**Divide**	83.91	333	*e*P	**P**	**13 59 19.7**	**-0.4**
	comp=Z,26nm,0.9s						
TAM	**Tamanrasset**	83.91	67	*e*P	**P**	**13 59 22.4**	**+1.3**
	comp=Z,17nm,0.8s						
TAM	**Tamanrasset**	83.91	67	*e*P	**P**	**13 59 22.4**	**+1.3**
TAM				pmax	pmax		
	comp=Z,17nm,0.8s						
DOT	**Dot Lake**	84.06	335	*e*P	**P**	**13 59 20.9**	**+0.1**
	comp=Z,90nm,0.9s						
HARP	**HAARP**	84.08	334	*e*P	**P**	**13 59 20.9**	**0.0**
	comp=Z,42nm,1.4s						
KLU	**Klutina**	84.10	333	*e*P	**P**	**13 59 20.7**	**-0.4**
	comp=Z,36nm,0.9s						
SCRK	**Sand Creek**	84.15	336	*e*P	**P**	**13 59 21.2**	**-0.1**
	comp=Z,16nm,0.8s						
RIDG	**Independ'e Rid**	84.42	335	*e*P	**P**	**13 59 22.4**	**-0.2**
	comp=Z,33nm,0.9s						
SCM	**Sheep Creek Mo**	84.84	333	*e*P	**P**	**13 59 24.6**	**-0.2**
	comp=Z,38nm,1.0s						
SCM	**Sheep Creek Mo**	84.84	333	*e*P	**P**	**13 59 24.6**	**-0.2**
SCM				pmax	pmax		
	comp=Z,38nm,1.0s						
SML	**Sawmill**	85.29	333	*e*P	**P**	**13 59 26.3**	**-0.7**
	comp=Z,37nm,1.0s						
SML	**Sawmill**	85.29	333	*e*P	**P**	**13 59 26.3**	**-0.7**
SML				pmax	pmax		
	comp=Z,37nm,1.0s						
NVL	**N'lazarevskaya**	85.47	161	⇑*i*P	**P**	**13 59 28.7**	**+1.0**
NVL				pmax	pmax		
	comp=Z,22nm,0.7s						
HDA	**Harding Lake**	85.52	336	*e*P	**P**	**13 59 27.6**	**-0.4**
	comp=Z,19nm,0.9s						
HDA				*e*pP	**pP**	**13 59 57.8**	**+1.7**
GHO	**Glory Hole Cre**	85.55	333	*e*P	**P**	**13 59 27.8**	**-0.6**
	comp=Z,32nm,1.0s						
FYU	**Fort Yukon**	85.58	338	*e*P	**P**	**13 59 28.3**	**0.0**
	comp=Z,24nm,0.9s						
PMR	**Palmer**	85.59	333	*e*P	**P**	**13 59 27.9**	**-0.5**
	comp=Z,12nm,1.1s						
IL1	**Eielson Array**	85.61	336	*e*P	**P**	**13 59 27.5**	**-1.0**
ILAR	**Eielson Array**	85.61	336	P	**P**	**13 59 27.9**	**-0.6**
	comp=Z,8.4nm,0.8s,baz=125,slow=3.6,SNR=96						
ILAR				pP	**pP**	**13 59 55.5**	**-1.0**
	comp=Z,5.4nm,0.9s,baz=106,slow=4.9,SNR=7.1						
ILAR				PP	**PP**	**14 02 48.0**	**-0.6**
	comp=Z,1.8nm,1.0s,baz=109,slow=7.4,SNR=6.1						
ILAR				PKKP	**PKKPdf**	**14 17 26.7**	**+0.5**
	comp=Z,0.4nm,0.8s,baz=278,slow=2.7,SNR=4.7						
ILAR	**Eielson Array**	85.61	336	P	**P**	**13 59 27.9**	**-0.6**
ILAR				*PP	**pP**	**13 59 55.5**	**-1.0**
ILAR						14 02 48.1	
ILAR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ILAR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ILAR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ILB	**Eielson Array**	85.61	336	*e*P	**P**	**13 59 28.2**	**-0.3**
RC01	**Rabbit Creek A**	85.72	332	*e*P	**P**	**13 59 28.3**	**-0.8**
	comp=Z,22nm,1.0s						
BRLK	**Bradley Lake**	85.91	331	*e*P	**P**	**13 59 29.5**	**-0.6**
	comp=Z,23nm,1.0s						
CCB	**Clear Creek Bu**	85.94	336	*e*P	**P**	**13 59 29.6**	**-0.5**
	comp=Z,8.8nm,0.8s						
QSPA	**South Pole Qui**	85.97	180	P	**P**	**13 59 31.4**	**+1.0**
	comp=Z,50nm,0.9s,baz=157,slow=3.9,SNR=92						
QSPA				pP	**pP**	**13 59 59.4**	**+1.0**
	comp=Z,27nm,1.0s,baz=147,slow=7.4,SNR=3.5						
QSPA	**South Pole Qui**	85.97	180	*e*P	**P**	**13 59 31.2**	**+0.8**
	comp=Z,65nm,1.0s						
QSPA				pP	**pP**	**13 59 59.4**	**+1.0**
COLA	**College**	86.03	336	*e*P	**P**	**13 59 30.1**	**-0.4**
	comp=Z,13nm,0.8s						
COLA	**College**	86.03	336	*e*P	**P**	**13 59 30.1**	**-0.4**
COLA				pmax	pmax		
	comp=Z,13nm,0.8s						
MCK	**McKinley**	86.14	335	*e*P	**P**	**13 59 30.6**	**-0.4**
	comp=Z,17nm,0.9s						
MCK	**McKinley**	86.14	335	*e*P	**P**	**13 59 30.7**	**-0.4**
MCK				pmax	pmax		
	comp=Z,17nm,0.9s						
MDM	**Murphy Dome**	86.22	336	*e*P	**P**	**13 59 31.0**	**-0.5**
	comp=Z,39nm,1.0s						
MDM				*e*pP	**pP**	**14 00 01.1**	**+1.5**
SUA	**Susitna One**	86.30	332	*e*P	**P**	**13 59 31.9**	**-0.2**
	comp=Z,30nm,1.0s						
BWN	**Browne**	86.49	335	*e*P	**P**	**13 59 32.0**	**-0.8**
	comp=Z,81nm,1.2s						
OHAK	**Old Harbor**	86.51	328	*e*P	**P**	**13 59 31.3**	**-1.7**
	comp=Z,15nm,0.7s						
TRF	**Thorofare Moun**	86.63	334	*e*P	**P**	**13 59 33.0**	**-0.8**
	comp=Z,99nm,1.9s						
TRF				*e*pP	**pP**	**14 00 03.8**	**+1.9**
SKT	**Skwentna**	86.79	333	*e*P	**P**	**13 59 33.9**	**-0.5**
	comp=Z,62nm,0.9s						
SKT				*e*pP	**pP**	**14 00 04.7**	**+2.3**
DAG	**Danmarks Havn**	86.90	11	*i* P	**P**	**13 59 34.1**	**-0.4**
DAG				*i*		14 00 04.6	
DAG	**Danmarks Havn**	86.90	11	*i* P	**P**	**13 59 34.1**	**-0.4**
DAG				*i*		14 00 04.6	
BPAW	**Bear Paw Mtn.**	87.11	335	*e*P	**P**	**13 59 35.6**	**-0.3**
	comp=Z,47nm,0.9s						
BPAW				*e*pP	**pP**	**14 00 03.0**	**-0.9**
DOU	**Dourbes**	87.19	40	⇓AP	pP	14 00 07.4	+2.8
	comp=Z,22nm,1.0s						
MLY	**Manley**	87.26	336	*e*P	**P**	**13 59 35.9**	**-0.7**
	comp=Z,34nm,0.8s						
PPLA	**Purkeypile**	87.32	334	*e*P	**P**	**13 59 36.6**	**-0.4**
	comp=Z,58nm,1.0s						
CAST	**Castle Rocks**	87.40	334	*e*P	**P**	**13 59 36.5**	**-0.8**
	comp=Z,42nm,0.8s						
COLD	**Coldfoot**	87.65	338	*e*P	**P**	**13 59 38.5**	**+0.1**
	comp=Z,23nm,0.9s						
TOLK	**Toolik Lake Re**	87.83	339	P	**P**	**13 59 39.3**	**+0.1**
	baz=107						
TOLK	**Toolik Lake Re**	87.83	339	*e*P	**P**	**13 59 38.9**	**-0.3**
	comp=Z,15nm,1.0s						
WLF	**Walferdange**	88.12	40	⇑AP	pP	14 00 12.2	+3.1
SVW2	**Sparrevohn**	88.48	331	*e*P	**P**	**13 59 41.2**	**-1.2**
	comp=Z,20nm,1.0s						
SVW2				*e*pP	**pP**	**14 00 08.8**	**-1.8**
IM3	**Indian Mountai**	88.71	336	*e*P	**P**	**13 59 42.8**	**-0.5**
TUE	**Stuetta**	89.84	44	*e*P	**P**	**13 59 49.5**	**+0.1**
	comp=Z,12nm,0.7s						
TUE				*e*pP	**pP**	**14 00 16.7**	**-1.0**
DAVOX	**Davos/Dischmat**	90.24	43	P	**P**	**13 59 51.3**	**+0.1**
	comp=Z,5.2nm,0.8s,baz=325,slow=16,SNR=5.9						
DAVOX				pP	**pP**	**14 00 18.6**	**-0.9**
	comp=Z,14nm,0.7s,baz=175,slow=12,SNR=5.9						
DAVA	**Damuels**	90.29	43	*e*pP	pP	14 00 22.3	+2.7
	comp=Z,12nm,0.7s						
FETA	**Feichten**	90.84	43	*e*pP	pP	14 00 25.0	+2.7
	comp=Z,8.9nm,0.9s						
RETA	**Reutte**	90.90	43	*e*pP	pP	14 00 25.0	+2.6
	comp=Z,6.3nm,0.9s						
MOTA	**Moosalm**	91.12	43	*e*pP	pP	14 00 27.2	+3.7
	comp=Z,15nm,0.8s						
WATA	**Walderalm**	91.44	43	*e*pP	pP	14 00 28.7	+3.7
	comp=Z,7.2nm,0.5s						
WTTA	**Wattenberg**	91.48	43	*e*pP	pP	14 00 28.0	+2.7
	comp=Z,10nm,0.7s						
SBA	**Scott Base**	91.53	191	*e*P	**P**	**13 59 57.3**	**+1.0**
	comp=Z,17nm,1.1s						
SBA	**Scott Base**	91.53	191	*e*P	**P**	**13 59 57.3**	**+1.0**
SBA				pmax	pmax		
	comp=Z,17nm,1.1s						
ABTA	**Abfaltersbach**	92.04	43	*e*pP	pP	14 00 30.2	+2.5
	comp=Z,11nm,1.0s						
TSUM	**Tsumeb**	92.17	109	*e*P	**P**	**14 00 03.0**	**+2.3**
NB2	**NORSAR Subarra**	92.28	29	P	pP	14 00 32.1	+3.7
	comp=Z,2.2nm,0.7s,baz=266,slow=4.8						
VNDA	**Vanda**	92.61	191	P	**P**	**14 00 02.4**	**+1.1**
	comp=Z,6.8nm,0.7s,baz=120,slow=3.7,SNR=55						
VNDA	**Vanda**	92.61	191	*e*P	**P**	**14 00 02.0**	**+0.7**
	comp=Z,8.0nm,0.8s						
KBA	**Koelnbreinsper**	92.63	43	*e*pP	pP	14 00 32.7	+2.2
	comp=Z,6.6nm,0.9s						
CLL	**Collm**	92.64	39	*e*P	**P**	**14 00 03.0**	**+1.0**
CLL				*i* pP	**pP**	**14 00 33.0**	**+2.8**
	comp=Z,5.0nm,0.8s						
GEA0	**GERESS Array S**	92.96	41	*e*P	**P**	**14 00 03.0**	**-0.6**
GERES	**GERESS Array B**	92.96	41	P	**P**	**14 00 03.8**	**+0.1**
	comp=Z,0.5nm,0.2s,baz=224,slow=2.7,SNR=4.2						
GERES				pP	**pP**	**14 00 32.1**	**+0.2**
	comp=Z,1.0nm,0.6s,baz=248,slow=3.6,SNR=3.4						
BRG	**Berggiesshubel**	93.21	39	*e*P	pP	14 00 36.3	+3.4
	comp=Z,31nm,2.0s						
MOA	**Molln**	93.29	42	*e*pP	pP	14 00 36.6	+3.3
	comp=Z,5.4nm,0.9s						
HFS	**Hagfors**	93.45	30	pP	pP	14 00 33.8	0.0
	comp=Z,3.6nm,0.7s,baz=220,slow=1.1,SNR=7.9						
ARSA	**Arzberg**	94.12	43	*e*pP	pP	14 00 39.9	+2.7
	comp=Z,6.0nm,1.2s						
CONA	**Conrad Observa**	94.37	42	*e*pP	pP	14 00 41.2	+2.8
	comp=Z,4.5nm,0.8s						
SPITS	**Spitsbergen Ar**	94.52	12	P	**P**	**14 00 10.1**	**0.0**
	comp=Z,3.1nm,0.7s,baz=282,slow=7.1,SNR=4.9						
SPITS				pP	**pP**	**14 00 37.4**	**-1.0**
	comp=Z,11nm,0.9s,baz=224,slow=3.5,SNR=5.3						
SPITS				LR	LR	14 43 08.5	
	comp=Z,17nm,19.8s,baz=295,slow=36						
MODS	**Modra-Piesok**	95.32	42	*e*pP	pP	14 00 45.5	+2.8
VYHS	**Vyhne**	96.36	42	*e*pP	pP	14 00 50.1	+2.7
BOSA	**Boshof**	98.00	119	LR	LR	14 40 21.9	
	comp=Z,28nm,21.0s,baz=234,slow=33						
FINES	**FINESS Array B**	99.43	28	P	**Pdif**	**14 00 32.1**	**-0.5**
	comp=Z,2.8nm,1.0s,baz=297,slow=6.1,SNR=3.7						
KBZ	**Khabaz**	113.58	44	PKiKP	**PKiKP**	**14 05 28.9**	**+0.7**
	comp=Z,2.2nm,0.7s,baz=270,slow=2.0,SNR=5.1						
AKTO	**Aktyubinsk**	119.94	32	PKP	**PKPdf**	**14 05 41.0**	**+0.7**
	comp=Z,1.8nm,0.6s,baz=330,slow=5.4,SNR=7.1						
AKTO	**Aktyubinsk**	119.94	32	PKIKP	**PKPdf**	**14 05 41.0**	**+0.7**
AKTO				pmax	pmax		
	comp=Z,2.0nm,0.6s						
RAYN	**Ar Rayn**	120.57	65	*e*PKPdf	**PKPdf**	**14 05 42.1**	**-0.2**
RAYN	**Ar Rayn**	120.57	65	*e*PKIKP	**PKPdf**	**14 05 42.1**	**-0.2**
ABKAR	**Akbulak array**	121.64	32	*e*PKPdf	**PKPdf**	**14 05 44.0**	**+0.4**
BVAR	**Borovoye Array**	124.01	24	PKP	**PKPdf**	**14 05 48.8**	**+0.7**
	comp=Z,1.7nm,0.6s,baz=315,slow=1.2,SNR=12						
YSS	**Yuzh-Sakhalins**	125.72	328	⇑*e*PKIKP	**PKPdf**	**14 05 51.0**	**-0.4**
YSS				*e*		14 06 23.2	
YSS				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BOD	**Bodaibo**	125.85	353	*e*PKIKP	**PKPdf**	**14 05 48.7**	**-2.7**
BOD				*e*		14 06 20.4	
BOD				pmax	pmax		
	comp=Z,4.0nm,1.4s						
GEYT	**Alibeck**	126.44	45	PKP	**PKPdf**	**14 05 52.2**	**-1.0**
	comp=Z,2.0nm,0.7s,baz=267,slow=5.9,SNR=4.5						
GEYT				pPKP	**pPKPdf**	**14 06 22.4**	**-0.3**
	comp=Z,1.1nm,0.5s,baz=33,slow=3.5,SNR=2.1						
NVS	**Novosibirsk**	126.73	15	*e*PKIKP	**PKPdf**	**14 05 53.2**	**+0.1**
NVS				*e*		14 06 23.4	
ASAJ	**Asahikawa**	127.58	325	PKP	**PKPdf**	**14 05 54.8**	**-0.3**
	comp=Z,5.4nm,0.8s,baz=90,slow=2.0,SNR=8.1						
ZAA0	**Zalesovo Array**	127.94	14	*e*PKPdf	**PKPdf**	**14 05 55.4**	**0.0**
ZAA0				*e*pPKPdf	**pPKPdf**	**14 06 24.4**	**-0.6**
ZALV	**Zalesovo Beam**	127.94	14	PKP	**PKPdf**	**14 05 55.6**	**+0.2**
	comp=Z,14nm,0.8s,baz=293,slow=4.1,SNR=50						
ZALV				pPKP	**pPKPdf**	**14 06 24.8**	**-0.1**
	comp=Z,14nm,0.7s,baz=318,slow=1.9,SNR=13						
ZALV	**Zalesovo Beam**	127.94	14	*e*PKPdf	**PKPdf**	**14 05 55.1**	**-0.3**
ZALV				pPKP	**pPKPdf**	**14 06 24.8**	**-0.1**
KURK	**Kurchatov**	128.94	20	PKP	**PKPdf**	**14 05 58.1**	**+0.6**
KURK				pPKP	**pPKPdf**	**14 06 27.1**	**+0.1**
KURK	**Kurchatov**	128.94	20	*d i*PKIKP	**PKPdf**	**14 05 58.0**	**+0.5**
KURK				pmax	pmax		
	comp=Z,19nm,1.7s						
KURBB	**Kurchatov Arra**	128.99	21	PKP	**PKPdf**	**14 05 58.1**	**+0.6**
	comp=Z,8.9nm,0.8s,baz=323,slow=2.7,SNR=63						
KURBB				pPKP	**pPKPdf**	**14 06 27.1**	**+0.1**
	comp=Z,10.0nm,0.9s,baz=321,slow=2.7,SNR=14						
KLR	**Kul'dur**	129.18	337	*d i*PKIKP	**PKPdf**	**14 05 57.4**	**-0.6**
STKA	**Stephens Creek**	129.32	222	PKP	**PKPdf**	**14 05 58.6**	**-0.3**
	comp=Z,13nm,0.7s,baz=108,slow=1.3,SNR=25						
CTAO	**Charters Tower**	131.92	238	*e*PKPdf	**PKPdf**	**14 06 03.9**	**-0.2**
CTAO	**Charters Tower**	131.92	238	*e*PKIKP	**PKPdf**	**14 06 03.9**	**-0.2**
TLY	**Talaya**	132.59	0	*e*PKIKP	**PKPdf**	**14 06 05.4**	**+1.0**
TLY				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MK31	**Makanchi Array**	133.56	20	*e*PKPdf	**PKPdf**	**14 06 06.1**	**-0.3**
MK31	**Makanchi Array**	133.56	20	*e*PKIKP	**PKPdf**	**14 06 06.1**	**-0.3**
MKAR	**Makanchi Array**	133.56	20	PKP	**PKPdf**	**14 06 06.5**	**+0.1**
	comp=Z,2.5nm,0.7s,baz=356,slow=1.8,SNR=17						
MKAR				pPKP	**pPKPdf**	**14 06 35.1**	**-0.7**
	comp=Z,2.1nm,0.6s,baz=303,slow=1.9,SNR=7.2						
MKAR	**Makanchi Array**	133.56	20	*e*PKPdf	**PKPdf**	**14 06 06.0**	**-0.4**
MKAR				pPKP	**pPKPdf**	**14 06 35.1**	**-0.7**
MKAR	**Makanchi Array**	133.56	20	PKIKP	**PKPdf**	**14 06 06.5**	**+0.1**
MKAR						14 06 35.2	
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MK01	**Makanchi Array**	133.58	20	*e*PKPdf	**PKPdf**	**14 06 06.1**	**-0.3**
MAJO	**Matsushiro**	134.87	320	*e*PKPdf	**PKPdf**	**14 06 07.8**	**-1.4**
MAJO	**Matsushiro**	134.87	320	⇑*i*PKIKP	**PKPdf**	**14 06 08.1**	**-1.1**
MAT	**Matsushiro**	134.87	320	PKP	**PKPdf**	**14 06 08.1**	**-1.1**
MJAR	**Matsushiro Arr**	134.87	320	PKP	**PKPdf**	**14 06 08.1**	**-1.0**
	comp=Z,3.1nm,0.8s,baz=105,slow=1.1,SNR=13						
MJB9	**Matsu-Tunnel**	134.87	320	*e*PKPdf	**PKPdf**	**14 06 07.9**	**-1.3**
ULN	**Ulaanbaatar**	136.33	357	*e*PKPdf	**PKPdf**	**14 06 11.2**	**-0.6**
ULN	**Ulaanbaatar**	136.33	357	*d i*PKIKP	**PKPdf**	**14 06 12.1**	**+0.4**
ULN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SONA1	**Songino Array**	136.38	358	*e*PKPdf	**PKPdf**	**14 06 11.7**	**-0.1**
SONM	**Songino Array**	136.39	358	PKP	**PKPdf**	**14 06 12.1**	**+0.3**
	comp=Z,4.2nm,0.9s,baz=340,slow=1.1,SNR=13						
SONM				pPKP	**pPKPdf**	**14 06 39.7**	**-1.6**
	comp=Z,0.7nm,0.8s,baz=335,slow=38,SNR=2.1						
KSH	**Kashi**	136.64	32	*e*PKP	**PKPdf**	**14 06 14.3**	**+1.8**
KSH				sPKP		14 06 51.1	
KSH				PP	**PP**	**14 09 01.3**	**+6.5**
KSH				PKS	**PKSdf**	**14 09 49.9**	**+1.0**
WMQ	**Urumqi**	137.95	18	*e*PKP	**PKPdf**	**14 06 13.9**	**-0.8**
WMQ				LR	LR		
	comp=Z,110nm,27.5s						
WMQ				LR	LR		
	comp=Z,52nm,20.5s						
FORT	**Forrest**	138.31	212	*e*PKPdf	**PKPdf**	**14 06 14.6**	**-1.1**
AS01	**Alice Springs**	139.72	225	*e*PKPpre	PKPpre	14 06 07.8	
AS01				*e*PKPdf	**PKPdf**	**14 06 17.7**	**-0.8**
AS31	**Alice Springs**	139.75	225	*e*PKPdf	**PKPdf**	**14 06 17.9**	**-0.7**
ASAR	**Alice Springs**	139.75	225	PKhKP	PKPpre	14 06 08.6	
	comp=Z,2.9nm,0.5s,baz=128,slow=3.7,SNR=58						
ASAR				PKP	**PKPdf**	**14 06 18.4**	**-0.2**
	comp=Z,13nm,0.8s,baz=124,slow=2.1,SNR=55						
ASAR				pPKP	pPKPdf	14 06 47.2	-0.9
	comp=Z,3.8nm,0.7s,baz=107,slow=2.0,SNR=4.1						
KS01	**Wonju Array Si**	140.17	330	*e*PKPpre	PKPpre	14 06 08.7	
KS01				*e*PKPdf	**PKPdf**	**14 06 18.2**	**-0.7**
KSRS	**Korea Array**	140.17	330	PKhKP	PKPpre	14 06 09.5	
	comp=Z,3.5nm,0.8s,baz=53,slow=3.9,SNR=16						
KSRS				PKP	**PKPdf**	**14 06 18.8**	**-0.1**
	comp=Z,6.3nm,0.8s,baz=8.2,slow=1.5,SNR=20						
KSRS				pPKP	pPKPdf	14 06 47.9	-0.4
	comp=Z,8.3nm,1.0s,baz=33,slow=1.0,SNR=5.7						
KS15	**Wonju Array Si**	140.20	330	*e*PKPdf	**PKPdf**	**14 06 18.5**	**-0.4**
KSAR	**Wonju Array Be**	140.20	330	PKPpre	PKPpre	14 06 09.5	
KSAR				PKP	**PKPdf**	**14 06 18.8**	**-0.1**
KSAR				pPKP	pPKPdf	14 06 47.9	-0.5
KSAR	**Wonju Array Be**	140.20	330	PKHKP	PKPpre	14 06 09.5	
KSAR						14 06 18.8	
KSAR						14 06 47.9	
WRAB	**Tennant Creek**	141.68	230	*e*PKPpre	PKPpre	14 06 15.6	
WRAB	**Tennant Creek**	141.68	230	*ce*PKIKP	**PKPdf**	**14 06 19.7**	**-2.4**
WRA	**Warramunga Arr**	141.68	230	PKhKP	PKPpre	14 06 15.5	
	comp=Z,12nm,0.7s,baz=121,slow=1.9,SNR=29						
WRA				PKP	**PKPdf**	**14 06 21.7**	**-0.4**
	comp=Z,8.8nm,0.5s,baz=118,slow=2.0,SNR=33						
WRA				pPKP	pPKPdf	14 06 50.1	-1.5
	comp=Z,6.2nm,0.7s,baz=125,slow=2.8,SNR=4.9						
HHC	**Hu-ho-hao-te**	142.78	350	*e*PKP	**PKPdf**	**14 06 25.6**	**+2.0**
GTA	**Gaotai**	144.67	5	⇓PKP	**PKPab**	**14 06 25.6**	**-0.3**
GTA				pPKP	pPKPdf	14 06 57.1	+0.6
GTA				sPKP		14 07 09.3	
GTA				PP	**PP**	**14 09 45.8**	**+2.6**
GTA				SS	SS	14 28 22.5	+0.8
GTA				AMB	AMB		
	comp=Z,63nm,7.7s						
GTA				LR	LR		
	comp=Z,70nm,19.6s						
GTA				LR	LR		
	comp=Z,54nm,17.7s						
GTA				LR	LR		
	comp=Z,76nm,20.6s						
TIA	**Tai'an**	145.80	341	PKPbc	**PKPdf**	**14 06 28.4**	**-0.5**
JOW	**Kunigami**	147.52	317	PKPbc	**PKPbc**	**14 06 34.8**	**+0.1**
	comp=Z,62nm,0.7s,baz=50,slow=2.3,SNR=17						
JOW				pPKPbc	**pPKPdf**	**14 07 02.6**	**+1.1**
	comp=Z,74nm,0.7s,baz=42,slow=3.5,SNR=5.7						
MTN	**Manton Dam**	148.10	238	*e*PKPbc	**PKPbc**	**14 06 35.7**	**-0.8**
LZH	**Lanzhou**	148.18	0	*e*PKPbc	**PKPbc**	**14 06 37.3**	**+0.9**
LZH				pPKP	pPKPbc	14 07 07.1	+1.4
LZH				sPKP		14 07 17.8	
LZH				LR	LR		
	comp=Z,70nm,14.4s						
LZH				LR	LR		
	comp=Z,77nm,16.7s						
LZH				LR	LR		
	comp=Z,120nm,17.3s						
NJ2	**Nanjing**	148.85	335	*e*PKPbc	**PKPbc**	**14 06 36.8**	**-1.2**
NJ2				pPKP	**pPKPbc**	**14 07 07.2**	**-0.1**
FITZ	**Fitzroy Crossi**	149.21	224	PKP	**PKPdf**	**14 06 34.9**	**0.0**
	comp=Z,28nm,0.7s,baz=176,slow=3.3,SNR=13						
FITZ				PKPbc	**PKPbc**	**14 06 39.1**	**-0.2**
	comp=Z,28nm,0.7s,baz=175,slow=4.7,SNR=42						
FITZ				PKPab	**PKPab**	**14 06 44.1**	**+0.2**
	comp=Z,31nm,0.8s,baz=178,slow=6.6,SNR=17						
FITZ				pPKPbc	**pPKPbc**	**14 07 07.3**	**-1.3**
	comp=Z,16nm,0.7s,baz=150,slow=2.0,SNR=4.1						
FITZ	**Fitzroy Crossi**	149.21	224	*e*PKPbc	**PKPbc**	**14 06 38.8**	**-0.5**
FITZ				PKPab	**PKPab**	**14 06 44.1**	**+0.2**
FITZ				pPKPbc	**pPKPbc**	**14 07 07.3**	**-1.3**
XAN	**Xi'an**	149.86	352	PKPbc	**PKPdf**	**14 06 35.9**	**+0.2**
MBWA	**Marble Bar**	150.46	211	*e*PKPbc	**PKPbc**	**14 06 41.3**	**-0.9**
LSA	**Lhasa**	151.85	24	*e*PKPdf	**PKPdf**	**14 06 39.9**	**+0.5**
LSA				*e*PKPbc	**PKPbc**	**14 06 46.0**	**+0.1**
LSA	**Lhasa**	151.85	24	*e*PKIKP	**PKPdf**	**14 06 39.9**	**+0.5**
WHN	**Wuhan**	151.91	341	*i* PKPbc	**PKPbc**	**14 06 44.8**	**-0.6**
WHN				sPKP		14 07 17.5	
CD2	**Chengdu**	153.35	0	PKPbc	**PKPdf**	**14 06 39.0**	**-2.0**
ENH	**Enshi**	153.45	349	*e*PKPdf	**PKPdf**	**14 06 40.4**	**-0.8**
ENH				*e*PKPbc	**PKPbc**	**14 06 48.1**	**-0.7**
SSLB	**Suanglung**	154.42	321	*e*PKPdf	**PKPdf**	**14 06 42.2**	**-0.4**
BATI	**Baumata**	155.68	234	PKPab	**PKPab**	**14 07 12.4**	**+1.1**
	comp=Z,31nm,0.6s,baz=180,slow=4.0,SNR=3.3						
GYA	**Guiyang**	157.62	353	*e*PKP	**PKPdf**	**14 06 45.0**	**-2.0**
GYA				pPKP	PKPab	14 07 18.2	-1.1
GYA				PKPab	**pPKPdf**	**14 07 20.4**	**+3.8**
GYA				PKS	**PKSdf**	**14 10 17.9**	**-3.1**
GYA				PP	**PP**	**14 11 00.6**	**+3.3**
GYA				AMB	AMB		
	comp=Z,120nm,8.0s						
KMI	**Kunming**	159.08	3	PKP	**PKPdf**	**14 06 47.5**	**-1.4**
CMAR	**Chiang Mai Arr**	164.95	18	PKP	**PKPdf**	**14 06 54.5**	**-0.2**
	comp=Z,4.0nm,0.8s,baz=297,slow=2.1,SNR=28						
CMAR				pPKP	**pPKPdf**	**14 07 24.0**	**-0.4**
	comp=Z,3.1nm,0.8s,baz=280,slow=1.7,SNR=5.2						
CMAR				PKPab	**PKPab**	**14 07 51.3**	**0.0**
	comp=Z,3.6nm,0.8s,baz=328,slow=5.6,SNR=10						
CMAR				pPKPab	**pPKPab**	**14 08 17.4**	**-2.4**
	comp=Z,5.4nm,0.7s,baz=332,slow=5.5,SNR=3.0						
CM01	**Chiang Mai Arr**	164.99	18	*e*PKPdf	**PKPdf**	**14 06 54.1**	**-0.6**
CM01				*e*PKPab	**PKPab**	**14 07 50.7**	**-0.8**

CSEM 03 13:47:53.4, 27°.69N × 18°.15W, h20km, ML3.8, Canary Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CORC	**Orchilla, El H**	0.01	31	P	Pb	13 47 56.7	-0.3
	SNR=18						
CORC				S	Sb	13 47 59.6	+0.2
	SNR=7.9						
CJUL	**El Julon, El H**	0.07	59	P	Pb	13 47 57.2	-0.2
	SNR=18						
CJUL				S	Sb	13 48 00.9	+0.8
	SNR=7.9						
CTAD	**Las Tabladas,**	0.08	47	P	Pb	13 47 57.1	-0.2
	SNR=18						
CTAD				S	Sb	13 47 59.7	-0.3
	13µm,0.1s,SNR=7.9						
CTAN	**El Hierro**	0.11	55	P	Pb	13 47 57.2	-2.1
	SNR=18						
CTAN				S	Sb	13 47 59.8	-3.6
	SNR=7.9						
CMCL	**Mercadel, El H**	0.12	80	P	Pb	13 47 57.6	-1.7
	SNR=18						
CMCL				S	Sb	13 48 00.4	-3.0
	SNR=7.9						

CCUM	Cumbre, El Hie	0.12	64	P	Pb	13 47 57.4	-1.8
	SNR=18						
CCUM				S	Sb	13 48 00.1	-3.1
	SNR=7.9						
CRST	La Restinga, E	0.16	108	P	Pb	13 47 57.7	-1.2
	SNR=18						
CRST				S	Sb	13 48 01.1	-1.7
	SNR=7.9						
CTIG	El Hierro	0.23	65	P	Pb	13 47 58.7	-0.5
	SNR=18						
CTIG				S	Sb	13 48 02.4	-0.8
	1µm,0.1s,SNR=7.9						

NEIC 03 13:50:36.9±0.0,68°.19N×168°.71W,h20^{km},ML2.8(AEIC), After AEIC.,Chukchi Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RDOG	Red Dog Mine	2.18	91	P	Pn	13 51 12.2	+0.2
RDOG				S	Sn	13 51 39.8	+1.5
ANM	Nome	3.88	158	P	Pn	13 51 34.8	-0.5
GCSA	Galena City Sc	5.86	121	P	Pn	13 52 02.5	0.0
GCSA				S	Sn	13 53 07.1	-1.9
IM3	Indian Mountai	6.25	104	P	Pn	13 52 06.4	-1.3
TOLK	Toolik Lake Re	7.07	77	P	Pn	13 52 19.3	+0.2
COLD	Coldfoot	7.10	89	P	Pn	13 52 18.9	-0.6
TT01	Tatalina	7.46	129	P	Pn	13 52 24.7	+0.2
BM3	Burnt Mountain	9.13	84	P	Pn	13 52 46.1	-1.2

MAN 03 14:07:28.9,12°.54N×123°.57E,h69^{km},mb4.3,ML3.1, MS2.8,1C,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNP	Catarman	1.07	91	eP	Pn	14 07 49.2	+1.0
CNP				eS	Sn	14 08 03.9	+1.4
AUQP	San Andres	1.17	312	eP	Pn	14 07 50.3	+0.7
AUQP				eS	Sn	14 08 09.3	+4.4
PVCP	Virac	1.19	28	eP	Pn	14 07 50.5	+0.7
PVCP				eS	Sn	14 08 07.5	+2.0
RCP	Roxas	1.27	220⇑	eP	Pn	14 07 50.9	+0.1
RCP				eS	Sn	14 08 08.5	+1.4
OTRP	Odiongan	1.52	264	eP	Pn	14 07 54.6	+0.5
OTRP				eS	Sn	14 08 15.2	+1.9
GUIM	Jordan	2.13	207	eP	Pn	14 08 04.3	+2.0
GUIM				eS	Sn	14 08 33.4	+5.6

*ISCJB **03** 14:13:03.2±0.7,18°.6S±0°.2×177°.8W±0°.1,h557^{km}, mb3.7/11,Error ellipse: s-maj=23.1km s-min=14.1km az=140.3*

*IDC **03** 14:13:07.9±1.6,18°.64S×177°.81W,h605^{km}±21^{km}, mb3.2/12,mb1 3.5/13,mb1mx3.2/48,mbtmp4.2/13,Error ellipse: s-maj=20.3km s-min=11.3km az=148.0*

ISC 03 14:13:04.9±0.7,18°.6S±0°.2×177°.9W±0°.1,h557^{km},n13, σ1^{s}75/14,mb3.6/11,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	7.53	53	P	P	14 15 01.6	+3.2
	4.2nm,0.3s,baz=98,slow=6.0,SNR=7.7						
URZ	Urewera	20.07	191	P	P	14 17 00.5	-0.6
	7.2nm,0.5s,baz=275,slow=3.6,SNR=6.0						
CTA	Charters Tower	33.78	261	P	P	14 19 02.9	+1.6
	3.9nm,0.4s,baz=82,slow=7.7,SNR=6.7						
STKA	Stephens Creek	38.70	242	P	P	14 19 43.3	+1.6
	1.5nm,0.3s,baz=64,slow=6.5,SNR=8.0						
WRA	Warramunga Arr	44.95	260	P	P	14 20 31.6	+0.5
	3.2nm,0.4s,baz=98,slow=7.1,SNR=103						
ASAR	Alice Springs	45.04	255	P	P	14 20 32.5	+0.8
	7.2nm,0.7s,baz=91,slow=7.6,SNR=202						
ASAR				S	S	14 26 28.1	-2.4
	0.2nm,0.6s,baz=93,slow=18,SNR=3.7						
FITZ	Fitzroy Crossi	53.36	261	P	P	14 21 33.5	+0.5
	2.2nm,0.7s,baz=95,slow=9.4,SNR=14						
QSPA	South Pole Qui	71.47	180	P	P	14 23 28.6	-0.7
	1.3nm,0.6s,baz=103,slow=2.1,SNR=5.1						
PETK	Petropavlovsk-	74.45	345	P	P	14 23 46.0	-0.4
	1.1nm,0.5s,baz=127,slow=8.6						
NVAR	Mina Array Bea	79.61	44	P	P	14 24 13.9	-1.1
	0.5nm,0.6s,baz=228,slow=9.2,SNR=5.0						
TXAR	Lajitas Array	85.98	57	P	P	14 24 46.5	-0.5
	0.7nm,0.7s,baz=218,slow=6.5,SNR=9.6						
ILAR	Eielson Array	86.45	13	P	P	14 24 45.7	-2.5
	0.5nm,0.5s,baz=223,slow=5.0,SNR=14						
PDAR	Pinedale Array	87.54	43	P	P	14 24 52.7	-1.5
	0.2nm,0.4s,baz=252,slow=5.3,SNR=4.0						

*IDC **03** 14:17:28.8±0.8,39°.86N×29°.62W,h0^{km},mb3.6/8, mb1 3.8/9,mb1mx3.6/59,mbtmp3.6/9,ML4.3/1,MS3.4/12, Ms1 3.4/12,ms1mx3.0/56,Error ellipse: s-maj=31.9km s-min=13.6km az=172.0*

*PDA **03** 14:17:33.8±0.6,40°.08N×29°.42W,h10^{km},MD3.9,ML2.8, Error ellipse: s-maj=3.3km s-min=2.0km az=41.0*

*CSEM **03** 14:17:33.8,40°.08N×29°.42W,h10^{km},ML2.8*

ISC 03 14:17:30.3±1.7,39°.82N±0°.09×29°.54W±0°.06,h12^{km}±11^{km}, n48,σ0^{s}91/53,mb3.6/8,MS3.4/12,Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H07N1	FLORES T-PHASE	1.22	264	Pn	Pg	14 17 52.3	-1.5
H07N1				T	T	14 19 14.4	
H07N1	FLORES T-PHASE	1.22	264	eP	Pg	14 17 54.5	+0.6
H07N1	FLORES T-PHASE	1.22	264	eP	Pg	14 17 54.5	+0.6
H07S1	FLORES T-PHASE	1.36	251	Pn	Pg	14 17 54.4	-2.1
H07S1				T	T	14 19 26.8	
	SNR=27						
H07S1	FLORES T-PHASE	1.36	251	eP	Pg	14 17 57.0	+0.5
H07S1	FLORES T-PHASE	1.36	251	eP	Pg	14 17 57.0	+0.5
PCED	Cedros	1.36	151	eP	Pg	14 17 56.6	+0.1
PCED				eS	Sg	14 18 13.9	-0.2
PCED				A	A	14 18 16.0	
	58nm,0.3s						
PCED	Cedros	1.36	151	eP	Pg	14 17 56.6	+0.1
PCED				eS	Sg	14 18 13.9	-0.2
CALA	Caldeira	1.40	152	eP	Pg	14 17 57.5	+0.2
CALA				eS	Sg	14 18 15.4	-0.1
CALA	Caldeira	1.40	152	eP	Pg	14 17 57.5	+0.2
CALA				eS	Sg	14 18 15.4	-0.1
PGRA	Graciosa	1.45	123	eP	Pn	14 17 56.3	0.0
PGRA				eS	Sn	14 18 13.8	-1.4
PGRA				A	A	14 18 16.9	
	65nm,0.3s						
PGRA	Graciosa	1.45	123	eP	Pn	14 17 56.3	0.0
PGRA				eS	Sn	14 18 13.8	-1.4
ROSA	Rosais	1.50	137	eP	Pb	14 17 57.7	-0.3
ROSA				eS	Sn	14 18 16.3	-0.2
ROSA				A	A	14 18 20.3	
	22nm,0.1s						
ROSA	Rosais	1.50	137	eP	Pb	14 17 57.7	-0.3
ROSA				eS	Sn	14 18 16.3	-0.2
PCAN	Candelaria	1.59	149	eP	Pb	14 17 59.7	+0.1
PCAN				eS	Sb	14 18 19.5	-0.2
PCAN				A	A	14 18 21.1	
	104nm,0.2s						
PCAN	Candelaria	1.59	149	eP	Pb	14 17 59.7	+0.1
PCAN				eS	Sb	14 18 19.5	-0.2
PMAN	Manadas	1.64	136	eP	Pb	14 17 59.7	-0.8
PMAN				eS	Sn	14 18 19.7	-0.3
PMAN				A	A	14 18 21.3	
	33nm,0.1s						
PMAN	Manadas	1.64	136	eP	Pb	14 17 59.7	-0.8
PMAN				eS	Sn	14 18 19.7	-0.3
ADH	Angra Heroismo	2.14	122	eP	Pn	14 18 05.9	+0.1
ADH	Angra Heroismo	2.14	122	eP	Pn	14 18 05.9	+0.1
PSCM	Serra do Cume	2.19	120	eP	Pn	14 18 06.6	0.0
PSCM				eS	Sn	14 18 31.2	-2.5
PSCM				A	A	14 18 37.2	
	30nm,0.3s						
PSCM	Serra do Cume	2.19	120	eP	Pn	14 18 06.6	0.0
PSCM				eS	Sn	14 18 31.2	-2.5
PSET	Sete Cidades	3.59	123	eP	Pn	14 18 27.4	+1.5
CMLA	Cha da Macela	3.75	122	eP	Pn	14 18 28.6	+0.5
CMLA	Cha da Macela	3.75	122	eP	Pn	14 18 28.6	+0.5
BART	Pico Bartolome	3.98	120	eP	Pn	14 18 31.4	+0.1
BART	Pico Bartolome	3.98	120	eP	Pn	14 18 31.4	+0.1
PSMA	Santa Maria	4.47	128	eP	Pn	14 18 38.6	+0.7
PSMN	Pico do Norte,	4.50	127	eP	Pn	14 18 39.1	+0.7
PSMN	Pico do Norte,	4.50	127	eP	Pn	14 18 39.1	+0.7
ESDC	Sonseca Array	19.65	82	P	Pn	14 22 00.4	0.0
	0.2nm,0.3s,baz=269,slow=7.4,SNR=3.9						
MDT	Midelt	21.23	101	P	P	14 22 18.8	+2.5
	3.9nm,1.1s,baz=304,slow=11,SNR=3.5						
KEST	Kesra	30.84	85	LR	LR	14 34 25.0	
	comp=Z,44nm,22.0s,baz=234,slow=33						
KOWA	Kowa	33.72	131	LR	LR	14 36 20.9	
	comp=Z,49nm,19.2s,baz=208,slow=34						
TORD	Torodi Ar. Bea	38.22	125	P	P	14 24 50.3	+0.1
	0.7nm,1.1s,baz=302,slow=8.3						
AKASG	Malin Array Be	41.73	55	P	P	14 25 19.0	0.0
	0.2nm,0.3s,baz=274,slow=8.2,SNR=3.2						
TKL	Tuckaleechee C	42.54	282	LR	LR	14 42 17.3	
	comp=Z,34nm,18.9s,baz=14,slow=35						
IDI	Anoyia	42.83	78	LR	LR	14 42 20.7	
	comp=Z,30nm,20.5s,baz=104,slow=35						
ULM	Lac du Bonnet	46.56	306	LR	LR	14 44 00.1	
	comp=Z,58nm,19.8s,baz=41,slow=34						
BRTR	Keskin Array B	47.62	69	P	P	14 26 05.7	-0.6
	0.5nm,0.3s,baz=288,slow=8.0,SNR=3.5						
PDAR	Pinedale Array	58.00	301	P	P	14 27 22.1	-1.1
	0.8nm,0.8s,baz=46,slow=12,SNR=4.9						
PDAR				LR	LR	14 51 46.2	
	comp=Z,62nm,18.4s,baz=68,slow=36						
AKTO	Aktyubinsk	59.24	48	LR	LR	14 52 28.0	
	comp=Z,30nm,20.8s,baz=296,slow=35						
ANMO	Albuquerque	59.54	292	LR	LR	14 53 18.1	
	comp=Z,25nm,18.2s,baz=63,slow=36						
TXAR	Lajitas Array	60.34	285	P	P	14 27 40.0	+0.7
	1.7nm,0.8s,baz=72,slow=7.0,SNR=14						
TXAR				LR	LR	14 52 05.9	
	comp=Z,26nm,20.0s,baz=0.0,slow=34						
KURBB	Kurchatov Arra	70.15	40	P	P	14 28 43.1	+0.5
	0.2nm,0.4s,baz=301,slow=8.6,SNR=3.5						
AAK	Ala-Archa	72.98	48	LR	LR	15 01 06.0	
	comp=Z,16nm,19.8s,baz=298,slow=36						
MKAR	Makanchi Array	74.53	41	P	P	14 29 09.8	+1.0
	0.4nm,0.9s,baz=298,slow=3.1,SNR=2.5						
MKAR				LR	LR	15 02 38.3	
	comp=Z,19nm,18.7s,baz=310,slow=36						
LSZ	Lusaka	76.71	123	LR	LR	15 02 47.6	
	comp=Z,40nm,18.4s,baz=335,slow=35						

*CSEM **03** 14:24:25.9±0.3,37°.33N×35°.18E,h2^{km},ML2.7,Error ellipse: s-maj=8.7km s-min=6.6km az=128.0*

*ISK **03** 14:24:25.8,37°.29N×35°.18E,h3^{km},ML2.7/5*

*ISCJB **03** 14:24:26.5±0.9,37°.30N±0°.05×35°.14E±0°.07,h8^{km}±5^{km}, Error ellipse: s-maj=9.4km s-min=7.6km az=36.1*

*DDA **03** 14:24:26.6,37°.33N×35°.06E,h7^{km},Ml2.1*

ISC 03 14:24:26.3±1.0,37°.31N±0°.04×35°.16E±0°.04,h8^{km}±8^{km}, n21,σ0^{s}81/29,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARA	Karaisali	0.10	238	PG	Pg	14 24 28.7	+0.1
KARA				SG	Sg	14 24 29.9	-0.3
KARA	Karaisali	0.10	238	ePg	Pg	14 24 28.7	+0.1
KARA				eSg	Sg	14 24 29.9	-0.3
GULE	Gulek	0.30	265	i P	Pg	14 24 32.0	-0.4
GULE				i S	Sg	14 24 38.0	+1.6
GULE	Gulek	0.30	265	P	Pg	14 24 32.0	-0.4
GULE				S	Sg	14 24 38.0	+1.6
MERS	Mersin	0.67	229	PG	Pg	14 24 39.3	0.0
MERS	Mersin	0.67	229	ePg	Pg	14 24 39.3	0.0
YAHY	KAYSERI_Yahyal	0.80	12	i P	Pg	14 24 41.5	-0.2
YAHY				i S	Sb	14 24 54.3	+0.7
YAHY	KAYSERI_Yahyal	0.80	12	P	Pg	14 24 41.5	-0.2
YAHY				S	Sb	14 24 54.3	+0.7
KERG	Konya-Eregli	0.83	277	i P	Pg	14 24 40.8	-1.5
KERG				i S	Sg	14 24 52.1	-1.0
KERG	Konya-Eregli	0.83	277	P	Pg	14 24 40.8	-1.5
KERG				S	Sg	14 24 52.1	-1.0
KIZK	Mersin	1.16	225	PN	Pg	14 24 48.7	+0.1
TAHT	Tahtakopru-Hat	1.25	138	PN	Pg	14 24 49.4	-0.8
TAHT	Tahtakopru-Hat	1.25	138	ePn	Pg	14 24 49.4	-0.8
GULA	Gulagac	1.26	325	PN	Pn	14 24 50.9	+0.5
GULA	Gulagac	1.26	325	ePn	Pn	14 24 50.9	+0.5
KEBE	Keben-Mersin	1.44	234	PN	Pb	14 24 53.7	+0.2
KEBE	Keben-Mersin	1.44	234	ePn	Pb	14 24 53.7	+0.2
IKL	Isikli	1.59	228	PN	Pb	14 24 55.9	-0.1
IKL	Isikli	1.59	228	ePn	Pb	14 24 55.9	-0.1
TEKE	Tekeli-Mersin	2.01	235	PN	Pb	14 25 02.3	-0.9
TEKE	Tekeli-Mersin	2.01	235	ePn	Pb	14 25 02.3	-0.9

*ISK **03** 14:45:15.7,40°.44N×40°.08E,h4^{km}±1^{km},ML2.4/3*

*ISCJB **03** 14:45:16.4±0.5,40°.43N±0°.03×40°.07E±0°.04,h3^{km}±8^{km}, Error ellipse: s-maj=5.7km s-min=5.6km az=15.6*

*DDA **03** 14:45:16.5,40°.41N×40°.05E,h7^{km},Ml2.7*

*CSEM **03** 14:45:16.4±0.2,40°.41N×40°.07E,h5^{km},ML2.4,Error ellipse: s-maj=4.6km s-min=4.0km az=174.0*

ISC 03 14:45:16.4±1.0,40°.41N±0°.03×40°.08E±0°.03,h4^{km}±7^{km}, n16,σ0^{s}55/29,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BAYT	Ayd˜–ntepe-Bay	0.05	104	PG	Pg	14 45 17.7	-0.1
BAYT				SG	Sg	14 45 18.9	+0.1
BAYT	Ayd˜–ntepe-Bay	0.05	104	ePg	Pg	14 45 17.7	-0.1
BAYT				eSg	Sg	14 45 18.9	+0.1
KOPT	Kop Dagi	0.50	140	i P	Pg	14 45 26.7	+0.6
KOPT				i S	Sb	14 45 34.7	-1.1
KOPT	Kop Dagi	0.50	140	P	Pg	14 45 26.7	+0.6
KOPT				S	Sb	14 45 34.7	-1.1
MACK	Trabzon	0.59	337	i P	Pg	14 45 28.0	+0.3
MACK				i S	Sg	14 45 36.1	+0.8
MACK	Trabzon	0.59	337	P	Pg	14 45 28.0	+0.3
MACK				S	Sg	14 45 36.1	+0.8
KELT	Kelkit	0.68	248	i P	Pg	14 45 29.3	-0.2
KELT				i S	Sg	14 45 39.1	+0.9
KELT	Kelkit	0.68	248	P	Pg	14 45 29.3	-0.2
KELT				S	Sg	14 45 39.2	+0.9
CHOM	Cayeli-Rize	0.86	37	PG	Pg	14 45 32.8	-0.2
CHOM				SG	Sg	14 45 44.4	+0.2
CHOM	Cayeli-Rize	0.86	37	ePg	Pg	14 45 32.8	-0.2
CHOM				eSg	Sg	14 45 44.4	+0.2
ESPY	Espiye-Giresun	1.15	297	PN	Pg	14 45 37.8	-0.6
ESPY	Espiye-Giresun	1.15	297	ePn	Pg	14 45 37.8	-0.6
SUSE	Susehri	1.45	263	i P	Pn	14 45 43.5	0.0
SUSE				i S	Sg	14 46 03.1	+0.3
SUSE				i S	Sg	14 46 03.2	+0.3
SUSE	Susehri	1.45	263	P	Pn	14 45 43.5	0.0
SUSE				S	Sg	14 46 03.2	+0.3
BCA	Borcka	1.56	48	PN	Pn	14 45 45.4	+0.4
BCA	Borcka	1.56	48	ePn	Pn	14 45 45.4	+0.4

*ISCJB **03** 14:45:41.1±0.5,11°.50N±0°.07×140°.17E±0°.07,h100^{km}, mb4.0/17,Error ellipse: s-maj=10.8km s-min=8.8km az=144.6*

*IDC **03** 14:45:42.9±2.5,11°.49N×140°.21E,h101^{km}±25^{km}, mb3.7/17,mb1 3.9/19,mb1mx3.7/60,mbtmp4.1/19, MS3.2/16,Ms1 3.2/16,ms1mx3.0/55,Error ellipse: s-maj=18.4km s-min=12.9km az=100.0*

ISC 03 14:45:42.8±0.6,11°.48N±0°.09×140°.18E±0°.09,h100^{km},n30, σ0^{s}57/21,mb4.1/17,Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	5.03	65	P	Pn	14 46 56.2	+0.3
	3.6nm,0.3s,baz=216,slow=14,SNR=2.9						
GUMO				S	Sn	14 47 52.4	-0.5
	2.4nm,0.3s,baz=45,slow=20,SNR=1.6						
GUMO				LR	LR	14 48 56.4	
	comp=Z,471nm,21.1s,baz=236,slow=39						
JAY	Jayapura	13.91	178	P	Pn	14 48 55.6	-0.2
	0.5nm,0.3s,baz=78,slow=9.3,SNR=3.9						
JAY				LR	LR	14 53 28.7	
	comp=Z,112nm,19.0s,baz=6.5,slow=33						
DAV	Davao City (W)	15.06	254	LR	LR	14 53 52.8	
	comp=Z,137nm,20.0s,baz=86,slow=32						
SIJI	Sorong	15.14	216	LR	LR	14 53 36.9	
	comp=Z,106nm,21.1s,baz=256,slow=31						
TGY	Tagaytay City	18.95	280	LR	LR	14 56 42.4	
	comp=Z,56nm,19.3s,baz=48,slow=35						
MJAR	Matsushiro Arr	25.01	356	P	P	14 50 58.0	+0.6
	0.9nm,0.7s,baz=189,slow=9.2,SNR=4.4						
H11N1	WAKE ISLAND Hy	26.96	69	T	T	15 20 21.8	
	baz=254,slow=75,SNR=6.9						
H11N2	WAKE ISLAND Hy	26.97	69	T	T	15 20 21.8	
	baz=254,slow=75,SNR=6.4						
H11N3	WAKE ISLAND Hy	26.98	69	T	T	15 20 22.3	
	baz=254,slow=75,SNR=5.8						
KSRS	Korea Array	28.11	339	P	P	14 51 24.6	-0.6
	0.7nm,0.6s,baz=156,slow=8.9,SNR=5.8						
KSRS				LR	LR	15 01 43.4	
	comp=Z,18nm,18.7s,baz=148,slow=34						
WRA	Warramunga Arr	31.75	190	P	P	14 51 57.3	-0.3
	0.7nm,0.9s,baz=2.5,slow=9.5,SNR=3.8						
ASAJ	Asahikawa	32.58	3	LR	LR	15 03 58.2	
	comp=Z,35nm,21.0s,baz=186,slow=34						
ASAR	Alice Springs	35.47	190	P	P	14 52 30.1	+0.3
	0.7nm,0.6s,baz=15,slow=13,SNR=11						
ASAR				PcP	PcP	14 54 57.9	+0.4
	0.3nm,0.7s,baz=28,slow=1.1,SNR=4.5						
ASAR				LR	LR	15 06 52.4	
	comp=Z,70nm,18.5s,baz=12,slow=36						
KLR	Kul'dur	38.28	351	P	P	14 52 54.1	+0.8
	0.8nm,0.6s,baz=153,slow=6.2,SNR=32						
CMAR	Chiang Mai Arr	40.37	285	P	P	14 53 11.6	+0.4
	3.7nm,0.7s,baz=94,slow=6.6,SNR=24						
CMAR				LR	LR	15 08 04.1	
	comp=Z,26nm,21.6s,baz=100,slow=33						
STKA	Stephens Creek	43.13	178	LR	LR	15 11 38.1	
	comp=Z,74nm,18.7s,baz=23,slow=36						
SONM	Songino Array	45.97	329	P	P	14 53 56.0	0.0
	1.0nm,0.7s,baz=137,slow=11,SNR=5.4						
YAK	Yakutsk	51.04	354	P	P	14 54 34.5	+0.1
	9.3nm,0.4s,baz=158,slow=1.0,SNR=4.5						
AFI	Afiamalu	53.90	117	LR	LR	15 15 25.2	
	comp=Z,17nm,19.7s,baz=208,slow=33						
MKAR	Makanchi Array	59.89	318	P	P	14 55 38.6	+0.4
	1.2nm,0.8s,baz=98,slow=9.1,SNR=8.9						
ZALV	Zalesovo Beam	60.74	326	P	P	14 55 43.0	-0.7
	1.2nm,0.5s,baz=109,slow=7.4,SNR=5.5						
KURBB	Kurchatov Arra	63.33	321	P	P	14 56 01.1	0.0
	2.4nm,0.8s,baz=104,slow=7.2,SNR=19						
RAR	Rarotonga	67.32	119	LR	LR	15 23 39.8	
	comp=Z,24nm,18.1s,baz=306,slow=34						
BVAR	Borovoye Array	68.77	323	P	P	14 56 36.1	+0.1
	2.5nm,0.7s,baz=106,slow=8.0,SNR=17						
BVAR				LR	LR	15 30 55.7	
	comp=Z,5.2nm,18.0s,baz=277,slow=39						
ILAR	Eielson Array	72.42	25	P	P	14 56 57.6	-0.4
	1.0nm,0.7s,baz=250,slow=6.1,SNR=13						
ILAR				LR	LR	15 30 14.4	
	comp=Z,10nm,18.6s,baz=277,slow=37						
YKA	Yellowknife Ar	86.80	27	P	P	14 58 15.5	-0.3
	1.0nm,0.9s,baz=299,slow=4.8,SNR=7.8						
ARCES	ARCESS Array B	87.64	341	P	P	14 58 19.2	-0.4
	1.4nm,0.6s,baz=54,slow=10,SNR=4.7						
YBH	Yreka Blue Hor	87.69	48	LR	LR	15 30 27.4	
	comp=Z,21nm,21.3s,baz=298,slow=31						
FINES	FINESS Array B	91.08	334	P	P	14 58 34.5	-1.4
	2.0nm,0.8s,baz=142,slow=7.2,SNR=5.1						
NVAR	Mina Array Bea	91.79	50	P	P	14 58 40.7	+0.7
	0.8nm,0.7s,baz=269,slow=5.1,SNR=7.5						
NVAR				LR	LR	15 33 45.3	
	comp=Z,17nm,21.1s,baz=60,slow=31						

*ISCJB **03** 15:13:14.4±1.3,27°.91N±0°.08×100°.8E±0°.2,h10^{km}, mb3.6/2,MS2.7/1,Error ellipse: s-maj=22.2km s-min=7.7km az=23.4*

*IDC **03** 15:13:15.4±5.1,27°.92N×100°.84E,h0^{km},mb3.5/2, mb1 3.8/2,mb1mx3.1/70,mbtmp3.5/2,MS2.8/1,Ms1 2.8/1, ms1mx2.2/57,Error ellipse: s-maj=109.3km s-min=41.1km az=117.0*

*BJI **03** 15:13:18.6,27°.91N×100°.65E,h8^{km},ML3.4/5*

ISC 03 15:13:17.1±1.5,27°.9N±0°.1×100°.7E±0°.2,h10^{km},n9, σ2^{s}24/7,Yunnan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMI	Kunming	3.29	146	Pn	Pn	15 14 06.3	-2.7
CD2	Chengdu	4.00	41	Pn	Pn	15 14 19.3	+0.8
CD2				Pg	Pb	15 14 29.7	+2.0
CD2				Sn	Sn	15 15 01.7	-3.8
CD2				Sg	Sg	15 15 26.0	+0.4
CD2				smax	smax		
	comp=N,110nm,0.7s						
CD2				smax	smax		
	comp=E,110nm,0.8s						
CMAR	Chiang Mai Arr	9.53	190	Pg	Pn	15 16 10.4	+36
	0.1nm,0.3s,baz=357,slow=17,SNR=2.8						
CMAR				Lg	Lg	15 18 19.6	
	0.1nm,0.3s,baz=11,slow=29,SNR=2.4						
WHN	Wuhan	12.19	74	eP	Pn	15 16 20.6	+10
WMQ	Urumqi	19.05	330	eP	Pn	15 17 51.5	+11
WMQ	Urumqi	19.05	330	eP	P	15 17 38.9	-0.5
ZALV	Zalesovo Beam	28.54	340	LR	LR	15 29 47.6	
	comp=Z,19nm,20.1s,baz=72,slow=35						
WRA	Warramunga Arr	57.61	142	P	P	15 23 07.4	-0.1
	0.7nm,0.7s,baz=332,slow=7.7,SNR=5.0						
ASAR	Alice Springs	60.43	145	P	P	15 23 26.3	-0.7
	0.2nm,0.5s,baz=327,slow=6.9,SNR=5.1						

*DDA **03** 15:32:06.6,39°.59N×39°.72E,h5^{km},Ml2.9*

*ISCJB **03** 15:32:07.5±0.4,39°.61N±0°.02×39°.77E±0°.03,h3^{km}±4^{km}, Error ellipse: s-maj=4.6km s-min=3.6km az=150.1*

*CSEM **03** 15:32:07.5±0.2,39°.61N×39°.73E,h2^{km},ML2.9,Error ellipse: s-maj=4.1km s-min=3.7km az=75.0*

*ISK **03** 15:32:07.2,39°.60N×39°.76E,h6^{km},ML2.7/8*

ISC 03 15:32:06.5±0.8,39°.64N±0°.02×39°.75E±0°.03,h12^{km}±4^{km}, n39,σ0^{s}91/58,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERZN	Erzincan	0.06	206	PG	Pg	15 32 08.9	-0.2
ERZN				SG	Sg	15 32 10.2	-0.7
EUZM	Uzumlu	0.08	329	i P	Pg	15 32 10.1	+0.7
EUZM				i S	Sg	15 32 11.9	+0.5
EUZM	Uzumlu	0.08	329	P	Pg	15 32 10.1	+0.7
EUZM				S	Sg	15 32 11.9	+0.5
TNCL	Tunceli-Merkez	0.55	197	i P	Pg	15 32 16.6	-0.6
TNCL				i S	Sg	15 32 24.7	+0.2
TNCL	Tunceli-Merkez	0.55	197	P	Pg	15 32 16.6	-0.6
TNCL				S	Sg	15 32 24.7	+0.2
KELT	Kelkit	0.64	323	i P	Pb	15 32 19.5	-0.3
KELT				i S	Sn	15 32 30.2	-1.7
KELT	Kelkit	0.64	323	P	Pb	15 32 19.5	-0.3
KELT				S	Sn	15 32 30.2	-1.7
YEDI	Yedisu-Bingol	0.64	108	PG	Pb	15 32 19.9	+0.1
YEDI	Yedisu-Bingol	0.64	108	ePg	Pb	15 32 19.9	+0.1
KOPT	Kop Dagi	0.69	56	i P	Pn	15 32 21.5	-0.9
KOPT	Kop Dagi	0.69	56	P	Pn	15 32 21.5	-0.9
PTK	Pertek	0.79	201	PG	Pg	15 32 21.9	0.0
PTK	Pertek	0.79	201	ePg	Pg	15 32 21.9	0.0
BAYT	Ayd˜–ntepe-Bay	0.81	21	PG	Pn	15 32 23.4	-0.6
BAYT	Ayd˜–ntepe-Bay	0.81	21	ePg	Pn	15 32 23.4	-0.6
BINT	Bingol	0.95	143	ePg	Pn	15 32 25.7	-0.1
BGOL	Bingol	0.96	132	i P	Pn	15 32 25.3	-0.7
BGOL				i S	Sn	15 32 40.3	+0.7
BGOL	Bingol	0.96	132	P	Pn	15 32 25.3	-0.7
BGOL				S	Sn	15 32 40.3	+0.7
BNGB	Bingˆ¶l	0.96	132	PG	Pn	15 32 25.7	-0.3
KEMA	Kemaliye	1.04	250	i P	Pb	15 32 26.4	-0.2
KEMA				i S	Sg	15 32 40.4	+0.2
KEMA	Kemaliye	1.04	250	P	Pb	15 32 26.4	-0.2
KEMA				S	Sg	15 32 40.4	+0.2
ELZG	Elazig	1.28	208	i P	Pn	15 32 30.1	-0.4
ELZG				i S	Sg	15 32 48.9	+1.0
ELZG	Elazig	1.28	208	P	Pn	15 32 30.1	-0.4
ELZG				S	Sg	15 32 48.9	+1.0
HANI	Diyarbakir_Han	1.32	157	i P	Pg	15 32 34.0	+2.1
HANI				i S	Sg	15 32 49.5	+0.5
HANI	Diyarbakir_Han	1.32	157	P	Pg	15 32 34.0	+2.1
HANI				S	Sg	15 32 49.5	+0.5
SUSE	Susehri	1.32	296	i P	Pg	15 32 32.6	+0.6
SUSE				i S	Sg	15 32 51.4	+2.2
SUSE	Susehri	1.32	296	P	Pg	15 32 32.6	+0.6
SUSE				S	Sg	15 32 51.4	+2.2
ESPY	Espiye-Giresun	1.50	329	PN	Pg	15 32 35.9	+0.5
ESPY	Espiye-Giresun	1.50	329	ePn	Pg	15 32 35.9	+0.5
HEKM	Malatya_Hekimh	1.58	242	i P	Pg	15 32 37.4	+0.4
HEKM				i S	Sg	15 32 59.2	+1.6
HEKM	Malatya_Hekimh	1.58	242	P	Pg	15 32 37.4	+0.4
HEKM				S	Sg	15 32 59.2	+1.6
CHOM	Cayeli-Rize	1.65	28	PN	Pg	15 32 38.1	-0.1
CHOM	Cayeli-Rize	1.65	28	ePn	Pg	15 32 38.1	-0.1
MALT	Malatya	1.68	218	PN	Pb	15 32 36.5	-0.9
MALT	Malatya	1.68	218	ePn	Pb	15 32 36.5	-0.9
DARE	Darende-Malaty	2.06	240	PN	Pb	15 32 44.1	+0.1
DARE	Darende-Malaty	2.06	240	ePn	Pb	15 32 44.1	+0.1

MAZI	Mazidag	2.24	166	PN	Pb	15 32 46.0	-1.0
MAZI	Mazidag	2.24	166	ePn	Pb	15 32 46.0	-1.0

CSEM 03 15:44:06.5, 38°.08N×42°.58E, h7km, ML2.5

DDA 03 15:44:06.5, 38°.08N×42°.58E, h7km, Ml2.5, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GEVA	Gevas	0.44	59	iP	Pg	15 44 14.7	-0.5
GEVA				iS	Sg	15 44 21.9	+0.9
GEVA	Gevas	0.44	59	P	Pg	15 44 14.7	-0.5
GEVA				S	Sg	15 44 21.9	+0.9
SRTM	Siirt_Merkez	0.53	260	iP	Pg	15 44 16.9	+0.3
SRTM				iS	Sg	15 44 24.6	+1.0
SRTM	Siirt_Merkez	0.53	260	P	Pg	15 44 17.0	+0.3
SRTM				S	Sg	15 44 24.6	+1.1
ADCV	BITLIS_Adilcev	0.73	9	iP	Pg	15 44 21.0	+0.4
ADCV				iS	Sb	15 44 31.4	-0.7
ADCV	BITLIS_Adilcev	0.73	9	P	Pg	15 44 21.0	+0.3
ADCV				S	Sb	15 44 31.4	-0.7
HAKT	HAKKARI	1.04	120	iP	Pg	15 44 26.4	0.0
HAKT				iS	Sb	15 44 41.2	+0.4
HAKT	HAKKARI	1.04	120	P	Pg	15 44 26.4	0.0
HAKT				S	Sb	15 44 41.2	+0.4

CSEM 03 15:44:29.8±0.3, 37°.37N×42°.65E, h2km, ML3.0, Error ellipse: s-maj=17.1km s-min=6.2km az=20.0

ISK 03 15:44:28.5, 37°.32N×42°.60E, h5km, ML3.0/5, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIRT	Sirnak	0.22	324	PG	Pg	15 44 33.7	+0.8
SIRT				SG	Sg	15 44 37.9	+2.0
SIRT	Sirnak	0.22	324	ePg	Pg	15 44 33.7	+0.8
SIRT				eSg	Sg	15 44 37.9	+2.0
SIRN	S˜–rnak	0.23	319	iP	Pg	15 44 33.9	+0.8
SIRN				iS	Sg	15 44 38.6	+2.4
SIRN	S˜–rnak	0.23	319	P	Pg	15 44 33.9	+0.8
SIRN				S	Sg	15 44 38.6	+2.4
SIRN	S˜–rnak	0.23	319	P	Pg	15 44 33.9	+0.8
SIRN				S	Sg	15 44 38.6	+2.4
CUKT	Cukurca	0.80	95	PG	Pb	15 44 45.1	+0.1
CUKT	Cukurca	0.80	95	ePg	Pb	15 44 45.1	+0.1
GURO	Guroymak-BITLI	1.31	340	PN	Pb	15 44 54.7	+1.0
GURO	Guroymak-BITLI	1.31	340	ePn	Pb	15 44 54.7	+1.0
SVAN	Silvan-Diyarba	1.39	307	PN	Pg	15 44 56.3	+1.1
SVAN	Silvan-Diyarba	1.39	307	ePn	Pg	15 44 56.3	+1.1
MAZI	Mazidag	1.72	275	PN	Pb	15 45 00.9	+0.2
MAZI	Mazidag	1.72	275	ePn	Pb	15 45 00.9	+0.2
DIY	Diyarbakir	1.97	288	ePn	Pb	15 45 05.6	+0.6
DYBB	Diyarbakir	2.06	289	PN	Pb	15 45 05.6	-0.8

IDC 03 15:51:14.6±1.5, 1°.92N×93°.52E, h0km, mb3.9/7, mb1 4.0/10, mb1mx3.7/71, mbtmp4.0/10, ML4.0/3, Error ellipse: s-maj=42.6km s-min=22.7km az=42.0

ISCJB 03 15:51:17.8±0.9, 2°.0N±0°.1×93°.56E±0°.06, h33km, mb4.0/8, Error ellipse: s-maj=15.5km s-min=7.9km az=18.1

DJA 03 15:51:17.1±3.8, 2°N±15°×9°4E±3°0, h10km, M4.5/7, mB5.3/1, mb4.5/2, MLv4.5/7, Mw(mB)4.8/1

NEIC 03 15:51:19.1±2.9, 1°.96N×93°.56E, h31km±21km, mb4.2/1, Error ellipse: s-maj=17.1km s-min=9.8km az=201.0

ISC 03 15:51:20.2±1.0, 2°.1N±0°.1×93°.68E±0°.08, h35km, n21, σ1.29/22, mb4.1/8, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNSI	Sinabang, Aceh	2.67	83	P	Pn	15 52 01.6	+0.9
MLSI	Meulaboh, Aceh	3.49	51	P	Pn	15 52 12.8	+0.8
TPTI		3.69	71	P	Pn	15 52 14.9	+0.1
BSI	Banda Aceh	3.77	25	P	Pn	15 52 16.1	+0.2
GSI	Gunungsitoli	3.97	101	P	Pn	15 52 19.5	+0.9
KCSI	Kotacane, Aceh	4.34	70	P	Pn	15 52 25.5	+1.8
LHMI	Lhok Sumawe	4.53	46	P	Pn	15 52 28.1	+1.8
PSI	Prapat	5.29	82	Pn	Pn	15 52 37.9	+0.9
	7.2nm,0.3s,baz=179,slow=0.3,SNR=32						
PSI				Sn	Sn	15 53 33.0	-3.9
	0.9nm,0.3s,baz=360,slow=14,SNR=1.9						
MNSI	Mandailing Nat	6.04	102	P	Pn	15 52 48.3	+1.3
PALK	Pallekele	13.92	292	Pn	Pn	15 54 33.5	-1.7
	0.3nm,0.3s,baz=295,slow=19,SNR=3.5						
PALK				Sn	Sn	15 56 55.6	-13
	2.4nm,0.3s,baz=116,slow=14,SNR=11						
CMAR	Chiang Mai Arr	17.09	17	P	Pn	15 55 16.9	+0.5
	0.2nm,0.3s,baz=209,slow=12,SNR=16						
LSA	Lhasa	27.59	355	eP	P	15 57 05.2	+0.5
	3.1nm,0.6s						
WRA	Warramunga Arr	45.49	121	P	P	15 59 36.7	+0.2
	0.3nm,0.7s,baz=307,slow=8.4,SNR=2.7						
MKAR	Makanchi Array	45.64	349	P	P	15 59 38.2	+0.9
	2.0nm,0.6s,baz=170,slow=9.0,SNR=18						
SONM	Songino Array	46.90	12	P	P	15 59 47.9	+0.6
	1.4nm,0.5s,baz=188,slow=8.9,SNR=7.2						
KURBB	Kurchatov Arra	50.05	347	P	P	16 00 12.1	+0.7
	1.3nm,0.6s,baz=170,slow=7.3,SNR=12						
KURK	Kurchatov	50.12	348	P	P	16 00 12.1	+0.2
ZALV	Zalesovo Beam	52.22	353	P	P	16 00 28.0	+0.4
	1.2nm,0.5s,baz=193,slow=9.2,SNR=6.9						
BVAR	Borovoye Array	54.34	343	P	P	16 00 42.8	-0.4
	0.6nm,0.7s,baz=157,slow=8.0,SNR=4.2						
HFS	Hagfors	83.22	330	P	P	16 03 42.7	-0.1
	2.7nm,1.1s,baz=108,slow=4.7,SNR=3.8						
TXAR	Lajitas Array	144.63	27	PKP	PKPab	16 10 52.8	+0.1
	0.3nm,0.5s,baz=100,slow=1.7,SNR=5.9						

CSEM 03 15:52:13.9±0.5, 37°.30N×12°.55W, h20km, mb3.7, Error ellipse: s-maj=11.9km s-min=8.8km az=159.0

INMG 03 15:52:13.7±0.9, 37°.17N×13°.01W, h10km, ML1.9, Error ellipse: s-maj=8.9km s-min=6.7km az=108.0

MDD 03 15:52:10.7±2.9, 37°.18N×13°.01W, h40km, mb3.7/7, Error ellipse: s-maj=37.1km s-min=25.5km az=162.0, PRXIMO, Azores-Cape St. Vincent Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMAFR	Mafra	3.43	58	P	Pn	15 53 00.5	-1.2
	0.7nm,0.1s,SNR=4.0						
PMAFR				S	Sn	15 53 38.7	-2.4
	2.9nm,0.2s,SNR=7.9						
PMAFR	Mafra	3.43	58	P	Pn	15 53 00.5	-1.2
	0.7nm,0.1s,SNR=4.0						
PMAFR				S	Sn	15 53 38.7	-2.4
	2.9nm,0.2s,SNR=7.9						
MORF	Marmelete	3.48	87	ePn	Pn	15 53 02.4	0.0
MORF	Marmelete	3.48	87	P	Pn	15 53 02.4	0.0
MORF	Marmelete	3.48	87	P	Pn	15 53 02.4	0.0
MESJ	Messejana	3.86	79	ePn	Pn	15 53 07.5	-0.1
MESJ				eSn	Sn	15 53 47.4	-4.3
MESJ				A	A	15 53 56.3	
	2.3nm,0.4s						
MESJ	Messejana	3.86	79	P	Pn	15 53 07.5	-0.1
MESJ				S	Sn	15 53 47.4	-4.3
	2.3nm,0.4s						
MESJ	Messejana	3.86	79	P	Pn	15 53 07.5	-0.1
MESJ				S	Sn	15 53 47.4	-4.3
	2.3nm,0.4s						
PCVE	Castro Verde	3.98	82	ePn	Pn	15 53 08.8	-0.4
PCVE				eSn	Sn	15 53 49.8	-4.8
PCVE				A	A	15 53 55.7	
	1.2nm,0.2s						
PCVE	Castro Verde	3.98	82	P	Pn	15 53 08.8	-0.4
PCVE				S	Sn	15 53 49.8	-4.8
	1.2nm,0.2s						
PCVE	Castro Verde	3.98	82	P	Pn	15 53 08.8	-0.4
PCVE				S	Sn	15 53 49.8	-4.8
	1.2nm,0.2s						
PMTG	Montargil	4.21	62	ePn	Pn	15 53 12.0	-0.4
PMTG				eSn	Sn	15 53 56.0	-4.4
PMTG				A	A	15 54 01.3	
	1.7nm,0.8s						
PMTG	Montargil	4.21	62	ePn	Pn	15 53 12.0	-0.4
PMTG				eSn	Sn	15 53 56.0	-4.4
EGRO	El Granado	4.41	84	P	Pn	15 53 14.1	-1.0
	0.3nm,0.1s,SNR=7.9						
EGRO				S	Sn	15 54 02.3	-3.0
	0.5nm,0.1s,SNR=7.9						
EGRO	El Granado	4.41	84	P	Pn	15 53 14.1	-1.1
	0.3nm,0.1s,SNR=7.9						
EGRO				S	Sn	15 54 02.3	-3.0
	0.5nm,0.1s,SNR=7.9						
PESTR	Estremoz	4.59	67	eSn	Sn	15 54 06.1	-3.7
PESTR	Estremoz	4.59	67	eSn	Sn	15 54 06.1	-3.7
PMRV	Marv??o	4.95	61	ePn	Pn	15 53 22.4	-0.2
PMRV				eSn	Sn	15 54 14.1	-4.5
PMRV				A	A	15 54 20.0	
	1.2nm,0.4s						
PMRV	Marv??o	4.95	61	P	Pn	15 53 22.4	-0.2
PMRV				S	Sn	15 54 14.1	-4.5
	1.2nm,0.4s						
PMRV	Marv??o	4.95	61	P	Pn	15 53 22.4	-0.2
PMRV				S	Sn	15 54 14.1	-4.5
	1.2nm,0.4s						
EBAD	Badajoz	4.99	70	P	Pn	15 53 23.0	0.0
	0.3nm,0.1s,SNR=7.9						
EBAD				S	Sn	15 54 13.9	-5.6
	1.1nm,0.2s,SNR=7.9						
EBAD	Badajoz	4.99	70	P	Pn	15 53 23.0	-0.1
	0.3nm,0.1s,SNR=7.9						
EBAD				S	Sn	15 54 13.9	-5.6
	1.1nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	5.07	81	P	Pn	15 53 22.9	-1.3
	0.3nm,0.1s,SNR=7.9						
EMIN				S	Sn	15 54 17.4	-4.2
	0.1nm,0.1s,SNR=7.9						
EMIN	Mina Concepcio	5.07	81	P	Pn	15 53 22.9	-1.3
	0.3nm,0.1s,SNR=7.9						
EMIN				S	Sn	15 54 17.4	-4.1
	0.1nm,0.1s,SNR=7.9						
ECAB	El Cabril	6.09	79	P	Pn	15 53 37.2	-1.0
	0.3nm,0.1s,SNR=5.7						
ECAB				S	Sn	15 54 42.9	-3.7
	0.1nm,0.2s,SNR=7.9						
ECAB	El Cabril	6.09	79	P	Pn	15 53 37.2	-1.0
	0.3nm,0.1s,SNR=5.7						
ECAB				S	Sn	15 54 42.9	-3.7
	0.1nm,0.2s,SNR=7.9						
EPLA	Plasencia	6.14	60	P	Pn	15 53 38.3	-0.6
	0.1nm,0.1s,SNR=7.9						
EPLA	Plasencia	6.14	60	P	Pn	15 53 38.3	-0.6
	0.1nm,0.1s,SNR=7.9						
EADA	Adamuz	6.76	79	P	Pn	15 53 46.7	-0.7
	0.3nm,0.1s,SNR=7.9						
EADA	Adamuz	6.76	79	P	Pn	15 53 46.7	-0.7
	0.3nm,0.1s,SNR=7.9						

MEX 03 16:00:01.9±1.4, 19°.24N×105°.03W, h5km, MD3.7

ISCJB 03 16:00:02.2±1.0, 19°.25N±0°.06×104°.84W±0°.05, h33km±6km, mb4.2/48, MS3.3/4, Error ellipse: s-maj=11.0km s-min=5.5km az=30.5

NEIC 03 16:00:03.9±1.6, 18°.94N×104°.60W, h71km±9km, mb4.2/59, Error ellipse: s-maj=17.4km s-min=5.5km az=191.0

NEIC Felt at Cihuatlan and Puerto Vallarta, Jalisco.

IDC 03 16:00:06.7±4.5, 19°.31N×104°.67W, h67km±35km, mb3.6/7, mb1 3.9/10, mb1mx3.6/48, mbtmp3.9/10, ML3.6/3, MS3.3/7, Ms1 3.3/7, ms1mx3.0/39, Error ellipse: s-maj=49.2km s-min=23.9km az=50.0

ISC 03 16:00:00.9±1.3, 19°.24N±0°.08×104°.92W±0°.06, h18km±4km, n101, σ1.79/93, mb4.3/48, MS3.4/4, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CJM	Chamela	0.28	335	eP	Pg	16 00 06.7	-0.5
CJM				eS	Sg	16 00 10.6	-0.9
R15V		0.89	95	eP	Pg	16 00 17.2	-1.1
R15V				iS	Sg	16 00 30.7	+0.7
EZ5V		1.27	79	iP	Pn	16 00 24.4	+0.5
EZ5V				eS	Sg	16 00 42.6	+0.6
PUVA	Puert Vallarta	1.41	348	eP	Pn	16 00 25.4	-0.2
PUVA				eS	Sb	16 00 42.5	-1.7
MMIG	Aquila	1.77	122	iP	Pn	16 00 31.7	+1.1
MMIG				eS	Sn	16 00 54.2	+1.7
MOIG	Morelia	3.54	82	ePn	Pn	16 00 52.8	-2.5
ZAIG	Zacatecas	4.14	32	ePn	Pn	16 01 04.4	+0.9
H06E1	SOCORRO T-PHAS	5.70	266	T	T	16 07 08.5	
H06S1	SOCORRO T	5.74	266	T	T	16 07 10.7	
	SNR=25						
H06N1	SOCORRO T-PHAS	5.75	267	T	T	16 07 11.8	
	SNR=167						
LNIG	Linares	7.56	41	ePn	Pn	16 01 52.8	+2.5
CMIG	Matias Romero	9.78	101	P	Pn	16 02 21.1	+0.5
	0.6nm,0.3s,baz=284,slow=12,SNR=11						
CMIG				Lg	Lg	16 05 01.6	
	0.4nm,0.3s,baz=35,slow=15,SNR=4.2						
CMIG				LR	LR	16 06 24.8	
	comp=Z,185nm,20.5s,baz=314,slow=40						
TX31	Lajitas Ar. Si	10.11	6	ePn	Pn	16 02 29.4	+4.1
TXAR	Lajitas Array	10.11	6	P	Pn	16 02 28.6	+3.2
	0.2nm,0.3s,baz=189,slow=15,SNR=13						
TXAR				Lg	Lg	16 05 14.5	
	0.1nm,0.3s,baz=177,slow=33,SNR=2.9						
TXAR				LR	LR	16 06 51.8	
	comp=Z,190nm,21.1s,baz=0.0,slow=40						
JCT	Junction City	12.11	22	ePn	Pn	16 02 56.0	+3.4
MNTX	Cornudas Mount	12.41	358	ePn	Pn	16 03 00.3	+3.6
319A	Douglas	12.71	343	ePn	Pn	16 03 06.6	+5.7
HKT	Hockley	13.48	36	ePn	Pn	16 03 12.2	+1.0
TUC	Tucson	14.04	339	ePn	P	16 03 26.5	-0.3
ABTX	Abilene, Hawle	14.14	19	ePn	Pn	16 03 26.8	+6.4
WHTX	Lake Whitney,	14.36	26	ePn	Pn	16 03 25.1	+1.8
MSTX	Muleshoe	14.79	7	ePn	Pn	16 03 33.6	+4.3
	11nm,1.0s						
113A	Mohawk Valley,	15.63	331	eP	P	16 03 47.1	+2.8
	4.6nm,0.8s						
ANMO	Albuquerque	15.70	355	P	Pn	16 03 44.4	+3.0
	0.1nm,0.3s,baz=170,slow=11,SNR=2.6						
ANMO				LR	LR	16 09 16.6	
	comp=Z,121nm,18.7s,baz=170,slow=35						
ANMO	Albuquerque	15.70	355	ePn	Pn	16 03 45.4	+3.9
	3.3nm,1.1s						
AMTX	Amarillo	15.84	10	ePn	Pn	16 03 46.9	+3.8
	8.8nm,0.6s						
543A	St. Martinvill	16.03	45	eP	Pn	16 03 47.0	+1.5
	309nm,0.4s						
240A	Hunter Patters	16.22	36	ePn	Pn	16 03 48.8	+1.0
	27nm,0.6s						
Y14A	Wickenburg	16.31	335	eP	P	16 03 54.5	+2.5
	3.6nm,1.1s						
WMOK	Wichita Mounta	16.37	18	ePn	Pn	16 03 52.4	+2.6
	6.0nm,1.1s						
241A	Mo Tay, Goldon	16.68	38	ePn	Pn	16 03 53.8	0.0
	54nm,0.5s						
U15A	North Rim	18.31	341	eP	Pn	16 04 16.4	+2.2
	12nm,1.8s						
SDCO	Great Sand Dun	18.44	359	eP	P	16 04 16.8	+1.0
	10nm,1.8s						
TUL1	Leonard	18.45	24	eP	P	16 04 15.4	-0.2
	18nm,0.8s						
GSC	Goldstone, Bar	19.14	329	eP	Pn	16 04 26.5	+2.3
	6.6nm,1.1s						
PV15	Paradox Valley	19.28	351	eP	P	16 04 26.2	+1.3
	3.3nm,0.7s						
146A	Union	19.50	44	eP	P	16 04 26.9	-0.2
	22nm,0.6s						
HHAR	Hobbs	19.53	27	eP	P	16 04 26.6	-0.9
	17nm,1.0s						
MTPU	Mount Pierson	19.77	343	eP	P	16 04 33.4	+3.0
	6.0nm,1.0s						
SMCO	Snowmass	19.95	355	eP	P	16 04 34.5	+2.2
	5.7nm,1.1s						
TPNV	Topopah Spring	20.25	333	eP	P	16 04 38.0	+2.6
	16nm,1.0s						
ISA	Isabella, Lake	20.27	327	eP	P	16 04 38.6	+3.1
	5.7nm,0.8s						
DAC	Darwin (Calif)	20.31	329	eP	P	16 04 37.7	+1.6
	7.9nm,1.0s						
MDPB	Devils Postpil	22.10	329	eP	P	16 04 58.0	+2.5
	6.6nm,1.0s						
NV11	Mina Array Sit	22.32	332	eP	P	16 04 59.7	+2.1
	0.9nm,1.0s						
NV01	Mina Array Sit	22.38	331	eP	P	16 05 00.1	+1.6
NVAR	Mina Array Bea	22.38	331	P	P	16 05 00.7	+2.3
	5.3nm,0.9s,baz=153,slow=11,SNR=23						
152A	Waverly Hall	22.50	50	eP	P	16 04 57.1	-2.4
	5.0nm,0.7s						
RYN	Ryan	22.64	331	eP	P	16 05 03.0	+1.8
	8.8nm,1.1s						
KVN	Kaiserville	22.80	333	eP	P	16 05 04.6	+1.7
	12nm,1.2s						
WAKR	Walker	22.97	330	eP	P	16 05 06.6	+2.0
	10nm,1.0s						
HWUT	Hardware Ranch	23.00	347	eP	P	16 05 05.5	+0.6
	7.1nm,1.4s						
P40A	Paris	23.07	26	eP	P	16 05 03.9	-1.5
	14nm,1.0s						
YERR	Yerington	23.26	331	eP	P	16 05 09.2	+1.6
	5.0nm,0.9s						
HVU	Hansel Valley	23.44	345	eP	P	16 05 09.5	+0.2
	3.3nm,0.9s						
X51A	Calhoun	23.45	45	eP	P	16 05 07.2	-2.1
	9.5nm,0.6s						
W50A	Signal Mountai	23.52	44	eP	P	16 05 07.9	-2.2
	9.8nm,0.8s						
BMN	Battle Mountai	23.61	336	eP	P	16 05 11.6	+0.6
	5.9nm,0.9s						
PDAR	Pinedale Array	23.78	352	P	P	16 05 12.6	-0.1
	0.4nm,0.7s,baz=153,slow=11,SNR=3.3						
GOGA	Godfrey	23.78	49	eP	P	16 05 10.5	-2.1
	8.8nm,0.6s						
N39A	Derby Farms, D	24.04	24	eP	P	16 05 13.2	-1.8
	13nm,0.6s						
BEKR	Beckworth	24.48	330	eP	P	16 05 20.6	+1.4
	9.4nm,1.2s						
N41A	Harden Midland	24.55	26	eP	P	16 05 17.8	-1.8
	22nm,1.1s						
REDW	Red Top Meadow	24.56	350	eP	P	16 05 19.7	-0.3
	6.2nm,0.8s						
TPAW	Teton Pass	24.70	349	eP	P	16 05 22.1	+0.8
	4.9nm,0.9s						
LOHW	Long Hollow	24.76	350	eP	P	16 05 21.9	+0.2
	5.4nm,0.9s						
FXWY	Fox Creek	24.86	349	eP	P	16 05 22.6	-0.1
	1.8nm,0.9s						
WVOR	Wild Horse Val	25.88	336	eP	P	16 05 32.0	+0.2
	4.0nm,1.0s						
MOD	Modoc Plateau	26.10	333	eP	P	16 05 35.1	+1.2
	8.1nm,1.0s						
J08A	Circle Bar Ran	26.61	338	eP	P	16 05 39.3	+0.9
	4.6nm,0.8s						
JFWS	Jewell Farm	26.65	25	eP	P	16 05 37.0	-1.7
	13nm,0.8s						
AGMN	Agassiz Nation	29.90	12	eP	P	16 06 06.7	-0.8
	10nm,1.3s						
IP04	Greensprings	29.94	46	eP	P	16 06 06.1	-1.9
	6.3nm,0.9s						
EYMN	Ely	30.64	18	eP	P	16 06 12.3	-1.8
	8.2nm,0.8s						
ULM	Lac du Bonnet	31.77	11	LR	LR	16 19 28.7	
	comp=Z,51nm,18.1s,baz=204,slow=37						
FFC	Flin Flon	35.49	3	eP	P	16 06 54.9	-1.5
	2.6nm,0.8s						
DLBC	Dease Lake	43.23	341	eP	P	16 08 01.8	+0.8
	6.8nm,0.9s						
YKA	Yellowknife Ar	43.73	354	P	P	16 08 03.4	-1.4
	0.5nm,0.6s,baz=167,slow=7.4,SNR=7.5						
YKA				LR	LR	16 27 33.4	
	comp=Z,4.4nm,18.2s,baz=163,slow=38						
EGAK	Eagle	51.50	341	eP	P	16 09 05.5	+0.4
	3.0nm,0.8s						
RIDG	Independ'e Rid	52.00	339	eP	P	16 09 09.6	+0.6
	25nm,1.0s						
INK	Inuvik	52.23	347	eP	P	16 09 10.2	-0.3
	4.7nm,0.8s						
IL1	Eielson Array	53.34	339	eP	P	16 09 18.6	-0.2
ILAR	Eielson Array	53.34	339	P	P	16 09 19.1	+0.4
	5.7nm,1.0s,baz=157,slow=6.3,SNR=26						
ILB	Eielson Array	53.34	339	eP	P	16 09 18.9	+0.1
SKT	Skwentna	53.47	335	eP	P	16 09 19.7	-0.1
	7.7nm,1.0s						
CCB	Clear Creek Bu	53.58	339	eP	P	16 09 20.2	-0.3
	2.3nm,0.8s						
TRF	Thorofare Moun	53.78	337	eP	P	16 09 22.3	+0.1
	14nm,0.8s						
BWN	Browne	53.88	338	eP	P	16 09 20.3	-2.5
	57nm,1.0s						
PPLA	Purkeypile	54.21	335	eP	P	16 09 24.3	-1.1
	15nm,1.2s						
MLY	Manley	54.82	338	eP	P	16 09 29.3	-0.4
	5.0nm,1.0s						
RES	Resolute Bay	55.73	3	LR	LR	16 34 21.5	
	comp=Z,102nm,19.7s,baz=225,slow=37						
COLD	Coldfoot	55.91	340	eP	P	16 09 37.5	+0.1
	2.8nm,1.0s						
TOLK	Toolik Lake Re	56.56	342	eP	P	16 09 42.2	+0.1
	5.1nm,0.6s						
PETK	Petropavlovsk-	79.15	322	P	P	16 12 05.1	+0.6
	3.1nm,0.8s,baz=74,slow=7.4						
NOA	NORSAR Array B	85.20	26	LR	LR	16 50 16.9	
	comp=Z,20nm,18.5s,baz=290,slow=35						
ESDC	Sonseca Array	86.00	49	P	P	16 12 40.2	-0.4
	0.1nm,0.2s,baz=316,slow=6.2,SNR=4.1						
FINES	FINESS Array B	90.60	21	P	P	16 13 00.7	-1.2
	1.2nm,0.8s,baz=348,slow=6.1,SNR=3.4						
WMQ	Urumqi	116.19	350	P	PKPdf	16 18 38.7	-4.7
WRA	Warramunga Arr	124.43	259	PKP	PKPdf	16 18 59.2	-0.5
	0.7nm,0.7s,baz=76,slow=2.8,SNR=6.3						
ASAR	Alice Springs	125.40	254	PKP	PKPdf	16 19 00.8	-0.7
	0.3nm,0.6s,baz=80,slow=2.3,SNR=5.5						
CMAR	Chiang Mai Arr	135.81	327	PKP	PKPdf	16 19 19.1	-2.3
	0.6nm,0.8s,baz=45,slow=0.4,SNR=4.5						

TAP 03 16:12:12.2, 25°.34N×122°.63E, h198km, ML2.9, C

ISCJB 03 16:12:13.4±0.8, 25°.22N±0°.08×122°.53E±0°.03, h191km±6km, Error ellipse: s-maj=12.9km s-min=4.1km az=177.0

JMA 03 16:12:13.5±0.3, 25°.29N×122°.48E, h188km±5km, M2.5

ISC 03 16:12:13.5±2.4, 25°.2N±0°.1×122°.52E±0°.04, h193km±14km, n42, σ0.56/65, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.53	245	eP	Pn	16 12 40.0	+0.1
	baz=243						
TWB1				eS	Sn	16 12 60.0	-0.2
	baz=243						
TIPB	Shuangxi	0.68	248	P	Pn	16 12 40.5	-0.1
	baz=253						
TIPB				eS	Sn	16 13 03.0	+1.4
	baz=253						
NWF	Wu-fen Shan	0.69	257	eP	Pn	16 12 40.9	+0.2
	baz=248						
WFSB	Wu-fen Shan	0.69	257	eP	Pn	16 12 40.6	0.0
	baz=248						
EOS1	EOS1	0.77	207	eP	Pn	16 12 40.8	-0.2
	baz=201						
EOS1				eS	Sn	16 13 02.9	+0.6
	baz=201						
YM07	YM07	0.81	266	eP	Pn	16 12 41.0	-0.4
	baz=256						
TWY	Chenhua	0.83	273	eP	Pn	16 12 41.4	0.0
	baz=264						
JYNG	Yonagunijimaku	0.87	153	P	Pn	16 12 41.7	0.0
JYNG				eS	Sn	16 13 04.1	+0.6
YOJ	Yonaguni jima	0.89	149	eP	Pn	16 12 41.5	-0.3
	baz=157						
YOJ				eS	Sn	16 13 02.8	-1.0
	baz=157						
TWE	Neicheng	0.92	237	eP	Pn	16 12 42.9	+0.9
	baz=227						
TWE				eS	Sn	16 13 04.5	+0.4
	baz=227						
NWLT	Wulai	1.02	244	eP	Pn	16 12 42.6	-0.1
	baz=244						
NWLT				eS	Sn	16 13 05.5	+0.2
	baz=244						
ENTT	Nioudou	1.04	236	P	Pn	16 12 43.0	+0.1
	baz=228						
ENTT				eS	Sn	16 13 05.9	+0.3
	baz=228						
NANB	Nanao	1.06	221	P	Pn	16 12 43.1	+0.1
	baz=216						
NANB				eS	Sn	16 13 05.8	0.0
	baz=216						
ENA	Nanau	1.07	221	eP	Pn	16 12 43.2	+0.1
	baz=216						
ENA				eS	Sn	16 13 06.1	+0.2
	baz=216						
YHNB	Yeheng	1.18	242	eP	Pn	16 12 43.6	-0.4
	baz=239						
YHNB				eS	Sn	16 13 06.4	-1.1
	baz=239						
NSK	Sanguang	1.19	242	eP	Pn	16 12 43.6	-0.4
	baz=240						
NNSH	Datong	1.30	232	eP	Pn	16 12 45.4	+0.3
	baz=227						
NNSH				eS	Sn	16 13 09.1	-0.3
	baz=227						
NNS	Nan Shan	1.30	233	eP	Pn	16 12 45.1	+0.1
	baz=226						
NNS				eS	Sn	16 13 09.6	+0.2
	baz=226						

NNSB	**Datong**	1.30	232	*e*P	Pn	16 12 44.9	-0.1
	baz=231						
NACB	**Ninganchiao**	1.35	219	*e*P	Pn	16 12 45.0	-0.3
	baz=227						
NACB				*e*S	Sn	16 13 09.5	-0.4
	baz=227						
IRIF	**Iriomote-Funau**	1.42	129	*e*S	Sn	16 13 11.0	+0.1
TWD	**Chiawan**	1.42	216	*e*P	Pn	16 12 45.2	-0.7
	baz=220						
LIOB	**Emei**	1.48	247	*e*P	Pn	16 12 46.4	0.0
	baz=244						
LIOB				*e*S	Sn	16 13 11.8	-0.1
	baz=244						
NSTT	**Nanjuang**	1.50	247	*e*P	Pn	16 12 46.3	-0.2
	baz=244						
NSTT				*e*S	Sn	16 13 11.5	-0.7
	baz=244						
TDCB	**Techi**	1.57	232	*e*P	Pn	16 12 47.5	+0.1
	baz=238						
HATJ	**Hateruma jima**	1.66	135	*e*S	Sn	16 13 14.7	-0.2
JKRS	**Kuro-shima**	1.68	126	P	Pn	16 12 49.1	+0.8
JKRS				S	Sn	16 13 15.0	-0.2
CHGB	**Renai**	1.69	227	*e*P	Pn	16 12 49.2	+0.5
	baz=226						
CHGB				*e*S	Sn	16 13 15.8	0.0
	baz=226						
JIJ	**Ishigaki jima**	1.71	120	P	Pn	16 12 49.0	+0.4
JIJ				S	Sn	16 13 14.4	-1.4
ESL	**Shilin**	1.72	215	*e*P	Pn	16 12 47.7	-1.0
	baz=220						
JISG	**Ishigakijimahi**	1.75	111	P	Pn	16 12 49.2	+0.2
JISG				S	Sn	16 13 16.0	-0.5
VWDT	**VWDT**	1.93	221	*e*P	Pn	16 12 51.6	+0.8
	baz=214						
VWDT				*e*S	Sn	16 13 20.9	+1.1
	baz=214						
SMLT	**Sun Moon Lake**	1.99	228	*e*P	Pn	16 12 52.0	+0.5
	baz=227						
HGSD	**Ruisui**	2.00	210	*e*P	Pn	16 12 51.4	-0.1
	baz=218						
SSLB	**Suanglung**	2.02	225	*e*P	Pn	16 12 51.6	-0.2
	baz=232						
SSLB				*e*S	Sn	16 13 20.9	-0.7
	baz=232						
JTJ	**Tarama**	2.07	106	P	Pn	16 12 53.1	+0.9
JTJ				S	Sn	16 13 22.2	-0.1
YULB	**Yu-li**	2.14	212	*e*P	Pn	16 12 52.3	-0.7
	baz=217						
CHN5	**Tsauling**	2.34	226	*e*P	Pn	16 12 55.1	-0.1
	baz=226						
CHKT	**Chengkung**	2.37	207	*e*P	Pn	16 12 56.3	+0.8
	baz=204						
JIRB	**Irabujima**	2.44	99	*e*S	Sn	16 13 28.5	-1.1
JIKM	**Ikemajima**	2.50	96	*e*S	Sn	16 13 30.6	-0.1
JOGS	**Gusukube**	2.67	100	*e*S	Sn	16 13 33.9	-0.3

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*JMA **03** 16:41:28.9±0.2, 43°.32N×147°.05E, h49^{km}±4^{km}, M3.0*
*ISCJB **03** 16:41:29.3±1.0, 43°.42N±0°.07×147°.00E±0°.07, h59^{km}±13^{km}, Error ellipse: s-maj=12.5km s-min=6.7km az=146.8*
*SKHL **03** 16:41:30.5±0.8, 43°.41N×146°.96E, h59^{km}±4^{km}, mb4.0/6*
ISC 03 16:41:30.2±1.9**, 43°.42N**±0°.09×**147°.01E**±0°.08**, h53**^{km}±18^{km}**, n17, σ0ˢ.84**/30**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	**Shikotan**	0.47	343	*i* P	Pn	16 41 41.9	+0.6
SHO				AMB	AMB	16 41 42.1	
	24nm,0.2s						
SHO				*e*S	Sn	16 41 50.0	+0.7
SHO				A	A	16 41 50.9	
	777nm,0.2s						
SHO				A	A	16 41 50.9	
	414nm,0.2s						
NEM2	**Nemuro 2**	0.93	267	P	Pn	16 41 46.2	-0.8
NEM2				*e*S	Sn	16 41 59.2	-0.2
YUK	**Yuzh-Kuril'sk**	1.04	307	*i* P	Pn	16 41 48.0	-0.4
YUK				AMB	AMB	16 41 48.0	
	98nm,0.2s						
YUK				AMB	AMB	16 41 48.0	
	26nm,0.2s						
YUK				*i* S	Sn	16 42 01.0	-1.0
YUK				A	A	16 42 03.0	
	480nm,0.2s						
YUK				A	A	16 42 03.0	
	540nm,0.2s						
GRPR	**Tuman**	1.07	303	*i* P	Pn	16 41 48.0	-0.9
GRPR				AMB	AMB	16 41 51.0	
	106nm,0.1s						
GRPR				AMB	AMB	16 41 51.0	
	14nm,0.1s						
GRPR				*i* S	Sn	16 42 03.0	+0.3
GRPR				A	A	16 42 03.3	
	547nm,0.2s						
GRPR				A	A	16 42 03.3	
	508nm,0.2s						
LAGR	**Lagunnoye**	1.09	306	*i* P	Pn	16 41 48.0	-1.2
LAGR				AMB	AMB	16 41 51.0	
	73nm,0.1s						
LAGR				AMB	AMB	16 41 51.0	
	53nm,0.1s						
LAGR				AMB	AMB	16 41 51.0	
	23nm,0.1s						
LAGR				*i* S	Sn	16 42 02.0	-1.3
LAGR				A	A	16 42 06.0	
	563nm,0.2s						
LAGR				A	A	16 42 06.0	
	314nm,0.2s						
GLVR	**Golovnino**	1.13	287	*i* P	Pn	16 41 49.0	-0.7
GLVR				AMB	AMB	16 41 50.0	
	31nm,0.1s						
GLVR				*i* S	Sn	16 42 04.0	-0.2
GLVR				A	A	16 42 08.0	
	418nm,0.2s						
GLVR				A	A	16 42 08.0	
	537nm,0.2s						
JRA	**Rausu**	1.47	291	P	Pn	16 41 54.3	+0.1
JRA				*e*S	Sn	16 42 12.7	+0.4
JNK	**Nakash**	1.68	276	P	Pn	16 41 56.7	-0.4
JNK				*e*S	Sn	16 42 17.9	+0.4
JAK	**Akkeshi**	1.75	257	P	Pn	16 41 57.5	-0.6
KUR	**Kuril'sk**	1.91	18	*i* P	Pn	16 42 00.3	0.0
KUR				AMB	AMB	16 42 03.4	
	26nm,0.2s						
KUR				*e*S	Sn	16 42 22.4	-0.8
KUR				A	A	16 42 25.0	
	47nm,0.3s						
KUR				A	A	16 42 25.0	
	367nm,0.3s						
JTKR	**Abashiri--Toko**	2.32	285	P	Pn	16 42 06.8	+0.9
JTKR				*e*S	Sn	16 42 34.5	+1.3
JAR	**Ashorobuto**	2.37	268	P	Pn	16 42 07.0	+0.4
JAR				*e*S	Sn	16 42 34.5	+0.1
JOB	**Onbets**	2.38	259	P	Pn	16 42 06.9	+0.2
JMP	**Maruseppu**	2.71	284	P	Pn	16 42 12.4	+1.1
JCH	**Churui**	2.80	254	P	Pn	16 42 12.1	-0.3
JCH				*e*S	Sn	16 42 44.9	0.0
JTHR	**Tokachihiroo**	2.96	249	P	Pn	16 42 15.5	+0.9
JTHR				*e*S	Sn	16 42 47.2	-1.6
JFR	**Furan**	3.24	267	P	Pn	16 42 19.9	+1.4

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*NIED **03** 16:57:00, 36°.40N×141°.20E, h32^{km}, Mw3.6 Best double couple: $M_0$2.86000×10^{14} NP1:ϕ_s109.00000°, δ25.00000°, λ-38.00000°. NP2:ϕ_s234.00000°, δ75.00000°, λ-110.00000°.*
*JMA **03** 16:57:21.0±0.1, 36°.43N×141°.10E, h45^{km}±1^{km}, M3.6*
JMA Felt I J1.
*IDC **03** 16:57:21.9±2.4, 36°.40N×141°.22E, h45^{km}±23^{km}, mb3.4/5, mb1 3.5/8, mb1mx3.2/71, mbtmp3.6/8, ML3.4/3, MS2.5/3, Ms1 2.5/3, ms1mx2.2/36, Error ellipse: s-maj=20.0km s-min=17.9km az=83.0*
ISC 03 16:57:19.1±1.8**, 36°.43N**±0°.05×**141°.22E**±0°.07**, h23**^{km}±13^{km}**, n26, σ0ˢ.94**/30**, mb3.6**/5**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHYU	**Hitachinakayam**	0.52	260	P	Pn	16 57 31.2	+0.1
JHYU				S	Sn	16 57 38.3	-1.0
JHO	**Hitachi**	0.56	289	P	Pn	16 57 31.4	-0.2
JHO				S	Sn	16 57 38.6	-1.6
JIHU	**Itakohorinouch**	0.73	231	P	Pn	16 57 34.6	+0.6
JIHU				*e*S	Sn	16 57 44.3	-0.1
ONAJ	**Iwakimizuishiy**	0.75	333	P	Pn	16 57 34.5	+0.1
ONAJ				*e*S	Sb	16 57 43.9	+0.4
JYT	**Yasato**	0.85	257	P	Pn	16 57 35.4	-0.3
JYT				*e*S	Sb	16 57 45.3	-1.0
JFK	**Kawauchi**	0.98	343	P	Pb	16 57 37.6	+0.2
JFT	**Otama**	1.30	327	P	Pb	16 57 43.1	+0.2
JFT				S	Sb	16 57 59.1	0.0
JAG	**Ashikaga**	1.43	270	P	Pn	16 57 43.6	0.0
JAG				S	Sn	16 58 00.0	-1.7
JMM	**Marumori**	1.47	347	P	Pb	16 57 45.3	-0.6
JMM				S	Sn	16 58 02.7	-0.1
MJAR	**Matsushiro Arr**	2.43	274	P	Pn	16 57 58.6	+1.2
	7.3nm,0.3s,baz=105,slow=9.4,SNR=72						
MJAR				S	Sn	16 58 27.7	+1.2
	8.2nm,0.3s,baz=190,slow=15,SNR=8.8						
MJAR				LR	LR	16 59 05.9	
	comp=Z,78nm,20.0s,baz=130,slow=43						
MAT	**Matsushiro**	2.43	274	P	Pn	16 57 59.0	+1.5
MAT				S	Sn	16 58 27.2	+0.7
JHJ	**Hachijo jima 2**	3.51	200	P	Pn	16 58 14.0	+1.8
	8.3nm,0.3s,baz=72,slow=20,SNR=3.3						
JHJ				S	Sn	16 58 51.6	-1.4
	11nm,0.3s,baz=90,slow=20,SNR=3.4						
ASAJ	**Asahikawa**	7.75	7	P	Pn	16 59 10.6	+0.2
	0.5nm,0.3s,baz=225,slow=12,SNR=9.9						
ASAJ				S	Sn	17 00 36.3	-1.1
	0.4nm,0.3s,baz=156,slow=20,SNR=2.4						
JNU	**Nakatsue**	9.13	252	LR	LR	17 03 35.0	
	comp=Z,31nm,18.3s,baz=124,slow=41						
KSRS	**Korea Array**	10.70	279	LR	LR	17 03 28.1	
	comp=Z,30nm,21.9s,baz=49,slow=34						
H11N2	**WAKE ISLAND Hy**	27.98	120	T	T	17 32 30.6	
	baz=313,slow=75						
H11N1	**WAKE ISLAND Hy**	27.98	120	T	T	17 32 30.6	
	baz=313,slow=75						
H11N3	**WAKE ISLAND Hy**	28.00	120	T	T	17 32 27.2	
	baz=313,slow=75						
H11S1	**WAKE ISLAND Hy**	28.67	122	T	T	17 33 20.9	
	baz=315						
H11S3	**WAKE ISLAND Hy**	28.67	122	T	T	17 33 18.1	
	baz=315,slow=74,SNR=37						
H11S2	**WAKE ISLAND Hy**	28.68	122	T	T	17 33 19.3	
	baz=315,slow=74,SNR=24						
ZALV	**Zalesovo Beam**	42.21	313	P	P	17 05 09.6	-0.4
	0.7nm,0.4s,baz=87,slow=8.1,SNR=2.3						
KURBB	**Kurchatov Arra**	46.25	308	P	P	17 05 42.5	0.0
	0.3nm,0.4s,baz=83,slow=8.8,SNR=7.4						
ILAR	**Eielson Array**	50.09	32	P	P	17 06 13.2	+1.3
	0.5nm,0.8s,baz=269,slow=6.2,SNR=6.1						
WRA	**Warramunga Arr**	56.44	188	P	P	17 06 58.7	-0.3
	0.7nm,0.6s,baz=6.0,slow=7.3,SNR=8.0						
ASAR	**Alice Springs**	60.17	188	P	P	17 07 24.4	-0.6
	0.2nm,0.7s,baz=3.1,slow=5.9,SNR=6.4						

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*ISCJB **03** 17:01:05.6±0.6, 7°.65N±0°.04×73°.45W±0°.04, h121^{km}±5^{km}, mb3.5/2, Error ellipse: s-maj=6.6km s-min=6.1km az=163.8*
*IDC **03** 17:01:07.7±1.6, 7°.67N×73°.31W, h138^{km}±18^{km}, mb3.0/2, mb1 3.4/4, mb1mx3.1/42, mbtmp3.6/4, Error ellipse: s-maj=41.3km s-min=16.4km az=121.0*
*RSNC **03** 17:01:07.4±0.8, 7°.62N×73°.44W, h110^{km}±5^{km}, ML3.3, Mw3.7*
ISC 03 17:01:05.8±0.9**, 7°.69N**±0°.04×**73°.41W**±0°.04**, h117**^{km}±7^{km}**, n23, σ1ˢ.47**/36**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OCAC	**Ocana**	0.55	9	*e*P	Pn	17 01 24.8	+0.8
OCAC				*e*S	Sn	17 01 38.1	+0.5
BRRC	**Barranca, Sant**	0.66	207	*e*P	Pn	17 01 24.4	-0.1
BRRC				*i*		17 01 24.7	
	comp=Z,816nm,0.1s						
BRRC				*e*S	Sn	17 01 38.1	-0.6
PAMC	**Pamplona, Colo**	0.79	116	*e*P	Pn	17 01 27.1	+0.9
PAMC				*e*S	Sn	17 01 42.2	+0.8
PAMC				*i*		17 01 43.8	
	comp=Z,551nm,0.1s						
BARC	**Barichara**	1.12	168	*e*P	Pn	17 01 29.1	0.0
BARC				*e*S	Sn	17 01 45.1	-1.4
BARC				*i*		17 01 46.9	
	comp=Z,745nm,0.2s						
ZARC	**Zaragoza, Cauc**	1.45	262	*e*P	Pn	17 01 32.9	+0.4
ZARC				*e*S	Sn	17 01 53.2	+0.4
ZARC				*i*		17 01 56.7	
	comp=Z,341nm,0.3s						
PTBC	**PUERTO BERRIO,**	1.55	222	*e*P	Pn	17 01 32.9	-0.7
PTBC				*e*S	Sn	17 01 53.6	-1.2
PTBC				*i*		17 01 57.8	
	comp=Z,198nm,0.3s						
RUSC	**La Rusia**	1.82	170	*e*P	Pn	17 01 36.6	-0.8
RUSC				*e*S	Sn	17 02 00.1	-1.2
TAMC	**Tame, Arauca**	2.03	128	*e*P	Pn	17 01 40.2	+0.6
TAMC				*e*S	Sn	17 02 06.1	+0.7
TAMC				*i*		17 02 12.3	
	comp=Z,110nm,0.3s						
CODC	**Agustˆ›n Codaz**	2.23	359	*e*P	Pn	17 01 43.1	+1.1
CODC				*i*		17 02 19.3	
	comp=Z,107nm,0.5s						
YOPC	**Yopal, Colombi**	2.52	157	*e*P	Pn	17 01 46.5	+0.6
YOPC				*e*S	Sn	17 02 16.6	-0.1
YOPC				*i*		17 02 19.4	
	comp=Z,63nm,0.2s						
NORC	**Norcasia**	2.56	215	*e*P	Pn	17 01 46.2	-0.2
NORC				*e*S	Sn	17 02 16.3	-1.3
HELC	**Santa Helena**	2.58	235	*e*P	Pn	17 01 46.8	-0.1
HELC				*e*S	Sn	17 02 17.5	-0.9
HELC				*i*		17 02 26.0	
	comp=Z,154nm,0.3s						
DBBC	**Dabeiba**	2.86	257	*e*P	Pn	17 01 50.8	+0.5
ROSC	**El Rosal**	2.98	198	P	Pn	17 01 55.3	+3.2
	comp=Z,9.4nm,0.3s,baz=205,slow=10,SNR=14						
ROSC				S	Sn	17 02 31.6	+3.9
	comp=Z,9.8nm,0.3s,baz=125,slow=18,SNR=4.6						
SDV	**Santo Domingo**	2.99	66	P	Pn	17 01 53.5	+1.4
	comp=Z,21nm,0.3s,baz=269,slow=9.5,SNR=40						
SDV				S	Sn	17 02 23.0	-4.8
	comp=Z,14nm,0.3s,baz=210,slow=20,SNR=9.5						
SDV	**Santo Domingo**	2.99	66	*e*P	Pn	17 01 53.4	+1.4
CHIC	**Chingaza**	3.06	186	*e*P	Pn	17 01 54.0	+0.8
CHIC				*i*		17 02 41.6	
	comp=Z,52nm,0.5s						
GUYC	**Guyana, Colomb**	3.15	219	*e*P	Pn	17 01 55.2	+0.8
PRAC	**Prado**	4.22	200	*e*P	Pn	17 02 08.6	+0.2
TXAR	**Lajitas Array**	35.68	311	P	P	17 07 53.2	+0.1
	comp=Z,0.2nm,0.6s,baz=134,slow=9.1,SNR=2.9						
YKA	**Yellowknife Ar**	62.35	340	P	P	17 11 16.1	+0.4
	comp=Z,0.5nm,0.6s,baz=127,slow=7.0,SNR=4.7						
ASAR	**Alice Springs**	149.38	236	PKPbc	PKPbc	17 20 41.0	-1.1
	comp=Z,0.2nm,0.5s,baz=120,slow=3.5,SNR=7.8						
WRA	**Warramunga Arr**	150.49	243	PKPbc	PKPbc	17 20 43.8	-1.0
	comp=Z,0.4nm,0.4s,baz=104,slow=2.8,SNR=11						

MEX 03 17:21:01.5±0.7**, 15°.29N×91°.97W, h175**^{km}±5^{km}**, MD3.6, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCIG	**Comitan**	1.00	351	*e*P	Pn	17 21 27.7	-1.2
CCIG				*e*S	Sn	17 21 47.8	-2.4
PCIG		1.27	289	*e*P	Pn	17 21 29.9	-1.1
PCIG				*e*S	Sn	17 21 51.4	-2.2
TGIG		1.85	323	*i* P	Pn	17 21 35.5	-1.1
TGIG				*i* S	Sn	17 22 01.6	-2.5

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*IDC **03** 17:25:30.3±3.0, 23°.20S×177°.63W, h230^{km}±33^{km}, mb3.4/5, mb1 3.6/7, mb1mx3.2/49, mbtmp4.1/7, MS3.7/1, Ms1 3.7/1, ms1mx2.7/21, Error ellipse: s-maj=30.6km s-min=16.6km az=124.0*
*ISCJB **03** 17:25:31.3±0.7, 23°.39S±0°.06×177°.6W±0°.2, h250^{km}, mb3.5/5, Error ellipse: s-maj=21.2km s-min=7.2km az=10.7*
*WEL **03** 17:25:46.4±1.2, 24°S±22°×17°7W±8°8, h363^{km}±15^{km}*
ISC 03 17:25:30.6±0.8**, 23°.36S**±0°.08×**177°.4W**±0°.2**, h250**^{km}**, n24, σ4ˢ.35**/28**, mb3.4**/5**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	5.88	184	P	Pn	17 27 10.4	+13
GLKZ	**Green Lake**	5.89	184	S	S	17 28 14.0	+7.3
AFI	**Afiamalu**	10.81	31	P	Pn	17 28 01.1	+1.5
	1.4nm,0.3s,baz=252,slow=20,SNR=2.9						
AFI				S	S	17 29 55.5	-5.3
	2.4nm,0.3s,baz=246,slow=23,SNR=4.1						
HAZ	**Te Kaha**	14.93	195	P	Pn	17 28 53.2	+3.4
HAZ				S	S	17 31 27.3	-7.3
DZM	**Mont Dzumac**	14.96	272	*e*LR	LR	17 29 55.8	
	143nm,26.1s						
RUGZ	**Raukumara Rang**	15.15	195	P	Pn	17 28 54.5	+1.8
RUGZ				S	S	17 31 30.3	-9.3
TWGZ	**Tauwhareparae**	15.29	194	P	Pn	17 28 58.2	+4.0
TWGZ				S	S	17 31 34.9	-7.3
MWZ	**Matawai**	15.54	195	P	Pn	17 29 00.0	+2.8
MWZ				S	S	17 31 39.5	-7.9
URZ	**Urewera**	15.57	196	P	Pn	17 28 58.7	+1.2
	2.8nm,0.3s,baz=277,slow=3.2,SNR=18						
URZ				S	S	17 31 40.5	-7.4
	0.7nm,0.3s,baz=104,slow=19,SNR=6.7						
URZ	**Urewera**	15.57	196	P	Pn	17 28 58.8	+1.2
URZ				S	S	17 31 39.8	-8.1
MUGZ	**Murupara**	15.87	197	P	Pn	17 29 02.1	+1.1
RTZ	**Ruatahuna**	15.94	196	P	Pn	17 29 03.2	+1.2
MRHZ	**Matea Rd**	16.30	197	P	Pn	17 29 06.8	+0.6
NMHZ	**Naumai**	16.44	196	P	Pn	17 29 09.1	+1.2
NMHZ				S	S	17 32 01.1	-4.3
HIZ	**Hauiti**	16.48	202	P	Pn	17 29 11.2	+2.8
BKZ	**Black Stump Fm**	16.59	197	P	Pn	17 29 09.8	+0.2
BKZ				S	S	17 32 03.5	-4.7
RPZ	**Rata Peaks**	22.42	202	P	P	17 30 10.1	+1.8
	9.4nm,0.9s,baz=31,slow=5.9,SNR=5.0						
PPT2	**Papeete2**	26.67	83	*e*LR	LR	17 29 48.2	
	97nm,24.2s						
CTA	**Charters Tower**	33.86	268	P	P	17 31 50.9	+0.9
	5.8nm,1.0s,baz=95,slow=12,SNR=6.3						
ASAR	**Alice Springs**	44.47	259	P	P	17 33 17.3	-0.3
	0.3nm,0.3s,baz=92,slow=7.7,SNR=12						
WRA	**Warramunga Arr**	44.82	265	P	P	17 33 19.7	-0.6
	0.3nm,0.5s,baz=97,slow=8.5,SNR=17						
WRA				LR	LR	17 52 23.7	
	comp=Z,87nm,18.7s,baz=70,slow=36						
ILAR	**Eielson Array**	90.97	13	P	P	17 38 06.6	+0.9
	0.2nm,0.4s,baz=227,slow=5.9,SNR=4.4						
HFS	**Hagfors**	142.44	351	PKhKP	PKPpre	17 44 31.0	
	1.1nm,0.3s,baz=72,slow=4.7,SNR=14						
AKASG	**Malin Array Be**	145.76	330	PKPbc	PKPab	17 44 41.1	+0.3
	0.3nm,0.3s,baz=43,slow=3.8,SNR=3.5						

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*NIED **03** 17:38:00, 32°.80N×130°.50E, h5^{km}, Mw3.7 Best double couple: $M_0$3.49000×10^{14} NP1:ϕ_s99.00000°, δ47.00000°, λ-69.00000°. NP2:ϕ_s250.00000°, δ47.00000°, λ-111.00000°.*
*IDC **03** 17:38:32.8±1.5, 33°.18N×131°.58E, h0^{km}, mb3.8/5, mb1 3.7/7, mb1mx3.4/78, mbtmp3.8/7, ML3.1/2, Error ellipse: s-maj=24.7km s-min=10.9km az=161.0*
*ISCJB **03** 17:38:35.6±0.5, 32°.80N±0°.03×130°.48E±0°.05, h12^{km}, mb3.8/5, Error ellipse: s-maj=6.5km s-min=4.7km az=172.2*
*JMA **03** 17:38:36.3, 32°.78N×130°.50E, h10^{km}±1^{km}, M3.7 Broadband fault plane solution: P waves. NP1: ϕ_s220.00000°, δ60.00000°, λ-114.00000°. NP2: ϕ_s82.00000°, δ38.00000°, λ-55.00000°. Principal axes: T Plg12.0000°, Azm327.0000°; N Plg21.0000°, Azm232.0000°; P Plg66.0000°, Azm85.0000°;*
JMA Felt II J1.
ISC 03 17:38:36.9±0.7**, 32°.77N**±0°.03×**130°.51E**±0°.04**, h12**^{km}**, n13, σ1ˢ.03**/17**, mb4.0**/5**, 4C, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTA	**Tamana**	0.20	7	⇑P	Pg	17 38 40.4	-0.8
JTA				S	Sg	17 38 43.2	-1.0
JIU2	**Izumi 2**	0.34	131	⇑P	Pg	17 38 43.1	-0.7
JIU2				S	Sg	17 38 48.1	-0.3
JHD	**Hondo**	0.43	226	⇑P	Pg	17 38 45.0	-0.5
JHD				S	Sg	17 38 51.7	+0.5
JNU	**Nakatsue**	0.47	42	Pg	Pg	17 38 45.5	-0.6
	313nm,0.3s,baz=259,slow=6.9,SNR=1176						
JNU				Lg	Lg	17 38 51.7	
	598nm,0.3s,baz=197,slow=19,SNR=91						
JTZ	**Takazaki**	0.99	150	⇑P	Pg	17 38 55.5	-0.6
JTZ				S	Sb	17 39 08.8	-0.3
KSRS	**Korea Array**	5.13	336	Pn	Pn	17 39 54.0	+0.5
	0.7nm,0.3s,baz=155,slow=14,SNR=9.5						
KSRS				Pg	Pb	17 40 08.5	+1.9
	1.2nm,0.3s,baz=152,slow=16,SNR=11						
KSRS				Lg	Lg	17 41 16.4	
	2.0nm,0.3s,baz=155,slow=31,SNR=12						
JOW	**Kunigami**	6.23	199	Pn	Pn	17 40 13.7	+5.1
	0.8nm,0.3s,baz=90,slow=21,SNR=5.2						
MJAR	**Matsushiro Arr**	7.38	57	Pg	Pn	17 40 26.6	+2.2
	0.4nm,0.3s,baz=246,slow=15,SNR=7.4						
KURBB	**Kurchatov Arra**	41.77	311	P	P	17 46 25.6	-0.4
	0.5nm,0.7s,baz=99,slow=9.3,SNR=4.4						
BVAR	**Borovoye Array**	46.93	314	P	P	17 47 07.2	0.0
	0.8nm,0.6s,baz=98,slow=11,SNR=5.7						
FINES	**FINESS Array B**	68.19	330	P	P	17 49 36.0	-0.8
	0.9nm,0.6s,baz=51,slow=6.1,SNR=6.8						
AKASG	**Malin Array Be**	71.89	319	P	P	17 49 58.9	-0.8
	1.1nm,0.5s,baz=57,slow=7.2,SNR=4.4						
HFS	**Hagfors**	73.97	332	P	P	17 50 10.6	-1.2
	0.8nm,0.7s,baz=26,slow=6.9,SNR=2.9						

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*NIED **03** 18:30:00, 30°.10N×131°.20E, h20^{km}, Mw4.2 Best double couple: $M_0$2.11000×10^{15} NP1:ϕ_s175.00000°, δ29.00000°, λ49.00000°. NP2:ϕ_s40.00000°, δ68.00000°, λ110.00000°.*
*ISCJB **03** 18:30:41.9±0.7, 30°.07N±0°.04×131°.12E±0°.08, h43^{km}±6^{km}, mb3.7/13, MS3.5/8, Error ellipse: s-maj=12.2km s-min=5.1km az=22.3*
*JMA **03** 18:30:41.3±0.1, 30°.06N×131°.21E, h25^{km}±1^{km}, M3.9*
*IDC **03** 18:30:43.9±3.1, 30°.14N×130°.88E, h36^{km}±27^{km}, mb3.6/12, mb1 3.6/17, mb1mx3.4/67, mbtmp3.7/17, ML3.0/5, MS3.5/9, Ms1 3.5/9, ms1mx3.0/68, Error ellipse: s-maj=25.8km s-min=15.9km az=111.0*
ISC 03 18:30:42.4±1.5**, 30°.08N**±0°.06×**131°.12E**±0°.08**, h29**^{km}±9^{km}**, n39, σ0ˢ.93**/37**, mb3.7**/13**, MS3.4**/8**, 2C-1D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMTN	**Minamitane**	0.37	330	P	Pb	18 30 50.2	-0.6
JMTN				*e*S	Sb	18 30 56.3	-0.1
JYAK	**Yakushimahirau**	0.55	287	P	Pb	18 30 53.5	-0.1
JYAK				*e*S	Sn	18 31 01.9	-0.5
JTN	**Tanegashima 3**	0.58	348	⇓P	Pb	18 30 53.6	-0.6
JTN				S	Sb	18 31 02.1	-0.1
JKC	**Kuchinoerabu**	0.88	296	⇑P	Pb	18 30 59.4	+0.3
JTSR	**Tashiro 2**	1.09	351	⇑P	Pn	18 31 01.5	-0.3
JTSR				*e*S	Sb	18 31 17.0	+0.3
JNN	**Nakanoshima**	1.10	258	P	Pb	18 31 02.5	-0.4
JNN				*e*S	Sb	18 31 18.6	+1.7
JNAR	**Kushima--Naru**	1.45	5	P	Pn	18 31 06.4	-0.2
JTAJ	**Takarajima**	1.91	241	P	Pn	18 31 13.8	+0.9
JAM	**Amami Oshima**	2.12	219	P	Pn	18 31 15.7	-0.2
JAMN	**Amaminishikomi**	2.50	223	P	Pn	18 31 20.9	-0.1
JTK	**Tokunoshima**	2.97	220	P	Pn	18 31 27.6	0.0
JNU	**Nakatsue**	3.04	356	Pn	Pn	18 31 28.9	+0.4
	4.3nm,0.3s,baz=342,slow=3.6,SNR=20						
JNU				Sn	Sn	18 32 04.0	+0.1
	3.3nm,0.3s,baz=268,slow=3.3,SNR=7.1						
JOW	**Kunigami**	4.09	218	Pn	Pn	18 31 42.6	-0.4
	1.3nm,0.3s,baz=78,slow=27,SNR=13						
JOW				Sn	Sn	18 32 29.5	-0.4
	3.4nm,0.3s,baz=188,slow=26,SNR=8.4						
KSRS	**Korea Array**	7.82	341	Pn	Pn	18 32 36.8	+2.6
	0.3nm,0.3s,baz=160,slow=14,SNR=13						
MJAR	**Matsushiro Arr**	8.76	41	Pn	Pn	18 32 48.2	+1.1
	0.3nm,0.3s,baz=182,slow=11,SNR=4.0						
ASAJ	**Asahikawa**	16.71	30	Pn	P	18 34 36.6	+0.2
	0.1nm,0.3s,baz=230,slow=7.9,SNR=4.2						
ASAJ				LR	LR	18 41 27.2	
	comp=Z,100nm,19.1s,baz=229,slow=38						
KLR	**Kul'dur**	19.13	1	P	P	18 35 02.9	-0.1
	0.0nm,0.3s,baz=182,slow=8.6,SNR=4.9						
DAV	**Davao City (W)**	23.48	194	LR	LR	18 45 14.1	
	comp=Z,47nm,20.0s,baz=358,slow=37						
SONM	**Songino Array**	25.97	320	P	P	18 36 11.2	-1.4
	0.9nm,0.5s,baz=132,slow=10,SNR=6.5						
SONM				LR	LR	18 47 20.3	
	comp=Z,85nm,20.8s,baz=94,slow=39						

PETK	Petropavlovsk-	30.09	33	LR	LR	18 49 49.7	
	comp=Z,50nm,18.7s,baz=239,slow=38						
CMAR	Chiang Mai Arr	31.42	256	P	P	18 37 00.5	-0.8
	0.5nm,0.7s,baz=46,slow=9.5,SNR=4.2						
CMAR				LR	LR	18 51 33.7	
	comp=Z,64nm,18.4s,baz=70,slow=40						
H11N2	WAKE ISLAND Hy	33.93	99	T	T	19 13 27.6	
	baz=296,slow=75,SNR=7.7						
H11N1	WAKE ISLAND Hy	33.93	99	T	T	19 13 25.0	
	baz=296,slow=75,SNR=8.7						
H11N3	WAKE ISLAND Hy	33.94	99	T	T	19 13 25.8	
	baz=296,slow=75,SNR=8.7						
SEY	Seymchan	35.61	17	P	P	18 37 39.8	+2.6
	0.5nm,0.5s,baz=206,slow=6.2,SNR=4.0						
ZALV	Zalesovo Beam	40.87	319	LR	LR	18 56 34.9	
	comp=Z,54nm,21.1s,baz=70,slow=38						
MKAR	Makanchi Array	41.02	308	P	P	18 38 22.3	-0.7
	0.8nm,0.7s,baz=99,slow=8.7,SNR=8.3						
PMG	Port Moresby	42.18	156	LR	LR	18 53 55.3	
	comp=Z,114nm,20.5s,baz=160,slow=33						
KURBB	Kurchatov Arra	43.95	313	P	P	18 38 45.6	-1.1
	0.9nm,1.0s,baz=99,slow=8.9,SNR=6.5						
FITZ	Fitzroy Crossi	48.19	187	LR	LR	18 58 40.9	
	comp=Z,146nm,20.9s,baz=140,slow=35						
BVAR	Borovoye Array	49.20	316	P	P	18 39 27.2	-0.6
	2.4nm,0.6s,baz=81,slow=8.9,SNR=14						
ASAR	Alice Springs	53.51	177	P	P	18 40 01.6	+1.3
	0.4nm,0.9s,baz=9.0,slow=14,SNR=4.8						
ARU	Arti	56.01	320	LR	LR	19 06 43.7	
	comp=Z,85nm,19.0s,baz=99,slow=39						
ARCES	ARCESS Array B	67.37	338	P	P	18 41 34.6	+0.2
	1.6nm,0.7s,baz=28,slow=5.5,SNR=3.5						
FINES	FINESS Array B	70.77	331	P	P	18 41 55.0	-0.6
	1.4nm,0.6s,baz=72,slow=6.2,SNR=13						
YKA	Yellowknife Ar	73.97	26	P	P	18 42 14.5	-0.2
	0.1nm,0.3s,baz=329,slow=5.8,SNR=3.5						
HFS	Hagfors	76.59	333	P	P	18 42 29.4	-0.4
	0.8nm,0.5s,baz=48,slow=2.1,SNR=6.4						
BRTR	Keskin Array B	76.67	308	P	P	18 42 30.2	-0.7
	0.8nm,0.6s,baz=105,slow=6.3,SNR=5.0						
NB2	NORSAR Subarra	76.98	334	P	P	18 42 31.2	-0.8
	comp=Z,0.4nm,0.5s,baz=48,slow=5.9						

*ISK **03** 18:36:43.8, 38°.58N×43°.16E, h14^{km}, ML2.6/4*

*CSEM **03** 18:36:44.6±0.2, 38°.60N×43°.17E, h15^{km}, ML2.6, Error ellipse: s-maj=5.1km s-min=4.7km az=130.0*

*ISCJB **03** 18:36:45.5±0.5, 38°.63N±0°.03×43°.15E±0°.03, h7^{km}±5^{km}, Error ellipse: s-maj=4.6km s-min=4.4km az=144.3*

*DDA **03** 18:36:45.2, 38°.65N×43°.19E, h7^{km}, Ml2.7*

ISC 03 18:36:45.1±0.8**, 38°.62N**±0°.02×**43°.19E**±0°.02**, h13**^{km}±6^{km}**, n27, σ1^{s}.11**/46**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VANB	Van	0.15	100	PG	Pg	18 36 49.2	+0.2
VANB				SG	Sg	18 36 52.3	+0.6
VANB	Van	0.15	100	*e*Pg	Pg	18 36 49.2	+0.2
VANB				*e*Sg	Sg	18 36 52.3	+0.6
TVAN	Van	0.19	119	*i* P	Pg	18 36 49.1	-0.5
TVAN				*i* S	Sb	18 36 53.8	-0.4
TVAN	Van	0.19	119	P	Pg	18 36 49.1	-0.5
TVAN				S	Sb	18 36 53.8	-0.4
GEVA	Gevas	0.33	199	*i* P	Pg	18 36 51.1	-0.7
GEVA				*i* S	Sb	18 36 57.8	-0.3
GEVA	Gevas	0.33	199	P	Pg	18 36 51.2	-0.7
GEVA				S	Sb	18 36 57.8	-0.3
ADCV	BITLIS_Adilcev	0.41	297	*i* P	Pg	18 36 53.1	-0.3
ADCV				*i* S	Sb	18 37 00.2	-0.4
ADCV	BITLIS_Adilcev	0.41	297	P	Pg	18 36 53.1	-0.3
ADCV				S	Sb	18 37 00.2	-0.4
VMUR	Van-Muradiye	0.47	39	*i* P	Pg	18 36 54.9	+0.4
VMUR				*i* S	Sb	18 37 03.6	+1.3
VMUR	Van-Muradiye	0.47	39	P	Pg	18 36 54.9	+0.4
VMUR				S	Sb	18 37 03.6	+1.3
CLDR	Caldiran	0.77	47	PG	Pg	18 36 59.8	-0.3
CLDR	Caldiran	0.77	47	*i* P	Pg	18 36 59.8	-0.3
CLDR				*i* S	Sn	18 37 12.6	-0.7
CLDR	Caldiran	0.77	47	P	Pg	18 36 59.8	-0.3
CLDR				S	Sn	18 37 12.6	-0.7
TUTA	Tutak	0.83	339	*i* P	Pg	18 37 00.5	-0.8
TUTA				*i* S	Sg	18 37 12.4	+0.1
TUTA	Tutak	0.83	339	P	Pg	18 37 00.5	-0.8
TUTA				S	Sg	18 37 12.4	+0.1
GURO	Guroymak-BITLI	0.91	266	PG	Pb	18 37 01.2	-1.6
GURO	Guroymak-BITLI	0.91	266	*e*Pg	Pb	18 37 01.2	-1.6
AGRB	Hanur-Agry	0.97	351	PG	Pb	18 37 03.6	-0.2
AGRB	Hanur-Agry	0.97	351	*e*Pg	Pb	18 37 03.6	-0.2
EKAR	Karacoban	1.08	306	*i* P	Pb	18 37 05.8	0.0
EKAR				*i* S	Sn	18 37 24.2	+3.0
EKAR	Karacoban	1.08	306	P	Pb	18 37 05.8	0.0
HAKT	HAKKARI	1.14	159	*i* P	Pb	18 37 06.2	-0.5
HAKT				*i* S	Sn	18 37 24.7	+2.3
HAKT	HAKKARI	1.14	159	P	Pb	18 37 06.2	-0.5
HAKT				S	Sn	18 37 24.7	+2.3
SRTM	Siirt_Merkez	1.18	238	*i* P	Pg	18 37 08.1	+0.3
SRTM				*i* S	Sg	18 37 25.8	+2.5
SRTM	Siirt_Merkez	1.18	238	P	Pg	18 37 08.1	+0.3
SRTM				S	Sg	18 37 25.8	+2.5
SIRT	Sirnak	1.27	208	PN	Pn	18 37 07.1	-1.4
SIRT	Sirnak	1.27	208	*e*Pn	Pn	18 37 07.1	-1.4

*IDC **03** 18:50:27.4±2.5, 38°.17N×69°.80E, h0^{km}, mb3.8/5, mb1 3.8/11, mb1mx3.5/75, mbtmp3.7/11, ML3.1/5, MS2.8/4, Ms1 2.8/4, ms1mx2.4/65, Error ellipse: s-maj=40.1km s-min=16.0km az=158.0*

*ISCJB **03** 18:50:31.7±0.8, 38°.60N±0°.07×69°.43E±0°.05, h12^{km}, mb3.7/6, MS2.8/3, Error ellipse: s-maj=10.3km s-min=5.3km az=165.1*

*NNC **03** 18:50:36.9±1.7, 38°.84N×69°.69E, h0^{km}, mb4.2, mpv3.9, Error ellipse: s-maj=13.1km s-min=9.6km az=22.0*

ISC 03 18:50:32.1±1.2**, 38°.49N**±0°.10×**69°.56E**±0°.06**, h12**^{km}**, n33, σ1^{s}.84**/39**, mb3.7**/6**, MS2.5**/3**, 13C-9D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAS	Tashkent	2.85	356	⇑Pn	Pn	18 51 20.7	+3.3
	76nm,0.2s						
TAS				⇑Lg	Lg	18 51 55.9	
	289nm,0.3s						
SFK	Sufi-Kurgan	3.42	62	⇑Pn	Pn	18 51 27.6	+2.2
	8.7nm,0.4s						
SFK				⇓Pg	Pb	18 51 34.5	+1.8
	23nm,0.5s						
SFK				⇑Lg	Lg	18 52 18.1	
	188nm,0.7s						
MNAS	Manas	4.58	28	⇑Pn	Pn	18 51 42.8	+1.4
	15nm,0.6s						
MNAS				⇓Sn	Sn	18 52 34.7	+0.1
	40nm,0.4s						
MNAS				⇑Lg	Lg	18 52 49.2	
	52nm,0.5s						
KK31	Karatay Array	4.67	9	⇓Pn	Pn	18 51 42.7	+0.3
	3.1nm,0.3s,baz=201,slow=16,SNR=89						
KK31				⇓Pg	Pb	18 51 55.1	+1.2
	4.3nm,0.3s,baz=181,slow=9.1,SNR=14						
KK31				⇑Sn	Sn	18 52 34.4	-2.1
	8.4nm,0.3s,baz=192,slow=22,SNR=3.8						
KK31				⇑Lg	Lg	18 52 52.5	
	19nm,0.4s,baz=192,slow=27,SNR=9.7						
AML	Almayashu	4.82	40	P	Pn	18 51 47.1	+2.3
	SNR=23						
EKS2	Erkin-Say	5.26	36	P	Pn	18 51 53.1	+2.4
	SNR=24						
UCH	Uchtor	5.32	44	P	Pn	18 51 54.6	+2.9
	SNR=7.4						
AAK	Ala-Archa	5.59	41	Pn	Pn	18 51 56.3	+1.1
	9.6nm,0.3s,baz=232,slow=2.0,SNR=19						
AAK				Sn	Sn	18 52 59.8	+0.3
	3.0nm,0.3s,baz=143,slow=23,SNR=6.3						
AAK				Lg	Lg	18 53 22.8	
	3.3nm,0.3s,baz=101,slow=16,SNR=4.1						
AAK				LR	LR	18 54 18.6	
	comp=Z,47nm,20.4s,baz=240,slow=40						
AAK	Ala-Archa	5.59	41	⇓Pn	Pn	18 51 57.9	+2.6
	8.8nm,0.3s						
AAK				⇓Sn	Sn	18 53 01.1	+1.6
	15nm,0.5s						
AAK				⇑Lg	Lg	18 53 21.4	
	30nm,0.7s						
AAK	Ala-Archa	5.59	41	P	Pn	18 51 58.4	+3.1
	SNR=12						
KZA	Kyzart	5.64	49	P	Pn	18 51 57.3	+1.2
	SNR=6.6						
KBK	Karagaybulak	5.84	43	P	Pn	18 52 01.1	+2.3
	SNR=9.5						
CHMS	Chumysh	5.99	40	P	Pn	18 52 02.5	+2.0
	SNR=8.5						
USP	Ospenovka	6.07	37	P	Pn	18 52 04.0	+2.4
	SNR=13						
TKM2	Tokmak 2	6.37	44	⇓Pn	Pn	18 52 05.6	-0.4
	4.6nm,0.3s						
TKM2				⇓Sn	Sn	18 53 18.8	-0.1
	23nm,0.6s						
TKM2				⇓Lg	Lg	18 53 49.2	
	20nm,0.7s						
TKM2	Tokmak 2	6.37	44	P	Pn	18 52 05.9	-0.1
	SNR=14						
GEYT	Alibeck	9.03	270	Sn	Sn	18 54 24.8	+0.9
	0.7nm,0.3s,baz=128,slow=19,SNR=4.7						
MKAR	Makanchi Array	12.51	44	Pn	Pn	18 53 27.7	-2.2
	0.1nm,0.3s,baz=224,slow=9.9,SNR=4.3						
AB31	Akbulak array	12.79	330	⇑Pn	Pn	18 53 34.6	+0.9
	1.5nm,0.3s,baz=157,slow=10,SNR=35						
AB31				⇑Sn	Sn	18 55 57.3	+1.3
	2.1nm,0.5s,baz=148,slow=24,SNR=6.7						
KURBB	Kurchatov Arra	13.70	25	Pn	Pn	18 53 42.6	-3.5
	0.0nm,0.3s,baz=213,slow=12,SNR=2.5						
KURBB				Lg	Lg	18 57 44.6	
	0.0nm,0.3s,baz=211,slow=30,SNR=6.0						
AKTO	Aktyubinsk	14.49	329	Pn	Pn	18 53 56.0	-0.9
	0.3nm,0.3s,baz=139,slow=17,SNR=9.2						
AKTO				Sn	Sn	18 56 28.8	-8.6
	0.3nm,0.3s,baz=14,slow=21,SNR=4.1						
AKTO	Aktyubinsk	14.49	329	⇑Pn	Pn	18 53 57.9	+1.0
	4.0nm,0.9s						
AKTO				⇑Sn	Sn	18 56 38.1	+0.7
	4.0nm,1.1s						
BVAR	Borovoye Array	14.55	2	Pn	Pn	18 53 55.7	-2.1
	0.2nm,0.3s,baz=170,slow=10,SNR=4.1						
ZALV	Zalesovo Beam	18.66	29	P	P	18 54 46.9	-2.8
	0.4nm,0.3s,baz=226,slow=12,SNR=10						
KVAR	Kislovodsk Arr	20.89	294	LR	LR	19 04 59.4	
	comp=Z,23nm,21.7s,baz=183,slow=41						
ASF	Jabal al Asfar	27.29	267	LR	LR	19 10 15.5	
	comp=Z,99nm,21.0s,baz=108,slow=43						
FINES	FINESS Array B	35.20	325	P	P	18 57 24.9	-0.8
	1.0nm,0.8s,baz=131,slow=9.1,SNR=5.0						
ARCES	ARCESS Array B	38.87	337	P	P	18 57 55.9	-1.1
	1.9nm,0.9s,baz=99,slow=7.5,SNR=4.5						
HFS	Hagfors	40.80	321	P	P	18 58 12.7	-0.3
	0.7nm,0.4s,baz=98,slow=10,SNR=6.5						
NB2	NORSAR Subarra	42.11	322	P	P	18 58 23.1	-0.7
	comp=Z,0.4nm,0.5s,baz=94,slow=8.6						
KLR	Kul'dur	44.92	55	LR	LR	19 19 50.9	
	comp=Z,4.5nm,18.3s,slow=39						
INK	Inuvik	72.13	9	P	P	19 01 55.4	-0.5
	comp=Z,0.9nm,0.5s,baz=321,slow=6.5,SNR=3.1						
YKA	Yellowknife Ar	79.31	2	P	P	19 02 36.4	-0.7
	comp=Z,0.3nm,0.5s,baz=346,slow=5.2,SNR=3.7						

*DMN **03** 19:11:34.3±0.7, 30°.77N×88°.76E, h10^{km}, Ml5.1/5, Error ellipse: s-maj=14.1km s-min=9.9km az=57.0*

*IDC **03** 19:11:39.2±0.6, 29°.88N×88°.02E, h0^{km}, mb4.3/28, mb1 4.4/30, mb1mx4.2/66, mbtmp4.3/30, ML3.9/2, MS3.8/35, Ms1 3.8/35, ms1mx3.7/63, Error ellipse: s-maj=15.7km s-min=11.5km az=19.0*

*BJI **03** 19:11:39.7, 30°.09N×88°.09E, h8^{km}, mb4.5/34, mB4.6/28, Ms4.6/32, Ms7 4.6/27*

*NEIC **03** 19:11:40.9±0.2, 29°.91N×88°.01E, h10^{km}, mb4.9/68, Error ellipse: s-maj=4.7km s-min=3.1km az=204.0*

*GCMT **03** 19:11:40.9±0.3, 29°.84N×88°.30E, h22^{km}±1^{km}, MW4.9/62, Moment Tensor Solution. s24,c25; s62,c99; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.31±.17; $M_{\theta\theta}$-0.09±.10; $M_{\phi\phi}$2.40±.10; $M_{r\theta}$0.20±.19; $M_{\theta\phi}$-0.23±.06; $M_{\phi r}$-0.40±.14; Best double couple: $M_0$2.40700×10^{16} NP1:ϕ_s351.00000°,δ50.00000°,λ-95.00000°. NP2: ϕ_s179.00000°,δ40.00000°,λ-84.00000°. Principal axes: T 2.4570, Plg5.0000°, Azm85.0000°; N -0.0960, Plg4.0000°, Azm354.0000°; P -2.3570, Plg84.0000°, Azm226.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*ISCJB **03** 19:11:41.3±1.0, 29°.94N±0°.02×88°.00E±0°.02, h24^{km}±7^{km}, mb4.6/108, MS3.9/38 Error ellipse: s-maj=4.4km s-min=3.4km az=27.6*

*MOS **03** 19:11:42.6±1.2, 29°.90N×87°.96E, h33^{km}, mb4.8/40, Error ellipse: s-maj=7.7km s-min=4.5km az=122.5*

*NDI **03** 19:11:44.3±3.3, 29°.84N×88°.16E, h10^{km}, mb4.7, mb4.9(NEIC)*

ISC 03 19:11:42.9±1.0**, 29°.96N**±0°.04×**88°.09E**±0°.03**, h23**^{km}±8^{km}**, n323, σ1^{s}.81**/329**, mb4.7**/108**, MS3.9**/39**, 8C-17D, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAPN	Taplejung	2.62	187	*e*Pn	Pb	19 12 28.2	-1.2
TAPN				*e*Sn	Sb	19 13 06.2	+4.9
	2μm,0.9s						
GTK	Tadong	2.67	170	*e*P	Pb	19 12 28.4	-1.8
GTK				*e*S	Sn	19 12 55.3	-1.1
LSA	Lhasa	2.67	95	Pg	Pb	19 12 29.1	-1.3
LSA				Sn	Sb	19 13 01.8	-1.1
LSA	Lhasa	2.67	95	*e*Pn	Pn	19 12 26.7	+1.7
LSA				*e*Sn	Sb	19 13 02.8	-0.1
LSA	Lhasa	2.67	95	*e*P	Pn	19 12 26.7	+1.7
LSA				*e*		19 13 02.8	
GUN	Gumba	2.81	224	*e*Pn	Pb	19 12 31.3	-1.4
GUN				*e*Sn	Sb	19 13 12.6	+5.7
	4μm,1.2s						
JIRN	Jiri	2.83	217	*e*Pn	Pb	19 12 31.8	-1.2
ODAN	Odare	3.15	191	*e*Pn	Pb	19 12 35.0	-3.4
ODAN				*e*Sn	Sb	19 13 19.8	+3.4
	6μm,1.6s						
RAMN	Ramite	3.27	204	*e*Pn	Pb	19 12 36.7	-3.8
KKN	Kakani	3.28	229	*e*Pn	Pb	19 12 36.8	-3.7
KKN				*e*Sn	Sb	19 13 24.4	+4.3
	5μm,1.4s						
PKIN	Phulchoki	3.35	226	*e*Pn	Pb	19 12 38.3	-3.5
PKIN				*e*Sn	Sb	19 13 26.9	+4.7
	2μm,0.8s						
DMN	Daman	3.51	229	*e*Pn	Pn	19 12 40.0	+3.6
GKN	Gorkha	3.60	238	*e*Pn	Pn	19 12 40.5	+3.0
DANN	Dangsing	4.11	248	*e*Pn	Pn	19 12 48.2	+3.5
KOLN	Koldanda	4.50	242	*e*Pn	Pn	19 12 52.6	+2.6
TURI	Tura	4.82	155	*e*P	Pn	19 12 55.9	+1.7
TURI				*e*S	Sn	19 13 44.5	-4.8
PYUN	Piuthan	4.83	249	*e*Pn	Pn	19 12 57.1	+2.6
GUWA	GUWAHATI	4.92	139	*e*P	Pn	19 12 57.5	+2.0
GUWA				*e*S	Sn	19 13 49.5	-2.2
TEZP	TEZPUR	5.32	128	*e*P	Pn	19 13 01.6	+0.6
TEZP				*e*x	x	19 14 03.7	
SHL	Shillong	5.52	142	*e*P	Pn	19 13 04.5	+0.6
SHL				*e*S	Sn	19 14 02.4	-4.3
ZIRO	ZIRO	5.61	114	*e*P	Pn	19 13 05.8	+0.6
ZIRO				*e*S	Sn	19 14 04.6	-4.4
ITAN	ITANAGAR	5.69	118	*e*P	Pn	19 13 08.3	+2.2
JORH	JORHAT	6.30	119	*e*P	Pn	19 13 14.7	+0.1
BOK	Bokaro	6.45	198	*e*P	Pn	19 13 19.2	+2.7
AGT	Agartala	6.68	154	*e*x	Pn	19 13 17.9	-1.7
MOKO	MOKOCHONG	6.73	121	*e*P	Pn	19 13 21.9	+1.3
KOHI	KOHIMA	6.80	127	*e*x	Pn	19 13 23.1	+1.6
LKP	Lekhapani	7.30	109	*e*P	Pn	19 13 28.5	+0.2
LKP				*e*x	x	19 14 51.1	
SAIH	SAIHA	8.64	148	*e*P	Pn	19 13 47.0	+0.2
SAIH				*e*x	x	19 15 24.5	
DDI	Dehra Dun	8.70	275	*e*P	Pn	19 13 49.7	+2.3
DDI				*e*x	x	19 15 25.3	
SMLA	Simla	9.49	280	*e*x	Pn	19 13 58.3	+0.1
SMLA				*e*S	Sn	19 15 42.5	-1.7
BWNR	Bhubaneshwar	9.84	193	*e*P	Pn	19 14 04.9	+1.8
DHRM	DHARAMSHALA	10.36	286	*e*x	Pn	19 14 09.4	-1.0
DHRM				*e*S	Sn	19 16 00.8	-5.1
BHPL	Bhopal	11.65	237	*e*x	Pn	19 14 27.0	-0.9
NGP	Nagpur	11.97	225	*e*P	Pn	19 14 27.3	-5.1
NGP				⇓*e*S	Sn	19 16 28.2	-17
CHLP	Challavanipeta	11.98	199	*e*P	Pn	19 14 32.0	-0.3
NIL	Nilore	13.14	290	*e*Pn	Pn	19 14 46.2	-2.1
NIL	Nilore	13.14	290	*e*P	Pn	19 14 46.2	-2.1
GTA	Gaotai	13.48	42	*e*P	Pn	19 14 51.2	-1.7
GTA				pP	P	19 14 55.7	-6.3
GTA				sP		19 14 58.3	
GTA				S	Sn	19 17 23.8	+1.7
GTA				sS	S	19 17 29.0	-16
GTA				SS	SnSn	19 17 38.3	+3.8
GTA				pmax	pmax		
	comp=Z,4.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,74nm,5.3s						
GTA				LR	LR		
	comp=N,1μm,15.8s						
GTA				LR	LR		
	comp=E,1μm,11.3s						
GTA				LR	LR		
	comp=Z,2μm,12.7s						
CD2	Chengdu	13.56	82	P	Pn	19 14 49.7	-4.3
CD2				S	Sn	19 17 21.2	-2.7
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,4.6s						
CD2				LR	LR		
	comp=N,2μm,8.0s						
CD2				LR	LR		
	comp=E,4μm,9.5s						
CD2				LR	LR		
	comp=Z,5μm,10.1s						
RPR	Rampur	13.64	218	*e*P	Pn	19 14 52.8	-2.3
WMQ	Urumqi	13.84	359	P	Pn	19 15 00.6	+2.8
WMQ				pmax	pmax		
	comp=Z,15nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,260nm,4.3s						
WMQ				LR	LR		
	comp=Z,1μm,13.5s						
WMQ				LR	LR		
	comp=Z,810nm,12.3s						
WMQ				LR	LR		
	comp=Z,530nm,15.7s						
KMI	Kunming	13.86	107	P	P	19 15 13.4	+7.0
KMI				pP	Pn	19 15 14.7	+16
KMI				S	S	19 17 50.7	-2.8
KMI				pmax	pmax		
	comp=Z,18nm,0.9s						
KMI				pmax	pmax		
	comp=Z,120nm,5.5s						
KMI				LR	LR		
	comp=N,1μm,13.3s						
KMI				LR	LR		
	comp=E,940nm,9.7s						
KMI				LR	LR		
	comp=Z,1μm,11.1s						
PVM	Polavaram	13.96	206	*e*P	Pn	19 14 57.2	-2.3
CMAI	Chiengmai2	14.07	133	P	P	19 15 07.0	-1.8
	comp=Z,4.4nm,1.4s,comp=Z,562nm						
SRSP	Sriramsagar	14.11	221	*e*P	Pn	19 14 56.1	-5.4
TARG	Taragay, Kyrgy	14.39	327	*e*Pn	Pn	19 15 05.4	-0.2
LZH	Lanzhou	14.56	61	*e*P	Pn	19 15 07.0	-0.7
LZH				pP	P	19 15 11.4	-2.7
LZH				sP		19 15 14.2	
LZH				PP	PnPn	19 15 21.7	+6.1
LZH				S	Sn	19 17 45.4	-3.0
LZH				sS	S	19 17 54.9	-13
LZH				pmax	pmax		
	comp=Z,33nm,1.3s						
LZH				pmax	pmax		
	comp=Z,170nm,4.8s						
LZH				LR	LR		
	comp=Z,3μm,10.5s						
LZH				LR	LR		
	comp=Z,3μm,10.3s						
LZH				LR	LR		
	comp=Z,3μm,11.7s						
CHTO	Chiang Mai	14.85	136	*e*Pn	Pn	19 15 11.4	-0.2
CHTO	Chiang Mai	14.85	136	*e*P	Pn	19 15 11.4	-0.2
CHTO	Chiang Mai	14.85	136	P	Pn	19 15 12.3	+0.7
	comp=Z,103nm,1.1s						
CMMT	Chiang Mai	14.85	136	P	Pn	19 15 12.3	+0.6
	comp=Z,23nm,1.1s						
PAYA	Payao	15.02	132	P	Pn	19 15 16.7	+2.8
	comp=Z,10nm,1.1s,comp=Z,127nm						
CM31	Chiang Mai Arr	15.12	137	*e*Pn	Pn	19 15 15.4	+0.1
CMAR	Chiang Mai Arr	15.12	137	Pn	Pn	19 15 13.1	-2.2
	comp=Z,0.2nm,0.3s,baz=315,slow=13,SNR=23						
CMAR				LR	LR	19 21 07.0	
	comp=Z,232nm,18.2s,baz=331,slow=38						
CM01	Chiang Mai Arr	15.16	137	*e*Pn	Pn	19 15 14.4	-1.4
HYBB	Hyderabad (bro	15.22	217	*e*P	Pn	19 15 12.4	-4.2
HYB	Hyderabad	15.22	217	*i* P	Pn	19 15 14.0	-2.6
HYB	Hyderabad	15.22	217	*e*x	Pn	19 15 13.3	-3.3
HYB				IAmb	IAmb	19 15 14.2	
	comp=Z,30nm,0.8s						
NJS	Nagarjunasagar	15.58	213	*e*P	Pn	19 15 17.6	-3.7
KLRI	Killari	15.80	224	*e*P	Pn	19 15 20.6	-3.6
ADKI	Addanki	15.90	210	*e*P	Pn	19 15 24.2	-1.2
SRLM	Srisailam	16.17	213	*e*P	Pn	19 15 25.3	-3.6
TKM2	Tokmak 2	16.36	326	P	P	19 15 34.6	+0.5
TKM2				pmax	pmax		
	comp=Z,9.0nm,0.7s						
AAK	Ala-Archa	16.71	323	Pn	P	19 15 37.0	-0.9
	comp=Z,0.1nm,0.3s,baz=125,slow=15,SNR=6.7						
AAK				LR	LR	19 23 18.3	
	comp=Z,137nm,21.9s,baz=124,slow=42						
AAK	Ala-Archa	16.71	323	*e*Pn	Pn	19 15 35.0	-0.8
	comp=Z,40nm,1.9s						
AAK	Ala-Archa	16.71	323	*e*P	Pn	19 15 35.0	-0.8
AAK				pmax	pmax		
	comp=Z,40nm,1.9s						
KBL	Kabul	16.74	291	*e*Pn	Pn	19 15 32.7	-3.6
	comp=Z,16nm,0.6s						
KBL	Kabul	16.74	291	*e*P	Pn	19 15 32.7	-3.6
KBL				pmax	pmax		
	comp=Z,16nm,0.6s						
FRU	Bishkek	16.79	324	*e*P	P	19 15 38.0	-0.6
FRU				pmax	pmax		
	comp=Z,125nm,2.5s						
PHIT	Phitsanulok	16.99	136	P	P	19 15 45.1	+4.1
	comp=Z,16nm,0.9s						
MK01	Makanchi Array	17.38	347	*e*Pn	Pn	19 15 43.1	-0.9
MK31	Makanchi Array	17.40	347	*e*Pn	Pn	19 15 43.4	-0.9
MK31	Makanchi Array	17.40	347	*e*P	Pn	19 15 42.8	-1.5
MK31				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MK32	Makanchi Array	17.40	347	*e*Pn	Pn	19 15 43.7	-0.6
MKAR	Makanchi Array	17.40	347	P	Pn	19 15 43.7	-0.6
	comp=Z,0.4nm,0.3s,baz=155,slow=13,SNR=22						
MKAR				LR	LR	19 23 26.6	
	comp=Z,236nm,18.9s,baz=162,slow=40						
MKAR	Makanchi Array	17.40	347	*e*Pn	Pn	19 15 43.9	-0.3
	comp=Z,34nm,0.6s						
MAKZ	Makanchi	17.48	346	*e*Pn	Pn	19 15 44.7	-0.5
	comp=Z,8.7nm,0.9s						
MAKZ	Makanchi	17.48	346	*e*P	Pn	19 15 44.7	-0.5
MAKZ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MNAS	Manas	17.70	319	P	P	19 15 49.7	+0.9
MNAS				pmax	pmax		
	comp=Z,8.0nm,1.0s						
UTHA	Uthaitani	17.73	141	P	P	19 15 54.0	+4.8
	comp=Z,3.0nm,0.8s						
PBKT	Sadao Pong	17.80	136	P	P	19 15 51.1	+1.2
	comp=Z,42nm,1.1s						
URV	Uravakonda	17.96	216	*e*P	Pn	19 15 49.2	-2.2
NONG	Nongkai	18.13	127	P	P	19 15 55.4	+1.9
	comp=Z,0.5nm,1.0s,comp=Z,54nm						
ENH	Enshi	18.52	84	*e*P	P	19 15 55.1	-2.7
	comp=Z,31nm,1.3s						
SRDT	SRDT	18.57	144	P	Pn	19 16 02.6	+3.8
	comp=Z,27nm,1.6s,comp=Z,2μm						
KK31	Karatay Array	19.23	318	*e*P	P	19 16 04.3	-1.2
KK31	Karatay Array	19.23	318	*e*P	P	19 16 04.3	-1.2
KKAR	Karatay Array	19.23	318	*e*P	P	19 16 04.3	-1.2
KKAR	Karatay Array	19.23	318	*e*P	P	19 16 04.3	-1.2
SKNT	Sakolnakorn	19.45	128	P	Pn	19 16 17.3	+7.9
PHET	Kaeng Krachan	20.05	145	P	Pn	19 16 23.9	+7.4
TIY	Taiyuan	21.61	63	*e*P	P	19 16 33.3	+1.8
TIY				S	S	19 20 29.6	-0.3
TIY				SS	SnSn	19 21 05.6	+11
TIY				LR	LR		
	comp=Z,540nm,6.0s						
TIY				LR	LR		
	comp=Z,1μm,7.8s						
TIY				LR	LR		
	comp=Z,1μm,7.1s						
UBPT	Khong Chiam	21.66	129	P	P	19 16 34.3	+2.3
	comp=Z,39nm,1.0s						
KURBB	Kurchatov Arra	21.86	343	P	P	19 16 33.3	-0.5
	comp=Z,10nm,0.6s,baz=158,slow=11,SNR=47						
OTUK	Ortayu	21.90	331	P	P	19 16 33.8	-0.6

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OTUK                              pmax   pmax
      comp=Z,19nm,0.8s
KURK  Kurchatov         21.92 344 eP     P      19 16 33.3 -1.2
KURK  Kurchatov         21.92 344ceP     P      19 16 34.1 -0.4
KURK                              pmax   pmax
      comp=Z,24nm,1.7s
HHC   Hu-ho-hao-te      21.94  54 eP     P      19 16 39.1 +4.1
HHC                               S      S      19 20 36.9 +0.6
HHC                               sS     pS     19 20 44.2 -1.0
HHC                               pmax   pmax
      comp=Z,15nm,0.8s
HHC                               pmax   pmax
      comp=Z,130nm,4.3s
HHC                               LR     LR
      comp=Z,1µm,8.5s
HHC                               LR     LR
      comp=Z,2µm,12.4s
HHC                               LR     LR
      comp=Z,2µm,11.8s
WHN   Wuhan             22.68  82 P      P      19 16 45.9 +3.0
WHN                               S      S      19 20 48.2 -1.8
SONA0 Songino Array     22.74  33 eP     P      19 16 44.4 +0.8
SONM  Songino Array     22.74  33 P      P      19 16 44.4 +0.8
      comp=Z,10nm,0.8s,baz=223,slow=12,SNR=28
SONA1 Songino Array     22.75  33 eP     P      19 16 44.8 +1.1
ULN   Ulaanbaatar       23.08  34 eP     P      19 16 47.5 +0.4
      comp=Z,14nm,0.8s
ULN   Ulaanbaatar       23.08  34ceP     P      19 16 49.9 +2.8
ULN                               pmax   pmax
      comp=Z,33nm,1.7s
ZAK   Zakamensk         23.39  25 eP     P      19 16 47.5 -2.6
ZAK                               pmax   pmax
      comp=Z,7.0nm,1.6s
PALK  Pallekele         23.61 199 LR     LR     19 26 12.1
      comp=Z,135nm,19.3s,baz=115,slow=37
ZAA0  Zalesovo Array    24.09 355 eP     P      19 16 56.2 -0.4
      comp=Z,21nm,1.8s
ZALV  Zalesovo Beam     24.09 355 P      P      19 16 56.2 -0.4
      comp=Z,2.3nm,0.6s,baz=180,slow=9.4,SNR=14
ZALV  Zalesovo Beam     24.09 355 eP     P      19 16 56.0 -0.6
ZALV  Zalesovo Beam     24.09 355 eP     P      19 16 56.1 -0.6
ZAA1  Zalesovo Array    24.09 355 eP     P      19 16 56.2 -0.5
BJT   Baijiatuau        25.01  59 eP     P      19 17 06.8 +1.7
      comp=Z,9.5nm,0.8s
BJT   Baijiatuau        25.01  59 eP     P      19 17 06.8 +1.7
BJT                               pmax   pmax
      comp=Z,9.0nm,0.8s
NVS   Novosibirsk       25.11 353 eP     P      19 17 05.8 -0.1
GEYT  Alibeck           26.02 296 P      P      19 17 14.5 +0.1
      comp=Z,2.1nm,0.7s,baz=134,slow=6.2,SNR=6.1
GEYT                              LR     LR     19 29 33.8
      comp=Z,353nm,19.1s,baz=85,slow=41
GYA0B ALIBECK ARRAY     26.02 296 eP     P      19 17 14.4  0.0
      comp=Z,7.6nm,0.9s
NJ2   Nanjing           26.41  78 eP     P      19 17 21.2 +3.3
NJ2                               S      S      19 21 55.0 +4.8
NJ2                               pmax   pmax
      comp=Z,11nm,0.7s
NJ2                               pmax   pmax
      comp=Z,140nm,6.7s
NJ2                               LR     LR
      comp=Z,750nm,10.3s
NJ2                               LR     LR
      comp=Z,890nm,10.8s
NJ2                               LR     LR
      comp=Z,1µm,11.9s
BVAR  Borovoye Array    26.45 336 P      P      19 17 17.7 -0.3
      comp=Z,1.7nm,0.6s,baz=128,slow=6.3,SNR=12
BVAR                              PcP    PcP    19 20 42.2 -0.6
      comp=Z,0.4nm,0.4s,baz=156,slow=0.9,SNR=5.3
BVAR  Borovoye Array    26.45 336 P      P      19 17 17.7 -0.3
BVAR                                            19 20 42.2
BVAR                              pmax   pmax
      comp=Z,1.0nm,0.5s
WSAR  Wadi Sarin        27.13 263 P      P      19 17 26.4 +1.9
      comp=Z,4.7nm,0.9s,baz=74,slow=6.5,SNR=5.0
WSAR                              LR     LR     19 30 44.3
      comp=Z,132nm,18.6s,baz=112,slow=42
AB31  Akbulak array     28.75 320 P      P      19 17 38.4 -0.3
AB31                              pmax   pmax
      comp=Z,1.0nm,0.4s
ABKAR Akbulak array     28.75 320 eP     P      19 17 38.7  0.0
PSI   Prapat            28.90 157 eP     P      19 17 40.2 -0.2
      comp=Z,28nm,1.8s
PSI   Prapat            28.90 157 eP     P      19 17 40.2 -0.2
PSI                               pmax   pmax
      comp=Z,28nm,1.8s
AKTO  Aktyubinsk        30.43 321 P      P      19 17 54.4 +0.8
      comp=Z,1.3nm,0.7s,baz=121,slow=8.8,SNR=6.8
AKTO                              LR     LR     19 30 40.8
      comp=Z,159nm,19.5s,baz=131,slow=38
CN2   Changchun         32.63  55 eP     P      19 18 15.3 +2.3
CN2                               pmax   pmax
      comp=Z,10.0nm,0.8s
INCN  Inchon            32.75  66 eP     P      19 18 15.7 +1.5
      comp=Z,78nm,1.6s
INCN  Inchon            32.75  66 eP     P      19 18 15.7 +1.5
INCN                              pmax   pmax
      comp=Z,78nm,1.6s
BOD   Bodaibo           33.13  25 eP     P      19 18 17.1 -0.1
BOD                               pmax   pmax
      comp=Z,7.0nm,1.7s
ARU   Arti              33.63 330 eP     P      19 18 21.2 -0.4
      comp=Z,5.1nm,0.6s
ARU   Arti              33.63 330 eP     P      19 18 21.2 -0.4
ARU                               pmax   pmax
      comp=Z,5.0nm,0.6s
KS15  Wonju Array Si    33.75  66 eP     P      19 18 23.8 +1.0
KSAR  Wonju Array Be    33.75  66 P      P      19 18 24.1 +1.3
KSAR  Wonju Array Be    33.75  66 P      P      19 18 24.1 +1.3
KS01  Wonju Array Si    33.76  66 eP     P      19 18 23.1 +0.1
KSRS  Korea Array       33.78  66 P      P      19 18 24.1 +1.0
      comp=Z,1.5nm,0.8s,baz=267,slow=7.7,SNR=8.2
KSRS                              LR     LR     19 33 22.9
      comp=Z,322nm,18.1s,baz=266,slow=38
TGY   Tagaytay City     34.14 110 LR     LR     19 33 06.8
      comp=Z,163nm,18.9s,baz=258,slow=38
JOW   Kunigami          35.37  85 LR     LR     19 34 11.8
      comp=Z,307nm,20.9s,baz=310,slow=38
JOW   Kunigami          35.37  85 eP     P      19 18 38.0 +1.1
      comp=Z,135nm,2.0s
MDJ   Mudanjiang        35.71  54 eP     P      19 18 38.1 -1.6
      comp=Z,21nm,1.7s
GROC  Groznyy           36.07 303 eP     P      19 18 40.5 -2.3
GROC                              e             19 21 07.0
GROC                              eS     S      19 24 20.0 -0.7
GROC                              pmax   pmax
      comp=Z,35nm,1.2s
JNU   Nakatsue          36.42  74 LR     LR     19 35 06.7
      comp=Z,327nm,18.8s,baz=303,slow=39
JNU   Nakatsue          36.42  74 eP     P      19 18 45.5 -0.5
      comp=Z,17nm,1.1s
GNI   Garni             36.60 298 LR     LR     19 37 12.7
      comp=Z,102nm,19.2s,baz=94,slow=42
GNI   Garni             36.60 298 eP     P      19 18 47.0 -0.6
      comp=Z,36nm,1.5s
GNI   Garni             36.60 298 eP     P      19 18 47.0 -0.6
GNI                               pmax   pmax
      comp=Z,36nm,1.5s
TBLG  Delisi            36.70 301 eP     P      19 18 48.2  0.0
      comp=Z,7.7nm,0.6s
TBLG  Delisi            36.70 301 eP     P      19 18 48.2  0.0
TBLG                              pmax   pmax
      comp=Z,8.0nm,0.6s
ZEA   Zeya              36.93  39 eP     P      19 18 53.0 +3.0
USRK  Ussuriysk Ar.     37.35  55 P      P      19 18 54.4 +0.7
      comp=Z,3.0nm,0.8s,baz=251,slow=8.7
ZEI   Tsey              37.40 302 eP     P      19 18 55.0 +0.6
ZEI                               pmax   pmax
      comp=Z,8.0nm,0.6s
AKH   Akhalkalaki       37.61 300 eP     P      19 18 58.1 +1.9
      comp=Z,18nm,0.7s
AKH   Akhalkalaki       37.61 300 eP     P      19 18 58.1 +1.9
AKH                               pmax   pmax
      comp=Z,18nm,0.7s
KLR   Kul'dur           38.12  47 P      P      19 19 00.2 +0.1
      comp=Z,0.4nm,0.8s,baz=278,slow=11,SNR=15
KBZ   Khabaz            38.22 304 P      P      19 19 02.6 +1.5
      comp=Z,2.3nm,0.7s,baz=232,slow=5.8,SNR=3.8
KBZ                               LR     LR     19 37 05.0
      comp=Z,278nm,19.6s,baz=89,slow=40
KIV   Kislovodsk        38.40 304 eP     P      19 19 03.1 +0.4
      comp=Z,12nm,1.2s
KIV   Kislovodsk        38.40 304 eP     P      19 19 03.1 +0.4
KIV                               pmax   pmax
      comp=Z,3.0nm,1.0s
KIV                               MLR    MLR
      comp=Z,149nm,13.0s
RAYN  Ar Rayn           38.40 271 eP     P      19 19 04.0 +1.1
      comp=Z,35nm,1.5s
LEM   Lembang           41.10 150 LR     LR     19 39 04.4
      comp=Z,184nm,19.4s,baz=286,slow=40
DAV   Davao City (W)    41.91 115 LR     LR     19 39 48.3
      comp=Z,88nm,18.3s,baz=298,slow=40
YAK   Yakutsk           41.91  28 P      P      19 19 32.3 +0.9
      comp=Z,9.3nm,0.6s,baz=323,slow=1.2,SNR=4.5
YAK   Yakutsk           41.91  28 eP     P      19 19 31.8 +0.4
      comp=Z,12nm,0.8s
YAK   Yakutsk           41.91  28 eP     P      19 19 31.8 +0.4
YAK                               pmax   pmax
      comp=Z,12nm,0.8s
MJB9  Matsu-Tunnel      42.04  67 eP     P      19 19 34.6 +1.8
      comp=Z,16nm,1.2s
MAJO  Matsushiro        42.04  67 eP     P      19 19 34.5 +1.6
      comp=Z,16nm,1.3s
MAJO  Matsushiro        42.04  67 eP     P      19 19 34.5 +1.6
MAJO                              pmax   pmax
      comp=Z,16nm,1.3s
MAT   Matsushiro        42.04  67 P      P      19 19 34.7 +1.8
MAT                               S      S      19 25 51.2 +0.4
MJAR  Matsushiro Arr    42.04  67 P      P      19 19 35.2 +2.3
      comp=Z,14nm,1.2s,baz=282,slow=10,SNR=16
MJAR                              LR     LR     19 37 58.8
      comp=Z,105nm,19.4s,baz=270,slow=38
DAMY  Dhamar            42.97 259 eP     P      19 19 41.5 +0.5
      comp=Z,59nm,1.7s
MOS   Moscow            43.76 321 eP     P      19 19 46.6 +0.1
MOS                               pmax   pmax
      comp=Z,30nm,0.9s
OBN   Obninsk           44.20 320 eP     P      19 19 50.4 +0.4
      comp=Z,23nm,0.5s
OBN   Obninsk           44.20 320⇑eP     P      19 19 50.2 +0.2
OBN                               e             19 21 33.9
OBN                               eS     S      19 26 31.0 +9.1
OBN                               eSS    ScS    19 29 50.2 +3.3
OBN                               pmax   pmax
      comp=Z,18nm,1.1s
OBN                               MLR    MLR
      comp=Z,67nm,15.0s
MMAI  Mount Meron Ar    44.65 288 P      P      19 19 55.0 +1.0
      comp=Z,1.3nm,0.5s,baz=80,slow=10,SNR=3.7
MMAI                              LR     LR     19 40 44.5
      comp=Z,98nm,18.8s,baz=235,slow=39
ASAJ  Asahikawa         44.96  56 LR     LR     19 39 33.6
      comp=Z,166nm,18.7s,baz=302,slow=37
ASAJ  Asahikawa         44.96  56 eP     P      19 19 56.4 +0.1
      comp=Z,16nm,1.1s
YSS   Yuzh-Sakhalins    45.11  52 eP     P      19 19 59.9 +2.5
      comp=Z,10.0nm,0.6s
YSS   Yuzh-Sakhalins    45.11  52⇓eP     P      19 20 01.1 +3.7
YSS                               pmax   pmax
      comp=Z,10.0nm,0.7s
YSS                               MLR    MLR
      comp=Z,290nm,17.0s
YSS                               MLR    MLR
      comp=E,390nm,15.0s
BR101 Keskin Array S    45.14 298 eP     P      19 19 58.1 +0.2
BR131 Keskin Array S    45.14 298 eP     P      19 19 58.2 +0.2
BRTR  Keskin Array B    45.14 298 P      P      19 19 58.1 +0.2
      comp=E,1.6nm,0.6s,baz=99,slow=8.4,SNR=12
ANTO  Ankara            45.77 298 eP     P      19 20 03.9 +1.0
      comp=E,64nm,1.9s
ANTO  Ankara            45.77 298 eP     P      19 20 03.9 +1.0
ANTO                              pmax   pmax
      comp=Z,64nm,1.9s
BR231 Keskin MP Arra    45.79 298 eP     P      19 20 03.7 +0.7
TIXI  Tiksi             47.20  16 eP     P      19 20 13.8 +0.3
      comp=Z,4.9nm,0.8s
TIXI  Tiksi             47.20  16 eP     P      19 20 13.8 +0.3
TIXI                              pmax   pmax
      comp=Z,5.0nm,0.8s
AKASG Malin Array Be    48.02 313 P      P      19 20 19.4 -0.9
      comp=Z,6.1nm,0.6s,baz=82,slow=6.7,SNR=25
AKASG                             LR     LR     19 43 35.3
      comp=Z,198nm,20.6s,baz=95,slow=40
AKBB  Malin Array Si    48.02 313 eP     P      19 20 19.6 -0.6
      comp=Z,6.6nm,0.7s
KIEV  Kiev              48.03 313 eP     P      19 20 19.6 -0.7
      comp=Z,6.5nm,0.7s
KIEV  Kiev              48.03 313 eP     P      19 20 19.6 -0.7
KIEV                              pmax   pmax
      comp=Z,6.0nm,0.7s
AK11  Malin Array Si    48.06 313 eP     P      19 20 19.7 -0.8
CFR   Carcaliu          48.81 306⇓iP     P      19 20 26.6 +0.3
CFR   Carcaliu          48.81 306 ⇓P     P      19 20 26.6 +0.3
VRI   Vrincioaia        49.75 307⇓iP     P      19 20 34.8 +1.2
VRI   Vrincioaia        49.75 307 ⇓P     P      19 20 34.8 +1.2
TESR  Tescani           49.77 307⇓iP     P      19 20 33.1 -0.6
PLOR  Plostina          49.81 307⇓iP     P      19 20 35.4 +1.3
PLOR  Plostina          49.81 307 ⇓P     P      19 20 35.4 +1.3
VSU   Vasula            50.11 323ceP     P      19 20 37.1 +1.1
VSU                               pmax   pmax
      comp=Z,84nm,2.5s
BIZ   Bicaz             50.12 308⇑iP     P      19 20 36.8 +0.4
MLR   Muntele Rosu      50.33 306 LR     LR     19 45 12.6
      comp=Z,46nm,21.0s,baz=74,slow=40
MLR   Muntele Rosu      50.33 306⇑iP     P      19 20 39.1 +1.0
MLR   Muntele Rosu      50.33 306 eP     P      19 20 38.6 +0.5
      comp=Z,11nm,0.9s
MLR   Muntele Rosu      50.33 306 ⇑P     P      19 20 39.1 +1.0
DOPR  Dopca             50.68 307⇓iP     P      19 20 41.6 +1.0
BURAR Bucovina Array    50.68 309⇓iP     P      19 20 39.5 -1.2
BURAR Bucovina Array    50.68 309 ⇓P     P      19 20 39.5 -1.2
BUR04 Bucovina Ar. S    50.69 309 eP     P      19 20 40.3 -0.5
BUR08 Bucovina Ar. S    50.69 309 eP     P      19 20 40.1 -0.7
ALN   Alexandroupoli    50.77 300 eP     P      19 20 41.6 +0.3
      comp=Z,5.7nm,1.2s
FIA0  FINESS Array S    50.84 327 eP     P      19 20 41.1 -0.5
FIA0  FINESS Array S    50.84 327 eP     P      19 20 41.1 -0.5
FIA1  FINESS Array S    50.84 327 eP     P      19 20 41.4 -0.1
FINES FINESS Array B    50.84 327 P      P      19 20 41.1 -0.5
      comp=Z,2.8nm,0.5s,baz=103,slow=8.1,SNR=28
FINES                             LR     LR     19 42 39.8
      comp=Z,84nm,20.8s,baz=98,slow=37
VOIR                    50.96 306⇓iP     P      19 20 41.9 -0.9
VOIR                    50.96 306 ⇓P     P      19 20 41.9 -0.9
ARR   Arges             51.26 306⇑iP     P      19 20 44.8 -0.3
SANT  Santorini         52.02 295 eP     P      19 20 50.3 -0.6
      comp=Z,63nm,1.0s
KWP   Kalwaria Pacla    52.23 312 eP     P      19 20 52.1  0.0
      comp=Z,421nm,2.0s
KWP   Kalwaria Pacla    52.23 312 eP     P      19 20 52.1  0.0
KWP                               pmax   pmax
      comp=Z,421nm,2.0s
KEV   Kevo              52.28 337 eP     P      19 20 52.5 +0.4
      comp=Z,159nm,2.0s
KEV   Kevo              52.28 337 eP     P      19 20 52.5 +0.4
KEV                               pmax   pmax
      comp=Z,159nm,2.0s
DRGR                    52.45 308⇓iP     P      19 20 54.1 +0.2
DRGR                    52.45 308 ⇓P     P      19 20 54.1 +0.2
IDI   Anoyia            52.71 293 P      P      19 20 55.6 -0.4
      comp=Z,5.5nm,0.5s,baz=297,slow=6.8,SNR=7.8
IDI   Anoyia            52.71 293 eP     P      19 20 55.3 -0.7
      comp=Z,112nm,1.7s
ARA0  ARCESS Array S    52.72 337 eP     P      19 20 55.9 +0.3
ARCES ARCESS Array B    52.72 337 P      P      19 20 55.9 +0.3
      comp=Z,2.1nm,0.7s,baz=106,slow=8.9,SNR=5.7
ARCES ARCESS Array B    52.72 337 eP     P      19 20 56.2 +0.7
MDVR  Moldovita         53.38 306⇓iP     P      19 21 01.3 +0.5
AGG   Agios Georgios    53.91 298 eP     P      19 21 03.9 -0.8
      comp=Z,28nm,0.6s
AGG   Agios Georgios    53.91 298 eP     P      19 21 03.9 -0.8
AGG                               pmax   pmax
      comp=Z,28nm,0.6s
OJC   Ojcow             54.06 313 eP     P      19 21 05.3 -0.3
      comp=Z,4.0nm,0.7s
OJC   Ojcow             54.06 313 eP     P      19 21 05.3 -0.3
OJC                               pmax   pmax
      comp=Z,4.0nm,0.7s
ITM   Ithomi            54.61 296 eP     P      19 21 08.5 -1.4
      comp=Z,96nm,1.8s
PETK  Petropavlovsk-    54.64  44 LR     LR     19 46 59.4
      comp=Z,152nm,18.0s,baz=279,slow=39
GUMO  Guam              54.67  94 LR     LR     19 45 54.5
      comp=Z,56nm,19.1s,baz=277,slow=38
DIVS  Divibare          54.70 305 eP     P      19 21 10.7 +0.1
      comp=Z,7.1nm,1.4s
MORC  Moravsky Berou    55.55 312 eP     P      19 21 16.7 +0.2
      comp=Z,10nm,0.6s
MORC  Moravsky Berou    55.55 312 eP     P      19 21 16.7 +0.2
MORC                              pmax   pmax
      comp=Z,10.0nm,0.6s
MORC  Moravsky Berou    55.55 312 eP     P      19 21 16.6 +0.2
JAVC  Velka Javorina    55.59 311 eP     P      19 21 17.7 +0.9
VRAC  Vranov            56.23 312 eP     P      19 21 21.2 -0.1
KRUC  Moravsky          56.39 311 eP     P      19 21 22.5 +0.1
HFS   Hagfors           56.84 325 P      P      19 21 25.3 -0.1
      comp=Z,6.7nm,0.6s,baz=93,slow=7.2,SNR=37
HFS                               LR     LR     19 49 04.3
      comp=Z,131nm,18.8s,baz=100,slow=40
SPA0  Spitsbergen Ar    57.16 347 eP     P      19 21 27.5  0.0
SPITS Spitsbergen Ar    57.16 347 P      P      19 21 27.5  0.0
      comp=Z,1.5nm,0.5s,baz=101,slow=7.5,SNR=10
SPITS                             LR     LR     19 51 41.5
      comp=Z,97nm,18.4s,baz=235,slow=42
BRG   Berggiesshubel    57.68 314 eP     P      19 21 31.8 +0.3
      comp=Z,4.4nm,0.8s
BRG   Berggiesshubel    57.68 314 eP     P      19 21 31.8 +0.3
NC405 NORSAR Array S    57.75 326 eP     P      19 21 31.7 -0.2
NC602 NORSAR Array S    57.86 326 eP     P      19 21 31.8 -0.8
NC303 NORSAR Array S    57.91 326 eP     P      19 21 32.5 -0.4
NB201 NORSAR Array S    57.96 326 eP     P      19 21 33.0 -0.4
NB2   NORSAR Subarra    58.00 326 P      P      19 21 32.9 -0.8
      comp=Z,2.4nm,0.7s,baz=84,slow=7.4
NOA   NORSAR Array B    58.00 326 LR     LR     19 47 57.7
      comp=Z,87nm,19.5s,baz=105,slow=38
GEC2  GERESS Array S    58.18 312 eP     P      19 21 35.2  0.0
      comp=Z,21nm,1.7s
GEC2  GERESS Array S    58.18 312 eP     P      19 21 35.2  0.0
GEC2                              pmax   pmax
      comp=Z,21nm,1.7s
GERES GERESS Array B    58.18 312 P      P      19 21 35.4 +0.2
      comp=Z,2.2nm,0.6s,baz=78,slow=7.0,SNR=23
GERES                             LR     LR     19 49 00.3
      comp=Z,104nm,20.8s,baz=83,slow=38
GEA0  GERESS Array S    58.18 312 eP     P      19 21 35.2  0.0
BILL  Bilibino          58.18  26 i P    P      19 21 35.6 +0.8
BILL                              i             19 21 46.2
BILL                              i             19 23 50.0
BILL                              pmax   pmax
      comp=Z,4.0nm,1.3s
BILL                              MLR    MLR
      comp=Z,170nm,17.0s
NC204 NORSAR Array S    58.20 326 eP     P      19 21 34.5 -0.5
CLL   Collm             58.20 314 i P    P      19 21 34.6 -0.6
      comp=Z,3.0nm,1.0s
CLL                               L      L      19 49 00.0
      comp=Z,100nm,21.1s
KHC   Kasperske Hory    58.21 312 eP     P      19 21 35.3  0.0
      comp=Z,0.8nm,0.7s
KHC   Kasperske Hory    58.21 312 eP     P      19 21 35.3  0.0
KHC                               pmax   pmax
      comp=Z,1.0nm,0.7s
NBO00 NORSAR Array S    58.21 326 eP     P      19 21 35.0 -0.1
TRI   Trieste           58.75 308 eP     P      19 21 38.6 -0.5
      comp=Z,14nm,1.0s
TRI   Trieste           58.75 308 eP     P      19 21 38.6 -0.5
TRI                               pmax   pmax
      comp=Z,14nm,1.0s
KONO  Kongsberg         58.94 324 eP     P      19 21 39.4 -0.8
      comp=Z,70nm,1.9s
KONO  Kongsberg         58.94 324 eP     P      19 21 39.4 -0.8
KONO                              pmax   pmax
      comp=Z,70nm,1.9s
CEL   Celeste           58.98 299 eP     P      19 21 40.7 -0.2
      comp=Z,15nm,0.9s
DAVOX Davos/Dischmat    61.13 310 LR     LR     19 51 01.2
      comp=Z,91nm,20.2s,slow=39
MBAR  Mbarara           62.42 252 eP     P      19 22 05.0 +0.2
      comp=Z,28nm,1.5s
MBAR  Mbarara           62.42 252 eP     P      19 22 05.0 +0.2
MBAR                              pmax   pmax
      comp=Z,28nm,1.5s
WR1   Warramunga Arr    66.67 132 eP     P      19 22 31.7 -0.4
      comp=Z,14nm,1.2s
WRA   Warramunga Arr    66.67 132 P      P      19 22 31.7 -0.4
      comp=Z,2.2nm,0.6s,baz=326,slow=6.5,SNR=20
AS31  Alice Springs     69.13 135 eP     P      19 22 46.8 -0.8
      comp=Z,1.2nm,0.8s
ASAR  Alice Springs     69.13 135 P      P      19 22 47.4 -0.2
      comp=Z,2.1nm,1.0s,baz=321,slow=6.0,SNR=26
AS01  Alice Springs     69.16 135 eP     P      19 22 47.5 -0.3
SUMG  Summit            71.45 345 eP     P      19 23 01.5 -0.1
      comp=Z,39nm,2.0s
SUMG  Summit            71.45 345 eP     P      19 23 01.5 -0.1
SUMG                              pmax   pmax
      comp=Z,39nm,2.0s
TOLK  Toolik Lake Re    73.01  19 eP     P      19 23 10.8 +0.3
      comp=Z,61nm,2.0s
ESDC  Sonseca Array     73.03 306 P      P      19 23 10.4 -0.8
      comp=Z,0.2nm,0.4s,baz=64,slow=5.5,SNR=4.2
IM3   Indian Mountai    73.40  22 eP     P      19 23 12.6 -0.2
COLD  Coldfoot          73.73  20 eP     P      19 23 15.4 +0.6
      comp=Z,8.6nm,1.2s
MLY   Manley            74.98  22 eP     P      19 23 22.9 +0.7
      comp=Z,36nm,1.9s
CAST  Castle Rocks      75.55  24 eP     P      19 23 26.2 +0.8
      comp=Z,92nm,2.0s
FYU   Fort Yukon        75.64  19 eP     P      19 23 27.2 +1.4
      comp=Z,45nm,1.6s
MDM   Murphy Dome       75.83  21 eP     P      19 23 26.7 -0.3
      comp=Z,34nm,1.6s
PPLA  Purkeypile        75.84  24 eP     P      19 23 27.5 +0.2
      comp=Z,62nm,1.7s
CCB   Clear Creek Bu    76.18  22 eP     P      19 23 28.7 -0.3
      comp=Z,5.2nm,1.1s
IL1   Eielson Array     76.38  21 eP     P      19 23 29.6 -0.6
ILAR  Eielson Array     76.38  21 P      P      19 23 29.3 -0.8
      comp=Z,2.9nm,1.0s,baz=305,slow=4.2,SNR=18
ILB   Eielson Array     76.38  21 eP     P      19 23 29.4 -0.7
MDT   Midelt            76.49 300 LR     LR     20 05 16.6
      comp=Z,20nm,18.4s,baz=152,slow=42
SKT   Skwentna          76.66  25 eP     P      19 23 31.6 -0.2
      comp=Z,15nm,1.0s
INK   Inuvik            77.29  15 eP     P      19 23 35.5 +0.3
      comp=Z,12nm,1.0s
INK   Inuvik            77.29  15 eP     P      19 23 35.5 +0.3
INK                               pmax   pmax
      comp=Z,12nm,1.0s
SML   Sawmill           77.92  24 eP     P      19 23 39.3 +0.4
      comp=Z,16nm,0.9s
SML   Sawmill           77.92  24 eP     P      19 23 39.3 +0.4
SML                               pmax   pmax
      comp=Z,17nm,0.9s
EGAK  Eagle             78.10  19 eP     P      19 23 39.2 -0.6
      comp=Z,6.5nm,0.9s
SCM   Sheep Creek Mo    78.25  24 eP     P      19 23 41.4 +0.6
      comp=Z,8.3nm,0.9s
SCM   Sheep Creek Mo    78.25  24 eP     P      19 23 41.4 +0.6
SCM                               pmax   pmax
      comp=Z,8.0nm,0.9s
KLU   Klutina           78.97  23 eP     P      19 23 45.6 +0.9
      comp=Z,17nm,1.4s
DAWY  Dawson            79.14  19 eP     P      19 23 45.6  0.0
      comp=Z,18nm,1.7s
HNR   Honiara           79.30 107 LR     LR     19 56 37.9
      comp=Z,48nm,21.5s,baz=194,slow=34
BMRM  Bremner River     79.80  23 eP     P      19 23 47.9 -1.3
      comp=Z,9.3nm,1.0s
TOA0  Torodi Ar. Sit    80.47 280 eP     P      19 23 51.5 -2.1
TOA1  Torodi Ar. Sit    80.47 280 eP     P      19 23 52.1 -1.5
TORD  Torodi Ar. Bea    80.47 280 P      P      19 23 52.1 -1.5
      comp=Z,3.1nm,1.0s,baz=87,slow=4.2
TORD                              LR     LR     20 05 21.7
      comp=Z,63nm,18.6s,baz=310,slow=40
BOSA  Boshof            83.59 232 P      P      19 24 08.9 -0.8
      comp=Z,5.7nm,1.0s,baz=86,slow=4.2,SNR=4.3
BOSA                              LR     LR     19 59 14.3
      comp=Z,68nm,19.3s,baz=30,slow=34
YKW3  Yellowknife Ar    86.02  10 eP     P      19 24 20.6 -0.7
      comp=Z,3.9nm,0.9s
YKA   Yellowknife Ar    86.08  10 P      P      19 24 20.8 -0.9
      comp=Z,1.2nm,0.5s,baz=331,slow=4.8,SNR=11
DBIC  Dimbokro          89.25 277 P      P      19 24 37.7  0.0
      comp=Z,3.1nm,0.6s,baz=31,slow=6.8,SNR=5.1
DBIC                              LR     LR     20 08 07.2
      comp=Z,92nm,18.8s,baz=38,slow=38
DBIC  Dimbokro          89.25 277 eP     P      19 24 37.5 -0.2
      comp=Z,87nm,1.9s
DBIC  Dimbokro          89.25 277 eP     P      19 24 37.5 -0.2
DBIC                              pmax   pmax
      comp=Z,87nm,1.9s
SCHQ  Schefferville     92.84 346 LR     LR     20 11 40.4
      comp=Z,44nm,19.0s,baz=52,slow=39
SCHQ  Schefferville     92.84 346 eP     P      19 24 55.3 +1.6
      comp=Z,61nm,2.0s
NEW   Newport           98.92  17 LR     LR     20 15 16.2
      comp=Z,60nm,18.2s,baz=3.0,slow=39
```

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
SAML	Samuel	145.96	302	ePKPdf	PKPbc	19 31 21.2	-0.3
SAML	Samuel	145.96	302	ePKP2	PKPbc	19 31 21.2	-0.3
CPUP	Villa Florida	149.36	268	PKPbc	PKPbc	19 31 29.9	-0.6
	comp=Z,4.6nm,0.8s,baz=74,slow=1.4,SNR=6.3						
CPUP	Villa Florida	149.36	268	ePKPbc	PKPbc	19 31 29.5	-1.0
CPUP	Villa Florida	149.36	268	ePKP2	PKPbc	19 31 29.5	-1.0

MEX 03 19:21:34.5±0.3**, 18°.16N**×**103°.50W, h15**^{km}±25^{km}**, MD3.5, Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMIG	Aquila	0.20	49	eP	Pg	19 21 38.6	-0.5
MMIG				eS	Sg	19 21 41.8	-0.4
R15V		1.10	336	eP	Pb	19 21 51.7	-3.7
R15V				eS	Sb	19 22 05.3	-4.3
CJM	Chamela	1.98	313	eP	Pn	19 22 04.4	-3.0
CJM				eS	Sn	19 22 27.1	-4.9

ISCJB ***03*** *19:22:10.3±0.2, 18°.00S±0°.05×178°.54W±0°.05, h579^{km}, mb4.4/93, Error ellipse: s-maj=8.1km s-min=4.1km az=137.8*

NEIC ***03*** *19:22:11.2±0.4, 17°.95S×178°.49W, h577^{km}±5^{km}, mb4.4/74, Error ellipse: s-maj=7.9km s-min=4.0km az=136.0*

IDC ***03*** *19:22:12.2±1.2, 18°.04S×178°.45W, h590^{km}±13^{km}, mb3.7/18, mb1 3.9/20, mb1mx3.6/46, mbtmp4.6/20, Error ellipse: s-maj=14.7km s-min=8.4km az=150.0*

ISC 03 19:22:11.1±0.4**, 17°.97S**±0°.08×**178°.47W**±0°.07**, h579**^{km}**, n191, σ0^{s}.93**/191**, mb4.3**/93**, 2C-9D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	7.60	59	P	P	19 24 07.0	+0.9
	12nm,0.3s,baz=153,slow=4.7,SNR=8.4						
AFI				S	S	19 25 40.8	+0.7
	3.9nm,0.3s,baz=192,slow=20,SNR=3.7						
AFI	Afiamalu	7.60	59	eP	P	19 24 06.0	-0.1
DZM	Mont Dzumac	14.75	251	P	P	19 25 18.1	+0.4
	1.5nm,0.3s,baz=115,slow=21,SNR=18						
OUZ	Omahuta	18.57	201	eP	P	19 25 54.5	+1.8
	130nm,1.6s						
HNR	Honiara	22.60	289	eP	P	19 26 24.8	-4.5
	44nm,1.0s						
THZ	Tophouse	24.84	195	eP	P	19 26 49.1	+0.3
	88nm,1.4s						
KHZ	Kahutara	25.30	194	eP	P	19 26 55.3	+2.6
	67nm,1.2s						
LTZ	Lake Taylor	25.95	196	eP	P	19 26 59.3	+0.7
	102nm,1.7s						
FOZ	Fox Glacier	27.34	199	eP	P	19 27 09.5	-1.1
	248nm,1.8s						
LBZ	Lake Benmore	28.01	197	eP	P	19 27 14.6	-1.9
	122nm,1.7s						
ODZ	Otahua Downs	28.49	196	eP	P	19 27 19.5	-1.2
	75nm,1.7s						
WKZ	Wanaka	28.76	199	eP	P	19 27 22.1	-0.9
	48nm,1.2s						
EIDS	Eidsvold	29.19	250	eP	P	19 27 27.2	+0.2
	11nm,0.7s						
MLZ	Mavora Lakes	29.52	199	eP	P	19 27 29.5	-0.1
	82nm,1.8s						
ARMA	Armidale	29.86	240	eP	P	19 27 34.2	+1.3
	53nm,1.7s						
DCZ	Deep Cove	29.92	201	eP	P	19 27 33.0	0.0
	124nm,1.9s						
CTA	Charters Tower	33.38	261	P	P	19 28 03.5	+0.6
	6.7nm,0.4s,baz=82,slow=12,SNR=21						
CTAO	Charters Tower	33.38	261	eP	P	19 28 03.5	+0.6
	59nm,1.8s						
CAN	Canberra	33.62	233	eP	P	19 28 05.7	+1.0
	68nm,1.5s						
PMG	Port Moresby	34.41	280	P	P	19 28 13.2	+1.7
	36nm,0.8s,baz=90,slow=8.1,SNR=6.8						
PMG	Port Moresby	34.41	280	eP	P	19 28 13.7	+2.1
	47nm,0.9s						
COEN	Coen	37.05	271	eP	P	19 28 34.9	+1.6
	188nm,1.9s						
MANU	Manus Island	37.07	291	eP	P	19 28 35.1	+1.6
	29nm,1.3s						
STKA	Stephens Creek	38.55	241	P	P	19 28 46.2	+0.9
	11nm,0.6s,baz=91,slow=10,SNR=34						
STKA	Stephens Creek	38.55	241	eP	P	19 28 45.9	+0.7
	4.1nm,0.9s						
HPO	Honuapo	43.16	33	eP	P	19 29 22.6	+0.7
BBOO	Buckleboo	43.33	241	eP	P	19 29 23.5	+0.4
	16nm,0.9s						
PUH	Pauahi	43.58	33	eP	P	19 29 23.4	-1.7
	362nm,1.7s						
HMH	Humu'ula Sheep	43.63	32	eP	P	19 29 27.1	+1.3
	355nm,1.8s						
KHLH	Kahului Airpor	44.26	30	eP	P	19 29 30.6	+0.3
	373nm,1.7s						
WC3	Warramunga Arr	44.53	260	eP	P	19 29 32.3	-0.3
	9.8nm,0.6s						
WB2	Warramunga Arr	44.55	260	eP	P	19 29 32.0	-0.8
WRAB	Tennant Creek	44.55	260	eP	P	19 29 32.5	-0.2
	36nm,1.4s						
WRA	Warramunga Arr	44.56	260	P	P	19 29 32.5	-0.3
	6.4nm,0.5s,baz=96,slow=7.3,SNR=124						
WRA				S	S	19 35 27.5	+0.1
	0.8nm,0.8s,baz=92,slow=11,SNR=3.8						
AS01	Alice Springs	44.68	254	eP	P	19 29 33.5	-0.2
AS31	Alice Springs	44.72	254	eP	P	19 29 34.0	0.0
	12nm,0.4s						
ASAR	Alice Springs	44.72	254	P	P	19 29 34.3	+0.3
	31nm,0.5s,baz=87,slow=8.9,SNR=407						
ASAR				ScP	ScP	19 34 01.6	+0.3
	0.5nm,0.6s,baz=100,slow=4.7,SNR=5.1						
ASAR				S	S	19 35 27.2	-2.3
	0.9nm,0.8s,baz=88,slow=15,SNR=4.9						
FORT	Forrest	49.93	245	eP	P	19 30 12.4	-0.4
	16nm,0.6s						
FITZ	Fitzroy Crossi	52.96	261	P	P	19 30 35.0	+0.2
	2.3nm,0.5s,baz=103,slow=7.6,SNR=14						
FITZ	Fitzroy Crossi	52.96	261	eP	P	19 30 35.3	+0.5
	45nm,1.8s						
SOEI	Soe	56.01	270	eP	P	19 30 57.2	+0.8
	84nm,1.3s						
MBWA	Marble Bar	58.00	256	eP	P	19 31 09.4	-0.3
	42nm,1.4s						
SBA	Scott Base	60.35	184	eP	P	19 31 26.1	+1.7
	13nm,1.9s						
VNDA	Vanda	60.38	185	P	P	19 31 24.9	+0.4
	0.3nm,0.5s,baz=12,slow=3.6,SNR=6.6						
VNDA	Vanda	60.38	185	eP	P	19 31 25.2	+0.6
	9.7nm,1.9s						
JAGI	Jajag, Banyuwa	65.98	269	eP	P	19 32 00.5	-1.0
	86nm,1.3s						
MJAR	Matsushiro Arr	67.92	323	P	P	19 32 13.7	+0.7
	1.2nm,0.5s,baz=120,slow=7.3,SNR=3.4						
KIWB	Kanaga Island	69.53	1	eP	P	19 32 23.2	+1.0
UGM	Wanagama	69.59	268	eP	P	19 32 23.4	-0.1
	1µm,2.0s						
GSTR	Great Sitkin T	69.80	2	eP	P	19 32 24.0	+0.1
ATKA	Atka Island	69.97	3	eP	P	19 32 24.3	-0.5
	66nm,1.3s						
QSPA	South Pole Qui	72.08	180	P	P	19 32 37.1	-0.2
	3.5nm,0.7s,baz=270,slow=1.0,SNR=10						
QSPA	South Pole Qui	72.08	180	eP	P	19 32 37.6	+0.3
	4.0nm,0.8s						
PEA0B	Petropavlovsk-	73.72	345	eP	P	19 32 46.7	+0.1
	19nm,1.3s						
PETK	Petropavlovsk-	73.72	345	P	P	19 32 46.9	+0.3
	4.4nm,0.6s,baz=132,slow=6.2						
KSRS	Korea Array	74.71	318	P	P	19 32 53.5	+1.0
	0.5nm,0.6s,baz=136,slow=6.6,SNR=3.9						
MWC	Mount Wilson	77.42	48	eP	P	19 33 10.2	+2.5
EML	El Monte Cty P	77.59	49	eP	P	19 33 04.9	-3.5
ISA	Isabella, Lake	77.90	46	eP	P	19 33 11.1	+0.9
	5.7nm,0.9s						
AFDM	Forest Hills D	78.06	42	eP	P	19 33 11.8	+0.9
	4.1nm,1.0s						
OMMB	Old Mammoth Mi	78.60	44	eP	P	19 33 14.8	+0.6
	3.4nm,0.7s						
YBH	Yreka Blue Hor	78.61	39	P	P	19 33 15.0	+1.2
	3.9nm,0.5s,baz=225,slow=4.3,SNR=4.2						
WAKR	Walker	78.81	43	eP	P	19 33 16.2	+1.1
	6.3nm,0.9s						
NV01	Mina Array Sit	79.51	44	eP	P	19 33 19.2	+0.4
NVAR	Mina Array Bea	79.51	44	P	P	19 33 19.2	+0.4
	3.1nm,0.7s,baz=224,slow=8.7,SNR=30						
NV11	Mina Array Sit	79.61	44	eP	P	19 33 20.0	+0.8
	0.4nm,1.0s						
KVN	Kaiserville	79.98	43	eP	P	19 33 21.7	+0.5
	4.6nm,0.9s						
MOD	Modoc Plateau	80.17	40	eP	P	19 33 22.7	+0.6
	6.9nm,0.7s						
K05A	Summer Lake	80.28	39	eP	P	19 33 23.8	+1.1
	10nm,0.9s						
PINE	Pine Mountain	80.88	38	eP	P	19 33 27.1	+1.3
	9.2nm,0.8s						
R11A	Troy Canyon, C	81.28	45	eP	P	19 33 28.1	+0.1
	2.0nm,1.0s						
BMN	Battle Mountai	81.29	43	eP	P	19 33 28.4	+0.5
	6.9nm,0.9s						
WVOR	Wild Horse Val	81.49	40	eP	P	19 33 29.8	+0.9
	8.3nm,1.0s						
TUC	Tucson	81.78	52	eP	P	19 33 32.0	+1.5
	7.0nm,1.0s						
LCMT	Little Creek M	82.21	47	eP	P	19 33 33.6	+0.9
	4.1nm,0.9s						
X16A	Lo Mia Camp, P	82.27	50	eP	P	19 33 34.1	+1.0
	6.6nm,1.0s						
CCUT	Cedar City	82.39	47	eP	P	19 33 34.8	+1.1
	3.3nm,0.8s						
319A	Douglas	82.51	54	eP	P	19 33 36.0	+1.8
	12nm,0.9s						
KNB	Kanab	82.51	47	eP	P	19 33 35.2	+1.0
	4.7nm,0.8s						
PSUT	Pine Spring	82.54	46	eP	P	19 33 34.9	+0.5
	4.1nm,0.7s						
U15A	North Rim	82.60	48	eP	P	19 33 35.9	+1.0
	9.4nm,0.8s						
GHO	Glory Hole Cre	82.88	14	eP	P	19 33 34.9	-0.4
	16nm,0.6s						
DIV	Divide	83.07	15	eP	P	19 33 36.1	-0.2
	8.1nm,0.7s						
MTPU	Mount Pierson	83.45	47	eP	P	19 33 40.6	+1.4
	3.3nm,0.8s						
CAST	Castle Rocks	83.70	12	eP	P	19 33 38.0	-1.3
	9.7nm,0.5s						
MAW	Mawson	83.78	200	P	P	19 33 39.3	-0.4
	1.2nm,0.5s,baz=100,slow=2.4,SNR=19						
DUG	Dugway, Tooele	84.06	45	epP	pP	19 35 45.5	-0.3
TRF	Thorofare Moun	84.08	12	eP	P	19 33 40.1	-1.3
	16nm,0.9s						
F10A	Beach Ranch, E	84.28	38	eP	P	19 33 42.7	0.0
	9.4nm,0.9s						
B08A	Colville Reser	84.42	35	eP	P	19 33 43.0	-0.2
	7.7nm,0.9s						
MCK	McKinley	84.61	13	eP	P	19 33 43.4	-0.4
	10nm,1.1s						
HLID	Hailey	84.71	41	eP	P	19 33 45.5	+0.5
	4.1nm,0.8s						
TMUT	Trail Mountain	84.72	46	eP	P	19 33 46.2	+1.0
	29nm,1.1s						
CCB	Clear Creek Bu	85.66	13	eP	P	19 33 47.6	-1.1
	5.4nm,0.5s						
MNTX	Cornudas Mount	85.66	55	eP	P	19 33 50.5	+1.0
	6.9nm,1.4s						
IM3	Indian Mountai	85.75	10	eP	P	19 33 48.9	-0.3
MDM	Murphy Dome	85.84	12	eP	P	19 33 48.7	-0.9
	4.5nm,0.9s						
IL1	Eielson Array	85.96	13	eP	P	19 33 49.2	-1.0
ILAR	Eielson Array	85.96	13	P	P	19 33 49.3	-0.9
	1.9nm,0.4s,baz=218,slow=5.0,SNR=34						
ILB	Eielson Array	85.96	13	eP	P	19 33 49.5	-0.8
TX31	Lajitas Ar. Si	86.08	58	eP	P	19 33 51.0	-0.7
TXAR	Lajitas Array	86.08	58	P	P	19 33 53.3	+1.5
	4.7nm,0.7s,baz=219,slow=6.1,SNR=41						
ANMO	Albuquerque	86.18	52	eP	P	19 33 51.9	-0.3
	3.4nm,1.1s						
MCMT	McKenzie Canyo	86.32	41	eP	P	19 33 52.9	+0.1
FXWY	Fox Creek	86.89	42	eP	P	19 33 56.0	+0.6
	2.5nm,0.8s						
IMW	Indian Meadow	87.07	42	eP	P	19 33 57.1	+0.8
	6.0nm,0.8s						
S22A	4UR Ranch, Cre	87.09	49	eP	P	19 33 57.1	+0.5
	2.2nm,0.6s						
DAWY	Dawson	87.16	16	eP	P	19 33 56.3	+0.3
	6.7nm,1.3s						
EGAK	Eagle	87.29	15	eP	P	19 33 56.5	0.0
	3.7nm,0.8s						
BW06	Boulder Array	87.44	43	eP	P	19 33 57.5	-0.5
	3.3nm,0.7s						
PD31	Pinedale Array	87.44	43	eP	P	19 33 58.0	+0.1
PDAR	Pinedale Array	87.44	43	P	P	19 33 58.1	+0.1
	2.5nm,0.6s,baz=219,slow=3.8,SNR=26						
PDAR	Pinedale Array	87.44	43	eP	P	19 33 57.9	-0.1
COLD	Coldfoot	87.48	11	eP	P	19 33 56.6	-0.8
	3.7nm,0.7s						
LNIG	Linares	87.91	63	eP	P	19 33 60.0	-0.4
	6.6nm,0.9s						
CMAR	Chiang Mai Arr	88.85	290	P	P	19 34 06.7	+1.9
	0.8nm,1.1s,baz=107,slow=3.1,SNR=4.3						
N23A	Red Feather La	89.04	46	eP	P	19 34 06.3	+0.7
	4.7nm,1.0s						
SNAA	Sanae	90.54	179	P	P	19 34 10.3	-1.4
SNAA	Sanae	90.54	179	P	P	19 34 10.3	-1.4
	1.3nm,0.7s,baz=196,slow=13,SNR=15						
VNA3	Neumayer Olymp	90.68	176	P	P	19 34 11.5	-0.8
VNA1	Neumayer--Stat	91.35	177	P	P	19 34 14.9	-0.4
YKA	Yellowknife Ar	94.41	25	P	P	19 34 28.7	-0.6
	0.6nm,0.5s,baz=237,slow=4.5,SNR=5.5						
241A	Mo Tay, Goldon	95.69	58	epP	pP	19 36 41.6	-0.7
MKAR	Makanchi Array	109.14	314	PKiKP	PKiKP	19 39 34.3	-1.5
	0.4nm,0.5s,baz=106,slow=0.6,SNR=11						
BVAR	Borovoye Array	116.86	321	PKP	PKPdf	19 39 49.3	-1.0
	1.2nm,0.5s,baz=119,slow=1.5,SNR=12						
ARCES	ARCESS Array B	126.37	350	PKP	PKPdf	19 40 07.1	-1.0
	3.7nm,0.7s,baz=48,slow=1.8,SNR=7.7						
FINES	FINESS Array B	133.23	344	PKP	PKPdf	19 40 21.2	-0.1
	1.7nm,0.6s,baz=72,slow=4.5,SNR=6.8						
HFS	Hagfors	136.99	351	PKhKP	PKPpre	19 40 17.4	
	0.8nm,0.5s,baz=67,slow=3.7,SNR=6.0						
AKASG	Malin Array Be	140.59	332	PKhKP	PKPpre	19 40 28.2	
	1.0nm,0.4s,baz=42,slow=4.0,SNR=8.1						
AKASG				PKP	PKPdf	19 40 34.8	-0.4
	1.0nm,0.5s,baz=38,slow=2.7,SNR=4.5						
KWP	Kalwaria Pacla	144.10	336	ePKPbc	PKPbc	19 40 40.9	-0.1
BUR08	Bucovina Ar. S	144.63	332	ePKPdf	PKPab	19 40 43.4	-0.2
BUR04	Bucovina Ar. S	144.64	332	ePKPdf	PKPab	19 40 43.3	-0.3
BURAR	Bucovina Array	144.64	332	⇓iP	PKPab	19 40 43.4	-0.2
OJC	Ojcow	144.65	340	ePKPdf	PKPdf	19 40 42.0	-0.4
BR131	Keskin Array S	144.79	315	ePKPdf	PKPdf	19 40 43.2	+0.1
BRTR	Keskin Array B	144.79	315	PKP	PKPbc	19 40 43.4	-0.3
	2.7nm,0.8s,baz=123,slow=3.5,SNR=12						
CLL	Collm	145.51	347	i PKPbc	PKPbc	19 40 45.1	-0.2
	comp=Z,20nm,0.7s						
CLL	Collm	145.51	347	ePKPdf	PKPbc	19 40 45.0	-0.2
UPC	Upice	145.53	344	ePKP	PKPbc	19 40 45.6	+0.3
DPC	Dobruska-Polom	145.59	343	ePKP	PKPbc	19 40 46.1	+0.5
KRLC	Kraliky	145.71	342	ePKP	PKPbc	19 40 46.6	+0.7
BRG	Berggiesshubel	145.71	346	i P	PKPbc	19 40 45.9	+0.1
	comp=Z,7.7nm,0.7s						
MORC	Moravsky Berou	145.75	341	⇑iP	PKPbc	19 40 46.1	+0.1
MORC	Moravsky Berou	145.75	341	ePKPdf	PKPbc	19 40 45.8	-0.2
MORC	Moravsky Berou	145.75	341	ePKP	PKPbc	19 40 45.8	-0.2
DOPR	Dopca	145.78	330	⇑iP	PKPbc	19 40 46.8	+0.6
MLR	Muntele Rosu	145.86	329	⇓iP	PKPbc	19 40 47.0	+0.4
MLR	Muntele Rosu	145.86	329	ePKPdf	PKPdf	19 40 45.4	+0.7
PVCC	Panska Ves	145.88	345	ePKP	PKPbc	19 40 46.9	+0.6
MMAI	Mount Meron Ar	146.13	303	PKPbc	PKPbc	19 40 47.4	-0.2
	comp=Z,2.6nm,0.5s,baz=73,slow=4.8,SNR=8.2						
VOIR		146.33	330	⇓iP	PKPbc	19 40 47.7	-0.1
DRGR		146.37	333	⇓iP	PKPbc	19 40 47.8	-0.1
PRU	Pruhonice	146.39	345	ePKP	PKPbc	19 40 47.8	+0.1
GOPC	GO Pecny, Ondr	146.40	344	ePKP	PKPbc	19 40 48.3	+0.5
VYHS	Vyhne	146.46	339	ePKP	PKPbc	19 40 48.2	+0.2
JAVC	Velka Javorina	146.52	341	ePKP	PKPbc	19 40 49.3	+1.1
ARR	Arges	146.58	330	⇓iP	PKPbc	19 40 49.3	+0.8
KRUC	Moravsky	146.73	342	ePKP	PKPbc	19 40 48.5	-0.2
MODS	Modra-Piesok	147.07	341	ePKP	PKPbc	19 40 50.3	+0.7
KHC	Kasperske Hory	147.42	345	ePKP	PKPbc	19 40 50.6	+0.1
KHC				ex	x	19 40 55.6	
KHC	Kasperske Hory	147.42	345	ePKPbc	PKPbc	19 40 49.7	-0.8
GEC2	GERESS Array S	147.66	345	ePKPbc	PKPbc	19 40 51.3	+0.1
GERES	GERESS Array B	147.66	345	PKPbc	PKPbc	19 40 51.1	-0.1
	comp=Z,3.7nm,0.5s,baz=21,slow=3.3,SNR=41						
GEA0	GERESS Array S	147.66	345	ePKPbc	PKPbc	19 40 50.9	-0.4
BZS	Buzias	147.76	333	⇓iP	PKPbc	19 40 51.3	-0.2
CONA	Conrad Observa	147.91	342	ePKPbc	PKPbc	19 40 52.1	+0.2
	comp=Z,8.9nm,1.3s,SNR=5.0						
HERR	Herculane	147.98	331	⇓iP	PKPbc	19 40 51.8	-0.2
WLF	Walferdange	148.16	354	ePKPbc	PKPbc	19 40 52.5	+0.1
ARSA	Arzberg	148.61	342	ePKPbc	PKPbc	19 40 53.4	-0.2
	comp=Z,1.5nm,1.1s						
BFO	Black Forest	149.22	351	ePKPbc	PKPbc	19 40 55.1	+0.1
SOKA	Soboth	149.28	342	ePKPbc	PKPbc	19 40 54.7	-0.6
	comp=Z,5.1nm,0.9s,SNR=4.9						
VTS	Vitosha	149.31	328	⇓iP	PKPbc	19 40 55.6	0.0
VTS	Vitosha	149.31	328	ePKPbc	PKPbc	19 40 55.3	-0.2
KBA	Koelnbreinsper	149.38	344	ePKPbc	PKPbc	19 40 54.7	-0.9
	comp=Z,6.7nm,1.1s						
WATA	Walderalm	149.57	346	ePKiKP	PKiKP	19 40 56.8	0.0
	comp=Z,4.1nm,0.5s						
RETA	Reutte	149.60	348	ePKPbc	PKPbc	19 40 55.7	-0.3
	comp=Z,0.8nm,0.3s						
WTTA	Wattenberg	149.63	346	ePKPbc	PKPbc	19 40 56.0	-0.2
	comp=Z,7.8nm,0.5s,SNR=4.9						
MOTA	Moosalm	149.67	347	i PKiKP	PKiKP	19 40 56.8	-0.2
	comp=Z,8.1nm,1.0s,SNR=4.6						
DIVS	Divibare	149.67	333	ePKPbc	PKPbc	19 40 56.2	-0.1
MYKA	Terra Mystica	149.72	343	ePKPbc	PKPbc	19 40 55.2	-1.1
	comp=Z,5.2nm,0.6s,SNR=5.6						
PDKS	Podkum	149.84	341	i PKPbc	PKPbc	19 40 56.0	-0.6
ABTA	Abfaltersbach	149.90	345	ePKPbc	PKPbc	19 40 55.7	-1.0
	comp=Z,10nm,0.7s,SNR=14						
ABTA				ePKPbc	PKiKP	19 40 56.6	-0.7
	SNR=8.0						
DAVA	Damuels	149.97	349	ePKPbc	PKPbc	19 40 56.7	-0.3
	comp=Z,6.6nm,1.0s						
CRNS	Crni Vrh	150.04	342	i PKPbc	PKPbc	19 40 56.3	-0.7
FETA	Feichten	150.05	347	ePKPbc	PKPbc	19 40 56.4	-0.8
	comp=Z,6.2nm,0.7s						
BOJS	Bojanci	150.26	340	i PKPbc	PKPbc	19 40 57.4	-0.1
DAVOX	Davos/Dischmat	150.45	348	PKPbc	PKPbc	19 40 58.1	-0.1
	comp=Z,9.7nm,0.6s,baz=312,slow=1.9,SNR=14						
TUE	Stuetta	150.85	349	ePKPbc	PKPbc	19 40 58.9	-0.3
PDG	Podgorica	151.33	332	⇓iP	PKPbc	19 40 58.9	-1.1
FNA	Florina	151.57	327	ePKPbc	PKPbc	19 40 59.5	-1.2
ESDC	Sonseca Array	157.85	11	PKPab	PKPab	19 41 38.8	-0.2
	comp=Z,0.2nm,0.4s,baz=342,slow=3.2,SNR=3.7						

ROM ***03*** *19:38:55.3±0.2, 41°.86N±0°.01×16°.01E±0°.01, h18^{km}±1^{km}, ML2.2/7*

ISCJB ***03*** *19:38:56.8±0.7, 41°.78N±0°.04×15°.92E±0°.07, h21^{km}±5^{km}, Error ellipse: s-maj=8.6km s-min=7.3km az=166.4*

ISC 03 19:38:57.0±1.1**, 41°.74N**±0°.04×**15°.96E**±0°.05**, h18**^{km}±4^{km}**, n14, σ0^{s}.90**/19**, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MS1	Monte Sant'Ang	0.04	196	ePg	Pg	19 39 00.3	-0.1
MS1				Sg	Sg	19 39 03.7	+1.1
MSAG	Monte S. Angel	0.05	229	P	Pg	19 39 00.3	-0.1
MSAG				AML	AML		
	comp=E,463µm,0.8s						
MSAG				AML	AML		
	comp=N,866µm,0.2s						
MSAG				AML	AML		
	comp=E,463µm,0.8s						
MSAG				AML	AML		
	comp=N,866µm,0.2s						
MSAG				AML	AML		
	comp=E,463µm,0.8s						
MSAG				AML	AML		
	comp=N,866µm,0.2s						
SGRT	San Giovanni R	0.16	274	P	Pg	19 39 00.9	-0.6
SGRT				AML	AML		
	comp=E,399µm,0.6s						
SGRT				AML	AML		
	comp=N,480µm,0.4s						
SGRT				AML	AML		
	comp=E,399µm,0.6s						
SGRT				AML	AML		
	comp=N,480µm,0.4s						
SGRT				AML	AML		
	comp=E,399µm,0.6s						
SGRT				AML	AML		
	comp=N,480µm,0.4s						
MELA	Melanico ??? S	0.62	267	P	Pg	19 39 08.2	-1.1
MELA				AML	AML		
	comp=E,696µm,0.2s						
MELA				AML	AML		
	comp=N,818µm,0.2s						
MELA				AML	AML		
	comp=E,762µm,0.2s						
MELA				AML	AML		
	comp=N,866µm,0.2s						
MELA				AML	AML		
	comp=E,696µm,0.2s						
MELA				AML	AML		
	comp=N,816µm,0.2s						
MELA				AML	AML		
	comp=E,762µm,0.2s						
MELA				AML	AML		
	comp=N,866µm,0.2s						
MELA				AML	AML		
	comp=N,816µm,0.2s						
MELA				AML	AML		
	comp=N,866µm,0.2s						
MELA				AML	AML		
	comp=E,696µm,0.2s						
MELA				AML	AML		
	comp=E,762µm,0.2s						
MRVN	Minervino Murg	0.70	165	P	Pg	19 39 10.3	-0.6
MRVN				S	Sb	19 39 21.7	+1.6
MRVN				AML	AML		
	comp=E,86µm,0.5s						
MRVN				AML	AML		
	comp=N,73µm,0.9s						
MRVN				AML	AML		
	comp=N,73µm,0.9s						
MRVN				AML	AML		
	comp=E,86µm,0.5s						
MOCO	Biccari - m.te	0.71	238	P	Pg	19 39 10.5	-0.4
PALZ	Palazzo San Ge	0.80	180	P	Pn	19 39 13.6	+0.2
PALZ				S	Sn	19 39 25.9	+1.1
PALZ				AML	AML		
	comp=E,112µm,1.3s						
PALZ				AML	AML		
	comp=N,97µm,1.2s						
PALZ				AML	AML		
	comp=N,97µm,1.2s						
PALZ				AML	AML		
	comp=E,112µm,1.3s						
VULT	Monte Vulture	0.83	198	P	Pb	19 39 13.2	+0.3
VULT				AML	AML		
	comp=E,147µm,0.2s						
VULT				AML	AML		
	comp=N,176µm,0.6s						
VULT				AML	AML		
	comp=E,147µm,0.2s						
VULT				AML	AML		
	comp=N,176µm,0.6s						
AMUR	Altamura	0.97	149	P	Pb	19 39 14.0	-1.3
SNAL	S. Angelo Dei	0.99	215	P	Pb	19 39 15.4	-0.3
SG1	Sgolgore (BA)	1.05	149	ePg	Pb	19 39 16.2	-0.5
SG1				Sg	Sg	19 39 31.6	+0.3
NOCI	Noci	1.27	138	P	Pn	19 39 19.0	-0.9
NOCI				AML	AML		
	comp=E,93µm,1.5s						
NOCI				AML	AML		
	comp=N,118µm,0.9s						
NOCI				AML	AML		
	comp=N,118µm,0.9s						
NOCI				AML	AML		
	comp=E,93µm,1.5s						
MASS	Massafra	1.43	141	ePg	Pn	19 39 20.7	-1.3
STON	Ston	1.72	48	ePg	Pb	19 39 28.3	+0.3
STON				Sg	Sn	19 39 48.1	+0.7

ISK ***03*** *19:41:52.8, 38°.66N×43°.17E, h5^{km}, ML2.4/4*

ISCJB ***03*** *19:41:54.4±0.5, 38°.66N±0°.03×43°.18E±0°.04, h12^{km}±5^{km}, Error ellipse: s-maj=5.3km s-min=5.1km az=163.6*

CSEM ***03*** *19:41:54.0±0.2, 38°.66N×43°.18E, h10^{km}, ML2.6, Error ellipse: s-maj=5.0km s-min=4.5km az=101.0*

DDA ***03*** *19:41:54.2, 38°.66N×43°.20E, h7^{km}, Ml2.6*

ISC 03 19:41:54.6±1.1**, 38°.66N**±0°.02×**43°.18E**±0°.03**, h10**^{km}±9^{km}**, n24, σ0^{s}.90**/37**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	Van	0.18	111	PG	Pg	19 41 58.6	+0.1
VANB	Van	0.18	111	ePg	Pg	19 41 58.6	+0.1
TVAN	Van	0.22	126	i P	Pg	19 41 58.6	-0.7
TVAN				i S	Sg	19 42 02.9	+0.4
TVAN	Van	0.22	126	P	Pg	19 41 58.6	-0.7
TVAN				S	Sg	19 42 02.9	+0.4
GEVA	Gevas	0.36	195	i P	Pg	19 42 01.4	-0.4
GEVA				i S	Sb	19 42 08.1	-0.8
GEVA	Gevas	0.36	195	P	Pg	19 42 01.4	-0.4

GEVA				S	Sb	19 42 08.1	-0.8
ADCV	BITLIS_Adilcev	0.38	293	iP	Pg	19 42 02.4	+0.2
ADCV				iS	Sb	19 42 09.1	-0.5
ADCV	BITLIS_Adilcev	0.38	293	P	Pg	19 42 02.4	+0.2
ADCV				S	Sb	19 42 09.1	-0.5
VMUR	Van-Muradiye	0.45	43	iP	Pg	19 42 03.5	0.0
VMUR				iS	Sb	19 42 11.0	-0.6
VMUR	Van-Muradiye	0.45	43	P	Pg	19 42 03.5	0.0
VMUR				S	Sb	19 42 11.0	-0.6
CLDR	Caldiran	0.75	50	PG	Pg	19 42 08.7	-0.5
CLDR	Caldiran	0.75	50	iP	Pg	19 42 07.8	-1.4
CLDR				iS	Sb	19 42 20.0	-0.4
CLDR	Caldiran	0.75	50	P	Pg	19 42 07.8	-1.4
CLDR	Caldiran	0.75	50	ePg	Pg	19 42 08.7	-0.5
CLDR				S	Sb	19 42 20.0	-0.4
TUTA	Tutak	0.79	339	iP	Pg	19 42 09.2	-0.7
TUTA				iS	Sg	19 42 20.4	+0.1
TUTA	Tutak	0.79	339	P	Pg	19 42 09.2	-0.7
TUTA				S	Sg	19 42 20.4	+0.1
GURO	Guroymak-BITLI	0.90	263	PG	Pg	19 42 11.1	-0.9
GURO	Guroymak-BITLI	0.90	263	ePg	Pg	19 42 11.1	-0.9
AGRB	Hanur-Agry	0.93	351	PG	Pg	19 42 11.7	-0.7
AGRB	Hanur-Agry	0.93	351	ePg	Pg	19 42 11.7	-0.7
HAKT	HAKKARI	1.18	159	iP	Pg	19 42 15.7	-1.5
HAKT				iS	Sn	19 42 36.6	+3.1
HAKT	HAKKARI	1.18	159	P	Pg	19 42 15.7	-1.5
CUKT	Cukurca	1.45	166	PN	Pg	19 42 21.8	-0.6
CUKT	Cukurca	1.45	166	ePn	Pg	19 42 21.8	-0.6

MAN 03 19:45:24.0, 13.°66N×120.°61E, h42^{km}, mb4.3, ML3.1, MS2.8, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUBP	Lubang	0.36	283	eP	Pn	19 45 34.6	+1.5
LUBP				eS	Sn	19 45 41.9	+2.4
TGY	Tagaytay City	0.55	36	⇑iP	Pn	19 45 37.3	+1.7
TGY				iS	Sn	19 45 46.5	+2.8
BOAC	Boac	1.22	99	eP	Pn	19 45 43.1	-1.5
BOAC				eS	Sn	19 45 58.3	-1.6
SJMP	San Jose	1.29	157	eP	Pn	19 45 45.5	-0.1
SJMP				eS	Sn	19 46 02.3	+0.6
BUSP	Coron	1.69	194	eP	Pn	19 45 52.3	+1.2
BUSP				eS	Sn	19 46 13.7	+2.2
OTRP	Odiongan	1.89	133	eP	Pn	19 45 52.8	-1.0
OTRP				eS	Sn	19 46 18.1	+1.7
AUQP	San Andres	2.04	99	eP	Pn	19 45 57.0	+1.2
BALP	Baler	2.28	24	eP	Pn	19 46 00.4	+1.3

IDC 03 19:46:42.3±2.4, 17.°72S×179.°12W, h0^{km}, mb4.1/5, mb1 4.4/5, mb1mx3.8/50, mbtmp4.1/5, Error ellipse: s-maj=210.5km s-min=23.8km az=157.0

NEIC 03 19:47:28.3±3.5, 18.°16S×179.°45W, h433^{km}±36^{km}, mb4.4/9, Error ellipse: s-maj=45.0km s-min=9.7km az=146.0

ISCJB 03 19:47:29.2±0.7, 18.°2S±0.°2×179.°6W±0.°1, h450^{km}, mb4.1/14, Error ellipse: s-maj=35.7km s-min=9.4km az=155.2

ISC 03 19:47:30.2±0.9, 18.°1S±0.°2×179.°5W±0.°1, h450^{km}, n25, σ1.^{s}62/25, mb4.0/14, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FUNA	Funafuti	9.63	352	eP	P	19 49 41.4	-2.0
HNR	Honiara	21.76	291	P	P	19 51 51.4	+3.6
	31nm,0.5s						
CTAO	Charters Tower	32.41	261	eP	P	19 53 21.6	0.0
	41nm,0.9s						
COEN	Coen	36.10	271	eP	P	19 53 53.3	+0.5
	107nm,1.8s						
MANU	Manus Island	36.24	292	eP	P	19 53 54.6	+0.7
	12nm,0.8s						
STKA	Stephens Creek	37.64	241	eP	P	19 54 06.4	+1.1
	6.1nm,2.0s						
BBOO	Buckleboo	42.42	241	eP	P	19 54 43.7	-0.2
	87nm,2.0s						
WRAB	Tennant Creek	43.59	260	eP	P	19 54 51.6	-1.8
	0.6nm,0.3s						
WR1	Warramunga Arr	43.60	260	eP	P	19 54 52.0	-1.4
	17nm,1.4s						
WRA	Warramunga Arr	43.60	260	P	P	19 54 52.0	-1.4
	0.6nm,0.3s,baz=93,slow=7.9,SNR=25						
AS31	Alice Springs	43.76	254	eP	P	19 54 54.0	-0.6
	1.7nm,0.6s						
ASAR	Alice Springs	43.76	254	P	P	19 54 54.0	-0.7
	4.4nm,0.4s,baz=89,slow=8.2,SNR=78						
FITZ	Fitzroy Crossi	52.00	261	P	P	19 55 55.6	-1.1
	1.8nm,0.7s,baz=92,slow=6.5,SNR=6.6						
FITZ	Fitzroy Crossi	52.00	261	eP	P	19 55 55.8	-1.0
MBWA	Marble Bar	57.04	256	eP	P	19 56 30.5	-1.8
PASC	Pasadena Art C	78.12	48	eP	P	19 58 44.6	+2.8
DPP	Dos Picos Cty	78.40	50	eP	P	19 58 42.8	-0.6
EML	El Monte Cty P	78.42	50	eP	P	19 58 42.2	-1.2
DNR	Dunn Ranch,Anz	78.92	49	eP	P	19 58 48.8	+2.5
GVDA	Garner Valley	78.94	49	eP	P	19 58 46.5	+0.2
NVAR	Mina Array Bea	80.28	44	P	P	19 58 53.9	+0.4
	0.4nm,0.7s,baz=226,slow=8.5,SNR=4.3						
CMW	Cultus Mountai	83.62	34	eP	P	19 59 10.8	+0.6
GBL	Gable Mountain	84.04	37	eP	P	19 59 14.3	+2.2
TXAR	Lajitas Array	86.97	58	P	P	19 59 26.4	-0.4
	0.7nm,0.8s,baz=212,slow=4.3,SNR=6.8						
CLL	Collm	145.44	346	ePKPbc	PKPdf	20 06 14.0	-1.8

IDC 03 19:53:32.7±0.9, 1.°50N×128.°36E, h0^{km}, mb3.7/6, mb1 3.8/7, mb1mx3.5/58, mbtmp3.7/7, ML3.8/1, MS2.8/1, Ms1 2.8/1, ms1mx2.2/53, Error ellipse: s-maj=59.8km s-min=16.5km az=61.0

DJA 03 19:53:34.0±1.7, 1°N±7°×12°8E±1°8, h10^{km}, M3.6/4, MLv3.6/4

NEIC 03 19:53:37.8±1.0, 1.°43N×128.°46E, h37^{km}±11^{km}, mb4.7/4, Error ellipse: s-maj=39.2km s-min=6.8km az=69.0

ISC 03 19:53:36.1±0.8, 1.°23N±0.°07×128.°04E±0.°08, h23^{km}, n26, σ1.^{s}65/25, mb4.0/9, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	0.81	236	P	Pn	19 53 54.4	+2.2
TNTI	Ternate	0.81	236	ePn	Pn	19 53 55.2	+3.0
LBMI	Labuha	1.93	196	P	Pb	19 54 09.6	-1.1
SIJI	Sorong	3.84	123	Pn	Pn	19 54 32.4	-1.5
	7.9nm,0.3s,baz=322,slow=15,SNR=15						
SIJI				Sn	Sn	19 55 16.1	-2.3
	baz=226,slow=23,SNR=4.6						
LUWI	Luwuk	5.73	247	ePn	Pb	19 55 11.9	-3.5
FAKI	Fak Fak	5.89	134	ePn	Pn	19 55 00.6	-1.5
DAV	Davao City (W)	6.30	337	ePn	Pn	19 55 09.0	+1.3
SAUI	Saumlaki	9.71	160	ePn	Pn	19 55 56.0	+1.5
MMRI	Maumere	11.38	210	ePn	Pn	19 56 28.8	+11
MTN	Manton Dam	14.31	168	ePn	Pn	19 56 58.2	+0.7
PMG	Port Moresby	21.78	119	LR	LR	20 09 10.5	
	comp=Z,24nm,18.5s,baz=207,slow=43						
WRAB	Tennant Creek	21.92	164	eP	P	19 58 29.1	+1.1
	57nm,1.9s						
WRA	Warramunga Arr	21.93	164	P	P	19 58 28.7	+0.6
	2.3nm,0.8s,baz=345,slow=11,SNR=9.1						
WR1	Warramunga Arr	21.93	164	eP	P	19 58 28.7	+0.6
	54nm,1.9s						
WB2	Warramunga Arr	21.93	164	eP	P	19 58 30.2	+2.1
	29nm,1.5s						
ASAR	Alice Springs	25.39	167	P	P	19 59 04.8	+2.8
	1.0nm,0.9s,baz=345,slow=9.8,SNR=8.5						
SONA0	Songino Array	50.07	341	eP	P	20 02 28.6	-0.8
SONM	Songino Array	50.07	341	P	P	20 02 28.6	-0.8
	0.9nm,0.8s,baz=159,slow=6.2,SNR=3.5						
MK01	Makanchi Array	60.33	325	eP	P	20 03 43.3	+0.1
MK31	Makanchi Array	60.34	326	eP	P	20 03 43.4	+0.1
MK32	Makanchi Array	60.34	326	eP	P	20 03 44.1	+0.7
MKAR	Makanchi Array	60.34	326	P	P	20 03 44.1	+0.7
	0.7nm,0.4s,baz=113,slow=8.7,SNR=14						
MKAR	Makanchi Array	60.34	326	eP	P	20 03 43.7	+0.3
	5.6nm,0.6s						
KURBB	Kurchatov Arra	64.54	328	P	P	20 04 11.3	0.0
	0.4nm,0.3s,baz=125,slow=5.9,SNR=8.5						
KURK	Kurchatov	64.54	328	eP	P	20 04 11.2	0.0
BVAR	Borovoye Array	70.12	327	P	P	20 04 45.2	-1.4
	0.1nm,0.3s,baz=106,slow=11,SNR=2.6						

KRSC 03 20:43:43.4±1.5, 53.°97N×168.°46E, h43^{km}±23^{km}, ML3.7, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	Bering	1.90	311	eP	Pn	20 44 14.0	+0.7
BKI				eS	Sn	20 44 39.7	+3.7
MKZ	Mys Kozlova	3.99	281	eS	Sn	20 45 31.2	+3.8
KBG	Krutoberegovo	4.02	307	S	Sn	20 45 33.6	+5.5
SMKR	Semkarok	4.78	306	eP	Pn	20 44 57.1	+4.3
TUMD	Tumrok D	4.85	288	S	Sn	20 45 52.8	+4.2
ZLN	Zelenaya	4.86	298	P	Pn	20 44 58.7	+4.7
KZV	Kizimen	4.89	287	S	Sn	20 45 54.6	+4.8
SPN	Mys Shipunski	5.11	264	eS	Sn	20 45 59.2	+4.3
NLC	Nalytchevo	5.49	265	S	Sn	20 46 08.9	+4.6
SDLR	Sedlovina	5.74	267	P	Pn	20 45 10.3	+4.2
SDLR				S	Sn	20 46 15.3	+4.6
UGLR	Uglovaya	5.79	266	P	Pn	20 45 11.4	+4.6
AVH	Avacha	5.83	267	P	Pn	20 45 12.4	+5.1
RUS	Russkaya	6.17	260	eP	Pn	20 45 17.1	+5.2
GNL	Ganaly	6.23	272	eP	Pn	20 45 17.5	+4.6
KRMR	Karymshinskiy	6.28	264	eS	Sn	20 46 28.6	+4.8
MTVR	Mutnovka	6.35	261	eS	Sn	20 46 30.2	+4.5
KDTR	Khodutka, Kamc	6.64	255	eS	Sn	20 46 36.2	+3.5

ISCJB 03 20:44:04.0±0.4, 7.°30S±0.°05×126.°46E±0.°07, h400^{km}, mb3.7/14, Error ellipse: s-maj=10.1km s-min=6.1km az=10.0

IDC 03 20:44:05.8±1.0, 7.°35S×126.°33E, h408^{km}±12^{km}, mb3.4/14, mb1 3.4/19, mb1mx3.3/53, mbtmp4.2/19, Error ellipse: s-maj=16.3km s-min=8.9km az=84.0

ISC 03 20:44:05.3±0.6, 7.°32S±0.°06×126.°49E±0.°09, h400^{km}, n21, σ1.^{s}10/25, mb3.7/14, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	4.01	224	P	Pn	20 45 18.8	+1.3
	115nm,0.3s,baz=60,slow=1.4,SNR=179						
BATI				S	S	20 46 14.5	-1.5
	10nm,0.3s,baz=94,slow=19,SNR=3.4						
SIJI	Sorong	7.98	37	P	P	20 46 01.1	+0.6
	3.4nm,0.3s,baz=316,slow=14,SNR=8.8						
SIJI				S	S	20 47 31.5	-2.7
	3.0nm,0.3s,baz=42,slow=22,SNR=6.2						
FITZ	Fitzroy Crossi	10.75	184	P	P	20 46 31.3	+0.1
	0.5nm,0.3s,baz=353,slow=6.6,SNR=52						
WRA	Warramunga Arr	14.68	150	P	P	20 47 14.4	0.0
	1.5nm,0.3s,baz=336,slow=8.2,SNR=60						
WRA				S	S	20 49 49.0	-1.9
	0.3nm,0.3s,baz=324,slow=21,SNR=8.4						
ASAR	Alice Springs	17.75	157	P	P	20 47 47.9	+0.6
	1.9nm,0.3s,baz=326,slow=8.0,SNR=78						
ASAR				S	S	20 50 50.8	-0.2
	0.3nm,0.3s,baz=342,slow=22,SNR=11						
LEM	Lembang	18.73	270	P	P	20 47 57.0	-0.9
	2.4nm,0.3s,baz=274,slow=19,SNR=4.9						
NWAO	Narrogin (SRO)	26.89	197	P	P	20 49 11.1	-0.6
	7.0nm,0.5s,baz=342,slow=6.4,SNR=14						
GUMO	Guam	27.65	41	P	P	20 49 19.3	+0.8
	24nm,0.7s,baz=225,slow=20,SNR=2.1						
STKA	Stephens Creek	28.21	152	P	P	20 49 24.4	+1.1
	2.0nm,0.3s,baz=337,slow=8.3,SNR=25						
KSRS	Korea Array	44.55	2	P	P	20 51 40.3	+0.9
	1.0nm,0.5s,baz=178,slow=9.6,SNR=7.5						
MAT	Matsushiro	44.99	13	P	P	20 51 42.6	-0.3
MJAR	Matsushiro Arr	44.99	13	P	P	20 51 42.5	-0.4
	4.0nm,0.6s,baz=193,slow=9.5,SNR=13						
USRK	Ussuriysk Ar.	51.52	5	P	P	20 52 32.3	+0.4
	2.1nm,0.6s,baz=203,slow=9.8						
ASAJ	Asahikawa	53.23	14	P	P	20 52 44.9	+0.6
	4.1nm,0.7s,baz=191,slow=5.2,SNR=6.9						
SONM	Songino Array	57.71	344	P	P	20 53 16.0	+0.1
	0.6nm,0.5s,baz=145,slow=9.0,SNR=3.6						
PETK	Petropavlovsk-	65.76	20	P	P	20 54 10.2	+1.5
	2.7nm,0.6s,baz=186,slow=4.0						
MKAR	Makanchi Array	66.63	329	P	P	20 54 13.8	-0.5
	0.3nm,0.6s,baz=121,slow=8.0,SNR=4.2						
ZALV	Zalesovo Beam	70.37	335	P	P	20 54 35.3	-1.7
	0.7nm,0.4s,baz=150,slow=5.2,SNR=5.1						
KURBB	Kurchatov Arra	71.00	330	P	P	20 54 40.2	-0.6
	0.5nm,0.6s,baz=139,slow=5.0,SNR=6.4						
BVAR	Borovoye Array	76.50	329	P	P	20 55 11.5	-0.9
	0.2nm,0.5s,baz=111,slow=7.9,SNR=3.5						
QSPA	South Pole Qui	82.67	180	P	P	20 55 44.8	-0.3
	1.3nm,0.6s,baz=142,slow=3.6,SNR=6.3						

IDC 03 20:48:41.1±18.0, 22.°77S×175.°43W, h0^{km}, mb4.2/5, mb1 4.4/5, mb1mx3.8/47, mbtmp4.2/5, MS4.1/1, Ms1 4.1/1, ms1mx2.6/47, Error ellipse: s-maj=330.4km s-min=138.3km az=83.0, Tonga Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	6.83	199	LR	LR	20 52 43.9	
	comp=Z,2μm,21.9s,baz=194,slow=36						
CTA	Charters Tower	35.70	267	P	P	20 55 42.6	+1.0
	4.7nm,0.3s,baz=102,slow=5.9,SNR=8.2						
STKA	Stephens Creek	39.03	247	P	P	20 56 08.8	-1.0
	2.3nm,0.9s,baz=90,slow=11,SNR=6.6						
ASAR	Alice Springs	46.37	258	P	P	20 57 08.8	-0.7
	0.6nm,0.3s,baz=94,slow=6.7,SNR=18						
WRA	Warramunga Arr	46.69	264	P	P	20 57 11.5	-0.5
	1.6nm,0.3s,baz=97,slow=8.4,SNR=49						
FITZ	Fitzroy Crossi	55.12	263	P	P	20 58 16.2	+0.6
	3.3nm,1.0s,baz=86,slow=19,SNR=5.3						

ISCJB 03 21:04:02.8±0.7, 34.°50N±0.°04×140.°40E±0.°06, h61^{km}±8^{km}, mb3.6/2, Error ellipse: s-maj=9.1km s-min=6.9km az=163.1

IDC 03 21:04:02.5±1.3, 33.°82N×138.°59E, h0^{km}, mb3.6/2, mb1 3.7/3, mb1mx3.3/67, mbtmp3.5/3, ML3.1/1, Error ellipse: s-maj=38.3km s-min=18.3km az=45.0

JMA 03 21:04:03.2±0.2, 34.°51N×140.°39E, h55^{km}±3^{km}, M2.9

ISC 03 21:04:03.5±1.1, 34.°49N±0.°05×140.°40E±0.°06, h52^{km}±11^{km}, n17, σ0.^{s}71/21, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO3	Boso 3	0.33	17	P	Pn	21 04 13.1	+0.4
BSO4	Boso 4	0.50	354	P	Pn	21 04 15.2	+0.4
BSO1	Boso 1	0.51	71	P	Pn	21 04 14.5	+0.1
KTR	Katsuura	0.66	354	P	Pn	21 04 16.6	-0.2
KTR				S	Sn	21 04 26.3	-0.1
JIM2	Oshima 3	0.83	286	P	Pn	21 04 18.9	-0.1
JIM2				S	Sn	21 04 29.6	-0.8
JMKN	Mikurajimanish	0.90	229	P	Pn	21 04 20.3	+0.4
JTHY	Toshimahigashi	0.92	272	P	Pn	21 04 20.6	+0.5
JIZS	Izushimoda	1.27	281	P	Pn	21 04 25.0	+0.1
JIZS				S	Sn	21 04 41.1	+0.2
JOD2	Odawara 2	1.32	306	P	Pn	21 04 25.4	-0.3
JOD2				S	Sn	21 04 40.9	-1.3
JHJ	Hachijo jima 2	1.46	201	Pn	Pn	21 04 27.8	+0.3
	12nm,0.3s,baz=233,slow=20,SNR=9.5						
JHJ				Sn	Sn	21 04 46.1	+0.6
	48nm,0.3s,baz=252,slow=20,SNR=16						
MJAR	Matsushiro Arr	2.72	320	Pn	Pn	21 04 45.4	+0.8
	3.1nm,0.3s,baz=174,slow=15,SNR=19						
MJAR				Sn	Sn	21 05 17.2	+0.9
	1.9nm,0.3s,baz=188,slow=19,SNR=7.5						
MAT	Matsushiro	2.72	320	P	Pn	21 04 46.0	+1.3
MAT				S	Sn	21 05 17.1	+0.7
H11N2	WAKE ISLAND Hy	27.68	115	T	T	21 39 39.1	
	baz=308,slow=75,SNR=5.0						
H11N1	WAKE ISLAND Hy	27.69	115	T	T	21 39 28.1	
	baz=308,slow=75,SNR=6.4						
H11N3	WAKE ISLAND Hy	27.70	115	T	T	21 39 39.6	
	baz=308,slow=75,SNR=4.7						
MKAR	Makanchi Array	44.81	304	P	P	21 12 12.6	+0.4
	0.6nm,0.7s,baz=88,slow=9.2,SNR=5.4						
WRA	Warramunga Arr	54.44	187	P	P	21 13 24.5	-1.0
	0.6nm,0.7s,baz=4.6,slow=7.9,SNR=8.1						

IDC 03 21:09:05.1±3.0, 33.°89S×178.°33W, h0^{km}, mb3.4/2, mb1 3.7/3, mb1mx3.5/46, mbtmp3.5/3, ML3.7/1, MS3.6/1, Ms1 3.6/1, ms1mx2.6/23, Error ellipse: s-maj=76.4km s-min=35.9km az=124.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	5.71	219	Pn	Pn	21 10 31.1	0.0
	2.0nm,0.3s,baz=333,slow=2.3,SNR=12						
URZ				Sn	Sn	21 11 36.1	-1.4
	3.1nm,0.3s,baz=150,slow=23,SNR=12						
ASAR	Alice Springs	42.77	271	P	P	21 17 05.2	+0.7
	0.4nm,0.7s,baz=110,slow=7.6,SNR=5.1						
WRA	Warramunga Arr	44.07	276	P	P	21 17 14.5	-0.5
	0.4nm,0.6s,baz=116,slow=7.8,SNR=7.0						
FITZ	Fitzroy Crossi	52.16	273	LR	LR	21 38 54.1	
	comp=Z,58nm,19.0s,baz=103,slow=34						
FINES	FINESS Array B	148.29	338	PKPbc	PKPbc	21 28 51.6	-0.8
	1.0nm,0.8s,baz=74,slow=5.1,SNR=2.6						

ISCJB 03 21:26:28.5±2.0, 33.°4S±0.°1×178.°6W±0.°3, h48^{km}, mb3.5/3, Error ellipse: s-maj=36.7km s-min=16.3km az=16.6

IDC 03 21:26:36.8±7.2, 33.°56S×178.°88W, h93^{km}±58^{km}, mb3.3/3, mb1 3.5/4, mb1mx3.3/47, mbtmp3.6/4, ML3.3/1, MS2.5/1, Ms1 2.5/1, ms1mx2.2/16, Error ellipse: s-maj=51.5km s-min=30.9km az=50.0

ISC 03 21:26:30.1±1.6, 33.°3S±0.°2×178.°6W±0.°3, h48^{km}, n7, σ1.^{s}42/7, mb3.6/3, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	4.08	8	LR	LR	21 28 51.7	
	comp=Z,51nm,18.7s,baz=330,slow=31						
URZ	Urewera	6.07	214	P	Pn	21 27 58.4	+1.1
	0.9nm,0.3s,baz=37,slow=16,SNR=9.4						
URZ				S	Sn	21 29 04.8	-0.6
	0.4nm,0.3s,baz=18,slow=20,SNR=2.6						
ASAR	Alice Springs	42.56	270	P	P	21 34 21.4	-0.1
	0.9nm,0.6s,baz=108,slow=7.3,SNR=13						
WRA	Warramunga Arr	43.81	275	P	P	21 34 31.1	-0.4
	0.4nm,0.3s,baz=117,slow=7.8,SNR=9.8						
VNDA	Vanda	45.17	186	P	P	21 34 40.8	-0.9
	0.4nm,0.7s,baz=45,slow=7.7,SNR=4.5						
FINES	FINESS Array B	147.68	338	PKPbc	PKPab	21 46 09.7	-1.3
	1.0nm,0.6s,baz=31,slow=4.4,SNR=6.7						
HFS	Hagfors	151.97	347	PKPbc	PKPbc	21 46 21.1	+2.0
	1.0nm,0.6s,baz=43,slow=2.6,SNR=4.3						

KRSC 03 21:29:13.8±1.4, 55.°56N×164.°57E, h50^{km}±24^{km}, ML3.7, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	Bering	0.88	114	iP	Pn	21 29 31.9	+2.1
BKI				iS	Sn	21 29 44.1	+2.6
KBTR	Krutoberegovo	1.18	304	eP	Pn	21 29 33.5	-0.4
KBTR				eS	Sn	21 29 48.9	0.0
KBG	Krutoberegovo	1.26	304	eP	Pn	21 29 34.6	-0.4
KBG				eS	Sn	21 29 51.0	+0.2
MKZ	Mys Kozlova	1.92	240	eP	Pn	21 29 46.2	+2.2
MKZ				eS	Sn	21 30 09.6	+2.7
SMKR	Semkarok	2.02	302	eP	Pn	21 29 46.8	+1.4
SMKR				eS	Sn	21 30 10.9	+1.4
BDR	Baidarnaya	2.14	300	eP	Pn	21 29 48.9	+1.8
BDR				eS	Sn	21 30 15.0	+2.6
ZLN	Zelenaya	2.18	284	eP	Pn	21 29 50.7	+3.1
ZLN				eS	Sn	21 30 16.5	+3.1
SRKR	Sorokina	2.20	301	eP	Pn	21 29 49.6	+1.7
SRKR				eS	Sn	21 30 16.2	+2.3
CIRR	Tsirk	2.23	286	eP	Pn	21 29 51.3	+3.0
CIRR				eS	Sn	21 30 18.1	+3.4
LGNR	Loginova	2.25	285	eP	Pn	21 29 51.5	+2.7
LGNR				eS	Sn	21 30 19.7	+4.2
KLY	Klyuchi	2.33	290	eP	Pn	21 29 50.4	+0.8
KLY				eS	Sn	21 30 17.8	+0.8
BZMR	Bezymyannaya	2.34	281	eP	Pn	21 29 53.3	+3.5
BZWR	Bezymyannyi-We	2.34	282	eS	Sn	21 30 21.7	+4.2
KRSR	Krestovskiy	2.35	288	eP	Pn	21 29 52.2	+2.2
KRSR				eS	Sn	21 30 20.4	+2.7
TUMD	Tumrok D	2.41	263	eP	Pn	21 29 53.9	+3.2
TUMD				eS	Sn	21 30 24.0	+5.0
KIRR	Kirishev	2.42	281	eP	Pn	21 29 54.5	+3.5
KIRR				eS	Sn	21 30 23.7	+4.2
KMNR	Kamenistaya	2.46	276	eP	Pn	21 29 54.8	+3.3
KMNR				eS	Sn	21 30 25.2	+4.8
KZV	Kizimen	2.48	261	eP	Pn	21 29 55.1	+3.2
KPT	Kopyto	2.49	281	eP	Pn	21 29 55.2	+3.3
KPT				eS	Sn	21 30 24.3	+3.2
TUMR	Tumrok	2.54	265	eP	Pn	21 29 56.2	+3.6
TUMR				eS	Sn	21 30 25.8	+3.5
KOZ	Kozyrevsk	2.70	283	eP	Pn	21 29 59.3	+4.6
KOZ				eS	Sn	21 30 31.6	+5.5
KII	Karymskiy	3.34	245	eP	Pn	21 30 06.2	+2.7
SPN	Mys Shipunski	3.63	229	eP	Pn	21 30 09.3	+1.9
SPN				eS	Sn	21 30 50.8	+1.8
NLC	Nalytchevo	3.88	234	eP	Pn	21 30 13.1	+2.2
NLC				eS	Sn	21 30 57.6	+2.4
SDLR	Sedlovina	4.04	238	eP	Pn	21 30 17.0	+3.9
SDLR				eS	Sn	21 31 03.8	+4.7
UGLR	Uglovaya	4.11	237	eP	Pn	21 30 17.9	+3.9
UGLR				eS	Sn	21 31 06.1	+5.3
AVH	Avacha	4.11	238	eP	Pn	21 30 18.2	+4.1
GNL	Ganaly	4.28	247	eP	Pn	21 30 20.6	+4.1
KRMR	Karymshinskiy	4.67	237	eP	Pn	21 30 26.1	+4.5
KRMR				eS	Sn	21 31 19.6	+5.1
RUS	Russkaya	4.75	231	eP	Pn	21 30 26.5	+3.7
MTVR	Mutnovka	4.87	233	eP	Pn	21 30 28.5	+4.0
ASAK	Asacha	5.07	234	eP	Pn	21 30 30.9	+3.7
KDTR	Khodutka, Kamc	5.39	228	eP	Pn	21 30 34.2	+2.7

NNC 03 21:56:57.1±2.1, 50.°21N×87.°68E, h0^{km}, mb3.6, mpv3.2, 5C-5D, Error ellipse: s-maj=19.8km s-min=10.3km az=106.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAA0	Zalesovo Array	4.14	336	⇓Pn	Pn	21 58 00.8	-0.7
	1.8nm,0.5s						
ZAA0				⇑Lg	Lg	21 59 09.2	
	8.7nm,0.4s						
MK31	Makanchi Array	4.95	228	⇓Pn	Pn	21 58 13.4	+0.7
	0.9nm,0.3s,baz=55,slow=13,SNR=111						
MK31				⇓Sn	Sn	21 59 11.6	+1.0
	1.8nm,0.4s						
MK31				⇑Lg	Lg	21 59 32.3	
	5.0nm,0.6s,baz=54,slow=32,SNR=4.7						
KURK	Kurchatov	5.81	278	⇓Pn	Pn	21 58 25.1	+0.7
	1.7nm,0.7s						
KURK				⇑Lg	Lg	21 59 59.6	
	8.5nm,0.5s						
KURBB	Kurchatov Arra	5.86	278	⇓Pn	Pn	21 58 25.4	+0.3
	1.1nm,0.2s						
KURBB				⇑Sn	Sn	21 59 34.5	+1.5
	9.3nm,0.7s						
KURBB				⇑Lg	Lg	22 00 00.8	
	25nm,0.7s						

IGQ 03 21:58:40.9±1.0, 1°S±3°×8°1W±°, h13^{km}±6^{km}, MLv4.0/2, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAG1	Magdalena	1.21	46	P	Pn	21 59 01.2	-2.3
QUEV	Quevedo	1.35	95	P	Pn	21 59 01.9	-3.5
QUEV				S	Sn	21 59 18.6	-4.6
ASDO	Santo Domingo	1.65	67	P	Pn	21 59 06.6	-3.0
MILO	Milagro-Astudi	1.73	141	P	Pn	21 59 08.2	-2.5
MILO				S	Sn	21 59 28.0	-4.6
ILLI	Illinizas Sur	1.93	84	P	Pn	21 59 11.8	-1.9
PAST	Pastocalle	2.01	84	P	Pn	21 59 13.5	-1.4
COHC	Cochancay	2.07	138	P	Pn	21 59 14.2	-1.1
COHC				S	Sn	21 59 42.0	+1.0
NINA	Atacazo Ninahu	2.09	75	P	Pn	21 59 16.5	+0.5
PINO	Pino	2.17	70	P	Pn	21 59 14.5	-2.7
GGPC	Guagua Pichinc	2.17	70	P	Pn	21 59 15.7	-1.6
BNAS	Cotopaxi Volca	2.18	84	P	Pn	21 59 16.7	-0.5
RIOE1	Riobamba	2.18	112	P	Pn	21 59 17.7	+0.6
BMOR	Cotopaxi Volca	2.19	85	P	Pn	21 59 16.8	-0.6
BREF	Cotopaxi Volca	2.22	84	P	Pn	21 59 17.2	-0.7
YANA	Yana	2.22	69	P	Pn	21 59 15.4	-2.4
JUI6	Juive	2.23	103	P	Pn	21 59 18.8	+1.0
BMAS	Trigal station	2.24	105	P	Pn	21 59 18.8	+0.8
PITA	Cotopaxi Volc	2.24	81	P	Pn	21 59 17.1	-0.9
BVC2	Cotopaxi Volca	2.25	83	P	Pn	21 59 18.1	-0.2
POND	Pondoa	2.25	103	P	Pn	21 59 18.0	-0.1
VC1	Cotopaxi 1	2.26	83	P	Pn	21 59 18.5	+0.1
BTAM	Cotopaxi Volca	2.26	84	P	Pn	21 59 18.6	+0.1
RETU	Refugio	2.26	104	P	Pb	21 59 20.8	-1.1
PISA	Pisayambo	2.26	94	P	Pn	21 59 19.8	+1.4
ARRY	Arrayan	2.26	105	P	Pn	21 59 19.5	+1.2

BPAT	Tungurahua Vol	2.28	105	P	Pn	21 59 18.6	-0.1
COV1	Cotopaxi Volc	2.31	84	P	Pn	21 59 17.9	-1.4
ANTG	Antisana-Guama	2.42	80	P	Pn	21 59 21.5	+0.9
ANTM	Antisana-La Mi	2.45	81	P	Pn	21 59 22.7	+1.7
OTAV	Otavalo	2.47	62	P	Pn	21 59 19.4	-1.9
ANTS	Antisana-Sarah	2.51	80	P	Pn	21 59 22.2	+0.4
CUIC	Cuicocha-Domo	2.58	62	P	Pn	21 59 21.3	-1.4
CUIC				S	Sn	21 59 53.0	-1.2
IMBA	Imbabura, San	2.72	64	P	Pn	21 59 26.5	+1.9
URCU	Urcuqui	2.74	61	P	Pn	21 59 25.1	+0.1
CAYA	Cayambe	2.83	70	P	Pn	21 59 25.7	-0.5
YAHU	Yahuarcocha	2.87	64	P	Pn	21 59 27.9	+1.2

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*ISCJB **03** 21:59:56.7±0.3, 10°.05N±0°.03×125°.53E±0°.05, h192^{km}±2^{km}, mb4.0/37, Error ellipse: s-maj=7.9km s-min=3.9km az=160.6*

*NEIC **03** 21:59:57.8±1.1, 10°.06N×125°.59E, h192^{km}±11^{km}, mb4.4/14, Error ellipse: s-maj=29.6km s-min=15.0km az=74.0*

*MAN **03** 21:59:58.6, 10°.06N×125°.46E, h172^{km}, mb4.9, ML3.8, MS3.8*

*IDC **03** 21:59:58.4±1.5, 10°.03N×125°.53E, h194^{km}±15^{km}, mb3.7/22, mb1 3.7/26, mb1mx3.5/72, mbtmp4.3/26, Error ellipse: s-maj=16.6km s-min=7.7km az=74.0*

ISC 03 21:59:57.7±0.6, 10°.04N±0°.04×125°.49E±0°.06, h185^{km}±5^{km}, n97, σ1^{s}11/104, mb4.2/37, 4C-4D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	Surigao	0.26	181	⇑iP	Pn	22 00 22.9	+0.6
SCPH				iS	Sn	22 00 40.8	-0.6
MSLP	Maasin	0.63	278	eP	Pn	22 00 24.4	+0.8
BUTP	Butuan	1.07	173	eP	Pn	22 00 26.8	+0.3
BUTP				eS	Sn	22 00 51.1	+2.4
PLP	Palo	1.23	336	⇓eP	Pn	22 00 27.7	0.0
PLP				eS	Sn	22 00 49.7	-1.3
OCLP	Ormoc	1.33	319	eP	Pn	22 00 29.7	+1.2
LLP	Lapu-Lapu	1.53	280	⇓eP	Pn	22 00 30.9	+0.5
LLP				eS	Sn	22 00 55.5	-0.1
BESP	Borongan	1.55	358	eP	Pn	22 00 30.8	+0.2
BESP				eS	Sn	22 00 55.7	-0.5
TBP	Tagbilaran	1.65	258	eP	Pn	22 00 31.9	+0.4
TBP				eS	Sn	22 00 57.2	-0.4
CGP	Cagayan de Oro	1.76	207	⇓eP	Pn	22 00 33.5	+0.8
CGP				eS	Sn	22 00 58.8	-1.0
BIPH	Bislig	2.03	155	⇑iP	Pn	22 00 37.9	+2.4
BIPH				iS	Sn	22 01 06.5	+1.6
BUKP	Musuan	2.19	191	eP	Pn	22 00 37.9	+0.6
CNP	Catarman	2.59	342	eP	Pn	22 00 41.7	+0.1
CNP				eS	Sn	22 01 15.1	-0.9
GUIM	Jordan	2.92	282	eP	Pn	22 00 44.9	-0.6
DAV	Davao City (W)	2.95	178	P	Pn	22 00 46.4	+0.4
	301nm,0.3s,baz=335,slow=1.8,SNR=7.2						
DAV	Davao City (W)	2.95	178	ePn	Pn	22 00 45.1	-0.9
PAGZ	Pagadian	3.02	224	eP	Pn	22 00 46.8	0.0
RCP	Roxas	3.09	299	⇑eP	Pn	22 00 49.0	+1.3
MATI	Mati	3.17	166	eP	Pn	22 00 47.3	-1.3
JAP	San Jose, Anti	3.56	282	⇓eP	Pn	22 00 59.5	+6.1
PVCP	Virac	3.77	340	eP	Pn	22 00 56.8	+0.7
OTRP	Odiongan	4.11	304	eP	Pn	22 01 01.2	+0.8
AUQP	San Andres	4.27	320	eP	Pn	22 01 05.4	+3.0
GQP	Guinayangan	4.86	322	⇑iP	Pn	22 01 21.4	+11
SJMP	San Jose	4.92	300	eP	Pn	22 01 12.5	+1.8
TGY	Tagaytay City	6.01	313	P	Pn	22 01 25.9	+1.0
	baz=153,slow=11,SNR=3.0						
BALP	Baler	6.83	326	eP	Pn	22 01 32.7	-2.9
APYP	Conner	8.80	333	eP	Pn	22 02 01.1	-0.3
TNTI	Ternate	9.39	168	ePn	Pn	22 02 06.1	-3.2
LUWI	Luwuk	11.34	194	ePn	Pn	22 02 35.7	+1.2
SIJI	Sorong	12.27	152	P	Pn	22 02 46.2	-0.2
	1.2nm,0.3s,baz=297,slow=18,SNR=3.0						
TWG	Pinlang	13.39	342	ePn	Pn	22 02 59.9	-0.7
YULB	Yu-li	13.87	344	ePn	Pn	22 03 06.5	-0.1
TPUB	Ta-pu	13.98	341	ePn	Pn	22 03 08.2	+0.2
SSLB	Suanglung	14.34	343	ePn	Pn	22 03 13.1	+0.6
FAKI	Fak Fak	14.53	152	ePn	P	22 03 16.8	+0.4
JAY	Jayapura	19.62	129	P	P	22 04 13.4	+1.2
	0.8nm,0.3s,baz=293,slow=15,SNR=4.1						
BATI	Baumata	20.20	185	P	P	22 04 19.4	+1.1
	16nm,0.4s,baz=326,slow=1.8,SNR=5.1						
JCJ	Chichijima	23.15	41	P	P	22 04 47.2	-0.5
	24nm,0.7s,baz=180,slow=20						
MTN	Manton Dam	23.41	166	eP	P	22 04 49.4	-0.8
	21nm,0.9s						
JNU	Nakatsue	23.50	11	P	P	22 04 49.7	-1.2
	3.9nm,0.8s,baz=240,slow=14,SNR=3.4						
GYA	Guiyang	24.16	315	eP	P	22 04 57.9	+0.8
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KMI	Kunming	26.30	308	P	P	22 05 18.7	+2.1
KMI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KMI				pmax	pmax		
	comp=Z,98nm,5.6s						
CMAR	Chiang Mai Arr	27.03	291	P	P	22 05 25.1	+2.2
	comp=Z,0.6nm,0.7s,baz=101,slow=7.4,SNR=3.9						
KSRS	Korea Array	27.38	4	P	P	22 05 25.9	+0.2
	comp=Z,0.7nm,0.4s,baz=175,slow=9.5,SNR=6.2						
FITZ	Fitzroy Crossi	27.96	180	P	P	22 05 30.4	-0.7
	comp=Z,2.8nm,0.8s,baz=0.0,slow=8.1,SNR=5.5						
WRA	Warramunga Arr	31.04	164	P	P	22 05 56.3	-2.0
	comp=Z,0.9nm,0.5s,baz=344,slow=9.1,SNR=11						
WB2	Warramunga Arr	31.05	164	eP	P	22 05 57.1	-1.3
	comp=Z,13nm,1.2s						
HHC	Hu-ho-hao-te	33.07	340	eP	P	22 06 18.7	+2.8
HHC				sP	pP	22 07 00.2	+5.8
HHC				PP	PP	22 07 37.4	+2.8
HHC				S	S	22 11 23.4	+2.3
HHC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,83nm,6.0s						
AS31	Alice Springs	34.49	166	eP	P	22 06 27.9	-0.4
	comp=Z,2.8nm,0.3s						
USA0B	Ussuriysk Arra	34.49	8	eP	P	22 06 27.4	-0.7
	comp=Z,5.7nm,0.8s						
USRK	Ussuriysk Ar.	34.49	8	P	P	22 06 28.5	+0.5
	comp=Z,4.9nm,0.7s,baz=186,slow=6.8						
ASAR	Alice Springs	34.50	166	P	P	22 06 27.7	-0.6
	comp=Z,1.6nm,0.4s,baz=345,slow=7.1,SNR=24						
MDJ	Mudanjiang	34.63	5	eP	P	22 06 28.3	-0.9
	comp=Z,5.5nm,0.6s						
ASAJ	Asahikawa	37.05	21	P	P	22 06 50.2	+0.5
	comp=Z,1.6nm,0.4s,baz=210,slow=16,SNR=4.9						
LSA	Lhasa	37.54	306	eP	P	22 06 55.7	+1.0
	comp=Z,4.2nm,0.6s						
KLR	Kul’dur	39.41	6	P	P	22 07 09.1	-0.3
	comp=Z,0.1nm,0.4s,baz=167,slow=16,SNR=4.6						
TAPN	Taplejung	39.51	301	eP	P	22 07 11.5	+0.6
	comp=Z,16nm,0.4s						
ODAN	Odare	39.63	300	eP	P	22 07 12.3	+0.4
	comp=Z,35nm,0.5s						
FORT	Forrest	40.66	177	eP	P	22 07 19.6	-0.3
	comp=Z,22nm,0.5s						
JIRN	Jiri	40.89	301	eP	P	22 07 22.6	+0.2
	comp=Z,72nm,0.5s						
SONM	Songino Array	40.97	340	P	P	22 07 22.1	-0.3
	comp=Z,0.4nm,0.5s,baz=156,slow=11,SNR=2.1						
H11N1	WAKE ISLAND Hy	41.05	72	T	T	22 51 39.1	
	baz=265						
H11N2	WAKE ISLAND Hy	41.06	72	T	T	22 51 39.1	
	baz=265,slow=74						
H11N3	WAKE ISLAND Hy	41.07	72	T	T	22 51 34.4	
	baz=265,slow=74						
GUN	Gumba	41.23	301	eP	P	22 07 24.6	-0.5
PKIN	Phulchoki	41.54	300	eP	P	22 07 27.7	+0.2
	comp=Z,16nm,0.5s						
KKN	Kakani	41.70	301	eP	P	22 07 28.8	0.0
	comp=Z,7.4nm,0.4s						
DMN	Daman	41.79	300	eP	P	22 07 29.3	-0.3
	comp=Z,6.4nm,0.4s						
GKN	Gorkha	42.30	301	eP	P	22 07 33.3	-0.3
	comp=Z,11nm,0.4s						
KOLN	Koldanda	43.12	300	eP	P	22 07 40.3	+0.1
	comp=Z,17nm,0.5s						
DANN	Dangsing	43.15	301	eP	P	22 07 40.3	-0.2
	comp=Z,23nm,0.4s						
PYUN	Piuthan	43.73	300	eP	P	22 07 45.4	+0.3
	comp=Z,15nm,0.4s						
BBOO	Buckleboo	43.79	167	eP	P	22 07 44.8	-0.4
	comp=Z,21nm,1.4s						
STKA	Stephens Creek	44.44	160	P	P	22 07 50.2	-0.1
	comp=Z,3.4nm,0.5s,baz=338,slow=7.8,SNR=11						
STKA	Stephens Creek	44.44	160	eP	P	22 07 49.9	-0.4
	comp=Z,0.8nm,0.8s						
WMQ	Urumqi	46.94	323	P	P	22 08 08.6	-1.3
WMQ				pmax	pmax		
	comp=Z,16nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,230nm,5.3s						
WMQ				LR	LR		
	comp=N,58nm,18.7s						
WMQ				LR	LR		
	comp=E,56nm,19.5s						
WMQ				LR	LR		
	comp=Z,34nm,14.5s						
DZM	Mont Dzumac	51.30	129	P	P	22 08 43.4	+0.1
	comp=Z,2.6nm,0.5s,baz=266,slow=17,SNR=4.0						
MK01	Makanchi Array	51.73	323	eP	P	22 08 46.0	-0.1
MK31	Makanchi Array	51.75	323	eP	P	22 08 46.5	+0.2
MKAR	Makanchi Array	51.75	323	P	P	22 08 46.7	+0.5
	comp=Z,4.6nm,0.7s,baz=124,slow=8.1,SNR=40						
MKAR	Makanchi Array	51.75	323	eP	P	22 08 46.5	+0.3
	comp=Z,26nm,0.7s						
MAKZ	Makanchi	51.94	323	eP	P	22 08 47.8	+0.2
	comp=Z,5.0nm,1.1s						
KSH	Kashi	52.82	312	eP	P	22 08 56.4	+2.1
KSH				ePcP	PcP	22 10 02.1	+0.9
NIL	Nilore	53.23	305	eP	P	22 08 56.5	-0.9
	comp=Z,12nm,1.0s						
ZALV	Zalesovo Beam	54.46	332	P	P	22 09 04.9	-0.9
	comp=Z,0.7nm,0.3s,baz=121,slow=6.0,SNR=5.4						
ZALV	Zalesovo Beam	54.46	332	eP	P	22 09 04.7	-1.1
KURK	Kurchatov	55.82	326	eP	P	22 09 15.4	-0.2
	comp=Z,7.7nm,0.8s						
KURBB	Kurchatov Arra	55.83	326	P	P	22 09 15.7	0.0
	comp=Z,4.2nm,0.6s,baz=124,slow=7.0,SNR=37						
KKAR	Karatay Array	57.87	315	eP	P	22 09 29.3	-0.9
BVAR	Borovoye Array	61.42	326	P	P	22 09 54.1	-0.2
	comp=Z,2.1nm,0.8s,baz=120,slow=8.8,SNR=16						
TIXI	Tiksi	61.59	1	P	P	22 09 54.4	-0.7
	comp=Z,1.6nm,0.5s,baz=162,slow=3.2,SNR=5.2						
ABKAR	Akbulak array	66.55	319	eP	P	22 10 27.3	-0.5
ARU	Arti	69.00	327	P	P	22 10 41.9	-1.0
	comp=Z,1.5nm,0.6s,baz=72,slow=2.7,SNR=4.1						
ARU	Arti	69.00	327	eP	P	22 10 41.8	-1.1
	comp=Z,3.8nm,0.5s						
FINES	FINESS Array B	85.73	332	P	P	22 12 15.0	-0.6
	comp=Z,0.5nm,0.4s,baz=65,slow=4.4,SNR=7.3						
MAW	Mawson	89.22	200	P	P	22 12 31.5	-0.6
	comp=Z,2.4nm,1.2s,baz=47,slow=19,SNR=3.4						
VNDA	Vanda	89.80	173	P	P	22 12 34.2	-0.4
	comp=Z,0.4nm,0.9s,baz=300,slow=7.4,SNR=2.9						

MEX 03 22:01:14.9±0.7, 17°.45N×100°.54W, h39^{km}±13^{km}, MD3.7, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAIG	El Cayaco	0.48	147	iP	Pn	22 01 23.4	-1.9
CAIG				eS	Sn	22 01 30.9	-1.7
ARIG	Puente Sto Nin	0.84	12	eP	Pn	22 01 28.8	-1.5
ARIG				eS	Sn	22 01 39.1	-2.5
ACP2	Acapulco	0.85	133	eP	Pn	22 01 28.6	-1.8
ACP2				eS	Sn	22 01 39.3	-2.3
ZIIG	Zihuatanejo	0.90	280	eP	Pn	22 01 29.8	-1.3
ZIIG				eS	Sn	22 01 40.0	-2.8
MEIG	Mezcala	0.99	62	eP	Pn	22 01 30.5	-1.9
MEIG				eS	Sn	22 01 43.3	-2.0
PLIG	Platanillo	1.36	46	eP	Pn	22 01 35.8	-1.6
PLIG				eS	Sn	22 01 51.8	-2.6
YAIG	Yautepec	1.98	45	eP	Pn	22 01 43.9	-2.2
YAIG				iS	Sn	22 02 08.1	-1.6

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*IDC **03** 22:14:43.0±3.4, 36°.20N×71°.04E, h195^{km}±32^{km}, mb3.5/9, mb1 3.4/14, mb1mx3.1/70, mbtmp4.0/14, MS3.5/2, Ms1 3.5/2, ms1mx2.4/56, Error ellipse: s-maj=24.0km s-min=17.0km az=51.0*

*ISCJB **03** 22:14:44.5±0.5, 36°.49N±0°.03×70°.71E±0°.07, h200^{km}, mb3.6/9, Error ellipse: s-maj=8.2km s-min=4.0km az=159.6*

*NNC **03** 22:14:50.3±4.3, 37°.07N×70°.45E, h0^{km}, mb3.7, mpv3.4, Error ellipse: s-maj=34.7km s-min=29.9km az=143.0*

ISC 03 22:14:45.3±0.7, 36°.50N±0°.06×70°.81E±0°.09, h200^{km}, n32, σ1^{s}89/38, mb3.8/9, 7C-3D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	4.10	30	⇑Pn	Pn	22 15 51.1	+2.6
	2.9nm,0.3s						
SFK				⇑Sn	Sn	22 16 37.9	-0.4
	31nm,0.4s						
AML	Almayashu	6.05	21	P	Pn	22 16 15.1	+1.6
	SNR=31						
MNAS	Manas	6.12	12	⇑Pn	Pn	22 16 16.1	+1.9
	1.2nm,0.5s						
MNAS				⇓Sn	Sn	22 17 21.6	-3.0
	5.4nm,0.6s						
DHRM	DHARAMSHALA	6.21	131	eP	Pn	22 16 19.5	+4.0
DHRM				eS	Sn	22 17 28.3	+1.4
DHRM				IAML		22 17 30.8	
	comp=N,109nm,1.7s						
UCH	Uchtor	6.40	26	P	Pn	22 16 19.6	+1.4
	SNR=12						
KZA	Kyzart	6.55	30	P	Pn	22 16 20.9	+0.9
	SNR=5.9						
KK31	Karatay Array	6.60	358	⇑Pn	Pn	22 16 21.9	+1.6
	comp=N,0.7nm,0.5s,baz=186,slow=15,SNR=15						
KK31				⇑Sn	Sn	22 17 33.2	-2.5
	comp=N,4.8nm,0.7s,baz=195,slow=24,SNR=9.8						
AAK	Ala-Archa	6.76	24	P	Pn	22 16 23.9	+1.4
	comp=N,1.0nm,0.3s,baz=192,slow=9.3,SNR=3.2						
AAK				S	Sn	22 17 36.5	-3.1
	comp=N,0.7nm,0.3s,baz=308,slow=19,SNR=5.7						
AAK	Ala-Archa	6.76	24	⇓Pn	Pn	22 16 23.8	+1.3
	comp=N,1.3nm,0.3s						
AAK				⇑Sn	Sn	22 17 37.8	-1.8
	comp=N,3.3nm,0.5s						
ULHL	Ulahol	7.12	35	P	Pn	22 16 28.3	+1.1
	SNR=8.9						
TKM2	Tokmak 2	7.40	28	⇑Pn	Pn	22 16 32.8	+2.0
	comp=N,3.9nm,0.5s						
TKM2				⇓Sn	Sn	22 17 56.4	+1.6
	comp=N,8.2nm,0.9s						
TKM2	Tokmak 2	7.40	28	P	Pn	22 16 32.6	+1.8
	SNR=8.0						
SMLA	Simla	7.53	134	eP	Pn	22 16 35.6	+3.2
SMLA				eS	Sn	22 17 56.6	-0.9
SMLA				IAML		22 17 59.4	
	comp=N,40nm,0.4s						
SMLA				IAML		22 18 00.9	
	comp=E,38nm,0.2s						
BHGR	Bahadurgarh	9.35	145	eS	Sn	22 18 40.0	-0.7
KHET	Khetri	9.40	152	eS	Sn	22 18 40.0	-2.2
KHET				IAML		22 18 40.7	
	comp=E,5.8nm,0.8s						
KHET				IAML		22 18 43.5	
JOSI	Joshimath	9.40	127	eS	Sn	22 18 40.5	-1.9
JOSI				IAML		22 18 42.5	
	comp=E,35nm,0.0s						
JOSI				IAML		22 18 43.3	
	comp=N,35nm,0.1s						
MKAR	Makanchi Array	13.38	36	P	Pn	22 17 45.7	-1.8
	comp=N,0.2nm,0.3s,baz=214,slow=12,SNR=9.3						
KURBB	Kurchatov Arra	15.18	19	P	Pn	22 18 09.1	-0.3
	comp=N,0.0nm,0.3s,baz=205,slow=11,SNR=3.0						
BVAR	Borovoye Array	16.53	359	P	Pn	22 18 25.2	-0.5
	comp=N,0.5nm,0.3s,baz=159,slow=11,SNR=14						
AKTO	Aktyubinsk	16.70	330	P	Pn	22 18 28.9	+1.0
	comp=N,0.8nm,0.3s,baz=149,slow=12,SNR=15						
ZALV	Zalesovo Beam	19.98	25	P	P	22 19 01.7	-0.5
	comp=N,0.7nm,0.3s,baz=221,slow=13,SNR=4.1						
ASF	Jabal al Asfar	28.24	271	LR	LR	22 35 13.3	
	comp=N,56nm,19.7s,baz=290,slow=43						
FINES	FINESS Array B	37.40	326	P	P	22 21 39.7	+1.1
	comp=N,1.1nm,0.3s,baz=127,slow=10.0,SNR=21						
ARCES	ARCESS Array B	41.09	338	P	P	22 22 10.0	+0.9
	comp=N,0.9nm,0.5s,baz=108,slow=8.0,SNR=7.2						
PSI	Prapat	42.39	136	P	P	22 22 16.4	-3.9
	comp=N,2.2nm,0.3s,baz=360,slow=10.0,SNR=7.2						
HFS	Hagfors	42.97	322	P	P	22 22 25.4	+1.0
	comp=N,1.8nm,0.5s,baz=105,slow=9.4,SNR=14						
NB2	NORSAR Subarra	44.29	323	P	P	22 22 35.0	+0.1
	comp=Z,0.8nm,0.5s,baz=98,slow=7.9						
TIXI	Tiksi	45.83	22	P	P	22 22 46.3	-0.5
	comp=Z,1.2nm,0.3s,baz=281,slow=10,SNR=3.7						
SPITS	Spitsbergen Ar	47.46	347	P	P	22 23 00.4	+1.0
	comp=Z,6.4nm,1.0s,baz=72,slow=14,SNR=3.2						
TORD	Torodi Ar. Bea	65.56	269	P	P	22 25 06.7	-1.2
	comp=Z,0.7nm,0.5s,baz=46,slow=6.0						
DBIC	Dimbokro	74.54	267	LR	LR	23 04 52.5	
	comp=Z,42nm,18.0s,baz=167,slow=40						
YKA	Yellowknife Ar	81.25	3	P	P	22 26 38.5	-0.1
	comp=Z,0.4nm,0.5s,baz=350,slow=4.5,SNR=3.1						

MEX 03 22:24:55.0±0.6, 16°.29N×99°.59W, h18^{km}±21^{km}, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ACP2	Acapulco	0.65	334	eP	Pb	22 25 05.3	-2.4
ACP2				eS	Sb	22 25 13.2	-3.2
CAIG	El Cayaco	0.99	320	eP	Pb	22 25 11.1	-2.6
CAIG				iS	Sb	22 25 22.5	-3.9
MEIG	Mezcala	1.63	359	eP	Pn	22 25 19.6	-3.3
MEIG				eS	Sn	22 25 39.0	-4.4
PLIG	Platanillo	2.10	2	eP	Pn	22 25 26.8	-2.5
PLIG				eS	Sn	22 25 51.2	-3.7
ARIG	Puente Sto Nin	2.11	340	eP	Pn	22 25 26.8	-2.6
ARIG				eS	Sn	22 25 51.6	-3.6
YAIG	Yautepec	2.61	11	iP	Pn	22 25 34.3	-2.1
YAIG				iS	Sn	22 26 05.0	-2.7

IDC 03 22:42:22.8±8.1, 21°.85S×179°.63E, h500^{km}±91^{km}, mb3.0/5, mb1 3.3/5, mb1mx2.9/43, mbtmp3.9/5, Error ellipse: s-maj=185.9km s-min=41.6km az=167.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	31.18	267	P	P	22 48 02.1	+1.6
	2.2nm,0.4s,baz=80,slow=11,SNR=2.9						
ASAR	Alice Springs	42.07	258	P	P	22 49 28.9	-1.5
	0.6nm,0.8s,baz=106,slow=6.8,SNR=4.0						
WRA	Warramunga Arr	42.24	264	P	P	22 49 31.1	-0.7
	0.5nm,0.3s,baz=92,slow=8.3,SNR=23						
FITZ	Fitzroy Crossi	50.67	264	P	P	22 50 35.9	0.0
	4.2nm,1.1s,baz=102,slow=19,SNR=3.7						
TXAR	Lajitas Array	89.64	58	P	P	22 54 27.2	-0.2
	0.4nm,0.8s,baz=211,slow=7.0,SNR=5.8						
HFS	Hagfors	140.47	349	PKhKP	PKPpre	23 00 49.1	
	2.0nm,0.3s,baz=349,slow=0.7,SNR=40						
AKASG	Malin Array Be	143.06	328	PKP	PKPbc	23 00 57.7	+0.6
	1.2nm,0.5s,baz=44,slow=4.6,SNR=8.1						
BRTR	Keskin Array B	146.04	309	PKPbc	PKPbc	23 01 06.3	-0.5
	0.4nm,0.6s,baz=127,slow=3.3,SNR=3.7						
MMAI	Mount Meron Ar	146.50	297	PKPbc	PKPbc	23 01 08.3	+0.1
	1.3nm,0.5s,baz=72,slow=6.3,SNR=4.0						

IDC 03 23:00:22.2±4.8, 7°.40S×129°.89E, h170^{km}±42^{km}, mb3.4/2, mb1 3.2/6, mb1mx3.0/48, mbtmp3.7/6, Error ellipse: s-maj=44.0km s-min=20.7km az=55.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	6.75	245	P	Pn	23 01 58.9	-0.3
	2.4nm,0.3s,baz=90,slow=2.0,SNR=2.6						
BATI				S	Sn	23 03 16.4	+1.0
	1.6nm,0.3s,baz=77,slow=17,SNR=2.2						
FITZ	Fitzroy Crossi	11.41	201	P	Pn	23 02 59.8	-0.6
	0.1nm,0.3s,baz=24,slow=13,SNR=10						
WRA	Warramunga Arr	13.20	161	P	Pn	23 03 23.2	-0.1
	0.4nm,0.3s,baz=339,slow=13,SNR=9.6						
WRA				S	Sn	23 05 46.1	-3.8
	0.6nm,0.3s,baz=330,slow=23,SNR=7.1						
ASAR	Alice Springs	16.63	167	P	Pn	23 04 07.1	+1.4
	0.1nm,0.3s,baz=337,slow=8.4,SNR=3.6						
ASAR				S	S	23 07 09.7	+0.1
	0.2nm,0.3s,baz=356,slow=26,SNR=4.4						
MKAR	Makanchi Array	68.50	327	P	P	23 11 06.2	0.0
	0.4nm,0.5s,baz=117,slow=8.0,SNR=6.4						
QSPA	South Pole Qui	82.58	180	P	P	23 12 25.9	-0.2
	0.7nm,0.5s,baz=329,slow=6.6,SNR=4.4						

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*CSEM **03** 23:18:32.9±0.2, 38°.95N×43°.51E, h15^{km}, ML2.5, Error ellipse: s-maj=6.3km s-min=5.2km az=125.0*

*ISK **03** 23:18:32.6, 38°.89N×43°.51E, h18^{km}, ML1.9/3*

*ISCJB **03** 23:18:33.7±0.8, 38°.91N±0°.04×43°.56E±0°.08, h13^{km}±6^{km}, Error ellipse: s-maj=10.5km s-min=5.9km az=21.1*

*DDA **03** 23:18:33.9, 38°.90N×43°.55E, h7^{km}, Ml2.5*

ISC 03 23:18:33.0±0.9, 38°.93N±0°.03×43°.49E±0°.04, h14^{km}±6^{km}, n17, σ0^{s}28/26, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VMUR	Van-Muradiye	0.08	46	iP	Pg	23 18 36.0	-0.2
VMUR				iS	Sg	23 18 38.6	+0.2
VMUR	Van-Muradiye	0.08	46	P	Pg	23 18 36.0	-0.2
VMUR				S	Sg	23 18 38.6	+0.2
ERCV	ERCIS-VAN	0.15	306	PG	Pb	23 18 37.7	0.0
ERCV	ERCIS-VAN	0.15	306	ePg	Pb	23 18 37.7	0.0
VANB	Van	0.35	194	PG	Pb	23 18 41.1	+0.1
VANB	Van	0.35	194	ePg	Pb	23 18 41.1	+0.1
CLDR	Caldiran	0.39	57	PG	Pg	23 18 41.0	+0.1
CLDR				SG	Sb	23 18 47.9	+0.1
CLDR	Caldiran	0.39	57	iP	Pg	23 18 41.0	+0.1
CLDR				iS	Sb	23 18 47.7	-0.1
CLDR	Caldiran	0.39	57	P	Pg	23 18 41.0	+0.1
CLDR				S	Sb	23 18 47.7	-0.1
TVAN	Van	0.41	190	iP	Pg	23 18 41.1	-0.1
TVAN				iS	Sb	23 18 48.7	+0.5
TVAN	Van	0.41	190	P	Pg	23 18 41.1	-0.1
TVAN				S	Sb	23 18 48.7	+0.5
ADCV	BITLIS_Adilcev	0.61	259	iP	Pb	23 18 45.8	+0.2
ADCV				iS	Sn	23 18 56.5	-0.7
ADCV	BITLIS_Adilcev	0.61	259	P	Pb	23 18 45.8	+0.2
TUTA	Tutak	0.71	312	iP	Pg	23 18 46.9	+0.1
TUTA				iS	Sn	23 18 59.9	+0.4
TUTA	Tutak	0.71	312	P	Pg	23 18 46.9	+0.1
GURO	Guroymak-BITLI	1.21	252	PN	Pn	23 18 55.1	-0.4
GURO	Guroymak-BITLI	1.21	252	ePn	Pn	23 18 55.1	-0.4

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*IDC **03** 23:18:53.9±1.7, 2°.71N×92°.75E, h0^{km}, mb3.5/5, mb1 3.8/8, mb1mx3.5/69, mbtmp3.7/8, ML3.8/3, MS3.2/4, Ms1 3.2/4, ms1mx2.7/51, Error ellipse: s-maj=42.8km s-min=21.8km az=38.0*

*NEIC **03** 23:18:54.7±1.0, 2°.63N×92°.70E, h10^{km}, mb4.1/1, Error ellipse: s-maj=22.3km s-min=12.2km az=202.0*

*ISCJB **03** 23:18:56.0±1.1, 2°.6N±0°.2×92°.69E±0°.07, h33^{km}, mb3.7/6, MS3.1/3, Error ellipse: s-maj=24.1km s-min=8.7km az=15.0*

ISC 03 23:18:58.5±1.3, 2°.7N±0°.2×92°.70E±0°.09, h35^{km}, n14, σ0^{s}99/13, mb3.8/6, MS3.2/3, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	Prapat	6.22	89	Pn	Pn	23 20 26.7	-1.3
	0.6nm,0.3s,baz=0.0,slow=20,SNR=3.6						
PSI				Sn	Sn	23 21 38.8	+0.8
	0.5nm,0.3s,baz=0.1,slow=11,SNR=2.1						
PALK	Pallekele	12.78	291	Pn	Pn	23 21 57.3	-0.6
	0.5nm,0.3s,baz=117,slow=15,SNR=2.9						
PALK				Sn	Sn	23 24 03.7	-15
	0.8nm,0.3s,baz=294,slow=5.7,SNR=3.8						
PALK				LR	LR	23 26 07.1	
	comp=Z,108nm,18.4s,baz=118,slow=34						
CMAR	Chiang Mai Arr	16.82	21	Pn	Pn	23 22 51.6	+0.2
	0.3nm,0.3s,baz=215,slow=12,SNR=3.4						
DAV	Davao City (W)	33.04	81	LR	LR	23 40 07.4	
	comp=Z,23nm,18.8s,baz=334,slow=39						
NIL	Nilore	35.77	332	eP	P	23 25 54.2	-0.1
MKAR	Makanchi Array	44.85	350	P	P	23 27 11.0	+1.6
	0.4nm,0.8s,baz=181,slow=11,SNR=2.6						
SONM	Songino Array	46.50	13	P	P	23 27 21.2	-1.3
	0.3nm,0.3s,baz=210,slow=8.3,SNR=2.7						
WRA	Warramunga Arr	46.65	121	P	P	23 27 24.7	+0.7
	0.8nm,0.7s,baz=296,slow=8.7,SNR=3.6						
KURBB	Kurchatov Arra	49.24	348	P	P	23 27 44.6	+1.1
	0.3nm,0.3s,baz=165,slow=7.6,SNR=4.0						
KURK	Kurchatov	49.31	348	P	P	23 27 44.6	+0.6
ZALV	Zalesovo Beam	51.50	354	P	P	23 28 00.8	+0.3
	0.2nm,0.3s,baz=159,slow=6.5,SNR=2.0						
ZALV				LR	LR	23 52 05.0	
	comp=Z,21nm,20.2s,baz=70,slow=39						

ARU	**Arti**	**60.13**	**339**	*e*P	**P**	**23 29 02.8**	**+0.5**
	0.5nm,0.3s						
SPITS	**Spitsbergen Ar**	**84.59**	**348**	LR	LR	00 16 44.5	
	comp=Z,13nm,18.9s,baz=210,slow=41						
TXAR	**Lajitas Array**	**144.51**	**25**	PKP	**PKPab**	**23 38 30.5**	**+0.1**
	0.1nm,0.5s,baz=151,slow=2.1,SNR=2.5						

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*IDC **03** 23:20:41.2±2.5, 39°.98N×37°.44E, h0^{km}, mb3.4/1, mb1 3.6/4, mb1mx3.2/55, mbtmp3.4/4, ML3.2/3, MS3.4/1, Ms1 3.4/1, ms1mx2.2/33, Error ellipse: s-maj=56.0km s-min=8.1km az=156.0*

*ISK **03** 23:20:45.3, 40°.56N×37°.01E, h5^{km}, ML3.5/9*

*DDA **03** 23:20:45.3, 40°.57N×37°.07E, h13^{km}, Ml3.5*

*CSEM **03** 23:20:46.8±0.2, 40°.56N×36°.99E, h2^{km}, ML3.5, Error ellipse: s-maj=4.8km s-min=3.2km az=33.0*

ISC 03 23:20:45.7±1.0, **40°.55N**±0°.02×**37°.04E**±0°.02, **h8**^{km}±8^{km}, **n83**, σ**1^{s}37**/121, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ERBA	**Erbaa**	**0.25**	**301**	*i* P	**Pg**	**23 20 51.3**	**+0.6**
ERBA				*i* S	**Sg**	**23 20 55.2**	**+1.1**
ERBA	**Erbaa**	**0.25**	**301**	P	**Pg**	**23 20 51.3**	**+0.6**
ERBA				S	**Sg**	**23 20 55.2**	**+1.1**
RSDY	**Resadiye-TOKAT**	**0.27**	**125**	PG	**Pg**	**23 20 51.1**	**0.0**
RSDY	**Resadiye-TOKAT**	**0.27**	**125**	*i* Pg	**Pg**	**23 20 51.1**	**0.0**
TOKT	**Tokat**	**0.44**	**238**	PG	**Pb**	**23 20 54.8**	**-1.0**
TOKT				SG	**Sb**	**23 21 02.1**	**-0.5**
TOKT	**Tokat**	**0.44**	**238**	*e*Pg	**Pb**	**23 20 54.8**	**-1.0**
TOKT				*e*Sg	**Sb**	**23 21 02.1**	**-0.5**
TOKA	**Tokat**	**0.48**	**242**	*i* P	**Pb**	**23 20 55.7**	**-0.8**
TOKA				*i* S	**Sb**	**23 21 03.4**	**-0.4**
TOKA	**Tokat**	**0.48**	**242**	P	**Pb**	**23 20 55.7**	**-0.8**
TOKA				S	**Sb**	**23 21 03.4**	**-0.4**
SVSK	**Karacayir**	**0.64**	**183**	PG	**Pg**	**23 20 57.9**	**-0.1**
SVSK	**Karacayir**	**0.64**	**183**	*e*Pg	**Pg**	**23 20 57.9**	**-0.1**
SCER	**sogukcermik**	**0.69**	**174**	*i* P	**Pg**	**23 20 58.9**	**-0.3**
SCER				*i* S	**Sb**	**23 21 09.4**	**-0.6**
SCER	**sogukcermik**	**0.69**	**174**	P	**Pg**	**23 20 58.8**	**-0.3**
SCER				S	**Sb**	**23 21 09.4**	**-0.6**
ORDU	**Ordu-Boztepe**	**0.76**	**55**	*i* P	**Pg**	**23 20 59.6**	**-0.8**
ORDU				*i* S	**Sg**	**23 21 08.9**	**-1.4**
KVT	**Kavak**	**0.92**	**305**	PG	**Pb**	**23 21 03.4**	**-0.5**
KVT				SG	**Sn**	**23 21 16.9**	**-1.5**
KVT	**Kavak**	**0.92**	**305**	*e*Pg	**Pb**	**23 21 03.4**	**-0.5**
KVT				*e*Sg	**Sn**	**23 21 16.9**	**-1.5**
SUSE	**Susehri**	**0.95**	**111**	*i* P	**Pg**	**23 21 03.3**	**-0.8**
SUSE				*i* S	**Sg**	**23 21 15.5**	**-1.0**
SAMS	**Samsun-Alacam**	**1.03**	**322**	*i* P	**Pn**	**23 21 05.5**	**-1.0**
SAMS				*i* S	**Sb**	**23 21 19.2**	**-0.3**
SAMS	**Samsun-Alacam**	**1.03**	**322**	P	**Pn**	**23 21 05.5**	**-1.0**
SAMS				S	**Sb**	**23 21 19.2**	**-0.3**
HAVZ	**Havza**	**1.13**	**298**	*i* P	**Pn**	**23 21 07.1**	**-0.8**
HAVZ				*i* S	**Sn**	**23 21 23.2**	**-0.4**
HAVZ	**Havza**	**1.13**	**298**	P	**Pn**	**23 21 07.1**	**-0.8**
HAVZ				S	**Sn**	**23 21 23.2**	**-0.4**
COAL	**Corum-Alaca**	**1.59**	**260**	*i* P	**Pb**	**23 21 14.7**	**-0.8**
COAL				*i* S	**Sg**	**23 21 40.6**	**+3.7**
COAL	**Corum-Alaca**	**1.59**	**260**	P	**Pb**	**23 21 14.7**	**-0.8**
YOZ	**Yozgat**	**1.60**	**236**	PN	**Pg**	**23 21 15.7**	**-0.7**
YOZ				SN	**Sg**	**23 21 38.2**	**+1.0**
YOZ	**Yozgat**	**1.60**	**236**	*e*Pn	**Pg**	**23 21 15.7**	**-0.7**
YOZ				*e*Sn	**Sg**	**23 21 38.2**	**+1.0**
KEMA	**Kemaliye**	**1.70**	**138**	*i* P	**Pb**	**23 21 16.9**	**-0.4**
KEMA				*i* S	**Sg**	**23 21 40.8**	**+0.4**
KEMA	**Kemaliye**	**1.70**	**138**	P	**Pb**	**23 21 16.9**	**-0.4**
KEMA				S	**Sg**	**23 21 40.8**	**+0.4**
DIKM	**Dikmen**	**1.73**	**310**	PN	**Pb**	**23 21 17.6**	**-0.2**
DIKM	**Dikmen**	**1.73**	**310**	*e*Pn	**Pb**	**23 21 17.6**	**-0.2**
KELT	**Kelkit**	**1.74**	**103**	*i* P	**Pn**	**23 21 16.6**	**+0.1**
KELT				*i* S	**Sn**	**23 21 38.8**	**-0.3**
HEKM	**Malatya_Hekimh**	**1.82**	**157**	*i* P	**Pg**	**23 21 20.3**	**-0.2**
HEKM				*i* S	**Sg**	**23 21 45.2**	**+1.1**
HEKM	**Malatya_Hekimh**	**1.82**	**157**	P	**Pg**	**23 21 20.3**	**-0.2**
HEKM				S	**Sg**	**23 21 45.2**	**+1.1**
GUMT	**Gumushane**	**1.87**	**92**	PN	**Pn**	**23 21 18.7**	**+0.6**
GUMT	**Gumushane**	**1.87**	**92**	*e*Pn	**Pn**	**23 21 18.7**	**+0.6**
CORM	**Corum**	**1.88**	**259**	PN	**Pb**	**23 21 19.6**	**-0.7**
CORM	**Corum**	**1.88**	**259**	*e*Pn	**Pb**	**23 21 19.6**	**-0.7**
BNN	**Bunyan**	**1.93**	**209**	PN	**Pb**	**23 21 21.1**	**-0.2**
BNN	**Bunyan**	**1.93**	**209**	*e*Pn	**Pb**	**23 21 21.1**	**-0.2**
EZC	**Erzincan**	**1.95**	**114**	*e*Pn	**Pg**	**23 21 26.5**	**+3.5**
DARE	**Darende-Malaty**	**2.01**	**170**	PN	**Pb**	**23 21 21.8**	**-0.8**
DARE	**Darende-Malaty**	**2.01**	**170**	*e*Pn	**Pb**	**23 21 21.8**	**-0.8**
SINO	**SINOP_Merkez**	**2.01**	**317**	*i* P	**Pb**	**23 21 22.2**	**-0.4**
SINO				*i* S	**Sg**	**23 21 49.2**	**-1.2**
SINO	**SINOP_Merkez**	**2.01**	**317**	P	**Pb**	**23 21 22.2**	**-0.4**
SINO				S	**Sg**	**23 21 49.2**	**-1.2**
SARI	**SarD1z-Kayseri**	**2.20**	**193**	PN	**Pb**	**23 21 24.9**	**-0.9**
EUZM	**Uzumlu**	**2.21**	**112**	*i* P	**Pb**	**23 21 25.4**	**-0.6**
EUZM				*i* S	**Sg**	**23 21 55.5**	**-1.1**
EUZM	**Uzumlu**	**2.21**	**112**	P	**Pb**	**23 21 25.4**	**-0.6**
EUZM				S	**Sg**	**23 21 55.5**	**-1.1**
CDAG	**Cicekdag**	**2.25**	**246**	*i* P	**Pn**	**23 21 23.6**	**+0.3**
CDAG				*i* S	**Sg**	**23 21 57.3**	**-0.5**
CDAG	**Cicekdag**	**2.25**	**246**	P	**Pn**	**23 21 23.6**	**+0.3**
ERZN	**Erzincan**	**2.28**	**114**	PN	**Pb**	**23 21 26.5**	**-0.6**
AKCD	**Akcadag**	**2.36**	**163**	*i* P	**Pb**	**23 21 29.2**	**+0.7**
AKCD	**Akcadag**	**2.36**	**163**	P	**Pb**	**23 21 29.2**	**+0.7**
BAYT	**Ayd˜–ntepe-Bay**	**2.37**	**93**	PN	**Pb**	**23 21 28.1**	**-0.7**
BAYT	**Ayd˜–ntepe-Bay**	**2.37**	**93**	*e*Pn	**Pb**	**23 21 28.1**	**-0.7**
TNCL	**Tunceli-Merkez**	**2.41**	**126**	*i* P	**Pb**	**23 21 28.2**	**-1.1**
TNCL				*i* S	**Sg**	**23 22 01.1**	**-1.9**
TNCL	**Tunceli-Merkez**	**2.41**	**126**	P	**Pb**	**23 21 28.2**	**-1.1**
AVNS	**Nevsehir-Avano**	**2.43**	**225**	*i* P	**Pb**	**23 21 27.3**	**-2.4**
AVNS				*i* S	**Sg**	**23 22 03.3**	**-0.4**
AVNS	**Nevsehir-Avano**	**2.43**	**225**	P	**Pb**	**23 21 27.3**	**-2.4**
PTK	**Pertek**	**2.46**	**132**	PN	**Pb**	**23 21 29.2**	**-1.1**
PTK	**Pertek**	**2.46**	**132**	*e*Pn	**Pb**	**23 21 29.2**	**-1.1**
MALT	**Malatya**	**2.48**	**154**	PN	**Pb**	**23 21 28.7**	**-1.9**
MALT	**Malatya**	**2.48**	**154**	*e*Pn	**Pb**	**23 21 28.7**	**-1.9**
ELZG	**Elazig**	**2.55**	**143**	*i* P	**Pb**	**23 21 32.6**	**+0.8**
ELZG				*i* S	**Sg**	**23 22 06.3**	**-1.2**
SAIM	**ADANA**	**2.68**	**196**	*i* P	**Pb**	**23 21 31.8**	**-2.1**
SAIM				*i* S	**Sg**	**23 22 12.0**	**+0.3**
SAIM	**ADANA**	**2.68**	**196**	P	**Pb**	**23 21 31.8**	**-2.1**
BRTR	**Keskin Array B**	**2.73**	**253**	Pn	**Pn**	**23 21 30.9**	**+0.8**
	4.0nm,0.3s,baz=83,slow=13,SNR=152						
BRTR				Pg	**Pb**	**23 21 35.6**	**+0.7**
	3.6nm,0.3s,baz=84,slow=16,SNR=24						
BRTR				Lg	Lg	23 22 15.2	
	1.3nm,0.3s,baz=108,slow=25,SNR=2.3						
YAHY	**KAYSERI_Yahyal**	**2.78**	**208**	*i* P	**Pb**	**23 21 35.6**	**-0.1**
YAHY				*i* S	**Sg**	**23 22 13.9**	**-1.0**
SVRC	**Sivrice-ELAZID**	**2.79**	**140**	PN	**Pn**	**23 21 32.4**	**+1.5**
SVRC	**Sivrice-ELAZID**	**2.79**	**140**	*e*Pn	**Pn**	**23 21 32.4**	**+1.5**
CHOM	**Cayeli-Rize**	**2.88**	**78**	PN	**Pb**	**23 21 35.4**	**-1.9**
CHOM	**Cayeli-Rize**	**2.88**	**78**	*e*Pn	**Pb**	**23 21 35.4**	**-1.9**
ANDN	**Andirin**	**3.02**	**190**	*i* P	**Pb**	**23 21 36.5**	**-3.2**
ANDN				*i* S	**Sg**	**23 22 24.6**	**+1.9**
ANDN	**Andirin**	**3.02**	**190**	P	**Pb**	**23 21 36.5**	**-3.2**
BBAL	**Bala**	**3.17**	**253**	*i* P	**Pn**	**23 21 36.8**	**+0.8**
BBAL				*i* S	**Sg**	**23 22 26.0**	**-1.5**
BBAL	**Bala**	**3.17**	**253**	P	**Pn**	**23 21 36.8**	**+0.8**
KKUL	**Konya-Kulu**	**3.46**	**248**	*i* P	**Pn**	**23 21 41.4**	**+1.4**
KKUL				*i* S	**Sg**	**23 22 34.6**	**-2.1**
KKUL	**Konya-Kulu**	**3.46**	**248**	P	**Pn**	**23 21 41.4**	**+1.4**
KUZU	**Kuzuini**	**3.77**	**180**	*i* P	**Pn**	**23 21 46.2**	**+1.9**
KUZU	**Kuzuini**	**3.77**	**180**	P	**Pn**	**23 21 46.2**	**+1.9**
YURE	**YUREGIR**	**3.88**	**197**	*i* P	**Pb**	**23 21 50.1**	**-4.4**
MARD	**Mardin**	**4.36**	**137**	*i* P	**Pb**	**23 21 59.2**	**-3.4**
KBZ	**Khabaz**	**5.39**	**52**	Pn	**Pn**	**23 22 05.5**	**-0.9**
	0.3nm,0.3s,baz=243,slow=4.5,SNR=2.7						
KBZ				Sn	**Sn**	**23 23 11.1**	**+2.5**
	0.2nm,0.3s,baz=201,slow=14,SNR=2.5						
KVAR	**Kislovodsk Arr**	**5.40**	**49**	Pn	**Pn**	**23 22 09.6**	**+2.9**
	baz=222,slow=5.7,SNR=11						
FINES	**FINESS Array B**	**21.96**	**346**	P	**P**	**23 25 42.4**	**+2.7**
	1.5nm,1.0s,baz=159,slow=12,SNR=3.3						
SFJD	**Kangerlussuaq**	**52.57**	**330**	LR	LR	23 54 32.1	
	comp=Z,33nm,18.8s,baz=93,slow=38						

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*ISCJB **03** 23:26:21.9±0.5, 40°.59N±0°.03×37°.09E±0°.03, h8^{km}±5^{km}, Error ellipse: s-maj=5.5km s-min=3.9km az=10.7*

*CSEM **03** 23:26:21.9±0.1, 40°.59N×37°.09E, h10^{km}, ML2.6, Error ellipse: s-maj=3.9km s-min=2.8km az=2.0*

*DDA **03** 23:26:21.4, 40°.56N×37°.09E, h7^{km}, Ml2.6*

*ISK **03** 23:26:21.6, 40°.60N×37°.09E, h7^{km}, ML2.6/5*

ISC 03 23:26:21.9±0.9, **40°.59N**±0°.03×**37°.09E**±0°.02, **h14**^{km}±7^{km}, **n28**, σ**0^{s}52**/44, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSDY	**Resadiye-TOKAT**	**0.26**	**136**	PG	**Pb**	**23 26 27.7**	**-0.6**
RSDY				SG	**Sg**	**23 26 31.6**	**+0.3**
RSDY	**Resadiye-TOKAT**	**0.26**	**136**	*e*Pg	**Pb**	**23 26 27.7**	**-0.6**
RSDY				*e*Sg	**Sg**	**23 26 31.6**	**+0.3**
ERBA	**Erbaa**	**0.27**	**291**	*i* P	**Pg**	**23 26 27.7**	**0.0**
ERBA				*i* S	**Sg**	**23 26 31.9**	**+0.2**
ERBA	**Erbaa**	**0.27**	**291**	P	**Pg**	**23 26 27.7**	**0.0**
ERBA				S	**Sg**	**23 26 32.0**	**+0.2**
TOKT	**Tokat**	**0.49**	**238**	PG	**Pg**	**23 26 31.6**	**-0.1**
TOKT	**Tokat**	**0.49**	**238**	*e*Pg	**Pg**	**23 26 31.6**	**-0.1**
TOKA	**Tokat**	**0.54**	**241**	*i* P	**Pg**	**23 26 31.9**	**-0.6**
TOKA				*i* S	**Sg**	**23 26 39.7**	**+0.1**
TOKA	**Tokat**	**0.54**	**241**	P	**Pg**	**23 26 31.9**	**-0.6**
TOKA				S	**Sg**	**23 26 39.7**	**+0.1**
SVSK	**Karacayir**	**0.67**	**186**	PG	**Pb**	**23 26 35.1**	**-0.2**
SVSK	**Karacayir**	**0.67**	**186**	*e*Pg	**Pb**	**23 26 35.1**	**-0.2**
ORDU	**Ordu-Boztepe**	**0.71**	**55**	*i* P	**Pg**	**23 26 35.5**	**-0.2**
ORDU				*i* S	**Sb**	**23 26 46.0**	**+0.4**
ORDU	**Ordu-Boztepe**	**0.71**	**55**	P	**Pg**	**23 26 35.5**	**-0.2**
ORDU				S	**Sb**	**23 26 46.0**	**+0.4**
SUSE	**Susehri**	**0.93**	**114**	*i* P	**Pg**	**23 26 39.7**	**-0.1**
SUSE				*i* S	**Sb**	**23 26 52.3**	**+0.3**
SUSE	**Susehri**	**0.93**	**114**	P	**Pg**	**23 26 39.7**	**-0.1**
SUSE				S	**Sb**	**23 26 52.3**	**+0.3**
KVT	**Kavak**	**0.94**	**302**	PG	**Pg**	**23 26 39.8**	**-0.2**
KVT	**Kavak**	**0.94**	**302**	*e*Pg	**Pg**	**23 26 39.8**	**-0.2**
GRSN	**GIRESUNGRSN**	**0.95**	**69**	*i* P	**Pg**	**23 26 40.0**	**-0.4**
GRSN				*i* S	**Sg**	**23 26 52.3**	**-0.6**
GRSN	**GIRESUNGRSN**	**0.95**	**69**	P	**Pg**	**23 26 40.0**	**-0.4**
GRSN				S	**Sg**	**23 26 52.3**	**-0.6**
HAVZ	**Havza**	**1.15**	**296**	*i* P	**Pg**	**23 26 42.6**	**-1.5**
HAVZ				*i* S	**Sn**	**23 26 59.7**	**+0.6**
HAVZ	**Havza**	**1.15**	**296**	P	**Pg**	**23 26 42.6**	**-1.5**
HAVZ				S	**Sn**	**23 26 59.7**	**+0.6**
ESPY	**Espiye-Giresun**	**1.28**	**75**	PN	**Pn**	**23 26 45.9**	**+0.5**
ESPY	**Espiye-Giresun**	**1.28**	**75**	*e*Pn	**Pn**	**23 26 45.9**	**+0.5**
CUKAN	**kangal_SIVAS**	**1.30**	**167**	*i* P	**Pn**	**23 26 45.3**	**-0.4**
CUKAN				*i* S	**Sb**	**23 27 03.5**	**+0.8**
CUKAN	**kangal_SIVAS**	**1.30**	**167**	P	**Pn**	**23 26 45.3**	**-0.4**
CUKAN				S	**Sb**	**23 27 03.5**	**+0.8**
YOZ	**Yozgat**	**1.66**	**236**	PN	**Pb**	**23 26 52.0**	**-0.2**
YOZ	**Yozgat**	**1.66**	**236**	*e*Pn	**Pb**	**23 26 52.0**	**-0.2**
DIKM	**Dikmen**	**1.75**	**308**	PN	**Pb**	**23 26 53.6**	**-0.1**
DIKM	**Dikmen**	**1.75**	**308**	*e*Pn	**Pb**	**23 26 53.6**	**-0.1**

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*ISCJB **03** 23:28:20.7±0.5, 40°.59N±0°.03×37°.10E±0°.03, h5^{km}±5^{km}, Error ellipse: s-maj=5.2km s-min=3.6km az=14.0*

*CSEM **03** 23:28:20.8±0.1, 40°.59N×37°.10E, h5^{km}, ML2.3, Error ellipse: s-maj=3.4km s-min=2.3km az=16.0*

*DDA **03** 23:28:20.4, 40°.58N×37°.10E, h7^{km}, Ml2.7*

*ISK **03** 23:28:20.6, 40°.57N×37°.08E, h6^{km}, ML2.3/7*

ISC 03 23:28:21.1±0.9, **40°.59N**±0°.03×**37°.10E**±0°.02, **h11**^{km}±7^{km}, **n32**, σ**0^{s}69**/52, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSDY	**Resadiye-TOKAT**	**0.26**	**138**	PG	**Pg**	**23 28 26.6**	**+0.2**
RSDY				SG	**Sg**	**23 28 30.2**	**+0.2**
RSDY	**Resadiye-TOKAT**	**0.26**	**138**	*e*Pg	**Pg**	**23 28 26.6**	**+0.2**
RSDY				*e*Sg	**Sg**	**23 28 30.2**	**+0.2**
ERBA	**Erbaa**	**0.28**	**289**	*i* P	**Pg**	**23 28 26.5**	**-0.3**
ERBA				*i* S	**Sg**	**23 28 31.0**	**+0.3**
ERBA	**Erbaa**	**0.28**	**289**	P	**Pg**	**23 28 26.5**	**-0.3**
ERBA				S	**Sg**	**23 28 31.0**	**+0.3**
TOKT	**Tokat**	**0.50**	**238**	PG	**Pg**	**23 28 30.4**	**-0.5**
TOKT				SG	**Sg**	**23 28 37.3**	**-0.3**
TOKT	**Tokat**	**0.50**	**238**	*e*Pg	**Pg**	**23 28 30.4**	**-0.5**
TOKT				*e*Sg	**Sg**	**23 28 37.3**	**-0.3**
TOKA	**Tokat**	**0.55**	**241**	*i* P	**Pg**	**23 28 31.0**	**-0.8**
TOKA				*i* S	**Sg**	**23 28 39.0**	**+0.1**
TOKA	**Tokat**	**0.55**	**241**	P	**Pg**	**23 28 31.0**	**-0.8**
TOKA				S	**Sg**	**23 28 39.0**	**+0.1**
SVSK	**Karacayir**	**0.68**	**187**	PG	**Pg**	**23 28 33.9**	**-0.3**
SVSK	**Karacayir**	**0.68**	**187**	*e*Pg	**Pg**	**23 28 33.9**	**-0.3**
ORDU	**Ordu-Boztepe**	**0.70**	**55**	*i* P	**Pg**	**23 28 34.1**	**-0.6**
ORDU				*i* S	**Sb**	**23 28 44.9**	**-0.3**
ORDU	**Ordu-Boztepe**	**0.70**	**55**	P	**Pg**	**23 28 34.1**	**-0.6**
ORDU				S	**Sb**	**23 28 44.8**	**-0.3**
CUZAR	**Zara_SIVAS**	**0.87**	**144**	*i* P	**Pg**	**23 28 37.0**	**-0.8**
CUZAR				*i* S	**Sb**	**23 28 50.0**	**0.0**
CUZAR	**Zara_SIVAS**	**0.87**	**144**	P	**Pg**	**23 28 37.0**	**-0.8**
CUZAR				S	**Sb**	**23 28 50.0**	**0.0**
SUSE	**Susehri**	**0.92**	**114**	*i* P	**Pg**	**23 28 38.4**	**-0.5**
SUSE				*i* S	**Sb**	**23 28 51.1**	**-0.5**
SUSE	**Susehri**	**0.92**	**114**	P	**Pg**	**23 28 38.4**	**-0.5**
SUSE				S	**Sb**	**23 28 51.1**	**-0.5**
KVT	**Kavak**	**0.94**	**302**	PG	**Pg**	**23 28 38.9**	**-0.3**
KVT	**Kavak**	**0.94**	**302**	*e*Pg	**Pg**	**23 28 38.9**	**-0.3**
HAVZ	**Havza**	**1.16**	**295**	*i* P	**Pg**	**23 28 41.7**	**-1.6**
HAVZ				*i* S	**Sb**	**23 28 58.7**	**+0.5**
HAVZ	**Havza**	**1.16**	**295**	P	**Pg**	**23 28 41.7**	**-1.6**
HAVZ				S	**Sb**	**23 28 58.7**	**+0.5**
ESPY	**Espiye-Giresun**	**1.28**	**75**	PN	**Pn**	**23 28 44.9**	**-0.1**
ESPY	**Espiye-Giresun**	**1.28**	**75**	*e*Pn	**Pn**	**23 28 44.9**	**-0.1**
CUKAN	**kangal_SIVAS**	**1.30**	**167**	*i* P	**Pg**	**23 28 44.6**	**-1.5**
CUKAN				*i* S	**Sn**	**23 29 03.4**	**+0.5**
CUKAN	**kangal_SIVAS**	**1.30**	**167**	P	**Pg**	**23 28 44.6**	**-1.5**
CUKAN				S	**Sn**	**23 29 03.4**	**+0.5**
YOZ	**Yozgat**	**1.66**	**236**	PN	**Pb**	**23 28 51.4**	**-0.5**
YOZ	**Yozgat**	**1.66**	**236**	*e*Pn	**Pb**	**23 28 51.4**	**-0.5**
KELT	**Kelkit**	**1.70**	**104**	*i* P	**Pn**	**23 28 51.8**	**+0.8**
KELT				*i* S	**Sn**	**23 29 13.7**	**+0.8**
KELT	**Kelkit**	**1.70**	**104**	P	**Pn**	**23 28 51.8**	**+0.8**
KELT				S	**Sn**	**23 29 13.7**	**+0.8**
DIKM	**Dikmen**	**1.75**	**308**	PN	**Pn**	**23 28 52.1**	**+0.6**
DIKM	**Dikmen**	**1.75**	**308**	*e*Pn	**Pn**	**23 28 52.1**	**+0.6**
CORM	**Corum**	**1.93**	**259**	PN	**Pn**	**23 28 55.1**	**+1.0**
CORM	**Corum**	**1.93**	**259**	*e*Pn	**Pn**	**23 28 55.1**	**+1.0**

JMA 03 23:49:09.1, 37°.68N×139°.94E, h9^{km}±1^{km}**, M0.4, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFY	**Yanaizu**	**0.33**	**215**	S	Sg	23 49 20.2	+0.2

JMA 03 23:49:35.7±0.1**, 36°.34N×138°.23E, h13**^{km}±1^{km}**, M0.7, 1C, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNG	**Nsakai**	**0.12**	**302**	P	Pg	23 49 39.0	-0.1
MAT	**Matsushiro**	**0.20**	**355**	P	Pg	23 49 40.0	-0.2
MAT				S	Sg	23 49 42.9	-0.4
MAT	**Matsushiro**	**0.20**	**355**	⇑P	Pg	23 49 40.0	-0.2
MAT				S	Sg	23 49 43.1	-0.2
JRY	**Ryogami san**	**0.63**	**121**	P	Pg	23 49 47.2	-0.8
JRY				*e*S	Sg	23 49 55.2	-1.2

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*SJA **03** 23:51:12.0±0.4, 33°.62S×72°.56W, h18^{km}±143^{km}, ML3.3, MW3.6*

*GUC **03** 23:51:16.7±0.6, 33°.66S×71°.97W, h32^{km}, ML3.2*

ISC 03 23:51:17.5±2.3, **33°.74S**±0°.06×**71°.90W**±0°.10, **h17**^{km}±18^{km}, **n15**, σ**1^{s}80**/23, **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROCH	**El Roble**	**1.07**	**45**	*e*P	**Pb**	**23 51 35.8**	**-1.9**
ROCH				*i* S	**Sb**	**23 51 49.7**	**-1.7**
ROCH				IAML		23 51 57.3	
	comp=N,742nm,0.6s						
PEL	**Peldehue**	**1.18**	**60**	*e*P	**Pn**	**23 51 38.0**	**-1.2**
PEL				*i* S	**Sb**	**23 51 53.7**	**-0.7**
CLCH	**Cerro Calan**	**1.19**	**74**	*e*P	**Pn**	**23 51 38.2**	**-1.2**
CLCH				*i* S	**Sb**	**23 51 55.1**	**+0.3**
CLCH				IAML		23 52 03.4	
	comp=E,664nm,0.6s						
GO05	**HualaæØ**	**1.27**	**181**	*i* P	**Pn**	**23 51 39.9**	**-0.6**
GO05				*i* S	**Sg**	**23 52 00.3**	**+1.6**
GO05	**HualaæØ**	**1.27**	**181**	*e*P	**Pn**	**23 51 40.3**	**-0.2**
GO05				*i* S	**Sn**	**23 51 57.8**	**+0.6**
FCH	**Farellones**	**1.41**	**74**	*e*P	**Pn**	**23 51 41.7**	**-1.0**
FCH				*i* S	**Sb**	**23 52 01.6**	**+0.3**
FCH				IAML		23 52 05.5	
	comp=N,768nm,0.2s						
LMEL	**Las Melosas**	**1.42**	**95**	*e*P	**Pn**	**23 51 42.1**	**-0.5**
LMEL				*i* S	**Sb**	**23 52 02.4**	**+0.9**
LMEL				IAML		23 52 06.4	
	comp=N,942nm,0.2s						
AUSP	**Uspallata**	**2.60**	**55**	*i* P	**Pb**	**23 52 02.5**	**-1.3**
ARCO	**CERRO ARCO**	**2.64**	**71**	*i* P	**Pb**	**23 52 03.6**	**-0.9**
ARCO				IAML		23 52 06.7	
	comp=Z,108nm,0.3s						
AAGR	**Agrelo**	**2.65**	**77**	*i* P	**Pb**	**23 52 03.9**	**-0.8**
ASAL	**Salagasta**	**2.81**	**67**	*i* P	**Pb**	**23 52 05.8**	**-1.6**
RTLS	**Leoncito**	**2.92**	**49**	*i* P	**Pb**	**23 52 06.4**	**-3.0**
RTLS				IAML		23 52 11.8	
	comp=Z,49nm,0.3s						
RTLS				*i* S	**Sb**	**23 52 46.9**	**+2.0**
RTCV	**Cerro Valdivia**	**3.39**	**57**	*i* P	**Pn**	**23 52 12.9**	**+3.2**
RTLL	**Cerro Villicun**	**3.76**	**51**	*i* P	**Pn**	**23 52 17.9**	**+3.1**
AMOG	**MOGNA**	**4.01**	**47**	*i* P	**Pn**	**23 52 21.0**	**+2.7**

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*ISCJB **03** 23:57:27.1±0.5, 23°.81S±0°.06×179°.96E±0°.09, h518^{km}, mb4.0/20, Error ellipse: s-maj=11.6km s-min=8.1km az=165.9*

*IDC **03** 23:57:27.1±1.1, 23°.75S×179°.96W, h509^{km}±11^{km}, mb3.6/20, mb1 3.7/22, mb1mx3.6/44, mbtmp4.4/22, Error ellipse: s-maj=12.9km s-min=11.4km az=36.0*

ISC 03 23:57:27.8±0.6, **23°.86S**±0°.08×**180°.0W**±0°.1, **h518**^{km}, **n32**, σ**1^{s}17**/35, **mb4.1**/20, **South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**5.68**	**161**	P	**P**	**23 59 02.7**	**+0.9**
	173nm,0.3s,baz=5.0,slow=23,SNR=15						
RAO				S	**S**	**00 00 17.8**	**-0.8**
	61nm,0.3s,baz=68,slow=19,SNR=2.5						
DZM	**Mont Dzumac**	**12.63**	**275**	P	**P**	**00 00 12.4**	**-0.7**
	0.3nm,0.3s,baz=115,slow=18,SNR=5.5						
URZ	**Urewera**	**14.57**	**189**	P	**P**	**00 00 32.6**	**-0.4**
	1.1nm,0.3s,baz=78,slow=2.2,SNR=5.4						
URZ				S	**S**	**00 03 03.0**	**-2.8**
	0.9nm,0.3s,baz=178,slow=23,SNR=8.6						
RPZ	**Rata Peaks**	**21.13**	**198**	P	**P**	**00 01 37.1**	**+1.6**
	5.3nm,0.5s,baz=27,slow=2.3,SNR=3.6						
PMG	**Port Moresby**	**34.50**	**289**	P	**P**	**00 03 32.6**	**+0.1**
	23nm,0.7s,baz=100,slow=6.1,SNR=5.2						
STKA	**Stephens Creek**	**34.75**	**248**	P	**P**	**00 03 35.0**	**+0.5**
	2.6nm,0.5s,baz=96,slow=11,SNR=8.2						
ASAR	**Alice Springs**	**42.06**	**261**	P	**P**	**00 04 33.9**	**-0.2**
	12nm,0.7s,baz=96,slow=8.0,SNR=72						
ASAR				ScP	**ScP**	**00 09 20.2**	**+2.1**
	3.4nm,0.7s,baz=109,slow=4.1,SNR=16						
WRA	**Warramunga Arr**	**42.42**	**266**	P	**P**	**00 04 36.3**	**-0.7**
	6.4nm,0.4s,baz=90,slow=6.2,SNR=89						
WRA				ScP	**ScP**	**00 09 21.9**	**+2.3**
	2.9nm,0.9s,baz=93,slow=3.8,SNR=6.2						
FITZ	**Fitzroy Crossi**	**50.85**	**266**	P	**P**	**00 05 41.5**	**+0.7**
	6.7nm,0.6s,baz=129,slow=8.9,SNR=10						
VNDA	**Vanda**	**54.42**	**185**	P	**P**	**00 06 07.0**	**+1.7**
	0.7nm,0.7s,baz=7.1,slow=9.2,SNR=5.8						
BATI	**Baumata**	**55.24**	**274**	P	**P**	**00 06 12.9**	**+0.7**
	30nm,0.8s,baz=121,slow=5.9,SNR=3.5						
NWAO	**Narrogin (SRO)**	**55.27**	**246**	P	**P**	**00 06 11.6**	**-0.5**
	7.0nm,0.8s,baz=124,slow=3.6,SNR=3.6						
QSPA	**South Pole Qui**	**66.22**	**180**	P	**P**	**00 07 25.0**	**+1.1**
	4.6nm,0.8s,baz=97,slow=1.7,SNR=16						
MJAR	**Matsushiro Arr**	**71.87**	**326**	P	**P**	**00 07 57.6**	**-0.6**
	0.7nm,0.3s,baz=169,slow=5.9,SNR=4.0						
MAW	**Mawson**	**77.79**	**200**	P	**P**	**00 08 31.4**	**+0.6**
	1.8nm,0.6s,baz=111,slow=2.7,SNR=9.0						
KSRS	**Korea Array**	**78.23**	**320**	P	**P**	**00 08 33.6**	**0.0**
	0.9nm,0.7s,baz=139,slow=6.3,SNR=2.7						
SNAA	**Sanae**	**84.70**	**179**	P	**P**	**00 09 05.8**	**-0.7**
	1.1nm,0.5s,baz=196,slow=14,SNR=12						
NVAR	**Mina Array Bea**	**84.71**	**44**	P	**P**	**00 09 07.5**	**+0.3**
	1.1nm,0.7s,baz=225,slow=7.9,SNR=8.7						
CMAR	**Chiang Mai Arr**	**89.53**	**290**	P	**P**	**00 09 31.4**	**+1.3**
	1.0nm,0.3s,baz=128,slow=3.9,SNR=4.9						
TXAR	**Lajitas Array**	**90.40**	**58**	P	**P**	**00 09 35.1**	**+1.0**
	2.1nm,0.7s,baz=218,slow=6.2,SNR=35						
ANMO	**Albuquerque**	**90.92**	**52**	P	**P**	**00 09 36.5**	**0.0**
	0.6nm,0.6s,baz=270,slow=5.1,SNR=3.9						
ILAR	**Eielson Array**	**91.99**	**14**	P	**P**	**00 09 38.7**	**-1.7**
	0.2nm,0.5s,baz=221,slow=4.8,SNR=3.1						
PDAR	**Pinedale Array**	**92.65**	**44**	P	**P**	**00 09 43.7**	**-0.6**
	0.4nm,0.3s,baz=260,slow=4.5,SNR=7.1						
MKAR	**Makanchi Array**	**112.14**	**313**	PKiKP	**PKiKP**	**00 15 02.2**	**-1.9**
	0.3nm,0.6s,baz=129,slow=2.0,SNR=3.3						
KURBB	**Kurchatov Arra**	**115.23**	**316**	PKP	**PKPdf**	**00 15 08.7**	**-1.2**
	0.2nm,0.3s,baz=67,slow=3.1,SNR=3.2						
BVAR	**Borovoye Array**	**120.42**	**319**	PKP	**PKPdf**	**00 15 18.6**	**-1.2**
	0.3nm,0.4s,baz=110,slow=0.8,SNR=3.9						
FINES	**FINESS Array B**	**138.41**	**341**	PKP	**PKPdf**	**00 15 54.1**	**+0.5**
	1.0nm,0.9s,baz=40,slow=11,SNR=3.2						
FINES				SKP		00 18 38.9	
	0.5nm,0.8s,baz=90,slow=3.8,SNR=4.6						
HFS	**Hagfors**	**142.51**	**349**	PKhKP	PKPpre	00 15 57.0	
	1.5nm,0.5s,baz=46,slow=4.2,SNR=14						
AKASG	**Malin Array Be**	**144.95**	**327**	SKPbc	**SKiKP**	**00 18 56.3**	**-0.1**
	0.3nm,0.3s,baz=47,slow=3.0,SNR=4.1						
BRTR	**Keskin Array B**	**147.57**	**307**	PKPbc	**PKPab**	**00 16 17.3**	**-0.6**
	0.7nm,0.5s,baz=86,slow=1.3,SNR=6.0						
GERES	**GERESS Array B**	**152.82**	**340**	PKPbc	**PKPbc**	**00 16 25.4**	**-0.5**
	0.4nm,0.7s,baz=2.9,slow=2.0,SNR=3.0						
TORD	**Torodi Ar. Bea**	**169.23**	**189**	PKPab	**PKPab**	**00 17 50.8**	**-0.9**
	baz=255,slow=3.9						

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*BJI **04** 00:03:57.8, 58°.89S×150°.13E, h5^{km}, mb5.1/3, mB5.2/1, Ms5.0/3, Ms7 4.7/3*

*IDC **04** 00:03:58.8±0.6, 59°.06S×148°.79E, h0^{km}, mb4.4/11, mb1 4.4/12, mb1mx4.3/41, mbtmp4.3/12, ML3.4/1, MS4.5/32, Ms1 4.5/32, ms1mx4.5/35, Error ellipse: s-maj=25.7km s-min=14.2km az=95.0*

*NEIC **04** 00:03:60.0±0.9, 59°.05S×149°.25E, h10^{km}±5^{km}, mb4.6/12, Error ellipse: s-maj=13.5km s-min=7.9km az=95.0*

*GCMT **04** 00:04:00.0±0.1, 58°.93S×148°.95E, h13^{km}±1^{km}, MW5.4/112, Moment Tensor Solution. s101,c155; s112,c214; Duration: 1^{s}2 Moment tensor: Scale 10^{17} Nm; M_{rr}0.02±.02; $M_{\theta\theta}$0.70±.02; $M_{\phi\phi}$-0.71±.02; $M_{r\theta}$-0.32±.05; $M_{\theta\phi}$-1.11±.02; $M_{\phi r}$-0.07±.04; Best double couple: $M_0$1.35500×10^{17} NP1:ϕ_s254.00000°,δ89.00000°, λ166.00000°. NP2:ϕ_s344.00000°,δ76.00000°,λ1.00000°. Principal axes: T 1.3530, Plg11.0000°, Azm208.0000°; N 0.0040, Plg76.0000°, Azm70.0000°; P -1.3570, Plg9.0000°, Azm300.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 04 00:04:00.9±0.4, **59°.09S**±0°.07×**148°.65E**±0°.10, **h10**^{km}, **n126**, σ**1^{s}61**/91, **mb4.4**/16, **MS4.6**/33, **2D**, **West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MCQ	**Macquarie Isla**	**7.29**	**55**	*e*Pn	Pn	00 05 39.8	-7.5
TAU	**Tasmania Unive**	**16.22**	**357**	*e*Pn	**Pn**	**00 07 46.8**	**-1.8**
CASY	**Casey**	**18.64**	**231**	*e*P	**Pn**	**00 08 20.6**	**+2.0**
	50nm,1.6s						
VNDA	**Vanda**	**19.04**	**171**	P	**P**	**00 08 20.6**	**-2.0**
	0.1nm,0.3s,baz=341,slow=11,SNR=10						
VNDA				LR	LR	00 15 04.5	
	comp=Z,2µm,19.0s,baz=345,slow=35						
VNDA	**Vanda**	**19.04**	**171**	*e*P	**P**	**00 08 20.4**	**-2.2**
	27nm,1.4s						
SBA	**Scott Base**	**19.79**	**169**	*e*P	**P**	**00 08 29.8**	**-1.0**
	23nm,1.3s						
RPZ	**Rata Peaks**	**20.64**	**52**	P	**P**	**00 08 39.4**	**-0.9**
	6.2nm,0.7s,baz=239,slow=8.0,SNR=3.9						
RPZ				LR	LR	00 15 06.7	
	comp=Z,4µm,19.1s,baz=200,slow=32						
RPZ	**Rata Peaks**	**20.64**	**52**	*e*P	**P**	**00 08 38.6**	**-1.7**
	66nm,1.4s						
CAN	**Canberra**	**23.78**	**1**	*e*P	**P**	**00 09 11.0**	**-2.4**
	52nm,1.1s						
STKA	**Stephens Creek**	**27.63**	**347**	P	**P**	**00 09 49.0**	**+0.7**
	8.6nm,1.1s,baz=152,slow=10,SNR=7.0						
STKA				LR	LR	00 18 02.8	
	comp=Z,957nm,19.1s,baz=176,slow=31						
STKA	**Stephens Creek**	**27.63**	**347**	*e*P	**P**	**00 09 48.8**	**+0.5**
	14nm,1.7s						
URZ	**Urewera**	**27.70**	**54**	P	**P**	**00 09 48.4**	**-0.5**
	10nm,1.0s,baz=218,slow=12,SNR=2.9						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ				LR	LR	00 19 54.6	
	comp=Z,2µm,18.8s,baz=210,slow=35						
QSPA	South Pole Qui	31.01	180	P	P	00 10 17.6	-0.7
	3.3nm,1.0s,baz=5.2,slow=6.4,SNR=4.6						
QSPA				LR	LR	00 22 30.0	
	comp=Z,2µm,20.7s,baz=20,slow=36						
QSPA	South Pole Qui	31.01	180	eP	P	00 10 17.3	-0.9
H01W1	Cape Leeuwin H	33.13	302	T	T	00 45 42.7	
	baz=146,slow=76,SNR=3162						
H01W2	Cape Leeuwin H	33.13	302	T	T	00 45 48.7	
	baz=146,slow=76,SNR=3603						
H01W3	Cape Leeuwin H	33.14	302	T	T	00 45 45.6	
	baz=146,slow=76,SNR=3725						
NWAO	Narrogin (SRO)	33.50	307	LR	LR	00 20 59.5	
	comp=Z,1µm,19.9s,baz=8.0,slow=30						
EIDS	Eidsvold	33.74	4	eP	P	00 10 40.9	-1.4
	21nm,1.0s						
MAW	Mawson	36.33	220	P	P	00 11 06.0	+1.8
	1.4nm,0.6s,baz=138,slow=9.6,SNR=8.9						
MAW				LR	LR	00 26 11.2	
	comp=Z,2µm,18.3s,baz=99,slow=37						
MAW	Mawson	36.33	220	eP	P	00 11 04.2	0.0
	1.9nm,1.4s						
AS01	Alice Springs	36.90	337	eP	P	00 11 09.3	-0.3
ASAR	Alice Springs	36.91	337	P	P	00 11 08.9	-0.7
	4.7nm,0.8s,baz=167,slow=9.9,SNR=15						
ASAR				PcP	PcP	00 13 29.1	-1.8
	0.5nm,0.5s,baz=152,slow=3.2,SNR=2.6						
ASAR				LR	LR	00 24 06.0	
	comp=Z,528nm,20.9s,baz=171,slow=33						
AS31	Alice Springs	36.91	337	eP	P	00 11 09.4	-0.2
	2.5nm,0.8s						
CTAO	Charters Tower	38.99	356	eP	P	00 11 26.6	-0.6
DZM	Mont Dzumac	39.11	27	P	P	00 11 26.4	-1.9
	4.0nm,0.8s,baz=187,slow=16,SNR=3.4						
DZM				LR	LR	00 24 47.6	
	comp=Z,2µm,18.9s,baz=203,slow=32						
DZM	Mont Dzumac	39.11	27	eS	S	00 17 32.0	+4.2
	644nm,25.7s						
DZM				eLR	LR	00 22 11.6	
	5µm,25.9s						
WRA	Warramunga Arr	40.45	339	P	P	00 11 37.5	-1.8
	7.7nm,0.9s,baz=166,slow=7.1,SNR=14						
WRA				PcP	PcP	00 13 41.5	-0.6
	2.7nm,1.1s,baz=158,slow=3.2,SNR=3.3						
WRA				LR	LR	00 26 06.8	
	comp=Z,828nm,21.5s,baz=155,slow=33						
WRAB	Tennant Creek	40.46	339	eP	P	00 11 39.4	0.0
	8.6nm,0.7s						
SYO	Syowa Base	42.42	210⇓	eP	P	00 11 56.2	+1.2
SYO	Syowa Base	42.42	210⇓	eP	P	00 12 10.8	+16
FITZ	Fitzroy Crossi	44.24	328	P	P	00 12 10.4	+0.2
	3.8nm,0.7s,baz=165,slow=14,SNR=3.2						
FITZ				LR	LR	00 28 41.6	
	comp=Z,966nm,20.6s,baz=164,slow=34						
SNAA	Sanae	48.01	192	P	P	00 12 39.8	+0.4
SNAA	Sanae	48.01	192	P	P	00 12 38.9	-0.6
	4.4nm,0.8s,baz=172,slow=9.9,SNR=14						
SNAA				LR	LR	00 33 05.6	
	comp=Z,931nm,18.0s,baz=161,slow=36						
SNAA	Sanae	48.01	192	eP	P	00 12 37.7	-1.7
	12nm,1.2s						
VNA3	Neumayer Olymp	49.06	189	P	P	00 12 48.9	+1.4
VNA2	Neumayer--Watz	49.17	190	P	P	00 12 47.1	-1.2
	baz=159,slow=5.6						
VNA1	Neumayer--Stat	49.52	190	P	P	00 12 50.3	-0.6
PMG	Port Moresby	49.59	358	LR	LR	00 30 22.9	
	comp=Z,1µm,21.5s,baz=192,slow=32						
HNR	Honiara	50.29	15	LR	LR	00 29 38.9	
	comp=Z,1µm,21.0s,baz=160,slow=31						
BATI	Baumata	52.31	328	LR	LR	00 34 31.4	
	comp=Z,674nm,19.3s,baz=192,slow=35						
RAR	Rarotonga	52.60	67	LR	LR	00 32 38.3	
	comp=Z,236nm,18.8s,baz=206,slow=33						
AFI	Afiamalu	53.77	50	LR	LR	00 35 39.0	
	comp=Z,184nm,19.0s,baz=190,slow=35						
PMSA	Palmer Station	54.01	163	LR	LR	00 34 18.3	
	comp=Z,401nm,19.3s,baz=202,slow=34						
TBI	Tubuai	55.87	78	eLR	LR	00 29 41.6	
	566nm,28.0s						
PPT2	Papeete2	60.65	75	eS	S	00 22 32.8	+4.4
	79nm,24.5s						
PPT2				eLQ	LQ	00 29 22.3	
	728nm,25.2s						
PPT2				eLR	LR	00 32 05.6	
	676nm,25.5s						
PPT	Papeete	60.67	75	LR	LR	00 33 37.2	
	comp=Z,202nm,21.7s,baz=195,slow=29						
LEM	Lembang	60.80	312	LR	LR	00 37 04.3	
	comp=Z,478nm,20.8s,baz=152,slow=33						
RKT	Rikitea	63.49	91	eS	S	00 23 07.2	+3.2
	537nm,29.2s						
RKT				eLQ	LQ	00 30 29.8	
	1µm,37.2s						
RKT				eLR	LR	00 33 22.4	
	496nm,27.2s						
RKT	Rikitea	63.49	91	eT	T	01 22 48.7	
	12nm,0.2s						
DAV	Davao City (W)	68.49	335	LR	LR	00 45 43.3	
	comp=Z,122nm,19.9s,baz=142,slow=37						
GUMO	Guam	72.49	356	LR	LR	00 48 18.9	
	comp=Z,184nm,18.0s,baz=183,slow=37						
TAOE	Nuku Hiva Isla	72.82	78	eLR	LR	00 37 40.6	
	359nm,24.4s						
PSI	Prapat	73.04	307	LR	LR	00 45 20.4	
	comp=Z,358nm,18.5s,baz=91,slow=34						
PLCA	Paso Flores	75.36	150	LR	LR	00 41 21.8	
	comp=Z,225nm,21.9s,baz=222,slow=30						
H08S2	Diego Garcia H	76.37	278	T	T	01 40 10.2	
	baz=148,slow=76,SNR=383						
H08S1	Diego Carcia H	76.38	278	T	T	01 40 11.2	
	baz=148,slow=76,SNR=190						
H08S3	Diego Garcia H	76.39	278	T	T	01 39 58.0	
	baz=148,slow=76,SNR=864						
H08N1	Diego Carcia H	78.24	277	T	T	01 42 25.2	
	baz=144,slow=76,SNR=374						
H08N3	Diego Garcia H	78.25	277	T	T	01 42 26.3	
	baz=144,slow=76,SNR=440						
H08N2	Diego Garcia H	78.26	277	T	T	01 42 28.0	
	baz=144,slow=76,SNR=414						
BOSA	Boshof	80.89	228	LR	LR	00 48 02.5	
	comp=Z,395nm,19.2s,baz=178,slow=33						
QIZ	Qiongzhong	84.09	323	P	P	00 16 33.2	+1.7
QIZ				pP	sP	00 16 36.9	+0.9
QIZ				S	S	00 26 58.7	+2.8
QIZ				sS	ScS	00 27 05.4	-2.7
QIZ				LR	LR		
	comp=N,190nm,14.5s						
QIZ				LR	LR		
	comp=E,250nm,17.7s						
QIZ				LR	LR		
	comp=Z,150nm,15.7s						
PALK	Pallekele	85.15	293	LR	LR	00 47 33.2	
	comp=Z,177nm,20.3s,baz=94,slow=31						
CMAR	Chiang Mai Arr	87.28	314	P	P	00 16 48.3	+0.9
	1.1nm,0.5s,baz=177,slow=3.6,SNR=6.7						
CMAR				LR	LR	00 53 55.3	
	comp=Z,250nm,19.4s,baz=154,slow=34						
CHTO	Chiang Mai	87.61	314	eP	P	00 16 49.7	+0.7
	11nm,1.1s						
CHTO	Chiang Mai	87.61	314	P	P	00 16 58.6	+10
GYA	Guiyang	92.04	323	eP	P	00 17 12.0	+2.3
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CPUP	Villa Florida	92.21	157	LR	LR	00 55 09.5	
	comp=Z,112nm,19.0s,baz=200,slow=33						
JNU	Nakatsue	93.05	345	LR	LR	00 56 31.2	
	comp=Z,192nm,21.8s,baz=133,slow=34						
BRDH	Bariadhala	93.94	309	LR	LR	00 58 57.4	
	comp=Z,154nm,18.8s,baz=164,slow=35						
NJ2	Nanjing	94.12	335	eP	P	00 17 20.4	+1.4
CD2	Chengdu	97.09	322	eP	Pdif	00 17 34.0	+1.2
KSRS	Korea Array	97.72	343	LR	LR	01 01 39.0	
	comp=Z,84nm,19.5s,baz=166,slow=35						
LPAZ	La Paz	99.11	144	LR	LR	00 54 13.0	
	comp=Z,118nm,20.2s,baz=170,slow=30						
LZH	Lanzhou	101.86	324	eP	Pdif	00 17 55.5	+1.5
LZH				pP	sPdif	00 18 01.4	+2.8
LZH				sP	pP	00 18 04.3	+6.7
H06S1	SOCORRO T	111.20	89	T	T	02 23 07.8	
	SNR=8.9						
H06E1	SOCORRO T-PHAS	111.26	89	T	T	02 23 14.7	
H06N1	SOCORRO T-PHAS	111.30	89	T	T	02 23 06.7	
	SNR=3.9						
WMQ	Urumqi	114.17	316	ePKP	PKPdf	00 22 40.0	+0.5
WMQ				LR	LR		
	comp=N,380nm,39.2s						
WMQ				LR	LR		
	comp=E,320nm,39.2s						
WMQ				LR	LR		
	comp=Z,360nm,32.1s						
MKAR	Makanchi Array	118.69	314	PKP	PKPdf	00 22 46.2	-1.8
	0.5nm,0.8s,baz=110,slow=1.5,SNR=3.4						
KURBB	Kurchatov Arra	123.26	314	PKP	PKPdf	00 22 54.3	-2.3
	0.3nm,0.7s,baz=142,slow=1.4,SNR=2.7						
KURK	Kurchatov	123.30	314	PKP	PKPdf	00 22 54.3	-2.4
NVAR	Mina Array Bea	123.48	70	PKP	PKPdf	00 22 59.9	+2.1
	0.2nm,0.5s,baz=304,slow=1.6,SNR=2.6						
TXAR	Lajitas Array	123.67	88	PKP	PKPdf	00 22 58.7	+0.5
	0.1nm,0.6s,baz=185,slow=5.4,SNR=2.4						
TORD	Torodi Ar. Bea	127.96	222	PKP	PKPdf	00 23 07.5	+0.8
	1.6nm,1.1s,baz=274,slow=2.3						
BVAR	Borovoye Array	128.25	311	PKP	PKPdf	00 23 06.4	+0.3
	0.2nm,0.5s,baz=120,slow=5.2,SNR=2.8						
TPAW	Teton Pass	130.93	71	ePKPdf	PKPdf	00 23 08.6	-3.3
ILAR	Eielson Array	132.72	32	PKP	PKPdf	00 23 14.1	-0.1
	0.1nm,0.5s,baz=270,slow=1.8,SNR=3.0						
KBZ	Khabaz	133.75	285	PKP	PKPdf	00 23 16.8	0.0
	1.6nm,0.8s,baz=117,slow=2.3,SNR=3.3						
F41A	Three Lakes	143.54	85	ePKPdf	PKPdf	00 23 33.3	-1.4
MLR	Muntele Rosu	143.60	274	PKP	PKPdf	00 23 34.5	-0.5
	1.2nm,0.8s,baz=139,slow=6.0						
COWI	Conover	143.77	85	ePKPdf	PKPdf	00 23 33.1	-2.0
KEST	Kesra	144.72	247	PKP	PKPdf	00 23 36.6	-0.6
	7.6nm,1.1s,baz=243,slow=2.3,SNR=6.5						
KEST	Kesra	144.72	247	ePKPdf	PKPdf	00 23 38.5	+1.4
O56A	Blue Knob Stat	145.06	101	ePKPdf	PKPdf	00 23 37.2	-0.4
AKASG	Malin Array Be	145.31	283	PKPbc	PKPdf	00 23 36.2	-1.4
	2.4nm,0.7s,baz=96,slow=1.7,SNR=8.5						
KIEV	Kiev	145.31	283	ePKPbc	PKPab	00 23 37.9	+0.3
AK11	Malin Array Si	145.32	283	ePKPdf	PKPdf	00 23 37.2	-0.4
BUR04	Bucovina Ar. S	145.40	276	ePKPdf	PKPbc	00 23 38.0	0.0
DIVS	Divibare	145.72	267	ePKPdf	PKPbc	00 23 38.7	-0.3
KWP	Kalwaria Pacla	147.96	277	ePKPbc	PKPbc	00 23 45.2	0.0
MDT	Midelt	148.23	226	PKPbc	PKPdf	00 23 44.5	+1.2
	1.1nm,0.8s,baz=180,slow=8.1,SNR=1.8						
FCC	Fort Churchill	148.67	63	ePKPbc	PKPbc	00 23 44.8	-1.9
VYHS	Vyhne	149.24	272	ePKP	PKPab	00 23 55.0	+1.8
VYHS				e		00 23 59.2	
SOKA	Soboth	150.03	266	eP	PKPbc	00 23 50.4	-0.2
	7.1nm,1.1s						
ARSA	Arzberg	150.15	268	ePKiKP	PKiKP	00 23 53.3	+1.7
	7.1nm,1.6s						
OBKA	Obir	150.17	266	epPKPbc	pPKPbc	00 23 55.4	+1.0
	2.0nm,0.8s						
SUW	Suwalki	150.25	284	ePKPbc	PKPbc	00 23 49.9	-0.8
MORC	Moravsky Berou	150.71	273	ePKPbc	PKPbc	00 23 52.9	+0.8
MYKA	Terra Mystica	150.71	265	epPKPbc	pPKPbc	00 23 55.6	0.0
	0.8nm,0.4s						
KBA	Koelnbreinsper	151.16	265	ePKPbc	PKPbc	00 23 54.0	+0.6
	1.6nm,0.6s						
ABTA	Abfaltersbach	151.37	264	ePKPbc	PKPbc	00 23 53.7	-0.1
DPC	Dobruska-Polom	151.68	273	ePKPAB	PKPab	00 24 05.0	+1.8
DPC				epPKP	sPKPab	00 24 08.7	+0.9
DPC				ex	x	00 24 17.9	
GEA0	GERESS Array S	152.11	268	epPKPdf	pPKPdf	00 23 52.4	+0.2
GERES	GERESS Array B	152.11	269	PKPbc	PKPbc	00 23 54.2	-1.2
	0.7nm,0.6s,baz=198,slow=3.8,SNR=5.6						
FIA1	FINESS Array S	152.21	300	ePKPdf	PKPdf	00 23 49.9	+1.6
FIA1				ePKPbc	PKPbc	00 23 54.0	-1.0
FINES	FINESS Array B	152.21	300	PKPbc	PKPbc	00 23 54.0	-1.0
	3.2nm,0.7s,baz=106,slow=4.2,SNR=10						
KHC	Kasperske Hory	152.35	269	ePKPAB	PKPab	00 24 05.9	-0.2
FETA	Feichten	152.47	263	eP	PKPbc	00 23 55.3	-1.1
	4.2nm,1.0s						
RETA	Reutte	152.76	264	pPKPbc	pPKPbc	00 24 00.7	+0.4
	3.6nm,1.0s						
DAVA	Damuels	153.08	262	epPKPbc	pPKPbc	00 24 01.5	+0.4
	4.8nm,1.1s						
ESDC	Sonseca Array	153.94	234	PKPbc	PKPbc	00 24 01.7	+2.0
	1.3nm,1.0s,baz=172,slow=1.1,SNR=5.1						
ESDC				PKPab	PKPab	00 24 11.3	-1.7
	1.6nm,1.0s,baz=180,slow=1.2,SNR=6.2						
CLL	Collm	153.95	272	ePKPdf	PKPbc	00 23 55.0	-4.2
CLL				ePKPbc	sPKPbc	00 24 05.0	+1.2
CLL				i PKPab	sPKPab	00 24 18.2	+1.0
	comp=Z,8.0nm,1.4s						
CLL				eSS	SS	00 47 36.0	+10
ARCES	ARCESS Array B	154.29	317	PKPab	PKPab	00 24 12.4	-1.2
	comp=Z,7.1nm,1.1s,baz=108,slow=4.0,SNR=4.4						
HFS	Hagfors	157.52	292	PKPab	PKPab	00 24 26.9	-0.8
	comp=Z,1.5nm,0.8s,baz=90,slow=7.2,SNR=2.5						

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*IDC **04** 00:15:52.4±0.8, 29°.49S×177°.03W, h0^{km}, mb4.2/4, mb1 4.4/6, mb1mx4.0/46, mbtmp4.3/6, ML3.7/2, MS4.2/4, Ms1 4.2/4, ms1mx3.5/41, Error ellipse: s-maj=27.5km s-min=17.3km az=3.0*

*ISCJB **04** 00:15:54.5±0.8, 29°.62S±0°.06×176°.99W±0°.09, h31^{km}, mb4.3/6, MS4.3/4, Error ellipse: s-maj=11.9km s-min=8.3km az=6.3*

*NEIC **04** 00:15:55.7±3.0, 29°.43S×177°.13W, h20^{km}±20^{km}, mb4.4/1, Error ellipse: s-maj=16.5km s-min=9.6km az=108.0*

ISC 04 00:15:57.3±0.7, 29°.49S±0°.08×177°.09W±0°.07, h31^{km}, n28, σ1§11/27, mb4.3/6, MS4.4/4, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.76	288	Pn	Pb	00 16 12.4	+0.4
	752nm,0.3s,baz=97,slow=6.0,SNR=72						
RAO				LR	LR	00 16 18.0	
	comp=Z,253nm,20.6s,baz=156,slow=32						
RAO				Sn	Sn	00 16 24.2	+2.0
	3µm,0.3s,baz=81,slow=19,SNR=24						
RAO	Raoul Island	0.76	288	ePg	Pn	00 16 11.9	+0.1
RAO				eSg	Sb	00 16 21.5	-0.5
URZ	Urewera	9.98	207	Pn	Pn	00 18 17.4	-1.1
	0.3nm,0.3s,baz=86,slow=13,SNR=3.6						
URZ				Sn	Sn	00 20 07.4	-2.0
	0.9nm,0.3s,baz=300,slow=20,SNR=4.9						
AFI	Afiamalu	16.27	19	ePn	Pn	00 19 42.0	-1.7
RPZ	Rata Peaks	17.06	211	Pn	Pn	00 19 53.1	-0.3
	0.8nm,0.3s,baz=32,slow=4.3,SNR=6.6						
RPZ				Sn	Sn	00 22 48.4	-14
	0.2nm,0.3s,baz=47,slow=19,SNR=2.7						
FUNA	Funafuti	21.15	350	eP	P	00 20 39.2	-0.6
STKA	Stephens Creek	35.46	256	P	P	00 22 50.8	-0.1
	4.3nm,0.8s,baz=92,slow=10,SNR=9.6						
ASAR	Alice Springs	43.95	266	P	P	00 24 01.2	-0.5
	2.6nm,0.7s,baz=98,slow=6.3,SNR=19						
WRAB	Tennant Creek	44.85	271	eP	P	00 24 08.1	-0.9
	3.8nm,0.7s						
WRA	Warramunga Arr	44.86	271	P	P	00 24 08.3	-0.8
	1.7nm,0.5s,baz=110,slow=7.8,SNR=9.2						
FITZ	Fitzroy Crossi	53.16	269	LR	LR	00 44 32.3	
	comp=Z,114nm,21.4s,baz=50,slow=32						
CASY	Casey	56.30	208	eP	P	00 25 35.2	+0.6
	4.8nm,0.5s						
QSPA	South Pole Qui	60.61	180	eP	P	00 26 07.7	+2.8
JHJ	Hachijo jima 2	74.48	323	LR	LR	00 54 54.2	
	comp=Z,239nm,20.1s,baz=98,slow=31						
ASAJ	Asahikawa	82.01	332	LR	LR	01 00 57.0	
	comp=Z,208nm,20.2s,baz=179,slow=33						
USRK	Ussuriysk Ar.	86.85	326	LR	LR	01 01 58.9	
	comp=Z,145nm,20.9s,baz=154,slow=32						
NVAR	Mina Array Bea	87.04	42	P	P	00 28 40.6	+0.7
	0.7nm,0.8s,baz=204,slow=8.6,SNR=4.6						
MKAR	Makanchi Array	117.79	310	PKP	PKPdf	00 34 39.5	-0.8
	0.3nm,0.6s,baz=135,slow=2.1,SNR=3.6						
KURK	Kurchatov	120.99	314	PKP	PKPdf	00 34 45.4	-0.8
KURBB	Kurchatov Arra	121.03	314	PKP	PKPdf	00 34 45.4	-0.9
	0.3nm,0.5s,baz=113,slow=1.8,SNR=5.0						
BVAR	Borovoye Array	126.30	316	PKP	PKPdf	00 34 56.6	+0.2
	0.4nm,0.5s,baz=113,slow=1.2,SNR=6.0						
FINES	FINESS Array B	144.56	341	PKP	PKPab	00 35 27.7	-0.7
	4.4nm,0.7s,baz=62,slow=2.9,SNR=18						
HFS	Hagfors	148.51	350	PKPbc	PKPbc	00 35 39.5	-0.8
	4.1nm,0.8s,baz=48,slow=2.1,SNR=9.0						
AKASG	Malin Array Be	151.04	324	PKPbc	PKPbc	00 35 46.5	-0.3
	1.3nm,0.5s,baz=48,slow=2.9,SNR=9.2						
MMAI	Mount Meron Ar	152.06	286	PKPbc	PKPbc	00 35 51.1	+1.3
	4.8nm,0.6s,baz=23,slow=5.5,SNR=6.6						
BRTR	Keskin Array B	152.84	300	PKPbc	PKPbc	00 35 51.1	-0.3
	1.6nm,0.9s,baz=96,slow=2.5,SNR=8.5						
GERES	GERESS Array B	158.98	340	PKPab	PKPab	00 36 28.8	+0.4
	0.1nm,0.3s,baz=56,slow=2.5,SNR=2.6						
TORD	Torodi Ar. Bea	163.69	176	PKPab	PKPab	00 36 50.6	+1.0
	baz=187,slow=4.0						

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*IDC **04** 00:22:02.4±1.8, 4°.30S×102°.12E, h0^{km}, mb4.0/10, mb1 4.1/10, mb1mx3.7/63, mbtmp4.0/10, Error ellipse: s-maj=78.6km s-min=15.4km az=55.0*

*ISCJB **04** 00:22:05.1±0.7, 4°.5S±0°.1×101°.97E±0°.07, h37^{km}, mb3.9/12, Error ellipse: s-maj=16.6km s-min=5.9km az=29.9*

*NEIC **04** 00:22:07.4±0.6, 4°.32S×102°.11E, h35^{km}, mb4.2/1, Error ellipse: s-maj=26.0km s-min=8.0km az=53.0*

*DJA **04** 00:22:10.8±1.1, 4°S±5°×10°2E±°, h62^{km}±36^{km}, M4.0/5, MLv4.0/5*

ISC 04 00:22:07.6±0.9, 4°.4S±0°.1×102°.0E±0°.1, h37^{km}, n26, σ1§33/22, mb4.0/12, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASI	Maura Aman, Be	1.29	9	P	Pn	00 22 30.4	+1.3
LWLI	Liwa	2.10	106	P	Pn	00 22 45.7	+5.5
LWLI				S	Sn	00 23 04.8	-0.3
MDSI	Maura Dua	2.13	92	P	Pn	00 22 41.6	+1.0
MDSI				S	Sn	00 23 05.8	-0.1
KRJI	Kerinci	2.39	346	P	Pn	00 22 47.5	+3.2
KASI	Kota Agung	2.68	114	P	Pn	00 22 49.6	+1.4
KASI				S	Sn	00 23 18.5	-0.9
KLI	Kotabumi	2.84	99	P	Pn	00 22 53.9	+3.5
CMAR	Chiang Mai Arr	22.94	352	P	P	00 27 08.5	-0.3
	0.8nm,0.3s,baz=187,slow=8.7,SNR=6.8						
FITZ	Fitzroy Crossi	26.79	122	P	P	00 27 43.8	-0.5
	3.9nm,0.9s,baz=293,slow=9.2,SNR=2.2						
H08S2	Diego Garcia H	29.55	262	T	T	00 58 31.3	
	baz=85						
H08S3	Diego Garcia H	29.56	262	T	T	00 58 29.7	
	baz=85						
H08S1	Diego Carcia H	29.57	262	T	T	00 58 24.9	
	baz=85						
H01W3	Cape Leeuwin H	32.31	161	T	T	01 02 38.8	
	baz=338						
H01W2	Cape Leeuwin H	32.33	161	T	T	01 02 31.2	
	baz=338						
H01W1	Cape Leeuwin H	32.33	161	T	T	01 02 36.0	
	baz=338						
WRA	Warramunga Arr	35.03	119	P	P	00 28 57.0	-0.1
	0.4nm,0.4s,baz=304,slow=8.8,SNR=4.3						
ASAR	Alice Springs	36.19	125	P	P	00 29 07.2	+0.2
	0.5nm,0.4s,baz=287,slow=7.0,SNR=4.2						
STKA	Stephens Creek	46.03	131	P	P	00 30 28.6	+0.8
	1.1nm,0.5s,baz=297,slow=14,SNR=4.4						
SONM	Songino Array	52.18	4	P	P	00 31 13.6	-1.1
	1.5nm,0.7s,baz=184,slow=9.7,SNR=6.5						
MKAR	Makanchi Array	53.91	343	P	P	00 31 27.1	-0.2
	1.2nm,0.4s,baz=152,slow=9.1,SNR=21						
KURBB	Kurchatov Arra	58.45	343	P	P	00 31 59.3	-0.3
	1.0nm,0.7s,baz=159,slow=6.8,SNR=9.0						
KURK	Kurchatov	58.50	343	P	P	00 31 59.3	-0.7
KLR	Kul’dur	59.35	22	P	P	00 32 04.7	-1.2
	0.1nm,0.5s,baz=246,slow=5.7,SNR=4.9						
ZALV	Zalesovo Beam	59.93	348	P	P	00 32 09.1	-0.7
	2.1nm,0.4s,baz=170,slow=5.8,SNR=12						
RAYN	Ar Rayn	61.69	300	eP	P	00 32 22.5	0.0
	1.8nm,1.0s						
BVAR	Borovoye Array	63.16	339	P	P	00 32 30.7	-0.9
	0.8nm,0.5s,baz=146,slow=9.3,SNR=8.6						
TXAR	Lajitas Array	145.26	42	PKPbc	PKPdf	00 41 42.0	-0.2
	1.0nm,0.5s,baz=245,slow=0.8,SNR=22						

MEX 04 00:27:18.6±0.6, 17°.28N×100°.67W, h11^{km}±5^{km}, MD3.7, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.45	121	eP	Pg	00 27 26.7	-0.8
CAIG				eS	Sg	00 27 33.0	-0.4
ZIIG	Zihuatanejo	0.82	293	eP	Pg	00 27 32.2	-2.3
ZIIG				eS	Sg	00 27 43.0	-2.3
ACP2	Acapulco	0.85	118	eP	Pg	00 27 33.1	-2.0
ACP2				eS	Sg	00 27 43.8	-2.4
ARIG	Puente Sto Nin	1.04	17	eP	Pg	00 27 35.3	-3.3
ARIG				eS	Sg	00 27 47.6	-4.6
MEIG	Mezcala	1.19	57	eP	Pb	00 27 37.7	-3.5
MEIG				eS	Sb	00 27 52.6	-4.1
YAIG	Yautepec	2.19	44	eP	Pn	00 27 51.7	-3.5
YAIG				i S	Sn	00 28 18.2	-4.1

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*IDC **04** 00:29:40.1±0.9, 52°.10N×176°.62E, h0^{km}, mb4.1/18, mb1 4.2/19, mb1mx4.0/74, mbtmp4.1/19, ML4.5/1, Error ellipse: s-maj=27.1km s-min=14.3km az=180.0*

*ISCJB **04** 00:29:44.1±0.4, 51°.95N±0°.08×176°.39E±0°.04, h40^{km}, mb4.1/32, MS4.0/2, Error ellipse: s-maj=11.2km s-min=3.2km az=7.7*

*NEIC **04** 00:29:44.2±0.0, 51°.53N×176°.45E, h38^{km}, mb4.1/12, ML3.5(AEIC), After AEIC.*

ISC 04 00:29:45.8±0.6, 51°.9N±0°.1×176°.48E±0°.04, h40^{km}, n84, σ1§80/88, mb4.1/32, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSSA	Little Sitkin	1.27	85	P	Pn	00 30 07.1	+0.1
LSNW	Little Sitkin	1.27	84	P	Pn	00 30 07.2	+0.1
LSPA	Little Sitkin	1.30	85	P	Pn	00 30 07.6	0.0
LSPA				S	Sn	00 30 26.7	+2.9
SMY	Shemya	1.70	302	P	Pn	00 30 15.3	+2.3
SMY				S	Sn	00 30 38.0	+4.5
AMKA	Amchitka	1.82	104	P	Pn	00 30 13.1	-1.5
CESW	Semis’ Southwe	1.92	87	P	Pn	00 30 15.8	-0.1
CEAP	Semis’ Anvil P	1.93	84	P	Pn	00 30 16.3	+0.2
CERB	Semis’ Cerberu	1.96	86	P	Pn	00 30 16.8	+0.3
CERB				S	Sn	00 30 42.3	+2.5
CERAA	Semis’ Rag’d T	1.99	87	P	Pn	00 30 17.0	+0.1
GAEA	Gareloi East	2.97	89	P	Pn	00 30 30.4	0.0
TASE	Tanaga Southea	3.40	88	P	Pn	00 30 36.6	+0.2
TAFP	Tanaga Falls P	3.44	87	P	Pn	00 30 36.8	-0.1
TAFP				S	Sn	00 31 19.1	+2.8
TAPA	Tanaga Point A	3.54	88	P	Pn	00 30 38.4	+0.1
KICM	Kanaga Island	3.92	87	P	Pn	00 30 43.9	+0.4
KIKV	Kanaga Island	3.94	87	P	Pn	00 30 44.2	+0.4
KIWB	Kanaga Island	3.95	87	ePn	Pn	00 30 43.7	-0.2
KINC	Kanaga Island	3.96	86	P	Pn	00 30 44.2	+0.1
KIRH	Kanaga Island	3.99	87	P	Pn	00 30 44.5	+0.1
ADAG	Mount Adagdak	4.29	86	P	Pn	00 30 48.5	0.0
ETKA	Kagalaska Isla	4.41	87	P	Pn	00 30 50.6	+0.4
GSCK	Great Sitkin C	4.56	85	P	Pn	00 30 52.6	+0.3
GSTD	Great Sitkin T	4.57	85	P	Pn	00 30 52.4	0.0
GSTD				S	Sn	00 31 47.4	+3.2
GSTR	Great Sitkin T	4.62	84	ePn	Pn	00 30 52.9	-0.3
KOKL	Mount Kliuchef	5.77	82	P	Pn	00 31 10.3	+1.4
ATKA	Atka Island	5.77	83	P	Pn	00 31 09.6	+0.8
ATKA				S	Sn	00 32 18.1	+4.4
NIKH	Nikolski High	9.04	77	P	Pn	00 31 55.7	+2.1
PETK	Petropavlovsk-	11.52	284	Pn	Pn	00 32 30.7	+3.1
	baz=99,slow=16						
PETK				Sn	Sn	00 34 28.2	-6.5
	baz=88,slow=17						
BILL	Bilibino	16.98	347	ePn	Pn	00 33 40.9	+0.9
KDAK	Kodiak Island	18.68	59	P	P	00 33 57.5	-2.7
	1.5nm,0.3s,baz=260,slow=3.9,SNR=34						
KDAK	Kodiak Island	18.68	59	eP	P	00 33 57.7	-2.5
	21nm,1.2s						
RDOG	Red Dog Mine	19.08	24	eP	Pn	00 34 05.9	+0.3
	12nm,0.7s						
BRLK	Bradley Lake	19.80	54	eP	P	00 34 11.4	-1.1
	16nm,0.7s						
SKT	Skwentna	19.98	47	eP	P	00 34 15.7	+1.3
	8.2nm,1.0s						
CAST	Castle Rocks	20.18	43	eP	P	00 34 18.2	+1.5
	6.8nm,1.4s						
IM3	Indian Mountai	20.60	35	eP	P	00 34 20.8	-0.3
MDM	Murphy Dome	22.29	40	eP	P	00 34 39.1	-0.2
	3.3nm,0.6s						
CCB	Clear Creek Bu	22.36	41	eP	P	00 34 40.0	-0.1
	1.0nm,0.6s						
ILAR	Eielson Array	22.78	41	P	P	00 34 40.7	-3.8
	0.6nm,0.6s,baz=249,slow=7.3,SNR=10						
TOLK	Toolik Lake Re	23.31	31	eP	P	00 34 49.6	-0.3
	3.3nm,0.7s						
CRQM	Cirque	23.75	52	eP	P	00 34 52.5	-1.8
	13nm,1.2s						
EGAK	Eagle	25.16	43	eP	P	00 35 06.0	-0.9
	6.7nm,1.1s						
DAWY	Dawson	25.81	45	eP	P	00 35 12.4	-0.4
	2.9nm,0.6s						
KLR	Kul’dur	28.21	283	P	P	00 35 34.0	-0.4
	0.1nm,0.3s,baz=68,slow=17,SNR=3.5						
MDJ	Mudanjiang	31.59	276	P	P	00 36 05.0	+0.6

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MDJ                                pP      sP       00 36 18.9  -1.3
MDJ                                sP      pP       00 36 26.1  +11
MDJ                                S       S        00 41 09.2  -1.1
MDJ                                pmax    pmax
      comp=Z,12nm,0.6s
MDJ                                pmax    pmax
      comp=Z,68nm,3.4s
MDJ                                LR      LR
      comp=N,120nm,13.5s
MDJ                                LR      LR
      comp=E,170nm,25.5s
MDJ                                LR      LR
      comp=Z,160nm,18.3s
H11N2 WAKE ISLAND Hy 32.92 197     T       T        01 11 25.6
      baz=11,slow=76,SNR=557
H11N3 WAKE ISLAND Hy 32.94 197     T       T        01 11 36.5
      baz=11,slow=76,SNR=397
H11N1 WAKE ISLAND Hy 32.94 197     T       T        01 11 37.1
      baz=11,slow=76,SNR=458
H11S1 WAKE ISLAND Hy 34.16 197     T       T        01 13 16.2
      baz=11,slow=76,SNR=114
H11S3 WAKE ISLAND Hy 34.17 197     T       T        01 13 09.9
      baz=11,slow=76,SNR=72
H11S2 WAKE ISLAND Hy 34.17 197     T       T        01 13 10.4
      baz=11,slow=76,SNR=59
YKA   Yellowknife Ar   37.03  46   P       P        00 36 50.0  -1.2
      comp=Z,0.7nm,0.4s,baz=285,slow=7.3,SNR=7.1
ULN   Ulaanbaatar      43.39 293  eP       P        00 37 44.1  -0.1
      comp=Z,1.2nm,0.6s
SONM  Songino Array    43.78 294   P       P        00 37 47.8  +0.4
      comp=Z,1.4nm,0.5s,baz=60,slow=8.1,SNR=11
HHC   Hu-ho-hao-te     44.72 282  eP       P        00 37 54.0  -0.9
HHC                                pmax    pmax
      comp=Z,26nm,0.9s
HHC                                pmax    pmax
      comp=Z,210nm,4.3s
NVAR  Mina Array Bea   46.39  80   P       P        00 38 07.9  -0.5
      comp=Z,1.0nm,0.7s,baz=293,slow=9.1,SNR=6.2
PDAR  Pinedale Array   48.94  70   P       P        00 38 24.8  -3.3
      comp=Z,0.5nm,0.8s,baz=274,slow=4.3,SNR=4.2
SPA0  Spitsbergen Ar   49.66 355  eP       P        00 38 31.7  -1.1
SPITS Spitsbergen Ar   49.66 355   P       P        00 38 31.5  -1.4
      comp=Z,2.2nm,0.4s,baz=10,slow=9.1,SNR=23
ZALV  Zalesovo Beam    51.53 311   P       P        00 38 45.0  -2.2
      comp=Z,0.6nm,0.6s,baz=43,slow=6.3,SNR=3.8
ZALV                               PcP     PcP      00 40 00.6  -0.2
      comp=Z,0.6nm,0.6s,baz=88,slow=5.0,SNR=3.2
GTA   Gaotai           52.64 288  eP       P        00 38 56.8  +1.0
GTA                                pP      pP       00 39 06.5  -0.8
GTA                                sP      sP       00 39 10.6  -1.4
GTA                                pmax    pmax
      comp=Z,4.0nm,0.8s
KURK  Kurchatov        56.52 311  eP       P        00 39 23.1  -0.5
WMQ   Urumqi           56.58 300   P       P        00 39 26.2  +2.0
WMQ                                pP      sP       00 39 41.6  +1.1
WMQ                                pmax    pmax
      comp=Z,13nm,0.7s
WMQ                                pmax    pmax
      comp=Z,380nm,4.5s
WMQ                                LR      LR
      comp=N,230nm,31.5s
WMQ                                LR      LR
      comp=E,240nm,26.3s
WMQ                                LR      LR
      comp=Z,270nm,28.9s
KURBB Kurchatov Arra   56.63 311   P       P        00 39 24.2  -0.2
      comp=Z,7.0nm,0.7s,baz=44,slow=6.7,SNR=61
ARCES ARCESS Array B   57.07 348   P       P        00 39 26.0  -1.3
      comp=Z,3.0nm,0.9s,baz=24,slow=9.4,SNR=7.4
GYA   Guiyang          57.35 272  eP       P        00 39 30.2  +0.2
GYA                                pmax    pmax
      comp=Z,10.0nm,1.0s
MK31  Makanchi Array   57.40 306  eP       P        00 39 29.1  -0.9
MKAR  Makanchi Array   57.40 306   P       P        00 39 28.9  -1.0
      comp=Z,1.2nm,0.5s,baz=51,slow=6.0,SNR=26
MK01  Makanchi Array   57.41 306  eP       P        00 39 28.8  -1.2
BVAR  Borovoye Array   58.58 317   P       P        00 39 37.8  -0.3
      comp=Z,5.7nm,0.4s,baz=51,slow=6.8,SNR=69
TXAR  Lajitas Array    61.47  78   P       P        00 39 57.4  -0.9
      comp=Z,0.4nm,0.5s,baz=304,slow=5.6,SNR=12
FINES FINESS Array B   64.61 345   P       P        00 40 17.2  -1.3
      comp=Z,2.5nm,0.6s,baz=29,slow=7.8,SNR=15
AKTO  Aktyubinsk       65.54 322   P       P        00 40 24.5  -0.3
      comp=Z,3.8nm,0.6s,baz=44,slow=8.1,SNR=12
ABKAR Akbulak array    65.73 320  eP       P        00 40 25.9  -0.1
KSH   Kashi            65.82 304   P       P        00 40 30.4  +3.5
KSH                                sP      PcP      00 40 52.6  -5.1
KSH                                PcP     sP       00 40 59.1  +16
KSH                                PP      PP       00 42 57.6  +6.0
KSH                                S       S        00 49 12.0  +1.3
KSH   Kashi            65.82 304   SS      SS       00 53 30.8  +5.9
KSH                                pmax    pmax
      comp=Z,96nm,6.3s
KK31  Karatay Array    65.85 309  eP       P        00 40 26.8  -0.1
KKAR  Karatay Array    65.85 309  eP       P        00 40 26.8  -0.1
NB2   NORSAR Subarra   66.84 352   P       P        00 40 31.6  -1.4
      comp=Z,1.6nm,1.0s,baz=7.2,slow=6.5
HFS   Hagfors          67.51 351   P       P        00 40 35.5  -1.7
      comp=Z,0.7nm,0.4s,baz=24,slow=7.9,SNR=13
AKASG Malin Array Be   74.12 339   P       P        00 41 16.5  -1.0
      comp=Z,1.6nm,0.4s,baz=21,slow=6.2,SNR=9.4
BUR08 Bucovina Ar. S   77.87 341  eP       P        00 41 39.1  +0.1
BUR04 Bucovina Ar. S   77.89 341  eP       P        00 41 38.9  -0.3
BRTR  Keskin Array B   83.22 332   P       P        00 42 07.8  -0.1
      comp=Z,0.3nm,0.5s,baz=16,slow=3.3,SNR=3.2
ASAR  Alice Springs    83.93 219   P       P        00 42 13.4  +2.0
      comp=Z,0.3nm,0.4s,baz=26,slow=4.7,SNR=3.3
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*IDC **04** 00:42:20.0±1.0, 37°.00N×28°.54E, h0^{km}, mb3.4/5, mb1 3.5/10, mb1mx3.3/57, mbtmp3.4/10, ML3.3/5, MS2.8/3, Ms1 2.8/3, ms1mx2.4/36, Error ellipse: s-maj=18.0km s-min=14.8km az=155.0*

*THE **04** 00:42:21.6, 37°.00N×28°.52E, h0^{km}±1^{km}, ML3.4/4, Error ellipse: s-maj=1.8km s-min=1.0km az=32.0*

*ISK **04** 00:42:21.2, 37°.06N×28°.51E, h6^{km}, ML3.8/18*

*ISCJB **04** 00:42:21.4±0.3, 37°.08N±0°.02×28°.51E±0°.02, h6^{km}±2^{km}, mb3.3/5, MS3.4/2, Error ellipse: s-maj=2.6km s-min=2.1km az=166.6*

*ATH **04** 00:42:21.2, 37°.08N×28°.53E, h23^{km}±1^{km}, ML3.5/6, Error ellipse: s-maj=1.9km s-min=0.4km az=182.0*

*DDA **04** 00:42:21.2, 37°.07N×28°.52E, h7^{km}, Ml3.7*

*CSEM **04** 00:42:22.3±0.1, 37°.06N×28°.56E, h10^{km}, ML3.8, Error ellipse: s-maj=2.6km s-min=2.2km az=174.0*

ISC 04 00:42:22.7±0.8, **37°.07N**±0°.02×**28°.51E**±0°.01, **h17**^{km}±5^{km}, **n253**, σ1^{s}.**55**/303, **mb3.4**/5, **Turkey**

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Code  Station Name      Δ°   AZ°    Phase ID          Time      Res
                                   Op      ISC       h  m  s    ISC
YER   Yerkesik          0.20 290   PG      Pb       00 42 25.4  -2.5
YER   Yerkesik          0.20 290   P       Pb       00 42 26.0  -1.9
YER                                S       Sb       00 42 30.4  -0.9
YER   Yerkesik          0.20 290  ePg      Pb       00 42 25.4  -2.5
YER   Yerkesik          0.20 290   P       Pb       00 42 26.0  -1.9
YER                                S       Sb       00 42 30.4  -0.9
TURN  Turunc            0.21 160   PG      Pg       00 42 28.6  +1.0
TURN                               SG      Sg       00 42 34.2  +3.2
TURN  Turunc            0.21 160  i P      Pb       00 42 28.2  +0.2
TURN                              i S      Sg       00 42 34.6  +3.6
TURN  Turunc            0.21 160   P       Pb       00 42 28.2  +0.2
DALY  Dalyan (Mu˜la     0.28 156   PG      Pg       00 42 26.8  -1.9
DALY  Dalyan (Mu˜la     0.28 156  i P      Pg       00 42 26.5  -2.2
DALY                              i S      Sb       00 42 31.7  -1.8
DALY  Dalyan (Mu˜la     0.28 156   P       Pg       00 42 26.5  -2.2
DALY  Dalyan (Mu˜la     0.28 156  ePg      Pg       00 42 26.8  -1.9
DALY                               S       Sb       00 42 31.7  -1.8
MRSB  Marmaris-Mugla    0.43 216   PG      Pg       00 42 29.9  -1.6
MRSB                               SG      Sg       00 42 36.5  -0.9
MRSB  Marmaris-Mugla    0.43 216  ePg      Pg       00 42 29.9  -1.6
MRSB                              eSg      Sg       00 42 36.5  -0.9
TAVA  DENIZLI_Tavas     0.51  39  i P      Pg       00 42 30.6  -2.3
TAVA                              i S      Sg       00 42 38.4  -1.4
TAVA  DENIZLI_Tavas     0.51  39   P       Pg       00 42 30.6  -2.3
TAVA                               S       Sg       00 42 38.4  -1.4
FETY  Fethiye           0.63 133   PG      Pb       00 42 33.9  -1.3
FETY                               SG      Sb       00 42 42.9  -0.9
FETY  Fethiye           0.63 133   P       Pb       00 42 32.4  -2.8
FETY                               S       Sb       00 42 41.6  -2.2
FETY  Fethiye           0.63 133   P       Pb       00 42 32.6  -2.6
FETY  Fethiye           0.63 133  ePg      Pb       00 42 33.9  -1.3
FETY                               S       Sb       00 42 41.6  -2.2
FETY                              eSg      Sb       00 42 42.9  -0.9
MLSB  Milas             0.63 291   PG      Pb       00 42 33.9  -1.4
MLSB  Milas             0.63 291  ePg      Pb       00 42 33.9  -1.4
DATC  Datca-Mugla       0.75 246   PG      Pb       00 42 35.9  -1.3
DATC  Datca-Mugla       0.75 246  ePg      Pb       00 42 35.9  -1.3
DNZL  Cakiroluk         0.75  34  i P      Pb       00 42 35.1  -2.4
DNZL                              i S      Sb       00 42 47.4  -0.1
DNZL  Cakiroluk         0.75  34   P       Pb       00 42 35.1  -2.4
DNZL                               S       Sb       00 42 47.4  -0.1
AYDN  Tasoluk           0.78 320  i P      Pb       00 42 37.0  -0.8
AYDN                              i S      Sb       00 42 47.1  -1.0
AYDN  Tasoluk           0.78 320   P       Pb       00 42 37.0  -0.8
AYDN                               S       Sb       00 42 47.1  -1.0
DENT  Denizli           0.80  31   PG      Pb       00 42 36.2  -2.0
DENT  Denizli           0.80  31  ePg      Pb       00 42 36.2  -2.0
DAT   Datca             0.82 246   PG      Pb       00 42 37.4  -1.2
DAT   Datca             0.82 246  i P      Pb       00 42 37.9  -0.7
DAT                               i S      Sn       00 42 51.3  -0.1
DAT   Datca             0.82 246  ePg      Pb       00 42 37.4  -1.2
DAT   Datca             0.82 246   P       Pb       00 42 37.9  -0.7
DAT                                S       Sn       00 42 51.3  -0.1
GOLH  Golhisar          0.85  78  i P      Pb       00 42 36.8  -2.3
GOLH                              i S      Sb       00 42 50.7  +0.4
GOLH  Golhisar          0.85  78   P       Pb       00 42 36.8  -2.3
GOLH                               S       Sb       00 42 50.7  +0.4
ARG   Arkhangelos       0.91 200   PG      Pb       00 42 38.5  -1.4
ARG   Arkhangelos       0.91 200   P       Pb       00 42 37.5  -2.5
ARG                                S       Sb       00 42 51.6  -0.1
ARG                                AML     AML      00 43 02.0
      comp=N,3450μm,0.4s
ARG                                AML     AML      00 43 02.6
      comp=E,4615μm,0.4s
ARG   Arkhangelos       0.91 200   P       Pb       00 42 38.1  -1.8
ARG                                S       Sb       00 42 51.0  -0.7
ARG   Arkhangelos       0.91 200   P       Pb       00 42 38.2  -1.7
ARG   Arkhangelos       0.91 200  ePg      Pb       00 42 38.5  -1.4
ARG                                S       Sb       00 42 51.0  -0.7
BODT  Bodrum            0.96 270   PG      Pb       00 42 40.1  -0.8
BODT  Bodrum            0.96 270   P       Pb       00 42 40.2  -0.7
BODT                               S       Sn       00 42 55.2  +0.5
BODT  Bodrum            0.96 270   P       Pb       00 42 40.2  -0.7
BODT                               S       Sn       00 42 55.2  +0.5
AYDB  Zeytinkoy-Aydi    1.01 331   PG      Pb       00 42 41.1  -0.6
AYDB  Zeytinkoy-Aydi    1.01 331  ePg      Pb       00 42 41.1  -0.6
ELL   Elmali            1.16 106   PN      Pn       00 42 43.9  -0.4
ELL   Elmali            1.16 106  ePn      Pn       00 42 43.9  -0.4
NISR  Nisiros           1.20 248   P       Pb       00 42 45.5  +0.5
NISR                               S       Sg       00 43 01.8  +0.2
NISR                               AML     AML      00 43 07.9
      comp=N,5320μm,0.4s
NISR                               AML     AML      00 43 08.3
      comp=E,9092μm,0.6s
NISR  Nisiros           1.20 248   P       Pn       00 42 44.8  +0.1
NISR                               S       Sn       00 43 01.1  +0.6
NISR  Nisiros           1.20 248   P       Pn       00 42 44.9  +0.2
NISR                               S       Sn       00 43 01.1  +0.6
AKAS  Kas               1.21 133   PN      Pn       00 42 45.2  +0.2
AKAS  Kas               1.21 133  i P      Pn       00 42 45.1  +0.1
AKAS                              i S      Sg       00 43 04.9  +3.0
AKAS  Kas               1.21 133   P       Pn       00 42 45.1  +0.1
AKAS                               S       Sg       00 43 04.9  +3.0
KSL   Kastellorizon     1.26 136   P       Pn       00 42 45.2  -0.2
KSL                                S       Sg       00 43 03.4   0.0
KSL                                AML     AML      00 43 07.9
      comp=N,2529μm,0.7s
KSL                                AML     AML      00 43 09.4
      comp=E,3621μm,0.9s
KSL   Kastellorizon     1.26 136   P       Pn       00 42 44.7  -0.8
KSL                                S       Sn       00 43 03.2  +1.2
BRDR  BURDUR-Merkez     1.38  63  i P      Pn       00 42 47.9  +0.6
BRDR  BURDUR-Merkez     1.38  63   P       Pn       00 42 47.9  +0.6
MANT  Manisa            1.42   1  i P      Pn       00 42 47.9   0.0
MANT                              i S      Sb       00 43 08.1  +1.3
MANT  Manisa            1.42   1   P       Pn       00 42 47.9   0.0
MANT                               S       Sb       00 43 08.1  +1.3
KULA  Kula-Manisa       1.45   5   PN      Pn       00 42 48.4  +0.2
KULA  Kula-Manisa       1.45   5  ePn      Pn       00 42 48.4  +0.2
KORT  Korkueli          1.47  92   PN      Pn       00 42 49.3  +0.8
KORT  Korkueli          1.47  92  i P      Pn       00 42 49.5  +1.0
KORT                              i S      Sg       00 43 13.9  +3.6
KORT  Korkueli          1.47  92  ePn      Pn       00 42 49.3  +0.8
SMG   Samos             1.48 296   P       Pn       00 42 48.5  -0.1
SMG                                S       Sb       00 43 09.2  +0.9
SMG                                AML     AML      00 43 17.1
      comp=N,1937μm,0.5s
SMG                                AML     AML      00 43 20.5
      comp=E,1878μm,0.6s
SMG   Samos             1.48 296   P       Pn       00 42 48.6  +0.1
SMG                                S       Sb       00 43 09.5  +1.3
SMG   Samos             1.48 296   P       Pn       00 42 48.6  +0.1
SMG                                S       Sb       00 43 08.9  +0.7
KHL   Karahalli         1.49  32   PN      Pn       00 42 49.2  +0.5
KHL   Karahalli         1.49  32  ePn      Pn       00 42 49.2  +0.5
DGB   ˜zmir             1.62 308  i P      Pn       00 42 50.3  -0.2
ANTB  Antalya           1.72  95   PN      Pn       00 42 52.8  +1.0
ANTB  Antalya           1.72  95  ePn      Pn       00 42 52.8  +1.0
KZIL  AFYON_Kizioren    1.75  47  i P      Pn       00 42 53.0  +0.6
KZIL                              i S      Sg       00 43 22.8  +3.5
KZIL  AFYON_Kizioren    1.75  47   P       Pn       00 42 53.0  +0.6
BLCB  Balcova           1.76 319   PN      Pn       00 42 52.5  +0.2
BLCB  Balcova           1.76 319  ePn      Pn       00 42 52.5  +0.2
ISP   Isparta           1.77  64   PN      Pn       00 42 53.7  +1.1
ISP   Isparta           1.77  64   P       Pn       00 42 52.8  +0.2
ISP                                S       Sb       00 43 16.9  +0.3
ISP   Isparta           1.77  64   P       Pn       00 42 52.8  +0.2
ISP   Isparta           1.77  64  ePn      Pn       00 42 53.7  +1.1
ISP                                S       Sb       00 43 16.9  +0.3
AKHS  Akhisar           1.89 343  i P      Pn       00 42 54.1  -0.1
AKHS  Akhisar           1.89 343   P       Pn       00 42 54.1  -0.1
AKS   Akhisar           1.89 343   PN      Pn       00 42 54.8  +0.6
AKS   Akhisar           1.89 343  ePn      Pn       00 42 54.8  +0.6
ZEY   ˜zmir             1.98 307  i P      Pn       00 42 55.9  +0.5
DEMI  Demirci           1.98   5  i P      Pn       00 42 55.6  +0.2
DEMI  Demirci           1.98   5   P       Pn       00 42 55.6  +0.2
URLA  Izmir             1.99 311   PN      Pn       00 42 56.4  +0.8
URLA  Izmir             1.99 311  i P      Pn       00 42 56.2  +0.6
URLA  Izmir             1.99 311  ePn      Pn       00 42 56.4  +0.8
SUTC  Sutluce-Ispart    2.02  78   PN      Pn       00 42 57.0  +0.8
SUTC  Sutluce-Ispart    2.02  78  ePn      Pn       00 42 57.0  +0.8
BAGO  Egridir - ISPA    2.03  62  i P      Pn       00 42 55.1  -1.1
SHAP  Saphane-Kutahy    2.03  16   PN      Pn       00 42 57.0  +0.8
SHAP  Saphane-Kutahy    2.03  16  ePn      Pn       00 42 57.0  +0.8
SIMA  Simav-Kutahya     2.04  10   PN      Pn       00 42 57.2  +0.8
SIMA  Simav-Kutahya     2.04  10  ePn      Pn       00 42 57.2  +0.8
SMAA  Simav-Kutahya     2.06  10   PN      Pn       00 42 57.2  +0.6
SMAA  Simav-Kutahya     2.06  10  ePn      Pn       00 42 57.2  +0.6
GEDZ  Gediz             2.10  19   PN      Pn       00 42 57.9  +0.8
GEDZ  Gediz             2.10  19  ePn      Pn       00 42 57.9  +0.8
AMGA  Amorgos Island    2.11 264   P       Pn       00 42 55.9  -1.3
AMGA  Amorgos Island    2.11 264   P       Pn       00 42 56.8  -0.4
KRBN  Karaburun         2.17 315   PN      Pn       00 42 58.8  +0.7
KRBN  Karaburun         2.17 315  ePn      Pn       00 42 58.8  +0.7
MNVG  Manavgat-Antal    2.34  96   PN      Pn       00 43 01.2  +0.8
MNVG  Manavgat-Antal    2.34  96  ePn      Pn       00 43 01.2  +0.8
CHOS  Chios island      2.35 305   PN      Pn       00 43 01.6  +1.0
CHOS  Chios island      2.35 305   P       Pn       00 43 01.5  +1.0
CHOS  Chios island      2.35 305   P       Pn       00 43 01.2  +0.6
CHOS  Chios island      2.35 305  ePn      Pn       00 43 01.6  +1.0
DKL   Dikili            2.37 328   PN      Pn       00 43 01.2  +0.5
DKL   Dikili            2.37 328  ePn      Pn       00 43 01.2  +0.5
APE   Apeiranthos       2.38 271   P       Pn       00 43 01.5  +0.5
APE   Apeiranthos       2.38 271   P       Pn       00 43 01.5  +0.5
SANT  Santorini         2.55 255   PN      Pn       00 43 04.2  +0.9
SANT  Santorini         2.55 255  ePn      Pn       00 43 04.2  +0.9
SAP1  Santorini-Akro    2.60 255   P       Pn       00 43 04.9  +0.9
IOSP  Ios island        2.61 263   P       Pn       00 43 03.9  -0.2
IOSP  Ios island        2.61 263   P       Pn       00 43 04.2  +0.2
ZKR   Zakros            2.69 224   P       Pn       00 43 06.1  +0.9
ZKR   Zakros            2.69 224   P       Pn       00 43 06.1  +0.9
ZKR   Zakros            2.69 224   P       Pn       00 43 06.1  +0.9
PRK   Paraskevi         2.80 322   P       Pn       00 43 06.6  -0.1
PRK                                S       Sn       00 43 40.0   0.0
PRK                                AML     AML      00 44 01.5
      comp=N,995μm,0.8s
PRK                                AML     AML      00 44 07.7
      comp=E,1016μm,0.7s
PRK   Paraskevi         2.80 322   P       Pn       00 43 07.9  +1.2
PRK   Paraskevi         2.80 322   P       Pn       00 43 07.9  +1.2
PRK                                S       Sn       00 43 40.4  +0.3
NPS   Neapolis          2.96 233   P       Pn       00 43 10.2  +1.3
NPS                                S       Sb       00 43 49.2  -1.6
NPS                                AML     AML      00 43 55.5
      comp=E,715μm,0.5s
NPS                                AML     AML      00 44 01.5
      comp=N,539μm,0.8s
NPS   Neapolis          2.96 233   P       Pn       00 43 09.1  +0.2
NPS   Neapolis          2.96 233   P       Pn       00 43 09.9  +1.0
NPS                                S       Sn       00 43 47.1  +3.1
SIGR  SIGRI             2.99 316   P       Pn       00 43 08.8  -0.6
SIGR  SIGRI             2.99 316   P       Pn       00 43 09.3   0.0
BAYC  CANAKKALE_Bayr    3.08 331  i P      Pn       00 43 11.3  +0.7
BAYC  CANAKKALE_Bayr    3.08 331   P       Pn       00 43 11.3  +0.7
LAST  Lasithi           3.11 233   P       Pn       00 43 12.0  +0.9
LAST  Lasithi           3.11 233   P       Pn       00 43 11.9  +0.9
LAST  Lasithi           3.11 233   P       Pn       00 43 11.9  +0.9
KONT  Konya--Tatoy      3.18  73  i P      Pn       00 43 13.8  +1.8
BORA  Eskisehir         3.19  28  i P      Pn       00 43 13.7  +1.5
BORA  Eskisehir         3.19  28   P       Pn       00 43 13.7  +1.5
KDHN  Kadinhani         3.20  62  i P      Pn       00 43 12.7  +0.3
KDHN  Kadinhani         3.20  62   P       Pn       00 43 12.6  +0.3
MHLO  Agia Marina, M    3.32 265   P       Pn       00 43 15.5  +1.7
MHLO  Agia Marina, M    3.32 265   P       Pn       00 43 15.1  +1.3
IDI   Anoyia            3.43 240   Pn      Pn       00 43 15.6  +0.3
      comp=N,3.0nm,0.3s,baz=60,slow=18,SNR=22
IDI                                Sn      Sn       00 43 57.9  +2.3
      comp=N,4.4nm,0.3s,baz=327,slow=18,SNR=4.0
IDI                                LR      LR       00 44 56.3
      comp=N,76nm,19.4s,baz=78,slow=46
ERMK  Ermenek           3.56  96  i P      Pn       00 43 20.0  +2.7
ERMK  Ermenek           3.56  96   P       Pn       00 43 20.0  +2.7
SIVA  Sivas             3.63 237   P       Pn       00 43 20.4  +2.3
SIVA  Sivas             3.63 237   P       Pn       00 43 19.7  +1.6
DION  Dionisos Attik    3.77 287   P       Pn       00 43 22.2  +2.1
DION  Dionisos Attik    3.77 287   P       Pn       00 43 21.6  +1.5
PTL   Penteli           3.82 286   P       Pn       00 43 22.8  +2.1
PTL   Penteli           3.82 286   P       Pn       00 43 22.2  +1.5
VLY   Voula,Athens      3.83 283   P       Pn       00 43 22.3  +1.4
VLY   Voula,Athens      3.83 283   P       Pn       00 43 22.1  +1.2
LIA   Limnos Island     3.85 318   P       Pn       00 43 21.9  +0.8
LIA   Limnos Island     3.85 318   P       Pn       00 43 21.9  +0.8
VAM   Vamos             3.86 246   P       Pn       00 43 21.0  -0.3
VAM   Vamos             3.86 246   P       Pn       00 43 21.6  +0.3
ATHU  Athens Univers    3.86 285   P       Pn       00 43 23.1  +1.8
ATHU  Athens Univers    3.86 285   P       Pn       00 43 22.7  +1.4
IMMV  Iera Moni Meta    4.00 248   P       Pn       00 43 26.2  +3.1
IMMV  Iera Moni Meta    4.00 248   P       Pn       00 43 25.2  +2.1
SMTH  Samothraki Isl    4.12 326   P       Pn       00 43 25.8  +0.9
SMTH  Samothraki Isl    4.12 326   P       Pn       00 43 25.7  +0.9
AOS   Alonnisos         4.21 301   P       Pn       00 43 27.9  +1.9
AOS   Alonnisos         4.21 301   P       Pn       00 43 27.5  +1.4
GVD   Gavdhos           4.22 240   P       Pn       00 43 30.0  +3.7
GVD   Gavdhos           4.22 240   P       Pn       00 43 28.7  +2.5
DID   Didima            4.23 278   P       Pn       00 43 28.3  +1.9
DID   Didima            4.23 278   P       Pn       00 43 27.9  +1.5
VILL  Villia            4.27 286   P       Pn       00 43 28.5  +1.5
ALN   Alexandroupoli    4.28 334   P       Pn       00 43 26.5  -0.5
ALN   Alexandroupoli    4.28 334   P       Pn       00 43 27.2  +0.2
VIL2  Platees           4.32 287   P       Pn       00 43 29.0  +1.4
ANKY  Antikythira Is    4.37 256   P       Pn       00 43 29.7  +1.5
ANKY  Antikythira Is    4.37 256   P       Pn       00 43 29.6  +1.4
VLI   Veliai            4.48 267   P       Pn       00 43 31.4  +1.6
VLI   Veliai            4.48 267   P       Pn       00 43 31.2  +1.4
SKIA  Skiathos          4.50 299   P       Pn       00 43 32.3  +2.3
SKIA  Skiathos          4.50 299   P       Pn       00 43 31.7  +1.7
LTK   Loutraki          4.51 284   P       Pn       00 43 32.7  +2.5
LTK   Loutraki          4.51 284   P       Pn       00 43 32.0  +1.8
PROD  Prodromos         4.61 287   P       Pn       00 43 33.1  +1.5
PROD  Prodromos         4.61 287   P       Pn       00 43 32.9  +1.3
RDO   Rodhopi           4.68 331   P       Pn       00 43 33.4  +0.9
RDO   Rodhopi           4.68 331   P       Pn       00 43 33.5  +0.9
NEO   Neokhori          4.73 300   P       Pn       00 43 34.2  +1.0
NEO   Neokhori          4.73 300   P       Pn       00 43 34.3  +1.1
XOR   Xorichti          4.78 300   P       Pn       00 43 35.5  +1.6
XOR   Xorichti          4.78 300   P       Pn       00 43 35.3  +1.4
BRTR  Keskin Array B    4.82  55   Pn      Pn       00 43 35.9  +1.3
      comp=N,1.5nm,0.3s,baz=240,slow=17,SNR=50
BRTR                               Sn      Sn       00 44 34.0  +3.9
      comp=N,0.6nm,0.3s,baz=143,slow=32,SNR=6.4
BRTR                               LR      LR       00 45 58.7
      comp=N,120nm,19.7s,baz=168,slow=45
DYR   Agios Nikonas     4.96 268   P       Pn       00 43 38.1  +1.7
DYR   Agios Nikonas     4.96 268   P       Pn       00 43 38.0  +1.6
GUR   Goura             4.98 282   P       Pn       00 43 39.2  +2.4
GUR   Goura             4.98 282   P       Pn       00 43 38.6  +1.8
KLV   Kalavryta, Ach    5.15 283   P       Pn       00 43 41.3  +2.3
KLV   Kalavryta, Ach    5.15 283   P       Pn       00 43 40.8  +1.8
AGG   Agios Georgios    5.25 294   P       Pn       00 43 41.9  +1.5
AGG   Agios Georgios    5.25 294   P       Pn       00 43 41.8  +1.3
ITM   Ithomi            5.26 273   P       Pn       00 43 41.9  +1.3
ITM   Ithomi            5.26 273   P       Pn       00 43 42.0  +1.4
TRIZ  Trizonia          5.27 286   P       Pn       00 43 41.8  +1.2
TRIZ  Trizonia          5.27 286   P       Pn       00 43 41.9  +1.3
SERG  Sergoula          5.29 287   P       Pn       00 43 42.9  +2.0
SERG  Sergoula          5.29 287   P       Pn       00 43 42.6  +1.7
LAKA  Lakka             5.32 285   P       Pn       00 43 43.1  +1.8
LAKA  Lakka             5.32 285   P       Pn       00 43 42.9  +1.6
EFP   Efpalio           5.41 287   P       Pn       00 43 46.8  +4.2
EFP   Efpalio           5.41 287   P       Pn       00 43 45.4  +2.9
PYL   PYLOS             5.42 270   P       Pn       00 43 42.9  +0.1
PYL   PYLOS             5.42 270   P       Pn       00 43 43.6  +0.9
ANX   Ano Chora         5.43 288   P       Pn       00 43 46.0  +3.0
ANX   Ano Chora         5.43 288   P       Pn       00 43 45.2  +2.2
MES2  Methoni           5.46 269   P       Pn       00 43 43.7  +0.5
MES2  Methoni           5.46 269   P       Pn       00 43 44.2  +1.0
MES3  Kyparissia        5.47 274   P       Pn       00 43 47.1  +3.8
MES3  Kyparissia        5.47 274   P       Pn       00 43 46.0  +2.7
DRO   Drossia           5.48 281   P       Pn       00 43 45.6  +2.0
DRO   Drossia           5.48 281   P       Pn       00 43 45.3  +1.8
HORT  Hortiatis         5.50 311   P       Pn       00 43 45.8  +2.0
HORT  Hortiatis         5.50 311   P       Pn       00 43 45.5  +1.6
NVR   Nevrokopi         5.60 321   P       Pn       00 43 46.2  +1.0
NVR   Nevrokopi         5.60 321   P       Pn       00 43 46.3  +1.2
LIT   Litokhoron        5.61 305   P       Pn       00 43 48.5  +3.2
LIT   Litokhoron        5.61 305   P       Pn       00 43 47.6  +2.3
EVR   Evrytania         5.61 291   P       Pn       00 43 48.5  +3.1
EVR   Evrytania         5.61 291   P       Pn       00 43 47.7  +2.3
THL   Klokotos Trika    5.69 298   P       Pn       00 43 45.8  -0.5
THL   Klokotos Trika    5.69 298   P       Pn       00 43 46.8  +0.5
PVO   Paravola          5.74 288   P       Pn       00 43 48.3  +1.2
PVO   Paravola          5.74 288   P       Pn       00 43 48.5  +1.4
KNT   Kendrikon         5.98 315   P       Pn       00 43 52.9  +2.5
KNT   Kendrikon         5.98 315   P       Pn       00 43 52.4  +2.0
PDO   Prodromos         6.00 287   P       Pn       00 43 53.5  +2.9
PDO   Prodromos         6.00 287   P       Pn       00 43 53.0  +2.4
GRG   Griva             6.14 311   P       Pn       00 43 55.3  +2.7
GRG   Griva             6.14 311   P       Pn       00 43 54.8  +2.2
LKD2  Lefkada island    6.44 288   P       Pn       00 43 58.9  +2.1
LKD2  Lefkada island    6.44 288   P       Pn       00 43 58.8  +2.1
IGT   Igoumenitsa       6.89 293   P       Pn       00 44 04.5  +1.7
IGT   Igoumenitsa       6.89 293   P       Pn       00 44 04.7  +1.9
MMAI  Mount Meron Ar    6.95 124   Pn      Pn       00 44 03.1  -0.7
      comp=N,3.3nm,0.3s,baz=308,slow=13,SNR=15
MMAI                               Sn      Sn       00 45 19.1  -3.3
      comp=N,2.0nm,0.3s,baz=306,slow=27,SNR=2.7
SGD   Sagiada           6.98 294   P       Pn       00 44 08.0  +3.9
SGD   Sagiada           6.98 294   P       Pn       00 44 07.2  +3.0
ASF   Jabal al Asfar    8.46 123   Pn      Pn       00 44 23.0  -1.5
      comp=N,0.2nm,0.3s,baz=306,slow=14,SNR=2.0
ASF                                Sn      Sn       00 45 59.3  -0.4
      comp=N,0.2nm,0.3s,baz=5.7,slow=10,SNR=1.6
MLR   Muntele Rosu      8.63 348   Pn      Pn       00 44 27.8  +0.9
      comp=N,0.0nm,0.3s,baz=190,slow=18,SNR=6.0
MLR                                Sn      Sn       00 46 05.7  +1.9
      comp=N,0.0nm,0.3s,baz=243,slow=14,SNR=2.6
FINES FINESS Array B   24.45 357   P       P        00 47 41.4  +1.2
      comp=N,1.1nm,0.6s,baz=161,slow=12,SNR=6.3
ESDC  Sonseca Array    25.52 286   P       P        00 47 50.5  +0.2
      comp=N,0.2nm,0.5s,baz=84,slow=10,SNR=3.2
NOA   NORSAR Array B   26.36 341   LR      LR       00 59 50.6
      comp=N,23nm,19.8s,baz=140,slow=40
TORD  Torodi Ar. Bea   33.80 232   P       P        00 49 02.9  -1.0
      comp=N,0.6nm,0.7s,baz=44,slow=8.6
KURBB Kurchatov Arra   37.81  53   P       P        00 49 38.3  +0.4
      comp=N,0.4nm,0.6s,baz=271,slow=8.6,SNR=3.6
MKAR  Makanchi Array   40.46  59   P       P        00 49 59.9  -0.4
      comp=N,0.2nm,0.6s,baz=269,slow=12,SNR=2.2
DBIC  Dimbokro         42.88 233   LR      LR       01 10 15.8
      comp=N,274nm,21.1s,baz=144,slow=39
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*ISCJB **04** 00:55:23.0±1.5, 3°.4N±0°.2×92°.74E±0°.09, h24^{km}, mb3.8/4, Error ellipse: s-maj=29.8km s-min=9.4km az=16.1*

*IDC **04** 00:55:23.4±3.5, 3°.59N×92°.72E, h0^{km}, mb3.8/4, mb1 4.0/7,*

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         mb1mx3.6/65,mbtmp3.9/7,ML4.1/3,Error ellipse:
         s-maj=69.8km s-min=32.2km az=17.0
     ISC 04 00:55:25.9±1.7,3°.5N±0°.2×92°.7E±0°.1,h24km,n13,σ1ˢ15/8,
         mb3.8/4,Off west coast of northern Sumatera
Code   Station Name       Δ°  AZ°   Phase ID          Time    Res
                                    Op     ISC       h  m  s   ISC
PSI    Prapat            6.21  96   Pn     Pn       00 56 57.6 +1.3
       2.6nm,0.3s,baz=360,slow=6.0,SNR=24
PSI                                 Sn     Sn       00 58 05.1 -1.6
       4.9nm,0.3s,baz=180,slow=19,SNR=13
PALK   Pallekele        12.56 288   Pn     Pn       00 58 23.0 -0.4
       0.3nm,0.3s,baz=295,slow=3.3,SNR=3.1
PALK                                Sn     Sn       01 00 31.0  -12
       3.2nm,0.3s,baz=115,slow=2.1,SNR=7.9
CMAR   Chiang Mai Arr   16.08  22   Pn     Pn       00 59 10.9 +0.2
       0.8nm,0.3s,baz=214,slow=12,SNR=5.3
H08S2  Diego Garcia H   23.02 241   T      T        01 25 51.6
       baz=59
H08S3  Diego Garcia H   23.02 241   T      T        01 25 53.7
       baz=59
H08S1  Diego Carcia H   23.04 241   T      T        01 26 04.5
       baz=59
H01W3  Cape Leeuwin H   43.13 154   T      T        01 49 31.3
       baz=330,slow=76,SNR=4.2
H01W2  Cape Leeuwin H   43.14 154   T      T        01 49 18.5
       baz=330,slow=76,SNR=3.9
H01W1  Cape Leeuwin H   43.15 154   T      T        01 49 32.3
       baz=330,slow=76,SNR=4.0
MKAR   Makanchi Array   44.10 350   P      P        01 03 33.6 +1.3
       0.8nm,0.6s,baz=182,slow=9.3,SNR=5.9
SONM   Songino Array    45.74  13   P      P        01 03 44.8 -0.7
       0.2nm,0.3s,baz=184,slow=7.9,SNR=2.2
KURBB  Kurchatov Arra   48.49 348   P      P        01 04 06.5 -0.2
       0.5nm,0.3s,baz=170,slow=7.4,SNR=4.3
ZALV   Zalesovo Beam    50.73 354   P      P        01 04 23.5 -0.2
       0.5nm,0.3s,baz=171,slow=6.0,SNR=4.3
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   ISCJB 04 01:01:18.8±0.4,40°.60N±0°.04×37°.08E±0°.04,h8km,Error
         ellipse: s-maj=5.8km s-min=3.6km az=19.6
    CSEM 04 01:01:18.9±0.1,40°.60N×37°.07E,h8km,ML2.2,Error
         ellipse: s-maj=4.2km s-min=2.9km az=13.0
     DDA 04 01:01:18.8,40°.58N×37°.11E,h7km,Ml2.7
     ISK 04 01:01:18.4,40°.59N×37°.07E,h11km,ML2.2/6
     ISC 04 01:01:18.5±0.8,40°.60N±0°.03×37°.09E±0°.02,h8km,n38,
         σ0ˢ57/44,Turkey
Code   Station Name       Δ°  AZ°   Phase ID          Time    Res
                                    Op     ISC       h  m  s   ISC
ERBA   Erbaa             0.26 287 i P      Pb       01 01 25.1 -0.5
ERBA   Erbaa             0.26 287   P      Pb       01 01 25.1 -0.5
RSDY   Resadiye-TOKAT    0.28 138   PG     Pb       01 01 24.9 -0.9
RSDY                                SG     Sg       01 01 28.7 +1.0
RSDY   Resadiye-TOKAT    0.28 138  ePg     Pb       01 01 24.9 -0.9
RSDY                               eSg     Sg       01 01 28.7 +1.0
TOKT   Tokat             0.50 236   PG     Pg       01 01 28.2  0.0
TOKT   Tokat             0.50 236  ePg     Pg       01 01 28.2  0.0
TOKA   Tokat             0.54 239 i P      Pb       01 01 29.5 -0.8
TOKA   Tokat             0.54 239   P      Pb       01 01 29.5 -0.8
SVSK   Karacayir         0.69 186   PG     Pg       01 01 31.9 +0.1
SVSK   Karacayir         0.69 186  ePg     Pg       01 01 31.9 +0.1
ORDU   Ordu-Boztepe      0.70  56 i P      Pb       01 01 33.1  0.0
ORDU   Ordu-Boztepe      0.70  56   P      Pb       01 01 33.1  0.0
CUZAR  Zara_SIVAS        0.89 143 i P      Pb       01 01 35.7 -0.6
CUZAR  Zara_SIVAS        0.89 143   P      Pb       01 01 35.7 -0.6
KVT    Kavak             0.92 302   PG     Pb       01 01 36.8  0.0
KVT                                 SG     Sb       01 01 49.5 +0.3
KVT    Kavak             0.92 302  ePg     Pb       01 01 36.8  0.0
KVT                                eSg     Sb       01 01 49.5 +0.3
SUSE   Susehri           0.94 114 i P      Pb       01 01 37.0 -0.2
SUSE   Susehri           0.94 114   P      Pb       01 01 37.0 -0.2
GRSN   GIRESUNGRSN       0.95  70 i P      Pg       01 01 36.7 -0.2
GRSN                              i S      Sg       01 01 49.2 -0.1
GRSN   GIRESUNGRSN       0.95  70   P      Pg       01 01 36.7 -0.2
GRSN                                S      Sg       01 01 49.2 -0.1
SAMS   Samsun-Alacam     1.02 318 i P      Pb       01 01 38.6 +0.2
SAMS   Samsun-Alacam     1.02 318   P      Pb       01 01 38.6 +0.2
HAVZ   Havza             1.14 295 i P      Pg       01 01 39.2 -1.2
HAVZ   Havza             1.14 295   P      Pg       01 01 39.2 -1.2
ESPY   Espiye-Giresun    1.29  75   PN     Pn       01 01 42.8  0.0
ESPY   Espiye-Giresun    1.29  75  ePn     Pn       01 01 42.8  0.0
YOZ    Yozgat            1.66 235   PN     Pn       01 01 48.2 +0.1
YOZ    Yozgat            1.66 235  ePn     Pn       01 01 48.2 +0.1
KEMA   Kemaliye          1.72 140 i P      Pb       01 01 50.1 -0.3
KEMA   Kemaliye          1.72 140   P      Pb       01 01 50.1 -0.3
KELT   Kelkit            1.72 105 i P      Pb       01 01 49.9 -0.7
KELT   Kelkit            1.72 105   P      Pb       01 01 49.8 -0.7
DIKM   Dikmen            1.73 308   PN     Pn       01 01 49.6 +0.7
DIKM   Dikmen            1.73 308  ePn     Pn       01 01 49.6 +0.7
MACK   Trabzon           2.07  80 i P      Pb       01 01 55.4 -0.9
MACK   Trabzon           2.07  80   P      Pb       01 01 55.4 -0.9
BAYT   Ayd˜–ntepe-Bay    2.34  94   PN     Pn       01 01 58.0 +0.5
BAYT   Ayd˜–ntepe-Bay    2.34  94  ePn     Pn       01 01 58.0 +0.5
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     IDC 04 01:17:22.2±1.7,1°.22N×126°.57E,h0km,mb3.8/4,
         mb1 4.0/5,mb1mx3.6/52,mbtmp3.9/5,ML3.5/1,Error
         ellipse: s-maj=116.6km s-min=21.9km az=69.0
   ISCJB 04 01:17:24.6±1.1,1°.4N±0°.1×127°.1E±0°.3,h35km,mb3.7/4,
         Error ellipse: s-maj=39.9km s-min=13.4km az=163.7
     DJA 04 01:17:27.5±1.6,1°N±9°×12°7E±1°6,h31km±14km,M3.5/5,
         MLv3.5/5
     ISC 04 01:17:26.2±1.5,1°.4N±0°.1×127°.3E±0°.3,h35km,n8,σ1ˢ16/8,
         mb3.8/4,Halmahera
Code   Station Name       Δ°  AZ°   Phase ID          Time    Res
                                    Op     ISC       h  m  s   ISC
TNTI   Ternate           0.65 172   P      Pn       01 17 40.4 +1.4
LBMI   Labuha            2.06 174   P      Pn       01 17 56.5 -1.8
SANI   Sanana            3.68 200   P      Pn       01 18 20.9 +0.3
FITZ   Fitzroy Crossi   19.46 185   P      P        01 21 49.4 -0.7
       0.1nm,0.3s,baz=0.0,slow=10,SNR=1.4
WRA    Warramunga Arr   22.33 162   P      P        01 22 21.7 +0.6
       1.6nm,0.4s,baz=338,slow=10,SNR=11
ASAR   Alice Springs    25.76 166   P      P        01 22 54.5 +0.7
       0.6nm,0.3s,baz=343,slow=7.7,SNR=6.4
MKAR   Makanchi Array   59.75 326   P      P        01 27 27.8 +0.1
       0.6nm,0.9s,baz=125,slow=6.7,SNR=1.5
KURBB  Kurchatov Arra   63.97 328   P      P        01 27 55.6 -0.3
       0.3nm,0.3s,baz=130,slow=5.6,SNR=2.2
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    CNRM 04 01:32:45.9,35°.68N×10°.10W,h0km,ML3.3
     MDD 04 01:32:49.6±1.0,35°.77N×10°.14W,h30km,mbLg2.7/36,
         Error ellipse: s-maj=10.2km s-min=7.1km az=79.0,
         PRXIMO
     SFS 04 01:32:51.0,35°.84N×10°.10W,h55km,ML3.7
    INMG 04 01:32:51.9±1.1,35°.90N×9°.95W,h14km±13km,ML2.3,
         Error ellipse: s-maj=12.0km s-min=2.8km az=54.0
    IGIL 04 01:32:51.6,35°.90N×10°.13W,h25km,ML2.4
    CSEM 04 01:32:53.4±0.3,36°.02N×9°.84W,h30km,ML2.7,Error
         ellipse: s-maj=5.8km s-min=3.8km az=50.0
     LDG 04 01:32:53.6±0.7,36°.19N×9°.71W,h30km,Ml3.0/3,Error
         ellipse: s-maj=13.9km s-min=8.9km az=32.0
     ISC 04 01:32:48.0±2.2,35°.88N±0°.07×9°.96W±0°.08,h17km±12km,
         n131,σ1ˢ86/243,6C-3D,West of Gibraltar
Code   Station Name       Δ°  AZ°   Phase ID          Time    Res
                                    Op     ISC       h  m  s   ISC
PFVI   Vila Bisbo        1.55  36  ePn     Pg       01 33 17.1 -0.7
PFVI                               eSn     Sb       01 33 35.7 +0.2
PFVI                                A      A        01 33 42.8
       18nm,0.2s
PFVI   Vila Bisbo        1.55  36 ⇑P       Pg       01 33 17.1 -0.7
       38nm,0.1s,SNR=18
PFVI                                S      Sb       01 33 35.7 +0.2
       20nm,0.1s,SNR=7.9
PFVI   Vila Bisbo        1.55  36   P      Pg       01 33 17.1 -0.7
       38nm,0.1s,SNR=18
PFVI                                S      Sb       01 33 35.7 +0.2
       20nm,0.1s,SNR=7.9
MORF   Marmelete         1.77  36  eP      Pb       01 33 20.2 +0.1
MORF                               eS      Sn       01 33 40.9 +0.8
MORF                                AML    AML      01 33 43.4
       comp=N,35nm,0.3s
MORF   Marmelete         1.77  36  ePn     Pb       01 33 20.2 +0.1
MORF                               eSn     Sn       01 33 41.2 +1.1
MORF                                A      A        01 33 43.9
       comp=N,28nm,0.2s
MORF   Marmelete         1.77  36   P      Pb       01 33 20.2 +0.1
MORF                                S      Sn       01 33 40.9 +0.8
       comp=N,35nm,0.3s
MORF   Marmelete         1.77  36   P      Pb       01 33 20.2 +0.1
MORF                                S      Sn       01 33 40.9 +0.8
       comp=N,35nm,0.3s
MORF                               eSn     Sn       01 33 41.2 +1.1
PTEO   Sao Teotonio      1.94  30  ePn     Pb       01 33 22.2 -0.6
PTEO                               eSn     Sn       01 33 45.2 +1.1
PTEO                                A      A        01 33 48.2
       comp=N,8.2nm,0.2s
PTEO   Sao Teotonio      1.94  30   P      Pb       01 33 22.2 -0.6
PTEO                                S      Sn       01 33 45.2 +1.1
       comp=N,4.1nm,0.2s
PTEO   Sao Teotonio      1.94  30   P      Pb       01 33 22.2 -0.6
PTEO                                S      Sn       01 33 45.2 +1.1
       comp=N,4.1nm,0.2s
PBDV   Barranco-do-Ve    2.12  50⇑iPn      Pb       01 33 25.3 -0.8
PBDV                               eSn     Sn       01 33 49.7 +0.9
PBDV                                A      A        01 33 53.5
       comp=N,13nm,0.2s
PBDV   Barranco-do-Ve    2.12  50   P      Pb       01 33 25.3 -0.8
PBDV                                S      Sn       01 33 49.7 +0.9
       comp=N,13nm,0.2s
PBDV   Barranco-do-Ve    2.12  50   P      Pb       01 33 25.3 -0.8
PBDV                                S      Sn       01 33 49.7 +0.9
       comp=N,13nm,0.2s
PCVE   Castro Verde      2.33  41⇑ePn      Pb       01 33 28.1 -1.5
PCVE                               eSn     Sn       01 33 54.8 +1.0
PCVE                                A      A        01 33 58.0
       comp=N,10nm,0.2s
PCVE   Castro Verde      2.33  41   P      Pb       01 33 28.1 -1.5
PCVE                                S      Sn       01 33 54.8 +1.0
       comp=N,10nm,0.2s
PCVE   Castro Verde      2.33  41   P      Pb       01 33 28.1 -1.5
PCVE                                S      Sn       01 33 54.8 +1.0
       comp=N,10nm,0.2s
MESJ   Messejana         2.40  35  eP      Pn       01 33 28.8 +2.2
MESJ                               eS      Sn       01 33 56.2 +0.6
MESJ                                AML    AML      01 33 58.6
       comp=N,13nm,0.2s
MESJ   Messejana         2.40  35  ePn     Pn       01 33 28.9 +2.4
MESJ                               eSn     Sn       01 33 56.6 +1.0
MESJ                                A      A        01 34 00.8
       comp=N,6.6nm,0.1s
MESJ   Messejana         2.40  35   P      Pn       01 33 28.8 +2.2
MESJ                                S      Sn       01 33 56.2 +0.6
       comp=N,13nm,0.2s
MESJ   Messejana         2.40  35  ePn     Pn       01 33 28.9 +2.4
MESJ                                S      Sn       01 33 56.2 +0.6
       comp=N,13nm,0.2s
MESJ                               eSn     Sn       01 33 56.6 +1.0
EGRO   El Granado        2.58  50   P      Pn       01 33 31.5 +2.4
       comp=N,3.5nm,0.3s,SNR=23
EGRO                                S      Sn       01 34 01.6 +1.5
       comp=N,18nm,0.1s,SNR=10
EGRO   El Granado        2.58  50   P      Pn       01 33 31.5 +2.4
       comp=N,3.5nm,0.3s,SNR=23
EGRO                                S      Sn       01 34 01.6 +1.5
       comp=N,18nm,0.1s,SNR=10
PBEJ   Beja              2.72  37  ePn     Pn       01 33 33.1 +2.2
PBEJ                               eSn     Sn       01 34 04.4 +1.0
PBEJ                                A      A        01 34 08.0
       comp=N,4.4nm,0.2s
PBEJ   Beja              2.72  37   P      Pn       01 33 33.1 +2.2
PBEJ                                S      Sn       01 34 04.4 +1.0
       comp=N,2.2nm,0.2s
PBEJ   Beja              2.72  37   P      Pn       01 33 33.1 +2.2
PBEJ                                S      Sn       01 34 04.4 +1.0
       comp=N,2.2nm,0.2s
PMST   Lisbon--Monsan    2.92  12  ePn     Pn       01 33 35.8 +2.2
PMST                               eSn     Sn       01 34 10.2 +1.9
PMST                                A      A        01 34 11.9
       comp=N,14nm,0.5s
PMST   Lisbon--Monsan    2.92  12  ePn     Pn       01 33 35.8 +2.2
PMST                               eSn     Sn       01 34 10.2 +1.9
EVO    Evora             3.07  30  ePn     Pn       01 33 37.5 +1.8
EVO                                eSn     Sn       01 34 12.1 +0.1
EVO                                 A      A        01 34 14.7
       comp=N,8.2nm,0.4s
EVO    Evora             3.07  30   P      Pn       01 33 37.5 +1.8
EVO                                 S      Sn       01 34 12.1 +0.1
       comp=N,8.2nm,0.4s
EVO    Evora             3.07  30   P      Pn       01 33 37.5 +1.8
EVO                                 S      Sn       01 34 12.1 +0.1
       comp=N,8.2nm,0.4s
PMAFR  Mafra             3.12  10  ePn     Pn       01 33 38.0 +1.6
PMAFR                              eSn     Sn       01 34 14.0 +0.8
PMAFR                               A      A        01 34 15.7
       comp=N,18nm,0.4s
PMAFR  Mafra             3.12  10   P      Pn       01 33 37.9 +1.5
       comp=N,12nm,0.3s,SNR=30
PMAFR                               S      Sn       01 34 11.9 -1.4
       comp=N,25nm,0.2s,SNR=9.1
PMAFR  Mafra             3.12  10  ePn     Pn       01 33 38.0 +1.6
PMAFR                               S      Sn       01 34 11.9 -1.4
       comp=N,25nm,0.2s,SNR=9.1
PMAFR                              eSn     Sn       01 34 14.0 +0.8
EMIN   Mina Concepcio    3.24  54 ⇑P       Pn       01 33 40.1 +2.0
       comp=N,1.1nm,0.3s,SNR=18
EMIN                                S      Sn       01 34 16.4 +0.1
       comp=N,5.9nm,0.1s,SNR=6.7
EMIN   Mina Concepcio    3.24  54   P      Pn       01 33 40.1 +2.0
       comp=N,1.1nm,0.3s,SNR=18
EMIN                                S      Sn       01 34 16.4 +0.1
       comp=N,5.9nm,0.1s,SNR=6.7
AVE    Averroes          3.32 140  eP      Pn       01 33 40.1 +0.9
ALMR   Almeirim          3.45  18  eP      Pn       01 33 42.9 +1.9
ALMR   Almeirim          3.45  18  ePn     Pn       01 33 43.2 +2.3
ALMR                               eSn     Sn       01 34 21.9 +0.5
ALMR                                A      A        01 34 23.4
       comp=N,19nm,0.8s
ALMR   Almeirim          3.45  18   P      Pn       01 33 42.9 +1.9
ALMR                                S      Sn       01 34 21.9 +0.5
       comp=N,9.3nm,0.8s
ALMR   Almeirim          3.45  18   P      Pn       01 33 42.9 +1.9
ALMR   Almeirim          3.45  18  ePn     Pn       01 33 43.2 +2.3
ALMR                                S      Sn       01 34 21.9 +0.5
       comp=N,9.3nm,0.8s
PMTG   Montargil         3.47  23  ePn     Pn       01 33 43.0 +1.8
PMTG                               eSn     Sn       01 34 22.1 +0.2
PMTG                                A      A        01 34 24.6
       comp=N,4.0nm,0.2s
PMTG   Montargil         3.47  23  ePn     Pn       01 33 43.0 +1.8
PMTG                               eSn     Sn       01 34 22.1 +0.2
PESTR  Estremoz          3.53  32  ePn     Pn       01 33 43.5 +1.5
PESTR                              eSn     Sn       01 34 23.4  0.0
PESTR                               A      A        01 34 25.5
       comp=N,2.6nm,0.3s
PESTR  Estremoz          3.53  32  ePn     Pn       01 33 43.5 +1.5
PESTR                              eSn     Sn       01 34 23.4  0.0
EJIF   Jimena Fronter    3.68  80   P      Pn       01 33 46.4 +2.3
       comp=N,0.8nm,0.1s,SNR=7.9
EJIF                                S      Sn       01 34 27.2 +0.1
       comp=N,0.5nm,0.2s,SNR=7.9
EJIF   Jimena Fronter    3.68  80   P      Pn       01 33 46.4 +2.3
       comp=N,0.8nm,0.1s,SNR=7.9
EJIF                                S      Sn       01 34 27.2 +0.1
       comp=N,0.5nm,0.2s,SNR=7.9
EBAD   Badajoz           3.71  38   P      Pn       01 33 46.4 +1.9
       comp=N,0.9nm,0.3s,SNR=20
EBAD                                S      Sn       01 34 27.6 -0.2
       comp=N,8.3nm,0.1s,SNR=6.0
EBAD   Badajoz           3.71  38   P      Pn       01 33 46.4 +1.9
       comp=N,0.9nm,0.3s,SNR=20
EBAD                                S      Sn       01 34 27.6 -0.2
       comp=N,8.3nm,0.1s,SNR=6.0
CEU    Ceuta             3.72  88   P      Pn       01 33 47.2 +2.5
CEU                                 S      Sn       01 34 29.4 +1.2
CEU    Ceuta             3.72  88 i P      Pn       01 33 47.2 +2.5
CEU                                eS      Sn       01 34 29.4 +1.2
PTOM   Tomar             3.93  18⇓ePn      Pn       01 33 49.5 +2.0
PTOM                               eSn     Sn       01 34 33.4 +0.2
PTOM                                A      A        01 34 35.9
       comp=N,4.4nm,0.3s
PTOM   Tomar             3.93  18   P      Pn       01 33 49.5 +2.0
PTOM                                S      Sn       01 34 33.4 +0.2
       comp=N,2.2nm,0.3s
PTOM   Tomar             3.93  18   P      Pn       01 33 49.5 +2.0
PTOM                                S      Sn       01 34 33.4 +0.2
       comp=N,2.2nm,0.3s
PMRV   Marv??o           4.08  29⇓ePn      Pn       01 33 51.5 +1.8
PMRV                               eSn     Sn       01 34 36.6 -0.6
PMRV                                A      A        01 34 37.8
       comp=N,3.5nm,0.2s
PMRV   Marv??o           4.08  29   P      Pn       01 33 51.5 +1.8
PMRV                                S      Sn       01 34 36.6 -0.6
       comp=N,3.5nm,0.2s
PMRV   Marv??o           4.08  29   P      Pn       01 33 51.5 +1.8
PMRV                                S      Sn       01 34 36.6 -0.6
       comp=N,3.5nm,0.2s
ECAB   El Cabril         4.24  58 ⇑P       Pn       01 33 54.1 +2.2
       comp=N,1.8nm,0.3s,SNR=18
ECAB                                S      Sn       01 34 40.0 -1.1
       comp=N,6.8nm,0.2s
ECAB   El Cabril         4.24  58   P      Pn       01 33 54.1 +2.2
       comp=N,1.8nm,0.3s,SNR=18
ECAB                                S      Sn       01 34 40.0 -1.1
       comp=N,6.8nm,0.2s
EMIJ   Mijas             4.25  79   P      Pn       01 33 50.9 -1.1
       comp=N,0.4nm,0.2s,SNR=5.9
EMIJ                                S      Sn       01 34 38.0 -3.2
       comp=N,1.7nm,0.2s
EMIJ   Mijas             4.25  79   P      Pn       01 33 50.9 -1.1
       comp=N,0.4nm,0.2s,SNR=5.9
EMIJ                                S      Sn       01 34 38.0 -3.2
       comp=N,1.7nm,0.2s
HORN   Hornachuelos      4.25  61   P      Pn       01 33 53.8 +1.9
PCAS   Casmilo, Conde    4.32  15  ePn     Pn       01 33 55.0 +2.0
PCAS                               eSn     Sn       01 34 44.6 +1.6
PCAS                                A      A        01 34 47.1
       comp=N,2.4nm,0.3s
PCAS   Casmilo, Conde    4.32  15  ePn     Pn       01 33 55.0 +2.0
PCAS                               eSn     Sn       01 34 44.6 +1.6
PCBR   Castelo Branco    4.41  26  eSn     Sn       01 34 45.8 +0.6
PCBR                                A      A        01 34 46.3
       comp=N,3.1nm,0.4s
PCBR   Castelo Branco    4.41  26   S      Sn       01 34 45.8 +0.6
       comp=N,1.6nm,0.4s
PCBR   Castelo Branco    4.41  26   S      Sn       01 34 45.8 +0.6
       comp=N,1.6nm,0.4s
IFR    Ifrane            4.63 119 i P      Pn       01 33 57.2 -0.1
EGOR   Sierra Gorda,     4.87  74   P      Pn       01 34 03.0 +2.4
       comp=N,0.2nm,0.2s,SNR=7.9
EGOR                                S      Sn       01 34 56.7  0.0
       comp=N,3.9nm,0.3s,SNR=7.9
EGOR   Sierra Gorda,     4.87  74   P      Pn       01 34 03.0 +2.4
       comp=N,0.2nm,0.2s,SNR=7.9
EGOR                                S      Sn       01 34 56.7  0.0
       comp=N,3.9nm,0.3s,SNR=7.9
EADA   Adamuz            4.87  60 ⇑P       Pn       01 34 03.1 +2.6
       comp=N,1.5nm,0.3s,SNR=18
EADA                                S      Sn       01 34 55.6 -1.0
       comp=N,15nm,0.1s,SNR=10
EADA   Adamuz            4.87  60   P      Pn       01 34 03.2 +2.6
       comp=N,1.5nm,0.3s,SNR=18
EADA                                S      Sn       01 34 55.6 -1.0
       comp=N,15nm,0.1s,SNR=10
MTE    Manteigas         4.90  22  ePn     Pn       01 34 02.9 +2.0
MTE                                eSn     Sn       01 34 56.3 -0.9
MTE                                 A      A        01 35 01.5
       comp=N,3.1nm,0.5s
MTE    Manteigas         4.90  22   P      Pn       01 34 02.9 +2.0
MTE                                 S      Sn       01 34 56.3 -0.9
       comp=N,1.6nm,0.5s
MTE    Manteigas         4.90  22   P      Pn       01 34 02.9 +2.0
MTE                                 S      Sn       01 34 56.3 -0.9
       comp=N,1.6nm,0.5s
PVIS   Viseu             5.09  18  ePn     Pn       01 34 05.5 +1.9
PVIS                               eSn     Sn       01 35 00.8 -1.2
PVIS                                A      A        01 35 06.3
       comp=N,2.6nm,0.3s
PVIS   Viseu             5.09  18   P      Pn       01 34 05.5 +1.9
PVIS                                S      Sn       01 35 00.8 -1.2
       comp=N,1.3nm,0.3s
PVIS   Viseu             5.09  18   P      Pn       01 34 05.5 +1.9
PVIS                                S      Sn       01 35 00.8 -1.2
       comp=N,1.3nm,0.3s
EPLA   Plasencia         5.18  35   P      Pn       01 34 07.3 +2.5
       comp=N,1.0nm,0.3s,SNR=5.8
EPLA                                S      Sn       01 35 02.0 -2.2
       comp=N,2.6nm,0.1s,SNR=5.6
EPLA   Plasencia         5.18  35   P      Pn       01 34 07.3 +2.5
       comp=N,1.0nm,0.3s,SNR=5.8
EPLA                                S      Sn       01 35 02.0 -2.2
       comp=N,2.6nm,0.1s,SNR=5.6
ELGU   Los Guajares,     5.20  77   P      Pn       01 34 07.9 +2.8
       comp=N,0.3nm,0.1s,SNR=7.9
ELGU                                S      Sn       01 35 03.5 -1.3
       comp=N,6.6nm,0.3s,SNR=7.9
ELGU   Los Guajares,     5.20  77   P      Pn       01 34 07.9 +2.8
       comp=N,0.3nm,0.1s,SNR=7.9
ELGU                                S      Sn       01 35 03.5 -1.3
       comp=N,6.6nm,0.3s,SNR=7.9
EQUE   Quentar           5.41  74   P      Pn       01 34 10.8 +2.8
       comp=N,1.2nm,0.3s,SNR=4.6
EQUE                                S      Sn       01 35 08.4 -1.6
       comp=N,2.2nm,0.3s,SNR=5.1
EQUE   Quentar           5.41  74   P      Pn       01 34 10.8 +2.8
       comp=N,1.2nm,0.3s,SNR=4.6
EQUE                                S      Sn       01 35 08.4 -1.6
       comp=N,2.2nm,0.3s,SNR=5.1
PVRL   Vila Real         5.67  17  ePn     Pn       01 34 13.4 +2.0
PVRL   Vila Real         5.67  17   Pn     Pn       01 34 13.4 +2.0
PVRL   Vila Real         5.67  17  ePn     Pn       01 34 13.4 +2.0
POLO   Lamas de Olo      5.74  17  ePn     Pn       01 34 14.0 +1.5
POLO                               eSn     Sn       01 35 16.2 -1.8
POLO                                A      A        01 35 19.3
       comp=N,0.9nm,0.6s
POLO   Lamas de Olo      5.74  17  ePn     Pn       01 34 14.0 +1.5
POLO                               eSn     Sn       01 35 16.2 -1.8
MVO    Moncorvo          5.75  23  ePn     Pn       01 34 14.3 +1.6
MVO                                eSn     Sn       01 35 17.0 -1.3
MVO                                 A      A        01 35 18.8
       comp=N,1.4nm,0.3s
MVO    Moncorvo          5.75  23   P      Pn       01 34 14.3 +1.6
       comp=N,1.3nm,0.3s,SNR=9.2
MVO                                 S      Sn       01 35 14.9 -3.4
       comp=N,1.2nm,0.1s
MVO    Moncorvo          5.75  23   P      Pn       01 34 14.3 +1.6
       comp=N,1.3nm,0.3s,SNR=9.2
MVO                                 S      Sn       01 35 14.9 -3.4
       comp=N,1.2nm,0.1s
MVO                                eSn     Sn       01 35 17.0 -1.3
PAB    San Pablo         5.76  49 ⇓P       Pn       01 34 14.6 +1.8
       comp=N,0.4nm,0.1s,SNR=18
PAB                                 S      Sn       01 35 16.2 -2.3
       comp=N,1.9nm,0.2s,SNR=7.9
PAB    San Pablo         5.76  49   P      Pn       01 34 14.6 +1.8
       comp=N,0.4nm,0.1s,SNR=18
PAB                                 S      Sn       01 35 16.2 -2.3
       comp=N,1.9nm,0.2s,SNR=7.9
GORA   Gorafe            5.78  72   S      Sn       01 35 17.0 -2.1
       comp=N,5.2nm,0.2s,SNR=7.9
GORA   Gorafe            5.78  72   S      Sn       01 35 17.0 -2.1
       comp=N,5.2nm,0.2s,SNR=7.9
EQES   Quesada           5.85  69   P      Pn       01 34 16.3 +2.3
       comp=N,0.2nm,0.1s,SNR=7.9
EQES                                S      Sn       01 35 18.2 -2.5
       comp=N,1.3nm,0.2s,SNR=7.9
EQES   Quesada           5.85  69   P      Pn       01 34 16.3 +2.3
       comp=N,0.2nm,0.1s,SNR=7.9
EQES                                S      Sn       01 35 18.2 -2.5
       comp=N,1.3nm,0.2s,SNR=7.9
PCAB   Cabril            6.01  14  ePn     Pn       01 34 17.7 +1.5
PCAB                               eSn     Sn       01 35 23.9 -0.8
PCAB                                A      A        01 35 33.5
       comp=N,2.7nm,0.4s
PCAB   Cabril            6.01  14   P      Pn       01 34 17.7 +1.5
PCAB                                S      Sn       01 35 23.9 -0.8
       comp=N,1.4nm,0.4s
PCAB   Cabril            6.01  14   P      Pn       01 34 17.7 +1.5
PCAB                                S      Sn       01 35 23.9 -0.8
       comp=N,1.4nm,0.4s
ESDC   Sonseca Array     6.07  50   P      Pn       01 34 19.1 +2.0
       comp=N,1.2nm,0.2s,baz=236,slow=13,SNR=30
ESDC                                S      Sn       01 35 24.9 -1.3
       comp=N,1.0nm,0.3s,baz=237,slow=24,SNR=18
ESDC   Sonseca Array     6.07  50   P      Pn       01 34 19.1 +2.0
       comp=N,1.2nm,0.2s,SNR=30
ESDC                                S      Sn       01 35 24.9 -1.3
       comp=N,1.0nm,0.3s,SNR=18
ELOB   Lobios            6.16  13   P      Pn       01 34 19.4 +1.2
       comp=N,4.9nm,1.0s,SNR=9.6
ELOB                                S      Sn       01 35 25.5 -2.8
       comp=N,2.0nm,0.1s
ELOB   Lobios            6.16  13   P      Pn       01 34 19.4 +1.2
       comp=N,4.9nm,1.0s,SNR=9.6
ELOB                                S      Sn       01 35 25.5 -2.8
       comp=N,2.0nm,0.1s
PGAV   Gavieira, Arco    6.22  12  ePn     Pn       01 34 20.5 +1.4
PGAV                               eSn     Sn       01 35 27.3 -2.5
PGAV                                A      A        01 35 31.9
       comp=N,2.4nm,0.8s
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PGAV	**Gavieira, Arco**	**6.22**	**12**	*e*Pn	**Pn**	**01 34 20.5**	**+1.4**
PGAV				*e*Sn	**Sn**	**01 35 27.3**	**-2.5**
SESP	**Santiago Espad**	**6.34**	**67**	P	**Pn**	**01 34 23.1**	**+2.3**
	comp=N,0.5nm,0.2s,SNR=7.9						
SESP				S	**Sn**	**01 35 30.9**	**-2.0**
	comp=N,3.0nm,0.2s,SNR=7.9						
SESP	**Santiago Espad**	**6.34**	**67**	P	**Pn**	**01 34 23.1**	**+2.3**
	comp=N,0.5nm,0.2s,SNR=7.9						
SESP				S	**Sn**	**01 35 30.9**	**-2.0**
	comp=N,3.0nm,0.2s,SNR=7.9						
PBRG	**Braganca**	**6.43**	**22**	*e*Pn	**Pn**	**01 34 24.1**	**+2.2**
PBRG	**Braganca**	**6.43**	**22**	P	**Pn**	**01 34 24.1**	**+2.2**
PBRG	**Braganca**	**6.43**	**22**	P	**Pn**	**01 34 24.1**	**+2.2**
UCM	**Universidad Co**	**6.90**	**48**	*i* P	**Pn**	**01 34 31.1**	**+2.8**
UCM				*e*S	**Sn**	**01 35 45.9**	**-0.5**
EAGO	**Agolada(Pontev**	**7.06**	**11**	P	**Pn**	**01 34 31.6**	**+1.0**
	comp=N,1.1nm,0.1s,SNR=7.9						
EAGO				S	**Sn**	**01 35 46.9**	**-3.6**
	comp=N,0.8nm,0.1s,SNR=7.9						
EAGO	**Agolada(Pontev**	**7.06**	**11**	P	**Pn**	**01 34 31.6**	**+1.0**
	comp=N,1.1nm,0.1s,SNR=7.9						
EAGO				S	**Sn**	**01 35 46.9**	**-3.6**
	comp=N,0.8nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	**7.10**	**6**	P	**Pn**	**01 34 31.4**	**+0.3**
	comp=N,0.9nm,0.1s,SNR=7.9						
EMAZ				S	**Sn**	**01 35 45.7**	**-5.7**
	comp=N,2.3nm,0.2s,SNR=7.9						
EMAZ	**Mazaricos**	**7.10**	**6**	P	**Pn**	**01 34 31.4**	**+0.3**
	comp=N,0.9nm,0.1s,SNR=7.9						
ETOB	**Tobarra**	**7.25**	**65**	P	**Pn**	**01 34 35.1**	**+1.9**
	comp=N,0.2nm,0.1s,SNR=7.9						
ETOB				S	**Sn**	**01 35 52.5**	**-2.8**
	comp=N,2.7nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**7.25**	**65**	P	**Pn**	**01 34 35.1**	**+1.9**
	comp=N,0.2nm,0.1s,SNR=7.9						
ETOB				S	**Sn**	**01 35 52.5**	**-2.8**
	comp=N,2.7nm,0.2s,SNR=7.9						
ETOR	**Torete**	**7.93**	**49**	P	**Pn**	**01 34 45.0**	**+2.5**
	comp=N,1.6nm,0.3s,SNR=8.4						
ETOR				S	**Sn**	**01 36 09.3**	**-2.6**
	comp=N,1.8nm,0.3s,SNR=7.9						
ETOR	**Torete**	**7.93**	**49**	P	**Pn**	**01 34 45.0**	**+2.5**
	comp=N,1.6nm,0.3s,SNR=8.4						
ETOR				S	**Sn**	**01 36 09.3**	**-2.6**
	comp=N,1.8nm,0.3s,SNR=7.9						
ECHE	**Chera**	**8.03**	**60**	P	**Pn**	**01 34 46.0**	**+2.1**
	comp=N,0.1nm,0.1s,SNR=7.9						
ECHE				S	**Sn**	**01 36 11.0**	**-3.3**
	comp=N,0.7nm,0.4s,SNR=7.9						
ECHE	**Chera**	**8.03**	**60**	P	**Pn**	**01 34 46.0**	**+2.1**
	comp=N,0.1nm,0.1s,SNR=7.9						
ECHE				S	**Sn**	**01 36 11.0**	**-3.3**
	comp=N,0.7nm,0.4s,SNR=7.9						
EMOS	**Mosqueruela**	**8.71**	**56**	P	**Pn**	**01 34 56.0**	**+2.6**
	comp=N,0.2nm,0.1s,SNR=7.9						
EMOS				S	**Sn**	**01 36 27.0**	**-4.3**
	comp=N,1.8nm,0.2s,SNR=6.5						
EMOS	**Mosqueruela**	**8.71**	**56**	P	**Pn**	**01 34 56.0**	**+2.6**
	comp=N,0.2nm,0.1s,SNR=7.9						
EMOS				S	**Sn**	**01 36 27.0**	**-4.3**
	comp=N,1.8nm,0.2s,SNR=6.5						
SJPF	**Ste Jean**	**9.88**	**40**	*e*P	**Pn**	**01 35 11.7**	**+2.5**
SJPF				*e*Sn	Sn	01 36 46.9	-13
	comp=N,0.4nm,0.3s						
SJPF	**Ste Jean**	**9.88**	**40**	*e*P	**Pn**	**01 35 11.7**	**+2.5**
ETSF	**Etsaut**	**10.10**	**43**	*e*P	**Pn**	**01 35 14.7**	**+2.5**
ETSF				*e*Sn	Sn	01 36 51.5	-14
	comp=N,0.8nm,0.5s						
ETSF	**Etsaut**	**10.10**	**43**	*e*P	**Pn**	**01 35 14.7**	**+2.5**
EPF	**Esparros**	**10.69**	**45**	*e*P	**Pn**	**01 35 23.7**	**+3.4**
EPF				*e*Sn	Sn	01 37 05.5	-14
	comp=N,1.5nm,0.4s						
EPF	**Esparros**	**10.69**	**45**	*e*P	**Pn**	**01 35 23.7**	**+3.4**

ISCJB ***04*** *01:51:48.5±0.4, 33°.17N±0°.01×82°.98W±0°.01, h3^{km}±2^{km}, Error ellipse: s-maj=2.1km s-min=1.9km az=152.2*

NEIC ***04*** *01:51:48.9±0.0, 33°.12N×82°.93W, h10^{km}, MN2.7(CERI), After CERI.*

NEIC Felt [III] at Milledgeville and [II] at Sandersville. Also felt at Jackson and Sparta.

ISC 04 01:51:49.4±0.9**, 33°.16N**±0°.02×**83°.00W**±0°.02**, h14**^{km}±7^{km}**, n97,** σ1^{s}**82**/138**, Georgia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
Z54A	**Sparta**	**0.15**	**61**	P	**Pg**	**01 51 53.5**	**+0.2**
	baz=211,SNR=1000						
GOGA	**Godfrey**	**0.46**	**303**	P	**Pg**	**01 51 58.8**	**+0.2**
	baz=123,SNR=155						
GOGA				S	**Sg**	**01 52 05.1**	**+0.3**
	baz=123						
GOGA	**Godfrey**	**0.46**	**303**	*e*Pg	**Pg**	**01 51 58.9**	**+0.2**
GOGA				*e*Sg	**Sg**	**01 52 04.5**	**-0.3**
Z53A	**Monticello**	**0.49**	**284**	P	**Pg**	**01 51 59.3**	**+0.2**
	baz=107,SNR=526						
Z53A				S	**Sg**	**01 52 05.8**	**0.0**
	baz=107						
154A	**Montrose**	**0.56**	**189**	P	**Pg**	**01 52 00.4**	**0.0**
	baz=16,SNR=37						
154A				S	**Sg**	**01 52 07.9**	**+0.1**
	baz=16						
154A	**Montrose**	**0.56**	**189**	*e*Pg	**Pg**	**01 52 00.3**	**0.0**
154A				*e*Sg	**Sg**	**01 52 07.3**	**-0.5**
155A	**Kite**	**0.70**	**140**	P	**Pg**	**01 52 02.7**	**-0.4**
	baz=322,SNR=292						
155A				S	**Sg**	**01 52 11.7**	**-0.7**
	baz=322						
Z55A	**Blythe**	**0.73**	**85**	P	**Pg**	**01 52 03.4**	**-0.2**
	baz=261,SNR=40						
Z55A				S	**Sg**	**01 52 12.7**	**-0.5**
	baz=261						
Y54A	**Tignall**	**0.74**	**21**	P	**Pg**	**01 52 03.6**	**-0.3**
	baz=195,SNR=73						
Y54A				S	**Sg**	**01 52 13.3**	**-0.4**
	baz=195						
Y53A	**Monroe**	**0.84**	**325**	P	**Pg**	**01 52 05.7**	**-0.2**
	baz=143,SNR=143						
Y53A				S	**Sg**	**01 52 16.4**	**-0.5**
	baz=143						
153A	**Fort Valley**	**0.86**	**234**	P	**Pg**	**01 52 05.6**	**-0.6**
	baz=58,SNR=37						
153A				S	**Sg**	**01 52 17.4**	**-0.2**
	baz=58						
Y52A	**Lilburn**	**1.13**	**309**	P	**Pb**	**01 52 10.5**	**-0.2**
	baz=128,SNR=58						
Y52A				S	**Sb**	**01 52 24.4**	**-0.8**
	baz=128						
Y52A	**Lilburn**	**1.13**	**309**	*e*Pg	**Pb**	**01 52 10.5**	**-0.2**
Y52A				*e*Sg	**Sb**	**01 52 24.5**	**-0.7**
Z52A	**Williamson**	**1.19**	**272**	Pb	**Pn**	**01 52 11.5**	**0.0**
	baz=93,SNR=68						
Z52A				S	**Sb**	**01 52 26.5**	**-0.4**
	baz=93						
HODGE	**Hodges**	**1.23**	**30**	*e*Pg	**Pn**	**01 52 12.2**	**0.0**
HODGE				*e*Sg	**Sb**	**01 52 28.6**	**+0.3**
254A	**Abbeville**	**1.24**	**191**	Pb	**Pn**	**01 52 12.0**	**-0.2**
	baz=14,SNR=9.1						
254A				S	**Sn**	**01 52 28.8**	**+0.1**
	baz=14						
255A	**Hazlehurst**	**1.31**	**160**	Pb	**Pn**	**01 52 13.5**	**+0.2**
	baz=342,SNR=46						
255A				Sb	**Sn**	**01 52 31.2**	**+0.6**
	baz=342						
255A	**Hazlehurst**	**1.31**	**160**	*e*Pn	**Pn**	**01 52 13.6**	**+0.4**
255A				*e*Sg	**Sn**	**01 52 31.1**	**+0.6**
X53A	**Estanollee**	**1.36**	**350**	Pb	**Pn**	**01 52 13.8**	**-0.2**
	baz=167,SNR=78						
X53A				Sb	**Sn**	**01 52 32.2**	**+0.4**
	baz=167						
156A	**Sylvania**	**1.37**	**111**	Pb	**Pn**	**01 52 14.4**	**+0.4**
	baz=292,SNR=9.6						
156A				Sb	**Sn**	**01 52 32.3**	**+0.4**
	baz=292						
253A	**Americus**	**1.45**	**221**	Pb	**Pb**	**01 52 16.1**	**-0.1**
	baz=43,SNR=34						
253A				Sb	**Sb**	**01 52 35.3**	**+0.8**
	baz=43						
253A	**Americus**	**1.45**	**221**	*e*Pn	**Pb**	**01 52 16.0**	**-0.1**
253A				*e*Sn	**Sb**	**01 52 35.3**	**+0.8**
256A	**Glennville**	**1.51**	**141**	Pb	**Pb**	**01 52 17.2**	**0.0**
	baz=323,SNR=15						
256A				Sb	**Sb**	**01 52 36.6**	**+0.5**
	baz=323						
152A	**Waverly Hall**	**1.52**	**252**	Pb	**Pn**	**01 52 17.1**	**+0.9**
	baz=73,SNR=16						
152A	**Waverly Hall**	**1.52**	**252**	*e*Pn	**Pn**	**01 52 17.1**	**+0.9**
152A				*e*Sn	**Sn**	**01 52 36.2**	**+0.4**
X52A	**Dahlonega**	**1.62**	**333**	Pb	**Pn**	**01 52 18.3**	**+0.8**
	baz=151,SNR=69						
X52A				Sb	**Sb**	**01 52 39.7**	**+0.4**
	baz=151						
TIGA	**Tifton**	**1.79**	**196**	*e*Pn	**Pb**	**01 52 22.2**	**+0.2**
TIGA				*e*Sn	**Sb**	**01 52 44.8**	**+0.5**
BG3	**Lake Jocassee**	**1.83**	**2**	*e*Pn	**Pn**	**01 52 21.2**	**+0.8**
BG3				*e*Sn	**Sn**	**01 52 43.7**	**+0.3**
Z51A	**Franklin**	**1.83**	**275**	Pb	**Pb**	**01 52 22.3**	**-0.3**
	baz=95,SNR=32						
Z51A				Sb	**Sb**	**01 52 45.1**	**-0.2**
	baz=95						
JSC	**Jenkinsville**	**1.83**	**52**	*e*Pn	**Pn**	**01 52 20.6**	**+0.2**
JSC				*e*Sn	**Sn**	**01 52 42.3**	**-1.1**
252A	**Lumpkin**	**1.87**	**232**	Pb	**Pb**	**01 52 22.7**	**-0.6**
	baz=53,SNR=27						
252A				Sb	**Sb**	**01 52 47.2**	**+0.7**
	baz=53						
Y51A	**Rockmart**	**1.87**	**294**	Pb	**Pb**	**01 52 22.7**	**-0.7**
	baz=113,SNR=79						
Y51A				Sb	**Sb**	**01 52 46.8**	**+0.1**
	baz=113						
PAULI	**Pauline**	**1.93**	**31**	*e*Pn	**Pn**	**01 52 22.2**	**+0.5**
PAULI				*e*Sn	**Sb**	**01 52 49.0**	**+0.8**
356A	**Blackshear**	**1.98**	**158**	Pb	**Pb**	**01 52 24.7**	**-0.4**
	baz=340						
356A				Sb	**Sb**	**01 52 50.2**	**+0.6**
	baz=340						
W53A	**Cullowhee**	**2.01**	**356**	Pb	**Pn**	**01 52 24.2**	**+1.3**
	baz=174,SNR=20						
W53A				Sb	**Sb**	**01 52 50.9**	**+0.3**
	baz=174						
257A	**Skidaway Islan**	**2.05**	**125**	*e*Pn	**Pb**	**01 52 26.5**	**+0.1**
257A				*e*Sn	**Sb**	**01 52 51.6**	**0.0**
151A	**Opelika**	**2.06**	**253**	Pb	**Pb**	**01 52 25.7**	**-0.8**
	baz=73,SNR=29						
151A				Sb	**Sb**	**01 52 52.3**	**+0.4**
	baz=73						
W52A	**Murphy**	**2.07**	**339**	Pb	**Pn**	**01 52 25.6**	**+1.8**
	baz=157,SNR=18						
W52A				Sb	**Sb**	**01 52 52.8**	**+0.4**
	baz=157						
W52A	**Murphy**	**2.07**	**339**	*e*Pn	**Pn**	**01 52 25.3**	**+1.5**
353A	**Camilla**	**2.08**	**210**	Pb	**Pb**	**01 52 26.5**	**-0.4**
	baz=31,SNR=27						
X51A	**Calhoun**	**2.08**	**313**	Pb	**Pb**	**01 52 26.2**	**-0.7**
	baz=132,SNR=34						
X51A				Sb	**Sb**	**01 52 53.3**	**+0.6**
	baz=132						
X51A	**Calhoun**	**2.08**	**313**	*e*Pn	**Pn**	**01 52 25.4**	**+1.5**
X51A				*e*Sn	**Sb**	**01 52 53.2**	**+0.5**
251A	**Midway**	**2.29**	**243**	Pb	**Pb**	**01 52 29.3**	**-1.3**
	baz=63,SNR=26						
251A				Sb	**Sb**	**01 52 59.5**	**+0.8**
	baz=63						
352A	**Blakely**	**2.34**	**225**	Pb	**Pb**	**01 52 30.9**	**-0.4**
	baz=45,SNR=7.3						
352A				Sb	**Sb**	**01 53 01.4**	**+1.4**
	baz=45						
352A	**Blakely**	**2.34**	**225**	*e*Pn	**Pn**	**01 52 28.6**	**+1.2**
352A				*e*Sn	**Sb**	**01 53 00.6**	**+0.6**
NHSC	**New Hope**	**2.37**	**91**	*e*Pn	**Pn**	**01 52 28.0**	**+0.2**
NHSC				*e*Sn	**Sn**	**01 52 56.5**	**-0.2**
RGRS	**Roger Stewart**	**2.37**	**95**	*e*Pn	**Pn**	**01 52 28.1**	**+0.3**
RGRS				*e*Sn	**Sn**	**01 52 58.1**	**+1.4**
KMSC	**Kings Mountain**	**2.41**	**35**	*e*Pn	**Pn**	**01 52 29.1**	**+0.6**
Z50A	**Ashland**	**2.45**	**273**	P	**Pn**	**01 52 30.9**	**+2.0**
	baz=92,SNR=33						
Z50A	**Ashland**	**2.45**	**273**	*e*Pn	**Pn**	**01 52 31.2**	**+2.3**
Z50A				*e*Sn	**Sb**	**01 53 02.1**	**-1.1**
454A	**Quitman**	**2.50**	**192**	P	**Pn**	**01 52 30.5**	**+0.9**
	baz=14						
V53A	**Saluda**	**2.50**	**4**	P	**Pn**	**01 52 30.8**	**+1.1**
	baz=182,SNR=17						
V53A	**Saluda**	**2.50**	**4**	*e*Pn	**Pn**	**01 52 31.0**	**+1.2**
V53A				*e*Sn	**Sn**	**01 53 01.6**	**+1.5**
X50B	**Fort Payne**	**2.56**	**301**	P	**Pn**	**01 52 31.9**	**+1.4**
	baz=120,SNR=32						
TKL	**Tuckaleechee C**	**2.57**	**346**	*e*Pn	**Pn**	**01 52 31.6**	**+1.1**
150A	**Eclectic**	**2.60**	**259**	P	**Pn**	**01 52 33.1**	**+2.2**
	baz=78,SNR=14						
CPCT	**Cooper Cave**	**2.60**	**332**	*e*Pn	**Pn**	**01 52 32.2**	**+1.1**
V52A	**Sevierville**	**2.72**	**350**	P	**Pn**	**01 52 33.5**	**+0.9**
	baz=168						
V52A	**Sevierville**	**2.72**	**350**	*e*Pn	**Pn**	**01 52 33.5**	**+0.9**
W50A	**Signal Mountai**	**2.79**	**317**	P	**Pn**	**01 52 35.1**	**+1.5**
	baz=136,SNR=8.4						
W50A	**Signal Mountai**	**2.79**	**317**	*e*Pn	**Pn**	**01 52 35.0**	**+1.4**
V51A	**Loudon**	**2.86**	**337**	P	**Pn**	**01 52 35.4**	**+0.8**
	baz=156						
V51A	**Loudon**	**2.86**	**337**	*e*Pn	**Pn**	**01 52 35.5**	**+0.8**
Y49A	**Blount Mountai**	**2.93**	**285**	P	**Pn**	**01 52 37.4**	**+1.8**
	baz=103,SNR=51						
Y49A	**Blount Mountai**	**2.93**	**285**	*e*Pn	**Pn**	**01 52 37.5**	**+2.0**
452A	**Marianna**	**2.96**	**219**	P	**Pn**	**01 52 36.9**	**+1.0**
	baz=40						
Z49A	**Columbiana**	**2.96**	**272**	P	**Pn**	**01 52 38.4**	**+2.4**
	baz=90						
250A	**Grady**	**3.00**	**248**	P	**Pn**	**01 52 38.8**	**+2.3**
	baz=67,SNR=18						
250A	**Grady**	**3.00**	**248**	*e*Pn	**Pn**	**01 52 38.5**	**+2.0**
V50A	**Pikevile**	**3.04**	**326**	P	**Pn**	**01 52 38.2**	**+1.1**
	baz=144,SNR=7.8						
X49A	**Woodville**	**3.08**	**297**	P	**Pn**	**01 52 38.9**	**+1.3**
	baz=115,SNR=29						
SWET	**Sewanee**	**3.18**	**311**	*e*Pn	**Pn**	**01 52 40.5**	**+1.5**
W49A	**Belvidere**	**3.34**	**307**	P	**Pn**	**01 52 41.8**	**+0.6**
	baz=125,SNR=17						
LRAL	**Lakeview Retre**	**3.36**	**269**	*e*Pn	**Pn**	**01 52 44.0**	**+2.6**
TZTN	**Tazewell**	**3.40**	**353**	*e*Pn	**Pn**	**01 52 43.2**	**+1.1**
TZTN				*e*Sg	**Sb**	**01 53 34.5**	**+3.8**
X48A	**Hartselle**	**3.60**	**292**	*e*Pn	**Pn**	**01 52 46.5**	**+1.7**
V48A	**Smith Brothers**	**4.07**	**310**	*e*Sb	**Sb**	**01 53 52.4**	**+2.5**
X47A	**Russelville**	**4.26**	**290**	P	**Pn**	**01 52 54.5**	**+0.7**
	baz=108,SNR=5.2						
147A	**Livingston**	**4.46**	**265**	*e*Sb	**Sb**	**01 54 04.8**	**+3.8**
BLA	**Blacksburg**	**4.56**	**27**	*e*Pn	**Pn**	**01 52 57.9**	**-0.1**
PLAL	**Pickwick Lake**	**4.58**	**295**	*e*Sb	**Sb**	**01 54 07.2**	**+2.5**
VWCC	**Virginia Weste**	**4.77**	**30**	*e*Sb	**Sb**	**01 54 14.6**	**+4.6**
WVT	**Waverly**	**4.96**	**308**	*e*Sb	**Sb**	**01 54 17.4**	**+2.0**
T47A	**Sharon Grove**	**5.09**	**320**	*e*Sb	**Sb**	**01 54 23.9**	**+4.8**
IP03	**Louisa**	**6.32**	**39**	*e*Sb	**Sg**	**01 55 04.5**	**-7.9**
IP01	**Cuckoo**	**6.33**	**40**	*e*Sb	**Sb**	**01 55 02.9**	**+8.0**
CVRD	**Centerville Ro**	**6.47**	**39**	*e*Sb	Sb	01 55 08.2	+9.3
PTRD	**Partlow Road**	**6.61**	**40**	*e*Pn	**Pn**	**01 53 26.8**	**+0.8**
SIUC	**Southern Illin**	**6.81**	**314**	*e*Sb	Sb	01 55 18.2	+10
PBMO	**Poplar Bluff**	**7.08**	**303**	*e*Sb	Sb	01 55 26.4	+10
T42A	**Van Buren**	**7.67**	**302**	*e*Sb	**Sb**	**01 55 34.8**	**+1.4**
W41B	**Gary Mavity, V**	**7.92**	**287**	*e*Sb	**Sg**	**01 55 55.3**	**-8.2**
O56A	**Blue Knob Stat**	**7.93**	**25**	*e*Sb	**Sb**	**01 55 47.6**	**+6.6**
SDMD	**Soldier's Deli**	**7.97**	**37**	*e*Sb	Sg	01 55 55.7	-9.5
SPMN	**Marine on St.**	**14.23**	**331**	*e*P	P	01 55 24.0	+6.3
G35A	**Watkins**	**14.95**	**327**	*e*Pn	**P**	**01 55 23.8**	**-2.0**
BBRC	**Big Bear Solar**	**28.16**	**282**	*e*P	**P**	**01 57 42.9**	**+1.4**

CSEM ***04*** *02:21:16.5±0.2, 40°.80N×21°.38E, h5^{km}, ML1.4, Error ellipse: s-maj=4.7km s-min=3.0km az=153.0*

TIR ***04*** *02:21:16.1, 40°.48N×21°.40E, h8^{km}, Md2.1/2*

SKO ***04*** *02:21:16.1, 40°.79N×21°.39E, h15^{km}, M1.0, ML1.6*

ATH 04 02:21:16.2, 40°.81N×21°.35E, h7^{km}±1^{km}, ML1.4/5, 2C-1D, Error ellipse: s-maj=2.2km s-min=1.2km az=320.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FNA	**Florina**	**0.03**	**132**	P	Pg	02 21 18.0	+0.3
FNA				S	Sg	02 21 18.5	-0.3
FNA				AML	AML	02 21 18.7	
	comp=N,8386µm,0.1s						
FNA				AML	AML	02 21 18.7	
	comp=E,7820µm,0.1s						
FNA	**Florina**	**0.03**	**132**	P	Pg	02 21 17.8	+0.1
FNA				S	Sg	02 21 18.6	-0.2
BIA	**Bitola**	**0.21**	**356**	⇑*i*Pg	Pg	02 21 22.1	+1.6
BIA				*i* Sg	Sg	02 21 25.8	+2.3
BIA				*e*Lg	Lg	02 21 26.8	
	comp=E,34nm,0.2s						
BIA				*e*Lg	Lg	02 21 27.6	
	comp=N,32nm,0.3s						
NEST	**Nestorio**	**0.45**	**210**	P	Pg	02 21 24.6	-0.4
NEST				S	Sb	02 21 32.5	-1.0
NEST	**Nestorio**	**0.45**	**210**	P	Pg	02 21 24.7	-0.2
NEST				S	Sg	02 21 31.9	+1.0
KBN	**Korca**	**0.46**	**247**	*i* Pg	Pb	02 21 26.0	-0.7
	baz=52						
KBN				*i* Sg	Sb	02 21 33.9	+0.2
	baz=52						
KBN	**Korca**	**0.46**	**247**	*i* PG	Pb	02 21 26.0	-0.7
KBN				*i* SG	Sb	02 21 33.9	+0.2
OHR	**Ohrid**	**0.51**	**307**	⇓*i*Pg	Pb	02 21 27.3	-0.2
OHR				*i* Sg	Sb	02 21 35.8	+0.5
OHR				*e*Lg	Lg	02 21 37.0	
	comp=N,18nm,0.5s						
OHR				*e*Lg	Lg	02 21 37.2	
	comp=E,28nm,0.5s						
KRUS	**Krusevo**	**0.57**	**353**	⇑*e*Pg	Pb	02 21 28.0	-0.6
KRUS				*i* Sg	Sb	02 21 36.5	-0.3
KRUS				*e*Lg	Lg	02 21 37.1	
	comp=N,8.7nm,0.3s						
KRUS				*e*Lg	Lg	02 21 37.3	
	comp=E,9.2nm,0.3s						
KZN	**Kozani**	**0.59**	**147**	P	Pg	02 21 26.6	-1.1
KZN				S	Sg	02 21 34.7	-0.7
KZN				AML	AML	02 21 38.0	
	comp=E,95µm,0.4s						
KZN				AML	AML	02 21 38.6	
	comp=N,72µm,0.3s						
KZN	**Kozani**	**0.59**	**147**	P	Pg	02 21 27.2	-0.5
KZN				S	Sg	02 21 35.4	0.0
GRG	**Griva**	**0.81**	**79**	P	Pg	02 21 31.9	0.0
GRG				S	Sb	02 21 43.6	-0.2
GRG	**Griva**	**0.81**	**79**	P	Pg	02 21 31.8	-0.1
GRG				S	Sb	02 21 43.3	-0.6
KPRO	**Kipourio**	**0.85**	**179**	P	Pg	02 21 32.6	+0.1
KPRO				S	Sb	02 21 45.0	+0.1
KPRO	**Kipourio**	**0.85**	**179**	P	Pg	02 21 32.5	0.0
KPRO				S	Sb	02 21 44.5	-0.4
STIP	**Stip**	**1.09**	**35**	*i* Pg	Pn	02 21 39.7	+1.8
STIP				*i* Sg	Sn	02 21 57.4	+4.2
STIP				*e*Lg	Lg	02 22 00.2	
	comp=N,0.9nm,0.2s						
STIP				*e*Lg	Lg	02 22 01.3	
	comp=E,1.4nm,0.6s						
LIT	**Litokhoron**	**1.12**	**128**	P	Pg	02 21 37.7	0.0
LIT				S	Sn	02 21 53.8	-0.2
LIT				AML	AML	02 21 55.9	
	comp=E,29µm,0.5s						
LIT				AML	AML	02 21 57.6	
	comp=N,37µm,0.8s						
LIT	**Litokhoron**	**1.12**	**128**	P	Pg	02 21 37.5	-0.2
LIT				S	Sb	02 21 53.3	+0.6
KNT	**Kendrikon**	**1.23**	**73**	P	Pn	02 21 39.8	0.0
KNT				S	Sg	02 21 55.2	-0.5
KNT				AML	AML	02 22 00.7	
	comp=N,18µm,0.5s						
KNT				AML	AML	02 22 00.8	
	comp=E,8µm,0.3s						
KNT	**Kendrikon**	**1.23**	**73**	P	Pb	02 21 39.6	-0.1
KNT				S	Sg	02 21 55.7	0.0
THL	**Klokotos Trika**	**1.34**	**157**	P	Pn	02 21 39.6	-1.7
THL				S	Sn	02 22 01.0	+1.7
THL				AML	AML	02 22 03.4	
	comp=N,16µm,0.9s						
THL				AML	AML	02 22 05.3	
	comp=E,16µm,0.9s						
THL	**Klokotos Trika**	**1.34**	**157**	P	Pn	02 21 40.5	-0.8
THL				S	Sn	02 22 00.4	+1.1

JMA 04 02:25:09.8±0.1**, 36°.70N**×**140°.79E, h46**^{km}±1^{km}**, M3.6, 3C-5D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHO	**Hitachi**	**0.20**	**243**	⇓P	Pn	02 25 17.8	+0.1
JHO				S	Sn	02 25 22.8	-0.5
JHYU	**Hitachinakayam**	**0.39**	**205**	P	Pn	02 25 19.5	0.0
JHYU				S	Sn	02 25 26.1	-0.3
ONAJ	**Iwakimizuishiy**	**0.40**	**1**	⇓P	Pn	02 25 19.4	-0.3
ONAJ				S	Sn	02 25 26.1	-0.6
JFFD	**Fukushimafurud**	**0.43**	**335**	P	Pn	02 25 20.0	0.0
JFFD				S	Sn	02 25 26.7	-0.6
JFK	**Kawauchi**	**0.67**	**6**	⇓P	Pn	02 25 22.5	-0.5
JFK				S	Sn	02 25 31.3	-1.3
JYT	**Yasato**	**0.67**	**226**	⇓P	Pn	02 25 22.8	-0.2
JYT				S	Sn	02 25 31.7	-0.8
JFT	**Otama**	**0.89**	**336**	⇑P	Pn	02 25 26.5	+0.5
JFT				S	Sn	02 25 38.3	+0.4
JAG	**Ashikaga**	**1.11**	**256**	⇓P	Pn	02 25 29.0	+0.1
JAG				S	Sn	02 25 42.6	-0.5
JFY	**Yanaizu**	**1.12**	**309**	⇑P	Pn	02 25 29.3	+0.2
JFY				S	Sn	02 25 44.6	+1.2
JMM	**Marumori**	**1.16**	**0**	⇑P	Pn	02 25 29.9	+0.2
JMM				S	Sn	02 25 44.4	0.0
JKT	**Katashina**	**1.24**	**274**	P	Pn	02 25 31.3	+0.5
JKT				S	Sn	02 25 46.9	+0.5
MAT	**Matsushiro**	**2.08**	**266**	P	Pn	02 25 43.8	+1.5
MAT				S	Sn	02 26 10.6	+3.6

NIED ***04*** *02:37:00, 43°.70N×146°.40E, h80^{km}, Mw4.2 Best double couple: $M_0$2.30000×10^{15} NP1:ϕ_s165.00000°, δ24.00000°, λ-132.00000°. NP2:ϕ_s29.00000°, δ73.00000°, λ-74.00000°.*

BJI ***04*** *02:37:42.3, 43°.79N×146°.79E, h75^{km}, mb4.7/24, mB4.9/15, Ms4.4/4, Ms7 4.1/2*

MOS ***04*** *02:37:46.5±1.0, 43°.72N×146°.39E, h90^{km}, mb4.5/29, Error ellipse: s-maj=8.4km s-min=6.0km az=100.4*

MOS Felt (III) at Yuzhno-Kuril'sk; (II-III) at Malokuril'skoye.

ISCJB ***04*** *02:37:47.2±0.3, 43°.79N±0°.03×146°.35E±0°.03, h92^{km}±1^{km}, mb4.4/94, Error ellipse: s-maj=5.5km s-min=3.3km az=145.8*

NEIC ***04*** *02:37:47.2±0.2, 43°.83N×146°.32E, mb4.5/50, Error ellipse: s-maj=6.0km s-min=3.4km az=153.0*

NEIC Recorded [2 JMA] in eastern Hokkaido.

JMA ***04*** *02:37:48.2±0.1, 43°.71N×146°.43E, h79^{km}±2^{km}, M4.0*

JMA Felt II J1.

SKHL ***04*** *02:37:48.2±0.4, 43°.74N×146°.37E, h87^{km}±2^{km}, mb5.9/6, msh6.8/6*

SKHL Felt (III) at Yushno-Kurilsk; felt (II-III) at Malokurilskoe.

IDC ***04*** *02:37:49.6±2.1, 43°.89N×146°.25E, h97^{km}±17^{km}, mb4.0/29, mb1 4.1/33, mb1mx4.0/67, mbtmp4.2/33, MS2.6/7, Ms1 2.6/7, ms1mx2.4/69, Error ellipse: s-maj=14.6km s-min=10.7km az=157.0*

ISC 04 02:37:47.4±0.5**, 43°.80N**±0°.04×**146°.37E**±0°.03**, h80**^{km}±4^{km}**, n261,** σ1^{s}**16**/292**, mb4.4**/94**, 18C-8D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHO	**Shikotan**	**0.34**	**77**	*i* P	**Pn**	**02 38 01.0**	**+1.1**
SHO				AMB	AMB	02 38 02.0	
	2µm,0.3s						
SHO				AMB	AMB	02 38 02.0	
	2µm,0.3s						
SHO				AMB	AMB	02 38 02.0	
	5µm,0.3s						
SHO				*i* S	**Sn**	**02 38 11.0**	**+1.8**
SHO				A	A	02 38 12.0	
	12µm,0.3s						
SHO				A	A	02 38 12.0	
	152nm,0.3s						
SHO	**Shikotan**	**0.34**	**77**	*d i*PN	**Pn**	**02 38 01.9**	**+2.0**
SHO				*i* S	**Sn**	**02 38 11.3**	**+2.1**
SHO				pmax	pmax		
	comp=Z,5µm,0.3s						
SHO				pmax	pmax		
	comp=N,2µm,0.2s						
SHO				pmax	pmax		
	comp=E,2µm,0.2s						
SHO				smax	smax		
	comp=N,12µm,0.2s						
SHO				smax	smax		
	comp=E,152nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**0.44**	**303**	*i* P	**Pn**	**02 38 01.0**	**+0.4**
YUK				AMB	AMB	02 38 02.4	
	comp=E,821nm,0.3s						
YUK				AMB	AMB	02 38 02.4	
	comp=E,2µm,0.3s						
YUK				AMB	AMB	02 38 02.4	
	comp=E,12µm,0.3s						
YUK				*i* S	**Sn**	**02 38 11.0**	**+0.6**
YUK				A	A	02 38 12.7	

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       comp=E,21µm,0.4s
YUK                             A      A      02 38 12.7
       comp=E,37µm,0.4s
YUK    Yuzh-Kuril'sk    0.44 303c iPN    Pn     02 38 01.7 +1.1
YUK                           i S      Sn     02 38 11.4 +1.0
YUK                             pmax   pmax
       comp=Z,12µm,0.3s
YUK                             pmax   pmax
       comp=N,821nm,0.2s
YUK                             pmax   pmax
       comp=E,2µm,0.2s
YUK                             smax   smax
       comp=N,21µm,0.2s
YUK                             smax   smax
       comp=E,37µm,0.5s
GRPR   Tuman            0.47 295  i P      Pn     02 38 02.0 +1.1
GRPR                            AMB    AMB    02 38 02.0
       comp=E,1µm,0.3s
GRPR                            AMB    AMB    02 38 02.0
       comp=E,2µm,0.3s
GRPR                            AMB    AMB    02 38 02.0
       comp=E,10µm,0.3s
GRPR                          i S      Sn     02 38 12.0 +1.1
GRPR                            A      A      02 38 14.0
       comp=E,44µm,0.5s
GRPR                            A      A      02 38 14.0
       comp=E,18µm,0.5s
GRPR   Tuman            0.47 295c iPN    Pn     02 38 02.0 +1.1
GRPR                          i S      Sn     02 38 12.0 +1.1
GRPR                            pmax   pmax
       comp=E,2µm,0.3s
GRPR                            pmax   pmax
       comp=Z,10µm,0.3s
GRPR                            pmax   pmax
       comp=N,1µm,0.4s
GRPR                            smax   smax
       comp=N,44µm,0.4s
GRPR                            smax   smax
       comp=E,18µm,0.2s
LAGR   Lagunnoye        0.50 302  i P      Pn     02 38 02.3 +1.2
LAGR                            AMB    AMB    02 38 04.5
       comp=E,2µm,0.3s
LAGR                          eS       Sn     02 38 12.7 +1.5
LAGR                            A      A      02 38 15.6
       comp=E,47µm,0.5s
LAGR                            A      A      02 38 15.6
       comp=E,29µm,0.5s
LAGR   Lagunnoye        0.50 302c iPN    Pn     02 38 02.3 +1.2
LAGR                          i S      Sn     02 38 12.7 +1.5
LAGR                            pmax   pmax
       comp=E,2µm,0.3s
LAGR                            pmax   pmax
       comp=Z,8µm,0.3s
LAGR                            pmax   pmax
       comp=N,4µm,0.4s
LAGR                            smax   smax
       comp=N,47µm,0.4s
LAGR                            smax   smax
       comp=E,29µm,0.4s
GLVR   Golovnino        0.62 265  i P      Pn     02 38 03.6 +1.4
GLVR                            AMB    AMB    02 38 06.7
       comp=E,3µm,0.2s
GLVR                          eS       Sn     02 38 15.1 +1.9
GLVR                            A      A      02 38 16.2
       comp=E,22µm,0.5s
GLVR                            A      A      02 38 16.2
       comp=E,17µm,0.5s
GLVR   Golovnino        0.62 265c iPN    Pn     02 38 03.6 +1.4
GLVR                          i S      Sn     02 38 15.1 +1.9
GLVR                            pmax   pmax
       comp=N,3µm,0.1s
GLVR                            pmax   pmax
       comp=E,510nm,0.1s
GLVR                            pmax   pmax
       comp=Z,3µm,0.1s
GLVR                            smax   smax
       comp=E,22µm,0.4s
GLVR                            smax   smax
       comp=N,17µm,0.3s
NEM2   Nemuro 2         0.63 227  ⇓P      Pn     02 38 03.1 +0.8
NEM2                            S      Sn     02 38 13.6 +0.3
JRA    Rausu            0.91 279  ⇑P      Pn     02 38 07.0 +1.6
JRA                           eS       Sn     02 38 20.9 +2.1
JNK    Nakash           1.22 261  ⇑P      Pn     02 38 10.1 +1.0
JAK    Akkeshi          1.46 237  ⇑P      Pn     02 38 12.9 +0.8
JAK                             S      Sn     02 38 31.4 +0.6
JTKR   Abashiri--Toko   1.79 276  ⇑P      Pn     02 38 18.3 +1.9
KUR    Kuril'sk         1.79  36  i P      Pn     02 38 18.6 +2.1
KUR                             AMB    AMB    02 38 19.1
       comp=N,676nm,0.3s
KUR                           eS       Sn     02 38 41.3 +2.7
KUR                             A      A      02 38 46.1
       comp=N,15µm,0.4s
KUR                             A      A      02 38 46.1
       comp=N,3µm,0.4s
KUR    Kuril'sk         1.79  36c iPN    Pn     02 38 18.6 +2.1
KUR                           i S      Sn     02 38 41.3 +2.7
KUR                             pmax   pmax
       comp=E,676nm,0.3s
KUR                             pmax   pmax
       comp=E,131nm,0.2s
KUR                             pmax   pmax
       comp=N,131nm,0.3s
KUR                             smax   smax
       comp=N,151nm,0.4s
KUR                             smax   smax
       comp=E,3µm,0.4s
JAR    Ashorobuto       1.96 256  ⇑P      Pn     02 38 20.6 +1.9
JAR                           eS       Sn     02 38 45.3 +2.8
JOB    Onbets           2.05 245  ⇑P      Pn     02 38 21.4 +1.5
JOB                             S      Sn     02 38 46.1 +1.3
JMP    Maruseppu        2.19 277  ⇑P      Pn     02 38 23.8 +2.0
HRK    Horoka           2.38 263  eP      Pn     02 38 26.5 +2.2
JCH    Churui           2.50 243  ⇑P      Pn     02 38 26.7 +0.8
JCH                           eS       Sn     02 38 56.1 +0.7
ASAJ   Asahikawa        2.74 278   P      Pn     02 38 31.8 +2.5
       comp=E,30nm,0.3s,baz=89,slow=15,SNR=303
ASAJ                            S      Sn     02 39 12.7  +11
       comp=E,27nm,0.3s,baz=41,slow=20,SNR=2.2
ASAJ   Asahikawa        2.74 278  ePn     Pn     02 38 31.2 +2.0
ASAJ                          eSn      Sn     02 38 58.0 -3.4
YSS    Yuzh-Sakhalins   4.06 322  i P      Pn     02 38 49.6 +2.6
YSS                             AMB    AMB    02 38 50.5
       comp=E,82nm,0.4s
YSS                           i S      Sn     02 39 34.5 +1.2
YSS                             A      A      02 39 35.6
       comp=E,168nm,0.8s
YSS    Yuzh-Sakhalins   4.06 322  ePn     Pn     02 38 48.0 +1.0
YSS                           eSn      Sn     02 39 34.6 +1.4
YSS    Yuzh-Sakhalins   4.06 322  ePN     Pn     02 38 49.6 +2.6
YSS                           eS       Sn     02 39 34.1 +0.8
YSS                             pmax   pmax
       comp=Z,70nm,0.4s
YSS                             smax   smax
       comp=N,150nm,1.0s
YSS                             smax   smax
       comp=E,170nm,0.7s
UGL    Uglegorsk        6.06 332  eP      Pn     02 39 16.5 +2.2
UGL                             AMB    AMB    02 39 19.0
       comp=E,44nm,0.4s
TYV    Tymovskoe        7.51 342  eP      Pn     02 39 36.6 +2.6
TYV                             AMB    AMB    02 39 37.3
       comp=E,16nm,1.0s
TYV                           eS       Sn     02 40 57.9 +0.4
TYV                             A      A      02 40 58.6
       comp=E,3µm,0.9s
TYV    Tymovskoe        7.51 342  ePN     Pn     02 39 36.6 +2.6
TYV                             pmax   pmax
       comp=Z,16nm,1.0s
SKR    Severo-Kuril's   9.55  40  eP      Pn     02 40 02.9 +1.0
SKR    Severo-Kuril's   9.55  40⇓ePN     Pn     02 40 02.9 +1.0
MJAR   Matsushiro Arr   9.56 223   P      Pn     02 40 02.1 -0.1
       comp=Z,1.2nm,0.3s,baz=24,slow=14,SNR=16
MJAR                            LR     LR     02 43 58.5
       comp=Z,34nm,21.8s,baz=20,slow=38
MJB9   Matsu-Tunnel     9.56 224  ePn     Pn     02 40 02.5 +0.4
MAJO   Matsushiro       9.56 224  eP      Pn     02 40 01.7 -0.5
MAJO   Matsushiro       9.56 224  ePn     Pn     02 40 02.2  0.0
MAJO   Matsushiro       9.56 224⇓ePN     Pn     02 40 01.7 -0.5
MAT    Matsushiro       9.56 224   P      Pn     02 40 01.9 -0.3
MAT                           eS       Sn     02 41 50.3 +2.4
GRNR   Gornyy           9.71 319  ePN     Pn     02 40 09.0 +4.9
NKL    Nikolayevsk     10.09 340  ePN     Pn     02 40 10.5 +1.3
NKL                             pmax   pmax
       comp=N,26nm,1.0s
NKL                             pmax   pmax
       comp=Z,43nm,1.0s
USRK   Ussuriysk Ar.   10.37 277   P      Pn     02 40 15.2 +2.1
       baz=96,slow=13
USRK                            LR     LR     02 44 44.2
       comp=Z,26nm,19.1s,baz=15,slow=40
KLR    Kul'dur         11.44 303   LR     LR     02 44 53.5
       comp=Z,4.4nm,18.1s,baz=80,slow=37
KLR    Kul'dur         11.44 303⇓ePN     Pn     02 40 30.8 +3.2
PEA0B  Petropavlovsk-  11.96  35  ePn     Pn     02 40 34.1 -0.6
PETK   Petropavlovsk-  11.96  35   P      Pn     02 40 34.9 +0.2
       baz=202,slow=11
PETK   Petropavlovsk-  11.96  35  ePn     Pn     02 40 34.6 -0.1
PEA1   Petropavlovsk-  11.96  35  ePn     Pn     02 40 34.9 +0.2
MDJ    Mudanjiang      12.07 280   P      Pn     02 40 34.9 -1.4
MDJ                             sP     P      02 40 55.4  +10
MDJ                             S      Sn     02 42 47.9 -1.0
MDJ                             PcS    PcS    02 49 49.0 +0.6
MDJ                             pmax   pmax
       comp=Z,8.0nm,0.9s
KSRS   Korea Array     15.36 252   P      Pn     02 41 20.2 +0.8
       comp=Z,0.8nm,0.3s,baz=59,slow=13,SNR=4.4
KSRS                            LR     LR     02 46 17.8
       comp=Z,38nm,21.7s,baz=25,slow=33
KS15   Wonju Array Si  15.39 252  ePn     Pn     02 41 20.2 +0.4
KSAR   Wonju Array Be  15.39 252   P      Pn     02 41 20.2 +0.4
KSAR   Wonju Array Be  15.39 252   P      Pn     02 41 20.2 +0.4
ZEA    Zeya            16.01 315  eP      P      02 41 37.8 +8.3
MA2    Magadan         16.03   8   LR     LR     02 47 26.2
       comp=Z,30nm,19.7s,baz=234,slow=36
JNU    Nakatsue        16.12 234   LR     LR     02 47 57.8
       comp=Z,9.0nm,18.1s,baz=123,slow=38
HIA    Hailar          19.07 296  eP      P      02 42 01.7 -1.6
       comp=Z,16nm,0.3s
HIA    Hailar          19.07 296  eP      P      02 42 01.7 -1.6
HIA                             pmax   pmax
       comp=Z,16nm,0.3s
SEY    Seymchan        19.49   8⇑eP      Pn     02 42 10.1 +0.5
HHC    Hu-ho-hao-te    25.79 276  eP      P      02 43 11.8 +0.9
HHC                             sP     sP     02 43 42.3 +3.7
HHC                             S      S      02 47 36.6 +2.3
HHC                             pmax   pmax
       comp=Z,21nm,0.8s
HHC                             pmax   pmax
       comp=Z,80nm,5.2s
ULN    Ulaanbaatar     27.49 292  eP      P      02 43 26.1  0.0
ULN    Ulaanbaatar     27.49 292  eP      P      02 43 24.2 -1.9
       comp=Z,9.1nm,0.8s
ULN    Ulaanbaatar     27.49 292deP      P      02 43 26.1  0.0
ULN                           i *PP    pP     02 43 43.1 -1.5
ULN                             pmax   pmax
       comp=Z,12nm,1.0s
SONA1  Songino Array   27.93 292  eP      P      02 43 29.8 -0.2
SONA0  Songino Array   27.93 292  eP      P      02 43 30.1 +0.1
SONM   Songino Array   27.93 292   P      P      02 43 30.1 +0.1
       comp=Z,10nm,1.0s,baz=84,slow=9.0,SNR=32
WHN    Wuhan           28.55 253  eP      P      02 43 35.5  0.0
TPUB   Ta-pu           29.43 234  eP      P      02 43 42.9 -0.5
       comp=Z,22nm,1.5s
H11N2  WAKE ISLAND Hy  29.51 138   T      T      03 14 36.3
       baz=329,slow=75,SNR=2938
H11N1  WAKE ISLAND Hy  29.52 138   T      T      03 14 43.9
       baz=329,slow=75,SNR=2048
H11N3  WAKE ISLAND Hy  29.53 138   T      T      03 14 44.3
       baz=329,slow=75,SNR=1983
H11S1  WAKE ISLAND Hy  30.46 139   T      T      03 15 54.9
       baz=330,slow=76,SNR=2128
H11S3  WAKE ISLAND Hy  30.47 139   T      T      03 15 53.8
       baz=330,slow=76,SNR=1616
H11S2  WAKE ISLAND Hy  30.48 139   T      T      03 15 52.0
       baz=330,slow=76,SNR=1784
LZH    Lanzhou         33.21 271  eP      P      02 44 17.5 +0.8
LZH                             pP     pP     02 44 34.7 -0.7
LZH                             sP     sP     02 44 42.0 -2.7
LZH                             pmax   pmax
       comp=Z,23nm,1.0s
GYA    Guiyang         36.39 255  eP      P      02 44 45.0 +0.9
GYA                             pmax   pmax
       comp=Z,10.0nm,0.8s
SVW2   Sparrevohn      37.91  42  eP      P      02 44 57.8 +1.3
       comp=Z,8.2nm,1.4s
IM3    Indian Mountai  38.92  34  eP      P      02 45 04.6 -0.2
PPLA   Purkeypile      39.50  39  eP      P      02 45 12.3 +2.4
       comp=Z,11nm,1.1s
CAST   Castle Rocks    39.54  38  eP      P      02 45 11.8 +1.7
       comp=Z,3.1nm,0.6s
KDAK   Kodiak Island   39.63  47   P      P      02 45 11.1 +0.3
       comp=Z,19nm,1.3s,baz=199,slow=4.5,SNR=7.2
KDAK   Kodiak Island   39.63  47  eP      P      02 45 11.7 +0.9
KDAK   Kodiak Island   39.63  47  eP      P      02 45 11.1 +0.3
       comp=Z,29nm,1.5s
KDAK   Kodiak Island   39.63  47  i P      P      02 45 11.7 +0.9
SKT    Skwentna        39.83  41  eP      P      02 45 12.8 +0.3
       comp=Z,2.6nm,1.2s
DGZ    Jazzator, Alta  39.91 300  eP      P      02 45 13.6 +0.2
DGZ                             pmax   pmax
       comp=Z,1.0nm,1.1s
KMI    Kunming         39.98 257   P      P      02 45 14.9 +0.5
KMI                             pmax   pmax
       comp=Z,12nm,0.5s
KMI                             pmax   pmax
       comp=Z,130nm,5.9s
BPAW   Bear Paw Mtn.   40.03  37  eP      P      02 45 14.4 +0.3
       comp=Z,4.1nm,1.2s
MLY    Manley          40.14  36  eP      P      02 45 16.2 +1.1
       comp=Z,1.8nm,0.9s
TRF    Thorofare Moun  40.35  38  eP      P      02 45 17.1 +0.1
       comp=Z,2.6nm,0.6s
ZAA1   Zalesovo Array  40.52 307  eP      P      02 45 17.4 -0.8
ZAA1                          ePcP     PcP    02 47 19.5 +0.3
ZALV   Zalesovo Beam   40.52 307   P      P      02 45 17.4 -0.8
       comp=Z,1.3nm,0.3s,baz=72,slow=7.8,SNR=4.5
ZALV                            PcP    PcP    02 47 19.5 +0.3
       comp=Z,3.6nm,0.5s,baz=96,slow=2.3,SNR=13
ZALV   Zalesovo Beam   40.52 307  eP      P      02 45 17.7 -0.5
GHO    Glory Hole Cre  41.08  41  eP      P      02 45 22.4 -0.5
       comp=Z,3.7nm,0.7s
MDM    Murphy Dome     41.20  36  eP      P      02 45 24.9 +1.1
       comp=Z,3.4nm,0.6s
WRH    Wood River Hil  41.28  37  eP      P      02 45 25.7 +1.3
       comp=Z,3.4nm,1.1s
SML    Sawmill         41.35  41  eP      P      02 45 26.5 +1.4
SML    Sawmill         41.35  41  eP      P      02 45 26.5 +1.4
       comp=Z,8.3nm,0.6s
SML    Sawmill         41.35  41  eP      P      02 45 26.5 +1.4
SML                             pmax   pmax
       comp=Z,8.0nm,0.6s
WMQ    Urumqi          41.55 291   P      P      02 45 28.2 +1.2
WMQ                             pP     pP     02 45 46.0 -0.2
WMQ                             sP     sP     02 45 54.1 -1.3
WMQ                             pmax   pmax
       comp=Z,31nm,0.7s
WMQ                             pmax   pmax
       comp=Z,330nm,5.9s
WMQ                             LR     LR
       comp=Z,73nm,22.7s
DHY    Denali Highway  41.69  39  eP      P      02 45 28.1 +0.2
       comp=Z,4.1nm,0.6s
IL1    Eielson Array   41.78  36  eP      P      02 45 28.2 -0.3
ILAR   Eielson Array   41.78  36   P      P      02 45 28.8 +0.3
       comp=Z,2.5nm,0.6s,baz=265,slow=6.3,SNR=37
ILB    Eielson Array   41.78  36  eP      P      02 45 28.8 +0.3
MK31   Makanchi Array  44.06 297  eP      P      02 45 47.1 -0.1
MK31   Makanchi Array  44.06 297  eP      P      02 45 47.1 -0.1
MK32   Makanchi Array  44.06 297  eP      P      02 45 46.8 -0.4
MK32                          ePP      PcP    02 47 30.9 -0.3
MKAR   Makanchi Array  44.06 297   P      P      02 45 46.8 -0.4
       comp=Z,6.9nm,0.6s,baz=81,slow=8.7,SNR=36
MKAR                            PcP    PcP    02 47 30.9 -0.3
       comp=Z,1.3nm,0.7s,baz=58,slow=4.6,SNR=4.5
MKAR   Makanchi Array  44.06 297  eP      P      02 45 47.1 -0.1
MKAR   Makanchi Array  44.06 297  eP      P      02 45 47.1 -0.1
       comp=Z,65nm,0.4s
MK01   Makanchi Array  44.06 297  eP      P      02 45 46.6 -0.5
EGAK   Eagle           44.23  36  eP      P      02 45 48.7 +0.5
       comp=Z,4.7nm,0.8s
MAKZ   Makanchi        44.26 297  eP      P      02 45 48.7  0.0
       comp=Z,8.7nm,0.9s
MAKZ   Makanchi        44.26 297  eP      P      02 45 48.7  0.0
MAKZ                            pmax   pmax
       comp=Z,9.0nm,0.9s
KURK   Kurchatov       45.03 304  eP      P      02 45 54.1 -0.7
KURK   Kurchatov       45.03 304  eP      P      02 45 54.4 -0.4
       comp=Z,0.4nm,0.5s
KURK                          ePcP     PcP    02 47 34.6 +0.3
KURK   Kurchatov       45.03 304ceP      P      02 45 54.1 -0.7
KURK                            pmax   pmax
       comp=Z,5.0nm,1.0s
DAWY   Dawson          45.10  37  eP      P      02 45 55.8 +0.6
       comp=Z,1.4nm,0.9s
KURBB  Kurchatov Arra  45.12 304   P      P      02 45 54.4 -1.1
       comp=Z,3.2nm,0.5s,baz=75,slow=9.4,SNR=31
KURBB                           PcP    PcP    02 47 34.6  0.0
       comp=Z,1.6nm,0.7s,baz=77,slow=3.6,SNR=10.0
INK    Inuvik          46.65  30   P      P      02 46 07.0 -0.2
       comp=Z,1.5nm,0.4s,baz=291,slow=9.5,SNR=19
INK    Inuvik          46.65  30  eP      P      02 46 07.0 -0.2
       comp=Z,5.8nm,1.2s
INK    Inuvik          46.65  30   P      P      02 46 07.0 -0.2
INK                             pmax   pmax
       comp=Z,2.0nm,0.4s
CM31   Chiang Mai Arr  47.00 253  eP      P      02 46 10.2 -0.4
CMAR   Chiang Mai Arr  47.00 253   P      P      02 46 10.2 -0.4
       comp=Z,1.0nm,0.3s,baz=47,slow=6.6,SNR=4.8
BVAR   Borovoye Array  49.04 309   P      P      02 46 24.9 -1.0
       comp=Z,1.3nm,0.4s,baz=92,slow=7.9,SNR=7.9
BVAR                            PcP    PcP    02 47 48.9 +0.3
       comp=Z,1.1nm,0.3s,baz=117,slow=3.1,SNR=5.2
TARG   Taragay, Kyrgy  49.05 293  eP      P      02 46 27.6 +1.0
       comp=Z,6.6nm,0.5s
KEKH   Kekaha          49.27  98  eP      P      02 46 27.4 -0.6
       comp=Z,238nm,1.5s
ULHL   Ulahol          49.86 294   P      P      02 46 33.2 +0.7
       SNR=7.7
ODAN   Odare           49.96 271  eP      P      02 46 36.1 +2.5
       comp=Z,12nm,0.7s
TKM2   Tokmak 2        49.98 295   P      P      02 46 34.1 +0.6
       SNR=16
JIRN   Jiri            50.37 272  eP      P      02 46 37.6 +0.8
       comp=Z,26nm,0.6s
GUN    Gumba           50.45 273  eP      P      02 46 38.3 +0.9
RAMN   Ramite          50.48 271  eP      P      02 46 38.7 +1.2
       comp=Z,22nm,0.7s
KBK    Karagaybulak    50.52 295   P      P      02 46 38.0 +0.5
       SNR=13
USP    Ospenovka       50.54 296   P      P      02 46 37.8 +0.4
       SNR=6.1
KZA    Kyzart          50.59 294   P      P      02 46 39.4 +1.1
       SNR=13
AAK    Ala-Archa       50.83 295  eP      P      02 46 40.2 +0.4
       comp=Z,6.4nm,0.5s
AAK    Ala-Archa       50.83 295  eP      P      02 46 40.2 +0.4
AAK                             pmax   pmax
       comp=Z,6.0nm,0.5s
KKN    Kakani          50.95 273  eP      P      02 46 41.5 +0.5
DMN    Daman           51.18 273  eP      P      02 46 43.7 +0.9
       comp=Z,9.1nm,0.5s
EKS2   Erkin-Say       51.28 296   P      P      02 46 43.5 +0.3
       SNR=5.5
GKN    Gorkha          51.29 274  eP      P      02 46 43.5  0.0
       comp=Z,5.7nm,0.3s
KSH    Kashi           51.32 291   P      P      02 46 47.3 +3.8
KSH                             sP     sP     02 47 14.2 +1.8
KSH                             PcP    PcP    02 48 00.2 +2.9
KSH                             S      S      02 54 00.2 +3.6
KSH                             ScS    ScS    02 56 26.3 +0.1
KSH                             pmax   pmax
       comp=Z,9.0nm,0.4s
KSH                             pmax   pmax
       comp=Z,120nm,5.4s
KSH                             LR     LR
       comp=Z,170nm,10.1s
KSH                             LR     LR
       comp=Z,170nm,12.0s
DANN   Dangsing        51.73 275  eP      P      02 46 46.7 -0.2
       comp=Z,42nm,0.8s
DIB    Dawson Inlet,   51.84  49  eP      P      02 46 46.0 -0.9
       comp=Z,11nm,1.4s
KOLN   Koldanda        52.18 274  eP      P      02 46 50.1  0.0
       comp=Z,13nm,0.5s
PYUN   Piuthan         52.43 275  eP      P      02 46 50.7 -1.3
KK31   Karatay Array   53.19 297  eP      P      02 46 56.9 -0.3
KK31   Karatay Array   53.19 297  eP      P      02 46 56.9 -0.3
KKAR   Karatay Array   53.19 297  eP      P      02 46 56.9 -0.3
KKAR   Karatay Array   53.19 297  eP      P      02 46 56.9 -0.3
ARU    Arti            53.93 317  eP      P      02 47 03.8 +1.5
ARU    Arti            53.93 317⇑eP      P      02 47 03.9 +1.6
ARU                             pmax   pmax
       comp=Z,2.0nm,0.9s
RES    Resolute Bay    55.09  17  eP      P      02 47 09.4 -0.9
       comp=Z,9.8nm,0.5s
RES    Resolute Bay    55.09  17  eP      P      02 47 09.5 -0.9
RES                             pmax   pmax
       comp=Z,10.0nm,0.5s
YKA    Yellowknife Ar  56.08  34   P      P      02 47 17.7 +0.1
       comp=Z,1.8nm,0.8s,baz=302,slow=6.6,SNR=6.7
NIL    Nilore          56.24 286  eP      P      02 47 20.1 +0.8
       comp=Z,8.1nm,0.6s
NIL    Nilore          56.24 286  eP      P      02 47 20.1 +0.8
NIL                             pmax   pmax
       comp=Z,8.0nm,0.6s
ABKAR  Akbulak array   56.59 308  eP      P      02 47 21.4 -0.2
AKTO   Aktyubinsk      57.08 310   P      P      02 47 24.0 -1.0
       comp=Z,1.2nm,0.5s,baz=61,slow=10,SNR=3.5
ARA0   ARCESS Array S  59.01 339  eP      P      02 47 37.3 -0.8
ARA0                          ePcP     PcP    02 48 26.4 +0.1
ARCES  ARCESS Array B  59.01 339   P      P      02 47 37.3 -0.8
       comp=Z,1.7nm,0.6s,baz=46,slow=7.7,SNR=5.7
ARCES                           PcP    PcP    02 48 26.4 +0.1
       comp=Z,1.8nm,0.8s,baz=46,slow=3.9,SNR=2.5
SUMG   Summit          63.88   2  eP      P      02 48 10.4 -1.0
       comp=Z,11nm,1.2s
SUMG   Summit          63.88   2  eP      P      02 48 10.4 -1.0
SUMG                            pmax   pmax
       comp=Z,11nm,1.2s
GEYT   Alibeck         63.92 298   P      P      02 48 10.7 -1.1
       comp=Z,145nm,1.2s,baz=357,slow=2.9,SNR=3.7
WR1    Warramunga Arr  64.38 193  eP      P      02 48 14.4 -0.4
       comp=Z,24nm,1.4s
WRA    Warramunga Arr  64.38 193   P      P      02 48 14.4 -0.4
       comp=Z,1.4nm,0.7s,baz=11,slow=6.5,SNR=7.6
FIA1   FINESS Array S  64.58 333  eP      P      02 48 14.0 -1.6
FIA0   FINESS Array S  64.58 333  eP      P      02 48 14.0 -1.6
FIA0   FINESS Array S  64.58 333  eP      P      02 48 14.0 -1.6
FINES  FINESS Array B  64.58 333   P      P      02 48 14.0 -1.6
       comp=Z,3.2nm,0.6s,baz=41,slow=7.7,SNR=18
FINES  FINESS Array B  64.58 333   P      P      02 48 14.0 -1.6
FINES                           pmax   pmax
       comp=Z,3.0nm,0.6s
FCC    Fort Churchill  66.26  30  eP      P      02 48 26.9 +0.4
       comp=Z,5.8nm,0.7s
FCC    Fort Churchill  66.26  30  eP      P      02 48 26.9 +0.4
FCC                             pmax   pmax
       comp=Z,6.0nm,0.7s
VSR    Storozhevoye    66.33 319⇑eP      P      02 48 26.8 -0.3
VSR                             pmax   pmax
       comp=Z,5.0nm,0.9s
ARN    Arnold Ranch    66.70  60  eP      P      02 48 28.3 -1.5
ARN    Arnold Ranch    66.70  60  eP      P      02 48 28.3 -1.5
NV01   Mina Array Sit  68.03  57  eP      P      02 48 39.4 +1.0
NVAR   Mina Array Bea  68.03  57   P      P      02 48 39.4 +1.0
       comp=Z,1.6nm,0.6s,baz=292,slow=7.7,SNR=7.4
AS01   Alice Springs   68.09 192  eP      P      02 48 39.1 +0.7
AS31   Alice Springs   68.10 192  eP      P      02 48 39.4 +0.9
       comp=Z,0.9nm,0.6s
ASAR   Alice Springs   68.10 192   P      P      02 48 39.4 +0.9
       comp=Z,2.1nm,0.7s,baz=8.9,slow=5.2,SNR=22
CARC   Carrizo Plain   69.04  61  eP      P      02 48 45.5 +1.0
KIV    Kislovodsk      69.31 311  eP      P      02 48 47.5 +1.4
KIV    Kislovodsk      69.31 311  eP      P      02 48 47.8 +1.7
       comp=Z,11nm,0.7s
KIV    Kislovodsk      69.31 311  eP      P      02 48 47.5 +1.4
KIV                             pmax   pmax
       comp=Z,15nm,1.1s
KBZ    Khabaz          69.34 311   P      P      02 48 46.6 +0.5
       comp=Z,5.2nm,0.9s,baz=59,slow=4.2,SNR=7.4
KBZ                             LR     LR     03 21 26.4
       comp=Z,21nm,19.0s,baz=37,slow=38
NB2    NORSAR Subarra  69.35 338   P      P      02 48 45.6 -0.4
       comp=Z,0.7nm,0.6s,baz=32,slow=6.5
ZEI    Tsey            69.41 310  eP      P      02 48 44.3 -2.6
HFS    Hagfors         69.43 337   P      P      02 48 45.5 -0.9
       comp=Z,2.5nm,0.4s,baz=55,slow=6.0,SNR=32
RCWM   Renegade Canyo  70.01  59  eP      P      02 48 48.4 -2.1
PD31   Pinedale Array  70.31  49  eP      P      02 48 53.5 +1.1
PDAR   Pinedale Array  70.31  49   P      P      02 48 53.2 +0.8
       comp=Z,1.0nm,0.8s,baz=248,slow=1.1,SNR=9.8
PDAR   Pinedale Array  70.31  49  eP      P      02 48 53.0 +0.6
PDAR                          epP      PcP    02 49 13.2 -0.4
AKASG  Malin Array Be  71.21 323   P      P      02 48 57.0 -0.3
       comp=Z,3.6nm,0.6s,baz=39,slow=6.4,SNR=17
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AKBB  Malin Array Si    71.21 323  eP       P        02 48 57.0 -0.4
      comp=Z,6.9nm,0.8s
KIEV  Kiev              71.22 323  eP       P        02 48 56.4 -1.1
      comp=Z,7.0nm,0.9s
KIEV  Kiev              71.22 323c iP       P        02 48 56.8 -0.7
KIEV                               pmax     pmax
      comp=Z,7.0nm,0.9s
AK11  Malin Array Si    71.25 323  eP       P        02 48 57.5 -0.1
U15A  North Rim         72.97  56  eP       P        02 49 10.4 +1.8
      comp=Z,1.2nm,0.6s
B35A  Bob, Littlefor    74.15  37  eP       P        02 49 15.0 +0.1
      comp=Z,3.9nm,0.6s
KWP   Kalwaria Pacla    74.75 326  eP       P        02 49 19.0 +0.6
      comp=Z,105nm,0.8s
KWP   Kalwaria Pacla    74.75 326  eP       P        02 49 19.0 +0.6
KWP                                pmax     pmax
      comp=Z,105nm,0.8s
BUR08 Bucovina Ar. S    75.25 323  eP       P        02 49 21.6 +0.1
BUR04 Bucovina Ar. S    75.26 323  eP       P        02 49 19.9 -1.6
OJC   Ojcow             75.44 328  eP       P        02 49 22.7 +0.4
OJC   Ojcow             75.44 328  eP       P        02 49 22.7 +0.4
      comp=Z,8.7nm,1.0s
OJC   Ojcow             75.44 328  eP       P        02 49 22.7 +0.4
OJC                                pmax     pmax
      comp=Z,9.0nm,1.0s
ECSD  EROS Data Cent    76.31  42  eP       P        02 49 27.9 +0.5
      comp=Z,2.6nm,0.8s
E38A  The Farm, Brul    76.44  37  eP       P        02 49 28.1  0.0
      comp=Z,5.0nm,0.8s
MLR   Muntele Rosu      76.57 321   P       P        02 49 29.8 +0.8
      comp=Z,0.3nm,0.6s,baz=195,slow=16,SNR=5.1
MORC  Moravsky Berou    76.66 329  eP       P        02 49 29.2 -0.1
      comp=Z,21nm,1.0s
MORC  Moravsky Berou    76.66 329  eP       P        02 49 29.2 -0.1
MORC                               pmax     pmax
      comp=Z,21nm,1.0s
MORC  Moravsky Berou    76.66 329  eP       P        02 49 29.7 +0.4
CLL   Collm             77.01 332⇓iP       P        02 49 30.6 -0.6
      comp=Z,11nm,1.0s
CLL   Collm             77.01 332  eP       P        02 49 30.9 -0.3
CLL   Collm             77.01 332  eP       P        02 49 30.9 -0.3
      comp=Z,9.1nm,0.6s
CLL   Collm             77.01 332⇓iP       P        02 49 30.6 -0.6
CLL                                pmax     pmax
      comp=Z,11nm,1.0s
BR101 Keskin Array S    77.10 313  eP       P        02 49 32.3 +0.2
BRTR  Keskin Array B    77.10 313   P       P        02 49 32.3 +0.2
      comp=Z,0.7nm,0.8s,baz=5.7,slow=2.9,SNR=3.3
VYHS  Vyhne             77.20 327  eP       P        02 49 32.9 +0.6
VYHS  Vyhne             77.20 327  eP       P        02 49 32.9 +0.6
JAVC  Velka Javorina    77.36 328  eP       P        02 49 34.8 +1.5
VRAC  Vranov            77.40 329  eP       P        02 49 34.2 +0.8
I37A  Lemond, Waseca    77.61  40  eP       P        02 49 35.6 +0.9
      comp=Z,15nm,1.3s
KRUC  Moravsky          77.67 329  eP       P        02 49 35.5 +0.6
SCHQ  Schefferville     77.76  19   P       P        02 49 35.6 +0.2
      comp=Z,3.3nm,0.6s,baz=347,slow=6.3,SNR=7.1
SCHQ  Schefferville     77.76  19  eP       P        02 49 35.6 +0.2
      comp=Z,4.1nm,0.7s
COWI  Conover           77.88  36  eP       P        02 49 36.2  0.0
      comp=Z,2.2nm,0.6s
KHC   Kasperske Hory    78.64 331  eP       P        02 49 41.0 +0.6
KHC   Kasperske Hory    78.64 331  eP       P        02 49 41.0 +0.6
GEC2  GERESS Array S    78.84 330  eP       P        02 49 41.4 -0.1
      comp=Z,1.5nm,0.8s
GEC2  GERESS Array S    78.84 330  eP       P        02 49 41.4 -0.1
GEC2                               pmax     pmax
      comp=Z,2.0nm,0.8s
GERES GERESS Array B    78.84 330   P       P        02 49 41.4 -0.1
      comp=Z,0.9nm,0.6s,baz=22,slow=4.3,SNR=8.1
GEA0  GERESS Array S    78.85 330  eP       P        02 49 40.9 -0.6
ARSA  Arzberg           79.50 328  eP       P        02 49 44.7 -0.4
      comp=Z,1.9nm,0.7s
VTS   Vitosha           80.06 321  eP       P        02 49 48.6 +0.3
      comp=Z,5.2nm,0.9s
SOKA  Soboth            80.16 328  eP       P        02 49 48.5 -0.3
      comp=Z,3.7nm,0.8s
UCC   Uccle             80.16 337  eP       P        02 49 48.5  0.0
      comp=Z,29nm,0.4s
UCC   Uccle             80.16 337  eP       P        02 49 48.5  0.0
UCC                                pmax     pmax
      comp=Z,29nm,0.4s
KBA   Koelnbreinsper    80.46 330  eP       P        02 49 51.2 +0.8
      comp=Z,5.0nm,0.8s
OBKA  Obir              80.49 329  eP       P        02 49 50.6 +0.2
      comp=Z,2.0nm,0.6s
WTTA  Wattenberg        80.92 331  eP       P        02 49 51.4 -1.5
      comp=Z,3.5nm,0.7s
MMAI  Mount Meron Ar    81.01 307   P       P        02 49 54.7 +1.3
      comp=Z,1.6nm,0.5s,baz=79,slow=10,SNR=4.4
RETA  Reutte            81.03 331  eP       P        02 49 53.4  0.0
      comp=Z,4.6nm,1.1s
MOTA  Moosalm           81.04 331  eP       P        02 49 54.6 +1.2
      comp=Z,4.4nm,0.8s
BFO   Black Forest      81.12 333  i P      P        02 49 54.6 +0.9
FETA  Feichten          81.44 331  eP       P        02 49 55.8 +0.2
      comp=Z,2.4nm,0.8s
DAVA  Damuels           81.51 332  eP       P        02 49 55.5 -0.5
      comp=Z,3.5nm,0.7s
R40A  Maddies Statio    82.59  43  eP       P        02 50 01.9 +0.3
      comp=Z,3.0nm,0.8s
TX31  Lajitas Ar. Si    83.09  56  eP       P        02 50 04.4 -0.1
TX31                               epP      pP       02 50 25.1 -0.7
TXAR  Lajitas Array     83.09  56   P       P        02 50 05.5 +1.1
      comp=Z,1.2nm,0.6s,baz=295,slow=3.9,SNR=22
TRQ   Mont Tremblant    83.31  27  eP       P        02 50 05.1 -0.1
IDI   Anoyia            84.99 316   P       P        02 50 12.8 -1.2
      comp=Z,3.5nm,0.5s,baz=31,slow=12,SNR=5.1
IDI   Anoyia            84.99 316  eP       P        02 50 12.8 -1.2
      comp=Z,20nm,1.2s
TKL   Tuckaleechee C    88.72  39   P       P        02 50 32.2 +0.2
      comp=Z,2.5nm,0.7s,baz=288,slow=6.4,SNR=4.9
TKL   Tuckaleechee C    88.72  39  eP       P        02 50 32.2 +0.2
      comp=Z,2.2nm,0.8s
Z50A  Ashland           89.70  42  eP       P        02 50 35.2 -1.4
      comp=Z,4.6nm,0.8s
Z50A                               epP      pP       02 50 56.8 -1.4
ESDC  Sonseca Array     92.70 338   P       P        02 50 48.8 -1.7
      comp=Z,0.5nm,0.6s,baz=23,slow=3.8,SNR=4.6
TOA1  Torodi Ar. Sit   114.81 322  ePKiKP   PKiKP    02 56 18.1 -1.0
TORD  Torodi Ar. Bea   114.81 322  PKP      PKPdf    02 56 18.1 -1.0
      comp=Z,0.3nm,0.4s,baz=20,slow=2.3
SNAA  Sanae            148.32 198  PKPbc    PKPbc    02 57 23.5 +0.4
      comp=Z,1.5nm,0.6s,baz=167,slow=2.2,SNR=14
```

CSEM ***04*** *02:48:55.6, 40°.15N×29°.35W, h15^{km}, ML2.3*

PDA 04 02:48:55.6±0.5**, 40°.15N×29°.35W, h15^{km}, MD3.6, ML2.3, Error ellipse: s-maj=7.0km s-min=3.4km az=75.0, Azores Islands region**

```
Code  Station Name       Δ°   AZ°    Phase ID           Time      Res
                                    Op       ISC       h  m  s    ISC
PGRA  Graciosa           1.54 136  eS       Sn       02 49 35.1 -7.1
PGRA                                A       A        02 49 43.0
      12nm,0.4s
PGRA  Graciosa           1.54 136  eS       Sn       02 49 35.1 -7.1
PCED  Cedros             1.60 161  eS       Sn       02 49 36.3 -7.4
PCED                                A       A        02 49 38.8
      18nm,0.1s
PCED  Cedros             1.60 161  eS       Sn       02 49 36.3 -7.4
CALA  Caldeira           1.64 162  eS       Sn       02 49 38.0 -6.9
CALA  Caldeira           1.64 162  eS       Sn       02 49 38.0 -6.9
ROSA  Rosais             1.67 149  eP       Pn       02 49 19.9 -4.3
ROSA                               eS       Sn       02 49 38.1 -7.3
ROSA                                A       A        02 49 41.3
      9.2nm,0.3s
ROSA  Rosais             1.67 149  eP       Pn       02 49 19.9 -4.3
ROSA                               eS       Sn       02 49 38.1 -7.3
PICO  Pico               1.79 156  eP       Pn       02 49 21.9 -4.2
PICO                               eS       Sn       02 49 41.7 -6.9
PICO                                A       A        02 49 44.6
      14nm,0.2s
PICO  Pico               1.79 156  eP       Pn       02 49 21.9 -4.2
PICO                               eS       Sn       02 49 41.7 -6.9
PMAN  Manadas            1.80 147  eP       Pn       02 49 21.9 -4.2
PMAN                               eS       Sn       02 49 41.7 -7.0
PMAN                                A       A        02 49 42.8
      14nm,0.2s
PMAN  Manadas            1.80 147  eP       Pn       02 49 21.9 -4.2
PMAN                               eS       Sn       02 49 41.7 -7.0
PCAN  Candelaria         1.81 158  eP       Pn       02 49 22.0 -4.3
PCAN                               eS       Sn       02 49 41.9 -7.1
PCAN                                A       A        02 49 43.9
      16nm,0.1s
PCAN  Candelaria         1.81 158  eP       Pn       02 49 22.0 -4.3
PCAN                               eS       Sn       02 49 41.9 -7.1
```

MEX 04 02:56:45.1±0.6**, 16°.46N×98°.62W, h16^{km}**±8^{km}**, MD3.6, Near coast of Guerrero**

```
Code  Station Name       Δ°   AZ°    Phase ID           Time      Res
                                    Op       ISC       h  m  s    ISC
PNIG  Pinotepa           0.48  98  eP       Pg       02 56 53.1 -1.7
PNIG                               eS       Sg       02 56 59.7 -1.6
TLIG  Tlapa              1.10   3  eP       Pb       02 57 02.1 -3.7
TLIG                               eS       Sb       02 57 15.3 -4.7
CAIG  El Cayaco          1.68 291  eP       Pn       02 57 10.7 -3.1
CAIG                               i S      Sn       02 57 30.7 -4.3
VHO   Vista Hermosa      1.91  71  eP       Pn       02 57 14.2 -3.0
VHO                                i S      Sn       02 57 37.1 -3.9
```

IDC ***04*** *03:01:19.5±1.2, 12°.82S×167°.01E, h192^{km}±9^{km}, mb4.0/21, mb1 4.1/21, mb1mx3.9/55, mbtmp4.4/21, MS2.7/1, Ms1 2.7/1, ms1mx2.4/42, Error ellipse: s-maj=17.6km s-min=11.4km az=112.0*

ISCJB ***04*** *03:01:21.2±2.1, 12°.83S±0°.07×166°.86E±0°.06, h219^{km}±20^{km}, mb4.3/66, Error ellipse: s-maj=10.9km s-min=9.3km az=172.4*

NEIC ***04*** *03:01:23.1±1.3, 12°.84S×166°.91E, h226^{km}±12^{km}, mb4.5/48, Error ellipse: s-maj=6.0km s-min=5.5km az=152.0*

ISC 04 03:01:20.1±1.0**, 12°.82S**±0°.07×**166°.9E**±0°.1**, h195^{km}**±8^{km}**, h196^{km}:pP-P, n108,** σ**0^{s}99**/120**, mb4.4**/66**, Santa Cruz Islands**

```
Code  Station Name       Δ°   AZ°    Phase ID           Time      Res
                                    Op       ISC       h  m  s    ISC
HNR   Honiara            7.62 296  LR       LR       03 06 15.4
      comp=Z,57nm,19.4s,baz=88,slow=38
DZM   Mont Dzumac        9.21 183   P       Pn       03 03 31.6 +2.3
      2.8nm,0.3s,baz=178,slow=16,SNR=23
DZM                                 S       Sn       03 05 11.9 -0.7
      0.4nm,0.3s,baz=323,slow=20,SNR=3.7
EIDS  Eidsvold          19.46 228  eP       Pn       03 05 34.4 -1.3
      9.4nm,0.6s
CTA   Charters Tower    21.07 247   P       P        03 05 50.9 +1.4
      6.1nm,0.6s,baz=360,slow=3.4,SNR=5.6
CTAO  Charters Tower    21.07 247  eP       P        03 05 49.6 +0.2
      13nm,0.9s
OUZ   Omahuta           23.11 166  eP       P        03 06 07.5 -1.4
      29nm,1.5s
COEN  Coen              23.12 264  eP       P        03 06 09.4 +0.2
      34nm,1.4s
HIZ   Hauiti            26.55 166  eP       P        03 06 39.6 -0.3
      87nm,1.5s
BKZ   Black Stump Fm    27.58 164  eP       P        03 06 48.8 -0.4
      74nm,1.5s
THZ   Tophouse          29.31 171  eP       P        03 07 05.7 +1.2
      31nm,1.2s
STKA  Stephens Creek    30.00 227   P       P        03 07 11.4 +0.8
      2.3nm,0.5s,baz=42,slow=11,SNR=6.3
STKA                                pP      pP       03 07 50.6  0.0
      1.0nm,0.4s,baz=72,slow=6.8,SNR=1.8
WB2   Warramunga Arr    31.99 253  eP       P        03 07 27.4 -0.8
      11nm,1.1s
WR1   Warramunga Arr    32.00 253  eP       P        03 07 27.9 -0.4
WR1                                epP      pP       03 08 09.2 +0.7
WRA   Warramunga Arr    32.00 253   P       P        03 07 27.9 -0.4
      3.3nm,0.6s,baz=86,slow=9.2,SNR=21
WRA                                 pP      pP       03 08 09.2 +0.7
      1.4nm,0.7s,baz=83,slow=8.6,SNR=3.9
AS01  Alice Springs     33.03 246  eP       P        03 07 36.7 -0.6
AS31  Alice Springs     33.07 246  eP       P        03 07 37.4 -0.3
      1.4nm,0.6s
AS31                               epP      pP       03 08 16.5 -1.4
AS31                               ePcP     PcP      03 10 15.7 -0.9
AS31                               eScP     ScP      03 13 42.6 +0.2
ASAR  Alice Springs     33.07 246   P       P        03 07 37.2 -0.4
      3.7nm,0.6s,baz=73,slow=9.8,SNR=41
ASAR                                pP      pP       03 08 16.5 -1.4
      1.0nm,0.7s,baz=72,slow=9.4,SNR=2.4
ASAR                                PcP     PcP      03 10 15.7 -0.9
      0.7nm,0.7s,baz=88,slow=2.7,SNR=5.0
ASAR                                ScP     ScP      03 13 42.6 +0.2
      1.2nm,0.9s,baz=101,slow=2.4,SNR=5.7
BBOO  Buckleboo         34.51 230  eP       P        03 07 50.5 +0.6
      9.7nm,1.1s
FORT  Forrest           40.00 237  eP       P        03 08 36.5 +0.4
      13nm,0.8s
NWAO  Narrogin (SRO)    49.45 238  eP       P        03 09 50.4 -0.3
      22nm,1.4s
MJAR  Matsushiro Arr    56.06 332   P       P        03 10 38.2 -0.8
      2.3nm,0.6s,baz=179,slow=7.7,SNR=9.0
MAJO  Matsushiro        56.06 332  eP       P        03 10 38.2 -0.8
ASAJ  Asahikawa         60.83 340  eP       P        03 11 11.7  0.0
      7.2nm,0.9s
KS15  Wonju Array Si    61.99 325  eP       P        03 11 20.3 +0.7
KS01  Wonju Array Si    62.01 325  eP       P        03 11 20.7 +1.0
VNDA  Vanda             64.75 181   P       P        03 11 37.5 +0.3
      1.4nm,0.6s,baz=355,slow=7.3,SNR=26
VNDA  Vanda             64.75 181  eP       P        03 11 37.5 +0.3
VNDA                               ePcP     PcP      03 12 10.1 +1.1
SBA   Scott Base        65.04 180  eP       P        03 11 40.6 +1.6
      3.6nm,0.8s
KIWB  Kanaga Island     65.87  11  eP       P        03 11 45.0 +0.4
PETK  Petropavlovsk-    66.13 354   P       P        03 11 47.4 +1.1
      6.0nm,0.7s,baz=187,slow=7.1
PETK  Petropavlovsk-    66.13 354  eP       P        03 11 46.8 +0.5
PEA1  Petropavlovsk-    66.14 354  eP       P        03 11 47.4 +1.0
GSTR  Great Sitkin T    66.30  11  eP       P        03 11 47.9 +0.4
KLR   Kul'dur           69.13 336   P       P        03 12 05.7 +0.6
      0.1nm,0.6s,baz=113,slow=6.0,SNR=5.3
CM31  Chiang Mai Arr    73.86 294  eP       P        03 12 35.0 +1.0
CMAR  Chiang Mai Arr    73.86 294   P       P        03 12 35.0 +1.0
      2.0nm,0.6s,baz=121,slow=5.1,SNR=5.6
SEY   Seymchan          76.35 353   P       P        03 12 47.5 +0.2
      9.6nm,0.6s,baz=160,slow=5.7,SNR=21
QSPA  South Pole Qui    77.20 180   P       P        03 12 52.2 -0.2
      2.1nm,0.7s,baz=83,slow=2.2,SNR=6.1
KDAK  Kodiak Island     77.81  21   P       P        03 12 55.0 -0.5
      4.1nm,0.6s,baz=198,slow=3.2,SNR=6.2
KDAK  Kodiak Island     77.81  21  eP       P        03 12 55.0 -0.5
      8.9nm,1.1s
BILL  Bilibino          80.64 360  eP       P        03 13 10.8 +0.1
      12nm,0.8s
SONA0 Songino Array     80.76 324  eP       P        03 13 12.3 +0.4
SONM  Songino Array     80.76 324   P       P        03 13 12.3 +0.4
      1.1nm,0.8s,baz=134,slow=8.3,SNR=3.5
PMR   Palmer            81.83  20  eP       P        03 13 16.7 -0.3
      12nm,1.0s
GHO   Glory Hole Cre    82.02  20  eP       P        03 13 18.1 -0.1
      5.3nm,0.8s
SML   Sawmill           82.24  20  eP       P        03 13 19.0 -0.3
      21nm,1.4s
CAST  Castle Rocks      82.28  17  eP       P        03 13 18.4 -1.1
      9.9nm,0.8s
SCM   Sheep Creek Mo    82.59  20  eP       P        03 13 21.3 +0.1
      14nm,0.8s
DIV   Divide            82.63  21  eP       P        03 13 21.2 -0.1
      9.0nm,0.8s
KLU   Klutina           82.83  21  eP       P        03 13 22.4 +0.1
      7.1nm,0.8s
TRF   Thorofare Moun    82.84  18  eP       P        03 13 21.5 -1.0
      10nm,1.0s
BPAW  Bear Paw Mtn.     83.12  17  eP       P        03 13 22.6 -1.2
      1.7nm,0.8s
MCK   McKinley          83.45  18  eP       P        03 13 24.8 -0.6
      12nm,1.0s
DHY   Denali Highway    83.47  19  eP       P        03 13 25.6 -0.1
      5.5nm,0.7s
BWN   Browne            83.62  18  eP       P        03 13 25.9 -0.3
      34nm,1.0s
IM3   Indian Mountai    83.82  15  eP       P        03 13 27.2  0.0
MLY   Manley            83.89  17  eP       P        03 13 27.4 -0.3
      7.4nm,1.1s
CARC  Carrizo Plain     84.08  52  eP       P        03 13 32.8 +3.5
CCB   Clear Creek Bu    84.46  18  eP       P        03 13 29.3 -1.1
      12nm,0.8s
AFDM  Forest Hills D    84.52  48  eP       P        03 13 31.1 -0.3
      4.4nm,0.9s
MDM   Murphy Dome       84.56  18  eP       P        03 13 29.9 -1.1
      19nm,1.0s
COLA  College           84.61  18  eP       P        03 13 30.6 -0.5
      33nm,1.2s
IL1   Eielson Array     84.83  18  eP       P        03 13 30.8 -1.5
ILAR  Eielson Array     84.83  18   P       P        03 13 31.1 -1.2
      5.5nm,0.4s,baz=231,slow=5.5,SNR=201
ILB   Eielson Array     84.83  18  eP       P        03 13 31.1 -1.2
BEKR  Beckworth         85.29  48  eP       P        03 13 35.2 -0.2
      3.7nm,0.7s
EML   El Monte Cty P    85.64  55  eP       P        03 13 38.7 +1.7
COLD  Coldfoot          85.69  15  eP       P        03 13 37.5 +1.0
      7.7nm,0.9s
NV01  Mina Array Sit    86.30  49  eP       P        03 13 39.8 -0.7
NVAR  Mina Array Bea    86.30  49   P       P        03 13 39.9 -0.6
      1.3nm,0.7s,baz=235,slow=7.8,SNR=7.1
EGAK  Eagle             86.64  20  eP       P        03 13 40.6 -0.6
      6.9nm,0.8s
KVN   Kaiserville       86.65  49  eP       P        03 13 41.9 -0.3
      4.7nm,1.3s
DAWY  Dawson            86.79  21  eP       P        03 13 41.5 -0.5
      5.9nm,1.4s
J08A  Circle Bar Ran    87.83  45  eP       P        03 13 47.3 -0.2
      5.4nm,0.6s
BMO   Blue Mountains    89.11  44  eP       P        03 13 53.0 -0.5
      1.8nm,0.7s
PSUT  Pine Spring       89.65  50  eP       P        03 13 56.3  0.0
      2.4nm,0.8s
MFID  Camas Ranch       89.67  45  eP       P        03 13 56.2  0.0
      3.4nm,0.8s
CCUT  Cedar City        89.74  51  eP       P        03 13 57.2 +0.4
      1.6nm,0.8s
U15A  North Rim         90.26  53  eP       P        03 13 59.8 +0.4
      4.3nm,0.8s
X16A  Lo Mia Camp, P    90.39  55  eP       P        03 14 00.2 +0.3
      2.1nm,0.8s
HLID  Hailey            90.69  45  eP       P        03 14 01.3 +0.3
      1.4nm,0.7s
TMUT  Trail Mountain    91.84  50  eS       S        03 24 53.7 +2.4
PV23  Carpenter Ridg    93.30  51  eP       P        03 14 13.4 +0.1
      4.1nm,0.7s
PD31  Pinedale Array    93.91  47  eP       P        03 14 14.6 -1.4
PDAR  Pinedale Array    93.91  47   P       P        03 14 14.6 -1.4
      0.3nm,0.5s,baz=191,slow=1.4,SNR=5.1
SNAA  Sanae             95.43 183   P       P        03 14 20.9 -1.3
      1.1nm,0.9s,baz=186,slow=6.2,SNR=5.1
SNAA  Sanae             95.43 183  eP       P        03 14 20.9 -1.3
      7.1nm,1.5s
MK01  Makanchi Array    95.57 317  eP       P        03 14 22.7 -0.5
MK31  Makanchi Array    95.58 317  eP       P        03 14 23.2 -0.1
MK32  Makanchi Array    95.58 317  eP       P        03 14 23.1 -0.2
MKAR  Makanchi Array    95.58 317   P       P        03 14 23.1 -0.2
      1.6nm,0.6s,baz=86,slow=5.9,SNR=14
ZALV  Zalesovo Beam     95.65 324   P       P        03 14 22.2 -1.1
      1.4nm,0.5s,baz=127,slow=4.5,SNR=4.7
ZAA1  Zalesovo Array    95.65 324  eP       P        03 14 22.2 -1.1
TXAR  Lajitas Array     95.67  61   P       P        03 14 24.0 -0.1
      0.2nm,0.7s,baz=260,slow=4.2,SNR=3.0
YKA   Yellowknife Ar    96.02  27   P       P        03 14 23.1 -1.7
      0.8nm,0.5s,baz=254,slow=4.1,SNR=5.0
YKB5  Yellowknife Ar    96.02  27  eP       P        03 14 23.1 -1.7
KURK  Kurchatov         98.72 320  eP       P        03 14 36.6 -0.6
KURBB Kurchatov Arra    98.76 320   P       P        03 14 36.6 -0.8
      0.2nm,0.2s,baz=100,slow=4.5,SNR=3.2
ARA0  ARCESS Array S   118.32 346  ePKPdf   PKPdf    03 19 41.9 -1.8
ARCES ARCESS Array B   118.32 346  PKP      PKPdf    03 19 41.9 -1.8
      2.2nm,0.4s,baz=70,slow=2.2,SNR=33
ARCES                              PKKPbc   PKKPbc   03 30 02.0 -3.0
      4.4nm,1.1s,baz=270,slow=0.5,SNR=3.9
FIA0  FINESS Array S   123.83 339  ePKPdf   PKPdf    03 19 53.8 -0.6
FINES FINESS Array B   123.83 339  PKP      PKPdf    03 19 53.8 -0.6
      0.5nm,0.5s,baz=20,slow=4.4,SNR=4.7
BOSA  Boshof           124.58 221  PKP      PKPdf    03 19 56.7 -0.5
      1.3nm,0.7s,baz=198,slow=3.2,SNR=2.6
HFS   Hagfors          128.80 343  PKP      PKPdf    03 20 03.4 -0.6
      1.3nm,0.6s,baz=64,slow=6.6,SNR=3.6
CLL   Collm            136.17 337  i PKPdf  PKPdf    03 20 20.1 +1.9
      comp=Z,7.0nm,1.1s
CLL   Collm            136.17 337  i P      PKPdf    03 20 20.1 +1.9
CLL                                pmax     pmax
      comp=Z,7.0nm,1.1s
KEST  Kesra            149.51 322  PKPbc    PKPbc    03 20 46.0 -0.8
      comp=Z,3.4nm,0.6s,baz=13,slow=1.1,SNR=11
ESDC  Sonseca Array    152.06 345  PKPbc    PKPbc    03 20 52.4 -0.3
      comp=Z,0.7nm,0.5s,baz=15,slow=2.9,SNR=8.0
ESDC                               PKPab    PKPab    03 21 02.0 -0.8
      comp=Z,1.7nm,0.7s,baz=16,slow=4.0,SNR=11
```

ISCJB ***04*** *03:08:38.2±0.5, 45°.33N±0°.07×150°.31E±0°.08, h100^{km}, mb3.9/19, Error ellipse: s-maj=12.2km s-min=4.0km az=144.7*

MOS ***04*** *03:08:39.6±0.9, 45°.43N×150°.22E, h111^{km}, mb4.1/13, Error ellipse: s-maj=12.2km s-min=9.5km az=45.4*

SKHL ***04*** *03:08:41.3±0.9, 45°.00N×150°.44E, h57^{km}±10^{km}, mb4.9/6*

JMA ***04*** *03:08:42.3±0.5, 44°.61N×150°.27E, h122^{km}, M3.8*

IDC ***04*** *03:08:43.8±3.0, 45°.52N×149°.97E, h131^{km}±26^{km}, mb3.6/17, mb1 3.8/18, mb1mx3.5/72, mbtmp4.0/18, MS2.8/2, Ms1 2.8/2, ms1mx2.3/63, Error ellipse: s-maj=17.8km s-min=14.7km az=132.0*

ISC 04 03:08:38.6±0.7**, 45°.16N**±0°.08×**150°.36E**±0°.08**, h100^{km}, n64,** σ**2^{s}00**/74**, mb3.9**/19**, 3C-3D, Kuril Islands**

```
Code  Station Name       Δ°   AZ°    Phase ID           Time      Res
                                    Op       ISC       h  m  s    ISC
KUR   Kuril'sk           1.76 273  i P      Pn       03 09 09.8 +1.8
KUR                                 AMB     AMB      03 09 10.0
      247nm,0.2s
KUR                                 AMB     AMB      03 09 10.0
      246nm,0.2s
KUR                                 AMB     AMB      03 09 10.0
      432nm,0.2s
KUR                                i S      Sn       03 09 31.0 +0.5
KUR                                 A       A        03 09 33.0
      1µm,0.2s
KUR                                 A       A        03 09 33.0
      1µm,0.2s
KUR   Kuril'sk           1.76 273d iPN      Pn       03 09 09.6 +1.6
KUR                                i S      Sn       03 09 31.3 +0.8
KUR                                 pmax    pmax
      comp=N,247nm,0.1s
KUR                                 pmax    pmax
      comp=E,246nm,0.1s
KUR                                 pmax    pmax
      comp=Z,432nm,0.1s
KUR                                 smax    smax
      comp=N,1µm,0.2s
KUR                                 smax    smax
      comp=E,1µm,0.2s
SHO   Shikotan           2.83 244  i P      Pn       03 09 24.0 +2.0
SHO                                 AMB     AMB      03 09 25.0
      comp=E,8.0nm,0.2s
SHO                                 AMB     AMB      03 09 25.0
      comp=E,16nm,0.2s
SHO                                 AMB     AMB      03 09 25.0
      comp=E,26nm,0.2s
SHO                                eS       Sn       03 09 55.0 -0.4
SHO                                 A       A        03 10 00.1
      comp=E,219nm,0.3s
SHO                                 A       A        03 10 00.1
      comp=E,253nm,0.3s
SHO   Shikotan           2.83 244c iPN      Pn       03 09 24.2 +2.2
SHO                                eS       Sn       03 09 55.4  0.0
SHO                                 pmax    pmax
      comp=N,8.0nm,0.2s
SHO                                 pmax    pmax
      comp=Z,26nm,0.2s
SHO                                 pmax    pmax
      comp=E,16nm,0.2s
SHO                                 smax    smax
      comp=N,215nm,0.4s
SHO                                 smax    smax
      comp=E,253nm,0.4s
YUK   Yuzh-Kuril'sk      3.40 252  i P      Pn       03 09 32.0 +2.4
YUK                                 AMB     AMB      03 09 35.0
      comp=E,60nm,0.2s
YUK                                 AMB     AMB      03 09 35.0
      comp=E,96nm,0.2s
YUK                                 AMB     AMB      03 09 35.0
      comp=E,180nm,0.2s
YUK                                i S      Sn       03 10 10.7 +1.7
YUK                                 A       A        03 10 13.0
      comp=E,22nm,0.2s
YUK                                 A       A        03 10 13.0
      comp=E,237nm,0.2s
YUK   Yuzh-Kuril'sk      3.40 252d iPN      Pn       03 09 32.2 +2.6
YUK                                i S      Sn       03 10 11.1 +2.1
YUK                                 pmax    pmax
      comp=Z,180nm,0.1s
YUK                                 pmax    pmax
      comp=N,60nm,0.2s
YUK                                 pmax    pmax
```

	comp=E,96nm,0.2s						
YUK				smax	smax		
	comp=N,22nm,0.2s						
YUK				smax	smax		
	comp=E,237nm,0.1s						
LAGR	**Lagunnoye**	**3.44**	**253**	*i* P	**Pn**	**03 09 32.8**	**+2.6**
LAGR				AMB	AMB	03 09 34.5	
	comp=E,112nm,0.3s						
LAGR				*e*S	**Sn**	**03 10 11.7**	**+1.6**
LAGR				A	A	03 10 20.6	
	comp=E,423nm,0.5s						
LAGR				A	A	03 10 20.6	
	comp=E,431nm,0.5s						
LAGR	**Lagunnoye**	**3.44**	**253**	*c i*PN	**Pn**	**03 09 32.8**	**+2.6**
LAGR				*i* S	**Sn**	**03 10 11.7**	**+1.6**
LAGR				pmax	pmax		
	comp=Z,112nm,0.3s						
LAGR				pmax	pmax		
	comp=E,46nm,0.2s						
LAGR				pmax	pmax		
	comp=N,102nm,0.4s						
LAGR				smax	smax		
	comp=N,423nm,0.5s						
LAGR				smax	smax		
	comp=E,431nm,0.2s						
GRPR	**Tuman**	**3.48**	**252**	*i* P	**Pn**	**03 09 33.0**	**+2.4**
GRPR				AMB	AMB	03 09 34.0	
	comp=E,81nm,0.2s						
GRPR				*i* S	**Sn**	**03 10 12.0**	**+1.1**
GRPR				A	A	03 10 16.0	
	comp=E,197nm,0.3s						
GRPR				A	A	03 10 16.0	
	comp=E,331nm,0.3s						
GRPR	**Tuman**	**3.48**	**252**	*d i*PN	**Pn**	**03 09 33.3**	**+2.7**
GRPR				pmax	pmax		
	comp=Z,81nm,0.2s						
GRPR				pmax	pmax		
	comp=E,21nm,0.1s						
GLVR	**Golovnino**	**3.74**	**249**	*i* P	**Pn**	**03 09 36.0**	**+1.8**
GLVR				AMB	AMB	03 09 39.4	
	comp=E,97nm,0.2s						
GLVR				*e*S	**Sn**	**03 10 18.3**	**+1.0**
GLVR				A	A	03 10 22.2	
	comp=E,272nm,0.2s						
GLVR				A	A	03 10 22.2	
	comp=E,448nm,0.2s						
GLVR	**Golovnino**	**3.74**	**249**	⇑*i*PN	**Pn**	**03 09 36.0**	**+1.8**
GLVR				*i* S	**Sn**	**03 10 18.3**	**+1.0**
GLVR				pmax	pmax		
	comp=Z,97nm,0.1s						
GLVR				smax	smax		
	comp=N,273nm,0.1s						
GLVR				smax	smax		
	comp=E,448nm,0.2s						
NEM2	**Nemuro 2**	**3.77**	**243**	P	**Pn**	**03 09 35.6**	**+1.1**
NEM2				*e*S	**Sn**	**03 10 17.6**	**-0.3**
JRA	**Rausu**	**3.93**	**254**	P	**Pn**	**03 09 39.7**	**+2.9**
JNK	**Nakash**	**4.33**	**251**	P	**Pn**	**03 09 44.8**	**+2.6**
JAK	**Akkeshi**	**4.61**	**244**	P	**Pn**	**03 09 46.9**	**+0.9**
JAK				*e*S	**Sn**	**03 10 37.6**	**-0.8**
JTKR	**Abashiri--Toko**	**4.76**	**258**	P	**Pn**	**03 09 50.3**	**+2.4**
JAR	**Ashorobuto**	**5.08**	**251**	P	**Pn**	**03 09 54.7**	**+2.3**
JMP	**Maruseppu**	**5.13**	**260**	P	**Pn**	**03 09 56.7**	**+3.7**
JOB	**Onbets**	**5.21**	**247**	*e*S	**Sn**	**03 10 52.7**	**-0.2**
YSS	**Yuzh-Sakhalins**	**5.59**	**291**	*e*PN	**Pn**	**03 10 00.4**	**+1.3**
YSS				*e*		03 11 01.7	
JKK2	**Kamakawa 2**	**5.59**	**259**	P	**Pn**	**03 10 01.9**	**+2.7**
ASAJ	**Asahikawa**	**5.63**	**262**	P	**Pn**	**03 10 02.8**	**+3.0**
	comp=E,0.9nm,0.3s,baz=77,slow=2.3,SNR=4.8						
JCH	**Churui**	**5.66**	**246**	P	**Pn**	**03 10 01.7**	**+1.6**
JCH				*e*S	**Sn**	**03 11 02.1**	**-1.6**
MYR	**Moyori**	**5.87**	**243**	*i* P	**Pn**	**03 10 04.9**	**+1.9**
JNBK	**Urakawa-nobuka**	**6.21**	**245**	P	**Pn**	**03 10 08.8**	**+1.1**
JNBK				*e*S	**Sn**	**03 11 15.0**	**-2.2**
JBT2	**Biratori 2**	**6.24**	**250**	P	**Pn**	**03 10 10.3**	**+2.3**
JNB	**Noboribetsu**	**7.25**	**252**	P	**Pn**	**03 10 24.2**	**+2.4**
JKB	**Kayabe**	**7.52**	**248**	P	**Pn**	**03 10 26.7**	**+1.3**
JANG	**Nango**	**8.07**	**237**	*e*S	**Sn**	**03 11 57.5**	**-4.9**
JTM	**Tenmabayashi**	**8.09**	**241**	*e*S	**Sn**	**03 11 58.0**	**-4.9**
JRG	**Rokugo**	**9.22**	**235**	P	**Pn**	**03 10 48.8**	**+0.3**
JRG				*e*S	**Sn**	**03 12 27.5**	**-2.9**
PETK	**Petropavlovsk-**	**9.30**	**28**	P	**Pn**	**03 10 48.3**	**-1.2**
	baz=198,slow=12						
PETK				LR	LR	03 14 53.3	
	comp=E,15nm,19.6s,baz=209,slow=41						
USRK	**Ussuriysk Ar.**	**13.11**	**272**	P	**Pn**	**03 11 40.9**	**+0.2**
	baz=78,slow=9.4						
KLR	**Kul'dur**	**13.29**	**294**	P	**Pn**	**03 11 43.6**	**+0.5**
	comp=E,0.0nm,0.3s,baz=71,slow=6.4,SNR=2.8						
TIXI	**Tiksi**	**28.50**	**346**	P	**P**	**03 14 20.7**	**-3.2**
	comp=E,2.0nm,0.5s,baz=168,slow=6.1,SNR=3.9						
H11N2	**WAKE ISLAND Hy**	**28.82**	**146**	T	T	03 45 25.6	
	baz=336,slow=76,SNR=170						
H11N1	**WAKE ISLAND Hy**	**28.84**	**146**	T	T	03 45 30.8	
	baz=336,slow=76,SNR=130						
H11N3	**WAKE ISLAND Hy**	**28.84**	**146**	T	T	03 45 31.1	
	baz=336,slow=76,SNR=189						
H11S1	**WAKE ISLAND Hy**	**29.86**	**148**	T	T	03 46 48.1	
	baz=337,slow=76,SNR=237						
H11S3	**WAKE ISLAND Hy**	**29.87**	**148**	T	T	03 46 47.1	
	baz=337,slow=76,SNR=218						
H11S2	**WAKE ISLAND Hy**	**29.88**	**148**	T	T	03 46 48.2	
	baz=337,slow=76,SNR=205						
ILAR	**Eielson Array**	**38.99**	**37**	P	**P**	**03 15 55.4**	**+0.7**
	comp=E,0.6nm,0.9s,baz=277,slow=7.9,SNR=5.4						
INK	**Inuvik**	**44.02**	**31**	P	**P**	**03 16 36.2**	**+0.6**
	comp=E,1.5nm,0.5s,baz=294,slow=6.4,SNR=4.0						
MKAR	**Makanchi Array**	**45.97**	**298**	P	**P**	**03 16 50.4**	**-1.0**
	comp=E,1.6nm,0.6s,baz=70,slow=7.6,SNR=11						
KURK	**Kurchatov**	**46.65**	**304**	P	**P**	**03 16 56.2**	**-0.4**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KURBB	**Kurchatov Arra**	**46.74**	**304**	P	**P**	**03 16 56.2**	**-1.1**
	comp=Z,0.9nm,0.5s,baz=73,slow=8.8,SNR=6.8						
BVAR	**Borovoye Array**	**50.38**	**309**	P	**P**	**03 17 24.4**	**-0.9**
	comp=Z,0.6nm,0.5s,baz=79,slow=7.6,SNR=3.6						
RES	**Resolute Bay**	**52.95**	**18**	P	**P**	**03 17 44.5**	**+0.6**
	comp=Z,7.1nm,0.9s,baz=3.7,slow=12,SNR=13						
YKA	**Yellowknife Ar**	**53.34**	**35**	P	**P**	**03 17 48.6**	**+1.6**
	comp=Z,0.3nm,0.4s,baz=295,slow=6.3,SNR=2.8						
AKTO	**Aktyubinsk**	**58.34**	**311**	P	**P**	**03 18 20.2**	**-2.7**
	comp=Z,0.7nm,0.5s,baz=109,slow=5.3,SNR=3.5						
FINES	**FINESS Array B**	**64.64**	**334**	P	**P**	**03 19 03.3**	**-1.7**
	comp=Z,1.8nm,0.6s,baz=34,slow=7.5,SNR=15						
WRA	**Warramunga Arr**	**66.41**	**196**	P	**P**	**03 19 19.9**	**+3.0**
	comp=Z,1.0nm,0.7s,baz=14,slow=6.7,SNR=4.4						
NB2	**NORSAR Subarra**	**69.09**	**340**	P	**P**	**03 19 32.1**	**-1.2**
	comp=Z,0.8nm,0.5s,baz=28,slow=6.5						
HFS	**Hagfors**	**69.25**	**338**	P	**P**	**03 19 33.0**	**-1.3**
	comp=Z,1.5nm,0.6s,baz=64,slow=6.6,SNR=12						
ASAR	**Alice Springs**	**70.11**	**196**	P	**P**	**03 19 43.6**	**+3.6**
	comp=Z,0.4nm,0.5s,baz=13,slow=5.9,SNR=5.5						
ASAR				LR	LR	03 49 49.2	
	comp=Z,31nm,21.7s,baz=67,slow=35						
KBZ	**Khabaz**	**70.56**	**313**	P	**P**	**03 19 43.5**	**+1.0**
	comp=Z,5.3nm,0.8s,baz=76,slow=5.6,SNR=7.5						
ZEI	**Tsey**	**70.69**	**312**	*e*P	**P**	**03 19 42.7**	**-0.9**
AKASG	**Malin Array Be**	**71.78**	**325**	P	**P**	**03 19 48.8**	**-0.9**
	comp=Z,2.5nm,0.5s,baz=38,slow=6.3,SNR=7.6						
AKASG	**Malin Array Be**	**71.78**	**325**	P	**P**	**03 19 48.8**	**-0.9**
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KHC	**Kasperske Hory**	**78.80**	**333**	*e*PKP	**P**	**03 20 30.3**	**+0.2**
KHC	**Kasperske Hory**	**78.80**	**333**	*e*P	**P**	**03 20 30.3**	**+0.2**
GERES	**GERESS Array B**	**79.01**	**332**	P	**P**	**03 20 30.9**	**-0.5**
	comp=Z,0.9nm,0.6s,baz=27,slow=4.5,SNR=7.8						
TXAR	**Lajitas Array**	**79.96**	**58**	P	**P**	**03 20 38.7**	**+1.9**
	comp=Z,0.1nm,0.5s,baz=317,slow=3.6,SNR=5.3						

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*SKO **04** 03:13:23.3, 40°.78N×21°.39E, h15^{km}, M2.2, ML2.6*
*ATH **04** 03:13:25.8, 40°.78N×21°.39E, h10^{km}±1^{km}, ML2.6/4, Error ellipse: s-maj=2.5km s-min=1.1km az=328.0*
*TIR **04** 03:13:25.9, 40°.76N×21°.32E, h4^{km}, Md2.7/4*
*ISCJB **04** 03:13:26.1±0.3, 40°.79N±0°.01×21°.40E±0°.02, h4^{km}±2^{km}, Error ellipse: s-maj=3.1km s-min=2.4km az=173.5*
*THE **04** 03:13:26.4, 40°.79N×21°.39E, h3^{km}±1^{km}, ML2.5/9, Error ellipse: s-maj=1.4km s-min=0.7km az=346.0*
*CSEM **04** 03:13:26.1±0.1, 40°.79N×21°.39E, h2^{km}, ML2.6, Error ellipse: s-maj=3.2km s-min=2.6km az=88.0*
ISC 04 03:13:26.2±0.8**, 40°.78N**±0°.01×**21°.39E**±0°.02**, h5**^{km}±4^{km}**, n89, σ0**^{s}**80**/132**, 3C-1D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FNA	**Florina**	**0.01**	**312**	P	**Pg**	**03 13 27.3**	**0.0**
FNA				S	**Sg**	**03 13 27.8**	**-0.3**
FNA				AML	AML	03 13 28.3	
	comp=N,52151µm,0.2s						
FNA				AML	AML	03 13 28.3	
	comp=E,76043µm,0.4s						
FNA	**Florina**	**0.01**	**312**	P	**Pg**	**03 13 27.4**	**+0.1**
FNA				S	**Sg**	**03 13 28.2**	**+0.1**
FNA	**Florina**	**0.01**	**312**	P	**Pg**	**03 13 27.4**	**+0.1**
FNA				S	**Sg**	**03 13 28.2**	**+0.1**
BIA	**Bitola**	**0.25**	**349**	P	**Pg**	**03 13 31.7**	**+0.6**
BIA				S	**Sg**	**03 13 34.8**	**+0.4**
BIA	**Bitola**	**0.25**	**349**	*e*Pg	**Pg**	**03 13 31.2**	**+0.1**
BIA				*i* Sg	**Sg**	**03 13 37.0**	**+2.7**
BIA	**Bitola**	**0.25**	**349**	P	**Pg**	**03 13 31.7**	**+0.6**
BIA				S	**Sg**	**03 13 34.8**	**+0.4**
NEST	**Nestorio**	**0.44**	**216**	P	**Pg**	**03 13 34.0**	**-0.8**
NEST				AML	AML	03 13 41.9	
	comp=N,1592µm,0.4s						
NEST				AML	AML	03 13 42.0	
	comp=E,2181µm,0.2s						
NEST				S	**Sb**	**03 13 42.0**	**-1.4**
NEST	**Nestorio**	**0.44**	**216**	P	**Pg**	**03 13 34.2**	**-0.5**
NEST				S	**Sg**	**03 13 40.8**	**+0.2**
NEST	**Nestorio**	**0.44**	**216**	P	**Pg**	**03 13 34.3**	**-0.5**
NEST				S	**Sg**	**03 13 41.5**	**+0.9**
KBN	**Korca**	**0.48**	**252**	P	**Pg**	**03 13 34.9**	**-0.6**
KBN				S	**Sg**	**03 13 42.9**	**+1.2**
KBN	**Korca**	**0.48**	**252**	P	**Pg**	**03 13 34.9**	**-0.6**
KBN	**Korca**	**0.48**	**252**	*i* Pg	**Pg**	**03 13 35.3**	**-0.2**
KBN				*i* Sg	**Sg**	**03 13 41.7**	**0.0**
KBN				S	**Sg**	**03 13 42.9**	**+1.2**
KBN	**Korca**	**0.48**	**252**	*i* PG	**Pg**	**03 13 35.3**	**-0.2**
KBN				*i* SG	**Sg**	**03 13 41.7**	**-0.1**
KZN	**Kozani**	**0.55**	**148**	P	**Pg**	**03 13 36.6**	**-0.3**
KZN				S	**Sb**	**03 13 45.6**	**-0.9**
KZN				AML	AML	03 13 47.3	
	comp=E,1385µm,0.4s						
KZN				AML	AML	03 13 48.1	
	comp=N,1206µm,0.3s						
KZN	**Kozani**	**0.55**	**148**	P	**Pg**	**03 13 36.5**	**-0.3**
KZN				S	**Sb**	**03 13 45.9**	**-0.7**
KZN	**Kozani**	**0.55**	**148**	P	**Pg**	**03 13 36.5**	**-0.3**
KZN				S	**Sg**	**03 13 45.1**	**+1.1**
OHR	**Ohrid**	**0.56**	**307**	⇑*e*Pg	**Pg**	**03 13 36.7**	**-0.3**
OHR				*i* Sg	**Sb**	**03 13 46.0**	**-0.7**
OHR				*e*Lg	Lg	03 13 46.4	
	comp=N,272nm,0.4s						
OHR				*e*Lg	Lg	03 13 46.6	
	comp=E,460nm,0.5s						
KRUS	**Krusevo**	**0.60**	**350**	⇑*e*Pg	**Pg**	**03 13 37.5**	**-0.3**
KRUS				*i* Sg	**Sg**	**03 13 46.5**	**+0.8**
PENT	**Pentalofos**	**0.61**	**198**	P	**Pg**	**03 13 37.9**	**-0.1**
PENT	**Pentalofos**	**0.61**	**198**	P	**Pg**	**03 13 37.7**	**-0.2**
KTI	**Kastanea**	**0.67**	**124**	P	**Pg**	**03 13 38.9**	**-0.2**
KTI	**Kastanea**	**0.67**	**124**	P	**Pg**	**03 13 38.9**	**-0.2**
GRG	**Griva**	**0.79**	**76**	P	**Pb**	**03 13 42.0**	**-0.4**
GRG	**Griva**	**0.79**	**76**	P	**Pg**	**03 13 41.1**	**-0.2**
GRG				S	**Sb**	**03 13 53.4**	**0.0**
GRG	**Griva**	**0.79**	**76**	P	**Pg**	**03 13 41.1**	**-0.2**
GRG				S	**Sb**	**03 13 53.4**	**0.0**
KPRO	**Kipourio**	**0.82**	**181**	P	**Pg**	**03 13 41.4**	**-0.5**
KPRO	**Kipourio**	**0.82**	**181**	P	**Pg**	**03 13 41.5**	**-0.4**
KPRO				S	**Sb**	**03 13 54.9**	**+0.6**
KPRO	**Kipourio**	**0.82**	**181**	P	**Pg**	**03 13 41.5**	**-0.4**
KPRO				S	**Sb**	**03 13 54.9**	**+0.6**
VAY	**Valandovo**	**1.05**	**58**	P	**Pg**	**03 13 45.9**	**-0.4**
VAY				S	**Sb**	**03 14 00.5**	**-0.2**
VAY	**Valandovo**	**1.05**	**58**	*i* Pg	**Pg**	**03 13 45.8**	**-0.5**
VAY				*i* Sg	**Sb**	**03 14 00.6**	**-0.2**
VAY				*e*Lg	Lg	03 14 05.0	
	comp=N,45nm,0.5s						
VAY				*e*Lg	Lg	03 14 05.5	
	comp=E,173nm,0.9s						
VAY	**Valandovo**	**1.05**	**58**	P	**Pg**	**03 13 45.9**	**-0.4**
VAY				S	**Sb**	**03 14 00.5**	**-0.2**
LIT	**Litokhoron**	**1.08**	**128**	P	**Pg**	**03 13 45.9**	**-1.0**
LIT	**Litokhoron**	**1.08**	**128**	P	**Pg**	**03 13 46.0**	**-0.8**
LIT	**Litokhoron**	**1.08**	**128**	P	**Pg**	**03 13 46.0**	**-0.8**
STIP	**Stip**	**1.10**	**33**	*i* Pg	**Pn**	**03 13 49.1**	**+0.9**
STIP				*i* Sg	**Sn**	**03 14 06.8**	**+3.0**
PHP	**Peshkopia**	**1.16**	**322**	P	**Pg**	**03 13 46.8**	**-1.5**
PHP				S	**Sn**	**03 14 05.2**	**-0.1**
PHP	**Peshkopia**	**1.16**	**322**	P	**Pg**	**03 13 46.8**	**-1.5**
PHP	**Peshkopia**	**1.16**	**322**	*i* Pn	**Pg**	**03 13 47.1**	**-1.3**
PHP				*i* Sn	**Sn**	**03 14 05.1**	**-0.1**
PHP	**Peshkopia**	**1.16**	**322**	*i* PN	**Pg**	**03 13 47.1**	**-1.3**
PHP				*i* SN	**Sn**	**03 14 05.1**	**-0.1**
SKO	**Skopje**	**1.20**	**2**	P	**Pg**	**03 13 48.5**	**-0.6**
SKO				S	**Sn**	**03 14 05.5**	**-0.7**
SKO	**Skopje**	**1.20**	**2**	*i* Pg	**Pg**	**03 13 48.5**	**-0.6**
SKO				*i* Sg	**Sn**	**03 14 05.5**	**-0.7**
SKO	**Skopje**	**1.20**	**2**	P	**Pg**	**03 13 48.5**	**-0.6**
SKO				S	**Sn**	**03 14 05.5**	**-0.7**
KNT	**Kendrikon**	**1.21**	**71**	P	**Pb**	**03 13 49.4**	**-0.1**
KNT				S	**Sn**	**03 14 05.9**	**-0.5**
KNT				AML	AML	03 14 10.5	
	comp=N,252µm,0.3s						
KNT				AML	AML	03 14 10.6	
	comp=E,145µm,0.3s						
KNT	**Kendrikon**	**1.21**	**71**	P	**Pg**	**03 13 48.7**	**-0.6**
KNT				S	**Sn**	**03 14 07.2**	**+0.8**
KNT	**Kendrikon**	**1.21**	**71**	P	**Pg**	**03 13 48.9**	**-0.4**
KNT				S	**Sb**	**03 14 05.4**	**0.0**
THL	**Klokotos Trika**	**1.30**	**158**	P	**Pn**	**03 13 49.0**	**-2.0**
THL	**Klokotos Trika**	**1.30**	**158**	P	**Pn**	**03 13 49.7**	**-1.2**
THL				S	**Sn**	**03 14 09.9**	**+1.2**
THL	**Klokotos Trika**	**1.30**	**158**	P	**Pn**	**03 13 49.7**	**-1.2**
THL				S	**Sn**	**03 14 09.9**	**+1.2**
HORT	**Hortiatis**	**1.31**	**97**	P	**Pg**	**03 13 50.8**	**-0.5**
HORT	**Hortiatis**	**1.31**	**97**	P	**Pg**	**03 13 50.6**	**-0.8**
SGD	**Sagiada**	**1.46**	**218**	P	**Pg**	**03 13 54.4**	**+0.3**
SGD	**Sagiada**	**1.46**	**218**	P	**Pg**	**03 13 53.9**	**-0.3**
SGD	**Sagiada**	**1.46**	**218**	P	**Pg**	**03 13 53.9**	**-0.3**
IGT	**Igoumenitsa**	**1.48**	**213**	P	**Pg**	**03 13 55.3**	**+0.7**
IGT	**Igoumenitsa**	**1.48**	**213**	P	**Pg**	**03 13 54.4**	**-0.2**
IGT				S	**Sg**	**03 14 15.0**	**+1.2**
IGT	**Igoumenitsa**	**1.48**	**213**	P	**Pg**	**03 13 54.4**	**-0.2**
IGT				S	**Sg**	**03 14 15.0**	**+1.2**
KEK	**Kerkira**	**1.61**	**229**	P	**Pg**	**03 13 57.0**	**-0.2**
KEK	**Kerkira**	**1.61**	**229**	P	**Pb**	**03 13 56.6**	**+0.2**
PLG	**Polygyros**	**1.62**	**104**	P	**Pn**	**03 13 54.7**	**-0.6**
PLG	**Polygyros**	**1.62**	**104**	P	**Pn**	**03 13 55.4**	**0.0**
PUK	**Puka**	**1.69**	**319**	*i* Pn	**Pb**	**03 13 57.3**	**-0.5**
PUK	**Puka**	**1.69**	**319**	*i* PN	**Pb**	**03 13 57.3**	**-0.5**
BCI	**Bajram Curri**	**1.87**	**328**	*i* Pn	**Pb**	**03 14 00.7**	**-0.2**
BCI	**Bajram Curri**	**1.87**	**328**	*i* PN	**Pb**	**03 14 00.7**	**-0.2**
EVR	**Evrytania**	**1.89**	**170**	P	**Pn**	**03 13 59.4**	**+0.3**
EVR	**Evrytania**	**1.89**	**170**	P	**Pn**	**03 13 59.8**	**+0.7**
PAIG	**Paliouri**	**1.95**	**115**	P	**Pn**	**03 13 59.7**	**-0.1**
PAIG	**Paliouri**	**1.95**	**115**	P	**Pn**	**03 13 59.7**	**-0.1**
XOR	**Xorichti**	**1.97**	**135**	P	**Pn**	**03 13 59.4**	**-0.8**
XOR	**Xorichti**	**1.97**	**135**	P	**Pn**	**03 14 00.5**	**+0.2**
LKD2	**Lefkada island**	**2.06**	**196**	P	**Pb**	**03 14 03.1**	**-1.0**
LKD2	**Lefkada island**	**2.06**	**196**	P	**Pb**	**03 14 03.0**	**-1.1**
BARS	**Barje**	**2.06**	**9**	*e*Pn	**Pn**	**03 14 02.1**	**+0.6**
ANX	**Ano Chora**	**2.22**	**169**	P	**Pn**	**03 14 04.7**	**+1.0**
ANX				S	**Sb**	**03 14 34.6**	**0.0**
ANX	**Ano Chora**	**2.22**	**169**	P	**Pn**	**03 14 04.4**	**+0.7**
ANX				S	**Sb**	**03 14 34.1**	**-0.5**
ANX	**Ano Chora**	**2.22**	**169**	P	**Pn**	**03 14 04.4**	**+0.7**
ANX				S	**Sb**	**03 14 34.1**	**-0.5**
EFP	**Efpalio**	**2.38**	**170**	P	**Pn**	**03 14 06.4**	**+0.6**
EFP	**Efpalio**	**2.38**	**170**	P	**Pn**	**03 14 06.9**	**+1.1**
SERG	**Sergoula**	**2.42**	**167**	P	**Pn**	**03 14 06.0**	**-0.4**
SERG	**Sergoula**	**2.42**	**167**	P	**Pn**	**03 14 06.9**	**+0.6**
TRIZ	**Trizonia**	**2.46**	**167**	P	**Pn**	**03 14 07.2**	**+0.2**
TRIZ	**Trizonia**	**2.46**	**167**	P	**Pn**	**03 14 07.8**	**+0.9**
BOVS	**Bovan**	**2.87**	**5**	*e*Pn	**Pn**	**03 14 11.7**	**-0.8**
IVAS	**Ivanjica**	**2.95**	**342**	⇑*i*Pn	**Pn**	**03 14 13.6**	**0.0**
GRUS	**Gruza**	**3.15**	**351**	*e*Pn	**Pn**	**03 14 14.6**	**-1.8**
STON	**Ston**	**3.46**	**308**	*e*Pn	**Pn**	**03 14 21.8**	**+1.2**
STON				Sn	**Sn**	**03 15 04.1**	**+2.1**
DIVS	**Divibare**	**3.48**	**343**	*e*Pn	**Pn**	**03 14 20.0**	**-1.0**
TRUS	**Trudelj**	**3.52**	**348**	⇓*i*Pn	**Pn**	**03 14 22.1**	**+0.6**
NVLJ	**Novalja**	**6.12**	**310**	*e*Pn	**Pn**	**03 14 56.8**	**-0.3**

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*BJI **04** 03:15:22.8, 4°.24S×152°.90E, h29^{km}, mb4.8/22, mB4.9/14, Ms4.3/6, Ms7 4.0/6*
*ISCJB **04** 03:15:23.5±0.2, 4°.21S±0°.03×152°.80E±0°.03, h35^{km}, mb4.7/66, MS3.8/28, Error ellipse: s-maj=5.0km s-min=4.3km az=165.3*
*IDC **04** 03:15:25.2±2.5, 4°.23S×152°.69E, h36^{km}±19^{km}, mb4.2/22, mb1 4.3/23, mb1mx4.2/44, mbtmp4.4/23, ML3.9/1, MS3.7/28, Ms1 3.7/28, ms1mx3.6/44, Error ellipse: s-maj=18.0km s-min=10.6km az=83.0*
*NEIC **04** 03:15:26.3±0.8, 4°.21S×152°.77E, h46^{km}±7^{km}, mb4.9/40, Error ellipse: s-maj=6.7km s-min=4.7km az=81.0*
ISC 04 03:15:25.5±0.3**, 4°.22S**±0°.05×**152°.77E**±0°.05**, h35**^{km}**, n155, σ1**^{s}**38**/142**, mb4.8**/66**, MS3.8**/28**, 1C-1D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	**0.61**	**273**	*e*Pn	**Pn**	**03 15 37.3**	**-0.3**
RABL				*e*Sn	**Sn**	**03 15 44.6**	**-1.6**
MANU	**Manus Island**	**5.81**	**292**	*e*Pn	**Pn**	**03 16 52.3**	**+3.0**
PMG	**Port Moresby**	**7.59**	**227**	Pn	Pn	03 17 18.9	+5.3
	2.9nm,0.3s,baz=48,slow=12,SNR=3.3						
PMG				Sn	**Sn**	**03 18 40.9**	**+2.4**
	3.5nm,0.3s,baz=78,slow=20,SNR=3.2						
PMG				LR	LR	03 20 20.0	
	comp=Z,1µm,21.0s,baz=96,slow=39						
PMG	**Port Moresby**	**7.59**	**227**	*e*Pn	Pn	03 17 20.8	+7.2
PMG				*e*Sn	**Sn**	**03 18 39.8**	**+1.3**
HNR	**Honiara**	**8.81**	**126**	Pn	Pn	03 17 36.1	+5.7
	38nm,0.3s,baz=276,slow=10,SNR=3.9						
HNR				Sn	**Sn**	**03 19 10.8**	**+2.4**
	23nm,0.3s,baz=285,slow=20,SNR=3.5						
HNR				LR	LR	03 21 28.5	
	comp=Z,308nm,18.1s,baz=304,slow=41						
HNR	**Honiara**	**8.81**	**126**	*e*P	**Pn**	**03 17 32.0**	**+1.6**
HNR				*e*S	Sn	03 19 17.0	+8.6
HNR	**Honiara**	**8.81**	**126**	*e*Pn	**Pn**	**03 17 31.0**	**+0.6**
HNR				*e*Sn	**Sn**	**03 19 10.0**	**+1.6**
PATS	**Pohnpei**	**12.30**	**27**	*e*Pn	**Pn**	**03 18 17.1**	**-1.1**
PATS				*e*Sn	Sn	03 20 24.5	-10
COEN	**Coen**	**13.54**	**224**	*e*Pn	**Pn**	**03 18 37.4**	**+2.3**
CTA	**Charters Tower**	**17.00**	**201**	Pn	**P**	**03 19 21.6**	**-0.6**
	0.3nm,0.3s,baz=0.1,slow=12,SNR=2.0						
GUMO	**Guam**	**19.36**	**336**	LR	LR	03 27 36.5	
	comp=Z,82nm,18.2s,baz=138,slow=38						
FAKI	**Fak Fak**	**20.52**	**273**	*e*P	Pn	03 20 03.4	0.0
	119nm,1.2s						
EIDS	**Eidsvold**	**21.09**	**184**	*e*P	**P**	**03 20 06.5**	**-0.4**
	23nm,1.1s						
DZM	**Mont Dzumac**	**22.15**	**144**	P	**P**	**03 20 18.3**	**-0.2**
	16nm,0.6s,baz=237,slow=9.8,SNR=24						
DZM				LR	LR	03 28 12.8	
	comp=Z,372nm,20.1s,baz=324,slow=35						
DZM	**Mont Dzumac**	**22.15**	**144**	*e*P	**P**	**03 20 17.3**	**-1.2**
	88nm,1.1s						
DZM				*e*LR	LR	03 25 50.5	
	700nm,24.8s						
MTN	**Manton Dam**	**23.03**	**247**	*e*P	**P**	**03 20 26.2**	**-1.6**
	37nm,1.1s						
WRAB	**Tennant Creek**	**23.79**	**227**	*e*P	**P**	**03 20 33.9**	**-1.3**
	48nm,0.8s						
WB2	**Warramunga Arr**	**23.80**	**227**	*e*P	**P**	**03 20 36.2**	**+1.0**
	39nm,0.8s						
WR1	**Warramunga Arr**	**23.81**	**227**	*e*P	**P**	**03 20 33.9**	**-1.4**
	43nm,0.6s						
WR1				*e*ScP	**ScP**	**03 27 53.3**	**-1.0**
WRA	**Warramunga Arr**	**23.81**	**227**	P	**P**	**03 20 33.9**	**-1.4**
	18nm,0.6s,baz=51,slow=10,SNR=82						
WRA				ScP	**ScP**	**03 27 53.3**	**-1.0**
	3.1nm,0.8s,baz=53,slow=3.2,SNR=8.8						
WRA				LR	LR	03 30 20.3	
	comp=Z,312nm,20.6s,baz=50,slow=38						
ARMA	**Armidale**	**26.08**	**182**	*e*P	**P**	**03 20 55.3**	**-0.7**
	32nm,1.3s						
AS01	**Alice Springs**	**26.53**	**221**	*e*P	**P**	**03 20 58.4**	**-1.7**
AS31	**Alice Springs**	**26.56**	**222**	*e*P	**P**	**03 21 00.3**	**0.0**
	3.7nm,0.6s						
AS31				*e*ScP	**ScP**	**03 28 01.4**	**-0.6**
ASAR	**Alice Springs**	**26.56**	**222**	P	**P**	**03 20 58.5**	**-1.9**
	2.2nm,0.5s,baz=53,slow=8.7,SNR=26						
ASAR				ScP	**ScP**	**03 28 01.4**	**-0.6**
	4.1nm,0.8s,baz=46,slow=3.1,SNR=18						
ASAR				LR	LR	03 31 31.6	
	comp=Z,214nm,20.6s,baz=49,slow=36						
STKA	**Stephens Creek**	**29.45**	**200**	P	**P**	**03 21 24.9**	**-1.2**
	2.4nm,0.5s,baz=25,slow=12,SNR=7.8						
STKA				LR	LR	03 33 25.3	
	comp=Z,147nm,20.4s,baz=20,slow=37						
STKA	**Stephens Creek**	**29.45**	**200**	*e*P	**P**	**03 21 25.2**	**-0.8**
	1.6nm,0.8s						
FITZ	**Fitzroy Crossi**	**29.91**	**240**	P	**P**	**03 21 28.6**	**-1.8**
	5.9nm,0.6s,baz=70,slow=6.2						
BBOO	**Buckleboo**	**32.45**	**207**	*e*P	**P**	**03 21 50.0**	**-2.6**
	23nm,0.9s						
FORT	**Forrest**	**35.22**	**219**	*e*P	**P**	**03 22 15.2**	**-1.4**
	24nm,0.7s						
MBWA	**Marble Bar**	**36.23**	**239**	*e*P	**P**	**03 22 22.4**	**-3.1**
	47nm,1.4s						
AFI	**Afiamalu**	**36.26**	**108**	LR	LR	03 35 01.6	
	comp=Z,226nm,19.6s,baz=286,slow=32						
OUZ	**Omahuta**	**36.37**	**151**	*e*P	**P**	**03 22 25.6**	**-0.7**
	54nm,1.4s						
TGY	**Tagaytay City**	**36.45**	**301**	LR	LR	03 35 12.5	
	comp=Z,202nm,19.7s,baz=134,slow=33						
TAU	**Tasmania Unive**	**38.83**	**186**	*e*P	**P**	**03 22 47.9**	**+0.9**
	80nm,1.4s						
JOW	**Kunigami**	**38.91**	**324**	P	**P**	**03 22 49.7**	**+1.7**
	8.5nm,0.4s,baz=102,slow=11,SNR=3.8						
JOW	**Kunigami**	**38.91**	**324**	*e*P	**P**	**03 22 49.7**	**+1.7**
	45nm,1.1s						
URZ	**Urewera**	**40.50**	**150**	P	**P**	**03 23 01.5**	**+0.5**
	5.8nm,0.4s,baz=279,slow=2.7,SNR=7.4						
URZ	**Urewera**	**40.50**	**150**	*e*P	**P**	**03 23 00.8**	**-0.2**
	40nm,1.3s						
BKZ	**Black Stump Fm**	**40.91**	**151**	*e*P	**P**	**03 23 04.1**	**-0.4**
	38nm,1.4s						
THZ	**Tophouse**	**41.49**	**157**	*e*P	**P**	**03 23 10.1**	**+0.8**
	38nm,0.9s						
SNZO	**South Karori**	**41.84**	**155**	*e*P	**P**	**03 23 10.5**	**-1.5**
	68nm,1.2s						
FOZ	**Fox Glacier**	**41.96**	**161**	*e*P	**P**	**03 23 14.1**	**+1.1**
	31nm,0.9s						
BFZ	**Birch Farm**	**42.00**	**153**	*e*P	**P**	**03 23 13.4**	**0.0**
	34nm,0.9s						
LTZ	**Lake Taylor**	**42.13**	**159**	*e*P	**P**	**03 23 15.6**	**+1.1**
	82nm,1.4s						
KHZ	**Kahutara**	**42.30**	**157**	*e*P	**P**	**03 23 15.3**	**-0.4**
	69nm,1.3s						
RPZ	**Rata Peaks**	**42.52**	**160**	P	**P**	**03 23 18.6**	**+1.0**
	16nm,0.6s,baz=328,slow=2.2,SNR=13						
JNU	**Nakatsue**	**42.54**	**332**	P	**P**	**03 23 18.0**	**+0.1**
	5.5nm,0.8s,baz=90,slow=4.0,SNR=2.2						
JNU				LR	LR	03 38 16.7	
	comp=Z,41nm,19.3s,baz=124,slow=32						
JNU	**Nakatsue**	**42.54**	**332**	*e*P	**P**	**03 23 18.0**	**+0.1**
	36nm,1.2s						
MJAR	**Matsushiro Arr**	**42.77**	**343**	P	**P**	**03 23 19.0**	**-0.7**
	1.5nm,0.8s,baz=176,slow=6.3,SNR=3.5						
MAJO	**Matsushiro**	**42.78**	**343**	*e*P	**P**	**03 23 19.0**	**-0.7**
LBZ	**Lake Benmore**	**42.84**	**162**	*e*P	**P**	**03 23 20.6**	**+0.4**
	26nm,1.1s						
WKZ	**Wanaka**	**42.88**	**163**	*e*P	**P**	**03 23 20.6**	**0.0**
	42nm,1.2s						
DCZ	**Deep Cove**	**42.96**	**165**	*e*P	**P**	**03 23 23.2**	**+2.1**
	34nm,1.2s						
MQZ	**McQueen's Vall**	**43.07**	**159**	*e*P	**P**	**03 23 20.8**	**-1.2**
	41nm,1.3s						
MLZ	**Mavora Lakes**	**43.13**	**164**	*e*P	**P**	**03 23 23.7**	**+1.2**
	68nm,1.2s						
NWAO	**Narrogin (SRO)**	**43.77**	**225**	LR	LR	03 41 48.7	
	comp=Z,272nm,21.4s,baz=291,slow=36						
KSRS	**Korea Array**	**47.47**	**333**	P	**P**	**03 23 56.8**	**-0.1**
	0.5nm,0.3s,baz=140,slow=7.2,SNR=3.6						
KS15	**Wonju Array Si**	**47.48**	**333**	*e*P	**P**	**03 23 56.9**	**-0.2**
KSAR	**Wonju Array Be**	**47.48**	**333**	P	**P**	**03 23 56.9**	**-0.2**
QIZ	**Qiongzhong**	**48.15**	**300**	P	**P**	**03 24 03.4**	**+0.8**
QIZ				S	**S**	**03 31 00.2**	**+0.6**
QIZ				LR	LR		
	comp=E,170nm,17.7s						
QIZ				LR	LR		
	comp=Z,170nm,19.6s						
NJ2	**Nanjing**	**48.38**	**321**	*e*P	**P**	**03 24 04.1**	**0.0**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
ASAJ	**Asahikawa**	**48.98**	**350**	P	**P**	**03 24 09.2**	**+0.7**
	3.8nm,0.6s,baz=210,slow=11,SNR=9.0						
ASAJ				LR	LR	03 41 53.1	
	comp=Z,45nm,21.3s,baz=176,slow=32						

ASAJ	**Asahikawa**	**48.98**	**350**	*e*P	**P**	**03 24 11.9**	**+3.4**
	6.3nm,0.8s						
RAR	**Rarotonga**	**49.04**	**114**	LR	LR	03 41 47.5	
	comp=Z,72nm,21.4s,baz=264,slow=32						
WHN	**Wuhan**	**50.42**	**316**	*e*P	**P**	**03 24 21.9**	**+2.2**
CN2	**Changchun**	**53.76**	**336**	*e*P	**P**	**03 24 47.9**	**+3.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA	**Guiyang**	**54.02**	**307**	*e*P	**P**	**03 24 47.4**	**+0.6**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN	**Xi'an**	**56.19**	**316**	P	P	03 25 10.6	+8.4
XAN				pP	sP	03 25 19.6	+2.7
XAN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KMI	**Kunming**	**56.64**	**304**	P	**P**	**03 25 07.0**	**+1.2**
KMI				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KMI				pmax	pmax		
	comp=Z,68nm,5.0s						
PETK	**Petropavlovsk-**	**57.27**	**4**	P	**P**	**03 25 10.4**	**+1.0**
	comp=Z,5.7nm,0.9s,baz=164,slow=6.5						
PETK				LR	LR	03 45 01.1	
	comp=Z,41nm,21.9s,baz=192,slow=31						
PETK	**Petropavlovsk-**	**57.27**	**4**	*e*P	**P**	**03 25 11.6**	**+2.1**
PEA1	**Petropavlovsk-**	**57.27**	**4**	*e*P	**P**	**03 25 10.4**	**+1.0**
CM31	**Chiang Mai Arr**	**57.61**	**295**	*e*P	**P**	**03 25 13.3**	**+0.9**
CMAR	**Chiang Mai Arr**	**57.61**	**295**	P	**P**	**03 25 13.3**	**+0.9**
	comp=Z,0.7nm,0.3s,baz=140,slow=5.7,SNR=3.2						
CMAR				LR	LR	03 47 46.0	
	comp=Z,42nm,21.3s,baz=155,slow=34						
PPT	**Papeete**	**57.93**	**108**	LR	LR	03 46 43.0	
	comp=Z,38nm,18.7s,baz=306,slow=32						
PPT2	**Papeete2**	**57.93**	**108**	*e*LR	LR	03 42 26.7	
	comp=Z,68nm,23.0s						
HHC	**Hu-ho-hao-te**	**58.56**	**324**	*e*P	**P**	**03 25 20.0**	**+1.1**
HHC				sP	sP	03 25 37.7	+4.1
HHC				S	**S**	**03 33 24.4**	**+3.8**
HHC				pmax	pmax		
	comp=Z,17nm,1.0s						
HHC				pmax	pmax		
	comp=Z,63nm,6.7s						
HHC				LR	LR		
	comp=Z,90nm,15.1s						
HHC				LR	LR		
	comp=Z,150nm,15.9s						
TBI	**Tubuai**	**58.82**	**115**	*e*LR	LR	03 42 48.6	
	comp=Z,195nm,24.5s						
LZH	**Lanzhou**	**60.80**	**316**	*e*P	**P**	**03 25 32.9**	**-1.5**
LZH				pP	pP	03 25 43.8	-1.3
LZH				sP	sP	03 25 48.8	-0.4
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
SONA0	**Songino Array**	**65.82**	**328**	*e*P	**P**	**03 26 07.6**	**+0.1**
SONM	**Songino Array**	**65.82**	**328**	P	**P**	**03 26 07.6**	**+0.1**
	comp=Z,0.7nm,0.4s,baz=141,slow=8.4,SNR=4.2						
SONM				LR	LR	03 54 46.2	
	comp=Z,41nm,19.8s,baz=89,slow=36						
TAOE	**Nuku Hiva Isla**	**66.73**	**98**	*e*LR	LR	03 46 46.2	
	comp=Z,179nm,26.8s						
BILL	**Bilibino**	**72.72**	**5**	*e*P	**P**	**03 26 49.3**	**-0.2**
	comp=Z,3.8nm,0.9s						
VNDA	**Vanda**	**73.41**	**178**	P	**P**	**03 26 53.8**	**+0.2**
	comp=Z,8.1nm,0.8s,baz=326,slow=6.4,SNR=58						
VNDA	**Vanda**	**73.41**	**178**	*e*P	**P**	**03 26 54.0**	**+0.5**
	comp=Z,9.3nm,0.8s						
SBA	**Scott Base**	**73.95**	**177**	*e*P	**P**	**03 27 00.5**	**+3.7**
	comp=Z,9.7nm,1.0s						
WMQ	**Urumqi**	**75.30**	**317**	P	**P**	**03 27 05.8**	**+0.5**
WMQ				pP	pP	03 27 15.7	-0.5
WMQ				sP	sP	03 27 20.8	+0.6
WMQ				pmax	pmax		
	comp=Z,20nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,290nm,4.7s						
WMQ				LR	LR		
	comp=Z,120nm,25.1s						
WMQ				LR	LR		
	comp=Z,140nm,38.9s						
WMQ				LR	LR		
	comp=Z,90nm,22.3s						
CAST	**Castle Rocks**	**78.98**	**22**	*e*P	**P**	**03 27 24.9**	**-0.6**
	comp=Z,2.9nm,0.8s						
IM3	**Indian Mountai**	**79.85**	**20**	*e*P	**P**	**03 27 29.5**	**-0.6**
MK01	**Makanchi Array**	**79.86**	**319**	*e*P	**P**	**03 27 30.9**	**+0.3**
MK32	**Makanchi Array**	**79.87**	**319**	*e*P	**P**	**03 27 29.6**	**-1.1**
MKAR	**Makanchi Array**	**79.87**	**319**	P	**P**	**03 27 29.6**	**-1.1**
	comp=Z,0.3nm,0.4s,baz=87,slow=7.9,SNR=5.9						
MKAR				LR	LR	04 02 39.9	
	comp=Z,36nm,20.6s,baz=84,slow=36						
MCK	**McKinley**	**80.34**	**23**	*e*P	**P**	**03 27 32.0**	**-0.9**
	comp=Z,6.7nm,0.9s						
MLY	**Manley**	**80.36**	**21**	*e*P	**P**	**03 27 32.4**	**-0.6**
	comp=Z,6.0nm,1.2s						
ZALV	**Zalesovo Beam**	**80.66**	**326**	P	**P**	**03 27 32.9**	**-1.8**
	comp=Z,1.1nm,0.5s,baz=97,slow=7.9,SNR=2.7						
ZALV				LR	LR	04 02 21.1	
	comp=Z,24nm,21.7s,baz=70,slow=35						
ZAA1	**Zalesovo Array**	**80.66**	**326**	*e*P	**P**	**03 27 32.9**	**-1.8**
CCB	**Clear Creek Bu**	**81.23**	**22**	*e*P	**P**	**03 27 35.4**	**-2.1**
	comp=Z,2.0nm,0.7s						
IL1	**Eielson Array**	**81.64**	**22**	*e*P	**P**	**03 27 37.1**	**-2.5**
ILAR	**Eielson Array**	**81.64**	**22**	P	**P**	**03 27 37.5**	**-2.1**
	comp=Z,1.6nm,0.6s,baz=249,slow=5.6,SNR=27						
ILAR				PKKPbc	**PKKPbc**	**03 46 14.2**	**-1.1**
	comp=Z,0.3nm,0.8s,baz=8.2,slow=2.5,SNR=4.5						
ILB	**Eielson Array**	**81.64**	**22**	*e*P	**P**	**03 27 37.7**	**-2.0**
KSH	**Kashi**	**82.54**	**311**	*e*P	**P**	**03 27 44.8**	**-0.3**
KSH				sP	sP	03 28 00.7	+0.5
KSH				PP	**PP**	**03 30 56.8**	**+1.9**
KSH				S	**S**	**03 37 55.0**	**-4.9**
KSH				pmax	pmax		
	comp=Z,64nm,4.1s						
KURK	**Kurchatov**	**83.30**	**322**	*e*P	**P**	**03 27 46.8**	**-1.8**
KURBB	**Kurchatov Arra**	**83.33**	**322**	P	**P**	**03 27 46.8**	**-2.0**
	comp=Z,0.4nm,0.7s,baz=104,slow=3.9,SNR=4.0						
EGAK	**Eagle**	**83.84**	**23**	*e*P	**P**	**03 27 50.7**	**-0.5**
	comp=Z,4.4nm,1.1s						
DAWY	**Dawson**	**84.27**	**24**	*e*P	**P**	**03 27 53.3**	**-0.1**
	comp=Z,2.5nm,0.8s						
H02S1	**DAWSON INLET T**	**84.30**	**36**	T	T	05 00 55.2	
	SNR=32						
QSPA	**South Pole Qui**	**85.74**	**180**	P	**P**	**03 28 00.1**	**-0.8**
	comp=Z,24nm,0.8s,baz=16,slow=1.4,SNR=43						
QSPA	**South Pole Qui**	**85.74**	**180**	*e*P	**P**	**03 28 01.4**	**+0.5**
MAW	**Mawson**	**86.09**	**203**	P	**P**	**03 28 01.3**	**-1.1**
	comp=Z,2.8nm,0.5s,baz=84,slow=6.9,SNR=20						
MAW				LR	LR	04 02 40.3	
	comp=Z,67nm,20.0s,baz=80,slow=33						
MAW	**Mawson**	**86.09**	**203**	*e*P	**P**	**03 28 01.6**	**-0.8**
	comp=Z,1.2nm,0.9s						
YBH	**Yreka Blue Hor**	**88.69**	**48**	LR	LR	04 04 42.0	
	comp=Z,40nm,18.1s,baz=286,slow=33						
BVAR	**Borovoye Array**	**88.76**	**323**	LR	LR	04 06 59.1	
	comp=Z,37nm,21.5s,baz=104,slow=35						
SBI	**Santa Barbara**	**90.80**	**57**	*e*P	**P**	**03 28 26.4**	**+0.9**
NV01	**Mina Array Sit**	**91.75**	**52**	*e*P	**P**	**03 28 29.4**	**-0.7**
NVAR	**Mina Array Bea**	**91.75**	**52**	P	**P**	**03 28 29.2**	**-0.9**
	comp=Z,0.6nm,0.5s,baz=255,slow=6.5,SNR=5.3						
NVAR				LR	LR	04 03 57.3	
	comp=Z,92nm,19.6s,baz=92,slow=32						
J08A	**Circle Bar Ran**	**91.96**	**47**	*e*P	**P**	**03 28 30.1**	**-0.8**
	comp=Z,2.3nm,0.7s						
SYO	**Syowa Base**	**94.20**	**199**⇑	*e*P	**P**	**03 28 40.4**	**-0.1**
SYO	**Syowa Base**	**94.20**	**199**⇓	*e*sP	sP	03 28 57.4	+1.8
YKA	**Yellowknife Ar**	**94.93**	**28**	P	**P**	**03 28 42.9**	**-1.0**
	comp=Z,0.6nm,0.6s,baz=275,slow=4.3,SNR=4.6						
YKA				LR	LR	04 05 34.7	
	comp=Z,7.5nm,21.5s,baz=264,slow=32						
YKB5	**Yellowknife Ar**	**94.93**	**28**	*e*P	**P**	**03 28 42.9**	**-1.0**
ARU	**Arti**	**95.82**	**326**	LR	LR	04 12 48.6	
	comp=Z,53nm,20.2s,baz=110,slow=36						
AKTO	**Aktyubinsk**	**96.26**	**320**	LR	LR	04 13 41.9	
	comp=Z,23nm,19.6s,baz=86,slow=36						
LPIG	**La Paz**	**98.02**	**66**	LR	LR	04 07 57.8	
	comp=Z,93nm,18.5s,baz=225,slow=32						
PD31	**Pinedale Array**	**98.48**	**48**	*e*P	**P**	**03 28 59.5**	**-1.4**
PDAR	**Pinedale Array**	**98.48**	**48**	P	**P**	**03 28 59.5**	**-1.4**
	comp=Z,0.4nm,0.6s,baz=280,slow=2.7,SNR=4.6						
PDAR				LR	LR	04 06 13.0	
	comp=Z,49nm,21.8s,baz=256,slow=31						
ARA0	**ARCESS Array S**	**106.31**	**343**	*e*PKKPbc	PKKPbc	03 45 08.2	-1.5
ARCES	**ARCESS Array B**	**106.31**	**343**	PKKPbc	PKKPbc	03 45 08.2	-1.5
	comp=Z,4.0nm,1.0s,baz=270,slow=0.9,SNR=4.0						
FIA0	**FINESS Array S**	**110.52**	**336**	*e*PKKPbc	PKKPbc	03 44 53.5	-2.6
FINES	**FINESS Array B**	**110.52**	**336**	PKKPbc	PKKPbc	03 44 53.5	-2.6
	comp=Z,0.4nm,0.3s,baz=234,slow=3.4,SNR=7.5						
BR101	**Keskin Array S**	**114.90**	**312**	*e*PKiKP	PKPdf	03 34 03.5	+0.3
BRTR	**Keskin Array B**	**114.90**	**312**	PKP	PKPdf	03 34 03.5	+0.3
	comp=Z,0.3nm,0.6s,baz=111,slow=3.5,SNR=2.8						
HFS	**Hagfors**	**116.13**	**339**	PKP	**PKPdf**	**03 34 03.7**	**-1.1**
	comp=Z,0.8nm,0.7s,baz=54,slow=7.3,SNR=3.2						
TKL	**Tuckaleechee C**	**119.35**	**51**	PKP	**PKPdf**	**03 34 11.2**	**-0.6**
	comp=Z,1.2nm,0.6s,baz=39,slow=6.5,SNR=3.7						
V52A	**Sevierville**	**119.44**	**51**	*e*PKPdf	**PKPdf**	**03 34 11.6**	**-0.3**
PLCA	**Paso Flores**	**120.26**	**143**	PKP	**PKPdf**	**03 34 13.2**	**-0.2**
	comp=Z,1.8nm,0.6s,baz=67,slow=4.1,SNR=5.6						
SCHQ	**Schefferville**	**120.28**	**25**	PKP	**PKPdf**	**03 34 12.8**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=311,slow=9.3,SNR=3.9						
MBAR	**Mbarara**	**121.88**	**267**	*e*PKPdf	**PKPdf**	**03 34 17.6**	**+0.2**
GEC2	**GERESS Array S**	**123.55**	**329**	*e*PKPdf	**PKPdf**	**03 34 18.5**	**-1.0**
GERES	**GERESS Array B**	**123.55**	**329**	PKP	**PKPdf**	**03 34 18.5**	**-1.0**
	comp=Z,0.8nm,0.5s,baz=90,slow=2.0,SNR=9.4						
GEA0	**GERESS Array S**	**123.55**	**329**	*e*PKPdf	**PKPdf**	**03 34 19.1**	**-0.4**
DAVOX	**Davos/Dischmat**	**126.85**	**329**	PKP	**PKPdf**	**03 34 25.0**	**-1.0**
	comp=Z,1.7nm,0.5s,baz=187,slow=8.1,SNR=4.2						
PRAC	**Prado**	**132.46**	**89**	*e*PKPdf	**PKPdf**	**03 34 37.2**	**-0.2**
KEST	**Kesra**	**133.96**	**318**	PKP	**PKPdf**	**03 34 39.0**	**-0.7**
	comp=Z,0.9nm,0.6s,baz=22,slow=5.4,SNR=2.9						
RUSC	**La Rusia**	**134.30**	**86**	*e*PKPdf	**PKPdf**	**03 34 41.6**	**+0.2**
LPAZ	**La Paz**	**134.71**	**118**	PKP	**PKPdf**	**03 34 42.4**	**+0.1**
	comp=Z,6.6nm,0.8s,baz=267,slow=1.7,SNR=21						
LPAZ	**La Paz**	**134.71**	**118**	*e*PKPdf	**PKPdf**	**03 34 42.0**	**-0.3**
SDV	**Santo Domingo**	**136.65**	**82**	PKP	**PKPdf**	**03 34 44.6**	**-0.8**
	comp=Z,7.0nm,0.5s,baz=342,slow=3.2,SNR=6.7						
SDV	**Santo Domingo**	**136.65**	**82**	*e*PKPdf	**PKPdf**	**03 34 45.7**	**+0.3**
CPUP	**Villa Florida**	**137.91**	**138**	PKP	**PKPdf**	**03 34 47.5**	**+0.3**
	comp=Z,3.3nm,0.7s,baz=269,slow=1.6,SNR=8.2						
SAML	**Samuel**	**141.84**	**110**	*e*PKPdf	**PKPdf**	**03 34 54.9**	**+0.2**
SPB	**Sao Paulo**	**146.05**	**145**	*e*PKPdf	**PKPab**	**03 35 02.9**	**-0.2**
PTGA	**Pitinga**	**146.92**	**98**	*e*PKPdf	**PKPdf**	**03 35 03.6**	**+0.1**
TOA0	**Torodi Ar. Sit**	**150.09**	**289**	*e*PKPbc	**PKPbc**	**03 35 12.6**	**-1.1**
TORD	**Torodi Ar. Bea**	**150.09**	**289**	PKPbc	**PKPbc**	**03 35 12.2**	**-1.4**
	baz=76,slow=2.6						
TOA1	**Torodi Ar. Sit**	**150.10**	**289**	*e*PKPbc	**PKPbc**	**03 35 12.2**	**-1.4**

IDC 04 03:27:56.9±1.9**,0°.56N×92°.32E,h0**^{km}**,mb3.8**/2**,mb1 4.2**/4**, mb1mx3.5**/63**,mbtmp4.0**/4**,ML4.2**/2**,MS3.5**/1**,Ms1 3.4**/1**, ms1mx2.5**/62**,Error ellipse: s-maj=59.6km s-min=30.3km az=53.0,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALK	**Pallekele**	**13.37**	**300**	Pn	Pn	03 31 07.9	-0.2
	1.2nm,0.3s,baz=116,slow=15,SNR=4.8						
PALK				Sn	Sn	03 33 25.6	-12
	4.5nm,0.3s,baz=118,slow=1.0,SNR=9.5						
CMAR	**Chiang Mai Arr**	**18.94**	**20**	P	Pn	03 32 20.6	+0.4
	0.3nm,0.3s,baz=213,slow=12,SNR=11						
WRA	**Warramunga Arr**	**45.92**	**119**	P	P	03 36 21.5	-0.3
	1.2nm,0.6s,baz=298,slow=8.3,SNR=6.3						
ASAR	**Alice Springs**	**47.00**	**124**	P	P	03 36 30.2	-0.1
	0.5nm,0.5s,baz=306,slow=8.0,SNR=2.5						
STKA	**Stephens Creek**	**56.63**	**129**	LR	LR	04 00 47.8	
	comp=Z,40nm,19.5s,baz=32,slow=35						
TXAR	**Lajitas Array**	**146.58**	**26**	PKPbc	PKPdf	03 47 40.2	+0.4
	0.7nm,0.8s,baz=319,slow=1.0,SNR=6.8						

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*NEIC **04** 03:47:33.9±1.6,24°.64S×176°.84W,h78^{km}±15^{km},mb4.7/11, Error ellipse: s-maj=17.1km s-min=9.4km az=134.0*

*ISCJB **04** 03:47:34.2±0.5,24°.55S±0°.06×176°.85W±0°.09,h100^{km}, mb4.5/18,Error ellipse: s-maj=12.6km s-min=7.3km az=26.9*

*IDC **04** 03:47:36.5±2.8,24°.31S×177°.27W,h76^{km}±27^{km},mb4.3/8, mb1 4.5/10,mb1mx3.9/46,mbtmp4.7/10,MS3.1/1, Ms1 3.1/1,ms1mx2.5/42,Error ellipse: s-maj=41.0km s-min=21.0km az=131.0*

ISC 04 03:47:35.8±0.6**,24°.49S**±0°.07×**176°.8W**±0°.1**,h100**^{km}**,n48,** σ**1^{s}.83**/47**,mb4.6**/18**,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**4.85**	**192**	P	**Pn**	**03 48 48.7**	**+2.2**
	95nm,0.3s,baz=72,slow=14,SNR=11						
RAO				S	**Sn**	**03 49 40.7**	**-0.7**
	68nm,0.3s,baz=120,slow=20,SNR=3.5						
AFI	**Afiamalu**	**11.53**	**25**	P	**Pn**	**03 50 18.6**	**+1.2**
	21nm,0.3s,baz=357,slow=3.3,SNR=17						
AFI				S	Sn	03 52 16.2	-8.1
	2.9nm,0.3s,baz=30,slow=20,SNR=3.0						
AFI	**Afiamalu**	**11.53**	**25**	*e*Pn	**Pn**	**03 50 17.9**	**+0.6**
AFI				*e*Sn	**Sn**	**03 52 19.0**	**-5.2**
URZ	**Urewera**	**14.68**	**199**	P	Pn	03 50 51.0	-7.3
	0.2nm,0.3s,baz=348,slow=20,SNR=3.7						
URZ				S	Sn	03 53 20.3	-20
	0.9nm,0.3s,baz=308,slow=18,SNR=3.3						
URZ	**Urewera**	**14.68**	**199**	*e*Pn	**Pn**	**03 50 56.5**	**-1.8**
URZ				*e*Sn	Sn	03 53 20.3	-20
DZM	**Mont Dzumac**	**15.61**	**275**	P	P	03 51 16.7	+4.3
	0.6nm,0.3s,baz=95,slow=17,SNR=12						
FOZ	**Fox Glacier**	**21.95**	**207**	*e*P	**P**	**03 52 20.3**	**-1.0**
	36nm,1.2s						
PPT	**Papeete**	**26.27**	**80**	LR	LR	04 01 34.0	
	comp=Z,40nm,21.1s,baz=228,slow=31						
EIDS	**Eidsvold**	**29.13**	**261**	*e*P	**P**	**03 53 25.8**	**-1.5**
	17nm,1.4s						
CTAO	**Charters Tower**	**34.42**	**270**	*e*P	**P**	**03 54 13.8**	**-0.1**
	17nm,1.0s						
STKA	**Stephens Creek**	**37.25**	**249**	P	**P**	**03 54 38.0**	**+0.2**
	1.5nm,0.6s,baz=93,slow=14,SNR=5.2						
PMG	**Port Moresby**	**37.47**	**287**	P	**P**	**03 54 38.8**	**-1.1**
	34nm,0.9s,baz=98,slow=12,SNR=4.5						
AS01	**Alice Springs**	**44.80**	**260**	*e*P	**P**	**03 55 39.9**	**0.0**
AS31	**Alice Springs**	**44.84**	**260**	*e*P	**P**	**03 55 40.5**	**+0.2**
	7.2nm,1.3s						
ASAR	**Alice Springs**	**44.84**	**260**	P	**P**	**03 55 39.7**	**-0.6**
	15nm,0.9s,baz=102,slow=8.1,SNR=58						
WB2	**Warramunga Arr**	**45.29**	**266**	*e*P	**P**	**03 55 43.2**	**-0.6**
	11nm,0.7s						
WRAB	**Tennant Creek**	**45.29**	**266**	*e*P	**P**	**03 55 41.9**	**-1.9**
WR1	**Warramunga Arr**	**45.30**	**266**	*e*P	**P**	**03 55 43.0**	**-1.0**
WRA	**Warramunga Arr**	**45.30**	**266**	P	**P**	**03 55 42.9**	**-1.0**
	8.3nm,0.6s,baz=99,slow=6.8,SNR=24						
FORT	**Forrest**	**48.87**	**250**	*e*P	**P**	**03 56 10.2**	**-1.2**
	11nm,0.6s						
FITZ	**Fitzroy Crossi**	**53.71**	**265**	P	**P**	**03 56 47.8**	**0.0**
	8.6nm,0.8s,baz=118,slow=12,SNR=4.9						
MBWA	**Marble Bar**	**58.17**	**259**	*e*P	**P**	**03 57 19.3**	**-0.3**
	35nm,1.3s						
CASY	**Casey**	**60.88**	**206**	*e*P	**P**	**03 57 37.6**	**+0.2**
	3.1nm,0.9s						
MJAR	**Matsushiro Arr**	**74.08**	**324**	P	**P**	**03 59 02.1**	**+1.2**
	0.7nm,0.5s,baz=163,slow=6.8,SNR=2.5						
MAJO	**Matsushiro**	**74.08**	**324**	*e*P	**P**	**03 59 02.1**	**+1.2**
MAW	**Mawson**	**78.21**	**200**	*e*P	**P**	**03 59 21.5**	**-2.4**
	0.6nm,1.1s						
PETK	**Petropavlovsk-**	**80.40**	**345**	P	**P**	**03 59 38.1**	**+2.2**
	4.0nm,0.8s,baz=126,slow=7.3						
PEA1	**Petropavlovsk-**	**80.40**	**345**	*e*P	**P**	**03 59 38.1**	**+2.2**
DGR	**Domenigoni Val**	**81.06**	**47**	*e*P	**P**	**03 59 41.6**	**+1.7**
BORC	**Borrego Spring**	**81.23**	**47**	*e*P	**P**	**03 59 45.0**	**+4.2**
GMRC	**Granite Mounta**	**82.64**	**47**	*e*P	**P**	**03 59 46.9**	**-1.4**
LOY	**Loyalton**	**82.78**	**40**	*e*P	**P**	**03 59 47.3**	**-1.6**
BABR	**Babbit Peak**	**82.82**	**41**	*e*P	**P**	**03 59 47.3**	**-2.1**
WPW	**White Pass**	**86.64**	**34**	*e*P	**P**	**04 00 11.3**	**+3.2**
TMUT	**Trail Mountain**	**88.14**	**45**	*e*P	**P**	**04 00 13.7**	**-2.0**
	2.5nm,0.8s						
BW06	**Boulder Array**	**91.09**	**43**	*e*P	**P**	**04 00 30.7**	**+1.3**
CM31	**Chiang Mai Arr**	**92.50**	**289**	*e*P	**P**	**04 00 38.7**	**+2.6**
CMAR	**Chiang Mai Arr**	**92.50**	**289**	P	**P**	**04 00 38.7**	**+2.6**
	2.3nm,0.8s,baz=130,slow=2.8,SNR=9.9						
HFS	**Hagfors**	**143.64**	**351**	PKhKP	PKPpre	04 06 57.2	
	1.1nm,0.5s,baz=66,slow=4.9,SNR=16						
AKASG	**Malin Array Be**	**147.02**	**329**	PKPbc	**PKPab**	**04 07 07.6**	**-0.7**
	1.4nm,0.5s,baz=41,slow=4.0,SNR=6.8						
AKBB	**Malin Array Si**	**147.02**	**329**	*e*PKPbc	**PKPab**	**04 07 09.2**	**+0.8**
AK11	**Malin Array Si**	**147.06**	**329**	*e*PKPbc	**PKPab**	**04 07 08.3**	**-0.2**
ASF	**Jabal al Asfar**	**149.48**	**292**	PKPbc	**PKPab**	**04 07 16.3**	**-2.7**
	2.3nm,0.6s,baz=169,slow=2.4,SNR=2.4						
BR101	**Keskin Array S**	**150.27**	**308**	*e*PKPbc	**PKPbc**	**04 07 16.6**	**+1.1**
BR131	**Keskin Array S**	**150.27**	**308**	*e*PKPbc	**PKPbc**	**04 07 16.8**	**+1.2**
BRTR	**Keskin Array B**	**150.27**	**308**	PKPbc	**PKPbc**	**04 07 16.6**	**+1.1**
	1.9nm,0.8s,baz=131,slow=4.7,SNR=8.9						
MMAI	**Mount Meron Ar**	**150.63**	**294**	PKPbc	**PKPbc**	**04 07 18.6**	**+2.0**
	3.0nm,0.5s,baz=74,slow=6.6,SNR=4.0						
CLL	**Collm**	**152.19**	**347**	*e*PKPbc	**PKPbc**	**04 07 21.0**	**+1.6**
CLL				*e*PKPab	**PKPab**	**04 07 29.0**	**-0.4**

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*NEIC **04** 04:00:05.8±0.0,48°.65N×123°.13W,h14^{km},ML2.4(OTT), ML3.1(SEA),After SEA.*

NEIC Felt [III] at Friday Harbor and [II] at Eastsound. Also felt at Forks and Olga. Felt [II] at Victoria, British Columbia. Also felt at Vancouver and White Rock.

PGC 04 04:00:05.9±0.2**,48°.66N×123°.12W,h15**^{km}**,ML3.1, ML2.4**/35**,Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNB	**Saturna Island**	**0.12**	**346**	P	Pg	04 00 09.4	-0.2
SNB				S	Sg	04 00 11.9	-0.1
SNB	**Saturna Island**	**0.12**	**346**	P	Pg	04 00 09.4	-0.2
SNB				S	Sg	04 00 11.9	-0.1
MCW	**Mount Constitu**	**0.20**	**83**	P	Pg	04 00 10.0	-0.6
MCW	**Mount Constitu**	**0.20**	**83**	*e*P	Pg	04 00 10.1	-0.5
MCW	**Mount Constitu**	**0.20**	**83**	P	Pg	04 00 10.0	-0.6
PA05	**PA05 Willingdo**	**0.21**	**269**	P	Pg	04 00 10.3	-0.4
PA05				S	Sg	04 00 13.4	-0.7
PA03	**PA03 Flamable**	**0.21**	**269**	P	Pg	04 00 10.4	-0.4
PA03				S	Sg	04 00 13.8	-0.3
PA04	**PA04 Cage**	**0.21**	**269**	P	Pg	04 00 10.4	-0.4
PA04				S	Sg	04 00 13.7	-0.4
PA01	**PA01 North**	**0.21**	**270**	P	Pg	04 00 10.4	-0.4
PA01				S	Sg	04 00 13.8	-0.3
B011	**North Saanich**	**0.21**	**269**	P	Pg	04 00 10.3	-0.5
B011				S	Sg	04 00 13.6	-0.5
PA02	**PA02 Ocean**	**0.21**	**269**	P	Pg	04 00 10.4	-0.5
PA02				S	Sg	04 00 13.8	-0.4
PA12	**PA12 Sannich**	**0.22**	**268**	P	Pg	04 00 10.4	-0.4
PA12				S	Sg	04 00 13.8	-0.4
B009	**North Saanich**	**0.22**	**269**	P	Pg	04 00 10.3	-0.5
B009				S	Sg	04 00 13.8	-0.4
B010	**North Saanich**	**0.22**	**269**	P	Pg	04 00 10.3	-0.5
B010				S	Sg	04 00 13.7	-0.4
PGC	**Sidney**	**0.22**	**269**	P	Pg	04 00 10.5	-0.4
PGC				S	Sg	04 00 13.8	-0.3
PGC	**Sidney**	**0.22**	**269**	*e*Pg	Pg	04 00 10.5	-0.4
PGC				*e*Sg	Sg	04 00 13.5	-0.6
VGZ	**Gonzales**	**0.28**	**209**	P	Pg	04 00 11.2	-0.7
VGZ				S	Sg	04 00 15.0	-0.8
VGZ	**Gonzales**	**0.28**	**209**	P	Pg	04 00 11.2	-0.7
VGZ				S	Sg	04 00 15.0	-0.8
A04D	**Lummi Island**	**0.28**	**77**	P	Pg	04 00 11.4	-0.6
	baz=257,SNR=22						
A04D				S	Sg	04 00 15.4	-0.7
	baz=257						
GOBB	**Galiano Island**	**0.39**	**319**	P	Pg	04 00 13.4	-0.5
GOBB				S	Sg	04 00 18.5	-0.8
GOBB	**Galiano Island**	**0.39**	**319**	P	Pg	04 00 13.4	-0.5
GOBB				S	Sg	04 00 18.5	-0.8
LZB	**Mount Lazard**	**0.47**	**265**	P	Pg	04 00 14.3	-1.0
LZB				S	Sg	04 00 20.6	-1.0
LZB	**Mount Lazard**	**0.47**	**265**	P	Pg	04 00 14.3	-1.0
LZB				S	Sg	04 00 20.6	-1.0
BPCB	**Bare Point**	**0.47**	**305**	P	Pg	04 00 14.3	-0.9
BPCB				S	Sg	04 00 20.6	-1.0
BPCB	**Bare Point**	**0.47**	**305**	P	Pg	04 00 14.3	-0.9
BPCB				S	Sg	04 00 20.6	-1.0
SVOH	**Skagit Valley**	**0.49**	**138**	P	Pg	04 00 14.8	-0.9
SVOH	**Skagit Valley**	**0.49**	**138**	*e*P	Pg	04 00 14.8	-0.8
SVOH	**Skagit Valley**	**0.49**	**138**	P	Pg	04 00 14.8	-0.9
BLN	**Blyn Mountain**	**0.66**	**171**	P	Pg	04 00 17.6	-1.2
BLN	**Blyn Mountain**	**0.66**	**171**	*e*Pg	Pg	04 00 17.6	-1.2
B926	**Mesachie Lake**	**0.69**	**284**	P	Pg	04 00 17.8	-1.6
B926				S	Sg	04 00 26.6	-1.8
VDB	**Vedder Mountai**	**0.77**	**61**	P	Pg	04 00 19.4	-1.5
VDB				S	Sg	04 00 29.0	-2.1
VDB	**Vedder Mountai**	**0.77**	**61**	P	Pg	04 00 19.4	-1.5
VDB				S	Sg	04 00 29.0	-2.1
B05A	**Bryant**	**0.79**	**119**	P	Pg	04 00 19.7	-1.6
	baz=300,SNR=46						
B05A				S	Sg	04 00 30.0	-1.7
	baz=300						
YOUB	**Youbou, Lake C**	**0.79**	**289**	P	Pg	04 00 19.7	-1.6
YOUB				S	Sg	04 00 29.9	-1.9
YOUB	**Youbou, Lake C**	**0.79**	**289**	P	Pg	04 00 19.7	-1.6
YOUB				S	Sg	04 00 29.9	-1.9
NLLB	**Nanaimo Lost L**	**0.81**	**316**	P	Pg	04 00 19.9	-1.8
NLLB				S	Sg	04 00 30.3	-2.0
NLLB	**Nanaimo Lost L**	**0.81**	**316**	P	Pg	04 00 19.9	-1.8
NLLB				S	Sg	04 00 30.3	-2.0
MBW	**Mount Baker**	**0.82**	**80**	P	Pg	04 00 20.6	-1.4
MBW	**Mount Baker**	**0.82**	**80**	P	Pg	04 00 20.6	-1.4
OBC	**Olympics--Boni**	**0.89**	**226**	P	Pb	04 00 21.6	-1.5
OBC				S	Sb	04 00 33.1	-1.6
OBC	**Olympics--Boni**	**0.89**	**226**	P	Pb	04 00 21.6	-1.5
OBC				S	Sb	04 00 33.1	-1.6
JCW	**Jim Creek**	**0.92**	**120**	P	Pb	04 00 21.8	-1.8
JCW				S	Sb	04 00 33.8	-1.8
JCW	**Jim Creek**	**0.92**	**120**	P	Pb	04 00 21.8	-1.8
JCW				S	Sb	04 00 33.8	-1.8
OSD	**Olympics--Snow**	**0.92**	**205**	P	Pb	04 00 22.3	-1.4
OSD	**Olympics--Snow**	**0.92**	**205**	P	Pb	04 00 22.3	-1.4
GHNB	**Nanoose**	**0.98**	**312**	P	Pb	04 00 22.6	-1.9
GHNB				S	Sb	04 00 35.0	-2.3
HDW	**Hoodsport**	**1.01**	**177**	P	Pb	04 00 23.1	-2.0
HDW				S	Sb	04 00 36.7	-1.5
HDW	**Hoodsport**	**1.01**	**177**	P	Pb	04 00 23.1	-2.0
HDW				S	Sb	04 00 36.7	-1.5
SHB	**Sechelt**	**1.06**	**333**	P	Pb	04 00 24.1	-2.0
SHB				S	Sb	04 00 37.2	-2.7
SHB	**Sechelt**	**1.06**	**333**	P	Pb	04 00 24.1	-2.0
SHB				S	Sb	04 00 37.2	-2.7
MGB	**Mount Grey**	**1.09**	**289**	P	Pb	04 00 24.7	-1.9
MGB				S	Sb	04 00 38.3	-2.3
MGB	**Mount Grey**	**1.09**	**289**	P	Pb	04 00 24.7	-1.9
MGB				S	Sb	04 00 38.3	-2.3
B06A	**Marblemount**	**1.10**	**97**	P	Pb	04 00 25.2	-1.3
B06A				S	Sb	04 00 38.8	-1.8
OFR	**Olym-F Res Ctr**	**1.11**	**230**	P	Pb	04 00 25.7	-1.2
OFR				S	Sb	04 00 39.1	-2.0
OFR	**Olym-F Res Ctr**	**1.11**	**230**	P	Pb	04 00 25.7	-1.2
OFR				S	Sb	04 00 39.1	-2.0
SP2	**Seward Park 2**	**1.25**	**152**	*e*Pn	Pn	04 00 28.7	0.0
B927	**Port Alberni**	**1.25**	**298**	P	Pn	04 00 27.1	-1.7
B927				S	Sb	04 00 42.7	-2.2
B927	**Port Alberni**	**1.25**	**298**	P	Pn	04 00 27.1	-1.7
B927				S	Sb	04 00 42.7	-2.2
ALB	**Alberni**	**1.28**	**299**	S	Sb	04 00 43.8	-2.1
HOPB	**Hope**	**1.34**	**56**	P	Pn	04 00 28.9	-1.1
HOPB				S	Sn	04 00 45.0	-2.6
HOPB	**Hope**	**1.34**	**56**	P	Pn	04 00 28.9	-1.1
HOPB				S	Sn	04 00 45.0	-2.6
B928	**Bamfield**	**1.34**	**278**	P	Pn	04 00 28.8	-1.2
B928				S	Sn	04 00 45.8	-1.8
B928	**Bamfield**	**1.34**	**278**	*e*Pn	Pn	04 00 29.1	-0.9
B928				S	Sn	04 00 45.8	-1.8
SMW	**South Mountain**	**1.34**	**186**	P	Pn	04 00 29.7	-0.4
SMW	**South Mountain**	**1.34**	**186**	P	Pn	04 00 29.7	-0.4
TXB	**Texada**	**1.35**	**321**	P	Pn	04 00 28.6	-1.7
TXB				S	Sn	04 00 45.6	-2.3
TXB	**Texada**	**1.35**	**321**	P	Pn	04 00 28.6	-1.7
TXB				S	Sn	04 00 45.6	-2.3
C05A	**Tolt Reservoir**	**1.36**	**134**	P	Pn	04 00 29.0	-1.3
C05A				S	Sn	04 00 46.3	-1.7
C05A	**Tolt Reservoir**	**1.36**	**134**	*e*Pn	Pn	04 00 29.4	-0.9
NLWA	**Neilton Lookou**	**1.36**	**202**	*e*Pn	Pn	04 00 30.3	0.0
NLWA				*e*Sn	Sn	04 00 46.0	-2.1
GPW	**Glacier Peak**	**1.43**	**111**	P	Pn	04 00 30.8	-0.8
GPW	**Glacier Peak**	**1.43**	**111**	P	Pn	04 00 30.8	-0.8
ELW	**Echo Lake**	**1.43**	**144**	P	Pn	04 00 30.4	-0.9
ELW				S	Sn	04 00 47.9	-2.0
ELW	**Echo Lake**	**1.43**	**144**	P	Pn	04 00 30.4	-0.9
ELW				S	Sn	04 00 47.9	-2.0
OZB	**Mount Ozzard**	**1.59**	**282**	P	Pn	04 00 33.1	-0.5
OZB				S	Sn	04 00 52.3	-1.7
OZB	**Mount Ozzard**	**1.59**	**282**	P	Pn	04 00 33.1	-0.5
OZB				S	Sn	04 00 52.3	-1.7
WISH	**Wishkah**	**1.60**	**196**	P	Pn	04 00 33.1	-0.5
WISH	**Wishkah**	**1.60**	**196**	P	Pn	04 00 33.1	-0.5
B012	**Ucluelet**	**1.62**	**280**	P	Pn	04 00 33.9	0.0
B012				S	Sn	04 00 53.9	-0.6
D05A	**Enumclaw**	**1.65**	**152**	P	Pn	04 00 34.0	-0.3
D05A				S	Sn	04 00 55.0	-0.3
D05A	**Enumclaw**	**1.65**	**152**	*e*Pn	Pn	04 00 34.4	0.0
D05A				*e*Sn	Sn	04 00 55.7	+0.4
C06D	**Leavenworth**	**1.66**	**115**	P	Pn	04 00 34.4	-0.1
	baz=297						

C06D				S	Sn	04 00 55.4	-0.1
	baz=297						
WRW	Wenatchee Ridg	1.70	117	*e*Pn	Pn	04 00 35.1	0.0
WRW				*e*Sn	Sn	04 00 56.8	+0.2
BTB	Buttle Lake	1.77	298	P	Pn	04 00 36.0	-0.2
BTB				S	Sn	04 00 58.2	-0.3
BTB	Buttle Lake	1.77	298	P	Pn	04 00 36.0	-0.2
BTB				S	Sn	04 00 58.2	-0.3
B941	Kapowsin	1.78	160	*e*Pn	Pn	04 00 35.7	-0.3
MWAB	Mount Washingt	1.80	308	S	Sn	04 00 58.6	-0.4
TOFB	Tofino	1.90	286	P	Pn	04 00 37.2	-0.6
TOFB				S	Sn	04 01 00.5	-1.0
OBSR	Observation Ro	1.96	153	*e*Pn	Pn	04 00 39.5	+0.6
FMW	Mount Fremont	1.98	150	P	Pn	04 00 39.2	+0.1
FMW	Mount Fremont	1.98	150	P	Pn	04 00 39.2	+0.1
CBB	Campbell River	2.01	314	P	Pn	04 00 39.2	-0.1
CBB				S	Sn	04 01 04.1	0.0
CBB	Campbell River	2.01	314	P	Pn	04 00 39.2	-0.1
CBB				S	Sn	04 01 04.1	0.0
SPLB	Strathcona Par	2.07	308	S	Sn	04 01 04.7	-0.9
LON	Longmire	2.10	155	P	Pn	04 00 40.7	+0.1
LON				S	Sn	04 01 06.9	+0.4
LON	Longmire	2.10	155	*e*Pn	Pn	04 00 41.0	+0.4
LON				*e*Sn	Sn	04 01 06.6	+0.1
LLLB	Lillooet	2.12	22	P	Pn	04 00 40.1	-0.6
LLLB				S	Sn	04 01 07.1	+0.3
LLLB	Lillooet	2.12	22	P	Pn	04 00 40.1	-0.6
LLLB				S	Sn	04 01 07.1	+0.3
LLLB				*e*Sn	Sb	04 01 09.4	-0.7
E03A	Lebam	2.13	188	P	Pn	04 00 40.6	-0.3
E03A				S	Sn	04 01 06.7	-0.3
E03A	Lebam	2.13	188	*e*Pn	Pn	04 00 40.9	0.0
E03A				*e*Sn	Sn	04 01 05.6	-1.4
LTY	Liberty	2.16	129	P	Pn	04 00 42.5	+1.1
LTY				S	Sn	04 01 09.0	+1.0
LTY	Liberty	2.16	129	*e*Pn	Pn	04 00 42.1	+0.7
LTY				*e*Sn	Sn	04 01 09.5	+1.5
BMW	Boistfort Moun	2.18	182	*e*Pn	Pn	04 00 41.9	+0.2
GDR	Gold River	2.21	302	P	Pn	04 00 43.1	+1.1
GDR	Gold River	2.21	302	P	Pn	04 00 43.1	+1.1
TBM	Table Mountain	2.26	130	*e*Pn	Pn	04 00 44.5	+1.7
TDL	Tradedollar La	2.39	165	*e*Pn	Pn	04 00 45.6	+1.1
PNT	Penticton	2.40	73	P	Pn	04 00 44.9	+0.2
PNT	Penticton	2.40	73	P	Pn	04 00 44.9	+0.2
B201	Coldwater, Mou	2.42	166	*e*Pn	Pn	04 00 46.2	+1.2
EBG	Ellensburg	2.45	134	*e*Pn	Pn	04 00 46.9	+1.5
NAC	Naches	2.47	140	*e*Pn	Pn	04 00 47.7	+2.1
NAC				*e*Sn	Sb	04 01 19.5	-0.7
B08A	Colville Reser	2.54	95	*e*Pn	Pn	04 00 47.5	+1.0
B08A				*e*Sn	Sb	04 01 20.1	-2.1
B203	Quarry, Mount	2.54	168	*e*Pn	Pn	04 00 47.7	+1.1
B023	Clatskanie	2.54	179	*e*Pn	Pn	04 00 47.0	+0.4
NCRB	Newcastle Ridg	2.59	314	P	Pn	04 00 48.2	+0.8
NCRB	Newcastle Ridg	2.59	314	P	Pn	04 00 48.2	+0.8
LVP	Lakeview Peak	2.63	169	*e*Pn	Pn	04 00 48.9	+1.0
WOSB	Woss	2.71	305	P	Pn	04 00 49.9	+0.9
WOSB	Woss	2.71	305	P	Pn	04 00 49.9	+0.9
F03A	Seaside	2.74	186	*e*Pn	Pn	04 00 49.8	+0.4
F03A				*e*Sn	Sn	04 01 21.9	-0.3
EDB	Eliza Dome	2.89	296	P	Pn	04 00 52.5	+1.2
EDB	Eliza Dome	2.89	296	P	Pn	04 00 52.5	+1.2
MAYB	Maynard	3.16	305	P	Pn	04 00 56.6	+1.4
MAYB	Maynard	3.16	305	P	Pn	04 00 56.6	+1.4
C09A	Chrisman Ranch	3.35	103	*e*Pn	Pn	04 01 00.2	+2.5
C09A				*e*Sg	Sg	04 01 49.7	-3.9
BPBC	Brooks Peninsu	3.39	298	P	Pn	04 00 59.6	+1.4
BPBC	Brooks Peninsu	3.39	298	P	Pn	04 00 59.6	+1.4
G03D	McMinnville, O	3.45	182	P	Pn	04 00 59.2	+0.2
	baz=1.5						
PHC	Port Hardy	3.47	308	P	Pn	04 01 00.8	+1.5
PHC	Port Hardy	3.47	308	P	Pn	04 01 00.8	+1.5
HOLB	Holberg	3.81	303	P	Pn	04 01 05.3	+1.3
HOLB	Holberg	3.81	303	P	Pn	04 01 05.3	+1.3
H04A	Detroit Lake	4.03	170	*e*Pn	Pn	04 01 07.8	+0.8
H04A				*e*Sn	Sn	04 01 55.2	+1.3
UBRB	Upper Baezaeko	4.29	352	P	Pn	04 01 11.3	+0.7
UBRB	Upper Baezaeko	4.29	352	P	Pn	04 01 11.3	+0.7

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*NNC **04** 04:18:41.3±3.0, 36°.84N×70°.88E, h197^{km}±50^{km}, mb2.6, mpv3.5, Error ellipse: s-maj=42.2km s-min=24.4km az=67.0*

ISC 04 04:18:31.7±1.2**, 36°.27N**±0°.07×**70°.7E**±0°.1**, h110**^{km}**, n12,** σ**3^{s}.68**/20**, 6C-6D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	4.33	30	⇑P	Pn	04 19 39.7	+4.0
	3.6nm,0.2s						
SFK				⇑S	Sn	04 20 28.1	+2.9
	16nm,0.4s						
DHRM	DHARAMSHALA	6.12	129	*e*P	Pn	04 19 59.7	-0.2
DHRM				*e*S	Sn	04 21 06.9	-1.7
DHRM				IAML		04 21 09.7	
	comp=E,84nm,0.3s						
DHRM				IAML		04 21 10.1	
	comp=N,138nm,0.3s						
MNAS	Manas	6.36	12	⇓P	Pn	04 20 06.4	+3.4
	comp=N,1.4nm,0.4s						
MNAS				⇑S	Sn	04 21 12.7	-1.5
	comp=N,12nm,0.7s						
KK31	Karatay Array	6.82	359	⇓P	Pn	04 20 11.8	+2.6
	comp=N,2.3nm,0.3s,baz=193,slow=17,SNR=76						
KK31				S	Sn	04 21 23.6	-1.7
	comp=N,1.7nm,0.3s,baz=187,slow=20,SNR=8.5						
AAK	Ala-Archa	6.99	23	⇓P	Pn	04 20 11.8	+0.2
	comp=N,1.5nm,0.3s						
AAK				⇑S	Sn	04 21 27.6	-2.0
	comp=N,8.5nm,0.9s						
SMLA	Simla	7.42	132	*e*P	Pn	04 20 18.4	+1.1
SMLA				*e*S	Sn	04 21 36.4	-3.6
SMLA				IAML		04 21 39.7	
	comp=E,35nm,1.0s						
TKM2	Tokmak 2	7.63	28	⇑P	Pn	04 20 23.2	+3.0
	comp=E,1.5nm,0.6s						
TKM2				⇓S	Sn	04 21 42.0	-3.2
	comp=E,4.1nm,1.1s						
BHGR	Bahadurgarh	9.20	144	*e*x	Sn	04 22 31.2	+8.0
KHET	Khetri	9.24	151	*e*S	Sn	04 22 18.4	-5.7
KHET				IAML		04 22 21.9	
	comp=E,11nm,0.2s						
KHET				IAML		04 22 22.0	
	comp=N,10nm,0.3s						
JOSI	Joshimath	9.33	125	*e*S	Sn	04 22 23.3	-3.2
JOSI				IAML		04 22 25.2	
	comp=E,35nm,0.8s						
AB31	Akbulak array	15.18	332	⇑P	P	04 22 02.7	+0.2
	comp=E,0.6nm,0.3s,baz=154,slow=12,SNR=14						
AB31				⇓S	Sn	04 24 41.8	-5.8
	comp=E,0.3nm,0.3s						
AKTO	Aktyubinsk	16.87	331	⇓P	Pn	04 22 22.0	+1.0
	comp=E,2.4nm,0.7s						

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*ISCJB **04** 04:24:50.3±0.2, 32°.74S±0°.03×179°.07W±0°.06, h50^{km}, mb4.7/32, MS3.7/28, Error ellipse: s-maj=7.8km s-min=2.7km az=25.5*

*IDC **04** 04:24:51.0±2.4, 32°.57S×179°.00W, h49^{km}±21^{km}, mb4.3/14, mb1 4.4/16, mb1mx4.2/42, mbtmp4.5/16, ML4.8/2, MS3.7/29, Ms1 3.7/29, ms1mx3.6/42, Error ellipse: s-maj=18.5km s-min=15.3km az=104.0*

*NEIC **04** 04:24:52.0±1.0, 32°.63S×179°.08W, h56^{km}±9^{km}, mb4.8/23, Error ellipse: s-maj=11.9km s-min=8.4km az=135.0*

*WEL **04** 04:24:52.0, 32°.63S×179°.08W, h56^{km}, ML5.7/10*

ISC 04 04:24:52.0±0.4**, 32°.71S**±0°.05×**178°.79W**±0°.08**, h61**^{km}**, n195,** σ**1^{s}.94**/182**, mb4.8**/32**, 2C, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.51	12	P	Pn	04 25 40.4	-3.7
GLKZ				S	Sn	04 26 21.0	-3.5
RAO	Raoul Island	3.52	12	P	Pn	04 25 41.1	-3.2
	115nm,0.3s,baz=242,slow=20,SNR=6.2						
RAO				LR	LR	04 26 20.3	
	comp=Z,101nm,20.6s,baz=211,slow=26						
RAO				S	Sn	04 26 22.4	-2.3
	387nm,0.3s,baz=90,slow=20,SNR=4.9						
RAO	Raoul Island	3.52	12	*e*Pn	Pn	04 25 41.9	-2.4
RAO				*e*Sn	Sn	04 26 23.7	-1.1
RIZ	Raoul Island	3.53	12	P	Pn	04 25 40.2	-4.2
MXZ	Matakaoa Point	5.40	205	*e*Pn	Pn	04 26 07.7	-2.2
MXZ				*e*Sn	Sn	04 27 08.2	-2.5
MXZ	Matakaoa Point	5.40	205	P	Pn	04 26 08.9	-1.0
WMGZ	Waiomatatini S	5.59	203	P	Pn	04 26 11.9	-0.6
HAZ	Te Kaha	5.77	208	P	Pn	04 26 13.5	-1.4
HAZ				S	Sn	04 27 19.5	-0.2
PUZ	Puketiti	5.87	203	P	Pn	04 26 14.7	-1.7
RUGZ	Raukumara Rang	5.99	208	P	Pn	04 26 16.4	-1.7
RUGZ				S	Sn	04 27 25.1	-0.3
TWGZ	Tauwhareparae	6.06	205	P	Pn	04 26 16.9	-2.1
TWGZ				S	Sn	04 27 27.2	+0.2
WHRZ	Whale Island	6.20	213	P	Pn	04 26 21.5	+0.6
WHRZ				S	Sn	04 27 31.4	+1.1
CNGZ	Carnagh Statio	6.26	202	P	Pn	04 26 20.8	-0.9
TKGZ	Te Karaka	6.34	205	P	Pn	04 26 21.5	-1.3
TKGZ				S	Sn	04 27 32.5	-1.4
MWZ	Matawai	6.37	207	P	Pn	04 26 21.4	-1.8
MWZ				S	Sn	04 27 33.8	-0.7
MARZ	Manawahe	6.44	214	P	Pn	04 26 26.5	+2.3
URZ	Urewera	6.47	210	P	Pn	04 26 22.7	-1.8
	14nm,0.3s,baz=276,slow=3.8,SNR=70						
URZ				S	Sn	04 27 34.7	-2.3
	30nm,0.3s,baz=266,slow=3.4,SNR=10						
URZ	Urewera	6.47	210	P	Pn	04 26 22.8	-1.8
URZ				S	Sn	04 27 35.7	-1.3
EDRZ	Edgecumbe	6.51	213	P	Pn	04 26 25.7	+0.5
WCZ	Waipu Caves	6.53	239	P	Pn	04 26 27.3	+1.9
RAGZ	Rawiri	6.55	207	P	Pn	04 26 23.7	-2.1
RIGZ	Rimuhau	6.61	204	P	Pn	04 26 25.1	-1.4
RIGZ				S	Sn	04 27 39.1	-1.4
MKAZ	Moumakai	6.63	227	P	Pn	04 26 29.9	+3.1
KARZ	Kaharoa	6.67	216	P	Pn	04 26 28.2	+0.8
KMRZ	Kaimai	6.70	219	P	Pn	04 26 29.2	+1.4
PRGZ	Paritu Road	6.77	203	P	Pn	04 26 26.5	-2.1
PRGZ				S	Sn	04 27 41.8	-2.5
MUGZ	Murupara	6.80	211	P	Pn	04 26 26.2	-2.9
MUGZ				S	Sn	04 27 43.2	-1.9
HLRZ	Highlands Stat	6.80	214	P	Pn	04 26 33.6	+4.3
OUZ	Omahuta	6.80	246	*e*Pn	Pn	04 26 30.5	+1.3
OUZ				*e*Sn	Sn	04 27 41.2	-4.0
OUZ	Omahuta	6.80	246	P	Pn	04 26 29.9	+0.7
RTZ	Ruatahuna	6.83	209	P	Pn	04 26 27.1	-2.4
SNGZ	Shannon Statio	6.83	206	P	Pn	04 26 29.1	-0.4
SNGZ				S	Sn	04 27 44.0	-1.9
TOZ	Tahuroa Road	6.85	221	P	Pn	04 26 31.3	+1.5
KNZ	Kokohu	6.92	203	P	Pn	04 26 28.9	-1.9
MHGZ	Mahia Peninsul	6.97	202	P	Pn	04 26 29.0	-2.4
ALRZ	Allen Road	7.06	213	P	Pn	04 26 33.0	+0.3
MRHZ	Matea Rd	7.25	211	P	Pn	04 26 34.1	-1.2
TLZ	Tolley Road	7.27	218	P	Pn	04 26 36.1	+0.5
NMHZ	Naumai	7.31	208	P	Pn	04 26 34.8	-1.4
WHTZ	Whakaora	7.32	214	P	Pn	04 26 36.4	0.0
ARHZ	Aropaoanui	7.38	206	P	Pn	04 26 35.9	-1.1
WATZ	Wairara	7.46	215	P	Pn	04 26 37.7	-0.6
BKZ	Black Stump Fm	7.50	209	*e*Pn	Pn	04 26 36.2	-2.4
BKZ				*e*Sn	Sn	04 28 00.7	-1.5
BKZ	Black Stump Fm	7.50	209	P	Pn	04 26 36.7	-1.9
RATZ	Rangitukua	7.57	214	P	Pn	04 26 39.1	-0.6
RITZ	Rihia Road	7.62	213	P	Pn	04 26 38.3	-2.0
MCHZ	McNeill Hill	7.65	207	P	Pn	04 26 39.2	-1.5
KATZ	Kakaramea	7.69	214	P	Pn	04 26 39.9	-1.6
KWHZ	Kaweka Forest	7.74	209	P	Pn	04 26 41.1	-0.9
HIZ	Hauiti	7.77	220	*e*Pn	Pn	04 26 42.5	+0.2
HIZ	Hauiti	7.77	220	P	Pn	04 26 43.3	+1.0
KRVZ	Karewarewa	7.81	214	P	Pn	04 26 41.4	-1.6
WTVZ	West Tongariro	7.85	214	P	Pn	04 26 42.9	-0.7
TWVZ	Taurewa	7.89	215	P	Pn	04 26 43.1	-1.0
KAHZ	Kahuranaki	7.89	205	P	Pn	04 26 40.0	-4.1
NGZ	Ngauruhoe	7.89	214	P	Pn	04 26 43.0	-1.3
TUVZ	Tukino	7.95	213	P	Pn	04 26 44.2	-0.7
BHHZ	Black Hill Sta	7.95	210	P	Pn	04 26 42.2	-2.6
KRHZ	Kereru	7.95	208	P	Pn	04 26 41.5	-3.4
FWVZ	Far West T-bar	7.98	213	P	Pn	04 26 44.0	-1.5
WHVZ	Whangaehu Hut	7.99	213	P	Pn	04 26 44.4	-1.1
MOVZ	Moawhango	8.01	212	P	Pn	04 26 44.2	-1.5
PKVZ	Pokaka	8.11	214	P	Pn	04 26 45.5	-1.5
PNHZ	Pukenui	8.25	208	P	Pn	04 26 45.4	-3.6
VRZ	Vera Road	8.27	217	P	Pn	04 26 50.4	+1.2
WPHZ	Waipukurau	8.29	206	P	Pn	04 26 47.2	-2.3
PRHZ	Porangahau	8.39	205	P	Pn	04 26 46.6	-4.4
TSZ	Takapari Road	8.47	208	P	Pn	04 26 49.5	-2.4
DVHZ	Dannevirke	8.60	207	P	Pn	04 26 50.7	-3.0
WAZ	Wanganui	8.64	214	P	Pn	04 26 52.2	-2.1
PKE	Pukeiti	8.73	220	P	Pn	04 26 57.2	+1.7
PRWZ	Pori Road	8.89	207	P	Pn	04 26 55.4	-2.3
BFZ	Birch Farm	8.90	205	P	Pn	04 26 53.2	-4.6
TMWZ	Te Maipa	9.40	205	P	Pn	04 26 59.7	-5.0
OGWZ	Otaki Gorge	9.43	209	P	Pn	04 27 00.4	-4.7
THZ	Tophouse	11.20	214	*e*Pn	Pn	04 27 23.7	-5.6
THZ				*e*Sn	Sn	04 29 26.9	-5.9
OXZ	Oxford	12.82	212	*e*Pn	Pn	04 27 45.4	-6.0
OXZ				*e*Sn	Sn	04 29 58.7	-14
RPZ	Rata Peaks	13.57	213	P	Pn	04 27 47.4	-14
	0.8nm,0.3s,baz=45,slow=19,SNR=3.6						
RPZ				S	Sn	04 30 14.0	-17
	1.7nm,0.3s,baz=163,slow=20,SNR=5.1						
DZM	Mont Dzumac	16.84	305	P	P	04 28 45.1	0.0
	1.1nm,0.3s,baz=116,slow=14,SNR=26						
DZM				LR	LR	04 33 46.3	
	comp=Z,944nm,19.9s,baz=144,slow=32						
DZM	Mont Dzumac	16.84	305	*e*P	P	04 28 43.5	-1.6
	237nm,1.1s						
DZM				*e*LR	LR	04 32 54.5	
	2µm,25.1s						
RAR	Rarotonga	20.42	61	LR	LR	04 38 00.8	
	comp=Z,84nm,18.5s,baz=240,slow=38						
TBI	Tubuai	27.44	78	*e*LR	LR	04 37 36.2	
	552nm,28.5s,baz=242						
TBI	Tubuai	27.44	78	*e*T	T	04 58 55.3	
	102nm,0.4s						
PAE	Paea	30.25	67	*e*T	T	05 02 18.0	
	19nm,0.2s						
PPT2	Papeete2	30.30	67	*e*LR	LR	04 38 49.3	
	456nm,27.5s,baz=230						
PPT2	Papeete2	30.30	67	*e*T	T	05 02 22.5	
	23nm,0.3s						
PPT	Papeete	30.31	67	LR	LR	04 39 44.6	
	comp=Z,147nm,19.9s,baz=222,slow=29						
TVO	Taravao	30.44	68	*e*T	T	05 02 33.5	
	4.1nm,0.3s						
TIAR	Tiarei	30.50	68	*e*T	T	05 02 36.4	
	3.7nm,0.3s						
PMOR	Pomariorio Ree	33.13	65	*e*T	T	05 05 52.1	
	11nm,0.3s						
VAH	Vaihoa	33.19	66	*e*T	T	05 05 56.4	
	68nm,0.3s						
STKA	Stephens Creek	33.37	261	P	P	04 31 25.1	+0.6
	2.4nm,0.8s,baz=76,slow=10,SNR=6.2						
STKA				LR	LR	04 43 16.6	
	comp=Z,271nm,20.4s,baz=49,slow=33						
CTA	Charters Tower	33.59	283	P	P	04 31 25.7	-0.8
	8.0nm,0.5s,baz=180,slow=5.7,SNR=11						
CTAO	Charters Tower	33.59	283	*e*P	P	04 31 28.4	+1.9
	16nm,1.1s						
PMG	Port Moresby	39.05	299	LR	LR	04 46 33.2	
	comp=Z,140nm,19.1s,baz=120,slow=34						
RKT	Rikitea	39.64	87	*e*LR	LR	04 43 25.3	
	502nm,25.8s						
RKT	Rikitea	39.64	87	*e*T	T	05 14 16.8	
	4.8nm,0.3s						
AS01	Alice Springs	42.33	270	*e*P	P	04 32 39.1	-1.0
AS31	Alice Springs	42.37	270	*e*P	P	04 32 40.0	-0.5
	3.0nm,0.6s						
ASAR	Alice Springs	42.37	270	P	P	04 32 39.2	-1.3
	4.8nm,0.6s,baz=109,slow=7.4,SNR=39						
ASAR				S	S	04 38 47.6	-10
	0.3nm,0.6s,baz=124,slow=15,SNR=2.9						
ASAR				LR	LR	04 48 21.5	
	comp=Z,133nm,20.8s,baz=134,slow=33						
TAOE	Nuku Hiva Isla	42.86	65	*e*LR	LR	04 44 22.8	
	295nm,30.8s						
WB2	Warramunga Arr	43.56	275	*e*P	P	04 32 49.4	-0.7
	13nm,0.6s						
WRAB	Tennant Creek	43.56	275	*e*P	P	04 32 48.7	-1.5
	9.8nm,0.6s						
WR1	Warramunga Arr	43.57	275	*e*P	P	04 32 48.6	-1.5
WRA	Warramunga Arr	43.57	275	P	P	04 32 48.6	-1.5
	10nm,0.5s,baz=114,slow=7.8,SNR=91						
WRA				LR	LR	04 50 13.8	
	comp=Z,115nm,19.3s,baz=315,slow=35						
FORT	Forrest	44.85	258	*e*P	P	04 32 58.5	-1.7
	31nm,0.6s						
SBA	Scott Base	45.69	184	*e*P	P	04 33 10.8	+4.5
	8.0nm,0.9s						
VNDA	Vanda	45.74	186	P	P	04 33 08.0	+1.3
	1.2nm,0.9s,baz=2.2,slow=7.8,SNR=10						
VNDA				LR	LR	04 47 51.9	
	comp=Z,56nm,20.0s,baz=22,slow=30						
VNDA	Vanda	45.74	186	*e*P	P	04 33 08.5	+1.8
	5.3nm,1.3s						
FITZ	Fitzroy Crossi	51.73	272	P	P	04 33 51.9	-1.4
	5.4nm,0.8s,baz=135,slow=8.6,SNR=5.3						
FITZ				LR	LR	04 55 22.9	
	comp=Z,190nm,18.2s,baz=98,slow=36						
FITZ	Fitzroy Crossi	51.73	272	*e*P	P	04 33 51.9	-1.4
	9.5nm,0.9s						
NWAO	Narrogin (SRO)	52.99	251	LR	LR	04 53 56.0	
	comp=Z,113nm,20.4s,baz=334,slow=33						
HATHI	Halema‘uma‘u T	56.51	27	*e*P	P	04 34 31.5	+3.3
	1µm,1.4s						
QSPA	South Pole Qui	57.41	180	P	P	04 34 36.9	+2.8
	13nm,0.7s,baz=345,slow=2.2,SNR=3.1						
QSPA				LR	LR	04 55 40.1	
	comp=Z,93nm,20.5s,baz=42,slow=32						
QSPA	South Pole Qui	57.41	180	*e*P	P	04 34 36.9	+2.8
	15nm,0.8s						
GUMO	Guam	57.67	317	LR	LR	04 56 58.2	
	comp=Z,49nm,20.8s,baz=114,slow=34						
RPN	Rapa Nui	59.50	104	LR	LR	04 55 06.7	
	comp=Z,42nm,20.7s,baz=297,slow=30						
DAV	Davao City (W)	66.01	296	LR	LR	05 04 51.7	
	comp=Z,37nm,20.1s,baz=156,slow=36						
MAW	Mawson	69.92	201	P	P	04 35 56.5	+0.3
	7.8nm,1.0s,baz=148,slow=7.5,SNR=10						
MAW	Mawson	69.92	201	*e*P	P	04 35 56.7	+0.5
	3.0nm,1.2s						
SYO	Syowa Base	74.72	193	⇑*i*P	P	04 36 23.6	-1.2
SYO	Syowa Base	74.72	193	⇑*e*P	P	04 36 29.8	+5.0
SNAA	Sanae	75.87	179	P	P	04 36 32.7	+1.1
SNAA	Sanae	75.87	179	P	P	04 36 32.5	+1.0
	5.5nm,1.0s,baz=184,slow=5.8,SNR=18						
SNAA				LR	LR	05 10 01.7	
	comp=Z,34nm,18.1s,baz=179,slow=36						
SNAA	Sanae	75.87	179	*e*P	P	04 36 32.6	+1.1
	11nm,1.2s						
VNA3	Neumayer Olymp	76.05	176	P	P	04 36 33.6	+1.2
VNA2	Neumayer--Watz	76.48	177	P	P	04 36 36.5	+1.7
	baz=180,slow=4.1						
VNA1	Neumayer--Stat	76.71	177	P	P	04 36 37.7	+1.6
MJAR	Matsushiro Arr	79.76	326	LR	LR	05 07 11.1	
	comp=Z,13nm,21.8s,baz=85,slow=32						
JNU	Nakatsue	80.84	319	LR	LR	05 09 05.4	
	comp=Z,21nm,20.3s,baz=123,slow=33						
ASAJ	Asahikawa	84.18	333	LR	LR	05 07 53.2	
	comp=Z,53nm,21.3s,baz=178,slow=31						
KSRS	Korea Array	85.67	320	P	P	04 37 23.6	-0.4
	1.0nm,0.5s,baz=137,slow=5.8,SNR=5.3						
KSRS				LR	LR	05 11 39.7	
	comp=Z,21nm,21.7s,baz=140,slow=33						
KS15	Wonju Array Si	85.69	320	*e*P	P	04 37 23.6	-0.5
KSAR	Wonju Array Be	85.69	320	P	P	04 37 23.6	-0.5
LPIG	La Paz	86.32	58	LR	LR	05 10 12.4	
	comp=Z,52nm,18.4s,baz=204,slow=32						
SBI	Santa Barbara	86.58	46	*e*P	P	04 37 31.3	+2.7
PETK	Petropavlovsk-	87.88	346	P	P	04 37 34.6	+0.3
	2.6nm,0.5s,baz=126,slow=7.3						
PETK				LR	LR	05 10 18.3	
	comp=Z,37nm,21.6s,baz=123,slow=31						
PETK	Petropavlovsk-	87.88	346	*e*P	P	04 37 34.0	-0.3
PEA1	Petropavlovsk-	87.88	346	*e*P	P	04 37 34.6	+0.3
BFSC	Mount Baldy Ra	87.93	47	*e*P	P	04 37 33.7	-1.6
SNDA	J Saunders Pla	88.12	48	*e*P	P	04 37 40.9	+4.8
PFO	Pinyon Flats O	88.26	48	*e*P	P	04 37 39.3	+2.5
	6.9nm,1.0s						
XPFO	Piæon Flat	88.26	48	*e*P	P	04 37 39.3	+2.5
	6.3nm,1.0s						
ISA	Isabella, Lake	88.40	45	*e*P	P	04 37 39.7	+2.3
	10nm,1.0s						
GSC	Goldstone, Bar	89.17	46	*e*P	P	04 37 43.4	+2.4
	11nm,1.2s						
YBH	Yreka Blue Hor	90.26	38	LR	LR	05 09 38.1	
	comp=Z,31nm,21.6s,baz=196,slow=30						
NV01	Mina Array Sit	90.38	43	*e*P	P	04 37 48.0	+1.2
NVAR	Mina Array Bea	90.38	43	P	P	04 37 48.5	+1.7
	3.2nm,0.9s,baz=219,slow=8.3,SNR=15						
NVAR				LR	LR	05 08 49.0	
	comp=Z,34nm,20.7s,baz=92,slow=29						
TPNV	Topopah Spring	90.60	45	*e*P	P	04 37 50.0	+2.3
	3.4nm,0.8s						
PAHR	Pah Rah Range	90.64	42	*e*P	P	04 37 49.8	+1.9
	3.9nm,1.1s						
Y14A	Wickenburg	90.65	49	*e*P	P	04 37 50.6	+2.6
	6.2nm,1.0s						
W13A	Hualapai Mount	90.84	48	*e*P	P	04 37 51.6	+2.7
	6.0nm,1.3s						
KVN	Kaiserville	90.92	43	*e*P	P	04 37 50.8	+1.6
	2.1nm,0.9s						
TUC	Tucson	91.07	52	*e*P	P	04 37 53.0	+3.1
	4.8nm,1.0s						
X16A	Lo Mia Camp, P	91.96	50	*e*P	P	04 37 57.1	+3.0
	8.7nm,1.3s						
U15A	North Rim	92.68	48	*e*P	P	04 38 00.2	+2.7
	3.3nm,0.9s						
NNA	Nana	93.43	106	LR	LR	05 10 11.9	
	comp=Z,60nm,20.6s,baz=237,slow=29						
TX31	Lajitas Ar. Si	94.19	58	*e*P	P	04 38 06.0	+1.5
TXAR	Lajitas Array	94.19	58	P	P	04 38 06.4	+1.9
	1.2nm,1.1s,baz=205,slow=5.5,SNR=7.9						
TXAR				LR	LR	05 15 09.3	
	comp=Z,25nm,18.5s,baz=0.0,slow=32						
RSO	Redoubt South	95.26	13	*e*P	P	04 38 07.7	-1.0
ANMO	Albuquerque	95.53	52	LR	LR	05 12 02.1	
	comp=Z,38nm,21.3s,baz=202,slow=30						
LPAZ	La Paz	97.80	115	LR	LR	05 14 11.4	
	comp=Z,18nm,19.5s,baz=192,slow=30						
PD31	Pinedale Array	98.26	44	*e*P	P	04 38 22.9	+0.1
PDAR	Pinedale Array	98.26	44	P	P	04 38 22.9	+0.1
	0.2nm,0.6s,baz=228,slow=3.5,SNR=3.7						
PDAR				LR	LR	05 14 16.5	
	comp=Z,37nm,21.7s,baz=211,slow=30						
CPUP	Villa Florida	99.07	129	LR	LR	05 14 20.9	
	comp=Z,90nm,22.0s,baz=211,slow=30						
ILAR	Eielson Array	100.32	13	P	Pdif	04 38 31.5	+0.4
	0.9nm,1.1s,baz=227,slow=4.8,SNR=3.2						
ILAR				PKiKP	PKiKP	04 42 58.6	+0.8
	0.4nm,0.7s,baz=225,slow=0.8,SNR=4.6						
ILB	Eielson Array	100.32	13	*e*Pdif	Pdif	04 38 31.5	+0.4
MK32	Makanchi Array	118.72	309	*e*PKPdf	PKPdf	04 43 31.7	-1.2
MKAR	Makanchi Array	118.72	309	PKP	PKPdf	04 43 31.7	-1.2
	0.2nm,0.3s,baz=64,slow=3.3,SNR=3.6						
ZALV	Zalesovo Beam	119.29	318	PKP	PKPdf	04 43 32.7	-1.0
	0.6nm,0.3s,baz=112,slow=2.3,SNR=2.7						
ZAA1	Zalesovo Array	119.29	318	*e*PKPdf	PKPdf	04 43 32.7	-1.0
KURK	Kurchatov	122.14	313	*e*PKPdf	PKPdf	04 43 37.9	-1.4
KURBB	Kurchatov Arra	122.17	313	PKP	PKPdf	04 43 37.9	-1.4
	1.2nm,0.7s,baz=104,slow=1.9,SNR=7.3						
BVAR	Borovoye Array	127.56	315	PKP	PKPdf	04 43 48.3	-1.3
	0.7nm,0.5s,baz=93,slow=2.9,SNR=6.1						
AKTO	Aktyubinsk	135.12	311	PKP	PKPdf	04 44 04.7	+0.7
	1.1nm,0.4s,baz=79,slow=5.2,SNR=2.6						
ARA0	ARCESS Array S	140.69	347	*e*PKPdf	PKPdf	04 44 14.2	+0.5
ARCES	ARCESS Array B	140.69	347	PKP	PKPdf	04 44 14.2	+0.5
	1.6nm,0.5s,baz=71,slow=3.9,SNR=8.8						
FIA1	FINESS Array S	147.05	338	*e*PKPdf	PKPdf	04 44 25.6	+0.6
FIA1				*e*PKPdf	PKPbc	04 44 25.9	-1.2
FIA0	FINESS Array S	147.05	338	*e*PKPdf	PKPdf	04 44 25.6	+0.6
FINES	FINESS Array B	147.05	338	PKPbc	PKPdf	04 44 25.6	+0.6
	8.2nm,0.5s,baz=32,slow=5.0,SNR=36						
NC303	NORSAR Array S	150.71	350	*e*PKPbc	PKPbc	04 44 35.5	-1.0
NB2	NORSAR Subarra	150.91	350	PKP	PKPbc	04 44 36.1	-0.9
	comp=Z,3.9nm,0.7s,baz=16,slow=4.1						
HFS	Hagfors	151.35	347	PKPbc	PKPbc	04 44 36.7	-1.4
	comp=Z,6.1nm,0.8s,baz=111,slow=3.2,SNR=12						
MMAI	Mount Meron Ar	151.35	280	PKPbc	PKPbc	04 44 39.4	+0.4
	comp=Z,1.0nm,0.3s,baz=101,slow=7.5,SNR=3.3						
AKASG	Malin Array Be	152.67	319	PKPbc	PKPbc	04 44 40.2	-1.1
	comp=Z,1.5nm,0.6s,baz=60,slow=2.2,SNR=5.2						
AKBB	Malin Array Si	152.67	319	*e*PKPbc	PKPbc	04 44 40.2	-1.1
BR101	Keskin Array S	153.02	294	*e*PKPbc	PKPbc	04 44 41.9	-0.8
BRTR	Keskin Array B	153.02	294	PKPbc	PKPbc	04 44 41.9	-0.8
	comp=Z,1.0nm,0.6s,baz=144,slow=3.2,SNR=5.6						
DBIC	Dimbokro	153.49	166	PKPbc	PKPbc	04 44 46.7	+2.5
	comp=Z,1.9nm,0.5s,baz=130,slow=2.7,SNR=6.0						
CLL	Collm	159.50	339	*e*PKPab	PKPab	04 45 23.0	+1.6
	comp=Z,6.0nm,1.0s						
TOA0	Torodi Ar. Sit	160.53	181	*e*PKPab	PKPab	04 45 28.1	+1.4
TORD	Torodi Ar. Bea	160.53	181	PKPab	PKPab	04 45 25.9	-0.8
	baz=194,slow=3.2						
TOA1	Torodi Ar. Sit	160.53	181	*e*PKPab	PKPab	04 45 25.9	-0.8
GEC2	GERESS Array S	161.35	333	*e*PKPab	PKPab	04 45 29.2	-0.5

GERES	GERESS Array B	161.35	333	PKPab	PKPab	04 45 29.2	-0.5
	comp=Z,0.4nm,0.4s,baz=46,slow=7.6,SNR=4.1						

MEX 04 04:49:30.7±0.8, 18°.72N×102°.08W, h17^{km}±999^{km}, MD3.8, Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	1.25	152	*e*P	Pn	04 49 50.4	-3.1
ZIIG				*e*S	Sb	04 50 04.3	-5.5
MMIG	Aquila	1.27	251	*e*P	Pn	04 49 49.9	-3.8
MMIG				*e*S	Sb	04 50 05.0	-5.3
MOIG	Morelia	1.28	41	*e*P	Pn	04 49 50.1	-4.0
MOIG				*e*S	Sb	04 50 05.5	-5.2
EZ5V		1.62	298	*e*P	Pn	04 49 56.1	-2.7
EZ5V				*e*S	Sn	04 50 14.2	-5.4
ARIG	Puente Sto Nin	1.70	104	*e*P	Pn	04 49 57.0	-2.7
ARIG				*i* S	Sn	04 50 16.1	-5.1
R15V		1.85	284	*e*P	Pn	04 49 58.6	-3.2
R15V				*i* S	Sn	04 50 20.5	-4.4

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*SJA **04** 04:55:09.4±0.5, 29°.81S×68°.40W, h2^{km}±2^{km}, ML3.1, MW3.7*

*GUC **04** 04:55:12.5±0.5, 29°.75S×73°.24W, h20^{km}, ML3.2*

ISC 04 04:55:10.0±1.5, 29°.83S±0°.03×68°.36W±0°.05, h7^{km}±12^{km}, n12, σ1^s.56/22, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACDV	Cuesta del Vie	0.74	243	*i* P	Pb	04 55 25.0	-0.2
ACDV				*i* S	Sb	04 55 36.5	+0.9
AROD	Rodeo	1.02	251	*i* P	Pn	04 55 30.2	-0.8
AROD				*i* S	Sn	04 55 45.4	-0.3
VCA	Vinchina	1.10	7	*i* P	Pb	04 55 30.9	-0.6
VCA				*i* S	Sn	04 55 47.3	-0.2
VCA				IAML		04 55 48.1	
	comp=Z,764nm,0.4s						
AMOG	MOGNA	1.11	186	*i* P	Pb	04 55 32.0	+0.5
RTLL	Cerro Villicun	1.49	184	*i* P	Pg	04 55 38.8	+0.1
RTCV	Cerro Valdivia	2.03	184	*i* P	Pb	04 55 47.6	+0.4
RTCV				*i* S	Sg	04 56 15.4	+0.2
RTLS	Leoncito	2.12	202	*i* P	Pb	04 55 48.9	0.0
RTLS				*i* S	Sg	04 56 18.5	+0.4
RTLS				IAML		04 56 20.6	
	comp=Z,78nm,0.3s						
GO04	Tololo Observa	2.14	260	*i* P	Pg	04 55 50.7	-0.4
GO04				*i* S	Sg	04 56 19.6	+0.8
TLL	Tololo Astrono	2.14	260	*i* P	Pg	04 55 50.9	-0.2
TLL				*i* S	Sg	04 56 19.2	+0.2
TLL				IAML		04 56 26.2	
	comp=N,235nm,0.3s						
LCO	Las Campanas	2.20	291	*e*P	Pg	04 55 52.8	+0.6
LCO				*i* S	Sg	04 56 21.4	+0.8
LCO				IAML		04 56 26.5	
	comp=E,157nm,0.3s						
FCH	Farellones	3.85	205	*e*P	Pb	04 56 14.6	-3.9
FCH				*i* S	Sb	04 57 01.8	-3.6
ROCH	El Roble	3.86	215	*e*P	Pn	04 56 12.6	+2.6
ROCH				*i* S	Sn	04 56 57.9	+2.2

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*ISCJB **04** 05:06:00.6±0.4, 40°.18N±0°.03×31°.71E±0°.03, h0^{km}, Error ellipse: s-maj=4.5km s-min=3.3km az=143.1*

*CSEM **04** 05:06:00.8±0.2, 40°.17N×31°.70E, h2^{km}, ML2.5, Error ellipse: s-maj=5.2km s-min=4.4km az=145.0, Suspected Mining explosion.*

*DDA **04** 05:06:00.4, 40°.17N×31°.73E, h8^{km}, Ml2.3, Suspected Mining explosion.*

*ISK **04** 05:06:01.1, 40°.14N×31°.65E, h8^{km}, ML2.5/4*

ISC 04 05:06:00.0±0.8, 40°.22N±0°.03×31°.71E±0°.02, h0^{km}, n31, σ0^s.82/46, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUMIH	MIHALICIK	0.39	207	PG	Pg	05 06 07.6	+0.1
AUMIH				SG	Sg	05 06 12.9	+0.4
AUMIH	MIHALICIK	0.39	207	*i* P	Pg	05 06 07.3	-0.2
AUMIH				*i* S	Sg	05 06 13.5	+1.0
AUMIH	MIHALICIK	0.39	207	P	Pg	05 06 07.3	-0.2
AUMIH	MIHALICIK	0.39	207	*e*Pg	Pg	05 06 07.6	+0.1
AUMIH				*e*Sg	Sg	05 06 12.9	+0.4
AUMIH				S	Sg	05 06 13.5	+1.0
MDUB	Mudurnu	0.47	303	PG	Pb	05 06 11.2	0.0
MDUB				SG	Sb	05 06 18.0	-0.7
MDUB	Mudurnu	0.47	303	*e*Pg	Pb	05 06 11.2	0.0
MDUB				*e*Sg	Sb	05 06 18.0	-0.7
CMDR	Camlidere-ANKA	0.65	64	*i* P	Pg	05 06 12.9	+0.5
CMDR				*i* S	Sb	05 06 23.5	-0.4
CMDR	Camlidere-ANKA	0.65	64	P	Pg	05 06 12.9	+0.5
CMDR				S	Sb	05 06 23.5	-0.4
BCAM	Yenicaga	0.66	24	*i* P	Pb	05 06 13.4	-1.0
BCAM				*i* S	Sb	05 06 23.7	-0.5
BCAM	Yenicaga	0.66	24	P	Pb	05 06 13.4	-1.0
BCAM				S	Sb	05 06 23.7	-0.5
AUSIV	SIVRIHISAR	0.79	190	PG	Pg	05 06 14.9	-0.2
AUSIV	SIVRIHISAR	0.79	190	*e*Pg	Pg	05 06 14.9	-0.2
ANTO	Ankara	0.90	112	PG	Pn	05 06 19.2	-0.8
ANTO	Ankara	0.90	112	*e*Pg	Pn	05 06 19.2	-0.8
SAHE	Sakarya_HENDEK	0.91	314	*i* P	Pn	05 06 19.3	-0.8
SAHE				*i* S	Sn	05 06 36.9	+2.9
SAHE	Sakarya_HENDEK	0.91	314	P	Pn	05 06 19.3	-0.8
GULT	Gulveren	0.94	284	PG	Pb	05 06 18.9	-0.3
GULT	Gulveren	0.94	284	*e*Pg	Pb	05 06 18.9	-0.3
ESKT	Eskisehir	0.96	224	*i* P	Pg	05 06 16.4	-2.0
ESKT				*i* S	Sb	05 06 32.5	-0.4
SEYT	Eskypehyr	0.96	224	P	Pg	05 06 16.4	-2.0
SEYT				S	Sb	05 06 32.5	-0.4
BORA	Eskisehir	1.02	251	PG	Pg	05 06 19.7	+0.1
BORA	Eskisehir	1.02	251	*i* P	Pg	05 06 19.9	+0.3
BORA				*i* S	Sb	05 06 34.9	+0.2
BORA	Eskisehir	1.02	251	P	Pg	05 06 19.9	+0.3
BORA				S	Sb	05 06 34.9	+0.2
AFSR	Af¯ar-Bala (A	1.30	126	PN	Pn	05 06 26.2	+0.7
AFSR	Af¯ar-Bala (A	1.30	126	*e*Pn	Pn	05 06 26.2	+0.7
KIZT	Kizilcal	1.34	174	PN	Pn	05 06 25.9	-0.2
KIZT	Kizilcal	1.34	174	*e*Pn	Pn	05 06 25.9	-0.2
KULU	Kulu	1.54	139	PN	Pn	05 06 28.8	0.0
KULU	Kulu	1.54	139	*e*Pn	Pn	05 06 28.8	0.0
CORM	Corum	2.24	90	PN	Pb	05 06 40.7	-0.7
CORM	Corum	2.24	90	*e*Pn	Pb	05 06 40.7	-0.7

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*ISCJB **04** 05:11:38.9±0.6, 37°.15N±0°.03×20°.82E±0°.03, h20^{km}±4^{km}, mb3.6/8, MS4.3/1, Error ellipse: s-maj=5.6km s-min=3.0km az=42.7*

*THE **04** 05:11:40.1, 37°.23N×20°.98E, h0^{km}±2^{km}, ML3.3/6, Error ellipse: s-maj=2.6km s-min=0.6km az=229.0*

*ATH **04** 05:11:40.2, 37°.25N×21°.00E, h25^{km}±1^{km}, ML3.4/11, Error ellipse: s-maj=2.2km s-min=0.7km az=53.0*

*CSEM **04** 05:11:40.0±0.2, 37°.22N×20°.94E, h10^{km}, ML3.4, Error ellipse: s-maj=5.0km s-min=2.3km az=42.0*

*IDC **04** 05:11:42.6±2.2, 37°.30N×21°.09E, h55^{km}±25^{km}, mb3.4/8, mb1 3.4/11, mb1mx3.3/55, mbtmp3.6/11, ML2.8/3, MS2.5/4, Ms1 2.5/4, ms1mx2.2/42, Error ellipse: s-maj=19.2km s-min=15.4km az=32.0*

ISC 04 05:11:39.2±1.1, 37°.22N±0°.03×20°.91E±0°.03, h17^{km}±7^{km}, n198, σ1^s.74/237, mb3.7/8, 1C-5D, Ionian Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MES3	Kyparissia	0.61	87	P	Pg	05 11 51.4	+0.2
MES3				S	Sg	05 11 58.6	-0.7
MES3	Kyparissia	0.61	87	P	Pg	05 11 51.4	+0.2
MES3				S	Sg	05 11 59.0	-0.3
AMT	Artemida-Makis	0.71	63	P	Pg	05 11 53.5	+0.4
AMT	Artemida-Makis	0.71	63	P	Pg	05 11 53.1	0.0
AMT	Artemida-Makis	0.71	63	P	Pg	05 11 53.2	+0.1
VTN	Vitineika	0.73	17	P	Pb	05 11 54.5	+1.0
VTN	Vitineika	0.73	17	P	Pb	05 11 54.3	+0.9
VTN	Vitineika	0.73	17	P	Pg	05 11 54.1	+0.6
PYL	PYLOS	0.74	115	P	Pg	05 11 54.0	+0.3
PYL				S	Sb	05 12 04.2	+0.9
PYL	PYLOS	0.74	115	P	Pg	05 11 53.8	+0.2
PYL				S	Sg	05 12 02.9	-0.5
PYL	PYLOS	0.74	115	P	Pg	05 11 53.9	+0.3
PYL				S	Sb	05 12 04.0	+0.7
MES2	Methoni	0.75	121	P	Pb	05 11 54.8	+1.1
MES2				S	Sg	05 12 03.8	+0.1
MES2	Methoni	0.75	121	P	Pb	05 11 54.5	+0.8
MES2				S	Sg	05 12 04.1	+0.4
ITM	Ithomi	0.81	92	P	Pg	05 11 54.3	-0.7
ITM				S	Sb	05 12 06.1	+0.7
ITM				AML	AML	05 12 10.2	
	comp=N,4441µm,0.8s						
ITM				AML	AML	05 12 10.9	
	comp=E,4982µm,0.6s						
ITM	Ithomi	0.81	92	P	Pg	05 11 54.4	-0.6
ITM				S	Sg	05 12 05.5	-0.3
ITM	Ithomi	0.81	92	P	Pg	05 11 54.5	-0.6
ITM				S	Sg	05 12 05.5	-0.3
KFL	Anninata	0.90	354	P	Pg	05 11 56.2	-0.5
KFL				S	Sg	05 12 08.9	+0.4
KFL				AML	AML	05 12 14.6	
	comp=N,8931µm,0.3s						
KFL				AML	AML	05 12 17.4	
	comp=E,7503µm,0.4s						
KFL	Anninata	0.90	354	P	Pg	05 11 56.5	-0.1
KFL				S	Sn	05 12 11.1	+1.5
KFL	Anninata	0.90	354	P	Pg	05 11 56.6	-0.1
KFL				S	Sg	05 12 09.1	+0.6
RLS	Riolos of Patr	0.95	28	P	Pg	05 11 57.6	0.0
RLS	Riolos of Patr	0.95	28	P	Pg	05 11 57.3	-0.3
RLS	Riolos of Patr	0.95	28	P	Pg	05 11 57.4	-0.2
DRO	Drossia	0.97	41	P	Pg	05 11 57.1	-0.9
DRO	Drossia	0.97	41	P	Pg	05 11 57.5	-0.5
DRO	Drossia	0.97	41	P	Pg	05 11 57.5	-0.5
VLS	Valsamata	0.99	345	P	Pg	05 11 58.4	-0.1
VLS				AML	AML	05 12 16.2	
	comp=E,3661µm,0.4s						
VLS				AML	AML	05 12 17.9	
	comp=N,3959µm,0.3s						
VLS	Valsamata	0.99	345	P	Pg	05 11 58.4	-0.1
VLS				S	Sb	05 12 12.6	+1.9
VLS	Valsamata	0.99	345	P	Pg	05 11 58.7	+0.2
VLS				S	Sb	05 12 12.6	+1.9
VLX	Vlachokerasia	1.18	82	P	Pn	05 12 03.0	+2.0
VLX				AML	AML	05 12 28.6	
	comp=E,3894µm,0.7s						
VLX				AML	AML	05 12 29.8	
	comp=N,3564µm,0.6s						
VLX	Vlachokerasia	1.18	82	P	Pn	05 12 02.3	+1.3
VLX				S	Sg	05 12 17.3	-0.2
VLX	Vlachokerasia	1.18	82	P	Pn	05 12 02.3	+1.3
VLX				S	Sg	05 12 17.3	-0.2
DYR	Agios Nikonas	1.23	111	P	Pb	05 12 02.2	+0.4
DYR				S	Sb	05 12 18.0	+0.6
DYR				AML	AML	05 12 30.7	
	comp=N,1476µm,0.6s						
DYR				AML	AML	05 12 32.5	
	comp=E,1613µm,0.5s						
DYR	Agios Nikonas	1.23	111	P	Pb	05 12 02.4	+0.5
DYR				S	Sn	05 12 19.7	+2.0
DYR	Agios Nikonas	1.23	111	P	Pb	05 12 02.4	+0.5
DYR				S	Sb	05 12 18.5	+1.1
FSK	Fiskardo	1.27	348	P	Pn	05 12 02.9	+0.8
FSK				S	Sb	05 12 20.6	+1.9
FSK	Fiskardo	1.27	348	P	Pn	05 12 03.3	+1.2
FSK				S	Sn	05 12 23.3	+4.5
UPR	University Cam	1.27	33	P	Pg	05 12 04.5	+0.8
UPR	University Cam	1.27	33	P	Pb	05 12 03.8	+1.2
KLV	Kalavryta, Ach	1.28	50	P	Pn	05 12 01.3	-1.0
KLV	Kalavryta, Ach	1.28	50	P	Pn	05 12 02.8	+0.4
KLV	Kalavryta, Ach	1.28	50	P	Pn	05 12 02.8	+0.4
LAKA	Lakka	1.33	39	P	Pn	05 12 03.3	+0.4
LAKA	Lakka	1.33	39	P	Pn	05 12 03.9	+1.0
LAKA	Lakka	1.33	39	P	Pn	05 12 03.9	+1.0
GUR	Goura	1.34	57	P	Pn	05 12 03.4	+0.2
GUR	Goura	1.34	57	P	Pn	05 12 03.0	-0.2
GUR	Goura	1.34	57	P	Pn	05 12 03.8	+0.6
PDO	Prodromos	1.40	9	P	Pn	05 12 04.9	+1.0
PDO				S	Sn	05 12 24.1	+2.2
PDO				AML	AML	05 12 30.5	
	comp=N,6586µm,0.4s						
PDO				AML	AML	05 12 32.1	
	comp=E,5427µm,0.3s						
PDO	Prodromos	1.40	9	P	Pn	05 12 05.0	+1.2
PDO	Prodromos	1.40	9	P	Pn	05 12 05.2	+1.4
PDO				S	Sn	05 12 24.0	+2.2
MGNA	Meganis‚„	1.44	356	P	Pb	05 12 06.9	+1.4
MGNA				S	Sn	05 12 24.9	+1.9
MGNA	Meganis‚„	1.44	356	P	Pb	05 12 06.6	+1.1
MGNA				S	Sb	05 12 25.2	+1.6
EFP	Efpalio	1.44	33	P	Pb	05 12 06.7	+1.1
EFP	Efpalio	1.44	33	P	Pn	05 12 06.2	+1.7
EFP	Efpalio	1.44	33	P	Pn	05 12 06.2	+1.7
TRIZ	Trizonia	1.47	38	P	Pn	05 12 06.3	+1.5
TRIZ	Trizonia	1.47	38	P	Pb	05 12 06.9	+0.9
TRIZ	Trizonia	1.47	38	P	Pn	05 12 06.3	+1.5
PVO	Paravola	1.48	19	P	Pb	05 12 07.1	+0.9
PVO				AML	AML	05 12 31.5	
	comp=E,1948µm,0.4s						
PVO				AML	AML	05 12 35.5	
	comp=N,1967µm,0.5s						
PVO	Paravola	1.48	19	P	Pb	05 12 07.0	+0.8
PVO	Paravola	1.48	19	P	Pn	05 12 06.8	+1.8
SERG	Sergoula	1.50	37	P	Pg	05 12 08.1	0.0
SERG	Sergoula	1.50	37	P	Pb	05 12 07.2	+0.6
SERG	Sergoula	1.50	37	P	Pb	05 12 07.2	+0.6
LKD2	Lefkada island	1.58	353	P	Pb	05 12 09.0	+1.0
LKD2				S	Sn	05 12 28.3	+1.8
LKD2				AML	AML	05 12 36.0	
	comp=N,2286µm,0.3s						
LKD2				AML	AML	05 12 37.9	
	comp=E,2568µm,0.4s						
LKD2	Lefkada island	1.58	353	P	Pn	05 12 08.6	+2.2
LKD2	Lefkada island	1.58	353	P	Pn	05 12 08.6	+2.2
LKD2				S	Sn	05 12 28.7	+2.2
ANX	Ano Chora	1.59	30	P	Pn	05 12 08.5	+1.9
ANX	Ano Chora	1.59	30	P	Pn	05 12 08.3	+1.7
ANX	Ano Chora	1.59	30	P	Pn	05 12 08.3	+1.7
THAL	Thalero	1.61	59	P	Pb	05 12 09.6	+1.1
THAL	Thalero	1.61	59	P	Pn	05 12 08.7	+1.9
THAL	Thalero	1.61	59	P	Pn	05 12 08.7	+1.9
VLI	Veliai	1.70	106	P	Pb	05 12 10.4	+0.5
VLI				S	Sn	05 12 31.3	+2.0
VLI				AML	AML	05 12 44.1	
	comp=N,1032µm,0.5s						
VLI				AML	AML	05 12 55.2	
	comp=E,1108µm,0.8s						
VLI	Veliai	1.70	106	P	Pn	05 12 10.1	+2.1
VLI	Veliai	1.70	106	P	Pn	05 12 10.0	+2.1
VLI				S	Sn	05 12 31.3	+2.0
DSF	Desfina	1.75	47	P	Pb	05 12 11.5	+0.6
DSF	Desfina	1.75	47	P	Pn	05 12 10.8	+2.1
DSF	Desfina	1.75	47	P	Pn	05 12 10.8	+2.1
DLFA	Delphi	1.78	44	P	Pg	05 12 13.1	-0.3
DLFA	Delphi	1.78	44	P	Pb	05 12 11.8	+0.5
KRND	KRANIDI	1.79	84	P	Pn	05 12 09.6	+0.3
KRND	KRANIDI	1.79	84	P	Pn	05 12 10.4	+1.1
KRND	KRANIDI	1.79	84	P	Pn	05 12 10.4	+1.1
LOUT	Loutraki	1.81	64	P	Pn	05 12 09.6	0.0
LOUT	Loutraki	1.81	64	P	Pn	05 12 10.8	+1.3
LOUT	Loutraki	1.81	64	P	Pn	05 12 10.8	+1.3
LTK	Loutraki	1.82	63	P	Pn	05 12 10.9	+1.2
LTK	Loutraki	1.82	63	P	Pn	05 12 11.0	+1.3
LTK	Loutraki	1.82	63	P	Pn	05 12 11.0	+1.3
EVR	Evrytania	1.84	22	P	Pb	05 12 13.3	+0.9
EVR	Evrytania	1.84	22	P	Pb	05 12 13.1	+0.7
EVR	Evrytania	1.84	22	P	Pn	05 12 12.5	+2.5
DID	Didima	1.88	80	P	Pn	05 12 10.4	-0.1
DID	Didima	1.88	80	P	Pn	05 12 11.1	+0.7
DID	Didima	1.88	80	P	Pn	05 12 11.1	+0.7
PROD	Prodromos	1.89	56	P	Pn	05 12 12.1	+1.4
PROD	Prodromos	1.89	56	P	Pn	05 12 12.0	+1.4
KTHR	Kythira	1.93	119	P	Pn	05 12 13.8	+2.6
KTHR	Kythira	1.93	119	P	Pn	05 12 13.8	+2.6
KYTH	Kithira	1.96	118	P	Pn	05 12 14.1	+2.5
KYTH				S	Sn	05 12 37.3	+1.5
KYTH				AML	AML	05 12 40.5	
	comp=N,917µm,0.4s						
KYTH				AML	AML	05 12 40.6	
	comp=E,1129µm,0.6s						
VIL2	Platees	2.12	61	P	Pn	05 12 14.2	+0.4
AGG	Agios Georgios	2.12	31	P	Pb	05 12 17.6	+0.4
AGG	Agios Georgios	2.12	31	P	Pn	05 12 16.6	+2.7
AGG	Agios Georgios	2.12	31	P	Pn	05 12 16.5	+2.7
VILL	Villia	2.13	63	P	Pn	05 12 14.6	+0.7
VILL	Villia	2.13	63	P	Pn	05 12 14.7	+0.8
LKR	Lokris	2.19	48	P	Pn	05 12 16.4	+1.7
LKR	Lokris	2.19	48	P	Pn	05 12 16.2	+1.6
LKR	Lokris	2.19	48	P	Pn	05 12 16.3	+1.6
ANKY	Antikythira Is	2.35	124	P	Pn	05 12 19.2	+2.2
ANKY				AML	AML	05 12 51.9	
	comp=E,505µm,1.0s						
ANKY				AML	AML	05 12 58.6	
	comp=N,393µm,0.6s						
ANKY	Antikythira Is	2.35	124	P	Pn	05 12 19.1	+2.2
VLY	Voula,Athens	2.38	74	P	Pn	05 12 16.3	-1.0
VLY	Voula,Athens	2.38	74	P	Pn	05 12 17.6	+0.3
ATHU	Athens Univers	2.40	71	P	Pn	05 12 16.7	-1.0
ATHU	Athens Univers	2.40	71	P	Pn	05 12 18.0	+0.3
SGD	Sagiada	2.45	348	P	Pn	05 12 19.4	+1.1
SGD	Sagiada	2.45	348	P	Pn	05 12 20.1	+1.8
THL	Klokotos Trika	2.50	20	P	Pn	05 12 21.9	+2.9
THL	Klokotos Trika	2.50	20	P	Pn	05 12 21.3	+2.3
THL	Klokotos Trika	2.50	20	P	Pn	05 12 21.3	+2.3
DION	Dionisos Attik	2.55	69	P	Pn	05 12 19.3	-0.4
DION	Dionisos Attik	2.55	69	P	Pn	05 12 20.3	+0.6
KEK	Kerkira	2.64	341	P	Pn	05 12 21.9	+0.9
KEK	Kerkira	2.64	341	P	Pn	05 12 22.6	+1.6
KEK	Kerkira	2.64	341	P	Pn	05 12 22.7	+1.7
KPRO	Kipourio	2.76	7	P	Pb	05 12 26.9	-1.1
KPRO	Kipourio	2.76	7	P	Pn	05 12 25.7	+3.1
KPRO	Kipourio	2.76	7	P	Pn	05 12 25.7	+3.1
NEO	Neokhori	2.77	40	P	Pn	05 12 26.5	+3.7
NEO	Neokhori	2.77	40	P	Pn	05 12 25.5	+2.8
NEO	Neokhori	2.77	40	P	Pn	05 12 25.5	+2.8
XOR	Xorichti	2.80	39	P	Pn	05 12 24.1	+1.0
XOR	Xorichti	2.80	39	P	Pn	05 12 24.3	+1.2
XOR	Xorichti	2.80	39	P	Pn	05 12 24.5	+1.4
SKIA	Skiathos	2.80	45	P	Pn	05 12 24.5	+1.4
SKIA	Skiathos	2.80	45	P	Pn	05 12 24.7	+1.6
PENT	Pentalofos	2.98	3	P	Pn	05 12 30.1	+4.4
PENT	Pentalofos	2.98	3	P	Pn	05 12 29.0	+3.3
AOS	Alonnisos	3.05	49	P	Pn	05 12 26.4	-0.1
AOS	Alonnisos	3.05	49	P	Pn	05 12 27.5	+1.0
AOS	Alonnisos	3.05	49	P	Pn	05 12 27.5	+1.0
LIT	Litokhoron	3.13	23	P	Pn	05 12 28.5	+0.8
LIT	Litokhoron	3.13	23	P	Pn	05 12 29.4	+1.6
LIT	Litokhoron	3.13	23	P	Pn	05 12 29.4	+1.6
KZN	Kozani	3.16	12	P	Pn	05 12 30.3	+2.2
KZN	Kozani	3.16	12	P	Pn	05 12 30.3	+2.2
NEST	Nestorio	3.20	2	P	Pn	05 12 32.7	+4.0
NEST	Nestorio	3.20	2	P	Pn	05 12 32.2	+3.5
NEST	Nestorio	3.20	2	P	Pn	05 12 31.8	+3.1
PAIG	Paliouri	3.47	38	P	Pn	05 12 33.0	+0.7
PAIG	Paliouri	3.47	38	P	Pn	05 12 33.0	+0.7
FNA	Florina	3.58	6	P	Pn	05 12 35.3	+1.3
FNA	Florina	3.58	6	P	Pn	05 12 35.6	+1.7
FNA	Florina	3.58	6	P	Pn	05 12 35.8	+1.9
IDI	Anoyia	3.75	120	P	Pn	05 12 37.8	+1.6
	comp=N,0.5nm,0.3s,baz=321,slow=14,SNR=3.4						
IDI				S	Sn	05 13 19.3	-0.7
	comp=N,5.9nm,0.3s,baz=146,slow=20,SNR=8.6						
IDI				LR	LR	05 14 12.7	
	comp=N,44nm,21.3s,baz=256,slow=41						
IDI	Anoyia	3.75	120	⇓*i*P	Pn	05 12 40.3	+4.1
IDI	Anoyia	3.75	120	⇓*i*P	Pn	05 12 40.3	+4.1
IDI				S	Sn	05 13 20.3	+0.4
BIA	Bitola	3.81	5	*i* Pn	Pn	05 12 39.6	+2.5
TIP	Timpagrande	3.81	302	⇑*i*P	Pn	05 12 39.4	+2.3
TIP	Timpagrande	3.81	302	P	Pn	05 12 39.4	+2.3
TIP	Timpagrande	3.81	302	P	Pn	05 12 39.4	+2.3
KNT	Kendrikon	4.23	21	P	Pn	05 12 44.5	+1.7
KNT	Kendrikon	4.23	21	P	Pn	05 12 44.5	+1.7
VAY	Valandovo	4.30	17	*i* Pn	Pn	05 12 43.3	-0.4
TAR1	Taranto	4.35	321	*e*Pn	Pn	05 12 45.7	+1.3
TAR1	Taranto	4.35	321	*e*Pn	Pn	05 12 45.7	+1.3
TAR1				(Sn)	Sn	05 13 32.3	-2.4
MASS	Massafra	4.50	320	*e*Pn	Pn	05 12 47.7	+1.2
MASS	Massafra	4.50	320	*e*Pn	Pn	05 12 47.7	+1.2
MASS				(Sn)	Sn	05 13 34.8	-3.7
FASA	Fasano	4.54	323	*e*Pn	Pn	05 12 48.3	+1.3
FASA	Fasano	4.54	323	*e*Pn	Pn	05 12 48.3	+1.3
FASA				Sn	Sn	05 13 35.8	-3.5
STIP	Stip	4.58	12	*i* Pn	Pn	05 12 49.5	+1.9
SKO	Skopje	4.77	5	*i* Pn	Pn	05 12 51.6	+1.5
SG1	Sgolgore (BA)	4.89	319	*e*Pn	Pn	05 12 50.5	-1.4
SG1	Sgolgore (BA)	4.89	319	*e*Pn	Pn	05 12 50.5	-1.4
SG1				Sn	Sn	05 13 43.5	-4.7
BAI	Bari	4.99	322	*e*Pn	Pn	05 12 54.4	+1.2
BAI				Sn	Sn	05 13 48.8	-1.7
BAI	Bari	4.99	322	*e*Pn	Pn	05 12 54.4	+1.2
BAI				Sn	Sn	05 13 48.8	-1.7
VAE	Valguarnera	5.18	275	S	Sn	05 14 00.5	+5.1
	comp=N,6.1nm,0.3s,baz=351,slow=6.6,SNR=4.3						
PDG	Podgorica	5.36	347	⇓*i*P	Pn	05 12 58.2	-0.1
PDG	Podgorica	5.36	347	⇓*i*P	Pn	05 12 58.2	-0.1
VTS	Vitosha	5.65	17	⇓*i*P	Pn	05 13 03.9	+1.4
STON	Ston	6.16	337	*i* Pn	Pn	05 13 08.6	-0.7
STON				Sn	Sn	05 14 15.3	-4.0
UDBI	Udbina	8.28	334	*e*Pn	Pn	05 13 40.0	+1.6
UDBI				Sn	Sn	05 15 07.5	-4.0
NVLJ	Novalja	8.65	330	*i* Pn	Pn	05 13 42.6	-0.8
NVLJ				Sn	Sn	05 15 15.2	-5.1
MLR	Muntele Rosu	9.09	23	P	Pn	05 13 51.0	+1.4
	comp=N,0.0nm,0.3s,baz=232,slow=12,SNR=2.3						
MLR				LR	LR	05 18 14.5	
	comp=N,23nm,20.2s,baz=200,slow=44						
KEST	Kesra	9.43	264	P	Pn	05 13 56.5	+2.3
	comp=N,0.1nm,0.3s,baz=303,slow=3.2,SNR=4.1						
KEST				S	Sn	05 15 39.3	-0.6
	comp=N,0.3nm,0.3s,baz=47,slow=19,SNR=3.6						
VRAC	Vranov	12.49	347	LR	LR	05 20 00.7	
	comp=N,20nm,21.2s,baz=23,slow=40						
AKASG	Malin Array Be	14.74	21	P	Pn	05 15 09.3	+2.6
	comp=N,2.6nm,0.3s,baz=210,slow=9.6,SNR=7.1						
GNI	Garni	18.82	74	LR	LR	05 24 12.0	
	comp=N,31nm,19.5s,baz=297,slow=40						
HFS	Hagfors	23.40	351	P	P	05 16 44.3	-2.5
	comp=N,1.0nm,0.5s,baz=159,slow=9.1,SNR=5.5						
FINES	FINESS Array B	24.47	6	P	P	05 16 55.5	-1.4
	comp=N,0.6nm,0.5s,baz=188,slow=8.4,SNR=3.4						
TORD	Torodi Ar. Bea	29.49	221	P	P	05 17 43.5	+1.1
	comp=N,0.4nm,0.8s,baz=47,slow=8.2						
ARCES	ARCESS Array B	32.47	3	P	P	05 18 05.8	-2.4
	comp=N,2.0nm,0.8s,baz=192,slow=11,SNR=5.1						
SPITS	Spitsbergen Ar	41.12	359	P	P	05 19 21.6	-0.1
	comp=N,0.5nm,0.3s,baz=147,slow=8.1,SNR=9.1						
KURBB	Kurchatov Arra	42.56	53	P	P	05 19 31.7	-2.0
	comp=N,0.6nm,0.6s,baz=279,slow=8.7,SNR=5.6						
MKAR	Makanchi Array	45.55	58	P	P	05 19 55.9	-1.9
	comp=N,0.4nm,0.4s,baz=262,slow=6.8,SNR=3.7						
ZALV	Zalesovo Beam	46.11	47	P	P	05 19 57.8	-4.3
	comp=N,0.8nm,0.4s,baz=290,slow=8.6,SNR=3.4						
SEY	Seymchan	72.92	21	LR	LR	06 00 41.0	
	comp=N,147nm,18.8s,baz=150,slow=40						

IDC 04 05:21:05.2±10.0, 24°.05S×179°.34E, h622^{km}±118^{km}, mb2.7/4, mb1 3.1/4, mb1mx2.8/40, mbtmp3.6/4, Error ellipse: s-maj=123.3km s-min=51.0km az=155.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	41.42	261	P	P	05 27 59.6	-0.1
	0.2nm,0.4s,baz=97,slow=7.6,SNR=3.7						
WRA	Warramunga Arr	41.80	267	P	P	05 28 02.6	-0.1
	0.7nm,0.4s,baz=98,slow=8.4,SNR=10						
TXAR	Lajitas Array	91.02	58	P	P	05 33 04.1	-0.9
	0.3nm,0.8s,baz=202,slow=6.5,SNR=4.2						
ILAR	Eielson Array	92.32	14	P	P	05 33 11.2	+1.2
	0.4nm,0.9s,baz=212,slow=4.4,SNR=3.1						
HFS	Hagfors	142.57	348	PKP	PKPdf	05 39 26.2	-1.9
	0.8nm,0.4s,baz=72,slow=4.7,SNR=8.1						
AKASG	Malin Array Be	144.77	327	PKP	PKPdf	05 39 32.5	+0.3
	0.8nm,0.5s,baz=48,slow=1.5,SNR=4.6						

NDI 04 05:24:09.8±2.2, 24°.90N×93°.89E, h20^{km}±15^{km}, ML3.3, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOHI	KOHIMA	0.84	13	*e*P	Pn	05 24 28.0	+1.3
KOHI				*e*S	Sn	05 24 41.0	+2.5
KOHI				*e*S	Sn	05 24 41.0	+2.5
MOKO	MOKOCHONG	1.52	22	*e*P	Pn	05 24 36.7	+0.7
MOKO				*e*S	Sg	05 24 57.8	-1.2
MOKO				IAML		05 25 00.3	

	comp=E,225nm,0.3s						
MOKO				IAML		05 25 01.4	
	comp=N,198nm,0.2s						
AZL	**Aizawl**	**1.60**	**224**	*e*P	Pn	05 24 37.1	+0.1
AZL				*e*S	Sn	05 24 57.8	+0.6
AZL				IAML		05 25 00.0	
	comp=N,291nm,0.2s						
AZL				IAML		05 25 00.5	
	comp=E,598nm,0.2s						
SHL	**Shillong**	**1.94**	**290**	*e*P	Pn	05 24 43.0	+1.2
SHL				*e*S	Sn	05 25 05.0	-0.7
TEZP	**TEZPUR**	**1.97**	**330**	*e*P	Pn	05 24 42.3	+0.2
TEZP				*e*S	Sn	05 25 07.2	+1.0
TEZP				IAML		05 25 08.2	
	comp=E,628nm,0.1s						
TEZP				IAML		05 25 08.8	
	comp=N,722nm,0.2s						
ITAN	**ITANAGAR**	**2.24**	**356**	*e*S	Sn	05 25 11.5	-1.4
GUWA	**GUWAHATI**	**2.37**	**303**	*e*P	Pn	05 24 48.8	+1.3
GUWA				*e*S	Sn	05 25 16.2	+0.2
GUWA				IAML		05 25 16.7	
	comp=N,97nm,0.5s						
GUWA				IAML		05 25 17.2	
	comp=E,101nm,0.7s						
ZIRO	**ZIRO**	**2.61**	**359**	*e*S	Sn	05 25 21.0	-1.4
ZIRO				IAML		05 25 23.3	
	comp=N,190nm,0.4s						
ZIRO				IAML		05 25 23.7	
	comp=E,130nm,0.2s						
TURI	**Tura**	**3.29**	**282**	*e*S	Sn	05 25 39.3	+0.5

NNC 04 05:31:18.8±4.3, 37°.15N×70°.55E, h0^{km}, mb3.7, mpv3.4, 3C-4D, Error ellipse: s-maj=32.7km s-min=28.9km az=162.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**3.68**	**38**	⇓P	Pn	05 32 17.5	+0.2
	1.8nm,0.3s						
SFK				⇑S	Sn	05 33 03.4	+1.9
	20nm,0.4s						
MNAS	**Manas**	**5.54**	**15**	⇓P	Pn	05 32 41.9	-0.8
	2.3nm,0.4s						
MNAS				⇑S	Sn	05 33 48.5	+1.3
	19nm,1.1s						
KK31	**Karatay Array**	**5.95**	**360**	⇓P	Pn	05 32 48.5	+0.4
	1.5nm,0.4s,baz=171,slow=12,SNR=27						
KK31				⇑S	Sn	05 33 59.2	+2.1
	1.3nm,0.4s,baz=188,slow=28,SNR=8.9						
AAK	**Ala-Archa**	**6.27**	**28**	⇓S	Sn	05 34 03.7	-1.4
	5.4nm,0.9s						

*BJI **04** 05:38:51.7, 2°.30S×100°.80E, h50^{km}, mb4.8/16, mB4.9/10, Ms4.2/4, Ms7 4.0/3*

*ISCJB **04** 05:38:52.2±0.5, 2°.25S±0°.04×100°.83E±0°.05, h74^{km}±5^{km}, mb4.5/31, Error ellipse: s-maj=9.0km s-min=5.6km az=135.8*

*NEIC **04** 05:38:52.5±0.6, 2°.30S×100°.77E, h63^{km}±6^{km}, mb4.7/10, Error ellipse: s-maj=9.5km s-min=4.7km az=58.0*

*DJA **04** 05:38:53.1±0.5, 2°S±5°×10°1E±°, h58^{km}±26^{km}, M4.5/9, mb4.2/2, MLv4.7/9*

*IDC **04** 05:38:58.7±3.0, 2°.13S×101°.00E, h112^{km}±25^{km}, mb3.9/18, mb1 4.0/18, mb1mx3.8/60, mbtmp4.3/18, MS3.4/4, Ms1 3.4/4, ms1mx2.8/53, Error ellipse: s-maj=26.6km s-min=9.8km az=50.0*

ISC 04 05:38:53.7±0.9, **2°.33S**±0°.05×**100°.73E**±0°.05, **h78**^{km}±8^{km}, **n89**, σ1^{s}.**78**/98, **mb4.5**/31, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PPSI	**Pulau Pagai**	**0.84**	**239**	P	**Pn**	**05 39 09.7**	**-1.0**
PPSI				S	**Sn**	**05 39 26.3**	**+2.9**
SISI	**Saibi**	**1.91**	**301**	P	**Pn**	**05 39 23.6**	**-0.8**
SISI				S	**Sn**	**05 39 46.1**	**-1.7**
BKNI	**Bangkinang**	**2.65**	**7**	P	**Pn**	**05 39 33.7**	**-0.7**
BKNI	**Bangkinang**	**2.65**	**7**	*e*Pn	**Pn**	**05 39 32.4**	**-2.0**
MNAI	**Manna**	**3.01**	**132**	P	**Pn**	**05 39 38.4**	**-0.8**
MNAI	**Manna**	**3.01**	**132**	*e*Pn	**Pn**	**05 39 38.5**	**-0.6**
PBSI	**Pulau Batu**	**3.33**	**313**	P	**Pn**	**05 39 42.6**	**-0.9**
DSRI	**Dabo**	**4.26**	**65**	P	**Pn**	**05 39 56.2**	**-0.1**
GSI	**Gunungsitoli**	**4.79**	**319**	P	**Pn**	**05 40 02.9**	**-0.5**
GSI	**Gunungsitoli**	**4.79**	**319**	*e*Pn	**Pn**	**05 40 01.9**	**-1.5**
TPRI	**Tanjung Pinang**	**4.98**	**50**	P	**Pn**	**05 40 04.7**	**-1.4**
PSI	**Prapat**	**5.40**	**341**	*e*Pn	**Pn**	**05 40 10.4**	**-1.5**
TPTI		**6.58**	**327**	P	**Pn**	**05 40 27.1**	**-0.9**
COCO	**West Island**	**10.53**	**201**	*e*Pn	**Pn**	**05 41 19.6**	**-2.2**
CMAR	**Chiang Mai Arr**	**20.73**	**355**	P	**P**	**05 43 27.9**	**-0.2**
	1.9nm,0.4s,baz=183,slow=9.2,SNR=7.7						
CMAR				LR	LR	05 51 12.0	
	comp=Z,72nm,19.0s,baz=175,slow=36						
DAV	**Davao City (W)**	**26.50**	**69**	LR	LR	05 54 55.5	
	comp=Z,58nm,19.1s,baz=162,slow=36						
TNTI	**Ternate**	**26.81**	**84**	*e*P	**P**	**05 44 26.1**	**-0.9**
	24nm,0.7s						
KMI	**Kunming**	**27.36**	**4**	P	**P**	**05 44 34.6**	**+2.7**
KMI				pmax	pmax		
	comp=Z,11nm,0.5s						
KMI				pmax	pmax		
	comp=Z,120nm,7.2s						
H08S2	**Diego Garcia H**	**28.61**	**258**	T	T	06 13 50.5	
	baz=81,slow=75,SNR=8.4						
H08S3	**Diego Garcia H**	**28.61**	**258**	T	T	06 13 51.0	
	baz=81,slow=75,SNR=155						
H08S1	**Diego Carcia H**	**28.63**	**258**	T	T	06 13 51.5	
	baz=81,slow=75,SNR=6.0						
FITZ	**Fitzroy Crossi**	**29.03**	**124**	P	**P**	**05 44 47.8**	**+1.1**
	4.1nm,0.8s,baz=282,slow=9.3,SNR=3.8						
GYA	**Guiyang**	**29.18**	**11**	*e*P	**P**	**05 44 51.0**	**+2.9**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ODAN	**Odare**	**31.74**	**337**	*e*P	**P**	**05 45 12.5**	**+1.7**
	35nm,0.7s						
TAPN	**Taplejung**	**32.06**	**338**	*e*P	**P**	**05 45 15.5**	**+1.8**
	18nm,0.5s						
JIRN	**Jiri**	**32.94**	**336**	*e*P	**P**	**05 45 22.6**	**+1.2**
	15nm,0.3s						
GUN	**Gumba**	**33.28**	**336**	*e*P	**P**	**05 45 26.0**	**+1.6**
	44nm,0.4s						
DMN	**Daman**	**33.35**	**334**	*e*P	**P**	**05 45 29.3**	**+4.4**
	36nm,1.2s						
GKN	**Gorkha**	**33.89**	**334**	*e*P	**P**	**05 45 31.4**	**+1.9**
	21nm,0.6s						
KOLN	**Koldanda**	**34.16**	**332**	*e*P	**P**	**05 45 33.9**	**+2.0**
	17nm,0.7s						
DANN	**Dangsing**	**34.58**	**333**	*e*P	**P**	**05 45 38.2**	**+2.6**
	32nm,0.4s						
H01W3	**Cape Leeuwin H**	**34.71**	**160**	T	T	06 22 11.2	
	baz=337,slow=76,SNR=11						
H01W2	**Cape Leeuwin H**	**34.73**	**160**	T	T	06 22 13.9	
	baz=337,slow=76,SNR=10						
H01W1	**Cape Leeuwin H**	**34.73**	**160**	T	T	06 22 12.2	
	baz=337,slow=76,SNR=11						
XAN	**Xi'an**	**36.99**	**11**	P	**P**	**05 45 54.8**	**-1.0**
XAN				pmax	pmax		
	comp=Z,9.0nm,0.6s						
WRA	**Warramunga Arr**	**37.20**	**121**	P	**P**	**05 45 57.9**	**0.0**
	3.9nm,0.6s,baz=308,slow=9.6,SNR=34						
WRA				PcP	**PcP**	**05 48 17.1**	**+0.6**
	0.9nm,0.9s,baz=317,slow=2.3,SNR=3.2						
WRA				S	**S**	**05 51 35.8**	**-3.6**
	0.4nm,0.8s,baz=299,slow=14,SNR=3.0						
WR1	**Warramunga Arr**	**37.20**	**121**	*e*P	**P**	**05 45 57.9**	**+0.1**
WR1				*e*PcP	**PcP**	**05 48 17.1**	**+0.6**
WR1				*e*S	**S**	**05 51 35.8**	**-3.6**
WRAB	**Tennant Creek**	**37.21**	**121**	*e*P	**P**	**05 45 58.0**	**+0.1**
	18nm,1.1s						
WB2	**Warramunga Arr**	**37.21**	**121**	*e*P	**P**	**05 45 57.4**	**-0.6**
WB2				*e*P	**P**	**05 45 57.7**	**-0.2**
NJ2	**Nanjing**	**38.27**	**25**	*e*P	**P**	**05 46 07.4**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ASAR	**Alice Springs**	**38.48**	**126**	P	**P**	**05 46 09.1**	**+0.5**
	7.6nm,0.7s,baz=300,slow=8.0,SNR=78						
ASAR				PcP	**PcP**	**05 48 21.4**	**+1.1**
	0.8nm,0.6s,baz=316,slow=3.9,SNR=4.2						
ASAR				S	**S**	**05 51 57.0**	**-1.6**
	0.5nm,0.6s,baz=296,slow=15,SNR=4.5						
AS31	**Alice Springs**	**38.48**	**126**	*e*P	**P**	**05 46 09.2**	**+0.7**
	3.0nm,0.7s						
AS31				*e*PcP	**PcP**	**05 48 21.4**	**+1.1**
AS31				*e*S	**S**	**05 51 57.0**	**-1.6**
AS01	**Alice Springs**	**38.51**	**126**	*e*P	**P**	**05 46 08.7**	**-0.2**
JOW	**Kunigami**	**39.33**	**41**	*e*P	**P**	**05 46 14.5**	**-1.0**
	19nm,1.1s						
HHC	**Hu-ho-hao-te**	**44.09**	**12**	*e*P	**P**	**05 46 57.8**	**+3.4**
HHC				pP	pP	05 47 11.9	-1.4
HHC				S	**S**	**05 53 27.8**	**+6.4**
HHC				pmax	pmax		
	comp=Z,11nm,1.0s						
HHC				pmax	pmax		
	comp=Z,140nm,5.1s						
HHC				LR	LR		
	comp=N,87nm,12.9s						
HHC				LR	LR		
	comp=E,100nm,14.5s						
HHC				LR	LR		
	comp=Z,84nm,14.1s						
NIL	**Nilore**	**44.17**	**326**	*e*P	**P**	**05 46 52.6**	**-2.5**
KS15	**Wonju Array Si**	**46.91**	**30**	*e*P	**P**	**05 47 15.1**	**-1.4**
KSAR	**Wonju Array Be**	**46.91**	**30**	P	**P**	**05 47 15.1**	**-1.4**
KSRS	**Korea Array**	**46.93**	**30**	P	**P**	**05 47 15.1**	**-1.7**
	0.4nm,0.3s,baz=231,slow=7.9,SNR=4.4						
WMQ	**Urumqi**	**47.41**	**347**	P	**P**	**05 47 21.7**	**+1.3**
WMQ				pP	pP	05 47 37.4	-2.1
WMQ				pmax	pmax		
	comp=Z,28nm,0.9s						
WMQ				LR	LR		
	comp=N,190nm,25.3s						
WMQ				LR	LR		
	comp=Z,260nm,32.1s						
KSH	**Kashi**	**47.44**	**334**	*e*P	**P**	**05 47 21.4**	**+0.6**
KSH				sP	pP	05 47 43.4	+3.4
KSH				PP	**PP**	**05 49 11.8**	**-1.1**
KSH				S	**S**	**05 54 08.0**	**-1.7**
KSH				SS	**SS**	**05 57 30.0**	**-8.5**
KSH				pmax	pmax		
	comp=Z,140nm,5.1s						
KSH				LR	LR		
	comp=N,390nm,13.9s						
KSH				LR	LR		
	comp=E,300nm,13.3s						
STKA	**Stephens Creek**	**48.39**	**132**	P	**P**	**05 47 29.0**	**+0.8**
	2.5nm,0.4s,baz=313,slow=8.6,SNR=7.0						
STKA	**Stephens Creek**	**48.39**	**132**	*e*P	**P**	**05 47 28.8**	**+0.6**
	0.9nm,0.8s						
SONA0	**Songino Array**	**50.20**	**5**	*e*P	**P**	**05 47 42.6**	**+0.8**
SONA0				*e*PcP	**PcP**	**05 49 00.3**	**+0.4**
SONM	**Songino Array**	**50.20**	**5**	P	**P**	**05 47 42.6**	**+0.8**
	2.6nm,0.7s,baz=184,slow=9.2,SNR=18						
SONM				PcP	**PcP**	**05 49 00.3**	**+0.4**
	0.5nm,0.6s,baz=178,slow=4.7,SNR=4.4						
SONA1	**Songino Array**	**50.21**	**5**	*e*P	**P**	**05 47 42.7**	**+0.8**
ULN	**Ulaanbaatar**	**50.29**	**6**	*e*P	**P**	**05 47 42.9**	**+0.4**
	2.5nm,0.8s						
CN2	**Changchun**	**51.00**	**23**	*e*P	**P**	**05 47 47.2**	**-0.5**
MK01	**Makanchi Array**	**51.51**	**344**	*e*P	**P**	**05 47 52.0**	**+0.4**
MK31	**Makanchi Array**	**51.54**	**344**	*e*P	**P**	**05 47 52.6**	**+0.9**
MK32	**Makanchi Array**	**51.54**	**344**	*e*P	**P**	**05 47 52.5**	**+0.7**
MKAR	**Makanchi Array**	**51.54**	**344**	P	**P**	**05 47 52.5**	**+0.7**
	9.6nm,0.6s,baz=148,slow=8.2,SNR=52						
MKAR	**Makanchi Array**	**51.54**	**344**	*e*P	**P**	**05 47 52.7**	**+0.9**
	53nm,0.8s						
MAKZ	**Makanchi**	**51.64**	**344**	*e*P	**P**	**05 47 52.4**	**-0.1**
	3.6nm,0.8s						
MAJO	**Matsushiro**	**52.07**	**38**	*e*P	**P**	**05 47 54.3**	**-1.6**
MJAR	**Matsushiro Arr**	**52.07**	**38**	P	**P**	**05 47 54.3**	**-1.6**
	0.6nm,0.3s,baz=202,slow=6.1,SNR=2.8						
TLY	**Talaya**	**53.86**	**2**	*e*P	**P**	**05 48 09.6**	**+0.9**
	3.6nm,0.7s						
USRK	**Ussuriysk Ar.**	**54.10**	**27**	P	**P**	**05 48 10.5**	**-0.1**
	3.1nm,0.6s,baz=207,slow=4.6						
KURBB	**Kurchatov Arra**	**56.07**	**343**	P	**P**	**05 48 25.4**	**+0.8**
	2.8nm,0.8s,baz=162,slow=7.0,SNR=17						
KURK	**Kurchatov**	**56.12**	**343**	*e*P	**P**	**05 48 25.4**	**+0.4**
KURK				*e*P	**P**	**05 48 25.7**	**+0.7**
ZAA0	**Zalesovo Array**	**57.62**	**349**	*e*P	**P**	**05 48 35.9**	**+0.3**
	10nm,0.8s						
ZALV	**Zalesovo Beam**	**57.62**	**349**	P	**P**	**05 48 36.0**	**+0.4**
	9.8nm,0.7s,baz=175,slow=5.5,SNR=44						
ZALV	**Zalesovo Beam**	**57.62**	**349**	*e*P	**P**	**05 48 35.6**	**0.0**
ZAA1	**Zalesovo Array**	**57.63**	**349**	*e*P	**P**	**05 48 36.0**	**+0.4**
BVAR	**Borovoye Array**	**60.74**	**340**	P	**P**	**05 48 57.8**	**+0.6**
	1.3nm,0.4s,baz=142,slow=9.2,SNR=6.9						
ABKAR	**Akbulak array**	**62.27**	**331**	*e*P	**P**	**05 49 08.1**	**+0.5**
AKTO	**Aktyubinsk**	**63.99**	**331**	P	**P**	**05 49 18.3**	**-0.6**
	0.6nm,0.3s,baz=96,slow=10,SNR=3.2						
YAK	**Yakutsk**	**67.87**	**14**	LR	LR	06 22 27.6	
	comp=Z,53nm,21.2s,baz=284,slow=39						
BR101	**Keskin Array S**	**74.08**	**312**	*e*P	**P**	**05 50 23.2**	**+1.4**
BRTR	**Keskin Array B**	**74.08**	**312**	P	**P**	**05 50 23.2**	**+1.4**
	0.5nm,0.5s,baz=108,slow=4.7,SNR=2.5						
BOSA	**Boshof**	**76.14**	**241**	LR	LR	06 20 26.2	
	comp=Z,26nm,19.4s,baz=200,slow=32						
FIA0	**FINESS Array S**	**84.74**	**332**	*e*P	**P**	**05 51 19.9**	**+0.9**
FINES	**FINESS Array B**	**84.74**	**332**	P	**P**	**05 51 19.9**	**+0.9**
	1.0nm,0.8s,baz=94,slow=4.2,SNR=3.3						
ARA0	**ARCESS Array S**	**87.02**	**340**	*e*P	**P**	**05 51 30.8**	**+0.5**
ARCES	**ARCESS Array B**	**87.02**	**340**	P	**P**	**05 51 30.8**	**+0.5**
	3.7nm,0.9s,baz=93,slow=4.3,SNR=8.5						
SPITS	**Spitsbergen Ar**	**91.10**	**348**	P	**P**	**05 51 49.5**	**+0.2**
	2.2nm,0.7s,baz=38,slow=7.3,SNR=2.7						
CPUP	**Villa Florida**	**144.48**	**215**	PKP	**PKPdf**	**05 58 22.8**	**+0.8**
	3.1nm,0.9s,baz=57,slow=2.5,SNR=6.6						
TXAR	**Lajitas Array**	**144.51**	**38**	PKP	**PKPdf**	**05 58 22.3**	**+0.2**
	3.1nm,0.7s,baz=313,slow=1.2,SNR=57						
TKL	**Tuckaleechee C**	**146.57**	**7**	PKPbc	**PKPbc**	**05 58 26.8**	**-0.1**
	1.1nm,0.5s,baz=109,slow=3.0,SNR=4.9						

*NIED **04** 05:53:00, 34°.90N×140°.00E, h53^{km}, Mw4.0 Best double couple: $M_0$1.15000×10^{15} NP1:ϕ_s23.00000°, δ31.00000°, λ52.00000°. NP2:ϕ_s245.00000°, δ66.00000°, λ110.00000°.*

*ISCJB **04** 05:53:22.2±0.3, 34°.92N±0°.03×139°.99E±0°.04, h68^{km}±2^{km}, mb4.2/16, Error ellipse: s-maj=6.3km s-min=4.1km az=153.0*

*JMA **04** 05:53:22.6±0.1, 34°.94N×139°.97E, h65^{km}±2^{km}, M3.6 Broadband fault plane solution: P waves. NP1: ϕ_s249.00000°, δ66.00000°, λ108.00000°. NP2: ϕ_s29.00000°, δ30.00000°, λ55.00000°. Principal axes: T Plg64.0000°, Azm189.0000°; N Plg17.0000°, Azm61.0000°; P Plg19.0000°, Azm325.0000°;*

JMA Felt I J1.

*NEIC **04** 05:53:24.0±0.8, 34°.82N×139°.85E, h64^{km}±7^{km}, mb4.4/6 Error ellipse: s-maj=15.1km s-min=6.2km az=67.0*

*IDC **04** 05:53:25.6±1.1, 34°.80N×139°.54E, h71^{km}±7^{km}, mb3.9/10, mb1 4.0/11, mb1mx3.5/62, mbtmp4.2/11, MS3.1/7, Ms1 3.1/7, ms1mx2.7/62, Error ellipse: s-maj=30.4km s-min=5.1km az=71.0*

ISC 04 05:53:23.4±0.7, **34°.89N**±0°.04×**139°.97E**±0°.04, **h57**^{km}±6^{km}, **n66**, σ1^{s}.**67**/73, **mb4.2**/16, **MS3.2**/5, **6C-6D, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TATJ	**Tateyama 2**	**0.15**	**336**	⇑P	**Pn**	**05 53 32.8**	**+0.6**
TATJ				S	**Sn**	**05 53 40.3**	**+1.8**
BSO4	**Boso 4**	**0.32**	**72**	⇑P	**Pn**	**05 53 33.8**	**+0.6**
BSO4				X		05 53 42.5	
KTR	**Katsuura**	**0.39**	**48**	⇑P	**Pn**	**05 53 33.8**	**-0.1**
KTR				S	**Sn**	**05 53 41.7**	**+0.3**
JYO	**Yokosk**	**0.41**	**324**	⇑P	**Pn**	**05 53 34.4**	**+0.2**
BSO3	**Boso 3**	**0.46**	**101**	⇓P	**Pn**	**05 53 34.8**	**+0.5**
BSO3				X		05 53 44.3	
JIM2	**Oshima 3**	**0.47**	**249**	⇑P	**Pn**	**05 53 35.1**	**+0.3**
JIM2				S	**Sn**	**05 53 43.4**	**+0.3**
JOD2	**Odawara 2**	**0.81**	**298**	⇓P	**Pn**	**05 53 38.2**	**-0.6**
JOD2				S	**Sn**	**05 53 49.1**	**-1.1**
BSO1	**Boso 1**	**0.87**	**106**	⇓P	**Pn**	**05 53 38.8**	**-0.2**
BSO1				X		05 53 51.1	
JIZS	**Izushimoda**	**0.91**	**259**	⇑P	**Pn**	**05 53 40.4**	**+0.3**
JIZS				S	**Sn**	**05 53 52.9**	**+0.5**
JMKN	**Mikurajimanish**	**1.04**	**197**	P	**Pn**	**05 53 42.6**	**+0.7**
JMKN				S	**Sn**	**05 53 57.0**	**+1.5**
JYN	**Shimob**	**1.31**	**298**	⇓P	**Pn**	**05 53 45.2**	**-0.3**
JYN				S	**Sn**	**05 54 01.9**	**-0.2**
JRY	**Ryogami san**	**1.42**	**323**	⇓P	**Pn**	**05 53 46.2**	**-0.7**
JRY				*e*S	**Sn**	**05 54 03.8**	**-0.8**
SHZ3	**Shizuoka 3**	**1.45**	**277**	P	**Pn**	**05 53 47.8**	**+0.4**
JAG	**Ashikaga**	**1.59**	**345**	⇓P	**Pn**	**05 53 47.8**	**-1.4**
JAG				S	**Sn**	**05 54 06.5**	**-2.1**
JHJ	**Hachijo jima 2**	**1.77**	**185**	P	**Pn**	**05 53 52.8**	**+1.1**
	241nm,0.3s,baz=62,slow=4.9,SNR=74						
JHJ				S	**Sn**	**05 54 14.6**	**+1.5**
	966nm,0.3s,baz=303,slow=22,SNR=41						
JHJ				LR	LR	05 54 45.0	
	comp=Z,235nm,19.9s,baz=268,slow=47						
JHJ2	**Mitsune**	**1.78**	**184**	*e*Pn	**Pn**	**05 53 52.6**	**+0.8**
MJAR	**Matsushiro Arr**	**2.18**	**320**	P	**Pn**	**05 53 57.1**	**-0.2**
	31nm,0.3s,baz=152,slow=12,SNR=372						
MJAR				S	**Sn**	**05 54 22.0**	**-1.1**
	22nm,0.3s,baz=142,slow=24,SNR=12						
MAJO	**Matsushiro**	**2.18**	**320**	*e*Pn	**Pn**	**05 53 57.3**	**0.0**
MAJO				*e*Sn	**Sn**	**05 54 22.0**	**-1.2**
MAT	**Matsushiro**	**2.18**	**320**	P	**Pn**	**05 53 57.5**	**+0.2**
MAT				S	**Sn**	**05 54 23.1**	**-0.1**
MJB9	**Matsu-Tunnel**	**2.19**	**320**	*e*Pn	**Pn**	**05 53 57.5**	**+0.1**
INU	**Inuyama**	**2.46**	**282**	*e*Pn	**Pn**	**05 54 01.6**	**+0.5**
CBIJ	**Chichi jima**	**8.00**	**166**	*e*Pn	**Pn**	**05 55 15.8**	**-1.2**
CBIJ				*e*Sn	**Sn**	**05 56 40.0**	**-6.1**
JCJ	**Chichijima**	**8.00**	**166**	P	**Pn**	**05 55 15.8**	**-1.2**
	baz=286,slow=20						
JCJ				S	**Sn**	**05 56 40.0**	**-6.1**
	3.8nm,0.3s,baz=293,slow=15,SNR=2.6						
ASAJ	**Asahikawa**	**9.43**	**12**	LR	LR	05 59 33.3	
	comp=Z,38nm,21.6s,baz=159,slow=38						
KSRS	**Korea Array**	**10.07**	**288**	P	**Pn**	**05 55 49.0**	**+3.8**
	0.4nm,0.3s,baz=101,slow=14,SNR=9.6						
KSRS				LR	LR	05 59 37.3	
	comp=Z,24nm,20.0s,baz=160,slow=38						
KS15	**Wonju Array Si**	**10.09**	**288**	*e*Pn	**Pn**	**05 55 47.6**	**+2.0**
KSAR	**Wonju Array Be**	**10.09**	**288**	P	**Pn**	**05 55 49.0**	**+3.5**
SONA0	**Songino Array**	**28.09**	**308**	*e*P	**P**	**05 59 07.6**	**-2.1**
SONM	**Songino Array**	**28.09**	**308**	P	**P**	**05 59 07.6**	**-2.1**
	0.7nm,0.8s,baz=101,slow=7.5,SNR=3.1						
SONM				LR	LR	06 10 23.8	
	comp=Z,39nm,20.8s,baz=87,slow=36						
H11N2	**WAKE ISLAND Hy**	**28.18**	**115**	T	T	06 28 53.5	
	baz=308,slow=75,SNR=200						
H11N1	**WAKE ISLAND Hy**	**28.18**	**115**	T	T	06 28 51.9	
	baz=308,slow=75,SNR=155						
H11N3	**WAKE ISLAND Hy**	**28.20**	**115**	T	T	06 28 54.1	
	baz=308,slow=75,SNR=136						
H11S3	**WAKE ISLAND Hy**	**28.80**	**118**	T	T	06 29 39.5	
	baz=310,slow=75,SNR=61						
H11S1	**WAKE ISLAND Hy**	**28.80**	**118**	T	T	06 29 39.9	
	baz=310,slow=75,SNR=59						
H11S2	**WAKE ISLAND Hy**	**28.81**	**118**	T	T	06 29 41.6	
	baz=310,slow=75,SNR=54						
ZAA0	**Zalesovo Array**	**42.52**	**314**	*e*P	**P**	**06 01 12.6**	**-0.5**
	4.3nm,0.8s						
ZAA1	**Zalesovo Array**	**42.52**	**314**	*e*P	**P**	**06 01 12.6**	**-0.5**
ZALV	**Zalesovo Beam**	**42.52**	**314**	P	**P**	**06 01 12.6**	**-0.5**
	2.9nm,0.6s,baz=90,slow=6.9,SNR=14						
ZALV	**Zalesovo Beam**	**42.52**	**314**	*e*P	**P**	**06 01 12.5**	**-0.6**
MK01	**Makanchi Array**	**44.29**	**304**	*e*P	**P**	**06 01 26.7**	**-0.7**
MK31	**Makanchi Array**	**44.30**	**304**	*e*P	**P**	**06 01 27.2**	**-0.2**
MK32	**Makanchi Array**	**44.30**	**304**	*e*P	**P**	**06 01 27.2**	**-0.3**
MKAR	**Makanchi Array**	**44.30**	**304**	P	**P**	**06 01 27.2**	**-0.3**
	1.4nm,0.6s,baz=89,slow=9.8,SNR=13						
MKAR	**Makanchi Array**	**44.30**	**304**	*e*P	**P**	**06 01 27.2**	**-0.3**
	11nm,0.7s						
KURK	**Kurchatov**	**46.36**	**310**	*e*P	**P**	**06 01 43.0**	**-0.7**
KURK				*e*P	**P**	**06 01 43.2**	**-0.5**
KURBB	**Kurchatov Arra**	**46.42**	**309**	P	**P**	**06 01 43.0**	**-1.2**
	2.6nm,0.8s,baz=85,slow=8.3,SNR=20						
BATI	**Baumata**	**47.44**	**202**	LR	LR	06 22 49.8	
	comp=Z,118nm,19.2s,slow=37						
BVAR	**Borovoye Array**	**51.16**	**313**	P	**P**	**06 02 20.6**	**0.0**
	0.4nm,0.5s,baz=82,slow=10,SNR=3.6						
COLA	**College**	**51.52**	**31**	*e*P	**P**	**06 02 23.0**	**+0.1**
	6.6nm,0.3s						
COLA				*e*S	**S**	**06 09 38.6**	**-0.2**
ILAR	**Eielson Array**	**51.93**	**31**	P	**P**	**06 02 28.3**	**+2.2**
	0.2nm,0.7s,baz=274,slow=7.0,SNR=3.3						
FITZ	**Fitzroy Crossi**	**54.43**	**197**	LR	LR	06 27 26.7	
	comp=Z,22nm,18.9s,baz=282,slow=38						
WR1	**Warramunga Arr**	**54.79**	**186**	*e*P	**P**	**06 02 46.4**	**-1.1**
WRA	**Warramunga Arr**	**54.79**	**186**	P	**P**	**06 02 46.4**	**-1.1**
	7.6nm,0.7s,baz=2.9,slow=7.6,SNR=55						
ABKAR	**Akbulak array**	**58.43**	**311**	*e*P	**P**	**06 03 12.6**	**-0.5**
AS01	**Alice Springs**	**58.51**	**186**	*e*P	**P**	**06 03 12.9**	**-1.0**
AS31	**Alice Springs**	**58.52**	**187**	*e*P	**P**	**06 03 12.9**	**-1.0**
	1.0nm,1.0s						
ASAR	**Alice Springs**	**58.52**	**187**	P	**P**	**06 03 12.9**	**-1.0**
	1.6nm,0.8s,baz=15,slow=6.0,SNR=11						
ASAR				LR	LR	06 27 39.1	
	comp=Z,44nm,21.7s,baz=148,slow=35						
ARA0	**ARCESS Array S**	**65.58**	**339**	*e*P	**P**	**06 04 02.5**	**+1.7**
ARCES	**ARCESS Array B**	**65.58**	**339**	P	**P**	**06 04 02.5**	**+1.7**
	5.4nm,0.9s,baz=322,slow=9.4,SNR=5.8						
STKA	**Stephens Creek**	**66.43**	**178**	P	**P**	**06 04 06.6**	**+0.1**
	2.8nm,1.0s,baz=20,slow=3.7,SNR=4.5						
STKA	**Stephens Creek**	**66.43**	**178**	*e*P	**P**	**06 04 06.6**	**+0.1**
	1.3nm,1.1s						
NWAO	**Narrogin (SRO)**	**70.76**	**200**	P	**P**	**06 04 32.5**	**-1.0**
	4.1nm,0.7s,baz=288,slow=7.6,SNR=4.2						
NOA	**NORSAR Array B**	**75.70**	**337**	LR	LR	06 41 53.0	
	comp=Z,12nm,18.6s,baz=175,slow=38						
CLL	**Collm**	**82.36**	**330**	*i* (P)	**P**	**06 05 41.7**	**+2.8**
N37A	**Lee Faris, Mou**	**89.72**	**38**	*e*P	**P**	**06 06 18.6**	**+3.1**
	14nm,0.3s						
JCT	**Junction City**	**94.01**	**48**	*e*P	**P**	**06 06 32.0**	**-3.6**
	3.0nm,0.8s						

*ATH **04** 05:57:59.0, 34°.78N×24°.74E, h25^{km}±4^{km}, ML2.6/4, Error ellipse: s-maj=5.0km s-min=1.3km az=355.0*

*ISCJB **04** 05:57:59.4±1.1, 34°.76N±0°.07×24°.74E±0°.04, h23^{km}±15^{km}, Error ellipse: s-maj=11.4km s-min=5.5km az=170.9*

*THE **04** 05:57:59.6, 34°.78N×24°.71E, h19^{km}±1^{km}, ML2.5/5, Error ellipse: s-maj=1.4km s-min=0.5km az=18.0*

*CSEM **04** 05:57:59.1±0.2, 34°.76N×24°.74E, h18^{km}±1^{km}, ML2.6, Error ellipse: s-maj=5.5km s-min=2.5km az=172.0*

ISC 04 05:57:58.4±1.3, **34°.73N**±0°.07×**24°.73E**±0°.03, **h22**^{km}±3^{km}, **n23**, σ0^{s}.**45**/43, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIVA	**Sivas**	**0.30**	**13**	P	**Pb**	**05 58 05.0**	**-0.1**
SIVA				S	**Sb**	**05 58 09.3**	**-0.4**
SIVA				AML	AML	05 58 09.7	
	comp=E,6848µm,0.3s						
SIVA				AML	AML	05 58 12.2	
	comp=N,7377µm,0.7s						
SIVA	**Sivas**	**0.30**	**13**	P	**Pb**	**05 58 05.2**	**+0.1**
SIVA				S	**Sb**	**05 58 09.6**	**-0.1**
SIVA	**Sivas**	**0.30**	**13**	P	**Pb**	**05 58 05.2**	**+0.1**
SIVA				S	**Sb**	**05 58 09.6**	**-0.1**
TMBK	**Timbaki Herakl**	**0.34**	**5**	P	**Pb**	**05 58 06.4**	**+0.6**
TMBK				S	**Sb**	**05 58 11.6**	**+0.7**
TMBK	**Timbaki Herakl**	**0.34**	**5**	P	**Pb**	**05 58 06.4**	**+0.6**
TMBK				S	**Sb**	**05 58 11.6**	**+0.7**
GVDS	**Gavdos**	**0.54**	**282**	P	**Pn**	**05 58 10.3**	**-0.5**
GVDS				S	**Sn**	**05 58 18.4**	**-0.8**
GVDS	**Gavdos**	**0.54**	**282**	P	**Pn**	**05 58 10.3**	**-0.5**
GVDS				S	**Sn**	**05 58 18.4**	**-0.8**
GVD	**Gavdhos**	**0.54**	**282**	P	**Pb**	**05 58 09.3**	**+0.1**
GVD				S	**Sn**	**05 58 19.4**	**+0.2**
GVD				AML	AML	05 58 23.6	
	comp=N,2294µm,0.3s						
GVD				AML	AML	05 58 27.6	
	comp=E,2130µm,0.3s						
GVD	**Gavdhos**	**0.54**	**282**	P	**Pb**	**05 58 09.6**	**+0.4**
GVD				S	**Sb**	**05 58 17.6**	**+1.0**
GVD	**Gavdhos**	**0.54**	**282**	P	**Pb**	**05 58 09.6**	**+0.4**
GVD				S	**Sb**	**05 58 17.6**	**+1.0**
PRNS	**Prines Rethymn**	**0.66**	**344**	P	**Pb**	**05 58 11.4**	**+0.1**
PRNS				S	**Sb**	**05 58 20.7**	**+0.6**
PRNS	**Prines Rethymn**	**0.66**	**344**	P	**Pb**	**05 58 11.4**	**+0.1**
PRNS				S	**Sb**	**05 58 20.7**	**+0.6**
LAST	**Lasithi**	**0.75**	**55**	P	**Pb**	**05 58 13.2**	**+0.2**
LAST				S	**Sn**	**05 58 24.5**	**-0.1**
LAST				AML	AML	05 58 29.1	
	comp=E,297µm,0.5s						
LAST				AML	AML	05 58 29.4	
	comp=N,270µm,0.5s						
LAST	**Lasithi**	**0.75**	**55**	P	**Pb**	**05 58 13.1**	**+0.2**
LAST				S	**Sn**	**05 58 24.2**	**-0.4**
LAST	**Lasithi**	**0.75**	**55**	P	**Pb**	**05 58 13.1**	**+0.2**
LAST				S	**Sn**	**05 58 24.0**	**-0.6**
VAM	**Vamos**	**0.80**	**328**	P	**Pb**	**05 58 13.6**	**-0.1**
VAM				S	**Sn**	**05 58 25.7**	**-0.1**
VAM				AML	AML	05 58 25.8	
	comp=E,730µm,0.2s						
VAM				AML	AML	05 58 30.8	
	comp=N,843µm,0.2s						
VAM	**Vamos**	**0.80**	**328**	P	**Pb**	**05 58 13.7**	**0.0**
VAM				S	**Sb**	**05 58 24.2**	**+0.1**

VAM	Vamos	0.80	328	P	Pb	05 58 13.8	0.0
VAM				S	Sb	05 58 24.2	+0.1
NPS	Neapolis	0.90	54	P	Pn	05 58 15.9	+0.1
NPS	Neapolis	0.90	54	P	Pn	05 58 15.8	0.0
IMMV	Iera Moni Meta	0.95	320	P	Pb	05 58 15.9	-0.3
IMMV	Iera Moni Meta	0.95	320	P	Pn	05 58 16.4	-0.1
IMMV				S	Sb	05 58 28.8	+0.4
IMMV	Iera Moni Meta	0.95	320	P	Pn	05 58 16.4	-0.1
IMMV				S	Sb	05 58 28.8	+0.4

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*NIED **04** 06:03:00, 36°.70N×141°.00E, h53^{km}, Mw3.9 Best double couple: $M_0$9.11000×10^{14} NP1:ϕ_s209.00000°, δ23.00000°, λ107.00000°. NP2:ϕ_s11.00000°, δ68.00000°, λ83.00000°.*
*ISCJB **04** 06:03:23.6±0.5, 36°.64N±0°.03×140°.99E±0°.06, h52^{km}±3^{km}, mb4.0/20, MS2.7/2, Error ellipse: s-maj=7.9km s-min=4.5km az=18.7*
*JMA **04** 06:03:24.6±0.1, 36°.64N×140°.93E, h49^{km}±1^{km}, M4.0*
JMA Felt III J1.
*IDC **04** 06:03:30.1±1.8, 36°.61N×140°.66E, h96^{km}±15^{km}, mb3.7/19, mb1 3.8/21, mb1mx3.7/65, mbtmp4.0/21, MS2.7/3, Ms1 2.7/3, ms1mx2.3/61, Error ellipse: s-maj=16.0km s-min=14.3km az=108.0*
ISC 04 06:03:24.5±1.0, **36°.65N**±0°.04×**140°.98E**±0°.07, **h42**^{km}±8^{km}, **n44**, σ**1^{s}.12**/50, **mb4.0**/20, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHO	Hitachi	0.33	263	P	Pn	06 03 33.7	+0.4
JHO				S	Sn	06 03 39.7	+0.2
JHYU	Hitachinakayam	0.44	226	P	Pn	06 03 34.9	+0.3
JHYU				S	Sn	06 03 41.8	+0.1
ONAJ	Iwakimizuishiy	0.47	342	P	Pn	06 03 35.2	+0.2
ONAJ				S	Sn	06 03 42.5	0.0
JFFD	Fukushimafurud	0.55	323	P	Pn	06 03 36.4	+0.4
JFFD				S	Sn	06 03 44.2	0.0
JFK	Kawauchi	0.72	353	P	Pn	06 03 38.2	-0.1
JFK				S	Sn	06 03 47.6	-0.6
JYT	Yasato	0.76	237	P	Pn	06 03 38.4	-0.4
JYT				S	Sn	06 03 48.3	-0.8
JFT	Otama	1.01	329	P	Pn	06 03 43.0	+0.8
JFT				S	Sn	06 03 55.7	+0.5
JMM	Marumori	1.22	353	P	Pn	06 03 45.3	+0.2
JMM				S	Sn	06 04 00.2	-0.2
JAG	Ashikaga	1.25	260	P	Pn	06 03 45.4	-0.1
JAG				*e*S	Sn	06 04 00.2	-0.9
JFY	Yanaizu	1.27	307	P	Pn	06 03 46.1	+0.3
JFY				S	Sn	06 04 02.5	+0.9
JKT	Katashina	1.40	275	P	Pn	06 03 47.9	+0.3
JKT				S	Sn	06 04 04.7	-0.1
MJAR	Matsushiro Arr	2.23	268	P	Pn	06 03 60.0	+1.0
	62nm,0.3s,baz=99,slow=12,SNR=269						
MJAR				S	Sn	06 04 26.8	+1.4
	20nm,0.3s,baz=88,slow=25,SNR=10						
MAT	Matsushiro	2.23	268	P	Pn	06 04 00.2	+1.2
MAT				S	Sn	06 04 29.4	+4.0
JHJ	Hachijo jima 2	3.66	196	P	Pn	06 04 19.3	+0.8
	28nm,0.3s,baz=325,slow=17,SNR=10.0						
JHJ				S	Sn	06 04 59.9	-0.5
	67nm,0.3s,baz=74,slow=24,SNR=9.6						
JHJ				LR	LR	06 05 44.6	
	comp=Z,58nm,20.0s,baz=111,slow=38						
ASAJ	Asahikawa	7.56	9	P	Pn	06 05 11.0	-1.0
	2.1nm,0.3s,baz=210,slow=10,SNR=5.0						
ASAJ				S	Sn	06 06 37.0	+0.6
	1.0nm,0.3s,baz=49,slow=30,SNR=5.6						
USRK	Ussuriysk Ar.	10.18	321	P	Pn	06 05 52.5	+4.5
	baz=124,slow=13						
KSRS	Korea Array	10.47	278	P	Pn	06 05 55.6	+3.7
	0.3nm,0.3s,baz=90,slow=14,SNR=7.5						
PETK	Petropavlovsk-	20.19	30	LR	LR	06 16 05.2	
	comp=Z,24nm,21.4s,baz=19,slow=37						
SEY	Seymchan	27.23	11	P	P	06 09 06.3	+2.1
	3.6nm,0.9s,baz=204,slow=7.8,SNR=8.1						
SONM	Songino Array	27.71	305	P	P	06 09 07.8	-1.0
	2.2nm,0.7s,baz=96,slow=11,SNR=12						
H11N2	WAKE ISLAND Hy	28.26	120	T	T	06 39 16.4	
	baz=313,slow=75,SNR=106						
H11N1	WAKE ISLAND Hy	28.26	120	T	T	06 39 17.0	
	baz=313,slow=75,SNR=93						
H11N3	WAKE ISLAND Hy	28.27	120	T	T	06 39 17.7	
	baz=313,slow=75,SNR=108						
H11S1	WAKE ISLAND Hy	28.95	122	T	T	06 40 04.9	
	baz=314,slow=76,SNR=330						
H11S3	WAKE ISLAND Hy	28.95	122	T	T	06 40 06.0	
	baz=314,slow=76,SNR=165						
H11S2	WAKE ISLAND Hy	28.96	122	T	T	06 40 07.5	
	baz=314,slow=76,SNR=141						
ZALV	Zalesovo Beam	41.92	313	P	P	06 11 08.8	-1.8
	3.6nm,0.7s,baz=88,slow=7.5,SNR=11						
MKAR	Makanchi Array	44.03	302	P	P	06 11 27.0	-0.8
	0.6nm,0.6s,baz=86,slow=9.4,SNR=5.9						
KURBB	Kurchatov Arra	45.96	308	P	P	06 11 41.4	-1.8
	0.8nm,0.4s,baz=86,slow=8.3,SNR=8.3						
KDAK	Kodiak Island	47.62	42	P	P	06 11 56.4	+0.5
	1.5nm,0.3s,baz=283,slow=2.2,SNR=12						
KDAK				LR	LR	06 33 17.0	
	comp=Z,14nm,19.8s,baz=276,slow=37						
ILAR	Eielson Array	50.00	32	P	P	06 12 15.3	+1.1
	1.5nm,0.7s,baz=270,slow=6.5,SNR=15						
BVAR	Borovoye Array	50.57	312	P	P	06 12 17.7	-0.9
	0.5nm,0.5s,baz=81,slow=13,SNR=3.3						
INK	Inuvik	54.88	27	P	P	06 12 51.6	+1.4
	2.5nm,0.7s,baz=277,slow=7.5,SNR=9.7						
WRA	Warramunga Arr	56.64	187	P	P	06 13 02.5	-0.8
	2.1nm,0.6s,baz=4.3,slow=7.4,SNR=25						
ASAR	Alice Springs	60.36	187	P	P	06 13 28.9	-0.3
	0.7nm,0.7s,baz=18,slow=6.4,SNR=9.2						
ARCES	ARCESS Array B	64.23	339	P	P	06 13 53.8	-0.8
	4.9nm,1.1s,baz=56,slow=8.9,SNR=4.7						
FINES	FINESS Array B	68.99	332	P	P	06 14 23.4	-1.6
	2.0nm,0.7s,baz=38,slow=9.6,SNR=6.3						
HFS	Hagfors	74.29	336	P	P	06 14 56.6	-0.4
	2.5nm,0.9s,baz=71,slow=6.2,SNR=7.6						
AKASG	Malin Array Be	74.39	322	P	P	06 14 56.5	-1.2
	1.4nm,0.5s,baz=46,slow=6.2,SNR=8.2						
NB2	NORSAR Subarra	74.40	337	P	P	06 14 57.1	-0.6
	comp=Z,0.9nm,0.6s,baz=41,slow=6.2						
NVAR	Mina Array Bea	75.50	53	P	P	06 15 06.7	+2.1
	comp=Z,0.3nm,0.6s,baz=280,slow=8.4,SNR=3.9						
PDAR	Pinedale Array	78.18	45	P	P	06 15 20.5	+0.8
	comp=Z,0.2nm,0.6s,baz=307,slow=3.3,SNR=3.0						
GERES	GERESS Array B	82.85	328	P	P	06 15 43.7	-0.7
	comp=Z,0.4nm,0.5s,baz=44,slow=7.4,SNR=3.0						
TXAR	Lajitas Array	90.63	52	P	P	06 16 24.1	+1.3
	comp=Z,0.2nm,0.5s,baz=314,slow=3.7,SNR=4.8						

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*ISCJB **04** 06:19:58.4±0.5, 37°.15N±0°.04×142°.56E±0°.04, h9^{km}, mb3.9/14, MS2.9/1, Error ellipse: s-maj=5.6km s-min=4.7km az=137.4*
*IDC **04** 06:19:58.9±0.8, 37°.10N×142°.53E, h0^{km}, mb3.9/12, mb1 4.0/17, mb1mx3.8/68, mbtmp3.9/17, ML3.9/3, MS2.8/4, Ms1 2.8/4, ms1mx2.4/64, Error ellipse: s-maj=18.4km s-min=15.4km az=117.0*
*NIED **04** 06:20:00, 37°.10N×142°.40E, h20^{km}, Mw3.8 Best double couple: $M_0$4.98000×10^{14} NP1:ϕ_s210.00000°, δ23.00000°, λ95.00000°. NP2:ϕ_s24.00000°, δ67.00000°, λ88.00000°.*
*JMA **04** 06:20:00.2±0.3, 37°.14N×142°.43E, h20^{km}±4^{km}, M4.0*
*NEIC **04** 06:20:03.8±1.0, 37°.13N×142°.54E, h35^{km}±8^{km}, mb4.2/2, Error ellipse: s-maj=9.9km s-min=7.2km az=103.0*
ISC 04 06:20:00.5±0.7, **37°.14N**±0°.05×**142°.51E**±0°.06, **h9**^{km}, **n53**, σ**1^{s}.86**/54, **mb3.9**/14, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	1.36	269	P	Pn	06 20 23.2	-2.5
JMM	Marumori	1.54	298	P	Pn	06 20 26.1	-2.0
JMM				*e*S	Sn	06 20 45.3	-2.9
JFFD	Fukushimafurud	1.56	269	P	Pn	06 20 26.0	-2.3
JFFD				*e*S	Sn	06 20 45.0	-3.6
JIO	Ouri	1.60	325	P	Pn	06 20 27.4	-1.5
JIO				*e*S	Sn	06 20 46.8	-2.8
JFT	Otama	1.77	283	P	Pn	06 20 30.2	-1.1
JOU	Okura	1.90	310	P	Pn	06 20 32.3	-0.8
JMK	Ichinoseki	2.07	331	P	Pn	06 20 34.8	-0.6
JYS	Shirataka	2.21	300	P	Pn	06 20 37.3	-0.1
JFY	Yanaizu	2.25	278	P	Pn	06 20 37.5	-0.4
JYK	Kaneyama	2.45	317	P	Pn	06 20 40.0	-0.6
JOM	Ohasama	2.52	338	P	Pn	06 20 41.4	-0.1
JAG	Ashikaga	2.55	255	P	Pn	06 20 40.8	-1.2
JAG				*e*S	Sn	06 21 10.4	-2.8
MJAR	Matsushiro Arr	3.50	261	Pn	Pn	06 20 55.2	+0.1
	9.8nm,0.3s,baz=90,slow=15,SNR=29						
MJAR				Sn	Sn	06 21 38.6	+2.0
	6.9nm,0.3s,baz=117,slow=13,SNR=5.9						
MJAR				LR	LR	06 22 27.1	
	comp=Z,124nm,18.8s,baz=90,slow=43						
MAJO	Matsushiro	3.50	261	*e*Pn	Pn	06 20 56.3	+1.2
MAJO				*e*Sn	Sn	06 21 38.6	+2.0
MAT	Matsushiro	3.50	261	P	Pn	06 20 56.2	+1.1
MAT				S	Sn	06 21 38.6	+2.0
MJB9	Matsu-Tunnel	3.50	262	*e*Pn	Pn	06 20 56.4	+1.3
JHJ2	Mitsune	4.58	210	*e*Pn	Pn	06 21 10.7	+0.7
JHJ	Hachijo jima 2	4.59	210	Pn	Pn	06 21 09.1	-1.0
	15nm,0.3s,baz=95,slow=21,SNR=9.3						
JHJ				Sn	Sn	06 22 00.5	-3.1
	23nm,0.3s,baz=274,slow=23,SNR=6.6						
INU	Inuyama	4.78	250	*e*Pn	Pn	06 21 14.3	+1.6
ASAJ	Asahikawa	6.97	1	Pn	Pn	06 21 42.6	-0.1
	2.0nm,0.3s,baz=201,slow=13,SNR=5.0						
ASAJ				Sn	Sn	06 23 02.9	+0.8
	0.7nm,0.3s,baz=90,slow=20,SNR=2.6						
JNU	Nakatsue	10.33	251	LR	LR	06 26 57.4	
	comp=Z,24nm,19.7s,baz=122,slow=40						
USRK	Ussuriysk Ar.	10.65	315	Pn	Pn	06 22 34.5	+1.4
	baz=123,slow=14						
KSRS	Korea Array	11.62	276	Pn	Pn	06 22 48.6	+2.2
	0.0nm,0.3s,baz=90,slow=14,SNR=4.6						
KSRS				LR	LR	06 26 40.8	
	comp=Z,66nm,19.3s,baz=98,slow=34						
KSAR	Wonju Array Be	11.65	276	Pn	Pn	06 22 48.6	+1.7
SEY	Seymchan	26.52	10	P	P	06 25 39.2	+1.2
	1.7nm,0.7s,baz=151,slow=9.2,SNR=3.9						
H11N2	WAKE ISLAND Hy	27.46	122	T	T	06 54 41.6	
	baz=315,slow=75,SNR=30						
H11N1	WAKE ISLAND Hy	27.47	123	T	T	06 54 46.7	
	baz=315,slow=75,SNR=27						
H11N3	WAKE ISLAND Hy	27.48	122	T	T	06 54 43.0	
	baz=315,slow=75,SNR=29						
H11S1	WAKE ISLAND Hy	28.19	125	T	T	06 55 40.1	
	baz=317,slow=76,SNR=22						
H11S3	WAKE ISLAND Hy	28.19	125	T	T	06 55 40.2	
	baz=317,slow=76,SNR=18						
H11S2	WAKE ISLAND Hy	28.21	125	T	T	06 55 40.1	
	baz=317,slow=76,SNR=19						
SONA0	Songino Array	28.45	304	*e*P	P	06 25 55.4	-0.3
SONM	Songino Array	28.45	304	P	P	06 25 55.4	-0.3
	1.2nm,0.6s,baz=100,slow=8.5,SNR=7.3						
TLY	Talaya	30.92	311	LR	LR	06 39 04.6	
	comp=Z,26nm,19.5s,baz=88,slow=37						
CMAR	Chiang Mai Arr	42.37	256	P	P	06 27 55.5	+0.3
	1.4nm,0.3s,baz=48,slow=8.5,SNR=5.0						
ZAA1	Zalesovo Array	42.49	312	*e*P	P	06 27 55.5	-0.2
ZALV	Zalesovo Beam	42.49	312	P	P	06 27 55.5	-0.2
	0.8nm,0.3s,baz=117,slow=5.6,SNR=3.5						
MK32	Makanchi Array	44.80	302	*e*P	P	06 28 14.2	-0.4
MKAR	Makanchi Array	44.80	302	P	P	06 28 14.2	-0.4
	0.9nm,0.6s,baz=90,slow=9.5,SNR=9.6						
KURK	Kurchatov	46.55	308	*e*P	P	06 28 28.0	-0.3
	6.3nm,0.8s						
KURBB	Kurchatov Arra	46.62	308	P	P	06 28 28.1	-0.7
	1.6nm,0.6s,baz=83,slow=8.2,SNR=12						
ILAR	Eielson Array	48.94	32	P	P	06 28 47.0	+0.5
	0.5nm,0.7s,baz=267,slow=6.8,SNR=7.1						
WR1	Warramunga Arr	57.30	189	*e*P	P	06 29 47.6	-0.9
WRA	Warramunga Arr	57.30	189	P	P	06 29 47.6	-1.0
	0.7nm,0.4s,baz=6.1,slow=7.1,SNR=13						
ABKAR	Akbulak array	58.54	310	*e*P	P	06 29 56.2	-0.9
AS31	Alice Springs	61.02	189	*e*P	P	06 30 14.0	-0.4
	0.9nm,1.0s						
ASAR	Alice Springs	61.02	189	P	P	06 30 14.0	-0.4
	0.4nm,0.5s,baz=1.3,slow=6.2,SNR=5.0						
FIA0	FINESS Array S	69.12	333	*e*P	P	06 31 06.2	-0.4
FINES	FINESS Array B	69.12	333	P	P	06 31 06.2	-0.4
	1.5nm,0.7s,baz=62,slow=8.9,SNR=4.5						
SBI	Santa Barbara	76.60	58	*e*P	P	06 31 48.2	-3.3
PDAR	Pinedale Array	76.97	46	P	P	06 31 54.0	+0.3
	0.3nm,0.7s,baz=303,slow=6.2,SNR=3.1						
CLL	Collm	81.43	331	*i* pP	pP	06 32 28.3	+7.7
CLL				L	L	09 42 00.0	
	comp=Z,100nm,19.6s						
TXAR	Lajitas Array	89.36	53	P	P	06 32 58.0	+0.2
	comp=Z,0.2nm,0.5s,baz=300,slow=2.6,SNR=3.9						

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*IDC **04** 06:51:12.3±1.3, 56°.32S×146°.74E, h0^{km}, mb3.8/5, mb1 4.0/5, mb1mx3.8/38, mbtmp3.8/5, MS3.5/16, Ms1 3.5/16, ms1mx3.3/35, Error ellipse: s-maj=106.6km s-min=19.3km az=82.0*
ISC 04 06:51:13.7±1.2, **56°.3S**±0°.2×**146°.8E**±0°.7, **h10**^{km}, **n30**, σ**0^{s}.66**/11, **mb3.8**/5, **MS3.5**/15, **West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPZ	Rata Peaks	19.93	61	LR	LR	07 01 41.0	
	comp=Z,262nm,18.9s,baz=209,slow=32						
VNDA	Vanda	21.94	171	P	P	06 56 07.3	+0.4
	2.5nm,0.8s,baz=335,slow=11,SNR=10.0						
VNDA				LR	LR	07 03 16.9	
	comp=Z,85nm,19.6s,baz=348,slow=33						
STKA	Stephens Creek	24.70	349	P	P	06 56 35.9	+1.0
	2.6nm,0.7s,baz=148,slow=18,SNR=3.3						
URZ	Urewera	27.05	61	LR	LR	07 06 05.5	
	comp=Z,174nm,19.7s,baz=215,slow=33						
H01W1	Cape Leeuwin H	30.83	300	T	T	07 30 17.5	
	baz=142,slow=75,SNR=246						
H01W2	Cape Leeuwin H	30.84	300	T	T	07 30 17.9	
	baz=142,slow=75,SNR=210						
H01W3	Cape Leeuwin H	30.85	300	T	T	07 30 18.7	
	baz=142,slow=75,SNR=282						
NWAO	Narrogin (SRO)	31.02	306	LR	LR	07 07 01.0	
	comp=Z,75nm,21.2s,baz=15,slow=31						
QSPA	South Pole Qui	33.78	180	LR	LR	07 11 43.8	
	comp=Z,113nm,20.1s,baz=44,slow=36						
ASAR	Alice Springs	33.95	339	P	P	06 57 57.2	+0.1
	0.8nm,0.7s,baz=163,slow=9.1,SNR=10						
ASAR				PcP	PcP	07 00 34.6	-0.6
	0.4nm,0.6s,baz=165,slow=2.9,SNR=4.9						
DZM	Mont Dzumac	37.17	31	LR	LR	07 10 53.8	
	comp=Z,135nm,18.8s,baz=206,slow=32						
WRA	Warramunga Arr	37.49	341	P	P	06 58 27.7	+0.2
	1.6nm,0.6s,baz=166,slow=7.7,SNR=11						
WRA				PcP	PcP	07 00 45.1	-0.6
	0.8nm,0.9s,baz=170,slow=2.7,SNR=5.2						
MAW	Mawson	37.84	218	LR	LR	07 13 18.8	
	comp=Z,123nm,18.0s,baz=62,slow=35						
FITZ	Fitzroy Crossi	41.35	329	LR	LR	07 14 25.7	
	comp=Z,27nm,19.7s,baz=200,slow=34						
PMG	Port Moresby	46.80	1	LR	LR	07 17 53.6	
	comp=Z,90nm,18.5s,baz=137,slow=34						
HNR	Honiara	47.90	18	LR	LR	07 14 54.0	
	comp=Z,50nm,20.0s,baz=184,slow=30						
SNAA	Sanae	50.53	192	P	P	07 00 11.9	+0.4
	0.6nm,0.8s,baz=193,slow=11,SNR=7.4						
SNAA				LR	LR	07 21 36.9	
	comp=Z,120nm,18.9s,baz=181,slow=36						
RAR	Rarotonga	52.54	71	LR	LR	07 19 00.9	
	comp=Z,29nm,21.8s,baz=277,slow=32						
PPT	Papeete	60.99	78	LR	LR	07 23 14.5	
	comp=Z,20nm,18.5s,baz=226,slow=32						
GUMO	Guam	69.66	358	LR	LR	07 33 15.1	
	comp=Z,16nm,18.4s,baz=172,slow=36						
H08S2	Diego Garcia H	74.96	279	T	T	08 25 24.9	
	baz=147						
H08S1	Diego Carcia H	74.97	279	T	T	08 25 22.0	
	baz=147						
H08S3	Diego Garcia H	74.98	279	T	T	08 25 24.3	
	baz=147						
BOSA	Boshof	81.97	229	LR	LR	07 37 40.9	
	comp=Z,22nm,18.8s,baz=206,slow=34						
CMAR	Chiang Mai Arr	84.62	315	LR	LR	07 41 45.0	
	comp=Z,18nm,18.1s,baz=198,slow=36						
ILAR	Eielson Array	130.88	31	PKP	PKPdf	07 10 23.2	-0.5
	0.3nm,0.8s,baz=270,slow=2.7,SNR=3.1						
AKASG	Malin Array Be	143.58	288	PKhKP	PKPpre	07 10 43.9	
	1.0nm,0.5s,baz=95,slow=2.8,SNR=5.1						
KEST	Kesra	144.74	253	PKP	PKPdf	07 10 50.1	-0.1
	3.9nm,0.9s,baz=242,slow=9.2,SNR=3.7						
FINES	FINESS Array B	149.87	305	PKPbc	PKPbc	07 11 02.6	+0.1
	1.1nm,0.5s,baz=101,slow=6.0,SNR=7.6						
GERES	GERESS Array B	151.01	275	PKPbc	PKPbc	07 11 04.8	-1.0
	0.9nm,0.6s,baz=134,slow=4.2,SNR=5.8						

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*IDC **04** 07:03:16.9±1.9, 38°.06S×73°.51W, h0^{km}, mb3.4/4, mb1 3.6/5, mb1mx3.4/34, mbtmp3.3/5, ML3.1/1, Error ellipse: s-maj=57.0km s-min=19.4km az=61.0*
*ISCJB **04** 07:03:18.1±1.1, 38°.06S±0°.06×73°.7W±0°.1, h22^{km}, mb3.3/4, Error ellipse: s-maj=14.6km s-min=7.4km az=159.6*
*GUC **04** 07:03:18.9±0.4, 38°.03S×73°.69W, h34^{km}±3^{km}, ML3.9*
ISC 04 07:03:20.3±1.2, **38°.00S**±0°.05×**73°.5W**±0°.1, **h22**^{km}, **n10**, σ**0^{s}.78**/12, **mb3.3**/4, **1C**, **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TMU	Temuco	1.02	137⇑	*i*P	Pb	07 03 38.5	-0.7
TMU				*i* S	Sn	07 03 52.9	+0.1
TMU				IAML		07 03 58.1	
	comp=N,2µm,0.9s						
CCSP	San Pedro de C	1.19	15	*e*P	Pn	07 03 40.1	-1.4
CCSP				IAML		07 04 04.6	
	comp=N,3µm,0.4s						
CCHI	Chillan	1.79	40	*e*P	Pb	07 03 51.7	-0.7
CCHI				*i* S	Sb	07 04 15.3	+0.8
GO05	HualaæØ	3.24	23	*e*P	Pn	07 04 09.8	0.0
PLCA	Paso Flores	3.56	141	Pn	Pn	07 04 13.9	-0.3
	comp=N,0.4nm,0.3s,baz=339,slow=14,SNR=5.0						
PLCA				Lg	Lg	07 05 07.8	
	comp=N,7.3nm,0.3s,baz=265,slow=18,SNR=4.4						
LPAZ	La Paz	22.14	14	P	P	07 08 16.1	+1.0
	comp=N,1.0nm,0.9s,baz=190,slow=6.1,SNR=3.4						
SIV	San Ignacio	24.51	30	P	P	07 08 38.0	-0.2
	comp=N,0.7nm,0.6s,baz=201,slow=17,SNR=4.3						
TXAR	Lajitas Array	72.69	333	P	P	07 14 46.7	+0.3
	comp=N,0.2nm,0.7s,baz=153,slow=8.4,SNR=3.7						
TORD	Torodi Ar. Bea	86.67	71	P	P	07 16 03.1	+0.6
	comp=N,0.4nm,0.9s,baz=216,slow=7.4						
BVAR	Borovoye Array	150.94	47	PKPbc	PKPbc	07 23 10.6	0.0
	comp=N,0.5nm,0.5s,baz=282,slow=1.3,SNR=2.9						

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*ISCJB **04** 07:04:57.1±0.8, 31°.58N±0°.07×141°.2E±0°.1, h57^{km}, mb3.7/6, Error ellipse: s-maj=19.1km s-min=7.4km az=158.4*
*IDC **04** 07:04:58.5±2.6, 31°.34N×140°.84E, h39^{km}±25^{km}, mb3.4/6, mb1 3.6/8, mb1mx3.3/61, mbtmp3.6/8, ML3.0/1, MS2.3/1, Ms1 2.3/1, ms1mx1.9/37, Error ellipse: s-maj=48.4km s-min=17.0km az=67.0*
*JMA **04** 07:04:59.3±0.2, 31°.91N×141°.10E, h4^{km}, M3.6*
ISC 04 07:04:58.9±0.9, **31°.51N**±0°.06×**141°.1E**±0°.1, **h57**^{km}, **n18**, σ**2^{s}.11**/18, **mb3.7**/6, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	1.47	311	P	Pn	07 05 23.1	-0.1
JAOM				*e*S	Sn	07 05 39.6	-1.8
JHJ2	Mitsune	1.93	326	P	Pn	07 05 28.8	-0.5
JHJ	Hachijo jima 2	1.95	326	Pn	Pn	07 05 29.1	-0.6
	13nm,0.3s,baz=241,slow=24,SNR=11						
JHJ				Sn	Sn	07 05 50.2	-2.7
	38nm,0.3s,baz=72,slow=20,SNR=8.3						
BSO3	Boso 3	3.32	352	P	Pn	07 05 47.8	-0.3
BSO3				*e*S	Sn	07 06 22.2	-4.0
BSO4	Boso 4	3.53	350	*e*S	Sn	07 06 28.2	-3.3
JCJ	Chichijima	4.50	167	Pn	Pn	07 06 03.8	-0.8
	baz=299,slow=19,SNR=2.5						
JCJ				Sn	Sn	07 06 51.6	-4.0
	3.3nm,0.3s,baz=299,slow=19,SNR=2.3						
JRY	Ryogami san	4.85	339	P	Pn	07 06 09.5	+0.1
MJAR	Matsushiro Arr	5.56	335	Pn	Pn	07 06 18.6	-0.4
	0.5nm,0.3s,baz=162,slow=14,SNR=2.2						
KSRS	Korea Array	12.37	302	LR	LR	07 13 00.2	
	comp=Z,14nm,18.8s,baz=5.0,slow=39						
H11S3	WAKE ISLAND Hy	26.50	113	T	T	07 39 12.5	
	baz=302,slow=74,SNR=4.1						
H11S1	WAKE ISLAND Hy	26.50	113	T	T	07 39 26.1	
	baz=302						
H11S2	WAKE ISLAND Hy	26.52	113	T	T	07 39 31.7	
	baz=302,slow=74,SNR=3.9						
SONM	Songino Array	30.96	312	P	P	07 11 11.7	+1.0
	0.5nm,0.6s,baz=111,slow=6.3,SNR=3.1						
ZALV	Zalesovo Beam	45.58	317	P	P	07 13 14.0	+0.9
	0.5nm,0.4s,baz=93,slow=7.9,SNR=2.4						
MKAR	Makanchi Array	47.01	307	P	P	07 13 24.9	+0.5
	0.5nm,0.5s,baz=86,slow=8.3,SNR=4.3						
KURBB	Kurchatov Arra	49.33	312	P	P	07 13 43.5	+1.3
	0.2nm,0.3s,baz=87,slow=6.6,SNR=2.9						
WRA	Warramunga Arr	51.56	188	P	P	07 13 58.9	-0.4
	0.4nm,0.4s,baz=5.2,slow=7.7,SNR=7.4						
TXAR	Lajitas Array	93.71	52	P	P	07 18 12.6	+2.8
	0.3nm,0.6s,baz=301,slow=2.3,SNR=5.3						

IDC 04 07:06:14.1±1.5, **15°.57N**×**122°.47E**, **h0**^{km}, **mb3.6**/3, **mb1 3.8**/4, **mb1mx3.3**/62, **mbtmp3.7**/4, **ML4.3**/1, **Error ellipse: s-maj=36.3km s-min=24.8km az=89.0, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGY	Tagaytay City	2.08	226	Pn	Pn	07 06 50.5	+0.2
	91nm,0.3s,baz=121,slow=6.0,SNR=4.5						
TGY				Sn	Sb	07 07 18.4	-0.9
	77nm,0.3s,baz=145,slow=24,SNR=6.6						
SONM	Songino Array	34.80	341	P	P	07 13 06.6	-0.1
	1.0nm,0.6s,baz=169,slow=10,SNR=5.6						
WRA	Warramunga Arr	37.17	161	P	P	07 13 28.5	+1.4
	0.7nm,1.0s,baz=341,slow=9.2,SNR=2.6						
ASAR	Alice Springs	40.57	164	P	P	07 13 53.4	-2.1
	0.4nm,0.8s,baz=333,slow=6.3,SNR=4.5						

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*CSEM **04** 07:16:24.3±0.1, 40°.43N×21°.86E, h2^{km}, ML1.5, Error ellipse: s-maj=3.1km s-min=2.1km az=28.0, Suspected Mining explosion.*
*THE **04** 07:16:24.5, 40°.43N×21°.88E, h2^{km}±23^{km}, ML1.5/4, Error ellipse: s-maj=23.0km s-min=0.5km az=0.0*
ATH 04 07:16:24.4, 40°.42N×21°.85E, h1^{km}±6^{km}, **ML0.0, Error ellipse: s-maj=6.7km s-min=1.4km az=191.0, Suspected Mining explosion., Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZN	Kozani	0.12	210	P	Pg	07 16 27.0	+0.2
KZN	Kozani	0.12	210	P	Pg	07 16 27.1	+0.3
KZN				S	Sg	07 16 29.5	+1.1
KZN	Kozani	0.12	210	P	Pg	07 16 27.1	+0.3
KZN				S	Sg	07 16 29.5	+1.1
KTI	Kastanea	0.20	96	P	Pg	07 16 28.4	+0.1
KTI	Kastanea	0.20	96	P	Pg	07 16 28.4	+0.1
FNA	Florina	0.52	316	P	Pg	07 16 33.8	-0.5
FNA				S	Sg	07 16 41.5	+0.5
FNA				AML	AML	07 16 49.7	
	comp=N,88µm,0.4s						
FNA				AML	AML	07 16 52.3	
	comp=E,90µm,0.6s						
FNA	Florina	0.52	316	P	Pg	07 16 33.9	-0.4
FNA	Florina	0.52	316	P	Pg	07 16 34.2	-0.1
FNA				S	Sg	07 16 42.0	+1.0
FNA	Florina	0.52	316	P	Pg	07 16 34.2	-0.1
FNA				S	Sg	07 16 42.0	+1.0
LIT	Litokhoron	0.58	123	P	Pg	07 16 34.9	-0.6
LIT				S	Sg	07 16 43.5	+0.5
LIT				AML	AML	07 16 45.1	
	comp=E,169µm,0.3s						
LIT				AML	AML	07 16 47.3	
	comp=N,93µm,0.3s						
LIT	Litokhoron	0.58	123	P	Pg	07 16 35.3	-0.2
LIT	Litokhoron	0.58	123	P	Pg	07 16 35.2	-0.3
LIT				S	Sg	07 16 42.9	-0.1
LIT	Litokhoron	0.58	123	P	Pg	07 16 35.5	0.0
LIT				S	Sg	07 16 42.9	-0.1
PENT	Pentalofos	0.59	248	P	Pb	07 16 36.8	-0.8
PENT				S	Sb	07 16 45.1	-1.3
KPRO	Kipourio	0.59	219	P	Pg	07 16 36.0	+0.3
KPRO				S	Sb	07 16 45.9	-0.7
KPRO				AML	AML	07 16 54.3	
	comp=E,156µm,0.6s						
KPRO				AML	AML	07 16 56.5	
	comp=N,142µm,0.6s						
KPRO	Kipourio	0.59	219	P	Pg	07 16 36.4	+0.6
KPRO	Kipourio	0.59	219	P	Pg	07 16 36.1	+0.4
KPRO	Kipourio	0.59	219	P	Pg	07 16 36.1	+0.4
NEST	Nestorio	0.61	270	P	Pg	07 16 36.2	+0.1
NEST				S	Sb	07 16 46.0	-1.2
NEST				AML	AML	07 16 55.6	
	comp=N,69µm,0.5s						
NEST				AML	AML	07 16 55.7	

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      comp=E,75µm,0.4s
NEST  Nestorio           0.61 270  P      Pg    07 16 36.4 +0.3
NEST  Nestorio           0.61 270  P      Pg    07 16 36.4 +0.2
GRG   Griva              0.68  37  P      Pg    07 16 36.8 -0.7
THL   Klokotos Trika     0.86 172  P      Pg    07 16 41.1 +0.3
THL   Klokotos Trika     0.86 172  P      Pg    07 16 40.7 -0.1
THL   Klokotos Trika     0.86 172  P      Pg    07 16 41.0 +0.2
THL                                S      Sb    07 16 53.5 -0.6
THL   Klokotos Trika     0.86 172  P      Pg    07 16 40.8  0.0
THL                                S      Sb    07 16 53.5 -0.6
HORT  Hortiatis          0.97  79  P      Pb    07 16 43.5 -0.5
HORT  Hortiatis          0.97  79  P      Pg    07 16 43.2 +0.3
HORT  Hortiatis          0.97  79  P      Pg    07 16 43.1 +0.1
STIP  Stip               1.30  11 i Pn    Pn    07 16 50.9 +1.2
AGG   Agios Georgios     1.44 165  P      Pn    07 16 50.0 -1.6
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CRAAG ***04*** *07:44:16.0, 34°.96N×2°.98W, Ml4.0*
SFS ***04*** *07:44:16.0, 34°.90N×3°.03W, h0^{km}, ML4.4*
CNRM ***04*** *07:44:16.2, 34°.92N×2°.95W, h2^{km}, ML4.4*
MDD ***04*** *07:44:16.9±0.4, 34°.93N×2°.98W, h5^{km}±3^{km}, mbLg3.4/41, Error ellipse: s-maj=3.6km s-min=2.7km az=80.0, PRXIMO*
MDD EMS: II INTENSIDAD MAXIMA-ESPAA.
CSEM ***04*** *07:44:17.4±0.3, 34°.95N×3°.06W, h15^{km}, ML3.4, Error ellipse: s-maj=6.3km s-min=3.9km az=164.0*
LDG ***04*** *07:44:17.6±0.5, 35°.17N×3°.07W, h10^{km}, Ml3.3/3, Error ellipse: s-maj=10.9km s-min=5.5km az=166.0*
INMG ***04*** *07:44:18.0±1.5, 34°.99N×2°.93W, h20^{km}±3^{km}, ML3.2, Error ellipse: s-maj=5.8km s-min=3.2km az=107.0*
IGIL ***04*** *07:44:22.5, 35°.25N×3°.33W, h1^{km}*
ISC 04 07:44:15.2±1.4**, 34°.89N**±0°.05×**2°.96W**±0°.03**, h20**^{km}±6^{km}**,**
n180, σ2^{s}.13/282**, 1C-7D, Morocco**

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Code  Station Name        Δ°   AZ°    Phase ID         Time      Res
                                   Op     ISC     h  m  s      ISC
MELI  Melilla            0.40   3  P      Pb    07 44 23.8 +0.2
      588nm,0.2s,SNR=7.9
MELI                               S      Sg    07 44 29.0 -0.4
      7µm,0.3s,SNR=7.9
MELI  Melilla            0.40   3 eP      Pb    07 44 24.5 +0.8
MELI                               S      Sg    07 44 29.0 -0.4
      7µm,0.3s,SNR=7.9
EMEL  Melilla            0.41   1  P      Pg    07 44 23.6 -0.1
      549nm,0.2s,SNR=7.9
EMEL                               S      Sg    07 44 29.0 -0.5
      9µm,0.2s,SNR=7.9
EMLI  Melilla            0.41   1  S      Sg    07 44 29.0 -0.5
      9µm,0.2s,SNR=7.9
MPAL  Palemas            0.87 293  P      Pn    07 44 33.4 +1.1
MPAL  Palemas            0.87 293  P      Pn    07 44 33.4 +1.1
ELGU  Los Guajares,      2.05 345 ⇓P      Pn    07 44 48.5 -0.1
      75nm,0.3s,SNR=18
ELGU                               S      Sn    07 45 12.2 -1.4
      250nm,0.2s,SNR=7.9
ELGU  Los Guajares,      2.05 345  P      Pn    07 44 48.5 -0.1
      75nm,0.3s,SNR=18
ENIJ  Nijar              2.17  16  P      Pn    07 44 50.3 +0.2
      49nm,0.2s,SNR=7.9
ENIJ                               S      Sn    07 45 14.1 -2.3
      329nm,0.4s,SNR=7.9
CEUT  Ceuta              2.17 298  P      Pn    07 44 50.1 -0.1
CEUT  Ceuta              2.17 298  P      Pn    07 44 50.1 -0.1
CEU   Ceuta              2.21 298  P      Pn    07 44 49.8 -0.9
CEU                                S      Sn    07 45 07.7  -10
CEU   Ceuta              2.21 298  P      Pn    07 44 49.8 -0.9
ECEU  Ceuta              2.21 298 ⇑P      Pn    07 44 51.0 +0.2
      44nm,0.3s,SNR=18
ECEU  Ceuta              2.21 298  P      Pn    07 44 51.0 +0.2
      44nm,0.3s,SNR=18
EMAL  Malaga-Limoner     2.22 328 i P     Pn    07 44 51.6 +0.8
EMAL                              eS      Sn    07 45 18.4 +0.8
EMIJ  Mijas              2.23 319 ⇓P      Pn    07 44 49.1 -1.9
      2.6nm,0.4s,SNR=18
EMIJ                               S      Sn    07 45 15.3 -2.7
      93nm,0.3s,SNR=6.1
EQUE  Quentar            2.34 351 ⇓P      Pn    07 44 54.1 +1.4
      83nm,0.5s,SNR=18
EQUE                               S      Sn    07 45 20.4 -0.5
      181nm,0.5s,SNR=13
EQUE  Quentar            2.34 351  P      Pn    07 44 54.1 +1.4
      83nm,0.5s,SNR=18
EQUE                               S      Sn    07 45 20.4 -0.5
      181nm,0.5s,SNR=13
RSA   Sarsar             2.36 271  P      Pb    07 44 57.2 +0.3
RSA   Sarsar             2.36 271  P      Pb    07 44 57.2 +0.3
EGOR  Sierra Gorda,      2.40 338  P      Pn    07 44 54.2 +0.7
      20nm,0.4s,SNR=7.9
EGOR                               S      Sn    07 45 24.8 +2.3
      221nm,0.6s,SNR=7.9
EGOR  Sierra Gorda,      2.40 338  P      Pn    07 44 54.2 +0.7
      20nm,0.4s,SNR=7.9
EGOR                               S      Sn    07 45 24.8 +2.3
      221nm,0.6s,SNR=7.9
CZD   Col de Zad         2.53 224  P      Pb    07 44 59.2 -0.9
CZD   Col de Zad         2.53 224  P      Pb    07 44 59.2 -0.9
EJIF  Jimena Fronter     2.57 308  P      Pn    07 44 56.2 +0.6
      5.4nm,0.4s,SNR=7.9
EJIF  Jimena Fronter     2.57 308  P      Pn    07 44 56.2 +0.6
      5.4nm,0.4s,SNR=7.9
GORA  Gorafe             2.58 359  P      Pb    07 44 58.8 -2.1
      12nm,0.4s,SNR=7.9
GORA                               S      Sn    07 45 27.9 +1.0
      218nm,0.6s,SNR=7.9
GORA  Gorafe             2.58 359  P      Pb    07 44 58.8 -2.1
      12nm,0.4s,SNR=7.9
GORA                               S      Sn    07 45 27.9 +1.0
      218nm,0.6s,SNR=7.9
EQES  Quesada            2.91 358 ⇓P      Pn    07 45 03.4 +2.9
      47nm,0.5s,SNR=18
EQES                               S      Sn    07 45 38.2 +3.3
      367nm,0.5s,SNR=8.3
EQES  Quesada            2.91 358  P      Pn    07 45 03.4 +2.9
      47nm,0.5s,SNR=18
EQES                               S      Sn    07 45 38.2 +3.3
      367nm,0.5s,SNR=8.3
CART  Cartagena          3.12  30  P      Pn    07 45 03.5 +0.2
CART                               S      Sn    07 45 38.0 -2.0
CART  Cartagena          3.12  30 eP      Pn    07 45 03.5 +0.2
SESP  Santiago Espad     3.24   6 ⇓P      Pn    07 45 07.9 +2.8
      37nm,0.2s,SNR=18
SESP                               S      Sn    07 45 44.6 +1.4
      548nm,0.6s,SNR=7.9
SESP  Santiago Espad     3.24   6  P      Pn    07 45 07.9 +2.8
      37nm,0.2s,SNR=18
SESP                               S      Sn    07 45 44.6 +1.4
      548nm,0.6s,SNR=7.9
EMUR  La Murta           3.26  25 ⇓P      Pn    07 45 06.1 +0.9
      44nm,0.3s,SNR=18
EMUR                               S      Sn    07 45 41.2 -2.2
      62nm,0.4s,SNR=5.6
EANR  'Ain N'Sour        3.48  71  P      Pn    07 45 09.4 +1.1
EANR  'Ain N'Sour        3.48  71  P      Pn    07 45 09.4 +1.1
EANR  'Ain N'Sour        3.48  71  P      Pn    07 45 09.4 +1.1
HORN  Hornachuelos       3.48 329  P      Pn    07 45 10.0 +1.7
HORN                               S      Sn    07 45 52.1 +3.2
EADA  Adamuz             3.52 339  P      Pn    07 45 09.6 +0.8
      9.0nm,0.3s,SNR=4.0
EADA                               S      Sn    07 45 49.5 -0.4
      108nm,0.3s,SNR=7.9
EADA  Adamuz             3.52 339  P      Pn    07 45 09.6 +0.8
      9.0nm,0.3s,SNR=4.0
EADA                               S      Sn    07 45 49.5 -0.4
      108nm,0.3s,SNR=7.9
ECAB  El Cabril          3.75 329  P      Pn    07 45 13.7 +1.8
      5.0nm,0.3s,SNR=16
ECAB                               S      Sn    07 45 56.6 +1.2
      76nm,0.5s
ECAB  El Cabril          3.75 329  P      Pn    07 45 13.7 +1.8
      5.0nm,0.3s,SNR=16
ECAB                               S      Sn    07 45 56.6 +1.2
      76nm,0.5s
ETOB  Tobarra            3.92  16  P      Pn    07 45 16.9 +2.6
      10nm,0.5s,SNR=31
ETOB                               S      Sn    07 45 59.9 +0.2
      138nm,0.6s,SNR=5.1
ETOB  Tobarra            3.92  16  P      Pn    07 45 16.9 +2.6
      10nm,0.5s,SNR=31
EBNR  Beni Rached        3.92  68  P      Pn    07 45 16.2 +1.9
EBNR  Beni Rached        3.92  68  P      Pn    07 45 16.2 +1.9
EMIN  Mina Concepcio     4.15 315  P      Pn    07 45 18.5 +1.1
      24nm,0.5s,SNR=51
EMIN                               S      Sn    07 46 04.6 -0.7
      8.7nm,0.2s
EMIN  Mina Concepcio     4.15 315  P      Pn    07 45 18.5 +1.1
      24nm,0.5s,SNR=51
EMIN                               S      Sn    07 46 04.6 -0.7
      8.7nm,0.2s
AFON  Font Roja          4.24  27  P      Pn    07 45 20.3 +1.6
      1.4nm,0.0s,SNR=4.0
AFON                               S      Sn    07 46 08.5 +0.8
      21nm,0.3s,SNR=7.9
AFON  Font Roja          4.24  27  P      Pn    07 45 20.3 +1.6
      1.4nm,0.0s,SNR=4.0
EBEN2 Beniarda presa     4.38  30  P      Pn    07 45 22.8 +2.1
      1.3nm,0.0s,SNR=7.9
EBEN2                              S      Sn    07 46 08.2 -3.0
      65nm,0.5s,SNR=7.9
EBEN2 Beniarda presa     4.38  30  P      Pn    07 45 22.8 +2.1
      1.3nm,0.0s,SNR=7.9
EGRO  El Granado         4.51 307 ⇓P      Pn    07 45 23.6 +1.2
      10nm,0.1s,SNR=18
EGRO                               S      Sn    07 46 12.7 -1.5
      27nm,0.3s,SNR=5.1
EGRO  El Granado         4.51 307  P      Pn    07 45 23.5 +1.2
      10nm,0.1s,SNR=18
EGRO                               S      Sn    07 46 12.7 -1.5
      27nm,0.3s,SNR=5.1
PBDV  Barranco-do-Ve     4.66 302 ePn     Pn    07 45 25.6 +1.2
PBDV                              eSn     Sn    07 46 17.4 -0.6
PBDV                               A      A     07 46 21.4
      19nm,0.6s
PBDV  Barranco-do-Ve     4.66 302  P      Pn    07 45 25.6 +1.2
PBDV                               S      Sn    07 46 17.4 -0.6
      19nm,0.6s
PBDV  Barranco-do-Ve     4.66 302  P      Pn    07 45 25.6 +1.2
PBDV                               S      Sn    07 46 17.4 -0.6
      19nm,0.6s
PAB   San Pablo          4.78 347  P      Pn    07 45 28.2 +2.1
      20nm,0.5s,SNR=7.9
PAB                                S      Sn    07 46 17.2 -3.7
      27nm,0.4s,SNR=7.9
PAB   San Pablo          4.78 347  P      Pn    07 45 28.2 +2.1
      20nm,0.5s,SNR=7.9
ESDC  Sonseca Array      4.84 351  P      Pn    07 45 29.5 +2.5
      2.5nm,0.2s,baz=173,slow=12,SNR=72
ESDC                               S      Sn    07 46 21.0 -1.5
      4.1nm,0.8s,baz=160,slow=16,SNR=4.8
ESDC  Sonseca Array      4.84 351  P      Pn    07 45 29.5 +2.5
      2.5nm,0.2s,SNR=72
PCVE  Castro Verde       4.93 305 ePn     Pn    07 45 29.5 +1.4
PCVE                              eSn     Sn    07 46 27.1 +2.5
PCVE                               A      A     07 46 31.5
      16nm,0.4s
PCVE  Castro Verde       4.93 305  P      Pn    07 45 29.5 +1.4
PCVE                               S      Sn    07 46 27.1 +2.5
      16nm,0.4s
PCVE  Castro Verde       4.93 305  P      Pn    07 45 29.5 +1.4
PCVE                               S      Sn    07 46 27.1 +2.5
      16nm,0.4s
ECHE  Chera              4.96  18  P      Pn    07 45 30.7 +2.2
      12nm,0.4s,SNR=7.9
ECHE                               S      Sn    07 46 24.9 -0.3
      SNR=7.9
ECHE  Chera              4.96  18  P      Pn    07 45 30.7 +2.2
      12nm,0.4s,SNR=7.9
EMHD  Djebel Mahouad     5.00  73  P      Pn    07 45 29.8 +0.6
EMHD  Djebel Mahouad     5.00  73  P      Pn    07 45 29.8 +0.6
EMHD  Djebel Mahouad     5.00  73  P      Pn    07 45 29.8 +0.6
PBEJ  Beja               5.04 310 ePn     Pn    07 45 32.8 +3.1
PBEJ                              eSn     Sn    07 46 28.5 +1.2
PBEJ                               A      A     07 46 39.5
      14nm,0.5s
PBEJ  Beja               5.04 310  P      Pn    07 45 32.8 +3.1
PBEJ                               S      Sn    07 46 28.5 +1.2
      7.2nm,0.5s
PBEJ  Beja               5.04 310  P      Pn    07 45 32.8 +3.1
PBEJ                               S      Sn    07 46 28.5 +1.2
      7.2nm,0.5s
EBAD  Badajoz            5.04 321  P      Pn    07 45 31.3 +1.6
      15nm,0.3s,SNR=62
EBAD                               S      Sn    07 46 27.3 -0.1
      33nm,0.2s,SNR=7.9
EBAD  Badajoz            5.04 321  P      Pn    07 45 31.3 +1.6
      15nm,0.3s,SNR=62
EBAD                               S      Sn    07 46 27.3 -0.1
      33nm,0.2s,SNR=7.9
MESJ  Messejana          5.16 306 eP      Pn    07 45 32.5 +1.3
MESJ  Messejana          5.16 306 ePn     Pn    07 45 32.6 +1.3
MESJ                              eSn     Sn    07 46 30.3  0.0
MESJ                               A      A     07 46 36.7
      20nm,0.6s
MESJ  Messejana          5.16 306  P      Pn    07 45 32.5 +1.3
MESJ                               S      Sn    07 46 30.3  0.0
      20nm,0.6s
MESJ  Messejana          5.16 306 ePn     Pn    07 45 32.6 +1.3
MESJ                               S      Sn    07 46 30.3  0.0
      20nm,0.6s
MORF  Marmelete          5.20 299 eP      Pn    07 45 33.2 +1.4
MORF  Marmelete          5.20 299 ePn     Pn    07 45 33.2 +1.4
MORF  Marmelete          5.20 299  P      Pn    07 45 33.2 +1.4
MORF  Marmelete          5.20 299  P      Pn    07 45 33.2 +1.4
PFVI  Vila Bisbo         5.25 297 ePn     Pn    07 45 34.8 +2.2
PFVI                              eSn     Sn    07 46 34.1 +1.5
PFVI                               A      A     07 46 46.8
      21nm,0.6s
PFVI  Vila Bisbo         5.25 297  P      Pn    07 45 34.8 +2.2
      8.3nm,0.2s,SNR=7.9
PFVI                               S      Sn    07 46 33.9 +1.4
      30nm,0.7s,SNR=7.9
PFVI  Vila Bisbo         5.25 297  P      Pn    07 45 34.8 +2.2
      8.3nm,0.2s,SNR=7.9
PFVI                               S      Sn    07 46 33.9 +1.4
      30nm,0.7s,SNR=7.9
PTEO  Sao Teotonio       5.36 301 ePn     Pn    07 45 35.5 +1.5
PTEO                              eSn     Sn    07 46 35.7 +0.6
PTEO  Sao Teotonio       5.36 301  P      Pn    07 45 35.5 +1.5
PTEO                               S      Sn    07 46 35.7 +0.6
PTEO  Sao Teotonio       5.36 301  P      Pn    07 45 35.5 +1.5
PTEO                               S      Sn    07 46 35.7 +0.6
EIBI  Ibiza              5.38  39  P      Pn    07 45 35.7 +1.4
      26nm,0.3s,SNR=36
EIBI                               S      Sn    07 46 33.5 -2.1
      16nm,0.3s,SNR=7.9
PESTR Estremoz           5.43 318 ePn     Pn    07 45 37.0 +2.0
PESTR                             eSn     Sn    07 46 35.5 -1.5
PESTR                              A      A     07 46 49.8
      21nm,0.7s
PESTR Estremoz           5.43 318 ePn     Pn    07 45 37.0 +2.0
PESTR                             eSn     Sn    07 46 35.5 -1.5
EVO   Evora              5.45 313 ePn     Pn    07 45 37.2 +2.0
EVO                               eSn     Sn    07 46 36.1 -1.2
EVO                                A      A     07 46 41.0
      19nm,0.3s
EVO   Evora              5.45 313  P      Pn    07 45 37.2 +2.0
EVO                                S      Sn    07 46 36.1 -1.2
      19nm,0.3s
EVO   Evora              5.45 313  P      Pn    07 45 37.2 +2.0
EVO                               eSn     Sn    07 46 36.1 -1.2
EVO                               eS      Sn    07 46 37.4 +0.1
EPLA  Plasencia          5.73 335  P      Pn    07 45 41.3 +2.2
      16nm,0.4s,SNR=28
EPLA                               S      Sn    07 46 41.1 -3.2
      9.9nm,0.3s,SNR=7.9
EPLA  Plasencia          5.73 335  P      Pn    07 45 41.3 +2.2
      16nm,0.4s,SNR=28
PMRV  Marv??o            5.75 323 ePn     Pn    07 45 41.3 +1.9
PMRV                              eSn     Sn    07 46 43.8 -0.9
PMRV                               A      A     07 47 08.5
      18nm,0.6s
PMRV  Marv??o            5.75 323  P      Pn    07 45 41.3 +1.9
PMRV                               S      Sn    07 46 43.8 -0.9
      18nm,0.6s
PMRV  Marv??o            5.75 323  P      Pn    07 45 41.3 +1.9
PMRV                               S      Sn    07 46 43.8 -0.9
      18nm,0.6s
EMOS  Mosqueruela        5.81  19  P      Pn    07 45 43.7 +3.3
      15nm,0.5s,SNR=14
EMOS                               S      Sn    07 46 44.5 -2.0
      19nm,0.8s,SNR=7.9
EMOS  Mosqueruela        5.81  19  P      Pn    07 45 43.7 +3.3
      15nm,0.5s,SNR=14
PMTG  Montargil          5.93 316 ePn     Pn    07 45 43.5 +1.7
PMTG                              eSn     Sn    07 46 48.7 -0.5
PMTG                               A      A     07 46 53.6
      12nm,0.5s
PMTG  Montargil          5.93 316 ePn     Pn    07 45 43.5 +1.7
PMTG                              eSn     Sn    07 46 48.7 -0.5
ETOR  Torete             5.96   7  P      Pn    07 45 45.0 +2.6
      8.3nm,0.2s,SNR=8.7
ETOR                               S      Sn    07 46 52.8 +2.6
      39nm,0.7s,SNR=4.0
ETOR  Torete             5.96   7  P      Pn    07 45 45.0 +2.6
      8.3nm,0.2s,SNR=8.7
ETOR                               S      Sn    07 46 52.8 +2.6
      39nm,0.7s,SNR=4.0
PCBR  Castelo Branco     6.11 325 ePn     Pn    07 45 46.4 +2.1
PCBR                              eSn     Sn    07 46 51.7 -1.9
PCBR                               A      A     07 46 54.1
      14nm,0.5s
PCBR  Castelo Branco     6.11 325  P      Pn    07 45 46.4 +2.1
PCBR                               S      Sn    07 46 51.7 -1.9
      6.9nm,0.5s
PCBR  Castelo Branco     6.11 325  P      Pn    07 45 46.4 +2.1
PCBR                               S      Sn    07 46 51.7 -1.9
      6.9nm,0.5s
ALMR  Almeirim           6.19 315 eP      Pn    07 45 46.3 +0.9
ALMR  Almeirim           6.19 315 ePn     Pn    07 45 47.2 +1.8
ALMR  Almeirim           6.19 315  P      Pn    07 45 46.3 +0.9
ALMR  Almeirim           6.19 315  P      Pn    07 45 46.3 +0.9
ALMR  Almeirim           6.19 315 ePn     Pn    07 45 47.2 +1.8
PMST  Lisbon--Monsan     6.30 309 ePn     Pn    07 45 48.5 +1.6
PTOM  Tomar              6.42 319 ePn     Pn    07 45 50.2 +1.7
PTOM  Tomar              6.42 319  P      Pn    07 45 50.2 +1.7
PTOM  Tomar              6.42 319  P      Pn    07 45 50.2 +1.7
PMAFR Mafra              6.49 311 ePn     Pn    07 45 51.1 +1.6
PMAFR Mafra              6.49 311  P      Pn    07 45 51.5 +1.9
      37nm,0.4s,SNR=5.7
PMAFR                              S      Sn    07 47 00.2 -2.8
      79nm,0.7s,SNR=7.9
MTE   Manteigas          6.59 328 ePn     Pn    07 45 52.6 +1.6
MTE                               eSn     Sn    07 47 06.3 +0.7
MTE                                A      A     07 47 38.5
      20nm,0.6s
MTE   Manteigas          6.59 328  P      Pn    07 45 52.6 +1.6
MTE                                S      Sn    07 47 06.3 +0.7
      9.9nm,0.6s
MTE   Manteigas          6.59 328  P      Pn    07 45 52.6 +1.6
MTE                               eSn     Sn    07 47 06.3 +0.7
ERTA  Horta de San J     6.59  22  P      Pn    07 45 53.8 +2.8
      25nm,0.6s,SNR=21
ERTA                               S      Sn    07 47 04.6 -1.0
      6.0nm,0.4s,SNR=7.2
ERTA  Horta de San J     6.59  22  P      Pn    07 45 53.8 +2.8
      25nm,0.6s,SNR=21
ETOS  Mallorca           6.70  42  P      Pn    07 45 54.1 +1.7
      8.6nm,0.3s,SNR=19
ETOS                               S      Sn    07 47 07.3 -0.9
      5.8nm,0.4s,SNR=9.5
PCAS  Casmilo, Conde     6.78 321 ePn     Pn    07 45 55.7 +2.2
PCAS                              eSn     Sn    07 47 08.6 -1.5
PCAS                               A      A     07 47 13.1
      15nm,0.5s
COI   Coimbra            6.85 322 ePn     Pn    07 45 56.7 +2.2
COI                               eSn     Sn    07 47 11.5 -0.3
COI   Coimbra            6.85 322  P      Pn    07 45 56.7 +2.2
COI                                S      Sn    07 47 11.5 -0.3
COI   Coimbra            6.85 322  P      Pn    07 45 56.7 +2.2
COI                               eSn     Sn    07 47 11.5 -0.3
PVIS  Viseu              7.00 328 ePn     Pn    07 45 58.3 +1.7
PVIS                              eSn     Sn    07 47 12.5 -3.2
PVIS                               A      A     07 47 17.4
      9.1nm,0.3s
PVIS  Viseu              7.00 328  P      Pn    07 45 58.3 +1.7
PVIS                               S      Sn    07 47 12.5 -3.2
      4.6nm,0.3s
PVIS  Viseu              7.00 328  P      Pn    07 45 58.3 +1.7
MVO   Moncorvo           7.04 334 ePn     Pn    07 45 59.1 +1.9
MVO                               eSn     Sn    07 47 13.7 -2.9
MVO                                A      A     07 47 17.1
      24nm,0.6s
MVO   Moncorvo           7.04 334  P      Pn    07 45 59.0 +1.9
      36nm,0.4s,SNR=23
MVO                                S      Sn    07 47 13.3 -3.3
      40nm,0.6s,SNR=7.9
MVO   Moncorvo           7.04 334  P      Pn    07 45 59.0 +1.9
      36nm,0.4s,SNR=23
EPOB  Poblet             7.20  25  P      Pn    07 46 01.2 +1.9
      4.0nm,0.4s,SNR=10.0
EPOB                               S      Sn    07 47 18.7 -1.8
      1.8nm,0.3s,SNR=7.9
EPOB  Poblet             7.20  25  P      Pn    07 46 01.2 +1.9
      4.0nm,0.4s,SNR=10.0
PVRL  Vila Real          7.39 331 ePn     Pn    07 46 04.2 +2.2
PVRL  Vila Real          7.39 331  P      Pn    07 46 04.2 +2.2
POLO  Lamas de Olo       7.51 331 ePn     Pn    07 46 05.3 +1.7
POLO                              eSn     Sn    07 47 24.6 -3.6
POLO                               A      A     07 47 29.0
      5.7nm,0.6s
PBRG  Braganca           7.51 338 ePn     Pn    07 46 05.7 +2.1
PBRG                              eSn     Sn    07 47 24.1 -4.2
PBRG                               A      A     07 47 26.8
      10nm,0.6s
PBRG  Braganca           7.51 338  P      Pn    07 46 05.7 +2.1
PBRG                               S      Sn    07 47 24.1 -4.2
      5.2nm,0.6s
PBRG  Braganca           7.51 338  P      Pn    07 46 05.7 +2.1
PTO   Porto              7.66 326 ePn     Pn    07 46 07.9 +2.3
PTO                               eSn     Sn    07 47 29.4 -2.4
PTO   Porto              7.66 326  P      Pn    07 46 07.9 +2.3
PTO                                S      Sn    07 47 29.4 -2.4
EMIR  Miracle            7.85  25  P      Pn    07 46 10.6 +2.4
      3.2nm,0.0s,SNR=7.9
EMIR  Miracle            7.85  25  P      Pn    07 46 10.6 +2.4
      3.2nm,0.0s,SNR=7.9
PCAB  Cabril             7.89 331 ePn     Pn    07 46 10.9 +2.2
PCAB                              eSn     Sn    07 47 34.3 -3.1
PCAB  Cabril             7.89 331  P      Pn    07 46 10.9 +2.2
PCAB                               S      Sn    07 47 34.3 -3.1
ELOB  Lobios             8.03 332  P      Pn    07 46 13.1 +2.3
      8.9nm,0.4s,SNR=7.9
ELOB                               S      Sn    07 47 37.2 -3.9
      12nm,0.6s,SNR=7.9
IELO  Elcoad             8.05   9  P      Pn    07 46 14.8 +3.8
      2.9nm,0.3s,SNR=7.9
IELO  Elcoad             8.05   9  P      Pn    07 46 14.8 +3.8
      2.9nm,0.3s,SNR=7.9
CFON  Fontmartina        8.06  30  P      Pn    07 46 13.2 +1.9
      4.5nm,0.3s,SNR=7.9
CFON  Fontmartina        8.06  30  P      Pn    07 46 13.1 +1.9
      4.5nm,0.3s,SNR=7.9
EORO  Oroz-Betelu        8.10   9  P      Pn    07 46 16.0 +4.4
      0.1nm,0.0s,SNR=7.9
EORO  Oroz-Betelu        8.10   9  P      Pn    07 46 16.0 +4.4
      0.1nm,0.0s,SNR=7.9
CSOR  Sort               8.13  22  P      Pn    07 46 16.0 +3.8
      4.4nm,0.3s,SNR=7.9
CSOR                               S      Sn    07 47 42.2 -1.3
      1.5nm,0.7s,SNR=7.9
CSOR  Sort               8.13  22  P      Pn    07 46 16.0 +3.8
      4.4nm,0.3s,SNR=7.9
ECHI  Chisagues Biel     8.14  17  P      Pn    07 46 15.4 +3.0
      1.5nm,0.4s,SNR=7.9
ECHI  Chisagues Biel     8.14  17  P      Pn    07 46 15.4 +3.0
      1.5nm,0.4s,SNR=7.9
PGAV  Gavieira, Arco     8.20 331 ePn     Pn    07 46 14.8 +1.7
PGAV                              eSn     Sn    07 47 40.9 -4.3
PGAV                               A      A     07 47 44.5
      14nm,0.6s
ETSF  Etsaut             8.21  12 eP      Pn    07 46 16.5 +3.2
ETSF                              eSn     Sn    07 47 35.0  -10
      3.7nm,0.7s
ETSF  Etsaut             8.21  12  P      Pn    07 46 16.5 +3.2
ETSF                               S      Sn    07 47 35.0  -10
      1.9nm,0.7s
ETSF  Etsaut             8.21  12  P      Pn    07 46 16.5 +3.2
SJPF  Ste Jean           8.32   9 eP      Pn    07 46 19.0 +4.3
SJPF                              eSn     Sn    07 47 37.6  -10
      3.9nm,0.5s
SJPF  Ste Jean           8.32   9  P      Pn    07 46 19.0 +4.3
SJPF                               S      Sn    07 47 37.6  -10
      1.9nm,0.5s
SJPF  Ste Jean           8.32   9  P      Pn    07 46 19.0 +4.3
ELAN  Lanestosa          8.34 358  P      Pn    07 46 18.3 +3.4
      1.3nm,0.2s,SNR=7.9
ELAN  Lanestosa          8.34 358  P      Pn    07 46 18.3 +3.4
      1.3nm,0.2s,SNR=7.9
EALK  Alkurruntz         8.39   7  P      Pn    07 46 19.3 +3.5
      7.5nm,0.5s,SNR=7.9
EALK                               S      Sn    07 47 45.8 -4.1
      19nm,0.8s,SNR=8.6
EALK  Alkurruntz         8.39   7  P      Pn    07 46 19.3 +3.5
      7.5nm,0.5s,SNR=7.9
EPF   Esparros           8.53  17 eP      Pn    07 46 20.5 +3.0
EPF                               eSn     Sn    07 47 43.1  -10
      3.5nm,0.5s
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EPF	Esparros	8.53	17	P	Pn	07 46 20.5	+3.0
EPF				S	Sn	07 47 43.1	-10
	1.8nm,0.5s						
EPF	Esparros	8.53	17	P	Pn	07 46 20.5	+3.0
EARI	Arriondas	8.58	349	P	Pn	07 46 20.2	+2.0
	4.0nm,0.5s,SNR=4.5						
EARI				S	Sn	07 47 49.7	-4.7
	0.0nm,0.0s,SNR=7.9						
EARI	Arriondas	8.58	349	P	Pn	07 46 20.2	+2.0
	4.0nm,0.5s,SNR=4.5						
EAGO	Agolada(Pontev	8.85	335	P	Pn	07 46 23.8	+1.9
	0.5nm,0.1s,SNR=7.9						
EAGO				S	Sn	07 47 56.5	-4.7
	8.0nm,0.7s,SNR=7.9						
EPON	Pontenova	9.03	340	P	Pn	07 46 27.0	+2.6
	2.0nm,0.3s,SNR=4.6						
EPON				S	Sn	07 47 58.8	-6.7
	4.4nm,0.3s,SNR=7.9						

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*KRAR **04** 07:44:33.3±0.2, 53°.75N×91°.00E, M2.9, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

*NNC **04** 07:44:35.5±3.0, 53°.77N×90°.64E, h0^{km}, mb4.1, mpv3.8, Error ellipse: s-maj=22.2km s-min=17.4km az=56.0, Suspected Mining explosion.*

IDC 04 07:44:37.0±3.2**, 53°.54N×90°.73E, h0^{km}, mb1 3.4**/3**, mb1mx3.1**/81**, mbtmp3.4**/3**, ML2.8**/3**, 10C-2D, Error ellipse: s-maj=27.7km s-min=23.0km az=53.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	3.53	279	*i*		08 07 41.7	
	baz=95,slow=325,SNR=3.4						
ZAA0	Zalesovo Array	3.53	279	⇑Pg	Pb	07 45 37.2	-3.2
	9.5nm,0.3s						
ZAA0				⇑Lg	Lg	07 46 27.1	
	52nm,0.8s						
ZALV	Zalesovo Beam	3.53	279	Pn	Pn	07 45 34.0	+0.9
	1.5nm,0.3s,baz=96,slow=15,SNR=19						
ZALV				Lg	Lg	07 46 28.2	
	1.6nm,0.3s,baz=87,slow=28,SNR=4.0						
KURK	Kurchatov	7.97	254	⇑Pn	Pn	07 46 33.9	-0.1
	6.5nm,0.7s						
KURK				⇑Sn	Sn	07 48 06.4	+1.6
	5.1nm,0.8s						
KURK				⇑Lg	Lg	07 48 51.3	
	40nm,1.0s						
KURBB	Kurchatov Arra	8.06	254	Pn	Pn	07 46 34.8	-0.5
	0.2nm,0.3s,baz=65,slow=14,SNR=12						
KURBB				Sn	Sn	07 48 05.9	-1.1
	0.1nm,0.3s,baz=67,slow=23,SNR=3.8						
KURBB				Lg	Lg	07 48 54.5	
	0.1nm,0.3s,baz=65,slow=34,SNR=5.0						
KURBB	Kurchatov Arra	8.06	254	⇑Pn	Pn	07 46 34.3	-0.9
	5.1nm,0.7s						
KURBB				⇑Sn	Sn	07 48 05.4	-1.6
	34nm,1.2s						
KURBB				⇓Lg	Lg	07 48 53.5	
	34nm,0.8s						
MK31	Makanchi Array	8.65	222	⇑Pn	Pn	07 46 44.7	+1.3
	1.6nm,0.8s,baz=36,slow=13,SNR=11						
MK31				⇑Sn	Sn	07 48 23.9	+2.3
	2.2nm,0.7s,baz=40,slow=13,SNR=3.9						
MK31				⇓Lg	Lg	07 49 14.1	
	7.4nm,0.8s,baz=40,slow=31,SNR=4.5						
MKAR	Makanchi Array	8.65	222	Pn	Pn	07 46 44.2	+0.8
	0.2nm,0.3s,baz=35,slow=16,SNR=13						
MKAR				Sn	Sn	07 48 20.6	-1.0
	baz=32,slow=11,SNR=1.8						
MKAR				Lg	Lg	07 49 11.1	
	0.1nm,0.3s,baz=34,slow=26,SNR=3.9						
MAKZ	Makanchi	8.77	223	⇑Lg	Lg	07 49 15.6	
	14nm,1.1s						
SONM	Songino Array	11.45	114	Lg	Lg	07 50 31.3	
	0.2nm,0.3s,baz=300,slow=27,SNR=8.7						

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*IDC **04** 07:55:23.5±0.8, 15°.25S×173°.33W, h0^{km}, mb3.7/9, mb1 4.0/10, mb1mx3.8/49, mbtmp3.8/10, ML4.5/1, MS2.8/3, Ms1 2.8/3, ms1mx2.4/49, Error ellipse: s-maj=48.5km s-min=16.0km az=142.0*

*ISCJB **04** 07:55:27.0±0.7, 15°.2S±0°.2×173°.4W±0°.2, h35^{km}, mb3.6/9, MS3.1/2, Error ellipse: s-maj=38.0km s-min=12.2km az=140.4*

ISC 04 07:55:28.3±0.8**, 15°.2S**±0°.3×**173°.2W**±0°.2**, h35^{km}, n15, σ1^{s}.82**/14**, mb3.7**/9**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	1.86	48	Pn	Pn	07 55 57.6	0.0
	173nm,0.3s,baz=174,slow=1.6,SNR=154						
AFI				Sn	Sn	07 56 16.4	-3.5
	88nm,0.3s,baz=115,slow=21,SNR=5.9						
AFI				LR	LR	07 56 18.1	
	comp=Z,51nm,21.7s,baz=194,slow=27						
URZ	Urewera	24.54	199	P	P	08 00 43.4	-1.2
	13nm,1.1s,baz=296,slow=6.4,SNR=5.6						
STKA	Stephens Creek	44.33	240	P	P	08 03 35.5	+0.3
	0.4nm,0.3s,baz=75,slow=7.9,SNR=2.9						
WRA	Warramunga Arr	50.09	257	P	P	08 04 18.1	-2.2
	0.7nm,1.0s,baz=95,slow=6.8,SNR=2.6						
ASAR	Alice Springs	50.37	252	P	P	08 04 20.9	-1.5
	0.5nm,0.5s,baz=93,slow=7.5,SNR=11						
GUMO	Guam	50.38	302	LR	LR	08 24 41.4	
	comp=Z,14nm,18.6s,baz=134,slow=35						
NVAR	Mina Array Bea	74.02	42	P	P	08 07 02.7	+1.8
	0.3nm,0.6s,baz=226,slow=6.2,SNR=3.2						
MA2	Magadan	80.01	342	LR	LR	08 36 14.3	
	comp=Z,13nm,20.9s,baz=170,slow=31						
TXAR	Lajitas Array	80.32	56	P	P	08 07 37.7	+1.4
	0.5nm,0.9s,baz=245,slow=2.6,SNR=4.6						
ANMO	Albuquerque	80.50	50	P	P	08 07 39.1	+1.9
	0.8nm,0.8s,baz=249,slow=5.5,SNR=4.5						
PDAR	Pinedale Array	81.96	42	P	P	08 07 46.5	+1.6
	0.5nm,0.6s,baz=224,slow=6.2,SNR=5.6						
ILAR	Eielson Array	82.18	11	P	P	08 07 45.9	+0.7
	0.3nm,0.8s,baz=197,slow=5.6,SNR=4.7						
AKASG	Malin Array Be	140.20	338	PKP	PKPdf	08 14 52.0	-1.3
	1.1nm,0.4s,baz=291,slow=2.9,SNR=6.5						
GERES	GERESS Array B	145.94	352	PKPbc	PKPab	08 15 05.4	+0.6
	0.3nm,0.2s,baz=327,slow=2.9,SNR=2.9						
BRTR	Keskin Array B	146.10	321	PKPbc	PKPab	08 15 06.8	+1.0
	1.3nm,0.7s,baz=93,slow=2.6,SNR=5.0						

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*ISCJB **04** 08:13:10.9±0.3, 33°.75S±0°.03×70°.50W±0°.05, h105^{km}±3^{km}, mb3.8/8, Error ellipse: s-maj=8.0km s-min=4.7km az=29.4*

*IDC **04** 08:13:10.7±3.2, 33°.68S×70°.24W, h90^{km}±28^{km}, mb3.6/8, mb1 3.6/12, mb1mx3.5/33, mbtmp3.8/12, Error ellipse: s-maj=30.8km s-min=15.2km az=96.0*

*GUC **04** 08:13:11.1±0.7, 33°.72S×70°.44W, h104^{km}±5^{km}, ML4.1*

*SJA **04** 08:13:11.0±0.5, 33°.78S×70°.45W, h79^{km}±2^{km}, ML3.3, MW4.1*

ISC 04 08:13:11.4±0.6**, 33°.74S**±0°.04×**70°.47W**±0°.05**, h98^{km}**±5^{km}**, n39, σ0^{s}.96**/54**, mb3.9**/8**, 5C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANTU	Antumapu	0.21	321	⇑*i*P	Pn	08 13 25.6	+0.2
ANTU				*i* S	Sn	08 13 36.8	+0.9
LMEL	Las Melosas	0.25	117	⇑*i*P	Pn	08 13 25.8	+0.1
LMEL				*i* S	Sn	08 13 37.2	+0.8
LMEL				IAML		08 13 39.8	
	comp=N,12µm,0.2s						
CLCH	Cerro Calan	0.34	351	⇑*i*P	Pn	08 13 26.4	+0.3
CLCH				*i* S	Sn	08 13 37.5	+0.6
CLCH				IAML		08 13 38.0	
	comp=N,7µm,0.7s						
FCH	Farellones	0.43	20	⇑*i*P	Pn	08 13 26.8	-0.1
FCH				*i* S	Sn	08 13 38.8	+0.4
FCH				IAML		08 13 39.6	
	comp=N,13µm,0.3s						
PEL	Peldehue	0.62	343	*e*P	Pn	08 13 27.9	-0.1
PEL				*i* S	Sn	08 13 40.6	+0.3
PEL				IAML		08 13 41.8	
	comp=N,10µm,0.9s						
ROC1	El Roble	0.88	329	*i* P	Pn	08 13 30.7	0.0
ROC1				*i* S	Sn	08 13 44.9	-0.3
ROCH	El Roble	0.89	329	⇓*i*P	Pn	08 13 30.9	+0.2
ROCH				*e*S	Sn	08 13 46.2	+1.0
ROCH				IAML		08 13 47.5	
	comp=E,5µm,0.4s						
AAGR	Agrelo	1.52	65	*i* P	Pn	08 13 37.9	0.0
ARCO	CERRO ARCO	1.57	56	*i* P	Pn	08 13 38.8	+0.2
ARCO				*i* S	Sn	08 13 59.6	+0.5
ARCO				IAML		08 14 02.3	
	comp=Z,363nm,0.6s						
AVIZ	Vizcacheras	1.65	81	*i* P	Pn	08 13 40.0	+0.5
GO05	HualaæØ	1.75	223	*i* P	Pn	08 13 41.1	+0.4
GO05				*i* S	Sn	08 14 03.0	-0.1
GO05	HualaæØ	1.75	223	*e*P	Pn	08 13 41.4	+0.6
GO05				*i* S	Sn	08 14 03.5	+0.4
AUSP	Uspallata	1.76	31	*i* P	Pn	08 13 42.4	+1.3
ASAL	Salagasta	1.79	51	*i* P	Pn	08 13 41.9	+0.7
ASAL				*i* S	Sn	08 14 04.8	+0.9
RTLS	Leoncito	2.17	27	*i* P	Pn	08 13 47.9	+1.5
RTLS				*i* S	Sn	08 14 15.3	+2.2
RTLS				IAML		08 14 18.5	
	comp=Z,169nm,0.4s						
RTCV	Cerro Valdivia	2.48	42	*i* P	Pn	08 13 51.2	+1.0
RTLL	Cerro Villicun	2.93	36	*i* P	Pn	08 13 57.2	+0.9
RTLL				*i* S	Sn	08 14 31.9	+1.1
CCHI	Chillan	3.15	204	⇑*i*P	Pn	08 13 59.3	+0.2
CCHI				*i* S	Sn	08 14 36.3	+0.5
TLL	Tololo Astrono	3.57	355	*i* P	Pn	08 14 09.8	+4.8
TLL				*i* S	Sn	08 14 45.7	-0.7
PLCA	Paso Flores	6.99	180	P	Pn	08 14 51.8	+0.7
	comp=Z,0.2nm,0.3s,baz=354,slow=13,SNR=3.2						
CPUP	Villa Florida	13.56	60	P	Pn	08 16 17.3	-2.4
	comp=Z,0.1nm,0.3s,baz=238,slow=9.5,SNR=2.9						
LPAZ	La Paz	17.50	7	P	P	08 17 09.3	-0.4
	comp=Z,0.1nm,0.3s,baz=192,slow=11,SNR=2.9						
SIV	San Ignacio	19.60	28	P	P	08 17 28.7	-3.3
	comp=Z,0.2nm,0.3s,baz=302,slow=15,SNR=4.8						
VNA3	Neumayer Olymp	49.11	158	P	P	08 21 49.4	+0.8
VNA2	Neumayer--Watz	49.75	157	P	P	08 21 53.9	+0.5
	baz=286,slow=8.2						
SNAA	Sanae	51.34	158	P	P	08 22 06.2	+0.7
SNAA	Sanae	51.34	158	P	P	08 22 05.6	+0.2
	comp=Z,1.6nm,0.7s,baz=244,slow=9.6,SNR=20						
QSPA	South Pole Qui	56.50	180	P	P	08 22 44.1	+0.9
	comp=Z,2.4nm,0.5s,baz=158,slow=9.2,SNR=16						
VNDA	Vanda	64.61	191	P	P	08 23 37.2	-0.7
	comp=Z,0.4nm,0.5s,baz=137,slow=4.9,SNR=7.5						
TXAR	Lajitas Array	70.16	329	P	P	08 24 14.4	+0.9
	comp=Z,0.2nm,0.6s,baz=146,slow=9.1,SNR=3.9						
TXAR				pP	pP	08 24 39.0	+0.7
	comp=Z,0.3nm,0.7s,baz=147,slow=7.2,SNR=5.1						
MAW	Mawson	73.06	163	P	P	08 24 31.3	+0.9
	comp=Z,0.9nm,0.6s,baz=196,slow=7.4,SNR=3.8						
BOSA	Boshof	79.03	117	P	P	08 25 04.8	-0.4
	comp=Z,7.9nm,1.1s,baz=258,slow=3.0,SNR=3.8						
TORD	Torodi Ar. Bea	82.90	69	P	P	08 25 24.6	-1.1
	comp=Z,1.4nm,0.8s,baz=234,slow=6.1						
NVAR	Mina Array Bea	84.42	324	P	P	08 25 34.4	+1.2
	comp=Z,0.3nm,0.8s,baz=159,slow=3.9,SNR=2.4						
WRA	Warramunga Arr	121.61	208	PKP	PKPdf	08 31 53.9	-0.4
	comp=Z,0.6nm,0.9s,baz=166,slow=1.7,SNR=4.7						
BVAR	Borovoye Array	146.20	43	PKPbc	PKPdf	08 32 39.4	+0.6
	comp=Z,1.0nm,0.6s,baz=259,slow=3.7,SNR=5.8						
KURBB	Kurchatov Arra	151.78	44	PKPbc	PKPbc	08 32 54.1	-0.1
	comp=Z,0.8nm,0.5s,baz=301,slow=2.9,SNR=9.3						
ZALV	Zalesovo Beam	153.30	33	PKPbc	PKPbc	08 32 57.7	+0.3
	comp=Z,1.2nm,0.5s,baz=327,slow=2.4,SNR=2.8						
MKAR	Makanchi Array	155.60	50	PKPab	PKPab	08 33 18.7	-1.3
	comp=Z,0.2nm,0.3s,baz=256,slow=2.3,SNR=2.7						

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*GUC **04** 08:33:05.7±1.1, 38°.04S×73°.29W, h33^{km}±7^{km}, ML5.2*

*GCMT **04** 08:33:05.0±0.3, 38°.09S×73°.31W, h45^{km}±1^{km}, MW5.1/64, Moment Tensor Solution. s63,c74; s64,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.52±.22; $M_{\theta\theta}$-0.30±.14; $M_{\phi\phi}$-4.22±.14; $M_{r\theta}$-0.59±.11; $M_{\theta\phi}$0.53±.10; $M_{\phi r}$-3.42±.15; Best double couple: $M_0$5.60200×10^{16} NP1:ϕ_s183.00000°, δ64.00000°, λ98.00000°. NP2: ϕ_s344.00000°, δ27.00000°, λ73.00000°. Principal axes: T 5.7860, Plg70.0000°, Azm110.0000°; N -0.3670, Plg8.0000°, Azm359.0000°; P -5.4180, Plg19.0000°, Azm266.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **04** 08:33:05.0±0.0, 38°.04S×73°.29W, h33^{km}, mb4.7/184, ML5.2(GUC), After GUC.*

NEIC Felt [V] at Angol, Collipulli, Ercilla, Lautaro, Nueva Imperial, Padre Las Casas, Renaico and Temuco; [IV] at Canete, Carahue, Cholochol, Curacautin, La Laja, Lebu, Los Angeles, Nacimiento, Negrete, Puerto Saavedra and San Rosendo; [III] at Arauco, Chiguayante, Concepcion, Mulchen, San Pedro de la Paz, Talcahuano, Tirua and Yumbel.

*MOS **04** 08:33:06.3±1.1, 37°.95S×72°.93W, h33^{km}, mb4.8/30, Error ellipse: s-maj=14.4km s-min=6.8km az=98.9*

*SJA **04** 08:33:06.8±0.6, 37°.92S×72°.66W, h30^{km}, ML4.7, MW5.4*

*IDC **04** 08:33:07.8±0.4, 37°.98S×72°.80W, h37^{km}±3^{km}, mb4.5/20, mb1 4.6/22, mb1mx4.5/36, mbtmp4.7/22, ML4.8/2, MS4.4/20, Ms1 4.3/20, ms1mx4.2/30, Error ellipse: s-maj=17.0km s-min=8.9km az=86.0*

*ISCJB **04** 08:33:07.6±0.5, 37°.90S±0°.03×72°.69W±0°.06, h50^{km}±4^{km}, mb4.7/195, MS4.5/22, Error ellipse: s-maj=8.1km s-min=4.3km az=172.0*

ISC 04 08:33:06.8±0.3**, 38°.00S**±0°.03×**72°.92W**±0°.06**, h31^{km}**±2^{km}**, h31^{km}:pP-P, n774, σ1^{s}.15**/826**, mb4.7**/195**, MS4.4**/22**, 5C-6D, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TMU	Temuco	0.78	161	⇑*i*P	Pn	08 33 21.4	-0.3
TMU				*i* S	Sn	08 33 32.8	+0.6
TMU				IAML		08 33 34.8	
	comp=N,70µm,0.4s						
CCSP	San Pedro de C	1.16	352	*e*P	Pn	08 33 26.5	-0.4
CCSP				*i* S	Sn	08 33 41.1	-0.6
CCSP				IAML		08 33 46.9	
	comp=N,38µm,0.4s						
CCHI	Chillan	1.55	26	⇑*i*P	Pb	08 33 34.4	-0.4
CCHI				*i* S	Sb	08 33 57.1	+3.2
VLCH	Valdivia	1.82	188	⇓*i*P	Pn	08 33 34.9	-1.1
VLCH				*i* S	Sn	08 33 56.5	-1.6
GO05	HualaæØ	3.09	15	*e*Pn	Pn	08 33 54.4	+0.9
GO05	HualaæØ	3.09	15	*i* P	Pn	08 33 54.8	+1.4
GO05	HualaæØ	3.09	15	*e*P	Pn	08 33 54.5	+1.1
GO05				IAML		08 34 49.5	
	comp=E,8µm,1.1s						
PLCA	Paso Flores	3.29	147	Pn	Pn	08 33 58.4	+2.1
	comp=E,36nm,0.3s,baz=342,slow=13,SNR=383						
PLCA				Lg	Lg	08 34 48.0	
	comp=E,117nm,0.3s,baz=52,slow=17,SNR=6.4						
PLCA				LR	LR	08 35 28.9	
	comp=E,7µm,20.7s,baz=333,slow=43						
PLCA	Paso Flores	3.29	147	*i* P	Pn	08 33 58.7	+2.4
PLCA	Paso Flores	3.29	147	⇑*i*P	Pn	08 33 58.0	+1.7
PEL	Peldehue	5.17	21	*e*Pn	Pn	08 34 22.2	0.0
PEL	Peldehue	5.17	21	*e*P	Pn	08 34 22.2	0.0
ROC1	El Roble	5.25	18	*e*Pn	Pn	08 34 23.3	-0.1
ROC1	El Roble	5.25	18	*i* P	Pn	08 34 25.5	+2.1
AVIZ	Vizcacheras	5.76	40	*i* P	Pn	08 34 31.9	+1.6
AAGR	Agrelo	5.93	35	⇓*i*P	Pn	08 34 34.0	+1.4
ARCO	CERRO ARCO	6.09	34	*i* P	Pn	08 34 36.0	+1.2
ARCO				IAML		08 36 04.9	
	comp=Z,281nm,0.8s						
AUSP	Uspallata	6.45	28	*i* P	Pn	08 34 41.0	+1.1
RTLS	Leoncito	6.86	27	*i* P	Pn	08 34 46.7	+1.1
RTLS				IAML		08 36 53.7	
	comp=Z,261nm,0.7s						
RTCV	Cerro Valdivia	7.10	32	*i* P	Pn	08 34 49.5	+0.9
RTLL	Cerro Villicun	7.59	30	*i* P	Pn	08 34 56.2	+0.8
AMOG	MOGNA	7.93	29	*i* P	Pn	08 35 00.8	+0.7
GO04	Tololo Observa	8.00	13	*e*Pn	Pn	08 35 00.5	-0.7
TRQA	Tornquist	8.63	94	*e*Pn	Pn	08 35 13.0	+3.4
TRQA	Tornquist	8.63	94	*e*P	Pn	08 35 13.0	+3.4
LCO	Las Campanas	9.15	12	*e*Pn	Pn	08 35 16.8	-0.2
LCO	Las Campanas	9.15	12	*e*P	Pn	08 35 16.8	-0.2
AGUA	GUANDACOL	9.25	25	*i* P	Pn	08 35 18.2	0.0
ACLC	CERRO LA CRUZ	9.89	32	*i* P	Pn	08 35 26.5	-0.5
GO03	Copiap	10.62	13	*e*Pn	Pn	08 35 35.5	-1.3
GO02	Mina Guanaco	13.11	13	*e*Pn	P	08 36 16.2	-4.8
PB01	IPOC Station P	17.16	11	*e*Pn	P	08 37 07.6	+1.8
	comp=Z,35nm,0.7s						
EFI	East Falkland	17.21	147	*e*Pn	P	08 37 06.5	+0.4
	comp=Z,304nm,1.1s						
EFI	East Falkland	17.21	147	*e*P	P	08 37 07.2	+1.1
CPUP	Villa Florida	17.57	53	P	Pn	08 37 09.2	-0.1
	comp=Z,0.6nm,0.3s,baz=223,slow=11,SNR=14						
CPUP	Villa Florida	17.57	53	*e*Pn	P	08 37 09.9	-0.2
	comp=Z,18nm,1.1s						
CPUP	Villa Florida	17.57	53	*e*P	P	08 37 09.9	-0.2
CPUP				pmax	pmax		
	comp=Z,18nm,1.1s						
MNMC	Minye Minye	19.02	10	*e*P	Pn	08 37 26.9	-0.5
	comp=Z,96nm,1.1s						
LPAZ	La Paz	22.03	12	P	P	08 38 00.2	+0.7
	comp=Z,4.7nm,0.5s,baz=161,slow=4.0,SNR=17						
LPAZ				S	S	08 42 02.3	+0.9
	comp=Z,1.3nm,0.9s,baz=145,slow=9.7,SNR=1.7						
LPAZ	La Paz	22.03	12	*e*P	P	08 38 00.8	+1.3
	comp=Z,23nm,1.0s						
LPAZ				*e*S	S	08 42 02.3	+0.9
LPAZ	La Paz	22.03	12	*e*P	P	08 38 00.8	+1.3
LPAZ				*e*S	S	08 42 02.3	+0.9
LPAZ				pmax	pmax		
	comp=Z,23nm,1.0s						
SIV	San Ignacio	24.29	29	P	P	08 38 20.5	-1.0
	comp=Z,14nm,0.8s,baz=224,slow=9.3,SNR=72						
SPB	Sao Paulo	26.07	64	*e*P	P	08 38 37.3	-0.3
SPB				*e*pP	P	08 38 37.6	0.0
NNA	Nana	26.14	351	P	P	08 38 38.4	+0.1
	comp=Z,10nm,0.7s,baz=280,slow=5.2,SNR=3.1						
NNA				LR	LR	08 47 31.9	
	comp=Z,429nm,18.3s,baz=175,slow=33						
PMSA	Palmer Station	27.32	172	LR	LR	08 49 25.0	
	comp=Z,982nm,18.8s,baz=336,slow=36						
SAML	Samuel	30.23	19	*e*P	P	08 39 09.2	-5.6
SAML				*e*pP	P	08 39 14.2	-0.6
SAML	Samuel	30.23	19	*e*P	P	08 39 09.2	-5.5
SAML				*e**PP	P	08 39 14.2	-0.6
RPN	Rapa Nui	32.36	279	LR	LR	08 49 00.2	
	comp=Z,886nm,19.6s,baz=78,slow=29						
OTAV	Otavalo	38.39	351	*e*P	P	08 40 28.3	+2.4
	comp=Z,6.3nm,0.6s						
OTAV	Otavalo	38.39	351	*e*P	P	08 40 28.3	+2.4
OTAV				pmax	pmax		
	comp=Z,6.0nm,0.6s						
PTGA	Pitinga	38.95	21	*e*P	P	08 40 28.8	-1.3
	comp=Z,10nm,1.0s						
ROSC	El Rosal	42.64	358	P	P	08 41 01.4	+0.5
	comp=Z,2.5nm,0.4s,baz=28,slow=22,SNR=2.4						
ROSC				LR	LR	08 58 45.1	
	comp=Z,322nm,19.2s,baz=218,slow=36						
ROSC	El Rosal	42.64	358	*e*P	P	08 41 03.8	+2.9
	comp=Z,6.6nm,0.8s						
RUSC	La Rusia	43.66	360	*e*P	P	08 41 09.8	+0.5
	comp=Z,3.9nm,0.9s						
HELC	Santa Helena	44.03	356	*e*P	P	08 41 11.5	-0.6
	comp=Z,20nm,0.6s						
VNA3	Neumayer Olymp	45.96	156	P	P	08 41 26.7	+0.2
VNA1	Neumayer--Stat	46.31	155	P	P	08 41 29.8	+0.6
VNA2	Neumayer--Watz	46.64	156	P	P	08 41 32.1	+0.3
	baz=283,slow=9.6						
SDV	Santo Domingo	46.69	3	P	P	08 41 33.0	0.0
	comp=Z,4.7nm,0.4s,baz=218,slow=11,SNR=4.9						
SDV	Santo Domingo	46.69	3	*e*P	P	08 41 32.7	-0.3
	comp=Z,13nm,1.1s						
SNAA	Sanae	48.19	156	P	P	08 41 44.1	+0.2
SNAA	Sanae	48.19	156	P	P	08 41 43.9	0.0
	comp=Z,66nm,0.9s,baz=272,slow=6.5,SNR=155						
SNAA				LR	LR	09 02 23.4	
	comp=Z,170nm,18.1s,baz=292,slow=36						
SNAA	Sanae	48.19	156	*e*P	P	08 41 43.9	0.0
	comp=Z,127nm,1.1s						
SNAA	Sanae	48.19	156	*e*P	P	08 41 43.9	0.0
SNAA				pmax	pmax		
	comp=Z,127nm,1.1s						
PCRV	Puerto La Cruz	48.54	11	P	P	08 41 47.6	+0.4
	comp=Z,13nm,1.0s,baz=109,slow=4.2,SNR=3.9						
PCRV				LR	LR	09 05 37.1	
	comp=Z,538nm,20.8s,baz=170,slow=40						
QSPA	South Pole Qui	52.25	180	P	P	08 42 15.3	+0.5
	comp=Z,24nm,1.0s,baz=148,slow=5.9,SNR=38						
QSPA				pP	sP	08 42 26.2	-1.6
	comp=Z,20nm,0.7s,baz=115,slow=2.2,SNR=17						
QSPA	South Pole Qui	52.25	180	*e*P	P	08 42 14.5	-0.3
	comp=Z,31nm,1.0s						
QSPA				*e*P	P	08 42 15.3	+0.5
QSPA				*e*pP	sP	08 42 26.2	-1.6
NVL	N'lazarevskaya	52.96	156	⇓*i*P	P	08 42 19.6	-0.2
NVL				*e**PP	pP	08 42 26.6	-2.5
NVL				*e**SP	sP	08 42 35.5	+2.7
NVL				*e*		08 43 35.0	
NVL				*e*		08 44 18.4	
NVL				*e*PPP	PPP	08 45 22.8	
NVL				*e*S	S	08 49 45.6	-1.2
NVL				*e**SS	sS	08 50 03.7	+1.6
NVL				*e*SS	SS	08 53 28.7	+3.3
NVL				pmax	pmax		
	comp=Z,50nm,0.9s						
RKT	Rikitea	54.53	267	*e*S	S	08 50 15.0	+5.6
	comp=Z,188nm,33.2s						
RKT				*e*LR	LR	08 58 29.4	
	comp=Z,795nm,26.8s,baz=128						
RKT	Rikitea	54.53	267	*e*T	T	09 40 36.5	
	comp=Z,1.3nm,0.2s						
SBA	Scott Base	59.03	192	*e*P	P	08 43 04.6	+1.5
	comp=Z,4.1nm,1.0s						
SBA	Scott Base	59.03	192	*e*P	P	08 43 04.6	+1.5
SBA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
VNDA	Vanda	60.05	192	P	P	08 43 11.0	+0.8
	comp=Z,1.6nm,0.8s,baz=140,slow=6.6,SNR=8.2						
VNDA				pP	sP	08 43 22.6	-0.6
	comp=Z,3.4nm,0.8s,baz=145,slow=8.4,SNR=12						
VNDA				LR	LR	09 05 24.6	
	comp=Z,102nm,19.9s,baz=136,slow=32						
VNDA	Vanda	60.05	192	*e*P	P	08 43 11.7	+1.5
	comp=Z,2.4nm,1.0s						
VNDA				*e*pP	sP	08 43 22.6	-0.6
VNDA	Vanda	60.05	192	*e*P	P	08 43 11.7	+1.5
VNDA				*e**PP	sP	08 43 22.6	-0.6
VNDA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SYO	Syowa Base	62.43	158	⇓*e*pP	P	08 43 25.2	-1.1
SYO	Syowa Base	62.43	158	⇑*e*sP	P	08 43 31.6	+5.3
TBI	Tubuai	65.76	259	*e*S	S	08 52 34.6	+1.2
	comp=Z,372nm,36.0s						
TBI	Tubuai	65.76	259	*e*LR	LR	09 03 36.1	
	comp=Z,892nm,26.8s,baz=128						
857A	Zephyrhills	66.49	351	P	P	08 43 53.5	+0.1
	baz=172						
TAOE	Nuku Hiva Isla	66.67	277	*e*LR	LR	09 04 06.2	
	comp=Z,821nm,24.7s,baz=135						
757A	Oxford	67.14	351	P	P	08 43 57.0	-0.5
	baz=172						
656A	Willston	67.62	351	P	P	08 43 59.8	-0.6
	baz=172						
TIAR	Tiarei	68.86	264	*e*T	T	09 58 32.3	
	comp=Z,3.2nm,0.3s						
PPT2	Papeete2	69.02	264	*e*S	S	08 53 16.9	+4.0
	comp=Z,335nm,27.2s						
PPT2	Papeete2	69.02	264	*e*LR	LR	09 05 10.0	
	comp=Z,743nm,25.5s,baz=113						
PPT	Papeete	69.03	264	LR	LR	09 06 11.1	
	comp=Z,348nm,18.2s,baz=126,slow=29						
453A	Whigham	69.32	350	P	P	08 44 11.5	+0.5
	baz=171						
MAW	Mawson	69.56	163	P	P	08 44 12.2	+0.1
	comp=Z,22nm,0.9s,baz=213,slow=6.9,SNR=34						
MAW				LR	LR	09 14 08.2	
	comp=Z,460nm,21.6s,baz=232,slow=35						
MAW	Mawson	69.56	163	*e*P	P	08 44 11.9	-0.3
	comp=Z,5.7nm,0.9s						
MAW	Mawson	69.56	163	P	P	08 44 12.2	+0.1
MAW				pmax	pmax		
	comp=Z,17nm,0.7s						
353A	Camilla	69.79	350	P	P	08 44 12.8	-1.2
	baz=171						
TIGA	Tifton	69.79	350	P	P	08 44 12.5	-1.5
	baz=171						
351A	Pinckard	69.93	348	P	P	08 44 14.7	0.0
	baz=170						
447A	Lucedale	70.00	346	P	P	08 44 15.6	+0.4
	baz=167						
352A	Blakely	70.02	349	P	P	08 44 15.1	-0.3
	baz=170						
254A	Abbeville	70.25	351	P	P	08 44 15.3	-1.5
	baz=172						
444A	Pine Grove	70.36	344	P	P	08 44 19.2	+1.7
	baz=166						
833A	Chaparral WMA,	70.48	335	P	P	08 44 19.3	+1.0
	baz=158						
833A	Chaparral WMA,	70.48	335	*e*P	P	08 44 19.3	+1.0

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     comp=Z,6.6nm,0.8s
252A Lumpkin          70.50 349  P     P     08 44 19.2 +0.9
     baz=170
347A Saraland         70.56 346  P     P     08 44 19.8 +1.1
     baz=167
251A Midway           70.70 349  P     P     08 44 19.2 -0.2
     baz=170
250A Grady            70.72 348  P     P     08 44 19.8 +0.2
     baz=169
155A Kite             70.82 351  P     P     08 44 20.2  0.0
     baz=172
249A Camden           70.86 347  P     P     08 44 20.5  0.0
     baz=168
154A Montrose         70.89 351  P     P     08 44 20.6  0.0
     baz=172
LPIG La Paz           71.05 324  LR    LR    09 08 16.2
     comp=Z,446nm,21.7s,baz=196,slow=30
344A Westbrook Farm   71.06 344  P     P     08 44 23.6 +1.9
     baz=166
248A Dixon Mills      71.09 347  P     P     08 44 22.3 +0.4
     baz=168
151A Opelika          71.11 349  P     P     08 44 21.7 -0.3
     baz=170
152A Waverly Hall     71.16 350  P     P     08 44 21.9 -0.4
     baz=170
152A Waverly Hall     71.16 350  eP    P     08 44 21.9 -0.4
     comp=Z,6.5nm,1.0s
247A Quitman          71.21 346  P     P     08 44 23.4 +0.8
     baz=167
150A Eclectic         71.30 348  P     P     08 44 22.8 -0.4
     baz=170
149A Jones            71.42 348  P     P     08 44 23.6 -0.2
     baz=169
Z54A Sparta           71.47 351  P     P     08 44 23.3 -0.8
     baz=172
341A Kurthwood        71.52 342  P     P     08 44 25.4 +0.9
     baz=164
HPIG                  71.52 329  eP    P     08 44 25.2 +0.4
     comp=Z,5.2nm,1.0s
148A Greensboro       71.60 347  P     P     08 44 25.1 +0.2
     baz=168
Z53A Monticello       71.61 351  P     P     08 44 24.6 -0.4
     baz=172
244A Avery, Jackson   71.62 344  P     P     08 44 26.4 +1.3
     baz=166
Z52A Williamson       71.63 350  P     P     08 44 25.0 -0.2
     baz=171
GOGA Godfrey          71.72 351  P     P     08 44 25.0 -0.6
     baz=172
GOGA Godfrey          71.72 351  eP    P     08 44 25.0 -0.6
     comp=Z,4.8nm,0.8s
GOGA Godfrey          71.72 351  eP    P     08 44 25.0 -0.6
GOGA                              pmax  pmax
     comp=Z,5.0nm,0.8s
147A Livingston       71.75 346  P     P     08 44 26.6 +0.7
     baz=168
147A Livingston       71.75 346  eP    P     08 44 26.9 +1.0
     comp=Z,17nm,0.8s
LRAL Lakeview Retre   71.88 348  P     P     08 44 26.3 -0.3
     baz=169,SNR=6.8
LRAL Lakeview Retre   71.88 348  eP    P     08 44 26.6  0.0
     comp=Z,11nm,1.1s
Z50A Ashland          71.92 349  P     P     08 44 26.9  0.0
     baz=170,SNR=5.7
Z50A Ashland          71.92 349  eP    P     08 44 26.4 -0.5
     comp=Z,9.5nm,1.0s
Z49A Columbiana       71.95 348  P     P     08 44 27.0  0.0
     baz=169
242A Grayson          71.97 343  P     P     08 44 28.4 +1.3
     baz=164
145A Houston Renfro   72.01 345  P     P     08 44 28.1 +0.7
     baz=166
Y54A Tignall          72.07 351  P     P     08 44 27.3 -0.4
     baz=172,SNR=5.8
241A Mo Tay, Goldon   72.11 342  P     P     08 44 29.0 +0.9
     baz=164
Y53A Monroe           72.17 351  P     P     08 44 28.5 +0.1
     baz=172
Z47A Carrollton       72.22 347  P     P     08 44 28.8 +0.1
     baz=168,SNR=14
Y52A Lilburn          72.24 350  P     P     08 44 28.2 -0.6
     baz=171,SNR=5.5
Y52A Lilburn          72.24 350  eP    P     08 44 28.3 -0.5
     comp=Z,10.0nm,0.9s
NATX Nacogdoches      72.30 341  P     P     08 44 30.1 +0.9
     baz=162
Z48A Northport        72.31 347  P     P     08 44 28.8 -0.3
     baz=168,SNR=10
JSC  Jenkinsville     72.33 353  eP    P     08 44 29.4 +0.1
     comp=Z,3.9nm,0.8s
JSC  Jenkinsville     72.33 353  eP    P     08 44 29.4 +0.1
JSC                               pmax  pmax
     comp=Z,4.0nm,0.8s
Z46A Louisville       72.38 346  P     P     08 44 30.8 +1.2
     baz=167
143A Socs Landing,    72.42 344  P     P     08 44 30.6 +0.7
     baz=165
143A Socs Landing,    72.42 344  eP    P     08 44 31.1 +1.3
     comp=Z,38nm,1.0s
Y51A Rockmart         72.42 349  P     P     08 44 29.8 -0.1
     baz=170
Y50A Piedmont         72.51 349  P     P     08 44 30.4  0.0
     baz=170
Y49A Blount Mountai   72.58 348  P     P     08 44 30.9 +0.1
     baz=169
Y49A Blount Mountai   72.58 348  eP    P     08 44 31.4 +0.5
     comp=Z,2.4nm,0.7s
JCT  Junction City    72.61 336  P     P     08 44 30.9 -0.2
     baz=158,SNR=10.0
JCT  Junction City    72.61 336  eP    P     08 44 31.5 +0.4
JCT  Junction City    72.61 336  eP    P     08 44 31.5 +0.4
Z45A Winona           72.70 345  P     P     08 44 32.4 +0.8
     baz=167
Z44A Pea Ridge, Bel   72.76 345  P     P     08 44 32.4 +0.5
     baz=166
Y48A Jasper           72.76 348  P     P     08 44 31.8 -0.1
     baz=169
X53A Estanollee       72.78 351  P     P     08 44 31.5 -0.5
     baz=172,SNR=6.2
Y47A UCPARC, Winfie   72.87 347  P     P     08 44 32.4 -0.1
     baz=168,SNR=7.4
LTX  Lajitas          72.90 332  eP    P     08 44 33.5 +0.6
LTX  Lajitas          72.90 332  eP    P     08 44 33.6 +0.6
TXAR Lajitas Array    72.90 332  P     P     08 44 33.5 +0.6
     comp=Z,2.9nm,0.8s,baz=156,slow=8.8,SNR=36
TXAR                             pP    sP    08 44 44.7 -1.4
     comp=Z,5.9nm,0.6s,baz=148,slow=8.7,SNR=22
TXAR                             LR    LR    09 11 44.1
     comp=Z,226nm,18.7s,baz=0.0,slow=32
TX31 Lajitas Ar. Si   72.90 332  eP    P     08 44 33.0 +0.1
TX31                             eP    P     08 44 33.9 +0.9
X52A Dahlonega        72.95 351  P     P     08 44 32.4 -0.6
     baz=171,SNR=5.9
CNNC Cliffs of the    73.02 356  P     P     08 44 33.8 +0.5
     baz=176
Y46A Houston          73.04 346  P     P     08 44 33.7 +0.2
     baz=167
X51A Calhoun          73.04 350  P     P     08 44 34.0 +0.4
     baz=170,SNR=5.4
X51A Calhoun          73.04 350  eP    P     08 44 31.6 -1.9
     comp=Z,24nm,0.9s
X50B Fort Payne       73.06 349  P     P     08 44 33.4 -0.2
     baz=170,SNR=7.3
Y45A Yeager Farm, C   73.15 346  P     P     08 44 34.5 +0.4
     baz=167
KMSC Kings Mountain   73.19 353  P     P     08 44 34.1 -0.2
     baz=173,SNR=5.3
KMSC Kings Mountain   73.19 353  eP    P     08 44 33.8 -0.6
     comp=Z,9.9nm,0.9s
X49A Woodville        73.21 348  P     P     08 44 34.2 -0.3
     baz=169,SNR=8.1
BG3  Lake Jocassee    73.22 351  eP    P     08 44 34.7 +0.2
     comp=Z,4.3nm,0.9s
X48A Hartselle        73.27 348  P     P     08 44 34.5 -0.4
     baz=169,SNR=8.5
X48A Hartselle        73.27 348  eP    P     08 44 34.5 -0.4
     comp=Z,13nm,1.1s
Z41A Richland Creek   73.27 343  P     P     08 44 35.5 +0.6
     baz=164
WHTX Lake Whitney,    73.29 338  P     P     08 44 35.6 +0.5
     baz=160
Z40A Long Farm, Mag   73.41 342  P     P     08 44 35.6 -0.2
     baz=164
W53A Cullowhee        73.42 351  P     P     08 44 35.8 -0.1
     baz=172,SNR=5.4
W52A Murphy           73.44 351  P     P     08 44 35.3 -0.6
     baz=171
W52A Murphy           73.44 351  eP    P     08 44 35.9  0.0
     comp=Z,8.8nm,1.1s
X47A Russelville      73.47 347  P     P     08 44 35.4 -0.7
     baz=168,SNR=5.5
Y43A Makayla and Ka   73.48 344  P     P     08 44 36.5 +0.5
     baz=166
Y42A Garnett, Star    73.59 344  P     P     08 44 36.6 -0.2
     baz=165
W51A Cleveland        73.61 350  P     P     08 44 36.5 -0.4
     baz=171
X46A Booneville       73.64 347  P     P     08 44 37.4 +0.4
     baz=168
X45A UM Field Stati   73.66 346  P     P     08 44 36.4 -0.8
     baz=167
W50A Signal Mountai   73.73 349  P     P     08 44 37.1 -0.5
     baz=170,SNR=13
W50A Signal Mountai   73.73 349  eP    P     08 44 37.2 -0.5
     comp=Z,18nm,0.8s
OXF  Oxford           73.75 346  P     P     08 44 36.6 -1.1
     baz=167
OXF  Oxford           73.75 346  eP    P     08 44 37.6 -0.1
     comp=Z,9.3nm,0.9s
OXF                              ePcP  pP    08 44 47.4 +0.1
OXF  Oxford           73.75 346  eP    P     08 44 37.6 -0.1
OXF                              e           08 44 47.4
OXF                               pmax  pmax
     comp=Z,9.0nm,0.9s
W49A Belvidere        73.80 349  P     P     08 44 37.5 -0.5
     baz=169,SNR=5.5
Y41A Eaglette Beard   73.82 343  P     P     08 44 38.2 +0.1
     baz=164
SWET Sewanee          73.84 349  eP    P     08 44 38.1 -0.2
     comp=Z,26nm,0.8s
CPCT Cooper Cave      73.87 350  eP    P     08 44 37.9 -0.5
     comp=Z,9.9nm,0.8s
V53A Saluda           73.87 352  P     P     08 44 37.5 -0.9
     baz=172,SNR=6.5
W48A Pulaski          73.92 348  P     P     08 44 38.1 -0.6
     baz=169,SNR=13
PLAL Pickwick Lake    73.96 347  eP    P     08 44 38.2 -0.7
     comp=Z,5.3nm,1.0s
TKL  Tuckaleechee C   73.97 351  P     P     08 44 37.8 -1.2
     comp=Z,3.2nm,0.6s,baz=171,slow=7.0,SNR=7.8
TKL                              pP    pP    08 44 49.2 +0.6
     comp=Z,4.6nm,0.5s,baz=147,slow=7.8,SNR=6.0
TKL  Tuckaleechee C   73.97 351  eP    P     08 44 38.1 -0.8
     comp=Z,13nm,1.1s
TKL                              ePcP  pP    08 44 49.2 +0.6
TKL  Tuckaleechee C   73.97 351  eP    P     08 44 38.2 -0.8
TKL                              e           08 44 49.3
TKL                               pmax  pmax
     comp=Z,13nm,1.1s
V52A Sevierville      74.13 351  P     P     08 44 38.9 -1.1
     baz=172,SNR=5.9
V52A Sevierville      74.13 351  eP    P     08 44 38.8 -1.1
     comp=Z,9.4nm,0.9s
W47A Westpoint        74.14 348  P     P     08 44 39.2 -0.8
     baz=168,SNR=7.3
V50A Pikevile         74.16 350  P     P     08 44 39.3 -0.8
     baz=170,SNR=9.1
V51A Loudon           74.19 350  P     P     08 44 38.8 -1.4
     baz=171
V51A Loudon           74.19 350  eP    P     08 44 39.2 -1.0
     comp=Z,4.4nm,0.9s
V49A McMinnville      74.38 349  P     P     08 44 40.4 -1.0
     baz=170,SNR=7.5
V48A Smith Brothers   74.49 348  P     P     08 44 41.0 -1.0
     baz=169,SNR=17
V48A Smith Brothers   74.49 348  eP    P     08 44 41.3 -0.7
     comp=Z,25nm,0.9s
U53A Fall Branch      74.53 352  P     P     08 44 40.7 -1.6
     baz=172
ABTX Abilene, Hawle   74.54 337  P     P     08 44 42.5 +0.1
     baz=159
ABTX Abilene, Hawle   74.54 337  eP    P     08 44 43.2 +0.8
     comp=Z,17nm,1.1s
U52A Thorn Hill       74.65 351  P     P     08 44 42.0 -1.0
     baz=172
MIAR Mount Ida        74.68 342  P     P     08 44 42.4 -0.8
     baz=164
MIAR Mount Ida        74.68 342  eP    P     08 44 43.0 -0.1
     comp=Z,2.9nm,0.9s
MIAR Mount Ida        74.68 342  eP    P     08 44 43.0 -0.1
MIAR                              pmax  pmax
     comp=Z,3.0nm,0.9s
V47A Nunnelly         74.69 348  P     P     08 44 42.3 -0.9
     baz=168,SNR=12
U51A La Follette      74.72 351  P     P     08 44 42.0 -1.3
     baz=171
V46A Holladay         74.77 347  P     P     08 44 42.8 -0.8
     baz=168,SNR=7.8
X39A Fountain Ranch   74.78 342  P     P     08 44 43.0 -0.7
     baz=163,SNR=7.0
TZTN Tazewell         74.82 351  P     P     08 44 43.2 -0.7
     baz=172
TZTN Tazewell         74.82 351  eP    P     08 44 43.1 -0.8
     comp=Z,6.3nm,0.8s
V45A Humboldt         74.86 347  P     P     08 44 43.2 -0.9
     baz=167
U50A Jamestown        74.86 350  P     P     08 44 43.4 -0.7
     baz=171
RAR  Rarotonga        74.87 255  LR    LR    09 09 29.7
     comp=Z,126nm,18.3s,baz=128,slow=29
W41B Gary Mavity, V   74.98 344  P     P     08 44 44.1 -0.7
     baz=165,SNR=5.9
W41B Gary Mavity, V   74.98 344  eP    P     08 44 44.5 -0.3
     comp=Z,6.5nm,1.0s
WVT  Waverly          75.04 348  P     P     08 44 43.9 -1.2
     baz=168
WVT  Waverly          75.04 348  eP    P     08 44 44.1 -1.0
     comp=Z,6.4nm,0.8s
WVT  Waverly          75.04 348  eP    P     08 44 44.1 -1.0
WVT                               pmax  pmax
     comp=Z,6.0nm,0.8s
U49A Red Boiling Sp   75.09 349  P     P     08 44 44.7 -0.8
     baz=170
BLA  Blacksburg       75.16 354  P     P     08 44 45.9  0.0
     baz=174
BLA  Blacksburg       75.16 354  ePcP  PcP   08 44 56.0 -3.3
W40A Ferguson Farm,   75.18 343  P     P     08 44 45.2 -0.8
     baz=164
U48A Cassie Pea, Po   75.20 349  P     P     08 44 45.7 -0.4
     baz=169
V43A Jonesboro        75.21 345  P     P     08 44 46.7 +0.6
     baz=166
U47A Clarksville      75.25 348  P     P     08 44 45.3 -1.0
     baz=169,SNR=8.2
T51A Gray             75.28 351  P     P     08 44 45.7 -0.9
     baz=171
T52A Hallie           75.31 352  P     P     08 44 45.5 -1.2
     baz=172
U46A Springville      75.32 347  P     P     08 44 45.9 -0.9
     baz=168
W39A Magazine         75.35 342  P     P     08 44 46.6 -0.4
     baz=164,SNR=8.6
W39A Magazine         75.35 342  eP    P     08 44 46.8 -0.2
     comp=Z,9.0nm,0.9s
V42A Cord             75.40 345  P     P     08 44 46.1 -1.1
     baz=165
U45A Rockin P Farm,   75.42 347  P     P     08 44 46.4 -0.9
     baz=168
T50A Nancy            75.45 350  P     P     08 44 46.4 -1.1
     baz=171
U44B Burton Farm, H   75.51 346  P     P     08 44 48.1 +0.2
     baz=167
V41A Mountainview     75.55 344  P     P     08 44 47.2 -0.9
     baz=165,SNR=10
IP05 Hopewell Churc   75.59 356  eP    P     08 44 49.0 +0.8
     comp=Z,11nm,1.1s
T49A Edmonton         75.63 350  P     P     08 44 47.6 -1.0
     baz=170
MNTX Cornudas Mount   75.66 332  P     P     08 44 48.1 -0.7
     baz=154,SNR=14
MNTX Cornudas Mount   75.66 332  eP    P     08 44 48.3 -0.6
     comp=Z,4.3nm,0.9s
IP07 Quail            75.69 356  eP    P     08 44 49.1 +0.2
     comp=Z,8.0nm,0.9s
IP06 Yanceyville      75.70 356  eP    P     08 44 49.9 +1.0
     comp=Z,4.4nm,0.8s
V40A Witts Springs    75.71 343  P     P     08 44 48.2 -0.9
     baz=164
V40A Witts Springs    75.71 343  eP    P     08 44 48.8 -0.3
     comp=Z,2.6nm,0.7s
IP01 Cuckoo           75.72 356  eP    P     08 44 49.8 +0.8
     comp=Z,14nm,1.2s
T47A Sharon Grove     75.76 348  P     P     08 44 48.2 -1.0
     baz=169
T47A Sharon Grove     75.76 348  eP    P     08 44 47.9 -1.4
     comp=Z,10.0nm,0.9s
IP03 Louisa           75.79 356  eP    P     08 44 50.2 +0.8
     comp=Z,7.4nm,0.8s
IP04 Greensprings     75.87 356  eP    P     08 44 50.3 +0.5
     comp=Z,15nm,1.0s
S52A Salyersville     75.89 352  P     P     08 44 49.0 -1.0
     baz=172,SNR=5.2
U42A Revenden         75.90 345  P     P     08 44 48.8 -1.3
     baz=166,SNR=6.2
S51A Beattyville      75.91 351  P     P     08 44 49.4 -0.7
     baz=172,SNR=5.3
V39A Pettigrew        75.94 343  P     P     08 44 49.9 -0.5
     baz=164
T46A Princeton        75.94 348  P     P     08 44 49.4 -0.9
     baz=168,SNR=5.4
CASY Casey            76.02 181  eP    P     08 44 50.7 +0.2
     comp=Z,21nm,0.9s
U41A Viola            76.03 344  P     P     08 44 50.1 -0.8
     baz=165
S50A Richmond         76.05 351  P     P     08 44 49.7 -1.2
     baz=171
PBMO Poplar Bluff     76.15 346  eP    P     08 44 50.5 -0.9
     comp=Z,9.8nm,0.8s
WMOK Wichita Mounta   76.25 338  P     P     08 44 51.2 -1.0
     baz=160,SNR=9.2
WMOK Wichita Mounta   76.25 338  eP    P     08 44 51.8 -0.3
     comp=Z,4.1nm,0.9s
WMOK Wichita Mounta   76.25 338  eP    P     08 44 51.8 -0.3
WMOK                              pmax  pmax
     comp=Z,4.0nm,0.9s
U40A Yellville        76.25 344  P     P     08 44 51.4 -0.7
     baz=164,SNR=6.4
S48A Wiedeman Farm,   76.25 349  P     P     08 44 50.7 -1.4
     baz=170
S49A Springfield      76.27 350  P     P     08 44 51.0 -1.1
     baz=170
S47A Hartford         76.31 349  P     P     08 44 51.5 -0.9
     baz=169
T43A Greenville       76.41 346  P     P     08 44 52.1 -0.8
     baz=166,SNR=9.9
U39A Green Forest     76.42 343  P     P     08 44 52.1 -0.9
     baz=164,SNR=7.0
HHAR Hobbs            76.43 343  eP    P     08 44 53.0 -0.2
     comp=Z,2.8nm,0.9s
T42A Van Buren        76.52 345  P     P     08 44 52.6 -1.0
     baz=166,SNR=6.8
T42A Van Buren        76.52 345  eP    P     08 44 52.9 -0.7
     comp=Z,6.6nm,1.1s
TUL1 Leonard          76.53 341  P     P     08 44 52.9 -0.8
     baz=162,SNR=6.7
TUL1 Leonard          76.53 341  eP    P     08 44 53.3 -0.4
     comp=Z,12nm,0.8s
S46A Don Dixon Farm   76.54 348  P     P     08 44 52.8 -0.9
     baz=168
R50A Paris            76.63 351  P     P     08 44 53.0 -1.2
     baz=171
T41A Mountain View    76.67 345  P     P     08 44 54.1 -0.3
     baz=165,SNR=5.5
LIC  Lamto            76.73  71  eP    P     08 44 55.1 -0.3
     comp=Z,138nm,1.1s
R49A Shelbyville      76.75 350  P     P     08 44 54.1 -0.8
     baz=170
MSTX Muleshoe         76.79 335  P     P     08 44 55.5 +0.1
     baz=157,SNR=5.6
MSTX Muleshoe         76.79 335  eP    P     08 44 55.4 +0.1
     comp=Z,7.4nm,0.8s
S44A Carbondale       76.81 347  P     P     08 44 54.7 -0.6
     baz=167
S43A Fulton Ridge,    76.85 346  P     P     08 44 54.4 -1.0
     baz=166,SNR=15
WCI  Wyandotte Cave   76.85 349  P     P     08 44 53.6 -1.8
     baz=170
WCI  Wyandotte Cave   76.85 349  eP    P     08 44 54.8 -0.6
     comp=Z,3.7nm,0.8s
WCI  Wyandotte Cave   76.85 349  eP    P     08 44 54.8 -0.6
WCI                               pmax  pmax
     comp=Z,4.0nm,0.8s
319A Douglas          76.91 329  eP    P     08 44 57.6 +1.6
     comp=Z,6.6nm,1.1s
T40A Mansfield        76.94 344  P     P     08 44 55.2 -0.8
     baz=165
R47A Wooly Knot Far   76.95 349  P     P     08 44 54.7 -1.3
     baz=169
R48A Northridge Ran   76.95 350  P     P     08 44 54.7 -1.3
     baz=170
TIC  Toumodi          77.01  71  eP    P     08 44 56.5 -0.5
R46A Gibon Southern   77.02 348  P     P     08 44 55.1 -1.2
     baz=169
KIC  Kosan Boka       77.03  71  eP    P     08 44 56.9 -0.2
     comp=Z,101nm,1.0s
DBIC Dimbokro         77.15  71  P     P     08 44 57.7  0.0
     comp=Z,27nm,0.8s,baz=195,slow=6.1,SNR=17
DBIC                             pP    PcP   08 45 09.5 +1.1
     comp=Z,10nm,0.6s,baz=200,slow=5.3,SNR=4.3
DBIC Dimbokro         77.15  71  eP    P     08 44 58.1 +0.4
     comp=Z,34nm,0.8s
DBIC                             ePcP  PcP   08 45 09.5 +1.1
DBIC Dimbokro         77.15  71  eP    P     08 44 58.1 +0.4
DBIC                             e           08 45 09.5
DBIC                              pmax  pmax
     comp=Z,34nm,0.8s
S42A Caledonia        77.18 346  P     P     08 44 55.9 -1.4
     baz=166,SNR=7.0
S41A Jillco Farms,    77.19 345  P     P     08 44 56.4 -1.0
     baz=165,SNR=11
R45A Skylar, Fairfi   77.22 348  P     P     08 44 55.8 -1.7
     baz=168
T38A Diamond          77.23 343  P     P     08 44 56.4 -1.2
     baz=163,SNR=6.9
AMTX Amarillo         77.27 336  P     P     08 44 58.0  0.0
     baz=157
AMTX Amarillo         77.27 336  eP    P     08 44 58.6 +0.6
     comp=Z,8.7nm,0.8s
FVM  French Village   77.31 346  eP    P     08 44 58.7 +0.6
     comp=Z,6.3nm,0.9s
121A Cookes Peak, D   77.32 330  P     P     08 44 58.6 +0.1
     baz=153
S40A Lebanon          77.36 344  P     P     08 44 57.7 -0.7
     baz=165
R43A Red Bud          77.50 346  P     P     08 44 58.6 -0.5
     baz=167
MCWV Mont Chateau     77.54 355  P     P     08 44 58.7 -0.6
     baz=175
CCM  Cathedral Cave   77.54 345  P     P     08 44 59.4  0.0
     baz=166
CCM  Cathedral Cave   77.54 345  eP    P     08 44 59.6 +0.3
     comp=Z,20nm,0.8s
CCM  Cathedral Cave   77.54 345  eP    P     08 44 59.6 +0.3
CCM                               pmax  pmax
     comp=Z,20nm,0.8s
Q47A Bedord North L   77.56 349  P     P     08 44 58.5 -0.9
     baz=169
S39A Bolivar          77.63 344  P     P     08 44 59.0 -0.9
     baz=164,SNR=7.1
S39A Bolivar          77.63 344  eP    P     08 44 59.3 -0.5
     comp=Z,7.8nm,1.0s
R42A Luebbering       77.67 346  P     P     08 44 59.9 -0.1
     baz=166
S38A Stockton         77.71 343  P     P     08 44 59.1 -1.2
     baz=164,SNR=9.2
Q45A Warren Harvey,   77.79 348  P     P     08 44 59.3 -1.4
     baz=168
R41A Rosebud          77.80 345  P     P     08 45 00.1 -0.7
     baz=166,SNR=16
BLO  Bloomington      77.81 349  eP    P     08 44 59.8 -1.0
     comp=Z,9.6nm,0.9s
BLO  Bloomington      77.81 349  eP    P     08 44 59.8 -1.0
BLO                               pmax  pmax
     comp=Z,10.0nm,0.9s
P50A Jamestown        77.87 351  P     P     08 45 00.4 -0.8
     baz=172
PAGS Pennsylvania G   77.93 357  eP    P     08 45 02.0 +0.6
     comp=Z,8.3nm,1.0s
Q44A Meyer Farm, Va   77.95 347  P     P     08 45 00.2 -1.3
     baz=167
R40A Maddies Statio   77.98 345  P     P     08 45 00.8 -0.9
     baz=165,SNR=9.4
R40A Maddies Statio   77.98 345  eP    P     08 45 01.4 -0.4
     comp=Z,8.0nm,0.9s
O56A Blue Knob Stat   78.06 356  P     P     08 45 01.4 -0.9
     baz=176
P47A Martinsville     78.08 349  P     P     08 45 00.7 -1.6
     baz=170
Q43A New Douglas      78.10 347  P     P     08 45 01.5 -1.0
     baz=167,SNR=7.4
R39A Chumby, Stover   78.17 344  P     P     08 45 01.8 -1.0
     baz=164,SNR=8.3
Q42A Golden Eagle     78.23 346  P     P     08 45 02.3 -0.8
     baz=166
```

R38A	**Fenwick Farm,**	**78.24**	**343**	P	**P**	**08 45 02.5**	**-0.7**
	baz=164						
BNM	**Barren Site**	**78.32**	**332**	*e*P	**P**	**08 45 05.5**	**+1.4**
P45A	**Graceland, Par**	**78.34**	**348**	P	**P**	**08 45 02.7**	**-1.0**
	baz=168						
TUC	**Tucson**	**78.34**	**328**	*e*P	**P**	**08 45 05.4**	**+1.3**
	comp=Z,2.4nm,1.1s						
P46A	**Rosedale**	**78.35**	**349**	P	**P**	**08 45 03.1**	**-0.7**
	baz=169						
O50A	**Cable**	**78.39**	**352**	P	**P**	**08 45 02.7**	**-1.3**
	baz=172,SNR=5.3						
SSPA	**Standing Stone**	**78.39**	**356**	P	**P**	**08 45 02.9**	**-1.1**
	baz=176						
SSPA	**Standing Stone**	**78.39**	**356**	*e*P	**P**	**08 45 03.5**	**-0.4**
	comp=Z,6.2nm,0.9s						
ACSO	**Alum Creek Sta**	**78.40**	**352**	P	**P**	**08 45 03.4**	**-0.6**
	baz=172,SNR=6.4						
ACSO	**Alum Creek Sta**	**78.40**	**352**	*e*P	**P**	**08 45 03.3**	**-0.7**
	comp=Z,16nm,0.7s						
Q41A	**Truxton**	**78.41**	**346**	P	**P**	**08 45 03.1**	**-1.0**
	baz=166,SNR=12						
P44A	**Sand Creek, Wi**	**78.43**	**348**	P	**P**	**08 45 03.2**	**-1.0**
	baz=168						
LENM	**Lemitar**	**78.46**	**332**	*e*P	**P**	**08 45 06.0**	**+1.3**
N59A	**State Game Lan**	**78.58**	**358**	P	**P**	**08 45 04.9**	**-0.1**
	baz=178						
N59A	**State Game Lan**	**78.58**	**358**	*e*P	**P**	**08 45 05.9**	**+0.9**
	comp=Z,5.4nm,0.8s						
Q40A	**Laux Farm, Aux**	**78.62**	**345**	P	**P**	**08 45 04.7**	**-0.5**
	baz=165,SNR=12						
ODNJ	**Ogdensburg**	**78.72**	**359**	*e*P	**P**	**08 45 06.0**	**+0.3**
	comp=Z,3.3nm,0.8s						
LAZ	**Ladron**	**78.73**	**332**	*e*P	**P**	**08 45 07.9**	**+1.6**
P43A	**Skaggs, Pawnee**	**78.75**	**347**	P	**P**	**08 45 05.4**	**-0.6**
	baz=167,SNR=5.9						
TSUM	**Tsumeb**	**78.82**	**106**	*e*P	**P**	**08 45 07.4**	**+0.2**
	comp=Z,11nm,1.0s						
N54A	**Moraine State**	**78.85**	**355**	P	**P**	**08 45 06.0**	**-0.5**
	baz=175						
P42A	**Winchester**	**78.85**	**346**	P	**P**	**08 45 06.1**	**-0.4**
	baz=166						
P42A	**Winchester**	**78.85**	**346**	*e*P	**P**	**08 45 05.8**	**-0.8**
	comp=Z,8.6nm,0.8s						
BOSA	**Boshof**	**78.86**	**118**	P	**P**	**08 45 06.4**	**-0.9**
	comp=Z,18nm,0.8s,baz=220,slow=5.7,SNR=18						
BOSA				LR	LR	09 15 40.7	
	comp=Z,166nm,19.0s,baz=214,slow=32						
Q39A	**Willow Grove F**	**78.86**	**344**	P	**P**	**08 45 06.3**	**-0.2**
	baz=164						
214A	**Organ Pipe Nat**	**78.91**	**326**	P	**P**	**08 45 06.4**	**-0.7**
	baz=149						
Q38A	**Cooks Store, C**	**78.92**	**344**	P	**P**	**08 45 06.1**	**-0.8**
	baz=164,SNR=6.5						
N50A	**Nevada**	**78.95**	**352**	P	**P**	**08 45 06.1**	**-0.9**
	baz=172						
TASL	**Snake Pit, Alb**	**78.97**	**332**	P	**P**	**08 45 08.2**	**+0.6**
	baz=154,SNR=7.5						
ANMO	**Albuquerque**	**78.97**	**332**	P	**P**	**08 45 08.7**	**+1.2**
	comp=Z,3.2nm,0.8s,baz=165,slow=8.0,SNR=12						
ANMO				pP	**sP**	**08 45 19.8**	**-1.0**
	comp=Z,11nm,0.8s,baz=156,slow=7.8,SNR=17						
ANMO	**Albuquerque**	**78.97**	**332**	P	**P**	**08 45 08.0**	**+0.5**
	baz=154						
ANMO	**Albuquerque**	**78.97**	**332**	*e*P	**P**	**08 45 08.7**	**+1.2**
	comp=Z,5.4nm,0.9s						
ANMO				*e*PcP	**sP**	**08 45 19.8**	**-1.0**
Q37A	**Longview Farm,**	**79.02**	**343**	P	**P**	**08 45 07.1**	**-0.4**
	baz=163						
O45A	**Potomac**	**79.04**	**349**	P	**P**	**08 45 07.1**	**-0.5**
	baz=168						
O44A	**Mansfield**	**79.07**	**348**	P	**P**	**08 45 07.1**	**-0.6**
	baz=168						
P41A	**Barry, Barry**	**79.07**	**346**	P	**P**	**08 45 06.9**	**-0.9**
	baz=166						
P40A	**Paris**	**79.13**	**345**	P	**P**	**08 45 07.3**	**-0.7**
	baz=165,SNR=18						
P40A	**Paris**	**79.13**	**345**	*e*P	**P**	**08 45 07.4**	**-0.6**
	comp=Z,25nm,0.8s						
P39B	**Salisbury**	**79.23**	**344**	P	**P**	**08 45 08.1**	**-0.5**
	baz=164,SNR=5.7						
O43A	**Sugar Creek Fa**	**79.34**	**347**	P	**P**	**08 45 08.8**	**-0.4**
	baz=167						
M54A	**Oil Creek Stat**	**79.37**	**355**	P	**P**	**08 45 08.9**	**-0.4**
	baz=175						
O41A	**Passleys Farm,**	**79.46**	**346**	P	**P**	**08 45 09.2**	**-0.6**
	baz=166,SNR=5.8						
N46A	**Monticello**	**79.53**	**349**	P	**P**	**08 45 09.5**	**-0.7**
	baz=169						
P38A	**Dawn**	**79.53**	**344**	P	**P**	**08 45 09.3**	**-0.9**
	baz=164,SNR=9.5						
P38A	**Dawn**	**79.53**	**344**	*e*P	**P**	**08 45 09.3**	**-0.9**
	comp=Z,12nm,0.8s						
N45A	**Kentland**	**79.60**	**349**	P	**P**	**08 45 09.7**	**-0.9**
	baz=169						
HDIL	**Hopedale**	**79.60**	**347**	P	**P**	**08 45 09.6**	**-1.0**
	baz=167,SNR=6.0						
HDIL	**Hopedale**	**79.60**	**347**	*e*P	**P**	**08 45 10.0**	**-0.6**
	comp=Z,19nm,0.8s						
N44A	**Piper City**	**79.64**	**348**	P	**P**	**08 45 10.2**	**-0.6**
	baz=168						
O40A	**La Belle**	**79.66**	**345**	P	**P**	**08 45 10.1**	**-0.8**
	baz=165,SNR=5.6						
P37A	**Lathrop**	**79.68**	**343**	P	**P**	**08 45 10.5**	**-0.6**
	baz=163						
KSU1	**Kansas State U**	**79.76**	**341**	P	**P**	**08 45 11.5**	**0.0**
	baz=162						
BINY	**Binghamton**	**79.87**	**358**	P	**P**	**08 45 11.8**	**-0.3**
	baz=178						
BINY	**Binghamton**	**79.87**	**358**	*e*P	**P**	**08 45 12.2**	**+0.2**
	comp=Z,9.3nm,1.1s						
QUA2	**Belchertown**	**79.90**	**0**	*e*P	**P**	**08 45 12.7**	**+0.6**
	comp=Z,14nm,0.9s						
O39A	**Kirksville**	**79.93**	**345**	P	**P**	**08 45 11.6**	**-0.8**
	baz=165						
N43A	**Stutzman Famil**	**79.95**	**348**	P	**P**	**08 45 11.7**	**-0.9**
	baz=167,SNR=5.9						
O38A	**Galt**	**80.00**	**344**	P	**P**	**08 45 12.7**	**-0.1**
	baz=164						
HRV	**Adam Dziewonsk**	**80.14**	**1**	P	**P**	**08 45 13.5**	**+0.1**
	baz=181						
RPZ	**Rata Peaks**	**80.17**	**221**	P	**P**	**08 45 15.8**	**+1.8**
	comp=Z,4.6nm,0.8s,baz=101,slow=23,SNR=2.0						
O37A	**Wolven Farm, M**	**80.19**	**344**	P	**P**	**08 45 13.1**	**-0.7**
	baz=164						
M44A	**Midewin, Midew**	**80.21**	**349**	P	**P**	**08 45 12.7**	**-1.2**
	baz=168,SNR=6.4						
M44A	**Midewin, Midew**	**80.21**	**349**	*e*P	**P**	**08 45 12.7**	**-1.2**
	comp=Z,20nm,0.8s						
T25A	**Trinidad**	**80.22**	**335**	P	**P**	**08 45 15.2**	**+0.8**
	baz=156,SNR=14						
T25A	**Trinidad**	**80.22**	**335**	*e*P	**P**	**08 45 15.5**	**+1.1**
	comp=Z,18nm,1.1s						
CBKS	**Cedar Bluff**	**80.32**	**339**	P	**P**	**08 45 14.9**	**+0.3**
	baz=159						
N40A	**Mertquake, Sal**	**80.34**	**346**	P	**P**	**08 45 13.8**	**-0.8**
	baz=166						
TRY	**Troy**	**80.35**	**359**	*e*P	**P**	**08 45 15.4**	**+0.8**
	comp=Z,18nm,1.1s						
W18A	**Petrified Fore**	**80.36**	**330**	P	**P**	**08 45 16.1**	**+1.0**
	baz=152						
M43A	**Waltham Townsh**	**80.40**	**348**	P	**P**	**08 45 14.4**	**-0.5**
	baz=168,SNR=5.4						
X16A	**Lo Mia Camp, P**	**80.44**	**329**	*e*P	**P**	**08 45 17.1**	**+1.5**
	comp=Z,5.8nm,1.1s						
MMNY	**Mt. Morris Dam**	**80.48**	**356**	*e*P	**P**	**08 45 15.8**	**+0.6**
	comp=Z,11nm,0.8s						
N39A	**Derby Farms, D**	**80.52**	**345**	P	**P**	**08 45 15.1**	**-0.5**
	baz=165,SNR=5.6						
N39A	**Derby Farms, D**	**80.52**	**345**	*e*P	**P**	**08 45 14.7**	**-0.9**
	comp=Z,18nm,0.8s						
N38A	**Joes South For**	**80.59**	**345**	P	**P**	**08 45 15.8**	**-0.1**
	baz=164						
M41A	**Milan**	**80.62**	**347**	P	**P**	**08 45 15.4**	**-0.6**
	baz=166						
Y14A	**Wickenburg**	**80.69**	**327**	*e*P	**P**	**08 45 18.1**	**+1.4**
	comp=Z,2.5nm,0.8s						
N37A	**Lee Faris, Mou**	**80.77**	**344**	P	**P**	**08 45 16.6**	**-0.3**
	baz=164						
N37A	**Lee Faris, Mou**	**80.77**	**344**	*e*P	**P**	**08 45 16.8**	**-0.1**
	comp=Z,7.6nm,0.8s						
M40A	**Post Highland**	**80.83**	**346**	P	**P**	**08 45 18.5**	**+1.3**
	baz=166						
N36A	**Muff Farm, Cla**	**80.99**	**343**	P	**P**	**08 45 17.7**	**-0.4**
	baz=163						
ACCN	**Adirondack Com**	**81.01**	**359**	*e*P	**P**	**08 45 18.6**	**+0.5**
	comp=Z,14nm,1.1s						
M39A	**Webster**	**81.03**	**345**	P	**P**	**08 45 17.9**	**-0.4**
	baz=165						
L42A	**Oliver, Polo**	**81.08**	**347**	P	**P**	**08 45 18.3**	**-0.1**
	baz=167						
L42A	**Oliver, Polo**	**81.08**	**347**	*e*P	**P**	**08 45 18.4**	**-0.1**
	comp=Z,7.4nm,0.8s						
L43A	**Garden Prairie**	**81.09**	**348**	P	**P**	**08 45 17.5**	**-1.2**
	baz=168,SNR=5.2						
SDCO	**Great Sand Dun**	**81.14**	**334**	P	**P**	**08 45 19.3**	**0.0**
	baz=155						
SDCO	**Great Sand Dun**	**81.14**	**334**	*e*P	**P**	**08 45 20.0**	**+0.7**
	comp=Z,4.0nm,1.1s						
M38A	**Pleasantville**	**81.18**	**345**	P	**P**	**08 45 17.9**	**-1.2**
	baz=164,SNR=7.7						
LBTB	**Lobatse**	**81.28**	**115**	*e*P	**P**	**08 45 20.0**	**-0.4**
	comp=Z,20nm,0.8s						
LBTB	**Lobatse**	**81.28**	**115**	*e*P	**P**	**08 45 20.0**	**-0.4**
LBTB				pmax	pmax		
	comp=Z,20nm,0.8s						
L41A	**Preston**	**81.29**	**347**	P	**P**	**08 45 18.4**	**-1.2**
	baz=166						
M37A	**Trindle Farm,**	**81.35**	**344**	P	**P**	**08 45 19.9**	**-0.1**
	baz=164						
KSCO	**Kaye Shedlock’**	**81.36**	**337**	P	**P**	**08 45 21.4**	**+1.1**
	baz=157						
KSCO	**Kaye Shedlock’**	**81.36**	**337**	*e*P	**P**	**08 45 21.8**	**+1.5**
	comp=Z,3.9nm,0.5s						
WUAZ	**Wupatki**	**81.36**	**329**	P	**P**	**08 45 21.3**	**+0.9**
	baz=151						
WUAZ	**Wupatki**	**81.36**	**329**	*e*P	**P**	**08 45 22.0**	**+1.6**
	comp=Z,6.1nm,1.1s						
L40A	**Anamosa**	**81.41**	**346**	P	**P**	**08 45 19.7**	**-0.5**
	baz=166						
L40A	**Anamosa**	**81.41**	**346**	*e*P	**P**	**08 45 19.5**	**-0.8**
	comp=Z,7.1nm,1.0s						
BC3	**Big Chuckawall**	**81.52**	**325**	P	**P**	**08 45 22.7**	**+1.4**
	baz=148						
NCB	**Newcomb**	**81.60**	**359**	*e*P	**P**	**08 45 21.8**	**+0.5**
	comp=Z,4.8nm,1.0s						
S22A	**4UR Ranch, Cre**	**81.60**	**333**	P	**P**	**08 45 22.5**	**+0.7**
	baz=154						
MVCO	**Mesa Verde**	**81.73**	**332**	P	**P**	**08 45 23.2**	**+0.8**
	baz=153						
MVCO	**Mesa Verde**	**81.73**	**332**	*e*P	**P**	**08 45 23.5**	**+1.0**
	comp=Z,3.0nm,0.8s						
K41A	**Shullsburg**	**81.77**	**347**	P	**P**	**08 45 22.1**	**0.0**
	baz=166						
PKRO	**Pickering**	**81.77**	**356**	P	**P**	**08 45 22.6**	**+0.5**
	baz=175						
K42A	**Prairie Point,**	**81.78**	**348**	P	**P**	**08 45 22.0**	**-0.2**
	baz=167						
L38A	**Oak Wood Farm,**	**81.83**	**345**	P	**P**	**08 45 22.2**	**-0.3**
	baz=164						
LBNH	**Lisbon**	**81.86**	**1**	P	**P**	**08 45 23.6**	**+1.0**
	baz=181						
XPFO	**Piæon Flat**	**81.94**	**325**	*e*P	**P**	**08 45 25.8**	**+2.3**
	comp=Z,4.6nm,1.0s						
PFO	**Pinyon Flats O**	**81.94**	**325**	P	**P**	**08 45 24.8**	**+1.3**
	baz=147						
PFO	**Pinyon Flats O**	**81.94**	**325**	*e*P	**P**	**08 45 25.8**	**+2.3**
	comp=Z,4.6nm,1.0s						
L37A	**Phoenix Point,**	**81.97**	**345**	P	**P**	**08 45 22.9**	**-0.4**
	baz=164						
W13A	**Hualapai Mount**	**82.05**	**327**	*e*P	**P**	**08 45 25.8**	**+1.6**
	comp=Z,2.5nm,1.0s						
JFWS	**Jewell Farm**	**82.06**	**347**	P	**P**	**08 45 23.8**	**+0.2**
	baz=167						
JFWS	**Jewell Farm**	**82.06**	**347**	*e*P	**P**	**08 45 23.9**	**+0.2**
	comp=Z,4.0nm,0.8s						
JFWS	**Jewell Farm**	**82.06**	**347**	*e*P	**P**	**08 45 23.9**	**+0.2**
JFWS				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BWLO	**Walkerton**	**82.07**	**354**	P	**P**	**08 45 22.3**	**-1.4**
	baz=174						
Q24A	**Divide**	**82.12**	**335**	P	**P**	**08 45 25.0**	**+0.5**
	baz=155						
L36A	**Harm Buss Farm**	**82.15**	**344**	P	**P**	**08 45 24.3**	**+0.1**
	baz=163						
K39A	**Oelwein**	**82.16**	**346**	P	**P**	**08 45 23.8**	**-0.5**
	baz=165						
J43A	**Natural Harves**	**82.21**	**349**	P	**P**	**08 45 23.5**	**-1.0**
	baz=168						
DELO	**Deloro Mine**	**82.25**	**357**	P	**P**	**08 45 23.6**	**-1.0**
	baz=177						
LONY	**Lake Ozonia**	**82.25**	**359**	P	**P**	**08 45 24.3**	**-0.4**
	baz=179,SNR=6.6						
LONY	**Lake Ozonia**	**82.25**	**359**	*e*P	**P**	**08 45 24.3**	**-0.4**
	comp=Z,10nm,1.0s						
J42A	**Columbus**	**82.26**	**348**	P	**P**	**08 45 24.7**	**0.0**
	baz=168,SNR=6.3						
MURC	**Murrieta**	**82.27**	**324**	P	**P**	**08 45 25.0**	**-0.1**
	baz=147						
CLWO	**Collingwood**	**82.34**	**355**	P	**P**	**08 45 24.8**	**-0.4**
	baz=174,SNR=6.5						
FRNY	**Flat Rock**	**82.46**	**360**	*e*P	**P**	**08 45 25.8**	**+0.1**
	comp=Z,7.8nm,1.0s						
J41A	**Loganville**	**82.46**	**348**	P	**P**	**08 45 25.1**	**-0.6**
	baz=167,SNR=6.2						
U15A	**North Rim**	**82.53**	**329**	*e*P	**P**	**08 45 28.2**	**+1.6**
	comp=Z,3.3nm,1.0s						
BMRO	**Meriville Lake**	**82.56**	**354**	P	**P**	**08 45 25.6**	**-0.6**
	baz=174						
GMRC	**Granite Mounta**	**82.56**	**326**	P	**P**	**08 45 28.3**	**+1.6**
	baz=148						
SADO	**Sadowa**	**82.58**	**356**	*e*P	**P**	**08 45 25.9**	**-0.5**
	comp=Z,12nm,0.8s						
J40A	**Soldiers Grove**	**82.61**	**347**	P	**P**	**08 45 25.8**	**-0.8**
	baz=166,SNR=6.4						
K36A	**Gilmore City**	**82.61**	**344**	P	**P**	**08 45 27.1**	**+0.5**
	baz=163						
I43A	**Langenfeld Bro**	**82.66**	**349**	P	**P**	**08 45 28.4**	**+1.6**
	baz=168						
PV13	**Radium Mtn., P**	**82.69**	**332**	*e*P	**P**	**08 45 28.4**	**+1.0**
	comp=Z,4.9nm,1.1s						
J39A	**Decorah**	**82.73**	**346**	P	**P**	**08 45 26.6**	**-0.6**
	baz=166						
PLVO	**Plevna**	**82.74**	**357**	P	**P**	**08 45 27.2**	**0.0**
	baz=177,SNR=6.9						
PLVO	**Plevna**	**82.74**	**357**	*e*P	**P**	**08 45 27.4**	**+0.2**
	comp=Z,16nm,1.0s						
BANO	**Bancroft**	**82.76**	**356**	P	**P**	**08 45 26.8**	**-0.5**
	baz=176						
I42A	**Draeger Farm,**	**82.79**	**348**	P	**P**	**08 45 26.9**	**-0.5**
	baz=168						
PV18	**Skein Mesa, Pa**	**82.80**	**332**	*e*P	**P**	**08 45 32.2**	**+4.3**
	comp=Z,12nm,0.9s						
PV12	**Saucer Basin,**	**82.82**	**332**	*e*P	**P**	**08 45 29.6**	**+1.5**
	comp=Z,5.1nm,1.1s						
PV16	**Nyswonger Mesa**	**82.86**	**332**	*e*P	**P**	**08 45 30.5**	**+2.3**
	comp=Z,3.7nm,0.9s						
J38A	**Wedel Dairy, R**	**82.86**	**346**	P	**P**	**08 45 27.5**	**-0.4**
	baz=165						
SMCO	**Snowmass**	**82.93**	**334**	*e*P	**P**	**08 45 30.1**	**+1.2**
	comp=Z,9.3nm,1.0s						
PKME	**Peaks-Kenny Pk**	**82.95**	**3**	P	**P**	**08 45 29.1**	**+0.8**
	baz=183						
OGNE	**Ogallala**	**82.96**	**338**	P	**P**	**08 45 29.1**	**+0.5**
	baz=158						
BFSC	**Mount Baldy Ra**	**83.02**	**324**	P	**P**	**08 45 30.1**	**+1.0**
	baz=146						
ISCO	**Idaho Springs**	**83.03**	**335**	P	**P**	**08 45 29.9**	**+0.6**
	baz=155						
ISCO	**Idaho Springs**	**83.03**	**335**	*e*P	**P**	**08 45 30.1**	**+0.9**
	comp=Z,3.8nm,0.9s						
ISCO	**Idaho Springs**	**83.03**	**335**	*e*P	**P**	**08 45 30.1**	**+0.9**
ISCO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
J37A	**Redenius Farm,**	**83.07**	**345**	P	**P**	**08 45 29.1**	**+0.1**
	baz=164						
I40A	**Norwalk**	**83.07**	**347**	P	**P**	**08 45 29.0**	**+0.1**
	baz=166						
PV09	**Paradox Valley**	**83.10**	**332**	*e*P	**P**	**08 45 32.6**	**+3.0**
ORIO	**Orleans, Innes**	**83.10**	**358**	P	**P**	**08 45 29.0**	**0.0**
	baz=178						
I41A	**Arkdale**	**83.11**	**348**	P	**P**	**08 45 29.3**	**+0.2**
	baz=167						
I41A	**Arkdale**	**83.11**	**348**	*e*P	**P**	**08 45 30.7**	**+1.6**
	comp=Z,5.1nm,0.7s						
H43A	**Windswept, Lux**	**83.18**	**349**	P	**P**	**08 45 28.5**	**-0.9**
	baz=169						
I39A	**Houston**	**83.20**	**347**	P	**P**	**08 45 29.1**	**-0.6**
	baz=166,SNR=6.7						
I39A	**Houston**	**83.20**	**347**	*e*P	**P**	**08 45 28.9**	**-0.7**
	comp=Z,8.8nm,0.7s						
TOBO	**Tobermory, Bru**	**83.21**	**354**	P	**P**	**08 45 28.1**	**-1.4**
	baz=174						
KLBO	**Killbear Provi**	**83.23**	**355**	P	**P**	**08 45 28.1**	**-1.6**
	baz=174						
KNB	**Kanab**	**83.25**	**329**	*e*P	**P**	**08 45 32.0**	**+1.8**
	comp=Z,4.7nm,1.0s						
KNB	**Kanab**	**83.25**	**329**	*e*P	**P**	**08 45 32.0**	**+1.8**
KNB				pmax	pmax		
	comp=Z,5.0nm,1.0s						
J36A	**Seneca 1, Swea**	**83.25**	**344**	P	**P**	**08 45 29.4**	**-0.4**
	baz=164						
J36A	**Seneca 1, Swea**	**83.25**	**344**	*e*P	**P**	**08 45 29.5**	**-0.4**
	comp=Z,21nm,1.1s						
ALFO	**Alfred**	**83.27**	**359**	P	**P**	**08 45 29.9**	**0.0**
	baz=179						
BUKO	**Buck Lake**	**83.27**	**355**	P	**P**	**08 45 30.1**	**+0.2**
	baz=175						
PEMO	**Pembroke**	**83.39**	**357**	P	**P**	**08 45 30.2**	**-0.3**
	baz=177,SNR=5.5						
LCMT	**Little Creek M**	**83.42**	**329**	*e*P	**P**	**08 45 32.3**	**+1.2**
	comp=Z,2.1nm,1.2s						
GSC	**Goldstone, Bar**	**83.51**	**325**	P	**P**	**08 45 33.0**	**+1.5**
	baz=147						
I38A	**Scanlan Farm,**	**83.53**	**346**	P	**P**	**08 45 30.2**	**-1.1**
	baz=165,SNR=6.5						
I37A	**Lemond, Waseca**	**83.72**	**345**	P	**P**	**08 45 31.9**	**-0.4**
	baz=164,SNR=7.3						
I37A	**Lemond, Waseca**	**83.72**	**345**	*e*P	**P**	**08 45 32.0**	**-0.3**
	comp=Z,23nm,1.1s						
H40A	**Chili**	**83.74**	**348**	P	**P**	**08 45 32.0**	**-0.3**
	baz=166						
SHPR	**Sheep Range**	**83.79**	**327**	*e*P	**P**	**08 45 34.7**	**+1.7**
	comp=Z,4.3nm,1.2s						
I36A	**Fitzsimmons Fa**	**83.84**	**345**	P	**P**	**08 45 32.5**	**-0.4**
	baz=164						
SZCU	**Shurtz Canyon**	**83.85**	**329**	*e*P	**P**	**08 45 35.2**	**+1.8**
	comp=Z,1.2nm,0.6s						
TRQ	**Mont Tremblant**	**83.85**	**359**	*e*P	**P**	**08 45 32.5**	**-0.5**
MTPU	**Mount Pierson**	**83.87**	**330**	*e*P	**P**	**08 45 34.9**	**+1.2**
	comp=Z,2.6nm,0.9s						
CCUT	**Cedar City**	**83.93**	**329**	*e*P	**P**	**08 45 35.7**	**+1.9**
	comp=Z,2.6nm,0.9s						
G43A	**Wallace**	**83.94**	**350**	P	**P**	**08 45 33.1**	**-0.2**
	baz=169						
G43A	**Wallace**	**83.94**	**350**	*e*P	**P**	**08 45 33.5**	**+0.2**
	comp=Z,5.1nm,0.9s						
H39A	**Augusta**	**83.95**	**347**	P	**P**	**08 45 33.2**	**-0.2**
	baz=166						
G42A	**Mountain**	**84.03**	**349**	P	**P**	**08 45 33.1**	**-0.8**
	baz=168						
G42A	**Mountain**	**84.03**	**349**	*e*P	**P**	**08 45 33.0**	**-0.8**
	comp=Z,8.8nm,0.9s						
LRMC	**Laurel Mtn Rad**	**84.05**	**325**	P	**P**	**08 45 35.3**	**+0.9**
	baz=146						
F46A	**Macinaw City C**	**84.07**	**352**	P	**P**	**08 45 33.6**	**-0.4**
	baz=171						
G41A	**Antigo**	**84.12**	**349**	P	**P**	**08 45 34.3**	**0.0**
	baz=168						
N23A	**Red Feather La**	**84.13**	**335**	P	**P**	**08 45 35.6**	**+0.9**
	baz=155						
N23A	**Red Feather La**	**84.13**	**335**	*e*P	**P**	**08 45 35.9**	**+1.1**
	comp=Z,4.4nm,0.9s						
ECSD	**EROS Data Cent**	**84.14**	**343**	P	**P**	**08 45 33.8**	**-0.7**
	baz=162,SNR=22						
ECSD	**EROS Data Cent**	**84.14**	**343**	*e*P	**P**	**08 45 34.0**	**-0.4**
	comp=Z,21nm,1.0s						
SRU	**San Rafael Swe**	**84.16**	**331**	*e*P	**P**	**08 45 35.7**	**+0.8**
	comp=Z,4.4nm,0.9s						
SRU	**San Rafael Swe**	**84.16**	**331**	*e*P	**P**	**08 45 35.7**	**+0.8**
SRU				pmax	pmax		
	comp=Z,4.0nm,0.9s						
H37A	**Dierke Farm, C**	**84.16**	**346**	P	**P**	**08 45 34.2**	**-0.3**
	baz=165						
O20A	**White River Ci**	**84.23**	**334**	P	**P**	**08 45 35.4**	**+0.2**
	baz=153						
O20A	**White River Ci**	**84.23**	**334**	*e*P	**P**	**08 45 37.6**	**+2.3**
	comp=Z,3.0nm,0.8s						
Q16A	**Castle Valley**	**84.24**	**331**	*e*P	**P**	**08 45 36.7**	**+1.4**
	comp=Z,4.0nm,0.8s						
MSU	**Marysvale**	**84.28**	**330**	*e*P	**P**	**08 45 37.0**	**+1.4**
MSU	**Marysvale**	**84.28**	**330**	*e*P	**P**	**08 45 37.0**	**+1.4**
G40A	**Rib Lake**	**84.34**	**348**	P	**P**	**08 45 35.1**	**-0.4**
	baz=167,SNR=5.8						
G40A	**Rib Lake**	**84.34**	**348**	*e*P	**P**	**08 45 35.0**	**-0.4**
	comp=Z,6.0nm,1.1s						
H36A	**Jessenland, He**	**84.36**	**345**	P	**P**	**08 45 35.7**	**+0.2**
	baz=164						
PQI	**Presque Isle**	**84.40**	**3**	*e*P	**P**	**08 45 35.6**	**-0.1**
	comp=Z,6.1nm,1.0s						
F43A	**Flat Rock, Esc**	**84.43**	**350**	P	**P**	**08 45 35.7**	**-0.2**
	baz=169						
MPMC	**Manual Prospec**	**84.45**	**325**	P	**P**	**08 45 33.7**	**-2.7**
	baz=146						
F44A	**Big Bay de Noc**	**84.47**	**351**	P	**P**	**08 45 35.2**	**-0.8**
	baz=170						
F42A	**Maple Grove Fa**	**84.49**	**349**	P	**P**	**08 45 36.3**	**+0.2**
	baz=168						
FURC	**Furnace Creek,**	**84.50**	**326**	P	**P**	**08 45 35.0**	**-1.4**
	baz=147						
P18A	**Preston Nutter**	**84.51**	**332**	*e*P	**P**	**08 45 38.0**	**+1.2**
	comp=Z,8.7nm,1.2s						
G39A	**Holcombe**	**84.52**	**347**	P	**P**	**08 45 35.6**	**-0.7**
	baz=166						
MAGC	**SCE Magundon P**	**84.53**	**324**	*e*P	**P**	**08 45 37.8**	**+1.2**
G38A	**Ridgeland**	**84.53**	**347**	P	**P**	**08 45 36.1**	**-0.2**
	baz=165,SNR=5.4						
P17A	**Butcher Ranch,**	**84.56**	**332**	*e*P	**P**	**08 45 38.2**	**+1.3**
	comp=Z,2.3nm,0.9s						
PKM	**Mcpherson Peak**	**84.56**	**323**	P	**P**	**08 45 38.2**	**+1.1**
	baz=145						
ISA	**Isabella, Lake**	**84.57**	**324**	P	**P**	**08 45 36.8**	**-0.1**
	baz=146						
ISA	**Isabella, Lake**	**84.57**	**324**	*e*P	**P**	**08 45 38.7**	**+1.8**
	comp=Z,2.6nm,0.9s						
ISA	**Isabella, Lake**	**84.57**	**324**	*e*P	**P**	**08 45 38.7**	**+1.8**
ISA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TMUT	**Trail Mountain**	**84.58**	**331**	*e*P	**P**	**08 45 38.7**	**+1.5**
	comp=Z,3.7nm,1.0s						
BAKC	**Calstate**	**84.60**	**324**	*e*P	**P**	**08 45 39.3**	**+2.3**
F41A	**Three Lakes**	**84.62**	**349**	P	**P**	**08 45 37.0**	**+0.1**
	baz=168						
F41A	**Three Lakes**	**84.62**	**349**	*e*P	**P**	**08 45 36.8**	**-0.1**
	comp=Z,6.4nm,1.1s						
TPNV	**Topopah Spring**	**84.64**	**326**	P	**P**	**08 45 38.1**	**+0.7**
	baz=147						
TPNV	**Topopah Spring**	**84.64**	**326**	*e*P	**P**	**08 45 39.0**	**+1.6**
	comp=Z,3.7nm,1.1s						
TPNV	**Topopah Spring**	**84.64**	**326**	*e*P	**P**	**08 45 39.0**	**+1.6**
TPNV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
H35A	**Sunnyside Ranc**	**84.66**	**344**	P	**P**	**08 45 36.5**	**-0.6**
	baz=163,SNR=7.1						
SPMN	**Marine on St.**	**84.76**	**346**	P	**P**	**08 45 36.4**	**-1.1**
	baz=165,SNR=5.3						
SPMN	**Marine on St.**	**84.76**	**346**	*e*P	**P**	**08 45 36.7**	**-0.9**
	comp=Z,8.8nm,1.0s						
E43A	**Lone Tree Farm**	**84.94**	**350**	P	**P**	**08 45 37.8**	**-0.6**
	baz=169,SNR=10						
E43A	**Lone Tree Farm**	**84.94**	**350**	*e*P	**P**	**08 45 38.2**	**-0.2**
	comp=Z,5.4nm,0.6s						
F40A	**Park Falls**	**84.96**	**348**	P	**P**	**08 45 37.8**	**-0.8**
	baz=167,SNR=8.8						
PSUT	**Pine Spring**	**84.97**	**329**	*e*P	**P**	**08 45 40.5**	**+1.5**
	comp=Z,2.8nm,0.8s						
COWI	**Conover**	**84.98**	**349**	*e*P	**P**	**08 45 38.3**	**-0.4**
	comp=Z,5.7nm,0.8s						
VES	**Vestal, Richgr**	**85.00**	**324**	P	**P**	**08 45 39.9**	**+1.0**
	baz=146						
E44A	**Grand Marais A**	**85.04**	**351**	P	**P**	**08 45 38.7**	**-0.2**
	baz=170						
E44A	**Grand Marais A**	**85.04**	**351**	*e*P	**P**	**08 45 38.3**	**-0.6**
	comp=Z,2.7nm,0.8s						
H32A	**Carlson Farm,**	**85.06**	**343**	P	**P**	**08 45 38.0**	**-1.1**
	baz=161						
F39A	**Loretta**	**85.09**	**347**	P	**P**	**08 45 38.5**	**-0.7**
	baz=166,SNR=12						
G35A	**Watkins**	**85.09**	**345**	P	**P**	**08 45 39.5**	**+0.3**
	baz=163						
E42A	**Champion**	**85.12**	**350**	P	**P**	**08 45 37.9**	**-1.4**
	baz=168						
BELQ	**Belleterre**	**85.17**	**356**	P	**P**	**08 45 39.2**	**-0.4**
	baz=176						
F37A	**Hinrichs Farm,**	**85.21**	**346**	P	**P**	**08 45 39.1**	**-0.7**
	baz=165						
RWWY	**Rawlins**	**85.26**	**335**	*e*P	**P**	**08 45 41.0**	**+0.6**
	comp=Z,12nm,1.1s						
F38A	**Pierce - Schro**	**85.30**	**347**	P	**P**	**08 45 39.7**	**-0.5**
	baz=165,SNR=8.6						
E41A	**Kenton**	**85.31**	**349**	P	**P**	**08 45 39.6**	**-0.6**
	baz=168						
G34A	**Benson**	**85.36**	**344**	P	**P**	**08 45 40.5**	**0.0**
	baz=162						
MPU	**Maple Canyon**	**85.37**	**331**	*e*P	**P**	**08 45 42.5**	**+1.5**

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      comp=Z,7.5nm,1.1s
E40A  Wakefield         85.43 348  P       P         08 45 40.3  -0.6
      baz=167,SNR=9.5
E39A  Mellen            85.48 348  P       P         08 45 40.4  -0.7
      baz=166,SNR=10
G33A  Ortonville        85.49 344  P       P         08 45 40.8  -0.3
      baz=162
F36A  Milaca            85.51 346  P       P         08 45 40.6  -0.7
      baz=164,SNR=8.9
F36A  Milaca            85.51 346 eP       P         08 45 40.6  -0.7
      comp=Z,8.8nm,1.1s
R11A  Troy Canyon, C    85.53 328  P       P         08 45 42.3  +0.5
      baz=148
R11A  Troy Canyon, C    85.53 328 eP       P         08 45 43.2  +1.5
      comp=Z,3.2nm,1.0s
F35A  Swanville         85.72 345  P       P         08 45 41.8  -0.5
      baz=163
G32A  Webster           85.79 343  P       P         08 45 42.5  -0.2
      baz=161
F34A  Alexandria        85.80 345  P       P         08 45 42.5  -0.2
      baz=163
D41A  Chassel           85.83 349  P       P         08 45 42.7  -0.1
      baz=168
D41A  Chassel           85.83 349 eP       P         08 45 42.4  -0.5
      comp=Z,11nm,0.8s
E38A  The Farm, Brul    85.87 347  P       P         08 45 42.6  -0.4
      baz=166
E38A  The Farm, Brul    85.87 347 eP       P         08 45 42.3  -0.7
      comp=Z,3.9nm,0.8s
K22A  Casper            85.89 336  P       P         08 45 43.5   0.0
      baz=154
K22A  Casper            85.89 336 eP       P         08 45 43.9  +0.4
      comp=Z,5.0nm,1.0s
DUG   Dugway, Tooele    85.97 330  P       P         08 45 45.2  +1.3
      baz=150
DUG   Dugway, Tooele    85.97 330 eP       P         08 45 45.6  +1.7
      comp=Z,2.3nm,1.0s
DUG   Dugway, Tooele    85.97 330 eP       P         08 45 45.6  +1.7
DUG                                pmax    pmax
      comp=Z,2.0nm,1.0s
E36A  McGregor          86.09 346  P       P         08 45 43.6  -0.5
      baz=164,SNR=11
TOA0  Torodi Ar. Sit    86.24  70 eP       P         08 45 43.4  -2.2
TOA0                              eP       P         08 45 45.3  -0.3
TORD  Torodi Ar. Bea    86.24  70  P       P         08 45 43.9  -1.8
      comp=Z,9.8nm,0.9s
TORD                               LR      LR        09 21 13.2
      comp=Z,125nm,21.2s,baz=270,slow=34
TCUT  Toone Canyon      86.24 332 eP       P         08 45 46.7  +1.3
      comp=Z,14nm,1.1s
TOA1  Torodi Ar. Sit    86.24  70 eP       P         08 45 43.9  -1.8
E35A  Pequot Lakes      86.35 345  P       P         08 45 45.2  -0.3
      baz=164
OMMB  Old Mammoth Mi    86.41 325 eP       P         08 45 48.2  +1.8
      comp=Z,6.5nm,1.2s
RSSD  Black Hills       86.46 338  P       P         08 45 45.8  -0.5
      baz=156
RSSD  Black Hills       86.46 338 eP       P         08 45 46.5  +0.2
      comp=Z,5.4nm,0.9s
RSSD  Black Hills       86.46 338 eP       P         08 45 46.5  +0.2
RSSD                               pmax    pmax
      comp=Z,5.0nm,0.9s
E34A  Wadena            86.47 345  P       P         08 45 46.3  +0.3
      baz=163
D37A  Cotton            86.56 347  P       P         08 45 45.4  -1.0
      baz=165,SNR=8.0
D36A  Goodland          86.71 346 eP       P         08 45 47.8  +0.6
      comp=Z,13nm,0.2s
HWUT  Hardware Ranch    86.72 332 eP       P         08 45 48.1  +0.5
      comp=Z,6.5nm,1.0s
NV01  Mina Array Sit    86.77 326 eP       P         08 45 48.5  +0.5
NV01                              ePcP     sP        08 46 00.5  -0.8
NVAR  Mina Array Bea    86.77 326  P       P         08 45 49.0  +1.0
      comp=Z,1.0nm,0.7s,baz=159,slow=5.9,SNR=8.9
NVAR                               pP      sP        08 46 00.5  -0.8
      comp=Z,2.3nm,0.7s,baz=155,slow=5.7,SNR=13
NVAR                               LR      LR        09 17 10.5
      comp=Z,120nm,19.6s,baz=266,slow=30
D35A  Remer             86.79 346  P       P         08 45 46.9  -0.7
      baz=164,SNR=8.2
C39A  Grand Marais      86.81 348  P       P         08 45 46.7  -0.9
      baz=167
C38A  Sawbill Land.     86.89 348  P       P         08 45 46.8  -1.3
      baz=166,SNR=7.0
BW06  Boulder Array     87.02 334  P       P         08 45 47.8  -1.3
      baz=152
BW06  Boulder Array     87.02 334 eP       P         08 45 49.5  +0.5
      comp=Z,3.2nm,1.0s
PD31  Pinedale Array    87.02 334 eP       P         08 45 49.5  +0.5
PD31                              ePcP     pP        08 46 00.4  +1.5
PDAR  Pinedale Array    87.02 334  P       P         08 45 49.3  +0.2
      comp=Z,1.1nm,0.7s,baz=110,slow=3.5,SNR=12
PDAR                               pP      pP        08 46 00.4  +1.5
      comp=Z,3.0nm,0.9s,baz=230,slow=8.5,SNR=12
PDAR                               LR      LR        09 20 51.1
      comp=Z,202nm,18.4s,baz=158,slow=33
PDAR  Pinedale Array    87.02 334 eP       P         08 45 48.2  -0.8
PDAR                               pP      pP        08 46 00.4  +1.5
RYN   Ryan              87.03 326 eP       P         08 45 51.3  +2.1
      comp=Z,3.6nm,0.9s
C37A  Embarrass         87.06 347  P       P         08 45 48.1  -0.8
      baz=165
EYMN  Ely               87.15 348  P       P         08 45 48.5  -0.9
      baz=166,SNR=8.3
EYMN  Ely               87.15 348 eP       P         08 45 48.8  -0.6
      comp=Z,3.6nm,0.9s
KVN   Kaiserville       87.19 326 eP       P         08 45 51.4  +1.4
      comp=Z,2.2nm,1.0s
KVN   Kaiserville       87.19 326 eP       P         08 45 51.4  +1.4
KVN                                pmax    pmax
      comp=Z,2.0nm,1.0s
C36A  Pine Crest Far    87.21 347  P       P         08 45 48.7  -0.9
      baz=165
C35A  Jirik Farms, M    87.37 346  P       P         08 45 49.6  -0.8
      baz=164,SNR=12
MATQ  Matagami          87.48 357  P       P         08 45 50.1  -0.7
      baz=177
C34A  RKJ Ranch, Bem    87.50 345  P       P         08 45 49.9  -1.1
      baz=163
CHGQ  Chibougamau       87.54 359  P       P         08 45 50.3  -0.8
      baz=179
AHID  Auburn Hatcher    87.56 333 eP       P         08 45 53.3  +1.6
      comp=Z,1.7nm,0.6s
B35A  Bob, Littlefor    87.95 346  P       P         08 45 52.4  -0.7
      baz=164
B35A  Bob, Littlefor    87.95 346 eP       P         08 45 52.3  -0.8
      comp=Z,11nm,0.7s
REDW  Red Top Meadow    87.99 333 eP       P         08 45 54.1  +0.4
      comp=Z,3.7nm,0.9s
SNOW  Snow King Moun    88.05 333 eP       P         08 45 55.8  +1.8
      comp=Z,3.2nm,0.8s
LOHW  Long Hollow       88.12 334 eP       P         08 45 54.7  +0.4
      comp=Z,1.2nm,0.8s
TPAW  Teton Pass        88.14 333 eP       P         08 45 55.4  +0.9
      comp=Z,4.1nm,1.0s
B34A  Aery, Baudette    88.25 346  P       P         08 45 53.5  -1.1
      baz=163
MOOW  Moose Ponds       88.29 334 eP       P         08 45 55.8  +0.6
      comp=Z,0.7nm,0.6s
FXWY  Fox Creek         88.30 333 eP       P         08 45 55.5  +0.3
      comp=Z,2.3nm,1.0s
AGMN  Agassiz Nation    88.31 345  P       P         08 45 54.1  -0.7
      baz=162
AGMN  Agassiz Nation    88.31 345 eP       P         08 45 54.2  -0.6
      comp=Z,11nm,0.8s
IMW   Indian Meadow     88.49 334 eP       P         08 45 56.7  +0.5
      comp=Z,2.1nm,1.0s
FLWY  Flagg Ranch       88.57 334 eP       P         08 45 57.2  +0.8
      comp=Z,5.0nm,1.0s
MDND  Maddock           88.72 342  P       P         08 45 57.1  +0.3
      baz=160
MDND  Maddock           88.72 342 eP       P         08 45 57.6  +0.8
      comp=Z,36nm,0.8s
A33A  Warroad           88.83 345  P       P         08 45 56.9  -0.3
      baz=163
RLMT  Red Lodge         89.00 335  P       P         08 45 58.7  +0.3
      baz=152
RLMT  Red Lodge         89.00 335 eP       P         08 46 00.0  +1.6
      comp=Z,1.8nm,0.8s
YMR   Madison River     89.17 334 eP       P         08 46 00.4  +1.1
      comp=Z,2.2nm,0.6s
LSZ   Lusaka            89.22 109 eP       P         08 46 01.2  +1.0
      comp=Z,7.4nm,1.0s
LSZ   Lusaka            89.22 109 eP       P         08 46 01.2  +1.0
LSZ                                pmax    pmax
      comp=Z,7.0nm,1.0s
HLID  Hailey            89.47 331 eP       P         08 46 01.8  +1.1
      comp=Z,3.9nm,1.1s
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MFID  Camas Ranch       89.90 330 eP       P         08 46 03.9  +1.4
      comp=Z,3.5nm,1.1s
MCMT  McKenzie Canyo    89.98 333 eP       P         08 46 04.2  +1.1
ULM   Lac du Bonnet     90.17 346  P       P         08 46 03.0  -0.5
      comp=Z,3.9nm,0.7s,baz=181,slow=4.5,SNR=5.3
ULM                                pP      pP        08 46 14.3  +1.0
      comp=Z,4.1nm,0.6s,baz=184,slow=6.4,SNR=4.3
BOZ   Bozeman (W)       90.21 334  P       P         08 46 04.6  +0.6
      baz=151
BOZ   Bozeman (W)       90.21 334 eP       P         08 46 04.8  +0.8
      comp=Z,1.4nm,1.1s
BOZ   Bozeman (W)       90.21 334 eP       P         08 46 04.8  +0.8
BOZ                                pmax    pmax
      comp=Z,1.0nm,1.1s
WVOR  Wild Horse Val    90.22 328 eP       P         08 46 05.9  +1.8
      comp=Z,6.1nm,1.1s
DLMT  Dillon            90.35 333 eP       P         08 46 06.0  +1.3
      comp=Z,0.3nm,0.6s
DGMT  Dagmar            90.47 340  P       P         08 46 05.0   0.0
      baz=156
LRM   Limekiln Ridge    90.69 334 eP       P         08 46 07.2  +0.9
J08A  Circle Bar Ran    90.91 329 eP       P         08 46 08.6  +1.3
      comp=Z,5.5nm,1.0s
SCHQ  Schefferville     92.61   4  LR      LR        09 27 40.3
      comp=Z,71nm,21.1s,baz=166,slow=35
MDT   Midelt            94.86  52  LR      LR        09 28 43.8
      comp=Z,629nm,19.7s,baz=240,slow=35
DZM   Mont Dzumac       98.30 234 eLR      LR        09 18 48.7
      comp=Z,446nm,24.4s
KIP   Kipapa            99.19 290 eP       Pdif      08 46 47.2  +1.7
ESDC  Sonseca Array     99.84  47  LR      LR        09 30 38.0
      comp=Z,121nm,19.4s,baz=225,slow=35
YKA   Yellowknife Ar   105.61 341  Pdiff   Pdif      08 47 22.9   +10
      comp=Z,0.6nm,0.6s,baz=151,slow=5.0,SNR=4.7
YKB5  Yellowknife Ar   105.61 341 ePdif    Pdif      08 47 22.9   +10
ASAR  Alice Springs    113.69 207  PKiKP   PKiKP     08 51 41.0  -1.6
      comp=Z,0.4nm,0.7s,baz=143,slow=2.2,SNR=3.9
ASAR                               PKKPbc  PKKPbc    09 02 24.0  -0.7
      comp=Z,0.4nm,0.8s,baz=346,slow=3.3,SNR=5.1
ASAR                               PKKPab  PKKPab    09 02 31.9  -3.6
      comp=Z,0.6nm,0.9s,baz=334,slow=3.6,SNR=4.1
ASAR                               PKKP    PKKPdf    09 02 42.7  -2.4
      comp=Z,0.5nm,0.9s,baz=339,slow=3.3,SNR=4.2
ASAR  Alice Springs    113.69 207  PKIKP   PKiKP     08 51 41.0  -1.6
AS31  Alice Springs    113.69 207 ePKiKP   PKiKP     08 51 41.0  -1.6
GEC2  GERESS Array S   115.44  47 ePKiKP   PKPdf     08 51 43.7  -1.3
GEC2  GERESS Array S   115.44  47 ePKIKP   PKPdf     08 51 43.7  -1.3
GERES GERESS Array B   115.44  47  PKP     PKPdf     08 51 43.7  -1.3
      comp=Z,0.9nm,0.6s,baz=197,slow=1.4,SNR=6.6
WR1   Warramunga Arr   116.93 209 ePKPdf   PKPdf     08 51 47.2  -1.7
WRA   Warramunga Arr   116.93 209  PKP     PKPdf     08 51 47.2  -1.7
      comp=Z,0.5nm,0.4s,baz=159,slow=1.6,SNR=14
WRA                                pPKP    pPKPdf    08 51 59.0  +0.1
      comp=Z,0.5nm,0.5s,baz=166,slow=1.3,SNR=2.9
WRA   Warramunga Arr   116.93 209  PKIKP   PKPdf     08 51 47.2  -1.7
WRA                                                  08 51 59.1
WRA                                pmax    pmax
      comp=Z,1.0nm,0.4s
WRA                                pmax    pmax
      comp=Z,1.0nm,0.5s
WRAB  Tennant Creek    116.93 209⇓iPKIKP   PKPpre    08 51 43.6
ILAR  Eielson Array    117.41 332  PKP     PKPdf     08 51 46.0  -2.2
      comp=Z,0.4nm,0.7s,baz=164,slow=2.8,SNR=4.9
ILAR                               pPKP    pPKPdf    08 51 58.9  +0.5
      comp=Z,0.4nm,0.7s,baz=166,slow=2.9,SNR=4.1
ILB   Eielson Array    117.41 332 ePKPdf   PKPdf     08 51 46.0  -2.2
TOLK  Toolik Lake Re   120.24 336  P       PKPdf     08 51 53.4  -0.3
      baz=118
TOLK  Toolik Lake Re   120.24 336 ePKPdf   PKPdf     08 51 53.2  -0.4
BR101 Keskin Array S   124.33  64 ePKPdf   PKPdf     08 52 01.5  -1.0
BR131 Keskin Array S   124.33  64 ePKPdf   PKPdf     08 52 02.6  +0.1
BRTR  Keskin Array B   124.33  64  PKP     PKPdf     08 52 01.5  -1.0
      comp=Z,2.8nm,0.8s,baz=203,slow=3.9,SNR=7.2
AKASG Malin Array Be   125.37  50  PKP     PKPdf     08 52 03.0  -0.9
      comp=Z,0.4nm,0.4s,baz=265,slow=3.4,SNR=5.2
AKBB  Malin Array Si   125.37  50 ePKPdf   PKPdf     08 52 03.0  -0.9
AKBB  Malin Array Si   125.37  50 ePKIKP   PKPdf     08 52 03.0  -0.9
RAYN  Ar Rayn          126.05  87 ePKPdf   PKPdf     08 52 06.9  +0.7
RAYN  Ar Rayn          126.05  87 ePKIKP   PKPdf     08 52 06.9  +0.7
OBN   Obninsk          130.78  46⇓ePKIKP   PKPdf     08 52 14.8  +0.7
OBN                                                  08 54 28.0
OBN                                pmax    pmax
      comp=Z,11nm,0.6s
VSR   Storozhevoye     131.56  51 i PKIKP  PKPdf     08 52 16.5  +0.8
KIV   Kislovodsk       132.12  61 i PKIKP  PKPdf     08 52 17.1  -0.1
KIV                                pmax    pmax
      comp=Z,8.0nm,1.1s
KBZ   Khabaz           132.20  62  PKP     PKPdf     08 52 17.5  +0.3
      comp=Z,2.4nm,0.8s,baz=341,slow=3.3,SNR=4.7
GNI   Garni            132.44  67 i PKIKP  PKPdf     08 52 18.1  +0.1
BILL  Bilibino         136.07 332⇑iPKIKP   PKPdf     08 52 24.3  +0.6
BILL                                                 08 59 34.0
BILL                               pmax    pmax
      comp=Z,12nm,1.9s
BILL                               MLR     MLR
      comp=Z,81nm,20.0s
SEY   Seymchan         143.07 327  PKhKP   PKPpre    08 52 33.2
ARU   Arti             143.18  44  PKhKP   PKPpre    08 52 32.9
      comp=Z,4.0nm,0.3s,baz=274,slow=1.1,SNR=5.5
ARU   Arti             143.18  44 i PKIKP  PKPab     08 52 33.2  +0.6
ARU                                SS      SS        09 14 17.6  -8.0
ARU                                MLR     MLR
      comp=Z,257nm,25.0s
AKTO  Aktyubinsk       143.35  54  PKhKP   PKPpre    08 52 33.7
      comp=Z,6.1nm,0.8s,baz=232,slow=2.3,SNR=11
AKTO                               PKP     PKPdf     08 52 38.0  +0.5
      comp=Z,6.1nm,0.8s,baz=300,slow=4.0,SNR=10
PSI   Prapat           144.18 166  PKP     PKPab     08 52 37.1  -0.8
      comp=Z,21nm,0.6s,baz=180,slow=6.3,SNR=19
PSI   Prapat           144.18 166 ePKPdf   PKPab     08 52 36.7  -1.2
SVE   Sverdlovsk       144.23  43 ePKIKP   PKPbc     08 52 37.0  -0.1
SVE                                pmax    pmax
      comp=Z,20nm,1.3s
TIXI  Tiksi            144.47 348  PKP     PKPab     08 52 36.6  -0.6
      comp=Z,22nm,1.0s,baz=11,slow=3.7,SNR=16
TIXI  Tiksi            144.47 348 i PKHKP  PKPpre    08 52 35.1
AB31  Akbulak array    144.61  56 i PKIKP  PKPab     08 52 37.6  -0.8
AB31                               pmax    pmax
      comp=Z,54nm,1.3s
ABKAR Akbulak array    144.61  56 ePKPdf   PKPbc     08 52 38.4  -0.1
KBL   Kabul            149.28  85 ePKPbc   PKPbc     08 52 54.1  +1.4
BVA0  Borovoye Array   150.60  47 i PKIKP  PKPdf     08 52 49.5   0.0
BVA0                               pmax    pmax
      comp=Z,16nm,0.8s
BVAR  Borovoye Array   150.60  47  PKP     PKPdf     08 52 49.7  +0.2
      comp=Z,0.8nm,0.6s,baz=324,slow=7.3,SNR=4.8
BVAR                               PKPbc   PKPbc     08 52 55.1  +0.1
      comp=Z,8.5nm,0.7s,baz=298,slow=3.2,SNR=32
BVAR                               PKPab   PKPab     08 53 01.4  -0.5
      comp=Z,4.9nm,0.7s,baz=321,slow=6.3,SNR=8.7
KK31  Karatay Array    151.90  68 ePKPbc   PKPbc     08 52 57.9  -0.5
KK31  Karatay Array    151.90  68 i PKIKP  PKPbc     08 52 57.5  -0.8
KK31                               pmax    pmax
      comp=Z,4.0nm,0.6s
KKAR  Karatay Array    151.90  68 ePKPbc   PKPbc     08 52 57.9  -0.5
YAK   Yakutsk          152.19 337  PKPbc   PKPbc     08 52 58.1  -0.2
      comp=Z,14nm,0.5s,baz=240,slow=1.5,SNR=2.6
YAK                                PKPab   pPKPbc    08 53 08.3  -0.1
      comp=Z,43nm,0.7s,baz=21,slow=1.1,SNR=5.6
YAK   Yakutsk          152.19 337 ePKIKP   PKPbc     08 52 55.6  -2.7
YAK                               e                  08 56 44.7
YAK                                pmax    pmax
      comp=Z,24nm,1.4s
YAK                                pmax    pmax
      comp=N,3.0nm,1.4s
YAK                                pmax    pmax
      comp=E,5.0nm,1.5s
YAK                                pmax    pmax
      comp=Z,42nm,2.5s
YAK                                pmax    pmax
      comp=N,21nm,2.7s
YAK                                pmax    pmax
      comp=E,25nm,3.0s
NIL   Nilore           152.32  89 ePKPdf   PKPdf     08 52 53.1  +0.3
NIL   Nilore           152.32  89 ePKIKP   PKPdf     08 52 53.1  +0.3
NKL   Nikolayevsk      152.34 314 ePKIKP   PKPbc     08 52 56.0  -2.9
NKL                                pmax    pmax
      comp=Z,34nm,1.0s
YSS   Yuzh-Sakhalins   152.41 300 ePKPab   PKPab     08 53 10.4  +0.8
YSS   Yuzh-Sakhalins   152.41 300 ePKIKP   PKPbc     08 52 58.0  -1.3
YSS                               e                  08 53 10.3
ASAJ  Asahikawa        152.68 294  PKPbc   PKPbc     08 52 59.9  -0.1
      comp=Z,5.9nm,1.0s,baz=304,slow=11,SNR=2.8
ASAJ                               PKPab   PKPab     08 53 11.0  +0.1
      comp=Z,10nm,0.8s,baz=219,slow=9.2,SNR=6.5
ASAJ  Asahikawa        152.68 294 ePKPbc   PKPbc     08 52 59.9  -0.1
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ASAJ                              ePKPab   PKPab     08 53 10.6  -0.3
OTUK  Ortayu           152.86  57  PKIKP   PKPbc     08 53 00.0  -0.3
OTUK                               pmax    pmax
      comp=Z,16nm,1.3s
MNAS  Manas            153.34  69  PKIKP   PKPdf     08 52 53.6  -0.6
MNAS                               pmax    pmax
      comp=Z,10.0nm,1.3s
SFK   Sufi-Kurgan      153.91  75  PKIKP   PKPbc     08 53 02.9  -0.3
SFK                                pmax    pmax
      comp=Z,18nm,0.9s
AAK   Ala-Archa        154.82  69  PKP     PKPdf     08 52 56.9  +0.7
      comp=Z,1.3nm,0.3s,baz=232,slow=3.4,SNR=6.7
AAK                                PKPbc   PKPbc     08 53 04.7  -0.2
      comp=Z,7.7nm,0.8s,baz=157,slow=1.8,SNR=6.8
AAK                                PKPab   PKPab     08 53 20.0  -0.2
      comp=Z,11nm,0.7s,baz=358,slow=7.1,SNR=4.3
AAK   Ala-Archa        154.82  69 ePKPdf   PKPdf     08 52 56.9  +0.7
AAK                               ePKPbc   PKPbc     08 53 04.7  -0.2
AAK                               ePKPbc   PKiKP     08 53 05.5  +0.5
AAK                               ePKPab   PKPab     08 53 20.0  -0.2
AAK                               ePKPab   sPKPbc    08 53 20.5  +2.0
FRU   Bishkek          154.91  69 ePKIKP   PKPdf     08 52 58.0  +1.8
FRU                               i                  08 53 21.0
FRU                               i                  08 56 57.0
KSH   Kashi            155.75  77 ePKP     PKPdf     08 52 57.4  -0.2
KSH                                PKS     PKSdf     08 56 29.8  -1.9
KSH                                PP      PP        08 57 02.0  +0.1
KSH                                SKS     SKSdf     09 00 01.6  -0.1
KSH                                SKKS    SKKSac    09 03 50.2  +1.4
KSH                                SS      SS        09 16 45.9  -1.7
KSH                                AMB     AMB
      comp=Z,170nm,7.8s
KSH                                LR      LR
      comp=Z,130nm,11.3s
KSH                                LR      LR
      comp=Z,130nm,12.2s
KURBB Kurchatov Arra   156.15  49  PKP     PKPdf     08 52 56.6  -0.9
      comp=Z,2.1nm,1.0s,baz=279,slow=2.0,SNR=14
KURBB                              PKPab   PKPab     08 53 25.3  -0.1
      comp=Z,5.4nm,0.8s,baz=286,slow=4.6,SNR=18
KURK  Kurchatov        156.17  49 ePKPdf   PKPdf     08 52 56.6  -1.0
KURK                              ePKPdf   PKPdf     08 52 57.6   0.0
KURK                              ePKPdif  PKPdf     08 53 07.7   +10
KURK                              ePKPab   PKPab     08 53 25.1  -0.3
KURK                              ePKPab   PKPab     08 53 25.3  -0.2
KURK  Kurchatov        156.17  49 ePKIKP   PKPdf     08 52 56.6  -1.0
KURK                              e                  08 53 25.1
NVS   Novosibirsk      156.65  36 ePKIKP   PKPdf     08 52 57.4  -0.6
TARG  Taragay, Kyrgy   157.27  71 ePKPab   PKPab     08 53 30.8  -0.3
ZAA1  Zalesovo Array   157.92  37 ePKPdf   PKPdf     08 52 58.4  -1.3
ZAA1                              ePKPab   PKPab     08 53 32.4  -0.5
ZALV  Zalesovo Beam    157.92  37  PKP     PKPdf     08 52 58.4  -1.3
      comp=Z,0.7nm,0.3s,baz=270,slow=3.0,SNR=4.4
ZALV                               PKPab   PKPab     08 53 32.4  -0.5
      comp=Z,2.2nm,0.5s,baz=290,slow=4.8,SNR=4.3
CM31  Chiang Mai Arr   159.27 158 ePKPdf   PKPdf     08 53 01.3  -1.1
CM31                              ePKPab   PKPab     08 53 39.1  -0.5
CMAR  Chiang Mai Arr   159.27 158  PKP     PKPdf     08 53 01.3  -1.1
      comp=Z,1.4nm,0.3s,baz=209,slow=1.7,SNR=2.7
CMAR                               PKPab   PKPab     08 53 39.1  -0.5
      comp=Z,0.9nm,0.3s,baz=223,slow=6.1,SNR=3.7
MAKZ  Makanchi         159.55  57 ePKPdf   PKPdf     08 53 01.3  -0.6
MAKZ  Makanchi         159.55  57 ePKIKP   PKPdf     08 53 01.3  -0.6
MK31  Makanchi Array   159.76  56 ePKPdf   PKPdf     08 53 02.2   0.0
MK31                              ePKPab   PKPab     08 53 40.7  -0.5
MK31  Makanchi Array   159.76  56 ePKIKP   PKPdf     08 53 02.2   0.0
MK31                              e                  08 53 40.7
MK32  Makanchi Array   159.76  56 ePKPdf   PKPdf     08 52 59.9  -2.3
MK32                              ePKPab   PKPab     08 53 40.5  -0.8
MK32                              ePP      PP        08 57 23.4  +0.1
MKAR  Makanchi Array   159.76  56  PKP     PKPdf     08 52 59.9  -2.3
      comp=Z,2.0nm,0.9s,baz=298,slow=2.6,SNR=13
MKAR                               PKPab   PKPab     08 53 40.5  -0.8
      comp=Z,4.3nm,0.7s,baz=284,slow=3.7,SNR=13
MKAR                               PP      PP        08 57 23.4  +0.1
      comp=Z,1.4nm,0.9s,baz=270,slow=4.9,SNR=4.7
MKAR  Makanchi Array   159.76  56 ePKPdf   PKPdf     08 53 02.2   0.0
MKAR                              ePKPab   PKPab     08 53 40.7  -0.5
MKAR                               PP      PP        08 57 23.4  +0.1
MKAR  Makanchi Array   159.76  56 ePKIKP   PKPdf     08 53 02.2   0.0
MKAR                              e                  08 53 40.7
MKAR                                                 08 57 23.4
MK01  Makanchi Array   159.77  56 ePKPdf   PKPdf     08 53 01.3  -0.9
WMQ   Urumqi           164.24  62 ePKP     PKPdf     08 53 07.0  +0.1
WMQ                                LR      LR
      comp=Z,170nm,35.3s
WMQ                                LR      LR
      comp=Z,470nm,39.2s
WMQ                                LR      LR
      comp=Z,250nm,30.3s
NJ2   Nanjing          168.68 242 ePKP     PKPdf     08 53 11.6  +1.0
SONA1 Songino Array    170.14   3 ePKPdf   PKPdf     08 53 10.0  -1.2
SONA0 Songino Array    170.16   3 ePKPdf   PKPdf     08 53 10.4  -0.7
SONA0                             ePKPab   PKPab     08 54 27.6  +0.7
SONM  Songino Array    170.16   3  PKP     PKPdf     08 53 10.4  -0.7
      comp=Z,0.2nm,0.3s,baz=270,slow=1.5,SNR=4.9
SONM                               PKPab   PKPab     08 54 27.6  +0.7
      comp=Z,1.1nm,0.7s,baz=356,slow=5.9,SNR=4.8
GTA   Gaotai           174.14  74 ePKP     PKPdf     08 53 13.2  -0.1
GTA                                PKPab   PKPab     08 54 45.5  +0.4
GTA                                PP      PP        08 58 40.7  +2.9
GTA                                SS      SS        09 19 57.9  +2.2
GTA                                AMB     AMB
      comp=Z,170nm,6.4s
GTA                                LR      LR
      comp=Z,90nm,20.6s
GTA                                LR      LR
      comp=Z,110nm,19.0s
GTA                                LR      LR
      comp=Z,300nm,21.6s
HHC   Hu-ho-hao-te     175.51 311 ePKP     PKPdf     08 53 14.7  +1.1
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NDI ***04*** *08:37:31.2±2.6, 33°.78N×75°.21E, h41km±971km, ML3.7*
IDC ***04*** *08:37:36.1±0.9, 33°.44N×76°.10E, h0km, mb3.8/9, mb1 4.0/13, mb1mx3.7/72, mbtmp3.8/13, ML3.7/3, Error ellipse: s-maj=28.9km s-min=15.5km az=62.0*
ISCJB ***04*** *08:37:37.1±0.4, 33°.28N±0°.04×75°.6E±0°.1, h33km, mb3.7/9, Error ellipse: s-maj=12.8km s-min=3.3km az=161.9*
NNC ***04*** *08:37:43.1±3.4, 33°.58N×75°.03E, h0km, mb3.8, mpv3.8, Error ellipse: s-maj=92.6km s-min=24.6km az=81.0*
ISC 04 08:37:40.5±0.6**, 33°.31N**±0°.05×**75°.7E**±0°.1**, h35km, n26, σ2s.25**/34**, mb3.8**/9**, 3C-2D, Eastern Kashmir**

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Code  Station Name       Δ°   AZ°   Phase ID           Time      Res
                                   Op      ISC       h  m  s     ISC
DHRM  DHARAMSHALA       1.17 156  eP       Pn        08 37 59.0  -1.6
DHRM                              eS       Sn        08 38 21.0  +5.7
SMLA  Simla             2.50 150  eP       Pn        08 38 19.3  +0.7
SMLA                              eS       Sn        08 38 52.0  +4.1
SMLA                               IAML              08 38 56.5
      comp=E,1µm,0.1s
SMLA                               IAML              08 38 56.6
      comp=N,472nm,0.5s
DDI   Dehra Dun         3.58 146  eP       Pn        08 38 33.2  -0.4
DDI                               eS       Sn        08 39 16.9  +2.2
DDI                                IAML              08 39 22.0
      comp=N,313nm,0.3s
DDI                                IAML              08 39 22.2
      comp=E,234nm,0.3s
JOSI  Joshimath         4.26 129  eP       Pn        08 38 41.3  -1.9
JOSI                              eS       Sn        08 39 32.1  +0.4
JOSI                               IAML              08 39 57.6
      comp=N,188nm,0.8s
JOSI                               IAML              08 39 58.3
      comp=E,220nm,0.8s
BHGR  Bahadurgarh       4.73 167  eS       Sn        08 39 41.5  -1.5
NDI   New Delhi         4.79 164  eS       Sn        08 39 45.0  +0.5
KHET  Khetri            5.22 179  eP       Pn        08 38 52.6  -3.6
KHET                              eS       Sn        08 39 52.4  -2.8
KHET                               IAML              08 40 26.6
      comp=N,41nm,0.4s
KHET                               IAML              08 40 28.6
      comp=E,55nm,0.1s
SFK   Sufi-Kurgan       6.92 346  ⇓P       Pn        08 39 20.2  +0.5
      comp=E,3.6nm,0.4s
SFK                               ⇑S       Sn        08 40 37.8  +0.6
      comp=E,8.9nm,0.3s
JASL  Jaisalmer         7.62 215  eS       Sn        08 40 39.8   -14
AAK   Ala-Archa         9.36 354   Pn      Pn        08 39 51.8  -1.2
      comp=E,0.8nm,0.3s,baz=203,slow=8.4,SNR=3.5
AAK                                Sn      Sn        08 41 37.1   0.0
      comp=E,0.5nm,0.3s,baz=244,slow=14,SNR=2.6
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MNAS	**Manas**	**9.50**	**345**	⇓P	**Pn**	**08 39 55.9**	**+0.9**
	comp=E,3.0nm,0.7s						
MNAS				⇑S	**Sn**	**08 41 41.2**	**+0.6**
	comp=E,3.9nm,0.6s						
BHPL	**Bhopal**	**10.15**	**171**	*e*P	**Pn**	**08 40 01.6**	**-2.2**
BHPL				*e*S	**Sn**	**08 41 51.0**	**-5.3**
KK31	**Karatay Array**	**10.60**	**339**	⇑P	**Pn**	**08 40 09.1**	**-0.8**
	comp=E,1.1nm,0.4s,baz=160,slow=23,SNR=3.4						
KK31				S	**Sn**	**08 42 04.6**	**-2.6**
	comp=E,3.1nm,0.5s,baz=160,slow=22,SNR=4.8						
MKAR	**Makanchi Array**	**14.36**	**18**	Pn	**Pn**	**08 40 59.7**	**-1.5**
	comp=E,0.2nm,0.3s,baz=207,slow=15,SNR=3.5						
KURBB	**Kurchatov Arra**	**17.42**	**6**	P	**Pn**	**08 41 36.6**	**-4.0**
	baz=193,slow=12,SNR=4.8						
AB31	**Akbulak array**	**19.79**	**328**	P	**Pn**	**08 42 11.6**	**+2.2**
	comp=E,0.2nm,0.4s,baz=0.0,slow=0.1,SNR=5.3						
BVAR	**Borovoye Array**	**20.07**	**351**	P	**P**	**08 42 09.7**	**-1.0**
	comp=E,0.5nm,0.3s,baz=178,slow=8.5,SNR=3.1						
AKTO	**Aktyubinsk**	**21.51**	**328**	P	**P**	**08 42 27.2**	**+0.9**
	comp=E,2.5nm,0.6s,baz=127,slow=8.6,SNR=8.6						
ZALV	**Zalesovo Beam**	**21.61**	**15**	P	**P**	**08 42 25.9**	**-1.4**
	comp=E,1.4nm,0.4s,baz=224,slow=12,SNR=3.1						
CMAR	**Chiang Mai Arr**	**25.51**	**120**	P	**P**	**08 43 03.9**	**-1.9**
	comp=E,4.9nm,0.7s,baz=311,slow=10,SNR=18						
FINES	**FINESS Array B**	**42.28**	**327**	P	**P**	**08 45 31.3**	**+1.1**
	comp=E,0.6nm,0.4s,baz=101,slow=9.9,SNR=5.3						
TORD	**Torodi Ar. Bea**	**69.64**	**273**	P	**P**	**08 48 49.6**	**+2.9**
	comp=E,1.1nm,0.9s,baz=46,slow=6.1						
ILAR	**Eielson Array**	**76.71**	**17**	P	**P**	**08 49 27.5**	**-0.2**
	comp=E,0.4nm,0.9s,baz=325,slow=5.6,SNR=3.7						
WRA	**Warramunga Arr**	**77.00**	**124**	P	**P**	**08 49 30.3**	**+0.3**
	comp=E,0.8nm,0.5s,baz=325,slow=5.8,SNR=10						
ASAR	**Alice Springs**	**79.24**	**128**	P	**P**	**08 49 42.5**	**+0.1**
	comp=E,1.0nm,0.8s,baz=318,slow=6.5,SNR=7.4						
YKA	**Yellowknife Ar**	**84.16**	**5**	P	**P**	**08 50 08.9**	**+1.2**
	comp=E,0.4nm,0.7s,baz=333,slow=3.9,SNR=2.9						

IDC ***04*** *08:40:15.9±0.9, 54°.45N×168°.91E, h0^{km}, mb3.8/11, mb1 4.0/12, mb1mx3.7/78, mbtmp3.8/12, MS4.0/2, Ms1 4.0/2, ms1mx2.6/66, Error ellipse: s-maj=24.4km s-min=20.8km az=170.0*

ISCJB ***04*** *08:40:17.3±0.4, 54°.12N±0°.05×168°.82E±0°.05, h20^{km}, mb4.0/16, MS4.1/2, Error ellipse: s-maj=7.5km s-min=3.6km az=9.5*

KRSC ***04*** *08:40:17.2±1.2, 53°.97N×168°.50E, h17^{km}±19^{km}, ML4.0*

NEIC ***04*** *08:40:18.2±0.4, 54°.47N×168°.84E, h10^{km}, mb4.6/5, Error ellipse: s-maj=12.4km s-min=7.0km az=174.0*

ISC 04 08:40:18.8±0.7**, 54°.13N**±0°.09×**168°.87E**±0°.06**, h20**^{km}**, n57,** σ**1^{s}.69**/55**, mb4.1**/16**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**2.00**	**304**	*e*P	**Pn**	**08 40 49.7**	**-1.7**
BKI				*e*S	**Sn**	**08 41 14.9**	**-0.9**
SMY	**Shemya**	**3.43**	**112**	*e*Pn	**Pn**	**08 41 12.5**	**+1.5**
KBTR	**Krutoberegovo**	**4.05**	**303**	*e*P	**Pn**	**08 41 21.1**	**+1.5**
KBTR				*e*S	**Sn**	**08 42 08.5**	**+2.1**
SMKR	**Semkarok**	**4.89**	**303**	*e*P	**Pn**	**08 41 32.3**	**+1.1**
SMKR				*e*S	**Sn**	**08 42 28.6**	**+1.4**
ZLN	**Zelenaya**	**5.01**	**295**	*e*S	**Sn**	**08 42 31.4**	**+1.3**
BDR	**Baidarnaya**	**5.01**	**302**	*e*P	**Pn**	**08 41 34.5**	**+1.6**
BDR				*e*S	**Sn**	**08 42 32.1**	**+1.9**
TUMD	**Tumrok D**	**5.04**	**286**	*e*P	**Pn**	**08 41 34.2**	**+1.0**
TUMD				*e*S	**Sn**	**08 42 31.0**	**+0.3**
BZGR	**Bezymyannyi-Gr**	**5.04**	**294**	*e*S	**Sn**	**08 42 32.3**	**+1.3**
SRKR	**Sorokina**	**5.07**	**303**	*e*S	**Sn**	**08 42 33.7**	**+2.1**
SPN	**Mys Shipunski**	**5.37**	**263**	*e*S	**Sn**	**08 42 35.3**	**-3.5**
NLC	**Nalytchevo**	**5.75**	**264**	*e*S	**Sn**	**08 42 46.2**	**-1.9**
SDLR	**Sedlovina**	**5.99**	**266**	*e*P	**Pn**	**08 41 46.0**	**-0.4**
UGLR	**Uglovaya**	**6.04**	**265**	*e*P	**Pn**	**08 41 47.2**	**+0.1**
SMAR	**Somma**	**6.04**	**266**	*e*P	**Pn**	**08 41 48.4**	**+1.2**
AVH	**Avacha**	**6.08**	**266**	*e*P	**Pn**	**08 41 48.0**	**+0.4**
KRX	**Arik**	**6.12**	**267**	*e*P	**Pn**	**08 41 47.9**	**-0.2**
RUS	**Russkaya**	**6.44**	**259**	*e*P	**Pn**	**08 41 53.2**	**+0.8**
GNL	**Ganaly**	**6.47**	**271**	*e*P	**Pn**	**08 41 53.5**	**+0.5**
GNL				*e*S	**Sn**	**08 43 05.0**	**-1.2**
PEA1	**Petropavlovsk-**	**6.72**	**266**	*e*Pn	**Pn**	**08 41 57.9**	**+1.5**
PEA1				*e*Sn	**Sn**	**08 43 12.5**	**+0.3**
PETK	**Petropavlovsk-**	**6.73**	**266**	Pn	**Pn**	**08 41 57.9**	**+1.5**
PETK				Sn	**Sn**	**08 43 12.5**	**+0.2**
	baz=98,slow=21						
ASAK	**Asacha**	**6.81**	**260**	*e*P	**Pn**	**08 41 57.7**	**+0.1**
MA2	**Magadan**	**11.30**	**306**	LR	LR	08 47 07.2	
	comp=Z,17nm,19.8s,baz=160,slow=37						
SCM	**Sheep Creek Mo**	**24.05**	**54**	*e*P	**P**	**08 45 31.7**	**-0.6**
	10nm,1.0s						
ILAR	**Eielson Array**	**24.34**	**47**	P	**P**	**08 45 32.9**	**-2.0**
	0.4nm,0.7s,baz=258,slow=6.9,SNR=9.4						
TIXI	**Tiksi**	**24.55**	**331**	P	**P**	**08 45 32.7**	**-3.9**
	2.3nm,0.6s,baz=115,slow=10,SNR=2.7						
KLU	**Klutina**	**24.73**	**54**	*e*P	**P**	**08 45 39.3**	**+0.7**
	5.5nm,0.8s						
DIV	**Divide**	**24.83**	**55**	*e*P	**P**	**08 45 38.7**	**-0.7**
	8.8nm,0.7s						
MAJO	**Matsushiro**	**27.50**	**243**	*e*P	**P**	**08 46 06.6**	**+2.9**
	24nm,0.9s						
MJB9	**Matsu-Tunnel**	**27.50**	**243**	*e*P	**P**	**08 46 06.5**	**+2.8**
	26nm,1.0s						
H11N2	**WAKE ISLAND Hy**	**34.37**	**183**	T	T	09 23 38.6	
	baz=2.3,slow=76,SNR=224						
H11N3	**WAKE ISLAND Hy**	**34.38**	**183**	T	T	09 23 39.7	
	baz=2.3,slow=76,SNR=181						
H11N1	**WAKE ISLAND Hy**	**34.38**	**183**	T	T	09 23 36.5	
	baz=2.3,slow=76,SNR=207						
H11S1	**WAKE ISLAND Hy**	**35.59**	**184**	T	T	09 25 06.9	
	baz=2.4,slow=76,SNR=126						
H11S3	**WAKE ISLAND Hy**	**35.60**	**184**	T	T	09 25 08.0	
	baz=2.4,slow=76,SNR=54						
H11S2	**WAKE ISLAND Hy**	**35.61**	**184**	T	T	09 25 08.6	
	baz=2.4,slow=76,SNR=130						
SONA0	**Songino Array**	**38.68**	**287**	*e*P	**P**	**08 47 41.5**	**+0.6**
SONM	**Songino Array**	**38.68**	**287**	P	**P**	**08 47 41.5**	**+0.6**
	0.9nm,0.6s,baz=57,slow=8.8,SNR=4.7						
KURK	**Kurchatov**	**51.51**	**306**	*e*P	**P**	**08 49 22.0**	**-0.6**
KURBB	**Kurchatov Arra**	**51.61**	**306**	P	**P**	**08 49 22.0**	**-1.4**
	1.1nm,0.8s,baz=52,slow=7.5,SNR=8.2						
CARC	**Carrizo Plain**	**51.71**	**81**	*e*P	P	08 49 29.1	+4.6
MK32	**Makanchi Array**	**52.30**	**300**	*e*P	**P**	**08 49 27.0**	**-1.6**
MKAR	**Makanchi Array**	**52.30**	**300**	P	**P**	**08 49 27.0**	**-1.6**
	0.4nm,0.4s,baz=51,slow=6.5,SNR=6.3						
SBI	**Santa Barbara**	**53.48**	**82**	*e*P	**P**	**08 49 41.0**	**+3.6**
BVAR	**Borovoye Array**	**53.71**	**312**	P	**P**	**08 49 37.9**	**-1.0**
	2.1nm,0.6s,baz=46,slow=8.6,SNR=6.8						
ARA0	**ARCESS Array S**	**53.80**	**345**	*e*P	**P**	**08 49 38.5**	**-0.8**
ARCES	**ARCESS Array B**	**53.80**	**345**	P	**P**	**08 49 38.5**	**-0.8**
	7.6nm,1.0s,baz=14,slow=8.4,SNR=3.1						
DPP	**Dos Picos Cty**	**55.04**	**81**	*e*P	**P**	**08 49 50.9**	**+2.0**
CTCC	**Cactus City**	**55.12**	**79**	*e*P	**P**	**08 49 45.6**	**-3.9**
EML	**El Monte Cty P**	**55.17**	**81**	*e*P	**P**	**08 49 50.5**	**+0.7**
AKTO	**Aktyubinsk**	**60.82**	**317**	P	**P**	**08 50 27.8**	**-1.3**
	1.4nm,0.7s,baz=68,slow=5.3,SNR=4.2						
LTX	**Lajitas**	**65.37**	**74**	*e*P	**P**	**08 50 59.5**	**-0.3**
TXAR	**Lajitas Array**	**65.37**	**74**	P	**P**	**08 50 59.5**	**-0.3**
	0.2nm,0.5s,baz=292,slow=4.7,SNR=5.4						
TKL	**Tuckaleechee C**	**70.96**	**55**	LR	LR	09 23 30.0	
	comp=Z,69nm,19.1s,baz=176,slow=37						
WR1	**Warramunga Arr**	**79.51**	**213**	*e*P	**P**	**08 52 25.4**	**+1.6**
WRA	**Warramunga Arr**	**79.51**	**213**	P	**P**	**08 52 25.4**	**+1.6**
	0.9nm,0.9s,baz=12,slow=13,SNR=3.8						
ASAR	**Alice Springs**	**83.13**	**212**	P	**P**	**08 52 45.0**	**+2.0**
	0.6nm,0.7s,baz=37,slow=3.7,SNR=6.3						
NWAO	**Narrogin (SRO)**	**97.48**	**222**	LR	LR	09 34 46.9	
	comp=Z,83nm,21.8s,baz=54,slow=34						

ATH ***04*** *08:45:24.7, 39°.90N×28°.06E, h11^{km}±3^{km}, ML4.2/5, Error ellipse: s-maj=4.1km s-min=1.8km az=143.0*

MOS ***04*** *08:45:27.0±0.8, 40°.00N×27°.94E, h10^{km}, mb4.2/5, Error ellipse: s-maj=6.9km s-min=6.1km az=77.4*

ISK ***04*** *08:45:28.7, 39°.94N×27°.84E, h13^{km}, ML4.4/44*

NEIC ***04*** *08:45:28.8±0.0, 39°.95N×27°.85E, h9^{km}, ML4.0(THE), ML4.4(ISK), After ISK.*

DDA ***04*** *08:45:28.4, 39°.95N×27°.89E, h24^{km}, Ml4.2*

THE ***04*** *08:45:29.6, 39°.90N×27°.79E, h0^{km}±3^{km}, ML4.1/5, Error ellipse: s-maj=6.4km s-min=1.2km az=83.0*

CSEM ***04*** *08:45:29.0±0.1, 39°.95N×27°.88E, h10^{km}, mb4.0/6, Error ellipse: s-maj=1.4km s-min=1.3km az=13.0*

IDC ***04*** *08:45:31.5±2.9, 40°.07N×28°.11E, h18^{km}±21^{km}, mb3.5/5, mb1 3.7/12, mb1mx3.5/63, mbtmp3.7/12, ML3.6/7, MS2.7/3, Ms1 2.8/3, ms1mx2.4/53, Error ellipse: s-maj=15.1km s-min=11.5km az=48.0*

ISC 04 08:45:28.8±1.0**, 39°.95N**±0°.01×**27°.90E**±0°.01**, h12**^{km}±7^{km}**, n442,** σ**1^{s}.07**/515**, mb3.9**/9**, 39C-29D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GONE	**Gonen-Balikesi**	**0.19**	**302**	PG	**Pb**	**08 45 33.6**	**-0.6**
GONE	**Gonen-Balikesi**	**0.19**	**302**	*i* Pg	**Pb**	**08 45 33.6**	**-0.6**
EDC	**Edincik**	**0.40**	**357**	PG	**Pb**	**08 45 37.8**	**0.0**
EDC	**Edincik**	**0.40**	**357**	*i* Pg	**Pb**	**08 45 37.8**	**0.0**
KNL	**Bal˜–kesir**	**0.43**	**319**	⇓*i*P	**Pb**	**08 45 37.8**	**-0.5**
KNL				*i* S	**Sb**	**08 45 44.1**	**-0.7**
KCTX	**Karacabey (Bur**	**0.47**	**48**	PG	**Pb**	**08 45 39.8**	**+0.7**
KCTX				SG	**Sb**	**08 45 46.3**	**+0.2**
KCTX	**Karacabey (Bur**	**0.47**	**48**	*i* Pg	**Pb**	**08 45 39.8**	**+0.7**
KCTX				*e*Sg	**Sb**	**08 45 46.3**	**+0.2**
DURS	**Dursunbey**	**0.56**	**128**	⇓*i*P	**Pg**	**08 45 40.3**	**+0.4**
DURS				*i* S	**Sb**	**08 45 48.2**	**-0.6**
DURS	**Dursunbey**	**0.56**	**128**	P	**Pg**	**08 45 40.3**	**+0.4**
DURS				S	**Sb**	**08 45 48.2**	**-0.6**
STEP	**BALIKESIR_Sava**	**0.59**	**193**	⇑*i*P	**Pg**	**08 45 40.2**	**-0.1**
STEP				*i* S	**Sb**	**08 45 48.9**	**-0.4**
STEP	**BALIKESIR_Sava**	**0.59**	**193**	P	**Pg**	**08 45 40.2**	**-0.1**
STEP				S	**Sb**	**08 45 48.9**	**-0.4**
KRBG	**Karabiga-Canak**	**0.64**	**314**	PG	**Pg**	**08 45 41.2**	**0.0**
KRBG				SG	**Sg**	**08 45 49.8**	**+0.1**
KRBG	**Karabiga-Canak**	**0.64**	**314**	*i* Pg	**Pg**	**08 45 41.2**	**0.0**
KRBG				*e*Sg	**Sg**	**08 45 49.8**	**+0.1**
DST	**Dursunbey**	**0.66**	**121**	PG	**Pg**	**08 45 41.5**	**-0.1**
DST	**Dursunbey**	**0.66**	**121**	*e*Pg	**Pg**	**08 45 41.5**	**-0.1**
MDNY	**Mudanya-Bursa**	**0.87**	**61**	PG	**Pb**	**08 45 45.8**	**0.0**
MDNY	**Mudanya-Bursa**	**0.87**	**61**	*e*Pg	**Pb**	**08 45 45.8**	**0.0**
RKY	**Sarkoy-Tekirda**	**0.92**	**324**	PG	**Pg**	**08 45 45.9**	**-0.7**
RKY				SG	**Sb**	**08 45 59.1**	**+0.2**
RKY	**Sarkoy-Tekirda**	**0.92**	**324**	*e*Pg	**Pg**	**08 45 45.9**	**-0.7**
RKY				*e*Sg	**Sb**	**08 45 59.1**	**+0.2**
SART	**Tekirdag**	**0.92**	**324**	⇓*i*P	**Pg**	**08 45 46.6**	**0.0**
SART				*i* S	**Sb**	**08 45 59.5**	**+0.5**
SART	**Tekirdag**	**0.92**	**324**	P	**Pg**	**08 45 46.6**	**0.0**
SART				S	**Sb**	**08 45 59.5**	**+0.5**
SBT3	**Marmara-Eregli**	**0.94**	**4**	PG	**Pn**	**08 45 48.3**	**+0.7**
SBT3	**Marmara-Eregli**	**0.94**	**4**	*e*Pg	**Pn**	**08 45 48.3**	**+0.7**
LPK	**Lapseki**	**0.97**	**296**	PG	**Pg**	**08 45 47.3**	**-0.2**
LPK	**Lapseki**	**0.97**	**296**	*e*Pg	**Pg**	**08 45 47.3**	**-0.2**
SBT5	**Esenkoy-Cinarc**	**1.02**	**48**	PG	**Pn**	**08 45 48.9**	**+0.1**
SBT5	**Esenkoy-Cinarc**	**1.02**	**48**	*e*Pg	**Pn**	**08 45 48.9**	**+0.1**
BAYC	**CANAKKALE_Bayr**	**1.06**	**259**	⇓*i*P	**Pg**	**08 45 48.3**	**-0.9**
BAYC				*i* S	**Sg**	**08 46 01.9**	**-1.1**
BAYC	**CANAKKALE_Bayr**	**1.06**	**259**	P	**Pg**	**08 45 48.3**	**-0.9**
BAYC				S	**Sg**	**08 46 01.9**	**-1.1**
AKHS	**Akhisar**	**1.07**	**183**	⇑*i*P	**Pb**	**08 45 48.8**	**-0.5**
AKHS				*i* S	**Sb**	**08 46 03.7**	**+0.5**
AKHS	**Akhisar**	**1.07**	**183**	P	**Pb**	**08 45 48.8**	**-0.5**
AKHS				S	**Sb**	**08 46 03.7**	**+0.5**
AKS	**Akhisar**	**1.07**	**183**	PG	**Pb**	**08 45 49.1**	**-0.2**
AKS	**Akhisar**	**1.07**	**183**	*e*Pg	**Pb**	**08 45 49.1**	**-0.2**
TKR	**Tekirdag**	**1.08**	**345**	PG	**Pb**	**08 45 49.4**	**0.0**
TKR	**Tekirdag**	**1.08**	**345**	*e*Pg	**Pb**	**08 45 49.4**	**0.0**
DEMI	**Demirci**	**1.10**	**145**	⇓*i*P	**Pg**	**08 45 50.1**	**0.0**
DEMI				*i* S	**Sb**	**08 46 04.6**	**+0.3**
DEMI	**Demirci**	**1.10**	**145**	P	**Pg**	**08 45 50.1**	**0.0**
DEMI				S	**Sb**	**08 46 04.6**	**+0.3**
AYVA	**Ayvalik**	**1.13**	**236**	⇓*i*P	**Pb**	**08 45 49.9**	**-0.3**
AYVA				*i* S	**Sg**	**08 46 05.2**	**0.0**
AYVA	**Ayvalik**	**1.13**	**236**	P	**Pb**	**08 45 49.9**	**-0.3**
AYVA				S	**Sg**	**08 46 05.2**	**0.0**
DKL	**Dikili**	**1.16**	**221**	PN	**Pb**	**08 45 50.7**	**-0.1**
DKL	**Dikili**	**1.16**	**221**	*e*Pn	**Pb**	**08 45 50.7**	**-0.1**
GELI	**Tayfur-Gelibol**	**1.18**	**293**	PN	**Pb**	**08 45 50.9**	**-0.2**
GELI	**Tayfur-Gelibol**	**1.18**	**293**	*e*Pn	**Pb**	**08 45 50.9**	**-0.2**
CRLT	**Corlu**	**1.19**	**354**	PN	**Pg**	**08 45 51.8**	**+0.2**
CRLT	**Corlu**	**1.19**	**354**	*e*Pn	**Pg**	**08 45 51.8**	**+0.2**
SMAA	**Simav-Kutahya**	**1.19**	**135**	PN	**Pg**	**08 45 52.7**	**+0.9**
SMAA	**Simav-Kutahya**	**1.19**	**135**	*e*Pn	**Pg**	**08 45 52.7**	**+0.9**
SIMA	**Simav-Kutahya**	**1.21**	**135**	PN	**Pg**	**08 45 52.2**	**+0.2**
SIMA	**Simav-Kutahya**	**1.21**	**135**	*e*Pn	**Pg**	**08 45 52.2**	**+0.2**
EZN	**Ezine**	**1.21**	**265**	PN	**Pn**	**08 45 51.6**	**0.0**
EZN	**Ezine**	**1.21**	**265**	*e*Pn	**Pn**	**08 45 51.6**	**0.0**
IZI	**Iznik**	**1.27**	**72**	PN	**Pg**	**08 45 54.2**	**+0.9**
IZI	**Iznik**	**1.27**	**72**	*e*Pn	**Pg**	**08 45 54.2**	**+0.9**
KESN	**Edirne-Kesan**	**1.28**	**314**	⇓*i*P	**Pn**	**08 45 52.6**	**-0.2**
KESN				*i* S	**Sg**	**08 46 09.9**	**-0.2**
KESN	**Edirne-Kesan**	**1.28**	**314**	P	**Pn**	**08 45 52.6**	**-0.2**
KESN				S	**Sg**	**08 46 09.9**	**-0.2**
ERIK	**Erikli-Kesan**	**1.28**	**305**	PN	**Pn**	**08 45 52.6**	**+0.1**
ERIK	**Erikli-Kesan**	**1.28**	**305**	*e*Pn	**Pn**	**08 45 52.6**	**+0.1**
YLV	**Yalova**	**1.29**	**61**	PN	**Pg**	**08 45 54.0**	**+0.4**
YLV	**Yalova**	**1.29**	**61**	*e*Pn	**Pg**	**08 45 54.0**	**+0.4**
SLVT	**Silivri**	**1.30**	**11**	PN	**Pn**	**08 45 53.1**	**+0.3**
SLVT	**Silivri**	**1.30**	**11**	P	**Pn**	**08 45 50.1**	**-2.7**
SLVT	**Silivri**	**1.30**	**11**	*e*Pn	**Pn**	**08 45 53.1**	**+0.3**
SLVT				S	**Sb**	**08 46 06.7**	**-3.2**
TVSB	**Tavsanli**	**1.31**	**112**	PN	**Pb**	**08 45 53.7**	**+0.3**
TVSB	**Tavsanli**	**1.31**	**112**	*e*Pn	**Pb**	**08 45 53.7**	**+0.3**
CTKS	**Kestanelik-??a**	**1.37**	**20**	PN	**Pb**	**08 45 54.6**	**+0.3**
CTKS	**Kestanelik-??a**	**1.37**	**20**	*e*Pn	**Pb**	**08 45 54.6**	**+0.3**
SHAP	**Saphane-Kutahy**	**1.38**	**132**	PN	**Pn**	**08 45 54.3**	**+0.3**
SHAP	**Saphane-Kutahy**	**1.38**	**132**	*e*Pn	**Pn**	**08 45 54.3**	**+0.3**
BOZC	**Bozcaada**	**1.42**	**266**	PN	**Pn**	**08 45 54.5**	**0.0**
BOZC	**Bozcaada**	**1.42**	**266**	⇓*i*P	**Pn**	**08 45 54.4**	**0.0**
BOZC				*i* S	**Sb**	**08 46 13.3**	**0.0**
BOZC	**Bozcaada**	**1.42**	**266**	*e*Pn	**Pn**	**08 45 54.5**	**0.0**
KAVV	**Kandilli-Istan**	**1.43**	**38**	PN	**Pn**	**08 45 54.7**	**+0.2**
KAVV	**Kandilli-Istan**	**1.43**	**38**	*e*Pn	**Pn**	**08 45 54.7**	**+0.2**
ISK	**Istanbul-Kandi**	**1.43**	**38**	PN	**Pn**	**08 45 54.6**	**+0.1**
ISK	**Istanbul-Kandi**	**1.43**	**38**	*e*Pn	**Pn**	**08 45 54.6**	**+0.1**
PRK	**Paraskevi**	**1.44**	**241**	P	**Pn**	**08 45 54.8**	**+0.2**
PRK				S	**Sn**	**08 46 12.8**	**-0.7**
PRK				AML	AML	08 46 19.4	
	comp=N,24019μm,0.5s						
PRK				AML	AML	08 46 21.0	
	comp=E,24609μm,0.5s						
PRK	**Paraskevi**	**1.44**	**241**	P	**Pn**	**08 45 54.6**	**0.0**
PRK				S	**Sn**	**08 46 12.9**	**-0.5**
PRK	**Paraskevi**	**1.44**	**241**	P	**Pn**	**08 45 54.6**	**0.0**
PRK				S	**Sb**	**08 46 13.9**	**+0.2**
PRK	**Paraskevi**	**1.44**	**241**	P	**Pn**	**08 45 54.6**	**0.0**
PRK				S	**Sn**	**08 46 12.9**	**-0.5**
PRK	**Paraskevi**	**1.44**	**241**	P	**Pn**	**08 45 54.6**	**0.0**
PRK				S	**Sn**	**08 46 13.6**	**+0.2**
GPNR	**Gulpinar-Canak**	**1.45**	**251**	PN	**Pn**	**08 45 54.9**	**+0.1**
GPNR	**Gulpinar-Canak**	**1.45**	**251**	*e*Pn	**Pn**	**08 45 54.9**	**+0.1**
GEDZ	**Gediz**	**1.48**	**127**	PN	**Pb**	**08 45 56.3**	**0.0**
GEDZ	**Gediz**	**1.48**	**127**	*e*Pn	**Pb**	**08 45 56.3**	**0.0**
ADVT	**Abdulvahap**	**1.49**	**70**	PN	**Pg**	**08 45 57.1**	**-0.4**
ADVT	**Abdulvahap**	**1.49**	**70**	*e*Pn	**Pg**	**08 45 57.1**	**-0.4**
CAVI	**Cavuskoy**	**1.52**	**80**	PN	**Pb**	**08 45 56.6**	**-0.3**
CAVI	**Cavuskoy**	**1.52**	**80**	*e*Pn	**Pb**	**08 45 56.6**	**-0.3**
GOKC	**Gokceada-Canak**	**1.54**	**280**	PN	**Pn**	**08 45 56.2**	**+0.2**
GOKC	**Gokceada-Canak**	**1.54**	**280**	*e*Pn	**Pn**	**08 45 56.2**	**+0.2**
MANT	**Manisa**	**1.54**	**160**	*i* P	**Pn**	**08 45 56.6**	**+0.3**
MANT				*i* S	**Sn**	**08 46 15.6**	**-0.8**
MANT	**Manisa**	**1.54**	**160**	*e*Pn	**Pn**	**08 45 56.9**	**+0.5**
MANT	**Manisa**	**1.54**	**160**	P	**Pn**	**08 45 56.6**	**+0.3**
MANT	**Manisa**	**1.54**	**160**	*e*Pn	**Pn**	**08 45 56.9**	**+0.5**
MANT				S	**Sn**	**08 46 15.6**	**-0.8**
ENEZ	**Enez**	**1.55**	**301**	PN	**Pn**	**08 45 56.1**	**-0.1**
ENEZ	**Enez**	**1.55**	**301**	*e*Pn	**Pn**	**08 45 56.1**	**-0.1**
GADA	**Gvkgeada**	**1.55**	**280**	PN	**Pn**	**08 45 56.2**	**0.0**
GADA	**Gvkgeada**	**1.55**	**280**	*e*Pn	**Pn**	**08 45 56.2**	**0.0**
KULA	**Kula-Manisa**	**1.55**	**157**	PN	**Pn**	**08 45 56.8**	**+0.5**
KULA	**Kula-Manisa**	**1.55**	**157**	*e*Pn	**Pn**	**08 45 56.8**	**+0.5**
CTYL	**Yalikoy Yolu**	**1.55**	**11**	PN	**Pn**	**08 45 56.6**	**+0.3**
CTYL	**Yalikoy Yolu**	**1.55**	**11**	*e*Pn	**Pn**	**08 45 56.6**	**+0.3**
KLYT	**Kilyos**	**1.57**	**33**	PN	**Pn**	**08 45 56.6**	**+0.1**
KLYT	**Kilyos**	**1.57**	**33**	*e*Pn	**Pn**	**08 45 56.6**	**+0.1**
HRT	**Hereke**	**1.61**	**57**	PN	**Pn**	**08 45 57.8**	**+0.7**
HRT	**Hereke**	**1.61**	**57**	*e*Pn	**Pn**	**08 45 57.8**	**+0.7**
AUKUT	**KUTAHYA**	**1.64**	**89**	⇓*i*P	**Pg**	**08 45 59.7**	**-0.5**
AUKUT				*i* S	**Sg**	**08 46 26.1**	**+4.7**
AUKUT	**KUTAHYA**	**1.64**	**89**	P	**Pg**	**08 45 59.7**	**-0.5**
AUBOZ	**BOZOYUK**	**1.64**	**91**	⇓*i*P	**Pn**	**08 45 57.8**	**+0.2**
AUBOZ				*i* S	**Sg**	**08 46 21.9**	**+0.1**
AUBOZ	**BOZOYUK**	**1.64**	**91**	P	**Pn**	**08 45 57.8**	**+0.2**
AUBOZ				S	**Sg**	**08 46 21.9**	**+0.1**
BLCB	**Balcova**	**1.70**	**203**	PN	**Pn**	**08 45 58.8**	**+0.6**
BLCB	**Balcova**	**1.70**	**203**	*e*Pn	**Pn**	**08 45 58.8**	**+0.6**
ALN	**Alexandroupoli**	**1.70**	**304**	PN	**Pn**	**08 45 58.3**	**0.0**
ALN	**Alexandroupoli**	**1.70**	**304**	P	**Pn**	**08 45 58.7**	**+0.4**
ALN				S	**Sb**	**08 46 21.2**	**-0.1**
ALN				AML	AML	08 46 24.0	
	comp=N,8509μm,0.5s						
ALN				AML	AML	08 46 26.3	
	comp=E,6264μm,0.5s						
ALN	**Alexandroupoli**	**1.70**	**304**	*e*Pn	**Pn**	**08 45 58.5**	**+0.2**
ALN				*e*Sn	**Sn**	**08 46 19.9**	**0.0**
ALN	**Alexandroupoli**	**1.70**	**304**	P	**Pn**	**08 45 58.5**	**+0.2**
ALN				S	**Sb**	**08 46 22.1**	**+0.8**
ALN	**Alexandroupoli**	**1.70**	**304**	*e*P	**Pn**	**08 45 58.5**	**+0.2**
ALN				*e*		08 46 19.9	
ALN	**Alexandroupoli**	**1.70**	**304**	*e*P	**Pn**	**08 45 58.5**	**+0.2**
ALN				*e*S	**Sn**	**08 46 19.9**	**0.0**
PHSR	**Pinarhisar**	**1.70**	**351**	PN	**Pn**	**08 45 59.1**	**+0.7**
PHSR	**Pinarhisar**	**1.70**	**351**	*e*Pn	**Pn**	**08 45 59.1**	**+0.7**
KUTH	**Kutahya**	**1.73**	**108**	PN	**Pn**	**08 45 59.8**	**+1.0**
KUTH	**Kutahya**	**1.73**	**108**	*e*Pn	**Pn**	**08 45 59.8**	**+1.0**
SILT	**Sile**	**1.79**	**47**	PN	**Pn**	**08 45 59.9**	**+0.3**
SILT	**Sile**	**1.79**	**47**	*e*Pn	**Pn**	**08 45 59.9**	**+0.3**
URLA	**Izmir**	**1.88**	**213**	PN	**Pn**	**08 46 00.8**	**0.0**
URLA	**Izmir**	**1.88**	**213**	⇑*i*P	**Pn**	**08 46 00.0**	**-0.8**
URLA				*i* S	**Sg**	**08 46 30.1**	**+0.9**
URLA	**Izmir**	**1.88**	**213**	P	**Pn**	**08 46 00.0**	**-0.8**
URLA	**Izmir**	**1.88**	**213**	*e*Pn	**Pn**	**08 46 00.8**	**0.0**
GPA	**Golpazari**	**1.88**	**79**	PN	**Pb**	**08 46 02.2**	**-0.9**
GPA	**Golpazari**	**1.88**	**79**	*e*Pn	**Pb**	**08 46 02.2**	**-0.9**
SMTH	**Samothraki Isl**	**1.88**	**287**	P	**Pn**	**08 46 01.0**	**+0.2**
SMTH				S	**Sb**	**08 46 28.0**	**+1.3**
SMTH				AML	AML	08 46 29.6	
	comp=E,7196μm,0.3s						
SMTH				AML	AML	08 46 33.8	
	comp=N,12747μm,0.6s						
SMTH	**Samothraki Isl**	**1.88**	**287**	*e*Pn	**Pn**	**08 46 00.9**	**+0.1**
SMTH				*e*Sn	**Sn**	**08 46 22.5**	**-2.0**
SMTH	**Samothraki Isl**	**1.88**	**287**	P	**Pn**	**08 46 00.8**	**0.0**
SMTH				S	**Sb**	**08 46 26.2**	**-0.5**
SMTH	**Samothraki Isl**	**1.88**	**287**	P	**Pn**	**08 46 01.0**	**+0.2**
SMTH				*e*Sn	**Sn**	**08 46 22.5**	**-2.0**
SMTH				S	**Sb**	**08 46 26.2**	**-0.5**
GEYV	**SAKARYA_Geyve**	**1.92**	**73**	⇑*i*P	**Pn**	**08 46 01.6**	**+0.3**
GEYV				*i* S	**Sg**	**08 46 30.8**	**+0.4**
GEYV	**SAKARYA_Geyve**	**1.92**	**73**	P	**Pn**	**08 46 01.5**	**+0.3**
GEYV				S	**Sg**	**08 46 30.8**	**+0.4**
BORA	**Eskisehir**	**1.97**	**91**	PN	**Pb**	**08 46 03.7**	**-0.9**
BORA	**Eskisehir**	**1.97**	**91**	⇓*i*P	**Pn**	**08 46 02.3**	**+0.2**
BORA				*i* S	**Sg**	**08 46 31.6**	**-0.5**
BORA	**Eskisehir**	**1.97**	**91**	P	**Pn**	**08 46 02.3**	**+0.2**
BORA	**Eskisehir**	**1.97**	**91**	*e*Pn	**Pb**	**08 46 03.7**	**-0.9**
BORA				S	**Sg**	**08 46 31.6**	**-0.5**
SPNC	**Sapanca-Adapaz**	**1.99**	**67**	PN	**Pb**	**08 46 03.9**	**-1.0**
SPNC	**Sapanca-Adapaz**	**1.99**	**67**	*e*Pn	**Pb**	**08 46 03.9**	**-1.0**
AYDB	**Zeytinkoy-Aydi**	**2.00**	**180**	PN	**Pn**	**08 46 02.7**	**+0.2**
AYDB	**Zeytinkoy-Aydi**	**2.00**	**180**	*e*Pn	**Pn**	**08 46 02.7**	**+0.2**
SAUV	**Serdivan-Sakar**	**2.02**	**66**	PN	**Pn**	**08 46 04.1**	**+1.4**
SAUV	**Serdivan-Sakar**	**2.02**	**66**	*e*Pn	**Pn**	**08 46 04.1**	**+1.4**
ZEY	**˜zmir**	**2.02**	**213**	*i* P	**Pn**	**08 46 02.0**	**-0.7**
ZEY				*i* S	**Sb**	**08 46 29.5**	**-1.1**
DGB	**˜zmir**	**2.05**	**203**	*i* P	**Pn**	**08 46 03.0**	**-0.1**
DGB				*i* S	**Sb**	**08 46 32.1**	**+0.7**
GULT	**Gulveren**	**2.06**	**76**	PN	**Pb**	**08 46 05.2**	**-1.1**
GULT	**Gulveren**	**2.06**	**76**	*e*Pn	**Pb**	**08 46 05.2**	**-1.1**
LIA	**Limnos Island**	**2.09**	**269**	P	**Pn**	**08 46 03.9**	**+0.3**
LIA				S	**Sb**	**08 46 33.6**	**+1.2**
LIA				AML	AML	08 46 35.1	
	comp=N,6704μm,0.4s						
LIA				AML	AML	08 46 39.0	
	comp=E,3129μm,0.4s						
LIA	**Limnos Island**	**2.09**	**269**	P	**Pn**	**08 46 03.6**	**0.0**
LIA				S	**Sn**	**08 46 27.1**	**-2.3**
LIA	**Limnos Island**	**2.09**	**269**	P	**Pn**	**08 46 03.5**	**0.0**
LIA				S	**Sn**	**08 46 29.7**	**+0.3**
LIA	**Limnos Island**	**2.09**	**269**	P	**Pn**	**08 46 03.8**	**+0.3**
LIA				S	**Sn**	**08 46 29.7**	**+0.3**
EDRB	**Edirne**	**2.09**	**336**	PN	**Pn**	**08 46 03.8**	**+0.2**
EDRB	**Edirne**	**2.09**	**336**	*e*Pn	**Pn**	**08 46 03.8**	**+0.2**
KAND	**Kocaeli-Kandir**	**2.09**	**56**	⇑*i*P	**Pn**	**08 46 03.9**	**+0.2**
KAND				*i* S	**Sn**	**08 46 29.0**	**-0.6**
KAND	**Kocaeli-Kandir**	**2.09**	**56**	P	**Pn**	**08 46 03.9**	**+0.2**
KAND				S	**Sn**	**08 46 29.0**	**-0.6**
CHOS	**Chios island**	**2.12**	**223**	P	**Pn**	**08 46 04.4**	**+0.3**
CHOS	**Chios island**	**2.12**	**223**	P	**Pn**	**08 46 03.7**	**-0.3**
CHOS				S	**Sn**	**08 46 31.4**	**+1.1**
CHOS	**Chios island**	**2.12**	**223**	P	**Pn**	**08 46 03.5**	**-0.6**
CHOS				S	**Sn**	**08 46 31.1**	**+0.8**
CHOS	**Chios island**	**2.12**	**223**	P	**Pn**	**08 46 03.8**	**-0.3**
CHOS				S	**Sn**	**08 46 31.1**	**+0.8**
RDO	**Rodhopi**	**2.16**	**304**	PN	**Pn**	**08 46 04.9**	**+0.4**
RDO	**Rodhopi**	**2.16**	**304**	P	**Pn**	**08 46 05.7**	**+1.2**
RDO				S	**Sb**	**08 46 36.0**	**+1.5**
RDO				AML	AML	08 46 41.2	
	comp=E,4217μm,0.3s						
RDO				AML	AML	08 46 45.4	
	comp=N,5799μm,0.3s						
RDO	**Rodhopi**	**2.16**	**304**	*e*Pn	**Pn**	**08 46 05.0**	**+0.4**
RDO				*e*Sn	**Sn**	**08 46 31.5**	**+0.3**
RDO	**Rodhopi**	**2.16**	**304**	*e*Pn	**Pn**	**08 46 04.9**	**+0.4**
RDO	**Rodhopi**	**2.16**	**304**	P	**Pn**	**08 46 05.3**	**+0.7**
RDO				*e*Sn	**Sn**	**08 46 31.5**	**+0.3**
RDO				S	**Sb**	**08 46 35.0**	**+0.5**
AYDN	**Tasoluk**	**2.28**	**180**	*i* P	**Pn**	**08 46 05.8**	**-0.6**
AYDN	**Tasoluk**	**2.28**	**180**	P	**Pn**	**08 46 05.8**	**-0.6**
PSRA	**Psara**	**2.29**	**233**	P	**Pn**	**08 46 04.8**	**-1.6**
PSRA	**Psara**	**2.29**	**233**	P	**Pn**	**08 46 05.3**	**-1.1**
ESKT	**Eskisehir**	**2.32**	**100**	*i* P	**Pn**	**08 46 07.5**	**+0.6**
SEYT	**Eskypehyr**	**2.32**	**100**	P	**Pn**	**08 46 07.5**	**+0.6**
SMG	**Samos**	**2.38**	**201**	P	**Pn**	**08 46 04.6**	**-3.1**
SMG	**Samos**	**2.38**	**201**	P	**Pb**	**08 46 10.6**	**-1.1**
SMG	**Samos**	**2.38**	**201**	P	**Pn**	**08 46 08.4**	**+0.7**
SMG	**Samos**	**2.38**	**201**	P	**Pn**	**08 46 08.4**	**+0.7**
DNZL	**Cakiroluk**	**2.43**	**158**	*i* P	**Pn**	**08 46 08.9**	**+0.5**
DNZL	**Cakiroluk**	**2.43**	**158**	P	**Pn**	**08 46 08.9**	**+0.5**
KZIL	**AFYON_Kizioren**	**2.43**	**133**	*i* P	**Pn**	**08 46 09.1**	**+0.7**
KZIL	**AFYON_Kizioren**	**2.43**	**133**	P	**Pn**	**08 46 09.1**	**+0.7**
SAHE	**Sakarya_HENDEK**	**2.43**	**67**	*i* P	**Pn**	**08 46 08.9**	**+0.5**
SAHE	**Sakarya_HENDEK**	**2.43**	**67**	P	**Pn**	**08 46 08.9**	**+0.5**
BTAS	**Taskesti**	**2.46**	**74**	*i* P	**Pn**	**08 46 08.8**	**+0.1**
BTAS	**Taskesti**	**2.46**	**74**	P	**Pn**	**08 46 08.8**	**+0.1**
MDUB	**Mudurnu**	**2.58**	**77**	PN	**Pn**	**08 46 12.2**	**+1.7**
MDUB	**Mudurnu**	**2.58**	**77**	*e*Pn	**Pn**	**08 46 12.2**	**+1.7**
TAVA	**DENIZLI_Tavas**	**2.60**	**162**	*i* P	**Pn**	**08 46 11.2**	**+0.3**
TAVA	**DENIZLI_Tavas**	**2.60**	**162**	P	**Pn**	**08 46 11.1**	**+0.3**
MLSB	**Milas**	**2.65**	**182**	PN	**Pn**	**08 46 12.4**	**+1.0**
MLSB	**Milas**	**2.65**	**182**	*e*Pn	**Pn**	**08 46 12.4**	**+1.0**
BOLV	**Bolvadin**	**2.67**	**116**	*i* P	**Pn**	**08 46 12.8**	**+1.0**
BOLV	**Bolvadin**	**2.67**	**116**	P	**Pn**	**08 46 12.8**	**+1.0**
AUMIH	**MIHALICIK**	**2.76**	**91**	PN	**Pn**	**08 46 14.6**	**+1.6**
AUMIH	**MIHALICIK**	**2.76**	**91**	*i* P	**Pn**	**08 46 13.2**	**+0.2**
AUMIH	**MIHALICIK**	**2.76**	**91**	P	**Pn**	**08 46 13.2**	**+0.2**
AUMIH	**MIHALICIK**	**2.76**	**91**	*e*Pn	**Pn**	**08 46 14.6**	**+1.6**
BRDR	**BURDUR-Merkez**	**2.81**	**142**	*i* P	**Pn**	**08 46 14.3**	**+0.6**
BRDR	**BURDUR-Merkez**	**2.81**	**142**	P	**Pn**	**08 46 14.3**	**+0.6**
KVLA	**Kavala**	**2.85**	**291**	P	**Pn**	**08 46 16.1**	**+1.9**
KVLA	**Kavala**	**2.85**	**291**	P	**Pn**	**08 46 15.3**	**+1.2**
AUSIV	**SIVRIHISAR**	**2.86**	**99**	PN	**Pn**	**08 46 15.6**	**+1.3**
AUSIV	**SIVRIHISAR**	**2.86**	**99**	*i* P	**Pn**	**08 46 14.5**	**+0.2**
AUSIV	**SIVRIHISAR**	**2.86**	**99**	P	**Pn**	**08 46 14.5**	**+0.2**
AUSIV	**SIVRIHISAR**	**2.86**	**99**	*e*Pn	**Pn**	**08 46 15.6**	**+1.3**
BODT	**Bodrum**	**2.92**	**189**	PN	**Pn**	**08 46 16.5**	**+1.4**
BODT	**Bodrum**	**2.92**	**189**	*e*Pn	**Pn**	**08 46 16.5**	**+1.4**
ISP	**Isparta**	**2.95**	**135**	PN	**Pn**	**08 46 17.5**	**+1.9**
ISP	**Isparta**	**2.95**	**135**	⇑*i*P	**Pn**	**08 46 16.2**	**+0.6**
ISP	**Isparta**	**2.95**	**135**	*e*Pn	**Pn**	**08 46 15.9**	**+0.3**
ISP	**Isparta**	**2.95**	**135**	*i* P	**Pn**	**08 46 15.5**	**-0.1**
ISP	**Isparta**	**2.95**	**135**	*i* P	**Pn**	**08 46 15.5**	**-0.1**
ISP	**Isparta**	**2.95**	**135**	*e*Pn	**Pn**	**08 46 15.9**	**+0.3**
BAGO	**Egridir - ISPA**	**2.98**	**130**	*i* P	**Pn**	**08 46 16.6**	**+0.6**
GOLH	**Golhisar**	**3.01**	**154**	*i* P	**Pn**	**08 46 17.5**	**+1.2**
GOLH	**Golhisar**	**3.01**	**154**	P	**Pn**	**08 46 17.5**	**+1.2**
OUR	**Ouranopolis**	**3.02**	**279**	*e*Pn	**Pn**	**08 46 13.9**	**-2.6**
OUR				*e*Sn	**Sn**	**08 46 52.9**	**+0.3**
OUR	**Ouranopolis**	**3.02**	**279**	*e*P	**Pn**	**08 46 13.9**	**-2.6**
OUR				*e*		08 46 52.9	
OUR	**Ouranopolis**	**3.02**	**279**	*e*P	**Pn**	**08 46 13.9**	**-2.6**
OUR				*e*S	**Sn**	**08 46 52.9**	**+0.3**
TURN	**Turunc**	**3.12**	**170**	*i* P	**Pn**	**08 46 18.8**	**+1.0**
TURN	**Turunc**	**3.12**	**170**	P	**Pn**	**08 46 18.8**	**+1.0**
AOS	**Alonnisos**	**3.20**	**257**	P	**Pn**	**08 46 18.7**	**-0.2**
AOS	**Alonnisos**	**3.20**	**257**	*e*Pn	**Pn**	**08 46 18.9**	**0.0**
AOS	**Alonnisos**	**3.20**	**257**	P	**Pn**	**08 46 18.9**	**0.0**
DAT	**Datca**	**3.22**	**185**	*i* P	**Pn**	**08 46 16.6**	**-2.8**
DAT	**Datca**	**3.22**	**185**	P	**Pn**	**08 46 16.5**	**-2.8**

PLD	Plovdiv	3.24	313	PN	Pn	08 46 19.8	+0.4
PLD	Plovdiv	3.24	313	ePn	Pn	08 46 19.8	+0.4
PAIG	Paliouri	3.24	271	P	Pn	08 46 18.6	-0.9
PAIG	Paliouri	3.24	271	ePn	Pn	08 46 19.2	-0.2
PAIG	Paliouri	3.24	271	eP	Pn	08 46 19.2	-0.2
PAIG	Paliouri	3.24	271	P	Pn	08 46 19.3	-0.2
BCAM	Yenicaga	3.30	73	iP	Pn	08 46 21.3	+0.9
BCAM	Yenicaga	3.30	73	P	Pn	08 46 21.3	+0.9
NVR	Nevrokopi	3.37	296	P	Pn	08 46 21.8	+0.5
NVR	Nevrokopi	3.37	296	P	Pn	08 46 21.6	+0.3
NVR	Nevrokopi	3.37	296	P	Pn	08 46 21.6	+0.3
APE	Apeiranthos	3.42	214	⇓iP	Pb	08 46 26.7	-2.7
APE	Apeiranthos	3.42	214	S	Sb	08 47 08.3	-2.6
APE	Apeiranthos	3.42	214	iP	Pn	08 46 22.9	+0.9
APE	Apeiranthos	3.42	214	iP	Pn	08 46 22.9	+0.9
PLG	Polygyros	3.44	279	P	Pn	08 46 22.2	0.0
PLG	Polygyros	3.44	279	P	Pn	08 46 22.4	+0.2
PLG	Polygyros	3.44	279	P	Pn	08 46 22.4	+0.2
PLG	Polygyros	3.44	279	P	Pn	08 46 22.4	+0.2
FETY	Fethiye	3.44	164	P	Pn	08 46 23.2	+1.0
SRS	Serrai	3.48	291	P	Pn	08 46 22.5	-0.3
SRS	Serrai	3.48	291	ePn	Pn	08 46 22.9	+0.1
SRS	Serrai	3.48	291	eP	Pn	08 46 22.9	+0.1
SRS	Serrai	3.48	291	P	Pn	08 46 23.0	+0.1
AMGA	Amorgos Island	3.49	207	P	Pn	08 46 22.1	-0.8
AMGA	Amorgos Island	3.49	207	P	Pn	08 46 22.0	-0.8
SKIA	Skiathos	3.51	259	P	Pn	08 46 22.7	-0.5
SKIA	Skiathos	3.51	259	P	Pn	08 46 23.1	-0.1
KORT	Korkueli	3.52	146	iP	Pn	08 46 25.0	+1.6
KORT	Korkueli	3.52	146	P	Pn	08 46 25.0	+1.6
CMDR	Camlidere-ANKA	3.55	80	iP	Pn	08 46 23.0	-0.8
CMDR	Camlidere-ANKA	3.55	80	P	Pn	08 46 23.0	-0.8
KDHN	Kadinhani	3.58	112	iP	Pn	08 46 24.9	+0.7
KDHN	Kadinhani	3.58	112	P	Pn	08 46 24.9	+0.7
DION	Dionisos Attik	3.61	240	P	Pn	08 46 24.9	+0.3
DION	Dionisos Attik	3.61	240	P	Pn	08 46 24.7	+0.2
NEO	Neokhori	3.66	261	P	Pn	08 46 26.9	+1.6
NEO	Neokhori	3.66	261	P	Pn	08 46 26.3	+1.0
XOR	Xorichti	3.68	262	P	Pn	08 46 24.4	-1.1
XOR	Xorichti	3.68	262	P	Pn	08 46 25.1	-0.4
XOR	Xorichti	3.68	262	P	Pn	08 46 25.2	-0.3
BTIN	Bart˜–n	3.71	62	iP	Pn	08 46 26.1	+0.2
BTIN	Bart˜–n	3.71	62	P	Pn	08 46 26.1	+0.2
HORT	Hortiatis	3.73	282	P	Pn	08 46 26.2	0.0
HORT	Hortiatis	3.73	282	P	Pn	08 46 26.5	+0.3
PSN	Preselentsi	3.74	3	PN	Pn	08 46 26.4	+0.1
PSN	Preselentsi	3.74	3	ePn	Pn	08 46 26.4	+0.1
BR231	Keskin MP Arra	3.76	90	ePn	Pn	08 46 27.7	+1.0
BR231	Keskin MP Arra	3.76	90	ePn	Pn	08 46 27.7	+1.0
ANTO	Ankara	3.77	90	⇑iP	Pg	08 46 40.2	-0.8
ANTO	Ankara	3.77	90	ePn	Pn	08 46 27.8	+1.0
ANTO	Ankara	3.77	90	eP	Pn	08 46 27.8	+1.0
ANTO	Ankara	3.77	90	eP	Pn	08 46 27.8	+1.0
MANR	Mangalia	3.90	7	⇓iP	Pn	08 46 27.8	-0.7
MANR	Mangalia	3.90	7	⇓iP	Pn	08 46 27.8	-0.7
KKUL	Konya-Kulu	3.96	100	iP	Pg	08 46 44.0	-0.7
VILL	Villia	3.99	245	P	Pn	08 46 30.6	+0.8
KNT	Kendrikon	4.00	289	P	Pn	08 46 30.6	+0.7
KNT	Kendrikon	4.00	289	P	Pn	08 46 30.5	+0.7
KNT	Kendrikon	4.00	289	P	Pn	08 46 30.5	+0.7
KNT	Kendrikon	4.00	289	P	Pn	08 46 30.5	+0.7
VIL2	Platees	4.00	246	P	Pn	08 46 31.2	+1.3
LKR	Lokris	4.01	253	P	Pn	08 46 32.4	+2.3
LKR	Lokris	4.01	253	P	Pn	08 46 31.5	+1.4
KONT	Konya--Tatoy	4.01	118	iP	Pn	08 46 31.6	+1.5
BBAL	Bala	4.05	94	iP	Pg	08 46 46.4	0.0
SANT	Santorini	4.05	209	ePn	Pn	08 46 31.4	+0.7
SANT	Santorini	4.05	209	ePn	Pn	08 46 31.4	+0.7
LIT	Litokhoron	4.15	274	P	Pn	08 46 31.0	-1.0
LIT	Litokhoron	4.15	274	ePn	Pn	08 46 32.1	+0.1
LIT	Litokhoron	4.15	274	eP	Pn	08 46 32.1	+0.1
LIT	Litokhoron	4.15	274	eP	Pn	08 46 32.1	+0.1
ZIMR		4.16	334	⇑iP	Pn	08 46 32.8	+0.7
LTK	Loutraki	4.29	245	P	Pn	08 46 35.0	+1.1
LTK	Loutraki	4.29	245	P	Pn	08 46 34.7	+0.7
LOUT	Loutraki	4.30	245	P	Pn	08 46 34.8	+0.6
LOUT	Loutraki	4.30	245	P	Pn	08 46 34.6	+0.5
GRG	Griva	4.31	285	ePn	Pn	08 46 35.1	+0.9
GRG	Griva	4.31	285	eP	Pn	08 46 35.1	+0.9
GRG	Griva	4.31	285	eP	Pn	08 46 35.1	+0.9
DID	Didima	4.38	238	P	Pn	08 46 35.0	-0.2
DID	Didima	4.38	238	P	Pn	08 46 35.2	0.0
AGG	Agios Georgios	4.40	260	P	Pn	08 46 35.5	0.0
AGG	Agios Georgios	4.40	260	ePn	Pn	08 46 35.7	+0.2
AGG	Agios Georgios	4.40	260	eP	Pn	08 46 35.7	+0.2
AGG	Agios Georgios	4.40	260	eP	Pn	08 46 35.7	+0.2
VTS	Vitosha	4.41	308	⇑iP	Pn	08 46 36.6	+0.9
VTS	Vitosha	4.41	308	ePn	Pn	08 46 36.8	+1.1
VTS	Vitosha	4.41	308	eP	Pn	08 46 36.8	+1.1
VTS	Vitosha	4.41	308	eP	Pn	08 46 36.8	+1.1
BR131	Keskin Array S	4.43	91	ePn	Pn	08 46 36.8	+0.9
BR131	Keskin Array S	4.43	91	ePn	Pn	08 46 36.8	+0.9
BRTR	Keskin Array B	4.43	91	Pn	Pn	08 46 36.6	+0.8
	comp=N,1.2nm,0.3s,baz=266,slow=12,SNR=15						
BRTR				Pg	Pg	08 46 51.1	-2.6
	comp=N,4.0nm,0.3s,baz=267,slow=14,SNR=52						
BRTR				Sn	Sn	08 47 27.4	-0.1
	comp=N,4.0nm,0.3s,baz=181,slow=21,SNR=6.5						
BRTR				Lg	Lg	08 47 53.4	
	comp=N,3.4nm,0.3s,baz=274,slow=26,SNR=11						
BRTR	Keskin Array B	4.43	91	P	Pn	08 46 36.7	+0.8
BRTR						08 47 27.4	
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRTR				pmax	pmax		
	comp=Z,4.0nm,0.3s						
BRTR				smax	smax		
	comp=N,4.0nm,0.3s						
BRTR	Keskin Array B	4.43	91	P	Pn	08 46 36.7	+0.8
	comp=N,4.0nm,0.3s						
BRTR				S	Sn	08 47 27.4	-0.1
	comp=N,4.0nm,0.3s						
DSF	Desfina	4.44	252	P	Pn	08 46 35.5	-0.6
DSF	Desfina	4.44	252	P	Pn	08 46 36.1	0.0
TIRR	Tirgusor	4.52	5	⇑iP	Pn	08 46 37.3	+0.3
TIRR	Tirgusor	4.52	5	ePn	Pn	08 46 37.4	+0.3
TIRR	Tirgusor	4.52	5	eP	Pn	08 46 37.4	+0.3
TIRR	Tirgusor	4.52	5	eP	Pn	08 46 37.4	+0.3
TIRR				S	Sn	08 47 29.2	-0.3
THL	Klokotos Trika	4.55	267	P	Pn	08 46 37.5	+0.1
THL	Klokotos Trika	4.55	267	P	Pn	08 46 37.9	+0.5
ILGA	Ilgaz	4.57	74	ePn	Pn	08 46 39.8	+1.8
ILGA	Ilgaz	4.57	74	ePn	Pn	08 46 39.8	+1.8
TLB	Topalu	4.64	1	⇑iP	Pn	08 46 38.9	+0.3
TLB	Topalu	4.64	1	⇑iP	Pn	08 46 38.9	+0.3
STIP	Stip	4.67	294	iPn	Pn	08 46 37.3	-1.8
HARR	Harsova	4.74	0	⇑iP	Pn	08 46 40.2	+0.2
HARR	Harsova	4.74	0	⇑iP	Pn	08 46 40.2	+0.2
GUR	Goura	4.77	247	P	Pn	08 46 41.5	+0.9
GUR	Goura	4.77	247	P	Pn	08 46 41.3	+0.7
SERG	Sergoula	4.79	253	P	Pn	08 46 41.4	+0.6
SERG	Sergoula	4.79	253	P	Pn	08 46 41.4	+0.6
TRIZ	Trizonia	4.79	253	P	Pn	08 46 41.1	+0.3
TRIZ	Trizonia	4.79	253	P	Pn	08 46 41.4	+0.6
KLV	Kalavryta, Ach	4.86	249	P	Pn	08 46 42.7	+0.8
KLV	Kalavryta, Ach	4.86	249	P	Pn	08 46 42.6	+0.8
EFP	Efpalio	4.89	254	P	Pn	08 46 44.4	+2.2
EFP	Efpalio	4.89	254	P	Pn	08 46 43.7	+1.5
KPRO	Kipourio	5.02	272	P	Pn	08 46 47.3	+3.3
KPRO	Kipourio	5.02	272	P	Pn	08 46 46.2	+2.2
FNA	Florina	5.05	282	PN	Pn	08 46 45.9	+1.5
FNA	Florina	5.05	282	P	Pn	08 46 45.6	+1.2
FNA	Florina	5.05	282	ePn	Pn	08 46 45.8	+1.4
FNA	Florina	5.05	282	eP	Pn	08 46 45.8	+1.4
FNA	Florina	5.05	282	P	Pn	08 46 45.5	+1.2
FNA	Florina	5.05	282	ePn	Pn	08 46 45.8	+1.4
HUMR	Humele	5.06	336	⇑iP	Pn	08 46 44.6	+0.1
HUMR	Humele	5.06	336	⇑iP	Pn	08 46 44.6	+0.1
IDI	Anoyia	5.23	208	Pn	Pn	08 46 53.3	+6.4
	comp=N,0.7nm,0.3s,baz=32,slow=13,SNR=3.7						
IDI				Sn	Sb	08 47 57.5	-5.4
	comp=N,0.6nm,0.3s,baz=254,slow=22,SNR=3.4						
IDI				Lg	Lg	08 48 31.5	
	comp=N,0.3nm,0.3s,baz=323,slow=15,SNR=2.3						
CFR	Carcaliu	5.23	2	⇓iP	Pn	08 46 46.0	-0.8
CFR	Carcaliu	5.23	2	⇓iP	Pn	08 46 46.0	-0.8
KRUS	Krusevo	5.25	288	ePn	Pn	08 46 48.4	+1.3
TLCR		5.28	7	⇑iP	Pn	08 46 48.2	+0.8
TLCR		5.28	7	⇑iP	Pn	08 46 48.2	+0.8
BARS	Barje	5.40	304	⇓iPn	Pn	08 46 50.2	+1.1
ITM	Ithomi	5.43	241	ePn	Pn	08 46 50.0	+0.4
ITM	Ithomi	5.43	241	ePn	Pn	08 46 50.0	+0.4
OHR	Ohrid	5.53	284	ePn	Pn	08 46 52.7	+1.7
MTUR	Matau	5.67	339	⇑iP	Pn	08 46 53.2	+0.2
MTUR	Matau	5.67	339	⇑iP	Pn	08 46 53.2	+0.2
MLR	Muntele Rosu	5.72	346	Pn	Pn	08 46 55.9	+2.3
	comp=N,1.7nm,0.3s,baz=167,slow=5.6,SNR=69						
MLR				Sn	Sn	08 48 00.2	+0.8
	comp=N,0.7nm,0.3s,baz=94,slow=3.0,SNR=1.9						
MLR				Lg	Lg	08 48 37.3	
	comp=N,0.3nm,0.3s,baz=229,slow=19,SNR=2.7						
MLR				LR	LR	08 49 35.1	
	comp=N,28nm,20.9s,baz=174,slow=43						
MLR	Muntele Rosu	5.72	346	⇑iP	Pn	08 46 55.0	+1.3
MLR	Muntele Rosu	5.72	346	ePn	Pn	08 46 55.3	+1.6
MLR	Muntele Rosu	5.72	346	ePn	Pn	08 46 55.3	+1.6
SRE	Strehaia	5.85	325	⇓iP	Pn	08 46 57.1	+1.7
SRE	Strehaia	5.85	325	⇓iP	Pn	08 46 57.1	+1.7
BOVS	Bovan	5.91	311	⇑iPn	Pn	08 46 57.5	+1.3
PLOR	Plostina	5.97	352	⇓iP	Pn	08 46 58.1	+1.1
PLOR	Plostina	5.97	352	⇓iP	Pn	08 46 58.1	+1.1
VRI	Vrincioaia	5.98	352	⇑iP	Pn	08 46 57.8	+0.7
VRI	Vrincioaia	5.98	352	⇑iP	Pn	08 46 57.8	+0.7
LOT	Lotru	6.28	332	⇓iP	Pn	08 47 01.5	+0.2
LOT	Lotru	6.28	332	⇓iP	Pn	08 47 01.5	+0.2
SEV	Sevastopol’	6.28	41	eP	Pn	08 47 01.1	-0.1
SEV				eS	Sn	08 48 08.0	-4.8
SEV	Sevastopol’	6.28	41	eP	Pn	08 47 01.1	-0.1
DOPR	Dopca	6.29	344	⇑iP	Pn	08 47 03.1	+1.7
DOPR	Dopca	6.29	344	⇑iP	Pn	08 47 03.1	+1.7
HERR	Herculane	6.38	322	⇑iP	Pn	08 47 02.2	-0.4
HERR	Herculane	6.38	322	⇑iP	Pn	08 47 02.2	-0.4
KUBS	Kucevo	6.42	316	⇓iPn	Pn	08 47 02.4	-0.8
YAL	Yalta	6.49	44	⇑eP	Pn	08 47 03.3	-0.8
YAL				eS	Sn	08 48 12.9	-5.1
YAL	Yalta	6.49	44	eP	Pn	08 47 03.3	-0.8
TESR	Tescani	6.62	353	⇓iP	Pn	08 47 06.8	+0.9
TESR	Tescani	6.62	353	⇓iP	Pn	08 47 06.8	+0.9
GRUS	Gruza	6.64	309	⇓iPn	Pn	08 47 07.1	+0.9
SIM	Simferopol’	6.79	41	eP	Pn	08 47 08.3	+0.1
SIM				eS	Sn	08 48 21.0	-4.5
SIM				pmax	pmax		
	comp=Z,28nm,0.8s						
SIM				smax	smax		
	comp=E,44nm,1.0s						
SIM	Simferopol’	6.79	41	eP	Pn	08 47 08.3	+0.1
	comp=E,28nm,0.8s						
IVAS	Ivanjica	6.83	305	⇑iPn	Pn	08 47 09.5	+0.7
BIZ	Bicaz	7.11	350	⇑iP	Pn	08 47 13.2	+0.6
BIZ	Bicaz	7.11	350	⇑iP	Pn	08 47 13.2	+0.6
DIVS	Divibare	7.20	308	ePn	Pn	08 47 14.7	+0.8
DIVS	Divibare	7.20	308	ePn	Pn	08 47 14.7	+0.8
SUDU	Sudak	7.21	44	eP	Pn	08 47 14.4	+0.4
SUDU				eS	Sn	08 48 31.0	-4.7
SUDU	Sudak	7.21	44	eP	Pn	08 47 14.4	+0.4
BZS	Buzias	7.31	323	⇑iP	Pn	08 47 14.9	-0.4
BZS	Buzias	7.31	323	⇑iP	Pn	08 47 14.9	-0.4
DRGR		7.81	333	⇓iP	Pn	08 47 22.8	+0.5
DRGR		7.81	333	⇓iP	Pn	08 47 22.8	+0.5
BURAR	Bucovina Array	7.90	347	⇑iP	Pn	08 47 24.8	+1.2
BURAR	Bucovina Array	7.90	347	⇑iP	Pn	08 47 24.8	+1.2
BUR04	Bucovina Ar. S	7.91	347	ePn	Pn	08 47 24.5	+0.9
BUR04	Bucovina Ar. S	7.91	347	ePn	Pn	08 47 24.5	+0.9
BUR08	Bucovina Ar. S	7.94	347	ePn	Pn	08 47 25.3	+1.2
BUR08	Bucovina Ar. S	7.94	347	ePn	Pn	08 47 25.3	+1.2
SORM	Soroca	8.19	2	⇑iP	Pn	08 47 26.7	-0.7
SORM	Soroca	8.19	2	⇑iP	Pn	08 47 26.7	-0.7
ANN	Anapa	8.56	52	eP	Pn	08 47 26.2	-6.3
ANN				eS	Sn	08 49 01.6	-7.4
ANN				pmax	pmax		
	comp=Z,62nm,1.2s						
TIP	Timpagrande	8.64	268	ePn	Pn	08 47 35.1	+1.5
TIP	Timpagrande	8.64	268	ePn	Pn	08 47 35.1	+1.5
MMAI	Mount Meron Ar	9.19	137	Pn	Pn	08 47 42.1	+0.9
	comp=Z,4.2nm,0.3s,baz=321,slow=12,SNR=7.3						
CUC	Castrocucco	9.28	274	ePn	Pn	08 47 42.6	+0.2
CUC	Castrocucco	9.28	274	ePn	Pn	08 47 42.6	+0.2
KIEV	Kiev	10.79	4	iP	Pn	08 48 03.4	+0.5
KIEV	Kiev	10.79	4	iP	Pn	08 48 03.4	+0.5
AKASG	Malin Array Be	10.79	5	Pn	Pn	08 48 01.9	-1.1
	comp=Z,1.4nm,0.3s,baz=183,slow=12,SNR=4.9						
GNI	Garni	12.91	84	LR	LR	08 53 38.6	
	comp=Z,58nm,18.6s,baz=324,slow=38						
GERES	GERESS Array B	13.47	316	Pn	Pn	08 48 41.4	+1.6
	comp=Z,0.1nm,0.3s,baz=128,slow=14,SNR=2.8						
VSR	Storozhevoye	13.74	31	iP	Pn	08 48 41.9	-1.4
VSR	Storozhevoye	13.74	31	iP	Pn	08 48 41.9	-1.4
KEST	Kesra	15.24	260	Pn	P	08 49 09.6	+0.8
	comp=Z,0.1nm,0.3s,baz=66,slow=20,SNR=3.5						
VSU	Vasula	18.55	358	iP	Pn	08 49 45.7	+0.4
VSU				pmax	pmax		
	comp=Z,25nm,0.9s						
FINES	FINESS Array B	21.55	358	P	P	08 50 17.5	-0.2
	comp=Z,3.9nm,1.0s,baz=173,slow=12,SNR=5.2						
FIA1	FINESS Array S	21.55	358	eP	P	08 50 17.1	-0.6
HFS	Hagfors	22.08	341	P	P	08 50 23.5	+0.1
	comp=Z,3.0nm,0.7s,baz=129,slow=14,SNR=6.9						
KLMR	Klimovskoe	22.14	15	eP	P	08 50 23.4	-0.6
KLMR				pmax	pmax		
	comp=Z,11nm,1.3s						
KLMR	Klimovskoe	22.14	15	eP	P	08 50 23.4	-0.6
KLMR				AMP		08 50 26.6	
	comp=Z,11nm,1.3s						
NOA	NORSAR Array B	23.49	339	LR	LR	09 01 10.7	
	comp=Z,29nm,18.5s,baz=175,slow=40						
AKTO	Aktyubinsk	23.52	54	P	P	08 50 38.4	-0.1
	comp=Z,0.9nm,0.7s,baz=254,slow=15,SNR=2.8						
PRGR	Permogore	24.27	21	eP	P	08 50 44.8	-0.8
PRGR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ARU	Arti	25.96	40c	iP	P	08 51 01.3	+0.4
ARU						08 51 35.0	
ARU				S	S	08 55 32.5	+1.6
ARU				pmax	pmax		
	comp=Z,7.0nm,1.0s						
TORD	Torodi Ar. Bea	35.27	228	P	P	08 52 26.9	+3.5
	comp=Z,0.8nm,0.7s,baz=24,slow=11						
KURBB	Kurchatov Arra	36.52	56	P	P	08 52 34.0	0.0
	comp=Z,0.3nm,0.3s,baz=281,slow=8.9,SNR=3.9						
KURK	Kurchatov	36.58	56	P	P	08 52 34.0	-0.4
GTA	Gaotai	53.90	66	eP	P	08 54 44.9	-7.2
GTA				pP	pP	08 54 49.3	-6.7
GTA				sP	sP	08 54 51.8	-5.7
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						

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*IDC **04** 08:46:10.7±2.7, 24°.34S×179°.80W, h493^{km}±31^{km}, mb3.1/7, mb1 3.4/8, mb1mx3.0/45, mbtmp4.0/8, Error ellipse: s-maj=50.6km s-min=18.1km az=165.0*

ISC 04 08:46:11.5±1.0**, 24°.1S**±0°.1×**179°.9W**±0°.2**, h500^{km}, n8, σ2^s.31**/10**, mb3.6**/7**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	14.39	190	P	P	08 49 11.2	-3.9
	0.2nm,0.3s,baz=7.1,slow=8.1,SNR=2.3						
URZ				S	S	08 51 50.8	+4.3
	0.2nm,0.3s,baz=252,slow=18,SNR=3.1						
CTA	Charters Tower	31.61	270	P	P	08 51 53.1	+0.2
	3.9nm,0.3s,baz=184,slow=0.6,SNR=6.3						
ASAR	Alice Springs	42.14	261	P	P	08 53 19.4	-0.2
	1.0nm,0.6s,baz=97,slow=7.4,SNR=13						
ASAR				ScP	ScP	08 58 05.2	-0.3
	0.4nm,0.5s,baz=109,slow=4.1,SNR=8.1						
WRA	Warramunga Arr	42.53	266	P	P	08 53 21.8	-1.0
	1.3nm,0.5s,baz=103,slow=8.4,SNR=43						
FITZ	Fitzroy Crossi	50.95	266	P	P	08 54 27.4	+0.8
	1.9nm,0.8s,baz=101,slow=5.2,SNR=1.8						
NVAR	Mina Array Bea	84.77	44	P	P	08 57 54.2	+1.3
	0.2nm,0.4s,baz=219,slow=7.0,SNR=3.0						
TXAR	Lajitas Array	90.40	58	P	P	08 58 19.8	+0.3
	0.5nm,0.7s,baz=223,slow=6.3,SNR=8.8						
PDAR	Pinedale Array	92.71	44	P	P	08 58 29.7	-0.2
	0.2nm,0.7s,baz=221,slow=7.8,SNR=2.5						

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*ISCJB **04** 09:04:42.6±0.2, 33°.37N±0°.01×116°.30W±0°.01, h8^{km}±2^{km}, Error ellipse: s-maj=2.1km s-min=1.9km az=33.1*

*NEIC **04** 09:04:43.5±0.0, 33°.38N×116°.30W, h14^{km}, ML3.4(PAS), After PAS.*

NEIC Felt [III] at Alpine, Indian Wells, La Quinta, Palm Springs and San Diego; [II] at Coachella, El Cajon, Escondido, Indio, Lakeside, Palm Desert, Ramona, Riverside, Spring Valley, Valley Center and Winchester. Felt at Tijuana, Baja California.

*MEX **04** 09:04:46.0±0.5, 33°.31N×117°.20W, h10^{km}, MD3.6*

ISC 04 09:04:43.0±0.9**, 33°.38N**±0°.01×**116°.27W**±0°.01**, h12^{km}**±6^{km}**, n123, σ1^s.19**/173**, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORC	Borrego Spring	0.17	228	ePg	Pg	09 04 47.1	+0.3
XPFO	Piæon Flat	0.28	325	ePg	Pg	09 04 48.8	0.0
XPFO				eSg	Sg	09 04 52.5	-0.2
PFO	Pinyon Flats O	0.28	325	P	Pg	09 04 48.6	-0.3
	baz=150,SNR=1000						
PFO				S	Sg	09 04 52.6	-0.2
	baz=150						
PFO	Pinyon Flats O	0.28	325	ePg	Pg	09 04 48.8	-0.1
PFO				eSg	Sg	09 04 52.4	-0.4
FRD	Ford Ranch, An	0.30	292	ePg	Pg	09 04 49.2	0.0
SNDA	J Saunders Pla	0.34	300	ePg	Pg	09 04 49.8	0.0
DNR	Dunn Ranch,Anz	0.35	301	ePg	Pg	09 04 50.3	+0.1
CTCC	Cactus City	0.36	40	ePg	Pb	09 04 51.2	-0.1
BATC	Bat Cave Butte	0.36	78	ePg	Pb	09 04 51.7	+0.3
CRY	Cary Ranch	0.43	295	ePg	Pg	09 04 51.5	-0.1
CTW	Cottonwood Mou	0.44	48	ePg	Pb	09 04 52.6	-0.1
GVDA	Garner Valley	0.44	310	ePg	Pg	09 04 51.6	-0.2
ERRC	Elmore Ranch	0.46	125	ePg	Pb	09 04 53.1	+0.2
ERRC				eSg	Sb	09 05 01.6	+2.0
PLM	Palomar	0.50	267	ePg	Pg	09 04 52.8	-0.1
MONP2	Monument Peak	0.51	195	P	Pg	09 04 52.8	-0.1
	baz=12,SNR=221						
MONP2				S	Sg	09 05 00.0	+0.3
	baz=12						
FRK	Frink	0.53	88	ePg	Pb	09 04 54.0	-0.1
CRR	Carrizo Plain	0.55	153	ePg	Pb	09 04 54.5	-0.1
HAY	Hayfield	0.58	56	ePg	Pb	09 04 55.6	+0.5
SWSC	Sam W. Stewart	0.59	138	P	Pb	09 04 54.8	-0.3
	baz=316,SNR=285						
SWSC				S	Sb	09 05 03.3	0.0
	baz=316						
SWSC	Sam W. Stewart	0.59	138	ePg	Pb	09 04 54.8	-0.3
DEVC	Devers	0.61	335	ePg	Pb	09 04 55.0	-0.6
BELC	Belle Mtn. Jos	0.66	20	P	Pb	09 04 56.0	-0.4
	baz=202,SNR=86						
BELC				S	Sb	09 05 05.0	-0.5
	baz=202						
BELC	Belle Mtn. Jos	0.66	20	ePg	Pb	09 04 56.1	-0.4
CLIC	Calipatria	0.67	111	ePg	Pb	09 04 56.5	+0.1
DGR	Domenigoni Val	0.68	293	ePg	Pg	09 04 55.6	-0.5
HWB	Hans Werner Br	0.68	239	ePg	Pg	09 04 55.5	-0.7
DPP	Dos Picos Cty	0.68	236	ePg	Pg	09 04 55.5	-0.7
BACC	Bachelor Mtn.	0.69	290	ePg	Pg	09 04 55.8	-0.5
EML	El Monte Cty P	0.69	225	ePg	Pg	09 04 55.8	-0.5
HMTC	Hemet	0.70	298	ePg	Pg	09 04 55.9	-0.6
BC3	Big Chuckawall	0.73	68	P	Pb	09 04 57.5	-0.2
	baz=249,SNR=160						
BC3				S	Sb	09 05 07.7	0.0
	baz=249						
IKP	In-Ko-Pah, Jac	0.74	170	P	Pg	09 04 57.3	-0.1
	baz=348,SNR=461						
IKP				S	Sg	09 05 07.6	+0.4
	baz=348						
WESC	Westside Schoo	0.77	144	ePg	Pb	09 04 59.1	+0.9
WESC				eSn	Sb	09 05 10.6	+2.0
BAR	Barrett	0.78	206	ePg	Pg	09 04 57.9	-0.2
BAR				eSg	Sg	09 05 07.5	-0.8
BAR				eSn	Sb	09 05 07.9	-1.1
BBSC	Beaumont Base	0.80	312	ePg	Pg	09 04 58.3	-0.2
MURC	Murrieta	0.81	286	P	Pg	09 04 57.8	-0.8
	baz=106,SNR=114						
MURC				S	Sg	09 05 08.2	-1.0
	baz=106						
ERPC	Ernies Place	0.81	141	ePg	Pb	09 04 58.6	-0.4
109C	Camp Elliot, M	0.86	235	P	Pg	09 04 58.4	-1.1
	baz=54,SNR=124						
109C				S	Sg	09 05 09.3	-1.5
	baz=54						
CPE	Camp Elliot	0.86	235	ePg	Pg	09 04 58.5	-1.1
CPE				eSg	Sg	09 05 09.3	-1.5
CPE				eSn	Sb	09 05 09.4	-1.8
DREC	Desert Rsrch C	0.90	130	ePn	Pn	09 05 02.5	+1.2
SVD	Seven Oaks Dam	1.00	316	ePg	Pg	09 05 01.7	-0.6
SVD				eSg	Sg	09 05 15.1	-0.3
TJIG	Tijuana	1.01	200	eP	Pg	09 05 01.6	-0.8
TJIG				eS	Sg	09 05 14.2	-1.3
BBRC	Big Bear Solar	1.03	328	P	Pg	09 05 02.2	-0.8
	baz=150,SNR=86						
BBRC				S	Sg	09 05 15.9	-0.5
	baz=150						
BBRC	Big Bear Solar	1.03	328	ePg	Pg	09 05 02.4	-0.5
BBRC				eSg	Sg	09 05 16.4	-0.1
COA	Coachella	1.09	118	ePg	Pg	09 05 02.4	-1.6
RVR	Riverside	1.11	304	ePg	Pg	09 05 03.4	-0.9
RVR				eSg	Sg	09 05 17.5	-1.2
CBX	Cerro Bola	1.12	197	eP	Pg	09 05 03.8	-0.8
CBX				eS	Sg	09 05 17.5	-1.6
CBX	Cerro Bola	1.12	197	ePg	Pg	09 05 03.8	-0.8
CBX				eSg	Sg	09 05 17.5	-1.6
CRNC	Corona	1.19	295	eSg	Sg	09 05 19.9	-1.4
IRM	Iron Mountain	1.21	50	P	Pg	09 05 04.6	-1.7
	baz=231,SNR=82						
IRM				S	Sn	09 05 22.1	0.0
	baz=231						
IRM	Iron Mountain	1.21	50	ePn	Pn	09 05 06.2	+0.4
IRM				eSn	Sn	09 05 22.7	+0.6
GLA	Glamis	1.25	105	P	Pg	09 05 05.0	-2.0
	baz=285,SNR=25						
GLA	Glamis	1.25	105	ePn	Pg	09 05 04.8	-2.2
CHNC	Chino	1.33	298	ePn	Pn	09 05 07.4	+0.1
CHNC				eSn	Sg	09 05 24.1	-1.8
BFSC	Mount Baldy Ra	1.44	307	Pb	Pn	09 05 08.6	-0.4
	baz=127,SNR=56						
BFSC				Sb	Sg	09 05 27.1	-2.3
	baz=127						
BFSC	Mount Baldy Ra	1.44	307	ePn	Pn	09 05 09.1	+0.1
BFSC				eSn	Sg	09 05 27.8	-1.6
HEC	Hector,Ludlow	1.44	358	Pb	Pn	09 05 09.1	+0.1
	baz=179,SNR=26						
HEC	Hector,Ludlow	1.44	358	ePn	Pg	09 05 10.9	+0.1
SSK	Sunset Peak	1.45	305	ePn	Pn	09 05 09.1	-0.1
DANC	Danby, Needles	1.45	30	ePn	Pg	09 05 11.2	+0.4
DANC				eSn	Sn	09 05 30.1	+2.1
PSRC	Puddingstone R	1.47	299	ePn	Pn	09 05 09.5	+0.3
PSRC				eSn	Sb	09 05 28.0	-0.7
VTV	Victorville	1.47	323	ePn	Pb	09 05 10.3	0.0
VTV				eSn	Sb	09 05 28.7	-0.2
GMRC	Granite Mounta	1.49	20	P	Pn	09 05 08.5	-1.1
	baz=201						
GMRC				Sb	Sn	09 05 30.2	+1.1
	baz=201						
GMRC	Granite Mounta	1.49	20	ePn	Pg	09 05 11.9	+0.3
Y12C	Blythe	1.50	75	P	Pn	09 05 08.5	-1.2
	baz=256,SNR=13						
Y12C	Blythe	1.50	75	ePn	Pn	09 05 08.4	-1.2
PEM	Pine Mountain	1.55	301	ePn	Pn	09 05 09.9	-0.3
PEM				eSn	Sn	09 05 30.9	+0.6
EL2	El Mirage 2	1.56	318	ePn	Pg	09 05 12.6	-0.4
DLAC	Del Amo	1.60	287	eSn	Sg	09 05 34.3	0.0
RRX	Edison Barstow	1.61	338	Pb	Pb	09 05 12.6	+0.1
	baz=159,SNR=25						
RRX				Sb	Sb	09 05 33.5	+0.7
	baz=159						
GVRC	Garvey Reservo	1.68	294	ePn	Pb	09 05 14.4	+0.6
HOLC	Holcomb Ridge	1.69	310	ePn	Pn	09 05 13.4	+1.0
MWC	Mount Wilson	1.71	300	ePn	Pn	09 05 13.6	+0.9
MWC				eSn	Sn	09 05 34.9	+0.3
MWC				eSg	Sb	09 05 35.8	-0.2
FMP	Fort Macarthur	1.72	282	Pb	Pn	09 05 13.4	+0.7
	baz=101						
FMP				Sb	Sn	09 05 35.1	+0.5
	baz=101						
FMP	Fort Macarthur	1.72	282	ePn	Pn	09 05 13.9	+1.2
CHFC	Chilao Flat St	1.74	303	ePn	Pn	09 05 14.1	+0.9
CHFC				eSn	Sn	09 05 36.3	+0.9
JNH	Juniper Hills	1.76	308	ePn	Pn	09 05 14.4	+1.1
DSCC	Desert Studies	1.76	4	eSn	Sg	09 05 39.5	-0.1
PASC	Pasadena Art C	1.78	297	ePn	Pn	09 05 14.0	+0.4
PASC				eSn	Sn	09 05 36.9	+0.8
PASC				eSg	Sb	09 05 37.4	-0.4
CIAC	Catalina I. Ai	1.80	271	ePn	Pn	09 05 13.4	-0.3
CIS	Catalina Islan	1.80	271	Pb	Pn	09 05 14.1	+0.3
	baz=90						

CIS				Sb	**Sn**	**09 05 37.3**	**+0.7**
	baz=90						
RPV	**Rancho Palos V**	**1.82**	**282**	*e*Pn	**Pn**	**09 05 15.0**	**+0.9**
BLKC	**Black Mountain**	**1.88**	**335**	*e*Pn	**Pb**	**09 05 17.5**	**+0.3**
DECC	**Green Verdugo**	**1.93**	**297**	Pb	**Pn**	**09 05 16.7**	**+1.2**
	baz=117,SNR=8.6						
DECC				Sb	**Sn**	**09 05 41.5**	**+1.7**
	baz=117						
DECC	**Green Verdugo**	**1.93**	**297**	*e*Pn	**Pn**	**09 05 17.3**	**+1.8**
DECC				*e*Sn	**Sn**	**09 05 41.7**	**+1.9**
LDFC	**Landfair**	**1.94**	**29**	*e*Pn	**Pg**	**09 05 20.3**	**0.0**
LDFC				*e*Sn	**Sg**	**09 05 46.0**	**+0.4**
LDFC				*e*Sg	**Sb**	**09 05 46.1**	**+3.5**
NEE2	**Needles Airpor**	**1.94**	**44**	Pb	**Pb**	**09 05 17.9**	**-0.4**
	baz=226						
SCI2	**San Clemente I**	**1.95**	**259**	P	**Pn**	**09 05 14.6**	**-1.2**
	baz=77,SNR=11						
GSC	**Goldstone, Bar**	**1.97**	**347**	Pb	**Pn**	**09 05 17.4**	**+1.3**
	baz=168,SNR=72						
GSC	**Goldstone, Bar**	**1.97**	**347**	*e*Pn	**Pn**	**09 05 17.5**	**+1.3**
GSC				*e*Sn	**Sg**	**09 05 45.5**	**-0.7**
PDMCI	**Parker Dam,Lak**	**1.99**	**62**	P	**Pn**	**09 05 15.7**	**-0.8**
	baz=243						
IR2C	**Iron Canyon**	**2.04**	**300**	*e*Pn	**Pn**	**09 05 19.0**	**+1.9**
TUQ	**Turquoise Moun**	**2.07**	**8**	*e*Sn	**Sg**	**09 05 48.6**	**-0.9**
SPIG	**San Pedro Mart**	**2.43**	**164**	*e*P	**Pb**	**09 05 27.1**	**+0.4**
SPIG				*e*S	**Sb**	**09 05 58.7**	**+2.0**
SPIG	**San Pedro Mart**	**2.43**	**164**	*e*Pn	**Pb**	**09 05 27.1**	**+0.4**
SPIG				*e*Sn	**Sb**	**09 05 58.7**	**+2.0**
SPX	**San Pedro Mart**	**2.43**	**163**	*e*Pn	**Pb**	**09 05 26.7**	**0.0**
SPX				*e*Sn	**Sb**	**09 05 58.1**	**+1.3**
SHOC	**Shoshone, Teco**	**2.51**	**360**	Pb	**Pb**	**09 05 28.0**	**0.0**
	baz=180,SNR=14						
W13A	**Hualapai Mount**	**2.61**	**48**	*e*Pn	**Pn**	**09 05 25.9**	**+0.7**
SNCC	**San Nicolas Is**	**2.73**	**268**	*e*Pn	**Pn**	**09 05 27.2**	**+0.6**
ARVC	**Arvin**	**2.75**	**310**	Pb	**Pb**	**09 05 30.6**	**-1.4**
	baz=129,SNR=7.4						
Y14A	**Wickenburg**	**2.78**	**78**	*e*Pn	**Pn**	**09 05 27.1**	**-0.1**
MPMC	**Manual Prospec**	**2.85**	**340**	Pb	**Pb**	**09 05 31.9**	**-2.0**
	baz=160,SNR=27						
ISA	**Isabella, Lake**	**2.92**	**322**	P	**Pn**	**09 05 28.4**	**-0.8**
	baz=141,SNR=25						
ISA	**Isabella, Lake**	**2.92**	**322**	*e*Pn	**Pn**	**09 05 29.6**	**+0.4**
ISA				*e*Sn	**Sb**	**09 06 13.3**	**+2.8**
DAC	**Darwin (Calif)**	**3.09**	**340**	*e*Pn	**Pn**	**09 05 31.5**	**-0.2**
SHPR	**Sheep Range**	**3.25**	**16**	*e*Pn	**Pn**	**09 05 34.3**	**+0.5**
TPNV	**Topopah Spring**	**3.56**	**0**	*e*Pn	**Pn**	**09 05 39.1**	**+1.0**
TIN	**Tinemaha, Big**	**4.00**	**337**	*e*Sn	**Sn**	**09 06 27.3**	**-3.7**
X16A	**Lo Mia Camp, P**	**4.14**	**74**	*e*Pn	**Pn**	**09 05 46.3**	**+0.1**
LCMT	**Little Creek M**	**4.39**	**34**	*e*Pn	**Pn**	**09 05 50.3**	**+0.8**
U15A	**North Rim**	**4.46**	**46**	*e*Pn	**Pn**	**09 05 51.4**	**+0.8**
WUAZ	**Wupatki**	**4.57**	**61**	*e*Pn	**Pn**	**09 05 53.6**	**+1.6**
KNB	**Kanab**	**4.59**	**37**	*e*Pn	**Pn**	**09 05 53.6**	**+1.2**
OMMB	**Old Mammoth Mi**	**4.77**	**333**	*e*Pg	**Pb**	**09 06 10.0**	**+3.3**
OMMB				*e*Lg	Lg	09 07 14.6	
CCUT	**Cedar City**	**4.79**	**29**	*e*Pg	**Pg**	**09 06 14.8**	**+0.1**
MDPB	**Devils Postpil**	**4.82**	**332**	*e*Pg	**Pb**	**09 06 11.2**	**+3.7**
MDPB				*e*Lg	Lg	09 07 18.2	
R11A	**Troy Canyon, C**	**4.99**	**6**	*e*Pg	**Pg**	**09 06 16.0**	**-2.5**
PKCU	**Pink Cliffs**	**5.18**	**37**	*e*Sg	**Sg**	**09 07 26.6**	**-2.8**
NV01	**Mina Array Sit**	**5.30**	**342**	*e*Pg	**Pg**	**09 06 21.4**	**-3.0**
RYN	**Ryan**	**5.54**	**341**	*e*Pg	**Pg**	**09 06 26.7**	**-2.4**
MTPU	**Mount Pierson**	**5.71**	**34**	*e*Sg	**Sg**	**09 07 43.4**	**-3.0**
KVN	**Kaiserville**	**5.85**	**346**	*e*Pg	**Pg**	**09 06 32.6**	**-2.3**
H17A	**Grant Village**	**11.85**	**20**	*e*Sn	**Sn**	**09 09 45.1**	**+0.9**

NAO ***04*** *09:09:30.3±6.5, 73°.10N×5°.30E, ML3.5*

ISCJB ***04*** *09:09:32.5±0.4, 73°.18N±0°.05×6°.5E±0°.1, h11^{km}, mb3.7/11, MS3.4/7, Error ellipse: s-maj=6.6km s-min=6.0km az=21.1*

IDC ***04*** *09:09:33.6±0.7, 73°.10N×6°.30E, h0^{km}, mb3.7/11, mb1 3.8/16, mb1mx3.6/72, mbtmp3.7/16, ML3.3/5, MS3.3/12, Ms1 3.3/12, ms1mx3.0/67, Error ellipse: s-maj=16.2km s-min=13.2km az=44.0*

BER ***04*** *09:09:36.4±2.9, 73°.21N×6°.60E, h10^{km}, ML2.3, ML3.5(NAO)*

ISC 04 09:09:34.5±0.6**, 73°.12N**±0°.07×**6°.66E**±0°.06**, h11^{km}, n48, σ1^{s}98**/46**, mb3.7**/11**, MS3.2**/7**, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BJO	**Bjornoya**	**3.77**	**62**	*e*P	**Pn**	**09 10 31.1**	**-1.4**
BJO				IAmb	IAmb	09 10 32.6	
	comp=Z,101nm,0.7s						
HSPB	**Hornsund (broa**	**4.52**	**26**	*e*P	**Pn**	**09 10 41.1**	**-1.7**
HSPB				IAmb	IAmb	09 10 45.4	
	comp=Z,41nm,1.1s						
JMIC	**Jan Mayen**	**5.15**	**253**	Pn	**Pn**	**09 10 50.6**	**-0.7**
	comp=Z,4.7nm,0.3s,baz=47,slow=4.5,SNR=5.8						
JMIC				Sn	**Sn**	**09 11 49.2**	**-1.4**
	comp=Z,1.3nm,0.3s,baz=229,slow=11,SNR=1.8						
JMIC				LR	LR	09 12 25.8	
	comp=Z,158nm,18.1s,baz=72,slow=34						
JMIC	**Jan Mayen**	**5.15**	**253**	*e*P	**Pn**	**09 10 50.8**	**-0.6**
JMIC				IAmb	IAmb	09 10 57.0	
	comp=Z,105nm,1.2s						
TRO	**Tromso**	**5.26**	**126**	*e*P	**Pn**	**09 10 53.8**	**+0.9**
TRO				IAmb	IAmb	09 10 55.3	
	comp=Z,7.5nm,0.4s						
TRO				*e*S	**Sn**	**09 11 49.5**	**-3.8**
TRO				IAML		09 11 55.4	
	comp=Z,8.5nm,0.5s						
TRO				IAML		09 11 55.4	
	comp=Z,8.5nm,0.5s						
LOF	**Lofoten**	**5.51**	**152**	*e*P	**Pn**	**09 10 58.0**	**+1.7**
LOF				IAmb	IAmb	09 11 12.4	
	comp=Z,66nm,1.4s						
SPA0	**Spitsbergen Ar**	**5.62**	**21**	Pn	**Pn**	**09 10 57.1**	**-0.8**
	baz=226,slow=16						
SPA0	**Spitsbergen Ar**	**5.62**	**21**	Pn	**Pn**	**09 10 57.1**	**-0.8**
	baz=226,slow=16						
SPA0				Pn	**Pn**	**09 10 57.1**	**-0.8**
	baz=226,slow=16						
SPA0				IAmb	IAmb	09 10 58.0	
	comp=Z,21nm,0.9s						
SPA0				IAmb	IAmb	09 10 58.0	
	comp=Z,21nm,0.9s						
SPITS	**Spitsbergen Ar**	**5.62**	**21**	Pn	**Pn**	**09 10 56.8**	**-1.1**
	baz=213,slow=15,SNR=49						
SPITS				LR	LR	09 12 49.2	
	comp=Z,129nm,18.7s,baz=210,slow=34						
HAMF	**Hammerfest**	**5.85**	**107**	*e*P	**Pn**	**09 11 00.7**	**-0.3**
STEI	**Steigen**	**5.94**	**147**	*e*P	**Pn**	**09 11 03.1**	**+0.8**
STEI				*e*S	**Sn**	**09 12 04.6**	**-5.6**
STEI				IAML		09 12 13.3	
	comp=Z,4.9nm,0.6s						
KBS	**Kingsbay**	**5.98**	**10**	Pn	**Pn**	**09 10 59.5**	**-3.2**
KBS	**Kingsbay**	**5.98**	**10**	*e*P	**Pn**	**09 11 01.1**	**-1.6**
KBS				IAmb	IAmb	09 11 08.4	
	comp=Z,11nm,0.6s						
KIF	**Kilpisjarvi**	**6.17**	**125**	*e*P	**Pn**	**09 11 06.2**	**+0.8**
KONS	**Konsvik**	**7.01**	**158**	*e*P	**Pn**	**09 11 18.2**	**+1.3**
KONS				IAmb	IAmb	09 11 20.9	
	comp=Z,9.6nm,0.7s						
KONS				IAML		09 12 37.5	
	comp=Z,5.7nm,0.8s						
ARA0	**ARCESS Array S**	**7.01**	**112**	Pn	**Pn**	**09 11 18.3**	**+1.3**
	baz=315,slow=12						
ARA0	**ARCESS Array S**	**7.01**	**112**	Pn	**Pn**	**09 11 18.3**	**+1.3**
	baz=315,slow=12						
ARCES	**ARCESS Array B**	**7.01**	**112**	Pn	**Pn**	**09 11 17.6**	**+0.6**
	comp=Z,1.3nm,0.3s,baz=324,slow=11,SNR=22						
ARCES				Sn	**Sn**	**09 12 31.5**	**-5.1**
	comp=Z,0.4nm,0.3s,baz=320,slow=23,SNR=3.3						
ARE0	**ARCESS Array S**	**7.01**	**112**	*e*P	**Pn**	**09 11 17.9**	**+0.9**
ARE0				IAmb	IAmb	09 11 28.3	
	comp=Z,12nm,0.8s						
STOK	**Stokkvaagen**	**7.16**	**159**	*e*P	**Pn**	**09 11 20.6**	**+1.6**
KEV	**Kevo**	**7.29**	**108**	*e*P	**Pn**	**09 11 21.7**	**+0.9**
HEF	**Hetta**	**7.32**	**122**	*e*P	**Pn**	**09 11 23.5**	**+2.4**
DAG	**Danmarks Havn**	**7.48**	**311**	*i* P	**Pn**	**09 11 18.8**	**-4.6**
DAG				*i* S	Sn	09 12 33.9	-14
NOA	**NORSAR Array B**	**12.26**	**170**	LR	LR	09 16 58.9	
	comp=Z,47nm,19.8s,baz=350,slow=36						
HFS	**Hagfors**	**13.32**	**165**	Pn	**Pn**	**09 12 45.4**	**+2.1**
	comp=Z,0.1nm,0.3s,baz=1.0,slow=16,SNR=3.8						
HFS				LR	LR	09 17 31.2	
	comp=Z,99nm,19.1s,baz=320,slow=36						
FIA0	**FINESS Array S**	**13.80**	**138**	Pn	**Pn**	**09 12 50.5**	**+0.8**
	baz=333,slow=10						
FIA0	**FINESS Array S**	**13.80**	**138**	Pn	**Pn**	**09 12 50.5**	**+0.8**
	baz=333,slow=10						
FINES	**FINESS Array B**	**13.80**	**138**	Pn	**Pn**	**09 12 50.5**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=347,slow=7.8,SNR=3.7						
FINES				LR	LR	09 17 51.1	
	comp=Z,90nm,19.6s,baz=344,slow=36						
KLMR	**Klimovskoe**	**17.43**	**118**	*e*Pn	**Pn**	**09 13 37.2**	**0.0**
KLMR				AMP		09 13 46.8	
	comp=Z,16nm,1.1s						
VRAC	**Vranov**	**24.30**	**164**	P	**P**	**09 14 53.2**	**+1.7**
	comp=Z,5.4nm,0.8s,baz=319,slow=8.4,SNR=4.4						
VRAC				LR	LR	09 24 02.6	
	comp=Z,50nm,20.9s,baz=327,slow=36						
AKASG	**Malin Array Be**	**24.54**	**144**	P	**P**	**09 14 54.3**	**+0.6**
	comp=Z,1.2nm,0.7s,baz=347,slow=9.4,SNR=4.5						
GERES	**GERESS Array B**	**24.56**	**169**	P	**P**	**09 14 55.0**	**+0.9**
	comp=Z,0.5nm,0.2s,baz=1.0,slow=8.0,SNR=9.2						
RES	**Resolute Bay**	**24.99**	**322**	LR	LR	09 24 46.2	
	comp=Z,52nm,19.5s,baz=36,slow=37						
AKTO	**Aktyubinsk**	**31.58**	**107**	LR	LR	09 28 50.6	
	comp=Z,50nm,21.6s,baz=334,slow=36						
BVAR	**Borovoye Array**	**32.83**	**92**	P	**P**	**09 16 10.4**	**+2.8**
	comp=Z,0.5nm,0.5s,baz=334,slow=9.6,SNR=4.1						
KBZ	**Khabaz**	**33.94**	**130**	LR	LR	09 30 14.5	
	comp=Z,52nm,20.5s,baz=278,slow=36						
ZALV	**Zalesovo Beam**	**36.21**	**78**	P	**P**	**09 16 38.9**	**+2.1**
	comp=Z,0.7nm,0.5s,baz=1.1,slow=7.2,SNR=3.5						
KURBB	**Kurchatov Arra**	**37.33**	**87**	P	**P**	**09 16 48.2**	**+2.0**
	comp=Z,1.1nm,0.8s,baz=337,slow=7.1,SNR=7.4						
ILAR	**Eielson Array**	**41.24**	**343**	P	**P**	**09 17 20.5**	**+1.7**
	comp=Z,1.0nm,1.0s,baz=4.2,slow=6.9,SNR=9.3						
MKAR	**Makanchi Array**	**41.87**	**86**	P	**P**	**09 17 25.4**	**+1.3**
	comp=Z,0.2nm,0.2s,baz=0.0,slow=6.2,SNR=4.3						
TKL	**Tuckaleechee C**	**56.41**	**282**	LR	LR	09 43 54.6	
	comp=Z,60nm,18.1s,baz=232,slow=37						
PDAR	**Pinedale Array**	**56.50**	**308**	P	**P**	**09 19 16.3**	**-0.1**
	comp=Z,0.8nm,0.9s,baz=30,slow=7.3,SNR=5.1						
TORD	**Torodi Ar. Bea**	**60.02**	**186**	P	**P**	**09 19 41.6**	**+0.7**
	comp=Z,1.1nm,0.8s,baz=4.1,slow=6.1						
MJAR	**Matsushiro Arr**	**65.74**	**41**	LR	LR	09 51 14.5	
	comp=Z,39nm,19.9s,baz=125,slow=38						
JNU	**Nakatsue**	**67.53**	**49**	LR	LR	09 54 05.7	
	comp=Z,70nm,20.9s,baz=124,slow=40						
TXAR	**Lajitas Array**	**67.82**	**298**	P	**P**	**09 20 32.4**	**+0.1**
	comp=Z,0.2nm,0.6s,baz=53,slow=4.6,SNR=3.5						
ASAR	**Alice Springs**	**122.95**	**60**	PKP	**PKPdf**	**09 28 30.1**	**-0.1**
	comp=Z,0.4nm,0.6s,baz=1.8,slow=1.3,SNR=7.1						
SNAA	**Sanae**	**144.69**	**185**	PKP	**PKPdf**	**09 29 09.4**	**+0.3**
	comp=Z,1.3nm,0.9s,baz=336,slow=6.4,SNR=4.4						

IDC 04 09:26:54.0±2.0**, 2°.10N**×**127°.81E, h0^{km}, mb3.5**/3**, mb1 3.7**/3**, mb1mx3.3**/57**, mbtmp3.5**/3**, MS3.4**/1**, Ms1 3.4**/1**, ms1mx2.4**/33**, Error ellipse: s-maj=138.4km s-min=25.0km az=67.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	**12.91**	**199**	LR	LR	09 35 37.6	
	comp=Z,164nm,19.6s,baz=150,slow=41						
WRA	**Warramunga Arr**	**22.82**	**164**	P	P	09 31 59.2	+0.4
	1.1nm,0.4s,baz=344,slow=11,SNR=14						
ASAR	**Alice Springs**	**26.29**	**167**	P	P	09 32 30.9	-0.6
	0.3nm,0.4s,baz=345,slow=7.8,SNR=5.1						
MKAR	**Makanchi Array**	**59.50**	**325**	P	P	09 36 59.2	+0.1
	0.4nm,0.9s,baz=134,slow=8.3,SNR=2.0						

ISCJB ***04*** *09:33:32.6±1.0, 5°.78S±0°.10×148°.1E±0°.1, h200^{km}, mb4.3/8, Error ellipse: s-maj=15.8km s-min=13.3km az=154.1*

IDC ***04*** *09:33:32.5±1.6, 5°.76S×148°.17E, h190^{km}±11^{km}, mb3.7/7, mb1 3.8/10, mb1mx3.4/47, mbtmp4.3/10, Error ellipse: s-maj=13.5km s-min=12.6km az=22.0*

ISC 04 09:33:33.6±1.1**, 5°.8S**±0°.1×**148°.2E**±0°.1**, h200^{km}, n13, σ1^{s}47**/17**, mb4.1**/8**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.74**	**195**	P	**Pn**	**09 34 31.8**	**-0.4**
	15nm,0.3s,baz=14,slow=7.3,SNR=32						
PMG				S	**Sn**	**09 35 16.6**	**-1.7**
	11nm,0.3s,baz=164,slow=21,SNR=7.1						
CTA	**Charters Tower**	**14.35**	**187**	P	**Pn**	**09 36 47.5**	**-0.4**
	0.1nm,0.3s,baz=339,slow=12,SNR=1.9						
WRA	**Warramunga Arr**	**19.46**	**222**	P	**P**	**09 37 45.6**	**+0.3**
	3.6nm,0.3s,baz=47,slow=10.0,SNR=75						
WRA				S	**S**	**09 41 14.4**	**-0.1**
	0.2nm,0.3s,baz=40,slow=20,SNR=4.7						
ASAR	**Alice Springs**	**22.46**	**216**	P	**P**	**09 38 16.9**	**+0.7**
	5.7nm,0.4s,baz=51,slow=8.2,SNR=165						
ASAR				S	**S**	**09 42 12.5**	**+4.7**
	1.6nm,1.0s,baz=23,slow=17,SNR=5.4						
DZM	**Mont Dzumac**	**23.99**	**134**	P	**P**	**09 38 30.5**	**+0.3**
	6.6nm,1.1s,baz=315,slow=19,SNR=4.4						
DZM				S	**S**	**09 42 32.3**	**-0.2**
	3.8nm,1.0s,baz=134,slow=20,SNR=2.3						
FITZ	**Fitzroy Crossi**	**25.16**	**239**	P	**P**	**09 38 40.4**	**-0.3**
	6.3nm,0.4s,baz=46,slow=8.9,SNR=23						
DAV	**Davao City (W)**	**25.88**	**299**	P	**P**	**09 38 47.4**	**+0.2**
	189nm,0.3s,baz=91,slow=23,SNR=5.1						
STKA	**Stephens Creek**	**26.68**	**192**	P	**P**	**09 38 53.6**	**-0.7**
	0.7nm,0.5s,baz=353,slow=9.3,SNR=6.2						
RPZ	**Rata Peaks**	**42.83**	**155**	P	**P**	**09 41 13.1**	**+1.3**
	2.2nm,0.5s,baz=350,slow=7.0,SNR=3.2						
VNDA	**Vanda**	**72.07**	**177**	P	**P**	**09 44 35.8**	**+0.3**
	0.9nm,0.8s,baz=321,slow=4.7,SNR=5.2						
QSPA	**South Pole Qui**	**84.19**	**180**	P	**P**	**09 45 41.8**	**-0.5**
	1.5nm,0.6s,baz=304,slow=3.6,SNR=7.0						
VAE	**Valguarnera**	**127.43**	**314**	PKP	**PKPdf**	**09 52 14.4**	**-0.7**
	10nm,0.3s,baz=54,slow=1.2,SNR=5.1						
TORD	**Torodi Ar. Bea**	**146.14**	**285**	PKPbc	**PKPbc**	**09 52 50.2**	**-1.1**
	baz=77,slow=3.1						

IDC 04 09:39:35.5±9.4**, 4°.14S**×**127°.80E, h522^{km}**±125^{km}**, mb2.6**/2**, mb1 2.8**/4**, mb1mx2.5**/52**, mbtmp3.7**/4**, Error ellipse: s-maj=118.5km s-min=89.4km az=64.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**14.03**	**188**	P	P	09 42 35.5	+0.3
	0.3nm,0.3s,baz=9.6,slow=9.1,SNR=6.2						
WRA	**Warramunga Arr**	**16.95**	**158**	P	P	09 43 06.1	+1.0
	0.3nm,0.3s,baz=338,slow=10,SNR=7.7						
ASAR	**Alice Springs**	**20.28**	**164**	P	P	09 43 34.5	-1.1
	0.4nm,0.5s,baz=343,slow=7.2,SNR=6.8						
STKA	**Stephens Creek**	**30.48**	**156**	P	P	09 45 06.6	+0.9
	0.6nm,0.3s,baz=339,slow=6.1,SNR=3.3						

MAN 04 09:54:28.8, 10°.11N×126°.04E, h5^{km}, mb4.4, ML3.2, MS3.0, 2C-2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.64**	**239**	*e*P	Pg	09 54 41.5	+0.5
SCPH				*e*S	Sb	09 54 52.1	+0.5
MSLP	**Maasin**	**1.17**	**271**	*e*P	Pg	09 54 50.5	-0.7
MSLP				*e*S	Sn	09 55 08.5	+0.4
BUTP	**Butuan**	**1.21**	**200**	*e*P	Pg	09 54 49.0	-3.0
BUTP				*e*S	Sg	09 55 06.9	-0.8
PLP	**Palo**	**1.48**	**315**	⇓*e*P	Pn	09 54 54.5	-1.6
PLP				*e*S	Sn	09 55 10.9	-5.0
BESP	**Borongan**	**1.60**	**338**	*e*P	Pn	09 54 56.9	-0.8
BESP				*e*S	Sg	09 55 19.7	-0.4
BIPH	**Bislig**	**1.94**	**171**	⇓*i*P	Pn	09 55 02.3	-0.1
BIPH				*i* S	Sn	09 55 26.7	-0.5
LLP	**Lapu-Lapu**	**2.06**	**276**	*e*P	Pn	09 55 04.2	+0.2
LLP				*e*S	Sn	09 55 31.0	+0.9
CGP	**Cagayan de Oro**	**2.12**	**219**	⇑*i*P	Pn	09 55 04.0	-0.8
CGP				*i* S	Sn	09 55 30.6	-1.0
TBP	**Tagbilaran**	**2.19**	**259**	*e*P	Pn	09 55 06.2	+0.3
BUKP	**Musuan**	**2.42**	**204**	*e*P	Pn	09 55 09.0	-0.1
BUKP				*e*S	Sn	09 55 40.6	+1.4
CNP	**Catarman**	**2.74**	**331**	*e*P	Pn	09 55 11.7	-1.7
RCP	**Roxas**	**3.55**	**294**	⇑*e*P	Pn	09 55 25.5	+1.0
PVCP	**Virac**	**3.93**	**332**	*e*P	Pb	09 55 35.1	-3.4
PVCP				*e*S	Sb	09 56 30.5	+4.1

IDC 04 10:01:04.6±1.9**, 4°.43S**×**151°.26E, h0^{km}, mb3.4**/3**, mb1 3.8**/3**, mb1mx3.3**/47**, mbtmp3.5**/3**, MS3.1**/1**, Ms1 3.1**/1**, ms1mx2.4**/31**, Error ellipse: s-maj=144.3km s-min=27.4km az=126.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.57**	**225**	P	P	10 06 06.5	-0.3
	1.3nm,0.6s,baz=52,slow=10,SNR=15						
DZM	**Mont Dzumac**	**22.90**	**141**	LR	LR	10 13 32.5	
	comp=Z,50nm,19.7s,baz=235,slow=33						
ASAR	**Alice Springs**	**25.42**	**220**	P	P	10 06 34.4	+0.2
	0.3nm,0.4s,baz=55,slow=8.7,SNR=8.2						
ILAR	**Eielson Array**	**82.40**	**22**	P	P	10 13 28.4	0.0
	0.4nm,0.9s,baz=242,slow=5.8,SNR=3.0						

GUC 04 10:17:45.4±0.6**, 20°.77S**×**69°.29W, h82^{km}**±3^{km}**, ML3.5, 8C-3D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	**0.33**	**213**	⇓*i*P	Pn	10 17 58.6	+0.4
PB01				*i* S	Sn	10 18 08.1	+0.5
PB08	**IPOC Station P**	**0.64**	**12**	⇓*i*P	Pn	10 18 01.7	+0.7
PB08				*i* S	Sn	10 18 13.6	+1.1
PB08				IAML		10 18 14.3	
	comp=E,3μm,0.2s						
PB02	**IPOC Station P**	**0.79**	**226**	⇑*i*P	Pn	10 18 02.7	+0.4
PB02				*i* S	Sn	10 18 15.3	+0.6
PB02				IAML		10 18 16.7	
	comp=N,4μm,0.4s						
PB07	**IPOC Station P**	**1.10**	**210**	⇑*i*P	Pn	10 18 06.4	+0.4
PB07				*i* S	Sn	10 18 21.8	+0.4
PB07				IAML		10 18 24.3	
	comp=N,814nm,0.2s						
PB03	**IPOC Station P**	**1.34**	**199**	⇑*i*P	Pn	10 18 09.4	+0.4
PB03				*i* S	Sn	10 18 26.8	+0.1
PB03				IAML		10 18 31.4	
	comp=E,825nm,0.2s						
PSGC	**Pisagua**	**1.40**	**326**	⇑*i*P	Pn	10 18 09.3	-0.4
PSGC				*i* S	Sn	10 18 28.4	+0.5
PSGC				IAML		10 18 33.0	
	comp=E,681nm,0.4s						
MNMC	**Minye Minye**	**1.65**	**350**	⇑*i*P	Pn	10 18 14.0	+0.9
MNMC				*i* S	Sn	10 18 34.8	+0.8
MNMC				IAML		10 18 44.7	
	comp=E,1μm,0.3s						
PB04	**IPOC Station P**	**1.75**	**207**	⇑*i*P	Pn	10 18 14.4	+0.1
PB04				*i* S	Sn	10 18 37.1	+1.0
PB05	**IPOC Station P**	**2.24**	**202**	⇑*i*P	Pn	10 18 21.4	+0.7
PB05				*i* S	Sn	10 18 49.3	+1.6
PB12	**IPOC Station P**	**2.35**	**335**	⇓*i*P	Pn	10 18 22.1	-0.1
PB12				*i* S	Sn	10 18 50.7	+0.4
PB12				IAML		10 18 59.6	
	comp=E,370nm,0.1s						
PB16	**IPOC Station P**	**2.43**	**355**	⇑*i*P	Pn	10 18 25.6	+2.0
PB16				*i* S	Sn	10 18 56.1	+3.3
PB16				IAML		10 19 01.5	
	comp=E,135nm,0.5s						

IDC 04 10:17:56.0±47.0**, 15°.67S**×**173°.58W, h0^{km}, mb4.1**/3**, mb1 4.3**/3**, mb1mx3.6**/47**, mbtmp4.1**/3**, Error ellipse: s-maj=909.0km s-min=172.3km az=78.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**43.76**	**240**	P	P	10 26 04.2	+0.7
	0.6nm,0.3s,baz=89,slow=8.8,SNR=7.6						
WRA	**Warramunga Arr**	**49.62**	**257**	P	P	10 26 48.9	-0.7
	0.3nm,0.3s,baz=98,slow=7.4,SNR=28						
ASAR	**Alice Springs**	**49.87**	**252**	P	P	10 26 51.4	-0.2
	3.2nm,0.4s,baz=88,slow=8.1,SNR=77						

BJI ***04*** *10:26:20.1, 6°.01S×147°.99E, h98^{km}, mb4.9/34, mB5.1/18*

ISCJB ***04*** *10:26:21.7±0.3, 5°.73S±0°.03×147°.41E±0°.05, h77^{km}, mb4.7/51, Error ellipse: s-maj=7.0km s-min=3.7km az=5.4*

DJA ***04*** *10:26:23.8±0.9, 6°S±5°×14°8E±°, h91^{km}±8^{km}, M5.4/9, mB5.8/2, mb5.3/9, MLv5.5/2, Mw(mB)5.4/2*

NEIC ***04*** *10:26:26.3±0.6, 5°.79S×147°.44E, h114^{km}±6^{km}, mb4.9/24, Error ellipse: s-maj=6.6km s-min=4.4km az=101.0*

IDC ***04*** *10:26:28.9±1.9, 5°.78S×147°.49E, h141^{km}±18^{km}, mb4.1/24, mb1 4.2/27, mb1mx4.1/49, mbtmp4.6/27, MS3.4/8, Ms1 3.4/8, ms1mx3.0/41, Error ellipse: s-maj=13.9km s-min=7.6km az=92.0*

ISC 04 10:26:22.6±0.3**, 5°.80S**±0°.04×**147°.46E**±0°.06**, h77^{km}, n119, σ1^{s}92**/123**, mb4.7**/51**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.59**	**185**	P	**Pn**	**10 27 18.1**	**+2.1**
	80nm,0.3s,baz=29,slow=5.3,SNR=209						
PMG				S	**Sn**	**10 27 58.8**	**+1.6**
	167nm,0.3s,baz=202,slow=22,SNR=7.9						
PMG				LR	LR	10 28 26.2	
	comp=Z,347nm,19.6s,baz=360,slow=32						
PMG	**Port Moresby**	**3.59**	**185**	*e*Pn	**Pn**	**10 27 17.6**	**+1.7**
PMG				S	**Sn**	**10 27 58.8**	**+1.6**
PMG				*e*Sn	Sn	10 27 59.9	+2.7
MANU	**Manus Island**	**3.74**	**359**	*e*Pn	**Pn**	**10 27 21.8**	**+3.8**
RABL	**Rabaul**	**4.96**	**71**	*e*Pn	**Pn**	**10 27 38.2**	**+3.6**
GENI	**Genyem**	**7.94**	**293**	P	**Pn**	**10 28 18.0**	**+2.6**
COEN	**Coen**	**9.13**	**207**	P	**Pn**	**10 28 33.8**	**+2.1**
	baz=9.2,SNR=139						
COEN	**Coen**	**9.13**	**207**	*e*Pn	**Pn**	**10 28 33.5**	**+1.8**
MTSU	**Mount Surprise**	**12.63**	**194**	P	**Pn**	**10 29 22.1**	**+2.7**
	baz=13,SNR=77						
HNR	**Honiara**	**12.89**	**107**	P	**P**	**10 29 28.3**	**-2.4**
	3.5nm,0.3s,baz=246,slow=10.0,SNR=1.8						
HNR				LR	LR	10 33 44.3	
	comp=Z,88nm,19.2s,baz=262,slow=34						
RKPI	**Ransiki, Papua**	**13.92**	**287**	P	**P**	**10 29 41.2**	**-0.9**
CTA	**Charters Tower**	**14.25**	**185**	P	**P**	**10 29 44.6**	**-1.1**
	2.1nm,0.3s,baz=0.3,slow=14,SNR=23						
CTAO	**Charters Tower**	**14.25**	**185**	*e*Pn	**P**	**10 29 43.3**	**-2.5**
FAKI	**Fak Fak**	**15.43**	**280**	*e*Pn	**P**	**10 29 58.0**	**-0.9**
	28nm,0.6s						
KDU	**Kakadu**	**16.29**	**244**	P	**Pn**	**10 30 06.5**	**-0.2**
	baz=16,SNR=89						
QIS	**Mount Isa**	**16.53**	**207**	P	**P**	**10 30 11.6**	**+0.5**
	baz=17,SNR=27						
PATS	**Pohnpei**	**16.58**	**41**	*e*Pn	**P**	**10 30 12.5**	**+0.8**
	92nm,0.9s						
MTN	**Manton Dam**	**17.55**	**245**	P	**Pn**	**10 30 22.0**	**-0.4**
	baz=17,SNR=33						
MTN	**Manton Dam**	**17.55**	**245**	*e*P	**P**	**10 30 23.2**	**+0.8**
	32nm,0.6s						
WRAB	**Tennant Creek**	**18.96**	**221**	*e*P	**Pn**	**10 30 38.9**	**-0.4**
	44nm,0.7s						
WB2	**Warramunga Arr**	**18.97**	**221**	*e*P	**P**	**10 30 38.9**	**+0.9**
WRA	**Warramunga Arr**	**18.98**	**221**	P	**Pn**	**10 30 39.3**	**-0.2**
	7.5nm,0.3s,baz=42,slow=11,SNR=348						
WRA				S	**S**	**10 34 04.5**	**-5.2**
	0.9nm,0.3s,baz=45,slow=20,SNR=5.2						
GUMO	**Guam**	**19.44**	**352**	LR	LR	10 38 15.8	
	comp=Z,44nm,18.7s,baz=186,slow=36						
GUMO	**Guam**	**19.44**	**352**	*e*P	**Pn**	**10 30 45.0**	**+0.1**
	116nm,1.1s						
EIDS	**Eidsvold**	**19.76**	**170**	P	**Pn**	**10 30 48.8**	**+0.1**
	baz=20,SNR=16						
EIDS	**Eidsvold**	**19.76**	**170**	*e*P	**Pn**	**10 30 48.8**	**+0.1**
	47nm,1.0s						
RMQ	**Roma**	**20.60**	**177**	P	Pn	10 31 00.4	+1.8
	baz=21,SNR=20						
KNRA	**Kununurra**	**20.80**	**240**	P	**P**	**10 30 58.0**	**+0.1**
	baz=21,SNR=26						
QLP	**Quilpie**	**20.89**	**188**	P	Pn	10 31 00.5	-1.5
	baz=21,SNR=31						
SANI	**Sanana**	**21.74**	**279**	P	**P**	**10 31 05.0**	**-2.9**
AS01	**Alice Springs**	**22.01**	**215**	*e*P	**P**	**10 31 11.8**	**+1.0**
AS31	**Alice Springs**	**22.04**	**215**	*e*P	**P**	**10 31 12.2**	**+1.1**
	7.4nm,0.6s						
ASAR	**Alice Springs**	**22.04**	**215**	P	**P**	**10 31 12.2**	**+1.2**
	17nm,0.5s,baz=54,slow=8.6,SNR=348						
ASAR				S	**S**	**10 35 07.1**	**-2.8**
	14nm,0.8s,baz=34,slow=20,SNR=9.1						
ASAR				LR	LR	10 40 53.6	
	comp=Z,213nm,18.1s,baz=38,slow=39						
SOEI	**Soe**	**23.30**	**259**	P	**P**	**10 31 23.8**	**-0.5**
SOEI	**Soe**	**23.30**	**259**	*e*P	**P**	**10 31 24.4**	**+0.1**
	80nm,0.7s						
BATI	**Baumata**	**23.96**	**258**	P	**P**	**10 31 31.2**	**+1.1**
	66nm,0.4s,baz=141,slow=6.5,SNR=7.7						
DZM	**Mont Dzumac**	**24.46**	**133**	P	**P**	**10 31 34.6**	**0.0**
	3.8nm,0.6s,baz=235,slow=14,SNR=6.3						
DZM	**Mont Dzumac**	**24.46**	**133**	*e*P	**P**	**10 31 34.8**	**+0.1**
	23nm,1.4s						
ARMA	**Armidale**	**24.80**	**171**	P	**P**	**10 31 40.9**	**+3.3**
	baz=25,SNR=5.9						
ARMA	**Armidale**	**24.80**	**171**	*e*P	**P**	**10 31 39.0**	**+1.4**
	15nm,0.9s						

LUWI	Luwuk	25.08	280	P	P	10 31 41.7	+1.4
LUWI				pP	pP	10 31 55.7	-2.4
LUWI	Luwuk	25.08	280	eP	P	10 31 40.8	+0.5
	93nm,0.8s						
MMRI	Maumere	25.17	262	eP	P	10 31 41.1	0.0
	110nm,1.0s						
CMSA	Cobar Meteorol	25.65	183	P	P	10 31 48.7	+3.4
	baz=26,SNR=12						
STKA	Stephens Creek	26.51	191	P	P	10 31 53.8	+0.8
	4.6nm,0.6s,baz=349,slow=7.5,SNR=17						
STKA	Stephens Creek	26.51	191	eP	P	10 31 53.5	+0.5
	2.6nm,1.3s						
WRKA	Warakurna	26.52	222	P	P	10 31 53.4	+0.2
	baz=26,SNR=96						
MGCD	Mangrove Creek	27.48	173	P	P	10 32 05.6	+4.0
	baz=28,SNR=4.7						
YNG	Young	28.37	178	P	P	10 32 13.3	+3.7
	baz=29,SNR=7.6						
HTT	Hallett	28.61	195	P	P	10 32 13.8	+2.0
	baz=29,SNR=24						
BBOO	Buckleboo	28.89	200	P	P	10 32 16.5	+2.2
	baz=29,SNR=6.9						
BBOO	Buckleboo	28.89	200	eP	P	10 32 16.0	+1.7
	12nm,1.0s						
CAN	Canberra	29.41	177	eP	P	10 32 22.1	+3.3
	32nm,1.3s						
FORT	Forrest	30.81	214	P	P	10 32 31.7	+0.4
	baz=31,SNR=24						
FORT	Forrest	30.81	214	eP	P	10 32 31.6	+0.4
	17nm,0.7s						
ARPS	Mount Arapiles	31.25	189	P	P	10 32 35.9	+0.9
	baz=31,SNR=4.8						
JCJ	Chichijima	33.10	351	P	P	10 32 50.0	-1.4
	71nm,0.4s,baz=260,slow=15,SNR=28						
CBIJ	Chichi jima	33.10	351	eP	P	10 32 50.0	-1.3
	104nm,0.4s						
MEEK	Meekatharra	34.43	230	P	P	10 33 03.4	+0.4
	baz=34,SNR=41						
KMBL	Kambalda	34.94	220	P	P	10 33 07.5	+0.2
	baz=35,SNR=22						
WOJI	Wonogiri, Jawa	36.32	265	P	P	10 33 18.2	-1.2
JOW	Kunigami	37.39	331	P	P	10 33 28.7	+0.5
	20nm,0.5s,baz=158,slow=11,SNR=17						
JOW	Kunigami	37.39	331	eP	P	10 33 29.1	+0.9
	28nm,1.0s						
MORW	Morawa	37.64	228	P	P	10 33 30.6	+0.2
	baz=38,SNR=8.6						
KLBR	Kellerberrin	37.83	224	P	P	10 33 31.7	-0.2
	baz=38,SNR=24						
BLDU	Ballidu	37.99	226	P	P	10 33 33.4	+0.1
	baz=38,SNR=12						
YULB	Yu-li	38.66	320	eP	P	10 33 39.0	0.0
	9.1nm,0.5s						
NWAO	Narrogin (SRO)	38.98	222	P	P	10 33 41.6	+0.1
	4.9nm,0.6s,baz=288,slow=11,SNR=9.6						
NWAO				LR	LR	10 50 47.0	
	comp=Z,124nm,18.1s,baz=234,slow=37						
TPUB	Ta-pu	39.03	319	eP	P	10 33 41.8	-0.3
	12nm,0.7s						
JHJ	Hachijo jima 2	39.39	350	P	P	10 33 43.8	-1.1
	68nm,0.6s,baz=191,slow=10,SNR=5.8						
YHNB	Yeheng	39.53	321	eP	P	10 33 48.6	+2.3
	16nm,0.7s						
LEM	Lembang	39.60	266	LR	LR	10 55 56.0	
	comp=Z,16nm,18.3s,baz=97,slow=45						
JNU	Nakatsue	41.79	339	P	P	10 34 04.2	-0.6
	14nm,0.8s,baz=89,slow=6.2,SNR=8.0						
JNU	Nakatsue	41.79	339	eP	P	10 34 04.3	-0.4
	13nm,0.7s						
URZ	Urewera	42.05	144	P	P	10 34 06.8	0.0
	11nm,1.0s,baz=300,slow=5.1,SNR=4.3						
MJAR	Matsushiro Arr	43.01	349	P	P	10 34 13.9	-0.6
	11nm,0.8s,baz=163,slow=6.6,SNR=29						
MJAR				ScP	ScP	10 39 41.3	-6.8
	1.2nm,0.8s,baz=163,slow=5.2,SNR=4.1						
MAJO	Matsushiro	43.01	349	eP	P	10 34 14.2	-0.3
	20nm,0.8s						
MAT	Matsushiro	43.01	349	P	P	10 34 14.4	-0.1
MAT				eS	S	10 40 22.0	-12
MJB9	Matsu-Tunnel	43.01	349	eP	P	10 34 14.7	+0.1
	20nm,0.8s						
NJ2	Nanjing	46.47	326	eP	P	10 34 44.8	+2.7
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KSRS	Korea Array	46.73	339	P	P	10 34 44.0	-0.1
	3.5nm,0.5s,baz=154,slow=8.4,SNR=20						
KSAR	Wonju Array Be	46.74	339	P	P	10 34 44.0	-0.1
KS01	Wonju Array Si	46.77	339	eP	P	10 34 44.4	+0.1
ASAJ	Asahikawa	49.88	355	P	P	10 35 08.2	0.0
	5.6nm,0.4s,baz=191,slow=5.8,SNR=22						
ASAJ	Asahikawa	49.88	355	eP	P	10 35 09.0	+0.8
	8.2nm,0.7s						
GYA	Guiyang	50.90	311	eP	P	10 35 18.2	+1.9
GYA				pmax	pmax		
	comp=Z,100nm,1.0s						
USRK	Ussuriysk Ar.	51.69	346	P	P	10 35 22.0	+0.2
	5.0nm,0.5s,baz=167,slow=8.8						
MDJ	Mudanjiang	52.70	344	P	P	10 35 32.3	+3.0
MDJ				pP	sP	10 35 57.3	0.0
MDJ				sP	pP	10 36 08.2	+20
MDJ				S	S	10 42 55.5	+4.2
MDJ				sS	sS	10 43 37.4	+13
MDJ				ScS	ScS	10 45 08.6	-3.2
MDJ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,83nm,3.4s						
CN2	Changchun	53.23	340	eP	P	10 35 35.6	+2.4
KMI	Kunming	53.24	307	P	P	10 35 36.8	+2.9
KMI				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KMI				pmax	pmax		
	comp=Z,110nm,7.0s						
CMAR	Chiang Mai Arr	53.56	298	P	P	10 35 37.1	+1.1
	0.6nm,0.3s,baz=124,slow=6.1,SNR=4.7						
CD2	Chengdu	55.47	314	eP	P	10 35 50.6	+0.8
HHC	Hu-ho-hao-te	56.91	328	eP	P	10 36 03.6	+3.7
HHC				sP	sP	10 36 37.0	+8.9
HHC				pmax	pmax		
	comp=Z,20nm,0.9s						
HHC				pmax	pmax		
	comp=Z,73nm,5.9s						
HHC				LR	LR		
	comp=N,98nm,16.5s						
HHC				LR	LR		
	comp=E,100nm,13.9s						
HHC				LR	LR		
	comp=Z,98nm,16.4s						
LZH	Lanzhou	58.36	319	eP	P	10 36 11.5	+1.2
LZH				pP	sP	10 36 35.2	-3.3
LZH				sP	PcP	10 36 46.9	-14
LZH				pmax	pmax		
	comp=Z,11nm,1.3s						
PETK	Petropavlovsk-	59.33	7	P	P	10 36 15.6	-0.8
	2.6nm,0.5s,baz=177,slow=7.2						
PETK	Petropavlovsk-	59.33	7	eP	P	10 36 16.7	+0.3
GTA	Gaotai	62.88	320	P	P	10 36 41.8	+0.9
GTA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ULN	Ulaanbaatar	64.16	331	eP	P	10 36 49.4	+0.2
	4.1nm,0.7s						
SONM	Songino Array	64.46	331	P	P	10 36 50.8	-0.3
	2.1nm,0.4s,baz=142,slow=7.0,SNR=14						
TLY	Talaya	68.38	332	LR	LR	11 06 31.2	
	comp=Z,19nm,19.7s,baz=135,slow=35						
VNDA	Vanda	72.08	177	P	P	10 37 38.2	+0.1
	1.3nm,0.6s,baz=341,slow=7.6,SNR=14						
WMQ	Urumqi	72.94	319	P	P	10 37 45.5	+1.6
WMQ				pP	pP	10 38 07.6	+3.3
WMQ				pmax	pmax		
	comp=Z,21nm,0.8s						
WMQ				pmax	pmax		
	comp=Z,180nm,4.9s						
WMQ				LR	LR		
	comp=N,79nm,18.5s						
WMQ				LR	LR		
	comp=E,97nm,22.1s						
WMQ				LR	LR		
	comp=Z,75nm,18.5s						
MKAR	Makanchi Array	77.64	320	P	P	10 38 10.1	-0.7
	2.7nm,0.5s,baz=99,slow=7.7,SNR=24						
ZALV	Zalesovo Beam	79.09	328	P	P	10 38 16.8	-1.8
	5.5nm,0.5s,baz=113,slow=6.0,SNR=21						
KDAK	Kodiak Island	79.51	28	P	P	10 38 20.1	-0.6
	1.8nm,0.5s,baz=259,slow=5.2,SNR=4.8						
KSH	Kashi	79.59	312	eP	P	10 38 22.7	+0.9
KSH				sP	sP	10 38 59.1	+8.3
KSH				S	S	10 48 12.0	-5.9
KSH				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,140nm,4.3s						
KSH				LR	LR		
	comp=N,170nm,12.7s						
KSH				LR	LR		
	comp=E,140nm,14.5s						
KURK	Kurchatov	81.33	323	P	P	10 38 29.5	-1.1
KURBB	Kurchatov Arra	81.35	323	P	P	10 38 29.5	-1.2
	1.0nm,0.6s,baz=106,slow=5.2,SNR=12						
MAW	Mawson	82.60	203	P	P	10 38 36.0	-1.0
	1.2nm,0.6s,baz=98,slow=7.1,SNR=3.5						
QSPA	South Pole Qui	84.16	180	P	P	10 38 44.0	-1.2
	2.3nm,0.5s,baz=203,slow=1.0,SNR=15						
ILAR	Eielson Array	85.12	23	P	P	10 38 47.2	-2.7
	3.5nm,0.6s,baz=251,slow=5.0,SNR=59						
BVAR	Borovoye Array	86.88	324	P	P	10 38 56.6	-2.2
	1.8nm,0.5s,baz=128,slow=6.2,SNR=11						
INK	Inuvik	91.31	21	P	P	10 39 17.6	-1.7
	0.7nm,0.7s,baz=276,slow=3.2,SNR=3.0						
YBH	Yreka Blue Hor	93.69	49	LR	LR	11 14 46.8	
	comp=Z,31nm,20.1s,baz=328,slow=31						
PDAR	Pinedale Array	103.45	48	Pdiff	Pdif	10 40 13.3	-1.8
	0.3nm,0.7s,baz=194,slow=4.1,SNR=3.9						
GERES	GERESS Array B	122.00	326	PKP	PKPdf	10 45 06.2	-2.2
	0.9nm,0.5s,baz=70,slow=1.6,SNR=8.1						
PLCA	Paso Flores	122.03	146	PKP	PKPdf	10 45 06.9	-1.9
	2.1nm,0.8s,baz=276,slow=3.0,SNR=5.9						
TKL	Tuckaleechee C	124.45	50	PKP	PKPdf	10 45 11.3	-2.1
	1.8nm,0.7s,baz=201,slow=14,SNR=5.1						
LPAZ	La Paz	138.51	122	PKP	PKPdf	10 45 40.0	-1.3
	1.4nm,0.7s,baz=30,slow=3.6,SNR=5.0						
TORD	Torodi Ar. Bea	145.48	285	PKPbc	PKPdf	10 45 50.5	-2.4
	baz=63,slow=3.7						

MEX 04 10:33:24.0±0.5, 16°.16N×98°.44W, h4^{km}±5^{km}, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.38	53	eP	Pg	10 33 30.9	-0.5
PNIG				eS	Sg	10 33 36.7	+0.3
TLIG	Tlapa	1.40	355	eP	Pn	10 33 46.6	-3.8
TLIG				eS	Sg	10 34 04.3	-4.8
VHO	Vista Hermosa	1.88	61	eP	Pn	10 33 53.5	-3.5
VHO				eS	Sn	10 34 16.0	-5.3
MEIG	Mezcala	2.09	328	i P	Pn	10 33 56.6	-3.3
MEIG				i S	Sn	10 34 21.4	-4.9
YAIG	Yautepec	2.75	348	i P	Pn	10 34 06.6	-2.5
YAIG				i S	Sn	10 34 39.0	-4.0
ARIG	Puente Sto Nin	2.79	320	i P	Pn	10 34 06.0	-3.5
ARIG				i S	Sn	10 34 39.3	-4.2

IDC 04 10:44:55.7±1.2, 29°.06S×74°.67E, h0^{km}, mb3.9/7, mb1 4.1/7, mb1mx3.7/67, mbtmp3.9/7, Error ellipse: s-maj=43.2km s-min=23.9km az=86.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	33.82	110	T	T	11 27 09.3	
	baz=268,SNR=11						
H01W3	Cape Leeuwin H	33.82	110	T	T	11 27 09.4	
	baz=268,slow=74,SNR=4.8						
H01W1	Cape Leeuwin H	33.84	110	T	T	11 27 09.0	
	baz=268,slow=74,SNR=6.0						
CMAR	Chiang Mai Arr	52.74	29	P	P	10 54 13.5	+1.0
	0.4nm,0.3s,baz=208,slow=7.0,SNR=3.4						
ASAR	Alice Springs	52.88	99	P	P	10 54 13.5	-0.2
	1.3nm,1.1s,baz=256,slow=6.3,SNR=5.1						
WRA	Warramunga Arr	54.57	95	P	P	10 54 25.5	-0.6
	2.5nm,1.0s,baz=249,slow=7.4,SNR=4.8						
QSPA	South Pole Qui	61.08	180	P	P	10 55 11.7	+0.4
	3.3nm,1.1s,baz=294,slow=4.3,SNR=3.6						
VNDA	Vanda	61.25	166	P	P	10 55 12.0	-0.1
	1.2nm,1.1s,baz=274,slow=8.3,SNR=5.2						
MKAR	Makanchi Array	75.81	5	P	P	10 56 42.5	-0.9
	0.3nm,0.3s,baz=186,slow=5.8,SNR=5.6						
KURBB	Kurchatov Arra	79.40	3	P	P	10 57 03.4	+0.1
	0.2nm,0.2s,baz=176,slow=3.7,SNR=3.9						
YKA	Yellowknife Ar	146.01	8	PKPbc	PKPdf	11 04 35.8	-0.2
	1.1nm,1.0s,baz=345,slow=4.5,SNR=3.8						

KRSC 04 10:52:16.0±0.5, 54°.00N×160°.60E, h76^{km}±9^{km}, ML3.8, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KII	Karymskiy	0.68	273	eP	Pn	10 52 32.2	+1.0
KII				eS	Sn	10 52 43.7	+1.3
MKZ	Mys Kozlova	0.86	50	eP	Pn	10 52 35.0	+1.8
MKZ				eS	Sn	10 52 48.1	+2.2
SPN	Mys Shipunski	0.97	201	eP	Pn	10 52 35.8	+1.4
SPN				eS	Sn	10 52 49.9	+1.8
NLC	Nalytchevo	1.12	222	eP	Pn	10 52 37.8	+1.5
NLC				eS	Sn	10 52 53.4	+2.0
KZV	Kizimen	1.13	351	eP	Pn	10 52 37.6	+1.1
KZV				eS	Sn	10 52 51.7	-0.2
TUMD	Tumrok D	1.21	355	eP	Pn	10 52 38.2	+0.8
TUMD				eS	Sn	10 52 53.9	+0.4
SDLR	Sedlovina	1.25	235	i P	Pn	10 52 39.7	+1.6
SDLR				eS	Sn	10 52 56.5	+1.9
SMAR	Somma	1.30	236	eP	Pn	10 52 40.3	+1.5
SMAR				eS	Sn	10 52 57.6	+1.7
TUMR	Tumrok	1.31	349	eP	Pn	10 52 40.2	+1.4
TUMR				eS	Sn	10 52 57.5	+1.6
UGLR	Uglovaya	1.32	234	eP	Pn	10 52 40.7	+1.7
UGLR				eS	Sn	10 52 58.3	+2.1
KRX	Arik	1.33	242	eP	Pn	10 52 40.5	+1.4
KRX				eS	Sn	10 52 58.2	+1.9
AVH	Avacha	1.33	237	i P	Pn	10 52 41.0	+1.9
AVH				eS	Sn	10 52 58.9	+2.6
KOK	Koryaka	1.37	239	eP	Pn	10 52 41.3	+1.8
DALK	Dalny	1.47	229	eP	Pn	10 52 42.4	+1.7
DALK				eS	Sn	10 53 01.3	+1.9
PET	Petropavlovsk	1.52	231	i P	Pn	10 52 43.2	+1.8
PET				eS	Sn	10 53 02.6	+2.1
GNL	Ganaly	1.60	260	eP	Pn	10 52 43.7	+1.1
KMNR	Kamenistaya	1.77	353	eP	Pn	10 52 46.7	+1.9
KRMR	Karymshinskiy	1.89	232	eP	Pn	10 52 47.8	+1.5
KRMR				eS	Sn	10 53 10.8	+1.6
BZMR	Bezymyannaya	1.94	358	eP	Pn	10 52 49.0	+1.9
BZGR	Bezymyannyi-Gr	1.94	2	eP	Pn	10 52 49.3	+2.2
KIRR	Kirishev	1.96	356	eP	Pn	10 52 49.7	+2.3
BZWR	Bezymyannyi-We	1.97	358	eP	Pn	10 52 50.0	+2.5
KPT	Kopyto	1.98	354	eP	Pn	10 52 49.4	+1.8
RUS	Russkaya	2.01	219	i P	Pn	10 52 49.4	+1.5
RUS				eS	Sn	10 53 13.5	+1.3
ZLN	Zelenaya	2.02	3	eP	Pn	10 52 50.6	+2.4
LGNR	Loginova	2.09	1	eP	Pn	10 52 52.1	+2.9
KOZ	Kozyrevsk	2.10	349	eP	Pn	10 52 50.8	+1.6
MTVR	Mutnovka	2.10	225	eP	Pn	10 52 51.5	+2.2
MTVR				eS	Sn	10 53 17.0	+2.4
CIRR	Tsirk	2.12	2	eP	Pn	10 52 52.1	+2.6
ESO	Esso	2.21	331	eP	Pn	10 52 51.6	+0.9
KRSR	Krestovskiy	2.22	360	eP	Pn	10 52 52.9	+2.1
ASAK	Asacha	2.29	226	eP	Pn	10 52 54.3	+2.5
ASAK				eS	Sn	10 53 22.0	+2.8
KLY	Klyuchi	2.32	1	eP	Pn	10 52 54.3	+2.3
APC	Apacha	2.32	244	eP	Pn	10 52 54.1	+2.0
KBTR	Krutoberegovo	2.55	29	eP	Pn	10 52 56.5	+1.3
BDR	Baidarnaya	2.59	7	eP	Pn	10 52 58.2	+2.4
SMKR	Semkarok	2.63	11	eP	Pn	10 52 58.6	+2.2
KDTR	Khodutka, Kamc	2.67	216	eP	Pn	10 52 58.7	+1.9
KDTR				eS	Sn	10 53 29.1	+0.9
SRKR	Sorokina	2.68	7	eP	Pn	10 52 59.4	+2.4
BKI	Bering	3.35	67	eS	Sn	10 53 46.5	+1.9

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*ISK **04** 11:06:11.1, 39°.01N×37°.74E, h5^{km}, ML2.3/4*

*ISCJB **04** 11:06:14.5±0.5, 38°.92N±0°.03×37°.74E±0°.04, h10^{km}±4^{km}, Error ellipse: s-maj=5.1km s-min=4.8km az=166.2*

*DDA **04** 11:06:14.3, 38°.92N×37°.74E, h7^{km}, Ml2.6*

*CSEM **04** 11:06:14.0±0.3, 38°.89N×37°.76E, h10^{km}, ML2.6, Error ellipse: s-maj=6.2km s-min=5.8km az=151.0*

ISC 04 11:06:14.5±0.9, 38°.90N±0°.02×37°.75E±0°.02, h12^{km}±6^{km}, n24, σ1ˢ.25/48, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HEKM	Malatya_Hekimh	0.17	96	i P	Pg	11 06 18.1	-0.4
HEKM				i S	Sg	11 06 22.2	+1.0
HEKM	Malatya_Hekimh	0.17	96	P	Pg	11 06 18.0	-0.4
HEKM				S	Sg	11 06 22.2	+1.0
DARE	Darende-Malaty	0.39	212	PG	Pg	11 06 21.7	-0.5
DARE				SG	Sb	11 06 29.2	-0.1
DARE	Darende-Malaty	0.39	212	ePg	Pg	11 06 21.7	-0.5
DARE				eSg	Sb	11 06 29.2	-0.1
CUGUR	Gurin_S˜VAS	0.41	245	i P	Pg	11 06 22.2	-0.4
CUGUR				i S	Sb	11 06 30.0	0.0
CUGUR	Gurin_S˜VAS	0.41	245	P	Pg	11 06 22.2	-0.4
CUGUR				S	Sb	11 06 30.0	0.0
CUKAN	kangal_SIVAS	0.47	333	i P	Pg	11 06 22.8	-1.0
CUKAN				i S	Sb	11 06 30.7	-1.2
CUKAN	kangal_SIVAS	0.47	333	P	Pg	11 06 22.8	-1.0
CUKAN				S	Sb	11 06 30.7	-1.2
AKCD	Akcadag	0.62	167	i P	Pg	11 06 25.4	-1.1
AKCD				i S	Sb	11 06 37.5	+1.5
AKCD	Akcadag	0.62	167	P	Pg	11 06 25.4	-1.1
AKCD				S	Sb	11 06 37.5	+1.5
KEMA	Kemaliye	0.69	57	i P	Pg	11 06 26.4	-1.5
KEMA				i S	Sb	11 06 39.1	+1.0
KEMA	Kemaliye	0.69	57	P	Pg	11 06 26.4	-1.5
KEMA				S	Sb	11 06 39.1	+1.0
MALT	Malatya	0.79	137	PG	Pg	11 06 28.5	-1.3
MALT				SG	Sb	11 06 42.2	+1.2
MALT	Malatya	0.79	137	ePg	Pg	11 06 28.5	-1.3
MALT				eSg	Sb	11 06 42.2	+1.2
ELZG	Elazig	1.05	112	i P	Pg	11 06 33.0	-1.7
ELZG				i S	Sn	11 06 50.1	+0.3
ELZG	Elazig	1.05	112	P	Pg	11 06 33.0	-1.7
ELZG				S	Sn	11 06 50.1	+0.3
PTK	Pertek	1.28	90	PN	Pn	11 06 36.9	-1.6
PTK				SN	Sg	11 06 55.7	-0.2
PTK	Pertek	1.28	90	ePn	Pn	11 06 36.9	-1.6
PTK				eSn	Sg	11 06 55.7	-0.2
SVRC	Sivrice-ELAZID	1.33	113	PN	Pn	11 06 38.5	-0.5
SVRC				SN	Sn	11 06 57.9	+1.1
SVRC	Sivrice-ELAZID	1.33	113	ePn	Pn	11 06 38.5	-0.5
SVRC				eSn	Sn	11 06 57.9	+1.1
SUSE	Susehri	1.36	15	i P	Pg	11 06 39.9	-0.7
SUSE				i S	Sn	11 07 00.9	+3.4
SUSE	Susehri	1.36	15	P	Pg	11 06 39.9	-0.7
SUSE				S	Sn	11 07 00.9	+3.4
KELT	Kelkit	1.71	43	i P	Pb	11 06 45.8	-0.2
KELT				i S	Sg	11 07 10.4	+0.9
KELT	Kelkit	1.71	43	P	Pb	11 06 45.8	-0.2
KELT				S	Sg	11 07 10.4	+0.9

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*ISCJB **04** 11:09:33.5±0.6, 54°.6N±0°.1×35°.2W±0°.1, h10^{km}, mb4.0/20, MS3.5/17, Error ellipse: s-maj=18.5km s-min=9.5km az=174.8*

*IDC **04** 11:09:33.9±0.8, 54°.56N×35°.18W, h0^{km}, mb3.9/14, mb1 4.0/16, mb1mx3.8/72, mbtmp3.9/16, ML3.0/2, MS3.6/19, Ms1 3.6/19, ms1mx3.4/60, Error ellipse: s-maj=27.5km s-min=14.1km az=175.0*

*CSEM **04** 11:09:35.1, 54°.53N×35°.23W, h10^{km}, mb4.4/6*

*NEIC **04** 11:09:35.1±0.4, 54°.53N×35°.23W, h10^{km}, mb4.4/6, Error ellipse: s-maj=14.0km s-min=7.0km az=174.0*

ISC 04 11:09:35.1±0.8, 54°.5N±0°.2×35°.23W±0°.09, h10^{km}, n34, σ0ˢ.72/24, mb4.2/20, MS3.6/17, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFJD	Kangerlussuaq	14.52	335	LR	LR	11 17 39.6	
	comp=Z,120nm,20.5s,baz=139,slow=34						
SCHQ	Schefferville	18.20	284	P	Pn	11 13 46.8	-0.8
	0.3nm,0.3s,baz=101,slow=6.9,SNR=6.7						
SCHQ				LR	LR	11 19 38.6	
	comp=Z,89nm,19.5s,baz=78,slow=33						
FRB	Frobisher Bay	19.19	312	P	P	11 13 57.8	-0.8
	0.1nm,0.3s,baz=32,slow=9.5,SNR=2.4						
FRB				LR	LR	11 19 52.5	
	comp=Z,128nm,19.4s,baz=185,slow=32						
JMIC	Jan Mayen	20.23	25	LR	LR	11 19 50.3	
	comp=Z,167nm,21.4s,baz=265,slow=30						
PKME	Peaks-Kenny Pk	23.61	261	eP	P	11 14 44.4	-1.5
	18nm,1.0s						
ESDC	Sonseca Array	25.68	112	P	P	11 15 04.4	-0.7
	0.2nm,0.3s,baz=312,slow=8.4,SNR=5.2						
SADO	Sadowa	29.61	269	P	P	11 15 40.4	+0.3
	2.7nm,0.5s,baz=56,slow=12,SNR=3.9						
SADO				LR	LR	11 26 40.2	
	comp=Z,220nm,18.3s,baz=68,slow=35						
MDT	Midelt	30.61	123	LR	LR	11 25 17.5	
	comp=Z,154nm,21.1s,baz=65,slow=31						
COWI	Conover	34.66	279	eP	P	11 16 25.1	+0.6
	3.9nm,1.0s						
ULM	Lac du Bonnet	36.25	289	LR	LR	11 30 21.6	
	comp=Z,118nm,19.3s,baz=52,slow=34						
TKL	Tuckaleechee C	38.20	261	LR	LR	11 31 40.7	
	comp=Z,115nm,20.6s,baz=32,slow=35						
MLR	Muntele Rosu	39.17	77	LR	LR	11 32 33.2	
	comp=Z,27nm,21.9s,baz=277,slow=35						
YKA	Yellowknife Ar	39.68	314	P	P	11 17 06.8	0.0
	1.3nm,0.8s,baz=57,slow=8.8,SNR=3.8						
YKA				LR	LR	11 32 02.2	
	comp=Z,5.4nm,19.6s,baz=63,slow=34						
OXF	Oxford	42.27	265	eP	P	11 17 27.9	-0.5
	10nm,0.9s						
MIAR	Mount Ida	44.67	268	eP	P	11 17 47.7	-0.2
	4.5nm,1.0s						
BRTR	Keskin Array B	47.21	79	P	P	11 18 08.0	-0.1
	2.7nm,0.8s,baz=311,slow=4.4,SNR=7.3						
BRTR				LR	LR	11 38 51.0	
	comp=Z,34nm,18.8s,baz=287,slow=37						
PDAR	Pinedale Array	48.26	288	P	P	11 18 15.8	-0.5
	0.6nm,0.7s,baz=47,slow=8.6,SNR=7.2						
PDAR				LR	LR	11 37 28.2	
	comp=Z,94nm,19.4s,baz=63,slow=35						
AMTX	Amarillo	49.15	275	eP	P	11 18 23.2	+0.2
	6.8nm,0.7s						
ILAR	Eielson Array	50.06	329	P	P	11 18 29.5	+0.1
	0.4nm,0.9s,baz=36,slow=5.3,SNR=4.8						
HWUT	Hardware Ranch	50.15	288	eP	P	11 18 31.2	+0.6
	2.7nm,0.8s						
ANMO	Albuquerque	51.87	279	P	P	11 18 45.3	+1.7
	0.7nm,0.8s,baz=43,slow=7.8,SNR=3.5						
ANMO				LR	LR	11 40 19.5	
	comp=Z,150nm,18.1s,baz=60,slow=36						
TXAR	Lajitas Array	54.33	272	P	P	11 19 02.7	+1.0
	0.6nm,0.8s,baz=58,slow=7.9,SNR=7.3						
TXAR				LR	LR	11 41 44.5	
	comp=Z,92nm,18.8s,baz=0.0,slow=36						
NVAR	Mina Array Bea	56.07	290	P	P	11 19 14.9	+0.6
	0.1nm,0.4s,baz=40,slow=6.0,SNR=3.3						
NVAR				LR	LR	11 42 30.0	
	comp=Z,83nm,19.1s,baz=290,slow=35						
YBH	Yreka Blue Hor	56.08	296	LR	LR	11 42 27.1	
	comp=Z,40nm,19.9s,baz=330,slow=35						
BVAR	Borovoye Array	56.44	44	P	P	11 19 16.9	+0.4
	1.5nm,0.7s,baz=319,slow=6.3,SNR=7.1						
PTGA	Pitinga	58.73	209	LR	LR	11 42 19.6	
	comp=Z,32nm,18.5s,baz=35,slow=33						
ROSC	El Rosal	58.74	227	P	P	11 19 34.1	+0.6
	4.2nm,0.4s,baz=117,slow=9.9,SNR=3.8						
ROSC				LR	LR	11 41 43.4	
	comp=Z,28nm,22.0s,baz=160,slow=33						
ZALV	Zalesovo Beam	61.12	36	P	P	11 19 48.7	-0.3
	0.8nm,0.4s,baz=336,slow=6.5,SNR=2.9						
LPIG	La Paz	62.15	273	LR	LR	11 46 34.6	
	comp=Z,103nm,18.5s,baz=46,slow=36						
MKAR	Makanchi Array	66.08	42	P	P	11 20 22.4	+0.5
	1.1nm,0.7s,baz=334,slow=5.8,SNR=3.5						
SONM	Songino Array	72.98	26	P	P	11 21 05.0	+0.3
	1.3nm,0.8s,baz=335,slow=6.9,SNR=5.0						
NNA	Nana	75.01	222	LR	LR	11 54 20.6	
	comp=Z,24nm,19.3s,baz=56,slow=36						
WRA	Warramunga Arr	144.56	17	PKP	PKPdf	11 29 11.1	-0.6
	0.9nm,1.2s,baz=342,slow=3.2,SNR=4.4						
ASAR	Alice Springs	148.12	19	PKPbc	PKPbc	11 29 20.6	-0.2
	2.1nm,0.6s,baz=350,slow=2.4,SNR=45						

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*IDC **04** 11:09:48.0±0.5, 11°.48N×124°.56E, h0^{km}, mb4.3/30, mb1 4.4/33, mb1mx4.3/66, mbtmp4.4/33, ML4.3/3, MS3.9/43, Ms1 3.9/43, ms1mx3.8/60, Error ellipse: s-maj=16.3km s-min=10.7km az=77.0*

*MAN **04** 11:09:48.5, 11°.52N×124°.38E, h3^{km}, mb5.6, ML4.6, MS4.9*

*BJI **04** 11:09:48.9, 11°.33N×124°.59E, h21^{km}, mb4.7/24, mB4.8/16, Ms4.6/15, Ms7 4.3/10*

*NEIC **04** 11:09:50.7±2.5,11°.38N×124°.44E,h18^{km}±15^{km},mb4.7/23,*
Error ellipse: s-maj=6.1km s-min=3.6km az=73.0

NEIC Felt [V PIVS] at Calubian, [IV PIVS] at Leyte, [III PIVS] at Kananga and [II PIVS] at Matagob, Palompon and Tacloban. Also felt [V PIVS] at Naval and [IV PIVS] at Almeria, Culaba and Kawayan, Biliran Island. Felt [I PIVS] at Cebu City, Cebu.

*GCMT **04** 11:09:50.7±0.3,11°.57N×124°.42E,h13^{km}±1^{km},MW4.8/83, Moment Tensor Solution. s11,c12; s83,c118; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.15±.09; M$_{\theta\theta}$1.98±.09; M$_{\phi\phi}$-1.83±.10; M$_{r\theta}$-0.35±.20; M$_{\theta\phi}$-0.90±.07; M$_{\phi r}$-0.77±.25; Best double couple: M$_0$2.27000×10^{16} NP1:φ$_s$59.00000°,δ79.00000°,λ-162.00000°. NP2: φ$_s$326.00000°,δ72.00000°,λ-12.00000°. Principal axes: T 2.1960, Plg5.0000°, Azm192.0000°; N 0.1450, Plg69.0000°, Azm90.0000°; P -2.3440, Plg21.0000°, Azm283.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*ISCJB **04** 11:09:50.9±0.7,11°.48N±0°.02×124°.46E±0°.02,h29^{km}±5^{km}, mb4.5/67,MS3.9/44 Error ellipse: s-maj=4.1km s-min=3.7km az=165.8*

ISC 04 11:09:51.0±1.0,**11°.49N**±0°.02×**124°.41E**±0°.03,**h16**^{km}±7^{km}, **n165,**σ1^s**90**/153,**mb4.5**/67,**MS3.9**/45,**6C-5D,Leyte**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLP	**Palo**	0.65	120	⇓iP	Pg	11 10 01.8	-1.9
PLP				iS	Sg	11 10 12.9	+0.5
BESP	**Borongan**	1.01	84	eP	Pb	11 10 08.0	-2.2
BESP				eS	Sb	11 10 23.5	+0.2
CNP	**Catarman**	1.04	14	eP	Pb	11 10 08.5	-2.2
CNP				eS	Sg	11 10 24.9	+0.1
MMPH	**Masbate**	1.15	318	⇑eP	Pb	11 10 11.8	-0.8
MMPH				iS	Sn	11 10 28.4	+0.4
LLP	**Lapu-Lapu**	1.25	201	⇑iP	Pn	11 10 11.9	-1.9
LLP				eS	Sb	11 10 29.4	-0.7
MSLP	**Maasin**	1.42	162	eP	Pn	11 10 16.2	-0.1
MSLP				eS	Sg	11 10 43.1	+6.1
RCP	**Roxas**	1.63	272	⇓eP	Pn	11 10 17.7	-1.4
RCP				eS	Sb	11 10 39.8	-1.4
TBP	**Tagbilaran**	1.87	197	eP	Pn	11 10 21.5	-0.9
TBP				iS	Sb	11 10 47.9	-0.1
GUIM	**Jordan**	1.98	244	eP	Pn	11 10 23.6	-0.4
GUIM				eS	Sb	11 10 49.9	-1.4
SCPH	**Surigao**	2.00	148	eP	Pn	11 10 25.4	+1.1
SCPH				eS	Sn	11 10 34.1	-15
PVCP	**Virac**	2.10	353	eP	Pn	11 10 24.3	-1.4
SNPH	**Sibulan**	2.43	209	⇓iP	Pn	11 10 29.8	-0.4
SNPH				iS	Sg	11 11 08.6	-0.7
AUQP	**San Andres**	2.49	317	eP	Pb	11 10 32.5	-2.8
OTRP	**Odiongan**	2.49	290	eP	Pn	11 10 29.5	-1.5
JAP	**San Jose, Anti**	2.53	253	⇑eP	Pb	11 10 35.9	-0.2
JAP				eS	Sg	11 11 22.7	+10
BUTP	**Butuan**	2.78	154	eP	Pb	11 10 39.4	-1.0
CGP	**Cagayan de Oro**	3.03	175	⇑eP	Pb	11 10 44.2	-0.5
GQP	**Guinayangan**	3.07	322	⇓eP	Pg	11 10 49.9	0.0
GQP				iS	Sg	11 11 33.1	+3.4
DCPH	**Dipolog City**	3.07	200	⇑eP	Pn	11 10 29.2	-10
BOAC	**Boac**	3.18	308	eP	Pn	11 10 38.9	-1.5
SJMP	**San Jose**	3.36	287	eP	Pn	11 10 40.4	-2.5
CUYO	**Cuyo Island**	3.39	259	eP	Pn	11 10 43.2	-0.2
BUKP	**Musuan**	3.65	170	eP	Pn	11 10 48.3	+1.3
PAGZ	**Pagadian**	3.76	196	eP	Pn	11 10 47.5	-1.0
PAGZ				eS	Sn	11 11 34.5	+2.1
BIPH	**Bislig**	3.81	150	⇑iP	Pb	11 10 57.7	-0.2
BIPH				iS	Sg	11 11 59.2	+5.7
LQP	**Lukban**	3.82	313	⇓eP	Pg	11 11 02.9	-1.4
BUSP	**Coron**	4.16	277	eP	Pn	11 10 53.4	-0.5
TGY	**Tagaytay City**	4.27	308	Pn	Pn	11 10 57.3	+1.9
	40nm,0.3s,baz=227,slow=2.8,SNR=5.9						
TGY				LR	LR	11 12 49.7	
	comp=Z,3μm,18.3s,baz=218,slow=41						
DAV	**Davao City (W)**	4.54	165	Pn	Pn	11 10 58.4	-0.8
	30nm,0.3s,baz=72,slow=14,SNR=3.1						
DAV	**Davao City (W)**	4.54	165	ePn	Pn	11 10 55.9	-3.3
LUBP	**Lubang**	4.63	299	eP	Pn	11 11 01.3	+0.9
MATI	**Mati**	4.87	158	eP	Pb	11 11 11.1	-5.0
ENPP	**El Nido**	4.90	267	eP	Pn	11 11 04.0	-0.1
BALP	**Baler**	5.04	327	eP	Pn	11 11 08.5	+2.5
PPR	**Puerto Princes**	5.84	254	iP	Pn	11 11 20.2	+3.2
PPR				iS	Sn	11 12 16.8	-6.9
CAUP	**Cauayan**	5.97	335	eP	Pn	11 11 19.0	+0.2
APYP	**Conner**	7.03	335	eP	Pn	11 11 37.2	+3.8
YULB	**Yu-li**	12.20	346	ePn	P	11 12 53.8	-2.9
QZH	**Quanzhou**	14.47	338	eP	Pn	11 13 14.3	-1.0
QZH				S	Sn	11 16 03.9	+8.5
QZH				LR	LR		
	comp=N,800nm,20.4s						
QZH				LR	LR		
	comp=E,430nm,18.5s						
JOW	**Kunigami**	15.69	13	Pn	Pn	11 13 31.6	0.0
	0.9nm,0.3s,baz=193,slow=11,SNR=6.4						
JOW				LR	LR	11 18 55.3	
	comp=Z,519nm,20.7s,baz=136,slow=35						
JOW	**Kunigami**	15.69	13	ePn	Pn	11 13 33.1	+1.6
	32nm,0.9s						
QIZ	**Qiongzhong**	15.92	300	P	P	11 13 36.2	-1.9
QIZ				S	S	11 16 42.5	-2.4
QIZ				LR	LR		
	comp=N,420nm,13.2s						
QIZ				LR	LR		
	comp=E,530nm,15.7s						
UBPT	**Khong Chiam**	18.80	284	P	Pn	11 14 11.1	+0.5
	57nm,0.8s						
GUMO	**Guam**	20.08	82	LR	LR	11 20 21.1	
	comp=Z,324nm,20.3s,baz=254,slow=32						
SKNT	**Sakolnakorn**	20.53	288	P	P	11 14 28.6	-0.3
	13nm,1.5s,979nm						
WHN	**Wuhan**	21.13	335	P	P	11 14 41.4	+6.1
WHN				S	Sn	11 18 33.8	-2.9
WHN				LR	LR		
	comp=N,2μm,16.8s						
WHN				LR	LR		
	comp=E,2μm,19.2s						
WHN				LR	LR		
	comp=Z,2μm,18.9s						
NONG	**Nongkai**	21.56	290	P	P	11 14 39.3	-0.8
	0.5nm,0.9s						
BATI	**Baumata**	21.57	182	P	P	11 14 42.1	+1.9
	140nm,1.0s,baz=100,slow=3.8,SNR=3.5						
BATI				LR	LR	11 24 28.3	
	comp=Z,354nm,19.9s,baz=5.5,slow=41						
JNU	**Nakatsue**	22.33	14	P	P	11 14 48.0	-0.2
	4.8nm,0.7s,baz=170,slow=4.7,SNR=2.1						
JNU				LR	LR	11 24 29.4	
	comp=Z,158nm,19.1s,baz=126,slow=40						
CBIJ	**Chichi jima**	22.81	45	eP	P	11 14 53.9	+0.6
	63nm,1.0s						
ENH	**Enshi**	23.27	326	eP	P	11 14 58.2	+0.2
	15nm,0.8s						
PBKT	**Sadao Pong**	23.29	285	P	P	11 14 58.9	+0.6
	14nm,1.2s,749nm						
KMI	**Kunming**	24.59	306	P	P	11 15 11.1	+0.2
KMI				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KMI				pmax	pmax		
	comp=Z,180nm,6.1s						
KMI				LR	LR		
	comp=N,270nm,18.3s						
KMI				LR	LR		
	comp=E,440nm,20.1s						
KMI				LR	LR		
	comp=Z,520nm,20.8s						
UTHA	**Uthaitani**	24.60	282	P	P	11 15 13.0	+2.2
	3.7nm,1.2s						
PAYA	**Payao**	24.89	291	P	P	11 15 14.1	+0.6
	6.4nm,1.0s						
UMPA	**Umpang Tak**	25.23	284	P	P	11 15 19.2	+2.6
	6.1nm,1.0s,1μm						
CM01	**Chiang Mai Arr**	25.52	289	eP	P	11 15 18.4	-0.7
CM31	**Chiang Mai Arr**	25.54	289	eP	P	11 15 19.5	+0.2
CMAR	**Chiang Mai Arr**	25.54	289	P	P	11 15 19.3	0.0
	5.4nm,0.9s,baz=100,slow=8.4,SNR=15						
CMAR				LR	LR	11 26 06.7	
	comp=Z,328nm,18.4s,baz=126,slow=38						
JHJ	**Hachijo jima 2**	25.73	31	LR	LR	11 23 16.8	
	comp=Z,274nm,21.5s,baz=254,slow=32						
CMAI	**Chiengmai2**	25.79	292	P	P	11 15 27.3	+5.5
	2.4nm,0.8s,167nm						
KS15	**Wonju Array Si**	26.03	6	eP	P	11 15 24.7	+1.2
KSAR	**Wonju Array Be**	26.03	6	P	P	11 15 22.8	-0.7
KSRS	**Korea Array**	26.04	6	P	P	11 15 22.8	-0.8
	3.3nm,0.7s,baz=187,slow=9.7,SNR=10.0						
KSRS				LR	LR	11 25 00.5	
	comp=Z,424nm,20.6s,baz=202,slow=35						
KS01	**Wonju Array Si**	26.06	6	eP	P	11 15 24.6	+0.8
INU	**Inuyama**	26.36	24	eP	P	11 15 26.9	+0.3
	39nm,1.4s						
XAN	**Xi'an**	26.53	330	P	P	11 15 27.4	-0.8
XAN				pP	sP	11 15 35.6	+0.6
XAN				pmax	pmax		
	comp=Z,40nm,0.8s						
PSI	**Prapat**	26.70	253	P	P	11 15 31.2	+1.3
	8.3nm,0.9s,baz=360,slow=16,SNR=5.2						
PSI				LR	LR	11 26 11.1	
	comp=Z,433nm,21.6s,baz=90,slow=37						
PSI	**Prapat**	26.70	253	eP	P	11 15 28.3	-1.6
	27nm,1.4s						
MJAR	**Matsushiro Arr**	27.87	24	P	P	11 15 38.2	-2.0
	0.9nm,0.7s,baz=192,slow=10,SNR=3.9						
MJAR				LR	LR	11 24 48.6	
	comp=Z,372nm,21.8s,baz=215,slow=32						
BJT	**Baijiatuau**	29.33	347	eP	P	11 15 53.3	+0.3
	14nm,1.0s						
FITZ	**Fitzroy Crossi**	29.43	178	P	P	11 15 52.7	-1.4
	6.7nm,1.1s,baz=0.0,slow=9.1,SNR=3.2						
FITZ				LR	LR	11 29 50.9	
	comp=Z,91nm,20.5s,baz=354,slow=41						
LZH	**Lanzhou**	30.74	326	eP	P	11 16 08.5	+2.7
LZH				pP	sP	11 16 13.2	+0.5
LZH				sP	pP	11 16 18.2	+7.5
LZH				pmax	pmax		
	comp=Z,26nm,1.2s						
LZH				pmax	pmax		
	comp=Z,110nm,4.9s						
LZH				LR	LR		
	comp=N,350nm,13.6s						
LZH				LR	LR		
	comp=E,680nm,13.8s						
LZH				LR	LR		
	comp=Z,800nm,13.5s						
COEN	**Coen**	31.39	143	eP	P	11 16 10.7	-0.8
	66nm,1.5s						
WRAB	**Tennant Creek**	32.73	163	eP	P	11 16 22.0	-1.2
	12nm,0.5s						
WRA	**Warramunga Arr**	32.73	163	P	P	11 16 21.3	-2.0
	2.4nm,0.8s,baz=341,slow=9.0,SNR=7.4						
WB2	**Warramunga Arr**	32.74	163	eP	P	11 16 21.5	-1.8
BRDH	**Bariadhala**	33.16	294	LR	LR	11 29 47.5	
	comp=Z,304nm,21.9s,baz=160,slow=36						
USRK	**Ussuriysk Ar.**	33.24	10	P	P	11 16 26.1	-1.3
	3.4nm,0.5s,baz=179,slow=7.8						
USRK				LR	LR	11 29 44.1	
	comp=Z,148nm,21.1s,baz=176,slow=36						
MDJ	**Mudanjiang**	33.30	7	eP	P	11 16 29.3	+1.3
	10nm,1.1s						
GTA	**Gaotai**	35.35	326	eP	P	11 16 48.5	+2.5
GTA				pP	sP	11 16 53.3	+0.4
GTA				sP	pP	11 16 56.8	+5.9
GTA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
ASAJ	**Asahikawa**	36.09	22	P	P	11 16 51.6	-0.5
	2.4nm,0.6s,baz=226,slow=11,SNR=4.3						
ASAJ				LR	LR	11 31 52.3	
	comp=Z,181nm,19.8s,baz=216,slow=37						
ASAJ	**Asahikawa**	36.09	22	eP	P	11 16 56.2	+4.1
	4.3nm,0.7s						
AS31	**Alice Springs**	36.16	165	eP	P	11 16 51.5	-1.4
	2.3nm,0.6s						
ASAR	**Alice Springs**	36.16	165	P	P	11 16 52.1	-0.8
	4.1nm,0.6s,baz=342,slow=7.4,SNR=34						
AS01	**Alice Springs**	36.17	165	eP	P	11 16 52.0	-1.0
KLR	**Kul'dur**	38.11	8	P	P	11 17 08.6	-0.7
	0.1nm,0.3s,baz=179,slow=7.9,SNR=3.7						
ULN	**Ulaanbaatar**	39.07	341	eP	P	11 17 17.2	-0.3
	7.5nm,0.8s						
SONM	**Songino Array**	39.26	341	P	P	11 17 19.2	+0.2
	5.6nm,0.9s,baz=160,slow=9.5,SNR=19						
SONM				LR	LR	11 33 49.6	
	comp=Z,345nm,21.4s,baz=152,slow=37						
SONA1	**Songino Array**	39.26	341	eP	P	11 17 18.2	-0.8
HNR	**Honiara**	40.99	119	LR	LR	11 32 36.8	
	comp=Z,146nm,21.4s,baz=296,slow=34						
H11N1	**WAKE ISLAND Hy**	41.63	73	T	T	12 00 58.0	
	baz=266,slow=74,SNR=7.4						
H11N2	**WAKE ISLAND Hy**	41.64	73	T	T	12 01 09.7	
	baz=266,slow=74,SNR=6.9						
H11N3	**WAKE ISLAND Hy**	41.65	73	T	T	12 01 02.4	
	baz=266,slow=74,SNR=6.2						
FORT	**Forrest**	42.17	175	eP	P	11 17 40.2	-2.9
	16nm,0.7s						
PALK	**Pallekele**	43.30	268	LR	LR	11 36 27.2	
	comp=Z,123nm,18.5s,baz=129,slow=37						
TLY	**Talaya**	43.48	341	eP	P	11 17 55.1	+1.6
	8.1nm,0.8s						
NWAO	**Narrogin (SRO)**	44.70	189	LR	LR	11 40 02.7	
	comp=Z,104nm,18.2s,baz=231,slow=41						
BBOO	**Buckleboo**	45.44	166	eP	P	11 18 07.7	-1.6
	24nm,0.8s						
STKA	**Stephens Creek**	46.16	160	P	P	11 18 14.5	-0.6
	4.0nm,0.6s,baz=323,slow=7.6,SNR=9.5						
STKA				LR	LR	11 40 25.1	
	comp=Z,166nm,20.4s,baz=344,slow=40						
STKA	**Stephens Creek**	46.16	160	eP	P	11 18 13.0	-2.0
	1.7nm,0.7s						
PETK	**Petropavlovsk-**	49.31	26	P	P	11 18 38.4	-0.9
	7.6nm,1.0s,baz=224,slow=6.0						
PETK				LR	LR	11 37 33.5	
	comp=Z,132nm,21.8s,baz=221,slow=34						
PETK	**Petropavlovsk-**	49.31	26	eP	P	11 18 39.1	-0.2
MK01	**Makanchi Array**	49.94	323	eP	P	11 18 44.0	-0.2
MK31	**Makanchi Array**	49.95	323	eP	P	11 18 44.1	-0.2
MKAR	**Makanchi Array**	49.95	323	P	P	11 18 44.4	+0.1
	7.6nm,0.7s,baz=115,slow=8.3,SNR=50						
MKAR	**Makanchi Array**	49.95	323	eP	P	11 18 44.1	-0.2
	53nm,0.8s						
MAKZ	**Makanchi**	50.15	323	eP	P	11 18 46.0	+0.2
	30nm,1.4s						
YAK	**Yakutsk**	50.60	3	P	P	11 18 47.9	-1.0
	8.4nm,0.4s,baz=230,slow=1.3,SNR=6.2						
KSH	**Kashi**	51.06	312	P	P	11 18 56.0	+3.1
KSH				ePcP	PcP	11 20 12.3	+3.5
KSH				PcS	PcS	11 24 04.6	-1.9
KSH				pmax	pmax		
	comp=Z,17nm,1.4s						
KSH				pmax	pmax		
	comp=Z,51nm,4.0s						
KSH				LR	LR		
	comp=N,150nm,10.4s						
KSH				LR	LR		
	comp=E,120nm,8.9s						
NIL	**Nilore**	51.54	304	eP	P	11 18 56.5	0.0
	21nm,0.8s						
ZAA0	**Zalesovo Array**	52.69	332	eP	P	11 19 04.5	-0.2
	22nm,0.9s						
ZALV	**Zalesovo Beam**	52.69	332	P	P	11 19 04.0	-0.6
	6.6nm,0.8s,baz=117,slow=4.8,SNR=14						
ZALV	**Zalesovo Beam**	52.69	332	eP	P	11 19 04.2	-0.4
DZM	**Mont Dzumac**	53.03	129	P	P	11 19 06.0	-1.7
	13nm,1.1s,baz=290,slow=15,SNR=5.8						
DZM				LR	LR	11 43 30.9	
	comp=Z,61nm,18.0s,baz=331,slow=38						
DZM	**Mont Dzumac**	53.03	129	eLR	LR	11 34 37.9	
	253nm,26.4s						
AAK	**Ala-Archa**	53.18	315	P	P	11 19 08.9	+0.2
	1.4nm,0.3s,baz=176,slow=8.4,SNR=2.6						
KURK	**Kurchatov**	54.03	326	eP	P	11 19 14.8	+0.2
	28nm,0.9s						
KURBB	**Kurchatov Arra**	54.04	326	P	P	11 19 14.7	+0.1
	9.3nm,0.7s,baz=125,slow=7.3,SNR=50						
KK31	**Karatay Array**	56.10	315	eP	P	11 19 29.4	-0.3
KKAR	**Karatay Array**	56.10	315	eP	P	11 19 29.4	-0.3
BVAR	**Borovoye Array**	59.63	325	LR	LR	11 44 48.3	
	comp=Z,165nm,20.1s,baz=114,slow=35						
BRVK	**Borovoye**	59.70	325	eP	P	11 19 54.6	-0.2
	14nm,0.8s						
TIXI	**Tiksi**	60.18	2	eP	P	11 19 57.0	-0.7
	8.0nm,0.9s						
BILL	**Bilibino**	62.74	16	eP	P	11 20 15.2	+0.1
	5.1nm,0.9s						
GEYT	**Alibeck**	64.35	307	LR	LR	11 52 20.3	
	comp=Z,127nm,19.6s,baz=235,slow=40						
ABKAR	**Akbulak array**	64.76	319	eP	P	11 20 29.0	+0.2
AKTO	**Aktyubinsk**	66.22	320	P	P	11 20 37.8	-0.4
	2.7nm,0.8s,baz=55,slow=9.3,SNR=2.6						
ARU	**Arti**	67.21	327	eP	P	11 20 44.9	+0.6
	11nm,0.7s						
AFI	**Afiamalu**	68.11	110	LR	LR	11 46 55.8	
	comp=Z,89nm,20.5s,baz=110,slow=33						
KBZ	**Khabaz**	76.04	312	P	P	11 21 37.7	-0.1
	4.1nm,0.9s,baz=117,slow=3.5,SNR=2.9						
KVAR	**Kislovodsk Arr**	76.18	313	P	P	11 21 39.5	+0.8
	baz=118,slow=15						
BPAW	**Bear Paw Mtn.**	77.39	27	eP	P	11 21 45.4	+0.2
	13nm,1.2s						
MLY	**Manley**	77.49	26	eP	P	11 21 44.7	-1.0
	6.9nm,1.0s						
KLMR	**Klimovskoe**	77.56	330	eP	P	11 21 46.0	-0.1
KLMR				AMP		11 21 59.3	
	comp=Z,11nm,1.5s						
KLMR				LQ	LQ	11 50 22.8	
COLD	**Coldfoot**	77.70	23	eP	P	11 21 47.1	+0.3
	comp=Z,8.0nm,1.0s						
TOLK	**Toolik Lake Re**	77.93	22	eP	P	11 21 49.3	+1.3
	comp=Z,15nm,0.9s						
ILAR	**Eielson Array**	79.14	26	P	P	11 21 53.4	-1.4
	comp=Z,0.4nm,0.6s,baz=258,slow=4.4,SNR=7.6						
ILAR				LR	LR	11 55 59.9	
	comp=Z,40nm,21.8s,baz=304,slow=35						
ATD	**Arta Tunnel**	79.61	280	LR	LR	11 56 08.1	
	comp=Z,48nm,18.7s,baz=322,slow=35						
SPITS	**Spitsbergen Ar**	82.47	349	LR	LR	12 02 35.6	
	comp=Z,140nm,19.4s,baz=10.0,slow=38						
MMAI	**Mount Meron Ar**	83.01	302	LR	LR	12 03 40.2	
	comp=Z,53nm,18.3s,baz=205,slow=39						
BRTR	**Keskin Array B**	83.35	309	P	P	11 22 18.2	+0.3
	comp=Z,0.8nm,0.6s,baz=112,slow=3.9,SNR=2.8						
BRTR				LR	LR	12 01 18.5	
	comp=Z,38nm,21.8s,baz=62,slow=37						
INK	**Inuvik**	83.82	21	P	P	11 22 18.9	-0.5
	comp=Z,1.3nm,0.7s,baz=280,slow=3.4,SNR=2.7						
INK				LR	LR	12 00 20.5	
	comp=Z,36nm,20.4s,baz=280,slow=36						
FINES	**FINESS Array B**	83.95	331	P	P	11 22 20.5	+0.2
	comp=Z,2.3nm,0.9s,baz=66,slow=3.5,SNR=2.7						
FINES				LR	LR	12 02 39.9	
	comp=Z,101nm,18.6s,baz=108,slow=38						
AKASG	**Malin Array Be**	84.47	320	P	P	11 22 22.5	-0.6
	comp=Z,0.2nm,0.2s,baz=67,slow=5.3,SNR=5.9						
AKASG				LR	LR	12 04 23.6	
	comp=Z,68nm,18.9s,baz=95,slow=39						
KIS	**Kishinev**	85.47	317	e		11 21 20.0	
BUR04	**Bucovina Ar. S**	87.72	318	eP	P	11 22 38.2	-1.2
MLR	**Muntele Rosu**	87.75	316	P	P	11 22 41.0	+1.4
	comp=Z,0.6nm,0.7s,baz=225,slow=1.4,SNR=3.1						
MLR				LR	LR	12 06 46.1	
	comp=Z,30nm,20.1s,baz=45,slow=39						
MLR	**Muntele Rosu**	87.75	316	P	P	11 22 41.0	+1.4
PPT	**Papeete**	89.68	108	LR	LR	11 53 03.4	
	comp=Z,26nm,21.9s,baz=310,slow=29						
PPT2	**Papeete2**	89.68	108	eLR	LR	11 51 36.0	
	comp=Z,156nm,32.0s						
HFS	**Hagfors**	90.12	332	P	P	11 22 50.2	-0.1
	comp=Z,1.4nm,0.7s,baz=94,slow=8.7,SNR=2.7						
HFS				LR	LR	12 06 45.8	
	comp=Z,152nm,18.4s,baz=68,slow=38						
RES	**Resolute Bay**	90.61	10	LR	LR	12 04 43.1	
	comp=Z,35nm,20.3s,baz=314,slow=36						
NOA	**NORSAR Array B**	90.86	333	LR	LR	12 06 44.8	
	comp=Z,186nm,20.3s,baz=60,slow=38						
TBI	**Tubuai**	90.98	113	eLR	LR	11 52 12.4	
	comp=Z,132nm,26.0s						
IDI	**Anoyia**	91.08	306	LR	LR	12 09 42.5	
	comp=Z,26nm,19.7s,baz=82,slow=39						
VNDA	**Vanda**	91.37	172	LR	LR	12 04 32.8	
	comp=Z,42nm,20.2s,baz=323,slow=36						
JMIC	**Jan Mayen**	91.82	346	LR	LR	12 08 12.0	
	comp=Z,45nm,19.9s,baz=72,slow=38						
YKA	**Yellowknife Ar**	93.38	23	P	P	11 23 05.6	+0.3
	comp=Z,1.6nm,1.0s,baz=304,slow=4.0,SNR=3.7						
GERES	**GERESS Array B**	94.61	322	P	P	11 23 11.9	+0.5
	comp=Z,0.3nm,0.2s,baz=76,slow=5.2,SNR=3.3						
GERES				LR	LR	12 10 32.7	
	comp=Z,105nm,18.7s,baz=77,slow=38						
TAOE	**Nuku Hiva Isla**	97.02	98	eLR	LR	11 54 57.0	
	comp=Z,197nm,26.8s						
DAVOX	**Davos/Dischmat**	97.81	321	LR	LR	12 09 07.6	
	comp=Z,118nm,21.9s,baz=82,slow=36						
YBH	**Yreka Blue Hor**	98.86	44	LR	LR	12 00 11.2	
	comp=Z,32nm,21.5s,baz=310,slow=31						
TXAR	**Lajitas Array**	118.38	48	PKP	PKPdf	11 28 37.9	-0.8
	comp=Z,0.5nm,0.8s,baz=197,slow=2.4,SNR=4.9						
S39A	**Bolivar**	119.63	34	ePKPdf	PKPdf	11 28 39.8	-0.9

PRU 04 11:12:03.7,50°.17N×19°.03E,h0^{km},Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHZP	**Chorzow**	0.12	349	ePg	Pg	11 12 05.9	-0.2
CHZP				eSg	Sg	11 12 07.1	-0.6
OJC	**Ojcow**	0.50	84	ePg	Pg	11 12 12.7	-0.5
OJC				eSg	Sg	11 12 19.1	-0.6
MORC	**Moravsky Berou**	1.04	248	ePG	Pb	11 12 24.2	-0.4
MORC				eSG	Sg	11 12 37.6	+0.6
KRLC	**Kraliky**	1.45	267	ePG	Pn	11 12 29.7	-1.5
KRLC				eSG	Sg	11 12 49.6	-0.7
	comp=Z,1.4nm,0.3s						
VYHS	**Vyhne**	1.68	184	ePG	Pn	11 12 33.7	-0.7
VYHS				eSG	Sn	11 12 55.8	-0.8
DPC	**Dobruska-Polom**	1.75	277	ePG	Pn	11 12 35.2	-0.1
DPC				eSG	Sn	11 12 58.2	-0.1
	comp=Z,3.5nm,0.4s						
UPC	**Upice**	1.96	281	eSG	Sg	11 13 06.1	-0.6
	comp=Z,3.4nm,0.3s						

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*IDC **04** 11:12:06.2±0.6,37°.64N×16°.79E,h0^{km},mb4.6/29, mb1 4.7/38,mb1mx4.5/66,mbtmp4.6/38,ML4.4/8,MS3.6/15, Ms1 3.6/15,ms1mx3.2/56,Error ellipse: s-maj=13.3km s-min=10.7km az=167.0*

*GII **04** 11:12:08.9±0.2,37°.69N×16°.87E,h40^{km}*

*ISCJB **04** 11:12:09.8±0.2,37°.64N±0°.01×16°.90E±0°.01,h33^{km}±2^{km}, mb4.7/99,MS3.7/17,Error ellipse: s-maj=2.5km s-min=1.7km az=5.4*

*ROM **04** 11:12:09.9±0.1,37°.475N±0°.002×16°.799E±0°.003, h38^{km},ML4.7/79*

*NEIC **04** 11:12:10.0±0.0,37°.47N×16°.74E,h48^{km},mb4.7/48, ML4.7(ROM),After ROM.*

*MOS **04** 11:12:10.8±0.9,37°.76N×16°.92E,h37^{km},mb4.9/49,Error ellipse: s-maj=5.6km s-min=2.9km az=69.8*

*TIR **04** 11:12:10.0,38°.00N×17°.03E,h35^{km},Md4.7/10*

*PDG **04** 11:12:11.7±0.5,37°.89N×17°.02E,h18^{km}±1^{km},MD5.0/5, ML5.0/11,Error ellipse: s-maj=1.2km s-min=1.2km az=90.0*

*BJI **04** 11:12:11.1,37°.77N×16°.71E,h55^{km},mb4.8/32,mB4.9/15, Ms4.8/9,Ms7 4.5/9*

*CSEM **04** 11:12:12.3±0.1,37°.68N×16°.85E,h40^{km},mb4.7/57,Error ellipse: s-maj=3.0km s-min=2.1km az=21.0*

*THE **04** 11:12:14.1,37°.72N×17°.06E,h32^{km}±43^{km},ML4.6/7,Error ellipse: s-maj=43.3km s-min=0.6km az=0.0*

*HLW **04** 11:12:33.9,36°.85N×19°.57E,h20^{km}±36^{km},Md4.3,Ml4.0*

ISC 04 11:12:11.9±0.4,**37°.64N**±0°.04×**16°.87E**±0°.03,**h41**^{km}±3^{km}, **h41**^{km}**:pP-P,n783,**σ1^s**72**/898,**mb4.7**/99,**MS3.7**/18, **51C-35D,Ionian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MPAZ	**Palizzi**	0.75	295	iP	Pn	11 12 25.4	-0.6
MPAZ				AML	AML		
	comp=E,31050μm,0.5s						
MPAZ				AML	AML		
	comp=N,33450μm,0.4s						
MPAZ				AML	AML		
	comp=E,31050μm,0.5s						
MPAZ				AML	AML		
	comp=N,33450μm,0.4s						
MPAZ				AML	AML		
	comp=E,31050μm,0.5s						
MPAZ				AML	AML		
	comp=N,33450μm,0.4s						
SOI	**Samo**	0.77	304	iP	Pn	11 12 26.7	+0.4
SOI				AML	AML		
	comp=E,17050μm,0.8s						
SOI				AML	AML		
	comp=N,21000μm,0.7s						
SOI				AML	AML		
	comp=E,17100μm,0.8s						
SOI				AML	AML		
	comp=N,21000μm,0.7s						
SOI				AML	AML		
	comp=E,17100μm,0.8s						

SOI				AML	AML		
	comp=N,21000μm,0.7s						
PLAC	**Placanica**	**0.88**	**337**	*i* P	**Pn**	**11 12 28.5**	**+0.7**
PLAC				AML	AML		
	comp=E,28950μm,0.6s						
PLAC				AML	AML		
	comp=N,38650μm,0.7s						
PLAC				AML	AML		
	comp=E,28950μm,0.6s						
PLAC				AML	AML		
	comp=N,38650μm,0.7s						
PLAC				AML	AML		
	comp=N,38650μm,0.7s						
PLAC				AML	AML		
	comp=E,28950μm,0.6s						
GMB	**Gambarie**	**0.98**	**303**	*i* P	**Pn**	**11 12 28.8**	**-0.5**
GMB				AML	AML		
	comp=E,82350μm,1.6s						
GMB				AML	AML		
	comp=N,72050μm,0.8s						
GMB				AML	AML		
	comp=E,82350μm,1.6s						
GMB				AML	AML		
	comp=N,72050μm,0.8s						
GMB				AML	AML		
	comp=N,72050μm,0.8s						
GMB				AML	AML		
	comp=E,82350μm,1.6s						
CEL	**Celeste**	**0.99**	**309**	*e*Pn	**Pn**	**11 12 28.9**	**-0.4**
CEL				*e*Sn	**Sn**	**11 12 44.6**	**+2.5**
CEL	**Celeste**	**0.99**	**309**	*e*Pn	**Pn**	**11 12 28.9**	**-0.4**
CEL				*e*Sn	**Sn**	**11 12 44.6**	**+2.5**
CEL	**Celeste**	**0.99**	**309**	*i* P	**Pn**	**11 12 29.4**	**+0.1**
CEL				S	**Sn**	**11 12 42.4**	**+0.3**
CEL				AML	AML		
	comp=E,26100μm,0.8s						
CEL				AML	AML		
	comp=N,24450μm,0.9s						
CEL				AML	AML		
	comp=E,26100μm,0.8s						
CEL				AML	AML		
	comp=N,24450μm,0.9s						
CEL				AML	AML		
	comp=N,24450μm,0.9s						
CEL				AML	AML		
	comp=E,26100μm,0.8s						
MTTG	**Motta San Giov**	**1.00**	**292**	*i* P	**Pn**	**11 12 28.6**	**-0.8**
MTTG				AML	AML		
	comp=E,17100μm,0.5s						
MTTG				AML	AML		
	comp=N,34100μm,0.6s						
MTTG				AML	AML		
	comp=E,17100μm,0.5s						
MTTG				AML	AML		
	comp=N,34100μm,0.6s						
MTTG				AML	AML		
	comp=N,34100μm,0.6s						
MTTG				AML	AML		
	comp=E,17100μm,0.5s						
MSCL	**Scilla**	**1.04**	**305**	*i* P	**Pn**	**11 12 29.8**	**-0.2**
MSCL				S	**Sn**	**11 12 43.4**	**+0.1**
MSCL				AML	AML		
	comp=E,70650μm,0.5s						
MSCL				AML	AML		
	comp=N,43450μm,0.5s						
MSCL				AML	AML		
	comp=E,70650μm,0.5s						
MSCL				AML	AML		
	comp=N,43450μm,0.5s						
MSCL				AML	AML		
	comp=E,70650μm,0.5s						
MSCL				AML	AML		
	comp=N,43450μm,0.5s						
ATN	**Antennamare**	**1.22**	**296**	*i* P	**Pn**	**11 12 32.2**	**-0.4**
ATN				AML	AML		
	comp=E,27200μm,0.4s						
ATN				AML	AML		
	comp=N,24350μm,1.0s						
ATN				AML	AML		
	comp=E,27200μm,0.4s						
ATN				AML	AML		
	comp=N,24350μm,1.0s						
GRI	**Girifalco**	**1.23**	**344**	*e*P	**Pn**	**11 12 33.3**	**+0.7**
GRI				AML	AML		
	comp=E,17400μm,0.8s						
GRI				AML	AML		
	comp=N,14050μm,0.7s						
GRI				AML	AML		
	comp=E,17400μm,0.8s						
GRI				AML	AML		
	comp=N,14050μm,0.7s						
GRI				AML	AML		
	comp=N,14050μm,0.7s						
GRI				AML	AML		
	comp=E,17400μm,0.8s						
JOPP	**Joppolo**	**1.24**	**322**	*i* P	**Pn**	**11 12 32.8**	**+0.1**
JOPP				S	**Sn**	**11 12 48.7**	**+0.5**
JOPP				AML	AML		
	comp=E,15150μm,0.5s						
JOPP				AML	AML		
	comp=N,21850μm,0.7s						
JOPP				AML	AML		
	comp=E,15150μm,0.5s						
JOPP				AML	AML		
	comp=N,21850μm,0.7s						
JOPP				AML	AML		
	comp=N,21850μm,0.7s						
JOPP				AML	AML		
	comp=E,15150μm,0.5s						
MSRU	**Castanea**	**1.24**	**301**	*i* P	**Pn**	**11 12 32.4**	**-0.3**
MSRU				S	**Sn**	**11 12 48.7**	**+0.4**
MSRU				AML	AML		
	comp=E,27200μm,1.4s						
MSRU				AML	AML		
	comp=N,18950μm,0.4s						
MSRU				AML	AML		
	comp=E,27200μm,1.4s						
MSRU				AML	AML		
	comp=N,18950μm,0.4s						
MSRU				AML	AML		
	comp=N,18950μm,0.4s						
MSRU				AML	AML		
	comp=E,27200μm,1.4s						
MPNC	**Port Mandanici**	**1.30**	**293**	*i* P	**Pn**	**11 12 33.9**	**+0.4**
MPNC				S	**Sn**	**11 12 49.7**	**0.0**
MPNC				AML	AML		
	comp=E,76550μm,1.1s						
MPNC				AML	AML		
	comp=N,60950μm,1.5s						
MPNC				AML	AML		
	comp=E,76550μm,1.1s						
MPNC				AML	AML		
	comp=N,60950μm,1.5s						
MCSR	**Castroreale**	**1.35**	**289**	*i* P	**Pn**	**11 12 33.5**	**-0.7**
MCSR				AML	AML		
	comp=E,31950μm,0.3s						
MCSR				AML	AML		
	comp=N,55200μm,0.3s						
MCSR				AML	AML		
	comp=E,31950μm,0.3s						
MCSR				AML	AML		
	comp=N,55200μm,0.3s						
MCSR				AML	AML		
	comp=E,31950μm,0.3s						
MCSR				AML	AML		
	comp=N,55200μm,0.3s						
SERS	**Sersale**	**1.40**	**354**	*e*P	**Pn**	**11 12 35.8**	**+0.7**
SERS				S	**Sn**	**11 12 53.4**	**+1.0**
SERS				AML	AML		
	comp=E,7905μm,0.4s						
SERS				AML	AML		
	comp=N,6695μm,0.6s						
SERS				AML	AML		
	comp=E,6695μm,0.6s						
SERS				AML	AML		
	comp=N,8720μm,0.4s						
SERS				AML	AML		
	comp=E,7905μm,0.4s						
SERS				AML	AML		
	comp=N,6700μm,0.6s						
SERS				AML	AML		
	comp=E,6695μm,0.6s						
SERS				AML	AML		
	comp=N,8720μm,0.4s						
SERS				AML	AML		
	comp=E,6695μm,0.6s						
SERS				AML	AML		
	comp=N,6700μm,0.6s						
SERS				AML	AML		
	comp=N,8720μm,0.4s						
SERS				AML	AML		
	comp=E,7905μm,0.4s						
HAGA	**Augusta**	**1.41**	**256**	P	**Pn**	**11 12 31.7**	**-3.3**
HAGA				AML	AML		
	comp=E,42300μm,0.9s						
HAGA				AML	AML		
	comp=N,23250μm,0.7s						
HAGA				AML	AML		
	comp=E,42300μm,0.9s						
HAGA				AML	AML		
	comp=N,23250μm,0.7s						
HAGA				AML	AML		
	comp=E,42300μm,0.9s						
HAGA				AML	AML		
	comp=N,23250μm,0.7s						
NOV	**Novara**	**1.42**	**286**	*i* P	**Pn**	**11 12 34.2**	**-1.1**
NOV				S	**Sn**	**11 12 50.8**	**-2.0**
NOV				AML	AML		
	comp=E,23400μm,1.2s						
NOV				AML	AML		
	comp=N,19200μm,0.6s						
NOV				AML	AML		
	comp=E,23400μm,1.2s						
NOV				AML	AML		
	comp=N,19200μm,0.6s						
NOV				AML	AML		
	comp=E,23400μm,1.2s						
NOV				AML	AML		
	comp=N,19200μm,0.6s						
MILZ	**Milazzo**	**1.44**	**297**	P	**Pn**	**11 12 34.7**	**-0.7**
MILZ				AML	AML		
	comp=E,71850μm,0.6s						
MILZ				AML	AML		
	comp=N,39200μm,1.0s						
MILZ				AML	AML		
	comp=E,71850μm,0.6s						
MILZ				AML	AML		
	comp=N,39200μm,1.0s						
MILZ				AML	AML		
	comp=E,71850μm,0.6s						
MILZ				AML	AML		
	comp=N,39200μm,1.0s						
ESLN	**Serra La Nave**	**1.50**	**273**	P	**Pn**	**11 12 33.8**	**-2.7**
ESLN				AML	AML		
	comp=E,18950μm,0.4s						
ESLN				AML	AML		
	comp=N,12350μm,0.4s						
ESLN				AML	AML		
	comp=E,18950μm,0.4s						
ESLN				AML	AML		
	comp=N,12350μm,0.4s						
ESLN				AML	AML		
	comp=N,12350μm,0.4s						
ESLN				AML	AML		
	comp=E,18950μm,0.4s						
SSY	**Sortino**	**1.51**	**252**	*e*P	**Pn**	**11 12 32.9**	**-3.5**
SSY				AML	AML		
	comp=E,41900μm,0.8s						
SSY				AML	AML		
	comp=N,55000μm,1.0s						
SSY				AML	AML		
	comp=E,41900μm,0.8s						
SSY				AML	AML		
	comp=N,55000μm,1.0s						
SSY				AML	AML		
	comp=E,41900μm,0.8s						
SSY				AML	AML		
	comp=N,55000μm,1.0s						
TIP	**Timpagrande**	**1.54**	**357**	*e*Pn	**Pn**	**11 12 37.5**	**+0.6**
TIP				*e*Sn	**Sn**	**11 12 53.7**	**-2.0**
TIP	**Timpagrande**	**1.54**	**357**	P	**Pn**	**11 12 37.4**	**+0.6**
TIP				S	**Sn**	**11 12 56.8**	**+1.1**
TIP	**Timpagrande**	**1.54**	**357**	*e*Pn	**Pn**	**11 12 37.5**	**+0.6**
TIP				*e*Sn	**Sn**	**11 12 53.7**	**-2.0**
TIP	**Timpagrande**	**1.54**	**357**	*e*P	**Pn**	**11 12 37.5**	**+0.6**
TIP				AML	AML		
	comp=E,4980μm,0.7s						
TIP				AML	AML		
	comp=N,6940μm,0.6s						
TIP				AML	AML		
	comp=N,6940μm,0.6s						
TIP				AML	AML		
	comp=E,4980μm,0.7s						
HAVL	**Avola**	**1.54**	**245**	*i* P	**Pn**	**11 12 33.5**	**-3.4**
HAVL				AML	AML		
	comp=E,71350μm,0.5s						
HAVL				AML	AML		
	comp=N,65950μm,0.3s						
HAVL				AML	AML		
	comp=N,65950μm,0.3s						
HAVL				AML	AML		
	comp=E,71350μm,0.5s						
HLNI	**Lentini**	**1.61**	**260**	P	**Pn**	**11 12 34.7**	**-3.1**
HLNI				S	**Sn**	**11 12 52.2**	**-5.2**
HLNI				AML	AML		
	comp=E,72150μm,0.6s						
HLNI				AML	AML		
	comp=N,54050μm,0.6s						
HLNI				AML	AML		
	comp=E,72150μm,0.6s						
HLNI				AML	AML		
	comp=N,54050μm,0.6s						
HLNI				AML	AML		
	comp=E,72150μm,0.6s						
HLNI				AML	AML		
	comp=N,54050μm,0.6s						
MEU	**Monte Lauro**	**1.63**	**251**	*e*P	**Pn**	**11 12 35.8**	**-2.4**
MEU				S	**Sn**	**11 12 54.7**	**-3.3**
LADO	**San Nicola del**	**1.65**	**3**	*e*P	**Pn**	**11 12 38.9**	**+0.6**
LADO				AML	AML		
	comp=E,4320μm,1.5s						
LADO				AML	AML		
	comp=N,2440μm,1.2s						
LADO				AML	AML		
	comp=E,4320μm,1.5s						
LADO				AML	AML		
	comp=N,2440μm,1.2s						
VPL	**Vulcano Piano**	**1.66**	**297**	*i* P	**Pn**	**11 12 37.6**	**-0.9**
VPL				AML	AML		
	comp=E,63550μm,0.4s						
VPL				AML	AML		
	comp=N,71050μm,0.4s						
VPL				AML	AML		
	comp=E,63550μm,0.4s						
VPL				AML	AML		
	comp=N,71050μm,0.4s						
LLI	**Lipari**	**1.71**	**299**	*i* P	**Pn**	**11 12 38.6**	**-0.6**
LLI				AML	AML		
	comp=E,30350μm,0.8s						
LLI				AML	AML		
	comp=N,46150μm,0.6s						
LLI				AML	AML		
	comp=E,30350μm,0.8s						
LLI				AML	AML		
	comp=N,46150μm,0.6s						
STR4	**STROMBOLI 4**	**1.73**	**312**	*i* P	**Pn**	**11 12 38.4**	**-1.0**
STR4				AML	AML		
	comp=E,8150μm,0.4s						
STR4				AML	AML		
	comp=N,6200μm,1.1s						
STR4				AML	AML		
	comp=N,6200μm,1.1s						
STR4				AML	AML		
	comp=E,8150μm,0.4s						
MNO	**Monte Soro**	**1.75**	**280**	*e*P	**Pn**	**11 12 38.8**	**-1.0**
MNO				S	**Sn**	**11 12 59.8**	**-1.2**
ISTR	**Stromboli Gino**	**1.75**	**311**	P	**Pn**	**11 12 38.5**	**-1.1**
HVZN	**Vizzini**	**1.77**	**256**	P	**Pn**	**11 12 37.2**	**-2.9**
HVZN				AML	AML		
	comp=E,78200μm,1.0s						
HVZN				AML	AML		
	comp=N,90900μm,0.6s						
HVZN				AML	AML		
	comp=E,78200μm,1.0s						
HVZN				AML	AML		
	comp=N,90900μm,0.6s						
HVZN				AML	AML		
	comp=E,78200μm,1.0s						
HVZN				AML	AML		
	comp=N,90900μm,0.6s						
CELI	**Celico**	**1.78**	**351**	*e*P	**Pn**	**11 12 41.5**	**+1.2**
CELI				AML	AML		
	comp=E,9100μm,0.8s						
CELI				AML	AML		
	comp=N,7240μm,0.6s						
CELI				AML	AML		
	comp=E,22800μm,0.8s						
CELI				AML	AML		
	comp=N,18050μm,0.6s						
CELI				AML	AML		
	comp=E,9100μm,0.8s						
CELI				AML	AML		
	comp=N,7240μm,0.6s						
CELI				AML	AML		
	comp=E,22800μm,0.8s						
CELI				AML	AML		
	comp=N,18050μm,0.6s						
HMDC	**Modica**	**1.80**	**248**	*e*P	**Pn**	**11 12 37.1**	**-3.2**
HMDC				S	**Sn**	**11 12 57.0**	**-5.0**
GALF	**Gagliano Caste**	**1.83**	**273**	*e*P	**Pn**	**11 12 39.5**	**-1.3**
GALF				AML	AML		
	comp=E,17550μm,0.5s						
GALF				AML	AML		
	comp=N,22950μm,0.6s						
GALF				AML	AML		
	comp=E,17550μm,0.5s						
GALF				AML	AML		
	comp=N,22950μm,0.6s						
MSFR	**San Fratello**	**1.84**	**283**	*i* P	**Pn**	**11 12 40.3**	**-0.8**
MSFR				S	**Sn**	**11 13 01.4**	**-1.8**
MSFR				AML	AML		
	comp=E,14150μm,0.8s						
MSFR				AML	AML		
	comp=N,13295μm,1.0s						
MSFR				AML	AML		
	comp=E,14150μm,0.8s						
MSFR				AML	AML		
	comp=N,13295μm,1.0s						
PIPA	**Pietrapaola**	**1.84**	**359**	*e*P	**Pn**	**11 12 41.9**	**+0.9**
PIPA				AML	AML		
	comp=E,12150μm,0.7s						
PIPA				AML	AML		
	comp=N,7010μm,0.7s						
PIPA				AML	AML		
	comp=E,12200μm,0.7s						
PIPA				AML	AML		
	comp=N,7305μm,0.7s						
PIPA				AML	AML		
	comp=E,12150μm,0.7s						
PIPA				AML	AML		
	comp=E,12200μm,0.7s						
PIPA				AML	AML		
	comp=N,7010μm,0.7s						
PIPA				AML	AML		
	comp=N,7305μm,0.7s						
CAGR	**Agira**	**1.88**	**270**	*e*P	**Pn**	**11 12 40.6**	**-0.9**
CAGR				AML	AML		
	comp=E,21750μm,0.5s						
CAGR				AML	AML		
	comp=N,24500μm,0.9s						
CAGR				AML	AML		
	comp=N,24500μm,0.9s						
CAGR				AML	AML		
	comp=E,21750μm,0.5s						
VAE	**Valguarnera**	**1.96**	**266**	Pn	**Pn**	**11 12 41.8**	**-0.8**
	comp=E,16nm,0.3s,baz=132,slow=10,SNR=30						
VAE				Sn	**Sn**	**11 13 03.2**	**-2.8**
	comp=E,200nm,0.3s,baz=288,slow=20,SNR=20						
CET2	**Cetraro**	**2.02**	**340**	P	**Pn**	**11 12 43.3**	**-0.2**
CET2				AML	AML		
	comp=E,21550μm,0.6s						
CET2				AML	AML		
	comp=N,28600μm,0.5s						
CET2				AML	AML		
	comp=N,28600μm,0.5s						
CET2				AML	AML		
	comp=E,21550μm,0.6s						
IFIL	**Filicudi I Eol**	**2.04**	**298**	*e*P	**Pn**	**11 12 42.2**	**-1.4**
IFIL				AML	AML		
	comp=E,81800μm,0.4s						
IFIL				AML	AML		
	comp=N,22850μm,0.4s						
IFIL				AML	AML		
	comp=N,22850μm,0.4s						
IFIL				AML	AML		
	comp=E,81800μm,0.4s						
IACL	**Alicudi**	**2.17**	**295**	*e*P	**Pn**	**11 12 44.8**	**-0.7**
IACL				AML	AML		
	comp=E,9695μm,0.4s						
IACL				AML	AML		
	comp=N,8525μm,0.4s						
IACL				AML	AML		
	comp=E,9695μm,0.4s						
IACL				AML	AML		
	comp=N,8525μm,0.4s						
PLLN	**Pollina**	**2.19**	**280**	*e*P	**Pn**	**11 12 45.0**	**-0.7**
RESU	**Resuttano**	**2.23**	**271**	*e*P	**Pn**	**11 12 45.8**	**-0.6**
RESU				AML	AML		
	comp=E,7660μm,1.2s						
RESU				AML	AML		
	comp=N,6495μm,1.0s						
RESU				AML	AML		
	comp=E,7660μm,1.2s						
RESU				AML	AML		
	comp=N,6495μm,1.0s						
SALB	**San Lorenzo Be**	**2.27**	**350**	P	**Pn**	**11 12 48.1**	**+1.2**
SALB				AML	AML		
	comp=E,5325μm,0.7s						
SALB				AML	AML		
	comp=N,4985μm,0.9s						
SALB				AML	AML		
	comp=E,5760μm,0.7s						
SALB				AML	AML		
	comp=N,4895μm,0.9s						
SALB				AML	AML		
	comp=E,5760μm,0.7s						
SALB				AML	AML		
	comp=E,5325μm,0.7s						
SALB				AML	AML		
	comp=N,4985μm,0.9s						
SALB				AML	AML		
	comp=N,4895μm,0.9s						
GIB	**Gibilmanna**	**2.28**	**280**	*e*P	**Pn**	**11 12 45.9**	**-1.1**
GIB				AML	AML		
	comp=E,10395μm,1.0s						
GIB				AML	AML		
	comp=N,13250μm,1.0s						
GIB				AML	AML		
	comp=N,13250μm,1.0s						
GIB				AML	AML		
	comp=E,10395μm,1.0s						
T0715	**Campotenese**	**2.28**	**344**	P	**Pn**	**11 12 48.6**	**+1.5**
T0715				AML	AML		
	comp=E,8980μm,0.6s						
T0715				AML	AML		
	comp=N,6290μm,0.7s						
T0715				AML	AML		
	comp=E,14525μm,0.7s						
T0715				AML	AML		
	comp=N,15950μm,0.7s						
T0715				AML	AML		
	comp=N,6290μm,0.7s						
T0715				AML	AML		
	comp=N,15950μm,0.7s						
T0715				AML	AML		
	comp=E,8980μm,0.6s						
T0715				AML	AML		
	comp=E,14525μm,0.7s						
T0712	**Santa Domenica**	**2.32**	**340**	*e*P	**Pn**	**11 12 47.5**	**-0.1**
T0712				AML	AML		
	comp=E,2060μm,0.7s						
T0712				AML	AML		
	comp=N,1920μm,0.7s						
T0712				AML	AML		
	comp=E,4060μm,0.7s						
T0712				AML	AML		
	comp=N,3890μm,0.7s						
T0712				AML	AML		
	comp=N,1920μm,0.7s						
T0712				AML	AML		
	comp=N,3890μm,0.7s						
T0712				AML	AML		
	comp=E,2060μm,0.7s						
T0712				AML	AML		
	comp=E,4060μm,0.7s						
MMN	**Mormanno**	**2.35**	**343**	P	**Pn**	**11 12 48.3**	**+0.4**
MMN				AML	AML		
	comp=E,2505μm,0.7s						
MMN				AML	AML		
	comp=N,4300μm,0.7s						
MMN				AML	AML		
	comp=E,2505μm,0.7s						

MMN				AML	AML		
	comp=N,4300µm,0.7s						
T0716	**Rotonda - Cont**	2.40	344	P	Pn	11 12 49.2	+0.6
T0716				AML	AML		
	comp=E,2970µm,1.5s						
T0716				AML	AML		
	comp=N,3120µm,0.6s						
T0716				AML	AML		
	comp=E,5820µm,1.6s						
T0716				AML	AML		
	comp=N,6490µm,0.6s						
T0716				AML	AML		
	comp=E,5820µm,1.6s						
T0716				AML	AML		
	comp=E,2970µm,1.5s						
T0716				AML	AML		
	comp=N,6490µm,0.6s						
T0716				AML	AML		
	comp=N,3120µm,0.6s						
ORI	**Oriolo Calabro**	2.44	352	P	Pn	11 12 50.3	+1.1
ORI				AML	AML		
	comp=E,11335µm,0.7s						
ORI				AML	AML		
	comp=N,10750µm,1.6s						
ORI				AML	AML		
	comp=E,11335µm,0.7s						
ORI				AML	AML		
	comp=N,10750µm,1.6s						
ALJA	**Alia**	2.47	273	*i* P	Pn	11 12 49.2	-0.5
ALJA				AML	AML		
	comp=E,3350µm,0.5s						
ALJA				AML	AML		
	comp=N,3805µm,0.6s						
ALJA				AML	AML		
	comp=N,3805µm,0.6s						
ALJA				AML	AML		
	comp=E,3350µm,0.5s						
CUC	**Castrocucco**	2.49	341	*e*Pn	Pn	11 12 49.7	-0.2
CUC	**Castrocucco**	2.49	341	*e*Pn	Pn	11 12 49.7	-0.2
CUC	**Castrocucco**	2.49	341	P	Pn	11 12 49.3	-0.6
CUC				AML	AML		
	comp=E,4420µm,0.8s						
CUC				AML	AML		
	comp=N,3730µm,0.6s						
CUC				AML	AML		
	comp=N,3730µm,0.6s						
CUC				AML	AML		
	comp=E,4420µm,0.8s						
FAVR	**Favara**	2.57	263	P	Pn	11 12 50.3	-0.7
FAVR				AML	AML		
	comp=E,8635µm,1.1s						
FAVR				AML	AML		
	comp=N,7055µm,1.0s						
FAVR				AML	AML		
	comp=E,8635µm,1.1s						
FAVR				AML	AML		
	comp=N,7055µm,1.0s						
SCHR	**S. Chirico Rap**	2.63	347	P	Pn	11 12 53.0	+1.1
SCHR				AML	AML		
	comp=E,2300µm,0.6s						
SCHR				AML	AML		
	comp=N,1965µm,0.4s						
SCHR				AML	AML		
	comp=E,2300µm,0.6s						
SCHR				AML	AML		
	comp=N,1965µm,0.4s						
SIRI	**Monte Sirino -**	2.66	343	P	Pn	11 12 52.3	0.0
SIRI				AML	AML		
	comp=E,5460µm,0.5s						
SIRI				AML	AML		
	comp=N,3830µm,0.6s						
SIRI				AML	AML		
	comp=E,5240µm,0.5s						
SIRI				AML	AML		
	comp=N,3670µm,0.6s						
SIRI				AML	AML		
	comp=N,3830µm,0.6s						
SIRI				AML	AML		
	comp=N,3670µm,0.6s						
SIRI				AML	AML		
	comp=E,5240µm,0.5s						
SIRI				AML	AML		
	comp=E,5460µm,0.5s						
SOLUN	**Solunto**	2.68	281	P	Pn	11 12 50.7	-1.7
SOLUN				AML	AML		
	comp=E,884µm,0.5s						
SOLUN				AML	AML		
	comp=N,826µm,1.4s						
SOLUN				AML	AML		
	comp=N,826µm,1.4s						
SOLUN				AML	AML		
	comp=E,884µm,0.5s						
MGR	**Morigerati**	2.70	338	P	Pn	11 12 52.5	-0.2
MGR				AML	AML		
	comp=E,6495µm,0.3s						
MGR				AML	AML		
	comp=N,4595µm,0.7s						
MGR				AML	AML		
	comp=E,5670µm,0.7s						
MGR				AML	AML		
	comp=N,5815µm,0.4s						
MGR				AML	AML		
	comp=N,4595µm,0.7s						
MGR				AML	AML		
	comp=N,5815µm,0.4s						
MGR				AML	AML		
	comp=E,6495µm,0.3s						
MGR				AML	AML		
	comp=E,5670µm,0.7s						
BULG	**Bulgheria - Ca**	2.70	335	*e*P	Pn	11 12 52.7	-0.1
BULG				AML	AML		
	comp=E,5185µm,0.4s						
BULG				AML	AML		
	comp=N,7240µm,0.8s						
BULG				AML	AML		
	comp=E,5380µm,0.4s						
BULG				AML	AML		
	comp=N,7525µm,0.8s						
BULG				AML	AML		
	comp=N,7525µm,0.8s						
BULG				AML	AML		
	comp=N,7240µm,0.8s						
BULG				AML	AML		
	comp=E,5380µm,0.4s						
BULG				AML	AML		
	comp=E,5185µm,0.4s						
SCTE	**Santa Cesarea**	2.73	27	*i* P	Pn	11 12 53.0	-0.2
SCTE				AML	AML		
	comp=E,1975µm,1.0s						
SCTE				AML	AML		
	comp=N,1880µm,0.6s						
SCTE				AML	AML		
	comp=N,1880µm,0.6s						
SCTE				AML	AML		
	comp=E,1975µm,1.0s						
CRAC	**Craco**	2.74	353	P	Pn	11 12 54.9	+1.5
CRAC				AML	AML		
	comp=E,6570µm,1.3s						
CRAC				AML	AML		
	comp=N,4245µm,0.6s						
CRAC				AML	AML		
	comp=E,6570µm,1.3s						
CRAC				AML	AML		
	comp=N,4245µm,0.6s						
MTSN	**Montesano sull**	2.76	342	P	Pn	11 12 53.6	-0.1
MTSN				AML	AML		
	comp=E,3465µm,0.7s						
MTSN				AML	AML		
	comp=N,4785µm,0.5s						
MTSN				AML	AML		
	comp=N,4785µm,0.5s						
MTSN				AML	AML		
	comp=E,3465µm,0.7s						
MCEL	**Monticello**	2.81	343	AML	AML		
	comp=E,4100µm,0.4s						
MCEL				AML	AML		
	comp=E,3985µm,0.4s						
MCEL				AML	AML		
	comp=N,3555µm,0.4s						
MCEL				AML	AML		
	comp=E,4100µm,0.4s						
MCEL				AML	AML		
	comp=N,3690µm,0.4s						
MCEL				AML	AML		
	comp=E,3985µm,0.4s						
MCEL				AML	AML		
	comp=N,3690µm,0.4s						
MCEL				AML	AML		
	comp=N,3555µm,0.4s						
CORL	**Corleone**	2.83	276	P	Pn	11 12 53.8	-0.8
CORL				AML	AML		
	comp=E,5625µm,0.6s						
CORL				AML	AML		
	comp=N,5635µm,0.8s						
CORL				AML	AML		
	comp=E,5625µm,0.6s						
CORL				AML	AML		
	comp=N,5635µm,0.8s						
CLTB	**Caltabellotta**	2.90	270	*e*Pn	Pn	11 12 54.6	-1.0
CLTB	**Caltabellotta**	2.90	270	*e*Pn	Pn	11 12 54.6	-1.0
CLTB	**Caltabellotta**	2.90	270	P	Pn	11 12 54.6	-1.0
CLTB				AML	AML		
	comp=E,6045µm,0.5s						
CLTB				AML	AML		
	comp=N,10025µm,0.6s						
CLTB				AML	AML		
	comp=N,10025µm,0.6s						
CLTB				AML	AML		
	comp=E,6045µm,0.5s						
TAR1	**Taranto**	2.90	6	*i* Pn	Pn	11 12 54.9	-0.6
TAR1				Sn	Sn	11 13 29.1	0.0
TAR1	**Taranto**	2.90	6	⇑*i*Pn	Pn	11 12 54.9	-0.6
TAR1				Sn	Sn	11 13 29.1	0.0
SLCN	**Sala Consilina**	2.91	341	AML	AML		
	comp=N,3755µm,0.5s						
SLCN				AML	AML		
	comp=E,5415µm,0.5s						
SLCN				AML	AML		
	comp=N,4115µm,0.5s						
SLCN				AML	AML		
	comp=E,6000µm,0.5s						
SLCN				AML	AML		
	comp=E,6000µm,0.5s						
SLCN				AML	AML		
	comp=E,5415µm,0.5s						
SLCN				AML	AML		
	comp=N,3755µm,0.5s						
SLCN				AML	AML		
	comp=N,4115µm,0.5s						
CMPR	**Campora**	2.94	336	*e*P	Pn	11 12 55.9	-0.2
CMPR				AML	AML		
	comp=E,3290µm,0.7s						
CMPR				AML	AML		
	comp=N,3575µm,0.4s						
CMPR				AML	AML		
	comp=E,3290µm,0.7s						
CMPR				AML	AML		
	comp=N,3575µm,0.4s						
MIGL	**Miglionico**	2.98	354	AML	AML		
	comp=E,8755µm,1.1s						
MIGL				AML	AML		
	comp=E,8755µm,1.1s						
MIGL				AML	AML		
	comp=N,10885µm,0.6s						
MIGL				AML	AML		
	comp=N,10885µm,0.6s						
VLS	**Valsamata**	2.99	79	P	Pn	11 12 56.6	-0.2
VLS				S	Sn	11 13 30.0	-1.5
VLS	**Valsamata**	2.99	79	P	Pn	11 12 56.6	-0.2
VLS				S	Sn	11 13 30.0	-1.5
VLS	**Valsamata**	2.99	79	P	Pn	11 12 56.6	-0.2
VLS				S	Sn	11 13 30.0	-1.5
VLS	**Valsamata**	2.99	79	P	Pn	11 12 56.6	-0.2
VLS				S	Sn	11 13 30.0	-1.5
MASS	**Massafra**	3.00	4	*i* Pn	Pn	11 12 56.2	-0.7
MASS				Sn	Sn	11 13 29.9	-1.6
MASS	**Massafra**	3.00	4	⇑*i*Pn	Pn	11 12 56.2	-0.7
MASS				Sn	Sn	11 13 29.9	-1.6
MATE	**Matera**	3.01	358	⇓*i*P	Pn	11 12 56.2	-0.8
MATE	**Matera**	3.01	358	⇓*i*P	Pn	11 12 56.2	-0.8
MATE	**Matera**	3.01	358	*e*P	Pn	11 12 56.6	-0.3
MATE				AML	AML		
	comp=E,4795µm,0.6s						
MATE				AML	AML		
	comp=N,5820µm,0.6s						
MATE				AML	AML		
	comp=N,5820µm,0.6s						
MATE				AML	AML		
	comp=E,4795µm,0.6s						
FSK	**Fiskardo**	3.03	73	P	Pn	11 12 57.8	+0.5
FSK				S	Sn	11 13 31.5	-0.8
MESG	**Mesagne**	3.04	14	*i* P	Pn	11 12 57.0	-0.5
MESG				AML	AML		
	comp=E,5305µm,1.5s						
MESG				AML	AML		
	comp=N,7955µm,0.4s						
MESG				AML	AML		
	comp=N,7955µm,0.4s						
MESG				AML	AML		
	comp=E,5305µm,1.5s						
CGL1	**Ceglie Messapi**	3.05	9	*i* Pn	Pn	11 12 57.0	-0.6
CGL1				Sn	Sn	11 13 32.5	-0.3
CGL1	**Ceglie Messapi**	3.05	9	⇑*i*Pn	Pn	11 12 57.0	-0.6
CGL1				Sn	Sn	11 13 32.5	-0.3
KEK	**Kerkira**	3.09	47	P	Pn	11 12 57.8	-0.3
KEK				S	Sn	11 13 32.5	-1.3
KEK	**Kerkira**	3.09	47	P	Pn	11 12 57.8	-0.3
KEK				S	Sn	11 13 32.5	-1.3
KEK	**Kerkira**	3.09	47	P	Pn	11 12 57.8	-0.3
KEK				S	Sn	11 13 32.5	-1.3
KEK	**Kerkira**	3.09	47	*i* P	Pn	11 12 57.8	-0.3
KEK				AML	AML		
	comp=E,883µm,0.7s						
KEK				AML	AML		
	comp=N,686µm,0.5s						
KEK				AML	AML		
	comp=E,883µm,0.7s						
KEK				AML	AML		
	comp=N,686µm,0.5s						
CDRU	**Civita di Ruta**	3.10	337	*e*P	Pn	11 12 58.3	0.0
CDRU				AML	AML		
	comp=E,2255µm,0.8s						
CDRU				AML	AML		
	comp=N,1365µm,0.5s						
CDRU				AML	AML		
	comp=E,2255µm,0.8s						
CDRU				AML	AML		
	comp=N,1365µm,0.5s						
USI	**Ustica**	3.10	291	*i* P	Pn	11 12 56.3	-1.9
USI				AML	AML		
	comp=E,3735µm,0.4s						
USI				AML	AML		
	comp=N,3270µm,0.4s						
USI				AML	AML		
	comp=N,3270µm,0.4s						
USI				AML	AML		
	comp=E,3735µm,0.4s						
PZUN	**Potenza**	3.11	345	AML	AML		
	comp=N,3270µm,1.0s						
PZUN				AML	AML		
	comp=E,3655µm,0.7s						
PZUN				AML	AML		
	comp=N,3270µm,1.0s						
PZUN				AML	AML		
	comp=E,3655µm,0.7s						
KFL	**Anninata**	3.14	80	P	Pn	11 12 58.7	-0.1
KFL				S	Sn	11 13 33.8	-1.2
KFL	**Anninata**	3.14	80	P	Pn	11 12 58.7	-0.1
KFL				S	Sn	11 13 33.8	-1.2
NOCI	**Noci**	3.15	3	*e*P	Pn	11 12 58.2	-0.8
NOCI				AML	AML		
	comp=E,8145µm,0.6s						
NOCI				AML	AML		
	comp=N,7465µm,0.7s						
NOCI				AML	AML		
	comp=E,8145µm,0.6s						
NOCI				AML	AML		
	comp=N,7465µm,0.7s						
FASA	**Fasano**	3.19	7	*i* Pn	Pn	11 12 58.7	-0.8
FASA				Sn	Sn	11 13 34.7	-1.7
FASA	**Fasano**	3.19	7	⇑*i*Pn	Pn	11 12 58.7	-0.8
FASA				Sn	Sn	11 13 34.7	-1.7
LKD2	**Lefkada island**	3.20	68	P	Pn	11 13 00.1	+0.5
LKD2				S	Sn	11 13 35.5	-1.1
LKD2	**Lefkada island**	3.20	68	P	Pn	11 13 00.1	+0.5
LKD2				S	Sn	11 13 35.5	-1.1
LKD2	**Lefkada island**	3.20	68	P	Pn	11 13 00.1	+0.5
LKD2				S	Sn	11 13 35.5	-1.1
SG1	**Sgolgore (BA)**	3.20	357	*e*Pn	Pn	11 12 59.1	-0.6
SG1				Sn	Sn	11 13 35.8	-0.8
SG1	**Sgolgore (BA)**	3.20	357	*e*Pn	Pn	11 12 59.1	-0.6
SG1				Sn	Sn	11 13 35.8	-0.8
ACER	**Acerenza**	3.22	347	AML	AML		
	comp=E,6475µm,0.6s						
ACER				AML	AML		
	comp=N,5330µm,0.7s						
ACER				AML	AML		
	comp=E,6810µm,0.6s						
ACER				AML	AML		
	comp=N,5625µm,0.7s						
ACER				AML	AML		
	comp=N,5625µm,0.7s						
ACER				AML	AML		
	comp=N,5330µm,0.7s						
ACER				AML	AML		
	comp=E,6810µm,0.6s						
ACER				AML	AML		
	comp=E,6475µm,0.6s						
AMUR	**Altamura**	3.27	357	*e*P	Pn	11 13 00.1	-0.5
AMUR				AML	AML		
	comp=E,6865µm,0.4s						
AMUR				AML	AML		
	comp=N,8550µm,1.2s						
AMUR				AML	AML		
	comp=N,8550µm,1.2s						
AMUR				AML	AML		
	comp=E,6865µm,0.4s						
MRLC	**Muro Lucano**	3.29	341	*e*P	Pn	11 13 02.4	+1.5
MRLC				AML	AML		
	comp=E,2915µm,0.5s						
MRLC				AML	AML		
	comp=N,2560µm,0.7s						
MRLC				AML	AML		
	comp=N,2560µm,0.7s						
MRLC				AML	AML		
	comp=E,2915µm,0.5s						
SGD	**Sagiada**	3.29	52	P	Pn	11 13 00.8	-0.1
SGD	**Sagiada**	3.29	52	P	Pn	11 13 00.8	-0.1
IGT	**Igoumenitsa**	3.31	54	P	Pn	11 13 01.1	0.0
IGT	**Igoumenitsa**	3.31	54	P	Pn	11 13 01.1	0.0
IGT	**Igoumenitsa**	3.31	54	P	Pn	11 13 01.1	0.0
IGT	**Igoumenitsa**	3.31	54	P	Pn	11 13 01.1	0.0
PALZ	**Palazzo San Ge**	3.38	348	AML	AML		
	comp=N,3270µm,1.0s						
PALZ				AML	AML		
	comp=E,3345µm,1.4s						
PALZ				AML	AML		
	comp=N,3270µm,1.0s						
PALZ				AML	AML		
	comp=E,3345µm,1.4s						
MCRV	**Calabrutti - M**	3.41	338	AML	AML		
	comp=N,2165µm,0.4s						
MCRV				AML	AML		
	comp=E,1725µm,0.6s						
MCRV				AML	AML		
	comp=N,2165µm,0.4s						
MCRV				AML	AML		
	comp=E,1725µm,0.6s						
VULT	**Monte Vulture**	3.45	344	P	Pn	11 13 04.7	+1.5
VULT				AML	AML		
	comp=E,2065µm,0.5s						
VULT				AML	AML		
	comp=N,4015µm,0.9s						
VULT				AML	AML		
	comp=E,2065µm,0.5s						
VULT				AML	AML		
	comp=N,4015µm,0.9s						
MRVN	**Minervino Murg**	3.46	352	AML	AML		
	comp=N,3155µm,0.5s						
MRVN				AML	AML		
	comp=E,2895µm,0.9s						
MRVN				AML	AML		
	comp=N,3155µm,0.5s						
MRVN				AML	AML		
	comp=E,2895µm,0.9s						
BAI	**Bari**	3.46	0	*e*Pn	Pn	11 13 02.5	-0.7
BAI				Sn	Sn	11 13 40.4	-2.6
BAI	**Bari**	3.46	0	*e*Pn	Pn	11 13 02.5	-0.7
BAI				Sn	Sn	11 13 40.4	-2.6
VLO	**Vlora**	3.49	35	P	Pn	11 13 04.2	+0.6
VLO	**Vlora**	3.49	35	P	Pn	11 13 04.2	+0.6
VLO	**Vlora**	3.49	35	P	Pn	11 13 04.2	+0.6
VLO	**Vlora**	3.49	35	P	Pn	11 13 04.2	+0.6
VLO	**Vlora**	3.49	35	AML	AML		
	comp=N,5020µm,0.8s						
VLO				AML	AML		
	comp=E,3470µm,1.2s						
VLO				AML	AML		
	comp=N,5020µm,0.8s						
VLO				AML	AML		
	comp=E,3470µm,1.2s						
SNAL	**S. Angelo Dei**	3.52	339	*e*P	Pn	11 13 05.5	+1.3
SNAL				AML	AML		
	comp=E,2885µm,1.0s						
SNAL				AML	AML		
	comp=N,3130µm,0.7s						
SNAL				AML	AML		
	comp=N,3130µm,0.7s						
SNAL				AML	AML		
	comp=E,2885µm,1.0s						
PDO	**Prodromos**	3.54	73	P	Pn	11 13 05.1	+0.9
PDO	**Prodromos**	3.54	73	P	Pn	11 13 05.1	+0.9
CAFE	**Carife**	3.61	340	AML	AML		
	comp=E,3370µm,0.7s						
CAFE				AML	AML		
	comp=E,3370µm,0.7s						
CAFE				AML	AML		
	comp=N,2260µm,0.7s						
CAFE				AML	AML		
	comp=E,3495µm,0.7s						
CAFE				AML	AML		
	comp=N,2420µm,0.7s						
CAFE				AML	AML		
	comp=N,2420µm,0.7s						
CAFE				AML	AML		
	comp=N,2260µm,0.7s						
CAFE				AML	AML		
	comp=E,3495µm,0.7s						
JAN	**Janina**	3.71	56	P	Pn	11 13 07.3	+0.6
JAN	**Janina**	3.71	56	P	Pn	11 13 07.3	+0.6
JAN	**Janina**	3.71	56	P	Pn	11 13 07.3	+0.6
JAN	**Janina**	3.71	56	P	Pn	11 13 07.3	+0.6
PVO	**Paravola**	3.80	74	P	Pn	11 13 09.4	+1.5
PVO	**Paravola**	3.80	74	P	Pn	11 13 09.4	+1.5
DRO	**Drossia**	3.85	84	P	Pn	11 13 09.6	+1.0
DRO	**Drossia**	3.85	84	P	Pn	11 13 09.6	+1.0
PSB1	**Pescosannita**	3.92	337	AML	AML		
	comp=N,1280µm,0.6s						
PSB1				AML	AML		
	comp=E,1250µm,0.8s						
PSB1				AML	AML		
	comp=N,1280µm,0.6s						
PSB1				AML	AML		
	comp=E,1250µm,0.8s						
PYL	**PYLOS**	3.96	99	P	Pn	11 13 10.2	+0.1
PYL	**PYLOS**	3.96	99	P	Pn	11 13 10.2	+0.1
PYL	**PYLOS**	3.96	99	P	Pn	11 13 10.2	+0.1
ITM	**Ithomi**	4.05	95	*e*Pn	Pn	11 13 12.1	+0.7
ITM				S	Sn	11 13 57.0	-0.6
ITM	**Ithomi**	4.05	95	P	Pn	11 13 12.1	+0.7
ITM				S	Sn	11 13 57.0	-0.6
ITM	**Ithomi**	4.05	95	P	Pn	11 13 12.1	+0.7
ITM				S	Sn	11 13 57.0	-0.6
EFP	**Efpalio**	4.06	77	P	Pn	11 13 12.4	+1.0
EFP				S	Sn	11 13 57.9	+0.3
EFP	**Efpalio**	4.06	77	P	Pn	11 13 12.4	+1.0
EFP				S	Sn	11 13 57.9	+0.3
LAKA	**Lakka**	4.09	80	P	Pn	11 13 12.6	+0.8
LAKA	**Lakka**	4.09	80	P	Pn	11 13 12.6	+0.8
LAKA	**Lakka**	4.09	80	P	Pn	11 13 12.6	+0.8
EVR	**Evrytania**	4.09	70	P	Pn	11 13 13.7	+1.7
EVR	**Evrytania**	4.09	70	P	Pn	11 13 13.7	+1.7
EVR	**Evrytania**	4.09	70	P	Pn	11 13 13.7	+1.7
ANX	**Ano Chora**	4.10	75	P	Pn	11 13 13.6	+1.5
ANX	**Ano Chora**	4.10	75	P	Pn	11 13 13.6	+1.5
MS1	**Monte Sant'Ang**	4.12	350	*e*Pn	Pn	11 13 12.9	+0.5
MS1				Sn	Sn	11 13 54.9	-4.4
MS1	**Monte Sant'Ang**	4.12	350	*e*Pn	Pn	11 13 12.9	+0.5
MS1				Sn	Sn	11 13 54.9	-4.4
MSAG	**Monte S. Angel**	4.13	350	AML	AML		
	comp=N,4130µm,0.6s						
MSAG				AML	AML		
	comp=E,2125µm,0.6s						
MSAG				AML	AML		
	comp=E,2315µm,0.6s						
MSAG				AML	AML		
	comp=N,4305µm,0.6s						
MSAG				AML	AML		

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      comp=N,4130µm,0.6s
MSAG                            AML    AML
      comp=N,4305µm,0.6s
MSAG                            AML    AML
      comp=E,2125µm,0.6s
MSAG                            AML    AML
      comp=E,2315µm,0.6s
PTRJ  Pietraroja         4.14 335  AML    AML
      comp=N,2310µm,0.8s
PTRJ                            AML    AML
      comp=E,1505µm,1.2s
PTRJ                            AML    AML
      comp=N,2310µm,0.8s
PTRJ                            AML    AML
      comp=E,1505µm,1.2s
SERG  Sergoula           4.17  78   P     Pn    11 13 13.9 +0.9
SERG  Sergoula           4.17  78   P     Pn    11 13 13.9 +0.9
TRIZ  Trizonia           4.18  78   P     Pn    11 13 13.8 +0.8
TRIZ  Trizonia           4.18  78   P     Pn    11 13 13.8 +0.8
SGRT  San Giovanni R     4.20 348   P     Pn    11 13 13.2 -0.2
SGRT                            AML    AML
      comp=E,1805µm,0.5s
SGRT                            AML    AML
      comp=N,1790µm,0.6s
SGRT                            AML    AML
      comp=N,1790µm,0.6s
SGRT                            AML    AML
      comp=E,1805µm,0.5s
KLV   Kalavryta, Ach     4.20  83   P     Pn    11 13 14.3 +0.8
KLV   Kalavryta, Ach     4.20  83   P     Pn    11 13 14.3 +0.8
KLV   Kalavryta, Ach     4.20  83   P     Pn    11 13 14.3 +0.8
KPRO  Kipourio           4.21  55   P     Pn    11 13 14.6 +1.1
KPRO  Kipourio           4.21  55   P     Pn    11 13 14.6 +1.1
SGG   Gregorio Mates     4.21 334  AML    AML
      comp=E,690µm,0.6s
SGG                             AML    AML
      comp=E,690µm,0.6s
SGG                             AML    AML
      comp=N,497µm,0.6s
SGG                             AML    AML
      comp=N,497µm,0.6s
KBN   Korca              4.26  44   P     Pn    11 13 14.7 +0.4
KBN   Korca              4.26  44   P     Pn    11 13 14.7 +0.4
KBN   Korca              4.26  44   P     Pn    11 13 14.7 +0.4
KBN   Korca              4.26  44   P     Pn    11 13 14.7 +0.4
KBN                               i Sn    Sn    11 14 03.0 +0.2
KBN   Korca              4.26  44 i PN    Pn    11 13 14.7 +0.4
KBN                               i SN    Sn    11 14 03.0 +0.2
MELA  Melanico ??? S     4.28 342  AML    AML
      comp=N,2675µm,0.6s
MELA                            AML    AML
      comp=E,2825µm,0.8s
MELA                            AML    AML
      comp=N,2615µm,0.6s
MELA                            AML    AML
      comp=E,2970µm,0.8s
MELA                            AML    AML
      comp=N,2675µm,0.6s
MELA                            AML    AML
      comp=E,2970µm,0.8s
MELA                            AML    AML
      comp=E,2825µm,0.8s
MELA                            AML    AML
      comp=N,2615µm,0.6s
NEST  Nestorio           4.28  48   P     Pn    11 13 16.1 +1.6
NEST  Nestorio           4.28  48   P     Pn    11 13 16.1 +1.6
CIGN  Sant'Elia a Pi     4.29 340  AML    AML
      comp=N,608µm,0.7s
CIGN                            AML    AML
      comp=E,813µm,0.8s
CIGN                            AML    AML
      comp=N,608µm,0.7s
CIGN                            AML    AML
      comp=E,813µm,0.8s
GUR   Goura              4.35  84   P     Pn    11 13 16.9 +1.4
GUR   Goura              4.35  84   P     Pn    11 13 16.9 +1.4
GUR   Goura              4.35  84   P     Pn    11 13 16.9 +1.4
VLX   Vlachokerasia      4.39  92   P     Pn    11 13 16.7 +0.6
VLX   Vlachokerasia      4.39  92   P     Pn    11 13 16.7 +0.6
VLX   Vlachokerasia      4.39  92   P     Pn    11 13 16.7 +0.6
DYR   Agios Nikonas      4.45 100   P     Pn    11 13 17.0 +0.2
DYR   Agios Nikonas      4.45 100   P     Pn    11 13 17.0 +0.2
THL   Klokotos Trika     4.47  63   P     Pn    11 13 18.4 +1.4
THL   Klokotos Trika     4.47  63   P     Pn    11 13 18.4 +1.4
THL   Klokotos Trika     4.47  63 i P     Pn    11 13 18.4 +1.4
THL                             AML    AML
      comp=E,284µm,0.7s
THL                             AML    AML
      comp=N,295µm,1.4s
THL                             AML    AML
      comp=E,284µm,0.7s
THL                             AML    AML
      comp=N,295µm,1.4s
AGG   Agios Georgios     4.51  71  ePn    Pn    11 13 20.0 +2.3
AGG   Agios Georgios     4.51  71   P     Pn    11 13 19.7 +2.0
AGG   Agios Georgios     4.51  71  eP     Pn    11 13 20.0 +2.3
AGG   Agios Georgios     4.51  71   P     Pn    11 13 19.7 +2.0
AGG   Agios Georgios     4.51  71  ePn    Pn    11 13 20.0 +2.3
CERA  Filignano          4.52 332 i P     Pn    11 13 19.4 +1.5
CERA                            AML    AML
      comp=E,550µm,1.2s
CERA                            AML    AML
      comp=N,570µm,1.2s
CERA                            AML    AML
      comp=N,570µm,1.2s
CERA                            AML    AML
      comp=E,550µm,1.2s
DSF   Desfina            4.54  78   P     Pn    11 13 18.6 +0.6
DSF   Desfina            4.54  78   P     Pn    11 13 18.6 +0.6
DSF   Desfina            4.54  78   P     Pn    11 13 18.6 +0.6
RNI2  Rionero Sannit     4.57 334  AML    AML
      comp=N,468µm,0.6s
RNI2                            AML    AML
      comp=E,526µm,0.8s
RNI2                            AML    AML
      comp=E,526µm,0.8s
RNI2                            AML    AML
      comp=N,468µm,0.6s
THAL  Thalero            4.61  83   P     Pn    11 13 20.7 +1.8
THAL  Thalero            4.61  83   P     Pn    11 13 20.7 +1.8
OHR   Ohrid              4.62  40 i Pn    Pn    11 13 19.9 +0.8
OHR                               i Sn    Sn    11 14 12.7 +1.3
KZN   Kozani             4.66  54   P     Pn    11 13 20.4 +0.7
KZN   Kozani             4.66  54   P     Pn    11 13 20.4 +0.7
KZN   Kozani             4.66  54   P     Pn    11 13 20.4 +0.7
KZN   Kozani             4.66  54   P     Pn    11 13 20.4 +0.7
ULC   Ulcinj             4.69  22⇑iPn    Pn    11 13 18.6 -1.5
ULC                                eSn    Sn    11 14 10.5 -2.8
ULC   Ulcinj             4.69  22⇑iPn    Pn    11 13 18.6 -1.5
ULC                                eSn    Sn    11 14 10.5 -2.8
FNA   Florina            4.70  47  ePn    Pn    11 13 20.9 +0.6
FNA                                eSn    Sn    11 14 15.8 +2.2
FNA   Florina            4.70  47   P     Pn    11 13 20.7 +0.4
FNA   Florina            4.70  47  eP     Pn    11 13 20.9 +0.6
FNA                                e            11 14 15.8
FNA   Florina            4.70  47  ePn    Pn    11 13 20.9 +0.6
FNA                                eS     Sn    11 14 15.8 +2.2
POFI  Posta Fibreno      4.74 330  AML    AML
      comp=E,250µm,0.9s
POFI                            AML    AML
      comp=N,176µm,0.6s
POFI                            AML    AML
      comp=N,176µm,0.6s
POFI                            AML    AML
      comp=E,250µm,0.9s
GIUL  Giuliano Di Ro     4.81 326  AML    AML
      comp=N,159µm,0.9s
GIUL                            AML    AML
      comp=E,139µm,0.5s
GIUL                            AML    AML
      comp=E,139µm,0.5s
GIUL                            AML    AML
      comp=N,159µm,0.9s
BIA   Bitola             4.83  44 i Pn    Pn    11 13 22.6 +0.6
LTK   Loutraki           4.84  84   P     Pn    11 13 21.9 -0.3
LTK   Loutraki           4.84  84   P     Pn    11 13 21.9 -0.3
LTK   Loutraki           4.84  84   P     Pn    11 13 21.9 -0.3
DRME  Dracevica, Mon     4.88  21⇑iPn    Pn    11 13 21.3 -1.4
DRME                               eSn    Sn    11 14 14.7 -3.2
DRME  Dracevica, Mon     4.88  21⇑iPn    Pn    11 13 21.3 -1.4
DRME                               eSn    Sn    11 14 14.7 -3.2
PHP   Peshkopia          4.89  33   P     Pn    11 13 22.5 -0.4
PHP   Peshkopia          4.89  33   P     Pn    11 13 22.5 -0.4
PHP   Peshkopia          4.89  33   P     Pn    11 13 22.5 -0.4
PHP   Peshkopia          4.89  33 i Pn    Pn    11 13 22.6 -0.4
PHP                               i Sn    Sn    11 14 17.1 -1.2
PHP   Peshkopia          4.89  33 i PN    Pn    11 13 22.6 -0.4
PHP                               i SN    Sn    11 14 17.1 -1.2
BUM   Brajici-Budva      4.91  18⇑iPn    Pn    11 13 22.7 -0.5
BUM                                eSn    Sn    11 14 15.3 -3.4
BUM   Brajici-Budva      4.91  18⇑iPn    Pn    11 13 22.7 -0.5
BUM                                eSn    Sn    11 14 15.3 -3.4
VLI   Veliai             4.93  99   P     Pn    11 13 25.0 +1.6
VLI   Veliai             4.93  99   P     Pn    11 13 25.0 +1.6
VLI   Veliai             4.93  99   P     Pn    11 13 25.0 +1.6
LKR   Lokris             4.94  76   P     Pn    11 13 25.2 +1.7
LKR   Lokris             4.94  76   P     Pn    11 13 25.2 +1.7
LKR   Lokris             4.94  76   P     Pn    11 13 25.2 +1.7
HCY   Herceg Novi        4.96  14⇓iPn    Pn    11 13 22.7 -1.1
HCY                                eSn    Sn    11 14 16.7 -3.2
HCY   Herceg Novi        4.96  14⇓iPn    Pn    11 13 22.7 -1.1
HCY                                eSn    Sn    11 14 16.7 -3.2
PUK   Puka               4.98  27 i Pn    Pn    11 13 23.6 -0.5
PUK                               i Sn    Sn    11 14 16.9 -3.5
PUK   Puka               4.98  27  eP     Pn    11 13 23.5 -0.5
PUK                             AML    AML
      comp=E,1344µm,0.5s
PUK                             AML    AML
      comp=N,1590µm,1.5s
PUK                             AML    AML
      comp=E,1344µm,0.5s
PUK                             AML    AML
      comp=N,1590µm,1.5s
PUK   Puka               4.98  27 i PN    Pn    11 13 23.6 -0.5
PUK                               i SN    Sn    11 14 16.9 -3.5
KRND  KRANIDI            5.00  91   P     Pn    11 13 24.8 +0.4
KRND  KRANIDI            5.00  91   P     Pn    11 13 24.8 +0.4
LIT   Litokhoron         5.03  59  ePn    Pn    11 13 25.5 +0.7
LIT   Litokhoron         5.03  59   P     Pn    11 13 25.2 +0.4
LIT   Litokhoron         5.03  59   P     Pn    11 13 25.2 +0.4
LIT   Litokhoron         5.03  59  ePn    Pn    11 13 25.5 +0.7
KRUS  Krusevo            5.04  41 i Pn    Pn    11 13 24.9 -0.1
DID   Didima             5.06  90   P     Pn    11 13 25.8 +0.6
DID   Didima             5.06  90   P     Pn    11 13 25.8 +0.6
DID   Didima             5.06  90   P     Pn    11 13 25.8 +0.6
KTHR  Kythira            5.11 104   P     Pn    11 13 26.4 +0.6
KTHR  Kythira            5.11 104   P     Pn    11 13 26.4 +0.6
PDG   Podgorica          5.12  20  ePn    Pn    11 13 25.1 -0.9
PDG                                eSn    Sn    11 14 21.0 -2.9
PDG   Podgorica          5.12  20   P     Pn    11 13 24.4 -1.6
TTG   Podgorica          5.12  20  ePn    Pn    11 13 25.1 -0.9
TTG                                eSn    Sn    11 14 21.0 -2.9
TTG   Podgorica          5.12  20  ePn    Pn    11 13 24.9 -1.1
TTG                                eSn    Sn    11 14 21.7 -2.2
TTG   Podgorica          5.12  20  eP     Pn    11 13 24.9 -1.1
TTG                                e            11 14 21.7
TTG   Podgorica          5.12  20  ePn    Pn    11 13 24.9 -1.1
TTG                                eS     Sn    11 14 21.7 -2.2
VILL  Villia             5.12  82   P     Pn    11 13 27.8 +1.7
VILL  Villia             5.12  82   P     Pn    11 13 27.8 +1.7
KYTH  Kithira            5.14 104   P     Pn    11 13 27.1 +0.8
KYTH  Kithira            5.14 104   P     Pn    11 13 27.1 +0.8
CEME  Cevo               5.15  17⇑iPn    Pn    11 13 25.0 -1.4
CEME                               eSn    Sn    11 14 21.2 -3.4
TREB  Trebinje           5.20  12  ePn    Pn    11 13 25.5 -1.6
XOR   Xorichti           5.25  69   P     Pn    11 13 28.4 +0.6
XOR   Xorichti           5.25  69   P     Pn    11 13 28.4 +0.6
XOR   Xorichti           5.25  69   P     Pn    11 13 28.4 +0.6
NEO   Neokhori           5.26  70   P     Pn    11 13 30.1 +2.2
NEO   Neokhori           5.26  70   P     Pn    11 13 30.1 +2.2
NEO   Neokhori           5.26  70   P     Pn    11 13 30.1 +2.2
STON  Ston               5.26   7 i Pn    Pn    11 13 26.8 -1.2
STON                                Sn    Sn    11 14 23.0 -4.4
STON  Ston               5.26   7⇑iPn    Pn    11 13 26.3 -1.6
STON  Ston               5.26   7  eP     Pn    11 13 26.2 -1.8
BCI   Bajram Curri       5.32  26 i Pn    Pn    11 13 29.1 +0.3
BCI                               i Sn    Sn    11 14 28.6 -0.2
BCI   Bajram Curri       5.32  26 i PN    Pn    11 13 29.1 +0.3
BCI                               i SN    Sn    11 14 28.6 -0.2
NKME  Niksic             5.37  17⇓iPn    Pn    11 13 28.6 -0.8
NKME                               eSn    Sn    11 14 26.6 -3.3
NKME  Niksic             5.37  17⇓iPn    Pn    11 13 28.6 -0.8
NKME                               eSn    Sn    11 14 26.6 -3.3
AQU   L'Aquila           5.41 332  ePn    Pn    11 13 32.7 +2.7
AQU   L'Aquila           5.41 332⇑iPn    Pn    11 13 32.4 +2.4
BRY   Bratogost          5.41  13⇑iPn    Pn    11 13 28.6 -1.5
BRY                                eSn    Sn    11 14 27.7 -3.4
BRY   Bratogost          5.41  13⇑iPn    Pn    11 13 28.6 -1.5
NKY   Niksic             5.42  17⇑iPn    Pn    11 13 29.2 -1.0
NKY                                eSn    Sn    11 14 28.0 -3.3
NKY   Niksic             5.42  17⇑iPn    Pn    11 13 29.2 -1.0
GRG   Griva              5.42  51   P     Pn    11 13 30.0 -0.2
GRG   Griva              5.42  51   P     Pn    11 13 30.0 -0.2
GRG   Griva              5.42  51   P     Pn    11 13 30.0 -0.2
GRG   Griva              5.42  51   P     Pn    11 13 30.0 -0.2
ANKY  Antikythira Is     5.46 107   P     Pn    11 13 31.1 +0.4
ANKY  Antikythira Is     5.46 107   P     Pn    11 13 31.1 +0.4
ANKY  Antikythira Is     5.46 107   P     Pn    11 13 31.1 +0.4
PVY   Plav               5.49  25⇑iPn    Pn    11 13 30.9 -0.2
PVY                                eSn    Sn    11 14 29.5 -3.5
PVY   Plav               5.49  25⇑iPn    Pn    11 13 30.9 -0.2
PVY                                eSn    Sn    11 14 29.5 -3.5
SKO   Skopje             5.58  38 i Sn    Sn    11 14 32.7 -2.4
KOME  Kolasin            5.59  20⇑iPn    Pn    11 13 31.7 -0.8
KOME                               eSn    Sn    11 14 32.2 -3.2
KOME  Kolasin            5.59  20⇑iPn    Pn    11 13 31.7 -0.8
KOME                               eSn    Sn    11 14 32.2 -3.2
BEY   Berane             5.72  23⇑iPn    Pn    11 13 34.3 +0.1
BEY                                eSn    Sn    11 14 34.5 -4.1
IVA   Berane             5.72  23⇑iPn    Pn    11 13 34.3 +0.1
IVA                                eSn    Sn    11 14 34.5 -4.1
AOS   Alonnisos          5.72  72   P     Pn    11 13 34.7 +0.5
AOS   Alonnisos          5.72  72   P     Pn    11 13 34.7 +0.5
AOS   Alonnisos          5.72  72   P     Pn    11 13 34.7 +0.5
VAY   Valandovo          5.74  48   P     Pn    11 13 34.2 -0.3
VAY   Valandovo          5.74  48   P     Pn    11 13 34.2 -0.3
VAY   Valandovo          5.74  48 i Pn    Pn    11 13 34.0 -0.5
VAY                               i Sn    Sn    11 14 37.2 -1.9
VAY   Valandovo          5.74  48   P     Pn    11 13 34.2 -0.3
VAY   Valandovo          5.74  48   P     Pn    11 13 34.2 -0.3
STIP  Stip               5.76  44 i Pn    Pn    11 13 35.8 +1.0
UPM   Unac-Piva          5.77  15⇓iPn    Pn    11 13 34.5 -0.6
UPM                                eSn    Sn    11 14 36.7 -3.4
UPM   Unac-Piva          5.77  15⇓iPn    Pn    11 13 34.5 -0.6
UPM                                eSn    Sn    11 14 36.7 -3.4
PAIG  Paliouri           5.79  65   P     Pn    11 13 35.3 +0.1
PAIG  Paliouri           5.79  65   P     Pn    11 13 35.3 +0.1
PAIG  Paliouri           5.79  65   P     Pn    11 13 35.3 +0.1
PAIG  Paliouri           5.79  65   P     Pn    11 13 35.3 +0.1
PLG   Polygyros          5.81  60   P     Pn    11 13 35.5 +0.1
PLG   Polygyros          5.81  60   P     Pn    11 13 35.5 +0.1
PLG   Polygyros          5.81  60   P     Pn    11 13 35.5 +0.1
PLG   Polygyros          5.81  60   P     Pn    11 13 35.5 +0.1
PLE   Pljevlja           6.00  18⇑iPn    Pn    11 13 38.3 +0.1
PLE                                eSn    Sn    11 14 41.7 -3.9
PLE   Pljevlja           6.00  18⇑iPn    Pn    11 13 38.3 +0.1
PLE                                eSn    Sn    11 14 41.7 -3.9
MHLO  Agia Marina, M     6.09  97   P     Pn    11 13 39.5 +0.2
MHLO  Agia Marina, M     6.09  97   P     Pn    11 13 39.5 +0.2
IMMV  Iera Moni Meta     6.13 109   P     Pn    11 13 39.7 -0.1
IMMV  Iera Moni Meta     6.13 109   P     Pn    11 13 39.7 -0.1
CHAN  Chania             6.15 108   P     Pn    11 13 40.2 +0.1
CHAN  Chania             6.15 108   P     Pn    11 13 40.2 +0.1
VSL   Villasalto         6.15 290   P     Pn    11 13 37.7 -2.5
OUR   Ouranopolis        6.16  62   P     Pn    11 13 38.8 -1.5
OUR   Ouranopolis        6.16  62   P     Pn    11 13 38.8 -1.5
OUR   Ouranopolis        6.16  62   P     Pn    11 13 38.8 -1.5
OUR   Ouranopolis        6.16  62   P     Pn    11 13 38.8 -1.5
CGL   Cagliari Serpe     6.18 288   P     Pn    11 13 38.7 -2.0
TAMR  Tamra              6.21 267  ePn    Pn    11 13 39.6 -1.2
TAMR  Tamra              6.21 267  ePn    Pn    11 13 39.7 -1.2
SRS   Serrai             6.26  54   P     Pn    11 13 41.4 -0.3
SRS   Serrai             6.26  54   P     Pn    11 13 41.4 -0.3
SRS   Serrai             6.26  54   P     Pn    11 13 41.4 -0.3
SRS   Serrai             6.26  54   P     Pn    11 13 41.4 -0.3
VAM   Vamos              6.31 108   P     Pn    11 13 42.0 -0.4
VAM   Vamos              6.31 108   P     Pn    11 13 42.0 -0.4
VAM   Vamos              6.31 108   P     Pn    11 13 42.0 -0.4
KEST  Kesra              6.33 255   Pn    Pn    11 13 41.5 -1.2
      comp=N,3.2nm,0.3s,baz=31,slow=12,SNR=24
KEST                                Sn    Sn    11 14 48.8 -5.1
      comp=N,1.8nm,0.3s,baz=30,slow=20,SNR=4.2
KEST                                LR    LR    11 16 28.0
      comp=N,215nm,20.6s,baz=344,slow=42
KKB   Krupnik            6.38  47 i P     Pn    11 13 43.7 +0.3
GVD   Gavdhos            6.47 113   P     Pn    11 13 43.4 -1.1
GVD   Gavdhos            6.47 113   P     Pn    11 13 43.4 -1.1
GVDS  Gavdos             6.47 113   P     Pn    11 13 43.1 -1.4
BBLS  Lazi&#263;i        6.51  16⇑iPn    Pn    11 13 44.4 -0.7
NVR   Nevrokopi          6.56  53   P     Pn    11 13 45.4 -0.3
NVR   Nevrokopi          6.56  53   P     Pn    11 13 45.4 -0.3
NVR   Nevrokopi          6.56  53   P     Pn    11 13 45.4 -0.3
MMB   Musomiste          6.60  51 i P     Pn    11 13 46.6 +0.2
DIVS  Divibare           6.87  19  ePn    Pn    11 13 49.0 -1.1
DIVS  Divibare           6.87  19  ePn    Pn    11 13 49.0 -1.1
IDI   Anoyia             6.88 108   Pn    Pn    11 13 49.8 -0.4
      comp=N,8.1nm,0.3s,baz=275,slow=15,SNR=33
IDI                                 Sn    Sn    11 15 03.4 -3.8
      comp=N,67nm,0.3s,baz=264,slow=16,SNR=14
IDI   Anoyia             6.88 108⇓iP     Pn    11 13 50.3 +0.1
IDI   Anoyia             6.88 108  ePn    Pn    11 13 50.5 +0.3
IDI                                 Sn    Sn    11 15 03.4 -3.8
IDI   Anoyia             6.88 108  ePn    Pn    11 13 50.5 +0.3
IDI                                 Sn    Sn    11 15 03.4 -3.8
THTN  Thala              6.90 255  ePn    Pn    11 13 50.5  0.0
THTN  Thala              6.90 255  ePn    Pn    11 13 50.5  0.0
APE   Apeiranthos        6.92  92⇓iP     Pn    11 13 50.4 -0.4
APE   Apeiranthos        6.92  92 i P     Pn    11 13 50.4 -0.4
APE   Apeiranthos        6.92  92 i P     Pn    11 13 50.4 -0.4
UDBI  Udbina             6.93 353 i Pn    Pn    11 13 51.7 +0.8
UDBI                                Sn    Sn    11 15 03.3 -5.2
VTS   Vitosha            6.93  43⇑iP     Pn    11 13 51.1  0.0
VTS   Vitosha            6.93  43  ePn    Pn    11 13 51.0  0.0
VTS   Vitosha            6.93  43 i P     Pn    11 13 50.9  0.0
VTS   Vitosha            6.93  43   P     Pn    11 13 50.8 -0.2
VTS   Vitosha            6.93  43  eP     Pn    11 13 51.0  0.0
VTS   Vitosha            6.93  43  ePn    Pn    11 13 51.0  0.0
SANT  Santorini          6.99  98  ePn    Pn    11 13 51.4 -0.3
SANT                               eSn    Sn    11 15 07.0 -3.0
SANT  Santorini          6.99  98  ePn    Pn    11 13 51.4 -0.3
SANT                               eSn    Sn    11 15 07.0 -3.0
NVLJ  Novalja            7.08 348  ePn    Pn    11 13 53.3 +0.5
NVLJ                                Sn    Sn    11 15 07.1 -4.9
BLY   Banja Luka         7.11   2  ePn    Pn    11 13 52.7 -0.5
BLY   Banja Luka         7.11   2  ePn    Pn    11 13 52.7 -0.5
TEKS  Tekeris            7.19  15⇑iPn    Pn    11 13 53.5 -0.9
RZN   Rozhen             7.28  54 i P     Pn    11 13 55.9 +0.1
SMTH  Samothraki Isl     7.31  65   P     Pn    11 13 55.7 -0.4
SMTH  Samothraki Isl     7.31  65   P     Pn    11 13 55.7 -0.4
SMTH  Samothraki Isl     7.31  65   P     Pn    11 13 55.7 -0.4
LAST  Lasithi            7.37 107   P     Pn    11 13 57.0  0.0
LAST  Lasithi            7.37 107   P     Pn    11 13 57.0  0.0
LAST  Lasithi            7.37 107   P     Pn    11 13 57.0  0.0
NPS   Neapolis           7.44 106   P     Pn    11 13 59.1 +1.3
NPS   Neapolis           7.44 106   P     Pn    11 13 59.1 +1.3
NPS   Neapolis           7.44 106   P     Pn    11 13 59.1 +1.3
NPS   Neapolis           7.44 106   P     Pn    11 13 59.1 +1.3
PGB   Panagyurishte      7.44  46 i P     Pn    11 13 57.9  0.0
RDO   Rodhopi            7.57  60   P     Pn    11 13 59.2 -0.4
RDO   Rodhopi            7.57  60   P     Pn    11 13 59.2 -0.4
KDZ   Kurdzhali          7.72  56 i P     Pn    11 14 00.6 -1.0
ALN   Alexandroupoli     7.83  63  ePn    Pn    11 14 03.0 -0.2
ALN   Alexandroupoli     7.83  63   P     Pn    11 14 02.9 -0.2
ALN   Alexandroupoli     7.83  63  eP     Pn    11 14 03.0 -0.2
ALN   Alexandroupoli     7.83  63  eP     Pn    11 14 03.0 -0.2
BOJS  Bojanci            7.95 352  ePn    Pn    11 14 05.1 +0.3
BOJS                               eSn    Sn    11 15 28.4 -5.0
MDVR  Moldovita          8.02  26⇑iP     Pn    11 14 04.4 -1.3
MDVR  Moldovita          8.02  26⇓iP     Sn    11 15 28.3 -6.8
OZLJ  Ozalj              8.04 353  ePn    Pn    11 14 05.9 -0.1
VLC   Villacollemand     8.15 325  ePn    Pn    11 14 10.9 +3.3
VLC   Villacollemand     8.15 325  ePn    Pn    11 14 10.9 +3.3
VISS  Visnje             8.30 350 i Pn    Pn    11 14 09.9 +0.4
VISS                               eSn    Sn    11 15 37.2 -4.7
HERR  Herculane          8.35  28⇑iP     Pn    11 14 09.0 -1.3
HERR  Herculane          8.35  28⇓iP     Sn    11 15 38.3 -5.0
TRI   Trieste            8.39 345  ePn    Pn    11 14 11.3 +0.5
TRI   Trieste            8.39 345  eP     Pn    11 14 11.3 +0.5
TRI   Trieste            8.39 345  eP     Pn    11 14 11.3 +0.5
JAVS  Javornik           8.51 347  ePn    Pn    11 14 13.2 +0.6
JAVS                              i Sn    Sn    11 15 43.3 -3.9
MORH  Mˆ‡rˆ¡gy, Hung     8.67   8⇓ePn    Pn    11 14 13.0 -1.6
MORH                               eSn    Sn    11 15 43.6 -7.4
BZS   Buzias             8.73  23⇓iP     Pn    11 14 14.1 -1.3
BZS   Buzias             8.73  23⇑iP     Sn    11 15 40.7  -12
ZIMR                     8.82  44⇓iP     Pn    11 14 17.7 +1.0
BEHE  Becsehely          8.82 360  ePn    Pn    11 14 16.1 -0.7
BEHE                               eSn    Sn    11 15 50.3 -4.6
OBKA  Obir               9.03 350  ePn    Pn    11 14 20.3 +0.6
      comp=N,6.4nm,0.3s,SNR=17
OBKA                               eSn    Sn    11 15 54.9 -5.1
      comp=N,19nm,0.3s
OBKA  Obir               9.03 350   Pn    Pn    11 14 20.3 +0.6
      comp=N,6.4nm,0.3s,SNR=17
PERS  Pernice            9.08 352  ePn    Pn    11 14 19.6 -0.8
PERS                              i Sn    Sn    11 15 56.0 -5.3
SOKA  Soboth             9.13 352  ePn    Pn    11 14 20.2 -0.9
      comp=N,9.5nm,0.2s,SNR=22
SOKA                                Sn    Sn    11 15 56.2 -6.4
      comp=N,16nm,0.7s
SOKA  Soboth             9.13 352   Pn    Pn    11 14 20.2 -0.9
      comp=N,9.5nm,0.2s,SNR=22
HUMR  Humele             9.21  39⇑iP     Pn    11 14 22.7 +0.6
SLUM  Salum              9.21 129   P     Pn    11 14 18.1 -4.1
      baz=137
SLUM                                AMP         11 15 00.0
      baz=137
SLUM                                S     Sn    11 15 36.5  -28
      baz=137
MYKA  Terra Mystica      9.30 346  ePn    Pn    11 14 24.7 +1.4
      comp=N,1.8nm,0.3s
MYKA                               eSn    Sn    11 16 00.9 -5.6
      comp=N,9.5nm,0.5s
MYKA  Terra Mystica      9.30 346   Pn    Pn    11 14 24.7 +1.4
      comp=N,1.8nm,0.3s
LOT   Lotru              9.36  31⇓iP     Pn    11 14 24.1 -0.1
DEV   Deva               9.39  27⇓iP     Pn    11 14 25.8 +1.3
GOLR                     9.43  38⇑iP     Pn    11 14 26.7 +1.7
SGRR  Singureni          9.52  43⇓iP     Pn    11 14 27.4 +1.1
ABTA  Abfaltersbach      9.66 342  ePn    Pn    11 14 28.8 +0.6
      comp=N,3.6nm,0.3s,SNR=6.8
ABTA                               eSn    Sn    11 16 11.1 -4.3
      comp=N,28nm,0.6s
ABTA  Abfaltersbach      9.66 342   Pn    Pn    11 14 28.8 +0.6
      comp=N,3.6nm,0.3s,SNR=6.8
ARSA  Arzberg            9.66 355  ePn    Pn    11 14 27.8 -0.4
      comp=N,12nm,0.5s,SNR=17
ARSA                               eSn    Sn    11 16 05.9 -9.4
      comp=N,19nm,0.6s
ARSA  Arzberg            9.66 355   Pn    Pn    11 14 27.8 -0.4
      comp=N,12nm,0.5s,SNR=17
ARR   Arges              9.67  35⇑iP     Pn    11 14 29.5 +1.1
MTUR  Matau              9.76  36⇓iP     Pn    11 14 31.1 +1.4
CSKK  Csˆ‡kako           9.77   6  ePn    Pn    11 14 30.8 +1.1
CSKK                               eSn    Sn    11 16 12.2 -5.9
KBA   Koelnbreinsper     9.79 346  ePn    Pn    11 14 31.0 +0.9
      comp=N,4.1nm,0.5s
KBA                                eSn    Sn    11 16 12.2 -6.4
      comp=N,8.9nm,0.4s
KBA   Koelnbreinsper     9.79 346   Pn    Pn    11 14 31.0 +0.9
      comp=N,4.1nm,0.5s
VOIR                     9.91  36⇑iP     Pn    11 14 32.3 +0.6
DRGR                    10.12  23⇑iP     Pn    11 14 33.8 -0.7
DRGR                    10.12  23⇓iP     Sn    11 16 19.0 -7.7
CONA  Conrad Observa    10.31 356  ePn    Pn    11 14 36.5 -0.7
      comp=N,12nm,0.5s,SNR=16
CONA                               eSn    Sn    11 16 23.9 -7.5
      comp=N,7.8nm,0.5s
CONA  Conrad Observa    10.31 356   Pn    Pn    11 14 36.5 -0.7
      comp=N,12nm,0.5s,SNR=16
CJR   Cluj-Napoca       10.35  27⇓iP     Pn    11 14 37.3 -0.4
WTTA  Wattenberg        10.36 340  eSn    Sn    11 16 29.5 -3.4
      comp=N,14nm,0.5s
MLR   Muntele Rosu      10.38  38   Pn    Pn    11 14 38.6 +0.5
      comp=N,0.3nm,0.3s,baz=251,slow=7.8,SNR=36
MLR                                 LR    LR    11 19 45.4
      comp=N,54nm,21.5s,baz=233,slow=44
MLR   Muntele Rosu      10.38  38⇓iP     Pn    11 14 39.3 +1.1
MLR   Muntele Rosu      10.38  38  ePn    Pn    11 14 40.3 +2.1
MLR   Muntele Rosu      10.38  38  ePn    Pn    11 14 40.3 +2.1
MOA   Molln             10.38 350  ePn    Pn    11 14 38.2 +0.1
      comp=N,64nm,0.7s,SNR=57
MOA                                eSn    Sn    11 16 26.5 -6.6
      comp=N,23nm,0.6s
MOA   Molln             10.38 350   Pn    Pn    11 14 38.2 +0.1
      comp=N,64nm,0.7s,SNR=57
FETA  Feichten          10.41 336  ePn    Pn    11 14 40.2 +1.5
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      comp=N,7.4nm,0.8s,SNR=8.9
FETA                              eSn    Sn      11 16 28.9  -5.1
      comp=N,7.1nm,0.8s
FETA  Feichten          10.41 336  Pn    Pn      11 14 40.2  +1.5
      comp=N,7.4nm,0.8s,SNR=8.9
DOPR  Dopca             10.47  35⇓iP     Pn      11 14 39.4  +0.1
DAVOX Davos/Dischmat    10.50 333  Pn    Pn      11 14 41.1  +1.2
      comp=N,0.3nm,0.3s,baz=155,slow=17,SNR=7.2
PSZ   Piszkesteto       10.51  11⇓iP     Pn      11 14 38.4  -1.5
PSZ   Piszkesteto       10.51  11⇓ePn    Pn      11 14 38.7  -1.2
PSZ                               eSn    Sn      11 16 29.0  -7.3
PSZ   Piszkesteto       10.51  11 ePn    Pn      11 14 39.2  -0.6
PSZ   Piszkesteto       10.51  11 eP     Pn      11 14 39.3  -0.6
PSZ   Piszkesteto       10.51  11 eP     Pn      11 14 39.3  -0.6
MOTA  Moosalm           10.59 338 ePn    Pn      11 14 43.8  +2.8
      comp=N,7.8nm,0.6s,SNR=5.8
BNI   Bardonecchia      10.65 317 ePn    Pn      11 14 46.2  +4.3
BNI   Bardonecchia      10.65 317 eP     Pn      11 14 46.2  +4.3
BNI   Bardonecchia      10.65 317 ePn    Pn      11 14 46.2  +4.3
MODS  Modra-Piesok      10.73   1 eP     Pn      11 14 42.5  -0.4
MODS                              e              11 16 33.1
MODS  Modra-Piesok      10.73   1 ePN    Pn      11 14 42.5  -0.4
MODS                              eSN    Sn      11 16 33.1  -8.6
MODS  Modra-Piesok      10.73   1 eP     Pn      11 14 42.5  -0.4
ISP   Isparta           10.82  85 i P    Pn      11 14 46.2  +2.0
ISP   Isparta           10.82  85 i P    Pn      11 14 46.2  +2.0
GRER                    10.82  41⇑iP     Pn      11 14 45.3  +1.2
SMOL  Smolenice         10.88   2 eP     Pn      11 14 44.6  -0.3
SMOL                              e              11 16 37.5
SMOL  Smolenice         10.88   2 ePN    Pn      11 14 44.6  -0.3
SMOL                              eSN    Sn      11 16 37.5  -7.7
SMOL  Smolenice         10.88   2 eP     Pn      11 14 44.6  -0.3
TLB   Topalu            10.91  47⇓iP     Pn      11 14 45.4  +0.1
DAVA  Damuels           10.93 334 eSn    Sn      11 16 44.2  -2.5
      comp=N,8.0nm,0.5s
DAVA  Damuels           10.93 334  Sn    Sn      11 16 44.2  -2.5
      comp=N,8.0nm,0.5s
ARCR  ARCALIA           10.94  28⇑iP     Pn      11 14 46.8  +1.1
VYHS  Vyhne             10.94   7 eP     Pn      11 14 46.4  +0.6
VYHS                              e              11 16 37.4
VYHS  Vyhne             10.94   7 ePN    Pn      11 14 46.4  +0.6
VYHS                              eSN    Sn      11 16 37.4  -9.4
VYHS  Vyhne             10.94   7 eP     Pn      11 14 46.4  +0.6
PLOR  Plostina          10.98  39⇑iP     Pn      11 14 47.6  +1.3
SWA2                    11.02 137  P     Pn      11 14 45.3  -1.6
      baz=145
VRI   Vrincioaia        11.03  39⇓iP     Pn      11 14 48.5  +1.5
TIRR  Tirgusor          11.06  48⇓iP     Pn      11 14 47.0  -0.4
TIRR  Tirgusor          11.06  48 ePn    Pn      11 14 46.9  -0.4
TIRR  Tirgusor          11.06  48 eP     Pn      11 14 46.9  -0.4
TIRR  Tirgusor          11.06  48 eP     Pn      11 14 46.9  -0.4
JAVC  Velka Javorina    11.23   3 ePN    Pn      11 14 50.9  +1.2
SENIN Lac Senin/Sane    11.24 324 ePn    Pn      11 14 52.1  +2.0
SENIN Lac Senin/Sane    11.24 324 ePn    Pn      11 14 52.1  +2.0
TRPA  Tarpa             11.28  20⇓iP     Pn      11 14 50.7  +0.4
KRUC  Moravsky          11.42 358 ePN    Pn      11 14 51.9  -0.4
KRUC                              eSN    Sn      11 16 49.2  -9.3
GEA0  GERESS Array S    11.43 349 ePn    Pn      11 14 52.1  -0.3
GEA0                              eSn    Sn      11 16 50.5  -8.2
GEA0  GERESS Array S    11.43 349 ePn    Pn      11 14 52.2  -0.3
GEA0                              eSn    Sn      11 16 50.5  -8.2
GEC2  GERESS Array S    11.44 349 ePn    Pn      11 14 52.9  +0.3
GEC2                              eSn    Sn      11 16 51.7  -7.2
GEC2  GERESS Array S    11.44 349 eP     Pn      11 14 52.9  +0.3
GEC2                              e              11 16 51.7
GEC2  GERESS Array S    11.44 349 eP     Pn      11 14 52.9  +0.3
GEC2                              eSn    Sn      11 16 51.7  -7.2
GERES GERESS Array B    11.44 349  Pn    Pn      11 14 51.7  -0.9
      comp=N,1.3nm,0.3s,baz=161,slow=13,SNR=36
GERES                              Sn    Sn      11 16 50.2  -8.7
      comp=N,2.0nm,0.3s,baz=164,slow=23,SNR=10
GERES                              LR    LR      11 20 51.9
      comp=N,321nm,20.4s,baz=169,slow=46
TESR  Tescani           11.46  36⇑iP     Pn      11 14 53.6  +0.8
BIZ   Bicaz             11.53  33⇓iP     Pn      11 14 53.8   0.0
VRAC  Vranov            11.67 359  Pn    Pn      11 14 55.3  -0.4
      comp=N,1.0nm,0.3s,baz=191,slow=13,SNR=13
VRAC                               Sn    Sn      11 16 55.9  -8.5
      comp=N,0.9nm,0.3s,baz=90,slow=20,SNR=3.8
VRAC  Vranov            11.67 359⇓iP     Pn      11 14 55.5  -0.2
VRAC  Vranov            11.67 359 ePN    Pn      11 14 55.5  -0.2
VRAC                              eSN    Sn      11 16 55.6  -8.9
UZH   Uzhgorod          11.68  18 eP     Pn      11 14 55.7   0.0
UZH   Uzhgorod          11.68  18 eP     Pn      11 14 55.7   0.0
BURAR Bucovina Array    11.71  29⇓iP     Pn      11 14 57.6  +1.3
BUR04 Bucovina Ar. S    11.71  29 ePn    Pn      11 14 57.3  +1.0
BUR04 Bucovina Ar. S    11.71  29 ePn    Pn      11 14 57.3  +1.0
BUR08 Bucovina Ar. S    11.72  29 ePn    Pn      11 14 57.9  +1.4
BUR08 Bucovina Ar. S    11.72  29 ePn    Pn      11 14 57.9  +1.4
KHC   Kasperske Hory    11.73 349 eP     Pn      11 14 56.8  +0.2
KHC                               ex     x       11 15 02.1
KHC                               eS     Sn      11 16 56.8  -9.3
KHC                                AMS   AMS     11 20 20.0
      comp=N,400nm,18.8s
KHC   Kasperske Hory    11.73 349 ePn    Pn      11 14 57.0  +0.5
KHC   Kasperske Hory    11.73 349 eP     Pn      11 14 56.8  +0.2
KHC                               eS     Sn      11 16 56.8  -9.3
KHC                                MLR   MLR
      comp=Z,400nm,18.8s
KHC   Kasperske Hory    11.73 349 eP     Pn      11 14 56.8  +0.2
NIE   Niedzica          12.03  11 eP     Pn      11 15 02.3  +1.6
NIE                               ePP    P       11 15 16.4  +3.6
NIE                               eS     Sn      11 17 08.6  -4.9
NIE   Niedzica          12.03  11 eP     Pn      11 15 02.3  +1.6
NIE                               eS     Sn      11 17 08.6  -4.9
NIE   Niedzica          12.03  11 eP     Pn      11 15 02.3  +1.6
MORC  Moravsky Berou    12.14   2 ePn    Pn      11 15 03.1  +0.9
MORC                              eSn    Sn      11 17 09.1  -7.1
MORC  Moravsky Berou    12.14   2 eP     Pn      11 15 03.1  +0.9
MORC                              e              11 17 09.1
MORC  Moravsky Berou    12.14   2 eP     Pn      11 15 03.1  +0.9
MORC                              eSn    Sn      11 17 09.1  -7.1
MORC  Moravsky Berou    12.14   2 ePN    Pn      11 15 02.6  +0.4
MORC  Moravsky Berou    12.14   2 eSN    Sn      11 17 08.2  -8.0
OKC   Ostrava-Krasne    12.23   4 eS     Sn      11 17 12.1  -6.1
OKC                                AMS   AMS     11 20 50.0
      comp=Z,200nm,15.9s
GOPC  GO Pecny, Ondr    12.36 354 eP     Pn      11 15 05.4  +0.2
GOPC                              ex     x       11 15 13.0
GOPC                              eS     Sn      11 17 13.8  -7.7
GOPC                              ex     x       11 17 26.5
GOPC                               AMS   AMS     11 21 00.0
      comp=Z,400nm,17.0s
GOPC  GO Pecny, Ondr    12.36 354 eP     Pn      11 15 05.4  +0.2
GOPC                              eS     Sn      11 17 13.8  -7.7
GOPC                               MLR   MLR
      comp=Z,400nm,17.0s
GOPC  GO Pecny, Ondr    12.36 354 eP     Pn      11 15 05.4  +0.2
BFO   Black Forest      12.37 332 ePn    Pn      11 15 06.3  +1.0
BFO   Black Forest      12.37 332 eP     Pn      11 15 06.3  +1.0
BFO   Black Forest      12.37 332 eP     Pn      11 15 06.3  +1.0
KRLC  Kraliky           12.43 360 eP     Pn      11 15 06.5  +0.4
KRLC                              ex     x       11 15 13.5
KRLC                              eS     Sn      11 17 15.2  -8.0
KRLC                              ex     x       11 17 30.4
KRLC  Kraliky           12.43 360 eP     Pn      11 15 06.5  +0.4
KRLC                              eS     Sn      11 17 15.2  -8.0
KRLC  Kraliky           12.43 360 eP     Pn      11 15 06.5  +0.4
PRU   Pruhonice         12.46 353 eP     Pn      11 15 06.0  -0.4
PRU                               ex     x       11 15 12.4
PRU                               eS     Sn      11 17 16.4  -7.4
PRU                               ex     x       11 17 30.2
PRU                                AMS   AMS     11 21 00.0
      comp=Z,400nm,16.4s
PRU   Pruhonice         12.46 353 eP     Pn      11 15 06.0  -0.4
PRU                               eS     Sn      11 17 16.4  -7.4
PRU                                MLR   MLR
      comp=Z,400nm,16.4s
PRU   Pruhonice         12.46 353 eP     Pn      11 15 06.0  -0.4
KWP   Kalwaria Pacla    12.71  18 eP     Pn      11 15 11.2  +1.4
KWP   Kalwaria Pacla    12.71  18 ePn    Pn      11 15 11.6  +1.7
KWP   Kalwaria Pacla    12.71  18 eP     Pn      11 15 11.2  +1.4
KWP   Kalwaria Pacla    12.71  18 eP     Pn      11 15 11.2  +1.4
KWP   Kalwaria Pacla    12.71  18 ePn    Pn      11 15 11.6  +1.7
DPC   Dobruska-Polom    12.71 358 eP     Pn      11 15 11.7  +1.7
DPC                               eS     Sn      11 17 22.7  -7.4
DPC   Dobruska-Polom    12.71 358 eP     Pn      11 15 11.7  +1.7
DPC                               eS     Sn      11 17 22.7  -7.4
DPC   Dobruska-Polom    12.71 358 eP     Pn      11 15 11.7  +1.7
ECH   Echery            12.73 329 ePn    Pn      11 15 09.5  -0.7
ECH   Echery            12.73 329 eP     Pn      11 15 09.5  -0.7
ECH   Echery            12.73 329 eP     Pn      11 15 09.5  -0.7
OJC   Ojcow             12.75   9 eP     Pn      11 15 11.1  +0.6
OJC                               ePP    P       11 15 22.9  +2.2
OJC   Ojcow             12.75   9 ePn    Pn      11 15 11.4  +0.9
OJC   Ojcow             12.75   9 eP     Pn      11 15 11.1  +0.6
OJC   Ojcow             12.75   9 eP     Pn      11 15 11.1  +0.6
OJC   Ojcow             12.75   9 ePn    Pn      11 15 11.4  +0.9
UPC   Upice             12.88 358 eP     Pn      11 15 13.3  +1.1
UPC                               eS     Sn      11 17 27.8  -6.3
UPC                               ex     x       11 17 38.6
UPC   Upice             12.88 358 eP     Pn      11 15 13.3  +1.1
UPC                               eS     Sn      11 17 27.8  -6.3
UPC   Upice             12.88 358 eP     Pn      11 15 13.3  +1.1
PVCC  Panska Ves        12.99 353  AMS   AMS     11 21 20.0
      comp=Z,300nm,15.0s
KSP   Ksiaz             13.21 358 eP     Pn      11 15 17.0  +0.3
KSP   Ksiaz             13.21 358 eP     Pn      11 15 17.0  +0.3
KSP   Ksiaz             13.21 358 eP     Pn      11 15 17.0  +0.3
BRTR  Keskin Array B    13.27  76  Pn    Pn      11 15 17.5  -0.3
      comp=Z,0.4nm,0.3s,baz=258,slow=12,SNR=6.2
BRTR                               LR    LR      11 21 23.7
      comp=Z,184nm,19.4s,baz=254,slow=42
BRG   Berggiesshubel    13.39 352 eP     Pn      11 15 18.5  -0.7
      comp=Z,5.7nm,0.9s
      comp=N,385nm,28.2s
      comp=E,164nm,12.7s
      comp=Z,482nm,26.2s
BRG   Berggiesshubel    13.39 352 eP     Pn      11 15 18.5  -0.7
BRG                                pmax  pmax
      comp=Z,1.0nm,0.9s
BRG                                MLR   MLR
      comp=N,6µm,28.2s
BRG                                MLR   MLR
      comp=E,385nm,12.7s
BRG                                MLR   MLR
      comp=Z,164nm,26.2s
BRG   Berggiesshubel    13.39 352 eP     Pn      11 15 18.5  -0.7
      comp=Z,164nm,26.2s
SORM  Soroca            13.43  35⇓iP     Pn      11 15 19.4  -0.4
CSS   Mathiatis         13.55  96  Pn    Pn      11 15 18.0  -3.4
CLL   Collm             13.94 350 i P    Pn      11 15 27.1  +0.5
      comp=Z,6.0nm,0.8s
CLL                               i pP   P       11 15 34.8  +0.9
CLL                                LmV           12 06 00.0
      comp=Z,100nm,21.4s
CLL   Collm             13.94 350 i P    Pn      11 15 27.1  +0.5
CLL                                pmax  pmax
      comp=Z,6.0nm,0.8s
CLL                                MLR   MLR
      comp=Z,300nm,22.1s
HFRF  Wahat Farafira    14.23 134  P     Pn      11 15 27.6  -3.1
      baz=140
BEL   Belsk             14.46  10 eP     P       11 15 42.4  +2.7
BEL   Belsk             14.46  10 eP     P       11 15 42.4  +2.7
HSAF  As Saff           14.61 119  P     Pn      11 15 31.8  -4.0
      baz=122
KOT   Kottamia          14.62 117  P     Pn      11 15 31.9  -4.1
      baz=120
GLL   Jalalah           14.74 119  P     Pn      11 15 33.5  -4.1
      baz=122
HHAG  Hagoal            14.79 117  P     Pn      11 15 34.7  -3.6
      baz=119
DOU   Dourbes           15.25 329 ⇑P     Pn      11 15 43.8  -0.3
TAMRE El Minia          15.43 126  P     Pn      11 15 43.7  -2.9
      baz=130
RSH                     15.43 111  P     Pn      11 15 42.3  -4.4
      baz=112
ZNM   Zenema            15.68 117  P     Pn      11 15 46.3  -3.5
      baz=120
AK11  Malin Array Si    15.71  30 ePn    P       11 15 52.7  -0.8
KIEV  Kiev              15.74  30 ePn    P       11 15 54.0  +0.1
      comp=Z,84nm,0.7s
KIEV  Kiev              15.74  30c iP    Pn      11 15 48.9  -1.6
AKASG Malin Array Be    15.75  30  Pn    Pn      11 15 49.1  -1.5
      comp=Z,11nm,0.3s,baz=222,slow=10,SNR=109
AKBB  Malin Array Si    15.75  30 ePn    P       11 15 53.8  -0.2
      comp=Z,86nm,0.6s
AKBB  Malin Array Si    15.75  30 eP     P       11 15 53.8  -0.2
AKBB                               pmax  pmax
      comp=Z,87nm,0.6s
MMA0B Mount Meron ar    15.81 101  Pn    Pn      11 15 48.9  -2.7
MMAI  Mount Meron Ar    15.81 101  Pn    Pn      11 15 48.7  -2.9
      comp=Z,17nm,0.3s,baz=279,slow=11,SNR=12
MMAI                               Sn    Sn      11 18 30.8   -15
      comp=Z,10nm,0.3s,baz=316,slow=32,SNR=6.9
SLTI  Sal'it            15.84 104  Pn    Pn      11 15 49.0  -2.9
KSDI  Kefar Szold       15.95 101  Pn    Pn      11 15 50.6  -2.6
KZIT  Kziot             15.96 110  Pn    Pn      11 15 49.3  -4.2
MMLI  Mount Malkishu    16.05 103  Pn    Pn      11 15 51.8  -2.8
KSHT  Keshet            16.14 101  Pn    Pn      11 15 53.4  -2.4
HMDT  Nahal Hemdat      16.21 104  Pn    Pn      11 15 54.4  -2.2
YTIR  Yattir            16.29 107  Pn    Pn      11 15 54.7  -2.9
RMNI  Mount Ramon       16.39 110  Pn    Pn      11 15 56.4  -2.5
DSI   Dead Sea          16.39 106  Pn    Pn      11 15 56.5  -2.4
ESDC  Sonseca Array     16.40 284  Pn    Pn      11 15 57.3  -1.7
      comp=Z,0.3nm,0.3s,baz=86,slow=13,SNR=12
MZDA  Masada            16.50 107  Pn    Pn      11 15 57.8  -2.4
KRMI  Paran Flat        16.61 112  Pn    Pn      11 15 59.0  -2.6
PRNI  Paran             16.69 110  Pn    Pn      11 16 00.0  -2.7
ZFRI  Zfri              16.72 110  Pn    Pn      11 16 00.9  -2.1
HRFI  Mount Harif       16.88 111  Pn    Pn      11 16 02.4  -2.7
MBRI  Mt Berech         16.91 112  Pn    Pn      11 16 03.1  -2.5
SUW   Suwalki           16.94  13 eP     Pn      11 16 05.2  -0.4
SUW   Suwalki           16.94  13 ePn    Pn      11 16 07.0  +1.4
      comp=Z,199nm,1.2s
SUW   Suwalki           16.94  13 eP     Pn      11 16 05.2  -0.4
HKAT  Jabal Katrina     16.97 117  P     Pn      11 16 04.2  -2.1
      baz=120
EIL   Elat              17.01 113  P     P       11 16 09.8  +1.7
      comp=Z,5.3nm,0.3s,baz=274,slow=2.3,SNR=60
EIL                                S     Sn      11 19 05.7  -9.0
      comp=Z,4.8nm,0.3s,baz=306,slow=19,SNR=7.5
EIL   Elat              17.01 113  Pn    Pn      11 16 04.1  -2.6
ANN   Anapa             17.02  59 eP     Pn      11 16 03.3  -3.4
ANN                                pmax  pmax
      comp=Z,36nm,1.1s
KLNR  Kaliningrad       17.12   7 i P    Pn      11 16 07.7  -0.2
ASF   Jabal al Asfar    17.30 102  P     Pn      11 16 08.5  -1.9
      comp=Z,1.4nm,0.3s,baz=207,slow=3.1,SNR=9.9
ASF                                S     Sn      11 19 13.9  -8.0
      comp=Z,0.8nm,0.3s,baz=120,slow=20,SNR=4.3
MDT   Midelt            18.19 261  P     P       11 16 19.8  -1.4
      comp=Z,0.1nm,0.3s,baz=85,slow=6.5,SNR=2.6
MICGM Minsk             18.48  21 e      P       11 16 22.0  -2.1
MNK   Minsk             18.48  21 eP     P       11 16 22.0  -2.1
NACGM Naroch            18.55  18 e      P       11 16 24.0  -0.8
IIGN  Ignalina          18.82  17 eP     P       11 16 28.0  +0.1
IIGN                               IAmb  IAmb    11 16 30.8
      comp=Z,24nm,1.2s
IDID  Didziasalis       18.91  18 eP     P       11 16 28.8   0.0
IDID                               IAmb  IAmb    11 16 30.0
      comp=Z,20nm,1.2s
ISAL  Salakas           19.00  16 eP     P       11 16 29.8   0.0
ISAL                               IAmb  IAmb    11 16 32.4
      comp=Z,27nm,0.8s
IZAR  Zarasai           19.19  16 eP     P       11 16 32.0  +0.1
IZAR                               IAmb  IAmb    11 16 33.7
      comp=Z,24nm,0.8s
NEY   Neytrino          20.42  66 i P    P       11 16 47.3  +1.7
NEY                                pmax  pmax
      comp=Z,24nm,0.9s
NEY   Neytrino          20.42  66 i P    P       11 16 47.3  +1.7
      comp=Z,24nm,0.9s
KIV   Kislovodsk        20.50  64 eP     P       11 16 47.7  +1.4
      comp=Z,92nm,1.1s
KIV   Kislovodsk        20.50  64 eP     P       11 16 47.6  +1.3
KIV                               eS     S       11 20 33.7  +0.3
KIV                                pmax  pmax
      comp=Z,87nm,1.1s
KIV                                MLR   MLR
      comp=Z,24nm,14.0s
KIV   Kislovodsk        20.50  64 eP     P       11 16 47.6  +1.3
      comp=Z,87nm,1.1s
KIV                               eS     S       11 20 33.7  +0.3
      comp=Z,24nm,14.0s
KVAR  Kislovodsk Arr    20.50  64  P     P       11 16 46.9  +0.5
      comp=Z,95nm,1.1s,baz=236,slow=3.1,SNR=31
KBZ   Khabaz            20.61  65  P     P       11 16 49.0  +1.6
      comp=Z,38nm,0.8s,baz=271,slow=12,SNR=48
KBZ   Khabaz            20.61  65  P     P       11 16 49.0  +1.6
KBZ                                pmax  pmax
      comp=Z,38nm,0.8s
KBZ   Khabaz            20.61  65  P     P       11 16 49.0  +1.6
      comp=Z,38nm,0.8s
VSR   Storozhevoye      20.82  42 eP     P       11 16 48.6  -1.0
VSR                                pmax  pmax
      comp=Z,80nm,0.9s
AKH   Akhalkalaki       20.85  71 eP     P       11 16 51.0  +0.7
      comp=Z,16nm,0.7s
AKH   Akhalkalaki       20.85  71 eP     P       11 16 51.0  +0.7
AKH                                pmax  pmax
      comp=Z,16nm,0.7s
AKH   Akhalkalaki       20.85  71 eP     P       11 16 51.0  +0.7
      comp=Z,16nm,0.7s
NCK   Nalchik           21.08  65 i P    P       11 16 53.6  +1.0
NCK                                pmax  pmax
      comp=Z,48nm,1.0s
NCK   Nalchik           21.08  65 i P    P       11 16 53.6  +1.0
      comp=Z,48nm,1.0s
GNI   Garni             21.81  75  P     P       11 17 01.5  +0.9
      comp=Z,5.9nm,0.4s,baz=308,slow=19,SNR=2.3
GNI                                LR    LR      11 27 02.5
      comp=Z,95nm,19.2s,baz=283,slow=41
GNI   Garni             21.81  75ceP     P       11 17 01.3  +0.8
GNI                                pmax  pmax
      comp=Z,66nm,1.7s
GNI   Garni             21.81  75 eP     P       11 17 01.3  +0.8
      comp=Z,66nm,1.7s
VSU   Vasula            21.81  14ceP     P       11 17 00.4  +0.3
VSU                                pmax  pmax
      comp=Z,325nm,1.7s
OBN   Obninsk           22.01  31⇓eP     P       11 17 02.2  -0.1
OBN                                *SP   sP      11 17 17.0  -0.8
OBN                                              11 17 25.0
OBN                                S     S       11 20 51.0   -12
OBN                               e              11 21 42.6
OBN                                pmax  pmax
      comp=Z,49nm,1.1s
OBN                                MLR   MLR
      comp=Z,85nm,19.0s
OBN   Obninsk           22.01  31 eP     P       11 17 02.2  -0.1
      comp=Z,49nm,1.1s
HFS   Hagfors           22.61 356  P     P       11 17 07.7  -1.0
      comp=Z,15nm,0.6s,baz=169,slow=9.1,SNR=33
HFS                                LR    LR      11 27 46.2
      comp=Z,184nm,20.0s,baz=193,slow=42
MOS   Moscow            22.88  31 eP     P       11 17 11.7  +0.1
MOS                               e              11 17 41.3
MOS                                pmax  pmax
      comp=Z,115nm,1.5s
MOS                                pmax  pmax
      comp=Z,200nm,1.7s
NC602 NORSAR Array S    23.36 353 eP     P       11 17 16.2  -0.2
NAO01 NORSAR Array S    23.53 353 eP     P       11 17 17.4  -0.6
NB2   NORSAR Subarra    23.69 353  P     P       11 17 18.8  -0.8
      comp=Z,5.2nm,0.7s,baz=169,slow=9.3
NB201 NORSAR Array S    23.70 353 eP     P       11 17 18.9  -0.7
NC405 NORSAR Array S    23.72 354 eP     P       11 17 18.9  -0.9
NBO00 NORSAR Array S    23.73 353 eP     P       11 17 20.2  +0.3
PUL   Pulkovo           23.77  17ceP     P       11 17 20.1  -0.1
PUL                                pmax  pmax
      comp=Z,162nm,0.4s
NC303 NORSAR Array S    23.86 353 eP     P       11 17 20.4  -0.7
NC204 NORSAR Array S    23.97 353 eP     P       11 17 22.2   0.0
AKT   Akhty             24.04  71 eP     P       11 17 24.3  +1.2
AKT                               e              11 17 51.4
AKT                               eS     S       11 21 36.9  -0.6
AKT                               eSS    SnSn    11 22 20.9  +0.5
AKT                                pmax  pmax
      comp=Z,15nm,0.9s
FINES FINESS Array B    24.52  11  P     P       11 17 27.0  -0.1
      comp=Z,44nm,0.7s,baz=177,slow=8.1,SNR=73
FIA1  FINESS Array S    24.52  11 eP     P       11 17 27.6  +0.5
KLMR  Klimovskoe        27.26  24 eP     P       11 17 51.0  -0.9
KLMR                               pmax  pmax
      comp=Z,37nm,0.9s
KLMR  Klimovskoe        27.26  24 eP     P       11 17 51.1  -0.9
KLMR                               AMP           11 17 52.6
      comp=Z,37nm,0.9s
TORD  Torodi Ar. Bea    27.90 213  P     P       11 17 57.5  -0.5
      comp=Z,0.7nm,0.9s,baz=26,slow=10
TORD                               LR    LR      11 30 18.7
      comp=Z,171nm,20.3s,baz=0.0,slow=39
PRGR  Permogore         29.93  27 eP     P       11 18 14.0  -1.6
PRGR                              e              11 19 07.4
PRGR                               pmax  pmax
      comp=Z,27nm,0.9s
APA   Apatity           31.39  12⇑iP     P       11 18 30.2  +1.7
APA                                pmax  pmax
      comp=Z,14nm,0.8s
APA                                MLR   MLR
      comp=Z,100nm,13.0s
AKTO  Aktyubinsk        31.81  53  P     P       11 18 32.6  +0.3
      comp=Z,14nm,0.7s,baz=263,slow=9.5,SNR=37
AKTO  Aktyubinsk        31.81  53  P     P       11 18 32.2  -0.2
AKTO                               pmax  pmax
      comp=Z,14nm,0.7s
ARCES ARCESS Array B    32.30   6  P     P       11 18 35.9  -0.5
      comp=Z,14nm,0.8s,baz=188,slow=8.2,SNR=23
GEYT  Alibeck           32.41  77  LR    LR      11 34 12.9
      comp=Z,29nm,18.9s,baz=15,slow=41
AB31  Akbulak array     32.93  55 i P    P       11 18 42.0  -0.2
AB31                               pmax  pmax
      comp=Z,3.0nm,0.6s
ABKAR Akbulak array     32.93  55 eP     P       11 18 42.5  +0.3
ARU   Arti              33.39  42  P     P       11 18 46.5  +0.4
      comp=Z,2.4nm,0.3s,baz=244,slow=8.2,SNR=7.4
ARU   Arti              33.39  42 eP     P       11 18 48.0  +1.9
      comp=Z,5.0nm,0.8s
ARU   Arti              33.39  42d iP    P       11 18 45.8  -0.3
ARU                                *PP   pP      11 18 55.1  -2.3
ARU                                              11 21 23.4
ARU                                S     S       11 24 05.1  +1.0
ARU                                SS    SnSn    11 26 06.3  -1.4
ARU                                pmax  pmax
      comp=Z,20nm,1.7s
SVE   Sverdlovsk        34.60  42 eP     P       11 18 57.4  +0.8
SVE                                pmax  pmax
      comp=Z,25nm,1.0s
DBIC  Dimbokro          36.61 218  LR    LR      11 35 21.6
      comp=Z,119nm,18.5s,baz=8.5,slow=38
BVAR  Borovoye Array    39.67  50  P     P       11 19 40.3  +0.7
      comp=Z,4.8nm,0.6s,baz=248,slow=7.3,SNR=22
SPA0  Spitsbergen Ar    40.65 360 eP     P       11 19 48.7  +1.2
SPITS Spitsbergen Ar    40.65 360  P     P       11 19 48.1  +0.7
      comp=Z,22nm,0.6s,baz=198,slow=9.1,SNR=44
SPITS                              LR    LR      11 39 20.5
      comp=Z,50nm,20.8s,baz=235,slow=40
KMBO  Kilima Mbogo      42.94 149  P     P       11 20 08.2  +1.2
      comp=Z,0.6nm,0.3s,baz=193,slow=3.9,SNR=2.1
AAK   Ala-Archa         43.61  65  P     P       11 20 13.2  +1.0
      comp=Z,5.6nm,0.7s,baz=284,slow=4.2,SNR=5.6
FRU   Bishkek           43.65  64 eP     P       11 20 13.0  +0.6
KURBB Kurchatov Arra    44.86  53  P     P       11 20 22.4  +0.5
      comp=Z,9.4nm,0.8s,baz=283,slow=8.9,SNR=8.5
KURK  Kurchatov         44.91  52  P     P       11 20 22.4  +0.2
KURK  Kurchatov         44.91  52ceP     P       11 20 22.5  +0.2
KURK                               pmax  pmax
      comp=Z,10.0nm,1.0s
KSH   Kashi             45.52  68  P     P       11 20 25.6  -1.8
KSH                                sP    sP      11 20 47.0  +3.1
KSH                                PP    PP      11 22 12.4  -1.9
KSH                                PcS   PcS     11 25 57.0  -2.9
KSH                                S     S       11 26 58.6  -8.0
KSH                                pmax  pmax
      comp=Z,25nm,1.6s
KSH                                pmax  pmax
      comp=Z,79nm,5.2s
KSH                                LR    LR
      comp=Z,96nm,8.7s
KSH                                LR    LR
      comp=Z,170nm,10.2s
MAKZ  Makanchi          47.82  57 eP     P       11 20 45.7  +0.4
      comp=Z,9.5nm,0.9s
MAKZ  Makanchi          47.82  57 eP     P       11 20 45.7  +0.4
MAKZ                               pmax  pmax
      comp=Z,10.0nm,0.9s
MK31  Makanchi Array    48.03  57 eP     P       11 20 47.5  +0.6
MK31  Makanchi Array    48.03  57 eP     P       11 20 47.5  +0.6
MKAR  Makanchi Array    48.03  57  P     P       11 20 47.4  +0.5
      comp=Z,11nm,0.7s,baz=271,slow=7.0,SNR=28
MKAR  Makanchi Array    48.03  57 eP     P       11 20 47.3  +0.4
      comp=Z,69nm,0.6s
MKAR  Makanchi Array    48.03  57 eP     P       11 20 47.3  +0.4
MKAR                               pmax  pmax
      comp=Z,69nm,0.6s
ZAA0  Zalesovo Array    48.19  47 eP     P       11 20 48.7  +0.7
      comp=Z,22nm,0.9s
ZALV  Zalesovo Beam     48.19  47  P     P       11 20 48.2  +0.2
      comp=Z,14nm,0.6s,baz=278,slow=9.0,SNR=28
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ZALV	Zalesovo Beam	48.19	47	eP	P	11 20 48.5	+0.6
DGZ	Jazzator, Alta	50.66	52	i P	P	11 21 07.8	+0.8
DGZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KRAR	Krasnoyarsk	52.34	43	i P	P	11 21 20.2	+0.9
WMQ	Urumqi	52.53	59	P	P	11 21 23.7	+2.7
WMQ				pP	sP	11 21 38.4	+0.8
WMQ				sP	pP	11 21 43.3	+10
WMQ				pmax	pmax		
	comp=Z,26nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,240nm,4.9s						
WMQ				LR	LR		
	comp=Z,920nm,21.9s						
HVS	Khovu-Aksy	54.12	49	i P	P	11 21 33.7	+1.2
HVS				pmax	pmax		
	comp=Z,15nm,0.9s						
TSUM	Tsumeb	56.54	179	LR	LR	11 47 49.2	
	comp=Z,64nm,19.1s,baz=329,slow=38						
TLY	Talaya	59.76	46	eP	P	11 22 14.2	+1.9
	comp=Z,15nm,0.8s						
TLY	Talaya	59.76	46	eP	P	11 22 14.0	+1.6
TLY				pmax	pmax		
	comp=Z,22nm,1.0s						
ZAK	Zakamensk	60.07	48	eP	P	11 22 14.0	-0.7
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
TIXI	Tiksi	61.14	20c	eP	P	11 22 22.2	+0.7
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.3s						
GTA	Gaotai	62.61	60	eP	P	11 22 32.8	+0.7
GTA				pP	sP	11 22 50.7	+1.8
GTA				sP	PcP	11 22 58.1	-13
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
SONA1	Songino Array	63.01	49	eP	P	11 22 35.6	+1.0
SONM	Songino Array	63.01	49	P	P	11 22 35.3	+0.7
	comp=Z,16nm,0.9s,baz=292,slow=8.1,SNR=60						
ULN	Ulaanbaatar	63.39	49	eP	P	11 22 37.9	+0.8
	comp=Z,9.1nm,0.9s						
ULN	Ulaanbaatar	63.39	49c	iP	P	11 22 37.5	+0.3
ULN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BOSA	Boshof	66.37	172	LR	LR	11 52 58.8	
	comp=Z,103nm,20.2s,baz=28,slow=37						
YAK	Yakutsk	66.97	28	i P	P	11 22 59.4	-0.4
YAK				pmax	pmax		
	comp=Z,12nm,0.7s						
LZH	Lanzhou	67.01	61	eP	P	11 23 01.4	+0.6
LZH				pP	sP	11 23 17.8	+0.1
LZH				sP	PcP	11 23 26.4	-2.6
LZH				pmax	pmax		
	comp=Z,19nm,1.2s						
LZH				pmax	pmax		
	comp=Z,96nm,4.4s						
HHC	Hu-ho-hao-te	69.70	54	eP	P	11 23 18.8	+1.3
HHC				sP	PcP	11 23 42.8	+2.7
HHC				S	S	11 32 22.9	-0.4
HHC				pmax	pmax		
	comp=Z,23nm,0.9s						
HHC				pmax	pmax		
	comp=Z,79nm,6.0s						
HHC				LR	LR		
	comp=Z,130nm,16.4s						
HHC				LR	LR		
	comp=Z,93nm,14.2s						
HHC				LR	LR		
	comp=Z,88nm,14.1s						
XAN	Xi’an	71.63	61	P	P	11 23 29.8	+0.6
XAN				pP	pP	11 23 43.0	+1.5
XAN				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KMI	Kunming	72.03	72	P	P	11 23 33.2	+1.2
KMI				pmax	pmax		
	comp=Z,3.0nm,0.6s						
E43A	Lone Tree Farm	72.11	315	eP	P	11 23 31.4	-0.4
	comp=Z,5.4nm,0.8s						
BILL	Bilibino	72.16	12	eP	P	11 23 32.7	+0.9
	comp=Z,4.7nm,0.9s						
BILL	Bilibino	72.16	12c	iP	P	11 23 32.0	+0.3
BILL				*PP	pP	11 23 44.0	0.0
BILL				e		11 23 48.9	
BILL				S	S	11 32 50.0	-0.7
BILL				eSS	SS	11 37 24.6	-2.8
BILL				eSSS	SSS	11 40 43.7	
BILL				pmax	pmax		
	comp=Z,11nm,2.5s						
BILL				MLR	MLR		
	comp=Z,48nm,19.0s						
CMAR	Chiang Mai Arr	72.83	80	P	P	11 23 36.9	+0.3
	comp=Z,1.7nm,0.7s,baz=301,slow=7.4,SNR=10						
YKA	Yellowknife Ar	72.87	339	P	P	11 23 36.4	+0.3
	comp=Z,2.5nm,0.6s,baz=38,slow=5.8,SNR=13						
COWI	Conover	73.47	316	eP	P	11 23 39.4	-0.6
	comp=Z,6.6nm,0.6s						
TOLK	Toolik Lake Re	73.55	355	eP	P	11 23 42.4	+2.3
	comp=Z,15nm,0.9s						
SEY	Seymchan	73.64	20	i P	P	11 23 40.7	+0.1
F41A	Three Lakes	73.67	315	eP	P	11 23 41.8	+0.6
	comp=Z,3.8nm,0.6s						
GYA	Guiyang	74.22	69	eP	P	11 23 45.8	+1.0
GYA				pP	PcP	11 24 01.0	+1.4
GYA				PP	PP	11 26 33.2	+2.6
GYA				S	S	11 33 13.8	-1.8
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ULM	Lac du Bonnet	74.38	322	P	P	11 23 45.2	+0.1
	comp=Z,3.4nm,0.6s,baz=94,slow=1.8,SNR=4.7						
COLD	Coldfoot	74.99	355	eP	P	11 23 50.3	+1.9
	comp=Z,6.2nm,1.0s						
FYU	Fort Yukon	75.21	353	eP	P	11 23 52.5	+2.9
	comp=Z,27nm,1.1s						
MA2	Magadan	75.92	22	i P	P	11 23 54.6	+0.8
MA2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
JFWS	Jewell Farm	76.06	314	eP	P	11 23 55.1	+0.1
	comp=Z,4.6nm,0.8s						
JFWS	Jewell Farm	76.06	314	eP	P	11 23 55.1	+0.1
JFWS				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KLR	Kul’dur	76.10	38	i P	P	11 23 55.1	0.0
CN2	Changchun	76.33	45	eP	P	11 23 56.5	0.0
CN2				pmax	pmax		
	comp=Z,20nm,0.7s						
TKL	Tuckaleechee C	76.49	305	P	P	11 23 57.5	-0.1
	comp=Z,1.6nm,0.8s,baz=59,slow=5.9,SNR=2.6						
DAWY	Dawson	76.90	350	eP	P	11 24 00.9	+1.5
	comp=Z,12nm,1.0s						
MDM	Murphy Dome	77.07	354	eP	P	11 24 02.0	+1.7
	comp=Z,9.0nm,1.0s						
ILAR	Eielson Array	77.13	353	P	P	11 24 01.9	+1.3
	comp=Z,1.9nm,0.9s,baz=359,slow=5.5,SNR=20						
L40A	Anamosa	77.15	313	eP	P	11 24 00.7	-0.5
	comp=Z,6.9nm,0.6s						
MLY	Manley	77.20	355	eP	P	11 24 03.1	+2.0
	comp=Z,6.9nm,1.0s						
CCB	Clear Creek Bu	77.34	353	eP	P	11 24 02.8	+1.0
	comp=Z,4.1nm,1.0s						
BPAW	Bear Paw Mtn.	78.14	355	eP	P	11 24 07.2	+0.9
	comp=Z,5.8nm,1.0s						
MCK	McKinley	78.34	354	eP	P	11 24 09.2	+1.8
	comp=Z,16nm,1.2s						
MCK	McKinley	78.34	354	eP	P	11 24 09.2	+1.8
MCK				pmax	pmax		
	comp=Z,16nm,1.2s						
TRF	Thorofare Moun	78.73	354	eP	P	11 24 10.8	+1.0
	comp=Z,6.0nm,0.9s						
DHY	Denali Highway	78.83	353	eP	P	11 24 11.9	+1.6
	comp=Z,16nm,1.0s						
CAST	Castle Rocks	78.89	355	eP	P	11 24 12.1	+1.7
	comp=Z,4.6nm,1.1s						
ECSD	EROS Data Cent	79.07	317	eP	P	11 24 11.7	-0.1
	comp=Z,5.1nm,0.6s						
NJ2	Nanjing	79.56	58	eP	P	11 24 14.9	+0.3
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
USRK	Ussuriysk Ar.	79.63	41	LR	LR	12 05 25.3	
	comp=Z,65nm,18.7s,baz=293,slow=40						
R40A	Maddies Statio	80.18	311	eP	P	11 24 17.7	-0.2
	comp=Z,3.4nm,0.7s						
KLU	Klutina	80.22	352	eP	P	11 24 18.9	+1.1
	comp=Z,12nm,1.2s						
KS01	Wonju Array Si	81.85	49	eP	P	11 24 27.3	+0.5
KSAR	Wonju Array Be	81.86	49	P	P	11 24 27.7	+0.9
KSAR	Wonju Array Be	81.86	49	P	P	11 24 27.7	+0.9
KSRS	Korea Array	81.88	49	P	P	11 24 27.7	+0.8
	comp=Z,4.5nm,0.7s,baz=316,slow=5.0,SNR=23						
YSS	Yuzh-Sakhalins	82.86	34	eP	P	11 24 33.1	+1.3
	comp=Z,25nm,1.1s						
YSS	Yuzh-Sakhalins	82.86	34⇑	eP	P	11 24 32.9	+1.0
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
PETK	Petropavlovsk-	83.45	23	LR	LR	12 07 54.7	
	comp=Z,59nm,18.2s,baz=277,slow=40						
GCMT	Greycliff	84.04	326	eP	P	11 24 38.7	+0.5
KDAK	Kodiak Island	84.52	354	i P	P	11 24 42.1	+2.0
K22A	Casper	84.94	322	eP	P	11 24 43.3	+0.5
	comp=Z,9.9nm,0.8s						
ASAJ	Asahikawa	84.95	36	P	P	11 24 42.9	+0.3
	comp=Z,4.8nm,0.6s,baz=333,slow=4.5,SNR=19						
PHWY	Pilot Hill	85.41	320	eP	P	11 24 47.1	+1.8
	comp=Z,14nm,0.8s						
PD31	Pinedale Array	86.31	324	eP	P	11 24 50.3	+0.6
PDAR	Pinedale Array	86.31	324	P	P	11 24 49.6	-0.1
	comp=Z,0.8nm,0.7s,baz=52,slow=5.9,SNR=9.4						
PDAR	Pinedale Array	86.31	324	eP	P	11 24 49.9	+0.2
WMOK	Wichita Mounta	86.45	312	eP	P	11 24 51.6	+1.4
	comp=Z,2.6nm,0.9s						
WMOK	Wichita Mounta	86.45	312	eP	P	11 24 51.6	+1.4
WMOK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
JNU	Nakatsue	86.58	50	P	P	11 24 51.2	+0.3
	comp=Z,13nm,0.9s,baz=313,slow=5.0,SNR=5.2						
ISCO	Idaho Springs	86.60	319	eP	P	11 24 52.6	+1.3
	comp=Z,1.6nm,0.6s						
ISCO	Idaho Springs	86.60	319	eP	P	11 24 52.6	+1.3
ISCO				pmax	pmax		
	comp=Z,2.0nm,0.6s						
O20A	White River Ci	87.68	321	eP	P	11 24 57.2	+0.8
	comp=Z,5.2nm,0.8s						
BMO	Blue Mountains	88.05	329	eP	P	11 24 58.8	+0.9
	comp=Z,3.0nm,0.8s						
BMO	Blue Mountains	88.05	329	eP	P	11 24 58.8	+0.9
BMO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SDCO	Great Sand Dun	88.06	318	eP	P	11 24 58.8	+0.5
	comp=Z,2.6nm,0.8s						
HWUT	Hardware Ranch	88.15	324	eP	P	11 24 59.3	+0.7
	comp=Z,3.9nm,0.8s						
MJAR	Matsushiro Arr	88.40	43	P	P	11 24 59.3	-0.3
	comp=Z,1.5nm,0.8s,baz=303,slow=5.1,SNR=5.0						
MJAR	Matsushiro Arr	88.40	43	P	P	11 24 59.3	-0.3
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
S22A	4UR Ranch, Cre	88.76	319	eP	P	11 25 02.9	+1.2
	comp=Z,2.6nm,0.9s						
PV07	Paradox Valley	89.18	320	eP	P	11 25 04.8	+1.3
	comp=Z,5.8nm,0.8s						
PV01	Paradox Valley	89.37	320	eP	P	11 25 05.4	+1.0
	comp=Z,3.7nm,0.8s						
PV09	Paradox Valley	89.38	321	eP	P	11 25 05.8	+1.2
PV03	Paradox Valley	89.42	320	eP	P	11 25 05.6	+1.0
	comp=Z,3.3nm,0.9s						
SRU	San Rafael Swe	89.60	322	eP	P	11 25 05.7	+0.3
	comp=Z,5.4nm,0.8s						
SRU	San Rafael Swe	89.60	322	eP	P	11 25 05.7	+0.3
SRU				pmax	pmax		
	comp=Z,5.0nm,0.8s						
TMUT	Trail Mountain	89.79	322	eP	P	11 25 07.4	+0.9
	comp=Z,2.5nm,0.7s						
ANMO	Albuquerque	90.66	317	P	P	11 25 11.5	+1.1
	comp=Z,0.4nm,0.3s,baz=79,slow=5.2,SNR=4.7						
ANMO	Albuquerque	90.66	317	i P	P	11 25 11.5	+1.1
ANMO				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MTPU	Mount Pierson	91.24	322	eP	P	11 25 15.4	+2.1
	comp=Z,3.8nm,0.9s						
MNTX	Cornudas Mount	92.47	314	eP	P	11 25 19.7	+1.0
	comp=Z,2.1nm,0.8s						
TX31	Lajitas Ar. Si	93.20	311	eP	P	11 25 24.2	+2.1
TXAR	Lajitas Array	93.20	311	P	P	11 25 23.3	+1.1
	comp=Z,2.5nm,0.9s,baz=61,slow=3.8,SNR=20						
NVAR	Mina Array Bea	93.77	326	P	P	11 25 23.8	-1.0
	comp=Z,0.5nm,0.8s,baz=54,slow=4.6,SNR=3.8						
NVAR				LR	LR	12 06 02.4	
	comp=Z,56nm,21.4s,baz=80,slow=34						
WRA	Warramunga Arr	123.42	90	PKP	PKPdf	11 31 03.6	-1.3
	comp=Z,0.8nm,0.8s,baz=334,slow=1.7,SNR=4.9						
ASAR	Alice Springs	125.00	94	PKP	PKPdf	11 31 07.3	-0.5
	comp=Z,0.8nm,0.8s,baz=315,slow=1.6,SNR=4.9						

MAN 04 11:15:34.3, 11°.57N×124°.38E, h1^{km}, mb4.6, ML3.5, MS3.3, 1C-2D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLP	Palo	0.71	124⇓	eP	Pg	11 15 48.2	+0.2
PLP				eS	Sg	11 15 58.4	+1.1
CNP	Catarman	0.97	17	eP	Pb	11 15 54.0	-0.1
CNP				eS	Sn	11 16 09.0	-0.6
BESP	Borongan	1.04	88	eP	Pb	11 15 54.7	-0.4
BESP				eS	Sn	11 16 13.5	+2.3
LLP	Lapu-Lapu	1.31	198⇓	eP	Pg	11 15 58.4	-1.0
LLP				eS	Sg	11 16 15.4	-1.0
MSLP	Maasin	1.50	162	eP	Pg	11 16 03.1	0.0
MSLP				eS	Sn	11 16 26.2	+3.5
RCP	Roxas	1.60	270⇑	eP	Pn	11 16 04.1	+0.4
RCP				eS	Sb	11 16 25.5	+0.1
GUIM	Jordan	1.99	242	eP	Pn	11 16 08.9	-0.2
GUIM				eS	Sn	11 16 35.0	+0.3
OTRP	Odiongan	2.44	289	eP	Pn	11 16 16.1	+0.8
OTRP				eS	Sb	11 16 49.9	+0.4

*IDC **04** 11:43:58.0±1.6, 17°.59S×178°.50W, h508^{km}±19^{km}, mb3.3/14, mb1 3.5/15, mb1mx3.3/49, mbtmp4.1/15, Error ellipse: s-maj=23.0km s-min=12.1km az=147.0*

*ISCJB **04** 11:43:59.4±0.6, 17°.7S±0°.1×178°.4W±0°.1, h547^{km}, mb3.6/13, Error ellipse: s-maj=20.5km s-min=10.2km az=150.1*

ISC 04 11:44:00.2±0.7, 17°.7S±0°.2×178°.3W±0°.1, h547^{km}, n20, σ1^s.36/21, mb3.6/13, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	7.30	60	P	P	11 45 50.4	-0.8
	1.8nm,0.3s,baz=349,slow=7.4,SNR=3.6						
AFI				S	S	11 47 18.5	-3.4
	0.9nm,0.3s,baz=100,slow=18,SNR=2.4						
URZ	Urewera	20.89	190	P	P	11 48 04.3	0.0
	4.4nm,0.7s,baz=269,slow=4.2,SNR=2.7						
STKA	Stephens Creek	38.85	241	P	P	11 50 38.3	-0.6
	1.3nm,0.8s,baz=54,slow=7.9,SNR=3.1						
WRA	Warramunga Arr	44.80	259	P	P	11 51 24.5	-1.4
	0.5nm,0.6s,baz=95,slow=7.2,SNR=9.2						
ASAR	Alice Springs	44.97	254	P	P	11 51 26.1	-1.2
	4.4nm,0.5s,baz=88,slow=8.1,SNR=116						
MJAR	Matsushiro Arr	67.81	323	P	P	11 54 03.8	-0.3
	2.5nm,0.8s,baz=160,slow=7.9,SNR=9.3						
ASAJ	Asahikawa	71.15	331	P	P	11 54 24.0	+0.2
	4.1nm,0.7s,baz=169,slow=4.8,SNR=9.9						
PETK	Petropavlovsk-	73.50	345	P	P	11 54 37.0	-0.2
	3.8nm,0.8s,baz=147,slow=6.7						
KSRS	Korea Array	74.62	318	P	P	11 54 44.5	+0.6
	0.9nm,0.7s,baz=132,slow=6.4,SNR=5.1						
NVAR	Mina Array Bea	79.18	44	P	P	11 55 11.1	+2.1
	1.6nm,0.7s,baz=224,slow=8.7,SNR=16						
ILAR	Eielson Array	85.65	13	P	P	11 55 40.7	0.0
	1.1nm,0.7s,baz=223,slow=4.9,SNR=14						
TXAR	Lajitas Array	85.77	58	P	P	11 55 44.2	+1.9
	0.9nm,0.7s,baz=222,slow=6.0,SNR=15						
ANMO	Albuquerque	85.86	51	P	P	11 55 44.7	+2.0
	0.7nm,0.7s,baz=270,slow=6.1,SNR=3.2						
PDAR	Pinedale Array	87.11	43	P	P	11 55 50.1	+1.6
	0.6nm,0.5s,baz=214,slow=3.3,SNR=8.6						
CMAR	Chiang Mai Arr	88.93	290	P	P	11 55 57.4	+0.1
	0.4nm,0.5s,baz=90,slow=1.4,SNR=4.1						
BRTR	Keskin Array B	144.72	315	PKP	PKPab	12 02 36.2	-0.2
	3.3nm,0.8s,baz=128,slow=3.8,SNR=7.6						
CLL	Collm	145.28	348	i PKPbc	PKPab	12 02 37.5	-0.5
	comp=Z,8.0nm,0.8s						
MMAI	Mount Meron Ar	146.13	303	PKPbc	PKPbc	12 02 39.4	-0.5
	comp=Z,1.0nm,0.3s,baz=41,slow=4.6,SNR=2.5						
GERES	GERESS Array B	147.43	345	PKPbc	PKPbc	12 02 43.8	+0.9
	comp=Z,1.6nm,0.6s,baz=40,slow=2.3,SNR=12						
DAVOX	Davos/Dischmat	150.22	349	PKPbc	PKPbc	12 02 50.8	+0.8
	comp=Z,2.6nm,0.6s,baz=26,slow=6.6,SNR=5.1						

*CSEM **04** 11:48:03.5±0.5, 45°.17N×14°.73E, h2^{km}, ML2.6/10, Error ellipse: s-maj=7.9km s-min=4.5km az=4.0*

*VIE **04** 11:48:05.0±0.9, 45°.25N×14°.77E, h4^{km}, mb1.6/4, ml2.3/6, Error ellipse: s-maj=5.6km s-min=2.9km az=179.0 30 km ESE of Rijeka*

ISC 04 11:48:04.4±1.2, 45°.21N±0°.03×14°.73E±0°.03, h1^{km}±11^{km}, n26, σ0^s.73/39, 2C-3D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GBRS	Gornja Briga	0.33	10⇓	iPg	Pg	11 48 10.9	+0.3
	comp=Z,49nm,0.1s						
GBRS	Gornja Briga	0.33	10	Pg	Pg	11 48 10.9	+0.3
	comp=Z,49nm,0.1s						
KNDS	Knezji Dol	0.40	322⇑	iPg	Pg	11 48 11.8	-0.3
	comp=Z,25nm,0.1s						
BOJS	Bojanci	0.47	51	ePg	Pg	11 48 13.3	0.0
BOJS				i Sg	Sg	11 48 19.8	+0.4
	comp=Z,30nm,0.1s						
BOJS	Bojanci	0.47	51	ePg	Pg	11 48 13.3	0.0
BOJS				i Sg	Sg	11 48 19.8	+0.4
	comp=Z,30nm,0.1s						
CEY	Cerknica	0.57	338	i Pg	Pg	11 48 14.8	-0.5
CEY				eSg	Sg	11 48 23.3	+0.6
	comp=Z,25nm,0.1s						
VISS	Visnje	0.60	7⇑	iPg	Pg	11 48 15.5	-0.3
VISS				i Sg	Sg	11 48 23.6	+0.1
	comp=Z,10.0nm,0.1s						
SKDS	Skadanscina	0.61	304⇓	iPg	Pg	11 48 15.1	-0.9
SKDS				i Sg	Sg	11 48 24.6	+0.7
	comp=Z,18nm,0.1s						
SKDS	Skadanscina	0.61	304⇓	iPg	Pg	11 48 15.1	-0.9
SKDS				i Sg	Sg	11 48 24.6	+0.7
	comp=Z,18nm,0.1s						
NVLJ	Novalja	0.66	171	i Pg	Pg	11 48 17.1	+0.2
NVLJ				Sg	Sb	11 48 27.7	-0.5
OZLJ	Ozalj	0.66	52	ePg	Pb	11 48 17.9	-0.7
OZLJ				Sg	Sg	11 48 26.1	+0.6
CRES	Cresnjev	0.80	39	ePg	Pg	11 48 19.4	-0.3
PDKS	Podkum	0.87	12	i Pg	Pg	11 48 20.7	-0.3
	comp=Z,10.0nm,0.1s						
UDBI	Udbina	1.00	133	ePg	Pb	11 48 24.4	-0.2
UDBI				Sg	Sb	11 48 37.9	-0.4
OBKA	Obir	1.30	354	ePg	Pg	11 48 29.4	0.0
	comp=Z,2.2nm,0.1s						
OBKA				Sg	Sb	11 48 46.9	-0.2
	comp=Z,11nm,0.2s						
OBKA	Obir	1.30	354	Pg	Pg	11 48 29.4	0.0
	comp=Z,2.2nm,0.1s						
OBKA				Sg	Sb	11 48 46.9	-0.2
	comp=Z,11nm,0.2s						
SOKA	Soboth	1.48	8	Pn	Pn	11 48 31.8	-0.5
	comp=Z,2.1nm,0.4s						
SOKA				Sg	Sb	11 48 51.4	-0.7
	comp=Z,3.2nm,0.4s						
SOKA	Soboth	1.48	8	Pn	Pn	11 48 31.8	-0.5
	comp=Z,2.1nm,0.4s						
SOKA				Sg	Sb	11 48 51.4	-0.7
	comp=Z,3.2nm,0.4s						
MYKA	Terra Mystica	1.61	332	Sg	Sb	11 48 55.9	+0.1
	comp=Z,7.9nm,0.3s						
MYKA	Terra Mystica	1.61	332	Sg	Sb	11 48 55.9	+0.1
	comp=Z,7.9nm,0.3s						
KBA	Koelnbreinsper	2.10	333	Sn	Sb	11 49 09.0	-1.1
	comp=Z,2.5nm,0.3s						
KBA	Koelnbreinsper	2.10	333	Sn	Sb	11 49 09.0	-1.1
	comp=Z,2.5nm,0.3s						
ABTA	Abfaltersbach	2.18	316	Sg	Sg	11 49 16.2	+1.8
	comp=Z,2.8nm,0.2s						
ABTA	Abfaltersbach	2.18	316	Sg	Sg	11 49 16.2	+1.8
	comp=Z,2.8nm,0.2s						
MOA	Molln	2.66	353	Sn	Sn	11 49 22.5	+1.2
	comp=Z,2.2nm,0.2s						
MOA	Molln	2.66	353	Sn	Sn	11 49 22.5	+1.2
	comp=Z,2.2nm,0.2s						

MAN 04 11:56:58.1, 11°.56N×124°.39E, h5^{km}, mb4.4, ML3.2, MS3.0, 2D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLP	Palo	0.70	124⇓	eP	Pg	11 57 11.8	+0.2
PLP				eS	Sb	11 57 22.1	-0.6
CNP	Catarman	0.98	16	eP	Pb	11 57 17.6	0.0
CNP				eS	Sn	11 57 34.1	+1.2
BESP	Borongan	1.03	88	eP	Pb	11 57 18.2	-0.2
BESP				eS	Sn	11 57 34.3	+0.3
LLP	Lapu-Lapu	1.30	199	eP	Pn	11 57 21.9	-1.1
LLP				eS	Sg	11 57 39.5	-0.4
MSLP	Maasin	1.49	162	eP	Pg	11 57 26.6	0.0
MSLP				eS	Sg	11 57 48.3	+2.3
RCP	Roxas	1.61	270⇓	eP	Pn	11 57 27.4	+0.2
RCP				eS	Sn	11 57 47.9	-0.5
TBP	Tagbilaran	1.93	196	eP	Pn	11 57 29.1	-2.4
GUIM	Jordan	1.99	242	eP	Pn	11 57 33.4	+1.0
GUIM				eS	Sn	11 57 58.9	+1.1
OTRP	Odiongan	2.45	289	eP	Pn	11 57 40.1	+1.3

MAN 04 12:00:53.8, 11°.39N×126°.05E, h15^{km}, mb4.5, ML3.3, MS3.2, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BESP	Borongan	0.63	289	eP	Pg	12 01 06.3	0.0
BESP				eS	Sn	12 01 27.8	+10
PLP	Palo	1.07	258⇓	eP	Pb	12 01 12.4	-1.7
PLP				eS	Sn	12 01 29.4	+0.4
MSLP	Maasin	1.71	223	eP	Pn	12 01 23.2	+0.1
MSLP				eS	Sb	12 01 46.4	+0.1
CNP	Catarman	1.75	310	eP	Pn	12 01 23.8	+0.1

*DDA **04** 12:09:50.5, 40°.16N×26°.62E, h7^{km}, Ml2.6*

*ISK **04** 12:09:50.6, 40°.09N×26°.70E, h8^{km}, ML2.2/11*

*CSEM **04** 12:09:51.3±0.1, 40°.11N×26°.68E, h5^{km}, ML2.2, Error ellipse: s-maj=2.4km s-min=2.2km az=118.0*

ISC 04 12:09:51.0±1.1, 40°.12N±0°.02×26°.67E±0°.03, h10^{km}±10^{km}, n35, σ0^s.67/44, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPK	Lapseki	0.26	16	PG	Pg	12 09 56.8	+0.4
LPK				SG	Sb	12 10 01.4	-1.1
LPK	Lapseki	0.26	16	ePg	Pg	12 09 56.8	+0.4
LPK				eSg	Sb	12 10 01.4	-1.1
GELI	Tayfur-Gelibol	0.32	332	PG	Pb	12 09 58.0	-0.8
GELI				SG	Sb	12 10 03.8	-0.2
GELI	Tayfur-Gelibol	0.32	332	ePg	Pb	12 09 58.0	-0.8
GELI				eSg	Sb	12 10 03.8	-0.2
BAYC	CANAKKALE_Bayr	0.39	194	i P	Pg	12 09 58.8	+0.2
BAYC	CANAKKALE_Bayr	0.39	194	P	Pg	12 09 58.8	+0.2
EZN	Ezine	0.39	222	PG	Pg	12 09 58.9	+0.2
EZN				SG	Sb	12 10 04.8	-1.3
EZN	Ezine	0.39	222	ePg	Pg	12 09 58.9	+0.2
EZN				eSg	Sb	12 10 04.8	-1.3
BOZC	Bozcaada	0.55	240	PG	Pg	12 10 01.5	-0.1
BOZC	Bozcaada	0.55	240	i P	Pg	12 10 01.5	-0.1
BOZC				i S	Sg	12 10 09.4	+0.6
BOZC	Bozcaada	0.55	240	ePg	Pg	12 10 01.5	-0.1
KRBG	Karabiga-Canak	0.56	60	PG	Pg	12 10 01.8	0.0
KRBG	Karabiga-Canak	0.56	60	ePg	Pg	12 10 01.8	0.0
ERIK	Erikli-Kesan	0.56	348	PG	Pb	12 10 02.7	-0.3
ERIK	Erikli-Kesan	0.56	348	ePg	Pb	12 10 02.7	-0.3
GADA	Gvkgeada	0.59	277	PG	Pb	12 10 03.1	-0.4
GADA	Gvkgeada	0.59	277	ePg	Pb	12 10 03.1	-0.4
RKY	Sarkoy-Tekirda	0.69	34	PG	Pg	12 10 04.1	-0.2
RKY	Sarkoy-Tekirda	0.69	34	ePg	Pg	12 10 04.1	-0.2
SART	Tekirdag	0.69	34	i P	Pg	12 10 04.3	-0.1
SART	Tekirdag	0.69	34	P	Pg	12 10 04.3	-0.1
ENEZ	Enez	0.73	328	PG	Pb	12 10 05.5	-0.3
ENEZ	Enez	0.73	328	ePg	Pb	12 10 05.5	-0.3
GONE	Gonen-Balikesi	0.79	95	PG	Pb	12 10 06.4	-0.4
GONE	Gonen-Balikesi	0.79	95	ePg	Pb	12 10 06.4	-0.4
ALN	Alexandroupoli	0.91	329	PG	Pg	12 10 08.6	+0.1
ALN	Alexandroupoli	0.91	329	ePg	Pg	12 10 08.6	+0.1
STEP	BALIKESIR_Sava	1.10	132	i P	Pn	12 10 12.4	-0.1
STEP				i S	Sn	12 10 29.8	+2.0
STEP	BALIKESIR_Sava	1.10	132	P	Pn	12 10 12.4	-0.1
STEP				S	Sn	12 10 29.8	+2.0
SBT3	Marmara-Eregli	1.26	52	PN	Pg	12 10 15.1	0.0
SBT3	Marmara-Eregli	1.26	52	ePn	Pg	12 10 15.1	0.0
RDO	Rodhopi	1.34	320	PN	Pg	12 10 16.9	+0.2
RDO	Rodhopi	1.34	320	ePn	Pg	12 10 16.9	+0.2

DURS	**Dursunbey**	**1.48**	**110**	*i* P	**Pg**	**12 10 19.0**	**-0.5**
DURS	**Dursunbey**	**1.48**	**110**	P	**Pg**	**12 10 19.0**	**-0.5**

MEX 04 12:25:30.9±0.4**, 16°.36N×98°.29W, h11^{km}**±2^{km}**, MD3.7, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.15**	**78**	*e*P	Pg	12 25 33.8	-0.7
PNIG				*i* S	Sg	12 25 36.7	-0.3
TLIG	**Tlapa**	**1.23**	**347**	*e*P	Pn	12 25 50.5	-3.6
TLIG				*e*S	Sb	12 26 05.4	-4.7
VHO	**Vista Hermosa**	**1.65**	**64**	*e*P	Pn	12 25 56.5	-3.4
VHO				*e*S	Sn	12 26 16.3	-4.9
MEIG	**Mezcala**	**2.01**	**321**	*i* P	Pn	12 26 01.2	-3.7
MEIG				*e*S	Sn	12 26 25.5	-4.6
YAIG	**Yautepec**	**2.60**	**343**	*i* P	Pn	12 26 10.3	-2.7
YAIG				*i* S	Sn	12 26 40.9	-3.7
ARIG	**Puente Sto Nin**	**2.74**	**314**	*i* P	Pn	12 26 12.3	-2.6
ARIG				*i* S	Sn	12 26 44.6	-3.5

IDC ***04*** *12:35:38.8±0.6, 10°.23N×122°.39E, h0^{km}, mb4.0/16, mb1 4.1/17, mb1mx3.9/64, mbtmp4.0/17, ML4.3/1, MS2.8/3, Ms1 2.8/3, ms1mx2.5/64, Error ellipse: s-maj=29.4km s-min=12.4km az=75.0*

MAN ***04*** *12:35:43.4, 10°.49N×122°.34E, h30^{km}, mb4.6, ML3.5, MS3.4*

NEIC ***04*** *12:35:44.1±0.6, 10°.23N×122°.44E, h39^{km}±6^{km}, mb4.5/7, Error ellipse: s-maj=6.5km s-min=3.6km az=73.0*

NEIC Felt [III PIVS] at Jordan and Nueva Valencia, Guimaras Island and [II PIVS] at Mandurriao, Panay.

ISC 04 12:35:43.0±1.1**, 10°.24N**±0°.03×**122°.33E**±0°.04**, h29^{km}**±8^{km}**, n66, σ1^{s}.34**/76**, mb4.2**/28**, 4C-5D, Panay**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIM	**Jordan**	**0.46**	**34**	*e*P	**Pb**	**12 35 51.9**	**-1.0**
GUIM				*e*S	**Sb**	**12 35 58.3**	**-1.2**
JAP	**San Jose, Anti**	**0.63**	**323**	⇓*i*P	**Pn**	**12 35 58.5**	**+2.5**
JAP				*e*S	Sn	12 36 19.2	+14
SNPH	**Sibulan**	**1.26**	**135**	⇓*i*P	**Pb**	**12 36 07.6**	**+1.4**
SNPH				*i* S	**Sb**	**12 36 26.8**	**+4.7**
RCP	**Roxas**	**1.38**	**17**	⇑*e*P	**Pn**	**12 36 07.1**	**+0.8**
RCP				*e*S	**Sb**	**12 36 25.5**	**+0.1**
CUYO	**Cuyo Island**	**1.42**	**295**	*e*P	**Pn**	**12 36 06.3**	**-0.6**
CUYO				*e*S	**Sn**	**12 36 23.6**	**-1.0**
TBP	**Tagbilaran**	**1.61**	**110**	*e*P	**Pb**	**12 36 12.2**	**+0.2**
LLP	**Lapu-Lapu**	**1.61**	**87**	⇑*e*P	**Pb**	**12 36 11.3**	**-0.9**
LLP				*e*S	**Sn**	**12 36 28.8**	**-0.5**
DCPH	**Dipolog City**	**1.93**	**148**	⇑*e*P	**Pb**	**12 36 17.8**	**+0.3**
MMPH	**Masbate**	**2.46**	**31**	⇓*i*P	**Pb**	**12 36 27.2**	**+0.7**
MMPH				*i* S	**Sb**	**12 36 58.5**	**+2.1**
MSLP	**Maasin**	**2.49**	**92**	*e*P	**Pb**	**12 36 24.4**	**-2.7**
MSLP				*e*S	**Sb**	**12 36 58.4**	**+1.0**
PLP	**Palo**	**2.76**	**70**	⇓*e*P	**Pn**	**12 36 26.4**	**+1.0**
CGP	**Cagayan de Oro**	**2.93**	**127**	⇓*e*P	**Pn**	**12 36 30.4**	**+2.8**
CGP				*e*S	**Sb**	**12 37 06.7**	**-3.3**
ENPP	**El Nido**	**3.01**	**289**	*e*P	**Pn**	**12 36 27.9**	**-0.8**
BESP	**Borongan**	**3.34**	**66**	*e*P	**Pn**	**12 36 36.4**	**+3.1**
PPR	**Puerto Princes**	**3.57**	**263**	⇑*i*P	**Pn**	**12 36 38.9**	**+2.4**
BUKP	**Musuan**	**3.58**	**131**	*e*P	**Pb**	**12 36 41.7**	**-4.0**
TGY	**Tagaytay City**	**4.07**	**341**	Pn	**Pn**	**12 36 45.0**	**+1.5**
	18nm,0.3s,baz=183,slow=17,SNR=2.1						
DAV	**Davao City (W)**	**4.50**	**134**	LR	LR	12 39 01.0	
	comp=Z,303nm,18.6s,baz=161,slow=46						
DAV	**Davao City (W)**	**4.50**	**134**	*e*Pn	**Pn**	**12 36 47.8**	**-1.5**
LUWI	**Luwuk**	**11.21**	**178**	*e*Pn	**Pn**	**12 38 22.3**	**+0.9**
TPUB	**Ta-pu**	**13.09**	**353**	*e*Pn	**Pn**	**12 38 48.2**	**+1.1**
BATI	**Baumata**	**20.36**	**176**	P	**P**	**12 40 18.0**	**+0.7**
	18nm,0.5s,baz=347,slow=5.8,SNR=2.3						
GUMO	**Guam**	**22.30**	**79**	LR	LR	12 50 52.3	
	comp=Z,13nm,18.3s,baz=135,slow=41						
GUMO	**Guam**	**22.30**	**79**	*e*P	**P**	**12 40 37.5**	**-0.9**
	181nm,1.4s						
BKNI	**Bangkinang**	**23.35**	**246**	*e*P	**P**	**12 40 49.7**	**+0.5**
	98nm,0.4s						
CM01	**Chiang Mai Arr**	**24.04**	**292**	*e*P	**P**	**12 40 56.6**	**+0.9**
CM31	**Chiang Mai Arr**	**24.06**	**292**	*e*P	**P**	**12 40 56.6**	**+0.6**
CMAR	**Chiang Mai Arr**	**24.06**	**292**	P	**P**	**12 40 57.2**	**+1.2**
	1.1nm,0.5s,baz=118,slow=9.3,SNR=7.8						
KS15	**Wonju Array Si**	**27.55**	**10**	*e*P	**P**	**12 41 27.4**	**+0.1**
KSAR	**Wonju Array Be**	**27.55**	**10**	P	**P**	**12 41 28.2**	**+1.0**
KSRS	**Korea Array**	**27.56**	**10**	P	**P**	**12 41 28.2**	**+0.8**
	0.7nm,0.8s,baz=182,slow=9.3,SNR=3.0						
KSRS				LR	LR	12 52 30.1	
	comp=Z,16nm,21.9s,baz=215,slow=37						
INU	**Inuyama**	**28.35**	**26**	*e*P	**P**	**12 41 33.4**	**-1.1**
	14nm,1.4s						
MAJO	**Matsushiro**	**29.88**	**26**	*e*P	**P**	**12 41 46.6**	**-1.5**
	34nm,2.0s						
MJB9	**Matsu-Tunnel**	**29.88**	**26**	*e*P	**P**	**12 41 46.6**	**-1.5**
	34nm,2.0s						
BJT	**Baijiatuau**	**30.16**	**351**	*e*P	**P**	**12 41 49.2**	**-1.3**
	6.8nm,0.5s						
COEN	**Coen**	**31.71**	**139**	*e*P	**P**	**12 42 02.7**	**-1.7**
	106nm,1.9s						
WRAB	**Tennant Creek**	**32.23**	**158**	*e*P	**P**	**12 42 09.6**	**+0.6**
	70nm,2.0s						
WR1	**Warramunga Arr**	**32.24**	**158**	*e*P	**P**	**12 42 08.0**	**-1.0**
	32nm,1.7s						
WR1				*e*PcP	**PcP**	**12 44 57.5**	**+0.2**
WRA	**Warramunga Arr**	**32.24**	**158**	P	**P**	**12 42 08.0**	**-1.0**
	0.9nm,0.3s,baz=331,slow=11,SNR=18						
WRA				PcP	**PcP**	**12 44 57.5**	**+0.2**
	0.4nm,0.5s,baz=341,slow=2.9,SNR=4.9						
WB2	**Warramunga Arr**	**32.24**	**158**	*e*P	**P**	**12 42 08.2**	**-0.9**
	27nm,1.7s						
AS31	**Alice Springs**	**35.55**	**162**	*e*P	**P**	**12 42 37.6**	**-0.2**
	0.8nm,0.8s						
AS31				*e*PcP	**PcP**	**12 45 06.6**	**-0.1**
ASAR	**Alice Springs**	**35.55**	**162**	P	**P**	**12 42 37.7**	**-0.1**
	0.8nm,0.4s,baz=342,slow=7.2,SNR=31						
ASAR				PcP	**PcP**	**12 45 06.6**	**-0.1**
	0.4nm,0.5s,baz=347,slow=2.9,SNR=7.0						
KLR	**Kul'dur**	**39.66**	**10**	P	**P**	**12 43 12.7**	**+0.5**
	0.2nm,0.7s,baz=187,slow=5.4,SNR=4.0						
SONA0	**Songino Array**	**39.81**	**343**	*e*P	**P**	**12 43 13.9**	**+0.2**
SONM	**Songino Array**	**39.81**	**343**	P	**P**	**12 43 13.9**	**+0.2**
	1.2nm,0.6s,baz=160,slow=9.5,SNR=6.4						
STKA	**Stephens Creek**	**45.76**	**157**	P	**P**	**12 44 02.6**	**+0.6**
	1.0nm,0.6s,baz=333,slow=8.3,SNR=3.7						
STKA	**Stephens Creek**	**45.76**	**157**	*e*P	**P**	**12 44 01.6**	**-0.4**
	1.8nm,1.4s						
MK32	**Makanchi Array**	**49.75**	**325**	*e*P	**P**	**12 44 33.6**	**+0.8**
MKAR	**Makanchi Array**	**49.75**	**325**	P	**P**	**12 44 33.6**	**+0.8**
	0.5nm,0.6s,baz=126,slow=7.8,SNR=4.0						
NIL	**Nilore**	**50.56**	**305**	*e*P	**P**	**12 44 39.5**	**+0.3**
	11nm,0.7s						
PETK	**Petropavlovsk-**	**51.34**	**27**	P	**P**	**12 44 45.0**	**+0.3**
	1.6nm,0.5s,baz=212,slow=4.9						
PEA1	**Petropavlovsk-**	**51.34**	**27**	*e*P	**P**	**12 44 45.0**	**+0.3**
ZALV	**Zalesovo Beam**	**52.84**	**333**	P	**P**	**12 44 55.6**	**-0.2**
	0.7nm,0.4s,baz=123,slow=8.1,SNR=3.3						
ZAA1	**Zalesovo Array**	**52.85**	**333**	*e*P	**P**	**12 44 55.6**	**-0.2**
KURBB	**Kurchatov Arra**	**53.94**	**327**	P	**P**	**12 45 03.6**	**-0.3**
	0.5nm,0.6s,baz=122,slow=8.8,SNR=3.9						
KURK	**Kurchatov**	**53.94**	**327**	*e*P	**P**	**12 45 03.6**	**-0.3**
TIXI	**Tiksi**	**61.49**	**2**	P	**P**	**12 45 56.4**	**-0.3**
	3.3nm,0.7s,baz=198,slow=5.7,SNR=6.8						
ABKAR	**Akbulak array**	**64.38**	**320**	*e*P	**P**	**12 46 16.5**	**+0.2**
ILAR	**Eielson Array**	**81.16**	**26**	P	**P**	**12 47 55.4**	**-0.3**
	0.2nm,0.6s,baz=234,slow=5.2,SNR=4.8						
ILB	**Eielson Array**	**81.16**	**26**	*e*P	**P**	**12 47 55.3**	**-0.3**
FIA0	**FINESS Array S**	**84.07**	**331**	*e*P	**P**	**12 48 10.7**	**0.0**
FINES	**FINESS Array B**	**84.07**	**331**	P	**P**	**12 48 10.7**	**0.0**
	0.7nm,0.6s,baz=29,slow=6.7,SNR=3.7						
INK	**Inuvik**	**85.73**	**21**	P	**P**	**12 48 19.2**	**+0.3**
	2.2nm,1.0s,baz=300,slow=6.1,SNR=3.7						
INK	**Inuvik**	**85.73**	**21**	*e*P	**P**	**12 48 19.2**	**+0.3**
	4.2nm,1.1s						
VNDA	**Vanda**	**90.41**	**172**	P	**P**	**12 48 41.7**	**+0.6**
	0.8nm,0.8s,baz=300,slow=6.6,SNR=5.2						
VNDA	**Vanda**	**90.41**	**172**	*e*P	**P**	**12 48 41.5**	**+0.4**

ISCJB ***04*** *12:41:38.8±0.6, 44°.32N±0°.05×141°.06E±0°.08, h248^{km}±4^{km}, mb3.4/3, Error ellipse: s-maj=9.5km s-min=7.7km az=16.0*

JMA ***04*** *12:41:38.6±0.2, 44°.36N×141°.03E, h252^{km}±2^{km}, M3.1*

IDC ***04*** *12:41:39.3±1.0, 44°.22N×140°.69E, h226^{km}±12^{km}, mb3.1/3, mb1 3.2/5, mb1mx2.8/68, mbtmp3.5/5, Error ellipse: s-maj=34.8km s-min=19.8km az=27.0*

ISC 04 12:41:39.8±1.1**, 44°.30N**±0°.06×**141°.07E**±0°.07**, h245^{km}**±7^{km}**, n26, σ0^{s}.94**/43**, mb3.4**/3**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYG	**Yagishiri**	**0.28**	**63**	P	**Pn**	**12 42 11.1**	**-0.3**
JYG				*e*S	**S**	**12 42 36.2**	**-0.1**
JSS	**Shosan**	**0.57**	**80**	P	**Pn**	**12 42 12.4**	**+0.2**
JSS				*e*S	**S**	**12 42 38.4**	**+0.7**
JHR	**Hokuryu**	**0.73**	**140**	P	**Pn**	**12 42 13.5**	**+0.6**
JHR				*e*S	**S**	**12 42 40.3**	**+1.4**
JRR	**Rishiri**	**0.85**	**11**	P	**Pn**	**12 42 13.3**	**0.0**
JSK	**Shakotan**	**1.04**	**205**	P	**Pn**	**12 42 14.4**	**-0.1**
JSK				*e*S	**S**	**12 42 41.1**	**-0.6**
ASAJ	**Asahikawa**	**1.11**	**99**	P	**Pn**	**12 42 14.5**	**-0.4**
	6.9nm,0.3s,baz=261,slow=8.0,SNR=125						
ASAJ				S	**S**	**12 42 41.8**	**-0.6**
	1.6nm,0.3s,baz=256,slow=8.3,SNR=9.2						
ASAJ	**Asahikawa**	**1.11**	**99**	P	**Pn**	**12 42 14.4**	**-0.4**
ASAJ				*e*S	**S**	**12 42 42.2**	**-0.2**
JWK2	**Keihoku**	**1.17**	**30**	P	**Pn**	**12 42 14.6**	**-0.6**
JWK2				*e*S	**S**	**12 42 41.9**	**-1.2**
JSE	**Soyaes**	**1.26**	**58**	P	**Pn**	**12 42 14.9**	**-0.9**
JSE				*e*S	**S**	**12 42 42.4**	**-1.7**
JKK2	**Kamakawa 2**	**1.28**	**109**	P	**Pn**	**12 42 15.8**	**-0.2**
JKK2				*e*S	**S**	**12 42 44.7**	**+0.3**
JEW	**Eniwo**	**1.48**	**169**	P	**Pn**	**12 42 17.7**	**+0.2**
JEW				*e*S	**S**	**12 42 48.1**	**+1.0**
JFR	**Furan**	**1.58**	**135**	P	**Pn**	**12 42 18.1**	**-0.1**
JFR				*e*S	**S**	**12 42 49.5**	**+1.0**
JTKR	**Abashiri--Toko**	**2.07**	**98**	P	**Pn**	**12 42 22.7**	**+0.4**
JTKR				*e*S	**S**	**12 42 57.1**	**+1.3**
JAR	**Ashorobuto**	**2.19**	**116**	P	**Pn**	**12 42 24.2**	**+0.6**
JAR				*e*S	**S**	**12 42 59.1**	**+1.0**
JNBK	**Urakawa-nobuka**	**2.36**	**148**	P	**Pn**	**12 42 25.7**	**+0.4**
JNBK				*e*S	**S**	**12 43 01.4**	**+0.3**
JCH	**Churui**	**2.37**	**135**	P	**Pn**	**12 42 24.4**	**-0.9**
JCH				*e*S	**S**	**12 42 58.1**	**-3.1**
JKB	**Kayabe**	**2.41**	**181**	P	**Pn**	**12 42 25.5**	**-0.2**
JKB				*e*S	**S**	**12 43 01.0**	**-1.0**
JOSM	**Okushiri--Mats**	**2.50**	**208**	P	**Pn**	**12 42 26.4**	**-0.3**
JOT	**Ohata**	**2.92**	**180**	P	**Pn**	**12 42 30.4**	**-0.6**
JOT				*e*S	**S**	**12 43 10.4**	**-1.1**
JAK	**Akkeshi**	**2.94**	**115**	P	**Pn**	**12 42 30.1**	**-1.1**
JAK				*e*S	**S**	**12 43 09.8**	**-1.9**
JRA	**Rausu**	**2.94**	**96**	P	**Pn**	**12 42 31.9**	**+0.7**
USRK	**Ussuriysk Ar.**	**6.53**	**272**	P	Pn	12 43 08.3	-6.0
	baz=90,slow=13						
MJAR	**Matsushiro Arr**	**8.05**	**197**	P	**Pn**	**12 43 33.4**	**-0.4**
	0.5nm,0.3s,baz=14,slow=13,SNR=5.6						
SONM	**Songino Array**	**24.20**	**291**	P	**P**	**12 46 34.2**	**+0.1**
	0.6nm,0.6s,baz=66,slow=8.8,SNR=3.5						
WRA	**Warramunga Arr**	**64.22**	**187**	P	**P**	**12 51 48.7**	**+0.1**
	0.3nm,0.3s,baz=1.6,slow=6.8,SNR=13						
ASAR	**Alice Springs**	**67.95**	**187**	P	**P**	**12 52 13.3**	**+1.0**
	0.4nm,0.5s,baz=5.3,slow=6.3,SNR=12						

MEX 04 12:57:37.5±0.6**, 16°.48N×98°.53W, h16^{km}**±8^{km}**, MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.40**	**102**	*i* P	Pg	12 57 44.1	-1.5
PNIG				*e*S	Sg	12 57 49.7	-1.4
TLIG	**Tlapa**	**1.08**	**358**	*e*P	Pb	12 57 53.9	-4.1
TLIG				*e*S	Sb	12 58 07.0	-4.9
CAIG	**El Cayaco**	**1.76**	**289**	*e*P	Pn	12 58 04.3	-3.1
CAIG				*e*S	Sn	12 58 24.7	-4.7
VHO	**Vista Hermosa**	**1.82**	**71**	*i* P	Pn	12 58 04.9	-3.5
VHO				*i* S	Sn	12 58 26.8	-4.4
YAIG	**Yautepec**	**2.43**	**348**	*i* P	Pn	12 58 13.2	-3.5
YAIG				*i* S	Sn	12 58 41.8	-4.4

IDC ***04*** *13:00:58.2±0.4, 11°.33N×126°.26E, h0^{km}, mb4.6/45, mb1 4.6/46, mb1mx4.5/60, mbtmp4.6/46, ML4.1/2, MS4.1/33, Ms1 4.1/33, ms1mx3.9/63, Error ellipse: s-maj=14.1km s-min=7.8km az=84.0*

BJI ***04*** *13:01:02.9, 11°.33N×126°.28E, h46^{km}, mb4.8/44, mB5.0/35, Ms4.6/38, Ms7 4.5/34*

ISCJB ***04*** *13:01:03.8±0.5, 11°.41N±0°.02×126°.19E±0°.04, h49^{km}±4^{km}, mb4.7/98, MS4.1/33, Error ellipse: s-maj=6.1km s-min=3.6km az=169.6*

NEIC ***04*** *13:01:04.3±0.7, 11°.32N×126°.14E, h42^{km}±6^{km}, mb4.9/46, Error ellipse: s-maj=4.8km s-min=3.3km az=79.0*

GCMT ***04*** *13:01:04.3±0.3, 11°.52N×126°.32E, h18^{km}±1^{km}, MW4.9/75, Moment Tensor Solution. s13,c14; s75,c103; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.38±.20; $M_{\theta\theta}$0.06±.10; $M_{\phi\phi}$-2.44±.14; $M_{r\theta}$-0.90±.27; $M_{\theta\phi}$0.40±.07; $M_{\phi r}$1.08±.24; Best double couple: $M_0$2.82000×10^{16} NP1:ϕ_s336.00000°, δ60.00000°, λ75.00000°. NP2: ϕ_s185.00000°, δ34.00000°, λ115.00000°. Principal axes: T 2.8440, Plg71.0000°, Azm211.0000°; N -0.0480, Plg13.0000°, Azm344.0000°; P -2.7950, Plg14.0000°, Azm78.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

DJA ***04*** *13:01:06.6±0.5, 12°N±3°×12°6E±°, h66^{km}±4^{km}, M5.1/31, mb5.1/31, mB5.2/10, MLv5.9/1, Mw(mB)4.5/10*

ISC 04 13:01:04.5±0.7**, 11°.39N**±0°.03×**126°.23E**±0°.05**, h41^{km}**±6^{km}**, n254, σ1^{s}.81**/247**, mb4.7**/105**, MS4.1**/34**, 12C-11D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.80**	**285**	*e*P	**Pn**	**13 01 17.3**	**-2.0**
PLP	**Palo**	**1.25**	**260**	⇓*i*P	**Pn**	**13 01 23.1**	**-2.3**
PLP				*e*S	**Sn**	**13 01 36.0**	**-5.1**
SCPH	**Surigao**	**1.76**	**205**	*e*P	**Pn**	**13 01 30.6**	**-1.9**
SCPH				*e*S	**Sn**	**13 01 55.0**	**+1.3**
MSLP	**Maasin**	**1.84**	**227**	*e*P	**Pn**	**13 01 32.7**	**-0.9**
MSLP				*e*S	**Sn**	**13 01 59.4**	**+3.8**
CNP	**Catarman**	**1.89**	**306**	*e*P	**Pn**	**13 01 33.6**	**-0.8**
LLP	**Lapu-Lapu**	**2.47**	**245**	⇑*e*P	**Pn**	**13 01 44.6**	**+2.3**
LLP				*e*S	**Sn**	**13 02 18.4**	**+7.3**
BUTP	**Butuan**	**2.48**	**194**	*e*P	**Pn**	**13 01 44.2**	**+1.7**
MMPH	**Masbate**	**2.73**	**291**	⇑*i*P	**Pn**	**13 01 48.9**	**+3.1**
MMPH				*i* S	**Sn**	**13 02 11.9**	**-5.6**
TBP	**Tagbilaran**	**2.88**	**234**	*e*P	**Pn**	**13 01 48.6**	**+0.7**
PVCP	**Virac**	**2.98**	**317**	*e*P	**Pn**	**13 01 47.2**	**-2.1**
PVCP				*e*S	Sn	13 02 47.3	+23
BIPH	**Bislig**	**3.19**	**178**	⇑*i*P	Pn	13 01 58.0	+5.8
BIPH				*i* S	**Sn**	**13 02 25.7**	**-3.3**
CGP	**Cagayan de Oro**	**3.29**	**208**	⇓*i*P	**Pn**	**13 01 56.6**	**+3.0**
CGP				*e*S	Sn	13 02 41.1	+10
RCP	**Roxas**	**3.42**	**273**	⇑*e*P	**Pn**	**13 01 56.7**	**+1.4**
SNPH	**Sibulan**	**3.58**	**236**	⇓*e*P	**Pn**	**13 01 55.2**	**-2.4**
GUIM	**Jordan**	**3.65**	**258**	*e*P	**Pn**	**13 01 58.2**	**-0.3**
BUKP	**Musuan**	**3.67**	**198**	*e*P	**Pn**	**13 01 58.7**	**-0.2**
BUKP				*e*S	**Sn**	**13 02 42.4**	**+1.4**
AUQP	**San Andres**	**3.97**	**299**	*e*P	**Pn**	**13 02 04.0**	**+1.1**
OTRP	**Odiongan**	**4.23**	**284**	*e*P	**Pn**	**13 02 06.8**	**+0.3**
JAP	**San Jose, Anti**	**4.25**	**262**	⇓*e*P	Pn	13 02 16.2	+9.4
DAV	**Davao City (W)**	**4.34**	**189**	Pn	Pn	13 02 14.3	+6.3
	52nm,0.3s,baz=293,slow=22,SNR=2.5						
DAV				Sn	**Sn**	**13 03 04.3**	**+6.9**
	32nm,0.3s,baz=78,slow=23,SNR=3.2						
DAV				LR	LR	13 03 40.5	
	comp=Z,2µm,20.1s,baz=355,slow=38						
MATI	**Mati**	**4.42**	**180**	*e*P	Pn	13 02 19.4	+10
GQP	**Guinayangan**	**4.46**	**304**	⇑*e*P	Pn	13 02 19.0	+9.4
PAGZ	**Pagadian**	**4.50**	**219**	*e*P	**Pn**	**13 02 10.5**	**+0.3**
BOAC	**Boac**	**4.75**	**296**	*e*P	**Pn**	**13 02 13.6**	**0.0**
SJMP	**San Jose**	**5.11**	**283**	*e*P	**Pn**	**13 02 20.6**	**+2.0**
CUYO	**Cuyo Island**	**5.14**	**265**	*e*P	**Pn**	**13 02 22.5**	**+3.4**
LQP	**Lukban**	**5.32**	**301**	⇓*e*P	**Pn**	**13 02 26.1**	**+4.5**
TGY	**Tagaytay City**	**5.82**	**298**	Pn	**Pn**	**13 02 28.7**	**+0.3**
	39nm,0.3s,baz=96,slow=9.2,SNR=7.1						
TGY				LR	LR	13 05 11.1	
	comp=Z,2µm,19.0s,baz=122,slow=43						
BUSP	**Coron**	**5.94**	**276**	*e*P	**Pn**	**13 02 31.4**	**+1.4**
BALP	**Baler**	**6.26**	**314**	*e*P	**Pn**	**13 02 35.0**	**+0.7**
LUBP	**Lubang**	**6.29**	**292**	*e*P	**Pn**	**13 02 35.9**	**+1.1**
ENPP	**El Nido**	**6.68**	**269**	*e*P	**Pn**	**13 02 44.3**	**+4.2**
CAUP	**Cauayan**	**6.98**	**323**	*e*P	**Pn**	**13 02 43.0**	**-1.2**
SCZP	**Santa Cruz**	**7.53**	**306**	*e*P	Pn	13 03 02.1	+10
APYP	**Conner**	**8.04**	**324**	*e*P	**Pn**	**13 02 59.4**	**+0.6**
ABRA	**Dolores**	**8.20**	**320**	*e*P	**Pn**	**13 03 01.6**	**+0.6**
BATP	**Bataraza**	**8.69**	**254**	*e*P	Pn	13 03 12.8	+5.1
TNTI	**Ternate**	**10.61**	**174**	P	**Pn**	**13 03 38.4**	**+4.3**
MPSI	**Mapaga**	**12.65**	**210**	P	**Pn**	**13 04 06.0**	**+4.0**
LUWI	**Luwuk**	**12.82**	**196**	P	**Pn**	**13 04 07.7**	**+3.4**
TPUB	**Ta-pu**	**12.99**	**336**	*e*Pn	**Pn**	**13 04 05.9**	**-0.7**
YHNB	**Yeheng**	**13.99**	**341**	*e*Pn	**Pn**	**13 04 21.2**	**+0.9**
QZH	**Quanzhou**	**15.30**	**333**	⇓*i*P	**Pn**	**13 04 38.2**	**+0.5**
QZH				S	**Sn**	**13 07 32.8**	**+6.7**
QZH				LR	LR		
	comp=N,790nm,14.2s						
QZH				LR	LR		
	comp=E,320nm,10.4s						
QZH				LR	LR		
	comp=Z,890nm,15.2s						
FAKI	**Fak Fak**	**15.43**	**157**	P	**Pn**	**13 04 39.5**	**+0.1**
FAKI	**Fak Fak**	**15.43**	**157**	*e*Pn	**Pn**	**13 04 38.9**	**-0.6**
	70nm,1.1s						
JOW	**Kunigami**	**15.48**	**7**	Pn	**Pn**	**13 04 39.4**	**-0.6**
	0.6nm,0.3s,baz=191,slow=12,SNR=2.7						
JOW				LR	LR	13 11 32.4	
	comp=Z,728nm,18.3s,baz=166,slow=41						
JOW	**Kunigami**	**15.48**	**7**	*e*Pn	**Pn**	**13 04 41.0**	**+1.0**
	50nm,1.3s						
SPSI	**Sidrap Palu**	**16.55**	**203**	P	**P**	**13 04 57.3**	**+1.4**
GZH	**Guangzhou**	**16.92**	**315**	P	**P**	**13 05 03.0**	**+3.2**
GZH				LR	LR		
	comp=N,820nm,10.4s						
GZH				LR	LR		
	comp=E,660nm,10.8s						
QIZ	**Qiongzhong**	**17.53**	**298**	P	**Pn**	**13 05 03.4**	**-2.6**
QIZ				S	**Sn**	**13 08 13.4**	**-6.9**
QIZ				pmax	pmax		
	comp=Z,250nm,5.1s						
QIZ				LR	LR		
	comp=N,460nm,12.8s						
QIZ				LR	LR		
	comp=E,750nm,16.7s						
QIZ				LR	LR		
	comp=Z,940nm,16.7s						
BKSI	**Bulukumba**	**17.68**	**200**	P	**P**	**13 05 08.4**	**+0.1**
	25nm,1.1s,414nm						
BKSI				pP	**pP**	**13 05 19.5**	**+1.1**
	25nm,1.1s,414nm						
GUMO	**Guam**	**18.33**	**81**	LR	LR	13 11 32.1	
	comp=Z,630nm,20.9s,baz=254,slow=35						
GENI	**Genyem**	**19.63**	**134**	P	**Pn**	**13 05 31.0**	**-0.4**
SAUI	**Saumlaki**	**19.90**	**165**	P	**Pn**	**13 05 34.3**	**-0.2**
SAUI				pP	**sP**	**13 05 45.6**	**-2.4**
PBKI	**Pangkalan Bun**	**20.14**	**227**	P	**P**	**13 05 33.8**	**-1.6**
SSE	**Sheshan**	**20.16**	**347**	P	Pn	13 05 48.1	+11
SSE				S	Sn	13 09 22.7	-0.8
SSE				pmax	pmax		
	comp=Z,47nm,1.1s						
SSE				pmax	pmax		
	comp=Z,88nm,3.5s						
SSE				LR	LR		
	comp=N,310nm,15.7s						
SSE				LR	LR		
	comp=E,180nm,12.3s						
MMRI	**Maumere**	**20.29**	**191**	P	Pn	13 05 39.6	+0.5
UBPT	**Khong Chiam**	**20.56**	**283**	P	Pn	13 05 42.3	-0.1
	comp=E,33nm,1.2s						
SOEI	**Soe**	**21.10**	**185**	P	**P**	**13 05 48.2**	**+2.4**
BATI	**Baumata**	**21.61**	**187**	P	**P**	**13 05 50.7**	**-0.5**
	comp=E,50nm,0.6s,baz=22,slow=7.4,SNR=5.8						
BATI				S	**S**	**13 09 49.2**	**+0.8**
	comp=E,21nm,0.7s,baz=112,slow=19,SNR=2.1						
BATI				LR	LR	13 14 58.4	
	comp=E,393nm,20.6s,baz=240,slow=39						
CBIJ	**Chichi jima**	**21.66**	**42**	P	**P**	**13 05 52.5**	**+0.8**
JCJ	**Chichijima**	**21.66**	**42**	P	**P**	**13 05 52.5**	**+0.8**
	comp=E,29nm,0.8s,baz=173,slow=17,SNR=3.0						
PLAI	**Plampang**	**21.77**	**203**	P	**P**	**13 05 52.4**	**-0.5**
JNU	**Nakatsue**	**22.05**	**10**	P	**P**	**13 05 55.4**	**-0.4**
	comp=E,8.1nm,0.8s,baz=209,slow=10,SNR=4.2						
JNU				LR	LR	13 15 29.2	
	comp=E,409nm,18.4s,baz=125,slow=39						
TWSI	**Taliwang, Sumb**	**22.05**	**205**	P	**P**	**13 05 56.4**	**+0.5**
SKNT	**Sakolnakorn**	**22.26**	**287**	P	**P**	**13 05 59.0**	**+0.8**
	comp=E,8.2nm,1.5s						
JAGI	**Jajag, Banyuwa**	**23.10**	**212**	P	**P**	**13 06 08.2**	**+1.2**
NONG	**Nongkai**	**23.27**	**289**	P	**P**	**13 06 07.0**	**-1.7**
	comp=E,0.4nm,0.9s,comp=E,54nm						
NGJI	**Ngawi**	**23.73**	**219**	P	**P**	**13 06 14.3**	**+1.2**
ENH	**Enshi**	**24.39**	**323**	*e*P	**P**	**13 06 18.4**	**-0.6**
	comp=E,42nm,1.0s						
WOJI	**Wonogiri, Jawa**	**24.43**	**219**	P	**P**	**13 06 19.2**	**-0.3**
JHJ	**Hachijo jima 2**	**24.95**	**28**	P	**P**	**13 06 23.7**	**-0.4**
	comp=E,52nm,0.8s,baz=88,slow=18,SNR=2.0						
JHJ				LR	LR	13 16 31.7	
	comp=E,565nm,18.5s,baz=148,slow=37						
PBKT	**Sadao Pong**	**25.03**	**285**	P	**P**	**13 06 24.6**	**-0.4**
	comp=E,47nm,0.8s,comp=E,528nm						
NANT	**Nan**	**25.70**	**290**	P	**P**	**13 06 29.6**	**-1.5**
	comp=E,10nm,0.6s,comp=E,143nm						
LEM	**Lembang**	**25.89**	**227**	P	**P**	**13 06 33.1**	**+0.1**
	comp=E,26nm,0.8s,baz=43,slow=8.2,SNR=3.2						
KSAR	**Wonju Array Be**	**25.98**	**3**	P	**P**	**13 06 34.5**	**+1.2**
KSRS	**Korea Array**	**26.00**	**3**	P	**P**	**13 06 34.5**	**+1.1**
	comp=E,6.9nm,1.0s,baz=183,slow=11,SNR=19						
KSRS				LR	LR	13 17 08.4	
	comp=E,466nm,18.9s,baz=172,slow=37						
KS01	**Wonju Array Si**	**26.02**	**3**	*e*P	**P**	**13 06 30.0**	**-3.7**
TIA	**Tai'an**	**26.05**	**343**	P	P	13 06 44.5	+10
TIA				pmax	pmax		
	comp=Z,12nm,1.0s						
TIA	**Tai'an**	**26.05**	**343**	P	**P**	**13 06 34.3**	**+0.3**
TIA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
SBJI	**Serang**	**26.51**	**230**	P	**P**	**13 06 38.6**	**+0.2**
CM01	**Chiang Mai Arr**	**27.24**	**288**	*e*P	**P**	**13 06 42.6**	**-2.4**
CM31	**Chiang Mai Arr**	**27.26**	**288**	*e*P	**P**	**13 06 42.9**	**-2.3**
CMAR	**Chiang Mai Arr**	**27.26**	**288**	P	**P**	**13 06 44.5**	**-0.7**
	comp=Z,11nm,0.8s,baz=100,slow=7.3,SNR=52						
CMAR				PcP	**PcP**	**13 10 05.3**	**+0.8**
	comp=Z,0.9nm,0.9s,baz=50,slow=0.5,SNR=4.3						
CMAR				ScP	**ScP**	**13 13 44.0**	**+2.3**
	comp=Z,0.8nm,0.8s,baz=59,slow=1.5,SNR=5.4						
CMAR				LR	LR	13 16 31.0	
	comp=Z,245nm,21.1s,baz=110,slow=34						
MJAR	**Matsushiro Arr**	**27.28**	**21**	P	**P**	**13 06 44.1**	**-1.1**
	comp=Z,2.1nm,0.7s,baz=199,slow=10,SNR=8.7						
MJAR				LR	LR	13 17 49.3	
	comp=Z,863nm,18.4s,baz=210,slow=37						
CMMT	**Chiang Mai**	**27.33**	**289**	P	**P**	**13 06 44.6**	**-1.2**
	comp=Z,13nm,1.3s,comp=Z,415nm						
CHTO	**Chiang Mai**	**27.33**	**289**	*e*P	**P**	**13 06 43.6**	**-2.2**
	comp=Z,11nm,0.8s						
CHTO	**Chiang Mai**	**27.33**	**289**	P	**P**	**13 06 44.7**	**-1.1**
	comp=Z,60nm,1.3s						
CMAI	**Chiengmai2**	**27.48**	**291**	P	**P**	**13 06 46.8**	**-0.6**
	comp=Z,6.3nm,1.0s,comp=Z,266nm						
PSI	**Prapat**	**28.38**	**255**	P	**P**	**13 06 54.7**	**-0.6**
	comp=Z,3.8nm,0.3s,baz=187,slow=0.7,SNR=3.3						
TIY	**Taiyuan**	**28.98**	**337**	*e*P	**P**	**13 07 04.6**	**+4.2**
TIY				SS	SS	13 13 16.8	-36
TIY				pmax	pmax		
	comp=Z,120nm,3.7s						
TIY				LR	LR		
	comp=Z,670nm,18.0s						
TIY				LR	LR		
	comp=Z,220nm,11.7s						
TIY				LR	LR		
	comp=Z,420nm,12.4s						
KCSI	**Kotacane, Aceh**	**29.26**	**257**	P	**P**	**13 06 58.5**	**-4.5**
	comp=Z,34nm,1.1s						
FITZ	**Fitzroy Crossi**	**29.31**	**181**	P	**P**	**13 07 01.4**	**-1.8**
	comp=Z,6.9nm,1.1s,baz=356,slow=8.4,SNR=5.7						
LZH	**Lanzhou**	**31.84**	**324**	*e*P	**P**	**13 07 27.7**	**+1.9**
LZH				pP	pP	13 07 38.3	+1.2
LZH				sP	sP	13 07 44.1	+2.1
LZH				PP	**PP**	**13 08 38.0**	**-0.3**
LZH				S	**S**	**13 12 38.2**	**+4.4**
LZH				pmax	pmax		
	comp=Z,31nm,1.3s						
LZH				pmax	pmax		
	comp=Z,130nm,4.1s						
LZH				LR	LR		
	comp=Z,1µm,13.0s						
LZH				LR	LR		
	comp=Z,1µm,14.1s						
LZH				LR	LR		
	comp=Z,2µm,15.7s						
WRA	**Warramunga Arr**	**32.14**	**166**	P	**P**	**13 07 26.1**	**-2.2**
	comp=Z,3.3nm,0.6s,baz=346,slow=9.4,SNR=19						

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
WRA				PcP	PcP	13 10 17.6	+0.7
	comp=Z,0.9nm,0.7s,baz=20,slow=2.9,SNR=3.8						
WRA				S	S	13 12 32.8	-5.5
	comp=Z,0.6nm,0.8s,baz=346,slow=15,SNR=2.9						
MBWA	Marble Bar	32.97	191	P	P	13 07 33.7	-1.8
USRK	Ussuriysk Ar.	33.07	8	P	P	13 07 34.5	-1.7
	comp=Z,2.8nm,0.6s,baz=190,slow=7.3						
USRK				LR	LR	13 22 00.3	
	comp=Z,259nm,18.2s,baz=157,slow=38						
BRDH	Bariadhala	34.83	293	LR	LR	13 23 26.1	
	comp=Z,282nm,18.5s,baz=134,slow=39						
SHL	Shillong	35.37	298	eP	P	13 07 56.5	-0.1
ASAJ	Asahikawa	35.53	20	P	P	13 07 56.5	-1.1
	comp=Z,2.1nm,0.7s,baz=221,slow=9.3,SNR=3.6						
ASAJ	Asahikawa	35.53	20	eP	P	13 07 58.1	+0.5
	comp=Z,6.0nm,0.8s						
ASAR	Alice Springs	35.64	168	P	P	13 07 57.7	-1.1
	comp=Z,1.7nm,0.7s,baz=345,slow=6.8,SNR=25						
ASAR				PcP	PcP	13 10 26.9	+0.1
	comp=Z,1.3nm,0.8s,baz=356,slow=3.0,SNR=2.5						
ASAR				S	S	13 13 31.0	-1.5
	comp=Z,0.7nm,0.8s,baz=350,slow=19,SNR=3.0						
AS01	Alice Springs	35.65	168	eP	P	13 07 57.4	-1.4
GTA	Gaotai	36.45	325	⇑P	P	13 08 06.4	+0.8
GTA				pP	pP	13 08 18.3	+1.3
GTA				sP	sP	13 08 21.8	-0.1
GTA				pmax	pmax		
	comp=Z,24nm,1.3s						
GTA				pmax	pmax		
	comp=Z,170nm,4.8s						
GTA				LR	LR		
	comp=Z,270nm,14.3s						
GTA				LR	LR		
	comp=Z,340nm,13.3s						
GTA				LR	LR		
	comp=Z,450nm,14.3s						
CTA	Charters Tower	36.97	148	P	P	13 08 09.3	-0.8
	comp=Z,6.2nm,1.0s,baz=354,slow=10,SNR=3.7						
LSA	Lhasa	37.35	304	eP	P	13 08 12.9	-1.0
	comp=Z,12nm,0.7s						
KLR	Kul'dur	38.00	6	P	P	13 08 18.3	-0.2
	comp=Z,0.4nm,0.6s,baz=198,slow=6.4,SNR=22						
YSS	Yuzh-Sakhalins	38.10	18	eP	P	13 08 20.0	+0.7
	comp=Z,9.2nm,0.8s						
HNR	Honiara	39.40	120	LR	LR	13 23 43.4	
	comp=Z,391nm,20.7s,baz=306,slow=35						
ODAN	Odare	39.60	298	eP	P	13 08 32.0	-0.5
	comp=Z,171nm,0.8s						
ULN	Ulaanbaatar	39.76	340	eP	P	13 08 33.6	+0.1
	comp=Z,10.0nm,0.7s						
SONM	Songino Array	39.96	339	P	P	13 08 35.2	+0.1
	comp=Z,3.8nm,0.7s,baz=156,slow=8.6,SNR=15						
SONM				PcP	PcP	13 10 40.3	+0.4
	comp=Z,0.6nm,0.6s,baz=132,slow=2.1,SNR=2.0						
SONM				LR	LR	13 27 01.1	
	comp=Z,271nm,19.0s,baz=142,slow=39						
SONA1	Songino Array	39.97	339	eP	P	13 08 34.8	-0.4
RAMN	Ramite	40.31	298	eP	P	13 08 38.0	-0.4
	comp=Z,159nm,1.0s						
JIRN	Jiri	40.84	299	eP	P	13 08 42.5	-0.5
	comp=Z,134nm,0.7s						
GUN	Gumba	41.17	300	eP	P	13 08 45.2	-0.5
	comp=Z,143nm,0.8s						
PKIN	Phulchoki	41.50	299	eP	P	13 08 47.0	-1.3
	comp=Z,32nm,0.7s						
KKN	Kakani	41.66	299	eP	P	13 08 48.4	-1.1
	comp=Z,74nm,1.0s						
DMN	Daman	41.76	299	eP	P	13 08 49.3	-1.1
	comp=Z,44nm,0.9s						
FORT	Forrest	41.96	178	eP	P	13 08 51.1	-0.5
	comp=Z,31nm,0.8s						
GKN	Gorkha	42.26	299	eP	P	13 08 53.2	-1.1
	comp=Z,84nm,1.1s						
KOLN	Koldanda	43.09	299	eP	P	13 09 00.3	-0.9
	comp=Z,41nm,0.8s						
DANN	Dangsing	43.10	299	eP	P	13 09 00.3	-1.0
	comp=Z,46nm,0.5s						
PYUN	Piuthan	43.70	299	eP	P	13 09 05.2	-0.8
	comp=Z,140nm,1.0s						
TLY	Talaya	44.17	340	P	P	13 09 09.4	+0.2
	comp=Z,5.2nm,0.6s,baz=134,slow=2.0,SNR=12						
TLY	Talaya	44.17	340	eP	P	13 09 09.6	+0.3
	comp=Z,13nm,0.8s						
NWAO	Narrogin (SRO)	44.90	191	P	P	13 09 14.3	-0.9
	comp=Z,9.4nm,0.7s,baz=242,slow=9.5,SNR=8.0						
NWAO	Narrogin (SRO)	44.90	191	eP	P	13 09 14.1	-1.1
	comp=Z,65nm,1.0s						
BBOO	Buckleboo	44.94	168	eP	P	13 09 15.0	-0.5
	comp=Z,27nm,0.6s						
PALK	Pallekele	45.08	269	LR	LR	13 29 09.8	
	comp=Z,148nm,19.8s,baz=126,slow=38						
STKA	Stephens Creek	45.47	162	P	P	13 09 19.2	-0.5
	comp=Z,6.0nm,0.6s,baz=336,slow=9.7,SNR=22						
STKA	Stephens Creek	45.47	162	eP	P	13 09 19.2	-0.5
	comp=Z,8.0nm,0.9s						
PETK	Petropavlovsk-	48.64	25	P	P	13 09 45.7	+1.4
	comp=Z,2.1nm,0.4s,baz=187,slow=5.7						
PETK				LR	LR	13 32 27.8	
	comp=Z,258nm,18.0s,baz=223,slow=39						
MK01	Makanchi Array	51.10	322	eP	P	13 10 03.3	+0.2
MK31	Makanchi Array	51.12	322	eP	P	13 10 03.3	+0.1
MKAR	Makanchi Array	51.12	322	P	P	13 10 04.2	+1.0
	comp=Z,21nm,0.7s,baz=116,slow=8.4,SNR=66						
MKAR				LR	LR	13 33 35.7	
	comp=Z,146nm,18.3s,baz=110,slow=38						
MKAR	Makanchi Array	51.12	322	eP	P	13 10 03.2	0.0
	comp=Z,208nm,0.8s						
MAKZ	Makanchi	51.31	322	eP	P	13 10 04.6	-0.1
	comp=Z,45nm,1.1s						
MA2	Magadan	51.47	16	LR	LR	13 32 50.2	
	comp=Z,104nm,18.9s,baz=188,slow=37						
DZM	Mont Dzumac	51.59	130	P	P	13 10 07.3	+0.1
	comp=Z,5.3nm,0.6s,baz=315,slow=7.1,SNR=7.2						
DZM	Mont Dzumac	51.59	130	eP	P	13 10 09.0	+1.8
	comp=Z,37nm,1.4s						
DZM	Mont Dzumac	51.59	130	eLR	LR	13 25 07.2	
	comp=Z,150nm,26.4s						
KSH	Kashi	52.46	311	P	P	13 10 15.4	+1.9
KSH				PcP	PcP	13 11 25.5	+1.7
KSH				PP	PP	13 12 17.1	+4.5
KSH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KSH				pmax	pmax		
	comp=Z,120nm,5.3s						
KSH				LR	LR		
	comp=Z,240nm,13.0s						
KSH				LR	LR		
	comp=Z,230nm,13.0s						
NIL	Nilore	53.08	304	eP	P	13 10 16.8	-1.3
	comp=Z,46nm,1.0s						
ZAA0	Zalesovo Array	53.63	331	eP	P	13 10 21.6	-0.1
	comp=Z,8.7nm,0.9s						
ZALV	Zalesovo Beam	53.63	331	P	P	13 10 22.1	+0.4
	comp=Z,2.9nm,0.6s,baz=114,slow=8.4,SNR=11						
ZALV				LR	LR	13 34 55.2	
	comp=Z,187nm,18.4s,baz=70,slow=38						
ZALV	Zalesovo Beam	53.63	331	eP	P	13 10 21.2	-0.4
KZA	Kyzart	53.80	314	P	P	13 10 24.6	+1.0
	SNR=8.3						
TKM2	Tokmak 2	53.84	315	P	P	13 10 24.9	+1.2
	SNR=6.0						
KBK	Karagaybulak	54.20	315	P	P	13 10 27.5	+1.2
	SNR=6.7						
UCH	Uchtor	54.37	314	P	P	13 10 29.3	+1.5
	SNR=17						
CHMS	Chumysh	54.45	315	P	P	13 10 28.8	+0.9
	SNR=5.3						
AAK	Ala-Archa	54.51	315	P	P	13 10 29.4	+0.9
	comp=Z,1.9nm,0.4s,baz=113,slow=5.6,SNR=6.1						
USP	Ospenovka	54.71	315	P	P	13 10 30.1	+0.2
	SNR=9.1						
KURK	Kurchatov	55.13	325	eP	P	13 10 32.6	0.0
	comp=Z,83nm,0.9s						
KURBB	Kurchatov Arra	55.13	325	P	P	13 10 33.5	+0.9
	comp=Z,17nm,0.7s,baz=126,slow=7.0,SNR=132						
KBL	Kabul	56.67	304	eP	P	13 10 43.4	-0.8
	comp=Z,11nm,0.8s						
KK31	Karatay Array	57.44	314	eP	P	13 10 49.1	-0.2
KKAR	Karatay Array	57.44	314	eP	P	13 10 49.0	-0.3
TIXI	Tiksi	60.24	1	LR	LR	13 38 13.0	
	comp=Z,345nm,19.4s,baz=203,slow=37						
BVAR	Borovoye Array	60.73	325	P	P	13 11 12.8	+1.0
	comp=Z,11nm,0.7s,baz=119,slow=8.4,SNR=52						
BVAR				LR	LR	13 37 26.5	
	comp=Z,126nm,18.1s,baz=114,slow=36						
BRVK	Borovoye	60.80	325	eP	P	13 11 12.2	-0.2
	comp=Z,39nm,0.9s						
GEYT	Alibeck	65.85	306	P	P	13 11 46.5	+0.4
	comp=Z,4.9nm,0.8s,baz=101,slow=6.2,SNR=10						
GYA0B	ALIBECK ARRAY	65.85	306	eP	P	13 11 45.5	-0.7
	comp=Z,14nm,0.9s						
ABKAR	Akbulak array	66.01	319	eP	P	13 11 46.4	-0.4
AFI	Afiamalu	66.41	111	LR	LR	13 38 20.7	
	comp=Z,148nm,18.5s,baz=93,slow=34						
AKTO	Aktyubinsk	67.44	320	P	P	13 11 56.0	0.0
	comp=Z,7.0nm,0.8s,baz=92,slow=9.3,SNR=17						
AKTO				LR	LR	13 44 00.7	
	comp=Z,188nm,18.1s,baz=109,slow=38						
ARU	Arti	68.28	326	eP	P	13 12 00.6	-0.5
	comp=Z,32nm,0.9s						
KDAK	Kodiak Island	75.75	33	eP	P	13 12 46.0	+0.2
	comp=Z,62nm,1.8s						
CAST	Castle Rocks	76.17	27	eP	P	13 12 49.1	+1.0
	comp=Z,6.3nm,0.9s						
GNI	Garni	76.27	309	P	P	13 12 51.0	+1.6
	comp=Z,5.4nm,0.4s,baz=234,slow=19,SNR=3.3						
GNI				LR	LR	13 50 18.4	
	comp=Z,64nm,19.8s,baz=91,slow=39						
BPAW	Bear Paw Mtn.	76.68	27	eP	P	13 12 51.6	+0.5
	comp=Z,15nm,0.9s						
MLY	Manley	76.81	26	eP	P	13 12 52.9	+1.1
	comp=Z,8.9nm,0.9s						
TRF	Thorofare Moun	76.98	27	eP	P	13 12 53.6	+0.7
	comp=Z,13nm,1.2s						
COLD	Coldfoot	77.08	23	eP	P	13 12 54.5	+1.3
	comp=Z,5.1nm,0.9s						
RAYN	Ar Rayn	77.12	292	eP	P	13 12 52.3	-2.1
	comp=Z,5.4nm,0.8s						
AKH	Akhalkalaki	77.14	310	eP	P	13 12 54.6	+0.3
	comp=Z,29nm,1.0s						
TOLK	Toolik Lake Re	77.36	22	eP	P	13 12 56.0	+1.2
	comp=Z,7.2nm,0.9s						
KBZ	Khabaz	77.42	312	P	P	13 12 55.1	-0.5
	comp=Z,8.6nm,1.0s,baz=69,slow=5.9,SNR=10						
KBZ				LR	LR	13 53 07.9	
	comp=Z,122nm,18.5s,baz=88,slow=40						
PMR	Palmer	77.52	29	eP	P	13 12 56.1	+0.4
	comp=Z,6.1nm,0.9s						
KIV	Kislovodsk	77.56	313	eP	P	13 12 56.6	+0.1
	comp=Z,23nm,0.8s						
MCK	McKinley	77.58	27	eP	P	13 12 56.2	+0.1
	comp=Z,12nm,0.9s						
MDM	Murphy Dome	77.88	26	eP	P	13 12 58.5	+0.8
	comp=Z,4.8nm,0.9s						
CCB	Clear Creek Bu	78.06	26	eP	P	13 12 58.9	+0.2
	comp=Z,19nm,1.8s						
CASY	Casey	78.32	186	eP	P	13 12 59.9	0.0
	comp=Z,7.2nm,0.8s						
SCM	Sheep Creek Mo	78.37	29	eP	P	13 13 01.6	+1.0
	comp=Z,27nm,1.4s						
HDA	Harding Lake	78.44	26	eP	P	13 13 00.2	-0.7
	comp=Z,5.3nm,0.8s						
IL1	Eielson Array	78.45	26	eP	P	13 13 00.1	-0.8
ILAR	Eielson Array	78.45	26	P	P	13 13 00.1	-0.8
	comp=Z,1.9nm,0.7s,baz=238,slow=5.3,SNR=33						
ILB	Eielson Array	78.45	26	eP	P	13 13 00.8	-0.1
KLMR	Klimovskoe	78.54	330	eP	P	13 12 59.9	-1.5
KLMR				AMP		13 13 13.3	
	comp=Z,29nm,1.2s						
DIV	Divide	79.15	30	eP	P	13 13 05.9	+1.0
	comp=Z,11nm,1.0s						
RAR	Rarotonga	79.54	114	LR	LR	13 43 51.8	
	comp=Z,136nm,19.6s,baz=297,slow=32						
EGAK	Eagle	80.90	26	eP	P	13 13 14.7	+0.6
	comp=Z,3.4nm,0.8s						
ATD	Arta Tunnel	81.39	280	LR	LR	13 48 43.0	
	comp=Z,25nm,18.2s,baz=342,slow=35						
DAWY	Dawson	81.76	26	eP	P	13 13 19.4	+0.6
	comp=Z,6.1nm,1.1s						
SPITS	Spitsbergen Ar	82.92	349	P	P	13 13 24.6	+0.1
	comp=Z,8.7nm,0.9s,baz=72,slow=9.3,SNR=3.5						
ARCES	ARCESS Array B	83.14	340	P	P	13 13 25.8	0.0
	comp=Z,4.8nm,0.8s,baz=76,slow=6.7,SNR=9.1						
ARCES	ARCESS Array B	83.14	340	eP	P	13 13 25.2	-0.6
OPO	Ambohidratompo	83.41	250	P	P	13 13 28.0	-0.4
	comp=Z,2.6nm,0.8s,baz=80,slow=11,SNR=2.1						
ASF	Jabal al Asfar	83.47	301	P	P	13 13 29.0	+0.6
	comp=Z,2.9nm,0.8s,baz=14,slow=4.2,SNR=3.8						
MMAI	Mount Meron Ar	84.58	302	P	P	13 13 33.7	-0.3
	comp=Z,0.6nm,0.2s,baz=73,slow=5.0,SNR=4.0						
MMAI				LR	LR	13 56 46.5	
	comp=Z,76nm,18.3s,baz=200,slow=40						
BR131	Keskin Array S	84.79	309	eP	P	13 13 33.9	-1.2
BRTR	Keskin Array B	84.79	309	P	P	13 13 34.2	-0.8
	comp=Z,3.9nm,0.7s,baz=119,slow=4.3,SNR=14						
BRTR				LR	LR	13 57 32.6	
	comp=Z,38nm,18.3s,baz=88,slow=40						
FIA1	FINESS Array S	84.89	332	eP	P	13 13 34.5	-0.4
	comp=Z,54nm,1.8s						
FINES	FINESS Array B	84.89	332	P	P	13 13 34.4	-0.5
	comp=Z,2.7nm,0.7s,baz=90,slow=3.8,SNR=7.4						
AKASG	Malin Array Be	85.67	321	P	P	13 13 38.3	-0.7
	comp=Z,4.0nm,0.7s,baz=64,slow=5.1,SNR=23						
AKBB	Malin Array Si	85.68	321	eP	P	13 13 38.3	-0.7
	comp=Z,24nm,1.1s						
KIEV	Kiev	85.69	321	eP	P	13 13 38.6	-0.5
	comp=Z,23nm,1.1s						
AK11	Malin Array Si	85.72	321	eP	P	13 13 38.9	-0.3
TLB	Topalu	87.85	315	⇓iP	P	13 13 48.1	-1.7
PPT	Papeete	87.95	108	LR	LR	13 47 41.4	
	comp=Z,72nm,19.7s,baz=315,slow=32						
PPT2	Papeete2	87.96	108	eLR	LR	13 41 38.4	
	comp=Z,212nm,35.2s						
TESR	Tescani	88.33	317	⇑iP	P	13 13 52.5	+0.5
VRI	Vrincioaia	88.44	316	⇑iP	P	13 13 52.5	-0.1
PLOR	Plostina	88.49	316	⇑iP	P	13 13 53.1	+0.2
BURAR	Bucovina Array	88.98	318	⇓iP	P	13 13 58.5	+3.3
BUR04	Bucovina Ar. S	88.98	318	eP	P	13 13 54.7	-0.5
BUR08	Bucovina Ar. S	88.98	318	eP	P	13 13 54.3	-1.0
MLR	Muntele Rosu	89.06	316	P	P	13 13 55.9	+0.2
	comp=Z,0.8nm,0.8s,baz=66,slow=10.0,SNR=5.2						
MLR	Muntele Rosu	89.06	316	⇓iP	P	13 13 56.0	+0.3
MLR	Muntele Rosu	89.06	316	eP	P	13 13 54.2	-1.5
	comp=Z,5.8nm,0.9s						
TBI	Tubuai	89.31	114	eLR	LR	13 42 34.5	
	comp=Z,106nm,26.5s						
ARR	Arges	89.99	316	⇓iP	P	13 14 01.1	+1.2
KWP	Kalwaria Pacla	90.00	321	eP	P	13 13 59.4	-0.4
	comp=Z,394nm,0.6s						
MAW	Mawson	90.73	200	P	P	13 14 02.2	-0.4
	comp=Z,1.1nm,0.6s,baz=45,slow=4.3,SNR=3.6						
MAW				LR	LR	13 54 18.3	
	comp=Z,47nm,20.8s,baz=58,slow=35						
DRGR		90.85	318	⇑iP	P	13 14 05.9	+2.0
VNDA	Vanda	91.04	173	P	P	13 14 03.5	-0.5
	comp=Z,1.4nm,0.7s,baz=323,slow=6.3,SNR=12						
VNDA				LR	LR	13 56 24.3	
	comp=Z,96nm,19.0s,baz=344,slow=37						
VNDA	Vanda	91.04	173	eP	P	13 14 04.0	+0.1
	comp=Z,11nm,1.0s						
HFS	Hagfors	91.04	332	P	P	13 14 03.9	-0.5
	comp=Z,1.3nm,0.6s,baz=99,slow=8.9,SNR=3.2						
NB2	NORSAR Subarra	91.74	334	P	P	13 14 06.5	-1.2
	comp=Z,6.8nm,1.2s,baz=63,slow=4.6						
NOA	NORSAR Array B	91.74	334	LR	LR	14 00 25.9	
	comp=Z,130nm,19.1s,baz=55,slow=39						
MDVR	Moldovita	92.14	316	⇓iP	P	13 14 09.5	-0.4
PSZ	Piszkesteto	92.31	320	⇑iP	P	13 14 15.4	+4.7
YKA	Yellowknife Ar	92.75	24	P	P	13 14 11.3	-1.0
	comp=Z,0.6nm,0.7s,baz=284,slow=8.9,SNR=3.2						
PDG	Podgorica	94.59	315	⇑iP	P	13 14 20.0	-1.1
CONA	Conrad Observa	94.83	321	ePcP	P	13 14 21.4	-0.9
	comp=Z,1.3nm,0.5s						
TAOE	Nuku Hiva Isla	95.23	98	eLR	LR	13 45 01.0	
	comp=Z,118nm,20.7s						
ARSA	Arzberg	95.31	320	ePcP	P	13 14 23.1	-1.3
	comp=Z,3.3nm,0.7s						
GERES	GERESS Array B	95.79	322	P	P	13 14 26.2	-0.5
	comp=Z,0.4nm,0.2s,baz=72,slow=4.8,SNR=3.8						
PERS	Pernice	95.81	320	eP	P	13 14 38.8	+12
SOKA	Soboth	95.84	320	ePcP	P	13 14 27.5	+0.6
	comp=Z,3.1nm,1.0s						
MOA	Molln	95.85	321	ePcP	P	13 14 27.8	+0.9
	comp=Z,5.3nm,1.1s						
BOJS	Bojanci	96.16	319	eP	P	13 14 41.2	+13
OBKA	Obir	96.22	320	ePcP	P	13 14 27.9	-0.7
	comp=Z,2.0nm,0.6s						
VISS	Visnje	96.31	319	eP	P	13 14 40.5	+12
KBA	Koelnbreinsper	96.74	321	ePcP	P	13 14 30.6	-0.5
	comp=Z,2.8nm,1.2s						
JAVS	Javornik	96.77	319	i P	P	13 14 41.9	+11
RETA	Reutte	98.15	322	ePcP	Pdif	13 14 37.4	+0.1
	comp=Z,1.5nm,0.6s						
FETA	Feichten	98.38	321	ePcP	P	13 14 37.0	-1.5
	comp=Z,3.7nm,0.9s						
DAVA	Damuels	98.77	322	ePdiff	P	13 14 39.2	-1.0
	comp=Z,2.8nm,0.8s						
TXAR	Lajitas Array	117.12	49	PKP	PKPdf	13 19 45.0	-1.0
	comp=Z,0.3nm,0.9s,baz=204,slow=2.0,SNR=3.2						
TORD	Torodi Ar. Bea	119.81	292	PKP	PKPdf	13 19 49.9	-1.4
	comp=Z,1.5nm,0.9s,baz=345,slow=5.1						
PLCA	Paso Flores	147.24	156	PKPbc	PKPbc	13 20 44.5	+0.6
	comp=Z,4.3nm,0.7s,baz=252,slow=4.1,SNR=7.9						

MEX 04 13:03:09.0±0.6, 18°.05N×103°.22W, h5^{km}±5^{km}, MD3.7,
Near coast of Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMIG	Aquila	0.27	332	eP	Pg	13 03 14.0	-0.2
MMIG				eS	Sg	13 03 17.4	-0.3
R15V		1.33	327	eP	Pn	13 03 30.6	-3.7
R15V				eS	Sg	13 03 47.0	-4.7
EZ5V		1.47	346	eP	Pn	13 03 33.2	-3.2
EZ5V				eS	Sb	13 03 51.2	-4.8
ZIIG	Zihuatanejo	1.73	105	eP	Pn	13 03 35.5	-4.2
CJM	Chamela	2.25	310	i P	Pn	13 03 44.4	-2.6
CJM				i S	Sn	13 04 10.4	-4.7
MOIG	Morelia	2.51	50	i P	Pn	13 03 47.1	-3.6
MOIG				i S	Sn	13 04 17.7	-4.1
ARIG	Puente Sto Nin	2.74	85	i P	Pn	13 03 51.3	-2.3
ARIG				i S	Sn	13 04 23.1	-4.1

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*NEIC **04** 13:13:29.4±0.9, 8°.84S×113°.07E, h95^{km}±9^{km}, mb4.3/1, Error ellipse: s-maj=10.4km s-min=6.4km az=52.0*
*IDC **04** 13:13:29.3±2.5, 8°.83S×113°.08E, h93^{km}±22^{km}, mb3.8/20, mb1 3.8/23, mb1mx3.7/58, mbtmp4.1/23, Error ellipse: s-maj=16.7km s-min=10.5km az=70.0*
*ISCJB **04** 13:13:31.3±0.4, 8°.84S±0°.06×113°.09E±0°.03, h129^{km}±3^{km}, mb3.9/22, Error ellipse: s-maj=9.4km s-min=5.0km az=16.5*
*DJA **04** 13:13:32.6±0.4, 9°S±8°×11°3E±°, h94^{km}±9^{km}, M4.5/11, mB5.5/1, mb4.5/4, MLv4.5/11, Mw(mB)5.0/1*
ISC 04 13:13:31.9±0.6, **8°.93S**±0°.07×**113°.03E**±0°.04, **h121**^{km}±5^{km},
n46, σ1^{s}.**59**/59, **mb4.0**/22, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GMJI	Gumukmas	0.77	33	P	Pn	13 13 51.7	-0.2
GMJI				S	Sn	13 14 06.2	-0.8
JAGI	Jajag, Banyuwa	1.20	68	P	Pn	13 13 56.1	0.0
JAGI				S	Sn	13 14 13.1	-1.3
BLJI	Banyuglugur	1.30	26	P	Pn	13 13 57.8	+0.7
BLJI				S	Sn	13 14 16.3	0.0
IGBI	Denpasar	2.10	87	P	Pn	13 14 06.9	+0.3
IGBI				S	Sn	13 14 31.5	-1.6
NGJI	Ngawi	2.19	315	P	Pn	13 14 11.6	+3.8
WOJI	Wonogiri, Jawa	2.34	297	P	Pn	13 14 10.9	+1.2
UGM	Wanagama	2.67	292	P	Pn	13 14 15.1	+1.1
UGM				S	Sn	13 14 46.6	+0.2
TWSI	Taliwang, Sumb	3.81	88	P	Pn	13 14 29.5	+0.5
TWSI				S	Sn	13 15 13.1	-0.2
PLAI	Plampang	4.70	89	P	Pn	13 14 41.5	+0.7
PLAI				S	Sn	13 15 32.7	-1.6
CISI	Cisompet, Garu	5.33	284	P	Pn	13 14 50.2	+0.8
CISI				S	Sn	13 15 46.6	-3.2
LEM	Lembang	5.75	291	P	Pn	13 14 52.5	-2.7
	1.9nm,0.3s,baz=0.0,slow=20,SNR=1.7						
LEM				S	Sn	13 15 54.3	-5.7
	2.7nm,0.3s,baz=287,slow=19,SNR=2.5						
CGJI	Cibinong	7.62	287	P	Pn	13 15 21.9	+1.6
BKSI	Bulukumba	7.90	64	P	Pn	13 15 26.0	+2.0
EDFI	Ende, Flores	8.56	89	P	Pn	13 15 30.2	-3.0
BATI	Baumata	10.57	98	P	Pn	13 15 57.4	-2.7
	3.7nm,0.3s,baz=313,slow=18,SNR=4.4						
BATI				S	Sn	13 17 43.2	-13
	3.8nm,0.3s,baz=124,slow=3.6,SNR=2.5						
MBWA	Marble Bar	13.77	153	ePn	Pn	13 16 40.7	-1.4
FITZ	Fitzroy Crossi	15.27	128	P	Pn	13 17 01.0	-0.2
	0.2nm,0.3s,baz=317,slow=9.9,SNR=16						
FITZ				S	Sn	13 19 38.5	-12
	0.5nm,0.3s,baz=195,slow=20,SNR=8.0						
WRA	Warramunga Arr	23.33	120	P	P	13 18 29.8	+0.2
	0.8nm,0.4s,baz=301,slow=11,SNR=25						
WRA				sP	pP	13 18 55.1	+1.6
	1.7nm,0.5s,baz=295,slow=12,SNR=6.5						
WRA				S	Sn	13 22 51.5	-12
	0.9nm,0.9s,baz=289,slow=24,SNR=5.1						
WRAB	Tennant Creek	23.34	120	eP	P	13 18 30.1	+0.4
ASAR	Alice Springs	24.77	129	P	P	13 18 44.0	+1.3
	1.9nm,0.8s,baz=306,slow=9.1,SNR=17						
ASAR				sP	pP	13 19 09.1	+0.6
	3.5nm,0.5s,baz=304,slow=9.5,SNR=10						
ASAR				PcP	PcP	13 22 17.7	+1.4
	0.4nm,0.7s,baz=318,slow=1.2,SNR=4.2						
ASAR				S	S	13 23 26.0	+30
	1.0nm,0.7s,baz=306,slow=22,SNR=6.3						
CMAR	Chiang Mai Arr	30.55	333	P	P	13 19 34.4	+0.2
	0.5nm,0.5s,baz=163,slow=9.4,SNR=3.7						
STKA	Stephens Creek	34.99	135	P	P	13 20 11.6	-1.2
	2.3nm,0.4s,baz=310,slow=11,SNR=11						
STKA				sP	pP	13 20 41.6	+2.1
	2.5nm,0.6s,baz=313,slow=10,SNR=4.0						
CBIJ	Chichi jima	45.62	37	P	P	13 21 39.4	-1.0
JCJ	Chichijima	45.62	37	P	P	13 21 39.4	-1.0
	19nm,0.4s,baz=72,slow=9.6,SNR=6.1						
KSAR	Wonju Array Be	48.18	16	P	P	13 21 59.9	-0.1
KSRS	Korea Array	48.20	16	P	P	13 21 59.9	-0.3
	0.8nm,0.5s,baz=195,slow=8.7,SNR=5.3						
MAT	Matsushiro	51.05	26	P	P	13 22 20.1	-1.8
MJAR	Matsushiro Arr	51.05	26	P	P	13 22 20.7	-1.1
	8.0nm,0.7s,baz=207,slow=8.8,SNR=27						
USRK	Ussuriysk Ar.	55.60	16	P	P	13 22 56.2	+1.3
	3.2nm,0.6s,baz=177,slow=5.3						
ULN	Ulaanbaatar	56.79	355	eP	P	13 23 04.2	+0.6
	1.5nm,0.4s						
SONM	Songino Array	56.81	355	P	P	13 23 04.0	+0.2
	1.6nm,0.4s,baz=170,slow=9.9,SNR=8.8						
ASAJ	Asahikawa	59.20	24	P	P	13 23 20.1	-0.1
	3.9nm,0.7s,baz=194,slow=6.0,SNR=8.5						
MKAR	Makanchi Array	61.87	337	P	P	13 23 38.6	+0.3
	0.8nm,0.4s,baz=147,slow=7.6,SNR=15						
MKAR				sP	pP	13 24 06.5	-1.2
	0.6nm,0.7s,baz=151,slow=7.2,SNR=2.7						
KURBB	Kurchatov Arra	66.43	337	P	P	13 24 07.3	-0.7
	0.3nm,0.7s,baz=124,slow=7.9,SNR=3.8						
KURK	Kurchatov	66.47	337	P	P	13 24 07.3	-1.0
ZALV	Zalesovo Beam	67.02	342	P	P	13 24 10.9	-0.9
	0.8nm,0.4s,baz=166,slow=5.8,SNR=4.2						
MAW	Mawson	67.36	199	P	P	13 24 14.6	+0.9
	1.3nm,0.8s,baz=41,slow=9.3,SNR=3.4						
PETK	Petropavlovsk-	72.50	26	P	P	13 24 44.0	-1.4
	1.1nm,0.7s,baz=203,slow=11						
VNDA	Vanda	73.03	170	P	P	13 24 48.6	+0.5
	0.6nm,0.8s,baz=284,slow=6.6,SNR=5.2						
SEY	Seymchan	77.73	17	P	P	13 25 15.2	+0.1
	0.4nm,0.4s,baz=225,slow=8.0,SNR=4.0						
QSPA	South Pole Qui	81.07	180	P	P	13 25 34.8	+1.3
	2.8nm,1.0s,baz=308,slow=9.4,SNR=4.8						
ASF	Jabal al Asfar	83.15	304	P	P	13 25 46.2	+1.2
	1.8nm,0.7s,baz=79,slow=6.4,SNR=3.0						
BRTR	Keskin Array B	87.58	311	P	P	13 26 07.1	+0.3
	2.0nm,0.8s,baz=101,slow=6.7,SNR=6.5						
SNAA	Sanae	89.44	197	P	P	13 26 17.4	+2.5
	1.1nm,0.8s,baz=135,slow=6.7,SNR=7.7						
CPUP	Villa Florida	143.72	195	PKP	PKPbc	13 32 52.5	+1.2
	2.1nm,0.8s,baz=122,slow=4.2,SNR=4.1						
TKL	Tuckaleechee C	149.29	27	PKPbc	PKPbc	13 33 07.6	+0.6
	1.9nm,0.6s,baz=0.0,slow=2.0,SNR=4.5						

SJA 04 13:15:55.9±0.7, **31°.78S×67°.30W, h127**^{km}±9^{km}, **ML3.5,**
MW3.7, 1D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZON	Zonda	1.20	281	eP	Pn	13 16 21.3	+0.7
ZON				eS	Sn	13 16 40.2	+0.9
ZON				IAML		13 16 40.8	
	comp=Z,497nm,0.2s						
MRA	San Martin	1.48	116	eP	Pn	13 16 24.6	+0.9
APLL	PUNTA DE LOS L	1.53	26	eP	Pn	13 16 25.2	+1.0
APLL				eS	Sn	13 16 46.5	+0.8
ASAL	Salagasta	1.54	238	eP	Pn	13 16 25.3	+1.0
ASAL				eS	Sn	13 16 46.9	+1.1
RTLS	Leoncito	1.70	269	eP	Pn	13 16 27.4	+1.0
RTLS				eS	Sn	13 16 51.1	+1.4

RTLS				IAML		13 16 52.3	
	comp=Z,264nm,0.7s						
ARCO	**CERRO ARCO**	**1.74**	**232**	*e*P	Pn	13 16 27.5	+0.8
ARCO				IAML		13 16 53.0	
	comp=Z,489nm,0.3s						
AUSP	**Uspallata**	**1.83**	**255**	*e*P	Pn	13 16 29.9	+1.9
AAGR	**Agrelo**	**1.84**	**224**	*e*P	Pn	13 16 28.8	+1.0
AVIZ	**Vizcacheras**	**1.98**	**211**	⇓*e*P	Pn	13 16 30.2	+0.7
TCA	**Tanti**	**2.35**	**80**	*e*P	Pn	13 16 34.8	+0.7

IDC 04 13:26:25.4±2.5, 9°.60S×158°.50E, h0^{km}, mb3.6/3, mb1 3.8/3, mb1mx3.3/61, mbtmp3.6/3, Error ellipse: s-maj=99.2km s-min=22.2km az=162.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.43**	**84**	Pn	Pn	13 26 52.7	0.0
	25nm,0.3s,baz=226,slow=7.5,SNR=10						
HNR				Sn	Sg	13 27 08.7	-2.9
	61nm,0.3s,baz=107,slow=20,SNR=7.9						
HNR	**Honiara**	**1.43**	**84**	*e*P	Pb	13 26 53.0	0.0
HNR				*e*S	Sg	13 27 10.0	-1.5
WRA	**Warramunga Arr**	**25.49**	**243**	P	P	13 31 56.0	+0.4
	0.4nm,0.4s,baz=71,slow=9.4,SNR=7.9						
STKA	**Stephens Creek**	**27.15**	**213**	P	P	13 32 10.5	0.0
	0.6nm,0.4s,baz=56,slow=15,SNR=3.9						
ASAR	**Alice Springs**	**27.34**	**236**	P	P	13 32 12.0	-0.4
	0.3nm,0.4s,baz=64,slow=10.0,SNR=4.9						

MOS ***04*** *13:27:12.5±1.2, 38°.34N×15°.11E, h186^{km}, mb4.5/30, Error ellipse: s-maj=7.1km s-min=3.6km az=75.6*
ISCJB ***04*** *13:27:13.0±0.1, 38°.41N±0°.01×15°.20E±0°.02, h182^{km}±1^{km}, mb4.3/59, Error ellipse: s-maj=2.4km s-min=2.0km az=176.8*
NEIC ***04*** *13:27:13.8±0.2, 38°.44N×15°.14E, h182^{km}±2^{km}, mb4.7/18, Error ellipse: s-maj=3.5km s-min=3.2km az=192.0*
ROM ***04*** *13:27:13.7±0.1, 38°.415N±0°.007×15°.16E±0°.01, h175^{km}±1^{km}, ML4.1/67*
IDC ***04*** *13:27:14.3±0.7, 38°.46N×15°.09E, h187^{km}±7^{km}, mb4.0/25, mb1 3.9/38, mb1mx3.8/83, mbtmp4.4/38, Error ellipse: s-maj=9.8km s-min=9.0km az=142.0*
PDG ***04*** *13:27:14.9±0.7, 38°.46N×15°.26E, h159^{km}±1^{km}, ML4.0/8, Error ellipse: s-maj=0.8km s-min=0.8km az=0.0*
CSEM ***04*** *13:27:14.2±0.2, 38°.43N×15°.26E, h182^{km}±1^{km}, mb4.3/20, Error ellipse: s-maj=5.3km s-min=3.3km az=16.0*
LDG ***04*** *13:27:15.0±0.2, 38°.44N×15°.20E, h159^{km}, Ml3.7/5, Error ellipse: s-maj=5.1km s-min=4.7km az=62.0*
THE ***04*** *13:27:16.5, 38°.17N×15°.37E, h30^{km}±33^{km}, ML4.0/10, Error ellipse: s-maj=39.5km s-min=2.4km az=259.0*
ISC 04 13:27:13.1±0.5**, 38°.45N**±0°.03×**15°.17E**±0°.03**, h173**^{km}±5^{km}**, n630, σ1§61**/713**, mb4.5**/70**, 41C-27D, Sicily**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VPL	**Vulcano Piano**	**0.17**	**245**	*e*P	**Pn**	**13 27 36.8**	**+0.6**
VPL				S	**Sn**	**13 27 54.7**	**+0.8**
VPL				AML	AML		
	comp=E,62450µm,0.2s						
VPL				AML	AML		
	comp=N,55200µm,0.3s						
VPL				AML	AML		
	comp=E,62450µm,0.2s						
VPL				AML	AML		
	comp=N,55200µm,0.3s						
VPL				AML	AML		
	comp=E,62450µm,0.2s						
VPL				AML	AML		
	comp=N,55200µm,0.3s						
LLI	**Lipari**	**0.18**	**268**	*i* P	**Pn**	**13 27 37.3**	**+1.1**
LLI				AML	AML		
	comp=E,25650µm,0.6s						
LLI				AML	AML		
	comp=N,21650µm,0.5s						
LLI				AML	AML		
	comp=E,25650µm,0.6s						
LLI				AML	AML		
	comp=N,21650µm,0.5s						
LLI				AML	AML		
	comp=E,25650µm,0.6s						
LLI				AML	AML		
	comp=N,21650µm,0.5s						
LLI				AML	AML		
	comp=N,21650µm,0.5s						
LLI				AML	AML		
	comp=E,25650µm,0.6s						
MILZ	**Milazzo**	**0.18**	**166**	*i* P	**Pn**	**13 27 36.7**	**+0.5**
MILZ				AML	AML		
	comp=E,16600µm,0.9s						
MILZ				AML	AML		
	comp=N,23500µm,0.8s						
MILZ				AML	AML		
	comp=E,16600µm,0.9s						
MILZ				AML	AML		
	comp=N,23500µm,0.8s						
MILZ				AML	AML		
	comp=E,16600µm,0.9s						
MILZ				AML	AML		
	comp=N,23500µm,0.8s						
MILZ				AML	AML		
	comp=N,23500µm,0.8s						
MILZ				AML	AML		
	comp=E,16600µm,0.9s						
MSRU	**Castanea**	**0.32**	**125**	*i* P	**Pn**	**13 27 37.0**	**+0.4**
MSRU				AML	AML		
	comp=E,58100µm,0.4s						
MSRU				AML	AML		
	comp=N,28200µm,0.4s						
MSRU				AML	AML		
	comp=E,58100µm,0.4s						
MSRU				AML	AML		
	comp=N,28200µm,0.4s						
STR4	**STROMBOLI 4**	**0.33**	**5**	*i* P	**Pn**	**13 27 37.6**	**+1.1**
STR4				AML	AML		
	comp=E,3100µm,0.9s						
STR4				AML	AML		
	comp=N,2555µm,0.3s						
STR4				AML	AML		
	comp=E,3100µm,0.9s						
STR4				AML	AML		
	comp=N,2825µm,1.5s						
STR4				AML	AML		
	comp=E,3100µm,0.9s						
STR4				AML	AML		
	comp=N,2825µm,1.5s						
STR4				AML	AML		
	comp=E,3100µm,0.9s						
STR4				AML	AML		
	comp=N,2825µm,1.5s						
MPNC	**Port Mandanici**	**0.34**	**155**	*i* P	**Pn**	**13 27 37.1**	**+0.5**
MPNC				AML	AML		
	comp=E,21850µm,0.4s						
MPNC				AML	AML		
	comp=N,26350µm,0.5s						
MPNC				AML	AML		
	comp=E,21850µm,0.4s						
MPNC				AML	AML		
	comp=N,26350µm,0.5s						
MPNC				AML	AML		
	comp=N,26350µm,0.5s						
MPNC				AML	AML		
	comp=E,21850µm,0.4s						
ATN	**Antennamare**	**0.37**	**142**	P	**Pn**	**13 27 37.1**	**+0.2**
ATN	**Antennamare**	**0.37**	**142**	P	**Pn**	**13 27 37.1**	**+0.2**
ATN	**Antennamare**	**0.37**	**142**	P	**Pn**	**13 27 37.1**	**+0.2**
ATN	**Antennamare**	**0.37**	**142**	*i* P	**Pn**	**13 27 37.2**	**+0.4**
ATN				AML	AML		
	comp=E,20700µm,1.4s						
ATN				AML	AML		
	comp=N,22950µm,0.3s						
ATN				AML	AML		
	comp=E,20700µm,1.4s						
ATN				AML	AML		
	comp=N,22950µm,0.3s						
ATN				AML	AML		
	comp=E,20700µm,1.4s						
ATN				AML	AML		
	comp=N,22950µm,0.3s						
ATN				AML	AML		
	comp=N,22950µm,0.3s						
ATN				AML	AML		
	comp=E,20700µm,1.4s						
MCSR	**Castroreale**	**0.39**	**171**	*i* P	**Pn**	**13 27 37.9**	**+1.0**
MCSR				AML	AML		
	comp=E,42450µm,1.1s						
MCSR				AML	AML		
	comp=N,35850µm,0.3s						
MCSR				AML	AML		
	comp=E,42450µm,1.1s						
MCSR				AML	AML		
	comp=N,35850µm,0.3s						
MCSR				AML	AML		
	comp=N,35850µm,0.3s						
MCSR				AML	AML		
	comp=E,42450µm,1.1s						
NOV	**Novara**	**0.42**	**184**	⇓P	**Pn**	**13 27 38.2**	**+1.2**
NOV	**Novara**	**0.42**	**184**	⇓P	**Pn**	**13 27 38.2**	**+1.2**
NOV	**Novara**	**0.42**	**184**	*i* P	**Pn**	**13 27 38.2**	**+1.2**
NOV				AML	AML		
	comp=E,26850µm,0.5s						
NOV				AML	AML		
	comp=N,28450µm,0.6s						
NOV				AML	AML		
	comp=E,26850µm,0.5s						
NOV				AML	AML		
	comp=N,28450µm,0.6s						
NOV				AML	AML		
	comp=E,26850µm,0.5s						
NOV				AML	AML		
	comp=N,28450µm,0.6s						
NOV				AML	AML		
	comp=E,26850µm,0.5s						
NOV				AML	AML		
	comp=N,28450µm,0.6s						
IFIL	**Filicudi I Eol**	**0.49**	**284**	*i* P	**Pn**	**13 27 37.8**	**+0.7**
IFIL				AML	AML		
	comp=E,15050µm,1.0s						
IFIL				AML	AML		
	comp=N,6545µm,0.8s						
IFIL				AML	AML		
	comp=E,15050µm,1.0s						
IFIL				AML	AML		
	comp=N,6545µm,0.8s						
MSCL	**Scilla**	**0.53**	**114**	*e*P	**Pn**	**13 27 38.3**	**+0.9**
MSCL				AML	AML		
	comp=E,41050µm,0.9s						
MSCL				AML	AML		
	comp=N,39100µm,0.6s						
MSCL				AML	AML		
	comp=E,41050µm,0.9s						
MSCL				AML	AML		
	comp=N,39100µm,0.6s						
MSCL				AML	AML		
	comp=E,41050µm,0.9s						
MSCL				AML	AML		
	comp=N,39100µm,0.6s						
MSCL				AML	AML		
	comp=E,41050µm,0.9s						
MSCL				AML	AML		
	comp=N,39100µm,0.6s						
JOPP	**Joppolo**	**0.58**	**74**	*e*P	**Pn**	**13 27 38.2**	**+0.6**
JOPP				AML	AML		
	comp=E,7440µm,0.4s						
JOPP				AML	AML		
	comp=N,10175µm,0.8s						
JOPP				AML	AML		
	comp=E,7440µm,0.4s						
JOPP				AML	AML		
	comp=N,10175µm,0.8s						
JOPP				AML	AML		
	comp=E,7440µm,0.4s						
JOPP				AML	AML		
	comp=N,10175µm,0.8s						
JOPP				AML	AML		
	comp=E,7440µm,0.4s						
JOPP				AML	AML		
	comp=N,10175µm,0.8s						
GMB	**Gambarie**	**0.59**	**118**	P	**Pn**	**13 27 38.6**	**+0.8**
GMB	**Gambarie**	**0.59**	**118**	P	**Pn**	**13 27 38.6**	**+0.8**
GMB	**Gambarie**	**0.59**	**118**	P	**Pn**	**13 27 38.6**	**+0.8**
GMB	**Gambarie**	**0.59**	**118**	P	**Pn**	**13 27 38.6**	**+0.8**
GMB				S	**Sn**	**13 27 57.8**	**+1.2**
GMB				AML	AML		
GMB				AML	AML		
GMB				AML	AML		
GMB				AML	AML		
CEL	**Celeste**	**0.60**	**108**	*e*Pn	**Pn**	**13 27 38.3**	**+0.6**
CEL				*e*Sn	**Sn**	**13 27 55.8**	**-0.7**
CEL	**Celeste**	**0.60**	**108**	*e*Pn	**Pn**	**13 27 38.3**	**+0.6**
CEL				*e*Sn	**Sn**	**13 27 55.8**	**-0.7**
CEL	**Celeste**	**0.60**	**108**	*e*P	**Pn**	**13 27 38.3**	**+0.6**
CEL				AML	AML		
	comp=E,13700µm,0.5s						
CEL				AML	AML		
	comp=N,17250µm,1.4s						
CEL				AML	AML		
	comp=E,13700µm,0.5s						
CEL				AML	AML		
	comp=N,17250µm,1.4s						
CEL				AML	AML		
	comp=E,13700µm,0.5s						
CEL				AML	AML		
	comp=N,17250µm,1.4s						
CEL				AML	AML		
	comp=N,17250µm,1.4s						
CEL				AML	AML		
	comp=E,13700µm,0.5s						
MTTG	**Motta San Giov**	**0.61**	**137**	*i* P	**Pn**	**13 27 39.0**	**+1.3**
MTTG				AML	AML		
	comp=E,13750µm,0.6s						
MTTG				AML	AML		
	comp=N,21400µm,0.6s						
MTTG				AML	AML		
	comp=E,13750µm,0.6s						
MTTG				AML	AML		
	comp=N,21400µm,0.6s						
MTTG				AML	AML		
	comp=E,13750µm,0.6s						
MTTG				AML	AML		
	comp=N,21400µm,0.6s						
MSFR	**San Fratello**	**0.62**	**228**	*i* P	**Pn**	**13 27 38.5**	**+0.7**
MSFR				S	**Sn**	**13 27 57.5**	**+0.8**
MSFR				AML	AML		
	comp=E,1420µm,0.8s						
MSFR				AML	AML		
	comp=N,1485µm,1.5s						
MSFR				AML	AML		
	comp=E,1420µm,0.8s						
MSFR				AML	AML		
	comp=N,1485µm,1.5s						
MSFR				AML	AML		
	comp=N,1485µm,1.5s						
MSFR				AML	AML		
	comp=E,1420µm,0.8s						
MNO	**Monte Soro**	**0.64**	**216**	*i* P	**Pn**	**13 27 39.4**	**+1.3**
IACL	**Alicudi**	**0.65**	**278**	*i* P	**Pn**	**13 27 38.6**	**+0.7**
IACL				S	**Sn**	**13 27 57.0**	**+0.2**
IACL				AML	AML		
	comp=E,2585µm,0.5s						
IACL				AML	AML		
	comp=N,5445µm,1.0s						
IACL				AML	AML		
	comp=E,2585µm,0.5s						
IACL				AML	AML		
	comp=N,5445µm,1.0s						
IACL				AML	AML		
	comp=N,5445µm,1.0s						
IACL				AML	AML		
	comp=E,2585µm,0.5s						
ESLN	**Serra La Nave**	**0.77**	**192**	P	**Pn**	**13 27 39.4**	**+0.5**
ESLN				AML	AML		
	comp=E,6695µm,1.0s						
ESLN				AML	AML		
	comp=N,5955µm,0.5s						
ESLN				AML	AML		
	comp=E,6695µm,1.0s						
ESLN				AML	AML		
	comp=N,5955µm,0.5s						
ESLN				AML	AML		
	comp=E,6695µm,1.0s						
ESLN				AML	AML		
	comp=N,5955µm,0.5s						
SOI	**Samo**	**0.79**	**118**	P	**Pn**	**13 27 39.9**	**+1.2**
SOI	**Samo**	**0.79**	**118**	P	**Pn**	**13 27 39.9**	**+1.2**
SOI	**Samo**	**0.79**	**118**	P	**Pn**	**13 27 39.9**	**+1.2**
SOI	**Samo**	**0.79**	**118**	*i* P	**Pn**	**13 27 39.9**	**+1.2**
SOI				S	**Sn**	**13 27 58.8**	**+0.4**
SOI				AML	AML		
	comp=E,10050µm,0.6s						
SOI				AML	AML		
	comp=N,15450µm,0.7s						
SOI				AML	AML		
	comp=E,10035µm,0.6s						
SOI				AML	AML		
	comp=N,15500µm,0.7s						
SOI				AML	AML		
	comp=N,15500µm,0.7s						
SOI				AML	AML		
	comp=E,10035µm,0.6s						
MPAZ	**Palizzi**	**0.82**	**127**	*i* P	**Pn**	**13 27 40.0**	**+1.0**
MPAZ				AML	AML		
	comp=E,12700µm,0.5s						
MPAZ				AML	AML		
	comp=N,16350µm,0.6s						
MPAZ				AML	AML		
	comp=E,12700µm,0.5s						
MPAZ				AML	AML		
	comp=N,16350µm,0.6s						
MPAZ				AML	AML		
	comp=E,12700µm,0.5s						
MPAZ				AML	AML		
	comp=N,16350µm,0.6s						
GALF	**Gagliano Caste**	**0.88**	**213**	*i* P	**Pn**	**13 27 41.0**	**+1.6**
GALF				AML	AML		
	comp=E,5785µm,0.4s						
GALF				AML	AML		
	comp=N,7585µm,0.8s						
GALF				AML	AML		
	comp=E,5785µm,0.4s						
GALF				AML	AML		
	comp=N,7585µm,0.8s						
GALF				AML	AML		
	comp=N,7585µm,0.8s						
GALF				AML	AML		
	comp=E,5785µm,0.4s						
PLLN	**Pollina**	**0.93**	**241**	*i* P	**Pn**	**13 27 40.2**	**+0.4**
PLLN				S	**Sn**	**13 28 00.3**	**+0.1**
CAGR	**Agira**	**0.98**	**213**	*i* P	**Pn**	**13 27 42.5**	**+2.4**
CAGR				AML	AML		
	comp=E,22050µm,0.9s						
CAGR				AML	AML		
	comp=N,42700µm,0.4s						
CAGR				AML	AML		
	comp=N,42700µm,0.4s						
CAGR				AML	AML		
	comp=E,22050µm,0.9s						
PLAC	**Placanica**	**0.99**	**90**	*i* P	**Pn**	**13 27 41.4**	**+1.3**
PLAC				AML	AML		
	comp=E,8710µm,0.8s						
PLAC				AML	AML		
	comp=N,8215µm,0.3s						
PLAC				AML	AML		
	comp=E,8710µm,0.8s						
PLAC				AML	AML		
	comp=N,8215µm,0.3s						
PLAC				AML	AML		
	comp=N,8215µm,0.3s						
PLAC				AML	AML		
	comp=E,8710µm,0.8s						
GIB	**Gibilmanna**	**1.01**	**243**	*i* P	**Pn**	**13 27 40.9**	**+0.5**
GIB				S	**Sn**	**13 28 01.3**	**-0.1**
GIB				AML	AML		
	comp=E,7975µm,0.9s						
GIB				AML	AML		
	comp=N,7685µm,0.5s						
GIB				AML	AML		
	comp=E,7975µm,0.9s						
GIB				AML	AML		
	comp=N,7685µm,0.5s						
GIB				AML	AML		
	comp=N,7685µm,0.5s						
GIB				AML	AML		
	comp=E,7975µm,0.9s						
GRI	**Girifalco**	**1.04**	**69**	P	**Pn**	**13 27 41.7**	**+1.2**
GRI				AML	AML		
	comp=E,4810µm,0.5s						
GRI				AML	AML		
	comp=N,5635µm,0.4s						
GRI				AML	AML		
	comp=N,5635µm,0.4s						
GRI				AML	AML		
	comp=E,4810µm,0.5s						
HLNI	**Lentini**	**1.13**	**192**	*i* P	**Pn**	**13 27 41.5**	**+0.3**
HLNI				AML	AML		
	comp=E,2520µm,0.9s						
HLNI				AML	AML		
	comp=N,2710µm,0.4s						
HLNI				AML	AML		
	comp=E,2520µm,0.9s						
HLNI				AML	AML		
	comp=N,2710µm,0.4s						
VAE	**Valguarnera**	**1.14**	**212**	P	**Pn**	**13 27 43.4**	**+1.9**
	comp=N,209nm,0.3s,baz=70,slow=12,SNR=184						
HAGA	**Augusta**	**1.16**	**181**	*i* P	**Pn**	**13 27 41.9**	**+0.4**
HAGA				S	**Sn**	**13 28 02.7**	**-0.6**
HAGA				AML	AML		
	comp=E,4855µm,0.4s						
HAGA				AML	AML		
	comp=N,6935µm,0.7s						
HAGA				AML	AML		
	comp=E,4855µm,0.4s						
HAGA				AML	AML		
	comp=N,6935µm,0.7s						
HAGA				AML	AML		
	comp=N,6935µm,0.7s						
HAGA				AML	AML		
	comp=E,4855µm,0.4s						
HCRL	**Carlentini**	**1.17**	**186**	*i* P	**Pn**	**13 27 42.1**	**+0.6**
HCRL				AML	AML		
	comp=E,8600µm,0.4s						
HCRL				AML	AML		
	comp=N,7310µm,0.4s						
HCRL				AML	AML		
	comp=E,8600µm,0.4s						
HCRL				AML	AML		
	comp=N,7310µm,0.4s						
HCRL				AML	AML		
	comp=E,8600µm,0.4s						
HCRL				AML	AML		
	comp=N,7310µm,0.4s						
AGST	**Augusta-Monte**	**1.19**	**178**	P	**Pn**	**13 27 41.9**	**+0.2**
RESU	**Resuttano**	**1.19**	**228**	*i* P	**Pn**	**13 27 43.7**	**+1.8**
RESU				AML	AML		
	comp=E,2350µm,0.7s						
RESU				AML	AML		
	comp=N,3610µm,0.6s						
RESU				AML	AML		
	comp=E,2350µm,0.7s						
RESU				AML	AML		
	comp=N,3610µm,0.6s						
CET2	**Cetraro**	**1.24**	**29**	*i* P	**Pn**	**13 27 43.5**	**+1.4**
CET2				S	**Sn**	**13 28 04.9**	**+0.2**
CET2				AML	AML		
	comp=E,7190µm,0.7s						
CET2				AML	AML		
	comp=N,6135µm,0.5s						
CET2				AML	AML		
	comp=E,7190µm,0.7s						
CET2				AML	AML		
	comp=N,6135µm,0.5s						
CET2				AML	AML		
	comp=E,7190µm,0.7s						
CET2				AML	AML		
	comp=N,6135µm,0.5s						
SSY	**Sortino**	**1.30**	**184**	*i* P	**Pn**	**13 27 43.2**	**+0.5**
SSY				S	**Sn**	**13 28 05.2**	**-0.3**
SSY				AML	AML		
	comp=E,4485µm,0.8s						
SSY				AML	AML		
	comp=N,9150µm,0.4s						
SSY				AML	AML		
	comp=E,4485µm,0.8s						
SSY				AML	AML		
	comp=N,9150µm,0.4s						
SSY				AML	AML		
	comp=N,9150µm,0.4s						
SSY				AML	AML		
	comp=E,4485µm,0.8s						
ALJA	**Alia**	**1.32**	**238**	*i* P	**Pn**	**13 27 44.3**	**+1.4**
ALJA				AML	AML		
	comp=E,5315µm,0.7s						
ALJA				AML	AML		
	comp=N,5785µm,0.4s						
ALJA				AML	AML		
	comp=E,5315µm,0.7s						
ALJA				AML	AML		

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      comp=N,5785µm,0.4s
HVZN  Vizzini          1.32 196 i P      Pn      13 27 43.8 +0.8
HVZN                              AML    AML
      comp=E,13800µm,0.9s
HVZN                              AML    AML
      comp=N,13850µm,0.3s
HVZN                              AML    AML
      comp=E,13800µm,0.9s
HVZN                              AML    AML
      comp=N,13850µm,0.3s
HVZN                              AML    AML
      comp=N,13850µm,0.3s
HVZN                              AML    AML
      comp=E,13800µm,0.9s
SERS  Sersale          1.32  63 i P      Pn      13 27 44.5 +1.5
SERS                              S      Sn      13 28 06.9 +0.9
SERS                              AML    AML
      comp=E,2390µm,0.9s
SERS                              AML    AML
      comp=N,2050µm,0.4s
SERS                              AML    AML
      comp=E,2180µm,0.5s
SERS                              AML    AML
      comp=N,2450µm,0.8s
SERS                              AML    AML
      comp=N,2050µm,0.4s
SERS                              AML    AML
      comp=E,2180µm,0.5s
SERS                              AML    AML
      comp=N,2450µm,0.8s
SERS                              AML    AML
      comp=E,2390µm,0.9s
SOLUN Solunto          1.34 255 i P      Pn      13 27 43.5 +0.5
SOLUN                             S      Sn      13 28 06.0  -0.1
SOLUN                             AML    AML
      comp=E,2150µm,0.6s
SOLUN                             AML    AML
      comp=N,1345µm,0.7s
SOLUN                             AML    AML
      comp=E,2150µm,0.6s
SOLUN                             AML    AML
      comp=N,1345µm,0.7s
SOLUN                             AML    AML
      comp=E,2150µm,0.6s
SOLUN                             AML    AML
      comp=N,1345µm,0.7s
MEU   Monte Lauro      1.36 188 i P      Pn      13 27 44.4 +1.0
CELI  Celico           1.41  47   P      Pn      13 27 45.6 +1.8
CELI                              AML    AML
      comp=E,1670µm,1.4s
CELI                              AML    AML
      comp=N,2080µm,0.6s
CELI                              AML    AML
      comp=E,4360µm,1.4s
CELI                              AML    AML
      comp=N,5070µm,0.6s
CELI                              AML    AML
      comp=E,1670µm,1.4s
CELI                              AML    AML
      comp=E,4360µm,1.4s
CELI                              AML    AML
      comp=N,2080µm,0.6s
CELI                              AML    AML
      comp=N,5070µm,0.6s
TIP   Timpagrande      1.44  59⇑iP       Pn      13 27 44.9 +0.9
TIP   Timpagrande      1.44  59 ePn      Pn      13 27 45.5 +1.6
TIP   Timpagrande      1.44  59   P      Pn      13 27 45.2 +1.2
TIP                               S      Sn      13 28 04.7  -3.1
TIP   Timpagrande      1.44  59⇑iP       Pn      13 27 44.9 +0.9
TIP   Timpagrande      1.44  59 ePn      Pn      13 27 45.5 +1.6
TIP                               S      Sn      13 28 09.4 +1.6
TIP   Timpagrande      1.44  59 i P      Pn      13 27 45.6 +1.6
TIP                               S      Sn      13 28 08.6 +0.8
TIP                               AML    AML
      comp=E,1395µm,0.9s
TIP                               AML    AML
      comp=N,1925µm,0.7s
TIP                               AML    AML
      comp=E,1395µm,0.9s
TIP                               AML    AML
      comp=N,1925µm,0.7s
MPG   Monte Pellegri   1.46 259   P      Pn      13 27 43.8  -0.4
MPG                               S      Sn      13 28 08.3 +0.2
MCT   Mte Cammarata    1.47 237 i P      Pn      13 27 46.3 +1.9
MCT                               AML    AML
      comp=E,3745µm,0.8s
MCT                               AML    AML
      comp=N,4180µm,0.6s
MCT                               AML    AML
      comp=N,4180µm,0.6s
MCT                               AML    AML
      comp=E,3745µm,0.8s
T0712 Santa Domenica   1.47  21 i P      Pn      13 27 45.8 +1.6
T0712                             S      Sn      13 28 09.2 +0.9
T0712                             AML    AML
      comp=E,534µm,0.8s
T0712                             AML    AML
      comp=N,621µm,0.8s
T0712                             AML    AML
      comp=N,621µm,0.8s
T0712                             AML    AML
      comp=E,534µm,0.8s
HAVL  Avola            1.49 182 i P      Pn      13 27 45.4 +0.9
HMDC  Modica           1.52 192 i P      Pn      13 27 45.6 +0.8
HMDC                              AML    AML
      comp=E,2710µm,0.5s
HMDC                              AML    AML
      comp=N,4445µm,1.0s
HMDC                              AML    AML
      comp=N,4445µm,1.0s
HMDC                              AML    AML
      comp=E,2710µm,0.5s
T0715 Campotenese      1.55  26 i P      Pn      13 27 47.7 +2.6
T0715                             AML    AML
      comp=E,1032µm,0.8s
T0715                             AML    AML
      comp=N,1003µm,0.5s
T0715                             AML    AML
      comp=N,1003µm,0.5s
T0715                             AML    AML
      comp=E,1032µm,0.8s
MMN   Mormanno         1.57  24 i P      Pn      13 27 46.6 +1.4
MMN                               AML    AML
      comp=E,294µm,0.5s
MMN                               AML    AML
      comp=N,569µm,1.2s
MMN                               AML    AML
      comp=E,294µm,0.5s
MMN                               AML    AML
      comp=N,569µm,1.2s
CORL  Corleone         1.57 250 i P      Pn      13 27 46.1 +0.8
CORL                              AML    AML
      comp=E,2995µm,1.6s
CORL                              AML    AML
      comp=N,3355µm,0.7s
CORL                              AML    AML
      comp=E,2995µm,1.6s
CORL                              AML    AML
      comp=N,3355µm,0.7s
USI   Ustica           1.58 280 i P      Pn      13 27 46.5 +1.2
CUC   Castrocucco      1.62  18 ePn      Pn      13 27 47.1 +1.4
CUC   Castrocucco      1.62  18 ePn      Pn      13 27 47.1 +1.4
CUC   Castrocucco      1.62  18 i P      Pn      13 27 47.3 +1.6
CUC                               AML    AML
      comp=E,660µm,1.2s
CUC                               AML    AML
      comp=N,752µm,0.7s
CUC                               AML    AML
      comp=N,752µm,0.7s
CUC                               AML    AML
      comp=E,660µm,1.2s
BULG  Bulgheria - Ca   1.63   5 i P      Pn      13 27 47.8 +1.9
BULG                              AML    AML
      comp=E,730µm,0.4s
BULG                              AML    AML
      comp=N,1455µm,0.7s
BULG                              AML    AML
      comp=E,779µm,0.4s
BULG                              AML    AML
      comp=N,1540µm,0.7s
BULG                              AML    AML
      comp=E,779µm,0.4s
BULG                              AML    AML
      comp=E,730µm,0.4s
BULG                              AML    AML
      comp=N,1540µm,0.7s
BULG                              AML    AML
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      comp=N,1455µm,0.7s
T0716 Rotonda - Cont   1.64  23 i P      Pn      13 27 47.4 +1.5
T0716                             AML    AML
      comp=E,510µm,0.8s
T0716                             AML    AML
      comp=N,392µm,0.7s
T0716                             AML    AML
      comp=E,908µm,0.8s
T0716                             AML    AML
      comp=N,890µm,0.7s
T0716                             AML    AML
      comp=N,392µm,0.7s
T0716                             AML    AML
      comp=N,890µm,0.7s
T0716                             AML    AML
      comp=E,510µm,0.8s
T0716                             AML    AML
      comp=E,908µm,0.8s
LADO  San Nicola del   1.64  59   P      Pn      13 27 47.2 +1.3
LADO                              AML    AML
      comp=E,2005µm,1.5s
LADO                              AML    AML
      comp=N,1235µm,0.5s
LADO                              AML    AML
      comp=N,1235µm,0.5s
LADO                              AML    AML
      comp=E,2005µm,1.5s
PIPA  Pietrapaola      1.65  51 i P      Pn      13 27 47.8 +1.8
PIPA                              AML    AML
      comp=E,2200µm,0.8s
PIPA                              AML    AML
      comp=N,1530µm,0.4s
PIPA                              AML    AML
      comp=E,2250µm,0.8s
PIPA                              AML    AML
      comp=N,1630µm,0.5s
PIPA                              AML    AML
      comp=N,1530µm,0.4s
PIPA                              AML    AML
      comp=N,1630µm,0.5s
PIPA                              AML    AML
      comp=E,2200µm,0.8s
PIPA                              AML    AML
      comp=E,2250µm,0.8s
FAVR  Favara           1.68 226 i P      Pn      13 27 48.2 +1.8
FAVR                              AML    AML
      comp=E,2235µm,1.4s
FAVR                              AML    AML
      comp=N,1680µm,0.6s
FAVR                              AML    AML
      comp=E,2235µm,1.4s
FAVR                              AML    AML
      comp=N,1680µm,0.6s
SALB  San Lorenzo Be   1.69  32   AML    AML
      comp=E,1295µm,0.8s
SALB                              AML    AML
      comp=E,1295µm,0.8s
SALB                              AML    AML
      comp=N,1030µm,0.6s
SALB                              AML    AML
      comp=E,1415µm,0.8s
SALB                              AML    AML
      comp=N,1015µm,0.5s
SALB                              AML    AML
      comp=N,1030µm,0.6s
SALB                              AML    AML
      comp=E,1415µm,0.8s
SALB                              AML    AML
      comp=N,1015µm,0.5s
MGR   Morigerati       1.71  10 i P      Pn      13 27 48.4 +1.8
MGR                               AML    AML
      comp=E,618µm,0.7s
MGR                               AML    AML
      comp=N,787µm,0.5s
MGR                               AML    AML
      comp=N,787µm,0.5s
MGR                               AML    AML
      comp=E,618µm,0.7s
CLTB  Caltabellotta    1.77 241 ePn      Pn      13 27 48.0 +0.6
CLTB  Caltabellotta    1.77 241 ePn      Pn      13 27 48.0 +0.6
CLTB  Caltabellotta    1.77 241 i P      Pn      13 27 48.2 +0.8
CLTB                              AML    AML
      comp=E,4640µm,0.5s
CLTB                              AML    AML
      comp=N,10360µm,0.5s
CLTB                              AML    AML
      comp=N,10360µm,0.5s
CLTB                              AML    AML
      comp=E,4640µm,0.5s
SIRI  Monte Sirino -   1.81  17 i P      Pn      13 27 49.3 +1.6
SIRI                              AML    AML
      comp=E,764µm,0.6s
SIRI                              AML    AML
      comp=N,842µm,0.3s
SIRI                              AML    AML
      comp=E,764µm,0.6s
SIRI                              AML    AML
      comp=N,842µm,0.3s
CMPR  Campora          1.87   3 i P      Pn      13 27 50.2 +1.9
CMPR                              AML    AML
      comp=E,1080µm,0.4s
CMPR                              AML    AML
      comp=N,1885µm,0.4s
CMPR                              AML    AML
      comp=N,1885µm,0.4s
CMPR                              AML    AML
      comp=E,1080µm,0.4s
MTSN  Montesano sull   1.87  14 i P      Pn      13 27 50.0 +1.6
MTSN                              AML    AML
      comp=E,723µm,0.7s
MTSN                              AML    AML
      comp=N,552µm,1.0s
MTSN                              AML    AML
      comp=E,723µm,0.7s
MTSN                              AML    AML
      comp=N,552µm,1.0s
ORI   Oriolo Calabro   1.89  31   AML    AML
      comp=E,2475µm,0.8s
ORI                               AML    AML
      comp=N,1895µm,0.5s
ORI                               AML    AML
      comp=E,2475µm,0.8s
ORI                               AML    AML
      comp=N,1895µm,0.5s
MCEL  Monticello       1.94  14 i P      Pn      13 27 50.8 +1.7
MCEL                              AML    AML
      comp=E,686µm,0.8s
MCEL                              AML    AML
      comp=N,609µm,0.5s
MCEL                              AML    AML
      comp=N,609µm,0.5s
MCEL                              AML    AML
      comp=E,686µm,0.8s
SLCN  Sala Consilina   1.97  10 i P      Pn      13 27 51.3 +1.8
CDRU  Civita di Ruta   2.04   3 i P      Pn      13 27 52.3 +2.1
CDRU                              AML    AML
      comp=E,322µm,1.2s
CDRU                              AML    AML
      comp=N,535µm,0.9s
CDRU                              AML    AML
      comp=N,535µm,0.9s
CDRU                              AML    AML
      comp=E,322µm,1.2s
CRAC  Craco            2.15  27   AML    AML
      comp=N,3855µm,0.4s
CRAC                              AML    AML
      comp=E,4870µm,0.5s
CRAC                              AML    AML
      comp=N,3855µm,0.4s
CRAC                              AML    AML
      comp=E,4870µm,0.5s
MRLC  Muro Lucano      2.32   6 i P      Pn      13 27 56.0 +2.7
MRLC                              AML    AML
      comp=E,429µm,0.5s
MRLC                              AML    AML
      comp=N,849µm,0.6s
MRLC                              AML    AML
      comp=E,429µm,0.5s
MRLC                              AML    AML
      comp=N,849µm,0.6s
MCRV  Calabrutti - M   2.33 360 eP       Pn      13 27 55.7 +2.1
MCRV                              AML    AML
      comp=E,426µm,0.5s
MCRV                              AML    AML
      comp=N,1110µm,1.1s
MCRV                              AML    AML
      comp=N,1110µm,1.1s
MCRV                              AML    AML
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      comp=E,426µm,0.5s
MIGL  Miglionico       2.36  24   AML    AML
      comp=N,1495µm,0.7s
MIGL                              AML    AML
      comp=E,1565µm,0.7s
MIGL                              AML    AML
      comp=N,1495µm,0.7s
MIGL                              AML    AML
      comp=E,1565µm,0.7s
ACER  Acerenza         2.41  14 i P      Pn      13 27 56.5 +2.1
ACER                              AML    AML
      comp=E,674µm,0.4s
ACER                              AML    AML
      comp=N,964µm,1.0s
ACER                              AML    AML
      comp=E,695µm,0.4s
ACER                              AML    AML
      comp=N,1012µm,1.0s
ACER                              AML    AML
      comp=E,695µm,0.4s
ACER                              AML    AML
      comp=E,674µm,0.4s
ACER                              AML    AML
      comp=N,1012µm,1.0s
ACER                              AML    AML
      comp=N,964µm,1.0s
SNAL  S. Angelo Dei    2.47   1 i P      Pn      13 27 57.9 +2.7
SNAL                              AML    AML
      comp=E,948µm,1.3s
SNAL                              AML    AML
      comp=N,963µm,0.8s
SNAL                              AML    AML
      comp=N,963µm,0.8s
SNAL                              AML    AML
      comp=E,948µm,1.3s
MATE  Matera           2.50  28⇑iP       Pn      13 27 55.6 +0.3
MATE  Matera           2.50  28⇑iP       Pn      13 27 55.6 +0.3
MATE                              S      Sn      13 28 28.0  -0.2
MATE  Matera           2.50  28 i P      Pn      13 27 55.6 +0.3
MATE                              AML    AML
      comp=E,692µm,0.7s
MATE                              AML    AML
      comp=N,700µm,1.1s
MATE                              AML    AML
      comp=E,692µm,0.7s
MATE                              AML    AML
      comp=N,700µm,1.1s
VULT  Monte Vulture    2.52   8 i P      Pn      13 27 58.1 +2.3
VULT                              AML    AML
      comp=E,548µm,0.6s
VULT                              AML    AML
      comp=N,648µm,0.7s
VULT                              AML    AML
      comp=E,548µm,0.6s
VULT                              AML    AML
      comp=N,648µm,0.7s
PALZ  Palazzo San Ge   2.56  13 i P      Pn      13 27 57.8 +1.7
PALZ                              AML    AML
      comp=E,680µm,1.0s
PALZ                              AML    AML
      comp=N,586µm,1.3s
PALZ                              AML    AML
      comp=E,680µm,1.0s
PALZ                              AML    AML
      comp=N,586µm,1.3s
CAFE  Carife           2.58   1 i P      Pn      13 27 59.2 +2.8
CAFE                              AML    AML
      comp=E,642µm,0.7s
CAFE                              AML    AML
      comp=N,482µm,1.0s
CAFE                              AML    AML
      comp=E,642µm,0.7s
CAFE                              AML    AML
      comp=N,482µm,1.0s
PAOL  Paolisi          2.62 350 i P      Pn      13 27 58.9 +2.1
PAOL                              AML    AML
      comp=E,8630µm,1.6s
PAOL                              AML    AML
      comp=N,8600µm,1.6s
PAOL                              AML    AML
      comp=E,437µm,0.6s
PAOL                              AML    AML
      comp=N,700µm,1.6s
PAOL                              AML    AML
      comp=N,700µm,1.6s
PAOL                              AML    AML
      comp=E,437µm,0.6s
PAOL                              AML    AML
      comp=E,8630µm,1.6s
PAOL                              AML    AML
      comp=N,8600µm,1.6s
TAR1  Taranto          2.64  38 i Pn     Pn      13 27 56.9  -0.1
TAR1                              Sn     Sn      13 28 31.3 +0.1
TAR1  Taranto          2.64  38⇑iPn      Pn      13 27 56.9  -0.1
TAR1                              Sn     Sn      13 28 31.3 +0.1
SG1   Sgolgore (BA)    2.66  25 ePn      Pn      13 27 57.6 +0.3
SG1                               Sn     Sn      13 28 32.6 +0.9
SG1   Sgolgore (BA)    2.66  25 ePn      Pn      13 27 57.6 +0.3
SG1                               Sn     Sn      13 28 32.6 +0.9
WDD   Wied Dalam       2.66 191 ePn      Pn      13 27 57.7 +0.3
MASS  Massafra         2.66  34 i Pn     Pn      13 27 57.1  -0.2
MASS                              Sn     Sn      13 28 31.6  -0.1
MASS  Massafra         2.66  34⇑iPn      Pn      13 27 57.1  -0.2
MASS                              Sn     Sn      13 28 31.6  -0.1
MRB1  Monte Rocchett   2.68 357 i P      Pn      13 28 00.4 +2.8
MRB1                              AML    AML
      comp=E,1710µm,0.6s
MRB1                              AML    AML
      comp=N,3290µm,0.6s
MRB1                              AML    AML
      comp=E,1755µm,0.6s
MRB1                              AML    AML
      comp=N,3455µm,0.8s
MRB1                              AML    AML
      comp=N,3455µm,0.8s
MRB1                              AML    AML
      comp=E,1710µm,0.6s
MRB1                              AML    AML
      comp=E,1755µm,0.6s
MRB1                              AML    AML
      comp=N,3290µm,0.6s
AMUR  Altamura         2.69  24 i P      Pn      13 27 58.2 +0.5
VENT  Ventotene        2.71 331 i P      Pn      13 27 59.9 +2.1
MRVN  Minervino Murg   2.72  16 i P      Pn      13 27 59.1 +1.0
MRVN                              AML    AML
      comp=E,230µm,0.4s
MRVN                              AML    AML
      comp=N,308µm,0.8s
MRVN                              AML    AML
      comp=E,230µm,0.4s
MRVN                              AML    AML
      comp=N,308µm,0.8s
PSB1  Pescosannita     2.78 354 i P      Pn      13 28 00.6 +1.7
PSB1                              AML    AML
      comp=E,708µm,0.6s
PSB1                              AML    AML
      comp=N,724µm,0.7s
PSB1                              AML    AML
      comp=E,708µm,0.6s
PSB1                              AML    AML
      comp=N,724µm,0.7s
CGL1  Ceglie Messapi   2.83  38 i Pn     Pn      13 27 59.2  -0.2
CGL1                              Sn     Sn      13 28 34.8  -0.6
CGL1  Ceglie Messapi   2.83  38⇑iPn      Pn      13 27 59.2  -0.2
CGL1                              Sn     Sn      13 28 34.8  -0.6
FASA  Fasano           2.90  35 i Pn     Pn      13 27 59.9  -0.3
FASA                              Sn     Sn      13 28 36.7  -0.2
FASA  Fasano           2.90  35⇑iPn      Pn      13 27 59.9  -0.3
FASA                              Sn     Sn      13 28 36.7  -0.2
PTRJ  Pietraroja       2.95 351 i P      Pn      13 28 03.3 +2.4
BAI   Bari             2.96  26 ePn      Pn      13 28 01.0 +0.1
BAI                               Sn     Sn      13 28 37.5  -0.7
BAI   Bari             2.96  26 ePn      Pn      13 28 01.0 +0.1
BAI                               Sn     Sn      13 28 37.5  -0.7
SACR  S. Croce Del S   2.97 353 i P      Pn      13 28 03.6 +2.5
SGG   Gregorio Mates   3.00 348 i P      Pn      13 28 03.9 +2.4
CERA  Filignano        3.27 345 i P      Pn      13 28 07.0 +2.2
KEK   Kerkira          3.81  69   P      Pn      13 28 12.4 +0.8
KEK                               S      Sn      13 28 56.0  -1.3
KEK   Kerkira          3.81  69   P      Pn      13 28 12.4 +0.8
KEK                               S      Sn      13 28 56.0  -1.3
SGD   Sagiada          4.11  72   P      Pn      13 28 16.9 +1.6
SGD   Sagiada          4.11  72   P      Pn      13 28 16.9 +1.6
AQU   L’Aquila         4.13 341 ePn      Pn      13 28 18.8 +3.2
AQU   L’Aquila         4.13 341 eP       Pn      13 28 18.8 +3.2
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AQU	L'Aquila	4.13	341	*e*P	Pn	13 28 18.8	+3.2
AQU	L'Aquila	4.13	341	⇑*i*Pn	Pn	13 28 19.3	+3.7
IGT	Igoumenitsa	4.16	73	P	Pn	13 28 17.6	+1.5
IGT	Igoumenitsa	4.16	73	P	Pn	13 28 17.6	+1.5
FSK	Fiskardo	4.23	88	P	Pn	13 28 17.8	+0.9
FSK				S	Sn	13 29 04.8	-2.0
FSK	Fiskardo	4.23	88	P	Pn	13 28 17.8	+0.9
FSK				S	Sn	13 29 04.8	-2.0
VLS	Valsamata	4.27	92	P	Pn	13 28 17.6	+0.1
VLS				S	Sn	13 29 05.3	-2.5
VLS	Valsamata	4.27	92	P	Pn	13 28 17.6	+0.1
VLS				S	Sn	13 29 05.3	-2.5
EVGI	Lefkada island	4.30	86	P	Pn	13 28 18.9	+1.0
EVGI	Lefkada island	4.30	86	P	Pn	13 28 18.9	+1.0
LKD2	Lefkada island	4.31	84	P	Pn	13 28 18.8	+0.8
LKD2				S	Sn	13 29 07.2	-1.5
LKD2	Lefkada island	4.31	84	P	Pn	13 28 18.8	+0.8
LKD2				S	Sn	13 29 07.2	-1.5
KFL	Anninata	4.43	93	P	Pn	13 28 20.0	+0.5
KFL				S	Sn	13 29 09.0	-2.5
KFL	Anninata	4.43	93	P	Pn	13 28 20.0	+0.5
KFL				S	Sn	13 29 09.0	-2.5
VSL	Villasalto	4.64	285	*i* P	Pn	13 28 23.2	+1.0
ULC	Ulcinj	4.69	40	⇓*i*Pn	Pn	13 28 23.7	+0.8
ULC				*e*Sn	Sn	13 29 17.4	-0.2
ULC	Ulcinj	4.69	40	⇓*i*Pn	Pn	13 28 23.7	+0.8
ULC				*e*Sn	Sn	13 29 17.4	-0.2
PDO	Prodromos	4.71	86	P	Pn	13 28 24.0	+0.8
PDO				S	Sn	13 29 17.5	-0.6
PDO	Prodromos	4.71	86	P	Pn	13 28 24.0	+0.8
PDO				S	Sn	13 29 17.5	-0.6
HCY	Herceg Novi	4.73	31	⇓*i*Pn	Pn	13 28 24.1	+0.8
HCY				*e*Sn	Sn	13 29 18.4	0.0
HCY	Herceg Novi	4.73	31	*e*Pn	Pn	13 28 23.9	+0.6
HCY				*e*Sn	Sn	13 29 18.4	0.0
BUM	Brajici-Budva	4.78	35	⇓*i*Pn	Pn	13 28 24.9	+0.8
BUM				*e*Sn	Sn	13 29 19.9	+0.1
BUM	Brajici-Budva	4.78	35	⇓*i*Pn	Pn	13 28 24.9	+0.8
BUM				*e*Sn	Sn	13 29 19.9	+0.1
STON	Ston	4.82	23	P	Pn	13 28 25.8	+1.4
STON	Ston	4.82	23	⇑*i*Pn	Pn	13 28 26.3	+1.9
DRME	Dracevica, Mon	4.83	38	⇑*i*Pn	Pn	13 28 25.5	+0.8
DRME				*e*Sn	Sn	13 29 20.7	-0.1
DRME	Dracevica, Mon	4.83	38	⇑*i*Pn	Pn	13 28 25.3	+0.6
DRME				*e*Sn	Sn	13 29 20.7	-0.1
KBN	Korca	4.85	62	P	Pn	13 28 27.9	+2.9
KBN	Korca	4.85	62	P	Pn	13 28 27.9	+2.9
TREB	Trebinje	4.90	29	*e*Pn	Pn	13 28 26.4	+0.8
NEST	Nestorio	4.95	65	P	Pn	13 28 29.7	+3.3
NEST	Nestorio	4.95	65	P	Pn	13 28 29.7	+3.3
PVO	Paravola	4.98	86	P	Pn	13 28 28.5	+1.8
PVO	Paravola	4.98	86	P	Pn	13 28 28.5	+1.8
CEME	Cevo	4.99	34	⇑*i*Pn	Pn	13 28 27.7	+0.9
CEME				*e*Sn	Sn	13 29 24.9	+0.3
CEME	Cevo	4.99	34	⇑*i*Pn	Pn	13 28 27.7	+0.9
CEME				*e*Sn	Sn	13 29 24.9	+0.3
TAMR	Tamra	5.01	256	*e*Pn	Pn	13 28 28.2	+1.2
TAMR	Tamra	5.01	256	*e*Pn	Pn	13 28 28.2	+1.2
KPRO	Kipourio	5.04	71	P	Pn	13 28 30.4	+2.9
KPRO	Kipourio	5.04	71	P	Pn	13 28 30.4	+2.9
PDG	Podgorica	5.05	37	⇑*i*P	Pn	13 28 28.3	+0.8
PDG	Podgorica	5.05	37	⇑*i*P	Pn	13 28 28.3	+0.8
PDG				*e*Sn	Sn	13 29 26.6	+0.7
TTG	Podgorica	5.05	37	⇑*i*Pn	Pn	13 28 28.5	+1.0
TTG				*e*Sn	Sn	13 29 26.6	+0.7
TTG	Podgorica	5.05	37	*e*Pn	Pn	13 28 28.1	+0.6
TTG	Podgorica	5.05	37	*e*P	Pn	13 28 28.1	+0.6
TTG	Podgorica	5.05	37	*e*P	Pn	13 28 28.1	+0.6
OHR	Ohrid	5.08	57	*e*Pn	Pn	13 28 30.7	+2.6
BRY	Bratogost	5.13	29	⇓*i*Pn	Pn	13 28 29.9	+1.2
BRY				*e*Sn	Sn	13 29 27.8	-0.2
BRY	Bratogost	5.13	29	*e*Pn	Pn	13 28 29.7	+1.0
BRY				*e*Sn	Sn	13 29 27.8	-0.2
DRO	Drossia	5.17	93	P	Pn	13 28 30.5	+1.3
DRO	Drossia	5.17	93	P	Pn	13 28 30.5	+1.3
PHP	Peshkopia	5.17	50	P	Pn	13 28 31.3	+2.1
PHP	Peshkopia	5.17	50	P	Pn	13 28 31.3	+2.1
NKME	Niksic	5.18	32	⇓*i*Pn	Pn	13 28 30.6	+1.3
NKME				*e*Sn	Sn	13 29 29.1	0.0
NKME	Niksic	5.18	32	⇓*i*Pn	Pn	13 28 30.6	+1.3
NKME				*e*Sn	Sn	13 29 29.1	0.0
EVR	Evrytania	5.21	83	P	Pn	13 28 31.9	+2.1
EVR				S	Sn	13 29 30.6	+0.7
EVR	Evrytania	5.21	83	P	Pn	13 28 31.9	+2.1
EVR				S	Sn	13 29 30.6	+0.7
NKY	Niksic	5.24	32	⇓*i*Pn	Pn	13 28 32.2	+2.1
NKY				*e*Sn	Sn	13 29 29.4	-1.1
NKY	Niksic	5.24	32	⇓*i*Pn	Pn	13 28 32.2	+2.1
NKY				*e*Sn	Sn	13 29 29.4	-1.1
AMT	Artemida-Makis	5.24	98	P	Pn	13 28 31.1	+1.0
AMT				S	Sn	13 29 28.1	-2.4
AMT	Artemida-Makis	5.24	98	P	Pn	13 28 31.1	+1.0
AMT				S	Sn	13 29 28.1	-2.4
EFP	Efpalio	5.29	88	P	Pn	13 28 32.4	+1.8
EFP	Efpalio	5.29	88	P	Pn	13 28 32.4	+1.8
ANX	Ano Chora	5.29	86	P	Pn	13 28 32.6	+1.8
ANX	Ano Chora	5.29	86	P	Pn	13 28 32.6	+1.8
FNA	Florina	5.33	62	*e*Pn	Pn	13 28 33.0	+1.8
FNA	Florina	5.33	62	P	Pn	13 28 33.2	+2.0
FNA	Florina	5.33	62	*e*P	Pn	13 28 33.0	+1.8
FNA	Florina	5.33	62	*e*P	Pn	13 28 33.0	+1.8
LAKA	Lakka	5.35	90	P	Pn	13 28 33.0	+1.4
LAKA	Lakka	5.35	90	P	Pn	13 28 33.0	+1.4
BIA	Bitola	5.39	60	*i* Pn	Pn	13 28 33.7	+1.6
KEST	Kesra	5.39	242	P	Pn	13 28 33.9	+1.7
	comp=N,2.7nm,0.3s,baz=80,slow=11,SNR=49						
KEST	Kesra	5.39	242	*e*Pn	Pn	13 28 34.1	+2.0
SERG	Sergoula	5.40	88	P	Pn	13 28 33.9	+1.7
SERG	Sergoula	5.40	88	P	Pn	13 28 33.9	+1.7
TRIZ	Trizonia	5.42	89	P	Pn	13 28 34.0	+1.6
TRIZ	Trizonia	5.42	89	P	Pn	13 28 34.0	+1.6
PYL	PYLOS	5.44	105	P	Pn	13 28 32.7	+0.1
PYL	PYLOS	5.44	105	P	Pn	13 28 32.7	+0.1
ITM	Ithomi	5.50	101	*e*Pn	Pn	13 28 33.9	+0.5
ITM	Ithomi	5.50	101	P	Pn	13 28 34.1	+0.7
ITM	Ithomi	5.50	101	*e*Pn	Pn	13 28 33.9	+0.5
KOME	Kolasin	5.50	36	⇑*i*Pn	Pn	13 28 35.5	+2.0
KOME				*e*Sn	Sn	13 29 37.0	+0.4
KRUS	Krusevo	5.50	56	*i* Pn	Pn	13 28 35.7	+2.1
KLV	Kalavryta, Ach	5.51	92	P	Pn	13 28 35.0	+1.4
KLV				S	Sn	13 29 36.6	-0.2
KLV	Kalavryta, Ach	5.51	92	P	Pn	13 28 35.0	+1.4
KLV				S	Sn	13 29 36.6	-0.2
AGG	Agios Georgios	5.62	82	*e*Pn	Pn	13 28 35.6	+0.5
AGG	Agios Georgios	5.62	82	P	Pn	13 28 36.9	+1.8
AGG				S	Sn	13 29 39.7	+0.2
AGG	Agios Georgios	5.62	82	*e*P	Pn	13 28 35.6	+0.5
AGG	Agios Georgios	5.62	82	*e*P	Pn	13 28 35.6	+0.5
GUR	Goura	5.67	93	P	Pn	13 28 37.6	+1.8
DSF	Desfina	5.77	88	P	Pn	13 28 38.4	+1.3
VLX	Vlachokerasia	5.80	98	P	Pn	13 28 39.2	+1.7
PLE	Pljevlja	5.83	32	⇑*i*Pn	Pn	13 28 40.5	+2.7
PLE				*e*Sn	Sn	13 29 43.9	-0.5
LIT	Litokhoron	5.91	72	*e*Pn	Pn	13 28 39.3	+0.4
LIT	Litokhoron	5.91	72	P	Pn	13 28 41.6	+2.7
LIT	Litokhoron	5.91	72	*e*P	Pn	13 28 39.3	+0.4
LIT	Litokhoron	5.91	72	*e*P	Pn	13 28 39.3	+0.4
DYR	Agios Nikonas	5.93	104	P	Pn	13 28 40.2	+1.1
THTN	Thala	5.94	243	*e*Pn	Pn	13 28 39.5	+0.2
UDBI	Udbina	6.09	4	P	Pn	13 28 44.4	+3.2
GRG	Griva	6.11	64	P	Pn	13 28 42.9	+1.4
NVLJ	Novalja	6.11	358	P	Pn	13 28 43.1	+1.7
PGF	Pioggiola	6.24	313	*e*Pn	Pn	13 28 45.4	+2.2
PGF				*e*Sn	Sn	13 29 52.6	-1.5
	comp=N,31nm,1.2s						
PGF	Pioggiola	6.24	313	*e*Pn	Pn	13 28 45.4	+2.2
PGF				*e*Sn	Sn	13 29 52.6	-1.5
	comp=N,16nm,1.2s						
STIP	Stip	6.28	57	*i* Pn	Pn	13 28 46.3	+2.7
BBLS	Lazići	6.28	29	*e*Pn	Pn	13 28 45.4	+1.7
VAY	Valandovo	6.37	61	*i* Pn	Pn	13 28 45.8	+1.0
VLI	Veliai	6.40	103	P	Pn	13 28 47.1	+1.8
VILL	Villia	6.41	90	P	Pn	13 28 46.2	+0.8
BLY	Banja Luka	6.47	13	⇑*i*P	Pn	13 28 45.8	-0.3
BLY	Banja Luka	6.47	13	*e*Pn	Pn	13 28 47.7	+1.5
BLY	Banja Luka	6.47	13	⇑*i*Pn	Pn	13 28 48.4	+2.3
KYTH	Kithira	6.64	107	P	Pn	13 28 49.7	+1.2
DIVS	Divibare	6.71	31	*e*Pn	Pn	13 28 49.8	+0.4
DIVS	Divibare	6.71	31	⇑*i*Pn	Pn	13 28 50.4	+1.0
VLC	Villacollemand	6.75	329	*e*Pn	Pn	13 28 50.9	+1.0
TEKS	Tekeris	6.91	27	⇑*i*Pn	Pn	13 28 53.8	+1.8
KKB	Krupnik	6.95	58	*i* P	Pn	13 28 54.2	+1.7
ANKY	Antikythira Is	6.98	109	P	Pn	13 28 53.6	+0.6
BOJS	Bojanci	7.05	0	*i* Pn	Pn	13 28 56.1	+2.3
MMB	Musomiste	7.27	62	*i* P	Pn	13 28 58.1	+1.3
TRI	Trieste	7.33	352	*e*Pn	Pn	13 28 58.8	+1.4
TRI	Trieste	7.33	352	*e*P	Pn	13 28 58.8	+1.4
TRI	Trieste	7.33	352	*e*P	Pn	13 28 58.8	+1.4
VISS	Visnje	7.35	358	*e*Pn	Pn	13 28 59.6	+1.8
VTS	Vitosha	7.39	53	⇑*i*P	Pn	13 29 01.8	+3.4
VTS	Vitosha	7.39	53	*e*Pn	Pn	13 28 58.9	+0.5
VTS	Vitosha	7.39	53	*e*P	Pn	13 28 58.9	+0.5
VTS	Vitosha	7.39	53	*e*P	Pn	13 28 58.9	+0.5
JAVS	Javornik	7.48	354	*e*Pn	Pn	13 29 00.8	+1.2
SBF	Sospel	7.96	315	*e*Pn	Pn	13 29 07.6	+1.8
SBF				*e*Sn	Sn	13 30 32.7	-2.2
SBF	Sospel	7.96	315	*e*Pn	Pn	13 29 07.6	+1.8
SBF				*e*Sn	Sn	13 30 32.7	-2.2
PGB	Panagyurishte	7.98	56	*i* P	Pn	13 29 08.1	+1.9
MDVR	Moldovita	8.00	36	⇑*i*P	Pn	13 29 08.0	+1.6
OBKA	Obir	8.07	357	*e*Pn	Pn	13 29 09.9	+2.6
	comp=N,14nm,0.5s,SNR=7.6						
OBKA	Obir	8.07	357	Pn	Pn	13 29 09.9	+2.6
	comp=N,14nm,0.5s,SNR=7.6						
LMR	La Mourre	8.18	309	*e*Pn	Pn	13 29 09.5	+0.8
LMR				*e*Sn	Sn	13 30 37.3	-2.8
	comp=N,17nm,0.9s						
LMR	La Mourre	8.18	309	*e*Pn	Pn	13 29 09.5	+0.8
LMR				*e*Sn	Sn	13 30 37.3	-2.8
	comp=N,8.6nm,0.9s						
FRF	La Foret Royal	8.22	311	*e*Pn	Pn	13 29 10.6	+1.3
FRF				*e*Sn	Sn	13 30 37.7	-3.5
	comp=N,7.0nm,0.5s						
FRF	La Foret Royal	8.22	311	*e*Pn	Pn	13 29 10.6	+1.3
FRF				*e*Sn	Sn	13 30 37.7	-3.5
	comp=N,3.5nm,0.5s						
SOKA	Soboth	8.22	359	*e*Pn	Pn	13 29 11.2	+1.9
	comp=N,8.7nm,0.8s,SNR=6.6						
SOKA	Soboth	8.22	359	Pn	Pn	13 29 11.2	+1.9
	comp=N,8.7nm,0.8s,SNR=6.6						
MYKA	Terra Mystica	8.25	353	*e*Pn	Pn	13 29 12.1	+2.4
	comp=N,15nm,0.8s						
MYKA	Terra Mystica	8.25	353	Pn	Pn	13 29 12.1	+2.4
	comp=N,15nm,0.8s						
APE	Apeiranthos	8.32	96	*i* P	Pn	13 29 09.6	-1.1
APE	Apeiranthos	8.32	96	*i* P	Pn	13 29 09.6	-1.1
IDI	Anoyia	8.40	109	P	Pn	13 29 13.1	+1.3
	comp=N,1.8nm,0.3s,baz=281,slow=14,SNR=14						
IDI				S	Sn	13 30 45.9	+0.2
	comp=N,0.9nm,0.3s,baz=27,slow=9.0,SNR=3.4						
IDI	Anoyia	8.40	109	⇑*i*P	Pn	13 29 13.9	+2.1
IDI	Anoyia	8.40	109	*e*Pn	Pn	13 29 12.7	+0.9
IDI				S	Sn	13 30 45.9	+0.2
HERR	Herculane	8.40	38	⇓*i*P	Pn	13 29 13.3	+1.7
SANT	Santorini	8.44	101	*e*Pn	Pn	13 29 12.3	0.0
ABTA	Abfaltersbach	8.52	348	*e*Pn	Pn	13 29 15.5	+2.2
	comp=N,23nm,0.6s,SNR=6.4						
ABTA	Abfaltersbach	8.52	348	Pn	Pn	13 29 15.5	+2.2
	comp=N,23nm,0.6s,SNR=6.4						
BZS	Buzias	8.61	32	⇓*i*P	Pn	13 29 15.6	+1.2
KBA	Koelnbreinsper	8.73	352	*e*Pn	Pn	13 29 18.1	+2.0
	comp=N,8.0nm,0.9s						
KBA	Koelnbreinsper	8.73	352	Pn	Pn	13 29 18.1	+2.0
	comp=N,8.0nm,0.9s						
ALN	Alexandroupoli	8.73	70	*e*Pn	Pn	13 29 17.7	+1.7
ALN	Alexandroupoli	8.73	70	*e*P	Pn	13 29 17.7	+1.7
ALN	Alexandroupoli	8.73	70	*e*P	Pn	13 29 17.7	+1.7
ARSA	Arzberg	8.80	2	*e*Pn	Pn	13 29 19.5	+2.6
	comp=N,11nm,0.7s						
ARSA	Arzberg	8.80	2	Pn	Pn	13 29 19.5	+2.6
	comp=N,11nm,0.7s						
MBDF	Montbardon	8.88	318	*e*Pn	Pn	13 29 21.2	+3.1
MBDF	Montbardon	8.88	318	*e*Pn	Pn	13 29 21.2	+3.1
SMRF	Simiane la Rot	9.10	310	*e*Pn	Pn	13 29 23.4	+2.6
SMRF				*e*Sn	Sn	13 30 59.3	-2.9
	comp=N,8.0nm,0.8s						
SMRF	Simiane la Rot	9.10	310	*e*Pn	Pn	13 29 23.4	+2.6
SMRF				*e*Sn	Sn	13 30 59.3	-2.9
	comp=N,4.0nm,0.8s						
TUE	Stuetta	9.10	334	*e*Pn	Pn	13 29 22.0	+1.0
FETA	Feichten	9.17	341	*e*Pn	Pn	13 29 24.7	+2.8
	comp=N,62nm,0.8s,SNR=23						
FETA	Feichten	9.17	341	Pn	Pn	13 29 24.7	+2.8
	comp=N,62nm,0.8s,SNR=23						
WTTA	Wattenberg	9.18	345	*e*Pn	Pn	13 29 26.1	+4.0
	comp=N,4.6nm,0.5s						
WTTA	Wattenberg	9.18	345	Pn	Pn	13 29 26.1	+4.0
	comp=N,4.6nm,0.5s						
DAVOX	Davos/Dischmat	9.19	337	P	Pn	13 29 23.9	+1.7
	comp=N,0.8nm,0.3s,baz=160,slow=15,SNR=6.8						
WATA	Walderalm	9.26	345	*i* Pn	Pn	13 29 28.5	+5.4
	comp=N,9.6nm,0.5s						
MOTA	Moosalm	9.38	343	*e*Pn	Pn	13 29 29.0	+4.4
	comp=N,27nm,0.8s,SNR=16						
MOTA	Moosalm	9.38	343	Pn	Pn	13 29 29.0	+4.4
	comp=N,27nm,0.8s,SNR=16						
MOA	Molln	9.42	356	*e*Pn	Pn	13 29 27.2	+2.2
	comp=N,36nm,0.9s,SNR=24						
MOA	Molln	9.42	356	Pn	Pn	13 29 27.2	+2.2
	comp=N,36nm,0.9s,SNR=24						
LPG	La Plagne	9.43	321	*e*Pn	Pn	13 29 28.4	+3.0
LPG	La Plagne	9.43	321	*e*Pn	Pn	13 29 28.4	+3.0
LPL	La Plagne	9.45	321	*e*Pn	Pn	13 29 29.1	+3.5
LPL	La Plagne	9.45	321	*e*Pn	Pn	13 29 29.1	+3.5
CONA	Conrad Observa	9.49	3	*e*Pn	Pn	13 29 27.8	+1.8
	comp=N,11nm,1.1s						
CONA	Conrad Observa	9.49	3	Pn	Pn	13 29 27.8	+1.8
	comp=N,11nm,1.1s						
ORIF	Oris-en-Rattie	9.49	316	*e*Pn	Pn	13 29 29.4	+3.4
ORIF	Oris-en-Rattie	9.49	316	*e*Pn	Pn	13 29 29.4	+3.4
RETA	Reutte	9.59	342	*e*Pn	Pn	13 29 31.0	+3.6
	comp=N,24nm,0.7s,SNR=14						
RETA	Reutte	9.59	342	Pn	Pn	13 29 31.0	+3.6
	comp=N,24nm,0.7s,SNR=14						
DAVA	Damuels	9.65	338	*e*Pn	Pn	13 29 31.7	+3.6
	comp=N,29nm,1.2s,SNR=13						
DAVA	Damuels	9.65	338	Pn	Pn	13 29 31.7	+3.6
	comp=N,29nm,1.2s,SNR=13						
SENIN	Lac Senin/Sane	9.82	326	*e*Pn	Pn	13 29 31.4	+0.9
ARR	Arges	9.87	43	⇓*i*P	Pn	13 29 33.9	+2.9
DRGR		10.01	31	⇑*i*P	Pn	13 29 35.2	+2.3
MODS	Modra-Piesok	10.04	8	*e*P	Pn	13 29 36.6	+3.5
MODS	Modra-Piesok	10.04	8	*e*PN	Pn	13 29 36.6	+3.5
MODS	Modra-Piesok	10.04	8	*e*P	Pn	13 29 36.6	+3.5
PSZ	Piszkesteto	10.07	18	⇓*i*P	Pn	13 29 35.5	+1.9
PSZ	Piszkesteto	10.07	18	*e*Pn	Pn	13 29 35.3	+1.7
PSZ	Piszkesteto	10.07	18	*e*P	Pn	13 29 35.3	+1.7
PSZ	Piszkesteto	10.07	18	*e*P	Pn	13 29 35.3	+1.7
VIVF	Saint-Julien-l	10.13	313	*e*Pn	Pn	13 29 38.2	+3.8
VIVF	Saint-Julien-l	10.13	313	*e*Pn	Pn	13 29 38.2	+3.8
VOIR		10.14	43	⇓*i*P	Pn	13 29 37.5	+3.0
LASF	Ste Croix	10.20	307	*e*Pn	Pn	13 29 36.1	+0.8
LASF	Ste Croix	10.20	307	*e*Pn	Pn	13 29 36.1	+0.8
VYHS	Vyhne	10.38	14	*e*P	Pn	13 29 41.0	+3.3
VYHS	Vyhne	10.38	14	*e*PN	Pn	13 29 41.0	+3.3
VYHS	Vyhne	10.38	14	*e*P	Pn	13 29 41.0	+3.3
GEA0	GERESS Array S	10.44	355	*e*Pn	Pn	13 29 37.6	-0.8
GEC2	GERESS Array S	10.45	355	*e*Pn	Pn	13 29 38.3	-0.2
GEC2	GERESS Array S	10.45	355	*e*P	Pn	13 29 38.3	-0.2
GEC2	GERESS Array S	10.45	355	*e*P	Pn	13 29 38.3	-0.2
GERES	GERESS Array B	10.45	355	P	Pn	13 29 40.5	+2.0
	comp=N,1.1nm,0.3s,baz=165,slow=11,SNR=26						
CABF	La Chapelle	10.55	324	*e*Pn	Pn	13 29 41.9	+2.0
CABF	La Chapelle	10.55	324	*e*Pn	Pn	13 29 41.9	+2.0
KRUC	Moravsky	10.64	4	*e*PN	Pn	13 29 43.5	+2.5
MLR	Muntele Rosu	10.66	45	P	Pn	13 29 44.9	+3.5
	comp=N,0.7nm,0.3s,baz=265,slow=11,SNR=22						
MLR	Muntele Rosu	10.66	45	⇑*i*P	Pn	13 29 45.2	+3.8
KHC	Kasperske Hory	10.74	354	*e*P	Pn	13 29 45.0	+2.7
KHC				*e*x	x	13 29 52.0	
KHC	Kasperske Hory	10.74	354	*e*Pn	Pn	13 29 42.6	+0.3
KHC	Kasperske Hory	10.74	354	*e*P	Pn	13 29 42.6	+0.3
KHC	Kasperske Hory	10.74	354	*e*P	Pn	13 29 42.6	+0.3
VRAC	Vranov	10.90	5	P	Pn	13 29 46.6	+2.2
	comp=N,0.8nm,0.3s,baz=189,slow=11,SNR=12						
VRAC	Vranov	10.90	5	⇓*i*P	Pn	13 29 44.5	+0.1
VRAC	Vranov	10.90	5	*e*PN	Pn	13 29 46.8	+2.4
MTLF	Montolieu	10.95	301	*e*Pn	Pn	13 29 45.7	+0.6
MTLF	Montolieu	10.95	301	*e*Pn	Pn	13 29 45.7	+0.6
BFO	Black Forest	11.05	335	*e*Pn	Pn	13 29 46.6	+0.2
BFO	Black Forest	11.05	335	*e*P	Pn	13 29 46.6	+0.2
BFO	Black Forest	11.05	335	*e*P	Pn	13 29 46.6	+0.2
TRPA	Tarpa	11.06	27	⇑*i*P	Pn	13 29 49.1	+2.7
HINF	Hinteralfeld	11.15	330	*e*Pn	Pn	13 29 48.4	+0.7
HINF	Hinteralfeld	11.15	330	*e*Pn	Pn	13 29 48.4	+0.7
ECH	Echery	11.37	332	*e*Pn	Pn	13 29 50.5	+0.1
ECH	Echery	11.37	332	*e*P	Pn	13 29 50.5	+0.1
MORC	Moravsky Berou	11.45	8	⇓*i*P	Pn	13 29 53.2	+1.7
MORC	Moravsky Berou	11.45	8	*e*Pn	Pn	13 29 51.4	-0.1
MORC	Moravsky Berou	11.45	8	*e*P	Pn	13 29 51.4	-0.1
MORC	Moravsky Berou	11.45	8	*e*P	Pn	13 29 51.4	-0.1
MORC	Moravsky Berou	11.45	8	*e*Pn	Pn	13 29 54.2	+2.7
MORC	Moravsky Berou	11.45	8	*e*PN	Pn	13 29 54.2	+2.7
GOPC	GO Pecny, Ondr	11.46	359	*e*P	Pn	13 29 53.5	+1.8
GOPC				*e*x	x	13 30 00.6	
GOPC	GO Pecny, Ondr	11.46	359	*e*P	Pn	13 29 53.5	+1.8
GOPC	GO Pecny, Ondr	11.46	359	*e*P	Pn	13 29 53.5	+1.8
CDF	Champ du Feu	11.49	333	*e*Pn	Pn	13 29 52.6	+0.6
CDF	Champ du Feu	11.49	333	*e*Pn	Pn	13 29 52.6	+0.6
HAU	Haudompre	11.51	329	*e*Pn	Pn	13 29 52.7	+0.4
HAU	Haudompre	11.51	329	*e*Pn	Pn	13 29 52.7	+0.4
PRU	Pruhonice	11.54	358	*e*P	P	13 29 56.3	-2.9
PRU				*e*x	x	13 30 00.6	
PRU	Pruhonice	11.54	358	*e*P	P	13 29 56.3	-2.9
PRU	Pruhonice	11.54	358	*e*P	P	13 29 56.3	-2.9
NIE	Niedzica	11.57	17	*e*P	Pn	13 29 56.5	+3.5
NIE	Niedzica	11.57	17	*e*P	Pn	13 29 56.5	+3.5
NIE	Niedzica	11.57	17	*e*P	Pn	13 29 56.5	+3.5
GRFO	Grafenberg	11.59	347	*e*Pn	Pn	13 29 52.9	-0.4
GRFO	Grafenberg	11.59	347	*e*P	Pn	13 29 52.9	-0.4
PRA	Prague	11.63	358	*e*P	P	13 30 03.0	+2.9
PRA	Prague	11.63	358	*e*P	P	13 30 03.0	+2.9
KRLC	Kraliky	11.68	5	*e*P	Pn	13 29 54.8	+0.3
KRLC				*e*x	x	13 30 03.1	
KRLC	Kraliky	11.68	5	*e*P	Pn	13 29 54.8	+0.3
TESR	Tescani	11.68	43	⇓*i*P	P	13 29 58.8	-1.9
SMF	Signal de Mont	11.69	318	*e*Pn	Pn	13 29 57.3	+2.7
SMF	Signal de Mont	11.69	318	*e*Pn	Pn	13 29 57.3	+2.7
BUR04	Bucovina Ar. S	11.73	35	*e*Pn	Pn	13 29 56.8	+1.5
BURAR	Bucovina Array	11.73	35	⇑*i*P	P	13 29 58.9	-2.5
BUR08	Bucovina Ar. S	11.75	35	*e*Pn	Pn	13 29 57.1	+1.7
CFR	Carcaliu	11.77	51	⇑*i*P	Pn	13 29 58.7	+3.1
DPC	Dobruska-Polom	11.93	4	*e*P	P	13 30 04.9	+1.4
DPC	Dobruska-Polom	11.93	4	*e*P	P	13 30 04.9	+1.4
DPC	Dobruska-Polom	11.93	4	*e*P	P	13 30 04.9	+1.4
NKC	Novy Kostel	11.94	352	*e*P	P	13 30 01.4	-2.2
NKC				*e*x	x	13 30 04.6	
NKC				*e*x	x	13 30 06.9	
NKC	Novy Kostel	11.94	352	*e*P	P	13 30 01.4	-2.2
NKC	Novy Kostel	11.94	352	*e*P	P	13 30 01.4	-2.2
AVF	Avril sur Loir	12.04	318	*e*Pn	P	13 30 05.0	+0.3
AVF	Avril sur Loir	12.04	318	*e*Pn	P	13 30 05.0	+0.3
UPC	Upice	12.07	3	*e*P	Pn	13 30 02.5	+3.0
UPC				*e*x	x	13 30 07.2	
UPC	Upice	12.07	3	*e*P	Pn	13 30 02.5	+3.0
UPC	Upice	12.07	3	*e*P	Pn	13 30 02.5	+3.0
PVCC	Panska Ves	12.08	358	*e*P	P	13 30 03.1	-2.1
PVCC				*e*x	x	13 30 07.1	
PVCC	Panska Ves	12.08	358	*e*P	P	13 30 03.1	-2.1
PVCC	Panska Ves	12.08	358	*e*P	P	13 30 03.1	-2.1
LOR	Lormes	12.10	320	*e*Pn	P	13 30 03.5	-1.9
	baz=135						
LOR	Lormes	12.10	320	*e*Pn	P	13 30 03.5	-1.9
	baz=135						
SSF	Saint Saulge	12.14	319	*e*Pn	P	13 30 04.4	-1.4
SSF	Saint Saulge	12.14	319	*e*Pn	P	13 30 04.4	-1.4
EPF	Esparros	12.14	297	*e*Pn	P	13 30 04.1	-1.9
EPF	Esparros	12.14	297	*e*Pn	P	13 30 04.1	-1.9
BGF	Bois d'Agland	12.17	316	*e*Pn	P	13 30 04.5	-1.7
BGF	Bois d'Agland	12.17	316	*e*Pn	P	13 30 04.5	-1.7
PAGF	Fort de Pagny	12.20	329	*e*Pn	Pn	13 30 03.4	+2.3
PAGF	Fort de Pagny	12.20	329	*e*Pn	Pn	13 30 03.4	+2.3
SFTF	Sexfontaines	12.22	326	*e*Pn	Pn	13 30 03.1	+1.7
	baz=142						
SFTF	Sexfontaines	12.22	326	*e*Pn	Pn	13 30 03.1	+1.7
	baz=142						
OJC	Ojcow	12.22	14	*e*P	P	13 30 09.0	+2.3
OJC	Ojcow	12.22	14	*e*Pn	Pn	13 30 02.6	+1.2
OJC	Ojcow	12.22	14	*e*P	Pn	13 30 02.6	+1.2
RJF	Les Rejaudoux	12.26	308	*e*Pn	P	13 30 05.9	-1.3
RJF	Les Rejaudoux	12.26	308	*e*Pn	P	13 30 05.9	-1.3
KWP	Kalwaria Pacla	12.41	23	*e*P	P	13 30 08.1	-0.8
KWP	Kalwaria Pacla	12.41	23	*e*P	P	13 30 08.1	-0.8
KWP	Kalwaria Pacla	12.41	23	*e*P	P	13 30 08.1	-0.8
BRG	Berggiesshubel	12.45	356	*i* P	P	13 30 07.2	-2.1
	comp=N,14nm,1.1s						
BRG				*i*		13 30 11.4	
	comp=N,303nm,0.9s comp=N,184nm,21.0s comp=E,99nm,14.7s comp=Z,276nm,16.1s						
BRG	Berggiesshubel	12.45	356	*i* P	P	13 30 07.2	-2.1
BRG				pmax	pmax		
	comp=Z,14nm,0.9s						
BRG				MLR	MLR		
	comp=N,303µm,21.0s						
BRG				MLR	MLR		
	comp=E,184nm,14.7s						
BRG				MLR	MLR		
	comp=Z,99nm,16.1s						
BRG	Berggiesshubel	12.45	356	*i* P	P	13 30 07.2	-2.1
	comp=Z,99nm,16.1s						
LEOM	Leova	12.54	46	⇑*i*P	P	13 30 09.9	-0.3
LEOM	Leova	12.54	46	⇑*i*P	P	13 30 09.9	-0.3
LFF	La Frestale	12.58	306	*e*Pn	P	13 30 08.8	-1.9
LFF	La Frestale	12.58	306	*e*Pn	P	13 30 08.8	-1.9
ETSF	Etsaut	12.74	295	*e*Pn	P	13 30 12.2	-0.4
ETSF	Etsaut	12.74	295	*e*Pn	P	13 30 12.2	-0.4
WLF	Walferdange	12.94	333	*e*Pn	Pn	13 30 11.0	+0.4
WLF	Walferdange	12.94	333	*e*P	Pn	13 30 11.0	+0.4
CLL	Collm	12.95	354	*e*(P)	P	13 30 14.0	-0.7
	comp=Z,30nm,1.2s						
CLL	Collm	12.95	354	*e*P	P	13 30 13.7	-1.1
CLL	Collm	12.95	354	*e*P	P	13 30 14.0	-0.7
CLL				pmax	pmax		
	comp=Z,30nm,1.2s						
CLL	Collm	12.95	354	*e*P	P	13 30 14.0	-0.7
	comp=Z,30nm,1.2s						
MILM	Milestii Mici	13.11	45	⇓*i*P	P	13 30 15.6	-1.0
MILM	Milestii Mici	13.11	45	⇓*i*P	P	13 30 15.6	-1.0
KIS	Kishinev	13.16	45	⇑*i*P	P	13 30 16.5	-0.6
KIS	Kishinev	13.16	45	⇑*i*P	P	13 30 16.5	-0.6
SJPF	Ste Jean	13.27	296	*e*Pn	P	13 30 21.2	+2.8
SJPF	Ste Jean	13.27	296	*e*Pn	P	13 30 21.2	+2.8
SORM	Soroca	13.61	40	⇓*i*P	P	13 30 23.5	+1.4
SORM	Soroca	13.61	40	⇓*i*P	P	13 30 23.5	+1.4
MEM	Membach	13.79	335	⇑P	P	13 30 26.7	+2.5
MEM	Membach	13.79	335	P	P	13 30 26.6	+2.5
GIVF	Givet	13.79	331	*e*Pn	P	13 30 23.5	-0.6
DOU	Dourbes	13.87	330	⇓P	P	13 30 24.1	-1.0
MFF	Saint Martin d	13.91	311	*e*Pn	P	13 30 28.9	+3.4
MFF	Saint Martin d	13.91	311	*e*Pn	P	13 30 28.9	+3.4
BAIF	Baives	14.00	330	*e*Pn	P	13 30 25.6	-0.8
BAIF	Baives	14.00	330	*e*Pn	P	13 30 25.6	-0.8
BRTR	Keskin Array B	14.40	79	P	P	13 30 32.1	+1.0
	comp=Z,0.3nm,0.3s,baz=322,slow=9.8,SNR=7.4						
ESDC	Sonseca Array	14.92	281	P	P	13 30 36.6	-0.2
	comp=Z,0.2nm,0.3s,baz=81,slow=11,SNR=11						
CSS	Mathiatis	14.97	98	*e*Pn	Pn	13 30 36.3	+0.1
LDF	La Druitiere	15.00	317	*e*Pn	P	13 30 39.3	+1.7
FLN	La Foliniere	15.29	317	*e*Pn	P	13 30 42.1	+1.3
FLN	La Foliniere	15.29	317	*e*Pn	P	13 30 42.1	+1.3
AK11	Malin Array Si	15.74	35	*e*Pn	Pn	13 30 45.2	-0.1
KIEV	Kiev	15.77	35	*e*Pn	Pn	13 30 45.9	+0.2
	comp=Z,18nm,1.1s						
KIEV	Kiev	15.77	35	*i* P	Pn	13 30 45.5	-0.2
AKASG	Malin Array Be	15.78	35	P	P	13 30 46.2	+0.1
	comp=Z,9.2nm,0.3s,baz=226,slow=10,SNR=29						
AKASG				S	S	13 33 39.5	-1.9
	baz=225,slow=21,SNR=3.6						
AKBB	Malin Array Si	15.78	35	*e*Pn	Pn	13 30 45.9	0.0
	comp=Z,17nm,1.0s						
AKBB	Malin Array Si	15.78	35	*e*P	Pn	13 30 45.9	0.0
AKBB				pmax	pmax		
	comp=Z,17nm,1.0s						
SGMF	Saint Gilles	16.16	313	*e*Pn	P	13 30 48.3	-2.1
SGMF	Saint Gilles	16.16	313	*e*Pn	P	13 30 48.3	-2.1
QUIF	Quistinic	16.35	311	*e*Pn	P	13 30 51.3	-1.1
KLNR	Kaliningrad	16.52	10	*i* P	P	13 30 53.4	-0.8
KLNR	Kaliningrad	16.52	10	*i* P	P	13 30 53.4	-0.8
ROSF	Rostrenen	16.62	312	*e*Pn	P	13 30 53.3	-2.1
ROSF	Rostrenen	16.62	312	*e*Pn	P	13 30 53.3	-2.1
MDT	Midelt	17.03	257	P	P	13 30 59.9	-0.4
	comp=Z,0.1nm,0.3s,baz=80,slow=12,SNR=3.4						

MMAI	Mount Meron Ar	17.29	102	P	Pn	13 31 04.4	+0.2
	comp=Z,0.8nm,0.3s,baz=306,slow=9.8,SNR=3.5						
PESTR	Estremoz	17.78	278	eP	P	13 31 08.7	+0.4
	comp=Z,5.2nm,0.8s						
PBUR	Paburg˜	18.15	12	eP	P	13 31 12.4	+0.3
NACGM	Naroch	18.24	22	e	P	13 31 12.0	-1.1
IIGN	Ignalina	18.48	20	eP	P	13 31 16.2	+0.6
IIGN				IAmb	IAmb	13 31 17.7	
	comp=Z,15nm,0.7s						
EIL	Elat	18.55	112	P	P	13 31 17.6	+0.9
	comp=Z,1.8nm,0.3s,baz=333,slow=17,SNR=9.4						
MCH1	Michaelchurch	18.57	323	eP	Pn	13 31 18.4	-0.5
IDID	Didziasalis	18.59	21	eP	P	13 31 17.2	+0.4
IDID				IAmb	IAmb	13 31 18.4	
	comp=Z,16nm,0.5s						
ISAL	Salakas	18.64	20	eP	P	13 31 18.0	+0.6
ISAL				IAmb	IAmb	13 31 19.4	
	comp=Z,28nm,0.5s						
ISAL	Salakas	18.64	20	eP	P	13 31 18.0	+0.6
ASF	Jabal al Asfar	18.78	103	P	Pn	13 31 21.0	-0.8
	comp=Z,0.4nm,0.3s,baz=277,slow=17,SNR=8.5						
ASF	Jabal al Asfar	18.78	103	P	Pn	13 31 21.0	-0.8
IZAR	Zarasai	18.83	20	eP	P	13 31 20.1	+0.6
IZAR				IAmb	IAmb	13 31 21.4	
	comp=Z,46nm,0.5s						
HLM1	Long Mynd	18.85	324	eP	P	13 31 20.3	+0.6
LBWR	Ladybower, Pea	18.95	328	eP	P	13 31 21.9	+1.2
LBWR				IAmb	IAmb	13 31 22.8	
	comp=Z,50nm,1.1s						
LBWR	Ladybower, Pea	18.95	328	eP	P	13 31 22.0	+1.2
PFVI	Vila Bisbo	19.01	273	eP	P	13 31 21.6	+0.1
	comp=Z,60nm,1.3s						
SOC	Sochi	19.19	67	eP	Pn	13 31 25.4	-1.0
SOC				pmax	pmax		
	comp=Z,53nm,0.9s						
SOC	Sochi	19.19	67	eP	Pn	13 31 25.4	-1.0
	comp=Z,53nm,0.9s						
WLF1	Llynfaes	20.05	324	eP	P	13 31 32.9	+0.3
YRC	Rhoscolyn	20.11	324	eP	P	13 31 33.5	+0.3
KESW	Keswick, Cumbr	20.36	328	eP	P	13 31 35.8	-0.2
KESW				IAmb	IAmb	13 31 38.0	
	comp=Z,89nm,1.7s						
BBO1	Bothel	20.53	328	eP	P	13 31 37.7	0.0
ESK	Eskdalemuir	20.93	330	eP	P	13 31 41.2	-0.7
	comp=Z,48nm,1.5s						
ESK	Eskdalemuir	20.93	330	eP	P	13 31 41.4	-0.5
ESK				IAmb	IAmb	13 31 41.7	
	comp=Z,49nm,1.5s						
ESK	Eskdalemuir	20.93	330	eP	P	13 31 41.2	-0.7
ESK				pmax	pmax		
	comp=Z,48nm,1.5s						
VORD	Divnogorie	21.11	46	eP	P	13 31 45.3	+1.4
VORD				pmax	pmax		
	comp=Z,6.0nm,0.4s						
ESY	Stoneypath	21.14	332	eP	P	13 31 44.5	+0.3
VSR	Storozhevoye	21.15	45	eP	P	13 31 43.9	-0.5
VSR				eS	S	13 35 27.3	-2.0
VSR				pmax	pmax		
	comp=Z,20nm,0.7s						
VSR				smax	smax		
	comp=N,70nm,2.5s						
NEY	Neytrino	21.34	68	i P	P	13 31 48.1	+1.4
NEY				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NEY	Neytrino	21.34	68	i P	P	13 31 48.1	+1.4
	comp=Z,3.0nm,0.8s						
EDI	Edinburgh	21.36	331	eP	P	13 31 45.1	-1.5
KIV	Kislovodsk	21.37	66	eP	P	13 31 47.6	+0.7
	comp=Z,16nm,0.6s						
KIV	Kislovodsk	21.37	66	eP	P	13 31 47.8	+0.9
KIV				pmax	pmax		
	comp=Z,23nm,1.0s						
KIV	Kislovodsk	21.37	66	eP	P	13 31 47.8	+0.9
	comp=Z,23nm,1.0s						
KVAR	Kislovodsk Arr	21.37	66	P	P	13 31 46.4	-0.6
	comp=Z,7.3nm,0.5s,baz=248,slow=5.4,SNR=4.2						
VSU	Vasula	21.38	17	ceP	P	13 31 46.1	-0.7
VSU				pmax	pmax		
	comp=Z,95nm,0.9s						
STAV	Stavanger	21.39	346	eP	P	13 31 47.8	+1.0
STAV				IAmb	IAmb	13 31 48.6	
	comp=Z,40nm,0.4s						
KBZ	Khabaz	21.50	67	P	P	13 31 47.9	-0.3
	comp=Z,14nm,0.9s,baz=271,slow=7.4,SNR=18						
KONO	Kongsberg	21.52	352	eP	P	13 31 46.2	-2.0
	comp=Z,22nm,1.0s						
KONO	Kongsberg	21.52	352	ceP	P	13 31 46.7	-1.5
KONO				pmax	pmax		
	comp=Z,20nm,1.2s						
KONO	Kongsberg	21.52	352	eP	P	13 31 46.6	-1.5
KONO				IAmb	IAmb	13 31 48.5	
	comp=Z,17nm,0.9s						
BLS5	Blasjo	21.72	348	eP	P	13 31 50.0	-0.4
BLS5				IAmb	IAmb	13 31 50.3	
	comp=Z,23nm,0.7s						
HFS	Hagfors	21.73	358	P	P	13 31 48.9	-1.5
	comp=Z,14nm,0.5s,baz=181,slow=10,SNR=52						
DRUM	Mains of Drumt	21.85	333	eP	P	13 31 50.1	-1.5
DRUM				IAmb	IAmb	13 31 51.7	
	comp=Z,36nm,0.9s						
NCK	Nalchik	21.99	68	i P	P	13 31 54.0	+0.8
NCK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
NCK	Nalchik	21.99	68	i P	P	13 31 54.0	+0.8
	comp=Z,9.0nm,0.8s						
OBN	Obninsk	22.05	34	⇓eP	P	13 31 51.8	-1.8
OBN				*PP	pP	13 32 24.0	-0.1
OBN				e		13 35 45.3	
OBN				pmax	pmax		
	comp=Z,12nm,1.1s						
INVG	Invergeldie, C	22.06	331	eP	P	13 31 53.5	-0.3
INVG				IAmb	IAmb	13 31 54.4	
	comp=Z,12nm,0.7s						
NC602	NORSAR Array S	22.43	355	eP	P	13 31 55.7	-1.5
NC602	NORSAR Array S	22.43	355	eP	P	13 31 55.6	-1.6
NC602				IAmb	IAmb	13 31 58.2	
	comp=Z,560nm,1.6s						
NAO01	NORSAR Array S	22.58	355	eP	P	13 31 57.5	-1.1
NB2	NORSAR Subarra	22.75	355	P	P	13 31 59.1	-1.1
	comp=Z,13nm,0.9s,baz=171,slow=10						
NB2	NORSAR Subarra	22.75	355	P	P	13 31 59.1	-1.1
	baz=171,slow=10						
NB201	NORSAR Array S	22.75	355	eP	P	13 31 59.5	-0.7
NBO00	NORSAR Array S	22.77	354	eP	P	13 31 59.7	-0.7
NC405	NORSAR Array S	22.79	356	eP	P	13 31 59.6	-0.9
MOS	Moscow	22.91	34	eP	P	13 32 02.4	+0.8
MOS				e		13 35 41.0	
NC303	NORSAR Array S	22.92	355	eP	P	13 32 01.1	-0.6
NC204	NORSAR Array S	23.02	355	eP	P	13 32 02.0	-0.6
KPL	Plockton	23.33	331	eP	P	13 32 04.7	-0.7
HYA	Hoyanger	23.42	349	eP	P	13 32 06.7	+0.5
HYA				IAmb	IAmb	13 32 09.3	
	comp=Z,16nm,1.0s						
SUE	Sulen	23.55	347	eP	P	13 32 07.3	0.0
SUE				IAmb	IAmb	13 32 14.3	
	comp=Z,368nm,2.6s						
FINES	FINESS Array B	24.00	13	P	P	13 32 10.6	-0.9
	comp=Z,52nm,0.4s,baz=184,slow=7.8,SNR=293						
FINES	FINESS Array B	24.00	13	P	P	13 32 10.6	-0.9
FINES				pmax	pmax		
	comp=Z,51nm,0.4s						
FIA1	FINESS Array S	24.00	13	eP	P	13 32 11.1	-0.4
NSS	Namsos	26.19	357	eP	P	13 32 30.0	-1.2
NSS				IAmb	IAmb	13 32 30.8	
	comp=Z,6.8nm,0.6s						
KLMR	Klimovskoe	27.10	26	eP	P	13 32 37.6	-1.8
KLMR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KLMR	Klimovskoe	27.10	26	eP	P	13 32 37.7	-1.7
KLMR				AMP		13 32 40.1	
	comp=Z,7.0nm,0.7s						
TORD	Torodi Ar. Bea	27.90	209	P	P	13 32 46.1	-0.9
	comp=Z,0.7nm,0.5s,baz=17,slow=8.7						
STEI	Steigen	29.53	0	eP	P	13 32 60.0	-0.9
STEI				IAmb	IAmb	13 33 07.0	
	comp=Z,20nm,1.2s						
LOF	Lofoten	29.75	359	eP	P	13 33 02.4	-0.4
LOF				IAmb	IAmb	13 33 04.6	
	comp=Z,57nm,1.4s						
KTK1	Kautokeino	30.93	6	eP	P	13 33 13.3	+0.1
ARCES	ARCESS Array B	31.64	7	P	P	13 33 18.4	-1.0
	comp=Z,3.7nm,0.4s,baz=183,slow=8.7,SNR=60						
ARCES	ARCESS Array B	31.64	7	P	P	13 33 18.4	-1.0
ARCES				pmax	pmax		
	comp=Z,6.0nm,0.5s						
ARE0	ARCESS Array S	31.64	7	eP	P	13 33 18.8	-0.6
ARE0				IAmb	IAmb	13 33 34.4	
	comp=Z,48nm,1.4s						
AKTO	Aktyubinsk	32.41	54	P	P	13 33 26.4	0.0
AKTO				pmax	pmax		
	comp=Z,4.0nm,0.5s						
GEYT	Alibeck	33.53	77	P	P	13 33 36.1	-0.2
	comp=Z,2.0nm,0.4s,baz=273,slow=8.8,SNR=5.2						
AB31	Akbulak array	33.59	57	eP	P	13 33 37.4	+0.8
AB31				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ABKAR	Akbulak array	33.59	57	eP	P	13 33 37.5	+0.9
ARU	Arti	33.70	43	eP	P	13 33 37.4	-0.1
	comp=Z,11nm,1.0s						
ARU	Arti	33.70	43	d iP	P	13 33 37.7	+0.2
ARU						13 34 53.1	
ARU						13 36 14.2	
ARU				S	S	13 38 52.5	+5.0
ARU				SS	SnSn	13 41 12.4	-0.7
ARU				pmax	pmax		
	comp=Z,13nm,1.2s						
SVE	Sverdlovsk	34.91	43	eP	P	13 33 49.1	+1.2
SVE				pmax	pmax		
	comp=Z,20nm,0.9s						
DBIC	Dimbokro	36.47	215	P	P	13 34 01.7	+0.2
	comp=Z,1.7nm,0.3s,baz=13,slow=10.0,SNR=7.2						
SPITS	Spitsbergen Ar	39.84	0	P	P	13 34 28.8	-0.2
	comp=Z,4.7nm,0.5s,baz=174,slow=5.8,SNR=34						
WSAR	Wadi Sarin	39.90	99	P	P	13 34 31.0	+0.8
	comp=Z,3.7nm,0.8s,baz=288,slow=6.4,SNR=2.5						
BRVK	Borovoye	40.11	50	eP	P	13 34 32.5	+0.9
	comp=Z,24nm,0.8s						
BRVK	Borovoye	40.11	50	eP	P	13 34 32.5	+0.9
BRVK				pmax	pmax		
	comp=Z,24nm,0.8s						
BVA0	Borovoye Array	40.17	50	P	P	13 34 32.9	+0.8
BVA0				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BVAR	Borovoye Array	40.17	50	P	P	13 34 32.9	+0.8
	comp=Z,5.4nm,0.5s,baz=270,slow=9.4,SNR=43						
KK31	Karatay Array	41.52	65	eP	P	13 34 44.2	+0.9
KK31	Karatay Array	41.52	65	eP	P	13 34 44.2	+0.9
KKAR	Karatay Array	41.52	65	eP	P	13 34 44.2	+0.9
KKAR	Karatay Array	41.52	65	eP	P	13 34 44.2	+0.9
OTUK	Ortayu	41.83	57	P	P	13 34 47.0	+1.3
OTUK				pmax	pmax		
	comp=Z,17nm,0.5s						
SFK	Sufi-Kurgan	44.50	69	P	P	13 35 08.6	+1.1
SFK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
FRU	Bishkek	44.51	65	eP	P	13 35 12.0	+4.7
KURBB	Kurchatov Arra	45.44	53	P	P	13 35 14.9	+0.5
	comp=Z,5.4nm,0.5s,baz=287,slow=8.4,SNR=45						
KURK	Kurchatov	45.48	53	eP	P	13 35 15.1	+0.3
	comp=Z,15nm,0.8s						
KURK	Kurchatov	45.48	53	ceP	P	13 35 15.2	+0.5
KURK				pmax	pmax		
	comp=Z,16nm,1.0s						
NVS	Novosibirsk	47.56	47	i P	P	13 35 32.0	+1.2
MAKZ	Makanchi	48.51	57	eP	P	13 35 38.6	+0.4
	comp=Z,14nm,1.4s						
MAKZ	Makanchi	48.51	57	P	P	13 35 38.7	+0.4
MAKZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ZAA0	Zalesovo Array	48.63	48	eP	P	13 35 39.2	+0.2
	comp=Z,14nm,0.4s						
ZALV	Zalesovo Beam	48.63	48	P	P	13 35 39.5	+0.5
	comp=Z,12nm,0.3s,baz=281,slow=6.6,SNR=30						
ZALV	Zalesovo Beam	48.63	48	eP	P	13 35 39.2	+0.1
ZALV	Zalesovo Beam	48.63	48	eP	P	13 35 39.2	+0.1
MK31	Makanchi Array	48.72	57	eP	P	13 35 40.4	+0.5
MK31	Makanchi Array	48.72	57	eP	P	13 35 40.4	+0.5
MKAR	Makanchi Array	48.72	57	P	P	13 35 40.7	+0.8
	comp=Z,11nm,0.5s,baz=282,slow=6.7,SNR=114						
MKAR	Makanchi Array	48.72	57	eP	P	13 35 40.5	+0.6
	comp=Z,80nm,0.6s						
MKAR	Makanchi Array	48.72	57	eP	P	13 35 40.5	+0.6
MKAR				pmax	pmax		
	comp=Z,80nm,0.6s						
MK01	Makanchi Array	48.73	57	eP	P	13 35 40.5	+0.5
DGZ	Jazzator, Alta	51.22	52	i P	P	13 35 59.6	+0.8
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
GTA	Gaotai	63.36	60	eP	P	13 37 24.9	+0.9
GTA				pP	PcP	13 37 35.5	-24
GTA				sP	pP	13 37 39.8	-25
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SONA1	Songino Array	63.49	49	eP	P	13 37 24.6	-0.2
SONM	Songino Array	63.49	49	P	P	13 37 25.3	+0.6
	comp=Z,3.1nm,0.5s,baz=292,slow=7.4,SNR=18						
ULN	Ulaanbaatar	63.86	49	ceP	P	13 37 25.7	-1.5
ULN				pmax	pmax		
	comp=Z,2.0nm,1.0s						
PALK	Pallekele	66.39	100	P	P	13 37 43.7	0.0
	comp=Z,9.7nm,1.0s,baz=292,slow=5.4,SNR=3.0						
BILL	Bilibino	71.62	11	⇑eP	P	13 38 14.0	-1.1
BILL				e		13 38 28.0	
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s						
YKA	Yellowknife Ar	71.63	338	P	P	13 38 14.5	-0.7
	comp=Z,0.7nm,0.5s,baz=36,slow=5.9,SNR=3.8						
TOLK	Toolik Lake Re	72.62	354	eP	P	13 38 22.3	+1.2
	comp=Z,36nm,1.1s						
SEY	Seymchan	73.32	19	P	P	13 38 25.1	-0.1
	comp=Z,2.1nm,0.9s,baz=40,slow=5.2,SNR=6.3						
CMAR	Chiang Mai Arr	73.99	79	P	P	13 38 30.2	+0.3
	comp=Z,2.3nm,0.9s,baz=311,slow=7.3,SNR=9.8						
CM01	Chiang Mai Arr	74.03	79	eP	P	13 38 30.2	+0.1
COLD	Coldfoot	74.06	354	eP	P	13 38 30.0	+0.5
	comp=Z,23nm,1.1s						
MA2	Magadan	75.67	22	P	P	13 38 38.2	-0.6
	comp=Z,4.4nm,0.4s,baz=171,slow=18,SNR=5.2						
DAWY	Dawson	75.85	349	eP	P	13 38 40.2	+0.3
	comp=Z,2.3nm,0.8s						
ILAR	Eielson Array	76.15	352	P	P	13 38 41.4	-0.1
	comp=Z,0.6nm,0.8s,baz=351,slow=5.0,SNR=5.2						
KLR	Kul'dur	76.27	37	P	P	13 38 42.5	+0.1
	comp=Z,0.2nm,0.5s,baz=324,slow=6.6,SNR=14						
HDA	Harding Lake	76.51	352	eP	P	13 38 42.1	-1.4
	comp=Z,12nm,0.9s						
DHY	Denali Highway	77.85	352	eP	P	13 38 51.3	+0.1
	comp=Z,30nm,1.2s						
USRK	Ussuriysk Ar.	79.89	41	P	P	13 39 02.5	+0.1
	comp=Z,2.8nm,0.5s,baz=290,slow=5.8						
KS01	Wonju Array Si	82.30	48	eP	P	13 39 15.4	+0.1
KSAR	Wonju Array Be	82.32	48	P	P	13 39 15.6	+0.2
KSAR	Wonju Array Be	82.32	48	P	P	13 39 15.6	+0.2
KSRS	Korea Array	82.33	48	P	P	13 39 15.6	+0.1
	comp=Z,2.2nm,0.6s,baz=316,slow=4.0,SNR=13						
YSS	Yuzh-Sakhalins	82.93	33	eP	P	13 39 18.6	+0.2
	comp=Z,13nm,0.8s						
YSS	Yuzh-Sakhalins	82.93	33	eP	P	13 39 18.7	+0.4
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
PHWY	Pilot Hill	83.93	319	eP	P	13 39 23.9	-0.1
	comp=Z,26nm,0.9s						
PDAR	Pinedale Array	84.86	323	P	P	13 39 27.8	-0.8
	comp=Z,18nm,1.0s,baz=40,slow=7.7,SNR=5.6						
ASAJ	Asahikawa	85.07	35	P	P	13 39 28.4	-0.8
	comp=Z,2.4nm,0.5s,baz=273,slow=4.7,SNR=7.4						
TXAR	Lajitas Array	91.66	310	P	P	13 40 01.2	+0.3
	comp=Z,0.2nm,0.8s,baz=54,slow=6.8,SNR=2.6						
WRA	Warramunga Arr	124.75	89	PKP	PKPdf	13 45 50.7	-1.8
	comp=Z,0.3nm,0.5s,baz=325,slow=1.8,SNR=4.3						
ASAR	Alice Springs	126.39	93	PKP	PKPdf	13 45 54.4	-1.2
	comp=Z,0.8nm,0.6s,baz=306,slow=1.7,SNR=13						
QSPA	South Pole Qui	128.31	180	PKP	PKPdf	13 45 57.2	-0.6
	comp=Z,1.2nm,0.6s,baz=213,slow=1.1,SNR=8.7						
STKA	Stephens Creek	136.22	98	PKP	PKPdf	13 46 13.0	-0.8
	comp=Z,1.8nm,0.8s,baz=284,slow=4.2,SNR=3.6						
DZM	Mont Dzumac	150.46	65	PKPbc	PKPbc	13 46 45.0	+0.5
	comp=Z,9.2nm,0.8s,baz=66,slow=10.0,SNR=9.6						

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*CSEM **04** 13:28:00.6, 38.°40N×21.°90E, h9^{km}, ML1.6/4*

ATH 04 13:28:00.7, 38.°40N×21.°90E, h9^{km}±2^{km}, ML1.6/4, Error ellipse: s-maj=2.1km s-min=0.9km az=55.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EFP	Efpalio	0.02	4	P	Pg	13 28 02.0	-0.3
EFP				S	Sg	13 28 03.4	-0.1
EFP				AML	AML	13 28 03.6	
	comp=N,16461µm,0.2s						
EFP				AML	AML	13 28 04.1	
	comp=E,4468µm,0.1s						
EFP	Efpalio	0.02	4	P	Pg	13 28 02.2	-0.1
EFP				S	Sg	13 28 03.5	0.0
SERG	Sergoula	0.12	85	P	Pg	13 28 03.5	0.0
SERG				S	Sg	13 28 05.6	+0.2
SERG				AML	AML	13 28 07.0	
	comp=N,550µm,0.2s						
SERG				AML	AML	13 28 07.1	
	comp=E,323µm,0.2s						
SERG	Sergoula	0.12	85	P	Pg	13 28 03.5	0.0
SERG				S	Sg	13 28 05.6	+0.2
TRIZ	Trizonia	0.14	106	P	Pg	13 28 03.8	0.0
TRIZ				S	Sg	13 28 06.5	+0.7
TRIZ	Trizonia	0.14	106	P	Pg	13 28 03.8	+0.1
TRIZ				S	Sg	13 28 06.3	+0.5
UPR	University Cam	0.15	218	P	Pg	13 28 04.3	+0.4
UPR	University Cam	0.15	218	P	Pg	13 28 04.2	+0.3
LAKA	Lakka	0.17	160	P	Pg	13 28 04.7	+0.4
LAKA	Lakka	0.17	160	P	Pg	13 28 04.5	+0.2
ANX	Ano Chora	0.19	4	P	Pg	13 28 04.6	-0.1
ANX				S	Sg	13 28 07.5	0.0
ANX				AML	AML	13 28 08.0	
	comp=E,400µm,0.1s						
ANX				AML	AML	13 28 08.4	
	comp=N,617µm,0.2s						
ANX	Ano Chora	0.19	4	P	Pg	13 28 04.6	-0.1
ANX				S	Sg	13 28 07.5	+0.1
PVO	Paravola	0.36	306	P	Pg	13 28 08.2	+0.3
PVO	Paravola	0.36	306	P	Pg	13 28 08.0	+0.2
KLV	Kalavryta, Ach	0.41	151	P	Pg	13 28 08.4	-0.3
KLV				S	Sg	13 28 14.5	+0.4
KLV	Kalavryta, Ach	0.41	151	P	Pg	13 28 08.5	-0.2
KLV				S	Sg	13 28 14.5	+0.5
DSF	Desfina	0.49	89	P	Pg	13 28 10.2	0.0
DSF	Desfina	0.49	89	P	Pg	13 28 10.1	-0.1
EVR	Evrytania	0.52	352	P	Pg	13 28 10.3	-0.4
EVR				AML	AML	13 28 19.9	
	comp=N,136µm,0.2s						
EVR				AML	AML	13 28 20.6	
	comp=E,89µm,0.1s						
EVR	Evrytania	0.52	352	P	Pg	13 28 10.5	-0.2
GUR	Goura	0.58	143	P	Pg	13 28 11.3	-0.6
GUR	Goura	0.58	143	P	Pg	13 28 11.6	-0.3
AGG	Agios Georgios	0.70	28	P	Pg	13 28 14.4	+0.2
AGG	Agios Georgios	0.70	28	P	Pg	13 28 14.2	0.0
AMT	Artemida-Makis	0.88	190	P	Pg	13 28 17.3	-0.3
AMT	Artemida-Makis	0.88	190	P	Pg	13 28 17.4	-0.2

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*NIED **04** 13:28:00, 41.°00N×142.°00E, h56^{km}, Mw4.1   Best double couple: $M_0$1.87000×10^{15} NP1:ϕ_s194.00000°, δ22.00000°, λ82.00000°.   NP2:ϕ_s22.00000°, δ68.00000°, λ93.00000°.*

*BJI **04** 13:28:45.2, 41.°11N×142.°77E, h80^{km}, mb4.7/11, mB4.9/6*

*ISCJB **04** 13:28:48.3±0.3, 41.°00N±0.°02×142.°04E±0.°04, h66^{km}±2^{km}, mb4.3/42, Error ellipse: s-maj=5.8km s-min=3.5km az=28.0*

*MOS **04** 13:28:48.5±0.9, 40.°96N×142.°12E, h73^{km}, mb4.6/29, Error ellipse: s-maj=8.8km s-min=6.0km az=97.5*

*JMA **04** 13:28:49.2±0.1, 40.°98N×142.°01E, h57^{km}±2^{km}, M4.0 Broadband fault plane solution: P waves.   NP1: ϕ_s26.00000°, δ76.00000°, λ96.00000°.   NP2:ϕ_s183.00000°, δ15.00000°, λ68.00000°.   Principal axes: T Plg58.0000°, Azm303.0000°; N Plg5.0000°, Azm204.0000°; P Plg31.0000°, Azm111.0000°;*

JMA   Felt III J1.

*IDC **04** 13:28:50.3±1.5, 40.°96N×142.°08E, h75^{km}±12^{km}, mb4.0/20, mb1 4.1/25, mb1mx3.9/81, mbtmp4.3/25, MS3.0/6, Ms1 3.0/6, ms1mx2.7/72 Error ellipse: s-maj=16.2km s-min=9.5km az=108.0*

*NEIC **04** 13:28:50.9±0.6, 41.°05N×142.°00E, h74^{km}±5^{km}, mb4.6/10, Error ellipse: s-maj=8.7km s-min=5.2km az=118.0*

ISC 04 13:28:49.3±0.6**, 40.°98N**±0.°03×**142.°02E**±0.°04**, h62**^{km}±4^{km}**, n124,** σ1.^{s}**42**/150**, mb4.5**/42**, 7C-10D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JARK	Aomorirokkasho	0.49	273	P	Pn	13 29 01.0	-0.4
JARK				S	Sn	13 29 09.1	-1.0
JAHD	Aomorihigashid	0.59	299	P	Pn	13 29 02.0	-0.4
JAHD				S	Sn	13 29 11.4	-0.5
JANG	Nango	0.72	213	⇓P	Pn	13 29 03.3	-0.6
JANG				S	Sn	13 29 13.4	-1.1
JTM	Tenmabayashi	0.75	255	⇓P	Pn	13 29 03.9	-0.3
JTM				S	Sn	13 29 14.3	-0.9
JOT	Ohata	0.84	299	⇓P	Pn	13 29 04.8	-0.5
JOT				eS	Sn	13 29 16.5	-0.6
JKB	Kayabe	1.17	321	⇓P	Pn	13 29 09.4	-0.3
JKB				S	Sn	13 29 24.0	-0.8
JAH	Hinai	1.32	234	⇓P	Pn	13 29 11.6	0.0
JAH				S	Sn	13 29 28.8	+0.5
JSR	Shiriuchi	1.33	295	⇓P	Pn	13 29 11.6	-0.1
JEM	Erimo	1.34	39	P	Pn	13 29 12.8	+0.9
JEM				eS	Sn	13 29 30.4	+1.5
JNBK	Urakawa-nobuka	1.41	23	P	Pn	13 29 13.6	+0.7
JIW	Iwasaki	1.58	256	⇓P	Pn	13 29 14.8	-0.3
JOM	Ohasama	1.60	201	⇑P	Pn	13 29 15.5	0.0
JOM				S	Sn	13 29 34.8	-0.4
JNB	Noboribetsu	1.66	334	⇓P	Pn	13 29 15.6	-0.6
JYM2	Yakumo 2	1.68	313	⇓P	Pn	13 29 16.5	0.0
JYM2				eS	Sn	13 29 37.1	+0.1
ASAJ	Asahikawa	3.16	8	P	Pn	13 29 38.0	+1.3
	19nm,0.3s,baz=198,slow=14,SNR=134						
ASAJ				S	Sn	13 30 15.6	+2.4
	22nm,0.3s,baz=356,slow=27,SNR=9.6						
ASAJ	Asahikawa	3.16	8	ePn	Pn	13 29 37.6	+1.0
ASAJ				S	Sn	13 30 15.6	+2.4
YUK	Yuzh-Kuril'sk	4.17	42	eP	Pn	13 29 50.5	+0.1
YUK				eS	Sn	13 30 35.4	-2.4
YUK				pmax	pmax		
	comp=E,110nm,0.5s						
YUK				pmax	pmax		
	comp=Z,192nm,0.5s						
YUK				pmax	pmax		
	comp=N,86nm,0.4s						
YUK				smax	smax		
	comp=N,525nm,0.3s						
YUK				smax	smax		
	comp=E,552nm,0.6s						
SHO	Shikotan	4.58	49	eP	Pn	13 29 55.9	-0.2
SHO				eS	Sn	13 30 44.3	-3.7
SHO				pmax	pmax		
	comp=E,12nm,0.2s						
SHO				pmax	pmax		
	comp=Z,42nm,0.2s						
SHO				pmax	pmax		
	comp=N,20nm,0.1s						
SHO				smax	smax		
	comp=E,159nm,0.2s						
SHO				smax	smax		
	comp=N,241nm,0.4s						
MJB9	Matsu-Tunnel	5.34	215	ePn	Pn	13 30 08.9	+2.4
MAJO	Matsushiro	5.34	215	ePn	Pn	13 30 08.8	+2.3
MAJO	Matsushiro	5.34	215	i P	Pn	13 30 08.9	+2.4
MAT	Matsushiro	5.34	215	P	Pn	13 30 09.0	+2.5
MAT				eS	Sn	13 31 10.0	+3.4
MJAR	Matsushiro Arr	5.34	215	P	Pn	13 30 07.6	+1.2
	comp=N,2.0nm,0.3s,baz=25,slow=13,SNR=20						
YSS	Yuzh-Sakhalins	6.00	5	ePn	Pn	13 30 13.5	-1.9
YSS	Yuzh-Sakhalins	6.00	5	eP	Pn	13 30 16.7	+1.3
YSS				eS	Sn	13 31 23.9	+1.3
YSS				smax	smax		
	comp=N,20nm,1.0s						
YSS				MLR	MLR		
	comp=Z,130nm,13.0s						
KUR	Kuril'sk	6.03	43	⇓iP	Pn	13 30 16.5	+0.6
KUR				eS	Sn	13 31 21.1	-2.4
KUR				pmax	pmax		
	comp=N,22nm,1.0s						
KUR				pmax	pmax		
	comp=Z,125nm,1.0s						
KUR				pmax	pmax		
	comp=E,32nm,0.4s						
KUR				smax	smax		
	comp=N,94nm,0.7s						
KUR				smax	smax		
	comp=E,46nm,0.4s						
INU	Inuyama	6.86	217	ePn	Pn	13 30 30.4	+3.1
JHJ	Hachijo jima 2	8.05	194	P	Pn	13 30 44.0	+0.5
	comp=E,4.1nm,0.3s,baz=127,slow=20,SNR=5.6						

JHJ				S	Sn	13 32 08.2	-4.8
	comp=E,2.6nm,0.3s,baz=53,slow=20,SNR=2.2						
USRK	Ussuriysk Ar.	8.07	297	P	Pn	13 30 44.9	+1.1
	baz=97,slow=16						
USRK				LR	LR	13 33 51.1	
	comp=E,65nm,19.6s,baz=115,slow=37						
MSHR	Mys Shultsa	8.27	285	ceP	Pn	13 30 48.7	+2.1
KLR	Kul'dur	10.98	322	P	Pn	13 31 25.8	+2.3
	comp=E,0.0nm,0.3s,baz=128,slow=15,SNR=5.6						
KLR				LR	LR	13 35 11.7	
	comp=E,8.7nm,20.0s,baz=158,slow=35						
KSRS	Korea Array	11.49	257	P	Pn	13 31 33.1	+2.6
	comp=E,0.5nm,0.3s,baz=64,slow=13,SNR=9.7						
KSRS				LR	LR	13 35 31.4	
	comp=E,107nm,21.5s,baz=100,slow=35						
KS01	Wonju Array Si	11.50	257	ePn	Pn	13 31 32.4	+1.7
KSAR	Wonju Array Be	11.52	257	P	Pn	13 31 33.1	+2.1
KSAR	Wonju Array Be	11.52	257	P	Pn	13 31 33.1	+2.1
JNU	Nakatsue	11.86	232	LR	LR	13 35 50.7	
	comp=E,99nm,18.4s,baz=126,slow=35						
ZEA	Zeya	16.17	327	eP	Pn	13 32 33.0	+0.5
ZEA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
YAK	Yakutsk	22.36	345	eP	P	13 33 39.3	-2.6
YAK				e*PP	pP	13 33 52.8	-2.5
YAK				e		13 34 04.1	
YAK				e		13 37 31.3	
YAK				eS	S	13 37 40.8	-2.6
YAK				e*SS	sS	13 38 06.0	-0.3
YAK				e		13 44 48.3	
YAK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
YAK				pmax	pmax		
	comp=N,4.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.8s						
YAK				pmax	pmax		
	comp=Z,45nm,3.0s						
YAK				pmax	pmax		
	comp=N,20nm,3.7s						
YAK				pmax	pmax		
	comp=E,14nm,3.0s						
YAK				smax	smax		
	comp=N,12nm,1.7s						
YAK				smax	smax		
	comp=E,11nm,1.7s						
SEY	Seymchan	22.84	12	P	P	13 33 45.1	-1.8
	comp=E,1.2nm,0.3s,baz=186,slow=10.0,SNR=8.7						
ULN	Ulaanbaatar	25.74	297	ceP	P	13 34 14.4	+0.3
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SONA1	Songino Array	26.18	297	eP	P	13 34 17.8	-0.3
SONM	Songino Array	26.18	297	P	P	13 34 17.5	-0.6
	comp=Z,2.3nm,0.5s,baz=80,slow=8.6,SNR=14						
SONM				LR	LR	13 46 03.9	
	comp=Z,98nm,18.6s,baz=118,slow=39						
TLY	Talaya	28.27	305	i P	P	13 34 37.5	+0.9
TLY				pmax	pmax		
	comp=Z,3.0nm,0.7s						
H11N2	WAKE ISLAND Hy	29.97	128	T	T	14 07 27.9	
	baz=321,slow=75,SNR=142						
H11N1	WAKE ISLAND Hy	29.98	128	T	T	14 07 28.6	
	baz=321,slow=75,SNR=172						
H11N3	WAKE ISLAND Hy	29.99	128	T	T	14 07 26.4	
	baz=321,slow=75,SNR=76						
BILL	Bilibino	30.12	18	⇑eP	P	13 34 53.9	+1.1
BILL						13 35 53.0	
BILL				pmax	pmax		
	comp=Z,3.0nm,1.4s						
BILL				MLR	MLR		
	comp=Z,95nm,16.0s						
H11S1	WAKE ISLAND Hy	30.80	129	T	T	14 08 25.4	
	baz=324						
H11S3	WAKE ISLAND Hy	30.80	129	T	T	14 08 18.9	
	baz=324,slow=74						
H11S2	WAKE ISLAND Hy	30.82	129	T	T	14 08 19.6	
	baz=324,slow=74						
DGZ	Jazzator, Alta	38.58	302	i P	P	13 36 07.6	+1.4
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ZALV	Zalesovo Beam	39.70	309	P	P	13 36 15.5	+0.2
	comp=Z,3.6nm,0.4s,baz=92,slow=8.5,SNR=9.1						
ZALV				PcP	PcP	13 38 19.8	-0.9
	comp=Z,1.2nm,0.4s,baz=62,slow=2.2,SNR=4.1						
ZALV				LR	LR	13 52 39.5	
	comp=Z,40nm,18.7s,baz=260,slow=36						
ZALV	Zalesovo Beam	39.70	309	eP	P	13 36 15.0	-0.3
ZALV				PcP	PcP	13 38 19.8	-0.9
MK01	Makanchi Array	42.53	299	eP	P	13 36 38.5	-0.2
MKAR	Makanchi Array	42.53	299	P	P	13 36 38.8	+0.1
	comp=Z,3.1nm,0.6s,baz=86,slow=10.0,SNR=14						
MKAR				PcP	PcP	13 38 29.8	-0.4
	comp=Z,0.4nm,0.5s,baz=77,slow=4.1,SNR=3.8						
MAKZ	Makanchi	42.74	299	eP	P	13 36 39.8	-0.5
	comp=Z,14nm,1.4s						
MAKZ	Makanchi	42.74	299	eP	P	13 36 39.8	-0.5
MAKZ				pmax	pmax		
	comp=Z,14nm,1.4s						
CHTO	Chiang Mai	42.84	252	eP	P	13 36 41.8	+0.4
	comp=Z,3.4nm,0.7s						
CHTO	Chiang Mai	42.84	252	eP	P	13 36 41.8	+0.4
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CMAR	Chiang Mai Arr	43.07	252	P	P	13 36 43.6	+0.4
	comp=Z,1.6nm,0.8s,baz=43,slow=6.9,SNR=10						
CMAR	Chiang Mai Arr	43.07	252	P	P	13 36 43.7	+0.4
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CM01	Chiang Mai Arr	43.08	252	eP	P	13 36 43.8	+0.4
KURK	Kurchatov	43.96	305	eP	P	13 36 49.5	-0.6
	comp=Z,6.0nm,0.7s						
KURK				PcP	PcP	13 38 35.1	+0.3
KURK	Kurchatov	43.96	305	ceP	P	13 36 49.7	-0.4
KURK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KURBB	Kurchatov Arra	44.04	305	P	P	13 36 50.7	+0.1
	comp=Z,7.1nm,0.7s,baz=78,slow=8.8,SNR=22						
KURBB				PcP	PcP	13 38 35.1	0.0
	comp=Z,1.1nm,0.7s,baz=81,slow=3.3,SNR=4.4						
MDM	Murphy Dome	45.36	34	eP	P	13 37 02.2	+1.1
	comp=Z,4.1nm,1.0s						
IL1	Eielson Array	45.94	34	eP	P	13 37 06.6	+0.9
ILAR	Eielson Array	45.94	34	P	P	13 37 06.1	+0.4
	comp=Z,1.0nm,0.7s,baz=268,slow=6.0,SNR=18						
ILB	Eielson Array	45.94	34	eP	P	13 37 05.8	+0.1
JIRN	Jiri	47.24	272	eP	P	13 37 17.8	+1.0
	comp=Z,17nm,0.3s						
RAMN	Ramite	47.31	271	eP	P	13 37 17.6	+0.5
	comp=Z,29nm,0.6s						
GUN	Gumba	47.35	272	eP	P	13 37 18.0	+0.5
	comp=Z,61nm,0.5s						
KKN	Kakani	47.87	273	eP	P	13 37 21.8	+0.4
	comp=Z,26nm,0.6s						
PKIN	Phulchoki	47.89	272	eP	P	13 37 22.2	+0.6
	comp=Z,12nm,0.5s						
DMN	Daman	48.09	273	eP	P	13 37 23.6	+0.4
	comp=Z,9.8nm,0.5s						
GKN	Gorkha	48.24	273	eP	P	13 37 24.3	+0.1
	comp=Z,17nm,0.5s						
BVAR	Borovoye Array	48.34	310	P	P	13 37 24.5	+0.1
	comp=Z,5.0nm,0.3s,baz=75,slow=8.3,SNR=25						
BRVK	Borovoye	48.39	310	eP	P	13 37 23.8	-1.0
	comp=Z,4.3nm,0.4s						
BRVK	Borovoye	48.39	310	eP	P	13 37 23.8	-1.0
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.4s						
DANN	Dangsing	48.73	274	eP	P	13 37 28.9	+0.8
	comp=Z,123nm,0.5s						
KOLN	Koldanda	49.15	274	eP	P	13 37 31.7	+0.5
	comp=Z,9.7nm,0.4s						
KSH	Kashi	49.32	291	P	P	13 37 36.0	+3.7
KSH				PcP	PcP	13 38 54.9	+0.7
KSH				PcS	PcS	13 42 50.6	-0.3
KSH				S	S	13 44 35.8	+1.5
KSH				ScS	ScS	13 47 11.3	-7.3
KSH				pmax	pmax		
	comp=Z,150nm,5.7s						
PYUN	Piuthan	49.44	274	eP	P	13 37 33.5	+0.1
INK	Inuvik	50.68	29	P	P	13 37 42.5	+0.5
	comp=Z,3.8nm,0.8s,baz=276,slow=6.2,SNR=13						
KK31	Karatay Array	51.63	298	eP	P	13 37 49.1	-0.5
KK31	Karatay Array	51.63	298	eP	P	13 37 49.1	-0.5
KKAR	Karatay Array	51.63	298	eP	P	13 37 49.0	-0.6
KKAR	Karatay Array	51.63	298	eP	P	13 37 49.0	-0.6
ARU	Arti	53.76	317	eP	P	13 38 04.9	-0.2
	comp=Z,6.5nm,0.8s						
ARU	Arti	53.76	317	c iP	P	13 38 05.3	+0.3
ARU				*PP	pP	13 38 21.7	+0.5
ARU						13 40 05.9	
ARU				S	S	13 45 35.5	+0.9
ARU				SS	SKiKP	13 49 12.7	0.0
ARU				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ABKAR	Akbulak array	55.81	308	eP	P	13 38 19.9	-0.1
AKTO	Aktyubinsk	56.44	310	P	P	13 38 24.4	-0.1
	comp=Z,2.6nm,0.7s,baz=62,slow=14,SNR=7.4						
PRGR	Permogore	57.74	326	eP	P	13 38 32.8	-0.6
PRGR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
RES	Resolute Bay	58.67	15	P	P	13 38 38.2	-1.5
	comp=Z,3.0nm,0.8s,baz=316,slow=8.6,SNR=3.4						
ARCES	ARCESS Array B	60.48	339	P	P	13 38 52.1	-0.2
	comp=Z,4.8nm,1.0s,baz=59,slow=8.4,SNR=7.9						
KLMR	Klimovskoe	60.70	327	eP	P	13 38 52.4	-1.4
KLMR				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KLMR	Klimovskoe	60.70	327	eP	P	13 38 52.4	-1.4
KLMR				AMP		13 38 54.4	
	comp=Z,8.0nm,1.3s						
WRA	Warramunga Arr	61.03	188	P	P	13 38 55.6	-0.9
	comp=Z,0.9nm,0.4s,baz=5.8,slow=6.8,SNR=20						
GEYT	Alibeck	62.39	297	P	P	13 39 05.2	-0.5
	comp=Z,1.7nm,0.6s,baz=297,slow=6.5,SNR=4.0						
ASAR	Alice Springs	64.75	188	P	P	13 39 20.7	-0.5
	comp=Z,1.1nm,0.7s,baz=3.7,slow=7.0,SNR=16						
OBN	Obninsk	65.24	322	eP	P	13 39 24.3	+0.3
OBN						13 39 56.0	
OBN				S	S	13 48 01.0	-1.4
OBN				pmax	pmax		
	comp=Z,14nm,0.6s						
OBN				MLR	MLR		
	comp=Z,41nm,17.0s						
FIA1	FINESS Array S	65.56	332	eP	P	13 39 25.9	-0.1
	comp=Z,14nm,0.6s						
FINES	FINESS Array B	65.56	332	P	P	13 39 25.4	-0.5
	comp=Z,16nm,0.7s,baz=44,slow=7.4,SNR=49						
VSU	Vasula	67.31	329	ceP	P	13 39 38.3	+1.1
VSU				pmax	pmax		
	comp=Z,53nm,2.5s						
KIV	Kislovodsk	68.70	310	eP	P	13 39 48.4	+2.0
KIV				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KBZ	Khabaz	68.72	310	P	P	13 39 47.1	+0.9
	comp=Z,3.8nm,0.7s,baz=55,slow=3.6,SNR=7.0						
NC204	NORSAR Array S	70.68	337	eP	P	13 39 58.0	-0.2
HFS	Hagfors	70.70	335	P	P	13 39 58.3	+0.1
	comp=Z,3.3nm,0.3s,baz=52,slow=7.5,SNR=32						
NB2	NORSAR Subarra	70.74	337	P	P	13 39 58.4	-0.1
	comp=Z,1.1nm,0.4s,baz=35,slow=6.5						
AKASG	Malin Array Be	71.48	322	P	P	13 40 03.2	+0.1
	comp=Z,3.1nm,0.5s,baz=45,slow=6.0,SNR=16						
AKBB	Malin Array Si	71.48	322	eP	P	13 40 02.9	-0.2
KIEV	Kiev	71.49	322	eP	P	13 40 02.6	-0.6
	comp=Z,5.6nm,0.8s						
KIEV	Kiev	71.49	322	eP	P	13 40 02.6	-0.6
KIEV				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BUR08	Bucovina Ar. S	75.50	321	eP	P	13 40 26.7	-0.3
BUR04	Bucovina Ar. S	75.52	321	eP	P	13 40 27.0	0.0
CLL	Collm	77.92	330	i P	P	13 40 40.9	+0.6
	comp=Z,5.0nm,1.0s						
CLL				LmV		14 04 00.0	
	comp=Z,200nm,19.0s						
CLL	Collm	77.92	330	i P	P	13 40 40.9	+0.6
CLL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KHC	Kasperske Hory	79.43	328	eP	P	13 40 49.8	+1.0
KHC	Kasperske Hory	79.43	328	eP	P	13 40 49.0	+0.3
	comp=Z,1.0nm,0.6s						
KHC	Kasperske Hory	79.43	328	eP	P	13 40 49.8	+1.0
GERES	GERESS Array B	79.61	328	P	P	13 40 48.8	-1.0
	comp=Z,0.6nm,0.4s,baz=35,slow=4.9,SNR=4.9						
319A	Douglas	82.48	55	eP	P	13 41 08.0	+2.6
	comp=Z,11nm,1.0s						
SNAA	Sanae	144.65	198	PKP	PKPab	13 48 16.5	0.0
	comp=Z,3.2nm,0.9s,baz=143,slow=3.9,SNR=13						
SNAA	Sanae	144.65	198	ePKPdf	PKPbc	13 48 17.0	+0.3

PGC ***04*** *13:35:43.4±1.3, 50°.46N×130°.15W, h10^{km}, MLSn3.8/35, Mw4.6, 194km west of Pt. Hardy, Bc Vancouver Island, Canada Region*

IDC ***04*** *13:35:43.0±0.7, 50°.46N×130°.16W, h0^{km}, mb4.0/15, mb1 4.3/24, mb1mx4.1/76, mbtmp4.1/24, ML4.2/7, MS3.6/28, Ms1 3.6/28, ms1mx3.4/61, Error ellipse: s-maj=15.9km s-min=9.3km az=46.0*

ISCJB ***04*** *13:35:45.7±0.7, 50°.60N±0°.02×129°.71W±0°.04, h19^{km}±5^{km}, mb4.5/67, MS3.6/21, Error ellipse: s-maj=4.7km s-min=2.2km az=142.2*

NEIC ***04*** *13:35:46.8±0.2, 50°.63N×129°.66W, h10^{km}, mb4.3/123, MW4.6(OTT), Error ellipse: s-maj=4.9km s-min=1.9km az=50.0*

ISC 04 13:35:46.3±2.0, **50°.63N**±0°.05×**129°.77W**±0°.05, **h15**^{km}±13^{km}, **n375,** σ1^{s}**19**/364, **mb4.6**/67, **MS3.6**/21, **Vancouver Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOLB	Holberg	1.04	89	P	Pb	13 36 05.7	-0.4
HOLB				S	Sn	13 36 20.9	+0.1
BPBC	Brooks Peninsu	1.36	109	Pn	Pn	13 36 08.4	-2.4
BPBC				Sn	Sb	13 36 27.2	-1.5
PHC	Port Hardy	1.49	86	Pn	Pn	13 36 12.1	-0.4
PHC				Sn	Sg	13 36 32.5	-1.7
PHC	Port Hardy	1.49	86	ePn	Pn	13 36 12.3	-0.2
MAYB	Maynard	1.67	97	Pn	Pn	13 36 14.1	-1.1
EDB	Eliza Dome	1.86	113	Pn	Pn	13 36 15.0	-2.6
EDB				Sn	Sn	13 36 37.7	-3.1
EDB	Eliza Dome	1.86	113	ePn	Pn	13 36 15.2	-2.4
BBB	Bella Bella	1.87	33	Pn	Pn	13 36 18.4	+0.6
	76nm,0.3s,baz=226,slow=15,SNR=1290						
BBB				Sn	Sn	13 36 41.4	+0.2
	239nm,0.3s,baz=330,slow=20,SNR=32						
BBB				LR	LR	13 37 19.2	
	comp=Z,636nm,18.0s,baz=72,slow=45						
BBB	Bella Bella	1.87	33	Pn	Pn	13 36 18.3	+0.5
BBB				Sn	Sn	13 36 41.4	+0.2
WOSB	Woss	2.10	102	Pn	Pn	13 36 20.1	-0.9
BNB	Barry Inlet	2.31	328	Pn	Pn	13 36 20.0	-3.9
BNB				Sn	Sn	13 36 47.2	-5.0
NCRB	Newcastle Ridg	2.38	94	Pn	Pn	13 36 24.4	-0.5
ETB	Estevan Point	2.43	120	Pn	Pn	13 36 23.1	-2.4
GDR	Gold River	2.54	108	Pn	Pn	13 36 25.6	-1.5
KEMF	NEPTUNE Canada	2.72	171	Pn	Pn	13 36 23.1	-6.0
NC89	ODP889	2.73	135	Pn	Pn	13 36 27.5	-1.8
CBB	Campbell River	2.88	100	Pn	Pn	13 36 31.4	-0.3
TOFB	Tofino	2.90	119	Pn	Pn	13 36 30.2	-1.6
BNAB	Bonilla	2.92	350	Pn	Pb	13 36 37.0	-1.1
BTB	Buttle Lake	2.97	111	Pn	Pn	13 36 31.5	-1.5
MWAB	Mount Washingt	3.00	105	Pn	Pn	13 36 32.7	-0.7
DIB	Dawson Inlet,	3.08	328	Pn	Pn	13 36 30.6	-3.8
DIB	Dawson Inlet,	3.08	328	ePn	Pn	13 36 30.8	-3.5
NCBC	Barkley Canyon	3.21	132	Pn	Pn	13 36 35.2	-0.9
B012	Ucluelet	3.22	120	Pn	Pn	13 36 35.3	-1.1
OZB	Mount Ozzard	3.23	119	Pn	Pn	13 36 34.1	-2.5
ALB	Alberni	3.46	111	Pn	Pn	13 36 38.8	-0.9
B927	Port Alberni	3.50	112	Pn	Pn	13 36 38.7	-1.4
B928	Bamfield	3.50	119	Pn	Pn	13 36 38.7	-1.4
TXB	Texada	3.55	103	Pn	Pn	13 36 40.2	-0.7
MGB	Mount Grey	3.67	114	Pn	Pn	13 36 41.5	-1.1
RUBB	Prince Rupert	3.72	356	Pn	Pn	13 36 42.6	-0.6
RUBB				Sn	Sn	13 37 25.3	-1.4
GHNB	Nanoose	3.81	108	Pn	Pn	13 36 43.3	-1.1
SHB	Sechelt	3.93	103	Pn	Pn	13 36 45.2	-0.9
YOUB	Youbou, Lake C	3.96	114	Pn	Pn	13 36 46.1	-0.5
NLLB	Nanaimo Lost L	3.99	108	Pn	Pn	13 36 45.7	-1.2
B926	Mesachie Lake	4.08	114	Pn	Pn	13 36 48.1	0.0
UBRB	Upper Baezaeko	4.20	55	Pn	Pn	13 36 52.8	+2.9
WPB	Watts Point	4.33	100	Pn	Pn	13 36 51.5	-0.1
BIB	Bowen Island	4.34	104	Pn	Pn	13 36 50.4	-1.3
LZB	Mount Lazard	4.36	115	Pn	Pn	13 36 51.7	-0.4
GOBB	Galiano Island	4.39	110	Pn	Pn	13 36 51.0	-1.4
OFR	Olym-F Res Ctr	4.43	125	Pn	Pn	13 36 52.5	-0.4
OBC	Olympics--Boni	4.53	123	Pn	Pn	13 36 54.3	-0.1
B010	North Saanich	4.55	113	Pn	Pn	13 36 53.6	-1.0
B009	North Saanich	4.55	113	Pn	Pn	13 36 54.6	0.0
PGC	Sidney	4.55	113	Pn	Pn	13 36 54.1	-0.5
PGC	Sidney	4.55	113	ePn	Pn	13 36 54.0	-0.6
B011	North Saanich	4.56	113	Pn	Pn	13 36 53.8	-0.9
SNB	Saturna Island	4.66	111	Pn	Pn	13 36 56.3	+0.2
VGZ	Gonzales	4.74	115	Pn	Pn	13 36 56.5	-0.8
OSD	Olympics--Snow	4.86	123	Pn	Pn	13 36 58.8	-0.4
MCW	Mount Constitu	4.91	111	Pn	Pn	13 36 58.8	-0.7
MCW	Mount Constitu	4.91	111	ePn	Pn	13 37 00.3	+0.8
LLLB	Lillooet	5.02	87	Pn	Pn	13 37 02.1	+1.0
LLLB	Lillooet	5.02	87	ePn	Pn	13 37 01.9	+0.7
NLWA	Neilton Lookou	5.05	128	ePn	Pn	13 37 01.1	-0.5
	22nm,0.8s						
BLN	Blyn Mountain	5.16	118	Pn	Pn	13 37 02.0	-1.0
VDB	Vedder Mountai	5.21	105	Pn	Pn	13 37 04.5	+0.8
CRAG	Craig	5.26	339	ePn	Pn	13 37 02.4	-1.9
HDW	Hoodsport	5.32	122	Pn	Pn	13 37 05.2	-0.1
HDW	Hoodsport	5.32	122	ePn	Pn	13 37 05.7	+0.5
SMW	South Mountain	5.37	126	Pn	Pn	13 37 06.3	+0.3
MBW	Mount Baker	5.43	107	Pn	Pn	13 37 07.2	+0.3
MBW	Mount Baker	5.43	107	ePn	Pn	13 37 07.6	+0.8
HOPB	Hope	5.52	100	Pn	Pn	13 37 08.4	+0.4
SHUK	Shuksan-Mt. Ba	5.54	106	ePn	Pn	13 37 09.5	+1.2
JCW	Jim Creek	5.66	112	Pn	Pn	13 37 10.4	+0.4
JCW	Jim Creek	5.66	112	ePn	Pn	13 37 10.6	+0.6
B06A	Marblemount	5.79	108	Pn	Pn	13 37 11.9	+0.3
B06A	Marblemount	5.79	108	ePn	Pn	13 37 11.8	+0.3
E03A	Lebam	5.80	132	Pn	Pn	13 37 09.6	-2.2
E03A	Lebam	5.80	132	ePn	Pn	13 37 12.2	+0.5
WRAK	Wrangell Islan	6.00	346	ePn	Pn	13 37 13.5	-1.1
	38nm,0.5s						
C05A	Tolt Reservoir	6.05	116	Pn	Pn	13 37 15.4	+0.1
GPW	Glacier Peak	6.17	111	Pn	Pn	13 37 17.4	+0.3
D05A	Enumclaw	6.17	121	Pn	Pn	13 37 18.1	+1.2
D05A	Enumclaw	6.17	121	ePn	Pn	13 37 18.0	+1.1
OBSR	Observation Ro	6.44	122	ePn	Pn	13 37 21.9	+1.1
FMW	Mount Fremont	6.50	122	Pn	Pn	13 37 22.0	+0.4
LON	Longmire	6.54	123	Pn	Pn	13 37 22.4	+0.4
LON	Longmire	6.54	123	ePn	Pn	13 37 22.5	+0.4
PNT	Penticton	6.68	97	Pn	Pn	13 37 24.9	+1.1
LTY	Liberty	6.87	116	Pn	Pn	13 37 27.1	+0.5
LTY	Liberty	6.87	116	ePn	Pn	13 37 27.4	+0.8
TBM	Table Mountain	6.96	116	ePn	Pn	13 37 29.9	+2.1
WTV	Waterville	7.07	111	ePn	Pn	13 37 31.5	+2.2
EBG	Ellensburg	7.12	118	ePn	Pn	13 37 32.8	+2.8
B08A	Colville Reser	7.16	104	Pn	Pn	13 37 31.0	+0.4
B08A	Colville Reser	7.16	104	ePn	Pn	13 37 30.7	+0.1
MNB	Mounoet Dainar	7.29	73	Pn	Pn	13 37 36.1	+3.7
COR	Corvallis	7.45	142	ePn	Pn	13 37 36.2	+1.8
DLBC	Dease Lake	7.83	359	Pn	Pn	13 37 41.1	+1.4
	5.0nm,0.3s,baz=185,slow=14,SNR=74						
DLBC				Sn	Sn	13 39 08.8	+0.8
	0.1nm,0.3s,baz=131,slow=19,SNR=1.5						
DLBC	Dease Lake	7.83	359	Pn	Pn	13 37 41.8	+2.1
DLBC	Dease Lake	7.83	359	ePn	Pn	13 37 41.6	+2.0
	22nm,0.6s						
DLBC				Sn	Sn	13 39 08.8	+0.8
H04A	Detroit Lake	7.84	136	ePn	Pn	13 37 41.1	+1.2
D08A	Wollman Farm,	8.00	112	ePn	Pn	13 37 42.0	+0.1
HAWA	Hanford	8.01	118	ePn	Pn	13 37 42.7	+0.6
	9.2nm,0.6s						
C09A	Chrisman Ranch	8.04	106	Pn	Pn	13 37 42.4	-0.1
C09A	Chrisman Ranch	8.04	106	ePn	Pn	13 37 42.7	+0.2
F07A	Phinny Hill Vi	8.09	122	ePn	Pn	13 37 44.0	+0.8
JIS	Juneau Island	8.12	342	ePn	Pn	13 37 43.1	-0.5
G06A	Carlson Farm,	8.16	128	ePn	Pn	13 37 44.6	+0.3
E08A	Dider Farm, El	8.22	116	ePn	Pn	13 37 45.0	+0.1
IRO	Indian Ridge	8.36	140	eSn	Sn	13 39 23.4	+2.2
BESE	Bessie Mountai	8.50	342	ePn	Pn	13 37 48.8	0.0
NEW	Newport	8.57	101	Pn	Pn	13 37 51.2	+1.4
	0.8nm,0.3s,baz=282,slow=12,SNR=12						
NEW				LR	LR	13 41 11.1	
	comp=Z,781nm,19.9s,baz=282,slow=37						
NEW	Newport	8.57	101	ePn	Pn	13 37 50.6	+0.7
	18nm,0.9s						
KEBM	Edson Butte	8.60	152	ePn	Pn	13 37 50.2	-0.1
E09A	Wood Farm, Sta	8.73	114	ePn	Pn	13 37 51.7	-0.3
G08A	Pilot Rock	9.00	122	ePn	Pn	13 37 55.8	0.0
FNBB	Fort Nelson	9.15	23	Pn	Pn	13 37 59.3	+1.5
SKAG	Skagway	9.41	342	ePn	Pn	13 38 03.5	+2.3
I07A	Izee	9.55	129	ePn	Pn	13 38 02.6	-0.8
F10A	Beach Ranch, E	9.56	114	ePn	Pn	13 38 03.2	-0.3
PRDA	Priddis	9.81	83	Pn	Pn	13 38 12.2	+5.2
BHMT	Big Hole Peak	10.13	102	Pn	Pn	13 38 12.6	+1.4
YBH	Yreka Blue Hor	10.15	149	Pn	Pn	13 38 13.4	+2.0
	0.4nm,0.3s,baz=337,slow=12,SNR=5.7						
YBH	Yreka Blue Hor	10.15	149	ePn	Pn	13 38 13.2	+1.7
BMO	Blue Mountains	10.18	120	ePn	Pn	13 38 10.5	-1.5
	4.0nm,0.7s						
BSMT	Bassoo Peak	10.18	100	Pn	Pn	13 38 13.7	+1.6
JTMT	Jette	10.54	100	Pn	Pn	13 38 18.2	+1.3
JTMT	Jette	10.54	100	ePn	Pn	13 38 18.0	+1.2
FBMT	Ferry Basin	10.58	102	Pn	Pn	13 38 17.8	+0.3
J08A	Circle Bar Ran	10.59	129	ePn	Pn	13 38 18.4	+0.8
JCC	Jacoby Creek,	10.59	156	ePn	Pn	13 38 19.9	+2.4
KHMM	Horse Mountain	10.62	154	ePn	Pn	13 38 20.8	+2.7
SWMT	Swartz Lake	10.80	101	Pn	Pn	13 38 21.6	+1.1
MSO	Missoula	11.12	104	ePn	Pn	13 38 25.4	+0.6
SLMT	Seeley Lake	11.22	101	Pn	Pn	13 38 27.1	+0.8
KMRM	Mail Ridge	11.24	156	ePn	Pn	13 38 29.5	+3.1
WDC	Whiskeytown Da	11.24	151	ePn	Pn	13 38 28.3	+1.9
BPMT	Black Pine Rid	11.60	105	Pn	Pn	13 38 32.2	+0.7
KCPM	Cahto Peak	11.77	156	ePn	Pn	13 38 35.3	+1.6
MFID	Camas Ranch	11.93	122	ePn	Pn	13 38 34.8	-1.0
	5.2nm,0.9s						
HRY	Holter Researc	12.48	101	ePn	Pn	13 38 43.9	+0.5
LRM	Limekiln Ridge	12.50	106	ePn	Pn	13 38 44.2	+0.4
ORV	Oroville	12.51	149	ePn	Pn	13 38 45.4	+1.7
BALM	Baldy	12.57	331	ePn	Pn	13 38 48.2	+3.6
HLID	Hailey	12.61	118	ePn	Pn	13 38 46.2	+1.0
	6.4nm,0.8s						
CRQM	Cirque	12.62	329	ePn	Pn	13 38 44.4	-0.9
BEKR	Beckworth	12.62	145	ePn	Pn	13 38 46.5	+1.1
DLMT	Dillon	12.64	108	ePn	Pn	13 38 46.0	+0.4
MCMT	McKenzie Canyo	12.77	110	ePn	Pn	13 38 48.1	+0.6
RAGM	Ragged Mountai	12.89	325	ePn	Pn	13 38 51.5	+2.7
BOZ	Bozeman (W)	13.11	106	ePn	Pn	13 38 51.9	-0.2
	7.3nm,1.0s						
PAHR	Pah Rah Range	13.13	142	ePn	Pn	13 38 53.8	+1.5
BMRM	Bremner River	13.27	327	ePn	Pn	13 38 56.4	+2.4
EGMT	Eagleton	13.31	94	ePn	Pn	13 38 55.8	+1.1
	34nm,1.0s						
VCNR	Virginia City	13.39	144	ePn	Pn	13 38 56.0	+0.2
MCCM	Marconi Confer	13.41	156	ePn	Pn	13 38 56.4	+0.4
RUBR	Rubicon Trail	13.42	146	ePn	Pn	13 38 57.1	+0.8
BMN	Battle Mountai	13.44	135	ePn	Pn	13 38 56.7	+0.1
PNTR	Pine Nut	13.59	144	ePn	Pn	13 38 58.9	+0.3
QLMT	Earthquake Lak	13.62	108	ePn	Pn	13 38 59.5	+0.4
YHB	Horse Butte	13.80	108	ePn	Pn	13 39 00.2	-1.4
YERR	Yerington	13.81	143	ePn	Pn	13 39 01.2	-0.5
YMR	Madison River	13.99	108	ePn	Pn	13 39 05.1	+1.0
KLU	Klutina	14.09	327	ePn	Pn	13 39 06.5	+1.3
ELK	Elko	14.14	129	Pn	Pn	13 39 10.1	+3.8
	0.1nm,0.3s,baz=352,slow=14,SNR=3.4						
ELK				LR	LR	13 44 29.7	
	comp=Z,170nm,20.1s,baz=32,slow=37						
YFT	Old Faithful	14.18	109	ePn	Pn	13 39 06.7	-0.1
KVN	Kaiserville	14.21	140	ePn	Pn	13 39 06.8	-0.3
YPP	Pitchstone Pla	14.30	109	ePn	Pn	13 39 09.4	+1.0
H17A	Grant Village	14.37	108	ePn	Pn	13 39 10.3	+1.0
RYN	Ryan	14.40	142	ePn	Pn	13 39 10.6	+0.9
DAWY	Dawson	14.41	343	Pn	Pn	13 39 09.9	+0.3
IMW	Indian Meadow	14.43	111	ePn	Pn	13 39 10.7	+0.6
FLWY	Flagg Ranch	14.46	110	ePn	Pn	13 39 11.4	+0.8
YKA	Yellowknife Ar	14.48	29	Pn	Pn	13 39 11.1	+0.6
	0.4nm,0.3s,baz=219,slow=12,SNR=9.2						
YKA				Sn	Sn	13 41 47.9	-2.7
	0.3nm,0.3s,baz=222,slow=23,SNR=5.2						
YKA				LR	LR	13 44 21.2	
	comp=Z,11nm,20.9s,baz=221,slow=35						
YKW1	Yellowknife Ar	14.51	29	Pn	Pn	13 39 10.5	-0.5
FXWY	Fox Creek	14.52	112	ePn	Pn	13 39 12.9	+1.5
YKW3	Yellowknife Ar	14.53	29	Pn	Pn	13 39 11.2	0.0
MOOW	Moose Ponds	14.62	111	ePn	Pn	13 39 14.3	+1.5
TPAW	Teton Pass	14.65	112	ePn	Pn	13 39 14.7	+1.4
NV01	Mina Array Sit	14.66	142	ePn	Pn	13 39 13.7	+0.5
NVAR	Mina Array Bea	14.66	142	Pn	Pn	13 39 14.4	+1.2
	0.1nm,0.3s,baz=330,slow=8.6,SNR=12						
NV11	Mina Array Sit	14.71	142	ePn	Pn	13 39 14.9	+0.9
SNOW	Snow King Moun	14.78	112	ePn	Pn	13 39 15.6	+0.5
REDW	Red Top Meadow	14.79	112	ePn	Pn	13 39 15.7	+0.7
LOHW	Long Hollow	14.79	111	ePn	Pn	13 39 16.4	+1.3
RLMT	Red Lodge	14.80	104	eP	Pn	13 39 15.4	+0.2
	44nm,1.3s						
SCM	Sheep Creek Mo	14.82	326	ePn	Pn	13 39 17.9	+2.7

AHID	Auburn Hatcher 49nm,1.1s	15.00	114	*e*P	P	13 39 21.0	-2.3
MDPB	Devils Postpil 6.4nm,0.9s	15.06	145	*e*Pn	Pn	13 39 21.6	+2.8
KDAK	Kodiak Island 0.4nm,0.3s,baz=89,slow=15,SNR=6.2	15.10	307	Pn	Pn	13 39 19.9	+1.0
KDAK	comp=Z,207nm,19.4s,baz=184,slow=32			LR	LR	13 43 35.7	
PMR	Palmer 17nm,1.2s	15.33	323	*e*Pn	Pn	13 39 24.1	+2.2
GHO	Glory Hole Cre 20nm,1.1s	15.36	324	*e*Pn	Pn	13 39 25.2	+2.7
EGAK	Eagle 16nm,0.8s	15.40	341	*e*P	Pn	13 39 23.9	+1.2
HWUT	Hardware Ranch 28nm,1.3s	15.48	119	*e*Pn	Pn	13 39 24.4	+0.3
DHY	Denali Highway 30nm,1.2s	15.68	329	*e*Pn	Pn	13 39 29.9	+3.2
DUG	Dugway, Tooele 26nm,1.1s	15.79	125	*e*Pn	Pn	13 39 28.1	-0.1
R11A	Troy Canyon, C 10nm,1.5s	15.87	135	*e*Pn	Pn	13 39 28.7	-0.6
TCUT	Toone Canyon 15nm,0.9s	15.89	120	*e*Pn	Pn	13 39 31.6	+2.0
BW06	Boulder Array 43nm,1.2s	15.90	112	*e*P	P	13 39 32.5	-0.8
PD31	Pinedale Array	15.90	112	*e*Pn	P	13 39 32.5	-0.9
PDAR	Pinedale Array 0.3nm,0.3s,baz=303,slow=12,SNR=104	15.90	112	Pn	P	13 39 32.8	-0.6
PDAR	comp=Z,240nm,18.6s,baz=316,slow=38			LR	LR	13 45 47.3	
PDAR	Pinedale Array	15.90	112	*e*Pn	P	13 39 32.3	-1.1
LAO	LASA Array 16nm,0.8s	16.02	95	*e*Pn	Pn	13 39 31.1	0.0
JLU	Jordanelle 11nm,1.0s	16.23	121	*e*Pn	Pn	13 39 33.9	0.0
NLU	North Lily Min 18nm,0.9s	16.35	124	*e*Pn	P	13 39 39.0	+0.6
PAGB	Antelope Grade 30nm,1.0s	16.40	152	*e*Pn	P	13 39 39.3	+0.6
SKT	Skwentna 20nm,1.4s	16.49	322	*e*Pn	P	13 39 41.2	+1.7
HDA	Harding Lake 12nm,0.9s	16.52	333	*e*Pn	P	13 39 41.1	+1.3
PSUT	Pine Spring 10nm,1.0s	16.53	131	*e*Pn	P	13 39 41.2	+1.0
MCK	McKinley 19nm,1.0s	16.65	329	*e*Pn	P	13 39 42.7	+1.5
DGMT	Dagmar 49nm,0.8s	16.71	87	*e*P	P	13 39 41.9	-0.2
TPNV	Topopah Spring 35nm,1.4s	16.76	140	*e*Pn	Pn	13 39 41.4	+0.8
IL1	Eielson Array	16.78	334	*e*Pn	P	13 39 44.5	+1.8
ILAR	Eielson Array 0.4nm,0.3s,baz=153,slow=11,SNR=42	16.78	334	Pn	Pn	13 39 42.2	+1.7
ILAR	comp=Z,117nm,20.9s,baz=288,slow=36			LR	LR	13 45 53.4	
ILB	Eielson Array	16.78	334	*e*Pn	Pn	13 39 41.4	+0.8
WRH	Wood River Hil 20nm,1.2s	16.91	332	*e*Pn	P	13 39 44.5	+0.4
TRF	Thorofare Moun 20nm,1.2s	16.91	327	*e*Pn	P	13 39 45.0	+0.7
CCB	Clear Creek Bu 6.1nm,0.8s	16.95	333	*e*Pn	P	13 39 45.4	+0.9
ISA	Isabella, Lake 20nm,1.2s	17.04	147	*e*Pn	P	13 39 46.3	+0.4
COLA	College 11nm,0.7s	17.13	333	*e*Pn	Pn	13 39 46.7	+1.8
TCRU	Three Creeks R 22nm,1.3s	17.16	128	*e*Pn	Pn	13 39 46.8	+1.1
KTH	Kantishna Hill 21nm,1.0s	17.20	327	*e*Pn	Pn	13 39 47.4	+1.6
DHRN	Dharma Camp	17.25	14	Pn	Pn	13 39 47.0	+0.6
PPLA	Purkeypile 21nm,1.2s	17.26	324	*e*Pn	Pn	13 39 47.0	+0.3
FFC	Flin Flon 22nm,0.8s	17.29	66	*e*Pn	Pn	13 39 46.5	-0.5
TMUT	Trail Mountain 9.7nm,1.2s	17.29	124	*e*Pn	Pn	13 39 45.3	-2.1
MDM	Murphy Dome 14nm,1.0s	17.30	333	*e*Pn	Pn	13 39 47.2	+0.1
MSU	Marysvale	17.37	127	*e*Pn	Pn	13 39 47.8	-0.6
P17A	Butcher Ranch, 11nm,0.9s	17.41	123	*e*Pn	Pn	13 39 47.8	-1.0
CAST	Castle Rocks 8.9nm,1.0s	17.53	325	*e*Pn	Pn	13 39 50.2	+0.3
CCUT	Cedar City 17nm,1.4s	17.55	132	*e*Pn	Pn	13 39 48.7	-1.8
P18A	Preston Nutter 24nm,1.6s	17.57	121	*e*Pn	Pn	13 39 49.0	-1.8
BPAW	Bear Paw Mtn. 14nm,1.2s	17.57	328	*e*Pn	Pn	13 39 51.3	+0.9
SHPR	Sheep Range 8.6nm,1.1s	17.59	138	*e*Pn	Pn	13 39 50.7	-0.3
SZCU	Shurtz Canyon 12nm,1.0s	17.64	131	*e*Pn	Pn	13 39 50.7	-1.0
MTPU	Mount Pierson 7.0nm,1.0s	17.73	128	*e*Pn	Pn	13 39 52.5	-0.5
SVW2	Sparrevohn 10nm,1.0s	17.75	316	*e*Pn	Pn	13 39 54.2	+1.5
SBC	Santa Barbara	17.76	152	*e*Pn	Pn	13 39 52.9	-0.1
SRU	San Rafael Swe 13nm,1.2s	17.79	123	*e*Pn	Pn	13 39 52.9	-0.5
K22A	Casper 31nm,0.9s	17.79	108	*e*Pn	Pn	13 39 53.7	+0.3
FYU	Fort Yukon 121nm,1.6s	17.81	340	*e*Pn	P	13 39 55.0	+1.0
INK	Inuvik 0.1nm,0.3s,baz=162,slow=11,SNR=11	17.83	355	P	P	13 39 55.0	+0.8
INK	comp=Z,262nm,20.3s,baz=170,slow=38			LR	LR	13 47 00.4	
INK	Inuvik	17.83	355	Pn	Pn	13 39 54.9	+1.3
INK	Inuvik 13nm,1.0s	17.83	355	*e*Pn	P	13 39 55.0	+0.8
RWWY	Rawlins 15nm,1.1s	17.94	111	*e*Pn	Pn	13 39 55.6	+0.2
GSC	Goldstone, Bar 9.8nm,1.1s	17.97	144	*e*Pn	Pn	13 39 56.5	+0.9
LCMT	Little Creek M 6.3nm,0.9s	18.03	133	*e*Pn	Pn	13 39 57.0	+0.5
MLY	Manley 10nm,0.9s	18.11	331	*e*Pn	Pn	13 39 58.1	+1.0
BALC	Balcom Canyon	18.12	150	*e*PcP	PcP	13 44 31.1	+0.4
KNB	Kanab 10nm,1.2s	18.23	132	*e*Pn	P	13 40 00.2	+1.1
O20A	White River Ci 28nm,1.2s	18.34	117	*e*P	P	13 40 01.0	+0.7
MWC	Mount Wilson 17nm,1.0s	18.49	148	*e*P	Pn	13 40 02.9	+0.8
PASC	Pasadena Art C 8.9nm,0.6s	18.50	148	*e*P	P	13 40 02.3	+0.5
RSSD	Black Hills 9.9nm,0.9s	18.54	101	*e*P	Pn	13 40 03.5	+0.7
KUKN	Kugluktuk,NWT	18.71	17	Pn	Pn	13 40 06.3	+2.0
LDFC	Landfair 15nm,1.0s	18.84	140	*e*P	P	13 40 06.4	+0.8
SNCC	San Nicolas Is 42nm,1.2s	18.93	153	*e*P	P	13 40 07.1	+0.5
U15A	North Rim 10.0nm,0.9s	18.95	132	*e*P	P	13 40 07.3	+0.2
PV09	Paradox Valley	18.98	122	*e*P	P	13 40 08.1	+0.7
PV10	Paradox Valley	19.12	122	*e*P	Pn	13 40 10.1	+0.3
N23A	Red Feather La 32nm,1.4s	19.18	111	*e*P	P	13 40 09.8	+0.2
PHWY	Pilot Hill 26nm,0.9s	19.22	110	*e*P	P	13 40 10.7	+0.7
PV05	Paradox Valley	19.30	123	*e*P	P	13 40 10.8	-0.1
PV03	Paradox Valley	19.31	122	*e*P	P	13 40 11.2	+0.2
W13A	Hualapai Mount 19nm,1.6s	19.33	137	*e*P	P	13 40 11.4	+0.1
PV02	Paradox Valley 7.1nm,0.8s	19.41	122	*e*P	P	13 40 12.8	+0.8
COLD	Coldfoot 23nm,1.1s	19.53	336	*e*P	Pn	13 40 15.4	+1.2
PV01	Paradox Valley	19.55	122	*e*P	P	13 40 14.0	+0.4
XPFO	Piæon Flat	19.61	145	*e*Pn	P	13 40 14.8	+0.6
SMCO	Snowmass 11nm,0.8s	19.70	117	*e*P	P	13 40 16.2	+0.8
MDND	Maddock 357nm,1.3s	19.82	86	*e*P	Pn	13 40 18.7	+0.8
CPE	Camp Elliot 24nm,1.5s	20.03	147	*e*P	P	13 40 18.4	-0.2
ISCO	Idaho Springs 7.1nm,0.9s	20.07	113	*e*P	P	13 40 20.7	+1.3
BAR	Barrett 13nm,1.4s	20.37	147	*e*P	P	13 40 23.1	+0.7
TOLK	Toolik Lake Re 36nm,1.1s	20.47	339	*e*P	P	13 40 25.1	+2.0
Y14A	Wickenburg 12nm,0.8s	20.70	137	*e*P	P	13 40 26.6	+0.7
GLA	Glamis 19nm,0.9s	20.72	142	*e*P	P	13 40 26.8	+0.6
S22A	4UR Ranch, Cre 27nm,1.4s	20.78	119	*e*P	P	13 40 27.3	+0.2
X16A	Lo Mia Camp, P 17nm,0.9s	21.00	134	*e*P	P	13 40 29.2	0.0
W18A	Petrified Fore 21nm,0.9s	21.24	129	*e*P	P	13 40 32.2	+0.3
ULM	Lac du Bonnet 21nm,0.6s,baz=287,slow=12,SNR=17	21.48	78	P	P	13 40 34.6	+0.4
ULM	comp=Z,269nm,19.8s,baz=304,slow=37			LR	LR	13 49 11.7	
ULM	Lac du Bonnet	21.48	78	Pn	P	13 40 34.0	-0.2
ULM	Lac du Bonnet 32nm,0.7s	21.48	78	*e*P	P	13 40 34.3	+0.1
OGNE	Ogallala 28nm,0.7s	21.51	106	*e*P	P	13 40 36.1	+1.4
SDCO	Great Sand Dun 7.4nm,0.8s	21.53	117	*e*P	P	13 40 35.0	0.0
X18A	Snowflake 18nm,0.8s	21.61	131	*e*P	P	13 40 36.5	+0.6
FCC	Fort Churchill	21.94	54	Pn	P	13 40 41.5	+2.6
FCC	Fort Churchill 16nm,0.9s	21.94	54	*e*P	P	13 40 40.7	+1.8
AGMN	Agassiz Nation 82nm,1.1s	22.05	83	*e*P	P	13 40 41.1	+0.9
T25A	Trinidad 37nm,1.6s	22.57	117	*e*P	P	13 40 46.9	+0.7
EPLO	Experimental L	22.98	78	Pn	P	13 40 49.9	-0.2
ANMO	Albuquerque 5.2nm,1.0s,baz=315,slow=10,SNR=15	23.06	124	P	P	13 40 52.1	+0.9
ANMO	comp=Z,126nm,18.0s,baz=313,slow=36			LR	LR	13 49 44.9	
ANMO	Albuquerque 11nm,1.2s	23.06	124	*e*P	P	13 40 51.0	-0.3
TUC	Tucson 41nm,1.4s	23.06	135	*e*P	P	13 40 50.2	-1.0
LAZ	Ladron	23.12	126	*e*P	P	13 40 53.0	+1.1
B35A	Bob, Littlefor 21nm,0.8s	23.38	81	*e*P	P	13 40 54.1	0.0
LENM	Lemitar	23.39	126	*e*P	P	13 40 54.7	+0.1
ECSD	EROS Data Cent 33nm,1.2s	23.42	94	*e*P	P	13 40 54.0	-0.7
LPM	Los Pinos Moun	23.45	125	*e*P	P	13 40 54.6	-0.6
BNM	Barren Site	23.58	125	*e*P	P	13 40 56.2	-0.3
SOLO	Sioux Lookout	23.90	77	Pn	P	13 40 59.4	+0.1
D36A	Goodland 20nm,1.0s	24.15	84	*e*P	P	13 41 01.8	+0.2
F36A	Milaca 33nm,1.4s	24.43	87	*e*P	P	13 41 05.2	+1.0
PKLO	Pickle Lake	24.59	73	P	P	13 41 06.4	+0.8
EYMN	Ely 10.0nm,0.6s	24.92	81	*e*P	P	13 41 09.7	+1.0
J36A	Seneca 1, Swea 17nm,0.8s	25.06	93	*e*P	P	13 41 10.7	+0.8
SPMN	Marine on St. 13nm,0.8s	25.16	88	*e*P	P	13 41 12.0	+1.1
E38A	The Farm, Brul 26nm,1.5s	25.39	84	*e*P	P	13 41 13.3	+0.5
TBO	Thunder Bay	25.99	79	P	P	13 41 20.0	+1.6
MNTX	Cornudas Mount 11nm,1.0s	26.16	127	*e*P	P	13 41 19.8	-0.1
K38A	Parkersburg 31nm,0.7s	26.40	93	*e*P	P	13 41 22.6	+0.5
I39A	Houston 27nm,0.8s	26.60	90	*e*P	P	13 41 24.5	+0.6
COWI	Conover 6.2nm,0.7s	27.12	84	*e*P	P	13 41 27.1	-1.5
GTO	Geraldton	27.15	75	P	P	13 41 30.7	+2.0
F41A	Three Lakes 5.8nm,0.9s	27.29	84	*e*P	P	13 41 30.0	-0.1
H41A	Junction City 11nm,1.2s	27.44	87	*e*P	P	13 41 31.9	+0.5
WMOK	Wichita Mounta 14nm,0.9s	27.50	113	*e*P	P	13 41 32.1	0.0
N39A	Derby Farms, D 14nm,0.9s	27.50	96	*e*P	P	13 41 32.3	+0.3
P38A	Dawn 17nm,0.8s	27.56	99	*e*P	P	13 41 32.7	+0.1
L40A	Anamosa 18nm,0.9s	27.68	93	*e*P	P	13 41 33.7	+0.1
JFWS	Jewell Farm 16nm,1.1s	27.87	91	*e*P	P	13 41 35.8	+0.5
RES	Resolute Bay comp=Z,177nm,19.2s,baz=280,slow=36	28.11	19	LR	LR	13 52 47.6	
E43A	Lone Tree Farm 6.1nm,0.8s	28.36	82	*e*P	P	13 41 38.6	-0.9
TUL1	Leonard 17nm,0.8s	28.48	108	*e*P	P	13 41 41.1	+0.3
L42A	Oliver, Polo 21nm,0.8s	28.70	92	*e*P	P	13 41 42.8	+0.1
TX31	Lajitas Ar. Si	28.93	127	*e*P	P	13 41 44.9	-0.1
TXAR	Lajitas Array 5.0nm,1.0s,baz=320,slow=7.5,SNR=32	28.93	127	P	P	13 41 46.1	+1.1
TXAR	0.2nm,0.6s,baz=328,slow=3.2,SNR=3.0			PcP	PcP	13 44 53.4	-0.2
TXAR	comp=Z,58nm,20.8s,baz=0.0,slow=37			LR	LR	13 53 36.1	
CCM	Cathedral Cave 3.8nm,0.8s	29.93	100	*e*P	P	13 41 54.3	+0.7
M44A	Midewin, Midew 17nm,0.9s	30.06	92	*e*P	P	13 41 55.2	+0.5
JCT	Junction City 10nm,0.8s	30.07	121	*e*P	P	13 41 54.2	-0.7
T42A	Van Buren 3.0nm,0.9s	30.66	101	*e*P	P	13 41 59.9	-0.1
MIAR	Mount Ida 14nm,1.3s	30.74	108	*e*P	P	13 42 01.6	+0.8
P45A	Graceland, Par 16nm,0.8s	31.28	94	*e*P	P	13 42 05.9	+0.4
OLIL	Olney 25nm,1.3s	31.51	96	*e*P	P	13 42 07.9	+0.4
WLAR	White Oak Lake 11nm,0.8s	31.61	108	*e*P	P	13 42 08.4	0.0
WVT	Waverly 7.6nm,1.1s	33.27	99	*e*P	P	13 42 22.6	-0.4
OXF	Oxford 53nm,1.1s	33.32	103	*e*P	P	13 42 23.6	+0.2
PLAL	Pickwick Lake 9.3nm,1.0s	33.84	101	*e*P	P	13 42 27.6	-0.4
SADO	Sadowa 3.5nm,0.5s,baz=309,slow=9.2,SNR=4.2	34.01	80	P	P	13 42 29.9	+0.6
X48A	Hartselle 4.6nm,0.8s	34.83	101	*e*P	P	13 42 35.6	-1.0
LRAL	Lakeview Retre 2.9nm,1.0s	35.80	103	*e*P	P	13 42 44.5	-0.4
V52A	Sevierville 12nm,0.7s	36.12	96	*e*P	P	13 42 47.7	0.0
TKL	Tuckaleechee C 2.4nm,0.7s,baz=275,slow=12,SNR=3.3	36.12	96	P	P	13 42 47.1	-0.6
TKL	comp=Z,237nm,18.7s,baz=342,slow=37			LR	LR	13 58 08.1	
X51A	Calhoun 18nm,0.9s	36.13	99	*e*P	P	13 42 47.8	+0.1
Z50A	Ashland 7.5nm,0.8s	36.32	102	*e*P	P	13 42 49.2	-0.2
W52A	Murphy 6.5nm,0.8s	36.38	97	*e*P	P	13 42 48.9	-1.0
BG3	Lake Jocassee 8.3nm,0.9s	37.07	97	*e*P	P	13 42 55.3	-0.4
SCHQ	Schefferville comp=Z,195nm,19.5s,baz=290,slow=36	37.20	58	LR	LR	13 57 60.0	
152A	Waverly Hall 14nm,0.8s	37.47	101	*e*P	P	13 42 58.6	-0.5
GOGA	Godfrey 9.6nm,0.9s	37.76	99	*e*P	P	13 43 01.4	-0.2
IP07	Quail 7.9nm,0.9s	38.40	89	*e*P	P	13 43 07.4	+0.5
JSC	Jenkinsville 6.0nm,1.0s	38.59	96	*e*P	P	13 43 08.2	-0.3
SEY	Seymchan 2.6nm,0.8s,baz=73,slow=8.4,SNR=8.2	41.68	318	P	P	13 43 32.6	-1.3
PETK	Petropavlovsk- 2.6nm,0.9s,baz=82,slow=10	43.09	303	P	P	13 43 43.7	-1.8
PETK	comp=Z,61nm,19.4s,baz=75,slow=33			LR	LR	13 59 39.1	
H11N2	WAKE ISLAND Hy baz=42,slow=75,SNR=1265	58.13	262	T	T	14 48 10.6	
H11N3	WAKE ISLAND Hy baz=42,slow=75,SNR=1738	58.13	262	T	T	14 48 20.3	
H11N1	WAKE ISLAND Hy baz=42,slow=75,SNR=1192	58.15	262	T	T	14 48 12.8	
H11S1	WAKE ISLAND Hy baz=46,slow=74,SNR=66	59.16	262	T	T	14 49 37.5	
H11S2	WAKE ISLAND Hy baz=46,slow=74,SNR=66	59.17	262	T	T	14 49 30.9	
H11S3	WAKE ISLAND Hy baz=46,slow=74,SNR=45	59.18	262	T	T	14 49 29.1	
SDV	Santo Domingo comp=Z,28nm,18.7s,baz=347,slow=41	63.82	109	LR	LR	14 19 05.5	
MJAR	Matsushiro Arr comp=Z,20nm,21.8s,baz=75,slow=32	63.97	296	LR	LR	14 09 54.4	
NOA	NORSAR Array B comp=Z,44nm,19.3s,baz=325,slow=36	64.37	20	LR	LR	14 14 19.8	
FINES	FINESS Array B 2.7nm,1.0s,baz=350,slow=7.1,SNR=2.7	66.62	12	P	P	13 46 36.1	+0.5
FINES	comp=Z,78nm,18.0s,baz=16,slow=37			LR	LR	14 16 41.8	
TLY	Talaya 1.2nm,0.3s,baz=16,slow=6.8,SNR=4.4	68.48	327	P	P	13 46 45.6	-1.9
KSRS	Korea Array comp=Z,12nm,18.7s,baz=48,slow=36	68.98	304	LR	LR	14 16 47.9	
JNU	Nakatsue comp=Z,32nm,22.0s,baz=122,slow=33	70.59	299	LR	LR	14 14 33.2	
SONM	Songino Array 0.3nm,0.4s,baz=35,slow=5.3,SNR=3.3	70.69	324	P	P	13 47 00.7	-0.7
SONM	comp=Z,66nm,18.2s,baz=42,slow=36			LR	LR	14 18 31.6	
ZALV	Zalesovo Beam 0.4nm,0.4s,baz=21,slow=6.2,SNR=2.5	71.83	339	P	P	13 47 06.8	-1.1
ZALV	comp=Z,32nm,18.0s,baz=66,slow=39			LR	LR	14 21 58.0	
BVAR	Borovoye Array 0.3nm,0.5s,baz=345,slow=4.5,SNR=2.5	75.33	348	P	P	13 47 28.1	-0.5
KURK	Kurchatov	76.18	342	P	P	13 47 33.8	+0.3
KURBB	Kurchatov Arra 0.2nm,0.3s,baz=18,slow=5.6,SNR=3.3	76.29	342	P	P	13 47 33.8	-0.3
GUMO	Guam comp=Z,39nm,20.0s,baz=64,slow=30	76.70	275	LR	LR	14 14 33.7	
AKASG	Malin Array Be 0.2nm,0.2s,baz=346,slow=6.7,SNR=2.4	77.47	14	P	P	13 47 40.3	-0.5
ESDC	Sonseca Array comp=Z,65nm,18.9s,baz=355,slow=34	78.31	40	LR	LR	14 19 45.1	
MKAR	Makanchi Array 0.6nm,0.7s,baz=28,slow=5.5,SNR=4.5	79.09	338	P	P	13 47 49.3	-0.6
MKAR	comp=Z,37nm,18.4s,baz=32,slow=37			LR	LR	14 24 36.7	
AKTO	Aktyubinsk comp=Z,16nm,21.2s,baz=1.2,slow=37	79.10	355	LR	LR	14 24 46.3	
KBZ	Khabaz comp=Z,26nm,18.2s,baz=0.0,slow=38	85.81	5	LR	LR	14 30 33.9	
BRTR	Keskin Array B comp=Z,25nm,19.9s,baz=312,slow=37	88.85	13	LR	LR	14 30 26.0	
SNAA	Sanae 1.5nm,1.0s,baz=323,slow=5.6,SNR=3.4	148.47	151	PKPbc	PKPdf	13 55 28.3	+1.0

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*NEIC **04** 13:36:50.1±0.0, 17°.36N×101°.64W, h4^{km}, MD4.0(MEX), After MEX.*

MEX 04 13:36:50.1±0.5**, 17°.36N×101°.64W, h4^{km}±6^{km}, MD4.0, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.30	34	*e*P	Pg	13 36 55.4	-0.5
ZIIG				*e*S	Sg	13 36 60.0	+0.2
ZIIG	Zihuatanejo	0.30	34	*e*P	Pg	13 36 55.4	-0.5
ZIIG				*e*S	Sg	13 36 60.0	+0.2
CAIG	El Cayaco	1.35	103	*e*P	Pn	13 37 11.6	-4.1
CAIG				*e*S	Sg	13 37 29.1	-4.4
CAIG	El Cayaco	1.35	103	*e*P	Pn	13 37 11.6	-4.1
CAIG				*e*S	Sg	13 37 29.1	-4.4
ARIG	Puente Sto Nin	1.54	53	*e*P	Pn	13 37 14.8	-3.5
ARIG				*e*S	Sn	13 37 33.5	-5.2
ARIG	Puente Sto Nin	1.54	53	*e*P	Pn	13 37 14.8	-3.5
ARIG				*e*S	Sn	13 37 33.5	-5.2
MEIG	Mezcala	2.01	73	*e*P	Pn	13 37 22.3	-2.6
MEIG				*e*S	Sn	13 37 45.7	-4.8
MEIG	Mezcala	2.01	73	*e*P	Pn	13 37 22.3	-2.6
MEIG				*e*S	Sn	13 37 45.7	-4.8
PLIG	Platanillo	2.28	63	*i* P	Pn	13 37 25.1	-3.5
PLIG				*i* S	Sn	13 37 52.3	-4.9
PLIG	Platanillo	2.28	63	*i* P	Pn	13 37 25.1	-3.5
PLIG				*i* S	Sn	13 37 52.3	-4.9

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*ISCJB **04** 13:52:56.1±0.6, 37°.96N±0°.06×75°.9E±0°.2, h10^{km}, Error ellipse: s-maj=18.6km s-min=5.4km az=156.3*

*NNC **04** 13:53:11.1±2.9, 38°.45N×75°.40E, h19^{km}±13^{km}, mb3.7, mpv3.2, Error ellipse: s-maj=32.0km s-min=19.9km az=33.0*

ISC 04 13:52:59.6±0.9**, 37°.90N**±0°.07×**75°.7E**±0°.1**, h10^{km}, n16, σ2^{s}65**/20**, 5C-5D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan 1.0nm,0.1s	2.74	321	⇑Pn	Pn	13 53 46.3	+2.4
SFK	8.8nm,0.4s			⇓Pg	Pb	13 53 50.7	+1.9
SFK	62nm,0.3s			⇓Lg	Lg	13 54 18.8	
AAK	Ala-Archa 3.1nm,0.7s	4.83	349	⇓Pn	Pn	13 54 16.5	+4.1
AAK	13nm,0.9s			⇓Sn	Sn	13 55 05.5	-3.0
TKM2	Tokmak 2 2.9nm,0.4s	5.02	359	⇑Pn	Pn	13 54 15.8	+0.7
MNAS	Manas 1.7nm,0.6s	5.21	333	⇓Pn	Pn	13 54 19.3	+1.6
MNAS	8.6nm,0.4s			⇑Sn	Sn	13 55 13.7	-4.2
MDOK	Medeo 3.7nm,0.7s	5.35	10	⇑Pn	Pn	13 54 23.2	+3.6
DHRM	DHARAMSHALA	5.66	175	*e*P	Pn	13 54 26.2	+2.3
DHRM				*e*S	Sn	13 55 29.0	-0.1
DHRM	comp=N,86nm,0.6s			IAML		13 55 37.7	
DHRM	comp=E,94nm,0.7s			IAML		13 55 38.4	
KK31	Karatay Array comp=E,1.2nm,0.3s,baz=136,slow=24,SNR=7.0	6.55	324	⇑Sn	Sn	13 55 45.8	-4.9
PYUN	Piuthan	11.51	146	*e*P	Pn	13 55 43.5	-0.6
DANN	Dangsing comp=E,15nm,0.3s	11.65	143	*e*P	Pn	13 55 45.4	-0.8
KOLN	Koldanda comp=E,7.9nm,0.3s	12.06	145	*e*P	Pn	13 55 51.3	-0.5
GKN	Gorkha comp=E,9.2nm,0.3s	12.37	140	*e*P	Pn	13 55 54.5	-1.4
KKN	Kakani	12.87	139	*e*P	Pn	13 56 01.3	-1.5
DMN	Daman comp=E,8.4nm,0.6s	12.93	140	*e*P	Pn	13 56 02.3	-1.3
PKIN	Phulchoki comp=E,6.0nm,0.4s	13.10	139	*e*P	Pn	13 56 04.4	-1.6
JIRN	Jiri comp=E,14nm,0.3s	13.46	136	*e*P	Pn	13 56 09.4	-1.6
RAMN	Ramite comp=E,19nm,0.6s	14.24	137	*e*P	Pn	13 56 18.7	-2.9

IDC 04 14:06:35.6±2.1**, 6°.90S×128°.82E, h0^{km}, mb3.4**/1**, mb1 3.7**/4**, mb1mx3.4**/49**, mbtmp3.5**/4**, ML3.4**/3**, Error ellipse: s-maj=93.7km s-min=27.5km az=75.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi 0.2nm,0.3s,baz=10,slow=12,SNR=6.5	11.55	195	Pn	Pn	14 09 21.7	-0.2
FITZ	0.4nm,0.3s,baz=342,slow=20,SNR=5.3			Sn	Sn	14 11 15.9	-16
WRA	Warramunga Arr 0.2nm,0.3s,baz=340,slow=13,SNR=6.3	14.03	158	Pn	Pn	14 09 54.8	-1.0
WRA	0.5nm,0.3s,baz=336,slow=23,SNR=8.9			Sn	Sn	14 12 15.9	-16
ASAR	Alice Springs 0.1nm,0.3s,baz=340,slow=11,SNR=12	17.37	164	P	P	14 10 40.4	-0.7
ASAR	0.1nm,0.3s,baz=346,slow=26,SNR=3.2			S	Sn	14 13 36.9	-17
MKAR	Makanchi Array 0.3nm,0.6s,baz=125,slow=6.4,SNR=3.2	67.51	327	P	P	14 17 33.6	0.0

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*NEIC **04** 14:10:38.1±0.0, 16°.31N×98°.26W, h5^{km}, MD4.0(MEX), After MEX.*

MEX 04 14:10:38.1±0.8**, 16°.31N×98°.26W, h5^{km}±5^{km}, MD4.0, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.15	57	*e*P	Pg	14 10 40.7	-0.4
PNIG				*e*S	Sg	14 10 43.5	+0.4

PNIG	**Pinotepa**	**0.15**	**57**	*e*P	Pg	14 10 40.7	-0.4
PNIG				*e*S	Sg	14 10 43.5	+0.4
TLIG	**Tlapa**	**1.28**	**347**	*e*P	Pg	14 10 58.4	-4.3
TLIG				*e*S	Sg	14 11 15.1	-4.2
TLIG	**Tlapa**	**1.28**	**347**	*e*P	Pg	14 10 58.4	-4.3
TLIG				*e*S	Sg	14 11 15.1	-4.2
HMTT	**Tlapaneco**	**1.51**	**349**	*e*P	Pn	14 11 02.5	-3.4
HMTT				*e*S	Sn	14 11 21.2	-4.8
VHO	**Vista Hermosa**	**1.65**	**62**	*e*P	Pn	14 11 03.9	-4.1
VHO				*e*S	Sn	14 11 25.2	-4.4
VHO	**Vista Hermosa**	**1.65**	**62**	*e*P	Pn	14 11 03.9	-4.1
VHO				*e*S	Sn	14 11 25.2	-4.4
ACP2	**Acapulco**	**1.66**	**290**	*e*P	Pn	14 11 04.2	-3.7
CAIG	**El Cayaco**	**2.06**	**291**	*e*P	Pn	14 11 10.4	-3.0
CAIG				*e*S	Sn	14 11 35.5	-4.0
CAIG	**El Cayaco**	**2.06**	**291**	*e*P	Pn	14 11 10.4	-3.0
CAIG				*e*S	Sn	14 11 35.5	-4.0
YAIG	**Yautepec**	**2.65**	**343**	*i* P	Pn	14 11 18.5	-3.2
YAIG				*i* S	Sn	14 11 49.7	-4.7
YAIG	**Yautepec**	**2.65**	**343**	*i* P	Pn	14 11 18.5	-3.2
YAIG				*i* S	Sn	14 11 49.7	-4.7
ARIG	**Puente Sto Nin**	**2.80**	**315**	*i* P	Pn	14 11 20.9	-2.7
ARIG				*i* S	Sn	14 11 54.5	-3.2
ARIG	**Puente Sto Nin**	**2.80**	**315**	*i* P	Pn	14 11 20.9	-2.7
ARIG				*i* S	Sn	14 11 54.5	-3.2

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*MDD **04** 14:20:52.1±1.0, 36°.72N×11°.18W, h0^{km}, mb4.4/19, Error ellipse: s-maj=9.3km s-min=5.9km az=79.0, PRXIMO*
*INMG **04** 14:20:54.7±1.0, 36°.66N×11°.34W, h31^{km}, MD2.9, ML3.1, Error ellipse: s-maj=3.7km s-min=2.0km az=87.0*
*IGIL **04** 14:20:54.1, 36°.85N×11°.17W, h0^{km}, ML3.2*
*CSEM **04** 14:20:55.5±0.3, 36°.82N×11°.12W, h30^{km}, mb4.4, Error ellipse: s-maj=6.3km s-min=4.2km az=62.0*
*CNRM **04** 14:20:57.0, 36°.41N×11°.01W, h70^{km}*
ISC 04 14:20:49.2±2.0**, 36°.71N**±0°.06×**11°.30W**±0°.09**, h10^{km}, n135, σ2^{s}18**/270**, 10C-7D, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFVI	**Vila Bisbo**	**2.03**	**77**	*e*Pn	**Pn**	**14 21 25.6**	**+2.2**
PFVI				*e*Sn	**Sn**	**14 21 47.8**	**-1.0**
PFVI				A	A	14 21 49.9	
	86nm,0.2s						
PFVI	**Vila Bisbo**	**2.03**	**77**	⇑P	**Pn**	**14 21 25.6**	**+2.2**
	44nm,0.1s,SNR=18						
PFVI				S	**Sn**	**14 21 48.1**	**-0.7**
	176nm,0.2s,SNR=11						
PFVI	**Vila Bisbo**	**2.03**	**77**	P	**Pn**	**14 21 25.7**	**+2.3**
PFVI				*e*Sn	**Sn**	**14 21 47.8**	**-1.0**
PFVI				S	**Sn**	**14 21 48.1**	**-0.7**
	176nm,0.2s,SNR=11						
MORF	**Marmelete**	**2.20**	**74**	*e*P	**Pn**	**14 21 28.1**	**+2.2**
MORF				*e*S	**Sn**	**14 21 52.7**	**-0.5**
MORF				AML	AML	14 21 55.3	
	comp=N,224nm,0.2s						
MORF	**Marmelete**	**2.20**	**74**	⇑*e*Pn	**Pn**	**14 21 28.1**	**+2.2**
MORF				*e*Sn	**Sn**	**14 21 53.0**	**-0.2**
MORF				A	A	14 21 55.1	
	comp=N,86nm,0.2s						
MORF	**Marmelete**	**2.20**	**74**	P	**Pn**	**14 21 28.1**	**+2.2**
MORF				S	**Sn**	**14 21 52.7**	**-0.5**
	comp=N,224nm,0.2s						
MORF	**Marmelete**	**2.20**	**74**	P	**Pn**	**14 21 28.1**	**+2.2**
MORF				S	**Sn**	**14 21 52.7**	**-0.5**
	comp=N,224nm,0.2s						
MORF				*e*Sn	**Sn**	**14 21 53.0**	**-0.2**
PTEO	**Sao Teotonio**	**2.22**	**67**	*e*Pn	**Pn**	**14 21 28.4**	**+2.4**
PTEO				*e*Sn	**Sn**	**14 21 53.4**	**-0.2**
PTEO				A	A	14 21 56.1	
	comp=N,86nm,0.6s						
PTEO	**Sao Teotonio**	**2.22**	**67**	P	**Pn**	**14 21 28.4**	**+2.4**
PTEO				S	**Sn**	**14 21 53.4**	**-0.2**
	comp=N,43nm,0.6s						
PTEO	**Sao Teotonio**	**2.22**	**67**	P	**Pn**	**14 21 28.4**	**+2.4**
PTEO				S	**Sn**	**14 21 53.4**	**-0.2**
	comp=N,43nm,0.6s						
PNCL	**Nicolau / Gran**	**2.61**	**57**	*e*Pn	**Pn**	**14 21 34.0**	**+2.6**
PNCL				*e*Sn	**Sn**	**14 22 03.1**	**-0.1**
PNCL				A	A	14 22 05.4	
	comp=N,51nm,0.1s						
PNCL	**Nicolau / Gran**	**2.61**	**57**	*e*Pn	**Pn**	**14 21 34.0**	**+2.6**
PNCL				*e*Sn	**Sn**	**14 22 03.1**	**-0.1**
PMST	**Lisbon--Monsan**	**2.63**	**39**	*e*Pn	**Pn**	**14 21 34.1**	**+2.4**
PMST				*e*Sn	**Sn**	**14 22 03.8**	**+0.2**
PMST				A	A	14 22 07.9	
	comp=N,65nm,0.2s						
PMST	**Lisbon--Monsan**	**2.63**	**39**	*e*Pn	**Pn**	**14 21 34.1**	**+2.4**
PMST				*e*Sn	**Sn**	**14 22 03.8**	**+0.2**
MESJ	**Messejana**	**2.71**	**64**	*e*P	**Pn**	**14 21 34.6**	**+2.0**
MESJ				*e*S	**Sn**	**14 22 04.5**	**-0.9**
MESJ				AML	AML	14 22 07.2	
	comp=N,56nm,0.2s						
MESJ	**Messejana**	**2.71**	**64**	*e*Pn	**Pn**	**14 21 34.9**	**+2.2**
MESJ				*e*Sn	**Sn**	**14 22 05.1**	**-0.4**
MESJ				A	A	14 22 07.1	
	comp=N,28nm,0.2s						
MESJ	**Messejana**	**2.71**	**64**	P	**Pn**	**14 21 34.6**	**+2.0**
MESJ				S	**Sn**	**14 22 04.5**	**-0.9**
	comp=N,56nm,0.2s						
MESJ	**Messejana**	**2.71**	**64**	*e*Pn	**Pn**	**14 21 34.9**	**+2.2**
MESJ				S	**Sn**	**14 22 04.6**	**-0.9**
	comp=N,56nm,0.2s						
MESJ				*e*Sn	**Sn**	**14 22 05.1**	**-0.4**
PBDV	**Barranco-do-Ve**	**2.75**	**78**	⇑*e*Pn	**Pn**	**14 21 35.8**	**+2.4**
PBDV				*e*Sn	**Sn**	**14 22 06.2**	**-0.5**
PBDV				A	A	14 22 11.4	
	comp=N,39nm,0.3s						
PBDV	**Barranco-do-Ve**	**2.75**	**78**	P	**Pn**	**14 21 35.8**	**+2.4**
PBDV				S	**Sn**	**14 22 06.2**	**-0.5**
	comp=N,39nm,0.3s						
PBDV	**Barranco-do-Ve**	**2.75**	**78**	P	**Pn**	**14 21 35.8**	**+2.4**
PBDV				S	**Sn**	**14 22 06.2**	**-0.5**
	comp=N,39nm,0.3s						
PMAFR	**Mafra**	**2.75**	**35**	⇓*i*Pn	**Pn**	**14 21 35.4**	**+2.0**
PMAFR				*e*Sn	**Sn**	**14 22 06.9**	**+0.2**
PMAFR				A	A	14 22 09.8	
	comp=N,133nm,0.2s						
PMAFR	**Mafra**	**2.75**	**35**	⇓P	**Pn**	**14 21 35.4**	**+2.0**
	comp=N,13nm,0.1s,SNR=18						
PMAFR				S	**Sn**	**14 22 06.0**	**-0.7**
	comp=N,160nm,0.2s,SNR=20						
PMAFR	**Mafra**	**2.75**	**35**	P	**Pn**	**14 21 35.4**	**+2.0**
	comp=N,13nm,0.1s,SNR=18						
PMAFR				S	**Sn**	**14 22 06.0**	**-0.7**
	comp=N,160nm,0.2s,SNR=20						
PMAFR				*e*Sn	**Sn**	**14 22 06.9**	**+0.2**
PCVE	**Castro Verde**	**2.76**	**70**	⇑*e*Pn	**Pn**	**14 21 36.0**	**+2.5**
PCVE				*e*Sn	**Sn**	**14 22 06.3**	**-0.6**
PCVE				A	A	14 22 12.8	
	comp=N,39nm,0.2s						
PCVE	**Castro Verde**	**2.76**	**70**	P	**Pn**	**14 21 36.0**	**+2.5**
PCVE				S	**Sn**	**14 22 06.3**	**-0.6**
	comp=N,39nm,0.2s						
PCVE	**Castro Verde**	**2.76**	**70**	P	**Pn**	**14 21 36.0**	**+2.5**
PCVE				S	**Sn**	**14 22 06.3**	**-0.6**
	comp=N,39nm,0.2s						
PVAQ	**Vaqueiros**	**2.95**	**75**	⇑*e*Pn	**Pn**	**14 21 38.6**	**+2.5**
PVAQ				*e*Sn	**Sn**	**14 22 10.4**	**-1.1**
PVAQ				A	A	14 22 15.4	
	comp=N,47nm,0.3s						
PVAQ	**Vaqueiros**	**2.95**	**75**	P	**Pn**	**14 21 38.6**	**+2.5**
PVAQ				S	**Sn**	**14 22 10.4**	**-1.1**
	comp=N,47nm,0.3s						
PVAQ	**Vaqueiros**	**2.95**	**75**	P	**Pn**	**14 21 38.6**	**+2.5**
PVAQ				S	**Sn**	**14 22 10.4**	**-1.1**
	comp=N,47nm,0.3s						
PBEJ	**Beja**	**3.04**	**63**	*e*Pn	**Pn**	**14 21 40.8**	**+3.5**
PBEJ				*e*Sn	**Sn**	**14 22 13.6**	**-0.1**
PBEJ				A	A	14 22 15.3	
	comp=N,30nm,0.2s						
PBEJ	**Beja**	**3.04**	**63**	P	**Pn**	**14 21 40.8**	**+3.5**
PBEJ				S	**Sn**	**14 22 13.6**	**-0.1**
	comp=N,15nm,0.2s						
PBEJ	**Beja**	**3.04**	**63**	P	**Pn**	**14 21 40.8**	**+3.5**
PBEJ				S	**Sn**	**14 22 13.6**	**-0.1**
	comp=N,15nm,0.2s						
EGRO	**El Granado**	**3.16**	**74**	P	**Pn**	**14 21 41.4**	**+2.4**
	comp=N,2.2nm,0.1s,SNR=18						
EGRO				S	**Sn**	**14 22 16.2**	**-0.5**
	comp=N,28nm,0.1s,SNR=7.7						
EGRO	**El Granado**	**3.16**	**74**	P	**Pn**	**14 21 41.4**	**+2.4**
	comp=N,2.2nm,0.1s,SNR=18						
EGRO				S	**Sn**	**14 22 16.2**	**-0.5**
	comp=N,28nm,0.1s,SNR=7.7						
EVO	**Evora**	**3.18**	**54**	*e*Pn	**Pn**	**14 21 41.9**	**+2.6**
EVO				*e*Sn	**Sn**	**14 22 16.4**	**-0.9**
EVO				A	A	14 22 19.0	
	comp=N,90nm,0.1s						
EVO	**Evora**	**3.18**	**54**	P	**Pn**	**14 21 41.9**	**+2.6**
EVO				S	**Sn**	**14 22 16.4**	**-0.9**
	comp=N,90nm,0.1s						
EVO	**Evora**	**3.18**	**54**	P	**Pn**	**14 21 41.9**	**+2.6**
EVO				S	**Sn**	**14 22 16.4**	**-0.9**
	comp=N,90nm,0.1s						
ALMR	**Almeirim**	**3.26**	**41**	*e*P	**Pn**	**14 21 42.1**	**+1.8**
ALMR				*e*S	**Sn**	**14 22 17.6**	**-1.5**
ALMR				AML	AML	14 22 20.1	
	comp=E,138nm,0.4s						
ALMR	**Almeirim**	**3.26**	**41**	⇓*i*Pn	**Pn**	**14 21 42.7**	**+2.4**
ALMR				*e*Sn	**Sn**	**14 22 18.7**	**-0.4**
ALMR				A	A	14 22 21.1	
	comp=E,68nm,0.1s						
ALMR	**Almeirim**	**3.26**	**41**	P	**Pn**	**14 21 42.1**	**+1.8**
ALMR				S	**Sn**	**14 22 17.6**	**-1.5**
	comp=E,69nm,0.4s						
ALMR	**Almeirim**	**3.26**	**41**	P	**Pn**	**14 21 42.1**	**+1.8**
ALMR	**Almeirim**	**3.26**	**41**	⇓*i*Pn	**Pn**	**14 21 42.7**	**+2.4**
ALMR				S	**Sn**	**14 22 17.6**	**-1.5**
	comp=E,69nm,0.4s						
ALMR				*e*Sn	**Sn**	**14 22 18.7**	**-0.4**
PMTG	**Montargil**	**3.39**	**45**	⇓*e*Pn	**Pn**	**14 21 43.9**	**+1.8**
PMTG				*e*Sn	**Sn**	**14 22 22.1**	**-0.2**
PMTG				A	A	14 22 24.6	
	comp=E,27nm,0.1s						
PMTG	**Montargil**	**3.39**	**45**	⇓*e*Pn	**Pn**	**14 21 43.9**	**+1.8**
PMTG				*e*Sn	**Sn**	**14 22 22.1**	**-0.2**
PESTR	**Estremoz**	**3.65**	**53**	*e*Pn	**Pn**	**14 21 48.2**	**+2.6**
PESTR				*e*Sn	**Sn**	**14 22 28.2**	**-0.5**
PESTR				A	A	14 22 31.2	
	comp=E,18nm,0.5s						
PESTR	**Estremoz**	**3.65**	**53**	*e*Pn	**Pn**	**14 21 48.2**	**+2.6**
PESTR	**Estremoz**	**3.65**	**53**	P	**Pn**	**14 21 49.9**	**+4.3**
PESTR				*e*Sn	**Sn**	**14 22 28.2**	**-0.5**
PTOM	**Tomar**	**3.69**	**37**	*e*Pn	**Pn**	**14 21 48.9**	**+2.7**
PTOM				*e*Sn	**Sn**	**14 22 29.4**	**-0.4**
PTOM				A	A	14 22 32.6	
	comp=E,41nm,0.4s						
PTOM	**Tomar**	**3.69**	**37**	P	**Pn**	**14 21 48.9**	**+2.7**
PTOM				S	**Sn**	**14 22 29.4**	**-0.4**
	comp=E,20nm,0.4s						
PTOM	**Tomar**	**3.69**	**37**	P	**Pn**	**14 21 48.9**	**+2.7**
PTOM				S	**Sn**	**14 22 29.4**	**-0.4**
	comp=E,20nm,0.4s						
PBAR	**Barrancos**	**3.69**	**65**	*e*Pn	**Pn**	**14 21 48.9**	**+2.6**
PBAR				*e*Sn	**Sn**	**14 22 29.2**	**-0.7**
PBAR				A	A	14 22 33.8	
	comp=E,46nm,0.2s						
PBAR	**Barrancos**	**3.69**	**65**	P	**Pn**	**14 21 48.9**	**+2.6**
PBAR				S	**Sn**	**14 22 29.2**	**-0.7**
	comp=E,46nm,0.2s						
PBAR	**Barrancos**	**3.69**	**65**	P	**Pn**	**14 21 48.9**	**+2.6**
PBAR				S	**Sn**	**14 22 29.2**	**-0.7**
	comp=E,46nm,0.2s						
EMIN	**Mina Concepcio**	**3.84**	**73**	P	**Pn**	**14 21 50.5**	**+2.2**
	comp=E,4.3nm,0.1s,SNR=64						
EMIN				S	**Sn**	**14 22 32.2**	**-1.4**
	comp=E,22nm,0.2s,SNR=19						
EMIN	**Mina Concepcio**	**3.84**	**73**	P	**Pn**	**14 21 50.5**	**+2.2**
	comp=E,4.3nm,0.1s,SNR=64						
EMIN				S	**Sn**	**14 22 32.2**	**-1.4**
	comp=E,22nm,0.2s,SNR=19						
EBAD	**Badajoz**	**3.97**	**58**	P	**Pn**	**14 21 52.1**	**+2.1**
	comp=E,4.1nm,0.1s,SNR=22						
EBAD				S	**Sn**	**14 22 35.4**	**-1.2**
	comp=E,60nm,0.2s,SNR=9.0						
EBAD	**Badajoz**	**3.97**	**58**	P	**Pn**	**14 21 52.1**	**+2.1**
	comp=E,4.1nm,0.1s,SNR=22						
EBAD				S	**Sn**	**14 22 35.4**	**-1.2**
	comp=E,60nm,0.2s,SNR=9.0						
PCAS	**Casmilo, Conde**	**4.00**	**33**	⇑*e*Pn	**Pn**	**14 21 52.6**	**+2.1**
PCAS				*e*Sn	**Sn**	**14 22 36.8**	**-0.6**
PCAS				A	A	14 22 39.2	
	comp=E,29nm,0.3s						
PCAS	**Casmilo, Conde**	**4.00**	**33**	⇑*e*Pn	**Pn**	**14 21 52.6**	**+2.1**
PCAS				*e*Sn	**Sn**	**14 22 36.8**	**-0.6**
PMRV	**Marv??o**	**4.11**	**47**	*e*Pn	**Pn**	**14 21 53.8**	**+1.8**
PMRV				*e*Sn	**Sn**	**14 22 38.6**	**-1.6**
PMRV				A	A	14 22 41.0	
	comp=E,39nm,0.5s						
PMRV	**Marv??o**	**4.11**	**47**	P	**Pn**	**14 21 53.8**	**+1.8**
PMRV				S	**Sn**	**14 22 38.6**	**-1.6**
	comp=E,39nm,0.5s						
PMRV	**Marv??o**	**4.11**	**47**	P	**Pn**	**14 21 53.8**	**+1.8**
PMRV				S	**Sn**	**14 22 38.6**	**-1.6**
	comp=E,39nm,0.5s						
COI	**Coimbra**	**4.17**	**32**	*e*Pn	**Pn**	**14 21 55.3**	**+2.6**
COI				*e*Sn	**Sn**	**14 22 40.7**	**-0.8**
COI				A	A	14 22 42.9	
	comp=E,38nm,0.5s						
COI	**Coimbra**	**4.17**	**32**	P	**Pn**	**14 21 55.3**	**+2.6**
COI				S	**Sn**	**14 22 40.7**	**-0.8**
	comp=E,19nm,0.5s						
COI	**Coimbra**	**4.17**	**32**	P	**Pn**	**14 21 55.3**	**+2.6**
COI				S	**Sn**	**14 22 40.7**	**-0.8**
	comp=E,19nm,0.5s						
PCBR	**Castelo Branco**	**4.34**	**43**	*e*Pn	**Pn**	**14 21 58.0**	**+2.9**
PCBR				*e*Sn	**Sn**	**14 22 44.6**	**-1.2**
PCBR				A	A	14 22 46.0	
	comp=E,21nm,0.5s						
PCBR	**Castelo Branco**	**4.34**	**43**	P	**Pn**	**14 21 58.0**	**+2.9**
PCBR				S	**Sn**	**14 22 44.6**	**-1.2**
	comp=E,11nm,0.5s						
PCBR	**Castelo Branco**	**4.34**	**43**	P	**Pn**	**14 21 58.0**	**+2.9**
PCBR				S	**Sn**	**14 22 44.6**	**-1.2**
	comp=E,11nm,0.5s						
MTE	**Manteigas**	**4.72**	**37**	*e*Pn	**Pn**	**14 22 02.7**	**+2.3**
MTE				*e*Sn	**Sn**	**14 22 53.2**	**-2.0**
MTE				A	A	14 22 55.4	
	comp=E,17nm,0.6s						
MTE	**Manteigas**	**4.72**	**37**	P	**Pn**	**14 22 02.7**	**+2.3**
MTE				S	**Sn**	**14 22 53.2**	**-2.0**
	comp=E,8.6nm,0.6s						
MTE	**Manteigas**	**4.72**	**37**	P	**Pn**	**14 22 02.7**	**+2.3**
MTE				S	**Sn**	**14 22 53.2**	**-2.0**
	comp=E,8.6nm,0.6s						
PVIS	**Viseu**	**4.81**	**33**	⇑*e*Pn	**Pn**	**14 22 03.5**	**+1.9**
PVIS				*e*Sn	**Sn**	**14 22 55.6**	**-1.8**
PVIS				A	A	14 23 00.0	
	comp=E,24nm,0.1s						
PVIS	**Viseu**	**4.81**	**33**	P	**Pn**	**14 22 03.5**	**+1.9**
PVIS				S	**Sn**	**14 22 55.6**	**-1.8**
	comp=E,12nm,0.1s						
PVIS	**Viseu**	**4.81**	**33**	P	**Pn**	**14 22 03.5**	**+1.9**
PVIS				S	**Sn**	**14 22 55.6**	**-1.8**
	comp=E,12nm,0.1s						
RSA	**Sarsar**	**4.81**	**111**	P	**Pn**	**14 22 02.0**	**+0.3**
RSA				S	**Sn**	**14 22 57.0**	**-0.5**
RSA	**Sarsar**	**4.81**	**111**	P	**Pn**	**14 22 02.0**	**+0.3**
RSA				S	**Sn**	**14 22 57.0**	**-0.5**
ECEU	**Ceuta**	**4.85**	**98**	P	**Pn**	**14 22 05.1**	**+2.9**
	comp=E,1.8nm,0.1s,SNR=5.0						
ECEU				S	**Sn**	**14 22 56.7**	**-1.8**
	comp=E,7.8nm,0.2s,SNR=7.9						
ECEU	**Ceuta**	**4.85**	**98**	P	**Pn**	**14 22 05.1**	**+2.9**
	comp=E,1.8nm,0.1s,SNR=5.0						
ECEU				S	**Sn**	**14 22 56.7**	**-1.8**
	comp=E,7.8nm,0.2s,SNR=7.9						
ECAB	**El Cabril**	**4.88**	**72**	⇑P	**Pn**	**14 22 04.7**	**+2.1**
	comp=E,7.3nm,0.2s,SNR=18						
ECAB				S	**Sn**	**14 22 56.5**	**-2.7**
	comp=E,25nm,0.3s,SNR=15						
ECAB	**El Cabril**	**4.88**	**72**	P	**Pn**	**14 22 04.7**	**+2.1**
	comp=E,7.3nm,0.2s,SNR=18						
ECAB				S	**Sn**	**14 22 56.5**	**-2.7**
	comp=E,25nm,0.3s,SNR=15						
PTO	**Porto**	**4.90**	**25**	*e*Pn	**Pn**	**14 22 04.5**	**+1.7**
PTO				*e*Sn	**Sn**	**14 22 57.8**	**-1.7**
PTO	**Porto**	**4.90**	**25**	P	**Pn**	**14 22 04.5**	**+1.7**
PTO				S	**Sn**	**14 22 57.8**	**-1.7**
PTO	**Porto**	**4.90**	**25**	P	**Pn**	**14 22 04.5**	**+1.7**
PTO				S	**Sn**	**14 22 57.8**	**-1.7**
HORN	**Hornachuelos**	**4.95**	**75**	P	**Pn**	**14 22 05.8**	**+2.2**
HORN				S	**Sn**	**14 23 00.3**	**-0.6**
HORN	**Hornachuelos**	**4.95**	**75**	P	**Pn**	**14 22 05.8**	**+2.2**
HORN				S	**Sn**	**14 23 00.3**	**-0.6**
EMIJ	**Mijas**	**5.25**	**90**	P	**Pn**	**14 22 07.9**	**+0.1**
	comp=E,2.0nm,0.2s,SNR=7.9						
EMIJ				S	**Sn**	**14 23 06.3**	**-2.1**
	comp=E,6.4nm,0.3s,SNR=7.9						
EMIJ	**Mijas**	**5.25**	**90**	P	**Pn**	**14 22 07.9**	**+0.1**
	comp=E,2.0nm,0.2s,SNR=7.9						
EMIJ				S	**Sn**	**14 23 06.3**	**-2.1**
	comp=E,6.4nm,0.3s,SNR=7.9						
EPLA	**Plasencia**	**5.29**	**49**	P	**Pn**	**14 22 10.7**	**+2.4**
	comp=E,1.3nm,0.1s,SNR=12						
EPLA				S	**Sn**	**14 23 07.5**	**-1.9**
	comp=E,11nm,0.2s,SNR=12						
EPLA	**Plasencia**	**5.29**	**49**	P	**Pn**	**14 22 10.7**	**+2.4**
	comp=E,1.3nm,0.1s,SNR=12						
EPLA				S	**Sn**	**14 23 07.5**	**-1.9**
	comp=E,11nm,0.2s,SNR=12						
PVRL	**Vila Real**	**5.35**	**30**	*e*Pn	**Pn**	**14 22 10.9**	**+1.9**
PVRL				*e*Sn	**Sn**	**14 23 07.9**	**-2.8**
PVRL				A	A	14 23 10.8	
	comp=E,16nm,0.1s						
PVRL	**Vila Real**	**5.35**	**30**	P	**Pn**	**14 22 10.9**	**+1.9**
PVRL				S	**Sn**	**14 23 07.9**	**-2.8**
	comp=E,8.2nm,0.1s						
PVRL	**Vila Real**	**5.35**	**30**	P	**Pn**	**14 22 10.9**	**+1.9**
PVRL				S	**Sn**	**14 23 07.9**	**-2.8**
	comp=E,8.2nm,0.1s						
POLO	**Lamas de Olo**	**5.40**	**29**	*e*Pn	**Pn**	**14 22 11.4**	**+1.6**
POLO				*e*Sn	**Sn**	**14 23 08.9**	**-3.2**
POLO				A	A	14 23 11.7	
	comp=E,5.9nm,0.2s						
POLO	**Lamas de Olo**	**5.40**	**29**	*e*Pn	**Pn**	**14 22 11.4**	**+1.6**
POLO				*e*Sn	**Sn**	**14 23 08.9**	**-3.2**
EADA	**Adamuz**	**5.54**	**73**	P	**Pn**	**14 22 13.8**	**+2.0**
	comp=E,5.5nm,0.2s,SNR=20						
EADA				S	**Sn**	**14 23 13.0**	**-2.6**
	comp=E,7.2nm,0.1s,SNR=15						
EADA	**Adamuz**	**5.54**	**73**	P	**Pn**	**14 22 13.8**	**+2.0**
	comp=E,5.5nm,0.2s,SNR=20						
EADA				S	**Sn**	**14 23 13.0**	**-2.6**
	comp=E,7.2nm,0.1s,SNR=15						
MVO	**Moncorvo**	**5.56**	**36**	*e*Pn	**Pn**	**14 22 13.6**	**+1.7**
MVO				*e*Sn	**Sn**	**14 23 13.1**	**-2.8**
MVO				A	A	14 23 15.8	
	comp=E,41nm,0.4s						
MVO	**Moncorvo**	**5.56**	**36**	P	**Pn**	**14 22 13.6**	**+1.7**
	comp=E,3.2nm,0.1s,SNR=12						
MVO				S	**Sn**	**14 23 12.6**	**-3.3**
	comp=E,6.4nm,0.1s,SNR=16						
MVO	**Moncorvo**	**5.56**	**36**	P	**Pn**	**14 22 13.6**	**+1.7**
	comp=E,3.2nm,0.1s,SNR=12						
MVO				S	**Sn**	**14 23 12.6**	**-3.3**
	comp=E,6.4nm,0.1s,SNR=16						
MVO				*e*Sn	Sb	14 23 13.1	-20
PCAB	**Cabril**	**5.60**	**26**	⇓*e*Pn	**Pn**	**14 22 14.4**	**+1.8**
PCAB				*e*Sn	**Sn**	**14 23 14.2**	**-2.8**
PCAB				A	A	14 23 18.4	
	comp=E,13nm,0.4s						
PCAB	**Cabril**	**5.60**	**26**	P	**Pn**	**14 22 14.4**	**+1.8**
PCAB				S	**Sn**	**14 23 14.2**	**-2.8**
	comp=E,6.6nm,0.4s						
PCAB	**Cabril**	**5.60**	**26**	P	**Pn**	**14 22 14.4**	**+1.8**
PCAB				S	**Sn**	**14 23 14.2**	**-2.8**
	comp=E,6.6nm,0.4s						
ELOB	**Lobios**	**5.73**	**25**	⇑P	**Pn**	**14 22 15.8**	**+1.4**
	comp=E,3.1nm,0.1s,SNR=18						
ELOB				S	**Sn**	**14 23 16.4**	**-3.8**
	comp=E,8.4nm,0.1s,SNR=7.2						
ELOB	**Lobios**	**5.73**	**25**	P	**Pn**	**14 22 15.8**	**+1.4**
	comp=E,3.1nm,0.1s,SNR=18						
ELOB				S	**Sn**	**14 23 16.4**	**-3.8**
	comp=E,8.4nm,0.1s,SNR=7.2						
PGAV	**Gavieira, Arco**	**5.75**	**23**	*e*Pn	**Pn**	**14 22 16.6**	**+2.0**
PGAV				*e*Sn	**Sn**	**14 23 17.9**	**-2.8**
PGAV				A	A	14 23 22.1	
	comp=E,9.4nm,0.2s						
PGAV	**Gavieira, Arco**	**5.75**	**23**	*e*Pn	**Pn**	**14 22 16.6**	**+2.0**
PGAV				*e*Sn	**Sn**	**14 23 17.9**	**-2.8**
EGOR	**Sierra Gorda,**	**5.78**	**84**	P	**Pn**	**14 22 15.9**	**+0.8**
	comp=E,0.7nm,0.1s,SNR=7.9						
EGOR				S	**Sn**	**14 23 19.5**	**-2.0**
	comp=E,1.7nm,0.2s,SNR=7.9						
EGOR	**Sierra Gorda,**	**5.78**	**84**	P	**Pn**	**14 22 15.9**	**+0.8**
	comp=E,0.7nm,0.1s,SNR=7.9						
EGOR				S	**Sn**	**14 23 19.5**	**-2.0**
	comp=E,1.7nm,0.2s,SNR=7.9						
ELGU	**Los Guajares,**	**6.16**	**86**	P	**Pn**	**14 22 22.9**	**+2.6**
	comp=E,0.7nm,0.1s,SNR=7.9						
ELGU				S	**Sn**	**14 23 29.0**	**-1.8**
	comp=E,2.1nm,0.2s,SNR=7.9						
ELGU	**Los Guajares,**	**6.16**	**86**	P	**Pn**	**14 22 22.9**	**+2.6**
	comp=E,0.7nm,0.1s,SNR=7.9						
ELGU				S	**Sn**	**14 23 29.0**	**-1.8**
	comp=E,2.1nm,0.2s,SNR=7.9						
PAB	**San Pablo**	**6.17**	**61**	P	**Pn**	**14 22 22.9**	**+2.5**
	comp=E,0.5nm,0.1s,SNR=7.9						
PAB				S	**Sn**	**14 23 27.1**	**-3.9**
	comp=E,4.7nm,0.2s,SNR=7.9						
PAB	**San Pablo**	**6.17**	**61**	P	**Pn**	**14 22 22.9**	**+2.5**
	comp=E,0.5nm,0.1s,SNR=7.9						
PAB				S	**Sn**	**14 23 27.1**	**-3.9**
	comp=E,4.7nm,0.2s,SNR=7.9						
OUK	**Oukaimeden**	**6.18**	**152**	P	**Pn**	**14 22 22.3**	**+1.5**
OUK				S	**Sn**	**14 23 26.1**	**-5.6**
PBRG	**Braganca**	**6.20**	**33**	*e*Pn	**Pn**	**14 22 22.4**	**+1.7**
PBRG				*e*Sn	**Sn**	**14 23 28.3**	**-3.4**
PBRG				A	A	14 23 31.6	
	comp=E,18nm,0.3s						
PBRG	**Braganca**	**6.20**	**33**	P	**Pn**	**14 22 22.4**	**+1.7**
PBRG				S	**Sn**	**14 23 28.3**	**-3.4**
	comp=E,8.8nm,0.3s						
PBRG	**Braganca**	**6.20**	**33**	P	**Pn**	**14 22 22.4**	**+1.7**
PBRG				S	**Sn**	**14 23 28.3**	**-3.4**
	comp=E,8.8nm,0.3s						
EQUE	**Quentar**	**6.32**	**83**	P	**Pn**	**14 22 25.8**	**+3.4**
	comp=E,1.5nm,0.3s,SNR=4.9						
EQUE				S	**Sn**	**14 23 33.1**	**-1.5**
	comp=E,0.9nm,0.1s						
EQUE	**Quentar**	**6.32**	**83**	P	**Pn**	**14 22 25.8**	**+3.4**
	comp=E,1.5nm,0.3s,SNR=4.9						
EQUE				S	**Sn**	**14 23 33.1**	**-1.5**
	comp=E,0.9nm,0.1s						
CZD	**Col de Zad**	**6.32**	**124**	P	**Pn**	**14 22 24.0**	**+1.4**
CZD				S	**Sn**	**14 23 31.6**	**-3.3**
CZD	**Col de Zad**	**6.32**	**124**	P	**Pn**	**14 22 24.0**	**+1.4**
EMAZ	**Mazaricos**	**6.48**	**15**	P	**Pn**	**14 22 25.7**	**+1.1**
	comp=E,2.9nm,0.1s,SNR=7.9						
EMAZ				S	**Sn**	**14 23 32.7**	**-5.9**
	comp=E,3.4nm,0.1s,SNR=7.9						
EMAZ	**Mazaricos**	**6.48**	**15**	P	**Pn**	**14 22 25.7**	**+1.1**
	comp=E,2.9nm,0.1s,SNR=7.9						
EAGO	**Agolada(Pontev**	**6.57**	**21**	P	**Pn**	**14 22 26.8**	**+1.0**
	comp=E,1.8nm,0.1s,SNR=7.9						
EAGO				S	**Sn**	**14 23 35.6**	**-5.1**
	comp=E,2.2nm,0.1s,SNR=7.9						
EAGO	**Agolada(Pontev**	**6.57**	**21**	P	**Pn**	**14 22 26.8**	**+1.0**
	comp=E,1.8nm,0.1s,SNR=7.9						
EQES	**Quesada**	**6.66**	**78**	P	**Pn**	**14 22 30.2**	**+3.1**
	comp=E,1.7nm,0.3s,SNR=7.9						
EQES				S	**Sn**	**14 23 40.3**	**-2.7**
	comp=E,1.3nm,0.1s,SNR=7.9						
EQES	**Quesada**	**6.66**	**78**	P	**Pn**	**14 22 30.2**	**+3.1**
	comp=E,1.7nm,0.3s,SNR=7.9						
EQES				S	**Sn**	**14 23 40.3**	**-2.7**
	comp=E,1.3nm,0.1s,SNR=7.9						
EBER	**Berja**	**6.75**	**86**	P	**Pn**	**14 22 30.6**	**+2.0**
	comp=E,1.6nm,0.3s,SNR=7.9						
EBER				S	**Sn**	**14 23 41.7**	**-3.8**
	comp=E,6.1nm,0.4s,SNR=7.9						
EBER	**Berja**	**6.75**	**86**	P	**Pn**	**14 22 30.5**	**+2.0**
	comp=E,1.6nm,0.3s,SNR=7.9						
EBER				S	**Sn**	**14 23 41.7**	**-3.8**
	comp=E,6.1nm,0.4s,SNR=7.9						
EPON	**Pontenova**	**7.34**	**24**	P	**Pn**	**14 22 37.1**	**+0.8**
	comp=E,7.3nm,0.3s,SNR=15						
EPON				S	**Sn**	**14 23 55.5**	**-4.1**
	comp=E,1.3nm,0.2s,SNR=5.1						
EPON	**Pontenova**	**7.34**	**24**	P	**Pn**	**14 22 37.1**	**+0.8**
	comp=E,7.3nm,0.3s,SNR=15						
EPON				S	**Sn**	**14 23 55.5**	**-4.1**
	comp=E,1.3nm,0.2s,SNR=5.1						
ETOB	**Tobarra**	**7.97**	**73**	P	**Pn**	**14 22 46.3**	**+1.2**
	comp=E,1.1nm,0.3s,SNR=7.9						
ETOB				S	**Sn**	**14 24 11.6**	**-3.8**
	comp=E,0.9nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**7.97**	**73**	P	**Pn**	**14 22 46.3**	**+1.2**
	comp=E,1.1nm,0.3s,SNR=7.9						
ETOB				S	**Sn**	**14 24 11.6**	**-3.8**
	comp=E,0.9nm,0.2s,SNR=7.9						
EARI	**Arriondas**	**8.07**	**33**	P	**Pn**	**14 22 48.4**	**+1.9**

	comp=E,0.5nm,0.2s,SNR=6.7						
EARI				S	**Sn**	**14 24 13.3**	**-4.5**
	comp=E,2.1nm,0.4s,SNR=7.9						
EARI	**Arriondas**	**8.07**	**33**	P	**Pn**	**14 22 48.4**	**+1.9**
	comp=E,0.5nm,0.2s,SNR=6.7						
EARI				S	**Sn**	**14 24 13.3**	**-4.5**
	comp=E,2.1nm,0.4s,SNR=7.9						

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*ISCJB **04** 14:21:53.8±0.4,39°.09N±0°.03×28°.15E±0°.03,h4^{km}±6^{km}, Error ellipse: s-maj=5.0km s-min=3.7km az=8.9*

*DDA **04** 14:21:53.5,39°.10N×28°.16E,h7^{km},Ml2.6*

*ISK **04** 14:21:53.8,39°.06N×28°.15E,h7^{km},ML2.6/10*

*CSEM **04** 14:21:54.1±0.1,39°.08N×28°.14E,h5^{km},ML2.6,Error ellipse: s-maj=2.6km s-min=2.3km az=31.0*

ISC 04 14:21:54.0±0.9**,39°.09N**±0°.02×**28°.15E**±0°.02**,h12**^{km}±10^{km}**, n40,**σ**0^{s}.48**/54**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKHS	**Akhisar**	**0.33**	**231**	*i* P	**Pg**	**14 22 00.7**	**-0.1**
AKHS				*i* S	**Sg**	**14 22 05.8**	**+0.5**
AKHS	**Akhisar**	**0.33**	**231**	P	**Pg**	**14 22 00.7**	**-0.1**
AKHS				S	**Sg**	**14 22 05.8**	**+0.5**
AKS	**Akhisar**	**0.34**	**232**	PG	**Pg**	**14 22 00.5**	**-0.3**
AKS				SG	**Sg**	**14 22 05.4**	**+0.1**
AKS	**Akhisar**	**0.34**	**232**	*e*Pg	**Pg**	**14 22 00.5**	**-0.3**
AKS				*e*Sg	**Sg**	**14 22 05.4**	**+0.1**
STEP	**BALIKESIR_Sava**	**0.44**	**311**	*i* P	**Pg**	**14 22 01.9**	**-0.8**
STEP				*i* S	**Sg**	**14 22 08.8**	**+0.1**
STEP	**BALIKESIR_Sava**	**0.44**	**311**	P	**Pg**	**14 22 01.9**	**-0.8**
STEP				S	**Sg**	**14 22 08.8**	**+0.1**
DEMI	**Demirci**	**0.44**	**96**	*i* P	**Pg**	**14 22 03.0**	**+0.2**
DEMI				*i* S	**Sg**	**14 22 08.8**	**+0.1**
DEMI	**Demirci**	**0.44**	**96**	P	**Pg**	**14 22 03.0**	**+0.2**
DURS	**Dursunbey**	**0.57**	**26**	*i* P	**Pg**	**14 22 04.7**	**-0.5**
DURS	**Dursunbey**	**0.57**	**26**	P	**Pg**	**14 22 04.7**	**-0.5**
SIMA	**Simav-Kutahya**	**0.65**	**90**	PG	**Pb**	**14 22 07.0**	**-0.3**
SIMA				SG	**Sg**	**14 22 15.4**	**+0.2**
SIMA	**Simav-Kutahya**	**0.65**	**90**	*e*Pg	**Pb**	**14 22 07.0**	**-0.3**
SIMA				*e*Sg	**Sg**	**14 22 15.4**	**+0.2**
MANT	**Manisa**	**0.68**	**152**	*i* P	**Pg**	**14 22 07.2**	**0.0**
MANT				*i* S	**Sg**	**14 22 15.6**	**-0.5**
MANT	**Manisa**	**0.68**	**152**	P	**Pg**	**14 22 07.2**	**0.0**
KULA	**Kula-Manisa**	**0.70**	**145**	PG	**Pb**	**14 22 07.7**	**-0.5**
KULA				SG	**Sb**	**14 22 17.1**	**-0.7**
KULA	**Kula-Manisa**	**0.70**	**145**	*e*Pg	**Pb**	**14 22 07.7**	**-0.5**
KULA				*e*Sg	**Sb**	**14 22 17.1**	**-0.7**
SHAP	**Saphane-Kutahy**	**0.84**	**94**	PG	**Pb**	**14 22 10.5**	**-0.1**
SHAP	**Saphane-Kutahy**	**0.84**	**94**	*e*Pg	**Pb**	**14 22 10.5**	**-0.1**
GONE	**Gonen-Balikesi**	**1.02**	**340**	PG	**Pb**	**14 22 14.0**	**+0.4**
GONE	**Gonen-Balikesi**	**1.02**	**340**	*e*Pg	**Pb**	**14 22 14.0**	**+0.4**
TVSB	**Tavsanli**	**1.08**	**70**	PN	**Pn**	**14 22 15.4**	**+0.3**
TVSB	**Tavsanli**	**1.08**	**70**	*e*Pn	**Pn**	**14 22 15.4**	**+0.3**
AYDB	**Zeytinkoy-Aydi**	**1.16**	**190**	PN	**Pg**	**14 22 15.9**	**-0.4**
AYDB	**Zeytinkoy-Aydi**	**1.16**	**190**	*e*Pn	**Pg**	**14 22 15.9**	**-0.4**
KCTX	**Karacabey (Bur**	**1.19**	**8**	PN	**Pn**	**14 22 17.2**	**+0.7**
KCTX	**Karacabey (Bur**	**1.19**	**8**	*e*Pn	**Pn**	**14 22 17.2**	**+0.7**
MDNY	**Mudanya-Bursa**	**1.40**	**24**	PN	**Pg**	**14 22 20.7**	**-0.2**
MDNY	**Mudanya-Bursa**	**1.40**	**24**	*e*Pn	**Pg**	**14 22 20.7**	**-0.2**
BAYC	**CANAKKALE_Bayr**	**1.40**	**298**	*i* P	**Pb**	**14 22 20.5**	**+0.4**
BAYC				*i* S	**Sb**	**14 22 37.4**	**-0.6**
BAYC	**CANAKKALE_Bayr**	**1.40**	**298**	P	**Pb**	**14 22 20.5**	**+0.4**
BAYC				S	**Sb**	**14 22 37.4**	**-0.6**
SBT5	**Esenkoy-Cinarc**	**1.64**	**20**	PN	**Pb**	**14 22 24.2**	**0.0**
SBT5	**Esenkoy-Cinarc**	**1.64**	**20**	*e*Pn	**Pb**	**14 22 24.2**	**0.0**
CAVI	**Cavuskoy**	**1.72**	**49**	PN	**Pn**	**14 22 25.0**	**+1.2**
CAVI	**Cavuskoy**	**1.72**	**49**	*e*Pn	**Pn**	**14 22 25.0**	**+1.2**
YLV	**Yalova**	**1.75**	**32**	PN	**Pb**	**14 22 25.8**	**-0.3**
YLV	**Yalova**	**1.75**	**32**	*e*Pn	**Pb**	**14 22 25.8**	**-0.3**
RKY	**Sarkoy-Tekirda**	**1.76**	**335**	PN	**Pb**	**14 22 26.1**	**-0.2**
RKY	**Sarkoy-Tekirda**	**1.76**	**335**	*e*Pn	**Pb**	**14 22 26.1**	**-0.2**
SBT3	**Marmara-Eregli**	**1.80**	**356**	PN	**Pb**	**14 22 26.3**	**-0.5**
SBT3	**Marmara-Eregli**	**1.80**	**356**	*e*Pn	**Pb**	**14 22 26.3**	**-0.5**

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*ISCJB **04** 14:28:59.6±0.7,37°.19N±0°.05×28°.12E±0°.07,h0^{km},Error ellipse: s-maj=9.9km s-min=4.5km az=135.9*

*CSEM **04** 14:28:59.8±0.4,37°.19N×28°.16E,h1^{km},ML2.5,Error ellipse: s-maj=10.2km s-min=6.2km az=28.0,Suspected Mining explosion.*

*ISK **04** 14:28:59.0,37°.22N×28°.09E,h8^{km},ML2.5/4*

*DDA **04** 14:29:00.2,37°.23N×28°.14E,h7^{km},Ml2.0,Suspected Mining explosion.*

ISC 04 14:28:58.8±0.9**,37°.15N**±0°.04×**28°.08E**±0°.04**,h0**^{km}**,n18, **σ**0^{s}.49**/23**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	**0.17**	**96**	PG	**Pg**	**14 29 02.9**	**+0.9**
YER	**Yerkesik**	**0.17**	**96**	*e*Pg	**Pg**	**14 29 02.9**	**+0.9**
TURN	**Turunc**	**0.51**	**123**	PG	**Pg**	**14 29 08.5**	**+0.1**
TURN				SG	**Sg**	**14 29 15.1**	**+0.1**
TURN	**Turunc**	**0.51**	**123**	*i* P	**Pg**	**14 29 08.2**	**-0.2**
TURN	**Turunc**	**0.51**	**123**	P	**Pg**	**14 29 08.2**	**-0.2**
TURN	**Turunc**	**0.51**	**123**	*e*Pg	**Pg**	**14 29 08.5**	**+0.1**
TURN				*e*Sg	**Sg**	**14 29 15.1**	**+0.1**
AYDN	**Tasoluk**	**0.53**	**343**	*i* P	**Pb**	**14 29 10.2**	**-0.9**
AYDN				*i* S	**Sg**	**14 29 16.3**	**+0.4**
AYDN	**Tasoluk**	**0.53**	**343**	P	**Pb**	**14 29 10.2**	**-0.9**
AYDN				S	**Sg**	**14 29 16.3**	**+0.4**
DALY	**Dalyan (Mu˜la**	**0.57**	**126**	PG	**Pb**	**14 29 11.1**	**-0.5**
DALY				SG	**Sb**	**14 29 20.7**	**+0.4**
DALY	**Dalyan (Mu˜la**	**0.57**	**126**	*e*Pg	**Pb**	**14 29 11.1**	**-0.5**
DAT	**Datca**	**0.58**	**224**	PG	**Pb**	**14 29 11.7**	**-0.2**
DAT	**Datca**	**0.58**	**224**	*i* P	**Pn**	**14 29 14.4**	**0.0**
DAT	**Datca**	**0.58**	**224**	*e*Pg	**Pb**	**14 29 11.7**	**-0.2**
DAT	**Datca**	**0.58**	**224**	P	**Pn**	**14 29 14.4**	**0.0**
BODT	**Bodrum**	**0.62**	**262**	PG	**Pb**	**14 29 12.2**	**-0.3**
BODT	**Bodrum**	**0.62**	**262**	*e*Pg	**Pb**	**14 29 12.2**	**-0.3**
AKAS	**Kas**	**1.53**	**126**	PN	**Pg**	**14 29 27.9**	**-0.3**
AKAS	**Kas**	**1.53**	**126**	*e*Pn	**Pg**	**14 29 27.9**	**-0.3**

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*BJI **04** 14:36:29.2,30°.14S×177°.57W,h7^{km},mb5.1/27,mB5.4/13, Ms4.9/11,Ms7 4.6/12*

*ISCJB **04** 14:36:33.9±0.1,31°.04S±0°.02×178°.12W±0°.04,h46^{km}, mb5.0/86,MS4.3/45,Error ellipse: s-maj=5.4km s-min=2.3km az=28.7*

*MOS **04** 14:36:33.0±0.9,30°.67S×178°.16W,h33^{km},mb5.3/23, Error ellipse: s-maj=12.3km s-min=9.7km az=69.4*

*NEIC **04** 14:36:34.5±1.0,30°.75S×178°.17W,h39^{km}±8^{km},mb5.1/62, Error ellipse: s-maj=7.4km s-min=4.7km az=145.0*

*GCMT **04** 14:36:34.5±0.2,30°.71S×177°.98W,h42^{km}±1^{km},MW5.2/85, Moment Tensor Solution. s78,c111; s85,c134; Duration: 1^{s}.0 Moment tensor: Scale 10^{16}Nm; M_{rr}5.22±.20; $M_{\theta\theta}$-1.72±.15; $M_{\phi\phi}$-3.50±.14; $M_{r\theta}$1.92±.16; $M_{\theta\phi}$-2.02±.11; $M_{\phi r}$5.24±.18; Best double couple: $M_0$7.50000×10^{16} NP1:ϕ_s24.00000°,δ69.00000°, λ84.00000°. NP2:ϕ_s220.00000°,δ22.00000°,λ105.00000°. Principal axes: T 7.7630, Plg65.0000°, Azm284.0000°; N -0.5270, Plg6.0000°, Azm26.0000°; P -7.2360, Plg24.0000°, Azm118.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*WEL **04** 14:36:34.0,30°.75S×178°.17W,h39^{km},ML6.0/7*

*IDC **04** 14:36:34.8±1.7,30°.63S×178°.10W,h41^{km}±14^{km},mb4.4/23, mb1 4.5/25,mb1mx4.4/44,mbtmp4.6/25,ML4.3/2,MS4.3/40, Ms1 4.3/40,ms1mx4.2/47,Error ellipse: s-maj=12.2km s-min=10.0km az=98.0*

ISC 04 14:36:35.3±0.3**,30°.93S**±0°.03×**177°.95W**±0°.05**,h46**^{km}**, n475,**σ**1^{s}.91**/447**,mb5.1**/85**,MS4.3**/45**,18C-6D,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**1.66**	**1**	P	**Pn**	**14 36 58.2**	**-3.8**
GLKZ				S	**Sn**	**14 37 14.6**	**-7.5**
RAO	**Raoul Island**	**1.67**	**1**	P	**Pn**	**14 36 58.3**	**-3.8**
	915nm,0.3s,baz=149,slow=3.3,SNR=52						
RAO				S	**Sn**	**14 37 14.5**	**-7.9**
	4μm,0.3s,baz=73,slow=19,SNR=18						
RAO				LR	LR	14 37 35.2	
	comp=Z,8μm,19.5s,baz=168,slow=44						
RIZ	**Raoul Island**	**1.68**	**1**	P	**Pn**	**14 36 58.2**	**-4.0**
RIZ				S	**Sn**	**14 37 16.0**	**-6.5**
MXZ	**Matakaoa Point**	**7.30**	**204**	*e*Pn	**Pn**	**14 38 17.7**	**-1.6**
MXZ	**Matakaoa Point**	**7.30**	**204**	P	**Pn**	**14 38 17.7**	**-1.6**
WMGZ	**Waiomatatini S**	**7.50**	**203**	P	**Pn**	**14 38 20.9**	**-1.2**
HAZ	**Te Kaha**	**7.67**	**206**	P	**Pn**	**14 38 22.7**	**-1.6**
HAZ				S	**Sn**	**14 39 52.0**	**+2.2**
PUZ	**Puketiti**	**7.78**	**203**	P	**Pn**	**14 38 23.2**	**-2.7**
PUZ				S	**Sn**	**14 39 52.9**	**+0.3**
RUGZ	**Raukumara Rang**	**7.89**	**206**	P	**Pn**	**14 38 25.1**	**-2.4**
RUGZ				S	**Sn**	**14 39 56.5**	**+1.0**
TWGZ	**Tauwhareparae**	**7.97**	**204**	P	**Pn**	**14 38 25.8**	**-2.7**
TWGZ				S	**Sn**	**14 39 59.6**	**+2.2**
CNGZ	**Carnagh Statio**	**8.17**	**202**	P	**Pn**	**14 38 29.3**	**-1.9**
TKGZ	**Te Karaka**	**8.25**	**204**	P	**Pn**	**14 38 30.2**	**-2.1**
TKGZ				S	**Sn**	**14 40 04.6**	**+0.5**
OPRZ	**Ohinepanea**	**8.26**	**212**	P	**Pn**	**14 38 32.2**	**-0.1**
OPRZ				S	**Sn**	**14 40 08.4**	**+4.1**
MWZ	**Matawai**	**8.27**	**206**	P	**Pn**	**14 38 30.0**	**-2.7**
MWZ				S	**Sn**	**14 40 05.3**	**+0.5**
OUZ	**Omahuta**	**8.28**	**237**	*e*Pn	Pn	14 38 38.1	+5.3
MARZ	**Manawahe**	**8.32**	**211**	P	**Pn**	**14 38 35.0**	**+1.7**
URZ	**Urewera**	**8.37**	**208**	P	**Pn**	**14 38 31.1**	**-2.8**
	3.4nm,0.3s,baz=271,slow=4.6,SNR=32						
URZ				S	**Sn**	**14 40 06.0**	**-1.0**
	23nm,0.3s,baz=17,slow=19,SNR=15						
URZ	**Urewera**	**8.37**	**208**	P	**Pn**	**14 38 31.5**	**-2.4**
RAGZ	**Rawiri**	**8.46**	**206**	P	**Pn**	**14 38 32.3**	**-2.9**
RIGZ	**Rimuhau**	**8.52**	**203**	P	**Pn**	**14 38 34.1**	**-1.9**
KARZ	**Kaharoa**	**8.54**	**213**	P	**Pn**	**14 38 39.3**	**+3.0**
KMRZ	**Kaimai**	**8.54**	**215**	P	**Pn**	**14 38 37.0**	**+0.6**
OMRZ	**Omania**	**8.55**	**212**	P	**Pn**	**14 38 40.2**	**+3.7**
TARZ	**Mount Tarawera**	**8.60**	**211**	P	**Pn**	**14 38 38.7**	**+1.5**
AWAZ	**Awhitu Peninsu**	**8.67**	**223**	P	Pn	14 38 49.8	+12
PRGZ	**Paritu Road**	**8.68**	**202**	P	**Pn**	**14 38 35.6**	**-2.6**
PRGZ				P	**Pn**	**14 38 35.6**	**-2.6**
PRGZ				S	**Sn**	**14 40 14.1**	**-0.5**
RRRZ	**Republican Roa**	**8.68**	**210**	P	**Pn**	**14 38 40.0**	**+1.7**
MUGZ	**Murupara**	**8.69**	**209**	P	**Pn**	**14 38 35.0**	**-3.3**
RTZ	**Ruatahuna**	**8.72**	**207**	P	**Pn**	**14 38 35.7**	**-3.2**
SNGZ	**Shannon Statio**	**8.73**	**205**	P	**Pn**	**14 38 39.2**	**+0.2**
KNZ	**Kokohu**	**8.83**	**203**	P	**Pn**	**14 38 37.1**	**-3.2**
PRRZ	**Plateau Road**	**8.87**	**210**	P	**Pn**	**14 38 40.1**	**-0.7**
MHGZ	**Mahia Peninsul**	**8.88**	**201**	P	**Pn**	**14 38 37.0**	**-3.9**
RAHZ	**Arahi**	**8.95**	**206**	P	**Pn**	**14 38 39.8**	**-2.1**
MTHZ	**Maungataniwha**	**8.98**	**207**	P	**Pn**	**14 38 39.9**	**-2.5**
WHHZ	**Waihua**	**9.03**	**205**	P	**Pn**	**14 38 40.8**	**-2.3**
WHHZ	**Waihua**	**9.03**	**205**	P	**Sn**	**14 40 23.6**	**+0.2**
TLZ	**Tolley Road**	**9.12**	**214**	P	**Pn**	**14 38 45.9**	**+1.6**
MRHZ	**Matea Rd**	**9.14**	**209**	P	**Pn**	**14 38 41.6**	**-3.0**
NMHZ	**Naumai**	**9.21**	**206**	P	**Pn**	**14 38 42.7**	**-2.9**
NMHZ	**Naumai**	**9.21**	**206**	P	**Sn**	**14 40 28.9**	**+1.1**
ARHZ	**Aropaoanui**	**9.29**	**205**	P	**Sn**	**14 40 27.4**	**-2.2**
BKZ	**Black Stump Fm**	**9.39**	**207**	*e*Pn	**Pn**	**14 38 44.6**	**-3.4**
BKZ	**Black Stump Fm**	**9.39**	**207**	P	**Pn**	**14 38 44.7**	**-3.4**
RATZ	**Rangitukua**	**9.44**	**211**	P	**Pn**	**14 38 49.1**	**+0.4**
MCHZ	**McNeill Hill**	**9.55**	**206**	P	**Pn**	**14 38 47.7**	**-2.4**
MCHZ	**McNeill Hill**	**9.55**	**206**	P	**Sn**	**14 40 35.9**	**-0.3**
HIZ	**Hauiti**	**9.60**	**216**	*e*Pn	**Pn**	**14 38 53.0**	**+2.2**
HIZ	**Hauiti**	**9.60**	**216**	P	**Pn**	**14 38 53.9**	**+3.1**
KWHZ	**Kaweka Forest**	**9.64**	**207**	P	**Pn**	**14 38 47.7**	**-3.8**
KWHZ	**Kaweka Forest**	**9.64**	**207**	P	**Sn**	**14 40 37.3**	**-1.1**
KRVZ	**Karewarewa**	**9.69**	**211**	P	**Pn**	**14 38 52.5**	**+0.4**
TWVZ	**Taurewa**	**9.76**	**212**	P	**Pn**	**14 38 53.7**	**+0.5**
NGZ	**Ngauruhoe**	**9.77**	**211**	P	**Pn**	**14 38 52.6**	**-0.7**
KAHZ	**Kahuranaki**	**9.80**	**204**	P	Pn	14 38 49.2	-4.3
KAHZ	**Kahuranaki**	**9.80**	**204**	P	**Sn**	**14 40 41.4**	**-0.8**
COVZ	**Chateau Observ**	**9.82**	**211**	P	**Pn**	**14 38 55.8**	**+1.8**
BHHZ	**Black Hill Sta**	**9.84**	**208**	P	**Pn**	**14 38 50.8**	**-3.3**
KRHZ	**Kereru**	**9.85**	**207**	P	Pn	14 38 49.0	-5.2
KRHZ	**Kereru**	**9.85**	**207**	P	**Sn**	**14 40 40.4**	**-3.1**
FWVZ	**Far West T-bar**	**9.86**	**211**	P	**Pn**	**14 38 53.4**	**-1.2**
WHVZ	**Whangaehu Hut**	**9.87**	**211**	P	**Pn**	**14 38 55.5**	**+0.9**
MOVZ	**Moawhango**	**9.90**	**210**	P	**Pn**	**14 38 51.6**	**-3.4**
PKVZ	**Pokaka**	**9.98**	**212**	P	**Pn**	**14 38 59.6**	**+3.6**
MTVZ	**Mangateitei**	**10.00**	**211**	P	**Pn**	**14 38 54.4**	**-2.0**
PXZ	**Pawanui**	**10.01**	**204**	P	**Sn**	**14 40 40.9**	**-6.5**
VRZ	**Vera Road**	**10.12**	**214**	P	Pn	14 39 03.6	+5.7
PNHZ	**Pukenui**	**10.15**	**206**	P	Pn	14 38 53.2	-5.2
PNHZ	**Pukenui**	**10.15**	**206**	P	**Sn**	**14 40 47.0**	**-3.9**
WPHZ	**Waipukurau**	**10.19**	**205**	P	**Sn**	**14 40 49.8**	**-2.0**
PRHZ	**Porangahau**	**10.30**	**204**	P	Pn	14 38 55.1	-5.3
PRHZ	**Porangahau**	**10.30**	**204**	P	Sn	14 40 45.5	-9.0
TSZ	**Takapari Road**	**10.37**	**207**	P	Pn	14 38 57.0	-4.3
DVHZ	**Dannevirke**	**10.50**	**205**	P	Pn	14 38 58.4	-4.8
WAZ	**Wanganui**	**10.52**	**211**	P	**Pn**	**14 39 00.6**	**-2.8**
PKE	**Pukeiti**	**10.56**	**216**	P	**Pn**	**14 39 07.7**	**+3.8**
PKE				P	**Pn**	**14 39 07.8**	**+3.8**
POWZ	**Post Office Ro**	**10.73**	**207**	P	**Pn**	**14 39 02.4**	**-3.9**
BFZ	**Birch Farm**	**10.81**	**204**	*e*Pn	Pn	14 39 02.3	-5.0
BFZ	**Birch Farm**	**10.81**	**204**	P	Pn	14 39 01.6	-5.7
MRZ	**Mangatainoka R**	**11.04**	**207**	P	Pn	14 39 04.0	-6.4
HOWZ	**Holdsworth Sta**	**11.26**	**206**	P	Pn	14 39 07.1	-6.5
OGWZ	**Otaki Gorge**	**11.33**	**208**	P	Pn	14 39 08.3	-6.1
KIW	**Kapiti Island**	**11.47**	**208**	P	Pn	14 39 09.7	-6.7
MTW	**Mount Morrison**	**11.49**	**206**	P	Pn	14 39 09.9	-6.9
CAW	**Cannon Point**	**11.62**	**207**	P	Pn	14 39 11.7	-6.7
PAWZ	**Paruwai Farm**	**11.72**	**205**	P	Pn	14 39 13.9	-5.9
MSWZ	**Moikau Station**	**11.81**	**206**	P	Pn	14 39 16.1	-5.0
SNZO	**South Karori**	**11.93**	**208**	*e*Pn	Pn	14 39 18.3	-4.3
TCW	**Tory Channel**	**12.03**	**209**	P	Pn	14 39 18.0	-6.0
TUWZ	**Tuamarina**	**12.35**	**210**	P	Pn	14 39 21.6	-6.8
NNZ	**Nelson**	**12.42**	**212**	P	Pn	14 39 25.1	-4.3
NNZ	**Nelson**	**12.42**	**212**	P	Pn	14 39 23.6	-5.8
THZ	**Tophouse**	**13.07**	**212**	*e*Pn	**Pn**	**14 39 34.2**	**-4.1**
THZ	**Tophouse**	**13.07**	**212**	P	Pn	14 39 32.1	-6.3
KHZ	**Kahutara**	**13.33**	**208**	*e*Pn	**Pn**	**14 39 42.6**	**+0.8**
KHZ	**Kahutara**	**13.33**	**208**	P	Pn	14 39 34.5	-7.2
DSZ	**Denniston Nort**	**13.58**	**215**	P	**Pn**	**14 39 42.5**	**-2.7**
DSZ	**Denniston Nort**	**13.58**	**215**	P	**Pn**	**14 39 42.5**	**-2.7**
LTZ	**Lake Taylor**	**14.17**	**211**	*e*Pn	Pn	14 39 48.6	-4.6
LTZ	**Lake Taylor**	**14.17**	**211**	P	Pn	14 39 46.5	-6.7
INZ	**Inchbonnie**	**14.50**	**213**	P	**Pn**	**14 39 53.3**	**-4.2**
OKCZ	**Okains Bay**	**14.62**	**207**	P	Pn	14 39 52.5	-6.7
OXZ	**Oxford**	**14.71**	**210**	*e*Pn	Pn	14 39 54.9	-5.4
OXZ	**Oxford**	**14.71**	**210**	P	Pn	14 39 53.1	-7.2
MQZ	**McQueen’s Vall**	**14.77**	**208**	*e*Pn	Pn	14 39 53.6	-7.5
MQZ	**McQueen’s Vall**	**14.77**	**208**	P	Pn	14 39 52.7	-8.4
WVZ	**Waitaha Valley**	**15.10**	**213**	P	**Pn**	**14 40 02.4**	**-3.0**
RPZ	**Rata Peaks**	**15.45**	**211**	P	**Pn**	**14 40 06.9**	**-3.1**
	3.6nm,0.3s,baz=30,slow=4.3,SNR=13						
RPZ				S	Sn	14 42 47.4	-13
	3.0nm,0.3s,baz=114,slow=20,SNR=12						
RPZ	**Rata Peaks**	**15.45**	**211**	*e*Pn	**Pn**	**14 40 07.1**	**-3.0**
	40nm,0.5s						
RPZ				S	Sn	14 42 47.5	-13
RPZ	**Rata Peaks**	**15.45**	**211**	P	**Pn**	**14 40 06.5**	**-3.6**
FOZ	**Fox Glacier**	**15.89**	**214**	*e*Pn	Pn	14 40 08.4	-7.2
LBZ	**Lake Benmore**	**16.37**	**212**	*e*Pn	**Pn**	**14 40 18.4**	**-3.3**
	86nm,1.8s						
LBZ	**Lake Benmore**	**16.37**	**212**	P	**Pn**	**14 40 18.8**	**-2.9**
DZM	**Mont Dzumac**	**16.51**	**299**	P	**Pn**	**14 40 23.4**	**-0.3**
	0.2nm,0.3s,baz=116,slow=13,SNR=13						
DZM				LR	LR	14 45 21.7	
	comp=Z,3μm,21.0s,baz=130,slow=32						
DZM	**Mont Dzumac**	**16.51**	**299**	*e*P	**P**	**14 40 26.7**	**+0.9**
	127nm,0.9s						
DZM				*e*LR	LR	14 44 16.4	
	7μm,25.4s						
DZM	**Mont Dzumac**	**16.51**	**299**	*e*Pn	**Pn**	**14 40 20.3**	**-3.4**
	72nm,1.0s						
ODZ	**Otahua Downs**	**16.69**	**209**	*e*Pn	**Pn**	**14 40 20.2**	**-5.5**
	22nm,0.7s						
WKZ	**Wanaka**	**17.24**	**213**	*e*Pn	**Pn**	**14 40 29.7**	**-2.9**
	166nm,1.8s						
EAZ	**Earnscleugh**	**17.41**	**211**	P	**P**	**14 40 35.2**	**-0.4**
TUZ	**Tuapeka**	**17.84**	**209**	P	**Pn**	**14 40 38.9**	**-1.1**
AFI	**Afiamalu**	**17.87**	**20**	P	**Pn**	**14 40 38.1**	**-2.5**
	2.7nm,0.3s,baz=191,slow=10,SNR=4.5						
AFI				S	Sn	14 43 38.8	-20
	1.6nm,0.3s,baz=59,slow=15,SNR=3.3						
MLZ	**Mavora Lakes**	**18.06**	**213**	*e*P	**P**	**14 40 41.3**	**-1.5**
	50nm,1.3s						
MLZ	**Mavora Lakes**	**18.06**	**213**	P	**P**	**14 40 42.3**	**-0.5**
WHZ	**Wether Hill Ro**	**18.54**	**212**	*e*P	**P**	**14 40 46.8**	**-1.1**
	146nm,1.9s						
DCZ	**Deep Cove**	**18.60**	**215**	*e*P	**P**	**14 40 46.8**	**-1.8**
	110nm,1.8s						
RAR	**Rarotonga**	**18.96**	**64**	P	**Pn**	**14 40 53.0**	**-0.7**
	3.2nm,0.3s,baz=234,slow=16,SNR=3.6						
RAR				S	Sn	14 44 07.7	-17
	1.0nm,0.3s,baz=107,slow=17,SNR=2.0						
RAR				LR	LR	14 47 43.2	
	comp=Z,392nm,19.8s,baz=234,slow=35						
RAR	**Rarotonga**	**18.96**	**64**	*e*P	**Pn**	**14 40 53.1**	**-0.7**
	85nm,1.1s						
RAR				S	Sn	14 44 07.7	-17
RAR	**Rarotonga**	**18.96**	**64**	*e*P	**Pn**	**14 40 53.1**	**-0.7**
RAR				pmax	pmax		
	comp=Z,85nm,1.1s						
ARMA	**Armidale**	**26.13**	**263**	P	**P**	**14 42 06.3**	**+1.1**
	baz=26,SNR=27						
ARMA	**Armidale**	**26.13**	**263**	*e*P	**P**	**14 42 07.8**	**+2.6**
	comp=Z,171nm,1.9s						
TBI	**Tubuai**	**26.40**	**80**	*e*LR	LR	14 48 38.7	
	comp=Z,3μm,27.8s,baz=246						
TBI	**Tubuai**	**26.40**	**80**	*e*T	T	15 09 36.6	
	comp=Z,67nm,0.3s						
CNB	**Canberra Magne**	**27.65**	**252**	P	**P**	**14 42 21.1**	**+2.4**
	baz=28,SNR=7.2						
EIDS	**Eidsvold**	**27.81**	**274**	P	**P**	**14 42 21.4**	**+1.2**
	baz=28,SNR=5.1						
EIDS	**Eidsvold**	**27.81**	**274**	*e*P	**P**	**14 42 20.8**	**+0.6**
	comp=Z,26nm,1.1s						
MILA	**Mila**	**27.86**	**248**	P	**P**	**14 42 21.4**	**+0.8**
	baz=28,SNR=7.0						
YNG	**Young**	**28.47**	**254**	P	**P**	**14 42 28.6**	**+2.6**
	baz=29,SNR=8.2						
PAE	**Paea**	**28.94**	**69**	*e*T	T	15 12 45.0	
	comp=Z,18nm,0.2s						
PPT2	**Papeete2**	**28.98**	**69**	*e*S	**S**	**14 47 15.0**	**-3.8**
	comp=Z,246nm,27.0s						
PPT2				*e*LR	LR	14 49 55.2	
	comp=Z,2μm,26.8s,baz=234						
PPT2	**Papeete2**	**28.98**	**69**	*e*T	T	15 12 49.1	
	comp=Z,13nm,0.3s						
PPT	**Papeete**	**28.99**	**69**	LR	LR	14 53 42.8	
	comp=Z,355nm,18.3s,baz=242,slow=36						
TIAR	**Tiarei**	**29.18**	**70**	*e*T	T	15 13 03.6	
	comp=Z,3.2nm,0.3s						
HNR	**Honiara**	**29.68**	**311**	LR	LR	14 52 32.2	
	comp=Z,610nm,21.6s,baz=164,slow=33						
TOO	**Toolangi**	**30.80**	**248**	P	**P**	**14 42 48.0**	**+1.4**
	baz=31,SNR=18						
CMSA	**Cobar Meteorol**	**31.00**	**259**	P	**P**	**14 42 50.2**	**+1.7**
	baz=31,SNR=157						
PMOR	**Pomariorio Ree**	**31.76**	**67**	*e*T	T	15 16 15.4	
	comp=Z,5.5nm,0.2s						
VAH	**Vaihoa**	**31.84**	**68**	*e*T	T	15 16 21.8	
	comp=Z,127nm,0.2s						
QLP	**Quilpie**	**33.33**	**268**	P	**P**	**14 43 09.5**	**+0.6**
	baz=33,SNR=9.1						
ARPS	**Mount Arapiles**	**33.72**	**249**	P	**P**	**14 43 13.1**	**+0.9**
	baz=34,SNR=13						
CTA	**Charters Tower**	**33.93**	**280**	P	**P**	**14 43 13.9**	**-0.3**
	comp=Z,60nm,0.7s,baz=104,slow=11,SNR=77						
CTA				LR	LR	14 55 42.5	
	comp=Z,1μm,20.4s,baz=116,slow=34						
CTAO	**Charters Tower**	**33.93**	**280**	*e*P	**P**	**14 43 14.7**	**+0.5**
	comp=Z,349nm,0.7s						
CTAO	**Charters Tower**	**33.93**	**280**	*e*P	**P**	**14 43 14.7**	**+0.5**
CTAO				pmax	pmax		
	comp=Z,349nm,0.7s						
STKA	**Stephens Creek**	**34.40**	**258**	P	**P**	**14 43 19.4**	**+1.2**
	baz=34,SNR=58						
STKA	**Stephens Creek**	**34.40**	**258**	P	**P**	**14 43 18.9**	**+0.8**
	comp=Z,120nm,0.8s,baz=100,slow=9.6,SNR=216						
STKA				LR	LR	14 56 28.4	
	comp=Z,848nm,18.1s,baz=76,slow=35						
STKA	**Stephens Creek**	**34.40**	**258**	*e*P	**P**	**14 43 19.0**	**+0.8**
	comp=Z,26nm,0.8s						
STKA	**Stephens Creek**	**34.40**	**258**	*e*P	**P**	**14 43 19.2**	**+1.0**
HTT	**Hallett**	**36.40**	**254**	P	**P**	**14 43 35.8**	**+0.4**
	baz=36,SNR=53						
MTSU	**Mount Surprise**	**36.44**	**282**	P	**P**	**14 43 36.6**	**+0.8**
	baz=36,SNR=26						
BBOO	**Buckleboo**	**38.87**	**255**	P	**P**	**14 43 55.8**	**-0.5**
	baz=39,SNR=47						
BBOO	**Buckleboo**	**38.87**	**255**	*e*P	**P**	**14 43 55.2**	**-1.0**
	comp=Z,43nm,0.6s						
PMG	**Port Moresby**	**38.87**	**296**	P	**P**	**14 43 54.1**	**-2.3**
	comp=Z,17nm,0.6s,baz=15,slow=2.6,SNR=5.3						
PMG				LR	LR	14 57 32.3	
	comp=Z,472nm,20.1s,baz=124,slow=32						
RKT	**Rikitea**	**38.88**	**89**	*e*LR	LR	14 54 24.6	
	comp=Z,1μm,30.5s,baz=251						
RKT	**Rikitea**	**38.88**	**89**	*e*T	T	15 25 13.4	
	comp=Z,2.6nm,0.3s						
QIS	**Mount Isa**	**39.40**	**275**	P	**P**	**14 44 00.5**	**-0.3**
	baz=39,SNR=12						
COEN	**Coen**	**39.46**	**287**	P	**P**	**14 44 01.3**	**0.0**
	baz=40,SNR=8.6						
COEN	**Coen**	**39.46**	**287**	*e*P	**P**	**14 44 00.1**	**-1.2**
	comp=Z,35nm,0.8s						
TAOE	**Nuku Hiva Isla**	**41.48**	**66**	*e*LR	LR	14 55 38.1	
	comp=Z,1μm,27.1s						
AS01	**Alice Springs**	**43.08**	**268**	*e*P	**P**	**14 44 29.2**	**-1.9**
AS31	**Alice Springs**	**43.12**	**267**	*e*P	**P**	**14 44 30.4**	**-1.0**
	comp=Z,14nm,1.2s						
ASAR	**Alice Springs**	**43.12**	**267**	P	**P**	**14 44 30.4**	**-1.0**
	comp=Z,29nm,0.7s,baz=104,slow=6.8,SNR=212						
ASAR				ScP	**ScP**	**14 50 09.2**	**+1.2**
	comp=Z,1.4nm,0.8s,baz=123,slow=4.5,SNR=4.3						
ASAR				S	**S**	**14 50 54.1**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=110,slow=14,SNR=3.0						
ASAR				LR	LR	15 02 13.6	
	comp=Z,939nm,18.1s,baz=115,slow=36						
WRAB	**Tennant Creek**	**44.16**	**273**	*e*P	**P**	**14 44 38.3**	**-1.4**
	comp=Z,36nm,0.8s						
WRAB	**Tennant Creek**	**44.16**	**273⇑**	*e*P	**P**	**14 44 38.8**	**-0.9**
WRAB				pmax	pmax		
	comp=Z,38nm,0.7s						
WRA	**Warramunga Arr**	**44.16**	**273**	P	**P**	**14 44 38.7**	**-1.1**
	comp=Z,36nm,0.5s,baz=111,slow=8.1,SNR=218						
WRA				S	**S**	**14 51 06.1**	**-3.7**
	comp=Z,1.1nm,0.9s,baz=109,slow=15,SNR=2.7						
WRA				LR	LR	15 02 34.2	
	comp=Z,948nm,18.2s,baz=100,slow=35						
FORT	**Forrest**	**45.95**	**256**	*e*P	**P**	**14 44 52.8**	**-1.0**
	comp=Z,43nm,0.7s						
WRKA	**Warakurna**	**47.46**	**263**	P	**P**	**14 45 04.6**	**-1.1**
	baz=48,SNR=95						
SBA	**Scott Base**	**47.51**	**184**	*e*P	**P**	**14 45 09.9**	**+4.6**
	comp=Z,26nm,1.3s						
VNDA	**Vanda**	**47.57**	**186**	P	**P**	**14 45 08.8**	**+2.9**
	comp=Z,2.4nm,0.6s,baz=5.5,slow=6.9,SNR=20						
VNDA				LR	LR	15 03 23.1	
	comp=Z,89nm,19.1s,baz=27,slow=34						
VNDA	**Vanda**	**47.57**	**186**	*e*P	**P**	**14 45 09.0**	**+3.2**
	comp=Z,19nm,1.7s						
VNDA	**Vanda**	**47.57**	**186**	*e*P	**P**	**14 45 09.0**	**+3.2**
VNDA				pmax	pmax		
	comp=Z,19nm,1.7s						
JAY	**Jayapura**	**48.18**	**298**	P	**P**	**14 45 10.8**	**-0.6**
GENI	**Genyem**	**48.54**	**297**	P	**P**	**14 45 13.1**	**-1.0**
KDU	**Kakadu**	**49.05**	**280**	P	**P**	**14 45 17.6**	**-0.4**
	baz=49,SNR=8.0						
MTN	**Manton Dam**	**50.11**	**279**	P	**P**	**14 45 25.6**	**-0.5**
	baz=50,SNR=9.3						
KNRA	**Kununurra**	**50.79**	**275**	P	**P**	**14 45 31.7**	**+0.5**
	baz=51,SNR=3.0						
SRPI	**Serui, Papua**	**52.03**	**295**	P	**P**	**14 45 41.4**	**+0.9**
FITZ	**Fitzroy Crossi**	**52.40**	**270**	P	**P**	**14 45 42.4**	**-0.9**
	baz=52,SNR=13						
FITZ	**Fitzroy Crossi**	**52.40**	**270**	P	**P**	**14 45 42.1**	**-1.2**
	comp=Z,10nm,0.7s,baz=102,slow=4.8,SNR=17						
FITZ				LR	LR	15 06 47.9	
	comp=Z,702nm,20.4s,baz=108,slow=35						
FITZ	**Fitzroy Crossi**	**52.40**	**270**	*e*P	**P**	**14 45 41.9**	**-1.4**
	comp=Z,12nm,0.8s						
KLBR	**Kellerberrin**	**54.22**	**251**	P	**P**	**14 45 55.3**	**-1.2**
	baz=54,SNR=7.3						
NWAO	**Narrogin (SRO)**	**54.25**	**250**	LR	LR	15 07 01.4	
	comp=Z,295nm,20.3s,baz=338,slow=34						
CASY	**Casey**	**54.69**	**208**	*e*P	**P**	**14 45 59.3**	**-0.1**
	comp=Z,30nm,0.5s						
MEEK	**Meekatharra**	**55.11**	**257**	P	**P**	**14 46 01.9**	**-1.1**
	baz=55,SNR=11						
MBWA	**Marble Bar**	**56.21**	**264**	*e*P	**P**	**14 46 09.9**	**-1.1**
GUMO	**Guam**	**56.88**	**315**	LR	LR	15 09 03.4	
	comp=Z,210nm,19.2s,baz=134,slow=34						
MSAI	**Masohi**	**57.01**	**288**	P	**P**	**14 46 16.8**	**+0.1**
SOEI	**Soe**	**57.47**	**278**	P	**P**	**14 46 19.9**	**-0.2**
BATI	**Baumata**	**57.76**	**278**	LR	LR	15 11 32.9	
	comp=Z,1μm,19.2s,baz=126,slow=36						
QSPA	**South Pole Qui**	**59.18**	**180**	P	**P**	**14 46 33.9**	**+2.6**
	comp=Z,17nm,0.8s,baz=49,slow=3.9,SNR=65						
QSPA	**South Pole Qui**	**59.18**	**180**	*e*P	**P**	**14 46 34.4**	**+3.1**
	comp=Z,36nm,0.8s						
GIRL	**Giralia**	**60.29**	**260**	P	**P**	**14 46 40.2**	**+0.7**
	baz=60,SNR=5.6						
PWJI	**Pagerwojo**	**68.99**	**273**	P	**P**	**14 47 35.9**	**-0.4**
PCJI	**Pacitan**	**69.44**	**273**	P	**P**	**14 47 38.9**	**-0.2**
PMSA	**Palmer Station**	**71.77**	**156**	LR	LR	15 11 33.0	

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          comp=Z,306nm,20.7s,baz=241,slow=29
MAW   Mawson            71.83 201  P        P        14 47 53.7 +1.0
          baz=72,SNR=14
MAW   Mawson            71.83 201  P        P        14 47 53.2 +0.5
          comp=Z,7.4nm,0.7s,baz=140,slow=9.0,SNR=19
MAW                                LR       LR       15 18 26.9
          comp=Z,172nm,19.6s,baz=77,slow=35
MAW   Mawson            71.83 201  eP       P        14 47 52.8 +0.1
          comp=Z,2.2nm,0.9s
MAW   Mawson            71.83 201  eP       P        14 47 52.8 +0.1
MAW                                pmax     pmax
          comp=Z,2.0nm,0.9s
LEM   Lembang           73.18 272  LR       LR       15 21 59.4
          comp=Z,334nm,19.0s,baz=120,slow=37
TGY   Tagaytay City     73.80 298  LR       LR       15 17 39.9
          comp=Z,92nm,21.7s,baz=92,slow=34
JHJ   Hachijo jima 2    75.19 324  LR       LR       15 14 46.1
          comp=Z,140nm,20.9s,baz=80,slow=31
SYO   Syowa Base        76.61 193⇑eX        P        14 48 15.4  -5.1
JOW   Kunigami          77.05 312  LR       LR       15 16 47.4
          comp=Z,209nm,21.5s,baz=120,slow=31
MDSI  Maura Dua         77.31 272  P        P        14 48 23.0  -2.4
SNAA  Sanae             77.63 178  P        P        14 48 28.1 +1.7
SNAA  Sanae             77.63 178  P        P        14 48 27.3 +1.0
          comp=Z,6.5nm,0.7s,baz=214,slow=7.7,SNR=36
SNAA                               LR       LR       15 19 13.7
          comp=Z,167nm,21.8s,baz=183,slow=33
SNAA  Sanae             77.63 178  eP       P        14 48 28.7 +2.4
VNA3  Neumayer Olymp    77.78 176  P        P        14 48 28.7 +1.6
VNA2  Neumayer--Watz    78.21 177  P        P        14 48 31.4 +1.9
          baz=173,slow=4.6
NVL   N'lazarevskaya    78.35 183  eP       P        14 48 36.6 +6.4
NVL                                pmax     pmax
          comp=Z,7.0nm,0.6s
INU   Inuyama           78.35 324  eP       P        14 48 28.9  -1.8
          comp=Z,9.3nm,0.9s
VNA1  Neumayer--Stat    78.44 177  P        P        14 48 32.3 +1.6
MJAR  Matsushiro Arr    78.70 325  P        P        14 48 30.4  -2.2
          comp=Z,2.3nm,0.8s,baz=164,slow=4.8,SNR=5.4
MJAR                               LR       LR       15 17 55.4
          comp=Z,72nm,22.0s,baz=155,slow=32
MAJO  Matsushiro        78.70 325⇓eP        P        14 48 30.8  -1.8
MAJO                               pmax     pmax
          comp=Z,5.0nm,0.8s
SSLB  Suanglung         79.90 305  eP       P        14 48 36.8  -2.7
          comp=Z,12nm,0.8s
JNU   Nakatsue          79.98 318  LR       LR       15 22 14.3
          comp=Z,44nm,18.8s,baz=124,slow=34
PLCA  Paso Flores       82.12 133  P        P        14 48 52.6 +1.4
          comp=Z,3.9nm,1.0s,baz=285,slow=6.3,SNR=7.6
PLCA                               LR       LR       15 16 47.5
          comp=Z,332nm,20.9s,baz=282,slow=29
PLCA  Paso Flores       82.12 133  eP       P        14 48 52.1 +0.9
          comp=Z,36nm,1.3s
PLCA  Paso Flores       82.12 133  eP       P        14 48 52.1 +0.9
PLCA                               pmax     pmax
          comp=Z,36nm,1.3s
ASAJ  Asahikawa         82.93 333  P        P        14 48 54.4  -0.6
          comp=Z,3.0nm,0.6s,baz=250,slow=10,SNR=4.6
ASAJ                               LR       LR       15 22 12.6
          comp=Z,221nm,19.9s,baz=178,slow=33
ASAJ  Asahikawa         82.93 333  eP       P        14 48 54.4  -0.6
          comp=Z,8.2nm,0.8s
KSRS  Korea Array       84.78 320  P        P        14 49 02.5  -2.1
          comp=Z,1.6nm,0.8s,baz=141,slow=6.4,SNR=10
KSRS                               LR       LR       15 22 52.7
          comp=Z,59nm,21.0s,baz=148,slow=33
LPIG  La Paz            84.78  58  LR       LR       15 20 06.9
          comp=Z,156nm,18.3s,baz=215,slow=31
KSAR  Wonju Array Be    84.79 320  P        P        14 49 02.5  -2.1
KSAR  Wonju Array Be    84.79 320  P        P        14 49 02.5  -2.1
KS01  Wonju Array Si    84.81 320  eP       P        14 49 03.7  -1.0
YSS   Yuzh-Sakhalins    85.24 334  eP       P        14 49 06.5  -0.1
          comp=Z,19nm,0.9s
YSS   Yuzh-Sakhalins    85.24 334⇑eP        P        14 49 06.6  -0.1
YSS                                e                 14 49 16.0
YSS                                eS       S        14 59 37.1 +4.0
YSS                                ePS      PnS      15 00 37.0 +2.8
YSS                                pmax     pmax
          comp=Z,200nm,4.8s
PSI   Prapat            85.53 276  LR       LR       15 28 05.8
          comp=Z,311nm,20.2s,baz=91,slow=36
PET   Petropavlovsk     86.06 346  eP       P        14 49 08.5  -2.0
PET                                eS       S        14 59 42.4 +1.6
PET                                ePS      PnS      15 00 45.5 +1.7
PET                                eSS      SS       15 05 24.5 +3.8
PET                                pmax     pmax
          comp=Z,100nm,14.3s
PET                                MLR      MLR
          comp=Z,100nm,16.0s
MURC  Murrieta          86.06  47  P        P        14 49 12.2 +1.1
          baz=229
MONP2 Monument Peak     86.09  48  P        P        14 49 12.7 +1.2
          baz=229
IKP   In-Ko-Pah, Jac    86.13  48  P        P        14 49 12.9 +1.3
          baz=230
BFSC  Mount Baldy Ra    86.20  46  P        P        14 49 13.2 +1.3
          baz=229
PEL   Peldehue          86.31 127  eP       P        14 49 16.3 +3.7
          comp=Z,145nm,1.0s
PETK  Petropavlovsk-    86.33 346  P        P        14 49 10.9  -1.0
          comp=Z,12nm,0.9s,baz=142,slow=7.2
PETK                               LR       LR       15 24 50.2
          comp=Z,123nm,19.0s,baz=164,slow=34
SWSC  Sam W. Stewart    86.52  48  P        P        14 49 14.7 +1.3
          baz=230
PFO   Pinyon Flats O    86.53  47  P        P        14 49 14.7 +1.2
          baz=229
PFO   Pinyon Flats O    86.53  47  eP       P        14 49 14.4 +0.8
          comp=Z,18nm,1.4s
PFO   Pinyon Flats O    86.53  47  eP       P        14 49 14.4 +0.8
PFO                                pmax     pmax
          comp=Z,18nm,1.4s
NJ2   Nanjing           86.62 311  eP       P        14 49 15.4 +1.6
NJ2                                pmax     pmax
          comp=Z,10.0nm,0.6s
ISA   Isabella, Lake    86.64  45  P        P        14 49 15.3 +1.3
          baz=228
ISA   Isabella, Lake    86.64  45  eP       P        14 49 14.4 +0.4
          comp=Z,20nm,1.3s
ISA   Isabella, Lake    86.64  45  eP       P        14 49 14.4 +0.4
ISA                                pmax     pmax
          comp=Z,20nm,1.3s
BELC  Belle Mtn. Jos    87.08  47  P        P        14 49 17.2 +0.9
          baz=230
CMB   Columbia Colle    87.13  42  eP       P        14 49 16.1  -0.1
          comp=Z,7.2nm,0.9s
CMB   Columbia Colle    87.13  42  eP       P        14 49 16.1  -0.1
CMB                                pmax     pmax
          comp=Z,7.0nm,0.9s
BC3   Big Chuckawall    87.20  48  P        P        14 49 18.1 +1.3
          baz=230
GLA   Glamis            87.21  49  P        P        14 49 18.3 +1.5
          baz=230
CWC   Cottonwood Cre    87.40  44  P        P        14 49 18.3 +0.6
          baz=228
HEC   Hector,Ludlow     87.41  46  P        P        14 49 18.5 +0.8
          baz=229
GSC   Goldstone, Bar    87.42  46  P        P        14 49 19.1 +1.3
          baz=229
GSC   Goldstone, Bar    87.42  46  eP       P        14 49 18.8 +1.0
          comp=Z,18nm,1.1s
GSC   Goldstone, Bar    87.42  46  eP       P        14 49 18.8 +1.0
GSC                                pmax     pmax
          comp=Z,18nm,1.1s
MPMC  Manual Prospec    87.50  45  P        P        14 49 18.9 +0.6
          baz=229
USRK  Ussuriysk Ar.     87.62 326  P        P        14 49 16.7  -1.7
          comp=Z,3.7nm,0.8s,baz=131,slow=4.4
USRK                               LR       LR       15 22 59.6
          comp=Z,80nm,21.7s,baz=135,slow=32
OMMB  Old Mammoth Mi    87.64  43  eP       P        14 49 19.2 +0.1
          comp=Z,17nm,1.5s
IRM   Iron Mountain     87.72  48  P        P        14 49 20.3 +1.1
          baz=230
GMRC  Granite Mounta    87.80  47  P        P        14 49 21.0 +1.3
          baz=230
214A  Organ Pipe Nat    87.84  51  P        P        14 49 21.6 +1.8
          baz=231
N02D  Trinity Center    87.89  39  P        P        14 49 21.4 +1.5
          baz=225
O03D  Paynes Creek      87.90  39  P        P        14 49 21.4 +1.4
          baz=226
TUQ   Turquoise Moun    88.06  46  P        P        14 49 22.0 +1.1
          baz=230
M02C  Callahan          88.11  38  P        P        14 49 22.5 +1.6
          baz=225
FURC  Furnace Creek,    88.15  45  P        P        14 49 22.5 +1.4
          baz=229
GRAC  Grapevine Rang    88.20  44  P        P        14 49 22.8 +1.4
          baz=229
PNTR  Pine Nut          88.30  42  eP       P        14 49 22.7 +0.7
          comp=Z,11nm,0.7s
VCNR  Virginia City     88.41  41  eP       P        14 49 23.6 +1.0
          comp=Z,9.3nm,1.2s
YBH   Yreka Blue Hor    88.42  38  P        P        14 49 23.0 +0.6
          comp=Z,3.1nm,0.8s,baz=168,slow=2.2,SNR=3.6
YBH                                LR       LR       15 21 14.8
          comp=Z,52nm,21.5s,baz=226,slow=30
YBH   Yreka Blue Hor    88.42  38  P        P        14 49 23.0 +0.6
YERR  Yerington         88.43  42  eP       P        14 49 22.6  0.0
          comp=Z,6.1nm,0.9s
PDMCI Parker Dam,Lak    88.45  48  P        P        14 49 24.3 +1.7
          baz=231
NVAR  Mina Array Bea    88.60  43  P        P        14 49 24.2 +0.8
          comp=Z,4.5nm,0.7s,baz=221,slow=8.2,SNR=43
NVAR                               PKKPbc   PKKPbc   15 07 06.8 +1.3
          comp=Z,0.3nm,0.5s,baz=71,slow=3.1,SNR=4.2
NVAR                               LR       LR       15 20 40.2
          comp=Z,87nm,21.1s,baz=99,slow=30
NV11  Mina Array Sit    88.69  43  eP       P        14 49 23.7  -0.1
          comp=Z,0.5nm,1.0s
WHN   Wuhan             88.70 307  P        P        14 49 26.8 +3.0
WHN                                S        S        15 00 14.2 +6.9
WHN                                LR       LR
          comp=Z,330nm,19.4s
PAHR  Pah Rah Range     88.84  41  eP       P        14 49 24.6 +0.1
          comp=Z,19nm,1.5s
TPNV  Topopah Spring    88.84  45  P        P        14 49 25.4 +0.8
          baz=229
TPNV  Topopah Spring    88.84  45  eP       P        14 49 25.2 +0.6
          comp=Z,11nm,1.1s
TPNV  Topopah Spring    88.84  45  eP       P        14 49 25.2 +0.6
TPNV                               pmax     pmax
          comp=Z,11nm,1.1s
Y14A  Wickenburg        88.95  49  eP       P        14 49 25.6 +0.5
W13A  Hualapai Mount    89.12  48  eP       P        14 49 26.0  0.0
          comp=Z,14nm,1.3s
KVN   Kaiserville       89.13  42  eP       P        14 49 25.6  -0.3
          comp=Z,9.5nm,1.3s
KVN   Kaiserville       89.13  42  eP       P        14 49 25.7  -0.3
KVN                                pmax     pmax
          comp=Z,10.0nm,1.3s
SHPR  Sheep Range       89.22  46  eP       P        14 49 26.4  0.0
          comp=Z,17nm,1.5s
TUC   Tucson            89.41  51  P        P        14 49 29.4 +2.1
          baz=232
TUC   Tucson            89.41  51  eP       P        14 49 27.6 +0.3
          comp=Z,25nm,1.4s
TUC   Tucson            89.41  51  eP       P        14 49 27.6 +0.3
TUC                                pmax     pmax
          comp=Z,25nm,1.4s
J04D  Umpqua Nationa    89.80  37  P        P        14 49 29.9 +0.9
          baz=226
I04A  Tendick Farm,     90.04  37  P        P        14 49 30.6 +0.7
          baz=225
X16A  Lo Mia Camp, P    90.26  49  eP       P        14 49 31.5 +0.1
          comp=Z,9.3nm,0.9s
J05D  Fort Rock, OR     90.29  38  P        P        14 49 32.2 +1.1
          baz=226
TIA   Tai'an            90.36 313  P        P        14 49 31.5  0.0
TIA                                pmax     pmax
          comp=Z,9.0nm,0.8s
CN2   Changchun         90.59 323  eP       P        14 49 31.1  -1.2
CN2                                pmax     pmax
          comp=Z,10.0nm,0.7s
CN2                                pmax     pmax
          comp=Z,200nm,3.0s
CN2                                LR       LR
          comp=Z,140nm,27.0s
CN2                                LR       LR
          comp=Z,110nm,27.0s
CN2                                LR       LR
          comp=Z,190nm,25.0s
GRNR  Gornyy            90.77 333  eP       P        14 49 35.1 +2.0
GRNR                               pmax     pmax
          comp=Z,26nm,1.0s
H04A  Detroit Lake      90.78  36  eP       P        14 49 33.1  -0.1
          comp=Z,9.9nm,0.9s
PINE  Pine Mountain     90.80  37  eP       P        14 49 34.1 +0.5
          comp=Z,12nm,0.9s
U15A  North Rim         90.96  47  eP       P        14 49 35.9 +1.3
          comp=Z,15nm,1.3s
I05D  Terrebonne, OR    90.97  37  P        P        14 49 35.1 +0.9
          baz=226
WUAZ  Wupatki           90.98  48  P        P        14 49 35.1 +0.4
          baz=232
WUAZ  Wupatki           90.98  48  eP       P        14 49 34.7 +0.1
          comp=Z,16nm,1.2s
CCUT  Cedar City        90.99  46  eP       P        14 49 35.0 +0.3
          comp=Z,6.8nm,1.2s
KNB   Kanab             90.99  47  eP       P        14 49 34.8 +0.2
          comp=Z,14nm,1.3s
KNB   Kanab             90.99  47  eP       P        14 49 34.8 +0.2
KNB                                pmax     pmax
          comp=Z,15nm,1.3s
X18A  Snowflake         91.31  50  eP       P        14 49 39.2 +3.0
          comp=Z,25nm,1.6s
PSUT  Pine Spring       91.31  45  eP       P        14 49 36.6 +0.5
          comp=Z,3.1nm,0.7s
KLR   Kul'dur           91.51 330  P        P        14 49 35.6  -0.9
          comp=Z,0.5nm,0.9s,baz=105,slow=3.1,SNR=11
KLR   Kul'dur           91.51 330⇑iP        P        14 49 35.3  -1.2
121A  Cookes Peak, D    91.57  53  P        P        14 49 38.5 +1.0
          baz=234
J08A  Circle Bar Ran    91.81  39  eP       P        14 49 38.6 +0.4
          comp=Z,14nm,1.4s
GYA   Guiyang           91.85 300  eP       P        14 49 40.0 +1.2
GYA                                PP       PP       14 53 21.2 +2.5
GYA                                SKS      SKSac    15 00 11.0 +2.8
GYA                                S        ScS      15 00 38.7  -0.6
GYA                                pmax     pmax
          comp=Z,10.0nm,1.0s
GYA                                pmax     pmax
          comp=Z,120nm,6.2s
ELK   Elko              91.90  43  LR       LR       15 21 23.3
          comp=Z,193nm,20.1s,baz=216,slow=29
ENH   Enshi             91.93 304  eP       P        14 49 38.3  -0.7
G06A  Carlson Farm,     91.95  37  eP       P        14 49 38.0  -0.7
          comp=Z,41nm,1.6s
TX31  Lajitas Ar. Si    92.64  57  eP       P        14 49 42.3  0.0
TXAR  Lajitas Array     92.64  57  P        P        14 49 43.0 +0.6
          comp=Z,1.0nm,0.9s,baz=211,slow=7.0,SNR=7.8
TXAR                               LR       LR       15 22 14.9
          comp=Z,111nm,21.7s,baz=0.0,slow=30
TXAR  Lajitas Array     92.64  57  P        P        14 49 43.0 +0.6
MNTX  Cornudas Mount    92.75  55  P        P        14 49 44.0 +1.3
          baz=235
MNTX  Cornudas Mount    92.75  55  eP       P        14 49 43.6 +0.8
          comp=Z,15nm,1.8s
G08A  Pilot Rock        92.85  37  eP       P        14 49 42.6  -0.4
          comp=Z,19nm,1.4s
NNA   Nana              93.24 106  LR       LR       15 22 24.4
          comp=Z,184nm,21.9s,baz=238,slow=29
MFID  Camas Ranch       93.30  40  eP       P        14 49 44.8  -0.3
          comp=Z,16nm,1.6s
TMUT  Trail Mountain    93.40  46  eP       P        14 49 45.5  -0.4
          comp=Z,26nm,0.7s
BMO   Blue Mountains    93.43  38  eP       P        14 49 45.3  -0.3
          comp=Z,17nm,1.9s
BMO   Blue Mountains    93.43  38  eP       P        14 49 45.3  -0.3
BMO                                pmax     pmax
          comp=Z,17nm,1.9s
CMAR  Chiang Mai Arr    93.61 289  P        P        14 49 47.5 +0.5
          comp=Z,0.8nm,0.8s,baz=142,slow=2.5,SNR=5.8
CMAR                               PP       PP       14 53 33.5 +1.0
          comp=Z,1.3nm,0.8s,baz=135,slow=7.2,SNR=6.8
CMAR                               LR       LR       15 32 52.9
          comp=Z,71nm,21.4s,baz=170,slow=36
SRU   San Rafael Swe    93.71  46  eP       P        14 49 48.4 +1.2
          comp=Z,6.6nm,1.1s
SRU   San Rafael Swe    93.71  46  eP       P        14 49 48.4 +1.2
SRU                                pmax     pmax
          comp=Z,7.0nm,1.1s
TASM  ASL Pad, Albuq    93.87  51  P        P        14 49 49.0 +0.9
          baz=235
ANMO  Albuquerque       93.88  51  LR       LR       15 27 08.1
          comp=Z,42nm,18.3s,baz=236,slow=32
ANMO  Albuquerque       93.88  51⇑eP        P        14 49 49.3 +1.2
ANMO                               pmax     pmax
          comp=Z,1.0nm,0.8s
KMI   Kunming           94.10 297  P        P        14 49 50.5 +1.2
KMI                                pmax     pmax
          comp=Z,4.0nm,0.7s
KMI                                pmax     pmax
          comp=Z,65nm,5.1s
HLID  Hailey            94.18  41  P        P        14 49 50.0 +0.8
          baz=231
HLID  Hailey            94.18  41  eP       P        14 49 48.8  -0.4
          comp=Z,2.7nm,0.9s
S22A  4UR Ranch, Cre    95.24  49  P        P        14 49 55.4 +1.0
          baz=235
GHO   Glory Hole Cre    95.32  13  eP       P        14 49 53.9  0.0
          comp=Z,15nm,1.2s
CD2   Chengdu           96.40 302  eP       P        14 50 00.0 +0.5
CD2                                pmax     pmax
          comp=Z,10.0nm,0.5s
BW06  Boulder Array     96.49  44  P        P        14 50 01.1 +1.2
          baz=234
PDAR  Pinedale Array    96.49  44  P        P        14 49 59.3  -0.6
          comp=Z,0.5nm,0.7s,baz=183,slow=3.0,SNR=5.0
PDAR                               PKKPbc   PKKPbc   15 06 44.0  -1.1
          comp=Z,0.7nm,0.6s,baz=69,slow=4.9,SNR=9.4
PDAR                               LR       LR       15 25 34.0
          comp=Z,77nm,21.9s,baz=242,slow=30
SEY   Seymchan          96.50 347  P        P        14 49 57.4  -1.7
          comp=Z,2.6nm,0.8s,baz=166,slow=10,SNR=5.5
HHC   Hu-ho-hao-te      96.63 314  eP       P        14 50 01.8 +1.4
HHC                                pP       PcP      14 50 05.6 +5.1
HHC                                PP       PP       14 53 56.1 +0.3
HHC                                SKS      SKSac    15 00 33.4  0.0
HHC                                S        ScS      15 01 22.4 +3.9
HHC                                sS       pS       15 01 29.5  -6.3
HHC                                pmax     pmax
          comp=Z,22nm,1.0s
HHC                                LR       LR
          comp=Z,110nm,13.5s
HHC                                LR       LR
          comp=Z,97nm,17.6s
HHC                                LR       LR
          comp=Z,110nm,17.2s
ZEA   Zeya              96.73 331  eP       P        14 50 03.2 +2.9
ZEA                                pmax     pmax
          comp=Z,12nm,1.0s
BOZ   Bozeman (W)       97.00  40  P        P        14 50 02.4 +0.4
          baz=233
BOZ   Bozeman (W)       97.00  40  eP       P        14 50 03.0 +1.0
          comp=Z,6.7nm,1.4s
BOZ   Bozeman (W)       97.00  40  eP       P        14 50 03.0 +1.0
BOZ                                pmax     pmax
          comp=Z,7.0nm,1.4s
LPAZ  La Paz            97.89 114  P        Pdif     14 50 09.6 +2.2
          comp=Z,1.2nm,0.7s,baz=211,slow=6.4,SNR=5.0
LPAZ                               LR       LR       15 26 20.1
          comp=Z,60nm,21.7s,baz=230,slow=30
ILAR  Eielson Array     98.43  13  P        P        14 50 06.2  -1.6
          comp=Z,0.5nm,0.7s,baz=220,slow=4.8,SNR=7.2
ILAR                               PKiKP    PKiKP    14 54 38.7  -0.9
          comp=Z,0.4nm,0.7s,baz=218,slow=5.7,SNR=5.3
ILAR                               LR       LR       15 29 23.4
          comp=Z,44nm,19.6s,baz=218,slow=32
LZH   Lanzhou           99.07 307  eP       Pdif     14 50 12.6 +1.0
LZH                                pP       pP       14 50 17.2  -8.1
LZH                                sP       sP       14 50 19.6   -11
LZH                                pmax     pmax
          comp=Z,19nm,1.2s
BILL  Bilibino          99.37 354⇑eP        Pdif     14 50 10.2  -1.7
BILL                               SS       SS       15 08 36.0 +4.9
BILL                               pmax     pmax
          comp=Z,2.0nm,0.9s
BILL                               MLR      MLR
          comp=Z,82nm,19.0s
SONM  Songino Array    103.56 318  PKiKP    PKiKP    14 54 48.7  -0.9
          comp=Z,0.2nm,0.3s,baz=111,slow=3.6,SNR=3.6
WMQ   Urumqi           113.58 308  ePKP     PKiKP    14 55 08.7 +0.4
WMQ                                LR       LR
          comp=Z,120nm,25.9s
WMQ                                LR       LR
          comp=Z,92nm,23.1s
WMQ                                LR       LR
          comp=Z,130nm,23.1s
OPO   Ambohidratompo114.40 228  PKP      PKPdf    14 55 10.6  -0.2
          comp=Z,2.9nm,0.7s,baz=76,slow=4.2,SNR=3.8
BOSA  Boshof           116.79 203  PKP      PKPdf    14 55 15.7 +0.5
          comp=Z,8.4nm,1.2s,baz=164,slow=3.2,SNR=3.8
MK01  Makanchi Array   118.13 310  ePKPdf   PKPdf    14 55 14.6  -2.3
MKAR  Makanchi Array   118.14 310  PKP      PKPdf    14 55 15.1  -1.9
          comp=Z,1.4nm,0.6s,baz=209,slow=1.3,SNR=18
MKAR                               PKKPbc   PKKPab   15 05 37.2  -0.1
          comp=Z,0.2nm,0.6s,baz=313,slow=3.2,SNR=2.8
MAKZ  Makanchi         118.35 310  ePKPdf   PKPdf    14 55 16.4  -0.9
ZALV  Zalesovo Beam    118.45 318  PKP      PKPdf    14 55 15.6  -1.7
          comp=Z,1.1nm,0.6s,baz=315,slow=0.4,SNR=4.9
ZALV  Zalesovo Beam    118.45 318  ePKPdf   PKPdf    14 55 15.9  -1.4
ZALV  Zalesovo Beam    118.45 318  ePKIKP   PKPdf    14 55 15.9  -1.4
LBTB  Lobatse          119.98 205  PKP      PKPdf    14 55 21.5 +0.1
          comp=Z,1.3nm,0.6s,baz=232,slow=5.9,SNR=3.4
KSH   Kashi            120.54 300  ePKP     PKPdf    14 55 24.4 +2.5
KSH                                PP       PP       14 56 55.3 +5.3
KSH                                PKS      PKSdf    14 58 59.4 +0.7
KURK  Kurchatov        121.44 314  ePKPdf   PKPdf    14 55 21.1  -2.0
KURK  Kurchatov        121.44 314  i PKIKP  PKPdf    14 55 21.5  -1.6
KURBB Kurchatov Arra   121.48 313  PKP      PKPdf    14 55 21.4  -1.8
          comp=Z,5.9nm,0.8s,baz=118,slow=2.0,SNR=34
KBL   Kabul            124.46 293  ePKPdf   PKPdf    14 55 29.2  -0.6
KBL   Kabul            124.46 293  ePKIKP   PKPdf    14 55 29.2  -0.6
SCHQ  Schefferville    126.60  42  PKP      PKPdf    14 55 32.1  -0.8
          comp=Z,1.8nm,0.7s,baz=250,slow=6.8,SNR=5.1
BVAR  Borovoye Array   126.81 315  PKP      PKPdf    14 55 32.2  -1.2
          comp=Z,4.0nm,0.6s,baz=126,slow=2.5,SNR=22
BRVK  Borovoye         126.88 316  ePKPdf   PKPdf    14 55 32.4  -1.1
BRVK  Borovoye         126.88 316  ePKIKP   PKPdf    14 55 32.4  -1.1
SPITS Spitsbergen Ar   132.23 356  PKP      PKPdf    14 55 41.8  -1.2
          comp=Z,9.9nm,0.7s,baz=108,slow=4.7,SNR=7.4
SVE   Sverdlovsk       132.33 321  ePKIKP   PKPdf    14 55 44.0 +0.3
ABKAR Akbulak array    133.28 310  ePKPdf   PKPdf    14 55 45.2  -0.5
ARU   Arti             133.52 320  ePKPdf   PKPdf    14 55 45.2  -0.8
ARU   Arti             133.52 320  i PKIKP  PKPdf    14 55 45.5  -0.5
GEYT  Alibeck          133.82 295  PKP      PKPdf    14 55 47.2  0.0
          comp=Z,1.1nm,0.5s,baz=276,slow=2.8,SNR=3.5
AKTO  Aktyubinsk       134.49 312  PKP      PKPdf    14 55 47.5  -0.5
          comp=Z,3.9nm,0.7s,baz=122,slow=1.4,SNR=6.1
PRGR  Permogore        138.30 330  ePKIKP   PKPdf    14 55 58.0 +3.3
PRGR                               pmax     pmax
          comp=Z,7.0nm,0.5s
ARCES ARCESS Array B 139.12 348  PKhKP    PKPpre   14 55 48.6
          comp=Z,4.7nm,0.8s,baz=26,slow=2.5,SNR=7.0
ARCES                              PKP      PKPdf    14 55 55.7  -0.3
          comp=Z,6.9nm,0.6s,baz=90,slow=2.7,SNR=10.0
RAYN  Ar Rayn          140.85 270  ePKPdf   PKPdf    14 55 59.3  -1.3
RAYN  Ar Rayn          140.85 270  ePKIKP   PKPdf    14 55 59.3  -1.3
KLMR  Klimovskoe       141.25 332  ePKIKP   PKPdf    14 55 59.4  -0.6
KLMR                               pmax     pmax
          comp=Z,13nm,1.1s
KLMR  Klimovskoe       141.25 332  ePKPdf   PKPdf    14 55 59.5  -0.6
KLMR                               AMP               14 56 05.8
          comp=Z,13nm,1.1s
AKT   Akhty            142.05 299  i PKIKP  PKPdf    14 56 03.5 +1.2
AKT                                pmax     pmax
          comp=Z,10.0nm,0.8s
GNI   Garni            144.35 297  PKP      PKPbc    14 56 05.1 +0.2
          comp=Z,5.4nm,0.4s,baz=106,slow=7.4,SNR=2.5
ZEI   Tsey             144.82 302  i PKIKP  PKPab    14 56 05.6  -0.8
ZEI                                pmax     pmax
          comp=Z,8.0nm,0.4s
NCK   Nalchik          144.97 303  i PKIKP  PKPbc    14 56 05.7  -0.9
AKH   Akhalkalaki      145.24 299⇑iP        PKPbc    14 56 06.9  -0.9
KBZ   Khabaz           145.44 303  PKPbc    PKPdf    14 56 06.6  -1.4
          comp=Z,7.8nm,0.8s,baz=149,slow=2.7,SNR=10
KIV   Kislovodsk       145.56 304  i PKIKP  PKPdf    14 56 07.1  -1.2
KIV                                pmax     pmax
          comp=Z,12nm,0.9s
NEY   Neytrino         145.63 302  i PKIKP  PKPab    14 56 09.0  -0.3
OBN   Obninsk          145.63 325  ePKPdf   PKPdf    14 56 06.7  -1.2
OBN   Obninsk          145.63 325dePKP2     PKPdf    14 56 06.7  -1.2
OBN                                pmax     pmax
          comp=Z,52nm,0.8s
OBN                                pmax     pmax
          comp=Z,50nm,1.1s
FIA1  FINESS Array S   145.65 340  ePKPbc   PKPab    14 56 08.8 +0.3
FINES FINESS Array B   145.66 340  PKPbc    PKPdf    14 56 06.1  -1.7
          comp=Z,41nm,0.6s,baz=55,slow=3.7,SNR=153
VSR   Storozhevoye     145.95 317  ePKIKP   PKPdf    14 56 07.4  -1.2
VSR                                pmax     pmax
          comp=Z,30nm,0.6s
VORD  Divnogorie       145.97 317  ePKIKP   PKPdf    14 56 06.6  -2.1
VORD                               pmax     pmax
          comp=Z,10.0nm,0.9s
NB201 NORSAR Array S 149.26 351  ePKPbc   PKPbc    14 56 18.1  0.0
NB2   NORSAR Subarra149.28 351  PKP      PKPbc    14 56 16.9  -1.4
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	comp=Z,13nm,0.8s,baz=30,slow=2.6						
NC602	NORSAR Array S	149.53	351	ePKPdf	PKPdf	14 56 14.3	0.0
HFS	Hagfors	149.77	348	PKPbc	PKPbc	14 56 17.6	-1.8
	comp=Z,22nm,0.7s,baz=90,slow=1.7,SNR=37						
MNK	Minsk	150.06	329	ePKHKP	PKPpre	14 56 19.0	
ASF	Jabal al Asfar	150.35	282	PKPbc	PKPbc	14 56 20.9	-1.0
	comp=Z,6.4nm,0.9s,baz=160,slow=0.6,SNR=9.8						
KONO	Kongsberg	150.83	352	ePKPdf	PKPdf	14 56 16.1	-0.2
KONO				ePKPbc	PKPbc	14 56 21.5	-0.5
KONO	Kongsberg	150.83	352	ePKIKP	PKPdf	14 56 16.1	-0.2
KONO				e		14 56 21.5	
MMAI	Mount Meron Ar	151.69	283	PKPbc	PKPbc	14 56 25.1	+0.1
	comp=Z,188nm,1.4s,baz=73,slow=4.8,SNR=6.9						
AKASG	Malin Array Be	151.74	322	PKPbc	PKPbc	14 56 22.5	-1.8
	comp=Z,17nm,0.7s,baz=49,slow=2.9,SNR=42						
AKASG				PKPab	pPKPdf	14 56 30.7	-1.5
	comp=Z,16nm,0.7s,baz=53,slow=3.1,SNR=13						
KIEV	Kiev	151.76	322	ePKPbc	PKPbc	14 56 23.0	-1.4
KIEV	Kiev	151.76	322	⇓iPKIKP	PKPbc	14 56 23.1	-1.3
AK11	Malin Array Si	151.79	322	ePKPbc	PKPbc	14 56 22.4	-2.0
SUW	Suwalki	152.37	333	ePKP	PKPbc	14 56 26.1	+0.4
SUW	Suwalki	152.37	333	ePKIKP	PKPbc	14 56 26.1	+0.4
BR131	Keskin Array S	152.88	298	ePKPbc	PKPbc	14 56 26.6	-0.9
BRTR	Keskin Array B	152.88	298	PKPbc	PKPbc	14 56 26.2	-1.3
	comp=Z,3.4nm,0.7s,baz=102,slow=2.6,SNR=12						
BRTR				PKPab	PKPab	14 56 38.6	-0.1
	comp=Z,8.0nm,0.9s,baz=90,slow=2.9,SNR=6.3						
ANTO	Ankara	153.50	298	⇑iP	PKPbc	14 56 30.7	+1.9
ANTO	Ankara	153.50	298	⇑PKIKP	PKPbc	14 56 30.7	+1.9
DBIC	Dimbokro	155.01	164	PKP	PKPdf	14 56 25.5	+1.7
	comp=Z,3.8nm,0.8s,baz=0.0,slow=1.0,SNR=2.7						
TESR	Tescani	155.43	316	⇑iP	PKPab	14 56 47.9	-1.3
KWP	Kalwaria Pacla	155.70	326	ePKP	PKPab	14 56 49.0	-1.2
KWP	Kalwaria Pacla	155.70	326	ePKP2	PKPab	14 56 49.0	-1.2
VRI	Vrincioaia	155.71	315	⇑iP	PKPab	14 56 49.5	-0.9
VRI	Vrincioaia	155.71	315	⇑PKP2	PKPab	14 56 49.5	-0.9
PLOR	Plostina	155.76	315	⇑iP	PKPab	14 56 51.8	+1.1
PLOR	Plostina	155.76	315	⇑PKP2	PKPab	14 56 51.8	+1.1
MLR	Muntele Rosu	156.37	315	⇑iP	PKPab	14 57 05.0	+12
MLR	Muntele Rosu	156.37	315	⇑PKP2	PKPab	14 57 05.0	+12
CRVS	Cervenica-Dubn	156.79	326	ePKP2	PKPab	14 56 53.1	-1.8
CRVS	Cervenica-Dubn	156.79	326	ePKP	PKPab	14 56 53.1	-1.8
KSP	Ksiaz	157.45	336	ePKP	PKPab	14 56 56.7	-1.0
KSP	Ksiaz	157.45	336	ePKP2	PKPab	14 56 56.7	-1.0
DRGR		157.53	321	⇑iP	PKPab	14 56 56.5	-1.8
DRGR		157.53	321	⇑PKP2	PKPab	14 56 56.5	-1.8
UPC	Upice	157.83	336	ePKPAB	PKPab	14 56 59.6	+0.3
UPC	Upice	157.83	336	ePKP2	PKPab	14 56 59.6	+0.3
DPC	Dobruska-Polom	157.85	335	ePKPAB	PKPab	14 56 58.8	-0.7
DPC				ex	x	14 57 05.8	
DPC	Dobruska-Polom	157.85	335	ePKP2	PKPab	14 56 58.8	-0.7
CLL	Collm	158.08	341	ePKPdif	PKPdf	14 56 41.0	+14
	comp=Z,5.0nm,1.0s						
CLL				i PKPab	PKPab	14 57 00.0	-0.3
	comp=Z,8.0nm,1.0s						
CLL				i		14 57 03.2	
	comp=Z,12nm,1.0s						
CLL	Collm	158.08	341	i PKP2	PKPab	14 57 00.0	-0.3
CLL				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BRG	Berggiesshubel	158.19	339	ePKP	PKPdf	14 56 27.6	+0.8
	comp=Z,3.2nm,1.0s						
BRG				e		14 56 37.5	
	comp=Z,5.2nm,1.2s						
BRG				e		14 57 00.3	
	comp=Z,10nm,1.3s						
BRG	Berggiesshubel	158.19	339	ePKIKP	PKPdf	14 56 27.6	+0.8
BRG				e		14 56 37.5	
BRG				e		14 57 00.3	
BRG				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BRG				pmax	pmax		
	comp=Z,3.0nm,1.2s						
BRG				pmax	pmax		
	comp=Z,5.0nm,1.3s						
VYHS	Vyhne	158.30	329	ePKP2	PKPab	14 56 59.5	-1.9
VYHS	Vyhne	158.30	329	ePKP	PKPab	14 56 59.5	-1.9
HERR	Herculane	158.81	317	⇓iP	PKPab	14 56 48.6	-15
NKC	Novy Kostel	159.20	341	ePKPAB	PKPab	14 57 07.7	+2.4
NKC	Novy Kostel	159.20	341	ePKP2	PKPab	14 57 07.7	+2.4
VTS	Vitosha	159.50	310	⇓iP	PKPab	14 57 00.5	-6.6
VTS	Vitosha	159.50	310	ePKPab	PKPab	14 57 06.3	-0.8
VTS	Vitosha	159.50	310	⇓PKP2	PKPab	14 57 00.5	-6.6
KHC	Kasperske Hory	159.83	338	ePKPAB	PKPab	14 57 07.8	-0.3
KHC				ex	x	14 57 14.5	
KHC				AMS	AMS	16 04 50.0	
	comp=Z,200nm,24.5s						
KHC	Kasperske Hory	159.83	338	ePKP2	PKPab	14 57 07.8	-0.3
KHC				MLR	MLR		
	comp=Z,200nm,24.5s						
CONA	Conrad Observa	160.00	332	PKPab	PKPab	14 57 08.4	-0.6
	comp=Z,2.6nm,0.6s						
GERES	GERESS Array B	160.04	337	PKP	PKPdf	14 56 28.9	-0.3
	comp=Z,0.2nm,0.3s,baz=170,slow=0.8,SNR=3.9						
GERES				PKPab	PKPab	14 57 07.4	-1.6
	comp=Z,1.4nm,0.7s,baz=32,slow=6.3,SNR=4.7						
ARSA	Arzberg	160.68	331	PKPab	PKPab	14 57 11.5	-0.4
	comp=Z,1.5nm,0.5s						
MOA	Molln	160.69	334	PKPab	PKPab	14 57 12.0	+0.2
	comp=Z,2.6nm,0.9s						
KBA	Koelnbreinsper	161.67	335	PKPab	PKPab	14 57 15.3	-1.0
	comp=Z,5.7nm,1.5s						
OBKA	Obir	161.68	332	PKPab	PKPab	14 57 16.9	+0.6
	comp=Z,2.3nm,0.5s						
MYKA	Terra Mystica	161.94	333	PKPab	PKPab	14 57 16.6	-0.8
	comp=Z,3.7nm,0.7s						
WTTA	Wattenberg	162.10	338	PKPab	PKPab	14 57 17.7	-0.5
	comp=Z,2.8nm,0.5s						
RETA	Reutte	162.16	340	PKPab	PKPab	14 57 17.4	-0.9
	comp=Z,4.8nm,0.7s						
MOTA	Moosalm	162.19	340	PKPab	PKPab	14 57 18.3	-0.2
	comp=Z,10nm,0.9s						
ABTA	Abfaltersbach	162.25	336	ePKPab	PKPab	14 57 17.7	-1.0
	comp=Z,3.0nm,0.5s						
TORD	Torodi Ar. Bea	162.30	179	PKP	PKPdf	14 56 32.7	+0.3
	comp=Z,1.5nm,0.8s,baz=286,slow=0.7						
TORD				PKPab	PKPab	14 57 19.5	0.0
	baz=176,slow=3.4						
DAVA	Damuels	162.59	342	PKPab	PKPab	14 57 19.2	-1.1
	comp=Z,13nm,0.9s						
FETA	Feichten	162.59	340	ePKPab	PKPab	14 57 19.5	-0.9
	comp=Z,6.4nm,0.9s						
TUE	Stuetta	163.48	342	ePKPdf	PKPdf	14 56 32.5	-0.5
TUE				ePKPab	PKPab	14 57 23.2	-1.1
SENIN	Lac Senin/Sane	164.06	347	ePKPab	PKPab	14 57 25.6	-1.2
ESDC	Sonseca Array	169.99	28	PKP	PKPdf	14 56 38.2	+0.2
	comp=Z,0.8nm,0.6s,baz=351,slow=3.1,SNR=7.5						
ESDC				PKPab	PKPab	14 57 52.7	-0.4
	comp=Z,0.5nm,0.5s,baz=292,slow=3.0,SNR=3.7						

IDC 04 14:44:51.0±1.6, 29°.99S×74°.74E, h0km, mb4.2/4, mb1 4.3/4, mb1mx3.7/67, mbtmp4.2/4, Error ellipse: s-maj=62.8km s-min=25.4km az=12.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S2	Diego Garcia H	22.33	354	T	T	15 11 41.0	
	baz=174,slow=76,SNR=8.8						
H08S1	Diego Carcia H	22.33	354	T	T	15 11 42.8	
	baz=174,slow=76,SNR=12						
H08S3	Diego Garcia H	22.35	354	T	T	15 11 43.8	
	baz=174,slow=76,SNR=26						
OPO	Ambohidratompo	27.49	288	P	P	14 50 39.3	0.0
	8.4nm,0.4s,baz=135,slow=10.0,SNR=17						
H01W2	Cape Leeuwin H	33.46	109	T	T	15 26 57.0	
	baz=272						
H01W3	Cape Leeuwin H	33.46	109	T	T	15 27 03.0	
	baz=272						
H01W1	Cape Leeuwin H	33.47	109	T	T	15 27 01.4	
	baz=272						
ASAR	Alice Springs	52.69	98	P	P	14 54 07.8	+0.3
	1.0nm,0.8s,baz=261,slow=6.1,SNR=5.7						
CMAR	Chiang Mai Arr	53.52	29	P	P	14 54 13.5	0.0
	1.0nm,0.9s,baz=213,slow=6.9,SNR=5.9						
WRA	Warramunga Arr	54.44	94	P	P	14 54 19.8	-0.6
	2.5nm,0.8s,baz=250,slow=7.3,SNR=6.8						

GUC 04 14:51:40.8±0.7, 22°.26S×68°.78W, h125km±5km, ML4.0, 10C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.63	317	⇑eP	Pn	14 52 01.1	+0.7
PB09				i S	Sn	14 52 16.2	+1.1
PB09				IAML		14 52 17.4	
	comp=N,4μm,0.2s						
PB06	IPOC Station P	0.86	238	⇑eP	Pn	14 52 02.6	+0.5
PB06				i S	Sn	14 52 19.3	+1.0
PB06				IAML		14 52 21.1	
	comp=N,3μm,0.2s						
PB15	IPOC Station P	1.14	214	⇑eP	Pn	14 52 05.3	+0.4
PB15				i S	Sn	14 52 24.2	+1.0
PB07	IPOC Station P	1.15	297	⇑eP	Pn	14 52 05.9	+0.9
PB07				i S	Sn	14 52 24.5	+1.2
PB07				IAML		14 52 25.8	
	comp=N,6μm,0.2s						
PB04	IPOC Station P	1.27	266	⇑eP	Pn	14 52 07.1	+0.9
PB04				i S	Sn	14 52 27.1	+1.6
PB04				IAML		14 52 29.4	
	comp=N,3μm,0.3s						
PB01	IPOC Station P	1.38	331	⇑eP	Pn	14 52 07.7	+0.4
PB01				i S	Sn	14 52 28.0	+0.6
PB01				IAML		14 52 29.3	
	comp=E,3μm,0.2s						
PB02	IPOC Station P	1.39	312	⇑eP	Pn	14 52 08.2	+0.7
PB02				i S	Sn	14 52 28.5	+0.8
PB02				IAML		14 52 29.9	
	comp=E,4μm,0.2s						
PB05	IPOC Station P	1.44	245	⇑eP	Pn	14 52 08.7	+0.7
PB05				i S	Sn	14 52 29.6	+0.8
PB05				IAML		14 52 36.7	
	comp=E,1μm,0.3s						
PB10	IPOC Station P	2.06	232	⇑eP	Pn	14 52 15.3	0.0
PB10				i S	Sn	14 52 41.1	-0.5
PB10				IAML		14 52 43.2	
	comp=E,660nm,0.3s						
PB14	IPOC Station P	2.79	212	eP	Pn	14 52 24.4	-0.4
GO02	Mina Guanaco	2.99	194	⇑iP	Pn	14 52 27.0	-0.4
GO02				i S	Sn	14 53 01.4	-1.8

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*CSEM **04** 14:54:14.9±0.3, 37°.06N×28°.05E, h2km, ML2.4, Error ellipse: s-maj=6.7km s-min=5.2km az=18.0, Suspected Mining explosion.*

*DDA **04** 14:54:14.9, 37°.10N×28°.04E, h7km, Ml2.3, Suspected Mining explosion.*

ISK 04 14:54:14.1, 37°.07N×27°.98E, h5km, ML2.4/5, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	Yerkesik	0.26	75	PG	Pg	14 54 20.1	+1.0
YER	Yerkesik	0.26	75	ePg	Pg	14 54 20.1	+1.0
MLSB	Milas	0.28	325	PG	Pb	14 54 21.0	-0.6
MLSB	Milas	0.28	325	ePg	Pb	14 54 21.0	-0.6
DAT	Datca	0.47	223	PG	Pb	14 54 24.3	-0.5
DAT				SG	Sb	14 54 31.8	-0.3
DAT	Datca	0.47	223	i P	Pb	14 54 24.4	-0.4
DAT				i S	Sb	14 54 33.2	+1.2
DAT	Datca	0.47	223	P	Pb	14 54 24.4	-0.4
DAT				eSg	Sb	14 54 31.8	-0.3
DAT				S	Sg	14 54 33.2	+4.1
BODT	Bodrum	0.53	270	PG	Pb	14 54 25.6	-0.3
BODT	Bodrum	0.53	270	ePg	Pb	14 54 25.6	-0.3
TURN	Turunc	0.54	111	PG	Pg	14 54 22.7	-1.8
TURN				SG	Sg	14 54 29.2	-2.3
TURN	Turunc	0.54	111	i P	Pg	14 54 23.0	-1.5
TURN				i S	Sg	14 54 31.6	+0.2
TURN	Turunc	0.54	111	ePg	Pg	14 54 22.7	-1.8
TURN	Turunc	0.54	111	P	Pg	14 54 23.0	-1.5
TURN				eSg	Sg	14 54 29.2	-2.3
TURN				S	Sb	14 54 31.6	-2.5
AYDN	Tasoluk	0.60	353	i P	Pb	14 54 27.4	+0.3
AYDN				i S	Sb	14 54 34.8	-1.0
AYDN	Tasoluk	0.60	353	P	Pb	14 54 27.4	+0.3
AYDN				S	Sb	14 54 34.8	-1.0
DALY	Dalyan (Mu˜la	0.60	115	PG	Pb	14 54 26.9	-0.1
DALY	Dalyan (Mu˜la	0.60	115	ePg	Pb	14 54 26.9	-0.1
TAVA	DENIZLI_Tavas	0.85	62	i P	Pg	14 54 29.4	-0.9
TAVA	DENIZLI_Tavas	0.85	62	P	Pg	14 54 29.4	-1.0
AYDB	Zeytinkoy-Aydi	0.88	356	PG	Pb	14 54 32.3	+0.4
AYDB	Zeytinkoy-Aydi	0.88	356	ePg	Pb	14 54 32.3	+0.4
AKAS	Kas	1.55	122	PN	Pg	14 54 44.0	+0.1
AKAS	Kas	1.55	122	ePn	Pg	14 54 44.0	+0.1

BER 04 14:54:26.9±1.9, 59°.32N×5°.62E, h0km, ML1.4, Suspected explosion, Southern Norway

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMY	Karmoy	0.22	242	eP	Pg	14 54 30.7	-0.4
KMY				eS	Sg	14 54 34.0	+0.1
STAV	Stavanger	0.39	174	eP	Pg	14 54 34.0	-0.2
STAV				eS	Sg	14 54 39.6	+0.4
STAV				IAML		14 54 39.9	
BLS5	Blasjo	0.44	76	eP	Pg	14 54 33.6	-1.7
BLS5				eS	Sg	14 54 39.5	-1.5
ODD1	Odda	0.79	40	eP	Pg	14 54 40.2	-1.7
ODD1				eS	Sg	14 54 52.8	+0.6
ODD1				IAML		14 54 53.3	
	comp=Z,10nm,0.1s						
BER	Bergen	1.08	352	eP	Pg	14 54 46.5	-1.1
BER				eS	Sg	14 55 01.6	0.0
BER				IAML		14 55 02.3	
	comp=Z,12nm,0.2s						
ASK	Askoy	1.19	350	eP	Pg	14 54 47.0	-2.7
ASK				eS	Sg	14 55 03.0	-2.1
ASK				IAML		14 55 04.8	
	comp=Z,19nm,0.2s						
SNART	Snartemo	1.28	139	eP	Pg	14 54 48.9	-2.5
SNART				eS	Sg	14 55 06.3	-1.7
SNART				IAML		14 55 07.7	
	comp=Z,11nm,0.1s						
HOMB	Homborsund	1.83	124	eP	Pn	14 54 58.6	-1.0
HOMB				eS	Sn	14 55 20.4	-3.0
HOMB				IAML		14 55 31.9	
	comp=Z,7.8nm,0.5s						
HYA	Hoyanger	1.88	8	eP	Pn	14 54 59.0	-1.2
HYA				eS	Sn	14 55 21.7	-2.8
HYA				IAML		14 55 30.8	
	comp=Z,5.1nm,0.3s						
KONO	Kongsberg	2.06	79	eP	Pn	14 55 01.8	-0.9
KONO				eS	Sn	14 55 26.5	-2.5
KONO				IAML		14 55 29.2	
	comp=Z,4.0nm,0.2s						

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*ISN **04** 14:58:29.9±0.3, 37°.45N×42°.58E, h0km, ML2.8*

*CSEM **04** 14:58:31.9±1.8, 36°.96N×44°.58E, h2km, MD2.7, Error ellipse: s-maj=31.8km s-min=15.3km az=108.0*

DDA 04 14:58:33.8, 37°.12N×44°.53E, h2km, Md2.7, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOVA	Hakkari_Yˆ…kse	0.50	338	i P	Pg	14 58 44.1	+0.6
YOVA				i S	Sb	14 58 51.9	-1.6
YOVA	Hakkari_Yˆ…kse	0.50	338	P	Pg	14 58 44.1	+0.6
YOVA				S	Sb	14 58 51.9	-1.6
CUKT	Cukurca	0.75	280	i P	Pg	14 58 48.5	+0.3
CUKT				i S	Sb	14 58 59.8	-0.6
CUKT	Cukurca	0.75	280	P	Pg	14 58 48.5	+0.3
CUKT				S	Sb	14 58 59.8	-0.6
HAKT	HAKKARI	0.79	304	i P	Pg	14 58 49.6	+0.6
HAKT				i S	Sb	14 59 00.5	-1.2
HAKT	HAKKARI	0.79	304	P	Pg	14 58 49.6	+0.6
HAKT				S	Sb	14 59 00.5	-1.2
SIRN	S˜–rnak	1.73	283	i P	Pg	14 59 07.0	0.0
SIRN				i S	Sn	14 59 28.0	+0.3
SIRN	S˜–rnak	1.73	283	P	Pg	14 59 07.0	0.0
SIRN				S	Sn	14 59 28.0	+0.2
SRTM	Siirt_Merkez	2.25	294	i P	Pb	14 59 16.1	+0.8
SRTM				i S	Sg	14 59 46.1	0.0

JMA 04 15:01:51.4, 36°.86N×140°.67E, h10km, M2.6, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHO	Hitachi	0.26	198	P	Pg	15 01 56.7	0.0
JHO				S	Sg	15 02 00.6	+0.3
ONAJ	Iwakimizuishiy	0.26	23	P	Pg	15 01 56.8	0.0
ONAJ				S	Sg	15 02 00.7	+0.3
JFK	Kawauchi	0.53	18	P	Pg	15 02 01.5	-0.3
JFK				S	Sg	15 02 08.7	-0.1
MAT	Matsushiro	2.00	262	P	Pn	15 02 26.3	+1.0
MAT				S	Sb	15 02 53.1	+0.1

KRSC 04 15:04:16.7±1.8, 50°.01N×158°.78E, h62km±36km, ML3.6, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.83	292	eP	Pn	15 04 46.3	+0.5
SKR				eS	Sn	15 05 07.8	-0.2
KDTR	Khodutka, Kamc	1.85	346	eP	Pn	15 04 48.3	+2.2
KDTR				eS	Sn	15 05 11.1	+2.7
PAU	Pauzhetka	1.92	320	eS	Sn	15 05 12.9	+2.8
RUS	Russkaya	2.43	356	eP	Pn	15 04 56.4	+2.5
RUS				eS	Sn	15 05 24.7	+2.2
ASAK	Asacha	2.44	347	eP	Pn	15 04 57.3	+3.2
ASAK				eS	Sn	15 05 26.0	+3.2
MTVR	Mutnovka	2.50	352	eP	Pn	15 04 57.8	+2.7
MTVR				eS	Sn	15 05 26.9	+2.4
MIPR	Malaya Ipel'ka	2.60	331	P	Pn	15 04 59.9	+3.6
KRMR	Karymshinskiy	2.85	352	eP	Pn	15 05 03.4	+3.7
KRMR				eS	Sn	15 05 37.0	+4.2
DALK	Dalny	3.02	360	eP	Pn	15 05 04.9	+2.9
DALK				eS	Sn	15 05 39.7	+2.7
SPN	Mys Shipunski	3.19	14	eP	Pn	15 05 07.2	+2.9
SPN				eS	Sn	15 05 43.7	+2.7
UGLR	Uglovaya	3.20	0	eP	Pn	15 05 07.6	+3.0
SMAR	Somma	3.25	0	eP	Pn	15 05 09.8	+4.4
AVH	Avacha	3.26	360	eP	Pn	15 05 08.6	+3.3
SDLR	Sedlovina	3.27	1	eP	Pn	15 05 08.0	+2.5
GNL	Ganaly	3.72	352	eP	Pn	15 05 16.1	+4.4
MKZ	Mys Kozlova	4.90	21	eP	Pn	15 05 30.1	+2.5
KZV	Kizimen	5.19	10	eP	Pn	15 05 35.9	+4.1
TUMR	Tumrok	5.34	8	eP	Pn	15 05 38.1	+4.2
KBTR	Krutoberegovo	6.66	20	eP	Pn	15 05 55.0	+3.2

KRSC 04 15:08:12.3±1.3, 48°.52N×154°.90E, h164km±21km, ML3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.31	20	eP	Pn	15 08 52.3	+0.5
SKR				eS	Sn	15 09 23.1	+0.7
PAU	Pauzhetka	3.20	22	eP	Pn	15 09 05.0	+2.4
PAU				eS	Sn	15 09 44.2	+2.3
KDTR	Khodutka, Kamc	3.88	31	eP	Pn	15 09 13.6	+2.4
KDTR				eS	Sn	15 09 57.3	+0.1
MIPR	Malaya Ipel'ka	3.95	17	eP	Pn	15 09 13.8	+1.6
RUS	Russkaya	4.55	29	eP	Pn	15 09 22.1	+2.2
RUS				eS	Sn	15 10 13.5	+0.7

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*ISCJB **04** 15:23:29.8±0.3, 28°.33S±0°.03×69°.06W±0°.04, h115km±4km, mb3.7/5, Error ellipse: s-maj=5.5km s-min=4.1km az=179.7*

*NEIC **04** 15:23:29.4±0.6, 28°.39S×68°.95W, h89km±9km, mb3.9/1, ML4.4(GUC), Error ellipse: s-maj=13.9km s-min=6.8km az=95.0*

NEIC Felt [II] at Coquimbo and La Serena, Chile.

*IDC **04** 15:23:29.4±2.8, 28°.35S×68°.91W, h83km±24km, mb3.5/5, mb1 3.7/9, mb1mx3.6/35, mbtmp3.8/9, Error ellipse: s-maj=30.4km s-min=17.7km az=88.0*

*SJA **04** 15:23:30.4±0.5, 28°.37S×68°.99W, h117km±3km, ML4.3, MW4.0*

*GUC **04** 15:23:30.8±1.2, 28°.41S×69°.15W, h98km±9km, ML4.4*

ISC 04 15:23:30.6±0.7, 28°.35S±0°.04×69°.08W±0°.04, h101km±7km, n53, σ1ˢ35/71, mb3.5/5, 1C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VCA	Vinchina	0.86	117	eP	Pn	15 23 51.0	+1.1
VCA				eS	Sn	15 24 06.2	+1.8
VCA				IAML		15 24 07.7	
	comp=Z,5μm,0.2s						
VCA	Vinchina	0.86	117	⇓iP	Pn	15 23 51.4	+1.5
VCA				i S	Sn	15 24 06.3	+1.9
VCA				IAML		15 24 07.0	
	comp=N,7μm,0.4s						
AGUA	GUANDACOL	1.25	156	eP	Pn	15 23 55.1	+1.1
AGUA				eS	Sn	15 24 13.4	+1.7
GO03	Copiap	1.26	306	ePn	Pn	15 23 55.0	+0.9
GO03	Copiap	1.26	306	eP	Pn	15 23 55.0	+0.9
GO03				i P	Pn	15 23 55.0	+0.9
GO03				i S	Sn	15 24 13.0	+1.0
GO03				i S	Sn	15 24 13.1	+1.1
LCO	Las Campanas	1.57	245	ePn	Pn	15 23 58.5	+0.5
LCO				eSn	Sn	15 24 19.4	+0.6
LCO	Las Campanas	1.57	245	⇑iP	Pn	15 23 58.7	+0.7
LCO				i S	Sn	15 24 19.8	+0.9
LCO				IAML		15 24 21.8	
	comp=N,5μm,0.3s						
ACDV	Cuesta del Vie	1.82	181	eP	Pn	15 24 02.6	+1.5
ACDV				IAML		15 24 03.2	
	comp=Z,474nm,0.4s						
ACDV				eS	Sn	15 24 26.4	+2.1
AROD	Rodeo	1.85	191	eP	Pn	15 24 03.6	+2.1
AROD				eS	Sn	15 24 27.6	+2.5
TLL	Tololo Astrono	2.36	219	eP	Pn	15 24 08.4	+0.3
TLL				i S	Sn	15 24 37.0	+0.2
TLL				IAML		15 24 44.9	
	comp=E,2μm,0.3s						
GO04	Tololo Observa	2.36	219	ePn	Pn	15 24 08.2	+0.2
GO04	Tololo Observa	2.36	219	eP	Pn	15 24 08.5	+0.4
GO04				i S	Sn	15 24 37.0	+0.2
GO04				IAML		15 24 45.7	
	comp=E,4μm,0.4s						
AMOG	MOGNA	2.63	169	eP	Pn	15 24 12.2	+0.6
AMOG				eS	Sn	15 24 43.7	+0.6
CYA	Choya	2.89	93	eP	Pn	15 24 15.4	+0.4
CYA				IAML		15 24 16.1	
	comp=Z,733nm,0.3s						
CYA				eS	Sn	15 24 48.2	-1.0
RTLL	Cerro Villicun	3.02	170	eP	Pn	15 24 17.3	+0.7
RTLL				eS	Sn	15 24 52.6	+0.4
GO02	Mina Guanaco	3.20	352	ePn	Pn	15 24 20.9	+1.5
GO02	Mina Guanaco	3.20	352	eP	Pn	15 24 20.8	+1.5
GO02				i S	Sn	15 24 58.6	+1.6
GO02				IAML		15 25 10.2	
	comp=N,899nm,0.7s						
RTLS	Leoncito	3.45	183	eP	Pn	15 24 24.2	+1.6
RTLS				IAML		15 25 07.3	
	comp=Z,246nm,0.3s						
RTCV	Cerro Valdivia	3.54	172	eP	Pn	15 24 24.6	+1.0
ROC1	El Roble	4.91	199	ePn	Pn	15 24 40.4	-1.9
PEL	Peldehue	4.98	196	ePn	Pn	15 24 41.3	-1.7
PB10	IPOC Station P	4.99	344	ePn	Pn	15 24 42.6	-0.6
FCH	Farellones	5.07	192	eP	Pn	15 24 44.7	+0.1
FCH				i S	Sn	15 25 41.5	-0.6
PB04	IPOC Station P	6.06	351	ePn	Pn	15 24 55.8	-2.1
GO05	HualaæØ	7.07	199	ePn	Pn	15 25 08.0	-3.5
PB01	IPOC Station P	7.28	357	ePn	Pn	15 25 12.2	-2.2
MNMC	Minye Minye	9.19	357	ePn	Pn	15 25 38.9	-1.6
CPUP	Villa Florida	10.64	82	P	Pn	15 25 56.5	-3.5
	comp=Z,0.3nm,0.3s,baz=259,slow=13,SNR=3.8						
CPUP				S	Sn	15 27 57.0	-0.2
	baz=257,slow=9.8,SNR=3.0						
CPUP	Villa Florida	10.64	82	ePn	Pn	15 25 58.5	-1.5
TRQA	Tornquist	11.36	150	ePn	Pn	15 26 07.3	-2.3
LPAZ	La Paz	12.03	4	P	Pn	15 26 18.5	-0.8
	comp=Z,0.5nm,0.3s,baz=152,slow=6.9,SNR=11						
LPAZ	La Paz	12.03	4	ePn	Pn	15 26 18.2	-1.1
PLCA	Paso Flores	12.41	185	P	Pn	15 26 23.5	-0.2
	comp=Z,0.1nm,0.3s,baz=0.0,slow=6.1,SNR=2.8						
SIV	San Ignacio	14.35	33	P	Pn	15 26 46.7	-2.4
	comp=Z,0.7nm,0.3s,baz=226,slow=8.6,SNR=7.9						
SAML	Samuel	20.08	17	eP	P	15 27 57.1	+1.0
	comp=Z,5.5nm,0.8s						
VNA3	Neumayer Olymp	53.70	160	P	P	15 32 42.0	+0.4
VNA2	Neumayer--Watz	54.30	159	P	P	15 32 46.5	+0.6
	baz=284,slow=8.4						
SNAA	Sanae	55.92	160	P	P	15 32 58.0	+0.4
SNAA	Sanae	55.92	160	P	P	15 32 57.8	+0.2
	comp=Z,1.1nm,0.5s,baz=274,slow=12,SNR=30						
QSPA	South Pole Qui	61.87	180	P	P	15 33 40.2	+1.2
	comp=Z,2.6nm,0.6s,baz=180,slow=3.0,SNR=7.9						
TXAR	Lajitas Array	66.21	327	P	P	15 34 09.6	+1.9
	comp=Z,0.4nm,0.7s,baz=150,slow=5.4,SNR=4.2						
TORD	Torodi Ar. Bea	79.87	69	P	P	15 35 28.3	-0.2

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=Z,0.7nm,0.9s,baz=232,slow=7.1						
PDAR	Pinedale Array	79.97	331	P	P	15 35 29.8	+1.1
	comp=Z,0.2nm,0.7s,baz=127,slow=6.5,SNR=3.7						
ASAR	Alice Springs	123.74	206	PKP	PKPdf	15 42 16.9	-0.2
	comp=Z,0.3nm,0.5s,baz=132,slow=1.7,SNR=9.2						
WRA	Warramunga Arr	126.92	208	PKP	PKPdf	15 42 23.4	+0.1
	comp=Z,0.7nm,0.5s,baz=155,slow=1.7,SNR=8.8						
KURBB	Kurchatov Arra	146.95	39	PKPbc	PKPab	15 43 02.0	-0.7
	comp=Z,0.7nm,0.5s,baz=305,slow=3.2,SNR=7.0						
ZALV	Zalesovo Beam	148.09	29	PKPbc	PKPbc	15 43 04.9	+0.9
	comp=Z,1.6nm,0.5s,baz=307,slow=4.6,SNR=5.5						
ZALV	Zalesovo Beam	148.09	29	*e*PKPbc	PKPbc	15 43 04.6	+0.6
ASAJ	Asahikawa	150.22	310	PKPbc	PKPbc	15 43 10.1	+0.5
	comp=Z,1.4nm,0.8s,baz=95,slow=17,SNR=2.9						
MK31	Makanchi Array	151.02	43	*e*PKPbc	PKPbc	15 43 11.9	+0.4
MKAR	Makanchi Array	151.02	43	PKPbc	PKPbc	15 43 12.2	+0.7
	comp=Z,1.1nm,0.4s,baz=293,slow=1.9,SNR=19						
MKAR	Makanchi Array	151.02	43	*e*PKPbc	PKPbc	15 43 12.0	+0.5
MK01	Makanchi Array	151.03	43	*e*PKPbc	PKPbc	15 43 11.8	+0.3

JMA 04 16:09:07.7, 35°.09N×135°.63E, h7km±1km, M2.7, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWT	Wachi	0.27	316	P	Pg	16 09 13.2	+0.2
JWT				S	Sg	16 09 16.6	0.0
JHE	Heguri	0.44	174	P	Pg	16 09 16.4	+0.2
JHE				S	Sg	16 09 22.2	+0.3
JKS	Kasai	0.65	261	P	Pg	16 09 20.2	-0.1
JKS				S	Sg	16 09 28.9	+0.1
JKY	Yasaka	0.69	321	P	Pg	16 09 20.9	-0.1
JKY				S	Sg	16 09 29.9	0.0
TSUJ	Tsu 2	0.75	120	P	Pg	16 09 22.0	-0.1
TSUJ				S	Sg	16 09 31.8	-0.1
JWY	Kouya	0.87	182	P	Pg	16 09 24.2	-0.2
JWY				S	Sg	16 09 35.6	-0.1
JAJ2	Tsuna	0.91	223	P	Pg	16 09 25.0	-0.1
JAJ2				S	Sg	16 09 37.0	+0.1
JKSM	Kasumi	0.93	302	P	Pg	16 09 25.3	-0.3
JKSM				S	Sg	16 09 37.3	-0.4
MAT	Matsushiro	2.55	55	P	Pn	16 09 51.1	+1.6
MAT				S	Sg	16 10 27.7	-1.8

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*IDC **04** 16:09:41.8±1.9, 7°.78N×127°.35E, h0km, mb3.7/6, mb1 3.8/6, mb1mx3.4/64, mbtmp3.7/6, Error ellipse: s-maj=188.5km s-min=18.9km az=70.0*

*ISCJB **04** 16:09:45.1±0.8, 7°.73N±0°.06×127°.62E±0°.06, h41km, mb3.6/6, Error ellipse: s-maj=10.1km s-min=7.5km az=35.9*

*MAN **04** 16:09:46.3, 7°.58N×127°.45E, h13km, mb4.5, ML3.4, MS3.2*

ISC 04 16:09:47.4±1.2, 7°.64N±0°.07×127°.5E±0°.1, h41km, n12, σ1ˢ33/15, mb3.8/6, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	Bislig	1.27	295⇑	*i*P	Pn	16 10 09.1	+0.3
BIPH				*e*S	Sn	16 10 24.2	-0.4
MATI	Mati	1.43	241	*e*P	Pn	16 10 10.3	-0.7
MATI				*e*S	Sn	16 10 28.6	0.0
DAV	Davao City (W)	2.01	254	LR	LR	16 10 39.3	
	comp=Z,24nm,21.1s,baz=119,slow=30						
BUTP	Butuan	2.30	305	*e*P	Pn	16 10 18.0	-4.8
BUTP				*e*S	Sn	16 10 50.0	+0.1
BUKP	Musuan	2.45	276	*e*P	Pn	16 10 25.1	+0.2
BUKP				*e*S	Sn	16 10 55.8	+2.0
MSLP	Maasin	3.61	313	*e*P	Pn	16 10 43.1	+2.2
MSLP				*e*S	Sn	16 11 21.6	-0.7
WRA	Warramunga Arr	28.22	166	P	P	16 15 38.0	+1.4
	2.0nm,1.1s,baz=350,slow=10,SNR=7.2						
ASAR	Alice Springs	31.74	169	P	P	16 16 09.2	+1.4
	0.2nm,0.9s,baz=352,slow=7.5,SNR=3.3						
SONM	Songino Array	43.90	339	P	P	16 17 49.4	-0.8
	1.4nm,0.8s,baz=152,slow=6.5,SNR=7.5						
MKAR	Makanchi Array	54.86	323	P	P	16 19 12.6	-1.2
	0.6nm,0.6s,baz=117,slow=7.8,SNR=6.2						
ZALV	Zalesovo Beam	57.51	332	P	P	16 19 30.7	-1.8
	0.3nm,0.3s,baz=133,slow=7.4,SNR=3.4						
KURBB	Kurchatov Arra	58.92	326	P	P	16 19 41.1	-1.3
	0.6nm,0.6s,baz=122,slow=7.1,SNR=8.5						

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*ISCJB **04** 16:16:14.5±0.5, 47°.76N±0°.06×154°.50E±0°.09, h33km, mb4.1/15, MS2.9/5, Error ellipse: s-maj=10.9km s-min=4.2km az=41.9*

*MOS **04** 16:16:15.1±2.4, 47°.77N×156°.13E, h7km, mb4.5/1, Error ellipse: s-maj=73.4km s-min=5.2km az=80.8*

*KRSC **04** 16:16:15.2±1.9, 47°.77N×156°.13E, h9km±58km, ML4.4*

*NEIC **04** 16:16:17.8±1.2, 47°.78N×154°.46E, h44km±10km, mb4.6/5, Error ellipse: s-maj=17.5km s-min=7.4km az=150.0*

*IDC **04** 16:16:17.6±2.7, 47°.72N×154°.44E, h51km±24km, mb3.5/11, mb1 3.7/17, mb1mx3.5/76, mbtmp3.8/17, ML3.3/3, MS2.9/8, Ms1 3.0/8, ms1mx2.7/58, Error ellipse: s-maj=22.7km s-min=14.6km az=148.0*

ISC 04 16:16:15.6±0.7, 47°.67N±0°.08×154°.68E±0°.08, h35km, n86, σ1ˢ76/94, mb4.0/15, MS2.9/5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	3.16	17	*e*P	Pn	16 17 03.2	+0.4
SKR				*e*S	Sn	16 17 39.8	+0.6
SKR	Severo-Kuril's	3.16	17	*e*PN	Pn	16 17 02.6	-0.2
SKR				*e*S	Sn	16 17 41.8	+2.6
SKR				pmax	pmax		
	comp=Z,300nm,0.8s						
SKR				pmax	pmax		
	comp=Z,363nm,0.6s						
SKR				smax	smax		
	comp=N,492nm,0.7s						
SKR				smax	smax		
	comp=E,414nm,0.5s						
SKR				MLR	MLR		
	comp=Z,300nm,11.0s						
PAU	Pauzhetka	4.04	19	*e*P	Pn	16 17 15.7	+0.8
PAU				*e*S	Sn	16 18 00.4	-0.6
PAU	Pauzhetka	4.04	19	PN	Pn	16 17 15.7	+0.8
PAU				S	Sn	16 18 00.4	-0.6
KDTR	Khodutka, Kamc	4.69	27	*e*P	Pn	16 17 23.5	-0.3
KDTR				*e*S	Sn	16 18 14.2	-2.7
MIPR	Malaya Ipel'ka	4.80	15	*e*P	Pn	16 17 26.6	+1.2
MIPR	Malaya Ipel'ka	4.80	15	PN	Pn	16 17 26.6	+1.2
ASAK	Asacha	5.15	23	*e*P	Pn	16 17 31.1	+0.8
ASAK	Asacha	5.15	23	PN	Pn	16 17 31.1	+0.8
MTVR	Mutnovka	5.32	24	*e*P	Pn	16 17 33.6	+1.0
MTVR				S	Sn	16 18 31.1	-1.5
MTVR	Mutnovka	5.32	24	PN	Pn	16 17 33.6	+1.0
MTVR				S	Sn	16 18 31.1	-1.5
RUS	Russkaya	5.37	26	*e*P	Pn	16 17 32.5	-0.6
RUS				*e*S	Sn	16 18 31.6	-2.0
RUS	Russkaya	5.37	26	PN	Pn	16 17 32.5	-0.6
RUS				S	Sn	16 18 31.6	-2.0
APC	Apacha	5.49	16	*e*P	Pn	16 17 37.1	+2.3
APC	Apacha	5.49	16	PN	Pn	16 17 37.1	+2.3
KRMR	Karymshinskiy	5.62	22	*e*P	Pn	16 17 38.4	+1.9
KRMR	Karymshinskiy	5.62	22	PN	Pn	16 17 38.4	+1.9
PEA0B	Petropavlovsk-	5.78	18	*e*Pn	Pn	16 17 39.8	+1.1
PETK	Petropavlovsk-	5.78	18	P	Pn	16 17 40.3	+1.6
	baz=194,slow=9.3						
PETK				S	Sn	16 18 50.1	+6.4
	baz=186,slow=23						
PETK	Petropavlovsk-	5.78	18	*e*Pn	Pn	16 17 39.4	+0.7
PET	Petropavlovsk	5.93	24	*e*Pn	Pn	16 17 43.3	+2.4
PET	Petropavlovsk	5.93	24	*e*P	Pn	16 17 41.4	+0.6
PET				*e*S	Sn	16 18 46.5	-1.0
PET	Petropavlovsk	5.93	24	*e*PN	Pn	16 17 42.7	+1.9
PET				*e*S	Sn	16 18 47.6	+0.1
PET				pmax	pmax		
	comp=Z,31nm,0.5s						
PET				smax	smax		
	comp=N,96nm,0.6s						
PET				smax	smax		
	comp=E,85nm,0.7s						
PET				MLR	MLR		
	comp=Z,100nm,15.0s						
DALK	Dalny	5.96	24	*e*P	Pn	16 17 41.5	+0.2
DALK				S	Sn	16 18 46.1	-2.2
DALK	Dalny	5.96	24	PN	Pn	16 17 41.5	+0.2
DALK				S	Sn	16 18 46.1	-2.2
UGLR	Uglovaya	6.14	24	P	Pn	16 17 46.2	+2.3
UGLR	Uglovaya	6.14	24	PN	Pn	16 17 46.2	+2.3
KOK	Koryaka	6.17	23	P	Pn	16 17 46.3	+2.1
KOK	Koryaka	6.17	23	PN	Pn	16 17 46.3	+2.1
AVH	Avacha	6.17	23	*e*P	Pn	16 17 46.1	+1.9
AVH	Avacha	6.17	23	PN	Pn	16 17 46.1	+1.9
SMAR	Somma	6.18	24	*e*P	Pn	16 17 46.7	+2.2
SMAR	Somma	6.18	24	PN	Pn	16 17 46.7	+2.2
SDLR	Sedlovina	6.22	24	*e*P	Pn	16 17 44.8	-0.1
SDLR				S	Sn	16 18 53.0	-1.8
SDLR	Sedlovina	6.22	24	PN	Pn	16 17 44.8	-0.1
SDLR				S	Sn	16 18 53.0	-1.8
KRX	Arik	6.23	22	P	Pn	16 17 47.3	+2.2
KRX	Arik	6.23	22	PN	Pn	16 17 47.3	+2.2
NLC	Nalytchevo	6.26	27	*e*S	Sn	16 18 51.4	-4.2
GNL	Ganaly	6.38	18	*e*P	Pn	16 17 48.6	+1.5
GNL	Ganaly	6.38	18	PN	Pn	16 17 48.6	+1.5
SPN	Mys Shipunski	6.42	30	P	Pn	16 17 47.9	+0.4
SPN				*e*S	Sn	16 18 56.1	-3.3
SPN	Mys Shipunski	6.42	30	PN	Pn	16 17 47.9	+0.4
SPN				S	Sn	16 18 56.1	-3.3
YSS	Yuzh-Sakhalins	8.13	269	*e*Pn	Pn	16 18 11.1	0.0
MKZ	Mys Kozlova	8.19	30	*e*P	Pn	16 18 09.9	-1.9
MKZ	Mys Kozlova	8.19	30	PN	Pn	16 18 09.9	-1.9
ASAJ	Asahikawa	9.14	252	P	Pn	16 18 26.2	+1.3
	comp=Z,0.3nm,0.3s,baz=62,slow=12,SNR=8.5						
ASAJ				LR	LR	16 21 38.1	
	comp=Z,110nm,18.9s,baz=20,slow=36						
ASAJ	Asahikawa	9.14	252	*e*Pn	Pn	16 18 25.8	+0.9
MA2	Magadan	12.15	351	P	Pn	16 19 05.8	-0.1
	comp=Z,0.9nm,0.3s,baz=170,slow=10,SNR=7.5						
MA2				LR	LR	16 24 10.4	
	comp=Z,65nm,18.2s,baz=119,slow=39						
MA2	Magadan	12.15	351	*e*Pn	Pn	16 19 05.9	0.0
KLR	Kul'dur	15.28	284	P	P	16 19 52.5	-0.4
	comp=Z,0.0nm,0.3s,baz=74,slow=11,SNR=10						
SEY	Seymchan	15.35	356	P	P	16 19 51.3	-2.3
	comp=Z,0.3nm,0.3s,baz=188,slow=14,SNR=9.9						
USRK	Ussuriysk Ar.	16.15	266	P	P	16 19 59.8	-2.8
	baz=79,slow=15						
MJAR	Matsushiro Arr	16.48	234	P	Pn	16 20 03.0	-1.0
	comp=Z,0.2nm,0.3s,baz=32,slow=12,SNR=2.8						
MJAR				LR	LR	16 26 54.9	
	comp=Z,15nm,18.4s,baz=115,slow=39						
YAK	Yakutsk	20.15	325	P	Pn	16 20 49.0	+0.5
	comp=Z,9.4nm,0.5s,baz=189,slow=0.4,SNR=5.3						
YAK	Yakutsk	20.15	325	*e*P	Pn	16 20 47.7	-0.8
	comp=Z,13nm,0.6s						
KSRS	Korea Array	22.09	252	P	P	16 21 05.9	-1.6
	comp=Z,2.3nm,0.8s,baz=51,slow=8.7,SNR=10.0						
KSRS				LR	LR	16 28 26.4	
	comp=Z,23nm,20.3s,baz=60,slow=33						
JNU	Nakatsue	23.11	240	LR	LR	16 29 34.0	
	comp=Z,18nm,20.5s,baz=253,slow=35						
TIXI	Tiksi	26.90	342	LR	LR	16 34 19.1	
	comp=Z,33nm,18.1s,baz=15,slow=40						
H11N2	WAKE ISLAND Hy	29.59	156	T	T	16 53 51.5	
	baz=344,slow=76,SNR=151						
H11N1	WAKE ISLAND Hy	29.61	156	T	T	16 53 54.7	
	baz=344,slow=76,SNR=286						
H11N3	WAKE ISLAND Hy	29.61	156	T	T	16 53 39.2	
	baz=344,slow=76,SNR=99						
H11S1	WAKE ISLAND Hy	30.70	157	T	T	16 55 07.4	
	baz=344,slow=76,SNR=741						
H11S3	WAKE ISLAND Hy	30.71	157	T	T	16 55 15.6	
	baz=344,slow=76,SNR=1089						
H11S2	WAKE ISLAND Hy	30.72	157	T	T	16 55 10.0	
	baz=344,slow=76,SNR=863						
MLY	Manley	33.53	39	*e*P	P	16 22 53.5	+1.9
	comp=Z,8.7nm,1.4s						
ILAR	Eielson Array	35.16	39	P	P	16 23 06.4	+0.8
	comp=Z,0.5nm,0.7s,baz=264,slow=8.5,SNR=10						
FYU	Fort Yukon	35.87	36	*e*P	P	16 23 14.0	+2.3
	comp=Z,18nm,1.5s						
MK31	Makanchi Array	47.46	297	*e*P	P	16 24 46.6	-0.1
MKAR	Makanchi Array	47.46	297	P	P	16 24 46.5	-0.3
	comp=Z,1.7nm,0.7s,baz=69,slow=8.4,SNR=19						
MKAR	Makanchi Array	47.46	297	*e*P	P	16 24 46.6	-0.1
	comp=Z,15nm,0.7s						
MK01	Makanchi Array	47.47	297	*e*P	P	16 24 46.1	-0.7
KURBB	Kurchatov Arra	47.84	303	P	P	16 24 49.3	-0.2
	comp=Z,1.1nm,0.7s,baz=68,slow=8.3,SNR=9.0						
BVAR	Borovoye Array	51.09	309	P	P	16 25 14.5	+0.2
	comp=Z,1.1nm,0.5s,baz=57,slow=11,SNR=7.1						
BRDH	Bariadhala	55.56	267	LR	LR	16 51 09.9	
	comp=Z,41nm,18.9s,baz=331,slow=38						
SUMG	Summit	59.70	5	*e*P	P	16 26 15.7	-0.7
	comp=Z,8.0nm,1.0s						
BOZ	Bozeman (W)	60.38	54	*e*P	P	16 26 22.5	+1.3
	comp=Z,7.2nm,1.5s						
NVAR	Mina Array Bea	61.06	64	P	P	16 26 28.2	+2.1
	comp=Z,0.4nm,0.6s,baz=294,slow=7.4,SNR=5.3						
PDAR	Pinedale Array	63.34	55	P	P	16 26 42.6	+1.3
	comp=Z,0.6nm,0.9s,baz=294,slow=1.5,SNR=4.7						
PDAR	Pinedale Array	63.34	55	*e*P	P	16 26 42.4	+1.1
FINES	FINESS Array B	63.65	335	P	P	16 26 40.7	-1.9
	comp=Z,1.2nm,0.8s,baz=36,slow=7.3,SNR=3.8						
SNDA	J Saunders Pla	65.28	67	*e*P	P	16 26 56.9	+2.9
NOA	NORSAR Array B	67.69	342	LR	LR	17 01 25.0	
	comp=Z,10nm,18.1s,baz=315,slow=40						
HFS	Hagfors	67.96	340	P	P	16 27 09.6	-0.8
	comp=Z,0.5nm,0.5s,baz=99,slow=4.5,SNR=4.4						
ASAR	Alice Springs	73.43	200	P	P	16 27 44.1	0.0
	comp=Z,0.8nm,1.1s,baz=14,slow=6.0,SNR=2.9						
TX31	Lajitas Ar. Si	76.11	62	*e*P	P	16 28 00.9	+1.0
TXAR	Lajitas Array	76.11	62	P	P	16 28 00.8	+0.9
	comp=Z,0.6nm,0.6s,baz=311,slow=4.7,SNR=7.7						

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*ISCJB **04** 16:17:46.3±0.6, 50°.15N±0°.04×19°.10E±0°.03, h0km, Error ellipse: s-maj=5.8km s-min=2.8km az=14.0*

*CSEM **04** 16:17:46.9±0.4, 50°.11N×19°.13E, h1km, ML2.6/8, Error ellipse: s-maj=8.8km s-min=4.4km az=12.0*

*PRU **04** 16:17:47.6, 50°.14N×19°.13E, h0km*

*WAR **04** 16:17:48.0, 50°.10N×19°.20E, h1km, Mw2.3*

ISC 04 16:17:46.8±0.8, 50°.04N±0°.03×19°.15E±0°.02, h0km, n32, σ0ˢ78/52, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	Ojcow	0.45	66	*e*Pg	Pg	16 17 55.6	+0.2
OJC				*e*Sg	Sg	16 18 01.5	+0.2
OJC	Ojcow	0.45	66	*e*Pg	Pg	16 17 55.6	+0.2
OJC				*e*Sg	Sg	16 18 01.5	+0.2
OJC	Ojcow	0.45	66	*e*Pg	Pg	16 17 55.6	+0.2
OJC				*e*Sg	Sg	16 18 01.5	+0.2
OKC	Ostrava-Krasne	0.68	253	*e*PG	Pb	16 18 02.0	+0.5
OKC				*e*SG	Sb	16 18 11.4	-0.1
	comp=Z,16nm,0.4s						
OKC	Ostrava-Krasne	0.68	253	Pg	Pb	16 18 02.0	+0.5
OKC				Sg	Sb	16 18 11.4	-0.1
	16nm,0.4s						
LANS	Liptovska Anna	0.91	167	*e*PG	Pn	16 18 06.3	-0.6
LANS				*e*SG	Sn	16 18 19.7	-1.1
LANS	Liptovska Anna	0.91	167	*e*Pg	Pn	16 18 06.3	-0.6
LANS				*e*Sg	Sn	16 18 19.7	-1.1
NIE	Niedzica	0.97	129	*e*Pg	Pb	16 18 06.6	+0.1
NIE				*e*Sg	Sn	16 18 22.0	-0.2
NIE	Niedzica	0.97	129	*e*Pg	Pb	16 18 06.6	+0.1
NIE				*e*Sg	Sn	16 18 22.0	-0.2
NIE	Niedzica	0.97	129	*e*Pg	Pb	16 18 06.6	+0.1
NIE				*e*Sg	Sn	16 18 22.0	-0.2
MORC	Moravsky Berou	1.07	256	*e*Pg	Pn	16 18 09.0	-0.1
MORC				*e*Sg	Sb	16 18 23.0	+0.1
MORC	Moravsky Berou	1.07	256	*e*PG	Pn	16 18 09.0	-0.1
MORC				*e*SG	Sb	16 18 23.0	+0.1
JAVC	Velka Javorina	1.53	220	*e*PN	Pg	16 18 17.7	+1.7
KRLC	Kraliky	1.53	272	*e*PG	Pn	16 18 15.4	0.0
KRLC				*e*SG	Sg	16 18 35.5	-0.4
	comp=Z,3.1nm,0.3s						
KRLC	Kraliky	1.53	272	Pg	Pn	16 18 15.4	0.0
KRLC				Sg	Sg	16 18 35.5	-0.4
	3.1nm,0.3s						
VYHS	Vyhne	1.56	188	*e*PN	Pb	16 18 16.3	-0.2
VYHS				*e*SN	Sg	16 18 37.2	+0.3
VYHS				*e*LG	Lg	16 18 40.5	
VYHS	Vyhne	1.56	188	*e*Pg	Pb	16 18 16.3	-0.2
VYHS				*e*Sn	Sg	16 18 37.2	+0.3
VRAC	Vranov	1.82	247	*e*PN	Pg	16 18 21.3	-0.3
VRAC				*e*SG	Sg	16 18 45.8	+0.7
DPC	Dobruska-Polom	1.85	281	*e*PG	Pb	16 18 21.4	0.0
DPC				*e*SG	Sb	16 18 44.5	-0.6
	comp=Z,13nm,0.4s						
DPC	Dobruska-Polom	1.85	281	Pg	Pb	16 18 21.4	0.0
DPC				Sg	Sb	16 18 44.5	-0.6
	13nm,0.4s						
KRUC	Moravsky	2.04	242	*e*PN	Pb	16 18 25.2	+0.4
KRUC				*e*SN	Sg	16 18 52.3	-0.2
UPC	Upice	2.07	284	*e*SG	Sg	16 18 53.3	+0.1
	comp=Z,5.9nm,0.5s						
UPC	Upice	2.07	284	Sg	Sg	16 18 53.3	+0.1
	5.9nm,0.5s						
GOPC	GO Pecny, Ondr	2.82	269	*e*SG	Sb	16 19 15.1	+2.0
	comp=Z,3.3nm,0.3s						
GOPC	GO Pecny, Ondr	2.82	269	Sg	Sb	16 19 15.1	+2.0
	3.3nm,0.3s						
PRU	Pruhonice	2.98	271	*e*SG	Sg	16 19 20.1	-2.2
	comp=Z,2.5nm,0.3s						
PRU	Pruhonice	2.98	271	Sg	Sg	16 19 20.1	-2.2
	2.5nm,0.3s						
PVCC	Panska Ves	2.98	281	*e*SG	Sg	16 19 22.3	-0.2
	comp=Z,8.6nm,0.4s						
PVCC	Panska Ves	2.98	281	Sg	Sg	16 19 22.3	-0.2
	8.6nm,0.4s						
BRG	Berggiesshubel	3.43	286	SG	Sg	16 19 38.2	+1.2
	3.0nm,0.4s						
KHC	Kasperske Hory	3.74	258	*e*SG	Sg	16 19 45.9	-1.0
	comp=Z,2.3nm,0.4s						
KHC	Kasperske Hory	3.74	258	Sg	Sg	16 19 45.9	-1.0
	2.3nm,0.4s						

IDC 04 16:18:40.3±5.0, 11°.72S×166°.66E, h270km±45km, mb3.2/6, mb1 3.4/7, mb1mx3.1/50, mbtmp3.8/7, Error ellipse: s-maj=32.8km s-min=25.4km az=8.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.29	181	P	Pn	16 21 03.0	+0.6
	0.3nm,0.3s,baz=328,slow=4.9,SNR=9.0						
STKA	Stephens Creek	30.58	225	P	P	16 24 29.8	+0.4
	1.5nm,0.7s,baz=48,slow=11,SNR=6.3						
WRA	Warramunga Arr	32.10	251	P	P	16 24 42.3	-0.5
	1.0nm,0.7s,baz=85,slow=9.1,SNR=5.8						
ASAR	Alice Springs	33.30	245	P	P	16 24 52.2	-1.0
	0.7nm,0.4s,baz=68,slow=10,SNR=34						
ASAR				PcP	PcP	16 27 29.3	+0.6
	0.3nm,0.8s,baz=79,slow=2.6,SNR=3.2						
FITZ	Fitzroy Crossi	40.07	256	P	P	16 25 51.0	+0.9
	1.8nm,0.8s,baz=72,slow=8.6,SNR=4.4						
VNDA	Vanda	65.84	181	P	P	16 28 56.3	-0.2
	0.4nm,0.7s,baz=353,slow=6.5,SNR=2.7						
ILAR	Eielson Array	83.87	18	P	P	16 30 39.0	-0.4
	0.5nm,0.6s,baz=231,slow=5.5,SNR=6.5						

IDC 04 16:22:36.4±66.0, 18°.41S×175°.80W, h0km, mb3.7/3, mb1 3.8/3, mb1mx3.5/45, mbtmp3.7/3, Error ellipse: s-maj=1239.0km s-min=184.7km az=81.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	40.58	242	P	P	16 30 18.4	+0.4
	1.0nm,0.8s,baz=101,slow=10,SNR=4.6						
WRA	Warramunga Arr	46.98	260	P	P	16 31 09.4	-0.3
	0.3nm,0.4s,baz=96,slow=7.7,SNR=3.3						
ASAR	Alice Springs	47.05	255	P	P	16 31 09.8	-0.4
	0.7nm,0.6s,baz=95,slow=8.1,SNR=20						

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*ISCJB **04** 16:25:10.3±0.4, 11°.17S±0°.05×73°.74W±0°.05, h105km, mb3.7/10, Error ellipse: s-maj=7.7km s-min=5.7km az=38.3*

*IDC **04** 16:25:12.2±0.7, 11°.18S×73°.79W, h113km±7km, mb3.6/11, mb1 3.9/15, mb1mx3.7/43, mbtmp4.1/15, MS3.0/2, Ms1 3.0/2, ms1mx2.6/33, Error ellipse: s-maj=13.5km s-min=10.9km az=171.0*

ISC 04 16:25:11.7±0.5, 11°.17S±0°.07×73°.73W±0°.07, h105km, n25, σ1ˢ06/29, mb3.9/10, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	3.16	255	P	Pn	16 25 59.3	-0.4
	193nm,0.3s,baz=85,slow=10.0,SNR=125						
NNA				S	Sn	16 26 36.7	-0.1
	191nm,0.3s,baz=345,slow=20,SNR=29						
NNA				LR	LR	16 26 51.8	
	comp=Z,200nm,18.1s,baz=104,slow=32						
LPAZ	La Paz	7.45	134	P	Pn	16 27 00.4	+2.1
	4.0nm,0.3s,baz=313,slow=7.7,SNR=80						
LPAZ				S	Sn	16 28 21.7	+0.1
	1.1nm,0.3s,baz=288,slow=20,SNR=2.0						
LPAZ				LR	LR	16 30 35.5	
	comp=Z,95nm,18.9s,baz=312,slow=43						
SIV	San Ignacio	13.21	113	P	Pn	16 28 15.1	-0.1
	1.9nm,0.3s,baz=307,slow=11,SNR=54						
SIV				S	Sn	16 30 39.1	-1.6
	0.5nm,0.3s,baz=263,slow=17,SNR=3.0						
YOTC	Yotoco, Valle	15.27	350	*e*P	P	16 28 45.3	+0.9
CHIC	Chingaza	15.69	360	*e*P	Pn	16 28 47.7	+0.3
RUSC	La Rusia	16.96	2	*e*P	P	16 29 06.5	+3.1
PTGA	Pitinga	17.16	54	P	Pn	16 29 05.6	+0.5
	2.4nm,0.3s,baz=288,slow=23,SNR=19						
PTGA				S	Sn	16 32 04.5	-12
	0.8nm,0.3s,baz=322,slow=19,SNR=3.5						
PTBC	PUERTO BERRIO,	17.61	358	*e*P	Pn	16 29 11.1	+0.6
PAMC	Pamplona, Colo	18.41	3	*e*P	Pn	16 29 20.0	-0.7
ZARC	Zaragoza, Cauc	18.57	356	*e*P	Pn	16 29 21.4	-0.7
OCAC	Ocana	19.28	1	*e*P	P	16 29 28.4	-0.1
SDV	Santo Domingo	20.16	9	P	Pn	16 29 39.5	-1.3
	5.0nm,0.3s,baz=201,slow=14,SNR=2.1						
SJCC	San Jacinto, C	20.98	356	*e*P	P	16 29 47.2	+0.5
CPUP	Villa Florida	21.61	137	P	P	16 29 53.0	-0.4
	4.1nm,0.6s,baz=322,slow=11,SNR=10						
PLCA	Paso Flores	29.58	175	P	P	16 31 07.0	+0.1
	3.2nm,1.1s,baz=340,slow=10,SNR=3.1						
TXAR	Lajitas Array	49.55	325	P	P	16 33 50.2	-2.0
	0.2nm,0.5s,baz=151,slow=5.8,SNR=2.9						
TXAR				pP	pP	16 34 18.1	+1.0
	0.9nm,0.6s,baz=147,slow=8.4,SNR=8.2						
PDAR	Pinedale Array	62.89	331	P	P	16 35 27.2	+0.2
	0.2nm,0.5s,baz=127,slow=8.3,SNR=3.8						
PDAR				pP	pP	16 35 54.1	+1.2
	0.6nm,1.0s,baz=128,slow=5.8,SNR=2.9						
NVAR	Mina Array Bea	64.54	322	P	P	16 35 37.5	-0.4
	0.2nm,0.6s,baz=142,slow=6.6,SNR=2.4						
NVAR				pP	pP	16 36 05.0	+1.0
	0.5nm,0.7s,baz=133,slow=8.3,SNR=3.8						
DBIC	Dimbokro	70.78	79	P	P	16 36 16.7	-0.7
	2.8nm,0.5s,baz=244,slow=7.4,SNR=7.1						
SNAA	Sanae	73.49	162	P	P	16 36 32.8	+0.2
	1.4nm,1.0s,baz=248,slow=11,SNR=4.1						
TORD	Torodi Ar. Bea	78.64	74	P	P	16 37 02.0	-0.7
	1.8nm,0.7s,baz=278,slow=4.8						
ESDC	Sonseca Array	81.98	47	P	P	16 37 21.0	+0.7
	0.3nm,0.4s,baz=254,slow=5.9,SNR=3.7						
GERES	GERESS Array B	96.63	42	P	P	16 38 29.5	-0.5
	0.6nm,0.8s,baz=316,slow=2.7,SNR=3.5						
WRA	Warramunga Arr	138.53	222	PKP	PKPdf	16 44 25.7	-0.4
	0.2nm,0.5s,baz=141,slow=1.8,SNR=3.0						
SONM	Songino Array	143.45	360	PKP	PKPbc	16 44 32.3	+0.6
	0.5nm,0.4s,baz=326,slow=3.3,SNR=3.3						

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*CSEM **04** 16:26:43.7±1.1, 37°.05N×44°.61E, h2km, ML2.9, Error ellipse: s-maj=18.9km s-min=10.4km az=109.0*

*ISN **04** 16:26:44.0±0.3, 37°.46N×42°.57E, h0km, ML2.5*

DDA 04 16:26:45.3, 37°.12N×44°.49E, h4km, Ml2.9, Turkey-Iran border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOVA	Hakkari_Yˆ…kse	0.49	341	*i* P	Pg	16 26 55.2	+0.5
YOVA	Hakkari_Yˆ…kse	0.49	341	P	Pg	16 26 55.2	+0.4
CUKT	Cukurca	0.71	280	*i* P	Pg	16 26 59.2	+0.2
CUKT				*i* S	Sb	16 27 11.0	+0.4
CUKT	Cukurca	0.71	280	P	Pg	16 26 59.2	+0.2
CUKT				S	Sb	16 27 11.0	+0.3
HAKT	HAKKARI	0.76	305	*i* P	Pg	16 27 00.2	+0.3
HAKT				*i* S	Sb	16 27 11.3	-0.8
HAKT	HAKKARI	0.76	305	P	Pg	16 27 00.2	+0.3
HAKT				S	Sb	16 27 11.3	-0.8
GEVA	Gevas	1.64	317	*i* P	Pn	16 27 15.2	0.0
GEVA				*i* S	Sg	16 27 39.8	+1.7
GEVA	Gevas	1.64	317	P	Pn	16 27 15.2	0.0
GEVA				S	Sg	16 27 39.8	+1.7
SIRN	S˜–rnak	1.70	283	*i* P	Pg	16 27 17.7	-0.1
SIRN				*i* S	Sg	16 27 41.5	+1.7
SIRN	S˜–rnak	1.70	283	P	Pg	16 27 17.7	-0.1

SIRN				S	Sg	16 27 41.5	+1.7
SRTM	Siirt_Merkez	2.22	294	i P	Pb	16 27 26.8	+0.7
SRTM				i S	Sg	16 27 57.2	+0.8
MARD	Mardin	2.97	275	i P	Pg	16 27 40.5	-1.6
MARD				i S	Sb	16 28 15.5	0.0

MEX 04 16:43:36.4±0.6, 17°.17N×100°.22W, h34^{km}±10^{km}, MD3.7, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAIG	El Cayaco	0.13	199	i P	Pn	16 43 40.9	+1.4
CAIG				eS	Sb	16 43 45.2	-1.5
MEIG	Mezcala	0.95	37	eP	Pn	16 43 52.0	-1.4
MEIG				eS	Sn	16 44 03.0	-2.7
ARIG	Puente Sto Nin	1.11	354	eP	Pn	16 43 54.0	-1.6
ARIG				eS	Sn	16 44 07.0	-2.7
PLIG	Platanillo	1.40	29	i P	Pn	16 43 57.6	-2.0
PLIG				i S	Sn	16 44 14.6	-2.3

IDC 04 17:30:30.7±2.8, 3°.25S×135°.73E, h0^{km}, mb3.3/2, mb1 3.6/4, mb1mx3.3/45, mbtmp3.4/4, ML3.1/2, Error ellipse: s-maj=96.4km s-min=28.6km az=85.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	16.64	185	Pn	Pn	17 34 24.6	-1.0
	0.1nm,0.3s,baz=6.9,slow=13,SNR=2.8						
WRA				Sn	Sn	17 37 19.9	-11
	0.1nm,0.3s,baz=5.8,slow=24,SNR=2.6						
FITZ	Fitzroy Crossi	17.76	213	P	Pn	17 34 38.7	-0.8
	0.1nm,0.3s,baz=29,slow=10,SNR=2.5						
FITZ				S	Sn	17 37 43.2	-15
	0.1nm,0.3s,baz=195,slow=19,SNR=2.3						
ASAR	Alice Springs	20.37	185	P	P	17 35 10.1	+0.9
	0.9nm,0.9s,baz=9.6,slow=11,SNR=8.0						
MKAR	Makanchi Array	68.43	324	P	P	17 41 34.6	0.0
	0.3nm,0.5s,baz=114,slow=7.5,SNR=6.0						

IDC 04 17:33:53.9±2.7, 40°.82N×142°.33E, h87^{km}±25^{km}, mb3.2/3, mb1 3.2/6, mb1mx3.0/65, mbtmp3.4/6, Error ellipse: s-maj=42.9km s-min=22.6km az=83.0

ISCJB 04 17:33:54.2±0.5, 40°.94N±0°.03×141°.96E±0°.06, h99^{km}±5^{km}, mb3.5/3, Error ellipse: s-maj=8.6km s-min=4.8km az=24.4

JMA 04 17:33:55.2±0.1, 40°.95N×141°.98E, h92^{km}±1^{km}, M3.2

ISC 04 17:33:55.2±1.0, 40°.93N±0°.04×141°.97E±0°.06, h93^{km}±7^{km}, n24, σ0^{s}.74/34, mb3.7/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JARK	Aomorirokkasho	0.46	280	P	Pn	17 34 10.1	+0.2
JARK				eS	Sn	17 34 20.9	-0.1
JAHD	Aomorihigashid	0.58	305	P	Pn	17 34 11.1	+0.2
JAHD				eS	Sn	17 34 22.8	+0.2
JANG	Nango	0.66	212	P	Pn	17 34 11.5	-0.1
JANG				eS	Sn	17 34 23.5	-0.3
JTM	Tenmabayashi	0.70	258	P	Pn	17 34 11.9	0.0
JTM				eS	Sn	17 34 24.3	-0.2
JOT	Ohata	0.83	303	P	Pn	17 34 12.9	-0.3
JOT				eS	Sn	17 34 26.1	-0.7
JKB	Kayabe	1.19	324	P	Pn	17 34 16.9	-0.3
JKB				eS	Sn	17 34 33.3	-0.6
JAH	Hinai	1.26	234	P	Pn	17 34 18.8	+0.7
JSR	Shiriuchi	1.31	298	P	Pn	17 34 18.6	-0.2
JSR				eS	Sn	17 34 36.0	-0.6
JEM	Erimo	1.40	39	P	Pn	17 34 20.1	+0.2
JEM				eS	Sn	17 34 38.3	-0.2
JNBK	Urakawa-nobuka	1.47	23	P	Pn	17 34 20.8	+0.1
JNBK				eS	Sn	17 34 41.5	+1.5
JIW	Iwasaki	1.53	258	P	Pn	17 34 21.8	+0.4
JOM	Ohasama	1.55	200	P	Pn	17 34 21.8	+0.1
JOM				eS	Sn	17 34 41.4	-0.3
JEW	Eniwo	1.95	349	P	Pn	17 34 26.7	-0.1
JEW				eS	Sn	17 34 50.3	-0.6
JCH	Churui	1.98	31	P	Pn	17 34 27.3	+0.1
JCH				eS	Sn	17 34 50.9	-0.7
JMK	Ichinoseki	2.06	197	P	Pn	17 34 28.2	0.0
ASAJ	Asahikawa	3.22	8	P	Pn	17 34 43.6	0.0
	1.6nm,0.3s,baz=161,slow=4.4,SNR=56						
ASAJ				S	Sn	17 35 19.8	-1.3
	3.0nm,0.3s,baz=139,slow=20,SNR=10						
MJAR	Matsushiro Arr	5.28	215	P	Pn	17 35 12.1	+0.5
	0.2nm,0.3s,baz=29,slow=11,SNR=4.0						
USRK	Ussuriysk Ar.	8.06	297	P	Pn	17 35 50.6	+1.3
	baz=94,slow=15						
H11N2	WAKE ISLAND Hy	29.97	127	T	T	18 10 52.8	
	baz=318,slow=75,SNR=9.2						
H11N1	WAKE ISLAND Hy	29.98	127	T	T	18 10 54.0	
	baz=318,slow=75,SNR=13						
H11N3	WAKE ISLAND Hy	29.99	127	T	T	18 11 01.5	
	baz=318,slow=75,SNR=9.5						
KURBB	Kurchatov Arra	44.04	305	P	P	17 41 55.3	+1.9
	0.6nm,0.5s,baz=78,slow=8.9,SNR=4.3						
WRA	Warramunga Arr	60.97	188	P	P	17 43 57.5	-1.1
	0.4nm,0.5s,baz=7.0,slow=7.6,SNR=3.1						
ASAR	Alice Springs	64.70	188	P	P	17 44 21.8	-1.5
	0.3nm,0.8s,baz=3.4,slow=7.2,SNR=5.0						

MAN 04 17:50:24.2, 9°.78N×123°.14E, h13^{km}, mb3.8, ML2.6, MS2.1, 1D, Negros

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNPH	Sibulan	0.44	167	⇓iP	Pb	17 50 35.0	+1.1
SNPH				i S	Sn	17 50 43.7	-0.5
TBP	Tagbilaran	0.72	97	eP	Pg	17 50 36.8	-1.4
LLP	Lapu-Lapu	0.98	57	eP	Pb	17 50 41.8	-1.2
LLP				eS	Sb	17 50 52.3	-3.5
GUIM	Jordan	1.00	327	eP	Pb	17 50 42.9	-0.5
GUIM				eS	Sn	17 50 57.5	-0.4
MSLP	Maasin	1.73	78	eP	Pn	17 50 54.4	+0.3
MSLP				eS	Sb	17 51 17.1	-0.5

IDC 04 18:29:37.8±7.9, 6°.80S×120°.96E, h502^{km}±26^{km}, mb2.6/2, mb1 2.7/4, mb1mx2.3/55, mbtmp3.4/4, Error ellipse: s-maj=236.9km s-min=101.5km az=52.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	4.31	142	P	P	18 30 59.0	0.0
	4.0nm,0.3s,baz=270,slow=20,SNR=6.1						
BATI				S	S	18 32 05.5	+0.4
	1.5nm,0.3s,baz=37,slow=20,SNR=2.7						
WRA	Warramunga Arr	18.42	136	P	P	18 33 21.8	-0.2
	0.1nm,0.3s,baz=318,slow=10,SNR=3.5						
ASAR	Alice Springs	20.88	145	P	P	18 33 44.0	-0.3
	0.5nm,0.8s,baz=316,slow=8.5,SNR=5.6						
STKA	Stephens Creek	31.52	145	P	P	18 35 18.5	+0.4
	1.3nm,0.8s,baz=302,slow=13,SNR=4.4						

IDC 04 18:45:19.7±1.1, 1°.20S×129°.16E, h0^{km}, mb3.4/3, mb1 3.7/5, mb1mx3.4/56, mbtmp3.6/5, ML3.6/2, MS3.1/1, Ms1 3.1/1, ms1mx2.2/35, Error ellipse: s-maj=35.1km s-min=21.2km az=69.0

ISCJB 04 18:45:22.0±0.6, 1°.11S±0°.05×129°.23E±0°.05, h20^{km}, mb3.5/3, Error ellipse: s-maj=7.9km s-min=6.4km az=147.2

DJA 04 18:45:23.0±1.2, 1°S±4°×12°9E±°, h18^{km}±10^{km}, M3.7/6, MLv3.7/6

ISC 04 18:45:22.1±0.8, 1°.15S±0°.06×129°.28E±0°.05, h20^{km}, n13, σ1^{s}.40/17, mb3.6/3, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBMI	Labuha	1.85	286	P	Pb	18 45 53.4	-1.8
SIJI	Sorong	2.01	82	Pn	Pb	18 45 57.0	-1.0
	baz=284,slow=12						
SIJI				Sn	Sb	18 46 22.6	0.0
	baz=211,slow=19						
MSAI	Masohi	2.21	189	P	Pn	18 45 58.2	+0.4
MSAI				S	Sb	18 46 27.6	-0.9
TNTI	Ternate	2.70	315	P	Pn	18 46 05.3	+0.9
AAI	Ambon	2.75	203	P	Pn	18 46 07.3	+2.2
NLAI	Namlea	3.01	226	P	Pn	18 46 10.0	+1.3
NLAI				S	Sn	18 46 45.5	+1.3
FAKI	Fak Fak	3.45	121	P	Pn	18 46 15.8	+1.0
FITZ	Fitzroy Crossi	17.22	192	P	Pn	18 49 21.4	-0.2
	0.1nm,0.3s,baz=27,slow=13,SNR=3.0						
WRA	Warramunga Arr	19.33	165	P	P	18 49 45.5	-0.8
	0.3nm,0.3s,baz=351,slow=12,SNR=11						
WRA				S	Sn	18 53 06.9	-17
	0.1nm,0.3s,baz=357,slow=23,SNR=3.8						
PMG	Port Moresby	19.59	115	LR	LR	18 58 43.0	
	comp=Z,55nm,20.1s,baz=150,slow=41						
ASAR	Alice Springs	22.83	169	P	P	18 50 24.6	+0.5
	1.0nm,0.5s,baz=348,slow=12,SNR=36						
ASAR				PcP	PcP	18 54 16.2	+1.0
	0.3nm,0.6s,baz=354,slow=1.9,SNR=4.9						
ASAR				S	S	18 54 29.6	-3.0
	1.1nm,0.8s,baz=350,slow=22,SNR=6.7						
MKAR	Makanchi Array	62.99	326	P	P	18 55 47.7	0.0
	0.2nm,0.4s,baz=122,slow=7.0,SNR=3.8						
KURBB	Kurchatov Arra	67.19	328	P	P	18 56 15.8	+1.0
	0.2nm,0.5s,baz=121,slow=5.7,SNR=2.5						

MOS 04 18:50:50.3±0.8, 48°.06N×154°.02E, h182^{km}, mb4.0/2, Error ellipse: s-maj=14.7km s-min=4.1km az=69.7

ISCJB 04 18:50:51.3±0.5, 48°.30N±0°.07×153°.6E±0°.1, h150^{km}, mb3.4/12, Error ellipse: s-maj=14.1km s-min=3.2km az=136.1

KRSC 04 18:50:52.8±2.5, 48°.18N×154°.56E, h177^{km}±38^{km}, ML4.5

IDC 04 18:50:54.5±2.1, 48°.44N×153°.32E, h165^{km}±19^{km}, mb3.2/12, mb1 3.4/17, mb1mx3.2/73, mbtmp3.7/17, Error ellipse: s-maj=20.3km s-min=13.2km az=145.0

ISC 04 18:50:52.2±0.8, 48°.2N±0°.1×153°.9E±0°.1, h150^{km}, n93, σ1^{s}.52/92, mb3.4/12, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	2.85	30	eP	Pn	18 51 38.9	+1.4
SKR				eS	Sn	18 52 13.8	+1.1
SKR	Severo-Kuril's	2.85	30	ePN	Pn	18 51 39.0	+1.4
SKR				eS	Sn	18 52 14.0	+1.3
SKR				pmax	pmax		
	comp=Z,300nm,0.7s						
SKR				pmax	pmax		
	comp=Z,243nm,0.5s						
SKR				smax	smax		
	comp=N,194nm,0.2s						
SKR				smax	smax		
	comp=E,229nm,0.2s						
PAU	Pauzhetka	3.75	29	eP	Pn	18 51 49.9	+0.8
PAU				eS	Sn	18 52 33.9	+0.6
PAU	Pauzhetka	3.75	29	PN	Pn	18 51 49.9	+0.8
PAU				S	Sn	18 52 33.9	+0.6
MIPR	Malaya Ipel'ka	4.45	24	eP	Pn	18 51 59.0	+0.8
MIPR	Malaya Ipel'ka	4.45	24	PN	Pn	18 51 59.0	+0.8
KDTR	Khodutka, Kamc	4.49	36	eP	Pn	18 51 58.3	-0.4
KDTR				eS	Sn	18 52 47.9	-2.6
ASAK	Asacha	4.89	30	eP	Pn	18 52 04.9	+0.9
ASAK	Asacha	4.89	30	PN	Pn	18 52 04.9	+0.9
MTVR	Mutnovka	5.07	31	eP	Pn	18 52 07.6	+1.1
MTVR				eS	Sn	18 53 03.9	-0.6
MTVR	Mutnovka	5.07	31	PN	Pn	18 52 07.6	+1.1
MTVR				S	Sn	18 53 03.9	-0.6
KUR	Kuril'sk	5.10	236	⇓ePN	Pn	18 52 07.0	+0.1
KUR				eS	Sn	18 53 04.6	-0.6
KUR				pmax	pmax		
	comp=Z,80nm,0.4s						
KUR				pmax	pmax		
	comp=N,13nm,0.1s						
KUR				pmax	pmax		
	comp=E,39nm,0.2s						
KUR				smax	smax		
	comp=N,36nm,0.4s						
KUR				smax	smax		
	comp=E,16nm,0.2s						
APC	Apacha	5.14	23	eP	Pn	18 52 07.6	+0.3
APC	Apacha	5.14	23	PN	Pn	18 52 07.6	+0.3
RUS	Russkaya	5.14	34	eP	Pn	18 52 07.0	-0.4
RUS				eS	Sn	18 53 03.1	-3.0
RUS	Russkaya	5.14	34	PN	Pn	18 52 07.0	-0.4
RUS				S	Sn	18 53 03.1	-3.0
KRMR	Karymshinskiy	5.34	29	eP	Pn	18 52 10.7	+0.8
KRMR	Karymshinskiy	5.34	29	PN	Pn	18 52 10.7	+0.8
PETK	Petropavlovsk-	5.45	25	P	Pn	18 52 12.8	+1.4
	baz=192,slow=11						
PETK				S	Sn	18 53 15.2	+1.8
	baz=186,slow=20						
PET	Petropavlovsk	5.67	31	eP	Pn	18 52 14.8	+0.4
PET				eS	Sn	18 53 17.0	-1.7
PET	Petropavlovsk	5.67	31	ePN	Pn	18 52 14.7	+0.4
PET				eS	Sn	18 53 17.0	-1.7
PET				pmax	pmax		
	comp=Z,18nm,0.5s						
PET				smax	smax		
	comp=N,30nm,0.4s						
PET				smax	smax		
	comp=E,24nm,0.6s						
DALK	Dalny	5.71	31	eP	Pn	18 52 15.4	+0.5
DALK				eS	Sn	18 53 16.4	-3.2
DALK	Dalny	5.71	31	PN	Pn	18 52 15.4	+0.5
DALK				S	Sn	18 53 16.4	-3.2
UGLR	Uglovaya	5.89	30	eP	Pn	18 52 18.7	+1.4
UGLR	Uglovaya	5.89	30	PN	Pn	18 52 18.7	+1.4
KOK	Koryaka	5.89	29	eP	Pn	18 52 18.6	+1.2
KOK	Koryaka	5.89	29	PN	Pn	18 52 18.6	+1.2
AVH	Avacha	5.90	30	P	Pn	18 52 17.9	+0.4
AVH				eP	Pn	18 52 19.1	+1.6
AVH	Avacha	5.90	30	PN	Pn	18 52 19.1	+1.6
SMAR	Somma	5.92	30	eP	Pn	18 52 19.0	+1.1
SMAR	Somma	5.92	30	PN	Pn	18 52 19.0	+1.1
KRX	Arik	5.95	29	eP	Pn	18 52 19.6	+1.3
KRX	Arik	5.95	29	PN	Pn	18 52 19.6	+1.3
SDLR	Sedlovina	5.96	30	eP	Pn	18 52 19.3	+0.9
SDLR	Sedlovina	5.96	30	PN	Pn	18 52 19.3	+0.9
GNL	Ganaly	6.04	24	eP	Pn	18 52 19.8	+0.5
GNL	Ganaly	6.04	24	PN	Pn	18 52 19.8	+0.5
NLC	Nalytchevo	6.04	33	eP	Pn	18 52 18.1	-1.1
NLC	Nalytchevo	6.04	33	PN	Pn	18 52 18.1	-1.1
SPN	Mys Shipunski	6.24	37	eP	Pn	18 52 21.4	-0.5
SPN				eS	Sn	18 53 26.0	-6.2
SPN	Mys Shipunski	6.24	37	PN	Pn	18 52 21.4	-0.5
SHO	Shikotan	6.56	231	ePN	Pn	18 52 23.3	-3.0
SHO				pmax	pmax		
	comp=E,32nm,0.3s						
SHO				pmax	pmax		
	comp=Z,54nm,0.3s						
SHO				pmax	pmax		
	comp=N,10.0nm,0.2s						
KII	Karymskiy	6.78	29	eP	Pn	18 52 28.0	-1.2
KII	Karymskiy	6.78	29	PN	Pn	18 52 28.0	-1.2
YUK	Yuzh-Kuril'sk	6.97	236	ePN	Pn	18 52 30.0	-1.8
YUK				pmax	pmax		
	comp=N,169nm,0.4s						
YUK				pmax	pmax		
	comp=E,17nm,0.3s						
YSS	Yuzh-Sakhalins	7.62	264	ePN	Pn	18 52 40.2	-0.2
KZV	Kizimen	7.95	28	eP	Pn	18 52 46.6	+1.7
KZV	Kizimen	7.95	28	PN	Pn	18 52 46.6	+1.7
MKZ	Mys Kozlova	8.01	35	eP	Pn	18 52 44.0	-1.5
MKZ	Mys Kozlova	8.01	35	PN	Pn	18 52 44.0	-1.5
TUMR	Tumrok	8.05	27	eP	Pn	18 52 48.8	+2.6
TUMR	Tumrok	8.05	27	PN	Pn	18 52 47.6	+1.4
TUMD	Tumrok D	8.06	28	eP	Pn	18 52 47.6	+1.3
KMNR	Kamenistaya	8.49	25	eP	Pn	18 52 54.2	+2.2
KMNR	Kamenistaya	8.49	25	PN	Pn	18 52 54.2	+2.2
BZMR	Bezymyannaya	8.71	25	eP	Pn	18 52 55.4	+0.4
BZMR	Bezymyannaya	8.71	25	PN	Pn	18 52 55.4	+0.4
BZWR	Bezymyannyi-We	8.74	25	eP	Pn	18 52 57.2	+1.8
BZWR	Bezymyannyi-We	8.74	25	PN	Pn	18 52 57.2	+1.8
ASAJ	Asahikawa	8.84	246	P	Pn	18 52 56.3	-0.4
	comp=E,3.8nm,0.3s,baz=71,slow=14,SNR=98						
SRKR	Sorokina	9.53	25	eP	Pn	18 53 06.2	+0.4
SRKR	Sorokina	9.53	25	PN	Pn	18 53 06.2	+0.4
KBG	Krutoberegovo	9.68	31	eP	Pn	18 53 07.7	0.0
KBG	Krutoberegovo	9.68	31	PN	Pn	18 53 07.7	0.0
KBTR	Krutoberegovo	9.68	31	eP	Pn	18 53 05.9	-1.8
KBTR	Krutoberegovo	9.68	31	PN	Pn	18 53 05.9	-1.8
BKI	Bering	10.24	43	eP	Pn	18 53 15.7	+0.6
BKI	Bering	10.24	43	PN	Pn	18 53 15.7	+0.6
KLR	Kul'dur	14.62	282	P	Pn	18 54 11.3	-0.4
	comp=E,0.0nm,0.3s,baz=78,slow=14,SNR=5.0						
SEY	Seymchan	14.75	357	P	Pn	18 54 12.7	-0.5
	comp=E,0.2nm,0.3s,baz=184,slow=10,SNR=9.2						
USRK	Ussuriysk Ar.	15.66	263	P	Pn	18 54 23.5	-1.1
	baz=68,slow=13						
MJAR	Matsushiro Arr	16.41	230	P	P	18 54 32.3	-1.6
	comp=E,0.5nm,0.3s,baz=24,slow=12,SNR=10						
KSRS	Korea Array	21.76	250	P	P	18 55 30.6	-1.1
	comp=E,0.8nm,0.5s,baz=46,slow=9.4,SNR=6.0						
H11N2	WAKE ISLAND Hy	30.33	155	T	T	19 28 53.6	
	baz=342,slow=76,SNR=19						
H11N1	WAKE ISLAND Hy	30.35	155	T	T	19 29 19.7	
	baz=342,slow=76,SNR=34						
H11N3	WAKE ISLAND Hy	30.35	155	T	T	19 29 19.8	
	baz=342,slow=76,SNR=21						
H11S1	WAKE ISLAND Hy	31.44	156	T	T	19 30 29.5	
	baz=344,slow=76,SNR=117						
H11S3	WAKE ISLAND Hy	31.45	156	T	T	19 30 35.5	
	baz=344,slow=76,SNR=126						
H11S2	WAKE ISLAND Hy	31.46	156	T	T	19 30 36.3	
	baz=344,slow=76,SNR=76						
ILAR	Eielson Array	35.07	40	P	P	18 57 31.7	+1.4
	comp=E,0.4nm,0.8s,baz=283,slow=9.9,SNR=4.8						
ZALV	Zalesovo Beam	42.17	305	PcP	PcP	19 00 20.7	-0.2
	comp=E,0.7nm,0.6s,baz=95,slow=4.6,SNR=3.4						
MKAR	Makanchi Array	46.72	296	P	P	18 59 03.7	-2.2
	comp=E,0.2nm,0.5s,baz=75,slow=8.6,SNR=3.3						
MKAR				PcP	PcP	19 00 35.7	-1.1
	comp=E,0.3nm,0.6s,baz=139,slow=1.3,SNR=4.0						
KURK	Kurchatov	46.98	303	P	P	18 59 05.5	-2.2
KURBB	Kurchatov Arra	47.07	303	P	P	18 59 05.5	-2.9
	comp=E,0.2nm,0.4s,baz=69,slow=8.6,SNR=4.8						
KURBB				pP	pP	18 59 42.3	+0.2
	comp=E,0.8nm,0.9s,baz=69,slow=8.1,SNR=4.5						
BVAR	Borovoye Array	50.31	309	P	P	18 59 31.0	-2.2
	comp=E,0.5nm,0.5s,baz=57,slow=6.4,SNR=3.9						
BVAR	Borovoye Array	50.31	309	P	P	18 59 31.0	-2.2
FINES	FINESS Array B	62.91	335	P	P	19 00 59.0	-2.8
	comp=E,1.0nm,0.6s,baz=30,slow=7.4,SNR=5.0						
PDAR	Pinedale Array	63.46	55	P	P	19 01 08.8	+2.6
	comp=E,0.4nm,0.7s,baz=264,slow=1.8,SNR=4.1						
HFS	Hagfors	67.24	340	P	P	19 01 28.7	-1.1
	comp=E,0.7nm,0.4s,baz=45,slow=4.3,SNR=9.7						
WRA	Warramunga Arr	70.09	200	P	P	19 01 48.4	+0.5
	comp=E,1.0nm,0.6s,baz=18,slow=6.3,SNR=6.0						
AKASG	Malin Array Be	70.59	326	P	P	19 01 48.9	-1.8
	comp=E,0.2nm,0.3s,baz=34,slow=6.0,SNR=2.4						
TXAR	Lajitas Array	76.32	61	P	P	19 02 26.7	+2.1
	comp=E,0.3nm,0.5s,baz=305,slow=6.4,SNR=4.6						
GERES	GERESS Array B	77.34	334	P	P	19 02 29.0	-1.0
	comp=E,0.3nm,0.6s,baz=14,slow=8.3,SNR=3.8						

IDC 04 18:55:05.7±0.6, 6°.64S×101°.93E, h0^{km}, mb4.1/17, mb1 4.2/18, mb1mx4.0/62, mbtmp4.1/18, ML4.4/1, MS3.2/4, Ms1 3.2/4, ms1mx2.6/56, Error ellipse: s-maj=25.1km s-min=12.4km az=56.0

ISCJB 04 18:55:09.1±0.5, 6°.48S±0°.05×102°.21E±0°.04, h33^{km}, mb4.1/19, MS3.1/1, Error ellipse: s-maj=7.1km s-min=5.6km az=7.1

DJA 04 18:55:09.0±0.6, 7°S±4°×10°2E±°, h30^{km}, M4.7/8, mB5.4/1, mb5.2/3, MLv4.4/8, Mw(mB)4.8/1

NEIC 04 18:55:11.1±0.5, 6°.58S×102°.05E, h35^{km}, mb4.2/1, Error ellipse: s-maj=15.4km s-min=8.1km az=50.0

ISC 04 18:55:11.4±0.6, 6°.51S±0°.07×102°.20E±0°.07, h35^{km}, n46, σ1^{s}.72/40, mb4.1/19, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LWLI	Liwa	2.37	51	P	Pn	18 55 46.7	-1.2
LWLI				S	Sn	18 56 14.7	-1.1
KASI	Kota Agung	2.48	67	P	Pn	18 55 47.8	-1.5
KASI				S	Sn	18 56 16.3	-2.2
MDSI	Maura Dua	2.81	44	P	Pn	18 55 52.3	-1.6
MDSI				S	Sn	18 56 25.1	-1.5
BLSI	Bandar Lampung	3.23	70	P	Pn	18 56 09.5	+10
MASI	Maura Aman, Be	3.35	1	P	Pn	18 55 59.7	-1.6
CGJI	Cibinong	3.47	92	P	Pn	18 56 01.1	-1.8
KRJI	Kerinci	4.45	350	P	Pn	18 56 14.4	-2.1
LEM	Lembang	5.39	94	Pn	Pn	18 56 29.8	+0.3
	10nm,0.3s,baz=294,slow=20,SNR=4.7						
LEM				Sn	Sn	18 57 30.4	0.0
	7.7nm,0.3s,baz=319,slow=19,SNR=2.6						
LEM				LR	LR	18 58 44.2	
	comp=Z,180nm,20.1s,baz=329,slow=39						
LEM	Lembang	5.39	94	P	Pn	18 56 27.2	-2.3
CISI	Cisompet, Garu	5.67	101	P	Pn	18 56 30.9	-2.3
	152nm,0.6s,3µm0.7nm						
SISI	Saibi	6.01	329	P	Pn	18 56 35.2	-2.7
BATI	Baumata	21.54	101	P	P	18 59 59.1	+1.2
	37nm,1.0s,baz=297,slow=14,SNR=2.7						
UBPT	Khong Chiam	21.89	8	P	P	19 00 11.5	+10
UTHA	Uthaitani	22.10	353	P	P	19 00 09.8	+6.1
	3.8nm,1.1s						
NONG	Nongkai	24.44	2	P	P	19 00 38.4	+11
CMAR	Chiang Mai Arr	25.02	353	P	P	19 00 32.6	+0.4
	4.1nm,0.7s,baz=186,slow=8.4,SNR=44						
CMAR				LR	LR	19 11 03.6	
	comp=Z,52nm,19.0s,baz=187,slow=38						
CMMT	Chiang Mai	25.37	353	P	P	19 00 36.2	+0.8
CHTO	Chiang Mai	25.37	353	eP	P	19 00 34.8	-0.7
	6.3nm,0.9s						
CHTO	Chiang Mai	25.37	353	P	P	19 00 36.3	+0.8
	32nm,0.7s						
FITZ	Fitzroy Crossi	25.59	119	P	P	19 00 40.1	+2.6
	3.5nm,0.9s,baz=333,slow=9.0,SNR=2.9						
DAV	Davao City (W)	26.94	60	LR	LR	19 12 26.8	
	comp=Z,25nm,18.2s,baz=190,slow=38						
H08S2	Diego Garcia H	29.50	266	T	T	19 33 18.0	
	baz=88						
H08S3	Diego Garcia H	29.51	266	T	T	19 33 07.7	
	baz=88						
H08S1	Diego Carcia H	29.52	266	T	T	19 33 16.8	
	baz=88						
H01W3	Cape Leeuwin H	30.30	160	T	T	19 33 38.3	
	baz=338,slow=76,SNR=13						
H01W2	Cape Leeuwin H	30.32	160	T	T	19 33 37.2	
	baz=338,slow=76,SNR=7.4						
H01W1	Cape Leeuwin H	30.32	160	T	T	19 33 33.2	
	baz=338,slow=76,SNR=10.0						
WRA	Warramunga Arr	33.93	116	P	P	19 01 51.6	0.0
	1.3nm,0.8s,baz=296,slow=8.8,SNR=5.0						
ASAR	Alice Springs	34.91	123	P	P	19 01 59.9	-0.1
	2.3nm,1.1s,baz=295,slow=7.7,SNR=15						
ASAR				PcP	PcP	19 04 33.2	+0.8
	0.2nm,0.6s,baz=293,slow=2.2,SNR=3.9						
STKA	Stephens Creek	44.56	130	P	P	19 03 20.1	-0.1
	2.7nm,0.8s,baz=321,slow=7.2,SNR=5.0						
KSAR	Wonju Array Be	49.87	27	P	P	19 04 03.9	+2.5
KSRS	Korea Array	49.90	27	P	P	19 04 03.9	+2.3
	0.6nm,0.8s,baz=225,slow=7.7,SNR=2.2						
SONM	Songino Array	54.24	3	P	P	19 04 35.2	+1.3
	1.7nm,0.7s,baz=180,slow=9.8,SNR=9.7						
MKAR	Makanchi Array	55.94	344	P	P	19 04 46.1	0.0
	1.8nm,0.8s,baz=146,slow=8.8,SNR=15						
KURBB	Kurchatov Arra	60.47	343	P	P	19 05 16.7	-0.9
	1.2nm,0.9s,baz=158,slow=6.2,SNR=7.6						
KURK	Kurchatov	60.53	343	P	P	19 05 16.7	-1.2
ZALV	Zalesovo Beam	61.99	348	P	P	19 05 27.6	-0.1
	3.6nm,0.8s,baz=160,slow=4.7,SNR=13						
BVAR	Borovoye Array	65.15	339	P	P	19 05 48.0	-0.7
	0.8nm,0.6s,baz=149,slow=8.8,SNR=5.1						
AKTO	Aktyubinsk	68.34	331	P	P	19 06 08.7	-0.4
	0.3nm,0.3s,baz=105,slow=11,SNR=2.8						
BOSA	Boshof	75.46	242	LR	LR	19 33 57.8	
	comp=Z,23nm,19.8s,baz=205,slow=31						
VNDA	Vanda	77.34	169	P	P	19 07 02.2	+0.2
	2.4nm,1.1s,baz=306,slow=5.6,SNR=5.0						
BRTR	Keskin Array B	77.97	313	P	P	19 07 05.8	-0.7
	1.1nm,1.0s,baz=74,slow=1.8,SNR=4.3						
QSPA	South Pole Qui	83.48	180	P	P	19 07 35.1	-0.3
	1.8nm,0.9s,baz=307,slow=3.6,SNR=3.5						
SNAA	Sanae	88.55	198	P	P	19 07 58.7	-1.5
	2.7nm,1.2s,baz=135,slow=5.7,SNR=3.1						
TXAR	Lajitas Array	146.68	44	PKPbc	PKPbc	19 14 49.8	-0.6
	0.8nm,0.8s,baz=186,slow=1.3,SNR=3.8						
TKL	Tuckaleechee C	150.48	10	PKPbc	PKPbc	19 14 59.5	-0.4
	2.3nm,0.7s,baz=72,slow=3.2,SNR=5.3						

JMA 04 19:03:28.6±0.2, 23°.95N×122°.43E, h23^{km}, M2.1

TAP 04 19:03:28.9, 23°.97N×122°.45E, h27^{km}±1^{km}, ML2.6, C

ISC 04 19:03:28.6±1.2, 23°.94N±0°.04×122°.43E±0°.02, h24^{km}±14^{km}, n33, σ0^{s}.67/47, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS1	EOS1	0.66	336	eP	Pb	19 03 41.5	0.0
	baz=327						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EOS1				S	Sn	19 03 51.7	-0.4
	baz=327						
JYNG	Yonagunijimaku	0.69	43	P	Pb	19 03 41.7	-0.4
JYNG				S	Sb	19 03 49.9	-1.3
YOJ	Yonaguni jima	0.74	46	P	Pb	19 03 42.8	-0.2
	baz=46						
YOJ	Yonaguni jima	0.74	46	P	Pb	19 03 42.7	-0.2
YOJ				S	Sb	19 03 51.4	-1.2
NANB	Nanao	0.78	308	eP	Pb	19 03 43.4	-0.2
	baz=305						
NANB				eS	Sn	19 03 55.1	0.0
	baz=305						
NACB	Ninganchiao	0.79	287	eP	Pb	19 03 43.4	-0.3
	baz=271						
TWC	Suao	0.85	322	P	Pb	19 03 44.1	-0.6
	baz=320						
TWC				eS	Sb	19 03 55.7	+0.1
	baz=320						
ESL	Shilin	0.92	262	eP	Pn	19 03 44.8	-1.2
	baz=260						
TWE	Neicheng	1.04	318	eP	Pb	19 03 48.0	+0.1
	baz=317						
ENTT	Nioudou	1.05	312	P	Pb	19 03 48.4	+0.3
	baz=295						
NNSH	Datong	1.07	297	eP	Pn	19 03 48.2	0.0
	baz=295						
NNSB	Datong	1.07	297	eP	Pn	19 03 48.2	0.0
	baz=284						
EHY	Hungye	1.10	247	eS	Sn	19 04 02.0	-1.0
	baz=245						
CHGB	Renai	1.15	276	eP	Pn	19 03 49.3	-0.1
	baz=263						
TIPB	Shuangxi	1.16	332	eP	Pb	19 03 50.2	+0.2
	baz=330						
TIPB				eS	Sb	19 04 05.1	+0.4
	baz=330						
YULB	Yu-li	1.17	242	eP	Pn	19 03 49.1	-0.3
	baz=241						
YULB				eS	Sn	19 04 04.2	-0.5
	baz=241						
NWLT	Wulai	1.18	315	eP	Pb	19 03 50.4	0.0
	baz=313						
TWF1	Yuli	1.19	241	P	Pn	19 03 49.8	+0.1
	baz=239						
TWF1				S	Sn	19 04 05.3	+0.2
	baz=239						
VWDT	VWDT	1.19	261	eP	Pn	19 03 50.1	+0.4
	baz=259						
VWDT				eS	Sn	19 04 05.1	-0.1
	baz=259						
YHNB	Yeheng	1.20	307	eP	Pb	19 03 50.5	-0.2
	baz=292						
YHNB				eS	Sb	19 04 07.2	+1.3
	baz=292						
NSK	Sanguang	1.22	307	eP	Pb	19 03 51.2	+0.2
	baz=292						
NSK				eS	Sb	19 04 07.7	+1.4
	baz=292						
IRIF	Iriomote-Funau	1.25	72	eS	Sb	19 04 08.2	+0.9
HATJ	Hateruma jima	1.27	85	eS	Sb	19 04 08.2	+0.5
SMLT	Sun Moon Lake	1.40	268	eP	Pn	19 03 53.5	+0.8
	baz=256						
LIOB	Emei	1.47	299	eP	Pb	19 03 55.0	-0.2
	baz=297						
JKRS	Kuro-shima	1.48	78	P	Pb	19 03 56.7	+1.3
JKRS				eS	Sb	19 04 14.2	+0.5
TWH	Lutao	1.50	216	P	Pn	19 03 53.5	-0.5
	baz=214						
ALS	Alishan	1.55	254	eS	Sn	19 04 14.8	+0.5
	baz=253						
JIJ	Ishigaki jima	1.62	75	eS	Sn	19 04 16.0	+0.2
CHN5	Tsauling	1.64	258	eS	Sb	19 04 18.6	+0.1
	baz=247						
WTP	Ta-pu	1.80	248	eP	Pb	19 04 00.3	-0.6
	baz=237						
WTP				eS	Sb	19 04 23.7	+0.5
	baz=237						
JISG	Ishigakijimahi	1.84	69	P	Pn	19 03 59.1	+0.5
JISG				eS	Sn	19 04 19.3	-1.8
TWK	Hsinying	1.90	250	eS	Sb	19 04 26.5	+0.5
	baz=248						

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*ISCJB **04** 19:03:40.6±0.4, 43.°79N±0.°04×105.°21W±0.°05, h0^{km}, mb4.3/1, Error ellipse: s-maj=5.7km s-min=4.8km az=155.3*

*NEIC **04** 19:03:41.9±0.5, 43.°78N×105.°25W, h0^{km}, ML3.2, Error ellipse: s-maj=7.5km s-min=6.4km az=148.0, Suspected Mining explosion.*

NEIC 60 km [38 miles] SSE of Gillette.

*IDC **04** 19:03:45.0±3.3, 43.°91N×105.°74W, h26^{km}±27^{km}, mb3.9/1, mb1 3.9/3, mb1mx3.2/64, mbtmp3.8/3, ML3.5/2, Error ellipse: s-maj=55.1km s-min=13.2km az=149.0*

ISC 04 19:03:41.7±0.9, **43.°77N**±0.°04×**105.°24W**±0.°04, **h0^{km}, n30, σ1^{s}43**/34, **Wyoming**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
RSSD	Black Hills	0.93	68	P	Pb	19 04 00.9	0.0
	baz=249						
RSSD	Black Hills	0.93	68	ePn	Pb	19 04 00.5	-0.4
K22A	Casper	1.47	220	P	Pn	19 04 07.1	-2.4
	baz=39						
K22A				S	Sb	19 04 29.0	-0.2
	baz=39						
N23A	Red Feather La	2.92	191	P	Pn	19 04 29.6	-0.1
	baz=9.9						
LAO	LASA Array	3.00	347	ePn	Pn	19 04 31.4	+0.8
RLMT	Red Lodge	3.19	296	P	Pn	19 04 33.1	-0.2
	baz=114						
RLMT				Sb	Sb	19 05 20.0	+1.3
	baz=114						
RLMT	Red Lodge	3.19	296	ePn	Pn	19 04 33.0	-0.2
BW06	Boulder Array	3.31	254	P	Pn	19 04 34.9	-0.2
	baz=71						
BW06	Boulder Array	3.31	254	ePn	Pn	19 04 34.6	-0.4
PDAR	Pinedale Array	3.31	254	Pn	Pn	19 04 34.5	-0.5
	6.8nm,0.3s,baz=75,slow=14,SNR=58						
PDAR				Lg	Lg	19 05 19.0	
	21nm,0.3s,baz=81,slow=29,SNR=13						
OGNE	Ogallala	3.69	139	P	Pn	19 04 41.7	+1.7
	baz=321						
OGNE				Sb	Sg	19 05 37.5	-2.7
	baz=321						
OGNE	Ogallala	3.69	139	ePn	Pn	19 04 40.7	+0.6
H17A	Grant Village	3.90	281	Pb	Pb	19 04 50.5	-0.9
	baz=97						
H17A				Sb	Sb	19 05 41.2	+1.9
	baz=97						
ISCO	Idaho Springs	3.98	184	P	Pn	19 04 44.6	+0.3
	baz=3.8						
ISCO				Sb	Sb	19 05 44.9	+3.2
	baz=3.8						
ISCO	Idaho Springs	3.98	184	ePn	Pn	19 04 44.3	0.0
O20A	White River Ci	4.27	213	P	Pn	19 04 48.1	0.0
	baz=30						
O20A	White River Ci	4.27	213	ePn	Pn	19 04 47.3	-0.9
AHID	Auburn Hatcher	4.40	259	ePn	Pn	19 04 51.6	+1.7
DGMT	Dagmar	4.75	8	ePn	Pn	19 04 56.6	+2.0
BOZ	Bozeman (W)	4.91	294	ePn	Pn	19 04 56.7	-0.2
HWUT	Hardware Ranch	5.14	247	ePn	Pn	19 04 59.0	-1.1
	6.7nm,0.4s						
EGMT	Eagleton	5.29	325	ePn	Pn	19 05 01.2	-0.9
	13nm,0.5s						
SDCO	Great Sand Dun	6.02	182	ePn	Pn	19 05 14.4	+2.1
	2.1nm,0.6s						
ECSD	EROS Data Cent	6.25	87	ePn	Pn	19 05 15.8	+0.7
	5.5nm,0.6s						
HLID	Hailey	6.66	271	ePn	Pn	19 05 21.5	+0.6
DUG	Dugway, Tooele	6.68	240	ePn	Pn	19 05 20.8	-0.4
	3.4nm,0.4s						
ELK	Elko	8.01	251	Pn	Pn	19 05 43.1	+3.5
	0.3nm,0.3s,baz=95,slow=12,SNR=4.9						
ULM	Lac du Bonnet	9.10	41	Pn	Pn	19 05 54.0	-0.2
	0.8nm,0.3s,baz=232,slow=13,SNR=4.5						
ULM				Lg	Lg	19 08 33.5	
	0.4nm,0.3s,baz=329,slow=18,SNR=3.3						
TXAR	Lajitas Array	14.46	175	Pg	Pg	19 08 11.9	
	0.1nm,0.3s,baz=7.0,slow=15,SNR=3.8						
ARCES	ARCESS Array B	61.38	18	P	P	19 13 57.9	-1.0
	2.1nm,0.9s,baz=332,slow=7.3,SNR=4.3						

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*CSEM **04** 19:10:15.9±0.2, 31.°89N×55.°84E, h2^{km}, ML3.9, Error ellipse: s-maj=6.3km s-min=5.0km az=160.0*

*THR **04** 19:10:15.0±0.3, 31.°73N×55.°96E, h15^{km}, ML3.9*

*ISCJB **04** 19:10:16.1±0.5, 31.°90N±0.°04×55.°78E±0.°04, h13^{km}, Error ellipse: s-maj=6.3km s-min=4.5km az=169.8*

*TEH **04** 19:10:16.7, 31.°89N×55.°85E, h5^{km}, ML3.9*

ISC 04 19:10:16.4±1.1, **31.°85N**±0.°04×**55.°85E**±0.°04, **h13^{km}, n50, σ1^{s}40**/44, **Northern and central Iran**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IMEH	Mehriz	1.15	247	ePg	Pb	19 10 37.5	-0.8
IMEH				eSg	Sb	19 10 53.0	-0.2
IMEH				e		19 10 53.4	
	comp=N,92µm,0.1s						
IMEH				e		19 10 53.7	
	comp=Z,60µm,0.1s						
IMEH	Mehriz	1.15	247	ePg	Pb	19 10 37.5	-0.8
IMEH				eSg	Sb	19 10 53.0	-0.2
ICHK	Chekchek	1.29	288	ePg	Pn	19 10 39.4	-0.9
ICHK				eSg	Sb	19 10 56.6	-0.6
ICHK				e		19 11 00.1	
	comp=N,37µm,0.1s						
ICHK				e		19 11 01.2	
	comp=E,30µm,0.1s						
ICHK				e		19 11 02.8	
	comp=Z,21µm,0.1s						
ICHK	Chekchek	1.29	288	ePg	Pn	19 10 39.4	-0.9
ICHK				eSg	Sb	19 10 56.6	-0.6
TPRV	Parvadeh(Tabas	1.37	31	ePg	Pn	19 10 41.0	-0.4
TPRV				e		19 11 02.5	
	comp=N,99nm,0.1s						
TPRV				e		19 11 04.5	
	comp=Z,99nm,0.1s						
TPRV				e		19 11 05.0	
	comp=E,99nm,0.1s						
TPRV	Parvadeh(Tabas	1.37	31	ePg	Pn	19 10 41.0	-0.4
KHGB	Koh Gabri	1.56	160	ePn	Pn	19 10 44.6	+0.5
KHGB				e		19 11 15.7	
	comp=Z,99nm,0.2s						
KHGB	Koh Gabri	1.56	160	ePn	Pn	19 10 44.6	+0.5
ISAD	Sadrabad	1.84	273	ePn	Pb	19 10 49.4	-0.7
ISAD				e		19 11 16.2	
	comp=Z,25µm,0.2s						
ISAD				e		19 11 16.3	
	comp=N,30µm,0.2s						
ISAD				e		19 11 16.4	
	comp=E,40µm,0.1s						
ISAD	Sadrabad	1.84	273	ePn	Pb	19 10 49.4	-0.7
TVBK	TV Kerman	2.01	157	ePn	Pb	19 10 52.9	-0.2
TVBK				e		19 11 22.5	
	comp=Z,99nm,0.3s						
TVBK	TV Kerman	2.01	157	ePn	Pb	19 10 52.9	-0.2
KRBR	Kerman	2.02	157	ePn	Pn	19 10 48.8	-1.6
KRBR				IAML		19 11 18.0	
	comp=N,1µm,0.6s						
KRBR				IAML		19 11 19.2	
	comp=E,1µm,0.5s						
KRBR	Kerman	2.02	157	i PA		19 11 32.0	
KRBR	Kerman	2.02	157	ePn	Pn	19 10 48.8	-1.6
TKDS	Koohdasht(Taba	2.06	31	ePn	Pn	19 10 51.4	+0.5
TKDS				e		19 11 30.9	
	comp=Z,99nm,0.3s						
TKDS				e		19 11 31.9	
	comp=N,99nm,0.3s						
TKDS				e		19 11 41.6	
	comp=E,99nm,0.3s						
TKDS	Koohdasht(Taba	2.06	31	ePn	Pn	19 10 51.4	+0.5
TABS	Tabas	2.09	30	ePn	Pn	19 10 52.4	+1.1
TABS	Tabas	2.09	30	i PA		19 11 32.0	
TABS	Tabas	2.09	30	ePn	Pn	19 10 52.4	+1.1
TABS	Tabas	2.09	30	ePn	Pn	19 10 52.3	+1.1
TNSJ	Nastanj	2.20	17	ePn	Pn	19 10 53.6	+0.8
TNSJ				e		19 11 33.3	
	comp=E,99nm,0.2s						
TNSJ				e		19 11 36.4	
	comp=N,99nm,0.2s						
TNSJ				e		19 11 37.6	
	comp=Z,99nm,0.2s						
TNSJ	Nastanj	2.20	17	ePn	Pn	19 10 53.6	+0.8
NGRK	Negar Kerman	2.32	161	ePn	Pn	19 10 56.6	+1.9
NGRK				e		19 11 31.7	
	comp=Z,99nm,0.2s						
NGRK	Negar Kerman	2.32	161	ePn	Pn	19 10 56.6	+1.9
CHMN	Cheshme madani	2.46	143	ePn	Pn	19 10 58.3	+1.8
CHMN				e		19 11 38.8	
	comp=Z,99nm,0.2s						
CHMN	Cheshme madani	2.46	143	ePn	Pn	19 10 58.3	+1.8
ITEG	Tejag	2.67	66	ePn	Pn	19 10 59.7	+0.5
ITEG				e		19 11 43.6	
	comp=E,10µm,0.3s						
ITEG				e		19 11 49.6	
	comp=N,9µm,0.3s						
ITEG				e		19 11 52.1	
	comp=Z,5µm,0.3s						
ITEG	Tejag	2.67	66	ePn	Pn	19 10 59.7	+0.5
IKOO	Kooshah	2.74	77	ePn	Pn	19 11 00.8	+0.5
IKOO				e		19 11 43.9	
	comp=E,10µm,0.1s						
IKOO				e		19 11 53.1	
	comp=Z,6µm,0.1s						
IKOO				e		19 11 53.2	
	comp=N,7µm,0.1s						
IKOO	Kooshah	2.74	77	ePn	Pn	19 11 00.8	+0.5
NASN	Na’in	2.75	291	ePn	Pn	19 11 02.7	+2.2
NASN	Na’in	2.75	291	i PA		19 11 32.0	
NASN	Na’in	2.75	291	ePn	Pn	19 11 02.7	+2.2
NASN	Na’in	2.75	291	ePn	Pn	19 11 02.7	+2.2
IDAH	Dahanechah	3.52	74	e		19 12 12.6	
	comp=E,3µm,0.3s						
IDAH				e		19 12 13.8	
	comp=Z,1µm,0.2s						
IDAH				e		19 12 26.4	
	comp=N,2µm,0.3s						
SHRT	Shahrakht	4.15	63	ePn	Pn	19 11 19.6	+0.1
SHRT	Shahrakht	4.15	63	i PA		19 11 32.0	
SHRT	Shahrakht	4.15	63	ePn	Pn	19 11 19.6	+0.1
SHRT	Shahrakht	4.15	63	ePn	Pn	19 11 19.6	+0.1
GHIR	Ghir-Karzin	4.33	216	i PA	Pb	19 11 32.0	-0.5
BNDS	Bandar-Abbas	4.44	176	i PA	Pb	19 11 33.4	-1.0
GHVR	GHOM	4.63	306	i PA	Pn	19 11 32.0	+5.8
DAMV	Damavand	4.97	320	i PA	Pn	19 11 36.5	+5.6
KHMZ	Khomeyn	5.31	292	i PA	Pb	19 11 46.1	-3.0
ASAO	Ashtian	5.58	300	i PA	Pn	19 11 44.5	+5.2
CHTH	Charan	5.64	317	i PA	Pn	19 11 43.8	+3.6
MRVT	Maraveh tapeh	5.80	2	i PA	Pn	19 11 45.4	+3.2
BJRD	Bojnurd	5.98	12	i PA	Pn	19 11 49.9	+5.2
ZNJK	Zanjan	7.63	311	i PA	Pn	19 12 13.4	+5.8

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*NIED **04** 19:19:00, 23.°90N×122.°40E, h20^{km}, Mw4.1 Best double couple: M$_0$1.79000×10^{15} NP1:φ$_s$318.00000°, δ20.00000°, λ163.00000°. NP2:φ$_s$64.00000°, δ84.00000°, λ71.00000°.*

*JMA **04** 19:19:46.7±0.3, 23.°91N×122.°43E, h17^{km}±5^{km}, M3.9*

*ISCJB **04** 19:19:46.5±0.3, 23.°90N±0.°02×122.°44E±0.°01, h17^{km}±2^{km}, mb4.0/13, MS3.3/11, Error ellipse: s-maj=2.8km s-min=1.9km az=148.4*

*BJI **04** 19:19:47.5, 24.°02N×122.°44E, h21^{km}, mb3.8/1, ML3.7/2, Ms3.5/2, Ms7 3.3/2*

*NEIC **04** 19:19:48.8±0.6, 24.°10N×122.°55E, h35^{km}, mb4.5/2, Error ellipse: s-maj=12.7km s-min=9.9km az=192.0*

*TAP **04** 19:19:48.1, 23.°98N×122.°37E, h24^{km}, ML4.2, D*

*IDC **04** 19:19:49.4±4.4, 24.°12N×122.°57E, h41^{km}±46^{km}, mb3.9/9, mb1 3.9/10, mb1mx3.5/61, mbtmp4.1/10, ML3.5/1, MS3.3/14, Ms1 3.3/14, ms1mx3.0/66, Error ellipse: s-maj=34.6km s-min=20.2km az=65.0*

ISC 04 19:19:46.8±1.1, **23.°95N**±0.°02×**122.°44E**±0.°02, **h24^{km}**±9^{km}, **n138, σ1^{s}26**/210, **mb4.1**/13, **MS3.3**/11, **1C-1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EOS1	EOS1	0.66	334	eP	Pn	19 20 00.1	-0.5
	baz=329						
EOS1				eS	Sn	19 20 09.6	-0.6
	baz=329						
JYNG	Yonagunijimaku	0.68	43	P	Pn	19 20 00.4	-0.5
JYNG				S	Sn	19 20 09.0	-1.7
YOJ	Yonaguni jima	0.72	46	eP	Pn	19 20 01.4	-0.2
	baz=60						
YOJ				eS	Sn	19 20 10.2	-1.7
	baz=60						
YOJ	Yonaguni jima	0.72	46	P	Pn	19 20 01.3	-0.2
YOJ				S	Sn	19 20 10.3	-1.6
ENAH	Nanao	0.76	311	P	Pb	19 20 01.7	+0.3
	baz=311						
ENAH				S	Sn	19 20 11.8	-1.0
	baz=311						
HWA	Hwalien	0.77	272	eP	Pb	19 20 01.9	+0.4
	baz=255						
HWA				eS	Sb	19 20 11.6	+0.1
	baz=255						
ENLB	Shoufeng	0.77	266	eP	Pn	19 20 01.8	-0.3
	baz=250						
ENLB				eS	Sb	19 20 12.2	+0.5
	baz=250						
TWD	Chiawan	0.78	279	P	Pn	19 20 01.7	-0.7
	baz=277						
TWD				eS	Sb	19 20 11.1	-1.0
	baz=277						
NANB	Nanao	0.79	307	eP	Pb	19 20 01.9	0.0
	baz=317						
NANB				eS	Sn	19 20 12.2	-1.3
	baz=317						
ENA	Nanau	0.80	307	i P	Pb	19 20 01.9	-0.1
	baz=317						
ENA				eS	Sb	19 20 11.8	-0.5
	baz=317						
NACB	Ninganchiao	0.81	286	eP	Pn	19 20 02.1	-0.6
	baz=270						
NACB				eS	Sb	19 20 11.9	-0.8
	baz=270						
TWC	Suao	0.85	320	P	Pb	19 20 02.6	-0.3
	baz=322						
TWC				eS	Sn	19 20 13.8	-1.1
	baz=322						
ESL	Shilin	0.93	262	P	Pn	19 20 03.5	-1.0
	baz=248						
ESL				eS	Sn	19 20 14.2	-2.9
	baz=248						
EGFH	Guangfu	0.97	253	eP	Pn	19 20 04.8	-0.1
	baz=249						
EGFH				eS	Sn	19 20 17.4	-0.6
	baz=249						
EGS		1.00	332	eP	Pb	19 20 06.0	+0.5
	baz=325						
EGS				eS	Sb	19 20 20.0	+1.7
	baz=325						
ILA	Ilan	1.03	322	eP	Pb	19 20 06.4	+0.5
	baz=323						
ILA				eS	Sb	19 20 20.6	+1.6
	baz=323						
HGSD	Ruisui	1.04	244	eP	Pn	19 20 05.3	-0.6
	baz=240						
HGSD				eS	Sn	19 20 17.3	-2.4
	baz=240						
TWE	Neicheng	1.04	317	eP	Pb	19 20 06.7	+0.5
	baz=326						
TWE				eS	Sb	19 20 19.8	+0.4
	baz=326						
ENTT	Nioudou	1.05	311	P	Pb	19 20 06.7	+0.4
	baz=310						
ENTT				eS	Sb	19 20 20.1	+0.4
	baz=310						
NNSB	Datong	1.08	296	eP	Pb	19 20 06.8	-0.1
	baz=283						
NNSB				eS	Sn	19 20 19.1	-1.6
	baz=283						
SLBB	Yuanshan	1.08	317	eP	Pb	19 20 07.8	+0.8
	baz=318						
NNS	Nan Shan	1.09	297	P	Pb	19 20 07.0	-0.1
	baz=296						
EHY	Hungye	1.12	247	P	Pn	19 20 06.7	-0.3
	baz=243						
EHY				eS	Sn	19 20 20.2	-1.5
	baz=243						
OWD	Renai	1.16	270	eP	Pn	19 20 07.7	+0.1
	baz=268						
OWD				eS	Sn	19 20 21.2	-1.6
	baz=268						
TIPB	Shuangxi	1.16	331	eP	Pb	19 20 08.4	+0.2
	baz=332						
TIPB				eS	Sb	19 20 22.3	-0.5
	baz=332						
CHGB	Renai	1.17	275	eP	Pn	19 20 07.9	+0.1
	baz=262						
CHGB				eS	Sn	19 20 21.5	-1.6
	baz=262						
YULB	Yu-li	1.19	242	eP	Pn	19 20 07.8	-0.1
	baz=238						
YULB				eS	Sn	19 20 20.9	-2.5
	baz=238						
TWT	Tachien	1.20	285	eP	Pb	19 20 09.2	+0.3
	baz=272						
YHNB	Yeheng	1.21	306	eP	Pb	19 20 09.0	-0.1
	baz=305						
YHNB				eS	Sb	19 20 24.0	-0.2
	baz=305						
VWDT	VWDT	1.21	261	eP	Pn	19 20 08.4	+0.3
	baz=258						
VWDT				eS	Sn	19 20 21.6	-2.2
	baz=258						
TWF1	Yuli	1.21	241	eP	Pn	19 20 08.3	0.0
	baz=237						
TWF1				eS	Sn	19 20 20.9	-3.0
	baz=237						
TDCB	Techi	1.21	285	eP	Pb	19 20 08.7	-0.4
	baz=273						
TDCB				eS	Sn	19 20 21.2	-2.9
	baz=273						
NSK	Sanguang	1.22	306	eP	Pb	19 20 09.2	-0.1
	baz=305						
NSK				eS	Sb	19 20 23.5	-1.2
	baz=305						
IRIF	Iriomote-Funau	1.24	72	P	Pb	19 20 10.0	+0.5
IRIF				S	Sb	19 20 25.4	+0.4
HATJ	Hateruma jima	1.25	85	P	Pb	19 20 10.0	+0.3
HATJ				S	Sb	19 20 26.9	+1.5
NWF	Wu-fen Shan	1.27	332	eP	Pb	19 20 09.8	-0.3
	baz=333						
WFSB	Wu-fen Shan	1.27	332	eP	Pb	19 20 09.7	-0.3
	baz=333						
FULB	Fuli	1.29	235	eP	Pn	19 20 08.8	-0.6
	baz=218						
FULB				eS	Sn	19 20 24.0	-2.0
	baz=218						
CHKT	Chengkung	1.30	230	eP	Pn	19 20 08.8	-0.8
	baz=225						
CHKT				eS	Sn	19 20 23.3	-2.8
	baz=225						
TATO	Taipei	1.34	320	eP	Pb	19 20 11.6	+0.3
	baz=320						
TATO	Taipei	1.34	320	ePn	Pb	19 20 11.3	+0.1
SSLB	Suanglung	1.37	263	eP	Pn	19 20 10.8	+0.2
	baz=261						
DPDB	Guoxing	1.39	274	eP	Pb	19 20 11.5	-0.6
	baz=262						
DPDB				eS	Sn	19 20 28.3	-0.1
	baz=262						
WLTB	Daxi	1.41	310	eP	Pb	19 20 12.6	+0.2
	baz=296						
WLTB				eS	Sb	19 20 30.9	+1.0
	baz=296						
SMLT	Sun Moon Lake	1.41	267	eP	Pn	19 20 11.8	+0.6
	baz=255						
SMLT				eS	Sn	19 20 29.0	0.0
	baz=255						
YM07	YM07	1.43	329	eP	Pb	19 20 12.0	-0.8
	baz=329						
YM10	YM10	1.44	326	eP	Pb	19 20 12.2	-0.8
	baz=342						
YUS	Yu-Shan	1.44	252	eP	Pn	19 20 12.4	+0.5
	baz=249						
YUS				eS	Sn	19 20 28.7	-1.6
	baz=249						
YM11	YM11	1.44	327	eP	Pb	19 20 13.3	+0.3
	baz=327						
YM04	YM04	1.45	326	eP	Pb	19 20 12.4	-0.8
	baz=342						
YM08	YM08	1.45	328	eP	Pb	19 20 12.2	-1.0
	baz=328						
JKRS	Kuro-shima	1.46	79	P	Pb	19 20 13.4	+0.1
JKRS				S	Sb	19 20 32.5	+1.1
YM03	YM03	1.47	326	eP	Pb	19 20 12.4	-1.2
	baz=327						
LIOB	Emei	1.47	298	eP	Pb	19 20 13.6	+0.1
	baz=297						
TWS1	Kuangyinshan	1.48	321	P	Pb	19 20 13.4	-0.2
	baz=320						
TWS1				eS	Sb	19 20 33.0	+1.1
	baz=320						
NSTT	Nanjuang	1.48	297	P	Pb	19 20 13.6	-0.1

	baz=283						
NSTT				*e*S	Sb	19 20 30.4	-1.5
	baz=283						
ELDTW	**Lidau**	1.51	240	P	Pn	19 20 12.3	-0.2
	baz=237						
ELDTW				*e*S	Sn	19 20 27.1	-4.4
	baz=237						
TWY	**Chenhua**	1.52	330	*e*P	Pb	19 20 14.9	+0.5
	baz=331						
ALS	**Alishan**	1.56	254	P	Pn	19 20 14.3	+1.0
	baz=251						
ALS				*e*S	Sn	19 20 32.0	-1.0
	baz=251						
SBCB	**Hsinchu**	1.57	302	*e*P	Pb	19 20 14.5	-0.7
	baz=301						
WJS	**Zhushan**	1.57	266	*e*P	Pb	19 20 15.2	-0.1
	baz=264						
NSY	**Sanyi**	1.60	287	*e*P	Pb	19 20 15.5	-0.3
	baz=286						
JIJ	**Ishigaki jima**	1.61	75	P	Pb	19 20 14.7	-1.1
JIJ				S	Sb	19 20 34.5	-1.2
WNT	**Mingjian**	1.61	268	*e*P	Pb	19 20 16.1	+0.2
	baz=265						
WNT				*e*S	Sb	19 20 35.3	-0.5
	baz=265						
NMLH	**Miaoli**	1.61	291	*e*P	Pb	19 20 16.3	+0.3
	baz=290						
TCU	**Taichung**	1.63	277	*e*P	Pb	19 20 16.2	+0.1
	baz=276						
CHN5	**Tsauling**	1.66	258	*e*P	Pb	19 20 16.1	-0.6
	baz=244						
CHN5				*e*S	Sb	19 20 36.7	-0.5
	baz=244						
TTN	**Taitung**	1.69	225	*e*P	Pn	19 20 15.2	+0.4
	baz=222						
TTN				*e*S	Sn	19 20 34.7	-0.9
	baz=222						
TWGBT	**Beinan**	1.69	228	*e*P	Pn	19 20 14.4	-0.4
	baz=238						
TWGBT				*e*S	Sn	19 20 33.8	-1.8
	baz=238						
TWG	**Pinlang**	1.69	228	*e*P	Pn	19 20 14.6	-0.3
	baz=238						
TWG				*e*S	Sn	19 20 34.1	-1.6
	baz=238						
WCHH	**Zhanghua**	1.73	275	*e*P	Pb	19 20 17.9	+0.1
	baz=272						
WCHH				*e*S	Sb	19 20 39.0	-0.2
	baz=272						
STYT	**Tauyuan**	1.73	243	P	Pn	19 20 16.7	+1.2
	baz=230						
STYT				*e*S	Sn	19 20 36.0	-1.0
	baz=230						
WGK	**Gukeng**	1.74	262	*e*P	Pb	19 20 17.8	-0.3
	baz=259						
WGK				*e*S	Sb	19 20 40.0	+0.5
	baz=259						
WDLH	**Douliu**	1.76	262	*e*P	Pb	19 20 18.1	-0.4
	baz=259						
WDLH				*e*S	Sb	19 20 39.9	-0.3
	baz=259						
TPUB	**Ta-pu**	1.79	249	*e*P	Pb	19 20 18.0	-0.9
	baz=246						
TPUB				*e*S	Sn	19 20 38.1	0.0
	baz=246						
CHN4	**Tsaushan**	1.80	251	*e*P	Pb	19 20 20.8	+1.7
	baz=248						
CHN4				*e*S	Sb	19 20 42.1	+0.9
	baz=248						
JISG	**Ishigakijimahi**	1.82	69	P	Pn	19 20 17.5	+0.9
WTP	**Ta-pu**	1.82	248	*e*P	Pn	19 20 18.5	+1.9
	baz=234						
WTP				*e*S	Sn	19 20 41.0	+2.0
	baz=234						
CHN2	**Minshiung**	1.85	257	*e*P	Pb	19 20 19.6	-0.3
	baz=255						
CHN2				*e*S	Sb	19 20 42.7	0.0
	baz=255						
RLNB	**Erlin**	1.91	269	*e*P	Pb	19 20 20.0	-0.9
	baz=266						
RLNB				*e*S	Sb	19 20 43.3	-1.0
	baz=266						
SGST	**Jiashian**	1.92	243	*e*P	Pb	19 20 20.4	-0.7
	baz=231						
SGST				*e*S	Sn	19 20 43.7	+2.4
	baz=231						
CHN1	**Nanshi**	1.92	247	*e*P	Pn	19 20 20.0	+2.0
	baz=244						
CHN1				*e*S	Sn	19 20 43.4	+2.0
	baz=244						
TWK	**Hsinying**	1.92	250	*e*P	Pb	19 20 20.2	-0.9
	baz=247						
TWK				*e*S	Sn	19 20 42.6	+1.1
	baz=247						
ECL	**Taimali**	1.92	226	*e*P	Pn	19 20 17.5	-0.5
	baz=223						
ECL				*e*S	Sn	19 20 38.7	-2.8
	baz=223						
WTCT	**Ta-ch’eng**	1.98	268	*e*P	Pb	19 20 21.1	-1.1
	baz=265						
WTCT				*e*S	Sb	19 20 45.4	-1.0
	baz=265						
SSD	**Sandimen**	2.05	235	*e*P	Pn	19 20 21.1	+1.3
	baz=225						
SSD				*e*S	Sn	19 20 45.9	+1.2
	baz=225						
WSF	**Szhu**	2.06	262	*e*P	Pb	19 20 22.2	-1.3
	baz=259						
WSF				*e*S	Sb	19 20 47.8	-0.9
	baz=259						
LAY	**Lan-yu**	2.08	203	*e*P	Pn	19 20 19.1	-1.1
	baz=200						
LAY				*e*S	Sn	19 20 41.5	-3.8
	baz=200						
CHN8	**Yiju**	2.13	254	*e*P	Pn	19 20 23.0	+2.0
	baz=251						
CHN8				*e*S	Sn	19 20 48.5	+1.9
	baz=251						
MASBT	**Mashibuluo**	2.13	232	*e*P	Pn	19 20 21.9	+0.9
	baz=223						
MASBT				*e*S	Sn	19 20 47.6	+0.9
	baz=223						
EAST	**Anshuo**	2.14	223	*e*P	Pn	19 20 21.0	-0.1
	baz=220						
EAST				*e*S	Sn	19 20 43.9	-3.1
	baz=220						
TWM1	**Shoushan**	2.17	239	*e*P	Pb	19 20 25.3	-0.2
	baz=236						
TWM1				*e*S	Sb	19 20 52.0	+0.1
	baz=236						
SGLT	**Jiouru**	2.17	236	*e*P	Pb	19 20 25.9	+0.5
	baz=234						
JTJ	**Tarama**	2.17	71	P	Pn	19 20 23.0	+1.5
SCZT	**Fangliau**	2.30	227	*e*P	Pn	19 20 24.7	+1.5
	baz=218						
SCZT				*e*S	Sn	19 20 52.1	+1.3
	baz=218						
HEN	**Hengchun**	2.50	219	*e*P	Pn	19 20 27.1	+1.2
	baz=217						
TWP	**Hsiaoliuchiu**	2.50	231	*e*P	Pb	19 20 30.0	-0.9
	baz=244						
TWKBT	**Hengchun**	2.50	217	*e*P	Pn	19 20 26.5	+0.4
	baz=215						
TWKBT				*e*S	Sn	19 20 55.4	-0.4
	baz=215						
TWK1	**Hengchun**	2.51	217	*e*P	Pn	19 20 27.0	+0.9
	baz=215						
TWK1				*e*S	Sn	19 20 55.6	-0.2
	baz=215						
WDGT	**Dungji**	2.64	255	*e*P	Pn	19 20 29.3	+1.4
	baz=254						
WDGT				*e*S	Sn	19 20 58.4	-0.8
	baz=254						
PHUB	**P’eng-hu**	2.67	261	*e*P	Pn	19 20 29.5	+1.2
	baz=259						
PHUB				*e*S	Sn	19 20 58.4	-1.5
	baz=259						
PNG	**Penghu**	2.67	262	*e*P	Pn	19 20 29.7	+1.3
	baz=260						
PNG				*e*S	Sn	19 21 00.2	+0.2
	baz=260						
VCHM	**Qimei**	2.86	256	*e*P	Pn	19 20 32.2	+1.3
	baz=254						
VCHM				*e*S	Sn	19 21 03.6	-1.0
	baz=254						
VWUC	**VWUC**	2.92	291	*e*P	Pn	19 20 31.9	+0.2
	baz=288						
VWUC				*e*S	Sn	19 21 04.4	-1.6
	baz=288						
MATB	**Ma-tsu**	3.15	315	*e*P	Pn	19 20 34.7	-0.2
	baz=312						
BBP	**Basco**	3.52	187	⇑*i*P	Pn	19 20 39.4	-0.7
BBP				*i* S	Sn	19 21 18.7	-2.3
QZH	**Quanzhou**	3.65	286	⇓*i*Pn	Pn	19 20 42.0	+0.3
QZH				Sn	Sn	19 21 22.4	-1.6
QZH				smax	smax		
	comp=N,82nm,0.7s						
QZH				smax	smax		
	comp=E,90nm,0.7s						
QZH				LR	LR		
	comp=N,390nm,8.3s						
QZH				LR	LR		
	comp=E,340nm,13.5s						
QZH				LR	LR		
	comp=Z,400nm,13.7s						
KNM	**Kinmen**	3.69	278	*e*P	Pn	19 20 44.7	+2.4
	baz=276						
KNMB	**Chin-men Tao**	3.74	279	*e*P	Pn	19 20 43.1	+0.2
	baz=277						
JOW	**Kunigami**	6.00	60	P	Pn	19 21 13.5	-0.6
	2.6nm,0.3s,baz=185,slow=11,SNR=9.4						
APYP	**Conner**	6.16	191	*e*P	Pn	19 21 16.9	+0.5
ABRA	**Dolores**	6.48	195	*e*P	Pn	19 21 22.8	+2.1
BALP	**Baler**	8.21	186	*e*P	Pn	19 21 47.7	+3.2
JNU	**Nakatsue**	11.76	37	LR	LR	19 27 26.3	
	comp=Z,83nm,19.4s,baz=123,slow=40						
KSAR	**Wonju Array Be**	14.23	18	P	P	19 23 10.4	-3.6
KSRS	**Korea Array**	14.25	18	P	P	19 23 10.4	-3.8
	0.6nm,0.3s,baz=199,slow=12,SNR=24						
KSRS				LR	LR	19 29 28.6	
	comp=Z,105nm,18.1s,baz=190,slow=41						
DAV	**Davao City (W)**	17.06	169	LR	LR	19 30 08.3	
	comp=Z,60nm,21.6s,baz=344,slow=36						
CMAR	**Chiang Mai Arr**	22.57	260	P	P	19 24 47.8	+2.3
	0.3nm,0.6s,baz=66,slow=8.6,SNR=4.2						
CMAR				LR	LR	19 35 20.4	
	comp=Z,18nm,18.3s,baz=205,slow=41						
GUMO	**Guam**	23.57	112	LR	LR	19 33 56.0	
	comp=Z,26nm,19.3s,baz=166,slow=36						
GTA	**Gaotai**	24.57	314	*e*P	P	19 25 06.1	+1.1
GTA				pP	pP	19 25 10.9	-1.3
GTA				sP	sP	19 25 13.1	-2.1
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ASAJ	**Asahikawa**	26.02	34	LR	LR	19 35 33.7	
	comp=Z,45nm,20.4s,baz=274,slow=37						
SONM	**Songino Array**	27.04	336	P	P	19 25 26.6	-0.6
	comp=Z,2.4nm,0.7s,baz=153,slow=9.3,SNR=16						
SONM				LR	LR	19 36 59.9	
	comp=Z,47nm,21.5s,baz=152,slow=38						
WMQ	**Urumqi**	34.65	313	*e*P	P	19 26 37.1	+2.8
MKAR	**Makanchi Array**	39.30	316	P	P	19 27 14.3	+0.4
	comp=Z,2.0nm,0.6s,baz=103,slow=9.1,SNR=21						
MKAR				LR	LR	19 45 00.0	
	comp=Z,40nm,19.5s,baz=90,slow=38						
ZALV	**Zalesovo Beam**	41.06	327	P	P	19 27 27.4	-0.9
	comp=Z,3.1nm,0.6s,baz=114,slow=8.1,SNR=11						
ZALV				LR	LR	19 46 06.4	
	comp=Z,44nm,18.5s,baz=76,slow=38						
KURK	**Kurchatov**	43.01	320	P	P	19 27 44.3	+0.1
KURBB	**Kurchatov Arra**	43.03	320	P	P	19 27 44.3	-0.1
	comp=Z,3.7nm,0.2s,baz=108,slow=9.6,SNR=4.7						
BVAR	**Borovoye Array**	48.58	321	P	P	19 28 28.1	-0.1
	comp=Z,1.3nm,0.5s,baz=107,slow=8.4,SNR=12						
ASAR	**Alice Springs**	48.63	166	P	P	19 28 30.1	+1.2
	comp=Z,0.9nm,0.5s,baz=343,slow=7.2,SNR=18						
BRVK	**Borovoye**	48.65	321	*e*P	P	19 28 28.4	-0.3
	comp=Z,5.7nm,0.8s						
AKTO	**Aktyubinsk**	55.74	316	LR	LR	19 54 53.5	
	comp=Z,21nm,20.1s,baz=74,slow=38						
GEYT	**Alibeck**	55.91	301	P	P	19 29 23.7	+0.8
	comp=Z,0.9nm,0.4s,baz=98,slow=11,SNR=3.7						
ARU	**Arti**	55.98	323	*e*P	P	19 29 22.7	-0.4
	comp=Z,1.9nm,0.6s						
SPITS	**Spitsbergen Ar**	69.95	348	LR	LR	20 06 03.3	
	comp=Z,41nm,18.1s,baz=205,slow=40						
FINES	**FINESS Array B**	72.22	330	P	P	19 31 09.8	+0.1
	comp=Z,0.5nm,0.5s,baz=53,slow=6.8,SNR=5.1						
FINES				LR	LR	20 06 31.0	
	comp=Z,48nm,20.6s,baz=62,slow=39						
BRTR	**Keskin Array B**	74.23	307	P	P	19 31 22.6	+0.5
	comp=Z,1.9nm,0.9s,baz=92,slow=6.2,SNR=7.5						
HFS	**Hagfors**	78.33	331	LR	LR	20 08 57.5	
	comp=Z,43nm,18.9s,baz=66,slow=38						
NOA	**NORSAR Array B**	78.96	332	LR	LR	20 10 15.8	
	comp=Z,28nm,19.7s,baz=70,slow=38						

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*CSEM **04** 19:23:14.8±1.1, 27°.55N×53°.70E, h10^{km}, ML3.3, Error ellipse: s-maj=30.0km s-min=20.1km az=12.0*
*OMAN **04** 19:23:17.8±1.6, 27°.49N×53°.97E, h6^{km}, Error ellipse: s-maj=13.1km s-min=8.5km az=163.0*
*ISCJB **04** 19:23:20.8±0.4, 27°.05N±0°.03×53°.96E±0°.04, h10^{km}, Error ellipse: s-maj=5.0km s-min=4.2km az=155.0*
*TEH **04** 19:23:21.1, 26°.97N×54°.05E, h6^{km}, ML3.1*
*DSN **04** 19:23:21.3±1.6, 27°.18N×54°.03E, h15^{km}, ML3.3/10, Error ellipse: s-maj=19.9km s-min=6.9km az=172.0*
ISC 04 19:23:20.9±0.9**, 27°.01N**±0°.04×**54°.03E**±0°.04**, h10^{km}, n40, σ1^{s}.45**/47**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHRM	**Jahrom**	1.54	345	*e*Pn	Pn	19 23 49.9	+1.3
JHRM				*e*		19 23 53.8	
	comp=Z,99nm,0.1s						
JHRM				*e*Sg	Sb	19 24 10.9	+1.5
JHRM				*e*		19 24 15.4	
	comp=E,99nm,0.3s						
JHRM				*e*		19 24 16.7	
	comp=N,99nm,0.2s						
GENO	**Geno**	1.95	78	*e*Pn	Pn	19 23 54.6	+0.4
GENO				*e*Sg	Sb	19 24 21.3	+0.3
GENO				*e*		19 24 25.3	
	comp=N,99nm,0.2s						
GENO				*e*		19 24 27.4	
	comp=E,99nm,0.2s						
GENO				*e*		19 24 32.5	
	comp=Z,99nm,0.2s						
SHME	**Shamm**	2.12	116	P	Pn	19 23 56.7	+0.2
SHME				S	Sb	19 24 24.7	-1.2
SHME	**Shamm**	2.12	116	P	Pb	19 23 59.1	-0.4
SHME				S	Sg	19 24 28.5	-0.6
BANOM	**Banah**	2.30	118	P	Pn	19 23 59.7	+0.7
	SNR=12						
BANOM	**Banah**	2.30	118	*e*P	Pn	19 23 59.6	+0.6
	SNR=12						
BANOM	**Banah**	2.30	118	P	Pn	19 23 59.7	+0.7
	SNR=12						
NAZ	**Nazwa, Dubai**	2.49	144	P	Pb	19 24 04.8	-1.0
NAZ	**Nazwa, Dubai**	2.49	144	P	Pb	19 24 04.1	-1.7
NAZ	**Nazwa, Dubai**	2.49	144	P	Pb	19 24 04.1	-1.7
MSFE	**Esma-Masafi**	2.52	130	P	Pn	19 24 03.7	+1.7
MSFE	**Esma-Masafi**	2.52	130	P	Pn	19 24 03.4	+1.4
MSFE				S	Sg	19 24 41.1	-0.9
NIAN	**Nian**	2.55	77	*e*Pn	Pn	19 24 02.9	+0.5
NIAN				*e*		19 24 53.6	
	comp=Z,99nm,0.1s						
NIAN				*e*		19 24 54.4	
	comp=N,99nm,0.2s						
NIAN				*e*		19 24 54.7	
	comp=E,99nm,0.2s						
ASUD	**Al Ashush, Dub**	2.65	153	P	Pb	19 24 07.0	-1.5
	SNR=17						
ASUD	**Al Ashush, Dub**	2.65	153	*e*P	Pb	19 24 06.6	-1.8
	SNR=17						
ASUD	**Al Ashush, Dub**	2.65	153	P	Pb	19 24 06.6	-1.8
	SNR=17						
MDH	**Madha**	2.66	129	P	Pn	19 24 05.5	+1.7
MDH	**Madha**	2.66	129	P	Pn	19 24 05.5	+1.7
MDH				S	Sg	19 24 45.3	-1.0
KHSK	**Kohestak**	2.71	95	*e*Pn	Pn	19 24 05.2	+0.6
KHSK				*e*		19 24 55.2	
	comp=E,99nm,0.2s						
KHSK				*e*		19 24 56.5	
	comp=N,99nm,0.1s						
KHSK				*e*		19 27 37.2	
	comp=Z,99nm,0.1s						
UOSS	**Minazif**	2.84	136	*e*P	Pn	19 24 07.7	+1.3
	SNR=11						
UOSS	**Minazif**	2.84	136	P	Pn	19 24 07.7	+1.3
	SNR=11						
HATD	**Hatta, Dubai**	2.88	139	P	Pn	19 24 08.9	+1.9
HATD	**Hatta, Dubai**	2.88	139	P	Pn	19 24 08.9	+1.9
ASHO	**Ashiyiah**	2.95	141	P	Pn	19 24 09.9	+2.0
	SNR=17						
ASHO	**Ashiyiah**	2.95	141	*i* P	Pn	19 24 09.7	+1.8
	SNR=17						
ASHO	**Ashiyiah**	2.95	141	P	Pn	19 24 09.9	+2.0
	SNR=17						
IPAR	**Pars**	2.95	343	*e*		19 25 00.5	
	comp=Z,566nm,0.3s						
IPAR				*e*		19 25 10.5	
	comp=E,1µm,0.4s						
IPAR				*e*		19 25 12.0	
	comp=N,1µm,0.5s						
ALNE	**Al Ain**	3.33	152	*i* P	Pn	19 24 15.4	+2.4
	SNR=14						
ALNE	**Al Ain**	3.33	152	P	Pn	19 24 15.4	+2.4
	SNR=14						
IKAZ	**Kazeroun**	3.37	326	*e*Pn	Pn	19 24 12.3	-1.6
IKAZ				*e*		19 25 25.2	
	comp=Z,538nm,0.2s						
NGRK	**Negar Kerman**	3.54	42	*e*Pn	Pn	19 24 17.3	+0.9
SOHO	**SOHO**	3.65	141	*i* P	Pn	19 24 18.6	+1.2
	SNR=6.3						
SOHO	**SOHO**	3.65	141	P	Pn	19 24 19.0	+1.5
	SNR=5.9						
MZR	**Muzera**	4.02	187	P	Pn	19 24 23.9	+1.2
BTHS		4.12	225	P	Pn	19 24 24.5	+0.5
BTHS				S	Sn	19 25 13.4	+1.1
CHMN	**Cheshme madani**	4.20	47	*e*Pn	Pn	19 24 28.3	+3.0
BOQSS		4.33	256	P	Pn	19 24 27.8	+1.0
BOQSS				S	Sn	19 25 18.4	+1.1
IMEH	**Mehriz**	4.39	7	*e*Pn	Pn	19 24 29.1	+1.1
IMEH				*e*		19 25 24.5	
	comp=N,260nm,0.1s						
IMEH				*e*		19 25 25.6	
	comp=Z,172nm,0.1s						
ISAD	**Sadrabad**	4.90	357	*e*Pn	Pn	19 24 34.9	0.0
ISAD				*e*		19 24 37.7	
	comp=N,308nm,0.1s						
ISAD				*e*		19 24 37.8	
	comp=Z,236nm,0.1s						
ISAD				*e*		19 25 32.7	
	comp=E,220nm,0.2s						
ANAR	**Anarak**	6.17	358	*e*Pn	Pn	19 24 51.3	-0.9
ANAR				*e*		19 25 10.2	
	comp=Z,99nm,0.2s						

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*ISK **04** 19:25:42.7, 38°.03N×41°.37E, h9^{km}, ML2.5/8*
*ISCJB **04** 19:25:43.3±0.5, 38°.02N±0°.03×41°.37E±0°.03, h6^{km}±4^{km}, Error ellipse: s-maj=4.9km s-min=3.9km az=1.6*
*CSEM **04** 19:25:43.1±0.2, 38°.02N×41°.37E, h8^{km}, ML2.6, Error ellipse: s-maj=5.1km s-min=3.3km az=15.0*
*DDA **04** 19:25:43.3, 38°.03N×41°.37E, h7^{km}, Ml2.6*
ISC 04 19:25:43.5±0.9**, 38°.03N**±0°.02×**41°.37E**±0°.02**, h9^{km}**±6^{km}**, n30, σ0^{s}.55**/50**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTMN	**Batman**	0.16	209	*i* P	Pg	19 25 46.5	-0.5
BTMN				*i* S	Sg	19 25 50.5	+1.0
BTMN	**Batman**	0.16	209	P	Pg	19 25 46.5	-0.5
BTMN				S	Sg	19 25 50.5	+1.0
SVAN	**Silvan-Diyarba**	0.18	311	PG	Pg	19 25 46.9	-0.4
SVAN				SG	Sg	19 25 50.2	+0.3
SVAN	**Silvan-Diyarba**	0.18	311	*i* P	Pg	19 25 46.3	-1.0
SVAN				*i* S	Sg	19 25 50.3	+0.3
SVAN	**Silvan-Diyarba**	0.18	311	P	Pg	19 25 46.3	-1.0
SVAN	**Silvan-Diyarba**	0.18	311	*e*Pg	Pg	19 25 46.9	-0.4
SVAN				*e*Sg	Sg	19 25 50.2	+0.3
SRTM	**Siirt_Merkez**	0.44	95	*i* P	Pg	19 25 51.7	-0.4
SRTM				*i* S	Sb	19 25 59.8	-0.3
SRTM	**Siirt_Merkez**	0.44	95	P	Pg	19 25 51.7	-0.4
SRTM				S	Sb	19 25 59.8	-0.3
GURO	**Guroymak-BITLI**	0.73	45	PG	Pg	19 25 57.2	-0.5
GURO				SG	Sb	19 26 08.9	+0.2
GURO	**Guroymak-BITLI**	0.73	45	*e*Pg	Pg	19 25 57.2	-0.5
GURO				*e*Sg	Sb	19 26 08.9	+0.2
HANI	**Diyarbakir_Han**	0.85	297	*i* P	Pg	19 25 60.0	0.0
HANI				*i* S	Sb	19 26 13.0	+0.9
HANI	**Diyarbakir_Han**	0.85	297	P	Pg	19 26 00.0	0.0
HANI				S	Sb	19 26 13.0	+0.9
MARD	**Mardin**	0.86	213	*i* P	Pg	19 25 59.3	-0.7
MARD				*i* S	Sn	19 26 15.5	+0.9
MAZI	**Mazidag**	0.93	232	PG	Pg	19 26 00.7	-0.7
MAZI				SG	Sb	19 26 14.0	-0.3
MAZI	**Mazidag**	0.93	232	*e*Pg	Pg	19 26 00.7	-0.7
MAZI				*e*Sg	Sb	19 26 14.0	-0.3
DYBB	**Diyarbakir**	0.98	266	PG	Pg	19 26 01.9	-0.3
SIRN	**S˜–rnak**	0.98	123	*i* P	Pg	19 26 01.8	-0.6
SIRN				*i* S	Sb	19 26 16.1	+0.2
SIRN	**S˜–rnak**	0.98	123	P	Pg	19 26 01.8	-0.6
SIRN				S	Sb	19 26 16.1	+0.2
DIYA	**Diyarbakir**	0.99	264	*i* P	Pg	19 26 02.0	-0.6
DIYA				*i* S	Sn	19 26 17.3	-0.5
DIYA	**Diyarbakir**	0.99	264	P	Pg	19 26 02.0	-0.6
DIYA				S	Sn	19 26 17.3	-0.5
SIRT	**Sirnak**	1.00	122	PG	Pg	19 26 02.6	-0.1
SIRT	**Sirnak**	1.00	122	*e*Pg	Pg	19 26 02.6	-0.1
BINT	**Bingol**	1.09	321	*e*Pn	Pg	19 26 03.9	-0.5
BGOL	**Bingol**	1.10	330	*i* P	Pg	19 26 04.5	-0.1
BGOL				*i* S	Sn	19 26 20.5	0.0
BGOL	**Bingol**	1.10	330	P	Pg	19 26 04.5	-0.1
BGOL				S	Sn	19 26 20.5	0.0
BNGB	**Bingˆ¶l**	1.10	331	PN	Pg	19 26 03.9	-0.7
SVRC	**Sivrice-ELAZID**	1.66	283	PN	Pn	19 26 12.2	-0.7
PTK	**Pertek**	1.77	299	PN	Pn	19 26 14.6	+0.1
MALT	**Malatya**	2.34	278	PN	Pn	19 26 22.4	+0.3
MALT	**Malatya**	2.34	278	*e*Pn	Pn	19 26 22.4	+0.3

IDC 04 19:27:09.0±3.0**, 22°.43N**×**94°.17E, h51^{km}**±36^{km}**, mb3.0**/2**, mb1 3.3**/4**, mb1mx2.9**/64**, mbtmp3.3**/4**, ML3.6**/2**, MS3.0**/1**, Ms1 3.0**/1**, ms1mx2.2**/18**, Error ellipse: s-maj=40.3km s-min=17.2km az=28.0, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRDH	**Bariadhala**	2.35	277	P	Pn	19 27 45.4	+0.2
	34nm,0.3s,baz=72,slow=20,SNR=2.4						
BRDH				S	Sn	19 28 13.4	+0.6
	22nm,0.3s,baz=60,slow=22,SNR=3.2						
SHL	**Shillong**	3.76	327	*e*P	Pn	19 28 06.5	+1.8
CMAR	**Chiang Mai Arr**	5.97	131	P	Pn	19 28 35.1	+0.2
	0.2nm,0.3s,baz=309,slow=13,SNR=8.7						
MKAR	**Makanchi Array**	26.14	341	P	P	19 32 38.7	+0.3
	0.2nm,0.4s,baz=155,slow=11,SNR=6.8						
MJAR	**Matsushiro Arr**	40.49	60	LR	LR	19 52 37.7	
	comp=Z,16nm,18.1s,baz=245,slow=38						
ASAR	**Alice Springs**	59.94	137	P	P	19 37 10.0	-0.3
	0.2nm,0.5s,baz=320,slow=6.6,SNR=4.5						

MEX 04 19:49:54.8±0.5**, 17°.72N**×**101°.35W, h38^{km}**±7^{km}**, MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZIIG	**Zihuatanejo**	0.16	223	*e*P	Pn	19 49 59.8	-5.4
ZIIG				*e*S	Sn	19 50 04.6	-11
ARIG	**Puente Sto Nin**	1.11	60	*e*P	Pn	19 50 12.1	-1.7
ARIG				*e*S	Sn	19 50 25.4	-2.5
CAIG	**El Cayaco**	1.23	123	*e*P	Pn	19 50 14.1	-1.5
CAIG				*e*S	Sn	19 50 28.3	-2.6
MEIG	**Mezcala**	1.66	83	*e*P	Pn	19 50 20.2	-1.3
MEIG				*e*S	Sn	19 50 39.5	-2.1
PLIG	**Platanillo**	1.88	69	*e*P	Pn	19 50 23.3	-1.2
PLIG				*e*S	Sn	19 50 44.9	-2.2
TLIG	**Tlapa**	2.66	93	*i* P	Pn	19 50 34.5	-0.8
TLIG				*e*S	Sn	19 51 05.3	-1.1

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*ISCJB **04** 20:02:21.0±0.5, 6°.96N±0°.04×77°.59W±0°.03, h19^{km}, mb3.4/3, MS3.1/1, Error ellipse: s-maj=5.7km s-min=4.2km az=41.8*
*IDC **04** 20:02:21.1±1.1, 7°.26N×77°.62W, h0^{km}, mb3.5/3, mb1 4.0/6, mb1mx3.7/42, mbtmp3.9/6, ML2.8/2, MS3.2/4, Ms1 3.2/4, ms1mx2.9/29, Error ellipse: s-maj=33.2km s-min=25.9km az=49.0*
*RSNC **04** 20:02:22.5±0.8, 6°.92N×77°.59W, h18^{km}±6^{km}, ML3.6, Mw4.2*
ISC 04 20:02:22.8±0.8**, 6°.96N**±0°.04×**77°.58W**±0°.05**, h19^{km}, n25,**

σ1ˢ60/27,mb3.5/3,3D,Near west coast of Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOLC	Bahia Solano	0.75	167	*e*P	Pb	20 02 35.3	-1.9
CAPC	Capurgana	1.68	8	*e*S	Sb	20 03 13.0	-1.0
CAPC				*i*		20 03 20.9	
	comp=Z,761nm,0.6s						
HELC	Santa Helena	2.18	110	⇓*i*P	Pn	20 02 56.8	-1.5
HELC				*e*S	Sn	20 03 23.2	-1.8
HELC				*i*		20 03 29.2	
	comp=Z,312nm,0.5s						
UREC	San Josˆ' de U	2.18	69	*e*P	Pn	20 02 57.1	-1.0
PLMC	San Josˆ' del	2.41	148	*e*P	Pn	20 02 59.9	-1.5
MOTC	Monteria, Cord	2.62	46	*e*P	Pn	20 03 03.4	-0.8
ZARC	Zaragoza, Cauc	2.75	79	*e*P	Pn	20 03 05.5	-0.5
ZARC				*i*		20 03 45.8	
	comp=Z,298nm,0.5s						
GUYC	Guyana, Colomb	2.78	128	*i*	Pg	20 03 15.4	-0.7
	comp=Z,417nm,0.6s						
GUYC				*e*S	Sn	20 03 39.2	-0.8
AZU	Azuero	2.80	287	⇓*i*P	Pn	20 03 05.7	-0.8
AZU				*e*S	Sn	20 03 38.6	-1.2
AZU				*i*		20 03 44.7	
	comp=Z,503nm,0.6s						
BCIP	Isla Barro Col	3.13	315	⇓*i*P	Pn	20 03 09.6	-1.6
BCIP				*i*		20 03 21.3	
	comp=Z,193nm,0.7s						
BCIP				*e*S	Sn	20 03 47.6	-0.5
PTBC	PUERTO BERRIO,	3.13	97	*e*P	Pn	20 03 11.2	+0.1
PTBC				*i*		20 03 56.9	
	comp=Z,114nm,0.7s						
YOTC	Yotoco, Valle	3.20	157	*e*S	Sn	20 03 49.2	-0.8
YOTC				*i*		20 04 13.8	
	comp=Z,67nm,0.6s						
SJCC	San Jacinto, C	3.77	39	*e*P	Pn	20 03 18.9	-1.0
SJCC				*e*S	Sn	20 04 03.7	-0.2
SJCC				*i*		20 04 13.4	
	comp=Z,43nm,0.4s						
ROSC	El Rosal	3.87	123	Pn	Pn	20 03 23.8	+2.2
	comp=Z,6.3nm,0.3s,baz=313,slow=19,SNR=9.1						
CODC	Agustˆ›n Codaz	5.05	54	*i*	Pn	20 03 40.5	+2.9
	comp=Z,82nm,0.5s						
CODC				*e*S	Sn	20 04 34.7	-0.8
SDV	Santo Domingo	7.14	74	Pn	Pn	20 04 06.7	+0.1
	comp=Z,5.4nm,0.3s,baz=281,slow=10,SNR=11						
PCRV	Puerto La Cruz	13.19	75	Pn	Pn	20 05 28.6	-0.8
	comp=Z,2.3nm,0.3s,baz=254,slow=3.3,SNR=5.8						
SJG	San Juan	15.72	44	LR	LR	20 12 52.0	
	comp=Z,66nm,21.5s,baz=260,slow=41						
NNA	Nana	18.83	178	LR	LR	20 16 30.5	
	comp=Z,107nm,18.1s,baz=1.0,slow=44						
PTGA	Pitinga	19.16	113	LR	LR	20 14 28.2	
	comp=Z,114nm,19.3s,baz=300,slow=38						
LPAZ	La Paz	24.92	158	P	P	20 07 50.6	+5.0
	comp=Z,0.8nm,0.6s,baz=343,slow=11,SNR=2.8						
NEW	Newport	53.05	328	LR	LR	20 36 59.5	
	comp=Z,17nm,20.4s,baz=184,slow=39						
ILAR	Eielson Array	74.98	335	P	P	20 14 02.9	+0.2
	comp=Z,0.2nm,0.7s,baz=109,slow=3.7,SNR=3.9						
GERES	GERESS Array B	85.66	41	P	P	20 15 01.5	+0.9
	comp=Z,0.4nm,0.8s,baz=316,slow=2.7,SNR=3.5						
ASAR	Alice Springs	145.51	238	PKPbc	PKPdf	20 22 00.4	-0.3
	comp=Z,0.7nm,1.0s,baz=120,slow=3.8,SNR=7.1						

JMA 04 20:05:24.7±0.3,36°.67N×141°.65E,h51^{km}±5^{km},M3.0, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.81	303	P	Pn	20 05 39.5	-0.4
JHO	Hitachi	0.87	266	P	Pn	20 05 40.6	-0.1
JHYU	Hitachinakayam	0.92	249	P	Pn	20 05 41.5	+0.2
JHYU				S	Sn	20 05 53.5	0.0
JFK	Kawauchi	0.93	318	P	Pn	20 05 41.4	-0.2
JFFD	Fukushimafurud	0.97	296	P	Pn	20 05 42.3	+0.3
JFT	Otama	1.35	309	P	Pn	20 05 48.8	+1.6
JMM	Marumori	1.38	330	P	Pn	20 05 47.9	+0.4
JMM				*e*S	Sn	20 06 05.2	+0.6
JFY	Yanaizu	1.72	296	P	Pn	20 05 54.7	+2.4
JAG	Ashikaga	1.79	263	P	Pn	20 05 54.2	+1.1
JIO	Ouri	1.80	352	P	Pn	20 05 53.5	+0.2
JOU	Okura	1.86	335	P	Pn	20 05 55.8	+1.6
MAT	Matsushiro	2.77	268	P	Pn	20 06 09.0	+2.3
MAT				*e*S	Sn	20 06 45.4	+6.5

IDC 04 20:05:44.9±4.5,29°.34S×74°.25E,h0^{km},mb3.7/5, mb1 3.8/5,mb1mx3.5/62,mbtmp3.7/5,Error ellipse: s-maj=129.4km s-min=42.8km az=46.0,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S2	Diego Garcia H	21.65	355	T	T	20 32 43.2	
	baz=174,slow=76,SNR=9.3						
H08S1	Diego Carcia H	21.65	355	T	T	20 32 41.9	
	baz=174,slow=76,SNR=20						
H08S3	Diego Garcia H	21.66	355	T	T	20 32 38.5	
	baz=174,slow=76,SNR=18						
H01W2	Cape Leeuwin H	34.07	110	T	T	20 48 00.1	
	baz=264,slow=74,SNR=3.4						
H01W3	Cape Leeuwin H	34.07	110	T	T	20 47 59.6	
	baz=264,slow=74,SNR=3.2						
H01W1	Cape Leeuwin H	34.08	110	T	T	20 47 59.5	
	baz=264						
CMAR	Chiang Mai Arr	53.16	30	P	P	20 15 05.0	+0.1
	0.8nm,0.9s,baz=213,slow=6.5,SNR=3.5						
ASAR	Alice Springs	53.20	99	P	P	20 15 05.4	+0.1
	1.8nm,1.1s,baz=270,slow=5.2,SNR=5.0						
MKAR	Makanchi Array	76.13	6	P	P	20 17 35.1	+0.7
	1.3nm,1.1s,baz=179,slow=6.1,SNR=4.7						
KURBB	Kurchatov Arra	79.70	3	P	P	20 17 54.4	+0.2
	0.3nm,0.8s,baz=187,slow=6.5,SNR=3.2						
SONM	Songino Array	82.08	21	P	P	20 18 06.0	-1.1
	0.2nm,0.3s,baz=178,slow=4.3,SNR=2.6						

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*NIED **04** 20:05:00,22°.50N×121°.30E,h26^{km},Mw4.3 Best double couple: $M_0$2.78000×10^{15} NP1:ϕ_s121.00000°,δ53.00000°, λ-11.00000°. NP2:ϕ_s218.00000°,δ81.00000°, λ-142.00000°.*

*IDC **04** 20:05:43.6±0.7,21°.75N×121°.40E,h0^{km},mb4.0/13, mb1 4.1/13,mb1mx3.8/57,mbtmp4.0/13,MS3.6/17, Ms1 3.6/17,ms1mx3.2/61,Error ellipse: s-maj=33.1km s-min=14.9km az=64.0*

*ISCJB **04** 20:05:46.2±0.6,21°.71N±0°.03×121°.17E±0°.03,h25^{km}±3^{km}, mb4.0/17,MS3.6/16,Error ellipse: s-maj=5.1km s-min=3.7km az=155.5*

*TAP **04** 20:05:46.5,21°.78N×121°.10E,h14^{km},ML4.3,C*

*NEIC **04** 20:05:50.3±1.4,21°.67N×121°.19E,h44^{km}±13^{km},mb4.2/2, Error ellipse: s-maj=13.5km s-min=10.7km az=140.0*

ISC 04 20:05:47.3±0.8,21°.79N±0°.04×121°.14E±0°.03,h19^{km}±2^{km}, n139,σ1ˢ26/152,mb4.0/17,MS3.6/16,20C-5D,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSEB	Hengchuen, Pin	0.25	296	⇓*i*P	Pg	20 05 53.1	0.0
	baz=290						
TSEB				*i* S	Sb	20 05 58.4	+1.6
	baz=290						
TWKBT	Hengchun	0.34	296	⇓P	Pg	20 05 54.0	-0.7
	baz=290						
TWKBT				S	Sg	20 05 59.4	-0.2
	baz=290						
TWK1	Hengchun	0.35	296	⇓*i*P	Pg	20 05 54.0	-0.8
	baz=290						
TWK1				*i* S	Sg	20 05 59.5	-0.3
	baz=290						
HEN	Hengchun	0.43	300	⇓*i*P	Pg	20 05 55.8	-0.5
	baz=295						
HEN				S	Sb	20 06 03.0	+0.3
	baz=295						
LAY	Lan-yu	0.46	57	*e*P	Pn	20 05 57.7	-1.2
	baz=60						
TAW	Tawu	0.61	338	⇑*i*P	Pg	20 05 59.2	-0.3
	baz=358						
TAW				S	Sb	20 06 08.2	+0.7
	baz=358						
EAST	Anshuo	0.65	335	⇑P	Pg	20 05 59.9	-0.4
	baz=354						
EAST				S	Sb	20 06 10.1	+1.3
	baz=354						
SCZT	Fangliau	0.76	320	⇑*i*P	Pb	20 06 02.0	+0.1
	baz=335						
SCZT				*e*S	Sg	20 06 13.3	+1.0
	baz=335						
ECL	Taimali	0.82	348	⇑*i*P	Pb	20 06 01.7	-1.4
	baz=4.0						
ECL				*e*S	Sb	20 06 12.7	-1.1
	baz=4.0						
SSPT	Xinbi	0.87	323	*e*P	Pg	20 06 04.5	+0.2
	baz=325						
WLCH	Liuqiu	0.90	309	⇑P	Pn	20 06 05.5	+0.5
	baz=296						
TWP	Hsiaoliuchiu	0.91	308	⇑P	Pn	20 06 05.6	+0.4
	baz=295						
MASBT	Mashibuluo	0.94	330	⇑P	Pb	20 06 04.8	-0.4
	baz=340						
MASBT				S	Sg	20 06 18.5	+0.2
	baz=340						
TTN	Taitung	0.96	0	*e*P	Pb	20 06 04.8	-0.6
	baz=18						
TWH	Lutao	0.97	19	*e*P	Pb	20 06 03.7	-1.9
	baz=23						
TWGBT	Beinan	1.03	357	⇑P	Pb	20 06 04.5	-2.1
	baz=360						
TWG	Pinlang	1.03	356	P	Pb	20 06 04.5	-2.2
	baz=360						
SSD	Sandimen	1.06	334	⇑P	Pb	20 06 06.2	-1.0
	baz=349						
SSD				*e*S	Sg	20 06 22.6	+0.6
	baz=349						
SGLT	Jiouru	1.11	327	⇓P	Pg	20 06 09.2	+0.4
	baz=351						
TWM1	Shoushan	1.23	327	*e*P	Pg	20 06 11.0	-0.1
	baz=351						
SLGT	Liugui	1.28	339	*e*P	Pn	20 06 10.1	-0.2
	baz=360						
CHKT	Chengkung	1.32	9	*e*P	Pn	20 06 08.9	-1.9
	baz=12						
SGST	Jiashian	1.39	338	⇑P	Pb	20 06 12.5	-0.2
	baz=359						
ELDTW	Lidau	1.40	355	*e*P	Pn	20 06 10.2	-1.8
	baz=10.0						
FULB	Fuli	1.41	6	⇑*i*P	Pn	20 06 10.6	-1.5
	baz=8.0						
FULB				*e*S	Sn	20 06 28.9	-1.3
	baz=8.0						
STYT	Tauyuan	1.41	346	*e*P	Pn	20 06 11.8	-0.3
	baz=359						
STYT				*e*S	Sg	20 06 33.1	0.0
	baz=359						
CHN1	Nanshi	1.50	338	⇑P	Pn	20 06 13.7	+0.3
	baz=342						
WTP	Ta-pu	1.53	342	⇑P	Pn	20 06 14.2	+0.4
	baz=345						
TWF1	Yuli	1.56	5	*e*P	Pn	20 06 12.2	-1.9
	baz=9.0						
TPUB	Ta-pu	1.58	343	⇑P	Pn	20 06 14.7	+0.3
	baz=346						
TWK	Hsinying	1.59	338	⇑P	Pn	20 06 14.7	+0.1
	baz=343						
YULB	Yu-li	1.60	5	*e*P	Pn	20 06 13.7	-1.1
	baz=8.0						
YUS	Yu-Shan	1.70	354	*e*P	Pb	20 06 18.0	-0.3
	baz=7.0						
HGSD	Ruisui	1.72	9	*e*P	Pn	20 06 15.0	-1.3
	baz=3.0						
EHY	Hungye	1.72	6	*e*P	Pn	20 06 15.5	-0.8
	baz=9.0						
CHN8	Yiju	1.77	331	*e*P	Pb	20 06 19.1	-0.2
	baz=354						
CHN2	Minshiung	1.84	341	*e*P	Pn	20 06 18.2	+0.2
	baz=345						
CHN5	Tsauling	1.85	347	⇑P	Pn	20 06 18.6	+0.4
	baz=350						
CHN5				*e*S	Sb	20 06 44.5	+1.1
	baz=350						
WLGB	Puzi	1.85	335	*e*P	Pn	20 06 17.2	-0.9
	baz=356						
EGFH	Guangfu	1.89	8	*e*P	Pn	20 06 19.5	+0.8
	baz=11						
VWDT	VWDT	1.96	0	*e*P	Pn	20 06 19.1	-0.4
	baz=11						
WGK	Gukeng	1.96	344	⇑P	Pn	20 06 20.0	+0.3
	baz=349						
WDLH	Douliu	1.97	344	*e*P	Pn	20 06 20.1	+0.3
	baz=348						
SSLB	Suanglung	2.00	355	*e*P	Pn	20 06 20.7	+0.5
	baz=13						
WDGT	Dungji	2.00	317	*e*P	Pn	20 06 18.1	-2.1
	baz=321						
WSF	Szhu	2.03	335	*e*P	Pn	20 06 20.0	-0.5
	baz=356						
ESL	Shilin	2.03	8	*e*P	Pn	20 06 21.2	+0.6
	baz=11						
SMLT	Sun Moon Lake	2.10	354	⇑*i*P	Pn	20 06 23.0	+1.4
	baz=5.0						
SMLT				*e*S	Sb	20 06 49.4	-1.2
	baz=5.0						
TYC	Yuchr	2.12	353	⇑P	Pn	20 06 23.0	+1.1
	baz=4.0						
TYC				*e*S	Sb	20 06 51.4	+0.2
	baz=4.0						
VCHM	Qimei	2.12	312	⇑*e*P	Pn	20 06 19.9	-2.0
	baz=315						
WNT	Mingjian	2.12	349	*e*P	Pn	20 06 22.2	+0.4
	baz=354						
ENLB	Shoufeng	2.15	11	*e*P	Pn	20 06 21.9	-0.4
	baz=26						
RLNB	Erlin	2.21	341	*e*P	Pn	20 06 22.3	-0.8
	baz=347						
DPDB	Guoxing	2.24	355	P	Pn	20 06 24.8	+1.2
	baz=358						
PHUB	P'eng-hu	2.25	320	*e*P	Pn	20 06 21.1	-2.5
	baz=323						
PHUB				*e*S	Sn	20 06 49.2	-1.6
	baz=323						
CHGB	Renai	2.26	1	*e*P	Pn	20 06 24.0	0.0
	baz=15						
PNG	Penghu	2.30	321	*e*P	Pn	20 06 21.9	-2.4
	baz=324						
PNG				S	Sn	20 06 51.6	-0.5
	baz=324						
TWD	Chiawan	2.32	10	*e*P	Pn	20 06 23.4	-1.1
	baz=14						
NACB	Ninganchiao	2.41	10	*e*P	Pn	20 06 23.8	-2.0
	baz=12						
NACB				*e*S	Sn	20 06 55.6	+0.7
	baz=12						
TDCB	Techi	2.45	0	*e*P	Pn	20 06 25.4	-1.1
	baz=3.0						
TWT	Tachien	2.45	1	*e*P	Pn	20 06 27.8	+1.2
	baz=3.0						
NNSB	Datong	2.64	5	*e*P	Pn	20 06 30.5	+1.5
	baz=18						
NNS	Nan Shan	2.65	5	*e*P	Pn	20 06 31.1	+1.9
	baz=18						
ENA	Nanau	2.69	12	*e*P	Pn	20 06 30.1	+0.5
	baz=3.0						
NANB	Nanao	2.69	12	*e*P	Pn	20 06 29.8	+0.1
	baz=3.0						
NSTT	Nanjuang	2.83	357	*e*P	Pn	20 06 32.8	+1.2
	baz=1.0						
LIOB	Emei	2.85	358	*e*P	Pn	20 06 33.3	+1.5
	baz=1.0						
ENTT	Nioudou	2.87	8	*e*P	Pn	20 06 32.2	+0.1
	baz=11						
YHNB	Yeheng	2.88	4	*e*P	Pn	20 06 32.3	0.0
	baz=355						
NSK	Sanguang	2.88	4	*e*P	Pn	20 06 32.6	+0.2
	baz=355						
TWC	Suao	2.88	13	*e*P	Pn	20 06 32.7	+0.4
	baz=5.0						
EOS1	EOS1	2.90	18	*e*P	Pn	20 06 33.4	+1.0
	baz=21						
TWE	Neicheng	2.96	9	*e*P	Pn	20 06 34.3	+1.0
	baz=12						
JYNG	Yonagunijimaku	3.13	32	P	Pn	20 06 37.2	+1.5
YOJ	Yonaguni jima	3.17	33	*e*P	Pn	20 06 37.3	+1.0
	baz=47						
YOJ				*e*S	Sn	20 07 14.6	+1.1
	baz=47						
YOJ	Yonaguni jima	3.17	33	P	Pn	20 06 38.0	+1.8
YOJ				*e*S	Sn	20 07 14.3	+0.7
TATO	Taipei	3.19	6	*e*P	Pn	20 06 37.6	+1.1
	baz=20						
TATO	Taipei	3.19	6	*e*Pn	Pn	20 06 37.0	+0.5
TIPB	Shuangxi	3.23	11	*e*P	Pn	20 06 38.9	+1.7
	baz=14						
NWF	Wu-fen Shan	3.32	10	*e*P	Pn	20 06 39.6	+1.2
	baz=13						
WFSB	Wu-fen Shan	3.32	10	*e*P	Pn	20 06 38.4	0.0
	baz=13						
HATJ	Hateruma jima	3.34	47	P	Pn	20 06 41.3	+2.8
HATJ				*e*S	Sn	20 07 15.6	-2.1
YM04	YM04	3.37	6	*e*P	Pn	20 06 39.7	+0.7
	baz=20						
YM11	YM11	3.38	7	*e*P	Pn	20 06 41.5	+2.2
	baz=357						
YM07	YM07	3.40	7	*e*P	Pn	20 06 39.5	0.0
	baz=9.0						
YM08	YM08	3.41	7	*e*P	Pn	20 06 40.1	+0.5
	baz=9.0						
IRIF	Iriomote-Funau	3.48	43	P	Pn	20 06 41.3	+0.8
IRIF				*e*S	Sn	20 07 21.3	+0.1
VWUC	VWUC	3.55	334	*e*P	Pn	20 06 40.3	-1.1
	baz=355						
JKRS	Kuro-shima	3.59	47	P	Pn	20 06 43.3	+1.2
JKRS				*e*S	Sn	20 07 23.3	-0.8
KNM	Kinmen	3.61	317	*e*P	Pn	20 06 42.3	-0.1
	baz=322						
KNMB	Chin-men Tao	3.67	317	*e*P	Pn	20 06 42.2	-1.0
	baz=325						
JIJ	Ishigaki jima	3.77	47	P	Pn	20 06 45.5	+1.0
JIJ				*e*S	Sn	20 07 27.0	-1.4
JISG	Ishigakijimahi	4.03	46	P	Pn	20 06 48.5	+0.4
JISG				*e*S	Sn	20 07 33.6	-1.3
VDOS	Pratas Island	4.25	256	*e*P	Pn	20 06 49.3	-1.8
	baz=251						
JTJ	Tarama	4.33	48	P	Pn	20 06 53.6	+1.3
JTJ				*e*S	Sn	20 07 40.6	-1.7
MATB	Ma-tsu	4.48	346	*e*P	Pn	20 06 53.5	-0.8
	baz=357						
JIRB	Irabujima	4.79	50	P	Pn	20 07 02.2	+3.7
JIRB				*e*S	Sn	20 07 52.2	-1.2
JIKM	Ikemajima	4.90	50	P	Pn	20 07 01.7	+1.7
JIKM				*e*S	Sn	20 07 56.3	+0.1
JOGS	Gusukube	4.91	52	*e*S	Sn	20 07 57.1	+0.5
JOW	Kunigami	8.22	51	Pn	Pn	20 07 46.5	+0.8
	1.9nm,0.3s,baz=157,slow=12,SNR=4.5						
QIZ	Qiongzhong	10.94	257	*e*P	Pn	20 08 26.5	+3.5
KSAR	Wonju Array Be	16.66	19	Pn	P	20 09 43.1	+1.0
KSRS	Korea Array	16.68	19	Pn	P	20 09 43.1	+0.8
	0.1nm,0.3s,baz=196,slow=12,SNR=5.0						
KSRS				LR	LR	20 17 13.6	
	comp=Z,164nm,20.1s,baz=201,slow=42						
MAT	Matsushiro	20.89	42	P	Pn	20 10 31.9	+0.8
MAT				S	S	20 14 15.8	-4.9
MJAR	Matsushiro Arr	20.89	42	P	Pn	20 10 31.9	+0.8
	1.9nm,1.0s,baz=229,slow=9.5,SNR=4.6						
CHTO	Chiang Mai	21.02	266	*e*P	P	20 10 30.7	+0.5
	8.4nm,1.1s						
CMAR	Chiang Mai Arr	21.10	265	P	P	20 10 31.7	+0.7
	2.2nm,0.8s,baz=74,slow=9.0,SNR=18						
CMAR				LR	LR	20 18 57.3	
	comp=Z,128nm,19.4s,baz=86,slow=37						
GUMO	Guam	24.01	106	LR	LR	20 19 58.8	
	comp=Z,88nm,19.1s,baz=268,slow=36						
BRDH	Bariadhala	27.30	277	LR	LR	20 23 28.4	
	comp=Z,49nm,18.3s,baz=116,slow=39						
ASAJ	Asahikawa	28.48	34	P	P	20 11 44.5	+3.2
	2.6nm,0.6s,baz=226,slow=6.4,SNR=7.7						
ASAJ				LR	LR	20 24 28.0	
	comp=Z,65nm,18.3s,baz=224,slow=40						
SONM	Songino Array	28.57	339	P	P	20 11 42.9	+0.7
	2.2nm,0.9s,baz=157,slow=9.9,SNR=11						
SONM				LR	LR	20 25 04.6	
	comp=Z,209nm,18.1s,baz=147,slow=40						
MKAR	Makanchi Array	40.05	318	P	P	20 13 22.3	+0.9
	1.4nm,0.6s,baz=115,slow=9.3,SNR=15						
MKAR				PcP	PcP	20 15 26.4	+0.4
	0.4nm,0.6s,baz=91,slow=3.6,SNR=3.2						
MKAR				LR	LR	20 29 12.1	
	comp=Z,45nm,20.0s,baz=108,slow=35						
PETK	Petropavlovsk-	41.88	33	LR	LR	20 33 03.5	
	comp=Z,68nm,18.1s,baz=235,slow=39						
ZALV	Zalesovo Beam	42.24	329	P	P	20 13 39.3	+0.1
	3.4nm,0.8s,baz=119,slow=7.4,SNR=13						
ZALV				LR	LR	20 33 18.0	
	comp=Z,64nm,18.0s,baz=68,slow=39						
H11N1	WAKE ISLAND Hy	42.72	84	T	T	20 59 35.8	
	baz=279						
H11N2	WAKE ISLAND Hy	42.72	84	T	T	20 59 39.4	
	baz=279,slow=74,SNR=7.6						
H11N3	WAKE ISLAND Hy	42.73	84	T	T	20 59 42.4	
	baz=279,slow=74,SNR=8.4						
H11S3	WAKE ISLAND Hy	42.77	86	T	T	20 59 32.4	
	baz=283,slow=74,SNR=19						
H11S1	WAKE ISLAND Hy	42.78	86	T	T	20 59 39.0	
	baz=283,slow=74,SNR=4.4						
H11S2	WAKE ISLAND Hy	42.79	86	T	T	20 59 34.2	
	baz=283,slow=74,SNR=4.0						
WRA	Warramunga Arr	43.44	162	P	P	20 13 47.0	-2.3
	baz=344,slow=8.9						
KURK	Kurchatov	43.92	322	*e*P	P	20 13 53.5	+0.6
KURBB	Kurchatov Arra	43.93	322	P	P	20 13 53.4	+0.4
	3.9nm,0.9s,baz=122,slow=7.3,SNR=19						
ASAR	Alice Springs	46.86	164	P	P	20 14 14.6	-1.9
	0.6nm,0.5s,baz=351,slow=11,SNR=21						
HNR	Honiara	49.12	125	LR	LR	20 32 22.5	
	comp=Z,25nm,21.0s,baz=20,slow=33						
BVAR	Borovoye Array	49.51	322	P	P	20 14 37.2	+0.6
	0.9nm,0.5s,baz=112,slow=8.7,SNR=9.4						
TIXI	Tiksi	50.08	3	LR	LR	20 37 54.7	
	comp=Z,132nm,20.2s,baz=101,slow=39						
GEYT	Alibeck	55.99	302	P	P	20 15 26.1	+1.2
	1.2nm,0.7s,baz=102,slow=14,SNR=3.6						
AKTO	Aktyubinsk	56.47	317	LR	LR	20 39 56.8	
	comp=Z,55nm,21.5s,baz=112,slow=36						
STKA	Stephens Creek	56.84	159	P	P	20 15 29.9	-0.9
	2.4nm,0.9s,baz=324,slow=9.6,SNR=4.3						
ARU	Arti	57.00	324	*e*P	P	20 15 31.7	0.0
	2.5nm,0.6s						
DZM	Mont Dzumac	62.06	132	LR	LR	20 38 35.9	
	comp=Z,57nm,21.8s,baz=276,slow=32						
GNI	Garni	66.14	305	LR	LR	20 51 31.4	
	comp=Z,27nm,18.4s,baz=97,slow=41						
ILAR	Eielson Array	71.36	27	P	P	20 17 04.2	-1.5
	0.3nm,0.6s,baz=281,slow=5.6,SNR=6.5						
FINES	FINESS Array B	73.49	330	P	P	20 17 18.8	+0.3
	0.7nm,0.5s,baz=46,slow=8.2,SNR=7.4						
FINES				LR	LR	20 55 30.8	
	comp=Z,33nm,18.9s,baz=58,slow=41						
HFS	Hagfors	79.63	331	P	P	20 17 53.0	-0.3
	2.1nm,0.8s,baz=99,slow=8.9,SNR=7.4						
HFS				LR	LR	20 58 19.2	
	comp=Z,73nm,18.7s,baz=64,slow=40						
NB2	NORSAR Subarra	80.32	332	P	P	20 17 56.7	-0.4
	comp=Z,10nm,1.2s,baz=61,slow=5.9						
NOA	NORSAR Array B	80.32	332	LR	LR	20 57 01.8	
	comp=Z,103nm,18.7s,baz=55,slow=38						
GERES	GERESS Array B	84.66	321	P	P	20 18 19.7	-0.3
	comp=Z,1.1nm,1.0s,baz=3.8,slow=4.0,SNR=4.7						

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*TAP **04** 20:10:46.1,21°.83N×121°.18E,h3^{km},ML3.9,D*

*IDC **04** 20:10:58.4±1.4,23°.01N×120°.05E,h0^{km},mb3.5/5, mb1 3.7/5,mb1mx3.4/60,mbtmp3.5/5,MS3.3/3,Ms1 3.3/3, ms1mx2.7/47,Error ellipse: s-maj=42.7km s-min=25.5km az=62.0*

ISC 04 20:10:43.7±2.3,21°.7N±0°.1×121°.19E±0°.04,h15^{km}±8^{km}, n67,σ1ˢ69/116,mb3.4/4,MS3.1/3,1C,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TSEB	Hengchuen, Pin	0.36	312	*i* P	Pn	20 10 52.9	-1.4
	baz=282						
TSEB				*i* S	Sg	20 10 58.0	+1.9
	baz=282						
TWKBT	Hengchun	0.45	309	⇑P	Pn	20 10 53.7	-1.8
	baz=287						
TWKBT				S	Sg	20 10 59.1	+0.3
	baz=287						
TWK1	Hengchun	0.45	308	*i* P	Pn	20 10 53.8	-1.9
	baz=287						
TWK1				*i* S	Sg	20 10 59.1	+0.2
	baz=287						
LAY	Lan-yu	0.51	42	*e*P	Pn	20 10 57.6	+1.2
	baz=59						
HEN	Hengchun	0.54	309	*i* P	Pn	20 10 55.5	-1.3
	baz=293						
HEN				*i* S	Sg	20 11 02.7	+1.0
	baz=293						
TAW	Tawu	0.74	339	*i* P	Pn	20 10 58.7	-0.9
	baz=333						

TAW	baz=333			*i* S	Sg	20 11 08.2	+0.1
EAST	**Anshuo** baz=331	0.79	336	*i* P	Pn	20 10 59.4	-0.8
EAST	baz=331			*i* S	Sg	20 11 09.2	-0.1
SCZT	**Fangliau** baz=316	0.88	323	P	Pg	20 11 01.6	+0.7
SCZT	baz=316			*e*S	Sb	20 11 13.6	+1.3
ECL	**Taimali** baz=345	0.96	347	*e*P	Pg	20 11 01.3	-0.9
ECL	baz=345			*e*S	Sb	20 11 12.7	-1.8
WLCH	**Liuqiu** baz=304	1.02	313	*e*P	Pg	20 11 05.0	+1.7
WLCH	baz=304			S	Sn	20 11 18.7	+1.3
TWP	**Hsiaoliuchiu** baz=304	1.03	312	*e*P	Pg	20 11 05.0	+1.4
TWP	baz=304			*e*S	Sg	20 11 18.9	+1.9
MASBT	**Mashibuluo** baz=326	1.08	332	P	Pg	20 11 04.8	+0.2
MASBT	baz=326			*i* S	Sn	20 11 19.3	+0.4
TWH	**Lutao** baz=18	1.08	14	P	Pg	20 11 04.4	-0.1
TWH	baz=18			*e*S	Sn	20 11 17.5	-1.4
TTN	**Taitung** baz=358	1.09	358	*e*P	Pg	20 11 06.3	+1.6
TTN	baz=358			*e*S	Sn	20 11 18.4	-0.8
TWGBT	**Beinan** baz=354	1.16	355	*e*P	Pb	20 11 04.2	-1.2
TWGBT	baz=354			*e*S	Sn	20 11 20.5	-0.3
TWG	**Pinlang** baz=354	1.16	355	*e*P	Pb	20 11 04.4	-1.1
TWG	baz=354			*e*S	Sn	20 11 21.0	0.0
SSD	**Sandimen** baz=331	1.20	335	*e*P	Pg	20 11 07.4	+0.6
SSD	baz=331			*e*S	Sn	20 11 21.7	-0.1
SGLT	**Jiouru** baz=324	1.24	329	*e*P	Pg	20 11 08.2	+0.6
SGLT	baz=324			*e*S	Sn	20 11 23.8	+0.9
TWM1	**Shoushan** baz=324	1.36	329	*e*P	Pg	20 11 11.9	+2.0
TWM1	baz=324			*e*S	Sn	20 11 26.9	+1.0
SLGT	**Liugui** baz=336	1.42	339	*e*P	Pg	20 11 11.4	+0.4
SLGT	baz=336			*e*S	Sn	20 11 28.9	+1.6
CHKT	**Chengkung** baz=8.0	1.44	7	*e*P	Pb	20 11 09.3	-0.9
CHKT	baz=8.0			*e*S	Sn	20 11 26.7	-1.1
SGST	**Jiashian** baz=336	1.52	339	*e*P	Pg	20 11 12.4	-0.5
SGST	baz=336			S	Sn	20 11 31.3	+1.4
ELDTW	**Lidau** baz=353	1.53	354	*e*P	Pg	20 11 12.8	-0.4
ELDTW	baz=353			*e*S	Sn	20 11 31.5	+1.3
FULB	**Fuli** baz=4.0	1.53	4	*e*P	Pb	20 11 10.9	-0.9
FULB	baz=4.0			*e*S	Sn	20 11 30.2	0.0
STYT	**Tauyuan** baz=343	1.55	345	*e*P	Pg	20 11 12.7	-0.8
STYT	baz=343			*e*S	Sn	20 11 32.4	+1.8
CHN3	**Shinhua** baz=328	1.60	332	*e*P	Pg	20 11 15.1	+0.6
CHN3	baz=328			*e*S	Sn	20 11 34.2	+2.3
CHN1	**Nanshi** baz=335	1.64	338	*e*P	Pg	20 11 14.8	-0.4
CHN1	baz=335			*e*S	Sn	20 11 35.3	+2.6
TAI1	**Yung-k'ang** baz=323	1.64	327	*e*P	Pg	20 11 14.1	-1.1
TAI1	baz=323			*e*S	Sn	20 11 34.9	+2.3
WTP	**Ta-pu** baz=339	1.67	342	*e*P	Pg	20 11 14.2	-1.5
WTP	baz=339			*e*S	Sn	20 11 35.4	+1.9
TWF1	**Yuli** baz=4.0	1.69	3	*e*P	Pb	20 11 14.0	-0.4
TWF1	baz=4.0			*e*S	Sn	20 11 36.0	+2.1
TPUB	**Ta-pu** baz=340	1.71	343	*e*P	Pg	20 11 14.9	-1.7
TPUB	baz=340			*e*S	Sn	20 11 36.6	+2.0
TWK	**Hsinying** baz=336	1.73	338	*e*P	Pg	20 11 16.2	-0.7
TWK	baz=336			*e*S	Sn	20 11 37.5	+2.6
YULB	**Yu-li** baz=3.0	1.73	3	*e*P	Pb	20 11 15.1	0.0
YULB	baz=3.0			*e*S	Sn	20 11 37.6	+2.7
SCLT	**Jiali** baz=325	1.77	329	*e*P	Pg	20 11 16.1	-1.5
SCLT	baz=325			*e*S	Sn	20 11 38.2	+2.4
HGSD	**Ruisui** baz=7.0	1.84	7	*e*P	Pg	20 11 17.5	-1.4
HGSD	baz=7.0			*e*S	Sn	20 11 40.6	+3.0
EHY	**Hungye** baz=4.0	1.84	4	*e*P	Pg	20 11 17.6	-1.5
EHY	baz=4.0			*e*S	Sn	20 11 39.8	+2.0
ALS	**Alishan** baz=348	1.88	349	*e*P	Pg	20 11 18.0	-1.7
ALS	baz=348			S	Sn	20 11 41.0	+2.0
CHN8	**Yiju** baz=329	1.91	332	*e*P	Pg	20 11 18.8	-1.5
CHN8	baz=329			*e*S	Sn	20 11 41.4	+2.1
CHN2	**Minshiung** baz=338	1.98	341	*e*P	Pb	20 11 18.2	-1.1
CHN2	baz=338			*e*S	Sn	20 11 43.0	+2.0
CHN5	**Tsauling** baz=345	1.98	346	*e*P	Pb	20 11 18.9	-0.7
CHN5	baz=345			*e*S	Sn	20 11 43.6	+2.2
EGFH	**Guangfu** baz=7.0	2.01	6	*e*P	Pb	20 11 20.3	+0.3
EGFH	baz=7.0			*e*S	Sn	20 11 44.9	+2.9
VWDT	**VWDT** baz=358	2.08	359	*e*P	Pg	20 11 22.2	-1.5
VWDT	baz=358			*e*S	Sn	20 11 44.7	+1.0
WGK	**Gukeng** baz=343	2.10	344	*e*P	Pb	20 11 19.1	-2.4
WGK	baz=343			*e*S	Sn	20 11 45.7	+1.6
WDLH	**Douliu** baz=342	2.11	344	*e*P	Pb	20 11 19.9	-1.7
WDLH	baz=342			*e*S	Sn	20 11 47.7	+3.4
SSLB	**Suanglung** baz=353	2.13	354	*e*P	Pb	20 11 22.1	+0.1
SSLB	baz=353			*e*S	Sn	20 11 47.5	+2.6
WDGT	**Dungji** baz=315	2.13	319	*e*P	Pg	20 11 21.7	-2.9
ESL	**Shilin** baz=6.0	2.15	6	*e*P	Pb	20 11 22.7	+0.3
ESL	baz=6.0			*e*S	Sn	20 11 47.1	+1.6
WJS	**Zhushan** baz=348	2.19	349	*e*P	Pb	20 11 23.5	+0.5
WJS	baz=348			*e*S	Sn	20 11 49.5	+3.1
SMLT	**Sun Moon Lake** baz=352	2.23	353	*e*P	Pb	20 11 22.9	-0.8
SMLT	baz=352			*e*S	Sn	20 11 50.6	+3.1
TYC	**Yuchr** baz=352	2.25	352	*e*P	Pb	20 11 22.5	-1.6
TYC	baz=352			*e*S	Sn	20 11 50.8	+2.9
WNT	**Mingjian** baz=347	2.25	348	*e*P	Pb	20 11 22.7	-1.4
WNT	baz=347			*e*S	Sn	20 11 49.8	+1.8
ENLB	**Shoufeng** baz=10.0	2.27	10	*e*P	Pb	20 11 24.6	+0.3
ENLB	baz=10.0			*e*S	Sn	20 11 50.2	+2.0
DPDB	**Guoxing** baz=353	2.37	354	*e*P	Pb	20 11 25.4	-0.8
DPDB	baz=353			*e*S	Sn	20 11 52.9	+1.9
CHGB	**Renai** baz=359	2.39	360	*e*P	Pb	20 11 25.2	-1.4
CHGB	baz=359			*e*S	Sn	20 11 54.4	+2.8
TWD	**Chiawan** baz=9.0	2.44	9	*e*P	Pb	20 11 26.0	-1.2
TWD	baz=9.0			*e*S	Sn	20 11 54.4	+2.0
NACB	**Ninganchiao** baz=9.0	2.53	8	*e*P	Pb	20 11 27.6	-1.2
NACB	baz=9.0			*e*S	Sn	20 11 57.7	+2.9
NNSB	**Datong** baz=4.0	2.76	4	*e*P	Pb	20 11 31.1	-1.8
NNSB	baz=4.0			*e*S	Sn	20 12 03.6	+2.9
NNSH	**Datong** baz=4.0	2.76	4	*e*P	Pb	20 11 31.1	-1.8
NNSH	baz=4.0			*e*S	Sn	20 12 03.8	+3.1
NNS	**Nan Shan** baz=4.0	2.77	3	*e*P	Pb	20 11 31.7	-1.3
NNS	baz=4.0			*e*S	Sn	20 12 03.6	+2.7
MJAR	**Matsushiro Arr** 1.9nm,0.8s,baz=230,slow=10.0,SNR=6.0	20.95	41	P	P	20 15 40.4	+14
SONM	**Songino Array** 0.3nm,0.7s,baz=158,slow=12,SNR=2.3	28.70	339	P	P	20 16 42.9	+2.7
LEM	**Lembang** comp=Z,35nm,18.4s,baz=159,slow=36	31.28	207	LR	LR	20 30 10.9	
FITZ	**Fitzroy Crossi** comp=Z,26nm,18.8s,baz=293,slow=39	39.75	173	LR	LR	20 37 59.1	
MKAR	**Makanchi Array** 0.4nm,0.7s,baz=115,slow=9.6,SNR=3.3	40.18	318	P	P	20 18 22.2	+2.9
KURBB	**Kurchatov Arra** 0.7nm,0.9s,baz=123,slow=7.6,SNR=3.6	44.06	322	P	P	20 18 53.9	+3.0
ASAR	**Alice Springs** 1.3nm,0.9s,baz=342,slow=5.2,SNR=5.6	46.72	164	P	P	20 19 41.6	+29
BVAR	**Borovoye Array** comp=Z,58nm,19.7s,baz=104,slow=36	49.64	322	LR	LR	20 39 32.3	

IDC 04 20:25:06.3±1.3**,28°.95S**×**74°.78E,h0**^{km}**,mb3.9**/8**,
mb1 4.0**/8**,mb1mx3.7**/64**,mbtmp3.9**/8**,MS3.5**/11**,
Ms1 3.5**/11**,ms1mx3.1**/55**,Error ellipse: s-maj=48.7km
s-min=23.0km az=71.0,Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H** baz=174,slow=76,SNR=26	21.30	354	T	T	20 52 07.0	
H08S1	**Diego Carcia H** baz=174,slow=76,SNR=54	21.30	354	T	T	20 51 55.2	
H08S3	**Diego Garcia H** baz=174,slow=76,SNR=100	21.32	354	T	T	20 52 08.6	
H01W2	**Cape Leeuwin H** baz=269,slow=75,SNR=13	33.77	110	T	T	21 07 18.0	
H01W3	**Cape Leeuwin H** baz=269,slow=75,SNR=11	33.77	110	T	T	21 07 18.1	
H01W1	**Cape Leeuwin H** baz=269,slow=75,SNR=14	33.78	110	T	T	21 07 20.6	
PALK	**Pallekele** comp=Z,84nm,18.6s,baz=110,slow=30	36.46	10	LR	LR	20 43 22.3	
LEM	**Lembang** comp=Z,76nm,19.0s,baz=178,slow=33	37.99	61	LR	LR	20 45 48.4	
PSI	**Prapat** comp=Z,81nm,18.5s,baz=94,slow=30	39.16	40	LR	LR	20 44 37.5	
MAW	**Mawson** comp=Z,76nm,20.6s,baz=228,slow=30	39.34	187	LR	LR	20 45 06.7	
BOSA	**Boshof** comp=Z,65nm,19.8s,baz=96,slow=32	43.14	258	LR	LR	20 48 19.8	
CMAR	**Chiang Mai Arr** 0.8nm,0.8s,baz=207,slow=6.8,SNR=5.9	52.60	29	P	P	20 34 22.8	+0.8
CMAR	comp=Z,50nm,19.9s,baz=205,slow=32			LR	LR	20 53 27.4	
ASAR	**Alice Springs** 1.1nm,0.7s,baz=253,slow=6.7,SNR=14	52.80	99	P	P	20 34 23.5	-0.2
ASAR	comp=Z,31nm,19.4s,baz=301,slow=34			LR	LR	20 55 06.1	
BRDH	**Bariadhala** comp=Z,83nm,19.6s,baz=153,slow=32	53.84	19	LR	LR	20 54 00.2	
STKA	**Stephens Creek** 2.4nm,0.9s,baz=268,slow=4.4,SNR=5.1	56.86	111	P	P	20 34 52.8	-0.3
DAV	**Davao City (W)** comp=Z,22nm,21.1s,baz=216,slow=33	60.60	62	LR	LR	20 58 43.4	
VNDA	**Vanda** 1.4nm,0.8s,baz=266,slow=8.1,SNR=9.2	61.33	166	P	P	20 35 23.4	+0.2
MKAR	**Makanchi Array** 0.5nm,100.0s,baz=167,slow=5.7,SNR=8.6	75.70	5	P	P	20 36 52.4	-0.9
KURBB	**Kurchatov Arra** 0.5nm,0.9s,baz=198,slow=5.1,SNR=4.3	79.29	2	P	P	20 37 13.5	+0.2
JNU	**Nakatsue** comp=Z,27nm,19.1s,baz=128,slow=35	81.47	45	LR	LR	21 12 37.0	
SONM	**Songino Array** 0.3nm,0.5s,baz=189,slow=4.9,SNR=3.6	81.55	21	P	P	20 37 25.3	-0.3
BVAR	**Borovoye Array** 0.6nm,0.6s,baz=156,slow=8.5,SNR=6.7	81.72	357	P	P	20 37 26.8	+0.5
KSRS	**Korea Array** comp=Z,27nm,20.4s,baz=190,slow=34	82.72	40	LR	LR	21 11 53.3	

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*IDC **04** 20:29:40.5±8.0, 2°.73N×96°.42E, h87^{km}±60^{km}, mb3.4/6,
mb1 3.3/8, mb1mx3.1/66, mbtmp3.6/8, ML3.0/2, MS2.9/2,
Ms1 2.9/2, ms1mx2.5/39, Error ellipse: s-maj=106.5km
s-min=23.5km az=59.0*

ISC 04 20:29:34.2±1.8**,2°.7N**±0°.2×**96°.4E**±0°.2**,h30**^{km}**,n16,**σ**0ˢ.39**/8**,
mb3.7**/6**,Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	**Prapat** 1.0nm,0.3s,baz=360,slow=16,SNR=3.2	2.55	88	P	**Pb**	**20 30 19.3**	**-0.1**
CMAR	**Chiang Mai Arr** 0.1nm,0.3s,baz=198,slow=11,SNR=7.3	15.85	9	P	**P**	**20 33 19.3**	**+0.5**
H08S2	**Diego Garcia H** baz=68,slow=74,SNR=25	25.95	246	T	T	21 01 44.2	
H08S3	**Diego Garcia H** baz=68,slow=74,SNR=24	25.95	247	T	T	21 01 52.5	
H08S1	**Diego Carcia H** baz=68,slow=74,SNR=26	25.97	246	T	T	21 01 46.3	
NWAO	**Narrogin (SRO)** comp=Z,21nm,19.4s,baz=306,slow=33	40.57	153	LR	LR	20 51 42.6	
H01W3	**Cape Leeuwin H** baz=334,slow=74,SNR=5.6	40.95	157	T	T	21 19 57.2	
H01W2	**Cape Leeuwin H** baz=334	40.96	158	T	T	21 19 51.9	
H01W1	**Cape Leeuwin H** baz=334,slow=74,SNR=4.8	40.96	157	T	T	21 19 55.1	
ASAR	**Alice Springs** 0.5nm,0.8s,baz=302,slow=7.7,SNR=4.8	44.97	128	P	**P**	**20 37 47.2**	**+0.2**
MKAR	**Makanchi Array** 0.8nm,0.4s,baz=163,slow=8.8,SNR=14	45.59	346	P	**P**	**20 37 52.0**	**+0.3**
SONM	**Songino Array** 0.3nm,0.5s,baz=195,slow=11,SNR=3.7	45.78	9	P	**P**	**20 37 53.0**	**-0.3**
GUMO	**Guam** comp=Z,10nm,18.2s,baz=108,slow=41	49.11	74	LR	LR	21 03 09.6	
KURBB	**Kurchatov Arra** 0.5nm,0.5s,baz=165,slow=7.0,SNR=5.7	50.07	345	P	**P**	**20 38 26.4**	**+0.2**
ZALV	**Zalesovo Beam** 1.5nm,0.4s,baz=177,slow=7.6,SNR=9.2	51.95	351	P	**P**	**20 38 40.4**	**+0.1**
BVAR	**Borovoye Array** 0.4nm,0.5s,baz=143,slow=9.8,SNR=3.7	54.56	341	P	**P**	**20 38 59.1**	**-0.5**

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*ISK **04** 20:32:44.3, 34°.99N×27°.73E, h10^{km}, ML2.8/9*

*CSEM **04** 20:32:46.0±0.4, 35°.15N×27°.84E, h2^{km}, ML2.4, Error
ellipse: s-maj=10.4km s-min=5.0km az=166.0*

*ATH **04** 20:32:47.5, 35°.18N×27°.71E, h13^{km}±4^{km}, ML2.6/3, Error
ellipse: s-maj=6.5km s-min=1.8km az=327.0*

*THE **04** 20:32:48.6, 35°.28N×27°.71E, h0^{km}±4^{km}, ML2.4/2, Error
ellipse: s-maj=7.3km s-min=1.9km az=163.0*

*DDA **04** 20:33:00.8, 35°.20N×27°.81E, h7^{km}, Ml2.9*

ISC 04 20:32:46.7±1.6**,35°.16N**±0°.06×**27°.77E**±0°.03**,h6**^{km}±10^{km}**,
n71,**σ**1ˢ.29**/92**,Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	**Karpathos**	0.63	308	PG	Pg	20 32 59.1	+0.2
KARP				SG	Sb	20 33 09.1	-0.3
KARP	**Karpathos**	0.63	308	P	Pg	20 32 58.2	-0.6
KARP				S	Sg	20 33 06.6	-0.5
KARP	**Karpathos**	0.63	308	P	Pg	20 32 58.6	-0.3
KARP				S	Sb	20 33 08.0	-1.4
KARP	**Karpathos**	0.63	308	P	Pg	20 32 58.6	-0.3
KARP	**Karpathos**	0.63	308	*e*Pg	Pg	20 32 59.1	+0.2
KARP				S	Sb	20 33 08.0	-1.4
KARP				*e*Sg	Sb	20 33 09.1	-0.3
ARG	**Arkhangelos**	1.09	15	PN	Pb	20 33 08.5	+0.4
ARG				SN	Sn	20 33 27.0	+2.9
ARG	**Arkhangelos**	1.09	15	P	Pg	20 33 06.6	-1.1
ARG				S	Sn	20 33 24.6	+0.4
ARG	comp=E,742µm,0.5s			AML	AML	20 33 30.0	
ARG	comp=N,747µm,0.7s			AML	AML	20 33 32.0	
ARG	**Arkhangelos**	1.09	15	P	Pg	20 33 07.3	-0.4
ARG				S	Sn	20 33 23.8	-0.3
ARG	**Arkhangelos**	1.09	15	P	Pg	20 33 07.3	-0.4
ARG	**Arkhangelos**	1.09	15	*e*Pn	Pb	20 33 08.5	+0.4
ARG				S	Sn	20 33 23.8	-0.3
ARG				*e*Sn	Sn	20 33 27.0	+2.9
ZKR	**Zakros**	1.27	268	P	Pb	20 33 11.1	-0.1
ZKR	comp=N,164µm,0.7s			AML	AML	20 33 39.2	
ZKR	comp=E,343µm,0.7s			AML	AML	20 33 39.4	
ZKR	**Zakros**	1.27	268	P	Pb	20 33 10.9	-0.3
ZKR	**Zakros**	1.27	268	P	Pb	20 33 10.8	-0.4
DAT	**Datca**	1.57	354	PN	Pn	20 33 14.9	-0.5
DAT				SN	Sg	20 33 37.9	+0.5
DAT	**Datca**	1.57	354	*i* P	Pn	20 33 14.2	-1.2
DAT				*i* S	Sg	20 33 38.1	+0.7
DAT	**Datca**	1.57	354	P	Pn	20 33 14.2	-1.2
DAT	**Datca**	1.57	354	*e*Pn	Pn	20 33 14.9	-0.5
DAT				*e*Sn	Sg	20 33 37.9	+0.5
NPS	**Neapolis**	1.77	274	P	Pb	20 33 19.8	+0.1
NPS	comp=N,222µm,0.6s			AML	AML	20 33 53.0	
NPS	comp=E,237µm,0.7s			AML	AML	20 34 03.4	
NPS	**Neapolis**	1.77	274	P	Pb	20 33 19.5	-0.2
NPS	**Neapolis**	1.77	274	P	Pb	20 33 19.5	-0.2
DALY	**Dalyan (Mu˜la**	1.80	23	PN	Pn	20 33 18.7	+0.3
DALY	**Dalyan (Mu˜la**	1.80	23	*i* P	Pn	20 33 16.1	-2.3
DALY				*i* S	Sg	20 33 47.0	+2.4
DALY	**Dalyan (Mu˜la**	1.80	23	P	Pn	20 33 16.1	-2.3
DALY	**Dalyan (Mu˜la**	1.80	23	*e*Pn	Pn	20 33 18.7	+0.3
DALY				S	Sg	20 33 47.0	+2.4
FETY	**Fethiye**	1.82	35	PN	Pn	20 33 18.7	0.0
FETY	**Fethiye**	1.82	35	P	Pn	20 33 17.9	-0.8
FETY	**Fethiye**	1.82	35	P	Pn	20 33 17.9	-0.8
FETY	**Fethiye**	1.82	35	*e*Pn	Pn	20 33 18.7	0.0
AKAS	**Kas**	1.84	54	PN	Pn	20 33 18.5	-0.5
AKAS	**Kas**	1.84	54	*i* P	Pn	20 33 17.4	-1.6
AKAS	**Kas**	1.84	54	P	Pn	20 33 17.4	-1.6
AKAS	**Kas**	1.84	54	*e*Pn	Pn	20 33 18.5	-0.5
TURN	**Turunc**	1.84	21	PN	Pn	20 33 16.9	-2.0
TURN	**Turunc**	1.84	21	*i* P	Pn	20 33 15.7	-3.2
TURN				*i* S	Sn	20 33 40.7	-1.8
TURN	**Turunc**	1.84	21	P	Pn	20 33 15.7	-3.2
TURN	**Turunc**	1.84	21	*e*Pn	Pn	20 33 16.9	-2.0
TURN				S	Sn	20 33 40.7	-1.8
LAST	**Lasithi**	1.88	271	P	Pb	20 33 21.0	-0.6
LAST	**Lasithi**	1.88	271	P	Pn	20 33 20.4	+0.9
LAST	**Lasithi**	1.88	271	P	Pn	20 33 20.4	+0.9
BODT	**Bodrum**	1.94	349	PN	Pn	20 33 20.6	+0.3
BODT	**Bodrum**	1.94	349	*e*Pn	Pn	20 33 20.6	+0.3
YER	**Yerkesik**	2.01	12	PN	Pn	20 33 21.4	0.0
YER	**Yerkesik**	2.01	12	P	Pn	20 33 21.5	0.0
YER	**Yerkesik**	2.01	12	*e*Pn	Pn	20 33 21.4	0.0
MLSB	**Milas**	2.13	0	PN	Pn	20 33 23.6	+0.6
MLSB	**Milas**	2.13	0	*e*Pn	Pn	20 33 23.6	+0.6
SANT	**Santorini**	2.24	303	PN	Pn	20 33 23.9	-0.5
SANT	**Santorini**	2.24	303	*e*Pn	Pn	20 33 23.9	-0.5
AMGA	**Amorgos Island**	2.26	318	P	Pn	20 33 24.6	-0.1
AMGA	**Amorgos Island**	2.26	318	P	Pn	20 33 25.4	+0.7
ELL	**Elmali**	2.35	47	PN	Pn	20 33 25.7	-0.4
ELL	**Elmali**	2.35	47	*e*Pn	Pn	20 33 25.7	-0.4
TAVA	**DENIZLI_Tavas**	2.48	21	*i* P	Pn	20 33 26.9	-0.9
TAVA				*i* S	Sb	20 34 03.5	+0.8
TAVA	**DENIZLI_Tavas**	2.48	21	P	Pn	20 33 26.9	-0.9
TAVA				S	Sb	20 34 03.5	+0.8
AYDN	**Tasoluk**	2.50	2	*i* P	Pn	20 33 25.0	-3.1
AYDN	**Tasoluk**	2.50	2	P	Pn	20 33 25.0	-3.1
GOLH	**Golhisar**	2.53	34	*i* P	Pn	20 33 28.5	0.0
GOLH				*i* S	Sn	20 34 00.8	+1.1
GOLH	**Golhisar**	2.53	34	P	Pn	20 33 28.5	0.0
GOLH				S	Sn	20 34 00.8	+1.1
KORT	**Korkueli**	2.78	48	PN	Pn	20 33 32.5	+0.5
KORT	**Korkueli**	2.78	48	*i* P	Pn	20 33 32.0	0.0
KORT	**Korkueli**	2.78	48	P	Pn	20 33 32.0	0.0
KORT	**Korkueli**	2.78	48	*e*Pn	Pn	20 33 32.5	+0.5
AYDB	**Zeytinkoy-Aydi**	2.78	2	PN	Pn	20 33 32.7	+0.7
AYDB	**Zeytinkoy-Aydi**	2.78	2	*e*Pn	Pn	20 33 32.7	+0.7
IMMV	**Iera Moni Meta**	3.11	277	P	Pb	20 33 39.6	-2.9
IMMV	**Iera Moni Meta**	3.11	277	P	Pn	20 33 38.6	+2.1
IMMV	**Iera Moni Meta**	3.11	277	P	Pn	20 33 38.6	+2.1
SUTC	**Sutluce-Ispart**	3.48	47	PN	Pn	20 33 42.4	+0.7
SUTC	**Sutluce-Ispart**	3.48	47	*e*Pn	Pn	20 33 42.4	+0.7
KEPZ	**Antalya-Kepez**	3.56	60	*i* P	Pn	20 33 40.9	-1.7
KEPZ	**Antalya-Kepez**	3.56	60	P	Pn	20 33 40.9	-1.7

IDC 04 20:45:53.0±2.9**,30°.93S**×**177°.64W,h0**^{km}**,mb4.0**/2**,
mb1 4.0**/3**,mb1mx3.6**/43**,mbtmp3.9**/3**,ML3.2**/1**,MS3.2**/1**,
Ms1 3.2**/1**,ms1mx2.4**/41**,Error ellipse: s-maj=71.6km
s-min=27.3km az=112.0,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island** 137nm,0.3s,baz=91,slow=14,SNR=6.5	1.69	352	Pn	Pn	20 46 23.9	+0.2
RAO	645nm,0.3s,baz=75,slow=21,SNR=14			Sn	Sn	20 46 40.6	-5.5
RAO	comp=Z,226nm,18.9s,baz=142,slow=41			LR	LR	20 47 01.7	
URZ	**Urewera** 0.3nm,0.3s,baz=275,slow=7.1,SNR=4.5	8.49	209	Pn	Pn	20 47 57.2	0.0
URZ	0.7nm,0.3s,baz=267,slow=21,SNR=8.0			Sn	Sn	20 49 31.8	-2.0
DZM	**Mont Dzumac** comp=Z,82nm,21.1s,baz=230,slow=31	16.75	298	LR	LR	20 54 39.3	
STKA	**Stephens Creek** 2.0nm,0.7s,baz=94,slow=14,SNR=6.5	34.67	258	P	P	20 52 45.1	+0.8
ASAR	**Alice Springs** 1.2nm,0.7s,baz=108,slow=7.6,SNR=9.1	43.39	267	P	P	20 53 56.6	-0.9
FINES	**FINESS Array B** 1.0nm,0.4s,baz=52,slow=4.8,SNR=13	145.75	340	PKPbc	PKPdf	21 05 32.2	-0.5

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*KRNET **04** 20:57:56.0±0.1, 42°.78N×74°.41E, h20^{km}, mb2.6*

*KNET **04** 20:57:55.2±0.2, 42°.79N×74°.43E, h22^{km}±4^{km}, ml1.6, Error
ellipse: s-maj=1.3km s-min=1.1km az=147.0*

*ISCJB **04** 20:57:56.3±0.4, 42°.76N±0°.02×74°.40E±0°.02, h7^{km}±3^{km},
Error ellipse: s-maj=3.9km s-min=2.8km az=160.9*

*SOME **04** 20:57:56.0, 42°.80N×74°.40E, h10^{km}*

ISC 04 20:57:56.0±0.8**,42°.77N**±0°.02×**74°.40E**±0°.02**,h17**^{km}±6^{km}**,
n39,**σ**0ˢ.62**/74**,30C-20D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	**Ala-Archa** 48nm,0.1s,SNR=13	0.15	152	⇓P	Pg	20 58 00.3	+0.1
AAK	**Ala-Archa** baz=58	0.15	152	⇓*i*P	Pg	20 58 00.2	-0.1
AAK	baz=58			⇓*i*S	Sg	20 58 03.2	+0.1
FRU1	**Bishkek** baz=80	0.17	76	⇑*i*P	Pg	20 58 00.5	0.0

FRU1				⇑iS	Sg	20 58 03.6	0.0
	baz=80						
CHMS	Chumysh	0.34	48	⇑P	Pg	20 58 02.8	-0.5
	15nm,0.1s,SNR=7.0						
CHMS				⇑S	Sg	20 58 07.8	-0.4
	49nm,0.1s						
CHMS	Chumysh	0.34	48	⇑iP	Pg	20 58 02.7	-0.6
	baz=49						
CHMS				⇑iS	Sg	20 58 07.6	-0.6
	baz=49						
KBK	Karagaybulak	0.42	105	⇑P	Pg	20 58 04.5	-0.1
	13nm,0.1s,SNR=19						
KBK				⇑S	Sg	20 58 10.7	+0.3
	77nm,0.2s						
KBK	Karagaybulak	0.42	105	⇑iP	Pg	20 58 04.3	-0.3
	baz=8.0						
KBK				⇑iS	Sg	20 58 10.4	0.0
	baz=8.0						
EKS2	Erkin-Say	0.47	257	⇑P	Pb	20 58 05.9	-0.1
	8.4nm,0.1s,SNR=63						
EKS2				⇓S	Sb	20 58 13.1	+0.4
	4.5nm,0.1s						
EKS2	Erkin-Say	0.47	257	⇑iP	Pg	20 58 05.6	0.0
	baz=56						
EKS2				⇑iS	Sb	20 58 12.7	0.0
	baz=56						
USP	Ospenovka	0.50	8	P	Pg	20 58 05.7	-0.5
	4.6nm,0.1s,SNR=52						
USP				⇑S	Sg	20 58 12.6	-0.3
	42nm,0.2s						
USP	Ospenovka	0.50	8	⇑iP	Pg	20 58 05.4	-0.7
	baz=8.0						
USP				⇑iS	Sg	20 58 12.3	-0.6
	baz=8.0						
UCH	Uchtor	0.55	171	⇓P	Pg	20 58 07.0	-0.1
	9.9nm,0.2s,SNR=7.1						
UCH	Uchtor	0.55	171	⇓iP	Pg	20 58 06.8	-0.3
	baz=72						
UCH				⇓iS	Sg	20 58 14.4	-0.1
	baz=72						
AML	Almayashu	0.82	220	⇑P	Pg	20 58 11.5	-0.7
	1.7nm,0.1s,SNR=5.8						
AML				⇑S	Sb	20 58 23.4	+0.3
	13nm,0.3s						
AML	Almayashu	0.82	220	⇓iP	Pg	20 58 11.5	-0.7
	baz=19						
AML				⇓iS	Sg	20 58 23.0	-0.1
	baz=19						
MRKS	Merke	0.87	269	⇑iP	Pb	20 58 12.5	-0.2
	baz=68						
MRKS				⇓iS	Sb	20 58 24.2	+0.2
	baz=68						
MRKS	Merke	0.87	269	⇑iP	Pb	20 58 12.4	-0.2
	14nm,0.2s						
MRKS				⇓iS	Sb	20 58 24.2	+0.2
	27nm,0.2s						
TKM2	Tokmak 2	0.89	80	⇑P	Pb	20 58 12.4	-0.8
	4.4nm,0.1s,SNR=22						
TKM2				⇑S	Sb	20 58 24.5	-0.4
	28nm,0.2s						
TKM2	Tokmak 2	0.89	80	⇑iP	Pb	20 58 12.2	-1.0
	baz=81						
TKM2				⇑iS	Sb	20 58 24.2	-0.7
	baz=81						
KZA	Kyzart	0.93	137	⇓P	Pb	20 58 13.9	-0.1
	1.8nm,0.1s,SNR=9.4						
KZA				⇓S	Sg	20 58 26.7	+0.1
	19nm,0.2s						
KZA	Kyzart	0.93	137	⇑iP	Pb	20 58 13.7	-0.3
	baz=38						
KZA				⇑iS	Sg	20 58 26.5	-0.1
	baz=38						
DGS	Degeres	1.11	64	eP	Pb	20 58 16.4	-0.5
	baz=65						
DGS				eS	Sb	20 58 31.1	0.0
	baz=65						
DGS	Degeres	1.11	64	eP	Pb	20 58 16.4	-0.5
	3.4nm,0.1s						
DGS				eS	Sb	20 58 31.1	0.0
	6.9nm,0.2s						
BOOM	Boomskoye usch	1.17	103	⇑iP	Pn	20 58 17.4	-0.4
	baz=4.0						
BOOM				⇑iS	Sb	20 58 32.8	0.0
	baz=4.0						
KST	Kastek	1.18	76	eP	Pn	20 58 17.5	-0.4
	baz=77						
KST				eS	Sb	20 58 33.3	+0.2
	baz=77						
KST	Kastek	1.18	76	eP	Pn	20 58 17.5	-0.4
	4.2nm,0.2s						
KST				eS	Sb	20 58 33.2	+0.2
	9.4nm,0.3s						
MNAS	Manas	1.43	259	⇑iP	Pn	20 58 21.9	+0.6
	baz=59						
MNAS				⇑iS	Sb	20 58 40.9	+0.7
	baz=59						
ULHL	Ulahol	1.46	110	⇓P	Pb	20 58 22.8	0.0
	0.9nm,0.1s,SNR=10						
ULHL	Ulahol	1.46	110	⇓iP	Pb	20 58 22.6	-0.2
	baz=11						
ULHL				⇓iS	Sb	20 58 41.5	+0.3
	baz=11						
KUU	Kurty	1.81	51	⇓iP	Pb	20 58 28.6	-0.1
	baz=51						
KUU				⇓iS	Sb	20 58 52.4	+1.4
	baz=51						
KUU	Kurty	1.81	51	⇓iP	Pb	20 58 28.6	-0.1
	1.1nm,0.2s						
KUU				⇓iS	Sb	20 58 52.4	+1.4
	9.3nm,0.2s						
TNSS	Tian-Shan	1.89	81	eP	Pb	20 58 30.2	-0.1
	baz=81						
TNSS				eS	Sb	20 58 55.0	+1.2
	baz=81						
TNSS	Tian-Shan	1.89	81	eP	Pb	20 58 30.2	-0.1
	4.8nm,0.2s						
TNSS				eS	Sb	20 58 55.0	+1.2
	3.9nm,0.5s						
KTBS	Karatobe	1.92	60	eP	Pb	20 58 30.3	-0.2
	4.0nm,0.2s						
KTBS				eS	Sb	20 58 55.2	+1.1
	7.6nm,0.4s						
MDOK	Medeo	1.98	78	eP	Pb	20 58 31.7	0.0
	baz=78						
MDOK				eS	Sb	20 58 57.4	+1.2
	baz=78						
MDOK	Medeo	1.98	78	eP	Pb	20 58 31.7	0.0
	3.6nm,0.2s						
MDOK				eS	Sb	20 58 57.4	+1.2
	5.7nm,0.4s						
CHKK	Chushkaly	2.18	59	eP	Pb	20 58 35.4	+0.4
	0.5nm,0.2s						
CHKK				eS	Sb	20 59 03.5	+1.8
	10nm,0.2s						
BTLS	Baital	2.29	354	eP	Pb	20 58 36.7	-0.1
	1.3nm,0.3s						
BTLS				eS	Sb	20 59 06.3	+1.5
	1.6nm,0.4s						
ARXS	Arharly	2.88	59	eP	Pb	20 58 48.4	+1.4
	1.1nm,0.3s						

GUC ***04*** *21:20:46.3±0.6, 21.°15S×68.°86W, h96^{km}±8^{km}, ML3.6*
ISCJB ***04*** *21:20:47.3±0.8, 21.°15S±0.°05×69.°0W±0.°2, h103^{km}±12^{km}, mb3.7/1, Error ellipse: s-maj=26.9km s-min=6.6km az=10.4*
IDC ***04*** *21:21:01.7±8.1, 19.°68S×69.°48W, h210^{km}±62^{km}, mb3.5/1, mb1 3.1/2, mb1mx2.8/37, mbtmp3.6/2, Error ellipse: s-maj=110.4km s-min=80.2km az=149.0*
ISC 04 21:20:47.7±1.1**, 21.°14S**±0.°06×**69.°0W**±0.°2**, h102**^{km}±13^{km}**, n11, σ0^{s}97**/18**, 7C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB01	IPOC Station P	0.45	282	⇑eP	Pn	21 21 03.0	-0.5
PB01				i S	Sn	21 21 15.6	+0.3
PB02	IPOC Station P	0.84	258	⇑eP	Pn	21 21 06.8	0.0
PB02				i S	Sn	21 21 22.1	+1.1
PB07	IPOC Station P	1.00	234	⇑eP	Pn	21 21 08.4	-0.1
PB07				IAML		21 21 26.5	
	comp=E,2µm,0.4s						
PB08	IPOC Station P	1.00	353	⇑eP	Pn	21 21 07.9	-0.8
PB08				i S	Sn	21 21 24.2	-0.3
PB08				IAML		21 21 25.1	
	comp=E,2µm,0.3s						
PB03	IPOC Station P	1.13	217	⇑eP	Pn	21 21 09.6	-0.3
PB03				i S	Sn	21 21 27.0	+0.3
PB03				IAML		21 21 30.5	
	comp=E,2µm,0.3s						
PB06	IPOC Station P	1.64	198	⇑eP	Pn	21 21 15.8	-0.2
PB06				i S	Sn	21 21 37.9	+0.5
PB06				IAML		21 21 41.0	
	comp=E,855nm,0.2s						
PB05	IPOC Station P	2.03	213	⇑eP	Pn	21 21 20.2	-0.6
PB05				i S	Sn	21 21 45.3	-0.8
PB05				IAML		21 21 45.8	
	comp=N,315nm,0.4s						
PB15	IPOC Station P	2.10	192	eP	Pn	21 21 21.5	-0.4
PB15				i S	Sn	21 21 48.0	0.0
LPAZ	La Paz	4.90	10	P	Pn	21 21 59.9	+0.1
	comp=N,0.5nm,0.3s,baz=194,slow=9.8,SNR=10						
LPAZ				S	Sn	21 22 45.6	-10
	comp=N,0.5nm,0.3s,baz=189,slow=14,SNR=5.6						
TORD	Torodi Ar. Bea	77.33	70	P	P	21 32 33.6	+1.8
	comp=N,0.7nm,0.4s,baz=252,slow=6.0						
MKAR	Makanchi Array	145.40	36	PKP	PKPbc	21 40 11.5	-2.4
	comp=N,0.4nm,0.6s,baz=328,slow=1.6,SNR=4.8						

TRN ***04*** *21:29:23.6, 18.°32N×62.°84W, h82^{km}, MD4.6*
TRN Felt in Antigua, St. Maarten, Anguilla,MMI III; St. Bartholomew III, St. Lucia II.
BJI ***04*** *21:29:24.7, 18.°10N×63.°37W, h96^{km}, mB5.2/4*
IDC ***04*** *21:29:24.8±0.4, 18.°11N×62.°99W, h84^{km}±3^{km}, mb4.8/32, mb1 4.9/36, mb1mx4.8/50, mbtmp5.1/36, MS3.4/33, Ms1 3.4/33, ms1mx3.4/46, Error ellipse: s-maj=7.9km s-min=5.8km az=41.0*
MOS ***04*** *21:29:24.5±0.9, 18.°16N×62.°98W, h95^{km}, mb5.1/101, Error ellipse: s-maj=5.4km s-min=4.1km az=105.9*
ISCJB ***04*** *21:29:24.9±0.2, 18.°13N±0.°02×62.°99W±0.°01, h99^{km}±2^{km}, mb5.0/425, Error ellipse: s-maj=2.9km s-min=1.7km az=27.3*
NEIC ***04*** *21:29:26.1±0.1, 18.°12N×62.°98W, h94^{km}±1^{km}, mb5.0/298, MW5.0, MD4.7(TRN), Error ellipse: s-maj=2.3km s-min=1.4km az=212.0, Moment Tensor Solution. s19 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-3.01; M$_{\theta\theta}$3.14; M$_{\phi\phi}$-0.13; M$_{r\theta}$-1.33; M$_{\theta\phi}$-0.60; M$_{\phi r}$0.18; Best double couple: M$_0$3.40000×10^{16} NP1:φ$_s$99.00000°, δ57.00000°, λ-91.00000°. NP2:φ$_s$281.00000°, δ33.00000°, λ-88.00000°. Principal axes: T 3.5200, Plg12.0000°, Azm190.0000°; N -0.2300, Plg1.0000°, Azm100.0000°; P -3.2800, Plg78.0000°, Azm5.0000°;*
NEIC Felt [V] at Lower Prince's Quarter and [IV] at Cole Bay, Duth Cul de Sac, Lowlands, Marigot, Philipsburg and Simpson Bay. Felt [IV] at Blowing Point, George Hill, Sandy Ground Village, Stoney Ground and The Valley and [III] at East End Village, Anguilla. Felt [IV] on Saint Barthelemy. Felt [IV] at Basseterre and [III] at Monkey Hill, Saint Kitts and [III] at Gingerland, Nevis. Also felt at Vieques, Puerto Rico and on Antigua, Guadeloupe, Saba, Saint Croix, Saint Eustatius, Saint John and Saint Thomas.
GCMT ***04*** *21:29:26.1±0.2, 18.°32N×62.°99W, h81^{km}±2^{km}, MW4.9/82, Moment Tensor Solution. s45,c55; s82,c123; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.24±.11; M$_{\theta\theta}$2.19±.12; M$_{\phi\phi}$0.05±.12; M$_{r\theta}$-1.59±.07; M$_{\theta\phi}$-0.06±.13; M$_{\phi r}$1.22±.07; Best double couple: M$_0$2.96900×10^{16} NP1:φ$_s$113.00000°, δ66.00000°, λ-73.00000°. NP2: φ$_s$256.00000°, δ29.00000°, λ-124.00000°. Principal axes: T 2.7750, Plg20.0000°, Azm190.0000°; N 0.3890, Plg16.0000°, Azm286.0000°; P -3.1630, Plg65.0000°, Azm52.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 04 21:29:25.2±0.3**, 18.°15N**±0.°03×**62.°99W**±0.°03**, h89**^{km}±2^{km}**, h89**^{km}**:pP-P, n1419, σ1^{s}00**/1543**, mb5.0**/437**, 49C-45D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMRT	St. Maarten	0.13	220	ePn	Pn	21 29 37.9	0.0
SMRT				eSn	Sn	21 29 47.4	+0.1
SMRT	St. Maarten	0.13	220	⇓iP	Pn	21 29 38.0	0.0
SMRT				eS	Sn	21 29 47.1	-0.2
SABA	Saba	0.58	205	ePn	Pn	21 29 41.5	+0.9
SABA				eSn	Sn	21 29 52.9	+1.0
SABA	Saba	0.58	205	⇓iP	Pn	21 29 41.5	+0.9
SABA				eS	Sn	21 29 55.2	+3.2
SEUS	St. Eustatius	0.65	180	ePn	Pn	21 29 41.9	+0.7
SEUS				eSn	Sn	21 29 54.5	+1.5
SEUS	St. Eustatius	0.65	180	⇓iP	Pn	21 29 42.0	+0.7
SEUS				eS	Sn	21 29 54.6	+1.5
BSK	Brimstone Hill	0.81	170	i P	Pn	21 29 45.0	+2.2
BSK	Brimstone Hill	0.81	170	⇓iP	Pn	21 29 45.0	+2.2
NVRH	Round Hill, Ne	1.03	159	⇓iP	Pn	21 29 46.9	+1.6
NEV	Hard Times	1.08	158	eP	Pn	21 29 46.9	+1.0
NEV	Hard Times	1.08	158	eP	Pn	21 29 46.9	+1.0
NVBH	Bath Hotel, Ne	1.09	161	eP	Pn	21 29 47.8	+1.9
ANWB	Willy Bob	1.24	113	ePn	Pn	21 29 46.8	-0.9
ANWB				eSn	Sn	21 30 02.7	-1.9
ANWB	Willy Bob	1.24	113	eP	Pn	21 29 46.8	-0.9
ANWB				eS	Sn	21 30 03.5	-1.1
ABVI	Anegada Island	1.40	294	ePn	Pn	21 29 49.5	-0.2
BPA	Boggy Peak	1.54	135	i P	Pn	21 29 51.4	-0.1
BPA	Boggy Peak	1.54	135	⇓iP	Pn	21 29 51.4	-0.1
MBWH		1.59	151	⇑iP	Pn	21 29 52.7	+0.5
MBWH				eS	Sn	21 30 13.4	+0.8
MLYT	Lee's Yard	1.61	152	eP	Pn	21 29 53.1	+0.7
MLYT				eS	Sn	21 30 15.3	+2.3
CDVI	St. Croix	1.74	257	ePn	Pn	21 29 54.9	+0.9
STVI	Saint Thomas	1.88	276	ePn	Pn	21 29 55.7	-0.1
MTP	Monte Pirata	2.44	269	ePn	Pn	21 30 03.8	+0.5
H05N1	Guadeloupe/Mar	2.59	134	P	Pn	21 30 04.9	-0.4
H05N1				S	Sn	21 30 35.2	-0.9
DEG	La Desirade	2.59	134	i P	Pn	21 30 05.2	-0.2
DEG	La Desirade	2.59	134	i P	Pn	21 30 05.2	-0.2
TBG	Guadaloupe-3	2.62	150	⇑iP	Pn	21 30 06.4	+0.7
TBG				eS	Sn	21 30 38.2	+1.5
HUMP	Col San Antoni	2.72	270	ePn	Pn	21 30 07.1	+0.1
CBYP	Canovanas	2.73	273	ePn	Pn	21 30 07.0	-0.2
MGG	Marie-Galante	2.73	144	i P	Pn	21 30 07.8	+0.6
MGG				eS	Sn	21 30 39.2	-0.3
MGG	Marie-Galante	2.73	144	⇓iP	Pn	21 30 07.8	+0.6
MGG				eS	Sn	21 30 39.2	-0.3
MDPV	Dominica, Penn	2.92	149	⇑iP	Pn	21 30 10.8	+1.0
MDPV				eS	Sn	21 30 45.2	+1.1
MDVC	Dominica, Viel	2.94	149	⇓iP	Pn	21 30 10.8	+0.8
MDVC				eS	Sn	21 30 45.4	+1.0
MDPO	Dominica; Chan	2.95	150	⇑iP	Pn	21 30 11.1	+0.9
MDPO				eS	Sn	21 30 45.9	+1.2
BBL	Barber's Block	2.99	151	i P	Pn	21 30 11.5	+0.8
BBL				eS	Sn	21 30 46.8	+1.2
BBL	Barber's Block	2.99	151	⇑iP	Pn	21 30 11.5	+0.8
BBL				eS	Sn	21 30 46.8	+1.2
SJG	San Juan	3.01	270	P	Pn	21 30 11.6	+0.7
	59nm,0.3s,baz=73,slow=12,SNR=125						
SJG				S	Sn	21 30 44.2	-1.8
	231nm,0.3s,baz=66,slow=20,SNR=6.6						
SJG				LR	LR	21 31 08.7	
	comp=Z,630nm,18.8s,baz=80,slow=35						
SJG	San Juan	3.01	270	eP	Pn	21 30 11.4	+0.6
MDN	Morne-Daniel	3.20	151	i P	Pn	21 30 15.3	+1.8
MDN	Morne-Daniel	3.20	151	⇑iP	Pn	21 30 15.3	+1.8
DLPL	La Plaine	3.26	149	eP	Pn	21 30 15.6	+1.2
DLPL				eS	Sn	21 30 52.5	+0.3
DLPL	La Plaine	3.26	149	eP	Pn	21 30 15.6	+1.2
DLPL				eS	Sn	21 30 52.5	+0.3
DBCT	Belle View Cho	3.27	151	eP	Pn	21 30 16.0	+1.6
DBCT	Belle View Cho	3.27	151	eP	Pn	21 30 16.0	+1.6
DSHT	Scott's Head	3.31	152	eP	Pn	21 30 16.7	+1.8
DSHT	Scott's Head	3.31	152	eP	Pn	21 30 16.7	+1.8
DSTT	Stowe	3.31	151	eP	Pn	21 30 16.7	+1.8
DSTT	Stowe	3.31	151	eP	Pn	21 30 16.7	+1.8
ICMP	Isla Caja de M	3.38	266	ePn	Pn	21 30 15.8	0.0
OBIP	Obispado Ponce	3.44	269	ePn	Pn	21 30 16.8	0.0
AOPR	Arecibo Observ	3.58	274	ePn	Pn	21 30 18.2	-0.5
PCM	Pelee Case Pet	3.73	153	⇑eP	Pn	21 30 21.4	+0.7
CXM	Morne La Croix	3.75	152	⇑eP	Pn	21 30 21.8	+0.7
CXM				eS	Sn	21 31 06.0	+1.7
BAMF	Morne Balai	3.76	152	⇑eP	Pn	21 30 21.8	+0.7
GBMF	Grand Be	3.77	152	⇑eP	Pn	21 30 21.8	+0.6
PML	Morne Lenard	3.77	152	⇑eP	Pn	21 30 21.8	+0.6
FDF	Fort de France	3.83	152	ePn	Pn	21 30 22.2	+0.2
FDF				eS	Sn	21 31 06.7	+0.7
FDF	Fort de France	3.83	152	⇑iP	Pn	21 30 22.5	+0.5
FDF				eS	Sn	21 31 06.7	+0.7
FDF	Fort de France	3.83	152	eP	Pn	21 30 22.2	+0.2
FDF				eS	Sn	21 31 06.7	+0.7
CRPR	Cabo Rojo, PR	3.92	269	ePn	Pn	21 30 23.3	0.0
MPR	Mayaguez	3.95	272	ePn	Pn	21 30 23.6	0.0
AGP	Aguadilla	3.96	274	ePn	Pn	21 30 22.7	-1.0
ZAM	Aeronautique	4.02	152	⇑eP	Pn	21 30 25.2	+0.6
TRMF	Trois Ilets	4.05	152	eP	Pn	21 30 25.8	+0.8
LPMF	Morne Lapointe	4.05	151	⇓eP	Pn	21 30 25.2	+0.2
BIM	Bigot	4.05	153	eP	Pn	21 30 25.9	+0.8
BIM	Bigot	4.05	153	eS	Sn	21 31 12.1	+0.6
MVM	Montagne Vaucl	4.10	150	⇓eP	Pn	21 30 26.1	+0.4
H05S1	Guadeloupe/Mar	4.24	151	P	Pn	21 30 27.8	+0.2
H05S1				S	Sn	21 31 15.2	-0.7
SLB	Belfond	4.69	156	i P	Pn	21 30 35.4	+1.7
SLB				eS	Sn	21 31 27.2	+0.3
SLB	Belfond	4.69	156	⇓iP	Pn	21 30 35.4	+1.7
SSV	Crater Summit	5.10	160	eP	Pn	21 30 41.3	+2.0
SSV	Crater Summit	5.10	160	eP	Pn	21 30 41.3	+2.0
SVV	Soufriere Volc	5.10	160	i P	Pn	21 30 41.4	+2.1
SVV	Soufriere Volc	5.10	160	⇑iP	Pn	21 30 41.4	+2.1
SVB	Belmont	5.13	161	ePn	Pn	21 30 40.7	+1.0
SVB	Belmont	5.13	161	⇑iP	Pn	21 30 40.6	+0.9
SVCV	St. Vincent, C	5.17	160	⇑iP	Pn	21 30 40.8	+0.6
FCV	Fort Charlotte	5.24	161	eP	Pn	21 30 42.8	+1.6
FCV	Fort Charlotte	5.24	161	eP	Pn	21 30 42.8	+1.6
GRSS	Sisters	5.97	167	eP	Pn	21 30 52.6	+1.6
GRSS	Sisters	5.97	167	eP	Pn	21 30 52.6	+1.6
BBGH	Gun Hill	5.97	146	ePn	Pn	21 30 51.6	+0.4
BBGH				eS	Sn	21 31 56.4	-1.8
BBGH	Gun Hill	5.97	146	eP	Pn	21 30 51.5	+0.4
GRHS	Sauteurs	6.03	167	eP	Pn	21 30 53.0	+1.0
GRHS	Sauteurs	6.03	167	eP	Pn	21 30 53.0	+1.0
BBSP	Saint Philip	6.06	145	eP	Pn	21 30 53.1	+0.7
BBSP				eS	Sn	21 31 58.1	-2.2
BBSP	Saint Philip	6.06	145	eP	Pn	21 30 53.1	+0.7
GRGR	Grenville	6.12	168	ePn	Pn	21 30 54.4	+1.2
GRGR				eS	Sn	21 32 02.2	+0.4
GRGR	Grenville	6.12	168	⇑iP	Pn	21 30 54.1	+0.9
TOSP	Speyside	7.21	160	eP	Pn	21 31 09.5	+1.4
TOSP				eS	Sn	21 32 27.5	-1.0
TOSP	Speyside	7.21	160	eP	Pn	21 31 09.5	+1.4
TRN	Trinidad (W)	7.62	168	eP	Pn	21 31 15.3	+1.8
TRN	Trinidad (W)	7.62	168	eP	Pn	21 31 15.3	+1.8
TRN	Trinidad (W)	7.62	168	eP	Pn	21 31 15.3	+1.8
TBH	Brigand Hill	7.84	166	eP	Pn	21 31 17.8	+1.1
TBH	Brigand Hill	7.84	166	eP	Pn	21 31 17.8	+1.1
TBH	Brigand Hill	7.84	166	eP	Pn	21 31 17.8	+1.1
TPP	Pointe-a-Pierr	7.93	169	eP	Pn	21 31 19.9	+2.1
TPP	Pointe-a-Pierr	7.93	169	eP	Pn	21 31 19.9	+2.1
TPP	Pointe-a-Pierr	7.93	169	eP	Pn	21 31 19.9	+2.1
PCRV	Puerto La Cruz	8.09	192	P	Pn	21 31 21.7	+1.7
	24nm,0.3s,baz=358,slow=2.8,SNR=107						
PCRV				LR	LR	21 35 13.7	
	comp=Z,530nm,19.0s,baz=344,slow=43						
GRTK	Grand Turk	8.36	295	ePn	Pn	21 31 20.6	-3.1
GRTK				eSn	Sn	21 32 45.5	-11
GTBY	Guantanamo Bay	11.60	281	ePn	Pn	21 32 04.1	-3.7
GTBY				eSn	Sn	21 34 05.7	-10
SDV	Santo Domingo	11.83	220	P	Pn	21 32 12.0	+0.8
	6.1nm,0.3s,baz=49,slow=9.6,SNR=56						
SDV				S	Sn	21 34 18.0	-3.5
	5.2nm,0.3s,baz=255,slow=23,SNR=9.2						
SDV	Santo Domingo	11.83	220	ePn	Pn	21 32 12.0	+0.8
SDV				eSn	Sn	21 34 20.3	-1.2
SDV	Santo Domingo	11.83	220	eP	Pn	21 32 11.9	+0.8
CODC	Agustˆ›n Codaz	13.02	233	eP	Pn	21 32 26.8	0.0
OCAC	Ocana	14.07	227	eP	Pn	21 32 39.8	-1.0
BBSR	BB Station	14.24	354	ePn	Pn	21 32 37.4	-5.3
	94nm,0.6s						
BBSR				eSn	Sn	21 35 00.4	-19
PAMC	Pamplona, Colo	14.32	223	eP	Pn	21 32 44.5	+0.3
SJCC	San Jacinto, C	14.39	237	eP	P	21 32 47.5	-1.6
TAMC	Tame, Arauca	14.47	218	eP	Pn	21 32 46.8	+0.9
BRRC	Barranca, Sant	15.15	225	eP	Pn	21 32 54.8	+0.3
BARC	Barichara	15.19	222	eP	Pn	21 32 55.0	-0.3
MOTC	Monteria, Cord	15.44	235	eP	P	21 32 59.6	-1.2
RUSC	La Rusia	15.67	220	ePn	Pn	21 33 01.7	+0.2
	52nm,0.6s						
RUSC	La Rusia	15.67	220	eP	Pn	21 33 01.5	0.0
ZARC	Zaragoza, Cauc	15.68	229	eP	Pn	21 32 59.5	-1.7
YOPC	Yopal, Colombi	15.71	217	eP	P	21 33 03.1	-0.7
PTBC	PUERTO BERRIO,	16.07	226	eP	Pn	21 33 04.8	-1.3
CAPC	Capurgana	16.86	238	eP	P	21 33 17.2	+0.7
CHIC	Chingaza	17.06	219	eP	Pn	21 33 18.8	+0.1
HELC	Santa Helena	17.06	227	ePn	Pn	21 33 18.6	0.0
	265nm,0.8s						
HELC				eSn	Sn	21 36 29.3	+1.0
HELC	Santa Helena	17.06	227	eP	P	21 33 19.0	-0.1
NORC	Norcasia	17.06	224	eP	Pn	21 33 18.3	-0.1
ROSC	El Rosal	17.26	221	P	P	21 33 21.5	+0.2
	8.3nm,0.3s,baz=46,slow=5.2,SNR=23						
ROSC				LR	LR	21 41 04.9	
	comp=Z,432nm,20.5s,baz=36,slow=41						
ROSC	El Rosal	17.26	221	ePn	P	21 33 22.2	+1.0
	67nm,0.8s						
ROSC				eS	S	21 36 38.0	+1.5
ROSC	El Rosal	17.26	221	eP	P	21 33 22.8	+1.5
VILC	Villavicencio,	17.45	218	eP	Pn	21 33 23.4	+0.2
GUYC	Guyana, Colomb	17.66	225	eP	P	21 33 24.5	-1.4
TOLC	Tolima	18.09	223	eP	P	21 33 30.0	-0.4
060A	Indiantown	18.30	302	P	Pn	21 33 33.3	+0.1
	baz=116						
SOLC	Bahia Solano	18.40	232	eP	Pn	21 33 35.5	+1.0
PRAC	Prado	18.48	220	eP	P	21 33 34.1	-0.3
	52nm,0.8s						
PRAC	Prado	18.48	220	eP	P	21 33 34.1	-0.3
PLMC	San Josˆ' del	18.50	226	eP	P	21 33 34.8	+0.1
BCIP	Isla Barro Col	18.64	244	eP	P	21 33 36.1	+0.1
	55nm,0.8s						
BCIP	Isla Barro Col	18.64	244	eP	P	21 33 35.3	-0.7
PTGA	Pitinga	19.00	171	P	P	21 33 40.6	+0.6
	4.1nm,0.3s,baz=358,slow=14,SNR=42						
PTGA	Pitinga	19.00	171	eP	P	21 33 40.4	+0.4
	105nm,0.6s						
859A	Kempfer Cattle	19.18	304	P	P	21 33 42.8	+0.9
	baz=117						
YOTC	Yotoco, Valle	19.21	224	eP	P	21 33 41.5	-1.0
058A	Arcadia	19.48	300	P	P	21 33 46.0	+0.8
	baz=113						
DWPF	Disney Wildern	19.62	304	P	P	21 33 47.7	+1.0
	baz=117						
BETC	Betania	19.63	220	eP	P	21 33 44.9	-2.1
958A	Wauchula	19.66	302	P	P	21 33 47.8	+0.7
	baz=115						
AZU	Azuero	19.72	241	eP	P	21 33 47.3	-0.6
HORQ	Saladito	19.77	224	eP	P	21 33 47.0	-1.8
MARP	Paez Belalcaza	19.82	221	eP	P	21 33 48.8	-0.5
758A	Lake Helen	19.84	306	P	P	21 33 49.9	+0.9
	baz=119						
957A	Wimauma	20.08	302	P	P	21 33 52.2	+0.5
	baz=114						
957A	Wimauma	20.08	302	epP	pP	21 34 11.5	+2.5
658A	Bunnell	20.11	307	P	P	21 33 52.3	+0.4
	baz=120						
857A	Zephyrhills	20.32	303	P	P	21 33 55.1	+0.8
	baz=116						
757A	Oxford	20.50	305	P	P	21 33 57.3	+1.1
	baz=118,SNR=8.9						
PCON	Cinco Dias	20.50	221	eP	P	21 33 57.0	+0.1
POPC	Popayan, Colom	20.51	222	eP	P	21 33 52.9	-3.8
FLOC	Florencia	20.63	218	eP	P	21 33 54.2	-3.5
657A	Interlachen	20.65	307	P	P	21 33 58.8	+1.0
	baz=119,SNR=6.1						
557A	Orange Park	20.76	308	P	P	21 33 59.8	+0.8
	baz=121,SNR=6.2						
656A	Willston	21.06	306	P	P	21 34 03.3	+1.1
	baz=118,SNR=5.5						
GRGC	Isla de Gorgon	21.16	226	eP	P	21 34 03.0	-0.4
556A	Lake Butler	21.26	307	P	P	21 34 04.8	+0.5
	baz=120						
CSU	Charleston Sou	21.30	317	eP	P	21 34 05.1	+0.3
257A	Skidaway Islan	21.32	314	P	P	21 34 06.8	+1.8
	baz=126						
RGRS	Roger Stewart	21.33	317	eP	P	21 34 06.0	+0.9
	2µm,0.6s						
456A	Hilliard	21.34	309	P	P	21 34 05.8	+0.6
	baz=122						
456A	Hilliard	21.34	309	eP	P	21 34 05.3	+0.1
	156nm,0.6s						
CRUC	La Cruz	21.43	221	eP	P	21 34 06.2	-0.6
NHSC	New Hope	21.45	317	P	P	21 34 06.8	+0.5

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           baz=130,SNR=5.3
NHSC  New Hope            21.45 317 eP    P      21 34 07.0 +0.7
           104nm,1.0s
NHSC                                eS    S      21 37 57.8  -1.5
CNNC  Cliffs of the       21.56 325  P    P      21 34 08.2 +0.7
           baz=138
655A  Horseshoe Beac      21.68 305  P    P      21 34 09.7 +0.9
           baz=117
356A  Blackshear          21.73 311  P    P      21 34 09.7 +0.4
           baz=123
555A  McAlpin             21.74 307  P    P      21 34 10.3 +0.8
           baz=119
555A  McAlpin             21.74 307 eP    P      21 34 10.1 +0.7
           63nm,0.6s
256A  Glennville          21.92 312  P    P      21 34 11.8 +0.4
           baz=125
GCUF  Volcan Galeras      21.95 222 eP    P      21 34 13.0 +0.7
156A  Sylvania            22.04 314  P    P      21 34 13.1 +0.5
           baz=127,SNR=8.5
455A  Stateville          22.09 308  P    P      21 34 13.8 +0.6
           baz=120,SNR=6.5
355A  Pearson             22.27 310  P    P      21 34 15.8 +0.8
           baz=122
554A  Perry               22.27 306  P    P      21 34 16.0 +0.9
           baz=118
255A  Hazlehurst          22.31 312  P    P      21 34 16.5 +1.0
           baz=124,SNR=6.9
255A  Hazlehurst          22.31 312 eS    S      21 38 15.2 +0.2
CMBC  Cumbal              22.47 222 eP    P      21 34 16.1  -1.7
454A  Quitman             22.53 308  P    P      21 34 18.6 +0.7
           baz=119
JTS   JuntasAbangare      22.66 253 eP    P      21 34 19.6 +0.2
           14nm,0.6s
JTS   JuntasAbangare      22.66 253 eP    P      21 34 19.6 +0.2
JTS                                  pmax pmax
           comp=Z,14nm,0.6s
155A  Kite                22.69 313  P    P      21 34 20.5 +1.0
           baz=125,SNR=12
Z55A  Blythe              22.81 315  P    P      21 34 21.8 +1.1
           baz=127,SNR=5.5
TIGA  Tifton              22.86 309  P    P      21 34 22.1 +0.8
           baz=121,SNR=9.3
TIGA  Tifton              22.86 309 eP    P      21 34 22.6 +1.3
           comp=Z,68nm,0.9s
JSC   Jenkinsville        22.89 318 eP    P      21 34 21.6 +0.1
           comp=Z,27nm,0.6s
JSC   Jenkinsville        22.89 318 eP    P      21 34 21.6 +0.1
JSC                                  pmax pmax
           comp=Z,27nm,0.6s
254A  Abbeville           22.90 311  P    P      21 34 22.2 +0.6
           baz=122,SNR=8.3
453A  Whigham             23.12 307  P    P      21 34 24.6 +0.9
           baz=118,SNR=6.6
453A  Whigham             23.12 307 eP    P      21 34 24.1 +0.3
           comp=Z,162nm,1.4s
154A  Montrose            23.13 312  P    P      21 34 24.9 +1.0
           baz=124,SNR=6.5
154A  Montrose            23.13 312 eP    P      21 34 25.0 +1.1
154A                                epP   pP     21 34 41.1  -1.0
URVA  University of       23.18 330 eP    P      21 34 24.9 +0.7
URVA                                eS    S      21 38 36.6 +7.7
353A  Camilla             23.28 308  P    P      21 34 25.9 +0.7
           baz=120,SNR=7.8
Z54A  Sparta              23.30 314  P    P      21 34 26.2 +0.7
           baz=125,SNR=17
OTAV  Otavalo             23.41 222 eP    P      21 34 27.4 +0.3
           comp=Z,67nm,1.1s
OTAV                                eS    S      21 38 31.2  -2.7
OTAV  Otavalo             23.41 222 eP    P      21 34 25.9  -1.2
OTAV  Otavalo             23.41 222 eP    P      21 34 27.4 +0.3
OTAV                                eS    S      21 38 31.2  -2.7
OTAV                                 pmax pmax
           comp=Z,67nm,1.1s
KMSC  Kings Mountain      23.50 320  P    P      21 34 28.0 +0.8
           baz=132,SNR=11
Y54A  Tignall             23.56 315  P    P      21 34 28.4 +0.6
           baz=127,SNR=17
253A  Americus            23.57 310  P    P      21 34 28.7 +0.8
           baz=121,SNR=5.2
253A  Americus            23.57 310 eP    P      21 34 28.9 +1.0
           comp=Z,68nm,0.9s
CBN   Corbin Frederi      23.61 331  P    P      21 34 29.3 +1.1
           baz=144,SNR=6.7
CBN   Corbin Frederi      23.61 331 eP    P      21 34 28.4 +0.3
           comp=Z,10nm,0.4s
IP03  Louisa              23.76 329 eP    P      21 34 30.0 +0.4
           comp=Z,34nm,0.9s
Z53A  Monticello          23.83 313  P    P      21 34 31.1 +0.9
           baz=124,SNR=14
GOGA  Godfrey             23.83 314  P    P      21 34 31.1 +0.9
           baz=125,SNR=21
GOGA  Godfrey             23.83 314 eP    P      21 34 30.8 +0.6
           comp=Z,30nm,0.8s
GOGA                                eLg   Lg     21 38 55.8
GOGA  Godfrey             23.83 314 eP    P      21 34 30.8 +0.6
GOGA                                 pmax pmax
           comp=Z,30nm,0.8s
IP04  Greensprings        23.86 329 eP    P      21 34 31.1 +0.7
IP04                                epP   pP     21 34 48.8  -1.0
352A  Blakely             23.87 308  P    P      21 34 31.5 +0.9
           baz=119,SNR=7.0
352A  Blakely             23.87 308 eP    P      21 34 31.9 +1.3
352A                                epP   pP     21 34 52.5 +2.6
252A  Lumpkin             23.98 309  P    P      21 34 32.5 +1.0
           baz=120,SNR=12
Y53A  Monroe              24.16 314  P    P      21 34 34.1 +0.9
           baz=125,SNR=22
PSUB  Penn St. - Bra      24.23 336 eP    P      21 34 34.4 +0.6
PSUB                                epP   pP     21 34 57.3 +3.8
351A  Pinckard            24.29 307  P    P      21 34 35.3 +0.9
           baz=117,SNR=6.6
152A  Waverly Hall        24.31 311  P    P      21 34 35.6 +1.1
           baz=121,SNR=21
152A  Waverly Hall        24.31 311 eP    P      21 34 35.6 +1.1
           comp=Z,37nm,0.8s
X53A  Estanollee          24.35 316  P    P      21 34 36.1 +1.1
           baz=127,SNR=19
SDMD  Soldier's Deli      24.36 333 eP    P      21 34 36.0 +1.1
SDMD                                epP   pP     21 34 57.8 +3.1
Z52A  Williamson          24.37 312  P    P      21 34 36.0 +0.9
           baz=123,SNR=5.6
BLA   Blacksburg          24.40 325  P    P      21 34 36.3 +1.0
           baz=137,SNR=16
BLA   Blacksburg          24.40 325 eP    P      21 34 36.3 +1.0
           comp=Z,72nm,0.8s
BLA   Blacksburg          24.40 325 eP    P      21 34 36.3 +1.0
BLA                                  pmax pmax
           comp=Z,72nm,0.8s
BG3   Lake Jocassee       24.41 317 eP    P      21 34 37.1 +1.7
           comp=Z,53nm,0.9s
CPNY  Central Park        24.46 340 eP    P      21 34 37.4 +1.6
           comp=Z,49nm,0.6s
Y52A  Lilburn             24.49 314  P    P      21 34 37.3 +1.0
           baz=125,SNR=17
Y52A  Lilburn             24.49 314 eP    P      21 34 37.2 +1.0
           comp=Z,30nm,0.7s
251A  Midway              24.53 309  P    P      21 34 37.5 +1.0
           baz=119,SNR=21
BRNJ  Basking Ridge       24.57 338 eP    P      21 34 38.5 +1.8
           comp=Z,53nm,0.5s
YLE   Yale                24.61 342 eP    P      21 34 38.8 +1.6
           comp=Z,123nm,1.1s
YLE                                 epP   pP     21 34 57.2 +0.1
PAL   Palisades           24.64 340  P    P      21 34 38.2 +0.8
           baz=154,SNR=13
PAL   Palisades           24.64 340 eP    P      21 34 38.3 +0.9
           comp=Z,179nm,0.6s
PAL   Palisades           24.64 340 eP    P      21 34 38.3 +0.9
PAL                                  pmax pmax
           comp=Z,179nm,0.6s
MVL   Millersville        24.65 335 eP    P      21 34 38.6 +1.1
           comp=Z,40nm,0.8s
W53A  Cullowhee           24.67 317  P    P      21 34 39.0 +1.1
           baz=128,SNR=36
151A  Opelika             24.68 310  P    P      21 34 38.9 +0.9
           baz=120,SNR=15
V53A  Saluda              24.76 319  P    P      21 34 39.6 +1.0
           baz=130,SNR=21
LUPA  Lehigh Univers      24.79 337 eP    P      21 34 40.1 +1.3
           comp=Z,5.7nm,0.6s
BRYW  Bryant College      24.79 345 eP    P      21 34 40.6 +1.8
           comp=Z,21nm,0.6s
X52A  Dahlonega           24.80 315  P    P      21 34 40.0 +0.9
           baz=126,SNR=9.3
450A  Crestview           24.84 305  P    P      21 34 39.8 +0.4
           baz=115
350A  Dozier              24.91 306  P    P      21 34 40.7 +0.7
           baz=117
ODNJ  Ogdensburg          24.94 339 eP    P      21 34 41.2 +1.1
           comp=Z,63nm,0.6s
Z51A  Franklin            24.97 312  P    P      21 34 41.6 +0.9
           baz=122,SNR=10
U53A  Fall Branch         25.06 320  P    P      21 34 42.3 +0.9
           baz=131,SNR=14
BCX   Boston College      25.09 346 eP    P      21 34 42.6 +1.1
           comp=Z,52nm,1.2s
250A  Grady               25.11 308  P    P      21 34 42.8 +0.9
           baz=118,SNR=11
250A  Grady               25.11 308 eP    P      21 34 42.9 +1.0
           comp=Z,133nm,1.4s
W52A  Murphy              25.12 316  P    P      21 34 42.8 +0.9
           baz=127
W52A  Murphy              25.12 316 eP    P      21 34 43.2 +1.2
           comp=Z,24nm,0.8s
WES   Weston              25.18 345 eP    P      21 34 43.4 +1.1
           comp=Z,37nm,1.0s
WES   Weston              25.18 345 eP    P      21 34 43.4 +1.1
WES                                  pmax pmax
           comp=Z,37nm,1.0s
Y51A  Rockmart            25.21 313  P    P      21 34 43.7 +0.9
           baz=123,SNR=11
N59A  State Game Lan      25.21 337  P    P      21 34 43.5 +0.8
           baz=150,SNR=7.4
N59A  State Game Lan      25.21 337 eP    P      21 34 43.8 +1.1
           comp=Z,88nm,0.6s
150A  Eclectic            25.23 309  P    P      21 34 43.9 +1.0
           baz=119,SNR=12
QUA2  Belchertown         25.34 344 eP    P      21 34 44.9 +1.1
           comp=Z,22nm,0.8s
HRV   Adam Dziewonsk      25.35 345  P    P      21 34 44.7 +0.8
           baz=161
HRV   Adam Dziewonsk      25.35 345 eP    P      21 34 44.1 +0.2
           comp=Z,58nm,0.8s
HRV   Adam Dziewonsk      25.35 345 eP    P      21 34 44.1 +0.2
HRV                                  pmax pmax
           comp=Z,58nm,0.8s
TKL   Tuckaleechee C      25.36 318  P    P      21 34 44.2 +0.1
           comp=Z,12nm,0.7s,baz=134,slow=9.4,SNR=18
TKL                                  LR   LR     21 44 24.9
           comp=Z,100nm,21.4s,baz=126,slow=35
TKL   Tuckaleechee C      25.36 318 eP    P      21 34 45.1 +1.0
           comp=Z,56nm,0.8s
TKL   Tuckaleechee C      25.36 318 eP    P      21 34 45.1 +1.0
TKL                                  pmax pmax
           comp=Z,56nm,0.8s
V52A  Sevierville         25.36 318  P    P      21 34 44.7 +0.6
           baz=129,SNR=12
V52A  Sevierville         25.36 318 eP    P      21 34 44.6 +0.6
           comp=Z,26nm,0.8s
X51A  Calhoun             25.43 314  P    P      21 34 45.7 +0.9
           baz=125
X51A  Calhoun             25.43 314 eP    P      21 34 45.9 +1.1
           comp=Z,36nm,0.6s
Z50A  Ashland             25.48 311  P    P      21 34 45.8 +0.6
           baz=121,SNR=31
Z50A  Ashland             25.48 311 eP    P      21 34 45.9 +0.6
           comp=Z,36nm,0.8s
Y50A  Piedmont            25.67 312  P    P      21 34 47.6 +0.6
           baz=122,SNR=20
CPCT  Cooper Cave         25.72 316 eP    P      21 34 48.5 +1.2
           comp=Z,23nm,0.7s
249A  Camden              25.76 307  P    P      21 34 48.6 +0.9
           baz=117,SNR=6.1
KSPA  Keystone Colle      25.77 338 eP    P      21 34 48.9 +1.2
           comp=Z,35nm,0.8s
TZTN  Tazewell            25.77 319  P    P      21 34 48.7 +0.8
           baz=130,SNR=14
TZTN  Tazewell            25.77 319 eP    P      21 34 48.6 +0.8
           comp=Z,27nm,0.8s
149A  Jones               25.80 308  P    P      21 34 48.5 +0.5
           baz=118
T52A  Hallie              25.80 321  P    P      21 34 49.0 +0.9
           baz=132,SNR=9.0
O56A  Blue Knob Stat      25.82 332  P    P      21 34 49.2 +0.9
           baz=144,SNR=9.9
O56A  Blue Knob Stat      25.82 332 eP    P      21 34 49.8 +1.6
           comp=Z,42nm,0.6s
V51A  Loudon              25.82 317  P    P      21 34 49.1 +0.8
           baz=128,SNR=9.5
V51A  Loudon              25.82 317 eP    P      21 34 49.0 +0.8
           comp=Z,41nm,1.0s
SSPA  Standing Stone      25.82 333  P    P      21 34 48.9 +0.7
           baz=146
SSPA  Standing Stone      25.82 333 eP    P      21 34 49.0 +0.8
           comp=Z,30nm,0.8s
Z49A  Columbiana          25.89 310  P    P      21 34 49.7 +0.8
           baz=120,SNR=22
X50B  Fort Payne          25.92 313  P    P      21 34 49.9 +0.7
           baz=123
MCWV  Mont Chateau        25.93 329 eP    P      21 34 50.3 +1.1
           comp=Z,28nm,0.9s
W50A  Signal Mountai      26.10 315  P    P      21 34 51.8 +1.0
           baz=125,SNR=8.7
W50A  Signal Mountai      26.10 315 eP    P      21 34 51.9 +1.0
           comp=Z,24nm,0.6s
TRY   Troy                26.13 342 eP    P      21 34 52.2 +1.3
           comp=Z,96nm,0.9s
Y49A  Blount Mountai      26.14 311  P    P      21 34 52.0 +0.8
           baz=121,SNR=7.5
Y49A  Blount Mountai      26.14 311 eP    P      21 34 52.0 +0.8
           comp=Z,20nm,0.8s
LRAL  Lakeview Retre      26.15 309  P    P      21 34 52.2 +0.9
           baz=119,SNR=29
LRAL  Lakeview Retre      26.15 309 eP    P      21 34 52.4 +1.1
           comp=Z,34nm,0.8s
V50A  Pikevile            26.23 316  P    P      21 34 53.0 +1.0
           baz=126,SNR=17
S52A  Salyersville        26.23 322  P    P      21 34 52.7 +0.7
           baz=132,SNR=17
248A  Dixon Mills         26.28 307  P    P      21 34 53.3 +0.9
           baz=116
148A  Greensboro          26.40 308  P    P      21 34 54.2 +0.7
           baz=117
BINY  Binghamton          26.41 338  P    P      21 34 54.5 +1.0
           baz=151,SNR=11
BINY  Binghamton          26.41 338 eP    P      21 34 54.6 +1.1
           comp=Z,43nm,1.1s
X49A  Woodville           26.42 313  P    P      21 34 54.4 +0.8
           baz=122,SNR=16
S51A  Beattyville         26.51 321  P    P      21 34 55.3 +0.8
           baz=132,SNR=41
SWET  Sewanee             26.53 314 eP    P      21 34 55.9 +1.2
           comp=Z,13nm,0.7s
W49A  Belvidere           26.70 314  P    P      21 34 57.0 +0.8
           baz=123
Y48A  Jasper              26.71 311  P    P      21 34 56.6 +0.4
           baz=120,SNR=8.1
ACCN  Adirondack Com      26.73 343 eP    P      21 34 57.6 +1.3
           comp=Z,26nm,0.6s
Z48A  Northport           26.73 309  P    P      21 34 56.9 +0.5
           baz=119,SNR=9.2
EMMW  East Machias        26.75 353 eP    P      21 34 56.8 +0.4
           comp=Z,28nm,0.8s
V49A  McMinnville         26.82 315  P    P      21 34 58.0 +0.7
           baz=125,SNR=6.6
T50A  Nancy               26.88 319  P    P      21 34 58.9 +1.1
           baz=129,SNR=34
X48A  Hartselle           26.89 312  P    P      21 34 58.6 +0.7
           baz=121,SNR=6.7
X48A  Hartselle           26.89 312 eP    P      21 34 58.9 +1.0
           comp=Z,17nm,0.8s
WVL   Waterville          26.92 349 eP    P      21 34 59.6 +1.6
           comp=Z,26nm,1.0s
SAML  Samuel              26.93 180 eP    P      21 34 57.1  -1.3
           comp=Z,14nm,0.8s
SAML  Samuel              26.93 180 eP    P      21 34 57.1  -1.3
SAML                                 pmax pmax
           comp=Z,14nm,0.8s
247A  Quitman             26.93 306  P    P      21 34 59.4 +1.2
           baz=115,SNR=5.5
147A  Livingston          26.94 307  P    P      21 34 59.1 +0.8
           baz=116,SNR=10
147A  Livingston          26.94 307 eP    P      21 34 59.3 +1.0
           comp=Z,64nm,0.7s
N54A  Moraine State       27.02 331  P    P      21 35 00.2 +1.2
           baz=142,SNR=7.2
N54A  Moraine State       27.02 331 eP    P      21 35 00.2 +1.2
           comp=Z,29nm,0.8s
Z47A  Carrollton          27.02 309  P    P      21 34 60.0 +0.9
           baz=118,SNR=16
LBNH  Lisbon              27.07 346  P    P      21 35 00.7 +1.2
           baz=161,SNR=7.3
LBNH  Lisbon              27.07 346 eP    P      21 35 01.0 +1.6
           comp=Z,23nm,0.7s
LBNH  Lisbon              27.07 346 eP    P      21 35 01.0 +1.6
LBNH                                 pmax pmax
           comp=Z,23nm,0.7s
U49A  Red Boiling Sp      27.17 317  P    P      21 35 01.2 +0.8
           baz=126,SNR=14
W48A  Pulaski             27.17 313  P    P      21 35 01.4 +0.9
           baz=122,SNR=10
Y47A  UCPARC, Winfie      27.20 310  P    P      21 35 01.5 +0.9
           baz=119,SNR=7.2
M54A  Oil Creek Stat      27.31 332  P    P      21 35 02.6 +1.0
           baz=144
M54A  Oil Creek Stat      27.31 332 eP    P      21 35 02.9 +1.3
           comp=Z,36nm,0.6s
T49A  Edmonton            27.37 318  P    P      21 35 03.0 +0.8
           baz=128,SNR=8.1
V48A  Smith Brothers      27.42 314  P    P      21 35 03.6 +0.9
           baz=124
V48A  Smith Brothers      27.42 314 eP    P      21 35 03.5 +0.9
           comp=Z,24nm,1.1s
NCB   Newcomb             27.43 342 eP    P      21 35 03.9 +1.3
           comp=Z,33nm,0.9s
X47A  Russelville         27.50 311  P    P      21 35 04.2 +0.8
           baz=120,SNR=32
PKME  Peaks-Kenny Pk      27.54 350  P    P      21 35 04.9 +1.3
           baz=167
PKME  Peaks-Kenny Pk      27.54 350 eP    P      21 35 03.6 +0.1
           comp=Z,83nm,1.8s
MMNY  Mt. Morris Dam      27.59 336 eP    P      21 35 05.2 +1.2
           comp=Z,105nm,0.6s
ALLY  Alegheny Colle      27.64 332 eP    P      21 35 05.4 +0.9
           comp=Z,36nm,0.8s
U48A  Cassie Pea, Po      27.67 316  P    P      21 35 05.5 +0.7
           baz=125
W47A  Westpoint           27.69 313  P    P      21 35 05.9 +0.8
           baz=122,SNR=6.6
PLAL  Pickwick Lake       27.89 312 eP    P      21 35 07.8 +0.9
           comp=Z,47nm,1.3s
CCIG  Comitan             27.89 271 eP    P      21 35 07.6 +0.3
           comp=Z,34nm,0.8s
Y46A  Houston             27.92 309  P    P      21 35 07.9 +0.8
           baz=118,SNR=16
ERPA  Erie                27.94 332  P    P      21 35 08.1 +0.9
           baz=144
ERPA  Erie                27.94 332 eP    P      21 35 08.2 +1.0
           comp=Z,33nm,0.6s
V47A  Nunnelly            27.95 314  P    P      21 35 07.8 +0.5
           baz=123,SNR=7.6
ACSO  Alum Creek Sta      27.96 326  P    P      21 35 08.3 +0.9
           baz=136,SNR=6.7
ACSO  Alum Creek Sta      27.96 326 eP    P      21 35 08.4 +1.1
           comp=Z,97nm,1.5s
P50A  Jamestown           27.96 324  P    P      21 35 08.4 +0.9
           baz=134,SNR=7.1
S48A  Wiedeman Farm,      28.03 319  P    P      21 35 08.7 +0.6
           baz=128
X46A  Booneville          28.04 311  P    P      21 35 09.0 +0.8
           baz=119,SNR=6.9
LONY  Lake Ozonia         28.12 342  P    P      21 35 09.9 +1.1
           baz=156,SNR=9.8
LONY  Lake Ozonia         28.12 342 eP    P      21 35 09.7 +0.9
           comp=Z,17nm,0.9s
U47A  Clarksville         28.12 315  P    P      21 35 09.5 +0.6
           baz=124,SNR=6.3
MEDO  Medina              28.17 336  P    P      21 35 10.3 +1.1
           baz=148
145A  Houston Renfro      28.17 306  P    P      21 35 10.2 +0.8
           baz=114
W46A  Michie              28.18 312  P    P      21 35 10.2 +0.8
           baz=120
O50A  Cable               28.24 325  P    P      21 35 11.0 +1.0
           baz=135,SNR=8.5
T47A  Sharon Grove        28.31 316  P    P      21 35 11.1 +0.5
           baz=125,SNR=5.5
T47A  Sharon Grove        28.31 316 eP    P      21 35 11.2 +0.7
           comp=Z,13nm,0.8s
Z45A  Winona              28.32 308  P    P      21 35 11.1 +0.5
           baz=116
Z45A  Winona              28.32 308 eP    P      21 35 11.7 +1.1
           comp=Z,53nm,0.9s
WVT   Waverly             28.32 314  P    P      21 35 11.0 +0.4
           baz=123
WVT   Waverly             28.32 314 eP    P      21 35 11.0 +0.4
           comp=Z,11nm,0.6s
WVT   Waverly             28.32 314 eP    P      21 35 11.0 +0.4
WVT                                  pmax pmax
           comp=Z,11nm,0.6s
V46A  Holladay            28.34 313  P    P      21 35 11.1 +0.3
           baz=122,SNR=6.2
R48A  Northridge Ran      28.38 320  P    P      21 35 12.3 +1.2
           baz=129,SNR=14
Y45A  Yeager Farm, C      28.42 309  P    P      21 35 12.5 +0.9
           baz=117
N50A  Nevada              28.44 327  P    P      21 35 12.3 +0.7
           baz=137,SNR=6.2
WCI   Wyandotte Cave      28.53 319  P    P      21 35 13.6 +1.1
           baz=128
WCI   Wyandotte Cave      28.53 319 eP    P      21 35 13.0 +0.5
           comp=Z,30nm,0.9s
WCI   Wyandotte Cave      28.53 319 eP    P      21 35 13.0 +0.5
WCI                                  pmax pmax
           comp=Z,30nm,0.9s
X45A  UM Field Stati      28.57 310  P    P      21 35 13.4 +0.6
           baz=118,SNR=9.1
OXF   Oxford              28.62 310  P    P      21 35 14.0 +0.6
           baz=118,SNR=12
OXF   Oxford              28.62 310 eP    P      21 35 13.3   0.0
OXF   Oxford              28.62 310 eP    P      21 35 13.3   0.0
TYNO  Tyneside            28.68 334  P    P      21 35 14.0 +0.3
           baz=145
R47A  Wooly Knot Far      28.72 319  P    P      21 35 14.8 +0.7
           baz=128,SNR=15
PQI   Presque Isle        28.74 353 eP    P      21 35 15.4 +1.2
           comp=Z,66nm,1.9s
W45A  Hickory Valley      28.77 311  P    P      21 35 15.2 +0.6
           baz=119
WLVO  Wesleyville         28.79 337  P    P      21 35 15.1 +0.5
           baz=148
DRCO  St. Marys Ceme      28.86 336  P    P      21 35 16.1 +0.8
           baz=148
DRWO  Darlington Wes      28.87 336  P    P      21 35 16.0 +0.6
           baz=148
V45A  Humboldt            28.90 313  P    P      21 35 16.5 +0.8
           baz=121
Y44A  Strider, Charl      28.96 308  P    P      21 35 17.1 +0.7
           baz=116
DELO  Deloro Mine         29.01 338  P    P      21 35 16.6  -0.1
           baz=150
Q47A  Bedord North L      29.05 320  P    P      21 35 18.1 +1.0
           baz=129,SNR=8.5
U45A  Rockin P Farm,      29.07 314  P    P      21 35 18.2 +0.9
           baz=122
PKRO  Pickering           29.08 336  P    P      21 35 18.1 +0.8
           baz=147
S46A  Don Dixon Farm      29.11 317  P    P      21 35 18.3 +0.7
           baz=125,SNR=19
ALFO  Alfred              29.13 343  P    P      21 35 18.9 +1.3
           baz=156
UTMT  University of       29.14 314 eP    P      21 35 19.4 +1.5
           comp=Z,170nm,1.1s
ORIO  Orleans, Innes      29.15 342  P    P      21 35 18.8 +0.9
           baz=155
ACTO  Acton               29.19 334  P    P      21 35 18.6 +0.4
           baz=145
USIN  University of       29.24 317 eP    P      21 35 19.9 +1.2
           comp=Z,49nm,0.7s
BLO   Bloomington         29.26 321 eP    P      21 35 20.1 +1.2
           comp=Z,41nm,0.7s
BLO   Bloomington         29.26 321 eP    P      21 35 20.1 +1.2
BLO                                  pmax pmax
           comp=Z,41nm,0.7s
PLVO  Plevna              29.28 339  P    P      21 35 19.8 +0.7
           baz=152
R46A  Gibon Southern      29.29 318  P    P      21 35 20.3 +1.2
           baz=126,SNR=12
P47A  Martinsville        29.31 321  P    P      21 35 19.9 +0.5
           baz=130,SNR=11
143A  Socs Landing,       29.36 305 eP    P      21 35 20.3 +0.5
143A                                epP   pP     21 35 42.1 +2.0
ELFO  Elginfield          29.39 332  P    P      21 35 20.7 +0.7
           baz=143
BANO  Bancroft            29.56 338  P    P      21 35 22.3 +0.8
           baz=150
TRQ   Mont Tremblant      29.59 344 eP    P      21 35 22.5 +0.7
S45A  Carrier Mills       29.67 316  P    P      21 35 23.3 +0.7
           baz=124,SNR=18
Q46A  CEJHS Indians,      29.68 320  P    P      21 35 23.7 +1.1
           baz=128,SNR=7.1
O47A  Sheridan            29.73 323  P    P      21 35 23.7 +0.5
           baz=131,SNR=19
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SADO	Sadowa comp=Z,30nm,0.9s,baz=160,slow=8.4,SNR=16	29.79	336	P	P	21 35 23.7	+0.2
AAM	Ann Arbor baz=138	29.82	328	P	P	21 35 24.5	+0.7
AAM	Ann Arbor comp=Z,78nm,1.4s	29.82	328	*e*P	P	21 35 24.5	+0.7
AAM	Ann Arbor	29.82	328	*e*P	P	21 35 24.5	+0.7
AAM	comp=Z,79nm,1.4s			pmax	pmax		
R45A	Skylar, Fairfi baz=125,SNR=32	29.82	317	P	P	21 35 25.0	+1.0
PEMO	Pembroke baz=152,SNR=6.2	29.90	340	P	P	21 35 25.4	+0.9
PARMO	Parma comp=Z,82nm,0.9s	29.92	313	*e*P	P	21 35 25.4	+0.6
P46A	Rosedale baz=129,SNR=14	29.95	321	P	P	21 35 26.3	+1.3
OLIL	Olney comp=Z,45nm,0.8s	29.97	318	*e*P	P	21 35 25.9	+0.8
CLWO	Collingwood baz=146	29.98	335	P	P	21 35 26.0	+0.8
T44A	Benton baz=122	30.03	314	P	P	21 35 26.3	+0.5
BWLO	Walkerton baz=144	30.05	333	P	P	21 35 26.7	+0.8
Q45A	Warren Harvey, baz=126,SNR=14	30.10	319	P	P	21 35 27.3	+1.0
Y42A	Garnett, Star baz=114	30.10	307	P	P	21 35 26.6	+0.2
SIUC	Southern Illin comp=Z,50nm,1.0s	30.11	316	*e*P	P	21 35 27.7	+1.2
S44A	Carbondale baz=123,SNR=11	30.13	316	P	P	21 35 27.6	+1.0
BASO	Ashfield baz=143	30.20	333	P	P	21 35 27.9	+0.8
P45A	Graceland, Par baz=128,SNR=18	30.22	320	P	P	21 35 28.5	+1.0
P45A	Graceland, Par comp=Z,51nm,0.9s	30.22	320	*e*P	P	21 35 28.6	+1.2
U43A	Rector baz=120	30.23	312	P	P	21 35 27.9	+0.4
BRCO	Bruce Peninsul baz=144	30.28	333	P	P	21 35 28.7	+0.8
R44A	Waltonville baz=124,SNR=13	30.32	317	P	P	21 35 29.2	+0.9
SFIN	Lafayette baz=130,SNR=5.5	30.36	322	P	P	21 35 29.7	+1.0
SFIN	Lafayette comp=Z,33nm,0.6s	30.36	322	*e*P	P	21 35 29.8	+1.0
PBMO	Poplar Bluff comp=Z,24nm,1.0s	30.45	313	*e*P	P	21 35 29.6	+0.1
BUKO	Buck Lake baz=148	30.45	337	P	P	21 35 29.8	+0.4
N46A	Monticello baz=131,SNR=25	30.49	323	P	P	21 35 30.9	+1.1
T43A	Greenville baz=121,SNR=6.6	30.50	314	P	P	21 35 30.2	+0.2
W42A	Bald Knob baz=117	30.51	310	P	P	21 35 30.5	+0.5
S43A	Fulton Ridge, baz=122,SNR=15	30.61	315	P	P	21 35 31.4	+0.5
M46A	Old House Fiel baz=132,SNR=8.7	30.61	324	P	P	21 35 31.8	+0.9
M46A	Old House Fiel comp=Z,47nm,0.8s	30.61	324	*e*P	P	21 35 31.8	+0.9
Q44A	Meyer Farm, Va baz=125,SNR=15	30.65	318	P	P	21 35 32.2	+1.0
O45A	Potomac baz=129,SNR=12	30.66	321	P	P	21 35 32.1	+0.8
V42A	Cord baz=118,SNR=27	30.66	311	P	P	21 35 32.2	+0.9
P44A	Sand Creek, Wi baz=126,SNR=18	30.73	319	P	P	21 35 32.9	+1.0
Y41A	Eaglette Beard baz=113	30.75	306	P	P	21 35 32.6	+0.4
U42A	Revenden baz=119,SNR=5.3	30.80	312	P	P	21 35 33.1	+0.5
R43A	Red Bud baz=123,SNR=8.7	30.89	316	P	P	21 35 33.8	+0.5
N45A	Kentland baz=130,SNR=34	30.91	322	P	P	21 35 34.5	+1.1
W41B	Gary Mavity, V baz=116,SNR=10	31.00	309	P	P	21 35 35.1	+0.7
W41B	Gary Mavity, V comp=Z,45nm,1.3s	31.00	309	*e*P	P	21 35 34.4	0.0
T42A	Van Buren baz=120,SNR=6.7	31.03	313	P	P	21 35 35.0	+0.4
T42A	Van Buren comp=Z,7.6nm,0.6s	31.03	313	*e*P	P	21 35 34.8	+0.1
O44A	Mansfield baz=128,SNR=15	31.04	320	P	P	21 35 35.6	+0.9
FVM	French Village comp=Z,12nm,0.6s	31.06	315	*e*P	P	21 35 36.6	+1.7
FVM	French Village	31.06	315	*e*P	P	21 35 36.6	+1.7
FVM	comp=Z,12nm,0.6s			pmax	pmax		
WHAR	Wooly Hollow comp=Z,26nm,1.0s	31.08	309	*e*P	P	21 35 35.9	+0.8
M45A	Boilermakers S baz=131	31.11	323	P	P	21 35 36.4	+1.1
Q43A	New Douglas baz=124,SNR=11	31.11	317	P	P	21 35 35.9	+0.7
TOBO	Tobermory, Bru baz=144	31.11	334	P	P	21 35 35.5	+0.3
X40A	Basin Creek Fa baz=114,SNR=18	31.16	307	P	P	21 35 36.5	+0.7
X40A	Basin Creek Fa comp=Z,22nm,0.8s	31.16	307	*e*P	P	21 35 36.9	+1.2
S42A	Caledonia baz=121,SNR=16	31.20	314	P	P	21 35 36.3	+0.1
V41A	Mountainview baz=117,SNR=20	31.20	310	P	P	21 35 36.9	+0.7
N44A	Piper City baz=129,SNR=22	31.24	322	P	P	21 35 37.2	+0.8
U41A	Viola baz=118,SNR=20	31.29	311	P	P	21 35 37.6	+0.7
Y40A	Okolona baz=113	31.31	306	P	P	21 35 38.1	+1.0
P43A	Skaggs, Pawnee baz=126,SNR=30	31.39	319	P	P	21 35 38.9	+1.1
R42A	Luebbering baz=122,SNR=15	31.47	315	P	P	21 35 39.3	+0.8
T41A	Mountain View baz=119,SNR=18	31.51	313	P	P	21 35 39.3	+0.4
M44A	Midewin, Midew baz=130,SNR=9.2	31.56	322	P	P	21 35 39.7	+0.5
M44A	Midewin, Midew comp=Z,41nm,0.8s	31.56	322	*e*P	P	21 35 40.1	+0.9
W40A	Ferguson Farm, baz=115	31.62	308	P	P	21 35 40.8	+1.0
W40A	Ferguson Farm, comp=Z,27nm,1.0s	31.62	308	*e*P	P	21 35 41.4	+1.6
NATX	Nacogdoches baz=108	31.62	301	P	P	21 35 40.7	+0.8
Q42A	Golden Eagle baz=123,SNR=6.8	31.63	317	P	P	21 35 40.6	+0.7
O43A	Sugar Creek Fa baz=127,SNR=10.0	31.64	320	P	P	21 35 40.8	+0.9
CCM	Cathedral Cave baz=121	31.65	315	P	P	21 35 41.2	+1.2
CCM	Cathedral Cave comp=Z,55nm,1.3s	31.65	315	*e*P	P	21 35 41.3	+1.2
CCM	Cathedral Cave	31.65	315	*e*P	P	21 35 41.3	+1.2
CCM	comp=Z,55nm,1.3s			pmax	pmax		
V40A	Witts Springs baz=116,SNR=8.4	31.70	310	P	P	21 35 41.2	+0.7
V40A	Witts Springs comp=Z,23nm,0.8s	31.70	310	*e*P	P	21 35 41.1	+0.5
MIAR	Mount Ida baz=113	31.74	307	P	P	21 35 41.3	+0.4
MIAR	Mount Ida comp=Z,6.8nm,1.0s	31.74	307	*e*P	P	21 35 41.6	+0.7
MIAR	Mount Ida	31.74	307	*e*P	P	21 35 41.6	+0.7
MIAR	comp=Z,7.0nm,1.0s			pmax	pmax		
S41A	Jillco Farms, baz=120	31.76	313	P	P	21 35 41.3	+0.3
HDIL	Hopedale baz=127,SNR=15	31.79	320	P	P	21 35 42.1	+0.9
HDIL	Hopedale	31.79	320	*e*P	P	21 35 42.1	+0.9
R41A	Rosebud baz=121,SNR=16	31.87	315	P	P	21 35 42.3	+0.4
P42A	Winchester baz=124,SNR=41	31.88	318	P	P	21 35 42.9	+0.8
P42A	Winchester comp=Z,88nm,0.6s	31.88	318	*e*P	P	21 35 42.8	+0.8
BELQ	Belleterre baz=151	31.89	340	P	P	21 35 42.2	+0.2
N43A	Stutzman Famil baz=128,SNR=15	31.95	321	P	P	21 35 43.5	+0.9
U40A	Yellville baz=117,SNR=16	31.96	311	P	P	21 35 43.4	+0.5
L44A	Lake County Fo baz=131,SNR=9.4	32.00	324	P	P	21 35 44.1	+1.1
O42A	Bath baz=126,SNR=6.1	32.06	319	P	P	21 35 44.8	+1.1
T40A	Mansfield baz=118,SNR=17	32.09	312	P	P	21 35 44.5	+0.6
HKT	Hockley comp=Z,6.5nm,1.0s	32.10	298	*e*P	P	21 35 44.0	0.0
HKT	Hockley	32.10	298	*e*P	P	21 35 44.0	0.0
HKT	comp=Z,7.0nm,1.0s			pmax	pmax		
Q41A	Truxton baz=122,SNR=18	32.11	316	P	P	21 35 44.6	+0.5
M43A	Waltham Townsh baz=129,SNR=22	32.13	322	P	P	21 35 45.1	+0.9
W39A	Magazine comp=Z,24nm,0.8s	32.16	308	*e*P	P	21 35 45.6	+1.0
S40A	Lebanon baz=119,SNR=17	32.29	313	P	P	21 35 46.0	+0.4
V39A	Pettigrew baz=115,SNR=11	32.32	309	P	P	21 35 47.0	+1.0
P41A	Barry, Barry baz=124,SNR=14	32.39	317	P	P	21 35 46.9	+0.4
N42A	Yates City baz=126,SNR=12	32.41	320	P	P	21 35 47.4	+0.8
U39A	Green Forest baz=116,SNR=11	32.43	310	P	P	21 35 47.5	+0.5
R40A	Maddies Statio baz=120,SNR=11	32.47	314	P	P	21 35 47.3	+0.1
R40A	Maddies Statio comp=Z,16nm,0.9s	32.47	314	*e*P	P	21 35 47.3	+0.1
L43A	Garden Prairie baz=130,SNR=17	32.47	323	P	P	21 35 48.0	+0.8
O41A	Passleys Farm, baz=124,SNR=31	32.52	318	P	P	21 35 48.0	+0.3
K43A	Burlington comp=Z,32nm,0.8s	32.58	324	*e*P	P	21 35 49.1	+1.0
M42A	Sheffield baz=128,SNR=9.0	32.61	321	P	P	21 35 49.5	+1.1
T39A	Clever baz=117,SNR=9.2	32.64	311	P	P	21 35 49.5	+0.8
Q40A	Laux Farm, Aux baz=121,SNR=9.6	32.70	315	P	P	21 35 49.3	+0.1
HHAR	Hobbs comp=Z,23nm,0.6s	32.72	310	*e*P	P	21 35 50.2	+0.7
N41A	Harden Midland baz=125,SNR=23	32.84	319	P	P	21 35 50.8	+0.3
N41A	Harden Midland comp=Z,73nm,0.8s	32.84	319	*e*P	P	21 35 50.7	+0.3
L42A	Oliver, Polo baz=128,SNR=28	32.89	322	P	P	21 35 51.8	+0.9
L42A	Oliver, Polo comp=Z,118nm,0.8s	32.89	322	*e*P	P	21 35 51.8	+0.9
S39A	Bolivar baz=118,SNR=15	32.91	312	P	P	21 35 51.2	+0.1
S39A	Bolivar comp=Z,26nm,1.1s	32.91	312	*e*P	P	21 35 51.2	+0.1
NNA	Nana comp=Z,40nm,0.6s,baz=356,slow=8.5,SNR=15	32.92	206	P	P	21 35 51.2	-0.2
NNA	Nana	32.92	206	*e*P	P	21 35 51.5	+0.1
NNA	Nana	32.92	206	*i* P	P	21 35 52.4	+1.0
P40A	Paris baz=122,SNR=21	32.96	316	P	P	21 35 51.7	+0.2
P40A	Paris comp=Z,34nm,0.8s	32.96	316	*e*P	P	21 35 51.5	+0.1
CHGQ	Chibougamau baz=160	32.98	346	P	P	21 35 52.5	+0.9
R39A	Chumby, Stover baz=119,SNR=15	33.01	314	P	P	21 35 52.1	+0.2
M41A	Milan baz=126,SNR=11	33.04	320	P	P	21 35 52.5	+0.3
J43A	Natural Harves baz=132,SNR=14	33.07	325	P	P	21 35 53.1	+0.7
O40A	La Belle baz=123,SNR=26	33.16	317	P	P	21 35 53.5	+0.3
K42A	Prairie Point, baz=130,SNR=37	33.20	323	P	P	21 35 54.2	+0.7
F45A	CMU Biological baz=138,SNR=12	33.23	331	P	P	21 35 54.7	+1.0
I43A	Langenfeld Bro baz=133,SNR=14	33.26	326	P	P	21 35 54.7	+0.7
S38A	Stockton baz=117,SNR=14	33.29	312	P	P	21 35 54.5	0.0
T38A	Diamond baz=116,SNR=11	33.30	311	P	P	21 35 55.0	+0.4
Q39A	Willow Grove F baz=120,SNR=14	33.33	315	P	P	21 35 54.8	+0.1
N40A	Mertquake, Sal baz=124,SNR=14	33.40	319	P	P	21 35 55.6	+0.3
P39B	Salisbury baz=121,SNR=12	33.40	316	P	P	21 35 55.5	+0.2
J42A	Columbus baz=131,SNR=16	33.42	324	P	P	21 35 56.1	+0.7
L41A	Preston baz=127,SNR=25	33.43	321	P	P	21 35 56.0	+0.5
H43A	Windswept, Lux baz=134,SNR=16	33.46	327	P	P	21 35 56.6	+0.9
H43A	Windswept, Lux comp=Z,66nm,0.8s	33.46	327	*e*P	P	21 35 56.7	+0.9
R38A	Fenwick Farm, baz=118,SNR=10	33.55	313	P	P	21 35 56.6	0.0
K41A	Shullsburg baz=128,SNR=13	33.64	322	P	P	21 35 58.0	+0.6
M40A	Post Highland baz=125	33.65	320	P	P	21 35 57.5	+0.1
MATQ	Matagami baz=154	33.66	343	P	P	21 35 58.1	+0.6
O39A	Kirksville baz=122,SNR=5.4	33.66	317	P	P	21 35 57.8	+0.2
I42A	Draeger Farm, baz=132,SNR=14	33.68	325	P	P	21 35 58.6	+0.8
I42A	Draeger Farm, comp=Z,51nm,0.7s	33.68	325	*e*P	P	21 35 58.5	+0.8
Q38A	Cooks Store, C baz=119,SNR=9.7	33.72	314	P	P	21 35 58.4	+0.3
435B	Jarrell baz=104	33.77	298	P	P	21 35 59.1	+0.5
435B	Jarrell comp=Z,19nm,0.6s	33.77	298	*e*P	P	21 35 59.6	+0.9
JFWS	Jewell Farm baz=129,SNR=12	33.80	323	P	P	21 35 59.1	+0.5
JFWS	Jewell Farm	33.80	323	*e*P	P	21 35 59.2	+0.5
JFWS	Jewell Farm	33.80	323	*e*P	P	21 35 59.2	+0.5
L40A	Anamosa baz=126,SNR=28	33.85	321	P	P	21 35 59.5	+0.2
L40A	Anamosa comp=Z,49nm,0.8s	33.85	321	*e*P	P	21 35 59.4	+0.1
F44A	Big Bay de Noc baz=137,SNR=17	33.87	330	P	P	21 36 00.3	+1.0
H42A	Shiocton baz=133,SNR=8.4	33.89	326	P	P	21 36 00.4	+0.8
H42A	Shiocton comp=Z,32nm,0.8s	33.89	326	*e*P	P	21 36 00.3	+0.8
TUL1	Leonard baz=113,SNR=15	33.94	308	P	P	21 36 00.7	+0.6
TUL1	Leonard comp=Z,35nm,0.8s	33.94	308	*e*P	P	21 36 00.6	+0.5
J41A	Loganville baz=129,SNR=52	33.95	324	P	P	21 36 00.7	+0.7
G43A	Wallace baz=135	33.97	328	P	P	21 36 00.6	+0.5
G43A	Wallace comp=Z,8.0nm,0.8s	33.97	328	*e*P	P	21 36 00.7	+0.5
N39A	Derby Farms, D baz=123,SNR=22	33.97	318	P	P	21 36 00.4	+0.1
N39A	Derby Farms, D comp=Z,46nm,0.6s	33.97	318	*e*P	P	21 36 00.4	+0.1
P38A	Dawn baz=120,SNR=18	33.99	315	P	P	21 36 00.7	+0.2
P38A	Dawn comp=Z,47nm,1.1s	33.99	315	*e*P	P	21 36 00.7	+0.2
M39A	Webster baz=124,SNR=7.3	34.10	319	P	P	21 36 01.4	0.0
E44A	Grand Marais A baz=139,SNR=6.0	34.12	331	P	P	21 36 02.5	+1.0
F43A	Flat Rock, Esc baz=136,SNR=26	34.12	329	P	P	21 36 02.3	+0.8
K40A	Colesburg baz=127,SNR=15	34.18	322	P	P	21 36 02.5	+0.5
Q37A	Longview Farm, baz=118,SNR=8.8	34.25	314	P	P	21 36 02.8	+0.1
I41A	Arkdale baz=130	34.31	325	P	P	21 36 03.8	+0.7
G42A	Mountain baz=134	34.33	327	P	P	21 36 04.0	+0.6
L39A	Vinton baz=125,SNR=30	34.36	320	P	P	21 36 03.7	+0.1
J40A	Soldiers Grove baz=128,SNR=19	34.38	323	P	P	21 36 04.2	+0.5
N38A	Joes South For baz=122,SNR=5.4	34.40	317	P	P	21 36 04.3	+0.4
E43A	Lone Tree Farm baz=137,SNR=12	34.43	330	P	P	21 36 04.9	+0.7
E43A	Lone Tree Farm comp=Z,28nm,0.8s	34.43	330	*e*P	P	21 36 05.0	+0.8
LNIG	Linares comp=Z,27nm,1.5s	34.52	288	*e*P	P	21 36 04.6	-0.6
P37A	Lathrop baz=119,SNR=8.8	34.52	315	P	P	21 36 05.3	+0.3
F42A	Maple Grove Fa baz=135,SNR=5.0	34.55	328	P	P	21 36 05.8	+0.6
H41A	Junction City baz=131,SNR=28	34.55	326	P	P	21 36 05.9	+0.6
H41A	Junction City comp=Z,45nm,0.8s	34.55	326	*e*P	P	21 36 05.9	+0.6
LPAZ	La Paz comp=Z,6.4nm,0.5s,baz=20,slow=4.8,SNR=19	34.59	189	P	P	21 36 05.5	-1.0
LPAZ	La Paz comp=Z,25nm,0.8s	34.59	189	*e*P	P	21 36 05.8	-0.7
LPAZ	La Paz	34.59	189	*e*P	P	21 36 05.8	-0.7
LPAZ	comp=Z,25nm,0.8s			pmax	pmax		
I40A	Norwalk baz=129,SNR=38	34.62	324	P	P	21 36 06.3	+0.5
K39A	Oelwein baz=126,SNR=25	34.63	321	P	P	21 36 06.0	+0.1
O37A	Wolven Farm, M baz=120	34.67	316	P	P	21 36 06.6	+0.2
G41A	Antigo baz=133	34.70	327	P	P	21 36 07.0	+0.5
H07S1	FLORES T-PHASE SNR=52	34.70	46	T	T	22 12 31.9	
M38A	Pleasantville baz=123,SNR=20	34.71	318	P	P	21 36 06.8	+0.2
833A	Chaparral WMA, baz=99	34.83	294	P	P	21 36 07.8	-0.1
833A	Chaparral WMA, comp=Z,18nm,0.9s	34.83	294	*e*P	P	21 36 08.1	+0.2
J39A	Decorah baz=127,SNR=12	34.90	322	P	P	21 36 08.4	+0.1
H07N1	FLORES T-PHASE SNR=20	34.91	45	T	T	22 13 10.3	
E42A	Champion baz=136,SNR=6.3	34.91	329	P	P	21 36 08.9	+0.5
L38A	Oak Wood Farm, baz=124,SNR=15	34.96	320	P	P	21 36 08.9	+0.2
H40A	Chili baz=130,SNR=57	34.96	325	P	P	21 36 09.6	+0.9
SCIA	State Center baz=124,SNR=5.2	34.98	319	P	P	21 36 09.5	+0.5
SCIA	State Center	34.98	319	*e*P	P	21 36 09.6	+0.5
N37A	Lee Faris, Mou baz=121,SNR=6.8	35.01	317	P	P	21 36 09.7	+0.4
N37A	Lee Faris, Mou comp=Z,40nm,0.7s	35.01	317	*e*P	P	21 36 09.7	+0.4
F41A	Three Lakes baz=133,SNR=24	35.02	328	P	P	21 36 10.1	+0.8
F41A	Three Lakes comp=Z,35nm,0.8s	35.02	328	*e*P	P	21 36 10.2	+0.8
I39A	Houston baz=128,SNR=26	35.11	323	P	P	21 36 10.3	+0.3
I39A	Houston comp=Z,64nm,0.6s	35.11	323	*e*P	P	21 36 10.4	+0.3
K38A	Parkersburg baz=125,SNR=18	35.13	320	P	P	21 36 10.5	+0.3
K38A	Parkersburg comp=Z,79nm,0.8s	35.13	320	*e*P	P	21 36 10.4	+0.2
M37A	Trindle Farm, baz=122,SNR=19	35.25	318	P	P	21 36 11.8	+0.5
G40A	Rib Lake baz=131,SNR=31	35.28	326	P	P	21 36 12.4	+0.9
G40A	Rib Lake comp=Z,50nm,0.8s	35.28	326	*e*P	P	21 36 12.4	+0.9
COWI	Conover	35.29	328	*e*P	P	21 36 12.4	+0.9
J38A	Wedel Dairy, R baz=126,SNR=7.1	35.34	322	P	P	21 36 12.2	+0.2
L37A	Phoenix Point, baz=123,SNR=5.9	35.44	319	P	P	21 36 13.1	+0.2
E41A	Kenton baz=134,SNR=23	35.45	329	P	P	21 36 13.6	+0.6
H39A	Augusta baz=129,SNR=47	35.48	324	P	P	21 36 14.0	+0.7
N36A	Muff Farm, Cla baz=120,SNR=5.6	35.53	316	P	P	21 36 14.3	+0.6
JCT	Junction City baz=102,SNR=12	35.57	297	P	P	21 36 14.3	+0.1
JCT	Junction City comp=Z,30nm,0.8s	35.57	297	*e*P	P	21 36 13.8	-0.4
JCT				*e*PcP	PcP	21 38 41.7	+0.2
JCT	Junction City	35.57	297	*e*P	P	21 36 13.8	-0.4
JCT				*e*		21 38 41.7	
JCT	comp=Z,30nm,0.8s			pmax	pmax		
F40A	Park Falls baz=132,SNR=28	35.67	327	P	P	21 36 15.6	+0.8
D41A	Chassel baz=135,SNR=13	35.68	330	P	P	21 36 16.0	+1.1
D41A	Chassel comp=Z,86nm,0.8s	35.68	330	*e*P	P	21 36 16.4	+1.6
I38A	Scanlan Farm, baz=127,SNR=42	35.68	323	P	P	21 36 15.2	+0.3
K37A	Belmond baz=124,SNR=9.2	35.72	320	P	P	21 36 15.5	+0.2
M36A	Felix, Anita baz=121,SNR=8.3	35.75	317	P	P	21 36 16.1	+0.5
G39A	Holcombe baz=130,SNR=55	35.81	325	P	P	21 36 16.9	+0.8
WMOK	Wichita Mounta baz=108,SNR=7.1	35.82	305	P	P	21 36 16.2	-0.1
WMOK	Wichita Mounta comp=Z,7.1nm,0.7s	35.82	305	*e*P	P	21 36 15.4	-0.9
WMOK	Wichita Mounta	35.82	305	*e*P	P	21 36 15.4	-0.9
WMOK	comp=Z,7.0nm,0.7s			pmax	pmax		
KSU1	Kansas State U baz=116	35.85	313	P	P	21 36 16.1	-0.4
KSU1	Kansas State U comp=Z,27nm,1.0s	35.85	313	*e*P	P	21 36 15.6	-0.9
KSU1				*e*PcP	PcP	21 38 42.3	+0.2
E40A	Wakefield baz=133,SNR=22	35.91	328	P	P	21 36 17.9	+1.0
ABTX	Abilene, Hawle baz=105,SNR=14	35.92	301	P	P	21 36 17.3	+0.1
ABTX	Abilene, Hawle comp=Z,31nm,0.7s	35.92	301	*e*P	P	21 36 17.8	+0.6
J37A	Redenius Farm, baz=125,SNR=13	35.98	321	P	P	21 36 17.8	+0.3
L36A	Harm Buss Farm baz=122,SNR=10	36.00	318	P	P	21 36 18.2	+0.5
H38A	Maiden Rock baz=128	36.04	324	P	P	21 36 18.3	+0.3
F39A	Loretta baz=131,SNR=45	36.08	326	P	P	21 36 19.3	+1.0
G38A	Ridgeland baz=129,SNR=13	36.11	325	P	P	21 36 19.4	+0.8
K36A	Gilmore City baz=123,SNR=6.5	36.15	319	P	P	21 36 19.6	+0.6
E39A	Mellen baz=132,SNR=44	36.20	327	P	P	21 36 20.5	+1.2
I37A	Lemond, Waseca baz=126,SNR=16	36.29	322	P	P	21 36 20.5	+0.4
I37A	Lemond, Waseca comp=Z,72nm,1.0s	36.29	322	*e*P	P	21 36 19.9	-0.2
H37A	Dierke Farm, C baz=127,SNR=5.6	36.34	323	P	P	21 36 21.0	+0.4
J36A	Seneca 1, Swea baz=124,SNR=11	36.46	320	P	P	21 36 21.8	+0.2
J36A	Seneca 1, Swea comp=Z,44nm,0.8s	36.46	320	*e*P	P	21 36 21.8	+0.2
ROSA	Rosais comp=Z,39nm,0.9s	36.48	49	*e*P	P	21 36 22.2	+0.4
C40A	Isle Royale Na baz=135,SNR=21	36.56	330	P	P	21 36 23.5	+1.2
C40A	Isle Royale Na comp=Z,130nm,0.7s	36.56	330	*e*P	P	21 36 23.6	+1.2
F38A	Pierce - Schro baz=130,SNR=50	36.62	326	P	P	21 36 23.9	+1.0
I36A	Fitzsimmons Fa baz=125	36.66	321	P	P	21 36 22.9	-0.3
SPMN	Marine on St. baz=128,SNR=16	36.67	324	P	P	21 36 23.7	+0.4

SPMN	**Marine on St.**	**36.67**	**324**	*e*P	**P**	**21 36 23.5**	**+0.1**
	comp=Z,101nm,1.4s						
SCHQ	**Schefferville**	**36.73**	**356**	P	**P**	**21 36 24.5**	**+0.7**
	comp=Z,30nm,0.7s,baz=172,slow=7.6,SNR=13						
E38A	**The Farm, Brul**	**36.87**	**327**	P	**P**	**21 36 25.5**	**+0.5**
	baz=131,SNR=8.0						
E38A	**The Farm, Brul**	**36.87**	**327**	*e*P	**P**	**21 36 25.1**	**+0.1**
	comp=Z,43nm,0.7s						
F37A	**Hinrichs Farm,**	**36.88**	**325**	P	**P**	**21 36 25.6**	**+0.5**
	baz=128,SNR=11						
H36A	**Jessenland, He**	**36.93**	**322**	P	**P**	**21 36 25.7**	**+0.2**
	baz=126,SNR=14						
C39A	**Grand Marais**	**36.96**	**329**	P	**P**	**21 36 26.3**	**+0.5**
	baz=134,SNR=10						
G36A	**St. Michael**	**37.21**	**323**	P	**P**	**21 36 28.1**	**+0.1**
	baz=127						
C38A	**Sawbill Land.**	**37.46**	**328**	P	**P**	**21 36 30.3**	**+0.3**
	baz=132,SNR=9.2						
F36A	**Milaca**	**37.46**	**324**	P	**P**	**21 36 30.3**	**+0.3**
	baz=128,SNR=51						
F36A	**Milaca**	**37.46**	**324**	*e*P	**P**	**21 36 30.1**	**+0.1**
	comp=Z,44nm,0.8s						
H35A	**Sunnyside Ranc**	**37.52**	**322**	P	**P**	**21 36 30.4**	**-0.2**
	baz=125,SNR=14						
MNMC	**Minye Minye**	**37.61**	**190**	*e*P	**P**	**21 36 30.4**	**-1.5**
	comp=Z,71nm,1.3s						
G35A	**Watkins**	**37.62**	**323**	P	**P**	**21 36 31.4**	**0.0**
	baz=126,SNR=5.8						
G35A	**Watkins**	**37.62**	**323**	*e*P	**P**	**21 36 31.0**	**-0.5**
	comp=Z,45nm,0.8s						
D37A	**Cotton**	**37.68**	**327**	P	**P**	**21 36 32.8**	**+0.9**
	baz=130,SNR=31						
E36A	**McGregor**	**37.72**	**325**	P	**P**	**21 36 32.7**	**+0.5**
	baz=128,SNR=44						
EYMN	**Ely**	**37.72**	**328**	P	**P**	**21 36 32.7**	**+0.4**
	baz=132,SNR=5.5						
EYMN	**Ely**	**37.72**	**328**	*e*P	**P**	**21 36 32.8**	**+0.5**
	comp=Z,31nm,0.8s						
SACV	**Santiago Islan**	**37.83**	**89**	*e*P	**P**	**21 36 34.0**	**+0.4**
	comp=Z,68nm,0.8s						
C37A	**Embarrass**	**37.93**	**328**	P	**P**	**21 36 34.5**	**+0.5**
	baz=131,SNR=12						
BGNE	**Belgrade**	**37.93**	**315**	P	**P**	**21 36 34.4**	**+0.2**
	baz=117						
BGNE	**Belgrade**	**37.93**	**315**	*e*P	**P**	**21 36 34.7**	**+0.6**
	comp=Z,68nm,0.7s						
CBKS	**Cedar Bluff**	**37.96**	**311**	*e*P	**P**	**21 36 34.5**	**+0.1**
CBKS	**Cedar Bluff**	**37.96**	**311**	*e*P	**P**	**21 36 34.5**	**+0.1**
F35A	**Swanville**	**38.05**	**324**	P	**P**	**21 36 35.0**	**0.0**
	baz=126,SNR=14						
ECSD	**EROS Data Cent**	**38.07**	**319**	P	**P**	**21 36 35.6**	**+0.3**
	baz=122,SNR=52						
ECSD	**EROS Data Cent**	**38.07**	**319**	*e*P	**P**	**21 36 35.5**	**+0.3**
ECSD				*e*PcP	**PcP**	**21 38 48.8**	**0.0**
ECSD				*e*S	**S**	**21 42 21.1**	**-0.4**
D36A	**Goodland**	**38.08**	**326**	P	**P**	**21 36 35.7**	**+0.4**
	baz=129,SNR=16						
D36A	**Goodland**	**38.08**	**326**	*e*P	**P**	**21 36 36.0**	**+0.7**
	comp=Z,61nm,1.0s						
CMLA	**Cha da Macela**	**38.10**	**51**	*e*P	**P**	**21 36 36.8**	**+1.2**
	comp=Z,112nm,1.0s						
CMLA	**Cha da Macela**	**38.10**	**51**	*e*P	**P**	**21 36 36.8**	**+1.2**
CMLA				pmax	pmax		
	comp=Z,112nm,1.0s						
AMTX	**Amarillo**	**38.15**	**304**	P	**P**	**21 36 36.1**	**0.0**
	baz=106						
AMTX	**Amarillo**	**38.15**	**304**	*e*P	**P**	**21 36 36.2**	**0.0**
	comp=Z,13nm,0.8s						
C36A	**Pine Crest Far**	**38.28**	**327**	P	**P**	**21 36 37.5**	**+0.6**
	baz=130,SNR=23						
G34A	**Benson**	**38.30**	**322**	P	**P**	**21 36 37.2**	**0.0**
	baz=124,SNR=5.3						
E35A	**Pequot Lakes**	**38.37**	**325**	P	**P**	**21 36 37.8**	**+0.1**
	baz=127						
F34A	**Alexandria**	**38.40**	**323**	P	**P**	**21 36 38.0**	**0.0**
	baz=125,SNR=12						
D35A	**Remer**	**38.49**	**325**	P	**P**	**21 36 38.8**	**+0.1**
	baz=128,SNR=12						
TXAR	**Lajitas Array**	**38.69**	**294**	P	**P**	**21 36 40.6**	**-0.1**
	comp=Z,3.2nm,0.6s,baz=115,slow=7.4,SNR=46						
TXAR				PcP	**PcP**	**21 38 52.1**	**+1.0**
	comp=Z,4.9nm,0.8s,baz=117,slow=5.8,SNR=6.5						
TXAR				pPcP		21 39 15.2	
	comp=Z,3.0nm,0.7s,baz=119,slow=5.1,SNR=4.6						
TXAR				ScP	**ScP**	**21 42 32.4**	**+1.1**
	comp=Z,2.1nm,0.8s,baz=110,slow=5.9,SNR=10						
TXAR				LR	LR	21 57 11.2	
	comp=Z,23nm,20.3s,baz=0.0,slow=43						
TX31	**Lajitas Ar. Si**	**38.69**	**294**	*e*P	**P**	**21 36 41.2**	**+0.5**
TX31				*e*S	**S**	**21 42 32.2**	**+0.9**
G33A	**Ortonville**	**38.75**	**321**	P	**P**	**21 36 41.0**	**+0.1**
	baz=123,SNR=6.6						
E34A	**Wadena**	**38.77**	**324**	P	**P**	**21 36 41.2**	**+0.2**
	baz=126,SNR=7.8						
MSTX	**Muleshoe**	**38.79**	**302**	P	**P**	**21 36 41.5**	**-0.1**
	baz=104,SNR=8.1						
MSTX	**Muleshoe**	**38.79**	**302**	*e*P	**P**	**21 36 41.4**	**-0.1**
	comp=Z,31nm,0.9s						
MSTX				*e*S	**S**	**21 42 33.8**	**+1.1**
C35A	**Jirik Farms, M**	**38.84**	**326**	P	**P**	**21 36 42.0**	**+0.4**
	baz=129,SNR=23						
H32A	**Carlson Farm,**	**38.98**	**320**	P	**P**	**21 36 43.1**	**+0.2**
	baz=121,SNR=22						
B35A	**Bob, Littlefor**	**39.12**	**327**	P	**P**	**21 36 44.4**	**+0.4**
	baz=130,SNR=11						
C34A	**RKJ Ranch, Bem**	**39.30**	**326**	P	**P**	**21 36 45.7**	**+0.2**
	baz=128,SNR=11						
G32A	**Webster**	**39.41**	**321**	P	**P**	**21 36 46.5**	**0.0**
	baz=122,SNR=9.9						
F32A	**Veblen**	**39.52**	**322**	P	**P**	**21 36 47.1**	**-0.3**
	baz=123,SNR=8.5						
B34A	**Aery, Baudette**	**39.68**	**327**	P	**P**	**21 36 48.8**	**+0.2**
	baz=129						
C33A	**Trail**	**39.83**	**325**	P	**P**	**21 36 49.9**	**0.0**
	baz=127						
SUSD	**Miller**	**39.89**	**319**	P	**P**	**21 36 50.3**	**-0.1**
	baz=120						
KSCO	**Kaye Shedlock’**	**40.13**	**310**	P	**P**	**21 36 53.0**	**+0.4**
	baz=110,SNR=6.0						
KSCO	**Kaye Shedlock’**	**40.13**	**310**	*e*P	**P**	**21 36 53.2**	**+0.6**
	comp=Z,46nm,0.7s						
KSCO				*e*pP	**pP**	**21 37 14.3**	**+0.8**
AGMN	**Agassiz Nation**	**40.20**	**326**	P	**P**	**21 36 53.0**	**+0.1**
	baz=127,SNR=60						
AGMN	**Agassiz Nation**	**40.20**	**326**	*e*P	**P**	**21 36 53.0**	**+0.1**
A33A	**Warroad**	**40.35**	**327**	P	**P**	**21 36 54.5**	**+0.4**
	baz=128,SNR=37						
OGNE	**Ogallala**	**40.40**	**313**	P	**P**	**21 36 54.6**	**-0.2**
	baz=113						
OGNE	**Ogallala**	**40.40**	**313**	*e*P	**P**	**21 36 55.1**	**+0.3**
	comp=Z,27nm,0.9s						
MNTX	**Cornudas Mount**	**40.49**	**298**	P	**P**	**21 36 56.0**	**+0.3**
	baz=99,SNR=19						
MNTX	**Cornudas Mount**	**40.49**	**298**	*e*P	**P**	**21 36 55.9**	**+0.3**
	comp=Z,13nm,0.8s						
MNTX				*e*PcP	**PcP**	**21 38 56.4**	**-0.3**
MNTX				*e*ScP	**ScP**	**21 42 38.3**	**0.0**
T25A	**Trinidad**	**40.90**	**306**	P	**P**	**21 36 59.6**	**+0.5**
	baz=106,SNR=15						
T25A	**Trinidad**	**40.90**	**306**	*e*P	**P**	**21 36 59.7**	**+0.6**
	comp=Z,18nm,0.8s						
ULM	**Lac du Bonnet**	**41.41**	**328**	P	**P**	**21 37 02.5**	**-0.3**
	comp=Z,82nm,0.6s,baz=128,slow=10,SNR=71						
ULM				LR	LR	21 54 36.8	
	comp=Z,80nm,18.8s,baz=81,slow=36						
ULM	**Lac du Bonnet**	**41.41**	**328**	P	**P**	**21 37 02.5**	**-0.3**
ULM				pmax	pmax		
	comp=Z,84nm,0.6s						
ULM				MLR	MLR		
	comp=Z,80nm,18.8s						
SDCO	**Great Sand Dun**	**41.90**	**307**	P	**P**	**21 37 07.8**	**+0.5**
	baz=106,SNR=44						
SDCO	**Great Sand Dun**	**41.90**	**307**	*e*P	**P**	**21 37 07.8**	**+0.5**
	comp=Z,13nm,0.8s						
SDCO				*e*PcP	**PcP**	**21 39 01.6**	**+0.1**
SDCO				*e*ScP	**ScP**	**21 42 45.1**	**+1.1**
BNM	**Barren Site**	**41.95**	**301**	*e*P	**P**	**21 37 08.8**	**+1.0**
ANMO	**Albuquerque**	**41.97**	**302**	P	**P**	**21 37 08.5**	**+0.6**
	comp=Z,11nm,0.8s,baz=112,slow=10,SNR=40						
ANMO				pP	**pP**	**21 37 29.3**	**+0.3**
	comp=Z,17nm,1.0s,baz=116,slow=10,SNR=8.8						
ANMO				LR	LR	21 58 52.0	
	comp=Z,24nm,18.2s,baz=110,slow=42						
ANMO	**Albuquerque**	**41.97**	**302**	P	**P**	**21 37 08.6**	**+0.6**
	baz=102						
ANMO	**Albuquerque**	**41.97**	**302**	*e*P	**P**	**21 37 08.6**	**+0.7**
	comp=Z,17nm,0.9s						
ANMO				pP	**pP**	**21 37 29.3**	**+0.3**
ANMO				*e*PcP	**PcP**	**21 39 02.1**	**+0.4**
ANMO				*e*ScP	**ScP**	**21 42 45.4**	**+1.1**
ANMO	**Albuquerque**	**41.97**	**302**	*e*P	**P**	**21 37 08.6**	**+0.7**
ANMO				*PP	**pP**	**21 37 29.3**	**+0.3**
ANMO				*e*		21 39 02.1	
ANMO				pmax	pmax		
	comp=Z,17nm,0.9s						
TASL	**Snake Pit, Alb**	**41.97**	**302**	P	**P**	**21 37 08.4**	**+0.5**
	baz=102,SNR=21						
TASM	**ASL Pad, Albuq**	**41.98**	**302**	P	**P**	**21 37 08.6**	**+0.7**
	baz=102,SNR=22						
Q24A	**Divide**	**41.98**	**309**	P	**P**	**21 37 08.3**	**+0.3**
	baz=108,SNR=7.8						
LPM	**Los Pinos Moun**	**41.99**	**301**	*e*P	**P**	**21 37 08.9**	**+0.9**
LENM	**Lemitar**	**42.24**	**301**	*e*P	**P**	**21 37 10.8**	**+0.8**
LAZ	**Ladron**	**42.42**	**301**	*e*P	**P**	**21 37 11.7**	**+0.2**
ISCO	**Idaho Springs**	**42.57**	**310**	P	**P**	**21 37 13.6**	**+0.7**
	baz=108,SNR=22						
ISCO	**Idaho Springs**	**42.57**	**310**	*e*P	**P**	**21 37 13.7**	**+0.9**
	comp=Z,12nm,0.8s						
ISCO	**Idaho Springs**	**42.57**	**310**	*e*P	**P**	**21 37 13.7**	**+0.9**
ISCO				pmax	pmax		
	comp=Z,12nm,0.8s						
121A	**Cookes Peak, D**	**42.64**	**299**	P	**P**	**21 37 14.1**	**+0.8**
	baz=98,SNR=6.7						
PHWY	**Pilot Hill**	**42.94**	**312**	*e*P	**P**	**21 37 16.4**	**+0.6**
	comp=Z,19nm,0.9s						
RSSD	**Black Hills**	**43.01**	**316**	P	**P**	**21 37 16.6**	**+0.4**
	baz=114						
RSSD	**Black Hills**	**43.01**	**316**	*e*P	**P**	**21 37 16.8**	**+0.6**
	comp=Z,9.8nm,0.7s						
RSSD				*e*PcP	**PcP**	**21 39 05.5**	**+0.5**
RSSD				*e*ScP	**ScP**	**21 42 48.4**	**+0.1**
RSSD	**Black Hills**	**43.01**	**316**	*e*P	**P**	**21 37 16.8**	**+0.6**
RSSD				*e*		21 39 05.5	
RSSD				pmax	pmax		
	comp=Z,10.0nm,0.7s						
N23A	**Red Feather La**	**43.16**	**311**	P	**P**	**21 37 17.9**	**+0.5**
	baz=109,SNR=7.7						
N23A	**Red Feather La**	**43.16**	**311**	*e*P	**P**	**21 37 18.0**	**+0.5**
	comp=Z,7.8nm,0.8s						
SMCO	**Snowmass**	**43.40**	**308**	*e*P	**P**	**21 37 20.1**	**+0.5**
	comp=Z,9.9nm,0.8s						
PMOZ	**Porto Moniz, M**	**43.51**	**61**	*e*P	**P**	**21 37 21.3**	**+1.1**
	comp=Z,182nm,1.1s						
GO02	**Mina Guanaco**	**43.53**	**189**	*e*P	**P**	**21 37 19.4**	**-1.1**
	comp=Z,26nm,0.6s						
319A	**Douglas**	**43.75**	**297**	*e*P	**P**	**21 37 23.9**	**+1.6**
	comp=Z,25nm,0.9s						
MVCO	**Mesa Verde**	**44.08**	**305**	P	**P**	**21 37 25.2**	**+0.4**
	baz=103						
MVCO	**Mesa Verde**	**44.08**	**305**	*e*P	**P**	**21 37 24.2**	**-0.7**
	comp=Z,12nm,1.3s						
K22A	**Casper**	**44.15**	**313**	P	**P**	**21 37 25.7**	**+0.4**
	baz=110,SNR=19						
K22A	**Casper**	**44.15**	**313**	*e*P	**P**	**21 37 25.6**	**+0.4**
	comp=Z,46nm,1.3s						
RWWY	**Rawlins**	**44.31**	**312**	*e*P	**P**	**21 37 27.6**	**+0.8**
	comp=Z,36nm,1.2s						
PV15	**Paradox Valley**	**44.32**	**307**	*e*P	**P**	**21 37 28.2**	**+1.4**
	comp=Z,21nm,0.8s						
PV01	**Paradox Valley**	**44.34**	**306**	*e*P	**P**	**21 37 28.4**	**+1.4**
PV01				*e*pP	**pP**	**21 37 49.6**	**+1.4**
PV01				*e*PcP	**PP**	**21 39 11.2**	**-0.7**
LPIG	**La Paz**	**44.38**	**286**	LR	LR	21 58 14.6	
	comp=Z,28nm,20.9s,baz=174,slow=39						
PV07	**Paradox Valley**	**44.47**	**307**	*e*P	**P**	**21 37 29.1**	**+1.1**
	comp=Z,14nm,0.7s						
PV02	**Paradox Valley**	**44.49**	**306**	*e*P	**P**	**21 37 29.5**	**+1.4**
	comp=Z,25nm,0.8s						
CPUP	**Villa Florida**	**44.55**	**173**	P	**P**	**21 37 26.9**	**-1.4**
	comp=Z,22nm,0.5s,baz=356,slow=7.3,SNR=84						
CPUP				LR	LR	21 56 12.1	
	comp=Z,87nm,18.9s,baz=357,slow=36						
CPUP	**Villa Florida**	**44.55**	**173**	*e*P	**P**	**21 37 27.0**	**-1.4**
	comp=Z,24nm,0.5s						
CPUP	**Villa Florida**	**44.55**	**173**	P	**P**	**21 37 27.0**	**-1.4**
CPUP				pmax	pmax		
	comp=Z,22nm,0.5s						
CPUP				MLR	MLR		
	comp=Z,87nm,18.9s						
PV03	**Paradox Valley**	**44.58**	**306**	*e*P	**P**	**21 37 30.0**	**+1.2**
	comp=Z,19nm,0.8s						
O20A	**White River Ci**	**44.60**	**309**	P	**P**	**21 37 29.6**	**+0.6**
	baz=106						
O20A	**White River Ci**	**44.60**	**309**	*e*P	**P**	**21 37 29.6**	**+0.6**
	comp=Z,11nm,1.0s						
W18A	**Petrified Fore**	**44.65**	**302**	P	**P**	**21 37 29.8**	**+0.4**
	baz=100						
W18A	**Petrified Fore**	**44.65**	**302**	*e*P	**P**	**21 37 29.6**	**+0.2**
	comp=Z,31nm,1.0s						
PV04	**Paradox Valley**	**44.66**	**307**	*e*P	**P**	**21 37 29.7**	**+0.2**
	comp=Z,12nm,1.0s						
X18A	**Snowflake**	**44.73**	**301**	*e*P	**P**	**21 37 31.8**	**+1.7**
	comp=Z,28nm,1.0s						
PV05	**Paradox Valley**	**44.73**	**306**	*e*P	**P**	**21 37 29.6**	**-0.5**
	comp=Z,19nm,0.8s						
NRS	**Narsarsuaq**	**44.74**	**12**	*e*P	**P**	**21 37 30.3**	**+0.9**
	comp=Z,80nm,0.9s						
NRS	**Narsarsuaq**	**44.74**	**12**	⇓*i*P	**P**	**21 37 30.5**	**+1.1**
	comp=Z,76nm,0.9s						
NRS	**Narsarsuaq**	**44.74**	**12**	⇓*i*P	**P**	**21 37 30.5**	**+1.1**
NRS				pmax	pmax		
	comp=Z,76nm,0.9s						
PV10	**Paradox Valley**	**44.76**	**307**	*e*P	**P**	**21 37 30.6**	**+0.3**
	comp=Z,20nm,1.0s						
PV09	**Paradox Valley**	**44.86**	**307**	*e*P	**P**	**21 37 31.6**	**+0.4**
DGMT	**Dagmar**	**44.99**	**322**	P	**P**	**21 37 32.3**	**+0.6**
	baz=118						
DGMT	**Dagmar**	**44.99**	**322**	*e*P	**P**	**21 37 31.3**	**-0.5**
	comp=Z,22nm,0.5s						
TUC	**Tucson**	**45.12**	**298**	P	**P**	**21 37 33.6**	**+0.5**
	baz=96						
TUC	**Tucson**	**45.12**	**298**	*e*P	**P**	**21 37 33.1**	**0.0**
	comp=Z,25nm,1.1s						
TUC	**Tucson**	**45.12**	**298**	*e*P	**P**	**21 37 33.1**	**0.0**
TUC				pmax	pmax		
	comp=Z,25nm,1.1s						
LAO	**LASA Array**	**45.45**	**319**	P	**P**	**21 37 36.0**	**+0.5**
	baz=114,SNR=21						
LAO	**LASA Array**	**45.45**	**319**	*e*P	**P**	**21 37 36.3**	**+0.8**
	comp=Z,38nm,0.8s						
LAO				*e*PcP	**PcP**	**21 39 13.5**	**+0.3**
FRB	**Frobisher Bay**	**45.72**	**357**	P	**P**	**21 37 37.4**	**+0.3**
	comp=Z,38nm,1.0s,baz=170,slow=8.3,SNR=19						
X16A	**Lo Mia Camp, P**	**45.93**	**301**	*e*P	**P**	**21 37 41.2**	**+1.6**
	comp=Z,15nm,1.0s						
P18A	**Preston Nutter**	**45.97**	**308**	*e*P	**P**	**21 37 41.0**	**+1.1**
	comp=Z,8.4nm,0.7s						
WUAZ	**Wupatki**	**46.03**	**302**	P	**P**	**21 37 41.2**	**+0.8**
	baz=99,SNR=13						
WUAZ	**Wupatki**	**46.03**	**302**	*e*P	**P**	**21 37 41.6**	**+1.3**
	comp=Z,27nm,1.0s						
WUAZ				*e*PcP	**PcP**	**21 39 15.8**	**+0.3**
WUAZ				*e*ScP	**ScP**	**21 42 59.7**	**-1.1**
SRU	**San Rafael Swe**	**46.06**	**307**	*e*P	**P**	**21 37 41.4**	**+0.9**
	comp=Z,14nm,0.8s						
SRU	**San Rafael Swe**	**46.06**	**307**	*e*P	**P**	**21 37 41.4**	**+0.9**
SRU				pmax	pmax		
	comp=Z,14nm,0.8s						
P17A	**Butcher Ranch,**	**46.30**	**308**	*e*P	**P**	**21 37 43.3**	**+0.9**
	comp=Z,37nm,1.5s						
BW06	**Boulder Array**	**46.30**	**312**	P	**P**	**21 37 42.9**	**+0.5**
	baz=107,SNR=34						
BW06	**Boulder Array**	**46.30**	**312**	*e*P	**P**	**21 37 42.9**	**+0.5**
	comp=Z,23nm,0.8s						
BW06				*e*PcP	**PcP**	**21 39 16.3**	**-0.1**
BW06				*e*ScP	**ScP**	**21 43 01.6**	**-0.2**
PD31	**Pinedale Array**	**46.30**	**312**	*e*P	**P**	**21 37 42.8**	**+0.3**
PDAR	**Pinedale Array**	**46.30**	**312**	P	**P**	**21 37 42.8**	**+0.3**
	comp=Z,24nm,0.8s,baz=108,slow=8.8,SNR=184						
PDAR				pP	**pP**	**21 38 03.7**	**-0.1**
	comp=Z,14nm,0.8s,baz=108,slow=9.5,SNR=8.2						
PDAR				PcP	**PcP**	**21 39 16.4**	**0.0**
	comp=Z,6.5nm,0.6s,baz=106,slow=4.4,SNR=9.1						
PDAR				pPcP		21 39 39.4	
	comp=Z,6.8nm,0.8s,baz=107,slow=5.7,SNR=3.7						
PDAR				ScP	**ScP**	**21 43 01.9**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=99,slow=4.7,SNR=4.5						
PDAR				PKiKP	**PKiKP**	**21 46 10.2**	**-1.5**
	comp=Z,0.5nm,0.6s,baz=106,slow=4.8,SNR=5.2						
PDAR				LR	LR	21 56 21.9	
	comp=Z,34nm,21.1s,baz=118,slow=35						
FCC	**Fort Churchill**	**46.48**	**338**	*e*P	**P**	**21 37 42.2**	**-1.0**
	comp=Z,57nm,1.1s						
FCC	**Fort Churchill**	**46.48**	**338**	*e*P	**P**	**21 37 42.2**	**-1.0**
FCC				pmax	pmax		
	comp=Z,57nm,1.1s						
Q16A	**Castle Valley**	**46.51**	**307**	*e*P	**P**	**21 37 45.1**	**+1.1**
	comp=Z,13nm,1.2s						
TMUT	**Trail Mountain**	**46.62**	**307**	*e*P	**P**	**21 37 46.2**	**+1.2**
	comp=Z,14nm,0.9s						
214A	**Organ Pipe Nat**	**46.80**	**297**	P	**P**	**21 37 46.8**	**+0.5**
	baz=95						
RLMT	**Red Lodge**	**46.85**	**315**	P	**P**	**21 37 47.2**	**+0.6**
	baz=110,SNR=26						
RLMT	**Red Lodge**	**46.85**	**315**	*e*P	**P**	**21 37 47.0**	**+0.4**
U15A	**North Rim**	**46.91**	**303**	*e*P	**P**	**21 37 47.8**	**+0.4**
	comp=Z,16nm,1.1s						
FFC	**Flin Flon**	**47.08**	**330**	*e*P	**P**	**21 37 47.6**	**-0.4**
	comp=Z,27nm,0.9s						
FFC	**Flin Flon**	**47.08**	**330**	*e*P	**P**	**21 37 47.6**	**-0.4**
FFC				pmax	pmax		
	comp=Z,27nm,0.9s						
JLU	**Jordanelle**	**47.09**	**309**	*e*P	**P**	**21 37 50.0**	**+1.3**
	comp=Z,25nm,0.9s						
MPU	**Maple Canyon**	**47.09**	**308**	*e*P	**P**	**21 37 49.4**	**+0.8**
	comp=Z,14nm,0.9s						
MTPU	**Mount Pierson**	**47.11**	**305**	*e*P	**P**	**21 37 50.2**	**+1.2**
	comp=Z,17nm,1.2s						
Y14A	**Wickenburg**	**47.16**	**300**	*e*P	**P**	**21 37 50.5**	**+1.5**
	comp=Z,24nm,1.0s						
TCUT	**Toone Canyon**	**47.19**	**310**	*e*P	**P**	**21 37 50.2**	**+0.8**
	comp=Z,26nm,0.7s						
MSU	**Marysvale**	**47.19**	**306**	*e*P	**P**	**21 37 50.5**	**+1.1**
LOHW	**Long Hollow**	**47.28**	**313**	*e*P	**P**	**21 37 50.6**	**+0.6**
	comp=Z,13nm,0.6s						
CTU	**Camp Tracy**	**47.34**	**309**	*e*P	**P**	**21 37 51.5**	**+1.1**
	comp=Z,35nm,0.9s						
GCMT	**Greycliff**	**47.34**	**316**	*e*P	**P**	**21 37 51.2**	**+0.8**
SNOW	**Snow King Moun**	**47.34**	**313**	*e*P	**P**	**21 37 51.4**	**+0.8**
	comp=Z,61nm,1.7s						
REDW	**Red Top Meadow**	**47.38**	**313**	*e*P	**P**	**21 37 51.2**	**+0.4**
	comp=Z,65nm,1.8s						
AHID	**Auburn Hatcher**	**47.39**	**312**	*e*P	**P**	**21 37 51.4**	**+0.6**
	comp=Z,27nm,0.7s						
AHID				*e*PcP	**PcP**	**21 39 20.9**	**+0.7**
NLU	**North Lily Min**	**47.41**	**308**	*e*P	**P**	**21 37 52.1**	**+1.0**
	comp=Z,58nm,1.8s						
MOOW	**Moose Ponds**	**47.42**	**313**	*e*P	**P**	**21 37 51.7**	**+0.6**
	comp=Z,9.5nm,0.8s						
HWUT	**Hardware Ranch**	**47.42**	**310**	*e*P	**P**	**21 37 51.4**	**+0.3**
	comp=Z,26nm,0.8s						
HWUT				*e*PcP	**PcP**	**21 39 20.8**	**+0.4**
HWUT				*e*ScP	**ScP**	**21 43 06.5**	**-0.1**
KNB	**Kanab**	**47.43**	**304**	*e*P	**P**	**21 37 52.3**	**+1.1**
	comp=Z,10nm,1.0s						
KNB	**Kanab**	**47.43**	**304**	*e*P	**P**	**21 37 52.3**	**+1.1**
KNB				pmax	pmax		
	comp=Z,10.0nm,1.0s						
LCO	**Las Campanas**	**47.47**	**189**	*e*P	**P**	**21 37 50.2**	**-1.4**
	comp=Z,6.0nm,0.5s						
LCO	**Las Campanas**	**47.47**	**189**	*e*P	**P**	**21 37 50.2**	**-1.4**
LCO				pmax	pmax		
	comp=Z,6.0nm,0.5s						
FLWY	**Flagg Ranch**	**47.49**	**314**	*e*P	**P**	**21 37 52.7**	**+1.1**
	comp=Z,14nm,0.9s						
TPAW	**Teton Pass**	**47.49**	**313**	*e*P	**P**	**21 37 52.3**	**+0.6**
	comp=Z,18nm,0.7s						
FXWY	**Fox Creek**	**47.59**	**313**	*e*P	**P**	**21 37 52.7**	**+0.3**
	comp=Z,11nm,0.8s						
IMW	**Indian Meadow**	**47.60**	**313**	*e*P	**P**	**21 37 53.0**	**+0.4**
	comp=Z,9.9nm,0.6s						
113A	**Mohawk Valley,**	**47.67**	**298**	*e*P	**P**	**21 37 54.3**	**+1.4**
	comp=Z,13nm,1.0s						
SZCU	**Shurtz Canyon**	**47.73**	**305**	*e*P	**P**	**21 37 53.9**	**+0.2**
	comp=Z,10nm,0.9s						
LCMT	**Little Creek M**	**47.76**	**304**	*e*P	**P**	**21 37 54.6**	**+0.8**
	comp=Z,7.1nm,0.8s						
CCUT	**Cedar City**	**47.94**	**304**	*e*P	**P**	**21 37 56.3**	**+1.1**
	comp=Z,17nm,1.0s						
SPUT	**South Promonto**	**47.99**	**310**	*e*P	**P**	**21 37 56.5**	**+0.9**
	comp=Z,22nm,0.8s						
W13A	**Hualapai Mount**	**48.01**	**301**	*e*P	**P**	**21 37 56.9**	**+1.1**
	comp=Z,26nm,1.3s						
DUG	**Dugway, Tooele**	**48.02**	**308**	P	**P**	**21 37 56.4**	**+0.8**
	baz=102,SNR=22						
DUG	**Dugway, Tooele**	**48.02**	**308**	*e*P	**P**	**21 37 56.6**	**+0.9**
	comp=Z,24nm,0.9s						
DUG				*e*PcP	**PcP**	**21 39 22.7**	**+0.3**
DUG				*e*ScP	**ScP**	**21 43 08.9**	**-0.1**
DUG	**Dugway, Tooele**	**48.02**	**308**	*e*P	**P**	**21 37 56.6**	**+0.9**
DUG				*e*		21 39 22.7	
DUG				pmax	pmax		
	comp=Z,24nm,0.9s						
YHB	**Horse Butte**	**48.03**	**314**	*e*P	**P**	**21 37 57.7**	**+1.9**
	comp=Z,40nm,0.8s						
YHB				*e*pP	**pP**	**21 38 19.7**	**+2.4**
PDMCI	**Parker Dam,Lak**	**48.13**	**300**	P	**P**	**21 37 56.5**	**+0.1**
	baz=96						
EGMT	**Eagleton**	**48.19**	**319**	P	**P**	**21 37 57.5**	**+0.7**
	baz=112,SNR=16						
EGMT	**Eagleton**	**48.19**	**319**	*e*P	**P**	**21 37 57.7**	**+0.9**
QLMT	**Earthquake Lak**	**48.21**	**314**	*e*P	**P**	**21 37 59.1**	**+1.9**
QLMT				*e*pP	**pP**	**21 38 20.3**	**+1.6**
BGU	**Big Grassy Mou**	**48.34**	**309**	*e*P	**P**	**21 37 58.9**	**+0.7**
	comp=Z,44nm,0.8s						
HVU	**Hansel Valley**	**48.34**	**310**	*e*P	**P**	**21 37 58.7**	**+0.5**
	comp=Z,22nm,0.8s						
HVU	**Hansel Valley**	**48.34**	**310**	*e*P	**P**	**21 37 58.7**	**+0.5**
HVU				pmax	pmax		
	comp=Z,23nm,0.8s						
Y12C	**Blythe**	**48.39**	**299**	P	**P**	**21 37 59.2**	**+0.7**
	baz=95						
Y12C	**Blythe**	**48.39**	**299**	*e*P	**P**	**21 38 00.5**	**+2.1**
Y12C				*e*pP	**pP**	**21 38 21.2**	**+1.2**
PSUT	**Pine Spring**	**48.49**	**306**	*e*P	**P**	**21 38 01.0**	**+1.6**
	comp=Z,22nm,0.7s						
BOZ	**Bozeman (W)**	**48.58**	**315**	P	**P**	**21 38 00.6**	**+0.7**
	baz=108,SNR=14						
BOZ	**Bozeman (W)**	**48.58**	**315**	*e*P	**P**	**21 38 00.8**	**+0.9**
	comp=Z,15nm,1.0s						
BOZ				*e*PcP	**PcP**	**21 39 25.1**	**+0.8**
BOZ	**Bozeman (W)**	**48.58**	**315**	*e*P	**P**	**21 38 00.8**	**+0.9**
BOZ				*e*		21 39 25.1	
BOZ				pmax	pmax		
	comp=Z,15nm,1.0s						
GLA	**Glamis**	**48.59**	**298**	P	**P**	**21 38 00.3**	**+0.3**
	baz=95						
GLA	**Glamis**	**48.59**	**298**	*e*P	**P**	**21 38 00.1**	**+0.1**
GLA				*e*pP	**pP**	**21 38 21.8**	**+0.2**
GLA	**Glamis**	**48.59**	**298**	*e*P	**P**	**21 38 00.1**	**+0.1**
GLA				*e**PP	**pP**	**21 38 21.8**	**+0.2**
GO04	**Tololo Observa**	**48.63**	**189**	*e*P	**P**	**21 37 59.5**	**-0.9**
	comp=Z,41nm,0.5s						
IRM	**Iron Mountain**	**48.95**	**300**	P	**P**	**21 38 03.5**	**+0.7**
	baz=95,SNR=18						
LDFC	**Landfair**	**49.01**	**301**	*e*P	**P**	**21 38 05.3**	**+2.0**
	comp=Z,38nm,0.9s						
HRY	**Holter Researc**	**49.06**	**317**	*e*P	**P**	**21 38 04.4**	**+0.8**
DLMT	**Dillon**	**49.16**	**315**	*e*P	**P**	**21 38 05.5**	**+1.2**
	comp=Z,30nm,1.3s						
BC3	**Big Chuckawall**	**49.16**	**299**	P	**P**	**21 38 05.2**	**+0.7**
	baz=95,SNR=12						
MCMT	**McKenzie Canyo**	**49.18**	**314**	*e*P	**P**	**21 38 06.1**	**+1.5**
LRM	**Limekiln Ridge**	**49.20**	**315**	*e*P	**P**	**21 38 05.9**	**+1.2**
LRM				*e*pP	**pP**	**21 38 27.6**	**+1.3**
SHPR	**Sheep Range**	**49.21**	**303**	*e*P	**P**	**21 38 06.5**	**+1.6**
SHPR				*e*pP	**pP**	**21 38 25.0**	**-1.5**
SWSC	**Sam W. Stewart**	**49.39**	**298**	P	**P**	**21 38 06.6**	**+0.5**
	baz=94						
GMRC	**Granite Mounta**	**49.43**	**300**	P	**P**	**21 38 07.0**	**+0.4**
	baz=96,SNR=8.6						
SFJD	**Kangerlussuaq**	**49.48**	**6**	P	**P**	**21 38 06.6**	**+0.5**
	comp=Z,17nm,0.7s,baz=201,slow=8.0,SNR=4.9						
SFJD				ScP	**ScP**	**21 43 15.0**	**+0.6**
	comp=Z,22nm,0.8s,baz=207,slow=8.7,SNR=3.8						
SFJD	**Kangerlussuaq**	**49.48**	**6**	*e*P	**P**	**21 38 06.3**	**+0.1**
	comp=Z,26nm,0.9s						
SFJD				ScP	**ScP**	**21 43 15.0**	**+0.6**
IKP	**In-Ko-Pah, Jac**	**49.64**	**298**	P	**P**	**21 38 08.7**	**+0.6**
	baz=94						
BELC	**Belle Mtn. Jos**	**49.64**	**299**	P	**P**	**21 38 09.2**	**+1.0**
	baz=95,SNR=7.4						
TUQ	**Turquoise Moun**	**49.71**	**301**	P	**P**	**21 38 09.5**	**+0.8**
	baz=96,SNR=21						
R11A	**Troy Canyon, C**	**49.80**	**305**	P	**P**	**21 38 10.3**	**+0.9**
	baz=99,SNR=10						
R11A	**Troy Canyon, C**	**49.80**	**305**	*e*P	**P**	**21 38 10.6**	**+1.1**
	comp=Z,7.1nm,0.9s						
MONP2	**Monument Peak**	**49.91**	**298**	P	**P**	**21 38 10.8**	**+0.4**
	baz=94,SNR=14						

HLID	Hailey	49.94	312	P	P	21 38 11.3	+1.0
	baz=104,SNR=27						
HLID	Hailey	49.94	312	eP	P	21 38 11.2	+0.9
	comp=Z,10nm,0.8s						
ELK	Elko	49.94	308	LR	LR	22 00 13.9	
	comp=Z,65nm,21.8s,baz=215,slow=37						
HEC	Hector,Ludlow	49.98	300	P	P	21 38 11.7	+1.0
	baz=95,SNR=7.0						
XPFO	Piæon Flat	49.99	299	eP	P	21 38 11.8	+1.0
XPFO				epP	pP	21 38 34.0	+1.5
PFO	Pinyon Flats O	49.99	299	P	P	21 38 11.6	+0.7
	baz=94						
PFO	Pinyon Flats O	49.99	299	eP	P	21 38 11.7	+0.9
PFO	Pinyon Flats O	49.99	299	eP	P	21 38 11.7	+0.9
SHOC	Shoshone, Teco	50.04	302	P	P	21 38 11.6	+0.6
	baz=96						
TPNV	Topopah Spring	50.14	303	P	P	21 38 12.6	+0.6
	baz=97,SNR=6.8						
TPNV	Topopah Spring	50.14	303	eP	P	21 38 13.1	+1.2
	comp=Z,15nm,0.9s						
TPNV	Topopah Spring	50.14	303	eP	P	21 38 13.1	+1.2
TPNV				pmax	pmax		
	comp=Z,15nm,0.9s						
ANGG	Ammassalik, Gr	50.33	13	eP	P	21 38 12.4	-0.2
	comp=Z,30nm,1.1s						
GSC	Goldstone, Bar	50.41	301	P	P	21 38 14.7	+0.8
	baz=95,SNR=9.7						
GSC	Goldstone, Bar	50.41	301	eP	P	21 38 15.2	+1.3
	comp=Z,12nm,0.9s						
GSC	Goldstone, Bar	50.41	301	eP	P	21 38 15.2	+1.3
GSC				pmax	pmax		
	comp=Z,12nm,0.9s						
MSO	Missoula	50.48	316	P	P	21 38 14.7	+0.4
	baz=107						
MSO	Missoula	50.48	316	eP	P	21 38 14.8	+0.4
MSO				ePcP	PcP	21 39 32.4	+1.2
109C	Camp Elliot, M	50.49	298	P	P	21 38 14.3	-0.2
	baz=93						
FURC	Furnace Creek,	50.57	303	P	P	21 38 15.8	+0.8
	baz=96						
MURC	Murrieta	50.60	299	P	P	21 38 15.7	+0.3
	baz=94						
MFID	Camas Ranch	50.91	312	eP	P	21 38 18.1	+0.6
	comp=Z,19nm,1.1s						
JTMT	Jette	50.97	317	eP	P	21 38 18.9	+0.9
	comp=Z,14nm,0.6s						
BFSC	Mount Baldy Ra	51.03	300	P	P	21 38 19.5	+0.8
	baz=94						
GRAC	Grapevine Rang	51.03	303	P	P	21 38 19.2	+0.7
	baz=96,SNR=5.1						
MORF	Marmelete	51.03	56	eP	P	21 38 19.5	+1.0
	comp=Z,51nm,1.4s						
MPMC	Manual Prospec	51.03	302	P	P	21 38 19.5	+0.8
	baz=95,SNR=8.3						
WALA	Waterton Lakes	51.14	319	eP	P	21 38 18.7	-0.5
	comp=Z,7.4nm,0.7s						
DAC	Darwin (Calif)	51.14	302	eP	P	21 38 20.0	+0.5
	comp=Z,17nm,0.8s						
DAC				ePcP	PcP	21 39 35.0	+1.0
DAC	Darwin (Calif)	51.14	302	eP	P	21 38 20.0	+0.5
DAC				e		21 39 35.0	
DAC				pmax	pmax		
	comp=Z,17nm,0.8s						
LRMC	Laurel Mtn Rad	51.14	301	P	P	21 38 20.2	+0.7
	baz=95						
EDW2	Edwards Air Fo	51.35	300	P	P	21 38 21.8	+0.8
	baz=94						
BMN	Battle Mountai	51.37	308	eP	P	21 38 21.8	+0.6
BMN	Battle Mountai	51.37	308	eP	P	21 38 21.8	+0.6
ROC1	El Roble	51.41	189	eP	P	21 38 21.0	-0.5
	comp=Z,25nm,0.7s						
MESJ	Messejana	51.43	56	eP	P	21 38 22.6	+1.2
	comp=Z,38nm,1.3s						
PCAS	Casmilo, Conde	51.51	53	eP	P	21 38 22.5	+0.5
	comp=Z,48nm,1.4s						
PTOM	Tomar	51.51	54	eP	P	21 38 22.4	+0.4
	comp=Z,37nm,0.9s						
CWC	Cottonwood Cre	51.55	302	P	P	21 38 23.0	+0.4
	baz=95						
PCVE	Castro Verde	51.55	56	eP	P	21 38 23.0	+0.7
	comp=Z,26nm,1.7s						
PMTG	Montargil	51.58	54	eP	P	21 38 22.9	+0.4
	comp=Z,28nm,0.9s						
ILULI	Ilulissat	51.58	5	i P	P	21 38 22.2	+0.2
	comp=Z,46nm,0.8s						
ILULI	Ilulissat	51.58	5	i P	P	21 38 22.2	+0.2
ILULI				pmax	pmax		
	comp=Z,46nm,0.8s						
PBDV	Barranco-do-Ve	51.59	57	eP	P	21 38 23.8	+1.1
	comp=Z,47nm,1.5s						
COI	Coimbra	51.60	53	eP	P	21 38 23.3	+0.7
	comp=Z,59nm,1.1s						
PTO	Porto	51.60	52	eP	P	21 38 23.3	+0.7
	comp=Z,39nm,1.3s						
EVO	Evora	51.68	55	eP	P	21 38 23.5	+0.3
	comp=Z,21nm,1.6s						
PBEJ	Beja	51.73	56	eP	P	21 38 25.5	+1.8
	comp=Z,26nm,1.7s						
ISA	Isabella, Lake	51.80	301	P	P	21 38 24.4	+0.1
	baz=94,SNR=5.7						
ISA	Isabella, Lake	51.80	301	eP	P	21 38 26.0	+1.7
ISA				epP	pP	21 38 47.7	+1.7
NV11	Mina Array Sit	51.81	305	eP	P	21 38 25.4	+0.9
	comp=Z,2.1nm,1.0s						
KVN	Kaiserville	51.85	306	eP	P	21 38 25.2	+0.5
	comp=Z,8.3nm,0.9s						
KVN	Kaiserville	51.85	306	eP	P	21 38 25.2	+0.5
KVN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
NV01	Mina Array Sit	51.93	305	eP	P	21 38 25.5	+0.1
NVAR	Mina Array Bea	51.93	305	P	P	21 38 26.2	+0.8
	comp=Z,9.7nm,0.8s,baz=101,slow=6.3,SNR=65						
NVAR				pP	pP	21 38 47.8	+0.7
	comp=Z,4.9nm,0.7s,baz=101,slow=7.2,SNR=5.3						
NVAR				PcP	PcP	21 39 38.5	+1.6
	comp=Z,5.6nm,0.9s,baz=124,slow=5.3,SNR=4.2						
NVAR				ScP	ScP	21 43 27.3	+1.4
	comp=Z,0.9nm,0.8s,baz=96,slow=5.8,SNR=4.0						
NVAR				LR	LR	22 01 01.4	
	comp=Z,50nm,21.8s,baz=279,slow=37						
PGAV	Gavieira, Arco	51.98	51	eP	P	21 38 26.1	+0.5
	comp=Z,49nm,1.8s						
PESTR	Estremoz	52.05	55	eP	P	21 38 26.5	+0.5
	comp=Z,29nm,1.7s						
PESTR	Estremoz	52.05	55	eP	P	21 38 26.5	+0.5
	comp=Z,28nm,1.6s						
ARVC	Arvin	52.05	301	P	P	21 38 26.4	+0.3
	baz=94						
PVIS	Viseu	52.06	52	eP	P	21 38 26.4	+0.2
	comp=Z,29nm,1.0s						
PCAB	Cabril	52.12	51	eP	P	21 38 26.9	+0.4
	comp=Z,34nm,1.9s						
RYN	Ryan	52.12	305	eP	P	21 38 27.8	+1.0
	comp=Z,9.5nm,0.8s						
POLO	Lamas de Olo	52.24	51	eP	P	21 38 27.8	+0.3
	comp=Z,23nm,1.1s						
PCBR	Castelo Branco	52.26	53	eP	P	21 38 28.0	+0.5
	comp=Z,28nm,2.0s						
BMO	Blue Mountains	52.26	313	eP	P	21 38 27.2	-0.3
	comp=Z,7.7nm,0.7s						
BMO	Blue Mountains	52.26	313	eP	P	21 38 27.3	-0.3
BMO				pmax	pmax		
	comp=Z,8.0nm,0.7s						
PMRV	Marv??o	52.27	54	eP	P	21 38 28.0	+0.4
	comp=Z,17nm,0.9s						
MTE	Manteigas	52.28	53	eP	P	21 38 28.2	+0.4
	comp=Z,40nm,1.5s						
MTE	Manteigas	52.28	53	eP	P	21 38 27.1	-0.7
	comp=Z,20nm,0.7s						
PVRL	Vila Real	52.28	52	eP	P	21 38 28.4	+0.6
	comp=Z,36nm,1.5s						
VES	Vestal, Richgr	52.31	302	P	P	21 38 27.9	-0.1
	baz=94						
OMMB	Old Mammoth Mi	52.39	304	eP	P	21 38 30.3	+1.3
	comp=Z,16nm,0.9s						
F10A	Beach Ranch, E	52.45	314	eP	P	21 38 29.3	+0.3
	comp=Z,6.3nm,0.8s						
MDPB	Devils Postpil	52.45	304	eP	P	21 38 31.0	+1.6
	comp=Z,13nm,0.8s						
YERR	Yerington	52.72	305	eP	P	21 38 31.9	+0.6
	comp=Z,10nm,0.9s						
WVOR	Wild Horse Val	52.75	310	eP	P	21 38 31.9	+0.6
	comp=Z,5.9nm,0.8s						
WVOR	Wild Horse Val	52.75	310	eP	P	21 38 31.9	+0.6
WVOR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MVO	Moncorvo	52.78	52	eP	P	21 38 32.3	+0.8
	comp=Z,27nm,1.0s						
J08A	Circle Bar Ran	52.79	311	eP	P	21 38 32.0	+0.4
	comp=Z,29nm,0.9s						
WAKR	Walker	52.82	305	eP	P	21 38 33.7	+1.7
	comp=Z,17nm,0.9s						
PKM	Mcpherson Peak	52.84	300	P	P	21 38 31.7	-0.5
	baz=93						
NEW	Newport	52.94	317	LR	LR	22 01 01.2	
	comp=Z,84nm,21.7s,baz=101,slow=36						
NEW	Newport	52.94	317	P	P	21 38 32.4	-0.1
	baz=105,SNR=30						
NEW	Newport	52.94	317	eP	P	21 38 32.5	0.0
NEW	Newport	52.94	317	eP	P	21 38 32.5	0.0
SMMC	Simmler	53.01	301	P	P	21 38 34.1	+0.8
	baz=93,SNR=8.6						
PBRG	Braganca	53.09	51	eP	P	21 38 34.1	+0.4
	comp=Z,23nm,1.6s						
G08A	Pilot Rock	53.49	313	eP	P	21 38 36.7	0.0
	comp=Z,4.7nm,0.8s						
CMB	Columbia Colle	53.52	304	eP	P	21 38 37.5	+0.6
	comp=Z,4.8nm,0.8s						
CMB	Columbia Colle	53.52	304	eP	P	21 38 37.5	+0.6
CMB				pmax	pmax		
	comp=Z,5.0nm,0.8s						
C09A	Chrisman Ranch	53.58	316	eP	P	21 38 37.4	+0.3
	comp=Z,7.7nm,0.8s						
I07A	Izee	53.65	312	eP	P	21 38 38.6	+0.8
	comp=Z,19nm,0.8s						
D08A	Wollman Farm,	53.84	315	eP	P	21 38 39.5	+0.5
	comp=Z,43nm,1.8s						
MOD	Modoc Plateau	53.89	309	eP	P	21 38 39.4	-0.3
MOD				ePcP	PcP	21 39 44.7	+0.5
AFDM	Forest Hills D	54.06	305	eP	P	21 38 41.8	+0.9
	comp=Z,8.6nm,0.8s						
MDT	Midelt	54.06	62	LR	LR	21 56 59.6	
	comp=Z,36nm,20.1s,baz=282,slow=31						
HAWA	Hanford	54.11	315	eP	P	21 38 41.3	+0.3
	comp=Z,10nm,0.8s						
BORG	Borgarnes	54.24	21	eP	P	21 38 42.3	+0.7
	comp=Z,87nm,1.8s						
BORG	Borgarnes	54.24	21	eP	P	21 38 42.3	+0.7
BORG				pmax	pmax		
	comp=Z,87nm,1.8s						
SAO	San Andreas Ge	54.27	303	eP	P	21 38 42.4	0.0
	comp=Z,14nm,1.0s						
SAO	San Andreas Ge	54.27	303	eP	P	21 38 42.4	0.0
SAO				pmax	pmax		
	comp=Z,14nm,1.0s						
H10N3	ASCENSION HYDR	54.38	114	T	T	22 37 16.7	
	baz=299,slow=75,SNR=656						
H10N2	ASCENSION HYDR	54.38	114	T	T	22 37 13.8	
	baz=299,slow=75,SNR=15						
H10N1	ASCENSION HYDR	54.40	114	T	T	22 37 16.0	
	baz=299,slow=75,SNR=18						
B08A	Colville Reser	54.40	317	eP	P	21 38 43.0	-0.2
	comp=Z,5.0nm,0.8s						
K05A	Summer Lake	54.44	310	eP	P	21 38 44.6	+0.9
	comp=Z,32nm,0.8s						
ORV	Oroville	54.52	306	eP	P	21 38 45.2	+1.0
	comp=Z,29nm,0.8s						
ORV	Oroville	54.52	306	eP	P	21 38 45.2	+1.0
ORV				pmax	pmax		
	comp=Z,29nm,0.8s						
ASCN	Ascension	54.54	114	eP	P	21 38 43.9	-0.7
PAB	San Pablo	54.62	54	eP	P	21 38 45.6	+0.6
	comp=Z,18nm,1.4s						
PAB	San Pablo	54.62	54	eP	P	21 38 45.6	+0.6
PAB				pmax	pmax		
	comp=Z,18nm,1.4s						
PINE	Pine Mountain	54.63	311	eP	P	21 38 45.8	+0.7
	comp=Z,10nm,1.0s						
G06A	Carlson Farm,	54.65	313	eP	P	21 38 46.3	+1.3
	comp=Z,11nm,0.9s						
J05D	Fort Rock, OR	54.76	311	P	P	21 38 45.7	-0.3
	baz=98,SNR=8.9						
H10S3	ASCENSION HYDR	54.78	115	T	T	22 37 44.7	
	baz=300,slow=75,SNR=14						
H10S1	ASCENSION HYDR	54.78	115	T	T	22 37 40.6	
	baz=300,slow=75,SNR=17						
H10S2	ASCENSION HYDR	54.80	115	T	T	22 37 49.2	
	baz=300,slow=75,SNR=19						
O03D	Paynes Creek	54.83	307	P	P	21 38 46.2	-0.2
	baz=96,SNR=10						
ESDC	Sonseca Array	54.93	54	P	P	21 38 47.5	+0.3
	comp=Z,6.8nm,0.8s,baz=259,slow=7.4,SNR=40						
ESDC				PcP	PcP	21 39 48.7	+0.6
	comp=Z,3.1nm,0.8s,baz=277,slow=4.0,SNR=8.6						
ESDC				LR	LR	21 58 02.2	
	comp=Z,10nm,20.8s,baz=160,slow=31						
ESLA	Sonseca Array	54.93	54	eP	P	21 38 47.9	+0.7
	comp=Z,16nm,1.1s						
ES19	SONSECA Array	54.98	54	eP	P	21 38 47.5	0.0
I05D	Terrebonne, OR	54.99	312	P	P	21 38 48.5	+0.9
	baz=99,SNR=9.1						
M04C	Macdoel	55.01	309	P	P	21 38 48.5	+0.6
	baz=97,SNR=11						
LTY	Liberty	55.04	315	eP	P	21 38 48.4	+0.5
	comp=Z,13nm,0.9s						
K04D	Chiloquin, OR	55.05	310	P	P	21 38 48.9	+0.8
	baz=97,SNR=11						
G05D	Wamic, OR	55.12	313	P	P	21 38 49.0	+0.6
	baz=100						
J04D	Umpqua Nationa	55.39	310	P	P	21 38 51.2	+0.6
	baz=98,SNR=20						
WDC	Whiskeytown Da	55.42	307	eP	P	21 38 49.1	-1.5
	comp=Z,17nm,0.8s						
WDC	Whiskeytown Da	55.42	307	eP	P	21 38 49.1	-1.5
WDC				pmax	pmax		
	comp=Z,17nm,0.8s						
N02D	Trinity Center	55.58	308	P	P	21 38 51.0	-0.8
	baz=96						
H04A	Detroit Lake	55.65	312	eP	P	21 38 52.9	+0.7
	comp=Z,24nm,0.8s						
YBH	Yreka Blue Hor	55.66	308	LR	LR	22 04 06.6	
	comp=Z,41nm,21.0s,baz=112,slow=37						
YBH	Yreka Blue Hor	55.66	308	eP	P	21 38 51.6	-0.8
	comp=Z,21nm,0.8s						
YBH	Yreka Blue Hor	55.66	308	eP	P	21 38 51.6	-0.8
YBH				pmax	pmax		
	comp=Z,21nm,0.8s						
I04A	Tendick Farm,	55.68	311	P	P	21 38 52.2	-0.3
	baz=98						
LON	Longmire	55.72	315	eP	P	21 38 52.8	+0.1
	comp=Z,4.1nm,0.7s						
LON	Longmire	55.72	315	eP	P	21 38 52.8	+0.1
LON				pmax	pmax		
	comp=Z,4.0nm,0.7s						
M02C	Callahan	55.73	308	P	P	21 38 52.1	-0.8
	baz=96,SNR=8.5						
TRQA	Tornquist	55.91	179	eP	P	21 38 53.0	-1.0
	comp=Z,9.0nm,0.7s						
TRQA	Tornquist	55.91	179	eP	P	21 38 53.0	-1.0
TRQA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HUMO	Hull Mountain	55.93	310	eP	P	21 38 53.7	-0.6
	comp=Z,13nm,0.8s						
KCPM	Cahto Peak	56.14	306	eP	P	21 38 55.6	-0.3
	comp=Z,41nm,1.1s						
B05A	Bryant	56.18	316	P	P	21 38 54.6	-1.2
	baz=101,SNR=6.1						
SUMG	Summit	56.23	9	eP	P	21 38 56.9	+0.6
	comp=Z,54nm,1.2s						
SUMG	Summit	56.23	9	⇓iP	P	21 38 56.9	+0.6
	comp=Z,52nm,1.2s						
SUMG	Summit	56.23	9	⇓iP	P	21 38 56.9	+0.6
SUMG				pmax	pmax		
	comp=Z,53nm,1.2s						
KHMM	Horse Mountain	56.34	307	eP	P	21 38 58.2	+0.8
	comp=Z,16nm,0.8s						
I03D	Drain, OR	56.34	311	P	P	21 38 56.8	-0.3
	baz=97						
L02D	Cave Junction,	56.36	309	P	P	21 38 57.0	-0.3
	baz=96						
G03D	McMinnville, O	56.48	313	P	P	21 38 58.5	+0.4
	baz=98,SNR=5.1						
LLLB	Lillooet	56.52	319	eP	P	21 38 58.8	+0.4
	comp=Z,25nm,0.9s						
YKA	Yellowknife Ar	56.75	334	P	P	21 38 59.0	-0.6
	comp=Z,27nm,0.7s,baz=109,slow=7.5,SNR=59						
YKA				pP	pP	21 39 20.8	-0.9
	comp=Z,8.1nm,0.6s,baz=107,slow=7.4,SNR=5.7						
YKA				LR	LR	22 03 19.8	
	comp=Z,13nm,19.1s,baz=102,slow=36						
F03A	Seaside	56.78	313	eP	P	21 39 01.1	+0.9
	comp=Z,62nm,1.4s						
E03A	Lebam	56.88	314	eP	P	21 39 01.1	+0.3
	comp=Z,20nm,0.7s						
KEBM	Edson Butte	56.97	310	eP	P	21 39 02.1	+0.5
	comp=Z,45nm,1.0s						
PGC	Sidney	57.14	317	eP	P	21 39 02.4	-0.2
PGC				ePcP	PcP	21 39 57.5	+1.1
NLWA	Neilton Lookou	57.21	315	eP	P	21 39 03.8	+0.5
	comp=Z,13nm,0.8s						
TIC	Toumodi	57.55	94	eP	P	21 39 06.3	+0.2
LIC	Lamto	57.67	94	eP	P	21 39 07.2	+0.3
	comp=Z,132nm,0.7s						
DBIC	Dimbokro	57.70	94	P	P	21 39 07.6	+0.5
	comp=Z,52nm,0.7s,baz=276,slow=6.6,SNR=72						
DBIC				LR	LR	21 59 33.3	
	comp=Z,24nm,21.7s,baz=250,slow=31						
KIC	Kosan Boka	57.90	94	eP	P	21 39 08.9	+0.4
	comp=Z,80nm,0.6s						
ESK	Eskdalemuir	58.16	36	eP	P	21 39 10.3	+0.6
ESK	Eskdalemuir	58.16	36	eP	P	21 39 10.3	+0.6
PLCA	Paso Flores	59.00	187	P	P	21 39 15.4	-0.3
	comp=Z,10nm,0.7s,baz=26,slow=7.5,SNR=25						
PLCA				LR	LR	22 09 39.8	
	comp=Z,311nm,19.7s,baz=344,slow=41						
PLCA	Paso Flores	59.00	187	eP	P	21 39 15.7	0.0
	comp=Z,14nm,0.8s						
RES	Resolute Bay	59.14	351	eP	P	21 39 15.3	-0.8
	comp=Z,9.6nm,0.9s						
RES	Resolute Bay	59.14	351	eP	P	21 39 15.3	-0.8
RES				pmax	pmax		
	comp=Z,10.0nm,0.9s						
UCC	Uccle	61.85	42	⇓P	P	21 39 34.8	-0.2
UCC	Uccle	61.85	42	eP	P	21 39 35.3	+0.3
	comp=Z,23nm,0.9s						
UCC	Uccle	61.85	42	eP	P	21 39 35.3	+0.3
UCC				pmax	pmax		
	comp=Z,23nm,0.9s						
DOU	Dourbes	61.94	42	⇓P	P	21 39 35.4	-0.2
DOU				⇑AP	pP	21 39 58.0	-0.1
TOA0	Torodi Ar. Sit	62.22	84	eP	P	21 39 37.8	-0.3
	comp=Z,27nm,0.8s						
TORD	Torodi Ar. Bea	62.22	84	P	P	21 39 36.3	-1.8
	comp=Z,21nm,0.9s,baz=295,slow=5.2						
BCLA	Clavier	62.42	42	⇓P	P	21 39 38.4	-0.4
BEBN	Eben Emael	62.69	42	⇓P	P	21 39 40.7	+0.1
DAG	Danmarks Havn	62.75	10	⇓iP	P	21 39 40.4	-0.1
	comp=Z,18nm,0.9s						
DAG	Danmarks Havn	62.75	10	⇓iP	P	21 39 40.4	-0.1
DAG				pmax	pmax		
	comp=Z,18nm,0.9s						
HGN	Heimansgroeve	62.85	42	i P	P	21 39 41.7	+0.1
	comp=Z,42nm,1.1s						
HGN				eS	PnS	21 48 26.8	-6.1
MEM	Membach	62.88	42	⇓P	P	21 39 42.0	+0.1
	comp=Z,12nm,1.1s						
MEM				⇓AP	pP	21 40 04.3	-0.1
WLF	Walferdange	62.91	43	⇑P	P	21 39 42.3	+0.2
WLF				⇑AP	pP	21 40 05.5	+0.9
WLF	Walferdange	62.91	43	eP	P	21 39 42.5	+0.4
	comp=Z,12nm,0.8s						
WLF	Walferdange	62.91	43	eP	P	21 39 42.5	+0.4
WLF				pmax	pmax		
	comp=Z,12nm,0.8s						
BNI	Bardonecchia	63.09	48	eP	P	21 39 44.6	+1.0
	comp=Z,12nm,1.0s						
BNI	Bardonecchia	63.09	48	eP	P	21 39 44.6	+1.0
BNI				pmax	pmax		
	comp=Z,12nm,1.0s						
CTEI	Djebel Teioual	63.09	58	P	P	21 39 44.2	+0.5
CASM	Ain Smara	63.14	58	P	P	21 39 45.8	+1.8
CKFL	Kef-Lekhel	63.32	58	P	P	21 39 46.8	+1.6
CAEH	’Ain El Ouahch	63.40	57	P	P	21 39 48.7	+3.1
WTSB	Winterswijk	63.48	40	i P	P	21 39 45.9	+0.1
	comp=Z,37nm,1.0s						
ECH	Echery	63.50	45	eP	P	21 39 45.9	-0.2
	comp=Z,24nm,1.1s						
ECH	Echery	63.50	45	eP	P	21 39 45.9	-0.2
ECH				pmax	pmax		
	comp=Z,24nm,1.1s						
SENIN	Lac Senin/Sane	63.55	47	eP	P	21 39 47.5	+0.9
	comp=Z,11nm,0.9s						
SENIN				epP	pP	21 40 10.3	+1.1
TAM	Tamanrasset	63.85	73	eP	P	21 39 50.8	+1.8
	comp=Z,19nm,0.9s						
CMAH	Djebel Manchou	63.87	58	P	P	21 39 49.7	+0.9
ABSA	Djebel Ababsia	63.94	58	P	P	21 39 49.9	+0.6
BLS5	Blasjo	64.10	32	eP	P	21 39 48.7	-1.1
BLS5				IAmb	IAmb	21 39 50.8	
	comp=Z,21nm,0.9s						
BFO	Black Forest	64.29	45	eP	P	21 39 50.4	-0.8
	comp=Z,0.8nm,0.8s						
BFO	Black Forest	64.29	45	i P	P	21 39 51.6	+0.3
SNART	Snartemo	64.34	33	eP	P	21 39 50.2	-1.2
SNART				IAmb	IAmb	21 39 51.4	
	comp=Z,11nm,1.1s						
TUE	Stuetta	64.96	47	eP	P	21 39 56.1	+0.2
	comp=Z,12nm,1.1s						
THTN	Thala	64.97	59	eP	P	21 39 57.0	+0.9
	comp=Z,21nm,1.0s						
HOMB	Homborsund	65.02	34	eP	P	21 39 55.8	+0.1
HOMB				IAmb	IAmb	21 39 56.8	
	comp=Z,14nm,0.8s						
BESE	Bessie Mountai	65.24	327	eP	P	21 39 58.2	+0.9
	comp=Z,12nm,0.8s						
DAVA	Damuels	65.32	46	eP	P	21 39 58.6	+0.4
	comp=Z,25nm,0.8s,SNR=15						
DAVOX	Davos/Dischmat	65.33	46	P	P	21 39 58.5	+0.2
	comp=Z,9.8nm,0.6s,baz=315,slow=8.6,SNR=19						
KEST	Kesra	65.49	58	P	P	21 40 00.1	+0.8
	comp=Z,28nm,0.8s,baz=224,slow=2.1,SNR=25						
KEST	Kesra	65.49	58	eP	P	21 40 00.1	+0.8
	comp=Z,29nm,0.9s						
KONO	Kongsberg	65.72	32	ceP	P	21 39 59.8	-0.4
KONO				pmax	pmax		
	comp=Z,17nm,1.7s						
VLC	Villacollemand	65.75	49	eP	P	21 40 00.1	-0.7
	comp=Z,13nm,0.8s						
FETA	Feichten	65.91	46	eP	P	21 40 02.4	+0.4
	comp=Z,20nm,0.7s,SNR=17						
RETA	Reutte	65.92	45	eP	P	21 40 02.1	+0.2
	comp=Z,17nm,0.8s,SNR=13						
INK	Inuvik	66.09	337	eP	P	21 40 01.9	-0.5
	comp=Z,45nm,0.9s						
INK	Inuvik	66.09	337	eP	P	21 40 02.0	-0.5
INK				pmax	pmax		
	comp=Z,45nm,0.9s						
MOTA	Moosalm	66.16	46	eP	P	21 40 04.5	+1.0
	comp=Z,14nm,0.8s,SNR=16						
GRFO	Grafenberg	66.20	43	eP	P	21 40 03.0	-0.6
	comp=Z,5.7nm,0.8s						
GRFO	Grafenberg	66.20	43	eP	P	21 40 03.0	-0.6
GRFO				pmax	pmax		
	comp=Z,6.0nm,0.8s						
NBO00	NORSAR Array S	66.43	31	eP	P	21 40 05.8	+1.0
NAO01	NORSAR Array S	66.47	31	eP	P	21 40 05.7	+0.6
WATA	Walderalm	66.48	46	eP	P	21 40 06.5	+1.0
	comp=Z,4.2nm,0.5s						
WTTA	Wattenberg	66.52	46	eP	P	21 40 05.9	0.0
	comp=Z,5.6nm,0.5s						
NB2	NORSAR Subarra	66.64	31	P	P	21 40 06.5	+0.3
	comp=Z,16nm,0.8s,baz=265,slow=6.5						
NB2	NORSAR Subarra	66.64	31	P	P	21 40 06.5	+0.3
	baz=265,slow=6.5						
NOA	NORSAR Array B	66.64	31	LR	LR	22 06 42.7	
	comp=Z,36nm,18.4s,baz=250,slow=34						
NB201	NORSAR Array S	66.68	31	eP	P	21 40 07.4	+1.0
NC303	NORSAR Array S	66.73	30	eP	P	21 40 07.3	+0.6
NC602	NORSAR Array S	66.78	31	eP	P	21 40 08.0	+1.0
NC602	NORSAR Array S	66.78	31	eP	P	21 40 07.9	+1.0
NC602				IAmb	IAmb	21 40 08.7	
	comp=Z,116nm,0.5s						
NC405	NORSAR Array S	66.89	31	eP	P	21 40 08.3	+0.6
NKC	Novy Kostel	66.99	42	eP	P	21 40 08.9	+0.3
NKC				epP	pP	21 40 31.3	0.0
NKC	Novy Kostel	66.99	42	eP	P	21 40 08.9	+0.3
NKC				e		21 40 31.3	
ABTA	Abfaltersbach	67.14	46	eP	P	21 40 09.5	-0.2
	comp=Z,7.9nm,0.7s,SNR=9.3						
NSS	Namsos	67.30	27	eP	P	21 40 10.9	+0.7
NSS				IAmb	IAmb	21 40 11.2	
	comp=Z,13nm,1.0s						
CLL	Collm	67.32	41	⇓iP	P	21 40 10.6	0.0
	comp=Z,14nm,0.9s						
CLL				i		21 40 15.6	
CLL				i pP	pP	21 40 33.3	0.0
	comp=Z,9.0nm,1.0s						
CLL				i sP	sP	21 40 43.0	-0.1
	comp=Z,8.0nm,0.9s						
CLL	Collm	67.32	41	eP	P	21 40 09.8	-0.8
	comp=Z,11nm,0.9s						

CLL	**Collm**	**67.32**	**41**	⇓*i*P	**P**	**21 40 10.6**	**0.0**
CLL				*i* *PP	**pP**	**21 40 33.3**	**0.0**
CLL				pmax	pmax		
	comp=Z,14nm,0.9s						
KBA	**Koelnbreinsper**	**67.69**	**46**	*e*P	**P**	**21 40 12.8**	**-0.5**
	comp=Z,7.7nm,0.6s,SNR=9.2						
KHC	**Kasperske Hory**	**67.75**	**44**	*e*P	**P**	**21 40 13.4**	**-0.1**
KHC				*e*x	x	21 40 21.7	
KHC				*e*pP	**pP**	**21 40 35.6**	**-0.6**
KHC	**Kasperske Hory**	**67.75**	**44**	*e*P	**P**	**21 40 13.1**	**-0.4**
	comp=Z,2.4nm,0.8s						
KHC	**Kasperske Hory**	**67.75**	**44**	*e*P	**P**	**21 40 13.4**	**-0.1**
KHC				*e*		21 40 35.6	
HFS	**Hagfors**	**67.81**	**32**	P	**P**	**21 40 13.6**	**0.0**
	comp=Z,4.7nm,0.6s,baz=240,slow=5.8,SNR=24						
HFS				LR	LR	22 06 43.7	
	comp=Z,22nm,19.1s,baz=266,slow=33						
GEA0	**GERESS Array S**	**67.85**	**44**	*e*P	**P**	**21 40 13.5**	**-0.6**
GEC2	**GERESS Array S**	**67.85**	**44**	*e*P	**P**	**21 40 13.9**	**-0.3**
	comp=Z,8.4nm,0.6s						
GEC2	**GERESS Array S**	**67.85**	**44**	*e*P	**P**	**21 40 13.9**	**-0.3**
GEC2				pmax	pmax		
	comp=Z,8.0nm,0.6s						
GERES	**GERESS Array B**	**67.85**	**44**	P	**P**	**21 40 13.8**	**-0.3**
	comp=Z,6.8nm,0.5s,baz=274,slow=5.3,SNR=92						
GERES				pP	**pP**	**21 40 36.1**	**-0.8**
	comp=Z,3.1nm,0.6s,baz=274,slow=5.3,SNR=6.2						
DAWY	**Dawson**	**67.89**	**333**	*e*P	**P**	**21 40 14.4**	**+0.4**
	comp=Z,23nm,0.7s						
MYKA	**Terra Mystica**	**67.92**	**46**	*e*P	**P**	**21 40 11.0**	**-3.6**
	comp=Z,9.3nm,0.9s,SNR=6.4						
BRG	**Berggiesshubel**	**67.93**	**42**	*i* P	**P**	**21 40 14.4**	**0.0**
	comp=Z,14nm,0.9s						
BRG				*e*		21 40 37.1	
	comp=Z,7.0nm,0.9s						
BRG	**Berggiesshubel**	**67.93**	**42**	*i* P	**P**	**21 40 14.4**	**0.0**
BRG				*e*		21 40 37.2	
BRG				pmax	pmax		
	comp=Z,13nm,0.9s						
BRG				pmax	pmax		
	comp=Z,14nm,0.9s						
AQU	**L'Aquila**	**68.06**	**51**	*e*P	**P**	**21 40 15.8**	**+0.3**
	comp=Z,17nm,1.0s						
TRI	**Trieste**	**68.06**	**47**	*e*P	**P**	**21 40 15.5**	**+0.1**
	comp=Z,12nm,0.9s						
TRI	**Trieste**	**68.06**	**47**	*e*P	**P**	**21 40 15.5**	**+0.1**
TRI				pmax	pmax		
	comp=Z,12nm,0.9s						
MOA	**Molln**	**68.27**	**45**	*e*P	**P**	**21 40 16.4**	**-0.3**
	comp=Z,5.8nm,0.5s,SNR=7.6						
PVCC	**Panska Ves**	**68.34**	**42**	*e*P	**P**	**21 40 17.9**	**+0.9**
PVCC	**Panska Ves**	**68.34**	**42**	*e*P	**P**	**21 40 17.9**	**+0.9**
PRU	**Pruhonice**	**68.34**	**43**	*e*P	**P**	**21 40 17.1**	**0.0**
PRU				*e*x	x	21 40 21.3	
PRU				*e*pP	**pP**	**21 40 38.6**	**-1.2**
PRU				*e*x	x	21 40 50.5	
PRU	**Pruhonice**	**68.34**	**43**	*e*P	**P**	**21 40 17.1**	**0.0**
PRU				*e*		21 40 38.6	
PRU				*e*		21 40 50.5	
CLTB	**Caltabellotta**	**68.40**	**56**	*e*P	**P**	**21 40 18.0**	**+0.2**
	comp=Z,10nm,0.7s						
OBKA	**Obir**	**68.55**	**46**	*e*P	**P**	**21 40 18.4**	**-0.2**
	comp=Z,33nm,1.6s,SNR=11						
EGAK	**Eagle**	**68.70**	**333**	*e*P	**P**	**21 40 19.3**	**+0.3**
VISS	**Visnje**	**68.81**	**47**	*e*P	**P**	**21 40 19.9**	**-0.1**
SOKA	**Soboth**	**68.87**	**46**	*e*P	**P**	**21 40 19.6**	**-1.0**
	comp=Z,5.9nm,0.9s,SNR=8.3						
STEI	**Steigen**	**68.90**	**23**	*e*P	**P**	**21 40 20.7**	**+0.5**
STEI				IAmb	IAmb	21 40 21.3	
	comp=Z,10nm,0.7s						
PERS	**Pernice**	**68.93**	**46**	*e*P	**P**	**21 40 20.0**	**-0.9**
BOJS	**Bojanci**	**69.12**	**47**	*e*P	**P**	**21 40 21.9**	**-0.1**
ARSA	**Arzberg**	**69.16**	**46**	*e*P	**P**	**21 40 21.7**	**-0.5**
	comp=Z,5.7nm,0.6s,SNR=7.0						
UPC	**Upice**	**69.26**	**42**	*e*P	**P**	**21 40 23.2**	**+0.4**
UPC				*e*pP	**pP**	**21 40 45.2**	**-0.4**
UPC	**Upice**	**69.26**	**42**	*e*P	**P**	**21 40 23.2**	**+0.4**
UPC				*e*		21 40 45.2	
CONA	**Conrad Observa**	**69.34**	**45**	*e*P	**P**	**21 40 23.3**	**-0.2**
	comp=Z,9.0nm,0.8s,SNR=9.3						
VAE	**Valguarnera**	**69.35**	**56**	LR	LR	22 06 24.5	
	comp=Z,45nm,18.4s,baz=326,slow=32						
TGL	**Tana Glacier**	**69.39**	**329**	*e*P	**P**	**21 40 24.6**	**+1.1**
	comp=Z,21nm,1.0s						
KBS	**Kingsbay**	**69.42**	**12**	*e*P	**P**	**21 40 24.7**	**+1.5**
	comp=Z,36nm,1.2s						
KBS	**Kingsbay**	**69.42**	**12**	*e*P	**P**	**21 40 24.7**	**+1.5**
KBS				pmax	pmax		
	comp=Z,36nm,1.2s						
KSP	**Ksiaz**	**69.42**	**42**	*e*P	**P**	**21 40 23.9**	**+0.3**
KSP	**Ksiaz**	**69.42**	**42**	*e*P	**P**	**21 40 24.0**	**+0.3**
DPC	**Dobruska-Polom**	**69.47**	**42**	*e*P	**P**	**21 40 24.6**	**+0.5**
DPC				*e*pP	**pP**	**21 40 46.8**	**-0.1**
DPC				*e*x	x	21 40 55.7	
DPC	**Dobruska-Polom**	**69.47**	**42**	*e*P	**P**	**21 40 24.6**	**+0.5**
DPC				*e*		21 40 46.8	
DPC				*e*		21 40 55.7	
KRUC	**Moravsky**	**69.61**	**44**	*e*P	**P**	**21 40 24.8**	**-0.1**
VRAC	**Vranov**	**69.72**	**43**	LR	LR	22 07 15.9	
	comp=Z,22nm,18.9s,baz=282,slow=33						
VRAC	**Vranov**	**69.72**	**43**	⇑*i*P	**P**	**21 40 26.0**	**+0.4**
VRAC	**Vranov**	**69.72**	**43**	*e*P	**P**	**21 40 25.7**	**+0.1**
KRLC	**Kraliky**	**69.78**	**43**	*e*P	**P**	**21 40 26.8**	**+0.8**
KRLC				*e*pP	**PcP**	**21 40 47.4**	**-0.8**
KRLC	**Kraliky**	**69.78**	**43**	*e*P	**P**	**21 40 26.8**	**+0.8**
KRLC				*e*		21 40 47.4	
HSPB	**Hornsund (broa**	**69.85**	**14**	*e*P	**P**	**21 40 27.7**	**+1.8**
HSPB				IAmb	IAmb	21 40 28.5	
	comp=Z,12nm,0.8s						
BEHE	**Becsehely**	**70.09**	**46**	⇓*e*P	**P**	**21 40 28.3**	**+0.4**
CUC	**Castrocucco**	**70.12**	**53**	*e*P	**P**	**21 40 27.6**	**-0.7**
	comp=Z,7.3nm,0.8s						
SPA0	**Spitsbergen Ar**	**70.17**	**12**	*e*P	**P**	**21 40 28.6**	**+0.7**
SPA0				IAmb	IAmb	21 40 29.1	
	comp=Z,21nm,1.1s						
SPITS	**Spitsbergen Ar**	**70.17**	**12**	P	**P**	**21 40 28.5**	**+0.6**
	comp=Z,6.0nm,0.5s,baz=278,slow=5.1,SNR=24						
SPITS				LR	LR	22 12 28.9	
	comp=Z,19nm,18.2s,baz=300,slow=37						
MODS	**Modra-Piesok**	**70.25**	**44**	*e*P	**P**	**21 40 29.0**	**+0.1**
MODS				pmax	pmax		
	comp=Z,51nm,1.6s						
MODS	**Modra-Piesok**	**70.25**	**44**	*e*P	**P**	**21 40 29.0**	**+0.1**
MORC	**Moravsky Berou**	**70.30**	**43**	⇑*i*P	**P**	**21 40 29.9**	**+0.7**
MORC	**Moravsky Berou**	**70.30**	**43**	*e*P	**P**	**21 40 29.5**	**+0.3**
TRO	**Tromso**	**70.31**	**22**	*e*P	**P**	**21 40 29.4**	**+0.5**
TRO				IAmb	IAmb	21 40 30.2	
	comp=Z,19nm,0.9s						
JAVC	**Velka Javorina**	**70.46**	**44**	*e*P	**P**	**21 40 31.3**	**+1.1**
HARP	**HAARP**	**70.47**	**331**	*e*P	**P**	**21 40 31.3**	**+1.3**
	comp=Z,33nm,0.7s						
BLY	**Banja Luka**	**70.56**	**48**	*e*P	**P**	**21 40 30.8**	**0.0**
	comp=Z,21nm,1.4s						
OKC	**Ostrava-Krasne**	**70.68**	**43**	*e*P	**P**	**21 40 32.0**	**+0.5**
OKC	**Ostrava-Krasne**	**70.68**	**43**	*e*P	**P**	**21 40 32.0**	**+0.5**
KLU	**Klutina**	**70.86**	**330**	*e*P	**P**	**21 40 32.9**	**+0.4**
	comp=Z,38nm,1.2s						
TIP	**Timpagrande**	**70.95**	**54**	⇑*i*P	**P**	**21 40 32.1**	**-1.3**
TIP	**Timpagrande**	**70.95**	**54**	*e*P	**P**	**21 40 32.2**	**-1.3**
	comp=Z,22nm,1.5s						
CSKK	**Csˆ‡kako**	**71.01**	**45**	⇓*e*P	**P**	**21 40 33.6**	**+0.1**
ILAR	**Eielson Array**	**71.15**	**333**	P	**P**	**21 40 33.6**	**-0.5**
	comp=Z,14nm,0.6s,baz=103,slow=4.0,SNR=232						
ILAR				pP	**pP**	**21 40 55.9**	**-1.1**
	comp=Z,11nm,0.9s,baz=104,slow=4.0,SNR=7.7						
ILAR				LR	LR	22 12 44.9	
	comp=Z,49nm,19.6s,baz=106,slow=36						
ILAR	**Eielson Array**	**71.15**	**333**	P	**P**	**21 40 33.6**	**-0.5**
ILAR				*PP	**pP**	**21 40 55.9**	**-1.1**
ILAR				pmax	pmax		
	comp=Z,17nm,0.6s						
ILAR				pmax	pmax		
	comp=Z,11nm,0.9s						
ILAR				MLR	MLR		
	comp=Z,49nm,19.7s						
ILB	**Eielson Array**	**71.15**	**333**	*e*P	**P**	**21 40 33.6**	**-0.5**
VYHS	**Vyhne**	**71.27**	**44**	*e*P	**P**	**21 40 35.3**	**+0.2**
VYHS				pmax	pmax		
	comp=Z,5.0nm,1.1s						
VYHS	**Vyhne**	**71.27**	**44**	*e*P	**P**	**21 40 35.3**	**+0.2**
MORH	**Mˆ‡rˆ¡gy, Hung**	**71.40**	**46**	⇓*e*P	**P**	**21 40 36.5**	**+0.6**
KLNR	**Kaliningrad**	**71.50**	**38**	*e*P	**P**	**21 40 35.7**	**-0.6**
KLNR				pmax	pmax		
	comp=Z,24nm,0.8s						
BUD	**Budapest**	**71.51**	**45**	⇓*e*P	**P**	**21 40 36.9**	**+0.4**
COLA	**College**	**71.56**	**333**	*e*P	**P**	**21 40 36.3**	**-0.1**
	comp=Z,42nm,1.0s						
COLA	**College**	**71.56**	**333**	*e*P	**P**	**21 40 36.3**	**-0.1**
COLA				pmax	pmax		
	comp=Z,42nm,1.0s						
LANS	**Liptovska Anna**	**71.61**	**43**	*e*P	**P**	**21 40 38.2**	**+1.0**
LANS	**Liptovska Anna**	**71.61**	**43**	*e*P	**P**	**21 40 38.2**	**+1.0**
OJC	**Ojcow**	**71.70**	**42**	*e*P	**P**	**21 40 38.0**	**+0.4**
OJC	**Ojcow**	**71.70**	**42**	*e*P	**P**	**21 40 38.0**	**+0.4**
	comp=Z,28nm,1.4s						
OJC	**Ojcow**	**71.70**	**42**	*e*P	**P**	**21 40 38.1**	**+0.5**
OJC				pmax	pmax		
	comp=Z,28nm,1.4s						
TOLK	**Toolik Lake Re**	**72.01**	**337**	P	**P**	**21 40 38.9**	**-0.3**
	baz=86,SNR=9.4						
TOLK	**Toolik Lake Re**	**72.01**	**337**	*e*P	**P**	**21 40 39.2**	**0.0**
	comp=Z,16nm,1.0s						
PSZ	**Piszkesteto**	**72.04**	**45**	⇓*i*P	**P**	**21 40 40.4**	**+0.7**
PSZ	**Piszkesteto**	**72.04**	**45**	⇓*e*P	**P**	**21 40 40.5**	**+0.7**
PSZ	**Piszkesteto**	**72.04**	**45**	*e*P	**P**	**21 40 40.0**	**+0.2**
	comp=Z,8.7nm,1.0s						
MCK	**McKinley**	**72.11**	**332**	*e*P	**P**	**21 40 39.9**	**0.0**
	comp=Z,24nm,1.0s						
MCK	**McKinley**	**72.11**	**332**	*e*P	**P**	**21 40 39.9**	**0.0**
MCK				pmax	pmax		
	comp=Z,24nm,1.0s						
NIE	**Niedzica**	**72.12**	**43**	*e*P	**P**	**21 40 41.2**	**+1.0**
NIE	**Niedzica**	**72.12**	**43**	*e*P	**P**	**21 40 41.2**	**+1.0**
GHO	**Glory Hole Cre**	**72.28**	**330**	*e*P	**P**	**21 40 41.3**	**+0.4**
	comp=Z,36nm,1.0s						
GHO				*e*pP	**pP**	**21 41 03.5**	**-0.4**
COLD	**Coldfoot**	**72.35**	**336**	*e*P	**P**	**21 40 41.4**	**+0.2**
	comp=Z,14nm,1.0s						
PDG	**Podgorica**	**72.35**	**50**	⇑*i*P	**P**	**21 40 42.6**	**+1.0**
TTG	**Podgorica**	**72.35**	**50**	*e*P	**P**	**21 40 42.2**	**+0.6**
	comp=Z,30nm,0.9s						
PMR	**Palmer**	**72.39**	**330**	*e*P	**P**	**21 40 41.4**	**-0.1**
	comp=Z,14nm,1.0s						
PMR	**Palmer**	**72.39**	**330**	*e*P	**P**	**21 40 41.4**	**-0.1**
PMR				pmax	pmax		
	comp=Z,14nm,1.0s						
ARCES	**ARCESS Array B**	**72.62**	**22**	P	**P**	**21 40 43.1**	**+0.3**
	comp=Z,20nm,0.7s,baz=273,slow=4.7,SNR=60						
ARCES	**ARCESS Array B**	**72.62**	**22**	*e*P	**P**	**21 40 42.7**	**-0.1**
ARE0	**ARCESS Array S**	**72.62**	**22**	*e*P	**P**	**21 40 43.3**	**+0.5**
	comp=Z,21nm,0.8s						
DIVS	**Divibare**	**72.64**	**49**	*e*P	**P**	**21 40 43.5**	**+0.1**
	comp=Z,32nm,1.4s						
TRF	**Thorofare Moun**	**72.74**	**332**	*e*P	**P**	**21 40 44.0**	**+0.2**
	comp=Z,75nm,0.7s						
CRVS	**Cervenica-Dubn**	**72.94**	**43**	*e*P	**P**	**21 40 46.1**	**+1.0**
CRVS				pmax	pmax		
	comp=Z,16nm,1.3s						
CRVS	**Cervenica-Dubn**	**72.94**	**43**	*e*P	**P**	**21 40 46.1**	**+1.0**
BPAW	**Bear Paw Mtn.**	**72.98**	**333**	*e*P	**P**	**21 40 44.7**	**-0.3**
	comp=Z,49nm,0.9s						
BANR	**Banloc**	**73.25**	**47**	⇑*i*P	**P**	**21 40 47.6**	**+0.7**
SUW	**Suwalki**	**73.29**	**38**	*e*P	**P**	**21 40 47.0**	**0.0**
SUW	**Suwalki**	**73.29**	**38**	*e*P	**P**	**21 40 47.1**	**+0.1**
	comp=Z,39nm,1.1s						
SUW	**Suwalki**	**73.29**	**38**	*e*P	**P**	**21 40 47.1**	**+0.1**
SUW				pmax	pmax		
	comp=Z,39nm,1.1s						
LTVH	**Lˆ'tavˆ'rtes,**	**73.46**	**45**	⇓*e*P	**P**	**21 40 49.8**	**+1.7**
SKT	**Skwentna**	**73.48**	**331**	*e*P	**P**	**21 40 47.8**	**-0.2**
	comp=Z,8.5nm,0.8s						
UZH	**Uzhgorod**	**73.53**	**44**	*e*P	**P**	**21 40 48.0**	**-0.5**
UZH				*e*		21 41 00.8	
UZH				*e*		21 41 09.0	
BZS	**Buzias**	**73.54**	**47**	⇑*i*P	**P**	**21 40 49.6**	**+1.0**
KWP	**Kalwaria Pacla**	**73.64**	**43**	*e*P	**P**	**21 40 50.1**	**+0.9**
KWP	**Kalwaria Pacla**	**73.64**	**43**	*e*P	**P**	**21 40 50.1**	**+0.9**
PPLA	**Purkeypile**	**73.66**	**331**	*e*P	**P**	**21 40 48.8**	**-0.4**
	comp=Z,103nm,1.9s						
OHR	**Ohrid**	**73.70**	**52**	*i* P	**P**	**21 40 50.7**	**+0.9**
MDVR	**Moldovita**	**73.75**	**48**	⇑*i*P	**P**	**21 40 50.4**	**+0.5**
TRPA	**Tarpa**	**73.77**	**44**	⇓*i*P	**P**	**21 40 50.9**	**+1.0**
TRPA	**Tarpa**	**73.77**	**44**	⇓*e*P	**P**	**21 40 50.9**	**+1.0**
FINES	**FINESS Array B**	**73.80**	**30**	P	**P**	**21 40 49.8**	**0.0**
	comp=Z,16nm,0.8s,baz=238,slow=4.1,SNR=52						
FINES				pP	**pP**	**21 41 12.3**	**-0.5**
	comp=Z,4.5nm,0.6s,baz=285,slow=3.7,SNR=4.5						
FINES				LR	LR	22 07 27.8	
	comp=Z,31nm,21.2s,baz=250,slow=31						
FIA1	**FINESS Array S**	**73.80**	**30**	*e*P	**P**	**21 40 50.0**	**+0.2**
	comp=Z,14nm,0.7s						
SKO	**Skopje**	**74.03**	**51**	*i* P	**P**	**21 40 51.9**	**+0.3**
DRGR		**74.10**	**45**	⇓*i*P	**P**	**21 40 52.5**	**+0.5**
BIA	**Bitola**	**74.11**	**52**	*i* P	**P**	**21 40 53.2**	**+1.1**
FNA	**Florina**	**74.19**	**52**	*e*P	**P**	**21 40 53.2**	**+0.6**
	comp=Z,34nm,1.0s						
FNA	**Florina**	**74.19**	**52**	P	**P**	**21 40 53.0**	**+0.4**
FNA	**Florina**	**74.19**	**52**	*e*P	**P**	**21 40 53.2**	**+0.6**
FNA				pmax	pmax		
	comp=Z,35nm,1.0s						
HERR	**Herculane**	**74.22**	**47**	⇑*i*P	**P**	**21 40 53.2**	**+0.6**
PDO	**Prodromos**	**74.45**	**54**	P	**P**	**21 40 54.4**	**+0.3**
LVV	**L'vov**	**74.46**	**42**	*e*P	**P**	**21 40 53.7**	**-0.2**
KZN	**Kozani**	**74.58**	**52**	P	**P**	**21 40 55.4**	**+0.5**
VSU	**Vasula**	**74.58**	**33**	*c**e*P	**P**	**21 40 53.7**	**-0.7**
VSU				pmax	pmax		
	comp=Z,114nm,1.3s						
STIP	**Stip**	**74.63**	**51**	*e*P	P	21 40 47.5	-7.5
KDAK	**Kodiak Island**	**74.63**	**326**	*i* P	**P**	**21 40 54.9**	**+0.2**
PVO	**Paravola**	**74.71**	**54**	P	**P**	**21 40 56.8**	**+1.2**
ISAL	**Salakas**	**74.74**	**36**	*e*P	**P**	**21 40 55.4**	**+0.1**
ISAL				IAmb	IAmb	21 40 56.6	
	comp=Z,6.8nm,0.6s						
IZAR	**Zarasai**	**74.78**	**36**	*e*P	**P**	**21 40 55.8**	**+0.2**
IZAR				IAmb	IAmb	21 40 57.0	
	comp=Z,10nm,0.6s						
IIGN	**Ignalina**	**74.83**	**36**	*e*P	**P**	**21 40 56.0**	**0.0**
IIGN				IAmb	IAmb	21 40 57.3	
	comp=Z,19nm,0.6s						
EVR	**Evrytania**	**74.87**	**54**	P	**P**	**21 40 58.0**	**+1.4**
THL	**Klokotos Trika**	**74.90**	**53**	P	**P**	**21 40 57.1**	**+0.5**
GRG	**Griva**	**74.92**	**51**	P	**P**	**21 40 57.4**	**+0.6**
VAY	**Valandovo**	**74.98**	**51**	*i* P	P	21 40 49.1	-7.9
DRO	**Drossia**	**74.98**	**55**	P	**P**	**21 40 58.5**	**+1.3**
ANX	**Ano Chora**	**75.02**	**54**	P	**P**	**21 40 58.7**	**+1.2**
EFP	**Efpalio**	**75.04**	**54**	P	**P**	**21 40 58.7**	**+1.2**
LOT	**Lotru**	**75.06**	**47**	⇑*i*P	**P**	**21 40 57.8**	**+0.2**
IDID	**Didziasalis**	**75.13**	**36**	*e*P	**P**	**21 40 57.6**	**0.0**
IDID				IAmb	IAmb	21 40 58.9	
	comp=Z,11nm,1.0s						
LAKA	**Lakka**	**75.13**	**54**	P	**P**	**21 40 59.1**	**+1.0**
ARCR	**ARCALIA**	**75.16**	**45**	⇑*i*P	**P**	**21 40 59.1**	**+1.1**
LIT	**Litokhoron**	**75.16**	**52**	*e*P	**P**	**21 40 58.5**	**+0.3**
	comp=Z,39nm,1.8s						
LIT	**Litokhoron**	**75.16**	**52**	P	**P**	**21 40 58.1**	**-0.1**
LIT	**Litokhoron**	**75.16**	**52**	*e*P	**P**	**21 40 58.5**	**+0.3**
LIT				pmax	pmax		
	comp=Z,39nm,1.8s						
SERG	**Sergoula**	**75.16**	**54**	P	**P**	**21 40 59.2**	**+1.0**
TRIZ	**Trizonia**	**75.18**	**54**	P	**P**	**21 40 59.5**	**+1.2**
VTS	**Vitosha**	**75.20**	**50**	⇑*i*P	**P**	**21 40 59.6**	**+1.1**
VTS	**Vitosha**	**75.20**	**50**	*e*P	**P**	**21 40 58.7**	**+0.2**
	comp=Z,20nm,1.2s						
VTS	**Vitosha**	**75.20**	**50**	P	**P**	**21 40 58.0**	**-0.5**
VTS	**Vitosha**	**75.20**	**50**	P	**P**	**21 40 58.7**	**+0.2**
VTS	**Vitosha**	**75.20**	**50**	*e*P	**P**	**21 40 58.7**	**+0.2**
VTS				pmax	pmax		
	comp=Z,20nm,1.2s						
PYL	**PYLOS**	**75.22**	**56**	P	**P**	**21 40 58.9**	**+0.4**
AGG	**Agios Georgios**	**75.25**	**53**	*e*P	**P**	**21 40 59.6**	**+0.9**
	comp=Z,59nm,0.9s						
AGG	**Agios Georgios**	**75.25**	**53**	P	**P**	**21 40 59.2**	**+0.5**
AGG	**Agios Georgios**	**75.25**	**53**	*e*P	**P**	**21 40 59.6**	**+0.9**
AGG				pmax	pmax		
	comp=Z,59nm,0.9s						
KKB	**Krupnik**	**75.25**	**50**	P	**P**	**21 40 58.5**	**-0.2**
KNT	**Kendrikon**	**75.25**	**51**	P	**P**	**21 40 59.4**	**+0.7**
KLV	**Kalavryta, Ach**	**75.31**	**54**	P	**P**	**21 41 00.1**	**+1.0**
ITM	**Ithomi**	**75.31**	**55**	*e*P	**P**	**21 40 59.9**	**+0.8**
	comp=Z,28nm,0.8s						
ITM	**Ithomi**	**75.31**	**55**	P	**P**	**21 40 59.6**	**+0.5**
GUR	**Goura**	**75.48**	**54**	P	**P**	**21 41 00.6**	**+0.5**
DSF	**Desfina**	**75.52**	**54**	P	**P**	**21 41 00.8**	**+0.5**
BUR08	**Bucovina Ar. S**	**75.61**	**44**	*e*P	**P**	**21 41 01.6**	**+0.9**
VLX	**Vlachokerasia**	**75.62**	**55**	P	**P**	**21 41 02.4**	**+1.4**
BUR04	**Bucovina Ar. S**	**75.63**	**44**	*e*P	**P**	**21 41 01.6**	**+0.8**
BURAR	**Bucovina Array**	**75.63**	**44**	⇑*i*P	**P**	**21 41 02.2**	**+1.4**
ARR	**Arges**	**75.67**	**47**	⇓*i*P	**P**	**21 41 01.8**	**+0.7**
DYR	**Agios Nikonas**	**75.71**	**56**	P	**P**	**21 41 02.0**	**+0.6**
SRS	**Serrai**	**75.78**	**51**	P	**P**	**21 41 02.1**	**+0.4**
MMB	**Musomiste**	**75.78**	**51**	P	**P**	**21 41 02.0**	**+0.3**
PLG	**Polygyros**	**75.82**	**52**	P	**P**	**21 41 02.2**	**+0.2**
XOR	**Xorichti**	**75.83**	**53**	P	**P**	**21 41 02.0**	**-0.1**
LKR	**Lokris**	**75.84**	**54**	P	**P**	**21 41 02.3**	**+0.3**
LTK	**Loutraki**	**75.94**	**54**	P	**P**	**21 41 02.9**	**+0.2**
VOIR		**75.95**	**46**	⇑*i*P	**P**	**21 41 03.1**	**+0.5**
DOPR	**Dopca**	**76.07**	**46**	⇑*i*P	**P**	**21 41 04.9**	**+1.6**
HUMR	**Humele**	**76.08**	**47**	⇓*i*P	**P**	**21 41 01.0**	**-2.3**
PAIG	**Paliouri**	**76.09**	**52**	P	**P**	**21 41 04.0**	**+0.6**
VILL	**Villia**	**76.18**	**54**	P	**P**	**21 41 04.3**	**+0.2**
VLI	**Veliai**	**76.19**	**56**	P	**P**	**21 41 05.2**	**+1.1**
OUR	**Ouranopolis**	**76.23**	**52**	P	**P**	**21 41 02.6**	**-1.6**
PRAR	**RASCA**	**76.35**	**44**	⇓*i*P	**P**	**21 41 04.6**	**-0.2**
BIZ	**Bicaz**	**76.36**	**45**	⇑*i*P	**P**	**21 41 06.4**	**+1.6**
KYTH	**Kithira**	**76.38**	**56**	P	**P**	**21 41 06.3**	**+1.1**
MLR	**Muntele Rosu**	**76.55**	**46**	LR	LR	22 11 04.4	
	comp=Z,5.9nm,20.9s,baz=257,slow=33						
MLR	**Muntele Rosu**	**76.55**	**46**	⇑*i*P	**P**	**21 41 07.7**	**+1.6**
VLY	**Voula,Athens**	**76.62**	**54**	P	**P**	**21 41 06.7**	**+0.2**
PTL	**Penteli**	**76.63**	**54**	P	**P**	**21 41 07.2**	**+0.6**
ANKY	**Antikythira Is**	**76.67**	**56**	P	**P**	**21 41 07.9**	**+1.1**
THAS	**Thassos island**	**76.72**	**51**	P	**P**	**21 41 07.3**	**+0.3**
TESR	**Tescani**	**76.81**	**45**	⇑*i*P	**P**	**21 41 08.3**	**+0.9**
PLOR	**Plostina**	**76.96**	**46**	⇑*i*P	**P**	**21 41 09.0**	**+0.7**
RDOG	**Red Dog Mine**	**76.98**	**338**	*e*P	**P**	**21 41 08.2**	**+0.3**
	comp=Z,26nm,0.8s						
DIM	**Dimitrovgrad**	**77.00**	**50**	P	**P**	**21 41 08.5**	**0.0**
VRI	**Vrincioaia**	**77.01**	**46**	⇑*i*P	**P**	**21 41 09.4**	**+0.9**
SZH	**Strazhica**	**77.02**	**49**	P	**P**	**21 41 09.0**	**+0.3**
ISR	**Istrita**	**77.05**	**47**	⇓*i*P	**P**	**21 41 09.5**	**+0.7**
RDO	**Rodhopi**	**77.21**	**51**	P	**P**	**21 41 10.0**	**+0.3**
LIA	**Limnos Island**	**77.22**	**52**	P	**P**	**21 41 10.4**	**+0.6**
IMMV	**Iera Moni Meta**	**77.30**	**57**	P	**P**	**21 41 11.1**	**+0.8**
VAM	**Vamos**	**77.48**	**57**	P	**P**	**21 41 10.6**	**-0.8**
AK11	**Malin Array Si**	**77.52**	**41**	*e*P	**P**	**21 41 11.1**	**-0.1**
KIEV	**Kiev**	**77.54**	**41**	*e*P	**P**	**21 41 10.9**	**-0.4**
	comp=Z,34nm,1.5s						
KIEV	**Kiev**	**77.54**	**41**	*e*P	**P**	**21 41 10.9**	**-0.4**
KIEV				pmax	pmax		
	comp=Z,34nm,1.5s						
AKASG	**Malin Array Be**	**77.55**	**41**	P	**P**	**21 41 11.2**	**-0.2**
	comp=Z,3.3nm,0.5s,baz=274,slow=4.3,SNR=34						
AKASG				pP	**pP**	**21 41 33.1**	**-1.5**
	comp=Z,2.7nm,0.8s,baz=269,slow=4.7,SNR=3.0						
AKASG				LR	LR	22 13 16.1	
	comp=Z,36nm,18.8s,baz=300,slow=34						
AKBB	**Malin Array Si**	**77.55**	**41**	*e*P	**P**	**21 41 10.9**	**-0.5**
	comp=Z,34nm,1.5s						
AKBB	**Malin Array Si**	**77.55**	**41**	*e*P	**P**	**21 41 10.9**	**-0.5**
AKBB				pmax	pmax		
	comp=Z,34nm,1.5s						
SORM	**Soroca**	**77.58**	**43**	⇑*i*P	**P**	**21 41 11.6**	**0.0**
ALN	**Alexandroupoli**	**77.64**	**51**	*e*P	**P**	**21 41 12.9**	**+0.8**
	comp=Z,9.3nm,1.0s						
ALN				*e*pP	**pP**	**21 41 35.3**	**0.0**
ALN	**Alexandroupoli**	**77.64**	**51**	P	**P**	**21 41 12.0**	**-0.1**
ALN	**Alexandroupoli**	**77.64**	**51**	*e*P	**P**	**21 41 12.9**	**+0.8**
ALN				*e**PP	**pP**	**21 41 35.3**	**0.0**
ALN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
GADA	**Gvkgeada**	**77.69**	**52**	P	**P**	**21 41 12.8**	**+0.4**
SIGR	**SIGRI**	**77.89**	**53**	P	**P**	**21 41 12.0**	**-1.5**
IDI	**Anoyia**	**78.06**	**57**	P	**P**	**21 41 15.7**	**+1.0**
	comp=Z,46nm,0.8s,baz=298,slow=6.7,SNR=35						
IDI	**Anoyia**	**78.06**	**57**	⇑*i*P	**P**	**21 41 15.6**	**+1.0**
IDI	**Anoyia**	**78.06**	**57**	*e*P	**P**	**21 41 15.7**	**+1.0**
	comp=Z,68nm,1.0s						
PRD	**Provadia**	**78.08**	**48**	P	**P**	**21 41 15.0**	**+0.5**
HARR	**Harsova**	**78.10**	**47**	⇑*i*P	**P**	**21 41 13.6**	**-1.0**
CFR	**Carcaliu**	**78.13**	**46**	⇓*i*P	**P**	**21 41 14.4**	**-0.3**
TLB	**Topalu**	**78.20**	**47**	⇓*i*P	**P**	**21 41 15.1**	**-0.1**
KARP	**Karpathos**	**79.79**	**56**	*e*P	**P**	**21 41 24.3**	**+0.2**
	comp=Z,23nm,0.8s						
KLMR	**Klimovskoe**	**80.26**	**29**	*e*P	**P**	**21 41 24.1**	**-1.9**
KLMR				pmax	pmax		
	comp=Z,34nm,1.1s						
KLMR	**Klimovskoe**	**80.26**	**29**	*e*P	**P**	**21 41 24.1**	**-1.9**
KLMR				AMP		21 41 26.6	
	comp=Z,34nm,1.1s						
OBN	**Obninsk**	**80.63**	**35**	*e*P	**P**	**21 41 28.3**	**+0.2**
OBN	**Obninsk**	**80.63**	**35**	*d* *i*P	**P**	**21 41 28.1**	**0.0**
OBN				*i* *PP	**pP**	**21 41 50.9**	**-0.6**
OBN				*e**SP	**sP**	**21 42 00.0**	**-1.1**
OBN				S	S	21 51 39.0	+11
OBN				*e*		21 52 40.3	
OBN				pmax	pmax		
	comp=Z,30nm,0.9s						
OBN				MLR	MLR		
	comp=Z,30nm,18.0s						
MOS	**Moscow**	**81.01**	**34**	*e*P	**P**	**21 41 30.5**	**+0.4**
MOS				pmax	pmax		
	comp=Z,60nm,1.3s						
PMSA	**Palmer Station**	**82.67**	**180**	LR	LR	22 20 40.3	
	comp=Z,81nm,18.9s,baz=43,slow=37						
PRGR	**Permogore**	**82.70**	**27**	*e*P	**P**	**21 41 38.7**	**-0.2**
PRGR				pmax	pmax		
	comp=Z,37nm,1.0s						
ANTO	**Ankara**	**82.88**	**51**	⇑*i*P	**P**	**21 41 41.6**	**+1.2**
ANTO	**Ankara**	**82.88**	**51**	*e*P	**P**	**21 41 40.8**	**+0.4**
ANTO	**Ankara**	**82.88**	**51**	*e*P	**P**	**21 41 40.8**	**+0.4**
VSR	**Storozhevoye**	**83.41**	**38**	*e*P	**P**	**21 41 42.0**	**-0.8**
VSR				*e**SP	**pP**	**21 42 04.3**	**-1.9**
VSR				pmax	pmax		
	comp=Z,30nm,1.2s						
BR131	**Keskin Array S**	**83.54**	**50**	*e*P	**P**	**21 41 44.2**	**+0.3**
BRTR	**Keskin Array B**	**83.54**	**50**	P	**P**	**21 41 44.1**	**+0.2**
	comp=Z,18nm,0.8s,baz=270,slow=4.0,SNR=103						
BRTR				pP	**pP**	**21 42 06.7**	**-0.7**
	comp=Z,6.8nm,0.8s,baz=266,slow=5.3,SNR=5.9						
BRTR				LR	LR	22 14 41.7	
	comp=Z,10.0nm,21.9s,baz=280,slow=32						
VORD	**Divnogorie**	**83.57**	**38**	*e*P	**P**	**21 41 42.5**	**-1.1**
VORD				pmax	pmax		
	comp=Z,40nm,1.1s						
ANN	**Anapa**	**84.55**	**45**	*e*P	**P**	**21 41 48.4**	**-0.3**
ANN				*e*S	**S**	**21 52 05.4**	**-3.0**
ANN				pmax	pmax		
	comp=Z,115nm,1.5s						
CSS	**Mathiatis**	**84.80**	**55**	*e*P	**P**	**21 41 51.7**	**+1.5**
	comp=Z,4.1nm,0.8s						
SOC	**Sochi**	**86.52**	**45**	*e*P	P	21 42 16.4	+18
SOC				pmax	pmax		
	comp=Z,27nm,0.8s						
BILL	**Bilibino**	**86.94**	**343**	*d* *i*P	**P**	**21 42 00.1**	**0.0**
BILL				*i* *PP	**pP**	**21 42 22.8**	**-0.9**
BILL				S	**S**	**21 52 33.0**	**+2.0**
BILL				pmax	pmax		
	comp=Z,24nm,1.7s						
BILL				MLR	MLR		
	comp=Z,122nm,20.0s						
MMAI	**Mount Meron Ar**	**87.06**	**56**	P	**P**	**21 42 02.3**	**+0.8**
	comp=Z,30nm,0.9s,baz=329,slow=2.5,SNR=18						
TSUM	**Tsumeb**	**87.36**	**111**	*e*P	**P**	**21 42 03.4**	**+0.3**
KIV	**Kislovodsk**	**88.36**	**44**	*e*P	**P**	**21 42 08.9**	**+1.5**
	comp=Z,20nm,1.0s						
KIV	**Kislovodsk**	**88.36**	**44**	*e*P	**P**	**21 42 08.5**	**+1.0**
KIV				pmax	pmax		
	comp=Z,19nm,1.0s						
KIV				MLR	MLR		
	comp=Z,21nm,20.0s						
KBZ	**Khabaz**	**88.59**	**44**	P	**P**	**21 42 10.2**	**+1.8**
	comp=Z,10nm,0.9s,baz=293,slow=3.3,SNR=11						
NCK	**Nalchik**	**89.15**	**44**	*i* P	**P**	**21 42 11.9**	**+0.8**
NCK				pmax	pmax		
	comp=Z,16nm,0.9s						
AKH	**Akhalkalaki**	**89.94**	**46**	⇓*i*P	**P**	**21 42 16.6**	**+1.5**
AKH	**Akhalkalaki**	**89.94**	**46**	*e*P	**P**	**21 42 16.5**	**+1.5**
	comp=Z,25nm,1.2s						
TIXI	**Tiksi**	**90.06**	**356**	*e*P	**P**	**21 42 15.0**	**+0.2**
	comp=Z,16nm,1.0s						
TIXI				*e*pP	**pP**	**21 42 37.1**	**-1.3**
TIXI	**Tiksi**	**90.06**	**356**	*c**e*P	**P**	**21 42 14.6**	**-0.1**
TIXI				pmax	pmax		
	comp=Z,17nm,1.3s						
ARU	**Arti**	**91.08**	**28**	*e*P	**P**	**21 42 19.8**	**0.0**
	comp=Z,8.0nm,1.0s						
ARU	**Arti**	**91.08**	**28**	*d* *i*P	**P**	**21 42 20.1**	**+0.3**
ARU						21 45 59.6	
ARU				S	**SKSac**	**21 52 46.0**	**+2.2**
ARU				SP	**SPn**	**21 54 20.1**	**+1.7**
ARU				SS	**SS**	**21 59 22.9**	**+8.1**
ARU				pmax	pmax		
	comp=Z,15nm,1.7s						

GNI	**Garni**	**91.32**	**47**	LR	LR	22 19 06.7	
	comp=Z,13nm,19.4s,baz=283,slow=33						
GNI	**Garni**	**91.32**	**47**	*e*P	**P**	**21 42 22.7**	**+1.2**
	comp=Z,55nm,1.1s						
GNI	**Garni**	**91.32**	**47**	*ce*P	**P**	**21 42 23.0**	**+1.5**
GNI				pmax	pmax		
	comp=Z,37nm,1.1s						
AKTO	**Aktyubinsk**	**94.31**	**33**	P	**P**	**21 42 34.9**	**+0.1**
	comp=Z,6.3nm,0.9s,baz=300,slow=5.8,SNR=11						
AKTO				LR	LR	22 23 58.0	
	comp=Z,9.6nm,19.0s,baz=327,slow=35						
SEY	**Seymchan**	**94.55**	**345**	*ce*P	**P**	**21 42 35.8**	**+0.2**
SNAA	**Sanae**	**98.28**	**164**	LR	LR	22 28 55.3	
	comp=Z,13nm,20.7s,baz=188,slow=36						
BRVK	**Borovoye**	**98.42**	**26**	*i* P	**P**	**21 42 52.8**	**-0.6**
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
YAK	**Yakutsk**	**99.46**	**354**	*i* P	**Pdif**	**21 42 58.0**	**+0.2**
YAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MKAR	**Makanchi Array**	**108.18**	**24**	PKKPbc	PKKPbc	21 58 54.6	-1.4
	comp=Z,0.4nm,0.8s,baz=99,slow=6.3,SNR=3.5						
KSH	**Kashi**	**111.01**	**33**	*e*PKP	**PKiKP**	**21 47 47.2**	**-1.6**
KSH				sPKP		21 48 24.2	
KSH				PP	**PP**	**21 48 27.9**	**+0.4**
KSH				PKS	**PKSdf**	**21 51 21.8**	**-3.8**
KSH				SKKS		21 55 12.7	
KSH				AMB	AMB		
	comp=Z,85nm,4.6s						
WMQ	**Urumqi**	**112.73**	**23**	*e*PKP	**PKiKP**	**21 47 52.0**	**+0.1**
WMQ				sPKP		21 48 27.2	
WMQ				LR	LR		
	comp=Z,47nm,15.7s						
WMQ				LR	LR		
	comp=Z,100nm,24.5s						
WMQ				LR	LR		
	comp=Z,49nm,22.7s						
SONM	**Songino Array**	**113.63**	**8**	PKiKP	**PKiKP**	**21 47 53.4**	**-0.1**
	comp=Z,0.7nm,0.7s,baz=289,slow=1.4,SNR=5.6						
SONM				PP	**PP**	**21 48 45.6**	**0.0**
	comp=Z,0.4nm,0.7s,baz=319,slow=4.1,SNR=3.9						
GTA	**Gaotai**	**120.53**	**15**	⇑PKP	**PKPdf**	**21 48 07.1**	**0.0**
HHC	**Hu-ho-hao-te**	**121.09**	**5**	*e*PKP	**PKPdf**	**21 48 05.6**	**-2.5**
HHC				SKS	**SKSdf**	**21 55 06.8**	**-5.6**
HHC				SKKS	**SKKSac**	**21 56 19.8**	**-10**
HHC				SS	**SS**	**22 06 00.2**	**-2.1**
HHC				AMB	AMB		
	comp=Z,38nm,8.2s						
HHC				LR	LR		
	comp=Z,120nm,17.9s						
HHC				LR	LR		
	comp=Z,81nm,17.6s						
HHC				LR	LR		
	comp=Z,87nm,16.0s						
MAJO	**Matsushiro**	**122.03**	**340**	*e*PKPdf	**PKPdf**	**21 48 09.2**	**-0.7**
MAJO	**Matsushiro**	**122.03**	**340**	*e*PKIKP	**PKPdf**	**21 48 09.2**	**-0.7**
MAT	**Matsushiro**	**122.03**	**340**	PKP	**PKPdf**	**21 48 09.0**	**-0.9**
MJAR	**Matsushiro Arr**	**122.03**	**340**	PKP	**PKPdf**	**21 48 09.3**	**-0.6**
	comp=Z,3.7nm,0.6s,baz=86,slow=0.5,SNR=13						
KSRS	**Korea Array**	**123.75**	**350**	PKP	**PKPdf**	**21 48 12.6**	**-0.5**
	comp=Z,2.5nm,0.8s,baz=32,slow=1.7,SNR=11						
KSRS	**Korea Array**	**123.75**	**350**	PKIKP	**PKPdf**	**21 48 12.6**	**-0.5**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KSAR	**Wonju Array Be**	**123.77**	**350**	PKP	**PKPdf**	**21 48 12.6**	**-0.6**
KSAR	**Wonju Array Be**	**123.77**	**350**	PKIKP	**PKPdf**	**21 48 12.6**	**-0.6**
URZ	**Urewera**	**124.34**	**236**	PKP	**PKPdf**	**21 48 14.7**	**+0.6**
	comp=Z,10nm,0.6s,baz=28,slow=15,SNR=3.7						
LZH	**Lanzhou**	**124.64**	**13**	*e*PKP	**PKPdf**	**21 48 15.9**	**+0.8**
LZH				sPKP		21 48 53.6	
LSA	**Lhasa**	**126.28**	**28**	*e*PKPdf	**PKPdf**	**21 48 19.4**	**+0.5**
LSA	**Lhasa**	**126.28**	**28**	*e*PKIKP	**PKPdf**	**21 48 19.4**	**+0.5**
XAN	**Xi'an**	**127.53**	**8**	PKP	**PKPdf**	**21 48 20.3**	**-0.3**
NJ2	**Nanjing**	**130.05**	**358**	*e*PKP	**PKPdf**	**21 48 24.9**	**-0.4**
ENH	**Enshi**	**131.32**	**9**	*e*PKPdf	**PKPdf**	**21 48 27.8**	**0.0**
WHN	**Wuhan**	**131.52**	**3**	PKP	**PKPdf**	**21 48 27.7**	**-0.4**
GYA	**Guiyang**	**134.53**	**13**	*e*Pdif	**Pdif**	**21 45 32.8**	**-2.0**
GYA				PKP	**PKPdf**	**21 48 33.0**	**-1.1**
GYA				sPKP		21 49 06.5	
GYA				PP	**PP**	**21 51 09.2**	**+3.3**
GYA				AMB	AMB		
	comp=Z,120nm,7.9s						
KMI	**Kunming**	**134.80**	**18**	PKP	**PKPdf**	**21 48 34.5**	**-0.3**
CMAR	**Chiang Mai Arr**	**139.52**	**27**	PKP	**PKPdf**	**21 48 43.6**	**+0.3**
	comp=Z,3.6nm,0.8s,baz=307,slow=2.0,SNR=10						
JAY	**Jayapura**	**152.05**	**301**	PKPbc	**PKPbc**	**21 49 11.0**	**-0.3**
	comp=Z,19nm,1.1s,baz=18,slow=2.3,SNR=6.1						
JAY	**Jayapura**	**152.05**	**301**	PKPbc	**PKPbc**	**21 49 11.0**	**-0.3**
JAY	**Jayapura**	**152.05**	**301**	PKIKP	**PKPbc**	**21 49 11.0**	**-0.3**
JAY				pmax	pmax		
	comp=Z,19nm,1.1s						
CTA	**Charters Tower**	**152.32**	**261**	PKPbc	**PKPbc**	**21 49 11.4**	**-0.3**
	comp=Z,7.9nm,0.5s,baz=69,slow=2.8,SNR=7.5						
CTAO	**Charters Tower**	**152.32**	**261**	*e*PKPdf	**PKPdf**	**21 49 04.3**	**-0.5**
CTAO				*e*PKPbc	**PKPbc**	**21 49 10.9**	**-0.8**
CTAO				*e*PKPab	**PKPab**	**21 49 22.4**	**+0.5**
CTAO	**Charters Tower**	**152.32**	**261**	*e*PKIKP	**PKPdf**	**21 49 04.3**	**-0.5**
PSI	**Prapat**	**152.59**	**42**	PKPbc	**PKPbc**	**21 49 12.4**	**-0.3**
	comp=Z,32nm,0.6s,baz=360,slow=2.6,SNR=26						
STKA	**Stephens Creek**	**153.94**	**234**	PKP	**PKPdf**	**21 49 07.5**	**+0.6**
	comp=Z,4.3nm,0.8s,baz=68,slow=1.4,SNR=11						
STKA				PKPbc	**PKiKP**	**21 49 15.6**	**+0.6**
	comp=Z,10.0nm,0.7s,baz=105,slow=2.8,SNR=19						
ASAR	**Alice Springs**	**163.30**	**248**	PKP	**PKPdf**	**21 49 17.7**	**-0.5**
	comp=Z,5.0nm,0.9s,baz=93,slow=0.9,SNR=26						
ASAR				pPKP	**pPKPdf**	**21 49 41.2**	**-2.0**
	comp=Z,3.1nm,0.8s,baz=112,slow=1.5,SNR=6.0						
WRAB	**Tennant Creek**	**163.51**	**261**	*e*PKPdf	**PKPdf**	**21 49 18.2**	**-0.3**
WRAB				*e*PKPab	**PKPab**	**21 50 10.0**	**-0.3**
WRAB	**Tennant Creek**	**163.51**	**261**	*e*PKIKP	**PKPdf**	**21 49 18.2**	**-0.3**
WRAB				*e*		21 50 10.0	

NIED ***04*** *21:33:00, 23.°90N×122.°40E, h14^{km}, Mw3.8 Best double couple: M$_0$5.04000×10^{14} NP1:ϕ_s319.00000°, δ19.00000°, λ168.00000°. NP2:ϕ_s60.00000°, δ86.00000°, λ71.00000°.*

IDC ***04*** *21:33:23.3±1.2, 24.°07N×122.°43E, h0^{km}, mb3.9/7, mb1 3.9/8, mb1mx3.5/66, mbtmp3.9/8, ML3.4/1, MS2.7/4, Ms1 2.7/4, ms1mx2.4/63, Error ellipse: s-maj=41.3km s-min=24.7km az=57.0*

ISCJB ***04*** *21:33:25.6±0.5, 23.°90N±0.°01×122.°46E±0.°01, h10^{km}±4^{km}, mb3.8/7, MS2.8/1, Error ellipse: s-maj=2.2km s-min=1.8km az=26.2*

TAP ***04*** *21:33:25.8, 23.°92N×122.°44E, h13^{km}, ML4.2, D*

JMA ***04*** *21:33:26.4±0.2, 23.°91N×122.°44E, h21^{km}, M3.5*

ISC 04 21:33:25.3±1.0**, 23.°91N**±0.°02×**122.°44E**±0.°02**, h15**^{km}±7^{km}**, n128,** σ**0^{s}82**/236**, mb3.9**/7**, 4C-1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.70**	**336**	P	**Pb**	**21 33 39.9**	**+0.6**
	baz=335						
EOS1				S	**Sb**	**21 33 49.6**	**+0.9**
	baz=335						
JYNG	**Yonagunijimaku**	**0.71**	**40**	P	**Pb**	**21 33 39.9**	**+0.5**
JYNG				*e*S	**Sg**	**21 33 48.3**	**-0.4**
YOJ	**Yonaguni jima**	**0.76**	**43**	⇓P	**Pb**	**21 33 40.7**	**+0.5**
	baz=43						
YOJ				S	**Sg**	**21 33 49.9**	**-0.3**
	baz=43						
YOJ	**Yonaguni jima**	**0.76**	**43**	P	**Pb**	**21 33 40.9**	**+0.7**
YOJ				*e*S	**Sg**	**21 33 49.7**	**-0.5**
ENLB	**Shoufeng**	**0.77**	**270**	P	**Pn**	**21 33 41.6**	**0.0**
	baz=268						
ENLB				S	**Sn**	**21 33 52.7**	**-0.2**
	baz=268						
HWA	**Hwalien**	**0.77**	**275**	P	**Pn**	**21 33 41.6**	**0.0**
	baz=273						
HWA				S	**Sb**	**21 33 52.1**	**+1.4**
	baz=273						
ENAH	**Nanao**	**0.79**	**313**	P	**Pb**	**21 33 41.3**	**+0.5**
	baz=312						
ENAH				S	**Sb**	**21 33 52.4**	**+1.1**
	baz=312						
TWD	**Chiawan**	**0.79**	**283**	⇑*i*P	**Pb**	**21 33 41.4**	**+0.6**
	baz=281						
TWD				*i* S	**Sb**	**21 33 52.0**	**+0.7**
	baz=281						
NANB	**Nanao**	**0.82**	**309**	P	**Pb**	**21 33 41.7**	**+0.5**
	baz=308						
NANB				S	**Sb**	**21 33 52.4**	**+0.4**
	baz=308						
NACB	**Ninganchiao**	**0.82**	**289**	P	**Pb**	**21 33 41.8**	**+0.6**
	baz=287						
NACB				S	**Sb**	**21 33 52.9**	**+0.8**
	baz=287						
ENA	**Nanau**	**0.82**	**309**	P	**Pb**	**21 33 41.8**	**+0.4**
	baz=308						
ENA				*e*S	**Sb**	**21 33 53.2**	**+1.0**
	baz=308						
TWC	**Suao**	**0.88**	**322**	*i* P	**Pg**	**21 33 42.3**	**-0.2**
	baz=322						
TWC				S	**Sg**	**21 33 53.5**	**-0.7**
	baz=322						
ESL	**Shilin**	**0.93**	**264**	*e*P	**Pg**	**21 33 43.1**	**-0.3**
	baz=263						
ESL				*e*S	**Sg**	**21 33 55.5**	**0.0**
	baz=263						
EGFH	**Guangfu**	**0.96**	**256**	*e*P	**Pb**	**21 33 44.2**	**+0.5**
	baz=254						
EGFH				*e*S	**Sg**	**21 33 57.4**	**+0.9**
	baz=254						
HGSD	**Ruisui**	**1.02**	**246**	*e*P	**Pb**	**21 33 45.3**	**+0.6**
	baz=245						
HGSD				*e*S	**Sb**	**21 33 56.5**	**-1.4**
	baz=245						
EGS		**1.04**	**334**	*e*P	**Pg**	**21 33 45.6**	**+0.1**
	baz=333						
EGS				S	**Sn**	**21 33 59.7**	**0.0**
	baz=333						
ILA	**Ilan**	**1.06**	**324**	*e*P	**Pb**	**21 33 45.9**	**+0.5**
	baz=323						
ILA				*e*S	**Sn**	**21 34 01.4**	**+1.2**
	baz=323						
TWE	**Neicheng**	**1.08**	**319**	P	**Pb**	**21 33 46.1**	**+0.5**
	baz=319						
TWE				S	**Sg**	**21 34 00.0**	**-0.2**
	baz=319						
ENTT	**Nioudou**	**1.08**	**313**	*e*P	**Pg**	**21 33 46.3**	**+0.1**
	baz=312						
ENTT				S	**Sn**	**21 34 01.6**	**+0.9**
	baz=312						
NTC	**Toucheng**	**1.10**	**329**	*e*P	**Pn**	**21 33 46.5**	**+0.4**
	baz=329						
NTC				*e*S	**Sg**	**21 34 01.1**	**+0.2**
	baz=329						
NNSB	**Datong**	**1.10**	**298**	⇑P	**Pb**	**21 33 46.3**	**+0.2**
	baz=297						
NNSB				*e*S	**Sn**	**21 34 01.8**	**+0.5**
	baz=297						
NNSH	**Datong**	**1.10**	**298**	P	**Pb**	**21 33 46.5**	**+0.4**
	baz=297						
NNSH				*e*S	**Sb**	**21 33 59.5**	**-0.7**
	baz=297						
EHY	**Hungye**	**1.10**	**249**	*e*P	**Pb**	**21 33 46.5**	**+0.4**
	baz=247						
EHY				*e*S	**Sb**	**21 34 00.8**	**+0.6**
	baz=247						
NNS	**Nan Shan**	**1.11**	**299**	*i* P	**Pb**	**21 33 46.8**	**+0.4**
	baz=297						
NNS				*e*S	**Sn**	**21 34 02.1**	**+0.6**
	baz=297						
OWD	**Renai**	**1.16**	**273**	*e*P	**Pb**	**21 33 47.5**	**+0.3**
	baz=271						
OWD				*e*S	**Sb**	**21 34 02.0**	**0.0**
	baz=271						
YULB	**Yu-li**	**1.17**	**244**	P	**Pn**	**21 33 47.5**	**+0.4**
	baz=243						
YULB				S	**Sb**	**21 34 02.8**	**+0.6**
	baz=243						
CHGB	**Renai**	**1.17**	**278**	⇑P	**Pb**	**21 33 47.6**	**+0.2**
	baz=276						
CHGB				S	**Sg**	**21 34 03.4**	**+0.1**
	baz=276						
TWB1	**Santiao Chiao**	**1.17**	**339**	*e*P	**Pb**	**21 33 47.2**	**0.0**
	baz=339						
TWB1				S	**Sn**	**21 34 04.2**	**+1.4**
	baz=339						
TWF1	**Yuli**	**1.19**	**242**	*i* P	**Pn**	**21 33 48.0**	**+0.6**
	baz=241						
TWF1				S	**Sb**	**21 34 03.6**	**+0.9**
	baz=241						
TIPB	**Shuangxi**	**1.20**	**332**	P	**Pn**	**21 33 47.9**	**+0.3**
	baz=331						
TIPB				S	**Sb**	**21 34 03.5**	**+0.4**
	baz=331						
VWDT	**VWDT**	**1.20**	**263**	P	**Pn**	**21 33 48.2**	**+0.7**
	baz=261						
VWDT				S	**Sb**	**21 34 03.4**	**+0.3**
	baz=261						
TWT	**Tachien**	**1.21**	**287**	*e*P	**Pg**	**21 33 48.9**	**+0.2**
	baz=285						
TWT				*e*S	**Sg**	**21 34 04.4**	**0.0**
	baz=285						
NWLT	**Wulai**	**1.22**	**316**	*e*P	**Pb**	**21 33 48.5**	**+0.4**
	baz=314						
NWLT				*e*S	**Sn**	**21 34 04.4**	**+0.3**
	baz=314						
TDCB	**Techi**	**1.22**	**287**	P	**Pn**	**21 33 48.5**	**+0.5**
	baz=285						
TDCB				*e*S	**Sb**	**21 34 03.5**	**-0.4**
	baz=285						
YHNB	**Yeheng**	**1.23**	**308**	P	**Pn**	**21 33 48.6**	**+0.5**
	baz=307						
YHNB				S	**Sg**	**21 34 05.3**	**0.0**
	baz=307						
IRIF	**Iriomote-Funau**	**1.25**	**70**	P	**Pb**	**21 33 49.2**	**+0.6**
IRIF				*e*S	**Sn**	**21 34 05.5**	**+0.7**
NSK	**Sanguang**	**1.25**	**308**	*e*P	**Pn**	**21 33 48.8**	**+0.5**
	baz=307						
NSK				*e*S	**Sb**	**21 34 04.8**	**+0.2**
	baz=307						
HATJ	**Hateruma jima**	**1.25**	**83**	S	**Sg**	**21 34 06.5**	**+0.6**
FULB	**Fuli**	**1.27**	**236**	*e*P	**Pn**	**21 33 48.6**	**+0.1**
	baz=235						
FULB				*e*S	**Sg**	**21 34 06.8**	**+0.5**
	baz=235						
CHKT	**Chengkung**	**1.27**	**231**	*e*P	**Pn**	**21 33 48.6**	**+0.1**
	baz=229						
CHKT				*e*S	**Sb**	**21 34 03.6**	**-1.6**
	baz=229						
NWF	**Wu-fen Shan**	**1.31**	**333**	P	**Pn**	**21 33 49.4**	**+0.3**
	baz=332						
NWF				*e*S	**Sg**	**21 34 07.4**	**-0.2**
	baz=332						
WFSB	**Wu-fen Shan**	**1.31**	**333**	P	**Pn**	**21 33 49.3**	**+0.3**
	baz=332						
WFSB				S	**Sg**	**21 34 08.1**	**+0.5**
	baz=332						
TWA	**Mucha**	**1.32**	**324**	*e*P	**Pb**	**21 33 50.4**	**+0.5**
	baz=323						
TWA				*e*S	**Sg**	**21 34 08.4**	**+0.3**
	baz=323						
SSLB	**Suanglung**	**1.37**	**265**	*e*P	**Pn**	**21 33 50.5**	**+0.6**
	baz=264						
SSLB				*e*S	**Sn**	**21 34 08.2**	**+0.5**
	baz=264						
TATO	**Taipei**	**1.37**	**321**	*e*P	**Pb**	**21 33 50.8**	**+0.1**
	baz=320						
TATO				*e*S	**Sg**	**21 34 09.2**	**-0.5**
	baz=320						
DPDB	**Guoxing**	**1.39**	**275**	P	**Pb**	**21 33 51.3**	**+0.2**
	baz=274						
DPDB				S	**Sg**	**21 34 10.2**	**-0.2**
	baz=274						
SMLT	**Sun Moon Lake**	**1.41**	**269**	*e*P	**Pn**	**21 33 51.5**	**+0.9**
	baz=268						
SMLT				S	**Sn**	**21 34 09.1**	**+0.1**
	baz=268						
YUS	**Yu-Shan**	**1.43**	**253**	*i* P	**Pn**	**21 33 52.1**	**+1.0**
	baz=252						
YUS				S	**Sn**	**21 34 09.8**	**0.0**
	baz=252						
WLTB	**Daxi**	**1.44**	**311**	*e*P	**Pb**	**21 33 52.3**	**+0.5**
	baz=310						
WLTB				*e*S	**Sb**	**21 34 10.7**	**+0.8**
	baz=310						
TYC	**Yuchr**	**1.45**	**270**	*e*P	**Pn**	**21 33 52.0**	**+1.0**
	baz=269						
TYC				*e*S	**Sn**	**21 34 10.1**	**+0.4**
	baz=269						
YM07	**YM07**	**1.47**	**330**	*e*P	**Pn**	**21 33 51.4**	**+0.1**
	baz=329						
YM07				*e*S	**Sn**	**21 34 10.9**	**+0.6**
	baz=329						
JKRS	**Kuro-shima**	**1.47**	**77**	P	**Pb**	**21 33 52.6**	**+0.3**
JKRS				*e*S	**Sb**	**21 34 12.3**	**+1.5**
YM10	**YM10**	**1.48**	**327**	*e*P	**Pn**	**21 33 51.5**	**0.0**
	baz=326						
YM10				*e*S	**Sb**	**21 34 11.9**	**+0.7**
	baz=326						
YM11	**YM11**	**1.48**	**328**	*e*P	**Pg**	**21 33 53.8**	**-0.1**
	baz=327						
YM11				*e*S	**Sb**	**21 34 12.0**	**+0.8**
	baz=327						
TWH	**Lutao**	**1.48**	**217**	*i* P	**Pn**	**21 33 51.8**	**+0.4**
	baz=215						
TWH				*e*S	**Sn**	**21 34 09.3**	**-1.3**
	baz=215						
ELDTW	**Lidau**	**1.49**	**242**	*e*P	**Pn**	**21 33 52.0**	**+0.3**
	baz=240						
ELDTW				*e*S	**Sn**	**21 34 11.8**	**+0.9**
	baz=240						
YM04	**YM04**	**1.49**	**327**	*e*P	**Pn**	**21 33 52.0**	**+0.4**
	baz=326						
YM04				*e*S	**Sg**	**21 34 12.7**	**-0.8**
	baz=326						
YM08	**YM08**	**1.49**	**329**	*e*P	**Pn**	**21 33 52.5**	**+0.8**
	baz=328						
YM08				*e*S	**Sb**	**21 34 12.1**	**+0.6**
	baz=328						
LIOB	**Emei**	**1.50**	**300**	⇑P	**Pb**	**21 33 53.2**	**+0.4**
	baz=299						
LIOB				*e*S	**Sb**	**21 34 12.6**	**+1.0**
	baz=299						
NSTT	**Nanjuang**	**1.50**	**299**	P	**Pb**	**21 33 53.4**	**+0.5**
	baz=298						
NSTT				*e*S	**Sb**	**21 34 12.5**	**+0.8**
	baz=298						
YM03	**YM03**	**1.51**	**327**	*e*P	**Pb**	**21 33 53.0**	**-0.1**
	baz=326						
YM03				*e*S	**Sb**	**21 34 12.1**	**0.0**
	baz=326						
TWS1	**Kuangyinshan**	**1.51**	**322**	*e*P	**Pb**	**21 33 53.2**	**+0.1**
	baz=321						
TWS1				*e*S	**Sb**	**21 34 12.7**	**+0.6**
	baz=321						
NTST	**Danshui**	**1.54**	**324**	*e*P	**Pb**	**21 33 53.5**	**-0.1**
	baz=323						
NTST				*e*S	**Sg**	**21 34 14.2**	**-1.0**
	baz=323						
ALS	**Alishan**	**1.55**	**256**	*e*P	**Pb**	**21 33 54.0**	**0.0**
	baz=254						
ALS				*e*S	**Sn**	**21 34 13.4**	**+0.8**
	baz=254						
NCU	**National Centr**	**1.56**	**313**	*e*P	**Pb**	**21 33 53.8**	**-0.1**
	baz=312						
NCU				*e*S	**Sb**	**21 34 13.5**	**+0.1**
	baz=312						
NCUH	**Zhongli**	**1.56**	**313**	*e*P	**Pb**	**21 33 53.7**	**-0.2**
	baz=312						
NCUH				*e*S	**Sb**	**21 34 13.3**	**-0.1**
	baz=312						
TWY	**Chenhua**	**1.56**	**331**	*e*P	**Pb**	**21 33 54.2**	**+0.2**
	baz=330						
TWY				*e*S	**Sn**	**21 34 12.4**	**-0.1**
	baz=330						
WJS	**Zhushan**	**1.57**	**267**	*e*P	**Pb**	**21 33 55.3**	**+1.2**
	baz=266						
WJS				*e*S	**Sb**	**21 34 15.0**	**+1.2**
	baz=266						
SBCB	**Hsinchu**	**1.59**	**304**	*e*P	**Pn**	**21 33 53.8**	**+0.8**
	baz=303						
SBCB				*e*S	**Sb**	**21 34 15.5**	**+1.1**
	baz=303						
WNT	**Mingjian**	**1.61**	**269**	*e*P	**Pb**	**21 33 55.6**	**+0.9**
	baz=268						
WNT				*e*S	**Sb**	**21 34 16.2**	**+1.4**
	baz=268						
NSY	**Sanyi**	**1.62**	**289**	*e*P	**Pb**	**21 33 55.7**	**+0.9**
	baz=287						
NSY				*e*S	**Sg**	**21 34 17.0**	**-0.5**
	baz=287						
JIJ	**Ishigaki jima**	**1.62**	**73**	P	**Pn**	**21 33 54.0**	**+0.7**
JIJ				*e*S	**Sn**	**21 34 14.1**	**+0.2**
NMLH	**Miaoli**	**1.63**	**293**	*e*P	**Pb**	**21 33 55.5**	**+0.3**
	baz=292						
NMLH				S	**Sb**	**21 34 16.3**	**+0.8**
	baz=292						
TCU	**Taichung**	**1.63**	**279**	*e*P	**Pb**	**21 33 56.0**	**+0.8**
	baz=277						
TCU				*e*S	**Sg**	**21 34 17.2**	**-0.8**
	baz=277						
CHN5	**Tsauling**	**1.65**	**260**	*e*P	**Pb**	**21 33 56.0**	**+0.6**
	baz=258						
CHN5				*e*S	**Sb**	**21 34 17.1**	**+1.1**
	baz=258						
TWGBT	**Beinan**	**1.66**	**229**	*e*P	**Pn**	**21 33 54.2**	**+0.4**
	baz=228						
TWGBT				*e*S	**Sn**	**21 34 14.3**	**-0.5**
	baz=228						
TWG	**Pinlang**	**1.66**	**230**	*e*P	**Pn**	**21 33 54.3**	**+0.4**
	baz=228						
TWG				*e*S	**Sn**	**21 34 14.6**	**-0.3**
	baz=228						
STYT	**Tauyuan**	**1.71**	**245**	*e*P	**Pn**	**21 33 56.3**	**+1.6**
	baz=243						
STYT				*e*S	**Sn**	**21 34 17.2**	**+0.8**
	baz=243						
WCHH	**Zhanghua**	**1.73**	**276**	*e*P	**Pb**	**21 33 57.7**	**+0.9**
	baz=275						
WCHH				*e*S	**Sg**	**21 34 20.7**	**-0.5**
	baz=275						
WGK	**Gukeng**	**1.74**	**263**	*e*P	**Pb**	**21 33 57.2**	**+0.3**
	baz=262						
WGK				*e*S	**Sb**	**21 34 19.8**	**+1.3**
	baz=262						
PCYT	**Pengchaiyu**	**1.75**	**349**	P	**Pn**	**21 33 55.6**	**+0.5**
	baz=349						
WDLH	**Douliu**	**1.76**	**263**	*e*P	**Pb**	**21 33 57.5**	**+0.3**
	baz=262						
WDLH				*e*S	**Sb**	**21 34 20.4**	**+1.2**
	baz=262						
TPUB	**Ta-pu**	**1.77**	**250**	*e*P	**Pb**	**21 33 57.5**	**0.0**
	baz=249						
TPUB				*e*S	**Sb**	**21 34 20.6**	**+1.1**
	baz=249						
WTP	**Ta-pu**	**1.80**	**249**	*e*P	**Pb**	**21 33 59.0**	**+1.0**
	baz=247						
WTP				*e*S	**Sb**	**21 34 21.8**	**+1.3**
	baz=247						
JISG	**Ishigakijimahi**	**1.83**	**68**	P	**Pn**	**21 33 57.0**	**+0.7**
JISG				S	**Sn**	**21 34 19.9**	**+0.7**
CHN2	**Minshiung**	**1.84**	**259**	*e*P	**Pb**	**21 33 59.4**	**+0.7**
	baz=257						
CHN2				*e*S	**Sg**	**21 34 23.7**	**-0.9**
	baz=257						
SLGT	**Liugui**	**1.88**	**241**	*e*P	**Pb**	**21 34 00.1**	**+0.7**
	baz=240						
SLGT				*e*S	**Sb**	**21 34 24.7**	**+2.0**
	baz=240						
ECL	**Taimali**	**1.89**	**227**	*e*P	**Pn**	**21 33 56.4**	**-0.6**
	baz=225						
ECL				*e*S	**Sn**	**21 34 20.1**	**-0.5**
	baz=225						
CHY	**Chiayi**	**1.89**	**258**	*e*P	**Pb**	**21 33 60.0**	**+0.4**
	baz=256						
CHY				*e*S	**Sb**	**21 34 23.9**	**+0.8**
	baz=256						
SGST	**Jiashian**	**1.89**	**245**	P	**Pb**	**21 34 00.2**	**+0.6**
	baz=243						
SGST				*e*S	**Sb**	**21 34 23.9**	**+0.8**
	baz=243						
CHN1	**Nanshi**	**1.90**	**248**	*e*P	**Pb**	**21 34 00.3**	**+0.6**
	baz=247						
CHN1				*e*S	**Sb**	**21 34 24.7**	**+1.5**
	baz=247						
TWK	**Hsinying**	**1.90**	**251**	P	**Pb**	**21 33 59.8**	**0.0**
	baz=249						
TWK				S	**Sb**	**21 34 23.9**	**+0.6**
	baz=249						
RLNB	**Erlin**	**1.91**	**270**	P	**Pb**	**21 33 59.7**	**-0.1**
	baz=269						
RLNB				S	**Sb**	**21 34 24.3**	**+0.9**
	baz=269						
WTCT	**Ta-ch'eng**	**1.98**	**269**	P	**Pb**	**21 34 00.8**	**-0.2**
	baz=268						
WTCT				*e*S	**Sb**	**21 34 26.1**	**+0.6**
	baz=268						
WLGB	**Puzi**	**2.01**	**258**	P	**Pb**	**21 34 01.2**	**-0.4**
	baz=257						
WLGB				S	**Sb**	**21 34 27.0**	**+0.6**
	baz=257						
SSD	**Sandimen**	**2.03**	**236**	*e*P	**Pb**	**21 34 02.9**	**+1.1**
	baz=234						
SSD				*e*S	**Sb**	**21 34 26.6**	**-0.3**
	baz=234						
LAY	**Lan-yu**	**2.03**	**204**	*e*P	**Pn**	**21 33 59.5**	**+0.4**
	baz=203						
LAY				*e*S	**Sn**	**21 34 22.0**	**-2.1**

	baz=203						
WSF	Szhu	2.05	263	eP	Pb	21 34 02.0	-0.3
	baz=261						
WSF				eS	Sb	21 34 28.1	+0.5
	baz=261						
MASBT	Mashibuluo	2.10	233	eP	Pb	21 34 02.5	-0.7
	baz=231						
MASBT				eS	Sb	21 34 30.2	+1.1
	baz=231						
EAST	Anshuo	2.11	224	eP	Pn	21 34 01.0	+0.9
	baz=223						
CHN8	Yiju	2.12	255	eP	Pn	21 34 02.3	+2.1
	baz=254						
CHN8				eS	Sb	21 34 28.9	-0.6
	baz=254						
JTJ	Tarama	2.19	70	P	Pn	21 34 02.4	+1.3
SCLT	Jiali	2.19	251	eS	Sb	21 34 31.0	-0.5
	baz=249						
TAI1	Yung-k’ang	2.21	247	eP	Pb	21 34 04.2	-0.7
	baz=246						
TAI1				eS	Sb	21 34 32.0	-0.1
	baz=246						
SCZT	Fangliau	2.27	228	eP	Pb	21 34 05.7	-0.2
	baz=227						
SCZT				eS	Sb	21 34 34.8	+0.9
	baz=227						
TSEB	Hengchuen, Pin	2.45	216	eS	Sn	21 34 36.5	+2.1
	baz=215						
HEN	Hengchun	2.46	220	eP	Pb	21 34 08.6	-0.7
	baz=219						
HEN				eS	Sn	21 34 35.0	+0.4
	baz=219						
TWKBT	Hengchun	2.47	218	eP	Pn	21 34 06.8	+1.8
	baz=217						
TWKBT				eS	Sn	21 34 36.5	+1.7
	baz=217						
TWK1	Hengchun	2.47	218	eP	Pn	21 34 06.8	+1.8
	baz=217						
TWK1				eS	Sn	21 34 35.9	+1.0
	baz=217						
WDGT	Dungji	2.63	256	eP	Pn	21 34 09.0	+1.8
	baz=255						
WDGT				eS	Sn	21 34 39.8	+0.9
	baz=255						
PHUB	P’eng-hu	2.66	262	eP	Pn	21 34 09.4	+1.8
	baz=261						
PHUB				eS	Sn	21 34 40.0	+0.4
	baz=261						
PNG	Penghu	2.67	263	eP	Pn	21 34 09.0	+1.3
	baz=262						
PNG				eS	Sn	21 34 40.9	+1.1
	baz=262						
VCHM	Qimei	2.85	256	eP	Pn	21 34 11.6	+1.3
	baz=255						
VCHM				eS	Sn	21 34 44.8	+0.5
	baz=255						
VWUC	VWUC	2.93	292	eP	Pn	21 34 11.6	+0.2
	baz=291						
VWUC				eS	Sn	21 34 47.6	+1.3
	baz=291						
MATB	Ma-tsu	3.18	315	eP	Pn	21 34 14.8	0.0
	baz=314						
KNM	Kinmen	3.70	279	eP	Pn	21 34 23.7	+1.8
	baz=277						
KNM				eS	Sn	21 35 08.4	+3.2
	baz=277						
KNMB	Chin-men Tao	3.74	279	eP	Pn	21 34 22.6	+0.1
	baz=278						
KNMB				eS	Sn	21 35 06.4	+0.1
	baz=278						
JOW	Kunigami	6.03	60	Pn	Pn	21 34 53.1	-0.8
	2.1nm,0.3s,baz=125,slow=16,SNR=8.5						
JNU	Nakatsue	11.80	37	LR	LR	21 40 21.4	
	comp=Z,30nm,21.0s,baz=299,slow=36						
KSRS	Korea Array	14.30	18	Pn	P	21 36 52.6	-1.7
	0.3nm,0.3s,baz=197,slow=11,SNR=11						
KSRS				LR	LR	21 43 07.9	
	comp=Z,28nm,18.9s,baz=200,slow=41						
DAV	Davao City (W)	17.01	169	LR	LR	21 43 57.7	
	comp=Z,28nm,19.6s,baz=168,slow=37						
SONM	Songino Array	27.08	336	P	P	21 39 06.2	-1.2
	1.0nm,0.7s,baz=153,slow=8.1,SNR=7.4						
SONM				LR	LR	21 49 05.3	
	comp=Z,28nm,20.6s,baz=84,slow=35						
MKAR	Makanchi Array	39.34	316	P	P	21 40 53.6	-0.3
	1.2nm,0.5s,baz=101,slow=9.3,SNR=23						
ZALV	Zalesovo Beam	41.10	327	P	P	21 41 07.0	-1.4
	1.9nm,0.6s,baz=106,slow=7.5,SNR=6.3						
ASAR	Alice Springs	48.58	166	P	P	21 42 09.8	+1.5
	0.5nm,0.6s,baz=340,slow=7.0,SNR=5.5						
BVAR	Borovoye Array	48.62	321	P	P	21 42 07.6	-0.7
	0.6nm,0.4s,baz=112,slow=9.3,SNR=5.1						
FINES	FINESS Array B	72.26	330	P	P	21 44 49.1	-0.6
	1.2nm,0.9s,baz=69,slow=4.6,SNR=3.9						
BRTR	Keskin Array B	74.26	307	P	P	21 45 02.2	+0.1
	0.5nm,0.5s,baz=117,slow=3.0,SNR=4.3						

BER 04 21:37:59.7±0.3**,71°.55N**×**10°.66W,h2**^{km}±419^{km}**,ML2.6, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMI	Jan Mayen	0.88	134	eP	Pg	21 38 15.9	-0.6
JMI				eS	Sg	21 38 27.6	-0.3
JMI				IAML		21 38 28.4	
	comp=Z,166nm,0.3s						
JNW	Jan Mayen West	0.89	125	eP	Pg	21 38 15.9	-0.7
JNW				eS	Sg	21 38 27.9	-0.2
JNW				IAML		21 38 30.3	
	comp=Z,109nm,0.2s						
JMIC	Jan Mayen	0.89	128	eP	Pg	21 38 15.9	-0.9
JMIC				eS	Sg	21 38 28.0	-0.3
JMIC				IAML		21 38 29.4	
	comp=Z,145nm,0.3s						
JNE	Jan Mayen East	0.94	125	eP	Pg	21 38 16.6	-1.2
JNE				eS	Sg	21 38 29.0	-1.0
JNE				IAML		21 38 30.5	
	comp=Z,162nm,0.1s						

ISCJB ***04*** *21:38:09.4±0.4, 7°.10S±0°.07×155°.71E±0°.07, h62*^{km}*, mb4.2/20, Error ellipse: s-maj=10.6km s-min=8.4km az=36.2*

IDC ***04*** *21:38:13.5±5.3, 7°.17S×155°.68E, h84*^{km}*±43*^{km}*, mb4.0/14, mb1 4.1/15, mb1mx3.9/50, mbtmp4.3/15, MS3.2/14, Ms1 3.2/14, ms1mx3.0/44, Error ellipse: s-maj=37.0km s-min=17.1km az=104.0*

NEIC ***04*** *21:38:14.0±2.5, 7°.19S×155°.72E, h92*^{km}*±19*^{km}*, mb4.4/5, Error ellipse: s-maj=25.7km s-min=10.2km az=101.0*

ISC 04 21:38:10.8±0.6**,7°.10S**±0°.09×**155°.83E**±0°.08**,h62**^{km}**,n50,** σ**1**^{s}**.10**/43**,mb4.2**/20**,Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	4.69	120	LR	LR	21 41 19.6	
	comp=Z,482nm,20.0s,baz=327,slow=39						
HNR	Honiara	4.69	120	eP	Pn	21 39 16.0	-3.0
HNR				eS	Sn	21 40 16.0	+3.8
PMG	Port Moresby	8.88	254	P	Pn	21 40 18.4	+1.9
	7.0nm,0.3s,baz=57,slow=9.8,SNR=14						
PMG				LR	LR	21 43 41.6	
	comp=Z,149nm,19.1s,baz=344,slow=38						
CTA	Charters Tower	15.91	215	P	P	21 41 55.2	+1.7
	0.3nm,0.3s,baz=18,slow=13,SNR=4.4						
CTAO	Charters Tower	15.91	215	ePn	Pn	21 41 50.3	-0.6
DZM	Mont Dzumac	18.07	147	LR	LR	21 47 52.3	
	comp=Z,177nm,18.6s,baz=320,slow=32						
GUMO	Guam	23.25	332	LR	LR	21 51 30.6	
	comp=Z,23nm,22.0s,baz=86,slow=34						
WRAB	Tennant Creek	24.43	236	eP	P	21 43 22.5	-1.3
	2.9nm,0.4s						
SIJI	Sorong	25.26	283	P	P	21 43 30.5	-1.0
	16nm,0.6s,baz=37,slow=11,SNR=9.6						
ASAR	Alice Springs	26.73	230	P	P	21 43 43.2	-1.5
	0.7nm,0.4s,baz=58,slow=9.5,SNR=13						
ASAR				PcP	PcP	21 47 07.7	+0.8
	0.6nm,0.4s,baz=68,slow=2.4,SNR=5.7						
ASAR				LR	LR	21 53 11.3	
	comp=Z,58nm,21.9s,baz=60,slow=34						
H11S3	WAKE ISLAND Hy	27.59	23	T	T	22 12 24.0	
	baz=203,slow=76,SNR=584						
H11S2	WAKE ISLAND Hy	27.59	23	T	T	22 12 19.6	
	baz=203,slow=76,SNR=723						
H11S1	WAKE ISLAND Hy	27.61	23	T	T	22 12 21.8	
	baz=203,slow=76,SNR=80						
STKA	Stephens Creek	28.01	206	P	P	21 43 55.9	0.0
	2.0nm,0.7s,baz=2.0,slow=12,SNR=5.4						
FITZ	Fitzroy Crossi	31.37	247	P	P	21 44 24.4	-1.5
	8.4nm,0.5s,baz=76,slow=9.1,SNR=31						
FITZ				LR	LR	21 56 38.2	
	comp=Z,63nm,19.3s,baz=86,slow=35						
BATI	Baumata	31.94	262	LR	LR	21 58 10.7	
	comp=Z,205nm,19.2s,baz=162,slow=38						
DAV	Davao City (W)	33.29	294	LR	LR	21 57 55.6	
	comp=Z,22nm,19.4s,baz=106,slow=36						
JOW	Kunigami	43.02	323	LR	LR	22 02 35.4	
	comp=Z,20nm,20.0s,baz=128,slow=34						
RAR	Rarotonga	45.11	113	LR	LR	22 03 14.2	
	comp=Z,100nm,18.4s,baz=322,slow=33						
MJAR	Matsushiro Arr	46.45	340	P	P	21 46 30.8	-0.8
	0.8nm,0.4s,baz=170,slow=9.0,SNR=5.1						
MJAR				LR	LR	22 03 49.7	
	comp=Z,16nm,21.6s,baz=150,slow=33						
MAJO	Matsushiro	46.45	340	eP	P	21 46 31.2	-0.3
	2.5nm,0.5s						
KSRS	Korea Array	51.42	332	P	P	21 47 09.4	-0.1
	1.6nm,0.8s,baz=152,slow=8.2,SNR=7.7						
KSRS				PcP	PcP	21 48 23.4	+0.1
	1.9nm,0.7s,baz=68,slow=2.4,SNR=6.2						
KSRS				LR	LR	22 07 17.9	
	comp=Z,8.2nm,19.9s,baz=194,slow=34						
KSAR	Wonju Array Be	51.43	332	P	P	21 47 09.4	-0.2
KSAR				PcP	PcP	21 48 23.4	0.0
ASAJ	Asahikawa	52.36	348	P	P	21 47 18.0	+1.6
	3.8nm,0.8s,baz=219,slow=13,SNR=7.9						
ASAJ				LR	LR	22 06 48.1	
	comp=Z,23nm,21.9s,baz=212,slow=33						
USRK	Ussuriysk Ar.	55.41	339	P	P	21 47 39.9	+1.1
	1.6nm,0.7s,baz=202,slow=7.4						
NONG	Nongkai	57.69	296	P	P	21 47 55.5	+0.1
KLR	Kul’dur	59.91	342	P	P	21 48 11.3	+1.0
	0.1nm,0.6s,baz=141,slow=6.5,SNR=5.0						
PAYA	Payao	61.05	297	P	P	21 48 19.3	+0.7
CMAR	Chiang Mai Arr	61.58	295	P	P	21 48 22.5	+0.3
	7.2nm,0.8s,baz=116,slow=5.1,SNR=42						
CMMT	Chiang Mai	61.69	296	P	P	21 48 23.4	+0.5
CHTO	Chiang Mai	61.69	296	eP	P	21 48 22.6	-0.4
	3.1nm,0.6s						
CHTO	Chiang Mai	61.69	296	P	P	21 48 23.5	+0.5
ULN	Ulaanbaatar	69.53	327	eP	P	21 49 13.3	+0.1
	1.8nm,0.5s						
SONM	Songino Array	69.87	327	P	P	21 49 16.0	+0.8
	3.9nm,0.8s,baz=134,slow=6.4,SNR=22						
ODAN	Odare	74.30	300	eP	P	21 49 42.3	0.0
	15nm,0.5s						
RAMN	Ramite	75.00	300	eP	P	21 49 45.8	-0.5
GUN	Gumba	75.88	301	eP	P	21 49 51.3	-0.2
PKIN	Phulchoki	76.20	301	eP	P	21 49 52.8	-0.4
KKN	Kakani	76.36	301	eP	P	21 49 53.9	-0.1
	7.4nm,0.5s						
DMN	Daman	76.46	301	eP	P	21 49 54.7	0.0
	10nm,0.5s						
GKN	Gorkha	76.96	301	eP	P	21 49 57.0	-0.4
KOLN	Koldanda	77.79	300	eP	P	21 50 01.5	-0.6
	5.7nm,0.3s						
DANN	Dangsing	77.80	301	eP	P	21 50 01.5	-0.7
	13nm,0.5s						
ILAR	Eielson Array	83.16	21	P	P	21 50 29.7	-0.1
	0.4nm,0.4s,baz=246,slow=4.6,SNR=17						
MKAR	Makanchi Array	84.03	319	P	P	21 50 34.8	+0.1
	1.2nm,0.6s,baz=92,slow=9.1,SNR=21						
MKAR				LR	LR	22 29 09.4	
	comp=Z,9.9nm,21.7s,baz=312,slow=36						
ZALV	Zalesovo Beam	84.73	326	P	P	21 50 37.4	-0.6
	0.9nm,0.4s,baz=116,slow=6.8,SNR=3.8						
KURK	Kurchatov	87.42	322	eP	P	21 50 51.8	+0.4
BVAR	Borovoye Array	92.87	323	P	P	21 51 16.0	-0.8
	0.7nm,0.8s,baz=117,slow=5.0,SNR=4.2						
BRVK	Borovoye	92.94	323	eP	P	21 51 16.6	-0.5
	1.0nm,0.3s						
FINES	FINESS Array B	114.36	336	PKP	PKPdf	21 56 43.6	+0.4
	0.5nm,0.8s,baz=158,slow=2.1,SNR=4.5						

ISCJB ***04*** *21:41:20.8±0.4, 31°.06S±0°.04×179°.7W±0°.1, h250*^{km}*, mb3.5/4, Error ellipse: s-maj=13.0km s-min=4.2km az=20.9*

WEL ***04*** *21:41:20.3±0.8, 31°S±8°×17°9W±2°0, h275*^{km}*±11*^{km}

IDC ***04*** *21:41:21.3±1.4, 31°.31S×179°.42W, h278*^{km}*±14*^{km}*, mb3.2/3, mb1 3.5/6, mb1mx3.2/48, mbtmp4.1/6, Error ellipse: s-maj=33.7km s-min=17.6km az=122.0*

ISC 04 21:41:21.6±0.8**,31°.13S**±0°.07×**179°.6W**±0°.1**,h250**^{km}**,n41,** σ**1**^{s}**.65**/46**,mb3.6**/4**,Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	2.35	38	P	Pn	21 42 06.0	-1.4
GLKZ				S	S	21 42 43.5	0.0
RIZ	Raoul Island	2.36	38	P	Pn	21 42 07.5	0.0
RAO	Raoul Island	2.36	38	P	Pn	21 42 09.9	+2.4
	54nm,0.3s,baz=122,slow=21,SNR=2.9						
RAO				S	S	21 42 44.5	+0.8
	92nm,0.3s,baz=278,slow=24,SNR=3.9						
GRZ	Great Barrier	6.57	218	P	Pn	21 43 01.9	+5.2
MXZ	Matakaoa Point	6.65	195	P	Pn	21 42 58.2	+0.4
KUZ	Kuaotunu	6.83	214	P	Pn	21 43 04.0	+4.0
WMGZ	Waiomatatini S	6.88	193	P	Pn	21 43 00.3	-0.3
WMGZ				S	S	21 44 20.1	0.0
HAZ	Te Kaha	6.96	197	P	Pn	21 43 01.4	-0.2
HAZ				S	S	21 44 23.9	+1.9
WCZ	Waipu Caves	6.98	225	P	Pn	21 43 07.3	+5.5
PUZ	Puketiti	7.15	194	P	Pn	21 43 02.2	-1.9
PUZ				S	S	21 44 25.8	-0.6
RUGZ	Raukumara Rang	7.18	198	P	Pn	21 43 04.0	-0.6
TWGZ	Tauwhareparae	7.31	195	P	Pn	21 43 08.4	+2.2
TWGZ				S	S	21 44 31.6	+1.4
CNGZ	Carnagh Statio	7.56	193	P	Pn	21 43 10.6	+1.4
MWZ	Matawai	7.57	198	P	Pn	21 43 07.6	-1.8
TKGZ	Te Karaka	7.59	195	P	Pn	21 43 07.3	-2.3
TKGZ				S	S	21 44 36.1	-0.4
URZ	Urewera	7.62	200	P	Pn	21 43 08.1	-1.8
	1.3nm,0.3s,baz=124,slow=5.8,SNR=6.4						
URZ				S	S	21 44 35.9	-1.2
	14nm,0.3s,baz=264,slow=23,SNR=23						
URZ	Urewera	7.62	200	P	Pn	21 43 08.7	-1.2
RAGZ	Rawiri	7.75	198	P	Pn	21 43 09.8	-1.9
RAGZ				S	S	21 44 41.2	+0.8
RIGZ	Rimuhau	7.87	195	P	Pn	21 43 10.8	-2.3
MUGZ	Murupara	7.92	201	P	Pn	21 43 13.7	0.0
RTZ	Ruatahuna	7.99	200	P	Pn	21 43 16.4	+1.8
SNGZ	Shannon Statio	8.04	197	P	Pn	21 43 13.8	-1.5
PRGZ	Paritu Road	8.05	194	P	Pn	21 43 16.8	+1.4
RAHZ	Arahi	8.24	198	P	Pn	21 43 17.5	-0.3
MTHZ	Maungataniwha	8.24	200	P	Pn	21 43 13.1	-4.8
MHGZ	Mahia Peninsul	8.27	194	P	Pn	21 43 19.5	+1.4
BKZ	Black Stump Fm	8.64	201	P	Pn	21 43 20.2	-2.7
HIZ	Hauiti	8.67	210	P	Pn	21 43 24.9	+1.7
KWHZ	Kaweka Forest	8.90	200	P	Pn	21 43 25.6	-0.5
FWVZ	Far West T-bar	9.03	205	P	Pn	21 43 30.0	+2.0
WHVZ	Whangaehu Hut	9.04	205	P	Pn	21 43 28.8	+0.7
KAHZ	Kahuranaki	9.12	197	P	Pn	21 43 29.4	+0.5
DZM	Mont Dzumac	15.40	302	P	P	21 44 47.7	+1.7
	0.2nm,0.3s,baz=120,slow=15,SNR=4.2						
STKA	Stephens Creek	32.99	258	P	P	21 47 34.6	+1.3
	1.9nm,0.6s,baz=97,slow=9.5,SNR=6.4						
ASAR	Alice Springs	41.72	268	P	P	21 48 43.3	-3.1
	0.5nm,0.8s,baz=110,slow=6.8,SNR=4.1						
WRA	Warramunga Arr	42.77	274	P	P	21 48 53.8	-1.2
	0.9nm,0.7s,baz=111,slow=7.4,SNR=4.6						
PETK	Petropavlovsk-	86.19	347	P	P	21 53 31.8	-2.5
	1.7nm,0.7s,baz=111,slow=7.9						
FINES	FINESS Array B	145.34	339	PKPbc	PKPdf	22 00 25.9	-2.8
	5.5nm,0.7s,baz=46,slow=5.5,SNR=19						
NB2	NORSAR Subarra	149.24	350	PKP	PKPdf	22 00 36.4	+1.1
	comp=Z,1.7nm,0.9s,baz=17,slow=2.6						
HFS	Hagfors	149.66	347	PKPbc	PKPdf	22 00 37.3	+1.3
	comp=Z,0.9nm,0.6s,baz=309,slow=3.1,SNR=4.1						
AKASG	Malin Array Be	151.03	321	PKPbc	PKPdf	22 00 41.4	+3.1
	comp=Z,1.1nm,0.6s,baz=58,slow=2.9,SNR=4.8						

IDC ***04*** *22:06:58.3±1.0, 37°.47S×73°.99W, h0*^{km}*, mb3.7/6, mb1 3.9/8, mb1mx3.7/32, mbtmp3.7/8, ML3.6/2, MS3.3/1, Ms1 3.3/1, ms1mx2.7/30, Error ellipse: s-maj=32.1km s-min=15.8km az=80.0*

GUC ***04*** *22:06:59.9±0.3, 37°.47S×74°.04W, h25*^{km}*±5*^{km}*, ML4.0*

ISCJB ***04*** *22:07:01.3±0.7, 37°.47S±0°.04×73°.93W±0°.10, h33*^{km}*, mb3.8/7, Error ellipse: s-maj=11.7km s-min=5.2km az=19.3*

ISC 04 22:07:03.5±1.0**,37°.48S**±0°.04×**73°.9W**±0°.1**,h35**^{km}**,n17,** σ**1**^{s}**.46**/24**,mb4.0**/7**,Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CCSP	San Pedro de C	0.87	43	eP	Pn	22 07 16.6	-2.6
CCSP				i S	Sn	22 07 28.5	-2.1
CCSP				i S		22 07 28.9	
CCSP				IAML		22 07 37.9	
	comp=N,7µm,0.5s						
TMU	Temuco	1.60	142	eP	Pn	22 07 28.2	-1.0
TMU				i S	Sn	22 07 46.2	-2.5
TMU				i S		22 07 55.3	
TMU				IAML		22 08 00.8	
	comp=N,2µm,1.8s						
CCHI	Chillan	1.67	59	i P	Pn	22 07 29.4	-0.8
CCHI				eP		22 07 30.2	
CCHI				i S	Sn	22 07 51.9	+1.6
CCHI				IAML		22 08 06.5	
	comp=E,3µm,0.5s						
GO05	HualaæØ	2.91	33	eP	Pn	22 07 46.4	-0.9
GO05				i S	Sn	22 08 21.9	+0.8
PLCA	Paso Flores	4.14	143	Pn	Pn	22 08 05.0	+0.7
	comp=E,0.4nm,0.3s,baz=325,slow=8.5,SNR=18						
PLCA				Lg	Lg	22 09 12.5	
	comp=E,4.9nm,0.3s,baz=70,slow=22,SNR=5.2						
LMEL	Las Melosas	4.68	40	eP	Pn	22 08 11.3	-0.5
LMEL				i S	Sn	22 09 05.8	+0.8
CLCH	Cerro Calan	4.89	35	eP	Pn	22 08 13.2	-1.4
CLCH				i S	Sn	22 09 13.4	+3.4
PEL	Peldehue	5.04	32	eP	Pn	22 08 15.8	-0.9
PEL				i S	Sn	22 09 40.3	+27
ROCH	El Roble	5.06	28	eP	Pn	22 08 15.2	-1.8
ROCH				i S	Sn	22 09 13.9	-0.5
CPUP	Villa Florida	17.87	56	P	P	22 11 10.7	+1.0
	comp=E,0.1nm,0.3s,baz=222,slow=14,SNR=3.3						
CPUP				LR	LR	22 18 17.0	
	comp=E,92nm,18.1s,baz=234,slow=38						
LPAZ	La Paz	21.70	15	P	P	22 11 52.8	+0.6
	comp=E,1.9nm,0.7s,baz=197,slow=6.5,SNR=6.9						
SIV	San Ignacio	24.20	31	P	P	22 12 17.4	+0.5
	comp=E,0.8nm,0.5s,baz=232,slow=14,SNR=6.4						
PMSA	Palmer Station	27.95	171	P	P	22 12 49.8	-0.4
	comp=E,8.7nm,0.6s,baz=322,slow=12,SNR=7.0						
SNAA	Sanae	48.96	157	P	P	22 15 46.4	+0.4
	comp=E,1.5nm,0.8s,baz=262,slow=7.1,SNR=5.3						
QSPA	South Pole Qui	52.77	180	P	P	22 16 15.4	+0.6
	comp=E,1.4nm,0.8s,baz=149,slow=5.8,SNR=3.8						
TXAR	Lajitas Array	72.10	333	P	P	22 18 24.3	+0.1
	comp=E,0.2nm,0.8s,baz=171,slow=8.2,SNR=2.3						
TORD	Torodi Ar. Bea	86.76	71	P	P	22 19 43.6	-0.7
	comp=E,1.5nm,1.1s,baz=232,slow=3.5						

ISCJB ***04*** *22:13:42.4±0.3, 50°.91N±0°.04×179°.77W±0°.04, h10*^{km}*, mb4.1/45, MS3.2/8, Error ellipse: s-maj=6.3km s-min=3.3km az=1.4*

IDC ***04*** *22:13:42.0±0.9, 51°.17N×179°.75W, h0*^{km}*, mb3.8/15, mb1 4.0/17, mb1mx3.8/76, mbtmp3.9/17, ML4.3/1, MS3.1/8, Ms1 3.1/8, ms1mx2.8/67, Error ellipse: s-maj=26.3km s-min=16.0km az=179.0*

NEIC ***04*** *22:13:44.0±0.0, 50°.98N×179°.71W, h8*^{km}*, mb4.2/38, ML4.1(AEIC), After AEIC.*

MOS ***04*** *22:13:46.1±1.0, 51°.34N×179°.86W, h33*^{km}*, mb4.3/17, Error ellipse: s-maj=13.9km s-min=12.8km az=57.6*

ISC 04 22:13:44.6±0.6**,51°.06N**±0°.08×**179°.73W**±0°.03**,h10**^{km}**,n132,** σ**1**^{s}**.37**/125**,mb4.1**/45**,MS3.3**/8**,1D,Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AMKA	Amchitka	0.69	298	P	Pg	22 13 58.5	+0.7
AMKA				S	Sg	22 14 08.0	+1.2
CERAA	Semis’ Rag’d T	0.92	337	P	Pg	22 14 03.0	+0.6
GALAA	Gareloi Lava P	0.93	40	P	Pg	22 14 02.1	-0.3
CESW	Semis’ Southwe	0.95	333	P	Pg	22 14 03.4	+0.5
GAEA	Gareloi East	0.95	40	P	Pg	22 14 03.4	+0.5
CERB	Semis’ Cerberu	0.96	336	P	Pg	22 14 03.8	+0.8
CEAP	Semis’ Anvil P	1.04	336	P	Pb	22 14 05.0	+0.4
TASE	Tanaga Southea	1.31	53	P	Pn	22 14 08.8	-0.3
LSSE	Little Sitkin	1.38	310	P	Pn	22 14 09.8	-0.1
TAFP	Tanaga Falls P	1.38	52	P	Pn	22 14 09.3	-0.6
TAFP				S	Sg	22 14 29.6	+0.6
LSPA	Little Sitkin	1.39	311	P	Pn	22 14 10.1	+0.1
TAPA	Tanaga Point A	1.42	57	P	Pn	22 14 09.2	-1.3
LSNW	Little Sitkin	1.42	310	P	Pn	22 14 10.2	-0.3
KIWB	Kanaga Island	1.80	63	ePn	Pn	22 14 14.6	-1.1
KIKV	Kanaga Island	1.80	62	P	Pn	22 14 15.0	-0.7
KICM	Kanaga Island	1.80	61	P	Pn	22 14 15.6	-0.1
KIRH	Kanaga Island	1.85	62	P	Pn	22 14 15.4	-0.9
ADAG	Mount Adagdak	2.16	64	P	Pn	22 14 21.0	+0.4
ETKA	Kagalaska Isla	2.23	68	P	Pn	22 14 21.0	-0.6
GSCK	Great Sitkin C	2.42	65	P	Pn	22 14 24.0	-0.2
GSTD	Great Sitkin T	2.45	65	P	Pn	22 14 25.1	+0.4
GSTD				S	Sn	22 14 55.4	+0.7
GSTR	Great Sitkin T	2.52	64	ePn	Pn	22 14 26.1	+0.6
ATKA	Atka Island	3.63	70	ePn	Pn	22 14 41.9	+1.0
KOKL	Mount Kliuchef	3.67	68	P	Pn	22 14 42.3	+1.0
KOFP	Korovin Flat P	3.71	69	P	Pn	22 14 43.3	+1.3
SMY	Shemya	4.17	296	ePn	Pn	22 14 50.2	+2.0
SMY	Shemya	4.17	296	eP	Pn	22 14 50.2	+2.0
NIKH	Nikolski High	6.98	70	ePn	Pn	22 15 30.4	+3.6
SPIA	Saint Paul Isl	8.28	39	ePn	Pn	22 15 47.6	+3.0
MREP	Makushin Rep’t	8.40	66	P	Pn	22 15 48.3	+2.0
UNV	Unalaska Valle	8.55	66	ePn	Pn	22 15 52.1	+3.8
PET	Petropavlovsk	13.44	287	i P	Pn	22 16 55.6	+0.4
PETK	Petropavlovsk-	14.02	287	Pn	Pn	22 17 01.3	-1.8
	baz=90,slow=19						
PETK				LR	LR	22 22 14.6	
	comp=Z,47nm,18.6s,baz=77,slow=37						
PETK	Petropavlovsk-	14.02	287	ePn	Pn	22 17 05.8	+2.8
OHAK	Old Harbor	16.61	58	ePn	Pn	22 17 35.9	-1.4
SVW2	Sparrevohn	16.71	44	ePn	Pn	22 17 39.4	+0.9
	17nm,0.9s						
KDAK	Kodiak Island	17.09	56	P	Pn	22 17 40.9	-2.4
	0.9nm,0.3s,baz=283,slow=4.7,SNR=32						
KDAK	Kodiak Island	17.09	56	ePn	Pn	22 17 42.4	-0.9
	17nm,1.0s						
CNPM	China Poot	18.18	51	eP	P	22 17 58.1	+1.0
	86nm,1.8s						
BILL	Bilibino	18.36	343	eP	Pn	22 17 59.9	+0.9
	19nm,1.3s						
BILL				ePn	pP	22 18 01.5	-0.3
BILL	Bilibino	18.36	343	d i P	Pn	22 18 02.1	+3.1
BILL				pmax	pmax		
	comp=Z,12nm,1.1s						
BILL				MLR	MLR		
	comp=Z,122nm,20.0s						
SKT	Skwentna	18.84	44	eP	Pn	22 18 05.4	+0.6
	comp=Z,32nm,1.0s						
PPLA	Purkeypile	18.94	41	eP	Pn	22 18 06.5	+0.3
	comp=Z,14nm,0.9s						
CAST	Castle Rocks	19.22	39	eP	Pn	22 18 09.5	0.0
	comp=Z,6.9nm,0.8s						
KTH	Kantishna Hill	19.74	40	eP	P	22 18 14.8	+0.5
	comp=Z,20nm,0.9s						
TRF	Thorofare Moun	19.96	40	eP	P	22 18 17.3	+0.6
	comp=Z,24nm,1.1s						
BPAW	Bear Paw Mtn.	19.96	38	eP	P	22 18 17.2	+0.6
	comp=Z,29nm,1.7s						
SCM	Sheep Creek Mo	20.66	46	eP	P	22 18 23.2	-1.1
	comp=Z,15nm,1.0s						
SCM	Sheep Creek Mo	20.66	46	eP	P	22 18 23.2	-1.1
SCM				pmax	pmax		
	comp=Z,15nm,1.0s						
KLU	Klutina	21.22	48	eP	P	22 18 31.6	+1.2
	comp=Z,8.1nm,1.0s						
WRH	Wood River Hil	21.26	39	eP	P	22 18 31.7	+1.1
	comp=Z,8.7nm,1.2s						
MDM	Murphy Dome	21.41	38	eP	P	22 18 32.7	+0.4
	comp=Z,5.5nm,0.8s						
CCB	Clear Creek Bu	21.45	39	eP	P	22 18 34.1	+1.5
	comp=Z,6.6nm,1.0s						
BMRM	Bremner River	21.73	49	eP	P	22 18 36.4	+0.6
	comp=Z,13nm,1.0s						
HARP	HAARP	21.81	45	eP	P	22 18 37.5	+0.9
	comp=Z,19nm,1.0s						
COLD	Coldfoot	21.83	31	eP	P	22 18 37.3	+0.6
	comp=Z,2.9nm,1.0s						
IL1	Eielson Array	21.86	39	eP	P	22 18 37.4	+0.4
ILAR	Eielson Array	21.86	39	P	P	22 18 34.6	-2.4

	comp=Z,0.7nm,0.7s,baz=242,slow=9.6,SNR=8.0						
ILB	Eielson Array	21.86	39	eP	P	22 18 37.5	+0.4
TOLK	Toolik Lake Re	22.82	28	eP	P	22 18 47.9	+0.5
	comp=Z,5.2nm,0.8s						
EGAK	Eagle	24.17	41	eP	P	22 18 59.4	-1.2
	comp=Z,7.6nm,1.2s						
DAWY	Dawson	24.74	43	eP	P	22 19 05.3	-0.5
	comp=Z,4.6nm,1.0s						
KLR	Kul'dur	30.70	286	iP	P	22 19 58.3	-1.0
H11N2	WAKE ISLAND Hy	33.00	204	T	T	22 55 43.0	
	baz=16,slow=76,SNR=24						
H11N3	WAKE ISLAND Hy	33.01	204	T	T	22 56 07.9	
	baz=16,slow=76,SNR=32						
H11N1	WAKE ISLAND Hy	33.02	204	T	T	22 56 11.8	
	baz=16,slow=76,SNR=28						
MJAR	Matsushiro Arr	33.15	261	LR	LR	22 32 59.3	
	comp=Z,19nm,21.2s,baz=70,slow=35						
MSHR	Mys Shultsa	34.10	275	iP	P	22 20 28.1	-1.0
H11S1	WAKE ISLAND Hy	34.22	203	T	T	22 57 22.9	
	baz=17,slow=76,SNR=26						
H11S2	WAKE ISLAND Hy	34.24	203	T	T	22 57 19.0	
	baz=17,slow=76,SNR=11						
H11S3	WAKE ISLAND Hy	34.24	203	T	T	22 57 22.2	
	baz=17,slow=76,SNR=12						
YKA	Yellowknife Ar	35.88	46	P	P	22 20 42.6	-1.6
	comp=Z,0.7nm,0.6s,baz=280,slow=9.3,SNR=3.0						
YKA				LR	LR	22 37 05.9	
	comp=Z,10nm,18.1s,baz=274,slow=39						
NEW	Newport	39.54	69	eP	P	22 21 15.6	+0.1
	comp=Z,2.3nm,0.6s						
NEW	Newport	39.54	69	eP	P	22 21 15.6	+0.1
NEW				pmax	pmax		
	comp=Z,2.0nm,0.6s						
JNU	Nakatsue	39.95	263	LR	LR	22 37 20.5	
	comp=Z,26nm,20.8s,baz=127,slow=36						
BMO	Blue Mountains	41.15	73	eP	P	22 21 29.1	+0.2
	comp=Z,1.8nm,0.8s						
BMO	Blue Mountains	41.15	73	eP	P	22 21 29.1	+0.2
BMO				pmax	pmax		
	comp=Z,2.0nm,0.8s						
WVOR	Wild Horse Val	41.64	77	eP	P	22 21 33.0	+0.1
	comp=Z,1.4nm,0.5s						
WVOR	Wild Horse Val	41.64	77	eP	P	22 21 33.1	+0.1
WVOR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
HLID	Hailey	43.59	73	eP	P	22 21 49.5	+0.6
	comp=Z,2.2nm,0.8s						
MCMT	McKenzie Canyo	43.84	71	eP	P	22 21 50.8	-0.1
BOZ	Bozeman (W)	44.14	69	eP	P	22 21 52.8	-0.4
	comp=Z,2.6nm,0.6s						
BOZ	Bozeman (W)	44.14	69	eP	P	22 21 52.8	-0.4
BOZ				pmax	pmax		
	comp=Z,3.0nm,0.6s						
NV01	Mina Array Sit	44.17	82	eP	P	22 21 55.4	+1.7
NVAR	Mina Array Bea	44.17	82	P	P	22 21 51.8	-1.8
	comp=Z,0.3nm,0.5s,baz=291,slow=7.5,SNR=2.9						
RLMT	Red Lodge	45.79	69	eP	P	22 22 06.3	-0.2
	comp=Z,5.3nm,1.1s						
ULN	Ulaanbaatar	45.88	296	eP	P	22 22 06.8	-0.2
	comp=Z,1.5nm,0.3s						
ULN	Ulaanbaatar	45.88	296	eP	P	22 22 06.8	-0.2
ULN				pmax	pmax		
	comp=Z,1.0nm,0.3s						
R11A	Troy Canyon, C	45.92	80	eP	P	22 22 07.9	+0.4
	comp=Z,1.4nm,0.8s						
SPUT	South Promonto	46.07	75	eP	P	22 22 09.6	+1.0
	comp=Z,6.5nm,1.5s						
SONA1	Songino Array	46.25	296	eP	P	22 22 09.1	-0.9
SONM	Songino Array	46.26	296	P	P	22 22 08.3	-1.7
	comp=Z,0.7nm,0.5s,baz=55,slow=6.9,SNR=8.2						
FURC	Furnace Creek,	46.29	83	eP	P	22 22 08.8	-1.3
DUG	Dugway, Tooele	46.51	76	eP	P	22 22 13.6	+1.5
	comp=Z,3.8nm,1.0s						
DUG	Dugway, Tooele	46.51	76	eP	P	22 22 13.6	+1.5
DUG				pmax	pmax		
	comp=Z,4.0nm,1.0s						
PSUT	Pine Spring	46.88	79	eP	P	22 22 16.3	+1.2
	comp=Z,2.6nm,0.8s						
PD31	Pinedale Array	46.97	71	eP	P	22 22 15.4	-0.3
PDAR	Pinedale Array	46.97	71	P	P	22 22 15.4	-0.3
	comp=Z,3.2nm,0.6s,baz=303,slow=2.9,SNR=29						
PDAR				LR	LR	22 39 12.6	
	comp=Z,26nm,21.6s,baz=254,slow=33						
PDAR	Pinedale Array	46.97	71	eP	P	22 22 15.1	-0.6
HHC	Hu-ho-hao-te	47.21	286	eP	P	22 22 20.4	+2.9
HHC				pmax	pmax		
	comp=Z,24nm,0.9s						
HHC				pmax	pmax		
	comp=Z,99nm,5.5s						
MSU	Marysvale	47.93	78	eP	P	22 22 25.2	+2.0
MSU	Marysvale	47.93	78	eP	P	22 22 25.2	+2.0
TMUT	Trail Mountain	48.04	76	eP	P	22 22 25.1	+0.9
	comp=Z,3.4nm,0.9s						
U15A	North Rim	49.16	80	eP	P	22 22 33.7	+0.9
	comp=Z,3.1nm,0.8s						
PV09	Paradox Valley	49.80	76	eP	P	22 22 39.3	+1.6
PV04	Paradox Valley	50.01	76	eP	P	22 22 39.0	-0.2
	comp=Z,3.3nm,0.8s						
PV03	Paradox Valley	50.13	76	eP	P	22 22 41.9	+1.7
	comp=Z,4.1nm,0.9s						
PV02	Paradox Valley	50.23	76	eP	P	22 22 39.5	-1.4
	comp=Z,4.3nm,0.7s						
SPITS	Spitsbergen Ar	50.65	356	P	P	22 22 41.8	-1.5
	comp=Z,6.8nm,0.9s,baz=16,slow=11,SNR=6.3						
SPITS	Spitsbergen Ar	50.65	356	P	P	22 22 41.8	-1.5
SPITS				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GTA	Gaotai	55.14	291	eP	P	22 23 23.3	+6.2
GTA				pP	sP	22 23 27.5	+6.0
GTA				sP	pP	22 23 30.1	+10
GTA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KURK	Kurchatov	58.81	313	eP	P	22 23 41.9	-0.8
KURK	Kurchatov	58.81	313	eP	P	22 23 41.9	-0.8
KURBB	Kurchatov Arra	58.92	313	P	P	22 23 42.7	-0.8
	comp=Z,1.4nm,0.4s,baz=42,slow=6.6,SNR=21						
WMQ	Urumqi	59.02	302	P	P	22 23 47.7	+3.3
WMQ				LR	LR		
	comp=N,86nm,19.3s						
WMQ				LR	LR		
	comp=E,56nm,20.5s						
WMQ				LR	LR		
	comp=Z,67nm,19.3s						
TXAR	Lajitas Array	59.28	80	P	P	22 23 45.5	-1.0
	comp=Z,0.5nm,0.7s,baz=308,slow=4.4,SNR=1.9						
MKAR	Makanchi Array	59.77	308	P	P	22 23 48.0	-1.5
	comp=Z,1.4nm,0.4s,baz=47,slow=6.8,SNR=8.1						
GYA	Guiyang	59.77	276	eP	P	22 23 52.1	+2.2
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MK01	Makanchi Array	59.78	308	eP	P	22 23 48.0	-1.6
BVAR	Borovoye Array	60.75	319	P	P	22 23 54.4	-1.7
	comp=Z,0.6nm,0.5s,baz=54,slow=5.0,SNR=10						
BRVK	Borovoye	60.77	319	eP	P	22 23 56.0	-0.2
	comp=Z,2.4nm,0.5s						
BRVK	Borovoye	60.77	319	eP	P	22 23 56.0	-0.2
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
FINES	FINESS Array B	65.96	347	P	P	22 24 28.0	-2.4
	comp=Z,1.6nm,0.7s,baz=39,slow=9.0,SNR=4.8						
FINES	FINESS Array B	65.96	347	P	P	22 24 28.0	-2.4
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
TKL	Tuckaleechee C	66.62	62	LR	LR	22 51 18.1	
	comp=Z,26nm,21.8s,baz=320,slow=34						
AKTO	Aktyubinsk	67.60	324	LR	LR	22 56 55.7	
	comp=Z,34nm,18.1s,baz=53,slow=38						
KSH	Kashi	68.22	306	P	P	22 24 49.1	+3.8
KSH				sP	PcP	22 25 06.9	-4.1
KSH				PP	sP	22 25 14.2	+24
KSH				S	S	22 33 45.8	+0.2
HFS	Hagfors	68.63	353	P	P	22 24 45.6	-1.7
	comp=Z,0.5nm,0.4s,baz=28,slow=6.5,SNR=6.1						
GERES	GERESS Array B	79.81	351	P	P	22 25 50.4	-2.4
	comp=Z,0.1nm,0.3s,baz=19,slow=6.2,SNR=3.6						
GNI	Garni	81.19	327	LR	LR	23 06 53.1	
	comp=Z,21nm,20.1s,baz=0.5,slow=39						
WRA	Warramunga Arr	81.38	223	P	P	22 26 00.2	-1.1
	comp=Z,0.4nm,0.7s,baz=30,slow=5.9,SNR=3.0						
ASAR	Alice Springs	84.86	222	P	P	22 26 18.9	-0.4
	comp=Z,0.7nm,0.7s,baz=27,slow=6.3,SNR=4.4						

TAP 04 22:22:51.6, 23°.30N×120°.42E, h7^{km}, ML2.4, 2D, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWK	Hsinying	0.07	118	⇓iP	Pg	22 22 53.9	+0.4
	baz=115						
TWK				iS	Sg	22 22 56.5	+1.6
	baz=115						
CHN1	Nanshi	0.15	139	⇓iP	Pg	22 22 55.3	+0.5
	baz=139						
CHN1				iS	Sg	22 22 58.9	+2.0
	baz=139						
WTP	Ta-pu	0.19	107	P	Pg	22 22 56.1	+0.7
	baz=106						
TPUB	Ta-pu	0.19	90	P	Pg	22 22 56.1	+0.6
	baz=89						
TPUB				S	Sg	22 22 60.0	+1.8
	baz=89						
CHY	Chiayi	0.20	1	P	Pg	22 22 56.5	+0.8
	baz=3.0						
CHY				S	Sg	22 23 00.4	+2.1
	baz=3.0						
CHN8	Yiju	0.20	283	iP	Pg	22 22 55.8	+0.2
	baz=284						
CHN8				iS	Sg	22 23 00.3	+2.1
	baz=284						
WLGB	Puzi	0.21	328	P	Pg	22 22 56.3	+0.5
	baz=327						
WLGB				S	Sg	22 23 00.9	+2.2
	baz=327						
CHN3	Shinhua	0.23	193	eP	Pg	22 22 57.3	+1.1
	baz=192						
CHN3				eS	Sg	22 23 01.3	+2.1
	baz=192						
CHN2	Minshiung	0.24	12	eP	Pg	22 22 57.6	+1.2
	baz=12						
CHN2				eS	Sg	22 23 01.6	+2.1
	baz=12						
SCLT	Jiali	0.24	239	P	Pg	22 22 57.1	+0.7
	baz=237						
SGST	Jiashian	0.26	145	iP	Pb	22 22 57.9	-0.9
	baz=144						
SGST				iS	Sb	22 23 03.2	-0.3
	baz=144						
STYT	Tauyuan	0.34	114	P	Pg	22 22 59.0	+0.8
	baz=113						
STYT				S	Sb	22 23 05.1	-0.6
	baz=113						
SLGT	Liugui	0.37	146	P	Pb	22 22 59.9	-0.6
	baz=145						
SLGT				S	Sb	22 23 06.4	-0.2
	baz=145						
CHN5	Tsauling	0.38	39	iP	Pg	22 22 59.8	+0.8
	baz=38						
CHN5				iS	Sb	22 23 06.8	-0.1
	baz=38						
WDLH	Douliu	0.40	16	P	Pb	22 23 00.5	-0.6
	baz=15						
WDLH				S	Sb	22 23 07.6	+0.1
	baz=15						
ALS	Alishan	0.41	59	P	Pb	22 23 00.8	-0.7
	baz=60						
ALS				S	Sb	22 23 08.2	+0.2
	baz=60						
SSD	Sandimen	0.58	160	eP	Pb	22 23 04.7	+0.5
	baz=159						
SSD				eS	Sb	22 23 13.7	+1.0
	baz=159						
RLNB	Erlin	0.59	355	eP	Pb	22 23 04.4	+0.1
	baz=354						
RLNB				eS	Sb	22 23 12.7	-0.2
	baz=354						
SSLB	Suanglung	0.69	45	eP	Pb	22 23 06.2	+0.1
	baz=45						
SSLB				eS	Sb	22 23 15.8	0.0
	baz=45						
WDGT	Dungji	0.70	267	eP	Pg	22 23 04.5	-0.6
	baz=266						
WDGT				eS	Sg	22 23 14.6	+0.4
	baz=266						
MASBT	Mashibuluo	0.71	164	eS	Sb	22 23 17.2	+0.9
	baz=164						
TYC	Yuchr	0.72	34	P	Pb	22 23 06.5	-0.1
	baz=34						
TYC				S	Sb	22 23 17.7	+1.0
	baz=34						
SMLT	Sun Moon Lake	0.73	37	eP	Pb	22 23 07.0	+0.3
	baz=37						
SMLT				eS	Sb	22 23 17.7	+0.7
	baz=37						
TWG	Pinlang	0.77	128	eP	Pb	22 23 07.4	0.0
	baz=128						
TWG				S	Sb	22 23 19.0	+1.0
	baz=128						
TWGBT	Beinan	0.78	128	P	Pb	22 23 07.3	-0.2
	baz=128						
TWGBT				S	Sb	22 23 19.2	+1.0
	baz=128						
VWDT	VWDT	0.80	56	eP	Pb	22 23 07.8	-0.1
	baz=55						
VWDT				eS	Sb	22 23 19.8	+0.9
	baz=55						
PHUB	P'eng-hu	0.81	285	eP	Pb	22 23 08.3	+0.3
	baz=285						
PHUB				eS	Sb	22 23 20.1	+1.0
	baz=285						
FULB	Fuli	0.81	97	P	Pb	22 23 08.3	+0.3
	baz=97						
FULB				eS	Sb	22 23 20.5	+1.2
	baz=97						
YULB	Yu-li	0.81	83	eP	Pb	22 23 08.4	+0.3
	baz=83						
YULB				eS	Sb	22 23 20.3	+1.0
	baz=83						
CHGB	Renai	1.02	42	eP	Pb	22 23 12.2	+0.3
	baz=42						
CHGB				eS	Sb	22 23 26.2	+0.6
	baz=42						

TAP 04 22:22:54.1, 23°.22N×120°.55E, h17^{km}, ML2.4, A, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHN1	Nanshi	0.04	216	eP	Pg	22 22 57.7	+0.5
	baz=215						
CHN1				S	Sg	22 23 00.1	+0.7
	baz=215						
WTP	Ta-pu	0.06	62	P	Pg	22 22 57.7	+0.3
	baz=66						
WTP				S	Sg	22 23 00.5	+0.8
	baz=66						
TWK	Hsinying	0.08	311	eP	Pg	22 22 57.8	+0.2
	baz=315						
TWK				eS	Sg	22 23 00.5	+0.6
	baz=315						
TPUB	Ta-pu	0.11	40	P	Pg	22 22 58.4	+0.5
	baz=40						
TPUB				S	Sg	22 23 01.2	+0.8
	baz=40						
SGST	Jiashian	0.14	168	P	Pb	22 22 58.6	+0.4
	baz=165						
SGST				eS	Sb	22 23 02.1	+1.1
	baz=165						
STYT	Tauyuan	0.20	106	eS	Sb	22 23 03.7	+1.0
	baz=105						
CHN3	Shinhua	0.22	231	eP	Pb	22 22 60.0	+0.3
	baz=231						
CHN3				eS	Sb	22 23 04.5	+1.1
	baz=231						
SLGT	Liugui	0.24	159	eS	Sb	22 23 04.2	+0.3
	baz=158						
CHY	Chiayi	0.30	337	eP	Pb	22 23 01.1	0.0
	baz=338						
CHY				eS	Sb	22 23 06.4	+0.6
	baz=338						
CHN2	Minshiung	0.32	347	eS	Sb	22 23 07.1	+0.8
	baz=347						
SCLT	Jiali	0.33	263	eP	Pb	22 23 01.7	+0.2
	baz=262						
SCLT				S	Sb	22 23 07.1	+0.6
	baz=262						
WLGB	Puzi	0.35	318	eP	Pb	22 23 02.0	+0.2
	baz=318						
WLGB				eS	Sb	22 23 07.9	+0.8
	baz=318						
ALS	Alishan	0.37	38	eP	Pb	22 23 02.9	+0.4
	baz=39						
ALS				S	Sb	22 23 08.8	+0.7
	baz=39						
CHN5	Tsauling	0.40	17	eP	Pb	22 23 03.3	+0.6
	baz=16						
CHN5				eS	Sb	22 23 09.5	+1.0
	baz=16						
WGK	Gukeng	0.47	1	eS	Sb	22 23 11.3	+0.8
	baz=2.0						
WDLH	Douliu	0.47	358	eP	Pb	22 23 04.5	+0.5
	baz=358						
WDLH				eS	Sb	22 23 11.3	+0.7
	baz=358						
SGLT	Jiouru	0.49	187	eP	Pb	22 23 04.7	+0.4
	baz=185						
SGLT				eS	Sb	22 23 12.2	+1.0
	baz=185						
WSF	Szhu	0.52	324	eP	Pb	22 23 05.0	+0.2
	baz=324						
WSF				eS	Sb	22 23 12.7	+0.7
	baz=324						
MASBT	Mashibuluo	0.61	173	eP	Pb	22 23 06.7	+0.4
	baz=172						
MASBT				eS	Sb	22 23 15.7	+1.3
	baz=172						
TWG	Pinlang	0.62	129	eS	Sb	22 23 16.2	+1.3
	baz=129						
WJS	Zhushan	0.62	15	eP	Pb	22 23 07.0	+0.5
	baz=14						
WJS				eS	Sn	22 23 16.4	-1.3
	baz=14						
TWGBT	Beinan	0.63	129	eS	Sb	22 23 16.0	+0.9
	baz=129						
SSLB	Suanglung	0.68	33	P	Pb	22 23 08.0	+0.5
	baz=32						
SSLB				eS	Sb	22 23 17.6	+0.9
	baz=32						
FULB	Fuli	0.68	91	eS	Sb	22 23 17.6	+0.8
	baz=91						
RLNB	Erlin	0.69	345	eP	Pg	22 23 08.3	+0.5
	baz=345						
RLNB				eS	Sg	22 23 18.2	+1.2
	baz=345						
TWF1	Yuli	0.70	79	eP	Pg	22 23 08.0	+0.1
	baz=79						
TWF1				eS	Sb	22 23 18.3	+1.1
	baz=79						
YULB	Yu-li	0.71	75	eS	Sg	22 23 18.4	+1.0
	baz=75						
SMLT	Sun Moon Lake	0.74	26	P	Pg	22 23 09.2	+0.6
	baz=26						
SMLT				S	Sn	22 23 20.1	-0.6
	baz=26						
TYC	Yuchr	0.74	22	iP	Pg	22 23 09.0	+0.3
	baz=22						
TYC				eS	Sn	22 23 19.8	-0.8
	baz=22						
VWDT	VWDT	0.76	45	eP	Pg	22 23 09.3	+0.3
	baz=45						
VWDT				eS	Sn	22 23 20.4	-0.7
	baz=45						

WEL 04 22:55:08.6, 42°S±1°×17°3E±°, h16^{km}±3^{km}, ML3.7/12, South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THZ	Tophouse	0.47	19	P	Pb	22 55 18.3	-0.2
KHZ	Kahutara	0.66	109	P	Pn	22 55 22.7	-0.6
KHZ				S	Sb	22 55 31.6	+1.0
LTZ	Lake Taylor	0.66	209	P	Pn	22 55 22.6	-0.7
LTZ				S	Sb	22 55 31.2	+0.5
DSZ	Denniston Nort	0.81	304	P	Pn	22 55 26.0	+0.6
BSWZ	Blackbirch Sta	1.00	61	P	Pg	22 55 28.0	-0.1
INZ	Inchbonnie	1.06	240	P	Pg	22 55 29.4	+0.3
INZ				S	Sn	22 55 44.6	+1.3
NNZ	Nelson	1.11	27	P	Pb	22 55 29.3	-0.1
NNZ				S	Sn	22 55 44.4	0.0
TUWZ	Tuamarina	1.21	51	P	Pb	22 55 31.3	+0.2
TUWZ				S	Sg	22 55 47.7	0.0
CMWZ	Cape Campbell	1.22	69	P	Pg	22 55 33.6	+1.5
OXZ	Oxford	1.22	203	P	Pg	22 55 31.8	-0.4
QRZ	Quartz Range	1.39	355	P	Pg	22 55 34.9	-0.3
MQZ	McQueen's Vall	1.50	181	P	Pn	22 55 35.0	+0.1
MQZ				S	Sn	22 55 54.0	0.0
OKCZ	Okains Bay	1.54	170	P	Pb	22 55 36.2	-0.6
TCW	Tory Channel	1.54	50	P	Pb	22 55 36.5	-0.3
AKCZ	Akaroa Harbour	1.67	175	P	Pn	22 55 38.0	+0.7
DUWZ	D'Urville Isla	1.68	34	P	Pb	22 55 38.9	-0.2
WVZ	Waitaha Valley	1.69	238	P	Pb	22 55 39.7	+0.5
BHW	Baring Head	1.81	65	P	Pb	22 55 40.3	-1.0
RPZ	Rata Peaks	1.93	218	P	Pn	22 55 41.9	+1.1
PLWZ	Palliser	2.01	72	P	Pn	22 55 42.5	+0.6
MSWZ	Moikau Station	2.06	68	P	Pn	22 55 43.3	+0.7
CAW	Cannon Point	2.08	59	P	Pn	22 55 44.2	+1.3
KIW	Kapiti Island	2.13	52	P	Pb	22 55 45.6	-1.3
PAWZ	Paruwai Farm	2.20	69	P	Pn	22 55 45.2	+0.7
PAWZ				P	Pn	22 55 45.2	+0.7
OGWZ	Otaki Gorge	2.32	54	P	Pn	22 55 47.5	+1.4
MTW	Mount Morrison	2.34	64	P	Pn	22 55 46.8	+0.3
TRWZ	Traveller	2.38	71	P	Pn	22 55 47.2	+0.3
HOWZ	Holdsworth Sta	2.48	59	P	Pn	22 55 48.9	+0.5
FOZ	Fox Glacier	2.50	237	P	Pn	22 55 50.5	+1.9
TMWZ	Te Maipa	2.63	66	P	Pn	22 55 50.9	+0.4
MRZ	Mangatainoka R	2.66	55	P	Pn	22 55 51.5	+0.8
LBZ	Lake Benmore	2.85	219	P	Pn	22 55 54.6	+1.2
NMEZ	Namu Road	2.93	18	P	Pb	22 55 58.9	-1.5
POWZ	Post Office Ro	2.94	53	P	Pn	22 55 55.4	+0.8
WAZ	Wanganui	3.00	36	P	Pb	22 56 00.7	-0.9
PREZ	Palmer Road	3.07	22	P	Pb	22 56 01.0	-1.8
BFZ	Birch Farm	3.07	61	P	Pn	22 55 58.5	+2.0
KHEZ	Kahui Hut	3.08	19	P	Pb	22 56 00.6	-2.3
PKE	Pukeiti	3.16	18	P	Pb	22 56 01.5	-3.0
ODZ	Otahua Downs	3.21	207	P	Pn	22 55 58.6	+0.3
DVHZ	Dannevirke	3.23	55	P	Pn	22 55 58.6	-0.1
TSZ	Takapari Road	3.27	50	P	Pn	22 55 59.9	+0.7
JCZ	Jackson Bay	3.42	236	P	Pn	22 56 03.1	+1.8
VRZ	Vera Road	3.45	28	P	Pb	22 56 05.9	-3.4
PNHZ	Pukenui	3.50	50	P	Pn	22 56 02.6	+0.2
MOVZ	Moawhango	3.63	41	P	Pn	22 56 07.0	+2.8
WHVZ	Whangaehu Hut	3.65	38	P	Pn	22 56 07.2	+2.6
FWVZ	Far West T-bar	3.66	37	P	Pn	22 56 07.7	+2.9
BHHZ	Black Hill Sta	3.72	44	P	Pn	22 56 06.9	+1.4
NGZ	Ngauruhoe	3.75	37	P	Pn	22 56 09.3	+3.5
WKZ	Wanaka	3.75	224	P	Pn	22 56 06.2	+0.5
TWVZ	Taurewa	3.76	35	P	Pn	22 56 10.0	+4.0
WTVZ	West Tongariro	3.79	36	P	Pn	22 56 10.2	+3.8
KRVZ	Karewarewa	3.83	37	P	Pn	22 56 10.5	+3.5
KAHZ	Kahuranaki	3.97	54	P	Pn	22 56 09.2	+0.3
HHSZ	Highcliff Hill	3.98	202	P	Pn	22 56 08.5	-0.4
HIZ	Hauiti	4.04	25	P	Pn	22 56 13.0	+3.2
TUZ	Tuapeka	4.35	209	P	Pn	22 56 14.7	+0.7
TLZ	Tolley Road	4.44	30	P	Pn	22 56 19.1	+3.8
MLZ	Mavora Lakes	4.58	225	P	Pn	22 56 18.0	+0.7
TOZ	Tahuroa Road	4.96	27	P	Pn	22 56 25.1	+2.7

ISCJB ***04*** *22:57:14.0±0.3, 37°.48S±0°.03×74°.04W±0°.06, h10^{km}, mb4.5/35, MS3.9/10, Error ellipse: s-maj=6.3km s-min=4.6km az=3.7*

IDC ***04*** *22:57:14.2±0.7, 37°.43S×73°.99W, h0^{km}, mb4.4/10, mb1 4.5/12, mb1mx4.3/31, mbtmp4.4/12, ML4.0/2, MS3.8/11, Ms1 3.8/11, ms1mx3.6/29, Error ellipse: s-maj=26.4km s-min=14.0km az=85.0*

GUC ***04*** *22:57:16.1±0.6, 37°.53S×74°.08W, h21^{km}±11^{km}, ML4.8*

NEIC ***04*** *22:57:16.0±0.0, 37°.63S×74°.08W, h21^{km}, mb4.6/26, ML4.8(GUC), After GUC.*

NEIC Felt [IV] at Arauco, Concepcion, Coronel, Hualpen, Lebu, Lota and Talcahuano; [III] at Chiguayante, San Pedro and San Pedro de la Paz; [II] at Penco.

BJI ***04*** *22:57:17.5, 37°.60S×74°.10W, h21^{km}, Ms4.8/1, Ms7 4.7/1*

ISC 04 22:57:16.0±0.4, 37°.49S±0°.05×73°.99W±0°.07, h10^{km}, n90, σ1^{s}.45/87, mb4.7/35, MS3.9/10, 1C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CCSP	San Pedro de C	0.96	48	eP	Pg	22 57 33.5	-0.8
CCSP				iS	Sg	22 57 46.8	0.0
CCSP				IAML		22 57 54.4	
	comp=N,29µm,0.6s						
TMU	Temuco	1.66	139	eP	Pn	22 57 44.6	-0.5
TMU				iS	Sn	22 58 05.3	-1.1
TMU				IAML		22 58 17.5	
	comp=N,11µm,1.7s						

CCHI	Chillan	1.77	61	*e*P	Pn	22 57 46.6	0.0
CCHI				*i* S	Sn	22 58 09.9	+0.7
CCHI				IAML		22 58 21.9	
	comp=E,14µm,0.6s						
GO05	HualaæØ	2.98	35	*e*Pn	Pn	22 58 02.4	-1.0
GO05	HualaæØ	2.98	35	*e*P	Pn	22 58 03.0	-0.4
GO05				*i* S	Sg	22 58 52.3	+0.4
GO05				IAML		22 59 02.9	
	comp=E,5µm,1.3s						
PLCA	Paso Flores	4.20	141	Pn	Pn	22 58 21.1	+0.9
	comp=E,1.0nm,0.3s,baz=336,slow=11,SNR=37						
PLCA				Lg	Lg	22 59 31.0	
	comp=E,18nm,0.3s,baz=80,slow=23,SNR=4.7						
PLCA	Paso Flores	4.20	141	*e*Pn	Pn	22 58 20.3	+0.2
PLCA				Lg	Lg	22 59 31.0	
PEL	Peldehue	5.11	33	*e*Pn	Pn	22 58 31.2	-1.4
PEL	Peldehue	5.11	33	*e*P	Pn	22 58 31.0	-1.6
PEL				*i* S	Sg	22 59 55.5	-4.5
ROC1	El Roble	5.12	29	*e*Pn	Pn	22 58 31.5	-1.5
ROCH	El Roble	5.13	29	*e*P	Pn	22 58 31.3	-1.7
ROCH				*i* S	Sb	22 59 54.1	+6.5
GO04	Tololo Observa	7.77	21	*e*Pn	Pn	22 59 07.8	-1.5
LCO	Las Campanas	8.89	19	*e*Pn	Pn	22 59 22.9	-1.8
LCO				*e*Sn	Sn	23 00 57.7	-7.5
TRQA	Tornquist	9.53	97	*e*Pn	Pn	22 59 31.8	-1.4
TRQA				*e*Lg	Lg	23 02 22.1	
GO03	Copiap	10.36	19	*e*Pn	Pn	22 59 44.8	0.0
GO02	Mina Guanaco	12.85	18	*e*Pn	Pn	23 00 18.8	-0.2
PB01	IPOC Station P	16.85	15	*e*Pn	Pn	23 01 12.2	+0.1
	comp=E,62nm,1.2s						
CPUP	Villa Florida	17.97	57	P	Pn	23 01 25.8	-0.1
	comp=E,0.4nm,0.3s,baz=230,slow=10,SNR=17						
CPUP				LR	LR	23 08 14.3	
	comp=E,299nm,20.6s,baz=234,slow=37						
CPUP	Villa Florida	17.97	57	*e*Pn	Pn	23 01 24.5	-1.4
	comp=E,12nm,1.0s						
EFI	East Falkland	18.10	147	*e*Pn	Pn	23 01 27.5	+0.2
	comp=E,66nm,0.8s						
MNMC	Minye Minye	18.69	13	*e*P	P	23 01 35.2	+0.5
	comp=E,67nm,1.2s						
LPAZ	La Paz	21.75	15	P	P	23 02 08.3	0.0
	comp=E,13nm,1.0s,baz=192,slow=5.5,SNR=25						
LPAZ	La Paz	21.75	15	*e*P	P	23 02 08.0	-0.2
	comp=E,14nm,0.8s						
SIV	San Ignacio	24.27	32	P	P	23 02 32.0	-1.5
	comp=E,6.0nm,0.8s,baz=227,slow=12,SNR=26						
SPB	Sao Paulo	26.63	66	*e*P	P	23 02 54.5	-0.3
	comp=E,41nm,1.0s						
PMSA	Palmer Station	27.95	171	LR	LR	23 14 50.8	
	comp=E,375nm,18.4s,baz=354,slow=38						
SAML	Samuel	30.05	22	*e*P	P	23 03 24.8	-0.5
	comp=E,12nm,1.1s						
RPN	Rapa Nui	31.45	279	LR	LR	23 12 27.6	
	comp=E,333nm,20.4s,baz=48,slow=29						
OTAV	Otavalo	37.77	353	*e*P	P	23 04 33.6	+0.8
	comp=E,16nm,1.5s						
PTGA	Pitinga	38.80	23	*e*P	P	23 04 39.9	-1.1
	comp=E,14nm,1.1s						
PRAC	Prado	41.00	359	*e*P	P	23 05 00.8	+1.5
	comp=E,17nm,1.1s						
RUSC	La Rusia	43.17	1	*e*P	P	23 05 18.2	+0.7
	comp=E,5.6nm,1.1s						
SDV	Santo Domingo	46.24	5	P	P	23 05 41.0	-0.7
	comp=E,3.9nm,0.4s,baz=296,slow=8.7,SNR=2.6						
VNA3	Neumayer Olymp	46.77	156	P	P	23 05 43.5	-1.5
VNA1	Neumayer--Stat	47.13	156	P	P	23 05 48.9	+1.1
VNA2	Neumayer--Watz	47.45	156	P	P	23 05 49.2	-1.1
	baz=284,slow=9.1						
SNAA	Sanae	48.99	157	P	P	23 06 02.6	+0.3
SNAA	Sanae	48.99	157	P	P	23 06 02.2	-0.1
	comp=E,10nm,0.8s,baz=277,slow=6.4,SNR=28						
SNAA				LR	LR	23 26 10.3	
	comp=E,88nm,19.1s,baz=284,slow=35						
SNAA	Sanae	48.99	157	*e*P	P	23 06 02.5	+0.2
	comp=E,26nm,1.2s						
QSPA	South Pole Qui	52.75	180	P	P	23 06 31.4	+0.6
	comp=E,13nm,1.0s,baz=143,slow=3.1,SNR=26						
QSPA	South Pole Qui	52.75	180	*e*P	P	23 06 30.8	0.0
RKT	Rikitea	53.71	267	*e*LR	LR	23 22 07.2	
	comp=E,288nm,29.5s						
VNDA	Vanda	60.37	192	P	P	23 07 25.3	+0.6
	comp=E,0.9nm,1.1s,baz=151,slow=5.9,SNR=3.1						
SYO	Syowa Base	63.21	158⇑	*e*X	P	23 07 35.4	-8.5
TBI	Tubuai	65.02	259	*e*LR	LR	23 27 16.8	
	comp=E,164nm,29.2s						
PPT2	Papeete2	68.23	264	*e*S	S	23 17 14.6	-3.3
	comp=E,83nm,25.0s						
PPT2	Papeete2	68.23	264	*e*LR	LR	23 28 56.6	
	comp=E,181nm,25.0s						
LPIG	La Paz	70.15	325	LR	LR	23 32 21.6	
	comp=E,75nm,21.2s,baz=206,slow=30						
MAW	Mawson	70.28	164	P	P	23 08 28.9	0.0
	comp=E,1.9nm,0.8s,baz=220,slow=7.4,SNR=5.3						
MAW				LR	LR	23 39 41.7	
	comp=E,138nm,18.3s,baz=238,slow=36						
TXAR	Lajitas Array	72.06	333	P	P	23 08 40.1	-0.2
	comp=E,0.4nm,0.8s,baz=148,slow=7.4,SNR=4.4						
TXAR				LR	LR	23 36 04.6	
	comp=E,64nm,18.1s,baz=0.0,slow=32						
W50A	Signal Mountai	73.08	350	*e*P	P	23 08 46.4	+0.2
	comp=E,8.2nm,0.9s						
SWET	Sewanee	73.19	350	*e*P	P	23 08 47.1	+0.4
	comp=E,8.4nm,0.8s						
CPCT	Cooper Cave	73.23	351	*e*P	P	23 08 47.1	+0.1
	comp=E,8.7nm,1.3s						
V48A	Smith Brothers	73.83	349	*e*P	P	23 08 50.2	-0.3
	comp=E,7.7nm,0.7s						
WVT	Waverly	74.37	348	*e*P	P	23 08 53.5	-0.1
	comp=E,11nm,1.4s						
IP04	Greensprings	75.31	357	*e*P	P	23 08 59.2	+0.2
	comp=E,6.3nm,0.8s						
CASY	Casey	76.50	182	*e*P	P	23 09 05.1	-0.5
	comp=E,7.1nm,1.0s						
CCM	Cathedral Cave	76.84	346	*e*P	P	23 09 07.7	-0.1
	comp=E,5.8nm,0.8s						
LIC	Lamto	77.38	72	*e*P	P	23 09 10.8	-0.6
	comp=E,90nm,1.4s						
TIC	Toumodi	77.65	72	*e*P	P	23 09 12.6	-0.3
KIC	Kosan Boka	77.68	72	*e*P	P	23 09 13.0	-0.1
	comp=E,32nm,1.0s						
DBIC	Dimbokro	77.79	72	P	P	23 09 13.2	-0.5
	comp=E,14nm,1.0s,baz=228,slow=4.1,SNR=5.4						
ANMO	Albuquerque	78.13	333	LR	LR	23 35 24.4	
	comp=E,8.0nm,21.0s,baz=42,slow=29						
BOSA	Boshof	79.84	118	P	P	23 09 24.4	-0.6
	comp=E,8.6nm,1.0s,baz=237,slow=3.3,SNR=5.1						
BOSA				LR	LR	23 41 52.1	
	comp=E,59nm,18.4s,baz=216,slow=34						
SDCO	Great Sand Dun	80.32	335	*e*P	P	23 09 27.0	-0.4
	comp=E,1.4nm,0.9s						
SMCO	Snowmass	82.11	335	*e*P	P	23 09 38.0	+1.0
	comp=E,4.5nm,1.1s						
LBTB	Lobatse	82.26	115	*e*P	P	23 09 37.9	-0.1
	comp=E,16nm,0.9s						
ECSD	EROS Data Cent	83.41	344	*e*P	P	23 09 43.0	-0.2
	comp=E,4.1nm,0.9s						
P18A	Preston Nutter	83.66	333	*e*P	P	23 09 44.7	-0.2
	comp=E,3.5nm,1.0s						
DUG	Dugway, Tooele	85.12	331	*e*P	P	23 09 50.5	-1.6
	comp=E,2.6nm,0.9s						
BENR	Benton	85.41	326	*e*P	P	23 09 51.4	-2.3
HWUT	Hardware Ranch	85.88	333	*e*P	P	23 09 55.7	-0.2
	comp=E,4.0nm,1.0s						
PDAR	Pinedale Array	86.19	335	LR	LR	23 45 02.6	
	comp=E,57nm,18.0s,baz=154,slow=33						
TORD	Torodi Ar. Bea	86.87	71	P	P	23 09 58.5	-2.6
	comp=E,3.9nm,1.0s,baz=216,slow=5.5						
AFI	Afiamalu	87.70	254	LR	LR	23 39 49.0	
	comp=E,49nm,19.9s,baz=93,slow=29						
LSZ	Lusaka	90.19	109	*e*P	P	23 10 17.6	+0.5
	comp=E,3.1nm,0.7s						
GERES	GERESS Array B	115.71	47	PKP	PKPdf	23 15 57.3	-0.8
	comp=E,0.5nm,0.7s,baz=242,slow=2.1,SNR=4.5						
BRTR	Keskin Array B	124.86	64	PKP	PKPdf	23 16 15.7	-0.4
	comp=E,1.2nm,0.8s,baz=190,slow=4.9,SNR=8.0						
ARU	Arti	143.40	43	PKhKP	PKPpre	23 16 45.6	
	comp=E,1.6nm,0.5s,baz=251,slow=3.0,SNR=4.0						
AKTO	Aktyubinsk	143.74	53	PKhKP	PKPpre	23 16 47.6	
	comp=E,5.6nm,1.0s,baz=270,slow=1.3,SNR=9.5						
PSI	Prapat	144.87	168	PKP	PKPab	23 16 51.6	-1.3
	comp=E,8.4nm,0.7s,baz=180,slow=4.0,SNR=6.5						
BVAR	Borovoye Array	150.88	46	PKP	PKPdf	23 17 02.4	-0.1
	comp=E,0.7nm,0.7s,baz=323,slow=2.2,SNR=4.0						
BVAR				PKPbc	pPKPdf	23 17 08.5	+2.6
	comp=E,3.4nm,0.7s,baz=298,slow=3.1,SNR=19						
ASAJ	Asahikawa	151.69	295	PKPbc	PKPdf	23 17 10.1	+6.1
	comp=E,2.8nm,0.4s,baz=304,slow=32,SNR=2.7						
KURBB	Kurchatov Arra	156.45	47	PKP	PKPdf	23 17 10.2	-0.3
	comp=E,0.4nm,0.3s,baz=316,slow=2.6,SNR=3.0						
KURBB				PKPab	PKPab	23 17 38.4	-0.7
	comp=E,0.8nm,0.5s,baz=287,slow=4.6,SNR=5.6						
KSH	Kashi	156.46	76	*e*PKP	PKPdf	23 17 11.5	+0.4
KSH				PKS	PKSdf	23 20 43.8	-1.2
KSH				PP	PP	23 21 21.1	+2.9
KSH				SKS	SKSdf	23 24 16.6	-0.7
KSH				SKKS	SKKSac	23 28 06.7	-0.7
KURK	Kurchatov	156.47	47	PKP	PKPdf	23 17 10.2	-0.3
KURK				PKPab	PKPab	23 17 38.4	-0.8
ZALV	Zalesovo Beam	158.01	35	PKP	PKPdf	23 17 11.0	-1.3
	comp=E,1.5nm,0.3s,baz=270,slow=2.3,SNR=4.2						
ZALV				PKPab	PKPab	23 17 45.7	0.0
	comp=E,2.1nm,0.5s,baz=294,slow=5.8,SNR=6.6						
WMQ	Urumqi	164.74	60	*e*PKP	PKPdf	23 17 19.5	-0.4
WMQ				LR	LR		
	comp=E,85nm,17.9s						
WMQ				LR	LR		
	comp=E,90nm,27.7s						
WMQ				LR	LR		
	comp=E,120nm,21.9s						
NJ2	Nanjing	168.13	247	*e*PKP	PKPdf	23 17 21.2	-1.6
HHC	Hu-ho-hao-te	174.53	310	*e*PKP	PKPdf	23 17 27.4	+1.6

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*ISCJB **04** 23:13:40.2±0.5, 35°.78N±0°.05×70°.20E±0°.06, h100^{km}, mb3.7/7, Error ellipse: s-maj=8.1km s-min=5.6km az=140.5*

*IDC **04** 23:13:44.2±5.2, 36°.17N×69°.91E, h78^{km}±30^{km}, mb3.7/7, mb1 3.8/12, mb1mx3.4/66, mbtmp4.1/12, MS2.5/1, Ms1 2.5/1, ms1mx2.1/60, Error ellipse: s-maj=61.7km s-min=17.0km az=154.0*

ISC 04 23:13:42.0±0.8**, 35°.82N**±0°.09×**70°.28E**±0°.09**, h100**^{km}**, n34, σ1^{s}.09**/34**, mb3.8**/7**, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AML	Almayashu	6.84	22	P	Pn	23 15 20.5	+0.5
	SNR=24						
UCH	Uchtor	7.20	26	P	Pn	23 15 25.5	+0.6
	SNR=26						
KZA	Kyzart	7.35	30	P	Pn	23 15 27.4	+0.4
	SNR=14						
EKS2	Erkin-Say	7.35	21	P	Pn	23 15 27.1	+0.4
	SNR=14						
AAK	Ala-Archa	7.55	24	P	Pn	23 15 30.1	+0.6
	5.3nm,0.3s,baz=195,slow=9.2,SNR=29						
AAK				S	Sn	23 16 51.4	-2.0
	8.0nm,0.3s,baz=320,slow=23,SNR=10						
AAK				LR	LR	23 18 33.9	
	comp=Z,29nm,18.1s,baz=194,slow=39						
AAK	Ala-Archa	7.55	24	P	Pn	23 15 30.0	+0.6
	SNR=14						
KBK	Karagaybulak	7.73	26	P	Pn	23 15 32.5	+0.7
	SNR=13						
ULHL	Ulahol	7.92	34	P	Pn	23 15 36.2	+1.7
	SNR=14						
CHMS	Chumysh	7.96	24	P	Pn	23 15 35.3	+0.4
	SNR=15						
USP	Ospenovka	8.12	22	P	Pn	23 15 37.7	+0.7
	SNR=33						
TKM2	Tokmak 2	8.20	28	P	Pn	23 15 38.7	+0.5
	SNR=6.8						
GEYT	Alibeck	9.97	286	P	Pn	23 15 58.9	-3.4
	1.7nm,0.3s,baz=110,slow=13,SNR=20						
GEYT				S	Sn	23 17 44.5	-7.8
	2.0nm,0.3s,baz=183,slow=25,SNR=8.7						
PYUN	Piuthan	13.24	122	*e*P	Pn	23 16 44.2	-2.0
KOLN	Koldanda	13.87	122	*e*P	Pn	23 16 53.2	-1.2
MKAR	Makanchi Array	14.18	36	P	Pn	23 16 59.5	+1.3
	0.1nm,0.3s,baz=228,slow=15,SNR=12						
GKN	Gorkha	14.46	119	*e*P	Pn	23 17 00.7	-1.2
DMN	Daman	15.02	119	*e*P	Pn	23 17 08.4	-0.9
KKN	Kakani	15.04	118	*e*P	Pn	23 17 09.3	-0.1
	16nm,0.5s						
PKIN	Phulchoki	15.25	118	*e*P	Pn	23 17 11.9	-0.2
	9.1nm,0.4s						
GUN	Gumba	15.41	116	*e*P	Pn	23 17 14.5	+0.3
JIRN	Jiri	15.78	117	*e*P	Pn	23 17 18.9	+0.1
	28nm,0.4s						
KURBB	Kurchatov Arra	15.95	19	P	Pn	23 17 17.9	-2.6
	0.1nm,0.3s,baz=210,slow=11,SNR=7.2						
AKTO	Aktyubinsk	17.10	332	P	Pn	23 17 33.4	-1.2
	1.7nm,0.3s,baz=140,slow=15,SNR=21						
AKTO				S	Sn	23 20 29.6	-15
	0.3nm,0.3s,baz=292,slow=18,SNR=2.4						
ODAN	Odare	17.11	117	*e*P	P	23 17 36.7	+1.4
	9.7nm,0.5s						
BVAR	Borovoye Array	17.20	0	P	Pn	23 17 34.5	-1.4
	2.1nm,0.3s,baz=174,slow=11,SNR=20						
GNI	Garni	20.57	290	P	P	23 18 13.5	+0.7
	7.1nm,0.8s,baz=100,slow=18,SNR=5.5						
ZALV	Zalesovo Beam	20.77	25	P	P	23 18 16.1	+1.4
	7.5nm,0.4s,baz=223,slow=11,SNR=23						
ARU	Arti	22.10	343	P	P	23 18 29.6	+0.8
	1.7nm,0.4s,baz=148,slow=18,SNR=4.5						
BRTR	Keskin Array B	29.10	289	P	P	23 19 34.0	+0.7
	0.8nm,0.8s,baz=89,slow=8.1,SNR=4.3						
FINES	FINESS Array B	37.73	327	P	P	23 20 47.8	+0.2
	1.0nm,0.7s,baz=105,slow=11,SNR=5.9						
ARCES	ARCESS Array B	41.56	338	P	P	23 21 19.6	+0.4
	2.6nm,0.8s,baz=102,slow=8.8,SNR=5.4						
HFS	Hagfors	43.25	322	P	P	23 21 33.4	+0.3
	1.1nm,0.6s,baz=87,slow=8.8,SNR=5.0						
NB2	NORSAR Subarra	44.58	324	P	P	23 21 43.6	-0.2
	comp=Z,0.4nm,0.6s,baz=98,slow=8.6						
TORD	Torodi Ar. Bea	65.12	269	P	P	23 24 11.3	-1.1
	comp=Z,1.0nm,0.8s,baz=53,slow=5.6						

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*SJA **04** 23:28:04.7±0.6, 23°.32S×66°.94W, h206^{km}±22^{km}, ML3.6, MW3.5*

*NEIC **04** 23:28:04.8±0.9, 23°.31S×66°.87W, h179^{km}±9^{km}, mb4.0/6, Error ellipse: s-maj=14.2km s-min=8.6km az=95.0*

*ISCJB **04** 23:28:05.1±0.4, 23°.34S±0°.03×66°.97W±0°.04, h200^{km}, mb3.8/9, Error ellipse: s-maj=5.7km s-min=4.3km az=148.9*

*IDC **04** 23:28:06.7±2.2, 23°.23S×66°.70W, h193^{km}±21^{km}, mb3.7/5, mb1 3.6/9, mb1mx3.4/38, mbtmp4.0/9, MS4.0/2, Ms1 4.0/2, ms1mx3.0/38, Error ellipse: s-maj=30.4km s-min=15.4km az=93.0*

*GUC **04** 23:28:08.0±0.5, 23°.10S×67°.75W, h265^{km}±28^{km}, ML4.3*

ISC 04 23:28:06.1±0.6**, 23°.36S**±0°.05×**66°.96W**±0°.06**, h200**^{km}**, n34, σ1^{s}.86**/43**, mb3.8**/9**, 2C-2D, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB03	IPOC Station P	2.89	296	*e*P	Pn	23 28 54.9	+0.2
PB03				*i* S	Sn	23 29 30.4	-2.1
PB03				IAML		23 29 32.7	
	comp=E,921nm,0.2s						
PB05	IPOC Station P	3.03	279	*e*P	Pn	23 28 56.3	+0.1
PB05				*i* S	Sn	23 29 33.0	-2.4
PB05				IAML		23 29 33.9	
	comp=N,297nm,0.5s						
PB07	IPOC Station P	3.16	300⇑	*e*P	Pn	23 28 57.9	0.0
PB07				*i* S	Sn	23 29 35.6	-2.6
PB01	IPOC Station P	3.29	314	*e*P	Pn	23 28 59.5	+0.1
PB01				*i* S	Sn	23 29 39.1	-1.8
PB01				*i* S		23 29 39.4	
PB01				IAML		23 29 40.6	
	comp=N,299nm,0.5s						
PB10	IPOC Station P	3.31	267	*i* P	Pn	23 28 59.1	-0.3
PB10				*i* S	Sn	23 29 39.4	-1.7
PB10	IPOC Station P	3.31	267	*e*P	Pn	23 28 59.9	+0.4
PB10				*i* S	Sn	23 29 38.4	-2.7
PB10				IAML		23 29 41.6	
	comp=E,307nm,0.4s						
PB14	IPOC Station P	3.39	248	*i* P	Pn	23 29 00.8	+0.1
PB14				*i* S	Sn	23 29 42.0	-1.5
PB02	IPOC Station P	3.40	306⇑	*e*P	Pn	23 29 00.3	-0.3
PB02				*i* S	Sn	23 29 39.8	-3.4
PB02				IAML		23 29 44.5	
	comp=E,514nm,0.3s						
AHML	Horco Molle	3.71	157	*i* P	Pn	23 29 04.2	-0.2
PB08	IPOC Station P	3.80	327⇓	*e*P	Pn	23 29 06.8	+0.9
PB08			⇓	*i*S	Sn	23 29 51.7	-1.0
CYA	Choya	5.17	169	*i* P	Pn	23 29 22.5	-0.1
CYA				IAML		23 29 24.7	
	comp=Z,8.5nm,0.8s						
VCA	Vinchina	5.47	192	*i* P	Pn	23 29 27.3	+0.6
VCA				IAML		23 29 29.1	
	comp=Z,24nm,0.3s						
AGUA	GUANDACOL	6.25	192	*i* P	Pn	23 29 37.1	+0.3
LCO	Las Campanas	6.55	210	*e*Pn	Pn	23 29 38.6	-2.1
	comp=Z,24nm,0.3s						
LCO				*e*Sn	Sn	23 30 49.7	-6.1
APLL	PUNTA DE LOS L	7.02	177	*i* P	Pn	23 29 45.8	-0.8
APLL				IAML		23 29 46.7	
	comp=Z,26nm,0.3s						
LPAZ	La Paz	7.12	351	P	Pn	23 29 48.6	-0.1
	comp=Z,2.1nm,0.3s,baz=169,slow=5.8,SNR=42						
LPAZ				S	Sn	23 31 06.7	-3.2
	comp=Z,0.2nm,0.3s,baz=91,slow=25,SNR=4.2						
SIV	San Ignacio	9.19	38	P	Pn	23 30 12.1	-2.9
	comp=Z,4.9nm,0.3s,baz=267,slow=9.8,SNR=58						
SIV				S	Sn	23 31 46.5	-12
	baz=267,slow=14,SNR=2.0						
CPUP	Villa Florida	9.23	111	P	Pn	23 30 14.0	-1.4
	comp=Z,0.1nm,0.3s,baz=282,slow=9.3,SNR=3.0						
SAML	Samuel	14.78	15	*e*Pn	Pn	23 31 24.3	-1.5
	comp=Z,7.6nm,0.6s						
PLCA	Paso Flores	17.58	189	P	P	23 31 59.1	+1.7
	comp=Z,0.2nm,0.3s,baz=16,slow=14,SNR=5.0						
PTGA	Pitinga	23.50	18	P	P	23 32 57.3	-0.8
	comp=Z,4.5nm,0.5s,baz=207,slow=13,SNR=8.7						
SDV	Santo Domingo	32.25	353	LR	LR	23 48 30.0	
	comp=Z,392nm,21.0s,baz=242,slow=38						
SNAA	Sanae	59.94	161	P	P	23 37 52.5	+1.6
	comp=Z,1.4nm,0.7s,baz=294,slow=11,SNR=6.0						
MNTX	Cornudas Mount	65.95	325	*e*P	P	23 38 31.5	+0.5
	comp=Z,0.6nm,0.6s						
AMTX	Amarillo	66.64	329	*e*P	P	23 38 35.1	-0.2
	comp=Z,2.8nm,0.4s						
QSPA	South Pole Qui	66.84	180	P	P	23 38 38.5	+2.3
	comp=Z,2.3nm,0.5s,baz=152,slow=2.1,SNR=13						
ANMO	Albuquerque	69.04	326	*e*P	P	23 38 51.6	+1.1
	comp=Z,1.5nm,0.9s						
SDCO	Great Sand Dun	70.77	328	*e*P	P	23 39 02.6	+1.6
TORD	Torodi Ar. Bea	76.31	69	P	P	23 39 33.0	-0.5
	comp=Z,0.6nm,0.4s,baz=238,slow=6.2						
HLID	Hailey	79.58	327	*e*P	P	23 39 53.6	+2.6
	comp=Z,1.8nm,0.9s						
SFJD	Kangerlussuaq	90.92	6	LR	LR	00 23 41.5	
	comp=Z,44nm,18.8s,baz=94,slow=37						
YKA	Yellowknife Ar	93.54	340	P	P	23 40 58.9	+0.2
	comp=Z,0.4nm,0.5s,baz=133,slow=4.3,SNR=3.0						
WRA	Warramunga Arr	132.21	207	PKP	PKPdf	23 46 58.7	+1.8
	comp=Z,0.8nm,0.9s,baz=171,slow=2.3,SNR=3.3						
MKAR	Makanchi Array	146.01	39	PKPbc	PKPbc	23 47 22.7	+0.4
	comp=Z,1.1nm,0.6s,baz=310,slow=3.2,SNR=14						

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*BJI **04** 23:39:17.2, 6°.60S×105°.80E, h95^{km}, mb4.7/23, mB4.8/14*

*ISCJB **04** 23:39:19.2±0.4, 6°.75S±0°.06×105°.87E±0°.04, h130^{km}±2^{km}, mb4.2/34, Error ellipse: s-maj=11.3km s-min=3.8km az=32.2*

*NEIC **04** 23:39:20.7±1.2, 6°.58S×105°.89E, h118^{km}±9^{km}, mb4.4/11, Error ellipse: s-maj=16.5km s-min=7.7km az=48.0*

*DJA **04** 23:39:20.9±0.3, 7°S±4°×10°6E±°, h91^{km}±4^{km}, M4.7/19, mB5.6/1, mb4.9/4, MLv4.6/19, Mw(mB)5.0/1*

*IDC **04** 23:39:22.7±1.5, 6°.62S×105°.99E, h143^{km}±10^{km}, mb3.9/16, mb1 4.0/17, mb1mx3.8/62, mbtmp4.3/17, MS2.9/1, Ms1 2.9/1, ms1mx2.4/55, Error ellipse: s-maj=25.3km s-min=10.8km az=43.0*

ISC 04 23:39:19.5±0.7**, 6°.83S**±0°.07×**105°.81E**±0°.05**, h113**^{km}±5^{km}**, n181, σ1^{s}.31**/186**, mb4.4**/34**, 1D, Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CGJI	Cibinong	0.24	332	P	Pn	23 39 36.7	+1.3
CGJI				S	Sn	23 39 47.8	+0.4
SKJI	Sukabumi	0.77	103	P	Pn	23 39 39.2	+0.5
SKJI				S	Sn	23 39 51.5	-1.7
SBJI	Serang	0.77	25	P	Pn	23 39 39.3	+0.5
SBJI				S	Sn	23 39 53.4	+0.1
DBJI	Dramaga	0.97	74	P	Pn	23 39 41.4	+0.7
DBJI				S	Sn	23 39 57.2	+0.5
TNG	Tangerang	1.06	52	P	Pn	23 39 42.0	+0.5
TNG				P		23 39 42.4	
TNG				S	Sn	23 39 58.7	+0.5
TNG				S		23 39 58.8	
BLSI	Bandar Lampung	1.55	339	P	Pn	23 39 48.8	+1.6
BLSI				S	Sn	23 40 09.8	+1.6
LEM	Lembang	1.80	90	P	Pn	23 39 52.7	+2.5
	411nm,0.3s,baz=339,slow=4.5,SNR=224						
LEM				S	Sn	23 40 17.1	+3.4
	62nm,0.3s,baz=110,slow=22,SNR=3.8						
LEM				LR	LR	23 40 31.0	
	comp=Z,332nm,19.1s,baz=246,slow=42						
LEM	Lembang	1.80	90	P	Pn	23 39 52.3	+2.0
KASI	Kota Agung	1.84	315	P	Pn	23 39 52.6	+2.0
KASI				S	Sn	23 40 15.8	+1.5
CISI	Cisompet, Garu	2.12	110	P	Pn	23 39 54.6	+0.4
CISI				S	Sn	23 40 20.5	-0.3
CISI	Cisompet, Garu	2.12	110	*e*Pn	Pn	23 39 54.1	-0.1
JCJI	Jatiwangi	2.47	82	P	Pn	23 39 59.1	+0.5
JCJI				S	Sn	23 40 29.2	+0.5
LWLI	Liwa	2.50	316	P	Pn	23 40 00.7	+1.5
LWLI				S	Sn	23 40 33.1	+3.5
CMJI	Cimerak	2.79	110	P	Pn	23 40 03.3	+0.5
MDSI	Maura Dua	2.83	325	P	Pn	23 40 04.9	+1.5
MDSI				S	Sn	23 40 38.3	+1.1
SMRI	Semarang	4.61	93	P	Pn	23 40 28.9	+1.8
SMRI	Semarang	4.61	93	*e*Pn	Pn	23 40 26.8	-0.3
PPBI	Pangkal Pinang	4.65	4	P	Pn	23 40 29.6	+2.0
UGM	Wanagama	4.80	103	P	Pn	23 40 30.6	+0.9
UGM	Wanagama	4.80	103	*e*Pn	Pn	23 40 29.4	-0.3
MASI	Maura Aman, Be	5.10	316	P	Pn	23 40 35.7	+1.9
WOJI	Wonogiri, Jawa	5.17	102	P	Pn	23 40 35.4	+0.7
PCJI	Pacitan	5.50	105	P	Pn	23 40 40.2	+1.1
PWJI	Pagerwojo	6.07	102	P	Pn	23 40 48.1	+1.3
KRJI	Kerinci	6.39	317	P	Pn	23 40 52.7	+1.3
PPSI	Pulau Pagai	7.05	305	P	Pn	23 40 59.6	-0.5
JAGI	Jajag, Banyuwa	8.43	102	*e*Pn	Pn	23 41 19.6	+0.7
GSI	Gunungsitoli	11.52	314	*e*Pn	Pn	23 41 56.8	-3.8
PSI	Prapat	11.78	324	LR	LR	23 46 22.5	
	comp=Z,68nm,21.5s,baz=90,slow=36						
BATI	Baumata	17.97	102	P	P	23 43 21.3	0.0
	3.7nm,0.3s,baz=222,slow=16,SNR=2.4						
BATI				S	S	23 46 39.6	-2.5
	2.9nm,0.3s,baz=70,slow=12,SNR=1.9						
SOEI	Soe	18.50	100	*e*P	P	23 43 27.7	+0.5
	47nm,0.8s						
SOEI				*e*S	S	23 46 53.7	+1.0
FITZ	Fitzroy Crossi	22.34	122	P	P	23 44 25.0	+17
	3.6nm,0.8s,baz=302,slow=13,SNR=9.6						
FITZ				S	S	23 48 12.3	+6.1
	4.1nm,1.0s,baz=28,slow=18,SNR=1.8						
CMAR	Chiang Mai Arr	26.02	345	P	P	23 44 40.3	-1.8
	2.1nm,0.7s,baz=179,slow=9.0,SNR=13						
H01W3	Cape Leeuwin H	28.96	166	T	T	00 15 06.6	
	baz=344,slow=76,SNR=201						
H01W1	Cape Leeuwin H	28.97	166	T	T	00 15 06.6	
	baz=344,slow=76,SNR=211						
H01W2	Cape Leeuwin H	28.97	166	T	T	00 15 07.1	
	baz=344,slow=76,SNR=158						
WRA	Warramunga Arr	30.60	118	P	P	23 45 22.4	-0.6
	2.7nm,0.7s,baz=290,slow=10,SNR=6.7						
WRAB	Tennant Creek	30.60	118	*e*P	P	23 45 24.2	+1.2
	3.3nm,0.8s						
WB2	Warramunga Arr	30.61	118	*e*P	P	23 45 23.7	+0.6
ASAR	Alice Springs	31.75	125	P	P	23 45 33.7	+0.5
	0.6nm,0.8s,baz=295,slow=7.5,SNR=5.1						
KMI	Kunming	31.90	355	P	P	23 45 36.0	+1.5
KMI				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KMI				pmax	pmax		
	comp=Z,74nm,4.3s						
H08S2	Diego Garcia H	33.05	266	T	T	00 20 11.8	
	baz=90,slow=75,SNR=31						
H08S3	Diego Garcia H	33.06	267	T	T	00 20 12.5	
	baz=90,slow=75,SNR=31						
H08S1	Diego Carcia H	33.07	266	T	T	00 20 14.0	
	baz=90,slow=75,SNR=35						
GYA	Guiyang	33.10	1	*e*P	P	23 45 45.8	+0.9
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
LSA	Lhasa	38.95	340	*e*P	P	23 46 34.3	-0.8
	6.4nm,0.4s						
NJ2	Nanjing	40.62	17	*e*P	P	23 46 50.2	+1.9
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PMG	Port Moresby	41.00	96	*e*P	P	23 46 52.3	+0.5
STKA	Stephens Creek	41.64	132	P	P	23 46 56.1	-0.7
	3.3nm,0.6s,baz=306,slow=7.5,SNR=12						

STKA	**Stephens Creek**	41.64	132	*e*P	P	23 46 59.0	+2.2
	0.9nm,0.6s						
GTA	**Gaotai**	46.34	354	⇓P	P	23 47 34.3	0.0
GTA				pP	pP	23 47 57.0	-3.7
GTA				sP	sP	23 48 08.7	-4.7
GTA				pmax	pmax		
	comp=Z,11nm,1.1s						
HHC	**Hu-ho-hao-te**	47.74	6	*e*P	P	23 47 46.6	+1.5
HHC				sP	sP	23 48 19.9	-4.4
HHC				S	S	23 54 38.6	+5.7
HHC				pmax	pmax		
	comp=Z,21nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,5.2s						
HHC				LR	LR		
	comp=N,130nm,13.7s						
HHC				LR	LR		
	comp=E,95nm,12.0s						
HHC				LR	LR		
	comp=Z,65nm,14.3s						
KSAR	**Wonju Array Be**	48.63	23	P	P	23 47 50.8	-1.1
KSRS	**Korea Array**	48.66	24	P	P	23 47 50.8	-1.3
	2.5nm,0.6s,baz=216,slow=7.6,SNR=12						
KS01	**Wonju Array Si**	48.66	23	*e*P	P	23 47 51.0	-1.2
MJAR	**Matsushiro Arr**	52.76	33	P	P	23 48 20.4	-2.5
	1.4nm,0.8s,baz=219,slow=9.4,SNR=4.4						
WMQ	**Urumqi**	53.01	344	P	P	23 48 26.3	+1.6
WMQ				pmax	pmax		
	comp=Z,17nm,1.3s						
WMQ				LR	LR		
	comp=N,120nm,24.1s						
WMQ				LR	LR		
	comp=E,81nm,23.1s						
WMQ				LR	LR		
	comp=Z,110nm,17.9s						
CN2	**Changchun**	53.44	18	*e*P	P	23 48 26.1	-1.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KSH	**Kashi**	53.74	331	*e*P	P	23 48 29.9	-0.3
KSH				PcP	PcP	23 49 35.3	+0.4
KSH				PP	PP	23 50 34.0	+1.6
KSH				PcS	PcS	23 53 33.7	-0.6
KSH				S	S	23 55 51.2	-4.8
KSH				pmax	pmax		
	comp=Z,110nm,5.9s						
SONM	**Songino Array**	54.43	0	P	P	23 48 33.8	-1.3
	1.9nm,0.5s,baz=178,slow=6.4,SNR=15						
SONM				PcP	PcP	23 49 36.7	-0.6
	1.4nm,0.8s,baz=175,slow=3.4,SNR=4.3						
SONA1	**Songino Array**	54.44	0	*e*P	P	23 48 34.7	-0.4
ULN	**Ulaanbaatar**	54.47	1	*e*P	P	23 48 34.4	-0.9
	3.0nm,0.8s						
USRK	**Ussuriysk Ar.**	56.02	23	P	P	23 48 43.7	-2.6
	3.0nm,0.7s,baz=194,slow=5.3						
HIA	**Hailar**	57.17	11	*e*P	P	23 48 53.7	-0.8
MK01	**Makanchi Array**	57.31	341	*e*P	P	23 48 54.2	-1.3
MK31	**Makanchi Array**	57.33	341	*e*P	P	23 48 54.8	-0.9
MKAR	**Makanchi Array**	57.33	341	P	P	23 48 54.8	-0.9
	5.2nm,0.5s,baz=150,slow=8.8,SNR=84						
ASAJ	**Asahikawa**	60.60	30	P	P	23 49 16.4	-1.8
	1.8nm,0.3s,baz=221,slow=19,SNR=3.9						
KURBB	**Kurchatov Arra**	61.89	341	P	P	23 49 26.1	-0.7
	2.7nm,0.6s,baz=151,slow=6.2,SNR=27						
KURK	**Kurchatov**	61.94	341	*e*P	P	23 49 26.2	-1.0
GEYT	**Alibeck**	62.85	319	P	P	23 49 33.6	0.0
	2.7nm,0.8s,baz=120,slow=7.5,SNR=7.0						
GYA0B	**ALIBECK ARRAY**	62.85	319	*e*P	P	23 49 34.2	+0.7
	6.1nm,0.9s						
ZAA0	**Zalesovo Array**	63.08	346	*e*P	P	23 49 33.0	-1.6
	3.9nm,1.0s						
ZALV	**Zalesovo Beam**	63.08	346	P	P	23 49 32.6	-2.0
	2.2nm,0.3s,baz=157,slow=5.7,SNR=9.2						
BVAR	**Borovoye Array**	66.75	338	P	P	23 49 58.0	-0.5
	1.7nm,0.5s,baz=147,slow=8.6,SNR=15						
BRVK	**Borovoye**	66.82	338	*e*P	P	23 49 58.1	-0.8
	5.9nm,0.6s						
KMBO	**Kilima Mbogo**	68.57	271	P	P	23 50 09.3	-1.8
	0.7nm,0.3s,baz=124,slow=18,SNR=3.6						
ABKAR	**Akbulak array**	68.66	330	*e*P	P	23 50 10.6	0.0
AKTO	**Aktyubinsk**	70.38	330	P	P	23 50 20.8	-0.3
	1.6nm,0.6s,baz=105,slow=7.0,SNR=6.0						
ARU	**Arti**	73.96	335	*e*P	P	23 50 42.5	+0.2
	6.5nm,0.8s						
LSZ	**Lusaka**	76.33	256	*e*P	P	23 50 59.5	+2.6
	2.2nm,0.7s						
TIXI	**Tiksi**	79.78	7	*e*P	P	23 51 12.5	-2.1
	4.3nm,0.6s						
ARCES	**ARCESS Array B**	92.96	340	P	P	23 52 19.2	-0.3
	1.7nm,0.8s,baz=92,slow=5.8,SNR=6.4						
R38A	**Fenwick Farm,**	144.03	27	P	PKPab	23 58 39.3	-0.5
	baz=325						
Q40A	**Laux Farm, Aux**	144.14	24	P	PKPab	23 58 40.1	0.0
	baz=329						
WMOK	**Wichita Mounta**	144.16	36	P	PKPab	23 58 40.4	0.0
	baz=315						
WMOK	**Wichita Mounta**	144.16	36	*e*PKPdf	PKPbc	23 58 40.9	0.0
N46A	**Monticello**	144.28	16	P	PKPab	23 58 40.7	+0.1
	baz=338						
R39A	**Chumby, Stover**	144.31	26	P	PKPab	23 58 40.8	0.0
	baz=327,SNR=5.5						
TX31	**Lajitas Ar. Si**	144.33	47	*e*PKPdf	PKPdf	23 58 43.1	0.0
TXAR	**Lajitas Array**	144.33	47	PKP	PKPbc	23 58 42.8	+1.0
	1.8nm,0.7s,baz=278,slow=0.9,SNR=23						
S38A	**Stockton**	144.49	27	P	PKPab	23 58 41.1	-0.5
	baz=325						
SFIN	**Lafayette**	144.65	17	P	PKPab	23 58 41.9	-0.1
	baz=338						
SFIN	**Lafayette**	144.65	17	*e*PKPdf	PKPbc	23 58 42.4	+0.2
R40A	**Maddies Statio**	144.66	25	P	PKPab	23 58 42.0	-0.1
	baz=328,SNR=9.8						
R40A	**Maddies Statio**	144.66	25	*e*PKPdf	PKPab	23 58 42.0	-0.1
S39A	**Bolivar**	144.70	27	P	PKPab	23 58 42.4	0.0
	baz=326						
S39A	**Bolivar**	144.70	27	*e*PKPdf	PKPbc	23 58 42.5	0.0
T38A	**Diamond**	144.79	28	P	PKPab	23 58 41.9	-0.8
	baz=324,SNR=6.5						
P44A	**Sand Creek, Wi**	145.00	20	P	PKPab	23 58 43.1	-0.3
	baz=334						
R41A	**Rosebud**	145.02	24	P	PKPab	23 58 43.0	-0.5
	baz=329,SNR=6.5						
S40A	**Lebanon**	145.14	26	P	PKPab	23 58 43.2	-0.8
	baz=327,SNR=8.1						
T39A	**Clever**	145.22	27	P	PKPbc	23 58 43.8	-0.3
	baz=325,SNR=9.1						
P45A	**Graceland, Par**	145.23	19	P	PKPbc	23 58 43.9	-0.2
	baz=336						
R42A	**Luebbering**	145.26	23	P	PKPbc	23 58 43.9	-0.4
	baz=330,SNR=8.7						
CCM	**Cathedral Cave**	145.28	24	P	PKPbc	23 58 43.6	-0.6
	baz=329						
CCM	**Cathedral Cave**	145.28	24	*e*PKPbc	PKPdf	23 58 45.2	+0.8
S41A	**Jillco Farms,**	145.47	25	P	PKPbc	23 58 44.4	-0.5
	baz=328,SNR=10.0						
T40A	**Mansfield**	145.50	26	P	PKPbc	23 58 44.3	-0.7
	baz=327,SNR=15						
HHAR	**Hobbs**	145.56	29	*e*PKPbc	PKPab	23 58 45.7	+0.1
R43A	**Red Bud**	145.60	22	P	PKPdf	23 58 44.6	-0.3
	baz=332,SNR=8.1						
FVM	**French Village**	145.66	23	*e*PKPdf	PKPab	23 58 46.2	+0.2
Q45A	**Warren Harvey,**	145.67	20	P	PKPdf	23 58 44.8	-0.2
	baz=335						
U39A	**Green Forest**	145.70	28	P	PKPdf	23 58 45.2	0.0
	baz=325,SNR=9.9						
S42A	**Caledonia**	145.70	24	P	PKPdf	23 58 45.1	0.0
	baz=330,SNR=15						
T41A	**Mountain View**	145.92	26	P	PKPbc	23 58 46.4	0.0
	baz=328,SNR=9.6						
R44A	**Waltonville**	145.94	21	P	PKPdf	23 58 45.5	0.0
	baz=333						
U40A	**Yellville**	146.01	28	P	PKPbc	23 58 46.6	0.0
	baz=326,SNR=28						
V39A	**Pettigrew**	146.06	29	P	PKPbc	23 58 46.7	-0.1
	baz=324,SNR=9.5						
S43A	**Fulton Ridge,**	146.16	23	P	PKPdf	23 58 45.5	-0.4
	baz=331						
SSPA	**Standing Stone**	146.17	5	*e*PKPbc	PKPbc	23 58 47.1	+0.2
R45A	**Skylar, Fairfi**	146.18	20	P	PKPbc	23 58 47.2	+0.2
	baz=334						
Q47A	**Bedord North L**	146.18	17	P	PKPdf	23 58 46.6	+0.8
	baz=338						
T42A	**Van Buren**	146.22	25	P	PKPdf	23 58 46.5	+0.5
	baz=329,SNR=17						
T42A	**Van Buren**	146.22	25	*e*PKPdf	PKPdf	23 58 46.5	+0.5
P50A	**Jamestown**	146.24	13	P	PKPdf	23 58 46.7	+0.7
	baz=343						
SIUC	**Southern Illin**	146.36	22	*e*PKPdf	PKPab	23 58 48.7	+0.2
S44A	**Carbondale**	146.36	22	P	PKPbc	23 58 48.0	+0.4
	baz=332						
JCT	**Junction City**	146.37	42	P	PKPbc	23 58 47.9	0.0
	baz=310						
JCT	**Junction City**	146.37	42	*e*PKPbc	PKPab	23 58 48.8	-0.1
U41A	**Viola**	146.44	26	P	PKPbc	23 58 48.0	+0.1
	baz=327,SNR=10.0						
O56A	**Blue Knob Stat**	146.47	6	P	PKPdf	23 58 46.8	+0.4
	baz=352						
O56A	**Blue Knob Stat**	146.47	6	*e*PKPdf	PKPdf	23 58 46.9	+0.5
V40A	**Witts Springs**	146.48	28	P	PKPbc	23 58 47.9	-0.2
	baz=325						
V40A	**Witts Springs**	146.48	28	*e*PKPdf	PKPbc	23 58 48.2	+0.2
T43A	**Greenville**	146.50	24	P	PKPdf	23 58 47.4	+1.0
	baz=330						
R46A	**Gibon Southern**	146.50	19	P	PKPbc	23 58 47.9	-0.1
	baz=336						
S45A	**Carrier Mills**	146.62	21	P	PKPbc	23 58 47.8	-0.5
	baz=334						
U42A	**Revenden**	146.73	26	P	PKPbc	23 58 48.4	-0.3
	baz=328,SNR=10						
R47A	**Wooly Knot Far**	146.74	18	P	PKPbc	23 58 48.2	-0.5
	baz=337						
V41A	**Mountainview**	146.80	27	P	PKPbc	23 58 49.7	+0.7
	baz=326,SNR=12						
W40A	**Ferguson Farm,**	146.86	29	P	PKPbc	23 58 49.2	+0.1
	baz=324,SNR=5.8						
W40A	**Ferguson Farm,**	146.86	29	*e*PKPbc	PKPab	23 58 50.7	+0.1
WCI	**Wyandotte Cave**	146.87	18	P	PKPbc	23 58 49.8	+0.7
	baz=338						
WCI	**Wyandotte Cave**	146.87	18	*e*PKPbc	PKPbc	23 58 49.8	+0.7
X39A	**Fountain Ranch**	146.88	31	P	PKPbc	23 58 48.8	-0.4
	baz=322,SNR=8.6						
MVL	**Millersville**	146.91	3	*e*PKPdf	PKPdf	23 58 45.1	-1.9
S46A	**Don Dixon Farm**	146.91	20	P	PKPbc	23 58 49.5	+0.3
	baz=335						
V42A	**Cord**	147.13	26	P	PKPbc	23 58 50.2	+0.3
	baz=327,SNR=7.3						
MIAR	**Mount Ida**	147.13	30	P	PKPbc	23 58 49.6	-0.2
	baz=323,SNR=12						
MIAR	**Mount Ida**	147.13	30	*e*PKPbc	PKPbc	23 58 49.8	0.0
MIAR				*e*PKPab	PKPab	23 58 51.9	+0.2
WHAR	**Wooly Hollow**	147.15	28	*e*PKPbc	PKPbc	23 58 50.9	+0.9
W41B	**Gary Mavity, V**	147.26	28	P	PKPab	23 58 51.7	-0.4
	baz=326						
T46A	**Princeton**	147.43	21	P	PKPbc	23 58 51.1	+0.4
	baz=334						
S48A	**Wiedeman Farm,**	147.47	18	P	PKPbc	23 58 50.9	+0.2
	baz=338						
T47A	**Sharon Grove**	147.75	20	P	PKPbc	23 58 50.7	-0.8
	baz=336						
T47A	**Sharon Grove**	147.75	20	*e*PKPbc	PKPbc	23 58 52.5	+1.1
S52A	**Salyersville**	148.24	13	P	PKPbc	23 58 54.2	+1.4
	baz=343						
WVT	**Waverly**	148.27	21	P	PKPbc	23 58 53.0	+0.1
	baz=334						
WVT	**Waverly**	148.27	21	*e*PKPbc	PKPbc	23 58 52.9	0.0
U48A	**Cassie Pea, Po**	148.37	19	P	PKPbc	23 58 53.5	+0.3
	baz=336						
V46A	**Holladay**	148.46	22	P	PKPbc	23 58 53.1	-0.3
	baz=333						
U49A	**Red Boiling Sp**	148.61	18	P	PKPbc	23 58 53.6	-0.1
	baz=338						
V47A	**Nunnelly**	148.65	21	P	PKPbc	23 58 54.7	+0.8
	baz=334						
V48A	**Smith Brothers**	148.98	20	P	PKPbc	23 58 56.4	+1.7
	baz=335						
V48A	**Smith Brothers**	148.98	20	*e*PKPbc	PKPab	23 58 57.1	-1.9
W47A	**Westpoint**	149.14	22	P	PKPbc	23 58 55.1	-0.1
	baz=334						
V49A	**McMinnville**	149.26	19	P	PKPbc	23 58 55.4	-0.1
	baz=337						
W48A	**Pulaski**	149.48	21	P	PKPab	23 58 59.0	-2.1
	baz=335						
V50A	**Pikevile**	149.60	18	P	PKPbc	23 58 57.1	+0.8
	baz=338						
W49A	**Belvidere**	149.73	20	P	PKPbc	23 58 56.3	-0.3
	baz=336						
Y46A	**Houston**	149.85	25	P	PKPbc	23 58 56.3	-0.7
	baz=330						
V52A	**Sevierville**	149.86	15	P	PKPbc	23 58 56.7	-0.2
	baz=341						
V52A	**Sevierville**	149.86	15	*e*PKPbc	PKPbc	23 58 57.3	+0.4
W50A	**Signal Mountai**	149.97	18	P	PKPbc	23 58 57.0	-0.2
	baz=338						
X48A	**Hartselle**	150.06	22	P	PKPbc	23 58 58.0	+0.6
	baz=334						
X49A	**Woodville**	150.26	20	P	PKPbc	23 58 56.6	-1.3
	baz=335						
VBMS	**Vicksburg**	150.51	29	P	PKPbc	23 58 57.1	-1.4
	baz=326						
W53A	**Cullowhee**	150.61	15	P	PKPbc	23 58 58.8	-0.1
	baz=342						
Y49A	**Blount Mountai**	150.82	21	P	PKPbc	23 58 58.0	-1.2
	baz=335						
Y49A	**Blount Mountai**	150.82	21	*e*PKPbc	PKPbc	23 59 00.4	+1.1

ISK ***04*** *23:46:28.7, 34°.65N×26°.61E, h17^{km}, ML5.0/29*

BJI ***04*** *23:46:30.6, 34°.75N×26°.26E, h38^{km}, mb4.9/44, mB5.0/33, Ms4.7/13, Ms7 4.4/7*

GII ***04*** *23:46:33.1±0.4, 34°.95N×26°.71E, h60^{km}, mb4.6/4, MD4.6/4*

PDG ***04*** *23:46:33.3±0.2, 34°.57N×25°.68E, h68^{km}±7^{km}, ML4.9/11, Error ellipse: s-maj=1.2km s-min=1.8km az=0.0*

NIC ***04*** *23:46:34.7±0.1, 34°.93N×26°.83E, h80^{km}, mb4.9, ML4.6*

ISCJB ***04*** *23:46:34.6±0.2, 34°.98N±0°.01×26°.70E±0°.01, h52^{km}±1^{km}, mb4.8/119, MS3.9/42, Error ellipse: s-maj=2.5km s-min=1.5km az=10.3*

MOS ***04*** *23:46:36.7±1.1, 35°.15N×26°.58E, h65^{km}, mb5.0/54, Error ellipse: s-maj=5.2km s-min=2.8km az=93.7*

ATH ***04*** *23:46:36.7, 35°.09N×26°.65E, h61^{km}±2^{km}, ML4.6/20, Error ellipse: s-maj=3.0km s-min=1.0km az=156.0*

DDA ***04*** *23:46:38.0, 35°.16N×27°.00E, h34^{km}, Ml5.0*

THE ***04*** *23:46:38.8, 35°.08N×26°.65E, h52^{km}±2^{km}, ML4.6/16, Error ellipse: s-maj=2.7km s-min=0.8km az=167.0*

NEIC ***04*** *23:46:38.8±0.0, 35°.08N×26°.65E, h52^{km}, mb4.8/60, ML4.6(THE), After THE.*

CSEM ***04*** *23:46:38.1±0.1, 35°.14N×26°.66E, h67^{km}, mb4.8/56, Ms3.8, Mw4.7, Error ellipse: s-maj=3.1km s-min=1.9km az=1.0*

IDC ***04*** *23:46:38.2±1.4, 35°.04N×26°.57E, h70^{km}±13^{km}, mb4.4/27, mb1 4.5/38, mb1mx4.4/60, mbtmp4.7/38, MS3.8/46, Ms1 3.8/46, ms1mx3.7/66, Error ellipse: s-maj=12.5km s-min=9.3km az=169.0*

GCMT ***04*** *23:46:38.8±0.3, 34°.87N×26°.73E, h32^{km}±1^{km}, MW5.0/91, Moment Tensor Solution. s31,c34; s91,c134; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.38±.20; $M_{\theta\theta}$3.78±.12; $M_{\phi\phi}$-3.40±.14; $M_{r\theta}$1.15±.19; $M_{\theta\phi}$0.59±.11; $M_{\phi r}$0.84±.19; Best double couple: $M_0$3.89500×10^{16} NP1:ϕ_s41.00000°, δ89.00000°, λ159.00000°. NP2: ϕ_s131.00000°, δ69.00000°, λ1.00000°. Principal axes: T 4.1590, Plg15.0000°, Azm354.0000°; N -0.5260, Plg69.0000°, Azm218.0000°; P -3.6310, Plg14.0000°, Azm88.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

HLW ***04*** *23:46:39.1, 34°.59N×27°.12E, h23^{km}±31^{km}, Md4.4*

ISC 04 23:46:36.9±0.4**, 35°.07N**±0°.03×**26°.64E**±0°.02**, h56**^{km}±3^{km}**, h55**^{km}**:pP-P, n1262,** σ**1**^{s}**76**/1353**, mb4.8**/136**, MS4.0**/42**, 59C-39D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZKR	**Zakros**	0.35	278	P	Pn	23 46 46.2	-0.8
ZKR				S	Sn	23 46 54.4	+0.1
ZKR				AML	AML	23 46 57.2	
ZKR				AML	AML	23 46 58.1	
ZKR	**Zakros**	0.35	278	P	Pn	23 46 46.9	-0.1
ZKR				S	Sn	23 46 55.1	+0.9
ZKR	**Zakros**	0.35	278	P	Pn	23 46 46.9	-0.1
ZKR				S	Sn	23 46 55.1	+0.9
KARP	**Karpathos**	0.64	42	PG	Pn	23 46 49.9	-0.4
KARP				SG	Sn	23 47 02.9	+2.9
KARP	**Karpathos**	0.64	42	P	Pn	23 46 51.2	+0.9
KARP				S	Sn	23 47 02.3	+2.4
KARP				AML	AML	23 47 04.3	
KARP				AML	AML	23 47 06.1	
KARP	**Karpathos**	0.64	42	*e*Pn	Pn	23 46 51.0	+0.8
KARP	**Karpathos**	0.64	42	P	Pn	23 46 51.1	+0.8
KARP				S	Sn	23 47 02.2	+2.2
KARP	**Karpathos**	0.64	42	*e*Pg	Pn	23 46 49.9	-0.4
KARP	**Karpathos**	0.64	42	*e*Pn	Pn	23 46 51.0	+0.8
KARP				S	Sn	23 47 01.5	+1.5
KARP				*e*Sg		23 47 02.9	
NPS	**Neapolis**	0.86	283	P	Pn	23 46 55.2	+2.2
NPS				S	Sn	23 47 07.5	+2.8
NPS				AML	AML	23 47 15.3	
	comp=N,74910µm,1.1s						
NPS				AML	AML	23 47 16.7	
	comp=E,71537µm,0.6s						
NPS	**Neapolis**	0.86	283	P	Pn	23 46 54.4	+1.4
NPS				S	Sn	23 47 06.8	+2.0
NPS	**Neapolis**	0.86	283	P	Pn	23 46 54.4	+1.4
NPS				S	Sn	23 47 06.8	+2.0
LAST	**Lasithi**	0.95	276	P	Pn	23 46 55.8	+1.6
LAST				AML	AML	23 47 23.9	
	comp=E,52366µm,0.9s						
LAST				AML	AML	23 47 28.4	
	comp=N,39786µm,0.9s						
LAST	**Lasithi**	0.95	276	P	Pn	23 46 55.5	+1.3
LAST	**Lasithi**	0.95	276	P	Pn	23 46 55.5	+1.3
IACM	**Heraklion**	1.30	281	P	Pn	23 47 01.6	+2.8
IACM	**Heraklion**	1.30	281	P	Pn	23 47 01.1	+2.3
IACM	**Heraklion**	1.30	281	P	Pn	23 47 01.1	+2.3
KSTL	**Kastelli Herak**	1.30	281	P	Pn	23 46 57.3	-1.5
IDI	**Anoyia**	1.45	279	P	Pn	23 47 02.7	+1.9
	comp=N,97nm,0.3s,baz=51,slow=3.1,SNR=575						
IDI				S	Sn	23 47 20.3	+1.5
	comp=N,384nm,0.3s,baz=126,slow=20,SNR=7.0						
IDI	**Anoyia**	1.45	279	⇓*i*P	Pn	23 47 02.7	+1.9
IDI	**Anoyia**	1.45	279	S	Sn	23 47 18.8	0.0
ANAF	**Anafi Island**	1.47	332	P	Pn	23 47 02.2	+1.2
ANAF				AML	AML	23 47 35.5	
	comp=N,79281µm,0.4s						
ANAF				AML	AML	23 47 35.5	
	comp=E,42864µm,0.8s						
ANAF	**Anafi Island**	1.47	332	P	Pn	23 47 02.0	+0.9
ANAF	**Anafi Island**	1.47	332	P	Pn	23 47 02.0	+0.9
SIVA	**Sivas**	1.50	269	P	Pn	23 47 03.1	+1.6
SIVA				AML	AML	23 47 43.3	
	comp=E,21863µm,0.6s						
SIVA				AML	AML	23 47 48.5	
	comp=N,41724µm,0.9s						
SIVA	**Sivas**	1.50	269	P	Pn	23 47 03.0	+1.6
SIVA	**Sivas**	1.50	269	P	Pn	23 47 03.0	+1.6
TMBK	**Timbaki Herakl**	1.53	271	P	Pn	23 47 03.8	+1.9
TMBK	**Timbaki Herakl**	1.53	271	P	Pn	23 47 03.8	+1.9
NISR	**Nisiros**	1.59	14	P	Pn	23 47 03.2	+0.4
NISR	**Nisiros**	1.59	14	P	Pn	23 47 03.5	+0.8
NISR	**Nisiros**	1.59	14	P	Pn	23 47 03.5	+0.8
SANT	**Santorini**	1.62	324	PN	Pn	23 47 02.4	-0.7
SANT	**Santorini**	1.62	324	P	Pn	23 47 03.9	+0.8
SANT				AML	AML	23 47 36.1	
	comp=N,11084µm,1.0s						
SANT				AML	AML	23 47 40.3	
	comp=E,44205µm,0.9s						
SANT	**Santorini**	1.62	324	⇓*i*P	Pn	23 47 03.5	+0.4
SANT	**Santorini**	1.62	324	*e*Pn	Pn	23 47 04.0	+0.8
SANT	**Santorini**	1.62	324	P	Pn	23 47 03.9	+0.8
SANT				S	Sn	23 47 24.4	+1.5
SANT	**Santorini**	1.62	324	*e*Pn	Pn	23 47 04.0	+0.8
SANT				S	Sn	23 47 24.4	+1.5
THT1	**Athinios (Pele**	1.64	324	P	Pn	23 47 03.1	-0.3
THT1				AML	AML	23 47 37.1	
	comp=N,9606µm,0.8s						
THT1				AML	AML	23 47 40.7	
	comp=E,18203µm,1.0s						
THT1	**Athinios (Pele**	1.64	324	P	Pn	23 47 04.2	+0.8
THT1	**Athinios (Pele**	1.64	324	P	Pn	23 47 04.2	+0.8
SAP2K	**Karterados**	1.65	325	P	Pn	23 47 04.3	+0.8
SAP2K	**Karterados**	1.65	325	P	Pn	23 47 04.6	+1.0
SAP2K				S	Sn	23 47 25.6	+1.9
ARG	**Arkhangelos**	1.67	46	PN	Pn	23 47 02.6	-1.2
ARG	**Arkhangelos**	1.67	46	P	Pn	23 47 05.8	+2.0
ARG				AML	AML	23 47 26.9	
	comp=N,16819µm,0.4s						
ARG				AML	AML	23 47 27.7	
	comp=E,17793µm,0.3s						
ARG	**Arkhangelos**	1.67	46	P	Pn	23 47 05.2	+1.4
ARG				S	Sn	23 47 25.6	+1.5
ARG	**Arkhangelos**	1.67	46	*e*Pn	Pn	23 47 02.6	-1.2
ARG	**Arkhangelos**	1.67	46	P	Pn	23 47 05.2	+1.4
ARG				S	Sn	23 47 25.6	+1.5
THT2	**Imerovigli**	1.69	324	P	Pn	23 47 05.6	+1.6
THT2				AML	AML	23 47 44.5	
	comp=E,46682µm,0.9s						
THT2				AML	AML	23 47 45.6	
	comp=N,45075µm,0.9s						
THT2	**Imerovigli**	1.69	324	P	Pn	23 47 06.2	+2.2
THT2	**Imerovigli**	1.69	324	P	Pn	23 47 06.2	+2.2
CMBO	**Columbo, Santo**	1.72	325	P	Pn	23 47 05.6	+1.0
CMBO				AML	AML	23 47 31.3	
	comp=N,42983µm,0.5s						
CMBO				AML	AML	23 47 33.6	
	comp=E,33633µm,0.6s						
CMBO	**Columbo, Santo**	1.72	325	P	Pn	23 47 05.5	+1.0
CMBO				S	Sn	23 47 26.5	+1.1
CMBO	**Columbo, Santo**	1.72	325	P	Pn	23 47 05.5	+1.0
CMBO				S	Sn	23 47 26.5	+1.1
SAP3	**Santorini-Thir**	1.72	323	P	Pn	23 47 05.2	+0.7
SAP3	**Santorini-Thir**	1.72	323	P	Pn	23 47 05.5	+1.0
SAP3	**Santorini-Thir**	1.72	323	P	Pn	23 47 05.5	+1.0
SAP4	**Santorini-Oia**	1.74	324	P	Pn	23 47 06.4	+1.7
PRNS	**Prines Rethymn**	1.77	280	P	Pn	23 47 08.0	+2.8
PRNS	**Prines Rethymn**	1.77	280	P	Pn	23 47 08.0	+2.8
DAT	**Datca**	1.83	24	PN	Pn	23 47 06.3	+0.3
DAT	**Datca**	1.83	24	⇑*i*P	Pn	23 47 06.6	+0.6
DAT				*i* S	Sn	23 47 29.2	+1.1
DAT	**Datca**	1.83	24	*e*Pn	Pn	23 47 06.3	+0.3
DAT	**Datca**	1.83	24	P	Pn	23 47 06.6	+0.6
DAT				S	Sn	23 47 29.2	+1.1
AMGA	**Amorgos Island**	1.86	341	P	Pn	23 47 06.7	+0.3
AMGA	**Amorgos Island**	1.86	341	P	Pn	23 47 07.1	+0.7
AMGA				S	Sn	23 47 28.9	+0.1
AMGA	**Amorgos Island**	1.86	341	P	Pn	23 47 07.1	+0.7
AMGA				S	Sn	23 47 28.9	+0.1
DATC	**Datca-Mugla**	1.88	26	PN	Pn	23 47 06.8	+0.1
DATC	**Datca-Mugla**	1.88	26	*e*Pn	Pn	23 47 06.8	+0.1
IOSP	**Ios island**	1.98	327	P	Pn	23 47 08.3	+0.3
IOSP				AML	AML	23 47 35.0	
	comp=N,18789µm,0.3s						
IOSP				AML	AML	23 47 41.4	
	comp=E,11136µm,0.6s						
IOSP	**Ios island**	1.98	327	P	Pn	23 47 08.8	+0.8
IOSP				S	Sn	23 47 33.2	+1.5
IOSP	**Ios island**	1.98	327	P	Pn	23 47 08.8	+0.8
IOSP				S	Sn	23 47 33.2	+1.5
VAM	**Vamos**	2.02	280	P	Pn	23 47 11.9	+3.3
VAM				AML	AML	23 48 00.7	
	comp=N,27981µm,1.2s						
VAM				AML	AML	23 48 03.8	
	comp=E,25934µm,1.3s						
VAM	**Vamos**	2.02	280	P	Pn	23 47 10.4	+1.8
VAM	**Vamos**	2.02	280	P	Pn	23 47 10.4	+1.8
BODT	**Bodrum**	2.06	15	PN	Pn	23 47 09.3	+0.1
BODT	**Bodrum**	2.06	15	P	Pn	23 47 10.0	+0.8
BODT	**Bodrum**	2.06	15	*e*Pn	Pn	23 47 09.3	+0.1
BODT	**Bodrum**	2.06	15	P	Pn	23 47 10.0	+0.8
MRSB	**Marmaris-Mugla**	2.08	37	PN	Pn	23 47 08.9	-0.5
MRSB	**Marmaris-Mugla**	2.08	37	*e*Pn	Pn	23 47 08.9	-0.5
GVDS	**Gavdos**	2.10	265	P	Pn	23 47 11.2	+1.5
GVDS	**Gavdos**	2.10	265	P	Pn	23 47 11.2	+1.5
GVD	**Gavdhos**	2.10	265	P	Pn	23 47 09.6	-0.1
GVD				AML	AML	23 47 43.0	
	comp=N,8000µm,0.4s						
GVD				AML	AML	23 47 45.6	
	comp=E,8022µm,0.6s						
GVD	**Gavdhos**	2.10	265	P	Pn	23 47 10.7	+1.0
GVD	**Gavdhos**	2.10	265	P	Pn	23 47 10.7	+1.0
CHAN	**Chania**	2.17	283	P	Pn	23 47 12.4	+1.8
CHAN	**Chania**	2.17	283	P	Pn	23 47 12.4	+1.8
APE	**Apeiranthos**	2.19	336	PN	Pn	23 47 10.8	-0.1
APE	**Apeiranthos**	2.19	336	P	Pn	23 47 11.2	+0.3
APE	**Apeiranthos**	2.19	336	⇑*i*P	Pn	23 47 11.7	+0.8
APE	**Apeiranthos**	2.19	336	P	Pn	23 47 11.7	+0.8
APE				S	Sn	23 47 37.6	+0.7
APE	**Apeiranthos**	2.19	336	*c i*P	Pn	23 47 11.5	+0.6
APE	**Apeiranthos**	2.19	336	*e*Pn	Pn	23 47 10.8	-0.1
APE	**Apeiranthos**	2.19	336	P	Pn	23 47 11.7	+0.8
APE				S	Sn	23 47 37.6	+0.7
IMMV	**Iera Moni Meta**	2.21	281	P	Pn	23 47 13.0	+1.9
IMMV				AML	AML	23 48 02.4	
	comp=N,16839µm,1.0s						
IMMV				AML	AML	23 48 08.3	

	comp=E,15753µm,1.1s						
IMMV	Iera Moni Meta	2.21	281	P	Pn	23 47 12.8	+1.7
IMMV	Iera Moni Meta	2.21	281	P	Pn	23 47 12.8	+1.7
DALY	Dalyan (Mu˜la	2.40	43	PN	Pn	23 47 13.4	-0.2
DALY	Dalyan (Mu˜la	2.40	43	⇓iP	Pn	23 47 14.8	+1.2
DALY				iS	Sn	23 47 40.9	-1.0
DALY	Dalyan (Mu˜la	2.40	43	ePn	Pn	23 47 13.4	-0.2
DALY	Dalyan (Mu˜la	2.40	43	P	Pn	23 47 14.8	+1.2
DALY				S	Sn	23 47 40.8	-1.0
MLSB	Milas	2.41	22	PN	Pn	23 47 14.4	+0.5
MLSB	Milas	2.41	22	ePn	Pn	23 47 14.4	+0.5
TURN	Turunc	2.41	41	PN	Pn	23 47 10.3	-3.5
TURN	Turunc	2.41	41	⇑iP	Pn	23 47 10.9	-2.9
TURN				iS	Sn	23 47 35.8	-6.3
TURN	Turunc	2.41	41	ePn	Pn	23 47 10.3	-3.5
TURN	Turunc	2.41	41	P	Pn	23 47 10.9	-2.9
MHLO	Agia Marina, M	2.43	312	P	Pn	23 47 15.7	+1.6
MHLO	Agia Marina, M	2.43	312	P	Pn	23 47 15.4	+1.2
MHLO				S	Sn	23 47 44.5	+1.8
MHLO	Agia Marina, M	2.43	312	P	Pn	23 47 15.4	+1.2
MHLO				S	Sn	23 47 44.5	+1.8
MHLA	Plaka, Milos I	2.46	314	P	Pn	23 47 16.4	+1.9
MHLA	Plaka, Milos I	2.46	314	P	Pn	23 47 16.1	+1.6
YER	Yerkesik	2.46	32	PN	Pn	23 47 14.8	+0.2
YER	Yerkesik	2.46	32	P	Pn	23 47 15.6	+1.0
YER	Yerkesik	2.46	32	ePn	Pn	23 47 14.8	+0.2
YER	Yerkesik	2.46	32	P	Pn	23 47 15.6	+1.0
FETY	Fethiye	2.53	51	PN	Pn	23 47 14.6	-1.0
FETY	Fethiye	2.53	51	P	Pn	23 47 15.4	-0.2
FETY				S	Sn	23 47 43.7	-1.5
FETY	Fethiye	2.53	51	ePn	Pn	23 47 14.6	-1.0
FETY	Fethiye	2.53	51	P	Pn	23 47 15.4	-0.2
FETY				S	Sn	23 47 43.7	-1.5
KSL	Kastellorizon	2.63	65	P	Pn	23 47 15.4	-1.6
KSL				AML	AML	23 47 49.4	
	comp=N,6969µm,0.4s						
KSL				AML	AML	23 47 52.9	
	comp=E,7486µm,0.4s						
KSL	Kastellorizon	2.63	65	P	Pn	23 47 16.6	-0.3
KSL				S	Sn	23 47 45.9	-1.8
KSL	Kastellorizon	2.63	65	P	Pn	23 47 16.6	-0.3
KSL				S	Sn	23 47 45.9	-1.8
SMG	Samos	2.64	3	P	Pn	23 47 16.8	-0.3
SMG	Samos	2.64	3	P	Pn	23 47 17.7	+0.6
SMG	Samos	2.64	3	P	Pn	23 47 17.7	+0.6
AKAS	Kas	2.68	63	PN	Pn	23 47 16.0	-1.8
AKAS	Kas	2.68	63	⇓iP	Pn	23 47 17.5	-0.3
AKAS				iS	Sn	23 47 46.9	-2.2
AKAS	Kas	2.68	63	ePn	Pn	23 47 16.0	-1.8
AKAS	Kas	2.68	63	P	Pn	23 47 17.5	-0.3
AKAS				S	Sn	23 47 46.9	-2.2
SERI	Serifos	2.72	321	P	Pn	23 47 18.8	+0.7
SERI	Serifos	2.72	321	P	Pn	23 47 19.2	+1.0
SERI	Serifos	2.72	321	P	Pn	23 47 19.2	+1.0
TNSA	Tinos	2.74	335	P	Pn	23 47 21.3	+3.0
TNSA	Tinos	2.74	335	P	Pn	23 47 20.5	+2.1
AYDN	Tasoluk	2.78	21	⇑iP	Pn	23 47 20.4	+1.4
AYDN				iS	Sn	23 47 50.5	-0.8
AYDN	Tasoluk	2.78	21	P	Pn	23 47 20.4	+1.4
AYDN				S	Sn	23 47 50.5	-0.8
ANKY	Antikythira Is	2.84	287	P	Pn	23 47 19.3	-0.4
ANKY	Antikythira Is	2.84	287	P	Pn	23 47 20.4	+0.7
ANKY	Antikythira Is	2.84	287	P	Pn	23 47 20.4	+0.7
DGB	˜zmir	2.99	4	⇑iP	Pn	23 47 22.4	+0.7
DGB				iS	Sn	23 48 15.3	+19
TAVA	DENIZLI_Tavas	3.02	37	⇑iP	Pn	23 47 23.1	+0.8
TAVA				iS	Sn	23 47 57.9	+0.5
TAVA	DENIZLI_Tavas	3.02	37	P	Pn	23 47 23.1	+0.8
TAVA				S	Sn	23 47 57.8	+0.5
AYDB	Zeytinkoy-Aydi	3.05	19	PN	Pn	23 47 23.5	+0.8
AYDB	Zeytinkoy-Aydi	3.05	19	ePn	Pn	23 47 23.5	+0.8
ELL	Elmali	3.14	57	PN	Pn	23 47 22.7	-1.3
ELL	Elmali	3.14	57	ePn	Pn	23 47 22.7	-1.3
KYTH	Kithira	3.16	293	P	Pn	23 47 23.3	-0.8
KYTH	Kithira	3.16	293	P	Pn	23 47 24.5	+0.4
KTHR	Kythira	3.19	293	P	Pn	23 47 25.1	+0.6
KTHR	Kythira	3.19	293	P	Pn	23 47 25.1	+0.6
GOLH	Golhisar	3.21	47	⇓iP	Pn	23 47 26.0	+1.1
GOLH				iS	Sn	23 48 01.7	-0.3
GOLH	Golhisar	3.21	47	P	Pn	23 47 26.0	+1.1
GOLH				S	Sn	23 48 01.7	-0.3
DNZL	Cakiroluk	3.26	36	⇑iP	Pn	23 47 26.3	+0.6
DNZL				iS	Sn	23 48 04.1	+0.7
DNZL	Cakiroluk	3.26	36	P	Pn	23 47 26.3	+0.6
DNZL				S	Sn	23 48 04.1	+0.7
CESE	ˆe¯me	3.27	355	PN	Pn	23 47 26.6	+1.0
CESE	ˆe¯me	3.27	355	ePn	Pn	23 47 26.6	+1.0
URLA	Izmir	3.29	359	PN	Pn	23 47 26.6	+0.6
URLA	Izmir	3.29	359	⇑iP	Pn	23 47 26.5	+0.6
URLA				iS	Sn	23 48 21.6	+18
URLA	Izmir	3.29	359	P	Pn	23 47 26.5	+0.6
DENT	Denizli	3.31	35	PN	Pn	23 47 26.6	+0.4
DENT	Denizli	3.31	35	ePn	Pn	23 47 26.6	+0.4
BLCB	Balcova	3.33	6	PN	Pn	23 47 27.5	+1.1
BLCB	Balcova	3.33	6	ePn	Pn	23 47 27.5	+1.1
MNVA	Monemvasia	3.34	300	P	Pn	23 47 29.2	+2.6
MNVA	Monemvasia	3.34	300	P	Pn	23 47 28.7	+2.1
CHOS	Chios island	3.35	352	PN	Pn	23 47 27.2	+0.4
CHOS	Chios island	3.35	352	P	Pn	23 47 26.1	-0.7
CHOS	Chios island	3.35	352	P	Pn	23 47 27.2	+0.4
CHOS	Chios island	3.35	352	P	Pn	23 47 27.2	+0.4
VLI	Veliai	3.42	300	P	Pn	23 47 26.9	-0.9
VLI				AML	AML	23 48 10.2	
	comp=E,3124µm,0.5s						
VLI				AML	AML	23 48 11.7	
	comp=N,4279µm,0.3s						
VLI	Veliai	3.42	300	P	Pn	23 47 28.2	+0.4
VLI	Veliai	3.42	300	P	Pn	23 47 28.2	+0.4
YDRA	Hydra	3.43	313	P	Pn	23 47 31.2	+3.4
YDRA	Hydra	3.43	313	P	Pn	23 47 30.3	+2.5
KARY	Karystos	3.45	330	P	Pn	23 47 29.7	+1.7
KARY	Karystos	3.45	330	P	Pn	23 47 29.8	+1.7
KARY	Karystos	3.45	330	P	Pn	23 47 29.8	+1.7
KRBN	Karaburun	3.52	359	PN	Pn	23 47 29.8	+0.7
KRBN	Karaburun	3.52	359	ePn	Pn	23 47 29.8	+0.7
PSRA	Psara	3.57	346	P	Pn	23 47 32.2	+2.5
PSRA	Psara	3.57	346	P	Pn	23 47 31.8	+2.0
KORT	Korkueli	3.58	56	PN	Pn	23 47 28.6	-1.4
KORT	Korkueli	3.58	56	⇓iP	Pn	23 47 30.9	+0.9
KORT				iS	Sn	23 48 10.7	-0.3
KORT	Korkueli	3.58	56	ePn	Pn	23 47 28.6	-1.4
KORT	Korkueli	3.58	56	P	Pn	23 47 30.9	+0.9
KORT				S	Sn	23 48 10.7	-0.3
VLY	Voula,Athens	3.60	321	P	Pn	23 47 31.3	+1.1
VLY	Voula,Athens	3.60	321	P	Pn	23 47 31.8	+1.6
VLY	Voula,Athens	3.60	321	P	Pn	23 47 31.8	+1.6
FOCM	Foˆ§a	3.64	1	PN	Pn	23 47 32.4	+1.7
FOCM	Foˆ§a	3.64	1	ePn	Pn	23 47 32.4	+1.7
KRND	KRANIDI	3.65	310	P	Pn	23 47 31.3	+0.5
KRND				S	Sn	23 48 14.2	+1.7
KRND				AML	AML	23 48 16.3	
	comp=N,3873µm,0.4s						
KRND				AML	AML	23 48 36.1	
	comp=E,4357µm,1.6s						
KRND	KRANIDI	3.65	310	P	Pn	23 47 32.2	+1.4
KRND				S	Sn	23 48 13.7	+1.2
KRND	KRANIDI	3.65	310	P	Pn	23 47 32.2	+1.4
KRND				S	Sn	23 48 13.7	+1.2
DID	Didima	3.67	313	P	Pn	23 47 31.7	+0.5
DID	Didima	3.67	313	P	Pn	23 47 32.4	+1.2
DID				S	Sn	23 48 14.6	+1.4
DID	Didima	3.67	313	P	Pn	23 47 32.4	+1.2
DID				S	Sn	23 48 14.6	+1.4
ATHU	Athens Univers	3.69	322	P	Pn	23 47 33.5	+2.0
ATHU	Athens Univers	3.69	322	P	Pn	23 47 33.4	+1.9
ATHU	Athens Univers	3.69	322	P	Pn	23 47 33.4	+1.9
DION	Dionisos Attik	3.71	325	P	Pn	23 47 33.9	+2.2
DION	Dionisos Attik	3.71	325	P	Pn	23 47 33.6	+1.9
PTL	Penteli	3.72	324	P	Pn	23 47 33.8	+2.0
PTL	Penteli	3.72	324	P	Pn	23 47 33.8	+2.0
PTL	Penteli	3.72	324	P	Pn	23 47 33.8	+2.0
ATH	Athens Observa	3.73	322	P	Pn	23 47 34.4	+2.5
ATH	Athens Observa	3.73	322	P	Pn	23 47 34.1	+2.1
ATH	Athens Observa	3.73	322	P	Pn	23 47 34.1	+2.1
ANTB	Antalya	3.74	60	PN	Pn	23 47 31.2	-0.8
ANTB	Antalya	3.74	60	ePn	Pn	23 47 31.2	-0.8
MATC	Matruh	3.74	172	P	Pn	23 47 26.5	-5.6
	baz=178						
MANT	Manisa	3.75	24	⇑iP	Pn	23 47 33.3	+0.9
MANT	Manisa	3.75	24	ePn	Pn	23 47 33.3	+0.9
MANT	Manisa	3.75	24	P	Pn	23 47 33.3	+0.9
SLUM	Salum	3.76	199	P	Pn	23 47 29.7	-2.7
	baz=208						
SLUM				S	Sn	23 48 08.4	-6.9
	baz=208						
SLUM	Salum	3.76	199	P	Pn	23 47 29.7	-2.7
KULA	Kula-Manisa	3.81	25	PN	Pn	23 47 34.1	+1.0
KULA	Kula-Manisa	3.81	25	ePn	Pn	23 47 34.1	+1.0
BRDR	BURDUR-Merkez	3.81	45	iP	Pn	23 47 33.6	+0.5
BRDR				iS	Sn	23 48 16.0	-0.8
BRDR	BURDUR-Merkez	3.81	45	P	Pn	23 47 33.6	+0.5
BRDR				S	Sn	23 48 16.0	-0.8
DYR	Agios Nikonas	3.88	297	P	Pn	23 47 35.5	+1.5
DYR	Agios Nikonas	3.88	297	P	Pn	23 47 35.8	+1.8
DYR	Agios Nikonas	3.88	297	P	Pn	23 47 35.8	+1.8
AKHS	Akhisar	3.92	14	⇑iP	Pn	23 47 35.6	+1.0
AKHS				iS	Sn	23 48 19.7	+0.4
AKHS	Akhisar	3.92	14	P	Pn	23 47 35.6	+1.0
AKHS				S	Sn	23 48 19.7	+0.4
AKS	Akhisar	3.92	14	PN	Pn	23 47 35.6	+1.0
AKS	Akhisar	3.92	14	ePn	Pn	23 47 35.6	+1.0
KHL	Karahalli	3.99	35	PN	Pn	23 47 36.4	+0.8
KHL	Karahalli	3.99	35	ePn	Pn	23 47 36.4	+0.8
DKL	Dikili	4.00	3	PN	Pn	23 47 36.9	+1.2
DKL	Dikili	4.00	3	ePn	Pn	23 47 36.9	+1.2
VILL	Villia	4.09	320	P	Pn	23 47 38.8	+1.9
VILL	Villia	4.09	320	P	Pn	23 47 38.8	+1.9
VLX	Vlachokerasia	4.14	305	P	Pn	23 47 37.6	0.0
VLX	Vlachokerasia	4.14	305	P	Pn	23 47 38.5	+0.9
VLX	Vlachokerasia	4.14	305	P	Pn	23 47 38.5	+0.9
LOUT	Loutraki	4.15	316	P	Pn	23 47 39.4	+1.7
LOUT	Loutraki	4.15	316	P	Pn	23 47 39.4	+1.7
VIL2	Platees	4.15	320	P	Pn	23 47 38.5	+0.9
SKY	Skiros Island	4.15	337	P	Pn	23 47 40.0	+2.2
SKY	Skiros Island	4.15	337	P	Pn	23 47 39.8	+2.0
ISP	Isparta	4.17	48	PN	Pn	23 47 37.9	-0.1
ISP	Isparta	4.17	48	⇓iP	Pn	23 47 38.0	-0.1
ISP	Isparta	4.17	48	ePn	Pn	23 47 38.3	+0.2
ISP	Isparta	4.17	48	P	Pn	23 47 37.8	-0.3
ISP	Isparta	4.17	48	Pn	Pn	23 47 37.7	-0.3
ISP	Isparta	4.17	48	eP	Pn	23 47 38.3	+0.2
ISP	Isparta	4.17	48	P	Pn	23 47 37.8	-0.3
ISP	Isparta	4.17	48	ePn	Pn	23 47 38.3	+0.2
ISP				S	Sn	23 48 24.5	-1.1
LTK	Loutraki	4.17	316	P	Pn	23 47 39.5	+1.5
LTK	Loutraki	4.17	316	P	Pn	23 47 39.6	+1.5
LTK	Loutraki	4.17	316	P	Pn	23 47 39.6	+1.5
PRK	Paraskevi	4.18	356	P	Pn	23 47 37.8	-0.3
PRK	Paraskevi	4.18	356	P	Pn	23 47 38.8	+0.7
PRK	Paraskevi	4.18	356	P	Pn	23 47 38.8	+0.7
SIGR	SIGRI	4.18	352	PN	Pn	23 47 38.2	0.0
SIGR	SIGRI	4.18	352	P	Pn	23 47 37.0	-1.2
SIGR	SIGRI	4.18	352	P	Pn	23 47 37.0	-1.2
SIGR	SIGRI	4.18	352	ePn	Pn	23 47 38.2	0.0
AYVA	Ayvalik	4.23	1	iP	Pn	23 47 39.2	+0.4
AYVA	Ayvalik	4.23	1	P	Pn	23 47 39.2	+0.4
MNVG	Manavgat-Antal	4.25	65	PN	Pn	23 47 37.6	-1.4
MNVG	Manavgat-Antal	4.25	65	ePn	Pn	23 47 37.6	-1.4
KZIL	AFYON_Kizioren	4.25	40	iP	Pn	23 47 38.6	-0.6
KZIL	AFYON_Kizioren	4.25	40	P	Pn	23 47 38.6	-0.6
SUTC	Sutluce-Ispart	4.27	54	PN	Pn	23 47 38.6	-0.9
SUTC	Sutluce-Ispart	4.27	54	ePn	Pn	23 47 38.6	-0.9
DEMI	Demirci	4.30	22	⇑iP	Pn	23 47 40.7	+0.8
DEMI				iS	Sn	23 48 28.5	-0.3
DEMI	Demirci	4.30	22	P	Pn	23 47 40.7	+0.8
DEMI				S	Sn	23 48 28.5	-0.3
ITM	Ithomi	4.36	300	PN	Pn	23 47 39.9	-0.6
ITM	Ithomi	4.36	300	P	Pn	23 47 40.1	-0.5
ITM				AML	AML	23 48 56.3	
	comp=N,1251µm,0.7s						
ITM				AML	AML	23 48 56.4	
	comp=E,1428µm,0.5s						
ITM	Ithomi	4.36	300	ePn	Pn	23 47 41.9	+1.3
ITM	Ithomi	4.36	300	P	Pn	23 47 41.5	+1.0
ITM	Ithomi	4.36	300	P	Pn	23 47 41.5	+1.0
ITM	Ithomi	4.36	300	ePn	Pn	23 47 41.9	+1.3
THAL	Thalero	4.36	314	P	Pn	23 47 41.2	+0.7
THAL	Thalero	4.36	314	P	Pn	23 47 42.0	+1.4
THAL	Thalero	4.36	314	P	Pn	23 47 42.0	+1.4
PYL	PYLOS	4.37	296	P	Pn	23 47 40.3	-0.4
PYL	PYLOS	4.37	296	P	Pn	23 47 40.3	-0.4
PROD	Prodromos	4.38	318	P	Pn	23 47 41.6	+0.8
PROD	Prodromos	4.38	318	P	Pn	23 47 42.2	+1.4
STEP	BALIKESIR_Sava	4.39	11	⇑iP	Pn	23 47 42.1	+1.1
STEP				iS	Sn	23 48 31.8	+1.0
STEP	BALIKESIR_Sava	4.39	11	P	Pn	23 47 42.1	+1.1
STEP				S	Sn	23 48 31.8	+1.0
GPNR	Gulpinar-Canak	4.40	355	PN	Pn	23 47 42.4	+1.3
GPNR	Gulpinar-Canak	4.40	355	ePn	Pn	23 47 42.4	+1.3
KEPZ	Antalya-Kepez	4.43	64	iP	Pn	23 47 41.0	-0.5
KEPZ	Antalya-Kepez	4.43	64	P	Pn	23 47 41.0	-0.5
SIMA	Simav-Kutahya	4.43	24	PN	Pn	23 47 42.6	+1.0
SIMA	Simav-Kutahya	4.43	24	ePn	Pn	23 47 42.6	+1.0
BAGO	Egridir - ISPA	4.44	48	iP	Pn	23 47 41.2	-0.5
SMAA	Simav-Kutahya	4.44	24	PN	Pn	23 47 42.8	+1.0
SMAA	Simav-Kutahya	4.44	24	ePn	Pn	23 47 42.8	+1.0
GUR	Goura	4.49	311	P	Pn	23 47 41.7	-0.8
GUR	Goura	4.49	311	P	Pn	23 47 43.1	+0.6
GUR				S	Sn	23 48 34.4	+1.0
GUR	Goura	4.49	311	P	Pn	23 47 43.1	+0.6
GUR				S	Sn	23 48 34.4	+1.0
GEDZ	Gediz	4.55	28	PN	Pn	23 47 44.6	+1.4
GEDZ	Gediz	4.55	28	ePn	Pn	23 47 44.6	+1.4
MES3	Kyparissia	4.57	300	P	Pn	23 47 42.5	-0.9
MES3	Kyparissia	4.57	300	P	Pn	23 47 44.0	+0.6
LKR	Lokris	4.61	322	P	Pn	23 47 45.4	+1.4
LKR	Lokris	4.61	322	P	Pn	23 47 45.8	+1.7
LKR	Lokris	4.61	322	P	Pn	23 47 45.8	+1.7
AOS	Alonnisos	4.65	333	PN	Pn	23 47 45.6	+1.0
AOS	Alonnisos	4.65	333	P	Pn	23 47 45.9	+1.3
AOS	Alonnisos	4.65	333	P	Pn	23 47 46.3	+1.7
AOS	Alonnisos	4.65	333	ePn	Pn	23 47 45.6	+1.0
AOS	Alonnisos	4.65	333	P	Pn	23 47 46.3	+1.7
BAYC	CANAKKALE_Bayr	4.67	359	iP	Pn	23 47 45.2	+0.4
BAYC	CANAKKALE_Bayr	4.67	359	P	Pn	23 47 45.2	+0.4
AKMC	Akamas	4.67	89	P	Pn	23 47 41.9	-3.0
	baz=270						
AKMC	Akamas	4.67	89	P	Pn	23 47 41.9	-3.0
KLV	Kalavryta, Ach	4.68	311	P	Pn	23 47 44.1	-0.9
KLV	Kalavryta, Ach	4.68	311	P	Pn	23 47 45.3	+0.3
KLV	Kalavryta, Ach	4.68	311	P	Pn	23 47 45.3	+0.3
AMT	Artemida-Makis	4.68	303	P	Pn	23 47 44.9	-0.1
AMT				AML	AML	23 49 01.8	
	comp=N,1982µm,0.4s						
AMT				AML	AML	23 49 04.4	
	comp=E,2793µm,1.1s						
AMT	Artemida-Makis	4.68	303	P	Pn	23 47 46.2	+1.2
AMT	Artemida-Makis	4.68	303	P	Pn	23 47 46.2	+1.2
SMIA	Simia	4.69	325	P	Pn	23 47 47.5	+2.4
SMIA	Simia	4.69	325	P	Pn	23 47 47.5	+2.4
PPCY	Paphos	4.69	91	P	Pn	23 47 42.0	-3.1
	baz=272						
PPCY	Paphos	4.69	91	P	Pn	23 47 42.0	-3.1
DSF	Desfina	4.69	317	P	Pn	23 47 45.8	+0.5
DSF	Desfina	4.69	317	P	Pn	23 47 46.5	+1.3
DSF	Desfina	4.69	317	P	Pn	23 47 46.5	+1.3
DLFA	Delphi	4.76	317	P	Pn	23 47 49.3	+3.2
DLFA	Delphi	4.76	317	P	Pn	23 47 48.7	+2.6
DURS	Dursunbey	4.76	17	iP	Pn	23 47 46.7	+0.6
DURS	Dursunbey	4.76	17	P	Pn	23 47 46.7	+0.6
GAZI	Gazipasa	4.77	74	PN	Pn	23 47 43.9	-2.3
GAZI	Gazipasa	4.77	74	iP	Pn	23 47 44.0	-2.2
GAZI	Gazipasa	4.77	74	P	Pn	23 47 44.0	-2.2
BOZC	Bozcaada	4.79	355	iP	Pn	23 47 46.9	+0.4
DST	Dursunbey	4.80	19	PN	Pn	23 47 47.8	+1.2
DST	Dursunbey	4.80	19	ePn	Pn	23 47 47.8	+1.2
SKIA	Skiathos	4.81	329	P	Pn	23 47 48.9	+2.1
SKIA	Skiathos	4.81	329	P	Pn	23 47 48.9	+2.1
ALFC	Alefka	4.89	87	P	Pn	23 47 44.9	-3.0
	baz=268						
ALFC	Alefka	4.89	87	P	Pn	23 47 44.9	-3.0
DRO	Drossia	4.90	307	P	Pn	23 47 48.0	-0.1
DRO	Drossia	4.90	307	P	Pn	23 47 49.5	+1.5
DRO				S	Sn	23 48 45.2	+1.8
DRO	Drossia	4.90	307	P	Pn	23 47 49.5	+1.5
DRO				S	Sn	23 48 45.2	+1.8
LAKA	Lakka	4.90	312	P	Pn	23 47 47.8	-0.3
LAKA	Lakka	4.90	312	P	Pn	23 47 48.7	+0.6
LAKA	Lakka	4.90	312	P	Pn	23 47 48.7	+0.6
TVSB	Tavsanli	4.92	26	PN	Pn	23 47 49.1	+0.7
TVSB	Tavsanli	4.92	26	ePn	Pn	23 47 49.1	+0.7
TRIZ	Trizonia	4.93	313	P	Pn	23 47 48.4	+0.1
TRIZ	Trizonia	4.93	313	P	Pn	23 47 49.0	+0.7
TRIZ	Trizonia	4.93	313	P	Pn	23 47 49.0	+0.7
LIA	Limnos Island	4.96	347	P	Pn	23 47 49.0	+0.3
LIA	Limnos Island	4.96	347	P	Pn	23 47 49.7	+0.9
LIA	Limnos Island	4.96	347	P	Pn	23 47 49.7	+0.9
SERG	Sergoula	4.97	314	P	Pn	23 47 49.5	+0.5
SERG	Sergoula	4.97	314	P	Pn	23 47 49.3	+0.4
SERG	Sergoula	4.97	314	P	Pn	23 47 49.3	+0.4
BOLV	Bolvadin	5.02	42	iP	Pn	23 47 50.2	+0.4
BOLV	Bolvadin	5.02	42	P	Pn	23 47 50.2	+0.4
NEO	Neokhori	5.03	328	P	Pn	23 47 54.0	+4.2
NEO	Neokhori	5.03	328	P	Pn	23 47 53.0	+3.2
NEO	Neokhori	5.03	328	P	Pn	23 47 53.0	+3.2
DOGA	KONYA_Doganhis	5.06	52	iP	Pn	23 47 50.8	+0.5
DOGA	KONYA_Doganhis	5.06	52	P	Pn	23 47 50.8	+0.5
EFP	Efpalio	5.07	313	P	Pn	23 47 50.5	+0.3
EFP	Efpalio	5.07	313	P	Pn	23 47 50.9	+0.7
EFP	Efpalio	5.07	313	P	Pn	23 47 50.9	+0.7
KUTH	Kutahya	5.10	31	PN	Pn	23 47 51.5	+0.7
KUTH	Kutahya	5.10	31	ePn	Pn	23 47 51.5	+0.7
XOR	Xorichti	5.10	328	P	Pn	23 47 52.6	+1.9
XOR	Xorichti	5.10	328	P	Pn	23 47 52.6	+1.9
LEF	Lefka	5.13	88	PN	Pn	23 47 47.4	-3.7
LEF	Lefka	5.13	88	ePn	Pn	23 47 47.4	-3.7
LEF	Lefka	5.13	88	P	Pn	23 47 47.7	-3.4
SZAC	Souni	5.14	92	P	Pn	23 47 48.2	-3.2
	baz=273						
SZAC				S	Sn	23 48 45.8	-3.6
SZAC	Souni	5.14	92	P	Pn	23 47 48.2	-3.2
SZAC				S	Sn	23 48 45.8	-3.6
GADA	Gvkgeada	5.15	354	P	Pn	23 47 52.2	+0.8
GADA	Gvkgeada	5.15	354	P	Pn	23 47 52.2	+0.8
ANX	Ano Chora	5.17	314	P	Pn	23 47 51.6	-0.1
ANX	Ano Chora	5.17	314	P	Pn	23 47 52.6	+0.9
ANX	Ano Chora	5.17	314	P	Pn	23 47 52.6	+0.9
VTN	Vitineika	5.23	305	P	Pn	23 47 52.5	0.0
VTN	Vitineika	5.23	305	P	Pn	23 47 53.7	+1.2
AGG	Agios Georgios	5.24	320	PN	Pn	23 47 53.5	+0.8
AGG	Agios Georgios	5.24	320	P	Pn	23 47 54.0	+1.4
AGG	Agios Georgios	5.24	320	ePn	Pn	23 47 54.5	+1.9
AGG	Agios Georgios	5.24	320	P	Pn	23 47 54.5	+1.9
AGG	Agios Georgios	5.24	320	eP	Pn	23 47 54.5	+1.9
AGG	Agios Georgios	5.24	320	ePn	Pn	23 47 53.5	+0.8
AGG	Agios Georgios	5.24	320	P	Pn	23 47 54.5	+1.9
FYTO	Fytoko, Volos	5.24	327	P	Pn	23 47 54.8	+2.1
FYTO	Fytoko, Volos	5.24	327	P	Pn	23 47 54.8	+2.1
BOZY	Bozyazi-Mersin	5.27	77	PN	Pn	23 47 51.6	-1.4
BOZY	Bozyazi-Mersin	5.27	77	ePn	Pn	23 47 51.6	-1.4
ERMK	Ermenek	5.33	71	iP	Pn	23 47 53.9	-0.3
ERMK	Ermenek	5.33	71	P	Pn	23 47 53.9	-0.3
KMER	Konya-Meram	5.35	58	iP	Pn	23 47 55.2	+0.9
KMER	Konya-Meram	5.35	58	P	Pn	23 47 55.2	+0.9
TEKE	Tekeli-Mersin	5.39	77	PN	Pn	23 47 52.4	-2.3
TEKE	Tekeli-Mersin	5.39	77	ePn	Pn	23 47 52.4	-2.3
PAIG	Paliouri	5.39	335	P	Pn	23 47 56.5	+1.8
PAIG	Paliouri	5.39	335	P	Pn	23 47 56.5	+1.8
MAMC	Mammari	5.40	87	P	Pn	23 47 51.9	-2.9
	baz=269						
MAMC	Mammari	5.40	87	P	Pn	23 47 51.9	-2.9
PVO	Paravola	5.42	312	P	Pn	23 47 57.5	+2.5
PVO	Paravola	5.42	312	P	Pn	23 47 57.8	+2.7
PVO	Paravola	5.42	312	P	Pn	23 47 57.8	+2.7
KONT	Konya--Tatoy	5.43	56	PN	Pn	23 47 56.2	+0.9
KONT	Konya--Tatoy	5.43	56	iP	Pn	23 47 56.3	+1.0
KONT	Konya--Tatoy	5.43	56	ePn	Pn	23 47 56.2	+0.9
EVR	Evrytania	5.45	316	P	Pn	23 47 56.6	+1.0
EVR	Evrytania	5.45	316	P	Pn	23 47 57.1	+1.5
EVR	Evrytania	5.45	316	P	Pn	23 47 57.1	+1.5
SMTH	Samothraki Isl	5.47	351	P	Pn	23 47 56.5	+0.8
SMTH	Samothraki Isl	5.47	351	P	Pn	23 47 56.5	+0.8
CSS	Mathiatis	5.50	89	PN	Pn	23 47 53.3	-2.9
CSS	Mathiatis	5.50	89	ePn	Pn	23 47 52.8	-3.4
CSS	Mathiatis	5.50	89	P	Pn	23 47 53.0	-3.1
CSS	Mathiatis	5.50	89	P	Pn	23 47 53.1	-3.1
	baz=271						
CSS				S	Sn	23 48 54.4	-3.7
CSS	Mathiatis	5.50	89	Pn	Pn	23 47 52.6	-3.6
CSS	Mathiatis	5.50	89	ePn	Pn	23 47 52.8	-3.4
BERE	Bereket-Mersin	5.51	75	PN	Pn	23 47 54.8	-1.7
AUBOZ	BOZOYUK	5.54	28	iP	Pn	23 47 57.1	+0.3
LADK	Ladik-KONYA	5.57	54	PN	Pn	23 47 57.8	+0.6
ESKT	Eskisehir	5.57	36	PN	Pn	23 47 58.9	+1.6
ESKT	Eskisehir	5.57	36	iP	Pn	23 47 56.9	-0.4
AUKUT	KUTAHYA	5.57	28	iP	Pn	23 47 51.5	-5.8
KDHN	Kadinhani	5.59	50	iP	Pn	23 47 57.2	-0.3
KFL	Anninata	5.60	305	P	Pn	23 47 57.5	-0.1
KFL	Anninata	5.60	305	P	Pn	23 47 57.5	-0.1
AKIN	Ak˜–nc˜–lar- K	5.60	89	PN	Pn	23 47 54.6	-3.0
PDO	Prodromos	5.62	310	P	Pn	23 47 59.3	+1.5
PDO	Prodromos	5.62	310	P	Pn	23 47 59.4	+1.6
PDO	Prodromos	5.62	310	P	Pn	23 47 59.4	+1.6
SART	Tekirdag	5.63	4	iP	Pn	23 47 59.5	+1.4
OUR	Ouranopolis	5.66	339	P	Pn	23 47 57.5	-0.9
OUR	Ouranopolis	5.66	339	P	Pn	23 47 57.5	-0.9
KIZT	Kizilcal	5.67	46	PN	Pn	23 47 59.5	+0.9
OREN	Orenkoy-Mersin	5.67	76	PN	Pn	23 47 56.9	-1.7
BORA	Eskisehir	5.68	31	iP	Pn	23 47 59.2	+0.4
TEVE	Tevekalti-Mers	5.70	74	PN	Pn	23 47 57.8	-1.3
LRSO	Larissa Observ	5.71	325	P	Pn	23 48 01.3	+2.3
LRSO	Larissa Observ	5.71	325	P	Pn	23 48 01.3	+2.3
AKK1	Akkuyu-Mersin	5.73	77	PN	Pn	23 47 57.5	-1.8
AKK2	Akkuyu-Mersin	5.73	77	PN	Pn	23 47 57.8	-1.6
THAS	Thassos island	5.74	345	P	Pn	23 48 00.3	+0.9
THAS	Thassos island	5.74	345	P	Pn	23 48 00.3	+0.9
GULN	MERSIN_Gulnar	5.74	77	iP	Pn	23 47 57.5	-1.9
AKKU	Akkuyu-Mersin	5.74	77	PN	Pn	23 47 58.0	-1.5
KESN	Edirne-Kesan	5.75	0	iP	Pn	23 48 01.1	+1.1
TEPE	Tepekoy-Mersin	5.76	76	PN	Pn	23 47 58.3	-1.5
VLS	Valsamata	5.77	304	P	Pn	23 47 58.9	-1.0
VLS	Valsamata	5.77	304	P	Pn	23 47 58.9	-1.0
THL	Klokotos Trika	5.81	322	P	Pn	23 48 00.4	0.0
THL	Klokotos Trika	5.81	322	P	Pn	23 48 01.5	+1.1
THL	Klokotos Trika	5.81	322	P	Pn	23 48 01.5	+1.1
YESI	Yesilovacik-Me	5.82	77	PN	Pn	23 47 58.9	-1.6
ALN	Alexandroupoli	5.84	356	ePn	Pn	23 48 01.9	+1.1
ALN	Alexandroupoli	5.84	356	P	Pn	23 48 01.7	+0.9
ALN	Alexandroupoli	5.84	356	eP	Pn	23 48 01.9	+1.1
ALN	Alexandroupoli	5.84	356	P	Pn	23 48 01.7	+0.9
IKL	Isikli	5.86	76	PN	Pn	23 47 59.7	-1.4
AUSIV	SIVRIHISAR	5.86	40	PN	Pn	23 48 02.8	+1.6
PLG	Polygyros	5.87	335	P	Pn	23 48 03.5	+2.2
PLG	Polygyros	5.87	335	P	Pn	23 48 03.5	+2.2
SWA2		5.89	190	P	Pn	23 47 58.3	-3.3
	baz=196						
MGNA	Meganis¸„	5.90	309	P	Pn	23 48 03.1	+1.4
KEBE	Keben-Mersin	5.92	74	PN	Pn	23 48 00.9	-1.1
FSK	Fiskardo	5.94	307	P	Pn	23 48 01.4	-0.7
EVGI	Lefkada island	5.96	308	P	Pn	23 48 02.1	-0.5
EVGI	Lefkada island	5.96	308	P	Pn	23 48 02.1	-0.5
LIT	Litokhoron	6.01	328	ePn	Pn	23 48 05.2	+2.0
LIT	Litokhoron	6.01	328	P	Pn	23 48 05.2	+2.0
LIT	Litokhoron	6.01	328	eP	Pn	23 48 05.2	+2.0
LIT	Litokhoron	6.01	328	P	Pn	23 48 05.2	+2.0
LKD2	Lefkada island	6.06	310	P	Pn	23 48 03.9	0.0
LKD2	Lefkada island	6.06	310	P	Pn	23 48 03.9	0.0
CHBY	Cihanbeyli	6.12	53	PN	Pn	23 48 05.4	+0.6
RDO	Rodhopi	6.13	352	P	Pn	23 48 05.1	+0.3
RDO	Rodhopi	6.13	352	P	Pn	23 48 05.9	+1.1
RDO	Rodhopi	6.13	352	P	Pn	23 48 05.9	+1.1
GEYV	SAKARYA_Geyve	6.14	27	iP	Pn	23 48 06.2	+1.3
EREN	Erenkoy	6.18	84	PN	Pn	23 48 03.5	-2.0
HORT	Hortiatis	6.19	334	P	Pn	23 48 08.2	+2.5
HORT	Hortiatis	6.19	334	P	Pn	23 48 08.2	+2.5
KIZK	Mersin	6.26	75	PN	Pn	23 48 05.6	-1.1
THE	Thessaloniki	6.27	334	P	Pn	23 48 09.5	+2.8
THE	Thessaloniki	6.27	334	P	Pn	23 48 09.5	+2.8
SULT	Sultanhani-AKS	6.35	59	PN	Pn	23 48 08.0	0.0
KPRO	Kipourio	6.43	321	P	Pn	23 48 09.8	+0.8
KPRO	Kipourio	6.43	321	P	Pn	23 48 09.8	+0.8
KULU	Kulu	6.45	50	PN	Pn	23 48 09.7	+0.3
KKUL	Konya-Kulu	6.48	49	iP	Pn	23 48 10.4	+0.7
BTAS	Taskesti	6.49	31	iP	Pn	23 48 10.5	+0.7
JAN	Janina	6.50	317	P	Pn	23 48 10.8	+0.9
KZN	Kozani	6.50	325	P	Pn	23 48 11.6	+1.6
KZN	Kozani	6.50	325	P	Pn	23 48 11.6	+1.6
SRS	Serrai	6.50	339	P	Pn	23 48 11.3	+1.4
SRS	Serrai	6.50	339	P	Pn	23 48 11.3	+1.4
KAND	Kocaeli-Kandir	6.64	24	iP	Pn	23 48 12.7	+0.9

NVR	Nevrokopi	6.64	342	P	Pn	23 48 13.4	+1.6
NVR	Nevrokopi	6.64	342	P	Pn	23 48 13.7	+1.8
NVR	Nevrokopi	6.64	342	P	Pn	23 48 13.7	+1.8
KDZ	Kurdzhali	6.64	352	P	Pn	23 48 13.0	+1.1
MERS	Mersin	6.64	72	PN	Pn	23 48 10.7	-1.2
SAHE	Sakarya_HENDEK	6.67	29	i P	Pn	23 48 12.3	+0.1
IGT	Igoumenitsa	6.71	313	P	Pn	23 48 12.0	-0.9
IGT	Igoumenitsa	6.71	313	P	Pn	23 48 12.0	-0.9
AFSR	Af¯ar-Bala (A	6.74	48	PN	Pn	23 48 14.2	+0.9
KOT	Kottamia	6.74	138	P	Pn	23 48 06.7	-6.6
	baz=138						
KNT	Kendrikon	6.76	335	P	Pn	23 48 16.1	+2.6
KNT	Kendrikon	6.76	335	P	Pn	23 48 16.1	+2.6
SERE	Sereflikochisa	6.76	53	PN	Pn	23 48 13.9	+0.3
GRG	Griva	6.76	332	P	Pn	23 48 15.9	+2.4
GRG	Griva	6.76	332	P	Pn	23 48 15.9	+2.4
RZN	Rozhen	6.78	348	P	Pn	23 48 15.0	+1.1
BR231	Keskin MP Arra	6.82	44	ePn	Pn	23 48 15.8	+1.4
BR231	Keskin MP Arra	6.82	44	ePn	Pn	23 48 15.9	+1.4
SGD	Sagiada	6.83	314	P	Pn	23 48 13.7	-0.6
SGD	Sagiada	6.83	314	P	Pn	23 48 13.7	-0.6
ANTO	Ankara	6.85	44	⇑iP	Pn	23 48 15.3	+0.5
ANTO	Ankara	6.85	44	ePn	Pn	23 48 15.8	+1.0
ANTO				eSn	Sn	23 49 31.5	+0.1
ANTO	Ankara	6.85	44	eP	Pn	23 48 15.8	+1.0
ANTO				e		23 49 31.5	
ANTO	Ankara	6.85	44	ePn	Pn	23 48 15.8	+1.0
ANTO				eS	Sn	23 49 31.5	+0.1
HHAG	Hagoal	6.88	136	P	Pn	23 48 08.8	-6.4
	baz=136						
MMB	Musomiste	6.90	342	P	Pn	23 48 16.0	+0.6
GULA	Gulagac	6.93	60	PN	Pn	23 48 15.7	-0.1
NEST	Nestorio	6.93	322	P	Pn	23 48 16.8	+0.9
NEST	Nestorio	6.93	322	P	Pn	23 48 16.8	+0.9
VAY	Valandovo	7.02	334	i Pn	Pn	23 48 19.2	+2.2
FNA	Florina	7.06	326	ePn	Pn	23 48 18.8	+1.2
FNA	Florina	7.06	326	P	Pn	23 48 18.1	+0.5
FNA	Florina	7.06	326	eP	Pn	23 48 18.8	+1.2
FNA	Florina	7.06	326	P	Pn	23 48 18.1	+0.5
FNA	Florina	7.06	326	ePn	Pn	23 48 18.8	+1.2
KEK	Kerkira	7.15	312	P	Pn	23 48 17.5	-1.3
KEK	Kerkira	7.15	312	P	Pn	23 48 17.5	-1.3
KARA	Karaisali	7.15	70	PN	Pn	23 48 17.8	-1.1
PLD	Plovdiv	7.19	348	P	Pn	23 48 21.0	+1.7
RSH		7.22	123	P	Pn	23 48 13.7	-6.2
	baz=121						
BR131	Keskin Array S	7.26	48	ePn	Pn	23 48 20.3	-0.1
BR131	Keskin Array S	7.26	48	ePn	Pn	23 48 20.3	-0.1
BRTR	Keskin Array B	7.26	48	P	Pn	23 48 20.9	+0.5
	comp=E,1.1nm,0.3s,baz=224,slow=14,SNR=57						
BRTR				S	Sn	23 49 38.0	-3.5
	comp=E,8.2nm,0.3s,baz=220,slow=25,SNR=14						
BRTR				LR	LR	23 52 12.3	
	comp=E,1µm,20.6s,baz=224,slow=46						
BIA	Bitola	7.27	326	i Pn	Pn	23 48 21.9	+1.3
KKB	Krupnik	7.34	339	P	Pn	23 48 23.0	+1.6
HNTI	Hanita	7.36	103	Pn	Pn	23 48 17.3	-4.4
OFRI	‘Ofer	7.36	107	Pn	Pn	23 48 17.1	-4.7
STIP	Stip	7.48	334	i Pn	Pn	23 48 24.6	+1.3
BLGI	Bet Lehem HaGe	7.48	106	Pn	Pn	23 48 19.0	-4.4
DQRL	Deir Qamar	7.51	98	eP	Pn	23 48 19.0	-4.9
BHL	Bhannes	7.54	96	eP	Pn	23 48 19.0	-5.2
NBNS	Bani Suef	7.55	147	P	Pn	23 48 17.7	-6.7
	baz=148						
SLTI	Sal’it	7.55	110	Pn	Pn	23 48 19.7	-4.7
MMA0B	Mount Meron ar	7.56	103	Pn	Pn	23 48 20.1	-4.4
MMAI	Mount Meron Ar	7.56	103	P	Pn	23 48 20.2	-4.3
	comp=E,61nm,0.3s,baz=294,slow=10,SNR=109						
MMAI				S	Sn	23 49 43.0	-5.9
	comp=E,182nm,0.3s,baz=269,slow=23,SNR=12						
KRUS	Krusevo	7.59	328	i Pn	Pn	23 48 26.2	+1.4
OHR	Ohrid	7.59	324	i Pn	Pn	23 48 25.4	+0.6
QRWL	Qaraoun	7.64	99	eP	Pn	23 48 21.1	-4.5
HWQ	Hawqa	7.71	93	eP	Pn	23 48 22.4	-4.2
KSDI	Kefar Szold	7.71	101	Pn	Pn	23 48 21.8	-4.7
KZIT	Kziot	7.73	120	Pn	Pn	23 48 21.3	-5.5
SHBL	Chebaa	7.74	100	eP	Pn	23 48 22.0	-5.0
ZNM	Zenema	7.75	135	P	Pn	23 48 21.2	-5.9
	baz=135						
MMLI	Mount Malkishu	7.77	107	Pn	Pn	23 48 22.8	-4.6
RCY	Rachaya	7.77	99	eP	Pn	23 48 23.1	-4.4
AMAZ	Amatzia	7.78	115	Pn	Pn	23 48 22.7	-4.7
KSHT	Keshet	7.90	103	Pn	Pn	23 48 24.8	-4.3
HMDT	Nahal Hemdat	7.92	108	Pn	Pn	23 48 25.0	-4.4
VTS	Vitosha	7.97	341	⇑iP	Pn	23 48 32.3	+2.1
VTS	Vitosha	7.97	341	ePn	Pn	23 48 32.0	+1.8
VTS	Vitosha	7.97	341	P	Pn	23 48 32.0	+1.8
VTS	Vitosha	7.97	341	P	Pn	23 48 31.8	+1.6
VTS	Vitosha	7.97	341	eP	Pn	23 48 32.0	+1.8
VTS	Vitosha	7.97	341	P	Pn	23 48 31.8	+1.6
SKO	Skopje	8.01	331	i Pn	Pn	23 48 32.9	+2.4
HFRF	Wahat Farafira	8.02	169	P	Pn	23 48 26.4	-4.4
	baz=171						
FKH	Fakeheh	8.10	93	eP	Pn	23 48 28.4	-3.5
DSI	Dead Sea	8.11	113	Pn	Pn	23 48 27.3	-4.6
PRD	Provadia	8.14	4	P	Pn	23 48 32.0	-0.4
RMNI	Mount Ramon	8.16	121	Pn	Pn	23 48 28.7	-4.1
SZH	Strazhica	8.21	356	P	Pn	23 48 34.0	+0.7
MZDA	Masada	8.22	115	Pn	Pn	23 48 28.7	-4.7
TAMRE	El Minia	8.22	152	P	Pn	23 48 27.1	-6.4
	baz=153						
PRNI	Paran	8.47	121	Pn	Pn	23 48 31.8	-5.2
ZFRI	Zfri	8.48	120	Pn	Pn	23 48 31.4	-5.6
HRFI	Mount Harif	8.68	123	Pn	Pn	23 48 35.1	-4.8
PSN	Preselentsi	8.69	7	P	Pn	23 48 39.0	-0.8
MBRI	Mt Berech	8.75	125	Pn	Pn	23 48 36.0	-4.8
EIL	Elat	8.85	125	P	Pn	23 48 43.5	+1.4
	comp=E,28nm,0.3s,baz=316,slow=2.3,SNR=226						
EIL				S	Sn	23 50 11.7	-8.8
	comp=E,30nm,0.3s,baz=350,slow=9.5,SNR=6.3						
EIL	Elat	8.85	125	Pn	Pn	23 48 37.2	-5.0
TIP	Timpagrande	8.89	300	⇓iP	Pn	23 48 41.1	-1.6
TIP	Timpagrande	8.89	300	ePn	Pn	23 48 41.3	-1.4
TIP	Timpagrande	8.89	300	P	Pn	23 48 40.9	-1.8
TIP	Timpagrande	8.89	300	ePn	Pn	23 48 41.3	-1.4
TR2	Tor 2	8.99	136	P	Pn	23 48 37.6	-6.4
	baz=135						
ULC	Ulcinj	8.99	322	⇑iPn	Pn	23 48 41.4	-2.7
ULC				eSn	Sn	23 50 17.2	-6.7
HBST	Basata	9.01	128	P	Pn	23 48 39.2	-5.0
	baz=127						
ASF	Jabal al Asfar	9.03	106	P	Pn	23 48 40.5	-4.2
	comp=E,5.9nm,0.3s,baz=242,slow=7.8,SNR=37						
ASF				S	Sn	23 50 15.5	-9.5
	comp=E,7.7nm,0.3s,baz=38,slow=13,SNR=2.5						
HKAT	Jabal Katrina	9.04	134	P	Pn	23 48 38.8	-6.1
	baz=134						
NUB		9.08	129	P	Pn	23 48 40.2	-5.1
	baz=129						
ICOR	Ion Corvin	9.08	5	⇑iP	Pn	23 48 47.1	+1.9
CGL1	Ceglie Messapi	9.14	310	ePn	Pn	23 48 44.9	-1.1
CGL1				Sn	Sn	23 50 21.1	-6.3
PVY	Plav	9.14	327	ePn	Pn	23 48 45.0	-1.2
PVY				eSn	Sn	23 50 22.5	-5.1
PVY	Plav	9.14	327	ePn	Pn	23 48 45.0	-1.2
TAR1	Taranto	9.19	309	ePn	Pn	23 48 44.0	-2.7
TAR1				Sn	Sn	23 50 20.3	-8.2
DRME	Dracevica, Mon	9.19	323	⇑iPn	Pn	23 48 44.8	-1.9
DRME				eSn	Sn	23 50 22.0	-6.6
DRME	Dracevica, Mon	9.19	323	⇑iPn	Pn	23 48 44.8	-1.9
CEL	Celeste	9.20	293	ePn	Pn	23 48 46.2	-0.7
CEL				eSn	Sn	23 50 22.7	-6.3
CEL	Celeste	9.20	293	ePn	Pn	23 48 46.2	-0.7
CEL				eSn	Sn	23 50 22.7	-6.3
FASA	Fasano	9.31	311	ePn	Pn	23 48 45.7	-2.6
FASA				Sn	Sn	23 50 23.2	-8.3
MASS	Massafra	9.34	309	ePn	Pn	23 48 46.1	-2.6
MASS				Sn	Sn	23 50 24.5	-7.7
PDG	Podgorica	9.34	324	⇑iP	Pn	23 48 46.6	-2.1
TTG	Podgorica	9.34	324	⇓iPn	Pn	23 48 46.3	-2.4
TTG				eSn	Sn	23 50 25.7	-6.5
TTG	Podgorica	9.34	324	ePn	Pn	23 48 46.3	-2.4
TTG	Podgorica	9.34	324	eP	Pn	23 48 46.3	-2.4
TTG	Podgorica	9.34	324	ePn	Pn	23 48 46.3	-2.4
BEY	Berane	9.39	328	ePn	Pn	23 48 48.4	-1.2
IVA	Berane	9.39	328	ePn	Pn	23 48 48.4	-1.2
IVA				eSn	Sn	23 50 28.3	-5.4
TR1	Tor 1	9.40	136	P	Pn	23 48 44.0	-5.7
	baz=136						
BUM	Brajici-Budva	9.42	322	⇓iPn	Pn	23 48 47.8	-2.1
BUM				eSn	Sn	23 50 27.0	-7.3
KOME	Kolasin	9.54	327	ePn	Pn	23 48 50.2	-1.4
KOME				eSn	Sn	23 50 31.9	-5.5
KOME	Kolasin	9.54	327	ePn	Pn	23 48 50.2	-1.4
TLB	Topalu	9.57	6	⇑iP	Pn	23 48 52.3	+0.4
SH2	Sharm el Sheik	9.57	136	P	Pn	23 48 45.7	-6.3
	baz=136						
CEME	Cevo	9.59	323	⇓iPn	Pn	23 48 49.5	-2.8
CEME				eSn	Sn	23 50 32.2	-6.3
SULR		9.61	358	⇑iP	Pn	23 48 53.5	+1.2
HARR	Harsova	9.66	6	⇓iP	Pn	23 48 53.8	+0.7
RSHS		9.68	132	P	Pn	23 48 48.5	-5.0
HCY	Herceg Novi	9.73	322	⇑iPn	Pn	23 48 51.9	-2.2
HCY				eSn	Sn	23 50 34.7	-7.1
NKME	Niksic	9.74	324	⇑iPn	Pn	23 48 51.9	-2.4
NKME				eSn	Sn	23 50 35.3	-6.9
SG1	Sgolgore (BA)	9.74	309	ePn	Pn	23 48 52.2	-2.1
SG1				Sn	Sn	23 50 35.6	-6.7
NKY	Niksic	9.76	325	⇓iPn	Pn	23 48 52.7	-1.9
NKY				eSn	Sn	23 50 36.2	-6.4
NKY	Niksic	9.76	325	⇓iPn	Pn	23 48 52.7	-1.9
BAI	Bari	9.77	311	ePn	Pn	23 48 51.9	-2.7
BAI				Sn	Sn	23 50 34.6	-8.2
BDAS	Al Bad‘	9.78	130	P	Pn	23 48 49.9	-5.0
BDAS				S	Sn	23 50 29.0	-14
HDK1	Dakhla	9.79	165	P	Pn	23 48 50.4	-4.6
	baz=167						
HHRG	Al Ghardaqah	9.82	141	P	Pn	23 48 51.8	-3.6
	baz=141						
JLOS		9.82	128	P	Pn	23 48 51.3	-4.2
CUC	Castrocucco	9.90	303	ePn	Pn	23 48 54.9	-1.5
CUC	Castrocucco	9.90	303	ePn	Pn	23 48 54.9	-1.5
PLE	Pljevlja	9.98	328	⇑iPn	Pn	23 48 56.6	-1.0
PLE				eSn	Sn	23 50 42.4	-5.8
PLE	Pljevlja	9.98	328	⇑iPn	Pn	23 48 56.6	-1.0
BRY	Bratogost	10.04	324	⇑iPn	Pn	23 48 56.0	-2.5
BRY				eSn	Sn	23 50 42.8	-6.9
AKRG	Al Kharijah	10.10	160	P	Pn	23 48 54.0	-5.2
	baz=161						
UPM	Unac-Piva	10.10	326	⇓iPn	Pn	23 48 57.4	-1.9
UPM				eSn	Sn	23 50 45.0	-6.1
UPM	Unac-Piva	10.10	326	⇓iPn	Pn	23 48 57.4	-1.9
VAE	Valguarnera	10.16	287	P	Pn	23 49 00.8	+0.8
	comp=E,2.5nm,0.3s,baz=151,slow=9.8,SNR=7.9						
VAE				S	Sn	23 50 44.7	-7.8
	comp=E,14nm,0.3s,baz=175,slow=18,SNR=3.1						
CFR	Carcaliu	10.16	6	⇑iP	Pn	23 49 01.0	+1.0
TLCR		10.24	9	⇑iP	Pn	23 49 04.0	+2.9
HERR	Herculane	10.32	343	⇑iP	Pn	23 49 03.8	+1.6
DIVS	Divibare	10.37	332	ePn	Pn	23 49 03.2	+0.3
DIVS	Divibare	10.37	332	ePn	Pn	23 49 03.2	+0.3
ARR	Arges	10.40	352	⇓iP	Pn	23 49 03.5	+0.2
BBLS	Lazići	10.41	330	ePn	Pn	23 49 01.2	-2.2
MDVR	Moldovita	10.41	340	⇓iP	Pn	23 49 04.4	+1.0
MLR	Muntele Rosu	10.43	357	P	Pn	23 49 05.1	+1.4
	comp=E,0.0nm,0.3s,baz=170,slow=5.4,SNR=4.2						
MLR				LR	LR	23 54 00.9	
	comp=E,331nm,18.1s,baz=198,slow=42						
MLR	Muntele Rosu	10.43	357	⇑iP	Pn	23 49 05.3	+1.6
MLR	Muntele Rosu	10.43	357	ePn	Pn	23 49 04.6	+0.9
MLR	Muntele Rosu	10.43	357	ePn	Pn	23 49 04.6	+0.9
VOIR		10.43	354	⇑iP	Pn	23 49 04.5	+0.8
STON	Ston	10.44	321	ePn	Pn	23 48 59.6	-4.2
STON				Sn	Sn	23 50 48.5	-11
HSFG		10.54	142	P	Pn	23 48 59.5	-5.7
	baz=142						
MS1	Monte Sant’Ang	10.69	311	ePn	Pn	23 49 04.4	-2.9
MS1				Sn	Sn	23 50 55.4	-10
PLOR	Plostina	10.77	0	⇑iP	Pn	23 49 09.6	+1.2
VRI	Vrincioaia	10.79	0	⇓iP	Pn	23 49 11.6	+3.0
TEKS	Tekeris	10.93	332	ePn	Pn	23 49 08.9	-1.6
DOPR	Dopca	10.93	355	⇑iP	Pn	23 49 12.0	+1.5
CLTB	Caltabellotta	11.11	287	ePn	Pn	23 49 13.2	+0.1
CLTB	Caltabellotta	11.11	287	ePn	Pn	23 49 13.2	+0.1
BZS	Buzias	11.21	342	⇓iP	Pn	23 49 15.0	+0.7
SIM	Simferopol’	11.41	28	eP	Pn	23 49 18.9	+1.9
SIM				S	Sn	23 51 26.0	+3.1
SIM				pmax	pmax		
	comp=Z,64nm,0.3s						
SIM	Simferopol’	11.41	28	eP	Pn	23 49 18.9	+1.9
	comp=Z,64nm,0.3s						
TESR	Tescani	11.43	0	⇑iP	Pn	23 49 17.6	+0.2
HQSR		11.44	142	P	Pn	23 49 11.8	-5.7
	baz=142						
NADB	Abo Dabab	11.84	143	P	Pn	23 49 17.5	-5.5
	baz=143						
BIZ	Bicaz	11.87	358	⇓iP	Pn	23 49 24.5	+1.2
KIS	Kishinev	12.03	7	eP	Pn	23 49 24.0	-1.5
KIS				eS	Sn	23 51 48.0	+10
KIS				LRM	MLR	23 54 48.0	
	comp=Z,500nm,13.0s						
KIS	Kishinev	12.03	7	eP	Pn	23 49 24.0	-1.5
KIS				eS	Sn	23 51 48.0	+10
KIS				MLR	MLR		
	comp=Z,500nm,13.0s						
KIS				MLR	MLR		
	comp=Z,600nm,14.0s						
KIS	Kishinev	12.03	7	eP	Pn	23 49 24.0	-1.5
BLY	Banja Luka	12.08	326	⇑iP	Pn	23 49 23.2	-3.0
BLY	Banja Luka	12.08	326	ePn	Pn	23 49 23.0	-3.2
BLY	Banja Luka	12.08	326	ePn	Pn	23 49 23.0	-3.2
DRGR		12.08	347	⇓iP	Pn	23 49 26.6	+0.3
PRAR	RASCA	12.29	359	⇑iP	Pn	23 49 30.8	+1.8
BUR04	Bucovina Ar. S	12.59	356	ePn	Pn	23 49 33.5	+0.4
BUR04	Bucovina Ar. S	12.59	356	ePn	Pn	23 49 33.5	+0.4
UDBI	Udbina	12.60	322	ePn	Pn	23 49 30.9	-2.5
UDBI				Sn	Sn	23 51 43.2	-9.0
BUR08	Bucovina Ar. S	12.61	356	ePn	Pn	23 49 34.9	+1.4
BUR08	Bucovina Ar. S	12.61	356	ePn	Pn	23 49 34.9	+1.4
AQU	L’Aquila	12.63	309	ePn	Pn	23 49 34.8	+1.0
AQU	L’Aquila	12.63	309	eP	Pn	23 49 34.8	+1.0
AQU	L’Aquila	12.63	309	eP	Pn	23 49 34.8	+1.0
MORH	Mˆ‡rˆ¡gy, Hung	12.67	334	⇓ePn	Pn	23 49 36.5	+2.3
ANN	Anapa	12.76	37	eP	P	23 49 43.3	-1.5
ANN				pmax	pmax		
	comp=Z,47nm,1.2s						
LTVH	Lˆ'tavˆ'rtes,	12.81	345	⇓ePn	Pn	23 49 39.8	+3.7
NVLJ	Novalja	13.09	320	i Pn	Pn	23 49 35.4	-4.6
NVLJ				Sn	Sn	23 51 53.1	-11
SORM	Soroca	13.12	5	⇓iP	Pn	23 49 40.7	+0.4
SOC	Sochi	13.21	46	eP	Pn	23 49 39.3	-2.3
SOC				e		23 52 07.9	
SOC				MLR	MLR		
	comp=Z,379nm,16.0s						
SOC	Sochi	13.21	46	eP	Pn	23 49 39.3	-2.3
SOC				eS	Sn	23 52 07.9	+1.1
	comp=Z,379nm,16.0s						
TRPA	Tarpa	13.40	348	⇓iP	Pn	23 49 44.4	+0.2
TRPA	Tarpa	13.40	348	⇓ePn	Pn	23 49 45.2	+1.0
OZLJ	Ozalj	13.53	324	ePn	Pn	23 49 42.0	-3.9
BOJS	Bojanci	13.56	324	ePn	Pn	23 49 42.0	-4.3
BOJS				eSn	Sn	23 52 05.0	-10
BEHE	Becsehely	13.61	330	⇓ePn	Pn	23 49 48.8	+1.8
BUD	Budapest	13.65	338	⇓ePn	Pn	23 49 51.5	+3.9
PSZ	Piszkesteto	13.79	341	⇓iP	Pn	23 49 48.4	-1.1
PSZ	Piszkesteto	13.79	341	⇓ePn	Pn	23 49 48.6	-1.0
PSZ	Piszkesteto	13.79	341	ePn	Pn	23 49 48.5	-1.0
PSZ	Piszkesteto	13.79	341	eP	Pn	23 49 48.5	-1.1
PSZ	Piszkesteto	13.79	341	ePn	Pn	23 49 48.5	-1.1
CSKK	Csˆ‡kako	13.80	335	⇓ePn	Pn	23 49 48.2	-1.3
UZH	Uzhgorod	13.93	348	eP	Pn	23 49 51.4	+0.1
VISS	Visnje	13.97	324	ePn	Pn	23 49 47.5	-4.4
VISS				i Sn	Sn	23 52 16.3	-9.1
KEST	Kesra	14.12	278	P	Pn	23 49 53.4	-0.7
	comp=Z,0.6nm,0.3s,baz=65,slow=17,SNR=20						
KEST				S	Sn	23 52 22.4	-6.8
	comp=Z,0.6nm,0.3s,baz=51,slow=23,SNR=5.8						
KEST				LR	LR	23 56 20.6	
	comp=Z,344nm,21.9s,baz=240,slow=41						
KEST	Kesra	14.12	278	ePn	Pn	23 49 53.7	-0.4
KEST				S	Sn	23 52 22.5	-6.8
TAMR	Tamra	14.32	283	ePn	Pn	23 49 56.9	+0.4
TAMR	Tamra	14.32	283	ePn	Pn	23 49 56.9	+0.4
CRVS	Cervenica-Dubn	14.35	346	eP	Pn	23 49 56.3	-0.6
CRVS	Cervenica-Dubn	14.35	346	ePN	Pn	23 49 56.3	-0.6
CRVS	Cervenica-Dubn	14.35	346	ePn	Pn	23 49 56.3	-0.6
JAVS	Javornik	14.42	322	ePn	Pn	23 49 53.3	-4.6
JAVS				eSn	Sn	23 52 24.6	-12
TRI	Trieste	14.44	321	ePn	Pn	23 49 57.9	-0.2
TRI	Trieste	14.44	321	eP	Pn	23 49 57.9	-0.2
TRI	Trieste	14.44	321	ePn	Pn	23 49 57.9	-0.2
PERS	Pernice	14.46	327	ePn	Pn	23 49 54.4	-3.9
PERS				eSn	Sn	23 52 27.2	-10
SOKA	Soboth	14.53	326	i Pn	Pn	23 49 59.7	+0.4
	comp=Z,29nm,0.9s,SNR=25						
SOKA	Soboth	14.53	326	Pn	Pn	23 49 59.7	+0.4
	comp=Z,29nm,0.9s,SNR=25						
VYHS	Vyhne	14.61	339	eP	Pn	23 49 59.1	-1.2
VYHS				e		23 52 47.5	
VYHS	Vyhne	14.61	339	ePN	Pn	23 49 59.1	-1.2
VYHS	Vyhne	14.61	339	eSN	Sn	23 52 47.5	+6.6
VYHS	Vyhne	14.61	339	ePn	Pn	23 49 59.1	-1.2
OBKA	Obir	14.62	325	i Pn	Pn	23 50 00.4	-0.2
	comp=Z,38nm,1.6s,SNR=15						
OBKA	Obir	14.62	325	Pn	Pn	23 50 00.4	-0.2
	comp=Z,38nm,1.6s,SNR=15						
THTN	Thala	14.67	277	ePn	Pn	23 50 02.9	+1.7
THTN	Thala	14.67	277	ePn	Pn	23 50 02.9	+1.7
AKH	Akhalkalaki	14.67	59	ePn	Pn	23 50 01.2	-0.2
AKH	Akhalkalaki	14.67	59	eP	Pn	23 50 01.2	-0.2
AKH	Akhalkalaki	14.67	59	ePn	Pn	23 50 01.2	-0.2
ARSA	Arzberg	14.75	329	i Pn	Pn	23 50 02.6	+0.4
	comp=Z,47nm,1.6s,SNR=32						
ARSA	Arzberg	14.75	329	Pn	Pn	23 50 02.6	+0.4
	comp=Z,47nm,1.6s,SNR=32						
KWP	Kalwaria Pacla	14.84	350	eP	Pn	23 50 03.6	+0.3
KWP	Kalwaria Pacla	14.84	350	ePn	Pn	23 50 02.7	-0.6
KWP	Kalwaria Pacla	14.84	350	eP	Pn	23 50 03.6	+0.3
KWP	Kalwaria Pacla	14.84	350	ePn	Pn	23 50 02.7	-0.6
LVV	L’vov	14.87	353	eP	Pn	23 50 05.5	+1.9
LVV				eS	Sn	23 52 52.3	+5.3
LVV				MLR	MLR		
	comp=N,400nm,11.0s						
LVV				MLR	MLR		
	comp=E,200nm,11.0s						
LVV				MLR	MLR		
	comp=Z,400nm,11.0s						
LVV	L’vov	14.87	353	eP	Pn	23 50 05.5	+1.9
NEY	Neytrino	14.90	52	i P	Pn	23 50 05.6	+1.3
MODS	Modra-Piesok	15.00	335	eP	Pn	23 50 03.6	-1.8
MODS				e		23 52 52.9	
MODS	Modra-Piesok	15.00	335	ePN	Pn	23 50 03.6	-1.8
MODS	Modra-Piesok	15.00	335	eSN	Sn	23 52 52.9	+2.5
MODS	Modra-Piesok	15.00	335	ePn	Pn	23 50 03.6	-1.8
LANS	Liptovska Anna	15.03	342	eP	Pn	23 50 08.3	+2.4
LANS	Liptovska Anna	15.03	342	ePN	Pn	23 50 08.3	+2.4
LANS	Liptovska Anna	15.03	342	eP	Pn	23 50 08.3	+2.4
NIE	Niedzica	15.08	344	eP	Pn	23 50 06.6	+0.1
NIE				eS	Sn	23 52 57.5	+5.2
NIE	Niedzica	15.08	344	eP	Pn	23 50 06.6	+0.1
NIE				eS	Sn	23 52 57.5	+5.2
MYKA	Terra Mystica	15.14	324	i Pn	Pn	23 50 06.2	-1.1
	comp=Z,7.7nm,0.6s						
MYKA	Terra Mystica	15.14	324	Pn	Pn	23 50 06.2	-1.1
	comp=Z,7.7nm,0.6s						
CONA	Conrad Observa	15.15	331	i Pn	Pn	23 50 07.0	-0.4
	comp=Z,25nm,1.5s,SNR=14						
CONA	Conrad Observa	15.15	331	Pn	Pn	23 50 07.0	-0.4
	comp=Z,25nm,1.5s,SNR=14						
GNI	Garni	15.21	65	P	Pn	23 50 09.9	+1.5
	comp=Z,3.0nm,0.3s,baz=313,slow=3.9,SNR=17						
GNI				LR	LR	23 57 32.9	
	comp=Z,372nm,20.3s,baz=278,slow=43						
GNI	Garni	15.21	65	ePn	Pn	23 50 09.8	+1.4
	comp=Z,43nm,0.8s						
GNI	Garni	15.21	65	i P	Pn	23 50 09.9	+1.4
	SNR=7.6						
GNI	Garni	15.21	65	ceP	Pn	23 50 10.2	+1.8
GNI				pmax	pmax		
	comp=Z,280nm,1.7s						
GNI	Garni	15.21	65	ePn	Pn	23 50 09.8	+1.4
	comp=Z,43nm,0.8s						
GNI	Garni	15.21	65	eP	Pn	23 50 10.2	+1.8
	comp=Z,280nm,1.7s						
KIV	Kislovodsk	15.22	50	ePn	Pn	23 50 10.4	+2.1
	comp=Z,44nm,0.8s						
KIV	Kislovodsk	15.22	50	i P	Pn	23 50 11.1	+2.7
	SNR=14						
KIV	Kislovodsk	15.22	50	eP	Pn	23 50 10.6	+2.3
KIV				eS	Sn	23 52 58.8	+3.0
KIV				pmax	pmax		
	comp=Z,55nm,1.1s						
KIV				MLR	MLR		
	comp=Z,173nm,12.0s						
KIV	Kislovodsk	15.22	50	ePn	Pn	23 50 10.4	+2.1
	comp=Z,44nm,0.8s						
KIV	Kislovodsk	15.22	50	P	Pn	23 50 11.1	+2.7
	SNR=14						
KVAR	Kislovodsk Arr	15.23	50	LR	LR	23 58 00.9	
	comp=Z,297nm,18.3s,baz=229,slow=45						
KBZ	Khabaz	15.24	51	P	Pn	23 50 11.0	+2.5
	comp=Z,0.2nm,0.3s,baz=238,slow=10,SNR=15						
KBZ				S	S	23 53 10.7	+0.6
	baz=354,slow=23,SNR=1.0						
KBZ				LR	LR	23 57 38.2	
	comp=Z,176nm,19.6s,baz=250,slow=43						
JAVC	Velka Javorina	15.29	337	ePN	Pn	23 50 09.8	+0.6
VLC	Villacollemand	15.45	311	ePn	Pn	23 50 11.6	+0.4
	comp=Z,38nm,1.4s						
VLC	Villacollemand	15.45	311	ePn	Pn	23 50 11.6	+0.4
	comp=Z,38nm,1.4s						
NCK	Nalchik	15.58	52	i P	Pn	23 50 15.0	+2.1
NCK	Nalchik	15.58	52	i P	Pn	23 50 15.0	+2.1
KBA	Koelnbreinsper	15.61	324	i Pn	Pn	23 50 12.6	-0.8
	comp=Z,23nm,0.6s,SNR=16						
KBA	Koelnbreinsper	15.61	324	Pn	Pn	23 50 12.6	-0.8
	comp=Z,23nm,0.6s,SNR=16						
ABSA	Djebel Ababsia	15.62	280	P	P	23 50 20.0	+3.2
ABSA	Djebel Ababsia	15.62	280	P	P	23 50 20.0	+3.2
TBLG	Delisi	15.66	59	ePn	Pn	23 50 13.5	-0.5
	comp=Z,30nm,1.1s						
TBLG	Delisi	15.66	59	eP	Pn	23 50 13.5	-0.5
TBLG				pmax	pmax		
	comp=Z,30nm,1.1s						
TBLG	Delisi	15.66	59	ePn	Pn	23 50 13.5	-0.5
	comp=Z,30nm,1.1s						
CMAH	Djebel Manchou	15.66	281	P	P	23 50 17.3	+0.1
CMAH	Djebel Manchou	15.66	281	P	P	23 50 17.3	+0.1
AK11	Malin Array Si	15.71	6	ePn	Pn	23 50 15.9	+1.4
KIEV	Kiev	15.73	6	ePn	Pn	23 50 14.1	-0.6
	comp=Z,28nm,0.7s						
KIEV				eSn	Sn	23 53 09.4	+1.5
KIEV	Kiev	15.73	6	i P	Pn	23 50 15.7	+0.9
	SNR=18						
KIEV	Kiev	15.73	6	eP	Pn	23 50 14.1	-0.6
KIEV				e		23 53 09.4	
KIEV				pmax	pmax		
	comp=Z,28nm,0.7s						
AKASG	Malin Array Be	15.74	6	P	Pn	23 50 14.7	-0.1
	comp=Z,15nm,0.3s,baz=195,slow=9.9,SNR=34						
AKASG				S	S	23 53 16.6	-3.7
	baz=193,slow=22,SNR=13						
AKASG				LR	LR	23 56 39.2	
	comp=Z,395nm,20.9s,baz=190,slow=38						
AKBB	Malin Array Si	15.74	6	ePn	Pn	23 50 14.2	-0.6
	comp=Z,29nm,0.8s						
AKBB				eSn	S	23 53 17.3	-3.0
AKBB	Malin Array Si	15.74	6	eP	Pn	23 50 14.3	-0.6
AKBB				pmax	pmax		
	comp=Z,29nm,0.8s						
AKBB	Malin Array Si	15.74	6	ePn	Pn	23 50 14.2	-0.6
	comp=Z,29nm,0.8s						
AKBB				eSn	S	23 53 17.3	-3.0
MOA	Molln	15.76	328	i Pn	Pn	23 50 14.7	-0.4
	comp=Z,36nm,1.1s,SNR=24						
MOA	Molln	15.76	328	Pn	Pn	23 50 14.7	-0.4
	comp=Z,36nm,1.1s,SNR=24						
ABTA	Abfaltersbach	15.79	322	i Pn	Pn	23 50 12.3	-3.2
	comp=Z,26nm,0.6s,SNR=22						
KRUC	Moravsky	15.90	335	ePN	Pn	23 50 16.0	-0.9
OJC	Ojcow	15.95	344	eP	Pn	23 50 16.5	-1.0
OJC				eS	S	23 53 36.4	+12
OJC	Ojcow	15.95	344	ePn	Pn	23 50 17.2	-0.3
	comp=Z,19nm,0.9s						
OJC	Ojcow	15.95	344	eP	Pn	23 50 17.2	-0.3
OJC				pmax	pmax		
	comp=Z,19nm,0.9s						
OJC	Ojcow	15.95	344	ePn	Pn	23 50 17.2	-0.3
	comp=Z,19nm,0.9s						
OKC	Ostrava-Krasne	16.02	340	eP	Pn	23 50 18.3	-0.1
OKC				AMS	AMS	23 58 00.0	
	comp=Z,400nm,14.0s						
OKC	Ostrava-Krasne	16.02	340	eP	Pn	23 50 18.3	-0.1
OKC				MLR	MLR		
	comp=Z,400nm,14.0s						
VRAC	Vranov	16.04	336	P	Pn	23 50 18.4	-0.3
	comp=Z,1.2nm,0.3s,baz=156,slow=12,SNR=23						
VRAC				LR	LR	23 57 16.1	

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      comp=Z,368nm,19.1s,baz=152,slow=40
VRAC  Vranov             16.04 336⇓iP   Pn      23 50 18.7  0.0
VRAC  Vranov             16.04 336⇓iP   Pn      23 50 18.7  0.0
VRAC  Vranov             16.04 336 ePN  Pn      23 50 18.3 -0.3
CAEH  'Ain El Ouahch     16.12 282  P   Pn      23 50 20.2 +0.4
CAEH                                P   Pn      23 50 21.4 +1.6
CAEH  'Ain El Ouahch     16.12 282  P   Pn      23 50 21.4 +1.6
MORC  Moravsky Berou     16.14 338⇓iP   Pn      23 50 20.4 +0.4
MORC  Moravsky Berou     16.14 338 ePn  Pn      23 50 19.5 -0.5
      comp=Z,254nm,1.4s
MORC  Moravsky Berou     16.14 338 eP   Pn      23 50 19.5 -0.5
MORC                                pmax pmax
      comp=Z,254nm,1.4s
MORC  Moravsky Berou     16.14 338 ePn  Pn      23 50 19.5 -0.5
      comp=Z,254nm,1.4s
MORC  Moravsky Berou     16.14 338⇓iP   Pn      23 50 20.4 +0.4
MORC  Moravsky Berou     16.14 338 ePN  Pn      23 50 20.5 +0.4
WTTA  Wattenberg         16.58 322 i Pn Pn      23 50 24.1 -1.6
      comp=Z,20nm,0.5s,SNR=6.1
WTTA  Wattenberg         16.58 322  Pn  Pn      23 50 24.1 -1.6
      comp=Z,20nm,0.5s,SNR=6.1
KRLC  Kraliky            16.64 337 eP   Pn      23 50 27.0 +0.7
KRLC                               ex   x       23 50 29.2
KRLC  Kraliky            16.64 337 eP   Pn      23 50 27.0 +0.7
KRLC  Kraliky            16.64 337 eP   Pn      23 50 27.0 +0.7
WATA  Walderalm          16.66 322 i P  P       23 50 28.7 +0.5
      comp=Z,33nm,0.5s,SNR=13
WATA  Walderalm          16.66 322  P   P       23 50 28.7 +0.5
      comp=Z,33nm,0.5s,SNR=13
GEA0  GERESS Array S     16.75 329 ePn  Pn      23 50 27.2 -0.6
GEA0  GERESS Array S     16.75 329 ePn  Pn      23 50 27.2 -0.6
GEC2  GERESS Array S     16.76 329 ePn  Pn      23 50 27.2 -0.6
      comp=Z,74nm,1.3s
GEC2  GERESS Array S     16.76 329 eP   Pn      23 50 27.3 -0.6
GEC2                                pmax pmax
      comp=Z,74nm,1.3s
GERES GERESS Array B     16.76 329  P   Pn      23 50 27.2 -0.6
      comp=Z,3.4nm,0.3s,baz=141,slow=11,SNR=65
GERES                               S   Sn      23 53 35.5 +2.4
      comp=Z,0.4nm,0.3s,baz=149,slow=21,SNR=3.1
GERES                               LR  LR      23 58 27.4
      comp=Z,321nm,19.8s,baz=146,slow=42
FETA  Feichten           16.89 320 i P  Pn      23 50 29.7 +0.2
      comp=Z,78nm,1.1s,SNR=27
FETA  Feichten           16.89 320  P   Pn      23 50 29.7 +0.2
      comp=Z,78nm,1.1s,SNR=27
MOTA  Moosalm            16.90 321 i P  Pn      23 50 30.9 +1.2
      comp=Z,8.2nm,0.6s,SNR=7.5
MOTA  Moosalm            16.90 321  P   Pn      23 50 30.9 +1.2
      comp=Z,8.2nm,0.6s,SNR=7.5
GROC  Groznyy            16.92  56 eP   P       23 50 31.6 +0.6
GROC                               eS   S       23 53 41.6 -2.8
GROC                                pmax pmax
      comp=Z,75nm,1.0s
GROC  Groznyy            16.92  56 eP   P       23 50 31.6 +0.6
      comp=Z,75nm,1.0s
DPC   Dobruska-Polom     17.02 337 eP   Pn      23 50 30.9 -0.2
DPC                                eS   Sn      23 53 43.1 +3.7
DPC                                 AMS AMS     23 58 20.0
      comp=Z,400nm,11.0s
DPC   Dobruska-Polom     17.02 337 eP   Pn      23 50 30.9 -0.2
DPC                                eS   Sn      23 53 43.1 +3.7
DPC                                 MLR MLR
      comp=Z,400nm,11.0s
DPC   Dobruska-Polom     17.02 337 eP   Pn      23 50 30.9 -0.2
      comp=Z,400nm,11.0s
KHC   Kasperske Hory     17.03 330 eP   Pn      23 50 30.0 -1.2
KHC                                epP  pP      23 50 40.6 -3.8
KHC                                ex   x       23 50 57.0
KHC                                eS   Sn      23 53 39.3 -0.3
KHC                                ex   x       23 53 52.0
KHC                                 AMS AMS     23 59 00.0
      comp=Z,600nm,13.1s
KHC   Kasperske Hory     17.03 330 ePn  Pn      23 50 29.9 -1.2
      comp=Z,38nm,1.3s
KHC   Kasperske Hory     17.03 330 eP   Pn      23 50 30.0 -1.2
KHC                                eS   Sn      23 53 39.3 -0.3
KHC                                 MLR MLR
      comp=Z,600nm,13.1s
KHC   Kasperske Hory     17.03 330 ePn  Pn      23 50 29.9 -1.2
      comp=Z,38nm,1.3s
RETA  Reutte             17.17 321 i Pn Pn      23 50 32.5 -0.4
      comp=Z,30nm,0.4s,SNR=40
RETA  Reutte             17.17 321  Pn  Pn      23 50 32.5 -0.4
      comp=Z,30nm,0.4s,SNR=40
GOPC  GO Pecny, Ondr     17.19 333 eP   Pn      23 50 32.4 -0.6
GOPC                               eS   Sn      23 53 42.5 -0.7
GOPC                                AMS AMS     23 57 00.0
      comp=Z,300nm,13.3s
GOPC  GO Pecny, Ondr     17.19 333 eP   Pn      23 50 32.4 -0.6
GOPC                               eS   Sn      23 53 42.5 -0.7
GOPC                                MLR MLR
      comp=Z,300nm,13.3s
GOPC  GO Pecny, Ondr     17.19 333 eP   Pn      23 50 32.4 -0.6
DAVOX Davos/Dischmat     17.20 318  P   Pn      23 50 34.0 +0.6
      comp=Z,3.3nm,0.3s,baz=114,slow=7.8,SNR=28
DAVOX                               S   S       23 53 51.0 +0.5
      comp=Z,0.6nm,0.3s,baz=230,slow=20,SNR=1.8
DAVOX                               LR  LR      23 58 54.5
      comp=Z,465nm,19.8s,baz=121,slow=43
DAVOX Davos/Dischmat     17.20 318  P   Pn      23 50 34.0 +0.6
DAVOX                               pmax pmax
      comp=Z,3.0nm,0.3s
DAVOX                               MLR MLR
      comp=Z,465nm,19.8s
UPC   Upice              17.26 337 eP   Pn      23 50 34.1 +0.2
UPC                                eS   Sn      23 53 44.0 -1.0
UPC                                 AMS AMS     23 59 20.0
      comp=Z,400nm,9.8s
UPC   Upice              17.26 337 eP   Pn      23 50 34.1 +0.2
UPC                                eS   Sn      23 53 44.0 -1.0
UPC                                 MLR MLR
      comp=Z,400nm,9.8s
UPC   Upice              17.26 337 eP   Pn      23 50 34.1 +0.2
      comp=Z,400nm,9.8s
BEL   Belsk              17.28 348 eP   P       23 50 35.7 +0.8
BEL   Belsk              17.28 348 eP   P       23 50 35.7 +0.8
BEL   Belsk              17.28 348 eP   P       23 50 35.7 +0.8
TUE   Stuetta            17.32 316 ePn  Pn      23 50 35.4 +0.6
      comp=Z,22nm,0.5s
TUE   Stuetta            17.32 316 ePn  Pn      23 50 35.4 +0.6
      comp=Z,22nm,0.5s
PRU   Pruhonice          17.34 333 eP   Pn      23 50 34.1 -0.8
PRU                                ex   x       23 50 40.8
PRU                                eS   Sn      23 53 44.0 -2.9
PRU                                 AMS AMS     23 57 40.0
      comp=Z,300nm,10.8s
PRU   Pruhonice          17.34 333 eP   Pn      23 50 34.1 -0.8
PRU                                eS   Sn      23 53 44.0 -2.9
PRU                                 MLR MLR
      comp=Z,300nm,10.8s
PRU   Pruhonice          17.34 333 eP   Pn      23 50 34.1 -0.8
      comp=Z,300nm,10.8s
PRA   Prague             17.45 333 eP   Pn      23 50 35.9 -0.3
PRA                                eS   Sn      23 53 44.9 -4.5
PRA                                 AMS AMS     23 57 10.0
      comp=Z,300nm,10.0s
PRA   Prague             17.45 333 eP   Pn      23 50 35.9 -0.3
PRA                                eS   Sn      23 53 44.9 -4.5
PRA                                 MLR MLR
      comp=Z,300nm,10.0s
KSP   Ksiaz              17.46 338 eP   Pn      23 50 35.9 -0.5
KSP                                eS   S       23 54 13.3 +18
KSP   Ksiaz              17.46 338 eP   Pn      23 50 35.9 -0.5
KSP   Ksiaz              17.46 338 eP   Pn      23 50 35.9 -0.5
CALF  Calern             17.50 306  P   Pn      23 50 37.5 +0.5
DAVA  Damuels            17.51 319 i P  Pn      23 50 36.7 -0.5
      comp=Z,34nm,0.6s,SNR=22
DAVA  Damuels            17.51 319  P   Pn      23 50 36.7 -0.5
      comp=Z,34nm,0.6s,SNR=22
AKT   Akhty              17.74  63 eP   Pn      23 50 39.2 -0.8
AKT                                eS   Sn      23 53 57.4 +0.5
AKT                                 pmax pmax
      comp=Z,10.0nm,1.6s
AKT   Akhty              17.74  63 eP   Pn      23 50 39.2 -0.8
      comp=Z,10.0nm,1.6s
PVCC  Panska Ves         17.77 334 eP   Pn      23 50 39.6 -0.6
PVCC                                AMS AMS     23 57 30.0
      comp=Z,400nm,7.8s
PVCC  Panska Ves         17.77 334 eP   Pn      23 50 39.6 -0.6
PVCC                                MLR MLR
      comp=Z,400nm,7.8s
PVCC  Panska Ves         17.77 334 eP   Pn      23 50 39.6 -0.6
      comp=Z,400nm,7.8s
SURF  Saint Ours         17.87 308  P   P       23 50 42.3 +0.6
MAK   Makhachkala        18.00  58 eP   Pn      23 50 44.2 +1.2
MAK                                eS   S       23 54 07.2 +0.9
MAK                                 pmax pmax
      comp=Z,196nm,1.3s
MAK                                 MLR MLR
      comp=Z,344nm,13.0s
MAK   Makhachkala        18.00  58 eP   Pn      23 50 44.2 +1.2
      comp=Z,196nm,1.3s
BNI   Bardonecchia       18.20 309 eP   P       23 50 45.0 -0.3
      comp=Z,44nm,1.2s
BNI   Bardonecchia       18.20 309 eP   P       23 50 45.0 -0.3
BNI                                 pmax pmax
      comp=Z,44nm,1.2s
BNI   Bardonecchia       18.20 309 eP   P       23 50 45.0 -0.3
      comp=Z,44nm,1.2s
BRG   Berggiesshubel     18.28 334 i P  P       23 50 45.1 -0.8
      comp=Z,30nm,1.1s
BRG   Berggiesshubel     18.28 334 i P  P       23 50 45.1 -0.8
BRG                                 pmax pmax
      comp=Z,7.0nm,1.1s
BRG   Berggiesshubel     18.28 334 i P  P       23 50 45.1 -0.8
      comp=Z,7.0nm,1.1s
VORD  Divnogorie         18.35  26 eP   P       23 50 45.9 -0.7
VORD                                pmax pmax
      comp=Z,90nm,1.4s
VORD  Divnogorie         18.35  26 eP   P       23 50 45.9 -0.7
      comp=Z,90nm,1.4s
NKC   Novy Kostel        18.35 330 eP   P       23 50 46.2 -0.6
NKC                                 AMS AMS     23 59 50.0
      comp=Z,700nm,12.5s
NKC   Novy Kostel        18.35 330 eP   P       23 50 46.2 -0.6
NKC                                 MLR MLR
      comp=Z,700nm,12.5s
GUT   Gutenstein         18.40 320  P   P       23 50 46.7 -0.6
SENIN Lac Senin/Sane     18.45 314 eP   P       23 50 47.8 -0.3
      comp=Z,46nm,0.5s
SENIN                              eSn  Sn      23 54 04.0  -10
SENIN Lac Senin/Sane     18.45 314 eP   P       23 50 47.8 -0.3
      comp=Z,46nm,0.5s
SENIN                              eSn  Sn      23 54 04.0  -10
GRFO  Grafenberg         18.47 327 eP   P       23 50 47.8 -0.3
      comp=Z,157nm,1.6s
GRFO  Grafenberg         18.47 327 eP   P       23 50 47.8 -0.3
GRFO                                pmax pmax
      comp=Z,157nm,1.6s
GRFO  Grafenberg         18.47 327 eP   P       23 50 47.8 -0.3
      comp=Z,157nm,1.6s
VSR   Storozhevoye       18.51  25 eP   P       23 50 48.1 -0.3
VSR                                 pmax pmax
      comp=Z,10.0nm,0.4s
VSR   Storozhevoye       18.51  25 eP   P       23 50 48.1 -0.3
      comp=Z,10.0nm,0.4s
RSL   Roselend           18.52 311  P   P       23 50 49.2 +0.4
STU   Stuttgart          18.80 322 eP   P       23 50 51.3 -0.4
      comp=Z,43nm,0.6s
STU   Stuttgart          18.80 322 eP   P       23 50 51.3 -0.4
STU                                 pmax pmax
      comp=Z,43nm,0.6s
VORR  Voronezh           18.90  25  P   P       23 50 52.0 -0.7
VORR                                pmax pmax
      comp=Z,350nm,1.4s
VORR  Voronezh           18.90  25  P   P       23 50 52.0 -0.7
      comp=Z,350nm,1.4s
BFO   Black Forest       18.97 320 eP   P       23 50 52.9 -0.8
      comp=Z,6.0nm,1.3s
BFO   Black Forest       18.97 320 i P  P       23 50 53.4 -0.2
BFO   Black Forest       18.97 320 i P  P       23 50 53.4 -0.2
CLL   Collm              18.98 333 i P  P       23 50 53.9 +0.3
      comp=Z,39nm,0.8s
CLL                                i pP pP      23 51 04.2 -1.7
CLL                                eS   S       23 54 20.0 -6.1
CLL                                 Lm  MLR     23 58 00.0
      comp=Z,300nm,22.0s
CLL   Collm              18.98 333 eP   P       23 50 53.9 +0.3
      comp=Z,38nm,0.6s
CLL   Collm              18.98 333 i P  P       23 50 53.9 +0.3
CLL                                eS   S       23 54 20.0 -6.1
CLL                                 pmax pmax
      comp=Z,39nm,0.8s
CLL   Collm              18.98 333 eP   P       23 50 53.9 +0.3
      comp=Z,38nm,0.6s
SUW   Suwalki            19.10 354 eP   P       23 50 54.5 -0.4
SUW                                eS   S       23 54 26.9 -1.5
SUW   Suwalki            19.10 354 eP   P       23 50 54.5 -0.4
SUW                                eS   S       23 54 26.9 -1.5
EMHD  Djebel Mahouad     19.28 280  P   P       23 50 58.0 +0.9
EMHD  Djebel Mahouad     19.28 280  P   P       23 50 58.0 +0.9
OG35  Corcelles          19.34 311  P   P       23 50 56.9 -0.8
GKP   Gorka Klasztor     19.38 343 eP   P       23 50 56.9 -1.0
GKP                                eS   S       23 54 33.1 -0.8
GKP   Gorka Klasztor     19.38 343 eP   P       23 50 56.9 -1.0
GKP                                eS   S       23 54 33.1 -0.8
GKP   Gorka Klasztor     19.38 343 eP   P       23 50 56.9 -1.0
GKP                                eS   S       23 54 33.1 -0.8
MICGM Minsk              19.45   2 e    P       23 50 59.0 +0.3
MNK   Minsk              19.45   2 eP   P       23 50 54.0 -4.7
ECH   Echery             19.54 318 eP   P       23 50 58.9 -0.9
      comp=Z,74nm,1.3s
ECH   Echery             19.54 318 eP   P       23 50 58.9 -0.9
ECH                                 pmax pmax
      comp=Z,74nm,1.3s
ECH   Echery             19.54 318  P   P       23 51 00.1 +0.3
NACGM Naroch             19.84   0 e    P       23 51 02.0 -0.9
RAYN  Ar Rayn            20.04 120 eP   P       23 51 06.1 +0.6
      comp=Z,109nm,1.8s
RAYN  Ar Rayn            20.04 120 i P  P       23 51 04.5 -0.9
      SNR=19
RAYN  Ar Rayn            20.04 120 eP   P       23 51 06.1 +0.6
RAYN                                pmax pmax
      comp=Z,109nm,1.8s
KLNR  Kaliningrad        20.04 349c iP  P       23 51 03.6 -1.5
KLNR                                pmax pmax
      comp=Z,100nm,1.4s
KLNR  Kaliningrad        20.04 349 i P  P       23 51 03.6 -1.5
      comp=Z,100nm,1.4s
IDID  Didziasalis        20.25   0 eP   P       23 51 05.2 -2.2
IDID                                IAmb IAmb   23 51 10.0
      comp=Z,8.8nm,0.5s
IDID  Didziasalis        20.25   0 eP   P       23 51 05.2 -2.2
      SNR=41
IIGN  Ignalina           20.29 359 eP   P       23 51 06.5 -1.3
IIGN                                IAmb IAmb   23 51 12.3
      comp=Z,20nm,0.6s
IIGN  Ignalina           20.29 359 eP   P       23 51 06.5 -1.3
      SNR=40
EBNR  Beni Rached        20.42 281  P   P       23 51 10.3 +0.8
EBNR  Beni Rached        20.42 281  P   P       23 51 10.3 +0.8
ECHA  Ech Chlef          20.56 280  P   P       23 51 12.0 +1.1
ECHA  Ech Chlef          20.56 280  P   P       23 51 12.0 +1.1
IZAR  Zarasai            20.69 359 eP   P       23 51 11.3 -0.8
IZAR                                IAmb IAmb   23 51 13.2
      comp=Z,21nm,0.6s
IZAR  Zarasai            20.69 359 eP   P       23 51 11.3 -0.8
      SNR=40
EANR  'Ain N'Sour        20.79 280  P   P       23 51 14.7 +1.2
EANR  'Ain N'Sour        20.79 280  P   P       23 51 14.7 +1.2
WLF   Walferdange        20.92 320⇓P    P       23 51 14.4 -0.3
WLF   Walferdange        20.92 320 eP   P       23 51 14.3 -0.4
      comp=Z,94nm,1.5s
WLF   Walferdange        20.92 320 eP   P       23 51 14.3 -0.4
WLF                                 pmax pmax
      comp=Z,94nm,1.5s
OBN   Obninsk            21.20  16  P   P       23 51 15.8 -1.7
      comp=Z,113nm,0.5s,baz=325,slow=5.5,SNR=16
OBN                                 S   S       23 55 02.0 -7.9
      comp=Z,22nm,0.4s,baz=229,slow=21,SNR=1.8
OBN                                 LR  LR      00 00 27.7
      comp=Z,1µm,18.5s,baz=187,slow=39
OBN   Obninsk            21.20  16c iP  P       23 51 15.8 -1.7
OBN                                e            23 51 37.1
OBN                                eS   S       23 55 12.3 +2.3
OBN                                eSS  SnSn    23 55 36.9 +1.5
OBN                                 pmax pmax
      comp=Z,87nm,1.4s
OBN                                 MLR MLR
      comp=Z,369nm,18.0s
MEM   Membach            21.57 322⇑P    P       23 51 21.5 -0.1
      comp=Z,51nm,0.9s
RGN   Rugen              21.58 339 eP   P       23 51 21.2 -0.4
      comp=Z,39nm,0.8s
BSD   Bornholm Skovb     21.63 342 i P  P       23 51 21.4 -0.8
BSD   Bornholm Skovb     21.63 342 eP   P       23 51 21.4 -0.8
BSD   Bornholm Skovb     21.63 342 eP   P       23 51 21.4 -0.8
HGN   Heimansgroeve      21.70 323 i P  P       23 51 23.2 +0.1
HGN                                eS   S       23 55 19.4 -0.7
BCLA  Clavier            21.81 321⇑P    P       23 51 24.0 -0.2
      comp=Z,45nm,1.3s
BEBN  Eben Emael         21.85 322⇑P    P       23 51 24.6  0.0
DOU   Dourbes            21.99 320⇑P    P       23 51 25.4 -0.8
MOS   Moscow             22.01  17 eP   P       23 51 24.6 -1.7
MOS                                eS   S       23 55 21.9 -3.9
MOS                                eSS  SnSn    23 55 50.5 -4.8
MOS                                 pmax pmax
      comp=Z,122nm,1.1s
MOS                                 pmax pmax
      comp=Z,400nm,2.0s
TAM   Tamanrasset        22.11 242 eP   P       23 51 28.4 +0.6
      comp=Z,38nm,1.1s
TAM   Tamanrasset        22.11 242 eP   P       23 51 28.4 +0.6
TAM                                 pmax pmax
      comp=Z,38nm,1.1s
TAM   Tamanrasset        22.11 242 eP   P       23 51 28.4 +0.6
      comp=Z,38nm,1.1s
SNF   Seneffe            22.39 320⇑P    P       23 51 30.2 -0.2
UCC   Uccle              22.52 321⇑P    P       23 51 31.3 -0.5
      comp=Z,38nm,1.3s
UCC                                ⇑AP  pP      23 51 46.6 +2.3
VSU   Vasula             23.41   0ceP   P       23 51 39.4 -1.2
VSU                                 pmax pmax
      comp=Z,120nm,1.2s
ES19  SONSECA Array      24.64 290 eP   P       23 51 52.9 +0.7
ES19  SONSECA Array      24.64 290 eP   P       23 51 52.9 +0.7
ESDC  Sonseca Array      24.68 290  P   P       23 51 53.0 +0.3
      comp=Z,2.4nm,0.4s,baz=82,slow=9.6,SNR=39
ESDC                                LR  LR      00 01 19.2
      comp=Z,103nm,20.3s,baz=265,slow=36
ESDC  Sonseca Array      24.68 290  P   P       23 51 53.0 +0.3
ESLA  Sonseca Array      24.68 290 eP   P       23 51 53.2 +0.5
      comp=Z,41nm,1.4s
ESLA  Sonseca Array      24.68 290 eP   P       23 51 53.2 +0.5
      comp=Z,41nm,1.4s
PUL   Pulkovo            24.83   4ceP   P       23 51 53.7 +0.1
PUL                                 pmax pmax
      comp=Z,128nm,0.7s
PAB   San Pablo          24.98 290 eP   P       23 51 56.3 +0.9
      comp=Z,46nm,1.4s
PAB   San Pablo          24.98 290 eP   P       23 51 56.3 +0.9
PAB                                 pmax pmax
      comp=Z,46nm,1.4s
PAB   San Pablo          24.98 290 eP   P       23 51 56.3 +0.9
      comp=Z,46nm,1.4s
GEYT  Alibeck            25.41  74  P   P       23 51 58.8 -0.4
      comp=Z,16nm,0.9s,baz=235,slow=27,SNR=59
GEYT                                S   S       23 56 30.4 +8.3
      comp=Z,0.5nm,0.5s,baz=280,slow=40,SNR=3.1
GYA0B ALIBECK ARRAY      25.41  74 eP   P       23 51 59.8 +0.6
      comp=Z,81nm,1.3s
GYA0B ALIBECK ARRAY      25.41  74 eP   P       23 51 59.8 +0.6
      comp=Z,81nm,1.3s
DAMY  Dhamar             25.92 138 eP   P       23 52 04.9 +0.6
      comp=Z,34nm,1.2s
MDT   Midelt             25.97 274  P   P       23 52 04.0 -0.5
      comp=Z,5.0nm,0.9s,baz=84,slow=14,SNR=6.5
MDT                                 LR  LR      00 04 52.7
      comp=Z,224nm,19.2s,baz=90,slow=42
MDT   Midelt             25.97 274  P   P       23 52 04.0 -0.5
STRU  Stroemstad         26.06 342 eP   P       23 52 02.8 -1.9
HOMB  Homborsund         26.16 338 eP   P       23 52 03.9 -1.8
HOMB                                IAmb IAmb   23 52 04.6
      comp=Z,5.2nm,0.7s
MZR   Muzera             26.28 110  P   P       23 52 07.4 +0.2
FIA1  FINESS Array S     26.40 359 eP   P       23 52 06.8 -1.0
      comp=Z,60nm,1.4s
FINES FINESS Array B     26.40 359  P   P       23 52 06.8 -1.0
      comp=Z,7.9nm,0.4s,baz=160,slow=11,SNR=81
FINES                               S   S       23 56 29.3 -7.8
      comp=Z,0.8nm,0.5s,baz=185,slow=26,SNR=2.5
FINES                               LR  LR      00 04 07.3
      comp=Z,127nm,21.1s,baz=186,slow=40
HFS   Hagfors            26.46 345  P   P       23 52 07.2 -1.2
      comp=Z,10nm,0.5s,baz=149,slow=12,SNR=79
HFS                                 LR  LR      00 04 26.0
      comp=Z,668nm,18.6s,baz=162,slow=40
SHME  Shamm              26.87 101  P   P       23 52 12.8 +0.2
PBRG  Braganca           26.88 295 eP   P       23 52 13.6 +1.1
      comp=Z,38nm,1.4s
PBRG  Braganca           26.88 295 eP   P       23 52 13.6 +1.1
ASUD  Al Ashush, Dub     26.89 105  P   P       23 52 12.4 -0.2
ASUD  Al Ashush, Dub     26.89 105  P   P       23 52 12.4 -0.2
NAZ   Nazwa, Dubai       26.98 104 i P  P       23 52 13.7 +0.3
      SNR=11
KONO  Kongsberg          27.00 341 eP   P       23 52 12.1 -1.2
      comp=Z,66nm,2.0s
KONO  Kongsberg          27.00 341 eP   P       23 52 12.1 -1.2
KONO                                pmax pmax
      comp=Z,66nm,2.0s
KONO  Kongsberg          27.00 341 eP   P       23 52 13.5 +0.2
BANOM Banah              27.06 102  P   P       23 52 14.2  0.0
BANOM Banah              27.06 102  P   P       23 52 14.2  0.0
MVO   Moncorvo           27.06 293 eP   P       23 52 16.7 +2.5
      comp=Z,50nm,1.4s
MVO                                eS   S       23 56 53.8 +5.6
MVO   Moncorvo           27.06 293 eP   P       23 52 16.7 +2.5
KLMR  Klimovskoe         27.11  14 eP   P       23 52 11.7 -2.4
KLMR                                pmax pmax
      comp=Z,37nm,0.8s
KLMR  Klimovskoe         27.11  14 eP   P       23 52 11.8 -2.4
KLMR                                AMP         23 52 13.3
      comp=Z,37nm,0.8s
KLMR                                LQ  LQ      00 00 54.1
KLMR                                LQ  LQ      00 00 54.1
MSFE  Esma-Masafi        27.20 103  P   P       23 52 15.4 -0.1
PMRV  Marv??o            27.34 289 eP   P       23 52 23.3 +6.7
      comp=Z,40nm,1.5s
PMRV                               epP  pP      23 52 31.3 +0.9
PMRV                               eS   S       23 56 56.4 +4.0
MDH   Madha              27.34 103  P   P       23 52 16.9 +0.2
HATD  Hatta, Dubai       27.43 104 i P  P       23 52 17.3 -0.3
      SNR=12
HATD  Hatta, Dubai       27.43 104  P   P       23 52 17.3 -0.3
      SNR=12
UOSS  Minazif            27.43 103 eP   P       23 52 17.5  0.0
      comp=Z,18nm,0.8s
UOSS  Minazif            27.43 103  P   P       23 52 16.8 -0.7
UOSS  Minazif            27.43 103 eP   P       23 52 17.5  0.0
      comp=Z,18nm,0.8s
AKTO  Aktyubinsk         27.43  46  P   P       23 52 17.8 +0.5
      comp=Z,17nm,0.8s,baz=250,slow=10,SNR=35
AKTO                                S   S       23 56 52.0 -1.7
      comp=Z,2.5nm,0.8s,baz=43,slow=18,SNR=2.7
AKTO                                LR  LR      00 05 49.5
      comp=Z,146nm,21.1s,baz=248,slow=42
ASHO  Ashiyiah           27.44 104  P   P       23 52 17.1 -0.6
ASHO  Ashiyiah           27.44 104  P   P       23 52 17.1 -0.6
MTE   Manteigas          27.44 291 eP   P       23 52 20.4 +2.8
      comp=Z,28nm,1.8s
MTE                                eS   S       23 56 54.6 +0.5
MTE   Manteigas          27.44 291 eP   P       23 52 18.6 +1.0
      comp=Z,16nm,1.0s
MTE   Manteigas          27.44 291 eP   P       23 52 18.5 +1.0
      comp=Z,16nm,1.0s
NC602 NORSAR Array S     27.47 344 eP   P       23 52 15.6 -1.8
NC602 NORSAR Array S     27.47 344 eP   P       23 52 16.1 -1.4
NC602                               IAmb IAmb   23 52 16.5
      comp=Z,156nm,1.1s
ALNE  Al Ain             27.51 106  P   P       23 52 18.1 -0.1
PESTR Estremoz           27.51 288 eP   P       23 52 19.0 +0.9
      comp=Z,38nm,1.3s
PESTR                              epP  pP      23 52 33.8 +1.8
PESTR Estremoz           27.51 288 eP   P       23 52 18.4 +0.3
      comp=Z,9.2nm,0.9s
PESTR Estremoz           27.51 288 eP   P       23 52 18.4 +0.3
      comp=Z,9.2nm,0.9s
PESTR                              epP  pP      23 52 33.8 +1.8
STAV  Stavanger          27.59 336 eP   P       23 52 17.6 -0.8
STAV                                IAmb IAmb   23 52 23.0
      comp=Z,12nm,1.0s
ATD   Arta Tunnel        27.68 144  LR  LR      00 03 54.1
      comp=Z,157nm,19.6s,baz=304,slow=37
NAO01 NORSAR Array S     27.71 343 eP   P       23 52 18.1 -1.6
NAO01 NORSAR Array S     27.71 343 eP   P       23 52 18.4 -1.3
NAO01                               IAmb IAmb   23 52 19.3
      comp=Z,35nm,0.8s
BLS5  Blasjo             27.73 338 eP   P       23 52 17.9 -2.0
BLS5                                IAmb IAmb   23 52 19.5
      comp=Z,20nm,1.2s
NC405 NORSAR Array S     27.76 344 eP   P       23 52 18.2 -1.9
PBEJ  Beja               27.78 286 epP  pP      23 52 35.1 +0.7
PBEJ  Beja               27.78 286 epP  pP      23 52 35.1 +0.7
NB201 NORSAR Array S     27.80 344 eP   P       23 52 18.9 -1.6
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NB201 NORSAR Array S  27.80 344  eP     P      23 52 19.6 -0.9
NB201                             IAmb   IAmb   23 52 20.4
      comp=Z,20nm,0.4s
NB2   NORSAR Subarra  27.81 344   P     P      23 52 18.7 -1.9
      comp=Z,2.0nm,0.5s,baz=156,slow=9.3
NB2   NORSAR Subarra  27.81 344   P     P      23 52 18.7 -1.9
      baz=156,slow=9.3
NOA   NORSAR Array B  27.81 344   LR    LR     00 04 47.3
      comp=Z,251nm,18.8s,baz=155,slow=39
NBO00 NORSAR Array S  27.90 343  eP     P      23 52 20.1 -1.3
NBO00 NORSAR Array S  27.90 343  eP     P      23 52 20.1 -1.3
NBO00                             IAmb   IAmb   23 52 21.5
      comp=Z,23nm,0.9s
PBDV  Barranco-do-Ve  27.91 285  eS     S      23 57 14.8 +13
NC303 NORSAR Array S  27.94 344  eP     P      23 52 20.1 -1.6
NC303 NORSAR Array S  27.94 344  eP     P      23 52 19.9 -1.8
NC303                             IAmb   IAmb   23 52 21.1
      comp=Z,13nm,0.4s
PMTG  Montargil       28.00 289  eS     S      23 57 10.0 +7.2
PGAV  Gavieira, Arco  28.03 295  eS     S      23 57 08.9 +5.5
ODD1  Odda            28.07 339  eP     P      23 52 22.0 -0.9
ODD1                              IAmb   IAmb   23 52 22.8
      comp=Z,9.5nm,0.7s
MESJ  Messejana       28.08 286  epP    pP     23 52 38.0 +0.9
MESJ  Messejana       28.08 286  epP    pP     23 52 38.0 +0.9
SOHO  SOHO            28.09 105  i P    P      23 52 23.4  0.0
      SNR=8.8
NC204 NORSAR Array S  28.12 344  eP     P      23 52 22.0 -1.4
NC204 NORSAR Array S  28.12 344  eP     P      23 52 22.0 -1.4
NC204                             IAmb   IAmb   23 52 22.0
      comp=Z,40nm,1.2s
PCAS  Casmilo, Conde  28.17 291  eS     S      23 57 02.0 -3.6
ABKAR Akbulak array   28.21  50  eP     P      23 52 25.0 +0.8
ABKAR Akbulak array   28.21  50  eP     P      23 52 25.0 +0.8
PNCL  Nicolau / Gran  28.30 287  eS     S      23 57 17.8 +10
ESK   Eskdalemuir     28.83 324  eP     P      23 52 29.0 -0.7
      comp=Z,68nm,1.4s
ESK   Eskdalemuir     28.83 324  eP     P      23 52 29.0 -0.7
ESK                               pmax   pmax
      comp=Z,68nm,1.4s
BER   Bergen          28.84 338  eP     P      23 52 26.9 -2.7
BER                               IAmb   IAmb   23 52 31.3
      comp=Z,208nm,2.3s
ASK   Askoy           28.96 338   IAmb   IAmb   23 52 27.8
      comp=Z,677nm,3.1s
ASK                              eP     P      23 52 29.8 -0.9
PRGR  Permogore       29.20  19⇑iP     P      23 52 32.1 -0.7
PRGR                             e*PP   pP     23 52 48.7 +1.9
PRGR                             eS     S      23 57 18.2 -3.0
PRGR                              pmax   pmax
      comp=Z,56nm,0.9s
AKN   Aaknes          29.82 342  eP     P      23 52 37.2 -1.2
AKN                               IAmb   IAmb   23 52 41.8
      comp=Z,352nm,2.8s
TBLU  Trondheim       29.98 345  eP     P      23 52 41.0 +1.2
TBLU                              IAmb   IAmb   23 52 41.9
      comp=Z,9.0nm,0.7s
WSAR  Wadi Sarin      30.20 104   P     P      23 52 42.0 -0.1
      comp=Z,8.8nm,1.1s,baz=302,slow=19,SNR=2.7
WSAR                              LR    LR     00 09 33.4
      comp=Z,151nm,19.7s,baz=317,slow=46
ARU   Arti            30.42  35  eP     P      23 52 43.9 +0.2
ARU   Arti            30.42  35c iP     P      23 52 43.6 -0.1
ARU                               *PP   pP     23 52 56.0 -1.7
ARU                                            23 53 46.7
ARU                               S     S      23 57 40.5 +0.1
ARU                               *SS   sS     23 58 04.0 -0.1
ARU                               SS    SnSn   23 59 25.3 +5.1
ARU                               pmax   pmax
      comp=Z,36nm,1.7s
NSS   Namsos          30.81 348  eP     P      23 52 45.8 -1.2
NSS                               IAmb   IAmb   23 52 46.9
      comp=Z,11nm,0.4s
TOA0  Torodi Ar. Sit  31.37 232  eP     P      23 52 51.9 -0.6
      comp=Z,18nm,1.0s
TORD  Torodi Ar. Bea  31.37 232   P     P      23 52 50.9 -1.6
      comp=Z,9.0nm,0.5s,baz=39,slow=9.4
TORD                              LR    LR     00 08 36.3
      comp=Z,326nm,18.1s,baz=355,slow=42
SVE   Sverdlovsk      31.61  36  eP     P      23 52 55.3 +1.1
SVE                               pmax   pmax
      comp=Z,52nm,1.6s
KONS  Konsvik         32.46 350  eP     P      23 53 00.4 -1.1
KONS                              IAmb   IAmb   23 53 00.8
      comp=Z,31nm,1.1s
APA   Apatity         32.78   5⇓iP     P      23 53 02.0 -2.3
APA                               pmax   pmax
      comp=Z,20nm,0.7s
APA                               MLR   MLR
      comp=Z,500nm,14.0s
STEI  Steigen         33.55 352  eP     P      23 53 09.9 -1.1
STEI                              IAmb   IAmb   23 53 10.9
      comp=Z,38nm,0.6s
KTK1  Kautokeino      34.05 358  eP     P      23 53 14.2 -1.1
ARCES ARCESS Array B  34.53 359   P     P      23 53 18.2 -1.3
      comp=Z,15nm,0.7s,baz=178,slow=9.4,SNR=111
ARCES                             LR    LR     00 08 17.4
      comp=Z,115nm,19.2s,baz=188,slow=38
ARE0  ARCESS Array S  34.53 359  eP     P      23 53 18.6 -0.9
      comp=Z,61nm,1.5s
ARE0  ARCESS Array S  34.53 359  eP     P      23 53 18.6 -0.9
ARE0                              IAmb   IAmb   23 53 20.8
      comp=Z,14nm,0.7s
KBL   Kabul           34.63  78  eP     P      23 53 20.2 -0.9
      comp=Z,7.1nm,0.9s
KBL   Kabul           34.63  78  eP     P      23 53 20.2 -0.9
KBL                               pmax   pmax
      comp=Z,7.0nm,0.9s
KBL   Kabul           34.63  78  eP     P      23 53 20.2 -0.9
      comp=Z,7.1nm,0.9s
KK31  Karatay Array   34.66  63  eP     P      23 53 21.8 +0.7
KK31  Karatay Array   34.66  63  eP     P      23 53 21.8 +0.7
KKAR  Karatay Array   34.66  63  eP     P      23 53 21.8 +0.7
KKAR  Karatay Array   34.66  63  eP     P      23 53 21.8 +0.7
KEV   Kevo            34.74   0  eP     P      23 53 21.3  0.0
KEV   Kevo            34.74   0  eP     P      23 53 21.3  0.0
TRO   Tromso          34.88 355  eP     P      23 53 21.8 -0.7
TRO                               IAmb   IAmb   23 53 21.9
      comp=Z,27nm,0.8s
BRVK  Borovoye        35.48  46  eP     P      23 53 29.3 +1.3
      comp=Z,22nm,1.1s
BRVK  Borovoye        35.48  46ceP     P      23 53 29.6 +1.7
BRVK                              pmax   pmax
      comp=Z,31nm,1.7s
BVAR  Borovoye Array  35.54  46   P     P      23 53 29.8 +1.3
      comp=Z,7.2nm,0.8s,baz=250,slow=6.5,SNR=45
BVAR                              LR    LR     00 12 58.2
      comp=Z,188nm,19.8s,baz=265,slow=44
HAMF  Hammerfest      35.67 358  eP     P      23 53 28.7 -0.6
HAMF                              IAmb   IAmb   23 53 29.5
      comp=Z,234nm,2.3s
EKS2  Erkin-Say       37.09  64   P     P      23 53 43.3 +1.4
      SNR=9.6
AAK   Ala-Archa       37.62  64  eP     P      23 53 47.8 +1.4
      comp=Z,13nm,0.8s
AAK   Ala-Archa       37.62  64  eP     P      23 53 47.8 +1.4
AAK                               pmax   pmax
      comp=Z,13nm,0.8s
AAK   Ala-Archa       37.62  64  eP     P      23 53 47.8 +1.4
      comp=Z,13nm,0.8s
UCH   Uchtor          37.66  64   P     P      23 53 48.4 +1.2
      SNR=6.4
FRU   Bishkek         37.69  63  eP     P      23 53 50.0 +3.1
FRU                              e             23 54 02.0
FRU                              e             23 55 15.0
FRU                              e             23 55 44.0
FRU                               pmax   pmax
      comp=Z,60nm,2.0s
CHMS  Chumysh         37.77  63   P     P      23 53 48.6 +1.0
      SNR=12
KZA   Kyzart          38.22  65   P     P      23 53 53.6 +1.7
      SNR=7.3
NIL   Nilore          38.24  78  eP     P      23 53 51.9 +0.3
NIL   Nilore          38.24  78  eP     P      23 53 51.9 +0.3
NIL   Nilore          38.24  78  eP     P      23 53 51.9 +0.3
TKM2  Tokmak 2        38.40  63   P     P      23 53 54.0 +1.0
      SNR=7.2
KSH   Kashi           39.11  68   P     P      23 53 58.0 -1.0
KSH                               pP    pP     23 54 07.7 -5.5
KSH                               PP    PP     23 55 31.3 +2.0
KSH                               S     S      23 59 51.9 -2.9
KSH                               ScS   ScS    00 04 02.0 -1.1
KSH                               pmax   pmax
      comp=Z,14nm,1.1s
KSH                               pmax   pmax
      comp=Z,140nm,6.2s
KURBB Kurchatov Arra  40.24  51   P     P      23 54 09.0 +1.0
      comp=Z,25nm,0.8s,baz=276,slow=8.8,SNR=194
KURBB                             S     S      00 00 09.4 -1.7
      comp=Z,1.8nm,0.9s,baz=274,slow=16,SNR=9.0
KURK  Kurchatov       40.30  51  eP     P      23 54 09.3 +0.7
KURK                              S     S      00 00 09.4 -2.6
KURK  Kurchatov       40.30  51ceP     P      23 54 08.9 +0.4
KURK                              pmax   pmax
      comp=Z,37nm,1.3s
DBIC  Dimbokro        40.47 233   P     P      23 54 09.2 -1.0
      comp=Z,6.4nm,0.7s,baz=12,slow=11,SNR=9.9
DBIC                              LR    LR     00 14 56.1
      comp=Z,239nm,19.5s,baz=24,slow=42
DBIC  Dimbokro        40.47 233  eP     P      23 54 10.6 +0.3
      comp=Z,40nm,1.5s
DBIC  Dimbokro        40.47 233  eP     P      23 54 10.6 +0.3
DBIC                              pmax   pmax
      comp=Z,40nm,1.5s
TIC   Toumodi         40.59 233  eP     P      23 54 11.2 -0.1
KIC   Kosan Boka      40.62 233  eP     P      23 54 11.4 -0.2
      comp=Z,86nm,1.3s
LIC   Lamto           40.91 233  eP     P      23 54 13.7 -0.2
      comp=Z,82nm,1.3s
BORG  Borgarnes       41.21 331  eP     P      23 54 16.0 +0.2
BORG  Borgarnes       41.21 331  eP     P      23 54 16.0 +0.2
MK31  Makanchi Array  42.82  57  eP     P      23 54 30.2 +1.0
MK31  Makanchi Array  42.82  57  eP     P      23 54 30.2 +1.0
MKAR  Makanchi Array  42.82  57   P     P      23 54 30.1 +0.9
      comp=Z,13nm,0.6s,baz=280,slow=6.4,SNR=139
MKAR                              S     S      00 00 46.1 -3.3
      comp=Z,0.2nm,0.5s,baz=290,slow=8.9,SNR=2.4
MKAR                              LR    LR     00 16 49.4
      comp=Z,73nm,18.1s,baz=268,slow=42
MK01  Makanchi Array  42.83  57  eP     P      23 54 29.9 +0.7
NVS   Novosibirsk     43.30  45⇓iP     P      23 54 35.0 +2.1
NVS                              e             23 54 48.7
NVS                              e             23 56 15.4
NVS                              i S    S      00 00 57.2 +1.0
NVS                              i             00 01 23.7
NVS                               pmax   pmax
      comp=Z,36nm,1.2s
NVS                               pmax   pmax
      comp=N,10.0nm,1.1s
NVS                               pmax   pmax
      comp=E,13nm,1.1s
NVS                               smax   smax
      comp=N,32nm,1.9s
NVS                               smax   smax
      comp=E,23nm,1.9s
SPA0  Spitsbergen Ar  43.44 357  eP     P      23 54 34.0 +0.2
SPITS Spitsbergen Ar  43.44 357   P     P      23 54 33.6 -0.3
      comp=E,5.2nm,0.4s,baz=160,slow=6.0,SNR=43
SPITS                             LR    LR     00 14 24.8
      comp=E,198nm,19.8s,baz=190,slow=38
ZAA0  Zalesovo Array  44.20  46  eP     P      23 54 40.3 +0.2
      comp=E,17nm,0.6s
ZALV  Zalesovo Beam   44.20  46   P     P      23 54 40.5 +0.4
      comp=E,16nm,0.5s,baz=268,slow=8.8,SNR=68
ZALV                              S     S      00 01 08.9 -0.4
      comp=E,0.5nm,0.4s,baz=265,slow=18,SNR=3.8
ZALV                              LR    LR     00 18 22.1
      comp=E,95nm,18.0s,baz=252,slow=43
ZALV  Zalesovo Beam   44.20  46  eP     P      23 54 40.0 -0.1
ZALV                              S     S      00 01 08.9 -0.4
KBS   Kingsbay        44.39 356  eP     P      23 54 40.0 -1.4
      comp=E,29nm,0.8s
KBS   Kingsbay        44.39 356  eP     P      23 54 40.0 -1.4
KBS                               pmax   pmax
      comp=Z,29nm,0.8s
DGZ   Jazzator, Alta  45.98  52  i P    P      23 54 55.6 +1.0
DGZ                               pmax   pmax
      comp=Z,5.0nm,0.9s
DAG   Danmarks Havn   46.41 347⇑iP     P      23 54 56.5 -0.9
      comp=Z,26nm,1.5s
DAG   Danmarks Havn   46.41 347⇑iP     P      23 54 56.5 -0.9
DAG                               pmax   pmax
      comp=Z,26nm,1.5s
WMQ   Urumqi          47.00  60   P     P      23 55 03.9 +1.3
WMQ                               pP    pP     23 55 11.0 -6.2
WMQ                               sP    sP     23 55 23.2 -0.4
WMQ                               S     S      00 01 51.9 +1.7
WMQ                               SS    SS     00 05 13.0 -4.3
WMQ                               pmax   pmax
      comp=Z,32nm,1.3s
WMQ                               pmax   pmax
      comp=Z,300nm,4.5s
WMQ                               LR    LR
      comp=Z,730nm,32.7s
WMQ                               LR    LR
      comp=Z,430nm,32.7s
PYUN  Piuthan         47.97  82  ePn    P      23 55 11.1 +0.6
      comp=Z,46nm,0.5s
DANN  Dangsing        48.50  81  ePn    P      23 55 15.4 +0.8
      comp=Z,274nm,0.8s
KOLN  Koldanda        48.60  82  ePn    P      23 55 15.5 +0.2
      comp=Z,50nm,0.8s
KRAR  Krasnoyarsk     48.79  43  i P    P      23 55 17.2 +1.1
HYB   Hyderabad       49.22  97  i P    P      23 55 21.0 +1.1
GKN   Gorkha          49.35  81  ePn    P      23 55 21.0  0.0
      comp=Z,54nm,0.7s
SUMG  Summit          49.50 339⇑iP     P      23 55 21.9 +0.1
      comp=Z,22nm,0.7s
SUMG  Summit          49.50 339⇑iP     P      23 55 21.9 +0.1
SUMG                              pmax   pmax
      comp=Z,22nm,0.7s
HVS   Khovu-Aksy      49.80  49  i P    P      23 55 25.2 +1.2
HVS                               pmax   pmax
      comp=Z,14nm,0.9s
DMN   Daman           49.88  82  ePn    P      23 55 25.5 +0.3
      comp=Z,41nm,0.3s
KKN   Kakani          49.95  81  ePn    P      23 55 25.7  0.0
      comp=Z,40nm,0.6s
LSZ   Lusaka          50.09 178  eP     P      23 55 27.2 +0.7
      comp=Z,4.1nm,1.0s
LSZ   Lusaka          50.09 178  eP     P      23 55 27.2 +0.7
LSZ                               pmax   pmax
      comp=Z,4.0nm,1.0s
PKIN  Phulchoki       50.13  81  ePn    P      23 55 27.1  0.0
      comp=Z,55nm,0.9s
GUN   Gumba           50.39  81  ePn    P      23 55 29.2 +0.1
      comp=Z,58nm,0.8s
JIRN  Jiri            50.74  81  ePn    P      23 55 31.9 +0.1
      comp=Z,104nm,0.8s
RAMN  Ramite          51.37  82  ePn    P      23 55 35.5 -0.9
ODAN  Odare           52.05  81  ePn    P      23 55 40.8 -0.6
TAPN  Taplejung       52.10  81  ePn    P      23 55 41.7 -0.2
SFJD  Kangerlussuaq   53.34 331  eP     P      23 55 49.7 -0.4
SFJD  Kangerlussuaq   53.34 331  eP     P      23 55 49.7 -0.4
LSA   Lhasa           53.91  76  eP     P      23 55 55.9 +0.5
      comp=Z,4.1nm,0.6s
LSA   Lhasa           53.91  76  eP     P      23 55 55.9 +0.5
LSA                               pmax   pmax
      comp=Z,4.0nm,0.6s
LSA   Lhasa           53.91  76  eP     P      23 55 55.9 +0.5
      comp=Z,4.1nm,0.6s
MOY   Mondy           54.18  48  eP     P      23 55 58.8 +2.2
MOY                               pmax   pmax
      comp=Z,13nm,1.8s
TSUM  Tsumeb          54.65 191  eP     P      23 56 00.5 +0.2
      comp=Z,6.1nm,1.0s
TLY   Talaya          55.78  47  eP     P      23 56 09.1 +1.1
      comp=Z,9.4nm,0.7s
TLY   Talaya          55.78  47  eP     P      23 56 09.1 +1.1
TLY                               pmax   pmax
      comp=Z,9.0nm,0.7s
ZAK   Zakamensk       55.90  49  eP     P      23 56 09.4 +0.4
ZAK                               pmax   pmax
      comp=Z,11nm,1.2s
PALK  Pallekele       56.67 106   LR    LR     00 25 26.6
      comp=Z,106nm,18.2s,baz=274,slow=41
OPO   Ambohidratompo  56.80 157   LR    LR     00 22 19.9
      comp=Z,78nm,19.9s,baz=360,slow=38
GTA   Gaotai          56.94  62   P     P      23 56 17.3 +0.7
GTA                               pP    pP     23 56 31.6  0.0
GTA                               sP    sP     23 56 35.5 -2.4
GTA                               S     S      00 04 08.7 +2.0
GTA                               pmax   pmax
      comp=Z,10.0nm,1.0s
GTA                               pmax   pmax
      comp=Z,43nm,4.8s
GTA                               LR    LR
      comp=Z,93nm,16.2s
GTA                               LR    LR
      comp=Z,97nm,18.4s
SONM  Songino Array   58.61  51   P     P      23 56 29.2 +1.0
      comp=Z,5.4nm,0.9s,baz=283,slow=8.4,SNR=25
SONM                              LR    LR     00 25 46.2
      comp=Z,158nm,21.8s,baz=293,slow=40
SONM  Songino Array   58.61  51   P     P      23 56 29.2 +1.0
SONM                              pmax   pmax
      comp=Z,6.0nm,0.9s
SONM                              MLR   MLR
      comp=Z,158nm,21.8s
SONA1 Songino Array   58.61  51  eP     P      23 56 29.1 +0.9
ULN   Ulaanbaatar     59.02  51  eP     P      23 56 32.4 +1.4
      comp=Z,10nm,1.1s
ULN   Ulaanbaatar     59.02  51ceP     P      23 56 31.5 +0.4
ULN                               pmax   pmax
      comp=Z,7.0nm,0.8s
BOD   Bodaibo         59.78  38  eP     P      23 56 34.8 -1.1
BOD                               pmax   pmax
      comp=Z,8.0nm,1.0s
TIXI  Tiksi           60.83  21  i P    P      23 56 41.3 -1.5
TIXI                              pmax   pmax
      comp=Z,9.0nm,1.1s
LZH   Lanzhou         61.15  64  eP     P      23 56 47.2 +1.3
LZH                               pP    pP     23 56 56.3 -4.7
LZH                               sP    sP     23 57 02.8 -4.5
LZH                               pmax   pmax
      comp=Z,31nm,0.9s
LZH                               pmax   pmax
      comp=Z,110nm,4.5s
LZH                               LR    LR
      comp=Z,200nm,11.4s
LZH                               LR    LR
      comp=Z,210nm,14.1s
LZH                               LR    LR
      comp=Z,290nm,15.7s
BOSA  Boshof          63.35 181   P     P      23 56 59.9 -0.5
      comp=Z,2.4nm,0.8s,baz=342,slow=6.4,SNR=6.1
BOSA                              LR    LR     00 26 39.3
      comp=Z,163nm,18.5s,baz=360,slow=38
SCHQ  Schefferville   64.04 320   P     P      23 57 04.8 +0.2
      comp=Z,16nm,0.5s,baz=52,slow=7.7,SNR=32
SCHQ                              LR    LR     00 26 53.7
      comp=Z,39nm,18.2s,baz=58,slow=38
RES   Resolute Bay    64.06 345  eP     P      23 57 05.1 +0.7
      comp=Z,4.2nm,0.8s
RES   Resolute Bay    64.06 345  eP     P      23 57 05.1 +0.7
RES                               pmax   pmax
      comp=Z,4.0nm,0.8s
HHC   Hu-ho-hao-te    64.68  57  eP     P      23 57 10.6 +1.4
HHC                               pP    pP     23 57 22.1 -2.3
HHC                               S     S      00 05 45.2 -0.1
HHC                               sS    pS     00 06 05.6 +2.2
HHC                               pmax   pmax
      comp=Z,17nm,1.2s
HHC                               pmax   pmax
      comp=Z,88nm,4.6s
HHC                               LR    LR
      comp=Z,110nm,16.1s
HHC                               LR    LR
      comp=Z,120nm,17.3s
CMAI  Chiengmai2      64.72  83   P     P      23 57 10.4 +0.6
      comp=Z,1.6nm,1.0s
KMI   Kunming         65.16  76   P     P      23 57 12.8 +0.1
KMI                               pmax   pmax
      comp=Z,9.0nm,0.8s
KMI                               pmax   pmax
      comp=Z,52nm,5.2s
CHTO  Chiang Mai      65.20  84  eP     P      23 57 12.5 -0.2
      comp=Z,5.9nm,0.8s
CHTO  Chiang Mai      65.20  84  eP     P      23 57 12.5 -0.2
CHTO                              pmax   pmax
      comp=Z,6.0nm,0.8s
CHTO  Chiang Mai      65.20  84   P     P      23 57 13.0 +0.3
      comp=Z,40nm,1.2s
CMMT  Chiang Mai      65.20  84   P     P      23 57 12.9 +0.2
      comp=Z,7.3nm,1.0s
CM31  Chiang Mai Arr  65.38  84  eP     P      23 57 13.7 -0.2
CMAR  Chiang Mai Arr  65.38  84   P     P      23 57 13.5 -0.4
      comp=Z,7.8nm,0.9s,baz=297,slow=8.1,SNR=39
CMAR                              LR    LR     00 31 46.9
      comp=Z,13nm,20.6s,baz=270,slow=41
CM01  Chiang Mai Arr  65.41  84  eP     P      23 57 13.7 -0.4
PAYA  Payao           65.68  83   P     P      23 57 15.9 +0.1
      comp=Z,14nm,0.8s,comp=Z,127nm
XAN   Xi’an           65.79  64   P     P      23 57 17.0 +0.6
XAN                               pP    pP     23 57 24.0 -7.6
XAN                               pmax   pmax
      comp=Z,10.0nm,0.7s
NANT  Nan             66.64  83   P     P      23 57 22.3 +0.4
      comp=Z,3.3nm,1.0s
PHIT  Phitsanulok     67.23  85   P     P      23 57 27.4 +1.7
      comp=Z,12nm,0.9s
UTHA  Uthaitani       67.29  87   P     P      23 57 27.0 +0.9
      comp=Z,4.2nm,0.8s
GYA   Guiyang         67.62  73  eP     P      23 57 29.0 +0.8
GYA                               pmax   pmax
      comp=Z,10.0nm,1.0s
ENH   Enshi           67.97  68  eP     P      23 57 30.1 -0.1
      comp=Z,13nm,0.8s
PBKT  Sadao Pong      68.01  85   P     P      23 57 31.2 +0.6
      comp=Z,8.2nm,0.6s,comp=Z,3µm
ZEA   Zeya            68.27  39  eP     P      23 57 32.9 +1.2
ZEA                               pmax   pmax
      comp=Z,14nm,1.2s
NONG  Nongkai         69.00  82   P     P      23 57 37.0 +0.2
      comp=Z,0.2nm,1.0s,comp=Z,213nm
SRAK  Srakaew         70.23  86   P     P      23 57 47.8 +3.4
      comp=Z,58nm,0.7s
CN2   Changchun       72.33  49  eP     P      23 57 58.3 +1.6
CN2                               pmax   pmax
      comp=Z,10.0nm,0.6s
BILL  Bilibino        72.85  15⇑eP     P      23 57 59.0 -0.4
BILL                             e             23 58 21.6
BILL                             e             00 08 04.3
BILL                              pmax   pmax
      comp=Z,6.0nm,1.2s
BILL                              MLR   MLR
      comp=Z,136nm,23.0s
KLR   Kul’dur         73.04  41  i P    P      23 58 01.7 +0.9
SEY   Seymchan        73.18  23  i P    P      23 58 01.8 +0.4
LONY  Lake Ozonia     73.36 313  eP     P      23 58 04.3 +1.5
      comp=Z,8.5nm,1.0s
PSI   Prapat          73.92  98   P     P      23 58 06.5 -0.2
      comp=Z,5.3nm,0.4s,baz=359,slow=1.1,SNR=4.0
NJ2   Nanjing         74.03  62  eP     P      23 58 07.5 +0.6
NJ2                               pmax   pmax
      comp=Z,10.0nm,0.5s
NKL   Nikolayevsk     75.21  35  eP     P      23 58 14.0 +0.7
INK   Inuvik          75.87 353  eP     P      23 58 16.8  0.0
      comp=Z,8.6nm,0.9s
INK   Inuvik          75.87 353  eP     P      23 58 16.8  0.0
INK                               pmax   pmax
      comp=Z,9.0nm,0.9s
USRK  Ussuriysk Ar.   76.05  46   P     P      23 58 18.5 +0.2
      comp=Z,8.9nm,0.7s,baz=288,slow=7.3
USRK                              LR    LR     00 39 55.3
      comp=Z,42nm,18.3s,baz=319,slow=42
TOLK  Toolik Lake Re  76.57 359  eP     P      23 58 22.1 +1.2
      comp=Z,14nm,1.4s
KS01  Wonju Array Si  77.34  53  eP     P      23 58 26.1 +0.4
KSAR  Wonju Array Be  77.36  53   P     P      23 58 25.5 -0.3
KSAR  Wonju Array Be  77.36  53   P     P      23 58 25.5 -0.3
KSRS  Korea Array     77.38  53   P     P      23 58 25.5 -0.4
      comp=Z,4.1nm,0.8s,baz=306,slow=4.7,SNR=16
SSPA  Standing Stone  77.61 311  eP     P      23 58 28.4 +1.2
      comp=Z,6.1nm,0.6s
YKA   Yellowknife Ar  77.90 343   P     P      23 58 28.4  0.0
      comp=Z,5.5nm,0.5s,baz=34,slow=5.5,SNR=36
YKA                               LR    LR     00 35 24.2
      comp=Z,9.7nm,18.1s,baz=36,slow=38
YKA   Yellowknife Ar  77.90 343   P     P      23 58 28.4  0.0
YKA                               pmax   pmax
      comp=Z,5.0nm,0.5s
YKA                               MLR   MLR
      comp=Z,10.0nm,18.1s
COLD  Coldfoot        78.00 359  eP     P      23 58 29.8 +1.0
      comp=Z,15nm,1.5s
EGAK  Eagle           80.02 355  eP     P      23 58 41.4 +1.4
MLY   Manley          80.21 359  eP     P      23 58 43.0 +1.9
      comp=Z,32nm,1.7s
MDM   Murphy Dome     80.22 358  eP     P      23 58 41.7 +0.6
YSS   Yuzh-Sakhalins  80.25  39  eP     P      23 58 43.2 +1.7
YSS                              e             23 59 02.6
FFC   Flin Flon       80.28 333  eP     P      23 58 41.1 -0.4
      comp=Z,16nm,1.4s
IL1   Eielson Array   80.36 357  eP     P      23 58 40.8 -1.0
ILAR  Eielson Array   80.36 357   P     P      23 58 40.7 -1.1
      comp=Z,3.4nm,1.2s,baz=0.2,slow=4.0,SNR=17
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ILAR				LR	LR	00 35 35.2	
	comp=Z,34nm,20.6s,baz=339,slow=36						
CCB	Clear Creek Bu	80.52	358	*e*P	P	23 58 43.0	+0.3
DAWY	Dawson	80.58	354	*e*P	P	23 58 42.9	-0.1
ULM	Lac du Bonnet	81.06	327	P	P	23 58 45.9	+0.1
	comp=Z,5.2nm,0.5s,baz=72,slow=4.7,SNR=7.8						
ULM				LR	LR	00 37 32.8	
	comp=Z,63nm,18.0s,baz=52,slow=38						
ULM	Lac du Bonnet	81.06	327	*e*P	P	23 58 46.0	+0.2
ULM	Lac du Bonnet	81.06	327	*e*P	P	23 58 46.0	+0.2
BPAW	Bear Paw Mtn.	81.15	359	*e*P	P	23 58 46.3	+0.2
MCK	McKinley	81.47	358	*e*P	P	23 58 48.8	+1.0
MCK	McKinley	81.47	358	*e*P	P	23 58 48.8	+1.0
TRF	Thorofare Moun	81.79	359	*e*P	P	23 58 50.8	+1.2
CAST	Castle Rocks	81.84	359	*e*P	P	23 58 51.4	+1.7
JNU	Nakatsue	81.86	55	LR	LR	00 41 04.9	
	comp=Z,134nm,18.8s,baz=192,slow=40						
H41A	Junction City	81.90	320	*e*P	P	23 58 51.1	+0.7
ASAJ	Asahikawa	82.06	41	LR	LR	00 42 29.8	
	comp=Z,70nm,18.3s,baz=354,slow=41						
PPLA	Purkeypile	82.37	359	*e*P	P	23 58 53.5	+0.8
PETK	Petropavlovsk-	82.45	27	LR	LR	00 39 41.3	
	comp=Z,68nm,20.1s,baz=324,slow=39						
SKT	Skwentna	83.28	359	*e*P	P	23 58 56.8	-0.4
SCM	Sheep Creek Mo	83.32	357	*e*P	P	23 58 59.5	+2.0
PMR	Palmer	83.62	358	*e*P	P	23 58 59.7	+0.8
	comp=Z,22nm,1.3s						
I37A	Lemond, Waseca	84.27	321	*e*P	P	23 59 03.6	+0.9
TKL	Tuckaleechee C	84.32	310	P	P	23 58 57.1	-6.0
	comp=Z,1.5nm,0.5s,baz=23,slow=15,SNR=5.5						
TKL				LR	LR	00 37 55.8	
	comp=Z,87nm,19.3s,baz=17,slow=36						
L40A	Anamosa	84.47	319	*e*P	P	23 59 04.2	+0.6
MJAR	Matsushiro Arr	84.48	49	P	P	23 59 04.4	+0.5
	comp=Z,3.8nm,0.8s,baz=295,slow=6.0,SNR=9.7						
MJAR				LR	LR	00 39 20.4	
	comp=Z,68nm,18.3s,baz=145,slow=37						
DLBC	Dease Lake	84.82	348	*e*P	P	23 59 07.3	+2.1
K38A	Parkersburg	84.90	320	*e*P	P	23 59 06.3	+0.5
J36A	Seneca 1, Swea	85.24	321	*e*P	P	23 59 08.3	+0.8
ECSD	EROS Data Cent	86.10	323	*e*P	P	23 59 12.6	+0.8
	comp=Z,4.2nm,0.9s						
LEM	Lembang	86.55	101	LR	LR	00 42 26.6	
	comp=Z,27nm,19.9s,baz=352,slow=39						
P40A	Paris	86.67	317	*e*P	P	23 59 15.4	+0.8
WRAK	Wrangell Islan	87.13	348	*e*P	P	23 59 18.5	+2.0
CCM	Cathedral Cave	87.23	316	*e*P	P	23 59 18.4	+1.0
CCM	Cathedral Cave	87.23	316	*e*P	P	23 59 18.4	+1.0
P38A	Dawn	87.42	318	*e*P	P	23 59 19.2	+0.9
KDAK	Kodiak Island	87.50	360	*i* P	P	23 59 19.5	+1.2
R40A	Maddies Statio	87.65	316	*e*P	P	23 59 20.6	+1.1
T42A	Van Buren	87.85	315	*e*P	P	23 59 22.5	+2.1
LRAL	Lakeview Retre	88.05	310	*e*P	P	23 59 22.4	+1.1
LAO	LASA Array	88.24	330	*e*P	P	23 59 23.4	+1.2
NEW	Newport	90.95	337	*e*P	P	23 59 36.1	+1.3
	comp=Z,3.7nm,0.8s						
NEW	Newport	90.95	337	*e*P	P	23 59 36.1	+1.3
NEW				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BOZ	Bozeman (W)	91.29	332	*e*P	P	23 59 37.7	+1.2
	comp=Z,1.5nm,0.9s						
BOZ	Bozeman (W)	91.29	332	*e*P	P	23 59 37.7	+1.2
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
PDAR	Pinedale Array	92.81	329	P	P	23 59 43.0	-0.7
	comp=Z,0.3nm,0.5s,baz=81,slow=5.8,SNR=2.4						
PDAR				PP	PP	00 03 24.2	-1.3
	comp=Z,1.1nm,1.1s,baz=34,slow=6.6,SNR=4.3						
PDAR				LR	LR	00 43 24.7	
	comp=Z,43nm,19.7s,baz=42,slow=37						
MFID	Camas Ranch	94.72	334	*e*P	P	23 59 53.6	+1.2
	comp=Z,3.3nm,1.0s						
SDCO	Great Sand Dun	95.03	324	*e*P	P	23 59 55.0	+0.9
	comp=Z,0.5nm,0.5s						
ANMO	Albuquerque	97.72	323	LR	LR	00 46 05.5	
	comp=Z,66nm,18.4s,baz=50,slow=36						
YBH	Yreka Blue Hor	98.56	337	LR	LR	00 47 14.0	
	comp=Z,84nm,19.3s,baz=12,slow=37						
NVAR	Mina Array Bea	99.98	333	LR	LR	00 49 29.5	
	comp=Z,61nm,18.5s,baz=300,slow=38						
ASAR	Alice Springs	116.84	101	PKP	PKPdf	00 05 15.3	-0.2
	comp=Z,0.2nm,0.3s,baz=291,slow=1.4,SNR=4.5						
QSPA	South Pole Qui	124.92	180	PKP	PKPdf	00 05 28.7	-1.1
	comp=Z,1.7nm,0.9s,baz=291,slow=0.8,SNR=4.5						

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*ISCJB **04** 23:58:06.6±0.6, 29°.61S±0°.05×179°.4W±0°.1, h300^{km}, mb3.9/7, Error ellipse: s-maj=13.2km s-min=5.7km az=19.2*

*IDC **04** 23:58:06.5±0.6, 29°.39S×179°.02W, h315^{km}±6^{km}, mb3.6/7, mb1 3.7/8, mb1mx3.4/42, mbtmp4.3/8, Error ellipse: s-maj=19.1km s-min=17.4km az=164.0*

*WEL **04** 23:58:11.6±1.8, 30°S±26'×18°0E±7'2, h193^{km}±60^{km}*

ISC 04 23:58:05.8±0.7**, 29°.56S**±0°.08×**179°.3W**±0°.1**, h300**^{km}**, n33, σ1^{s}.93**/37**, mb3.9**/7**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RIZ	Raoul Island	1.22	75	P	Pn	23 58 48.6	+1.3
GLKZ	Green Lake	1.22	76	P	Pn	23 58 48.3	+1.1
RAO	Raoul Island	1.23	76	P	Pn	23 58 48.7	+1.4
	218nm,0.3s,baz=102,slow=8.0,SNR=29						
RAO				S	S	23 59 21.7	+1.4
	59nm,0.3s,baz=36,slow=24,SNR=1.5						
MXZ	Matakaoa Point	8.23	194	P	Pn	00 00 04.4	+2.3
WMGZ	Waiomatatini S	8.46	193	P	Pn	00 00 08.2	+3.3
WMGZ				S	S	00 01 39.1	-2.5
HAZ	Te Kaha	8.53	196	P	Pn	00 00 08.7	+2.9
HAZ				S	S	00 01 40.8	-2.5
PUZ	Puketiti	8.73	193	P	Pn	00 00 11.2	+2.9
PUZ				S	S	00 01 43.7	-4.1
RUGZ	Raukumara Rang	8.76	196	P	Pn	00 00 09.6	+0.9
RUGZ				S	S	00 01 44.3	-4.2
TWGZ	Tauwhareparae	8.89	194	P	Pn	00 00 13.7	+3.4
TWGZ				S	S	00 01 48.9	-2.6
MWZ	Matawai	9.14	196	P	Pn	00 00 13.8	+0.4
MWZ				S	S	00 01 53.5	-3.7
URZ	Urewera	9.18	198	P	Pn	00 00 16.2	+2.5
	1.8nm,0.3s,baz=269,slow=4.8,SNR=14						
URZ				S	S	00 01 53.6	-4.3
	1.4nm,0.3s,baz=337,slow=16,SNR=1.9						
URZ	Urewera	9.18	198	P	Pn	00 00 15.6	+1.9
URZ				S	S	00 01 55.8	-2.1
RAGZ	Rawiri	9.32	196	P	Pn	00 00 17.1	+1.5
MUGZ	Murupara	9.48	199	P	Pn	00 00 18.7	+1.3
RTZ	Ruatahuna	9.55	198	P	Pn	00 00 19.6	+1.2
NMHZ	Naumai	10.05	198	P	Pn	00 00 25.2	+0.8
BKZ	Black Stump Fm	10.20	199	P	Pn	00 00 28.0	+1.7
STKA	Stephens Creek	33.60	256	P	P	00 04 20.7	+2.2
	1.5nm,0.4s,baz=108,slow=11,SNR=6.2						
ASAR	Alice Springs	42.05	267	P	P	00 05 29.9	+0.9
	2.2nm,0.5s,baz=100,slow=7.1,SNR=27						
WRA	Warramunga Arr	42.96	272	P	P	00 05 36.5	+0.3
	3.7nm,0.4s,baz=109,slow=7.7,SNR=17						
FITZ	Fitzroy Crossi	51.25	270	P	P	00 06 41.2	+1.4
	5.3nm,0.9s,baz=101,slow=6.5,SNR=3.8						
QSPA	South Pole Qui	60.55	180	P	P	00 07 45.9	+1.1
	2.1nm,0.7s,baz=6.9,slow=1.9,SNR=7.5						
SNAA	Sanae	79.02	179	P	P	00 09 36.3	-0.2
	0.6nm,0.6s,baz=204,slow=10.0,SNR=4.1						
PETK	Petropavlovsk-	84.73	346	P	P	00 10 04.2	-1.8
	4.0nm,0.7s,baz=143,slow=5.2						
KURBB	Kurchatov Arra	119.71	314	PKP	PKPdf	00 16 17.8	-2.0
	0.8nm,0.7s,baz=110,slow=1.7,SNR=6.8						
BVAR	Borovoye Array	125.03	316	PKP	PKPdf	00 16 29.2	-0.8
	1.0nm,0.6s,baz=113,slow=2.4,SNR=6.3						
ARCES	ARCESS Array B	137.53	347	PKP	PKPdf	00 16 50.8	-2.4
	1.9nm,0.9s,baz=27,slow=3.0,SNR=5.2						
FINES	FINESS Array B	143.98	340	PKP	PKPab	00 17 02.3	-0.9
	3.7nm,0.4s,baz=51,slow=3.2,SNR=62						
NB2	NORSAR Subarra	147.75	350	PKP	PKPdf	00 17 13.4	+2.0
	comp=Z,1.1nm,0.6s,baz=13,slow=2.7						
HFS	Hagfors	148.20	348	PKPbc	PKPbc	00 17 14.4	-1.4
	comp=Z,1.7nm,0.5s,baz=72,slow=4.8,SNR=15						
AKASG	Malin Array Be	149.96	323	PKPbc	PKPbc	00 17 19.2	-1.2
	comp=Z,1.1nm,0.4s,baz=52,slow=3.6,SNR=5.6						
BRTR	Keskin Array B	151.22	299	PKPbc	PKPbc	00 17 22.9	-1.1
	comp=Z,0.4nm,0.4s,baz=138,slow=5.0,SNR=6.3						
TORD	Torodi Ar. Bea	163.64	183	PKPab	PKPab	00 18 25.5	-1.4
	baz=185,slow=3.9						

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*NIED **05** 00:35:00, 32°.50N×141°.80E, h5^{km}, Mw4.0 Best double couple: M$_0$1.20000×10^{15} NP1:φ$_s$148.00000°, δ44.00000°, λ33.00000°. NP2:φ$_s$33.00000°, δ68.00000°, λ129.00000°.*

*IDC **05** 00:35:01.6±0.7, 32°.37N×141°.75E, h0^{km}, mb3.9/14, mb1 4.0/17, mb1mx3.8/66, mbtmp3.9/17, ML3.4/3, MS3.3/6, Ms1 3.3/6, ms1mx2.8/66, Error ellipse: s-maj=18.6km s-min=14.6km az=52.0*

*NEIC **05** 00:35:02.5±2.8, 32°.36N×141°.80E, h6^{km}±17^{km}, mb4.3/5, Error ellipse: s-maj=10.3km s-min=6.4km az=78.0*

*ISCJB **05** 00:35:04.8±0.4, 32°.36N±0°.04×141°.76E±0°.07, h39^{km}, mb3.9/19, MS3.4/5, Error ellipse: s-maj=8.8km s-min=5.0km az=153.2*

*JMA **05** 00:35:04.6±0.4, 32°.45N×141°.79E, h89^{km}, M3.7*

ISC 05 00:35:06.7±0.5**, 32°.36N**±0°.05×**141°.81E**±0°.08**, h39**^{km}**, n44, σ1^{s}.32**/45**, mb4.0**/19**, MS3.4**/5**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAOM	Aogashimamukai	1.73	274	P	Pn	00 35 33.7	-0.5
JHCJ	Hachijojimakas	1.84	293	P	Pn	00 35 34.3	-1.4
JHJ2	Mitsune	1.84	295	P	Pn	00 35 34.6	-1.1
JHJ	Hachijo jima 2	1.87	295	Pn	Pn	00 35 34.7	-1.4
	43nm,0.3s,baz=96,slow=22,SNR=14						
JHJ				Sn	Sn	00 35 56.9	-1.5
	104nm,0.3s,baz=247,slow=23,SNR=7.3						
BSO1	Boso 1	2.39	343	P	Pn	00 35 41.4	-1.4
BSO3	Boso 3	2.67	336	P	Pn	00 35 45.3	-1.6
BSO4	Boso 4	2.90	335	P	Pn	00 35 48.9	-1.3
JHO	Hitachi	4.37	347	P	Pn	00 36 07.8	-2.6
JAG	Ashikaga	4.50	335	P	Pn	00 36 10.7	-1.6
MJAR	Matsushiro Arr	5.12	326	Pn	Pn	00 36 20.0	-0.9
	1.4nm,0.3s,baz=150,slow=11,SNR=13						
MJAR				Sn	Sn	00 37 19.4	+0.7
	0.8nm,0.3s,baz=147,slow=27,SNR=2.5						
MAJO	Matsushiro	5.13	326	*e*Pn	Pn	00 36 20.3	-0.6
	21nm,0.9s						
MAT	Matsushiro	5.13	326	P	Pn	00 36 20.5	-0.4
MAT				S	Sn	00 37 16.1	-2.7
CBIJ	Chichi jima	5.25	176	Pn	Pn	00 36 21.9	-0.8
CBIJ				Sn	Sn	00 37 19.6	-2.3
JCJ	Chichijima	5.25	176	Pn	Pn	00 36 21.9	-0.8
	baz=342,slow=20						
JCJ				Sn	Sn	00 37 19.6	-2.3
	6.1nm,0.3s,baz=270,slow=20,SNR=3.1						
JFT	Otama	5.29	347	P	Pn	00 36 21.2	-1.9
ASAJ	Asahikawa	11.76	3	Pn	Pn	00 37 48.9	-2.9
	0.8nm,0.3s,baz=195,slow=13,SNR=3.7						
KSRS	Korea Array	12.47	298	LR	LR	00 42 57.9	
	comp=Z,110nm,18.8s,baz=71,slow=38						
KLR	Kul'dur	18.47	339	P	P	00 39 17.4	-1.6
	0.0nm,0.3s,baz=132,slow=11,SNR=5.0						
SONM	Songino Array	30.87	310	P	P	00 41 20.7	+1.4
	0.7nm,0.6s,baz=112,slow=9.5,SNR=4.8						
SONM				LR	LR	00 54 17.8	
	comp=Z,71nm,18.7s,baz=68,slow=38						
CMAR	Chiang Mai Arr	40.85	261	LR	LR	00 59 53.0	
	comp=Z,16nm,18.6s,baz=90,slow=37						
ZALV	Zalesovo Beam	45.40	316	P	P	00 43 21.1	-0.1
	0.4nm,0.5s,baz=84,slow=4.5,SNR=2.1						
MKAR	Makanchi Array	47.00	306	P	P	00 43 34.4	+0.4
	1.7nm,0.8s,baz=82,slow=9.5,SNR=12						
KURK	Kurchatov	49.17	311	P	P	00 43 50.6	+0.1
KURBB	Kurchatov Arra	49.23	311	P	P	00 43 50.6	-0.4
	0.5nm,0.4s,baz=90,slow=8.1,SNR=8.9						
WRAB	Tennant Creek	52.48	189	*e*P	P	00 44 15.6	-0.2
	4.5nm,0.7s						
WRA	Warramunga Arr	52.49	189	P	P	00 44 16.0	+0.2
	2.1nm,0.5s,baz=5.9,slow=7.6,SNR=9.8						
ILAR	Eielson Array	53.31	30	P	P	00 44 21.9	+0.4
	1.4nm,0.8s,baz=268,slow=6.3,SNR=17						
BVAR	Borovoye Array	54.03	315	P	P	00 44 27.4	+0.5
	1.0nm,0.8s,baz=95,slow=7.2,SNR=4.1						
BRVK	Borovoye	54.09	315	*e*P	P	00 44 27.4	+0.1
	2.0nm,0.6s						
ASAR	Alice Springs	56.22	189	P	P	00 44 43.5	+0.5
	0.2nm,0.4s,baz=20,slow=12,SNR=5.4						
INK	Inuvik	58.42	26	P	P	00 44 58.6	+0.7
	1.8nm,0.7s,baz=326,slow=2.9,SNR=3.7						
KBZ	Khabaz	74.22	312	LR	LR	01 21 58.7	
	comp=Z,25nm,18.4s,baz=51,slow=38						
BMO	Blue Mountains	74.89	46	*e*P	P	00 46 44.6	+1.1
	0.6nm,0.4s						
FFC	Flin Flon	77.47	32	*e*P	P	00 46 58.0	+0.1
	1.5nm,0.6s						
NVAR	Mina Array Bea	77.56	52	P	P	00 47 00.8	+1.9
	1.1nm,0.8s,baz=0.3,slow=27,SNR=5.1						
HFS	Hagfors	78.48	336	P	P	00 47 03.3	0.0
	1.0nm,0.8s,baz=56,slow=8.9,SNR=2.3						
HFS				LR	LR	01 23 31.4	
	comp=Z,18nm,18.1s,baz=26,slow=37						
PDAR	Pinedale Array	80.72	45	P	P	00 47 17.1	+0.9
	0.7nm,0.8s,baz=299,slow=3.1,SNR=7.7						
BRTR	Keskin Array B	82.21	312	P	P	00 47 24.6	+0.6
	0.6nm,0.7s,baz=57,slow=10,SNR=4.2						
RAYN	Ar Rayn	82.76	293	*e*P	P	00 47 27.5	+0.5
	1.2nm,0.6s						
ANMO	Albuquerque	87.35	50	LR	LR	01 19 36.3	
	comp=Z,27nm,21.8s,baz=16,slow=31						
TXAR	Lajitas Array	92.70	53	P	P	00 48 16.6	+1.5
	1.1nm,0.9s,baz=298,slow=2.7,SNR=10						
TORD	Torodi Ar. Bea	120.81	313	PKP	PKPdf	00 53 55.1	-0.2
	1.4nm,1.2s,baz=317,slow=0.5						
SAML	Samuel	147.16	50	*e*PKPbc	PKPbc	00 54 47.1	+0.8
LPAZ	La Paz	148.52	67	PKPbc	PKPbc	00 54 51.7	+1.1
	1.2nm,0.7s,baz=9.0,slow=4.7,SNR=4.5						

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*CSEM **05** 00:39:18.3, 34°.74N×26°.79E, h33^{km}, ML2.1/5*

ATH 05 00:39:18.3, 34°.74N×26°.79E, h33^{km}±2^{km}**, ML2.1**/5**, Error ellipse: s-maj=5.6km s-min=1.5km az=340.0, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZKR	Zakros	0.60	308	P	Pn	00 39 31.0	+0.4
ZKR				S	Sn	00 39 39.8	+0.6
ZKR				AML	AML	00 39 40.1	
	comp=E,380μm,0.3s						
ZKR				AML	AML	00 39 40.8	
	comp=N,252μm,0.5s						
ZKR	Zakros	0.60	308	P	Pn	00 39 30.9	+0.3
ZKR				S	Sn	00 39 40.0	+0.7
KARP	Karpathos	0.86	21	P	Pb	00 39 35.0	+0.2
KARP				S	Sb	00 39 47.8	+1.8
KARP				AML	AML	00 39 48.9	
	comp=N,82μm,0.2s						
KARP				AML	AML	00 39 49.1	
	comp=E,80μm,0.1s						
KARP	Karpathos	0.86	21	P	Pb	00 39 35.1	+0.3
KARP				S	Sb	00 39 47.5	+1.4
NPS	Neapolis	1.10	298	P	Pb	00 39 38.4	-0.4
NPS	Neapolis	1.10	298	P	Pb	00 39 38.7	-0.2
LAST	Lasithi	1.16	292	P	Pb	00 39 40.0	+0.1
LAST				S	Sb	00 39 57.0	+2.3
LAST				AML	AML	00 40 04.5	
	comp=E,34μm,0.7s						
LAST				AML	AML	00 40 04.6	
	comp=N,40μm,0.9s						
LAST	Lasithi	1.16	292	P	Pb	00 39 40.0	+0.1
LAST				S	Sb	00 39 56.3	+1.7
ARG	Arkhangelos	1.83	36	P	Pb	00 39 50.0	-1.1
ARG				S	Sn	00 40 10.5	+1.0
ARG	Arkhangelos	1.83	36	P	Pb	00 39 49.7	-1.5
ARG				S	Sn	00 40 11.4	+1.9

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*CSEM **05** 00:40:27.6, 38°.59N×21°.87E, h22^{km}, ML1.0/10*

ATH 05 00:40:27.6, 38°.59N×21°.87E, h22^{km}±2^{km}**, ML1.0**/10**, Error ellipse: s-maj=2.4km s-min=1.0km az=116.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANX	Ano Chora	0.04	80	P	Pb	00 40 31.9	+0.2
ANX				S	Sb	00 40 34.6	+0.2
ANX				AML	AML	00 40 34.7	
	comp=E,375μm,0.1s						
ANX				AML	AML	00 40 35.9	
	comp=N,288μm,0.3s						
ANX	Ano Chora	0.04	80	P	Pb	00 40 31.7	0.0
ANX				S	Sb	00 40 34.5	+0.1
EFP	Efpalio	0.16	171	P	Pb	00 40 32.3	-0.2
EFP				S	Sb	00 40 35.1	-0.7
EFP				AML	AML	00 40 35.9	
	comp=E,228μm,0.1s						
EFP				AML	AML	00 40 36.1	
	comp=N,125μm,0.2s						
EFP	Efpalio	0.16	171	P	Pb	00 40 32.4	-0.1
EFP				S	Sb	00 40 35.6	-0.2
SERG	Sergoula	0.23	140	P	Pb	00 40 33.3	-0.1
SERG				S	Sb	00 40 37.1	-0.2
SERG				AML	AML	00 40 38.0	
	comp=N,245μm,0.2s						
SERG				AML	AML	00 40 38.1	
	comp=E,170μm,0.2s						
SERG	Sergoula	0.23	140	P	Pb	00 40 33.3	-0.1
SERG				S	Sb	00 40 37.3	0.0
TRIZ	Trizonia	0.27	145	P	Pb	00 40 34.1	+0.1
TRIZ				S	Sb	00 40 39.2	+0.9
TRIZ	Trizonia	0.27	145	P	Pb	00 40 34.1	+0.1
TRIZ				S	Sb	00 40 38.9	+0.6
PVO	Paravola	0.28	276	P	Pb	00 40 34.4	+0.3
PVO				S	Sb	00 40 39.9	+1.5
PVO				AML	AML	00 40 41.0	
	comp=N,31μm,0.2s						
PVO				AML	AML	00 40 41.7	
	comp=E,47μm,0.2s						
PVO	Paravola	0.28	276	P	Pb	00 40 34.2	+0.1
PVO				S	Sb	00 40 39.3	+0.9
EVR	Evrytania	0.33	351	AML	AML	00 40 38.2	
	comp=N,31μm,0.1s						
EVR				AML	AML	00 40 38.3	
	comp=E,22μm,0.1s						
EVR	Evrytania	0.33	351	P	Pb	00 40 33.6	-1.5
EVR				S	Sb	00 40 39.3	-0.8
EVR				AML	AML	00 40 42.8	
	comp=E,47μm,0.3s						
EVR				AML	AML	00 40 43.1	
	comp=N,31μm,0.2s						
EVR	Evrytania	0.33	351	P	Pb	00 40 34.3	-0.8
EVR				S	Sb	00 40 39.9	-0.2
DSF	Desfina	0.54	109	P	Pb	00 40 38.1	-0.4
DSF				S	Sn	00 40 47.2	-1.2
DSF				AML	AML	00 40 48.0	
	comp=N,40μm,0.2s						
DSF				AML	AML	00 40 49.7	
	comp=E,21μm,0.2s						
DSF	Desfina	0.54	109	P	Pb	00 40 38.3	-0.2
DSF				S	Sb	00 40 46.9	+1.0
PDO	Prodromos	0.54	271	P	Pb	00 40 38.9	+0.4
PDO				S	Sb	00 40 46.0	+0.2
PDO				AML	AML	00 40 48.7	
	comp=N,75μm,0.4s						
PDO				AML	AML	00 40 48.9	
	comp=E,51μm,0.3s						
PDO	Prodromos	0.54	271	P	Pb	00 40 38.7	+0.2
PDO				S	Sb	00 40 46.3	+0.5
AGG	Agios Georgios	0.56	39	P	Pn	00 40 40.2	-0.1
AGG				S	Sb	00 40 47.1	+0.6
AGG				AML	AML	00 40 48.9	
	comp=E,38μm,0.3s						
AGG				AML	AML	00 40 49.5	
	comp=N,40μm,0.3s						
AGG	Agios Georgios	0.56	39	P	Pn	00 40 39.6	-0.7
AGG				S	Sb	00 40 47.1	+0.6
KLV	Kalavryta, Ach	0.58	158	AML	AML	00 40 50.2	
	comp=N,6μm,0.1s						
KLV				AML	AML	00 40 51.4	
	comp=E,9μm,0.2s						
KLV	Kalavryta, Ach	0.58	158	P	Pb	00 40 38.6	-0.6
KLV				S	Sb	00 40 48.2	+1.1
KLV				AML	AML	00 40 50.2	
	comp=N,6μm,0.1s						
KLV				AML	AML	00 40 51.4	
	comp=E,9μm,0.2s						
KLV	Kalavryta, Ach	0.58	158	P	Pb	00 40 38.9	-0.3
KLV				S	Sb	00 40 48.0	+0.9
DRO	Drossia	0.65	192	P	Pb	00 40 40.3	+0.1
DRO				S	Sn	00 40 50.4	-0.6
DRO				AML	AML	00 40 52.2	
	comp=E,26μm,0.4s						
DRO				AML	AML	00 40 53.0	
	comp=N,24μm,0.2s						
DRO	Drossia	0.65	192	P	Pb	00 40 40.3	0.0
DRO				S	Sn	00 40 50.0	-1.0

MEX 05 00:43:36.3±0.5**, 16°.70N×98°.41W, h16**^{km}±6^{km}**, MD3.5, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.41	138	*i* P	Pg	00 43 43.4	-1.2
PNIG				*e*S	Sg	00 43 48.7	-1.6
TLIG	Tlapa	0.87	350	*i* P	Pb	00 43 49.2	-3.9
TLIG				*e*S	Sb	00 44 00.6	-4.1
CAIG	El Cayaco	1.81	281	*e*P	Pn	00 44 03.6	-3.3
CAIG				*e*S	Sn	00 44 23.7	-5.8
YAIG	Yautepec	2.24	344	*i* P	Pn	00 44 10.4	-2.5
YAIG				*i* S	Sn	00 44 36.5	-3.9

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*NEIC **05** 00:53:41.7±0.8, 30°.33S×177°.56W, h10^{km}, mb4.3/1, Error ellipse: s-maj=23.8km s-min=13.9km az=87.0*

*ISCJB **05** 00:53:45.5±1.3, 30°.28S±0°.07×177°.9W±0°.2, h35^{km}, mb4.1/6, Error ellipse: s-maj=29.9km s-min=8.9km az=8.2*

*IDC **05** 00:53:49.2±2.0, 30°.09S×177°.77W, h59^{km}±17^{km}, mb3.8/5, mb1 4.0/5, mb1mx3.6/41, mbtmp4.1/5, Error ellipse: s-maj=27.0km s-min=24.6km az=133.0*

ISC 05 00:53:46.2±1.0**, 30°.21S**±0°.07×**177°.7W**±0°.2**, h35**^{km}**, n23, σ1^{s}.30**/19**, mb4.2**/6**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	0.98	346	P	Pn	00 54 05.0	+1.4
	46nm,0.3s,baz=30,slow=23,SNR=8.6						
RAO				S	Sn	00 54 18.0	+1.8
	126nm,0.3s,baz=19,slow=23,SNR=8.8						
RAO	Raoul Island	0.98	346	*e*Pg	Pn	00 54 03.6	+0.1
RAO				*e*Sg	Sn	00 54 14.9	-1.4
URZ	Urewera	9.12	207	P	Pn	00 55 56.5	+1.2
	0.6nm,0.3s,baz=0.5,slow=17,SNR=3.4						
URZ				S	Sn	00 57 26.5	-10
	2.4nm,0.3s,baz=202,slow=23,SNR=19						
CTA	Charters Tower	34.06	279	P	P	01 00 28.3	+0.8
	2.8nm,0.5s,baz=72,slow=6.4,SNR=3.6						
STKA	Stephens Creek	34.81	257	P	P	01 00 34.0	+0.2
	5.5nm,0.9s,baz=109,slow=10.0,SNR=11						
ASAR	Alice Springs	43.42	267	P	P	01 01 44.6	-1.2
	0.7nm,0.6s,baz=103,slow=7.2,SNR=7.8						
WRA	Warramunga Arr	44.39	272	P	P	01 01 52.3	-1.4
	1.5nm,0.5s,baz=111,slow=7.8,SNR=6.0						
CASY	Casey	55.44	208	*e*P	P	01 03 15.0	-1.9
	1.7nm,0.6s						
QSPA	South Pole Qui	59.90	180	P	P	01 03 49.8	+1.4
	1.0nm,0.6s,baz=128,slow=3.2,SNR=6.3						
KURK	Kurchatov	121.14	314	PKP	PKPdf	01 12 34.1	-0.7
KURBB	Kurchatov Arra	121.17	314	PKP	PKPdf	01 12 34.1	-0.8
	0.4nm,0.6s,baz=113,slow=1.7,SNR=4.3						
BVAR	Borovoye Array	126.48	316	PKP	PKPdf	01 12 45.0	0.0
	0.4nm,0.5s,baz=132,slow=4.3,SNR=2.5						
H10S3	ASCENSION HYDR	137.77	155	T	T	03 47 22.9	
	baz=204,slow=75,SNR=6.5						
H10S2	ASCENSION HYDR	137.77	155	T	T	03 47 28.3	
	baz=204,slow=75,SNR=5.3						
H10S1	ASCENSION HYDR	137.78	155	T	T	03 47 28.3	
	baz=204,slow=75,SNR=5.5						
H10N3	ASCENSION HYDR	138.85	154	T	T	03 48 37.4	
	baz=203,slow=75,SNR=10						
H10N1	ASCENSION HYDR	138.85	154	T	T	03 48 35.7	
	baz=203,slow=75,SNR=8.0						
H10N2	ASCENSION HYDR	138.87	154	T	T	03 48 40.1	
	baz=203,slow=75,SNR=11						
FINES	FINESS Array B	145.07	340	PKP	PKPbc	01 13 18.4	-0.2
	3.4nm,0.7s,baz=46,slow=4.0,SNR=11						
HFS	Hagfors	149.12	349	PKPbc	PKPbc	01 13 28.3	-1.9
	1.4nm,0.7s,baz=134,slow=4.2,SNR=3.0						
AKASG	Malin Array Be	151.33	323	PKPbc	PKPbc	01 13 34.7	-1.1
	0.8nm,0.5s,baz=46,slow=2.6,SNR=3.3						
BRTR	Keskin Array B	152.77	299	PKPbc	PKPbc	01 13 41.2	+1.6
	0.6nm,0.7s,baz=67,slow=4.2,SNR=3.6						
TORD	Torodi Ar. Bea	163.01	178	PKPab	PKPab	01 14 35.2	+0.3
	baz=172,slow=4.4						

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*NIED **05** 01:00:00, 38°.20N×144°.50E, h8^{km}, Mw3.6 Best double couple: M$_0$3.09000×10^{14} NP1:φ$_s$18.00000°, δ23.00000°, λ-100.00000°. NP2:φ$_s$208.00000°, δ67.00000°, λ-86.00000°.*

JMA 05 01:00:23.4±0.2**, 38°.23N×144°.52E, h36**^{km}**, M3.7, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	2.39	292	P	Pn	01 01 01.6	+1.6
MIYJ	**Miyakonagasawa**	2.50	303	P	Pn	01 01 02.9	+1.4
JIO	**Ouri**	2.50	276	P	Pn	01 01 02.9	+1.4
JIO				*e*S	Sn	01 01 32.0	+1.2
JMK	**Ichinoseki**	2.69	287	P	Pn	01 01 05.8	+1.8
JOM	**Ohasama**	2.81	297	*e*S	Sn	01 01 41.0	+2.6
JOU	**Okura**	3.04	274	P	Pn	01 01 10.9	+2.0
JOU				*e*S	Sn	01 01 46.1	+2.1
JANG	**Nango**	3.17	313	P	Pn	01 01 12.3	+1.7
JANG				*e*S	Sn	01 01 49.7	+2.6
JRG	**Rokugo**	3.25	292	P	Pn	01 01 14.5	+2.7
JYK	**Kaneyama**	3.33	283	P	Pn	01 01 15.4	+2.5
JYK				*e*S	Sn	01 01 54.4	+3.1
JFT	**Otama**	3.39	259	P	Pn	01 01 15.5	+1.8
JFT				*e*S	Sn	01 01 54.1	+1.5
JAH	**Hinai**	3.60	304	P	Pn	01 01 19.3	+2.8
JTM	**Tenmabayashi**	3.69	315	P	Pn	01 01 20.0	+2.1
JTM				*e*S	Sn	01 02 01.6	+1.4
JCH	**Churui**	4.47	349	P	Pn	01 01 29.5	+1.0
JRY	**Ryogami san**	5.00	246	P	Pn	01 01 36.7	+0.8
NEM2	**Nemuro 2**	5.21	10	P	Pn	01 01 37.2	-1.5
MAT	**Matsushiro**	5.30	253	P	Pn	01 01 42.8	+2.8
MAT				S	Sn	01 02 45.1	+5.2
JTKR	**Abashiri--Toko**	5.75	356	P	Pn	01 01 46.7	+0.5

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*ISCJB **05** 01:23:01.6±0.3, 36°.70S±0°.06×53°.35E±0°.08, h7^{km}, mb4.4/29, MS3.5/18, Error ellipse: s-maj=9.9km s-min=8.4km az=164.3*

*IDC **05** 01:23:02.1±0.4, 36°.64S×53°.32E, h0^{km}, mb4.3/24, mb1 4.4/24, mb1mx4.3/58, mbtmp4.3/24, MS3.4/18, Ms1 3.4/18, ms1mx3.2/53, Error ellipse: s-maj=15.7km s-min=13.8km az=59.0*

*NEIC **05** 01:23:03.7±0.2, 36°.70S×53°.30E, h10^{km}, mb4.6/16, Error ellipse: s-maj=8.0km s-min=7.4km az=58.0*

ISC 05 01:23:03.4±0.4**, 36°.73S**±0°.08×**53°.3E**±0°.1**, h7^{km}, n119, σ0ˢ89**/105**, mb4.4**/29**, MS3.5**/18**, 1C-4D, South Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABPO	**Ambohimpanom**	18.44	341	*e*P	Pn	01 27 24.0	+4.3
	17nm,1.0s						
OPO	**Ambohidratompo**	18.88	342	P	Pn	01 27 26.8	+1.7
	1.1nm,0.3s,baz=164,slow=8.8,SNR=11						
BOSA	**Boshof**	24.91	281	P	P	01 28 26.6	-0.6
	10.0nm,0.7s,baz=118,slow=9.8,SNR=20						
BOSA				LR	LR	01 35 31.5	
	comp=Z,51nm,21.5s,baz=128,slow=30						
BOSA	**Boshof**	24.91	281	*e*P	P	01 28 26.6	-0.6
	13nm,0.8s						
LBTB	**Lobatse**	26.41	288	P	P	01 28 39.6	-1.2
	7.1nm,0.9s,baz=126,slow=9.6,SNR=8.6						
LBTB				LR	LR	01 36 59.2	
	comp=Z,57nm,18.7s,baz=115,slow=32						
LBTB	**Lobatse**	26.41	288	*e*P	P	01 28 39.6	-1.2
	11nm,1.0s						
SUR	**Sutherland**	27.05	270	P	P	01 28 47.2	+0.5
	19nm,1.0s,baz=152,slow=7.0,SNR=4.1						
SUR				LR	LR	01 37 36.3	
	comp=Z,48nm,18.0s,baz=118,slow=32						
SUR	**Sutherland**	27.05	270	*e*P	P	01 28 47.2	+0.5
	57nm,1.4s						
MAW	**Mawson**	31.40	173	P	P	01 29 26.3	+1.7
	1.0nm,0.2s,baz=331,slow=10,SNR=4.6						
MAW				LR	LR	01 38 49.4	
	comp=Z,150nm,20.6s,baz=52,slow=30						
H08S1	**Diego Carcia H**	33.80	36	T	T	02 05 14.7	
	baz=208,slow=76						
H08S2	**Diego Garcia H**	33.81	36	T	T	02 05 16.7	
	baz=208						
H08S3	**Diego Garcia H**	33.82	36	T	T	02 05 17.1	
	baz=208,slow=76						
H08N3	**Diego Garcia H**	34.28	32	T	T	02 05 43.8	
	baz=206,slow=75,SNR=9.9						
H08N1	**Diego Carcia H**	34.30	32	T	T	02 05 50.6	
	baz=206,slow=75,SNR=8.7						
H08N2	**Diego Garcia H**	34.31	32	T	T	02 06 00.3	
	baz=206,slow=75,SNR=11						
SNAA	**Sanae**	45.06	202	P	P	01 31 20.2	+0.6
SNAA	**Sanae**	45.06	202	P	P	01 31 20.1	+0.6
	13nm,0.7s,baz=99,slow=6.4,SNR=134						
SNAA	**Sanae**	45.06	202	*e*P	P	01 31 19.9	+0.3
	15nm,0.7s						
VNA1	**Neumayer--Stat**	46.46	204	P	P	01 31 31.6	+1.0
VNA3	**Neumayer Olymp**	47.04	203	P	P	01 31 35.6	+0.5
H01W2	**Cape Leeuwin H**	48.61	107	T	T	02 24 11.1	
	baz=249,slow=75,SNR=249						
H01W3	**Cape Leeuwin H**	48.62	107	T	T	02 24 11.7	
	baz=249,slow=75,SNR=255						
H01W1	**Cape Leeuwin H**	48.63	107	T	T	02 24 12.4	
	baz=249,slow=75,SNR=241						
QSPA	**South Pole Qui**	53.46	180	P	P	01 32 23.7	-0.3
	14nm,0.9s,baz=261,slow=3.2,SNR=28						
QSPA				LR	LR	01 52 37.1	
	comp=Z,63nm,20.6s,baz=234,slow=33						
QSPA	**South Pole Qui**	53.46	180	*e*P	P	01 32 23.5	-0.5
	18nm,1.0s						
VNDA	**Vanda**	58.29	166	P	P	01 32 58.7	+0.4
	2.2nm,0.8s,baz=248,slow=7.5,SNR=13						
VNDA				LR	LR	01 56 19.6	
	comp=Z,52nm,18.3s,baz=214,slow=34						
VNDA	**Vanda**	58.29	166	*e*P	P	01 32 59.1	+0.9
	3.3nm,1.0s						
WSAR	**Wadi Sarin**	59.85	6	P	P	01 33 09.8	+0.1
	5.3nm,0.9s,baz=185,slow=11,SNR=2.7						
BBOO	**Buckleboo**	66.01	114	*e*P	P	01 33 50.2	-0.6
	14nm,1.3s						
ASAR	**Alice Springs**	69.01	104	P	P	01 34 09.6	-0.4
	2.2nm,0.6s,baz=233,slow=5.9,SNR=17						
AS31	**Alice Springs**	69.01	104	*e*P	P	01 34 09.6	-0.4
	1.2nm,0.8s						
AS01	**Alice Springs**	69.05	104	*e*P	P	01 34 09.5	-0.6
DBIC	**Dimbokro**	69.38	296	P	P	01 34 12.8	+0.5
	2.5nm,0.7s,baz=131,slow=7.4,SNR=3.9						
DBIC				LR	LR	02 02 07.6	
	comp=Z,25nm,19.5s,baz=118,slow=34						
TOA0	**Torodi Ar. Sit**	69.43	305	*e*P	P	01 34 12.2	-0.3
TORD	**Torodi Ar. Bea**	69.43	305	P	P	01 34 11.4	-1.1
	2.5nm,0.8s,baz=121,slow=4.2						
TORD				LR	LR	02 03 41.9	
	comp=Z,42nm,18.5s,baz=255,slow=35						
TOA1	**Torodi Ar. Sit**	69.44	305	*e*P	P	01 34 11.3	-1.2
CM31	**Chiang Mai Arr**	69.76	46	*e*P	P	01 34 15.2	+0.8
CMAR	**Chiang Mai Arr**	69.76	46	P	P	01 34 15.2	+0.8
	0.9nm,0.3s,baz=239,slow=5.4,SNR=6.7						
STKA	**Stephens Creek**	70.52	116	P	P	01 34 19.0	-0.1
	2.2nm,0.7s,baz=287,slow=7.2,SNR=4.7						
STKA				LR	LR	01 57 27.9	
	comp=Z,108nm,20.0s,baz=205,slow=29						
WR1	**Warramunga Arr**	71.34	101	*e*P	P	01 34 24.0	-0.2
WRA	**Warramunga Arr**	71.34	101	P	P	01 34 24.0	-0.2
	2.0nm,0.6s,baz=233,slow=5.3,SNR=9.9						
MMAI	**Mount Meron Ar**	71.37	344	LR	LR	02 02 42.7	
	comp=Z,13nm,19.0s,baz=265,slow=33						
EFI	**East Falkland**	73.53	217	*e*P	P	01 34 36.7	0.0
	101nm,1.4s						
LSA	**Lhasa**	75.01	34	*e*P	P	01 34 46.6	+0.5
	6.7nm,1.0s						
GNI	**Garni**	76.91	353	LR	LR	02 08 20.8	
	comp=Z,15nm,18.6s,baz=200,slow=35						
BR101	**Keskin Array S**	78.21	345	*e*P	P	01 35 02.2	-1.4
BRTR	**Keskin Array B**	78.21	345	P	P	01 35 02.2	-1.4
	0.6nm,0.7s,baz=178,slow=11,SNR=4.8						
BRTR				LR	LR	02 07 54.9	
	comp=Z,11nm,18.8s,baz=146,slow=34						
KK31	**Karatay Array**	80.98	13	*e*P	P	01 35 19.1	+0.7
KKAR	**Karatay Array**	80.98	13	*e*P	P	01 35 19.1	+0.7
VAE	**Valguarnera**	82.15	330	LR	LR	02 11 56.7	
	comp=Z,30nm,18.3s,baz=138,slow=36						
KEST	**Kesra**	82.86	325	LR	LR	02 11 28.7	
	comp=Z,37nm,21.1s,baz=274,slow=35						
MLR	**Muntele Rosu**	85.49	341	P	P	01 35 41.4	-0.3
	0.4nm,0.6s,baz=156,slow=18,SNR=8.3						
MLR	**Muntele Rosu**	85.49	341	⇑*i*P	P	01 35 41.8	0.0
MLR	**Muntele Rosu**	85.49	341	*e*P	P	01 35 41.4	-0.3
	12nm,1.5s						
VRI	**Vrincioaia**	85.64	342	⇓*i*P	P	01 35 42.2	-0.1
PLOR	**Plostina**	85.64	342	⇓*i*P	P	01 35 42.1	-0.3
VOIR		85.68	340	⇓*i*P	P	01 35 41.5	-1.1
AKTO	**Aktyubinsk**	86.89	3	P	P	01 35 47.9	-0.5
	0.9nm,0.7s,baz=153,slow=2.7,SNR=3.5						
MK32	**Makanchi Array**	87.12	19	*e*P	P	01 35 48.8	-0.9
MKAR	**Makanchi Array**	87.12	19	P	P	01 35 48.7	-0.9
	0.8nm,0.8s,baz=210,slow=3.6,SNR=3.8						
PLCA	**Paso Flores**	87.32	219	P	P	01 35 50.5	-0.7
	4.1nm,1.1s,baz=193,slow=6.2,SNR=4.2						
PLCA	**Paso Flores**	87.32	219	*e*P	P	01 35 50.5	-0.7
	13nm,1.2s						
BURAR	**Bucovina Array**	87.65	341	⇓*i*P	P	01 35 52.8	+0.6
BUR04	**Bucovina Ar. S**	87.65	341	*e*P	P	01 35 52.3	0.0
MDT	**Midelt**	87.82	314	LR	LR	02 14 07.9	
	comp=Z,34nm,21.9s,baz=170,slow=35						
CPUP	**Villa Florida**	89.52	237	P	P	01 36 01.4	-0.3
	4.3nm,0.9s,baz=124,slow=5.2,SNR=8.4						
AKASG	**Malin Array Be**	89.61	345	P	P	01 36 00.4	-0.9
	0.6nm,0.5s,baz=151,slow=5.0,SNR=4.6						
AKASG				LR	LR	02 13 02.4	
	comp=Z,9.4nm,21.1s,baz=305,slow=34						
AKBB	**Malin Array Si**	89.61	345	*e*P	P	01 36 00.4	-0.9
	2.3nm,0.7s						
KURBB	**Kurchatov Arra**	89.77	16	P	P	01 36 00.5	-1.5
	0.5nm,0.7s,baz=214,slow=5.0,SNR=5.1						
KURK	**Kurchatov**	89.88	16	*e*P	P	01 36 00.5	-2.0
DAVOX	**Davos/Dischmat**	91.81	332	LR	LR	02 17 56.0	
	comp=Z,23nm,20.7s,baz=242,slow=36						
GERES	**GERESS Array B**	92.19	335	LR	LR	02 19 46.8	
	comp=Z,14nm,18.1s,baz=100,slow=37						
ESDC	**Sonseca Array**	92.49	319	P	P	01 36 15.2	+0.2
	0.2nm,0.5s,baz=61,slow=19,SNR=3.1						
ZALV	**Zalesovo Beam**	94.32	18	P	P	01 36 21.3	-1.7
	0.9nm,0.7s,baz=303,slow=8.1,SNR=4.1						
ZAA1	**Zalesovo Array**	94.33	18	*e*P	P	01 36 21.3	-1.7
154A	**Montrose**	144.16	277	*e*PKPdf	PKPab	01 42 37.7	0.0
GOGA	**Godfrey**	144.70	278	*e*PKPdf	PKPab	01 42 38.9	-0.8
BG3	**Lake Jocassee**	144.73	281	*e*PKPdf	PKPab	01 42 39.8	0.0
253A	**Americus**	144.79	275	*e*PKPdf	PKPab	01 42 39.7	-0.4
Y52A	**Lilburn**	145.31	278	*e*PKPbc	PKPbc	01 42 41.5	-0.3
X51A	**Calhoun**	146.14	279	*e*PKPdf	PKPbc	01 42 44.3	-0.1
250A	**Grady**	146.48	274	*e*PKPdf	PKPdf	01 42 44.7	+0.6
W50A	**Signal Mountai**	146.66	280	*e*PKPdf	PKPbc	01 42 45.7	-0.3
SWET	**Sewanee**	147.16	280	*e*PKPdf	PKPbc	01 42 47.2	-0.2
WCI	**Wyandotte Cave**	148.09	285	*e*PKPbc	PKPbc	01 42 48.9	-0.8
INK	**Inuvik**	148.14	5	*e*PKPbc	PKPbc	01 42 48.5	-0.4
MLY	**Manley**	148.27	19	*e*PKPbc	PKPbc	01 42 49.8	+0.4
M46A	**Old House Fiel**	148.55	291	*e*PKPbc	PKPbc	01 42 50.6	-0.2
WVT	**Waverly**	148.88	281	*e*PKPbc	PKPbc	01 42 51.1	-0.7
BPAW	**Bear Paw Mtn.**	148.93	20	*e*PKPbc	PKPbc	01 42 51.1	-0.1
MDM	**Murphy Dome**	148.96	18	*e*PKPbc	PKPbc	01 42 50.5	-0.7
CAST	**Castle Rocks**	149.12	22	*e*PKPbc	PKPbc	01 42 52.1	+0.5
CCB	**Clear Creek Bu**	149.32	18	*e*PKPbc	PKPbc	01 42 51.3	-0.7
IL1	**Eielson Array**	149.44	17	*e*PKPdf	PKPdf	01 42 49.7	+1.8
ILAR	**Eielson Array**	149.44	17	PKPbc	PKPbc	01 42 51.2	-1.1
	5.9nm,0.7s,baz=321,slow=3.3,SNR=55						
ILB	**Eielson Array**	149.44	17	*e*PKPbc	PKPbc	01 42 51.3	-1.1
OLIL	**Olney**	149.57	286	*e*PKPbc	PKPbc	01 42 53.4	0.0
HDA	**Harding Lake**	149.73	17	*e*PKPbc	PKPbc	01 42 52.0	-1.1
F41A	**Three Lakes**	150.57	300	*e*PKPbc	PKPbc	01 42 55.3	-0.4
EGAK	**Eagle**	150.61	13	*e*PKPbc	PKPbc	01 42 55.2	+0.1
DHY	**Denali Highway**	150.72	19	*e*PKPbc	PKPbc	01 42 56.2	+0.5
PBMO	**Poplar Bluff**	151.06	281	*e*PKPbc	PKPbc	01 42 56.8	-0.3
P42A	**Winchester**	151.41	287	*e*PKPbc	PKPbc	01 42 57.7	-0.1
JFWS	**Jewell Farm**	151.50	294	*e*PKPbc	PKPbc	01 42 57.8	-0.2
DAWY	**Dawson**	151.57	12	*e*PKPbc	PKPbc	01 42 57.2	-0.2
T42A	**Van Buren**	151.63	281	*e*PKPbc	PKPbc	01 42 58.0	-0.4
CCM	**Cathedral Cave**	151.92	284	*e*PKPbc	PKPbc	01 42 59.4	+0.4
W41B	**Gary Mavity, V**	152.17	277	*e*PKPbc	PKPbc	01 42 59.8	+0.1
V40A	**Witts Springs**	152.76	278	*e*PKPbc	PKPbc	01 43 00.7	-0.4
YKA	**Yellowknife Ar**	153.14	348	PKPbc	PKPbc	01 43 00.4	-0.5
	1.9nm,0.7s,baz=31,slow=2.1,SNR=5.5						
YKB5	**Yellowknife Ar**	153.14	348	*e*PKPbc	PKPbc	01 43 00.4	-0.5
N39A	**Derby Farms, D**	153.15	289	*e*PKPbc	PKPbc	01 43 02.5	+0.8
LTX	**Lajitas**	159.38	256	*e*PKPdf	PKPdf	01 43 02.7	-0.2
LTX				*e*PKPab	PKPab	01 43 41.2	+0.6
TXAR	**Lajitas Array**	159.38	256	PKP	PKPdf	01 43 02.7	-0.2
	0.5nm,0.8s,baz=112,slow=1.3,SNR=6.0						
TXAR				PKPab	PKPab	01 43 41.2	+0.6
	0.8nm,0.9s,baz=131,slow=7.3,SNR=5.3						
PD31	**Pinedale Array**	165.52	300	*e*PKPdf	PKPdf	01 43 07.8	-1.0
PDAR	**Pinedale Array**	165.52	300	PKP	PKPdf	01 43 07.8	-1.0
	0.7nm,0.8s,baz=130,slow=2.3,SNR=5.7						
PDAR	**Pinedale Array**	165.52	300	*e*PKPdf	PKPdf	01 43 07.6	-1.2
FXWY	**Fox Creek**	166.20	305	*e*PKPdf	PKPdf	01 43 09.8	+0.5
R11A	**Troy Canyon, C**	171.04	284	*e*PKPdf	PKPdf	01 43 11.3	-1.3

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*GUC **05** 01:27:32.5±0.6, 34°.77S×71°.77W, h45^{km}±2^{km}, ML3.6*

*ISCJB **05** 01:27:34.0±0.7, 34°.77S±0°.05×71°.76W±0°.08, h28^{km}±7^{km}, Error ellipse: s-maj=11.8km s-min=6.9km az=28.8*

*SJA **05** 01:27:34.0±1.0, 34°.80S×71°.54W, h30^{km}, ML3.1, MW3.7*

ISC 05 01:27:34.1±1.1**, 34°.77S**±0°.04×**71°.77W**±0°.07**, h27^{km}**±10^{km}**, n15, σ1ˢ04**/22**, 4C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO05	**HualaæØ**	0.27	209	⇑*i*P	Pb	01 27 40.7	-0.3
GO05				*i* S	Sb	01 27 46.5	+0.8
GO05				IAML		01 27 47.2	
	comp=E,8μm,0.3s						
NICH	**Los Niches**	0.50	118	*e*P	Pb	01 27 43.5	-1.0
NICH				*i* S	Sb	01 27 51.4	0.0
CLCH	**Cerro Calan**	1.71	37	⇑*i*P	Pn	01 28 01.7	-0.5
CLCH				*i* S	Sn	01 28 23.1	-0.1
CLCH				IAML		01 28 28.3	
	comp=N,2μm,0.2s						
CCHI	**Chillan**	1.85	188	*e*P	Pn	01 28 05.5	+1.5
CCHI				*i* S	Sb	01 28 29.8	-0.1
CCHI	**Chillan**	1.85	188	*e*P	Pn	01 28 02.8	-1.2
CCHI				*i* S	Sn	01 28 26.1	-0.3
CCHI				IAML		01 28 30.9	
	comp=E,743nm,0.2s						
FCH	**Farellones**	1.89	41	⇑*i*P	Pn	01 28 04.1	-0.8
FCH				*i* S	Sn	01 28 28.9	+0.9
FCH				IAML		01 28 32.6	
	comp=N,1μm,0.2s						
ROC1	**El Roble**	1.90	20	*i* S	Sb	01 28 30.9	-0.6
ROCH	**El Roble**	1.90	20	⇑*i*P	Pn	01 28 04.5	-0.5
ROCH				*i* S	Sn	01 28 27.2	-0.9
ROCH				IAML		01 28 34.1	
	comp=N,704nm,0.4s						
AAGR	**Agrelo**	2.97	56	⇓*i*P	Pn	01 28 20.6	+1.1
ARCO	**CERRO ARCO**	3.05	52	*i* P	Pn	01 28 21.5	+0.9
ARCO				IAML		01 28 41.1	
	comp=Z,49nm,0.4s						
AUSP	**Uspallata**	3.23	39	*i* P	Pn	01 28 25.3	+2.0
ASAL	**Salagasta**	3.27	49	*i* P	Pn	01 28 24.4	+0.7
RTLS	**Leoncito**	3.61	36	*i* P	Pn	01 28 29.9	+1.4
RTLS				IAML		01 29 31.6	
	comp=Z,39nm,0.4s						
RTCV	**Cerro Valdivia**	3.96	44	*e*P	Pn	01 28 34.3	+1.1
RTLL	**Cerro Villicun**	4.41	40	*i* P	Pn	01 28 40.2	+1.0

IDC 05 01:38:20.8±3.1**, 28°.64S**×**178°.59W, h0^{km}, mb3.7**/3**, mb1 3.9**/3**, mb1mx3.6**/41**, mbtmp3.7**/3**, Error ellipse: s-maj=96.2km s-min=16.3km az=31.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	0.84	136	Pn	Pn	01 38 40.6	+0.7
	31nm,0.3s,baz=288,slow=13,SNR=3.4						
RAO				Sn	Sn	01 38 52.9	-0.2
	277nm,0.3s,baz=202,slow=23,SNR=20						
STKA	**Stephens Creek**	34.41	255	P	P	01 45 09.4	-0.6
	0.6nm,0.4s,baz=110,slow=5.6,SNR=3.5						
ASAR	**Alice Springs**	42.72	265	P	P	01 46 19.3	-0.6
	0.5nm,0.8s,baz=104,slow=7.7,SNR=4.3						
WRA	**Warramunga Arr**	43.54	271	P	P	01 46 27.6	+1.0
	0.8nm,0.6s,baz=111,slow=8.0,SNR=5.5						
FINES	**FINESS Array B**	143.32	340	PKP	PKPbc	01 57 53.7	+0.2
	1.0nm,0.5s,baz=48,slow=2.1,SNR=6.5						

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*NIED **05** 01:42:00, 38°.60N×142°.40E, h53^{km}, Mw3.5 Best double couple: M₀2.15000×10^{14} NP1:φₛ76.00000°, δ47.00000°, λ120.00000°. NP2:φₛ216.00000°, δ51.00000°, λ62.00000°.*

JMA 05 01:42:58.1±0.1**, 38°.56N**×**142°.36E, h43^{km}**±1^{km}**, M3.7, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	0.75	314	P	Pn	01 43 12.5	+0.2
OFUJ				S	Sn	01 43 22.7	+0.2
JIO	**Ouri**	0.80	263	P	Pn	01 43 12.9	0.0
JIO				S	Sn	01 43 23.4	-0.3
JMK	**Ichinoseki**	0.97	294	P	Pn	01 43 15.6	+0.3
JMK				S	Sn	01 43 28.3	+0.4
JOM	**Ohasama**	1.23	318	P	Pn	01 43 19.5	+0.6
JOM				S	Sn	01 43 35.1	+0.7
JOU	**Okura**	1.34	262	P	Pn	01 43 20.8	+0.4
JOU				S	Sn	01 43 37.7	+0.6
JMM	**Marumori**	1.42	241	P	Pn	01 43 21.1	-0.3
JRG	**Rokugo**	1.58	302	P	Pn	01 43 24.3	+0.6
JYK	**Kaneyama**	1.60	283	P	Pn	01 43 24.7	+0.7
JYS	**Shirataka**	1.83	260	P	Pn	01 43 28.0	+0.9
JYS				*e*S	Sn	01 43 49.9	+0.8

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*TIR **05** 02:13:00.5, 40°.51N×21°.49E, h3^{km}, Md3.3/3*

*ATH **05** 02:13:01.0, 40°.44N×21°.47E, h21^{km}, ML3.2/16, Error ellipse: s-maj=1.3km s-min=0.9km az=325.0*

*SKO **05** 02:13:00.6, 40°.34N×21°.39E, h8^{km}, M2.6, ML3.3*

*PDG **05** 02:13:01.7±0.4, 40°.46N×21°.48E, h16^{km}, ML3.2/11, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*

*THE **05** 02:13:01.3, 40°.41N×21°.42E, h18^{km}, ML3.4/8, Error ellipse: s-maj=0.6km s-min=0.3km az=335.0*

*CSEM **05** 02:13:01.5±0.1, 40°.45N×21°.47E, h8^{km}, ML3.2, Error ellipse: s-maj=2.3km s-min=1.5km az=60.0*

*BEO **05** 02:13:02.4±0.7, 40°.47N×21°.43E, h12^{km}±2^{km}, ML3.0/6*

ISC 05 02:13:01.2±0.9**, 40°.43N**±0°.01×**21°.45E**±0°.01**, h13^{km}**±7^{km}**, n287, σ1ˢ18**/393**, 20C-25D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KZN	**Kozani**	0.28	117	P	Pb	02 13 08.2	+0.2
KZN				S	Sb	02 13 13.0	+0.4
KZN				AML	AML	02 13 13.4	
	comp=N,44193μm,0.2s						
KZN				AML	AML	02 13 13.8	
	comp=E,47785μm,0.3s						
KZN	**Kozani**	0.28	117	P	Pb	02 13 07.8	-0.2
KZN				S	Sb	02 13 12.5	-0.1
KZN	**Kozani**	0.28	117	P	Pb	02 13 07.8	-0.2
KZN				S	Sb	02 13 12.5	-0.1
NEST	**Nestorio**	0.31	267	P	Pg	02 13 07.0	-0.6
NEST				S	Sg	02 13 11.8	-0.1
NEST				AML	AML	02 13 14.7	
	comp=N,16861μm,0.3s						
NEST				AML	AML	02 13 15.2	
	comp=E,22785μm,0.3s						
NEST	**Nestorio**	0.31	267	P	Pg	02 13 07.6	0.0
NEST				S	Sg	02 13 12.3	+0.4
NEST	**Nestorio**	0.31	267	P	Pg	02 13 07.6	0.0
NEST				S	Sg	02 13 12.5	+0.6
PENT	**Pentalofos**	0.34	225	P	Pg	02 13 07.4	-0.7
PENT				S	Sg	02 13 12.9	+0.2
PENT				AML	AML	02 13 17.2	
	comp=N,9584μm,0.5s						
PENT				AML	AML	02 13 17.5	
	comp=E,7959μm,0.3s						
PENT	**Pentalofos**	0.34	225	P	Pg	02 13 08.0	-0.1
PENT				S	Sg	02 13 12.6	-0.2
PENT	**Pentalofos**	0.34	225	P	Pg	02 13 08.0	-0.1
PENT				S	Sg	02 13 13.5	+0.7
FNA	**Florina**	0.35	351	*e*Pg	Pb	02 13 08.8	-0.6
FNA				*e*Sg	Sb	02 13 14.4	-0.5
FNA	**Florina**	0.35	351	P	Pb	02 13 08.9	-0.5
FNA				S	Sb	02 13 15.4	+0.5
FNA	**Florina**	0.35	351	P	Pb	02 13 09.1	-0.3
FNA				S	Sb	02 13 14.7	-0.2
FNA				AML	AML	02 13 16.0	
	comp=E,24045μm,0.2s						
FNA				AML	AML	02 13 16.4	
	comp=N,27664μm,0.2s						
FNA	**Florina**	0.35	351	P	Pb	02 13 08.9	-0.5
FNA				S	Sb	02 13 14.4	-0.5
FNA	**Florina**	0.35	351	P	Pb	02 13 08.9	-0.5
FNA				S	Sb	02 13 14.3	-0.6
KPRO	**Kipourio**	0.48	188	P	Pg	02 13 10.4	-0.3
KPRO				S	Sb	02 13 20.1	+1.5
KPRO				AML	AML	02 13 24.5	
	comp=N,9202μm,0.5s						
KPRO				AML	AML	02 13 26.3	
	comp=E,13777μm,0.4s						
KPRO	**Kipourio**	0.48	188	P	Pg	02 13 10.5	-0.3
KPRO				S	Sg	02 13 17.6	+0.4
KPRO	**Kipourio**	0.48	188	P	Pg	02 13 10.7	0.0
KPRO				S	Sg	02 13 17.6	+0.4
KTI	**Kastanea**	0.51	94	P	Pb	02 13 12.0	0.0
KTI	**Kastanea**	0.51	94	P	Pb	02 13 12.0	0.0
KBN	**Korca**	0.54	291	P	Pg	02 13 11.6	-0.2
KBN				S	Sb	02 13 20.0	-0.2
KBN	**Korca**	0.54	291	P	Pg	02 13 11.6	-0.2
KBN	**Korca**	0.54	291	*i* Pg	Pg	02 13 12.0	+0.2
KBN				S	Sb	02 13 20.0	-0.2
KBN	**Korca**	0.54	291	*i* PG	Pg	02 13 12.0	+0.2
KBN				*i* SG	Sb	02 13 20.5	+0.2
BIA	**Bitola**	0.59	351	P	Pb	02 13 13.1	-0.3
BIA				S	Sb	02 13 22.3	+0.6
BIA	**Bitola**	0.59	351	*i* Pg	Pb	02 13 13.3	-0.1
BIA				*i* Sg	Sb	02 13 23.2	+1.4
BIA				*e*Lg	Lg	02 13 24.0	
	comp=N,2μm,0.3s						
BIA				*e*Lg	Lg	02 13 24.1	
	comp=E,2μm,0.4s						
BIA	**Bitola**	0.59	351	P	Pb	02 13 13.1	-0.3
BIA				S	Sb	02 13 22.3	+0.6
OHR	**Ohrid**	0.84	324	⇓*i*Pg	Pg	02 13 16.8	-0.7
OHR				*i* Sg	Sb	02 13 29.4	+0.6
OHR				*e*Lg	Lg	02 13 31.9	
	comp=E,1μm,0.4s						
OHR				*e*Lg	Lg	02 13 32.0	
	comp=N,719nm,0.5s						
LIT	**Litokhoron**	0.86	112	P	Pg	02 13 17.3	-0.6
LIT				S	Sb	02 13 29.4	0.0
LIT				AML	AML	02 13 34.5	
	comp=N,5188μm,0.3s						
LIT				AML	AML	02 13 34.6	
	comp=E,6978μm,0.3s						
LIT	**Litokhoron**	0.86	112	P	Pg	02 13 17.4	-0.5
LIT				S	Sb	02 13 29.7	+0.3
LIT	**Litokhoron**	0.86	112	P	Pg	02 13 17.4	-0.5
LIT				S	Sb	02 13 29.4	0.0
GRG	**Griva**	0.89	54	P	Pb	02 13 18.4	-0.1
GRG				S	Sb	02 13 30.2	-0.1
GRG	**Griva**	0.89	54	P	Pb	02 13 18.9	+0.4
GRG				AML	AML	02 13 36.2	
	comp=E,998μm,0.5s						
GRG				AML	AML	02 13 38.7	
	comp=N,1982μm,0.7s						
GRG	**Griva**	0.89	54	P	Pb	02 13 18.3	-0.2
JAN	**Janina**	0.90	211	P	Pg	02 13 16.7	-1.9
JAN				S	Sg	02 13 31.4	+0.9
JAN				AML	AML	02 13 33.1	
	comp=E,1865μm,0.4s						
JAN				AML	AML	02 13 36.1	
	comp=N,1573μm,0.5s						
JAN	**Janina**	0.90	211	P	Pg	02 13 17.1	-1.5
JAN				S	Sg	02 13 29.7	-0.7
JAN	**Janina**	0.90	211	P	Pg	02 13 17.6	-1.0
JAN				S	Sg	02 13 31.4	+0.9
KRUS	**Krusevo**	0.95	351	*i* Pg	Pg	02 13 18.8	-0.7
KRUS				*i* Sg	Sn	02 13 33.5	-0.2
KRUS				*e*Lg	Lg	02 13 33.9	
	comp=E,354nm,0.5s						
KRUS				*e*Lg	Lg	02 13 34.2	
	comp=N,319nm,0.3s						
THL	**Klokotos Trika**	0.97	153	P	Pg	02 13 18.2	-1.7
THL				S	Sg	02 13 32.9	+0.4
THL				AML	AML	02 13 36.2	
	comp=E,2955μm,0.3s						
THL				AML	AML	02 13 40.7	
	comp=N,2857μm,0.4s						
THL	**Klokotos Trika**	0.97	153	P	Pg	02 13 18.8	-1.1
THL				S	Sg	02 13 32.4	-0.2
THL	**Klokotos Trika**	0.97	153	P	Pg	02 13 18.9	-1.0
THL				S	Sg	02 13 33.0	+0.4
LRSO	**Larissa Observ**	1.05	136	P	Pn	02 13 21.9	+0.4
LRSO				S	Sn	02 13 37.0	+1.1
LRSO	**Larissa Observ**	1.05	136	P	Pb	02 13 21.4	+0.3
LRSO				S	Sn	02 13 36.3	+0.4
THE	**Thessaloniki**	1.17	80	P	Pg	02 13 24.1	+0.4
THE				AML	AML	02 13 42.7	
	comp=E,353μm,0.4s						
THE				AML	AML	02 13 45.0	

	comp=N,548μm,0.3s						
THE	Thessaloniki	1.17	80	P	Pg	02 13 23.5	-0.2
VAY	Valandovo	1.23	43	i Pg	Pg	02 13 24.4	-0.4
VAY				i Sg	Sn	02 13 41.9	+1.5
VAY				eLg	Lg	02 13 45.7	
	comp=N,468nm,0.7s						
VAY				eLg	Lg	02 13 45.8	
	comp=E,206nm,0.6s						
SGD	Sagiada	1.24	229	P	Pn	02 13 23.8	-0.4
SGD	Sagiada	1.24	229	P	Pn	02 13 22.7	-1.5
SGD	Sagiada	1.24	229	P	Pn	02 13 24.3	+0.1
IGT	Igoumenitsa	1.25	224	P	Pn	02 13 24.1	-0.1
IGT				AML	AML	02 13 47.6	
	comp=E,654μm,0.8s						
IGT				AML	AML	02 13 50.5	
	comp=N,875μm,0.5s						
IGT	Igoumenitsa	1.25	224	P	Pn	02 13 24.5	+0.3
HORT	Hortiatis	1.27	82	P	Pn	02 13 24.2	-0.4
HORT	Hortiatis	1.27	82	P	Pn	02 13 24.8	+0.2
HORT				AML	AML	02 13 46.4	
	comp=E,938μm,0.6s						
HORT				AML	AML	02 13 51.9	
	comp=N,698μm,0.4s						
HORT	Hortiatis	1.27	82	P	Pn	02 13 24.8	+0.2
KNT	Kendrikon	1.32	56	P	Pn	02 13 25.4	+0.2
KNT	Kendrikon	1.32	56	P	Pb	02 13 25.7	-0.1
KNT	Kendrikon	1.32	56	P	Pb	02 13 25.6	-0.1
KASA	Kassiopi	1.35	240	P	Pg	02 13 27.8	+0.6
KASA	Kassiopi	1.35	240	P	Pg	02 13 27.3	+0.2
STIP	Stip	1.38	24	i Pn	Pg	02 13 28.0	+0.4
KEK	Kerkira	1.46	241	P	Pg	02 13 30.6	+1.4
KEK	Kerkira	1.46	241	P	Pn	02 13 25.3	-1.9
KEK	Kerkira	1.46	241	P	Pg	02 13 29.5	+0.3
PHP	Peshkopia	1.47	329	i Pn	Pb	02 13 28.2	-0.1
PHP				i Sn	Sb	02 13 47.4	+0.6
PHP	Peshkopia	1.47	329	i PN	Pb	02 13 28.2	-0.1
PHP				i SN	Sb	02 13 47.4	+0.6
PLG	Polygyros	1.52	92	P	Pb	02 13 29.4	+0.1
PLG				S	Sg	02 13 50.3	0.0
PLG				AML	AML	02 13 50.3	
	comp=N,532μm,0.5s						
PLG				AML	AML	02 13 55.2	
	comp=E,471μm,0.4s						
PLG	Polygyros	1.52	92	P	Pb	02 13 29.1	-0.2
PLG				S	Sg	02 13 49.8	-0.5
SKO	Skopje	1.54	360	i Pg	Pb	02 13 29.2	-0.3
SKO				i Sg	Sg	02 13 53.5	+2.8
SKO				eLg	Lg	02 13 53.6	
	comp=N,30nm,0.8s						
SKO				eLg	Lg	02 13 54.5	
	comp=E,20nm,0.4s						
EVR	Evrytania	1.54	170	P	Pn	02 13 28.8	+0.5
EVR				S	Sn	02 13 47.7	-0.5
EVR				AML	AML	02 13 56.3	
	comp=N,1153μm,0.2s						
EVR				AML	AML	02 13 57.8	
	comp=E,789μm,0.3s						
EVR	Evrytania	1.54	170	P	Pn	02 13 29.1	+0.7
EVR				S	Sn	02 13 49.0	+0.8
AGG	Agios Georgios	1.56	154	P	Pn	02 13 28.9	+0.3
AGG	Agios Georgios	1.56	154	P	Pn	02 13 28.3	-0.3
AGG				S	Sb	02 13 51.1	+1.5
AGG				AML	AML	02 13 58.6	
	comp=E,3936μm,0.6s						
AGG				AML	AML	02 13 59.9	
	comp=N,3672μm,0.6s						
AGG	Agios Georgios	1.56	154	P	Pn	02 13 29.0	+0.3
AGG				S	Sb	02 13 50.9	+1.3
XOR	Xorichti	1.71	128	P	Pn	02 13 30.8	+0.2
XOR	Xorichti	1.71	128	P	Pn	02 13 31.2	+0.5
LKD2	Lefkada island	1.75	201	P	Pg	02 13 35.2	+0.3
LKD2	Lefkada island	1.75	201	P	Pb	02 13 33.8	+0.6
SRS	Serrai	1.76	67	⇓iPn	Pn	02 13 31.8	+0.4
SRS	Serrai	1.76	67	P	Pn	02 13 31.1	-0.3
SRS	Serrai	1.76	67	⇓iPn	Pn	02 13 31.8	+0.4
NEO	Neokhori	1.77	129	P	Pb	02 13 33.9	+0.4
NEO	Neokhori	1.77	129	P	Pb	02 13 33.2	-0.2
PAIG	Paliouri	1.78	106	P	Pn	02 13 31.5	-0.1
PAIG				AML	AML	02 14 01.1	
	comp=N,606μm,0.5s						
PAIG				AML	AML	02 14 01.9	
	comp=E,507μm,0.5s						
PAIG	Paliouri	1.78	106	P	Pn	02 13 32.0	+0.4
PVO	Paravola	1.81	178	P	Pb	02 13 35.5	+1.3
PVO	Paravola	1.81	178	P	Pb	02 13 34.4	+0.2
PDO	Prodromos	1.84	187	P	Pb	02 13 35.7	+1.0
PDO	Prodromos	1.84	187	P	Pb	02 13 34.7	0.0
MGNA	Meganis¸„	1.85	196	P	Pb	02 13 35.2	+0.5
MGNA	Meganis¸„	1.85	196	P	Pb	02 13 34.5	-0.2
ANX	Ano Chora	1.87	169	P	Pb	02 13 35.2	-0.1
ANX	Ano Chora	1.87	169	P	Pn	02 13 34.6	+1.6
OUR	Ouranopolis	1.94	92	P	Pn	02 13 31.4	-2.3
PUK	Puka	1.99	324	i Pn	Pb	02 13 37.6	+0.3
PUK				i Sn	Sg	02 14 05.1	-0.1
PUK	Puka	1.99	324	i PN	Pb	02 13 37.6	+0.3
PUK				i SN	Sg	02 14 05.1	-0.1
SKIA	Skiathos	2.00	129	P	Pn	02 13 34.7	0.0
SKIA	Skiathos	2.00	129	P	Pn	02 13 35.2	+0.6
EFP	Efpalio	2.04	170	P	Pb	02 13 37.7	-0.3
EFP	Efpalio	2.04	170	P	Pn	02 13 37.0	+1.9
NVR	Nevrokopi	2.04	63	P	Pn	02 13 35.1	-0.2
NVR	Nevrokopi	2.04	63	P	Pn	02 13 35.6	+0.4
SERG	Sergoula	2.07	167	P	Pn	02 13 36.5	+0.9
SERG	Sergoula	2.07	167	P	Pn	02 13 36.7	+1.1
FSK	Fiskardo	2.09	200	P	Pb	02 13 37.9	-0.9
TRIZ	Trizonia	2.12	167	P	Pb	02 13 39.0	-0.4
TRIZ	Trizonia	2.12	167	P	Pn	02 13 38.3	+2.1
LKR	Lokris	2.15	146	P	Pn	02 13 37.1	+0.5
LKR	Lokris	2.15	146	P	Pn	02 13 37.5	+0.9
DSF	Desfina	2.19	157	P	Pn	02 13 37.4	+0.2
DSF	Desfina	2.19	157	P	Pn	02 13 37.9	+0.7
LAKA	Lakka	2.23	169	P	Pn	02 13 39.8	+2.0
LAKA	Lakka	2.23	169	P	Pn	02 13 39.4	+1.6
AOS	Alonnisos	2.26	123	P	Pn	02 13 39.0	+0.9
AOS	Alonnisos	2.26	123	P	Pn	02 13 37.1	-1.1
AOS	Alonnisos	2.26	123	P	Pn	02 13 38.2	+0.1
ULC	Ulcinj	2.26	313	⇓iPn	Pn	02 13 40.1	+1.9
ULC				eSn	Sb	02 14 09.9	+0.2
ULC	Ulcinj	2.26	313	⇓iPn	Pn	02 13 40.1	+1.9
ULC				eSn	Sb	02 14 09.9	+0.2
VLS	Valsamata	2.35	197	P	Pn	02 13 41.5	+2.0
VLS	Valsamata	2.35	197	P	Pn	02 13 41.2	+1.8
KFL	Anninata	2.38	193	P	Pb	02 13 42.4	-1.4
KFL	Anninata	2.38	193	P	Pn	02 13 41.8	+2.0
BARS	Barje	2.40	6	ePn	Pn	02 13 41.1	+1.0
BARS	Barje	2.40	6	ePn	Pn	02 13 41.1	+1.0
PVY	Plav	2.43	333	⇓iPn	Pn	02 13 41.9	+1.2
PVY				eSn	Sb	02 14 13.0	-1.7
PVY	Plav	2.43	333	⇓iPn	Pn	02 13 41.9	+1.2
PVY				eSn	Sb	02 14 13.0	-1.7
PROD	Prodromos	2.44	152	P	Pn	02 13 41.2	+0.5
PROD	Prodromos	2.44	152	P	Pn	02 13 41.7	+1.0
DRME	Dracevica, Mon	2.45	316	⇓iPn	Pn	02 13 42.6	+1.9
DRME				eSn	Sb	02 14 13.7	-1.3
DRME	Dracevica, Mon	2.45	316	⇓iPn	Pn	02 13 42.6	+1.9
DRME				eSn	Sb	02 14 13.7	-1.3
KLV	Kalavryta, Ach	2.45	167	P	Pn	02 13 41.9	+1.0
KLV	Kalavryta, Ach	2.45	167	P	Pn	02 13 42.0	+1.2
DRO	Drossia	2.49	175	P	Pb	02 13 45.3	-0.4
DRO	Drossia	2.49	175	P	Pn	02 13 44.0	+2.7
VTS	Vitosha	2.53	31	ePn	Pn	02 13 43.7	+1.7
VTS				eSn	Sn	02 14 14.1	+1.4
VTS	Vitosha	2.53	31	⇓iP	Pn	02 13 43.5	+1.5
VTS	Vitosha	2.53	31	S	Sn	02 14 14.3	+1.6
VTS	Vitosha	2.53	31	⇓iP	Pn	02 13 43.5	+1.5
VTS				eSn	Sn	02 14 14.1	+1.4
THAL	Thalero	2.57	158	P	Pn	02 13 42.8	+0.4
THAL	Thalero	2.57	158	P	Pn	02 13 43.4	+1.0
GUR	Goura	2.59	164	P	Pn	02 13 43.4	+0.6
GUR	Goura	2.59	164	P	Pn	02 13 43.8	+1.0
PDG	Podgorica	2.59	321	⇑iP	Pn	02 13 44.7	+2.0
PDG	Podgorica	2.59	321	ePn	Pn	02 13 44.5	+1.8
PDG				S	Sn	02 14 14.4	+0.4
PDG				eSn	Sb	02 14 17.0	-2.1
TTG	Podgorica	2.59	321	ePn	Pn	02 13 44.5	+1.8
TTG				eSn	Sb	02 14 17.0	-2.1
VIL2	Platees	2.63	147	P	Pn	02 13 44.1	+0.9
LTK	Loutraki	2.68	153	P	Pn	02 13 43.5	-0.4
LTK	Loutraki	2.68	153	P	Pn	02 13 44.5	+0.5
BUM	Brajici-Budva	2.68	315	⇓iPn	Pn	02 13 45.5	+1.5
BUM				eSn	Sb	02 14 19.9	-1.9
BUM	Brajici-Budva	2.68	315	⇓iPn	Pn	02 13 45.5	+1.5
BUM				eSn	Sb	02 14 19.9	-1.9
VILL	Villia	2.69	147	P	Pn	02 13 44.8	+0.7
BEY	Berane	2.70	335	⇓iPn	Pn	02 13 45.9	+1.6
BEY				eSn	Sn	02 14 19.4	+2.5
IVA	Berane	2.70	335	⇓iPn	Pn	02 13 45.9	+1.6
IVA				eSn	Sn	02 14 19.4	+2.5
SELS	Selova	2.79	355	ePn	Pn	02 13 46.2	+0.6
KOME	Kolasin	2.82	330	⇑iPn	Pn	02 13 47.9	+2.0
KOME				eSn	Sn	02 14 22.3	+2.5
KOME	Kolasin	2.82	330	⇑iPn	Pn	02 13 47.9	+2.0
KOME				eSn	Sn	02 14 22.3	+2.5
CEME	Cevo	2.84	319	⇓iPn	Pn	02 13 47.7	+1.4
CEME				eSn	Sn	02 14 23.3	+2.9
CEME	Cevo	2.84	319	⇓iPn	Pn	02 13 47.7	+1.4
CEME				eSn	Sn	02 14 23.3	+2.9
LIA	Limnos Island	2.91	99	P	Pn	02 13 46.6	-0.4
LIA	Limnos Island	2.91	99	P	Pn	02 13 47.5	+0.4
PLD	Plovdiv	2.97	55	P	Pn	02 13 47.3	-0.6
ZAPS	Zavoj	2.97	17	ePn	Pn	02 13 49.7	+1.7
NKME	Niksic	2.99	322	ePn	Pn	02 13 49.9	+1.6
NKME				eSn	Sn	02 14 26.7	+2.7
NKME	Niksic	2.99	322	ePn	Pn	02 13 49.9	+1.6
NKME				eSn	Sn	02 14 26.7	+2.7
HCY	Herceg Novi	3.00	313	ePn	Pn	02 13 50.1	+1.8
HCY				eSn	Sn	02 14 27.2	+3.1
HCY	Herceg Novi	3.00	313	ePn	Pn	02 13 50.1	+1.8
HCY				eSn	Sn	02 14 27.2	+3.1
NKY	Niksic	3.01	323	⇑iPn	Pn	02 13 50.0	+1.4
NKY				eSn	Sn	02 14 26.9	+2.4
NKY	Niksic	3.01	323	⇑iPn	Pn	02 13 50.0	+1.4
NKY				eSn	Sn	02 14 26.9	+2.4
PTL	Penteli	3.03	141	P	Pn	02 13 49.6	+0.8
PTL	Penteli	3.03	141	P	Pn	02 13 49.9	+1.1
DION	Dionisos Attik	3.04	140	P	Pn	02 13 49.6	+0.6
DION	Dionisos Attik	3.04	140	P	Pn	02 13 50.0	+1.1
ATHU	Athens Univers	3.06	143	P	Pn	02 13 49.8	+0.6
ATHU	Athens Univers	3.06	143	P	Pn	02 13 50.2	+1.0
SMTH	Samothraki Isl	3.11	88	P	Pn	02 13 50.8	+0.9
SMTH	Samothraki Isl	3.11	88	P	Pn	02 13 51.0	+1.1
FASA	Fasano	3.14	278	ePn	Pn	02 13 51.1	+0.8
FASA				Sn	Sn	02 14 27.8	+0.2
FASA	Fasano	3.14	278	ePn	Pn	02 13 51.1	+0.8
FASA				Sn	Sn	02 14 27.8	+0.2
VLY	Voula,Athens	3.16	144	P	Pn	02 13 51.1	+0.6
VLY	Voula,Athens	3.16	144	P	Pn	02 13 51.6	+1.1
TAR1	Taranto	3.18	273	ePn	Pn	02 13 51.7	+0.9
TAR1	Taranto	3.18	273	ePn	Pn	02 13 51.7	+0.9
BOVS	Bovan	3.21	3	ePn	Pn	02 13 51.9	+0.7
BOVS				eSn	Sn	02 14 29.1	-0.1
BOVS	Bovan	3.21	3	ePn	Pn	02 13 51.9	+0.7
BOVS				eSn	Sn	02 14 29.1	-0.1
DID	Didima	3.24	154	P	Pn	02 13 51.5	-0.1
DID	Didima	3.24	154	P	Pn	02 13 52.4	+0.7
TREB	Trebinje	3.26	315	ePn	Pn	02 13 53.2	+1.3
ITM	Ithomi	3.27	173	P	Pb	02 13 56.3	-2.7
ITM	Ithomi	3.27	173	P	Pn	02 13 55.0	+2.9
PLE	Pljevlja	3.28	333	⇑iPn	Pn	02 13 53.5	+1.2
PLE				eSn	Sn	02 14 33.4	+2.2
PLE	Pljevlja	3.28	333	⇑iPn	Pn	02 13 53.5	+1.2
PLE				eSn	Sn	02 14 33.4	+2.2
IVAS	Ivanjica	3.29	343	ePn	Pn	02 13 52.9	+0.5
IVAS				eSn	Sn	02 14 31.0	-0.3
IVAS	Ivanjica	3.29	343	ePn	Pn	02 13 52.9	+0.5
IVAS				eSn	Sn	02 14 31.0	-0.3
MASS	Massafra	3.29	275	ePn	Pn	02 13 53.5	+1.2
MASS	Massafra	3.29	275	ePn	Pn	02 13 53.5	+1.2
BRY	Bratogost	3.29	319	ePn	Pn	02 13 53.7	+1.2
BRY				eSn	Sn	02 14 33.8	+2.2
BRY	Bratogost	3.29	319	ePn	Pn	02 13 53.7	+1.2
BRY				eSn	Sn	02 14 33.8	+2.2
KRND	KRANIDI	3.32	156	P	Pn	02 13 52.3	-0.5
KRND	KRANIDI	3.32	156	P	Pn	02 13 53.4	+0.6
KARY	Karystos	3.33	135	P	Pn	02 13 55.1	+2.1
KARY	Karystos	3.33	135	P	Pn	02 13 54.8	+1.8
UPM	Unac-Piva	3.36	326	ePn	Pn	02 13 55.5	+2.0
UPM				eSn	Sn	02 14 35.5	+2.2
UPM	Unac-Piva	3.36	326	ePn	Pn	02 13 55.5	+2.0
UPM				eSn	Sn	02 14 35.5	+2.2
GADA	Gvkgeada	3.41	93	P	Pn	02 13 53.8	-0.2
GRUS	Gruza	3.50	351	ePn	Pn	02 13 56.4	+1.2
GRUS				eSn	Sn	02 14 36.1	-0.3
GRUS	Gruza	3.50	351	ePn	Pn	02 13 56.4	+1.2
GRUS				eSn	Sn	02 14 36.1	-0.3
ALN	Alexandroupoli	3.52	81	P	Pn	02 13 56.0	+0.5
ALN	Alexandroupoli	3.52	81	P	Pn	02 13 55.2	-0.4
ALN	Alexandroupoli	3.52	81	P	Pn	02 13 56.1	+0.5
BAI	Bari	3.54	282	i Pn	Pn	02 13 56.9	+1.2
BAI				Sn	Sn	02 14 37.1	-0.2
BAI	Bari	3.54	282	⇓iPn	Pn	02 13 56.9	+1.2
BAI				Sn	Sn	02 14 37.1	-0.2
PYL	PYLOS	3.54	176	P	Pn	02 13 57.6	+1.8
PYL	PYLOS	3.54	176	P	Pn	02 13 57.6	+1.8
BOZC	Bozcaada	3.58	98	eP	Pn	02 13 56.4	+0.1
ENEZ	Enez	3.59	84	eP	Pn	02 13 56.4	-0.1
SIGR	SIGRI	3.60	108	eP	Pn	02 13 57.2	+0.6
MATE	Matera	3.62	275	⇑iP	Pn	02 13 58.5	+1.6
MATE	Matera	3.62	275	⇑iP	Pn	02 13 58.5	+1.6
MATE				S	Sn	02 14 37.5	-2.0
SG1	Sgolgore (BA)	3.65	278	ePn	Pn	02 13 58.0	+0.6
SG1				Sn	Sn	02 14 38.7	-1.6
SG1	Sgolgore (BA)	3.65	278	ePn	Pn	02 13 58.0	+0.6
SG1				Sn	Sn	02 14 38.7	-1.6
STON	Ston	3.72	312	i Pn	Pn	02 13 59.1	+0.9
STON				Sn	Sn	02 14 40.8	-1.0
STON	Ston	3.72	312	ePn	Pn	02 13 59.0	+0.8
BBLS	Lazići	3.75	337	ePn	Pn	02 13 59.9	+1.1
BBLS	Lazići	3.75	337	ePn	Pn	02 13 59.9	+1.1
DIVS	Divibare	3.82	344	ePn	Pn	02 14 00.2	+0.5
DIVS				eSn	Sn	02 14 44.0	-0.5
DIVS	Divibare	3.82	344	ePn	Pn	02 14 00.2	+0.5
DIVS				eSn	Sn	02 14 44.0	-0.5
TIP	Timpagrande	3.83	252	⇑iP	Pn	02 14 00.9	+1.1
TIP	Timpagrande	3.83	252	⇑iP	Pn	02 14 00.9	+1.1
GELI	Tayfur-Gelibol	3.83	89	eP	Pn	02 14 00.7	+0.9
ERIK	Erikli-Kesan	3.86	85	eP	Pn	02 14 00.3	+0.1
TRUS	Trudelj	3.87	349	ePn	Pn	02 14 01.0	+0.7
TRUS	Trudelj	3.87	349	ePn	Pn	02 14 01.0	+0.7
VLI	Veliai	3.89	162	P	Pn	02 14 00.4	-0.2
VLI	Veliai	3.89	162	P	Pn	02 14 01.4	+0.8
KUBS	Kucevo	3.98	2	ePn	Pn	02 14 02.0	+0.2
KUBS	Kucevo	3.98	2	ePn	Pn	02 14 02.0	+0.2
HAPS	Han Pijesak,Bl	4.09	334	ePn	Pn	02 14 04.4	+0.9
HAPS	Han Pijesak,Bl	4.09	334	ePn	Pn	02 14 04.4	+0.9
CHOS	Chios island	4.11	118	eP	Pn	02 14 03.4	-0.3
CHOS	Chios island	4.11	118	P	Pn	02 14 05.1	+1.4
CHOS	Chios island	4.11	118	P	Pn	02 14 05.2	+1.5
TEKS	Tekeris	4.35	342	ePn	Pn	02 14 07.5	+0.5
TEKS	Tekeris	4.35	342	ePn	Pn	02 14 07.5	+0.5
DKL	Dikili	4.42	106	eP	Pn	02 14 08.4	+0.6
APE	Apeiranthos	4.63	135	eP	Pn	02 14 11.3	+0.5
APE	Apeiranthos	4.63	135	⇑iP	Pn	02 14 12.1	+1.3
APE	Apeiranthos	4.63	135	⇑iP	Pn	02 14 12.1	+1.3
FGSL	Fruska Gora	4.87	346	ePn	Pn	02 14 14.7	+0.6
FGSL				eSn	Sn	02 15 08.7	-1.6
FRGS	Fruska Gora	4.87	346	ePn	Pn	02 14 14.7	+0.6
FRGS				eSn	Sn	02 15 08.7	-1.7
BZS	Buzias	5.18	1	⇓iP	Pn	02 14 19.4	+1.1
BZS	Buzias	5.18	1	⇓iP	Pn	02 14 19.4	+1.1
BZS				S	Sn	02 15 15.4	-2.5
ARR	Arges	5.46	24	⇑iP	Pn	02 14 23.0	+0.8
ARR	Arges	5.46	24	⇑iP	Pn	02 14 23.0	+0.8
VOIR		5.66	27	⇓iP	Pn	02 14 25.7	+0.8
VOIR		5.66	27	⇓iP	Pn	02 14 25.7	+0.8
UDBI	Udbina	5.87	316	ePn	Pn	02 14 29.3	+1.5
UDBI				Sn	Sn	02 15 33.9	-1.0
MLR	Muntele Rosu	6.03	32	⇓iP	Pn	02 14 30.8	+0.6
MORH	Mˆ‡rˆ¡gy, Hung	6.13	341	ePn	Pn	02 14 31.5	+0.2
MORH				Sn	Sn	02 15 37.1	-4.1
MORH	Mˆ‡rˆ¡gy, Hung	6.13	341	ePn	Pn	02 14 31.1	-0.2
NVLJ	Novalja	6.38	312	ePn	Pn	02 14 34.3	-0.4
NVLJ				Sn	Sn	02 15 45.2	-2.1
PLOR	Plostina	6.62	33	⇑iP	Pn	02 14 39.9	+1.9
PLOR	Plostina	6.62	33	⇑iP	Pn	02 14 39.9	+1.9
VRI	Vrincioaia	6.66	34	⇑iP	Pn	02 14 39.4	+0.8
VRI	Vrincioaia	6.66	34	⇑iP	Pn	02 14 39.4	+0.8
VRI				S	Sn	02 15 54.5	+0.2
OZLJ	Ozalj	6.78	322	ePn	Pn	02 14 40.6	+0.3
CRES	Cresnjev	6.95	323	ePn	Pn	02 14 43.0	+0.4
CEY	Cerknica	7.38	318	ePn	Pn	02 14 48.7	+0.1
PSZ	Piszkesteto	7.57	352	⇓iP	Pn	02 14 50.9	-0.2
PSZ	Piszkesteto	7.57	352	⇑ePn	Pn	02 14 52.2	+1.1
PSZ				eSn	Sn	02 16 13.9	-2.8
PSZ	Piszkesteto	7.57	352	⇓iP	Pn	02 14 50.9	-0.2
PSZ				S	Sn	02 16 17.1	+0.4
SOKA	Soboth	7.79	325	ePn	Pn	02 14 53.2	-1.0
	comp=E,1.0nm,0.4s						
SOKA	Soboth	7.79	325	Pn	Pn	02 14 53.2	-1.0
	comp=E,1.0nm,0.4s						
OBKA	Obir	7.88	323	ePn	Pn	02 14 55.0	-0.4
	comp=E,0.4nm,0.2s						
OBKA	Obir	7.88	323	Pn	Pn	02 14 55.0	-0.4
	comp=E,0.4nm,0.2s						
ARSA	Arzberg	8.05	330	ePn	Pn	02 14 56.8	-0.9
	comp=E,1.8nm,0.7s						
ARSA	Arzberg	8.05	330	Pn	Pn	02 14 56.8	-0.9
	comp=E,1.8nm,0.7s						
VYHS	Vyhne	8.27	348	ePN	Pn	02 15 02.8	+2.0
VYHS				ePG	Pn	02 15 02.8	+2.0
CONA	Conrad Observa	8.50	334	ePn	Pn	02 15 03.0	-0.9
	comp=E,0.2nm,0.2s						
CONA	Conrad Observa	8.50	334	Pn	Pn	02 15 03.0	-0.9
	comp=E,0.2nm,0.2s						
MOA	Molln	9.03	328	ePn	Pn	02 15 10.7	-0.5
	comp=E,0.5nm,0.3s						
MOA	Molln	9.03	328	Pn	Pn	02 15 10.7	-0.5
	comp=E,0.5nm,0.3s						
ABTA	Abfaltersbach	9.05	317	ePn	Pn	02 15 10.8	-0.6
	comp=E,0.7nm,0.3s						
ABTA	Abfaltersbach	9.05	317	Pn	Pn	02 15 10.8	-0.6
	comp=E,0.7nm,0.3s						
WTTA	Wattenberg	9.84	317	ePn	Pn	02 15 20.4	-2.0
	comp=E,0.8nm,0.2s						
MOTA	Moosalm	10.17	316	i Pn	Pn	02 15 25.7	-1.2
MOTA	Moosalm	10.17	316	Pn	Pn	02 15 25.7	-1.2
RETA	Reutte	10.44	316	i Pn	Pn	02 15 29.3	-1.2
	comp=E,0.3nm,0.1s						
RETA	Reutte	10.44	316	Pn	Pn	02 15 29.3	-1.2
	comp=E,0.3nm,0.1s						
NB2	NORSAR Subarra	21.57	346	P	P	02 17 49.5	-0.7
	comp=Z,0.9nm,0.7s,baz=157,slow=11						

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*NEIC **05** 02:19:07.7±2.3, 55°.89S×27°.06W, h38^{km}±20^{km}, mb4.4/9,*
Error ellipse: s-maj=21.2km s-min=10.0km az=56.0
*IDC **05** 02:19:10.3±3.4, 55°.91S×26°.94W, h59^{km}±29^{km}, mb4.0/7,*
mb1 4.1/8, mb1mx3.9/31, mbtmp4.2/8, ML4.1/1, MS3.1/1,
Ms1 3.1/1, ms1mx2.6/29, Error ellipse: s-maj=32.7km
s-min=16.8km az=67.0
ISC 05 02:19:08.3±0.6**, 56°.0S**±0°.1×**27°.4W**±0°.1**, h35^{km}, n41,**
σ2^{s}.12/38**, mb4.4**/10**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HOPE	Hope Point	5.47	284	ePn	Pn	02 20 28.1	+0.9
HOPE				eSn	Sn	02 21 25.4	-3.4
VNA1	Neumayer--Stat	16.91	158	P	Pn	02 23 03.9	+2.0
VNA3	Neumayer Olymp	17.10	160	P	Pn	02 23 04.4	+0.1
SNAA	Sanae	18.86	156	P	P	02 23 24.0	-1.1
SNAA	Sanae	18.86	156	P	P	02 23 24.2	-0.8
	0.5nm,0.3s,baz=289,slow=10,SNR=50						
SNAA				PcP	PcP	02 27 48.9	-1.2
	0.1nm,0.3s,baz=20,slow=6.8,SNR=5.9						
SNAA				ScP	ScP	02 31 19.0	-3.8
	0.1nm,0.3s,baz=279,slow=4.8,SNR=7.7						
SNAA	Sanae	18.86	156	eP	P	02 23 24.3	-0.8
	4.8nm,0.8s						
SNAA				ePcP	PcP	02 27 48.9	-1.2
SNAA				eScP	ScP	02 31 19.0	-3.8
PMSA	Palmer Station	19.85	229	LR	LR	02 29 17.0	
	comp=Z,59nm,19.9s,baz=157,slow=30						
QSPA	South Pole Qui	34.27	180	P	P	02 25 50.7	-0.1
	4.6nm,0.6s,baz=217,slow=1.4,SNR=19						
QSPA	South Pole Qui	34.27	180	eP	P	02 25 51.1	+0.3
CPUP	Villa Florida	36.66	311	P	P	02 26 13.6	+2.1
	1.1nm,0.7s,baz=160,slow=11,SNR=2.9						
CPUP	Villa Florida	36.66	311	eP	P	02 26 13.6	+2.1
	4.4nm,1.2s						
MAW	Mawson	40.28	144	P	P	02 26 41.1	-0.3
	1.7nm,0.3s,baz=231,slow=8.6,SNR=5.6						
MAW	Mawson	40.28	144	eP	P	02 26 41.1	-0.3
	1.3nm,1.3s						
GO02	Mina Guanaco	43.34	298	eP	P	02 27 06.9	-0.4
	25nm,1.3s						
VNDA	Vanda	46.64	183	P	P	02 27 32.7	+0.2
	2.4nm,0.6s,baz=184,slow=6.9,SNR=30						
VNDA	Vanda	46.64	183	eP	P	02 27 33.0	+0.5
	2.7nm,0.7s						
PB01	IPOC Station P	46.76	301	eP	P	02 27 34.9	+0.7
	18nm,1.2s						
H10S2	ASCENSION HYDR	47.97	17	T	T	03 20 02.3	
	baz=190,slow=74,SNR=94						
H10S3	ASCENSION HYDR	47.97	17	T	T	03 20 02.7	
	baz=190,slow=74,SNR=74						
H10S1	ASCENSION HYDR	47.99	17	T	T	03 20 03.7	
	baz=190,slow=74,SNR=90						
H10N1	ASCENSION HYDR	49.09	17	T	T	03 21 01.2	
	baz=189						
H10N3	ASCENSION HYDR	49.09	17	T	T	03 21 27.8	
	baz=189						
H10N2	ASCENSION HYDR	49.10	17	T	T	03 21 15.0	
	baz=189						
LPAZ	La Paz	50.23	305	P	P	02 28 01.9	+0.4
	1.4nm,0.4s,baz=91,slow=5.9,SNR=14						
LPAZ	La Paz	50.23	305	eP	P	02 28 02.0	+0.5
	3.6nm,0.9s						
SAML	Samuel	54.66	315	eP	P	02 28 33.1	-0.6
	5.9nm,1.3s						
TOA0	Torodi Ar. Sit	73.06	30	eP	P	02 30 33.1	-1.5
TORD	Torodi Ar. Bea	73.06	30	P	P	02 30 32.4	-2.2
	1.4nm,0.4s,baz=199,slow=6.7						
TOA1	Torodi Ar. Sit	73.06	30	eP	P	02 30 32.4	-2.2
957A	Wimauma	95.44	313	eP	P	02 32 26.1	-2.7
	38nm,0.6s						
ASAR	Alice Springs	99.10	163	P	Pdif	02 32 43.6	-2.2
	0.4nm,0.7s,baz=183,slow=4.3,SNR=3.1						
AS31	Alice Springs	99.10	163	eP	Pdif	02 32 43.6	-2.2
	1.5nm,1.3s						
FIA0	FINESS Array S	124.38	28	ePKPdf	PKPdf	02 37 59.4	-2.6
FINES	FINESS Array B	124.38	28	PKP	PKPdf	02 37 59.4	-2.6
	0.5nm,0.5s,baz=116,slow=3.2,SNR=4.5						
BVAR	Borovoye Array	134.85	58	PKP	PKPdf	02 38 22.3	+0.1
	0.2nm,0.4s,baz=70,slow=1.7,SNR=3.0						
YKA	Yellowknife Ar	136.03	318	PKP	PKPdf	02 38 24.1	0.0
	0.2nm,0.4s,baz=145,slow=1.7,SNR=3.1						
YKB5	Yellowknife Ar	136.03	318	ePKPdf	PKPdf	02 38 24.1	0.0
ILAR	Eielson Array	149.97	312	PKPbc	PKPdf	02 38 52.1	+3.7
	1.3nm,0.7s,baz=132,slow=2.2,SNR=14						
ILB	Eielson Array	149.97	312	ePKPbc	PKPdf	02 38 52.9	+4.5
SONA0	Songino Array	150.85	87	ePKPbc	PKPdf	02 38 54.3	+3.8
SONM	Songino Array	150.85	87	PKPbc	PKPdf	02 38 54.3	+3.8
	0.8nm,0.5s,baz=237,slow=3.4,SNR=5.8						

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*ISK **05** 02:20:09.9, 38°.09N×25°.56E, h12^{km}, ML2.3/12*
*ATH **05** 02:20:11.5, 38°.03N×25°.60E, h20^{km}±2^{km}, ML2.2/9, Error*
ellipse: s-maj=2.4km s-min=1.0km az=91.0
*ISCJB **05** 02:20:11.4±0.5, 38°.07N±0°.02×25°.64E±0°.02, h14^{km}±4^{km},*
Error ellipse: s-maj=3.5km s-min=2.9km az=136.4
*THE **05** 02:20:11.8, 38°.10N×25°.61E, h28^{km}±1^{km}, ML2.1/6, Error*
ellipse: s-maj=2.0km s-min=0.6km az=46.0
*CSEM **05** 02:20:12.0±0.1, 38°.08N×25°.64E, h20^{km}, ML2.1, Error*
ellipse: s-maj=3.7km s-min=2.9km az=134.0
*DDA **05** 02:20:13.3, 37°.89N×25°.79E, h6^{km}, Ml2.7*
ISC 05 02:20:10.5±1.1**, 38°.07N**±0°.02×**25°.62E**±0°.01**, h7^{km}**±9^{km}**,**
n83, σ0^{s}.83/129**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOS	Chios island	0.47	47	PG	Pb	02 20 21.4	+0.3
CHOS	Chios island	0.47	47	P	Pb	02 20 21.7	+0.6
CHOS				S	Sb	02 20 27.3	-1.0
CHOS				AML	AML	02 20 28.8	
	comp=N,584μm,0.3s						
CHOS				AML	AML	02 20 29.5	
	comp=E,1461μm,0.4s						
CHOS	Chios island	0.47	47	P	Pb	02 20 21.2	+0.1
CHOS				S	Sb	02 20 28.8	+0.5
CHOS				AML	AML	02 20 28.8	
	comp=N,584μm,0.3s						
CHOS				AML	AML	02 20 29.5	
	comp=E,1461μm,0.4s						
CHOS	Chios island	0.47	47	P	Pb	02 20 21.3	+0.2

CHOS				S	Sb	02 20 28.0	-0.3
CHOS	Chios island	0.47	47	P	Pb	02 20 21.4	+0.3
CHOS				S	Sb	02 20 28.0	-0.3
PSRA	Psara	0.47	355	P	Pn	02 20 22.7	-1.0
PSRA				S	Sb	02 20 30.0	+1.7
PSRA	Psara	0.47	355	P	Pb	02 20 22.2	+1.1
PSRA				S	Sb	02 20 29.6	+1.3
TNSA	Tinos	0.64	214	P	Pb	02 20 24.7	+0.7
TNSA				S	Sb	02 20 32.4	-0.6
TNSA	Tinos	0.64	214	P	Pb	02 20 24.0	0.0
TNSA				S	Sg	02 20 32.1	+1.0
URLA	Izmir	0.82	69	PG	Pg	02 20 26.2	-0.1
URLA				SG	Sb	02 20 39.1	+0.7
URLA	Izmir	0.82	69	iP	Pn	02 20 28.4	-0.1
URLA				iS	Sn	02 20 40.3	-0.6
URLA	Izmir	0.82	69	ePg	Pg	02 20 26.2	-0.1
URLA	Izmir	0.82	69	P	Pn	02 20 28.4	-0.1
URLA				eSg	Sb	02 20 39.1	+0.7
URLA				S	Sn	02 20 40.3	-0.6
KRBN	Karaburun	0.90	54	PG	Pb	02 20 28.7	+0.2
KRBN	Karaburun	0.90	54	ePg	Pb	02 20 28.7	+0.2
KARY	Karystos	0.93	268	P	Pn	02 20 29.8	-0.2
KARY	Karystos	0.93	268	P	Pb	02 20 29.2	+0.3
KARY				S	Sb	02 20 41.2	-0.4
KARY				AML	AML	02 20 42.8	
	comp=N,373μm,0.2s						
KARY				AML	AML	02 20 43.1	
	comp=E,276μm,0.2s						
KARY	Karystos	0.93	268	P	Pg	02 20 28.5	+0.1
KARY				S	Sg	02 20 40.6	+0.1
KARY	Karystos	0.93	268	P	Pb	02 20 29.1	+0.1
KARY				S	Sg	02 20 40.6	+0.1
DGB	˜zmir	1.00	91	iP	Pb	02 20 30.1	0.0
DGB				iS	Sg	02 20 43.0	+0.4
APE	Apeiranthos	1.00	184	PG	Pn	02 20 30.7	-0.3
APE				SG	Sb	02 20 44.1	+0.5
APE	Apeiranthos	1.00	184	P	Pb	02 20 30.3	+0.1
APE				S	Sb	02 20 43.7	+0.1
APE	Apeiranthos	1.00	184	P	Pg	02 20 30.0	+0.3
APE				AML	AML	02 20 44.0	
	comp=E,184μm,0.4s						
APE				S	Sb	02 20 44.4	+0.8
APE				AML	AML	02 20 44.4	
	comp=N,210μm,0.2s						
APE	Apeiranthos	1.00	184	P	Pg	02 20 29.6	-0.1
APE				S	Sg	02 20 42.7	0.0
APE	Apeiranthos	1.00	184	P	Pg	02 20 29.9	+0.2
APE	Apeiranthos	1.00	184	ePg	Pn	02 20 30.7	-0.3
APE				S	Sg	02 20 42.7	0.0
APE				eSg	Sb	02 20 44.1	+0.5
SMG	Samos	1.03	110	P	Pn	02 20 31.1	-0.2
SMG				S	Sg	02 20 42.4	-1.2
SMG				AML	AML	02 20 46.3	
	comp=E,123μm,0.5s						
SMG				AML	AML	02 20 46.8	
	comp=N,119μm,0.3s						
SMG	Samos	1.03	110	P	Pg	02 20 29.9	-0.4
SMG				S	Sn	02 20 46.6	+0.6
SMG	Samos	1.03	110	P	Pg	02 20 29.4	-0.9
SMG				S	Sg	02 20 43.9	+0.3
SMG	Samos	1.03	110	P	Pb	02 20 30.5	-0.1
SMG				S	Sg	02 20 43.9	+0.3
FOCM	Foˆ§a	1.08	53	PN	Pn	02 20 31.8	-0.3
FOCM	Foˆ§a	1.08	53	ePn	Pn	02 20 31.8	-0.3
SIGR	SIGRI	1.16	9	PN	Pg	02 20 31.5	-1.1
SIGR	SIGRI	1.16	9	P	Pg	02 20 30.4	-2.2
SIGR				S	Sg	02 20 45.7	-1.9
SIGR	SIGRI	1.16	9	P	Pg	02 20 30.4	-2.2
SIGR	SIGRI	1.16	9	ePn	Pg	02 20 31.5	-1.1
SIGR				S	Sg	02 20 45.7	-1.9
BLCB	Balcova	1.17	74	PN	Pn	02 20 33.1	-0.1
BLCB	Balcova	1.17	74	ePn	Pn	02 20 33.1	-0.1
AMGA	Amorgos Island	1.26	170	P	Pn	02 20 33.6	-0.9
AMGA				S	Sb	02 20 49.2	-1.7
AMGA	Amorgos Island	1.26	170	P	Pb	02 20 34.6	+0.1
AMGA				S	Sn	02 20 51.6	+0.1
AMGA				AML	AML	02 20 52.1	
	comp=E,194μm,0.3s						
AMGA				AML	AML	02 20 52.7	
	comp=N,175μm,0.4s						
AMGA	Amorgos Island	1.26	170	P	Pb	02 20 34.5	+0.1
AMGA				S	Sn	02 20 51.5	-0.1
SERI	Serifos	1.28	225	P	Pn	02 20 32.8	-2.0
SERI	Serifos	1.28	225	P	Pn	02 20 33.2	-1.6
SERI				S	Sb	02 20 51.5	0.0
SERI				AML	AML	02 20 53.1	
	comp=N,130μm,0.2s						
SERI				AML	AML	02 20 53.3	
	comp=E,180μm,0.2s						
SERI	Serifos	1.28	225	P	Pn	02 20 33.2	-1.6
SERI				S	Sb	02 20 49.5	-2.0
SERI	Serifos	1.28	225	P	Pn	02 20 34.1	-0.7
SERI				S	Sb	02 20 49.5	-2.0
PRK	Paraskevi	1.28	23	P	Pn	02 20 33.7	-1.1
PRK				AML	AML	02 20 59.9	
	comp=E,69μm,0.3s						
PRK				AML	AML	02 21 00.3	
	comp=N,88μm,0.4s						
DION	Dionisos Attik	1.33	271	P	Pn	02 20 34.4	-1.1
DION				S	Sn	02 20 54.5	+1.1
DION	Dionisos Attik	1.33	271	P	Pn	02 20 35.3	-0.2
DION				S	Sn	02 20 53.8	+0.4
DION				AML	AML	02 20 54.7	
	comp=N,90μm,0.4s						
DION				AML	AML	02 20 56.0	
	comp=E,177μm,0.4s						
DION	Dionisos Attik	1.33	271	P	Pb	02 20 35.8	+0.1
DION				S	Sn	02 20 54.2	+0.8
IOSP	Ios island	1.37	191	P	Pn	02 20 35.6	-0.4
IOSP				AML	AML	02 20 57.0	
	comp=E,323μm,0.4s						
IOSP				AML	AML	02 20 57.9	
	comp=N,217μm,0.5s						
IOSP	Ios island	1.37	191	P	Pg	02 20 36.7	-0.1
IOSP				S	Sb	02 20 54.1	0.0
IOSP				AML	AML	02 20 57.0	
	comp=E,323μm,0.4s						
IOSP				AML	AML	02 20 57.9	
	comp=N,217μm,0.5s						
IOSP	Ios island	1.37	191	P	Pg	02 20 36.6	-0.1
IOSP				S	Sn	02 20 54.4	0.0
PTL	Penteli	1.38	270	P	Pn	02 20 35.4	-0.9
PTL				S	Sg	02 20 55.8	+0.9
PTL				AML	AML	02 20 58.3	
	comp=E,63μm,0.3s						
PTL				AML	AML	02 20 58.3	
	comp=N,123μm,0.3s						
PTL	Penteli	1.38	270	P	Pg	02 20 37.6	+0.6
PTL				S	Sg	02 20 56.5	+1.5
PTL				AML	AML	02 20 58.3	
	comp=E,63μm,0.3s						
PTL				AML	AML	02 20 58.3	
	comp=N,123μm,0.3s						
PTL	Penteli	1.38	270	P	Pg	02 20 37.5	+0.5
PTL				S	Sg	02 20 56.4	+1.5
DKL	Dikili	1.42	45	PN	Pn	02 20 36.7	0.0
DKL	Dikili	1.42	45	ePn	Pn	02 20 36.7	0.0
VLY	Voula,Athens	1.46	262	P	Pg	02 20 38.9	+0.5
VLY				S	Sg	02 20 57.4	+0.1
VLY				AML	AML	02 20 59.7	
	comp=N,162μm,0.4s						
VLY				AML	AML	02 21 00.6	
	comp=E,149μm,0.4s						
VLY	Voula,Athens	1.46	262	P	Pg	02 20 39.0	+0.5
VLY				S	Sg	02 20 57.9	+0.6
VLY				AML	AML	02 20 59.7	
	comp=N,162μm,0.4s						
VLY				AML	AML	02 21 00.6	
	comp=E,149μm,0.4s						
VLY	Voula,Athens	1.46	262	P	Pg	02 20 38.7	+0.3
VLY				S	Sg	02 20 58.1	+0.8
BODT	Bodrum	1.68	126	PN	Pn	02 20 40.2	-0.1
BODT	Bodrum	1.68	126	ePn	Pn	02 20 40.2	-0.1
AOS	Alonnisos	1.75	309	PN	Pn	02 20 40.6	-0.6
AOS	Alonnisos	1.75	309	ePn	Pn	02 20 40.6	-0.6
AYDB	Zeytinkoy-Aydi	1.80	93	PN	Pn	02 20 42.1	+0.1
AYDB	Zeytinkoy-Aydi	1.80	93	ePn	Pn	02 20 42.1	+0.1
BOZC	Bozcaada	1.80	11	PN	Pn	02 20 41.6	-0.3
BOZC	Bozcaada	1.80	11	ePn	Pn	02 20 41.6	-0.3
VILL	Villia	1.82	274	P	Pb	02 20 44.0	-0.1
EZN	Ezine	1.84	17	PN	Pn	02 20 42.2	-0.2
EZN	Ezine	1.84	17	ePn	Pn	02 20 42.2	-0.2
VIL2	Platees	1.86	275	P	Pb	02 20 44.2	-0.6
DAT	Datca	2.06	130	PN	Pn	02 20 45.5	-0.1
DAT	Datca	2.06	130	ePn	Pn	02 20 45.5	-0.1
STEP	BALIKESIR_Sava	2.10	51	iP	Pg	02 20 51.5	+0.9
STEP				iS	Sg	02 21 21.3	+3.4
GADA	Gvkgeada	2.13	6	PN	Pn	02 20 46.1	-0.3
GADA	Gvkgeada	2.13	6	ePn	Pn	02 20 46.1	-0.3
GELI	Tayfur-Gelibol	2.42	16	PN	Pn	02 20 50.6	+0.2
GELI	Tayfur-Gelibol	2.42	16	ePn	Pn	02 20 50.6	+0.2
KULA	Kula-Manisa	2.44	79	PN	Pn	02 20 51.4	+0.7
KULA	Kula-Manisa	2.44	79	ePn	Pn	02 20 51.4	+0.7
ERIK	Erikli-Kesan	2.69	15	PN	Pn	02 20 54.1	0.0
ERIK	Erikli-Kesan	2.69	15	ePn	Pn	02 20 54.1	0.0

IDC 05 02:42:01.1±2.2, 2°.72S×132°.88E, h0^{km}, mb3.6/2, mb1 4.0/3, mb1mx3.4/48, mbtmp3.7/3, ML3.7/1, Error ellipse: s-maj=93.2km s-min=32.6km az=101.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	16.85	204	Pn	Pn	02 45 58.4	-0.3
	baz=43,slow=1.0						
WRA	Warramunga Arr	17.18	175	P	P	02 46 04.3	-0.2
	0.3nm,0.3s,baz=354,slow=11,SNR=7.0						
ASAR	Alice Springs	20.85	177	P	P	02 46 44.1	-0.6
	2.9nm,0.6s,baz=5.6,slow=10,SNR=23						
ILAR	Eielson Array	88.28	25	P	P	02 54 54.3	0.0
	0.2nm,0.7s,baz=261,slow=4.2,SNR=1.8						

IDC 05 03:00:12.5±0.6, 18°.81N×121°.29E, h0^{km}, mb3.8/15, mb1 3.9/17, mb1mx3.8/71, mbtmp3.9/17, ML4.3/3, MS2.9/4, Ms1 3.0/4, ms1mx2.6/57, Error ellipse: s-maj=20.6km s-min=13.3km az=76.0

ISCJB 05 03:00:17.3±0.5, 19°.19N±0°.02×121°.18E±0°.06, h37^{km}±6^{km}, mb4.0/17, MS2.7/1, Error ellipse: s-maj=9.7km s-min=4.0km az=178.1

NEIC 05 03:00:17.3±0.5, 18°.91N×121°.33E, h35^{km}, mb4.6/6, Error ellipse: s-maj=13.5km s-min=9.0km az=78.0

MAN 05 03:00:17.4, 19°.14N×121°.23E, h63^{km}, mb5.1, ML4.0, MS4.1

ISC 05 03:00:17.3±1.2, 19°.05N±0°.04×121°.16E±0°.06, h32^{km}±9^{km}, n55, σ2^{s}.45/61, mb3.9/17, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGCP	Mt. Cagua	1.16	133	eP	Pb	03 00 39.2	+0.3
SGCP				eS	Sb	03 00 55.1	+1.5
APYP	Conner	1.18	176	eP	Pb	03 00 39.3	+0.1
APYP				eS	Sb	03 00 55.5	+1.3
ABRA	Dolores	1.45	197	eP	Pn	03 00 42.6	+1.2
ABRA				eS	Sb	03 01 03.9	+1.9
CVP	Callao Caves	1.48	155	eP	Pb	03 00 44.4	+0.1
CVP				eS	Sb	03 01 03.3	+0.7
BBP	Basco	1.58	29	eP	Pb	03 00 44.0	-1.9
BBP				iS	Sb	03 01 09.6	+4.1
TWG	Pinlang	3.75	359	ePn	Pn	03 01 12.0	-1.1
TWG				eSn	Sn	03 01 51.7	-4.5
TPUB	Ta-pu	4.26	353	ePn	Pn	03 01 19.1	-0.9
TPUB				eSn	Sn	03 02 03.4	-5.3
YULB	Yu-li	4.33	2	ePn	Pn	03 01 20.1	-0.8
YULB				eSn	Sn	03 02 10.3	0.0
SSLB	Suanglung	4.72	358	ePn	Pn	03 01 26.1	-0.3
SSLB				eSn	Sn	03 02 17.7	-2.4
TGY	Tagaytay City	4.92	183	Pn	Pn	03 01 23.0	-6.2
	66nm,0.3s,baz=50,slow=16,SNR=2.3						
TGY				Lg	Lg	03 02 49.1	
	92nm,0.3s,baz=123,slow=15,SNR=2.6						
NACB	Ninganchiao	5.12	4	ePn	Pn	03 01 32.2	+0.4
NACB				eSn	Sn	03 02 26.8	-3.0
YHNB	Yeheng	5.60	2	ePn	Pn	03 01 38.7	+0.3
YHNB				eSn	Sn	03 02 40.9	-0.9
YOJ	Yonaguni jima	5.66	17	ePn	Pn	03 01 37.8	-1.3
JOW	Kunigami	10.15	39	Pn	Pn	03 02 43.0	+2.1
	3.8nm,0.3s,baz=199,slow=13,SNR=6.0						
JOW				Sn	Sn	03 04 25.0	-8.5
	0.7nm,0.3s,baz=197,slow=19,SNR=3.6						
QIZ	Qiongzhong	10.70	272	ePn	Pn	03 02 43.7	-4.8
DAV	Davao City (W)	12.66	160	LR	LR	03 08 36.2	
	comp=Z,66nm,20.6s,baz=344,slow=41						
JNU	Nakatsue	16.50	30	LR	LR	03 10 49.6	
	comp=Z,48nm,18.6s,baz=118,slow=38						
KS15	Wonju Array Si	19.25	16	eP	P	03 04 38.9	-0.2
KSAR	Wonju Array Be	19.25	16	P	P	03 04 38.9	-0.2
KSRS	Korea Array	19.27	16	P	P	03 04 38.9	-0.4
	0.3nm,0.3s,baz=198,slow=12,SNR=8.2						
KSRS				LR	LR	03 13 04.7	
	comp=Z,25nm,19.1s,baz=160,slow=40						
CBIJ	Chichi jima	20.92	64	eP	P	03 04 56.0	-1.3
	84nm,1.4s						
JCJ	Chichijima	20.92	64	P	P	03 04 56.0	-1.3
	13nm,0.6s,baz=274,slow=19						
CHTO	Chiang Mai	21.02	273	eP	P	03 04 58.1	-0.3
	10nm,1.3s						
CM01	Chiang Mai Arr	21.03	272	eP	P	03 04 57.0	-1.7
CM31	Chiang Mai Arr	21.05	272	eP	P	03 04 53.7	-5.1
CMAR	Chiang Mai Arr	21.05	272	P	P	03 04 59.3	+0.5
	0.9nm,0.3s,baz=83,slow=9.8,SNR=5.3						
CMAR				LR	LR	03 13 56.2	
	comp=Z,29nm,18.3s,baz=260,slow=39						
JHJ2	Mitsune	21.79	46	eP	P	03 04 57.9	-8.8
	817nm,1.6s						
ASAJ	Asahikawa	30.77	31	P	P	03 06 32.3	+2.4
	0.6nm,0.3s,baz=241,slow=13,SNR=2.0						
ASAJ	Asahikawa	30.77	31	eP	P	03 06 32.3	+2.4
	8.5nm,1.3s						
SONA0	Songino Array	31.13	341	eP	P	03 06 36.0	+2.8
SONM	Songino Array	31.13	341	P	P	03 06 36.0	+2.8
	0.4nm,0.5s,baz=142,slow=7.2,SNR=2.7						
FITZ	Fitzroy Crossi	37.17	173	P	P	03 07 24.4	-1.2
	3.7nm,1.0s,baz=79,slow=10,SNR=4.0						
FITZ	Fitzroy Crossi	37.17	173	eP	P	03 07 24.4	-1.2
	61nm,1.9s						
WR1	Warramunga Arr	40.85	161	eP	P	03 07 53.2	-3.1
WRA	Warramunga Arr	40.85	161	P	P	03 07 53.2	-3.1
	1.0nm,0.5s,baz=343,slow=9.1,SNR=6.2						
WRA				PcP	PcP	03 09 56.8	-0.1
	0.4nm,0.5s,baz=339,slow=2.9,SNR=4.9						
MK32	Makanchi Array	42.12	320	eP	P	03 08 08.2	+1.6
MKAR	Makanchi Array	42.12	320	P	P	03 08 08.2	+1.6
	0.2nm,0.5s,baz=118,slow=8.1,SNR=3.2						
H11N1	WAKE ISLAND Hy	43.05	81	T	T	03 53 51.2	
	baz=277,slow=75,SNR=17						
H11N2	WAKE ISLAND Hy	43.05	81	T	T	03 53 51.4	
	baz=277,slow=75,SNR=17						
H11N3	WAKE ISLAND Hy	43.06	81	T	T	03 53 56.3	
	baz=277,slow=75,SNR=13						
AS31	Alice Springs	44.24	163	eP	P	03 08 21.9	-2.0
	6.6nm,1.9s						
ASAR	Alice Springs	44.24	163	P	P	03 08 21.9	-2.0
	0.6nm,0.4s,baz=345,slow=7.1,SNR=8.2						
ZALV	Zalesovo Beam	44.60	330	P	P	03 08 28.7	+2.3
	0.7nm,0.4s,baz=96,slow=8.8,SNR=2.8						
ZAA1	Zalesovo Array	44.60	330	eP	P	03 08 28.7	+2.2
KURK	Kurchatov	46.09	323	eP	P	03 08 38.8	+0.4
KURBB	Kurchatov Arra	46.10	323	P	P	03 08 38.8	+0.4
	0.3nm,0.3s,baz=122,slow=7.6,SNR=4.4						
BVAR	Borovoye Array	51.69	323	P	P	03 09 22.6	+1.4
	0.4nm,0.4s,baz=101,slow=1.5,SNR=2.2						
ARU	Arti	59.23	325	P	P	03 10 18.7	+3.3
	3.0nm,0.4s,baz=98,slow=19,SNR=3.4						
ARU	Arti	59.23	325	eP	P	03 10 18.7	+3.3
	4.3nm,0.4s						
ILAR	Eielson Array	73.78	26	P	P	03 11 49.3	+1.0
	0.2nm,0.6s,baz=272,slow=5.2,SNR=3.2						
ILB	Eielson Array	73.78	26	eP	P	03 11 49.3	+1.0
FIA0	FINESS Array S	75.86	330	eP	P	03 12 02.7	+2.4
FINES	FINESS Array B	75.86	330	P	P	03 12 02.7	+2.4
	1.1nm,0.9s,baz=88,slow=3.2,SNR=2.4						
YKA	Yellowknife Ar	87.69	23	P	P	03 13 02.4	-0.1
	0.6nm,0.5s,baz=312,slow=4.8,SNR=6.4						
TXAR	Lajitas Array	115.32	43	PKP	PKPdf	03 18 56.3	-0.2
	0.1nm,0.5s,baz=188,slow=2.7,SNR=3.3						

KRSC 05 03:09:10.8±2.0, 49°.02N×155°.77E, h60^{km}±23^{km}, ML5.0

SKHL 05 03:09:14.8±0.1, 49°.13N×155°.68E, h64^{km}±2^{km}, mb4.9/6

MOS 05 03:09:15.0±1.0, 49°.32N×155°.37E, h67^{km}, mb4.5/22, Error ellipse: s-maj=10.4km s-min=3.2km az=71.9

BJI 05 03:09:15.6, 49°.50N×155°.20E, h69^{km}, mb4.4/21, mB4.6/13, Ms4.3/3

ISCJB 05 03:09:16.2±0.5, 49°.40N±0°.04×155°.29E±0°.04, h78^{km}±3^{km}, mb4.3/132, Error ellipse: s-maj=7.1km s-min=2.9km az=145.8

NEIC 05 03:09:18.5±0.6, 49°.43N×155°.17E, h81^{km}±5^{km}, mb4.5/92, Error ellipse: s-maj=6.1km s-min=3.0km az=151.0

IDC 05 03:09:19.1±2.1, 49°.43N×155°.22E, h89^{km}±18^{km}, mb3.9/30, mb1 4.0/36, mb1mx3.9/77, mbtmp4.2/36, MS3.3/17, Ms1 3.3/17, ms1mx3.0/66, Error ellipse: s-maj=14.8km s-min=9.7km az=142.0

ISC 05 03:09:15.3±0.6, 49°.21N±0°.05×155°.47E±0°.05, h62^{km}±5^{km}, n511, σ1^{s}.41/543, mb4.5/132, 2C-1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.53	16	iP	Pn	03 09 39.0	-1.4
SKR				AMB	AMB	03 09 41.0	
	319nm,0.4s						
SKR				eS	Sn	03 09 57.0	-2.4
SKR				A	A	03 10 01.0	
	3μm,0.5s						
SKR				A	A	03 10 01.0	
	3μm,0.5s						
SKR	Severo-Kuril's	1.53	16	eP	Pn	03 09 39.0	-1.4
SKR				eS	Sn	03 09 58.8	-0.6
SKR	Severo-Kuril's	1.53	16	⇓iPN	Pn	03 09 39.2	-1.2
SKR				eS	Sn	03 09 57.6	-1.8
SKR				pmax	pmax		
	comp=Z,319nm,0.4s						
SKR				smax	smax		
	comp=N,3μm,0.5s						
SKR				smax	smax		
	comp=E,3μm,0.4s						
PAU	Pauzhetka	2.42	20	eP	Pn	03 09 52.7	+0.3
PAU				AMB	AMB	03 09 53.2	
	comp=E,147nm,0.6s						
PAU				eS	Sn	03 10 21.2	+0.4
PAU				A	A	03 10 23.4	
	comp=E,2μm,0.3s						
PAU	Pauzhetka	2.42	20	eP	Pn	03 09 51.8	-0.6
PAU				eS	Sn	03 10 21.0	+0.2
PAU	Pauzhetka	2.42	20	PN	Pn	03 09 51.8	-0.6
PAU				S	Sn	03 10 21.0	+0.2
KDTR	Khodutka, Kamc	3.09	32	eP	Pn	03 10 00.2	-1.3
KDTR				eS	Sn	03 10 34.5	-2.7
ASAK	Asacha	3.53	25	eP	Pn	03 10 08.1	+0.4
ASAK	Asacha	3.53	25	PN	Pn	03 10 08.1	+0.4
MTVR	Mutnovka	3.70	27	eP	Pn	03 10 10.4	+0.3
MTVR				eS	Sn	03 10 54.4	+2.0
MTVR	Mutnovka	3.70	27	PN	Pn	03 10 10.4	+0.3
MTVR				S	Sn	03 10 54.4	+2.0
GRL	Gorelyy	3.73	25	eP	Pn	03 10 11.0	+0.6
GRL	Gorelyy	3.73	25	PN	Pn	03 10 11.0	+0.6
RUS	Russkaya	3.76	30	eP	Pn	03 10 10.2	-0.5
RUS				eS	Sn	03 10 53.2	-0.4
RUS	Russkaya	3.76	30	PN	Pn	03 10 10.2	-0.5
RUS				S	Sn	03 10 53.2	-0.4
APC	Apacha	3.87	15	eP	Pn	03 10 13.7	+1.5
APC	Apacha	3.87	15	PN	Pn	03 10 13.7	+1.5
KRMR	Karymshinskiy	3.99	24	eP	Pn	03 10 14.7	+0.8
KRMR				eS	Sn	03 11 01.7	+2.3
KRMR	Karymshinskiy	3.99	24	PN	Pn	03 10 14.7	+0.8
KRMR				S	Sn	03 11 01.7	+2.3
PEA0B	Petropavlovsk-	4.15	19	ePn	Pn	03 10 17.1	+1.1
PEA0B				eSn	Sn	03 10 55.9	-7.3
PETK	Petropavlovsk-	4.15	19	P	Pn	03 10 16.9	+0.9
	baz=192,slow=13						
PETK				S	Sn	03 11 16.7	+13
	baz=240,slow=23						
PETK				LR	LR	03 12 10.0	
	comp=E,263nm,20.3s,baz=201,slow=43						
PETK	Petropavlovsk-	4.15	19	ePn	Pn	03 10 16.9	+0.9
PETK				eSn	Sn	03 10 57.5	-5.7
PEA1	Petropavlovsk-	4.15	19	ePn	Pn	03 10 16.9	+0.8
PEA1				eSn	Sn	03 11 16.7	+13
PET	Petropavlovsk	4.31	26	eP	Pn	03 10 19.1	+0.8
PET				AMB	AMB	03 10 21.3	
	comp=E,53nm,0.3s						
PET				eS	Sn	03 11 06.7	-0.5
PET				A	A	03 11 10.6	
	comp=E,350nm,0.5s						
PET				A	A	03 11 10.6	
	comp=E,249nm,0.5s						
PET	Petropavlovsk	4.31	26	ePn	Pn	03 10 18.9	+0.6
PET				eSn	Sn	03 11 06.1	-1.1
PET	Petropavlovsk	4.31	26	eP	Pn	03 10 18.9	+0.6
PET				eS	Sn	03 11 08.5	+1.3
PET	Petropavlovsk	4.31	26	ePN	Pn	03 10 19.1	+0.8
PET				eS	Sn	03 11 08.1	+0.9
PET				pmax	pmax		
	comp=Z,51nm,0.5s						
PET				smax	smax		
	comp=N,438nm,0.5s						
PET				smax	smax		
	comp=E,418nm,0.5s						
PET				MLR	MLR		
	comp=Z,100nm,17.0s						
DALK	Dalny	4.35	27	eP	Pn	03 10 19.1	+0.3
DALK				eS	Sn	03 11 09.6	+1.5
DALK	Dalny	4.35	27	PN	Pn	03 10 19.1	+0.3
DALK				S	Sn	03 11 09.6	+1.5
UGLR	Uglovaya	4.52	26	eP	Pn	03 10 22.4	+1.1
UGLR	Uglovaya	4.52	26	PN	Pn	03 10 22.4	+1.1
KOK	Koryaka	4.54	25	eP	Pn	03 10 23.4	+1.8
KOK				eS	Sn	03 11 16.0	+2.9
KOK	Koryaka	4.54	25	PN	Pn	03 10 23.4	+1.8
KOK				S	Sn	03 11 16.0	+2.9
AVH	Avacha	4.55	26	eP	Pn	03 10 23.2	+1.6
AVH	Avacha	4.55	26	PN	Pn	03 10 23.2	+1.6
SMAR	Somma	4.56	26	eP	Pn	03 10 23.3	+1.3
SMAR	Somma	4.56	26	PN	Pn	03 10 23.3	+1.3
SDLR	Sedlovina	4.60	26	eP	Pn	03 10 22.7	+0.3
SDLR				eS	Sn	03 11 16.8	+2.3
SDLR	Sedlovina	4.60	26	PN	Pn	03 10 22.7	+0.3
SDLR				S	Sn	03 11 16.8	+2.3
KRX	Arik	4.61	24	eP	Pn	03 10 24.3	+1.8
KRX	Arik	4.61	24	PN	Pn	03 10 24.3	+1.8
NLC	Nalytchevo	4.65	30	eP	Pn	03 10 22.5	-0.4
NLC				eS	Sn	03 11 14.7	-0.9
NLC	Nalytchevo	4.65	30	PN	Pn	03 10 22.5	-0.4
NLC				S	Sn	03 11 14.7	-0.9
GNL	Ganaly	4.75	18	eP	Pn	03 10 25.8	+1.4
GNL	Ganaly	4.75	18	PN	Pn	03 10 25.8	+1.4
SPN	Mys Shipunski	4.83	35	eP	Pn	03 10 24.4	-1.0
SPN				eS	Sn	03 11 19.5	-0.5
SPN	Mys Shipunski	4.83	35	PN	Pn	03 10 24.4	-1.0
SPN				S	Sn	03 11 19.5	-0.5
KII	Karymskiy	5.43	26	eP	Pn	03 10 36.1	+2.4
KII	Karymskiy	5.43	26	PN	Pn	03 10 36.1	+2.4
KUR	Kuril'sk	6.53	235	eP	Pn	03 10 50.0	+1.3
KUR				AMB	AMB	03 10 57.0	
	comp=Z,65nm,0.6s						
KUR				eS	Sn	03 12 02.8	+1.1
KUR	Kuril'sk	6.53	235	⇑iPN	Pn	03 10 50.6	+1.9
KUR				eS	Sn	03 12 05.9	+4.2
KUR				pmax	pmax		
	comp=E,38nm,0.6s						
KUR				pmax	pmax		
	comp=Z,67nm,0.6s						
KUR				pmax	pmax		
	comp=N,38nm,0.4s						
KUR				smax	smax		
	comp=N,151nm,0.6s						
KUR				smax	smax		
	comp=E,87nm,0.7s						
MKZ	Mys Kozlova	6.61	33	eP	Pn	03 10 47.8	-1.8
MKZ	Mys Kozlova	6.61	33	PN	Pn	03 10 47.8	-1.8
TUMD	Tumrok D	6.72	25	eP	Pn	03 10 52.9	+1.6
TUMR	Tumrok	6.72	23	eP	Pn	03 10 53.1	+1.7
TUMR	Tumrok	6.72	23	PN	Pn	03 10 52.9	+1.5
KMNR	Kamenistaya	7.17	22	eP	Pn	03 10 59.0	+1.5
KMNR	Kamenistaya	7.17	22	PN	Pn	03 10 59.0	+1.5
KPT	Kopyto	7.36	21	eP	Pn	03 11 01.7	+1.7
KPT	Kopyto	7.36	21	PN	Pn	03 11 01.7	+1.7
BZMR	Bezymyannaya	7.39	22	eP	Pn	03 11 02.4	+1.8
BZMR	Bezymyannaya	7.39	22	PN	Pn	03 11 02.4	+1.8
BZWR	Bezymyannyi-We	7.42	22	eP	Pn	03 11 02.7	+1.7
BZWR	Bezymyannyi-We	7.42	22	PN	Pn	03 11 02.7	+1.7
BZGR	Bezymyannyi-Gr	7.45	23	eP	Pn	03 11 02.7	+1.4
BZGR	Bezymyannyi-Gr	7.45	23	PN	Pn	03 11 02.7	+1.4
ZLN	Zelenaya	7.55	23	eP	Pn	03 11 04.8	+2.2

ZLN	**Zelenaya**	**7.55**	**23**	PN	**Pn**	**03 11 04.8**	**+2.2**
LGNR	**Loginova**	**7.58**	**23**	*e*P	**Pn**	**03 11 04.2**	**+1.0**
LGNR	**Loginova**	**7.58**	**23**	PN	**Pn**	**03 11 04.2**	**+1.0**
KRSR	**Krestovskiy**	**7.67**	**22**	*e*P	**Pn**	**03 11 05.6**	**+1.3**
KRSR	**Krestovskiy**	**7.67**	**22**	PN	**Pn**	**03 11 05.6**	**+1.3**
SHO	**Shikotan**	**8.00**	**231**	*e*P	**Pn**	**03 11 06.0**	**-2.8**
SHO				AMB	AMB	03 11 12.0	
	comp=E,30nm,0.3s						
SHO				*e*S	**Sn**	**03 12 33.0**	**-4.7**
SHO	**Shikotan**	**8.00**	**231**	*e*PN	**Pn**	**03 11 06.9**	**-1.9**
SHO				pmax	pmax		
	comp=Z,30nm,0.3s						
BDR	**Baidarnaya**	**8.14**	**23**	*e*P	**Pn**	**03 11 11.1**	**+0.4**
BDR	**Baidarnaya**	**8.14**	**23**	PN	**Pn**	**03 11 11.1**	**+0.4**
SRKR	**Sorokina**	**8.21**	**23**	*e*P	**Pn**	**03 11 12.2**	**+0.6**
SRKR	**Sorokina**	**8.21**	**23**	PN	**Pn**	**03 11 12.2**	**+0.6**
SMKR	**Semkarok**	**8.22**	**24**	*e*P	**Pn**	**03 11 12.1**	**+0.3**
SMKR	**Semkarok**	**8.22**	**24**	PN	**Pn**	**03 11 12.1**	**+0.3**
KBTR	**Krutoberegovo**	**8.30**	**30**	*e*P	**Pn**	**03 11 11.9**	**-1.0**
KBTR	**Krutoberegovo**	**8.30**	**30**	PN	**Pn**	**03 11 11.9**	**-1.0**
YUK	**Yuzh-Kuril'sk**	**8.40**	**236**	*e*P	**Pn**	**03 11 14.9**	**+0.7**
YUK				AMB	AMB	03 11 15.0	
	comp=Z,37nm,0.4s						
YUK				AMB	AMB	03 11 15.0	
	comp=Z,224nm,0.4s						
YUK				AMB	AMB	03 11 15.0	
	comp=Z,122nm,0.4s						
YUK				*e*S	**Sn**	**03 12 46.0**	**-1.4**
YUK	**Yuzh-Kuril'sk**	**8.40**	**236**	*e*PN	**Pn**	**03 11 14.0**	**-0.2**
YUK				pmax	pmax		
	comp=E,224nm,0.4s						
YUK				pmax	pmax		
	comp=Z,122nm,0.4s						
YUK				pmax	pmax		
	comp=N,37nm,0.2s						
TYV	**Tymovskoe**	**8.42**	**286**	*e*P	**Pn**	**03 11 16.8**	**+2.3**
TYV				AMB	AMB	03 11 19.6	
	comp=N,10.0nm,0.6s						
TYV	**Tymovskoe**	**8.42**	**286**	*e*PN	**Pn**	**03 11 16.7**	**+2.3**
TYV				pmax	pmax		
	comp=Z,100nm,1.9s						
TYV				pmax	pmax		
	comp=Z,17nm,0.7s						
UGL	**Uglegorsk**	**8.79**	**274**	*e*P	**Pn**	**03 11 23.1**	**+3.5**
UGL				AMB	AMB	03 11 25.1	
	comp=Z,76nm,0.9s						
BKI	**Bering**	**8.80**	**43**	*e*P	**Pn**	**03 11 19.0**	**-0.7**
BKI	**Bering**	**8.80**	**43**	PN	**Pn**	**03 11 19.0**	**-0.7**
YSS	**Yuzh-Sakhalins**	**8.81**	**260**	*e*P	**Pn**	**03 11 22.6**	**+2.8**
YSS				AMB	AMB	03 11 22.9	
	comp=Z,25nm,0.3s						
YSS	**Yuzh-Sakhalins**	**8.81**	**260**	*e*PN	Pn	03 11 13.0	-6.8
YSS				MLR	MLR		
	comp=Z,100nm,13.0s						
ASAJ	**Asahikawa**	**10.21**	**245**	P	**Pn**	**03 11 41.4**	**+2.5**
	comp=Z,5.4nm,0.3s,baz=75,slow=14,SNR=61						
ASAJ				S	Sn	03 13 43.3	+12
	baz=103,slow=18,SNR=4.5						
ASAJ				LR	LR	03 15 06.5	
	comp=Z,123nm,21.5s,baz=350,slow=34						
ASAJ	**Asahikawa**	**10.21**	**245**	*e*Pn	**Pn**	**03 11 41.2**	**+2.2**
ASAJ				*e*Sn	**Sn**	**03 13 38.4**	**+6.7**
MA2	**Magadan**	**10.74**	**347**	P	**Pn**	**03 11 46.3**	**+0.2**
	comp=Z,1.0nm,0.3s,baz=174,slow=9.9,SNR=5.7						
MA2				LR	LR	03 15 51.1	
	comp=Z,92nm,21.1s,baz=193,slow=37						
MA2	**Magadan**	**10.74**	**347**	*e*P	**Pn**	**03 11 46.5**	**+0.4**
SMY	**Shemya**	**12.25**	**66**	*e*Pn	**Pn**	**03 12 04.3**	**-2.4**
SMY	**Shemya**	**12.25**	**66**	*e*PN	**Pn**	**03 12 04.4**	**-2.4**
SEY	**Seymchan**	**13.86**	**354**	P	**Pn**	**03 12 28.6**	**+0.1**
	comp=Z,0.4nm,0.3s,baz=153,slow=9.6,SNR=8.9						
KLR	**Kul'dur**	**15.49**	**279**	P	**Pn**	**03 12 51.0**	**+1.3**
	comp=Z,0.0nm,0.3s,baz=80,slow=15,SNR=3.7						
USRK	**Ussuriysk Ar.**	**16.84**	**262**	P	**P**	**03 13 09.1**	**+1.1**
	baz=70,slow=12						
MJA0	**Matsu Arr-Jizo**	**17.82**	**231**	*e*P	**Pn**	**03 13 21.0**	**+2.0**
MJA0				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR	**Matsushiro Arr**	**17.84**	**231**	P	**Pn**	**03 13 21.6**	**+2.4**
	comp=Z,0.7nm,0.3s,baz=16,slow=10,SNR=7.2						
MJAR				LR	LR	03 20 54.8	
	comp=Z,52nm,19.1s,baz=45,slow=39						
MJB9	**Matsu-Tunnel**	**17.84**	**231**	*e*P	**Pn**	**03 13 21.2**	**+2.1**
	comp=Z,11nm,0.9s						
MAJO	**Matsushiro**	**17.85**	**231**	*e*P	**P**	**03 13 18.3**	**-0.8**
MAJO	**Matsushiro**	**17.85**	**231**	*e*P	**Pn**	**03 13 21.2**	**+2.0**
	comp=Z,11nm,0.9s						
MAJO	**Matsushiro**	**17.85**	**231**	*i* P	**Pn**	**03 13 20.3**	**+1.1**
MAJO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MAT	**Matsushiro**	**17.85**	**231**	P	**Pn**	**03 13 20.9**	**+1.7**
BILL	**Bilibino**	**19.64**	**12**	*e*P	**P**	**03 13 38.3**	**-0.2**
	comp=Z,6.0nm,0.6s						
BILL	**Bilibino**	**19.64**	**12**	*i* P	**P**	**03 13 38.1**	**-0.4**
BILL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KSRS	**Korea Array**	**23.09**	**250**	P	**P**	**03 14 16.8**	**+1.2**
	comp=Z,2.2nm,0.5s,baz=51,slow=11,SNR=7.6						
KSRS				LR	LR	03 22 37.3	
	comp=Z,37nm,20.8s,baz=80,slow=35						
KS15	**Wonju Array Si**	**23.12**	**250**	*e*P	**P**	**03 14 16.8**	**+0.9**
KSAR	**Wonju Array Be**	**23.12**	**250**	P	**P**	**03 14 16.8**	**+0.9**
KSAR	**Wonju Array Be**	**23.12**	**250**	P	**P**	**03 14 16.8**	**+0.9**
JNU	**Nakatsue**	**24.36**	**238**	P	**P**	**03 14 29.1**	**+1.7**
	comp=Z,9.0nm,0.8s,baz=83,slow=4.4,SNR=4.9						
JNU				LR	LR	03 25 56.3	
	comp=Z,24nm,18.3s,baz=292,slow=41						
JNU	**Nakatsue**	**24.36**	**238**	*e*P	**P**	**03 14 25.6**	**-1.8**
	comp=Z,10nm,0.9s						
BJI	**Beijing**	**29.15**	**267**	P	**P**	**03 15 10.3**	**0.0**
BJI				pmax	pmax		
	comp=Z,4.0nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**30.81**	**159**	T	T	03 48 10.0	
	baz=346,slow=76,SNR=87						
H11N1	**WAKE ISLAND Hy**	**30.82**	**159**	T	T	03 48 09.7	
	baz=346,slow=76,SNR=242						
H11N3	**WAKE ISLAND Hy**	**30.82**	**159**	T	T	03 48 02.5	
	baz=346,slow=76,SNR=180						
HHC	**Hu-ho-hao-te**	**31.76**	**272**	*e*P	**P**	**03 15 35.0**	**+1.6**
BPAW	**Bear Paw Mtn.**	**31.86**	**42**	*e*P	**P**	**03 15 35.5**	**+1.5**
	comp=Z,4.6nm,0.9s						
CNPM	**China Poot**	**31.86**	**51**	*e*P	**P**	**03 15 34.1**	**0.0**
	comp=Z,11nm,1.0s						
H11S1	**WAKE ISLAND Hy**	**31.94**	**160**	T	T	03 49 28.2	
	baz=346,slow=76,SNR=3848						
H11S3	**WAKE ISLAND Hy**	**31.95**	**160**	T	T	03 49 29.0	
	baz=346,slow=76,SNR=4482						
H11S2	**WAKE ISLAND Hy**	**31.96**	**160**	T	T	03 49 27.7	
	baz=346,slow=76,SNR=1870						
MLY	**Manley**	**32.01**	**40**	*e*P	**P**	**03 15 36.5**	**+1.2**
	comp=Z,2.9nm,0.8s						
SONM	**Songino Array**	**32.08**	**287**	LR	LR	03 29 42.6	
	comp=Z,75nm,19.5s,baz=64,slow=38						
TRF	**Thorofare Moun**	**32.15**	**43**	*e*P	**P**	**03 15 37.3**	**+0.6**
	comp=Z,5.0nm,0.9s						
NJ2	**Nanjing**	**32.26**	**252**	*e*P	**P**	**03 15 38.0**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
COLD	**Coldfoot**	**32.41**	**36**	*e*P	**P**	**03 15 39.2**	**+0.4**
	comp=Z,6.8nm,1.1s						
MCK	**McKinley**	**32.76**	**43**	*e*P	**P**	**03 15 42.9**	**+1.1**
MCK	**McKinley**	**32.76**	**43**	*e*P	**P**	**03 15 43.0**	**+1.1**
	comp=Z,7.0nm,0.9s						
MCK	**McKinley**	**32.76**	**43**	*e*P	**P**	**03 15 43.0**	**+1.1**
MCK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
TOLK	**Toolik Lake Re**	**32.82**	**34**	P	**P**	**03 15 42.7**	**+0.4**
	baz=263,SNR=8.2						
TOLK	**Toolik Lake Re**	**32.82**	**34**	*e*P	**P**	**03 15 42.9**	**+0.5**
	comp=Z,6.1nm,0.6s						
MDM	**Murphy Dome**	**33.07**	**40**	*e*P	**P**	**03 15 45.9**	**+1.3**
	comp=Z,6.0nm,0.8s						
SML	**Sawmill**	**33.11**	**46**	*e*P	**P**	**03 15 45.6**	**+0.6**
	comp=Z,16nm,0.8s						
SML	**Sawmill**	**33.11**	**46**	*e*P	**P**	**03 15 45.6**	**+0.6**
SML				pmax	pmax		
	comp=Z,16nm,0.8s						
ZAK	**Zakamensk**	**33.14**	**292**	*e*P	P	03 16 01.0	+16
ZAK				pmax	pmax		
	comp=Z,2.0nm,2.1s						
COLA	**College**	**33.23**	**41**	*e*P	**P**	**03 15 47.2**	**+1.3**
COLA	**College**	**33.23**	**41**	*e*P	**P**	**03 15 47.2**	**+1.3**
	comp=Z,14nm,0.8s						
COLA	**College**	**33.23**	**41**	*e*P	**P**	**03 15 47.2**	**+1.3**
COLA				pmax	pmax		
	comp=Z,14nm,0.8s						
CCB	**Clear Creek Bu**	**33.25**	**41**	*e*P	**P**	**03 15 46.8**	**+0.8**
	comp=Z,4.3nm,0.8s						
ILAR	**Eielson Array**	**33.64**	**41**	P	**P**	**03 15 49.6**	**+0.1**
	comp=Z,2.6nm,0.8s,baz=256,slow=7.6,SNR=32						
ILB	**Eielson Array**	**33.64**	**41**	*e*P	**P**	**03 15 49.8**	**+0.3**
IL1	**Eielson Array**	**33.64**	**41**	*e*P	**P**	**03 15 49.3**	**-0.2**
CRQM	**Cirque**	**35.72**	**48**	*e*P	**P**	**03 16 07.5**	**-0.2**
	comp=Z,14nm,0.9s						
EGAK	**Eagle**	**36.09**	**41**	*e*P	**P**	**03 16 10.8**	**+0.3**
	comp=Z,7.9nm,0.8s						
DAWY	**Dawson**	**36.94**	**42**	*e*P	**P**	**03 16 18.8**	**+0.9**
	comp=Z,2.2nm,0.9s						
INK	**Inuvik**	**38.72**	**34**	P	**P**	**03 16 33.8**	**+1.0**
	comp=Z,5.6nm,0.6s,baz=296,slow=6.4,SNR=19						
INK	**Inuvik**	**38.72**	**34**	*e*P	**P**	**03 16 33.8**	**+1.0**
	comp=Z,5.2nm,0.6s						
LZH	**Lanzhou**	**39.42**	**270**	*e*P	**P**	**03 16 38.3**	**-0.9**
LZH				pP	pP	03 16 55.4	+0.6
LZH				sP	sP	03 17 03.5	+1.4
LZH				SS	SS	03 25 24.7	-7.7
LZH				pmax	pmax		
	comp=Z,25nm,1.1s						
LZH				pmax	pmax		
	comp=Z,120nm,4.6s						
JIS	**Juneau Island**	**40.66**	**50**	*e*P	**P**	**03 16 51.4**	**+2.5**
	comp=Z,5.5nm,0.9s						
WRAK	**Wrangell Islan**	**42.34**	**52**	*e*P	**P**	**03 17 05.6**	**+2.9**
	comp=Z,5.8nm,0.7s						
ZALV	**Zalesovo Beam**	**42.49**	**304**	PcP	**PcP**	**03 18 55.6**	**0.0**
	comp=Z,0.6nm,0.3s,baz=76,slow=0.6,SNR=4.4						
ZALV				LR	LR	03 35 14.8	
	comp=Z,26nm,18.7s,baz=70,slow=37						
DLBC	**Dease Lake**	**42.76**	**48**	*e*P	**P**	**03 17 09.0**	**+2.8**
	comp=Z,3.9nm,0.9s						
GYA	**Guiyang**	**43.80**	**257**	*e*P	**P**	**03 17 16.0**	**+0.9**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TGY	**Tagaytay City**	**45.01**	**231**	LR	LR	03 35 32.2	
	comp=Z,90nm,21.7s,baz=224,slow=35						
WMQ	**Urumqi**	**45.54**	**290**	P	**P**	**03 17 30.1**	**+1.5**
WMQ				pmax	pmax		
	comp=Z,18nm,0.7s						
MK32	**Makanchi Array**	**47.24**	**296**	*e*P	**P**	**03 17 41.5**	**-0.4**
MKAR	**Makanchi Array**	**47.24**	**296**	P	**P**	**03 17 41.5**	**-0.4**
	comp=Z,0.5nm,0.5s,baz=74,slow=8.0,SNR=6.2						
MKAR				LR	LR	03 38 52.4	
	comp=Z,62nm,19.1s,baz=62,slow=38						
KMI	**Kunming**	**47.26**	**259**	P	P	03 17 50.6	+8.1
KMI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KURK	**Kurchatov**	**47.34**	**303**	*e*P	**P**	**03 17 41.9**	**-0.6**
KURK				*e*PcP	**PcP**	**03 19 12.8**	**+0.4**
KURK	**Kurchatov**	**47.34**	**303**	P	**P**	**03 17 41.9**	**-0.6**
KURK						03 19 12.8	
KURK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURBB	**Kurchatov Arra**	**47.44**	**303**	P	**P**	**03 17 41.9**	**-1.4**
	comp=Z,0.7nm,0.7s,baz=67,slow=8.2,SNR=4.9						
KURBB				PcP	**PcP**	**03 19 12.8**	**+0.1**
	comp=Z,1.3nm,0.7s,baz=60,slow=3.6,SNR=8.1						
RES	**Resolute Bay**	**47.99**	**20**	*e*P	**P**	**03 17 47.1**	**-0.1**
RES	**Resolute Bay**	**47.99**	**20**	*e*P	**P**	**03 17 47.1**	**-0.1**
YKA	**Yellowknife Ar**	**48.01**	**39**	P	**P**	**03 17 48.2**	**+0.7**
	comp=Z,1.8nm,0.6s,baz=295,slow=7.1,SNR=8.4						
BVAR	**Borovoye Array**	**50.54**	**309**	P	**P**	**03 18 06.0**	**-1.0**
	comp=Z,0.8nm,0.5s,baz=86,slow=5.3,SNR=4.3						
BVAR				PcP	**PcP**	**03 19 23.7**	**-0.3**
	comp=Z,0.6nm,0.4s,baz=35,slow=3.6,SNR=3.8						
A04D	**Lummi Island**	**51.14**	**57**	P	**P**	**03 18 12.6**	**+1.1**
	baz=304						
G03D	**McMinnville, O**	**52.81**	**61**	P	**P**	**03 18 25.1**	**+1.1**
	baz=306						
CMMT	**Chiang Mai**	**54.22**	**257**	P	**P**	**03 18 35.7**	**+1.0**
	comp=Z,11nm,1.1s						
CHTO	**Chiang Mai**	**54.23**	**257**	*e*P	**P**	**03 18 35.5**	**+0.8**
	comp=Z,8.7nm,0.8s						
CHTO	**Chiang Mai**	**54.23**	**257**	*e*P	**P**	**03 18 35.5**	**+0.8**
CHTO				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CHTO	**Chiang Mai**	**54.23**	**257**	P	**P**	**03 18 35.8**	**+1.1**
	comp=Z,50nm,0.9s						
ARU	**Arti**	**54.28**	**317**	P	**P**	**03 18 33.4**	**-1.2**
	comp=Z,5.9nm,0.2s,baz=148,slow=18,SNR=5.0						
ARU	**Arti**	**54.28**	**317**	*e*P	**P**	**03 18 33.4**	**-1.2**
	comp=Z,5.0nm,0.6s						
ARU	**Arti**	**54.28**	**317**	*c i*P	**P**	**03 18 33.4**	**-1.2**
ARU				*PP	**pP**	**03 18 52.5**	**+1.7**
ARU				S	**S**	**03 26 06.9**	**-0.3**
ARU				SS	**SS**	**03 29 44.7**	**-4.4**
ARU				pmax	pmax		
	comp=Z,8.0nm,1.2s						
NEW	**Newport**	**54.44**	**55**	P	**P**	**03 18 36.3**	**+0.3**
	baz=307						
CM31	**Chiang Mai Arr**	**54.49**	**257**	*e*P	**P**	**03 18 37.8**	**+1.2**
CMAR	**Chiang Mai Arr**	**54.49**	**257**	P	**P**	**03 18 37.8**	**+1.2**
	comp=Z,5.4nm,0.9s,baz=32,slow=7.1,SNR=17						
CM01	**Chiang Mai Arr**	**54.51**	**257**	*e*P	**P**	**03 18 37.5**	**+0.8**
J05D	**Fort Rock, OR**	**55.13**	**62**	P	**P**	**03 18 42.3**	**+1.1**
	baz=308						
KSH	**Kashi**	**55.19**	**292**	*e*P	**P**	**03 18 42.7**	**+1.1**
KSH				sP	sP	03 19 11.4	+6.4
KSH				PcS	**PcS**	**03 23 42.2**	**+0.1**
KSH				S	**S**	**03 26 15.2**	**-4.9**
KSH				pmax	pmax		
	comp=Z,81nm,4.6s						
WALA	**Waterton Lakes**	**55.67**	**53**	*e*P	**P**	**03 18 46.0**	**+1.1**
	comp=Z,6.0nm,0.7s						
BMO	**Blue Mountains**	**56.41**	**59**	*e*P	**P**	**03 18 51.9**	**+1.7**
	comp=Z,1.9nm,0.8s						
BMO	**Blue Mountains**	**56.41**	**59**	*e*P	**P**	**03 18 51.9**	**+1.7**
BMO				pmax	pmax		
	comp=Z,2.0nm,0.8s						
J08A	**Circle Bar Ran**	**56.67**	**61**	*e*P	**P**	**03 18 54.3**	**+2.2**
	comp=Z,3.7nm,1.0s						
MSO	**Missoula**	**57.03**	**55**	P	**P**	**03 18 55.5**	**+0.9**
	baz=309,SNR=6.2						
MSO	**Missoula**	**57.03**	**55**	*e*P	**P**	**03 18 55.9**	**+1.3**
	comp=Z,5.4nm,1.1s						
ABKAR	**Akbulak array**	**58.07**	**310**	*e*P	**P**	**03 19 00.8**	**-0.9**
SUMG	**Summit**	**58.12**	**5**	*e*P	**P**	**03 19 02.2**	**0.0**
	comp=Z,5.6nm,0.7s						
SUMG	**Summit**	**58.12**	**5**	*i* P	**P**	**03 19 02.0**	**-0.2**
	comp=Z,5.1nm,0.7s						
SUMG	**Summit**	**58.12**	**5**	*i* P	**P**	**03 19 02.0**	**-0.2**
SUMG				pmax	pmax		
	comp=Z,5.0nm,0.7s						
AKTO	**Aktyubinsk**	**58.27**	**312**	LR	LR	03 46 51.1	
	comp=Z,22nm,19.8s,baz=41,slow=39						
LRM	**Limekiln Ridge**	**58.46**	**55**	*e*P	**P**	**03 19 06.7**	**+1.9**
EGMT	**Eagleton**	**58.47**	**52**	P	**P**	**03 19 05.4**	**+0.7**
	baz=310						
HLID	**Hailey**	**58.84**	**58**	P	**P**	**03 19 08.8**	**+1.4**
	baz=310						
HLID	**Hailey**	**58.84**	**58**	*e*P	**P**	**03 19 09.2**	**+1.8**
	comp=Z,2.0nm,0.9s						
MCMT	**McKenzie Canyo**	**58.89**	**56**	*e*P	**P**	**03 19 09.4**	**+1.6**
BOZ	**Bozeman (W)**	**59.05**	**55**	P	**P**	**03 19 10.2**	**+1.4**
	baz=311,SNR=15						
BOZ	**Bozeman (W)**	**59.05**	**55**	*e*P	**P**	**03 19 10.3**	**+1.5**
BOZ	**Bozeman (W)**	**59.05**	**55**	*e*P	**P**	**03 19 10.3**	**+1.5**
	comp=Z,6.1nm,0.8s						
BOZ	**Bozeman (W)**	**59.05**	**55**	*e*P	**P**	**03 19 10.3**	**+1.5**
BOZ				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BMN	**Battle Mountai**	**59.25**	**63**	*e*P	**P**	**03 19 12.3**	**+2.0**
	comp=Z,3.7nm,1.0s						
BMN	**Battle Mountai**	**59.25**	**63**	*e*P	**P**	**03 19 12.3**	**+2.0**
BMN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
QLMT	**Earthquake Lak**	**59.65**	**55**	*e*P	**P**	**03 19 15.1**	**+2.0**
YHB	**Horse Butte**	**59.83**	**55**	*e*P	**P**	**03 19 16.4**	**+2.1**
	comp=Z,8.6nm,1.0s						
NV01	**Mina Array Sit**	**59.92**	**65**	*e*P	**P**	**03 19 16.6**	**+1.6**
NVAR	**Mina Array Bea**	**59.92**	**65**	P	**P**	**03 19 16.6**	**+1.6**
	comp=Z,1.0nm,0.7s,baz=328,slow=5.3,SNR=4.7						
GCMT	**Greycliff**	**59.97**	**54**	*e*P	**P**	**03 19 16.9**	**+1.8**
H17A	**Grant Village**	**60.40**	**55**	*e*P	**P**	**03 19 21.7**	**+3.5**
	comp=Z,7.1nm,0.9s						
IMW	**Indian Meadow**	**60.53**	**56**	*e*P	**P**	**03 19 21.6**	**+2.5**
	comp=Z,4.9nm,1.2s						
RLMT	**Red Lodge**	**60.62**	**54**	P	**P**	**03 19 21.4**	**+1.8**
	baz=312,SNR=6.3						
RLMT	**Red Lodge**	**60.62**	**54**	*e*P	**P**	**03 19 21.8**	**+2.2**
	comp=Z,5.4nm,0.8s						
NIL	**Nilore**	**60.63**	**288**	*e*P	**P**	**03 19 19.8**	**+0.1**
	comp=Z,27nm,0.6s						
NIL				*e*pP	**pP**	**03 19 33.3**	**-2.9**
NIL	**Nilore**	**60.63**	**288**	*e*P	**P**	**03 19 19.8**	**+0.1**
NIL				*e**PP	**pP**	**03 19 33.3**	**-2.9**
NIL				pmax	pmax		
	comp=Z,27nm,0.6s						
FXWY	**Fox Creek**	**60.65**	**56**	*e*P	**P**	**03 19 21.9**	**+2.0**
	comp=Z,2.5nm,0.8s						
TPAW	**Teton Pass**	**60.79**	**56**	*e*P	**P**	**03 19 23.4**	**+2.5**
	comp=Z,4.9nm,0.8s						
LOHW	**Long Hollow**	**60.90**	**56**	*e*P	**P**	**03 19 23.9**	**+2.3**
	comp=Z,3.2nm,0.8s						
HVU	**Hansel Valley**	**60.91**	**59**	*e*P	**P**	**03 19 23.7**	**+2.1**
	comp=Z,2.1nm,0.9s						
HVU	**Hansel Valley**	**60.91**	**59**	*e*P	**P**	**03 19 23.7**	**+2.1**
HVU				pmax	pmax		
	comp=Z,2.0nm,0.9s						
REDW	**Red Top Meadow**	**60.93**	**56**	*e*P	**P**	**03 19 24.3**	**+2.5**
	comp=Z,4.3nm,0.9s						
CARC	**Carrizo Plain**	**61.05**	**69**	*e*P	**P**	**03 19 26.1**	**+3.6**
LAO	**LASA Array**	**61.16**	**51**	P	**P**	**03 19 24.6**	**+1.5**
	baz=313						
LAO	**LASA Array**	**61.16**	**51**	*e*P	**P**	**03 19 25.0**	**+2.0**
	comp=Z,9.5nm,0.9s						
SPUT	**South Promonto**	**61.41**	**59**	*e*P	**P**	**03 19 27.1**	**+2.1**
	comp=Z,3.7nm,1.0s						
R11A	**Troy Canyon, C**	**61.58**	**63**	P	**P**	**03 19 27.2**	**+1.0**
	baz=312						
R11A	**Troy Canyon, C**	**61.58**	**63**	*e*P	**P**	**03 19 27.6**	**+1.4**
	comp=Z,2.6nm,1.1s						
HWUT	**Hardware Ranch**	**61.71**	**58**	*e*P	**P**	**03 19 28.7**	**+1.7**
	comp=Z,2.3nm,0.6s						
DUG	**Dugway, Tooele**	**61.95**	**60**	P	**P**	**03 19 29.8**	**+1.2**
	baz=312						
DUG	**Dugway, Tooele**	**61.95**	**60**	*e*P	**P**	**03 19 30.5**	**+1.9**
	comp=Z,4.7nm,1.1s						
BW06	**Boulder Array**	**62.03**	**56**	P	**P**	**03 19 30.4**	**+1.1**
	baz=313,SNR=6.1						
PD31	**Pinedale Array**	**62.04**	**56**	*e*P	**P**	**03 19 30.6**	**+1.3**
PDAR	**Pinedale Array**	**62.04**	**56**	P	**P**	**03 19 30.6**	**+1.3**
	comp=Z,4.4nm,0.8s,baz=305,slow=2.2,SNR=40						
PDAR	**Pinedale Array**	**62.04**	**56**	*e*P	**P**	**03 19 30.1**	**+0.8**
FURC	**Furnace Creek,**	**62.08**	**66**	P	**P**	**03 19 30.8**	**+1.6**
	baz=313						
TPNV	**Topopah Spring**	**62.12**	**65**	P	**P**	**03 19 30.9**	**+1.0**
	baz=313						
EDW2	**Edwards Air Fo**	**62.46**	**68**	P	**P**	**03 19 33.6**	**+1.6**
	baz=313						
FIA0	**FINESS Array S**	**62.48**	**335**	*e*P	**P**	**03 19 29.6**	**-2.0**
FIA0	**FINESS Array S**	**62.48**	**335**	*e*P	**P**	**03 19 29.6**	**-2.0**
FINES	**FINESS Array B**	**62.48**	**335**	P	**P**	**03 19 29.6**	**-2.0**
	comp=Z,0.8nm,0.5s,baz=31,slow=8.2,SNR=11						
BFSC	**Mount Baldy Ra**	**63.10**	**68**	*e*P	**P**	**03 19 37.5**	**+1.2**
CCUT	**Cedar City**	**63.41**	**63**	*e*P	**P**	**03 19 40.4**	**+1.9**
	comp=Z,2.5nm,1.0s						
TMUT	**Trail Mountain**	**63.47**	**60**	*e*P	**P**	**03 19 40.7**	**+1.8**
	comp=Z,3.7nm,0.9s						
HEC	**Hector,Ludlow**	**63.50**	**67**	P	**P**	**03 19 40.3**	**+1.4**
	baz=313						
P17A	**Butcher Ranch,**	**63.61**	**60**	*e*P	**P**	**03 19 41.6**	**+1.9**
	comp=Z,2.3nm,0.8s						
Q16A	**Castle Valley**	**63.74**	**60**	*e*P	**P**	**03 19 42.9**	**+2.3**
	comp=Z,2.9nm,0.9s						
K22A	**Casper**	**63.75**	**55**	P	**P**	**03 19 42.0**	**+1.4**
	baz=314						
MTPU	**Mount Pierson**	**63.76**	**62**	*e*P	**P**	**03 19 43.5**	**+2.5**
	comp=Z,2.6nm,0.8s						
P18A	**Preston Nutter**	**63.78**	**59**	*e*P	**P**	**03 19 42.8**	**+1.8**
	comp=Z,5.0nm,1.3s						
LCMT	**Little Creek M**	**63.85**	**63**	*e*P	**P**	**03 19 43.2**	**+2.0**
	comp=Z,3.0nm,0.9s						
GMRC	**Granite Mounta**	**63.93**	**66**	P	**P**	**03 19 43.0**	**+1.2**
	baz=314						
GMRC	**Granite Mounta**	**63.93**	**66**	*e*P	**P**	**03 19 41.9**	**+0.1**
SRU	**San Rafael Swe**	**63.98**	**60**	*e*P	**P**	**03 19 43.9**	**+1.7**
	comp=Z,6.5nm,0.8s						
RSSD	**Black Hills**	**64.04**	**52**	P	**P**	**03 19 43.3**	**+0.8**
	baz=315						
RSSD	**Black Hills**	**64.04**	**52**	*e*P	**P**	**03 19 43.8**	**+1.3**
	comp=Z,7.9nm,0.7s						
RSSD	**Black Hills**	**64.04**	**52**	*e*P	**P**	**03 19 43.8**	**+1.3**
RSSD				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KNB	**Kanab**	**64.09**	**63**	*e*P	**P**	**03 19 45.4**	**+2.5**
	comp=Z,3.7nm,1.0s						
KNB	**Kanab**	**64.09**	**63**	*e*P	**P**	**03 19 45.4**	**+2.5**
KNB				pmax	pmax		
	comp=Z,4.0nm,1.0s						
OBN	**Obninsk**	**64.16**	**326**	*e*P	**P**	**03 19 43.4**	**+0.6**
OBN				*e*		03 20 18.7	
OBN				*e*		03 22 05.1	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
O20A	**White River Ci**	**64.55**	**58**	P	**P**	**03 19 46.4**	**+0.5**
	baz=314						
O20A	**White River Ci**	**64.55**	**58**	*e*P	**P**	**03 19 47.5**	**+1.6**
	comp=Z,3.6nm,0.8s						
IRM	**Iron Mountain**	**64.67**	**67**	P	**P**	**03 19 47.4**	**+0.8**
	baz=314						
A33A	**Warroad**	**64.80**	**44**	P	**P**	**03 19 47.4**	**+0.3**
	baz=317						
U15A	**North Rim**	**64.81**	**63**	*e*P	**P**	**03 19 50.1**	**+2.4**
	comp=Z,1.9nm,0.9s						
AGMN	**Agassiz Nation**	**65.05**	**44**	P	**P**	**03 19 48.5**	**-0.2**
	baz=317						
PV21	**Cone Mtn., Par**	**65.23**	**59**	*e*P	**P**	**03 19 52.0**	**+1.6**
	comp=Z,4.4nm,0.7s						
N23A	**Red Feather La**	**65.28**	**56**	P	**P**	**03 19 51.8**	**+1.1**
	baz=315						
PV23	**Carpenter Ridg**	**65.29**	**59**	*e*P	**P**	**03 19 52.8**	**+2.0**
	comp=Z,8.1nm,1.2s						
PV22	**Blue Mesa, Par**	**65.36**	**59**	*e*P	**P**	**03 19 53.0**	**+1.9**
	comp=Z,4.4nm,0.9s						
PV04	**Paradox Valley**	**65.39**	**59**	*e*P	**P**	**03 19 52.9**	**+1.6**
	comp=Z,5.3nm,0.9s						
PV20	**West Nyswonger**	**65.39**	**59**	*e*P	**P**	**03 19 53.3**	**+2.0**
	comp=Z,6.0nm,0.7s						
PV17	**East Wray Mesa**	**65.44**	**59**	*e*P	**P**	**03 19 53.3**	**+1.6**
	comp=Z,9.3nm,0.7s						
PV16	**Nyswonger Mesa**	**65.44**	**59**	*e*P	**P**	**03 19 53.6**	**+1.9**
	comp=Z,8.0nm,1.2s						
PV11	**David Mesa, Pa**	**65.47**	**59**	*e*P	**P**	**03 19 53.5**	**+1.6**
	comp=Z,12nm,1.2s						
PV18	**Skein Mesa, Pa**	**65.49**	**59**	*e*P	**P**	**03 19 53.7**	**+1.7**
	comp=Z,5.1nm,0.8s						
PV03	**Paradox Valley**	**65.52**	**59**	*e*P	**P**	**03 19 53.8**	**+1.6**
	comp=Z,6.1nm,1.0s						
PV13	**Radium Mtn., P**	**65.60**	**59**	*e*P	**P**	**03 19 54.3**	**+1.6**
	comp=Z,6.8nm,0.8s						
PV01	**Paradox Valley**	**65.76**	**59**	*e*P	**P**	**03 19 55.6**	**+1.8**
	comp=Z,9.0nm,1.5s						
SMCO	**Snowmass**	**65.92**	**58**	*e*P	**P**	**03 19 56.5**	**+1.5**
	comp=Z,4.5nm,0.8s						
WUAZ	**Wupatki**	**65.97**	**63**	P	**P**	**03 19 56.6**	**+1.5**
	baz=315						
ISCO	**Idaho Springs**	**66.23**	**56**	P	**P**	**03 19 58.5**	**+1.6**
	baz=315,SNR=9.1						
ISCO	**Idaho Springs**	**66.23**	**56**	*e*P	**P**	**03 19 58.6**	**+1.6**
	comp=Z,5.5nm,0.8s						
MVCO	**Mesa Verde**	**66.45**	**60**	P	**P**	**03 19 59.1**	**+0.9**
	baz=315						
GEYT	**Alibeck**	**66.69**	**301**	LR	LR	03 51 00.6	
	comp=Z,32nm,18.3s,baz=210,slow=38						
HFS	**Hagfors**	**66.69**	**340**	P	**P**	**03 19 57.1**	**-2.0**
	comp=Z,0.6nm,0.5s,baz=40,slow=5.6,SNR=8.1						
HFS				LR	LR	03 51 30.4	
	comp=Z,20nm,19.5s,baz=359,slow=38						
X16A	**Lo Mia Camp, P**	**66.70**	**64**	*e*P	**P**	**03 20 01.8**	**+2.0**
	comp=Z,2.4nm,0.9s						
S22A	**4UR Ranch, Cre**	**67.01**	**59**	P	**P**	**03 20 02.9**	**+1.1**
	baz=316						
S22A	**4UR Ranch, Cre**	**67.01**	**59**	*e*P	**P**	**03 20 03.9**	**+2.1**
	comp=Z,4.7nm,1.0s						
G33A	**Ortonville**	**67.05**	**47**	P	**P**	**03 20 02.1**	**+0.5**
	baz=318						
OGNE	**Ogallala**	**67.33**	**53**	P	**P**	**03 20 04.5**	**+0.9**
	baz=316						
SDCO	**Great Sand Dun**	**67.75**	**58**	P	**P**	**03 20 07.3**	**+0.7**
	baz=316						
SDCO	**Great Sand Dun**	**67.75**	**58**	*e*P	**P**	**03 20 07.8**	**+1.3**
	comp=Z,1.6nm,0.8s						
ECSD	**EROS Data Cent**	**68.05**	**48**	P	**P**	**03 20 08.0**	**+0.1**
	baz=318						
ECSD	**EROS Data Cent**	**68.05**	**48**	*e*P	**P**	**03 20 08.5**	**+0.6**
	comp=Z,4.3nm,0.8s						
H35A	**Sunnyside Ranc**	**68.19**	**46**	P	**P**	**03 20 09.3**	**+0.5**
	baz=319						

E38A	The Farm, Brul	68.26	43	P	P	03 20 08.9	-0.3
	baz=320						
F38A	Pierce - Schro	68.61	44	P	P	03 20 11.8	+0.4
	baz=320						
H36A	Jessenland, He	68.70	46	P	P	03 20 12.8	+0.8
	baz=319						
SPMN	Marine on St.	68.74	45	P	P	03 20 12.9	+0.7
	baz=320						
T25A	Trinidad	68.79	58	P	P	03 20 14.0	+1.1
	baz=317						
F39A	Loretta	69.07	43	P	P	03 20 14.6	+0.3
	baz=320						
H37A	Dierke Farm, C	69.17	45	P	P	03 20 15.4	+0.5
	baz=320						
TASM	ASL Pad, Albuq	69.22	60	P	P	03 20 16.9	+1.3
	baz=316						
ANMO	Albuquerque	69.22	60	P	P	03 20 17.2	+1.6
	comp=Z,1.4nm,0.8s,baz=313,slow=9.3,SNR=5.7						
ANMO	Albuquerque	69.22	60	P	P	03 20 16.8	+1.2
	baz=316						
ANMO	Albuquerque	69.22	60	*e*P	P	03 20 17.2	+1.6
	comp=Z,1.7nm,0.9s						
ANMO	Albuquerque	69.22	60	*i* P	P	03 20 16.8	+1.2
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TASL	Snake Pit, Alb	69.22	60	P	P	03 20 16.8	+1.2
	baz=316						
I37A	Lemond, Waseca	69.38	46	P	P	03 20 16.8	+0.6
	baz=320						
H40A	Chili	70.31	44	P	P	03 20 21.6	-0.3
	baz=321						
AKASG	Malin Array Be	70.36	327	P	P	03 20 20.3	-1.7
	comp=Z,0.4nm,0.4s,baz=35,slow=6.4,SNR=2.3						
AKASG				LR	LR	03 52 39.1	
	comp=Z,24nm,21.4s,baz=45,slow=37						
I39A	Houston	70.38	45	P	P	03 20 21.8	-0.5
	baz=321						
SCHQ	Schefferville	70.42	24	P	P	03 20 22.7	+0.3
	comp=Z,4.3nm,0.6s,baz=347,slow=6.5,SNR=7.7						
SCHQ	Schefferville	70.42	24	*e*P	P	03 20 23.2	+0.8
	comp=Z,7.1nm,0.9s						
H41A	Junction City	70.64	43	P	P	03 20 23.6	-0.3
	baz=321						
J39A	Decorah	70.69	45	P	P	03 20 23.7	-0.5
	baz=321						
L38A	Oak Wood Farm,	71.01	47	P	P	03 20 25.9	-0.3
	baz=320						
SCIA	State Center	71.07	47	P	P	03 20 26.9	+0.3
	baz=320						
K39A	Oelwein	71.09	46	P	P	03 20 26.8	+0.1
	baz=321						
J40A	Soldiers Grove	71.09	45	P	P	03 20 26.3	-0.4
	baz=321						
WR1	Warramunga Arr	71.37	201	*e*P	P	03 20 28.4	-0.1
WRA	Warramunga Arr	71.37	201	P	P	03 20 28.4	-0.1
	comp=Z,0.9nm,0.7s,baz=17,slow=6.4,SNR=5.5						
J41A	Loganville	71.45	44	P	P	03 20 28.5	-0.3
	baz=321						
L39A	Vinton	71.48	46	P	P	03 20 28.9	-0.1
	baz=321						
DZM	Mont Dzumac	71.63	169	P	P	03 20 33.5	+3.5
	comp=Z,7.4nm,1.1s,baz=310,slow=7.9,SNR=2.4						
DZM	Mont Dzumac	71.63	169	*e*P	P	03 20 33.5	+3.5
	comp=Z,16nm,1.4s						
M39A	Webster	71.90	47	P	P	03 20 31.4	-0.2
	baz=321						
MSTX	Muleshoe	72.01	59	P	P	03 20 33.1	+0.6
	baz=318						
FITZ	Fitzroy Crossi	72.06	210	P	P	03 20 33.3	+0.7
	comp=Z,8.3nm,1.1s,baz=36,slow=6.0,SNR=3.5						
FITZ	Fitzroy Crossi	72.06	210	*e*P	P	03 20 33.3	+0.7
	comp=Z,19nm,1.4s						
GNI	Garni	72.13	311	LR	LR	03 55 23.5	
	comp=Z,22nm,19.7s,baz=66,slow=38						
MNTX	Cornudas Mount	72.19	62	P	P	03 20 34.5	+1.1
	baz=318						
N39A	Derby Farms, D	72.20	48	P	P	03 20 33.2	-0.2
	baz=321						
K42A	Prairie Point,	72.22	44	P	P	03 20 33.2	-0.2
	baz=322						
L41A	Preston	72.23	46	P	P	03 20 33.6	+0.1
	baz=321						
M40A	Post Highland	72.27	47	P	P	03 20 33.7	-0.1
	baz=321						
P37A	Lathrop	72.28	50	P	P	03 20 33.7	-0.2
	baz=320						
O38A	Galt	72.31	49	P	P	03 20 33.9	-0.1
	baz=320						
CHGQ	Chibougamau	72.39	31	P	P	03 20 33.6	-0.7
	baz=329						
N40A	Mertquake, Sal	72.64	47	P	P	03 20 35.9	-0.1
	baz=321						
P38A	Dawn	72.66	49	P	P	03 20 36.1	0.0
	baz=320						
O40A	La Belle	73.09	48	P	P	03 20 38.9	+0.2
	baz=321						
Q38A	Cooks Store, C	73.12	50	P	P	03 20 38.6	-0.3
	baz=321						
L44A	Lake County Fo	73.34	44	P	P	03 20 39.8	-0.3
	baz=323						
Q39A	Willow Grove F	73.38	49	P	P	03 20 40.4	0.0
	baz=321						
N42A	Yates City	73.42	46	P	P	03 20 40.3	-0.2
	baz=322						
P40A	Paris	73.46	48	P	P	03 20 41.0	+0.1
	baz=321						
P40A	Paris	73.46	48	*e*P	P	03 20 41.4	+0.5
	comp=Z,5.5nm,1.0s						
O41A	Passleys Farm,	73.57	47	P	P	03 20 41.6	+0.1
	baz=322						
R38A	Fenwick Farm,	73.57	50	P	P	03 20 41.0	-0.5
	baz=321						
WMOK	Wichita Mounta	73.64	56	P	P	03 20 42.6	+0.6
	baz=319						
WMOK	Wichita Mounta	73.64	56	*e*P	P	03 20 42.9	+0.9
	comp=Z,4.9nm,1.0s						
WMOK	Wichita Mounta	73.64	56	*e*P	P	03 20 42.9	+0.9
WMOK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
P41A	Barry, Barry	73.83	47	P	P	03 20 43.0	0.0
	baz=322						
Q40A	Laux Farm, Aux	73.86	49	P	P	03 20 43.2	0.0
	baz=321						
M44A	Midewin, Midew	73.91	45	P	P	03 20 43.1	-0.3
	baz=323						
R39A	Chumby, Stover	73.91	50	P	P	03 20 43.2	-0.3
	baz=321						
HDIL	Hopedale	73.98	46	P	P	03 20 43.6	-0.3
	baz=322						
S38A	Stockton	74.00	51	P	P	03 20 43.6	-0.5
	baz=321						
P42A	Winchester	74.24	47	P	P	03 20 45.3	-0.2
	baz=322						
S39A	Bolivar	74.25	50	P	P	03 20 45.3	-0.2
	baz=321						
T38A	Diamond	74.26	51	P	P	03 20 45.3	-0.3
	baz=321,SNR=6.5						
EKA	Eskdalemuir Ar	74.30	348	P	P	03 20 44.5	-1.0
	comp=Z,0.3nm,0.3s,baz=18,slow=5.1,SNR=7.2						
BUKO	Buck Lake	74.31	37	P	P	03 20 45.0	-0.7
	baz=326						
Q41A	Truxton	74.31	48	P	P	03 20 46.0	+0.2
	baz=322						
R40A	Maddies Statio	74.31	49	P	P	03 20 45.6	-0.3
	baz=321						
R40A	Maddies Statio	74.31	49	*e*P	P	03 20 46.0	+0.2
	comp=Z,5.9nm,0.9s						
N44A	Piper City	74.33	45	P	P	03 20 45.7	-0.3
	baz=323						
TUL1	Leonard	74.35	53	P	P	03 20 46.4	+0.3
	baz=320						
S40A	Lebanon	74.73	50	P	P	03 20 47.9	-0.4
	baz=321						
T39A	Clever	74.74	51	P	P	03 20 48.1	-0.2
	baz=321						
R41A	Rosebud	74.75	49	P	P	03 20 48.0	-0.4
	baz=322						
TX31	Lajitas Ar. Si	74.92	63	*e*P	P	03 20 50.4	+0.7
TX31				*e*PcP	PcP	03 21 02.4	-0.9
TX31				*e*PcP	pP	03 21 05.3	-1.4
LTX	Lajitas	74.93	63	*e*P	P	03 20 50.8	+1.1
LTX	Lajitas	74.93	63	*e*P	P	03 20 50.8	+1.1
TXAR	Lajitas Array	74.93	63	P	P	03 20 50.8	+1.1
	comp=Z,2.9nm,0.8s,baz=296,slow=4.3,SNR=37						
O45A	Potomac	74.96	45	P	P	03 20 49.6	0.0
	baz=323						
CCM	Cathedral Cave	75.00	49	P	P	03 20 50.5	+0.6
	baz=322						
R42A	Luebbering	75.05	48	P	P	03 20 50.4	+0.3
	baz=322						
AS31	Alice Springs	75.06	200	*e*P	P	03 20 50.9	+0.7
	comp=Z,0.5nm,0.8s						
ASAR	Alice Springs	75.06	200	P	P	03 20 50.9	+0.7
	comp=Z,0.7nm,0.6s,baz=15,slow=5.2,SNR=5.1						
S41A	Jillco Farms,	75.12	49	P	P	03 20 50.3	-0.2
	baz=322						
U39A	Green Forest	75.18	51	P	P	03 20 50.7	-0.3
	baz=321,SNR=8.9						
Q44A	Meyer Farm, Va	75.42	47	P	P	03 20 52.0	-0.2
	baz=323						
S42A	Caledonia	75.45	49	P	P	03 20 52.4	0.0
	baz=322						
R43A	Red Bud	75.47	48	P	P	03 20 52.4	-0.1
	baz=322						
V39A	Pettigrew	75.51	52	P	P	03 20 52.7	-0.3
	baz=321						
U40A	Yellville	75.52	51	P	P	03 20 52.7	-0.2
	baz=321,SNR=7.1						
T41A	Mountain View	75.53	50	P	P	03 20 52.6	-0.4
	baz=322						
PRU	Pruhonice	75.64	335	*e*P	P	03 20 53.1	-0.2
PRU	Pruhonice	75.64	335	*e*P	P	03 20 53.1	-0.2
P46A	Rosedale	75.70	45	P	P	03 20 53.4	-0.5
	baz=323						
T42A	Van Buren	75.88	49	P	P	03 20 54.4	-0.5
	baz=322						
R44A	Waltonville	75.90	47	P	P	03 20 54.8	-0.2
	baz=323						
W39A	Magazine	75.94	52	P	P	03 20 55.4	+0.1
	baz=321						
S43A	Fulton Ridge,	75.95	48	P	P	03 20 55.2	-0.2
	baz=322						
V40A	Witts Springs	75.96	51	P	P	03 20 55.2	-0.2
	baz=322						
V40A	Witts Springs	75.96	51	*e*P	P	03 20 55.5	0.0
	comp=Z,6.4nm,1.1s						
U41A	Viola	76.00	50	P	P	03 20 55.5	-0.1
	baz=322						
T43A	Greenville	76.23	49	P	P	03 20 57.0	+0.1
	baz=322						
S44A	Carbondale	76.26	48	P	P	03 20 57.0	0.0
	baz=323						
JCT	Junction City	76.28	59	P	P	03 20 58.0	+0.7
	baz=320						
X39A	Fountain Ranch	76.30	53	P	P	03 20 57.9	+0.6
	baz=321,SNR=5.5						
V41A	Mountainview	76.32	51	P	P	03 20 57.1	-0.4
	baz=322						
MIAR	Mount Ida	76.55	52	P	P	03 20 59.2	+0.4
	baz=321						
MIAR	Mount Ida	76.55	52	*e*P	P	03 20 59.5	+0.8
MIAR	Mount Ida	76.55	52	*e*P	P	03 20 59.5	+0.8
T44A	Benton	76.58	48	P	P	03 20 59.0	+0.2
	baz=323						
S45A	Carrier Mills	76.60	47	P	P	03 20 59.2	+0.3
	baz=323						
KHC	Kasperske Hory	76.69	335	*e*P	P	03 20 59.5	+0.2
KHC	Kasperske Hory	76.69	335	*e*P	P	03 20 59.5	+0.2
V42A	Cord	76.69	50	P	P	03 20 59.8	+0.3
	baz=322						
U43A	Rector	76.74	49	P	P	03 21 00.1	+0.3
	baz=322						
W41B	Gary Mavity, V	76.75	51	P	P	03 21 00.2	+0.4
	baz=322						
W41B	Gary Mavity, V	76.75	51	*e*P	P	03 21 00.1	+0.4
	comp=Z,5.2nm,0.9s						
LONY	Lake Ozonia	76.83	34	P	P	03 20 59.9	-0.2
	baz=329						
GEC2	GERESS Array S	76.91	335	*e*P	P	03 21 00.3	-0.4
	comp=Z,1.2nm,0.9s						
GEC2	GERESS Array S	76.91	335	*e*P	P	03 21 00.3	-0.4
GEC2				pmax	pmax		
	comp=Z,1.0nm,0.9s						
GERES	GERESS Array B	76.91	335	P	P	03 21 00.3	-0.4
	comp=Z,0.5nm,0.4s,baz=30,slow=6.3,SNR=6.9						
GERES				LR	LR	03 58 44.7	
	comp=Z,45nm,20.2s,baz=24,slow=39						
X40A	Basin Creek Fa	76.98	52	P	P	03 21 01.4	+0.3
	baz=322						
X40A	Basin Creek Fa	76.98	52	*e*P	P	03 21 01.9	+0.8
	comp=Z,4.2nm,1.1s						
S46A	Don Dixon Farm	77.00	47	P	P	03 21 01.2	0.0
	baz=324						
R47A	Wooly Knot Far	77.08	45	P	P	03 21 01.8	+0.2
	baz=324						
CONA	Conrad Observa	77.13	333	*e*P	P	03 20 59.7	-2.2
	comp=Z,1.3nm,0.6s						
X41A	Kaden, Bauxite	77.14	52	P	P	03 21 02.4	+0.4
	baz=322						
WCI	Wyandotte Cave	77.24	45	P	P	03 21 03.0	+0.5
	baz=324						
WCI	Wyandotte Cave	77.24	45	*e*P	P	03 21 03.3	+0.8
	comp=Z,6.7nm,0.8s						
WCI	Wyandotte Cave	77.24	45	*e*P	P	03 21 03.3	+0.8
WCI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
R48A	Northridge Ran	77.30	45	P	P	03 21 03.4	+0.5
	baz=324						
T46A	Princeton	77.43	47	P	P	03 21 04.2	+0.6
	baz=324						
Y41A	Eaglette Beard	77.57	52	P	P	03 21 04.9	+0.5
	baz=322						
Z40A	Long Farm, Mag	77.64	53	P	P	03 21 05.8	+0.9
	baz=322						
BR101	Keskin Array S	77.65	318	*e*P	P	03 21 05.0	0.0
BRTR	Keskin Array B	77.66	318	P	P	03 21 05.0	0.0
	comp=Z,0.4nm,0.7s,baz=44,slow=4.4,SNR=2.4						
MOA	Molln	77.66	334	P	P	03 21 02.9	-1.9
	comp=Z,0.9nm,0.5s						
N54A	Moraine State	77.79	40	P	P	03 21 05.6	0.0
	baz=327						
S48A	Wiedeman Farm,	77.81	46	P	P	03 21 05.8	+0.1
	baz=324						
T47A	Sharon Grove	77.85	47	P	P	03 21 06.3	+0.3
	baz=324						
NATX	Nacogdoches	78.14	55	P	P	03 21 08.4	+0.8
	baz=321						
WVT	Waverly	78.19	48	P	P	03 21 08.2	+0.3
	baz=324						
U47A	Clarksville	78.20	47	P	P	03 21 08.4	+0.5
	baz=324						
V46A	Holladay	78.31	48	P	P	03 21 08.7	+0.1
	baz=324						
SOKA	Soboth	78.50	333	*e*P	P	03 21 08.2	-1.3
	comp=Z,2.9nm,1.0s						
T49A	Edmonton	78.50	46	P	P	03 21 09.6	0.0
	baz=325						
U48A	Cassie Pea, Po	78.50	47	P	P	03 21 09.1	-0.5
	baz=324						
V47A	Nunnelly	78.58	48	P	P	03 21 10.1	+0.1
	baz=324						
KBA	Koelnbreinsper	78.62	335	*e*P	P	03 21 09.2	-1.0
	comp=Z,6.5nm,0.6s						
OBKA	Obir	78.79	334	*e*P	P	03 21 09.5	-1.6
	comp=Z,2.6nm,0.8s						
241A	Mo Tay, Goldon	78.86	54	P	P	03 21 12.0	+0.4
	baz=322						
U49A	Red Boiling Sp	78.86	46	P	P	03 21 11.2	-0.3
	baz=325						
T50A	Nancy	78.89	45	P	P	03 21 11.9	+0.2
	baz=325						
WTTA	Wattenberg	78.92	336	*e*P	P	03 21 08.2	-3.8
	comp=Z,3.6nm,0.5s						
MYKA	Terra Mystica	78.94	334	P	P	03 21 08.7	-3.2
	comp=Z,0.8nm,0.4s						
RETA	Reutte	78.95	336	*e*P	P	03 21 10.6	-1.3
	comp=Z,2.7nm,1.2s						
MOTA	Moosalm	78.99	336	*e*P	P	03 21 09.2	-3.1
	comp=Z,2.8nm,0.8s						
V48A	Smith Brothers	78.99	47	P	P	03 21 12.1	-0.1
	baz=324						
ABTA	Abfaltersbach	79.16	335	*e*P	P	03 21 12.1	-1.0
	comp=Z,3.0nm,0.8s						
DAVA	Damuels	79.36	337	*e*P	P	03 21 11.6	-2.7
	comp=Z,5.1nm,1.1s						
FETA	Feichten	79.39	336	*e*P	P	03 21 12.5	-1.9
	comp=Z,2.9nm,0.9s						
V49A	McMinnville	79.41	47	P	P	03 21 14.5	-0.1
	baz=325						
W48A	Pulaski	79.42	48	P	P	03 21 14.9	+0.2
	baz=324						
Y46A	Houston	79.48	50	P	P	03 21 15.4	+0.4
	baz=324						
T52A	Hallie	79.67	44	P	P	03 21 17.1	+1.0
	baz=326						
W49A	Belvidere	79.76	47	P	P	03 21 16.7	+0.2
	baz=324						
V50A	Pikevile	79.87	46	P	P	03 21 17.1	0.0
	baz=325						
V51A	Loudon	80.11	46	P	P	03 21 18.3	-0.1
	baz=325						
W50A	Signal Mountai	80.15	47	P	P	03 21 18.7	+0.1
	baz=325						
X49A	Woodville	80.22	48	P	P	03 21 19.1	+0.1
	baz=324						
Z47A	Carrollton	80.42	50	P	P	03 21 20.3	+0.3
	baz=324						
245A	Little AP, Sta	80.42	52	P	P	03 21 21.1	+1.0
	baz=323						
344A	Westbrook Farm	80.45	52	P	P	03 21 21.3	+1.1
	baz=323						
Z48A	Northport	80.53	49	P	P	03 21 20.9	+0.2
	baz=324						
X50B	Fort Payne	80.59	47	P	P	03 21 20.9	0.0
	baz=325						
Y49A	Blount Mountai	80.71	48	P	P	03 21 21.7	+0.1
	baz=324						
BLA	Blacksburg	80.73	42	P	P	03 21 21.8	+0.1
	baz=327						
Y50A	Piedmont	81.01	48	P	P	03 21 23.2	0.0
	baz=325						
LRAL	Lakeview Retre	81.08	49	P	P	03 21 23.7	+0.1
	baz=324						
Z49A	Columbiana	81.19	49	P	P	03 21 24.2	+0.1
	baz=325						
Y51A	Rockmart	81.33	47	P	P	03 21 24.9	0.0
	baz=325						
Z50A	Ashland	81.43	48	P	P	03 21 25.5	0.0
	baz=325,SNR=6.5						
Z50A	Ashland	81.43	48	*e*P	P	03 21 25.9	+0.4
	comp=Z,7.4nm,0.8s						
248A	Dixon Mills	81.47	50	P	P	03 21 25.6	-0.1
	baz=324						
149A	Jones	81.54	49	P	P	03 21 26.4	+0.4
	baz=324						
347A	Saraland	81.62	51	P	P	03 21 27.2	+0.7
	baz=324						
X53A	Estanollee	81.67	46	P	P	03 21 27.1	+0.4
	baz=326						
Z51A	Franklin	81.75	48	P	P	03 21 27.4	+0.3
	baz=325						
249A	Camden	81.88	50	P	P	03 21 28.6	+0.8
	baz=324,SNR=5.2						
150A	Eclectic	81.91	49	P	P	03 21 28.2	+0.2
	baz=325						
Z52A	Williamson	82.22	47	P	P	03 21 29.9	+0.3
	baz=326						
ASF	Jabal al Asfar	82.30	311	P	P	03 21 30.3	+0.1
	comp=Z,2.2nm,0.8s,baz=301,slow=4.3,SNR=3.8						
250A	Grady	82.30	49	P	P	03 21 30.4	+0.4
	baz=325						
151A	Opelika	82.32	48	P	P	03 21 30.3	+0.2
	baz=325						
MMAI	Mount Meron Ar	82.34	313	P	P	03 21 30.5	+0.2
	comp=Z,2.1nm,0.4s,baz=49,slow=5.7,SNR=4.0						
Y54A	Tignall	82.48	45	P	P	03 21 31.5	+0.5
	baz=326,SNR=9.9						
Z53A	Monticello	82.55	46	P	P	03 21 31.5	+0.2
	baz=326						
350A	Dozier	82.72	49	P	P	03 21 33.1	+0.9
	baz=325						
449A	Pace	82.81	50	P	P	03 21 33.3	+0.6
	baz=324						
Z54A	Sparta	82.93	46	P	P	03 21 33.4	+0.1
	baz=326						
252A	Lumpkin	83.04	48	P	P	03 21 34.2	+0.4
	baz=325						
254A	Abbeville	83.78	47	P	P	03 21 38.0	+0.4
	baz=326						
353A	Camilla	83.82	48	P	P	03 21 38.7	+0.8
	baz=326						
TIGA	Tifton	84.05	47	P	P	03 21 39.8	+0.8
	baz=326						
255A	Hazlehurst	84.18	46	P	P	03 21 39.4	-0.3
	baz=326						
IDI	Anoyia	85.11	321	P	P	03 21 42.2	-2.2
	comp=Z,2.2nm,0.6s,baz=37,slow=18,SNR=3.5						
IDI	Anoyia	85.11	321	*e*P	P	03 21 42.2	-2.2
	comp=Z,14nm,1.4s						
555A	McAlpin	85.44	48	P	P	03 21 47.0	+1.0
	baz=326						
ESDC	Sonseca Array	89.65	344	P	P	03 22 05.4	-0.8
	comp=Z,0.8nm,0.7s,baz=358,slow=4.6,SNR=4.0						
KEST	Kesra	90.23	333	P	P	03 22 08.0	-1.1
	comp=Z,1.9nm,0.9s,baz=302,slow=9.5,SNR=3.1						
KEST				LR	LR	04 08 51.8	
	comp=Z,44nm,18.5s,baz=264,slow=40						
KEST	Kesra	90.23	333	*e*P	P	03 22 08.0	-1.1
	comp=Z,3.6nm,1.1s						

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*DDA **05** 03:14:16.9, 40°.85N×43°.53E, h7^{km}, Ml2.7*

*ISCJB **05** 03:14:17.5±0.5, 40°.83N±0°.02×43°.50E±0°.04, h8^{km}±4^{km}, Error ellipse: s-maj=4.6km s-min=3.4km az=17.9*

*CSEM **05** 03:14:17.3±0.2, 40°.83N×43°.50E, h10^{km}, ML2.7, Error ellipse: s-maj=4.7km s-min=3.3km az=131.0*

*TIF **05** 03:14:17.4, 40°.87N×43°.48E, h28^{km}*

*ISK **05** 03:14:17.3, 40°.87N×43°.46E, h24^{km}, ML2.4/2*

ISC 05 03:14:17.2±0.9, **40°.85N**±0°.02×**43°.55E**±0°.02, **h14**^{km}±7^{km}, **n43, σ0^{s}.63**/68, **Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EAK	Akyaka	0.17	166	*i* P	Pg	03 14 21.1	-0.3
EAK	Akyaka	0.17	166	P	Pg	03 14 21.1	-0.3
BGD	Bogdanovka	0.41	5	P	Pb	03 14 26.0	-0.4
BGD				S	Sb	03 14 32.0	-0.7
BGD	Bogdanovka	0.41	5	P	Pb	03 14 26.0	-0.4
BGD				S	Sb	03 14 32.0	-0.7
KARS	Kars	0.42	238	PG	Pg	03 14 25.7	0.0
KARS				SG	Sg	03 14 32.2	+0.8
KARS	Kars	0.42	238	*e*Pg	Pg	03 14 25.7	0.0
KARS				*e*Sg	Sg	03 14 32.2	+0.8
DIGO	Kars	0.46	197	*i* P	Pg	03 14 26.2	-0.1
DIGO				*i* S	Sg	03 14 32.9	+0.4
DIGO	Kars	0.46	197	P	Pg	03 14 26.2	-0.1
DIGO				S	Sg	03 14 32.9	+0.4
AKH	Akhalkalaki	0.56	356	PG	Pb	03 14 28.9	0.0
AKH				SG	Sb	03 14 37.3	+0.5
AKH	Akhalkalaki	0.56	356	P	Pg	03 14 28.1	-0.1
AKH				S	Sb	03 14 36.5	-0.3
AKH	Akhalkalaki	0.56	356	P	Pg	03 14 28.1	-0.1
AKH	Akhalkalaki	0.56	356	*e*Pg	Pb	03 14 28.9	0.0
AKH				S	Sb	03 14 36.5	-0.3
AKH				*e*Sg	Sb	03 14 37.3	+0.5
EPOS	Posof	0.90	317	*i* P	Pb	03 14 34.1	-0.6
EPOS				*i* S	Sb	03 14 46.5	-0.1
EPOS	Posof	0.90	317	P	Pb	03 14 34.1	-0.6
EPOS				S	Sb	03 14 46.5	-0.1
SENK	Senkaya-Erzuru	0.96	253	PG	Pb	03 14 34.7	-1.0
SENK	Senkaya-Erzuru	0.96	253	*e*Pg	Pb	03 14 34.7	-1.0
IGDI	IGDIR	1.06	158	*i* P	Pb	03 14 36.6	-0.7
IGDI				*i* S	Sn	03 14 51.3	-1.0
GNI	Garni	1.15	127	PN	Pg	03 14 39.3	0.0
GNI				SN	Sn	03 14 55.8	+1.3
GNI	Garni	1.15	127	*e*Pn	Pg	03 14 39.3	0.0
GNI				*e*Sn	Sn	03 14 55.8	+1.3
TBLG	Delisi	1.25	45	PN	Pb	03 14 39.7	-0.9
TBLG	Delisi	1.25	45	P	Pg	03 14 41.0	-0.3
TBLG				S	Sg	03 14 58.8	+1.1
TBLG	Delisi	1.25	45	*e*Pn	Pb	03 14 39.7	-0.9
TBLG	Delisi	1.25	45	P	Pg	03 14 41.0	-0.3
TBLG				S	Sg	03 14 58.8	+1.1
ARTV	Artvin	1.27	286	*i* P	Pb	03 14 41.2	+0.2
ARTV	Artvin	1.27	286	P	Pb	03 14 41.2	+0.2
EATA	Eleskirt	1.28	220	*i* P	Pn	03 14 40.6	-0.2
EATA	Eleskirt	1.28	220	P	Pn	03 14 40.7	-0.2
SEAG	Tbilisi Sea	1.31	46	P	Pg	03 14 42.8	+0.4
SEAG				S	Sg	03 14 59.0	-0.5
SEAG	Tbilisi Sea	1.31	46	P	Pg	03 14 42.8	+0.4
SEAG				S	Sg	03 14 59.0	-0.5
DDEM	Demirkent	1.37	272	*i* P	Pn	03 14 42.2	+0.3
DDEM	Demirkent	1.37	272	P	Pn	03 14 42.2	+0.3
DBAD	Bademkaya	1.42	277	*i* P	Pn	03 14 43.2	+0.6
DBAD	Bademkaya	1.42	277	P	Pn	03 14 43.2	+0.6
DGRG	David-gareji	1.50	66	P	Pg	03 14 46.3	+0.3
DGRG				S	Sg	03 15 07.0	+1.5
DGRG	David-gareji	1.50	66	P	Pg	03 14 46.1	+0.1
DGRG				S	Sg	03 15 07.0	+1.5
DBOC	Borcka	1.51	290	*i* P	Pn	03 14 44.1	+0.3

DBOC	Borcka	1.51	290	P	Pn	03 14 44.1	+0.3
DUS	Dusheti	1.51	35	P	Pg	03 14 45.1	-1.1
DUS				S	Sg	03 15 06.1	+0.3
DUS	Dusheti	1.51	35	P	Pg	03 14 45.1	-1.1
DUS				S	Sg	03 15 06.1	+0.3
BCA	Borcka	1.57	293	PN	Pn	03 14 43.9	-0.8
BCA	Borcka	1.57	293	*e*Pn	Pn	03 14 43.9	-0.8
GUDG	Gudauri	1.75	23	P	Pg	03 14 50.9	0.0
GUDG				S	Sg	03 15 13.8	+0.1
GUDG	Gudauri	1.75	23	P	Pg	03 14 50.9	0.0
GUDG				S	Sg	03 15 13.8	+0.1

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*ISCJB **05** 03:16:39.5±0.4, 3°.26S±0°.05×152°.32E±0°.09, h33^{km}, mb4.2/22, MS3.4/10, Error ellipse: s-maj=13.9km s-min=6.0km az=21.4*

*NEIC **05** 03:16:43.5±1.1, 3°.50S×152°.40E, h61^{km}±10^{km}, mb4.6/12, Error ellipse: s-maj=13.2km s-min=7.7km az=127.0*

*IDC **05** 03:16:47.0±4.6, 3°.53S×152°.43E, h93^{km}±42^{km}, mb3.8/11, mb1 4.1/12, mb1mx3.7/50, mbtmp4.2/12, MS3.4/11, Ms1 3.4/11, ms1mx3.1/40, Error ellipse: s-maj=37.2km s-min=19.6km az=122.0*

ISC 05 03:16:41.1±0.6**, 3°.35S**±0°.08×**152°.4E**±0°.1**, h35**^{km}**, n48, σ1^{s}.15**/40**, mb4.4**/22**, MS3.4**/10**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	0.87	194	*e*Pn	Pn	03 16 58.3	+1.5
RABL				*e*Sn	Sn	03 17 08.8	+0.5
PMG	Port Moresby	7.95	220	P	Pn	03 18 38.9	+4.7
	2.1nm,0.3s,baz=47,slow=10,SNR=8.4						
PMG	Port Moresby	7.95	220	*e*Pn	Pn	03 18 38.3	+4.1
HNR	Honiara	9.65	129	LR	LR	03 23 02.3	
	comp=Z,266nm,21.5s,baz=331,slow=40						
PATS	Pohnpei	11.72	30	*e*Pn	Pn	03 19 25.0	-0.9
PATS				*e*Sn	Sn	03 21 27.2	-8.4
FAKI	Fak Fak	20.11	271	*e*P	P	03 21 12.4	+0.3
	66nm,1.3s						
WRAB	Tennant Creek	24.11	225	*e*P	P	03 21 53.0	-0.8
	19nm,0.9s						
WR1	Warramunga Arr	24.12	225	*e*P	P	03 21 53.3	-0.6
WRA	Warramunga Arr	24.12	225	P	P	03 21 53.3	-0.6
	19nm,1.1s,baz=48,slow=9.9,SNR=43						
AS31	Alice Springs	26.96	220	*e*P	P	03 22 18.5	-1.1
	1.5nm,1.2s						
ASAR	Alice Springs	26.96	220	P	P	03 22 18.5	-1.1
	0.6nm,0.4s,baz=52,slow=8.9,SNR=10						
DAV	Davao City (W)	28.68	291	LR	LR	03 33 49.0	
	comp=Z,81nm,19.4s,baz=158,slow=36						
FITZ	Fitzroy Crossi	30.02	239	P	P	03 22 47.1	+0.3
	7.4nm,1.2s,baz=48,slow=12,SNR=4.0						
FITZ				LR	LR	03 35 11.8	
	comp=Z,66nm,19.3s,baz=52,slow=37						
FITZ	Fitzroy Crossi	30.02	239	*e*P	P	03 22 47.1	+0.3
	18nm,1.4s						
STKA	Stephens Creek	30.14	198	LR	LR	03 34 28.0	
	comp=Z,82nm,20.3s,baz=24,slow=35						
BBOO	Buckleboo	33.06	206	*e*P	P	03 23 11.2	-2.3
	8.9nm,1.5s						
FORT	Forrest	35.66	217	*e*P	P	03 23 33.9	-2.1
	13nm,1.0s						
JNU	Nakatsue	41.59	332	*e*P	P	03 24 24.4	-1.4
	14nm,1.2s						
MJAR	Matsushiro Arr	41.83	343	LR	LR	03 40 16.9	
	comp=Z,28nm,22.0s,baz=325,slow=34						
NWAO	Narrogin (SRO)	44.12	224	LR	LR	03 43 13.5	
	comp=Z,68nm,19.0s,baz=294,slow=36						
KLR	Kul'dur	55.34	344	P	P	03 26 12.1	+0.7
	0.1nm,0.5s,baz=156,slow=7.7,SNR=3.0						
PETK	Petropavlovsk-	56.42	4	P	P	03 26 20.1	+1.1
	1.4nm,0.5s,baz=166,slow=13						
PEA1	Petropavlovsk-	56.43	4	*e*P	P	03 26 20.1	+1.0
CM31	Chiang Mai Arr	56.89	294	*e*P	P	03 26 24.1	+1.1
CMAR	Chiang Mai Arr	56.89	294	P	P	03 26 24.1	+1.1
	1.1nm,0.3s,baz=108,slow=5.8,SNR=2.7						
CMAR				LR	LR	03 49 38.0	
	comp=Z,18nm,19.6s,baz=120,slow=35						
SONA0	Songino Array	64.88	328	*e*P	P	03 27 16.7	-0.2
SONM	Songino Array	64.88	328	P	P	03 27 16.7	-0.2
	0.7nm,0.5s,baz=138,slow=6.1,SNR=3.6						
SONM				LR	LR	03 55 42.3	
	comp=Z,21nm,19.4s,baz=104,slow=36						
MK32	Makanchi Array	78.96	319	*e*P	P	03 28 41.9	+0.6
MKAR	Makanchi Array	78.96	319	P	P	03 28 41.9	+0.6
	0.2nm,0.6s,baz=122,slow=4.4,SNR=2.5						
MLY	Manley	79.69	21	*e*P	P	03 28 45.3	+0.3
	5.4nm,0.7s						
MCK	McKinley	79.69	23	*e*P	P	03 28 46.5	+1.6
	9.3nm,1.0s						
CCB	Clear Creek Bu	80.57	22	*e*P	P	03 28 49.8	+0.1
	3.8nm,0.8s						
ILAR	Eielson Array	80.98	22	P	P	03 28 51.6	-0.2
	3.2nm,0.7s,baz=244,slow=5.8,SNR=37						
ILB	Eielson Array	80.98	22	*e*P	P	03 28 51.7	-0.2
IL1	Eielson Array	80.98	22	*e*P	P	03 28 50.5	-1.3
EGAK	Eagle	83.20	23	*e*P	P	03 29 05.0	+1.6
	2.8nm,1.1s						
INK	Inuvik	87.26	21	P	P	03 29 24.1	+0.4
	2.4nm,1.0s,baz=253,slow=2.8,SNR=3.2						
INK	Inuvik	87.26	21	*e*P	P	03 29 24.1	+0.4
	5.3nm,1.2s						
BVAR	Borovoye Array	87.83	323	P	P	03 29 26.7	-0.1
	0.6nm,0.5s,baz=138,slow=4.1,SNR=4.3						
YBH	Yreka Blue Hor	88.40	48	LR	LR	04 03 16.3	
	comp=Z,26nm,19.7s,baz=211,slow=32						
H04A	Detroit Lake	89.08	45	*e*P	P	03 29 31.1	-1.9
	6.0nm,1.1s						
SBI	Santa Barbara	90.65	57	*e*P	P	03 29 40.5	+0.1
NVAR	Mina Array Bea	91.52	52	LR	LR	04 07 19.5	
	comp=Z,25nm,18.1s,baz=112,slow=33						
VPEM	Volcano Peak E	91.78	54	*e*P	P	03 29 49.1	+3.3
PD31	Pinedale Array	98.18	47	*e*P	P	03 30 14.9	-0.2
PDAR	Pinedale Array	98.18	47	P	P	03 30 14.9	-0.2
	0.1nm,0.4s,baz=276,slow=4.4,SNR=2.3						
PDAR				LR	LR	04 10 44.1	
	comp=Z,20nm,18.7s,baz=227,slow=33						
TORD	Torodi Ar. Bea	149.43	290	PKPab	PKPab	03 36 31.4	-1.1
	baz=49,slow=3.1						
TOA1	Torodi Ar. Sit	149.44	290	*e*PKPbc	PKPab	03 36 31.4	-1.1

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*NNC **05** 03:18:30.1±5.5, 38°.79N×71°.05E, h0^{km}, mb4.6, mpv4.4, Error ellipse: s-maj=48.1km s-min=29.2km az=168.0*

*IDC **05** 03:18:31.2±0.9, 38°.97N×71°.71E, h0^{km}, mb3.7/11, mb1 3.9/17, mb1mx3.7/69, mbtmp3.8/17, ML3.6/6, MS2.8/1, Ms1 2.8/1, ms1mx2.2/57, Error ellipse: s-maj=16.0km s-min=11.3km az=141.0*

*KRNET **05** 03:18:32.0±0.1, 39°.13N×71°.70E, h10^{km}, mb4.3*

ISC 05 03:18:33.0±0.7**, 39°.30N**±0°.05×**72°.01E**±0°.03**, h10**^{km}**, n49, σ2^{s}.18**/65**, mb3.7**/12**, 23C-12D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	0.24	318	⇑*i*P	Pb	03 18 39.3	+1.2
	baz=13						
DRK				⇑*i*S	Sb	03 18 44.5	+2.9
	baz=13						
BTK	Batken	1.19	310	⇑*i*P	Pb	03 18 54.2	-1.5
	baz=24						
BTK				⇑*i*S	Sb	03 19 09.9	-1.3
	baz=24						
SFK	Sufi-Kurgan	1.36	58	⇑*i*P	Pg	03 19 02.5	+3.5
	baz=57						
SFK				⇑*i*S	Sg	03 19 26.0	+9.3
	baz=57						
ARSB	Arslanbob	2.16	20	⇑*i*P	Pg	03 19 14.7	+0.4
	baz=24						
ARSB				⇑*i*S	Sg	03 19 45.4	+3.1
	baz=24						
TOKL	Toktogul	2.72	14	⇓*i*P	Pb	03 19 22.0	+0.2
	baz=17						
TOKL				⇓*i*S	Sg	03 19 58.1	-2.2
	baz=17						
TAS	Tashkent	2.91	315	⇑*i*P	Pn	03 19 20.6	+1.3
	baz=21						
TAS				⇑*i*S	Sn	03 19 55.6	+1.3
	baz=21						
KSH	Kashi	3.08	85	Pn	Pb	03 19 26.2	-1.7
KSH				Sn	Sb	03 20 01.6	-4.0
KSH				smax	smax		
	comp=N,350nm,0.6s						
KSH				smax	smax		
	comp=E,280nm,0.6s						
AML	Almayashu	3.11	24	P	Pg	03 19 29.6	-2.9
	SNR=57						
AML	Almayashu	3.11	24	⇓*i*P	Pb	03 19 28.7	+0.2
	baz=26						
AML				⇓*i*S	Sg	03 20 09.9	-2.9
	baz=26						
MNAS	Manas	3.21	7	⇑*i*P	Pb	03 19 28.4	-1.7
	baz=10.0						
MNAS				⇑*i*S	Sb	03 20 09.4	+0.1
	baz=10.0						
UCH	Uchtor	3.49	32	P	Pb	03 19 35.2	+0.1
	SNR=40						
UCH	Uchtor	3.49	32	⇓*e*P	Pb	03 19 34.3	-0.8
	baz=34						
UCH				⇓*i*S	Sb	03 20 19.0	+1.3
	baz=34						
EKS2	Erkin-Say	3.62	21	P	Pb	03 19 36.7	-0.4
	SNR=21						
EKS2	Erkin-Say	3.62	21	⇓*i*P	Pb	03 19 35.0	-2.1
	baz=23						
EKS2				⇓*i*S	Sb	03 20 21.4	+0.3
	baz=23						
KZA	Kyzart	3.71	41	P	Pb	03 19 37.9	-0.9
	SNR=22						
KZA	Kyzart	3.71	41	⇑*i*P	Pb	03 19 37.4	-1.5
	baz=41						
KZA				⇑*i*S	Sb	03 20 24.5	+0.4
	baz=41						
AAK	Ala-Archa	3.83	29	Pn	Pb	03 19 40.2	-0.6
	comp=E,21nm,0.3s,baz=180,slow=7.4,SNR=56						
AAK				Sn	Sg	03 20 34.4	-1.6
	comp=E,3.3nm,0.3s,baz=306,slow=14,SNR=3.6						
AAK	Ala-Archa	3.83	29	⇓Pn	Pb	03 19 40.3	-0.5
	comp=E,63nm,0.5s						
AAK				⇓Sn	Sg	03 20 39.9	+3.9
	comp=E,67nm,0.6s						
AAK	Ala-Archa	3.83	29	P	Pb	03 19 40.0	-0.7
	SNR=44						
AAK	Ala-Archa	3.83	29	⇑*i*P	Pb	03 19 38.1	-2.6
	baz=30						
AAK				⇑*i*S	Sb	03 20 27.2	0.0
	baz=30						
KK31	Karatay Array	3.97	344	⇑Pn	Pb	03 19 39.0	-4.0
	comp=E,11nm,0.3s,baz=172,slow=12,SNR=66						
KK31				⇑Sn	Sb	03 20 29.0	-2.0
	comp=E,53nm,0.6s,baz=168,slow=21,SNR=6.3						
KK31				⇑Lg	Lg	03 20 41.5	
	comp=E,100nm,0.7s,baz=172,slow=33,SNR=9.8						
KBK	Karagaybulak	4.03	33	P	Pb	03 19 43.4	-0.6
	SNR=34						
KBK	Karagaybulak	4.03	33	⇓*i*P	Pb	03 19 41.1	-3.0
	baz=34						
KBK				⇓*i*S	Sb	03 20 30.8	-2.1
	baz=34						
CHMS	Chumysh	4.24	28	P	Pb	03 19 45.2	-2.4
	SNR=77						
ULHL	Ulahol	4.36	46	P	Pb	03 19 46.3	-3.5
	SNR=14						
USP	Ospenovka	4.39	25	P	Pb	03 19 46.9	-3.2
	SNR=29						
TKM2	Tokmak 2	4.52	36	⇑Pn	Pb	03 19 49.0	-3.6
	comp=E,22nm,0.4s						
TKM2				⇑Sn	Sg	03 20 55.5	-2.6
	comp=E,32nm,0.8s						
TKM2	Tokmak 2	4.52	36	P	Pb	03 19 50.0	-2.5
	SNR=13						
MKAR	Makanchi Array	10.61	42	Pn	Pn	03 21 11.6	+6.6
	comp=E,0.2nm,0.3s,baz=240,slow=14,SNR=6.9						
MKAR				Sn	Sn	03 23 22.1	+18
	baz=218,slow=23,SNR=1.9						
KURBB	Kurchatov Arra	12.22	20	Pn	Pn	03 21 29.8	+2.8
	comp=E,0.1nm,0.3s,baz=213,slow=12,SNR=9.3						
KURBB				Lg	Lg	03 25 10.8	
	comp=E,0.1nm,0.3s,baz=206,slow=29,SNR=6.3						
AB31	Akbulak array	13.17	323	P	Pn	03 21 39.5	-0.5
	comp=E,2.2nm,0.5s,baz=137,slow=12,SNR=14						
AB31				⇑S	Sn	03 24 01.3	-5.0
	comp=E,0.9nm,0.3s,baz=127,slow=27,SNR=4.5						
BVAR	Borovoye Array	13.78	356	Pn	Pn	03 21 50.6	+2.4
	comp=E,0.2nm,0.3s,baz=206,slow=9.6,SNR=3.2						
BVAR				Sn	S	03 24 34.0	-10
	comp=E,0.2nm,0.3s,baz=157,slow=20,SNR=2.6						
BVAR				Lg	Lg	03 25 58.4	
	baz=166,slow=25,SNR=2.4						
AKTO	Aktyubinsk	14.88	323	Pn	Pn	03 22 02.5	-0.8
	comp=E,0.3nm,0.3s,baz=122,slow=13,SNR=5.3						
AKTO				Sn	Sn	03 24 46.0	-2.1
	comp=E,0.3nm,0.3s,baz=46,slow=18,SNR=4.3						
AKTO	Aktyubinsk	14.88	323	⇑P	Pn	03 22 04.6	+1.3
	comp=E,6.2nm,0.8s						
ZALV	Zalesovo Beam	17.05	27	P	P	03 22 36.5	+3.4
	comp=E,1.2nm,0.3s,baz=216,slow=12,SNR=14						
ARU	Arti	19.31	337	LR	LR	03 31 21.7	
	comp=E,27nm,18.6s,baz=147,slow=40						
GNI	Garni	20.96	281	P	Pn	03 23 17.1	-1.7
	comp=E,2.4nm,0.4s,baz=70,slow=15,SNR=2.4						
KVAR	Kislovodsk Arr	22.34	292	P	P	03 23 31.3	+0.3
	comp=E,3.2nm,0.4s,baz=139,slow=9.3,SNR=2.7						
SONM	Songino Array	26.16	60	P	P	03 24 11.8	+4.3
	comp=E,0.6nm,0.7s,baz=265,slow=9.7,SNR=2.8						
BRTR	Keskin Array B	29.46	283	P	P	03 24 35.0	-2.1
	comp=E,1.1nm,1.2s,baz=85,slow=3.6,SNR=2.9						
FINES	FINESS Array B	35.66	324	P	P	03 25 31.1	+0.2
	comp=E,0.4nm,0.4s,baz=117,slow=10.0,SNR=5.8						
ARCES	ARCESS Array B	38.89	336	P	P	03 25 59.1	+0.8
	comp=E,3.4nm,0.9s,baz=94,slow=7.7,SNR=3.6						
HFS	Hagfors	41.40	320	P	P	03 26 18.9	-0.2
	comp=E,1.7nm,0.4s,baz=98,slow=10,SNR=22						
GERES	GERESS Array B	42.02	303	P	P	03 26 24.8	+0.3
	comp=E,0.4nm,0.5s,baz=63,slow=8.1,SNR=4.9						
NB2	NORSAR Subarra	42.66	321	P	P	03 26 28.7	-0.8
	comp=Z,0.2nm,0.4s,baz=108,slow=7.9						
EKA	Eskdalemuir Ar	50.86	315	P	P	03 27 33.3	-0.4
	comp=Z,0.7nm,0.6s,baz=80,slow=8.7,SNR=3.7						
TORD	Torodi Ar. Bea	66.60	268	P	P	03 29 21.5	-2.2
	comp=Z,0.4nm,0.7s,baz=55,slow=5.5						
WRA	Warramunga Arr	82.81	123	P	P	03 30 57.3	-0.3
	comp=Z,0.3nm,0.7s,baz=326,slow=5.9,SNR=2.9						
ASAR	Alice Springs	85.22	126	P	P	03 31 10.4	+0.6
	comp=Z,0.2nm,0.3s,baz=332,slow=7.5,SNR=2.8						

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*SJA **05** 04:02:35.5±0.5, 28°.57S×69°.47W, h135^{km}±3^{km}, ML4.3, MW4.4*

*ISCJB **05** 04:02:36.5±0.9, 28°.59S±0°.04×69°.48W±0°.06, h125^{km}±10^{km}, Error ellipse: s-maj=8.1km s-min=6.0km az=178.0*

*GUC **05** 04:02:38.8±0.5, 28°.67S×69°.54W, h75^{km}±8^{km}, ML4.3*

ISC 05 04:02:36.4±1.6**, 28°.59S**±0°.04×**69°.46W**±0°.04**, h129**^{km}±13^{km}**, n15, σ1^{s}.19**/26**, 6C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VCA	Vinchina	1.11	98	*i* P	Pn	04 03 01.1	+0.7
VCA				*i* S	Sn	04 03 19.6	+0.9
VCA				IAML		04 03 20.8	
	comp=Z,9µm,0.2s						
VCA	Vinchina	1.11	98	⇓*i*P	Pn	04 03 01.1	+0.7
VCA				*i* S	Sn	04 03 18.1	-0.5
VCA				IAML		04 03 19.3	
	comp=E,24µm,0.3s						
LCO	Las Campanas	1.17	249	*i* P	Pn	04 03 01.5	+0.3
LCO				*i* S	Sn	04 03 20.6	+0.6
LCO	Las Campanas	1.17	249	⇑*i*P	Pn	04 03 01.5	+0.3
LCO				*i* S	Sn	04 03 17.9	-2.1
LCO				IAML		04 03 21.3	
	comp=E,8µm,0.3s						
GO03	Copiap	1.21	325	⇑*i*P	Pn	04 03 02.0	+0.6
GO03				*i* S	Sn	04 03 18.9	-1.4
GO03				IAML		04 03 21.4	
	comp=N,5µm,0.3s						
ACDV	Cuesta del Vie	1.60	170	*i* P	Pn	04 03 06.6	+0.8
ACDV				*i* S	Sn	04 03 29.5	+1.2
TLL	Tololo Astrono	1.97	216	⇑*i*P	Pn	04 03 10.4	+0.3
TLL				*i* S	Sn	04 03 34.7	-1.3
TLL				IAML		04 03 38.8	
	comp=E,2µm,0.5s						
GO04	Tololo Observa	1.97	216	⇑*i*P	Pn	04 03 10.4	+0.3
GO04				*i* S	Sn	04 03 34.6	-1.4
GO04				IAML		04 03 37.4	
	comp=E,4µm,0.5s						
AMOG	MOGNA	2.49	161	*i* P	Pn	04 03 17.3	+0.8
APLL	PUNTA DE LOS L	3.12	126	*i* P	Pn	04 03 24.8	+0.2
APLL				IAML		04 04 00.4	
	comp=Z,392nm,0.5s						
RTLS	Leoncito	3.20	178	*i* P	Pn	04 03 26.9	+1.0
RTLS				IAML		04 04 08.9	
	comp=Z,458nm,0.3s						
CYA	Choya	3.22	88	*i* P	Pn	04 03 26.1	+0.2
CYA	Choya	3.22	88	⇑*i*P	Pn	04 03 26.1	+0.2
CYA				*i* S	Sn	04 04 00.7	-3.4
CYA				IAML		04 04 02.9	
	comp=E,665nm,0.3s						
RTCV	Cerro Valdivia	3.36	167	*i* P	Pn	04 03 28.3	+0.6
RTCV				*i* S	Sn	04 04 07.4	0.0
GO02	Mina Guanaco	3.41	358	⇑*i*P	Pn	04 03 30.4	+1.6
GO02				*i* S	Sn	04 04 09.0	-0.2

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*ISCJB **05** 04:03:22.8±1.0, 10°.34S±0°.09×161°.7E±0°.1, h61^{km}, mb3.9/6, Error ellipse: s-maj=18.5km s-min=8.0km az=141.6*

*IDC **05** 04:03:27.1±2.4, 10°.36S×161°.48E, h86^{km}±18^{km}, mb3.6/6, mb1 3.8/7, mb1mx3.5/52, mbtmp4.0/7, Error ellipse: s-maj=27.1km s-min=16.7km az=66.0*

ISC 05 04:03:24.6±1.0**, 10°.3S**±0°.1×**161°.6E**±0°.1**, h61**^{km}**, n12, σ1^{s}.62**/11**, mb3.7**/6**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.87	297	P	Pn	04 03 55.4	+1.0
	380nm,0.3s,baz=152,slow=7.0,SNR=39						
HNR				S	Sn	04 04 18.5	+1.5
	678nm,0.3s,baz=353,slow=23,SNR=8.4						
DZM	Mont Dzumac	12.59	159	P	Pn	04 06 23.1	+2.0
	1.8nm,0.3s,baz=340,slow=8.1,SNR=13						
DZM				S	Sn	04 08 38.8	-1.0
	0.5nm,0.3s,baz=252,slow=19,SNR=3.9						
CTA	Charters Tower	17.74	235	P	Pn	04 07 29.0	+1.4
	0.2nm,0.3s,baz=68,slow=16,SNR=1.9						
STKA	Stephens Creek	28.38	218	P	P	04 09 12.8	-0.5
	0.9nm,0.7s,baz=34,slow=15,SNR=2.2						
ASAR	Alice Springs	29.60	240	P	P	04 09 23.9	-0.3
	1.6nm,1.1s,baz=62,slow=9.4,SNR=4.8						
H11N1	WAKE ISLAND Hy	30.26	10	T	T	04 39 50.1	
	baz=193,slow=76,SNR=6.0						
H11N3	WAKE ISLAND Hy	30.26	10	T	T	04 39 48.5	
	baz=193,slow=76,SNR=8.7						
H11N2	WAKE ISLAND Hy	30.27	10	T	T	04 39 49.3	
	baz=193,slow=76,SNR=78						
FITZ	Fitzroy Crossi	35.70	253	P	P	04 10 15.3	-2.2
	2.5nm,0.5s,baz=63,slow=11,SNR=8.6						
SONM	Songino Array	75.71	325	P	P	04 15 02.5	-1.2
	0.3nm,0.3s,baz=144,slow=6.4,SNR=3.1						
ILAR	Eielson Array	84.12	20	P	P	04 15 50.0	+1.4
	0.3nm,0.4s,baz=241,slow=5.0,SNR=8.6						
MKAR	Makanchi Array	90.22	318	P	P	04 16 17.2	-1.5
	0.3nm,0.3s,baz=104,slow=6.1,SNR=4.1						

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*ISCJB **05** 04:04:05.2±1.1, 3°.4S±0°.1×152°.2E±0°.2, h100^{km}, mb3.8/12, Error ellipse: s-maj=38.1km s-min=11.9km az=22.8*

*IDC **05** 04:04:07.5±4.5, 3°.49S×152°.22E, h112^{km}±40^{km}, mb3.7/11, mb1 3.9/12, mb1mx3.6/50, mbtmp4.1/12, MS3.4/14, Ms1 3.4/14, ms1mx3.2/38, Error ellipse: s-maj=41.8km s-min=19.1km az=108.0*

ISC 05 04:04:06.9±1.3**, 3°.4S**±0°.2×**152°.2E**±0°.3**, h100**^{km}**, n30, σ0^{s}.98**/14**, mb3.9**/12**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	7.79	220	P	Pn	04 05 57.9	+0.3
	3.7nm,0.3s,baz=37,slow=5.2,SNR=6.4						
PMG				LR	LR	04 09 08.2	
	comp=Z,484nm,19.8s,baz=73,slow=39						
JAY	Jayapura	11.50	274	LR	LR	04 10 35.0	
	comp=Z,503nm,21.0s,baz=317,slow=34						
GUMO	Guam	18.37	337	LR	LR	04 15 52.6	
	comp=Z,108nm,19.7s,baz=105,slow=38						
DZM	Mont Dzumac	23.16	144	LR	LR	04 17 26.1	
	comp=Z,218nm,19.6s,baz=346,slow=35						
WRA	Warramunga Arr	23.96	225	P	P	04 09 10.8	-1.3
	3.2nm,0.6s,baz=53,slow=11,SNR=36						
H11S3	WAKE ISLAND Hy	26.02	33	T	T	04 36 42.5	
	baz=211,slow=76,SNR=41						
H11S2	WAKE ISLAND Hy	26.02	33	T	T	04 36 43.0	
	baz=211,slow=76,SNR=47						
H11S1	WAKE ISLAND Hy	26.04	33	T	T	04 36 44.0	
	baz=211,slow=76,SNR=43						
ASAR	Alice Springs	26.81	220	P	P	04 09 37.3	-0.7
	0.7nm,0.5s,baz=58,slow=8.2,SNR=8.1						
H11N1	WAKE ISLAND Hy	27.13	32	T	T	04 38 28.6	
	baz=213						
H11N3	WAKE ISLAND Hy	27.14	32	T	T	04 38 44.3	
	baz=213						
H11N2	WAKE ISLAND Hy	27.15	32	T	T	04 38 51.2	
	baz=213						
STKA	Stephens Creek	30.04	198	LR	LR	04 22 16.5	
	comp=Z,110nm,19.6s,baz=25,slow=36						
AFI	Afiamalu	37.06	109	LR	LR	04 24 38.2	
	comp=Z,58nm,18.3s,baz=324,slow=33						
JNU	Nakatsue	41.54	333	P	P	04 11 43.6	-1.1
	4.3nm,0.4s,baz=232,slow=5.8,SNR=6.0						
JNU				LR	LR	04 24 53.9	
	comp=Z,20nm,22.0s,baz=121,slow=30						
MJAR	Matsushiro Arr	41.82	343	LR	LR	04 27 57.1	
	comp=Z,47nm,20.4s,baz=200,slow=34						
KSRS	Korea Array	46.48	333	P	P	04 12 24.4	+0.3
	0.7nm,0.5s,baz=153,slow=8.4,SNR=4.3						
KSRS				LR	LR	04 30 39.7	
	comp=Z,43nm,18.2s,baz=149,slow=34						
KLR	Kul'dur	55.33	344	P	P	04 13 29.0	-1.2
	0.1nm,0.5s,baz=146,slow=5.9,SNR=6.0						
PETK	Petropavlovsk-	56.48	4	P	P	04 13 38.9	+0.5
	2.1nm,0.5s,baz=145,slow=4.7						
PETK				LR	LR	04 33 59.7	
	comp=Z,29nm,21.0s,baz=180,slow=32						
CMAR	Chiang Mai Arr	56.74	295	LR	LR	04 36 46.1	
	comp=Z,23nm,20.5s,baz=115,slow=34						
PPT	Papeete	58.74	108	LR	LR	04 36 16.9	
	comp=Z,25nm,18.3s,baz=320,slow=33						
SONM	Songino Array	64.82	328	P	P	04 14 36.2	+1.0
	0.9nm,0.5s,baz=144,slow=5.6,SNR=5.0						
MKAR	Makanchi Array	78.87	319	P	P	04 16 00.1	+0.8
	0.4nm,0.7s,baz=128,slow=2.0,SNR=4.2						
ZALV	Zalesovo Beam	79.65	326	LR	LR	04 50 46.2	
	comp=Z,24nm,21.8s,baz=72,slow=35						
ILAR	Eielson Array	81.09	22	P	P	04 16 10.6	-0.3
	4.4nm,0.7s,baz=247,slow=5.7,SNR=43						
KURBB	Kurchatov Arra	82.32	322	P	P	04 16 17.7	+0.2
	0.1nm,0.4s,baz=101,slow=4.9,SNR=3.4						
BVAR	Borovoye Array	87.76	323	P	P	04 16 45.2	+0.5
	0.8nm,0.5s,baz=100,slow=4.9,SNR=5.1						
YKA	Yellowknife Ar	94.47	28	P	P	04 17 15.1	-0.5
	0.8nm,0.6s,baz=274,slow=4.6,SNR=5.8						
AKTO	Aktyubinsk	95.26	320	LR	LR	05 00 20.2	
	comp=Z,18nm,21.5s,baz=111,slow=35						
TORD	Torodi Ar. Bea	149.27	290	PKPbc	PKPdf	04 23 42.4	+1.7
	baz=37,slow=4.1						

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*ISCJB **05** 04:06:42.5±0.3, 3°.30S±0°.05×152°.28E±0°.08, h33^{km}, mb4.2/20, MS3.2/1, Error ellipse: s-maj=11.4km s-min=6.8km az=13.7*

*IDC **05** 04:06:46.1±10.0, 3°.46S×152°.32E, h60^{km}±96^{km}, mb3.9/9, mb1 4.1/9, mb1mx3.7/49, mbtmp4.1/9, MS3.2/1, Ms1 3.2/1, ms1mx2.6/43, Error ellipse: s-maj=49.9km s-min=22.9km az=101.0*

*NEIC **05** 04:06:46.2±1.4, 3°.43S×152°.25E, h57^{km}±13^{km}, mb4.5/9, Error ellipse: s-maj=13.2km s-min=11.7km az=96.0*

ISC 05 04:06:44.4±0.6**, 3°.33S**±0°.07×**152°.3E**±0°.1**, h35**^{km}**, n40, σ1^{s}.23**/42**, mb4.4**/20**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	0.86	190	*e*Pn	Pn	04 07 01.5	+1.4
RABL				*e*Sn	Sn	04 07 11.6	+0.1
MANU	Manus Island	5.10	284	*e*Pn	Pn	04 07 59.4	+1.0
WRAB	Tennant Creek	24.07	225	*e*P	P	04 11 56.1	-0.6
	9.8nm,0.9s						
WR1	Warramunga Arr	24.08	225	*e*P	P	04 11 56.0	-0.8
WRA	Warramunga Arr	24.08	225	P	P	04 11 56.0	-0.9
	8.9nm,0.8s,baz=48,slow=9.8,SNR=15						
AS31	Alice Springs	26.93	220	*e*P	P	04 12 20.7	-1.9
	0.9nm,0.9s						
ASAR	Alice Springs	26.93	220	P	P	04 12 20.7	-1.9
	0.9nm,0.5s,baz=50,slow=9.1,SNR=6.3						
RAO	Raoul Island	38.25	135	*e*P	P	04 14 00.3	-1.0
	524nm,1.1s						
JNU	Nakatsue	41.55	332	P	P	04 14 28.1	-0.6
	7.9nm,0.7s,baz=160,slow=3.3,SNR=4.2						

JNU	Nakatsue	41.55	332	eP	P	04 14 28.1	-0.6
	19nm,1.3s						
KSRS	Korea Array	46.48	333	P	P	04 15 08.1	-0.1
	1.1nm,0.8s,baz=141,slow=7.9,SNR=5.2						
KS15	Wonju Array Si	46.49	333	eP	P	04 15 08.1	-0.2
KSAR	Wonju Array Be	46.49	333	P	P	04 15 08.1	-0.2
PSI	Prapat	53.71	276	LR	LR	04 39 33.3	
	comp=Z,21nm,20.7s,baz=90,slow=37						
KLR	Kul'dur	55.31	344	P	P	04 16 13.5	-0.9
	0.1nm,0.7s,baz=162,slow=7.3,SNR=4.2						
SONA0	Songino Array	64.83	328	eP	P	04 17 20.6	+0.7
SONM	Songino Array	64.83	328	P	P	04 17 20.6	+0.7
	0.7nm,0.6s,baz=142,slow=4.7,SNR=4.0						
MK32	Makanchi Array	78.91	319	eP	P	04 18 44.2	-0.1
MKAR	Makanchi Array	78.91	319	P	P	04 18 44.2	-0.1
	0.4nm,0.6s,baz=103,slow=6.7,SNR=3.7						
MLY	Manley	79.70	21	eP	P	04 18 49.2	+0.9
	6.8nm,0.6s						
MCK	McKinley	79.71	23	eP	P	04 18 48.4	0.0
	8.6nm,1.0s						
CCB	Clear Creek Bu	80.59	22	eP	P	04 18 52.5	-0.5
	3.4nm,0.8s						
ILAR	Eielson Array	80.99	22	P	P	04 18 54.3	-0.9
	4.0nm,0.7s,baz=245,slow=5.7,SNR=30						
ILB	Eielson Array	80.99	22	eP	P	04 18 54.5	-0.7
IL1	Eielson Array	81.00	22	eP	P	04 18 54.0	-1.2
COLD	Coldfoot	81.04	19	eP	P	04 18 57.3	+1.9
	6.5nm,1.2s						
EGAK	Eagle	83.21	23	eP	P	04 19 07.5	+0.7
	4.8nm,1.0s						
DAWY	Dawson	83.66	24	eP	P	04 19 10.9	+1.7
	4.7nm,1.3s						
INK	Inuvik	87.27	21	eP	P	04 19 27.2	+0.2
	4.3nm,1.1s						
BVAR	Borovoye Array	87.78	323	P	P	04 19 29.0	-0.8
	1.1nm,0.5s,baz=120,slow=5.8,SNR=7.3						
BAKC	Calstate	90.75	55	eP	P	04 19 44.0	-0.2
PASC	Pasadena Art C	91.44	56	eP	P	04 19 45.2	-2.3
FULC	Fullerton	91.64	56	eP	P	04 19 50.1	+1.7
RVR	Riverside	92.10	56	eP	P	04 19 47.7	-2.8
RVR				ePcP	PcP	04 19 52.6	+1.3
BBRC	Big Bear Solar	92.49	56	eP	P	04 19 50.3	-2.3
BBRC				ePcP	PcP	04 19 54.1	+0.8
EML	El Monte Cty P	92.50	57	eP	P	04 19 52.4	0.0
SWSC	Sam W. Stewart	93.38	57	eP	P	04 19 58.6	+2.2
YKA	Yellowknife Ar	94.36	28	P	P	04 20 00.6	+0.4
	0.5nm,0.6s,baz=270,slow=4.7,SNR=3.4						
TORD	Torodi Ar. Bea	149.37	290	PKPbc	PKPdf	04 26 27.6	+1.3
	baz=77,slow=2.3						
TOA1	Torodi Ar. Sit	149.37	290	ePKPdf	PKPdf	04 26 27.6	+1.2

TRN 05 04:10:00.5, 14°.88N×60°.20W, h30km, MD3.5, 1D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MVM	Montagne Vaucl	0.74	244	eP	Pn	04 10 16.4	+1.3
LPMF	Morne Lapointe	0.80	248	eP	Pb	04 10 16.8	+0.9
ZAM	Aeronautique	0.86	249	eP	Pb	04 10 17.7	+0.8
TRMF	Trois Ilets	0.89	247	eP	Pb	04 10 18.2	+0.8
BIM	Bigot	0.92	247	⇓iP	Pb	04 10 18.5	+0.6
BIM				eS	Sb	04 10 31.4	+1.7
BAMF	Morne Balai	0.92	266	eP	Pb	04 10 18.9	+0.9
FDF	Fort de France	0.93	261	eP	Pb	04 10 18.5	+0.4
FDF				eS	Sb	04 10 32.0	+1.9
GBMF	Grand Be	0.94	265	eP	Pb	04 10 19.1	+0.8
CXM	Morne La Croix	0.94	266	eP	Pb	04 10 19.1	+0.8
CXM				eS	Sb	04 10 32.6	+2.1
PML	Morne Lenard	0.95	264	eP	Pb	04 10 19.2	+0.7
PCM	Pelee Case Pet	0.98	266	eP	Pb	04 10 19.7	+0.8
DLPL	La Plaine	1.10	294	eP	Pb	04 10 20.7	-0.4
DLPL				eS	Sb	04 10 36.8	+1.7
DBCT	Belle View Cho	1.17	289	eP	Pb	04 10 23.1	+1.0
DBCT				eS	Sb	04 10 38.9	+1.9
DSHT	Scott's Head	1.18	286	eP	Pb	04 10 22.8	+0.6
DSHT				eS	Sb	04 10 39.1	+1.9
MDN	Morne-Daniel	1.23	291	eP	Pb	04 10 23.4	+0.3
MDN				eS	Sb	04 10 40.2	+1.5
SLB	Belfond	1.33	218	eP	Pb	04 10 25.5	+0.7
SLB				eS	Sb	04 10 42.7	+1.2
BBL	Barber's Block	1.38	298	eP	Pb	04 10 25.7	0.0
BBL				eS	Sb	04 10 44.0	+1.0
MDPO	Dominica; Chan	1.39	300	eP	Pb	04 10 26.2	+0.3
MDPO				eS	Sb	04 10 43.3	+0.1
MDPV	Dominica, Penn	1.39	302	eP	Pb	04 10 25.9	0.0
MDPV				eS	Sb	04 10 43.6	+0.3
MGG	Marie-Galante	1.49	314	eP	Pn	04 10 26.2	+0.9
MGG				eS	Sb	04 10 45.8	-0.2
DEG	La Desirade	1.65	330	eP	Pn	04 10 28.5	+1.0
DEG				eS	Sn	04 10 49.0	+1.3
TBG	Guadaloupe-3	1.69	305	eP	Pb	04 10 29.9	-1.2
TBG				eS	Sb	04 10 51.4	-0.5
SSV	Crater Summit	1.82	212	eP	Pb	04 10 31.8	-1.5
SSV				eS	Sn	04 10 53.3	+1.2
BBGH	Gun Hill	1.84	160	eP	Pn	04 10 31.1	+1.0
BBGH				eS	Sb	04 10 55.4	-0.6
SVV	Soufriere Volc	1.84	212	eP	Pb	04 10 32.6	-0.8
SVV				eS	Sb	04 10 54.4	-1.8
SVCV	St. Vincent, C	1.84	210	eP	Pn	04 10 31.0	+0.9
SVCV				eS	Sb	04 10 54.7	-1.5
SVB	Belmont	1.90	213	eP	Pn	04 10 31.9	+1.0
SVB				eS	Sn	04 10 55.7	+1.9
BBSP	Saint Philip	1.91	158	eP	Pn	04 10 32.8	+1.7
FCV	Fort Charlotte	1.99	211	eP	Pb	04 10 34.2	-1.9
FCV				eS	Sb	04 10 58.4	-2.1
GRHS	Sauteurs	2.99	208	eP	Pn	04 10 48.0	+2.1
GRGR	Grenville	3.08	208	eP	Pn	04 10 49.2	+2.1
GRGR				eS	Sn	04 11 24.8	+1.9

*IDC **05** 05:52:57.5±1.5, 34°.46S×72°.63W, h0km, mb3.5/3, mb1 3.7/5, mb1mx3.6/30, mbtmp3.5/5, ML3.7/2, MS3.4/1, Ms1 3.4/1, ms1mx2.7/21, Error ellipse: s-maj=66.0km s-min=26.8km az=79.0*

*ISCJB **05** 05:52:58.2±1.4, 34°.45S±0°.04×72°.69W±0°.07, h20km±11km, mb3.5/3, Error ellipse: s-maj=10.1km s-min=6.8km az=10.3*

*NEIC **05** 05:53:00.0±0.0, 34°.49S×72°.64W, h39km, mb3.9/1, ML4.0(GUC), After GUC.*

*GUC **05** 05:53:00.0±0.6, 34°.49S×72°.64W, h39km±25km, ML4.0*

ISC 05 05:52:58.2±2.0, **34°.39S**±0°.04×**72°.46W**±0°.08, **h4**km±12km, **n31**, σ**1s00**/39, **mb3.7**/3, **1C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO05	HualaæØ	0.76	145	ePn	Pn	05 53 14.4	-1.4
GO05				eSn	Sb	05 53 23.3	-1.4
GO05	HualaæØ	0.76	145	⇓iP	Pn	05 53 14.3	-1.4
GO05				⇓iP	Pn	05 53 14.3	-1.4
GO05				iS	Sb	05 53 24.7	-0.1
GO05				iS	Sb	05 53 24.7	-0.1
GO05				IAML		05 53 25.1	
	comp=N,8µm,1.1s						
NICH	Los Niches	1.18	122	eP	Pg	05 53 21.9	+1.0
NICH				iS	Sn	05 53 38.2	0.0
ANTU	Antumapu	1.72	62	eP	Pg	05 53 31.0	-0.2
ANTU				IAML		05 54 02.3	
	comp=N,2µm,1.0s						
ROC1	El Roble	1.85	41	ePn	Pb	05 53 32.4	-0.4
ROC1				eSn	Sg	05 53 57.4	-0.3
ROC1	El Roble	1.85	41	iP	Pg	05 53 34.5	+0.8
ROCH	El Roble	1.85	41	eP	Pb	05 53 32.5	-0.3
ROCH				IAML		05 54 12.8	
	comp=E,1µm,0.6s						
CLCH	Cerro Calan	1.88	59	⇑iP	Pb	05 53 33.0	-0.1
CLCH				iS	Sg	05 53 58.0	-0.6
CLCH				IAML		05 54 14.4	
	comp=N,3µm,0.8s						
PEL	Peldehue	1.93	50	ePn	Pb	05 53 33.5	-0.4
PEL	Peldehue	1.93	50	eP	Pb	05 53 33.5	-0.4
PEL				iS	Sg	05 53 59.2	-0.9
FCH	Farellones	2.09	60	eP	Pb	05 53 36.3	-0.6
FCH				eS	Sb	05 54 03.8	+0.5
FCH				IAML		05 54 14.6	
	comp=E,698nm,0.6s						
CCHI	Chillan	2.23	172	iP	Pn	05 53 29.7	-6.3
CCHI				iS	Sb	05 54 07.1	0.0
CCHI	Chillan	2.23	172	IAML		05 54 09.6	
	comp=N,2µm,0.8s						
AAGR	Agrelo	3.29	68	iP	Pb	05 53 58.3	+1.1
ARCO	CERRO ARCO	3.32	63	iP	Pb	05 53 58.1	+0.3
ARCO				IAML		05 54 07.2	
	comp=Z,125nm,0.5s						
AUSP	Uspallata	3.35	51	iP	Pb	05 53 57.1	-1.4
CANA	Caviahue	3.67	162	⇓iP	Pn	05 53 49.3	-6.7
GO04	Tololo Observa	4.43	19	ePn	Pn	05 54 07.4	+0.9
GO04				eSn	Sn	05 54 59.1	+0.5
LCO	Las Campanas	5.56	16	ePn	Pn	05 54 22.3	+0.3
LCO				eSn	Sn	05 55 26.5	-0.1
PLCA	Paso Flores	6.51	167	Pn	Pn	05 54 35.6	+0.7
	comp=Z,0.3nm,0.3s,baz=342,slow=13,SNR=5.1						
PLCA				Lg	Lg	05 56 16.6	
	comp=Z,0.4nm,0.3s,baz=264,slow=12,SNR=3.5						
PLCA	Paso Flores	6.51	167	ePn	Pn	05 54 35.1	+0.2
GO03	Copiap	7.03	16	ePn	Pn	05 54 42.6	+0.6
TRQA	Tornquist	9.22	116	ePn	Pn	05 55 12.8	+0.7
GO02	Mina Guanaco	9.52	16	ePn	Pn	05 55 14.7	-1.8
CPUP	Villa Florida	15.32	62	LR	LR	06 03 05.4	
	comp=Z,126nm,18.7s,baz=241,slow=39						
LPAZ	La Paz	18.44	13	P	Pn	05 57 17.8	+2.4
	comp=Z,0.2nm,0.3s,baz=190,slow=7.3,SNR=13						
LPAZ	La Paz	18.44	13	eP	Pn	05 57 18.2	+2.9
	comp=Z,18nm,2.0s						
SNAA	Sanae	51.36	158	P	P	06 02 03.2	-0.4
	comp=Z,1.1nm,1.0s,baz=262,slow=8.7,SNR=2.3						
TXAR	Lajitas Array	69.90	331	P	P	06 04 10.2	-0.3
	comp=Z,0.1nm,0.5s,baz=159,slow=8.7,SNR=2.3						
TORD	Torodi Ar. Bea	84.67	70	P	P	06 05 33.7	+0.2
	comp=Z,0.5nm,0.9s,baz=221,slow=4.6						
KURBB	Kurchatov Arra	153.39	44	PKPbc	PKPbc	06 12 57.1	-0.1
	comp=Z,0.1nm,0.3s,baz=302,slow=2.7,SNR=2.8						

*NEIC **05** 06:02:55.6±0.0, 16°.27N×98°.44W, h18km, MD4.0(MEX), After MEX.*

MEX 05 06:02:55.6±0.4, **16°.27N×98°.44W, h18**km±32km, **MD4.0, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.32	67	iP	Pg	06 03 01.4	-1.1
PNIG				eS	Sg	06 03 06.3	-1.0
PNIG	Pinotepa	0.32	67	iP	Pg	06 03 01.4	-1.1
PNIG				eS	Sg	06 03 06.3	-1.0
TLIG	Tlapa	1.29	354	eP	Pn	06 03 15.5	-3.4
TLIG				eS	Sn	06 03 30.6	-5.2
TLIG	Tlapa	1.29	354	eP	Pn	06 03 15.5	-3.4
TLIG				eS	Sn	06 03 30.6	-5.2
CAIG	El Cayaco	1.92	294	eP	Pn	06 03 24.5	-2.9
CAIG				eS	Sn	06 03 46.8	-4.3
CAIG	El Cayaco	1.92	294	eP	Pn	06 03 24.5	-2.9
CAIG				eS	Sn	06 03 46.8	-4.3
MEIG	Mezcala	2.00	326	eP	Pn	06 03 25.3	-3.3
MEIG				eS	Sn	06 03 49.0	-4.2
MEIG	Mezcala	2.00	326	eP	Pn	06 03 25.3	-3.3
MEIG				eS	Sn	06 03 49.0	-4.2
PLIG	Platanillo	2.35	334	eP	Pn	06 03 30.8	-2.5
PLIG				eS	Sn	06 03 58.3	-3.4
PLIG	Platanillo	2.35	334	eP	Pn	06 03 30.8	-2.5
PLIG				eS	Sn	06 03 58.3	-3.4
ARIG	Puente Sto Nin	2.71	318	eP	Pn	06 03 35.6	-2.7
ARIG				eS	Sn	06 04 07.3	-3.4
ARIG	Puente Sto Nin	2.71	318	eP	Pn	06 03 35.6	-2.7
ARIG				eS	Sn	06 04 07.3	-3.4
ZIIG	Zihuatanejo	3.19	295	eS	Sn	06 04 19.3	-3.2

*ISCJB **05** 06:05:46.7±0.5, 23°.98N±0°.03×122°.45E±0°.02, h15km±6km, Error ellipse: s-maj=5.1km s-min=2.8km az=160.1*

*JMA **05** 06:05:46.8±0.3, 24°.01N×122°.41E, h14km±5km, M2.4*

*TAP **05** 06:05:47.4, 24°.06N×122°.44E, h29km, ML3.1, C*

ISC 05 06:05:47.0±1.1, **24°.02N**±0°.03×**122°.42E**±0°.02, **h25**km±13km, **n35**, σ**0s56**/58, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1	0.59	334	eP	Pb	06 05 59.0	+0.2
	baz=322						
EOS1				S	Sn	06 06 08.0	-0.7
	baz=322						
JYNG	Yonagunijimaku	0.65	48	P	Pb	06 05 59.4	-0.4
JYNG				S	Sb	06 06 07.7	-0.7
YOJ	Yonaguni jima	0.70	51	P	Pb	06 06 00.5	-0.2
	baz=59						
YOJ				eS	Sb	06 06 10.2	+0.3
	baz=59						
YOJ	Yonaguni jima	0.70	51	P	Pb	06 06 00.4	-0.2
YOJ				eS	Sb	06 06 09.3	-0.6
NANB	Nanao	0.73	304	eP	Pb	06 06 01.3	+0.1
	baz=300						
NANB				eS	Sn	06 06 12.0	-0.3
	baz=300						
ENA	Nanau	0.74	304	eP	Pb	06 06 01.6	+0.3
	baz=300						
ENA				eS	Sn	06 06 12.2	-0.3
	baz=300						
NACB	Ninganchiao	0.77	282	eP	Pb	06 06 01.6	-0.2
	baz=263						
NACB				eS	Sn	06 06 13.5	+0.4
	baz=263						
TWC	Suao	0.79	319	P	Pb	06 06 01.6	-0.4
	baz=316						
TWC				eS	Sb	06 06 11.8	-0.5
	baz=316						
EGS		0.94	332	eP	Pb	06 06 04.3	-0.3
	baz=317						
EGS				eS	Sn	06 06 17.9	+0.6
	baz=317						
TWE	Neicheng	0.98	316	eP	Pn	06 06 05.2	0.0
	baz=313						
TWE				eS	Sn	06 06 18.9	+0.6
	baz=313						
NNSB	Datong	1.03	294	eP	Pn	06 06 06.0	-0.1
	baz=291						
NNSB				eS	Sb	06 06 19.6	+0.2
	baz=291						
NNSH	Datong	1.03	294	eP	Pn	06 06 05.9	-0.1
	baz=290						
NNSH				eS	Sb	06 06 19.5	+0.1
	baz=290						
NNS	Nan Shan	1.04	294	eP	Pb	06 06 06.6	+0.1
	baz=291						
NNS				eS	Sn	06 06 20.9	+0.8
	baz=291						
TIPB	Shuangxi	1.09	331	eP	Pn	06 06 06.0	-0.9
	baz=328						
TIPB				eS	Sb	06 06 20.9	-0.3
	baz=328						
EHY	Hungye	1.12	243	eP	Pn	06 06 06.7	-0.5
	baz=241						
EHY				eS	Sb	06 06 22.6	+0.6
	baz=241						
NWLT	Wulai	1.13	312	eP	Pb	06 06 08.1	+0.2
	baz=309						
CHGB	Renai	1.14	272	eP	Pb	06 06 08.1	-0.1
	baz=257						
CHGB				eS	Sb	06 06 22.5	-0.1
	baz=257						
YHNB	Yeheng	1.15	305	P	Pn	06 06 07.8	+0.2
	baz=289						
YHNB				eS	Sb	06 06 23.5	+0.6
	baz=289						
VWDT	VWDT	1.20	258	eP	Pn	06 06 08.7	+0.5
	baz=255						
VWDT				eS	Sn	06 06 23.7	+0.1
	baz=255						
YULB	Yu-li	1.20	239	eP	Pn	06 06 07.9	-0.4
	baz=237						
TWF1	Yuli	1.22	237	eP	Pn	06 06 08.8	+0.3
	baz=224						
TWF1				eS	Sb	06 06 24.8	0.0
	baz=224						
IRIF	Iriomote-Funau	1.24	75	P	Pb	06 06 09.7	-0.1
IRIF				eS	Sb	06 06 26.0	+0.6
HATJ	Hateruma jima	1.27	88	P	Pb	06 06 11.3	+1.0
TATO	Taipei	1.28	319	eP	Pb	06 06 10.6	+0.2
	baz=316						
TATO				eS	Sb	06 06 27.8	+1.4
	baz=316						
FULB	Fuli	1.31	232	eS	Sn	06 06 26.0	-0.6
	baz=218						
CHKT	Chengkung	1.33	227	eS	Sn	06 06 25.6	-1.4
	baz=225						
YUS	Yu-Shan	1.44	249	eS	Sn	06 06 30.1	-0.4
	baz=247						
JKRS	Kuro-shima	1.47	81	eS	Sb	06 06 32.5	+0.5
JIJ	Ishigaki jima	1.61	77	P	Pn	06 06 14.6	+0.6
JIJ				eS	Sn	06 06 33.1	-0.9
TPUB	Ta-pu	1.79	247	eP	Pb	06 06 18.8	-0.4
	baz=245						
TPUB				eS	Sb	06 06 40.1	-1.0
	baz=245						
CHN4	Tsaushan	1.80	249	eS	Sb	06 06 42.6	+1.2
	baz=247						
WTP	Ta-pu	1.82	246	eP	Pb	06 06 19.5	-0.2
	baz=244						
TWK	Hsinying	1.92	248	eS	Sb	06 06 45.0	0.0
	baz=245						
CHN1	Nanshi	1.92	245	eS	Sb	06 06 45.6	+0.6
	baz=243						
SGST	Jiashian	1.92	241	eS	Sb	06 06 45.8	+0.7
	baz=231						

*SJA **05** 06:24:00.0±0.7, 34°.21S×73°.02W, h40km±32km, ML3.2, MW3.6*

*ISCJB **05** 06:24:08.5±2.7, 34°.12S±0°.06×72°.1W±0°.2, h12km±26km, Error ellipse: s-maj=23.5km s-min=7.2km az=19.5*

*GUC **05** 06:24:08.6±0.7, 34°.16S×72°.16W, h60km±68km, ML3.1*

ISC 05 06:24:06.5±2.4, **34°.19S**±0°.07×**72°.2W**±0°.2, **h14**km±12km, **n12**, σ**1s88**/19, **4C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO05	HualaæØ	0.85	164	iP	Pg	06 24 21.5	-1.6
GO05				iS	Sn	06 24 37.7	+1.3
GO05	HualaæØ	0.85	164	⇓iP	Pn	06 24 24.5	+0.3
GO05				eP		06 24 24.6	
GO05				iS	Sn	06 24 37.0	+0.5
GO05				iS		06 24 37.1	
GO05				IAML		06 24 38.6	
	comp=E,908nm,0.2s						
ANTU	Antumapu	1.45	65	⇑iP	Pn	06 24 32.0	-0.4
ANTU				iS	Sb	06 24 49.1	-2.6
ANTU				IAML		06 24 55.5	
	comp=N,418nm,0.5s						
ROC1	El Roble	1.57	40	iP	Pn	06 24 33.8	-0.4
ROC1				iS	Sg	06 24 59.7	+2.6
ROCH	El Roble	1.57	40	⇑iP	Pn	06 24 33.7	-0.5
ROCH				iS	Sn	06 24 53.2	-1.4
ROCH				IAML		06 25 02.8	
	comp=N,325nm,0.4s						
CLCH	Cerro Calan	1.60	61	⇑iP	Pn	06 24 34.5	0.0
CLCH				iS	Sn	06 24 54.4	-0.7
CLCH				IAML		06 25 05.8	
	comp=E,320nm,0.6s						
FCH	Farellones	1.82	62	⇑iP	Pn	06 24 37.6	-0.1
FCH				iS	Sn	06 24 59.8	-0.9
FCH				IAML		06 25 06.7	
	comp=E,353nm,0.3s						
AAGR	Agrelo	3.03	70	iP	Pn	06 24 56.8	+2.7
ARCO	CERRO ARCO	3.05	65	iP	Pn	06 24 57.4	+2.9
ARCO				IAML		06 25 05.3	
	comp=Z,77nm,0.3s						
AUSP	Uspallata	3.08	51	iP	Pn	06 24 57.0	+2.1
ASAL	Salagasta	3.25	62	iP	Pn	06 24 59.7	+2.6
RTLS	Leoncito	3.42	47	iP	Pn	06 25 01.8	+2.2
RTLS				IAML		06 25 53.6	
	comp=Z,18nm,0.4s						

MEX 05 06:49:02.2±0.5, **16°.52N×98°.55W, h12**km±5km, **MD3.9, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.42	107	eP	Pg	06 49 10.0	-0.6
PNIG				eS	Sg	06 49 16.1	-0.1
TLIG	Tlapa	1.04	359	eP	Pb	06 49 19.3	-3.0
TLIG				eS	Sg	06 49 31.8	-4.1
CAIG	El Cayaco	1.73	288	eP	Pn	06 49 28.6	-3.5
CAIG				eS	Sn	06 49 48.8	-5.3
MEIG	Mezcala	1.74	324	eP	Pn	06 49 28.9	-3.4
MEIG				iS	Sn	06 49 49.7	-4.7
VHO	Vista Hermosa	1.82	72	eP	Pn	06 49 29.8	-3.7
VHO				eS	Sn	06 49 51.6	-5.2
PLIG	Platanillo	2.08	334	eP	Pn	06 49 33.7	-3.3
PLIG				eS	Sn	06 49 58.5	-4.3

*IDC **05** 06:50:19.2±1.0, 12°.11N×143°.09E, h0km, mb3.6/5, mb1 3.8/6, mb1mx3.5/66, mbtmp3.6/6, ML3.7/1, MS2.4/1, Ms1 2.4/1, ms1mx2.1/44, Error ellipse: s-maj=35.6km s-min=19.0km az=115.0*

*ISCJB **05** 06:50:22.0±0.8, 12°.1N±0°.1×143°.0E±0°.1, h31km, mb3.6/5, Error ellipse: s-maj=23.9km s-min=10.0km az=135.2*

ISC 05 06:50:23.9±1.1, **12°.1N**±0°.2×**143°.1E**±0°.2, **h31**km, **n9**, σ**0s81**/7, **mb3.7**/5, **South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	2.31	49	Pn	Pn	06 50 59.9	+0.1
	22nm,0.3s,baz=300,slow=13,SNR=14						
GUMO				Sn	Sn	06 51 27.7	+0.5
	33nm,0.3s,baz=59,slow=23,SNR=8.5						
GUMO				LR	LR	06 52 00.5	
	comp=Z,86nm,20.6s,baz=90,slow=45						
H11N1	WAKE ISLAND Hy	24.11	69	T	T	07 20 27.9	
	baz=247,slow=74						
H11N2	WAKE ISLAND Hy	24.12	69	T	T	07 20 27.6	
	baz=247,slow=74						
H11N3	WAKE ISLAND Hy	24.13	69	T	T	07 20 30.5	
	baz=247						
WRA	Warramunga Arr	32.96	195	P	P	06 56 55.6	-0.4
	0.7nm,0.6s,baz=17,slow=9.7,SNR=8.4						
ASAR	Alice Springs	36.64	194	P	P	06 57 28.5	+0.7
	0.3nm,0.5s,baz=18,slow=12,SNR=6.2						
SONM	Songino Array	46.98	327	P	P	06 58 52.4	+0.2
	0.4nm,0.5s,baz=138,slow=7.9,SNR=2.8						
KURBB	Kurchatov Arra	64.65	320	P	P	07 00 59.1	+0.4
	0.4nm,0.9s,baz=107,slow=6.6,SNR=3.1						
ILAR	Eielson Array	70.67	25	P	P	07 01 35.2	-1.2
	1.1nm,0.6s,baz=251,slow=5.9,SNR=13						

*ISCJB **05** 07:26:32.0±1.1, 24°.97N±0°.07×122°.56E±0°.04, h10km±6km, Error ellipse: s-maj=11.9km s-min=5.1km az=21.8*

*TAP **05** 07:26:31.4, 24°.94N×122°.54E, h5km, ML2.7, C*

*JMA **05** 07:26:33.4±0.2, 24°.89N×122°.50E, h20km, M2.0*

ISC 05 07:26:32.5±1.7, **24°.89N**±0°.07×**122°.53E**±0°.04, **h9**km±13km, **n17**, σ**0s39**/26, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1	0.50	227	P	Pb	07 26 43.2	-0.2
	baz=211						
TWB1	Santiao Chiao	0.50	284	P	Pg	07 26 42.6	+0.3
	baz=278						
EGS		0.54	265	eP	Pb	07 26 43.6	-0.5
	baz=260						
EGS				eS	Sb	07 26 52.3	+0.3
	baz=260						
JYNG	Yonagunijimaku	0.58	139	P	Pb	07 26 44.8	0.0
JYNG				eS	Sb	07 26 53.2	0.0
YOJ	Yonaguni jima	0.61	134	eP	Pb	07 26 45.5	+0.1
	baz=138						
YOJ				eS	Sb	07 26 54.0	-0.1
	baz=138						
YOJ	Yonaguni jima	0.61	134	P	Pb	07 26 45.4	0.0
YOJ				eS	Sb	07 26 53.9	-0.2
TIPB	Shuangxi	0.64	277	eP	Pb	07 26 45.3	-0.6
	baz=273						
TWC	Suao	0.68	246	eP	Pg	07 26 45.7	+0.2
	baz=242						
TWC				S	Sb	07 26 56.5	+0.5
	baz=242						
TWE	Neicheng	0.80	258	eP	Pb	07 26 48.2	-0.3
	baz=254						
NANB	Nanao	0.84	237	eP	Pg	07 26 48.5	-0.2
	baz=235						
NANB				eS	Sb	07 27 01.5	+0.8
	baz=235						
ENA	Nanau	0.85	237	P	Pg	07 26 48.9	0.0
	baz=234						
ENA				eS	Sb	07 27 01.9	+0.9
	baz=234						
YM07	YM07	0.87	289	eP	Pb	07 26 49.7	-0.1
	baz=286						
YHNB	Yeheng	1.07	258	eP	Pb	07 26 53.0	-0.2

	baz=269						
NACB	Ninganchiao	1.11	230	eP	Pb	07 26 53.4	-0.4
	baz=228						
NNSB	Datong	1.14	246	eP	Pg	07 26 54.4	0.0
	baz=230						
NNSB				eS	Sn	07 27 10.3	-0.2
	baz=230						
NNSH	Datong	1.14	246	eP	Pb	07 26 54.0	-0.4
	baz=230						
NNSH				eS	Sn	07 27 10.6	0.0
	baz=230						
WHF	Hehuan Shan	1.37	237	eP	Pg	07 26 58.6	-0.2
	baz=235						

NIED ***05*** *07:28:00, 39°.00N×142°.40E, h32^{km}, Mw3.7 Best double couple: M$_0$3.57000×10^{14} NP1:ϕ_s108.00000°, δ44.00000°, λ-35.00000°. NP2:ϕ_s225.00000°, δ67.00000°, λ-128.00000°.*

ISCJB ***05*** *07:28:51.6±1.1, 39°.00N±0°.03×142°.46E±0°.06, h19^{km}±6^{km}, mb3.5/6, MS2.6/1, Error ellipse: s-maj=8.9km s-min=4.7km az=22.9*

JMA ***05*** *07:28:53.0±0.1, 39°.04N×142°.38E, h31^{km}±1^{km}, M3.8*

JMA Felt I J1.

IDC ***05*** *07:28:56.7±2.7, 38°.99N×142°.44E, h52^{km}±25^{km}, mb3.3/6, mb1 3.6/9, mb1mx3.3/71, mbtmp3.6/9, ML3.5/3, MS2.8/6, Ms1 2.8/6, ms1mx2.5/35, Error ellipse: s-maj=28.4km s-min=11.1km az=116.0*

ISC 05 07:28:51.9±1.7, **39°.02N**±0°.04×**142°.39E**±0°.06, **h10**^{km}±10^{km}, **n30**, σ**1^{s}39**/33, **mb3.6**/6, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.56	277	P	Pb	07 29 04.4	+0.5
OFUJ				eS	Sb	07 29 12.0	0.0
MIYJ	Miyakonagasawa	0.71	322	P	Pb	07 29 06.1	-0.3
MIYJ				eS	Sg	07 29 15.2	+0.2
JMK	Ichinoseki	0.91	266	P	Pg	07 29 09.6	+0.1
JMK				eS	Sg	07 29 21.3	-0.1
JOM	Ohasama	0.97	298	P	Pg	07 29 10.4	-0.1
JOM				S	Sg	07 29 23.2	+0.2
JIO	Ouri	0.99	236	P	Pb	07 29 10.2	-0.9
JIO				S	Sg	07 29 22.3	-1.5
JTH	Tanohata	1.00	336	P	Pg	07 29 10.8	-0.4
JTH				eS	Sg	07 29 23.5	-0.8
JKZ	Kuzumaki	1.27	320	P	Pn	07 29 15.3	-0.4
JKZ				S	Sb	07 29 31.1	-1.2
JRG	Rokugo	1.42	286	P	Pn	07 29 18.0	+0.3
JRG				eS	Sn	07 29 35.9	-0.5
JOU	Okura	1.50	245	P	Pn	07 29 18.7	-0.2
JOU				eS	Sn	07 29 38.1	-0.4
JANG	Nango	1.51	334	P	Pn	07 29 18.5	-0.5
JANG				eS	Sn	07 29 37.9	-0.9
MAT	Matsushiro	4.13	235	P	Pn	07 29 58.6	+3.5
MAT				S	Sn	07 30 43.9	+0.4
MJAR	Matsushiro Arr	4.13	235	P	Pn	07 29 57.2	+2.1
	2.7nm,0.3s,baz=37,slow=10,SNR=20						
MJAR				S	Sn	07 30 45.4	+1.9
	0.5nm,0.3s,baz=59,slow=24,SNR=2.6						
MJAR				LR	LR	07 31 43.7	
	comp=Z,115nm,18.2s,baz=50,slow=40						
ASAJ	Asahikawa	5.10	2	P	Pn	07 30 11.2	+2.9
	2.1nm,0.3s,baz=221,slow=9.5,SNR=9.1						
ASAJ				S	Sn	07 31 08.4	+1.3
	0.4nm,0.3s,baz=256,slow=8.7,SNR=4.0						
ASAJ				LR	LR	07 32 43.9	
	comp=Z,44nm,19.4s,baz=158,slow=44						
USRK	Ussuriysk Ar.	9.35	307	P	Pn	07 31 12.4	+5.7
	baz=136,slow=36						
JNU	Nakatsue	11.01	241	LR	LR	07 35 26.6	
	comp=Z,102nm,19.8s,baz=130,slow=35						
KSRS	Korea Array	11.49	267	P	Pn	07 31 39.3	+3.4
	0.2nm,0.3s,baz=86,slow=13,SNR=3.4						
KSRS				LR	LR	07 35 30.9	
	comp=Z,40nm,18.8s,baz=96,slow=34						
PETK	Petropavlovsk-	17.59	32	LR	LR	07 38 51.6	
	comp=Z,30nm,21.0s,baz=250,slow=34						
H11N2	WAKE ISLAND Hy	28.58	125	T	T	08 05 13.5	
	baz=317,slow=76,SNR=144						
H11N1	WAKE ISLAND Hy	28.59	125	T	T	08 05 23.6	
	baz=317,slow=76,SNR=96						
H11N3	WAKE ISLAND Hy	28.60	125	T	T	08 05 17.3	
	baz=317,slow=76,SNR=190						
H11S1	WAKE ISLAND Hy	29.37	127	T	T	08 06 10.8	
	baz=318,slow=76,SNR=22						
H11S3	WAKE ISLAND Hy	29.37	127	T	T	08 06 11.9	
	baz=318,slow=76,SNR=36						
H11S2	WAKE ISLAND Hy	29.38	127	T	T	08 06 13.9	
	baz=318,slow=76,SNR=18						
ZALV	Zalesovo Beam	41.18	311	P	P	07 36 36.8	+0.5
	0.6nm,0.4s,baz=93,slow=5.8,SNR=2.3						
CMAR	Chiang Mai Arr	42.76	254	LR	LR	07 55 09.7	
	comp=Z,8.5nm,20.1s,baz=195,slow=37						
MKAR	Makanchi Array	43.75	301	P	P	07 36 56.3	-1.0
	0.6nm,0.7s,baz=91,slow=7.5,SNR=5.6						
ILAR	Eielson Array	47.41	33	P	P	07 37 26.2	+0.1
	1.0nm,0.7s,baz=266,slow=6.2,SNR=14						
WRA	Warramunga Arr	59.13	189	P	P	07 38 51.1	-1.5
	0.8nm,0.7s,baz=6.1,slow=6.8,SNR=4.9						
ASAR	Alice Springs	62.86	189	P	P	07 39 16.9	-1.1
	0.2nm,0.7s,baz=15,slow=7.7,SNR=3.1						
PDAR	Pinedale Array	75.73	46	P	P	07 40 36.9	-1.1
	0.2nm,0.6s,baz=232,slow=1.7,SNR=3.8						

MEX 05 07:45:28.2±0.4, **15°.99N**×**98°.31W**, **h5**^{km}±3^{km}, **MD3.9**, **Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.43	23	i P	Pg	07 45 36.4	-0.2
PNIG				eS	Sg	07 45 42.5	+0.2
TLIG	Tlapa	1.58	351	eP	Pn	07 45 52.9	-4.1
TLIG				eS	Sn	07 46 13.4	-4.5
VHO	Vista Hermosa	1.85	54	eP	Pn	07 45 57.0	-3.7
VHO				eS	Sn	07 46 19.9	-4.7
HUIG	Huatulco	2.13	96	i P	Pn	07 46 01.4	-3.0
HUIG				i S	Sn	07 46 26.6	-4.6
CAIG	El Cayaco	2.15	299	i P	Pn	07 46 00.6	-4.1
CAIG				i S	Sn	07 46 27.6	-4.2
PLIG	Platanillo	2.65	335	eP	Pn	07 46 08.7	-2.9
PLIG				eS	Sn	07 46 40.3	-3.9

IDC ***05*** *07:50:18.2±1.1, 14°.66N×91°.02W, h0^{km}, mb3.7/7, mb1 4.0/10, mb1mx3.8/45, mbtmp3.8/10, ML3.4/3, MS3.2/7, Ms1 3.2/7, ms1mx2.9/41, Error ellipse: s-maj=43.6km s-min=17.5km az=46.0*

ISCJB ***05*** *07:50:24.4±0.6, 14°.15N±0°.05×91°.83W±0°.04, h82^{km}±4^{km}, mb3.8/17, Error ellipse: s-maj=10.5km s-min=3.5km az=37.1*

NEIC ***05*** *07:50:25.4±0.9, 14°.12N×91°.82W, h78^{km}±9^{km}, mb4.0/22, MD4.4(MEX), Error ellipse: s-maj=13.6km s-min=6.7km az=223.0*

MEX ***05*** *07:50:26.8±0.6, 14°.12N×91°.95W, h30^{km}±20^{km}, MD4.4*

CASC ***05*** *07:50:26.9±1.8, 14°.30N×91°.60W, h17^{km}±18^{km}, ML3.9, mb4.4(NEIC)*

ISC 05 07:50:25.2±1.2, **14°.17N**±0°.08×**91°.81W**±0°.06, **h71**^{km}±11^{km}, **n71**, σ**1^{s}41**/81, **mb3.9**/17, **Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IXG	Ixpaco	1.32	90	eP	Pn	07 50 47.0	-1.0
PCIG		2.04	318	eP	Pn	07 50 57.1	-0.4
PCIG				eS	Sn	07 51 19.5	-2.4
PCIG		2.04	318	ePn	Pn	07 50 57.1	-0.4
PCIG				eSn	Sn	07 51 19.5	-2.4
CCIG	Comitan	2.12	352	eP	Pn	07 51 00.1	+1.4
CCIG				eS	Sn	07 51 24.2	0.0
CCIG	Comitan	2.12	352	ePn	Pn	07 51 00.5	+1.9
CCIG				eSn	Sn	07 51 23.6	-0.6
CCIG				eSn	Sn	07 51 24.2	0.0
RTR	El Retiro	2.12	97	eP	Pn	07 50 59.2	+0.5
SBLS	San Blas	2.15	99	eP	Pn	07 50 59.3	+0.1
SNJE	San Jose	2.16	98	eP	Pn	07 50 59.7	+0.4
SNJE				eS	Sn	07 51 27.0	+1.7
MTO3	Montecristo	2.39	84	eP	Pn	07 51 02.4	0.0
MTO3				eS	Sn	07 51 31.3	+0.6
MTO3				IAML		07 51 34.8	
	comp=Z,134nm,0.6s						
COLS	Colinas	2.49	101	eP	Pn	07 51 04.0	+0.3
BOQS	Boqueron	2.50	100	eP	Pn	07 51 04.5	+0.7
UEES	San Salvador	2.53	100	eP	Pn	07 51 04.7	+0.5
UEES				eS	Sn	07 51 34.0	-0.1
SNET	Serv Nac Est T	2.55	101	eP	Pn	07 51 05.4	+0.9
SNET				eS	Sn	07 51 34.1	-0.5
SNET				IAML		07 51 38.0	
	comp=Z,868nm,0.4s						
OPAM	San Salvador	2.58	100	eP	Pn	07 51 05.9	+1.1
OPAM				eS	Sn	07 51 35.7	+0.6
LFU	La Fuente	2.65	99	eP	Pn	07 51 06.5	+0.7
LBRS	Las Brisas	2.72	99	eP	Pn	07 51 08.4	+1.6
LFRS	El Faro	2.73	101	eP	Pn	07 51 07.4	+0.5
LFRS				eS	Sn	07 51 39.2	+0.4
TGIG		2.88	334	eP	Pn	07 51 08.3	-0.6
TGIG				eS	Sn	07 51 42.5	0.0
TGIG		2.88	334	ePn	Pn	07 51 08.3	-0.6
TGIG				eSn	Sn	07 51 42.5	0.0
CNCH	Conchagua	3.97	103	eP	Pn	07 51 26.8	+3.0
CNCH				IAML		07 52 19.6	
	comp=Z,3µm,0.5s						
CMIG	Matias Romero	4.14	315	Pn	Pn	07 51 26.4	+0.3
	comp=Z,5.6nm,0.3s,baz=141,slow=7.4,SNR=94						
CMIG				Sn	Sn	07 52 14.8	+1.5
	comp=Z,23nm,0.3s,baz=72,slow=17,SNR=7.5						
ESTN	Estel	5.40	101	ePn	Pn	07 51 43.0	-0.3
ESTN				eSn	Sn	07 52 41.4	-2.8
BOAB	BOACO BROADBAN	6.22	105	ePn	Pn	07 51 53.9	-0.6
TLIG	Tlapa	7.32	298	ePn	Pn	07 52 11.0	+1.4
656A	Willston	17.39	28	ePn	P	07 54 24.1	+0.6
	comp=Z,30nm,0.7s						
BRAL	Brewton	17.47	14	ePn	P	07 54 26.3	+1.9
	comp=Z,12nm,0.9s						
348A	Jackson	17.53	11	ePn	P	07 54 27.5	+2.5
	comp=Z,12nm,0.6s						
352A	Blakely	18.35	19	eP	Pn	07 54 34.7	0.0
	comp=Z,20nm,1.1s						
TXAR	Lajitas Array	18.65	326	P	Pn	07 54 39.9	+1.3
	comp=Z,0.0nm,0.3s,baz=154,slow=11,SNR=17						
TX31	Lajitas Ar. Si	18.65	326	eP	P	07 54 37.5	0.0
SOTA	Rioblanco	19.20	127	eP	Pn	07 54 51.8	+6.2
PCON	Cinco Dias	19.25	126	eP	Pn	07 55 00.4	+14
LRAL	Lakeview Retre	19.28	12	P	Pn	07 54 45.5	-0.4
	comp=Z,6.9nm,0.8s						
152A	Waverly Hall	19.52	18	eP	Pn	07 54 47.8	-0.9
	comp=Z,5.2nm,0.8s						
ROSC	El Rosal	19.57	117	P	P	07 54 44.9	-3.1
	comp=Z,1.0nm,0.3s,baz=232,slow=19,SNR=2.9						
ROSC				LR	LR	08 02 57.1	
	comp=Z,27nm,19.2s,baz=356,slow=40						
PRAC	Prado	19.67	120	eP	Pn	07 54 49.6	-1.1
	comp=Z,17nm,1.0s						
PRAC	Prado	19.67	120	eP	P	07 54 47.6	-1.1
Z50A	Ashland	19.74	15	eP	Pn	07 54 50.3	-1.0
	comp=Z,2.8nm,0.8s						
BARC	Barichara	19.80	110	eP	Pn	07 54 55.2	+2.8
RUSC	La Rusia	20.18	112	eP	P	07 54 54.6	-0.1
	comp=Z,5.1nm,1.1s						
RUSC	La Rusia	20.18	112	eP	P	07 54 53.5	-1.2
CHIC	Chingaza	20.18	116	eP	Pn	07 54 56.7	-0.5
FLOC	Florencia	20.29	127	eP	P	07 54 55.5	+0.1
UALR	University of	20.52	359	eP	P	07 54 58.5	+0.9
	comp=Z,3.3nm,0.7s						
GOGA	Godfrey	20.60	20	eP	P	07 54 58.6	+0.1
	comp=Z,4.9nm,0.6s						
SJAC	San Juan de Ar	20.69	120	eP	Pn	07 55 02.1	-0.7
Y52A	Lilburn	20.82	18	eP	P	07 55 01.6	+0.6
	comp=Z,6.1nm,0.8s						
MNTX	Cornudas Mount	21.42	327	eP	P	07 55 08.5	+1.1
SWET	Sewanee	21.61	13	eP	P	07 55 09.9	+0.5
	comp=Z,3.8nm,0.8s						
W50A	Signal Mountai	21.74	14	eP	P	07 55 10.9	+0.1
	comp=Z,4.3nm,0.8s						
PBMO	Poplar Bluff	22.55	3	eP	P	07 55 18.0	-1.4
	comp=Z,3.0nm,0.8s						
TKL	Tuckaleechee C	22.58	17	P	P	07 55 20.1	+0.3
	comp=Z,2.7nm,0.8s,baz=182,slow=9.1,SNR=5.5						
TKL				LR	LR	08 04 47.7	
	comp=Z,83nm,21.8s,baz=202,slow=40						
T47A	Sharon Grove	23.11	10	eP	P	07 55 23.1	-2.0
	comp=Z,3.6nm,0.6s						
319A	Douglas	23.45	320	eP	P	07 55 28.6	+0.1
	comp=Z,6.9nm,0.9s						
S39A	Bolivar	23.46	357	eP	P	07 55 27.2	-1.2
	comp=Z,3.3nm,0.7s						
WCI	Wyandotte Cave	24.45	11	eP	P	07 55 35.6	-1.8
	comp=Z,5.8nm,0.8s						
PDAR	Pinedale Array	32.34	335	P	P	07 56 48.4	+0.5
	comp=Z,0.1nm,0.3s,baz=149,slow=8.7,SNR=2.2						
PDAR				LR	LR	08 12 25.3	
	comp=Z,22nm,19.1s,baz=193,slow=41						
NV01	Mina Array Sit	33.65	321	eP	P	07 57 00.1	+0.7
NVAR	Mina Array Bea	33.65	321	P	P	07 57 02.4	+3.0
	comp=Z,1.1nm,0.6s,baz=133,slow=8.9,SNR=15						
NVAR				PcP	PcP	07 59 41.7	+3.6
	comp=Z,0.6nm,0.7s,baz=130,slow=6.0,SNR=5.2						
PTGA	Pitinga	34.84	113	eP	P	07 57 08.7	-1.0
	comp=Z,4.9nm,0.8s						
SAML	Samuel	36.53	127	eP	P	07 57 23.3	-0.9
	comp=Z,2.5nm,0.8s						
YBH	Yreka Blue Hor	38.34	322	LR	LR	08 14 54.7	
	comp=Z,42nm,18.8s,baz=146,slow=38						
SIV	San Ignacio	42.68	134	P	P	07 58 14.6	-0.7
	comp=Z,1.2nm,0.8s,baz=330,slow=12,SNR=5.8						
SIV				PcP	PcP	08 00 08.9	+2.8
	comp=Z,0.7nm,0.6s,baz=342,slow=3.2,SNR=5.5						
SCHQ	Schefferville	45.00	20	P	P	07 58 30.9	-2.5
	comp=Z,11nm,1.4s,baz=221,slow=7.4,SNR=4.0						
SCHQ				LR	LR	08 18 16.4	
	comp=Z,60nm,19.0s,baz=14,slow=38						
SCHQ	Schefferville	45.00	20	eP	P	07 58 31.3	-2.1
	comp=Z,2.2nm,0.8s						
YKA	Yellowknife Ar	50.90	347	P	P	07 59 18.1	-0.6
	comp=Z,0.6nm,0.6s,baz=147,slow=7.2,SNR=7.6						
SFJD	Kangerlussuaq	59.30	18	LR	LR	08 27 49.2	
	comp=Z,27nm,18.1s,baz=223,slow=38						
ILAR	Eielson Array	62.75	337	P	P	08 00 43.6	+1.0
	comp=Z,0.4nm,0.8s,baz=169,slow=6.1,SNR=4.3						
JMIC	Jan Mayen	74.52	20	LR	LR	08 34 32.9	
	comp=Z,13nm,19.3s,baz=248,slow=36						
EKA	Eskdalemuir Ar	77.72	36	P	P	08 02 11.2	-3.0
	comp=Z,0.7nm,0.6s,baz=278,slow=4.9,SNR=3.1						
CMAR	Chiang Mai Arr	145.88	342	PKPbc	PKPab	08 09 58.1	+0.2
	comp=Z,1.3nm,0.3s,baz=341,slow=4.3,SNR=6.6						

MAN ***05*** *08:14:14.4, 4°.64N×126°.56E, h71^{km}, mb5.9, ML4.9, MS5.3*

BJI ***05*** *08:14:14.3, 4°.69N×126°.64E, h64^{km}, mb5.1/80, mB5.0/47, Ms4.4/74, Ms7 4.3/69*

MOS ***05*** *08:14:14.7±0.9, 5°.15N×126°.49E, h34^{km}, mb5.5/84, MS4.1/19, Error ellipse: s-maj=8.2km s-min=4.2km az=114.0*

IDC ***05*** *08:14:16.9±1.3, 5°.16N×126°.53E, h39^{km}±10^{km}, mb4.9/53, mb1 4.9/55, mb1mx4.9/67, mbtmp5.1/55, ML5.5/3, MS4.0/46, Ms1 4.0/46, ms1mx4.0/55, Error ellipse: s-maj=10.7km s-min=7.2km az=74.0*

ISCJB ***05*** *08:14:18.6±0.3, 5°.09N±0°.01×126°.58E±0°.02, h72^{km}±3^{km}, mb5.1/230, Error ellipse: s-maj=3.6km s-min=2.2km az=159.3*

DJA ***05*** *08:14:18.9±0.3, 5°N±2°×12°7E±°, h80^{km}±4^{km}, M5.3/51, mb5.6/51, mB5.7/36, MLv5.7/7, Mw(mB)5.2/36, Mwp5.0/1*

NEIC ***05*** *08:14:19.3±0.5, 5°.13N×126°.55E, h62^{km}±4^{km}, mb5.3/124, Error ellipse: s-maj=3.7km s-min=2.4km az=78.0*

NEIC Felt [I PIVS] at General Santos.

GCMT ***05*** *08:14:19.3±0.2, 5°.10N×126°.71E, h36^{km}±1^{km}, MW5.2/96, Moment Tensor Solution. s64,c84; s96,c139; Duration: 1^{s}0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.26±.22; M$_{\theta\theta}$0.14±.15; M$_{\phi\phi}$-2.40±.17; M$_{r\theta}$-2.15±.19; M$_{\theta\phi}$-2.94±.11; M$_{\phi r}$6.31±.34; Best double couple: M$_0$7.58700×10^{16} NP1:ϕ_s351.00000°, δ81.00000°, λ64.00000°. NP2: ϕ_s244.00000°, δ27.00000°, λ161.00000°. Principal axes: T 8.1550, Plg47.0000°, Azm234.0000°; N -1.1350, Plg26.0000°, Azm355.0000°; P -7.0190, Plg32.0000°, Azm103.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

KLM ***05*** *08:14:26.0, 5°.40N×126°.62E, h105^{km}, mb5.4*

ISC 05 08:14:19.2±0.3, **5°.13N**±0°.03×**126°.64E**±0°.04, **h60**^{km}±2^{km}, **h60**^{km}**:pP-P**, **n1067**, σ**1^{s}44**/1172, **mb5.2**/242, **MS4.1**/72, **43C-32D**, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	1.85	348	eP	Pn	08 14 48.2	-0.3
MATI				eS	Sn	08 15 20.2	+9.3
DAV	Davao City (W)	2.20	332	Pn	Pn	08 14 53.3	0.0
	378nm,0.3s,baz=134,slow=0.8,SNR=35						
DAV				Sn	Sn	08 15 19.9	+0.4
	670nm,0.3s,baz=19,slow=13,SNR=5.4						
DAV	Davao City (W)	2.20	332	ePn	Pn	08 14 53.5	+0.2
DAV				eSn	Sn	08 15 15.3	-4.1
DMPH	Davao City--Mi	2.25	330⇑	eP	Pn	08 14 56.0	+2.0
DMPH				eS	Sn	08 15 26.7	+6.1
SKMP	Bagumbayan, Su	2.50	304	eP	Pn	08 14 58.5	+1.0
SKMP				eS	Sn	08 15 29.5	+2.7
BIPH	Bislig	3.05	355⇓	eP	Pn	08 15 10.0	+5.0
BIPH				eS	Sn	08 15 54.6	+14
BUKP	Musuan	3.15	330	eP	Pn	08 15 06.9	+0.5
BUKP				eS	Sn	08 15 54.1	+11
CTBH	Cotabato--PC H	3.16	311⇑	eP	Pn	08 15 07.6	+1.1
CTBH				eS	Sn	08 15 42.4	-0.6
CGP	Cagayan de Oro	3.83	330⇓	eP	Pn	08 15 18.4	+2.8
CGP				eS	Sn	08 16 10.5	+11
BUTP	Butuan	3.95	345	eP	Pn	08 15 20.4	+3.1
BUTP				eS	Sn	08 16 14.7	+12
PAGZ	Pagadian	4.21	310	eP	Pn	08 15 20.6	-0.4
PAGZ				eS	Sn	08 15 57.5	-11
TNTI	Ternate	4.39	170	P	Pn	08 15 23.2	-0.1
TNTI	Ternate	4.39	170	ePn	Pn	08 15 23.1	-0.1
TNTI				eSn	Sn	08 16 12.4	-0.8
SCPH	Surigao	4.76	346⇑	eP	Pn	08 15 31.7	+3.2
SCPH				eS	Sn	08 16 31.2	+8.8
ZCP	Zamboanga City	4.88	292⇑	i P	Pn	08 15 18.4	-12
ZCP				i S	Sn	08 16 27.2	+2.0
MSLP	Maasin	5.28	341	eP	Pn	08 15 37.3	+1.8
MSLP				eS	Sn	08 16 34.2	-0.9
SNPH	Sibulan	5.38	321⇓	eP	Pn	08 15 41.5	+4.6
LBMI	Labuha	5.79	171	P	Pn	08 15 42.1	-0.4
LLP	Lapu-Lapu	5.80	333⇑	eP	Pn	08 15 46.1	+3.5
LLP				eS	Sn	08 16 56.1	+8.3
OCLP	Ormoc	6.22	341	eP	Pn	08 15 51.5	+3.1
OCLP				eS	Sn	08 17 07.4	+9.2
PLP	Palo	6.22	345⇓	eP	Pn	08 15 51.0	+2.6
SANI	Sanana	7.16	185	P	Pn	08 15 58.3	-3.0
LUWI	Luwuk	7.24	212	P	Pn	08 16 04.6	+2.2
LUWI	Luwuk	7.24	212	ePn	Pn	08 16 02.0	-0.4
JAP	San Jose, Anti	7.26	321⇑	eP	Pn	08 16 12.6	+10
RCP	Roxas	7.46	329⇓	eP	Pn	08 16 07.9	+2.5
SIJI	Sorong	7.54	142	Pn	Pn	08 16 06.5	-0.1
	44nm,0.3s,baz=345,slow=12,SNR=63						
SIJI				Sn	Sn	08 17 28.7	-2.0
	12nm,0.3s,baz=150,slow=21,SNR=6.3						
SIJI				LR	LR	08 19 13.1	
	comp=Z,1µm,21.5s,baz=1.5,slow=39						
APSI	Ampana	7.79	220	P	Pn	08 16 13.5	+3.5
	844nm,0.9s,9µm						
APSI				S	Sn	08 17 40.7	+3.8
	844nm,0.9s,9µm						
PALU	Palau	8.10	74	P	Pn	08 16 11.2	-2.9
	baz=8.1,SNR=4.5						
NLAI	Namlea	8.32	177	P	Pn	08 16 15.5	-1.7
	481nm,0.6s,9µm						
MSAI	Masohi	8.72	165	P	Pn	08 16 23.7	+1.0
AAI	Ambon	8.89	170	P	Pn	08 16 24.3	-0.7
PCI	Palu	9.06	229	P	Pn	08 16 28.8	+1.5
	394nm,0.7s,3µm						
FAKI	Fak Fak	9.76	145	P	Pn	08 16 37.9	+1.0
FAKI	Fak Fak	9.76	145	ePn	Pn	08 16 37.7	+0.8
KDI	Kendari	9.87	204	P	Pn	08 16 37.0	-1.5
	170nm,0.7s,3µm						
RKPI	Ransiki, Papua	10.01	131	P	Pn	08 16 43.7	+3.4
KKM	Kota Kinabalu	10.41	276	P	Pn	08 16 52.0	+6.1
TGY	Tagaytay City	10.54	328	Pn	Pn	08 16 52.1	+4.5
	33nm,0.3s,baz=131,slow=20,SNR=1.9						
TGY				LR	LR	08 21 56.5	
	comp=Z,1µm,18.6s,baz=110,slow=44						
TTSI	Tana Toraja	10.60	220	P	Pn	08 16 50.4	+2.1
SMKI	Samarinda	10.92	240	P	Pn	08 16 56.5	+3.7
SPSI	Sidrap Palu	11.34	217	P	Pn	08 16 59.8	+1.3
BAKI	Biak	11.35	123	P	Pn	08 17 00.8	+2.1
BKB	Balikpapan	11.61	237	P	Pn	08 17 03.7	+1.5
SRPI	Serui, Papua	11.85	126	P	Pn	08 17 11.0	+5.6
BKSI	Bulukumba	12.25	212	P	Pn	08 17 12.1	+1.2
	52nm,0.8s,559nm						
MTKI	Muara Teweh, K	13.19	243	P	Pn	08 17 24.4	+0.7
KBKI	Kotabaru	13.39	232	P	P	08 17 30.9	-3.2
SAUI	Saumlaki	13.83	160	eP	P	08 17 38.9	0.0
MMRI	Maumere	14.36	198	ePn	Pn	08 17 39.3	-0.1
EDFI	Ende, Flores	14.64	200	P	Pn	08 17 41.6	-1.6
	194nm,0.9s,2µm						
SOEI	Soe	14.97	189	P	Pn	08 17 48.1	+0.6
SOEI	Soe	14.97	189	ePn	Pn	08 17 47.3	-0.2
	218nm,0.7s						
BATI	Baumata	15.52	191	Pn	Pn	08 17 54.7	+0.3
	59nm,0.3s,baz=45,slow=0.6,SNR=28						
BATI				LR	LR	08 24 02.2	
	comp=Z,912nm,21.7s,baz=44,slow=38						
BATI	Baumata	15.52	191	P	Pn	08 17 55.2	+0.8
JAY	Jayapura	15.97	118	Pn	Pn	08 17 57.6	-2.6
	1.4nm,0.3s,baz=246,slow=23,SNR=38						
JAY	Jayapura	15.97	118	P	Pn	08 17 55.1	-5.2
WBSI	Waikabubak, Su	16.35	206	P	Pn	08 18 03.8	-1.2
PLAI	Plampang	16.44	213	P	Pn	08 18 05.2	-0.8
TWSI	Taliwang, Sumb	16.86	215	P	Pn	08 18 11.2	-0.1
	357nm,0.9s,3µm						
SRBI	Singaraja	17.38	221	P	Pn	08 18 16.6	-1.1
IGBI	Denpasar	17.98	220	P	P	08 18 23.9	-1.0
JAGI	Jajag, Banyuwa	18.37	223	P	P	08 18 29.4	+0.2
JAGI	Jajag, Banyuwa	18.37	223	eP	Pn	08 18 29.6	-0.2
	254nm,1.0s						
TWG	Pinlang	18.39	344	eP	Pn	08 18 30.2	+0.1
	149nm,0.6s						
MTN	Manton Dam	18.40	166	P	P	08 18 27.4	-2.1
	baz=18,SNR=110						
MTN	Manton Dam	18.40	166	eP	P	08 18 27.5	-2.1
	211nm,0.8s						
KDU	Kakadu	18.62	162	P	P	08 18 30.1	-1.9
	baz=19,SNR=92						
GMJI	Gumukmas	18.71	225	P	P	08 18 32.5	-0.5
YULB	Yu-li	18.88	345	eP	P	08 18 33.6	-1.2
	22nm,0.7s						
TBJI	Tambak Boyo	18.94	231	P	Pn	08 18 38.2	+1.6
TPUB	Ta-pu	18.98	343	eP	P	08 18 35.1	-0.8
	64nm,0.6s						
SSLB	Suanglung	19.34	344	eP	P	08 18 38.7	-1.1
	49nm,0.7s						
YOJ	Yonaguni jima	19.54	350	eP	Pn	08 18 44.1	+0.4
	88nm,0.9s						
YOJ	Yonaguni jima	19.54	350	eP	Pn	08 18 44.1	+0.4
YOJ				pmax	pmax		
	comp=Z,88nm,0.9s						
NACB	Ninganchiao	19.55	346	eP	Pn	08 18 43.2	-0.6
	comp=Z,30nm,0.9s						
NGJI	Ngawi	19.58	231	P	P	08 18 42.2	-0.2
PWJI	Pagerwojo	19.73	229	P	P	08 18 41.8	-2.4
GUMO	Guam	19.84	64	P	P	08 18 44.5	-0.9
	comp=Z,6.0nm,0.3s,baz=178,slow=12,SNR=5.6						
GUMO				LR	LR	08 25 18.9	
	comp=Z,1µm,21.2s,baz=229,slow=33						
GUMO	Guam	19.84	64	eP	P	08 18 44.9	-0.4
GUMO	Guam	19.84	64	eP	P	08 18 44.9	-0.4
YHNB	Yeheng	20.08	346	eP	P	08 18 48.8	+0.9
	comp=Z,46nm,0.8s						
SMRI	Semarang	20.19	233	P	P	08 18 48.0	-1.1
SMRI	Semarang	20.19	233	eP	P	08 18 49.0	-0.1
	comp=Z,198nm,0.7s						
PCJI	Pacitan	20.32	229	P	P	08 18 48.7	-1.8
UGM	Wanagama	20.64	231	P	P	08 18 54.3	+0.3
UGM	Wanagama	20.64	231	eP	P	08 18 54.4	+0.3
	comp=Z,410nm,1.2s						
KNRA	Kununurra	20.78	174	P	P	08 18 55.3	-0.1
	baz=21,SNR=53						
QZH	Quanzhou	21.16	339	P	P	08 19 00.6	+1.1
QZH				S	S	08 22 46.2	-5.5
QZH				pmax	pmax		
	comp=Z,48nm,0.5s						
QZH				LR	LR		
	comp=Z,420nm,26.5s						
QZH				LR	LR		
	comp=Z,310nm,17.5s						
QZH				LR	LR		
	comp=Z,590nm,20.4s						
QIZ	Qiongzhong	21.43	312	P	P	08 19 02.3	-0.1
QIZ				sP	sP	08 19 21.8	-1.3
QIZ				S	S	08 22 51.5	-5.7

QIZ				pmax	pmax		
	comp=Z,18nm,1.3s						
QIZ				LR	LR		
	comp=Z,640nm,13.2s						
QIZ				LR	LR		
	comp=Z,510nm,17.2s						
QIZ				LR	LR		
	comp=Z,720nm,29.4s						
QIZ	**Qiongzhong**	**21.43**	**312**	*e*P	**P**	**08 19 02.3**	**-0.1**
	comp=Z,36nm,0.9s						
KPJI	**Karang Pucung**	**21.57**	**235**	P	**P**	**08 19 04.5**	**+0.5**
JOW	**Kunigami**	**21.64**	**4**	P	**P**	**08 19 04.8**	**+0.2**
	comp=Z,29nm,0.5s,baz=174,slow=8.4,SNR=11						
JOW				LR	LR	08 26 51.5	
	comp=Z,372nm,21.9s,baz=146,slow=35						
JOW	**Kunigami**	**21.64**	**4**	*e*P	**P**	**08 19 05.0**	**+0.4**
	comp=Z,40nm,0.7s						
GZH	**Guangzhou**	**21.99**	**326**⇓	*i*P	**P**	**08 19 10.5**	**+2.1**
GZH				S	**S**	**08 23 09.7**	**+1.9**
GZH				LR	LR		
	comp=Z,730nm,20.4s						
GZH				LR	LR		
	comp=Z,470nm,18.6s						
LEM	**Lembang**	**22.39**	**238**	P	**P**	**08 19 13.3**	**+0.4**
	comp=Z,172nm,0.7s,baz=60,slow=8.7,SNR=22						
LEM	**Lembang**	**22.39**	**238**	P	**P**	**08 19 14.0**	**+1.0**
CISI	**Cisompet, Garu**	**22.61**	**236**	*e*P	**P**	**08 19 14.3**	**-1.0**
	comp=Z,168nm,0.9s						
FITZ	**Fitzroy Crossi**	**23.10**	**182**	P	**P**	**08 19 20.0**	**-0.1**
	baz=23,SNR=153						
FITZ	**Fitzroy Crossi**	**23.10**	**182**	P	**P**	**08 19 18.3**	**-1.7**
	comp=Z,421nm,1.1s,baz=9.5,slow=9.0,SNR=127						
FITZ				LR	LR	08 29 48.4	
	comp=Z,206nm,20.6s,baz=24,slow=40						
FITZ	**Fitzroy Crossi**	**23.10**	**182**	*e*P	**P**	**08 19 18.7**	**-1.4**
	comp=Z,438nm,1.0s						
UBPT	**Khong Chiam**	**23.12**	**297**	P	**P**	**08 19 19.5**	**-0.9**
	comp=Z,62nm,1.2s						
CGJI	**Cibinong**	**23.94**	**241**	P	**P**	**08 19 26.2**	**-1.8**
MDSI	**Maura Dua**	**24.38**	**247**	P	**P**	**08 19 31.3**	**-0.7**
KASI	**Kota Agung**	**24.51**	**245**	P	**P**	**08 19 31.5**	**-1.7**
LWLI	**Liwa**	**24.70**	**246**	P	**P**	**08 19 33.3**	**-1.7**
PMG	**Port Moresby**	**25.04**	**125**	LR	LR	08 31 02.4	
	comp=Z,224nm,21.0s,baz=314,slow=40						
COEN	**Coen**	**25.08**	**139**	P	**P**	**08 19 38.3**	**0.0**
	baz=25,SNR=116						
COEN	**Coen**	**25.08**	**139**	*e*P	**P**	**08 19 37.9**	**-0.4**
	comp=Z,65nm,0.8s						
SKNT	**Sakolnakorn**	**25.12**	**300**	P	**P**	**08 19 38.4**	**-0.3**
	comp=Z,29nm,0.7s,comp=Z,566nm						
MNAI	**Manna**	**25.46**	**249**	P	**P**	**08 19 41.3**	**-0.6**
MNAI	**Manna**	**25.46**	**249**	*e*P	**P**	**08 19 40.9**	**-0.9**
	comp=Z,716nm,1.5s						
MASI	**Maura Aman, Be**	**25.72**	**252**	P	**P**	**08 19 44.7**	**+0.5**
BKNI	**Bangkinang**	**26.00**	**260**	*e*P	**P**	**08 19 46.5**	**-0.3**
	comp=Z,156nm,0.7s						
WRAB	**Tennant Creek**	**26.03**	**163***d*	*i*P	**P**	**08 19 46.7**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,191nm,0.8s						
WRA	**Warramunga Arr**	**26.04**	**163**	P	**P**	**08 19 46.1**	**-0.9**
	comp=Z,154nm,0.5s,baz=342,slow=10.0,SNR=303						
WRA				ScP	**ScP**	**08 26 50.2**	**+1.6**
	comp=Z,12nm,0.8s,baz=340,slow=3.3,SNR=16						
WRA				LR	LR	08 31 39.4	
	comp=Z,315nm,20.3s,baz=5.0,slow=40						
WR1	**Warramunga Arr**	**26.04**	**163**	*e*P	**P**	**08 19 46.1**	**-0.9**
	comp=Z,245nm,0.7s						
WR1				*e*ScP	**ScP**	**08 26 50.2**	**+1.6**
WC3	**Warramunga Arr**	**26.06**	**163**	*e*P	**P**	**08 19 46.2**	**-1.1**
	comp=Z,263nm,0.6s						
NONG	**Nongkai**	**26.31**	**301**	P	**P**	**08 19 49.6**	**+0.1**
	comp=Z,1.0nm,1.0s,comp=Z,83nm						
SSE	**Sheshan**	**26.34**	**349**	P	**P**	**08 19 51.4**	**+1.8**
SSE				S	**S**	**08 24 18.4**	**0.0**
SSE				pmax	pmax		
	comp=Z,28nm,0.8s						
SSE				LR	LR		
	comp=Z,170nm,21.1s						
SSE				LR	LR		
	comp=Z,190nm,14.9s						
CBIJ	**Chichi jima**	**26.41**	**33**	*e*P	**P**	**08 19 47.6**	**-2.6**
	comp=Z,177nm,0.7s						
JCJ	**Chichijima**	**26.41**	**33**	P	**P**	**08 19 48.4**	**-1.8**
	comp=Z,171nm,0.5s,baz=260,slow=18,SNR=17						
TRTT	**Trang**	**26.90**	**277**	P	**P**	**08 19 56.5**	**+1.6**
	comp=Z,16nm,1.0s,comp=Z,460nm						
MBWA	**Marble Bar**	**26.98**	**194**	*e*P	**P**	**08 19 55.0**	**-0.5**
	comp=Z,175nm,0.9s						
MNSI	**Mandailing Nat**	**27.35**	**262**	P	**P**	**08 19 57.5**	**-1.4**
KRAB	**Krabi**	**27.42**	**278**	P	**P**	**08 20 00.8**	**+1.3**
PBKT	**Sadao Pong**	**27.61**	**296**	P	**P**	**08 20 01.8**	**+0.6**
	comp=Z,32nm,0.8s						
PSI	**Prapat**	**27.74**	**266**	P	**P**	**08 20 01.8**	**-0.7**
	comp=Z,38nm,0.8s,baz=0.8,slow=1.7,SNR=24						
PSI				LR	LR	08 33 34.5	
	comp=Z,398nm,18.4s,baz=90,slow=42						
PSI	**Prapat**	**27.74**	**266**	*e*P	**P**	**08 20 01.5**	**-1.0**
	comp=Z,47nm,0.8s						
PSI				*e*PcP	**PcP**	**08 23 18.4**	**+0.2**
PSI	**Prapat**	**27.74**	**266**	*e*P	**P**	**08 20 01.5**	**-1.0**
PSI				*e*		08 23 18.4	
PSI				pmax	pmax		
	comp=Z,47nm,0.8s						
PHET	**Kaeng Krachan**	**27.75**	**288**	P	**P**	**08 20 04.3**	**+1.9**
	comp=Z,41nm,0.7s,comp=Z,377nm						
NJ2	**Nanjing**	**27.76**	**346**	*e*P	**P**	**08 20 02.6**	**+0.3**
NJ2				pP	**pP**	**08 20 19.7**	**+2.6**
NJ2				sP	**sP**	**08 20 24.3**	**+0.2**
NJ2				pmax	pmax		
	comp=Z,26nm,0.9s						
WHN	**Wuhan**	**27.81**	**337**⇓	*i*P	**P**	**08 20 03.7**	**+0.9**
WHN				pP	**pP**	**08 20 17.6**	**+0.1**
WHN				S	**S**	**08 24 41.6**	**0.0**
WHN				LR	LR		
	comp=Z,490nm,11.4s						
WHN				LR	LR		
	comp=Z,1µm,19.1s						
WHN				LR	LR		
	comp=Z,1µm,21.5s						
JNU	**Nakatsue**	**28.13**	**8**	P	**P**	**08 20 05.0**	**-0.8**
	comp=Z,13nm,0.7s,baz=171,slow=2.6,SNR=9.0						
JNU				LR	LR	08 30 53.7	
	comp=Z,282nm,21.5s,baz=123,slow=36						
JNU	**Nakatsue**	**28.13**	**8**	*e*P	**P**	**08 20 05.1**	**-0.6**
	comp=Z,33nm,0.8s						
PHIT	**Phitsanulok**	**28.33**	**297**	P	**P**	**08 20 10.7**	**+3.1**
	comp=Z,31nm,1.0s						
QIS	**Mount Isa**	**28.53**	**154**	P	**P**	**08 20 09.5**	**+0.2**
	baz=29,SNR=123						
GYA	**Guiyang**	**28.53**	**320**	P	**P**	**08 20 10.6**	**+1.1**
GYA				pP	pP	08 20 26.0	+1.8
GYA				sP	sP	08 20 33.5	+2.2
GYA				PP	**PnPn**	**08 21 05.2**	**+3.2**
GYA				PcP	**PcP**	**08 23 20.7**	**+0.7**
GYA				S	**S**	**08 24 53.0**	**-0.4**
GYA				sS	sS	08 25 20.3	+1.7
GYA				SS	**SnSn**	**08 26 23.6**	**+5.8**
GYA				pmax	pmax		
	comp=Z,30nm,0.8s						
GYA				pmax	pmax		
	comp=Z,140nm,5.2s						
GYA				LR	LR		
	comp=Z,540nm,16.8s						
GYA				LR	LR		
	comp=Z,460nm,16.4s						
GYA				LR	LR		
	comp=Z,610nm,18.6s						
SRDT	**SRDT**	**28.59**	**291**	P	**P**	**08 20 11.2**	**+1.2**
	comp=Z,40nm,0.6s,comp=Z,3µm						
UTHA	**Uthaitani**	**28.65**	**293**	P	**P**	**08 20 11.4**	**+1.0**
	comp=Z,15nm,0.6s,comp=Z,354nm						
NANT	**Nan**	**28.72**	**300**	P	**P**	**08 20 12.6**	**+1.5**
	comp=Z,11nm,0.5s,comp=Z,423nm						
KCSI	**Kotacane, Aceh**	**28.82**	**268**	P	**P**	**08 20 10.5**	**-1.6**
MTSU	**Mount Surprise**	**28.96**	**143**	P	**P**	**08 20 13.8**	**+0.7**
	baz=29,SNR=52						
UMPA	**Umpang Tak**	**29.39**	**294**	P	**P**	**08 20 20.7**	**+3.7**
	comp=Z,14nm,1.0s,comp=Z,1µm						
TPTI		**29.43**	**268**	P	**P**	**08 20 15.1**	**-2.4**
AS31	**Alice Springs**	**29.48**	**166**	*e*P	**P**	**08 20 17.5**	**-0.2**
	comp=Z,16nm,0.8s						
AS31				*e*PcP	**PcP**	**08 23 21.9**	**-0.4**
AS31				*e*ScP	**ScP**	**08 27 00.7**	**+1.5**
ASAR	**Alice Springs**	**29.48**	**166**	P	**P**	**08 20 17.3**	**-0.5**
	comp=Z,18nm,0.5s,baz=339,slow=6.8,SNR=194						
ASAR				PcP	**PcP**	**08 23 21.9**	**-0.4**
	comp=Z,11nm,0.8s,baz=339,slow=2.8,SNR=4.7						
ASAR				ScP	**ScP**	**08 27 00.7**	**+1.5**
	comp=Z,8.2nm,0.8s,baz=344,slow=2.8,SNR=12						
ASAR	**Alice Springs**	**29.48**	**166**	P	**P**	**08 20 17.3**	**-0.5**
ASAR						08 23 21.9	
ASAR						08 27 00.7	
ASAR				pmax	pmax		
	comp=Z,20nm,0.5s						
ASAR				pmax	pmax		
	comp=Z,11nm,0.8s						
ASAR				pmax	pmax		
	comp=N,8.0nm,0.8s						
AS01	**Alice Springs**	**29.49**	**166**	*e*P	**P**	**08 20 17.1**	**-0.7**
PAYA	**Payao**	**29.67**	**301**	P	**P**	**08 20 20.3**	**+0.8**
	comp=N,14nm,0.6s,comp=N,142nm						
ENH	**Enshi**	**29.78**	**329**	*e*P	**P**	**08 20 20.1**	**-0.3**
	comp=N,52nm,0.9s						
WRKA	**Warakurna**	**30.02**	**177**	P	**P**	**08 20 22.4**	**-0.1**
	baz=30,SNR=251						
CM01	**Chiang Mai Arr**	**30.08**	**298**	*e*P	**P**	**08 20 22.9**	**-0.2**
CM01				*e*PcP	**PcP**	**08 23 25.2**	**+1.3**
CM31	**Chiang Mai Arr**	**30.11**	**298**	*e*P	**P**	**08 20 24.4**	**+1.0**
CM31				*e*PcP	**PcP**	**08 23 23.8**	**-0.2**
CM31				*e*ScP	**ScP**	**08 27 03.5**	**+2.1**
CMAR	**Chiang Mai Arr**	**30.11**	**298**	P	**P**	**08 20 23.2**	**-0.2**
	comp=N,7.0nm,0.7s,baz=109,slow=7.2,SNR=32						
CMAR				PcP	**PcP**	**08 23 23.8**	**-0.2**
	comp=N,5.3nm,0.7s,baz=133,slow=1.1,SNR=6.4						
CMAR				ScP	**ScP**	**08 27 03.5**	**+2.1**
	comp=N,3.6nm,0.8s,baz=142,slow=1.5,SNR=8.6						
CMAR				LR	LR	08 32 00.6	
	comp=N,469nm,22.0s,baz=109,slow=36						
GIRL	**Giralia**	**30.15**	**203**	P	**P**	**08 20 24.2**	**+0.6**
	baz=30,SNR=9.1						
CMMT	**Chiang Mai**	**30.24**	**299**	P	**P**	**08 20 25.4**	**+0.8**
	comp=N,24nm,0.6s,comp=N,411nm						
CHTO	**Chiang Mai**	**30.25**	**299**	*e*P	**P**	**08 20 25.2**	**+0.7**
	comp=N,22nm,0.9s						
CHTO				*e*PcP	**PcP**	**08 23 25.4**	**+1.1**
CHTO	**Chiang Mai**	**30.25**	**299**	*e*P	**P**	**08 20 25.3**	**+0.7**
CHTO				*e*		08 23 25.4	
CHTO				pmax	pmax		
	comp=Z,22nm,0.9s						
CHTO	**Chiang Mai**	**30.25**	**299**	P	**P**	**08 20 25.6**	**+1.0**
	comp=Z,101nm,0.7s						
KMI	**Kunming**	**30.35**	**313**	P	**P**	**08 20 26.6**	**+0.9**
KMI				PP	**PnPn**	**08 21 27.9**	**+1.9**
KMI				S	**S**	**08 25 20.8**	**-1.3**
KMI				SS	**ScP**	**08 27 03.2**	**+1.0**
KMI				pmax	pmax		
	comp=Z,30nm,1.0s						
KMI				pmax	pmax		
	comp=Z,54nm,3.1s						
KMI				LR	LR		
	comp=Z,460nm,24.9s						
KMI				LR	LR		
	comp=Z,270nm,22.4s						
KMI				LR	LR		
	comp=Z,780nm,27.5s						
JHJ	**Hachijo jima 2**	**30.43**	**22**	LR	LR	08 30 43.2	
	comp=Z,290nm,22.0s,baz=165,slow=32						
CMAI	**Chiengmai2**	**30.61**	**301**	P	**P**	**08 20 28.8**	**+0.8**
	comp=Z,3.5nm,0.8s						
TJN	**Taejon**	**31.11**	**1**	*e*P	**P**	**08 20 32.0**	**0.0**
INU	**Inuyama**	**31.57**	**16**	*e*P	**P**	**08 20 35.2**	**-0.8**
	comp=Z,22nm,0.8s						
CTA	**Charters Tower**	**31.62**	**143**	P	**P**	**08 20 38.0**	**+1.3**
	comp=Z,40nm,0.8s,baz=324,slow=13,SNR=26						
CTA				LR	LR	08 34 41.0	
	comp=Z,434nm,18.8s,baz=338,slow=39						
CTAO	**Charters Tower**	**31.62**	**143**	*e*P	**P**	**08 20 38.0**	**+1.3**
	comp=Z,36nm,0.8s						
CTAO	**Charters Tower**	**31.62**	**143**	*e*P	**P**	**08 20 38.0**	**+1.3**
CTAO				pmax	pmax		
	comp=Z,36nm,0.8s						
TIA	**Tai’an**	**32.15**	**345**	P	**P**	**08 20 41.5**	**+0.4**
TIA				S	**S**	**08 25 49.5**	**-0.1**
TIA				pmax	pmax		
	comp=Z,14nm,1.0s						
TIA				pmax	pmax		
	comp=Z,51nm,4.1s						
TIA				LR	LR		
	comp=Z,290nm,16.3s						
TIA				LR	LR		
	comp=Z,140nm,16.9s						
TIA				LR	LR		
	comp=Z,420nm,21.0s						
KS15	**Wonju Array Si**	**32.19**	**2**	*e*P	**P**	**08 20 42.9**	**+1.5**
KS15				*e*PcP	**PcP**	**08 23 29.6**	**+0.6**
KSRS	**Korea Array**	**32.20**	**2**	P	**P**	**08 20 42.0**	**+0.5**
	comp=Z,7.0nm,0.6s,baz=179,slow=10,SNR=14						
KSRS				PcP	**PcP**	**08 23 29.6**	**+0.5**
	comp=Z,6.7nm,0.7s,baz=189,slow=2.5,SNR=12						
KSRS				LR	LR	08 32 51.1	
	comp=Z,192nm,20.8s,baz=180,slow=35						
KS01	**Wonju Array Si**	**32.22**	**2**	*e*P	**P**	**08 20 42.0**	**+0.3**
KS01				*e*PcP	**PcP**	**08 23 29.7**	**+0.5**
MEEK	**Meekatharra**	**32.52**	**193**	P	**P**	**08 20 44.1**	**-0.4**
	baz=33,SNR=98						
MAJO	**Matsushiro**	**33.02**	**17**	*e*P	**P**	**08 20 48.6**	**-0.2**
	comp=Z,10nm,0.8s						
MAJO				*e*PcP	**PcP**	**08 23 31.6**	**+0.1**
MAJO				*e*ScP	**ScP**	**08 27 13.0**	**+2.2**
MAJO	**Matsushiro**	**33.02**	**17**⇑	*e*P	**P**	**08 20 48.4**	**-0.4**
MAJO				pmax	pmax		
	comp=Z,4.0nm,0.5s						
MAT	**Matsushiro**	**33.02**	**17**	P	**P**	**08 20 48.9**	**+0.1**
MJAR	**Matsushiro Arr**	**33.02**	**17**	P	**P**	**08 20 47.9**	**-0.9**
	comp=Z,3.0nm,0.5s,baz=186,slow=9.3,SNR=12						
MJAR				PcP	**PcP**	**08 23 31.6**	**+0.1**
	comp=Z,5.5nm,0.7s,baz=187,slow=3.7,SNR=6.4						
MJAR				ScP	**ScP**	**08 27 12.8**	**+2.1**
	comp=Z,16nm,1.1s,baz=214,slow=5.0,SNR=19						
MJB9	**Matsu-Tunnel**	**33.02**	**17**	*e*P	**P**	**08 20 48.5**	**-0.3**
	comp=Z,10nm,0.8s						
XAN	**Xi’an**	**33.14**	**332**	P	**P**	**08 20 48.5**	**-1.4**
XAN				S	**S**	**08 26 00.6**	**-4.6**
XAN				pmax	pmax		
	comp=Z,34nm,1.3s						
XAN				pmax	pmax		
	comp=Z,86nm,3.6s						
XAN				LR	LR		
	comp=Z,400nm,23.0s						
XAN				LR	LR		
	comp=Z,520nm,21.6s						
XAN				LR	LR		
	comp=Z,590nm,20.1s						
CD2	**Chengdu**	**33.48**	**323**	P	**P**	**08 20 53.0**	**+0.1**
CD2				pP	pP	08 21 08.3	+0.5
CD2				sP	sP	08 21 15.8	+1.0
CD2				S	**S**	**08 26 11.5**	**+1.0**
CD2				sS	sS	08 26 38.1	+2.3
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,220nm,5.0s						
CD2				LR	LR		
	comp=Z,640nm,17.4s						
CD2				LR	LR		
	comp=Z,1µm,15.4s						
CD2				LR	LR		
	comp=Z,800nm,15.9s						
DL2	**Dalian**	**33.93**	**353**	P	**P**	**08 20 58.6**	**+2.0**
DL2				sP	**sP**	**08 21 18.1**	**-0.5**
DL2				S	**S**	**08 26 17.0**	**-0.2**
DL2				pmax	pmax		
	comp=Z,89nm,0.9s						
DL2				pmax	pmax		
	comp=Z,95nm,4.1s						
DL2				LR	LR		
	comp=Z,190nm,21.4s						
DL2				LR	LR		
	comp=Z,280nm,22.6s						
DL2				LR	LR		
	comp=Z,400nm,21.8s						
TIY	**Taiyuan**	**34.93**	**340**	*e*P	**P**	**08 21 03.7**	**-1.7**
TIY				pP	**pP**	**08 21 18.2**	**-2.1**
TIY				S	**S**	**08 26 40.0**	**+7.2**
TIY				sS	**sS**	**08 26 58.9**	**+0.7**
TIY				pmax	pmax		
	comp=Z,60nm,0.6s						
TIY				pmax	pmax		
	comp=Z,140nm,5.4s						
TIY				LR	LR		
	comp=Z,250nm,11.9s						
TIY				LR	LR		
	comp=Z,88nm,8.9s						
TIY				LR	LR		
	comp=Z,230nm,20.0s						
MORW	**Morawa**	**35.49**	**196**	P	**P**	**08 21 09.9**	**-0.3**
	baz=36,SNR=24						
FORT	**Forrest**	**35.73**	**178**	P	**P**	**08 21 12.2**	**0.0**
	baz=36,SNR=148						
FORT	**Forrest**	**35.73**	**178**	*e*P	**P**	**08 21 12.1**	**-0.1**
	comp=Z,291nm,0.7s						
QLP	**Quilpie**	**35.83**	**152**	P	**P**	**08 21 13.0**	**-0.2**
	baz=36,SNR=24						
BJT	**Baijiatuau**	**36.00**	**346**	*e*P	**P**	**08 21 15.2**	**+0.8**
	comp=Z,105nm,0.7s						
BJT	**Baijiatuau**	**36.00**	**346**	*e*P	**P**	**08 21 15.2**	**+0.8**
BJT				pmax	pmax		
	comp=Z,105nm,0.7s						
BJI	**Beijing**	**36.02**	**346**⇑	*i*P	**P**	**08 21 15.2**	**+0.6**
BJI				pP	**pP**	**08 21 30.5**	**+0.9**
BJI				sP	**sP**	**08 21 38.6**	**+2.0**
BJI				S	**S**	**08 26 51.4**	**+2.2**
BJI				sS	**sS**	**08 27 14.9**	**+0.2**
BJI				pmax	pmax		
	comp=Z,190nm,0.8s						
BJI				LR	LR		
	comp=Z,420nm,20.4s						
BJI				LR	LR		
	comp=Z,270nm,21.9s						
BJI				LR	LR		
	comp=Z,370nm,20.8s						
HNR	**Honiara**	**36.21**	**113**	LR	LR	08 34 51.7	
	comp=Z,221nm,20.9s,baz=279,slow=34						
KMBL	**Kambalda**	**36.57**	**187**	P	**P**	**08 21 19.4**	**0.0**
	baz=37,SNR=91						
LKP	**Lekhapani**	**36.70**	**310**	*e*P	**P**	**08 21 16.9**	**-3.7**
SAIH	**SAIHA**	**36.81**	**301**	*e*P	**P**	**08 21 20.3**	**-1.5**
IMP	**Imphal**	**36.99**	**305**	*e*P	**P**	**08 21 21.8**	**-1.4**
IMP				IAmb	IAmb	08 21 22.9	
	comp=Z,28nm,0.8s						
MOKO	**MOKOCHONG**	**37.23**	**308**	*e*P	**P**	**08 21 24.4**	**-0.9**
KOHI	**KOHIMA**	**37.26**	**307**	*e*P	P	08 21 20.2	-5.4
KOHI				IAmb	IAmb	08 21 25.2	
	comp=Z,97nm,1.4s						
LZH	**Lanzhou**	**37.26**	**329**	*e*P	**P**	**08 21 25.8**	**+0.3**
LZH				pP	pP	08 21 42.5	+2.0
LZH				sP	sP	08 21 48.5	+1.0
LZH				PP	**PnPn**	**08 22 59.3**	**+6.7**
LZH				PcP	**PcP**	**08 23 45.8**	**+1.7**
LZH				*e*S	**S**	**08 27 07.2**	**-1.5**
LZH				sS	sS	08 27 39.0	+4.7
LZH				SS	**SnSn**	**08 29 43.0**	**-6.4**
LZH				pmax	pmax		
	comp=Z,83nm,1.0s						
LZH				pmax	pmax		
	comp=Z,310nm,4.1s						
LZH				LR	LR		
	comp=Z,1µm,13.0s						
LZH				LR	LR		
	comp=Z,1µm,13.8s						
LZH				LR	LR		
	comp=Z,2µm,17.9s						
KLBR	**Kellerberrin**	**37.48**	**193**	P	**P**	**08 21 27.0**	**-0.1**
	baz=38,SNR=40						
MSHR	**Mys Shultsa**	**37.51**	**5***c*	*i*P	**P**	**08 21 29.3**	**+2.1**
BRDH	**Bariadhala**	**38.03**	**301**	LR	LR	08 38 26.3	
	comp=Z,297nm,18.9s,baz=163,slow=38						
RMQ	**Roma**	**38.04**	**147**	P	**P**	**08 21 31.9**	**0.0**
	baz=38,SNR=14						
HHC	**Hu-ho-hao-te**	**38.05**	**341**	*e*P	**P**	**08 21 34.5**	**+2.5**
MUN	**Mundaring**	**38.21**	**194**	P	**P**	**08 21 32.8**	**-0.4**
	baz=38,SNR=30						
ITAN	**ITANAGAR**	**38.24**	**309**	*e*P	**P**	**08 21 33.7**	**0.0**
ZIRO	**ZIRO**	**38.33**	**309**	*e*P	**P**	**08 21 34.4**	**-0.3**
BELO	**BELONIA**	**38.41**	**301**	*e*x	**P**	**08 21 36.8**	**+1.7**
EIDS	**Eidsvold**	**38.51**	**143**	P	**P**	**08 21 36.1**	**+0.2**
	baz=39,SNR=31						
EIDS	**Eidsvold**	**38.51**	**143**	*e*P	**P**	**08 21 36.1**	**+0.2**
	comp=Z,84nm,0.8s						
CN2	**Changchun**	**38.53**	**359**	*e*P	**P**	**08 21 36.4**	**+0.6**
CN2				*e*sP	sP	08 21 58.9	+1.0
CN2				*e*S	**S**	**08 27 28.0**	**+0.7**
CN2				SS	**SS**	**08 30 11.7**	**-7.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,260nm,20.0s						
CN2				LR	LR		
	comp=Z,210nm,20.0s						
CN2				LR	LR		
	comp=Z,230nm,23.0s						
TEZP	**TEZPUR**	**38.72**	**307**	*e*P	**P**	**08 21 37.1**	**-0.5**
BBOO	**Buckleboo**	**38.77**	**167**	P	**P**	**08 21 38.0**	**0.0**
	baz=39,SNR=71						
BBOO	**Buckleboo**	**38.77**	**167**	*e*P	**P**	**08 21 38.4**	**+0.4**
	comp=Z,90nm,0.6s						
AGT	**Agartala**	**38.83**	**302**	*e*P	**P**	**08 21 36.3**	**-2.3**
NWAO	**Narrogin (SRO)**	**38.88**	**193**	P	**P**	**08 21 39.1**	**+0.2**
	baz=39,SNR=63						
NWAO	**Narrogin (SRO)**	**38.88**	**193**	P	**P**	**08 21 39.1**	**+0.2**
	comp=Z,75nm,0.6s,baz=253,slow=8.3,SNR=78						
NWAO				LR	LR	08 39 17.6	
	comp=Z,84nm,20.1s,baz=240,slow=39						
NWAO	**Narrogin (SRO)**	**38.88**	**193**	*e*P	**P**	**08 21 39.0**	**+0.1**
	comp=Z,329nm,1.4s						
SHL	**Shillong**	**38.99**	**305**	*e*P	**P**	**08 21 38.8**	**-1.4**
USRK	**Ussuriysk Ar.**	**39.20**	**6**	P	**P**	**08 21 42.3**	**+0.9**
	comp=Z,9.0nm,0.6s,baz=179,slow=8.0						
USRK				PcP	**PcP**	**08 23 50.2**	**+0.5**
	baz=173,slow=3.4						
USRK				LR	LR	08 36 32.8	
	comp=Z,189nm,21.4s,baz=183,slow=34						
GUWA	**GUWAHATI**	**39.42**	**306**	*e*P	**P**	**08 21 42.4**	**-1.1**
GUWA				IAmb	IAmb	08 21 43.9	
	comp=Z,55nm,1.1s						
MDJ	**Mudanjiang**	**39.42**	**3**	P	**P**	**08 21 42.0**	**-1.2**
MDJ				pP	pP	08 21 57.6	-0.8
MDJ				sP	sP	08 22 05.1	-0.3
MDJ				S	**S**	**08 27 41.6**	**+0.9**
MDJ				sS	sS	08 28 08.6	+2.3
MDJ				ScS	**ScS**	**08 31 43.6**	**-2.5**
MDJ				pmax	pmax		
	comp=Z,41nm,0.9s						
MDJ				LR	LR		
	comp=Z,240nm,26.7s						
MDJ				LR	LR		
	comp=Z,160nm,23.5s						
MDJ				LR	LR		
	comp=Z,300nm,23.5s						
MDJ	**Mudanjiang**	**39.42**	**3**	*e*P	**P**	**08 21 44.5**	**+1.3**
STKA	**Stephens Creek**	**39.46**	**160**	P	**P**	**08 21 44.0**	**+0.3**
	baz=40,SNR=344						
STKA	**Stephens Creek**	**39.46**	**160**	P	**P**	**08 21 44.0**	**+0.3**
	comp=Z,56nm,0.4s,baz=339,slow=7.7,SNR=113						
STKA				LR	LR	08 40 10.4	
	comp=Z,196nm,21.2s,baz=334,slow=39						
STKA	**Stephens Creek**	**39.46**	**160**	*e*P	**P**	**08 21 43.9**	**+0.1**
	comp=Z,18nm,1.0s						
STKA	**Stephens Creek**	**39.46**	**160**	*e*P	**P**	**08 21 43.9**	**+0.1**
STKA				pmax	pmax		
	comp=Z,19nm,1.0s						
HTT	**Hallett**	**40.07**	**164**	P	**P**	**08 21 49.1**	**+0.2**
	baz=40,SNR=16						
TURI	**Tura**	**40.25**	**304**	*e*P	**P**	**08 21 48.9**	**-1.6**
TEY	**Ternei**	**40.70**	**11**	*e*P	P	08 21 41.0	-13
CMSA	**Cobar Meteorol**	**40.74**	**155**	P	**P**	**08 21 54.8**	**+0.5**
	baz=41,SNR=82						
H11S3	**WAKE ISLAND Hy**	**41.28**	**68**	T	T	09 05 58.7	
	baz=253,slow=78,SNR=6.2						
H11S1	**WAKE ISLAND Hy**	**41.29**	**68**	T	T	09 06 02.6	
	baz=253,slow=78,SNR=4.8						
H11S2	**WAKE ISLAND Hy**	**41.29**	**68**	T	T	09 05 59.2	
	baz=253,slow=78,SNR=5.6						
ASAJ	**Asahikawa**	**41.30**	**17**	P	**P**	**08 21 59.2**	**+0.5**
	comp=Z,16nm,0.6s,baz=209,slow=10,SNR=21						
ASAJ	**Asahikawa**	**41.30**	**17**	*e*P	**P**	**08 21 58.5**	**-0.2**
	comp=Z,21nm,0.7s						
LSA	**Lhasa**	**41.46**	**310**	P	**P**	**08 22 01.6**	**+0.7**
LSA				pmax	pmax		
	comp=Z,40nm,0.9s						
LSA	**Lhasa**	**41.46**	**310**	*e*P	**P**	**08 22 01.7**	**+0.8**
	comp=Z,36nm,1.0s						
LSA	**Lhasa**	**41.46**	**310**	*e*P	**P**	**08 22 01.7**	**+0.8**
LSA				pmax	pmax		
	comp=Z,36nm,1.0s						
H11N1	**WAKE ISLAND Hy**	**41.76**	**66**	T	T	09 06 40.4	

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       baz=255,slow=75,SNR=13
H11N2  WAKE ISLAND Hy 41.77  66   T     T      09 06 41.6
       baz=255,slow=75,SNR=9.1
H11N3  WAKE ISLAND Hy 41.78  66   T     T      09 06 48.6
       baz=255,slow=75,SNR=20
GTA    Gaotai         41.86 328 ⇑P     P      08 22 03.2 -0.5
GTA                              PcP   PcP    08 23 59.5 +0.9
GTA                              PcS   PcS    08 27 49.4 -0.9
GTA                              S     S      08 28 21.2 +3.7
GTA                              pmax  pmax
       comp=Z,9.0nm,1.3s
GTA                              pmax  pmax
       comp=Z,120nm,5.4s
GTA                              LR    LR
       comp=Z,380nm,21.6s
GTA                              LR    LR
       comp=Z,440nm,21.6s
GTA                              LR    LR
       comp=Z,920nm,23.2s
GTK    Tadong         42.39 306 eP     P      08 22 05.3 -2.9
BWNR   Bhubaneshwar   42.44 295 ex     P      08 22 00.7 -7.7
ARMA   Armidale       42.68 147  P     P      08 22 11.3 +0.9
       baz=43,SNR=85
ARMA   Armidale       42.68 147 eP     P      08 22 11.1 +0.7
       comp=Z,86nm,0.7s
TAPN   Taplejung      43.13 305 eP     P      08 22 14.3  0.0
       comp=Z,45nm,0.5s
ODAN   Odare          43.20 304 eP     P      08 22 14.8  0.0
       comp=Z,86nm,0.4s
RAMN   Ramite         43.88 304 eP     P      08 22 20.6 +0.2
       comp=Z,125nm,0.7s
YSS    Yuzh-Sakhalins 43.93  16 eP     P      08 22 20.2 +0.1
YSS                             e             08 22 33.4
YSS                              pmax  pmax
       comp=Z,20nm,0.6s
YSS                              MLR   MLR
       comp=Z,200nm,15.0s
ARPS   Mount Arapiles 44.03 162  P     P      08 22 21.9 +0.8
       baz=44,SNR=105
KLR    Kul'dur        44.16   5d iP    P      08 22 22.0 +0.1
YNG    Young          44.27 154  P     P      08 22 24.1 +1.1
       baz=44,SNR=36
JIRN   Jiri           44.49 305 eP     P      08 22 25.3 -0.1
       comp=Z,147nm,0.6s
GUN    Gumba          44.84 305 eP     P      08 22 27.7 -0.4
       comp=Z,122nm,0.7s
PKIN   Phulchoki      45.11 304 eP     P      08 22 29.3 -0.9
       comp=Z,27nm,0.6s
KKN    Kakani         45.29 305 eP     P      08 22 30.7 -0.8
       comp=Z,31nm,0.4s
DMN    Daman          45.36 304 eP     P      08 22 31.7 -0.5
       comp=Z,71nm,0.9s
CAN    Canberra       45.40 154 eP     P      08 22 31.8 -0.2
       comp=Z,49nm,0.7s
CAN    Canberra       45.40 154 eP     P      08 22 31.8 -0.2
CAN                              pmax  pmax
       comp=Z,49nm,0.7s
CNB    Canberra Magne 45.55 154  P     P      08 22 34.7 +1.5
       baz=46,SNR=16
PALK   Pallekele      45.70 275  P     P      08 22 33.6 -1.1
       comp=Z,3.8nm,0.5s,baz=111,slow=6.9,SNR=3.1
PALK                             PcP   PcP    08 24 12.4 +0.4
       comp=Z,7.5nm,0.5s,baz=115,slow=2.3,SNR=4.9
PALK                             LR    LR     08 44 40.2
       comp=Z,134nm,18.7s,baz=155,slow=40
PALK   Pallekele      45.70 275 eP     P      08 22 33.6 -1.1
       comp=Z,18nm,0.8s
PALK                            ePcP   PcP    08 24 12.4 +0.4
ULN    Ulaanbaatar    45.77 342 eP     P      08 22 35.0 +0.1
       comp=Z,37nm,0.8s
ULN    Ulaanbaatar    45.77 342 eP     P      08 22 35.0 +0.1
ULN                              pmax  pmax
       comp=Z,37nm,0.8s
GKN    Gorkha         45.90 305 eP     P      08 22 35.6 -0.6
       comp=Z,32nm,0.4s
SONA0  Songino Array  45.95 341 eP     P      08 22 36.6 +0.3
SONA0                           ePcP   PcP    08 24 12.8 +0.4
SONM   Songino Array  45.95 341  P     P      08 22 36.6 +0.3
       comp=Z,15nm,0.7s,baz=159,slow=7.5,SNR=78
SONM                             PcP   PcP    08 24 12.8 +0.4
       comp=Z,13nm,0.7s,baz=160,slow=2.6,SNR=7.5
SONM                             LR    LR     08 43 07.3
       comp=Z,154nm,20.1s,baz=156,slow=38
SONA1  Songino Array  45.96 341 eP     P      08 22 36.2 -0.2
TOO    Toolangi       45.97 159  P     P      08 22 37.9 +1.5
       baz=46,SNR=14
GRNR   Gornyy         46.22   9 eP     P      08 22 41.1 +2.9
KOLN   Koldanda       46.66 304 eP     P      08 22 41.3 -1.0
       comp=Z,119nm,0.6s
DANN   Dangsing       46.74 305 eP     P      08 22 41.7 -1.3
       comp=Z,143nm,0.6s
MILA   Mila           46.93 155  P     P      08 22 45.8 +1.7
       baz=47,SNR=8.8
PYUN   Piuthan        47.29 304 eP     P      08 22 46.3 -0.9
       comp=Z,49nm,0.4s
DZM    Mont Dzumac    47.42 126  P     P      08 22 47.2 -0.9
       comp=Z,11nm,0.5s,baz=257,slow=10,SNR=22
DZM                              LR    LR     08 42 19.2
       comp=Z,96nm,21.3s,baz=310,slow=35
DZM    Mont Dzumac    47.42 126 eS     S      08 29 44.8 +6.4
       comp=Z,112nm,28.8s
DZM                             eLR    LR     08 36 20.0
       comp=Z,768nm,30.1s
DZM    Mont Dzumac    47.42 126 eP     P      08 22 47.2 -0.9
       comp=Z,15nm,0.7s
TYV    Tymovskoe      47.52  14 eP     P      08 22 49.2 +0.9
TYV                              pmax  pmax
       comp=Z,9.0nm,1.8s
ZEA    Zeya           48.47   0 eP     P      08 22 55.7 +0.1
ZEA                              pmax  pmax
       comp=Z,20nm,0.8s
HYB    Hyderabad      48.57 289 i P    P      08 22 57.0 -0.1
HYB    Hyderabad      48.57 289 eP     P      08 22 56.0 -1.1
NKL    Nikolayevsk    49.24  11 eP     P      08 23 02.0 +0.5
NKL                              pmax  pmax
       comp=Z,26nm,0.8s
TLY    Talaya         50.18 342 eP     P      08 23 09.3 +0.6
       comp=Z,34nm,0.8s
TLY    Talaya         50.18 342 eP     P      08 23 09.5 +0.7
TLY                             e             08 25 01.8
TLY                             eS     S      08 30 20.4 +4.1
TLY                             eSS    ScS    08 32 54.8 +0.3
TLY                              pmax  pmax
       comp=Z,38nm,0.8s
IRK    Irkutsk        50.48 342 eP     P      08 23 11.7 +0.7
IRK                             e             08 23 30.3
IRK                              pmax  pmax
       comp=Z,60nm,2.1s
BHPL   Bhopal         50.70 296 eP     P      08 23 11.4 -1.8
BHPL                             IAmb  IAmb   08 23 13.1
       comp=Z,17nm,0.6s
MOO    Moorlands      50.90 160  P     P      08 23 15.6 +1.4
       baz=51,SNR=4.5
MOY    Mondy          51.05 340 eP     P      08 23 16.0 +0.6
MOY                              pmax  pmax
       comp=Z,61nm,2.4s
WMQ    Urumqi         51.54 324  P     P      08 23 19.2  0.0
WMQ                              pP    pP     08 23 35.5 +0.6
WMQ                              sP    sP     08 23 42.2 +0.5
WMQ                              pmax  pmax
       comp=Z,34nm,0.9s
WMQ                              pmax  pmax
       comp=Z,390nm,5.1s
WMQ                              LR    LR
       comp=Z,1µm,19.3s
WMQ                              LR    LR
       comp=Z,810nm,16.9s
WMQ                              LR    LR
       comp=Z,1µm,28.3s
CLNS   Chul'man       51.59 359 eP     P      08 23 19.9 +0.6
CLNS                             pmax  pmax
       comp=Z,19nm,0.9s
CLNS                             pmax  pmax
       comp=N,12nm,1.0s
CLNS                             pmax  pmax
       comp=E,9.0nm,1.0s
SMLA   Simla          53.08 305 eP     P      08 23 29.7 -1.0
HVS    Khovu-Aksy     53.44 335ceP     P      08 23 33.7 +0.5
HVS                              pmax  pmax
       comp=Z,28nm,1.0s
BOD    Bodaibo        53.48 352 eP     P      08 23 34.5 +1.3
BOD                             e             08 23 45.7
DHRM   DHARAMSHALA    54.14 306 eP     P      08 23 37.6 -1.2
PEA0B  Petropavlovsk- 54.18  23 eP     P      08 23 39.0 +0.6
       comp=Z,57nm,1.2s
PETK   Petropavlovsk- 54.18  23  P     P      08 23 39.5 +1.1
       comp=Z,22nm,0.6s,baz=203,slow=3.2
PETK                             LR    LR     08 44 52.8
       comp=Z,81nm,21.4s,baz=218,slow=34
PETK   Petropavlovsk- 54.18  23 eP     P      08 23 39.2 +0.8
PEA1   Petropavlovsk- 54.19  23 eP     P      08 23 39.5 +1.1
PET    Petropavlovsk  54.49  23 eP     P      08 23 41.3 +0.7
       comp=Z,28nm,0.7s
PET    Petropavlovsk  54.49  23 eP     P      08 23 41.3 +0.7
PET                             eS     S      08 31 15.4 +0.4
PET                              pmax  pmax
       comp=Z,35nm,0.6s
DGZ    Jazzator, Alta 55.34 330 eP     P      08 23 46.7 -0.4
DGZ                              pmax  pmax
       comp=Z,6.0nm,0.5s
SHLS   Shalkode       56.22 320⇑iP     P      08 23 51.2 -2.3
       comp=Z,15nm,0.8s
SHLS                            eS     S      08 31 35.0 -3.9
PDGK   Podgornoye     56.29 320  P     P      08 23 52.8 -1.1
PDGK                             pmax  pmax
       comp=Z,60nm,1.2s
MK01   Makanchi Array 56.35 325 eP     P      08 23 53.0 -1.1
MK31   Makanchi Array 56.37 325 eP     P      08 23 53.5 -0.8
MK31                            ePcP   PcP    08 24 50.9  0.0
MK31   Makanchi Array 56.37 325 eP     P      08 23 53.5 -0.8
MK31                            e             08 24 50.9
MK32   Makanchi Array 56.37 325 eP     P      08 23 53.6 -0.7
MK32                            ePcP   PcP    08 24 50.9  0.0
MK32                            eScP   ScP    08 28 46.3 +1.1
MKAR   Makanchi Array 56.37 325  P     P      08 23 53.6 -0.7
       comp=Z,23nm,0.5s,baz=121,slow=8.0,SNR=322
MKAR                             PcP   PcP    08 24 50.9  0.0
       comp=Z,22nm,0.8s,baz=108,slow=3.6,SNR=6.0
MKAR                             ScP   ScP    08 28 46.3 +1.1
       comp=Z,2.2nm,0.7s,baz=120,slow=4.8,SNR=3.6
MKAR                             LR    LR     08 49 08.9
       comp=Z,299nm,21.9s,baz=97,slow=37
MKAR   Makanchi Array 56.37 325 eP     P      08 23 53.7 -0.7
       comp=Z,190nm,0.4s
MKAR   Makanchi Array 56.37 325 eP     P      08 23 53.7 -0.6
MKAR                             pmax  pmax
       comp=Z,190nm,0.4s
UZB    Uzynbulak      56.50 320⇑iP     P      08 23 54.9 -0.6
       comp=Z,9.7nm,0.8s
UZB                             eS     S      08 31 42.0 -0.6
MAKZ   Makanchi       56.55 325 eP     P      08 23 54.9 -0.7
       comp=Z,38nm,1.0s
MAKZ                            ePcP   PcP    08 24 51.3 -0.3
MAKZ   Makanchi       56.55 325 eP     P      08 23 54.9 -0.7
MAKZ                            e             08 24 51.3
MAKZ                             pmax  pmax
       comp=Z,39nm,1.0s
PRZ    Przheval'sk    56.60 319 eP     P      08 23 56.6 +0.4
       comp=Z,41nm,0.8s
PRZ    Przheval'sk    56.60 319 eP     P      08 23 56.7 +0.4
PRZ                              pmax  pmax
       comp=Z,41nm,0.8s
TARG   Taragay, Kyrgy 56.66 318 eP     P      08 23 57.0 +0.1
       comp=Z,20nm,0.9s
YAK    Yakutsk        56.83   2 eP     P      08 23 57.3 +0.1
       comp=Z,152nm,0.9s
YAK    Yakutsk        56.83   2 eP     P      08 23 57.5 +0.3
YAK                             e*PP   pP     08 24 09.7 -3.4
YAK                             e             08 26 05.8
YAK                             eS     S      08 31 47.5 +1.6
YAK                             e             08 33 39.9
YAK                              pmax  pmax
       comp=Z,115nm,1.1s
YAK                              pmax  pmax
       comp=N,19nm,1.2s
YAK                              pmax  pmax
       comp=E,5.0nm,1.0s
YAK                              pmax  pmax
       comp=Z,15nm,0.6s
YAK                              pmax  pmax
       comp=E,5.0nm,0.6s
YAK                              pmax  pmax
       comp=N,7.0nm,0.7s
YAK                              smax  smax
       comp=N,89nm,4.4s
YAK                              smax  smax
       comp=E,68nm,3.3s
YAK                              MLR   MLR
       comp=Z,242nm,25.0s
YAK                              MLR   MLR
       comp=N,470nm,26.0s
YAK                              MLR   MLR
       comp=E,85nm,28.0s
SATY   Saty           56.86 319⇑iP     P      08 23 57.6 -0.4
       comp=E,18nm,0.8s
SATY                            eS     S      08 31 47.3 -0.1
KPKS   Kokpek         56.87 320⇑iP     P      08 23 57.3 -0.7
       comp=E,18nm,0.8s
KPKS                            eS     S      08 31 46.8 -0.6
ZHN    Zhinishke      56.89 319⇑eP     P      08 23 57.5 -0.7
       comp=E,8.3nm,1.0s
KSH    Kashi          57.00 314  P     P      08 23 59.4 +0.4
KSH                              pP    pP     08 24 15.0  0.0
KSH                              PcP   PcP    08 24 53.2 -0.5
KSH                              PP    PP     08 26 08.2 +1.9
KSH                              S     S      08 31 45.2 -4.1
KSH                              ScS   ScS    08 33 37.2 -6.2
KSH                              SS    SS     08 35 38.4 -0.3
KSH                              pmax  pmax
       comp=E,72nm,1.5s
KSH                              pmax  pmax
       comp=E,92nm,3.5s
KSH                              LR    LR
       comp=E,870nm,22.8s
KSH                              LR    LR
       comp=E,530nm,18.1s
KSH                              LR    LR
       comp=E,450nm,22.7s
NIL    Nilore         57.01 307 eP     P      08 23 58.5 -0.6
       comp=E,114nm,1.1s
NIL    Nilore         57.01 307 eP     P      08 23 58.5 -0.6
NIL                              pmax  pmax
       comp=Z,114nm,1.1s
MA2    Magadan        57.38  14 eP     P      08 24 01.9 +0.7
       comp=Z,14nm,0.8s
MA2    Magadan        57.38  14 eP     P      08 24 01.9 +0.7
MA2                              pmax  pmax
       comp=Z,14nm,0.8s
KRAR   Krasnoyarsk    57.42 338⇓iP     P      08 24 01.7 +0.2
MDOK   Medeo          57.79 319 i P    P      08 24 04.2 -0.4
       comp=Z,184nm,0.7s
MDOK                            eS     S      08 31 59.2 -0.5
ULHL   Ulahol         57.93 318  P     P      08 24 05.2 -0.4
       SNR=9.2
KZA    Kyzart         58.53 317  P     P      08 24 10.2 +0.1
       SNR=23
KUU    Kurty          58.58 319⇑iP     P      08 24 09.3 -0.6
       comp=Z,49nm,0.8s
KUU                             i S    S      08 32 08.9 -0.7
TKM2   Tokmak 2       58.65 318  P     P      08 24 10.2 -0.5
       SNR=42
TKM2   Tokmak 2       58.65 318  P     P      08 24 09.9 -0.8
TKM2                             pmax  pmax
       comp=Z,28nm,0.7s
SFK    Sufi-Kurgan    58.95 314  P     P      08 24 12.3 -0.5
SFK                              pmax  pmax
       comp=Z,24nm,0.6s
KBK    Karagaybulak   58.97 318  P     P      08 24 12.7 -0.2
       SNR=12
UCH    Uchtor         59.09 317  P     P      08 24 14.1  0.0
       SNR=40
CHMS   Chumysh        59.24 318  P     P      08 24 13.6 -1.0
       SNR=6.7
FRU    Bishkek        59.27 318 eP     P      08 24 14.0 -0.7
FRU                             e             08 24 56.0
FRU                              pmax  pmax
       comp=Z,120nm,2.5s
AAK    Ala-Archa      59.27 317  LR    LR     08 53 42.1
       comp=Z,172nm,20.4s,baz=76,slow=40
AAK    Ala-Archa      59.27 317  P     P      08 24 14.5 -0.4
       SNR=5.5
AAK    Ala-Archa      59.27 317 eP     P      08 24 14.5 -0.4
       comp=Z,12nm,0.7s
AAK    Ala-Archa      59.27 317  P     P      08 24 14.0 -0.9
AAK                              pmax  pmax
       comp=Z,11nm,0.7s
ZAA0   Zalesovo Array 59.31 333 eP     P      08 24 13.4 -1.4
       comp=Z,19nm,0.6s
ZALV   Zalesovo Beam  59.31 333  P     P      08 24 13.4 -1.4
       comp=Z,17nm,0.5s,baz=135,slow=6.3,SNR=53
ZALV                             LR    LR     08 51 50.5
       comp=Z,132nm,21.4s,baz=83,slow=38
ZALV   Zalesovo Beam  59.31 333 eP     P      08 24 13.3 -1.5
ZAA1   Zalesovo Array 59.31 333 eP     P      08 24 13.4 -1.4
SEM    Semipalatinsk  59.48 327⇑eP     P      08 24 14.8 -1.4
       comp=Z,3.9nm,0.6s
USP    Ospenovka      59.52 318  P     P      08 24 15.9 -0.6
       SNR=31
AML    Almayashu      59.62 317  P     P      08 24 17.8 +0.2
       SNR=5.2
EKS2   Erkin-Say      59.77 317  P     P      08 24 17.9 -0.4
       SNR=34
KURBB  Kurchatov Arra 60.52 327  P     P      08 24 22.3 -0.8
       comp=Z,28nm,0.5s,baz=127,slow=6.8,SNR=254
KURK   Kurchatov      60.52 327 eP     P      08 24 22.2 -0.9
       comp=Z,87nm,1.0s
KURK   Kurchatov      60.52 327c iP    P      08 24 22.2 -0.9
KURK                             pmax  pmax
       comp=Z,41nm,0.6s
KURK                             MLR   MLR
       comp=Z,213nm,20.0s
WCZ    Waipu Caves    60.52 136  P     P      08 24 24.7 +1.4
BTLS   Baital         60.55 320⇑iP     P      08 24 22.3 -1.1
       comp=Z,7.3nm,0.7s
MNAS   Manas          60.57 317  P     P      08 24 22.9 -0.9
MNAS                             pmax  pmax
       comp=Z,23nm,0.8s
NVS    Novosibirsk    60.59 333⇑iP     P      08 24 22.6 -0.9
NVS                             e             08 33 03.6
NVS                              pmax  pmax
       comp=N,19nm,1.1s
NVS                              pmax  pmax
       comp=E,20nm,1.1s
NVS                              pmax  pmax
       comp=Z,38nm,1.1s
KBL    Kabul          60.61 307 eP     P      08 24 23.0 -1.3
       comp=Z,26nm,0.6s
KBL    Kabul          60.61 307 eP     P      08 24 23.0 -1.3
KBL                              pmax  pmax
       comp=Z,26nm,0.6s
SEY    Seymchan       60.70  13⇑eP     P      08 24 25.6 +1.5
GRZ    Great Barrier  61.45 136  P     P      08 24 30.2 +0.5
DZA    Taraz          61.52 317 eP     P      08 24 28.8 -1.3
       comp=Z,13nm,0.7s
MSZ    Milford Sound  61.85 148  P     P      08 24 33.5 +1.4
JCZ    Jackson Bay    61.92 147  P     P      08 24 32.9 +0.1
DCZ    Deep Cove      61.98 149 eP     P      08 24 33.8 +0.8
       comp=Z,27nm,0.7s
DCZ    Deep Cove      61.98 149  P     P      08 24 33.6 +0.6
QRZ    Quartz Range   62.08 142  P     P      08 24 34.6 +0.8
FOZ    Fox Glacier    62.14 146  P     P      08 24 35.6 +1.5
KK31   Karatay Array  62.16 317 eP     P      08 24 33.2 -1.1
KK31   Karatay Array  62.16 317 eP     P      08 24 33.3 -1.1
KKAR   Karatay Array  62.16 317 eP     P      08 24 33.2 -1.1
KKAR   Karatay Array  62.16 317 eP     P      08 24 33.3 -1.1
IUG    Iuzhnay        62.16 315⇑iP     P      08 24 34.0 -0.5
       comp=Z,16nm,0.6s
HIZ    Hauiti         62.25 139  P     P      08 24 36.8 +1.8
TOZ    Tahuroa Road   62.26 138  P     P      08 24 36.5 +1.5
WVZ    Waitaha Valley 62.37 145  P     P      08 24 36.0 +0.3
MLZ    Mavora Lakes   62.41 148  P     P      08 24 36.3 +0.3
VRZ    Vera Road      62.52 139  P     P      08 24 38.8 +2.0
WHZ    Wether Hill Ro 62.68 149 eP     P      08 24 37.8 +0.1
       comp=Z,22nm,1.0s
NNZ    Nelson         62.83 142  P     P      08 24 38.1 -0.7
THZ    Tophouse       62.86 143 eP     P      08 24 39.0  0.0
       comp=Z,39nm,0.6s
THZ    Tophouse       62.86 143  P     P      08 24 38.6 -0.4
LBZ    Lake Benmore   62.89 146 eP     P      08 24 39.3 +0.2
       comp=Z,40nm,0.8s
RPZ    Rata Peaks     62.95 145  P     P      08 24 40.1 +0.5
       comp=Z,37nm,0.8s,baz=261,slow=1.1,SNR=15
RPZ    Rata Peaks     62.95 145 eP     P      08 24 39.9 +0.4
       comp=Z,41nm,0.9s
OTUK   Ortayu         62.96 322  P     P      08 24 38.6 -1.0
OTUK                             pmax  pmax
       comp=Z,16nm,0.7s
WTVZ   West Tongariro 63.06 139  P     P      08 24 42.3 +1.8
LTZ    Lake Taylor    63.08 144 eP     P      08 24 40.9 +0.4
       comp=Z,34nm,1.0s
OXZ    Oxford         63.28 144 eP     P      08 24 41.2 -0.5
       comp=Z,44nm,1.1s
BRZS   Berezniki      63.51 324⇑iP     P      08 24 42.4 -0.8
       comp=Z,12nm,0.6s
BRZS                            eS     S      08 33 11.4 -0.7
BHHZ   Black Hill Sta 63.57 139  P     P      08 24 44.3 +0.5
URZ    Urewera        63.62 137  P     P      08 24 44.2 +0.1
       comp=Z,3.9nm,0.4s,baz=262,slow=6.6,SNR=8.4
URZ    Urewera        63.62 137  P     P      08 24 44.7 +0.6
BKZ    Black Stump Fm 63.68 138 eP     P      08 24 44.8 +0.3
       comp=Z,24nm,0.7s
BKZ    Black Stump Fm 63.68 138  P     P      08 24 44.9 +0.3
MTHZ   Maungataniwha  63.75 138  P     P      08 24 45.5 +0.5
KRHZ   Kereru         63.85 139  P     P      08 24 45.8 +0.2
NMHZ   Naumai         63.85 138  P     P      08 24 47.1 +1.4
RUGZ   Raukumara Rang 63.86 137  P     P      08 24 45.7 -0.1
PNHZ   Pukenui        63.88 139  P     P      08 24 47.3 +1.4
MWZ    Matawai        63.94 137  P     P      08 24 46.9 +0.6
RAHZ   Arahi          63.94 138  P     P      08 24 47.2 +0.9
RAGZ   Rawiri         63.95 137  P     P      08 24 46.6 +0.3
AFI    Afiamalu       63.96 108  LR    LR     08 47 31.3
       comp=Z,80nm,19.1s,baz=292,slow=31
MCHZ   McNeill Hill   63.96 139  P     P      08 24 46.8 +0.5
SNGZ   Shannon Statio 64.04 138  P     P      08 24 48.0 +1.1
TWGZ   Tauwhareparae  64.17 137  P     P      08 24 49.1 +1.3
WMGZ   Waiomatatini S 64.29 136  P     P      08 24 49.7 +1.3
RIGZ   Rimuhau        64.29 137  P     P      08 24 49.8 +1.2
PUZ    Puketiti       64.31 137  P     P      08 24 49.7 +1.1
CNGZ   Carnagh Statio 64.48 137  P     P      08 24 50.8 +1.1
BVAR   Borovoye Array 66.11 327  P     P      08 24 59.1 -1.0
       comp=Z,34nm,0.8s,baz=113,slow=6.2,SNR=101
BVAR                             LR    LR     08 56 26.1
       comp=Z,114nm,18.8s,baz=105,slow=38
BRVK   Borovoye       66.18 327 eP     P      08 24 59.7 -0.8
       comp=Z,70nm,0.8s
BRVK   Borovoye       66.18 327c iP    P      08 24 59.7 -0.8
BRVK                             pmax  pmax
       comp=Z,57nm,1.0s
TIXI   Tiksi          66.46   1  P     P      08 25 01.7 -0.2
       comp=Z,13nm,0.4s,baz=211,slow=5.1
TIXI   Tiksi          66.46   1c iP    P      08 25 02.1 +0.2
TIXI                             pmax  pmax
       comp=Z,49nm,1.7s
ATKA   Atka Island    67.41  35 eP     P      08 25 07.7 -0.5
       comp=Z,52nm,0.7s
WSAR   Wadi Sarin     67.79 293  P     P      08 25 09.5 -1.8
       comp=Z,7.6nm,0.6s,baz=305,slow=14,SNR=12
WSAR                             LR    LR     08 58 42.1
       comp=Z,81nm,19.9s,baz=106,slow=39
BILL   Bilibino       68.24  15⇑iP     P      08 25 13.2  0.0
BILL                            e             08 25 28.0
BILL                            e             08 25 39.6
BILL                            e             08 27 44.3
BILL                            ePPP   PPP    08 29 24.6
BILL                             pmax  pmax
       comp=Z,31nm,2.5s
GEYT   Alibeck        69.95 308  P     P      08 25 23.5 -1.0
       comp=Z,3.3nm,0.3s,baz=108,slow=9.3,SNR=5.1
AB31   Akbulak array  71.02 320  P     P      08 25 29.5 -1.2
AB31                             pmax  pmax
       comp=Z,22nm,0.7s
ABKAR  Akbulak array  71.02 320 eP     P      08 25 29.2 -1.5
CASY   Casey          72.18 187 eP     P      08 25 37.5 +0.2
       comp=Z,54nm,0.8s
UNV    Unalaska Valle 72.34  35 eP     P      08 25 38.7 +0.2
       comp=Z,31nm,0.8s
AKTO   Aktyubinsk     72.52 321  P     P      08 25 38.9 -0.8
       comp=Z,33nm,0.6s,baz=97,slow=7.9,SNR=97
AKTO                             LR    LR     09 00 01.7
       comp=Z,268nm,20.6s,baz=103,slow=38
SVE    Sverdlovsk     72.73 328deP     P      08 25 40.2 -0.6
SVE                              pmax  pmax
       comp=Z,65nm,0.8s
AKUT   Akutan         72.83  35 eP     P      08 25 40.5 -0.9
       comp=Z,58nm,0.8s
ARU    Arti           73.72 328  P     P      08 25 45.7 -0.9
       comp=Z,49nm,0.6s,baz=100,slow=3.1,SNR=43
ARU    Arti           73.72 328 eP     P      08 25 45.5 -1.2
       comp=Z,55nm,0.6s
ARU    Arti           73.72 328d iP    P      08 25 45.4 -1.2
ARU                                           08 26 01.6
ARU                              S     S      08 35 14.8 +2.0
ARU                              SS    SS     08 40 04.9 +7.6
ARU                              pmax  pmax
       comp=Z,53nm,0.7s
ARU                              MLR   MLR
       comp=Z,192nm,23.0s
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RAR   Rarotonga         76.67 113  LR        LR        08 52 47.8
      comp=Z,55nm,21.3s,baz=276,slow=30
AKT   Akhty             78.31 311 eP         P         08 26 12.0 -1.3
AKT                               e                    08 26 23.1
AKT                               eS         S         08 36 05.5 +1.2
AKT                                pmax      pmax
      comp=Z,17nm,0.6s
SVW2  Sparrevohn        79.63  29 eP         P         08 26 20.2 +0.2
      comp=Z,9.2nm,0.9s
GROC  Groznyy           79.83 313 eP         P         08 26 18.7 -2.7
GROC                              e                    08 26 26.3
GROC                               pmax      pmax
      comp=Z,26nm,0.5s
RAYN  Ar Rayn           79.85 293 eP         P         08 26 20.0 -2.0
      comp=Z,12nm,0.6s
RAYN  Ar Rayn           79.85 293 eP         P         08 26 20.0 -2.0
RAYN                               pmax      pmax
      comp=Z,12nm,0.6s
OHAK  Old Harbor        80.34  33 eP         P         08 26 23.2 -0.6
      comp=Z,62nm,1.4s
GNI   Garni             80.52 310  P         P         08 26 24.9 -0.5
      comp=Z,3.4nm,0.3s,baz=176,slow=4.1,SNR=4.6
GNI                                LR        LR        09 07 47.8
      comp=Z,40nm,19.7s,baz=86,slow=40
GNI   Garni             80.52 310⇓eP         P         08 26 25.7 +0.3
GNI                                pmax      pmax
      comp=Z,76nm,1.7s
TBLG  Delisi            80.56 311 eP         P         08 26 24.8 -0.6
      comp=Z,30nm,0.6s
TBLG  Delisi            80.56 311 eP         P         08 26 24.8 -0.6
TBLG                               pmax      pmax
      comp=Z,30nm,0.6s
KDAK  Kodiak Island     80.77  32  P         P         08 26 26.2 +0.2
      comp=Z,15nm,0.6s,baz=226,slow=2.0,SNR=34
KDAK                               LR        LR        08 57 38.0
      comp=Z,102nm,21.6s,baz=251,slow=32
KDAK  Kodiak Island     80.77  32 eP         P         08 26 25.7 -0.4
      comp=Z,21nm,0.8s
ZEI   Tsey              81.21 312 eP         P         08 26 27.3 -1.8
ZEI                                pmax      pmax
      comp=Z,23nm,0.6s
PRGR  Permogore         81.24 331 eP         P         08 26 27.4 -1.1
PRGR                              e                    08 26 35.1
PRGR                              e*SP       pP        08 26 41.8 -3.4
PRGR                               pmax      pmax
      comp=Z,40nm,0.6s
PPLA  Purkeypile        81.44  27 eP         P         08 26 29.9 +0.1
      comp=Z,15nm,0.8s
AKH   Akhalkalaki       81.49 311⇑iP         P         08 26 30.6  0.0
AKH   Akhalkalaki       81.49 311 eP         P         08 26 30.3 -0.2
      comp=Z,29nm,0.8s
AKH   Akhalkalaki       81.49 311 eP         P         08 26 30.3 -0.2
AKH                                pmax      pmax
      comp=Z,29nm,0.8s
CAST  Castle Rocks      81.54  27 eP         P         08 26 30.6 +0.4
      comp=Z,15nm,0.8s
CNPM  China Poot        81.61  31 eP         P         08 26 30.5 -0.1
      comp=Z,23nm,0.9s
SKT   Skwentna          81.66  28 eP         P         08 26 30.4 -0.4
      comp=Z,28nm,1.3s
OPO   Ambohidratompo    81.67 250  P         P         08 26 30.7 -1.1
      comp=Z,21nm,0.5s,baz=86,slow=2.8,SNR=37
ABPO  Ambohimpanom      81.69 250 eP         P         08 26 30.8 -1.2
      comp=Z,26nm,0.6s
ABPO  Ambohimpanom      81.69 250 eP         P         08 26 30.8 -1.2
ABPO                               pmax      pmax
      comp=Z,25nm,0.6s
BRLK  Bradley Lake      81.81  30 eP         P         08 26 31.3 -0.4
      comp=Z,29nm,0.9s
KBZ   Khabaz            81.96 313  P         P         08 26 31.6 -1.0
      comp=Z,6.7nm,1.0s,baz=145,slow=8.5,SNR=7.2
KBZ                                LR        LR        09 09 26.3
      comp=Z,60nm,18.8s,baz=72,slow=40
SUA   Susitna One       81.99  29 eP         P         08 26 32.5 -0.2
      comp=Z,33nm,0.9s
KTH   Kantishna Hill    82.07  27 eP         P         08 26 33.3 +0.4
      comp=Z,31nm,1.3s
NEY   Neytrino          82.08 313⇑eP         P         08 26 33.5 -0.1
NEY                                pmax      pmax
      comp=Z,1.0nm,0.7s
BPAW  Bear Paw Mtn.     82.08  26 eP         P         08 26 33.8 +0.8
      comp=Z,20nm,0.7s
KVAR  Kislovodsk Arr    82.11 314  P         P         08 26 33.0 -0.6
      comp=Z,8.9nm,0.6s,baz=89,slow=5.2,SNR=5.1
KVAR                               LR        LR        09 08 38.5
      comp=Z,57nm,18.2s,slow=40
KIV   Kislovodsk        82.11 314 eP         P         08 26 33.7 +0.1
      comp=Z,25nm,0.8s
KIV   Kislovodsk        82.11 314 eP         P         08 26 33.3 -0.4
KIV                                pmax      pmax
      comp=Z,27nm,1.0s
KIV                                MLR       MLR
      comp=Z,116nm,19.0s
MLY   Manley            82.26  25 eP         P         08 26 34.4 +0.4
      comp=Z,20nm,0.8s
TRF   Thorofare Moun    82.34  27 eP         P         08 26 34.6 +0.1
      comp=Z,20nm,0.9s
COLD  Coldfoot          82.65  23 eP         P         08 26 37.1 +1.3
      comp=Z,20nm,0.6s
BWN   Browne            82.75  26 eP         P         08 26 37.4 +1.0
      comp=Z,46nm,0.9s
PMR   Palmer            82.77  29 eP         P         08 26 36.5  0.0
      comp=Z,46nm,1.4s
PMR   Palmer            82.77  29 eP         P         08 26 36.5  0.0
PMR                                pmax      pmax
      comp=Z,46nm,1.4s
GHO   Glory Hole Cre    82.88  28 eP         P         08 26 38.2 +0.9
      comp=Z,21nm,1.0s
ATD   Arta Tunnel       82.92 281  P         P         08 26 37.5 -0.8
      comp=Z,7.5nm,0.6s,baz=191,slow=7.8,SNR=3.0
ATD                                LR        LR        09 03 59.8
      comp=Z,29nm,18.6s,baz=320,slow=36
MCK   McKinley          82.96  27 eP         P         08 26 37.7 +0.1
      comp=Z,45nm,1.0s
MCK   McKinley          82.96  27 eP         P         08 26 37.7 +0.1
MCK                                pmax      pmax
      comp=Z,45nm,1.0s
TOLK  Toolik Lake Re    82.99  22  P         P         08 26 38.8 +1.1
      baz=266
TOLK  Toolik Lake Re    82.99  22 eP         P         08 26 38.8 +1.1
      comp=Z,22nm,0.9s
SML   Sawmill           83.16  28 eP         P         08 26 38.8 +0.1
      comp=Z,31nm,0.9s
SML   Sawmill           83.16  28 eP         P         08 26 38.8 +0.1
SML                                pmax      pmax
      comp=Z,31nm,0.9s
MDM   Murphy Dome       83.32  25 eP         P         08 26 38.9 -0.5
      comp=Z,17nm,1.0s
WRH   Wood River Hil    83.36  26 eP         P         08 26 39.4 -0.1
      comp=Z,18nm,1.0s
COLA  College           83.48  25 eP         P         08 26 39.3 -0.8
      comp=Z,11nm,0.8s
COLA  College           83.48  25 eP         P         08 26 39.3 -0.8
COLA                               pmax      pmax
      comp=Z,11nm,0.8s
CCB   Clear Creek Bu    83.49  26 eP         P         08 26 39.0 -1.2
      comp=Z,30nm,1.1s
SCM   Sheep Creek Mo    83.64  28 eP         P         08 26 40.6 -0.6
      comp=Z,64nm,1.3s
SCM   Sheep Creek Mo    83.64  28 eP         P         08 26 40.6 -0.6
SCM                                pmax      pmax
      comp=Z,64nm,1.3s
DHY   Denali Highway    83.64  27 eP         P         08 26 41.6 +0.4
      comp=Z,16nm,1.2s
IL1   Eielson Array     83.89  25 eP         P         08 26 40.6 -1.6
ILAR  Eielson Array     83.89  25  P         P         08 26 41.2 -1.0
      comp=Z,3.6nm,0.5s,baz=244,slow=5.2,SNR=87
ILAR                               PKKPbc    PKKPbc    08 44 57.4 -3.0
      comp=Z,0.7nm,0.8s,baz=22,slow=2.9,SNR=6.3
ILB   Eielson Array     83.89  25 eP         P         08 26 41.3 -1.0
ILB                               ePKKPbc    PKKPbc    08 44 57.2 -3.1
KLMR  Klimovskoe        84.15 331 eP         P         08 26 41.4 -2.2
KLMR                              e                    08 29 57.3
KLMR                               pmax      pmax
      comp=Z,135nm,1.1s
KLMR  Klimovskoe        84.15 331 eP         P         08 26 41.4 -2.2
KLMR                               AMP                 08 26 43.9
      comp=Z,135nm,1.1s
KLMR                              ePP        PP        08 29 57.4 -1.0
KLU   Klutina           84.31  29 eP         P         08 26 45.2 +0.7
      comp=Z,14nm,0.7s
DIV   Divide            84.38  29 eP         P         08 26 45.6 +0.6
      comp=Z,66nm,1.2s
VNDA  Vanda             84.81 173  P         P         08 26 47.1 +0.5
      comp=Z,30nm,1.0s,baz=315,slow=6.1,SNR=110
VNDA                               PKKPbc    PKKPbc    08 44 56.7 -2.2
      comp=Z,0.7nm,0.7s,baz=279,slow=2.7,SNR=4.0
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VNDA                               LR        LR        09 05 08.1
      comp=Z,88nm,19.1s,baz=334,slow=36
VNDA  Vanda             84.81 173 eP         P         08 26 47.2 +0.5
      comp=Z,32nm,1.0s
VNDA                              ePKKPbc    PKKPbc    08 44 56.7 -2.2
BMRM  Bremner River     84.95  29 eP         P         08 26 48.5 +0.7
      comp=Z,56nm,1.2s
MAW   Mawson            85.02 200  P         P         08 26 48.5 +0.7
      baz=85,SNR=11
MAW   Mawson            85.02 200  P         P         08 26 47.8  0.0
      comp=Z,21nm,0.9s,baz=38,slow=7.1,SNR=18
MAW                                LR        LR        09 00 50.0
      comp=Z,77nm,19.1s,baz=40,slow=33
MAW   Mawson            85.02 200 eP         P         08 26 48.3 +0.5
      comp=Z,7.2nm,1.0s
MAW   Mawson            85.02 200 eP         P         08 26 48.3 +0.5
MAW                                pmax      pmax
      comp=Z,7.0nm,1.0s
MOS   Moscow            85.24 325 eP         P         08 26 48.8 -0.4
MOS                               e                    08 26 57.6
MOS                                pmax      pmax
      comp=Z,71nm,0.8s
PPT   Papeete           85.63 108  LR        LR        08 57 23.5
      comp=Z,48nm,20.0s,baz=292,slow=30
PPT2  Papeete2          85.63 108 eSS        SS        08 43 07.7  +10
      comp=Z,77nm,28.5s
PPT2  Papeete2          85.63 108 eLR        LR        08 54 06.1
      comp=Z,421nm,29.0s
SBA   Scott Base        85.72 172 eP         P         08 26 52.6 +1.4
      comp=Z,18nm,0.9s
SBA   Scott Base        85.72 172 eP         P         08 26 52.6 +1.4
SBA                                pmax      pmax
      comp=Z,18nm,0.9s
TGL   Tana Glacier      85.83  29 eP         P         08 26 52.7 +0.5
      comp=Z,23nm,0.9s
ANN   Anapa             85.86 314 eP         P         08 26 50.8 -1.7
ANN                               e*PP       PcP       08 27 00.2 +5.0
ANN                               eS         S         08 37 13.2 -8.1
ANN                               eSS        SS        08 42 54.8 -4.6
ANN                                pmax      pmax
      comp=Z,136nm,1.0s
OBN   Obninsk           85.87 325 eP         P         08 26 51.5 -0.8
      comp=Z,78nm,0.8s
OBN   Obninsk           85.87 325⇑eP         P         08 26 51.4 -1.0
OBN                               e                    08 30 09.0
OBN                               ePPP       PPP       08 32 03.9
OBN                               eS         S         08 37 14.2 -6.8
OBN                                pmax      pmax
      comp=Z,84nm,0.8s
OBN                                MLR       MLR
      comp=Z,172nm,20.0s
EGAK  Eagle             86.34  25 eP         P         08 26 54.6 +0.1
      comp=Z,8.1nm,0.7s
TBI   Tubuai            86.43 114 eLR        LR        08 54 24.8
      comp=Z,399nm,29.2s
APA   Apatity           86.54 337⇑iP         P         08 26 53.8 -1.6
APA                                pmax      pmax
      comp=Z,22nm,0.8s
APA                                MLR       MLR
      comp=Z,400nm,20.0s
ASF   Jabal al Asfar    87.08 302  P         P         08 26 58.7 -0.3
      comp=Z,7.3nm,0.8s,baz=38,slow=6.3,SNR=10.0
DAWY  Dawson            87.17  26 eP         P         08 26 59.1 +0.4
      comp=Z,4.7nm,0.7s
SIM   Simferopol'       88.20 315  P         P         08 27 02.8 -1.1
SIM                                pmax      pmax
      comp=Z,14nm,0.8s
MMAI  Mount Meron Ar    88.27 303  P         P         08 27 04.0 -0.6
      comp=Z,0.6nm,0.3s,baz=52,slow=14,SNR=4.2
MMAI                               LR        LR        09 11 03.2
      comp=Z,51nm,21.4s,baz=30,slow=39
PUL   Pulkovo           88.79 330⇓eP         P         08 27 06.4 +0.1
PUL                                pmax      pmax
      comp=Z,114nm,1.0s
INK   Inuvik            88.91  21  P         P         08 27 06.2 -0.5
      comp=Z,6.0nm,0.8s,baz=32,slow=4.6,SNR=20
INK   Inuvik            88.91  21 eP         P         08 27 06.2 -0.5
      comp=Z,15nm,1.2s
INK   Inuvik            88.91  21 eP         P         08 27 06.3 -0.4
INK                                pmax      pmax
      comp=Z,15nm,1.2s
EIL   Elat              88.96 300  P         P         08 27 07.0 -0.8
      comp=Z,1.6nm,0.6s,baz=151,slow=19,SNR=2.3
EIL                                LR        LR        09 11 18.8
      comp=Z,45nm,21.7s,baz=64,slow=38
BR101 Keskin Array S    89.06 310 eP         P         08 27 06.5 -1.8
BR101                             ePKKPdf    PKKPbc    08 44 48.4 +1.3
BR131 Keskin Array S    89.06 310 eP         P         08 27 06.5 -1.8
BRTR  Keskin Array B    89.06 310  P         P         08 27 06.5 -1.8
      comp=Z,6.0nm,0.7s,baz=128,slow=4.7,SNR=22
BRTR                               PKKPbc    PKKPbc    08 44 48.4 +1.3
      comp=Z,0.8nm,0.5s,baz=63,slow=17,SNR=3.7
SPA0  Spitsbergen Ar    89.10 349 eP         P         08 27 07.2 -0.4
SPA0  Spitsbergen Ar    89.10 349 eP         P         08 27 07.8 +0.2
SPA0                               IAmb      IAmb      08 27 09.5
      comp=Z,14nm,0.5s
SPITS Spitsbergen Ar    89.10 349  P         P         08 27 07.0 -0.6
      comp=Z,17nm,0.7s,baz=77,slow=3.1,SNR=32
SPITS                              LR        LR        09 11 39.6
      comp=Z,60nm,21.2s,baz=20,slow=39
SPITS Spitsbergen Ar    89.10 349  P         P         08 27 07.0 -0.6
SPITS                              pmax      pmax
      comp=Z,17nm,0.7s
ARCES ARCESS Array B    89.11 340  P         P         08 27 07.2 -0.6
      comp=Z,25nm,0.8s,baz=82,slow=6.2,SNR=60
ARCES ARCESS Array B    89.11 340 eP         P         08 27 07.0 -0.7
ARCES ARCESS Array B    89.11 340 eP         P         08 27 07.0 -0.7
ARE0  ARCESS Array S    89.11 340 eP         P         08 27 07.3 -0.5
      comp=Z,35nm,1.0s
ARE0  ARCESS Array S    89.11 340 eP         P         08 27 07.2 -0.5
ARE0                               IAmb      IAmb      08 27 08.3
      comp=Z,36nm,1.0s
HAMF  Hammerfest        89.47 341 eP         P         08 27 08.7 -0.7
HAMF                               IAmb      IAmb      08 27 09.6
      comp=Z,23nm,0.8s
KBS   Kingsbay          89.62 350 eP         P         08 27 09.5 -0.4
KBS                                IAmb      IAmb      08 27 12.1
      comp=Z,6.1nm,0.8s
HSPB  Hornsund (broa    89.70 348 eP         P         08 27 08.8 -1.5
HSPB                               IAmb      IAmb      08 27 11.3
      comp=Z,41nm,1.5s
BJO   Bjornoya          89.70 345 eP         P         08 27 09.6 -0.8
BJO                                IAmb      IAmb      08 27 10.8
      comp=Z,25nm,0.8s
KTK1  Kautokeino        90.02 339 eP         P         08 27 11.3 -0.7
FIA1  FINESS Array S    90.56 332 eP         P         08 27 13.3 -1.2
FIA0  FINESS Array S    90.57 332 eP         P         08 27 13.7 -0.9
FIA0  FINESS Array S    90.57 332 eP         P         08 27 13.7 -0.9
FINES FINESS Array B    90.57 332  P         P         08 27 13.7 -0.9
      comp=Z,18nm,0.6s,baz=59,slow=4.9,SNR=72
FINES                              LR        LR        09 11 47.0
      comp=Z,122nm,20.1s,baz=60,slow=38
AKASG Malin Array Be    90.76 321  P         P         08 27 14.2 -1.5
      comp=Z,4.4nm,0.5s,baz=68,slow=4.0,SNR=6.5
AKASG                              LR        LR        09 10 19.3
      comp=Z,93nm,21.4s,baz=50,slow=37
AKASG Malin Array Be    90.76 321  P         P         08 27 14.2 -1.5
AKASG                              pmax      pmax
      comp=Z,3.0nm,0.5s
AKASG                              MLR       MLR
      comp=Z,93nm,21.4s
AKBB  Malin Array Si    90.76 321 eP         P         08 27 14.3 -1.5
      comp=Z,14nm,0.9s
KIEV  Kiev              90.77 321 eP         P         08 27 14.3 -1.5
      comp=Z,14nm,1.0s
KIEV  Kiev              90.77 321⇓iP         P         08 27 14.5 -1.3
KIEV                               pmax      pmax
      comp=Z,5.0nm,0.6s
AK11  Malin Array Si    90.80 321 eP         P         08 27 14.2 -1.7
VSU   Vasula            90.83 329c iP        P         08 27 14.8 -1.1
VSU                                pmax      pmax
      comp=Z,125nm,0.8s
MICGM Minsk             90.94 325 eP         P         08 27 15.0 -1.5
MICGM                             eSKS       SKSac     08 37 46.0 +2.7
MICGM                             eS         S         08 38 05.0 -3.9
MNK   Minsk             90.94 325 eP         P         08 27 15.0 -1.5
MNK                               e                    08 37 46.0
MNK                               eS         S         08 38 05.0 -3.9
WRAK  Wrangell Islan    91.83  33 eP         P         08 27 21.3 +0.7
      comp=Z,7.6nm,0.8s
CFR   Carcaliu          92.37 316⇓iP         P         08 27 22.6 -0.7
CFR   Carcaliu          92.37 316 ⇓P         P         08 27 22.6 -0.7
DLBC  Dease Lake        92.60  31  P         P         08 27 25.0 +0.8
      comp=Z,1.7nm,0.6s,baz=58,slow=22,SNR=4.0
DLBC  Dease Lake        92.60  31 eP         P         08 27 25.0 +0.8
      comp=Z,3.2nm,0.8s
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TESR  Tescani           93.16 317⇑iP         P         08 27 26.1 -0.9
STEI  Steigen           93.16 339 eP         P         08 27 25.2 -1.3
STEI                               IAmb      IAmb      08 27 26.4
      comp=Z,15nm,0.9s
VRI   Vrincioaia        93.23 316⇓iP         P         08 27 26.6 -0.7
VRI   Vrincioaia        93.23 316 ⇓P         P         08 27 26.6 -0.7
PLOR  Plostina          93.28 316⇓iP         P         08 27 26.8 -0.8
PLOR  Plostina          93.28 316 ⇓P         P         08 27 26.8 -0.8
BIZ   Bicaz             93.45 318⇑iP         P         08 27 27.5 -0.8
SYO   Syowa Base        93.69 201⇓eP         P         08 27 29.0 +0.2
SUW   Suwalki           93.73 325 eP         P         08 27 28.5 -0.9
SUW   Suwalki           93.73 325 eP         P         08 27 28.5 -0.9
      comp=Z,81nm,0.7s
SUW   Suwalki           93.73 325 eP         P         08 27 28.5 -0.9
MLR   Muntele Rosu      93.84 316  P         P         08 27 29.2 -1.1
      comp=Z,2.3nm,0.6s,baz=313,slow=3.1,SNR=19
MLR   Muntele Rosu      93.84 316⇓iP         P         08 27 28.9 -1.4
MLR   Muntele Rosu      93.84 316 eP         P         08 27 29.3 -1.1
      comp=Z,12nm,0.7s
MLR   Muntele Rosu      93.84 316 ⇓P         P         08 27 28.9 -1.4
BURAR Bucovina Array    93.90 318⇓iP         P         08 27 29.9 -0.6
BURAR Bucovina Array    93.90 318 ⇓P         P         08 27 29.9 -0.6
BUR04 Bucovina Ar. S    93.91 318 eP         P         08 27 29.3 -1.2
BUR08 Bucovina Ar. S    93.91 318 eP         P         08 27 29.4 -1.2
TAOE  Nuku Hiva Isla    93.94  98 eLR        LR        08 57 54.1
      comp=Z,474nm,27.4s
VOIR                    94.46 316⇓iP         P         08 27 32.0 -1.1
VOIR                    94.46 316 ⇓P         P         08 27 32.0 -1.1
ARR   Arges             94.77 316⇑iP         P         08 27 33.4 -1.1
QSPA  South Pole Qui    95.02 180  P         P         08 27 36.2 +1.0
      comp=Z,11nm,0.9s,baz=141,slow=3.4,SNR=27
QSPA  South Pole Qui    95.02 180 eP         P         08 27 35.7 +0.5
      comp=Z,16nm,1.0s
KWP   Kalwaria Pacla    95.08 321 eP         P         08 27 35.7 -0.1
KWP   Kalwaria Pacla    95.08 321 eP         P         08 27 35.7 -0.1
TRPA  Tarpa             95.55 319⇓iP         P         08 27 36.8 -1.1
UZH   Uzhgorod          95.58 320 eP         P         08 27 36.4 -1.6
UZH                               e                    08 27 44.4
UZH                               e                    08 27 52.6
UZH                               e                    08 38 02.0
UZH                               eS         S         08 38 47.4 -2.9
UZH                               ePS        PS        08 40 21.6 +5.8
DRGR                    95.75 318⇑iP         P         08 27 38.0 -0.9
DRGR                    95.75 318 ⇑P         P         08 27 38.1 -0.9
DAG   Danmarks Havn     95.87 352 i P        P         08 27 37.9 -0.8
      comp=Z,19nm,0.6s
DAG   Danmarks Havn     95.87 352 i P        P         08 27 37.9 -0.8
DAG                                pmax      pmax
      comp=Z,19nm,0.6s
CRVS  Cervenica-Dubn    96.05 320 eP         P         08 27 39.9 -0.3
CRVS                               pmax      pmax
      comp=Z,10.0nm,0.8s
CRVS  Cervenica-Dubn    96.05 320 eP         P         08 27 39.9 -0.3
VTS   Vitosha           96.37 314⇑iP         P         08 27 40.3 -1.7
VTS   Vitosha           96.37 314 eP         P         08 27 40.3 -1.7
      comp=Z,4.3nm,0.6s
VTS   Vitosha           96.37 314 ⇑P         P         08 27 40.3 -1.7
HERR  Herculane         96.40 316⇓iP         P         08 27 40.7 -1.2
RES   Resolute Bay      96.47  10  P         P         08 27 41.9 +0.4
      comp=Z,3.5nm,0.7s,baz=302,slow=6.5,SNR=6.3
RES   Resolute Bay      96.47  10 eP         P         08 27 41.9 +0.4
      comp=Z,6.4nm,0.9s
NIE   Niedzica          96.65 321 eP         P         08 27 42.6 -0.3
NIE   Niedzica          96.65 321 eP         P         08 27 42.6 -0.3
HFS   Hagfors           96.75 332  P         P         08 27 42.0 -1.1
      comp=Z,9.2nm,0.6s,baz=98,slow=4.5,SNR=36
HFS                                LR        LR        09 15 17.1
      comp=Z,153nm,20.3s,baz=68,slow=38
HFS   Hagfors           96.75 332  P         P         08 27 42.0 -1.1
HFS                                pmax      pmax
      comp=Z,7.0nm,0.5s
BZS   Buzias            96.77 317⇓iP         P         08 27 42.2 -1.3
BZS   Buzias            96.77 317 ⇓P         P         08 27 42.2 -1.3
KECS  Kecovo            96.78 320 eP         P         08 27 43.2 -0.3
KECS                               pmax      pmax
      comp=Z,6.0nm,0.7s
KECS  Kecovo            96.78 320 eP         P         08 27 43.2 -0.3
MDVR  Moldovita         96.91 316⇑iP         P         08 27 43.4 -0.9
NC405 NORSAR Array S    97.25 334 eP         P         08 27 44.4 -1.0
NC303 NORSAR Array S    97.36 334 eP         P         08 27 44.7 -1.1
NC303 NORSAR Array S    97.36 334 eP         P         08 27 45.0 -0.8
NC303                              IAmb      IAmb      08 27 46.2
      comp=Z,16nm,1.0s
NB201 NORSAR Array S    97.46 334 eP         P         08 27 45.5 -0.8
NB201                              IAmb      IAmb      08 27 49.0
      comp=Z,29nm,1.1s
NB201                              IAmb      IAmb      08 27 49.0
      comp=Z,29nm,1.1s
NB2   NORSAR Subarra    97.50 334  P         P         08 27 44.8 -1.7
      comp=Z,9.8nm,0.8s,baz=65,slow=4.4
NB2   NORSAR Subarra    97.50 334  P         P         08 27 44.8 -1.7
      baz=65,slow=4.4
NB2                                P         P         08 27 44.8 -1.7
      baz=65,slow=4.4
NOA   NORSAR Array B    97.50 334  LR        LR        09 16 10.7
      comp=Z,213nm,20.2s,baz=60,slow=38
NC204 NORSAR Array S    97.60 334 eP         P         08 27 45.8 -1.2
NC204 NORSAR Array S    97.60 334 eP         P         08 27 46.3 -0.7
NC204                             eP         P         08 27 46.3 -0.7
NC204                              IAmb      IAmb      08 27 46.9
      comp=Z,15nm,0.7s
NC204                              IAmb      IAmb      08 27 46.9
      comp=Z,15nm,0.7s
NAO01 NORSAR Array S    97.73 334 eP         P         08 27 45.2 -2.3
BSD   Bornholm Skovb    98.00 327 i P        P         08 27 47.9 -0.9
      comp=Z,30nm,1.0s
BSD   Bornholm Skovb    98.00 327 i P        P         08 27 47.9 -0.9
BSD                                pmax      pmax
      comp=Z,30nm,1.0s
MORC  Moravsky Berou    98.26 322⇑iP         P         08 27 49.9 -0.3
MORC  Moravsky Berou    98.26 322 ⇑P         P         08 27 49.9 -0.3
YKA   Yellowknife Ar    98.27  24  P         P         08 27 49.7 -0.1
      comp=Z,2.2nm,0.7s,baz=301,slow=4.4,SNR=15
YKA                                PKiKP     PKiKP     08 32 23.6 +1.5
      comp=Z,0.4nm,0.5s,baz=302,slow=1.5,SNR=5.3
YKA                                PKKP      PKKPbc    08 44 20.2 -3.4
      comp=Z,0.8nm,0.5s,baz=123,slow=3.5,SNR=8.2
YKB5  Yellowknife Ar    98.27  24 eP         P         08 27 49.7 -0.1
YKB5                              ePKiKP     PKiKP     08 32 23.6 +1.5
YKB5                              ePKKPbc    PKKPbc    08 44 20.2 -3.4
DIVS  Divibare          98.28 316 eP         P         08 27 47.7 -2.8
      comp=Z,6.2nm,1.0s
KSP   Ksiaz             98.68 323 eP         Pdif      08 27 52.2 +0.2
KSP   Ksiaz             98.68 323 eP         Pdif      08 27 52.2 +0.2
AKN   Aaknes            98.78 336 eP         Pdif      08 27 52.2  0.0
AKN                                IAmb      IAmb      08 27 56.3
      comp=Z,343nm,2.7s
PDG   Podgorica         99.24 314⇑iP         Pdif      08 27 53.3 -1.4
LSZ   Lusaka            99.47 255 eP         Pdif      08 27 55.2 -1.1
      comp=Z,10nm,1.1s
LSZ   Lusaka            99.47 255 eP         Pdif      08 27 55.2 -1.1
LSZ                                pmax      pmax
      comp=Z,10.0nm,1.1s
PVCC  Panska Ves        99.82 323  AMS       AMS       09 17 30.0
      comp=Z,200nm,22.4s
CONA  Conrad Observa    99.90 320 ePdiff     Pdif      08 27 57.4 -0.2
      comp=Z,1.1nm,0.6s
GOPC  GO Pecny, Ondr    99.90 322 ePDIFF     Pdif      08 27 58.2 +0.7
GOPC  GO Pecny, Ondr    99.90 322 eP         Pdif      08 27 58.2 +0.7
PRU   Pruhonice        100.02 323  AMS       AMS       09 16 50.0
      comp=Z,100nm,17.8s
BRG   Berggiesshubel   100.07 324 ePKP       Pdif      08 27 57.9 -0.3
      comp=Z,13nm,0.8s
BRG                                SS        Sdif      08 39 35.0 +6.6
BRG   Berggiesshubel   100.07 324 eP         Pdif      08 27 57.9 -0.3
BRG                                SS        Sdif      08 39 35.0 +6.6
BRG                                pmax      pmax
      comp=Z,6.0nm,0.8s
B05A  Bryant           100.10  39  P         Pdif      08 27 59.0 +0.6
      baz=290
ARSA  Arzberg          100.34 320 ePdiff     Pdif      08 27 59.2 -0.3
      comp=Z,3.4nm,0.8s
CLL   Collm            100.46 324 i Pdif     Pdif      08 27 59.8 -0.1
      comp=Z,19nm,1.5s
CLL                               i                    08 28 08.6
CLL                                L         L         09 17 00.0
      comp=Z,100nm,22.0s
CLL   Collm            100.46 324 i P        Pdif      08 27 59.8 -0.1
CLL                                pmax      pmax
      comp=Z,19nm,1.5s
SOKA  Soboth           100.84 319 ePdiff     Pdif      08 28 00.6 -1.2
      comp=Z,3.4nm,1.1s
CRES  Cresnjev         100.85 318 i P        Pdif      08 28 01.1 -0.7
KHC   Kasperske Hory   100.91 322 ePDIFF     Pdif      08 28 01.6 -0.4
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KHC				AMS	AMS	09 17 40.0	
	comp=Z,200nm,17.1s						
KHC	Kasperske Hory	100.91	322	*e*P	Pdif	08 28 01.6	-0.4
KHC				MLR	MLR		
	comp=Z,200nm,17.1s						
MOA	Molln	100.94	321	*e*Pdiff	Pdif	08 28 01.7	-0.5
	comp=Z,6.9nm,0.7s						
GEC2	GERESS Array S	100.94	322	*e*Pdif	Pdif	08 28 01.9	-0.3
GEC2	GERESS Array S	100.94	322	*e*P	Pdif	08 28 01.9	-0.3
GERES	GERESS Array B	100.94	322	P	Pdif	08 28 01.1	-1.1
	comp=Z,1.8nm,0.7s,baz=84,slow=4.7,SNR=12						
GEA0	GERESS Array S	100.94	322	*e*Pdif	Pdif	08 28 01.5	-0.7
OBKA	Obir	101.22	319	*e*Pdiff	Pdif	08 28 03.2	-0.3
	comp=Z,2.6nm,0.6s						
VISS	Visnje	101.26	319	*i* P	Pdif	08 28 03.0	-0.6
KBA	Koelnbreinsper	101.79	320	*e*Pdiff	Pdif	08 28 02.6	-3.5
	comp=Z,2.5nm,0.7s						
ABTA	Abfaltersbach	102.44	320	*e*Pdiff	Pdif	08 28 07.1	-1.8
	comp=Z,2.8nm,0.6s						
WTTA	Wattenberg	102.81	321	*e*Pdiff	Pdif	08 28 10.1	-0.6
	comp=Z,2.9nm,0.5s						
WATA	Walderalm	102.82	321	*e*Pdiff	Pdif	08 28 08.9	-1.8
	comp=Z,3.6nm,0.5s						
NVL	N'lazarevskaya	102.84	198	*e*P	Pdif	08 28 20.9	+11
NVL				*e*		08 32 26.9	
NVL				*e*SS	SS	08 47 09.5	+10
NVL				pmax	pmax		
	comp=Z,3.0nm,0.5s						
MOTA	Moosalm	103.11	321	*e*Pdiff	Pdif	08 28 11.8	-0.3
	comp=Z,2.3nm,0.5s						
FETA	Feichten	103.47	321	*e*Pdiff	Pdif	08 28 10.5	-3.1
	comp=Z,4.3nm,1.2s						
DAVA	Damuels	103.90	321	*e*Pdiff	Pdif	08 28 12.6	-2.9
	comp=Z,2.4nm,0.6s						
NV01	Mina Array Sit	106.05	48	*e*Pdif	Pdif	08 28 27.1	+1.7
NV01				*e*PKiKP	PKiKP	08 32 37.9	+0.6
NV01				*e*PKKPbc	PKKPbc	08 44 00.5	0.0
NVAR	Mina Array Bea	106.05	48	Pdiff	Pdif	08 28 27.9	+2.5
	comp=Z,0.8nm,0.7s,baz=286,slow=4.9,SNR=8.0						
NVAR				PKiKP	PKiKP	08 32 37.9	+0.6
	comp=Z,0.8nm,0.7s,baz=249,slow=1.2,SNR=5.6						
NVAR				PKKPbc	PKKPbc	08 44 00.8	+0.3
	comp=Z,0.7nm,0.6s,baz=132,slow=4.9,SNR=8.4						
SNAA	Sanae	106.53	195	Pdiff	Pdif	08 28 27.3	+0.8
	comp=Z,1.2nm,0.7s,baz=120,slow=20,SNR=7.6						
HLID	Hailey	106.83	42	P	PKiKP	08 32 40.0	+1.5
	baz=295						
EGMT	Eagleton	107.72	36	P	PKiKP	08 32 40.6	+0.7
	baz=300						
DUG	Dugway, Tooele	109.31	44	P	PKiKP	08 32 44.4	+1.2
	baz=295						
GMRC	Granite Mounta	109.31	51	P	PKiKP	08 32 44.3	+0.9
	baz=291						
PD31	Pinedale Array	110.37	41	*e*PKiKP	PKiKP	08 32 46.0	+0.7
PD31				*e*PKKPbc	PKKPbc	08 43 46.4	-0.7
PDAR	Pinedale Array	110.37	41	PKiKP	PKiKP	08 32 46.0	+0.7
	comp=Z,0.3nm,0.7s,baz=44,slow=4.5,SNR=4.4						
PDAR				PKKPbc	PKKPbc	08 43 46.4	-0.7
	comp=Z,0.5nm,0.6s,baz=114,slow=5.8,SNR=6.6						
O20A	White River Ci	112.48	43	P	PKiKP	08 32 49.2	-0.1
	baz=298						
RSSD	Black Hills	113.15	37	P	PKiKP	08 32 50.3	-0.2
	baz=303						
ISCO	Idaho Springs	114.41	42	P	PKPdf	08 32 53.1	0.0
	baz=300						
A33A	Warroad	114.91	29	P	PKPdf	08 32 54.7	+1.3
	baz=313						
SDCO	Great Sand Dun	115.50	44	P	PKPdf	08 32 56.3	+1.0
	baz=300						
ANMO	Albuquerque	116.15	47	PKP	PKPdf	08 32 56.4	-0.1
	comp=Z,0.8nm,0.7s,baz=251,slow=11,SNR=4.5						
TASL	Snake Pit, Alb	116.15	47	P	PKPdf	08 32 56.1	-0.4
	baz=298						
E35A	Pequot Lakes	117.01	31	P	PKPdf	08 32 57.2	-0.4
	baz=313						
G34A	Benson	117.25	32	P	PKPdf	08 32 58.5	+0.5
	baz=311						
F35A	Swanville	117.40	31	P	PKPdf	08 32 58.6	+0.3
	baz=312						
E36A	McGregor	117.62	30	P	PKPdf	08 32 58.6	-0.1
	baz=314						
ECSD	EROS Data Cent	117.69	34	P	PKPdf	08 32 58.5	-0.5
	baz=310						
ECSD	EROS Data Cent	117.69	34	*e*PKPdf	PKPdf	08 32 58.3	-0.7
G35A	Watkins	117.88	32	*e*PKPdf	PKPdf	08 32 58.6	-0.7
F36A	Milaca	117.94	31	P	PKPdf	08 32 59.6	+0.3
	baz=314						
F36A	Milaca	117.94	31	*e*PKPdf	PKPdf	08 32 59.6	+0.3
H35A	Sunnyside Ranc	118.04	32	P	PKPdf	08 33 00.0	+0.4
	baz=312						
BGNE	Belgrade	118.25	37	P	PKPdf	08 33 00.1	0.0
	baz=307						
MNTX	Cornudas Mount	118.43	50	P	PKPdf	08 33 01.6	+0.9
	baz=297						
MNTX	Cornudas Mount	118.43	50	*e*PKPdf	PKPdf	08 33 00.2	-0.5
C40A	Isle Royale Na	118.55	27	P	PKPdf	08 33 00.9	+0.5
	baz=319						
C40A	Isle Royale Na	118.55	27	*e*PKPdf	PKPdf	08 33 00.6	+0.2
F38A	Pierce - Schro	118.69	30	P	PKPdf	08 33 01.1	+0.3
	baz=315						
E39A	Mellen	119.03	29	P	PKPdf	08 33 01.3	-0.1
	baz=317						
F39A	Loretta	119.19	29	P	PKPdf	08 33 01.3	-0.5
	baz=316						
SCHQ	Schefferville	119.21	9	PKP	PKPdf	08 33 01.4	-0.2
	comp=Z,9.5nm,0.7s,baz=298,slow=1.5,SNR=16						
SCHQ	Schefferville	119.21	9	*e*PKPdf	PKPdf	08 33 01.8	+0.3
J36A	Seneca 1, Swea	119.22	33	P	PKPdf	08 33 01.5	-0.3
	baz=312						
J36A	Seneca 1, Swea	119.22	33	*e*PKPdf	PKPdf	08 33 01.4	-0.5
G38A	Ridgeland	119.26	30	P	PKPdf	08 33 01.4	-0.5
	baz=315						
I37A	Lemond, Waseca	119.26	32	P	PKPdf	08 33 02.0	+0.1
	baz=313						
I37A	Lemond, Waseca	119.26	32	*e*PKPdf	PKPdf	08 33 02.2	+0.3
MSTX	Muleshoe	119.29	46	P	PKPdf	08 33 02.8	+0.4
	baz=300						
E40A	Wakefield	119.30	28	P	PKPdf	08 33 02.2	+0.3
	baz=317						
D41A	Chassel	119.45	27	P	PKPdf	08 33 02.7	+0.5
	baz=319						
J37A	Redenius Farm,	119.65	33	P	PKPdf	08 33 02.9	+0.2
	baz=312						
I38A	Scanlan Farm,	119.80	32	P	PKPdf	08 33 03.1	+0.1
	baz=314						
H39A	Augusta	119.89	30	P	PKPdf	08 33 03.1	0.0
	baz=315						
K37A	Belmond	119.97	33	P	PKPdf	08 33 03.3	-0.1
	baz=312						
G40A	Rib Lake	120.01	29	P	PKPdf	08 33 03.6	+0.2
	baz=317						
F41A	Three Lakes	120.19	28	P	PKPdf	08 33 03.3	-0.3
	baz=318						
E42A	Champion	120.22	27	P	PKPdf	08 33 04.0	+0.3
	baz=319						
HPIG		120.25	55	*e*PKPdf	PKPdf	08 33 05.2	+0.7
MDT	Midelt	120.34	313	PKP	PKPdf	08 33 05.0	+0.5
	comp=Z,3.1nm,0.9s,baz=358,slow=1.2,SNR=4.2						
I39A	Houston	120.35	31	P	PKPdf	08 33 03.8	-0.2
	baz=315						
I39A	Houston	120.35	31	*e*PKPdf	PKPdf	08 33 03.6	-0.5
H40A	Chili	120.38	30	P	PKPdf	08 33 03.4	-0.6
	baz=316						
K38A	Parkersburg	120.53	33	P	PKPdf	08 33 04.2	-0.2
	baz=313						
KSU1	Kansas State U	120.58	38	P	PKPdf	08 33 04.8	+0.2
	baz=308						
KSU1	Kansas State U	120.58	38	*e*PKPdf	PKPdf	08 33 04.9	+0.2
J39A	Decorah	120.62	32	P	PKPdf	08 33 03.9	-0.7
	baz=314						
M37A	Trindle Farm,	120.64	35	P	PKPdf	08 33 04.6	-0.1
	baz=311						
E43A	Lone Tree Farm	120.67	26	P	PKPdf	08 33 04.4	-0.2
	baz=320						
H41A	Junction City	120.75	29	P	PKPdf	08 33 04.7	-0.1
	baz=317						
L38A	Oak Wood Farm,	120.76	33	P	PKPdf	08 33 04.6	-0.2
	baz=313						
I40A	Norwalk	120.79	31	P	PKPdf	08 33 04.5	-0.4
	baz=316						
TX31	Lajitas Ar. Si	120.81	51	*e*PKPdf	PKPdf	08 33 06.0	+0.5
TXAR	Lajitas Array	120.81	51	PKP	PKPdf	08 33 06.2	+0.7
	comp=Z,1.7nm,0.7s,baz=223,slow=0.9,SNR=24						
TXAR				PKKPab	PKKPbc	08 43 09.8	-0.3
	comp=Z,0.8nm,0.5s,baz=132,slow=6.5,SNR=17						
K39A	Oelwein	120.96	32	P	PKPdf	08 33 04.4	-0.8
	baz=314						
J40A	Soldiers Grove	121.08	31	P	PKPdf	08 33 05.1	-0.4
	baz=315						
M38A	Pleasantville	121.12	34	P	PKPdf	08 33 04.9	-0.7
	baz=312						
G43A	Wallace	121.21	28	P	PKPdf	08 33 06.8	+1.1
	baz=319						
L39A	Vinton	121.30	33	P	PKPdf	08 33 05.8	-0.1
	baz=314						
K40A	Colesburg	121.36	32	P	PKPdf	08 33 05.5	-0.5
	baz=315						
O37A	Wolven Farm, M	121.40	36	P	PKPdf	08 33 05.6	-0.6
	baz=310						
MATQ	Matagami	121.42	18	P	PKPdf	08 33 05.6	-0.3
	baz=332						
J41A	Loganville	121.47	31	P	PKPdf	08 33 06.0	-0.3
	baz=316						
E45A	Wooded Hills,	121.48	25	P	PKPdf	08 33 06.8	+0.7
	baz=322						
I42A	Draeger Farm,	121.64	30	P	PKPdf	08 33 05.8	-0.7
	baz=317						
M39A	Webster	121.65	34	P	PKPdf	08 33 05.9	-0.7
	baz=313						
P37A	Lathrop	121.65	37	P	PKPdf	08 33 06.3	-0.3
	baz=310						
JFWS	Jewell Farm	121.67	31	P	PKPdf	08 33 06.2	-0.4
	baz=316						
JFWS	Jewell Farm	121.67	31	*e*PKPdf	PKPdf	08 33 06.5	-0.1
JFWS	Jewell Farm	121.67	31	*e*PKIKP	PKPdf	08 33 06.5	-0.1
WMOK	Wichita Mounta	121.70	44	P	PKPdf	08 33 07.5	+0.6
	baz=304						
L40A	Anamosa	121.76	33	P	PKPdf	08 33 07.0	+0.2
	baz=314						
L40A	Anamosa	121.76	33	*e*PKPdf	PKPdf	08 33 06.4	-0.4
F45A	CMU Biological	121.86	26	P	PKPdf	08 33 07.0	+0.1
	baz=322						
K41A	Shullsburg	121.86	31	P	PKPdf	08 33 06.3	-0.7
	baz=315						
N39A	Derby Farms, D	121.87	34	P	PKPdf	08 33 06.9	-0.1
	baz=312						
J42A	Columbus	121.96	30	P	PKPdf	08 33 06.4	-0.7
	baz=317						
Q37A	Longview Farm,	122.04	37	P	PKPdf	08 33 07.1	-0.3
	baz=310						
M40A	Post Highland	122.06	33	P	PKPdf	08 33 07.1	-0.3
	baz=314						
P38A	Dawn	122.11	36	P	PKPdf	08 33 06.8	-0.8
	baz=311						
P38A	Dawn	122.11	36	*e*PKPdf	PKPdf	08 33 06.5	-1.0
F46A	Macinaw City C	122.12	25	P	PKPdf	08 33 08.0	+0.7
	baz=322						
ABTX	Abilene, Hawle	122.23	46	P	PKPdf	08 33 07.8	-0.2
	baz=302						
K42A	Prairie Point,	122.23	31	P	PKPdf	08 33 07.3	-0.4
	baz=316						
CHGQ	Chibougamau	122.24	16	P	PKPdf	08 33 07.6	+0.1
	baz=335						
O39A	Kirksville	122.26	35	P	PKPdf	08 33 08.2	+0.4
	baz=312						
TOA0	Torodi Ar. Sit	122.39	289	*e*PKPdf	PKPdf	08 33 06.9	-1.8
TORD	Torodi Ar. Bea	122.39	289	PKP	PKPdf	08 33 07.8	-0.9
	comp=Z,5.5nm,0.6s,baz=144,slow=5.4						
TOA1	Torodi Ar. Sit	122.39	289	*e*PKPdf	PKPdf	08 33 07.8	-0.9
Q38A	Cooks Store, C	122.49	37	P	PKPdf	08 33 07.6	-0.6
	baz=310						
M41A	Milan	122.61	33	P	PKPdf	08 33 07.7	-0.7
	baz=315						
P39B	Salisbury	122.65	36	P	PKPdf	08 33 08.7	+0.1
	baz=312						
R38A	Fenwick Farm,	122.81	38	P	PKPdf	08 33 08.4	-0.5
	baz=310						
Q39A	Willow Grove F	122.81	36	P	PKPdf	08 33 09.2	+0.3
	baz=311						
TUL1	Leonard	123.03	41	P	PKPdf	08 33 10.0	+0.6
	baz=307						
P40A	Paris	123.03	35	P	PKPdf	08 33 09.0	-0.3
	baz=312						
P40A	Paris	123.03	35	*e*PKPdf	PKPdf	08 33 09.2	-0.1
BELQ	Belleterre	123.13	20	P	PKPdf	08 33 08.9	-0.4
	baz=330						
S38A	Stockton	123.16	38	P	PKPdf	08 33 09.2	-0.4
	baz=310						
JCT	Junction City	123.22	48	P	PKPdf	08 33 10.5	+0.5
	baz=301						
JCT	Junction City	123.22	48	*e*PKPdf	PKPdf	08 33 10.6	+0.6
JCT	Junction City	123.22	48	*e*PKIKP	PKPdf	08 33 10.6	+0.6
R39A	Chumby, Stover	123.25	37	P	PKPdf	08 33 09.5	-0.2
	baz=311						
N42A	Yates City	123.26	33	P	PKPdf	08 33 08.7	-1.0
	baz=315						
O41A	Passleys Farm,	123.29	34	P	PKPdf	08 33 09.5	-0.3
	baz=314						
T38A	Diamond	123.30	39	P	PKPdf	08 33 10.1	+0.2
	baz=309						
Q40A	Laux Farm, Aux	123.37	36	P	PKPdf	08 33 10.1	+0.1
	baz=312						
M43A	Waltham Townsh	123.40	32	P	PKPdf	08 33 09.9	0.0
	baz=316						
S39A	Bolivar	123.48	38	P	PKPdf	08 33 10.4	+0.1
	baz=310						
S39A	Bolivar	123.48	38	*e*PKPdf	PKPdf	08 33 10.2	-0.1
P41A	Barry, Barry	123.49	34	P	PKPdf	08 33 10.3	+0.1
	baz=313						
N43A	Stutzman Famil	123.64	32	P	PKPdf	08 33 10.5	+0.1
	baz=316						
R40A	Maddies Statio	123.72	36	P	PKPdf	08 33 10.7	0.0
	baz=311						
R40A	Maddies Statio	123.72	36	*e*PKPdf	PKPdf	08 33 10.6	0.0
HDIL	Hopedale	123.85	33	P	PKPdf	08 33 10.4	-0.5
	baz=316						
HDIL	Hopedale	123.85	33	*e*PKPdf	PKPdf	08 33 10.4	-0.5
T39A	Clever	123.87	38	P	PKPdf	08 33 11.0	-0.1
	baz=310						
Q41A	Truxton	123.89	35	P	PKPdf	08 33 10.4	-0.5
	baz=313						
TOBO	Tobermory, Bru	123.90	24	P	PKPdf	08 33 11.3	+0.5
	baz=326						
M44A	Midewin, Midew	123.91	31	P	PKPdf	08 33 11.2	+0.3
	baz=317						
P42A	Winchester	123.96	34	P	PKPdf	08 33 11.0	0.0
	baz=314						
P42A	Winchester	123.96	34	*e*PKPdf	PKPdf	08 33 11.1	0.0
HHAR	Hobbs	123.99	39	*e*PKPdf	PKPdf	08 33 10.8	-0.5
O43A	Sugar Creek Fa	124.03	33	P	PKPdf	08 33 11.3	+0.1
	baz=315						
S40A	Lebanon	124.04	37	P	PKPdf	08 33 11.3	0.0
	baz=311						
U39A	Green Forest	124.21	39	P	PKPdf	08 33 11.3	-0.5
	baz=309						
R41A	Rosebud	124.24	36	P	PKPdf	08 33 10.3	-1.4
	baz=312						
N44A	Piper City	124.29	32	P	PKPdf	08 33 11.6	-0.1
	baz=317						
KLBO	Killbear Provi	124.31	23	P	PKPdf	08 33 10.9	-0.7
	baz=327						
T40A	Mansfield	124.32	38	P	PKPdf	08 33 11.9	0.0
	baz=311						
P43A	Skaggs, Pawnee	124.37	34	P	PKPdf	08 33 12.5	+0.7
	baz=315						
V39A	Pettigrew	124.45	40	P	PKPdf	08 33 12.1	-0.1
	baz=309						
CCM	Cathedral Cave	124.48	36	P	PKPdf	08 33 12.6	+0.5
	baz=312						
CCM	Cathedral Cave	124.48	36	*e*PKPdf	PKPdf	08 33 13.1	+0.9
CCM	Cathedral Cave	124.48	36	*e*PKIKP	PKPdf	08 33 13.1	+0.9
S41A	Jillco Farms,	124.50	37	P	PKPdf	08 33 12.4	+0.2
	baz=312						
BUKO	Buck Lake	124.55	22	P	PKPdf	08 33 12.6	+0.6
	baz=328						
BMRO	Meriville Lake	124.55	24	P	PKPdf	08 33 12.6	+0.6
	baz=326						
O44A	Mansfield	124.58	32	P	PKPdf	08 33 12.3	+0.1
	baz=316						
R42A	Luebbering	124.59	36	P	PKPdf	08 33 12.1	-0.2
	baz=313						
833A	Chaparral WMA,	124.60	50	P	PKPdf	08 33 13.7	+1.1
	baz=300						
833A	Chaparral WMA,	124.60	50	*e*PKPdf	PKPdf	08 33 13.4	+0.7
U40A	Yellville	124.62	39	P	PKPdf	08 33 11.9	-0.6
	baz=310						
BRCO	Bruce Peninsul	124.75	24	P	PKPdf	08 33 12.7	+0.3
	baz=325						
W39A	Magazine	124.76	40	P	PKPdf	08 33 13.0	+0.3
	baz=308						
W39A	Magazine	124.76	40	*e*PKPdf	PKPdf	08 33 13.2	+0.5
Q43A	New Douglas	124.76	34	P	PKPdf	08 33 12.8	+0.2
	baz=314						
BASO	Ashfield	124.84	25	P	PKPdf	08 33 13.2	+0.6
	baz=325						
T41A	Mountain View	124.84	37	P	PKPdf	08 33 13.0	+0.1
	baz=311						
O45A	Potomac	124.91	32	P	PKPdf	08 33 12.9	+0.1
	baz=317						
S42A	Caledonia	124.94	36	P	PKPdf	08 33 13.5	+0.4
	baz=313						
N46A	Monticello	124.94	31	P	PKPdf	08 33 13.3	+0.4
	baz=318						
X39A	Fountain Ranch	124.97	41	P	PKPdf	08 33 14.2	+1.0
	baz=308						
BWLO	Walkerton	124.97	24	P	PKPdf	08 33 14.0	+1.1
	baz=326						
P44A	Sand Creek, Wi	124.99	33	P	PKPdf	08 33 13.7	+0.6
	baz=316						
V40A	Witts Springs	124.99	39	P	PKPdf	08 33 13.4	+0.1
	baz=310						
V40A	Witts Springs	124.99	39	*e*PKPdf	PKPdf	08 33 13.3	+0.1
CLWO	Collingwood	125.03	23	P	PKPdf	08 33 13.7	+0.7
	baz=327						
R43A	Red Bud	125.09	35	P	PKPdf	08 33 13.3	0.0
	baz=314						
PEMO	Pembroke	125.12	20	P	PKPdf	08 33 13.3	+0.2
	baz=331						
U41A	Viola	125.20	38	P	PKPdf	08 33 13.9	+0.3
	baz=311						
SADO	Sadowa	125.21	22	*e*PKPdf	PKPdf	08 33 13.5	+0.2
T42A	Van Buren	125.26	37	P	PKPdf	08 33 13.7	0.0
	baz=312						
T42A	Van Buren	125.26	37	*e*PKPdf	PKPdf	08 33 13.7	0.0
MIAR	Mount Ida	125.30	41	P	PKPdf	08 33 13.7	-0.1
	baz=308						
MIAR	Mount Ida	125.30	41	*e*PKPdf	PKPdf	08 33 15.1	+1.3
MIAR	Mount Ida	125.30	41	*e*PKIKP	PKPdf	08 33 15.1	+1.3
P45A	Graceland, Par	125.42	32	P	PKPdf	08 33 14.5	+0.6
	baz=317						
P45A	Graceland, Par	125.42	32	*e*PKPdf	PKPdf	08 33 14.2	+0.3
V41A	Mountainview	125.42	39	P	PKPdf	08 33 14.0	0.0
	baz=310						
BANO	Bancroft	125.45	21	P	PKPdf	08 33 13.9	+0.1
	baz=330						
S43A	Fulton Ridge,	125.49	36	P	PKPdf	08 33 14.2	+0.1
	baz=313						
TRQ	Mont Tremblant	125.52	18	*e*PKPdf	PKPdf	08 33 13.8	-0.2
U42A	Revenden	125.62	38	P	PKPdf	08 33 14.5	+0.2
	baz=311						
Q45A	Warren Harvey,	125.65	33	P	PKPdf	08 33 15.2	+0.9
	baz=316						
ELFO	Elginfield	125.66	25	P	PKPdf	08 33 14.3	+0.1
	baz=325						
O47A	Sheridan	125.72	31	P	PKPdf	08 33 14.3	-0.1
	baz=318						
PLVO	Plevna	125.73	21	P	PKPdf	08 33 14.0	-0.3
	baz=331						
PLVO	Plevna	125.73	21	*e*PKPdf	PKPdf	08 33 14.4	+0.1
OLIL	Olney	125.80	33	*e*PKPdf	PKPdf	08 33 14.9	+0.3
Y40A	Okolona	125.82	41	P	PKPdf	08 33 15.2	+0.4
	baz=308						
PBMO	Poplar Bluff	125.82	37	*e*PKPdf	PKPdf	08 33 14.0	-0.7
ACTO	Acton	125.83	24	P	PKPdf	08 33 14.8	+0.2
	baz=327						
V42A	Cord	125.88	38	P	PKPdf	08 33 14.9	0.0
	baz=311						
PKRO	Pickering	125.92	23	P	PKPdf	08 33 15.2	+0.5
	baz=328						
ALFO	Alfred	125.94	19	P	PKPdf	08 33 14.8	+0.2
	baz=333						
U43A	Rector	126.11	37	P	PKPdf	08 33 15.6	+0.3
	baz=312						
WLVO	Wesleyville	126.21	22	P	PKPdf	08 33 16.1	+0.8
	baz=329						
P47A	Martinsville	126.22	31	P	PKPdf	08 33 15.7	+0.3
	baz=318						
S45A	Carrier Mills	126.28	35	P	PKPdf	08 33 15.9	+0.3
	baz=315						
BLO	Bloomington	126.32	32	*e*PKPdf	PKPdf	08 33 15.8	+0.2
BLO	Bloomington	126.32	32	*e*PKIKP	PKPdf	08 33 15.8	+0.2
Y41A	Eaglette Beard	126.33	41	P	PKPdf	08 33 17.1	+1.3
	baz=309						
TYNO	Tyneside	126.34	24	P	PKPdf	08 33 15.6	+0.1
	baz=327						
R46A	Gibon Southern	126.49	33	P	PKPdf	08 33 16.8	+0.9
	baz=316						
Q47A	Bedord North L	126.55	32	P	PKPdf	08 33 16.8	+0.7
	baz=318						
N50A	Nevada	126.79	28	P	PKPdf	08 33 17.2	+0.7
	baz=322						
PQI	Presque Isle	126.82	13	*e*PKPdf	PKPdf	08 33 16.9	+0.6
MEDO	Medina	126.84	23	P	PKPdf	08 33 17.1	+0.6
	baz=328						
LONY	Lake Ozonia	126.94	19	*e*PKPdf	PKPdf	08 33 17.1	+0.4
R47A	Wooly Knot Far	126.96	33	P	PKPdf	08 33 17.3	+0.4
	baz=317						
O50A	Cable	127.05	29	P	PKPdf	08 33 16.8	-0.2
	baz=321						
ERPA	Erie	127.10	25	P	PKPdf	08 33 17.3	+0.3
	baz=326						
ERPA	Erie	127.10	25	*e*PKPdf	PKPdf	08 33 16.9	-0.2
T46A	Princeton	127.11	35	P	PKPdf	08 33 17.6	+0.4
	baz=315						
WCI	Wyandotte Cave	127.14	32	P	PKPdf	08 33 17.4	+0.2
	baz=317						
WCI	Wyandotte Cave	127.14	32	*e*PKPdf	PKPdf	08 33 17.2	0.0
WCI	Wyandotte Cave	127.14	32	*e*PKIKP	PKPdf	08 33 17.2	0.0
R48A	Northridge Ran	127.24	32	P	PKPdf	08 33 18.4	+1.0
	baz=318						
241A	Mo Tay, Goldon	127.27	43	P	PKPdf	08 33 19.0	+1.4
	baz=307						
ACSO	Alum Creek Sta	127.29	28	P	PKPdf	08 33 17.9	+0.4
	baz=322						
ACSO	Alum Creek Sta	127.29	28	*e*PKPdf	PKPdf	08 33 18.0	+0.6
P50A	Jamestown	127.38	30	P	PKPdf	08 33 18.1	+0.4
	baz=321						
U46A	Springville	127.43	35	P	PKPdf	08 33 18.5	+0.7
	baz=314						
341A	Kurthwood	127.51	44	P	PKPdf	08 33 19.5	+1.4
	baz=307						
T47A	Sharon Grove	127.59	34	P	PKPdf	08 33 18.0	-0.1
	baz=316						
NCB	Newcomb	127.64	19	*e*PKPdf	PKPdf	08 33 18.2	+0.2
S48A	Wiedeman Farm,	127.68	33	P	PKPdf	08 33 18.4	+0.1
	baz=317						
M54A	Oil Creek Stat	127.74	25	P	PKPdf	08 33 19.0	+0.7
	baz=326						
M54A	Oil Creek Stat	127.74	25	*e*PKPdf	PKPdf	08 33 18.7	+0.4
WVT	Waverly	127.79	35	P	PKPdf	08 33 18.6	+0.2
	baz=315						
WVT	Waverly	127.79	35	*e*PKPdf	PKPdf	08 33 18.7	+0.2
WVT	Waverly	127.79	35	*e*PKIKP	PKPdf	08 33 18.7	+0.2
V46A	Holladay	127.85	36	P	PKPdf	08 33 18.2	-0.4
	baz=314						
U47A	Clarksville	127.88	35	P	PKPdf	08 33 19.3	+0.6
	baz=315						
OXF	Oxford	127.95	38	P	PKPdf	08 33 20.2	+1.4
	baz=312						
S49A	Springfield	128.00	32	P	PKPdf	08 33 19.3	+0.4
	baz=318						
X45A	UM Field Stati	128.02	38	P	PKPdf	08 33 19.6	+0.6
	baz=312						
N54A	Moraine State	128.05	26	P	PKPdf	08 33 18.0	-0.9
	baz=326						
LBNH	Lisbon	128.10	17	*e*PKPdf	PKPdf	08 33 19.5	+0.6
LBNH	Lisbon	128.10	17	*e*PKIKP	PKPdf	08 33 19.5	+0.6
Z44A	Pea Ridge, Bel	128.12	40	P	PKPdf	08 33 20.1	+0.9
	baz=310						
R50A	Paris	128.13	31	P	PKPdf	08 33 19.8	+0.7
	baz=320						
W46A	Michie	128.16	37	P	PKPdf	08 33 18.9	-0.4
	baz=314						
V47A	Nunnelly	128.18	35	P	PKPdf	08 33 19.1	-0.2
	baz=315,SNR=5.8						
U48A	Cassie Pea, Po	128.25	34	P	PKPdf	08 33 20.0	+0.6
	baz=316						
Y45A	Yeager Farm, C	128.30	39	P	PKPdf	08 33 20.9	+1.4
	baz=312						
T49A	Edmonton	128.37	33	P	PKPdf	08 33 19.2	-0.4
	baz=318,SNR=8.6						
WVL	Waterville	128.41	15	*e*PKPdf	PKPdf	08 33 20.5	+1.1
X46A	Booneville	128.43	37	P	PKPdf	08 33 20.4	+0.6
	baz=313,SNR=6.3						
PLAL	Pickwick Lake	128.44	37	*e*PKPdf	PKPdf	08 33 19.7	-0.1
W47A	Westpoint	128.54	36	P	PKPdf	08 33 19.5	-0.4
	baz=314						
S50A	Richmond	128.55	32	P	PKPdf	08 33 20.7	+0.8
	baz=319						
BINY	Binghamton	128.59	21	P	PKPdf	08 33 20.8	+0.9
	baz=331						

BINY	**Binghamton**	**128.59**	**21**	*e*PKPdf	**PKPdf**	**08 33 20.6**	**+0.7**
V48A	**Smith Brothers**	**128.64**	**35**	P	**PKPdf**	**08 33 20.0**	**-0.2**
	baz=316,SNR=7.6						
V48A	**Smith Brothers**	**128.64**	**35**	*e*PKPdf	**PKPdf**	**08 33 20.8**	**+0.6**
U49A	**Red Boiling Sp**	**128.67**	**34**	P	**PKPdf**	**08 33 21.0**	**+0.9**
	baz=317,SNR=14						
Y46A	**Houston**	**128.71**	**38**	P	**PKPdf**	**08 33 20.9**	**+0.6**
	baz=312						
T50A	**Nancy**	**128.81**	**32**	P	**PKPdf**	**08 33 21.0**	**+0.6**
	baz=318,SNR=10						
X47A	**Russelville**	**128.89**	**37**	P	**PKPdf**	**08 33 21.0**	**+0.3**
	baz=314,SNR=6.3						
S51A	**Beattyville**	**128.99**	**31**	P	**PKPdf**	**08 33 20.6**	**-0.2**
	baz=320,SNR=7.2						
W48A	**Pulaski**	**129.00**	**36**	P	**PKPdf**	**08 33 20.9**	**+0.1**
	baz=315,SNR=5.7						
344A	**Westbrook Farm**	**129.08**	**42**	P	**PKPdf**	**08 33 21.1**	**0.0**
	baz=309						
344A	**Westbrook Farm**	**129.08**	**42**	*e*PKPdf	**PKPdf**	**08 33 21.1**	**0.0**
Z46A	**Louisville**	**129.12**	**39**	P	**PKPdf**	**08 33 22.2**	**+1.0**
	baz=312						
V49A	**McMinnville**	**129.14**	**34**	P	**PKPdf**	**08 33 21.2**	**+0.1**
	baz=316,SNR=11						
MCWV	**Mont Chateau**	**129.19**	**26**	P	**PKPdf**	**08 33 21.2**	**+0.1**
	baz=325,SNR=11						
SSPA	**Standing Stone**	**129.20**	**24**	P	**PKPdf**	**08 33 21.5**	**+0.4**
	baz=328						
SSPA	**Standing Stone**	**129.20**	**24**	*e*PKPdf	**PKPdf**	**08 33 21.6**	**+0.6**
S52A	**Salyersville**	**129.22**	**31**	P	**PKPdf**	**08 33 21.6**	**+0.3**
	baz=321,SNR=5.2						
O56A	**Blue Knob Stat**	**129.23**	**25**	P	**PKPdf**	**08 33 21.3**	**+0.1**
	baz=327,SNR=7.8						
O56A	**Blue Knob Stat**	**129.23**	**25**	*e*PKPdf	**PKPdf**	**08 33 21.6**	**+0.4**
U50A	**Jamestown**	**129.25**	**33**	P	**PKPdf**	**08 33 21.5**	**+0.1**
	baz=318						
Y47A	**UCPARC, Winfie**	**129.31**	**37**	P	**PKPdf**	**08 33 21.5**	**+0.1**
	baz=313						
W49A	**Belvidere**	**129.40**	**35**	P	**PKPdf**	**08 33 21.7**	**+0.1**
	baz=316,SNR=8.5						
X48A	**Hartselle**	**129.42**	**36**	P	**PKPdf**	**08 33 21.0**	**-0.7**
	baz=315,SNR=6.4						
X48A	**Hartselle**	**129.42**	**36**	*e*PKPdf	**PKPdf**	**08 33 21.0**	**-0.7**
345A	**Thompson Farm,**	**129.64**	**42**	P	**PKPdf**	**08 33 22.9**	**+0.7**
	baz=310						
Z47A	**Carrollton**	**129.66**	**38**	P	**PKPdf**	**08 33 22.4**	**+0.3**
	baz=313						
V50A	**Pikevile**	**129.66**	**34**	P	**PKPdf**	**08 33 23.4**	**+1.3**
	baz=317,SNR=6.4						
T52A	**Hallie**	**129.71**	**31**	P	**PKPdf**	**08 33 22.7**	**+0.5**
	baz=320,SNR=5.9						
Y48A	**Jasper**	**129.72**	**37**	P	**PKPdf**	**08 33 22.3**	**0.0**
	baz=314						
N59A	**State Game Lan**	**129.79**	**22**	P	**PKPdf**	**08 33 23.6**	**+1.3**
	baz=331						
N59A	**State Game Lan**	**129.79**	**22**	*e*PKPdf	**PKPdf**	**08 33 22.6**	**+0.4**
HRV	**Adam Dziewonsk**	**129.79**	**17**	P	**PKPdf**	**08 33 22.0**	**-0.1**
	baz=336						
X49A	**Woodville**	**129.80**	**36**	P	**PKPdf**	**08 33 22.4**	**0.0**
	baz=315,SNR=7.1						
TZTN	**Tazewell**	**129.85**	**32**	P	**PKPdf**	**08 33 23.2**	**+0.8**
	baz=320,SNR=7.4						
TZTN	**Tazewell**	**129.85**	**32**	*e*PKPdf	**PKPdf**	**08 33 22.6**	**+0.1**
Z48A	**Northport**	**129.85**	**38**	P	**PKPdf**	**08 33 22.3**	**-0.2**
	baz=313						
147A	**Livingston**	**129.88**	**39**	P	**PKPdf**	**08 33 23.4**	**+0.8**
	baz=312						
W50A	**Signal Mountai**	**129.88**	**34**	P	**PKPdf**	**08 33 22.8**	**+0.2**
	baz=317,SNR=7.4						
W50A	**Signal Mountai**	**129.88**	**34**	*e*PKPdf	**PKPdf**	**08 33 19.2**	**-3.4**
V51A	**Loudon**	**129.97**	**33**	P	**PKPdf**	**08 33 23.3**	**+0.6**
	baz=318,SNR=11						
U52A	**Thorn Hill**	**130.06**	**32**	P	**PKPdf**	**08 33 23.6**	**+0.7**
	baz=320						
ODNJ	**Ogdensburg**	**130.07**	**21**	*e*PKPdf	**PKPdf**	**08 33 22.7**	**0.0**
KIC	**Kosan Boka**	**130.14**	**283**	*e*PKP1	**PKPdf**	**08 33 23.9**	**+0.3**
	comp=Z,148nm,1.5s						
DBIC	**Dimbokro**	**130.19**	**283**	PKP	**PKPdf**	**08 33 24.8**	**+1.1**
	comp=Z,4.8nm,0.7s,baz=62,slow=3.1,SNR=7.1						
DBIC				SKPbc	**SKPbc**	**08 36 42.5**	**+0.7**
	comp=Z,14nm,0.8s,baz=61,slow=5.8,SNR=8.1						
Y49A	**Blount Mountai**	**130.21**	**36**	P	**PKPdf**	**08 33 23.7**	**+0.5**
	baz=315						
Y49A	**Blount Mountai**	**130.21**	**36**	*e*PKPdf	**PKPdf**	**08 33 24.2**	**+1.0**
W51A	**Cleveland**	**130.22**	**34**	P	**PKPdf**	**08 33 23.9**	**+0.7**
	baz=317						
X50B	**Fort Payne**	**130.22**	**35**	P	**PKPdf**	**08 33 24.0**	**+0.7**
	baz=316						
148A	**Greensboro**	**130.34**	**38**	P	**PKPdf**	**08 33 24.3**	**+0.9**
	baz=313						
TIC	**Toumodi**	**130.35**	**283**	*e*PKP1	**PKPdf**	**08 33 24.9**	**+0.9**
V52A	**Sevierville**	**130.35**	**32**	P	**PKPdf**	**08 33 25.0**	**+1.5**
	baz=319,SNR=10						
V52A	**Sevierville**	**130.35**	**32**	*e*PKPdf	**PKPdf**	**08 33 24.2**	**+0.7**
MVL	**Millersville**	**130.36**	**23**	*e*PKPdf	**PKPdf**	**08 33 23.4**	**+0.1**
PAL	**Palisades**	**130.38**	**20**	P	**PKPdf**	**08 33 24.2**	**+0.9**
	baz=333						
TKL	**Tuckaleechee C**	**130.40**	**33**	PKP	**PKPdf**	**08 33 24.3**	**+0.8**
	comp=Z,9.4nm,0.7s,baz=315,slow=2.9,SNR=14						
LRAL	**Lakeview Retre**	**130.43**	**38**	*e*PKPdf	**PKPdf**	**08 33 24.0**	**+0.3**
LIC	**Lamto**	**130.44**	**283**	*e*PKP1	**PKPdf**	**08 33 24.5**	**+0.3**
	comp=Z,36nm,0.5s						
U53A	**Fall Branch**	**130.49**	**31**	P	**PKPdf**	**08 33 23.7**	**0.0**
	baz=320,SNR=6.8						
Z49A	**Columbiana**	**130.60**	**37**	P	**PKPdf**	**08 33 24.5**	**+0.5**
	baz=314						
X51A	**Calhoun**	**130.60**	**35**	P	**PKPdf**	**08 33 24.4**	**+0.5**
	baz=317,SNR=5.3						
248A	**Dixon Mills**	**130.61**	**39**	P	**PKPdf**	**08 33 25.1**	**+1.1**
	baz=312						
W52A	**Murphy**	**130.73**	**33**	P	**PKPdf**	**08 33 25.4**	**+1.2**
	baz=318						
W52A	**Murphy**	**130.73**	**33**	*e*PKPdf	**PKPdf**	**08 33 25.2**	**+1.0**
PSUB	**Penn St. - Bra**	**130.77**	**22**	*e*PKPdf	**PKPdf**	**08 33 24.5**	**+0.4**
149A	**Jones**	**130.85**	**38**	P	**PKPdf**	**08 33 24.9**	**+0.5**
	baz=314,SNR=5.5						
V53A	**Saluda**	**130.90**	**32**	P	**PKPdf**	**08 33 25.7**	**+1.2**
	baz=320,SNR=7.0						
BLA	**Blacksburg**	**130.90**	**29**	P	**PKPdf**	**08 33 24.2**	**-0.3**
	baz=323						
Z50A	**Ashland**	**130.92**	**37**	P	**PKPdf**	**08 33 25.3**	**+0.7**
	baz=315,SNR=7.7						
249A	**Camden**	**131.07**	**39**	P	**PKPdf**	**08 33 25.3**	**+0.4**
	baz=313						
W53A	**Cullowhee**	**131.09**	**33**	P	**PKPdf**	**08 33 26.9**	**+1.9**
	baz=319,SNR=9.5						
X52A	**Dahlonega**	**131.11**	**34**	P	**PKPdf**	**08 33 25.9**	**+1.0**
	baz=318						
IP04	**Greensprings**	**131.25**	**26**	*e*PKPdf	**PKPdf**	**08 33 26.0**	**+1.0**
150A	**Eclectic**	**131.31**	**37**	P	**PKPdf**	**08 33 26.1**	**+0.7**
	baz=314						
IP03	**Louisa**	**131.34**	**26**	*e*PKPdf	**PKPdf**	**08 33 25.6**	**+0.4**
IP01	**Cuckoo**	**131.44**	**26**	*e*PKPdf	**PKPdf**	**08 33 24.6**	**-0.7**
CBN	**Corbin Frederi**	**131.47**	**25**	P	**PKPdf**	**08 33 27.5**	**+2.1**
	baz=328						
CBN	**Corbin Frederi**	**131.47**	**25**	*e*PKPdf	**PKPdf**	**08 33 27.0**	**+1.6**
X53A	**Estanollee**	**131.51**	**33**	P	**PKPdf**	**08 33 27.4**	**+1.8**
	baz=319,SNR=18						
Y52A	**Lilburn**	**131.56**	**35**	P	**PKPdf**	**08 33 27.8**	**+2.0**
	baz=317						
Y52A	**Lilburn**	**131.56**	**35**	*e*PKPdf	**PKPdf**	**08 33 26.6**	**+0.8**
250A	**Grady**	**131.60**	**38**	P	**PKPdf**	**08 33 27.4**	**+1.5**
	baz=314						
250A	**Grady**	**131.60**	**38**	*e*PKPdf	**PKPdf**	**08 33 25.8**	**-0.1**
IP05	**Hopewell Churc**	**131.61**	**26**	*e*PKPdf	**PKPdf**	**08 33 26.5**	**+0.8**
BRAL	**Brewton**	**131.66**	**40**	P	**PKPdf**	**08 33 28.2**	**+2.2**
	baz=312						
151A	**Opelika**	**131.79**	**37**	P	**PKPdf**	**08 33 26.4**	**+0.2**
	baz=315						
Y53A	**Monroe**	**131.84**	**34**	P	**PKPdf**	**08 33 27.0**	**+0.7**
	baz=318						
Z52A	**Williamson**	**131.85**	**35**	P	**PKPdf**	**08 33 28.0**	**+1.7**
	baz=317						
350A	**Dozier**	**131.94**	**39**	P	**PKPdf**	**08 33 27.7**	**+1.2**
	baz=313						
251A	**Midway**	**132.04**	**37**	P	**PKPdf**	**08 33 27.7**	**+1.0**
	baz=315						
152A	**Waverly Hall**	**132.05**	**36**	P	**PKPdf**	**08 33 27.7**	**+1.0**
	baz=316						
152A	**Waverly Hall**	**132.05**	**36**	*e*PKPdf	**PKPdf**	**08 33 27.2**	**+0.5**
KMSC	**Kings Mountain**	**132.08**	**31**	P	**PKPdf**	**08 33 27.9**	**+1.2**
	baz=321						
KMSC	**Kings Mountain**	**132.08**	**31**	*e*PKPdf	**PKPdf**	**08 33 26.6**	**-0.1**
NCAT	**North Carolina**	**132.12**	**29**	*e*PKPdf	**PKPdf**	**08 33 25.5**	**-1.2**
GOGA	**Godfrey**	**132.23**	**35**	P	**PKPdf**	**08 33 28.0**	**+1.0**
	baz=318						
Z53A	**Monticello**	**132.27**	**35**	P	**PKPdf**	**08 33 26.6**	**-0.5**
	baz=318						
Y54A	**Tignall**	**132.33**	**33**	P	**PKPdf**	**08 33 28.2**	**+1.0**
	baz=319						
252A	**Lumpkin**	**132.52**	**37**	P	**PKPdf**	**08 33 28.3**	**+0.7**
	baz=316						
Z54A	**Sparta**	**132.71**	**34**	P	**PKPdf**	**08 33 29.4**	**+1.5**
	baz=318						
352A	**Blakely**	**132.77**	**38**	P	**PKPdf**	**08 33 28.9**	**+0.8**
	baz=315						
352A	**Blakely**	**132.77**	**38**	*e*PKPdf	**PKPdf**	**08 33 27.8**	**-0.3**
253A	**Americus**	**132.83**	**36**	P	**PKPdf**	**08 33 29.4**	**+1.2**
	baz=316						
Z55A	**Blythe**	**133.12**	**34**	P	**PKPdf**	**08 33 29.6**	**+1.0**
	baz=319						
155A	**Kite**	**133.38**	**34**	P	**PKPdf**	**08 33 30.9**	**+1.7**
	baz=318						
453A	**Whigham**	**133.57**	**38**	P	**PKPdf**	**08 33 30.7**	**+1.0**
	baz=315						
TIGA	**Tifton**	**133.60**	**36**	P	**PKPdf**	**08 33 30.8**	**+1.2**
	baz=316						
PLCA	**Paso Flores**	**141.34**	**159**	PKhKP	PKPpre	08 33 40.6	
	comp=Z,7.8nm,0.9s,baz=253,slow=0.8,SNR=4.0						
PLCA				SKPbc	**SKiKP**	**08 37 18.4**	**+0.6**
	comp=Z,5.0nm,0.7s,baz=297,slow=1.9,SNR=7.7						
PLCA	**Paso Flores**	**141.34**	**159**	*e*PKPdf	**PKPdf**	**08 33 43.5**	**-0.2**
PLCA				*e*SKPbc	**SKiKP**	**08 37 18.4**	**+0.6**
PLCA	**Paso Flores**	**141.34**	**159**	*e*PKIKP	**PKPdf**	**08 33 43.6**	**-0.2**
ESPN	**Las Esperanzas**	**144.76**	**61**	*e*PKPdf	**PKPdf**	**08 33 49.9**	**-0.5**
GO05	**HualaæØ**	**145.66**	**152**	*e*PKPdf	**PKPab**	**08 33 52.6**	**+0.5**
TRQA	**Tornquist**	**146.29**	**168**	*e*PKPdf	**PKPdf**	**08 33 52.9**	**+0.5**
TRQA	**Tornquist**	**146.29**	**168**	*e*PKP2	**PKPdf**	**08 33 52.9**	**+0.5**
ROC1	**El Roble**	**147.77**	**151**	*e*PKPbc	**PKPbc**	**08 33 58.8**	**+0.6**
PEL	**Peldehue**	**147.79**	**152**	*e*PKPbc	**PKPbc**	**08 33 58.5**	**+0.6**
PEL	**Peldehue**	**147.79**	**152**	*e*PKP2	**PKPbc**	**08 33 58.6**	**+0.6**
BCIP	**Isla Barro Col**	**150.03**	**62**	*e*PKPbc	**PKPbc**	**08 34 04.3**	**+0.2**
BCIP	**Isla Barro Col**	**150.03**	**62**	*e*P	**PKPbc**	**08 34 04.3**	**+0.1**
LCO	**Las Campanas**	**151.12**	**147**	*e*PKPbc	**PKPbc**	**08 34 07.6**	**+0.9**
LCO	**Las Campanas**	**151.12**	**147**	*e*PKIKP	**PKPbc**	**08 34 07.6**	**+0.9**
SJCC	**San Jacinto, C**	**153.64**	**56**	*e*P	**PKPdf**	**08 34 04.0**	**-0.6**
SJG	**San Juan**	**153.69**	**28**	PKPbc	**PKPbc**	**08 34 12.2**	**-0.2**
	comp=Z,5.8nm,0.3s,baz=351,slow=3.9,SNR=5.0						
MTP	**Monte Pirata**	**153.98**	**27**	*e*PKPbc	**PKPbc**	**08 34 13.5**	**+0.5**
OTAV	**Otavalo**	**154.38**	**79**	*e*P	**PKPab**	**08 34 31.2**	**+2.2**
GO02	**Mina Guanaco**	**154.72**	**144**	*e*PKPbc	**PKPbc**	**08 34 15.1**	**+0.3**
ZARC	**Zaragoza, Cauc**	**155.16**	**60**	*e*P	**PKPdf**	**08 34 07.5**	**+0.7**
YOTC	**Yotoco, Valle**	**155.33**	**69**	*e*P	**PKPdf**	**08 34 03.1**	**-4.0**
PCON	**Cinco Dias**	**155.83**	**73**	*e*P	**PKPab**	**08 34 37.6**	**+2.3**
PTBC	**PUERTO BERRIO,**	**155.97**	**61**	*e*P	**PKPdf**	**08 34 08.1**	**+0.3**
NORC	**Norcasia**	**156.04**	**64**	*e*P	**PKPab**	**08 34 37.0**	**+1.5**
OCAC	**Ocana**	**156.08**	**56**	*e*P	**PKPdf**	**08 34 08.9**	**+0.8**
BRRC	**Barranca, Sant**	**156.34**	**59**	*e*P	**PKPdf**	**08 34 09.1**	**+0.8**
FLOC	**Florencia**	**156.76**	**74**	*e*P	**PKPab**	**08 34 33.2**	**-5.3**
PRAC	**Prado**	**156.78**	**68**	*e*P	PKPdf	08 34 23.2	+14
ROSC	**El Rosal**	**156.85**	**65**	PKPab	**PKPab**	**08 34 38.9**	**-0.5**
	comp=Z,6.2nm,0.6s,baz=104,slow=20,SNR=4.3						
BARC	**Barichara**	**157.05**	**60**	*e*P	**PKPab**	**08 34 41.1**	**+1.1**
CHIC	**Chingaza**	**157.47**	**65**	*e*P	**PKPdf**	**08 34 10.4**	**+0.2**
RUSC	**La Rusia**	**157.47**	**61**	*e*PKPdf	**PKPdf**	**08 34 09.7**	**-0.7**
RUSC	**La Rusia**	**157.47**	**61**	*e*P	**PKPdf**	**08 34 08.8**	**-1.6**
SJAC	**San Juan de Ar**	**157.81**	**68**	*e*P	**PKPab**	**08 34 45.6**	**+2.4**
SDV	**Santo Domingo**	**157.86**	**51**	PKP	**PKPdf**	**08 34 11.0**	**+0.5**
	comp=Z,12nm,0.7s,baz=50,slow=2.2,SNR=12						
SDV	**Santo Domingo**	**157.86**	**51**	*e*PKPdf	**PKPdf**	**08 34 10.2**	**-0.2**
CPUP	**Villa Florida**	**158.57**	**170**	PKP	**PKPdf**	**08 34 10.9**	**+0.2**
	comp=Z,2.8nm,0.8s,baz=291,slow=7.5,SNR=4.4						
CPUP				PKPab	**PKPab**	**08 34 47.5**	**+1.8**
	comp=Z,8.1nm,0.7s,baz=204,slow=5.5,SNR=8.4						
CPUP	**Villa Florida**	**158.57**	**170**	PKIKP	**PKPdf**	**08 34 11.0**	**+0.2**
CPUP				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CPUP				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MNMC	**Minye Minye**	**158.92**	**133**	*e*PKPdf	**PKPdf**	**08 34 12.7**	**+1.0**
LPAZ	**La Paz**	**161.75**	**129**	PKP	**PKPdf**	**08 34 16.1**	**+0.8**
	comp=Z,6.1nm,1.0s,baz=329,slow=1.0,SNR=14						
LPAZ				PKPab	**PKPab**	**08 35 01.7**	**+0.9**
	comp=Z,4.5nm,0.8s,baz=172,slow=3.1,SNR=4.3						
SIV	**San Ignacio**	**166.81**	**146**	PKP	**PKPdf**	**08 34 20.3**	**+1.2**
	comp=Z,6.3nm,0.9s,baz=282,slow=1.5,SNR=17						
SIV				PKPab	**PKPab**	**08 35 23.6**	**+1.4**
	comp=Z,6.1nm,0.8s,baz=232,slow=4.7,SNR=9.9						
SAML	**Samuel**	**169.54**	**112**	*e*PKPdf	**PKPdf**	**08 34 20.6**	**-0.4**
SAML	**Samuel**	**169.54**	**112**	*e*PKIKP	**PKPdf**	**08 34 20.6**	**-0.4**
PTGA	**Pitinga**	**172.09**	**57**	PKP	**PKPdf**	**08 34 22.1**	**-0.3**
	comp=Z,1.7nm,0.3s,baz=121,slow=4.4,SNR=4.3						

RSNC 05 08:32:30.4±0.8**, 6°.90N×73°.29W, h124**^{km}±13^{km}**, ML1.1,**
Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.33**	**161**	*e*P	Pn	08 32 47.2	-1.0
BARC				*i*		08 32 47.4	
	comp=Z,2.6nm,0.3s						
BARC				*e*S	Sn	08 33 01.6	0.0
BRRC	**Barranca, Sant**	**0.47**	**296**	*e*P	Pn	08 32 48.7	+0.1
PTBC	**PUERTO BERRIO,**	**1.21**	**253**	*e*P	Pn	08 32 54.8	-0.1
PTBC				*e*S	Sn	08 33 12.9	-0.7
PTBC				*i*		08 33 21.1	
	comp=Z,2.7nm,0.5s						
OCAC	**Ocana**	**1.33**	**359**	*e*S	Sn	08 33 15.6	-0.4

ISCJB ***05*** *08:32:41.1±1.5, 2°.4N±0°.3×88°.9E±0°.1, h10^{km}, mb3.9/5, Error ellipse: s-maj=39.8km s-min=12.2km az=23.7*
IDC ***05*** *08:32:42.5±1.8, 2°.55N×89°.16E, h0^{km}, mb3.8/5, mb1 3.9/6, mb1mx3.5/66, mbtmp3.9/6, ML3.5/1, Error ellipse: s-maj=57.2km s-min=25.1km az=44.0*
ISC 05 08:32:43.4±1.6**, 2°.5N**±0°.3×**89°.1E**±0°.2**, h10**^{km}**, n7,** σ**0**^{s}**.92**/8**,**
mb3.7/5**, North Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	**Pallekele**	**9.59**	**300**	Pn	**Pn**	**08 35 02.8**	**+1.1**
	0.4nm,0.3s,baz=114,slow=16,SNR=2.3						
PALK				Sn	**Sn**	**08 36 48.4**	**-1.3**
	2.7nm,0.3s,baz=116,slow=2.3,SNR=9.7						
MKAR	**Makanchi Array**	**44.53**	**353**	P	**P**	**08 40 55.8**	**+0.5**
	0.5nm,0.5s,baz=170,slow=9.8,SNR=6.2						
GEYT	**Alibeck**	**45.26**	**325**	P	**P**	**08 41 00.9**	**-0.4**
	2.9nm,0.3s,baz=144,slow=5.2,SNR=2.5						
SONM	**Songino Array**	**47.60**	**16**	P	**P**	**08 41 19.2**	**-0.4**
	2.1nm,0.6s,baz=198,slow=9.4,SNR=9.7						
KURBB	**Kurchatov Arra**	**48.79**	**351**	P	**P**	**08 41 28.7**	**+0.1**
	0.1nm,0.4s,baz=171,slow=6.6,SNR=3.4						
WRA	**Warramunga Arr**	**49.70**	**119**	P	**P**	**08 41 35.7**	**-0.5**
	0.5nm,0.9s,baz=299,slow=8.4,SNR=3.1						
TXAR	**Lajitas Array**	**146.09**	**20**	PKPbc	**PKPab**	**08 52 25.9**	**+0.7**
	0.4nm,0.6s,baz=9.7,slow=0.1,SNR=6.7						

ISCJB ***05*** *08:36:05.8±0.6, 41°.33N±0°.05×35°.88E±0°.05, h0^{km}, Error ellipse: s-maj=7.6km s-min=4.1km az=33.3*
DDA ***05*** *08:36:05.7, 41°.35N×35°.82E, h7^{km}, Ml3.1, Suspected Mining explosion.*
ISK ***05*** *08:36:05.5, 41°.41N×35°.94E, h8^{km}, ML2.6/5*
CSEM ***05*** *08:36:06.1±0.3, 41°.32N×35°.85E, h2^{km}, ML3.1, Error ellipse: s-maj=7.4km s-min=4.7km az=36.0, Suspected Mining explosion.*
ISC 05 08:36:05.6±0.9**, 41°.32N**±0°.03×**35°.84E**±0°.03**, h0**^{km}**, n34,**
σ**0**^{s}**.65**/39**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAMS	**Samsun-Alacam**	**0.26**	**81**	*i* P	**Pg**	**08 36 11.4**	**+0.8**
SAMS	**Samsun-Alacam**	**0.26**	**81**	P	**Pg**	**08 36 11.4**	**+0.8**
HAVZ	**Havza**	**0.26**	**201**	*i* P	**Pg**	**08 36 11.6**	**+1.0**
HAVZ	**Havza**	**0.26**	**201**	P	**Pg**	**08 36 11.6**	**+1.0**
KVT	**Kavak**	**0.28**	**147**	PG	**Pg**	**08 36 11.8**	**+0.8**
KVT				SG	**Sb**	**08 36 18.6**	**-0.3**
KVT	**Kavak**	**0.28**	**147**	*e*Pg	**Pg**	**08 36 11.8**	**+0.8**
KVT				*e*Sg	**Sb**	**08 36 18.6**	**-0.3**
DIKM	**Dikmen**	**0.55**	**307**	PG	**Pg**	**08 36 16.6**	**+0.5**
DIKM				SG	**Sb**	**08 36 25.6**	**-1.0**
DIKM	**Dikmen**	**0.55**	**307**	*e*Pg	**Pg**	**08 36 16.6**	**+0.5**
DIKM				*e*Sg	**Sb**	**08 36 25.6**	**-1.0**
BOYT	**Boyabat**	**0.71**	**278**	*i* P	**Pg**	**08 36 19.9**	**+0.6**
BOYT				*i* S	**Sb**	**08 36 32.2**	**+0.9**
BOYT	**Boyabat**	**0.71**	**278**	P	**Pg**	**08 36 19.9**	**+0.6**
SINO	**SINOP_Merkez**	**0.85**	**326**	*i* P	**Pg**	**08 36 21.6**	**-0.2**
SINO	**SINOP_Merkez**	**0.85**	**326**	P	**Pg**	**08 36 21.6**	**-0.2**
ERBA	**Erbaa**	**0.94**	**133**	*i* P	**Pb**	**08 36 24.4**	**-0.4**
ERBA	**Erbaa**	**0.94**	**133**	P	**Pb**	**08 36 24.4**	**-0.4**
CTAK	**Corum_Osmancik**	**1.04**	**230**	*i* P	**Pg**	**08 36 25.9**	**+0.3**
CTAK	**Corum_Osmancik**	**1.04**	**230**	P	**Pg**	**08 36 25.9**	**+0.3**
TOKT	**Tokat**	**1.13**	**152**	PN	**Pn**	**08 36 28.6**	**-0.2**
TOKT	**Tokat**	**1.13**	**152**	*e*Pn	**Pn**	**08 36 28.6**	**-0.2**
COAL	**Corum-Alaca**	**1.25**	**212**	*i* P	**Pg**	**08 36 27.9**	**-1.5**
COAL	**Corum-Alaca**	**1.25**	**212**	P	**Pg**	**08 36 28.0**	**-1.5**
CORM	**Corum**	**1.47**	**219**	PN	**Pn**	**08 36 33.7**	**+0.3**
CORM	**Corum**	**1.47**	**219**	*e*Pn	**Pn**	**08 36 33.7**	**+0.3**
BZK	**Bozkurt**	**1.52**	**295**	PN	**Pb**	**08 36 34.8**	**+0.1**
BZK	**Bozkurt**	**1.52**	**295**	*e*Pn	**Pb**	**08 36 34.8**	**+0.1**
ILGA	**Ilgaz**	**1.63**	**261**	*i* P	**Pn**	**08 36 36.0**	**+0.2**
ILGA	**Ilgaz**	**1.63**	**261**	P	**Pn**	**08 36 36.0**	**+0.2**
SVSK	**Karacayir**	**1.66**	**148**	PN	**Pn**	**08 36 35.8**	**-0.1**
SVSK	**Karacayir**	**1.66**	**148**	*e*Pn	**Pn**	**08 36 35.8**	**-0.1**
YOZ	**Yozgat**	**1.73**	**194**	PN	**Pn**	**08 36 37.7**	**+0.7**
YOZ	**Yozgat**	**1.73**	**194**	*e*Pn	**Pn**	**08 36 37.7**	**+0.7**
CDAG	**Cicekdag**	**2.03**	**214**	*i* P	**Pb**	**08 36 43.5**	**0.0**
CDAG	**Cicekdag**	**2.03**	**214**	P	**Pb**	**08 36 43.5**	**0.0**
ESPY	**Espiye-Giresun**	**2.21**	**100**	PN	**Pn**	**08 36 43.4**	**-0.2**
ESPY	**Espiye-Giresun**	**2.21**	**100**	*e*Pn	**Pn**	**08 36 43.4**	**-0.2**

MAN 05 08:39:39.0, 7°.61N×126°.84E, h30^{km}**, mb4.6, ML3.5, MS3.4,**
2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.74**	**320**	⇓*i*P	Pn	08 39 55.1	+1.7
BIPH				*i* S	Sn	08 40 03.8	+0.1
MATI	**Mati**	**0.88**	**221**	*e*P	Pn	08 39 54.6	-0.7
MATI				*e*S	Sb	08 40 07.6	+0.5
BUKP	**Musuan**	**1.78**	**279**	*e*P	Pn	08 40 08.7	+0.9
BUKP				*e*S	Sb	08 40 34.5	+1.5
BUTP	**Butuan**	**1.81**	**318**	*e*P	Pn	08 40 06.5	-1.7
BUTP				*e*S	Sn	08 40 30.7	+0.6
CGP	**Cagayan de Oro**	**2.28**	**292**	⇓*e*P	Pn	08 40 16.0	+1.3
CGP				*e*S	Sn	08 40 42.1	+0.3

NNC 05 08:42:27.7±4.1**, 37°.13N×70°.81E, h0**^{km}**, mb3.8, mpv3.4,**
2C-2D, Error ellipse: s-maj=41.5km s-min=28.2km
az=141.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**3.57**	**35**	⇓P	Pn	08 43 24.3	-0.2
	4.4nm,0.2s						
SFK				⇑S	Sn	08 44 09.4	+2.0
	13nm,0.2s						
KK31	**Karatay Array**	**5.97**	**358**	P	Pn	08 43 57.5	+0.2
	0.6nm,0.2s,baz=181,slow=13,SNR=13						
KK31				⇑S	Sn	08 45 08.7	+2.4
	1.2nm,0.5s,baz=180,slow=24,SNR=6.0						
AAK	**Ala-Archa**	**6.18**	**26**	P	Pn	08 44 00.5	+0.1
	1.1nm,0.3s						
AAK				⇓S	Sn	08 45 11.0	-0.9
	2.6nm,0.5s						

GUC ***05*** *08:44:34.6±0.6, 18°.39S×71°.29W, h37^{km}±3^{km}, ML3.9*
ISCJB ***05*** *08:44:35.4±0.9, 18°.55S±0°.04×71°.34W±0°.08, h68^{km}±10^{km}, mb3.9/7, Error ellipse: s-maj=11.9km s-min=7.2km az=177.4*
IDC ***05*** *08:44:42.0±2.4, 18°.05S×71°.05W, h98^{km}±21^{km}, mb3.7/8, mb1 3.9/11, mb1mx3.6/46, mbtmp4.1/11, MS3.1/2, Ms1 3.2/2, ms1mx2.7/37, Error ellipse: s-maj=23.4km s-min=18.0km az=53.0*
ISC 05 08:44:36.7±1.2**, 18°.50S**±0°.05×**71°.27W**±0°.09**, h59**^{km}±12^{km}**,**
n23, σ**1**^{s}**.55**/30**, mb3.9**/7**, 8C, Off coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB12	**IPOC Station P**	**0.90**	**97**	⇑*i*P	**Pn**	**08 44 52.0**	**-1.5**
PB12				*i* S	**Sn**	**08 45 04.9**	**-1.0**
PB12				IAML		08 45 06.0	
	comp=N,4µm,0.4s						
PSGC	**Pisagua**	**1.54**	**135**	⇑*i*P	**Pn**	**08 45 02.1**	**0.0**
PSGC				*i* S	**Sn**	**08 45 18.9**	**-2.2**
PB16	**IPOC Station P**	**1.68**	**85**	⇑*i*P	**Pn**	**08 45 04.1**	**-0.2**
PB16				*i* S	**Sn**	**08 45 26.6**	**+1.4**
PB16				IAML		08 45 29.7	
	comp=N,2µm,0.7s						
MNMC	**Minye Minye**	**1.71**	**112**	⇑*i*P	**Pn**	**08 45 04.8**	**+0.3**
MNMC				*i* S	**Sn**	**08 45 27.2**	**+1.8**
MNMC				IAML		08 45 41.5	
	comp=E,3µm,0.4s						
PB08	**IPOC Station P**	**2.58**	**130**	⇑*i*P	**Pn**	**08 45 17.5**	**+1.0**
PB08				*i* S	**Sn**	**08 45 49.5**	**+2.6**
PB08				IAML		08 46 06.0	
	comp=E,373nm,0.4s						
PB01	**IPOC Station P**	**3.04**	**147**	⇑*i*P	**Pn**	**08 45 22.9**	**+0.4**
PB01				*i* S	**Sn**	**08 45 58.9**	**+1.2**
PB01				IAML		08 46 01.3	
	comp=N,246nm,0.1s						
PB02	**IPOC Station P**	**3.09**	**155**	⇑*i*P	**Pn**	**08 45 23.5**	**+0.3**
PB02				*i* S	**Sn**	**08 45 57.8**	**-1.2**
PB02				IAML		08 46 07.3	
	comp=E,535nm,0.7s						
PB07	**IPOC Station P**	**3.47**	**158**	*e*P	**Pn**	**08 45 28.4**	**0.0**
PB07				*i* S	**Sn**	**08 46 05.6**	**-2.7**
PB07				IAML		08 46 28.2	
	comp=E,227nm,0.6s						
LPAZ	**La Paz**	**3.72**	**54**	P	**Pn**	**08 45 33.5**	**+1.2**
	comp=E,6.4nm,0.3s,baz=244,slow=11,SNR=70						
LPAZ				LR	LR	08 47 20.4	
	comp=E,439nm,18.3s,baz=279,slow=48						
PB03	**IPOC Station P**	**3.81**	**158**	⇑*i*P	**Pn**	**08 45 33.0**	**0.0**
PB03				*i* S	**Sn**	**08 46 14.9**	**-1.7**
PB03				IAML		08 46 57.4	
	comp=E,124nm,0.3s						
NNA	**Nana**	**8.41**	**320**	P	**Pn**	**08 46 37.5**	**+1.5**
	comp=E,1.5nm,0.3s,baz=129,slow=19,SNR=3.6						
NNA				S	Sn	08 47 57.0	-13
	comp=E,1.9nm,0.3s,baz=311,slow=18,SNR=2.5						
NNA				LR	LR	08 50 00.8	
	comp=E,83nm,19.4s,baz=160,slow=39						
SIV	**San Ignacio**	**10.06**	**77**	P	**Pn**	**08 46 58.9**	**+0.4**
	comp=E,2.0nm,0.3s,baz=281,slow=9.6,SNR=36						
PTGA	**Pitinga**	**20.86**	**33**	P	**P**	**08 49 11.2**	**-2.7**
	comp=E,9.1nm,0.6s,baz=335,slow=22,SNR=22						
PLCA	**Paso Flores**	**22.17**	**179**	P	P	08 49 35.9	+8.0
	comp=E,5.1nm,1.1s,baz=334,slow=9.3,SNR=3.0						
TXAR	**Lajitas Array**	**56.91**	**326**	P	**P**	**08 54 14.8**	**-1.2**
	comp=E,0.4nm,1.0s,baz=151,slow=6.2,SNR=3.2						
SNAA	**Sanae**	**65.83**	**161**	P	**P**	**08 55 18.3**	**+2.7**
	comp=E,2.3nm,1.1s,baz=284,slow=11,SNR=7.0						
DBIC	**Dimbokro**	**70.08**	**76**	P	**P**	**08 55 42.8**	**-0.4**
	comp=E,4.6nm,0.7s,baz=196,slow=7.4,SNR=4.4						
NVAR	**Mina Array Bea**	**71.77**	**323**	P	**P**	**08 55 53.0**	**-0.2**
	comp=E,0.4nm,0.7s,baz=159,slow=6.4,SNR=4.0						
TORD	**Torodi Ar. Bea**	**78.49**	**72**	P	**P**	**08 56 30.2**	**-2.0**
	comp=E,1.0nm,0.6s,baz=248,slow=4.7						
YKA	**Yellowknife Ar**	**87.64**	**341**	P	**P**	**08 57 18.1**	**-0.1**
	comp=E,2.0nm,0.6s,baz=134,slow=4.7,SNR=15						
WRA	**Warramunga Arr**	**134.28**	**215**	PKP	**PKPdf**	**09 03 50.6**	**+1.8**
	comp=E,0.3nm,0.7s,baz=147,slow=1.7,SNR=3.9						
MKAR	**Makanchi Array**	**144.39**	**32**	PKP	PKPbc	09 04 05.5	+0.6
	comp=E,2.2nm,0.9s,baz=247,slow=28,SNR=4.1						
SONM	**Songino Array**	**150.68**	**3**	PKPbc	**PKPbc**	**09 04 22.3**	**-0.1**
	comp=E,0.9nm,0.8s,baz=323,slow=2.8,SNR=5.3						

DRS ***05*** *08:49:02.5±0.0, 43°.64N×45°.54E, h18^{km}*
IDC ***05*** *08:49:03.1±0.7, 43°.50N×45°.62E, h0^{km}, mb3.6/8, mb1 3.9/13, mb1mx3.7/64, mbtmp3.8/13, ML3.4/3, MS2.7/1, Ms1 2.7/1, ms1mx2.2/61, Error ellipse: s-maj=12.5km s-min=8.9km az=156.0*
NORS ***05*** *08:49:04.4±0.0, 43°.48N×45°.88E, h11^{km}*
CSEM ***05*** *08:49:04.9±0.1, 43°.57N×45°.86E, h2^{km}, mb4.0/5, Error ellipse: s-maj=4.0km s-min=2.7km az=23.0*
ISCJB ***05*** *08:49:05.0±0.4, 43°.70N±0°.02×45°.93E±0°.02, h15^{km}±3^{km}, mb3.6/11, Error ellipse: s-maj=3.2km s-min=2.2km az=13.6*
MOS ***05*** *08:49:04.4±0.0, 43°.46N×45°.86E, h10^{km}, MPVA4.7, FELT I=II-III MSK at Groznyy*
MOS ***05*** *08:49:04.7±1.4, 43°.64N×45°.90E, h16^{km}, mb4.1/5, Error ellipse: s-maj=5.3km s-min=4.3km az=97.2*
MOS Felt (II-III) at Groznyy.
AZER ***05*** *08:49:06.0±6.9, 43°.10N×45°.63E, h1^{km}, ml3.9/14, Error ellipse: s-maj=6.0km s-min=5.4km az=331.0*
NNC ***05*** *08:49:10.2±12.0, 44°.03N×46°.26E, h0^{km}, mb4.1, Error*

ellipse: s-maj=160.9km s-min=117.7km az=136.0

ISC 05 08:49:05.8±0.9**, 43°.53N**±0°.02×**45°.89E**±0°.01**, h19**^{km}±2^{km}**,**
n173, σ1^{s}.52/278**, mb3.6**/11**, 29C-34D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GROC	**Groznyy**	0.34	191	*e*PG	Pg	08 49 11.3	-1.8
GROC				pmax	pmax		
	comp=Z,2µm,0.7s						
GROC	**Groznyy**	0.34	191	*e*Pg	Pg	08 49 11.3	-1.8
	comp=Z,2µm,0.7s						
GROC	**Groznyy**	0.34	191	*i* Pg	Pg	08 49 11.6	-1.5
GROC				*e*Sg	Sg	08 49 17.4	-0.6
DLMR	**Dylym**	0.71	130	⇑*i*PG	Pb	08 49 19.0	-0.6
DLMR				*e*S	Sn	08 49 31.0	-0.4
DLMR				pmax	pmax		
	comp=Z,856nm,0.2s						
DLMR	**Dylym**	0.71	130	*i* Pg	Pb	08 49 19.0	-0.6
	comp=Z,856nm,0.2s						
DLMR				*e*Sg	Sn	08 49 31.0	-0.4
DLMR	**Dylym**	0.71	130	*i* Pg	Pb	08 49 19.0	-0.6
DLMR				*e*Sg	Sn	08 49 31.0	-0.4
DBC	**Dubki**	0.86	126	⇑*i*PG	Pb	08 49 22.0	-0.2
DBC				*i* S	Sg	08 49 34.4	+0.4
DBC				pmax	pmax		
	comp=Z,850nm,0.6s						
DBC	**Dubki**	0.86	126	*i* Pg	Pb	08 49 22.0	-0.2
	comp=Z,850nm,0.6s						
DBC				*i* Sg	Sg	08 49 34.4	+0.4
DBC	**Dubki**	0.86	126	*i* Pg	Pb	08 49 22.2	0.0
DBC				*e*Sg	Sn	08 49 34.8	-0.3
TRKR	**Terskaya**	0.86	283	*e*PG	Pg	08 49 22.7	+0.1
TRKR				*e*S	Sn	08 49 35.7	+0.8
TRKR	**Terskaya**	0.86	283	*e*Pg	Pg	08 49 22.7	+0.1
TRKR	**Terskaya**	0.86	283	*i* Pg	Pg	08 49 22.6	-0.1
TRKR				*e*Sg	Sn	08 49 35.7	+0.8
KMGR	**Komgaron**	0.88	238	*e*Pg	Pb	08 49 22.6	0.0
KMGR				*e*Sg	Sn	08 49 35.8	+0.2
BTLR	**Botlikh**	0.90	164	⇑*i*PG	Pb	08 49 21.2	-1.7
BTLR				pmax	pmax		
	comp=Z,833nm,0.4s						
BTLR	**Botlikh**	0.90	164	*i* Pg	Pb	08 49 21.2	-1.7
	comp=Z,833nm,0.4s						
BTLR	**Botlikh**	0.90	164	*i* Pg	Pb	08 49 21.3	-1.6
BTKR	**Batakoyurt**	0.99	261	⇑*i*PG	Pn	08 49 24.8	+0.1
BTKR				*e*S	Sn	08 49 40.1	+1.9
BTKR	**Batakoyurt**	0.99	261	*i* Pg	Pn	08 49 24.8	+0.1
BTKR	**Batakoyurt**	0.99	261	*i* Pg	Pn	08 49 24.9	+0.1
BTKR				*e*Sg	Sn	08 49 39.7	+1.5
VLKR	**Vladikavkaz**	1.01	242	*e*PG	Pb	08 49 24.7	0.0
VLKR				*e*S	Sn	08 49 39.5	+0.9
VLKR	**Vladikavkaz**	1.01	242	*e*Pg	Pb	08 49 24.7	0.0
VLKR				*e*Sg	Sn	08 49 39.5	+0.9
VLKR	**Vladikavkaz**	1.01	242	*e*Pg	Pb	08 49 24.8	0.0
VLKR				*e*Sg	Sn	08 49 39.5	+0.9
KRNR	**Karanay**	1.03	133	⇓*i*PG	Pb	08 49 24.5	-0.6
KRNR				*e*S	Sn	08 49 39.8	+0.6
KRNR				pmax	pmax		
	comp=Z,466nm,0.2s						
KRNR	**Karanay**	1.03	133	*i* Pg	Pb	08 49 24.5	-0.6
	comp=Z,466nm,0.2s						
KRNR				*e*Sg	Sn	08 49 39.8	+0.6
KRNR	**Karanay**	1.03	133	*i* Pg	Pb	08 49 24.5	-0.6
KRNR				*e*Sg	Sn	08 49 39.8	+0.6
UNCR	**Uncukul**	1.05	141	⇓*i*PG	Pb	08 49 25.0	-0.5
UNCR				*i* S	Sg	08 49 40.5	+0.3
UNCR				pmax	pmax		
	comp=Z,1µm,0.2s						
UNCR	**Uncukul**	1.05	141	*i* Pg	Pb	08 49 25.0	-0.5
	comp=Z,1µm,0.2s						
UNCR				*i* Sg	Sg	08 49 40.5	+0.3
UNCR	**Uncukul**	1.05	141	*i* Pg	Pb	08 49 25.0	-0.5
UNCR				*i* Sg	Sg	08 49 40.5	+0.3
BUJR	**Buynaksk**	1.14	128	*e*PG	Pg	08 49 28.0	+0.1
BUJR				*e*S	Sg	08 49 46.0	+3.1
BUJR				pmax	pmax		
	comp=Z,143nm,0.1s						
BUJR	**Buynaksk**	1.14	128	*e*Pg	Pg	08 49 28.0	+0.1
	comp=Z,143nm,0.1s						
BUJR	**Buynaksk**	1.14	128	*e*Pg	Pg	08 49 28.0	+0.1
BUJR				*e*Sg	Sg	08 49 46.0	+3.1
XNZR	**Khunzakh**	1.16	148	⇓*i*PG	Pn	08 49 26.9	-0.3
XNZR				*e*S	Sn	08 49 43.0	+0.4
XNZR	**Khunzakh**	1.16	148	*i* Pg	Pn	08 49 26.9	-0.3
XNZR				*e*Sg	Sn	08 49 43.0	+0.4
XNZR	**Khunzakh**	1.16	148	*i* Pg	Pn	08 49 26.9	-0.3
XNZR				*e*Sg	Sn	08 49 43.0	+0.4
PRTR	**Priterechnaya**	1.18	281	*e*PG	Pb	08 49 28.4	+0.7
PRTR				*e*S	Sg	08 49 46.3	+2.0
PRTR	**Priterechnaya**	1.18	281	*e*Pg	Pb	08 49 28.4	+0.7
PRTR	**Priterechnaya**	1.18	281	*i* Pg	Pb	08 49 28.4	+0.7
PRTR				*e*Sg	Sg	08 49 45.9	+1.6
ARNR	**Ardon**	1.22	254	*e*PG	Pb	08 49 28.9	+0.6
ARNR				*e*S	Sg	08 49 46.6	+1.1
ARNR	**Ardon**	1.22	254	*e*Pg	Pb	08 49 28.9	+0.6
ARNR				*e*Sg	Sg	08 49 46.6	+1.1
ARNR	**Ardon**	1.22	254	*e*Pg	Pb	08 49 28.9	+0.6
ARNR				*e*Sg	Sg	08 49 46.5	+1.1
ARKR	**Arakani**	1.23	138	⇓*i*PG	Pn	08 49 28.3	+0.2
ARKR				*e*S	Sg	08 49 47.3	+1.4
ARKR	**Arakani**	1.23	138	*i* Pg	Pn	08 49 28.3	+0.2
ARKR				*e*Sg	Sg	08 49 47.3	+1.4
ARKR	**Arakani**	1.23	138	*i* Pg	Pn	08 49 28.3	+0.2
ARKR				*e*Sg	Sg	08 49 47.3	+1.4
MAK	**Makhachkala**	1.31	115	*e*PG	Pg	08 49 31.1	-0.1
MAK				*e*		08 49 51.1	
MAK				pmax	pmax		
	comp=Z,439nm,0.3s						
MAK				smax	smax		
	comp=N,7µm,0.3s						
MAK				smax	smax		
	comp=N,6µm,0.3s						
MAK	**Makhachkala**	1.31	115	*e*Pg	Pg	08 49 31.1	-0.1
	comp=N,439nm,0.3s						
MAK	**Makhachkala**	1.31	115	*e*Pg	Pg	08 49 31.6	+0.3
MAK				*e*Sg	Sg	08 49 47.8	-0.6
STDR	**Stavd-Durt**	1.34	264	⇓*i*PG	Pb	08 49 30.8	+0.5
STDR				*e*S	Sg	08 49 50.2	+1.1
STDR	**Stavd-Durt**	1.34	264	*i* Pg	Pb	08 49 30.8	+0.5
STDR				*e*Sg	Sg	08 49 50.2	+1.1
STDR	**Stavd-Durt**	1.34	264	*e*Pg	Pb	08 49 30.6	+0.3
STDR				*e*Sg	Sg	08 49 49.7	+0.6
LACR	**Lac**	1.36	239	⇓*i*PG	Pn	08 49 29.5	-0.4
LACR	**Lac**	1.36	239	*i* Pg	Pn	08 49 29.5	-0.4
LACR	**Lac**	1.36	239	*e*Pg	Pn	08 49 29.5	-0.4
LACR				*e*Sg	Sb	08 49 48.6	+0.8
GNBR	**Gunib**	1.39	145	*e*PG	Pb	08 49 31.4	+0.2
GNBR				*e*S	Sg	08 49 51.5	+0.6
GNBR				pmax	pmax		
	comp=Z,644nm,0.6s						
GNBR	**Gunib**	1.39	145	*e*Pg	Pb	08 49 31.4	+0.2
	comp=Z,644nm,0.6s						
GNBR				*e*Sg	Sg	08 49 51.5	+0.6
GNBR	**Gunib**	1.39	145	*i* Pg	Pb	08 49 31.4	+0.2
GNBR				*e*Sg	Sb	08 49 49.6	+1.0
KORR	**Kora**	1.40	252	⇑*i*PG	Pn	08 49 30.8	+0.4
KORR				*e*S	Sg	08 49 51.7	+0.5
KORR	**Kora**	1.40	252	*i* Pg	Pn	08 49 30.8	+0.4
KORR				*e*Sg	Sg	08 49 51.7	+0.5
KORR	**Kora**	1.40	252	*i* Pg	Pn	08 49 30.8	+0.4
KORR				*e*Sg	Sg	08 49 50.9	-0.2
GUDG	**Gudauri**	1.49	225	P	Pn	08 49 31.5	-0.2
GUDG				S	Sn	08 49 50.7	0.0
LSNR	**Lesken**	1.52	261	*e*PG	Pb	08 49 33.4	-0.1
LSNR				*e*S	Sg	08 49 55.2	+0.2
LSNR	**Lesken**	1.52	261	*e*Pg	Pb	08 49 33.4	-0.1
LSNR				*e*Sg	Sg	08 49 55.2	+0.2
LSNR	**Lesken**	1.52	261	*e*Pg	Pb	08 49 33.4	-0.1
LSNR				*e*Sg	Sg	08 49 54.6	-0.5
ZEI	**Tsey**	1.63	244	⇑*i*PN	Pn	08 49 33.7	0.0
ZEI	**Tsey**	1.63	244	*i* Pn	Pn	08 49 33.7	0.0
ZEI	**Tsey**	1.63	244	*i* Pg	Pn	08 49 33.7	0.0
ZEI				*e*Sg	Sn	08 49 55.2	+0.9
KMKR	**Kumukh**	1.66	147	⇑*i*PN	Pb	08 49 35.5	-0.4
KMKR				pmax	pmax		
	comp=Z,552nm,0.3s						
KMKR	**Kumukh**	1.66	147	*i* Pn	Pb	08 49 35.5	-0.4
	comp=Z,552nm,0.3s						
KMKR	**Kumukh**	1.66	147	*i* Pg	Pb	08 49 35.5	-0.4
KMKR				*e*Sg	Sb	08 49 58.0	+1.5
NCK	**Nalchik**	1.67	270	⇑*e*PN	Pn	08 49 34.5	+0.5
NCK	**Nalchik**	1.67	270	*e*Pn	Pn	08 49 34.5	+0.5
NCK	**Nalchik**	1.67	270	*e*Pg	Pn	08 49 33.8	-0.2
NCK				*e*Sg	Sb	08 49 57.2	+0.7
DUS	**Dusheti**	1.68	212	P	Pn	08 49 35.2	+0.9
DUS				S	Sg	08 49 59.9	-0.4
DUS	**Dusheti**	1.68	212	⇑*i*PN	Pn	08 49 35.2	+0.9
DUS				*e*S	Sg	08 49 59.8	-0.4
DUS	**Dusheti**	1.68	212	*i* Pn	Pn	08 49 35.2	+0.9
DUS				*e*Sg	Sg	08 49 59.8	-0.4
DIGR	**Digorskoe uzhe**	1.80	250	*e*PN	Pn	08 49 36.5	+0.5
DIGR	**Digorskoe uzhe**	1.80	250	*e*Pn	Pn	08 49 36.5	+0.5
DIGR	**Digorskoe uzhe**	1.80	250	*i* Pg	Pn	08 49 36.4	+0.4
DIGR				*e*Sg	Sn	08 49 59.6	+1.2
KBTC	**Kuba-Taba**	1.82	280	*e*PN	Pb	08 49 38.4	-0.1
KBTC				*e*S	Sg	08 50 03.8	-0.7
KBTC	**Kuba-Taba**	1.82	280	*e*Pn	Pb	08 49 38.4	-0.1
KBTC				*e*Sg	Sg	08 50 03.8	-0.7
KBTC	**Kuba-Taba**	1.82	280	*e*Pg	Pn	08 49 37.3	+1.2
KBTC				*e*Sg	Sb	08 50 02.6	+1.7
URKR	**Urkarakh**	1.88	136	⇓*e*PN	Pb	08 49 39.7	+0.2
URKR				*i*		08 50 06.2	
URKR	**Urkarakh**	1.88	136	*e*Pn	Pb	08 49 39.7	+0.2
URKR				*i* Sg	Sg	08 50 06.2	-0.1
URKR	**Urkarakh**	1.88	136	*i* Pg	Pb	08 49 39.0	-0.5
SEAG	**Tbilisi Sea**	1.94	205	P	Pb	08 49 40.7	+0.1
SEAG				S	Sg	08 50 08.2	-0.1
ZKTA	**Zakatala**	1.97	164	P	Pb	08 49 40.4	-0.7
	SNR=65						
ZKTA				⇓S	Sb	08 50 05.9	+0.6
TBLG	**Delisi**	1.99	206	P	Pn	08 49 39.5	+1.0
TBLG				S	Sn	08 50 04.1	+1.3
TBLG	**Delisi**	1.99	206	*e*PN	Pn	08 49 39.4	+1.0
TBLG	**Delisi**	1.99	206	*e*Pn	Pn	08 49 39.4	+1.0
ONI	**Oni**	2.02	243	P	Pn	08 49 39.7	+0.8
ONI				S	Sb	08 50 06.7	+0.1
ONI	**Oni**	2.02	243	*e*PN	Pn	08 49 39.7	+0.8
ONI				*e*S	Sb	08 50 06.7	+0.1
DDFL	**Dedoflistskaro**	2.09	175	P	Pg	08 49 44.8	-1.2
DDFL				S	Sg	08 50 20.2	+7.0
DGRG	**David-gareji**	2.12	190	P	Pb	08 49 42.5	-1.2
DGRG				S	Sg	08 50 13.7	-0.3
DGRG	**David-gareji**	2.12	190	*e*PN	Pb	08 49 42.4	-1.2
DGRG				*e*S	Sg	08 50 13.6	-0.3
DGRG	**David-gareji**	2.12	190	*e*Pn	Pb	08 49 42.4	-1.2
KBZ	**Khabaz**	2.18	276	Pn	Pn	08 49 40.6	-0.4
	comp=Z,4.4nm,0.3s,baz=113,slow=8.0,SNR=43						
KBZ				Sn	Sn	08 50 08.2	+0.8
	comp=Z,14nm,0.3s,baz=131,slow=15,SNR=6.2						
NEY	**Neytrino**	2.32	264	*e*PN	Pn	08 49 44.5	+1.3
NEY				*e*S	Sb	08 50 14.7	-0.9
NEY	**Neytrino**	2.32	264	*e*Pn	Pn	08 49 44.5	+1.3
NEY				*e*Sn	Sb	08 50 14.7	-0.9
NEY	**Neytrino**	2.32	264	*e*Pn	Pn	08 49 44.1	+1.0
NEY				*e*Sn	Sb	08 50 14.7	-0.9
DRN	**Derbent**	2.34	129	⇓*e*PN	Pb	08 49 47.0	-0.4
DRN				*e*		08 50 22.4	
DRN				pmax	pmax		
	comp=Z,184nm,0.5s						
DRN				smax	smax		
	comp=N,654nm,0.7s						
DRN	**Derbent**	2.34	129	*e*Pn	Pb	08 49 47.0	-0.4
	comp=N,184nm,0.5s						
DRN				*e*Sb	Sg	08 50 22.4	+1.2
	comp=N,654nm,0.7s						
DRN	**Derbent**	2.34	129	*e*Pn	Pb	08 49 47.1	-0.3
DRN				*e*Sn	Sb	08 50 15.8	-0.1
KVAR	**Kislovodsk Arr**	2.35	281	Pn	Pn	08 49 43.5	0.0
	baz=104,slow=7.1,SNR=10						
KVAR				Lg	Lg	08 50 17.0	
	baz=236,slow=20,SNR=16						
SHA1	**Shidzhatmaz**	2.35	276	*e*PN	Pn	08 49 43.4	-0.3
SHA1				*e*S	Sb	08 50 17.5	+1.0
SHA1	**Shidzhatmaz**	2.35	276	*e*Pn	Pn	08 49 43.4	-0.3
SHA1	**Shidzhatmaz**	2.35	276	*i* Pn	Pn	08 49 43.5	-0.1
SHA1				*e*Sn	Sb	08 50 14.9	-1.6
KIV	**Kislovodsk**	2.36	281	*e*PN	Pn	08 49 43.5	-0.1
KIV				pmax	pmax		
	comp=Z,318nm,0.8s						
KIV	**Kislovodsk**	2.36	281	*e*Pn	Pn	08 49 43.5	-0.1
	comp=Z,318nm,0.8s						
AKT	**Akhty**	2.46	146	⇑*i*PN	Pb	08 49 48.3	-1.3
AKT				*e*S	Sb	08 50 21.4	+1.9
AKT				pmax	pmax		
	comp=Z,219nm,0.4s						
AKT				smax	smax		
	comp=N,847nm,0.4s						
AKT				smax	smax		
	comp=E,1µm,0.4s						
AKT				smax	smax		
	comp=E,862nm,0.4s						
AKT	**Akhty**	2.46	146	*i* Pn	Pb	08 49 48.3	-1.3
	comp=E,219nm,0.4s						
QZX	**Qazax, Azerbai**	2.50	189	P	Pn	08 49 46.3	+0.8
	SNR=27						
QZX				⇑S	Sn	08 50 16.1	+0.6
QZX	**Qazax, Azerbai**	2.50	189	P	Pn	08 49 46.3	+0.8
	SNR=27						
QZX				⇑S	Sn	08 50 16.1	+0.6
SEKA	**Sheki**	2.52	157	⇓P	Pn	08 49 47.8	+2.0
	SNR=114						
SEKA				⇓S	Sb	08 50 19.2	-1.9
SEKA	**Sheki**	2.52	157	⇓P	Pn	08 49 47.8	+2.0
	SNR=114						
SEKA				⇓S	Sb	08 50 19.2	-1.9
QSAR	**Qusar**	2.67	138	⇓P	Pb	08 49 52.3	-0.8
	SNR=7.1						
QSAR	**Qusar**	2.67	138	⇓P	Pb	08 49 52.3	-0.8
	SNR=7.1						
QSAR				⇓S	Sb	08 50 27.3	+1.8
AKH	**Akhalkalaki**	2.76	221	P	Pn	08 49 51.0	+1.7
AKH				S	Sb	08 50 28.9	+0.6
AKH	**Akhalkalaki**	2.76	221	*e*PN	Pn	08 49 50.9	+1.7
AKH				*e*S	Sb	08 50 28.8	+0.6
AKH	**Akhalkalaki**	2.76	221	*e*Pn	Pn	08 49 50.9	+1.7
GDB	**GEDABAY**	2.81	182	P	Pn	08 49 50.4	+0.5
	SNR=54						
GDB				⇓S	Sn	08 50 23.0	-0.3
GDB	**GEDABAY**	2.81	182	P	Pn	08 49 50.4	+0.5
	SNR=54						
GDB				⇓S	Sn	08 50 23.0	-0.3
BGD	**Bogdanovka**	2.83	218	P	Pn	08 49 52.5	+2.3
BGD				S	Sb	08 50 29.6	-0.6
XNQ	**Khinaliq**	2.89	144	P	Pb	08 49 54.8	-2.1
	SNR=21						
XNQ				⇑S	Sb	08 50 30.9	-1.1
XNQ	**Khinaliq**	2.89	144	P	Pb	08 49 54.8	-2.1
	SNR=21						
XNQ				⇑S	Sb	08 50 30.9	-1.1
GANJ	**Ganja**	2.90	173	P	Pn	08 49 52.1	+1.1
	SNR=40						
GANJ				⇓S	Sn	08 50 26.3	+0.9
GANJ	**Ganja**	2.90	173	P	Pn	08 49 52.1	+1.1
	SNR=40						
GANJ				⇓S	Sn	08 50 26.3	+0.9
QUBA	**Quba, Azerbaij**	2.91	138	⇓P	Pb	08 49 54.9	-2.2
	SNR=3.5						
QUBA				⇓S	Sb	08 50 32.2	-0.1
QUBA	**Quba, Azerbaij**	2.91	138	⇓P	Pb	08 49 54.9	-2.2
	SNR=3.5						
QUBA				⇓S	Sb	08 50 32.2	-0.1
QBL	**Gabala**	2.96	150	⇑P	Pn	08 49 55.0	+3.1
	SNR=12						
QBL	**Gabala**	2.96	150	⇑P	Pn	08 49 55.0	+3.1
	SNR=12						
SIZA	**Siyzn**	3.32	137	⇓P	Pb	08 50 01.9	-2.2
	SNR=4.9						
SIZA	**Siyzn**	3.32	137	⇓P	Pb	08 50 01.9	-2.2
	SNR=4.9						
PQL	**Pirkuli**	3.40	143	⇑P	Pn	08 50 01.6	+3.6
	SNR=10						
PQL	**Pirkuli**	3.40	143	⇑P	Pn	08 50 01.6	+3.6
	SNR=10						
GNI	**Garni**	3.49	195	Pn	Pn	08 50 01.1	+1.9
	comp=E,4.7nm,0.3s,baz=11,slow=10,SNR=7.3						
GNI				Lg	Lg	08 50 50.5	
	comp=E,8.8nm,0.3s,baz=227,slow=6.8,SNR=4.1						
GNI				LR	LR	08 51 35.7	
	comp=E,98nm,18.0s,baz=44,slow=45						
GNI	**Garni**	3.49	195	*c* *i*PN	Pn	08 50 02.0	+2.8
GNI				pmax	pmax		
	comp=Z,351nm,0.6s						
GNI	**Garni**	3.49	195	*i* Pn	Pn	08 50 02.0	+2.8
	comp=Z,351nm,0.6s						
ATGJ	**Altiaghaj**	3.50	139	⇑P	Pn	08 50 02.8	+3.5
	SNR=8.8						
ATGJ				⇓S	Sn	08 50 44.8	+4.5
ATGJ	**Altiaghaj**	3.50	139	⇑P	Pn	08 50 02.8	+3.5
	SNR=8.8						
ATGJ				⇓S	Sn	08 50 44.8	+4.5
LRK	**Lerik**	5.22	158	P	Pn	08 50 24.3	+1.2
	SNR=36						
LRK				⇑S	Sn	08 51 25.1	+2.3
LRK	**Lerik**	5.22	158	P	Pn	08 50 24.3	+1.2
	SNR=36						
LRK				⇑S	Sn	08 51 25.1	+2.3
ASTR	**Astara**	5.43	155	⇑P	Pn	08 50 26.8	+1.0
	SNR=6.3						
ASTR				⇓S	Sn	08 51 28.5	+0.8
ASTR	**Astara**	5.43	155	⇑P	Pn	08 50 26.8	+1.0
	SNR=6.3						
ASTR				⇓S	Sn	08 51 28.5	+0.8
AKTK	**Aktyubinsk**	10.78	46	P	Pn	08 51 39.7	+0.7
	comp=Z,1.0nm,0.3s						
AKTO	**Aktyubinsk**	10.78	46	Pn	Pn	08 51 39.6	+0.6
	comp=Z,1.1nm,0.3s,baz=241,slow=15,SNR=12						
AKTO				Sn	Sn	08 53 34.3	-4.7
	comp=Z,0.6nm,0.3s,baz=60,slow=20,SNR=4.1						
AKTO	**Aktyubinsk**	10.78	46	⇓P	Pn	08 51 39.6	+0.6
	comp=Z,2.8nm,0.5s						
AKTO				⇓S	Sn	08 53 35.6	-3.4
	comp=Z,4.9nm,0.5s						
AKTO	**Aktyubinsk**	10.78	46	P	Pn	08 51 39.6	+0.6
	comp=Z,2.8nm,0.5s						
AB31	**Akbulak array**	11.26	55	P	Pn	08 51 45.7	+0.1
	comp=Z,2.6nm,0.5s,baz=242,slow=10.0,SNR=30						
AB31				⇑S	Sn	08 53 47.6	-3.3
	comp=Z,4.8nm,0.5s,baz=2.3,slow=43,SNR=4.2						
AB31	**Akbulak array**	11.26	55	P	Pn	08 51 45.7	+0.1
	comp=Z,2.6nm,0.5s,SNR=30						
OBN	**Obninsk**	13.07	336	*e*P	Pn	08 52 11.4	+1.1
OBN				pmax	pmax		
	comp=Z,9.0nm,0.5s						
OBN				MLR	MLR		
	comp=Z,28nm,16.0s						
OBN	**Obninsk**	13.07	336	*e*P	Pn	08 52 11.4	+1.1
	comp=Z,28nm,16.0s						
KIEV	**Kiev**	13.41	308	⇑*e*P	Pn	08 52 15.6	+0.7
KIEV				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ARU	**Arti**	15.23	28	Pn	Pn	08 52 36.1	-3.6
	comp=Z,0.0nm,0.3s,baz=236,slow=5.4,SNR=4.7						
ARU	**Arti**	15.23	28	*d* *i*P	Pn	08 52 37.0	-2.7
ARU				S	Sn	08 55 24.7	-3.0
ARU				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SVE	**Sverdlovsk**	16.27	30	*e*P	Pn	08 52 50.8	-2.2
SVE				*e*S	Sn	08 55 47.4	-5.4
SVE				pmax	pmax		
	comp=Z,17nm,0.9s						
KLMR	**Klimovskoe**	17.77	350	*e*P	Pn	08 53 10.2	-1.6
KLMR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KLMR	**Klimovskoe**	17.77	350	*e*Pn	Pn	08 53 10.2	-1.6
KLMR				AMP		08 53 27.0	
	comp=Z,8.0nm,0.8s						
KK31	**Karatay Array**	17.91	83	P	Pn	08 53 12.9	-0.9
	comp=Z,1.5nm,0.6s,baz=299,slow=16,SNR=15						
KK31				S	Sn	08 56 34.2	+1.3
	comp=Z,2.1nm,0.5s,baz=281,slow=25,SNR=3.8						
BRVK	**Borovoye**	18.74	51	*ce*P	Pn	08 53 25.2	+1.4
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
BVA0	**Borovoye Array**	18.79	51	P	Pn	08 53 26.6	+2.3
	comp=Z,3.8nm,0.6s,baz=266,slow=11,SNR=12						
BVAR	**Borovoye Array**	18.79	51	P	P	08 53 24.1	+0.3
	comp=Z,1.3nm,0.3s,baz=252,slow=12,SNR=13						
BVAR				S	Sn	08 56 45.1	-8.7
	comp=Z,0.4nm,0.3s,baz=243,slow=25,SNR=4.4						
VSU	**Vasula**	19.09	328	⇓*e*P	Pn	08 53 28.2	+0.3
VSU				pmax	pmax		
	comp=Z,39nm,1.3s						
FINES	**FINESS Array B**	21.46	334	P	P	08 53 52.5	-0.2
	comp=Z,1.3nm,0.5s,baz=132,slow=11,SNR=7.9						
GERES	**GERESS Array B**	22.80	295	P	P	08 54 05.2	-2.2
	comp=Z,0.2nm,0.2s,baz=92,slow=4.9,SNR=2.2						
KURBB	**Kurchatov Arra**	23.20	61	P	P	08 54 14.0	+2.8
	comp=Z,2.5nm,0.7s,baz=272,slow=12,SNR=30						
KURBB	**Kurchatov Arra**	23.20	61	⇑P	P	08 54 13.1	+1.8
	comp=Z,6.6nm,0.8s						
KURK	**Kurchatov**	23.26	61	P	P	08 54 14.0	+2.1
KURK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
HFS	**Hagfors**	25.55	322	P	P	08 54 30.9	-2.1
	comp=Z,1.0nm,0.7s,baz=99,slow=16,SNR=2.7						
MKAR	**Makanchi Array**	25.73	70	P	P	08 54 36.3	+1.3
	comp=Z,0.3nm,0.5s,baz=268,slow=8.0,SNR=3.9						
NB2	**NORSAR Subarra**	27.04	322	P	P	08 54 59.3	+13
	comp=Z,0.7nm,0.7s,baz=117,slow=9.3						
SPITS	**Spitsbergen Ar**	36.67	350	P	P	08 56 10.9	+0.1
	comp=Z,5.6nm,1.0s,baz=133,slow=8.9,SNR=3.2						
TORD	**Torodi Ar. Bea**	48.46	245	P	P	08 57 45.0	-2.2
	comp=Z,0.6nm,0.7s,baz=32,slow=8.5						
BILL	**Bilibino**	60.16	22	*e*P	P	08 59 14.4	+2.7
BILL				*e*		08 59 59.8	
BILL				*e*		09 01 27.0	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.2s						
YKA	**Yellowknife Ar**	73.17	351	P	P	09 00 35.1	+0.4
	comp=Z,0.4nm,0.7s,baz=16,slow=6.8,SNR=3.7						

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*ISCJB **05** 08:53:11.0±0.7, 18°.0S±0°.2×178°.0W±0°.2, h590^{km},*
mb3.5/10, Error ellipse: s-maj=35.2km s-min=15.6km
az=149.7
*IDC **05** 08:53:18.2±4.4, 18°.11S×178°.05W, h670^{km}±54^{km},*
mb3.0/10, mb1 3.3/10, mb1mx3.0/49, mbtmp4.0/10, Error
ellipse: s-maj=28.4km s-min=20.9km az=153.0
ISC 05 08:53:11.7±0.8**, 18°.0S**±0°.2×**177°.9W**±0°.2**, h590**^{km}**, n12,**
σ1^{s}.09/14**, mb3.5**/10**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	38.97	241	P	P	08 59 49.3	+0.7
	1.3nm,0.8s,baz=139,slow=15,SNR=3.7						
WRA	**Warramunga Arr**	45.05	260	P	P	09 00 36.9	+0.4
	0.9nm,0.3s,baz=96,slow=7.5,SNR=52						
WRA				PcP	PcP	09 02 03.1	-1.3
	0.3nm,0.4s,baz=91,slow=3.8,SNR=6.1						
ASAR	**Alice Springs**	45.19	254	P	P	09 00 38.0	+0.5
	2.4nm,0.5s,baz=90,slow=8.0,SNR=42						
ASAR				PcP	PcP	09 02 03.5	-1.4
	0.4nm,0.4s,baz=100,slow=3.9,SNR=6.0						
FITZ	**Fitzroy Crossi**	53.45	261	P	P	09 01 38.7	+0.6
	3.5nm,0.9s,baz=53,slow=5.1,SNR=3.4						
QSPA	**South Pole Qui**	72.04	180	P	P	09 03 36.3	-0.5
	0.9nm,0.6s,baz=301,slow=5.9,SNR=3.9						
NVAR	**Mina Array Bea**	79.19	44	P	P	09 04 16.9	+0.1
	0.5nm,0.7s,baz=211,slow=6.7,SNR=5.9						
TXAR	**Lajitas Array**	85.68	57	P	P	09 04 51.3	+1.9
	0.7nm,0.7s,baz=217,slow=6.6,SNR=9.9						
ILAR	**Eielson Array**	85.89	13	P	P	09 04 49.1	-0.4
	0.3nm,0.4s,baz=216,slow=4.6,SNR=8.5						
PDAR	**Pinedale Array**	87.12	43	P	P	09 04 56.2	+0.1
	0.2nm,0.6s,baz=198,slow=3.0,SNR=3.5						
CMAR	**Chiang Mai Arr**	89.34	290	P	P	09 05 06.9	+0.2
	0.9nm,0.3s,baz=128,slow=2.8,SNR=2.2						
BRTR	**Keskin Array B**	145.17	315	PKPbc	PKPdf	09 11 41.6	-1.7
	0.4nm,0.4s,baz=117,slow=5.0,SNR=2.4						
GERES	**GERESS Array B**	147.82	346	PKPbc	PKPbc	09 11 50.0	-1.2
	0.4nm,0.4s,baz=29,slow=3.0,SNR=3.9						

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*DDA **05** 08:54:15.7, 39°.90N×30°.07E, h7^{km}, Ml2.5*
*ISK **05** 08:54:16.9, 39°.77N×30°.18E, h17^{km}, ML1.9/4*
*ISCJB **05** 08:54:17.4±0.6, 39°.76N±0°.05×30°.19E±0°.04, h13^{km}±7^{km},*
Error ellipse: s-maj=8.8km s-min=5.1km az=173.4
*CSEM **05** 08:54:17.3±0.2, 39°.76N×30°.20E, h15^{km}, ML1.9, Error*
ellipse: s-maj=4.5km s-min=3.6km az=13.0
ISC 05 08:54:17.3±1.0**, 39°.78N**±0°.03×**30°.20E**±0°.02**, h16**^{km}±8^{km}**,**
n21, σ0^{s}.68/34**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUBOZ	**BOZOYUK**	0.18	316	PG	Pg	08 54 21.1	-0.8
AUBOZ				SG	Sb	08 54 25.4	-0.3
AUBOZ	**BOZOYUK**	0.18	316	*e*Pg	Pg	08 54 21.1	-0.8
AUBOZ				*e*Sg	Sb	08 54 25.4	-0.3
BORA	**Eskisehir**	0.22	63	PG	Pg	08 54 22.3	-0.2
BORA				SG	Sb	08 54 27.2	+0.4
BORA	**Eskisehir**	0.22	63	*i* P	Pg	08 54 22.1	-0.4

BORA				*i* S	Sb	08 54 27.0	+0.2
BORA	Eskisehir	0.22	63	*e*Pg	Pg	08 54 22.3	-0.2
BORA				S	Sb	08 54 27.0	+0.2
CAVI	Cavuskoy	0.50	327	PG	Pg	08 54 27.2	-0.2
CAVI				SG	Sb	08 54 35.3	+0.4
CAVI	Cavuskoy	0.50	327	*e*Pg	Pg	08 54 27.2	-0.2
CAVI				*e*Sg	Sb	08 54 35.3	+0.4
ESKT	Eskisehir	0.56	117	*i* P	Pg	08 54 28.3	-0.2
ESKT				*i* S	Sb	08 54 37.0	+0.3
SEYT	Eskypehyr	0.56	117	P	Pg	08 54 28.3	-0.2
SEYT				S	Sb	08 54 37.0	+0.3
TVSB	Tavsanli	0.66	240	PG	Pg	08 54 29.6	-0.7
TVSB				SG	Sb	08 54 39.8	+0.4
TVSB	Tavsanli	0.66	240	*e*Pg	Pg	08 54 29.6	-0.7
TVSB				*e*Sg	Sb	08 54 39.8	+0.4
GULT	Gulveren	0.70	20	PG	Pn	08 54 31.9	-0.7
GULT	Gulveren	0.70	20	*e*Pg	Pn	08 54 31.9	-0.7
YLV	Yalova	1.01	321	PG	Pn	08 54 37.7	+0.8
YLV	Yalova	1.01	321	*e*Pg	Pn	08 54 37.7	+0.8
AUSIV	SIVRIHISAR	1.09	108	PN	Pn	08 54 37.9	-0.1
AUSIV	SIVRIHISAR	1.09	108	*e*Pn	Pn	08 54 37.9	-0.1
DURS	Dursunbey	1.34	263	*i* P	Pg	08 54 42.6	-0.6
DURS				*i* S	Sg	08 55 02.4	+1.7
DURS	Dursunbey	1.34	263	P	Pg	08 54 42.6	-0.6
DURS				S	Sg	08 55 02.4	+1.7
DEMI	Demirci	1.36	238	*i* P	Pb	08 54 41.7	-0.8
DEMI	Demirci	1.36	238	P	Pb	08 54 41.7	-0.8

NNC ***05*** *08:57:13.3±2.9, 38°.24N×70°.00E, h0^{km}, mb4.7, mpv4.3, Error ellipse: s-maj=27.0km s-min=18.4km az=177.0*

ISCJB ***05*** *08:57:15.4±0.5, 38°.51N±0°.04×70°.30E±0°.08, h10^{km}, mb3.7/11, MS3.1/1, Error ellipse: s-maj=8.7km s-min=5.0km az=166.0*

IDC ***05*** *08:57:23.3±2.8, 38°.67N×70°.80E, h64^{km}±23^{km}, mb3.4/10, mb1 3.6/18, mb1mx3.5/75, mbtmp3.8/18, MS3.3/1, Ms1 3.3/1, ms1mx2.5/61, Error ellipse: s-maj=21.7km s-min=15.6km az=172.0*

ISC 05 08:57:17.6±0.6**, 38°.68N**±0°.04×**70°.46E**±0°.06**, h10^{km}, n48,** σ**2^{s}.60**/48**, mb3.8**/11**, 6C-7D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan 180nm,0.4s	2.71	60	⇑Pn	Pb	08 58 07.1	+0.8
SFK	250nm,0.4s			⇓Sn	Sg	08 58 46.4	+1.8
MNAS	Manas 36nm,0.6s	4.11	22	⇑Pn	Pn	08 58 25.3	+4.7
MNAS	70nm,0.6s			⇑Sn	Sb	08 59 20.3	+0.4
AML	Almayashu SNR=5.5	4.24	35	P	Pb	08 58 33.7	+1.2
KK31	Karatay Array 7.1nm,0.4s,baz=179,slow=12,SNR=53	4.42	1	Pn	Pn	08 58 28.8	+4.1
KK31	14nm,0.3s,baz=189,slow=16,SNR=9.3			⇓Pg	Pg	08 58 42.7	+0.6
KK31	69nm,0.7s,baz=178,slow=28,SNR=4.5			⇓Lg	Lg	08 59 41.8	
UCH	Uchtor SNR=20	4.70	40	P	Pn	08 58 32.5	+3.5
EKS2	Erkin-Say SNR=10	4.71	31	P	Pb	08 58 36.4	-3.9
CEP	Cherat	4.99	166	P	Pn	08 58 33.4	+0.7
CEP				S	Sn	08 59 34.0	+3.6
CEP	Cherat	4.99	166	P	Sn	08 59 34.1	+3.6
KZA	Kyzart SNR=14	4.99	46	P	Pn	08 58 36.1	+3.2
AAK	Ala-Archa 6.8nm,0.3s,baz=195,slow=3.9,SNR=13	5.00	37	P	Pn	08 58 35.3	+2.4
AAK	3.7nm,0.3s,baz=207,slow=16,SNR=2.4			S	Sn	08 59 28.9	-1.9
AAK	Ala-Archa 35nm,0.5s	5.00	37	⇓Pn	Pn	08 58 36.0	+3.1
AAK	36nm,0.6s			⇓Sn	Sb	08 59 46.8	+1.2
AAK	Ala-Archa SNR=8.2	5.00	37	P	Pn	08 58 37.1	+4.2
KBK	Karagaybulak SNR=34	5.24	39	P	Pn	08 58 40.4	+4.3
CHMS	Chumysh SNR=17	5.40	36	P	Pn	08 58 41.8	+3.5
CHCP	Chirah Chowk	5.50	155	P	Pn	08 58 42.1	+2.4
USP	Ospenovka SNR=16	5.51	32	P	Pn	08 58 45.4	+5.7
TKM2	Tokmak 2 14nm,0.5s	5.76	41	⇓Pn	Pn	08 58 45.9	+2.6
TKM2	Tokmak 2 SNR=28	5.76	41	P	Pn	08 58 50.5	+7.3
THW	Thamme Wali	5.97	170	P	Pn	08 58 44.9	-1.1
MDOK	Medeo 9.0nm,0.6s	6.70	46	⇑P	Pn	08 58 59.9	+3.7
DHRM	DHARAMSHALA	7.99	142	*e*P	Pn	08 59 13.7	-0.3
DHRM				*e*S	Sn	09 00 43.3	-1.3
DHRM	comp=N,130nm,0.8s			IAML		09 00 44.8	
DHRM	comp=E,90nm,0.4s			IAML		09 00 46.1	
PDGK	Podgornoye comp=E,7.3nm,1.0s	8.26	53	⇓P	Pn	08 59 19.3	+1.8
SMLA	Simla	9.33	142	*e*P	Pn	08 59 29.8	-2.3
GEYT	Alibeck comp=E,2.1nm,0.3s,baz=78,slow=13,SNR=2.7	9.73	269	P	Pn	08 59 45.9	+8.3
JOSI	Joshimath	11.04	135	*e*P	Pn	08 59 49.3	-6.4
JOSI				*e*S	Sn	09 01 46.3	-13
JOSI	comp=N,58nm,0.2s			IAML		09 01 57.6	
JOSI	comp=E,57nm,1.1s			IAML		09 01 58.2	
KHET	Khetri	11.48	156	*e*S	Sn	09 02 08.1	-1.9
MKAR	Makanchi Array comp=E,0.3nm,0.3s,baz=228,slow=13,SNR=34	11.88	43	P	Pn	09 00 08.5	+1.5
AB31	Akbulak array comp=E,9.9nm,0.5s,baz=157,slow=10,SNR=78	12.99	328	⇑P	Pn	09 00 21.6	-0.5
KURBB	Kurchatov Arra comp=E,0.1nm,0.3s,baz=216,slow=12,SNR=4.1	13.24	23	P	Pn	09 00 25.3	-0.2
BVAR	Borovoye Array comp=E,0.4nm,0.3s,baz=175,slow=13,SNR=3.1	14.35	360	P	Pn	09 00 42.6	+2.0
BVAR	comp=E,0.4nm,0.3s,baz=182,slow=21,SNR=2.6			S	Sn	09 03 12.6	-7.0
AKTO	Aktyubinsk comp=E,1.4nm,0.3s,baz=141,slow=15,SNR=12	14.69	327	P	Pn	09 00 47.9	+2.5
AKTO	Aktyubinsk comp=E,4.5nm,0.7s	14.69	327	⇑P	Pn	09 00 46.3	+0.9
BHPL	Bhopal	16.50	157	*e*P	Pn	09 01 10.5	+1.2
ZALV	Zalesovo Beam comp=E,0.3nm,0.3s,baz=219,slow=11,SNR=5.9	18.15	28	P	Pn	09 01 27.7	-1.9
ARU	Arti comp=E,0.0nm,0.3s,baz=153,slow=6.6,SNR=6.0	19.43	340	P	P	09 01 45.4	+1.5
POO	Poona	20.30	171	*e*P	Pn	09 01 57.9	+2.3
KOHI	KOHIMA	23.74	116	*e*P	P	09 02 20.0	-10
SONM	Songino Array comp=E,0.4nm,0.5s,baz=265,slow=9.8,SNR=2.8	27.51	59	P	P	09 03 01.9	-2.4
SONM	comp=E,54nm,18.8s,baz=218,slow=36			LR	LR	09 13 45.7	
FINES	FINESS Array B comp=E,0.8nm,0.6s,baz=102,slow=13,SNR=3.3	35.45	325	P	P	09 04 14.8	+1.2
ARCES	ARCESS Array B comp=E,0.7nm,0.5s,baz=113,slow=6.9,SNR=3.8	38.97	337	P	P	09 04 43.5	0.0
HFS	Hagfors comp=E,1.4nm,0.4s,baz=74,slow=11,SNR=4.5	41.10	320	P	P	09 05 01.5	+0.2
NB2	NORSAR Subarra comp=Z,5.4nm,1.2s,baz=91,slow=8.6	42.39	322	P	P	09 05 07.4	-4.5
TORD	Torodi Ar. Bea comp=Z,0.4nm,0.5s,baz=70,slow=8.4	65.36	267	P	P	09 08 00.2	-0.3
INK	Inuvik comp=Z,0.6nm,0.4s,baz=9.8,slow=6.1,SNR=6.7	71.82	9	P	P	09 08 39.9	0.0
ILAR	Eielson Array comp=Z,0.3nm,0.8s,baz=337,slow=5.0,SNR=4.1	72.80	16	P	P	09 08 44.2	-1.6
YKA	Yellowknife Ar comp=Z,0.2nm,0.4s,baz=348,slow=5.5,SNR=4.4	79.09	2	P	P	09 09 20.3	-1.4
WRA	Warramunga Arr comp=Z,0.5nm,0.8s,baz=326,slow=4.8,SNR=4.4	83.51	122	P	P	09 09 42.8	-3.0
ASAR	Alice Springs comp=Z,0.3nm,0.8s,baz=323,slow=7.5,SNR=2.9	85.85	125	P	P	09 09 54.8	-2.8

NNC 05 09:03:10.8±4.0**, 38°.49N**×**70°.01E, h0^{km}, mb4.3, mpv3.9, 5C-3D, Error ellipse: s-maj=36.4km s-min=22.1km az=6.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan 57nm,0.4s	3.11	60	⇑Pn	Pn	09 04 00.2	-1.2
SFK	90nm,0.4s			⇑Sn	Sn	09 04 42.2	+2.8
MNAS	Manas 10.0nm,0.5s	4.42	25	⇓Pg	Pb	09 04 29.6	+0.2
MNAS	41nm,0.9s			⇓Lg	Lg	09 05 34.3	
KK31	Karatay Array 2.8nm,0.3s,baz=175,slow=11,SNR=44	4.62	5	Pn	Pn	09 04 23.4	+1.4
KK31	5.7nm,0.4s,baz=186,slow=17,SNR=7.6			⇑Pg	Pb	09 04 35.6	+2.8
KK31	23nm,0.7s,baz=179,slow=29,SNR=4.6			Lg	Lg	09 05 36.6	
AAK	Ala-Archa 5.2nm,0.5s	5.37	38	⇓Pn	Pn	09 04 31.4	-0.9
AAK	13nm,0.6s			⇑Pg	Pb	09 04 46.9	+1.3
AAK	35nm,0.9s			⇑Lg	Lg	09 05 53.5	
AB31	Akbulak array 2.9nm,0.5s,baz=150,slow=11,SNR=21	12.97	329	P	Pn	09 06 18.2	+2.0

IDC 05 09:13:38.3±5.8**, 21°.31S**×**178°.80W, h646^{km}**±66^{km}**, mb3.4**/5**, mb1 3.5**/6**, mb1mx2.8**/57**, mbtmp4.5**/6**, Error ellipse: s-maj=58.1km s-min=26.6km az=58.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera 1.2nm,0.3s,baz=275,slow=2.5,SNR=11	17.26	191	P	P	09 17 05.6	+0.5
URZ	0.1nm,0.3s,baz=119,slow=20,SNR=0.9			S	S	09 19 52.0	-0.8
CTA	Charters Tower 4.9nm,0.4s,baz=85,slow=9.2,SNR=8.7	32.67	266	P	P	09 19 20.4	-0.1
JAY	Jayapura 5.5nm,0.8s,baz=90,slow=10,SNR=5.4	43.60	290	P	P	09 20 48.0	-0.4
ASAR	Alice Springs 3.4nm,0.5s,baz=96,slow=7.8,SNR=25	43.61	258	P	P	09 20 48.8	+0.4
WRA	Warramunga Arr 1.6nm,0.3s,baz=97,slow=7.2,SNR=35	43.75	263	P	P	09 20 49.3	-0.2
FITZ	Fitzroy Crossi 1.5nm,0.4s,baz=104,slow=2.5,SNR=6.0	52.18	263	P	P	09 21 52.5	+0.7
AKASG	Malin Array Be 1.7nm,0.5s,baz=45,slow=4.2,SNR=4.1	143.35	330	PKP	PKPbc	09 32 00.0	+0.5

NIED ***05*** *09:20:00, 37°.20N×141°.40E, h35^{km}, Mw3.6 Best double couple: M$_0$2.70000×10^{14} NP1:φ$_s$64.00000°, δ34.00000°, λ101.00000°. NP2:φ$_s$230.00000°, δ57.00000°, λ82.00000°.*

IDC ***05*** *09:20:08.7±1.9, 36°.97N×141°.91E, h50^{km}±20^{km}, mb3.1/5, mb1 3.4/10, mb1mx3.2/78, mbtmp3.6/10, ML3.3/3, Error ellipse: s-maj=16.0km s-min=11.4km az=93.0*

JMA ***05*** *09:20:09.3±0.1, 37°.19N×141°.38E, h48^{km}±1^{km}, M3.7*

JMA Felt I J1.

ISC 05 09:20:03.8±2.3**, 37°.07N**±0°.04×**141°.61E**±0°.06**, h5^{km}**±14^{km}**, n27,** σ**2^{s}.06**/34**, mb3.5**/5**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.65	273	P	Pn	09 20 20.1	+0.3
ONAJ				S	Sb	09 20 27.4	+0.3
JFK	Kawauchi	0.66	297	P	Pn	09 20 19.6	-0.3
JFK				S	Sb	09 20 26.7	-0.7
JFFD	Fukushimafurud	0.84	272	P	Pn	09 20 22.5	+0.2
JFFD				S	Sg	09 20 31.6	+0.7
JHO	Hitachi	0.95	242	P	Pn	09 20 24.7	+0.9
JHO				*e*S	Sb	09 20 35.6	-0.1
JMM	Marumori	1.03	321	P	Pb	09 20 24.5	+0.3
JMM				S	Sg	09 20 35.5	-1.5
JFT	Otama	1.11	294	P	Pn	09 20 26.4	+0.3
JFT				S	Sg	09 20 38.5	-1.1
JIO	Ouri	1.40	352	P	Pb	09 20 30.3	-0.2
JIO				S	Sb	09 20 45.2	-3.5
JOU	Okura	1.50	330	P	Pn	09 20 31.8	+0.4
JOU				S	Sn	09 20 49.4	-2.0
JFY	Yanaizu	1.56	283	P	Pn	09 20 32.5	+0.3
JYS	Shirataka	1.69	314	P	Pn	09 20 34.4	+0.5
MJAR	Matsushiro Arr 2.1nm,0.3s,baz=82,slow=2.6,SNR=17	2.78	260	P	Pb	09 20 51.9	-2.1
MJAR	3.8nm,0.3s,baz=76,slow=40,SNR=8.5			S	Sb	09 21 29.2	+0.9
MAT	Matsushiro	2.78	260	P	Pb	09 20 52.3	-1.7
MAT				S	Sn	09 21 24.4	+1.4
JHJ	Hachijo jima 2 11nm,0.3s,baz=17,slow=19,SNR=9.8	4.21	201	P	Pn	09 21 11.6	+2.9
JHJ	16nm,0.3s,baz=294,slow=20,SNR=6.9			S	Sn	09 21 58.1	-0.1
ASAJ	Asahikawa 0.5nm,0.3s,baz=208,slow=12,SNR=3.1	7.08	6	P	Pn	09 21 49.2	+1.1
ASAJ	0.5nm,0.3s,baz=302,slow=19,SNR=4.1			S	Sn	09 23 12.8	+3.8
JCJ	Chichijima baz=0.0,slow=20	9.95	177	P	Pn	09 22 28.9	+1.5
JCJ	3.4nm,0.3s,baz=252,slow=20,SNR=2.8			S	Sn	09 24 13.2	-6.3
USRK	Ussuriysk Ar. baz=126,slow=15	10.21	317	P	Pn	09 22 35.6	+4.7
SONM	Songino Array 0.6nm,0.7s,baz=104,slow=10,SNR=3.3	27.90	304	P	P	09 25 57.0	+2.3
H11N2	WAKE ISLAND Hy baz=314,slow=75,SNR=34	28.03	121	T	T	09 55 31.5	
H11N1	WAKE ISLAND Hy baz=314,slow=75,SNR=40	28.04	121	T	T	09 55 31.5	
H11N3	WAKE ISLAND Hy baz=314,slow=75,SNR=20	28.05	121	T	T	09 55 31.5	
H11S1	WAKE ISLAND Hy baz=316,slow=75,SNR=9.9	28.74	123	T	T	09 56 25.6	
H11S3	WAKE ISLAND Hy baz=316,slow=75,SNR=12	28.74	123	T	T	09 56 25.6	
H11S2	WAKE ISLAND Hy baz=316,slow=75,SNR=14	28.76	123	T	T	09 56 25.6	
MKAR	Makanchi Array 0.3nm,0.7s,baz=87,slow=10,SNR=3.0	44.24	302	P	P	09 28 13.3	-0.7
KURBB	Kurchatov Arra 0.3nm,0.4s,baz=78,slow=7.6,SNR=6.3	46.11	308	P	P	09 28 28.6	-0.2
ILAR	Eielson Array 0.2nm,0.7s,baz=277,slow=7.0,SNR=3.8	49.38	32	P	P	09 28 52.8	-1.2
WRA	Warramunga Arr 0.5nm,0.8s,baz=5.4,slow=7.5,SNR=4.1	57.11	188	P	P	09 29 51.3	0.0

NNC 05 09:26:01.2±3.2**, 36°.85N**×**70°.93E, h123^{km}**±63^{km}**, mb3.1, mpv3.9, 7C-5D, Error ellipse: s-maj=36.3km s-min=26.6km az=115.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan 10nm,0.3s	3.75	32	⇓P	Pn	09 26 57.7	0.0
SFK	9.5nm,0.3s			⇓S	Sn	09 27 43.1	+1.6
AML	Almayashu SNR=7.0	5.70	21	P	Pn	09 27 23.2	-0.6
MNAS	Manas 8.2nm,0.8s	5.76	12	⇑P	Pn	09 27 24.6	+0.1
MNAS	6.3nm,0.4s			⇓S	Sn	09 28 30.0	+0.5
UCH	Uchtor SNR=9.5	6.05	26	P	Pn	09 27 27.5	-1.1
KZA	Kyzart SNR=9.8	6.20	31	P	Pn	09 27 29.0	-1.7
EKS2	Erkin-Say SNR=9.8	6.21	20	P	Pn	09 27 30.2	-0.3
KK31	Karatay Array 4.4nm,0.2s,baz=179,slow=13,SNR=75	6.26	357	⇑P	Pn	09 27 31.7	+0.7
KK31	3.3nm,0.5s,baz=182,slow=23,SNR=4.1			⇓S	Sn	09 28 41.6	+0.4
AAK	Ala-Archa 4.7nm,0.3s	6.40	24	⇓P	Pn	09 27 32.3	-0.8
AAK	6.6nm,0.6s			⇑S	Sn	09 28 45.7	+0.7
AAK	Ala-Archa SNR=6.6	6.40	24	P	Pn	09 27 32.6	-0.6
CHMS	Chumysh SNR=8.6	6.81	24	P	Pn	09 27 38.1	-0.4
USP	Ospenovka SNR=6.5	6.97	22	P	Pn	09 27 40.2	-0.5
TKM2	Tokmak 2 3.7nm,0.5s	7.05	29	⇑P	Pn	09 27 40.5	-1.4
TKM2	2.2nm,0.6s			⇑S	Sn	09 28 59.3	-1.4
TKM2	Tokmak 2 SNR=11	7.05	29	P	Pn	09 27 39.9	-2.1
AB31	Akbulak array 0.2nm,0.3s,baz=153,slow=11,SNR=8.4	14.75	331	⇑P	P	09 29 25.3	-1.1
AKTO	Aktyubinsk 0.2nm,0.3s	16.45	330	⇑P	P	09 29 46.6	+1.5

NDI 05 09:29:31.8±3.1**, 25°.67N**×**94°.21E, h14^{km}**±17^{km}**, ML3.1, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOHI	KOHIMA	0.11	299	*e*P	Pb	09 29 37.5	+1.7
KOHI				*e*S	Sb	09 29 40.6	+2.2
KOHI				*e*S	Sg	09 29 40.8	+3.3
KOHI				IAML		09 29 42.0	
KOHI				IAML		09 29 42.6	
MOKO	MOKOCHONG	0.70	23	*e*P	Pb	09 29 46.2	+0.2
MOKO				*e*S	Sb	09 29 56.8	+1.2
MOKO				*e*S	Sn	09 29 56.9	-1.4
IMP	Imphal	0.87	196	*e*P	Pn	09 29 49.8	+0.1
IMP				*e*S	Sn	09 30 01.7	-0.4
IMP	comp=E,51nm,0.3s			IAML		09 30 02.2	
JORH	JORHAT	1.07	2	*e*S	Sn	09 30 07.7	+0.6
JORH	comp=E,789nm,0.2s			IAML		09 30 08.4	
ITAN	ITANAGAR	1.54	343	*e*P	Pn	09 29 59.4	+0.6
ITAN				*e*S	Sb	09 30 19.4	+0.1
ITAN				IAML		09 30 22.1	
ITAN				IAML		09 30 22.2	
TEZP	TEZPUR	1.58	307	*e*P	Pn	09 29 58.9	-0.5
TEZP				*e*S	Sn	09 30 18.7	-1.0
TEZP	comp=E,380nm,0.1s			IAML		09 30 19.4	
TEZP	comp=N,552nm,0.2s			IAML		09 30 19.7	
ZIRO	ZIRO	1.88	350	*e*S	Pn	09 30 03.2	-0.5
ZIRO	comp=N,301nm,0.3s			IAML		09 30 28.1	
ZIRO	comp=E,251nm,0.2s			IAML		09 30 28.2	
SHL	Shillong	2.10	268	*e*P	Pb	09 30 09.1	-0.8
SHL				*e*S	Sn	09 30 34.2	+1.4
SHL	comp=E,281nm,0.1s			IAML		09 30 38.8	
SHL	comp=N,443nm,0.1s			IAML		09 30 39.0	
GUWA	GUWAHATI	2.33	284	*e*P	Pn	09 30 09.3	-0.4
GUWA				*e*S	Sn	09 30 37.2	-0.9
GUWA	comp=N,60nm,0.2s			IAML		09 30 38.3	
TURI	Tura	3.50	269	*e*S	Sn	09 31 06.8	-0.3
TURI	comp=E,56nm,0.1s			IAML		09 31 07.1	
TURI	comp=N,62nm,0.2s			IAML		09 31 07.2	
BOK	Bokaro	7.80	258	*e*x	x	09 32 27.2	

JMA ***05*** *09:41:17.0±0.3, 24°.97N×122°.85E, h14^{km}, M2.5*

TAP ***05*** *09:41:17.7, 24°.91N×122°.84E, h11^{km}±1^{km}, ML2.8, D*

ISCJB ***05*** *09:41:18.0±1.3, 24°.92N±0°.08×122°.86E±0°.04, h19^{km}±9^{km}, Error ellipse: s-maj=14.1km s-min=5.9km az=13.6*

ISC 05 09:41:17.3±1.9**, 24°.95N**±0°.09×**122°.86E**±0°.04**, h15^{km}**±12^{km}**, n24,** σ**0^{s}.65**/30**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.50	171	P	Pg	09 41 27.2	0.0
JYNG				S	Sg	09 41 33.9	0.0
YOJ	Yonaguni jima baz=164	0.50	164	P	Pg	09 41 27.3	0.0
YOJ	baz=164			*e*S	Sg	09 41 34.1	+0.1
YOJ	Yonaguni jima	0.50	164	P	Pg	09 41 27.3	0.0
YOJ				S	Sb	09 41 35.1	+0.2
EOS1	EOS1 baz=242	0.77	239	*e*P	Pb	09 41 32.3	-0.1
EOS1	baz=242			S	Sb	09 41 42.7	0.0
TWC	Suao baz=253	0.98	250	*e*P	Pb	09 41 35.3	-0.6
IRIF	Iriomote-Funau	1.00	127	P	Pb	09 41 36.0	-0.3
NANB	Nanao baz=246	1.13	243	*e*P	Pb	09 41 38.5	-0.1
NANB	baz=246			*e*S	Sb	09 41 52.6	-0.5
ENA	Nanau baz=246	1.14	243	*e*P	Pg	09 41 39.1	-0.2
ENA	baz=246			*e*S	Sb	09 41 52.0	-1.3
ENTT	Nioudou baz=258	1.21	256	*e*P	Pg	09 41 40.9	+0.1
JISG	Ishigakijimahi	1.37	105	P	Pn	09 41 41.9	+0.1
YHNB	Yeheng baz=271	1.38	259	*e*P	Pn	09 41 42.0	0.0
NACB	Ninganchiao baz=239	1.38	237	*e*P	Pb	09 41 42.6	-0.2
NSK	Sanguang baz=271	1.39	259	*e*P	Pb	09 41 43.4	+0.4
NNSH	Datong baz=252	1.44	249	*e*P	Pb	09 41 43.6	-0.3
NNSB	Datong baz=252	1.44	249	*e*P	Pn	09 41 43.0	+0.1
NNS	Nan Shan baz=252	1.44	250	*e*P	Pn	09 41 42.9	-0.1
CHGB	Renai baz=230	1.77	240	*e*P	Pb	09 41 49.2	-0.4
HGSD	Ruisui baz=225	1.95	222	*e*P	Pn	09 41 49.7	-0.1
VWDT	VWDT baz=223	1.96	233	*e*P	Pn	09 41 50.8	+0.7
SSLB	Suanglung baz=225	2.08	237	*e*P	Pn	09 41 52.8	+1.1
YULB	Yu-li baz=215	2.10	223	*e*P	Pn	09 41 51.2	-0.8
TWF1	Yuli baz=214	2.13	222	*e*P	Pn	09 41 52.3	0.0
CHN5	Tsauling baz=239	2.40	236	*e*P	Pn	09 41 58.0	+1.8
WTP	Ta-pu baz=222	2.66	231	*e*P	Pn	09 42 01.1	+1.5

NIED ***05*** *09:46:00, 32°.40N×142°.00E, h5^{km}, Mw4.8 Best double couple: M$_0$2.04000×10^{16} NP1:φ$_s$158.00000°, δ33.00000°, λ60.00000°. NP2:φ$_s$13.00000°, δ62.00000°, λ108.00000°.*

IDC ***05*** *09:46:16.6±0.4, 32°.32N×141°.74E, h0^{km}, mb4.7/45, mb1 4.8/50, mb1mx4.7/72, mbtmp4.7/50, ML3.9/2, MS4.2/37, Ms1 4.2/37, ms1mx4.1/55, Error ellipse: s-maj=11.2km s-min=9.0km az=89.0*

ISCJB ***05*** *09:46:17.5±0.7, 32°.29N±0°.02×141°.67E±0°.02, h13^{km}±4^{km}, mb4.9/267, MS4.5/62, Error ellipse: s-maj=3.4km s-min=2.5km az=22.9*

JMA ***05*** *09:46:18.3±0.2, 32°.39N×141°.98E, h32^{km}, M4.8*

BJI ***05*** *09:46:19.6, 32°.35N×141°.62E, h32^{km}, mb4.8/69, mB4.9/55, Ms4.8/77, Ms7 4.6/72*

MOS ***05*** *09:46:20.4±0.9, 32°.34N×141°.65E, h33^{km}, mb5.2/94, MS4.3/24, Error ellipse: s-maj=7.2km s-min=4.1km az=114.7*

GCMT ***05*** *09:46:21.4±0.3, 32°.17N×141°.81E, h17^{km}, MW5.0/85, Moment Tensor Solution. s35,c45; s85,c130; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.19±.15; M$_{\theta\theta}$-0.06±.09; M$_{\phi\phi}$-3.14±.10; M$_{r\theta}$0.88±.26; M$_{\theta\phi}$0.17±.07; M$_{\phi r}$0.92±.22; Best double couple: M$_0$3.40700×10^{16} NP1:φ$_s$11.00000°, δ54.00000°, λ107.00000°. NP2: φ$_s$163.00000°, δ39.00000°, λ68.00000°. Principal axes: T 3.5420, Plg74.0000°, Azm330.0000°; N -0.2750, Plg14.0000°, Azm181.0000°; P -3.2720, Plg8.0000°, Azm89.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***05*** *09:46:21.4±1.1, 32°.28N×141°.64E, h29^{km}±7^{km}, mb5.0/186 Error ellipse: s-maj=3.2km s-min=2.8km az=149.0*

ISC 05 09:46:20.6±0.4**, 32°.36N**±0°.03×**141°.79E**±0°.03**, h27^{km}**±2^{km}**, h27^{km}:pP-P, n705,** σ**1^{s}.42**/785**, mb5.0**/278**, MS4.4**/63**, 34C-21D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	1.72	274	P	Pn	09 46 49.4	+0.6

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JHJ2  Mitsune          1.83 295  ePn   Pn     09 46 50.2  0.0
JHJ2  Mitsune          1.83 295 ⇑P     Pn     09 46 50.6 +0.3
JHJ2                             eS    Sb     09 47 14.4 -1.4
JHJ   Hachijo jima 2   1.85 295   Pn   Pn     09 46 50.2 -0.5
      364nm,0.3s,baz=352,slow=13,SNR=68
JHJ                               Sn   Sn     09 47 14.6 +1.4
      461nm,0.3s,baz=102,slow=20,SNR=7.1
BSO1  Boso 1           2.39 344   P    Pn     09 46 57.2 -0.3
BSO1                             eX           09 47 26.5
JMKN  Mikurajimanish   2.40 310   P    Pn     09 46 58.1 -0.1
JMKN                             eS    Sn     09 47 27.3 +0.6
BSO3  Boso 3           2.66 337   P    Pn     09 47 01.4 -0.2
BSO4  Boso 4           2.89 336   P    Pn     09 47 04.9  0.0
TATJ  Tateyama 2       3.10 330   P    Pn     09 47 07.7 -0.1
TATJ                             eS    Sn     09 47 45.2 +1.2
JOD2  Odawara 2        3.67 323   P    Pn     09 47 15.9 +0.2
JOD2                             eS    Sn     09 47 59.3 +1.2
TK02  Tokai 2          3.74 296   P    Pn     09 47 17.8 +1.4
JHU   Hanno            4.06 330   P    Pn     09 47 20.4 -0.6
JHU                              eS    Sn     09 48 08.3 +0.6
JYT   Yasato           4.08 342   P    Pn     09 47 21.3  0.0
JYT                              eS    Sn     09 48 08.6 +0.4
JYN   Shimob           4.13 320   P    Pn     09 47 23.5 +1.4
JHMK  Hamakita         4.16 307   P    Pn     09 47 23.1 +0.8
HMMJ  Hamamatsu 2      4.21 307   P    Pn     09 47 23.4 +0.3
JHO   Hitachi          4.36 347   P    Pn     09 47 23.9 -1.3
JHO                              eS    Sn     09 48 13.3 -1.8
JRY   Ryogami san      4.37 328 ⇑P     Pn     09 47 25.0 -0.2
JAG   Ashikaga         4.50 335   P    Pn     09 47 26.2 -0.8
JAG                              eS    Sn     09 48 17.3 -1.1
JIE   Ise              4.71 297   P    Pn     09 47 31.1 +1.1
JIE                              eS    Sn     09 48 25.4 +1.6
JAO   Obara            4.76 309   P    Pn     09 47 32.4 +1.7
INU   Inuyama          4.97 308  ePn   Pn     09 47 35.1 +1.6
JKN2  Miekihoku        4.99 294   P    Pn     09 47 35.1 +1.4
JFK   Kawauchi         5.05 352  eS    Sn     09 48 27.9 -4.3
MJAR  Matsushiro Arr   5.12 326   Pn   Pn     09 47 35.6  0.0
      10nm,0.3s,baz=155,slow=11,SNR=129
MJAR                              Sn   Sn     09 48 35.1 +1.3
      6.4nm,0.3s,baz=157,slow=20,SNR=3.9
MJAR                              LR   LR     09 49 50.8
      comp=Z,2µm,18.4s,baz=145,slow=42
MAJO  Matsushiro       5.12 326  ePn   Pn     09 47 36.0 +0.4
MAJO                             eSn   Sn     09 48 35.1 +1.3
MAJO  Matsushiro       5.12 326c iP    Pn     09 47 35.9 +0.3
MAT   Matsushiro       5.12 326   P    Pn     09 47 36.5 +0.9
MAT                              eS    Sn     09 48 34.8 +1.0
MAT   Matsushiro       5.12 326   P    Pn     09 47 36.0 +0.4
MAT                               S    Sn     09 48 35.2 +1.4
MJB9  Matsu-Tunnel     5.12 326  ePn   Pn     09 47 36.2 +0.5
JWZ   Kozaga           5.24 285   P    Pn     09 47 39.1 +1.8
CBIJ  Chichi jima      5.25 176  ePn   Pn     09 47 36.2 -1.3
CBIJ                             eSn   Sn     09 48 33.3 -3.8
CBIJ  Chichi jima      5.25 176   P    Pn     09 47 36.5 -1.0
CBIJ                             eS    Sn     09 48 33.9 -3.3
JCJ   Chichijima       5.25 176   Pn   Pn     09 47 36.6 -0.9
      91nm,0.3s,baz=278,slow=15,SNR=56
JCJ                               Sn   Sn     09 48 33.8 -3.3
      135nm,0.3s,baz=116,slow=23,SNR=12
JCJ                               LR   LR     09 49 31.4
      comp=Z,3µm,18.0s,baz=358,slow=37
JFT   Otama            5.29 347   P    Pn     09 47 36.8 -1.1
JFT                              eS    Sn     09 48 35.2 -2.7
JNU   Nakatsue         9.22 278   Pn   Pn     09 48 34.7 +2.7
      0.6nm,0.3s,baz=82,slow=5.8,SNR=18
JNU   Nakatsue         9.22 278  ePn   Pn     09 48 34.6 +2.6
ERM   Erimo            9.70   6  ePn   Pn     09 48 34.9 -3.5
ERM   Erimo            9.70   6c iP    Pn     09 48 34.4 -4.0
ERM                               pmax pmax
      comp=Z,34nm,0.7s
ASAJ  Asahikawa       11.76   3   Pn   Pn     09 49 03.5 -3.0
      comp=Z,1.6nm,0.3s,baz=208,slow=8.3,SNR=18
ASAJ                              LR   LR     09 54 15.6
      comp=Z,1µm,20.2s,baz=195,slow=41
ASAJ  Asahikawa       11.76   3  ePn   Pn     09 49 03.2 -3.4
KSRS  Korea Array     12.46 298   Pn   Pn     09 49 16.6 +0.4
      comp=Z,0.0nm,0.3s,baz=108,slow=13,SNR=4.4
KSRS                              LR   LR     09 54 49.4
      comp=Z,2µm,18.0s,baz=110,slow=41
KSRS  Korea Array     12.46 298   P    Pn     09 49 16.7 +0.4
KSRS                              MLR  MLR
      comp=Z,2µm,18.0s
KS15  Wonju Array Si  12.49 298  ePn   Pn     09 49 18.0 +1.4
KSAR  Wonju Array Be  12.49 298   Pn   Pn     09 49 16.6 +0.1
KSAR  Wonju Array Be  12.49 298   P    Pn     09 49 16.7 +0.1
KS01  Wonju Array Si  12.49 298  ePn   Pn     09 49 18.1 +1.4
TJN   Taejon          12.57 293⇓eP     Pn     09 49 21.2 +3.4
JOW   Kunigami        12.98 248   Pn   Pn     09 49 23.6 +0.2
      comp=Z,1.0nm,0.3s,baz=57,slow=12,SNR=4.8
JOW                               LR   LR     09 54 36.1
      comp=Z,2µm,18.2s,baz=96,slow=39
JOW   Kunigami        12.98 248  ePn   Pn     09 49 22.6 -0.8
KUR   Kuril'sk        13.70  18⇑eP     Pn     09 49 33.3 +0.3
USA0B Ussuriysk Arra  14.10 330  ePn   Pn     09 49 37.5 -1.0
USRK  Ussuriysk Ar.   14.10 330   Pn   Pn     09 49 37.0 -1.4
      baz=139,slow=10
USRK                              LR   LR     09 55 02.4
      comp=Z,1µm,18.7s,baz=135,slow=37
YSS   Yuzh-Sakhalins  14.60   3  ePn   Pn     09 49 41.8 -3.5
YSS   Yuzh-Sakhalins  14.60   3  eP    Pn     09 49 41.6 -3.7
YSS                               MLR  MLR
      comp=Z,2µm,14.0s
YSS                               MLR  MLR
      comp=N,2µm,13.0s
YSS                               MLR  MLR
      comp=E,1µm,16.0s
MDJ   Mudanjiang      15.50 326   P    Pn     09 49 55.0 -2.4
MDJ                               pP   P      09 50 02.6 +1.1
MDJ                               sP   pP     09 50 07.4 -1.3
MDJ                               S    Sn     09 52 49.5 +1.3
MDJ                               sS   S      09 53 01.1 -2.3
MDJ                               PcS  PcS    09 58 28.9 -5.5
MDJ                               pmax pmax
      comp=E,34nm,0.8s
MDJ                               LR   LR
      comp=E,2µm,15.5s
MDJ                               LR   LR
      comp=E,1µm,14.7s
MDJ                               LR   LR
      comp=E,2µm,15.9s
MDJ   Mudanjiang      15.50 326  ePn   Pn     09 49 56.4 -1.0
      comp=E,40nm,1.0s
CN2   Changchun       17.17 316  eP    Pn     09 50 18.0 -0.6
CN2                              esP   sP     09 50 30.4 -0.3
CN2                              eS    Sn     09 53 26.6 -2.1
CN2                               pmax pmax
      comp=E,20nm,1.1s
CN2                               pmax pmax
      comp=E,200nm,3.0s
CN2                               LR   LR
      comp=E,910nm,14.0s
CN2                               LR   LR
      comp=E,730nm,14.0s
CN2                               LR   LR
      comp=E,1µm,14.0s
SNY   Shenyang        17.31 308 ⇓P     Pn     09 50 20.6 +0.3
SNY                               S    Sn     09 53 35.3 +3.3
SNY                               pmax pmax
      comp=E,37nm,1.5s
SNY                               pmax pmax
      comp=E,440nm,13.1s
SNY                               LR   LR
      comp=E,1µm,14.3s
SNY                               LR   LR
      comp=E,1µm,15.9s
SNY                               LR   LR
      comp=E,2µm,16.5s
SSE   Sheshan         17.58 271   P    Pn     09 50 23.0 -0.7
SSE                               S    Sn     09 53 38.4 -0.3
SSE                               pmax pmax
      comp=E,20nm,0.7s
SSE                               pmax pmax
      comp=E,180nm,4.7s
SSE                               LR   LR
      comp=E,440nm,14.2s
SSE                               LR   LR
      comp=E,490nm,16.2s
DL2   Dalian          17.63 297   P    Pn     09 50 23.0 -1.3
DL2                               S    Sn     09 53 37.8 -2.1
DL2                               pmax pmax
      comp=E,280nm,6.9s
DL2                               LR   LR
      comp=E,2µm,15.7s
DL2                               LR   LR
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      comp=E,2µm,14.7s
YOJ   Yonaguni jima   18.28 249  ePn   P      09 50 31.1 -1.3
      comp=E,300nm,1.1s
YOJ   Yonaguni jima   18.28 249  eP    P      09 50 31.1 -1.3
YOJ                               pmax pmax
      comp=Z,300nm,1.1s
KLR   Kul'dur         18.46 339   P    P      09 50 31.2 -3.0
      comp=Z,0.1nm,0.3s,baz=140,slow=12,SNR=36
TYV   Tymovskoe       18.50   2  eP    P      09 50 33.9 -0.7
TYV                              eS    Sn     09 53 59.8 -1.0
TYV                               pmax pmax
      comp=Z,30nm,1.4s
TYV                               pmax pmax
      comp=Z,200nm,1.7s
TYV                               smax smax
      comp=E,1µm,8.0s
TYV                               MLR  MLR
      comp=Z,1µm,17.0s
GRNR  Gornyy          18.82 349  eP    P      09 50 37.9 -0.3
GRNR                             e            09 54 04.7
GRNR                              pmax pmax
      comp=Z,39nm,1.0s
GUMO  Guam            18.89 171   P    Pn     09 50 41.1 +1.3
      comp=Z,3.1nm,0.3s,baz=189,slow=5.8,SNR=7.3
GUMO  Guam            18.89 171  eP    P      09 50 37.5 -1.7
      comp=Z,1µm,1.2s
GUMO                             eP    Pn     09 50 41.1 +1.3
GUMO  Guam            18.89 171  eP    P      09 50 37.5 -1.7
GUMO                              pmax pmax
      comp=Z,1µm,1.2s
TATO  Taipei          19.26 253  eP    P      09 50 42.3 -0.8
      comp=Z,82nm,0.9s
NJ2   Nanjing         19.41 275  eP    P      09 50 43.1 -1.6
NJ2                               pP   pP     09 50 50.3 -1.7
NJ2                               sP   sP     09 50 57.4 +2.0
NJ2                               S    S      09 54 21.9 -0.8
NJ2                               pmax pmax
      comp=Z,200nm,0.5s
NJ2                               pmax pmax
      comp=Z,590nm,7.1s
NJ2                               LR   LR
      comp=Z,930nm,16.5s
NJ2                               LR   LR
      comp=Z,1µm,16.5s
NJ2                               LR   LR
      comp=Z,1µm,14.6s
YHNB  Yeheng          19.49 252  eP    P      09 50 44.3 -1.5
      comp=Z,212nm,1.7s
NACB  Ninganchiao     19.55 250  eP    P      09 50 46.4 +0.1
      comp=Z,46nm,0.9s
YULB  Yu-li           20.17 249  eP    P      09 50 52.4 -0.7
      comp=Z,52nm,1.0s
SSLB  Suanglung       20.25 250  eP    P      09 50 52.8 -1.2
TWG   Pinlang         20.64 248  eP    P      09 50 55.8 -2.4
      comp=Z,808nm,1.6s
TIA   Tai'an          20.73 287   P    P      09 50 58.0 -1.1
TIA                               pmax pmax
      comp=Z,9.0nm,1.1s
TIA                               pmax pmax
      comp=Z,170nm,9.3s
TIA                               LR   LR
      comp=Z,1µm,16.9s
TIA                               LR   LR
      comp=Z,3µm,16.1s
TIA                               LR   LR
      comp=Z,4µm,16.4s
TPUB  Ta-pu           20.75 250  eP    P      09 50 59.1 -0.3
      comp=Z,50nm,0.9s
NKL   Nikolayevsk     20.80 358  eP    P      09 51 00.5 +0.9
NKL                              eS    S      09 54 51.5 +1.3
NKL                               pmax pmax
      comp=N,26nm,1.1s
NKL                               pmax pmax
      comp=Z,66nm,1.1s
NKL                               pmax pmax
      comp=N,300nm,8.0s
NKL                               pmax pmax
      comp=Z,500nm,8.0s
NKL                               smax smax
      comp=N,400nm,7.0s
NKL                               smax smax
      comp=E,700nm,7.0s
NKL                               MLR  MLR
      comp=N,1µm,14.0s
NKL                               MLR  MLR
      comp=Z,2µm,14.0s
SKR   Severo-Kuril's  21.15  26  eP    P      09 51 11.4 +7.9
SKR                              eS    S      09 54 54.7 -2.6
SKR                               MLR  MLR
      comp=Z,900nm,12.0s
SKR                               MLR  MLR
      comp=Z,700nm,12.0s
QZH   Quanzhou        21.63 256⇓iP     P      09 51 09.5 +0.7
QZH                               sP   sP     09 51 22.8 +3.2
QZH                               pmax pmax
      comp=Z,260nm,7.6s
QZH                               LR   LR
      comp=Z,630nm,16.1s
QZH                               LR   LR
      comp=Z,1µm,18.5s
QZH                               LR   LR
      comp=Z,1µm,19.4s
BJI   Beijing         22.00 298⇑iP     P      09 51 11.0 -1.7
BJI                               S    S      09 55 13.9 -0.1
BJI                               pmax pmax
      comp=Z,24nm,1.2s
BJI                               pmax pmax
      comp=Z,220nm,3.8s
BJI                               LR   LR
      comp=Z,2µm,19.6s
BJI                               LR   LR
      comp=Z,1µm,26.5s
BJT   Baijiatuau      22.00 298  eP    P      09 51 11.1 -1.6
      comp=Z,26nm,1.0s
BJT   Baijiatuau      22.00 298  eP    P      09 51 11.1 -1.6
BJT                               pmax pmax
      comp=Z,26nm,1.0s
WHN   Wuhan           23.46 273⇓iP     P      09 51 26.4 -1.6
WHN                               sP   sP     09 51 41.1 +2.2
WHN                               S    S      09 55 40.3 +0.4
WHN                               LR   LR
      comp=Z,2µm,15.9s
WHN                               LR   LR
      comp=Z,2µm,16.4s
WHN                               LR   LR
      comp=Z,2µm,14.1s
HIA   Hailar          23.61 322  eP    P      09 51 28.3 -1.1
      comp=Z,98nm,1.6s
HIA   Hailar          23.61 322⇓iP     P      09 51 28.0 -1.3
HIA                               pmax pmax
      comp=Z,64nm,1.6s
PETK  Petropavlovsk-  23.70  24   P    P      09 51 29.6 -0.5
      comp=Z,1.0nm,0.5s,baz=216,slow=7.1
PETK                              LR   LR     10 01 30.6
      comp=Z,582nm,20.8s,baz=199,slow=38
PETK  Petropavlovsk-  23.70  24  eP    P      09 51 31.3 +1.1
PEA1  Petropavlovsk-  23.70  24  eP    P      09 51 29.6 -0.5
ZEA   Zeya            23.77 338ceP     P      09 51 31.1 +0.3
ZEA                              e            09 52 06.0
ZEA                              eS    S      09 55 46.0 +1.5
ZEA                              eSS   SnSn   09 56 40.0  +16
ZEA                               pmax pmax
      comp=E,55nm,0.9s
ZEA                               pmax pmax
      comp=N,110nm,0.8s
ZEA                               pmax pmax
      comp=Z,170nm,0.8s
ZEA                               pmax pmax
      comp=N,500nm,3.0s
ZEA                               pmax pmax
      comp=Z,500nm,3.0s
ZEA                               pmax pmax
      comp=Z,500nm,8.0s
ZEA                               smax smax
      comp=N,700nm,8.0s
ZEA                               MLR  MLR
      comp=Z,1µm,15.0s
ZEA                               MLR  MLR
      comp=E,600nm,12.0s
ZEA                               MLR  MLR
      comp=N,700nm,14.0s
PET   Petropavlovsk   23.97  26  eP    P      09 51 31.5 -1.2
PET                              e            09 52 05.5
PET                              eS    S      09 55 45.8 -1.9
PET                               pmax pmax
      comp=Z,100nm,9.1s
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PET                               MLR  MLR
      comp=Z,600nm,16.0s
PET                               MLR  MLR
      comp=Z,700nm,14.0s
TIY   Taiyuan         24.57 291  eP    P      09 51 40.7 +2.3
TIY                               pP   sP     09 51 51.1 +1.5
TIY                               pmax pmax
      comp=Z,210nm,5.3s
TIY                               LR   LR
      comp=Z,540nm,11.0s
TIY                               LR   LR
      comp=Z,2µm,13.0s
TIY                               LR   LR
      comp=Z,2µm,13.2s
HHC   Hu-ho-hao-te    25.61 298  eP    P      09 51 47.6 -0.2
HHC                               sP   sP     09 52 01.4 +2.4
HHC                               PP   PnPn   09 52 25.1 +0.9
HHC                               S    S      09 56 13.9 -0.5
HHC                               sS   pS     09 56 22.6 -0.2
HHC                               pmax pmax
      comp=Z,15nm,1.0s
HHC                               pmax pmax
      comp=Z,330nm,5.5s
HHC                               LR   LR
      comp=Z,1µm,15.5s
HHC                               LR   LR
      comp=Z,1µm,14.3s
HHC                               LR   LR
      comp=Z,1µm,14.9s
TGY   Tagaytay City   26.32 231   LR   LR     10 02 14.0
      comp=Z,509nm,18.4s,baz=26,slow=36
BTO   Baotou          26.73 297  eP    P      09 51 56.2 -1.8
CLNS  Chul'man        27.12 339  eP    P      09 52 01.5 +0.2
CLNS                             e*PP  pP     09 52 10.5 +1.4
CLNS                             e            09 52 47.4
CLNS                             e            09 55 20.8
CLNS                             eS    S      09 56 38.4 +0.6
CLNS                              pmax pmax
      comp=Z,47nm,1.2s
CLNS                              pmax pmax
      comp=N,38nm,1.3s
CLNS                              pmax pmax
      comp=E,17nm,1.2s
CLNS                              pmax pmax
      comp=E,15nm,1.1s
CLNS                              pmax pmax
      comp=Z,17nm,0.9s
CLNS                              pmax pmax
      comp=N,21nm,1.1s
CLNS                              smax smax
      comp=N,173nm,13.8s
CLNS                              smax smax
      comp=E,269nm,14.3s
CLNS                              MLR  MLR
      comp=N,426nm,14.0s
CLNS                              MLR  MLR
      comp=Z,560nm,15.0s
XAN   Xi'an           27.49 283   P    P      09 52 02.6 -2.3
XAN                               pP   sP     09 52 16.1 +0.1
XAN                               pmax pmax
      comp=Z,32nm,1.1s
XAN                               pmax pmax
      comp=Z,210nm,3.6s
XAN                               LR   LR
      comp=Z,830nm,11.5s
XAN                               LR   LR
      comp=Z,530nm,13.7s
XAN                               LR   LR
      comp=Z,710nm,14.1s
ENH   Enshi           27.62 274  eP    P      09 52 04.6 -1.4
      comp=Z,17nm,0.8s
MA2   Magadan         27.88  10   P    P      09 52 04.5 -3.5
      comp=Z,3.0nm,0.7s,baz=186,slow=18,SNR=2.8
DAV   Davao City (W)  29.34 214   LR   LR     10 03 52.5
      comp=Z,430nm,20.4s,baz=68,slow=36
ULN   Ulaanbaatar     30.45 311  eP    P      09 52 32.0 +0.9
      comp=Z,29nm,0.8s
ULN   Ulaanbaatar     30.45 311   P    P      09 52 32.3 +1.3
      SNR=27
ULN   Ulaanbaatar     30.45 311c iP    P      09 52 31.7 +0.6
ULN                               pmax pmax
      comp=Z,27nm,1.0s
YAK   Yakutsk         30.70 349   P    P      09 52 34.7 +1.8
      comp=Z,15nm,0.3s,baz=192,slow=2.0,SNR=4.8
YAK                               LR   LR     10 07 00.0
      comp=Z,501nm,18.0s,baz=172,slow=40
YAK   Yakutsk         30.70 349  eP    P      09 52 33.1 +0.2
      comp=Z,41nm,1.0s
YAK   Yakutsk         30.70 349  eP    P      09 52 32.5 -0.4
YAK                              e*PP  pP     09 52 38.2 -2.6
YAK                              ePPP  PPP    09 53 38.7
YAK                              e            09 55 30.5
YAK                              eS    S      09 57 34.1 +0.3
YAK                              e*SS  sS     09 57 47.3 +0.5
YAK                               pmax pmax
      comp=Z,18nm,0.8s
YAK                               pmax pmax
      comp=N,12nm,1.3s
YAK                               pmax pmax
      comp=E,3.0nm,1.2s
YAK                               pmax pmax
      comp=Z,23nm,0.9s
YAK                               pmax pmax
      comp=N,15nm,1.3s
YAK                               pmax pmax
      comp=E,2.0nm,0.3s
YAK                               smax smax
      comp=N,12nm,2.3s
YAK                               smax smax
      comp=E,46nm,2.3s
YAK                               MLR  MLR
      comp=Z,904nm,18.0s
YAK                               MLR  MLR
      comp=N,877nm,16.0s
YAK                               MLR  MLR
      comp=E,140nm,18.0s
SONA1 Songino Array   30.86 310  eP    P      09 52 35.0 +0.3
SONA0 Songino Array   30.86 310  eP    P      09 52 35.6 +0.9
SONM  Songino Array   30.86 310   P    P      09 52 35.6 +0.9
      comp=E,24nm,0.8s,baz=114,slow=6.8,SNR=68
GYA   Guiyang         31.07 268   P    P      09 52 36.6 -0.1
GYA                               pP   sP     09 52 47.2 -0.7
GYA                               PP   PnPn   09 53 39.0 +0.7
GYA                               S    S      09 57 38.9 -1.7
GYA                               sS   sS     09 57 54.0 +0.4
GYA                               SS   SnSn   09 59 21.2 -1.3
GYA                               pmax pmax
      comp=E,20nm,0.8s
GYA                               pmax pmax
      comp=E,120nm,5.4s
GYA                               LR   LR
      comp=E,600nm,17.1s
GYA                               LR   LR
      comp=E,490nm,17.4s
GYA                               LR   LR
      comp=E,650nm,17.4s
SEY   Seymchan        31.33   9   P    P      09 52 39.0 +0.5
      comp=E,2.8nm,0.7s,baz=169,slow=6.0,SNR=9.3
SEY   Seymchan        31.33   9⇓iP     P      09 52 39.2 +0.8
LZH   Lanzhou         31.47 287  eP    P      09 52 43.1 +2.9
LZH                               pP   sP     09 52 51.3 -0.1
LZH                               sP   pP     09 52 55.6 +7.5
LZH                               PP   PnPn   09 53 44.9 +1.4
LZH                               PcP  PcP    09 55 34.9 +1.9
LZH                              eS    S      09 57 51.6 +4.9
LZH                               SS   SnSn   09 59 28.6 -3.5
LZH                               pmax pmax
      comp=E,36nm,1.1s
LZH                               pmax pmax
      comp=E,170nm,5.2s
LZH                               LR   LR
      comp=E,2µm,14.6s
LZH                               LR   LR
      comp=E,2µm,17.4s
LZH                               LR   LR
      comp=E,2µm,17.9s
QIZ   Qiongzhong      31.57 253   P    P      09 52 40.7 -0.4
QIZ                               S    S      09 57 46.9 -1.4
QIZ                               sS   sS     09 58 03.9 +2.6
QIZ                               ScS  ScS    10 03 12.4 -0.4
QIZ                               LR   LR
      comp=E,520nm,17.7s
QIZ                               LR   LR
      comp=E,350nm,18.1s
QIZ                               LR   LR
      comp=E,530nm,18.6s
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BOD	**Bodaibo**	**31.72**	**332**	*e*P	**P**	**09 52 42.2**	**+0.2**
BOD				*e*		09 52 53.2	
ZAK	**Zakamensk**	**33.58**	**314**	*e*P	**P**	**09 52 58.4**	**-0.1**
ZAK				pmax	pmax		
	comp=Z,19nm,1.5s						
IRK	**Irkutsk**	**33.61**	**317**	*e*P	**P**	**09 52 59.2**	**+0.6**
IRK				pmax	pmax		
	comp=Z,49nm,2.2s						
TLY	**Talaya**	**33.78**	**316**	*e*P	**P**	**09 53 01.6**	**+1.5**
	comp=Z,31nm,1.1s						
TLY	**Talaya**	**33.78**	**316**	P	**P**	**09 53 01.4**	**+1.3**
	SNR=20						
TLY	**Talaya**	**33.78**	**316**	*e*P	**P**	**09 53 00.8**	**+0.7**
TLY				*e*		09 54 14.7	
TLY				*e*S	**S**	**09 58 21.7**	**-0.4**
TLY				pmax	pmax		
	comp=Z,41nm,1.5s						
TLY				MLR	MLR		
	comp=Z,609nm,18.0s						
GTA	**Gaotai**	**34.49**	**294**	⇑P	**P**	**09 53 05.4**	**-1.2**
GTA				pP	pP	09 53 13.9	-0.6
GTA				sP	sP	09 53 18.1	+0.3
GTA				PP	**PP**	**09 54 25.5**	**+0.7**
GTA				PcP	**PcP**	**09 55 43.2**	**+1.9**
GTA				S	**S**	**09 58 31.6**	**-2.0**
GTA				sS	pS	09 58 43.1	+0.7
GTA				pmax	pmax		
	comp=Z,15nm,1.1s						
GTA				pmax	pmax		
	comp=Z,79nm,4.6s						
GTA				LR	LR		
	comp=Z,810nm,16.5s						
GTA				LR	LR		
	comp=Z,890nm,14.3s						
GTA				LR	LR		
	comp=Z,970nm,14.3s						
SIJI	**Sorong**	**34.51**	**199**	LR	LR	10 05 38.3	
	comp=Z,370nm,19.1s,baz=360,slow=34						
KMI	**Kunming**	**34.85**	**268**	P	**P**	**09 53 11.9**	**+2.0**
KMI				pP	sP	09 53 19.7	-1.4
KMI				sP	pP	09 53 27.4	+10
KMI				PP	**PnPn**	**09 54 24.9**	**-1.7**
KMI				S	**S**	**09 58 37.7**	**-1.8**
KMI				sS	sS	09 58 54.6	+2.0
KMI				SS	**SnSn**	**10 00 44.5**	**-10**
KMI				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KMI				pmax	pmax		
	comp=Z,80nm,5.1s						
KMI				LR	LR		
	comp=Z,530nm,16.2s						
KMI				LR	LR		
	comp=Z,820nm,14.4s						
KMI				LR	LR		
	comp=Z,640nm,15.9s						
MOY	**Mondy**	**35.34**	**315**	*e*P	**P**	**09 53 14.0**	**+0.3**
MOY				pmax	pmax		
	comp=Z,20nm,1.4s						
SKNT	**Sakolnakorn**	**37.40**	**255**	P	**P**	**09 53 31.2**	**-0.3**
	comp=Z,5.9nm,1.1s,comp=Z,795nm						
BILL	**Bilibino**	**38.44**	**15**	*e*P	**P**	**09 53 38.9**	**-0.8**
BILL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BILL				MLR	MLR		
	comp=Z,301nm,18.0s						
HVS	**Khovu-Aksy**	**39.66**	**313**	⇑*e*P	**P**	**09 53 51.8**	**+1.5**
HVS				pmax	pmax		
	comp=Z,21nm,0.9s						
TIXI	**Tiksi**	**39.96**	**354**	P	**P**	**09 53 52.4**	**0.0**
	comp=Z,4.8nm,0.5s,baz=136,slow=11,SNR=4.3						
TIXI				LR	LR	10 13 36.7	
	comp=Z,290nm,19.2s,baz=154,slow=41						
TIXI	**Tiksi**	**39.96**	**354**	*ce*P	**P**	**09 53 52.2**	**-0.1**
TIXI				pmax	pmax		
	comp=Z,15nm,1.7s						
PBKT	**Sadao Pong**	**40.08**	**257**	P	**P**	**09 53 52.7**	**-1.3**
	comp=Z,21nm,1.0s						
CMMT	**Chiang Mai**	**40.66**	**261**	P	**P**	**09 53 57.6**	**-1.3**
	comp=Z,8.8nm,1.0s						
CHTO	**Chiang Mai**	**40.67**	**261**	*e*P	**P**	**09 53 57.8**	**-1.1**
	comp=Z,9.3nm,1.0s						
CHTO	**Chiang Mai**	**40.67**	**261**	*e*P	**P**	**09 53 57.8**	**-1.1**
CHTO				pmax	pmax		
	comp=Z,9.0nm,1.0s						
CHTO	**Chiang Mai**	**40.67**	**261**	P	**P**	**09 53 58.2**	**-0.7**
	comp=Z,39nm,1.0s						
CMAR	**Chiang Mai Arr**	**40.84**	**261**	P	**P**	**09 53 58.2**	**-2.1**
	comp=Z,2.3nm,0.8s,baz=50,slow=7.0,SNR=7.1						
CMAR				LR	LR	10 12 25.4	
	comp=Z,189nm,18.3s,baz=73,slow=38						
KRAR	**Krasnoyarsk**	**41.15**	**320**	⇑*e*P	**P**	**09 53 59.4**	**-2.9**
PMG	**Port Moresby**	**41.84**	**172**	P	**P**	**09 54 07.2**	**-1.2**
	comp=Z,19nm,0.7s,baz=319,slow=19,SNR=7.7						
WMQ	**Urumqi**	**43.38**	**301**	P	**P**	**09 54 22.3**	**+1.4**
WMQ				pP	sP	09 54 31.5	-0.7
WMQ				sP	pP	09 54 35.7	+6.7
WMQ				PP	**PcP**	**09 56 07.4**	**-1.7**
WMQ				S	**S**	**10 00 47.0**	**-0.2**
WMQ				sS	sS	10 01 03.5	+2.9
WMQ				pmax	pmax		
	comp=Z,43nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,400nm,6.1s						
WMQ				LR	LR		
	comp=Z,1µm,17.1s						
WMQ				LR	LR		
	comp=Z,530nm,14.3s						
WMQ				LR	LR		
	comp=Z,400nm,21.5s						
DGZ	**Jazzator, Alta**	**43.51**	**310**	*i* P	**P**	**09 54 22.9**	**+1.0**
DGZ				pmax	pmax		
	comp=Z,40nm,1.5s						
BRDH	**Bariadhala**	**45.16**	**271**	LR	LR	10 16 44.9	
	comp=Z,452nm,18.5s,baz=192,slow=40						
ZAA0	**Zalesovo Array**	**45.39**	**316**	*e*P	**P**	**09 54 36.8**	**+0.2**
	comp=Z,26nm,1.1s						
ZAA1	**Zalesovo Array**	**45.39**	**316**	*e*P	**P**	**09 54 36.4**	**-0.2**
ZAA1				*e*PcP	**PcP**	**09 56 15.4**	**-0.2**
ZALV	**Zalesovo Beam**	**45.39**	**316**	P	**P**	**09 54 36.4**	**-0.2**
	comp=Z,14nm,0.9s,baz=112,slow=9.3,SNR=30						
ZALV				PcP	**PcP**	**09 56 15.4**	**-0.2**
	comp=Z,5.2nm,0.7s,baz=89,slow=2.7,SNR=4.1						
BATI	**Baumata**	**45.73**	**205**	LR	LR	10 11 53.1	
	comp=Z,254nm,20.5s,baz=130,slow=34						
NVS	**Novosibirsk**	**46.38**	**317**	⇑*i*P	**P**	**09 54 44.9**	**+0.5**
NVS				*e*S	**S**	**10 01 34.4**	**+4.3**
NVS				pmax	pmax		
	comp=N,4.0nm,0.7s						
NVS				pmax	pmax		
	comp=E,12nm,0.7s						
NVS				pmax	pmax		
	comp=Z,23nm,0.7s						
NVS				smax	smax		
	comp=N,19nm,2.0s						
NVS				smax	smax		
	comp=E,21nm,2.0s						
MK01	**Makanchi Array**	**46.98**	**306**	*e*P	**P**	**09 54 49.1**	**-0.3**
MK31	**Makanchi Array**	**46.99**	**306**	*e*P	**P**	**09 54 49.6**	**+0.2**
MK31	**Makanchi Array**	**46.99**	**306**	*i* P	**P**	**09 54 49.3**	**-0.1**
MK31				pmax	pmax		
	comp=Z,36nm,0.8s						
MK32	**Makanchi Array**	**46.99**	**306**	*e*P	**P**	**09 54 49.6**	**+0.2**
MK32				*e*PcP	**PcP**	**09 56 21.8**	**+0.3**
MKAR	**Makanchi Array**	**46.99**	**306**	P	**P**	**09 54 49.6**	**+0.2**
	comp=Z,25nm,0.8s,baz=91,slow=9.4,SNR=145						
MKAR				PcP	**PcP**	**09 56 21.8**	**+0.3**
	comp=Z,6.4nm,0.9s,baz=84,slow=7.4,SNR=2.2						
MKAR				ScP	**ScP**	**10 00 13.9**	**+0.5**
	comp=Z,0.9nm,0.8s,baz=95,slow=3.2,SNR=3.7						
MKAR	**Makanchi Array**	**46.99**	**306**	*e*P	**P**	**09 54 49.6**	**+0.2**
	comp=Z,191nm,0.8s						
MKAR				PcP	**PcP**	**09 56 21.8**	**+0.3**
ODAN	**Odare**	**47.20**	**278**	*e*P	**P**	**09 54 50.4**	**-1.1**
MAKZ	**Makanchi**	**47.20**	**306**	*e*P	**P**	**09 54 51.4**	**+0.4**
	comp=Z,26nm,0.8s						
MAKZ	**Makanchi**	**47.20**	**306**	*e*P	**P**	**09 54 51.4**	**+0.4**
MAKZ				pmax	pmax		
	comp=Z,26nm,0.8s						
RAMN	**Ramite**	**47.83**	**279**	*e*P	**P**	**09 54 55.7**	**-0.7**
	comp=Z,63nm,0.7s						
JIRN	**Jiri**	**47.93**	**280**	*e*P	**P**	**09 54 57.1**	**-0.3**
GUN	**Gumba**	**48.10**	**280**	*e*P	**P**	**09 54 58.4**	**-0.3**
PKIN	**Phulchoki**	**48.62**	**280**	*e*P	**P**	**09 55 01.5**	**-1.1**
	comp=Z,22nm,0.8s						
KKN	**Kakani**	**48.64**	**280**	*e*P	**P**	**09 55 02.2**	**-0.5**
	comp=Z,78nm,1.1s						
DMN	**Daman**	**48.85**	**280**	*e*P	**P**	**09 55 03.6**	**-0.7**
	comp=Z,44nm,1.1s						
GKN	**Gorkha**	**49.10**	**281**	*e*P	**P**	**09 55 05.6**	**-0.6**
	comp=Z,88nm,1.2s						
KURK	**Kurchatov**	**49.16**	**311**	*e*P	**P**	**09 55 05.8**	**-0.3**
	comp=Z,60nm,1.0s						
KURK				*e*P	**P**	**09 55 06.3**	**+0.3**
KURK	**Kurchatov**	**49.16**	**311**	P	**P**	**09 55 06.1**	**+0.1**
	SNR=24						
KURK	**Kurchatov**	**49.16**	**311**	*c i*P	**P**	**09 55 05.7**	**-0.3**
KURK				pmax	pmax		
	comp=Z,106nm,1.7s						
KURBB	**Kurchatov Arra**	**49.22**	**311**	P	**P**	**09 55 06.3**	**-0.2**
	comp=Z,29nm,0.8s,baz=88,slow=7.6,SNR=104						
PDGK	**Podgornoye**	**49.36**	**302**	P	**P**	**09 55 07.5**	**-0.4**
PDGK				pmax	pmax		
	comp=Z,45nm,1.0s						
DANN	**Dangsing**	**49.72**	**281**	*e*P	**P**	**09 55 10.8**	**-0.2**
	comp=Z,62nm,0.7s						
PSI	**Prapat**	**49.80**	**243**	LR	LR	10 16 22.8	
	comp=Z,93nm,18.2s,baz=84,slow=36						
KOLN	**Koldanda**	**50.05**	**281**	*e*P	**P**	**09 55 13.0**	**-0.4**
	comp=Z,20nm,0.6s						
PRZ	**Przheval'sk**	**50.30**	**301**	*e*P	**P**	**09 55 15.6**	**+0.5**
	comp=Z,31nm,0.9s						
PRZ	**Przheval'sk**	**50.30**	**301**	*e*P	**P**	**09 55 15.6**	**+0.5**
PRZ				pmax	pmax		
	comp=Z,31nm,0.9s						
KDAK	**Kodiak Island**	**50.44**	**39**	P	**P**	**09 55 16.1**	**+0.5**
	comp=Z,6.6nm,0.7s,baz=270,slow=8.1,SNR=5.1						
KDAK	**Kodiak Island**	**50.44**	**39**	*e*P	**P**	**09 55 16.1**	**+0.5**
	comp=Z,22nm,0.9s						
KDAK	**Kodiak Island**	**50.44**	**39**	*i* P	**P**	**09 55 16.4**	**+0.7**
PYUN	**Piuthan**	**50.44**	**281**	*e*P	**P**	**09 55 16.2**	**-0.2**
	comp=Z,54nm,0.5s						
LEM	**Lembang**	**50.77**	**226**	P	**P**	**09 55 18.0**	**-0.8**
	comp=Z,39nm,0.7s,baz=342,slow=19,SNR=4.5						
LEM				LR	LR	10 18 11.9	
	comp=Z,110nm,18.1s,baz=58,slow=38						
TARG	**Taragay, Kyrgy**	**50.87**	**300**	*e*P	**P**	**09 55 19.7**	**0.0**
	comp=Z,18nm,1.1s						
CAST	**Castle Rocks**	**50.97**	**32**	*e*P	**P**	**09 55 21.4**	**+1.8**
	comp=Z,18nm,1.4s						
MLY	**Manley**	**51.69**	**30**	*e*P	**P**	**09 55 26.8**	**+1.8**
	comp=Z,7.7nm,0.9s						
BWN	**Browne**	**52.18**	**31**	*e*P	**P**	**09 55 30.9**	**+2.3**
	comp=Z,31nm,1.2s						
TKM2	**Tokmak 2**	**52.24**	**302**	P	**P**	**09 55 30.5**	**+0.8**
	SNR=23						
TKM2	**Tokmak 2**	**52.24**	**302**	P	**P**	**09 55 30.2**	**+0.5**
TKM2				pmax	pmax		
	comp=Z,38nm,1.4s						
CTA	**Charters Tower**	**52.32**	**175**	P	**P**	**09 55 30.4**	**+0.3**
	comp=Z,3.3nm,0.8s,baz=333,slow=6.8,SNR=3.3						
MCK	**McKinley**	**52.39**	**32**	*e*P	**P**	**09 55 31.2**	**+1.0**
	comp=Z,25nm,1.4s						
MCK	**McKinley**	**52.39**	**32**	*e*P	**P**	**09 55 31.2**	**+1.0**
MCK				pmax	pmax		
	comp=Z,25nm,1.4s						
WRAB	**Tennant Creek**	**52.48**	**189**	*e*P	**P**	**09 55 30.8**	**-0.5**
	comp=Z,69nm,1.1s						
WRAB	**Tennant Creek**	**52.48**	**189**	*c i*P	**P**	**09 55 30.8**	**-0.5**
WRAB				pmax	pmax		
	comp=Z,73nm,1.3s						
WR1	**Warramunga Arr**	**52.49**	**189**	*e*P	**P**	**09 55 30.9**	**-0.5**
WRA	**Warramunga Arr**	**52.49**	**189**	P	**P**	**09 55 30.9**	**-0.5**
	comp=Z,27nm,0.6s,baz=4.7,slow=7.6,SNR=123						
FITZ	**Fitzroy Crossi**	**52.50**	**199**	P	**P**	**09 55 31.4**	**-0.1**
	comp=Z,6.3nm,0.5s,baz=18,slow=6.8,SNR=22						
FITZ	**Fitzroy Crossi**	**52.50**	**199**	*e*P	**P**	**09 55 31.4**	**-0.1**
	comp=Z,54nm,1.7s						
TOLK	**Toolik Lake Re**	**52.52**	**25**	P	**P**	**09 55 32.6**	**+1.5**
	baz=264						
TOLK	**Toolik Lake Re**	**52.52**	**25**	*e*P	**P**	**09 55 32.8**	**+1.7**
	comp=Z,18nm,1.1s						
KSH	**Kashi**	**52.72**	**298**	P	**P**	**09 55 37.2**	**+4.0**
KSH				sP	sP	09 55 51.1	+6.5
KSH				*e*PcP	**PcP**	**09 56 46.1**	**+3.4**
KSH				PP	**PP**	**09 57 38.3**	**+5.9**
KSH				S	**S**	**10 03 01.7**	**+2.1**
KSH				ScS	**ScS**	**10 05 21.0**	**-0.3**
KSH				SS	**SS**	**10 06 40.0**	**+2.0**
KSH				pmax	pmax		
	comp=Z,17nm,0.8s						
KSH				pmax	pmax		
	comp=Z,130nm,6.2s						
KSH				LR	LR		
	comp=Z,620nm,16.4s						
KSH				LR	LR		
	comp=Z,410nm,16.2s						
KSH				LR	LR		
	comp=Z,670nm,15.8s						
MDM	**Murphy Dome**	**52.75**	**30**	*e*P	**P**	**09 55 34.4**	**+1.5**
	comp=Z,25nm,1.2s						
KBK	**Karagaybulak**	**52.76**	**302**	P	**P**	**09 55 34.2**	**+0.6**
	SNR=10						
CHMS	**Chumysh**	**52.83**	**302**	P	**P**	**09 55 34.2**	**+0.4**
	SNR=5.4						
CCB	**Clear Creek Bu**	**52.92**	**31**	*e*P	**P**	**09 55 35.6**	**+1.6**
	comp=Z,10nm,1.3s						
USP	**Ospenovka**	**52.96**	**302**	P	**P**	**09 55 35.2**	**+0.5**
	SNR=6.3						
FRU	**Bishkek**	**52.96**	**302**	*e*P	**P**	**09 55 35.5**	**+0.7**
FRU				*e*		09 55 50.0	
FRU				pmax	pmax		
	comp=Z,60nm,1.8s						
AAK	**Ala-Archa**	**53.09**	**302**	*e*P	**P**	**09 55 36.2**	**+0.3**
	comp=Z,7.9nm,0.8s						
AAK	**Ala-Archa**	**53.09**	**302**	*e*P	**P**	**09 55 36.2**	**+0.3**
AAK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
UCH	**Uchtor**	**53.17**	**301**	P	**P**	**09 55 38.2**	**+1.4**
	SNR=12						
HDA	**Harding Lake**	**53.28**	**31**	*e*P	**P**	**09 55 37.0**	**+0.3**
	comp=Z,9.5nm,0.9s						
IL1	**Eielson Array**	**53.32**	**30**	*e*P	**P**	**09 55 37.2**	**+0.2**
ILAR	**Eielson Array**	**53.32**	**30**	P	**P**	**09 55 37.3**	**+0.3**
	comp=Z,3.5nm,0.8s,baz=267,slow=6.2,SNR=49						
ILB	**Eielson Array**	**53.32**	**30**	*e*P	**P**	**09 55 37.3**	**+0.3**
OTUK	**Ortayu**	**53.51**	**309**	P	**P**	**09 55 39.1**	**+0.4**
OTUK				pmax	pmax		
	comp=Z,69nm,0.9s						
AML	**Almayashu**	**53.78**	**301**	P	**P**	**09 55 42.5**	**+1.2**
	SNR=9.9						
BVAR	**Borovoye Array**	**54.02**	**315**	P	**P**	**09 55 42.5**	**+0.1**
	comp=Z,9.1nm,0.7s,baz=90,slow=10,SNR=45						
BVAR				PcP	**PcP**	**09 56 47.2**	**0.0**
	comp=Z,7.6nm,0.8s,baz=101,slow=4.6,SNR=3.0						
BRVK	**Borovoye**	**54.08**	**315**	*e*P	**P**	**09 55 43.0**	**+0.2**
	comp=Z,20nm,0.9s						
BRVK	**Borovoye**	**54.08**	**315**	P	**P**	**09 55 43.2**	**+0.4**
	SNR=16						
BRVK	**Borovoye**	**54.08**	**315**	*c i*P	**P**	**09 55 43.0**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,63nm,2.5s						
SFK	**Sufi-Kurgan**	**54.44**	**299**	P	**P**	**09 55 45.4**	**-0.5**
SFK				pmax	pmax		
	comp=Z,19nm,1.0s						
MNAS	**Manas**	**54.56**	**302**	P	**P**	**09 55 46.8**	**+0.1**
MNAS				pmax	pmax		
	comp=Z,21nm,1.1s						
NDI	**New Delhi**	**55.00**	**284**	*e*P	**P**	**09 55 51.0**	**+1.2**
EGAK	**Eagle**	**55.77**	**30**	*e*P	**P**	**09 55 55.5**	**+0.7**
	comp=Z,4.9nm,0.8s						
KK31	**Karatay Array**	**55.83**	**303**	*e*P	**P**	**09 55 56.0**	**+0.3**
KK31	**Karatay Array**	**55.83**	**303**	*i* P	**P**	**09 55 55.7**	**0.0**
KK31				pmax	pmax		
	comp=Z,22nm,0.8s						
KKAR	**Karatay Array**	**55.83**	**303**	*e*P	**P**	**09 55 56.0**	**+0.3**
KKAR	**Karatay Array**	**55.83**	**303**	*e*P	**P**	**09 55 56.0**	**+0.3**
AS01	**Alice Springs**	**56.21**	**189**	*e*P	**P**	**09 55 57.4**	**-1.0**
AS31	**Alice Springs**	**56.21**	**189**	*e*P	**P**	**09 55 58.1**	**-0.4**
	comp=Z,3.3nm,0.5s						
ASAR	**Alice Springs**	**56.22**	**189**	P	**P**	**09 55 58.1**	**-0.4**
	comp=Z,3.2nm,0.5s,baz=18,slow=12,SNR=34						
ASAR				LR	LR	10 18 25.0	
	comp=Z,274nm,21.9s,baz=359,slow=34						
NIL	**Nilore**	**56.49**	**291**	*e*P	**P**	**09 56 01.4**	**+0.9**
	comp=Z,39nm,0.7s						
NIL	**Nilore**	**56.49**	**291**	*e*P	**P**	**09 56 01.4**	**+0.9**
NIL				pmax	pmax		
	comp=Z,39nm,0.7s						
DAWY	**Dawson**	**56.60**	**31**	*e*P	**P**	**09 56 02.2**	**+1.4**
	comp=Z,9.8nm,1.2s						
INK	**Inuvik**	**58.43**	**26**	P	**P**	**09 56 13.6**	**+0.1**
	comp=Z,3.9nm,0.8s,baz=301,slow=5.9,SNR=12						
INK	**Inuvik**	**58.43**	**26**	*e*P	**P**	**09 56 14.7**	**+1.2**
	comp=Z,19nm,1.3s						
HYB	**Hyderabad**	**58.51**	**272**	*i* P	**P**	**09 56 14.0**	**-1.0**
SVE	**Sverdlovsk**	**58.90**	**321**	⇓*e*P	**P**	**09 56 17.4**	**+0.3**
SVE				pmax	pmax		
	comp=Z,41nm,1.4s						
DZM	**Mont Dzumac**	**59.03**	**153**	LR	LR	10 21 00.9	
	comp=Z,292nm,19.6s,baz=24,slow=35						
DZM	**Mont Dzumac**	**59.03**	**153**	*e*S	**S**	**10 04 24.0**	**+0.4**
	comp=Z,71nm,26.3s						
DZM				*e*LR	LR	10 13 36.0	
	comp=Z,309nm,20.9s						
KBL	**Kabul**	**59.48**	**294**	*e*P	**P**	**09 56 21.6**	**-0.1**
	comp=Z,33nm,1.1s						
KBL	**Kabul**	**59.48**	**294**	*e*P	**P**	**09 56 21.6**	**-0.1**
KBL				pmax	pmax		
	comp=Z,33nm,1.1s						
JIS	**Juneau Island**	**59.98**	**37**	*e*P	**P**	**09 56 24.1**	**-0.3**
	comp=Z,13nm,1.2s						
ARU	**Arti**	**60.11**	**320**	*e*P	**P**	**09 56 25.4**	**-0.1**
	comp=Z,50nm,1.2s						
ARU	**Arti**	**60.11**	**320**	*c i*P	**P**	**09 56 25.3**	**-0.1**
ARU						09 57 10.3	
ARU						09 58 34.3	
ARU				S	**S**	**10 04 37.7**	**+1.0**
ARU				SS	**SS**	**10 08 29.4**	**-3.9**
ARU				pmax	pmax		
	comp=Z,46nm,1.2s						
ARU				MLR	MLR		
	comp=Z,454nm,17.0s						
AB31	**Akbulak array**	**61.25**	**312**	*i* P	**P**	**09 56 33.3**	**0.0**
AB31				pmax	pmax		
	comp=Z,5.0nm,0.5s						
ABKAR	**Akbulak array**	**61.25**	**312**	*e*P	**P**	**09 56 33.2**	**-0.1**
COCO	**West Island**	**61.72**	**232**	*i* P	**P**	**09 56 40.2**	**+3.4**
PALK	**Pallekele**	**61.78**	**260**	P	**P**	**09 56 37.3**	**0.0**
	comp=Z,12nm,0.8s,baz=117,slow=4.5,SNR=3.2						
PALK				LR	LR	10 25 07.7	
	comp=Z,185nm,20.2s,baz=95,slow=38						
AKTO	**Aktyubinsk**	**62.08**	**314**	P	**P**	**09 56 38.7**	**-0.2**
	comp=Z,8.2nm,0.6s,baz=57,slow=12,SNR=18						
DLBC	**Dease Lake**	**62.15**	**36**	P	**P**	**09 56 40.5**	**+1.1**
	comp=Z,3.0nm,0.8s,baz=305,slow=4.8,SNR=10						
DLBC	**Dease Lake**	**62.15**	**36**	*e*P	**P**	**09 56 41.3**	**+2.0**
	comp=Z,23nm,1.4s						
DIB	**Dawson Inlet,**	**62.40**	**43**	*e*P	**P**	**09 56 42.1**	**+1.2**
	comp=Z,20nm,1.1s						
STKA	**Stephens Creek**	**63.89**	**180**	P	**P**	**09 56 51.4**	**+0.5**
	comp=Z,4.4nm,0.8s,baz=347,slow=7.7,SNR=12						
STKA				LR	LR	10 24 00.4	
	comp=Z,245nm,20.1s,baz=20,slow=36						
STKA	**Stephens Creek**	**63.89**	**180**	*e*P	**P**	**09 56 51.1**	**+0.2**
	comp=Z,1.8nm,0.8s						
STKA	**Stephens Creek**	**63.89**	**180**	*e*P	**P**	**09 56 51.1**	**+0.2**
STKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AFI	**Afiamalu**	**63.95**	**128**	LR	LR	10 19 56.0	
	comp=Z,256nm,20.8s,baz=303,slow=32						
FORT	**Forrest**	**64.13**	**193**	*e*P	**P**	**09 56 52.4**	**-0.1**
	comp=Z,48nm,0.6s						
PRGR	**Permogore**	**64.88**	**328**	*e*P	**P**	**09 56 56.8**	**-0.3**
PRGR				pmax	pmax		
	comp=Z,24nm,1.3s						
SPA0	**Spitsbergen Ar**	**65.16**	**349**	*e*P	**P**	**09 56 59.3**	**+0.5**
SPITS	**Spitsbergen Ar**	**65.16**	**349**	P	**P**	**09 56 58.1**	**-0.7**
	comp=Z,7.5nm,0.8s,baz=72,slow=4.7,SNR=7.0						
SPITS				LR	LR	10 28 03.0	
	comp=Z,191nm,18.9s,baz=15,slow=38						
GEYT	**Alibeck**	**66.44**	**301**	P	**P**	**09 57 07.6**	**-0.1**
	comp=Z,2.8nm,0.3s,baz=50,slow=9.9,SNR=5.0						
RES	**Resolute Bay**	**67.05**	**14**	*e*P	**P**	**09 57 11.9**	**+1.0**
	comp=Z,52nm,1.6s						
RES	**Resolute Bay**	**67.05**	**14**	*e*P	**P**	**09 57 11.9**	**+1.0**
RES				pmax	pmax		
	comp=Z,53nm,1.6s						
APA	**Apatity**	**67.08**	**337**	⇓*i*P	**P**	**09 57 09.6**	**-1.6**
APA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
APA				MLR	MLR		
	comp=Z,700nm,16.0s						
YKW3	**Yellowknife Ar**	**67.67**	**29**	*e*P	**P**	**09 57 15.7**	**+0.7**
	comp=Z,12nm,1.3s						
YKA	**Yellowknife Ar**	**67.71**	**29**	P	**P**	**09 57 15.5**	**+0.3**
	comp=Z,2.4nm,0.7s,baz=304,slow=6.5,SNR=14						
KLMR	**Klimovskoe**	**67.89**	**329**	*e*P	**P**	**09 57 13.8**	**-2.6**
KLMR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KLMR	**Klimovskoe**	**67.89**	**329**	*e*P	**P**	**09 57 13.9**	**-2.5**
KLMR				AMP		09 57 16.5	
	comp=Z,10.0nm,0.9s						
KLMR				*e*PP	**PP**	**09 59 41.4**	**-4.4**
ARA0	**ARCESS Array S**	**68.48**	**340**	*e*P	**P**	**09 57 19.4**	**-0.6**
ARCES	**ARCESS Array B**	**68.48**	**340**	P	**P**	**09 57 19.4**	**-0.6**
	comp=Z,1.5nm,0.6s,baz=82,slow=8.3,SNR=4.4						
ARCES				LR	LR	10 32 53.5	
	comp=Z,247nm,18.8s,baz=91,slow=41						
NWAO	**Narrogin (SRO)**	**68.94**	**202**	P	**P**	**09 57 23.4**	**+0.1**
	comp=Z,28nm,0.8s,baz=252,slow=7.5,SNR=13						
NWAO				LR	LR	10 27 58.1	
	comp=Z,52nm,19.4s,baz=257,slow=36						
NWAO	**Narrogin (SRO)**	**68.94**	**202**	*e*P	**P**	**09 57 23.3**	**+0.1**
	comp=Z,58nm,1.1s						
LLLB	**Lillooet**	**69.45**	**43**	*e*P	**P**	**09 57 27.6**	**+1.2**
	comp=Z,10nm,1.1s						
NLWA	**Neilton Lookou**	**69.68**	**46**	*e*P	**P**	**09 57 28.5**	**+0.6**
B05A	**Bryant**	**70.36**	**45**	P	**P**	**09 57 32.8**	**+0.8**
	baz=297						
DAG	**Danmarks Havn**	**70.45**	**355**	⇑*i*P	**P**	**09 57 32.4**	**+0.4**
	comp=Z,12nm,0.9s						
DAG	**Danmarks Havn**	**70.45**	**355**	⇑*i*P	**P**	**09 57 32.4**	**+0.4**
DAG				pmax	pmax		
	comp=Z,12nm,0.9s						
D05A	**Enumclaw**	**70.92**	**46**	*e*P	**P**	**09 57 36.2**	**+0.9**
	comp=Z,35nm,1.4s						
MOS	**Moscow**	**71.21**	**325**	*e*P	**P**	**09 57 37.5**	**+0.5**
MOS				pmax	pmax		
	comp=Z,41nm,0.9s						
MAK	**Makhachkala**	**71.62**	**310**	*e*P	**P**	**09 57 39.0**	**-0.7**
MAK				*e*		10 00 17.1	
MAK				*e*S	**S**	**10 06 55.9**	**-1.6**
MAK				pmax	pmax		
	comp=Z,198nm,1.4s						
MAK				MLR	MLR		
	comp=Z,852nm,17.0s						
I03D	**Drain, OR**	**71.66**	**50**	P	**P**	**09 57 40.9**	**+1.0**
	baz=297						
H04A	**Detroit Lake**	**71.95**	**48**	*e*P	**P**	**09 57 42.7**	**+1.0**
	comp=Z,50nm,1.6s						
OBN	**Obninsk**	**72.05**	**324**	*e*P	**P**	**09 57 42.3**	**+0.3**
OBN				*e*		09 58 02.8	
OBN				*e*		10 00 25.2	
OBN				*e*PPP	PPP	10 02 03.1	
OBN				pmax	pmax		
	comp=Z,41nm,1.7s						
OBN				MLR	MLR		
	comp=Z,507nm,17.0s						
AKT	**Akhty**	**72.16**	**308**	*e*P	**P**	**09 57 43.4**	**+0.3**
AKT				*e*		09 58 02.9	
AKT				*e*		10 00 24.2	
AKT				pmax	pmax		
	comp=Z,33nm,0.7s						
I04A	**Tendick Farm,**	**72.22**	**49**	P	**P**	**09 57 44.5**	**+1.1**
	baz=298						
WSAR	**Wadi Sarin**	**72.44**	**287**	P	**P**	**09 57 44.5**	**-0.5**
	comp=Z,28nm,1.1s,baz=94,slow=5.1,SNR=5.1						
J04D	**Umpqua Nationa**	**72.67**	**50**	P	**P**	**09 57 48.0**	**+1.7**
	baz=298						
VSR	**Storozhevoye**	**72.68**	**320**	*e*P	**P**	**09 57 45.5**	**-0.4**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
FIA1	**FINESS Array S**	**73.10**	**333**	*e*P	**P**	**09 57 47.6**	**-0.6**
FIA1				*e*P	**P**	**09 57 48.4**	**+0.2**
FIA0	**FINESS Array S**	**73.10**	**333**	*e*P	**P**	**09 57 47.9**	**-0.3**
FIA0	**FINESS Array S**	**73.10**	**333**	*e*P	**P**	**09 57 47.9**	**-0.3**
FINES	**FINESS Array B**	**73.10**	**333**	P	**P**	**09 57 47.9**	**-0.3**
	comp=Z,8.6nm,0.8s,baz=70,slow=6.7,SNR=21						
SHME	**Shamm**	**73.12**	**290**	P	**P**	**09 57 49.8**	**+0.7**
PINE	**Pine Mountain**	**73.16**	**49**	*e*P	**P**	**09 57 50.8**	**+1.7**
	comp=Z,36nm,1.2s						
J05D	**Fort Rock, OR**	**73.21**	**49**	P	**P**	**09 57 50.6**	**+1.1**
	baz=299						
NEW	**Newport**	**73.29**	**43**	P	**P**	**09 57 51.1**	**+1.4**
	baz=300						
NEW	**Newport**	**73.29**	**43**	*e*P	**P**	**09 57 50.6**	**+0.9**
	comp=Z,22nm,1.5s						
NEW	**Newport**	**73.29**	**43**	*e*P	**P**	**09 57 50.6**	**+0.9**
NEW				pmax	pmax		

	comp=Z,22nm,1.5s						
MSFE	Esma-Masafi	73.43	290	P	P	09 57 52.1	+1.2
M04C	Macdoel	73.54	51	P	P	09 57 55.2	+3.8
	baz=299						
UOSS	Minazif	73.59	289	P	P	09 57 52.2	+0.5
K05A	Summer Lake	73.70	50	*e*P	P	09 57 54.1	+1.7
	comp=Z,19nm,1.0s						
HATD	Hatta, Dubai	73.70	289	P	P	09 57 52.1	-0.3
SOHO	SOHO	73.71	288	*i* P	P	09 57 53.2	+0.8
	SNR=7.2						
ASHO	Ashiyiah	73.83	289	P	P	09 57 52.9	-0.3
NCK	Nalchik	73.89	311	⇑*e*P	P	09 57 54.5	+1.3
NCK				pmax	pmax		
	comp=Z,28nm,0.5s						
ZEI	Tsey	74.04	311	*e*P	P	09 57 52.5	-1.9
ZEI				pmax	pmax		
	comp=Z,23nm,1.3s						
KBZ	Khabaz	74.22	312	P	P	09 57 56.0	+1.0
	comp=Z,17nm,0.8s,baz=72,slow=2.8,SNR=26						
KIV	Kislovodsk	74.24	312	*e*P	P	09 57 56.3	+1.0
	comp=Z,39nm,0.9s						
KIV	Kislovodsk	74.24	312	P	P	09 57 56.4	+1.1
	SNR=11						
KIV	Kislovodsk	74.24	312	*i* P	P	09 57 56.6	+1.2
	SNR=8.2						
KIV	Kislovodsk	74.24	312	*e*P	P	09 57 56.1	+0.8
KIV				*e*S	S	10 07 28.8	+1.4
KIV				*e*SS	SS	10 12 14.1	+1.6
KIV				pmax	pmax		
	comp=Z,48nm,1.1s						
KIV				pmax	pmax		
	comp=Z,51nm,3.4s						
O03D	Paynes Creek	74.28	52	P	P	09 57 56.3	+0.6
	baz=299						
ALNE	Al Ain	74.38	289	P	P	09 57 57.1	+0.7
F10A	Beach Ranch, E	74.38	45	*e*P	P	09 57 57.1	+0.9
	comp=Z,9.2nm,1.3s						
ASUD	Al Ashush, Dub	74.44	289	P	P	09 57 57.5	+0.8
MOD	Modoc Plateau	74.48	50	*e*P	P	09 57 58.5	+1.6
	comp=Z,6.9nm,0.9s						
NEY	Neytrino	74.56	312	⇓*e*P	P	09 57 59.1	+1.7
NEY				pmax	pmax		
	comp=Z,4.0nm,1.0s						
VSU	Vasula	74.65	330	*c* *i*P	P	09 57 57.5	+0.2
VSU				pmax	pmax		
	comp=Z,68nm,1.0s						
WALA	Waterton Lakes	74.71	41	*e*P	P	09 57 59.8	+1.8
	comp=Z,14nm,1.0s						
GNI	Garni	74.78	308	P	P	09 57 59.3	+0.7
	comp=Z,9.6nm,0.4s,baz=9.5,slow=12,SNR=11						
GNI	Garni	74.78	308	P	P	09 58 01.3	+2.6
	SNR=7.0						
GNI	Garni	74.78	308	P	P	09 57 59.6	+0.9
GNI	Garni	74.78	308	*c* *i*P	P	09 57 59.9	+1.2
GNI				pmax	pmax		
	comp=Z,133nm,1.3s						
BMO	Blue Mountains	74.90	46	*e*P	P	09 58 00.8	+1.6
	comp=Z,8.1nm,1.1s						
BMO	Blue Mountains	74.90	46	*e*P	P	09 58 00.8	+1.6
BMO				pmax	pmax		
	comp=Z,8.0nm,1.1s						
J08A	Circle Bar Ran	74.93	48	*e*P	P	09 58 01.0	+1.6
	comp=Z,18nm,1.2s						
AKH	Akhalkalaki	74.98	310	⇑*i*P	P	09 58 00.8	+1.0
AKH	Akhalkalaki	74.98	310	*e*P	P	09 58 01.0	+1.2
	comp=Z,13nm,1.0s						
JTMT	Jette	75.19	43	*e*P	P	09 58 03.2	+2.3
	comp=Z,30nm,1.3s						
WVOR	Wild Horse Val	75.29	49	*e*P	P	09 58 03.1	+1.6
	comp=Z,28nm,1.6s						
WVOR	Wild Horse Val	75.29	49	*e*P	P	09 58 03.1	+1.6
WVOR				pmax	pmax		
	comp=Z,28nm,1.6s						
SUMG	Summit	75.35	0	*e*P	P	09 58 02.4	+0.7
	comp=Z,17nm,0.9s						
SUMG	Summit	75.35	0	⇑*i*P	P	09 58 03.2	+1.6
	comp=Z,16nm,0.8s						
SUMG	Summit	75.35	0	⇑*i*P	P	09 58 03.2	+1.6
SUMG				pmax	pmax		
	comp=Z,16nm,0.8s						
BEKR	Beckworth	75.46	52	*e*P	P	09 58 03.3	+0.7
BEKR				*e*pP	P	09 58 06.2	+3.6
AFDM	Forest Hills D	75.50	53	*e*P	P	09 58 04.3	+1.6
	comp=Z,15nm,1.4s						
MSO	Missoula	75.88	43	P	P	09 58 05.7	+0.9
	baz=302						
MSO	Missoula	75.88	43	*e*P	P	09 58 05.9	+1.1
	comp=Z,22nm,1.7s						
PAHR	Pah Rah Range	76.19	52	*e*P	P	09 58 08.1	+1.3
	comp=Z,8.9nm,1.2s						
VCNR	Virginia City	76.22	52	*e*P	P	09 58 07.7	+0.7
	comp=Z,24nm,1.8s						
PNTR	Pine Nut	76.36	52	*e*P	P	09 58 09.3	+1.5
	comp=Z,11nm,1.0s						
CMB	Columbia Colle	76.36	54	*e*P	P	09 58 08.6	+1.0
	comp=Z,27nm,1.6s						
CMB	Columbia Colle	76.36	54	*e*P	P	09 58 08.6	+1.0
CMB				pmax	pmax		
	comp=Z,27nm,1.6s						
MICGM	Minsk	76.55	327	*e*P	P	09 58 09.0	+0.7
MNK	Minsk	76.55	327	*e*P	P	09 58 09.0	+0.7
MFID	Camas Ranch	76.55	47	*e*P	P	09 58 10.4	+1.7
	comp=Z,11nm,1.0s						
YERR	Yerington	76.65	52	*e*P	P	09 58 10.9	+1.4
	comp=Z,24nm,1.5s						
WAKR	Walker	76.76	53	*e*P	P	09 58 11.1	+1.0
	comp=Z,29nm,1.6s						
ANN	Anapa	77.02	315	*e*P	P	09 58 09.8	-1.3
ANN				*e**PP	pP	09 58 15.3	-4.4
ANN				*e*		10 01 02.1	
ANN				*e*S	S	10 07 56.9	-1.0
ANN				*e*SS	SS	10 12 49.1	-5.2
ANN				pmax	pmax		
	comp=Z,46nm,1.3s						
HRY	Holter Researc	77.16	43	*e*P	P	09 58 13.7	+1.6
RAR	Rarotonga	77.19	125	LR	LR	10 25 59.1	
	comp=Z,205nm,19.4s,baz=312,slow=31						
BMN	Battle Mountai	77.23	50	*e*P	P	09 58 14.5	+1.8
	comp=Z,25nm,1.6s						
LRM	Limekiln Ridge	77.29	44	*e*P	P	09 58 14.2	+1.3
RYN	Ryan	77.31	52	*e*P	P	09 58 14.7	+1.5
	comp=Z,16nm,1.4s						
HLID	Hailey	77.35	46	P	P	09 58 14.3	+1.0
	baz=303						
HLID	Hailey	77.35	46	*e*P	P	09 58 14.7	+1.4
	comp=Z,8.2nm,1.2s						
KVN	Kaiserville	77.38	52	*e*P	P	09 58 15.0	+1.5
	comp=Z,15nm,1.2s						
MDPB	Devils Postpil	77.45	53	*e*P	P	09 58 14.8	+0.7
	comp=Z,9.9nm,1.4s						
FFC	Flin Flon	77.48	32	*e*P	P	09 58 14.2	+0.7
	comp=Z,13nm,0.9s						
FFC	Flin Flon	77.48	32	*e*P	P	09 58 14.2	+0.7
FFC				pmax	pmax		
	comp=Z,13nm,0.9s						
OMMB	Old Mammoth Mi	77.52	53	*e*P	P	09 58 15.8	+1.3
	comp=Z,10nm,1.3s						
NV01	Mina Array Sit	77.56	52	*e*P	P	09 58 15.7	+1.0
NVAR	Mina Array Bea	77.56	52	P	P	09 58 15.7	+1.0
	comp=Z,3.2nm,0.7s,baz=287,slow=5.6,SNR=16						
EGMT	Eagleton	77.59	41	P	P	09 58 15.5	+1.1
	baz=305						
EGMT	Eagleton	77.59	41	*e*P	P	09 58 15.7	+1.3
	comp=Z,89nm,1.9s						
MCMT	McKenzie Canyo	77.60	45	*e*P	P	09 58 16.0	+1.2
MLAC	Mammoth, Mammo	77.62	53	P	P	09 58 16.3	+1.4
	baz=301						
PAGB	Antelope Grade	77.62	56	*e*P	P	09 58 16.4	+1.6
	comp=Z,15nm,1.1s						
NV11	Mina Array Sit	77.66	52	*e*P	P	09 58 16.5	+1.4
	comp=Z,1.8nm,1.7s						
BOZ	Bozeman (W)	77.89	43	P	P	09 58 16.7	+0.5
	baz=304						
BOZ	Bozeman (W)	77.89	43	*e*P	P	09 58 17.5	+1.3
	comp=Z,8.3nm,1.0s						
AKASG	Malin Array Be	78.20	323	P	P	09 58 17.5	-0.1
	comp=Z,5.4nm,0.5s,baz=47,slow=6.5,SNR=19						
AKASG				LR	LR	10 36 06.3	
	comp=Z,462nm,18.6s,baz=45,slow=38						
AKASG	Malin Array Be	78.20	323	P	P	09 58 17.5	-0.1
AKASG				pmax	pmax		
	comp=Z,8.0nm,0.6s						
AKASG				MLR	MLR		
	comp=Z,462nm,18.6s						
AKBB	Malin Array Si	78.20	323	*e*P	P	09 58 17.4	-0.2
	comp=Z,13nm,0.8s						
KIEV	Kiev	78.21	323	*e*P	P	09 58 17.4	-0.2
	comp=Z,13nm,0.8s						
KIEV	Kiev	78.21	323	*i* P	P	09 58 17.7	0.0
	SNR=12						
KIEV	Kiev	78.21	323	*c* *i*P	P	09 58 17.4	-0.2
KIEV				pmax	pmax		
	comp=Z,15nm,0.8s						
AK11	Malin Array Si	78.24	323	*e*P	P	09 58 17.2	-0.6
NC405	NORSAR Array S	78.40	338	*e*P	P	09 58 18.9	+0.3
NC303	NORSAR Array S	78.43	338	*e*P	P	09 58 19.2	+0.5
QLMT	Earthquake Lak	78.44	44	*e*P	P	09 58 20.0	+0.6
HFS	Hagfors	78.48	336	P	P	09 58 18.9	-0.1
	comp=Z,10nm,0.8s,baz=57,slow=5.3,SNR=26						
NB201	NORSAR Array S	78.58	338	*e*P	P	09 58 20.1	+0.5
NB2	NORSAR Subarra	78.62	338	P	P	09 58 19.4	-0.4
	comp=Z,25nm,1.0s,baz=40,slow=5.6						
NB2	NORSAR Subarra	78.62	338	P	P	09 58 19.4	-0.4
	baz=40,slow=5.6						
YHB	Horse Butte	78.62	44	*e*P	P	09 58 22.4	+2.0
	comp=Z,11nm,1.0s						
CWC	Cottonwood Cre	78.76	54	P	P	09 58 22.2	+1.1
	baz=302						
NBO00	NORSAR Array S	78.76	338	*e*P	P	09 58 21.0	+0.5
NAO01	NORSAR Array S	78.87	338	*e*P	P	09 58 21.4	+0.2
ISA	Isabella, Lake	78.89	55	P	P	09 58 22.4	+0.6
	baz=302						
YFT	Old Faithful	79.00	44	*e*P	P	09 58 25.6	+3.1
	comp=Z,26nm,1.4s						
YPP	Pitchstone Pla	79.13	44	*e*P	P	09 58 26.2	+3.0
	comp=Z,28nm,1.5s						
DAC	Darwin (Calif)	79.18	54	*e*P	P	09 58 24.3	+0.8
	comp=Z,11nm,1.4s						
DAC	Darwin (Calif)	79.18	54	*e*P	P	09 58 24.3	+0.8
DAC				pmax	pmax		
	comp=Z,11nm,1.4s						
H17A	Grant Village	79.19	44	P	P	09 58 27.0	+3.5
	baz=305						
H17A	Grant Village	79.19	44	*e*P	P	09 58 26.8	+3.3
	comp=Z,26nm,1.3s						
IMW	Indian Meadow	79.26	45	*e*P	P	09 58 25.7	+1.7
	comp=Z,19nm,1.5s						
FLWY	Flagg Ranch	79.30	44	*e*P	P	09 58 26.8	+2.7
	comp=Z,67nm,1.8s						
HVU	Hansel Valley	79.33	47	*e*P	P	09 58 26.2	+2.0
	comp=Z,8.8nm,0.9s						
HVU	Hansel Valley	79.33	47	*e*P	P	09 58 26.2	+2.0
HVU				pmax	pmax		
	comp=Z,9.0nm,0.9s						
FXWY	Fox Creek	79.35	45	*e*P	P	09 58 26.3	+1.9
	comp=Z,8.4nm,1.1s						
MPMC	Manual Prospec	79.36	54	P	P	09 58 25.0	+0.4
	baz=302						
R11A	Troy Canyon, C	79.42	51	P	P	09 58 25.6	+0.8
	baz=303						
R11A	Troy Canyon, C	79.42	51	*e*P	P	09 58 26.1	+1.4
	comp=Z,14nm,1.4s						
MOOW	Moose Ponds	79.46	45	*e*P	P	09 58 26.2	+1.2
	comp=Z,8.0nm,1.2s						
TPAW	Teton Pass	79.48	45	*e*P	P	09 58 27.1	+1.9
	comp=Z,18nm,1.4s						
RLMT	Red Lodge	79.53	43	P	P	09 58 26.6	+1.4
	baz=306						
RLMT	Red Lodge	79.53	43	*e*P	P	09 58 26.7	+1.4
	comp=Z,5.3nm,0.8s						
FURC	Furnace Creek,	79.57	53	P	P	09 58 26.3	+0.9
	baz=303						
REDW	Red Top Meadow	79.61	45	*e*P	P	09 58 27.3	+1.4
	comp=Z,15nm,1.3s						
SNOW	Snow King Moun	79.62	45	*e*P	P	09 58 27.5	+1.6
	comp=Z,10nm,1.1s						
LOHW	Long Hollow	79.62	45	*e*P	P	09 58 27.4	+1.6
	comp=Z,11nm,1.4s						
EDW2	Edwards Air Fo	79.64	55	P	P	09 58 26.9	+1.0
	baz=302						
BGU	Big Grassy Mou	79.65	48	*e*P	P	09 58 27.6	+1.6
	comp=Z,8.1nm,1.1s						
SBI	Santa Barbara	79.65	57	*e*P	P	09 58 23.2	-2.7
SBI				*e*PcP	PcP	09 58 27.4	-6.3
TPNV	Topopah Spring	79.73	53	P	P	09 58 27.3	+0.8
	baz=303						
TPNV	Topopah Spring	79.73	53	*e*P	P	09 58 27.8	+1.3
	comp=Z,11nm,0.9s						
TPNV	Topopah Spring	79.73	53	*e*P	P	09 58 27.8	+1.3
TPNV				pmax	pmax		
	comp=Z,11nm,0.9s						
AHID	Auburn Hatcher	79.81	46	*e*P	P	09 58 28.4	+1.6
	comp=Z,5.4nm,0.8s						
CIAC	Catalina I. Ai	80.13	57	*e*P	P	09 58 32.6	+4.1
HWUT	Hardware Ranch	80.18	47	*e*P	P	09 58 30.7	+1.9
	comp=Z,32nm,1.5s						
DUG	Dugway, Tooele	80.19	49	P	P	09 58 30.3	+1.4
	baz=304						
DUG	Dugway, Tooele	80.19	49	*e*P	P	09 58 30.7	+1.8
	comp=Z,19nm,1.1s						
DUG	Dugway, Tooele	80.19	49	*e*P	P	09 58 30.7	+1.8
DUG				pmax	pmax		
	comp=Z,19nm,1.1s						
SORM	Soroca	80.22	321	⇓*i*P	P	09 58 28.1	-0.5
BFSC	Mount Baldy Ra	80.22	56	P	P	09 58 30.0	+0.9
	baz=302						
GSC	Goldstone, Bar	80.24	54	P	P	09 58 29.9	+0.7
	baz=303						
GSC	Goldstone, Bar	80.24	54	*e*P	P	09 58 30.9	+1.7
	comp=Z,18nm,1.5s						
GSC	Goldstone, Bar	80.24	54	*e*P	P	09 58 30.9	+1.7
GSC				pmax	pmax		
	comp=Z,18nm,1.5s						
SHOC	Shoshone, Teco	80.28	54	P	P	09 58 29.9	+0.6
	baz=303						
PSUT	Pine Spring	80.45	50	*e*P	P	09 58 31.5	+1.1
	comp=Z,9.5nm,1.0s						
SFJD	Kangerlussuaq	80.51	5	LR	LR	10 36 12.8	
	comp=Z,88nm,20.8s,baz=344,slow=37						
TCUT	Toone Canyon	80.56	47	*e*P	P	09 58 32.8	+1.8
	comp=Z,18nm,0.8s						
CTU	Camp Tracy	80.58	48	*e*P	P	09 58 32.4	+1.3
	comp=Z,13nm,1.3s						
KIS	Kishinev	80.67	320	*e*P	P	09 58 30.0	-1.1
KIS				LRM	MLR	10 37 20.0	
	comp=Z,500nm,18.0s						
KIS	Kishinev	80.67	320	*e*P	P	09 58 30.0	-1.1
KIS				*e*		10 03 23.0	
KIS				*e*		10 08 32.0	
KIS				MLR	MLR		
	comp=Z,400nm,17.0s						
KIS				MLR	MLR		
	comp=Z,500nm,18.0s						
SHPR	Sheep Range	80.70	53	*e*P	P	09 58 33.4	+1.6
	comp=Z,10nm,1.1s						
BBRC	Big Bear Solar	80.72	55	P	P	09 58 32.9	+0.9
	baz=303						
BW06	Boulder Array	80.73	45	P	P	09 58 32.1	+0.2
	baz=306						
BW06	Boulder Array	80.73	45	*e*P	P	09 58 32.4	+0.5
	comp=Z,4.9nm,1.0s						
PD31	Pinedale Array	80.73	45	*e*P	P	09 58 32.6	+0.8
PDAR	Pinedale Array	80.73	45	P	P	09 58 32.5	+0.7
	comp=Z,1.6nm,0.7s,baz=271,slow=2.4,SNR=21						
PDAR				LR	LR	10 31 24.6	
	comp=Z,75nm,19.9s,baz=312,slow=34						
PDAR	Pinedale Array	80.73	45	*e*P	P	09 58 32.3	+0.4
HEC	Hector,Ludlow	80.82	55	P	P	09 58 32.8	+0.5
	baz=303						
JLU	Jordanelle	80.82	48	*e*P	P	09 58 33.8	+1.3
	comp=Z,15nm,1.2s						
MURC	Murrieta	80.88	56	P	P	09 58 33.4	+0.8
	baz=303						
MPU	Maple Canyon	81.04	48	*e*P	P	09 58 34.9	+1.3
	comp=Z,11nm,1.0s						
GMRC	Granite Mounta	81.31	54	P	P	09 58 35.8	+0.8
	baz=303						
CCUT	Cedar City	81.32	51	*e*P	P	09 58 36.8	+1.6
	comp=Z,10nm,1.2s						
LVV	L’vov	81.35	325	*e*P	P	09 58 34.7	0.0
ILGA	Ilgaz	81.38	313	*e*P	P	09 58 36.4	+1.1
	comp=Z,31nm,0.8s						
PFO	Pinyon Flats O	81.39	56	P	P	09 58 35.9	+0.5
	baz=303						
PFO	Pinyon Flats O	81.39	56	*e*P	P	09 58 35.9	+0.5
	comp=Z,17nm,1.4s						
PFO	Pinyon Flats O	81.39	56	*e*P	P	09 58 35.9	+0.5
PFO				pmax	pmax		
	comp=Z,17nm,1.4s						
XPFO	Piæon Flat	81.40	56	*e*P	P	09 58 35.9	+0.5
	comp=Z,16nm,1.4s						
TPFO	Pinon Flats	81.40	56	P	P	09 58 35.7	+0.3
	baz=303						
SZCU	Shurtz Canyon	81.48	51	*e*P	P	09 58 37.1	+1.2
	comp=Z,6.8nm,1.1s						
BELC	Belle Mtn. Jos	81.50	55	P	P	09 58 36.0	0.0
	baz=303						
LDFC	Landfair	81.52	54	*e*P	P	09 58 36.9	+0.8
	comp=Z,19nm,1.3s						
BEL	Belsk	81.53	327	*e*P	P	09 58 36.5	+0.9
BEL	Belsk	81.53	327	*e*P	P	09 58 36.5	+0.9
MSU	Marysvale	81.55	50	*e*P	P	09 58 37.9	+1.6
MSU	Marysvale	81.55	50	*e*P	P	09 58 37.9	+1.6
LCMT	Little Creek M	81.70	51	*e*P	P	09 58 38.7	+1.7
	comp=Z,11nm,1.1s						
TMUT	Trail Mountain	81.72	49	*e*P	P	09 58 38.8	+1.5
	comp=Z,6.5nm,0.8s						
BAR	Barrett	81.75	57	*e*P	P	09 58 38.9	+1.7
	comp=Z,14nm,1.4s						
MONP2	Monument Peak	81.81	56	P	P	09 58 37.9	+0.2
	baz=303						
MTPU	Mount Pierson	81.81	50	*e*P	P	09 58 39.5	+1.6
	comp=Z,22nm,1.6s						
P17A	Butcher Ranch,	81.92	48	*e*P	P	09 58 40.0	+1.8
	comp=Z,20nm,1.0s						
Q16A	Castle Valley	81.96	49	*e*P	P	09 58 40.0	+1.6
	comp=Z,14nm,1.1s						
KNB	Kanab	81.98	51	*e*P	P	09 58 40.4	+1.9
	comp=Z,26nm,1.2s						
IRM	Iron Mountain	82.01	55	P	P	09 58 38.5	-0.1
	baz=304						
BC3	Big Chuckawall	82.07	55	P	P	09 58 39.2	+0.3
	baz=304						
KWP	Kalwaria Pacla	82.12	325	*e*P	P	09 58 39.7	+1.0
KWP	Kalwaria Pacla	82.12	325	*e*P	P	09 58 39.8	+1.0
	comp=Z,728nm,1.2s						
KWP	Kalwaria Pacla	82.12	325	*e*P	P	09 58 39.7	+1.0
TESR	Tescani	82.13	321	⇓*i*P	P	09 58 39.1	+0.2
P18A	Preston Nutter	82.14	48	*e*P	P	09 58 41.1	+1.6
	comp=Z,19nm,1.1s						
IKP	In-Ko-Pah, Jac	82.17	56	P	P	09 58 39.5	+0.1
	baz=304						
BUR08	Bucovina Ar. S	82.17	322	*e*P	P	09 58 40.0	+0.7
BUR04	Bucovina Ar. S	82.18	322	*e*P	P	09 58 39.3	0.0
BURAR	Bucovina Array	82.18	322	⇓*i*P	P	09 58 40.2	+0.9
BR101	Keskin Array S	82.20	312	*e*P	P	09 58 40.0	+0.5
BR131	Keskin Array S	82.20	312	*e*P	P	09 58 40.4	+0.8
BRTR	Keskin Array B	82.20	312	P	P	09 58 40.0	+0.5
	comp=Z,8.6nm,0.9s,baz=104,slow=5.2,SNR=38						
SWSC	Sam W. Stewart	82.22	56	P	P	09 58 43.1	+3.5
	baz=304						
SRU	San Rafael Swe	82.26	48	*e*P	P	09 58 41.2	+1.2
	comp=Z,14nm,0.7s						
SRU	San Rafael Swe	82.26	48	*e*P	P	09 58 41.2	+1.2
SRU				pmax	pmax		
	comp=Z,14nm,0.7s						
PPT	Papeete	82.28	116	LR	LR	10 31 34.9	
	comp=Z,275nm,18.8s,baz=324,slow=33						
PPT2	Papeete2	82.29	116	*e*LR	LR	10 24 25.7	
	comp=Z,223nm,23.2s,baz=310						
VRI	Vrincioaia	82.50	320	⇓*i*P	P	09 58 42.4	+1.5
PLOR	Plostina	82.55	320	⇓*i*P	P	09 58 42.8	+1.6
TLB	Topalu	82.58	319	⇓*i*P	P	09 58 42.3	+1.0
ANTO	Ankara	82.64	313	*e*P	P	09 58 41.6	-0.2
	comp=Z,39nm,0.6s						
ANTO	Ankara	82.64	313	P	P	09 58 43.0	+1.2
	SNR=5.8						
ANTO	Ankara	82.64	313	*e*P	P	09 58 41.6	-0.2
ANTO				pmax	pmax		
	comp=Z,39nm,0.6s						
U15A	North Rim	82.66	51	*e*P	P	09 58 43.7	+1.5
	comp=Z,34nm,1.9s						
Y12C	Blythe	82.66	55	P	P	09 58 43.3	+1.4
	baz=304						
RAYN	Ar Rayn	82.75	293	*e*P	P	09 58 43.0	+0.4
	comp=Z,17nm,0.8s						
RAYN	Ar Rayn	82.75	293	*i* P	P	09 58 43.1	+0.5
	SNR=23						
RAYN	Ar Rayn	82.75	293	*e*P	P	09 58 43.0	+0.4
RAYN				pmax	pmax		
	comp=Z,17nm,0.8s						
RWWY	Rawlins	82.78	45	*e*P	P	09 58 44.0	+1.3
	comp=Z,15nm,1.1s						
UZH	Uzhgorod	82.99	324	*e*P	P	09 58 43.0	-0.3
UZH				*e*		09 58 51.8	
UZH				*e*		09 58 55.0	
O20A	White River Ci	83.08	47	P	P	09 58 45.3	+1.1
	baz=307						
O20A	White River Ci	83.08	47	*e*P	P	09 58 45.5	+1.2
	comp=Z,31nm,1.4s						
OJC	Ojcow	83.10	327	*e*P	P	09 58 44.5	+0.6
OJC	Ojcow	83.10	327	*e*P	P	09 58 44.5	+0.6
	comp=Z,35nm,1.1s						
OJC	Ojcow	83.10	327	*e*P	P	09 58 44.5	+0.6
DOPR	Dopca	83.16	321	⇓*i*P	P	09 58 46.3	+2.0
MLR	Muntele Rosu	83.16	320	P	P	09 58 44.3	-0.1
	comp=Z,1.2nm,0.6s,baz=53,slow=6.0,SNR=8.4						
MLR				LR	LR	10 39 19.1	
	comp=Z,80nm,18.0s,baz=60,slow=38						
MLR	Muntele Rosu	83.16	320	⇑*i*P	P	09 58 44.7	+0.2
MLR	Muntele Rosu	83.16	320	*e*P	P	09 58 45.2	+0.7
	comp=Z,25nm,1.4s						
TRPA	Tarpa	83.20	324	⇑*i*P	P	09 58 45.5	+1.1
TRPA	Tarpa	83.20	324	⇑*e*P	P	09 58 45.5	+1.1
CRVS	Cervenica-Dubn	83.21	325	*e*P	P	09 58 45.1	+0.6
CRVS				pmax	pmax		
	comp=Z,52nm,1.9s						
CRVS	Cervenica-Dubn	83.21	325	*e*P	P	09 58 45.1	+0.6
ULM	Lac du Bonnet	83.24	33	LR	LR	10 34 22.9	
	comp=Z,144nm,21.0s,baz=308,slow=35						
NIE	Niedzica	83.42	326	*e*P	P	09 58 46.5	+0.9
NIE	Niedzica	83.42	326	*e*P	P	09 58 46.5	+0.9
PV09	Paradox Valley	83.50	48	*e*P	P	09 58 48.2	+1.6
PV21	Cone Mtn., Par	83.57	48	*e*P	P	09 58 48.5	+1.7
	comp=Z,21nm,1.0s						
Y14A	Wickenburg	83.60	54	*e*P	P	09 58 48.2	+1.4
	comp=Z,6.8nm,1.1s						
PV23	Carpenter Ridg	83.61	48	*e*P	P	09 58 48.8	+1.7
	comp=Z,28nm,1.0s						
PV14	Lion Creek, Pa	83.65	48	*e*P	P	09 58 48.8	+1.5
	comp=Z,36nm,1.1s						
VOIR		83.68	321	⇑*i*P	P	09 58 47.6	+0.5
PV22	Blue Mesa, Par	83.70	48	*e*P	P	09 58 48.9	+1.5
	comp=Z,15nm,1.1s						
PV20	West Nyswonger	83.70	48	*e*P	P	09 58 49.1	+1.6
	comp=Z,30nm,1.0s						
PV19	Morning Glory	83.71	48	*e*P	P	09 58 49.0	+1.5
	comp=Z,35nm,1.1s						
PV17	East Wray Mesa	83.74	48	*e*P	P	09 58 49.2	+1.5
	comp=Z,49nm,1.2s						
PV16	Nyswonger Mesa	83.75	48	*e*P	P	09 58 49.3	+1.5
	comp=Z,26nm,1.1s						
PV11	David Mesa, Pa	83.79	48	*e*P	P	09 58 49.5	+1.6
	comp=Z,30nm,1.0s						
PV18	Skein Mesa, Pa	83.79	48	*e*P	P	09 58 49.4	+1.5
	comp=Z,33nm,1.2s						
WUAZ	Wupatki	83.80	52	P	P	09 58 48.9	+0.9
	baz=306						
WUAZ	Wupatki	83.80	52	*e*P	P	09 58 49.8	+1.9
	comp=Z,8.3nm,1.0s						
PV12	Saucer Basin,	83.82	48	*e*P	P	09 58 49.7	+1.6
	comp=Z,45nm,1.3s						
PV13	Radium Mtn., P	83.90	48	*e*P	P	09 58 49.9	+1.4
	comp=Z,20nm,1.0s						
PV02	Paradox Valley	83.93	48	*e*P	P	09 58 50.2	+1.6
	comp=Z,23nm,1.1s						
ARR	Arges	83.95	321	⇓*i*P	P	09 58 49.7	+1.3
LANS	Liptovska Anna	84.00	326	*e*P	P	09 58 49.9	+1.3
LANS	Liptovska Anna	84.00	326	*e*P	P	09 58 49.9	+1.3
DRGR		84.01	323	⇓*i*P	P	09 58 49.2	+0.5
PHWY	Pilot Hill	84.05	44	*e*P	P	09 58 53.0	+3.7
	comp=Z,20nm,1.4s						
OKC	Ostrava-Krasne	84.13	327	*e*P	P	09 58 49.9	+0.8
OKC				*e*S	S	10 09 10.5	-1.6
OKC				AMS	AMS	10 40 40.0	
	comp=Z,300nm,15.5s						
OKC	Ostrava-Krasne	84.13	327	*e*P	P	09 58 49.9	+0.8
OKC				*e*		10 09 10.5	
OKC				MLR	MLR		
	comp=Z,300nm,15.5s						
KSP	Ksiaz	84.24	329	*e*P	P	09 58 50.2	+0.5
KSP	Ksiaz	84.24	329	*e*P	P	09 58 50.2	+0.5
A33A	Warroad	84.38	34	P	P	09 58 50.8	+0.4
	baz=314						
X16A	Lo Mia Camp, P	84.39	53	*e*P	P	09 58 51.6	+0.6
	comp=Z,13nm,1.4s						
ASF	Jabal al Asfar	84.39	305	P	P	09 58 51.3	+0.4
	comp=Z,9.7nm,0.9s,baz=55,slow=1.6,SNR=8.7						
SMCO	Snowmass	84.44	47	*e*P	P	09 58 53.1	+1.6

	comp=Z,21nm,1.4s						
MORC	Moravsky Berou	84.45	327	⇑iP	P	09 58 51.5	+0.6
MORC	Moravsky Berou	84.45	327	eP	P	09 58 51.3	+0.5
	comp=Z,25nm,1.2s						
MORC	Moravsky Berou	84.45	327	eP	P	09 58 51.3	+0.5
MORC				pmax	pmax		
	comp=Z,25nm,1.2s						
MORC	Moravsky Berou	84.45	327	eP	P	09 58 51.4	+0.6
KRLC	Kraliky	84.58	328	eP	P	09 58 52.6	+1.1
KRLC	Kraliky	84.58	328	eP	P	09 58 52.6	+1.1
DPC	Dobruska-Polom	84.59	328	eP	P	09 58 52.5	+1.0
DPC				AMS	AMS	10 40 30.0	
	comp=Z,300nm,17.6s						
DPC	Dobruska-Polom	84.59	328	eP	P	09 58 52.5	+1.0
DPC				MLR	MLR		
	comp=Z,300nm,17.6s						
AGMN	Agassiz Nation	84.60	35	P	P	09 58 50.8	-0.8
	baz=314						
UPC	Upice	84.61	329	eP	P	09 58 52.5	+0.9
UPC				eS	S	10 09 18.5	+1.6
UPC				AMS	AMS	10 40 40.0	
	comp=Z,400nm,14.3s						
UPC	Upice	84.61	329	eP	P	09 58 52.5	+0.9
UPC				e		10 09 18.5	
UPC				MLR	MLR		
	comp=Z,400nm,14.3s						
PSZ	Piszkesteto	84.65	325	⇓iP	P	09 58 52.8	+0.8
PSZ	Piszkesteto	84.65	325	⇑eP	P	09 58 53.2	+1.3
PSZ	Piszkesteto	84.65	325	eP	P	09 58 52.7	+0.8
	comp=Z,29nm,1.0s						
PSZ	Piszkesteto	84.65	325	eP	P	09 58 52.7	+0.8
PSZ				pmax	pmax		
	comp=Z,29nm,1.0s						
MVCO	Mesa Verde	84.67	49	P	P	09 58 53.3	+0.8
	baz=307						
MVCO	Mesa Verde	84.67	49	eP	P	09 58 53.6	+1.2
	comp=Z,15nm,1.4s						
TAOE	Nuku Hiva Isla	84.75	104	eLR	LR	10 25 23.6	
	comp=Z,339nm,21.6s						
VYHS	Vyhne	84.75	326	eP	P	09 58 52.9	+0.5
VYHS				pmax	pmax		
	comp=Z,18nm,1.2s						
VYHS	Vyhne	84.75	326	eP	P	09 58 52.9	+0.5
214A	Organ Pipe Nat	84.86	55	P	P	09 58 53.8	+0.5
	baz=305						
ISCO	Idaho Springs	84.89	46	P	P	09 58 54.1	+0.5
	baz=308						
ISCO	Idaho Springs	84.89	46	eP	P	09 58 55.0	+1.4
	comp=Z,20nm,1.7s						
MMAI	Mount Meron Ar	84.94	306	P	P	09 58 54.1	+0.4
	comp=Z,3.6nm,0.5s,baz=57,slow=5.3,SNR=8.6						
JAVC	Velka Javorina	85.04	327	eP	P	09 58 55.6	+1.7
VRAC	Vranov	85.22	328	⇑iP	P	09 58 55.3	+0.6
VRAC	Vranov	85.22	328	eP	P	09 58 55.4	+0.7
PVCC	Panska Ves	85.22	329	eP	P	09 58 55.7	+1.0
PVCC				AMS	AMS	10 43 00.0	
	comp=Z,200nm,15.2s						
PVCC	Panska Ves	85.22	329	eP	P	09 58 55.7	+1.0
PVCC				MLR	MLR		
	comp=Z,200nm,15.2s						
BRG	Berggiesshubel	85.24	330	ePKP	P	09 58 54.8	+0.1
	comp=Z,14nm,1.0s						
BRG	Berggiesshubel	85.24	330	eP	P	09 58 54.8	+0.1
BRG				pmax	pmax		
	comp=Z,2.0nm,1.0s						
CLL	Collm	85.31	331	iP	P	09 58 55.1	+0.1
	comp=Z,33nm,1.0s						
CLL				isP	sP	09 59 06.8	0.0
CLL				eS	S	10 09 27.0	+3.2
CLL				eS	S	10 09 27.0	+3.2
	comp=E,200nm,13.5s						
CLL	Collm	85.31	331	eP	P	09 58 54.9	-0.1
	comp=E,28nm,0.9s						
CLL	Collm	85.31	331	iP	P	09 58 55.1	+0.1
CLL				eS	S	10 09 27.0	+3.2
CLL				pmax	pmax		
	comp=Z,33nm,1.0s						
S22A	4UR Ranch, Cre	85.41	48	P	P	09 58 56.7	+0.5
	baz=308						
S22A	4UR Ranch, Cre	85.41	48	eP	P	09 58 57.9	+1.7
	comp=Z,14nm,1.3s						
KRUC	Moravsky	85.48	327	eP	P	09 58 56.4	+0.4
MODS	Modra-Piesok	85.57	327	eP	P	09 58 57.4	+0.9
MODS				pmax	pmax		
	comp=Z,27nm,1.2s						
MODS	Modra-Piesok	85.57	327	eP	P	09 58 57.4	+0.9
GOPC	GO Pecny, Ondr	85.58	329	eP	P	09 58 57.3	+0.8
GOPC				eS	S	10 09 28.0	+1.4
GOPC				AMS	AMS	10 41 30.0	
	comp=Z,300nm,15.6s						
GOPC	GO Pecny, Ondr	85.58	329	eP	P	09 58 57.3	+0.8
GOPC				e		10 09 28.0	
GOPC				MLR	MLR		
	comp=Z,300nm,15.6s						
PRU	Pruhonice	85.63	329	eS	S	10 09 28.1	+1.0
PRU				AMS	AMS	10 41 30.0	
	comp=Z,300nm,17.5s						
TBI	Tubuai	85.87	121	eLR	LR	10 25 39.8	
	comp=Z,301nm,22.0s,baz=315						
MDVR	Moldovita	85.88	322	⇓iP	P	09 58 57.4	-0.7
TUC	Tucson	86.06	54	P	P	09 58 59.9	+0.6
	baz=306						
TUC	Tucson	86.06	54	eP	P	09 59 01.0	+1.7
	comp=Z,12nm,1.6s						
TUC	Tucson	86.06	54	eP	P	09 59 01.0	+1.7
TUC				pmax	pmax		
	comp=Z,12nm,1.6s						
SDCO	Great Sand Dun	86.23	47	P	P	09 59 00.6	+0.3
	baz=309						
SDCO	Great Sand Dun	86.23	47	eP	P	09 59 01.4	+1.1
	comp=Z,5.7nm,1.1s						
MORH	Mˆ‡rˆ¡gy, Hung	86.45	324	⇑eP	P	09 59 00.6	-0.2
CONA	Conrad Observa	86.55	327	ePcP	P	09 59 02.2	+0.8
	comp=Z,15nm,1.0s,SNR=9.1						
VTS	Vitosha	86.55	319	eP	P	09 59 03.2	+1.6
	comp=Z,19nm,1.8s						
KHC	Kasperske Hory	86.69	329	eS	S	10 09 40.8	+3.3
KHC				AMS	AMS	10 45 50.0	
	comp=Z,300nm,14.2s						
KHC	Kasperske Hory	86.69	329	eP	P	09 59 02.6	+0.6
	comp=Z,5.5nm,1.5s						
KHC	Kasperske Hory	86.69	329	eP	P	09 59 02.6	+0.6
KHC				pmax	pmax		
	comp=Z,6.0nm,1.5s						
GEC2	GERESS Array S	86.85	329	eP	P	09 59 02.7	-0.1
	comp=Z,5.5nm,1.3s						
GEC2	GERESS Array S	86.85	329	eP	P	09 59 02.7	-0.1
GEC2				pmax	pmax		
	comp=Z,6.0nm,1.3s						
GERES	GERESS Array B	86.85	329	P	P	09 59 02.7	-0.1
	comp=Z,0.3nm,0.3s,baz=46,slow=5.6,SNR=5.1						
GEA0	GERESS Array S	86.86	329	eP	P	09 59 02.5	-0.4
ARSA	Arzberg	87.20	327	ePcP	P	09 59 04.9	+0.4
	comp=Z,3.9nm,1.0s						
DIVS	Divibare	87.25	322	eP	P	09 59 04.3	-0.5
	comp=Z,9.9nm,1.2s						
MOA	Molln	87.34	328	ePcP	P	09 59 05.9	+0.8
	comp=Z,3.6nm,0.8s						
ANMO	Albuquerque	87.36	50	P	P	09 59 06.8	+1.0
	comp=Z,1.1nm,0.8s,baz=251,slow=5.0,SNR=4.5						
ANMO				LR	LR	10 34 43.4	
	comp=Z,360nm,19.1s,baz=316,slow=33						
ANMO	Albuquerque	87.36	50	eP	P	09 59 07.5	+1.8
	comp=Z,5.5nm,1.2s						
ANMO	Albuquerque	87.36	50	⇓eP	P	09 59 07.1	+1.4
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.7s						
ECSD	EROS Data Cent	87.39	38	P	P	09 59 05.2	-0.3
	baz=314						
ECSD	EROS Data Cent	87.39	38	eP	P	09 59 05.7	+0.2
	comp=Z,20nm,1.6s						
G35A	Watkins	87.44	36	P	P	09 59 06.0	+0.3
	baz=315						
G35A	Watkins	87.44	36	eP	P	09 59 06.5	+0.8
	comp=Z,20nm,0.9s						
H35A	Sunnyside Ranc	87.63	37	P	P	09 59 07.4	+0.7
	baz=315						
EKA	Eskdalemuir Ar	87.64	341	P	P	09 59 06.8	+0.4
	comp=Z,5.3nm,0.9s,baz=30,slow=5.8,SNR=8.7						
EKA				LR	LR	10 44 16.3	
	comp=Z,132nm,18.5s,baz=70,slow=40						
PERS	Pernice	87.84	326	iP	P	09 59 07.6	-0.1
PERS	Pernice	87.84	326	P	P	09 59 07.6	-0.1
SOKA	Soboth	87.85	326	ePcP	P	09 59 07.7	0.0
	comp=Z,9.8nm,1.1s,SNR=8.1						
H36A	Jessenland, He	88.17	36	P	P	09 59 10.5	+1.3
	baz=316						
F38A	Pierce - Schro	88.17	34	P	P	09 59 09.7	+0.5
	baz=317						
OBKA	Obir	88.20	327	eP	P	09 59 07.8	-1.6
	comp=Z,3.0nm,0.5s						
SPMN	Marine on St.	88.26	35	P	P	09 59 09.9	+0.3
	baz=316						
SPMN	Marine on St.	88.26	35	eP	P	09 59 10.3	+0.8
	comp=Z,8.0nm,1.0s						
KBA	Koelnbreinsper	88.33	328	ePcP	P	09 59 10.4	+0.3
	comp=Z,5.0nm,0.8s						
E39A	Mellen	88.49	33	P	P	09 59 10.9	+0.3
	baz=318						
MYKA	Terra Mystica	88.53	327	eP	P	09 59 10.3	-0.6
	comp=Z,4.7nm,0.6s						
VISS	Visnje	88.58	326	iP	P	09 59 10.6	-0.5
VISS	Visnje	88.58	326	iP	P	09 59 10.6	-0.5
H37A	Dierke Farm, C	88.67	36	P	P	09 59 11.6	+0.1
	baz=316						
E40A	Wakefield	88.74	33	P	P	09 59 12.3	+0.5
	baz=318						
GBRS	Gornja Briga	88.80	326	iP	P	09 59 11.6	-0.6
GBRS	Gornja Briga	88.80	326	iP	P	09 59 11.6	-0.6
I37A	Lemond, Waseca	88.84	36	P	P	09 59 12.7	+0.3
	baz=316						
I37A	Lemond, Waseca	88.84	36	eP	P	09 59 13.6	+1.2
	comp=Z,19nm,1.1s						
J36A	Seneca 1, Swea	88.85	37	P	P	09 59 13.1	+0.7
	baz=316						
J36A	Seneca 1, Swea	88.85	37	eP	P	09 59 13.2	+0.7
	comp=Z,11nm,0.9s						
WTTA	Wattenberg	88.95	329	PcP	P	09 59 14.5	+1.5
	comp=Z,4.4nm,0.8s						
ABTA	Abfaltersbach	88.95	328	ePcP	P	09 59 12.5	-0.5
	comp=Z,5.8nm,0.7s						
MOTA	Moosalm	89.12	329	ePcP	P	09 59 14.8	+1.0
	comp=Z,2.6nm,0.6s						
E41A	Kenton	89.15	32	P	P	09 59 14.0	+0.3
	baz=319						
RETA	Reutte	89.16	329	ePcP	P	09 59 14.0	+0.1
	comp=Z,5.5nm,0.7s						
H39A	Augusta	89.40	35	P	P	09 59 15.6	+0.7
	baz=318						
G40A	Rib Lake	89.48	34	P	P	09 59 16.2	+0.9
	baz=318						
BFO	Black Forest	89.53	331	iP	P	09 59 16.2	+0.7
FETA	Feichten	89.54	329	ePcP	P	09 59 15.6	-0.1
	comp=Z,6.3nm,0.8s						
DAVA	Damuels	89.70	330	iPcP	P	09 59 16.3	-0.2
	comp=Z,13nm,1.0s						
SCHQ	Schefferville	89.74	16	P	P	09 59 16.6	+0.3
	comp=Z,3.0nm,0.8s,baz=329,slow=2.9,SNR=4.0						
SCHQ	Schefferville	89.74	16	eP	P	09 59 16.6	+0.3
	comp=Z,25nm,1.8s						
MNTX	Cornudas Mount	90.08	52	P	P	09 59 19.8	+1.4
	baz=309						
DAVOX	Davos/Dischmat	90.09	329	P	P	09 59 18.1	-0.3
	comp=Z,9.2nm,0.9s,baz=51,slow=10						
TUE	Stuetta	90.56	329	eP	P	09 59 19.5	-1.1
	comp=Z,15nm,1.3s						
KSU1	Kansas State U	90.60	42	eP	P	09 59 20.8	+0.1
	comp=Z,6.0nm,0.8s						
L39A	Vinton	90.92	37	P	P	09 59 22.1	+0.1
	baz=317						
K40A	Colesburg	90.93	36	P	P	09 59 21.4	-0.8
	baz=318						
MATQ	Matagami	91.06	24	P	P	09 59 22.6	0.0
	baz=328						
ATD	Arta Tunnel	91.33	284	LR	LR	10 42 28.6	
	comp=Z,26nm,20.2s,baz=329,slow=37						
WMOK	Wichita Mounta	92.31	46	P	P	09 59 28.8	+0.1
	baz=313						
WMOK	Wichita Mounta	92.31	46	eP	P	09 59 29.4	+0.7
	comp=Z,8.3nm,1.5s						
WMOK	Wichita Mounta	92.31	46	eP	P	09 59 29.4	+0.7
WMOK				pmax	pmax		
	comp=Z,8.0nm,1.5s						
LTX	Lajitas	92.71	53	eP	P	09 59 31.6	+0.9
LTX	Lajitas	92.71	53	eP	P	09 59 31.7	+0.9
TX31	Lajitas Ar. Si	92.71	53	eP	P	09 59 31.7	+0.9
TX31				eP	P	09 59 32.1	+1.3
TXAR	Lajitas Array	92.71	53	P	P	09 59 31.6	+0.9
	comp=Z,2.4nm,0.8s,baz=297,slow=3.2,SNR=32						
TXAR				LR	LR	10 36 45.6	
	comp=Z,232nm,20.3s,baz=0.0,slow=33						
R38A	Fenwick Farm,	92.75	41	P	P	09 59 30.7	+0.1
	baz=316						
P40A	Paris	92.78	39	P	P	09 59 30.6	-0.2
	baz=317						
P40A	Paris	92.78	39	eP	P	09 59 31.5	+0.7
	comp=Z,6.0nm,0.9s						
BNI	Bardonecchia	92.83	330	eP	P	09 59 30.5	-0.6
	comp=Z,8.3nm,0.9s						
BNI	Bardonecchia	92.83	330	eP	P	09 59 30.5	-0.6
BNI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HPIG		92.85	56	eP	P	09 59 34.7	+3.1
	comp=Z,28nm,1.9s						
R39A	Chumby, Stover	93.13	40	P	P	09 59 32.2	-0.2
	baz=316						
S38A	Stockton	93.14	41	P	P	09 59 31.7	-0.8
	baz=316						
Q40A	Laux Farm, Aux	93.16	39	P	P	09 59 32.1	-0.4
	baz=317						
T38A	Diamond	93.35	42	P	P	09 59 33.6	+0.1
	baz=316						
S39A	Bolivar	93.42	41	P	P	09 59 33.4	-0.4
	baz=316						
S39A	Bolivar	93.42	41	eP	P	09 59 33.7	-0.1
	comp=Z,6.4nm,1.1s						
R40A	Maddies Statio	93.57	40	P	P	09 59 34.3	-0.1
	baz=317						
R40A	Maddies Statio	93.57	40	eP	P	09 59 34.7	+0.3
	comp=Z,23nm,1.8s						
P42A	Winchester	93.64	38	P	P	09 59 35.2	+0.5
	baz=318						
P42A	Winchester	93.64	38	eP	P	09 59 35.3	+0.6
	comp=Z,6.9nm,0.8s						
S40A	Lebanon	93.94	40	P	P	09 59 36.1	0.0
	baz=317						
R41A	Rosebud	94.04	39	P	P	09 59 36.2	-0.4
	baz=317						
HHAR	Hobbs	94.09	42	eP	P	09 59 36.7	-0.2
	comp=Z,19nm,1.8s						
U39A	Green Forest	94.27	42	P	P	09 59 37.5	-0.2
	baz=316						
CCM	Cathedral Cave	94.29	39	P	P	09 59 38.5	+0.8
	baz=318						
JCT	Junction City	94.52	50	eP	P	09 59 39.0	0.0
	comp=Z,5.0nm,0.7s						
JCT	Junction City	94.52	50	eP	P	09 59 39.0	0.0
JCT				pmax	pmax		
	comp=Z,5.0nm,0.7s						
V39A	Pettigrew	94.57	42	P	P	09 59 39.0	-0.2
	baz=316						
U40A	Yellville	94.64	41	P	P	09 59 39.5	+0.1
	baz=316						
S42A	Caledonia	94.74	39	P	P	09 59 40.2	+0.4
	baz=318						
T41A	Mountain View	94.75	40	P	P	09 59 40.0	+0.2
	baz=317						
X39A	Fountain Ranch	95.24	43	P	P	09 59 42.7	+0.5
	baz=315						
V41A	Mountainview	95.45	41	P	P	09 59 43.1	0.0
	baz=317						
MIAR	Mount Ida	95.53	43	P	P	09 59 43.8	+0.3
	baz=316						
MIAR	Mount Ida	95.53	43	eP	P	09 59 44.1	+0.6
	comp=Z,6.1nm,1.0s						
MIAR	Mount Ida	95.53	43	eP	P	09 59 44.1	+0.6
MIAR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
RKT	Rikitea	96.67	113	eLR	LR	10 30 44.0	
	comp=Z,292nm,24.5s						
TOA1	Torodi Ar. Sit	120.80	313	ePKPdf	PKPdf	10 05 09.7	-1.3
TORD	Torodi Ar. Bea	120.80	313	PKP	PKPdf	10 05 09.7	-1.3
	comp=Z,1.1nm,0.6s,baz=15,slow=2.1						
QSPA	South Pole Qui	122.11	180	ePKPdf	PKPdf	10 05 12.2	+0.3
SAML	Samuel	147.17	50	ePKPdf	PKPbc	10 06 02.0	0.0
SAML	Samuel	147.17	50	ePKP2	PKPbc	10 06 02.0	0.0
LPAZ	La Paz	148.53	67	PKPbc	PKPbc	10 06 07.2	+0.9
	comp=Z,7.1nm,0.8s,baz=8.5,slow=5.0,SNR=23						
LPAZ	La Paz	148.53	67	ePKPbc	PKPbc	10 06 07.6	+1.3

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*ISCJB **05** 09:49:27.5±0.2, 41°.93N±0°.03×141°.46E±0°.03, h100^{km}±2^{km}, mb4.2/24, Error ellipse: s-maj=5.1km s-min=3.1km az=138.1*

*JMA **05** 09:49:28.7±0.1, 41°.94N×141°.44E, h88^{km}±1^{km}, M4.1 Broadband fault plane solution: P waves. NP1: ϕ$_s$323.00000°, δ77.00000°, λ-20.00000°. NP2: ϕ$_s$57.00000°, δ71.00000°, λ-166.00000°. Principal axes: T Plg4.0000°, Azm11.0000°; N Plg67.0000°, Azm110.0000°; P Plg23.0000°, Azm279.0000°;*

JMA Felt I J1.

*MOS **05** 09:49:28.1±0.8, 41°.94N×141°.50E, h111^{km}, mb4.2/16 Error ellipse: s-maj=11.7km s-min=6.5km az=62.2*

*NEIC **05** 09:49:29.2±0.5, 41°.94N×141°.50E, h104^{km}±5^{km}, mb4.3/2, Error ellipse: s-maj=7.1km s-min=4.7km az=125.0*

*IDC **05** 09:49:29.1±1.3, 41°.95N×141°.44E, h100^{km}±10^{km}, mb3.8/21, mb1 3.9/27, mb1mx3.8/75, mbtmp4.2/27, Error ellipse: s-maj=14.9km s-min=10.1km az=130.0*

ISC 05 09:49:28.3±0.6, **41°.91N**±0°.04×**141°.45E**±0°.04, **h94**^{km}±5^{km}, **n93**, σ1§**41**/110, **mb4.2**/24, **10C-2D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKB	Kayabe	0.31	266	⇑P	Pn	09 49 41.8	-0.3
JKB				eS	Sn	09 49 51.8	-0.7
JOT	Ohata	0.60	210	⇑P	Pn	09 49 44.4	+0.1
JOT				eS	Sn	09 49 56.3	+0.2
JNB	Noboribetsu	0.64	332	⇑P	Pn	09 49 44.0	-0.5
JNB				eS	Sn	09 49 55.5	-1.1
JAHD	Aomorihigashid	0.65	187	P	Pn	09 49 44.9	+0.3
JAHD				eS	Sn	09 49 57.0	+0.2
JYM2	Yakumo 2	0.83	285	⇓P	Pn	09 49 46.4	0.0
JYM2				eS	Sn	09 49 59.6	-0.3
JSR	Shiriuchi	0.86	244	⇑P	Pn	09 49 46.9	+0.2
JSR				eS	Sn	09 50 00.4	0.0
JEW	Eniwo	0.93	0	⇑P	Pn	09 49 47.5	0.0
JEW				eS	Sn	09 50 01.4	-0.4
JNBK	Urakawa-nobuka	1.04	69	P	Pn	09 49 49.0	+0.3
JBT2	Biratori 2	1.10	38	⇑P	Pn	09 49 49.9	+0.5
JBT2				eS	Sn	09 50 06.1	+0.8
JTM	Tenmabayashi	1.16	194	⇑P	Pn	09 49 50.8	+0.8
JTM				eS	Sn	09 50 07.7	+1.3
ERM	Erimo	1.28	85	ePn	Pn	09 49 52.6	+1.1
ERM	Erimo	1.28	85	eP	Pn	09 49 52.6	+1.1
JOSM	Okushiri--Mats	1.48	277	⇓P	Pn	09 49 53.7	-0.2
JOSM				eS	Sn	09 50 12.6	-0.7
JFR	Furan	1.51	34	P	Pn	09 49 54.1	-0.3
JANG	Nango	1.54	178	P	Pn	09 49 55.0	+0.3
JCH	Churui	1.59	63	P	Pn	09 49 56.2	+0.9
JCH				eS	Sn	09 50 16.5	+0.7
JSK	Shakotan	1.61	334	⇑P	Pn	09 49 56.0	+0.4
JSK				eS	Sn	09 50 17.1	+0.8
JHR	Hokuryu	1.84	6	P	Pn	09 49 59.6	+1.0
ASAJ	Asahikawa	2.36	21	P	Pn	09 50 05.9	+0.6
	41nm,0.3s,baz=213,slow=16,SNR=218						
ASAJ				S	Sn	09 50 34.5	+0.8
	35nm,0.3s,baz=186,slow=28,SNR=4.6						
GLVR	Golovnino	3.51	57	eP	Pn	09 50 21.3	+0.6
GLVR				eS	Sn	09 51 00.1	-1.1
GLVR				smax	smax		
	comp=N,2µm,0.3s						
GLVR				smax	smax		
	comp=E,1µm,0.3s						
GRPR	Tuman	3.80	55	eP	Pn	09 50 25.2	+0.6
GRPR				eS	Sn	09 51 06.7	-1.5
GRPR				pmax	pmax		
	comp=Z,224nm,0.5s						
GRPR				smax	smax		
	comp=N,1µm,0.5s						
GRPR				smax	smax		
	comp=E,803nm,0.2s						
LAGR	Lagunnoye	3.84	55	P	Pn	09 50 26.3	+1.2
LAGR				eS	Sn	09 51 08.3	-0.9
LAGR				smax	smax		
	comp=N,2µm,0.4s						
LAGR				smax	smax		
	comp=E,1µm,0.4s						
YUK	Yuzh-Kuril'sk	3.87	55	eP	Pn	09 50 26.5	+0.9
YUK				eS	Sn	09 51 08.6	-1.4
YUK				pmax	pmax		
	comp=Z,283nm,0.4s						
YUK				pmax	pmax		
	comp=N,146nm,0.5s						
YUK				pmax	pmax		
	comp=E,129nm,0.1s						
YUK				smax	smax		
	comp=E,1µm,0.6s						
YUK				smax	smax		
	comp=N,512nm,0.3s						
SHO	Shikotan	4.41	62	eP	Pn	09 50 33.0	+0.1
SHO				eS	Sn	09 51 19.7	-3.4
SHO				pmax	pmax		
	comp=Z,102nm,0.5s						
SHO				pmax	pmax		
	comp=N,37nm,0.3s						
SHO				smax	smax		
	comp=N,380nm,0.5s						
SHO				smax	smax		
	comp=E,718nm,0.3s						
YSS	Yuzh-Sakhalins	5.13	10	ePn	Pn	09 50 44.0	+1.4
YSS	Yuzh-Sakhalins	5.13	10	αiP	Pn	09 50 43.6	+1.0
YSS				pmax	pmax		
	comp=Z,200nm,1.0s						
YSS				pmax	pmax		
	comp=Z,90nm,1.1s						
KUR	Kuril'sk	5.73	52	eP	Pn	09 50 52.3	+1.6
KUR				eS	Sn	09 51 55.5	+0.5
KUR				pmax	pmax		
	comp=Z,84nm,0.6s						
KUR				pmax	pmax		
	comp=E,22nm,0.2s						
KUR				pmax	pmax		
	comp=N,26nm,0.3s						
KUR				smax	smax		
	comp=N,157nm,0.4s						
KUR				smax	smax		
	comp=E,183nm,0.4s						
MJB9	Matsu-Tunnel	5.92	206	ePn	Pn	09 50 55.3	+1.9
MAJO	Matsushiro	5.92	206	ePn	Pn	09 50 55.4	+1.9
MAJO				e		09 50 56.0	
MAJO	Matsushiro	5.92	206	eP	Pn	09 50 55.4	+1.9
MAT	Matsushiro	5.92	206	P	Pn	09 50 56.4	+2.9
MAT				S	Sn	09 52 06.8	+6.9
MJAR	Matsushiro Arr	5.92	206	P	Pn	09 50 56.0	+2.5
	comp=E,4.0nm,0.3s,baz=224,slow=11,SNR=7.7						
MJAR	Matsushiro Arr	5.92	206	P	Pn	09 50 56.0	+2.5
MJAR				pmax	pmax		
	comp=Z,4.0nm,0.3s						
USA0B	Ussuriysk Arra	7.29	291	ePn	Pn	09 51 13.4	+1.3
USRK	Ussuriysk Ar.	7.29	291	P	Pn	09 51 13.1	+1.0
	baz=101,slow=14						
JHJ	Hachijo jima 2	8.87	189	P	Pn	09 51 31.2	-2.4
	comp=Z,27nm,0.3s,baz=53,slow=20,SNR=5.1						
JHJ				S	Sn	09 53 06.8	-5.0
	comp=Z,7.9nm,0.3s,baz=338,slow=19,SNR=3.1						
JHJ2	Mitsune	8.88	189	ePn	Pn	09 51 34.0	+0.3
KSRS	Korea Array	11.33	251	P	Pn	09 52 08.5	+1.5
	comp=Z,0.2nm,0.3s,baz=64,slow=12,SNR=6.9						
KS15	Wonju Array Si	11.36	251	ePn	Pn	09 52 08.5	+1.1
KSAR	Wonju Array Be	11.36	251	P	Pn	09 52 08.5	+1.1
KSAR	Wonju Array Be	11.36	251	P	Pn	09 52 08.5	+1.1
JNU	Nakatsue	12.13	227	ePn	Pn	09 52 20.8	+2.9
PETK	Petropavlovsk-	15.64	39	P	Pn	09 53 01.5	-1.7
	baz=190,slow=5.9						
PEA1	Petropavlovsk-	15.65	39	ePn	Pn	09 53 01.5	-1.7
MA2	Magadan	18.61	15	P	P	09 53 38.6	+0.6
	comp=Z,0.8nm,0.3s,baz=191,slow=8.2,SNR=5.3						
MA2	Magadan	18.61	15	eP	P	09 53 38.3	+0.2
MA2				ePn	P	09 53 38.6	+0.6
SEY	Seymchan	22.03	13	P	P	09 54 12.9	-1.8
	comp=Z,3.9nm,0.4s,baz=193,slow=14,SNR=9.8						
SEY	Seymchan	22.03	13	P	P	09 54 13.0	-1.8
SEY				pmax	pmax		
	comp=Z,4.0nm,0.4s						
SONA0	Songino Array	25.38	295	eP	P	09 54 46.7	-0.1
SONM	Songino Array	25.38	295	P	P	09 54 46.7	-0.1
	comp=Z,2.6nm,0.7s,baz=88,slow=8.2,SNR=4.3						
H11N2	WAKE ISLAND Hy	30.88	128	T	T	10 28 12.0	
	baz=321,slow=75,SNR=70						
H11N1	WAKE ISLAND Hy	30.89	128	T	T	10 28 12.8	
	baz=321,slow=75,SNR=92						
H11N3	WAKE ISLAND Hy	30.90	128	T	T	10 28 12.0	
	baz=321,slow=75,SNR=78						
H11S1	WAKE ISLAND Hy	31.73	130	T	T	10 29 08.0	
	baz=322,slow=76,SNR=31						
H11S3	WAKE ISLAND Hy	31.73	130	T	T	10 29 10.3	

	baz=322,slow=76,SNR=17						
H11S2	WAKE ISLAND Hy	31.74	130	T	T	10 29 17.2	
	baz=322,slow=76,SNR=20						
ZAA1	Zalesovo Array	38.79	308	eP	P	09 56 44.3	+0.8
ZALV	Zalesovo Beam	38.79	308	P	P	09 56 44.3	+0.8
	comp=Z,3.0nm,0.3s,baz=88,slow=8.6,SNR=6.3						
MK32	Makanchi Array	41.72	298	eP	P	09 57 07.3	-0.5
MKAR	Makanchi Array	41.72	298	P	P	09 57 07.3	-0.5
	comp=Z,4.2nm,0.6s,baz=84,slow=9.6,SNR=6.7						
MKAR				ScP	ScP	10 02 42.9	-1.3
	comp=Z,0.4nm,0.7s,baz=47,slow=2.6,SNR=2.9						
CMAR	Chiang Mai Arr	42.97	250	P	P	09 57 19.4	+1.2
	comp=Z,0.9nm,0.3s,baz=42,slow=7.7,SNR=3.2						
KURK	Kurchatov	43.08	304	eP	P	09 57 18.8	0.0
KURK	Kurchatov	43.08	304	P	P	09 57 18.8	0.0
KURK				pmax	pmax		
	comp=Z,5.0nm,0.4s						
KURBB	Kurchatov Arra	43.16	304	P	P	09 57 18.8	-0.6
	comp=Z,4.5nm,0.4s,baz=78,slow=8.9,SNR=9.3						
KDAK	Kodiak Island	43.55	45	P	P	09 57 22.6	+0.2
	comp=Z,5.5nm,0.8s,baz=265,slow=4.0,SNR=12						
MANU	Manus Island	44.08	171	eP	P	09 57 25.1	-2.0
	comp=Z,92nm,0.3s						
ILAR	Eielson Array	45.42	35	P	P	09 57 37.5	+0.3
	comp=Z,3.2nm,1.0s,baz=267,slow=6.3,SNR=8.1						
ILB	Eielson Array	45.42	35	eP	P	09 57 36.8	-0.4
BVAR	Borovoye Array	47.41	309	P	P	09 57 52.7	-0.3
	comp=Z,1.5nm,0.3s,baz=72,slow=9.9,SNR=6.8						
INK	Inuvik	50.08	29	P	P	09 58 13.5	+0.5
	comp=Z,2.1nm,0.3s,baz=304,slow=11,SNR=32						
INK	Inuvik	50.08	29	eP	P	09 58 13.5	+0.5
	comp=Z,3.7nm,0.7s						
PMG	Port Moresby	51.33	173	P	P	09 58 22.1	-1.0
	comp=Z,20nm,0.8s,baz=281,slow=16,SNR=2.9						
SPA0	Spitsbergen Ar	55.76	348	eP	P	09 58 55.1	+0.3
SPITS	Spitsbergen Ar	55.76	348	P	P	09 58 55.1	+0.3
	comp=Z,1.8nm,0.7s,baz=27,slow=9.7,SNR=4.0						
YKA	Yellowknife Ar	59.61	31	P	P	09 59 22.4	+0.5
	comp=Z,0.6nm,0.5s,baz=306,slow=6.7,SNR=5.1						
WR1	Warramunga Arr	61.89	188	eP	P	09 59 37.7	-0.1
WRA	Warramunga Arr	61.89	188	P	P	09 59 37.7	-0.1
	comp=Z,0.5nm,0.5s,baz=7.9,slow=7.3,SNR=5.3						
FIA0	FINESS Array S	64.54	331	eP	P	09 59 53.9	-0.9
FIA0	FINESS Array S	64.54	331	eP	P	09 59 53.9	-0.9
FINES	FINESS Array B	64.54	331	P	P	09 59 53.9	-0.9
	comp=Z,1.1nm,0.3s,baz=57,slow=10,SNR=15						
GSM	Grass Mountain	64.73	48	eP	P	09 59 57.7	+1.2
GSM	Grass Mountain	64.73	48	eP	P	09 59 57.7	+1.2
ASAR	Alice Springs	65.62	188	P	P	10 00 02.2	-0.1
	comp=Z,0.3nm,0.8s,baz=1.9,slow=6.3,SNR=3.0						
HFS	Hagfors	69.67	335	P	P	10 00 27.3	0.0
	comp=Z,1.0nm,0.4s,baz=38,slow=7.3,SNR=10						
AKASG	Malin Array Be	70.48	321	P	P	10 00 31.9	-0.6
	comp=Z,2.5nm,0.5s,baz=44,slow=6.8,SNR=4.1						
AKBB	Malin Array Si	70.48	321	eP	P	10 00 31.9	-0.6
	comp=Z,2.4nm,0.8s						
AKBB	Malin Array Si	70.48	321	eP	P	10 00 31.9	-0.6
AKBB				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NVAR	Mina Array Bea	72.09	54	P	P	10 00 42.9	+0.2
	comp=Z,0.4nm,0.6s,baz=295,slow=6.4,SNR=2.8						
GCMT	Greycliff	72.16	44	ePcP	PcP	10 01 02.6	+1.9
ANGG	Ammassalik, Gr	72.81	360	ePcP	PcP	10 01 00.0	-2.8
PDAR	Pinedale Array	74.26	46	P	P	10 00 55.3	-0.1
	comp=Z,0.4nm,0.7s,baz=262,slow=2.7,SNR=3.2						
BR101	Keskin Array S	75.67	311	eP	P	10 01 03.5	0.0
BRTR	Keskin Array B	75.67	311	P	P	10 01 03.5	0.0
	comp=Z,0.6nm,0.6s,baz=49,slow=4.4,SNR=2.8						

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*ISCJB **05** 09:58:30.7±0.7, 24°.96N±0°.05×122°.89E±0°.03, h18^{km}±5^{km}, Error ellipse: s-maj=8.2km s-min=3.9km az=16.7*
*JMA **05** 09:58:30.7±0.2, 24°.96N×122°.88E, h19^{km}±3^{km}, M2.5*
*TAP **05** 09:58:31.1, 24°.90N×122°.83E, h11^{km}, ML3.2, C*
ISC 05 09:58:30.3±1.3**, 24°.96N**±0°.05×**122°.89E**±0°.03**, h16**^{km}±10^{km}**, n45, **σ**0^{s}86**/53**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.51	167	P	Pg	09 58 40.8	+0.4
	baz=159						
YOJ				S	Sb	09 58 48.1	+0.1
	baz=159						
YOJ	Yonaguni jima	0.51	167	P	Pg	09 58 40.7	+0.3
YOJ				eS	Sb	09 58 47.8	-0.1
JYNG	Yonagunijimaku	0.51	174	P	Pg	09 58 40.6	+0.2
JYNG				S	Sb	09 58 47.8	-0.1
EOS1	EOS1	0.80	240	eP	Pb	09 58 45.9	+0.1
	baz=242						
EOS1				S	Sb	09 58 56.2	-0.1
	baz=242						
TWB1	Santiao Chiao	0.82	274	eP	Pg	09 58 45.8	-0.4
	baz=278						
TWB1				eS	Sg	09 58 56.3	-0.7
	baz=278						
EGS		0.87	263	eP	Pb	09 58 46.7	-0.4
	baz=266						
TIPB	Shuangxi	0.96	271	eP	Pb	09 58 48.3	-0.3
	baz=275						
IRIF	Iriomote-Funau	0.99	129	P	Pb	09 58 48.8	-0.2
IRIF				eS	Sb	09 59 01.9	+0.1
PCYT	Pengchaiyu	1.00	312	eP	Pg	09 58 50.0	+0.4
	baz=317						
TWC	Suao	1.00	250	eP	Pb	09 58 49.2	-0.1
	baz=252						
TWE	Neicheng	1.13	258	eP	Pn	09 58 51.7	+0.3
	baz=260						
NANB	Nanao	1.16	243	eP	Pb	09 58 50.8	-1.2
	baz=245						
NANB				S	Sb	09 59 06.7	-0.1
	baz=245						
ENA	Nanau	1.17	243	eP	Pb	09 58 51.8	-0.3
	baz=245						
HATJ	Hateruma jima	1.23	137	P	Pn	09 58 52.8	0.0
ENTT	Nioudou	1.24	256	eP	Pn	09 58 53.3	+0.4
	baz=257						
JKRS	Kuro-shima	1.25	125	P	Pn	09 58 53.8	+0.7
NWLT	Wulai	1.27	262	eP	Pn	09 58 53.8	+0.4
	baz=264						
JIJ	Ishigaki jima	1.29	117	P	Pn	09 58 54.1	+0.5
YHNB	Yeheng	1.40	259	eP	Pn	09 58 55.4	+0.1
	baz=260						
NACB	Ninganchiao	1.41	237	eP	Pn	09 58 55.3	0.0
	baz=237						
NACB				S	Sn	09 59 13.5	-0.1
	baz=237						
NSK	Sanguang	1.42	259	eP	Pn	09 58 55.9	+0.4
	baz=261						
NNSB	Datong	1.47	249	eP	Pn	09 58 56.4	+0.2
	baz=251						
NNS	Nan Shan	1.47	250	eP	Pn	09 58 56.3	0.0
	baz=251						
JTJ	Tarama	1.68	100	eS	Sn	09 59 19.1	-1.1
WHF	Hehuan Shan	1.68	242	eP	Pn	09 59 00.3	+0.9
	baz=225						
TDCB	Techi	1.72	246	eP	Pb	09 59 01.2	-0.4
	baz=247						
LIOB	Emei	1.73	260	eP	Pn	09 59 00.7	+0.9
	baz=261						
NSTT	Nanjuang	1.74	260	eP	Pn	09 59 00.9	+1.0
	baz=261						
CHGB	Renai	1.80	241	eP	Pn	09 59 01.8	+0.9
	baz=226						
HGSD	Ruisui	1.98	223	eP	Pn	09 59 02.6	-0.5
	baz=223						
VWDT	VWDT	1.99	233	eP	Pn	09 59 03.4	+0.1
	baz=234						
SMLT	Sun Moon Lake	2.10	240	eP	Pn	09 59 06.0	+1.0
	baz=224						
SSLB	Suanglung	2.11	237	eP	Pn	09 59 05.7	+0.7
	baz=222						
TYC	Yuchr	2.13	241	eP	Pn	09 59 06.8	+1.7
	baz=226						
YULB	Yu-li	2.13	223	eP	Pn	09 59 04.6	-0.6
	baz=239						
TWF1	Yuli	2.16	223	eP	Pn	09 59 05.3	-0.3
	baz=238						
FULB	Fuli	2.28	220	eP	Pn	09 59 07.0	-0.3
	baz=220						
YUS	Yu-Shan	2.29	231	eP	Pn	09 59 08.6	+0.7
	baz=231						
ALS	Alishan	2.38	233	eP	Pn	09 59 10.4	+1.4
	baz=233						
CHN5	Tsauling	2.43	237	eP	Pn	09 59 11.3	+1.9
	baz=237						
CHN4	Tsaushan	2.63	233	eP	Pn	09 59 14.1	+2.0
	baz=233						
TPUB	Ta-pu	2.64	232	eP	Pn	09 59 13.9	+1.7
	baz=232						
WTP	Ta-pu	2.69	231	eP	Pn	09 59 14.8	+1.9
	baz=231						
TWK	Hsinying	2.76	233	eP	Pn	09 59 15.8	+1.8
	baz=233						
CHN1	Nanshi	2.79	231	eP	Pn	09 59 15.7	+1.4
	baz=231						

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*CSEM **05** 10:00:57.3, 45°.96N×14°.76E, h0^{km}, ML0.3, Suspected Mining explosion.*
LJU 05 10:00:57.3, 45°.96N×14°.76E, h0^{km}, ML0.3, 4C Artificial, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDS	Vrh nad Dolski	0.14	344	⇑iPg	Pg	10 00 59.6	-0.5
VNDS				i Sg	Sg	10 01 02.3	+0.3
	comp=Z,5.0nm,0.1s						
VNDS	Vrh nad Dolski	0.14	344	⇑iPg	Pg	10 00 59.6	-0.5
VNDS				i Sg	Sg	10 01 02.3	+0.4
	comp=Z,5.0nm,0.1s						
VISS	Visnje	0.17	160	i Sg	Sg	10 01 03.2	+0.5
LJU	Ljubljana	0.18	297	i Sg	Sg	10 01 03.7	+0.7
LJU	Ljubljana	0.18	297	i Sg	Sg	10 01 03.7	+0.7
PDKS	Podkum	0.19	60	⇑iPg	Pg	10 01 00.5	-0.5
PDKS				i Sg	Sg	10 01 04.5	+1.0
	comp=Z,9.0nm,0.2s						
PDKS	Podkum	0.19	60	⇑iPg	Pg	10 01 00.5	-0.5
PDKS				i Sg	Sg	10 01 04.5	+1.0
	comp=Z,9.0nm,0.2s						
GBAS	Gorenja Brezov	0.22	263	i Pg	Pg	10 01 00.9	-0.6
GBAS				i Sg	Sg	10 01 05.2	+0.8
	comp=Z,4.0nm,0.1s						
GBAS	Gorenja Brezov	0.22	263	i Pg	Pg	10 01 00.9	-0.6
GBAS				i Sg	Sg	10 01 05.2	+0.8
	comp=Z,4.0nm,0.1s						
OZLJ	Ozalj	0.61	125	Sg	Sg	10 01 17.0	+0.3
NVLJ	Novalja	1.40	177	ePn	Pn	10 01 23.1	-1.0
NVLJ				Sn	Sn	10 01 44.2	+0.9

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*ISCJB **05** 10:02:57.7±0.8, 24°.86N±0°.06×122°.89E±0°.03, h17^{km}±5^{km}, Error ellipse: s-maj=9.8km s-min=3.8km az=9.4*
*JMA **05** 10:02:57.6±0.3, 24°.90N×122°.89E, h23^{km}±4^{km}, M2.4*
*TAP **05** 10:02:59.4, 24°.72N×122°.78E, h14^{km}±2^{km}, ML3.2, D*
ISC 05 10:02:56.6±1.4**, 24°.87N**±0°.06×**122°.90E**±0°.03**, h13**^{km}±12^{km}**, n48, **σ**1^{s}15**/57**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.42	174	P	Pb	10 03 06.6	+0.7
JYNG				eS	Sn	10 03 13.7	-2.2
YOJ	Yonaguni jima	0.42	165	P	Pb	10 03 06.8	+0.9
	baz=140						
YOJ				S	Sb	10 03 12.3	+0.2
	baz=140						
YOJ	Yonaguni jima	0.42	165	P	Pb	10 03 06.7	+0.9
YOJ				S	Sb	10 03 12.5	+0.4
EOS1	EOS1	0.77	246	eP	Pb	10 03 11.9	+0.1
	baz=254						
EOS1				eS	Sb	10 03 21.3	-0.8
	baz=254						
EGS		0.88	269	eP	Pn	10 03 15.5	+0.9
	baz=279						
IRIF	Iriomote-Funau	0.93	125	P	Pb	10 03 14.7	+0.1
TIPB	Shuangxi	0.98	276	eP	Pg	10 03 14.1	-1.4
	baz=286						
TWC	Suao	0.98	255	eP	Pg	10 03 15.7	+0.1
	baz=262						
TWC				eS	Sg	10 03 27.2	-1.4
	baz=262						
ENAH	Nanao	1.07	247	eP	Pn	10 03 17.6	+0.3
	baz=253						
TWE	Neicheng	1.12	263	eP	Pb	10 03 18.7	+0.7
	baz=269						
NANB	Nanao	1.13	247	eP	Pb	10 03 18.2	+0.2
	baz=252						
ENA	Nanau	1.14	248	eP	Pb	10 03 18.1	-0.1
	baz=252						
ENA				eS	Sg	10 03 31.6	-1.8
	baz=252						
HATJ	Hateruma jima	1.16	134	P	Pb	10 03 19.0	+0.5
JKRS	Kuro-shima	1.19	122	P	Pn	10 03 19.6	+0.6
JKRS				eS	Sb	10 03 34.1	-0.3
ENTT	Nioudou	1.23	260	eP	Pg	10 03 21.6	+1.3
	baz=265						
JIJ	Ishigaki jima	1.24	114	P	Pn	10 03 20.1	+0.4
JIJ				eS	Sb	10 03 34.9	-0.9
NWLT	Wulai	1.27	266	eP	Pg	10 03 23.2	+2.2
	baz=272						
JISG	Ishigakijimahi	1.32	102	P	Pn	10 03 20.7	0.0
NACB	Ninganchiao	1.37	240	eP	Pb	10 03 22.2	0.0
	baz=243						
NACB				eS	Sb	10 03 37.6	-1.9
	baz=243						
YHNB	Yeheng	1.40	262	P	Pb	10 03 23.5	+0.9
	baz=267						
NSK	Sanguang	1.41	263	eP	Pn	10 03 23.3	+1.3
	baz=268						
NNSB	Datong	1.44	253	eP	Pn	10 03 22.6	+0.1
	baz=257						
NNSH	Datong	1.44	253	P	Pn	10 03 22.5	-0.1
	baz=257						
WHF	Hehuan Shan	1.65	244	eP	Pn	10 03 25.7	0.0
	baz=247						
TDCB	Techi	1.70	249	eP	Pn	10 03 26.2	+0.2
	baz=252						
ESL	Shilin	1.70	232	eP	Pn	10 03 26.0	+0.1
	baz=233						
LIOB	Emei	1.72	263	eP	Pn	10 03 28.0	+1.7
	baz=267						
NSTT	Nanjuang	1.74	263	eP	Pb	10 03 29.7	+1.3
	baz=266						
CHGB	Renai	1.76	243	eP	Pn	10 03 28.1	+1.0
	baz=245						
HGSD	Ruisui	1.92	225	eP	Pn	10 03 29.9	+0.9
	baz=225						
VWDT	VWDT	1.95	236	eP	Pn	10 03 29.3	-0.1
	baz=237						
SMLT	Sun Moon Lake	2.07	242	eP	Pn	10 03 31.9	+0.8
	baz=243						
YULB	Yu-li	2.07	225	eP	Pn	10 03 30.7	-0.4
	baz=225						
SSLB	Suanglung	2.07	239	eP	Pn	10 03 31.4	+0.3
	baz=240						
TYC	Yuchr	2.09	243	eP	Pn	10 03 32.1	+0.8
	baz=245						
TWF1	Yuli	2.10	224	eP	Pn	10 03 31.8	+0.3
	baz=224						
FULB	Fuli	2.21	222	eP	Pn	10 03 33.8	+0.7
	baz=221						
ALS	Alishan	2.34	235	eP	Pn	10 03 36.2	+1.1
	baz=236						
CHN5	Tsauling	2.39	238	eP	Pn	10 03 36.4	+0.9
	baz=239						
TPUB	Ta-pu	2.59	233	eP	Pn	10 03 40.0	+1.7
	baz=234						
TWGBT	Beinan	2.63	220	eP	Pn	10 03 39.2	+0.4
	baz=219						
TWG	Pinlang	2.63	220	eP	Pn	10 03 39.8	+0.9
	baz=219						
WTP	Ta-pu	2.64	233	eP	Pn	10 03 40.8	+1.9
	baz=233						
TWK	Hsinying	2.72	235	eP	Pn	10 03 41.7	+1.7
	baz=235						
CHN1	Nanshi	2.74	233	eP	Pn	10 03 42.4	+2.1
	baz=233						
SGST	Jiashian	2.76	230	eP	Pn	10 03 42.6	+2.0
	baz=230						
MASBT	Mashibuluo	3.06	223	eP	Pn	10 03 46.7	+2.0
	baz=223						
SCZT	Fangliau	3.24	220	eP	Pn	10 03 49.8	+2.6
	baz=220						

MAN 05 10:04:22.2, 11°.55N×124°.37E, h10^{km}, mb4.5, ML3.4, MS3.2, 1C-2D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OCLP	Ormoc	0.55	154	eP	Pb	10 04 33.7	-0.3
OCLP				eS	Sb	10 04 42.5	+0.5
PLP	Palo	0.71	122	⇓eP	Pg	10 04 35.4	-0.6
PLP				eS	Sg	10 04 45.9	+0.6
CNP	Catarman	1.00	17	eP	Pg	10 04 40.9	-0.6
CNP				eS	Sn	10 05 00.9	+4.5
BESP	Borongan	1.05	87	eP	Pg	10 04 41.0	-1.4
BESP				eS	Sn	10 05 01.8	+4.0
LLP	Lapu-Lapu	1.29	198	⇓iP	Pn	10 04 45.8	-0.5
LLP				eS	Sb	10 05 03.3	+0.1
MSLP	Maasin	1.49	161	eP	Pn	10 04 49.1	+0.1
MSLP				eS	Sg	10 05 10.6	+0.4
RCP	Roxas	1.59	271	⇑eP	Pb	10 04 51.4	-0.3
RCP				eS	Sg	10 05 15.2	+1.8
TBP	Tagbilaran	1.91	195	eP	Pb	10 04 56.9	-0.4
GUIM	Jordan	1.97	242	eP	Pn	10 04 55.6	-0.1
GUIM				eS	Sn	10 05 20.6	+0.1

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*KRAR **05** 10:05:22.3±0.3, 53°.59N×87°.32E, M2.2, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*
*NNC **05** 10:05:31.8±4.3, 53°.40N×87°.77E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=36.7km s-min=24.5km az=7.0, Suspected Mining explosion.*
IDC 05 10:05:30.2±2.5**, 53°.55N×87°.80E, h0**^{km}**, mb1 3.6**/3**, mb1mx3.2**/73**, mbtmp3.6**/3**, ML3.3**/3**, 7C-1D, Error ellipse: s-maj=22.2km s-min=13.5km az=65.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.82	284	i		10 16 40.0	
	baz=100,slow=310,SNR=1.1						
ZALV	Zalesovo Beam	1.82	284	Pg	Pn	10 06 01.5	-1.1
	6.1nm,0.3s,baz=104,slow=15,SNR=38						
ZALV				Lg	Lg	10 06 27.1	
	8.1nm,0.3s,baz=100,slow=24,SNR=13						
KURK	Kurchatov	6.32	247	⇑Sn	Sn	10 08 16.9	-0.5
	0.5nm,0.2s						
KURK				⇑Lg	Lg	10 08 50.6	
	5.8nm,0.7s						
KURBB	Kurchatov Arra	6.42	247	Pn	Pn	10 07 06.2	+0.3
	0.4nm,0.3s,baz=62,slow=14,SNR=27						
KURBB				Sn	Sn	10 08 19.6	-0.2
	0.1nm,0.3s,baz=66,slow=43,SNR=3.0						
KURBB				Lg	Lg	10 08 53.6	
	0.1nm,0.3s,baz=60,slow=29,SNR=7.3						
KURBB	Kurchatov Arra	6.42	247	⇑Pn	Pn	10 07 05.9	0.0
	6.7nm,0.5s						
KURBB				⇑Sn	Sn	10 08 22.2	+2.4
	4.0nm,0.5s						
KURBB				⇓Lg	Lg	10 08 53.4	
	9.1nm,0.6s						
MK31	Makanchi Array	7.63	210	⇑Pn	Pn	10 07 23.2	+0.7
	0.6nm,0.4s,baz=30,slow=12,SNR=13						
MK31				⇑Sn	Sn	10 08 48.1	-1.6
	0.8nm,0.6s,baz=20,slow=20,SNR=5.8						
MK31				⇑Lg	Lg	10 09 29.8	
	2.2nm,0.7s,baz=35,slow=37,SNR=5.5						
MKAR	Makanchi Array	7.63	210	Pn	Pn	10 07 23.7	+1.1
	0.5nm,0.3s,baz=29,slow=12,SNR=16						
MKAR				Sn	Sn	10 08 49.6	-0.1
	0.2nm,0.3s,baz=32,slow=21,SNR=7.2						
MKAR				Lg	Lg	10 09 32.5	
	0.2nm,0.3s,baz=30,slow=29,SNR=3.6						
BVAR	Borovoye Array	10.44	274	Pn	Pn	10 08 00.8	-0.2
	0.4nm,0.3s,baz=79,slow=15,SNR=4.9						

DJA 05 10:18:35.1±0.5**, 10°S**±3°×**12°2E**±°**, h27**^{km}±7^{km}**, M3.5**/8**, MLv3.5**/8**, Savu Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDFI	Ende, Flores	0.77	351	P	Pb	10 18 49.4	-0.5
EDFI				S	Sn	10 19 01.0	+0.1
MMRI	Maumere	0.97	26	P	Pn	10 18 52.3	-0.6
MMRI				S	Sb	10 19 05.4	-0.2
BASI	Baing, Sumba	1.40	240	P	Pn	10 18 58.2	-0.7
BASI				S	Sn	10 19 17.3	+0.7
BATI	Baumata	1.95	111	P	Pn	10 19 05.0	-1.5
WBSI	Waikabubak, Su	2.39	267	P	Pn	10 19 14.0	+1.5
WBSI				S	Sn	10 19 41.4	+0.4
SOEI	Soe	2.44	96	P	Pn	10 19 14.4	+1.2
PLAI	Plampang	4.04	279	P	Pn	10 19 35.0	-0.2
PLAI				S	Sn	10 20 22.6	+0.9
TWSI	Taliwang, Sumb	4.93	279	P	Pn	10 19 49.0	+1.6

CSEM 05 10:44:37.3, 27°.79N×18°.21W, h21^{km}, ML2.0, Canary Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CORC	Orchilla, El H	0.10	144	P	Pb	10 44 41.1	-2.9
	SNR=18						
CORC				S	Sb	10 44 44.2	-4.6
	99nm,0.1s,SNR=7.9						
CTAD	Las Tabladas,	0.12	109	P	Pb	10 44 41.5	-2.2
	SNR=7.9						
CTAN	El Hierro	0.14	103	P	Pb	10 44 41.6	-1.8
	SNR=7.9						
CTAN				S	Sb	10 44 44.4	-3.3
	41nm,0.1s,SNR=7.9						
CCUM	Cumbre, El Hie	0.17	105	P	Pb	10 44 41.8	-1.5
	SNR=18						
CHIE	El Hierro	0.23	105	P	Pb	10 44 42.5	-0.8
	SNR=7.9						
CTIG	El Hierro	0.26	90	S	Sb	10 44 47.1	-0.7
	22nm,0.1s,SNR=7.9						

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*KRAR **05** 11:01:03.0±0.2, 53°.57N×87°.80E, M2.5, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*
*NNC **05** 11:01:08.7±3.1, 53°.39N×87°.50E, h0^{km}, mb3.7, mpv3.3, Error ellipse: s-maj=29.4km s-min=20.2km az=175.0, Suspected Mining explosion.*
IDC 05 11:01:03.6±2.5**, 53°.51N×87°.83E, h0**^{km}**, mb1 3.3**/3**, mb1mx3.0**/71**, mbtmp3.3**/3**, ML3.1**/3**, 6C-2D, Error ellipse: s-maj=21.2km s-min=12.8km az=61.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.84	285	i		11 12 30.0	
	baz=106,slow=335,SNR=3.0						
ZALV	Zalesovo Beam	1.84	285	Pg	Pn	11 01 35.5	-1.0
	4.8nm,0.3s,baz=108,slow=16,SNR=43						
ZALV				Lg	Lg	11 02 00.5	
	9.6nm,0.3s,baz=103,slow=25,SNR=23						
KURK	Kurchatov	6.33	247	⇓Pn	Pn	11 02 40.3	+2.2
	1.5nm,0.6s						
KURK				⇑Sn	Sn	11 03 51.0	+0.1
	3.6nm,0.8s						
KURK				⇓Lg	Lg	11 04 25.4	
	17nm,0.8s						
KURBB	Kurchatov Arra	6.42	247	Pn	Pn	11 02 39.9	+0.6
	0.2nm,0.3s,baz=62,slow=14,SNR=14						
KURBB				Sn	Sn	11 03 54.1	+0.8
	0.1nm,0.3s,baz=66,slow=24,SNR=5.0						
KURBB				Lg	Lg	11 04 28.6	
	0.1nm,0.3s,baz=63,slow=33,SNR=4.8						
KURBB	Kurchatov Arra	6.42	247	⇑Pn	Pn	11 02 41.8	+2.5
	2.8nm,0.5s						
KURBB				⇑Sn	Sn	11 03 52.7	-0.6
	13nm,0.6s						
KURBB				⇑Lg	Lg	11 04 29.0	
	35nm,0.8s						
MK31	Makanchi Array	7.60	210	Pn	Pn	11 02 57.6	+1.9
	0.8nm,0.6s,baz=30,slow=14,SNR=12						
MK31				⇑Sn	Sn	11 04 23.7	+1.2
	1.5nm,0.7s,baz=33,slow=23,SNR=4.0						
MK31				⇑Lg	Lg	11 05 05.6	
	5.1nm,0.7s,baz=35,slow=30,SNR=5.4						
MKAR	Makanchi Array	7.60	210	Pn	Pn	11 02 56.5	+0.9
	0.3nm,0.3s,baz=29,slow=14,SNR=11						
MKAR				Sn	Sn	11 04 22.5	0.0
	0.3nm,0.3s,baz=32,slow=23,SNR=7.5						
MKAR				Lg	Lg	11 05 05.3	
	0.2nm,0.3s,baz=30,slow=36,SNR=6.0						
BVAR	Borovoye Array	10.46	274	Pn	Pn	11 03 33.9	-0.8
	0.3nm,0.3s,baz=74,slow=13,SNR=4.8						
BVAR				Sn	Sn	11 05 27.9	-4.6
	0.5nm,0.3s,baz=77,slow=25,SNR=10.0						

*CSEM **05** 11:01:47.9±0.2, 39°.47N×35°.34E, h10^{km}, ML2.4, Error ellipse: s-maj=4.3km s-min=4.0km az=55.0*
*DDA **05** 11:01:47.9, 39°.47N×35°.34E, h7^{km}, Ml2.6*
*ISK **05** 11:01:47.7, 39°.46N×35°.33E, h10^{km}±1^{km}, ML2.4/7*
ISC 05 11:01:48.0±1.0**, 39°.46N**±0°.03×**35°.34E**±0°.03**, h10**^{km}±7^{km}**, n25, σ0^s.47**/39**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOZ	**Yozgat**	**0.18**	**355**	PG	**Pg**	**11 01 51.9**	**-0.1**
YOZ				SG	**Sg**	**11 01 55.2**	**+0.4**
YOZ	**Yozgat**	**0.18**	**355**	*i* Pg	**Pg**	**11 01 51.9**	**-0.1**
YOZ				*i* Sg	**Sg**	**11 01 55.2**	**+0.4**
CUSAR	**Sarkisla-SIVAS**	**0.70**	**93**	*i* P	**Pg**	**11 02 01.2**	**-0.4**
CUSAR				*i* S	**Sb**	**11 02 12.3**	**+0.2**
CUSAR	**Sarkisla-SIVAS**	**0.70**	**93**	P	**Pg**	**11 02 01.2**	**-0.4**
CUSAR				S	**Sb**	**11 02 12.3**	**+0.2**
AVNS	**Nevsehir-Avano**	**0.76**	**211**	*i* P	**Pg**	**11 02 01.7**	**-0.9**
AVNS				*i* S	**Sb**	**11 02 14.0**	**+0.3**
AVNS	**Nevsehir-Avano**	**0.76**	**211**	P	**Pg**	**11 02 01.7**	**-0.9**
AVNS				S	**Sb**	**11 02 14.0**	**+0.3**
CDAG	**Cicekdag**	**0.77**	**283**	*i* P	**Pg**	**11 02 02.6**	**-0.3**
CDAG				*i* S	**Sb**	**11 02 14.2**	**+0.2**
CDAG	**Cicekdag**	**0.77**	**283**	P	**Pg**	**11 02 02.6**	**-0.3**
CDAG				S	**Sb**	**11 02 14.2**	**+0.2**
COAL	**Corum-Alaca**	**0.84**	**341**	*i* P	**Pg**	**11 02 03.6**	**-0.7**
COAL				*i* S	**Sb**	**11 02 15.9**	**-0.3**
COAL	**Corum-Alaca**	**0.84**	**341**	P	**Pg**	**11 02 03.6**	**-0.7**
COAL				S	**Sb**	**11 02 15.9**	**-0.3**
CORM	**Corum**	**0.90**	**323**	PG	**Pg**	**11 02 04.9**	**-0.6**
CORM				SG	**Sb**	**11 02 18.2**	**+0.2**
CORM	**Corum**	**0.90**	**323**	*e*Pg	**Pg**	**11 02 04.9**	**-0.6**
CORM				*e*Sg	**Sb**	**11 02 18.2**	**+0.2**
CTAK	**Corum_Osmancik**	**1.26**	**341**	*i* P	**Pn**	**11 02 11.2**	**-0.7**
CTAK				*i* S	**Sn**	**11 02 29.7**	**+0.8**
CTAK	**Corum_Osmancik**	**1.26**	**341**	P	**Pn**	**11 02 11.2**	**-0.7**
CTAK				S	**Sn**	**11 02 29.7**	**+0.8**
SARI	**SarD1z-Kayseri**	**1.34**	**141**	PN	**Pg**	**11 02 13.8**	**-0.1**
SVSK	**Karacayir**	**1.36**	**70**	PN	**Pn**	**11 02 12.6**	**-0.4**
SVSK	**Karacayir**	**1.36**	**70**	*e*Pn	**Pn**	**11 02 12.6**	**-0.4**
GULA	**Gulagac**	**1.41**	**218**	PN	**Pn**	**11 02 13.6**	**-0.2**
GULA	**Gulagac**	**1.41**	**218**	*e*Pn	**Pn**	**11 02 13.6**	**-0.2**
SERE	**Sereflikochisa**	**1.47**	**250**	PN	**Pb**	**11 02 15.6**	**+0.1**
SERE	**Sereflikochisa**	**1.47**	**250**	*e*Pn	**Pb**	**11 02 15.6**	**+0.1**
AFSR	**Af¯ar-Bala (A**	**1.76**	**270**	PN	**Pn**	**11 02 18.2**	**-0.4**
AFSR	**Af¯ar-Bala (A**	**1.76**	**270**	*e*Pn	**Pn**	**11 02 18.2**	**-0.4**
KULU	**Kulu**	**1.86**	**258**	PN	**Pn**	**11 02 20.6**	**+0.5**
KULU	**Kulu**	**1.86**	**258**	*e*Pn	**Pn**	**11 02 20.6**	**+0.5**

MAN 05 11:22:34.3, 11°.48N×124°.51E, h26^{km}, mb4.2, ML3.1, MS2.8, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.44**	**167**	*e*P	Pb	11 22 44.2	+0.7
OCLP				*e*S	Sn	11 22 53.0	+0.9
PLP	**Palo**	**0.56**	**124**	⇓*e*P	Pn	11 22 46.4	-0.1
PLP				*e*S	Sn	11 22 56.5	+1.6
CNP	**Catarman**	**1.03**	**8**	*e*P	Pn	11 22 52.5	-0.7
CNP				*e*S	Sn	11 23 06.9	+0.1
LLP	**Lapu-Lapu**	**1.27**	**205**	*e*P	Pn	11 22 56.8	+0.4

NNC 05 11:39:55.2±4.0**, 36°.79N×69°.72E, h163**^{km}±102^{km}**, mb2.6, mpv3.5, 4C-4D, Error ellipse: s-maj=47.9km s-min=32.9km az=68.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**4.38**	**42**	⇑Pn	Pn	11 41 01.0	+0.1
	4.5nm,0.3s						
SFK				⇓Sn	Sn	11 41 52.9	+0.6
	11nm,0.3s						
MNAS	**Manas**	**6.09**	**20**	⇓Pn	Pn	11 41 23.9	+0.6
	1.7nm,0.4s						
MNAS				⇓Sn	Sn	11 42 32.8	+0.5
	2.9nm,0.5s						
AML	**Almayashu**	**6.16**	**29**	P	Pn	11 41 26.3	+1.9
	SNR=20						
KK31	**Karatay Array**	**6.34**	**5**	⇓Pn	Pn	11 41 27.7	+1.2
	0.2nm,0.3s,baz=181,slow=11,SNR=5.2						
KK31				⇑Sn	Sn	11 42 38.9	+0.7
	1.0nm,0.5s,baz=190,slow=23,SNR=5.8						
UCH	**Uchtor**	**6.58**	**33**	P	Pn	11 41 29.4	-0.6
	SNR=6.3						
EKS2	**Erkin-Say**	**6.65**	**27**	P	Pn	11 41 30.7	0.0
	SNR=9.0						
KZA	**Kyzart**	**6.80**	**37**	P	Pn	11 41 31.4	-1.5
	SNR=5.5						
AAK	**Ala-Archa**	**6.91**	**31**	⇑Pn	Pn	11 41 33.1	-1.0
	5.3nm,0.4s						
AAK				⇑Sn	Sn	11 42 52.3	+0.4
	2.2nm,0.7s						
AAK	**Ala-Archa**	**6.91**	**31**	P	Pn	11 41 33.7	-0.4
	SNR=6.2						
TKM2	**Tokmak 2**	**7.61**	**35**	P	Pn	11 41 41.9	-1.6
	SNR=5.8						

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*GUC **05** 11:46:52.4±0.7, 34°.69S×72°.78W, h24^{km}±17^{km}, ML3.6*
ISC 05 11:46:55.5±2.2**, 34°.71S**±0°.05×**72°.6W**±0°.1**, h26**^{km}±20^{km}**, n15, σ2^s.69**/20**, 1C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO05	**HualaæØ**	**0.63**	**119**	⇓*i*P	**Pn**	**11 47 06.1**	**-2.6**
GO05				*i* S	**Sn**	**11 47 15.8**	**-2.1**
GO05				IAML		11 47 16.8	
	comp=N,7µm,0.2s						
NICH	**Los Niches**	**1.17**	**105**	*e*P	**Pn**	**11 47 15.0**	**-1.1**
NICH				*i* S	**Sn**	**11 47 31.7**	**+0.6**
CCHI	**Chillan**	**1.94**	**167**	*i* P	**Pn**	**11 47 25.7**	**-1.0**
CCHI				*i* S	**Sb**	**11 48 00.2**	**+6.4**
CLCH	**Cerro Calan**	**2.16**	**53**	*e*P	**Pn**	**11 47 29.4**	**-0.5**
CLCH				*e*S	**Sn**	**11 47 57.1**	**+1.4**
CLCH				IAML		11 48 17.1	
	comp=E,548nm,0.7s						
ROCH	**El Roble**	**2.18**	**38**	*e*P	**Pn**	**11 47 29.1**	**-1.2**
ROCH				*e*S	**Sn**	**11 47 57.6**	**+1.1**
ROCH				IAML		11 48 12.4	
	comp=N,343nm,0.7s						
PEL	**Peldehue**	**2.23**	**46**	⇑*i*P	**Pn**	**11 47 30.0**	**-0.8**
AAGR	**Agrelo**	**3.53**	**64**	*i* P	**Pb**	**11 47 53.8**	**-3.6**
ARCO	**CERRO ARCO**	**3.58**	**60**	*i* P	**Pn**	**11 47 53.4**	**+3.9**
ARCO				IAML		11 48 07.1	
	comp=Z,53nm,0.6s						
AUSP	**Uspallata**	**3.66**	**48**	*i* P	**Pn**	**11 47 52.9**	**+2.3**
ASAL	**Salagasta**	**3.79**	**57**	*i* P	**Pn**	**11 47 55.7**	**+3.5**
RTCV	**Cerro Valdivia**	**4.43**	**51**	*i* P	**Pn**	**11 48 03.4**	**+2.3**
RTLL	**Cerro Villicun**	**4.83**	**47**	*i* P	**Pn**	**11 48 07.6**	**+1.0**
AMOG	**MOGNA**	**5.11**	**44**	*i* P	**Pn**	**11 48 10.8**	**+0.4**
ACDV	**Cuesta del Vie**	**5.40**	**34**	*i* P	**Pn**	**11 48 13.3**	**-1.1**
AGUA	**GUANDACOL**	**6.27**	**35**	*i* P	**Pn**	**11 48 24.9**	**-1.5**

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*ISCJB **05** 11:54:10.6±0.7, 25°.24S±0°.09×178°.5E±0°.1, h579^{km}, mb4.1/18, Error ellipse: s-maj=16.1km s-min=11.2km az=165.5*
*IDC **05** 11:54:14.0±1.2, 25°.23S×178°.34E, h598^{km}±13^{km}, mb3.6/18, mb1 3.7/20, mb1mx3.5/47, mbtmp4.6/20, Error ellipse: s-maj=12.1km s-min=10.9km az=37.0*
ISC 05 11:54:12.2±0.5**, 25°.20S**±0°.10×**178°.38E**±0°.10**, h579**^{km}**, n43, σ1^s.11**/46**, mb4.0**/18**, 1C-1D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**5.21**	**142**	P	**P**	**11 55 48.8**	**+3.3**
	255nm,0.3s,baz=62,slow=23,SNR=11						
DZM	**Mont Dzumac**	**11.37**	**283**	P	**P**	**11 56 46.0**	**+1.4**
	2.2nm,0.3s,baz=93,slow=14,SNR=17						
URZ	**Urewera**	**13.07**	**184**	P	**P**	**11 56 58.3**	**-3.3**
	2.0nm,0.3s,baz=288,slow=2.1,SNR=15						
URZ				S	S	11 59 11.2	-10
	0.4nm,0.3s,baz=90,slow=19,SNR=3.0						
AFI	**Afiamalu**	**14.55**	**41**	P	P	11 57 10.8	-6.2
	3.8nm,0.3s,baz=32,slow=3.9,SNR=6.8						
RPZ	**Rata Peaks**	**19.42**	**196**	P	**P**	**11 58 00.7**	**-0.7**
	1.9nm,0.3s,baz=3.6,slow=3.7,SNR=15						
CTA	**Charters Tower**	**30.04**	**273**	P	**P**	**11 59 36.9**	**+1.3**
	17nm,0.5s,baz=98,slow=11,SNR=27						
STKA	**Stephens Creek**	**32.88**	**250**	P	**P**	**12 00 00.4**	**+0.8**
	0.6nm,0.3s,baz=94,slow=9.8,SNR=7.3						
PMG	**Port Moresby**	**33.57**	**292**	P	**P**	**12 00 05.8**	**+0.3**
	21nm,0.9s,baz=108,slow=20,SNR=3.5						
ASAR	**Alice Springs**	**40.38**	**262**	P	**P**	**12 01 01.7**	**+0.4**
	5.3nm,0.5s,baz=90,slow=6.4,SNR=81						
ASAR				PcP	**PcP**	**12 02 49.9**	**-0.1**
	1.1nm,0.8s,baz=99,slow=5.7,SNR=4.2						
ASAR				S	**S**	**12 06 27.4**	**-1.4**
	3.8nm,1.0s,baz=100,slow=15,SNR=11						
WRA	**Warramunga Arr**	**40.87**	**268**	P	**P**	**12 01 05.0**	**-0.1**
	17nm,0.6s,baz=103,slow=7.9,SNR=165						
WRA				S	**S**	**12 06 33.4**	**-2.4**
	1.6nm,0.8s,baz=99,slow=14,SNR=5.3						
JAY	**Jayapura**	**42.71**	**296**	P	**P**	**12 01 19.4**	**-0.2**
	7.8nm,0.6s,baz=246,slow=6.4,SNR=6.8						
FITZ	**Fitzroy Crossi**	**49.27**	**267**	P	**P**	**12 02 09.5**	**+0.3**
	9.4nm,0.5s,baz=98,slow=6.8,SNR=38						
VNDA	**Vanda**	**52.98**	**184**	P	**P**	**12 02 35.6**	**+0.5**
	1.3nm,0.8s,baz=355,slow=9.1,SNR=6.4						
QSPA	**South Pole Qui**	**64.89**	**180**	P	**P**	**12 03 55.7**	**+0.7**
	7.5nm,0.6s,baz=11,slow=0.4,SNR=33						
MJAR	**Matsushiro Arr**	**72.15**	**327**	P	**P**	**12 04 38.2**	**-0.8**
	2.8nm,0.8s,baz=169,slow=5.4,SNR=6.1						
JNU	**Nakatsue**	**73.54**	**320**	P	**P**	**12 04 46.5**	**-0.6**
	3.2nm,0.5s,baz=181,slow=7.7,SNR=4.6						
ASAJ	**Asahikawa**	**76.37**	**334**	P	**P**	**12 05 03.7**	**+1.1**
	2.0nm,0.4s,baz=121,slow=5.9,SNR=8.3						
KSRS	**Korea Array**	**78.31**	**321**	P	**P**	**12 05 13.4**	**+0.3**
	2.8nm,0.7s,baz=137,slow=5.8,SNR=18						
PETK	**Petropavlovsk-**	**80.02**	**348**	P	**P**	**12 05 22.0**	**+0.1**
	4.5nm,0.7s,baz=108,slow=7.7						
USRK	**Ussuriysk Ar.**	**81.06**	**328**	P	**P**	**12 05 28.0**	**+0.6**
	3.9nm,0.7s,baz=144,slow=5.4						
SNAA	**Sanae**	**83.39**	**180**	P	**P**	**12 05 38.1**	**-0.9**
	0.7nm,0.5s,baz=196,slow=8.4,SNR=14						
CMAR	**Chiang Mai Arr**	**88.60**	**291**	P	**P**	**12 06 06.5**	**+1.9**
	1.6nm,0.6s,baz=154,slow=3.4,SNR=11						
ILAR	**Eielson Array**	**93.64**	**14**	P	**P**	**12 06 25.2**	**-1.6**
	0.4nm,0.5s,baz=225,slow=5.8,SNR=5.3						
MKAR	**Makanchi Array**	**111.94**	**313**	PKiKP	**PKiKP**	**12 11 42.0**	**0.0**
	0.4nm,0.6s,baz=232,slow=1.6,SNR=3.4						
KURBB	**Kurchatov Arra**	**115.16**	**316**	PKP	**PKPdf**	**12 11 46.8**	**-1.2**
	1.0nm,0.7s,baz=116,slow=2.2,SNR=4.1						
BVAR	**Borovoye Array**	**120.42**	**318**	PKP	**PKPdf**	**12 11 57.4**	**-0.7**
	2.0nm,0.5s,baz=79,slow=3.1,SNR=10						
SPITS	**Spitsbergen Ar**	**126.30**	**355**	PKP	**PKPdf**	**12 12 08.2**	**-0.6**
	1.9nm,0.6s,baz=64,slow=3.4,SNR=7.6						
AKTO	**Aktyubinsk**	**128.19**	**315**	PKP	**PKPdf**	**12 12 12.8**	**-0.3**
	0.9nm,0.6s,baz=124,slow=7.3,SNR=3.8						
ARCES	**ARCESS Array B**	**132.84**	**347**	PKP	**PKPdf**	**12 12 20.3**	**-1.0**
	1.8nm,0.6s,baz=9.9,slow=2.1,SNR=6.0						
ARCES				SKPbc	**SKPbc**	**12 14 54.3**	**-1.0**
	3.0nm,0.9s,baz=19,slow=4.1,SNR=4.3						
FINES	**FINESS Array B**	**139.18**	**340**	PKhKP	PKPpre	12 12 23.9	
	0.4nm,0.3s,baz=64,slow=3.4,SNR=5.5						
FINES				PKP	**PKPdf**	**12 12 32.3**	**-1.0**
	0.7nm,0.4s,baz=66,slow=3.5,SNR=8.4						
NB2	**NORSAR Subarra**	**143.11**	**350**	PKP	PKPab	12 12 37.2	-1.1
	comp=Z,5.4nm,0.5s,baz=16,slow=3.2						
HFS	**Hagfors**	**143.50**	**347**	PKP	PKPab	12 12 38.8	-0.9
	comp=Z,16nm,0.5s,baz=64,slow=3.4,SNR=41						
AKASG	**Malin Array Be**	**145.22**	**325**	PKPbc	**PKPdf**	**12 12 44.6**	**+0.4**
	comp=Z,3.0nm,0.6s,baz=43,slow=3.9,SNR=6.7						
ASF	**Jabal al Asfar**	**145.64**	**291**	PKPbc	**PKPbc**	**12 12 47.6**	**+0.3**
	comp=Z,3.9nm,0.7s,baz=27,slow=2.3,SNR=5.7						
MMAI	**Mount Meron Ar**	**146.86**	**292**	PKPbc	**PKPbc**	**12 12 51.0**	**+0.4**
	comp=Z,5.6nm,0.5s,baz=74,slow=5.2,SNR=6.2						
BRTR	**Keskin Array B**	**147.14**	**305**	PKPbc	**PKPbc**	**12 12 50.3**	**-0.9**
	comp=Z,2.3nm,0.6s,baz=113,slow=3.0,SNR=7.9						
EKA	**Eskdalemuir Ar**	**149.87**	**2**	PKPbc	**PKPbc**	**12 12 56.3**	**-1.0**
	comp=Z,0.9nm,0.4s,baz=341,slow=2.3,SNR=11						
UPC	**Upice**	**151.30**	**336**	*e*PKP	**PKPbc**	**12 13 00.7**	**0.0**
DPC	**Dobruska-Polom**	**151.31**	**336**	*e*PKP	**PKPbc**	**12 13 01.1**	**+0.3**
DPC				*e*x	x	12 13 12.1	
KRLC	**Kraliky**	**151.36**	**335**	*e*PKP	**PKPbc**	**12 13 01.1**	**+0.2**
CLL	**Collm**	**151.62**	**341**	⇓*i*PKPbc	**PKPbc**	**12 13 01.1**	**-0.3**
	comp=Z,9.0nm,0.7s						
CLL				⇑*i*PKPab	**PKPab**	**12 13 12.7**	**-0.2**
	comp=Z,5.0nm,0.6s						
BRG	**Berggiesshubel**	**151.70**	**339**	*i* PKP	**PKPbc**	**12 13 01.4**	**-0.2**
	comp=Z,6.7nm,0.5s						
GERES	**GERESS Array B**	**153.51**	**337**	PKPbc	**PKPbc**	**12 13 05.0**	**-0.8**
	comp=Z,0.3nm,0.2s,baz=0.0,slow=3.9,SNR=4.6						
GERES				PKPab	**PKPab**	**12 13 21.3**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=57,slow=4.9,SNR=5.8						

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*NIED **05** 13:33:00, 43°.20N×146°.50E, h35^{km}, Mw3.3 Best double couple: M$_0$1.03000×10^{14} NP1:φ$_s$323.00000°, δ26.00000°, λ-166.00000°. NP2:φ$_s$221.00000°, δ84.00000°, λ-65.00000°.*
*ISCJB **05** 13:33:42.9±0.8, 43°.32N±0°.06×146°.56E±0°.06, h59^{km}±7^{km}, mb4.1/2, Error ellipse: s-maj=10.6km s-min=5.5km az=144.8*
*SKHL **05** 13:33:43.6±0.7, 43°.36N×146°.55E, h70^{km}±8^{km}, mb4.8/6*
*JMA **05** 13:33:43.1±0.1, 43°.23N×146°.55E, h49^{km}±2^{km}, M3.5*
*MOS **05** 13:33:43.9±0.9, 43°.49N×146°.37E, h62^{km}, mb4.3/2, Error ellipse: s-maj=21.1km s-min=15.6km az=105.6*
ISC 05 13:33:43.5±1.3**, 43°.33N**±0°.07×**146°.54E**±0°.05**, h49**^{km}±12^{km}**, n30, σ0^s.97**/49**, 2C-5D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	**Shikotan**	**0.58**	**21**	*i* P	**Pn**	**13 33 56.0**	**+0.3**
SHO				AMB	AMB	13 33 56.0	
	129nm,0.2s						
SHO				AMB	AMB	13 33 56.0	
	111nm,0.2s						
SHO				AMB	AMB	13 33 56.0	
	512nm,0.2s						
SHO				*i* S	**Sn**	**13 34 05.0**	**+0.6**
SHO				A	A	13 34 06.0	
	2µm,0.2s						
SHO				A	A	13 34 06.0	
	2µm,0.2s						
SHO	**Shikotan**	**0.58**	**21**	*d i*PN	**Pn**	**13 33 56.5**	**+0.8**
SHO				*i* S	**Sn**	**13 34 05.6**	**+1.2**
SHO				pmax	pmax		
	comp=N,129nm,0.2s						
SHO				pmax	pmax		
	comp=E,111nm,0.2s						
SHO				pmax	pmax		
	comp=Z,512nm,0.2s						
SHO				smax	smax		
	comp=N,2.0nm,0.2s						
SHO				smax	smax		
	comp=E,1.0nm,0.2s						
NEM2	**Nemuro 2**	**0.58**	**274**	P	**Pn**	**13 33 55.6**	**-0.1**
NEM2				*e*S	**Sn**	**13 34 04.6**	**+0.2**
GLVR	**Golovnino**	**0.84**	**299**	*e*P	**Pn**	**13 33 59.0**	**-0.1**
GLVR				AMB	AMB	13 34 00.0	
	comp=E,63nm,0.3s						
GLVR				AMB	AMB	13 34 00.0	
	comp=E,1µm,0.3s						
GLVR				*e*S	**Sn**	**13 34 11.0**	**+0.5**
GLVR				A	A	13 34 13.5	
	comp=E,1µm,0.3s						
GLVR				A	A	13 34 13.5	
	comp=E,4µm,0.3s						
GLVR	**Golovnino**	**0.84**	**299**	*e*PN	**Pn**	**13 33 59.8**	**+0.7**
GLVR				*e*S	**Sn**	**13 34 11.9**	**+1.4**
GLVR				pmax	pmax		
	comp=N,63nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,1µm,0.1s						
GLVR				smax	smax		
	comp=Z,934nm,0.1s						
GLVR				smax	smax		
	comp=E,3µm,0.3s						
YUK	**Yuzh-Kuril'sk**	**0.86**	**325**	*i* P	**Pn**	**13 33 59.0**	**-0.3**
YUK				AMB	AMB	13 34 01.0	
	comp=E,317nm,0.3s						
YUK				AMB	AMB	13 34 01.0	
	comp=E,277nm,0.3s						
YUK				AMB	AMB	13 34 01.0	
	comp=E,1µm,0.3s						
YUK				*i* S	**Sn**	**13 34 11.0**	**+0.2**
YUK				A	A	13 34 12.0	
	comp=E,4µm,0.3s						
YUK				A	A	13 34 12.0	
	comp=E,3µm,0.3s						
YUK	**Yuzh-Kuril'sk**	**0.86**	**325**	*d i*PN	**Pn**	**13 33 59.6**	**+0.3**
YUK				*i* S	**Sn**	**13 34 11.8**	**+1.0**
YUK				pmax	pmax		
	comp=N,317nm,0.1s						
YUK				pmax	pmax		
	comp=E,277nm,0.1s						
YUK				pmax	pmax		
	comp=Z,1µm,0.1s						
YUK				smax	smax		
	comp=E,3µm,0.2s						
YUK				smax	smax		
	comp=N,4µm,0.3s						
GRPR	**Tuman**	**0.86**	**320**	*e*P	**Pn**	**13 33 59.0**	**-0.4**
GRPR				AMB	AMB	13 34 01.0	
	comp=N,157nm,0.4s						
GRPR				AMB	AMB	13 34 01.0	
	comp=N,269nm,0.4s						
GRPR				AMB	AMB	13 34 01.0	
	comp=N,523nm,0.4s						
GRPR				*e*S	**Sn**	**13 34 11.0**	**0.0**
GRPR				A	A	13 34 11.0	
	comp=N,2µm,0.4s						
GRPR				A	A	13 34 11.0	
	comp=N,1µm,0.4s						
GRPR	**Tuman**	**0.86**	**320**	*e*PN	**Pn**	**13 33 59.8**	**+0.4**
GRPR				*e*S	**Sn**	**13 34 11.2**	**+0.2**
GRPR				pmax	pmax		
	comp=Z,523nm,0.2s						
GRPR				pmax	pmax		
	comp=N,157nm,0.1s						
GRPR				pmax	pmax		
	comp=E,269nm,0.1s						
GRPR				smax	smax		
	comp=N,2µm,0.4s						
GRPR				smax	smax		
	comp=E,1µm,0.2s						
LAGR	**Lagunnoye**	**0.91**	**323**	*e*P	**Pn**	**13 34 00.0**	**+0.1**
LAGR				AMB	AMB	13 34 01.0	
	comp=E,143nm,0.2s						
LAGR				AMB	AMB	13 34 01.0	
	comp=E,71nm,0.2s						
LAGR				AMB	AMB	13 34 01.0	
	comp=E,440nm,0.2s						
LAGR				*e*S	**Sn**	**13 34 12.0**	**0.0**
LAGR				A	A	13 34 13.0	
	comp=E,3µm,0.2s						
LAGR				A	A	13 34 13.0	
	comp=E,1µm,0.2s						
LAGR	**Lagunnoye**	**0.91**	**323**	*e*PN	**Pn**	**13 34 00.3**	**+0.4**
LAGR				*e*S	**Sn**	**13 34 12.9**	**+0.9**
LAGR				pmax	pmax		
	comp=N,143nm,0.1s						
LAGR				pmax	pmax		
	comp=E,71nm,0.1s						
LAGR				pmax	pmax		
	comp=Z,440nm,0.1s						
LAGR				smax	smax		
	comp=E,1µm,0.3s						
LAGR				smax	smax		
	comp=N,3µm,0.2s						
JRA	**Rausu**	**1.19**	**301**	P	**Pn**	**13 34 04.7**	**+0.9**
JRA				*e*S	**Sn**	**13 34 20.6**	**+1.7**
JNK	**Nakash**	**1.35**	**281**	P	**Pn**	**13 34 06.0**	**0.0**
JNK				*e*S	**Sn**	**13 34 22.9**	**+0.2**
JAK	**Akkeshi**	**1.39**	**257**	P	**Pn**	**13 34 06.1**	**-0.4**
JAK				*e*S	**Sn**	**13 34 23.3**	**-0.4**
JTKR	**Abashiri--Toko**	**2.01**	**289**	P	**Pn**	**13 34 16.5**	**+1.5**
JTKR				*e*S	**Sn**	**13 34 41.7**	**+2.7**
JAR	**Ashorobuto**	**2.02**	**270**	P	**Pn**	**13 34 15.6**	**+0.5**
JAR				*e*S	**Sn**	**13 34 40.0**	**+0.8**
JOB	**Onbets**	**2.02**	**259**	P	**Pn**	**13 34 15.6**	**+0.4**
JOB				*e*S	**Sn**	**13 34 40.2**	**+0.9**
KUR	**Kuril'sk**	**2.13**	**26**	*e*P	**Pn**	**13 34 17.3**	**+0.7**
KUR				AMB	AMB	13 34 20.0	
	comp=N,15nm,0.1s						
KUR				*e*S	**Sn**	**13 34 41.8**	**0.0**
KUR				A	A	13 34 47.0	
	comp=N,137nm,0.2s						
KUR				A	A	13 34 47.0	
	comp=N,146nm,0.2s						
KUR	**Kuril'sk**	**2.13**	**26**	*d i*PN	**Pn**	**13 34 18.1**	**+1.5**
KUR				*e*S	**Sn**	**13 34 41.8**	**0.0**
KUR				pmax	pmax		
	comp=Z,30nm,0.5s						
KUR				pmax	pmax		
	comp=N,16nm,0.1s						
KUR				pmax	pmax		
	comp=E,12nm,0.1s						
KUR				smax	smax		
	comp=N,125nm,0.2s						
KUR				smax	smax		
	comp=E,92nm,0.2s						
JMP	**Maruseppu**	**2.40**	**287**	P	**Pn**	**13 34 22.0**	**+1.6**
JCH	**Churui**	**2.44**	**254**	P	**Pn**	**13 34 21.1**	**+0.2**
HRK	**Horoka**	**2.49**	**274**	*e*P	**Pn**	**13 34 23.2**	**+1.6**
ERM	**Erimo**	**2.82**	**243**	*e*P	**Pn**	**13 34 27.6**	**+1.5**
ERM	**Erimo**	**2.82**	**243**	⇓*e*PN	**Pn**	**13 34 27.6**	**+1.5**
KLR	**Kul'dur**	**11.80**	**305**	*e*P	**Pn**	**13 36 27.8**	**-1.3**
KLR	**Kul'dur**	**11.80**	**305**	⇑*i*PN	**Pn**	**13 36 27.8**	**-1.3**
KURK	**Kurchatov**	**45.40**	**304**	*e*P	**P**	**13 41 55.7**	**-1.3**
KURK	**Kurchatov**	**45.40**	**304**	⇑*e*P	**P**	**13 41 55.7**	**-1.3**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BRVK	**Borovoye**	**49.47**	**310**	*e*P	**P**	**13 42 28.7**	**+0.1**
BRVK	**Borovoye**	**49.47**	**310**	⇓*e*P	**P**	**13 42 28.7**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.0s						

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*IDC **05** 13:57:55.4±0.9, 47°.34S×165°.81E, h0^{km}, mb4.1/5, mb1 4.2/7, mb1mx4.0/42, mbtmp4.1/7, ML3.7/2, MS3.5/7, Ms1 3.5/7, ms1mx3.1/45, Error ellipse: s-maj=27.4km s-min=20.7km az=68.0*
*WEL **05** 13:57:55.8, 48°S±18°×16°6E±1°2, h33^{km}, ML5.0/10*
*ISCJB **05** 13:57:56.1±0.6, 47°.48S±0°.06×165°.79E±0°.08, h14^{km}, mb4.0/5, MS3.5/7, Error ellipse: s-maj=10.8km s-min=5.1km az=142.5*
ISC 05 13:57:57.6±0.8**, 47°.43S**±0°.08×**165°.82E**±0°.08**, h14**^{km}**, n39, σ1^s.24**/34**, mb4.2**/5**, MS3.5**/7**, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APZ	**The Paps**	**1.59**	**69**	P	**Pn**	**13 58 25.9**	**+0.5**
APZ				S	**Sn**	**13 58 44.9**	**-0.9**
WHZ	**Wether Hill Ro**	**2.12**	**44**	P	**Pn**	**13 58 33.2**	**+0.6**
WHZ				S	**Sn**	**13 58 58.6**	**-0.1**
DCZ	**Deep Cove**	**2.17**	**26**	P	**Pn**	**13 58 33.0**	**-0.1**
MLZ	**Mavora Lakes**	**2.60**	**38**	P	**Pn**	**13 58 40.4**	**+1.2**
MLZ				S	**Sn**	**13 59 12.1**	**+1.5**
TUZ	**Tuapeka**	**3.01**	**62**	P	**Pn**	**13 58 45.8**	**+1.0**
TUZ				S	**Sn**	**13 59 21.4**	**+0.9**
MSZ	**Milford Sound**	**3.12**	**29**	P	**Pn**	**13 58 47.8**	**+1.5**
EAZ	**Earnscleugh**	**3.26**	**49**	P	**Pn**	**13 58 48.8**	**+0.6**
EAZ				S	**Sn**	**13 59 27.7**	**+0.7**
WKZ	**Wanaka**	**3.42**	**42**	P	**Pn**	**13 58 52.0**	**+1.6**
WKZ				S	**Sn**	**13 59 33.2**	**+2.5**
HHSZ	**Highcliff Hill**	**3.63**	**67**	P	**Pn**	**13 58 54.8**	**+1.4**
HHSZ				S	**Sn**	**13 59 36.3**	**+0.3**
JCZ	**Jackson Bay**	**3.94**	**33**	P	**Pn**	**13 58 59.6**	**+1.8**
ODZ	**Otahua Downs**	**4.11**	**56**	P	**Pn**	**13 58 59.1**	**-0.8**
LBZ	**Lake Benmore**	**4.30**	**47**	P	**Pn**	**13 59 01.4**	**-1.2**
RPZ	**Rata Peaks**	**5.22**	**47**	Pn	**Pn**	**13 59 13.6**	**-1.6**
	2.7nm,0.3s,baz=202,slow=3.2,SNR=14						
RPZ				Sn	**Sn**	**14 00 11.4**	**-3.7**
	6.8nm,0.3s,baz=18,slow=8.8,SNR=3.6						
URZ	**Urewera**	**12.34**	**46**	Pn	**Pn**	**14 00 52.4**	**-0.4**
	0.4nm,0.3s,baz=222,slow=11,SNR=3.6						
URZ				Sn	Sn	14 03 01.2	-8.7
	0.4nm,0.3s,baz=288,slow=20,SNR=4.9						
STKA	**Stephens Creek**	**24.13**	**301**	P	**P**	**14 03 12.7**	**-0.2**
	1.6nm,0.8s,baz=120,slow=17,SNR=2.6						
STKA				LR	LR	14 11 10.5	
	comp=Z,65nm,19.4s,baz=199,slow=33						
DZM	**Mont Dzumac**	**25.30**	**1**	LR	LR	14 12 11.2	
	comp=Z,127nm,18.1s,baz=222,slow=34						
VNDA	**Vanda**	**30.24**	**182**	LR	LR	14 13 52.1	
	comp=Z,53nm,19.9s,baz=11,slow=32						
ASAR	**Alice Springs**	**34.77**	**302**	P	**P**	**14 04 47.4**	**-0.2**
	2.3nm,0.7s,baz=134,slow=8.8,SNR=28						
WRA	**Warramunga Arr**	**37.47**	**306**	P	**P**	**14 05 09.7**	**-1.0**
	1.4nm,0.7s,baz=139,slow=7.7,SNR=14						
HNR	**Honiara**	**38.19**	**351**	LR	LR	14 18 40.0	
	comp=Z,105nm,21.2s,baz=198,slow=33						
H01W1	**Cape Leeuwin H**	**40.16**	**269**	T	T	14 47 55.1	
	baz=124,slow=75,SNR=519						
H01W2	**Cape Leeuwin H**	**40.17**	**269**	T	T	14 47 59.6	
	baz=124,slow=75,SNR=472						
H01W3	**Cape Leeuwin H**	**40.18**	**269**	T	T	14 47 56.4	
	baz=124,slow=75,SNR=453						
QSPA	**South Pole Qui**	**42.70**	**180**	P	**P**	**14 05 55.0**	**+1.3**

	5.0nm,1.0s,baz=17,slow=3.0,SNR=10						
JAY	Jayapura	49.74	326	LR	LR	14 27 05.1	
	comp=Z,47nm,18.7s,baz=2.0,slow=35						
MAW	Mawson	51.70	208	LR	LR	14 27 56.2	
	comp=Z,92nm,19.0s,baz=356,slow=35						
SIJI	Sorong	55.24	316	LR	LR	14 31 02.7	
	comp=Z,56nm,20.3s,baz=106,slow=36						
SNAA	Sanae	60.94	184	P	P	14 08 09.4	-0.1
SNAA	Sanae	60.94	184	P	P	14 08 09.6	+0.1
	1.8nm,0.5s,baz=194,slow=11,SNR=38						
VNA3	Neumayer Olymp	61.60	182	P	P	14 08 13.8	-0.1
VNA1	Neumayer--Stat	62.16	182	P	P	14 08 18.1	+0.5
H08S2	Diego Garcia H	86.68	262	T	T	15 45 56.3	
	baz=144,slow=74						
H08S1	Diego Carcia H	86.69	262	T	T	15 45 56.3	
	baz=144						
H08S3	Diego Garcia H	86.70	262	T	T	15 45 59.6	
	baz=144,slow=74						
TORD	Torodi Ar. Bea	143.34	206	PKhKP	PKPpre	14 17 27.8	
	baz=164,slow=2.9						
BRTR	Keskin Array B	144.98	275	PKP	PKPab	14 17 33.0	-0.4
	2.9nm,0.8s,baz=134,slow=4.9,SNR=10						
SPITS	Spitsbergen Ar	147.03	349	PKPbc	PKPbc	14 17 38.4	+0.1
	1.7nm,0.5s,baz=50,slow=4.4,SNR=11						
ARCES	ARCESS Array B	150.58	333	PKPbc	PKPbc	14 17 46.2	-1.4
	2.8nm,0.7s,baz=18,slow=4.2,SNR=6.3						
FINES	FINESS Array B	153.23	316	PKPbc	PKPbc	14 17 53.5	-0.3
	0.8nm,0.5s,baz=80,slow=2.3,SNR=5.8						

ISCJB ***05*** *14:04:36.2±0.7, 24°.4S±0°.2×179°.9E±0°.1, h517^{km}, mb3.9/11, Error ellipse: s-maj=24.8km s-min=12.9km az=166.0*

IDC ***05*** *14:04:37.5±1.8, 24°.34S×179°.91E, h524^{km}±18^{km}, mb3.5/11, mb1 3.8/12, mb1mx3.4/44, mbtmp4.4/12, Error ellipse: s-maj=22.9km s-min=12.6km az=164.0*

ISC 05 14:04:36.7±0.7**, 24°.4S**±0°.2×**180°.0E**±0°.1**, h517**^{km}**, n17, σ1^{s}.13**/20**, mb4.0**/11**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	12.65	278	P	P	14 07 23.4	+1.2
	3.0nm,0.3s,baz=87,slow=17,SNR=23						
CTA	Charters Tower	31.46	271	P	P	14 10 16.6	+0.8
	16nm,0.4s,baz=91,slow=12,SNR=66						
STKA	Stephens Creek	34.53	249	P	P	14 10 42.0	+0.3
	3.0nm,0.5s,baz=96,slow=10,SNR=16						
ASAR	Alice Springs	41.94	261	P	P	14 11 41.8	-0.3
	2.1nm,0.5s,baz=94,slow=7.0,SNR=89						
ASAR				ScP	ScP	14 16 27.4	+0.6
	0.8nm,0.8s,baz=108,slow=4.5,SNR=4.9						
ASAR				S	S	14 17 21.6	-1.6
	0.3nm,0.7s,baz=100,slow=15,SNR=4.2						
WRA	Warramunga Arr	42.36	267	P	P	14 11 44.7	-0.7
	6.8nm,0.4s,baz=98,slow=8.4,SNR=157						
WRA				ScP	ScP	14 16 30.0	+1.6
	2.5nm,0.7s,baz=100,slow=3.8,SNR=14						
FITZ	Fitzroy Crossi	50.77	266	P	P	14 12 49.2	0.0
	4.4nm,0.6s,baz=142,slow=8.2,SNR=16						
QSPA	South Pole Qui	65.72	180	P	P	14 14 30.6	+0.8
	3.6nm,0.6s,baz=113,slow=0.8,SNR=23						
SNAA	Sanae	84.20	179	P	P	14 16 12.1	-0.9
	0.7nm,0.5s,baz=201,slow=13,SNR=23						
NVAR	Mina Array Bea	85.10	44	P	P	14 16 18.7	+0.6
	0.8nm,0.8s,baz=227,slow=8.0,SNR=7.5						
TXAR	Lajitas Array	90.69	58	P	P	14 16 45.6	+1.2
	1.3nm,0.8s,baz=214,slow=6.5,SNR=18						
ILAR	Eielson Array	92.48	14	P	P	14 16 51.3	-0.3
	0.2nm,0.6s,baz=207,slow=5.8,SNR=4.0						
PDAR	Pinedale Array	93.04	44	P	P	14 16 55.2	+0.2
	0.6nm,0.8s,baz=151,slow=3.4,SNR=4.8						
ARCES	ARCESS Array B	132.33	348	PKP	PKPdf	14 22 50.3	-0.7
	2.0nm,0.8s,baz=88,slow=3.4,SNR=6.8						
FINES	FINESS Array B	138.88	341	PKhKP	PKPpre	14 22 55.2	
	1.4nm,1.0s,baz=38,slow=3.4,SNR=4.3						
FINES				PKP	PKPdf	14 23 03.5	+0.1
	0.4nm,0.3s,baz=72,slow=6.2,SNR=3.9						
HFS	Hagfors	143.00	349	PKP	PKPdf	14 23 08.0	-2.8
	3.4nm,0.4s,baz=70,slow=4.9,SNR=44						
BRTR	Keskin Array B	147.84	307	PKPbc	PKPbc	14 23 22.4	-1.2
	0.6nm,0.6s,baz=147,slow=7.0,SNR=3.1						
EKA	Eskdalemuir Ar	148.98	3	PKPbc	PKPbc	14 23 25.3	-0.5
	0.6nm,0.4s,baz=0.2,slow=3.6,SNR=7.7						

CSEM ***05*** *14:11:11.8±0.2, 37°.30N×28°.85E, h15^{km}, ML2.6, Error ellipse: s-maj=5.5km s-min=5.0km az=65.0*

ISK ***05*** *14:11:11.3, 37°.31N×28°.85E, h18^{km}, ML2.5/7*

ISCJB ***05*** *14:11:12.3±0.5, 37°.31N±0°.03×28°.81E±0°.04, h12^{km}±5^{km}, Error ellipse: s-maj=6.0km s-min=5.2km az=141.2*

DDA ***05*** *14:11:12.9, 37°.31N×28°.79E, h7^{km}, Ml2.6*

ISC 05 14:11:11.8±1.0**, 37°.31N**±0°.02×**28°.90E**±0°.03**, h14**^{km}±8^{km}**, n24, σ1^{s}.01**/34**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAVA	DENIZLI_Tavas	0.16	4	*i* P	Pg	14 11 16.5	+0.7
TAVA				*i* S	Sb	14 11 19.6	-0.2
TAVA	DENIZLI_Tavas	0.16	4	P	Pg	14 11 16.5	+0.7
TAVA				S	Sb	14 11 19.6	-0.2
DENT	Denizli	0.46	13	PG	Pg	14 11 21.2	+0.3
DENT	Denizli	0.46	13	*e*Pg	Pg	14 11 21.2	+0.3
TURN	Turunc	0.49	209	PG	Pn	14 11 26.1	+1.7
TURN				SG	Sn	14 11 36.2	+3.4
TURN	Turunc	0.49	209	*e*Pg	Pn	14 11 26.1	+1.7
YER	Yerkesik	0.52	251	PG	Pg	14 11 21.7	-0.4
YER				SG	Sg	14 11 28.7	-0.3
YER	Yerkesik	0.52	251	*e*Pg	Pg	14 11 21.7	-0.4
YER				*e*Sg	Sg	14 11 28.7	-0.3
DALY	Dalyan (Mu˜la	0.53	202	PG	Pg	14 11 21.9	-0.2
DALY				SG	Sb	14 11 30.9	+0.6
DALY	Dalyan (Mu˜la	0.53	202	*i* Pg	Pg	14 11 21.9	-0.2
DALY				*e*Sg	Sb	14 11 30.9	+0.6
GOLH	Golhisar	0.53	97	*i* P	Pn	14 11 24.8	-0.3
GOLH				*i* S	Sn	14 11 34.6	+0.7
GOLH	Golhisar	0.53	97	P	Pn	14 11 24.8	-0.3
FETY	Fethiye	0.69	168	PG	Pb	14 11 24.1	-1.4
FETY	Fethiye	0.69	168	*e*Pg	Pb	14 11 24.1	-1.4
AYDN	Tasoluk	0.89	294	*i* P	Pb	14 11 28.6	-0.4
AYDN				*i* S	Sb	14 11 39.9	-0.8
AYDN	Tasoluk	0.89	294	P	Pb	14 11 28.6	-0.4
AYDN				S	Sb	14 11 39.9	-0.8
AYDB	Zeytinkoy-Aydi	1.02	309	PG	Pb	14 11 31.1	-0.3
AYDB	Zeytinkoy-Aydi	1.02	309	*e*Pg	Pb	14 11 31.1	-0.3
AKAS	Kas	1.21	152	PN	Pn	14 11 34.1	-0.4
AKAS	Kas	1.21	152	*e*Pn	Pn	14 11 34.1	-0.4
KULA	Kula-Manisa	1.22	351	PN	Pn	14 11 34.3	-0.2
KULA	Kula-Manisa	1.22	351	*e*Pn	Pn	14 11 34.3	-0.2
BODT	Bodrum	1.29	260	PN	Pn	14 11 34.1	-1.3
BODT	Bodrum	1.29	260	*e*Pn	Pn	14 11 34.1	-1.3

IDC ***05*** *14:18:23.8±2.5, 36°.26N×70°.64E, h168^{km}±21^{km}, mb3.6/13, mb1 3.7/19, mb1mx3.4/74, mbtmp4.2/19, Error ellipse: s-maj=19.1km s-min=13.3km az=170.0*

BJI ***05*** *14:18:25.2, 36°.62N×70°.59E, h171^{km}, mb4.5/19, mB4.5/10*

MOS ***05*** *14:18:25.4±1.0, 36°.37N×70°.68E, h189^{km}, mb4.2/19, Error ellipse: s-maj=11.9km s-min=5.5km az=80.4*

ISCJB ***05*** *14:18:27.1±0.3, 36°.44N±0°.02×70°.79E±0°.05, h204^{km}, mb3.8/26, Error ellipse: s-maj=5.6km s-min=2.8km az=158.9*

NNC ***05*** *14:18:33.3±2.8, 36°.98N×70°.68E, h218^{km}±26^{km}, mb3.9, mpv5.2, Error ellipse: s-maj=27.2km s-min=16.3km az=16.0*

ISC 05 14:18:27.8±0.5**, 36°.45N**±0°.04×**70°.68E**±0°.05**, h204**^{km}**, n109, σ2^{s}.22**/128**, mb4.0**/26**, 20C-17D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	2.81	159	⇓P	Pn	14 19 16.5	+1.0
CEP				S	S	14 19 52.0	-0.2
CEP	Cherat	2.81	159	P	S	14 19 52.0	-0.2
CHCP	Chirah Chowk	3.50	142	⇓P	Pn	14 19 24.6	+1.0
THW	Thamme Wali	3.75	166	⇓P	Pn	14 19 27.2	+0.5
SFK	Sufi-Kurgan	4.20	31	⇑P	Pn	14 19 32.4	+0.1
	363nm,0.4s						
SFK				⇑S	S	14 20 20.7	-1.9
	750nm,0.4s						
SFK	Sufi-Kurgan	4.20	31	PN	Pn	14 19 32.4	+0.1
SFK				S	S	14 20 20.7	-1.9
SFK				pmax	pmax		
	comp=Z,363nm,0.4s						
SFK				smax	smax		
	comp=N,750nm,0.4s						
SARP	Sargodha	4.81	159	P	Pn	14 19 39.9	+0.1
TAS	Tashkent	5.00	348	⇑P	Pn	14 19 42.2	0.0
	comp=N,762nm,0.4s						
TAS				⇑S	S	14 20 36.8	-3.7
	comp=N,728nm,0.3s						
TAS	Tashkent	5.00	348	PN	Pn	14 19 42.1	0.0
TAS				pmax	pmax		
	comp=Z,763nm,0.4s						
KSH	Kashi	5.18	52	P	Pn	14 19 40.1	-4.6
KSH				S	S	14 20 34.3	-11
KSH				pmax	pmax		
	comp=Z,990nm,0.5s						
KSH				smax	smax		
	comp=Z,1µm,0.4s						
KSH				smax	smax		
	comp=Z,2µm,0.6s						
AML	Almayashu	6.14	21	P	Pn	14 19 56.5	-0.6
	SNR=434						
MNAS	Manas	6.20	13	⇓P	Pn	14 19 57.6	0.0
	comp=Z,11nm,0.3s						
MNAS				⇓S	S	14 21 02.3	-6.4
	comp=Z,525nm,0.5s						
DHRM	DHARAMSHALA	6.26	130	*e*P	Pn	14 19 57.8	-0.8
DHRM				*e*S	S	14 21 07.5	-2.8
UCH	Uchtor	6.49	26	P	Pn	14 20 01.4	-0.4
	SNR=114						
KZA	Kyzart	6.65	31	P	Pn	14 20 02.8	-1.0
	SNR=43						
KK31	Karatay Array	6.65	359	P	Pn	14 20 02.7	-0.7
	comp=Z,67nm,0.4s,baz=185,slow=12,SNR=529						
KK31				⇑S	S	14 21 12.3	-6.8
	comp=Z,135nm,0.5s,baz=188,slow=22,SNR=33						
KK31	Karatay Array	6.65	359	PN	Pn	14 20 02.7	-0.7
KK31				pmax	pmax		
	comp=Z,67nm,0.4s						
EKS2	Erkin-Say	6.65	20	P	Pn	14 20 03.2	-0.3
	SNR=50						
AAK	Ala-Archa	6.85	24	P	Pn	14 20 05.9	-0.2
	comp=Z,26nm,0.3s,baz=192,slow=6.5,SNR=147						
AAK				S	S	14 21 20.5	-3.5
	comp=Z,19nm,0.3s,baz=191,slow=7.2,SNR=5.2						
AAK	Ala-Archa	6.85	24	⇑P	Pn	14 20 05.9	-0.2
	comp=Z,111nm,0.7s						
AAK				⇓S	S	14 21 20.4	-3.7
	comp=Z,314nm,0.6s						
AAK	Ala-Archa	6.85	24	P	Pn	14 20 06.0	-0.2
	SNR=86						
AAK	Ala-Archa	6.85	24	PN	Pn	14 20 05.8	-0.3
AAK				pmax	pmax		
	comp=Z,122nm,0.7s						
KBK	Karagaybulak	7.02	27	P	Pn	14 20 08.4	+0.1
	SNR=113						
FRU	Bishkek	7.06	24	*e*PN	Pn	14 20 08.5	-0.3
FRU				pmax	pmax		
	comp=Z,120nm,1.0s						
FRU				pmax	pmax		
	comp=E,660nm,1.8s						
ULHL	Ulahol	7.22	35	P	Pn	14 20 10.5	-0.5
	SNR=13						
CHMS	Chumysh	7.26	24	P	Pn	14 20 10.6	-0.7
	SNR=73						
USP	Ospenovka	7.42	22	P	Pn	14 20 12.5	-0.9
	SNR=15						
TKM2	Tokmak 2	7.49	29	⇑P	Pn	14 20 14.1	-0.4
	comp=E,103nm,0.5s						
TKM2				⇑S	S	14 21 34.3	-5.1
	comp=E,110nm,0.7s						
TKM2	Tokmak 2	7.49	29	P	Pn	14 20 14.2	-0.4
	SNR=86						
TKM2	Tokmak 2	7.49	29	PN	Pn	14 20 13.4	-1.1
TKM2				pmax	pmax		
	comp=Z,209nm,0.7s						
SMLA	Simla	7.57	133	*e*P	Pn	14 20 14.2	-1.2
SMLA				*e*S	S	14 21 34.6	-6.4
SMLA				IAML		14 21 38.8	
	comp=E,254nm,0.4s						
SMLA				IAML		14 21 39.0	
	comp=N,299nm,0.5s						
KKR	Kurukshetra	8.26	140	*e*P	Pn	14 20 21.2	-3.2
MDOK	Medeo	8.30	34	⇓P	Pn	14 20 24.6	-0.4
	comp=N,142nm,0.8s						
DDI	Dehra Dun	8.68	133	*e*P	Pn	14 20 27.4	-2.5
DDI				*e*x	x	14 22 03.7	
DDI				IAML		14 22 10.0	
	comp=E,254nm,0.3s						
DDI				IAML		14 22 10.8	
	comp=N,241nm,0.5s						
KHET	Khetri	9.41	151	*e*P	Pn	14 20 35.5	-3.9
KHET				*e*S	S	14 22 14.4	-10
KHET				IAML		14 22 19.4	
	comp=N,68nm,0.6s						
KHET				IAML		14 22 20.5	
	comp=E,98nm,0.3s						
JOSI	Joshimath	9.46	126	*e*P	Pn	14 20 38.4	-1.7
JOSI				*e*S	S	14 22 21.4	-5.0
JASL	Jaisalmer	9.50	179	*e*S	S	14 22 08.8	-18
NDI	New Delhi	9.50	143	*e*P	Pn	14 20 37.0	-3.5
PDGK	Podgornoye	9.64	42	⇑P	Pn	14 20 40.6	-1.8
	comp=E,16nm,0.6s						
PDGK	Podgornoye	9.64	42	P	Pn	14 20 40.5	-1.8
PDGK				pmax	pmax		
	comp=Z,28nm,1.0s						
SONA	Sohna	9.80	145	*e*P	Pn	14 20 40.8	-3.6
SONA				*e*S	S	14 22 25.8	-8.5
SONA				IAML		14 22 29.6	
	comp=E,67nm,0.3s						
SONA				IAML		14 22 35.0	
GEYT	Alibeck	10.13	282	P	Pn	14 20 46.5	-2.1
	comp=E,0.6nm,0.3s,baz=111,slow=8.4,SNR=11						
GEYT				S	S	14 22 35.6	-6.6
	comp=E,1.1nm,0.3s,baz=101,slow=38,SNR=3.9						
OTUK	Ortayu	11.85	5	⇓P	Pn	14 21 09.4	-1.1
	comp=E,7.7nm,0.8s						
PYUN	Piuthan	13.32	125	*e*P	Pn	14 21 27.5	-1.9
	comp=E,150nm,0.7s						
MK31	Makanchi Array	13.49	36	⇑P	Pn	14 21 30.5	-0.5
	comp=E,45nm,0.7s,baz=238,slow=6.0,SNR=6.8						
MKAR	Makanchi Array	13.49	36	P	Pn	14 21 30.6	-0.4
	comp=E,2.9nm,0.3s,baz=222,slow=16,SNR=102						
DANN	Dangsing	13.68	122	*e*P	Pn	14 21 32.5	-1.4
	comp=E,81nm,0.5s						
KOLN	Koldanda	13.95	125	*e*P	Pn	14 21 35.7	-1.4
	comp=E,49nm,0.4s						
BHPL	Bhopal	14.40	154	*e*P	Pn	14 21 41.1	-1.4
BHPL				*e*x	x	14 24 15.5	
GKN	Gorkha	14.49	122	*e*P	Pn	14 21 43.3	-0.5
	comp=E,87nm,0.4s						
AB31	Akbulak array	15.01	332	⇑P	Pn	14 21 48.5	-1.1
	comp=E,20nm,0.5s						
AB31				⇓S	S	14 24 33.0	-3.0
	comp=E,3.2nm,0.5s,baz=143,slow=26,SNR=5.2						
AB31	Akbulak array	15.01	332	P	Pn	14 21 48.6	-1.1
AB31				pmax	pmax		
	comp=Z,20nm,0.5s						
DMN	Daman	15.06	122	*e*P	Pn	14 21 50.1	-0.8
	comp=Z,100nm,0.5s						
KKN	Kakani	15.07	121	*e*P	Pn	14 21 50.0	-0.9
	comp=Z,87nm,0.6s						
KURBB	Kurchatov Arra	15.26	19	P	Pn	14 21 51.4	-1.3
	comp=Z,0.7nm,0.3s,baz=206,slow=10,SNR=50						
KURBB				S	S	14 24 42.8	+1.1
	baz=210,slow=19,SNR=4.8						
KURBB	Kurchatov Arra	15.26	19	⇑P	Pn	14 21 51.2	-1.5
	comp=Z,8.7nm,0.7s						
PKIN	Phulchoki	15.29	121	*e*P	Pn	14 21 53.1	-0.5
	comp=Z,115nm,0.7s						
KURK	Kurchatov	15.37	19	⇑P	Pn	14 21 52.3	-1.7
	comp=Z,14nm,0.8s						
KURK	Kurchatov	15.37	19	⇓*e*P	Pn	14 21 53.0	-1.0
KURK				pmax	pmax		
	comp=Z,17nm,0.8s						
GUN	Gumba	15.42	119	*e*P	Pn	14 21 54.8	-0.4
	comp=Z,112nm,0.6s						
JIRN	Jiri	15.79	119	*e*P	P	14 21 59.6	+0.1
	comp=Z,173nm,0.4s						
BVA0	Borovoye Array	16.58	359	⇓P	Pn	14 22 09.8	+1.2
	comp=Z,3.9nm,0.6s,baz=169,slow=12,SNR=7.4						
BVAR	Borovoye Array	16.58	359	P	Pn	14 22 08.4	-0.2
	comp=Z,1.5nm,0.3s,baz=165,slow=12,SNR=20						
BVAR				S	S	14 25 08.1	-2.2
	comp=Z,1.5nm,0.3s,baz=168,slow=24,SNR=7.6						
BVAR	Borovoye Array	16.58	359	P	Pn	14 22 08.4	-0.2
BVAR				S	S	14 25 08.1	-2.2
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
BVAR				smax	smax		
	comp=N,2.0nm,0.3s						
BRVK	Borovoye	16.61	359	⇑*e*P	Pn	14 22 09.9	+0.9
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
AKTO	Aktyubinsk	16.70	331	P	Pn	14 22 10.0	0.0
	comp=Z,1.4nm,0.3s,baz=139,slow=11,SNR=130						
AKTO	Aktyubinsk	16.70	331	⇓P	Pn	14 22 09.9	0.0
	comp=Z,66nm,1.0s						
TAPN	Taplejung	17.05	117	*e*P	Pn	14 22 14.9	+0.1
	comp=Z,68nm,0.7s						
ODAN	Odare	17.12	119	*e*P	Pn	14 22 16.0	+0.5
	comp=Z,77nm,0.7s						
DGZ	Jazzator, Alta	17.98	37	*i* P	Pn	14 22 24.6	-0.7
BOK	Bokaro	18.19	130	*e*P	Pn	14 22 28.3	+0.4
TURI	Tura	20.01	117	*e*x	P	14 22 46.8	+1.8
ZALV	Zalesovo Beam	20.07	25	P	P	14 22 45.8	+0.4
	comp=Z,40nm,0.7s,baz=221,slow=11,SNR=143						
NVS	Novosibirsk	20.32	21	⇑*i*P	P	14 22 49.2	+1.2
NVS				*e*S	S	14 26 21.1	-3.1
NVS				pmax	pmax		
	comp=N,22nm,0.8s						
NVS				pmax	pmax		
	comp=E,6.0nm,0.8s						
NVS				pmax	pmax		
	comp=Z,24nm,0.8s						
NVS				smax	smax		
	comp=N,19nm,1.6s						
NVS				smax	smax		
	comp=E,12nm,1.4s						
GNI	Garni	20.66	288	⇑*e*P	Pn	14 22 55.8	-1.9
GNI				pmax	pmax		
	comp=Z,17nm,0.6s						
TEZP	TEZPUR	21.21	111	*e*P	P	14 23 01.6	+3.9
SVE	Sverdlovsk	21.48	345	⇓*e*P	P	14 23 02.4	+2.3
SVE				pmax	pmax		
	comp=Z,9.0nm,0.7s						
ZEI	Tsey	21.53	295	*e*P	P	14 23 03.4	+2.4
ARU	Arti	21.60	342	P	P	14 23 01.6	+0.3
	comp=Z,2.7nm,0.5s,baz=135,slow=8.8,SNR=8.4						
ARU	Arti	21.60	342	*c i*P	P	14 23 01.8	+0.5
ARU				*PP	pP	14 23 34.7	-1.2
ARU						14 23 41.7	
ARU				S	S	14 26 48.9	+2.3
ARU				pmax	pmax		
	comp=Z,13nm,1.2s						
HVS	Khovu-Aksy	22.05	41	⇓*e*P	P	14 23 07.3	+1.4
HVS				pmax	pmax		
	comp=Z,46nm,1.5s						
KIV	Kislovodsk	22.58	298	*e*P	P	14 23 12.3	+1.3
KIV				*e*S	S	14 27 05.7	+2.8
KIV				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KOHI	KOHIMA	22.68	112	*e*P	P	14 23 20.0	+7.9
GTA	Gaotai	23.13	74	⇑P	P	14 23 17.9	+1.9
GTA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
SAIH	SAIHA	23.81	120	*e*P	P	14 23 26.0	+3.7
ZAK	Zakamensk	27.22	49	*e*P	P	14 23 51.7	-1.0
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
TLY	Talaya	27.86	46	*e*P	P	14 24 00.6	+2.3
TLY				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SONM	Songino Array	28.58	55	P	P	14 24 06.6	+1.9
	comp=Z,2.8nm,0.7s,baz=258,slow=9.9,SNR=14						
ULN	Ulaanbaatar	29.02	55	⇓*e*P	P	14 24 10.6	+1.9
ULN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
OBN	Obninsk	29.81	320	*i* P	P	14 24 15.6	+0.3
OBN				*e*		14 25 27.7	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
CMAR	Chiang Mai Arr	30.66	118	P	P	14 24 18.2	-5.0
	comp=Z,0.7nm,0.3s,baz=299,slow=9.2,SNR=2.9						
CMAR	Chiang Mai Arr	30.66	118	*e*P	P	14 24 25.9	+2.6
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KIEV	Kiev	32.78	309	⇑*e*P	P	14 24 43.6	+2.1
KIEV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
FINES	FINESS Array B	37.38	326	P	P	14 25 21.4	+0.9
	comp=Z,1.3nm,0.7s,baz=120,slow=7.5,SNR=5.7						
ARCES	ARCESS Array B	41.09	338	P	P	14 25 52.7	+1.6
	comp=Z,1.4nm,0.6s,baz=112,slow=9.7,SNR=4.0						
HFS	Hagfors	42.95	322	P	P	14 26 07.2	+1.0
	comp=Z,1.0nm,0.6s,baz=98,slow=11,SNR=4.2						
YAK	Yakutsk	44.16	35	⇓*i*P	P	14 26 16.7	+0.9
YAK				pmax	pmax		
	comp=Z,20nm,0.7s						
NB2	NORSAR Subarra	44.27	323	P	P	14 26 17.0	+0.2
	comp=Z,0.2nm,0.4s,baz=97,slow=7.9						
KLR	Kul'dur	45.38	54	⇓*i*P	P	14 26 27.2	+1.5
TIXI	Tiksi	45.92	22	*ce*P	P	14 26 30.5	+1.0
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SEY	Seymchan	54.61	34	P	P	14 27 35.8	+1.0
	comp=Z,2.6nm,0.7s,baz=268,slow=13,SNR=14						
BILL	Bilibino	58.77	26	*e*P	P	14 28 05.5	+1.6
BILL				*e**PP	pP	14 28 50.5	+0.3
BILL				*e*		14 30 15.4	
BILL				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TORD	Torodi Ar. Bea	65.46	268	P	P	14 28 48.4	-0.7
	comp=Z,1.8nm,0.6s,baz=55,slow=6.4						
INK	Inuvik	74.00	9	P	P	14 29 41.6	+1.2
	comp=Z,0.7nm,0.5s,baz=327,slow=6.7,SNR=4.8						
ILAR	Eielson Array	74.90	16	P	P	14 29 45.6	0.0
	comp=Z,1.0nm,1.0s,baz=322,slow=4.6,SNR=8.4						
YKA	Yellowknife Ar	81.31	2	P	P	14 30 21.8	+0.9
	comp=Z,0.4nm,0.7s,baz=341,slow=4.4,SNR=4.4						
YKA	Yellowknife Ar	81.31	2	*e*P	P	14 30 21.7	+0.9
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRA	Warramunga Arr	82.18	122	P	P	14 30 25.3	-0.7
	comp=Z,0.5nm,0.6s,baz=322,slow=5.9,SNR=14						
ASAR	Alice Springs	84.44	125	P	P	14 30 37.1	-0.4
	comp=Z,0.3nm,0.5s,baz=317,slow=4.6,SNR=6.0						

IDC 05 14:22:58.1±6.9**, 15°.41S**×**173°.03W, h0**^{km}**, mb3.8**/3**, mb1 4.2**/3**, mb1mx3.6**/52**, mbtmp3.8**/3**, MS3.2**/6**, Ms1 3.2**/6**, ms1mx2.9**/45**, Error ellipse: s-maj=325.8km s-min=24.0km az=141.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	1.92	39	Pn	Pn	14 23 30.0	-2.2
	74nm,0.3s,baz=205,slow=3.2,SNR=153						
AFI				Sn	Sn	14 23 48.4	-8.8
	324nm,0.3s,baz=44,slow=21,SNR=20						
AFI				LR	LR	14 23 51.6	
	comp=Z,172nm,18.6s,baz=165,slow=28						
DZM	Mont Dzumac	20.53	248	*e*P	Pn	14 27 44.6	+4.2
	58nm,1.4s						
PAE	Paea	22.59	99	*e*T	T	14 51 11.7	
	3.1nm,0.3s						
PPT	Papeete	22.59	99	LR	LR	14 35 26.0	
	comp=Z,38nm,18.7s,baz=280,slow=33						
PPT2	Papeete2	22.59	99	*e*LR	LR	14 33 35.1	
	114nm,24.2s						
PPT2	Papeete2	22.59	99	*e*T	T	14 51 12.5	
	3.8nm,0.3s						
TVO	Taravao	22.90	99	*e*T	T	14 51 36.2	
	1.8nm,0.4s						
TBI	Tubuai	23.57	113	*e*LR	LR	14 33 53.5	
	147nm,26.5s						
TBI	Tubuai	23.57	113	*e*T	T	14 52 37.8	
	6.8nm,0.3s						
PMOR	Pomariorio Ree	24.25	92	*e*T	T	14 53 09.3	
	3.4nm,0.4s						
HNR	Honiara	27.04	280	LR	LR	14 37 26.7	
	comp=Z,49nm,19.1s,baz=78,slow=32						
RKT	Rikitea	36.65	108	*e*T	T	15 08 54.9	
	2.9nm,0.3s						
WRA	Warramunga Arr	50.19	257	P	P	14 31 55.5	-0.7
	1.0nm,0.9s,baz=96,slow=7.9,SNR=4.6						
ASAR	Alice Springs	50.45	252	P	P	14 31 57.2	-0.8
	2.2nm,0.6s,baz=87,slow=8.1,SNR=35						
GUMO	Guam	50.64	303	LR	LR	14 51 21.9	
	comp=Z,17nm,19.3s,baz=100,slow=34						
FITZ	Fitzroy Crossi	58.56	258	LR	LR	14 55 25.2	
	comp=Z,51nm,20.5s,baz=16,slow=33						
MJAR	Matsushiro Arr	69.18	320	LR	LR	14 58 43.6	

	comp=Z,24nm,21.6s,baz=145,slow=31						
KSRS	**Korea Array**	**76.42**	**315**	LR	LR	15 03 12.3	
	comp=Z,7.8nm,21.2s,baz=95,slow=32						
ILAR	**Eielson Array**	**82.39**	**11**	P	P	14 35 22.4	+0.7
	0.3nm,0.6s,baz=223,slow=6.6,SNR=4.6						
BRTR	**Keskin Array B**	**146.39**	**321**	PKPbc	PKPab	14 42 42.8	+0.4
	1.3nm,0.8s,baz=128,slow=2.0,SNR=5.4						

IDC 05 14:30:17.7±3.2, 22°.77N×11°.97W, h0^{km}, mb3.5/1, mb1 3.6/2, mb1mx3.2/60, mbtmp3.6/2, Error ellipse: s-maj=115.5km s-min=62.7km az=66.0, Mauritania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I11CV	**MAIO ISLAND IN**	**12.96**	**237**	*i*		15 48 40.0	
	baz=51,slow=323,SNR=0.4						
TORD	**Torodi Ar. Bea**	**16.13**	**124**	Pn	Pn	14 34 05.4	-0.6
	baz=304,slow=12						
I42PT	**GRACIOSA ISLAN**	**21.22**	**324**	*i*		16 34 50.0	
	baz=142,slow=317,SNR=1.1						
MKAR	**Makanchi Array**	**76.56**	**45**	P	P	14 42 09.9	-0.1
	0.2nm,0.5s,baz=299,slow=6.0,SNR=4.4						
WRA	**Warramunga Arr**	**148.54**	**91**	PKPbc	PKPbc	14 50 07.0	-0.3
	0.4nm,0.7s,baz=276,slow=2.2,SNR=4.7						
ASAR	**Alice Springs**	**148.67**	**98**	PKPbc	PKPbc	14 50 06.9	-0.6
	0.5nm,0.7s,baz=290,slow=2.0,SNR=6.1						

NNC 05 14:41:21.8±12.0, 37°.98N×70°.95E, h0^{km}, mb3.6, mpv3.2, 2C-4D, Error ellipse: s-maj=93.8km s-min=65.8km az=17.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**2.84**	**44**	⇓Pn	Pn	14 42 08.1	-0.6
	7.6nm,0.4s						
SFK				⇓Sn	Sb	14 42 47.4	-1.7
	10nm,0.3s						
MNAS	**Manas**	**4.66**	**14**	⇑Pn	Pn	14 42 32.0	-1.6
	1.4nm,0.5s						
MNAS				⇓Sn	Sn	14 43 26.1	-2.3
	2.2nm,0.4s						
KK31	**Karatay Array**	**5.13**	**356**	⇑Pn	Pn	14 42 40.6	+0.6
	0.7nm,0.3s,baz=178,slow=12,SNR=9.3						
KK31				⇓Sn	Sn	14 43 42.9	+3.0
	1.0nm,0.3s,baz=168,slow=31						

GUC 05 14:51:29.1±0.5, 23°.16S×67°.29W, h250^{km}±9^{km}, ML3.9, 13C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB15	**IPOC Station P**	**2.01**	**268**	⇑*i*P	Pn	14 52 13.3	+1.4
PB15				*i* S	S	14 52 47.6	+1.9
PB06	**IPOC Station P**	**2.15**	**282**	⇑*i*P	Pn	14 52 15.1	+1.9
PB06				*i* S	S	14 52 50.0	+2.0
PB06				IAML		14 52 52.3	
	comp=E,255nm,0.3s						
PB09	**IPOC Station P**	**2.26**	**307**	⇑*i*P	Pn	14 52 16.6	+2.3
PB09				IAML		14 52 57.6	
	comp=N,96nm,0.3s						
PB03	**IPOC Station P**	**2.53**	**295**	⇑*i*P	Pn	14 52 19.1	+2.1
PB03				*i* S	S	14 52 57.1	+2.4
PB03				IAML		14 53 00.5	
	comp=N,285nm,0.1s						
PB05	**IPOC Station P**	**2.70**	**276**	⇑*i*P	Pn	14 52 20.7	+2.1
PB05				*i* S	S	14 52 59.8	+2.1
PB05				IAML		14 53 04.1	
	comp=E,104nm,0.5s						
PB04	**IPOC Station P**	**2.77**	**287**	⇑*i*P	Pn	14 52 21.7	+2.4
PB04				*i* S	S	14 53 01.6	+2.6
PB04				IAML		14 53 04.1	
	comp=N,254nm,0.3s						
PB07	**IPOC Station P**	**2.80**	**300**	⇑*i*P	Pn	14 52 22.0	+2.3
PB07				*i* S	S	14 53 01.9	+2.3
PB07				IAML		14 53 02.6	
	comp=N,403nm,0.6s						
GO02	**Mina Guanaco**	**2.90**	**226**	⇑*i*P	Pn	14 52 20.5	-0.3
GO02				*i* S	S	14 53 00.7	-0.9
ANCH	**Antofagasta**	**2.91**	**259**	⇑*i*P	Pn	14 53 01.1	+40
ANCH				*i* S	S	14 53 41.5	+40
PB01	**IPOC Station P**	**2.93**	**316**	⇑*i*P	Pn	14 52 22.9	+1.9
PB01				*e*S	S	14 53 04.5	+2.4
PB10	**IPOC Station P**	**3.02**	**263**	⇑*i*P	Pn	14 52 24.1	+2.3
PB10				*i* S	S	14 53 05.7	+2.1
PB02	**IPOC Station P**	**3.03**	**307**	⇑*i*P	Pn	14 52 24.3	+2.1
PB02				*i* S	S	14 53 06.2	+2.2
PB08	**IPOC Station P**	**3.47**	**330**	⇑*i*P	Pn	14 52 29.9	+2.6
PB08				*i* S	S	14 53 16.2	+2.8
MNMC	**Minye Minye**	**4.55**	**331**	⇓*i*P	Pn	14 52 42.0	+2.2
MNMC				*i* S	S	14 53 38.2	+2.2

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*DDA **05** 15:00:17.6, 37°.02N×27°.46E, h11^{km}, Ml2.4, Suspected Mining explosion.*
*ISK **05** 15:00:17.9, 36°.99N×27°.43E, h7^{km}, ML2.5/9*
*ISCJB **05** 15:00:18.2±0.4, 37°.03N±0°.03×27°.48E±0°.04, h0^{km}, Error ellipse: s-maj=4.5km s-min=3.4km az=144.9*
*CSEM **05** 15:00:18.2±0.2, 37°.01N×27°.44E, h1^{km}, ML2.4, Error ellipse: s-maj=4.4km s-min=3.4km az=56.0, Suspected Mining explosion.*
ISC 05 15:00:17.8±0.9, 37°.02N±0°.02×27°.49E±0°.02, h0^{km}, n33, σ1^{s}.59/45, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BDRM	**Kayabasi**	**0.06**	**325**	*i* P	**Pg**	**15 00 20.1**	**+1.2**
BDRM				*i* S	**Sg**	**15 00 21.4**	**+1.7**
BDRM	**Kayabasi**	**0.06**	**325**	P	**Pg**	**15 00 20.1**	**+1.2**
BDRM				S	**Sg**	**15 00 21.5**	**+1.7**
BODT	**Bodrum**	**0.15**	**288**	PG	**Pg**	**15 00 20.7**	**+0.1**
BODT				SG	**Sg**	**15 00 23.4**	**+0.8**
BODT	**Bodrum**	**0.15**	**288**	*e*Pg	**Pg**	**15 00 20.7**	**+0.1**
BODT				*e*Sg	**Sg**	**15 00 23.4**	**+0.8**
DATC	**Datca-Mugla**	**0.29**	**151**	PG	**Pg**	**15 00 24.4**	**+1.1**
DATC				SG	**Sg**	**15 00 29.5**	**+2.4**
DATC	**Datca-Mugla**	**0.29**	**151**	*e*Pg	**Pg**	**15 00 24.4**	**+1.1**
DATC				*e*Sg	**Sg**	**15 00 29.5**	**+2.4**
DAT	**Datca**	**0.29**	**166**	PG	**Pg**	**15 00 24.0**	**+0.6**
DAT				SG	**Sg**	**15 00 28.6**	**+1.4**
DAT	**Datca**	**0.29**	**166**	*i* P	**Pg**	**15 00 23.8**	**+0.4**
DAT				*i* S	**Sg**	**15 00 28.8**	**+1.6**
DAT	**Datca**	**0.29**	**166**	*e*Pg	**Pg**	**15 00 24.0**	**+0.6**
DAT				S	**Sg**	**15 00 28.8**	**+1.6**
MLSB	**Milas**	**0.36**	**39**	PG	**Pg**	**15 00 26.6**	**+1.9**
MLSB	**Milas**	**0.36**	**39**	*e*Pg	**Pg**	**15 00 26.6**	**+1.9**
YER	**Yerkesik**	**0.65**	**79**	PG	**Pg**	**15 00 31.5**	**+1.3**
YER	**Yerkesik**	**0.65**	**79**	*e*Pg	**Pg**	**15 00 31.5**	**+1.3**
AYDN	**Tasoluk**	**0.72**	**26**	*i* P	**Pg**	**15 00 31.9**	**+0.4**
AYDN				*i* S	**Sg**	**15 00 41.4**	**+0.6**
AYDN	**Tasoluk**	**0.72**	**26**	P	**Pg**	**15 00 31.9**	**+0.4**
AYDN				S	**Sg**	**15 00 41.4**	**+0.6**
TURN	**Turunc**	**0.91**	**99**	PG	Pg	15 00 31.2	-3.9
TURN				SG	**Sg**	**15 00 42.1**	**-4.8**
TURN	**Turunc**	**0.91**	**99**	*i* P	Pg	15 00 31.0	-4.1
TURN				*i* S	**Sg**	**15 00 42.0**	**-4.8**
TURN	**Turunc**	**0.91**	**99**	*e*Pg	Pg	15 00 31.2	-3.9
ARG	**Arkhangelos**	**0.95**	**147**	PG	**Pg**	**15 00 36.3**	**+0.4**
ARG	**Arkhangelos**	**0.95**	**147**	*e*Pg	**Pg**	**15 00 36.3**	**+0.4**
DALY	**Dalyan (Mu˜la**	**0.95**	**102**	PG	**Pg**	**15 00 37.3**	**+1.2**
DALY	**Dalyan (Mu˜la**	**0.95**	**102**	*e*Pg	**Pg**	**15 00 37.3**	**+1.2**
AYDB	**Zeytinkoy-Aydi**	**0.98**	**19**	PG	**Pg**	**15 00 37.5**	**+0.9**
AYDB	**Zeytinkoy-Aydi**	**0.98**	**19**	*e*Pg	**Pg**	**15 00 37.5**	**+0.9**
DGB	**˜zmir**	**1.14**	**335**	*i* P	**Pg**	**15 00 38.7**	**-0.9**
TAVA	**DENIZLI_Tavas**	**1.22**	**68**	*i* P	**Pg**	**15 00 41.2**	**0.0**
TAVA				*i* S	**Sg**	**15 00 58.6**	**+1.5**
TAVA	**DENIZLI_Tavas**	**1.22**	**68**	P	**Pg**	**15 00 41.2**	**0.0**
TAVA				S	**Sg**	**15 00 58.6**	**+1.5**
FETY	**Fethiye**	**1.34**	**106**	PN	**Pg**	**15 00 44.2**	**+0.8**
FETY	**Fethiye**	**1.34**	**106**	*e*Pn	**Pg**	**15 00 44.2**	**+0.8**
URLA	**Izmir**	**1.52**	**332**	PN	**Pb**	**15 00 46.9**	**+0.1**
URLA	**Izmir**	**1.52**	**332**	*e*Pn	**Pb**	**15 00 46.9**	**+0.1**
APE	**Apeiranthos**	**1.57**	**273**	PN	**Pn**	**15 00 45.3**	**-1.6**
APE	**Apeiranthos**	**1.57**	**273**	*e*Pn	**Pn**	**15 00 45.3**	**-1.6**

MAN 05 15:00:42.2, 9°.85N×125°.61E, h90^{km}, mb4.1, ML2.9, MS2.6, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.13**	**242**	⇑*e*P	Pn	15 00 55.8	+0.8
SCPH				*e*S	Sn	15 01 06.2	+1.8
MSLP	**Maasin**	**0.79**	**291**	*e*P	Pn	15 01 04.0	+4.4
MSLP				*e*S	Sn	15 01 23.0	+10
BESP	**Borongan**	**1.75**	**355**	*e*P	Pn	15 01 11.7	+0.5
BESP				*e*S	Sn	15 01 33.9	+0.7
CNP	**Catarman**	**2.81**	**341**	*e*P	Pn	15 01 26.5	+1.4
CNP				*e*S	Sn	15 01 59.0	+0.9

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*ISCJB **05** 15:03:27.9±0.4, 40°.90N±0°.02×43°.21E±0°.03, h0^{km}, Error ellipse: s-maj=4.3km s-min=2.8km az=44.3*
*CSEM **05** 15:03:27.7±0.2, 40°.87N×43°.22E, h2^{km}, ML2.6, Error ellipse: s-maj=5.6km s-min=4.0km az=141.0, Suspected Mining explosion.*
*DDA **05** 15:03:27.2, 40°.92N×43°.26E, h7^{km}, Ml2.7, Suspected Mining explosion.*
*TIF **05** 15:03:27.6, 40°.86N×43°.28E, h15^{km}±1^{km}*
*ISK **05** 15:03:27.4, 40°.94N×43°.24E, h12^{km}, ML2.6/2*
ISC 05 15:03:27.1±0.8, 40°.88N±0°.02×43°.19E±0°.02, h0^{km}, n40, σ0^{s}.76/63, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARS	**Kars**	**0.27**	**198**	PG	**Pb**	**15 03 33.9**	**-1.0**
KARS				SG	**Sb**	**15 03 40.5**	**+0.4**
KARS	**Kars**	**0.27**	**198**	*e*Pg	**Pb**	**15 03 33.9**	**-1.0**
EAK	**Akyaka**	**0.37**	**121**	*i* P	**Pg**	**15 03 33.9**	**-0.4**
EAK				*i* S	**Sg**	**15 03 40.5**	**+1.4**
EAK	**Akyaka**	**0.37**	**121**	P	**Pg**	**15 03 33.9**	**-0.4**
EAK				S	**Sg**	**15 03 40.5**	**+1.4**
DIGO	**Kars**	**0.49**	**163**	*i* P	**Pg**	**15 03 36.8**	**+0.3**
DIGO	**Kars**	**0.49**	**163**	P	**Pg**	**15 03 36.8**	**+0.3**
BGD	**Bogdanovka**	**0.49**	**39**	P	**Pg**	**15 03 36.8**	**+0.2**
BGD				S	**Sg**	**15 03 44.3**	**+1.3**
BGD	**Bogdanovka**	**0.49**	**39**	P	**Pg**	**15 03 36.8**	**+0.2**
BGD				S	**Sg**	**15 03 44.3**	**+1.3**
AKH	**Akhalkalaki**	**0.57**	**23**	PG	**Pg**	**15 03 38.2**	**0.0**
AKH				SG	**Sg**	**15 03 45.4**	**-0.2**
AKH	**Akhalkalaki**	**0.57**	**23**	P	**Pg**	**15 03 38.4**	**+0.2**
AKH				S	**Sg**	**15 03 45.1**	**-0.5**
AKH	**Akhalkalaki**	**0.57**	**23**	P	**Pg**	**15 03 38.4**	**+0.2**
AKH				S	**Sg**	**15 03 45.1**	**-0.5**
SENK	**Senkaya-Erzuru**	**0.71**	**244**	PG	**Pb**	**15 03 42.8**	**+0.2**
SENK	**Senkaya-Erzuru**	**0.71**	**244**	*e*Pg	**Pb**	**15 03 42.8**	**+0.2**
DDEM	**Demirkent**	**1.09**	**271**	*i* P	**Pb**	**15 03 49.1**	**+0.2**
DDEM				*i* S	**Sn**	**15 04 05.3**	**-0.3**
DDEM	**Demirkent**	**1.09**	**271**	P	**Pb**	**15 03 49.1**	**+0.2**
DDEM				S	**Sn**	**15 04 05.3**	**-0.3**
DBAD	**Bademkaya**	**1.14**	**277**	*i* P	**Pb**	**15 03 49.9**	**+0.1**
DBAD	**Bademkaya**	**1.14**	**277**	P	**Pb**	**15 03 49.9**	**+0.1**
EATA	**Eleskirt**	**1.15**	**208**	*i* P	**Pg**	**15 03 48.7**	**-0.4**
EATA				*i* S	**Sn**	**15 04 08.5**	**+1.1**
EATA	**Eleskirt**	**1.15**	**208**	P	**Pg**	**15 03 48.7**	**-0.4**
EATA				S	**Sn**	**15 04 08.5**	**+1.1**
DBOC	**Borcka**	**1.24**	**292**	*i* P	**Pb**	**15 03 51.5**	**+0.1**
DBOC	**Borcka**	**1.24**	**292**	P	**Pb**	**15 03 51.5**	**+0.1**
BCA	**Borcka**	**1.31**	**296**	PN	**Pg**	**15 03 52.4**	**+0.2**
BCA	**Borcka**	**1.31**	**296**	*e*Pn	**Pg**	**15 03 52.4**	**+0.2**
GNI	**Garni**	**1.39**	**121**	PN	**Pg**	**15 03 53.6**	**-0.2**
GNI	**Garni**	**1.39**	**121**	*e*Pn	**Pg**	**15 03 53.6**	**-0.2**
TBLG	**Delisi**	**1.44**	**54**	PN	**Pn**	**15 03 52.6**	**-2.0**
TBLG	**Delisi**	**1.44**	**54**	P	**Pn**	**15 03 53.8**	**-0.8**
TBLG				S	**Sg**	**15 04 13.1**	**-0.4**
TBLG	**Delisi**	**1.44**	**54**	*e*Pn	**Pn**	**15 03 52.6**	**-2.0**
TBLG	**Delisi**	**1.44**	**54**	P	**Pn**	**15 03 53.8**	**-0.8**
TBLG				S	**Sg**	**15 04 13.1**	**-0.4**
SEAG	**Tbilisi Sea**	**1.50**	**54**	P	**Pg**	**15 03 57.4**	**+1.5**
SEAG				S	**Sn**	**15 04 16.2**	**+0.5**
SEAG	**Tbilisi Sea**	**1.50**	**54**	P	**Pg**	**15 03 57.4**	**+1.5**
SEAG				S	**Sn**	**15 04 16.2**	**+0.5**
DUS	**Dusheti**	**1.66**	**43**	P	**Pb**	**15 03 58.5**	**-0.1**
DUS				S	**Sn**	**15 04 19.0**	**-0.6**
DUS	**Dusheti**	**1.66**	**43**	P	**Pb**	**15 03 58.5**	**-0.1**
DUS				S	**Sn**	**15 04 19.0**	**-0.6**
ONI	**Oni**	**1.72**	**7**	P	**Pb**	**15 03 59.2**	**-0.4**
ONI				S	**Sg**	**15 04 23.5**	**+1.2**
DGRG	**David-gareji**	**1.75**	**70**	P	**Pb**	**15 03 59.6**	**-0.4**
DGRG				S	**Sg**	**15 04 24.9**	**+1.7**
DGRG	**David-gareji**	**1.75**	**70**	P	**Pn**	**15 03 59.2**	**+0.5**
DGRG				S	**Sg**	**15 04 23.8**	**+0.6**
GUDG	**Gudauri**	**1.85**	**31**	P	**Pg**	**15 04 02.5**	**-0.2**
GUDG				S	**Sn**	**15 04 24.6**	**0.0**
GUDG	**Gudauri**	**1.85**	**31**	P	**Pg**	**15 04 02.5**	**-0.2**
GUDG				S	**Sn**	**15 04 24.6**	**0.0**
DDFL	**Dedoflistskaro**	**2.28**	**75**	P	**Pg**	**15 04 11.0**	**+0.1**
DDFL	**Dedoflistskaro**	**2.28**	**75**	P	**Pg**	**15 04 11.0**	**+0.1**

IDC 05 15:50:42.1±1.7, 16°.48S×178°.38W, h0^{km}, mb3.8/5, mb1 4.1/5, mb1mx3.6/51, mbtmp3.8/5, Error ellipse: s-maj=162.7km s-min=25.9km az=153.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.36**	**240**	P	P	15 58 13.4	-0.1
	0.6nm,0.5s,baz=105,slow=12,SNR=4.1						
WRA	**Warramunga Arr**	**44.94**	**258**	P	P	15 58 59.3	+0.1
	0.6nm,0.8s,baz=90,slow=6.9,SNR=5.7						
ASAR	**Alice Springs**	**45.22**	**253**	P	P	15 59 01.0	-0.4
	4.1nm,0.5s,baz=88,slow=8.2,SNR=70						
TXAR	**Lajitas Array**	**85.21**	**58**	P	P	16 03 20.9	0.0
	0.1nm,0.4s,baz=209,slow=4.1,SNR=3.7						
PDAR	**Pinedale Array**	**86.30**	**43**	P	P	16 03 26.4	+0.1
	0.2nm,0.6s,baz=235,slow=3.2,SNR=3.7						

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*NIED **05** 16:07:00, 42°.00N×142°.60E, h50^{km}, Mw4.1   Best double couple: M$_0$1.41000×10^{15} NP1:ϕ_s212.00000°, δ24.00000°, λ95.00000°.   NP2:ϕ_s26.00000°, δ66.00000°, λ88.00000°.*
*ISCJB **05** 16:07:15.8±0.3, 42°.04N±0°.03×142°.58E±0°.03, h70^{km}±2^{km}, mb4.1/35, Error ellipse: s-maj=5.4km s-min=3.2km az=147.9*
*BJI **05** 16:07:16.5, 42°.10N×142°.60E, h64^{km}, mb4.5/13, mB4.6/6*
*JMA **05** 16:07:16.3±0.2, 42°.04N×142°.60E, h64^{km}±2^{km}, M3.8 Broadband fault plane solution: P waves.   NP1: ϕ_s21.00000°, δ64.00000°, λ89.00000°.   NP2:ϕ_s204.00000°, δ26.00000°, λ92.00000°.   Principal axes: T Plg71.0000°, Azm289.0000°; N Plg1.0000°, Azm22.0000°; P Plg19.0000°, Azm112.0000°;*
JMA   Felt I J1.
*MOS **05** 16:07:16.2±0.8, 42°.03N×142°.64E, h76^{km}, mb4.3/20 Error ellipse: s-maj=9.1km s-min=6.2km az=76.8*
*NEIC **05** 16:07:16.9±0.5, 42°.01N×142°.76E, h78^{km}±5^{km}, mb4.6/8, Error ellipse: s-maj=11.2km s-min=5.3km az=116.0*
*IDC **05** 16:07:17.8±1.6, 42°.07N×142°.54E, h70^{km}±13^{km}, mb3.7/22, mb1 3.8/28, mb1mx3.7/73, mbtmp3.9/28, MS2.9/11, Ms1 2.9/11, ms1mx2.6/68, Error ellipse: s-maj=14.5km s-min=9.9km az=122.0*
*SKHL **05** 16:07:17.3±1.1, 41°.96N×142°.71E, h82^{km}±2^{km}, mb5.2/5, msh6.0/5*
ISC 05 16:07:16.9±0.6, 42°.03N±0°.04×142°.57E±0°.03, h64^{km}±5^{km}, n133, σ1^{s}.11/148, mb4.2/35, 13C-13D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNBK	**Urakawa-nobuka**	**0.28**	**29**	⇑P	**Pn**	**16 07 26.5**	**-0.8**
JNBK				*e*S	**Sn**	**16 07 34.3**	**-0.6**
JSHD	**Hidakashinhida**	**0.39**	**349**	P	**Pn**	**16 07 27.7**	**-0.4**
JSHD				*e*S	**Sn**	**16 07 36.6**	**+0.3**
ERM	**Erimo**	**0.44**	**92**	*e*P	**Pn**	**16 07 28.2**	**-0.3**
ERM	**Erimo**	**0.44**	**92**	*e*Pn	**Pn**	**16 07 28.2**	**-0.3**
ERM				*e*Sn	**Sn**	**16 07 35.7**	**-1.3**
ERM	**Erimo**	**0.44**	**92**	*c i*PN	**Pn**	**16 07 28.2**	**-0.3**
JEM	**Erimo**	**0.44**	**92**	⇑P	**Pn**	**16 07 28.2**	**-0.3**
JEM				*e*S	**Sn**	**16 07 36.9**	**-0.1**
JTHR	**Tokachihiroo**	**0.60**	**64**	P	**Pn**	**16 07 29.8**	**-0.4**
JTHR				*e*S	**Sn**	**16 07 39.6**	**-0.4**
JBT2	**Biratori 2**	**0.76**	**349**	⇓P	**Pn**	**16 07 31.5**	**-0.6**
JBT2				*e*S	**Sn**	**16 07 43.2**	**-0.1**
JCH	**Churui**	**0.83**	**45**	⇑P	**Pn**	**16 07 32.4**	**-0.5**
JCH				*e*S	**Sn**	**16 07 44.3**	**-0.5**
JFR	**Furan**	**1.13**	**1**	⇓P	**Pn**	**16 07 36.2**	**-0.6**
JKB	**Kayabe**	**1.15**	**263**	⇓P	**Pn**	**16 07 36.6**	**-0.5**
JKB				*e*S	**Sn**	**16 07 51.8**	**-0.3**
JEW	**Eniwo**	**1.16**	**315**	⇓P	**Pn**	**16 07 36.9**	**-0.2**
JEW				*e*S	**Sn**	**16 07 52.0**	**-0.2**
JNB	**Noboribetsu**	**1.22**	**292**	⇓P	**Pn**	**16 07 36.9**	**-1.0**
JOB	**Onbets**	**1.28**	**47**	⇑P	**Pn**	**16 07 39.2**	**+0.5**
JOT	**Ohata**	**1.31**	**241**	⇓P	**Pn**	**16 07 38.7**	**-0.4**
JOT				*e*S	**Sn**	**16 07 55.8**	**+0.1**
JAB	**Ashibetsu**	**1.50**	**350**	P	**Pn**	**16 07 41.8**	**+0.2**
JAR	**Ashorobuto**	**1.55**	**35**	⇑P	**Pn**	**16 07 41.8**	**-0.5**
JYM2	**Yakumo 2**	**1.64**	**274**	⇓P	**Pn**	**16 07 43.1**	**-0.4**
ASAJ	**Asahikawa**	**2.09**	**1**	P	**Pn**	**16 07 50.1**	**+0.5**
	43nm,0.3s,baz=213,slow=9.7,SNR=580						
ASAJ				S	**Sn**	**16 08 15.2**	**+0.8**
	22nm,0.3s,baz=52,slow=26,SNR=6.0						
ASAJ	**Asahikawa**	**2.09**	**1**	*e*Pn	**Pn**	**16 07 49.8**	**+0.2**
GLVR	**Golovnino**	**2.76**	**51**	*e*P	**Pn**	**16 07 59.1**	**+0.4**
GLVR				AMB	AMB	16 08 03.0	
	162nm,0.3s						
GLVR				*e*S	**Sn**	**16 08 30.7**	**-0.2**
GLVR				A	A	16 08 33.5	
	1µm,0.4s						
GLVR				A	A	16 08 33.5	
	2µm,0.4s						
GLVR	**Golovnino**	**2.76**	**51**	*e*PN	**Pn**	**16 07 59.1**	**+0.4**
GLVR				*e*S	**Sn**	**16 08 30.7**	**-0.2**
GLVR				pmax	pmax		
	comp=N,29nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,162nm,0.1s						
GLVR				smax	smax		
	comp=N,1µm,0.3s						
GLVR				smax	smax		
	comp=E,2µm,0.3s						
GRPR	**Tuman**	**3.06**	**49**	*e*P	**Pn**	**16 08 03.7**	**+0.9**
GRPR				AMB	AMB	16 08 06.9	
	comp=E,134nm,0.4s						
GRPR				*e*S	**Sn**	**16 08 37.2**	**-1.0**
GRPR				A	A	16 08 43.7	
	comp=E,810nm,0.4s						
GRPR				A	A	16 08 43.7	
	comp=E,330nm,0.4s						
GRPR	**Tuman**	**3.06**	**49**	*e*PN	**Pn**	**16 08 03.7**	**+0.9**
GRPR				*e*S	**Sn**	**16 08 37.2**	**-1.0**
GRPR				pmax	pmax		
	comp=Z,134nm,0.4s						
GRPR				pmax	pmax		
	comp=N,86nm,0.2s						
GRPR				pmax	pmax		
	comp=E,75nm,0.3s						
GRPR				smax	smax		
	comp=N,806nm,0.3s						
GRPR				smax	smax		
	comp=E,328nm,0.3s						
LAGR	**Lagunnoye**	**3.11**	**48**	*e*P	**Pn**	**16 08 04.2**	**+0.7**
LAGR				AMB	AMB	16 08 06.3	
	comp=E,170nm,0.4s						
LAGR				*e*S	**Sn**	**16 08 40.4**	**+1.0**
LAGR				A	A	16 08 47.2	
	comp=E,1µm,0.4s						
LAGR				A	A	16 08 47.2	
	comp=E,501nm,0.4s						
LAGR	**Lagunnoye**	**3.11**	**48**	*e*PN	**Pn**	**16 08 04.2**	**+0.7**
LAGR				*e*S	**Sn**	**16 08 40.4**	**+1.0**
LAGR				pmax	pmax		
	comp=Z,167nm,0.4s						
LAGR				pmax	pmax		
	comp=N,82nm,0.3s						
LAGR				pmax	pmax		
	comp=E,500nm,0.3s						
LAGR				smax	smax		
	comp=N,1µm,0.3s						
LAGR				smax	smax		
	comp=E,501nm,0.3s						
YUK	**Yuzh-Kuril’sk**	**3.14**	**49**	*e*P	**Pn**	**16 08 04.5**	**+0.6**
YUK				AMB	AMB	16 08 06.7	
	comp=E,210nm,0.5s						
YUK				*i* S	**Sn**	**16 08 39.9**	**-0.2**
YUK				A	A	16 08 50.0	
	comp=E,410nm,0.4s						
YUK				A	A	16 08 50.0	
	comp=E,790nm,0.4s						
YUK	**Yuzh-Kuril’sk**	**3.14**	**49**	*c i*PN	**Pn**	**16 08 04.5**	**+0.6**
YUK				*i* S	**Sn**	**16 08 39.9**	**-0.2**
YUK				pmax	pmax		
	comp=Z,212nm,0.5s						
YUK				pmax	pmax		
	comp=N,41nm,0.1s						
YUK				pmax	pmax		
	comp=E,49nm,0.2s						
YUK				smax	smax		
	comp=N,792nm,0.4s						
YUK				smax	smax		
	comp=E,408nm,0.4s						
SHO	**Shikotan**	**3.63**	**58**	*d i*PN	**Pn**	**16 08 10.6**	**0.0**
SHO				*i* S	**Sn**	**16 08 49.6**	**-2.5**
SHO				pmax	pmax		
	comp=N,11nm,0.2s						
SHO				pmax	pmax		
	comp=Z,114nm,0.2s						
SHO				smax	smax		
	comp=E,180nm,0.2s						
SHO				smax	smax		
	comp=N,465nm,0.4s						
YSS	**Yuzh-Sakhalins**	**4.92**	**1**	*e*P	**Pn**	**16 08 30.5**	**+2.3**
YSS	**Yuzh-Sakhalins**	**4.92**	**1**	*e*Pn	**Pn**	**16 08 30.4**	**+2.1**
YSS	**Yuzh-Sakhalins**	**4.92**	**1**	α *i*PN	**Pn**	**16 08 30.6**	**+2.3**
YSS				*e*S	**Sn**	**16 09 22.5**	**-1.4**
YSS				pmax	pmax		
	comp=Z,30nm,0.9s						
YSS				smax	smax		
	comp=N,10.0nm,0.7s						
YSS				smax	smax		
	comp=E,10.0nm,0.8s						
KUR	**Kuril’sk**	**5.00**	**48**	*i* P	**Pn**	**16 08 30.3**	**+0.9**
KUR				AMB	AMB	16 08 33.3	
	comp=E,71nm,0.3s						
KUR				*i* S	**Sn**	**16 09 25.0**	**-0.8**
KUR				A	A	16 09 30.2	
	comp=E,127nm,0.3s						
KUR				A	A	16 09 30.2	
	comp=E,84nm,0.3s						
KUR	**Kuril’sk**	**5.00**	**48**	*c i*PN	**Pn**	**16 08 30.8**	**+1.4**
KUR				*e*S	**Sn**	**16 09 29.0**	**+3.2**
KUR				pmax	pmax		
	comp=Z,60nm,0.4s						
KUR				pmax	pmax		
	comp=N,19nm,0.3s						
KUR				pmax	pmax		
	comp=E,17nm,0.4s						
KUR				smax	smax		
	comp=E,100nm,0.4s						
KUR				smax	smax		
	comp=N,45nm,0.3s						
TEY	**Ternei**	**5.28**	**307**	*e*PN	Pn	16 08 23.8	-9.3
MJB9	**Matsu-Tunnel**	**6.44**	**213**	*e*Pn	**Pn**	**16 08 50.2**	**+1.2**
MAJO	**Matsushiro**	**6.44**	**213**	*e*P	**Pn**	**16 08 51.6**	**+2.5**
MAJO	**Matsushiro**	**6.44**	**213**	*e*Pn	**Pn**	**16 08 50.5**	**+1.4**
MAJO	**Matsushiro**	**6.44**	**213**	⇓*e*PN	**Pn**	**16 08 51.6**	**+2.5**
MAJO				pmax	pmax		
	comp=Z,9.0nm,1.7s						
MAT	**Matsushiro**	**6.44**	**213**	P	**Pn**	**16 08 51.6**	**+2.5**
MJAR	**Matsushiro Arr**	**6.44**	**213**	P	**Pn**	**16 08 50.7**	**+1.6**
	comp=Z,0.5nm,0.3s,baz=330,slow=15,SNR=9.4						
MJAR				LR	LR	16 11 53.4	
	comp=Z,38nm,21.0s,baz=45,slow=43						
INU	**Inuyama**	**7.96**	**215**	*e*Pn	**Pn**	**16 09 10.9**	**+1.0**
USA0B	**Ussuriysk Arra**	**8.04**	**289**	*e*Pn	**Pn**	**16 09 12.3**	**+1.4**
USRK	**Ussuriysk Ar.**	**8.04**	**289**	P	**Pn**	**16 09 12.6**	**+1.7**
	baz=84,slow=15						
TYV	**Tymovskoe**	**8.84**	**0**	*e*PN	**Pn**	**16 09 19.0**	**-2.8**
TYV				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KLR	**Kul’dur**	**10.44**	**317**	P	**Pn**	**16 09 44.0**	**+0.3**
	comp=Z,0.0nm,0.3s,baz=109,slow=13,SNR=6.6						
KLR				LR	LR	16 13 51.1	
	comp=Z,6.9nm,20.7s,baz=163,slow=38						
KLR	**Kul’dur**	**10.44**	**317**	*e*P	**Pn**	**16 09 46.0**	**+2.3**
KLR	**Kul’dur**	**10.44**	**317**	⇓*e*PN	**Pn**	**16 09 46.0**	**+2.3**
KSRS	**Korea Array**	**12.16**	**253**	P	**Pn**	**16 10 09.4**	**+2.2**
	comp=Z,0.1nm,0.3s,baz=68,slow=13,SNR=4.2						
KSRS				LR	LR	16 14 21.1	
	comp=Z,46nm,19.0s,baz=59,slow=35						
KSRS	**Korea Array**	**12.16**	**253**	*e*P	**Pn**	**16 10 08.8**	**+1.6**
KS01	**Wonju Array Si**	**12.17**	**253**	*e*Pn	**Pn**	**16 10 08.6**	**+1.2**
JNU	**Nakatsue**	**12.84**	**230**	*e*Pn	**P**	**16 10 21.3**	**-3.8**
PETK	**Petropavlovsk-**	**15.03**	**37**	P	**Pn**	**16 10 45.3**	**-0.2**
	baz=112,slow=16						
PETK	**Petropavlovsk-**	**15.03**	**37**	*e*Pn	**Pn**	**16 10 43.5**	**-1.9**

MA2	Magadan	18.29	13	P	P	16 11 24.1	-1.2
	baz=184,slow=19,SNR=3.4						
YAK	Yakutsk	21.46	343	⇓ eP	P	16 11 59.4	-0.3
YAK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
SEY	Seymchan	21.72	12	P	P	16 12 00.6	-1.9
	comp=Z,2.4nm,0.7s,baz=198,slow=8.5,SNR=13						
SEY	Seymchan	21.72	12	⇓ eP	P	16 12 00.7	-1.8
ULN	Ulaanbaatar	25.64	295	eP	P	16 12 40.8	+0.2
	comp=Z,2.5nm,0.6s						
ULN	Ulaanbaatar	25.64	295	⇑ eP	P	16 12 42.6	+2.0
ULN				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SONA1	Songino Array	26.08	295	eP	P	16 12 44.5	-0.1
SONM	Songino Array	26.09	295	P	P	16 12 44.5	-0.1
	comp=Z,1.0nm,0.5s,baz=76,slow=9.1,SNR=5.6						
SONM				LR	LR	16 23 36.4	
	comp=Z,30nm,19.1s,baz=123,slow=38						
SONM	Songino Array	26.09	295	eP	P	16 12 44.9	+0.3
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
TWG	Pinlang	26.26	230	eP	P	16 12 45.5	-0.6
	comp=Z,270nm,2.0s						
TLY	Talaya	28.01	304	eP	P	16 13 01.8	+0.1
TLY	Talaya	28.01	304	eP	P	16 13 01.5	-0.1
	comp=Z,1.8nm,0.7s						
TLY	Talaya	28.01	304	eP	P	16 13 01.5	-0.1
TLY				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GUMO	Guam	28.41	175	LR	LR	16 23 37.0	
	comp=Z,12nm,21.2s,baz=27,slow=34						
H11N2	WAKE ISLAND Hy	30.30	130	T	T	16 44 57.9	
	baz=324,slow=75,SNR=266						
H11N1	WAKE ISLAND Hy	30.32	130	T	T	16 44 58.8	
	baz=324,slow=75,SNR=270						
H11N3	WAKE ISLAND Hy	30.32	130	T	T	16 45 02.3	
	baz=324,slow=75,SNR=262						
H11S1	WAKE ISLAND Hy	31.17	131	T	T	16 46 05.6	
	baz=325,slow=76,SNR=301						
H11S3	WAKE ISLAND Hy	31.17	131	T	T	16 46 04.9	
	baz=325,slow=76,SNR=231						
H11S2	WAKE ISLAND Hy	31.19	131	T	T	16 46 07.5	
	baz=325,slow=76,SNR=242						
NIKH	Nikolski High	33.97	54	eP	P	16 13 46.1	-7.9
	comp=Z,71nm,1.4s						
KMI	Kunming	36.84	256	P	P	16 14 18.0	-1.2
KMI				pmax	pmax		
	comp=Z,8.0nm,0.6s						
DAV	Davao City (W)	37.93	208	P	P	16 14 27.1	-1.1
	comp=Z,338nm,0.4s,baz=48,slow=3.5,SNR=4.7						
DGZ	Jazzator, Alta	38.39	301	⇑ eP	P	16 14 32.8	+0.9
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.2s						
ZAA0	Zalesovo Array	39.37	308	eP	P	16 14 39.9	0.0
	comp=Z,5.6nm,0.8s						
ZALV	Zalesovo Beam	39.37	308	P	P	16 14 40.0	0.0
	comp=Z,5.2nm,0.7s,baz=83,slow=7.1,SNR=23						
ZALV				LR	LR	16 31 38.6	
	comp=Z,16nm,20.9s,baz=72,slow=37						
ZALV	Zalesovo Beam	39.37	308	eP	P	16 14 39.1	-0.8
ZALV	Zalesovo Beam	39.37	308	eP	P	16 14 39.1	-0.8
NVS	Novosibirsk	40.19	310	eP	P	16 14 46.7	+0.1
MK01	Makanchi Array	42.40	298	eP	P	16 15 03.9	-1.1
MK31	Makanchi Array	42.40	298	eP	P	16 15 04.9	0.0
MK31	Makanchi Array	42.40	298	eP	P	16 15 04.9	0.0
MKAR	Makanchi Array	42.40	298	P	P	16 15 04.7	-0.2
	comp=Z,3.5nm,0.9s,baz=78,slow=8.8,SNR=13						
MKAR	Makanchi Array	42.40	298	eP	P	16 15 04.9	0.0
	comp=Z,18nm,0.7s						
MKAR	Makanchi Array	42.40	298	eP	P	16 15 04.9	0.0
MKAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MAKZ	Makanchi	42.60	298	eP	P	16 15 06.2	-0.4
	comp=Z,7.7nm,1.1s						
MAKZ	Makanchi	42.60	298	eP	P	16 15 06.2	-0.4
MAKZ				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KURK	Kurchatov	43.70	304	eP	P	16 15 15.0	-0.4
KURK	Kurchatov	43.70	304	eP	P	16 15 14.8	-0.5
	comp=Z,5.2nm,0.7s						
KURK	Kurchatov	43.70	304	c iP	P	16 15 15.0	-0.4
KURK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KURBB	Kurchatov Arra	43.78	304	P	P	16 15 15.9	-0.1
	comp=Z,5.0nm,0.7s,baz=78,slow=8.6,SNR=29						
CMAR	Chiang Mai Arr	43.80	251	P	P	16 15 16.6	+0.1
	comp=Z,0.6nm,0.6s,baz=43,slow=6.6,SNR=5.5						
CMAR				LR	LR	16 33 44.8	
	comp=Z,17nm,18.9s,baz=165,slow=36						
ILAR	Eielson Array	44.84	35	P	P	16 15 23.9	-0.5
	comp=Z,0.7nm,0.8s,baz=273,slow=6.7,SNR=7.5						
ILAR	Eielson Array	44.84	35	eP	P	16 15 25.5	+1.2
ILAR	Eielson Array	44.84	35	eP	P	16 15 25.5	+1.2
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BVAR	Borovoye Array	47.98	309	P	P	16 15 49.2	+0.2
	comp=Z,2.1nm,0.5s,baz=77,slow=9.9,SNR=13						
INK	Inuvik	49.56	29	P	P	16 16 00.7	-0.2
	comp=Z,0.9nm,0.4s,baz=291,slow=3.7,SNR=4.6						
KK31	Karatay Array	51.52	297	eP	P	16 16 15.2	-0.8
KK31	Karatay Array	51.52	297	eP	P	16 16 15.3	-0.8
KKAR	Karatay Array	51.52	297	eP	P	16 16 15.5	-0.5
KKAR	Karatay Array	51.52	297	eP	P	16 16 15.5	-0.5
ARU	Arti	53.28	316	d iP	P	16 16 28.9	0.0
ARU				*PP	pP	16 16 46.1	+0.7
ARU						16 18 26.0	
ARU				S	S	16 23 56.6	+1.3
ARU				SS	SS	16 27 32.8	-2.3
ARU				pmax	pmax		
	comp=Z,4.0nm,1.0s						
HNR	Honiara	53.63	159	LR	LR	16 40 10.9	
	comp=Z,13nm,18.6s,baz=314,slow=37						
ABKAR	Akbulak array	55.49	308	eP	P	16 16 44.8	-0.1
SPITS	Spitsbergen Ar	55.81	348	LR	LR	16 44 07.0	
	comp=Z,16nm,18.2s,baz=255,slow=40						
YKA	Yellowknife Ar	59.07	32	P	P	16 17 10.4	+0.4
	comp=Z,0.4nm,0.6s,baz=306,slow=6.5,SNR=4.6						
YKA	Yellowknife Ar	59.07	32	eP	P	16 17 12.4	+2.4
ARCES	ARCESS Array B	59.66	339	P	P	16 17 14.0	+0.1
	comp=Z,2.4nm,0.8s,baz=51,slow=9.6,SNR=3.7						
WRA	Warramunga Arr	62.13	189	P	P	16 17 30.9	-0.3
	comp=Z,0.8nm,0.8s,baz=6.4,slow=6.8,SNR=8.3						
WRA	Warramunga Arr	62.13	189	eP	P	16 17 31.0	-0.3
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
OBN	Obninsk	64.66	322	eP	P	16 17 48.6	+1.0
OBN				e		16 20 10.8	
OBN				pmax	pmax		
	comp=N,20nm,0.7s						
FINES	FINESS Array B	64.83	332	P	P	16 17 48.0	-0.6
	comp=N,3.1nm,0.6s,baz=51,slow=7.6,SNR=13						
FINES				LR	LR	16 48 34.0	
	comp=N,29nm,19.0s,baz=358,slow=38						
FINES	FINESS Array B	64.83	332	eP	P	16 17 48.0	-0.6
FINES	FINESS Array B	64.83	332	eP	P	16 17 48.0	-0.6
FINES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ASAR	Alice Springs	65.85	189	P	P	16 17 56.0	+0.4
	comp=Z,0.2nm,0.5s,baz=5.3,slow=7.8,SNR=5.4						
YBH	Yreka Blue Hor	66.64	54	P	P	16 18 01.0	+0.3
	comp=Z,2.6nm,0.8s,baz=76,slow=19,SNR=4.4						
HFS	Hagfors	69.91	335	P	P	16 18 20.3	-0.4
	comp=Z,3.0nm,0.5s,baz=40,slow=5.6,SNR=21						
HFS				LR	LR	16 51 53.8	
	comp=Z,19nm,18.3s,baz=68,slow=38						
NB2	NORSAR Subarra	69.93	337	P	P	16 18 20.2	-0.7
	comp=Z,1.4nm,0.7s,baz=36,slow=6.5						
AKASG	Malin Array Be	70.91	322	P	P	16 18 26.3	-0.7
	comp=Z,1.3nm,0.5s,baz=43,slow=6.9,SNR=4.6						
NVAR	Mina Array Bea	71.33	55	P	P	16 18 31.1	+1.0
	comp=Z,0.4nm,0.6s,baz=285,slow=6.0,SNR=5.6						
PDAR	Pinedale Array	73.57	47	P	P	16 18 43.5	+0.1
	comp=Z,0.6nm,0.7s,baz=262,slow=3.0,SNR=6.1						
BRTR	Keskin Array B	76.22	311	P	P	16 18 58.5	0.0
	comp=Z,0.7nm,0.7s,baz=55,slow=4.7,SNR=3.9						
BRTR	Keskin Array B	76.22	311	eP	P	16 18 59.0	+0.5
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
CLL	Collm	77.21	330	i P	P	16 19 03.2	-0.5
CLL	Collm	77.21	330	i P	P	16 19 03.2	-0.5
GERES	GERESS Array B	78.94	328	P	P	16 19 13.7	+0.3
	comp=Z,0.3nm,0.4s,baz=46,slow=8.4,SNR=2.1						
TXAR	Lajitas Array	86.39	53	P	P	16 19 53.6	+1.1
	comp=Z,0.5nm,0.6s,baz=282,slow=3.7,SNR=7.3						
TXAR	Lajitas Array	86.39	53	eP	P	16 19 53.9	+1.4
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SNAA	Sanae	145.77	199	PKPbc	PKPbc	16 26 47.7	+0.1
	comp=Z,0.6nm,0.6s,baz=177,slow=7.0,SNR=13						

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*JMA **05** 16:15:54.8±0.2, 23°.39N×121°.72E, h0^{km}, M2.6*
*ISCJB **05** 16:15:55.6±0.4, 23°.41N±0°.02×121°.71E±0°.02, h6^{km}±3^{km}, Error ellipse: s-maj=3.3km s-min=2.3km az=26.3*
*TAP **05** 16:15:56.5, 23°.45N×121°.58E, h4^{km}, ML3.1, C*
ISC 05 16:15:55.1±1.2**, 23°.40N**±0°.02×**121°.70E**±0°.03**, h2**^{km}±10^{km}**, n67, σ0^{s}.64**/98**, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HGSD	Ruisui	0.27	291	P	Pg	16 16 00.3	+0.1
	baz=285						
HGSD				S	Sg	16 16 03.4	-0.4
	baz=285						
EHY	Hungye	0.36	288	P	Pg	16 16 02.5	+0.4
	baz=282						
EHY				eS	Sg	16 16 07.1	+0.3
	baz=282						
EGFH	Guangfu	0.37	318	eP	Pg	16 16 02.5	+0.3
	baz=327						
YULB	Yu-li	0.37	269	P	Pg	16 16 02.8	+0.6
	baz=251						
TWF1	Yuli	0.37	263	P	Pg	16 16 03.1	+0.9
	baz=247						
TWF1				eS	Sg	16 16 07.7	+0.7
	baz=247						
FULB	Fuli	0.42	242	P	Pb	16 16 04.9	-0.4
	baz=225						
FULB				eS	Sb	16 16 11.9	-0.2
	baz=225						
CHKT	Chengkung	0.42	226	eP	Pb	16 16 05.6	+0.3
	baz=193						
CHKT				eS	Sb	16 16 12.8	+0.6
	baz=193						
ESL	Shilin	0.48	330	P	Pg	16 16 04.5	+0.2
	baz=340						
ESL				eS	Sg	16 16 10.9	+0.3
	baz=340						
ENLB	Shoufeng	0.51	350	eP	Pb	16 16 06.5	-0.3
	baz=3.0						
ENLB				eS	Sb	16 16 15.4	+0.7
	baz=3.0						
HWA	Hwalien	0.58	352	eS	Sb	16 16 17.6	+0.8
	baz=4.0						
VWDT	VWDT	0.62	305	P	Pb	16 16 07.6	-1.1
	baz=307						
ELDTW	Lidau	0.66	252	P	Pg	16 16 08.4	+0.7
	baz=255						
ELDTW				eS	Sb	16 16 17.9	-1.1
	baz=255						
TWD	Chiawan	0.69	352	eP	Pg	16 16 09.0	+0.7
	baz=22						
YUS	Yu-Shan	0.69	278	eP	Pb	16 16 09.2	-0.9
	baz=272						
TWH	Lutao	0.71	197	eP	Pb	16 16 10.9	+0.7
	baz=170						
TWH				S	Sb	16 16 21.5	+1.0
	baz=170						
OWD	Renai	0.73	319	eP	Pg	16 16 09.2	0.0
	baz=324						
NACB	Ninganchiao	0.78	353	eP	Pb	16 16 10.9	-0.5
	baz=17						
NACB				eS	Sb	16 16 22.4	-0.1
	baz=17						
SSLB	Suanglung	0.79	300	eP	Pg	16 16 10.0	-0.2
	baz=300						
SSLB				eS	Sg	16 16 20.2	-0.2
	baz=300						
TWGBT	Beinan	0.81	225	P	Pg	16 16 11.4	+0.8
	baz=215						
TWGBT				S	Sb	16 16 23.4	+0.1
	baz=215						
TWG	Pinlang	0.81	225	P	Pb	16 16 11.8	-0.2
	baz=215						
TWG				eS	Sb	16 16 23.3	0.0
	baz=215						
CHGB	Renai	0.82	324	eP	Pg	16 16 11.0	+0.2
	baz=339						
CHGB				S	Sb	16 16 21.7	-2.0
	baz=339						
ALS	Alishan	0.83	278	P	Pb	16 16 11.7	-0.7
	baz=274						
SMLT	Sun Moon Lake	0.88	304	P	Pb	16 16 12.2	-0.9
	baz=305						
STYT	Tauyuan	0.90	255	P	Pb	16 16 13.1	-0.3
	baz=234						
TYC	Yuchr	0.92	303	eP	Pg	16 16 12.4	-0.3
	baz=305						
DPDB	Guoxing	0.95	312	eP	Pg	16 16 13.4	+0.1
	baz=314						
CHN5	Tsauling	0.96	282	eP	Pb	16 16 14.2	-0.2
	baz=279						
TDCB	Techi	0.98	330	eP	Pg	16 16 14.1	+0.1
	baz=334						
TDCB				eS	Sg	16 16 26.9	0.0
	baz=334						
WJS	Zhushan	0.98	296	eP	Pb	16 16 14.9	0.0
	baz=303						
TPUB	Ta-pu	0.99	265	eP	Pb	16 16 14.8	-0.2
	baz=259						
WTP	Ta-pu	1.01	262	P	Pb	16 16 15.2	-0.1
	baz=255						
NANB	Nanao	1.03	3	eP	Pg	16 16 15.0	+0.2
	baz=10.0						
NANB				eS	Sb	16 16 30.1	+0.5
	baz=10.0						
WNT	Mingjian	1.04	297	P	Pn	16 16 16.1	-0.7
	baz=305						
ECL	Taimali	1.05	221	eP	Pg	16 16 14.8	-0.5
	baz=225						
ECL				eS	Sb	16 16 30.1	-0.1
	baz=225						
NNSB	Datong	1.07	344	eP	Pg	16 16 15.3	-0.3
	baz=340						
NNSB				eS	Sg	16 16 29.3	-0.1
	baz=340						
NNSH	Datong	1.07	344	eP	Pg	16 16 15.3	-0.3
	baz=344						
SGST	Jiashian	1.07	253	eP	Pn	16 16 17.1	-0.1
	baz=247						
NNS	Nan Shan	1.08	344	eP	Pg	16 16 15.9	+0.1
	baz=349						
NNS				eS	Sg	16 16 29.7	-0.1
	baz=349						
CHN1	Nanshi	1.09	259	P	Pb	16 16 17.1	+0.3
	baz=254						
CHN2	Minshiung	1.13	277	eP	Pb	16 16 17.4	0.0
	baz=273						
SSD	Sandimen	1.18	237	eP	Pg	16 16 17.2	-0.4
	baz=220						
TCU	Taichung	1.20	309	eP	Pn	16 16 19.3	+0.4
	baz=309						
ENTT	Nioudou	1.24	354	eP	Pg	16 16 18.9	-0.1
	baz=347						
MASBT	Mashibuluo	1.25	232	eP	Pg	16 16 18.6	-0.5
	baz=216						
EAST	Anshuo	1.28	218	eP	Pg	16 16 18.8	-0.9
	baz=221						
WLGB	Puzi	1.29	274	eP	Pn	16 16 20.1	0.0
	baz=270						
YHNB	Yeheng	1.30	347	eP	Pg	16 16 19.4	-0.7
	baz=3.0						
NSK	Sanguang	1.31	346	eP	Pb	16 16 20.4	-0.1
	baz=350						
TWE	Neicheng	1.32	359	eP	Pn	16 16 22.0	+1.4
	baz=351						
NSY	Sanyi	1.33	320	eP	Pn	16 16 21.3	+0.6
	baz=322						
SLBB	Yuanshan	1.35	358	eP	Pg	16 16 20.4	-0.6
	baz=351						
LAY	Lan-yu	1.36	186	eP	Pn	16 16 19.4	-1.7
	baz=179						
CHN8	Yiju	1.37	268	eP	Pb	16 16 21.5	+0.1
	baz=264						
CHN8				eS	Sn	16 16 41.1	+1.2
	baz=264						
WTCT	Ta-ch’eng	1.38	290	eP	Pb	16 16 21.6	0.0
	baz=289						
NSTT	Nanjuang	1.38	333	eP	Pg	16 16 21.4	-0.3
	baz=335						
NSTT				eS	Sg	16 16 38.6	-1.0
	baz=335						
PTSB	Yuanli	1.39	319	eP	Pn	16 16 21.4	-0.1
	baz=321						
PTSB				eS	Sn	16 16 41.6	+1.2
	baz=321						
LIOB	Emei	1.39	334	eP	Pb	16 16 21.7	-0.1
	baz=336						
LIOB				eS	Sn	16 16 39.8	-0.7
	baz=336						
NMLH	Miaoli	1.41	324	eP	Pb	16 16 22.1	0.0
	baz=325						
NMLH				eS	Sn	16 16 42.2	+1.4
	baz=325						
SCZT	Fangliau	1.42	224	eP	Pn	16 16 22.0	0.0
	baz=210						
JYNG	Yonagunijimaku	1.55	47	P	Pn	16 16 23.9	+0.2
JYNG				eS	Sn	16 16 44.3	-0.1
YOJ	Yonaguni jima	1.60	48	eP	Pn	16 16 24.8	+0.3
	baz=56						
YOJ	Yonaguni jima	1.60	48	P	Pn	16 16 24.7	+0.3
YOJ				eS	Sn	16 16 45.6	-0.1
HATJ	Hateruma jima	2.04	71	P	Pn	16 16 30.8	+0.3
HATJ				eS	Sn	16 16 56.1	-0.4
IRIF	Iriomote-Funau	2.08	63	P	Pn	16 16 31.4	+0.4
IRIF				eS	Sn	16 16 59.1	+1.5
JKRS	Kuro-shima	2.28	68	P	Pn	16 16 34.6	+0.9
JKRS				eS	Sn	16 17 02.6	+0.2
JIJ	Ishigaki jima	2.44	66	P	Pn	16 16 36.3	+0.4
JIJ				eS	Sn	16 17 04.9	-1.4
JISG	Ishigakijimahi	2.67	63	P	Pn	16 16 39.1	0.0
JISG				S	Sn	16 17 11.4	-0.6

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*NEIC **05** 16:24:55.1±0.0, 16°.49N×94°.51W, h98^{km}, MD4.0(MEX), After MEX.*
MEX 05 16:24:55.1±1.1**, 16°.49N**×**94°.51W, h98**^{km}±9^{km}**, MD4.0, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGIG		1.36	78	eP	Pn	16 25 18.1	-1.5
TGIG				i S	Sn	16 25 36.3	-1.8
TGIG		1.36	78	eP	Pn	16 25 18.1	-1.5
TGIG				i S	Sn	16 25 36.3	-1.8
PCIG		1.46	122	eP	Pn	16 25 20.3	-0.5
PCIG				i S	Sn	16 25 39.0	-1.3
PCIG		1.46	122	eP	Pn	16 25 20.3	-0.5
PCIG				i S	Sn	16 25 39.0	-1.3
TUIG	Tuzandepetl	1.54	3	i P	Pn	16 25 20.4	-1.3
TUIG				i S	Sn	16 25 40.0	-2.0
TUIG	Tuzandepetl	1.54	3	i P	Pn	16 25 20.4	-1.3
TUIG				i S	Sn	16 25 40.0	-2.0
HUIG	Huatulco	1.70	245	i P	Pn	16 25 21.3	-2.4
HUIG				i S	Sn	16 25 43.4	-2.2
HUIG	Huatulco	1.70	245	i P	Pn	16 25 21.3	-2.4
HUIG				i S	Sn	16 25 43.4	-2.2
VHO	Vista Hermosa	2.21	286	eP	Pn	16 25 30.3	-0.3
VHO				i S	Sn	16 25 57.0	-0.7
VHO	Vista Hermosa	2.21	286	eP	Pn	16 25 30.3	-0.3
VHO				i S	Sn	16 25 57.0	-0.7
PNIG	Pinotepa	3.48	269	eP	Pn	16 25 45.6	-1.7
PNIG				i S	Sn	16 26 26.2	-1.4
PNIG	Pinotepa	3.48	269	eP	Pn	16 25 45.6	-1.7
PNIG				i S	Sn	16 26 26.2	-1.4
PLIG	Platanillo	5.13	292	eP	Pn	16 26 09.4	-0.3
PLIG				i S	Sn	16 27 05.8	-1.9
PLIG	Platanillo	5.13	292	eP	Pn	16 26 09.4	-0.3
PLIG				i S	Sn	16 27 05.8	-1.9

IDC 05 16:27:10.5±12.0**, 17°.49S**×**178°.77W, h582**^{km}±164^{km}**, mb3.2**/8**, mb1 3.5**/8**, mb1mx3.0**/45**, mbtmp4.2**/8**, Error ellipse: s-maj=91.7km s-min=44.6km az=157.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	33.18	260	P	P	16 33 00.5	+0.1
	1.8nm,0.4s,baz=84,slow=13,SNR=3.5						
STKA	Stephens Creek	38.53	241	P	P	16 33 44.0	-0.3
	1.9nm,0.5s,baz=84,slow=11,SNR=9.1						
WRA	Warramunga Arr	44.37	259	P	P	16 34 30.1	-0.4
	1.4nm,0.3s,baz=92,slow=7.4,SNR=63						
ASAR	Alice Springs	44.58	254	P	P	16 34 31.9	-0.2
	14nm,0.6s,baz=87,slow=8.9,SNR=355						
FITZ	Fitzroy Crossi	52.76	260	P	P	16 35 32.8	+0.2
	3.3nm,1.0s,baz=119,slow=2.6,SNR=9.8						
NVAR	Mina Array Bea	79.36	44	P	P	16 38 17.3	+0.1
	0.7nm,0.6s,baz=224,slow=8.4,SNR=7.2						
TXAR	Lajitas Array	86.06	58	P	P	16 38 51.3	+0.5
	0.8nm,0.8s,baz=215,slow=6.4,SNR=7.8						
PDAR	Pinedale Array	87.29	44	P	P	16 38 55.5	-0.9
	0.5nm,0.6s,baz=207,slow=0.3,SNR=4.5						

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*ISCJB **05** 16:39:13.6±0.7, 29°.0S±0°.1×74°.8E±0°.2, h10^{km}, mb4.2/10, MS3.2/2, Error ellipse: s-maj=22.5km s-min=13.9km az=154.3*
*IDC **05** 16:39:14.0±0.9, 28°.95S×74°.81E, h0^{km}, mb3.9/7, mb1 4.1/7, mb1mx3.7/63, mbtmp3.9/7, MS3.2/2, Ms1 3.2/2, ms1mx2.6/58, Error ellipse: s-maj=34.5km s-min=22.1km az=94.0*
*NEIC **05** 16:39:15.8±0.4, 28°.92S×74°.81E, h10^{km}, mb4.7/6, Error ellipse: s-maj=13.8km s-min=8.6km az=65.0*
ISC 05 16:39:15.6±0.9**, 28°.9S**±0°.1×**74°.8E**±0°.2**, h10**^{km}**, n30, σ0^{s}.45**/23**, mb4.3**/10**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S2	Diego Garcia H	21.29	354	T	T	17 06 07.6	
	baz=171,slow=74						
H08S1	Diego Carcia H	21.30	354	T	T	17 06 25.3	
	baz=171						
H08S3	Diego Garcia H	21.31	354	T	T	17 06 05.7	
	baz=171,slow=74						
H01W2	Cape Leeuwin H	33.74	110	T	T	17 21 24.4	
	baz=269,slow=75,SNR=6.6						
H01W3	Cape Leeuwin H	33.74	110	T	T	17 21 20.9	
	baz=269,slow=75,SNR=5.1						
H01W1	Cape Leeuwin H	33.75	110	T	T	17 21 28.8	
	baz=269,slow=75,SNR=4.8						
BOSA	Boshof	43.19	258	LR	LR	17 03 24.0	
	comp=Z,38nm,18.4s,baz=166,slow=34						
CMAR	Chiang Mai Arr	52.56	29	P	P	16 48 28.4	-1.1
	0.3nm,0.2s,baz=220,slow=7.5,SNR=5.0						
CMAR				LR	LR	17 07 29.9	
	comp=Z,16nm,21.2s,baz=185,slow=32						
ASAR	Alice Springs	52.77	99	P	P	16 48 31.2	0.0
	0.9nm,0.9s,baz=252,slow=6.6,SNR=10						
AS01	Alice Springs	52.81	99	eP	P	16 48 31.4	-0.1
WRA	Warramunga Arr	54.44	95	P	P	16 48 44.0	+0.5
	3.0nm,0.9s,baz=250,slow=7.4,SNR=6.6						
WR1	Warramunga Arr	54.44	95	eP	P	16 48 44.0	+0.5
	36nm,1.8s						
WB2	Warramunga Arr	54.45	95	eP	P	16 48 44.3	+0.7
SNAA	Sanae	58.94	201	P	P	16 49 14.8	0.0
	2.9nm,1.2s,baz=89,slow=7.0,SNR=3.4						
SNAA	Sanae	58.94	201	eP	P	16 49 14.8	0.0
	23nm,2.0s						
LSA	Lhasa	60.36	16	eP	P	16 49 26.0	+0.6
	6.9nm,1.4s						
VNDA	Vanda	61.33	166	P	P	16 49 30.3	-0.7
	2.2nm,0.9s,baz=265,slow=6.5,SNR=11						
VNDA	Vanda	61.33	166	eP	P	16 49 31.2	+0.2
	3.0nm,1.0s						
KK31	Karatay Array	71.80	357	eP	P	16 50 38.1	0.0
KKAR	Karatay Array	71.80	357	eP	P	16 50 38.5	+0.4
MK01	Makanchi Array	75.66	5	eP	P	16 51 00.4	-0.3
MAKZ	Makanchi	75.67	5	eP	P	16 51 01.0	+0.2
	3.5nm,1.3s						
MK31	Makanchi Array	75.68	5	eP	P	16 51 00.9	+0.1
MK32	Makanchi Array	75.68	5	eP	P	16 51 00.8	-0.1
MKAR	Makanchi Array	75.68	5	P	P	16 51 00.8	-0.1
	0.9nm,0.9s,baz=193,slow=5.0,SNR=5.7						
MKAR	Makanchi Array	75.68	5	eP	P	16 51 00.8	-0.1
	12nm,1.2s						
KURBB	Kurchatov Arra	79.28	2	P	P	16 51 21.3	+0.4
	0.3nm,0.8s,baz=193,slow=5.8,SNR=3.0						
KURK	Kurchatov	79.37	2	eP	P	16 51 21.3	-0.1
ZALV	Zalesovo Beam	82.99	6	eP	P	16 51 41.1	+0.6
YKA	Yellowknife Ar	145.87	8	PKPbc	PKPab	16 58 54.7	-0.3
	1.2nm,0.9s,baz=331,slow=3.8,SNR=9.0						

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*KOLA **05** 17:01:57.3, 65°.80N×21°.36E, h0^{km}*
*ISCJB **05** 17:01:59.5±0.4, 67°.05N±0°.02×21°.09E±0°.07, h0^{km}, Error*

ellipse: s-maj=4.1km s-min=2.7km az=11.4
HEL ***05*** *17:02:00.8±0.1, 67°.08N×20°.94E, h0^{km}, ML2.0, ML1.9(UPP), Explosion*
CSEM ***05*** *17:02:00.2±0.2, 67°.10N×21°.05E, h2^{km}, ML1.9, Error ellipse: s-maj=6.0km s-min=3.8km az=108.0, Mining explosion.*
NAO ***05*** *17:02:00.4±1.0, 67°.10N×21°.23E, ML2.2*
UPP ***05*** *17:02:01.3, 67°.03N×21°.07E, h1^{km}, ML1.9, Mining explosion.*
BER ***05*** *17:02:03.0±4.1, 67°.07N×20°.87E, h0^{km}, ML1.7, ML2.2(NAO), Suspected explosion*
ISC 05 17:02:00.1±0.7**, 67°.08N**±0°.02×**21°.04E**±0°.03**, h0^{km}, n67, σ1^{s}03**/99**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERTU	**Ertsjaerv**	0.70	139	P	Pg	17 02 13.5	0.0
ERTU	**Ertsjaerv**	0.70	139	*e*P	Pg	17 02 13.2	-0.3
	baz=312						
ERTU	**Ertsjaerv**	0.70	139	P	Pg	17 02 13.5	0.0
PAJU	**Pajala**	0.81	93	P	Pg	17 02 16.2	+0.5
PAJU	**Pajala**	0.81	93	*i* P	Pg	17 02 16.2	+0.5
PAJU	**Pajala**	0.81	93	P	Pg	17 02 16.2	+0.5
HARU	**Harads**	0.92	182	P	Pg	17 02 17.6	-0.2
HARU	**Harads**	0.92	182	*i* P	Pg	17 02 17.6	-0.2
HARU	**Harads**	0.92	182	P	Pg	17 02 17.6	-0.2
LANU	**Lannavaara**	1.04	20	*e*P	Pg	17 02 19.5	-0.5
LANU	**Lannavaara**	1.04	20	*e*P	Pg	17 02 19.5	-0.5
KALU	**Kalix**	1.54	142	P	Pn	17 02 28.4	-0.3
KALU	**Kalix**	1.54	142	*e*P	Pn	17 02 28.3	-0.5
KALU				*e*SN	Sg	17 02 53.0	+3.5
KALU	**Kalix**	1.54	142	P	Pn	17 02 28.5	-0.3
KALU				*e*Sn	Sg	17 02 53.0	+3.5
SJUU	**Sjulsmark**	1.60	172	P	Pn	17 02 29.0	-0.6
SJUU				S	Sb	17 02 50.9	-0.3
SJUU	**Sjulsmark**	1.60	172	*e*P	Pn	17 02 29.0	-0.6
SJUU				*e*S	Sb	17 02 50.9	-0.3
SJUU	**Sjulsmark**	1.60	172	P	Pn	17 02 29.0	-0.6
SJUU				S	Sb	17 02 50.9	-0.3
TOF	**Tornio**	1.65	126	*e*P	Pn	17 02 30.5	+0.1
TOF				MSG		17 02 51.4	
	comp=Z,12nm,0.2s						
TOF				*e*SG	Sb	17 02 52.8	0.0
TOF	**Tornio**	1.65	126	*e*P	Pn	17 02 30.5	+0.1
TOF				*e*Sg	Sb	17 02 52.8	0.0
	comp=Z,12nm,0.2s						
HEF	**Hetta**	1.66	36	*e*P	Pn	17 02 30.6	+0.1
	baz=221						
HEF				MSG		17 02 52.0	
	comp=Z,12nm,0.2s						
HEF				*e*SN	Sb	17 02 53.9	+0.7
HEF	**Hetta**	1.66	36	*e*P	Pn	17 02 30.6	+0.1
HEF				*e*Sn	Sb	17 02 53.8	+0.7
HEF	**Hetta**	1.66	36	*e*P	Pn	17 02 31.0	+0.5
HEF				*e*S	Sb	17 02 53.5	+0.5
KIF	**Kilpisjarvi**	1.93	357	Pn	Pb	17 02 35.8	-0.4
KIF				Sn	Sg	17 03 02.2	+0.1
KIF	**Kilpisjarvi**	1.93	357	*e*PB	Pb	17 02 35.6	-0.6
KIF				MSG		17 02 59.2	
	comp=Z,16nm,0.2s						
KIF				*e*SG	Sg	17 03 02.8	+0.6
KIF	**Kilpisjarvi**	1.93	357	*e*Pb	Pb	17 02 35.6	-0.6
KIF				Sn	Sg	17 03 02.2	+0.1
KIF				*e*Sg	Sg	17 03 02.8	+0.6
	comp=Z,16nm,0.2s						
KIF	**Kilpisjarvi**	1.93	357	*e*P	Pb	17 02 36.0	-0.1
KIF				*e*S	Sg	17 03 03.0	+0.8
RNF	**Rovaniemi**	2.02	101	*e*P	Pn	17 02 36.6	+1.2
RNF				*e*SG	Sg	17 03 04.8	-0.2
RNF	**Rovaniemi**	2.02	101	*e*P	Pn	17 02 36.6	+1.2
RNF				*e*Sg	Sg	17 03 04.8	-0.2
KTK1	**Kautokeino**	2.11	22	*e*P	Pb	17 02 38.5	-0.6
KTK1				*e*S	Sn	17 03 04.7	+1.3
SGF	**Sodankyl**	2.16	78	*e*PB	Pb	17 02 39.0	-1.1
	baz=261						
SGF				*e*SG	Sg	17 03 09.2	-0.3
SGF	**Sodankyl**	2.16	78	*e*Pb	Pb	17 02 39.0	-1.1
SGF				*e*Sg	Sg	17 03 09.2	-0.3
BURU	**Burvik**	2.51	177	P	Pn	17 02 42.8	+0.6
BURU	**Burvik**	2.51	177	*e*P	Pn	17 02 42.8	+0.6
	baz=359						
BURU	**Burvik**	2.51	177	P	Pn	17 02 42.8	+0.6
SVAU	**Svanoeiden**	2.67	194	P	Pn	17 02 44.7	+0.4
SVAU	**Svanoeiden**	2.67	194	*e*P	Pn	17 02 44.7	+0.4
SVAU	**Svanoeiden**	2.67	194	P	Pn	17 02 44.7	+0.4
ODEU	**Stanfors**	2.69	183	P	Pn	17 02 45.3	+0.7
ODEU	**Stanfors**	2.69	183	*e*P	Pn	17 02 45.3	+0.7
ODEU	**Stanfors**	2.69	183	P	Pn	17 02 45.3	+0.7
MOR8	**Moi Rana**	2.79	254	*e*P	Pn	17 02 46.1	+0.2
MOR8				*e*Sg	Sn	17 03 19.6	-0.6
MOR8				IAML		17 03 26.2	
	comp=Z,4.1nm,0.2s						
OUL	**Oulu**	2.82	133	*e*PB	Pb	17 02 49.1	-2.1
OUL	**Oulu**	2.82	133	*e*Pb	Pb	17 02 49.1	-2.1
ARA0	**ARCESS Array S**	2.97	32	Pn	Pn	17 02 48.6	+0.2
	baz=217,slow=14						
ARA0				Sn	Sn	17 03 25.5	+0.8
	baz=214,slow=18						
ARA0				Lg	Lg	17 03 30.4	
	baz=216,slow=37						
ARA0	**ARCESS Array S**	2.97	32	Pn	Pn	17 02 48.6	+0.2
	SNR=2.9						
ARA0				Sn	Sn	17 03 25.5	+0.8
ARA0				Lg	Lg	17 03 30.5	
	SNR=4.6						
ARA0	**ARCESS Array S**	2.97	32	Pn	Pn	17 02 48.6	+0.2
	baz=217,slow=14						
ARA0				Sn	Sn	17 03 25.5	+0.8
	baz=214,slow=18						
ARA0				Sg	Sb	17 03 30.4	-0.2
	baz=216,slow=37						
ARE0	**ARCESS Array S**	2.97	32	*e*P	Pn	17 02 50.3	+1.8
ARE0				*e*Sg	Sb	17 03 29.7	-1.0
ARE0				IAML		17 03 39.7	
	comp=Z,9.4nm,0.1s						
OUF	**Merijarvi**	3.12	149	*e*P	Pn	17 02 52.9	+2.4
OUF				MSG		17 03 32.4	
	comp=Z,3.2nm,0.2s						
OUF	**Merijarvi**	3.12	149	*e*P	Pn	17 02 52.9	+2.4
UMAU	**Umeaa**	3.22	183	P	Pn	17 02 52.3	+0.5
UMAU	**Umeaa**	3.22	183	*e*P	Pn	17 02 54.1	+2.3
UMAU	**Umeaa**	3.22	183	P	Pn	17 02 52.3	+0.5
VRF	**Varrio**	3.37	75	*e*PB	Pb	17 02 57.9	-2.8
	baz=260						
VRF	**Varrio**	3.37	75	*e*Pb	Pb	17 02 57.9	-2.8
KEV	**Kevo**	3.47	37	*e*PB	Pb	17 03 00.6	-1.8
VAF	**Ylistaro**	4.12	170	*e*P	Pn	17 03 05.3	+1.1
	baz=351						
VAF	**Ylistaro**	4.12	170	*e*P	Pn	17 03 05.3	+1.1
APA0	**Apatity Array**	4.65	78	P	Pn	17 03 11.7	+0.2
APA0				S	Sn	17 04 07.6	+1.5
FIA0	**FINESS Array S**	6.07	156	Pn	Pn	17 03 31.4	+0.4
	baz=347,slow=14						
FIA0				Sn	Sn	17 04 40.8	-0.2
	baz=7.7,slow=18						
FIA0	**FINESS Array S**	6.07	156	Pn	Pn	17 03 31.4	+0.4
	baz=347,slow=14						
FIA0				Sn	Sn	17 04 40.8	-0.2
	baz=7.7,slow=18						
NB2	**NORSAR Subarra**	7.43	220	Pn	Pn	17 03 49.2	-0.5
	baz=16,slow=16						
NB2	**NORSAR Subarra**	7.43	220	Pn	Pn	17 03 49.2	-0.5
	baz=16,slow=16						
NRA0	**NORESS Array S**	7.62	218	Pn	Pn	17 03 51.7	-0.5
NRA0				Sn	Sn	17 05 19.6	+0.5
	baz=30,slow=28						
NRA0	**NORESS Array S**	7.62	218	Pn	Pn	17 03 51.7	-0.5
NRA0				Sn	Sn	17 05 19.6	+0.5
	SNR=7.1						
NRA0	**NORESS Array S**	7.62	218	Pn	Pn	17 03 51.7	-0.5
NRA0				Sn	Sn	17 05 19.6	+0.5
	baz=30,slow=28						
HFS	**Hagfors**	7.70	209	Pn	Pn	17 03 52.8	-0.6
	baz=24,slow=14						
HFS	**Hagfors**	7.70	209	Pn	Pn	17 03 52.8	-0.6
	baz=24,slow=14						

NSSC ***05*** *17:02:05.7±0.3, 39°.34N×41°.24E, h16^{km}±999^{km}, ML3.3*
DDA ***05*** *17:02:20.0, 38°.94N×38°.94E, h6^{km}, Ml3.7*
ISK ***05*** *17:02:19.1, 38°.93N×38°.94E, h3^{km}, ML3.9/19*
IDC ***05*** *17:02:19.9±1.3, 38°.87N×38°.93E, h0^{km}, mb3.5/5, mb1 3.6/10, mb1mx3.4/66, mbtmp3.5/10, ML3.3/5, MS2.9/9, Ms1 2.9/9, ms1mx2.6/52, Error ellipse: s-maj=23.5km s-min=11.8km az=164.0*
CSEM ***05*** *17:02:20.4±0.1, 38°.95N×38°.94E, h2^{km}, ML3.9, Error ellipse: s-maj=3.0km s-min=2.6km az=173.0*
ISC 05 17:02:20.5±1.0**, 38°.93N**±0°.01×**38°.93E**±0°.01**, h4^{km}**±8^{km}**, n125, σ1^{s}36**/180**, mb3.5**/6**, MS2.6**/4**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTK	**Pertek**	0.36	96	PG	Pg	17 02 27.3	-0.2
PTK				SG	Sg	17 02 33.0	+0.7
PTK	**Pertek**	0.36	96	*e*Pg	Pg	17 02 27.3	-0.2
PTK				*e*Sg	Sg	17 02 33.0	+0.7
ELZG	**Elazig**	0.43	175	*i* P	Pg	17 02 28.6	-0.3
ELZG				*i* S	Sg	17 02 35.4	+0.9
ELZG	**Elazig**	0.43	175	P	Pg	17 02 28.6	-0.3
ELZG				S	Sg	17 02 35.4	+0.9
KEMA	**Kemaliye**	0.48	315	*i* P	Pg	17 02 29.2	-0.6
KEMA				*i* S	Sg	17 02 36.6	+0.5
KEMA	**Kemaliye**	0.48	315	P	Pg	17 02 29.2	-0.6
KEMA				S	Sg	17 02 36.6	+0.5
REFA	**Refahiye_ERZ˜**	0.48	344	*i* P	Pn	17 02 38.4	+3.9
REFA				*i* S	Sb	17 02 53.2	+14
TNCL	**Tunceli-Merkez**	0.51	68	*i* P	Pg	17 02 29.6	-0.7
TNCL				*i* S	Sg	17 02 36.7	-0.3
TNCL	**Tunceli-Merkez**	0.51	68	P	Pg	17 02 29.6	-0.7
TNCL				S	Sg	17 02 36.7	-0.3
SVRC	**Sivrice-ELAZID**	0.62	152	PG	Pg	17 02 31.9	-0.6
SVRC				SG	Sg	17 02 41.1	+0.5
SVRC	**Sivrice-ELAZID**	0.62	152	*e*Pg	Pg	17 02 31.9	-0.6
SVRC				*e*Sg	Sg	17 02 41.1	+0.5
MALT	**Malatya**	0.73	213	PG	Pg	17 02 33.6	-0.9
MALT				SG	Sg	17 02 44.7	+0.7
MALT	**Malatya**	0.73	213	*e*Pg	Pg	17 02 33.6	-0.9
MALT				*e*Sg	Sg	17 02 44.7	+0.7
HEKM	**Malatya_Hekimh**	0.76	267	*i* P	Pb	17 02 35.5	-1.0
HEKM				*i* S	Sn	17 02 48.7	-1.6
HEKM	**Malatya_Hekimh**	0.76	267	P	Pb	17 02 35.5	-1.0
HEKM				S	Sn	17 02 48.7	-1.6
EZC	**Erzincan**	0.89	21	*e*Pg	Pg	17 02 36.5	-1.0
EZC				*e*Sg	Sb	17 02 49.6	-1.2
ERZN	**Erzincan**	0.90	43	PG	Pg	17 02 36.5	-1.3
ERZN				SG	Sg	17 02 49.6	+0.1
EUZM	**Uzumlu**	0.98	37	*i* P	Pg	17 02 38.4	-1.0
EUZM				*i* S	Sb	17 02 52.3	-1.1
EUZM	**Uzumlu**	0.98	37	P	Pg	17 02 38.3	-1.0
EUZM				S	Sb	17 02 52.3	-1.1
AKCD	**Akcadag**	1.01	232	*i* P	Pg	17 02 38.8	-1.2
AKCD				*i* S	Sb	17 02 53.5	-0.9
AKCD	**Akcadag**	1.01	232	P	Pg	17 02 38.8	-1.2
AKCD				S	Sb	17 02 53.5	-0.9
DARE	**Darende-Malaty**	1.19	253	PN	Pb	17 02 42.2	-1.5
DARE				SN	Sn	17 03 00.4	-0.3
DARE	**Darende-Malaty**	1.19	253	*e*Pn	Pb	17 02 42.2	-1.5
DARE				*e*Sn	Sn	17 03 00.4	-0.3
CUKAN	**kangal_SIVAS**	1.20	289	*i* P	Pg	17 02 43.4	-0.2
CUKAN				*i* S	Sn	17 03 00.5	-0.6
CUKAN	**kangal_SIVAS**	1.20	289	P	Pg	17 02 43.4	-0.2
CUKAN				S	Sn	17 03 00.5	-0.6
BINT	**Bingol**	1.22	92	*e*Pn	Pg	17 02 44.4	+0.6
KELT	**Kelkit**	1.24	11	*i* P	Pn	17 02 42.6	-2.3
KELT				*i* S	Sn	17 03 01.4	-0.8
KELT	**Kelkit**	1.24	11	P	Pn	17 02 42.6	-2.3
KELT				S	Sn	17 03 01.4	-0.8
HANI	**Diyarbakir_Han**	1.26	114	*i* P	Pg	17 02 45.1	+0.5
HANI				*i* S	Sn	17 03 03.0	+0.7
HANI	**Diyarbakir_Han**	1.26	114	P	Pg	17 02 45.1	+0.5
HANI				S	Sn	17 03 03.0	+0.7
CUGUR	**Gurin_S˜VAS**	1.31	262	*i* P	Pg	17 02 46.2	+0.5
CUGUR				*i* S	Sg	17 03 05.4	+2.7
CUGUR	**Gurin_S˜VAS**	1.31	262	P	Pg	17 02 46.2	+0.5
CUGUR				S	Sg	17 03 05.4	+2.7
CUZAR	**Zara_SIVAS**	1.31	317	*i* P	Pn	17 02 44.6	-1.2
CUZAR				*i* S	Sg	17 03 06.1	+3.3
CUZAR	**Zara_SIVAS**	1.31	317	P	Pn	17 02 44.6	-1.2
CUZAR				S	Sg	17 03 06.1	+3.3
YEDI	**Yedisu-Bingol**	1.35	67	PN	Pn	17 02 44.9	-1.4
YEDI				SN	Sg	17 03 04.8	+0.8
YEDI	**Yedisu-Bingol**	1.35	67	*e*Pn	Pn	17 02 44.9	-1.4
YEDI				*e*Sn	Sg	17 03 04.8	+0.8
BGOL	**Bingol**	1.36	87	*i* P	Pn	17 02 44.3	-2.0
BGOL				*i* S	Sg	17 03 03.8	-0.3
BGOL	**Bingol**	1.36	87	P	Pn	17 02 44.3	-2.0
BGOL				S	Sg	17 03 03.8	-0.3
DYBB	**Diyarbakir**	1.36	135	PN	Pg	17 02 46.3	-0.3
BNGB	**Bingˆ¶l**	1.36	87	PN	Pn	17 02 44.4	-2.0
BNGB				SN	Sg	17 03 04.6	+0.3
DIYA	**Diyarbakir**	1.37	137	*i* P	Pg	17 02 46.9	+0.1
DIYA				*i* S	Sg	17 03 06.9	+2.3
DIYA	**Diyarbakir**	1.37	137	P	Pg	17 02 46.9	+0.1
DIYA				S	Sg	17 03 06.9	+2.3
DIY	**Diyarbakir**	1.45	135	*e*Pn	Pn	17 02 46.3	-1.3
URFA	**Urfa**	1.49	183	PN	Pn	17 02 47.2	-0.9
URFA	**Urfa**	1.49	183	*e*Pn	Pn	17 02 47.2	-0.9
ATAB	**Bozova**	1.54	199	*i* P	Pg	17 02 50.5	+0.5
ATAB				*i* S	Sg	17 03 12.2	+2.1
ATAB	**Bozova**	1.54	199	P	Pg	17 02 50.5	+0.5
ATAB				S	Sg	17 03 12.1	+2.1
GUMT	**Gumushane**	1.59	15	PN	Pb	17 02 49.2	-1.3
GUMT	**Gumushane**	1.59	15	*e*Pn	Pb	17 02 49.2	-1.3
KOPT	**Kop Dagi**	1.63	48	*i* P	Pg	17 02 51.4	-0.4
KOPT				*i* S	Sg	17 03 14.2	+1.4
KOPT	**Kop Dagi**	1.63	48	P	Pg	17 02 51.4	-0.4
KOPT				S	Sg	17 03 14.2	+1.4
SCER	**sogukcermik**	1.68	304	*i* P	Pg	17 02 52.0	-0.7
SCER				*i* S	Sg	17 03 15.2	+0.7
SCER	**sogukcermik**	1.68	304	P	Pg	17 02 52.0	-0.7
SCER				S	Sg	17 03 15.2	+0.7
ECAT	**Cat-ERZURUM**	1.72	66	*i* P	Pb	17 02 52.4	-0.5
ECAT				*i* S	Sb	17 03 13.7	-1.2
ECAT	**Cat-ERZURUM**	1.72	66	P	Pb	17 02 52.4	-0.5
ECAT				S	Sb	17 03 13.7	-1.2
CUALT	**Altinyayla-SIV**	1.73	282	*i* P	Pb	17 02 52.1	-0.8
CUALT				*i* S	Sg	17 03 17.5	+1.5
CUALT	**Altinyayla-SIV**	1.73	282	P	Pb	17 02 52.1	-0.8
CUALT				S	Sg	17 03 17.5	+1.5
BNGL	**BINGOL**	1.73	89	*i* P	Pb	17 02 52.5	-0.5
BNGL				*i* S	Sg	17 03 18.6	+2.5
BAYT	**Ayd˜–ntepe-Bay**	1.73	32	PN	Pn	17 02 51.4	-0.2
BAYT	**Ayd˜–ntepe-Bay**	1.73	32	*e*Pn	Pn	17 02 51.4	-0.2
SANL	**SANLIURFA_Merk**	1.75	179	*i* P	Pg	17 02 53.6	-0.5
SANL				*i* S	Sg	17 03 17.8	+0.9
SANL	**SANLIURFA_Merk**	1.75	179	P	Pg	17 02 53.6	-0.5
SANL				S	Sg	17 03 17.8	+0.9
SVSK	**Karacayir**	1.79	304	PN	Pb	17 02 52.4	-1.5
SVSK	**Karacayir**	1.79	304	*e*Pn	Pb	17 02 52.4	-1.5
RSDY	**Resadiye-TOKAT**	1.92	320	PN	Pb	17 02 54.7	-1.4
RSDY	**Resadiye-TOKAT**	1.92	320	*e*Pn	Pb	17 02 54.7	-1.4
SVAN	**Silvan-Diyarba**	1.94	113	PN	Pn	17 02 53.6	-0.7
SVAN	**Silvan-Diyarba**	1.94	113	*i* P	Pb	17 02 55.7	-0.8
SVAN				*i* S	Sg	17 03 22.3	-0.5
SVAN	**Silvan-Diyarba**	1.94	113	*e*Pn	Pn	17 02 53.6	-0.7
SVAN	**Silvan-Diyarba**	1.94	113	P	Pb	17 02 55.7	-0.8
SVAN				S	Sg	17 03 22.3	-0.5
VRTB	**Varto-Mus**	1.98	82	PN	Pn	17 02 54.4	-0.5
VRTB	**Varto-Mus**	1.98	82	*e*Pn	Pn	17 02 54.4	-0.5
ESPY	**Espiye-Giresun**	1.99	356	PN	Pb	17 02 55.5	-1.8
ESPY	**Espiye-Giresun**	1.99	356	*e*Pn	Pb	17 02 55.5	-1.8
SARI	**SarD1z-Kayseri**	2.04	256	PN	Pn	17 02 55.9	+0.2
SURC	**SANLIURFA_SURC**	2.06	187	*i* P	Pb	17 02 57.3	-1.2
SURC				*i* S	Sg	17 03 25.4	-1.4
SURC	**SANLIURFA_SURC**	2.06	187	P	Pb	17 02 57.3	-1.2
SURC				S	Sg	17 03 25.4	-1.4
BTMN	**Batman**	2.11	119	*i* P	Pb	17 02 58.6	-0.8
BTMN				*i* S	Sg	17 03 28.1	-0.2
BTMN	**Batman**	2.11	119	P	Pb	17 02 58.6	-0.8
KMRS	**Kahramanmaras**	2.14	229	PN	Pn	17 02 57.0	-0.1
KMRS	**Kahramanmaras**	2.14	229	*e*Pn	Pn	17 02 57.0	-0.1
MARD	**Mardin**	2.17	137	*i* P	Pn	17 02 57.6	0.0
MARD				*i* S	Sn	17 03 24.9	-0.1
GAZ	**Gaziantep**	2.22	218	PN	Pn	17 02 57.3	-0.9
GAZ	**Gaziantep**	2.22	218	*e*Pn	Pn	17 02 57.3	-0.9
TOKT	**Tokat**	2.31	308	PN	Pn	17 02 59.9	+0.5
TOKT	**Tokat**	2.31	308	*e*Pn	Pn	17 02 59.9	+0.5
BNN	**Bunyan**	2.41	269	PN	Pn	17 03 00.9	0.0
BNN	**Bunyan**	2.41	269	*e*Pn	Pn	17 03 00.9	0.0
GURO	**Guroymak-BITLI**	2.45	98	PN	Pn	17 03 01.4	0.0
GURO	**Guroymak-BITLI**	2.45	98	*e*Pn	Pn	17 03 01.4	0.0
CHOM	**Cayeli-Rize**	2.58	32	PN	Pn	17 03 03.2	+0.1
CHOM	**Cayeli-Rize**	2.58	32	*e*Pn	Pn	17 03 03.2	+0.1
SLMH	**Al Salmeh**	2.83	197	*e*P	Pn	17 03 08.0	+1.5
SLMH				*e*S	Sg	17 03 52.7	+1.4
SLMH				AML	AML	17 04 03.1	
	comp=N,323nm,0.7s						
SLMH				AML	AML	17 04 07.7	
	comp=E,296nm,0.7s						
YOZ	**Yozgat**	2.89	285	PN	Pn	17 03 07.6	+0.1
YOZ	**Yozgat**	2.89	285	*e*Pn	Pn	17 03 07.6	+0.1
KVT	**Kavak**	3.09	315	PN	Pn	17 03 10.2	+0.1
KVT	**Kavak**	3.09	315	*e*Pn	Pn	17 03 10.2	+0.1
SENK	**Senkaya-Erzuru**	3.10	57	PN	Pn	17 03 10.4	0.0
SENK	**Senkaya-Erzuru**	3.10	57	*e*Pn	Pn	17 03 10.4	0.0
SIRT	**Sirnak**	3.11	116	PN	Pn	17 03 10.7	+0.3
SIRT	**Sirnak**	3.11	116	*e*Pn	Pn	17 03 10.7	+0.3
AGRB	**Hanur-Agry**	3.22	77	PN	Pn	17 03 12.2	+0.2
AGRB	**Hanur-Agry**	3.22	77	*e*Pn	Pn	17 03 12.2	+0.2
BCA	**Borcka**	3.25	38	PN	Pn	17 03 12.9	+0.6
BCA	**Borcka**	3.25	38	*e*Pn	Pn	17 03 12.9	+0.6
BRTR	**Keskin Array B**	4.18	283	Pn	Pn	17 03 26.4	+1.2
	comp=E,1.0nm,0.3s,baz=101,slow=14,SNR=22						
BRTR				Lg	Lg	17 04 36.8	
	comp=E,0.6nm,0.3s,baz=119,slow=26,SNR=5.9						
GNI	**Garni**	4.65	73	Pg	Pg	17 03 53.4	+3.8
	comp=E,1.3nm,0.3s,baz=253,slow=7.1,SNR=4.8						
GNI				LR	LR	17 05 42.2	
	comp=E,60nm,18.4s,baz=330,slow=43						
KBZ	**Khabaz**	5.65	31	Pn	Pn	17 03 47.8	+2.6
	comp=E,0.2nm,0.3s,baz=224,slow=11,SNR=7.8						
KVAR	**Kislovodsk Arr**	5.76	28	Pn	Pn	17 03 50.3	+3.4
	baz=209,slow=4.7,SNR=6.7						
KVAR				LR	LR	17 06 24.6	
	comp=E,69nm,18.8s,baz=293,slow=42						
QASN	**Qassioun**	5.80	203	*e*P	Pn	17 03 49.7	+2.3
QASN				AML	AML	17 05 37.5	
	comp=N,62nm,0.6s						
QASN				AML	AML	17 05 46.7	
	comp=E,91nm,0.7s						
TOTH	**TOTAH**	5.91	201	*e*P	Pn	17 03 50.7	+1.8
TOTH				*e*S	Sb	17 05 05.6	-10
TOTH				AML	AML	17 05 52.1	
	comp=N,31nm,0.7s						
TOTH				AML	AML	17 06 14.1	
	comp=E,19nm,0.9s						
BRBR	**Barbar**	6.01	205	*e*P	Pn	17 03 52.5	+2.1
BRBR				*e*S	Sb	17 05 10.2	-8.1
BRBR				AML	AML	17 05 46.9	
	comp=E,21nm,0.7s						
BRBR				AML	AML	17 05 52.7	
	comp=N,27nm,0.7s						
MMAI	**Mount Meron Ar**	6.56	207	Pn	Pn	17 03 57.6	-0.2
	comp=N,1.9nm,0.3s,baz=52,slow=19,SNR=3.9						
MMAI				Lg	Lg	17 05 36.2	
	baz=30,slow=27,SNR=1.9						
MMAI				LR	LR	17 06 54.6	
	comp=N,90nm,18.4s,baz=345,slow=42						
ASF	**Jabal al Asfar**	6.94	194	Pn	Pn	17 04 05.6	+2.5
	comp=N,0.4nm,0.3s,baz=156,slow=22,SNR=3.6						
ASF				Lg	Lg	17 05 57.0	
	comp=N,0.3nm,0.3s,baz=341,slow=22,SNR=3.6						
EIL	**Elat**	9.80	201	LR	LR	17 08 58.9	
	comp=N,123nm,18.1s,baz=62,slow=41						
AKTO	**Aktyubinsk**	17.73	43	P	P	17 06 30.2	+1.2
	comp=N,0.2nm,0.3s,baz=243,slow=6.8,SNR=3.9						
AKTO				LR	LR	17 15 19.5	
	comp=N,26nm,18.2s,baz=203,slow=44						
GERES	**GERESS Array B**	20.62	307	P	Pn	17 07 03.6	+0.5
	comp=N,0.6nm,0.7s,baz=118,slow=8.0,SNR=5.0						
ARU	**Arti**	21.80	30	P	P	17 07 13.5	+0.1
	comp=N,2.2nm,0.6s,baz=255,slow=16,SNR=4.4						
FINES	**FINESS Array B**	23.91	345	P	P	17 07 35.7	+0.6
	comp=N,0.9nm,0.7s,baz=158,slow=8.2,SNR=3.3						
FINES				LR	LR	17 16 56.7	
	comp=N,25nm,19.4s,baz=203,slow=37						
HFS	**Hagfors**	26.51	331	P	P	17 08 02.2	+3.4
	comp=N,1.5nm,0.7s,baz=129,slow=13,SNR=5.5						
HFS				LR	LR	17 19 55.3	
	comp=N,10nm,19.7s,baz=172,slow=40						
NOA	**NORSAR Array B**	28.03	331	LR	LR	17 21 22.1	
	comp=N,14nm,18.6s,baz=130,slow=41						
KURBB	**Kurchatov Arra**	30.09	54	P	P	17 08 31.6	+0.8
	comp=N,0.4nm,0.7s,baz=268,slow=8.9,SNR=4.2						
MKAR	**Makanchi Array**	32.40	62	P	P	17 08 51.7	+0.5
	comp=N,0.7nm,0.9s,baz=282,slow=6.9,SNR=4.3						
CMAR	**Chiang Mai Arr**	55.46	94	P	P	17 11 56.3	-0.2
	comp=N,0.3nm,0.7s,baz=291,slow=7.6,SNR=3.7						
BOSA	**Boshof**	68.40	193	LR	LR	17 46 49.2	
	comp=N,35nm,18.2s,baz=256,slow=39						

NIED ***05*** *17:04:00, 37°.00N×140°.60E, h8^{km}, Mw4.2 Best double couple: $M_0$2.39000×10^{15} NP1:ϕ_s159.00000°, δ52.00000°, λ-26.00000°. NP2:ϕ_s266.00000°, δ70.00000°, λ-139.00000°.*
IDC ***05*** *17:04:31.8±0.6, 37°.04N×140°.55E, h0^{km}, mb4.0/24, mb1 4.1/26, mb1mx4.0/72, mbtmp4.0/26, ML3.9/2, MS3.3/24, Ms1 3.3/24, ms1mx3.1/70, Error ellipse: s-maj=15.7km s-min=12.7km az=116.0*
ISCJB ***05*** *17:04:32.7±0.4, 37°.04N±0°.03×140°.67E±0°.04, h16^{km}±2^{km}, mb4.0/33, MS3.4/20, Error ellipse: s-maj=5.3km s-min=3.6km az=36.7*
JMA ***05*** *17:04:33.3, 37°.04N×140°.57E, h9^{km}±1^{km}, M4.5 Broadband fault plane solution: P waves. NP1: ϕ_s276.00000°, δ62.00000°, λ-128.00000°. NP2: ϕ_s154.00000°, δ46.00000°, λ-42.00000°. Principal axes: T Plg9.0000°, Azm32.0000°; N Plg32.0000°, Azm296.0000°; P Plg56.0000°, Azm136.0000°;*
JMA Felt III J1.
MOS ***05*** *17:04:35.1±1.5, 37°.14N×140°.71E, h33^{km}, mb4.4/22 Error ellipse: s-maj=9.2km s-min=6.0km az=89.7*
NEIC ***05*** *17:04:35.5±2.7, 37°.09N×140°.60E, h23^{km}±18^{km}, mb4.7/1, Error ellipse: s-maj=14.3km s-min=7.6km az=136.0*
NEIC Recorded [3 JMA] in Fukushima.
ISC 05 17:04:33.4±0.8**, 37°.07N**±0°.03×**140°.64E**±0°.03**, h10^{km}**±4^{km}**, n97, σ1^{s}88**/97**, mb4.0**/33**, MS3.4**/20**, 11C-6D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFFD	**Fukushimafurud**	0.07	292	P	Pg	17 04 35.2	-0.5
JFFD				S	Sg	17 04 36.4	-1.0
ONAJ	**Iwakimizuishiy**	0.13	74	⇑P	Pg	17 04 37.4	+0.8
ONAJ				S	Sg	17 04 40.4	+1.6
JFK	**Kawauchi**	0.35	32	⇑P	Pn	17 04 41.1	-3.5
JFK				S	Sb	17 04 46.7	-0.7
JHO	**Hitachi**	0.46	187	⇑P	Pg	17 04 41.6	-0.7
JHO				S	Sg	17 04 47.4	-1.0
JFT	**Otama**	0.51	332	⇑P	Pg	17 04 43.5	+0.1
JFT				S	Sg	17 04 50.3	+0.1
JSB	**Shiboa**	0.58	261	⇑P	Pg	17 04 44.3	-0.4
JSB				*e*S	Sg	17 04 51.9	-0.6
JMM	**Marumori**	0.81	9	⇑P	Pn	17 04 48.8	-2.0
JMM				S	Sn	17 05 00.2	-2.6
JFY	**Yanaizu**	0.82	295	⇓P	Pg	17 04 48.3	-0.9
JFY				S	Sg	17 04 58.5	-1.4
MJAR	**Matsushiro Arr**	2.02	256	Pn	Pn	17 05 06.5	-1.0
	66nm,0.3s,baz=20,slow=16,SNR=399						
MJAR				Sn	Sn	17 05 33.2	+0.5
	92nm,0.3s,baz=96,slow=25,SNR=17						
MJAR				LR	LR	17 05 42.5	
	comp=Z,142nm,20.1s,baz=75,slow=37						
MAJO	**Matsushiro**	2.02	256	*c i*P	Pn	17 05 07.6	+0.1
MAT	**Matsushiro**	2.02	256	P	Pn	17 05 07.6	+0.1
MAT				S	Sn	17 05 34.4	+1.6
JHJ	**Hachijo jima 2**	4.00	190	Pn	Pn	17 05 35.1	+0.4
	22nm,0.3s,baz=307,slow=19,SNR=12						
JHJ				Sn	Sn	17 06 19.5	-2.1
	36nm,0.3s,baz=230,slow=18,SNR=3.2						
ERM	**Erimo**	5.31	21	*e*Pn	Pn	17 05 52.8	+0.1
	43nm,0.9s						
ERM	**Erimo**	5.31	21	⇓*e*P	Pn	17 05 53.0	+0.3
ASAJ	**Asahikawa**	7.20	11	Pn	Pn	17 06 19.2	+0.6
	1.9nm,0.3s,baz=221,slow=10,SNR=34						
ASAJ				Sn	Sn	17 07 41.8	+1.4
	0.3nm,0.3s,baz=217,slow=20,SNR=2.5						
YUK	**Yuzh-Kuril'sk**	8.02	28	P	Pn	17 06 29.6	-0.2
YUK				*e*S	Sn	17 07 57.0	-3.4
YUK				pmax	pmax		
	comp=Z,106nm,0.3s						
YUK				pmax	pmax		
	comp=N,79nm,0.4s						

YUK				pmax	pmax		
	comp=E,41nm,0.2s						
YUK				MLR	MLR		
	comp=Z,60nm,13.0s						
SHO	**Shikotan**	**8.27**	**33**	*e*P	**Pn**	**17 06 31.8**	**-1.5**
SHO				*e*S	**Sn**	**17 08 00.8**	**-5.9**
SHO				pmax	pmax		
	comp=N,10.0nm,0.3s						
SHO				pmax	pmax		
	comp=Z,12nm,0.3s						
SHO				pmax	pmax		
	comp=E,5.0nm,0.2s						
TEY	**Ternei**	**8.53**	**340**	*e*P	**Pn**	**17 06 34.9**	**-1.9**
JNU	**Nakatsue**	**8.91**	**247**	Pn	**Pn**	**17 06 43.8**	**+1.6**
	comp=E,0.3nm,0.3s,baz=205,slow=19,SNR=4.2						
JNU				LR	LR	17 10 19.8	
	comp=E,179nm,19.6s,baz=120,slow=39						
USRK	**Ussuriysk Ar.**	**9.69**	**320**	Pn	Pn	17 06 58.7	+5.9
	baz=132,slow=12						
USRK				LR	LR	17 10 16.3	
	comp=E,173nm,19.9s,baz=112,slow=36						
KUR	**Kuril'sk**	**9.81**	**31**	*e*P	**Pn**	**17 06 53.5**	**-0.8**
KUR				*e*S	**Sn**	**17 08 39.4**	**-5.0**
KUR				pmax	pmax		
	comp=Z,16nm,0.4s						
KUR				pmax	pmax		
	comp=N,6.0nm,0.3s						
KUR				pmax	pmax		
	comp=E,5.0nm,0.3s						
YSS	**Yuzh-Sakhalins**	**10.01**	**8**	*e*Pn	**Pn**	**17 06 57.5**	**+0.4**
YSS	**Yuzh-Sakhalins**	**10.01**	**8**	⇓*e*P	**Pn**	**17 06 57.6**	**+0.6**
YSS				*e*S	**Sn**	**17 08 41.2**	**-8.1**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.7s						
YSS				MLR	MLR		
	comp=N,100nm,13.0s						
YSS				MLR	MLR		
	comp=Z,100nm,13.0s						
YSS				MLR	MLR		
	comp=E,300nm,14.0s						
CBIJ	**Chichi jima**	**10.03**	**172**	Pn	**Pn**	**17 06 53.9**	**-3.5**
CBIJ				Sn	Sn	17 08 35.7	-14
JCJ	**Chichijima**	**10.03**	**172**	Pn	**Pn**	**17 06 53.9**	**-3.5**
	comp=E,4.8nm,0.3s,baz=288,slow=19,SNR=10						
JCJ				Sn	Sn	17 08 35.7	-14
	baz=309,slow=19						
KSRS	**Korea Array**	**10.15**	**276**	Pn	**Pn**	**17 07 02.4**	**+3.4**
	comp=E,0.2nm,0.3s,baz=80,slow=14,SNR=4.3						
KSRS				LR	LR	17 10 42.1	
	comp=E,166nm,18.8s,baz=92,slow=37						
KSAR	**Wonju Array Be**	**10.18**	**276**	Pn	**Pn**	**17 07 02.4**	**+3.0**
KSAR	**Wonju Array Be**	**10.18**	**276**	P	**Pn**	**17 07 02.4**	**+3.0**
KLR	**Kul'dur**	**13.77**	**335**	Pn	**Pn**	**17 07 48.1**	**-0.3**
	comp=E,0.0nm,0.3s,baz=136,slow=13,SNR=1.9						
KLR	**Kul'dur**	**13.77**	**335**	⇓*e*P	**Pn**	**17 07 48.5**	**0.0**
TYV	**Tymovskoe**	**13.87**	**5**	*e*P	**Pn**	**17 07 48.5**	**-1.3**
TYV				pmax	pmax		
	comp=Z,7.0nm,0.8s						
TYV				pmax	pmax		
	comp=Z,100nm,3.6s						
JOW	**Kunigami**	**14.62**	**229**	LR	LR	17 13 49.2	
	comp=Z,58nm,18.6s,baz=313,slow=38						
ZEA	**Zeya**	**19.09**	**335**	*e*P	Pn	17 09 04.7	+8.0
ZEA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
PETK	**Petropavlovsk-**	**19.98**	**31**	P	**Pn**	**17 09 06.8**	**-0.5**
	comp=Z,4.3nm,1.0s,baz=242,slow=8.0						
PETK				LR	LR	17 16 20.0	
	comp=Z,37nm,21.3s,baz=226,slow=35						
MA2	**Magadan**	**23.46**	**13**	P	**P**	**17 09 41.9**	**-0.8**
	comp=Z,2.6nm,0.5s,baz=188,slow=5.1,SNR=4.6						
MA2				LR	LR	17 19 01.6	
	comp=Z,29nm,19.7s,baz=214,slow=37						
GUMO	**Guam**	**23.68**	**170**	LR	LR	17 18 16.7	
	comp=Z,49nm,21.1s,baz=360,slow=35						
YAK	**Yakutsk**	**25.91**	**348**	P	**P**	**17 10 04.5**	**-0.7**
	comp=Z,5.1nm,0.5s,baz=274,slow=1.6,SNR=6.2						
YAK				LR	LR	17 20 17.9	
	comp=Z,90nm,18.2s,baz=178,slow=36						
YAK	**Yakutsk**	**25.91**	**348**	P	**P**	**17 10 04.5**	**-0.7**
YAK				pmax	pmax		
	comp=Z,4.0nm,0.4s						
YAK				MLR	MLR		
	comp=Z,90nm,18.2s						
ULN	**Ulaanbaatar**	**26.82**	**304**	⇓*e*P	**P**	**17 10 13.4**	**-0.5**
ULN				pmax	pmax		
	comp=Z,4.0nm,1.4s						
SEY	**Seymchan**	**26.88**	**12**	P	**P**	**17 10 15.4**	**+1.4**
	comp=Z,2.7nm,1.0s,baz=215,slow=9.5,SNR=3.6						
SEY	**Seymchan**	**26.88**	**12**	⇑*e*P	**P**	**17 10 16.9**	**+2.9**
SONM	**Songino Array**	**27.25**	**304**	P	**P**	**17 10 17.5**	**-0.2**
	comp=Z,2.8nm,0.7s,baz=105,slow=9.2,SNR=14						
SONM				LR	LR	17 20 17.1	
	comp=Z,25nm,18.8s,baz=216,slow=35						
SONM	**Songino Array**	**27.25**	**304**	*e*P	**P**	**17 10 18.9**	**+1.2**
SONM				pmax	pmax		
	comp=Z,3.0nm,0.7s						
H11N2	**WAKE ISLAND Hy**	**28.70**	**120**	T	T	17 40 22.7	
	baz=313,slow=75,SNR=493						
H11N1	**WAKE ISLAND Hy**	**28.71**	**120**	T	T	17 40 25.4	
	baz=313,slow=75,SNR=396						
H11N3	**WAKE ISLAND Hy**	**28.72**	**120**	T	T	17 40 24.9	
	baz=313,slow=75,SNR=487						
TGY	**Tagaytay City**	**28.84**	**223**	LR	LR	17 23 02.9	
	comp=Z,58nm,18.2s,baz=193,slow=39						
H11S1	**WAKE ISLAND Hy**	**29.40**	**122**	T	T	17 41 13.6	
	baz=314,slow=76,SNR=886						
H11S3	**WAKE ISLAND Hy**	**29.40**	**122**	T	T	17 41 13.5	
	baz=314,slow=76,SNR=724						
H11S2	**WAKE ISLAND Hy**	**29.41**	**122**	T	T	17 41 14.8	
	baz=314,slow=76,SNR=806						
TLY	**Talaya**	**29.84**	**311**	LR	LR	17 22 55.4	
	comp=Z,52nm,19.4s,baz=108,slow=37						
TLY	**Talaya**	**29.84**	**311**	*e*P	**P**	**17 10 40.7**	**+0.1**
TLY				pmax	pmax		
	comp=Z,3.0nm,1.0s						
TLY				MLR	MLR		
	comp=Z,86nm,16.0s						
BILL	**Bilibino**	**34.17**	**17**	*e*P	**P**	**17 11 20.4**	**+2.0**
BILL				pmax	pmax		
	comp=Z,1.0nm,1.1s						
SIJI	**Sorong**	**38.73**	**195**	LR	LR	17 24 58.8	
	comp=Z,58nm,21.1s,baz=102,slow=32						
DGZ	**Jazzator, Alta**	**39.87**	**306**	*e*P	**P**	**17 12 09.0**	**+1.8**
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**40.91**	**255**	P	**P**	**17 12 16.6**	**+0.7**
	comp=Z,0.3nm,0.6s,baz=40,slow=8.5,SNR=2.8						
ZALV	**Zalesovo Beam**	**41.44**	**312**	P	**P**	**17 12 18.3**	**-1.6**
	comp=Z,0.8nm,0.3s,baz=120,slow=8.5,SNR=6.8						
ZALV				PcP	**PcP**	**17 14 17.1**	**-0.4**
	comp=Z,0.8nm,0.5s,baz=82,slow=4.9,SNR=3.5						
ZALV				LR	LR	17 29 43.6	
	comp=Z,23nm,19.1s,baz=70,slow=36						
ZALV	**Zalesovo Beam**	**41.44**	**312**	P	**P**	**17 12 18.3**	**-1.6**
ZALV						17 14 17.1	
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ZALV				MLR	MLR		
	comp=Z,23nm,19.1s						
MKAR	**Makanchi Array**	**43.58**	**302**	P	**P**	**17 12 37.0**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=86,slow=9.2,SNR=8.7						
MKAR				LR	LR	17 31 22.0	
	comp=Z,48nm,19.5s,baz=76,slow=37						
MKAR	**Makanchi Array**	**43.58**	**302**	*e*P	**P**	**17 12 38.1**	**+0.7**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURK	**Kurchatov**	**45.42**	**308**	*e*P	**P**	**17 12 50.7**	**-1.3**
	comp=Z,9.1nm,0.8s						
KURK	**Kurchatov**	**45.42**	**308**	*ce*P	**P**	**17 12 52.9**	**+0.8**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KURBB	**Kurchatov Arra**	**45.49**	**308**	P	**P**	**17 12 51.4**	**-1.2**
	comp=Z,3.3nm,0.7s,baz=83,slow=8.0,SNR=19						
ILAR	**Eielson Array**	**49.80**	**32**	P	**P**	**17 13 26.9**	**+1.0**
	comp=Z,1.2nm,0.8s,baz=283,slow=5.5,SNR=4.6						
ILAR	**Eielson Array**	**49.80**	**32**	*e*P	**P**	**17 13 29.6**	**+3.7**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BVAR	**Borovoye Array**	**50.09**	**312**	P	**P**	**17 13 28.8**	**+0.5**
	comp=Z,0.8nm,0.6s,baz=74,slow=8.1,SNR=4.6						
BVAR				PcP	**PcP**	**17 14 46.8**	**-0.9**
	comp=Z,1.0nm,0.6s,baz=73,slow=5.1,SNR=3.9						
BRVK	**Borovoye**	**50.15**	**312**	⇓*e*P	**P**	**17 13 30.8**	**+2.1**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ARU	**Arti**	**55.93**	**318**	P	**P**	**17 14 12.9**	**+1.7**
	comp=Z,3.1nm,0.6s,baz=301,slow=0.7,SNR=7.6						
ARU				LR	LR	17 40 37.4	
	comp=Z,55nm,18.7s,baz=340,slow=39						
ARU	**Arti**	**55.93**	**318**	*c i*P	**P**	**17 14 12.3**	**+1.1**
ARU						17 15 10.1	
ARU				S	**S**	**17 22 00.7**	**+2.0**
ARU				SS	**SS**	**17 25 43.5**	**-0.5**
ARU				pmax	pmax		
	comp=Z,6.0nm,0.8s						
WRA	**Warramunga Arr**	**57.01**	**187**	P	**P**	**17 14 18.2**	**-1.1**
	comp=Z,1.1nm,0.3s,baz=2.5,slow=7.3,SNR=29						
AKTO	**Aktyubinsk**	**58.19**	**312**	LR	LR	17 39 59.9	
	comp=Z,22nm,18.6s,baz=88,slow=37						
ASAR	**Alice Springs**	**60.74**	**187**	P	**P**	**17 14 43.9**	**-1.2**
	comp=Z,0.8nm,0.7s,baz=0.5,slow=3.4,SNR=15						
ASAR	**Alice Springs**	**60.74**	**187**	P	**P**	**17 14 44.0**	**-1.2**
ARCES	**ARCESS Array B**	**63.75**	**339**	P	**P**	**17 15 05.2**	**+0.4**
	comp=Z,2.9nm,0.8s,baz=41,slow=8.4,SNR=7.9						
YKA	**Yellowknife Ar**	**64.09**	**30**	P	**P**	**17 15 06.7**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=308,slow=7.0,SNR=3.0						
AFI	**Afiamalu**	**67.63**	**129**	LR	LR	17 39 28.5	
	comp=Z,16nm,21.3s,baz=133,slow=31						
OBN	**Obninsk**	**67.70**	**323**	*e*P	**P**	**17 15 31.4**	**+0.9**
OBN				*e*		17 17 58.6	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
FINES	**FINESS Array B**	**68.50**	**332**	P	**P**	**17 15 34.1**	**-1.2**
	comp=Z,3.2nm,0.7s,baz=34,slow=12,SNR=11						
KVAR	**Kislovodsk Arr**	**70.41**	**311**	LR	LR	17 48 00.7	
	comp=Z,24nm,20.6s,slow=37						
KIV	**Kislovodsk**	**70.42**	**311**	*e*P	**P**	**17 15 48.7**	**+1.0**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,20nm,18.0s						
HFS	**Hagfors**	**73.80**	**335**	P	**P**	**17 16 07.6**	**0.0**
	comp=Z,2.1nm,0.8s,baz=46,slow=13,SNR=5.1						
HFS				LR	LR	17 50 51.4	
	comp=Z,53nm,19.9s,baz=29,slow=38						
AKASG	**Malin Array Be**	**73.89**	**322**	P	**P**	**17 16 08.4**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=47,slow=6.6,SNR=4.5						
AKASG				LR	LR	17 50 45.9	
	comp=Z,41nm,21.2s,baz=30,slow=38						
KIEV	**Kiev**	**73.91**	**322**	⇑*e*P	**P**	**17 16 09.4**	**+1.1**
KIEV				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NB2	**NORSAR Subarra**	**73.92**	**337**	P	**P**	**17 16 08.0**	**-0.3**
	comp=Z,2.1nm,0.8s,baz=40,slow=6.2						
NOA	**NORSAR Array B**	**73.92**	**337**	LR	LR	17 51 47.5	
	comp=Z,40nm,18.2s,baz=30,slow=38						
NVAR	**Mina Array Bea**	**75.46**	**53**	P	**P**	**17 16 19.4**	**+1.5**
	comp=Z,0.6nm,0.6s,baz=305,slow=5.5,SNR=6.7						
PDAR	**Pinedale Array**	**78.08**	**45**	P	**P**	**17 16 33.2**	**+0.6**
	comp=Z,0.3nm,0.6s,baz=319,slow=2.6,SNR=3.7						
BRTR	**Keskin Array B**	**78.37**	**311**	P	**P**	**17 16 34.9**	**+0.8**
	comp=Z,0.8nm,0.6s,baz=129,slow=4.9,SNR=4.7						
MLR	**Muntele Rosu**	**78.96**	**319**	LR	LR	17 54 06.2	
	comp=Z,9.9nm,19.5s,baz=60,slow=38						
RAR	**Rarotonga**	**80.68**	**125**	LR	LR	17 45 38.6	
	comp=Z,59nm,21.1s,baz=194,slow=31						
CLL	**Collm**	**80.76**	**330**	*i* P	**P**	**17 16 48.6**	**+1.9**
CLL	**Collm**	**80.76**	**330**	*i* P	**P**	**17 16 48.6**	**+1.9**
MMAI	**Mount Meron Ar**	**81.44**	**305**	LR	LR	17 55 24.4	
	comp=Z,17nm,19.2s,baz=205,slow=38						
GERES	**GERESS Array B**	**82.36**	**328**	P	**P**	**17 16 54.7**	**-0.7**
	comp=Z,0.6nm,0.5s,baz=32,slow=6.3,SNR=5.3						
GERES	**GERESS Array B**	**82.36**	**328**	*e*P	**P**	**17 16 57.0**	**+1.6**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
TXAR	**Lajitas Array**	**90.59**	**52**	P	**P**	**17 17 37.1**	**+1.0**
	comp=Z,0.2nm,0.5s,baz=325,slow=5.8,SNR=3.6						
LPAZ	**La Paz**	**147.21**	**59**	PKPbc	**PKPab**	**17 24 19.9**	**+0.2**
	comp=Z,0.9nm,0.5s,baz=27,slow=2.3,SNR=3.9						

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*ISCJB **05** 17:04:34.5±0.9, 56°.1S±0°.1×27°.2W±0°.5, h112^{km}, mb4.1/5, Error ellipse: s-maj=38.5km s-min=15.0km az=159.1*

*IDC **05** 17:04:38.5±7.5, 56°.14S×27°.34W, h135^{km}±66^{km}, mb3.9/5, mb1 4.1/6, mb1mx3.7/28, mbtmp4.3/6, Error ellipse: s-maj=35.8km s-min=22.6km az=76.0*

ISC 05 17:04:35.7±0.8**, 56°.1S**±0°.1×**27°.3W**±0°.3**, h112**^{km}**, n13, σ0**^{s}**.60**/13**, mb4.2**/5**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**16.76**	**158**	P	**P**	**17 08 23.4**	**-0.1**
VNA3	**Neumayer Olymp**	**16.95**	**160**	P	**Pn**	**17 08 25.4**	**-0.2**
SNAA	**Sanae**	**18.71**	**156**	P	**P**	**17 08 45.3**	**+0.2**
SNAA	**Sanae**	**18.71**	**156**	P	**P**	**17 08 45.2**	**+0.2**
	6.3nm,0.3s,baz=331,slow=10,SNR=101						
QSPA	**South Pole Qui**	**34.14**	**180**	P	**P**	**17 11 10.1**	**+0.5**
	2.7nm,0.3s,baz=7.6,slow=12,SNR=9.0						
VNDA	**Vanda**	**46.51**	**183**	P	**P**	**17 12 51.5**	**+0.5**
	2.3nm,0.6s,baz=190,slow=6.5,SNR=26						
LPAZ	**La Paz**	**50.37**	**305**	P	**P**	**17 13 22.4**	**+0.3**
	1.2nm,0.5s,baz=210,slow=2.2,SNR=5.0						
TORD	**Torodi Ar. Bea**	**73.13**	**30**	P	**P**	**17 15 54.5**	**+0.8**
	0.4nm,0.4s,baz=208,slow=5.7						
ASAR	**Alice Springs**	**98.95**	**163**	P	**P**	**17 18 02.5**	**-0.9**
	0.4nm,0.5s,baz=187,slow=4.3,SNR=12						
YKA	**Yellowknife Ar**	**136.18**	**318**	PKP	**PKPdf**	**17 23 41.5**	**-0.7**
	0.5nm,0.5s,baz=125,slow=2.1,SNR=5.5						
MKAR	**Makanchi Array**	**136.95**	**72**	PKP	**PKPdf**	**17 23 43.8**	**-0.5**
	0.2nm,0.5s,baz=239,slow=0.8,SNR=2.2						
ILAR	**Eielson Array**	**150.12**	**312**	PKPbc	**PKPbc**	**17 24 10.8**	**-0.9**
	2.9nm,0.7s,baz=124,slow=1.8,SNR=22						
SONM	**Songino Array**	**150.78**	**87**	PKPbc	**PKPbc**	**17 24 14.0**	**+0.1**
	2.4nm,0.6s,baz=218,slow=3.1,SNR=11						

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*CSEM **05** 17:11:08.2±0.8, 51°.46N×16°.12E, h2^{km}, ML2.6/7, Error ellipse: s-maj=12.6km s-min=7.0km az=10.0*

*PRU **05** 17:11:09.8, 51°.43N×16°.08E, h0^{km}*

ISC 05 17:11:07.9±1.7**, 51°.49N**±0°.08×**16°.18E**±0°.05**, h0**^{km}**, n21, σ0**^{s}**.44**/37**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.65**	**174**	*e*Pg	**Pg**	**17 11 20.9**	**+0.4**
KSP				*e*Sg	**Sg**	**17 11 29.3**	**+0.5**
UPC	**Upice**	**0.99**	**186**	*e*PG	**Pb**	**17 11 27.7**	**-0.2**
UPC				*e*SG	**Sg**	**17 11 39.8**	**+0.1**
	comp=Z,15nm,0.3s						
UPC	**Upice**	**0.99**	**186**	Pg	**Pb**	**17 11 27.7**	**-0.2**
UPC				Sg	**Sg**	**17 11 39.8**	**+0.1**
	15nm,0.3s						
DPC	**Dobruska-Polom**	**1.15**	**175**	*e*PG	**Pg**	**17 11 29.7**	**-0.2**
DPC				*e*SG	**Sg**	**17 11 44.9**	**+0.2**
	comp=Z,4.0nm,0.3s						
DPC	**Dobruska-Polom**	**1.15**	**175**	Pg	**Pg**	**17 11 29.7**	**-0.2**
DPC				Sg	**Sg**	**17 11 44.9**	**+0.2**
	4.0nm,0.3s						
PVCC	**Panska Ves**	**1.40**	**227**	*e*PG	**Pn**	**17 11 34.7**	**0.0**
PVCC				*e*SG	**Sg**	**17 11 52.3**	**-0.6**
	comp=Z,22nm,0.2s						
PVCC	**Panska Ves**	**1.40**	**227**	Pg	**Pn**	**17 11 34.7**	**0.0**
PVCC				Sg	**Sg**	**17 11 52.3**	**-0.6**
	22nm,0.2s						
KRLC	**Kraliky**	**1.47**	**165**	*e*PG	**Pb**	**17 11 36.1**	**0.0**
KRLC				*e*SG	**Sg**	**17 11 54.9**	**-0.1**
	comp=Z,1.5nm,0.4s						
KRLC	**Kraliky**	**1.47**	**165**	Pg	**Pb**	**17 11 36.1**	**0.0**
KRLC				Sg	**Sg**	**17 11 54.9**	**-0.1**
	1.5nm,0.4s						
BRG	**Berggiesshubel**	**1.54**	**247**	PG	**Pg**	**17 11 37.7**	**+0.3**
BRG				SG	**Sn**	**17 11 56.6**	**-0.7**
	8.7nm,0.3s						
GOPC	**GO Pecny, Ondr**	**1.81**	**210**	*e*PG	**Pg**	**17 11 42.8**	**+0.2**
GOPC	**GO Pecny, Ondr**	**1.81**	**210**	Pg	**Pg**	**17 11 42.8**	**+0.2**
PRU	**Pruhonice**	**1.83**	**215**	*e*SG	**Sn**	**17 12 04.8**	**+0.3**
	comp=Z,3.8nm,0.3s						
PRU	**Pruhonice**	**1.83**	**215**	Sg	**Sn**	**17 12 04.8**	**+0.3**
	3.8nm,0.3s						
MORC	**Moravsky Berou**	**1.92**	**153**	*e*Pn	**Pn**	**17 11 41.7**	**-0.2**
MORC				*e*Sg	**Sg**	**17 12 09.3**	**-0.3**
MORC	**Moravsky Berou**	**1.92**	**153**	*e*PN	**Pn**	**17 11 41.7**	**-0.2**
MORC				*e*SG	**Sg**	**17 12 09.3**	**-0.3**
CLL	**Collm**	**2.00**	**266**	*e*Pn	**Pn**	**17 11 43.0**	**+0.1**
CLL				*i* Pg	**Pg**	**17 11 46.1**	**-0.1**
CLL				*e*Sg	**Sb**	**17 12 11.0**	**+0.5**
NKC	**Novy Kostel**	**2.68**	**243**	*e*SG	**Sg**	**17 12 34.1**	**+0.2**
	comp=Z,4.6nm,0.3s						
NKC	**Novy Kostel**	**2.68**	**243**	Sg	**Sg**	**17 12 34.1**	**+0.2**
	4.6nm,0.3s						
KHC	**Kasperske Hory**	**2.89**	**216**	*e*PN	**Pn**	**17 11 55.2**	**-0.1**
KHC				*e*PG	**Pb**	**17 12 00.9**	**+0.5**
KHC				*e*SG	**Sg**	**17 12 39.0**	**-1.8**
	comp=Z,1.4nm,0.3s						
KHC	**Kasperske Hory**	**2.89**	**216**	Pn	**Pn**	**17 11 55.2**	**-0.1**

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*IDC **05** 17:17:52.8±0.9, 10°.54N×126°.48E, h0^{km}, mb3.9/9, mb1 4.0/9, mb1mx3.6/57, mbtmp3.9/9, MS3.0/2, Ms1 3.0/2, ms1mx2.4/56, Error ellipse: s-maj=46.3km s-min=20.5km az=70.0*

*MAN **05** 17:17:55.5, 10°.61N×126°.58E, h27^{km}, mb5.3, ML4.2, MS4.4*

*NEIC **05** 17:17:58.3±0.6, 10°.49N×126°.44E, h35^{km}, mb4.6/1, Error ellipse: s-maj=28.2km s-min=12.1km az=71.0*

ISC 05 17:17:54.3±3.3**, 10°.56N**±0°.04×**126°.51E**±0°.06**, h8**^{km}±21^{km}**, n28, σ1**^{s}**.18**/40**, mb4.0**/10**, 2C-4D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.27**	**233**	⇓*i*P	**Pn**	**17 18 17.9**	**-0.4**
SCPH				*i* S	**Sb**	**17 18 34.1**	**-0.9**
BESP	**Borongan**	**1.48**	**315**	*e*P	**Pn**	**17 18 20.0**	**-1.2**
BESP				*e*S	Sg	17 18 53.5	+12
PLP	**Palo**	**1.62**	**292**	⇓*e*P	**Pn**	**17 18 23.8**	**+0.6**
MSLP	**Maasin**	**1.68**	**256**	*e*P	**Pn**	**17 18 23.7**	**-0.3**
MSLP				*e*S	**Sb**	**17 18 47.0**	**+0.2**
BUTP	**Butuan**	**1.81**	**209**	*e*P	**Pn**	**17 18 25.1**	**-0.6**
BUTP				*e*S	**Sb**	**17 18 50.7**	**+0.2**
OCLP	**Ormoc**	**1.93**	**285**	*e*P	**Pn**	**17 18 28.4**	**+1.0**
OCLP				*e*S	**Sn**	**17 18 51.6**	**-0.3**
BIPH	**Bislig**	**2.37**	**184**	⇑*e*P	**Pb**	**17 18 38.0**	**+0.8**
BIPH				*e*S	**Sn**	**17 19 03.3**	**+0.7**
LLP	**Lapu-Lapu**	**2.52**	**265**	⇓*e*P	**Pn**	**17 18 36.7**	**+1.2**
LLP				*e*S	**Sn**	**17 19 08.6**	**+2.3**
CNP	**Catarman**	**2.65**	**317**	*e*P	**Pn**	**17 18 39.3**	**+1.9**
CNP				*e*S	**Sn**	**17 19 08.7**	**-1.1**
CGP	**Cagayan de Oro**	**2.75**	**221**	⇑*e*P	**Pb**	**17 18 42.2**	**-1.6**
CGP				*e*S	**Sn**	**17 19 10.9**	**-1.3**
BUKP	**Musuan**	**3.02**	**208**	*e*P	**Pn**	**17 18 43.5**	**+1.0**
BUKP				*e*S	**Sn**	**17 19 20.1**	**+1.1**
PVCP	**Virac**	**3.80**	**323**	*e*P	**Pn**	**17 18 52.7**	**-0.4**
PVCP				*e*S	**Sb**	**17 19 49.9**	**+2.1**
RCP	**Roxas**	**3.83**	**285**	⇓*e*P	**Pn**	**17 18 55.6**	**+2.0**
GUIM	**Jordan**	**3.86**	**271**	*e*P	**Pn**	**17 18 52.7**	**-1.2**
GUIM				*e*S	Sn	17 19 13.2	-26
PAGZ	**Pagadian**	**4.10**	**229**	*e*P	**Pn**	**17 18 59.8**	**+2.5**
PAGZ				*e*S	**Sn**	**17 19 46.6**	**+1.2**
CMAR	**Chiang Mai Arr**	**27.79**	**290**	P	**P**	**17 23 44.5**	**+0.4**
	0.8nm,0.6s,baz=96,slow=7.2,SNR=7.9						
FITZ	**Fitzroy Crossi**	**28.49**	**182**	P	**P**	**17 23 50.2**	**0.0**
	2.0nm,0.9s,baz=8.8,slow=14,SNR=2.5						
ASAR	**Alice Springs**	**34.77**	**168**	P	**P**	**17 24 44.6**	**-0.8**
	0.4nm,0.7s,baz=349,slow=6.7,SNR=6.4						
ASAJ	**Asahikawa**	**36.22**	**20**	LR	LR	17 39 05.4	
	comp=Z,15nm,20.2s,baz=290,slow=35						
SONM	**Songino Array**	**40.83**	**339**	PcP	**PcP**	**17 27 38.0**	**+0.5**
	0.3nm,0.5s,baz=165,slow=2.8,SNR=2.4						
PETK	**Petropavlovsk-**	**49.28**	**24**	LR	LR	17 47 17.4	
	comp=Z,21nm,20.0s,baz=162,slow=36						
MKAR	**Makanchi Array**	**51.94**	**323**	P	**P**	**17 27 03.6**	**-0.2**
	1.4nm,0.8s,baz=121,slow=8.9,SNR=14						
MKAR				PcP	**PcP**	**17 28 14.0**	**-2.3**
	0.4nm,0.4s,baz=119,slow=5.1,SNR=7.2						
ZALV	**Zalesovo Beam**	**54.49**	**331**	P	**P**	**17 27 22.2**	**-0.1**
	1.7nm,0.8s,baz=120,slow=7.1,SNR=8.2						
KURK	**Kurchatov**	**55.97**	**325**	*e*P	**P**	**17 27 32.7**	**-0.3**
	2.8nm,0.4s						
KURK				PcP	**PcP**	**17 28 31.2**	**-0.3**
KURBB	**Kurchatov Arra**	**55.97**	**325**	P	**P**	**17 27 32.3**	**-0.8**
	0.9nm,0.5s,baz=125,slow=6.7,SNR=9.1						
KURBB				PcP	**PcP**	**17 28 31.2**	**-0.3**
	0.1nm,0.3s,baz=120,slow=3.7,SNR=2.5						
ARCES	**ARCESS Array B**	**84.01**	**340**	P	**P**	**17 30 24.9**	**0.0**
	2.0nm,0.7s,baz=75,slow=5.5,SNR=7.8						
FINES	**FINESS Array B**	**85.75**	**332**	P	**P**	**17 30 33.1**	**-0.7**
	0.4nm,0.4s,baz=65,slow=4.8,SNR=6.3						
YKA	**Yellowknife Ar**	**93.40**	**24**	P	**P**	**17 31 10.9**	**+0.9**
	0.1nm,0.3s,baz=289,slow=4.3,SNR=3.3						

MEX 05 17:35:27.1±0.5**, 15°.94N**×**98°.38W, h15**^{km}**, MD3.6, Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.51**	**28**	*i* P	Pg	17 35 35.9	-1.5
PNIG				*e*S	Sg	17 35 42.5	-1.7
TLIG	**Tlapa**	**1.63**	**354**	*e*P	Pn	17 35 51.8	-3.6
TLIG				*e*S	Sn	17 36 11.0	-5.2

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*NNC **05** 17:37:53.0±4.1, 36°.99N×70°.71E, h183^{km}±65^{km}, mb2.9, mpv4.0, Error ellipse: s-maj=41.4km s-min=38.4km az=89.0*

ISC 05 17:37:53.5±3.1**, 37°.0N**±0°.2×**71°.0E**±0°.1**, h200**^{km}**, n15, σ0**^{s}**.68**/20**, 6C-4D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**3.63**	**32**	⇑P	**Pn**	**17 38 50.8**	**-0.2**
	6.9nm,0.3s						
SFK				⇑S	**Sn**	**17 39 37.2**	**+1.1**
	20nm,0.2s						
AML	**Almayashu**	**5.57**	**21**	P	**Pn**	**17 39 15.2**	**-0.3**
	SNR=63						
MNAS	**Manas**	**5.64**	**12**	⇓P	**Pn**	**17 39 15.9**	**-0.2**
	9.2nm,0.7s						
MNAS				⇓S	**Sn**	**17 40 22.1**	**+0.6**
	13nm,0.4s						
UCH	**Uchtor**	**5.92**	**26**	P	**Pn**	**17 39 19.8**	**-0.3**
	SNR=30						
KZA	**Kyzart**	**6.08**	**32**	P	**Pn**	**17 39 21.0**	**-1.1**
	SNR=6.3						
EKS2	**Erkin-Say**	**6.08**	**20**	P	**Pn**	**17 39 21.8**	**-0.1**
	SNR=10						
KK31	**Karatay Array**	**6.14**	**357**	P	**Pn**	**17 39 22.5**	**0.0**
	4.0nm,0.4s,baz=179,slow=13,SNR=54						
KK31				⇓S	**Sn**	**17 40 31.5**	**-1.5**
	3.8nm,0.3s,baz=185,slow=21,SNR=5.1						
AAK	**Ala-Archa**	**6.28**	**25**	⇑P	**Pn**	**17 39 24.5**	**+0.1**
	3.2nm,0.3s						
AAK				⇑S	**Sn**	**17 40 37.3**	**+0.8**
	7.5nm,0.5s						
KBK	**Karagaybulak**	**6.45**	**27**	P	**Pn**	**17 39 27.0**	**+0.3**
	SNR=6.2						
ULHL	**Ulahol**	**6.66**	**36**	P	**Pn**	**17 39 28.7**	**-0.8**
	SNR=5.8						
CHMS	**Chumysh**	**6.69**	**25**	P	**Pn**	**17 39 29.6**	**0.0**
	SNR=5.6						
USP	**Ospenovka**	**6.85**	**22**	P	**Pn**	**17 39 31.7**	**0.0**
	SNR=5.8						
TKM2	**Tokmak 2**	**6.92**	**29**	⇑P	**Pn**	**17 39 32.1**	**-0.7**
	19nm,0.7s						
TKM2				⇑S	**Sn**	**17 40 51.2**	**-0.5**
	2.8nm,0.8s						
TKM2	**Tokmak 2**	**6.92**	**29**	P	**Pn**	**17 39 32.5**	**-0.4**
	SNR=21						
AB31	**Akbulak array**	**14.66**	**330**	⇓P	**P**	**17 41 12.8**	**+0.4**
	0.4nm,0.6s,baz=0.0,slow=0.1,SNR=5.2						

WEL 05 17:38:14.0±0.5**, 34°S**±6°×**17°9E**±1°1**, h33**^{km}**, ML4.8**/24**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.70**	**191**	P	Pn	17 39 12.2	+3.4
MXZ				S	Sn	17 39 55.2	+3.9
WMGZ	**Waiomatatini S**	**3.94**	**189**	P	Pn	17 39 14.5	+2.4
HAZ	**Te Kaha**	**3.99**	**196**	P	Pn	17 39 15.3	+2.6
PUZ	**Puketiti**	**4.21**	**190**	P	Pn	17 39 18.4	+2.6
RUGZ	**Raukumara Rang**	**4.21**	**196**	P	Pn	17 39 17.5	+1.6
TWGZ	**Tauwhareparae**	**4.36**	**192**	P	Pn	17 39 19.9	+2.1
MWZ	**Matawai**	**4.60**	**196**	P	Pn	17 39 21.7	+0.5
CNGZ	**Carnagh Statio**	**4.62**	**189**	P	Pn	17 39 22.0	+0.6
TKGZ	**Te Karaka**	**4.63**	**193**	P	Pn	17 39 21.5	-0.1
URZ	**Urewera**	**4.64**	**200**	P	Pn	17 39 22.2	+0.5
OUZ	**Omahuta**	**4.78**	**253**	P	Pn	17 39 26.1	+2.5
RAGZ	**Rawiri**	**4.78**	**197**	P	Pn	17 39 24.7	+1.0
TOZ	**Tahuroa Road**	**4.83**	**217**	P	Pn	17 39 30.2	+5.8
RIGZ	**Rimuhau**	**4.91**	**193**	P	Pn	17 39 25.9	+0.4

MUGZ	Murupara	4.94	202	P	Pn	17 39 26.1	+0.2
MUGZ				S	Sn	17 40 19.9	-2.0
RTZ	Ruatahuna	5.01	200	P	Pn	17 39 26.3	-0.6
RTZ				S	Sn	17 40 21.7	-1.9
SNGZ	Shannon Statio	5.07	196	P	Pn	17 39 27.3	-0.3
ALRZ	Allen Road	5.16	205	P	Pn	17 39 29.8	+0.8
ALRZ				S	Sn	17 40 28.0	+0.6
KNZ	Kokohu	5.23	193	P	Pn	17 39 29.4	-0.4
GLKZ	Green Lake	5.27	29	P	Pn	17 39 27.4	-2.9
GLKZ				S	Sn	17 40 30.1	+0.2
MTHZ	Maungataniwha	5.27	200	P	Pn	17 39 30.5	+0.1
MTHZ				S	Sn	17 40 27.4	-2.6
TLZ	Tolley Road	5.29	213	P	Pn	17 39 32.8	+2.1
KUTZ	Kaahu Road	5.30	210	P	Pn	17 39 32.4	+1.6
MRHZ	Matea Rd	5.38	204	P	Pn	17 39 30.4	-1.6
NMHZ	Naumai	5.50	200	P	Pn	17 39 33.1	-0.6
NMHZ				S	Sn	17 40 34.4	-1.5
ARHZ	Aropaoanui	5.61	198	P	Pn	17 39 34.2	-0.9
BKZ	Black Stump Fm	5.66	202	P	Pn	17 39 34.1	-1.7
HIZ	Hauiti	5.76	216	P	Pn	17 39 38.9	+1.8
MCHZ	McNeill Hill	5.86	199	P	Pn	17 39 36.6	-1.9
KWHZ	Kaweka Forest	5.92	201	P	Pn	17 39 37.1	-2.3
WTVZ	West Tongariro	5.93	208	P	Pn	17 39 38.5	-1.0
TWVZ	Taurewa	5.95	209	P	Pn	17 39 39.0	-0.9
TUVZ	Tukino	6.04	207	P	Pn	17 39 39.4	-1.7
FWVZ	Far West T-bar	6.07	208	P	Pn	17 39 39.7	-1.8
WHVZ	Whangaehu Hut	6.08	207	P	Pn	17 39 39.5	-2.2
BHHZ	Black Hill Sta	6.09	203	P	Pn	17 39 38.8	-2.9
TRVZ	Turoa	6.11	207	P	Pn	17 39 40.3	-1.8
MOVZ	Moawhango	6.12	206	P	Pn	17 39 39.4	-2.8
KRHZ	Kereru	6.14	201	P	Pn	17 39 39.3	-3.1
KAHZ	Kahuranaki	6.14	197	P	Pn	17 39 40.3	-2.1
PKVZ	Pokaka	6.18	209	P	Pn	17 39 40.9	-1.9
VRZ	Vera Road	6.29	213	P	Pn	17 39 43.6	-0.8
PXZ	Pawanui	6.37	196	P	Pn	17 39 42.0	-3.5
PNHZ	Pukenui	6.44	201	P	Pn	17 39 42.9	-3.6
TSZ	Takapari Road	6.64	202	P	Pn	17 39 45.0	-4.3
PRHZ	Porangahau	6.65	197	P	Pn	17 39 45.4	-3.9
PKE	Pukeiti	6.71	217	P	Pn	17 39 48.9	-1.4
WAZ	Wanganui	6.72	209	P	Pn	17 39 46.9	-3.3
LREZ	Lake Rotokare	6.72	213	P	Pn	17 39 48.3	-2.0
DVHZ	Dannevirke	6.80	200	P	Pn	17 39 46.5	-4.9
POWZ	Post Office Ro	7.01	202	P	Pn	17 39 49.2	-5.0
BFZ	Birch Farm	7.14	198	P	Pn	17 39 51.1	-4.9
MRZ	Mangatainoka R	7.31	202	P	Pn	17 39 51.9	-6.5
TIWZ	Tintock	7.33	200	P	Pn	17 39 53.4	-5.3
HOWZ	Holdsworth Sta	7.55	202	P	Pn	17 39 54.9	-6.7
OGWZ	Otaki Gorge	7.58	204	P	Pn	17 39 55.5	-6.6
TMWZ	Te Maipa	7.63	199	P	Pn	17 39 56.9	-5.9
KIW	Kapiti Island	7.71	205	P	Pn	17 39 57.0	-6.9
MTW	Mount Morrison	7.79	201	P	Pn	17 39 57.7	-7.2
TRWZ	Traveller	7.96	199	P	Pn	17 40 00.7	-6.6
PAWZ	Paruwai Farm	8.02	201	P	Pn	17 40 00.6	-7.5
DUWZ	D’Urville Isla	8.04	210	P	Pn	17 40 00.3	-8.1
MSWZ	Moikau Station	8.10	201	P	Pn	17 40 01.7	-7.6
BHW	Baring Head	8.21	203	P	Pn	17 40 02.3	-8.4
TCW	Tory Channel	8.25	207	P	Pn	17 40 03.3	-7.9

*ISK **05** 17:48:14.3, 39°.03N×42°.25E, h11^{km}, ML2.1/7*

*ISCJB **05** 17:48:15.1±0.4, 39°.06N±0°.02×42°.23E±0°.03, h9^{km}±4^{km}, Error ellipse: s-maj=4.2km s-min=3.8km az=161.6*

*CSEM **05** 17:48:15.0±0.2, 39°.07N×42°.24E, h10^{km}, ML2.8, Error ellipse: s-maj=3.4km s-min=3.3km az=23.0*

*DDA **05** 17:48:15.3, 39°.07N×42°.25E, h7^{km}, Ml2.8*

ISC 05 17:48:15.2±0.9**, 39°.06N**±0°.02×**42°.24E**±0°.02**, h14**^{km}±7^{km}**, n32,** σ0^s.**77**/53**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EKAR	Karacoban	0.24	326	i P	Pg	17 48 20.8	+0.2
EKAR				i S	Sg	17 48 24.6	+0.3
EKAR	Karacoban	0.24	326	P	Pg	17 48 20.8	+0.2
EKAR				S	Sg	17 48 24.6	+0.3
ADCV	BITLIS_Adilcev	0.45	123	i P	Pg	17 48 24.4	+0.2
ADCV				i S	Sb	17 48 31.9	+0.2
ADCV	BITLIS_Adilcev	0.45	123	P	Pg	17 48 24.4	+0.2
ADCV				S	Sb	17 48 31.9	+0.2
GURO	Guroymak-BITLI	0.53	198	PG	Pg	17 48 24.4	-1.3
GURO				SG	Sg	17 48 31.9	-0.8
GURO	Guroymak-BITLI	0.53	198	ePg	Pg	17 48 24.4	-1.3
GURO				eSg	Sg	17 48 31.9	-0.8
TUTA	Tutak	0.56	52	i P	Pg	17 48 25.9	-0.5
TUTA				i S	Sb	17 48 34.1	-1.0
TUTA	Tutak	0.56	52	P	Pg	17 48 25.9	-0.5
TUTA				S	Sb	17 48 34.1	-1.0
VRTB	Varto-Mus	0.62	280	PG	Pg	17 48 27.0	-0.4
VRTB				SG	Sb	17 48 36.8	+0.2
VRTB	Varto-Mus	0.62	280	i P	Pb	17 48 28.4	+0.4
VRTB				i S	Sg	17 48 36.1	+0.4
VRTB	Varto-Mus	0.62	280	ePg	Pg	17 48 27.0	-0.4
VRTB	Varto-Mus	0.62	280	P	Pb	17 48 28.4	+0.4
VRTB				S	Sg	17 48 36.1	+0.4
AGRB	Hanur-Agry	0.78	48	PG	Pg	17 48 29.7	-0.7
AGRB				SG	Sb	17 48 41.6	+0.3
AGRB	Hanur-Agry	0.78	48	ePg	Pg	17 48 29.7	-0.7
AGRB				eSg	Sb	17 48 41.6	+0.3
EATA	Eleskirt	0.83	13	i P	Pg	17 48 30.3	-1.1
EATA				i S	Sb	17 48 42.9	0.0
EATA	Eleskirt	0.83	13	P	Pg	17 48 30.3	-1.1
EATA				S	Sb	17 48 42.8	0.0
GEVA	Gevas	0.98	139	i P	Pg	17 48 33.6	-0.5
GEVA				i S	Sn	17 48 48.5	0.0
GEVA	Gevas	0.98	139	P	Pg	17 48 33.6	-0.5
GEVA				S	Sn	17 48 48.5	0.0
VANB	Van	1.01	117	PG	Pn	17 48 35.4	+0.3
VANB	Van	1.01	117	ePg	Pn	17 48 35.4	+0.3
ERZM	Erzurum	1.09	322	i P	Pg	17 48 35.5	-0.7
ERZM				i S	Sb	17 48 50.3	+0.2
ERZM	Erzurum	1.09	322	P	Pg	17 48 35.5	-0.7
ERZM				S	Sb	17 48 50.3	+0.2
SRTM	Siirt_Merkez	1.09	193	i P	Pb	17 48 36.3	+0.3
SRTM				i S	Sn	17 48 52.6	+1.5
SRTM	Siirt_Merkez	1.09	193	P	Pb	17 48 36.3	+0.3
SRTM				S	Sn	17 48 52.6	+1.5
SVAN	Silvan-Diyarba	1.22	223	PN	Pn	17 48 37.8	-0.1
SVAN	Silvan-Diyarba	1.22	223	ePn	Pn	17 48 37.8	-0.1
BNGB	Bingˆ¶l	1.22	268	PN	Pn	17 48 37.3	-0.7
BINT	Bingol	1.38	263	ePn	Pn	17 48 37.3	-2.9
SENK	Senkaya-Erzuru	1.51	3	PN	Pn	17 48 41.5	-0.5
SIRT	Sirnak	1.56	174	PN	Pn	17 48 42.6	0.0
PTK	Pertek	2.23	267	PN	Pn	17 48 52.8	+0.9
PTK	Pertek	2.23	267	ePn	Pn	17 48 52.8	+0.9

*NIED **05** 17:53:00, 37°.00N×140°.60E, h8^{km}, Mw3.7 Best double couple: M$_0$3.48000×10^{14} NP1:ϕ_s162.00000°, δ54.00000°, λ-26.00000°. NP2:ϕ_s268.00000°, δ69.00000°, λ-141.00000°.*

*IDC **05** 17:53:19.2±0.8, 36°.97N×140°.65E, h0^{km}, mb3.6/10, mb1 3.8/13, mb1mx3.6/69, mbtmp3.7/13, ML3.7/3, MS2.8/4, Ms1 2.8/4, ms1mx2.4/65, Error ellipse: s-maj=20.2km s-min=15.4km az=96.0*

*ISCJB **05** 17:53:20.6±0.4, 37°.04N±0°.03×140°.62E±0°.04, h15^{km}±3^{km}, mb3.5/11, MS2.8/3, Error ellipse: s-maj=5.8km s-min=4.3km az=22.5*

*JMA **05** 17:53:21.1, 37°.05N×140°.57E, h9^{km}±1^{km}, M3.9 Broadband fault plane solution: P waves. NP1: ϕ_s266.00000°, δ71.00000°, λ-139.00000°. NP2: ϕ_s160.00000°, δ52.00000°, λ-25.00000°. Principal axes: T Plg12.0000°, Azm29.0000°; N Plg46.0000°, Azm286.0000°; P Plg42.0000°, Azm130.0000°;*

JMA Felt II J1.

ISC 05 17:53:20.6±1.0**, 37°.01N**±0°.04×**140°.59E**±0°.03**, h7**^{km}±6^{km}**, n34,** σ0^s.**94**/35**, mb3.6**/11**, MS2.7**/3**, 6C-1D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFFD	Fukushimafurud	0.09	346	P	Pg	17 53 22.9	+0.2
JFFD				S	Sg	17 53 24.1	0.0
ONAJ	Iwakimizuishiy	0.19	60	⇑P	Pg	17 53 25.2	+0.7
ONAJ				S	Sg	17 53 28.2	+1.1
JHO	Hitachi	0.40	182	⇑P	Pb	17 53 29.5	-0.4
JHO				S	Sb	17 53 35.4	-0.8
JFK	Kawauchi	0.43	32	⇑P	Pg	17 53 28.9	0.0
JFK				eS	Sg	17 53 34.5	0.0
JSB	Shiboa	0.54	266	⇑P	Pb	17 53 32.1	-0.2
JFT	Otama	0.55	339	⇑P	Pg	17 53 31.2	0.0
JFT				S	Sg	17 53 37.9	-0.5
JFY	Yanaizu	0.81	300	⇓P	Pg	17 53 36.0	-0.2
JFY				S	Sg	17 53 46.1	-0.6
JMM	Marumori	0.87	11	⇑P	Pg	17 53 36.5	-0.9
JMM				S	Sg	17 53 47.6	-1.1
MJAR	Matsushiro Arr	1.96	257	Pn	Pn	17 53 54.0	-0.3
	13nm,0.3s,baz=91,slow=9.7,SNR=102						
MJAR				Sn	Sn	17 54 19.9	+0.6
	32nm,0.3s,baz=87,slow=8.7,SNR=17						
MAT	Matsushiro	1.97	257	P	Pn	17 53 55.5	+1.1
MAT				S	Sb	17 54 22.1	+0.6
JHJ	Hachijo jima 2	3.93	190	Pn	Pn	17 54 22.6	+1.2
	5.8nm,0.3s,baz=76,slow=19,SNR=3.8						
JHJ				Sn	Sn	17 55 08.8	+1.0
	6.4nm,0.3s,baz=65,slow=19,SNR=2.5						
ASAJ	Asahikawa	7.26	12	Pn	Pn	17 55 07.5	+0.4
	0.9nm,0.3s,baz=228,slow=9.8,SNR=15						
ASAJ				Sn	Sn	17 56 30.2	+0.3
	0.1nm,0.3s,baz=209,slow=19,SNR=2.0						
JCJ	Chichijima	9.97	172	Pn	Pn	17 55 41.7	-2.6
	2.1nm,0.3s,baz=301,slow=18,SNR=3.9						
KSRS	Korea Array	10.11	276	LR	LR	17 59 29.2	
	comp=Z,36nm,18.4s,baz=85,slow=36						
PETK	Petropavlovsk-	20.05	31	LR	LR	18 05 13.1	
	comp=Z,16nm,18.3s,baz=215,slow=36						
SONM	Songino Array	27.25	304	P	P	17 59 06.3	+0.8
	1.0nm,0.8s,baz=115,slow=10.0,SNR=6.3						
H11N2	WAKE ISLAND Hy	28.70	120	T	T	18 29 10.6	
	baz=313,slow=75,SNR=76						
H11N1	WAKE ISLAND Hy	28.71	120	T	T	18 29 09.7	
	baz=313,slow=75,SNR=49						
H11N3	WAKE ISLAND Hy	28.72	120	T	T	18 29 12.1	
	baz=313,slow=75,SNR=48						
H11S1	WAKE ISLAND Hy	29.40	122	T	T	18 30 01.5	
	baz=314,slow=76,SNR=59						
H11S3	WAKE ISLAND Hy	29.40	122	T	T	18 30 01.5	
	baz=314,slow=76,SNR=38						
H11S2	WAKE ISLAND Hy	29.42	122	T	T	18 29 60.0	
	baz=314,slow=76,SNR=47						
TLY	Talaya	29.85	311	LR	LR	18 12 44.8	
	comp=Z,16nm,18.6s,baz=194,slow=39						
ZALV	Zalesovo Beam	41.45	312	P	P	18 01 08.3	+0.7
	1.6nm,0.9s,baz=114,slow=9.9,SNR=3.9						
MKAR	Makanchi Array	43.57	302	P	P	18 01 24.6	-0.6
	0.2nm,0.6s,baz=69,slow=7.9,SNR=3.3						
KURBB	Kurchatov Arra	45.50	308	P	P	18 01 39.4	-1.0
	1.0nm,0.5s,baz=83,slow=7.9,SNR=4.1						
ILAR	Eielson Array	49.87	32	P	P	18 02 15.4	+1.2
	0.2nm,0.7s,baz=270,slow=6.3,SNR=3.0						
WRA	Warramunga Arr	56.95	187	P	P	18 03 05.6	-1.0
	0.6nm,0.5s,baz=3.4,slow=7.4,SNR=8.4						
ASAR	Alice Springs	60.67	187	P	P	18 03 32.4	-0.1
	0.4nm,0.9s,baz=13,slow=8.9,SNR=3.8						
FINES	FINESS Array B	68.53	332	P	P	18 04 22.6	-0.8
	0.7nm,0.7s,baz=116,slow=25,SNR=4.2						
NB2	NORSAR Subarra	73.95	337	P	P	18 04 57.6	+1.3
	comp=Z,0.4nm,0.6s,baz=41,slow=6.2						
NVAR	Mina Array Bea	75.53	53	P	P	18 05 04.9	-1.2
	comp=Z,0.3nm,0.5s,baz=324,slow=7.0,SNR=2.6						
GERES	GERESS Array B	82.38	328	P	P	18 05 44.8	+1.5
	comp=Z,0.2nm,0.3s,baz=35,slow=6.0,SNR=3.8						
ATD	Arta Tunnel	89.23	284	LR	LR	18 49 40.8	
	comp=Z,11nm,19.0s,baz=347,slow=38						

*ISK **05** 17:54:33.2, 38°.94N×38°.90E, h2^{km}, ML2.4/5*

*ISCJB **05** 17:54:34.8±0.5, 38°.93N±0°.02×38°.93E±0°.03, h1^{km}±7^{km}, Error ellipse: s-maj=4.5km s-min=3.3km az=40.6*

*CSEM **05** 17:54:34.7±0.2, 38°.92N×38°.95E, h10^{km}, ML2.4, Error ellipse: s-maj=4.3km s-min=4.1km az=122.0*

*DDA **05** 17:54:34.8, 38°.94N×38°.96E, h7^{km}, Ml2.5*

ISC 05 17:54:34.6±1.0**, 38°.92N**±0°.02×**38°.96E**±0°.02**, h9**^{km}±10^{km}**, n28,** σ0^s.**78**/52**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PTK	Pertek	0.34	95	PG	Pg	17 54 41.9	+0.5
PTK				SG	Sb	17 54 48.1	-0.4
PTK	Pertek	0.34	95	ePg	Pg	17 54 41.9	+0.5
PTK				eSg	Sb	17 54 48.1	-0.4
ELZG	Elazig	0.42	177	i P	Pg	17 54 43.4	+0.4
ELZG				i S	Sb	17 54 50.5	-0.4
ELZG	Elazig	0.42	177	P	Pg	17 54 43.4	+0.4
ELZG				S	Sb	17 54 50.5	-0.4
TNCL	Tunceli-Merkez	0.49	67	i P	Pg	17 54 43.3	-0.9
TNCL				i S	Sb	17 54 52.2	-0.7
TNCL	Tunceli-Merkez	0.49	67	P	Pg	17 54 43.3	-0.9
TNCL				S	Sb	17 54 52.2	-0.7
KEMA	Kemaliye	0.50	314	i P	Pg	17 54 43.8	-0.6
KEMA				i S	Sg	17 54 50.0	-1.1
KEMA	Kemaliye	0.50	314	P	Pg	17 54 43.8	-0.6
KEMA				S	Sg	17 54 50.0	-1.1
SVRC	Sivrice-ELAZID	0.61	153	PG	Pg	17 54 46.5	+0.1
SVRC				SG	Sb	17 54 56.1	-0.1
SVRC	Sivrice-ELAZID	0.61	153	ePg	Pg	17 54 46.5	+0.1
SVRC				eSg	Sb	17 54 56.1	-0.1
MALT	Malatya	0.74	215	PG	Pg	17 54 47.9	-1.0
MALT				SG	Sg	17 54 59.2	+0.7
MALT	Malatya	0.74	215	ePg	Pg	17 54 47.9	-1.0
MALT				eSg	Sg	17 54 59.2	+0.7
HEKM	Malatya_Hekimh	0.78	267	i P	Pb	17 54 50.7	+0.2
HEKM				i S	Sb	17 55 02.9	+1.5
HEKM	Malatya_Hekimh	0.78	267	P	Pb	17 54 50.7	+0.2
HEKM				S	Sb	17 55 02.8	+1.5
EZC	Erzincan	0.88	20	ePg	Pb	17 54 52.0	-0.2
EZC				eSg	Sb	17 55 04.9	+0.7
ERZN	Erzincan	0.89	41	PG	Pg	17 54 52.0	+0.2
ERZN				SG	Sb	17 55 04.9	+0.6
AKCD	Akcadag	1.03	233	i P	Pg	17 54 54.1	-0.3
AKCD				i S	Sb	17 55 08.8	+0.6
AKCD	Akcadag	1.03	233	P	Pg	17 54 54.1	-0.3
AKCD				S	Sb	17 55 08.8	+0.6
DARE	Darende-Malaty	1.21	254	PN	Pg	17 54 55.8	-2.0
DARE	Darende-Malaty	1.21	254	ePn	Pg	17 54 55.8	-2.0
CUKAN	kangal_SIVAS	1.23	289	i P	Pg	17 54 58.0	-0.2
CUKAN				i S	Sb	17 55 14.6	+0.6
CUKAN	kangal_SIVAS	1.23	289	P	Pg	17 54 58.0	-0.2
CUKAN				S	Sb	17 55 14.6	+0.6
KELT	Kelkit	1.25	10	i P	Pg	17 54 58.1	-0.5
KELT				i S	Sn	17 55 15.4	0.0
KELT	Kelkit	1.25	10	P	Pg	17 54 58.1	-0.5
KELT				S	Sn	17 55 15.4	0.0
SUSE	Susehri	1.41	336	i P	Pg	17 55 02.1	+0.3
SUSE				i S	Sg	17 55 21.3	+1.2
SUSE	Susehri	1.41	336	P	Pg	17 55 02.1	+0.3
SUSE				S	Sg	17 55 21.3	+1.2
SVSK	Karacayir	1.82	304	PN	Pn	17 55 05.9	-0.1
SVSK	Karacayir	1.82	304	ePn	Pn	17 55 05.9	-0.1

*JMA **05** 18:00:23.2±0.1, 35°.23N×141°.22E, h37^{km}±2^{km}, M3.1*

*ISCJB **05** 18:00:24.1±0.8, 35°.19N±0°.04×141°.16E±0°.09, h48^{km}, mb3.6/7, Error ellipse: s-maj=10.5km s-min=5.9km az=174.5*

*IDC **05** 18:00:29.5±1.1, 34°.21N×138°.27E, h0^{km}, mb3.6/7, mb1 3.7/8, mb1mx3.4/69, mbtmp3.6/8, ML2.7/1, MS2.9/1, Ms1 2.9/1, ms1mx2.2/59, Error ellipse: s-maj=41.2km s-min=16.3km az=62.0*

ISC 05 18:00:25.6±1.1**, 35°.20N**±0°.05×**141°.18E**±0°.10**, h48**^{km}**, n25,** σ**1**^{s}.**80**/22**, mb3.6**/7**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	Chosi	0.56	332	P	Pn	18 00 34.6	-2.9
CHOJ				S	Sn	18 00 43.1	-2.9
BSO1	Boso 1	0.57	197	P	Pn	18 00 35.2	-1.9
BSO3	Boso 3	0.68	234	P	Pn	18 00 37.2	-1.5
KTR	Katsuura	0.71	266	P	Pn	18 00 37.6	-1.8
KTR				S	Sn	18 00 47.5	-1.8
BSO4	Boso 4	0.72	253	P	Pn	18 00 38.1	-1.3
JCN	Nagara	0.83	285	P	Pn	18 00 38.4	-2.5
JYT	Yasato	1.30	322	P	Pn	18 00 45.6	-1.7
JHO	Hitachi	1.49	341	P	Pn	18 00 48.9	-1.0
JHJ	Hachijo jima 2	2.38	209	Pn	Pn	18 01 01.0	-1.1
	14nm,0.3s,baz=269,slow=24,SNR=6.1						
JHJ				Sn	Sn	18 01 28.4	-1.6
	26nm,0.3s,baz=303,slow=20,SNR=5.0						
MJAR	Matsushiro Arr	2.76	300	Pn	Pn	18 01 08.4	+1.1
	2.1nm,0.3s,baz=127,slow=9.3,SNR=21						
MAT	Matsushiro	2.76	300	P	Pn	18 01 08.8	+1.5
MAT				eS	Sn	18 01 39.6	+0.2
USRK	Ussuriysk Ar.	11.43	325	LR	LR	18 07 38.0	
	comp=Z,60nm,18.2s,baz=156,slow=39						
H11N2	WAKE ISLAND Hy	27.43	117	T	T	18 35 12.5	
	baz=310,slow=75,SNR=24						
H11N1	WAKE ISLAND Hy	27.43	117	T	T	18 35 04.8	
	baz=310,slow=75,SNR=31						
H11N3	WAKE ISLAND Hy	27.44	117	T	T	18 35 17.6	
	baz=310,slow=75,SNR=29						
H11S1	WAKE ISLAND Hy	28.07	120	T	T	18 35 45.3	
	baz=312,slow=75,SNR=51						
H11S3	WAKE ISLAND Hy	28.07	120	T	T	18 35 48.7	
	baz=312,slow=75,SNR=34						
H11S2	WAKE ISLAND Hy	28.09	120	T	T	18 35 44.1	
	baz=312,slow=75,SNR=32						
SONM	Songino Array	28.69	307	P	P	18 06 17.6	-0.5
	0.2nm,0.5s,baz=120,slow=8.5,SNR=2.5						
ZALV	Zalesovo Beam	43.02	314	P	P	18 08 20.8	+0.6
	0.7nm,0.5s,baz=97,slow=7.1,SNR=3.8						
MKAR	Makanchi Array	44.95	304	P	P	18 08 35.5	-0.3
	0.7nm,0.9s,baz=87,slow=10,SNR=5.1						
KURBB	Kurchatov Arra	46.99	309	P	P	18 08 52.8	+1.1
	0.9nm,0.7s,baz=84,slow=8.1,SNR=7.0						
BVAR	Borovoye Array	51.67	313	P	P	18 09 30.0	+2.5
	0.3nm,0.5s,baz=99,slow=8.9,SNR=3.5						
WRA	Warramunga Arr	55.23	188	P	P	18 09 54.7	+0.9
	1.3nm,0.6s,baz=2.8,slow=7.6,SNR=16						
ASAR	Alice Springs	58.95	188	P	P	18 10 22.1	+2.0
	0.2nm,0.5s,baz=357,slow=5.6,SNR=7.1						

*NEIC **05** 18:18:09.4±0.0, 34°.30N×116°.84W, h7^{km}, ML3.5(PAS), After PAS.*

NEIC Felt [III] at Apple Valley, Big Bear City, Big Bear Lake and Lucerne Valley and [II] at Riverside. Also felt at Angelus Oaks, Bellflower, Crestline, Escondido, Hesperia, Highland, Lake Arrowhead, Lake Elsinore, Loma Linda, Redlands, San Bernardino, Studio City, Victorville and Woodland Hills.

ISC 05 18:18:08.5±0.8**, 34°.30N**±0°.01×**116°.84W**±0°.01**, h10**^{km}±5^{km}**, n184,** σ**1**^{s}.**70**/235**, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBRC	Big Bear Solar	0.08	239	P	Pg	18 18 11.3	+0.2
	baz=58,SNR=479						
BBRC				S	Sg	18 18 12.9	0.0
	baz=58						
BBRC	Big Bear Solar	0.08	239	ePg	Pg	18 18 11.3	+0.2
SVD	Seven Oaks Dam	0.29	228	ePg	Pg	18 18 14.9	+0.5
HLNC	Highland	0.36	240	ePg	Pg	18 18 16.5	+0.8
BBSC	Beaumont Base	0.40	197	ePg	Pg	18 18 17.4	+1.0
DEVC	Devers	0.42	149	ePg	Pg	18 18 17.9	+1.0
CLTC	Calectric	0.45	242	ePg	Pg	18 18 18.4	+1.1
HDB	Hidalgo Marine	0.47	78	ePg	Pg	18 18 18.3	+0.5
VTV	Victorville	0.48	303	ePg	Pg	18 18 18.3	+0.4
RVR	Riverside	0.54	235	ePg	Pg	18 18 19.4	+0.4
RVR				eSg	Sg	18 18 27.2	+1.1
RRX	Edison Barstow	0.59	347	P	Pg	18 18 20.5	+0.5
	baz=167,SNR=51						
RRX				S	Sg	18 18 28.8	+1.1
	baz=167						
HMTC	Hemet	0.61	193	ePg	Pg	18 18 20.7	+0.4
EL2	El Mirage 2	0.62	292	ePg	Pb	18 18 22.4	+0.8
GVDA	Garner Valley	0.65	168	ePg	Pg	18 18 21.5	+0.4
DGR	Domenigoni Val	0.67	192	ePg	Pg	18 18 21.7	+0.3
DGR				eSg	Sg	18 18 30.9	+0.7
HEC	Hector,Ludlow	0.67	38	P	Pg	18 18 22.1	+0.5
	baz=219,SNR=142						
HEC				S	Sg	18 18 31.2	+0.7
	baz=219						
HEC	Hector,Ludlow	0.67	38	ePg	Pg	18 18 22.1	+0.5
BFSC	Mount Baldy Ra	0.68	265	P	Pg	18 18 22.0	+0.3
	baz=84,SNR=362						
BFSC				S	Sg	18 18 31.0	+0.4
	baz=84						
BFSC	Mount Baldy Ra	0.68	265	ePg	Pg	18 18 22.1	+0.3
TPC	Twentynine Pal	0.69	106	ePg	Pg	18 18 22.3	+0.4
BACC	Bachelor Mtn.	0.71	194	ePg	Pg	18 18 22.4	+0.2
SSK	Sunset Peak	0.71	263	ePg	Pg	18 18 22.7	+0.4
CRNC	Corona	0.73	235	eSg	Sg	18 18 33.0	+0.7
CRY	Cary Ranch	0.74	173	ePg	Pg	18 18 23.2	+0.4
DNR	Dunn Ranch,Anz	0.75	166	ePg	Pg	18 18 23.6	+0.4
PFO	Pinyon Flats O	0.76	155	P	Pg	18 18 23.3	+0.1
	baz=336,SNR=167						
PFO				S	Sg	18 18 33.1	0.0
	baz=336						
PFO	Pinyon Flats O	0.76	155	ePg	Pg	18 18 23.2	+0.1
PFO				ePg	Pg	18 18 23.4	+0.1
PFO				ePn	Pn	18 18 33.0	+7.6
MURC	Murrieta	0.76	203	P	Pg	18 18 23.3	+0.1
	baz=22,SNR=121						
MURC				S	Sg	18 18 33.3	+0.2
	baz=22						
XPFO	Piæon Flat	0.76	155	ePg	Pg	18 18 23.2	0.0
XPFO				eSg	Sg	18 18 33.3	+0.1
BELC	Belle Mtn. Jos	0.76	113	P	Pg	18 18 23.7	+0.4
	baz=294,SNR=492						
BELC				S	Sg	18 18 33.7	+0.5
	baz=294						
BELC	Belle Mtn. Jos	0.76	113	ePg	Pg	18 18 23.8	+0.6
SNDA	J Saunders Pla	0.77	166	ePg	Pg	18 18 23.8	+0.4
SNDA				eSg	Sg	18 18 34.8	+1.3
PSRC	Puddingstone R	0.83	256	ePg	Pg	18 18 24.8	+0.3
FRD	Ford Ranch, An	0.83	166	ePg	Pg	18 18 24.9	+0.3
FRD				eSg	Sg	18 18 36.0	+0.6
BLKC	Black Mountain	0.84	338	ePg	Pg	18 18 25.2	+0.3
HOLC	Holcomb Ridge	0.84	281	ePg	Pg	18 18 24.9	+0.1
PEM	Pine Mountain	0.86	261	ePg	Pg	18 18 25.3	+0.1
JNH	Juniper Hills	0.93	279	ePg	Pg	18 18 26.4	-0.1
PLM	Palomar	0.95	181	ePg	Pg	18 18 27.0	+0.2
CTCC	Cactus City	0.96	132	ePg	Pb	18 18 28.4	+1.1
CTCC				eSn	Sb	18 18 41.5	+1.5
CHFC	Chilao Flat St	0.98	272	ePg	Pg	18 18 27.3	-0.2
CHFC				eSg	Sg	18 18 40.7	+0.5
GSC	Goldstone, Bar	1.00	2	P	Pg	18 18 27.9	+0.1
	baz=182,SNR=1000						
GSC				S	Sg	18 18 41.7	+1.0
	baz=182						
GSC	Goldstone, Bar	1.00	2	ePg	Pg	18 18 27.8	0.0
LRRC	Littlerock Res	1.01	283	ePg	Pg	18 18 27.8	-0.1
MWC	Mount Wilson	1.01	266	ePg	Pg	18 18 27.9	-0.1
CTW	Cottonwood Mou	1.02	127	ePg	Pg	18 18 28.5	+0.4
BREC	Barre Substati	1.07	243	ePg	Pb	18 18 30.1	+1.0
GMRC	Granite Mounta	1.09	63	P	Pg	18 18 29.1	-0.4
	baz=244,SNR=567						
GMRC				S	Sg	18 18 44.1	+0.5
	baz=244						
GMRC	Granite Mounta	1.09	63	ePg	Pg	18 18 29.6	+0.1
GMRC				eSn	Sb	18 18 45.3	+1.4
GVRC	Garvey Reservo	1.09	257	ePg	Pg	18 18 30.2	+0.7
BORC	Borrego Spring	1.09	161	ePg	Pg	18 18 29.6	+0.1
EDW2	Edwards Air Fo	1.11	302	P	Pg	18 18 29.7	-0.2
	baz=121,SNR=203						
EDW2				S	Sg	18 18 44.3	-0.1
	baz=121						
EDW2	Edwards Air Fo	1.11	302	ePg	Pg	18 18 29.7	-0.2
EDW2				eSg	Sg	18 18 44.3	-0.1
PASC	Pasadena Art C	1.12	264	ePg	Pg	18 18 29.7	-0.4
HAY	Hayfield	1.13	121	ePg	Pg	18 18 31.1	+0.8
FOXC	Fox Airport	1.23	291	ePg	Pb	18 18 32.2	+0.2
DECC	Green Verdugo	1.24	268	P	Pb	18 18 32.0	0.0
	baz=87,SNR=44						
DECC				S	Sg	18 18 48.7	+0.3
	baz=87						
DECC	Green Verdugo	1.24	268	ePg	Pb	18 18 32.2	+0.2
DANC	Danby, Needles	1.25	74	ePg	Pn	18 18 33.2	+1.1
DANC				eSn	Sn	18 18 50.9	+1.8
LEOC	Leona Valley	1.25	286	ePg	Pb	18 18 32.1	-0.2
ALPC	Antelope	1.26	288	ePg	Pn	18 18 33.4	+1.0
ALPC				eSn	Sb	18 18 49.6	+0.7
HWB	Hans Werner Br	1.28	184	ePg	Pn	18 18 32.6	+0.1
HWB				eSn	Sb	18 18 48.7	-0.4
TPO	Tropico Hills	1.28	297	ePg	Pn	18 18 32.6	0.0
CCAC	Calif City Air	1.29	312	ePg	Pn	18 18 32.7	0.0
IR2C	Iron Canyon	1.29	274	ePg	Pn	18 18 32.5	-0.2
CCCA	Chr Cany lake	1.29	341	ePg	Pn	18 18 33.3	+0.6
CCCA				eSn	Sg	18 18 51.0	+0.8
DPP	Dos Picos Cty	1.30	184	ePg	Pn	18 18 32.4	-0.4
DPP				eSn	Sb	18 18 49.5	-0.5
BC3	Big Chuckawall	1.32	119	P	Pn	18 18 33.0	-0.1
	baz=300,SNR=295						
BC3				S	Sb	18 18 51.0	+0.5

	baz=300						
FMP	Fort Macarthur	1.34	244	S	Sb	18 18 51.0	0.0
	baz=63						
FRK	Frink	1.34	132	ePg	Pn	18 18 34.5	+1.2
DJJ	Donna J Jenkin	1.35	262	ePg	Pn	18 18 34.5	+1.0
TUQ	Turquoise Moun	1.36	33	P	Pn	18 18 33.4	-0.3
	baz=214,SNR=99						
TUQ				S	Sb	18 18 52.0	+0.3
	baz=214						
TUQ	Turquoise Moun	1.36	33	ePn	Pb	18 18 35.2	+1.0
LRMC	Laurel Mtn Rad	1.36	330	P	Pn	18 18 33.6	-0.2
	baz=149,SNR=107						
LRMC				S	Sb	18 18 52.2	+0.3
	baz=149						
EML	El Monte Cty P	1.41	180	eSg	Sb	18 18 52.6	-0.2
RPV	Rancho Palos V	1.41	247	ePn	Pn	18 18 35.1	+0.8
IRM	Iron Mountain	1.41	95	P	Pn	18 18 33.8	-0.6
	baz=276,SNR=515						
IRM				Sb	Sb	18 18 54.3	+1.2
	baz=276						
IRM	Iron Mountain	1.41	95	ePn	Pn	18 18 35.5	+1.2
109C	Camp Elliot, M	1.43	189	Pb	Pn	18 18 34.5	0.0
	baz=8.8,SNR=31						
109C				S	Sb	18 18 52.7	-0.8
	baz=8.8						
CPE	Camp Elliot	1.43	189	ePn	Pn	18 18 34.5	+0.1
CPE				ePn	Pn	18 18 34.6	+0.1
CPE				eSn	Sb	18 18 52.9	-0.5
MONP2	Monument Peak	1.45	166	Pb	Pn	18 18 35.4	+0.4
	baz=346,SNR=146						
MONP2				S	Sb	18 18 54.0	-0.3
	baz=346						
ERRC	Elmore Ranch	1.46	144	ePn	Pg	18 18 37.1	+0.6
ERRC				eSn	Sg	18 18 56.9	+1.5
OAT	Oat Mountain	1.47	272	ePn	Pg	18 18 37.7	+1.0
BTPC	Burnt Peak	1.48	285	ePn	Pn	18 18 36.9	+1.4
CBKC	Canebrake	1.48	160	ePn	Pn	18 18 36.5	+1.2
SRTC	Snort	1.57	332	ePn	Pb	18 18 39.2	+1.4
OSI	Osito Audit: C	1.59	282	Pb	Pn	18 18 37.9	+1.1
	baz=101						
OSI				Sb	Sb	18 18 59.3	+1.1
	baz=101						
OSI	Osito Audit: C	1.59	282	ePn	Pn	18 18 38.2	+1.4
CIS	Catalina Islan	1.59	236	Pb	Pn	18 18 37.5	+0.8
	baz=55,SNR=15						
CIS				Sb	Sn	18 18 58.8	+1.4
	baz=55						
CRR	Carrizo Plain	1.59	152	ePn	Pb	18 18 38.7	+0.7
SWSC	Sam W. Stewart	1.61	147	P	Pn	18 18 36.5	-0.5
	baz=328,SNR=37						
SWSC				Sb	Sb	18 18 59.8	+1.2
	baz=328						
SWSC	Sam W. Stewart	1.61	147	ePn	Pb	18 18 39.2	+0.9
SWSC				eSn	Sb	18 19 00.0	+1.4
BAR	Barrett	1.62	175	ePn	Pn	18 18 37.8	+0.6
BAR				eSn	Sn	18 18 59.2	+1.0
LDFC	Landfair	1.62	61	ePn	Pn	18 18 38.1	+0.8
LDFC				ePg	Pb	18 18 39.4	+0.7
LDFC				eSn	Sb	18 19 00.8	+1.6
WBSM	Bird Springs	1.63	320	eSn	Sb	18 19 00.5	+0.9
CLC	China Lake	1.63	338	ePn	Pb	18 18 40.2	+1.4
CLC				eSn	Sb	18 19 00.8	+1.3
SHOC	Shoshone, Teco	1.66	16	P	Pn	18 18 37.6	-0.1
	baz=196,SNR=89						
SHOC				Sb	Sg	18 19 02.2	+0.2
	baz=196						
TJR	Tejon Ranch	1.73	295	ePn	Pb	18 18 40.8	+0.4
TJR				eSn	Sb	18 19 03.9	+1.8
IKP	In-Ko-Pah, Jac	1.76	159	P	Pn	18 18 39.0	-0.1
	baz=340						
IKP				Sb	Sb	18 19 04.0	+0.9
	baz=340						
WWPM	Walker Pass	1.76	325	ePn	Pb	18 18 41.9	+0.9
RCWM	Renegade Canyo	1.77	338	ePn	Pb	18 18 41.9	+0.7
WESC	Westside Schoo	1.80	149	eSn	Sg	18 19 07.2	+0.9
WORM	Onyx Ranch	1.81	321	eSn	Sb	18 19 06.5	+2.0
YUH	Yuha Desert	1.82	155	ePn	Pn	18 18 40.2	+0.3
YUH				ePg	Pb	18 18 43.0	+1.1
MPMC	Manual Prospec	1.83	343	P	Pn	18 18 40.2	-0.1
	baz=163,SNR=163						
MPMC				Sb	Sg	18 19 07.8	+0.3
	baz=163						
ARVC	Arvin	1.83	297	P	Pn	18 18 40.2	+0.1
	baz=116,SNR=7.9						
ARVC				Sb	Sb	18 19 06.4	+1.2
	baz=116						
ARVC	Arvin	1.83	297	ePn	Pb	18 18 43.4	+1.2
BLG	Laguna Peak, P	1.85	265	Pb	Pn	18 18 42.0	+1.6
	baz=83						
BLG				Sb	Sb	18 19 06.9	+1.1
	baz=83						
DREC	Desert Rsrch C	1.89	142	eSn	Sb	18 19 08.2	+1.4
NEE2	Needles Airpor	1.89	75	Pb	Pb	18 18 43.7	+0.5
	baz=256,SNR=9.7						
NEE2				Sb	Sb	18 19 08.4	+1.5
	baz=256						
ISA	Isabella, Lake	1.91	316	Pb	Pb	18 18 44.0	+0.5
	baz=135,SNR=107						
ISA				Sb	Sb	18 19 08.8	+1.4
	baz=135						
ISA	Isabella, Lake	1.91	316	ePn	Pn	18 18 43.2	+2.0
SCI2	San Clemente I	1.94	228	P	Pn	18 18 42.0	+0.4
	baz=46,SNR=15						
BLYC	Blythe	2.00	105	ePn	Pb	18 18 46.3	+1.2
Y12C	Blythe	2.00	105	P	Pn	18 18 41.9	-0.5
	baz=287,SNR=49						
Y12C	Blythe	2.00	105	ePn	Pb	18 18 46.2	+1.1
ABL	Mount Abel	2.04	286	ePn	Pb	18 18 45.9	+0.1
DAC	Darwin (Calif)	2.06	343	ePn	Pn	18 18 43.9	+0.4
GLA	Glamis	2.09	126	P	Pn	18 18 43.4	-0.3
	baz=307,SNR=31						
GLA				Sb	Sb	18 19 15.2	+2.6
	baz=307						
GLA	Glamis	2.09	126	ePn	Pn	18 18 43.3	-0.3
FURC	Furnace Creek,	2.16	360	Pb	Pb	18 18 48.9	+1.1
	baz=180,SNR=65						
PDMCI	Parker Dam,Lak	2.23	89	Pb	Pb	18 18 49.8	+0.7
	baz=271						
CWC	Cottonwood Cre	2.36	335	Sb	Sg	18 19 23.9	-0.5
	baz=154						
VES	Vestal, Richgr	2.40	310	Sb	Sb	18 19 24.0	+2.6
	baz=129						
SNCC	San Nicolas Is	2.47	246	P	Pn	18 18 48.9	+0.1
	baz=64						
SNCC	San Nicolas Is	2.47	246	ePn	Pn	18 18 48.5	-0.4
PKM	Mcpherson Peak	2.52	284	P	Pn	18 18 50.5	+0.7
	baz=103,SNR=15						
W13A	Hualapai Mount	2.56	71	ePn	Pn	18 18 50.0	-0.3
SHPR	Sheep Range	2.59	32	ePn	Pn	18 18 53.9	+3.2
TPNV	Topopah Spring	2.69	10	P	Pn	18 18 52.7	+0.7
	baz=190						
TPNV				Sb	Sg	18 19 33.8	-1.1
	baz=190						
TPNV	Topopah Spring	2.69	10	ePn	Pn	18 18 53.2	+1.2
SMMC	Simmler	2.79	292	P	Pn	18 18 52.5	-0.8
	baz=110						
SMMC				Sb	Sb	18 19 36.1	+3.5
	baz=110						
113A	Mohawk Valley,	2.99	120	ePn	Pn	18 18 54.9	-1.1
PAGB	Antelope Grade	3.14	298	ePn	Pn	18 19 00.2	+2.1
Y14A	Wickenburg	3.20	95	ePn	Pn	18 18 58.1	-0.9
OMMB	Old Mammoth Mi	3.74	333	ePn	Pb	18 19 12.9	-1.9
PMPB	Monarch Peak	3.76	302	ePn	Pn	18 19 09.0	+2.3
MDPB	Devils Postpil	3.79	332	ePn	Pn	18 19 09.2	+2.0
LCMT	Little Creek M	3.99	46	ePn	Pn	18 19 10.0	+0.1
R11A	Troy Canyon, C	4.16	14	Sb	Sb	18 20 17.9	+5.4
	baz=194						
R11A	Troy Canyon, C	4.16	14	ePn	Pn	18 19 15.2	+2.8
KNB	Kanab	4.25	49	ePn	Pn	18 19 13.7	+0.2
NV11	Mina Array Sit	4.26	346	ePn	Pn	18 19 16.7	+3.1
U15A	North Rim	4.28	59	ePn	Pn	18 19 14.6	+0.6
NV01	Mina Array Sit	4.29	344	ePn	Pn	18 19 18.6	+4.6
CCUT	Cedar City	4.30	40	ePn	Pn	18 19 17.8	+3.6
X16A	Lo Mia Camp, P	4.47	87	ePn	Pn	18 19 17.9	+1.4
SZCU	Shurtz Canyon	4.48	42	ePn	Pn	18 19 19.6	+2.9
SCKWR	San Luis Creek	4.48	311	eSg	Sg	18 20 29.2	-3.2
SAO	San Andreas Ge	4.49	305	ePn	Pn	18 19 16.5	-0.2
RYN	Ryan	4.53	343	ePn	Pn	18 19 23.1	+5.8
WUAZ	Wupatki	4.65	73	ePn	Pn	18 19 20.6	+1.6
WAKR	Walker	4.69	334	ePn	Pn	18 19 22.3	+2.7
CMB	Columbia Colle	4.70	323	ePn	Pn	18 19 20.5	+0.9
KVN	Kaiserville	4.85	348	ePn	Pn	18 19 23.6	+1.8
PSUT	Pine Spring	4.86	29	ePn	Pn	18 19 24.4	+2.4
YERR	Yerington	5.06	338	ePn	Pn	18 19 29.2	+4.6
PNTR	Pine Nut	5.27	336	ePn	Pn	18 19 30.8	+3.3
MTPU	Mount Pierson	5.30	44	ePn	Pn	18 19 32.6	+4.5
EMB	Emerald Bay	5.35	332	eSg	Sg	18 20 57.7	-2.6
TUC	Tucson	5.45	110	ePn	Pn	18 19 29.8	-0.1
X18A	Snowflake	5.70	86	ePn	Pn	18 19 35.2	+1.7
AFDM	Forest Hills D	5.70	326	ePn	Pn	18 19 34.2	+0.9
AFDM				eSg	Sg	18 21 05.9	-5.7
PAHR	Pah Rah Range	5.76	340	ePg	Pg	18 20 01.1	+2.1
BEKR	Beckworth	6.22	334	ePn	Pn	18 19 37.2	-3.5
BEKR				eSg	Sg	18 21 24.8	-3.6
FTR	Fort Ross	6.61	311	eSg	Sb	18 21 16.9	-5.7
SRU	San Rafael Swe	6.98	45	ePg	Pg	18 20 19.1	-3.1
KRKM	Rackout Spring	7.30	318	eSg	Sb	18 21 49.0	+6.4
MVCO	Mesa Verde	7.38	64	ePn	Pn	18 20 00.2	+3.6
PV13	Radium Mtn., P	7.54	57	eSg	Sg	18 22 05.2	-5.2
PV23	Carpenter Ridg	7.55	54	ePg	Pg	18 20 29.7	-3.4
PV23				eSg	Sg	18 22 08.0	-2.9
PV03	Paradox Valley	7.56	56	ePn	Pn	18 19 54.3	-4.7
PV11	David Mesa, Pa	7.57	56	ePn	Pn	18 19 56.1	-3.0
PV11				eSg	Sg	18 22 05.4	-6.0
PV02	Paradox Valley	7.62	57	eSg	Sg	18 22 09.2	-3.9
PV12	Saucer Basin,	7.63	56	ePg	Pg	18 20 32.9	-1.7
PV21	Cone Mtn., Par	7.63	54	ePn	Pn	18 20 05.9	+5.8
PV21				eSg	Sg	18 22 05.8	-7.7
LGPM	Granite Peak	8.13	326	eSg	Sb	18 22 01.2	-5.1
ANMO	Albuquerque	8.58	83	ePg	Pg	18 20 48.2	-4.7
JCC	Jacoby Creek,	8.65	321	eSn	Sn	18 21 49.0	-2.2
S22A	4UR Ranch, Cre	8.81	64	ePg	Pg	18 20 54.9	-2.3
SHW	Mount Saint He	12.57	343	eSn	Sn	18 23 42.8	+15
ERK	Elk Rock	12.70	342	eSn	Sn	18 23 41.4	+11
C04A	Brinnon	14.17	343	eSn	Sn	18 24 17.8	+11
OCP	Olym-Cheeka Pk	15.14	340	ePn	P	18 21 46.9	-0.7

IDC 05 18:38:02.1±1.4**,28°98S×74°78E,h0^{km},mb3.8**/7**,**
mb1 4.0/7**,mb1mx3.6**/58**,mbtmp3.8**/7**,MS3.3**/2**,Ms1 3.2**/2**,**
ms1mx2.6/55**,Error ellipse: s-maj=45.6km**
s-min=25.9km az=69.0,Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOSA	Boshof	43.14	258	LR	LR	19 00 24.0	
	comp=Z,50nm,18.5s,baz=26,slow=31						
CMAR	Chiang Mai Arr	52.62	29	P	P	18 47 18.6	+0.6
	0.8nm,1.0s,baz=206,slow=10.0,SNR=3.4						
ASAR	Alice Springs	52.79	99	P	P	18 47 19.2	-0.2
	0.9nm,0.9s,baz=252,slow=6.5,SNR=8.6						
WRA	Warramunga Arr	54.47	95	P	P	18 47 31.4	-0.3
	2.9nm,0.9s,baz=254,slow=7.1,SNR=6.8						
STKA	Stephens Creek	56.85	111	P	P	18 47 48.8	0.0
	2.1nm,0.9s,baz=252,slow=9.1,SNR=3.7						
VNDA	Vanda	61.30	166	P	P	18 48 18.9	+0.1
	1.6nm,0.9s,baz=272,slow=6.4,SNR=8.2						
MKAR	Makanchi Array	75.72	5	P	P	18 49 48.6	-0.6
	1.1nm,1.0s,baz=177,slow=5.2,SNR=4.0						
KURBB	Kurchatov Arra	79.32	2	P	P	18 50 09.4	+0.3
	0.4nm,0.8s,baz=192,slow=5.9,SNR=2.8						
AKTO	Aktyubinsk	80.45	349	LR	LR	19 23 08.5	
	comp=Z,9.4nm,19.0s,baz=199,slow=34						
YKA	Yellowknife Ar	145.92	8	PKPbc	PKPdf	18 57 41.9	-0.2
	0.9nm,0.9s,baz=336,slow=3.7,SNR=8.1						

IDC ***05*** *18:54:47.8±0.7, 10°79S×117°13E, h0^{km}, mb3.9/10,*
mb1 4.0/12, mb1mx3.8/53, mbtmp3.9/12, ML4.2/2, MS3.5/2,
Ms1 3.5/2, ms1mx2.5/49, Error ellipse: s-maj=42.0km
s-min=14.5km az=60.0
DJA ***05*** *18:54:49.1±0.4, 11°S±4°×11°7E±°, h10^{km}, M4.8/18,*
mb4.9/10, mB5.1/5, MLv4.9/18, Mw(mB)4.5/5
NEIC ***05*** *18:54:52.9±0.4, 10°89S×116°98E, h35^{km}, mb4.7/3, Error*
ellipse: s-maj=14.6km s-min=7.7km az=48.0
ISC 05 18:54:52.8±0.7**,11°00S**±0°08×**116°97E**±0°07**,h41^{km},n41,**
σ1^{s}81/37**,mb4.0**/10**,South of Sumbawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWSI	Taliwang, Sumb	2.25	358	P	Pn	18 55 29.4	+1.7
PLAI	Plampang	2.30	20	P	Pn	18 55 30.4	+2.0
WBSI	Waikabubak, Su	2.74	61	P	Pn	18 55 35.6	+1.2
IGBI	Denpasar	2.82	320	P	Pn	18 55 35.8	+0.3
DNP	Denpasar	2.89	323	P	Pn	18 55 36.6	+0.2
SRBI	Singaraja	3.38	329	P	Pn	18 55 45.6	+2.5
BASI	Baing, Sumba	3.63	78	P	Pn	18 55 46.9	+0.3
JAGI	Jajag, Banyuwa	3.75	312	P	Pn	18 55 47.8	-0.5
JAGI				S	Sn	18 56 28.1	-3.1
GMJI	Gumukmas	4.41	308	P	Pn	18 55 56.8	-0.5
BLJI	Banyuglugur	4.65	314	P	Pn	18 56 01.3	+0.7
EDFI	Ende, Flores	5.16	65	P	Pn	18 56 07.6	-0.1
PWJI	Pagerwojo	5.90	300	P	Pn	18 56 16.4	-1.3
	90nm,0.6s,0.9nm						
GRJI	Gresik	6.02	312	P	Pn	18 56 19.8	+0.4
PCJI	Pacitan	6.36	296	P	Pn	18 56 23.6	-0.5
BKSI	Bulukumba	6.45	29	P	Pn	18 56 28.9	+3.6
BATI	Baumata	6.63	84	Pn	Pn	18 56 28.4	+0.6
	33nm,0.3s,baz=272,slow=3.9,SNR=30						
BATI				Sn	Sn	18 57 37.2	-4.9
	9.2nm,0.3s,baz=204,slow=20,SNR=2.7						
TTSI	Tana Toraja	8.40	20	P	Pn	18 56 57.6	+5.5
KPJI	Karang Pucung	8.74	294	P	Pn	18 56 56.6	-0.1
CMJI	Cimerak	9.00	290	P	Pn	18 56 58.4	-1.9
CISI	Cisompet, Garu	9.66	290	P	Pn	18 57 07.4	-2.1
MTKI	Muara Teweh, K	10.21	348	P	Pn	18 57 22.0	+5.1
MBWA	Marble Bar	10.44	166	ePn	Pn	18 57 14.4	-5.7
	116nm,0.3s						
FITZ	Fitzroy Crossi	10.96	131	Pn	Pn	18 57 24.3	-2.8
	2.2nm,0.3s,baz=312,slow=10,SNR=77						
FITZ				Sn	Sn	18 59 15.8	-13
	2.8nm,0.3s,baz=192,slow=17,SNR=5.4						
CGJI	Cibinong	11.97	290	P	Pn	18 57 39.1	-1.9
WRA	Warramunga Arr	18.93	120	P	Pn	18 59 11.3	-0.1
	0.6nm,0.3s,baz=286,slow=14,SNR=19						
WRA				S	Sn	19 02 27.4	-15
	0.4nm,0.3s,baz=285,slow=24,SNR=7.4						
WRAB	Tennant Creek	18.94	120	eP	Pn	18 59 11.7	+0.1
	7.3nm,1.0s						
ASAR	Alice Springs	20.46	130	P	P	18 59 28.1	+0.9
	2.2nm,0.6s,baz=300,slow=10.0,SNR=43						
ASAR				S	S	19 03 02.6	-12
	0.8nm,0.4s,baz=299,slow=22,SNR=4.5						
NWAO	Narrogin (SRO)	21.82	179	P	P	18 59 45.4	+3.8
	14nm,0.4s,baz=228,slow=13,SNR=22						
NWAO				S	S	19 03 23.5	-17
	2.5nm,0.4s,baz=106,slow=20,SNR=2.4						
NWAO	Narrogin (SRO)	21.82	179	eP	P	18 59 44.4	+2.7
	26nm,0.5s						
NWAO				S	S	19 03 23.5	-17
STKA	Stephens Creek	30.79	136	P	P	19 01 05.7	+1.0
	1.9nm,0.8s,baz=336,slow=12,SNR=3.1						
CMAR	Chiang Mai Arr	34.26	329	P	P	19 01 35.9	+0.7
	0.3nm,0.7s,baz=181,slow=7.2,SNR=3.0						
KSRS	Korea Array	49.28	12	LR	LR	19 27 41.3	
	comp=Z,8.8nm,18.3s,baz=240,slow=40						
SONM	Songino Array	59.33	352	P	P	19 04 50.1	-0.6
	0.4nm,0.8s,baz=177,slow=5.8,SNR=2.7						
MKAR	Makanchi Array	65.36	335	P	P	19 05 31.3	+0.3
	0.6nm,0.3s,baz=147,slow=7.0,SNR=16						
KURBB	Kurchatov Arra	69.90	335	P	P	19 05 59.5	0.0
	0.9nm,0.7s,baz=147,slow=5.6,SNR=10						
KURK	Kurchatov	69.94	335	eP	P	19 05 59.2	-0.5
	7.1nm,0.7s						
ZALV	Zalesovo Beam	70.22	340	P	P	19 06 00.8	-0.6
	0.9nm,0.4s,baz=161,slow=4.1,SNR=4.8						
BVAR	Borovoye Array	75.14	333	P	P	19 06 31.6	+0.9
	0.1nm,0.3s,baz=128,slow=9.5,SNR=2.5						
ASF	Jabal al Asfar	87.53	303	LR	LR	19 50 59.5	
	comp=Z,109nm,20.1s,baz=109,slow=38						
SNAA	Sanae	88.54	196	P	P	19 07 41.9	+1.0
	0.8nm,0.8s,baz=124,slow=3.6,SNR=6.3						
H09W1	TRISTAN DA CUN	112.55	222	T	T	21 18 09.1	
	SNR=5.7						

IDC ***05*** *19:39:35.6±1.4, 5°67S×68°41E, h0^{km}, mb3.7/10,*
mb1 3.8/10, mb1mx3.5/67, mbtmp3.7/10, MS3.3/10,
Ms1 3.3/10, ms1mx2.9/61, Error ellipse: s-maj=43.1km
s-min=20.8km az=44.0
ISCJB ***05*** *19:39:36.6±1.0, 5°5S±0°2×68°8E±0°1, h10^{km}, mb3.7/10,*
MS3.3/9, Error ellipse: s-maj=27.7km s-min=5.2km
az=37.5
ISC 05 19:39:38.3±1.3**,5°5S**±0°2×**68°8E**±0°2**,h10^{km},n28,**
σ1^{s}56/23**,mb3.8**/10**,MS3.3**/9**,Chagos Archipelago**
region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08N3	Diego Garcia H	2.35	112	Pn	Pn	19 40 14.5	-2.2
H08N3				Sn	Sn	19 40 44.7	-0.9
H08N3				T	T	19 42 57.0	
	baz=290,slow=74,SNR=133						
H08N2	Diego Garcia H	2.36	111	Pn	Pn	19 40 14.6	-2.2
H08N2				Sn	Sn	19 40 44.7	-0.9
H08N2				T	T	19 42 57.9	
	baz=290,slow=74,SNR=134						
H08N1	Diego Carcia H	2.38	111	Pn	Pn	19 40 14.8	-2.2
H08N1				Sn	Sn	19 40 44.1	-2.0
H08N1				T	T	19 42 59.6	
	baz=290,slow=74,SNR=147						
H08S3	Diego Garcia H	4.25	120	Pn	Pn	19 40 43.7	+0.8
H08S3				Sn	Sn	19 41 32.7	+0.3
H08S1	Diego Carcia H	4.25	121	Pn	Pn	19 40 43.7	+0.8
H08S1				Sn	Sn	19 41 32.7	+0.2
H08S2	Diego Garcia H	4.26	121	Pn	Pn	19 40 43.9	+0.8
H08S2				Sn	Sn	19 41 33.1	+0.3
PALK	Pallekele	17.37	43	LR	LR	19 49 06.0	
	comp=Z,75nm,21.5s,baz=297,slow=32						
ATD	Arta Tunnel	30.85	303	LR	LR	19 56 11.5	
	comp=Z,39nm,21.3s,baz=234,slow=32						
PSI	Prapat	31.20	75	LR	LR	19 56 34.5	
	comp=Z,111nm,20.4s,baz=270,slow=32						
CMAR	Chiang Mai Arr	38.08	51	P	P	19 46 59.5	+2.0
	1.0nm,0.7s,baz=238,slow=9.8,SNR=7.0						
CMAR				LR	LR	20 00 03.0	
	comp=Z,34nm,19.9s,baz=190,slow=32						
LEM	Lembang	38.62	94	LR	LR	19 59 40.6	
	comp=Z,94nm,21.1s,baz=274,slow=31						
GEYT	Alibeck	44.31	348	LR	LR	20 05 03.5	
	comp=Z,30nm,20.1s,baz=250,slow=34						
BOSA	Boshof	47.18	236	LR	LR	20 03 46.8	
	comp=Z,42nm,18.8s,baz=80,slow=31						
H01W3	Cape Leeuwin H	51.01	131	T	T	20 43 49.5	
	baz=294,slow=75,SNR=3.6						
H01W2	Cape Leeuwin H	51.02	131	T	T	20 43 46.9	
	baz=294,slow=75,SNR=5.0						
H01W1	Cape Leeuwin H	51.03	131	T	T	20 43 47.7	
	baz=294,slow=75,SNR=3.7						
MKAR	Makanchi Array	53.41	12	P	P	19 48 58.5	+0.2
	0.5nm,0.8s,baz=189,slow=8.3,SNR=2.4						
BRTR	Keskin Array B	55.43	327	P	P	19 49 11.7	-1.6
	0.2nm,0.4s,baz=99,slow=7.4,SNR=2.8						
BRTR				LR	LR	20 11 04.8	
	comp=Z,17nm,19.0s,baz=103,slow=34						
KURBB	Kurchatov Arra	56.51	7	P	P	19 49 21.4	+0.8
	0.2nm,0.6s,baz=199,slow=7.6,SNR=2.7						
DAV	Davao City (W)	58.03	78	LR	LR	20 15 40.8	
	comp=Z,22nm,18.1s,baz=24,slow=37						
ZALV	Zalesovo Beam	60.72	11	P	P	19 49 50.9	+1.0
	0.6nm,0.6s,baz=202,slow=3.1,SNR=3.6						
SONM	Songino Array	62.53	28	P	P	19 50 04.0	+1.6
	0.5nm,0.7s,baz=205,slow=6.4,SNR=3.1						
ASAR	Alice Springs	65.04	113	P	P	19 50 19.6	+0.2
	0.9nm,0.7s,baz=276,slow=6.1,SNR=9.2						
WRA	Warramunga Arr	65.18	109	P	P	19 50 22.0	+1.7
	1.7nm,0.7s,baz=281,slow=6.1,SNR=11						
AKASG	Malin Array Be	65.49	334	P	P	19 50 21.3	-0.3
	0.3nm,0.5s,baz=124,slow=5.9,SNR=5.1						
TORD	Torodi Ar. Bea	69.14	286	LR	LR	20 19 01.4	
	comp=Z,28nm,19.2s,baz=270,slow=34						
HFS	Hagfors	78.29	335	P	P	19 51 38.3	0.0
	0.9nm,0.6s,baz=122,slow=10,SNR=3.4						
TXAR	Lajitas Array	155.22	344	PKPab	PKPab	19 59 53.9	-3.5
	0.1nm,0.5s,baz=59,slow=3.5,SNR=2.4						

CSEM ***05*** *20:06:11.7±0.1, 40°40N×26°03E, h10^{km}, ML2.3, Error*
ellipse: s-maj=1.9km s-min=1.7km az=96.0
DDA ***05*** *20:06:11.5, 40°37N×26°07E, h6^{km}, Ml2.8*
ISK ***05*** *20:06:11.2, 40°38N×26°06E, h16^{km}, ML2.3/5*
ATH ***05*** *20:06:11.2, 40°41N×26°00E, h28^{km}±3^{km}, ML1.9/5, Error*
ellipse: s-maj=4.0km s-min=1.1km az=297.0
ISCJB ***05*** *20:06:11.7±0.3, 40°40N±0°02×26°03E±0°02, h9^{km}±3^{km},*
Error ellipse: s-maj=2.9km s-min=2.7km az=2.5
THE ***05*** *20:06:12.2, 40°41N×25°98E, h16^{km}, ML1.8/6, Error*
ellipse: s-maj=0.8km s-min=0.5km az=89.0
ISC 05 20:06:11.6±0.8**,40°40N**±0°01×**26°03E**±0°02**,h17^{km}**±6^{km}**,**
n59,σ0^{s}27/110**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GOKC	Gokceada-Canak	0.22	202	PG	Pg	20 06 16.5	-0.2
GOKC				SG	Sg	20 06 20.2	+0.1
GOKC	Gokceada-Canak	0.22	202	ePg	Pg	20 06 16.5	-0.2
GOKC				eSg	Sg	20 06 20.2	+0.1
GADA	Gvkgeada	0.23	205	PG	Pb	20 06 17.2	-0.1
GADA				SG	Sb	20 06 20.8	-0.4
GADA	Gvkgeada	0.23	205	P	Pg	20 06 17.0	+0.1
GADA				S	Sb	20 06 21.2	0.0
GADA	Gvkgeada	0.23	205	P	Pg	20 06 17.0	+0.1
GADA	Gvkgeada	0.23	205	ePg	Pb	20 06 17.2	-0.1
GADA				eSg	Sb	20 06 20.8	-0.4
GADA				S	Sb	20 06 21.2	0.0
GELI	Tayfur-Gelibol	0.34	91	PG	Pg	20 06 18.6	-0.1
GELI				SG	Sg	20 06 23.5	-0.1
GELI	Tayfur-Gelibol	0.34	91	ePg	Pg	20 06 18.6	-0.1
GELI				eSg	Sg	20 06 23.5	-0.1
ENEZ	Enez	0.35	16	PG	Pb	20 06 19.2	-0.1
ENEZ				SG	Sb	20 06 24.5	-0.1
ENEZ	Enez	0.35	16	ePg	Pb	20 06 19.2	-0.1
ENEZ				eSg	Sb	20 06 24.5	-0.1
SMTH	Samothraki Isl	0.38	280	P	Pg	20 06 19.6	0.0
SMTH				S	Sg	20 06 24.8	-0.1
SMTH				AML	AML	20 06 25.7	
	comp=N,807μm,0.3s						
SMTH				AML	AML	20 06 25.8	
	comp=E,690μm,0.1s						
SMTH	Samothraki Isl	0.38	280	P	Pg	20 06 19.5	0.0
SMTH				S	Sg	20 06 24.7	-0.1
SMTH	Samothraki Isl	0.38	280	P	Pg	20 06 19.5	0.0
SMTH				S	Sg	20 06 24.7	-0.1
ERIK	Erikli-Kesan	0.46	54	PG	Pg	20 06 20.7	-0.1
ERIK				SG	Sg	20 06 26.9	-0.2
ERIK	Erikli-Kesan	0.46	54	ePg	Pg	20 06 20.7	-0.1
ERIK				eSg	Sg	20 06 26.9	-0.2
ALN	Alexandroupoli	0.49	2	P	Pb	20 06 21.9	0.0
ALN				S	Sg	20 06 28.0	-0.2
ALN				AML	AML	20 06 29.3	
	comp=E,207μm,0.2s						
ALN				AML	AML	20 06 29.5	
	comp=N,171μm,0.3s						
ALN	Alexandroupoli	0.49	2	P	Pg	20 06 21.6	+0.1
ALN				S	Sb	20 06 29.0	+0.2
ALN	Alexandroupoli	0.49	2	P	Pg	20 06 21.6	+0.1
ALN				S	Sb	20 06 28.5	-0.3
BOZC	Bozcaada	0.56	178	PG	Pg	20 06 22.2	-0.5
BOZC				SG	Sg	20 06 29.9	-0.3
BOZC	Bozcaada	0.56	178	iP	Pg	20 06 22.0	-0.7
BOZC				iS	Sb	20 06 30.5	-0.1
BOZC	Bozcaada	0.56	178	ePg	Pg	20 06 22.2	-0.5
BOZC				eSg	Sg	20 06 29.9	-0.3
LPK	Lapseki	0.56	93	PG	Pb	20 06 22.8	-0.2
LPK				SG	Sb	20 06 30.7	0.0
LPK	Lapseki	0.56	93	ePg	Pb	20 06 22.8	-0.2
LPK				eSg	Sb	20 06 30.7	0.0
EZN	Ezine	0.62	158	PG	Pb	20 06 23.9	0.0
EZN				SG	Sg	20 06 31.9	-0.1
EZN	Ezine	0.62	158	ePg	Pb	20 06 23.9	0.0
EZN				eSg	Sg	20 06 31.9	-0.1
KESN	Edirne-Kesan	0.65	49	iP	Pg	20 06 24.2	-0.4
KESN				iS	Sg	20 06 33.3	0.0
KESN	Edirne-Kesan	0.65	49	P	Pg	20 06 24.2	-0.4
KESN				S	Sg	20 06 33.3	0.0
BAYC	CANAKKALE_Bayr	0.77	149	iP	Pg	20 06 26.3	-0.3
BAYC				iS	Sg	20 06 36.6	-0.2
BAYC	CANAKKALE_Bayr	0.77	149	P	Pg	20 06 26.3	-0.3
BAYC				S	Sg	20 06 36.6	-0.2
LIA	Limnos Island	0.82	232	P	Pg	20 06 27.6	+0.1
LIA				S	Sg	20 06 38.7	+0.4
LIA				AML	AML	20 06 41.9	
	comp=N,102μm,0.1s						
LIA				AML	AML	20 06 42.3	
	comp=E,127μm,0.3s						
LIA	Limnos Island	0.82	232	P	Pg	20 06 27.4	-0.1
LIA				S	Sg	20 06 38.6	+0.3
LIA	Limnos Island	0.82	232	P	Pg	20 06 27.4	-0.1
LIA				S	Sg	20 06 38.6	+0.3
RDO	Rodhopi	0.83	334	PG	Pn	20 06 28.3	-0.2

RDO				SG	Sn	20 06 40.7	+0.3
RDO	Rodhopi	0.83	334	P	Pg	20 06 27.7	0.0
RDO				S	Sb	20 06 38.5	+0.1
RDO				AML	AML	20 06 42.6	
	comp=N,124µm,0.2s						
RDO				AML	AML	20 06 45.0	
	comp=E,124µm,0.2s						
RDO	Rodhopi	0.83	334	P	Pb	20 06 27.6	0.0
RDO				S	Sg	20 06 38.8	+0.1
RDO	Rodhopi	0.83	334	P	Pb	20 06 27.6	0.0
RDO	Rodhopi	0.83	334	*e*Pg	Pn	20 06 28.3	-0.2
RDO				S	Sg	20 06 38.8	+0.1
RDO				*e*Sg	Sn	20 06 40.7	+0.3
RKY	Sarkoy-Tekirda	0.92	72	PG	Pb	20 06 28.9	-0.3
RKY	Sarkoy-Tekirda	0.92	72	*e*Pg	Pb	20 06 28.9	-0.3
SART	Tekirdag	0.93	72	*i* P	Pb	20 06 29.1	-0.1
SART				*i* S	Sn	20 06 42.8	0.0
SART	Tekirdag	0.93	72	P	Pb	20 06 29.1	-0.1
SART				S	Sn	20 06 42.8	0.0
THAS	Thassos island	1.02	282	P	Pb	20 06 30.2	-0.5
THAS				S	Sg	20 06 44.5	-0.1
THAS	Thassos island	1.02	282	P	Pb	20 06 30.2	-0.5
THAS				S	Sg	20 06 44.5	-0.1
KNL	Bal˜–kesir	1.15	96	*i* P	Pb	20 06 33.0	0.0
KNL				*i* S	Sg	20 06 48.8	-0.1
PRK	Paraskevi	1.17	171	P	Pb	20 06 33.6	+0.3
PRK				S	Sn	20 06 48.5	-0.2
PRK				AML	AML	20 06 50.4	
	comp=E,282µm,0.5s						
PRK				AML	AML	20 06 52.2	
	comp=N,241µm,0.4s						
PRK	Paraskevi	1.17	171	P	Pb	20 06 33.5	+0.2
PRK				S	Sn	20 06 49.0	+0.3
PRK	Paraskevi	1.17	171	P	Pb	20 06 33.5	+0.2
PRK				S	Sn	20 06 49.0	+0.3
AYVA	Ayvalik	1.21	155	*i* P	Pb	20 06 34.1	+0.2
AYVA				*i* S	Sn	20 06 49.6	+0.1
AYVA	Ayvalik	1.21	155	P	Pb	20 06 34.2	+0.2
AYVA				S	Sn	20 06 49.7	+0.1
EDC	Edincik	1.41	92	PN	Pn	20 06 36.4	0.0
EDC	Edincik	1.41	92	*e*Pn	Pn	20 06 36.4	0.0
EDRB	Edirne	1.54	20	PN	Pn	20 06 38.5	+0.2
EDRB	Edirne	1.54	20	*e*Pn	Pn	20 06 38.5	+0.2
STEP	BALIKESIR_Sava	1.66	128	*i* P	Pb	20 06 41.7	+0.1
STEP				*i* S	Sb	20 07 03.4	+1.1
STEP	BALIKESIR_Sava	1.66	128	P	Pb	20 06 41.7	+0.1
STEP				S	Sb	20 07 03.3	+1.1
NVR	Nevrokopi	1.89	301	P	Pn	20 06 43.2	0.0
NVR	Nevrokopi	1.89	301	P	Pn	20 06 43.3	+0.1
DURS	Dursunbey	2.04	112	*i* P	Pb	20 06 48.8	+0.5
DURS				*i* S	Sb	20 07 13.7	+0.2
DURS	Dursunbey	2.04	112	P	Pb	20 06 48.8	+0.5
DURS				S	Sb	20 07 13.7	+0.2

IDC 05 20:10:16.8±1.3**,29°.17S**×**74°.69E,h0^{km},mb3.9**/5**,
mb1 4.1**/5**,mb1mx3.6**/62**,mbtmp3.9**/5**,MS3.4**/3**,Ms1 3.3**/3**,
ms1mx2.7**/60**,Error ellipse: s-maj=56.0km
s-min=27.0km az=94.0,Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOSA	Boshof	43.02	258	LR	LR	20 33 56.3	
	comp=Z,44nm,18.5s,baz=153,slow=33						
CMAR	Chiang Mai Arr	52.82	29	P	P	20 19 34.2	0.0
	0.3nm,0.6s,baz=230,slow=7.0,SNR=4.0						
WRA	Warramunga Arr	54.54	95	P	P	20 19 46.7	-0.3
	1.6nm,0.8s,baz=248,slow=6.6,SNR=4.6						
QSPA	South Pole Qui	60.97	180	P	P	20 20 31.5	-0.2
	2.6nm,1.1s,baz=315,slow=5.7,SNR=3.8						
VNDA	Vanda	61.14	166	P	P	20 20 32.7	+0.2
	1.1nm,0.9s,baz=277,slow=7.9,SNR=6.4						
AAK	Ala-Archa	71.45	360	LR	LR	20 49 34.3	
	comp=Z,18nm,20.0s,baz=181,slow=33						
BVAR	Borovoye Array	81.93	357	P	P	20 22 38.0	+0.1
	0.3nm,0.6s,baz=144,slow=12,SNR=2.9						
FINES	FINESS Array B	98.47	339	LR	LR	21 05 44.6	
	comp=Z,18nm,18.8s,baz=29,slow=34						
YKA	Yellowknife Ar	146.12	8	PKPbc	PKPdf	20 29 57.3	0.0
	0.7nm,0.9s,baz=325,slow=3.8,SNR=6.1						

RSNC 05 20:26:43.0±0.8**,6°.82N**×**73°.17W,h144^{km}**±5^{km}**,ML3.1,
Mw4.0,2D,Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	Barichara	0.22	184	*i* P	Pn	20 27 02.6	-0.4
BARC				*i*		20 27 03.0	
	comp=Z,191nm,0.3s						
BARC				*e*S	Sn	20 27 17.3	-0.8
BRRC	Barranca, Sant	0.61	298	⇓*i*P	Pn	20 27 04.5	+0.2
BRRC				*i*		20 27 04.8	
	comp=Z,348nm,0.3s						
BRRC				*e*S	Sn	20 27 20.8	+0.3
PAMC	Pamplona, Colo	0.70	42	*i* P	Pn	20 27 05.5	0.0
PAMC				*e*S	Sn	20 27 22.6	+0.1
PAMC				*i*		20 27 24.6	
	comp=Z,89nm,0.3s						
RUSC	La Rusia	0.92	175	⇓*i*P	Pn	20 27 06.5	-0.7
RUSC				*e*S	Sn	20 27 25.3	-0.2
PTBC	PUERTO BERRIO,	1.31	258	*e*P	Pn	20 27 09.1	-1.1
PTBC				*e*S	Sn	20 27 29.6	-1.3
PTBC				*i*		20 27 36.2	
	comp=Z,106nm,0.2s						
TAMC	Tame, Arauca	1.42	105	*e*P	Pn	20 27 10.7	-0.6
TAMC				*i*		20 27 31.5	
	comp=Z,76nm,0.3s						
TAMC				*e*S	Sn	20 27 32.2	-0.7
OCAC	Ocana	1.42	354	*e*P	Pn	20 27 10.7	-0.8
OCAC				*e*S	Sn	20 27 32.5	-0.8
OCAC				*i*		20 27 38.4	
	comp=Z,225nm,0.2s						
YOPC	Yopal, Colombi	1.63	153	*e*P	Pn	20 27 13.1	-0.6
YOPC				*e*S	Sn	20 27 37.0	-0.2
ZARC	Zaragoza, Cauc	1.81	292	*e*P	Pn	20 27 15.2	-0.4
ZARC				*e*S	Sn	20 27 40.9	+0.3
ZARC				*i*		20 27 47.6	
	comp=Z,153nm,0.5s						
NORC	Norcasia	2.10	234	*e*P	Pn	20 27 18.3	-0.7
NORC				*e*S	Sn	20 27 45.9	-0.9
CHIC	Chingaza	2.24	195	*e*P	Pn	20 27 20.7	-0.5
CHIC				*e*S	Sn	20 27 49.7	-0.7
ROSC	El Rosal	2.27	210	*e*S	Sn	20 27 51.4	+0.4
ROSC				*i*		20 27 58.5	
	comp=Z,97nm,0.5s						
GUYC	Guyana, Colomb	2.72	235	*e*P	Pn	20 27 26.9	-0.2
GUYC				*e*S	Sn	20 28 02.2	+1.2
GUYC				*i*		20 28 10.1	
	comp=Z,118nm,0.4s						
VILC	Villavicencio,	2.74	191	*e*P	Pn	20 27 27.0	0.0
VILC				*e*S	Sn	20 27 59.9	-1.0
DBBC	Dabeiba	3.03	274	*e*P	Pn	20 27 30.5	-0.1
TOLC	Tolima	3.08	224	*e*P	Pn	20 27 31.6	0.0
SDV	Santo Domingo	3.25	50	*e*P	Pn	20 27 31.6	-1.9
PRAC	Prado	3.52	209	*e*P	Pn	20 27 36.7	-0.3
PRAC				*i*		20 28 24.3	
	comp=Z,93nm,0.2s						
SJCC	San Jacinto, C	3.65	327	*e*P	Pn	20 27 36.9	-1.7

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*IDC **05** 20:46:23.2±1.0, 41°.61N×80°.16E, h0^{km}, mb3.7/6,
mb1 3.8/10, mb1mx3.5/76, mbtmp3.7/10, ML3.5/4, MS2.3/1,
Ms1 2.3/1, ms1mx1.9/74, Error ellipse: s-maj=18.3km
s-min=14.0km az=46.0*
*SOME **05** 20:46:25.1, 41°.72N×80°.03E, h0^{km}*
*BJI **05** 20:46:25.5, 41°.72N×80°.07E, h5^{km}, ML3.6/9*
*KRNET **05** 20:46:26.1±0.1, 41°.82N×80°.39E, mb3.8*
*NNC **05** 20:46:27.3±1.5, 41°.81N×80°.25E, h0^{km}, mb4.0, mpv3.7,
Error ellipse: s-maj=11.3km s-min=7.3km az=126.0*
ISC 05 20:46:25.6±1.4**,41°.68N**±0°.04×**80°.20E**±0°.04**,h13^{km}**±9^{km}**,
n60,σ2^{s}.14**/95**,mb3.6**/7**,22C-16D,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	Shalkode	1.58	340	*e*P	Pn	20 46 52.9	-0.6
	263nm,0.1s						
SHLS				*e*S	Sn	20 47 12.7	-1.1
	2µm,0.3s						
UZB	Uzynbulak	1.71	330	*e*P	Pg	20 46 58.5	+0.1
	251nm,0.5s						
UZB				*e*S	Sg	20 47 22.3	+1.7
	379nm,0.4s						
PDGK	Podgornoye	1.73	343	⇓P	Pn	20 46 56.1	+0.5
	68nm,0.3s						
PDGK				⇓S	Sb	20 47 19.1	-0.1
	574nm,0.5s						
PDGK	Podgornoye	1.73	343	⇓*i*P	Pn	20 46 56.1	+0.5
	baz=37						
PDGK				⇓*i*S	Sn	20 47 17.6	-0.1
	baz=37						
KTMS	Ketmen	1.77	4	*e*P	Pg	20 46 58.8	-0.8
	242nm,0.2s						
KTMS				*e*S	Sg	20 47 22.7	0.0
	538nm,0.4s						
SATY	Saty	1.92	317	*e*P	Pg	20 47 01.7	-0.7
	207nm,0.5s						
SATY				*e*S	Sg	20 47 28.5	+1.2
	707nm,0.4s						
ZHN	Zhinishke	1.98	319	*e*P	Pg	20 47 02.7	-0.9
	347nm,0.3s						
ZHN				*e*S	Sg	20 47 29.9	+0.6
	2µm,0.2s						
KPKS	Kokpek	2.11	328	*e*P	Pb	20 47 04.1	+0.3
	385nm,0.3s						
KPKS				*e*S	Sg	20 47 32.8	-0.6
	1µm,0.5s						
KURS	Kuram	2.35	321	*e*P	Pb	20 47 07.8	-0.1
	90nm,0.5s						
KURS				*e*S	Sb	20 47 37.9	+1.0
	213nm,0.6s						
DJR	Jarkent	2.67	354	*e*P	Pb	20 47 12.8	-0.6
	23nm,0.3s						
DJR				*e*S	Sb	20 47 47.2	+1.1
	230nm,0.5s						
KOTS	Kotyrbulak	2.76	305	*e*P	Pb	20 47 14.4	-0.6
	43nm,0.3s						
KOTS				*e*S	Sb	20 47 49.9	+1.1
	168nm,0.5s						
MDOK	Medeo	2.77	304	⇑Pn	Pn	20 47 12.4	+2.6
	30nm,0.4s						
MDOK				⇑Sn	Sb	20 47 48.7	-0.2
	171nm,0.4s						
MDOK	Medeo	2.77	304	*e*P	Pb	20 47 13.4	-1.6
	59nm,0.4s						
MDOK				*e*S	Sb	20 47 48.6	-0.2
	292nm,0.4s						
TNSS	Tian-Shan	2.77	301	*e*P	Pb	20 47 14.9	-0.3
	37nm,0.3s						
TNSS				*e*S	Sb	20 47 50.7	+1.5
	158nm,0.4s						
IZV	Izvestkoviy	2.98	298	*e*P	Pb	20 47 18.8	+0.1
	49nm,0.5s						
IZV				*e*S	Sb	20 47 57.0	+1.8
	224nm,0.7s						
ULHL	Ulahol	3.01	282	⇓*i*P	Pn	20 47 16.0	+2.8
	baz=79						
ULHL				⇓*i*S	Sb	20 47 53.3	-2.5
	baz=79						
ARXS	Arharly	3.08	326	*e*P	Pb	20 47 19.7	-0.6
	23nm,0.6s						
ARXS				*e*S	Sb	20 47 59.1	+1.4
	239nm,0.4s						
MTBS	Maitube	3.15	299	*e*P	Pb	20 47 20.6	-0.9
	13nm,0.3s						
MTBS				*e*S	Sb	20 48 00.4	+0.6
	86nm,0.4s						
CHKK	Chushkaly	3.21	314	*e*P	Pb	20 47 21.8	-0.8
	8.8nm,0.5s						
CHKK				*e*S	Sb	20 48 02.1	+0.5
	162nm,0.4s						
KST	Kastek	3.42	295	*e*P	Pb	20 47 25.9	-0.3
	17nm,0.5s						
KST				*e*S	Sb	20 48 09.3	+1.5
	100nm,0.5s						
TDK	Taldyqorghan	3.57	339	*e*P	Pb	20 47 28.3	-0.3
	62nm,0.5s						
TDK				*e*S	Sb	20 48 14.0	+2.1
	382nm,0.6s						
KUU	Kurty	3.60	309	*e*P	Pb	20 47 29.6	+0.5
	5.7nm,0.3s						
KUU				*e*S	Sb	20 48 15.5	+2.6
	85nm,0.5s						
DGS	Degeres	3.63	297	*e*P	Pb	20 47 29.9	+0.2
	19nm,0.3s						
DGS				*e*S	Sb	20 48 16.4	+2.7
	106nm,0.6s						
TKM2	Tokmak 2	3.63	292	⇑Pn	Pn	20 47 24.3	+2.5
	5.0nm,0.4s						
TKM2				⇓Pg	Pg	20 47 37.2	+2.0
	12nm,0.4s						
TKM2				⇑Lg	Lg	20 48 18.3	
	51nm,0.6s						
TKM2	Tokmak 2	3.63	292	⇑*i*P	Pn	20 47 24.2	+2.5
	baz=89						
TKM2				⇑*i*S	Sn	20 48 07.9	+3.2
	baz=89						
KAPS	Kapalarasan	3.66	351	*e*P	Pb	20 47 29.8	-0.4
	22nm,0.4s						
KAPS				⇓*i*S	Sb	20 48 16.2	+1.7
	164nm,0.5s						
KZA	Kyzart	3.72	278	⇑*i*P	Pn	20 47 26.0	+2.9
	baz=76						
KZA				⇑*i*S	Sn	20 48 10.4	+3.4
	baz=76						
KSH	Kashi	3.87	238	Pn	Pg	20 47 41.7	+1.9
KSH				Sn	Sg	20 48 41.8	+12
KSH				smax	smax		
	comp=N,170nm,0.7s						
KSH				smax	smax		
	comp=E,130nm,0.7s						
KBK	Karagaybulak	4.02	286	⇑*i*P	Pn	20 47 30.0	+2.9
	baz=84						
KBK				⇑*i*S	Sn	20 48 17.2	+3.0
	baz=84						
CHMS	Chumysh	4.25	290	⇑*i*P	Pn	20 47 33.4	+3.3
	baz=88						
CHMS				⇑*i*S	Sn	20 48 22.4	+2.8
	baz=88						
UCH	Uchtor	4.28	279	⇑*i*P	Pn	20 47 34.2	+3.4
	baz=77						
UCH				⇑*i*S	Sn	20 48 24.1	+3.3
	baz=77						
AAK	Ala-Archa	4.35	285	Pg	Pb	20 47 43.8	+1.8
	comp=E,1.4nm,0.3s,baz=140,slow=11,SNR=11						
AAK				Lg	Lg	20 48 38.4	
	comp=E,3.0nm,0.3s,baz=255,slow=20,SNR=2.8						
AAK	Ala-Archa	4.35	285	⇑Pn	Pn	20 47 35.8	+4.2
	comp=E,1.2nm,0.3s						
AAK				⇓Pg	Pg	20 47 47.0	-1.9
	comp=E,7.4nm,0.4s						
AAK				⇑Lg	Lg	20 48 42.8	
	comp=E,31nm,0.5s						
MAKZ	Makanchi	5.29	13	⇑Pn	Pn	20 47 46.3	+2.0
	comp=E,10nm,0.6s						
MAKZ				⇑Lg	Lg	20 49 08.1	
	comp=E,18nm,0.7s						
MRKS	Merke	5.29	284	*e*P	Pb	20 48 00.4	+2.5
	comp=E,8.3nm,0.4s						
MRKS				*e*S	Sg	20 49 08.7	-6.6
	comp=E,16nm,0.7s						
MK31	Makanchi Array	5.33	16	Pn	Pn	20 47 47.1	+2.2
	comp=E,1.9nm,0.2s,baz=202,slow=13,SNR=490						
MK31				⇓Sn	Sn	20 48 48.8	+2.5
	comp=E,8.8nm,0.5s,baz=160,slow=37,SNR=4.6						
MK31				⇓Lg	Lg	20 49 09.8	
	comp=E,13nm,0.5s,baz=198,slow=27,SNR=5.0						
MKAR	Makanchi Array	5.33	16	Pn	Pn	20 47 47.2	+2.3
	comp=E,4.8nm,0.3s,baz=200,slow=13,SNR=172						
MKAR				Sn	Sn	20 48 48.8	+2.5
	comp=E,4.5nm,0.3s,baz=191,slow=22,SNR=7.1						
MKAR				Lg	Lg	20 49 09.5	
	comp=E,5.0nm,0.3s,baz=196,slow=29,SNR=9.0						
SFK	Sufi-Kurgan	5.34	254	⇑Pg	Pg	20 48 05.5	-2.4
	comp=E,3.4nm,0.6s						
SFK				⇑Lg	Lg	20 49 14.9	
	comp=E,19nm,0.6s						
MNAS	Manas	5.78	281	⇑Pg	Pb	20 48 09.7	+3.3
	comp=E,3.1nm,0.6s						
MNAS				⇓Lg	Lg	20 49 27.9	
	comp=E,13nm,0.8s						
WMQ	Urumqi	5.92	66	Pn	Pn	20 47 57.3	+4.2
WMQ				Sn	Sn	20 49 06.0	+5.2
WMQ				smax	smax		
	comp=E,72nm,0.9s						
WMQ				smax	smax		
	comp=E,61nm,0.9s						
KK31	Karatay Array	7.31	284	⇓Pg	Pg	20 48 40.9	-4.7
	comp=E,1.5nm,0.5s						
KK31				⇓Lg	Lg	20 50 18.8	
	comp=E,3.0nm,0.5s,baz=94,slow=25,SNR=5.2						
OTUK	Ortayu	8.61	322	⇓Lg	Lg	20 50 53.1	
	comp=E,28nm,0.9s						
KURBB	Kurchatov Arra	9.02	353	Pn	Pn	20 48 35.5	0.0
	comp=E,0.0nm,0.3s,baz=158,slow=11,SNR=3.5						
KURBB				Lg	Lg	20 51 08.4	
	comp=E,0.3nm,0.3s,baz=180,slow=27,SNR=6.7						
KURBB	Kurchatov Arra	9.02	353	⇓Lg	Lg	20 51 09.2	
	comp=E,42nm,0.8s						
KURK	Kurchatov	9.11	354	⇑Lg	Lg	20 51 10.9	
	comp=E,30nm,0.9s						
CHCP	Chirah Chowk	9.71	217	P	Pn	20 48 46.6	+1.6
DHRM	DHARAMSHALA	9.91	200	*e*P	Pn	20 48 48.8	+0.8
DHRM				*e*S	Sn	20 50 34.5	-4.7
DHRM				IAML		20 50 46.5	
	comp=E,25nm,0.6s						
DHRM				IAML		20 50 46.6	
	comp=N,17nm,0.4s						
CEP	Cherat	10.22	223	P	Pn	20 48 53.4	+1.3
CEP				S	Sn	20 50 43.0	-3.6
SMLA	Simla	10.80	194	*e*P	Pn	20 48 58.5	-1.5
SMLA				*e*S	Sn	20 50 51.7	-9.1
SMLA				IAML		20 51 02.0	
	comp=E,14nm,0.2s						
SMLA				IAML		20 51 02.9	
	comp=N,17nm,0.6s						
THW	Thamme Wali	11.13	220	P	Pn	20 49 05.4	+0.9
ZALV	Zalesovo Beam	12.66	13	Pn	Pn	20 49 24.9	-0.3
	comp=N,0.4nm,0.3s,baz=198,slow=14,SNR=7.6						
ZALV				Sn	Sn	20 51 43.8	-2.3
	comp=N,0.4nm,0.3s,baz=199,slow=25,SNR=4.3						
ZALV				Lg	Lg	20 53 08.0	
	comp=N,0.0nm,0.3s,baz=198,slow=27,SNR=2.4						
ZALV				LR	LR	20 54 09.4	
	comp=N,16nm,21.8s,baz=325,slow=37						
BVAR	Borovoye Array	13.14	333	Pn	Pn	20 49 30.9	-1.0
	comp=N,0.3nm,0.3s,baz=149,slow=14,SNR=4.6						
BVAR				Lg	Lg	20 53 19.9	
	comp=N,0.1nm,0.3s,baz=141,slow=28,SNR=4.0						
SONM	Songino Array	19.54	63	P	P	20 50 53.5	+0.5
	comp=N,0.1nm,0.3s,baz=261,slow=11,SNR=5.2						
FINES	FINESS Array B	37.64	320	P	P	20 53 39.8	-0.1
	comp=N,1.7nm,0.9s,baz=97,slow=11,SNR=3.4						
HFS	Hagfors	43.70	318	P	P	20 54 29.5	-0.5
	comp=N,0.6nm,0.4s,baz=81,slow=12,SNR=7.2						
NB2	NORSAR Subarra	44.81	320	P	P	20 54 38.0	-0.9
	comp=Z,0.3nm,0.5s,baz=83,slow=8.6						
ILAR	Eielson Array	67.67	20	P	P	20 57 21.2	-0.8
	comp=Z,0.2nm,0.5s,baz=320,slow=6.5,SNR=4.3						
YKA	Yellowknife Ar	75.50	7	P	P	20 58 08.1	-1.0
	comp=Z,0.5nm,0.6s,baz=341,slow=6.0,SNR=5.8						
WRA	Warramunga Arr	79.15	129	P	P	20 58 29.8	-0.3
	comp=Z,0.4nm,0.9s,baz=331,slow=5.5,SNR=2.4						
ASAR	Alice Springs	81.83	132	P	P	20 58 44.6	+0.1
	comp=Z,0.3nm,0.8s,baz=322,slow=5.5,SNR=2.6						

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*NIED **05** 20:58:00, 46°.90N×152°.90E, h35^{km}, Mw3.8 Best double
couple: M$_0$5.17000×10^{14} NP1:φ$_s$274.00000°, δ32.00000°,
λ-71.00000°. NP2:φ$_s$72.00000°, δ60.00000°,
λ-101.00000°.*
JMA 05 20:58:55.4±0.7**,46°.87N**×**152°.85E,h30^{km},M4.1,Kuril
Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	6.13	238	P	Pn	21 00 23.0	-0.8
NEM2				*e*S	Sn	21 01 27.7	-5.2
JRA	Rausu	6.18	244	P	Pn	21 00 27.5	+3.0
JNK	Nakash	6.61	243	P	Pn	21 00 31.7	+1.2
JNK				*e*S	Sn	21 01 43.8	-1.0
JTKR	Abashiri--Toko	6.93	249	P	Pn	21 00 37.2	+2.4
JAK	Akkeshi	6.96	239	P	Pn	21 00 34.3	-1.0
JAR	Ashorobuto	7.35	244	P	Pn	21 00 42.1	+1.5
JAR				*e*S	Sn	21 02 01.9	-1.1
JOB	Onbets	7.53	241	*e*S	Sn	21 02 03.5	-3.8
JKK2	Kamakawa 2	7.72	251	P	Pn	21 00 48.5	+2.8
JCH	Churui	7.98	241	P	Pn	21 00 48.9	-0.3
JCH				*e*S	Sn	21 02 13.2	-5.2
JNBK	Urakawa-nobuka	8.54	241	P	Pn	21 00 56.0	-0.9
JNBK				*e*S	Sn	21 02 25.6	-6.6
JKB	Kayabe	9.81	244	P	Pn	21 01 13.1	-1.3
JANG	Nango	10.47	236	*e*S	Sn	21 03 07.0	-13

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*ISCJB **05** 21:04:08.7±1.0, 23°.86S±0°.10×179°.8W±0°.2, h518^{km},
mb3.8/10, Error ellipse: s-maj=20.7km s-min=12.5km
az=171.0*
*IDC **05** 21:04:11.6±4.9, 24°.07S×179°.75W, h552^{km}±52^{km},
mb3.3/10, mb1 3.5/11, mb1mx3.2/47, mbtmp4.3/11, Error
ellipse: s-maj=35.7km s-min=24.2km az=35.0*
ISC 05 21:04:08.6±0.9**,24°.0S**±0°.1×**179°.7W**±0°.2**,h518^{km},n15,
σ1^{s}.17**/17**,mb3.8**/10**,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	14.50	190	P	P	21 07 13.3	+0.1
	0.6nm,0.3s,baz=14,slow=12,SNR=5.5						
URZ				S	S	21 09 45.4	0.0
	0.8nm,0.3s,baz=67,slow=21,SNR=6.4						
CTA	Charters Tower	31.76	270	P	P	21 09 50.9	+0.6
	14nm,0.6s,baz=93,slow=10,SNR=24						
STKA	Stephens Creek	34.96	248	P	P	21 10 17.3	+0.2
	1.1nm,0.5s,baz=88,slow=9.1,SNR=4.6						
ASAR	Alice Springs	42.30	261	P	P	21 11 16.7	-0.2
	4.0nm,0.8s,baz=96,slow=7.1,SNR=41						
WRA	Warramunga Arr	42.69	266	P	P	21 11 19.3	-0.6
	5.3nm,0.4s,baz=96,slow=8.4,SNR=116						
JAY	Jayapura	43.80	293	P	P	21 11 27.9	-0.8
	4.9nm,0.5s,baz=101,slow=3.8,SNR=4.9						
FITZ	Fitzroy Crossi	51.11	266	P	P	21 12 23.8	+0.3
	5.6nm,0.9s,baz=109,slow=7.4,SNR=12						
KSRS	Korea Array	78.48	320	P	P	21 15 17.3	+1.5
	1.1nm,0.7s,baz=131,slow=5.6,SNR=3.4						
SNAA	Sanae	84.59	179	P	P	21 15 46.8	0.0
	0.7nm,1.1s,baz=258,slow=9.3,SNR=4.4						
CMAR	Chiang Mai Arr	89.82	290	P	P	21 16 13.2	+0.9
	0.6nm,0.8s,baz=167,slow=4.5,SNR=5.2						
TXAR	Lajitas Array	90.23	58	P	P	21 16 15.2	+1.1
	0.3nm,0.7s,baz=185,slow=7.0,SNR=4.4						
BVAR	Borovoye Array	120.68	319	PKP	PKPdf	21 22 00.6	-0.6
	0.2nm,0.3s,baz=84,slow=5.3,SNR=3.7						
HFS	Hagfors	142.67	349	PKP	PKPdf	21 22 38.8	-3.3
	0.5nm,0.3s,baz=66,slow=3.6,SNR=11						
BRTR	Keskin Array B	147.85	307	PKPbc	PKPdf	21 22 52.2	+0.4
	0.4nm,0.6s,baz=99,slow=1.9,SNR=2.6						
BRTR				PKPab	PKPab	21 22 59.4	-0.5
	0.5nm,0.5s,baz=68,slow=3.9,SNR=3.8						
MMAI	Mount Meron Ar	147.99	294	PKPbc	PKPbc	21 22 54.8	-1.2
	1.0nm,0.4s,baz=116,slow=3.4,SNR=3.7						

IDC 05 21:04:33.0±2.0**,0°.44N**×**125°.25E,h0^{km},mb3.2**/3**,
mb1 3.4**/3**,mb1mx3.1**/59**,mbtmp3.3**/3**,Error ellipse:
s-maj=193.2km s-min=28.1km az=64.0,Northern
Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.13	157	P	P	21 09 30.7	+0.3
	0.6nm,0.7s,baz=335,slow=11,SNR=4.3						
ASAR	Alice Springs	25.39	161	P	P	21 10 02.1	-0.3
	0.3nm,0.9s,baz=343,slow=8.7,SNR=3.5						
MKAR	Makanchi Array	59.45	327	P	P	21 14 37.7	0.0
	0.3nm,0.4s,baz=129,slow=7.1,SNR=4.0						

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*NIED **05** 21:05:00, 38°.20N×141°.70E, h50^{km}, Mw3.9 Best double
couple: M$_0$7.32000×10^{14} NP1:φ$_s$222.00000°, δ26.00000°,
λ113.00000°. NP2:φ$_s$17.00000°, δ66.00000°, λ79.00000°.*
*ISCJB **05** 21:05:52.9±0.7, 38°.15N±0°.03×141°.81E±0°.07, h55^{km}±5^{km},
mb3.9/15, Error ellipse: s-maj=9.6km s-min=4.5km
az=19.8*
*JMA **05** 21:05:54.5±0.1, 38°.18N×141°.70E, h51^{km}±1^{km}, M3.7*
JMA Felt II J1.
*IDC **05** 21:05:56.7±0.9, 38°.09N×141°.59E, h70^{km}±5^{km}, mb3.6/14,
mb1 3.7/18, mb1mx3.5/70, mbtmp3.9/18, MS2.4/2,
Ms1 2.4/2, ms1mx2.2/60, Error ellipse: s-maj=20.4km
s-min=11.1km az=89.0*
ISC 05 21:05:55.3±0.7**,38°.16N**±0°.04×**141°.76E**±0°.07**,h59^{km}**±6^{km}**,
n41,σ1^{s}.56**/57**,mb3.9**/15**,Near east coast of eastern
Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIO	Ouri	0.44	313	P	Pn	21 06 04.7	-1.8
JIO				*i* S	Sn	21 06 11.6	-3.1
JMM	Marumori	0.82	249	P	Pn	21 06 09.1	-1.8
JMM				*e*S	Sn	21 06 19.6	-2.8
JOU	Okura	0.89	284	P	Pn	21 06 10.4	-1.5
JOU				S	Sn	21 06 21.8	-2.3
JMK	Ichinoseki	0.90	332	P	Pn	21 06 10.7	-1.3
JMK				S	Sn	21 06 21.9	-2.4
OFUJ	Ofunato	0.92	356	P	Pn	21 06 10.8	-1.5
OFUJ				S	Sn	21 06 22.3	-2.6
JFK	Kawauchi	1.06	222	P	Pn	21 06 12.7	-1.4
JFT	Otama	1.29	241	P	Pn	21 06 16.3	-0.9
JFT				S	Sn	21 06 32.3	-1.3
JYK	Kaneyama	1.33	305	P	Pn	21 06 16.4	-1.3
JYK				*e*S	Sn	21 06 33.1	-1.5
JYS	Shirataka	1.34	273	P	Pn	21 06 16.6	-1.2
JYS				S	Sn	21 06 32.7	-1.9
JOM	Ohasama	1.36	345	P	Pn	21 06 17.1	-1.0
JOM				S	Sn	21 06 33.5	-1.7
JRG	Rokugo	1.52	325	P	Pn	21 06 19.5	-0.7
JRG				*e*S	Sn	21 06 39.5	+0.6
JYA	Atsumi	1.67	286	P	Pn	21 06 21.1	-1.1
JFY	Yanaizu	1.79	246	P	Pn	21 06 23.3	-0.6
JFY				*e*S	Sn	21 06 44.5	-1.1
MJAR	Matsushiro Arr	3.26	241	P	Pn	21 06 43.7	-0.2
	2.7nm,0.3s,baz=55,slow=10,SNR=24						
MJAR				LR	LR	21 08 03.6	
	comp=Z,54nm,21.2s,baz=50,slow=41						
MAT	Matsushiro	3.26	241	P	Pn	21 06 44.6	+0.7
MAT				S	Sn	21 07 23.0	+1.5
JHJ	Hachijo jima 2	5.28	198	P	Pn	21 07 11.7	+0.1
	12nm,0.3s,baz=138,slow=23,SNR=7.0						
JHJ				S	Sn	21 08 08.8	-2.3
	35nm,0.3s,baz=250,slow=22,SNR=6.7						
ASAJ	Asahikawa	5.99	6	P	Pn	21 07 19.9	-1.4
	0.7nm,0.3s,baz=220,slow=16,SNR=12						
ASAJ				S	Sn	21 08 27.6	-0.8
	0.5nm,0.3s,baz=204,slow=20,SNR=2.3						
USRK	Ussuriysk Ar.	9.52	312	P	Pn	21 08 11.7	+2.1
	baz=116,slow=13						
KSRS	Korea Array	10.97	271	P	Pn	21 08 28.8	-0.7
	0.1nm,0.3s,baz=78,slow=14,SNR=2.8						
KSRS				LR	LR	21 12 32.5	
	comp=Z,27nm,18.9s,baz=85,slow=36						
JCJ	Chichijima	11.04	178	P	Pn	21 08 27.6	-2.8
	1.8nm,0.3s,baz=315,slow=20,SNR=2.6						
JCJ				S	Sn	21 10 21.3	-11
	1.9nm,0.3s,baz=287,slow=19,SNR=2.8						
YAK	Yakutsk	25.04	347	P	P	21 11 13.9	+0.3
	10nm,0.5s,baz=153,slow=2.7,SNR=3.1						
SONM	Songino Array	27.40	302	P	P	21 11 35.7	+0.4
	0.6nm,0.5s,baz=90,slow=9.1,SNR=4.0						
H11N2	WAKE ISLAND Hy	28.51	123	T	T	21 41 56.2	
	baz=316,slow=76,SNR=108						
H11N1	WAKE ISLAND Hy	28.52	123	T	T	21 41 59.7	
	baz=316,slow=76,SNR=452						
H11N3	WAKE ISLAND Hy	28.52	123	T	T	21 42 00.4	
	baz=316,slow=76,SNR=154						
H11S1	WAKE ISLAND Hy	29.26	125	T	T	21 42 57.0	
	baz=318,slow=76,SNR=88						
H11S3	WAKE ISLAND Hy	29.26	125	T	T	21 42 57.0	
	baz=318,slow=76,SNR=111						
H11S2	WAKE ISLAND Hy	29.27	125	T	T	21 42 58.3	
	baz=318,slow=76,SNR=88						
ZALV	Zalesovo Beam	41.37	311	P	P	21 13 35.0	-0.3
	2.0nm,0.5s,baz=93,slow=9.3,SNR=8.3						
ZALV				pP	pP	21 13 52.8	+2.4
	2.2nm,0.6s,baz=87,slow=7.4,SNR=4.2						
ZALV				PcP	PcP	21 15 31.0	-1.5
	0.4nm,0.3s,baz=80,slow=1.6,SNR=2.2						
CMAR	Chiang Mai Arr	42.06	254	P	P	21 13 40.7	-0.6
	0.3nm,0.3s,baz=48,slow=7.3,SNR=4.2						
MKAR	Makanchi Array	43.76	301	P	P	21 13 54.4	-0.5
	2.5nm,0.9s,baz=82,slow=9.7,SNR=9.5						
MKAR				pP	pP	21 14 12.6	+2.5
	2.4nm,0.7s,baz=87,slow=9.9,SNR=9.5						
KURBB	Kurchatov Arra	45.53	307	P	P	21 14 08.6	-0.3
	1.6nm,0.4s,baz=82,slow=8.3,SNR=17						
KURBB				pP	pP	21 14 26.3	+2.2
	8.0nm,0.7s,baz=80,slow=8.1,SNR=14						
BVAR	Borovoye Array	50.03	312	P	P	21 14 43.2	-0.4
	0.6nm,0.5s,baz=72,slow=8.7,SNR=7.8						
BVAR				pP	pP	21 15 01.2	+2.2
	0.9nm,0.5s,baz=67,slow=8.0,SNR=5.1						
BVAR				PcP	PcP	21 16 02.8	+0.1
	0.5nm,0.6s,baz=44,slow=4.8,SNR=3.5						
WRA	Warramunga Arr	58.21	188	P	P	21 15 43.3	-0.2
	0.4nm,0.3s,baz=5.6,slow=7.2,SNR=14						
ASAR	Alice Springs	61.94	188	P	P	21 16 09.2	+0.3
	0.4nm,0.4s,baz=1.4,slow=5.4,SNR=8.5						
FINES	FINESS Array B	67.95	332	P	P	21 16 47.2	-0.3
	0.7nm,0.6s,baz=54,slow=7.1,SNR=4.2						
FINES				pP	pP	21 17 05.5	+1.9
	0.7nm,0.7s,baz=42,slow=11,SNR=2.3						
HFS	Hagfors	73.18	336	P	P	21 17 19.4	0.0
	1.0nm,0.4s,baz=42,slow=4.5,SNR=15						
NB2	NORSAR Subarra	73.26	337	P	P	21 17 19.5	-0.4
	comp=Z,0.4nm,0.5s,baz=37,slow=6.2						
AKASG	Malin Array Be	73.58	322	P	P	21 17 21.1	-0.8
	comp=Z,0.6nm,0.4s,baz=49,slow=6.3,SNR=3.4						
AKASG				pP	pP	21 17 40.0	+1.8
	comp=Z,0.7nm,0.5s,baz=46,slow=5.7,SNR=2.2						
NVAR	Mina Array Bea	74.10	54	P	P	21 17 27.5	+2.0
	comp=Z,0.2nm,0.4s,baz=290,slow=2.6,SNR=3.7						
TXAR	Lajitas Array	89.22	53	P	P	21 18 45.5	+0.4
	comp=Z,0.1nm,0.5s,baz=316,slow=6.2,SNR=2.3						

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*ISCJB **05** 21:28:53.5±1.0, 7°.4N±0°.1×36°.0W±0°.2, h15^{km}, mb3.6/6, MS3.3/18, Error ellipse: s-maj=34.0km s-min=16.6km az=9.8*

*IDC **05** 21:28:53.1±1.8, 7°.44N×36°.01W, h0^{km}, mb3.7/6, mb1 3.9/6, mb1mx3.5/61, mbtmp3.7/6, ML5.1/1, MS3.3/18, Ms1 3.3/18, ms1mx3.1/49, Error ellipse: s-maj=42.6km s-min=39.6km az=53.0*

ISC 05 21:28:55.4±1.2**, 7°.4N**±0°.1×**36°.0W**±0°.3**, h15**^{km}**, n27, σ0**^{s}**.71**/7**, mb3.8**/6**, MS3.4**/18**, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RCBR	Riachuelo	13.15	180	Pn	Pn	21 32 01.9	0.0
	11nm,0.3s,baz=344,slow=0.3,SNR=8.7						
RCBR				Sn	Sn	21 34 18.6	-9.5
	2.3nm,0.3s,baz=311,slow=3.2,SNR=6.7						
H10N3	ASCENSION HYDR	26.24	125	T	T	22 02 08.6	
	baz=305,slow=75,SNR=20						
H10N2	ASCENSION HYDR	26.24	125	T	T	22 02 08.8	
	baz=305,slow=75,SNR=22						
H10N1	ASCENSION HYDR	26.26	125	T	T	22 02 07.6	
	baz=305,slow=75,SNR=25						
H10S3	ASCENSION HYDR	26.75	127	T	T	22 02 50.3	
	baz=307,slow=75,SNR=23						
H10S1	ASCENSION HYDR	26.76	127	T	T	22 02 50.6	
	baz=307,slow=75,SNR=23						
H10S2	ASCENSION HYDR	26.77	127	T	T	22 02 51.6	
	baz=307,slow=75,SNR=20						
TORD	Torodi Ar. Bea	37.48	78	P	P	21 36 08.5	-0.4
	1.1nm,0.9s,baz=269,slow=10						
TORD				LR	LR	21 49 11.5	
	comp=Z,62nm,19.5s,baz=270,slow=32						
MDT	Midelt	38.54	45	LR	LR	21 50 30.4	
	comp=Z,51nm,19.1s,baz=236,slow=34						
CPUP	Villa Florida	39.43	211	LR	LR	21 52 37.3	
	comp=Z,58nm,18.9s,baz=44,slow=36						
LPAZ	La Paz	39.58	233	LR	LR	21 51 46.5	
	comp=Z,46nm,20.2s,baz=92,slow=35						
NNA	Nana	44.97	245	LR	LR	21 55 37.3	
	comp=Z,47nm,19.5s,baz=82,slow=36						
PLCA	Paso Flores	57.50	211	LR	LR	22 04 02.8	
	comp=Z,78nm,18.6s,baz=82,slow=37						
IDI	Anoyia	62.05	54	LR	LR	22 06 23.2	
	comp=Z,13nm,21.6s,baz=254,slow=36						
NOA	NORSAR Array B	63.90	23	LR	LR	22 03 18.8	
	comp=Z,22nm,20.9s,baz=220,slow=32						
HFS	Hagfors	64.39	25	LR	LR	22 03 35.3	
	comp=Z,28nm,21.3s,baz=240,slow=32						
MLR	Muntele Rosu	65.20	43	P	P	21 39 37.1	+0.7
	1.3nm,1.1s,baz=225,slow=8.6,SNR=5.5						
MLR				LR	LR	22 07 33.1	
	comp=Z,5.2nm,19.6s,baz=266,slow=36						
TXAR	Lajitas Array	66.97	299	LR	LR	22 09 45.0	
	comp=Z,11nm,18.1s,baz=0.0,slow=37						
AKASG	Malin Array Be	68.69	38	P	P	21 39 57.9	-0.4
	0.2nm,0.3s,baz=258,slow=4.6,SNR=4.2						
BOSA	Boshof	68.99	124	LR	LR	22 04 07.0	
	comp=Z,28nm,21.2s,baz=214,slow=31						
BRTR	Keskin Array B	69.64	50	P	P	21 40 05.7	+1.1
	0.6nm,0.7s,baz=260,slow=7.8,SNR=3.4						
BRTR				LR	LR	22 10 49.7	
	comp=Z,11nm,21.6s,baz=259,slow=36						
ANMO	Albuquerque	69.80	304	LR	LR	22 06 35.1	
	comp=Z,47nm,21.9s,baz=60,slow=32						
FINES	FINESS Array B	70.39	27	P	P	21 40 08.3	-0.3
	0.8nm,0.7s,baz=249,slow=6.2,SNR=3.0						
FINES				LR	LR	22 06 43.4	
	comp=Z,27nm,21.2s,baz=226,slow=32						
PDAR	Pinedale Array	72.95	312	LR	LR	22 08 06.7	
	comp=Z,20nm,21.8s,baz=106,slow=32						
GNI	Garni	78.18	51	LR	LR	22 17 03.1	
	comp=Z,11nm,21.4s,baz=250,slow=37						
YKA	Yellowknife Ar	78.21	332	P	P	21 40 54.1	0.0
	0.3nm,0.6s,baz=100,slow=6.3,SNR=4.4						
YBH	Yreka Blue Hor	82.68	311	LR	LR	22 15 47.2	
	comp=Z,21nm,19.4s,baz=190,slow=34						

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*SKO **05** 21:31:47.8, 41°.58N×20°.62E, h18^{km}, M1.6, ML2.0*

*CSEM **05** 21:31:49.4±0.3, 41°.55N×20°.72E, h2^{km}, ML1.7, Error ellipse: s-maj=5.8km s-min=3.9km az=69.0*

*BEO **05** 21:31:50.8±0.6, 41°.53N×20°.74E, h0^{km}, ML1.7/6*

ATH 05 21:31:49.7, 41°.51N×20°.71E, h12^{km}±4^{km}, ML1.8/2, Error ellipse: s-maj=5.7km s-min=2.2km az=136.0, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHR	Ohrid	0.40	171	*i* Pg	Pg	21 31 57.9	+0.2
OHR				*i* Sg	Sb	21 32 05.4	+0.5
OHR				*e*Lg	Lg	21 32 05.5	
	comp=N,83nm,0.3s						
OHR				*e*Lg	Lg	21 32 05.6	
	comp=E,52nm,0.3s						
KRUS	Krusevo	0.43	109	*i* Pg	Pg	21 31 58.4	+0.2
KRUS				*i* Sg	Sb	21 32 05.6	-0.1
BIA	Bitola	0.67	136	*e*Pg	Pb	21 32 03.1	-0.3
BIA				*i* Sg	Sn	21 32 15.0	-0.6
PRZK	Prizren	0.70	3	P	Pg	21 32 02.7	-0.7
SKO	Skopje	0.72	49	*e*Pg	Pg	21 32 02.5	-1.1
SKO				*e*Sg	Sg	21 32 11.9	-1.1
SKO	Skopje	0.72	49	*e*Pg	Pg	21 32 02.4	-1.2
SKO				*i* Sg	Sb	21 32 13.7	-0.3
SKO	Skopje	0.72	49	*e*Pg	Pg	21 32 02.5	-1.1
SKO				*e*Sg	Sg	21 32 11.9	-1.1
FNA	Florina	0.88	145	P	Pg	21 32 05.8	-0.9
FNA				S	Sb	21 32 18.7	0.0
FNA				AML	AML	21 32 27.0	
	comp=E,222µm,0.4s						
FNA				AML	AML	21 32 27.2	
	comp=N,126µm,0.7s						
FNA	Florina	0.88	145	P	Pg	21 32 06.1	-0.6
FNA				S	Sb	21 32 18.7	0.0
ZATK	Zatriq	0.94	356	P	Pg	21 32 03.5	-4.4
NEST	Nestorio	1.12	167	P	Pb	21 32 11.1	0.0
NEST				S	Sn	21 32 26.6	-0.2
NEST				AML	AML	21 32 36.4	
	comp=E,47µm,0.5s						
NEST				AML	AML	21 32 38.2	
	comp=N,59µm,0.6s						
NEST	Nestorio	1.12	167	P	Pb	21 32 11.0	-0.1
NEST				S	Sn	21 32 26.5	-0.3
STIP	Stip	1.12	80	*e*Pg	Pn	21 32 13.1	+1.8
STIP				*i* Sg	Sn	21 32 32.6	+5.9
GRG	Griva	1.39	113	P	Pg	21 32 16.2	-0.2
GRG	Griva	1.39	113	P	Pg	21 32 16.0	-0.4
VAY	Valandovo	1.41	97	*e*Pg	Pg	21 32 16.4	-0.4
VAY				*e*Sg	Sg	21 32 35.3	+0.2
VAY	Valandovo	1.41	97	*e*Pg	Pb	21 32 16.0	0.0
VAY				*i* Sg	Sg	21 32 36.5	+1.5
VAY				*e*Lg	Lg	21 32 38.3	
	comp=E,12nm,0.5s						
VAY	Valandovo	1.41	97	*e*Pg	Pg	21 32 16.4	-0.4
VAY				*e*Sg	Sg	21 32 35.3	+0.2
PDG	Podgorica	1.43	311	*e*Pg	Pb	21 32 16.4	+0.2
PDG				*e*Sg	Sg	21 32 36.4	+0.8
PDG	Podgorica	1.43	311	*e*Pg	Pb	21 32 16.4	+0.2
PDG				*e*Sg	Sg	21 32 36.4	+0.8
BARS	Barje	1.54	32	*e*Pg	Pb	21 32 18.2	-0.1
BARS				*e*Sg	Sg	21 32 40.0	+0.6
BARS	Barje	1.54	32	*e*Pg	Pb	21 32 18.2	-0.1
BARS				*e*Sg	Sg	21 32 40.0	+0.6
KNT	Kendrikon	1.68	101	P	Pb	21 32 21.0	+0.4
KNT	Kendrikon	1.68	101	P	Pb	21 32 21.1	+0.5
SELS	Selova	1.74	10	*e*Pg	Pb	21 32 21.1	-0.5
SJES	Sjenica	1.84	343	*e*Pg	Pb	21 32 22.7	-0.7
SJES				*e*Sg	Sg	21 32 48.5	-0.3
KEK	Kerkira	1.92	202	P	Pb	21 32 24.3	-0.4
KEK	Kerkira	1.92	202	P	Pb	21 32 24.4	-0.3
LIT	Litokhoron	1.95	136	P	Pb	21 32 25.1	-0.1
LIT	Litokhoron	1.95	136	P	Pb	21 32 25.0	-0.2
IVAS	Ivanjica	2.11	349	*e*Pg	Pb	21 32 28.5	+0.5
IVAS	Ivanjica	2.11	349	*e*Pg	Pb	21 32 28.5	+0.5
VTS	Vitosha	2.15	59	*e*Pg	Pb	21 32 28.4	-0.3
VTS				*e*Sg	Sg	21 32 58.7	-0.2
VTS	Vitosha	2.15	59	*e*Pg	Pb	21 32 28.4	-0.3
VTS				*e*Sg	Sg	21 32 58.7	-0.2
STON	Ston	2.62	302	*e*Pn	Pn	21 32 34.0	+2.2
STON				Sn	Sb	21 33 07.8	-0.9

IDC 05 21:53:01.1±2.1**, 5°.36S×146°.67E, h149**^{km}±22^{km}**, mb3.3**/4**, mb1 3.5**/7**, mb1mx3.2**/45**, mbtmp3.8**/7**, Error ellipse: s-maj=26.5km s-min=18.5km az=82.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.05	173	P	Pn	21 54 03.1	+1.1
	3.9nm,0.3s,baz=8.3,slow=9.4,SNR=8.2						
PMG				S	Sn	21 54 49.7	+0.3
	4.7nm,0.3s,baz=356,slow=16,SNR=7.0						
JAY	Jayapura	6.58	295	P	Pn	21 54 34.9	-0.8
	2.4nm,0.3s,baz=142,slow=4.7,SNR=14						
WRA	Warramunga Arr	18.82	219	P	P	21 57 09.8	+0.4
	0.5nm,0.3s,baz=45,slow=9.6,SNR=28						
ASAR	Alice Springs	21.97	213	P	P	21 57 43.5	+0.3
	0.4nm,0.4s,baz=44,slow=7.5,SNR=11						
FITZ	Fitzroy Crossi	24.13	237	P	P	21 58 02.7	-0.7
	2.2nm,0.4s,baz=48,slow=8.4,SNR=9.8						
SONM	Songino Array	63.69	331	P	P	22 03 17.3	+0.7
	0.3nm,0.5s,baz=128,slow=6.1,SNR=2.9						
ILAR	Eielson Array	85.02	23	P	P	22 05 18.9	-0.6
	0.6nm,0.6s,baz=253,slow=5.2,SNR=8.2						

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*NEIC **05** 22:18:23.8±0.0, 15°.59N×96°.03W, h5^{km}, MD4.0(MEX), After MEX.*

MEX 05 22:18:23.8±0.8**, 15°.59N×96°.03W, h5**^{km}**, MD4.0, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	0.20	337	*e*P	Pg	22 18 26.7	-1.0
HUIG				*e*S	Sg	22 18 30.1	-0.3
HUIG	Huatulco	0.20	337	*e*P	Pg	22 18 26.7	-1.0
HUIG				*e*S	Sg	22 18 30.1	-0.3
VHO	Vista Hermosa	1.63	335	*e*P	Pn	22 18 50.3	-3.0
VHO				*i* S	Sn	22 19 10.3	-4.4
VHO	Vista Hermosa	1.63	335	*e*P	Pn	22 18 50.3	-3.0
VHO				*i* S	Sn	22 19 10.3	-4.4
PNIG	Pinotepa	2.17	292	*e*P	Pn	22 18 57.2	-3.5
PNIG				*e*S	Sn	22 19 23.8	-4.2
PNIG	Pinotepa	2.17	292	*e*P	Pn	22 18 57.2	-3.5
PNIG				*e*S	Sn	22 19 23.8	-4.2
TLIG	Tlapa	3.13	309	*e*P	Pn	22 19 11.8	-2.2
TLIG				*e*S	Sn	22 19 48.1	-3.7
TLIG	Tlapa	3.13	309	*e*P	Pn	22 19 11.8	-2.2
TLIG				*e*S	Sn	22 19 48.1	-3.7

MEX 05 22:29:27.7±0.5**, 15°.57N×95°.90W, h8**^{km}±3^{km}**, MD3.7, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	0.28	315	*e*P	Pg	22 29 33.2	-0.1
HUIG				*e*S	Sg	22 29 36.7	-0.4
VHO	Vista Hermosa	1.69	332	*e*P	Pn	22 29 54.5	-3.3
VHO				*e*S	Sn	22 30 15.5	-4.2
PNIG	Pinotepa	2.29	291	*e*P	Pn	22 30 02.9	-2.9
PNIG				*i* S	Sn	22 30 29.6	-4.7
PCIG		2.59	87	*i* P	Pn	22 30 07.2	-2.7
PCIG				*i* S	Sn	22 30 37.1	-4.4

MEX 05 23:01:52.4±0.6**, 14°.09N×92°.79W, h8**^{km}±92^{km}**, MD3.8, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.66	345	*i* P	Pn	23 02 17.4	-4.4
PCIG				*i* S	Sn	23 02 37.8	-5.5
CCIG	Comitan	2.27	16	*e*P	Pn	23 02 26.5	-3.8
CCIG				*i* S	Sn	23 02 54.3	-4.3
TGIG		2.69	353	*i* P	Pn	23 02 33.7	-2.4
TGIG				*i* S	Sn	23 03 05.5	-3.4

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*NIED **05** 23:04:00, 29°.30N×130°.60E, h17^{km}, Mw4.6 Best double couple: M$_0$9.17000×10^{15} NP1:φ$_s$252.00000°, δ17.00000°, λ131.00000°. NP2:φ$_s$30.00000°, δ77.00000°, λ78.00000°.*

*IDC **05** 23:04:25.3±0.5, 29°.36N×130°.48E, h0^{km}, mb4.4/32, mb1 4.5/36, mb1mx4.4/67, mbtmp4.4/36, ML4.1/4, MS3.8/39, Ms1 3.8/39, ms1mx3.6/71, Error ellipse: s-maj=13.7km s-min=12.3km az=107.0*

*BJI **05** 23:04:26.1, 29°.06N×130°.83E, h35^{km}, mb4.6/57, mB4.6/38, Ms4.3/51, Ms7 4.2/48*

*MOS **05** 23:04:28.7±1.0, 29°.31N×130°.48E, h33^{km}, mb4.8/45, MS4.0/13, Error ellipse: s-maj=8.9km s-min=5.1km az=109.1*

*ISCJB **05** 23:04:29.3±0.3, 29°.23N±0°.02×130°.60E±0°.03, h42^{km}±2^{km}, mb4.6/105, MS4.1/55, Error ellipse: s-maj=4.7km s-min=2.6km az=38.3*

*JMA **05** 23:04:29.6±0.1, 29°.26N×130°.55E, h68^{km}±3^{km}, M4.4*

JMA Felt II J1.

*NEIC **05** 23:04:30.8±0.3, 29°.30N×130°.45E, h36^{km}±2^{km}, mb4.7/46, Error ellipse: s-maj=4.9km s-min=3.2km az=147.0*

NEIC Recorded [2 JMA] on Akuseki-jima and Suwanose-jima.

ISC 05 23:04:29.1±0.6**, 29°.21N**±0°.03×**130°.61E**±0°.04**, h25**^{km}±4^{km}**, n311, σ1**^{s}**.61**/333**, mb4.7**/112**, MS4.0**/56**, 27C-23D, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNN	Nakanoshima	0.90	315	P	Pn	23 04 45.9	-0.3
JNN				S	Sn	23 04 58.4	0.0
JYAK	Yakushimahirau	1.03	355	P	Pn	23 04 47.4	-0.6
JYAK				S	Sn	23 05 02.0	+0.4
JZK	Kikaishima	1.05	212	P	Pb	23 04 49.3	+0.7
JAM	Amami Oshima	1.19	228	P	Pb	23 04 50.4	-0.4
JAM				*e*S	Sb	23 05 05.8	0.0
JMTN	Minamitane	1.22	12	P	Pn	23 04 50.1	-0.4
JMTN				*e*S	Sb	23 05 07.1	+0.4
JTAJ	Takarajima	1.23	268	P	Pn	23 04 50.9	+0.2
JKC	Kuchinoerabu	1.30	344	P	Pn	23 04 51.4	-0.3
JTN	Tanegashima 3	1.48	12	P	Pn	23 04 53.8	-0.3
JTN				*e*S	Sb	23 05 13.2	-1.1
JAMN	Amaminishikomi	1.58	233	P	Pn	23 04 56.0	+0.5
JAMN				*e*S	Sn	23 05 15.8	+0.6
JTSR	Tashiro 2	1.97	8	P	Pn	23 05 01.0	+0.1
JTSR				*e*S	Sn	23 05 24.9	0.0
JTK	Tokunoshima	2.03	226	P	Pn	23 05 02.7	+1.0
JTK				*e*S	Sn	23 05 27.8	+1.5
JSU	Suzuyama	2.30	357	P	Pn	23 05 05.0	-0.4
JSU				S	Sn	23 05 32.9	0.0
JNAR	Kushima--Naru	2.38	14	P	Pn	23 05 06.9	+0.4
JOKE	Okinoerabujima	2.57	225	P	Pn	23 05 10.0	+0.9
JOKE				S	Sn	23 05 40.6	+1.0
JYRO	Yoronjima	2.89	222	P	Pn	23 05 13.9	+0.4
JYRO				*e*S	Sn	23 05 47.0	-0.5
JOW	Kunigami	3.14	222	Pn	Pn	23 05 17.8	+0.8
	17nm,0.3s,baz=75,slow=16,SNR=36						
JOW				Sn	Sn	23 05 53.5	-0.1
	60nm,0.3s,baz=124,slow=28,SNR=6.6						
JOW				LR	LR	23 06 51.4	
	comp=Z,2µm,19.1s,baz=5.5,slow=46						
JOW	Kunigami	3.14	222	*e*Pn	Pn	23 05 17.2	+0.2
JOW				Sn	Sn	23 05 53.5	-0.1
JOW	Kunigami	3.14	222	P	Pn	23 05 17.7	+0.8
JOW				*e*S	Sn	23 05 53.3	-0.3
JIH	Iheya	3.18	228	P	Pn	23 05 17.8	+0.3
JMZ	Minamidaito 2	3.42	171	S	Sn	23 05 57.5	-2.9
JNU	Nakatsue	3.91	3	Pn	Pn	23 05 27.8	+0.2
	7.2nm,0.3s,baz=182,slow=22,SNR=54						
JNU				LR	LR	23 06 45.4	
	comp=Z,269nm,20.3s,baz=119,slow=37						
JNU	Nakatsue	3.91	3	*e*Pn	Pn	23 05 27.1	-0.5
JKE	Kume jima 2	4.44	231	P	Pn	23 05 34.8	0.0
TJN	Taejon	7.66	340	⇑*i*P	Pn	23 06 22.3	+3.3
INU	Inuyama	8.18	40	*e*Pn	Pn	23 06 27.1	+0.9
KSAR	Wonju Array Be	8.53	345	Pn	Pn	23 06 31.9	+1.0
KSAR	Wonju Array Be	8.53	345	P	Pn	23 06 31.9	+1.0
KSRS	Korea Array	8.53	345	Pn	Pn	23 06 31.8	+0.9
	0.4nm,0.3s,baz=165,slow=14,SNR=26						
KSRS				LR	LR	23 10 03.8	
	comp=Z,556nm,20.0s,baz=165,slow=41						
KS01	Wonju Array Si	8.56	345	*e*Pn	Pn	23 06 30.6	-0.7
JHJ	Hachijo jima 2	8.77	61	Pn	Pn	23 06 35.3	+1.0
	31nm,0.3s,baz=28,slow=5.4,SNR=9.5						
JHJ				LR	LR	23 09 40.3	
	comp=Z,341nm,20.0s,baz=104,slow=36						
JHJ2	Mitsune	8.80	61	*e*Pn	Pn	23 06 37.0	+2.4
YHNB	Yeheng	9.40	243	*e*Pn	Pn	23 06 43.9	+0.9
MAJO	Matsushiro	9.71	39	*e*Pn	Pn	23 06 48.6	+1.4
MAJO	Matsushiro	9.71	39	⇑*e*P	Pn	23 06 48.2	+1.0
MAT	Matsushiro	9.71	39	P	Pn	23 06 48.3	+1.1
MAT				S	Sn	23 08 36.0	+0.6
MJAR	Matsushiro Arr	9.71	39	Pn	Pn	23 06 48.5	+1.3
	1.4nm,0.3s,baz=245,slow=21,SNR=7.7						
MJB9	Matsu-Tunnel	9.71	39	*e*Pn	Pn	23 06 48.3	+1.1
YULB	Yu-li	10.16	237	*e*Pn	Pn	23 06 52.8	-0.7
SSLB	Suanglung	10.19	240	*e*Pn	Pn	23 06 52.9	-0.9
CBIJ	Chichi jima	10.43	99	*e*Pn	Pn	23 06 57.5	+0.5
JCJ	Chichijima	10.43	99	Pn	Pn	23 06 57.6	+0.5
	11nm,0.3s,baz=289,slow=16,SNR=12						
JCJ				LR	LR	23 10 26.0	
	comp=Z,319nm,21.4s,baz=344,slow=34						
NJ2	Nanjing	10.52	289	*e*P	Pn	23 07 00.4	+2.2
NJ2				S	Sn	23 08 53.2	-2.0
NJ2				pmax	pmax		
	comp=Z,35nm,0.6s						
NJ2				LR	LR		
	comp=N,400nm,15.7s						
NJ2				LR	LR		
	comp=E,720nm,17.7s						
NJ2				LR	LR		
	comp=Z,1µm,13.0s						
QZH	Quanzhou	11.52	251	*e*P	Pn	23 07 14.4	+2.4
QZH				S	Sn	23 09 22.6	+2.8
QZH				SS	SnSn	23 09 34.3	+2.6
QZH				LR	LR		
	comp=N,570nm,15.6s						
QZH				LR	LR		
	comp=E,240nm,9.9s						
QZH				LR	LR		
	comp=Z,420nm,15.6s						
DL2	Dalian	12.20	325	P	P	23 07 37.8	+4.3
DL2				*e*S	Sn	23 10 02.4	+26
DL2				pmax	pmax		
	comp=Z,24nm,1.0s						
DL2				LR	LR		
	comp=N,960nm,13.8s						
DL2				LR	LR		
	comp=E,870nm,13.2s						
DL2				LR	LR		
	comp=Z,1µm,14.5s						
TIA	Tai’an	13.33	305	P	P	23 07 47.3	+1.3
TIA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
WHN	Wuhan	14.17	279	P	Pn	23 07 50.4	+2.2
WHN				S	Sn	23 10 26.9	+2.2
WHN				LR	LR		
	comp=Z,820nm,10.6s						
WHN				LR	LR		
	comp=Z,1µm,14.3s						
WHN				LR	LR		
	comp=Z,2µm,15.1s						
CN2	Changchun	15.14	346	*e*P	P	23 08 06.2	0.0
CN2				*e*S	Sn	23 10 51.6	+3.5
CN2				pmax	pmax		

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      comp=Z,20nm,0.9s
CN2                                pmax    pmax
      comp=Z,200nm,3.0s
CN2                                LR      LR
      comp=Z,950nm,13.0s
CN2                                LR      LR
      comp=Z,270nm,13.0s
CN2                                LR      LR
      comp=Z,1µm,15.0s
BJI   Beijing           16.04 316⇓eP       P       23 08 14.4 -1.7
BJI                                pmax    pmax
      comp=Z,15nm,0.8s
BJI                                LR      LR
      comp=Z,2µm,15.1s
BJI                                LR      LR
      comp=Z,1µm,11.6s
BJI                                LR      LR
      comp=Z,880nm,17.1s
ASAJ  Asahikawa         17.69  29  P       Pn      23 08 29.8 -3.9
      comp=Z,0.2nm,0.3s,baz=172,slow=33,SNR=3.5
ASAJ                               LR      LR      23 15 36.7
      comp=Z,251nm,21.1s,baz=223,slow=38
ASAJ  Asahikawa         17.69  29 ePn      Pn      23 08 33.0 -0.6
      comp=Z,9.7nm,0.8s
ENH   Enshi             18.38 279 eP       Pn      23 08 42.3 +0.1
      comp=Z,23nm,0.6s
XAN   Xi'an             19.08 290  P       P       23 08 48.9 -0.9
XAN                                pP      pP      23 08 54.2 -2.5
XAN                                pmax    pmax
      comp=Z,21nm,0.4s
XAN                                pmax    pmax
      comp=Z,88nm,3.9s
XAN                                LR      LR
      comp=Z,310nm,10.1s
XAN                                LR      LR
      comp=Z,510nm,10.1s
XAN                                LR      LR
      comp=Z,470nm,10.1s
HHC   Hu-ho-hao-te      19.40 312 eP       Pn      23 08 54.7 +0.1
HHC                                pP      sP      23 09 02.6 -0.8
HHC                                S       S       23 12 24.6 -6.8
HHC                                SS      SnSn    23 12 56.6 +11
HHC                                pmax    pmax
      comp=Z,17nm,1.0s
HHC                                pmax    pmax
      comp=Z,110nm,5.9s
HHC                                LR      LR
      comp=Z,540nm,14.1s
HHC                                LR      LR
      comp=Z,600nm,14.7s
HHC                                LR      LR
      comp=Z,610nm,13.2s
KLR   Kul'dur           20.02   2  P       P       23 08 58.5 -1.4
      comp=Z,0.1nm,0.3s,baz=184,slow=7.1,SNR=82
KLR                                LR      LR      23 17 12.2
      comp=Z,18nm,19.1s,baz=180,slow=39
KLR   Kul'dur           20.02   2c iP      P       23 08 58.3 -1.6
YSS   Yuzh-Sakhalins    20.09  25⇓eP       Pn      23 09 02.2 -0.4
YSS                                pmax    pmax
      comp=Z,23nm,1.1s
GUMO  Guam              20.40 137  LR      LR      23 15 44.2
      comp=Z,140nm,19.2s,baz=318,slow=33
GYA   Guiyang           21.35 268  P       P       23 09 15.4 +0.8
GYA                                pP      sP      23 09 25.4 +0.7
GYA                                sP      pP      23 09 30.0 +8.5
GYA                                PP      PnPn    23 09 38.4 +3.7
GYA                                S       S       23 13 02.0 -8.6
GYA                                sS      Sn      23 13 19.6 +1.0
GYA                                SS      SnSn    23 13 37.8 +4.1
GYA                                pmax    pmax
      comp=Z,20nm,0.8s
GYA                                pmax    pmax
      comp=Z,110nm,4.8s
GYA                                LR      LR
      comp=Z,380nm,13.9s
GYA                                LR      LR
      comp=Z,570nm,14.0s
GYA                                LR      LR
      comp=Z,790nm,13.9s
QIZ   Qiongzhong        21.46 246  P       P       23 09 19.9 +4.2
QIZ                                S       S       23 13 11.1 -1.6
QIZ                                pmax    pmax
      comp=Z,41nm,3.0s
QIZ                                LR      LR
      comp=Z,320nm,13.7s
QIZ                                LR      LR
      comp=Z,170nm,15.7s
QIZ                                LR      LR
      comp=Z,280nm,15.2s
GRNR  Gornyy            21.98  10 eP       P       23 09 25.6 +4.6
GRNR                               pmax    pmax
      comp=Z,51nm,0.9s
DAV   Davao City (W)    22.52 193  LR      LR      23 19 44.0
      comp=Z,74nm,18.2s,baz=26,slow=41
TYV   Tymovskoe         23.46  19 eP       P       23 09 38.5 +2.1
TYV                                pmax    pmax
      comp=Z,9.0nm,1.1s
LZH   Lanzhou           23.52 294 eP       P       23 09 37.2 -0.2
LZH                                pP      sP      23 09 47.5 -0.2
LZH                                sP      pP      23 09 52.7 +8.2
LZH                                PP      PnPn    23 10 09.6 +5.3
LZH                                pmax    pmax
      comp=Z,31nm,1.4s
LZH                                pmax    pmax
      comp=Z,160nm,4.8s
LZH                                LR      LR
      comp=Z,510nm,11.9s
LZH                                LR      LR
      comp=Z,1µm,14.9s
LZH                                LR      LR
      comp=Z,2µm,15.5s
ZEA   Zeya              24.64 355 eP       P       23 09 44.8 -2.6
ZEA                                pmax    pmax
      comp=Z,17nm,1.0s
ZEA                                MLR     MLR
      comp=Z,200nm,12.0s
ZEA                                MLR     MLR
      comp=E,200nm,13.0s
ZEA                                MLR     MLR
      comp=N,200nm,12.0s
KMI   Kunming           25.10 267  P       P       23 09 51.8 -0.4
KMI                                pmax    pmax
      comp=N,42nm,0.7s
KMI                                pmax    pmax
      comp=N,83nm,4.7s
KMI                                LR      LR
      comp=N,290nm,14.9s
KMI                                LR      LR
      comp=N,570nm,14.9s
KMI                                LR      LR
      comp=N,720nm,12.5s
ULN   Ulaanbaatar       26.04 322 eP       P       23 09 57.7 -2.7
      comp=N,7.9nm,1.0s
ULN   Ulaanbaatar       26.04 322c iP      P       23 09 58.4 -2.0
ULN                                pmax    pmax
      comp=Z,6.0nm,0.7s
SONM  Songino Array     26.37 322  P       P       23 10 01.2 -2.2
      comp=Z,4.0nm,0.6s,baz=140,slow=10,SNR=26
SONM                               LR      LR      23 21 28.9
      comp=Z,401nm,20.0s,baz=124,slow=39
SONA1 Songino Array     26.38 322 eP       P       23 10 01.2 -2.3
SKNT  Sakolnakorn       27.28 249  P       P       23 10 12.5 +0.8
      comp=Z,5.1nm,0.8s
GTA   Gaotai            27.28 300  P       P       23 10 12.4 +0.7
GTA                                pP      pP      23 10 18.7 -0.4
GTA                                sP      sP      23 10 22.2  0.0
GTA                                S       S       23 14 51.8 +2.0
GTA                                sS      sS      23 15 04.2 +2.2
GTA                                pmax    pmax
      comp=Z,4.0nm,0.8s
GTA                                pmax    pmax
      comp=Z,58nm,4.8s
GTA                                LR      LR
      comp=Z,250nm,17.8s
GTA                                LR      LR
      comp=Z,530nm,15.9s
GTA                                LR      LR
      comp=Z,740nm,16.2s
SKR   Severo-Kuril's    28.78  35 eP       P       23 10 21.6 -3.1
SKR                               eS       S       23 15 19.8 +7.2
SKR                                MLR     MLR
      comp=Z,100nm,15.0s
PBKT  Sadao Pong        29.97 252  P       P       23 10 36.0 +0.4
      comp=Z,8.7nm,0.9s,comp=Z,892nm
SRAK  Srakaew           30.45 246  P       P       23 10 37.0 -2.9
      comp=Z,49nm,1.0s
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CMMT  Chiang Mai        30.63 257  P       P       23 10 41.6 +0.1
      comp=Z,4.9nm,0.6s
CHTO  Chiang Mai        30.63 257 eP       P       23 10 40.6 -0.9
      comp=Z,3.4nm,0.8s
CHTO  Chiang Mai        30.63 257 eP       P       23 10 40.6 -0.9
CHTO                               pmax    pmax
      comp=Z,3.0nm,0.8s
CMAR  Chiang Mai Arr    30.79 257  P       P       23 10 42.0 -0.9
      comp=Z,1.4nm,0.5s,baz=58,slow=6.0,SNR=6.3
CMAR                               PcP     PcP     23 13 40.9 +0.9
      comp=Z,0.8nm,0.3s,baz=358,slow=1.9,SNR=4.7
CMAR                               LR      LR      23 24 01.1
      comp=Z,224nm,19.9s,baz=78,slow=38
BOD   Bodaibo           30.86 343 eP       P       23 10 40.8 -2.2
PETK  Petropavlovsk-    31.07  32  P       P       23 10 44.9 -0.1
      comp=Z,1.5nm,0.6s,baz=201,slow=6.2
PETK                               LR      LR      23 25 48.1
      comp=Z,80nm,18.1s,baz=219,slow=41
YAK   Yakutsk           32.84 359  LR      LR      23 24 46.6
      comp=Z,108nm,18.2s,baz=94,slow=37
MA2   Magadan           33.33  19  LR      LR      23 25 56.5
      comp=Z,148nm,18.5s,baz=222,slow=39
MA2   Magadan           33.33  19 eP       P       23 11 04.7  0.0
      comp=Z,11nm,0.9s
MA2   Magadan           33.33  19 eP       P       23 11 04.7  0.0
MA2                                pmax    pmax
      comp=Z,11nm,0.9s
H11N2 WAKE ISLAND Hy    34.23  98  T       T       23 47 54.0
      baz=335,slow=74,SNR=9.4
H11N1 WAKE ISLAND Hy    34.23  98  T       T       23 47 52.9
H11N3 WAKE ISLAND Hy    34.25  98  T       T       23 47 52.4
      baz=299,slow=74,SNR=4.6
LSA   Lhasa             34.25 281 eP       P       23 11 12.7 -0.9
      comp=Z,10.0nm,0.9s
LSA   Lhasa             34.25 281 eP       P       23 11 12.7 -0.9
LSA                                pmax    pmax
      comp=Z,10.0nm,0.9s
SEY   Seymchan          36.58  17⇓iP       P       23 11 33.1 +0.5
WMQ   Urumqi            37.02 305  P       P       23 11 36.8  0.0
WMQ                                pP      sP      23 11 45.9 -1.5
WMQ                                sP      pP      23 11 50.2 +5.9
WMQ                                pmax    pmax
      comp=Z,21nm,0.9s
WMQ                                pmax    pmax
      comp=Z,140nm,4.7s
WMQ                                LR      LR
      comp=Z,500nm,15.5s
WMQ                                LR      LR
      comp=Z,430nm,12.9s
WMQ                                LR      LR
      comp=Z,350nm,19.5s
TAPN  Taplejung         37.67 278 eP       P       23 11 43.5 +0.7
ODAN  Odare             38.07 277 eP       P       23 11 45.0 -1.1
      comp=Z,52nm,0.6s
DGZ   Jazzator, Alta    38.45 314 i P      P       23 11 48.5 -0.4
DGZ                                pmax    pmax
      comp=Z,1.0nm,0.7s
GUN   Gumba             39.13 279 eP       P       23 11 54.9 -0.2
      comp=Z,76nm,0.4s
PKIN  Phulchoki         39.62 279 eP       P       23 11 58.5 -0.7
      comp=Z,45nm,0.6s
KKN   Kakani            39.68 279 eP       P       23 11 59.0 -0.5
      comp=Z,71nm,0.8s
DMN   Daman             39.87 279 eP       P       23 12 00.5 -0.7
      comp=Z,24nm,0.6s
PSI   Prapat            39.95 235  P       P       23 12 02.2 +0.5
      comp=Z,3.5nm,0.4s,baz=359,slow=8.9,SNR=4.1
GKN   Gorkha            40.18 280 eP       P       23 12 02.8 -0.9
      comp=Z,45nm,0.7s
DANN  Dangsing          40.86 281 eP       P       23 12 08.9 -0.5
      comp=Z,65nm,0.6s
MK01  Makanchi Array    41.21 309 eP       P       23 12 11.4 -0.4
MK31  Makanchi Array    41.22 309 eP       P       23 12 11.2 -0.7
MK31  Makanchi Array    41.22 309ceP       P       23 12 10.8 -1.1
MK31                               pmax    pmax
      comp=Z,1.0nm,0.4s
MKAR  Makanchi Array    41.22 309  P       P       23 12 10.5 -1.4
      comp=Z,2.7nm,0.4s,baz=90,slow=10,SNR=90
MKAR                               PcP     PcP     23 14 08.6 -1.9
      comp=Z,1.3nm,0.7s,baz=103,slow=2.6,SNR=4.0
MKAR                               LR      LR      23 31 06.9
      comp=Z,141nm,18.5s,baz=112,slow=39
MKAR  Makanchi Array    41.22 309 eP       P       23 12 11.2 -0.7
      comp=Z,25nm,0.5s
MKAR                               PcP     PcP     23 14 08.6 -1.9
ZAA0  Zalesovo Array    41.25 320 eP       P       23 12 10.4 -1.5
      comp=Z,5.4nm,0.6s
ZALV  Zalesovo Beam     41.25 320  P       P       23 12 10.4 -1.5
      comp=Z,4.4nm,0.5s,baz=112,slow=8.1,SNR=20
ZALV                               PcP     PcP     23 14 08.3 -2.1
      comp=Z,1.3nm,0.5s,baz=97,slow=3.4,SNR=6.0
ZALV                               LR      LR      23 31 17.3
      comp=Z,369nm,18.7s,baz=68,slow=39
ZALV  Zalesovo Beam     41.25 320 eP       P       23 12 10.4 -1.5
ZALV                              ePcP     PcP     23 14 09.3 -1.0
ZALV  Zalesovo Beam     41.25 320 eP       P       23 12 10.4 -1.5
ZALV                              e                23 14 09.3
MAKZ  Makanchi          41.44 309 eP       P       23 12 12.4 -1.2
      comp=Z,11nm,1.4s
MAKZ  Makanchi          41.44 309 eP       P       23 12 12.4 -1.2
MAKZ                               pmax    pmax
      comp=Z,11nm,1.4s
PYUN  Piuthan           41.58 280 eP       P       23 12 13.7 -1.5
      comp=Z,50nm,0.6s
LEM   Lembang           42.11 215  P       P       23 12 20.5 +1.0
      comp=Z,17nm,0.5s,baz=311,slow=20,SNR=2.4
TIXI  Tiksi             42.50 359  LR      LR      23 31 20.9
      comp=Z,136nm,19.6s,baz=90,slow=38
TIXI  Tiksi             42.50 359⇓eP       P       23 12 22.0 +0.1
TIXI                               pmax    pmax
      comp=Z,4.0nm,0.8s
BILL  Bilibino          44.20  18 eP       P       23 12 35.2 -0.4
      comp=Z,13nm,1.2s
BILL  Bilibino          44.20  18c iP      P       23 12 35.4 -0.2
BILL                              e                23 14 20.4
BILL                              ePPP     PPP     23 14 57.5
BILL                               pmax    pmax
      comp=Z,6.0nm,0.7s
BILL                               MLR     MLR
      comp=Z,164nm,22.0s
KURK  Kurchatov         44.20 314 eP       P       23 12 33.5 -2.3
      comp=Z,28nm,0.7s
KURK                               PcP     PP      23 14 18.6 -0.4
KURK  Kurchatov         44.20 314d iP      P       23 12 34.8 -1.0
KURK                               pmax    pmax
      comp=Z,28nm,0.7s
KURBB Kurchatov Arra    44.24 314  P       P       23 12 35.1 -1.1
      comp=Z,20nm,0.6s,baz=102,slow=8.9,SNR=97
KURBB                              PcP     PP      23 14 18.6 -0.8
      comp=Z,0.6nm,0.5s,baz=104,slow=3.1,SNR=3.3
KSH   Kashi             45.65 298 eP       P       23 12 50.2 +2.4
KSH                                sP      sP      23 13 07.1 +8.6
KSH                                PcP     PcP     23 14 29.1 +3.4
KSH                                PP      PP      23 14 38.0 +3.3
KSH                                PcS     PcS     23 18 21.6 +1.6
KSH                                S       S       23 19 29.3 +0.1
KSH                                pmax    pmax
      comp=Z,6.0nm,1.1s
KSH                                pmax    pmax
      comp=Z,64nm,5.3s
KSH                                LR      LR
      comp=Z,84nm,10.1s
KSH                                LR      LR
      comp=Z,130nm,7.6s
KSH                                LR      LR
      comp=Z,100nm,10.2s
FITZ  Fitzroy Crossi    47.27 186  P       P       23 13 00.9 +0.5
      comp=Z,3.3nm,0.8s,baz=346,slow=5.1,SNR=5.3
MNAS  Manas             48.06 302 i P      P       23 13 05.3 -1.3
MNAS                               pmax    pmax
      comp=Z,5.0nm,0.8s
NIL   Nilore            48.62 291 eP       P       23 13 10.3 -0.6
      comp=Z,30nm,0.6s
NIL   Nilore            48.62 291 eP       P       23 13 10.3 -0.6
NIL                                pmax    pmax
      comp=Z,30nm,0.6s
WRA   Warramunga Arr    48.99 175  P       P       23 13 14.3 +0.6
      comp=Z,0.7nm,0.7s,baz=355,slow=8.3,SNR=6.3
KK31  Karatay Array     49.48 303 eP       P       23 13 17.0 -0.4
KK31  Karatay Array     49.48 303ceP       P       23 13 16.7 -0.7
KK31                               pmax    pmax
      comp=Z,11nm,0.8s
KKAR  Karatay Array     49.48 303 eP       P       23 13 17.0 -0.4
BVAR  Borovoye Array    49.52 316  P       P       23 13 16.0 -1.5
      comp=Z,23nm,0.7s,baz=92,slow=9.4,SNR=125
BVAR                               PcP     PcP     23 14 39.0 -0.2
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      comp=Z,2.6nm,0.6s,baz=88,slow=2.1,SNR=4.4
BVAR                               LR      LR      23 35 30.4
      comp=Z,96nm,19.8s,baz=100,slow=38
BVAR  Borovoye Array    49.52 316  P       P       23 13 16.0 -1.5
BVAR                                               23 14 39.0
BVAR                               pmax    pmax
      comp=Z,23nm,0.7s
BVAR                               pmax    pmax
      comp=Z,3.0nm,0.6s
BVAR                               MLR     MLR
      comp=Z,96nm,19.8s
BRVK  Borovoye          49.59 316 eP       P       23 13 16.5 -1.5
      comp=Z,31nm,0.6s
BRVK  Borovoye          49.59 316ceP       P       23 13 16.9 -1.1
BRVK                               pmax    pmax
      comp=Z,51nm,1.3s
PALK  Pallekele         51.71 255  LR      LR      23 36 37.0
      comp=Z,109nm,21.9s,baz=95,slow=37
KBL   Kabul             51.86 293 eP       P       23 13 35.4 -0.3
      comp=Z,9.8nm,0.9s
KBL   Kabul             51.86 293 eP       P       23 13 35.4 -0.3
KBL                                pmax    pmax
      comp=Z,10.0nm,0.9s
ASAR  Alice Springs     52.66 176  P       P       23 13 42.6 +1.3
      comp=Z,1.1nm,0.5s,baz=9.1,slow=13,SNR=17
SVE   Sverdlovsk        55.24 321⇑eP       P       23 13 59.1 -0.7
SVE                                pmax    pmax
      comp=Z,25nm,0.9s
SVE                                MLR     MLR
      comp=Z,705nm,16.0s
JOHN  Johnston Islan    55.98  89 eP       P       23 14 06.6 +0.9
      comp=Z,172nm,1.0s
AB31  Akbulak array     56.20 312ceP       P       23 14 05.5 -1.3
AB31                               pmax    pmax
      comp=Z,21nm,0.6s
ABKAR Akbulak array     56.20 312 eP       P       23 14 05.3 -1.5
ARU   Arti              56.41 321 eP       P       23 14 07.1 -1.1
      comp=Z,25nm,0.9s
ARU   Arti              56.41 321c iP      P       23 14 06.5 -1.7
ARU                                *PP     sP      23 14 18.2 -0.8
ARU                                                23 15 00.4
ARU                                                23 16 07.6
ARU                                S       S       23 21 56.8 -0.5
ARU                                                23 23 50.7
ARU                                SS      SS      23 25 43.2 -0.8
ARU                                pmax    pmax
      comp=Z,20nm,1.0s
ARU                                MLR     MLR
      comp=Z,463nm,18.0s
AKTO  Aktyubinsk        57.29 314  P       P       23 14 13.2 -1.4
      comp=Z,10nm,0.7s,baz=84,slow=12,SNR=24
AKTO                               LR      LR      23 40 52.6
      comp=Z,418nm,18.2s,baz=81,slow=38
PPLA  Purkeypile        58.65  32 eP       P       23 14 25.3 +1.2
      comp=Z,7.7nm,1.0s
CAST  Castle Rocks      58.67  31 eP       P       23 14 25.4 +1.3
      comp=Z,7.5nm,1.0s
KDAK  Kodiak Island     58.88  38  P       P       23 14 25.0 -0.6
      comp=Z,6.1nm,0.6s,baz=269,slow=5.5,SNR=9.9
KDAK  Kodiak Island     58.88  38  P       P       23 14 25.0 -0.6
KDAK                               pmax    pmax
      comp=Z,6.0nm,0.6s
BPAW  Bear Paw Mtn.     59.12  30 eP       P       23 14 28.3 +1.1
      comp=Z,10nm,1.3s
MLY   Manley            59.16  29 eP       P       23 14 28.9 +1.3
      comp=Z,5.2nm,0.8s
COLD  Coldfoot          59.27  26 eP       P       23 14 29.2 +1.1
      comp=Z,2.9nm,1.0s
SUA   Susitna One       59.44  33 eP       P       23 14 30.7 +1.2
      comp=Z,17nm,0.8s
TOLK  Toolik Lake Re    59.45  25 eP       P       23 14 30.5 +1.1
      comp=Z,5.6nm,0.8s
GEYT  Alibeck           59.66 299  P       P       23 14 30.3 -1.1
      comp=Z,0.8nm,0.5s,baz=57,slow=5.5,SNR=5.0
GEYT                               LR      LR      23 43 43.7
      comp=Z,98nm,18.5s,baz=300,slow=40
MDM   Murphy Dome       60.23  29 eP       P       23 14 36.0 +1.1
      comp=Z,13nm,0.8s
IL1   Eielson Array     60.83  29 eP       P       23 14 38.1 -0.8
ILAR  Eielson Array     60.83  29  P       P       23 14 38.4 -0.4
      comp=Z,2.0nm,0.8s,baz=273,slow=5.4,SNR=22
ILB   Eielson Array     60.83  29 eP       P       23 14 38.7 -0.2
DZM   Mont Dzumac       61.57 142  LR      LR      23 38 49.9
      comp=Z,40nm,20.7s,baz=62,slow=33
STKA  Stephens Creek    61.64 169  LR      LR      23 41 12.2
      comp=Z,41nm,21.6s,baz=24,slow=36
PRGR  Permogore         62.42 328 eP       P       23 14 46.9 -2.7
PRGR                               pmax    pmax
      comp=Z,13nm,0.7s
DAWY  Dawson            64.15  29 eP       P       23 15 01.9 +0.8
      comp=Z,2.6nm,0.9s
MSFE  Esma-Masafi       65.24 286  P       P       23 15 08.0 -0.9
INK   Inuvik            65.33  24 eP       P       23 15 09.2 +0.6
      comp=Z,5.0nm,0.8s
INK   Inuvik            65.33  24 eP       P       23 15 09.2 +0.6
INK                                pmax    pmax
      comp=Z,5.0nm,0.8s
SOHO  SOHO              65.39 285  P       P       23 15 09.5 -0.2
KLMR  Klimovskoe        65.47 327 eP       P       23 15 06.7 -3.0
KLMR                               pmax    pmax
      comp=Z,11nm,1.4s
KLMR  Klimovskoe        65.47 327 eP       P       23 15 06.7 -3.0
KLMR                               AMP             23 15 08.6
      comp=Z,11nm,1.4s
ASHO  Ashiyiah          65.58 286  P       P       23 15 09.5 -1.5
SPITS Spitsbergen Ar    66.36 348  LR      LR      23 47 29.1
      comp=Z,94nm,18.9s,baz=40,slow=39
ARCES ARCESS Array B    68.02 339  P       P       23 15 24.5 -1.3
      comp=Z,2.9nm,0.9s,baz=62,slow=8.4,SNR=6.8
ARCES                              LR      LR      23 50 26.4
      comp=Z,211nm,19.0s,baz=60,slow=41
ZEI   Tsey              68.56 308 eP       P       23 15 26.2 -3.8
ZEI                                pmax    pmax
      comp=Z,17nm,0.9s
VSR   Storozhevoye      68.68 318 eP       P       23 15 28.3 -2.0
VSR                                pmax    pmax
      comp=Z,9.0nm,0.5s
OBN   Obninsk           68.78 322 eP       P       23 15 28.2 -2.6
OBN                               e                23 15 41.9
OBN                               e                23 15 52.5
OBN                               e                23 18 00.3
OBN                               ePPP     PPP     23 19 48.7
OBN                                pmax    pmax
      comp=Z,4.0nm,0.9s
OBN                                MLR     MLR
      comp=Z,220nm,19.0s
GNI   Garni             68.90 305  P       P       23 15 31.9 -0.1
      comp=Z,10nm,0.9s,baz=345,slow=14,SNR=6.7
GNI                                LR      LR      23 49 32.5
      comp=Z,31nm,19.4s,baz=86,slow=39
GNI   Garni             68.90 305 eP       P       23 15 31.3 -0.8
      comp=Z,12nm,0.9s
GNI   Garni             68.90 305  P       P       23 15 32.2 +0.2
GNI   Garni             68.90 305d iP      P       23 15 32.7 +0.7
GNI                                pmax    pmax
      comp=Z,24nm,0.7s
KBZ   Khabaz            68.92 309  P       P       23 15 31.6 -0.3
      comp=Z,18nm,0.9s,baz=76,slow=2.7,SNR=24
KBZ                                LR      LR      23 49 41.0
      comp=Z,50nm,18.2s,baz=109,slow=40
KIV   Kislovodsk        68.98 309 eP       P       23 15 31.9 -0.6
      comp=Z,24nm,1.0s
KIV   Kislovodsk        68.98 309 i P      P       23 15 32.4  0.0
      SNR=8.3
KIV   Kislovodsk        68.98 309 eP       P       23 15 31.7 -0.7
KIV                                pmax    pmax
      comp=Z,26nm,1.0s
KIV                                MLR     MLR
      comp=Z,52nm,17.0s
FIA1  FINESS Array S    71.32 331 eP       P       23 15 44.5 -1.8
FINES FINESS Array B    71.32 331  P       P       23 15 44.4 -1.8
      comp=Z,2.8nm,0.4s,baz=61,slow=5.8,SNR=39
FINES                              LR      LR      23 50 19.8
      comp=Z,148nm,19.7s,baz=66,slow=39
RES   Resolute Bay      72.23  11 eP       P       23 15 51.5  0.0
      comp=Z,12nm,0.8s
RES   Resolute Bay      72.23  11 eP       P       23 15 51.5  0.0
RES                                pmax    pmax
      comp=Z,13nm,0.8s
VSU   Vasula            72.38 328deP       P       23 15 51.7 -0.9
VSU                                pmax    pmax
      comp=Z,30nm,1.0s
AKASG Malin Array Be    74.64 320  P       P       23 16 05.2 -1.0
      comp=Z,9.0nm,0.5s,baz=59,slow=6.3,SNR=20
AKASG                              LR      LR      23 51 06.6
      comp=Z,97nm,19.8s,baz=60,slow=38
```

AKBB	Malin Array Si	74.64	320	*e*P	P	23 16 04.8	-1.3
	comp=Z,10nm,0.6s						
KIEV	Kiev	74.65	320	*e*P	P	23 16 04.8	-1.4
	comp=Z,9.9nm,0.6s						
KIEV	Kiev	74.65	320	*i* P	P	23 16 05.3	-0.9
	SNR=8.8						
KIEV	Kiev	74.65	320	*d i*P	P	23 16 04.6	-1.6
KIEV				pmax	pmax		
	comp=Z,6.0nm,0.5s						
AK11	Malin Array Si	74.68	320	*e*P	P	23 16 05.7	-0.6
RAYN	Ar Rayn	74.87	289	*e*P	P	23 16 07.3	-0.7
	comp=Z,12nm,1.1s						
RAYN	Ar Rayn	74.87	289	*i* P	P	23 16 07.3	-0.7
	SNR=7.1						
RAYN	Ar Rayn	74.87	289	*e*P	P	23 16 07.3	-0.7
RAYN				pmax	pmax		
	comp=Z,12nm,1.1s						
YKW3	Yellowknife Ar	74.90	26	*e*P	P	23 16 08.0	+0.6
YKA	Yellowknife Ar	74.94	26	P	P	23 16 07.8	+0.1
	comp=Z,1.9nm,0.7s,baz=304,slow=5.6,SNR=16						
SORM	Soroca	76.34	318	⇑*i*P	P	23 16 14.9	-1.0
SORM	Soroca	76.34	318	⇑P	P	23 16 14.9	-1.0
MILM	Milestii Mici	76.65	316	⇓*i*P	P	23 16 16.5	-1.2
BR131	Keskin Array S	76.87	308	*e*P	P	23 16 18.6	-0.7
BRTR	Keskin Array B	76.87	308	P	P	23 16 19.1	-0.2
	comp=Z,6.2nm,0.7s,baz=104,slow=5.2,SNR=44						
BRTR				LR	LR	23 55 12.7	
	comp=Z,39nm,18.1s,baz=97,slow=40						
HFS	Hagfors	77.16	333	P	P	23 16 18.6	-1.7
	comp=Z,1.6nm,0.4s,baz=74,slow=5.3,SNR=18						
HFS				LR	LR	23 53 57.6	
	comp=Z,113nm,19.1s,baz=34,slow=39						
NC405	NORSAR Array S	77.34	334	*e*P	P	23 16 19.5	-1.9
TLCR		77.48	315	⇓*i*P	P	23 16 22.2	-0.2
TLCR		77.48	315	⇓P	P	23 16 22.2	-0.2
NB201	NORSAR Array S	77.54	334	*e*P	P	23 16 20.6	-1.9
NB2	NORSAR Subarra	77.57	334	P	P	23 16 20.5	-2.2
	comp=Z,0.8nm,0.4s,baz=47,slow=5.6						
NOA	NORSAR Array B	77.57	334	LR	LR	23 56 16.3	
	comp=Z,73nm,18.5s,baz=70,slow=40						
NC204	NORSAR Array S	77.59	335	*e*P	P	23 16 21.2	-1.7
CFR	Carcaliu	77.90	315	⇑*i*P	P	23 16 24.3	-0.4
CFR	Carcaliu	77.90	315	⇑P	P	23 16 24.3	-0.4
GIRR	Girov	78.02	317	⇓*i*P	P	23 16 25.1	-0.3
TIRR	Tirgusor	78.08	314	⇓*i*P	P	23 16 25.5	-0.3
TIRR	Tirgusor	78.08	314	⇓P	P	23 16 25.5	-0.3
TESR	Tescani	78.15	317	⇓*i*P	P	23 16 25.5	-0.6
SUMG	Summit	78.21	357	*e*P	P	23 16 26.4	-0.1
	comp=Z,8.5nm,1.1s						
SUMG	Summit	78.21	357	*e*P	P	23 16 26.4	-0.1
SUMG				pmax	pmax		
	comp=Z,9.0nm,1.1s						
TLB	Topalu	78.25	315	⇓*i*P	P	23 16 26.5	-0.2
TLB	Topalu	78.25	315	⇓P	P	23 16 26.5	-0.2
BIZ	Bicaz	78.26	317	⇓*i*P	P	23 16 26.2	-0.5
VRI	Vrincioaia	78.42	316	⇓*i*P	P	23 16 27.9	+0.2
VRI	Vrincioaia	78.42	316	⇓P	P	23 16 27.9	+0.2
BUR08	Bucovina Ar. S	78.43	318	*e*P	P	23 16 27.2	-0.6
BURAR	Bucovina Array	78.44	318	⇑*i*P	P	23 16 27.9	+0.1
BURAR	Bucovina Array	78.44	318	⇑P	P	23 16 27.9	+0.1
BUR04	Bucovina Ar. S	78.44	318	*e*P	P	23 16 27.5	-0.4
PLOR	Plostina	78.48	316	⇑*i*P	P	23 16 28.9	+0.9
PLOR	Plostina	78.48	316	⇑P	P	23 16 28.9	+0.9
MMAI	Mount Meron Ar	78.66	301	P	P	23 16 29.7	+0.3
	comp=Z,1.7nm,0.6s,baz=44,slow=9.9,SNR=4.1						
MMAI				LR	LR	23 58 41.7	
	comp=Z,30nm,18.2s,baz=45,slow=42						
KWP	Kalwaria Pacla	78.81	321	*e*P	P	23 16 29.8	+0.1
KWP	Kalwaria Pacla	78.81	321	*e*P	P	23 16 30.0	+0.3
	comp=Z,112nm,0.6s						
KWP	Kalwaria Pacla	78.81	321	*e*P	P	23 16 29.8	+0.1
KONO	Kongsberg	79.08	334	*ce*P	P	23 16 31.6	+0.6
KONO				pmax	pmax		
	comp=Z,14nm,2.5s						
MLR	Muntele Rosu	79.09	316	P	P	23 16 31.4	-0.1
	comp=Z,0.5nm,0.5s,baz=224,slow=3.7,SNR=9.3						
MLR				LR	LR	23 54 29.2	
	comp=Z,39nm,19.2s,baz=54,slow=38						
MLR	Muntele Rosu	79.09	316	⇓*i*P	P	23 16 31.7	+0.2
MLR	Muntele Rosu	79.09	316	*e*P	P	23 16 31.3	-0.2
	comp=Z,3.6nm,0.7s						
MLR	Muntele Rosu	79.09	316	⇓P	P	23 16 31.7	+0.2
DOPR	Dopca	79.18	317	⇑*i*P	P	23 16 32.4	+0.6
CSS	Mathiatis	79.28	304	*e*P	P	23 16 32.7	+0.1
	comp=Z,2.7nm,0.6s						
TRPA	Tarpa	79.70	320	⇑*i*P	P	23 16 34.3	-0.3
ARR	Arges	79.94	317	⇑*i*P	P	23 16 36.1	0.0
OJC	Ojcow	80.07	322	*e*P	P	23 16 35.9	-0.7
OJC	Ojcow	80.07	322	*e*P	P	23 16 36.3	-0.2
	comp=Z,11nm,0.7s						
OJC	Ojcow	80.07	322	*e*P	P	23 16 35.9	-0.7
NIE	Niedzica	80.25	322	*e*P	P	23 16 37.1	-0.5
NIE	Niedzica	80.25	322	*e*P	P	23 16 37.1	-0.5
DRGR		80.32	318	⇑*i*P	P	23 16 38.0	-0.1
DRGR		80.32	318	⇑P	P	23 16 38.1	-0.1
LOT	Lotru	80.42	317	⇑*i*P	P	23 16 39.0	+0.3
LANS	Liptovska Anna	80.85	322	*e*P	P	23 16 42.6	+1.8
LANS	Liptovska Anna	80.85	322	*e*P	P	23 16 42.6	+1.8
OKC	Ostrava-Krasne	81.16	323	AMS	AMS	23 56 00.0	
	comp=Z,200nm,17.3s						
MORC	Moravsky Berou	81.52	323	*e*P	P	23 16 43.5	-0.9
	comp=Z,13nm,0.8s						
MORC	Moravsky Berou	81.52	323	*e*P	P	23 16 43.5	-0.9
MORC				pmax	pmax		
	comp=Z,13nm,0.8s						
VYHS	Vyhne	81.56	321	*e*P	P	23 16 44.2	-0.4
VYHS				pmax	pmax		
	comp=Z,5.0nm,1.5s						
VYHS	Vyhne	81.56	321	*e*P	P	23 16 44.2	-0.4
DPC	Dobruska-Polom	81.82	324	*e*P	P	23 16 46.2	+0.3
DPC				AMS	AMS	23 56 10.0	
	comp=Z,300nm,18.0s						
DPC	Dobruska-Polom	81.82	324	*e*P	P	23 16 46.2	+0.3
DPC				MLR	MLR		
	comp=Z,300nm,18.0s						
UPC	Upice	81.88	324	AMS	AMS	23 56 30.0	
	comp=Z,300nm,16.0s						
VTS	Vitosha	82.29	315	⇓*i*P	P	23 16 49.3	+0.6
VTS	Vitosha	82.29	315	*e*P	P	23 16 48.0	-0.7
	comp=Z,2.9nm,0.8s						
VTS	Vitosha	82.29	315	*e*P	P	23 16 48.0	-0.7
VTS				pmax	pmax		
	comp=Z,3.0nm,0.8s						
YBH	Yreka Blue Hor	82.29	46	P	P	23 16 50.1	+1.4
	comp=Z,0.4nm,0.3s,baz=116,slow=11,SNR=2.5						
GOPC	GO Pecny, Ondr	82.87	324	*e*P	P	23 16 51.6	+0.2
GOPC				AMS	AMS	23 57 00.0	
	comp=Z,300nm,13.9s						
GOPC	GO Pecny, Ondr	82.87	324	*e*P	P	23 16 51.6	+0.2
GOPC				MLR	MLR		
	comp=Z,300nm,13.9s						
CLL	Collm	82.90	326	*i* P	P	23 16 50.6	-0.9
	comp=Z,17nm,1.7s						
CLL				*e*pP	sP	23 17 02.0	-0.5
CLL	Collm	82.90	326	*e*P	P	23 16 51.0	-0.5
	comp=Z,15nm,1.5s						
CLL	Collm	82.90	326	*i* P	P	23 16 50.6	-0.9
CLL				*i*		23 17 03.3	
CLL				pmax	pmax		
	comp=Z,17nm,1.7s						
CLL				MLR	MLR		
	comp=Z,300nm,17.6s						
PRU	Pruhonice	82.95	324	*e*P	P	23 16 53.3	+1.5
PRU				AMS	AMS	23 57 10.0	
	comp=Z,300nm,17.1s						
PRU	Pruhonice	82.95	324	*e*P	P	23 16 53.3	+1.5
PRU				MLR	MLR		
	comp=Z,300nm,17.1s						
PRA	Prague	82.95	324	AMS	AMS	23 58 20.0	
	comp=Z,200nm,12.0s						
DIVS	Divibare	83.41	317	*e*P	P	23 16 53.3	-1.1
	comp=Z,3.5nm,0.9s						
CONA	Conrad Observa	83.51	322	*e*PcP	P	23 16 55.9	+1.0
	comp=Z,10nm,0.9s						
BMO	Blue Mountains	83.83	42	*e*P	P	23 16 57.1	+0.5
	comp=Z,1.4nm,0.7s						
BMO	Blue Mountains	83.83	42	*e*P	P	23 16 57.1	+0.5
BMO				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KHC	Kasperske Hory	83.97	324	*e*P	P	23 16 56.4	-0.7
KHC				AMS	AMS	23 57 40.0	
	comp=Z,200nm,14.7s						
KHC	Kasperske Hory	83.97	324	*e*P	P	23 16 56.5	-0.6
	comp=Z,3.7nm,1.5s						
KHC	Kasperske Hory	83.97	324	*e*P	P	23 16 56.4	-0.7
KHC				MLR	MLR		
	comp=Z,200nm,14.7s						
J08A	Circle Bar Ran	84.00	43	*e*P	P	23 16 58.2	+0.7
	comp=Z,6.2nm,1.2s						
GEC2	GERESS Array S	84.08	324	*e*P	P	23 16 57.5	-0.3
	comp=Z,6.5nm,1.4s						
GEC2	GERESS Array S	84.08	324	*e*P	P	23 16 57.5	-0.3
GEC2				pmax	pmax		
	comp=Z,7.0nm,1.4s						
GERES	GERESS Array B	84.08	324	P	P	23 16 57.1	-0.7
	comp=Z,1.1nm,0.7s,baz=53,slow=5.2,SNR=9.6						
GERES				LR	LR	23 58 24.5	
	comp=Z,177nm,18.4s,baz=82,slow=39						
GEA0	GERESS Array S	84.09	324	*e*P	P	23 16 57.2	-0.6
ARSA	Arzberg	84.10	322	*e*PcP	P	23 16 57.8	0.0
	comp=Z,3.6nm,0.8s						
MOA	Molln	84.41	323	*i* PcP	P	23 16 59.4	0.0
	comp=Z,7.7nm,1.4s						
SOKA	Soboth	84.71	321	*e*P	P	23 17 00.6	-0.4
	comp=Z,9.2nm,1.0s						
PDG	Podgorica	84.80	316	⇑*i*P	P	23 17 02.3	+0.9
LEGS	Legarje	85.00	321	*e*P	P	23 17 01.7	-0.7
IDI	Anoyia	85.10	308	LR	LR	00 01 10.5	
	comp=Z,38nm,19.5s,baz=74,slow=40						
MYKA	Terra Mystica	85.50	322	*e*P	P	23 17 04.3	-0.6
	comp=Z,2.2nm,0.5s						
PAHR	Pah Rah Range	85.52	47	*e*pP	pP	23 17 18.0	+4.6
JAVS	Javornik	85.72	321	*i* P	P	23 17 04.9	-1.2
CMB	Columbia Colle	85.81	48	*e*pP	pP	23 17 18.2	+3.4
ABTA	Abfaltersbach	86.03	323	*e*PcP	P	23 17 06.9	-0.7
	comp=Z,2.3nm,0.5s						
HLID	Hailey	86.27	41	*e*P	P	23 17 09.7	+0.7
	comp=Z,4.5nm,1.1s						
MOTA	Moosalm	86.38	324	*e*PcP	P	23 17 09.6	+0.2
	comp=Z,3.1nm,1.1s						
KVN	Kaiserville	86.71	47	*e*P	P	23 17 12.7	+1.4
	comp=Z,3.5nm,0.9s						
NV01	Mina Array Sit	86.94	47	*e*P	P	23 17 13.0	+0.6
NVAR	Mina Array Bea	86.94	47	P	P	23 17 13.0	+0.6
	comp=Z,1.1nm,0.7s,baz=303,slow=4.8,SNR=8.3						
EKA	Eskdalemuir Ar	86.97	336	P	P	23 17 10.3	-1.6
	comp=Z,1.0nm,0.4s,baz=48,slow=4.8,SNR=17						
EKA				LR	LR	00 01 22.7	
	comp=Z,82nm,18.9s,baz=10.0,slow=39						
DAVA	Damuels	87.05	324	*e*PcP	P	23 17 12.3	-0.4
	comp=Z,2.2nm,0.6s						
DAVOX	Davos/Dischmat	87.39	324	P	P	23 17 13.7	-0.7
	comp=Z,1.8nm,0.5s,baz=200,slow=2.4,SNR=7.1						
PDAR	Pinedale Array	89.53	40	P	P	23 17 25.1	+0.4
	comp=Z,0.8nm,0.7s,baz=338,slow=1.6,SNR=8.0						
PDAR	Pinedale Array	89.53	40	*e*P	P	23 17 24.3	-0.3
PPT	Papeete	89.89	110	LR	LR	23 55 09.9	
	comp=Z,32nm,19.4s,baz=203,slow=34						
PV01	Paradox Valley	93.14	43	*e*P	P	23 17 42.3	+0.8
	comp=Z,2.5nm,0.8s						
SCHQ	Schefferville	94.97	10	LR	LR	00 04 32.3	
	comp=Z,59nm,19.5s,baz=352,slow=38						
ESDC	Sonseca Array	99.49	326	LR	LR	00 06 40.8	
	comp=Z,57nm,20.4s,baz=40,slow=38						

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*CNRM **05** 23:08:53.6, 35.°85N×10.°11W, h0^{km}, ML3.5*
*MDD **05** 23:08:57.8±0.9, 35.°97N×10.°23W, h56^{km}±46^{km}, Error ellipse: s-maj=9.1km s-min=8.5km az=131.0, PRXIMO*
*INMG **05** 23:08:58.7±1.1, 36.°00N×10.°17W, h24^{km}±7^{km}, MD2.8, ML3.0, Error ellipse: s-maj=4.9km s-min=3.4km az=47.0*
*IGIL **05** 23:08:58.6, 35.°95N×10.°16W, h31^{km}, ML3.1*
*CSEM **05** 23:08:59.5±0.3, 36.°13N×10.°01W, h30^{km}, ML3.5, Error ellipse: s-maj=6.1km s-min=4.5km az=48.0*
ISC 05 23:08:52.7±2.5**, 36.°00N**±0.°09×**10.°16W**±0.°08**, h10^{km}, n144, σ2$\overset{s}{.}$36**/263**, 7C-5D, Azores-Cape St. Vincent Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PFVI	Vila Bisbo	1.56	43	⇓*e*Pn	Pn	23 09 23.3	+2.7
PFVI				*e*Sn	Sb	23 09 41.6	0.0
PFVI				A	A	23 09 43.5	
	109nm,0.1s						
PFVI	Vila Bisbo	1.56	43	⇓P	Pn	23 09 23.3	+2.7
	22nm,0.1s,SNR=18						
PFVI				S	Sb	23 09 41.0	-0.6
	117nm,0.1s,SNR=18						
PFVI	Vila Bisbo	1.56	43	P	Pn	23 09 23.3	+2.7
	22nm,0.1s,SNR=18						
PFVI				S	Sb	23 09 41.0	-0.6
	117nm,0.1s,SNR=18						
PFVI				*e*Sn	Sb	23 09 41.6	0.0
MORF	Marmelete	1.79	43	*e*P	Pn	23 09 26.4	+2.7
MORF				*e*S	Sn	23 09 46.9	+0.5
MORF				AML	AML	23 09 47.7	
	comp=N,236nm,0.2s						
MORF	Marmelete	1.79	43	⇑*e*Pn	Pn	23 09 26.4	+2.7
MORF				*e*Sn	Sn	23 09 47.2	+0.7
MORF				A	A	23 09 48.5	
	comp=N,192nm,0.1s						
MORF	Marmelete	1.79	43	P	Pn	23 09 26.4	+2.7
MORF				S	Sn	23 09 47.2	+0.7
	comp=N,192nm,0.1s						
MORF	Marmelete	1.79	43	P	Pn	23 09 26.4	+2.7
MORF				S	Sn	23 09 47.2	+0.7
	comp=N,192nm,0.1s						
PTEO	Sao Teotonio	1.93	36	*e*Pn	Pn	23 09 28.3	+2.7
PTEO				*e*Sn	Sn	23 09 50.6	+0.7
PTEO				A	A	23 09 51.1	
	comp=N,65nm,0.2s						
PTEO	Sao Teotonio	1.93	36	P	Pn	23 09 28.3	+2.7
PTEO				S	Sn	23 09 50.6	+0.7
	comp=N,32nm,0.2s						
PTEO	Sao Teotonio	1.93	36	P	Pn	23 09 28.3	+2.7
PTEO				S	Sn	23 09 50.6	+0.7
	comp=N,32nm,0.2s						
PBDV	Barranco-do-Ve	2.19	55	⇑*e*Pn	Pn	23 09 32.0	+2.9
PBDV				*e*Sn	Sn	23 09 56.4	+0.1
PBDV				A	A	23 10 01.5	
	comp=N,34nm,0.2s						
PBDV	Barranco-do-Ve	2.19	55	P	Pn	23 09 32.0	+2.9
PBDV				S	Sn	23 09 56.4	+0.1
	comp=N,34nm,0.2s						
PBDV	Barranco-do-Ve	2.19	55	P	Pn	23 09 32.0	+2.9
PBDV				S	Sn	23 09 56.4	+0.1
	comp=N,34nm,0.2s						
PCVE	Castro Verde	2.36	46	⇑*e*Pn	Pn	23 09 34.5	+3.0
PCVE				*e*Sn	Sn	23 10 01.5	+0.9
PCVE				A	A	23 10 04.0	
	comp=N,37nm,0.3s						
PCVE	Castro Verde	2.36	46	P	Pn	23 09 34.5	+3.0
PCVE				S	Sn	23 10 01.5	+0.9
	comp=N,37nm,0.3s						
PCVE	Castro Verde	2.36	46	P	Pn	23 09 34.5	+3.0
PCVE				*e*Sn	Sn	23 10 01.5	+0.9
MESJ	Messejana	2.41	40	*e*P	Pn	23 09 35.0	+2.8
MESJ				*e*S	Sn	23 10 02.0	+0.2
MESJ				AML	AML	23 10 04.1	
	comp=E,72nm,0.0s						
MESJ	Messejana	2.41	40	⇑*e*Pn	Pn	23 09 35.0	+2.8
MESJ				*e*Sn	Sn	23 10 02.1	+0.3
MESJ				A	A	23 10 04.4	
	comp=E,50nm,0.3s						
MESJ	Messejana	2.41	40	P	Pn	23 09 35.0	+2.8
MESJ				S	Sn	23 10 02.1	+0.3
	comp=E,50nm,0.3s						
MESJ	Messejana	2.41	40	P	Pn	23 09 35.0	+2.8
MESJ				*e*Sn	Sn	23 10 02.1	+0.3
PVAQ	Vaqueiros	2.42	54	*e*Pn	Pn	23 09 35.1	+2.8
PVAQ				*e*Sn	Sn	23 10 01.7	-0.2
PVAQ				A	A	23 10 05.3	
	comp=E,58nm,0.2s						
PVAQ	Vaqueiros	2.42	54	P	Pn	23 09 35.1	+2.8
PVAQ				S	Sn	23 10 01.7	-0.2
	comp=E,58nm,0.2s						
PVAQ	Vaqueiros	2.42	54	P	Pn	23 09 35.1	+2.8
PVAQ				*e*Sn	Sn	23 10 01.7	-0.2
PVAQ				S	Sn	23 10 02.5	+0.6
PNCL	Nicolau / Gran	2.48	31	*e*Pn	Pn	23 09 35.7	+2.5
PNCL				*e*Sn	Sn	23 10 03.9	+0.3
PNCL				A	A	23 10 07.6	
	comp=E,42nm,0.1s						
PNCL	Nicolau / Gran	2.48	31	*e*Pn	Pn	23 09 35.7	+2.5
PNCL				*e*Sn	Sn	23 10 03.9	+0.3
EGRO	El Granado	2.64	54	⇑P	Pn	23 09 38.1	+2.7
	comp=E,3.3nm,0.1s,SNR=18						
EGRO				S	Sn	23 10 07.4	-0.1
	comp=E,27nm,0.1s						
EGRO	El Granado	2.64	54	P	Pn	23 09 38.1	+2.7
	comp=E,3.3nm,0.1s,SNR=18						
EGRO				S	Sn	23 10 07.4	-0.1
	comp=E,27nm,0.1s						
PBEJ	Beja	2.74	42	⇓*e*Pn	Pn	23 09 40.3	+3.6
PBEJ				*e*Sn	Sn	23 10 10.9	+1.1
PBEJ				A	A	23 10 12.7	
	comp=E,37nm,0.5s						
PBEJ	Beja	2.74	42	P	Pn	23 09 40.3	+3.6
PBEJ				S	Sn	23 10 10.9	+1.1
	comp=E,19nm,0.5s						
PBEJ	Beja	2.74	42	P	Pn	23 09 40.3	+3.6
PBEJ				S	Sn	23 10 10.9	+1.1
	comp=E,19nm,0.5s						
LIS	Lisbon	2.83	16	*e*Sn	Sn	23 10 12.8	+0.6
LIS				A	A	23 10 14.8	
	comp=E,76nm,0.1s						
LIS	Lisbon	2.83	16	S	Sn	23 10 12.8	+0.6
	comp=E,76nm,0.1s						
LIS	Lisbon	2.83	16	*e*Sn	Sn	23 10 12.8	+0.6
PMST	Lisbon--Monsan	2.84	16	*e*Pn	Pn	23 09 41.6	+3.4
PMST				*e*Sn	Sn	23 10 12.7	+0.2
PMST				A	A	23 10 16.2	
	comp=E,50nm,0.4s						
PMST	Lisbon--Monsan	2.84	16	*e*Pn	Pn	23 09 41.6	+3.4
PMST				*e*Sn	Sn	23 10 12.7	+0.2
PMAFR	Mafra	3.04	13	*e*Pn	Pn	23 09 43.0	+2.2
PMAFR				*e*Sn	Sn	23 10 16.8	-0.5
PMAFR				A	A	23 10 19.9	
	comp=E,82nm,0.2s						
PMAFR	Mafra	3.04	13	P	Pn	23 09 43.0	+2.2
	comp=E,3.0nm,0.1s,SNR=7.4						
PMAFR				S	Sn	23 10 16.7	-0.5
	comp=E,50nm,0.1s						
PMAFR	Mafra	3.04	13	P	Pn	23 09 43.0	+2.2
	comp=E,3.0nm,0.1s,SNR=7.4						
PMAFR				S	Sn	23 10 16.7	-0.5
	comp=E,50nm,0.1s						
EVO	Evora	3.06	34	*e*Pn	Pn	23 09 43.6	+2.5
EVO				*e*Sn	Sn	23 10 17.4	-0.3
EVO				A	A	23 10 18.3	
	comp=E,77nm,0.2s						
EVO	Evora	3.06	34	P	Pn	23 09 43.6	+2.5
EVO				S	Sn	23 10 17.4	-0.3
	comp=E,77nm,0.2s						
EVO	Evora	3.06	34	P	Pn	23 09 43.6	+2.5
EVO				S	Sn	23 10 17.4	-0.3
	comp=E,77nm,0.2s						
EMIN	Mina Concepcio	3.31	57	P	Pn	23 09 47.0	+2.4
	comp=E,3.7nm,0.1s,SNR=7.9						
EMIN				S	Sn	23 10 23.1	-0.9
	comp=E,7.0nm,0.1s,SNR=11						
EMIN	Mina Concepcio	3.31	57	P	Pn	23 09 47.0	+2.4
	comp=E,3.7nm,0.1s,SNR=7.9						
EMIN				S	Sn	23 10 23.1	-0.9
	comp=E,7.0nm,0.1s,SNR=11						
PBAR	Barrancos	3.31	48	*e*Pn	Pn	23 09 47.2	+2.6
PBAR				*e*Sn	Sn	23 10 24.0	0.0
PBAR				A	A	23 10 25.4	
	comp=E,43nm,0.2s						
PBAR	Barrancos	3.31	48	P	Pn	23 09 47.2	+2.6
PBAR				S	Sn	23 10 24.0	0.0
	comp=E,43nm,0.2s						
PBAR	Barrancos	3.31	48	P	Pn	23 09 47.2	+2.6
PBAR				S	Sn	23 10 24.0	0.0
	comp=E,43nm,0.2s						
ALMR	Almeirim	3.40	21	*e*P	Pn	23 09 48.8	+3.1
ALMR				*e*S	Sn	23 10 25.6	-0.5
ALMR				AML	AML	23 10 27.1	
	comp=N,46nm,0.2s						
ALMR	Almeirim	3.40	21	*e*Pn	Pn	23 09 49.4	+3.6
ALMR				*e*Sn	Sn	23 10 25.6	-0.5
ALMR				A	A	23 10 29.9	
	comp=N,32nm,0.3s						
ALMR	Almeirim	3.40	21	P	Pn	23 09 49.4	+3.6
ALMR				S	Sn	23 10 25.6	-0.5
	comp=N,16nm,0.3s						
ALMR	Almeirim	3.40	21	P	Pn	23 09 49.4	+3.6
ALMR				S	Sn	23 10 25.6	-0.5
	comp=N,16nm,0.3s						
PMTG	Montargil	3.43	26	*e*Pn	Pn	23 09 48.9	+2.6
PMTG				*e*Sn	Sn	23 10 26.6	-0.4
PMTG				A	A	23 10 28.7	
	comp=N,25nm,0.2s						
PMTG	Montargil	3.43	26	*e*Pn	Pn	23 09 48.9	+2.6
PMTG				*e*Sn	Sn	23 10 26.6	-0.4
PESTR	Estremoz	3.52	35	*e*Pn	Pn	23 09 49.6	+2.1
PESTR				*e*Sn	Sn	23 10 28.7	-0.5
PESTR				A	A	23 10 30.1	
	comp=N,16nm,0.2s						
PESTR	Estremoz	3.52	35	*e*Pn	Pn	23 09 49.6	+2.1
PESTR				*e*Sn	Sn	23 10 28.7	-0.5
EBAD	Badajoz	3.73	41	P	Pn	23 09 52.6	+2.3
	comp=N,3.2nm,0.1s,SNR=22						
EBAD				S	Sn	23 10 32.8	-1.4
	comp=N,8.4nm,0.1s,SNR=4.8						
EBAD	Badajoz	3.73	41	P	Pn	23 09 52.6	+2.3
	comp=N,3.2nm,0.1s,SNR=22						
EBAD				S	Sn	23 10 32.8	-1.4
	comp=N,8.4nm,0.1s,SNR=4.8						
PTOM	Tomar	3.87	20	*e*Pn	Pn	23 09 54.9	+2.6
PTOM				*e*Sn	Sn	23 10 37.0	-0.8
PTOM				A	A	23 10 39.8	
	comp=N,29nm,0.2s						
PTOM	Tomar	3.87	20	P	Pn	23 09 54.9	+2.6
PTOM				S	Sn	23 10 37.0	-0.8
	comp=N,14nm,0.2s						
PTOM	Tomar	3.87	20	P	Pn	23 09 54.9	+2.6
PTOM				S	Sn	23 10 37.0	-0.8
	comp=N,14nm,0.2s						
PMRV	Marv??o	4.07	32	*e*Pn	Pn	23 09 57.5	+2.5
PMRV				*e*Sn	Sn	23 10 41.6	-1.2
PMRV				A	A	23 10 43.6	
	comp=N,29nm,0.4s						
PMRV	Marv??o	4.07	32	P	Pn	23 09 57.5	+2.5
PMRV				S	Sn	23 10 41.6	-1.2
	comp=N,29nm,0.4s						
PMRV	Marv??o	4.07	32	P	Pn	23 09 57.5	+2.5
PMRV				S	Sn	23 10 41.6	-1.2
	comp=N,29nm,0.4s						
PCAS	Casmilo, Conde	4.26	17	*e*Pn	Pn	23 10 00.3	+2.7
PCAS				*e*Sn	Sn	23 10 46.6	-0.8
PCAS				A	A	23 10 51.9	
	comp=N,10nm,0.4s						
PCAS	Casmilo, Conde	4.26	17	*e*Pn	Pn	23 10 00.3	+2.7
PCAS				*e*Sn	Sn	23 10 46.6	-0.8
ECAB	El Cabril	4.33	60	P	Pn	23 10 00.9	+2.3
	comp=N,4.9nm,0.1s,SNR=117						
ECAB				S	Sn	23 10 47.6	-1.5
	comp=N,1.5nm,0.1s						
ECAB	El Cabril	4.33	60	P	Pn	23 10 00.9	+2.3
	comp=N,4.9nm,0.1s,SNR=117						
ECAB				S	Sn	23 10 47.6	-1.5
	comp=N,1.5nm,0.1s						
HORN	Hornachuelos	4.34	63	P	Pn	23 10 01.1	+2.3
HORN				S	Sn	23 10 46.6	-2.9
PCBR	Castelo Branco	4.38	28	*e*Pn	Pn	23 10 02.0	+2.6
PCBR				*e*Sn	Sn	23 10 49.3	-1.2
PCBR				A	A	23 10 51.3	
	comp=N,10nm,0.6s						
PCBR	Castelo Branco	4.38	28	P	Pn	23 10 02.0	+2.6
PCBR				S	Sn	23 10 49.3	-1.2
	comp=N,5.2nm,0.6s						
PCBR	Castelo Branco	4.38	28	P	Pn	23 10 02.0	+2.6
PCBR				S	Sn	23 10 49.3	-1.2
	comp=N,5.2nm,0.6s						
EMIJ	Mijas	4.39	81	P	Pn	23 09 59.6	+0.1
	comp=N,1.3nm,0.2s,SNR=9.2						
EMIJ				S	Sn	23 10 47.3	-3.4
	comp=N,3.7nm,0.2s,SNR=4.9						
EMIJ	Mijas	4.39	81	P	Pn	23 09 59.6	+0.1
	comp=N,1.3nm,0.2s,SNR=9.2						
EMIJ				S	Sn	23 10 47.3	-3.4
	comp=N,3.7nm,0.2s,SNR=4.9						
COI	Coimbra	4.42	18	*e*Sn	Sn	23 10 49.8	-1.7
COI	Coimbra	4.42	18	S	Sn	23 10 49.8	-1.7
COI	Coimbra	4.42	18	S	Sn	23 10 49.8	-1.7
MTE	Manteigas	4.86	24	⇓*e*Pn	Pn	23 10 08.4	+2.5
MTE				*e*Sn	Sn	23 11 00.3	-1.9
MTE				A	A	23 11 04.3	
	comp=N,13nm,0.3s						
MTE	Manteigas	4.86	24	P	Pn	23 10 08.4	+2.5
MTE				S	Sn	23 11 00.3	-1.9
	comp=N,6.4nm,0.3s						
MTE	Manteigas	4.86	24	P	Pn	23 10 08.4	+2.5
MTE				S	Sn	23 11 00.3	-1.9

	comp=N,6.4nm,0.3s						
EADA	Adamuz	4.96	62	⇑P	Pn	23 10 09.8	+2.4
	comp=N,7.9nm,0.2s,SNR=18						
EADA				S	Sn	23 11 03.0	-1.9
	comp=N,4.1nm,0.1s						
EADA	Adamuz	4.96	62	P	Pn	23 10 09.8	+2.4
	comp=N,7.9nm,0.2s,SNR=18						
EADA				S	Sn	23 11 03.0	-1.9
	comp=N,4.1nm,0.1s						
EGOR	Sierra Gorda,	5.00	75	P	Pn	23 10 10.5	+2.5
	comp=N,0.6nm,0.1s,SNR=7.9						
EGOR				S	Sn	23 11 05.2	-0.6
	comp=N,1.5nm,0.2s,SNR=7.9						
EGOR	Sierra Gorda,	5.00	75	P	Pn	23 10 10.5	+2.5
	comp=N,0.6nm,0.1s,SNR=7.9						
EGOR				S	Sn	23 11 05.2	-0.6
	comp=N,1.5nm,0.2s,SNR=7.9						
PVIS	Viseu	5.04	20	*e*Pn	Pn	23 10 10.3	+1.9
PVIS				*e*Sn	Sn	23 11 04.9	-1.8
PVIS				A	A	23 11 08.3	
	comp=N,9.9nm,0.1s						
PVIS	Viseu	5.04	20	P	Pn	23 10 10.3	+1.9
PVIS				S	Sn	23 11 04.9	-1.8
	comp=N,4.9nm,0.1s						
PVIS	Viseu	5.04	20	P	Pn	23 10 10.3	+1.9
PVIS				S	Sn	23 11 04.9	-1.8
	comp=N,4.9nm,0.1s						
OUK	Oukaimeden	5.15	157	P	Pn	23 10 10.0	-0.2
EPLA	Plasencia	5.18	37	P	Pn	23 10 12.8	+2.4
	comp=N,0.5nm,0.1s,SNR=7.9						
EPLA				S	Sn	23 11 08.3	-2.0
	comp=N,6.8nm,0.1s,SNR=13						
EPLA	Plasencia	5.18	37	P	Pn	23 10 12.8	+2.4
	comp=N,0.5nm,0.1s,SNR=7.9						
EPLA				S	Sn	23 11 08.3	-2.0
	comp=N,6.8nm,0.1s,SNR=13						
ELGU	Los Guajares,	5.34	79	P	Pn	23 10 15.4	+2.8
	comp=N,0.2nm,0.1s,SNR=7.9						
ELGU				S	Sn	23 11 14.1	-0.1
	comp=N,1.5nm,0.1s,SNR=7.9						
ELGU	Los Guajares,	5.34	79	P	Pn	23 10 15.4	+2.8
	comp=N,0.2nm,0.1s,SNR=7.9						
ELGU				S	Sn	23 11 14.1	-0.1
	comp=N,1.5nm,0.1s,SNR=7.9						
EQUE	Quentar	5.54	75	P	Pn	23 10 18.6	+3.2
	comp=N,0.3nm,0.1s,SNR=8.7						
EQUE				S	Sn	23 11 18.5	-0.7
	comp=N,0.3nm,0.1s						
EQUE	Quentar	5.54	75	P	Pn	23 10 18.6	+3.2
	comp=N,0.3nm,0.1s,SNR=8.7						
EQUE				S	Sn	23 11 18.5	-0.7
	comp=N,0.3nm,0.1s						
PVRL	Vila Real	5.61	19	*e*Sn	Sn	23 11 17.9	-2.8
PVRL				A	A	23 11 21.5	
	comp=N,18nm,0.3s						
PVRL	Vila Real	5.61	19	S	Sn	23 11 17.9	-2.8
	comp=N,9.2nm,0.3s						
PVRL	Vila Real	5.61	19	S	Sn	23 11 17.9	-2.8
	comp=N,9.2nm,0.3s						
POLO	Lamas de Olo	5.68	18	*e*Pn	Pn	23 10 19.5	+2.3
POLO				*e*Sn	Sn	23 11 19.4	-3.1
POLO				A	A	23 11 23.5	
	comp=N,4.1nm,0.5s						
POLO	Lamas de Olo	5.68	18	*e*Pn	Pn	23 10 19.5	+2.3
POLO				*e*Sn	Sn	23 11 19.4	-3.1
MVO	Moncorvo	5.71	25	⇑*e*Pn	Pn	23 10 19.7	+2.0
MVO				*e*Sn	Sn	23 11 20.6	-2.7
MVO				A	A	23 11 23.7	
	comp=N,14nm,0.4s						
MVO	Moncorvo	5.71	25	P	Pn	23 10 19.7	+2.0
	comp=N,3.3nm,0.2s,SNR=12						
MVO				S	Sn	23 11 20.9	-2.4
	comp=N,3.7nm,0.1s,SNR=8.0						
MVO	Moncorvo	5.71	25	P	Pn	23 10 19.7	+2.0
	comp=N,3.3nm,0.2s,SNR=12						
MVO				*e*Sn	Sn	23 11 20.6	-2.7
MVO				S	Sn	23 11 20.9	-2.4
	comp=N,3.7nm,0.1s,SNR=8.0						
PAB	San Pablo	5.81	51	P	Pn	23 10 20.8	+1.8
	comp=N,0.7nm,0.1s,SNR=7.9						
PAB				S	Sn	23 11 22.6	-3.2
	comp=N,5.8nm,0.2s,SNR=7.9						
PAB	San Pablo	5.81	51	P	Pn	23 10 20.8	+1.8
	comp=N,0.7nm,0.1s,SNR=7.9						
PAB				S	Sn	23 11 22.6	-3.2
	comp=N,5.8nm,0.2s,SNR=7.9						
PMPS	Porto Santo	5.88	242	*e*Pn	Pn	23 10 21.7	+1.9
PMPS				*e*Sn	Sn	23 11 20.0	-7.2
PMPS				A	A	23 11 24.3	
	comp=N,19nm,1.0s						
PMPS	Porto Santo	5.88	242	P	Pn	23 10 21.7	+1.9
PMPS				S	Sn	23 11 20.0	-7.2
	comp=N,9.4nm,1.0s						
EBER	Berja	5.93	79	P	Pn	23 10 22.8	+2.0
	comp=N,0.0nm,0.1s,SNR=7.9						
EBER				S	Sn	23 11 25.6	-3.3
	comp=N,0.4nm,0.2s,SNR=7.9						
EBER	Berja	5.93	79	P	Pn	23 10 22.8	+2.0
	SNR=7.9						
EBER				S	Sn	23 11 25.6	-3.3
	comp=N,0.4nm,0.2s,SNR=7.9						
PCAB	Cabril	5.94	16	⇓*e*Pn	Pn	23 10 22.9	+2.1
PCAB				*e*Sn	Sn	23 11 25.1	-3.8
PCAB				A	A	23 11 28.8	
	comp=N,7.5nm,0.3s						
PCAB	Cabril	5.94	16	P	Pn	23 10 22.9	+2.1
PCAB				S	Sn	23 11 25.1	-3.8
	comp=N,3.8nm,0.3s						
PCAB	Cabril	5.94	16	P	Pn	23 10 22.9	+2.1
PCAB				S	Sn	23 11 25.1	-3.8
	comp=N,3.8nm,0.3s						
EQES	Quesada	5.96	70	P	Pn	23 10 23.2	+2.1
	comp=N,0.5nm,0.1s,SNR=15						
EQES				S	Sn	23 11 27.1	-2.5
	comp=N,0.4nm,0.1s						
EQES	Quesada	5.96	70	P	Pn	23 10 23.2	+2.1
	comp=N,0.5nm,0.1s,SNR=15						
EQES				S	Sn	23 11 27.1	-2.5
	comp=N,0.4nm,0.1s						
ELOB	Lobios	6.09	15	P	Pn	23 10 24.6	+1.8
	comp=N,0.3nm,0.1s,SNR=6.3						
ELOB				S	Sn	23 11 28.5	-4.1
	comp=N,1.9nm,0.1s,SNR=7.9						
ELOB	Lobios	6.09	15	P	Pn	23 10 24.6	+1.8
	comp=N,0.3nm,0.1s,SNR=6.3						
ELOB				S	Sn	23 11 28.5	-4.1
	comp=N,1.9nm,0.1s,SNR=7.9						
ESDC	Sonseca Array	6.13	51	P	Pn	23 10 25.8	+2.4
	baz=234,slow=13,SNR=7.9						
ESDC				S	Sn	23 11 31.7	-1.8
	baz=239,slow=24,SNR=7.9						
ESDC	Sonseca Array	6.13	51	P	Pn	23 10 25.8	+2.4
	SNR=7.9						
ESDC				S	Sn	23 11 31.7	-1.8
	SNR=7.9						
PGAV	Gavieira, Arco	6.14	13	*e*Pn	Pn	23 10 25.5	+1.9
PGAV				*e*Sn	Sn	23 11 30.0	-3.9
PGAV				A	A	23 11 33.1	
	comp=N,5.0nm,0.3s						
PGAV	Gavieira, Arco	6.14	13	*e*Pn	Pn	23 10 25.5	+1.9
PGAV				*e*Sn	Sn	23 11 30.0	-3.9
PBRG	Braganca	6.38	24	*e*Pn	Pn	23 10 29.0	+2.1
PBRG				*e*Sn	Sn	23 11 37.3	-2.5
PBRG				A	A	23 11 40.9	
	comp=N,6.2nm,0.3s						
PBRG	Braganca	6.38	24	P	Pn	23 10 29.0	+2.1
PBRG				S	Sn	23 11 37.3	-2.5
	comp=N,3.1nm,0.3s						
PBRG	Braganca	6.38	24	P	Pn	23 10 29.0	+2.1
PBRG				S	Sn	23 11 37.3	-2.5
	comp=N,3.1nm,0.3s						
SESP	Santiago Espad	6.45	69	P	Pn	23 10 30.0	+2.1
	comp=N,3.2nm,0.2s,SNR=7.9						
SESP				S	Sn	23 11 38.6	-3.0
	comp=N,4.0nm,0.1s,SNR=7.9						
SESP	Santiago Espad	6.45	69	P	Pn	23 10 30.0	+2.1
	comp=N,3.2nm,0.2s,SNR=7.9						
SESP				S	Sn	23 11 38.6	-3.0
	comp=N,4.0nm,0.1s,SNR=7.9						
PMAR	Madeira	6.47	242	*e*Sn	Sn	23 11 34.3	-7.8
PMAR				A	A	23 11 38.8	
	comp=N,10.0nm,0.4s						
PMAR	Madeira	6.47	242	S	Sn	23 11 34.3	-7.8
	comp=N,5.0nm,0.4s						
EAGO	Agolada(Pontev	6.98	13	P	Pn	23 10 36.7	+1.6
	comp=N,0.4nm,0.1s,SNR=7.9						
EAGO				S	Sn	23 11 49.4	-5.2
	comp=N,1.5nm,0.1s,SNR=7.9						
EAGO	Agolada(Pontev	6.98	13	P	Pn	23 10 36.7	+1.6
	comp=N,0.4nm,0.1s,SNR=7.9						
EMAZ	Mazaricos	7.00	7	P	Pn	23 10 36.4	+1.1
	comp=N,0.8nm,0.1s,SNR=7.9						
EMAZ				S	Sn	23 11 48.8	-6.2
	comp=N,2.8nm,0.1s,SNR=7.9						
EMAZ	Mazaricos	7.00	7	P	Pn	23 10 36.4	+1.1
	comp=N,0.8nm,0.1s,SNR=7.9						
ETOB	Tobarra	7.36	66	P	Pn	23 10 41.9	+1.7
	comp=N,0.1nm,0.1s,SNR=10						
ETOB				S	Sn	23 11 59.9	-3.9
	comp=N,1.8nm,0.1s,SNR=7.9						
ETOB	Tobarra	7.36	66	P	Pn	23 10 41.9	+1.7
	comp=N,0.1nm,0.1s,SNR=10						
ETOB				S	Sn	23 11 59.9	-3.9
	comp=N,1.8nm,0.1s,SNR=7.9						
EPON	Pontenova	7.68	17	P	Pn	23 10 46.2	+1.6
	comp=N,0.1nm,0.1s,SNR=7.9						
EPON				S	Sn	23 12 07.6	-4.1
	comp=N,0.4nm,0.1s,SNR=7.9						
EPON	Pontenova	7.68	17	P	Pn	23 10 46.2	+1.6
	comp=N,0.1nm,0.1s,SNR=7.9						
EPON				S	Sn	23 12 07.6	-4.1
	comp=N,0.4nm,0.1s,SNR=7.9						
ETOR	Torete	7.98	50	P	Pn	23 10 51.1	+2.3
	comp=N,0.3nm,0.1s,SNR=7.2						
ETOR				S	Sn	23 12 15.0	-4.2
	comp=N,0.1nm,0.1s,SNR=7.9						
ETOR	Torete	7.98	50	P	Pn	23 10 51.1	+2.3
	comp=N,0.3nm,0.1s,SNR=7.2						
ETOR				S	Sn	23 12 15.0	-4.2
	comp=N,0.1nm,0.1s,SNR=7.9						
CFUE	Fuerteventura	7.99	205	P	Pn	23 10 50.5	+1.6
	comp=N,0.8nm,0.1s,SNR=4.0						
CFUE				S	Sn	23 12 09.6	-10
	comp=N,2.5nm,0.1s,SNR=7.9						
ECHE	Chera	8.12	61	P	Pn	23 10 52.3	+1.7
	comp=N,0.2nm,0.1s,SNR=7.9						
ECHE				S	Sn	23 12 18.2	-4.2
	comp=N,0.2nm,0.1s,SNR=7.9						
ECHE	Chera	8.12	61	P	Pn	23 10 52.3	+1.7
	comp=N,0.2nm,0.1s,SNR=7.9						
ECHE				S	Sn	23 12 18.2	-4.2
	comp=N,0.2nm,0.1s,SNR=7.9						
EARI	Arriondas	8.23	26	P	Pn	23 10 54.3	+2.1
	comp=N,0.1nm,0.1s,SNR=4.0						
EARI				S	Sn	23 12 21.0	-4.3
	comp=N,0.1nm,0.1s,SNR=7.9						
EARI	Arriondas	8.23	26	P	Pn	23 10 54.3	+2.1
	comp=N,0.1nm,0.1s,SNR=4.0						
EARI				S	Sn	23 12 21.0	-4.3
	comp=N,0.1nm,0.1s,SNR=7.9						
CFTV	Fuerteventura	8.26	205	S	Sn	23 12 14.5	-11
	comp=N,0.4nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	8.79	57	P	Pn	23 11 03.4	+3.4
	comp=N,0.1nm,0.1s,SNR=7.9						
EMOS				S	Sn	23 12 36.0	-3.2
	comp=N,0.8nm,0.2s,SNR=7.9						
EMOS	Mosqueruela	8.79	57	P	Pn	23 11 03.4	+3.4
	comp=N,0.1nm,0.1s,SNR=7.9						
EMOS				S	Sn	23 12 36.0	-3.2
	comp=N,0.8nm,0.2s,SNR=7.9						
ELAN	Lanestosa	8.89	34	S	Sn	23 12 36.2	-5.3
	comp=N,0.4nm,0.2s,SNR=7.9						
ELAN	Lanestosa	8.89	34	S	Sn	23 12 36.2	-5.3
	comp=N,0.4nm,0.2s,SNR=7.9						

IDC ***05*** *23:11:27.8±1.8, 29°.26N×130°.48E, h0^{km}, mb3.7/8, mb1 3.7/11, mb1mx3.5/67, mbtmp3.6/11, ML3.0/3, MS4.2/1, Ms1 4.2/1, ms1mx2.7/70, Error ellipse: s-maj=40.1km s-min=21.7km az=116.0*
JMA ***05*** *23:11:31.2±0.1, 29°.23N×130°.68E, h24^{km}, M3.3*
NEIC ***05*** *23:11:33.4±1.1, 29°.22N×130°.43E, h40^{km}±11^{km}, mb4.1/2, Error ellipse: s-maj=19.3km s-min=10.5km az=133.0*
ISC 05 23:11:29.6±1.2**, 29°.21N**±0°.03×**130°.75E**±0°.05**, h18**^{km}±5^{km}**, n34, σ1^{s}04**/49**, mb3.8**/9**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JNN	Nakanoshima	0.99	310	P	Pb	23 11 48.0	-0.2
JNN				*e*S	Sb	23 12 01.4	+0.5
JYAK	Yakushimahirau	1.05	349	P	Pg	23 11 49.8	-0.1
JYAK				*e*S	Sg	23 12 03.9	+0.2
JZK	Kikaishima	1.12	218	P	Pg	23 11 51.8	+0.4
JZK				*e*S	Sn	23 12 05.6	+0.2
JMTN	Minamitane	1.19	6	P	Pg	23 11 52.4	-0.3
JMTN				*e*S	Sg	23 12 08.7	+0.4
JAM	Amami Oshima	1.28	232	P	Pn	23 11 52.8	+0.2
JAM				*e*S	Sn	23 12 08.8	-0.5
JKC	Kuchinoerabu	1.34	339	P	Pb	23 11 53.7	-0.5
JKC				*e*S	Sb	23 12 11.6	+0.6
JTAJ	Takarajima	1.35	268	P	Pn	23 11 53.7	+0.1
JTAJ				*e*S	Sn	23 12 11.2	+0.1
JTN	Tanegashima 3	1.46	8	P	Pb	23 11 56.2	0.0
JTN				*e*S	Sg	23 12 14.9	-1.8
JAMN	Amaminishikomi	1.68	235	P	Pn	23 11 58.4	+0.2
JAMN				*e*S	Sn	23 12 19.9	+0.6
JTSR	Tashiro 2	1.96	4	P	Pb	23 12 03.5	-1.3
JTSR				*e*S	Sb	23 12 28.1	-0.8
JTK	Tokunoshima	2.12	229	P	Pn	23 12 05.2	+1.0
JTK				*e*S	Sn	23 12 30.8	+0.6
JOKE	Okinoerabujima	2.66	227	P	Pn	23 12 13.1	+1.5
JOKE				*e*S	Sn	23 12 44.0	+0.6
JYRO	Yoronjima	2.97	224	P	Pn	23 12 16.5	+0.6
JYRO				*e*S	Sn	23 12 50.1	-1.1
JOW	Kunigami	3.22	223	Pn	Pn	23 12 19.1	-0.3
	2.9nm,0.3s,baz=97,slow=18,SNR=14						
JOW				Sn	Sn	23 12 56.2	-1.1
	3.3nm,0.3s,baz=50,slow=17,SNR=3.8						
JOW	Kunigami	3.22	223	P	Pn	23 12 20.5	+1.1
JOW				*e*S	Sn	23 12 57.2	-0.1
JMZ	Minamidaito 2	3.40	173	P	Pn	23 12 23.0	+1.2
JMZ				*e*S	Sn	23 12 59.4	-2.3
JNU	Nakatsue	3.90	2	Pn	Pn	23 12 30.4	+1.6
	2.5nm,0.3s,baz=172,slow=9.6,SNR=11						
JNU				Sn	Sn	23 13 14.6	+0.4
	0.8nm,0.3s,baz=252,slow=19,SNR=2.3						
KSAR	Wonju Array Be	8.55	344	Pn	Pn	23 13 34.6	+2.1
KSRS	Korea Array	8.55	345	Pn	Pn	23 13 34.6	+2.0
	0.1nm,0.3s,baz=166,slow=14,SNR=2.7						
MAJO	Matsushiro	9.63	39	Pn	Pn	23 13 49.3	+1.9
MJAR	Matsushiro Arr	9.63	39	Pn	Pn	23 13 54.4	+7.1
	0.3nm,0.3s,baz=218,slow=15,SNR=3.4						
ENH	Enshi	18.49	279	*e*Pn	P	23 15 42.7	-2.1
	1.4nm,0.2s						
KLR	Kul’dur	20.01	2	P	P	23 16 01.4	+0.1
	0.0nm,0.3s,baz=184,slow=13,SNR=17						
SONM	Songino Array	26.44	321	P	P	23 17 05.1	-0.5
	0.6nm,0.7s,baz=142,slow=8.9,SNR=3.8						
SEY	Seymchan	36.54	16	LR	LR	23 33 51.0	
	comp=Z,357nm,18.6s,baz=330,slow=37						
MKAR	Makanchi Array	41.31	309	P	P	23 19 13.3	-0.9
	0.3nm,0.5s,baz=100,slow=9.4,SNR=4.7						
ZALV	Zalesovo Beam	41.32	320	P	P	23 19 13.4	-0.6
	0.4nm,0.3s,baz=93,slow=10,SNR=2.4						
KURK	Kurchatov	44.28	314	P	P	23 19 37.5	-0.6
KURBB	Kurchatov Arra	44.32	314	P	P	23 19 37.5	-0.9
	1.4nm,0.7s,baz=97,slow=9.1,SNR=9.1						
BVAR	Borovoye Array	49.60	316	P	P	23 20 19.2	-0.4
	1.1nm,0.5s,baz=92,slow=8.7,SNR=7.7						
BRVK	Borovoye	49.67	316	*e*P	P	23 20 19.4	-0.7
	3.4nm,0.7s						
FINES	FINESS Array B	71.37	331	P	P	23 22 48.0	-0.2
	0.5nm,0.5s,baz=46,slow=5.5,SNR=5.0						
BRTR	Keskin Array B	76.96	308	P	P	23 23 21.0	-0.5
	0.6nm,0.8s,baz=125,slow=6.2,SNR=4.5						
NVAR	Mina Array Bea	86.85	47	P	P	23 24 15.4	+1.8
	0.3nm,0.5s,baz=290,slow=5.6,SNR=4.2						

IDC ***05*** *23:18:30.7±2.0, 28°.11N×129°.51E, h0^{km}, mb3.6/4, mb1 3.7/4, mb1mx3.2/79, mbtmp3.6/4, Error ellipse: s-maj=55.8km s-min=22.8km az=81.0*
ISCJB ***05*** *23:18:37.2±1.5, 27°.10N±0°.07×126°.76E±0°.06, h20^{km}±11^{km}, mb3.5/4, Error ellipse: s-maj=11.9km s-min=8.5km az=159.2*
JMA ***05*** *23:18:37.4±0.2, 27°.09N×126°.74E, h30^{km}±3^{km}, M3.2*
ISC 05 23:18:38.7±2.1**, 27°.02N**±0°.08×**126°.79E**±0°.07**, h23**^{km}±16^{km}**, n13, σ0^{s}88**/19**, mb3.5**/4**, Northwest of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAGN	Aguni-jima	0.59	137	P	Pb	23 18 50.2	-0.2
JAGN				S	Sb	23 18 59.2	+0.9
JKE	Kume jima 2	0.69	180	P	Pn	23 18 51.6	-1.5
JKE				S	Sb	23 19 01.7	+0.5
JIH	Iheya	1.05	89	P	Pn	23 18 56.7	-1.3
JIH				*e*S	Sn	23 19 11.1	-0.8
JNTH	Nagotoyohara	1.21	114	P	Pn	23 18 59.5	-0.7
JNTH				*e*S	Sn	23 19 15.1	-0.7
JJT3	Tamagusuku3	1.25	134	P	Pb	23 19 01.1	-0.4
JJT3				*e*S	Sb	23 19 18.0	+0.8
JOW	Kunigami	1.34	98	Pn	Pn	23 19 01.5	-0.5
	29nm,0.3s,baz=296,slow=17,SNR=48						
JOW				Sn	Sb	23 19 20.3	+0.6
	64nm,0.3s,baz=112,slow=19,SNR=11						
JOW	Kunigami	1.34	98	P	Pn	23 19 01.5	-0.5
JOW				*e*S	Sn	23 19 19.0	0.0
JYRO	Yoronjima	1.48	90	P	Pn	23 19 03.0	-0.9
JOKE	Okinoerabujima	1.62	78	P	Pn	23 19 05.0	-0.9
SONM	Songino Array	26.20	328	P	P	23 24 12.2	+0.5
	1.5nm,1.0s,baz=133,slow=9.7,SNR=5.7						
MKAR	Makanchi Array	40.05	312	P	P	23 26 16.5	+4.4
	0.7nm,0.8s,baz=105,slow=9.7,SNR=3.7						
ZALV	Zalesovo Beam	40.84	323	P	P	23 26 18.3	-0.1
	0.3nm,0.3s,baz=125,slow=7.6,SNR=2.5						
ASAR	Alice Springs	50.86	172	P	P	23 27 39.2	+1.4
	0.4nm,0.6s,baz=355,slow=7.8,SNR=6.2						

NIED ***05*** *23:24:00, 37°.10N×140°.50E, h11^{km}, Mw3.7 Best double couple: M$_0$3.94000×10^{14} NP1:φ$_s$178.00000°, δ85.00000°, λ0.00000°. NP2:φ$_s$88.00000°, δ90.00000°, λ175.00000°.*
IDC ***05*** *23:24:18.7±1.6, 37°.16N×140°.53E, h0^{km}, mb3.6/5, mb1 3.7/6, mb1mx3.4/80, mbtmp3.7/6, ML3.7/1, Error ellipse: s-maj=36.0km s-min=20.0km az=65.0*
ISCJB ***05*** *23:24:20.0±0.4, 37°.10N±0°.03×140°.54E±0°.04, h17^{km}±4^{km}, mb3.5/5, Error ellipse: s-maj=5.2km s-min=4.8km az=24.0*
JMA ***05*** *23:24:20.3, 37°.10N×140°.49E, h12^{km}±1^{km}, M4.1 Broadband fault plane solution: P waves. NP1: φ$_s$93.00000°, δ89.00000°, λ170.00000°. NP2: φ$_s$184.00000°, δ80.00000°, λ1.00000°. Principal axes: T Plg8.0000°, Azm48.0000°; N Plg80.0000°, Azm265.0000°; P Plg6.0000°, Azm139.0000°;*
JMA Felt II J1.
ISC 05 23:24:20.2±0.8**, 37°.11N**±0°.03×**140°.48E**±0°.03**, h10**^{km}±6^{km}**, n23, σ0^{s}53**/28**, mb3.5**/5**, 5C-3D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFFD	Fukushimafurud	0.07	109	P	Pg	23 24 22.6	+0.1
JFFD				S	Sg	23 24 24.1	-0.1
ONAJ	Iwakimizuishiy	0.26	93	⇑P	Pg	23 24 25.6	+0.1
ONAJ				S	Sg	23 24 29.5	+0.4
JFK	Kawauchi	0.41	52	⇑P	Pg	23 24 28.3	0.0
JFT	Otama	0.42	345	⇓P	Pb	23 24 29.1	-0.6
JFT				S	Sb	23 24 35.3	-0.8
JSB	Shiboa	0.47	252	⇑P	Pb	23 24 30.2	-0.4
JSB				S	Sb	23 24 37.0	-0.5
JHO	Hitachi	0.51	171	⇓P	Pg	23 24 29.6	-0.5
JHO				S	Sg	23 24 36.3	-0.5
JFY	Yanaizu	0.68	296	⇓P	Pg	23 24 33.7	+0.3
JFY				S	Sg	23 24 42.8	+0.4
JMM	Marumori	0.79	19	⇑P	Pg	23 24 35.1	-0.4
JMM				S	Sg	23 24 45.6	-0.3
JKT	Katashina	1.04	251	⇑P	Pg	23 24 39.8	-0.5
JKT				S	Sg	23 24 53.7	-0.2
MJAR	Matsushiro Arr	1.91	253	Pn	Pn	23 24 53.2	+0.4
	30nm,0.3s,baz=66,slow=14,SNR=127						
MJAR				Sn	Sb	23 25 18.4	-0.6
	23nm,0.3s,baz=73,slow=17,SNR=11						
MAT	Matsushiro	1.91	253	P	Pn	23 24 53.7	+0.9
MAT				S	Sb	23 25 19.9	+0.9
JHJ	Hachijo jima 2	4.03	188	Pn	Pn	23 25 22.8	+0.9
	14nm,0.3s,baz=9.9,slow=16,SNR=3.8						
JHJ				Sn	Sn	23 26 08.4	-0.7
	19nm,0.3s,baz=27,slow=4.5,SNR=3.7						
SONM	Songino Array	27.12	304	P	P	23 30 03.6	+0.2
	0.5nm,0.7s,baz=99,slow=8.9,SNR=2.4						
H11N2	WAKE ISLAND Hy	28.84	120	T	T	00 00 12.6	
	baz=313,slow=75,SNR=86						
H11N1	WAKE ISLAND Hy	28.84	120	T	T	00 00 13.1	
	baz=313,slow=75,SNR=66						
H11N3	WAKE ISLAND Hy	28.85	120	T	T	00 00 13.8	
	baz=313,slow=75,SNR=67						
H11S1	WAKE ISLAND Hy	29.54	122	T	T	00 01 03.4	
	baz=314,slow=75,SNR=200						
H11S3	WAKE ISLAND Hy	29.54	122	T	T	00 01 04.4	
	baz=314,slow=75,SNR=91						
H11S2	WAKE ISLAND Hy	29.55	122	T	T	00 01 04.6	
	baz=314,slow=75,SNR=120						
MKAR	Makanchi Array	43.44	302	P	P	23 32 23.5	+0.3
	0.1nm,0.3s,baz=93,slow=8.7,SNR=2.0						
KURBB	Kurchatov Arra	45.36	308	P	P	23 32 38.2	-0.2
	0.9nm,0.6s,baz=83,slow=8.3,SNR=4.5						
WRA	Warramunga Arr	57.04	187	P	P	23 34 06.6	+0.2
	0.7nm,0.5s,baz=3.4,slow=7.6,SNR=9.0						
ASAR	Alice Springs	60.77	187	P	P	23 34 32.6	+0.4
	0.3nm,0.7s,baz=24,slow=5.6,SNR=4.4						

ISCJB ***05*** *23:28:46.1±0.8, 24°.9S±0°.1×179°.9E±0°.2, h501^{km}, mb3.8/12, Error ellipse: s-maj=19.5km s-min=15.5km az=152.1*
IDC ***05*** *23:28:46.3±2.8, 24°.80S×179°.98E, h494^{km}±28^{km}, mb3.4/12, mb1 3.6/13, mb1mx3.3/53, mbtmp4.3/13, Error ellipse: s-maj=23.8km s-min=16.2km az=52.0*
ISC 05 23:28:47.1±0.8**, 24°.8S**±0°.1×**179°.9E**±0°.1**, h501**^{km}**, n18, σ0^{s}70**/18**, mb3.9**/12**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	13.59	189	P	P	23 31 41.9	-0.3
	0.9nm,0.3s,baz=117,slow=2.5,SNR=5.6						
CTA	Charters Tower	31.42	272	P	P	23 34 27.6	+0.8
	6.1nm,0.3s,baz=92,slow=11,SNR=11						
STKA	Stephens Creek	34.31	249	P	P	23 34 51.4	+0.2
	1.2nm,0.3s,baz=102,slow=11,SNR=6.3						
ASAR	Alice Springs	41.81	262	P	P	23 35 52.5	-0.1
	1.7nm,0.3s,baz=93,slow=7.1,SNR=38						
WRA	Warramunga Arr	42.27	267	P	P	23 35 55.7	-0.5
	4.7nm,0.3s,baz=99,slow=6.9,SNR=90						
FITZ	Fitzroy Crossi	50.69	266	P	P	23 37 00.3	+0.2
	3.1nm,0.7s,baz=65,slow=4.4,SNR=9.2						
SIJI	Sorong	52.67	289	P	P	23 37 14.8	+0.3
	6.8nm,0.4s,baz=143,slow=20,SNR=3.1						
VNDA	Vanda	53.44	185	P	P	23 37 19.7	+0.7
	0.3nm,0.4s,baz=331,slow=6.5,SNR=4.1						
QSPA	South Pole Qui	65.24	180	P	P	23 38 38.5	+0.1
	4.3nm,1.0s,baz=330,slow=1.8,SNR=8.9						
MJAR	Matsushiro Arr	72.63	326	P	P	23 39 23.3	+0.1
	0.7nm,0.3s,baz=164,slow=7.0,SNR=4.4						
PETK	Petropavlovsk-	80.00	347	P	P	23 40 02.2	-1.2
	1.2nm,0.5s,baz=119,slow=8.4						
SNAA	Sanae	83.73	179	P	P	23 40 21.4	-1.1
	0.9nm,0.7s,baz=234,slow=8.7,SNR=3.6						
TXAR	Lajitas Array	90.99	58	P	P	23 40 59.0	+1.4
	0.2nm,0.6s,baz=221,slow=6.7,SNR=3.1						
BVAR	Borovoye Array	121.09	318	PKP	PKPdf	23 46 41.8	-0.3
	0.2nm,0.3s,baz=35,slow=3.5,SNR=3.7						
ARCES	ARCESS Array B	132.79	348	PKP	PKPdf	23 47 04.1	+0.1
	2.5nm,0.9s,baz=98,slow=1.3,SNR=2.8						
ARCES				SKPbc	SKPbc	23 49 44.4	+0.1
	4.1nm,1.1s,baz=64,slow=5.5,SNR=3.6						
HFS	Hagfors	143.45	348	PKP	PKPab	23 47 21.5	-0.4
	2.1nm,0.4s,baz=72,slow=4.7,SNR=17						
MMAI	Mount Meron Ar	148.01	293	PKPbc	PKPbc	23 47 35.7	-0.5
	0.6nm,0.3s,baz=85,slow=6.1,SNR=5.2						
BRTR	Keskin Array B	148.08	306	PKPbc	PKPbc	23 47 35.5	-0.7
	0.3nm,0.5s,baz=56,slow=0.5,SNR=4.1						

IDC 05 23:29:00.2±3.5**, 14°.43N×146°.83E, h0**^{km}**, mb3.6**/4**, mb1 3.7**/5**, mb1mx3.3**/70**, mbtmp3.6**/5**, ML3.4**/1**, Error ellipse: s-maj=83.7km s-min=26.3km az=144.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	Guam	2.08	247	Pn	Pn	23 29 36.3	+0.1
	13nm,0.3s,baz=63,slow=9.0,SNR=5.9						
GUMO				Sn	Sn	23 30 03.8	+0.9
	8.7nm,0.3s,baz=198,slow=20,SNR=3.4						
SONM	Songino Array	47.17	323	P	P	23 37 34.6	-0.1
	0.3nm,0.3s,baz=111,slow=8.0,SNR=3.3						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MKAR	Makanchi Array	62.22	315	P	P	23 39 23.9	+0.1
	0.4nm,0.6s,baz=100,slow=6.8,SNR=4.2						
KURBB	Kurchatov Arra	65.22	319	P	P	23 39 43.4	-0.1
	1.0nm,0.6s,baz=99,slow=6.8,SNR=10						
ILAR	Eielson Array	67.00	25	P	P	23 39 54.7	0.0
	0.2nm,0.4s,baz=260,slow=4.2,SNR=4.1						

MEX 05 23:29:04.9±0.3, 26°.56N×111°.67W, h20km±14km, MD3.7, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRIG	Santa Rosalia	0.91	326	eP	Pb	23 29 19.4	-2.7
SRIG				eS	Sb	23 29 30.4	-3.3
GUYB	Guaymas	1.51	28	eP	Pn	23 29 27.9	-2.9
GUYB				eS	Sn	23 29 45.6	-4.4

GUC 05 23:36:28.4±0.3, 23°.25S×68°.69W, h120km±4km, ML4.0, 3C-3D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB06	IPOC Station P	0.97	303	⇑iP	Pn	23 36 50.9	+0.5
PB06				iS	Sn	23 37 07.9	+0.9
PB06				IAML		23 37 08.9	
	comp=E,6µm,0.1s						
PB05	IPOC Station P	1.45	285	⇑iP	Pn	23 36 55.8	+0.5
PB05				iS	Sn	23 37 16.9	+1.1
PB05				IAML		23 37 20.1	
	comp=E,1µm,0.9s						
PB09	IPOC Station P	1.53	340	⇓iP	Pn	23 36 57.8	+1.4
PB09				iS	Sn	23 37 19.6	+1.9
PB09				IAML		23 37 21.0	
	comp=N,806nm,0.3s						
PB03	IPOC Station P	1.54	320	eP	Pn	23 36 57.4	+0.8
PB03				iS	Sn	23 37 19.2	+1.3
PB03				IAML		23 37 21.2	
	comp=N,3µm,0.4s						
PB04	IPOC Station P	1.62	304	⇑iP	Pn	23 36 58.3	+0.8
PB04				eS	Sn	23 37 21.0	+1.4
PB04				IAML		23 37 22.1	
	comp=E,2µm,0.4s						
PB10	IPOC Station P	1.73	261	eP	Pn	23 36 59.2	+0.6
PB10				iS	Sn	23 37 22.7	+1.0
PB10				IAML		23 37 31.4	
	comp=N,880nm,0.3s						
PB07	IPOC Station P	1.87	324	⇓iP	Pn	23 37 01.5	+1.0
PB07				iS	Sn	23 37 26.6	+1.6
PB07				IAML		23 37 28.2	
	comp=E,1µm,0.2s						
PB14	IPOC Station P	2.09	228	eP	Pn	23 37 03.0	-0.3
PB14				IAML		23 37 34.9	
	comp=E,962nm,0.4s						
PB02	IPOC Station P	2.22	330	⇓iP	Pn	23 37 05.6	+0.8
PB02				iS	Sn	23 37 33.8	+1.2
PB02				IAML		23 37 35.2	
	comp=E,2µm,0.6s						
PB01	IPOC Station P	2.31	341	eP	Pn	23 37 06.5	+0.5
PB01				iS	Sn	23 37 36.0	+1.4
PB01				IAML		23 37 36.8	
	comp=E,1µm,0.3s						

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*ISCJB **05** 23:36:47.8±0.5, 15°.08S±0°.07×73°.03W±0°.05, h101km, mb4.0/11, Error ellipse: s-maj=11.0km s-min=6.8km az=19.7*

*NEIC **05** 23:36:48.8±1.1, 15°.10S×73°.02W, h95km±10km, mb4.6/2, Error ellipse: s-maj=14.9km s-min=8.8km az=220.0*

*IDC **05** 23:36:48.8±1.8, 15°.15S×73°.07W, h95km±15km, mb3.8/9, mb1 4.0/14, mb1mx3.8/43, mbtmp4.2/14, MS2.4/1, Ms1 2.4/1, ms1mx2.2/37, Error ellipse: s-maj=22.5km s-min=11.5km az=41.0*

ISC 05 23:36:49.3±0.6, **15°.07S**±0°.09×**73°.02W**±0°.07, **h101**km, **n26**, σ**1s.01**/27, **mb4.1**/11, **Southern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	4.82	309	P	Pn	23 38 00.5	+0.9
	4.6nm,0.3s,baz=123,slow=13,SNR=8.3						
NNA				S	Sn	23 38 53.5	-0.9
	19nm,0.3s,baz=46,slow=9.9,SNR=12						
NNA				LR	LR	23 39 20.1	
	comp=Z,40nm,19.2s,baz=126,slow=31						
NNA	Nana	4.82	309	ePn	Pn	23 37 58.9	-0.8
NNA				S	Sn	23 38 53.5	-0.9
LPAZ	La Paz	4.86	105	P	Pn	23 38 02.5	+1.7
	6.1nm,0.3s,baz=305,slow=8.0,SNR=70						
SAML	Samuel	11.38	59	ePn	Pn	23 39 26.6	-2.1
	12nm,0.9s						
SAML				eSn	Sn	23 41 34.9	+0.9
SIV	San Ignacio	11.55	96	P	Pn	23 39 29.3	-1.8
	4.7nm,0.3s,baz=292,slow=9.7,SNR=12						
CPUP	Villa Florida	18.45	130	P	Pn	23 40 57.7	-0.6
	0.3nm,0.3s,baz=323,slow=10,SNR=3.4						
PTGA	Pitinga	19.21	43	P	P	23 41 06.6	+1.0
	4.2nm,0.3s,baz=222,slow=13,SNR=30						
TXAR	Lajitas Array	53.14	326	P	P	23 45 57.7	+0.7
	1.9nm,0.9s,baz=149,slow=8.8,SNR=15						
SDCO	Great Sand Dun	60.76	331	eP	P	23 46 51.9	+1.0
	7.1nm,1.1s						
PDAR	Pinedale Array	66.62	331	P	P	23 47 29.5	+0.2
	0.5nm,0.7s,baz=141,slow=5.7,SNR=5.5						
NVAR	Mina Array Bea	68.04	323	P	P	23 47 39.8	+1.5
	0.8nm,0.8s,baz=145,slow=7.2,SNR=6.4						
ULM	Lac du Bonnet	68.07	344	P	P	23 47 37.9	-0.1
	3.9nm,0.5s,baz=147,slow=5.6,SNR=4.5						
SNAA	Sanae	69.59	161	P	P	23 47 46.4	-0.8
	1.9nm,0.6s,baz=280,slow=8.7,SNR=9.0						
MFID	Camas Ranch	70.15	328	eP	P	23 47 52.5	+1.4
	10.0nm,1.1s						
QSPA	South Pole Qui	75.09	180	P	P	23 48 19.8	-0.3
	2.1nm,0.8s,baz=164,slow=3.4,SNR=4.1						
TORD	Torodi Ar. Bea	79.06	73	P	P	23 48 42.9	-0.2
	1.5nm,0.6s,baz=260,slow=5.1						
VNDA	Vanda	82.46	190	P	P	23 48 59.8	-0.3
	1.0nm,0.9s,baz=214,slow=3.8,SNR=3.6						
YKA	Yellowknife Ar	83.88	342	P	P	23 49 07.6	+0.2
	2.2nm,0.7s,baz=135,slow=5.2,SNR=23						
ASAR	Alice Springs	133.37	215	PKP	PKPdf	23 55 53.7	-0.8
	0.5nm,0.7s,baz=129,slow=2.0,SNR=4.4						
WRA	Warramunga Arr	136.02	219	PKP	PKPdf	23 55 58.6	-0.9
	1.2nm,0.5s,baz=145,slow=1.9,SNR=8.2						
ZALV	Zalesovo Beam	137.49	19	PKP	PKPdf	23 56 01.2	+0.1
	1.0nm,0.7s,baz=212,slow=5.3,SNR=4.7						
MKAR	Makanchi Array	142.26	28	PKhKP	PKPpre	23 55 57.5	
	0.6nm,0.7s,baz=336,slow=2.7,SNR=4.1						
MJAR	Matsushiro Arr	144.93	313	PKP	PKPbc	23 56 14.4	-0.1
	1.7nm,0.6s,baz=140,slow=0.4,SNR=6.3						
SONM	Songino Array	147.32	1	PKPbc	PKPbc	23 56 21.8	+0.4
	1.6nm,0.6s,baz=330,slow=1.9,SNR=11						
KSRS	Korea Array	150.98	324	PKPbc	PKPbc	23 56 31.1	+0.4
	3.1nm,0.8s,baz=12,slow=1.6,SNR=8.3						
KSAR	Wonju Array Be	151.01	324	PKPbc	PKPbc	23 56 31.1	+0.4

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*ISN **05** 23:41:06.2±0.9, 35°.81N×43°.49E, h0km±5km, ML2.9*

*CSEM **05** 23:41:08.8±0.3, 35°.74N×43°.42E, h2km, ML2.9, Error ellipse: s-maj=10.4km s-min=5.0km az=68.0*

*DDA **05** 23:42:03.6, 36°.70N×43°.31E, h12km, Ml3.5*

ISC 05 23:41:09.4±2.0, **35°.84N**±0°.05×**43°.36E**±0°.04, **h20**km±12km, **n41**, σ**1s.58**/53, **Iraq**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAKT	HAKKARI	1.73	9	iP	Pb	23 41 40.3	-0.5
HAKT				iS	Sg	23 42 07.8	+2.3
HAKT	HAKKARI	1.73	9	P	Pb	23 41 40.3	-0.5
HAKT				S	Sg	23 42 07.8	+2.3
SIRT	Sirnak	1.81	336	eP	Pn	23 41 39.8	+0.2
SIRN	S˜–rnak	1.82	336	iP	Pb	23 41 41.4	-0.7
SIRN				iS	Sg	23 42 09.3	+1.2
SIRN	S˜–rnak	1.82	336	P	Pb	23 41 41.4	-0.7
SIRN				S	Sg	23 42 09.3	+1.2
YOVA	Hakkari_Yˆ…kse	1.89	23	iP	Pb	23 41 43.3	-0.2
YOVA				iS	Sg	23 42 13.4	+2.8
YOVA	Hakkari_Yˆ…kse	1.89	23	P	Pb	23 41 43.3	-0.2
SRTM	Siirt_Merkez	2.43	332	iS	Sg	23 42 27.7	-0.1
GEVA	Gevas	2.48	355	iP	Pb	23 41 51.7	-1.7
GEVA				iS	Sg	23 42 26.4	-2.7
GEVA	Gevas	2.48	355	P	Pb	23 41 51.7	-1.7
GEVA				S	Sg	23 42 26.4	-2.7
MARD	Mardin	2.54	306	iS	Sb	23 42 25.6	+0.2
BTMN	Batman	2.64	321	iP	Pb	23 41 55.7	-0.5
BTMN				iS	Sg	23 42 32.5	-1.9
BTMN	Batman	2.64	321	P	Pb	23 41 55.7	-0.5
BHD	Baghdad	2.70	162	ePn	Pn	23 41 51.0	-0.8
	SNR=39						
BHD				eSn	Sn	23 42 23.4	-0.5
	SNR=39						
VANB	Van	2.75	0	eP	Pn	23 41 50.5	-2.0
MAZI	Mazidag	2.84	305	eP	Pn	23 41 53.5	-0.3
SVAN	Silvan-Diyarba	2.88	324	eP	Pn	23 41 54.3	0.0
SVAN	Silvan-Diyarba	2.88	324	iP	Pb	23 42 00.9	+0.7
SVAN				iS	Sg	23 42 39.3	-2.7
SVAN	Silvan-Diyarba	2.88	324	P	Pb	23 42 00.9	+0.7
GURO	Guroymak-BITLI	2.90	339	eP	Pn	23 41 55.9	+1.2
ADCV	BITLIS_Adilcev	3.00	350	iP	Pn	23 41 58.8	+2.7
ADCV	BITLIS_Adilcev	3.00	350	P	Pn	23 41 58.8	+2.7
CLDR	Caldiran	3.32	7	eP	Pn	23 41 59.3	-1.2
DIYA	Diyarbakir	3.32	310	iP	Pb	23 42 09.4	+1.7
DIYA				iS	Sg	23 42 53.0	-3.3
DYBB	Diyarbakir	3.33	310	eP	Pn	23 42 01.1	+0.6
HANI	Diyarbakir_Han	3.49	318	iP	Pb	23 42 08.9	-1.7
HANI	Diyarbakir_Han	3.49	318	P	Pb	23 42 08.9	-1.7
VRTB	Varto-Mus	3.64	336	eP	Pn	23 42 06.4	+1.6
RTB	Rutbah	3.77	223	ePn	Pn	23 42 08.0	+1.4
	SNR=39						
RTB				eSn	Sn	23 42 51.0	+0.6
	SNR=3.0						
BNGB	Bingˆ¶l	3.80	327	eP	Pn	23 42 07.8	+0.8
URFA	Urfa	3.98	295	eP	Pn	23 42 10.4	+0.9
SVRC	Sivrice-ELAZID	4.11	309	eP	Pn	23 42 12.2	+0.9
YEDI	Yedisu-Bingol	4.23	329	eP	Pn	23 42 13.4	+0.5
PTK	Pertek	4.39	315	eP	Pn	23 42 16.9	+1.8
GNI	Garni	4.43	14	eP	Pn	23 42 15.3	-0.5
MALT	Malatya	4.65	303	eP	Pn	23 42 19.6	+0.9
GAZ	Gaziantep	5.13	287	eP	Pn	23 42 27.0	+1.8
DARE	Darende-Malaty	5.42	302	eP	Pn	23 42 31.6	+2.3
KMRS	Kahramanmaras	5.45	290	eP	Pn	23 42 30.2	+0.6
TAHT	Tahtakopru-Hat	5.83	277	eP	Pn	23 42 35.4	+0.6
SVSK	Karacayir	6.47	311	eP	Pn	23 42 45.4	+1.9

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*SJA **06** 00:04:58.4±0.6, 28°.78S×72°.13W, h32km±26km, ML3.7, MW3.4*

*ISCJB **06** 00:05:09.1±1.4, 29°.21S±0°.05×71°.5W±0°.1, h31km, Error ellipse: s-maj=15.1km s-min=6.0km az=13.1*

*GUC **06** 00:05:10.4±0.5, 29°.29S×70°.94W, h64km±3km, ML3.4*

ISC 06 00:05:07.0±2.0, **29°.13S**±0°.05×**71°.6W**±0°.1, **h31**km, **n11**, σ**1s.87**/16, **2C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCO	Las Campanas	0.75	82	⇓iP	Pn	00 05 23.0	+1.2
LCO				iS	Sn	00 05 31.9	-0.4
LCO				IAML		00 05 32.8	
	comp=E,3µm,0.4s						
TLL	Tololo Astrono	1.23	148	⇓iP	Pb	00 05 28.6	-1.2
TLL				iS	Sn	00 05 42.6	-1.3
TLL				IAML		00 05 45.0	
	comp=N,3µm,0.4s						
GO04	Tololo Observa	1.23	148	⇑iP	Pb	00 05 28.6	-1.3
GO04				iS	Sn	00 05 42.8	-1.3
GO03	Copiap	1.92	38	⇑iP	Pb	00 05 40.7	-0.7
GO03				iS	Sb	00 06 04.0	-1.0
GO03				IAML		00 06 14.8	
	comp=N,390nm,0.3s						
AROD	Rodeo	2.08	120	iP	Pb	00 05 42.6	-1.8
AGUA	GUANDACOL	2.70	98	iP	Pn	00 05 50.4	+2.0
AMOG	MOGNA	3.21	125	iP	Pn	00 05 58.1	+2.6
RTLS	Leoncito	3.30	144	iP	Pn	00 06 00.1	+3.3
RTLS				iS	Sb	00 06 45.1	+0.1
RTLS				IAML		00 06 48.8	
	comp=Z,118nm,0.7s						
AUSP	Uspallata	3.61	149	iP	Pn	00 06 04.1	+3.0
ROC1	El Roble	3.87	173	iP	Pn	00 06 04.9	+0.3
CYA	Choya	5.09	84	iP	Pn	00 06 22.7	+1.4

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*IDC **06** 00:11:50.7±1.0, 12°.04N×143°.18E, h0km, mb3.9/9, mb1 4.2/10, mb1mx3.8/59, mbtmp4.0/10, ML4.1/1, MS1.9/1, Ms1 1.9/1, ms1mx1.8/54, Error ellipse: s-maj=31.2km s-min=22.1km az=134.0*

*NEIC **06** 00:11:52.3±0.4, 12°.03N×143°.18E, h10km, mb4.2/4, Error ellipse: s-maj=15.6km s-min=9.4km az=102.0*

*ISCJB **06** 00:11:53.6±0.6, 12°.00N±0°.08×143°.14E±0°.10, h31km, mb4.0/13, Error ellipse: s-maj=15.9km s-min=8.8km az=38.4*

ISC 06 00:11:55.4±0.8, **12°.0N**±0°.1×**143°.2E**±0°.1, **h31**km, **n22**, σ**0s.66**/19, **mb4.1**/13, **South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	2.26	47	Pn	Pn	00 12 30.8	0.0
	53nm,0.3s,baz=204,slow=2.4,SNR=19						
GUMO				Sn	Sn	00 12 57.9	+0.2
	53nm,0.3s,baz=359,slow=22,SNR=6.6						
GUMO				LR	LR	00 13 01.8	
	comp=Z,27nm,21.9s,baz=224,slow=32						
GUMO	Guam	2.26	47	ePn	Pn	00 12 29.8	-0.9
GUMO				eSn	Sn	00 12 57.6	-0.1
GUMO				Sn	Sn	00 12 57.9	+0.2
H11S3	WAKE ISLAND Hy	23.56	71	T	T	00 41 27.9	
	baz=252,slow=77,SNR=7.2						
H11S1	WAKE ISLAND Hy	23.58	71	T	T	00 41 27.4	
	baz=252,slow=77,SNR=5.9						
H11S2	WAKE ISLAND Hy	23.58	71	T	T	00 41 22.9	
	baz=252,slow=77,SNR=8.3						
H11N1	WAKE ISLAND Hy	24.04	68	T	T	00 41 59.5	
	baz=254,slow=75,SNR=14						
H11N2	WAKE ISLAND Hy	24.05	68	T	T	00 41 58.6	
	baz=254,slow=75,SNR=11						
H11N3	WAKE ISLAND Hy	24.06	68	T	T	00 42 00.9	
	baz=254,slow=75,SNR=11						
MAJO	Matsushiro	24.81	350	P	P	00 17 14.6	-0.3
	1.4nm,0.6s						
CTAO	Charters Tower	32.06	175	P	P	00 18 19.7	0.0
	2.1nm,0.4s						
WRAB	Tennant Creek	32.93	195	P	P	00 18 27.1	-0.3
	3.8nm,1.1s						
WRA	Warramunga Arr	32.94	195	P	P	00 18 27.2	-0.3
	0.7nm,0.9s,baz=21,slow=9.3,SNR=4.1						
ZALV	Zalesovo Beam	61.93	325	P	P	00 22 12.7	+0.5
	0.4nm,0.3s,baz=102,slow=8.0,SNR=2.3						
KURK	Kurchatov	64.71	321	P	P	00 22 31.1	+0.5
KURBB	Kurchatov Arra	64.75	320	P	P	00 22 31.1	+0.3
	0.3nm,0.2s,baz=106,slow=6.0,SNR=3.9						
BVAR	Borovoye Array	70.12	322	P	P	00 23 05.5	+0.7
	0.6nm,0.3s,baz=107,slow=9.9,SNR=8.1						
BRVK	Borovoye	70.19	322	P	P	00 23 05.4	+0.2
	0.9nm,0.5s						
ILAR	Eielson Array	70.67	25	P	P	00 23 06.7	-1.3
	0.9nm,0.4s,baz=250,slow=5.7,SNR=19						
YKA	Yellowknife Ar	84.99	27	P	P	00 24 28.4	+0.8
	0.3nm,0.5s,baz=287,slow=5.6,SNR=3.8						
ARCES	ARCESS Array B	88.04	342	P	P	00 24 42.5	+0.1
	0.5nm,0.4s,baz=82,slow=7.9,SNR=7.6						
NVAR	Mina Array Bea	89.18	51	P	P	00 24 50.0	+1.2
	0.5nm,0.6s,baz=274,slow=5.6,SNR=5.3						
FINES	FINESS Array B	91.86	335	P	P	00 24 59.4	-1.0
	0.5nm,0.3s,baz=87,slow=5.1,SNR=8.6						

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*ISCJB **06** 00:38:57.0±0.6, 4°.10S±0°.06×76°.86W±0°.06, h109km, mb3.4/5, Error ellipse: s-maj=10.5km s-min=6.0km az=136.1*

*IDC **06** 00:38:58.2±3.7, 3°.96S×76°.80W, h109km±37km, mb3.2/5, mb1 3.6/8, mb1mx3.4/43, mbtmp3.8/8, Error ellipse: s-maj=41.3km s-min=19.8km az=36.0*

*IGQ **06** 00:39:00.1±1.0, 4°S±9°×7°7W±°, h10km, MLv4.6/4, MLv4.6/2*

ISC 06 00:38:57.3±0.6, **4°.13S**±0°.07×**76°.86W**±0°.09, **h109**km, **n38**, σ**1s.31**/42, **mb3.4**/5, **Northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BPAT	Tungurahua Vol	3.05	329	P	Pn	00 39 44.5	0.0
ARRY	Arrayan	3.06	329	P	Pn	00 39 43.9	-0.6
BMAS	Trigal station	3.07	328	P	Pn	00 39 45.4	+0.8
BMAS				S	Sn	00 40 19.6	-1.5
BULB	Ulba Tungurahu	3.09	330	P	Pn	00 39 44.3	-0.6
BULB				S	Sn	00 40 19.6	-2.0
RETU	Refugio	3.10	329	P	Pn	00 39 44.9	-0.2
RUN5	Runtun	3.12	330	P	Pn	00 39 45.0	-0.3
JUI6	Juive	3.13	329	P	Pn	00 39 45.2	-0.2
MILO	Milagro-Astudi	3.26	304	P	Pn	00 39 46.9	+0.1
MILO				S	Sn	00 40 24.0	-1.0
PISA	Pisayambo	3.41	333	P	Pn	00 39 49.1	-0.3
BMOR	Cotopaxi Volca	3.74	335	P	Pn	00 39 54.2	+0.5
BTAM	Cotopaxi Volca	3.76	336	P	Pn	00 39 54.2	+0.1
BREF	Cotopaxi Volca	3.79	335	P	Pn	00 39 55.3	+0.9
BVC2	Cotopaxi Volca	3.79	336	P	Pn	00 39 55.0	+0.7
PAST	Pastocalle	3.85	332	P	Pn	00 40 00.1	+5.0
ANTG	Antisana-Guama	3.87	339	P	Pn	00 39 55.0	-0.4
ILLI	Illinizas Sur	3.88	331	P	Pn	00 39 57.9	+2.5
PITA	Cotopaxi Volc	3.88	336	P	Pn	00 39 56.7	+1.2
OTAV	Otavalo	4.62	340	eP	Pn	00 40 06.6	+1.1
URCU	Urcuqui	4.75	343	P	Pn	00 40 09.0	+1.8
LITE1	Lita	5.12	343	P	Pn	00 40 16.0	+4.1
POPC	Popayan, Colom	6.63	2	eP	Pn	00 40 32.9	+0.4
BETC	Betania	6.92	12	eP	Pn	00 40 36.0	-0.2
NNA	Nana	7.80	180	P	Pn	00 40 50.7	+2.4
	12nm,0.3s,baz=12,slow=8.2,SNR=27						
NNA				S	Sn	00 42 11.1	-3.9
	6.6nm,0.3s,baz=270,slow=23,SNR=3.8						
CHIC	Chingaza	9.25	20	eP	Pn	00 41 08.0	-0.2
RUSC	La Rusia	10.65	21	eP	Pn	00 41 26.9	-0.4
PTBC	PUERTO BERRIO,	10.87	13	eP	Pn	00 41 30.4	+0.6
PTGA	Pitinga	17.21	79	P	Pn	00 42 51.8	+0.7
	0.9nm,0.3s,baz=294,slow=19,SNR=4.1						
SIV	San Ignacio	19.48	128	P	Pn	00 43 18.5	+0.3
	0.2nm,0.3s,baz=325,slow=12,SNR=6.3						
TXAR	Lajitas Array	42.06	324	P	P	00 46 39.0	+0.4
	0.4nm,0.6s,baz=149,slow=8.3,SNR=5.7						
TXAR				PcP	PcP	00 48 32.2	+0.6
	0.4nm,0.8s,baz=133,slow=5.5,SNR=4.4						
PDAR	Pinedale Array	55.27	331	P	P	00 48 19.4	-0.3
	0.4nm,0.6s,baz=116,slow=8.5,SNR=6.9						
NVAR	Mina Array Bea	57.12	322	P	P	00 48 33.6	+0.7
	0.3nm,0.6s,baz=112,slow=9.2,SNR=3.5						
YKA	Yellowknife Ar	72.38	343	P	P	00 50 10.0	-1.2
	0.4nm,0.7s,baz=113,slow=8.9,SNR=3.7						
TORD	Torodi Ar. Bea	79.83	76	P	P	00 50 53.9	-0.5
	0.7nm,1.1s,baz=285,slow=5.9						
ZALV	Zalesovo Beam	128.13	14	PKP	PKPdf	00 57 51.5	+0.8
	0.7nm,0.5s,baz=272,slow=3.9,SNR=4.1						
KURBB	Kurchatov Arra	129.26	20	PKP	PKPdf	00 57 53.9	+1.0
	0.5nm,0.7s,baz=330,slow=2.2,SNR=4.8						
MKAR	Makanchi Array	133.82	20	PKP	PKPdf	00 58 01.9	+0.1
	0.4nm,0.8s,baz=322,slow=2.1,SNR=2.2						
ASAR	Alice Springs	139.22	226	PKP	PKPdf	00 58 12.2	-0.3
	0.3nm,0.6s,baz=128,slow=1.5,SNR=3.9						
WRA	Warramunga Arr	141.11	231	PKhKP	PKPpre	00 58 10.9	
	0.9nm,0.8s,baz=115,slow=2.0,SNR=3.0						
WRA				PKP	PKPdf	00 58 14.9	-1.0
	0.8nm,0.7s,baz=121,slow=1.9,SNR=3.7						

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*IDC **06** 00:40:33.4±0.6, 14°.79S×178°.10W, h0km, mb4.3/15, mb1 4.5/16, mb1mx4.4/47, mbtmp4.3/16, ML3.3/1, MS4.3/43, Ms1 4.3/43, ms1mx4.2/49, Error ellipse: s-maj=21.1km s-min=16.1km az=134.0*

*ISCJB **06** 00:40:35.7±0.2, 14°.62S±0°.05×177°.92W±0°.05, h10km, mb4.8/118, MS4.4/44, Error ellipse: s-maj=8.1km s-min=5.3km az=139.1*

*BJI **06** 00:40:35.8, 14°.17S×177°.58W, h12km, mb5.0/26, mB5.1/19, Ms4.8/11, Ms7 4.5/13*

*NEIC **06** 00:40:37.0±0.2, 14°.59S×177°.91W, h10km, mb4.9/93, Error ellipse: s-maj=8.6km s-min=4.7km az=132.0*

NEIC Felt at Vele, Wallis and Futuna.

*GCMT **06** 00:40:37.0±0.2, 14°.67S×177°.92W, h20km, MW5.2/110, Moment Tensor Solution. s78,c107; s110,c178; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.31±.13; $M_{\theta\theta}$-2.80±.12; $M_{\phi\phi}$3.12±.12; $M_{r\theta}$-1.23±.23; $M_{\theta\phi}$5.95±.12; $M_{\phi r}$-0.48±.23; Best double couple: $M_0$6.77400×10^{16} NP1:ϕ_s257.00000°, δ89.00000°, λ11.00000°. NP2: ϕ_s167.00000°, δ79.00000°, λ179.00000°. Principal axes: T 6.9600, Plg8.0000°, Azm122.0000°; N -0.3670, Plg79.0000°, Azm260.0000°; P -6.5870, Plg7.0000°, Azm31.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*MOS **06** 00:40:38.8±1.0, 14°.59S×177°.93W, h33km, mb5.0/25 Error ellipse: s-maj=11.8km s-min=10.8km az=60.9*

ISC 06 00:40:36.7±0.3, **14°.61S**±0°.07×**177°.75W**±0°.05, **h10**km, **n263**, σ**1s.64**/231, **mb4.8**/118, **MS4.4**/44, **7C-8D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	5.83	84	Pn	Pn	00 42 01.8	-1.5
	13nm,0.3s,baz=86,slow=6.4,SNR=10						
AFI				Sn	Sn	00 43 08.8	-1.6
	12nm,0.3s,baz=332,slow=23,SNR=3.9						
AFI				LR	LR	00 43 54.6	
	comp=Z,2µm,18.3s,baz=259,slow=32						
AFI	Afiamalu	5.83	84	ePn	Pn	00 42 02.6	-0.8
AFI				Sn	Sn	00 43 08.8	-1.6
AFI	Afiamalu	5.83	84	eP	Pn	00 42 02.6	-0.8
AFI						00 43 08.8	
KNTN	Kanton	13.18	27	ePn	Pn	00 43 42.0	-2.1
DZM	Mont Dzumac	16.73	241	LR	LR	00 49 39.9	
	comp=Z,1µm,19.9s,baz=66,slow=33						
DZM	Mont Dzumac	16.73	241	ePn	Pn	00 44 31.0	-0.5
	88nm,1.3s						
DZM				eLQ	LQ	00 47 40.6	
	3µm,28.1s						
DZM				eLR	LR	00 48 25.8	
	2µm,25.6s						
DZM	Mont Dzumac	16.73	241	ePn	Pn	00 44 31.9	+0.4
	158nm,2.0s						
RAR	Rarotonga	18.32	114	P	P	00 44 51.8	+0.6
	0.9nm,0.3s,baz=309,slow=3.2,SNR=5.0						
RAR				LR	LR	00 50 18.8	
	comp=Z,1µm,21.6s,baz=278,slow=32						
RAR	Rarotonga	18.32	114	eP	P	00 44 53.2	+2.1
	162nm,1.7s						
RAR	Rarotonga	18.32	114	eP	P	00 44 53.2	+2.1
RAR				pmax	pmax		
	comp=Z,162nm,1.7s						
OUZ	Omahuta	21.95	199	eP	P	00 45 30.5	-0.1
	comp=Z,173nm,1.8s						
HNR	Honiara	22.41	281	LR	LR	00 52 45.7	
	comp=Z,2µm,20.7s,baz=124,slow=33						
HNR	Honiara	22.41	281	eP	P	00 45 34.9	-0.8
	comp=Z,200nm,1.1s						
HNR	Honiara	22.41	281	eP	P	00 45 34.9	-0.8
HNR				pmax	pmax		
	comp=Z,200nm,1.1s						
URZ	Urewera	24.00	190	P	P	00 45 45.7	-5.9
	comp=Z,5.2nm,0.6s,baz=24,slow=10.0,SNR=2.4						
URZ				LR	LR	00 53 20.3	
	comp=Z,960nm,18.7s,baz=42,slow=32						
URZ	Urewera	24.00	190	eP	P	00 45 51.1	-0.4
	comp=Z,36nm,1.0s						
HIZ	Hauiti	24.69	194	eP	P	00 45 58.0	0.0
	comp=Z,94nm,1.3s						
PPT	Papeete	27.22	100	LR	LR	00 55 04.1	
	comp=Z,207nm,19.2s,baz=261,slow=32						
PPT2	Papeete2	27.22	100	eLQ	LQ	00 51 57.7	
	comp=Z,2µm,28.0s						
PPT2				eLR	LR	00 53 14.6	
	comp=Z,2µm,28.5s,baz=258						
TBI	Tubuai	28.09	112	eLQ	LQ	00 52 26.3	
	comp=Z,2µm,26.2s						
TBI				eLR	LR	00 53 45.6	
	comp=Z,3µm,27.2s,baz=285						
TBI	Tubuai	28.09	112	eT	T	01 15 37.0	
	comp=Z,6.3nm,0.3s						
LTZ	Lake Taylor	29.36	195	eP	P	00 46 39.7	-0.3
	comp=Z,106nm,1.9s						
OXZ	Oxford	29.93	195	eP	P	00 46 43.0	-1.9
	comp=Z,53nm,1.3s						
JOHN	Johnston Islan	32.18	15	eP	P	00 47 05.5	+0.5
	comp=Z,132nm,0.9s						
MLZ	Mavora Lakes	32.91	198	eP	P	00 47 09.8	-1.3
	comp=Z,64nm,1.3s						
WHZ	Wether Hill Ro	33.43	198	eP	P	00 47 16.1	+0.4
	comp=Z,122nm,1.5s						
PMG	Port Moresby	34.69	275	LR	LR	00 59 49.0	
	comp=Z,446nm,20.1s,baz=99,slow=34						
H11S2	WAKE ISLAND Hy	36.28	335	T	T	01 26 05.5	
	baz=155,slow=76,SNR=4.2						
H11S3	WAKE ISLAND Hy	36.29	335	T	T	01 26 08.7	
	baz=155,slow=76,SNR=5.5						
H11S1	WAKE ISLAND Hy	36.30	335	T	T	01 26 04.4	
	baz=155,slow=76,SNR=4.2						

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TAOE  Nuku Hiva Isla   37.22  85  eLR      LR       00 57 45.0
      comp=Z,646nm,25.4s
H11N3 WAKE ISLAND Hy  37.30 336   T        T        01 27 11.0
      baz=159
H11N1 WAKE ISLAND Hy  37.30 336   T        T        01 27 33.2
      baz=159,SNR=5.1
H11N2 WAKE ISLAND Hy  37.32 336   T        T        01 27 38.2
      baz=159
HLP   Hilina Pali      40.29  34  eP       P        00 48 15.2 +0.8
      comp=Z,406nm,1.3s
STKA  Stephens Creek   40.84 238   P       P        00 48 15.5 -3.4
      comp=Z,3.5nm,0.8s,baz=50,slow=9.6,SNR=6.9
STKA                               LR      LR       01 03 09.7
      comp=Z,825nm,20.7s,baz=71,slow=34
STKA  Stephens Creek   40.84 238  eP       P        00 48 18.1 -0.8
      comp=Z,4.4nm,1.1s
STKA  Stephens Creek   40.84 238  eP       P        00 48 18.0 -0.8
STKA                               pmax    pmax
      comp=Z,4.0nm,0.8s
RKT   Rikitea          41.23 108  eLQ      LQ       00 57 54.8
      comp=Z,445nm,31.8s
RKT                               eLR      LR       00 59 48.5
      comp=Z,886nm,26.2s,baz=278
RKT   Rikitea          41.23 108  eT       T        01 32 06.9
      comp=Z,1.7nm,0.3s
WB2   Warramunga Arr   45.93 256  eP       P        00 49 00.1  0.0
WRAB  Tennant Creek    45.93 256⇓eP       P        00 48 58.3 -1.8
WRAB                               pmax    pmax
      comp=Z,13nm,1.4s
WRA   Warramunga Arr   45.94 256   P       P        00 48 55.2 -5.0
      comp=Z,2.0nm,0.9s,baz=92,slow=10,SNR=3.8
WRA                                LR      LR       01 07 19.6
      comp=Z,537nm,18.4s,baz=95,slow=35
AS01  Alice Springs    46.33 251  eP       P        00 49 03.1 -0.2
AS01                              ePcP     PcP      00 50 39.8 +1.2
AS31  Alice Springs    46.37 251  eP       P        00 49 04.9 +1.2
      comp=Z,2.3nm,0.8s
ASAR  Alice Springs    46.37 251   P       P        00 48 59.0 -4.6
      comp=Z,5.9nm,0.7s,baz=85,slow=8.0,SNR=19
ASAR                               PcP     PcP      00 50 34.3 -4.4
      comp=Z,1.6nm,0.9s,baz=81,slow=5.7,SNR=2.4
ASAR                               LR      LR       01 07 47.7
      comp=Z,295nm,18.0s,baz=92,slow=36
GUMO  Guam             46.41 305   LR      LR       01 05 28.6
      comp=Z,125nm,20.3s,baz=144,slow=32
MTN   Manton Dam       49.61 265  eP       P        00 49 27.9 -0.8
      comp=Z,72nm,1.3s
BATI  Baumata          57.26 267   LR      LR       01 12 50.6
      comp=Z,433nm,21.5s,baz=142,slow=34
DAV   Davao City (W)   60.18 287   LR      LR       01 15 16.2
      comp=Z,188nm,18.6s,baz=143,slow=35
NWAO  Narrogin (SRO)   61.35 240   LR      LR       01 16 06.2
      comp=Z,480nm,18.6s,baz=325,slow=35
SBA   Scott Base       63.73 184  eP       P        00 51 09.0 +0.8
      comp=Z,16nm,1.4s
SBA   Scott Base       63.73 184  eP       P        00 51 09.0 +0.8
SBA                                pmax    pmax
      comp=Z,16nm,1.4s
VNDA  Vanda            63.77 185   P       P        00 51 06.2 -2.3
      comp=Z,1.6nm,1.0s,baz=9.7,slow=6.8,SNR=5.3
VNDA                               LR      LR       01 13 58.8
      comp=Z,126nm,20.7s,baz=18,slow=32
VNDA  Vanda            63.77 185  eP       P        00 51 09.6 +1.2
      comp=Z,12nm,1.6s
VNDA  Vanda            63.77 185  eP       P        00 51 09.6 +1.2
VNDA                               pmax    pmax
      comp=Z,12nm,1.6s
RPN   Rapa Nui         64.46 113   LR      LR       01 12 26.3
      comp=Z,133nm,22.0s,baz=271,slow=30
MJA0  Matsu Arr-Jizo   65.66 322  eP       P        00 51 22.0 +0.6
MJA0                               pmax    pmax
      comp=Z,1.0nm,0.3s
MJAR  Matsushiro Arr   65.68 322   P       P        00 51 18.5 -3.0
      comp=Z,0.9nm,0.3s,baz=159,slow=6.3,SNR=5.0
MJAR                               LR      LR       01 14 25.1
      comp=Z,94nm,21.1s,baz=145,slow=31
MAJO  Matsushiro       65.68 322⇓eP       P        00 51 21.6 +0.1
MAJO                               pmax    pmax
      comp=Z,8.0nm,1.1s
JOW   Kunigami         66.66 308   LR      LR       01 14 25.4
      comp=Z,161nm,21.7s,baz=129,slow=31
TGY   Tagaytay City    67.03 292   LR      LR       01 16 40.9
      comp=Z,476nm,20.7s,baz=158,slow=32
JNU   Nakatsue         68.23 315   LR      LR       01 16 20.0
      comp=Z,141nm,20.8s,baz=118,slow=32
ASAJ  Asahikawa        68.72 330   LR      LR       01 18 12.6
      comp=Z,392nm,19.4s,baz=156,slow=33
CASY  Casey            69.39 204  eP       P        00 51 44.4 -0.1
      comp=Z,10nm,1.2s
PET   Petropavlovsk    70.36 345  eP       P        00 52 01.0  +11
PETK  Petropavlovsk-   70.67 345   P       P        00 51 51.2 -1.3
      comp=Z,9.6nm,1.1s,baz=152,slow=13
PETK                               LR      LR       01 23 06.9
      comp=Z,111nm,18.1s,baz=158,slow=36
YSS   Yuzh-Sakhalins   70.78 333  eP       P        00 51 54.5 +1.3
YSS                               eS       S        01 01 11.9 +3.9
YSS                               e                 01 01 38.3
YSS                                pmax    pmax
      comp=Z,20nm,0.7s
KSRS  Korea Array      72.69 317   P       P        00 52 03.6 -1.3
      comp=Z,1.9nm,1.0s,baz=143,slow=9.4,SNR=4.8
KSRS                               LR      LR       01 18 12.7
      comp=Z,233nm,21.8s,baz=122,slow=31
KSRS  Korea Array      72.69 317  eP       P        00 52 06.1 +1.1
KSRS                               pmax    pmax
      comp=Z,1.0nm,0.6s
KSAR  Wonju Array Be   72.71 317   P       P        00 52 03.6 -1.5
KSAR  Wonju Array Be   72.71 317   P       P        00 52 03.6 -1.5
LEM   Lembang          73.48 267   LR      LR       01 25 52.8
      comp=Z,105nm,18.2s,baz=60,slow=37
USRK  Ussuriysk Ar.    74.28 325   P       P        00 52 12.5 -1.6
      comp=Z,1.7nm,0.8s,baz=90,slow=2.9
USRK                               LR      LR       01 20 38.9
      comp=Z,45nm,19.2s,baz=118,slow=32
CMB   Columbia Colle   75.02  44  eP       P        00 52 19.0 +0.3
      comp=Z,4.6nm,0.9s
CMB   Columbia Colle   75.02  44  eP       P        00 52 19.0 +0.3
CMB                                pmax    pmax
      comp=Z,5.0nm,0.9s
AFDM  Forest Hills D   75.12  42  eP       P        00 52 19.9 +0.6
      comp=Z,6.3nm,1.0s
QSPA  South Pole Qui   75.43 180  eP       P        00 52 21.1 +0.4
      comp=Z,55nm,1.1s
YBH   Yreka Blue Hor   75.58  39   LR      LR       01 18 10.7
      comp=Z,335nm,21.0s,baz=248,slow=30
YBH   Yreka Blue Hor   75.58  39  eP       P        00 52 22.7 +0.8
      comp=Z,9.9nm,1.0s
YBH   Yreka Blue Hor   75.58  39  eP       P        00 52 22.7 +0.8
YBH                                pmax    pmax
      comp=Z,10.0nm,1.0s
WAKR  Walker           75.90  44  eP       P        00 52 24.6 +0.6
      comp=Z,25nm,1.6s
HUMO  Hull Mountain    75.93  38  eP       P        00 52 25.1 +1.2
      comp=Z,9.4nm,1.0s
DAC   Darwin (Calif)   76.01  46  eP       P        00 52 30.1 +5.4
      comp=Z,12nm,1.4s
BEKR  Beckworth        76.02  42  eP       P        00 52 25.2 +0.6
      comp=Z,7.1nm,0.9s
GSC   Goldstone, Bar   76.09  47  eP       P        00 52 25.7 +0.8
      comp=Z,6.9nm,1.0s
GSC   Goldstone, Bar   76.09  47  eP       P        00 52 25.7 +0.8
GSC                                pmax    pmax
      comp=Z,7.0nm,1.0s
LPIG  La Paz           76.25  60   LR      LR       01 17 29.1
      comp=Z,223nm,21.9s,baz=222,slow=29
YERR  Yerington        76.28  43  eP       P        00 52 26.5 +0.4
      comp=Z,7.0nm,0.9s
NJ2   Nanjing          76.36 309  eP       P        00 52 27.3 +0.9
NJ2                                pmax    pmax
      comp=Z,8.0nm,0.5s
GRNR  Gornyy           76.42 332  eP       P        00 52 27.5 +1.1
PAHR  Pah Rah Range    76.57  42  eP       P        00 52 28.4 +0.7
      comp=Z,12nm,1.2s
RYN   Ryan             76.58  44  eP       P        00 52 28.2 +0.4
      comp=Z,7.2nm,1.1s
NV01  Mina Array Sit   76.62  44  eP       P        00 52 27.8 -0.2
NVAR  Mina Array Bea   76.62  44   P       P        00 52 28.2 +0.2
      comp=Z,2.2nm,0.8s,baz=231,slow=9.3,SNR=14
NVAR                               LR      LR       01 18 25.1
      comp=Z,214nm,21.7s,baz=100,slow=30
NV11  Mina Array Sit   76.72  44  eP       P        00 52 28.9 +0.4
      comp=Z,1.1nm,1.1s
KVN   Kaiserville      77.08  44  eP       P        00 52 30.8 +0.2
      comp=Z,10.0nm,1.2s
KVN   Kaiserville      77.08  44  eP       P        00 52 30.8 +0.2
KVN                                pmax    pmax
      comp=Z,10.0nm,1.2s
MOD   Modoc Plateau    77.17  40  eP       P        00 52 31.4 +0.4
      comp=Z,6.9nm,0.9s
K05A  Summer Lake      77.25  39  eP       P        00 52 32.1 +0.6
      comp=Z,43nm,1.6s
TPNV  Topopah Spring   77.29  46  eP       P        00 52 32.2 +0.4
      comp=Z,8.2nm,1.0s
TPNV  Topopah Spring   77.29  46  eP       P        00 52 32.2 +0.4
TPNV                               pmax    pmax
      comp=Z,8.0nm,1.0s
KLR   Kul'dur          77.62 329⇓eP       P        00 52 33.6 +0.5
PINE  Pine Mountain    77.82  38  eP       P        00 52 35.3 +0.7
      comp=Z,22nm,1.4s
SHPR  Sheep Range      77.84  47  eP       P        00 52 35.5 +0.7
      comp=Z,27nm,1.8s
H02S1 DAWSON INLET T 77.90  26    T        T        02 18 14.3
      SNR=22
W13A  Hualapai Mount   78.10  49  eP       P        00 52 37.5 +1.1
      comp=Z,5.5nm,1.0s
Y14A  Wickenburg       78.22  50  eP       P        00 52 37.6 +0.6
BMN   Battle Mountai   78.36  43  eP       P        00 52 38.4 +0.7
      comp=Z,8.2nm,1.0s
BMN   Battle Mountai   78.36  43  eP       P        00 52 38.4 +0.7
BMN                                pmax    pmax
      comp=Z,8.0nm,1.0s
R11A  Troy Canyon, C   78.43  45  eP       P        00 52 39.0 +0.8
      comp=Z,9.1nm,1.4s
WVOR  Wild Horse Val   78.50  40  eP       P        00 52 39.1 +0.8
      comp=Z,7.8nm,1.1s
WVOR  Wild Horse Val   78.50  40  eP       P        00 52 39.1 +0.8
WVOR                               pmax    pmax
      comp=Z,8.0nm,1.1s
QIZ   Qiongzhong       78.72 293   P       P        00 52 38.7 -1.2
QIZ                                S       S        01 02 36.3 -1.6
QIZ                                LR      LR
      comp=Z,160nm,19.6s
QIZ                                LR      LR
      comp=Z,240nm,20.6s
J08A  Circle Bar Ran   79.09  40  eP       P        00 52 41.8 +0.2
      comp=Z,6.8nm,1.0s
TUC   Tucson           79.19  52  eP       P        00 52 44.0 +1.6
      comp=Z,10nm,1.1s
TUC   Tucson           79.19  52  eP       P        00 52 44.0 +1.6
TUC                                pmax    pmax
      comp=Z,10.0nm,1.1s
WHN   Wuhan            79.19 306   P       P        00 52 43.5 +1.2
X16A  Lo Mia Camp, P   79.59  50  eP       P        00 52 46.2 +1.6
      comp=Z,6.9nm,0.9s
CCUT  Cedar City       79.60  47  eP       P        00 52 46.0 +1.3
      comp=Z,10.0nm,1.2s
PSUT  Pine Spring      79.71  46  eP       P        00 52 46.0 +0.8
      comp=Z,5.5nm,0.9s
KNB   Kanab            79.74  47  eP       P        00 52 47.2 +1.9
      comp=Z,20nm,1.6s
KNB   Kanab            79.74  47  eP       P        00 52 47.2 +1.9
KNB                                pmax    pmax
      comp=Z,20nm,1.6s
G08A  Pilot Rock       79.83  38  eP       P        00 52 46.4 +0.8
      comp=Z,26nm,1.8s
U15A  North Rim        79.85  48  eP       P        00 52 46.9 +0.7
      comp=Z,8.2nm,0.9s
BMO   Blue Mountains   80.59  39  eP       P        00 52 51.1 +1.5
      comp=Z,22nm,1.9s
BMO   Blue Mountains   80.59  39  eP       P        00 52 51.1 +1.5
BMO                                pmax    pmax
      comp=Z,22nm,1.9s
MTPU  Mount Pierson    80.65  47  eP       P        00 52 53.0 +2.5
      comp=Z,17nm,1.5s
SEY   Seymchan         80.72 347⇑eP       P        00 52 48.5 -1.3
MFID  Camas Ranch      80.77  41  eP       P        00 52 51.2 +0.5
      comp=Z,6.1nm,1.0s
JIS   Juneau Island    80.84  22  eP       P        00 52 51.2 +0.7
      comp=Z,8.8nm,0.8s
MSU   Marysvale        80.87  46  eP       P        00 52 52.2 +0.7
MSU   Marysvale        80.87  46  eP       P        00 52 52.2 +0.7
DUG   Dugway, Tooele   81.20  45  eP       P        00 52 53.7 +0.6
      comp=Z,7.3nm,1.1s
DUG   Dugway, Tooele   81.20  45  eP       P        00 52 53.7 +0.6
DUG                                pmax    pmax
      comp=Z,7.0nm,1.1s
HLID  Hailey           81.74  41  eP       P        00 52 56.3 +0.4
      comp=Z,7.3nm,0.9s
TMUT  Trail Mountain   81.89  46  eP       P        00 52 58.0 +1.0
      comp=Z,15nm,1.0s
BJI   Beijing          81.91 315⇑eP       P        00 52 58.1 +1.5
BJI                                pmax    pmax
      comp=Z,12nm,0.7s
HVU   Hansel Valley    81.95  43  eP       P        00 52 58.2 +1.1
      comp=Z,7.9nm,1.0s
HVU   Hansel Valley    81.95  43  eP       P        00 52 58.2 +1.1
HVU                                pmax    pmax
      comp=Z,8.0nm,1.0s
MLY   Manley           82.00  11  eP       P        00 52 55.1 -1.5
      comp=Z,7.6nm,1.0s
CCB   Clear Creek Bu   82.24  13  eP       P        00 52 59.4 +1.6
      comp=Z,7.7nm,1.0s
SRU   San Rafael Swe   82.29  46  eP       P        00 53 00.0 +1.1
      comp=Z,11nm,1.1s
P17A  Butcher Ranch,   82.30  46  eP       P        00 53 01.6 +2.7
      comp=Z,11nm,1.2s
JLU   Jordanelle       82.31  45  eP       P        00 53 00.0 +0.9
      comp=Z,9.3nm,1.1s
MDM   Murphy Dome      82.43  12  eP       P        00 53 01.2 +2.4
      comp=Z,7.4nm,0.9s
IL1   Eielson Array    82.55  13  eP       P        00 52 59.7 +0.3
ILAR  Eielson Array    82.55  13   P       P        00 52 59.6 +0.2
      comp=Z,2.3nm,0.9s,baz=227,slow=5.5,SNR=17
ILB   Eielson Array    82.55  13  eP       P        00 53 00.8 +1.4
DLBC  Dease Lake       82.56  23   LR      LR       01 24 27.5
      comp=Z,423nm,18.7s,baz=256,slow=32
ZEA   Zeya             82.63 331  eP       P        00 52 58.2 -1.9
ZEA                                pmax    pmax
      comp=Z,18nm,1.2s
HWUT  Hardware Ranch   82.68  44  eP       P        00 53 02.4 +1.5
      comp=Z,8.5nm,1.0s
P18A  Preston Nutter   82.71  46  eP       P        00 53 06.0 +4.8
      comp=Z,5.2nm,0.8s
LAZ   Ladron           82.83  52  eP       P        00 53 03.5 +1.6
LENM  Lemitar          82.86  52  eP       P        00 53 03.5 +1.4
PV05  Paradox Valley   82.86  48  eP       P        00 53 04.7 +2.7
      comp=Z,15nm,1.0s
PV09  Paradox Valley   83.01  47  eP       P        00 53 04.7 +1.8
PV03  Paradox Valley   83.12  48  eP       P        00 53 04.7 +1.4
      comp=Z,19nm,1.4s
PV04  Paradox Valley   83.13  48  eP       P        00 53 05.5 +2.2
      comp=Z,12nm,0.8s
MNTX  Cornudas Mount   83.17  55  eP       P        00 53 04.4 +0.9
      comp=Z,7.3nm,1.0s
PV02  Paradox Valley   83.18  48  eP       P        00 53 04.2 +0.6
      comp=Z,9.0nm,1.0s
BILL  Bilibino         83.23 354⇓eP       P        00 53 00.7 -2.2
BILL                              e                 00 56 16.0
BILL                               pmax    pmax
      comp=Z,3.0nm,1.3s
PV01  Paradox Valley   83.27  48  eP       P        00 53 05.0 +1.0
      comp=Z,7.7nm,0.9s
MCMT  McKenzie Canyo   83.33  40  eP       P        00 53 05.8 +1.5
PV07  Paradox Valley   83.34  48  eP       P        00 53 05.2 +0.8
      comp=Z,13nm,1.1s
PV15  Paradox Valley   83.42  48  eP       P        00 53 06.3 +1.4
      comp=Z,12nm,0.9s
AHID  Auburn Hatcher   83.51  43   P       P        00 53 06.8 +1.6
      comp=Z,12nm,1.2s
ANMO  Albuquerque      83.56  52   P       P        00 53 06.5 +0.9
      comp=Z,8.7nm,1.1s,baz=225,slow=5.0,SNR=6.4
ANMO                               LR      LR       01 23 53.5
      comp=Z,249nm,19.6s,baz=246,slow=31
ANMO  Albuquerque      83.56  52  eP       P        00 53 06.7 +1.1
      comp=Z,13nm,1.1s
ANMO  Albuquerque      83.56  52⇓iP       P        00 53 05.6  0.0
ANMO                               pmax    pmax
      comp=Z,6.0nm,1.2s
TX31  Lajitas Ar. Si   83.70  58  eP       P        00 53 07.3 +0.9
TXAR  Lajitas Array    83.70  58   P       P        00 53 07.3 +0.9
      comp=Z,13nm,1.1s,baz=218,slow=7.6,SNR=17
TXAR                               LR      LR       01 23 54.3
      comp=Z,217nm,19.1s,baz=0.0,slow=31
DLMT  Dillon           83.74  40  eP       P        00 53 06.9 +0.7
      comp=Z,14nm,1.3s
EGAK  Eagle            83.88  15  eP       P        00 53 07.1 +0.8
      comp=Z,14nm,1.2s
TPAW  Teton Pass       83.93  42  eP       P        00 53 09.1 +1.6
      comp=Z,13nm,0.9s
REDW  Red Top Meadow   83.94  42  eP       P        00 53 08.2 +0.8
      comp=Z,30nm,1.2s
FXWY  Fox Creek        83.95  42  eP       P        00 53 09.0 +1.6
      comp=Z,13nm,1.1s
GYA   Guiyang          83.98 299  eP       P        00 53 08.8 +1.0
GYA                                PP      PP       00 56 24.4 +2.6
GYA                                S       S        01 03 28.0 -4.4
GYA                                pmax    pmax
      comp=Z,10.0nm,1.0s
GYA                                pmax    pmax
      comp=Z,110nm,6.2s
COLD  Coldfoot         84.07  10  eP       P        00 53 08.8 +1.6
      comp=Z,11nm,1.2s
IMW   Indian Meadow    84.12  42  eP       P        00 53 09.4 +1.0
      comp=Z,8.1nm,0.8s
MOOW  Moose Ponds      84.18  42  eP       P        00 53 09.5 +0.9
      comp=Z,4.1nm,1.0s
LOHW  Long Hollow      84.21  42  eP       P        00 53 10.7 +1.9
      comp=Z,7.3nm,1.1s
PSI   Prapat           84.25 274   LR      LR       01 32 59.4
      comp=Z,79nm,19.1s,baz=94,slow=38
O20A  White River Ci   84.32  46  eP       P        00 53 10.0 +0.6
      comp=Z,9.8nm,0.9s
YHB   Horse Butte      84.34  41  eP       P        00 53 12.0 +2.6
      comp=Z,14nm,1.0s
S22A  4UR Ranch, Cre   84.37  49  eP       P        00 53 10.2 +0.4
      comp=Z,17nm,1.0s
BOZ   Bozeman (W)      84.45  40  eP       P        00 53 10.4 +0.6
      comp=Z,15nm,1.5s
BOZ   Bozeman (W)      84.45  40  eP       P        00 53 10.4 +0.6
BOZ                                pmax    pmax
      comp=Z,15nm,1.5s
BW06  Boulder Array    84.53  43  eP       P        00 53 11.4 +1.0
      comp=Z,11nm,1.1s
PD31  Pinedale Array   84.53  43  eP       P        00 53 10.8 +0.3
PDAR  Pinedale Array   84.53  43   P       P        00 53 10.7 +0.3
      comp=Z,4.8nm,0.8s,baz=214,slow=4.5,SNR=14
PDAR                               LR      LR       01 23 47.3
      comp=Z,175nm,21.1s,baz=260,slow=31
PDAR  Pinedale Array   84.53  43  eP       P        00 53 10.1 -0.4
SMCO  Snowmass         84.83  47  eP       P        00 53 13.2 +0.9
      comp=Z,9.5nm,0.9s
SDCO  Great Sand Dun   85.34  49  eP       P        00 53 16.0 +1.3
      comp=Z,12nm,1.8s
HHC   Hu-ho-hao-te     85.44 314  eP       P        00 53 16.1 +1.2
HHC                                S       S        01 03 46.1 -0.3
HHC                                sS      sS       01 03 54.5 +2.6
HHC                                pmax    pmax
      comp=Z,14nm,0.9s
HHC                                pmax    pmax
      comp=Z,91nm,5.3s
HHC                                LR      LR
      comp=Z,160nm,18.1s
HHC                                LR      LR
      comp=Z,500nm,20.7s
RLMT  Red Lodge        85.73  41  eP       P        00 53 17.6 +1.2
      comp=Z,13nm,1.3s
LNIG  Linares          85.78  63  eP       P        00 53 16.5 -0.3
      comp=Z,18nm,1.0s
PMSA  Palmer Station   86.58 157   LR      LR       01 23 11.9
      comp=Z,132nm,21.9s,baz=250,slow=30
KMI   Kunming          86.91 297   P       P        00 53 24.7 +2.1
KMI                                S       S        01 03 59.8 -1.8
KMI                                sS      ScS      01 04 16.1 +6.7
KMI                                SS      SS       01 09 47.8 +3.4
KMI                                pmax    pmax
      comp=Z,13nm,0.6s
KMI                                pmax    pmax
      comp=Z,80nm,3.7s
KMI                                LR      LR
      comp=Z,82nm,22.1s
KMI                                LR      LR
      comp=Z,180nm,22.1s
KMI                                LR      LR
      comp=Z,240nm,26.8s
MAW   Mawson           87.17 200   LR      LR       01 27 24.2
      comp=Z,212nm,21.9s,baz=77,slow=32
CD2   Chengdu          87.83 303  eP       P        00 53 26.6 -0.1
CMAR  Chiang Mai Arr   88.38 289   LR      LR       01 29 31.2
      comp=Z,121nm,20.7s,baz=116,slow=33
RSSD  Black Hills      88.76  44  eP       P        00 53 31.8 +0.7
      comp=Z,11nm,1.1s
RSSD  Black Hills      88.76  44  eP       P        00 53 31.8 +0.7
RSSD                               pmax    pmax
      comp=Z,11nm,1.1s
LZH   Lanzhou          89.39 307  eP       P        00 53 32.4 -1.8
LZH                                pP      PcP      00 53 35.8 +0.2
LZH                                sP      sP       00 53 38.7  0.0
LZH                                SKS     SKSac    01 03 59.9 -4.9
LZH                               eS       S        01 04 24.9 +0.2
LZH                                sS      sS       01 04 34.9 +4.6
LZH                                pmax    pmax
      comp=Z,29nm,1.1s
LZH                                pmax    pmax
      comp=Z,89nm,4.6s
LZH                                LR      LR
      comp=Z,1µm,20.2s
HKT   Hockley          90.36  59⇓eP       P        00 53 38.9 +0.4
ULN   Ulaanbaatar      91.07 319  eP       P        00 53 40.8 -0.9
      comp=Z,10nm,1.4s
ULN   Ulaanbaatar      91.07 319d iP      P        00 53 40.3 -1.4
ULN                                pmax    pmax
      comp=Z,7.0nm,1.1s
YKA   Yellowknife Ar   91.08  24   P       P        00 53 43.1 +2.0
      comp=Z,0.4nm,0.7s,baz=247,slow=4.3,SNR=3.4
YKA                                LR      LR       01 30 42.1
      comp=Z,44nm,18.6s,baz=268,slow=33
SONM  Songino Array    91.48 319   P       P        00 53 40.4 -3.1
      comp=Z,0.9nm,0.7s,baz=104,slow=3.0,SNR=4.8
SONM                               LR      LR       01 31 32.6
      comp=Z,67nm,19.6s,baz=110,slow=34
SYO   Syowa Base       92.50 193⇑ePcP     P        00 53 48.4 +0.6
PLCA  Paso Flores      93.13 133   LR      LR       01 27 01.5
      comp=Z,165nm,21.0s,baz=268,slow=30
GTA   Gaotai           93.43 310  eP       P        00 53 42.5  -10
GTA                                pP      sP       00 53 57.4 +0.1
GTA                                sP      pP       00 54 02.8 +6.7
GTA                                pmax    pmax
      comp=Z,3.0nm,0.9s
SNAA  Sanae            93.86 178   P       P        00 53 57.1 +3.0
SNAA  Sanae            93.86 178   LR      LR       01 34 11.4
      comp=Z,74nm,18.9s,baz=130,slow=34
VNA3  Neumayer Olymp   93.97 176   P       P        00 53 57.7 +3.1
NVL   N'lazarevskaya   94.58 183  eP       P        00 54 03.4 +6.1
NVL                               eSS      SS       01 11 27.9 -3.6
NVL                               eSSS     SSS      01 15 15.1
NVL                                pmax    pmax
      comp=Z,7.0nm,0.7s
VNA1  Neumayer--Stat   94.65 177   P       P        00 54 00.0 +2.4
ULM   Lac du Bonnet    95.99  40   LR      LR       01 31 19.5
      comp=Z,188nm,20.1s,baz=280,slow=32
BRDH  Bariadhala       96.06 292   LR      LR       01 34 18.9
      comp=Z,126nm,21.3s,baz=146,slow=34
NNA   Nana             97.33 104   LR      LR       01 27 20.8
      comp=Z,60nm,21.4s,baz=253,slow=29
KSH   Kashi           111.64 307  ePKP     PKiKP    00 59 13.8 +1.7
KSH                                PP      PP       01 00 00.4 +6.5
KSH                                PKS     PKSdf    01 02 48.0 -0.8
ARU   Arti            120.44 328  i PKIKP  PKPdf    00 59 28.3  0.0
ARU                                                 01 00 53.6
ARU                                                 01 06 40.2
ARU                                SS      SS       01 17 13.2  -10
VSR   Storozhevoye    132.97 329⇑ePKIKP   PKPdf    00 59 52.4 +0.1
NB2   NORSAR Subarra133.18 354     PKP     PKPdf    00 59 54.9 +2.4
      comp=Z,0.3nm,0.6s,baz=15,slow=2.5
KIV   Kislovodsk      134.87 319  i PKIKP  PKPdf    00 59 54.8 -1.5
KIV                                pmax    pmax
      comp=Z,3.0nm,1.0s
GNI   Garni           135.08 313⇑iPKIKP   PKPdf    00 59 58.0 +1.1
KIEV  Kiev            137.92 335⇓iPKIKP   PKPdf    01 00 04.8 +3.2
CLL   Collm           142.38 349  i PKIKP  PKPdf    01 00 16.9 +7.2
DPC   Dobruska-Polom  142.56 345  ePKP     PKPdf    01 00 08.7 -1.4
DPC   Dobruska-Polom  142.56 345  ePKIKP   PKPdf    01 00 08.7 -1.4
BRTR  Keskin Array B  142.83 318   PKhKP   PKPpre   01 00 05.1
      comp=Z,1.1nm,0.9s,baz=66,slow=1.5,SNR=5.2
PRU   Pruhonice       143.32 347  ePKP     PKPdf    01 00 10.5 -0.9
PRU   Pruhonice       143.32 347  ePKIKP   PKPdf    01 00 10.5 -0.9
VYHS  Vyhne           143.54 341  ePKIKP   PKPbc    01 00 10.8 +1.7
VYHS  Vyhne           143.54 341  ePKP     PKPbc    01 00 10.8 +1.7
MODS  Modra-Piesok    144.11 343  ePKIKP   PKPdf    01 00 13.6 +0.7
MODS  Modra-Piesok    144.11 343  ePKP     PKPdf    01 00 13.6 +0.7
KHC   Kasperske Hory  144.34 347  ePKP     PKPab    01 00 10.5 -0.7
KHC                               ex       x        01 00 13.6
KHC   Kasperske Hory  144.34 347  ePKIKP   PKPab    01 00 10.5 -0.7
GERES GERESS Array B  144.58 347   PKP     PKPab    01 00 10.4 -1.8
      comp=Z,2.3nm,0.9s,baz=46,slow=3.9,SNR=13
CSKK  Csˆ‡kako        144.72 341  ePKPbc   PKPab    01 00 10.9 -1.7
MMAI  Mount Meron Ar  144.77 307   PKP     PKPab    01 00 10.2 -3.2
      comp=Z,11nm,1.0s,baz=74,slow=6.2,SNR=9.3
WLF   Walferdange     144.89 356 ⇑PKP      PKPab    01 00 12.2 -1.0
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WLF				⇑APKP	PKPdf	01 00 15.5	+1.4
WLF	Walferdange	144.89	356	*e*PKPdf	PKPab	01 00 12.3	-0.9
WLF	Walferdange	144.89	356	*e*PKIKP	PKPab	01 00 12.3	-0.9
CONA	Conrad Observa	144.91	344	*e*PKPbc	PKPab	01 00 12.1	-1.3
	comp=Z,22nm,1.4s,SNR=21						
MOA	Molln	145.39	346	*e*PKPbc	PKPbc	01 00 13.3	-1.6
	comp=Z,20nm,1.1s,SNR=15						
ARSA	Arzberg	145.62	344	*e*PKPbc	PKPdf	01 00 14.1	-1.5
	comp=Z,21nm,1.5s,SNR=6.8						
BFO	Black Forest	146.00	353	*e*PKPdf	PKPdf	01 00 15.0	-1.1
BFO	Black Forest	146.00	353	*e*PKP2	PKPdf	01 00 15.0	-1.1
SOKA	Soboth	146.28	344	*e*PKPdf	PKPdf	01 00 15.3	-1.4
	comp=Z,11nm,1.1s,SNR=14						
KBA	Koelnbreinsper	146.33	346	*e*PKPdf	PKPdf	01 00 15.2	-1.7
	comp=Z,5.3nm,0.6s						
WATA	Walderalm	146.46	348	*e*PKPbc	PKPdf	01 00 17.0	-0.1
	comp=Z,17nm,1.3s						
RETA	Reutte	146.46	350	*e*PKPdf	PKPdf	01 00 16.4	-0.6
	comp=Z,15nm,1.2s,SNR=7.6						
WTTA	Wattenberg	146.51	348	*e*pPKPdf	PKPbc	01 00 19.5	+0.9
	comp=Z,13nm,1.2s						
MOTA	Moosalm	146.54	349	*e*PKPbc	PKPdf	01 00 17.8	+0.6
	comp=Z,10nm,1.0s						
OBKA	Obir	146.57	345	*e*PKPbc	PKPdf	01 00 17.4	+0.1
	comp=Z,7.4nm,1.2s						
MYKA	Terra Mystica	146.68	346	*e*PKPdf	PKPdf	01 00 16.0	-1.3
	comp=Z,16nm,1.3s						
DAVA	Damuels	146.80	350	*e*PKPbc	PKPdf	01 00 17.6	-0.1
	comp=Z,18nm,1.1s						
ABTA	Abfaltersbach	146.83	347	PKPdf	PKPdf	01 00 16.7	-0.9
	comp=Z,9.1nm,1.0s						
FETA	Feichten	146.92	349	*e*PKPbc	PKPdf	01 00 17.8	-0.1
	comp=Z,11nm,1.0s						
VISS	Visnje	147.14	344	*e*PKPbc	PKPdf	01 00 18.1	0.0

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*JMA **06** 00:46:16.3, 24°.24N×121°.79E, h59^{km}±1^{km}, M2.8*

*ISCJB **06** 00:46:17.3±0.3, 24°.28N±0°.02×121°.86E±0°.02, h48^{km}±3^{km}, Error ellipse: s-maj=3.1km s-min=2.2km az=44.9*

*TAP **06** 00:46:17.7, 24°.31N×121°.77E, h46^{km}, ML3.3, B*

ISC 06 00:46:17.7±1.2**, 24°.29N**±0°.02×**121°.84E**±0°.02**, h47**^{km}±5^{km}**, n66, σ0^{s}.76**/119**, 5C-1D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NANB	Nanao	0.16	329	⇑P	Pn	00 46 25.4	0.0
	baz=350						
NANB				*e*S	Sn	00 46 30.8	-0.1
	baz=350						
ENAH	Nanao	0.16	350	⇑*i*P	Pn	00 46 25.6	+0.2
	baz=18						
ENAH				*e*S	Sn	00 46 31.0	+0.1
	baz=18						
ENA	Nanau	0.17	326	⇑*i*P	Pn	00 46 25.4	-0.1
	baz=350						
ENA				S	Sn	00 46 31.1	+0.2
	baz=350						
NACB	Ninganchiao	0.25	243	P	Pn	00 46 25.8	-0.3
	baz=240						
NACB				S	Sn	00 46 31.4	-0.7
	baz=240						
TWD	Chiawan	0.31	227	P	Pn	00 46 26.4	-0.2
	baz=223						
TWD				S	Sn	00 46 32.8	-0.1
	baz=223						
TWC	Suao	0.32	1	⇑*i*P	Pn	00 46 27.0	+0.3
	baz=20						
TWC				S	Sn	00 46 33.5	+0.4
	baz=20						
EOS1	EOS1	0.37	45	*e*P	Pn	00 46 28.3	+1.1
	baz=53						
EOS1				*e*S	Sn	00 46 36.5	+2.6
	baz=53						
ENTT	Nioudou	0.43	324	*e*P	Pn	00 46 27.7	-0.3
	baz=332						
ENTT				*e*S	Sn	00 46 34.2	-1.1
	baz=332						
ENLB	Shoufeng	0.44	210	*e*P	Pn	00 46 28.4	+0.3
	baz=190						
ENLB				*e*S	Sn	00 46 36.6	+1.2
	baz=190						
NNSB	Datong	0.44	289	*e*P	Pn	00 46 27.8	-0.4
	baz=289						
NNSB				*e*S	Sn	00 46 35.0	-0.6
	baz=289						
NNSH	Datong	0.44	289	P	Pn	00 46 27.9	-0.3
	baz=289						
NNSH				*e*S	Sn	00 46 35.2	-0.5
	baz=289						
NNS	Nan Shan	0.45	290	P	Pn	00 46 27.9	-0.4
	baz=290						
NNS				*e*S	Sn	00 46 35.1	-0.8
	baz=290						
TWE	Neicheng	0.46	340	P	Pn	00 46 28.2	-0.1
	baz=342						
TWE				*e*S	Sn	00 46 35.1	-0.7
	baz=342						
SLBB	Yuanshan	0.50	338	P	Pn	00 46 28.9	+0.1
	baz=339						
SLBB				*e*S	Sn	00 46 37.2	+0.4
	baz=339						
WHF	Hehuan Shan	0.55	255	P	Pn	00 46 29.2	-0.5
	baz=250						
WHF				*e*S	Sn	00 46 37.7	-0.7
	baz=250						
EGS		0.56	8	*e*P	Pn	00 46 30.2	+0.7
	baz=16						
YHNB	Yeheng	0.57	312	*e*P	Pn	00 46 29.4	-0.3
	baz=307						
YHNB				*e*S	Sn	00 46 37.3	-1.0
	baz=307						
NSK	Sanguang	0.59	311	P	Pn	00 46 29.6	-0.4
	baz=307						
NSK				*e*S	Sn	00 46 37.5	-1.2
	baz=307						
ESL	Shilin	0.60	219	*e*P	Pn	00 46 30.2	+0.2
	baz=219						
TDCB	Techi	0.62	267	⇓*e*P	Pn	00 46 30.4	-0.1
	baz=261						
TDCB				*e*S	Sn	00 46 38.8	-0.8
	baz=261						
CHGB	Renai	0.65	250	*e*P	Pn	00 46 30.6	-0.3
	baz=238						
CHGB				*e*S	Sn	00 46 39.1	-1.3
	baz=238						
TIPB	Shuangxi	0.68	359	⇑*e*P	Pn	00 46 31.6	+0.4
	baz=359						
TIPB				*e*S	Sn	00 46 41.4	+0.6
	baz=359						
EGFH	Guangfu	0.72	212	*e*P	Pn	00 46 32.1	+0.4
	baz=216						
TWA	Mucha	0.73	341	P	Pn	00 46 31.8	+0.1
	baz=338						
TWA				*e*S	Sn	00 46 41.9	0.0
	baz=338						
TATO	Taipei	0.76	335	*e*P	Pn	00 46 31.2	-0.9
	baz=333						
TATO				*e*S	Sn	00 46 41.4	-1.1
	baz=333						
WLTB	Daxi	0.78	316	*e*P	Pn	00 46 32.6	+0.2
	baz=315						
WLTB				*e*S	Sn	00 46 43.3	+0.3
	baz=315						
NWF	Wu-fen Shan	0.78	356	*e*P	Pn	00 46 32.9	+0.4
	baz=353						
NWF				*e*S	Sn	00 46 43.6	+0.4
	baz=353						
WFSB	Wu-fen Shan	0.78	356	*e*P	Pn	00 46 32.9	+0.5
	baz=353						
WFSB				*e*S	Sn	00 46 43.7	+0.6
	baz=353						
LIOB	Emei	0.83	295	*e*P	Pn	00 46 33.2	+0.1
	baz=296						
LIOB				*e*S	Sn	00 46 44.6	+0.2
	baz=296						
VWDT	VWDT	0.83	230	*e*P	Pn	00 46 32.9	-0.2
	baz=221						
VWDT				*e*S	Sn	00 46 43.4	-0.9
	baz=221						
NSTT	Nanjuang	0.84	294	P	Pn	00 46 33.3	+0.1
	baz=294						
NSTT				*e*S	Sn	00 46 44.0	-0.5
	baz=294						
HGSD	Ruisui	0.88	206	*e*P	Pn	00 46 33.3	-0.5
	baz=211						
HGSD				*e*S	Sn	00 46 45.4	0.0
	baz=211						
TWS1	Kuangyinshan	0.90	335	P	Pn	00 46 33.7	-0.2
	baz=339						
TWS1				*e*S	Sn	00 46 45.6	-0.2
	baz=339						
YM10	YM10	0.90	344	*e*P	Pn	00 46 33.5	-0.6
	baz=336						
YM07	YM07	0.91	347	*e*P	Pn	00 46 33.7	-0.5
	baz=339						
YM07				*e*S	Sn	00 46 45.6	-0.6
	baz=339						
YM11	YM11	0.91	344	*e*P	Pn	00 46 34.6	+0.4
	baz=335						
EHY	Hungye	0.91	212	*e*P	Pn	00 46 33.9	-0.3
	baz=205						
EHY				*e*S	Sn	00 46 44.6	-1.7
	baz=205						
YM03	YM03	0.93	343	*e*P	Pn	00 46 33.9	-0.6
	baz=335						
SMLT	Sun Moon Lake	0.95	245	*e*P	Pn	00 46 35.5	+0.6
	baz=234						
SMLT				*e*S	Sn	00 46 48.3	+1.0
	baz=234						
SSLB	Suanglung	0.95	239	*e*P	Pn	00 46 35.1	+0.4
	baz=230						
SSLB				*e*S	Sn	00 46 47.8	+0.5
	baz=230						
TYC	Yuchr	0.98	247	P	Pn	00 46 35.3	+0.2
	baz=237						
TYC				*e*S	Sn	00 46 47.7	-0.1
	baz=237						
TWY	Chenhua	1.01	347	P	Pn	00 46 35.5	0.0
	baz=339						
TWY				*e*S	Sn	00 46 48.1	-0.4
	baz=339						
JYNG	Yonagunijimaku	1.02	81	P	Pn	00 46 35.4	-0.2
JYNG				*e*S	Sn	00 46 49.4	+0.6
YULB	Yu-li	1.02	209	*e*P	Pn	00 46 33.8	-1.9
	baz=205						
YULB				*e*S	Sn	00 46 47.6	-1.3
	baz=205						
TWF1	Yuli	1.06	208	*e*P	Pn	00 46 35.0	-1.2
	baz=210						
TWF1				*e*S	Sn	00 46 48.0	-1.8
	baz=210						
YOJ	Yonaguni jima	1.08	81	*e*P	Pn	00 46 36.2	-0.2
	baz=83						
YOJ				*e*S	Sn	00 46 49.8	-0.4
	baz=83						
YOJ	Yonaguni jima	1.08	81	P	Pn	00 46 36.3	-0.1
YOJ				S	Sn	00 46 50.6	+0.3
WNT	Mingjian	1.14	249	*e*P	Pn	00 46 38.2	+1.1
	baz=246						
WNT				*e*S	Sn	00 46 53.3	+1.7
	baz=246						
FULB	Fuli	1.20	205	*e*P	Pn	00 46 37.2	-0.8
	baz=208						
FULB				*e*S	Sn	00 46 53.0	-0.1
	baz=208						
ALS	Alishan	1.23	231	*e*P	Pn	00 46 39.1	+0.4
	baz=218						
CHN5	Tsauling	1.27	237	P	Pn	00 46 39.6	+0.5
	baz=234						
CHN5				*e*S	Sn	00 46 55.8	+0.7
	baz=234						
PCYT	Pengchaiyu	1.35	9	*e*P	Pn	00 46 40.5	+0.3
	baz=13						
CHN4	Tsaushan	1.48	231	*e*P	Pn	00 46 43.0	+1.2
	baz=229						
TPUB	Ta-pu	1.48	229	*e*P	Pn	00 46 42.9	+0.9
	baz=213						
TPUB				*e*S	Sn	00 47 01.6	+1.4
	baz=213						
STYT	Tauyuan	1.50	222	*e*P	Pn	00 46 43.5	+1.2
	baz=218						
WTP	Ta-pu	1.53	228	*e*P	Pn	00 46 43.8	+1.1
	baz=225						
TWK	Hsinying	1.60	231	*e*P	Pn	00 46 44.3	+0.7
	baz=226						
TWK				*e*S	Sn	00 47 04.6	+1.4
	baz=226						
CHN1	Nanshi	1.63	228	*e*P	Pn	00 46 44.5	+0.5
	baz=223						
CHN1				*e*S	Sn	00 47 05.2	+1.4
	baz=223						
IRIF	Iriomote-Funau	1.72	88	P	Pn	00 46 44.6	-0.6
IRIF				*e*S	Sn	00 47 06.2	+0.2
HATJ	Hateruma jima	1.81	97	P	Pn	00 46 46.7	+0.3
HATJ				*e*S	Sn	00 47 07.7	-0.4
SSD	Sandimen	1.90	216	*e*P	Pn	00 46 48.6	+1.0
	baz=200						
JKRS	Kuro-shima	1.98	91	P	Pn	00 46 49.2	+0.5
JKRS				*e*S	Sn	00 47 12.5	+0.2
MASBT	Mashibuluo	2.00	214	*e*P	Pn	00 46 49.6	+0.5
	baz=199						
JIJ	Ishigaki jima	2.10	87	P	Pn	00 46 49.4	-1.0
JIJ				S	Sn	00 47 14.0	-1.3
JISG	Ishigakijimahi	2.27	82	P	Pn	00 46 52.0	-0.7
JISG				*e*S	Sn	00 47 18.8	-0.7
JTJ	Tarama	2.63	82	P	Pn	00 46 57.4	-0.3
JTJ				*e*S	Sn	00 47 27.6	-0.7

GUC 06 00:48:56.9±0.6**, 35°.94S**×**70°.88W, h15**^{km}±7^{km}**, ML3.5, 1C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NICH	Los Niches	0.98	343	*i* P	Pb	00 49 14.9	-0.7
NICH				*e*P	Pn	00 49 17.4	+1.2
NICH				*e*S	Sn	00 49 31.5	+1.7
NICH				IAML		00 49 34.7	
	comp=E,2μm,0.3s						
CCHI	Chillan	1.17	235	*e*P	Pn	00 49 18.3	-0.5
CCHI				*i* S	Sb	00 49 34.1	+0.2
CCHI				IAML		00 49 34.6	
	comp=N,810nm,0.3s						
GO05	HualaæØ	1.26	317	⇑*i*P	Pg	00 49 21.0	-0.3
GO05				*e*S	Sg	00 49 37.5	-0.2
GO05				IAML		00 49 39.5	
	comp=N,4μm,0.2s						
CLCH	Cerro Calan	2.56	6	*i* P	Pb	00 49 41.8	-0.7
CLCH				*e*S	Sg	00 50 18.0	-1.0
FCH	Farellones	2.65	11	*e*P	Pb	00 49 45.3	+1.0
FCH				*i* S	Sg	00 50 19.7	-2.5
FCH				*e*S	Sb	00 50 22.2	+5.4
FCH				IAML		00 50 28.2	
	comp=N,153nm,0.6s						
PEL	Peldehue	2.79	3	*i* P	Pb	00 49 45.6	-1.0
PEL				*e*S	Sb	00 50 23.3	+2.6
ROCH	El Roble	2.96	358	*e*P	Pb	00 49 48.7	-0.9
ROCH				*i* S	Sb	00 50 28.5	+2.8
ROCH				IAML		00 50 34.5	
	comp=E,223nm,0.5s						
TMU	Temuco	3.11	206	*e*P	Pb	00 49 50.6	-1.3

MEX 06 01:01:00.1±0.3**, 14°.13N**×**92°.63W, h22**^{km}±16^{km}**, MD3.9, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		1.67	340	*e*P	Pn	01 01 25.5	-2.5
PCIG				*e*S	Sn	01 01 44.8	-4.0
CCIG	Comitan	2.20	12	*e*P	Pn	01 01 33.0	-2.4
CCIG				*e*S	Sn	01 01 59.0	-3.1
TGIG		2.68	350	*i* P	Pn	01 01 39.3	-2.7
TGIG				*e*S	Sn	01 02 10.7	-3.1

NNC 06 01:07:12.8±5.5**, 37°.93N**×**71°.55E, h0**^{km}**, mb3.6, mpv3.2, 3C-3D, Error ellipse: s-maj=42.1km s-min=30.7km az=178.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	2.58	36	⇓Pn	Pn	01 07 55.8	-0.3
	2.8nm,0.4s						
SFK				⇓Sn	Sn	01 08 30.0	+1.7
	42nm,0.5s						
MNAS	Manas	4.61	9	⇑Pn	Pn	01 08 23.5	-0.4
	3.5nm,0.5s						
MNAS				⇑Sn	Sn	01 09 18.8	+0.5
	4.2nm,0.6s						
KK31	Karatay Array	5.23	352	⇓Pn	Pn	01 08 32.9	+0.6
	1.3nm,0.5s,baz=158,slow=11,SNR=13						
KK31				⇑Sn	Sn	01 09 34.3	+1.0
	3.0nm,0.4s,baz=169,slow=23,SNR=14						

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*ISCJB **06** 01:19:15.6±1.0, 3°.77N±0°.09×95°.72E±0°.09, h50^{km}, mb3.9/7, Error ellipse: s-maj=16.2km s-min=9.0km az=44.2*

*IDC **06** 01:19:21.1±4.8, 3°.95N×96°.05E, h78^{km}±43^{km}, mb3.6/7, mb1 3.6/8, mb1mx3.3/65, mbtmp3.8/8, ML3.0/1, Error ellipse: s-maj=58.6km s-min=22.4km az=53.0*

ISC 06 01:19:17.8±1.2**, 3°.8N**±0°.1×**95°.7E**±0°.1**, h50**^{km}**, n12, σ1^{s}.19**/11**, mb3.9**/7**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	Prapat	3.34	108	P	Pn	01 20 09.7	+2.0
	1.6nm,0.3s,baz=183,slow=0.6,SNR=4.1						
PSI				S	Sn	01 20 44.9	-1.3
	2.3nm,0.3s,baz=180,slow=5.3,SNR=5.6						
CMAR	Chiang Mai Arr	14.86	12	P	P	01 22 48.3	-1.4
	0.6nm,0.3s,baz=201,slow=12,SNR=5.3						
CMAR				S	Sn	01 25 29.7	+1.2
	0.5nm,0.3s,baz=198,slow=29,SNR=2.7						
H08S2	Diego Garcia H	25.85	244	T	T	01 51 48.5	
	baz=62,slow=74,SNR=3.4						
H08S3	Diego Garcia H	25.86	244	T	T	01 51 26.1	
	baz=62,slow=74,SNR=39						
H08S1	Diego Carcia H	25.87	244	T	T	01 51 11.0	
	baz=62						
MKAR	Makanchi Array	44.35	347	P	P	01 27 22.9	-0.2
	0.9nm,0.4s,baz=154,slow=9.1,SNR=8.0						
WRA	Warramunga Arr	44.68	123	P	P	01 27 25.2	-0.9
	0.7nm,0.7s,baz=302,slow=9.3,SNR=2.8						
SONM	Songino Array	44.78	10	P	P	01 27 26.2	-0.4
	1.7nm,0.5s,baz=195,slow=8.3,SNR=7.5						
KURBB	Kurchatov Arra	48.82	345	P	P	01 27 58.1	+0.1
	0.4nm,0.3s,baz=170,slow=5.9,SNR=4.5						
ZALV	Zalesovo Beam	50.74	352	P	P	01 28 12.2	-0.4
	2.5nm,0.5s,baz=176,slow=7.8,SNR=12						
BVAR	Borovoye Array	53.30	341	P	P	01 28 32.0	+0.4
	0.4nm,0.5s,baz=121,slow=7.2,SNR=3.7						
BRTR	Keskin Array B	66.27	312	P	P	01 30 02.1	+0.8
	0.4nm,0.7s,baz=99,slow=5.0,SNR=3.6						

KRSC 06 01:20:45.2±1.1**, 55°.73N**×**164°.94E, h40**^{km}±20^{km}**, ML3.6, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	Bering	0.79	132	*e*P	Pn	01 21 00.6	+0.8
BKI				*e*S	Sn	01 21 11.8	+1.4
KBTR	Krutoberegovo	1.28	293	*e*P	Pn	01 21 06.1	-0.5
SMKR	Semkarok	2.12	295	*e*P	Pn	01 21 19.5	+1.4
MKZ	Mys Kozlova	2.19	239	*e*P	Pn	01 21 21.6	+2.6
MKZ				*e*S	Sn	01 21 46.8	+2.0
BDR	Baidarnaya	2.25	293	*e*P	Pn	01 21 21.7	+1.8
SRKR	Sorokina	2.30	295	*e*P	Pn	01 21 22.4	+1.8
ZLN	Zelenaya	2.35	279	*e*P	Pn	01 21 24.6	+3.3
CIRR	Tsirk	2.39	281	*e*P	Pn	01 21 24.2	+2.3
BZGR	Bezymyannyi-Gr	2.40	277	*e*P	Pn	01 21 25.3	+3.2
LGNR	Loginova	2.42	280	*e*P	Pn	01 21 25.2	+2.8
KLY	Klyuchi	2.48	285	*e*P	Pn	01 21 24.0	+1.1
BZWR	Bezymyannyi-We	2.52	277	*e*P	Pn	01 21 27.0	+3.3
KIRR	Kirishev	2.60	277	*e*P	Pn	01 21 28.1	+3.3
TUMD	Tumrok D	2.64	260	*e*P	Pn	01 21 29.0	+3.8
TUMD				*e*S	Sn	01 22 00.1	+4.1
KMNR	Kamenistaya	2.66	272	*e*P	Pn	01 21 29.1	+3.5
KPT	Kopyto	2.67	277	*e*P	Pn	01 21 29.1	+3.4
KZV	Kizimen	2.72	259	*e*P	Pn	01 21 30.3	+3.8
TUMR	Tumrok	2.76	263	*e*P	Pn	01 21 31.4	+4.4
KOZ	Kozyrevsk	2.87	279	*e*P	Pn	01 21 32.5	+4.1
KOZ				*e*S	Sn	01 22 06.0	+4.3
SPN	Mys Shipunski	3.90	229	*e*P	Pn	01 21 46.1	+3.6
SPN				*e*S	Sn	01 22 29.2	+2.2
SDLR	Sedlovina	4.30	238	*e*P	Pn	01 21 52.5	+4.3
SMAR	Somma	4.35	238	*e*P	Pn	01 21 53.3	+4.4
UGLR	Uglovaya	4.37	237	*e*P	Pn	01 21 53.6	+4.5
AVH	Avacha	4.38	238	*e*P	Pn	01 21 54.3	+5.1
GNL	Ganaly	4.54	246	*e*P	Pn	01 21 56.3	+4.9
KRMR	Karymshinskiy	4.94	237	*e*P	Pn	01 22 01.9	+5.2
RUS	Russkaya	5.02	231	*e*P	Pn	01 22 01.3	+3.4
ASAK	Asacha	5.33	234	*e*P	Pn	01 22 07.3	+5.0

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*BJI **06** 01:21:59.5, 61°.50N×151°.30W, h80^{km}, mb4.8/23, mB5.0/14, Ms4.3/2, Ms7 4.0/2*

*MOS **06** 01:22:01.3±0.9, 61°.69N×151°.49W, h80^{km}, mb5.0/28, Error ellipse: s-maj=11.8km s-min=5.3km az=92.6*

*ISCJB **06** 01:22:02.4±0.1, 61°.69N±0°.02×151°.24W±0°.03, h88^{km}±1^{km}, mb4.6/113, Error ellipse: s-maj=2.8km s-min=2.6km az=147.2*

*NEIC **06** 01:22:04.4±0.0, 61°.68N×151°.27W, h85^{km}, mb4.4/29, MW4.7, ML4.4(AEIC), Moment Tensor Solution. s84 Moment tensor: Scale 10^{16}Nm; M_{rr}0.64; $M_{\theta\theta}$-1.12; $M_{\phi\phi}$0.48; $M_{r\theta}$0.31; $M_{\theta\phi}$0.36; $M_{\phi r}$0.40; Best double couple: $M_0$1.20000×10^{16} NP1:ϕ_s317.00000°, δ52.00000°, λ146.00000°. NP2:ϕ_s69.00000°, δ64.00000°, λ43.00000°. Principal axes: T 1.0700, Plg48.0000°, Azm289.0000°; N 0.1600, Plg41.0000°, Azm94.0000°; P -1.2300, Plg7.0000°, Azm190.0000°; After AEIC.*

NEIC Felt [IV] at Anchorage and [III] at Talkeetna. Also felt at Chugiak, Eagle River, Elmendorf AFB, Girdwood, Kenai, Wasilla and Willow.

*IDC **06** 01:22:04.7±0.5, 61°.89N×151°.48W, h86^{km}±4^{km}, mb4.2/27, mb1 4.3/28, mb1mx4.1/70, mbtmp4.5/28, MS3.4/10, Ms1 3.4/10, ms1mx3.1/67 Error ellipse: s-maj=10.2km s-min=9.5km az=52.0*

ISC 06 01:22:04.0±0.4**, 61°.67N**±0°.03×**151°.31W**±0°.03**, h88**^{km}±2^{km}**, h88**^{km}**:pP-P, n342, σ1^{s}.20**/401**, mb4.6**/113**, 22C-11D, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKT	Skwentna	0.33	341	P	Pn	01 22 16.3	-1.0
SKT				S	Sn	01 22 25.9	-1.4
SUA	Susitna One	0.34	127	P	Pn	01 22 16.9	-0.6
SUA				S	Sn	01 22 26.4	-1.2
SPCG	Spurr Capps Gl	0.51	222	P	Pn	01 22 17.8	-0.9
SPCG				S	Sn	01 22 28.3	-1.4
SPCP	Crater Peak Br	0.57	225	P	Pn	01 22 18.5	-0.8
SPCP				S	Sn	01 22 29.4	-1.3
FIB	Fire Island	0.74	133	P	Pn	01 22 21.0	+0.3
FIB	Fire Island	0.74	133	P	Pn	01 22 21.0	+0.3
RC01	Rabbit Creek A	0.95	127	P	Pn	01 22 22.0	-1.0
RC01				S	Sn	01 22 36.2	-1.0
PMR	Palmer	1.04	93	P	Pn	01 22 22.6	-1.3
PMR				S	Sn	01 22 36.8	-2.1
PMR	Palmer	1.04	93	P	Pn	01 22 22.6	-1.3
PMR				S	Sn	01 22 36.8	-2.1
GHO	Glory Hole Cre	1.14	84	P	Pn	01 22 24.1	-1.1
GHO				S	Sn	01 22 39.7	-1.4
PPLA	Purkeypile	1.30	342	P	Pn	01 22 26.6	-0.5
PPLA				S	Sn	01 22 43.4	-1.2
RDJH	Redoubt Jeurge	1.30	214	P	Pn	01 22 27.0	-0.3
RDJH				S	Sn	01 22 44.4	-0.5
RDN	Redoubt North	1.36	212	P	Pn	01 22 27.5	-0.4
KNK	Knik Glacier	1.39	100	P	Pn	01 22 27.1	-1.1
KNK				S	Sn	01 22 45.7	-0.8
RDWB	Redoubt West	1.40	213	P	Pn	01 22 28.2	-0.3
SML	Sawmill	1.42	83	P	Pn	01 22 27.5	-1.1
SML				S	Sn	01 22 45.8	-1.5
SML	Sawmill	1.42	83	P	Pn	01 22 27.5	-1.1
SML				S	Sn	01 22 45.8	-1.5
HUR	Hurricane	1.52	30	P	Pn	01 22 29.4	-0.5
ILIM	Iliamna	1.79	208	P	Pn	01 22 33.1	-0.3
CAST	Castle Rocks	1.79	349	P	Pn	01 22 32.9	-0.5
CAST				S	Sn	01 22 54.9	-0.8
TRF	Thorofare Moun	1.85	14	P	Pn	01 22 33.8	-0.4
KTH	Kantishna Hill	1.90	5	P	Pn	01 22 34.6	-0.1
KTH				S	Sn	01 22 57.5	-0.7
SCM	Sheep Creek Mo	1.90	83	P	Pn	01 22 33.6	-1.2
SCM	Sheep Creek Mo	1.90	83	P	Pn	01 22 33.6	-1.2
BRLK	Bradley Lake	1.93	174	P	Pn	01 22 34.3	-0.8
HOM	Homer	2.03	185	P	Pn	01 22 36.3	-0.1
SVW2	Sparrevohn	2.14	256	P	Pn	01 22 37.8	0.0
CNPM	China Poot	2.15	179	P	Pn	01 22 37.4	-0.7
CHUM	Lake Minchumin	2.27	349	P	Pn	01 22 39.4	-0.2
CHUM				S	Sn	01 23 05.5	-1.2
DHY	Denali Highway	2.31	51	P	Pn	01 22 39.7	-0.6
DHY				S	Sn	01 23 07.2	-0.9
MCK	McKinley	2.34	27	P	Pn	01 22 40.1	-0.4

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MCK    McKinley            2.34  27  P      Pn      01 22 40.1 -0.4
BPAW   Bear Paw Mtn.       2.44   3  P      Pn      01 22 41.2 -0.7
VMT    TAPS Tl Valdez      2.45 102  P      Pn      01 22 40.1 -1.8
TT01   Tatalina            2.53 301  P      Pn      01 22 42.6 -0.4
AUNW   Augustine NWes      2.54 206  P      Pn      01 22 43.3 +0.1
AUW    Augustine West      2.54 206  P      Pn      01 22 43.4 +0.2
AUI    Augustine Isla      2.57 205  P      Pn      01 22 43.5 -0.1
KLU    Klutina             2.58  92  P      Pn      01 22 42.0 -1.8
KLU                                  S      Sn      01 23 12.6 -1.8
BWN    Browne              2.65  18  P      Pn      01 22 44.4 -0.2
HIN    Hinchinbrook I      2.67 117  P      Pn      01 22 43.0 -1.9
DIV    Divide              2.72  99  P      Pn      01 22 43.5 -2.1
PS11   TAPS Pump St11      2.79  79  P      Pn      01 22 46.6  0.0
CDD    Cape Douglas        2.99 204  P      Pn      01 22 48.9 -0.4
HARP   HAARP               2.99  73  P      Pn      01 22 49.1 -0.1
PAX    Paxson              3.02  62  P      Pn      01 22 49.5 -0.2
PAX    Paxson              3.02  62  P      Pn      01 22 49.5 -0.2
NEA    Nenana              3.09  18  P      Pn      01 22 49.8 -0.8
PS10   TAPS Pump St10      3.11  53  P      Pn      01 22 51.6 +0.7
WRH    Wood River Hil      3.17  26  P      Pn      01 22 50.8 -0.8
BMRM   Bremner River       3.31  99  P      Pn      01 22 51.0 -2.5
GOAT   Goat Mountain       3.37 106  P      Pn      01 22 52.1 -2.3
CCB    Clear Creek Bu      3.38  26  P      Pn      01 22 53.6 -0.9
MLY    Manley              3.38   4  P      Pn      01 22 53.6 -0.9
KAPH   Katmai Pasha        3.44 208  P      Pn      01 22 55.5 +0.1
PS08   TAPS Pump Stn8      3.53  33  P      Pn      01 22 55.9 -0.6
KAHC   Katmai Hardscr      3.55 213  P      Pn      01 22 56.7 -0.2
MDM    Murphy Dome         3.58  21  P      Pn      01 22 56.5 -0.7
GLB    Gilahina Butte      3.59  90  P      Pn      01 22 55.8 -1.7
ILAR   Eielson Array       3.70  31  P      Pn      01 22 57.9 -0.9
       36nm,0.3s,baz=218,slow=14,SNR=1679
ILAR                                 S      Sn      01 23 37.8 -3.4
       68nm,0.3s,baz=217,slow=18,SNR=6.6
ILAR                                 LR     LR      01 24 08.3
       comp=Z,198nm,21.8s,baz=224,slow=35
ILB    Eielson Array       3.70  31  P      Pn      01 22 57.9 -0.9
GLM    Gilmore Dome        3.77  26  P      Pn      01 22 59.1 -0.6
VRDI   Verde Repeater      3.80  93  P      Pn      01 22 58.1 -2.1
KAKN   Katmai Knife C      3.88 211  P      Pn      01 23 01.1 -0.2
BERG   Berg Lake           3.92 106  P      Pn      01 22 59.0 -2.7
KELA   Mount Kelaz         3.93 216  P      Pn      01 23 02.2 +0.2
KABU   Katmai Buttres      3.95 212  P      Pn      01 23 02.6 +0.3
KDAK   Kodiak Island       3.96 190  P      Pn      01 23 00.1 -2.1
       11nm,0.3s,baz=46,slow=7.1,SNR=178
KDAK                                 S      Sn      01 23 43.8 -3.6
       14nm,0.3s,baz=121,slow=23,SNR=7.2
KDAK   Kodiak Island       3.96 190  ePn    Pn      01 23 00.4 -1.8
KDAK                                 eSn    Sn      01 23 43.9 -3.5
KDAK   Kodiak Island       3.96 190  eP     Pn      01 23 00.4 -1.8
KDAK                                 e              01 23 43.9
MCARA  McCarthy VSAT       3.98  91  P      Pn      01 23 01.9 -0.7
ANCK   Angle Creek         4.07 213  P      Pn      01 23 04.1 +0.2
KHIT   Khitrov Hills       4.11 104  P      Pn      01 23 02.3 -2.1
GRIN   Grindle Hills       4.13 106  P      Pn      01 23 02.7 -2.0
CAHL   Cahill              4.15 211  P      Pn      01 23 05.2 +0.2
PTPK   Patty Peak          4.27  93  P      Pn      01 23 05.3 -1.5
BALM   Baldy               4.36  94  P      Pn      01 23 06.0 -1.9
BALM   Baldy               4.36  94  P      Pn      01 23 06.0 -1.9
KIAG   Kiagna River        4.38  96  P      Pn      01 23 06.0 -2.2
KULT   Kultieth River      4.42 105  P      Pn      01 23 06.1 -2.6
IM01   Indian Mountai      4.47 347  P      Pn      01 23 09.1 -0.2
OHAK   Old Harbor          4.58 194  P      Pn      01 23 07.3 -3.4
BAGL   Bagley Icefiel      4.63 101  P      Pn      01 23 09.5 -1.9
PRP    Porcupine Dome      4.64  31  P      Pn      01 23 10.8 -0.9
BCA3   Beaver Creek A      4.65  68  P      Pn      01 23 10.8 -0.9
BARN   Barnard Glacie      4.68  93  P      Pn      01 23 11.2 -1.1
GRNC   Granite Creek       4.72  97  P      Pn      01 23 10.9 -1.9
PLK1   Peulik 1            4.72 217  P      Pn      01 23 13.0 +0.4
YAH    Yahtse              4.83 102  P      Pn      01 23 12.6 -1.8
CTGM   Chitina Glacie      4.86  94  P      Pn      01 23 12.9 -1.8
YUK2   White River         4.98  84  P      Pn      01 23 15.2 -1.0
PS05   TAPS Pump Stn5      5.17   3  P      Pn      01 23 18.9 +0.2
EGAK   Eagle               5.54  51  ePn    Pn      01 23 22.8 -1.0
       258nm,0.6s
FYU    Fort Yukon          5.58  26  P      Pn      01 23 23.8 -0.6
COLD   Coldfoot            5.60   4  P      Pn      01 23 24.1 -0.5
ANNW   Aniakchak Nort      5.89 220  P      Pn      01 23 29.7 +1.0
DAWY   Dawson              5.96  61  ePn    Pn      01 23 28.5 -1.0
       245nm,0.6s
AZAC   Aniakchak           5.96 220  P      Pn      01 23 31.0 +1.4
BM3    Burnt Mountain      6.45  24  P      Pn      01 23 35.5 -0.6
YUK7   Dusty Glacier       6.49  94  P      Pn      01 23 35.9 -1.0
HYT    Haines Junctio      6.71  91  P      Pn      01 23 38.7 -1.2
TOLK   Toolik Lake Re      7.04   5  P      Pn      01 23 44.8 +0.7
PLBC   Pleasant Camp       7.69 100  P      Pn      01 23 51.8 -1.2
SDPT   Sand Point          7.95 221  P      Pn      01 23 56.0 -0.5
PS01   TAPS Pump Stn       8.69   6  P      Pn      01 24 06.8 +0.3
BESE   Bessie Mountai      8.77 103  P      Pn      01 24 06.1 -1.8
JIS    Juneau Island       9.13 104  P      Pn      01 24 10.8 -1.9
INK    Inuvik             10.01  41  P      Pn      01 24 23.1 -1.4
       15nm,0.3s,baz=245,slow=13,SNR=263
INK                                  S      Sn      01 26 12.9 -1.9
       0.7nm,0.3s,baz=313,slow=11,SNR=4.7
WRAK   Wrangell Islan     11.07 110  ePn    Pn      01 24 39.4 +0.4
DLBC   Dease Lake         11.10  97  P      Pn      01 24 38.3 -1.3
       0.2nm,0.3s,baz=293,slow=16,SNR=6.5
DLBC   Dease Lake         11.10  97  ePn    Pn      01 24 38.2 -1.4
       9.5nm,0.9s
YKA    Yellowknife Ar     17.06  71  P      Pn      01 25 55.4 -1.2
       0.2nm,0.3s,baz=281,slow=12,SNR=17
YKA                                  ScP    ScP     01 34 03.6 +0.9
       0.1nm,0.3s,baz=292,slow=2.2,SNR=11
BILL   Bilibino           18.77 308  eP     P       01 26 15.5 -0.2
       13nm,0.9s
BILL   Bilibino           18.77 308c iP     P       01 26 15.7  0.0
BILL                                 pmax   pmax
       comp=Z,20nm,1.3s
RES    Resolute Bay       23.45  34  P      P       01 27 04.6 -0.3
       comp=Z,9.8nm,0.5s,baz=253,slow=10,SNR=18
RES    Resolute Bay       23.45  34  eP     P       01 27 05.4 +0.5
       comp=Z,19nm,0.7s
RES    Resolute Bay       23.45  34  eP     P       01 27 05.4 +0.5
RES                                  pmax   pmax
       comp=Z,19nm,0.7s
WALA   Waterton Lakes     24.32 104  eP     P       01 27 13.2  0.0
       comp=Z,7.6nm,0.9s
HUMO   Hull Mountain      25.48 125  eP     P       01 27 25.8 +2.2
       comp=Z,66nm,1.5s
SEY    Seymchan           25.50 298  P      P       01 27 22.5 -1.0
       comp=Z,6.9nm,0.9s,baz=91,slow=9.2,SNR=18
SEY    Seymchan           25.50 298⇑eP     P       01 27 24.5 +1.0
BMO    Blue Mountains     25.96 115  eP     P       01 27 25.1 -3.0
       comp=Z,6.6nm,1.0s
BMO    Blue Mountains     25.96 115  eP     P       01 27 25.1 -3.0
BMO                                  pmax   pmax
       comp=Z,7.0nm,1.0s
YBH    Yreka Blue Hor     26.32 126  P      P       01 27 34.4 +3.1
       comp=Z,1.7nm,0.7s,baz=28,slow=4.5,SNR=5.1
YBH                                  LR     LR      01 36 03.9
       comp=Z,79nm,20.0s,baz=325,slow=32
EGMT   Eagleton           26.99 101  eP     P       01 27 37.5 +0.3
       comp=Z,21nm,1.0s
WVOR   Wild Horse Val     27.36 120  eP     P       01 27 42.3 +1.6
       comp=Z,6.4nm,1.0s
WVOR   Wild Horse Val     27.36 120  eP     P       01 27 42.3 +1.6
WVOR                                 pmax   pmax
       comp=Z,6.0nm,1.0s
FCC    Fort Churchill     27.79  70  eP     P       01 27 44.3 +0.2
       comp=Z,37nm,1.3s
FCC    Fort Churchill     27.79  70  eP     P       01 27 44.3 +0.2
FCC                                  pmax   pmax
       comp=Z,37nm,1.3s
BOZ    Bozeman (W)        27.92 107  eP     P       01 27 45.5 -0.1
       comp=Z,2.2nm,1.1s
BOZ    Bozeman (W)        27.92 107  eP     P       01 27 45.6 -0.1
BOZ                                  pmax   pmax
       comp=Z,2.0nm,1.1s
PETK   Petropavlovsk-     28.09 276  P      P       01 27 45.6 -1.3
       comp=Z,1.5nm,0.7s,baz=79,slow=15
HLID   Hailey             28.25 113  eP     P       01 27 48.4 -0.2
       comp=Z,3.4nm,0.9s
HOPS   Hopland Field      28.57 130  eP     P       01 27 50.9 -0.3
       comp=Z,12nm,1.0s
RLMT   Red Lodge          29.36 105  eP     P       01 27 59.1 +0.6
       comp=Z,24nm,1.1s
NVAR   Mina Array Bea     30.88 124  P      P       01 28 14.2 +2.3
       comp=Z,2.0nm,0.7s,baz=312,slow=8.9,SNR=15
NVAR                                 pP     pP      01 28 34.4 +2.3
       comp=Z,2.6nm,0.9s,baz=309,slow=8.3,SNR=7.0
NVAR                                 sP     sP      01 28 44.5 +2.2
       comp=Z,1.6nm,0.8s,baz=322,slow=10.0,SNR=3.3
NVAR                                 PcP    PcP     01 31 07.7 +1.2
       comp=Z,0.8nm,0.6s,baz=319,slow=2.4,SNR=5.0
NVAR                                 ScP    ScP     01 34 42.6 +1.8
       comp=Z,0.6nm,0.7s,baz=304,slow=3.9,SNR=5.3
PDAR   Pinedale Array     31.05 108  P      P       01 28 15.7 +2.2
       comp=Z,0.2nm,0.5s,baz=311,slow=4.3,SNR=4.5
PDAR                                 pP     pP      01 28 35.0 +1.4
       comp=Z,2.4nm,0.9s,baz=317,slow=3.2,SNR=10
PDAR                                 sP     sP      01 28 45.8 +2.0
       comp=Z,0.9nm,0.6s,baz=305,slow=5.2,SNR=4.3
PDAR                                 ScP    ScP     01 34 42.1 +0.7
       comp=Z,0.5nm,0.6s,baz=112,slow=1.6,SNR=5.1
PDAR                                 LR     LR      01 41 28.7
       comp=Z,28nm,22.0s,baz=326,slow=37
HWUT   Hardware Ranch     31.08 112  eP     P       01 28 14.3 +0.7
       comp=Z,5.3nm,0.9s
DUG    Dugway, Tooele     31.68 115  eP     P       01 28 19.6 +0.7
       comp=Z,4.5nm,0.9s
DUG    Dugway, Tooele     31.68 115  eP     P       01 28 19.6 +0.7
DUG                                  pmax   pmax
       comp=Z,4.0nm,0.9s
RSSD   Black Hills        32.56 101  eP     P       01 28 26.3 -0.3
       comp=Z,7.7nm,1.0s
RSSD   Black Hills        32.56 101  eP     P       01 28 26.3 -0.3
RSSD                                 pmax   pmax
       comp=Z,8.0nm,1.0s
AGMN   Agassiz Nation     33.39  88  eP     P       01 28 32.5 -1.1
       comp=Z,9.8nm,1.1s
O20A   White River Ci     33.75 110  eP     P       01 28 38.1 +1.1
       comp=Z,6.5nm,0.8s
YAK    Yakutsk            35.12 306  eP     P       01 28 45.8 -2.5
YAK                                  e*PP   pP      01 29 07.0 -1.6
YAK                                  e              01 30 07.5
YAK                                  e              01 31 13.9
YAK                                  eS     S       01 34 11.8 -2.4
YAK                                  eSS    SnSn    01 36 40.1 +1.0
YAK                                  e              01 38 53.1
YAK                                  pmax   pmax
       comp=Z,30nm,0.9s
YAK                                  pmax   pmax
       comp=N,9.0nm,1.1s
YAK                                  pmax   pmax
       comp=E,12nm,1.1s
YAK                                  pmax   pmax
       comp=Z,28nm,0.9s
YAK                                  pmax   pmax
       comp=E,13nm,1.4s
YAK                                  smax   smax
       comp=E,32nm,3.4s
YAK                                  smax   smax
       comp=N,24nm,3.7s
ISCO   Idaho Springs      35.21 107  eP     P       01 28 50.3 +0.6
       comp=N,2.4nm,1.0s
ISCO   Idaho Springs      35.21 107  eP     P       01 28 50.3 +0.6
ISCO                                 pmax   pmax
       comp=Z,2.0nm,1.0s
EYMN   Ely                35.72  84  eP     P       01 28 55.0 +1.3
       comp=Z,13nm,1.1s
MVCO   Mesa Verde         36.04 113  eP     P       01 28 56.6 -0.1
       comp=Z,7.4nm,0.9s
WUAZ   Wupatki            36.23 118  eP     P       01 29 00.2 +1.9
       comp=Z,4.7nm,1.0s
ECSD   EROS Data Cent     36.36  94  eP     P       01 28 59.6 +0.5
       comp=Z,4.3nm,1.0s
SDCO   Great Sand Dun     36.93 109  eP     P       01 29 06.3 +1.9
       comp=Z,4.1nm,1.0s
SUMG   Summit             38.53  26  i P    P       01 29 19.1 +1.5
       comp=Z,6.3nm,0.8s
SUMG   Summit             38.53  26  i P    P       01 29 19.1 +1.5
SUMG                                 pmax   pmax
       comp=Z,6.0nm,0.8s
DAG    Danmarks Havn      38.66  16⇑iP     P       01 29 18.0 -0.1
DAG                                  i              01 29 38.1
DAG    Danmarks Havn      38.66  16⇑iP     P       01 29 18.0 -0.1
DAG                                  i              01 29 38.1
ANMO   Albuquerque        38.83 112  eP     P       01 29 20.1 -0.2
       comp=Z,2.5nm,1.0s
ANMO   Albuquerque        38.83 112  eP     P       01 29 20.1 -0.2
ANMO                                 pmax   pmax
       comp=Z,3.0nm,1.0s
SPITS  Spitsbergen Ar     40.19   4  P      P       01 29 30.3 -0.5
       comp=Z,5.2nm,0.6s,baz=359,slow=7.2,SNR=7.0
SPITS                                PcP    PcP     01 31 33.2 +0.2
       comp=Z,2.3nm,0.5s,baz=45,slow=3.1,SNR=5.6
ZEA    Zeya               41.48 298  eP     P       01 29 41.0 -0.7
ZEA                                  pmax   pmax
       comp=Z,17nm,1.0s
KLR    Kul'dur            42.75 290⇑eP     P       01 29 51.1 -0.9
BOD    Bodaibo            43.81 310  eP     P       01 29 59.3 -1.2
BOD                                  pmax   pmax
       comp=Z,14nm,1.4s
TXAR   Lajitas Array      44.84 114  P      P       01 30 11.3 +2.1
       comp=Z,0.5nm,0.6s,baz=328,slow=6.2,SNR=10
TXAR                                 pP     pP      01 30 31.7 +1.5
       comp=Z,1.4nm,0.8s,baz=335,slow=5.5,SNR=6.4
TXAR                                 ScP    ScP     01 35 35.6 +2.2
       comp=Z,0.2nm,0.7s,baz=316,slow=2.5,SNR=3.9
TXAR                                 LR     LR      01 49 49.2
       comp=Z,54nm,19.3s,baz=0.0,slow=37
JCT    Junction City      45.58 109  eP     P       01 30 15.5 +0.6
JCT    Junction City      45.58 109  eP     P       01 30 15.5 +0.6
USRK   Ussuriysk Ar.      46.41 285  LR     LR      01 52 37.5
       comp=Z,49nm,18.3s,baz=20,slow=40
BINY   Binghamton         47.31  78  eP     P       01 30 45.9  +18
TKL    Tuckaleechee C     48.81  90  LR     LR      01 50 43.3
       comp=Z,72nm,18.9s,baz=336,slow=35
ARCES  ARCESS Array B     49.06   1  P      P       01 30 40.5 -0.9
       comp=Z,4.0nm,0.7s,baz=5.3,slow=8.4,SNR=13
ARCES                                PcP    PcP     01 32 03.4 -0.3
       comp=Z,3.2nm,0.6s,baz=12,slow=3.7,SNR=8.6
MJAR   Matsushiro Arr     49.51 273  P      P       01 30 45.2  0.0
       comp=Z,1.4nm,0.8s,baz=342,slow=5.7,SNR=4.3
CN2    Changchun          49.70 289  eP     P       01 30 46.2 -0.3
CN2                                  ePP    PP      01 32 41.8 +0.4
CN2                                  eS     S       01 37 46.4 -2.0
CN2                                  pmax   pmax
       comp=Z,20nm,0.9s
CN2                                  pmax   pmax
       comp=Z,200nm,3.0s
TLY    Talaya             52.36 311⇓eP     P       01 31 07.5 +1.1
TLY                                  pmax   pmax
       comp=Z,12nm,1.2s
KRAR   Krasnoyarsk        52.37 320⇓eP     P       01 31 04.1 -2.3
MOY    Mondy              53.32 312  eP     P       01 31 14.6 +1.0
MOY                                  pmax   pmax
       comp=Z,22nm,1.4s
ZAK    Zakamensk          53.56 310  eP     P       01 31 15.2 -0.1
ZAK                                  pmax   pmax
       comp=Z,5.0nm,0.9s
KSRS   Korea Array        53.62 283  P      P       01 31 16.0 +0.2
       comp=Z,3.6nm,0.7s,baz=29,slow=7.2,SNR=11
KSRS                                 LR     LR      01 54 55.1
       comp=Z,15nm,18.4s,baz=343,slow=37
KSAR   Wonju Array Be     53.65 283  P      P       01 31 16.0  0.0
KSAR   Wonju Array Be     53.65 283  P      P       01 31 16.0  0.0
ULN    Ulaanbaatar        54.20 306  eP     P       01 31 20.3 +0.2
ULN    Ulaanbaatar        54.20 306⇑eP     P       01 31 19.7 -0.4
ULN                                  pmax   pmax
       comp=Z,29nm,1.0s
SONM   Songino Array      54.48 306  P      P       01 31 23.0 +1.0
       comp=Z,28nm,0.7s,baz=35,slow=7.4,SNR=152
SONM                                 LR     LR      01 54 25.5
       comp=Z,52nm,18.3s,baz=49,slow=36
NVS    Novosibirsk        56.16 325  eP     P       01 31 32.7 -1.1
NVS                                  e              01 32 03.2
NVS                                  e              01 32 29.6
NVS                                  pmax   pmax
       comp=Z,15nm,1.1s
NVS                                  pmax   pmax
       comp=N,4.0nm,0.7s
NVS                                  pmax   pmax
       comp=E,4.0nm,0.7s
PRGR   Permogore          56.34 350  eP     P       01 31 34.4 -0.6
PRGR                                 e              01 32 31.0
PRGR                                 pmax   pmax
       comp=Z,26nm,0.7s
ZALV   Zalesovo Beam      56.51 324  P      P       01 31 35.6 -0.7
       comp=Z,12nm,0.6s,baz=28,slow=6.9,SNR=29
ZALV                                 PcP    PcP     01 32 31.7 -0.3
       comp=Z,5.1nm,0.9s,baz=15,slow=6.2,SNR=3.9
NB2    NORSAR Subarra     56.88  10  P      P       01 31 38.0 -1.0
       comp=Z,1.4nm,0.7s,baz=350,slow=6.9
FINES  FINESS Array B     57.19   1  P      P       01 31 40.2 -0.8
       comp=Z,4.0nm,0.5s,baz=20,slow=6.1,SNR=29
FINES                                pP     pP      01 32 02.3 -0.6
       comp=Z,6.1nm,0.8s,baz=7.8,slow=11,SNR=7.2
KLMR   Klimovskoe         57.52 354  eP     P       01 31 41.8 -1.5
KLMR                                 e*PP   pP      01 32 04.1 -1.1
KLMR                                 pmax   pmax
       comp=Z,21nm,1.3s
KLMR   Klimovskoe         57.52 354  eP     P       01 31 41.9 -1.4
KLMR                                 AMP            01 31 43.8
       comp=Z,21nm,1.3s
KLMR                                 epP    pP      01 32 04.2 -1.0
HFS    Hagfors            57.97   9  P      P       01 31 45.6 -1.0
       comp=Z,4.5nm,0.7s,baz=22,slow=5.1,SNR=20
HFS                                  pP     pP      01 32 07.7 -0.8
       comp=Z,5.4nm,0.9s,baz=25,slow=8.2,SNR=3.9
HHC    Hu-ho-hao-te       58.15 298  eP     P       01 31 47.9 -0.3
HHC                                  pmax   pmax
       comp=Z,19nm,1.0s
HHC                                  pmax   pmax
       comp=Z,110nm,5.4s
DGZ    Jazzator, Alta     59.49 320  eP     P       01 31 57.8 +0.4
ARU    Arti               59.93 341  LR     LR      01 59 57.6
       comp=Z,51nm,18.3s,baz=42,slow=38
ARU    Arti               59.93 341  eP     P       01 31 58.9 -1.3
       comp=Z,7.2nm,0.6s
ARU    Arti               59.93 341c iP     P       01 31 59.4 -0.8
ARU                                  *PP    pP      01 32 21.1 -1.1
ARU                                                 01 32 43.3
ARU                                                 01 34 11.2
ARU                                  S      S       01 40 08.5 +3.5
ARU                                  pmax   pmax
       comp=Z,29nm,1.7s
VSU    Vasula             60.19   1c iP     P       01 32 01.3 -0.5
VSU                                  pmax   pmax
       comp=Z,26nm,0.7s
EKA    Eskdalemuir Ar     60.67  20  P      P       01 32 05.3 +0.1
       comp=Z,3.9nm,0.4s,baz=335,slow=5.0,SNR=56
ESK    Eskdalemuir        60.68  20  eP     P       01 32 04.9 -0.3
       comp=Z,8.2nm,0.8s
ESK    Eskdalemuir        60.68  20  eP     P       01 32 04.9 -0.3
ESK                                  pmax   pmax
       comp=Z,8.0nm,0.8s
BRVK   Borovoye           60.96 333  eP     P       01 32 06.2 -1.0
BRVK                                 ePcP   PcP     01 32 49.6 -0.1
BRVK   Borovoye           60.96 333  eP     P       01 32 06.2 -1.0
BRVK                                 e              01 32 49.6
BVAR   Borovoye Array     60.97 333  P      P       01 32 06.3 -0.9
       comp=Z,6.3nm,0.7s,baz=38,slow=7.3,SNR=28
BVAR                                 PcP    PcP     01 32 49.8 +0.1
       comp=Z,5.5nm,0.7s,baz=29,slow=3.3,SNR=8.0
KURK   Kurchatov          61.10 326  eP     P       01 32 07.1 -1.1
KURK                                 ePcP   PcP     01 32 49.4 -0.9
KURK   Kurchatov          61.10 326  eP     P       01 32 07.1 -1.1
KURK                                 e              01 32 49.4
KURBB  Kurchatov Arra     61.21 326  P      P       01 32 08.0 -0.9
       comp=Z,3.7nm,0.6s,baz=27,slow=6.4,SNR=22
KURBB                                PcP    PcP     01 32 50.5 -0.3
       comp=Z,6.9nm,0.7s,baz=27,slow=4.3,SNR=15
OBN    Obninsk            63.39 355  eP     P       01 32 22.7 -0.7
OBN    Obninsk            63.39 355⇑iP     P       01 32 22.9 -0.4
OBN                                  i *PP  pP      01 32 44.8 -0.8
OBN                                  e              01 34 40.3
OBN                                  pmax   pmax
       comp=Z,33nm,1.1s
MKAR   Makanchi Array     63.63 322  P      P       01 32 23.8 -1.4
       comp=Z,4.6nm,0.8s,baz=45,slow=6.9,SNR=23
GTA    Gaotai             64.14 305 ⇑P      P       01 32 28.9 +0.2
GTA                                  pP     pP      01 32 48.6 -2.4
GTA                                  sP     sP      01 32 56.5 -4.2
GTA                                  pmax   pmax
       comp=Z,26nm,0.9s
WMQ    Urumqi             64.62 317  P      P       01 32 35.4 +3.7
XAN    Xi'an              65.01 295  P      P       01 32 33.6 -0.8
XAN                                  pmax   pmax
       comp=Z,5.0nm,0.5s
LZH    Lanzhou            65.39 301  eP     P       01 32 36.7 -0.3
LZH                                  pmax   pmax
       comp=Z,20nm,1.0s
CLL    Collm              66.67  11  i P    P       01 32 44.3 -0.4
       comp=Z,15nm,1.7s
CLL                                  i pP   pP      01 33 07.6 +0.5
       comp=Z,6.0nm,1.4s
CLL    Collm              66.67  11  i P    P       01 32 44.3 -0.4
CLL                                  i *PP  pP      01 33 07.6 +0.5
CLL                                  pmax   pmax
       comp=Z,15nm,1.7s
VSR    Storozhevoye       67.15 353  eP     P       01 32 46.7 -1.0
VSR                                  pmax   pmax
       comp=Z,10.0nm,0.6s
BRG    Berggiesshubel     67.19  10  eP     P       01 32 47.8 -0.2
       comp=Z,7.0nm,1.1s
BRG    Berggiesshubel     67.19  10  eP     P       01 32 47.8 -0.2
BRG                                  pmax   pmax
       comp=Z,7.0nm,1.1s
VORD   Divnogorie         67.39 353  eP     P       01 32 47.2 -2.0
VORD                                 pmax   pmax
       comp=Z,10.0nm,0.5s
PVCC   Panska Ves         67.58  10  eP     P       01 32 50.9 +0.4
PVCC   Panska Ves         67.58  10  eP     P       01 32 50.9 +0.4
NKC    Novy Kostel        67.69  11  eP     P       01 32 51.8 +0.6
NKC    Novy Kostel        67.69  11  eP     P       01 32 51.8 +0.6
DPC    Dobruska-Polom     67.89   9  eP     P       01 32 53.3 +0.8
DPC                                  ex     x       01 32 59.3
DPC                                  epP    pP      01 33 16.3 +1.4
DPC    Dobruska-Polom     67.89   9  eP     P       01 32 53.3 +0.8
DPC                                  e              01 33 16.3
AKASG  Malin Array Be     67.98 360  P      P       01 32 52.3 -0.6
       comp=Z,8.7nm,0.4s,baz=2.7,slow=6.2,SNR=47
AKASG                                pP     pP      01 33 15.1 -0.3
       comp=Z,5.9nm,0.7s,baz=358,slow=6.2,SNR=3.6
KIEV   Kiev               67.98 360  eP     P       01 32 52.1 -0.9
       comp=Z,7.3nm,0.4s
KIEV   Kiev               67.98 360⇑iP     P       01 32 52.4 -0.6
KIEV                                 pmax   pmax
       comp=Z,13nm,0.7s
ENH    Enshi              67.99 293  eP     P       01 32 52.8 -0.6
GRFO   Grafenberg         68.11  12  eP     P       01 32 54.4 +0.6
       comp=Z,4.4nm,0.8s
GRFO   Grafenberg         68.11  12  eP     P       01 32 54.4 +0.6
GRFO                                 pmax   pmax
       comp=Z,4.0nm,0.8s
PRU    Pruhonice          68.11  10  eP     P       01 32 54.3 +0.5
PRU                                  epP    PcP     01 33 18.5 -0.7
PRU    Pruhonice          68.11  10  eP     P       01 32 54.3 +0.5
PRU                                  e              01 33 18.5
KRLC   Kraliky            68.20   8  eP     P       01 32 55.0 +0.6
KRLC                                 ex     x       01 33 00.4
KRLC   Kraliky            68.20   8  eP     P       01 32 55.0 +0.6
GOPC   GO Pecny, Ondr     68.21  10  eP     P       01 32 54.7 +0.3
GOPC   GO Pecny, Ondr     68.21  10  eP     P       01 32 54.7 +0.3
MORC   Moravsky Berou     68.54   8⇑iP     P       01 32 56.6  0.0
MORC   Moravsky Berou     68.54   8  eP     P       01 32 56.7 +0.1
MORC                                 ePCP   pP      01 33 19.9 +0.8
LVV    L'vov              68.80   3  eP     P       01 32 57.6 -0.5
KHC    Kasperske Hory     68.89  11  eP     P       01 32 59.4 +0.7
KHC    Kasperske Hory     68.89  11  eP     P       01 32 59.4 +0.7
VRAC   Vranov             68.95   8⇑iP     P       01 32 58.8 -0.2
VRAC   Vranov             68.95   8  eP     P       01 32 59.4 +0.4
TKM2   Tokmak 2           69.09 325  P      P       01 32 59.8 -0.4
       SNR=6.4
BFO    Black Forest       69.14  14  i P    P       01 33 01.8 +1.6
KRUC   Moravsky           69.18   9  eP     P       01 33 00.6 +0.2
KRUC                                 ePCP   PcP     01 33 24.1 +0.4
GERES  GERESS Array B     69.18  11  P      P       01 33 00.7 +0.1
       comp=Z,1.9nm,0.8s,baz=343,slow=4.2,SNR=16
CHMS   Chumysh            69.24 326  P      P       01 33 01.3 +0.3
       SNR=6.0
LANS   Liptovska Anna     69.28   6  eP     P       01 33 01.9 +0.8
LANS   Liptovska Anna     69.28   6  eP     P       01 33 01.9 +0.8
JAVC   Velka Javorina     69.47   8  eP     P       01 33 03.6 +1.3
JAVC                                 ePCP   PcP     01 33 26.9 +1.9
KBK    Karagaybulak       69.51 325  P      P       01 33 02.8 -0.1
       SNR=5.7
CRVS   Cervenica-Dubn     69.62   5  eP     P       01 33 04.0 +0.8
CRVS   Cervenica-Dubn     69.62   5  eP     P       01 33 04.0 +0.8
EKS2   Erkin-Say          69.82 326  P      P       01 33 04.7 +0.1
       SNR=10
VYHS   Vyhne              69.90   7  eP     P       01 33 05.1 +0.2
VYHS                                 pmax   pmax
       comp=Z,3.0nm,0.9s
VYHS   Vyhne              69.90   7  eP     P       01 33 05.1 +0.2
UZH    Uzhgorod           69.93   5c iP     P       01 33 05.4 +0.4
MOA    Molln              70.22  10  eP     P       01 33 06.8 -0.1
       comp=Z,5.0nm,1.1s
RETA   Reutte             70.24  13  eP     P       01 33 07.3 +0.2
       comp=Z,6.0nm,1.6s
CONA   Conrad Observa     70.27   9  eP     P       01 33 07.8 +0.6
       comp=Z,16nm,1.7s,SNR=8.3
AML    Almayashu          70.33 326  P      P       01 33 08.8 +0.6
       SNR=7.7
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DAVA	Damuels	70.34	13	eP	P	01 33 06.8	-1.0
	comp=Z,3.7nm,0.9s						
TRPA	Tarpa	70.44	4	⇓iP	P	01 33 08.4	+0.3
WATA	Walderalm	70.47	12	eP	P	01 33 10.0	+1.3
	comp=Z,4.3nm,0.8s						
PSZ	Piszkesteto	70.53	6	⇓iP	P	01 33 09.2	+0.3
SORM	Soroca	70.55	0	⇑iP	P	01 33 08.3	-0.5
WTTA	Wattenberg	70.55	12	eP	P	01 33 09.5	+0.4
	comp=Z,8.7nm,1.2s						
FETA	Feichten	70.70	13	eP	P	01 33 10.1	+0.2
	comp=Z,2.9nm,0.8s						
KBA	Koelnbreinsper	70.90	11	iP	P	01 33 12.0	+0.8
	comp=Z,12nm,0.7s,SNR=5.5						
ARSA	Arzberg	70.91	9	eP	P	01 33 11.5	+0.3
	comp=Z,3.0nm,0.7s						
BURAR	Bucovina Array	71.03	2	⇑iP	P	01 33 11.8	-0.1
ABTA	Abfaltersbach	71.15	12	eP	P	01 33 13.9	+1.3
	comp=Z,2.1nm,0.8s						
MYKA	Terra Mystica	71.37	11	eP	P	01 33 13.6	-0.4
	comp=Z,1.9nm,0.5s						
SOKA	Soboth	71.44	10	eP	P	01 33 15.5	+1.1
	comp=Z,5.9nm,1.1s						
OBKA	Obir	71.57	10	eP	P	01 33 15.5	+0.3
	comp=Z,16nm,0.7s,SNR=12						
BIZ	Bicaz	71.72	2	⇑iP	P	01 33 15.9	-0.1
DRGR		71.78	4	⇓iP	P	01 33 16.1	-0.3
KSH	Kashi	72.14	323	P	P	01 33 21.5	+2.8
KSH				ePcP	pP	01 33 39.4	-2.0
KSH				sP	sP	01 33 49.6	-1.4
KSH				PP	PP	01 36 06.1	+6.7
KSH				S	S	01 42 33.7	-0.1
KSH				SKS	SKSac	01 43 11.6	-3.2
KSH				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,47nm,5.1s						
PGAV	Gavieira, Arco	72.47	28	eP	P	01 33 21.5	+0.9
	comp=Z,65nm,1.7s						
GYA	Guiyang	72.52	293	eP	P	01 33 22.0	+0.8
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PCAB	Cabril	72.76	28	eP	P	01 33 23.3	+1.0
	comp=Z,47nm,1.7s						
VRI	Vrincioaia	72.80	1	⇑iP	P	01 33 22.1	-0.3
BZS	Buzias	72.91	5	⇓iP	P	01 33 23.1	+0.1
PBRG	Braganca	72.95	27	eP	P	01 33 24.3	+0.9
	comp=Z,27nm,2.2s						
POLO	Lamas de Olo	73.14	28	eP	P	01 33 25.5	+0.9
	comp=Z,14nm,1.7s						
LOT	Lotru	73.16	4	⇓iP	P	01 33 24.0	-0.7
MLR	Muntele Rosu	73.17	2	⇓iP	P	01 33 24.2	-0.5
PVRL	Vila Real	73.25	28	eP	P	01 33 26.3	+1.1
	comp=Z,34nm,1.7s						
ARR	Arges	73.26	3	⇓iP	P	01 33 24.7	-0.5
CFR	Carcaliu	73.50	0	⇑iP	P	01 33 26.3	-0.2
MVO	Moncorvo	73.50	27	eP	P	01 33 27.7	+1.0
	comp=Z,26nm,1.8s						
PVIS	Viseu	73.74	28	eP	P	01 33 29.1	+1.0
	comp=Z,34nm,1.7s						
MDVR	Moldovita	73.75	5	⇓iP	P	01 33 28.0	-0.1
HARR	Harsova	73.99	1	⇑iP	P	01 33 28.7	-0.7
TLB	Topalu	74.09	0	⇓iP	P	01 33 29.2	-0.8
KIV	Kislovodsk	74.12	350	eP	P	01 33 30.1	-0.2
KIV	Kislovodsk	74.12	350	eP	P	01 33 29.7	-0.6
KIV				pmax	pmax		
	comp=Z,26nm,1.1s						
MTE	Manteigas	74.12	28	eP	P	01 33 31.2	+0.9
	comp=Z,43nm,1.8s						
PCAS	Casmilo, Conde	74.24	29	eP	P	01 33 31.9	+1.0
	comp=Z,49nm,1.4s						
KBZ	Khabaz	74.33	349	P	P	01 33 31.9	+0.6
	comp=Z,8.4nm,0.9s,baz=337,slow=6.0,SNR=13						
PCBR	Castelo Branco	74.67	28	eP	P	01 33 34.2	+0.8
	comp=Z,22nm,1.9s						
ALMR	Almeirim	75.07	29	eP	P	01 33 36.4	+0.7
	comp=Z,53nm,0.5s						
PMRV	Marv??o	75.08	28	eP	P	01 33 36.2	+0.4
	comp=Z,22nm,1.6s						
PMAFR	Mafra	75.10	30	eP	P	01 33 36.8	+0.9
	comp=Z,114nm,2.0s						
ZEI	Tsey	75.17	348	eP	P	01 33 33.2	-3.3
PMTG	Montargil	75.24	29	eP	P	01 33 37.0	+0.3
	comp=Z,22nm,1.6s						
ESDC	Sonseca Array	75.58	25	P	P	01 33 39.3	+0.5
	comp=Z,6.1nm,0.7s,baz=342,slow=5.6,SNR=35						
ESDC				pP	pP	01 34 02.4	+0.7
	comp=Z,1.9nm,0.7s,baz=344,slow=5.5,SNR=3.8						
VTS	Vitosha	75.99	4	⇑iP	P	01 33 40.2	-1.0
PNCL	Nicolau / Gran	76.08	29	eP	P	01 33 42.4	+0.9
	comp=Z,34nm,0.8s						
PBAR	Barrancos	76.36	28	eP	P	01 33 43.4	+0.3
	comp=Z,33nm,1.6s						
PVAQ	Vaqueiros	76.94	29	eP	P	01 33 47.4	+1.0
	comp=Z,48nm,1.8s						
PBDV	Barranco-do-Ve	77.05	29	eP	P	01 33 47.8	+0.8
	comp=Z,49nm,1.8s						
GNI	Garni	77.69	347	eP	P	01 33 51.3	+0.5
GNI	Garni	77.69	347	⇑eP	P	01 33 51.4	+0.6
GNI				pmax	pmax		
	comp=Z,48nm,1.7s						
GEYT	Alibeck	77.91	337	P	P	01 33 51.1	-0.7
	comp=Z,2.2nm,0.8s,baz=290,slow=6.1,SNR=10						
NIL	Nilore	78.39	323	eP	P	01 33 53.4	-1.1
NIL	Nilore	78.39	323	eP	P	01 33 53.4	-1.1
BRTR	Keskin Array B	78.87	356	P	P	01 33 57.0	-0.3
	comp=Z,4.3nm,0.9s,baz=12,slow=2.8,SNR=23						
BRTR	Keskin Array B	78.87	356	P	P	01 33 57.0	-0.3
TAPN	Taplejung	79.44	309	eP	P	01 34 01.0	+0.3
	comp=Z,21nm,0.4s						
GUN	Gumba	79.60	311	eP	P	01 34 01.7	+0.1
JIRN	Jiri	79.72	311	eP	P	01 34 02.7	+0.4
KKN	Kakani	79.93	311	eP	P	01 34 03.3	+0.1
DANN	Dangsing	79.95	313	eP	P	01 34 03.8	+0.3
	comp=Z,51nm,0.7s						
GKN	Gorkha	79.96	312	eP	P	01 34 03.3	-0.1
	comp=Z,20nm,0.5s						
ODAN	Odare	80.00	309	eP	P	01 34 03.8	+0.1
PKIN	Phulchoki	80.08	311	eP	P	01 34 03.9	-0.2
DMN	Daman	80.15	311	eP	P	01 34 04.7	+0.2
KEST	Kesra	81.67	16	P	P	01 34 12.6	+0.3
	comp=Z,5.6nm,0.7s,baz=60,slow=1.7,SNR=11						
BRDH	Bariadhala	82.15	304	LR	LR	02 12 52.2	
	comp=Z,59nm,18.2s,baz=58,slow=37						
CMAR	Chiang Mai Arr	82.90	296	P	P	01 34 17.8	-1.0
	comp=Z,3.4nm,0.8s,baz=5.6,slow=5.9,SNR=16						
MMAI	Mount Meron Ar	85.49	354	P	P	01 34 32.0	+0.2
	comp=Z,3.0nm,0.7s,baz=355,slow=7.2,SNR=4.4						
RAYN	Ar Rayn	94.03	345	eP	P	01 35 11.6	-0.5
RAYN	Ar Rayn	94.03	345	eP	P	01 35 11.6	-0.5
SAML	Samuel	96.91	96	eP	P	01 35 25.7	+0.5
	comp=Z,1.1nm,0.6s						
SAML	Samuel	96.91	96	eP	P	01 35 25.7	+0.5
SAML				pmax	pmax		
	comp=Z,1.0nm,0.6s						
LSZ	Lusaka	133.67	1	ePKPdf	PKPdf	01 41 11.2	+1.1
LSZ	Lusaka	133.67	1	ePKIKP	PKPdf	01 41 11.3	+1.1
TSUM	Tsumeb	136.86	15	ePKPdf	PKPdf	01 41 16.3	+0.2
BOSA	Boshof	146.86	6	PKPbc	PKPbc	01 41 35.5	-0.1
	comp=Z,9.1nm,0.7s,baz=335,slow=2.4,SNR=25						
SUR	Sutherland	150.25	14	ePKPbc	PKPbc	01 41 44.8	+0.5
QSPA	South Pole Qui	151.48	180	PKPbc	PKPbc	01 41 46.4	+0.5
	comp=Z,17nm,0.7s,baz=220,slow=0.7,SNR=88						

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*NEIC **06** 01:48:12.8±0.0, 18°.42N×105°.07W, h16^{km}, MD4.0(MEX), After MEX.*

MEX 06 01:48:12.8±0.5**, 18°.42N×105°.07W, h16**^{km}±11^{km}**, MD4.0, Off coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CJM	Chamela	1.08	1	iP	Pb	01 48 29.3	-3.8
CJM				eS	Sb	01 48 42.1	-4.8
CJM	Chamela	1.08	1	iP	Pb	01 48 29.3	-3.8
CJM				eS	Sb	01 48 42.1	-4.8
R15V		1.27	54	eP	Pn	01 48 32.8	-3.2
R15V				eS	Sb	01 48 46.9	-5.7
MMIG	Aquila	1.64	94	eP	Pn	01 48 37.0	-3.9
MMIG				eS	Sn	01 48 56.5	-5.3
MMIG	Aquila	1.64	94	eP	Pn	01 48 37.0	-3.9
MMIG				eS	Sn	01 48 56.5	-5.3
EZ5V		1.74	52	eP	Pn	01 48 39.8	-2.9
EZ5V				eS	Sn	01 48 59.7	-5.0
ZIIG	Zihuatanejo	3.52	103	iP	Pn	01 49 04.1	-2.7
ZIIG				eS	Sn	01 49 44.5	-3.7
ZIIG	Zihuatanejo	3.52	103	iP	Pn	01 49 04.1	-2.7
ZIIG				eS	Sn	01 49 44.5	-3.7
MOIG	Morelia	3.88	70	iP	Pn	01 49 08.4	-3.6
MOIG				iS	Sn	01 49 53.7	-3.7
MOIG	Morelia	3.88	70	iP	Pn	01 49 08.4	-3.6
MOIG				iS	Sn	01 49 53.7	-3.7
ARIG	Puente Sto Nin	4.48	91	eP	Pn	01 49 17.5	-2.7
ARIG				eS	Sn	01 50 08.2	-3.8
ARIG	Puente Sto Nin	4.48	91	eP	Pn	01 49 17.5	-2.7
ARIG				eS	Sn	01 50 08.2	-3.8

MEX 06 02:19:54.0±0.3**, 16°.42N×98°.39W, h13**^{km}±6^{km}**, MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.26	96	eP	Pg	02 19 59.0	-0.4
PNIG				eS	Sg	02 20 02.9	-0.3
TLIG	Tlapa	1.15	352	eP	Pb	02 20 12.2	-3.6
TLIG				eS	Sb	02 20 26.2	-4.5
VHO	Vista Hermosa	1.72	68	iP	Pn	02 20 20.0	-3.8
VHO				iS	Sn	02 20 41.1	-4.6
PLIG	Platanillo	2.23	332	iP	Pn	02 20 28.0	-2.7
PLIG				eS	Sn	02 20 53.7	-4.5

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*BJI **06** 02:28:21.2, 14°.58S×167°.29E, h164^{km}, mb5.8/86, mB6.3/80*

*GCMT **06** 02:28:22.2±0.1, 14°.74S×167°.19E, h169^{km}, MW6.4/148, Moment Tensor Solution. s147,c372; s148,c626; Duration: 3^{s}8 Moment tensor: Scale 10^{18}Nm; M_{rr}4.04±.02; $M_{\theta\theta}$-0.39±.02; $M_{\phi\phi}$-3.65±.02; $M_{r\theta}$-1.45±.02; $M_{\theta\phi}$1.96±.02; $M_{\phi r}$-0.83±.02; Best double couple: $M_0$4.63900×10^{18} NP1:ϕ_s175.00000°,δ50.00000°, λ119.00000°. NP2:ϕ_s315.00000°,δ48.00000°,λ60.00000°. Principal axes: T 4.7080, Plg68.0000°, Azm153.0000°; N -0.1320, Plg22.0000°, Azm336.0000°; P -4.5710, Plg1.0000°, Azm245.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*WEL **06** 02:28:22.0, 14°.66S×167°.34E, h160^{km}*

*IDC **06** 02:28:22.1±0.3, 14°.68S×167°.40E, h160^{km}±2^{km}, mb5.6/41, mb1 5.6/44, mb1mx5.6/47, mbtmp6.1/44, MS5.4/21, Ms1 5.4/21, ms1mx5.0/52, Error ellipse: s-maj=7.7km s-min=6.9km az=53.0*

*NEIC **06** 02:28:22.0±0.0, 14°.46S×167°.05E, h170^{km}, Moment Tensor Solution. s59 Moment tensor: Scale 10^{18}Nm; M_{rr}3.38; $M_{\theta\theta}$-0.50; $M_{\phi\phi}$-2.88; $M_{r\theta}$-1.03; $M_{\theta\phi}$1.41; $M_{\phi r}$-1.38; Best double couple: $M_0$3.90000×10^{18} NP1:ϕ_s176.00000°, δ55.00000°,λ115.00000°. NP2:ϕ_s316.00000°,δ42.00000°, λ58.00000°. Principal axes: T 4.0500, Plg68.0000°, Azm139.0000°; N -0.4100, Plg20.0000°, Azm340.0000°; P -3.6400, Plg7.0000°, Azm247.0000°;*

*NEIC **06** 02:28:22.2±0.1, 14°.66S×167°.34E, mb5.7/296, ME5.8, MW6.3, MW6.3, MW6.3 Error ellipse: s-maj=3.1km s-min=2.5km az=143.0, Moment Tensor Solution. s99 Moment tensor: Scale 10^{18}Nm; M_{rr}2.77; $M_{\theta\theta}$-0.91; $M_{\phi\phi}$-1.87; $M_{r\theta}$-1.24; $M_{\theta\phi}$1.04; $M_{\phi r}$-0.34; Best double couple: $M_0$3.00000×10^{18} NP1:ϕ_s165.00000°,δ44.00000°, λ118.00000°. NP2:ϕ_s308.00000°,δ53.00000°,λ66.00000°. Principal axes: T 3.2300, Plg70.0000°, Azm158.0000°; N -0.6700, Plg19.0000°, Azm323.0000°; P -2.5600, Plg5.0000°, Azm55.0000°; Broadband fault plane solution: P waves. NP1:ϕ_s167.00000°,δ48.00000°, λ109.00000°. NP2:ϕ_s320.00000°,δ45.00000°,λ70.00000°. Principal axes: T Plg76.0000°, Azm147.0000°; N Plg0.0000°, Azm0.0000°; P Plg2.0000°, Azm244.0000°; Depth from broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt at Luganville and Port Olry.

*ISCJB **06** 02:28:22.9±0.6, 14°.67S±0°.02×167°.29E±0°.02, h178^{km}±5^{km}, mb5.7/451 Error ellipse: s-maj=3.4km s-min=2.5km az=177.4*

*MOS **06** 02:28:23.0±0.9, 14°.61S×167°.27E, h178^{km}, mb6.0/66, MS5.5/25, Error ellipse: s-maj=6.5km s-min=5.9km az=101.8*

*NEIC **06** 02:28:39.9±0.0, 13°.95S×168°.22E, h154^{km}, Moment Tensor Solution. s19 Moment tensor: Scale 10^{18}Nm; M_{rr}3.10; $M_{\theta\theta}$-0.53; $M_{\phi\phi}$-2.58; $M_{r\theta}$-0.91; $M_{\theta\phi}$0.81; $M_{\phi r}$-1.73; Best double couple: $M_0$3.50000×10^{18} NP1:ϕ_s182.00000°, δ60.00000°,λ109.00000°. NP2:ϕ_s326.00000°,δ35.00000°, λ59.00000°. Principal axes: T 3.8700, Plg68.0000°, Azm131.0000°; N -0.6900, Plg17.0000°, Azm352.0000°; P -3.1800, Plg13.0000°, Azm258.0000°;*

ISC 06 02:28:22.6±0.2**, 14°.66S**±0°.03×**167°.30E**±0°.03**, h165**^{km}±1^{km}**, h165**^{km}**:pP-P, n2167,** σ**1**^{s}**30**/2211**, mb5.8**/459**, 98C-30D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.42	186	P	Pn	02 30 08.5	+0.2
	88nm,0.3s,baz=43,slow=19,SNR=321						
DZM				S	Sn	02 31 29.5	-2.1
	baz=307,slow=19,SNR=4.0						
DZM	Mont Dzumac	7.42	186	ePn	Pn	02 30 10.8	+2.5
	818nm,0.2s						
DZM				eSn	Sn	02 31 27.6	-4.0
	816nm,0.3s						
DZM	Mont Dzumac	7.42	186	ePn	Pn	02 30 08.5	+0.2
DZM				eSn	Sn	02 31 31.1	-0.6
HNR	Honiara	8.87	305	P	Pn	02 30 29.0	+1.4
	161nm,0.3s,baz=172,slow=3.8,SNR=76						
HNR				S	Sn	02 32 10.7	+4.3
	563nm,0.3s,baz=82,slow=19,SNR=4.2						
HNR	Honiara	8.87	305	eP	Pn	02 30 30.0	+2.5
HNR				eS	Sn	02 32 05.0	-1.4
HNR	Honiara	8.87	305	ePn	Pn	02 30 29.3	+1.8
HNR				eSn	Sn	02 32 06.5	0.0
FUNA	Funafuti	13.14	64	ePn	Pn	02 31 23.7	+0.5
	6μm,1.4s						
NFK	Norfolk Island	14.33	178	P	P	02 31 40.9	+0.6
	baz=14,SNR=6.5						
TARA	Tarawa	16.85	20	eP	Pn	02 32 09.7	+0.7
	200nm,1.4s						
LHI	Lord Howe Isla	18.40	203	P	Pn	02 32 27.5	+0.3
	baz=18,SNR=15						
LHI	Lord Howe Isla	18.40	203	eP	Pn	02 32 27.6	+0.3
	578nm,0.9s						
EIDS	Eidsvold	18.58	232	P	Pn	02 32 29.8	+0.4
	baz=19,SNR=142						
EIDS	Eidsvold	18.58	232	eP	Pn	02 32 29.8	+0.4
	3μm,1.6s						
RAO	Raoul Island	19.94	139	P	P	02 32 42.7	+0.9
	46nm,0.3s,baz=331,slow=14,SNR=4.0						
RAO	Raoul Island	19.94	139	eP	P	02 32 41.3	-0.5
	2μm,1.5s						
GLKZ	Green Lake	19.94	139	P	Pn	02 32 45.2	-0.2
AFI	Afiamalu	20.29	91	P	P	02 32 44.9	-0.8
	70nm,0.7s,baz=282,slow=11,SNR=3.7						
AFI	Afiamalu	20.29	91	eP	P	02 32 46.5	+0.7
	1μm,1.0s						
AFI	Afiamalu	20.29	91	eP	P	02 32 46.5	+0.7
AFI				pmax	pmax		
	comp=Z,1μm,1.0s						
PMG	Port Moresby	20.38	283	eP	P	02 32 48.6	+2.0
PMG	Port Moresby	20.38	283	eP	P	02 32 48.6	+2.0
CTA	Charters Tower	20.80	252	P	P	02 32 52.9	+1.8
	comp=Z,404nm,0.7s,baz=81,slow=12,SNR=146						
CTAO	Charters Tower	20.80	252	eP	P	02 32 52.7	+1.6
CTAO	Charters Tower	20.80	252	eP	P	02 32 52.7	+1.6
RMQ	Roma	20.94	233	P	P	02 32 55.0	+2.3
	baz=21,SNR=346						
OUZ	Omahuta	21.24	166	eP	P	02 32 57.5	+1.9
	comp=Z,471nm,1.2s						
OUZ	Omahuta	21.24	166	P	P	02 32 57.4	+1.8
ARMA	Armidale	21.31	220	P	P	02 32 58.9	+2.4
	baz=21,SNR=63						
ARMA	Armidale	21.31	220	eP	P	02 32 59.0	+2.4
	comp=Z,670nm,1.0s						
NIUE	Niue	22.22	105	P	P	02 33 06.4	+0.5
	baz=22,SNR=18						
MTSU	Mount Surprise	22.32	258	P	P	02 33 08.3	+1.4
	baz=22,SNR=105						
PATS	Pohnpei	23.14	337	P	P	02 33 14.9	+0.5
	baz=23,SNR=24						
PATS	Pohnpei	23.14	337	eP	P	02 33 14.2	-0.2
	comp=Z,996nm,1.0s						
KUZ	Kuaotunu	23.25	163	P	P	02 33 15.7	+0.5
MANU	Manus Island	23.34	301	eP	P	02 33 17.0	+0.7
	comp=Z,3μm,1.9s						
COEN	Coen	23.39	269	P	P	02 33 18.6	+1.9
	baz=24,SNR=69						
COEN	Coen	23.39	269	eP	P	02 33 18.7	+1.9
	comp=Z,538nm,1.1s						
MKAZ	Moumakai	23.43	164	P	P	02 33 18.2	+1.4
MGCD	Mangrove Creek	23.61	216	P	P	02 33 20.6	+2.0
	baz=24,SNR=114						
KNTN	Kanton	23.83	62	eP	P	02 33 21.6	+0.9
	comp=Z,796nm,1.2s						
RIV	Riverview	24.04	215	P	P	02 33 24.6	+2.2
	baz=24,SNR=47						
TOZ	Tahuroa Road	24.11	164	P	P	02 33 24.3	+1.3
QLP	Quilpie	24.59	237	P	P	02 33 29.1	+1.5
	baz=25,SNR=109						
HIZ	Hauiti	24.68	166	eP	P	02 33 29.7	+1.5
	comp=Z,480nm,1.1s						
HIZ	Hauiti	24.68	166	P	P	02 33 29.5	+1.2
HAZ	Te Kaha	24.82	160	P	P	02 33 30.8	+1.4
MXZ	Matakaoa Point	24.82	159	eP	P	02 33 26.9	-2.6
	comp=Z,257nm,1.3s						
RUGZ	Raukumara Rang	24.97	160	P	P	02 33 31.4	+0.4
URZ	Urewera	25.06	162	P	P	02 33 30.8	-0.9
	comp=Z,56nm,1.0s,baz=304,slow=2.2,SNR=20						
URZ	Urewera	25.06	162	eP	P	02 33 31.4	-0.2
	comp=Z,440nm,1.3s						
URZ	Urewera	25.06	162	P	P	02 33 31.9	+0.3
MUGZ	Murupara	25.16	162	P	P	02 33 32.9	+0.3
MWZ	Matawai	25.26	161	P	P	02 33 33.5	0.0
MWZ				S	S	02 37 48.2	+1.3
TWGZ	Tauwhareparae	25.26	160	P	P	02 33 33.8	+0.3
TWGZ				S	S	02 37 49.8	+2.7
RTZ	Ruatahuna	25.35	162	P	P	02 33 34.2	-0.2
MRHZ	Matea Rd	25.39	163	P	P	02 33 36.9	+2.2
MTHZ	Maungataniwha	25.53	163	P	P	02 33 35.8	-0.1
WHVZ	Whangaehu Hut	25.59	165	P	P	02 33 38.4	+1.6
CNGZ	Carnagh Statio	25.62	160	P	P	02 33 36.6	-0.1
RAHZ	Arahi	25.66	162	P	P	02 33 37.0	-0.1
RIGZ	Rimuhau	25.67	161	P	P	02 33 36.9	-0.3
BKZ	Black Stump Fm	25.72	163	eP	P	02 33 37.2	-0.4
	comp=Z,158nm,0.6s						
BKZ	Black Stump Fm	25.72	163	P	P	02 33 37.3	-0.4
MOVZ	Moawhango	25.75	165	P	P	02 33 39.3	+1.3
WHHZ	Waihua	25.85	162	P	P	02 33 40.0	+1.2
KNZ	Kokohu	25.93	161	P	P	02 33 38.8	-0.7
KWHZ	Kaweka Forest	25.94	164	P	P	02 33 40.3	+0.6
CMSA	Cobar Meteorol	25.95	226	P	P	02 33 40.8	+1.1
	baz=26,SNR=222						
YNG	Young	25.96	218	P	P	02 33 41.4	+1.5
	baz=26,SNR=41						
CNB	Canberra Magne	26.14	215	P	P	02 33 42.9	+1.4
	baz=26,SNR=88						
CAN	Canberra	26.34	215	eP	P	02 33 44.4	+1.1
	comp=Z,199nm,1.1s						
CAN	Canberra	26.34	215	eP	P	02 33 44.4	+1.1
CAN				pmax	pmax		
	comp=Z,199nm,1.1s						
QIS	Mount Isa	27.02	253	P	P	02 33 50.6	+1.0
	baz=27,SNR=40						
BFZ	Birch Farm	27.08	165	eP	P	02 33 48.8	-0.9
	comp=Z,265nm,1.3s						
SNZO	South Karori	27.32	168	eP	P	02 33 53.6	+1.7
	comp=Z,385nm,1.6s						
THZ	Tophouse	27.44	171	eP	P	02 33 53.5	+0.5
	comp=Z,577nm,1.9s						
MILA	Mila	27.55	213	P	P	02 33 55.5	+1.5
	baz=28,SNR=28						
KHZ	Kahutara	28.18	170	eP	P	02 34 00.1	+0.6
	comp=Z,121nm,1.0s						
LTZ	Lake Taylor	28.35	172	eP	P	02 34 00.9	-0.2
	comp=Z,184nm,1.2s						
FOZ	Fox Glacier	28.86	176	eP	P	02 34 06.4	+0.9
	comp=Z,313nm,0.9s						
OXZ	Oxford	28.86	173	eP	P	02 34 04.9	-0.6
	comp=Z,126nm,0.7s						
JAY	Jayapura	28.89	292	P	P	02 34 05.2	-1.0
	comp=Z,32nm,0.8s,baz=248,slow=1.2,SNR=7.4						
JAY	Jayapura	28.89	292	P	P	02 34 08.6	+2.4
STKA	Stephens Creek	29.07	229	P	P	02 34 09.0	+1.4
	baz=29,SNR=304						
STKA	Stephens Creek	29.07	229	P	P	02 34 09.2	+1.6
	comp=Z,467nm,0.6s,baz=48,slow=8.5,SNR=328						
STKA				PcP	PcP	02 37 12.5	+0.8
	comp=Z,110nm,0.6s,baz=77,slow=2.8,SNR=9.5						
STKA				ScP	ScP	02 40 39.9	+2.1
	comp=Z,46nm,1.1s,baz=60,slow=4.5,SNR=4.1						
STKA	Stephens Creek	29.07	229	eP	P	02 34 09.1	+1.6
	comp=Z,114nm,0.6s						
STKA				PcP	PcP	02 37 12.5	+0.8
STKA				ScP	ScP	02 40 39.9	+2.1
RPZ	Rata Peaks	29.14	174	P	P	02 34 07.4	-0.6
	comp=Z,114nm,0.6s,baz=286,slow=0.9,SNR=64						
RPZ	Rata Peaks	29.14	174	eP	P	02 34 07.9	-0.1
	comp=Z,191nm,0.9s						
MQZ	McQueen's Vall	29.31	172	eP	P	02 34 09.2	-0.3
	comp=Z,603nm,1.9s						
GENI	Genyem	29.34	292	P	P	02 34 11.5	+1.4
	comp=Z,174nm,0.9s,comp=Z,8μm						
LBZ	Lake Benmore	29.73	176	eP	P	02 34 12.9	-0.4
	comp=Z,180nm,1.2s						
TOO	Toolangi	29.93	216	P	P	02 34 16.4	+1.2
	baz=30,SNR=75						
WKZ	Wanaka	30.11	178	eP	P	02 34 17.5	+0.9
	comp=Z,398nm,1.1s						
ODZ	Otahua Downs	30.42	175	eP	P	02 34 19.1	-0.2
	comp=Z,197nm,1.2s						
MLZ	Mavora Lakes	30.62	179	eP	P	02 34 21.2	+0.1
	comp=Z,357nm,0.9s						
DCZ	Deep Cove	30.71	180	eP	P	02 34 21.9	+0.1
	comp=Z,841nm,1.0s						
WHZ	Wether Hill Ro	31.14	179	eP	P	02 34 25.4	-0.2
	comp=Z,259nm,1.1s						
ARPS	Mount Arapiles	31.62	221	P	P	02 34 31.3	+1.3
	baz=32,SNR=39						
HTT	Hallett	31.79	229	P	P	02 34 33.0	+1.4
	baz=32,SNR=224						
WB2	Warramunga Arr	31.86	256	eP	P	02 34 32.5	+0.1
	comp=Z,657nm,1.9s						
WB2				epP	pP	02 35 06.7	-0.3
WRAB	Tennant Creek	31.86	256	eP	P	02 34 32.4	+0.1
WRAB				eS	S	02 39 29.5	-1.5
WRAB	Tennant Creek	31.86	256	⇓iP	P	02 34 32.2	-0.1
WRAB				pmax	pmax		
	comp=Z,72nm,0.7s						
WRA	Warramunga Arr	31.88	256	P	P	02 34 31.9	-0.6
	comp=Z,67nm,0.5s,baz=85,slow=9.1,SNR=203						
WRA				pP	pP	02 35 06.5	-0.6
	comp=Z,59nm,0.9s,baz=84,slow=9.0,SNR=3.2						
WRA				S	S	02 39 27.1	-4.2
	comp=Z,31nm,1.1s,baz=90,slow=12,SNR=5.1						
WRA				ScP	ScP	02 40 50.1	+2.7
	comp=Z,36nm,1.1s,baz=83,slow=3.8,SNR=4.7						
WRA				PKiKP	PKiKP	02 44 46.5	-1.3
	comp=Z,3.3nm,0.6s,baz=5.0,slow=0.4,SNR=8.7						
RAR	Rarotonga	31.95	107	P	P	02 34 32.9	-0.2
	comp=Z,136nm,0.9s,baz=258,slow=6.7,SNR=16						
RAR	Rarotonga	31.95	107	eP	P	02 34 33.2	+0.2
	comp=Z,1μm,1.6s						
RAR	Rarotonga	31.95	107	eP	P	02 34 33.2	+0.2
RAR				pmax	pmax		
	comp=Z,1μm,1.6s						
MOO	Moorlands	32.67	208	P	P	02 34 40.3	+1.3
	baz=33,SNR=28						
AS01	Alice Springs	32.69	249	eP	P	02 34 36.9	-2.6
AS31	Alice Springs	32.73	249	eP	P	02 34 40.0	+0.1
	comp=Z,85nm,0.6s						
ASAR	Alice Springs	32.73	249	P	P	02 34 39.5	-0.4
	comp=Z,212nm,0.6s,baz=80,slow=8.6,SNR=907						
ASAR				PcP	PcP	02 37 21.9	+0.3
	comp=Z,42nm,0.7s,baz=71,slow=2.0,SNR=7.7						
ASAR				S	S	02 39 41.1	-3.4
	comp=Z,21nm,0.9s,baz=83,slow=18,SNR=5.1						
ASAR				ScP	ScP	02 40 53.7	+3.4
	comp=Z,41nm,1.0s,baz=92,slow=3.5,SNR=10.0						
ASAR				LR	LR	02 47 37.4	
	comp=Z,14μm,19.4s,baz=68,slow=35						
TAU	Tasmania Unive	32.98	207	eP	P	02 34 43.0	+1.3
	comp=Z,211nm,0.9s						
TAU				ePcP	PcP	02 37 23.7	+1.9
TAU				eScP	ScP	02 40 50.6	0.0
TAU	Tasmania Unive	32.98	207	eP	P	02 34 43.0	+1.3
TAU				e		02 37 23.7	
TAU				pmax	pmax		

	comp=Z,211nm,0.9s						
BAKI	Biak	33.60	291	P	P	02 34 49.2	+1.7
	comp=Z,313nm,1.7s,comp=Z,8µm						
BBOO	Buckleboo	33.65	232	P	P	02 34 48.8	+1.1
	baz=34,SNR=456						
BBOO	Buckleboo	33.65	232	eP	P	02 34 48.7	+1.0
WAKE	Wake Island	33.73	359	eP	P	02 34 47.3	-1.1
	comp=Z,862nm,1.6s						
KDU	Kakadu	33.88	269	P	P	02 34 50.9	+1.0
	baz=34,SNR=10						
MTN	Manton Dam	35.16	268	P	P	02 35 02.3	+1.4
	baz=35,SNR=36						
MTN	Manton Dam	35.16	268	eP	P	02 35 02.0	+1.1
	comp=Z,307nm,1.4s						
RKPI	Ransiki, Papua	35.23	289	P	P	02 35 03.7	+2.2
GUMO	Guam	35.79	321	LR	LR	02 49 03.6	
	comp=Z,6µm,21.8s,baz=140,slow=35						
GUMO	Guam	35.79	321	eP	P	02 35 06.4	+0.2
	comp=Z,487nm,1.2s						
GUMO	Guam	35.79	321	eP	P	02 35 06.4	+0.2
GUMO				pmax	pmax		
	comp=Z,487nm,1.2s						
FAKI	Fak Fak	36.49	285	P	P	02 35 13.6	+1.4
	comp=Z,290nm,1.2s,comp=Z,5µm						
FAKI	Fak Fak	36.49	285	eP	P	02 35 12.9	+0.7
KNRA	Kununurra	37.18	263	P	P	02 35 18.4	+0.4
	baz=37,SNR=64						
WRKA	Warakurna	37.99	248	P	P	02 35 24.8	-0.1
	baz=38,SNR=1000						
SIJI	Sorong	38.16	288	S	S	02 41 08.3	+0.8
	comp=Z,18nm,1.0s,baz=214,slow=20,SNR=15						
BNDI	Bandanaira	38.17	282	P	P	02 35 31.3	+5.0
	comp=Z,1µm,1.9s,comp=Z,22µm						
JOHN	Johnston Islan	38.68	37	eP	P	02 35 31.6	+1.2
	comp=Z,36nm,0.6s						
PALU	Palau	39.22	302	P	P	02 35 36.9	+1.8
	baz=39,SNR=9.1						
FORT	Forrest	39.36	239	P	P	02 35 36.4	+0.3
	baz=39,SNR=26						
FORT	Forrest	39.36	239	eP	P	02 35 36.8	+0.7
AAI	Ambon	40.05	282	P	P	02 35 47.4	+5.4
FITZ	Fitzroy Crossi	40.06	259	P	P	02 35 42.8	+0.8
	baz=40,SNR=209						
FITZ	Fitzroy Crossi	40.06	259	P	P	02 35 42.4	+0.4
	comp=Z,188nm,0.7s,baz=89,slow=6.3,SNR=278						
FITZ				pP	pP	02 36 16.7	-1.0
	comp=Z,125nm,0.9s,baz=89,slow=10.0,SNR=3.9						
FITZ				S	S	02 41 33.8	-2.1
	comp=Z,56nm,1.2s,baz=300,slow=23,SNR=5.8						
FITZ	Fitzroy Crossi	40.06	259	eP	P	02 35 42.2	+0.1
	comp=Z,158nm,0.7s						
FITZ				pP	pP	02 36 16.7	-1.0
FITZ				S	S	02 41 33.8	-2.1
MCQ	Macquarie Isla	40.29	188	eP	P	02 35 44.5	+1.2
	comp=Z,1µm,1.5s						
MCQ	Macquarie Isla	40.29	188	eP	P	02 35 44.5	+1.2
MCQ				pmax	pmax		
	comp=Z,1µm,1.5s						
NLAI	Namlea	41.22	282	P	P	02 35 53.7	+2.1
	comp=Z,514nm,0.8s,comp=Z,8µm						
PAE	Paea	41.46	100	eP	P	02 35 53.8	+0.3
	comp=Z,92nm,1.3s						
PPT2	Papeete2	41.46	100	eP	P	02 35 54.1	+0.5
	comp=Z,535nm,1.4s						
PPT2				eS	S	02 41 57.7	+0.9
	comp=Z,6µm,25.8s						
PPT2				eLQ	LQ	02 46 03.0	
	comp=Z,35µm,26.2s						
PPT2				eLR	LR	02 47 57.7	
	comp=Z,19µm,32.8s						
PPT	Papeete	41.46	100	P	P	02 35 53.7	+0.1
	comp=Z,210nm,0.7s,baz=114,slow=5.1,SNR=14						
PPT	Papeete	41.46	100	eP	P	02 35 55.1	+1.5
PPT	Papeete	41.46	100	eP	P	02 35 55.1	+1.5
PPTF	Pamatai, Papee	41.47	100	eP	P	02 35 53.0	-0.7
	comp=Z,2µm,1.9s						
TBI	Tubuai	41.65	109	eP	P	02 35 55.5	+0.5
	comp=Z,501nm,1.1s						
TBI				eS	S	02 42 01.2	+1.8
	comp=Z,7µm,26.6s						
TBI				eLQ	LQ	02 46 10.3	
	comp=Z,38µm,26.5s						
TBI				eLR	LR	02 48 06.3	
	comp=Z,15µm,36.0s						
TIAR	Tiarei	41.68	100	eP	P	02 35 55.8	+0.5
	comp=Z,228nm,1.4s						
TVO	Taravao	41.77	100	eP	P	02 35 56.3	+0.2
	comp=Z,111nm,0.8s						
SOEI	Soe	42.30	272	P	P	02 36 02.4	+1.9
	comp=Z,281nm,1.1s,comp=Z,9µm						
SOEI	Soe	42.30	272	eP	P	02 36 02.2	+1.8
	comp=Z,448nm,1.0s						
TNTI	Ternate	42.38	288	P	P	02 36 02.9	+1.9
	comp=Z,197nm,1.7s,comp=Z,7µmcomp=Z,9µm						
TNTI	Ternate	42.38	288	eP	P	02 36 02.5	+1.5
	comp=Z,222nm,1.2s						
BATI	Baumata	42.80	271	P	P	02 36 06.6	+2.2
	comp=Z,472nm,0.5s,baz=124,slow=2.4,SNR=34						
BATI				LR	LR	02 53 09.9	
	comp=Z,16µm,21.2s,baz=117,slow=35						
BATI	Baumata	42.80	271	P	P	02 36 06.9	+2.5
	comp=Z,262nm,0.5s,comp=Z,5µm						
PMOR	Pomariorio Ree	43.25	96	eP	P	02 36 08.1	+0.1
	comp=Z,735nm,1.1s						
VAH	Vaihoa	43.49	97	eP	P	02 36 10.2	+0.3
	comp=Z,427nm,1.0s						
MMRI	Maumere	44.48	273	P	P	02 36 18.9	+1.0
	comp=Z,346nm,0.5s,comp=Z,12µm						
MMRI	Maumere	44.48	273	eP	P	02 36 18.5	+0.6
	comp=Z,314nm,0.8s						
KMBL	Kambalda	44.66	240	P	P	02 36 19.1	0.0
	baz=45,SNR=41						
KDI	Kendari	45.27	279	P	P	02 36 26.2	+2.1
	comp=Z,91nm,1.2s,comp=Z,4µm						
KMSI	Cibinong	45.45	286	P	P	02 36 26.7	+1.3
	comp=Z,1µm,1.0s,comp=Z,15µm						
MBWA	Marble Bar	45.60	255	eP	P	02 36 26.9	+0.4
	comp=Z,208nm,0.6s						
BASI	Baing, Sumba	45.78	270	P	P	02 36 31.4	+3.3
	comp=Z,761nm,1.1s,comp=Z,11µm						
LUWI	Luwuk	46.02	283	P	P	02 36 31.4	+1.4
	comp=Z,374nm,1.1s,comp=Z,8µm						
LUWI	Luwuk	46.02	283	eP	P	02 36 29.4	-0.6
DAV	Davao City (W)	46.67	295	P	P	02 36 35.9	+0.9
	comp=Z,375nm,0.4s,baz=243,slow=5.9,SNR=3.8						
DAV	Davao City (W)	46.67	295	⇑iP	P	02 36 35.0	0.0
MEEK	Meekatharra	46.84	247	P	P	02 36 36.6	+0.3
	baz=47,SNR=584						
WBSI	Waikabubak, Su	47.04	270	P	P	02 36 39.0	+1.1
	comp=Z,446nm,0.9s,comp=Z,6µm						
APSI	Ampana	47.12	283	P	P	02 36 40.2	+1.6
	comp=Z,298nm,1.0s,comp=Z,5µm						
BKSI	Bulukumba	47.30	276	P	P	02 36 40.7	+0.8
	comp=Z,94nm,0.9s,comp=Z,3µm						
SKMP	Bagumbayan, Su	47.34	293	eP	P	02 36 40.2	0.0
BUKP	Musuan	47.50	295	eP	P	02 36 42.0	+0.5
CTBH	Cotabato--PC H	47.91	294	⇑eP	P	02 36 45.2	+0.6
SPSI	Sidrap Palu	48.00	278	P	P	02 36 45.6	+0.3
	comp=Z,103nm,0.9s,comp=Z,3µm						
CGP	Cagayan de Oro	48.09	296	⇓eP	P	02 36 49.3	+3.4
JCJ	Chichijima	48.14	329	P	P	02 36 45.6	-0.5
	comp=Z,454nm,0.7s,baz=171,slow=4.4,SNR=39						
JCJ				pP	pP	02 37 21.8	-1.2
	comp=Z,180nm,0.8s,baz=268,slow=19,SNR=1.4						
CBIJ	Chichi jima	48.14	329	eP	P	02 36 45.8	-0.3
	comp=Z,2µm,1.4s						
CBIJ				pP	pP	02 37 21.8	-1.2
TTSI	Tana Toraja	48.21	279	P	P	02 36 48.3	+1.4
	comp=Z,131nm,0.7s,comp=Z,4µm						
KEKH	Kekaha	48.70	42	eP	P	02 36 47.1	-3.3
	comp=Z,354nm,0.8s						
MSLP	Maasin	48.76	298	eP	P	02 36 51.8	+0.7
PLAI	Plampang	48.76	271	P	P	02 36 51.9	+0.8
	comp=Z,373nm,0.9s,comp=Z,10µm						
NWAO	Narrogin (SRO)	48.81	239	P	P	02 36 51.2	-0.1
	comp=Z,224nm,0.6s						
NWAO				pP	pP	02 37 27.0	-1.3
	comp=Z,84nm,0.8s,baz=317,slow=9.8,SNR=2.4						
NWAO				LR	LR	02 59 25.4	
	comp=Z,10µm,18.1s,baz=277,slow=38						
NWAO	Narrogin (SRO)	48.81	239	eP	P	02 36 50.9	-0.5
	comp=Z,1µm,1.3s						
NWAO				pP	pP	02 37 27.0	-1.3
PCI	Palu	48.84	282	P	P	02 36 54.3	+2.5
	comp=Z,984nm,0.9s,comp=Z,15µm						
PAGZ	Pagadian	48.96	294	eP	pP	02 37 33.0	+3.4
PLP	Palo	49.17	299	⇓eP	P	02 36 51.6	-2.6
MPSI	Mapaga	49.19	283	P	P	02 36 54.7	+0.3
	comp=Z,313nm,1.1s,comp=Z,5µm						
KIP	Kipapa	49.44	44	eP	P	02 36 57.1	+1.0
	comp=Z,429nm,1.2s						
KIP	Kipapa	49.44	44	⇓eP	P	02 36 57.7	+1.6
KIP				pmax	pmax		
	comp=Z,3µm,1.3s						
LLP	Lapu-Lapu	49.61	298	⇓eP	P	02 36 59.3	+1.7
LLP				eS	S	02 43 52.4	-1.1
OPA	Opana	49.62	44	eP	P	02 36 56.9	-0.6
	comp=Z,867nm,0.9s						
OPA				epP	pP	02 37 37.8	+3.2
OPA	Opana	49.62	44	eP	P	02 36 56.9	-0.6
OPA				e*PP	pP	02 37 37.8	+3.2
OPA				pmax	pmax		
	comp=Z,867nm,0.9s						
TWSI	Taliwang, Sumb	49.64	271	P	P	02 36 58.8	+1.0
	comp=Z,571nm,0.6s,comp=Z,9µm						
KHU	Kahuku	49.67	48	eP	P	02 37 00.0	+1.8
	comp=Z,1µm,1.6s						
KHU	Kahuku	49.67	48	eP	P	02 37 00.0	+1.8
KHU				pmax	pmax		
	comp=Z,1µm,1.6s						
MWH	Moku‘aweowe	49.84	48	eP	P	02 37 02.0	+2.2
	comp=Z,444nm,1.3s						
AIN	Ainahou	49.87	48	eP	P	02 37 01.5	+1.9
	comp=Z,399nm,1.0s						
AIN				epP	pP	02 37 40.8	+4.0
MLOA	Mauna Loa Obse	49.89	48	eP	P	02 37 01.8	+1.8
	comp=Z,255nm,0.9s						
HMH	Humu‘ula Sheep	50.00	48	eP	P	02 37 02.6	+1.9
	comp=Z,548nm,1.0s						
HMH				epP	pP	02 37 40.9	+3.0
MLH	Mauna Loa	50.00	48	eP	P	02 37 02.5	+1.9
	comp=Z,1µm,1.9s						
MLH	Mauna Loa	50.00	48	eP	P	02 37 02.5	+1.9
MLH				pmax	pmax		
	comp=Z,1µm,1.9s						
PUH	Pauahi	50.04	49	eP	P	02 37 04.0	+3.2
	comp=Z,400nm,1.3s						
POHA	Pohakuloa	50.06	48	eP	P	02 37 01.9	+0.7
	comp=Z,246nm,0.8s						
MHA	Mahukona	50.08	47	eP	P	02 37 03.1	+2.2
MHA				epP	pP	02 37 42.7	+4.6
MHA	Mahukona	50.08	47	eP	P	02 37 03.1	+2.2
MHA				e*PP	pP	02 37 42.7	+4.6
STCH	Steam Cracks	50.12	49	eP	P	02 37 03.2	+1.9
	comp=Z,250nm,0.8s						
HPAH	Hawaii Prepara	50.12	48	eP	P	02 37 02.9	+1.5
	comp=Z,349nm,0.9s						
HPAH				epP	pP	02 37 42.4	+3.9
CNP	Catarman	50.12	300	eP	P	02 37 03.8	+2.5
KHLH	Kahului Airpor	50.17	46	eP	P	02 37 03.9	+2.3
	comp=Z,444nm,1.0s						
HLK	Haleakala	50.21	46	eP	P	02 37 04.2	+2.0
	comp=Z,359nm,0.8s						
HULD	Heiheiahulu Di	50.25	49	eP	P	02 37 04.3	+2.1
	comp=Z,433nm,1.0s						
GUIM	Jordan	50.94	297	eP	P	02 37 07.4	-0.1
SGKI	Sangatta, Kali	51.08	281	P	P	02 37 14.2	+5.6
	comp=Z,494nm,1.0s,comp=Z,6µmcomp=Z,12µm						
PVCP	Virac	51.11	301	eP	P	02 37 00.6	-8.1
RCP	Roxas	51.26	298	⇑eP	P	02 37 10.9	+1.0
DNP	Denpasar	51.27	271	P	P	02 37 11.3	+1.2
	comp=Z,1µm,0.5s,comp=Z,34µm						
IGBI	Denpasar	51.31	270	P	P	02 37 11.6	+1.3
	comp=Z,1µm,0.9s,comp=Z,15µm						
SRBI	Singaraja	51.39	271	P	P	02 37 12.1	+1.1
	comp=Z,189nm,2.2s,comp=Z,6µm						
SMKI	Samarinda	51.48	281	P	P	02 37 15.2	+3.6
	comp=Z,481nm,1.0s,comp=Z,7µmcomp=Z,14µm						
BKB	Balikpapan	51.52	280	P	P	02 37 16.2	+4.3
	comp=Z,495nm,1.1s,comp=Z,9µm						
KBKI	Kotabaru	51.63	277	P	P	02 37 14.3	+1.6
	comp=Z,163nm,1.0s,comp=Z,2µm						
H01W1	Cape Leeuwin H	51.66	237	P	P	02 37 15.2	+2.8
	baz=119,slow=8.2,SNR=7.8						
H01W3	Cape Leeuwin H	51.67	237	P	P	02 37 15.6	+3.1
	baz=119,slow=8.2,SNR=5.4						
H01W2	Cape Leeuwin H	51.68	237	P	P	02 37 16.2	+3.7
	baz=119,slow=8.2,SNR=6.2						
TAOE	Nuku Hiva Isla	51.68	90	eP	P	02 37 13.0	-0.2
	comp=Z,416nm,1.3s						
TAOE				eS	S	02 44 20.7	-1.6
	comp=Z,6µm,23.1s						
TAOE	Nuku Hiva Isla	51.68	90	eP	P	02 37 15.7	+2.5
	comp=Z,133nm,1.0s						
OTRP	Odiongan	52.27	299	eP	P	02 37 17.6	+0.2
JAGI	Jajag, Banyuwa	52.34	271	P	P	02 37 17.9	-0.1
	comp=Z,332nm,0.7s,comp=Z,6µm						
JAGI	Jajag, Banyuwa	52.34	271	eP	P	02 37 17.6	-0.4
	comp=Z,565nm,1.2s						
GQP	Guinayangan	52.69	301	⇑iP	P	02 37 31.7	+11
BLJI	Banyuglugur	53.03	271	P	P	02 37 23.6	+0.6
	comp=Z,318nm,1.2s,comp=Z,7µm						
GMJI	Gumukmas	53.07	271	P	P	02 37 23.7	+0.4
	comp=Z,234nm,0.9s,comp=Z,7µm						
SJMP	San Jose	53.09	298	eP	P	02 37 24.2	+0.9
MTKI	Muara Teweh, K	53.53	280	P	P	02 37 27.6	+0.9
	comp=Z,147nm,0.9s						
PPR	Puerto Princes	53.93	294	eP	P	02 37 31.2	+1.7
ENPP	El Nido	53.96	296	eP	P	02 37 27.8	-1.9
TGY	Tagaytay City	54.05	300	P	P	02 37 31.0	+0.6
	comp=Z,899nm,0.7s,baz=197,slow=1.4,SNR=33						
GRJI	Gresik	54.29	272	P	P	02 37 36.4	+4.2
	comp=Z,140nm,1.2s						
BALP	Baler	54.35	302	eP	P	02 37 32.7	+0.1
KDM	Kudat	54.44	290	P	P	02 37 39.0	+5.7
KKM	Kota Kinabalu	54.67	288	P	P	02 37 36.0	+1.0
PWJI	Pagerwojo	54.71	270	P	P	02 37 35.9	+0.7
	comp=Z,209nm,0.6s,comp=Z,7µm						
RKT	Rikitea	54.97	108	eP	P	02 37 37.6	+0.6
	comp=Z,253nm,1.4s						
RKT				eS	S	02 45 05.9	-0.4
	comp=Z,9µm,35.0s						
RKT				eLQ	LQ	02 51 51.8	
	comp=Z,17µm,32.0s						
RKT				eLR	LR	02 54 12.8	
	comp=Z,6µm,35.2s						
NGJI	Ngawi	55.18	271	P	P	02 37 41.4	+2.8
	comp=Z,433nm,1.0s,comp=Z,12µm						
PCJI	Pacitan	55.28	270	P	P	02 37 40.4	+1.1
	comp=Z,1µm,1.1s,comp=Z,14µm						
WOJI	Wonogiri, Jawa	55.60	270	P	P	02 37 42.6	+1.0
	comp=Z,449nm,0.8s,comp=Z,7µm						
APYP	Conner	55.74	304	eP	P	02 37 42.4	-0.1
UGM	Wanagama	55.97	270	P	P	02 37 45.5	+1.2
	comp=Z,1µm,1.1s,comp=Z,13µm						
UGM	Wanagama	55.97	270	eP	P	02 37 45.5	+1.2
	comp=Z,2µm,1.4s						
JOW	Kunigami	56.02	317	P	P	02 37 45.7	+1.3
	comp=Z,333nm,1.0s,baz=161,slow=6.6,SNR=24						
JOW				pP	pP	02 38 21.2	-1.1
	comp=Z,85nm,0.8s,baz=131,slow=4.6,SNR=2.6						
JOW	Kunigami	56.02	317	eP	P	02 37 45.6	+1.3
	comp=Z,327nm,0.9s						
JOW				pP	pP	02 38 21.2	-1.1
BOLP	Bolinao	56.05	302	eP	P	02 37 43.3	-1.4
PBKI	Pangkalan Bun	56.12	277	P	P	02 37 47.7	+2.4
	comp=Z,701nm,1.0s,comp=Z,8µm						
SMRI	Semarang	56.24	271	P	P	02 37 47.7	+1.5
	comp=Z,779nm,1.0s,comp=Z,14µm						
SMRI	Semarang	56.24	271	eP	P	02 37 47.2	+1.0
	comp=Z,560nm,0.9s						
BBP	Basco	56.59	307	eP	P	02 37 47.6	-0.8
STKI	Sintang	57.09	280	P	P	02 37 54.0	+1.8
	comp=Z,346nm,0.9s						
INU	Inuyama	57.43	331	eP	P	02 37 54.5	+0.4
	comp=Z,436nm,1.4s						
KPJI	Karang Pucung	57.63	271	P	P	02 37 56.7	+0.7
	comp=Z,890nm,0.9s,comp=Z,7µm						
MJAR	Matsushiro Arr	57.86	332	P	P	02 37 56.7	-0.4
	comp=Z,128nm,1.0s,baz=168,slow=7.3,SNR=98						
MJAR				pP	pP	02 38 34.0	-1.3
	comp=Z,55nm,0.8s,baz=178,slow=8.5,SNR=4.4						
MJAR				PKPPKP	P’P’df	03 07 43.5	+5.8
	comp=Z,4.7nm,1.1s,baz=334,slow=3.5,SNR=5.2						
MJAR	Matsushiro Arr	57.86	332	P	P	02 37 56.7	-0.4
MJAR				*PP	pP	02 38 34.0	-1.3
MJAR				pmax	pmax		
	comp=Z,111nm,1.0s						
MJAR				pmax	pmax		
	comp=Z,55nm,0.8s						
MAJO	Matsushiro	57.86	332	eP	P	02 37 57.1	0.0
	comp=Z,153nm,0.8s						
MAJO	Matsushiro	57.86	332	c iP	P	02 37 57.0	-0.1
MAJO				pmax	pmax		
	comp=Z,273nm,1.2s						
MAT	Matsushiro	57.86	332	P	P	02 37 56.8	-0.3
MAT				S	S	02 45 41.4	-2.4
MJB9	Matsu-Tunnel	57.86	332	eP	P	02 37 57.1	-0.1
	comp=Z,160nm,0.8s						
CMJI	Cimerak	58.00	270	P	P	02 37 58.6	0.0
	comp=Z,380nm,1.0s,comp=Z,6µm						
YOJ	Yonaguni jima	58.15	311	eP	P	02 38 00.4	+1.1
	comp=Z,1µm,1.5s						
YOJ	Yonaguni jima	58.15	311	eP	P	02 38 00.4	+1.1
YOJ				pmax	pmax		
	comp=Z,1µm,1.5s						
JCJI	Jatiwangi	58.46	271	P	P	02 38 02.8	+1.1
	comp=Z,678nm,1.1s,comp=Z,16µm						
TWG	Pinlang	58.62	309	eP	P	02 38 02.2	-0.4
	comp=Z,2µm,1.9s						
CISI	Cisompet, Garu	58.67	270	P	P	02 38 03.0	-0.2
	comp=Z,761nm,0.7s,comp=Z,9µm						
CISI	Cisompet, Garu	58.67	270	eP	P	02 38 03.1	-0.2
	comp=Z,523nm,0.7s						
YULB	Yu-li	58.78	309	eP	P	02 38 02.9	-0.8
	comp=Z,695nm,1.9s						
JNU	Nakatsue	58.88	324	P	P	02 38 04.6	+0.3
	comp=Z,267nm,1.1s,baz=106,slow=3.5,SNR=29						
JNU				pP	pP	02 38 42.5	-0.1
	comp=Z,142nm,0.8s,baz=111,slow=4.7,SNR=5.0						
JNU				S	S	02 45 57.3	0.0
	comp=Z,40nm,1.3s,baz=34,slow=22,SNR=8.9						
JNU	Nakatsue	58.88	324	eP	P	02 38 04.6	+0.3
	comp=Z,392nm,1.1s						
JNU				pP	pP	02 38 42.5	-0.1
JNU				eS	S	02 45 59.9	+2.6
NACB	Ninganchiao	59.01	310	eP	P	02 38 05.6	+0.3
	comp=Z,806nm,1.4s						
LEM	Lembang	59.02	271	P	P	02 38 06.6	+0.9
	comp=Z,526nm,0.6s,baz=42,slow=5.5,SNR=51						
LEM				S	S	02 46 02.1	+2.1
	comp=Z,32nm,0.6s,baz=278,slow=21,SNR=5.0						
TPUB	Ta-pu	59.22	309	eP	P	02 38 06.5	-0.4
	comp=Z,514nm,1.3s						
SSLB	Suanglung	59.26	310	eP	P	02 38 06.9	-0.2
	comp=Z,182nm,0.9s						
SSLB				eS	S	02 46 05.9	+3.5
YHNB	Yeheng	59.46	311	eP	P	02 38 08.9	+0.4
	comp=Z,897nm,1.2s						
TATO	Taipei	59.56	311	eP	P	02 38 09.8	+0.7
	comp=Z,403nm,1.1s						
DBJI	Dramaga	59.92	271	P	P	02 38 12.4	+0.6
	comp=Z,850nm,1.5s,comp=Z,20µm						
SKJI	Sukabumi	60.01	270	P	P	02 38 12.7	+0.4
	comp=Z,1µm,1.1s,comp=Z,15µm						
SBJI	Serang	60.62	271	P	P	02 38 17.2	+0.7
	comp=Z,571nm,1.2s,comp=Z,8µm						
ERM	Erimo	60.63	340	eP	P	02 38 16.8	+0.9
	comp=Z,253nm,1.5s						
ERM	Erimo	60.63	340	d iP	P	02 38 16.6	+0.7
ERM				pmax	pmax		
	comp=Z,179nm,1.6s						
CGJI	Cibinong	60.93	271	P	P	02 38 18.4	-0.2
	comp=Z,1µm,1.2s,comp=Z,16µm						
PPBI	Pangkal Pinang	61.59	276	P	P	02 38 24.5	+1.5
YUK	Yuzh-Kuril’sk	61.60	343	eP	P	02 38 22.0	-0.4
YUK				i *PP	PcP	02 39 03.8	+1.4
YUK				eS	S	02 46 30.9	-0.5
YUK				i SS	SS	02 50 37.7	+1.6
YUK				pmax	pmax		
	comp=Z,445nm,0.8s						
YUK				pmax	pmax		
	comp=E,149nm,0.9s						
YUK				pmax	pmax		
	comp=N,73nm,0.8s						
YUK				pmax	pmax		
	comp=Z,920nm,2.7s						
BLSI	Bandar Lampung	61.65	272	P	P	02 38 23.9	+0.4
	comp=Z,478nm,1.1s,comp=Z,7µm						
QZH	Quanzhou	61.69	309	⇑iP	P	02 38 24.1	+0.7
QZH				pP	pP	02 39 02.4	+0.3
QZH				S	S	02 46 29.8	-3.4
QZH				sS	sS	02 47 34.5	-5.7
QZH				pmax	pmax		
	comp=Z,160nm,2.0s						
QZH				pmax	pmax		
	comp=Z,3µm,6.4s						
QZH				LR	LR		
	comp=Z,3µm,18.5s						
QZH				LR	LR		
	comp=Z,2µm,15.6s						
QZH				LR	LR		
	comp=Z,4µm,25.1s						
KLI	Kotabumi	62.14	272	P	P	02 38 27.2	+0.5
	comp=Z,245nm,1.3s						
KUR	Kuril’sk	62.16	345	c iP	P	02 38 26.9	+0.8
KUR				i		02 39 05.2	
KUR						02 40 49.7	
KUR				i S	S	02 46 39.9	+1.6
KUR				pmax	pmax		
	comp=Z,764nm,1.1s						
KUR				pmax	pmax		
	comp=Z,4µm,4.9s						
KUR				pmax	pmax		
	comp=Z,1µm,14.0s						
KUR				pmax	pmax		
	comp=N,2µm,15.0s						
KASI	Kota Agung	62.33	271	P	P	02 38 27.5	-0.5
	comp=N,969nm,1.0s,comp=N,10µm						
ASAJ	Asahikawa	62.69	340	P	P	02 38 31.3	+1.6
	comp=N,528nm,1.1s,baz=204,slow=9.3,SNR=149						
ASAJ				pP	pP	02 39 08.0	-0.5
	comp=N,60nm,0.8s,baz=1.0,slow=0.4,SNR=1.3						
ASAJ				S	S	02 46 46.2	+1.2
	comp=N,3.7nm,0.4s,baz=305,slow=32,SNR=7.9						
ASAJ				PKPPKP	P’P’df	03 07 33.1	+3.5
	comp=N,7.2nm,1.1s,baz=275,slow=8.3,SNR=12						
ASAJ	Asahikawa	62.69	340	eP	P	02 38 31.3	+1.6
	comp=N,934nm,1.3s						
ASAJ				pP	pP	02 39 08.0	-0.5
ASAJ				S	S	02 46 46.2	+1.2
ASAJ				P’P’		03 07 33.1	
PMBI	Palembang	62.70	274	P	P	02 38 33.0	+2.5
	comp=N,802nm,1.2s,comp=N,14µm						
LWLI	Liwa	62.88	272	P	P	02 38 31.6	-0.2
	comp=N,467nm,0.7s,comp=N,12µm						
MDSI	Maura Dua	62.89	272	P	P	02 38 30.9	-0.8
	comp=N,216nm,0.7s,comp=N,5µm						
VNDA	Vanda	62.93	181	P	P	02 38 30.9	0.0
	comp=N,95nm,0.7s,baz=358,slow=7.2,SNR=195						
VNDA				PKPPKP	P’P’df	03 07 24.7	-5.9
	comp=N,4.9nm,1.1s,baz=230,slow=2.9,SNR=4.4						
VNDA	Vanda	62.93	181	eP	P	02 38 31.0	0.0
	comp=N,1µm,1.8s						
VNDA				P’P’		03 07 24.7	
VNDA	Vanda	62.93	181	eP	P	02 38 31.0	0.0
VNDA				pmax	pmax		
	comp=Z,1µm,1.8s						
SBA	Scott Base	63.21	180	eP	P	02 38 33.7	+1.0
	comp=Z,683nm,1.0s						
SBA	Scott Base	63.21	180	eP	P	02 38 33.7	+1.0
SBA				pmax	pmax		
	comp=Z,683nm,1.0s						
TJN	Taejon	63.23	325	c iP	P	02 38 33.7	+0.3
SSE	Sheshan	63.49	316	P	P	02 38 35.6	+0.3
SSE				pP	pP	02 39 14.3	+0.1
SSE				S	S	02 46 51.7	-3.8
SSE				sS	sS	02 48 00.3	-2.6
SSE				pmax	pmax		
	comp=Z,67nm,1.3s						
SSE				pmax	pmax		
	comp=Z,1µm,7.8s						
SSE				LR	LR		
	comp=Z,2µm,22.2s						
CASY	Casey	63.61	202	eP	P	02 38 35.7	+0.2
	comp=Z,274nm,0.9s						
KSRS	Korea Array	63.70	326	P	P	02 38 37.1	+0.6
	comp=Z,48nm,1.0s,baz=142,slow=6.7,SNR=56						
KSRS				pP	pP	02 39 13.8	-1.6
	comp=Z,52nm,1.0s,baz=141,slow=5.7,SNR=5.0						
HKC	Hong Kong Obse	63.71	304	⇑P	P	02 38 39.0	+2.1
KS15	Wonju Array Si	63.71	326	eP	P	02 38 37.6	+1.0
KS15				epP	pP	02 39 14.2	-1.3
KSAR	Wonju Array Be	63.71	326	P	P	02 38 37.1	+0.5
KSAR				pP	pP	02 39 13.8	-1.7
KSAR	Wonju Array Be	63.71	326	P	P	02 38 37.1	+0.5
KSAR				*PP	pP	02 39 13.8	-1.7
KS01	Wonju Array Si	63.73	326	eP	P	02 38 35.6	-1.1
TPRI	Tanjung Pinang	63.98	278	P	P	02 38 39.5	+0.6

	comp=Z,288nm,1.1s,comp=Z,26µm						
MNAI	Manna	64.10	272	P	P	02 38 40.5	+0.8
	comp=Z,999nm,1.4s,comp=Z,18µm						
MNAI	Manna	64.10	272	*e*P	P	02 38 39.4	-0.3
	comp=Z,2µm,1.6s						
MCO	Taipa Grande	64.11	304	P	P	02 38 42.0	+2.5
GZH	Guangzhou	64.77	305	⇑*i*P	P	02 38 45.0	+1.3
GZH				PcP	PcP	02 39 17.8	+1.9
GZH				pP	pP	02 39 21.4	-1.4
GZH				S	S	02 47 10.0	-1.4
GZH				sS	sS	02 48 15.6	-3.5
GZH				SS	SS	02 51 23.6	-2.5
GZH				pmax	pmax		
	comp=Z,3µm,6.7s						
MASI	Maura Aman, Be	65.09	273	P	P	02 38 46.3	+0.1
	comp=Z,815nm,1.2s,comp=Z,11µm						
YSS	Yuzh-Sakhalins	65.17	342	*e*P	P	02 38 47.5	+1.6
	comp=Z,818nm,1.1s						
YSS	Yuzh-Sakhalins	65.17	342	α*i*P	P	02 38 47.6	+1.8
YSS				*e**PP	pP	02 39 25.9	+1.0
YSS				*e*		02 41 12.0	
YSS				*i* S	S	02 47 16.8	+1.3
YSS				*e*PS	PnS	02 48 20.0	+19
YSS				pmax	pmax		
	comp=Z,590nm,1.0s						
YSS				pmax	pmax		
	comp=N,190nm,1.1s						
YSS				pmax	pmax		
	comp=E,200nm,1.1s						
YSS				pmax	pmax		
	comp=Z,2µm,4.6s						
YSS				smax	smax		
	comp=N,5µm,8.7s						
YSS				MLR	MLR		
	comp=Z,2µm,18.0s						
TEY	Ternei	65.62	337	⇑*e*P	P	02 38 46.0	-2.8
TEY				*e*		02 39 28.0	
TEY				*e*S	S	02 47 18.0	-3.1
TEY				pmax	pmax		
	comp=Z,730nm,2.0s						
TEY				pmax	pmax		
	comp=N,1µm,3.0s						
TEY				pmax	pmax		
	comp=E,1µm,3.0s						
TEY				pmax	pmax		
	comp=Z,5µm,8.0s						
TEY				pmax	pmax		
	comp=N,350nm,2.0s						
TEY				pmax	pmax		
	comp=E,200nm,2.0s						
TEY				pmax	pmax		
	comp=Z,7µm,8.0s						
TEY				smax	smax		
	comp=E,2µm,4.0s						
TEY				smax	smax		
	comp=N,4µm,8.0s						
NJ2	Nanjing	65.65	316	*e*P	P	02 38 49.9	+0.7
NJ2				pP	pP	02 39 29.2	+0.8
NJ2				S	S	02 47 21.4	-0.5
NJ2				sS	SKSac	02 48 27.2	-1.9
NJ2				pmax	pmax		
	comp=N,98nm,1.1s						
NJ2				pmax	pmax		
	comp=N,2µm,6.5s						
NJ2				LR	LR		
	comp=N,3µm,22.8s						
NJ2				LR	LR		
	comp=N,2µm,22.5s						
NJ2				LR	LR		
	comp=N,4µm,21.7s						
RGRI	Rengat	65.73	276	P	P	02 38 52.5	+2.3
	comp=N,753nm,0.4s,comp=N,86µm						
QIZ	Qiongzhong	65.73	299	P	P	02 38 50.9	+0.8
QIZ				pP	pP	02 39 28.0	-1.2
QIZ				S	S	02 47 27.7	+4.3
QIZ				sS	sS	02 48 32.2	+1.0
QIZ				pmax	pmax		
	comp=N,88nm,1.1s						
QIZ				pmax	pmax		
	comp=N,2µm,6.3s						
QIZ	Qiongzhong	65.73	299	*e*P	P	02 38 51.5	+1.4
	comp=N,181nm,1.1s						
SKR	Severo-Kuril's	65.79	352	*c i*P	P	02 38 50.3	+0.6
SKR				*e**PP	pP	02 39 27.5	-1.4
SKR				*i* S	S	02 47 24.2	+1.3
SKR				pmax	pmax		
	comp=Z,3µm,3.7s						
SKR				pmax	pmax		
	comp=Z,402nm,1.2s						
SKR				pmax	pmax		
	comp=Z,2µm,8.0s						
SKR				MLR	MLR		
	comp=Z,3µm,20.0s						
SKR				MLR	MLR		
	comp=Z,1µm,18.0s						
MSHR	Mys Shultsa	65.94	332	*c i*P	P	02 38 52.5	+1.6
KRJI	Kerinci	66.11	274	P	P	02 38 54.1	+1.3
	comp=Z,464nm,1.0s						
USRK	Ussuriysk Ar.	66.84	333	P	P	02 38 57.6	+1.0
	comp=Z,353nm,1.2s,baz=132,slow=4.4						
USRK				LR	LR	03 05 45.0	
	comp=Z,687nm,21.1s,baz=139,slow=34						
BKNI	Bangkinang	67.16	277	P	P	02 39 00.5	+1.2
	comp=Z,1µm,1.3s,comp=Z,18µmcomp=Z,17µm						
BKNI	Bangkinang	67.16	277	*e*P	P	02 39 00.6	+1.2
	comp=Z,899nm,0.8s						
PPSI	Pulau Pagai	67.34	273	P	P	02 39 01.8	+1.4
	comp=Z,1µm,1.1s,comp=Z,14µm						
SMY	Shemya	67.36	4	*e*P	P	02 39 01.3	+1.6
	comp=Z,619nm,1.5s						
SMY	Shemya	67.36	4	*e*P	P	02 39 01.3	+1.6
SMY				pmax	pmax		
	comp=Z,619nm,1.5s						
KIWB	Kanaga Island	67.60	10	*e*P	P	02 39 00.4	-0.8
PET	Petropavlovsk	67.81	354	*e*P	P	02 39 02.2	-0.3
	comp=Z,479nm,1.2s						
PET	Petropavlovsk	67.81	354	α*i*P	P	02 39 02.8	+0.3
PET				*e**PP	pP	02 39 41.8	0.0
PET				*e*S	S	02 47 43.8	-3.3
PET				pmax	pmax		
	comp=Z,3µm,3.9s						
PET				pmax	pmax		
	comp=Z,388nm,1.3s						
PET				pmax	pmax		
	comp=Z,2µm,15.4s						
WHN	Wuhan	67.92	312	⇑*i*P	P	02 39 04.0	+0.3
WHN				pP	pP	02 39 43.6	+0.6
WHN				S	S	02 47 47.9	-1.4
WHN				pmax	pmax		
	comp=Z,180nm,0.8s						
WHN				pmax	pmax		
	comp=Z,5µm,11.1s						
WHN				LR	LR		
	comp=Z,5µm,17.2s						
WHN				LR	LR		
	comp=Z,3µm,13.0s						
WHN				LR	LR		
	comp=Z,7µm,19.4s						
UBPT	Khong Chiam	67.97	293	P	P	02 39 05.6	+1.3
	comp=Z,206nm,1.1s,comp=Z,4µm						
PEA0B	Petropavlovsk-	67.99	354	*e*P	P	02 39 04.3	+0.7
	comp=Z,851nm,1.2s						
PETK	Petropavlovsk-	67.99	354	P	P	02 39 04.3	+0.6
	comp=Z,314nm,0.9s,baz=135,slow=7.3						
PETK				LR	LR	03 05 24.9	
	comp=Z,2µm,20.1s,baz=154,slow=33						
PETK	Petropavlovsk-	67.99	354	*e*P	P	02 39 03.5	-0.1
GSTR	Great Sitkin T	68.02	11	*e*P	P	02 39 03.1	-0.8
MDJ	Mudanjiang	68.23	332	P	P	02 39 03.9	-1.4
MDJ				pP	pP	02 39 42.6	-2.1
MDJ				sP	sP	02 39 58.1	-4.3
MDJ				S	S	02 47 51.7	-0.8
MDJ				ScS	ScS	02 48 49.0	+0.1
MDJ				SS	SS	02 52 17.7	-1.5
MDJ				pmax	pmax		
	comp=Z,410nm,1.1s						
MDJ				LR	LR		
	comp=Z,3µm,20.8s						
MDJ				LR	LR		
	comp=Z,2µm,21.0s						
MDJ				LR	LR		
	comp=Z,3µm,18.0s						
MDJ	Mudanjiang	68.23	332	*e*P	P	02 39 06.5	+1.2
	comp=Z,424nm,1.1s						
MDJ				*e*pP	pP	02 39 44.9	+0.2
DL2	Dalian	68.26	323	⇑*i*P	P	02 39 06.4	+0.8
DL2				pP	pP	02 39 45.8	+0.8
DL2				S	S	02 47 52.7	-0.3
DL2				ScS	SKKSac	02 48 48.7	+0.1
DL2				pmax	pmax		
	comp=Z,280nm,1.1s						
DL2				pmax	pmax		
	comp=Z,3µm,5.6s						
ATKA	Atka Island	68.49	12	*e*P	P	02 39 07.1	+0.4
	comp=Z,112nm,1.0s						
SISI	Saibi	68.60	274	P	P	02 39 10.2	+1.9
	comp=Z,225nm,1.0s,comp=Z,6µm						
MNSI	Mandailing Nat	68.69	277	P	P	02 39 08.6	-0.3
	comp=Z,596nm,0.9s,comp=Z,10µm						
SNY	Shenyang	69.17	326	⇑P	P	02 39 11.6	+0.5
SNY				S	S	02 48 03.7	+0.2
SNY				pmax	pmax		
	comp=Z,95nm,2.0s						
SNY				pmax	pmax		
	comp=Z,3µm,8.0s						
SNY				LR	LR		
	comp=Z,1µm,24.5s						
SNY				LR	LR		
	comp=Z,2µm,24.5s						
SNY				LR	LR		
	comp=Z,3µm,27.1s						
TIA	Tai'an	69.31	318	P	P	02 39 12.3	+0.1
TIA				pP	pP	02 39 51.6	-0.1
TIA				S	S	02 48 04.3	-1.2
TIA				pmax	pmax		
	comp=Z,76nm,1.1s						
TIA				pmax	pmax		
	comp=Z,2µm,8.2s						
TIA				LR	LR		
	comp=Z,2µm,18.6s						
TIA				LR	LR		
	comp=Z,1µm,16.3s						
TIA				LR	LR		
	comp=Z,3µm,18.8s						
CN2	Changchun	69.60	329	*e*P	P	02 39 14.2	+0.4
CN2				*e*pP	pP	02 39 53.0	-0.3
CN2				*e*PP	PP	02 41 53.0	+2.9
CN2				*e*S	S	02 48 10.0	+1.4
CN2				LR	LR		
	comp=Z,2µm,20.0s						
CN2				LR	LR		
	comp=Z,1µm,20.0s						
CN2				LR	LR		
	comp=Z,3µm,21.0s						
PBSI	Pulau Batu	69.71	275	P	P	02 39 16.1	+1.0
	comp=Z,425nm,1.2s,comp=Z,10µm						
CHBT	CHBT	69.86	290	P	P	02 39 19.1	+3.2
	comp=Z,108nm,0.5s,comp=Z,660µm						
PSI	Prapat	69.88	279	P	P	02 39 16.0	-0.3
	comp=Z,207nm,1.0s,baz=180,slow=3.2,SNR=83						
PSI				S	S	02 48 11.6	-1.7
	comp=Z,9.3nm,1.0s,baz=181,slow=17,SNR=9.1						
PSI	Prapat	69.88	279	*e*P	P	02 39 14.8	-1.5
	comp=Z,395nm,1.1s						
PSI				S	S	02 48 11.6	-1.7
SKNT	Sakolnakorn	69.95	294	P	P	02 39 17.1	+0.6
	comp=Z,200nm,1.0s,comp=Z,3µm						
NIKH	Nikolski High	70.42	15	*e*P	P	02 39 18.2	-0.4
	comp=Z,210nm,0.8s						
TSI	Tuntungan	70.42	279	P	P	02 39 20.0	+0.5
	comp=Z,727nm,1.0s,comp=Z,13µm						
GRNR	Gornyy	70.54	340	⇑*i*P	P	02 39 23.6	+4.3
GRNR				*e*		02 40 02.0	
GRNR				pmax	pmax		
	comp=N,160nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,380nm,1.0s						
SRAK	Srakaew	70.57	291	P	P	02 39 18.7	-1.6
	comp=Z,162nm,1.6s,comp=Z,2µm						
TRTT	Trang	70.66	284	P	P	02 39 22.3	+1.4
	comp=Z,82nm,1.3s,comp=Z,2µm						
GSI	Gunungsitoli	70.76	277	P	P	02 39 22.3	+0.8
	comp=Z,1µm,0.9s,comp=Z,13µm						
GSI	Gunungsitoli	70.76	277	*e*P	P	02 39 22.1	+0.6
	comp=Z,675nm,0.8s						
KLR	Kul'dur	70.95	336	P	P	02 39 23.1	+1.3
	comp=Z,14nm,1.0s,baz=146,slow=7.5						
KLR				pP	pP	02 40 01.4	-0.2
	comp=Z,3.7nm,0.8s,baz=143,slow=5.4,SNR=1.6						
KLR				PKPPKP	P'P'df	03 07 14.9	-0.9
	comp=Z,0.4nm,1.2s,baz=264,slow=2.0,SNR=7.9						
KLR				LR	LR	03 08 39.1	
	comp=Z,102nm,20.0s,baz=161,slow=34						
KLR	Kul'dur	70.95	336	*c i*P	P	02 39 23.0	+1.1
NONG	Nongkai	71.10	295	P	P	02 39 24.1	+0.7
	comp=Z,4.4nm,1.3s,comp=Z,431nm						
KCSI	Kotacane, Aceh	71.19	279	P	P	02 39 23.4	-0.7
	comp=Z,221nm,0.9s,comp=Z,3µm						
KRAB	Krabi	71.25	284	P	P	02 39 26.0	+1.6
	comp=Z,123nm,1.2s						
NKL	Nikolayevsk	71.31	343	*i* P	P	02 39 25.0	+1.1
NKL				*i* S	S	02 48 30.0	+2.0
NKL				*e*		02 49 20.0	
NKL				pmax	pmax		
	comp=N,60nm,1.0s						
NKL				pmax	pmax		
	comp=Z,300nm,1.0s						
NKL				pmax	pmax		
	comp=N,2µm,10.0s						
NKL				pmax	pmax		
	comp=E,1µm,10.0s						
NKL				pmax	pmax		
	comp=Z,4µm,8.0s						
NKL				smax	smax		
	comp=N,4µm,16.0s						
NKL				smax	smax		
	comp=E,2µm,16.0s						
ENH	Enshi	71.35	309	*e*P	P	02 39 24.9	+0.2
	comp=E,299nm,1.0s						
ENH				*e*pP	pP	02 40 04.7	+0.2
TPTI		71.68	278	P	P	02 39 27.1	+0.1
	comp=E,242nm,1.0s,comp=E,5µm						
GYA	Guiyang	71.70	305	⇑*i*P	P	02 39 27.7	+0.7
GYA				PcP	PcP	02 39 48.2	+3.0
GYA				pP	pP	02 40 08.9	+2.1
GYA				sP	sP	02 40 27.5	+3.1
GYA				PP	PP	02 42 13.3	+4.6
GYA				S	S	02 48 34.9	+1.0
GYA				SKS	SKSac	02 49 13.0	-2.5
GYA				ScS	ScS	02 49 16.5	-0.9
GYA				sS	sS	02 49 45.2	+2.4
GYA				pmax	pmax		
	comp=E,190nm,1.0s						
GYA				pmax	pmax		
	comp=E,2µm,9.9s						
GYA				LR	LR		
	comp=E,3µm,21.7s						
GYA				LR	LR		
	comp=E,4µm,19.2s						
GYA				LR	LR		
	comp=E,3µm,21.4s						
UNV	Unalaska Valle	71.82	16	*e*P	P	02 39 27.7	+0.8
	comp=E,86nm,1.0s						
PKDT	Phuket	71.95	283	P	P	02 39 30.7	+2.1
	comp=E,58nm,2.5s						
BJT	Baijiatuau	72.22	321	*e*P	P	02 39 30.6	+0.9
	comp=E,805nm,1.6s						
BJT	Baijiatuau	72.22	321	*e*P	P	02 39 30.6	+0.9
BJT				pmax	pmax		
	comp=Z,805nm,1.6s						
BJI	Beijing	72.23	321	⇑*i*P	P	02 39 30.5	+0.8
BJI				PcP	PcP	02 39 51.2	+4.3
BJI				pP	pP	02 40 09.4	-0.1
BJI				sP	sP	02 40 29.7	+2.6
BJI				S	S	02 48 38.5	-0.6
BJI				sS	sS	02 49 47.3	-0.8
BJI				pmax	pmax		
	comp=Z,310nm,1.1s						
BJI				pmax	pmax		
	comp=Z,6µm,4.3s						
SNSI	Sinabang, Aceh	72.26	277	P	P	02 39 31.9	+1.4
	comp=Z,611nm,1.3s,comp=Z,9µm						
PHET	Kaeng Krachan	72.38	289	P	P	02 39 33.4	+2.3
	comp=Z,54nm,1.0s,comp=Z,503nm						
PBKT	Sadao Pong	72.46	293	P	P	02 39 32.9	+1.3
	comp=Z,238nm,1.0s,comp=Z,4µm						
LHMI	Lhok Sumawe	72.47	280	P	P	02 39 33.2	+1.5
	comp=Z,380nm,0.8s,comp=Z,8µm						
LHMI	Lhok Sumawe	72.47	280	*e*P	P	02 39 32.6	+0.9
	comp=Z,308nm,0.9s						
MLSI	Meulaboh, Aceh	72.71	279	P	P	02 39 33.4	+0.3
	comp=Z,2µm,1.0s,comp=Z,18µm						
PHIT	Phitsanulok	73.18	293	P	P	02 39 37.6	+1.8
	comp=Z,240nm,1.0s,comp=Z,2µm						
TIY	Taiyuan	73.23	317	*e*P	P	02 39 36.9	+1.1
TIY				pP	pP	02 40 16.4	+0.7
TIY				S	S	02 48 49.7	-1.0
TIY				SS	SS	02 53 32.8	-3.5
TIY				pmax	pmax		
	comp=Z,570nm,1.4s						
TIY				pmax	pmax		
	comp=Z,3µm,3.5s						
TIY				LR	LR		
	comp=Z,2µm,18.7s						
TIY				LR	LR		
	comp=Z,600nm,12.8s						
TIY				LR	LR		
	comp=Z,3µm,20.0s						
SRDT	SRDT	73.34	290	P	P	02 39 38.8	+2.0
	comp=Z,156nm,1.3s,comp=Z,5µm						
UTHA	Uthaitani	73.47	291	P	P	02 39 39.1	+1.6
	comp=Z,56nm,1.1s,comp=Z,546nm						
NANT	Nan	73.53	295	P	P	02 39 39.0	+1.2
	comp=Z,128nm,0.7s,comp=Z,1µm						
XAN	Xi'an	73.67	313	P	P	02 39 39.0	+0.6
XAN				pP	pP	02 40 17.0	-1.4
XAN				PP	PP	02 42 28.4	+3.2
XAN				S	SKiKP	02 48 51.1	-0.4
XAN				SS	SS	02 53 39.4	-3.6
XAN				pmax	pmax		
	comp=Z,180nm,1.7s						
XAN				pmax	pmax		
	comp=Z,5µm,5.2s						
XAN				LR	LR		
	comp=Z,2µm,18.1s						
XAN				LR	LR		
	comp=Z,2µm,21.6s						
XAN				LR	LR		
	comp=Z,3µm,24.0s						
SPIA	Saint Paul Isl	73.96	12	*e*P	P	02 39 39.5	0.0
	comp=Z,404nm,1.3s						
BSI	Banda Aceh	74.12	280	P	P	02 39 41.5	+0.1
	comp=Z,781nm,1.2s,comp=Z,13µm						
UMPA	Umpang Tak	74.22	292	P	P	02 39 43.7	+1.8
	comp=Z,36nm,1.0s						
KMI	Kunming	74.30	302	⇑P	P	02 39 44.4	+1.9
KMI				pP	pP	02 40 22.2	-0.3
KMI				sP	sP	02 40 43.3	+3.2
KMI				PP	PP	02 42 31.3	+0.4
KMI				S	S	02 49 00.4	-3.0
KMI				SKS	SKSac	02 49 34.0	-1.3
KMI				sS	sS	02 50 13.9	+1.1
KMI				pmax	pmax		
	comp=Z,340nm,1.2s						
KMI				pmax	pmax		
	comp=Z,3µm,6.9s						
KMI				LR	LR		
	comp=Z,1µm,15.0s						
KMI				LR	LR		
	comp=Z,3µm,20.2s						
KMI				LR	LR		
	comp=Z,4µm,28.9s						
SDPT	Sand Point	74.85	18	*e*P	P	02 39 48.1	+3.4
	comp=Z,238nm,1.3s						
CM01	Chiang Mai Arr	74.92	294	*e*P	P	02 39 46.7	+0.8
CM31	Chiang Mai Arr	74.95	294	*e*P	P	02 39 48.0	+1.9
CMAR	Chiang Mai Arr	74.95	294	P	P	02 39 47.8	+1.7
	comp=Z,111nm,0.8s,baz=120,slow=4.2,SNR=176						
CMAR				pP	pP	02 40 27.1	+0.9
	comp=Z,72nm,0.8s,baz=132,slow=5.3,SNR=3.3						
CMMT	Chiang Mai	75.08	294	P	P	02 39 47.9	+1.1
	comp=Z,192nm,1.1s,comp=Z,4µm						
CHTO	Chiang Mai	75.08	294	*e*P	P	02 39 48.2	+1.4
	comp=Z,360nm,1.4s						
CHTO				*e*pP	pP	02 40 26.6	-0.3
CHTO	Chiang Mai	75.08	294	P	P	02 39 47.9	+1.1
	comp=Z,869nm,1.2s,comp=Z,18µm						
MA2	Magadan	75.18	351	*e*P	P	02 39 46.2	-0.2
	comp=Z,245nm,1.0s						
MA2	Magadan	75.18	351	*e*P	P	02 39 46.3	-0.2
MA2				pmax	pmax		
	comp=Z,245nm,1.0s						
QSPA	South Pole Qui	75.37	180	P	P	02 39 47.5	-0.3
	comp=Z,320nm,1.0s,baz=43,slow=2.2						
QSPA				LR	LR	03 10 33.1	
	comp=Z,1µm,18.1s,baz=18,slow=34						
QSPA	South Pole Qui	75.37	180	*e*P	P	02 39 47.3	-0.5
CMAI	Chiengmai2	75.40	295	P	P	02 39 50.0	+1.2
	comp=Z,58nm,1.1s,comp=Z,831nm						
HHC	Hu-ho-hao-te	75.55	320	*e*P	P	02 39 50.4	+1.2
HHC				pP	pP	02 40 26.4	-2.9
HHC				S	S	02 49 19.1	+2.6
HHC				sS	sS	02 50 27.7	+1.6
HHC				pmax	pmax		
	comp=Z,120nm,1.1s						
HHC				pmax	pmax		
	comp=Z,4µm,7.0s						
CMBY	CAMPBELL BAY	75.86	281	*e*P	P	02 39 50.9	-0.4
CD2	Chengdu	75.99	308	⇑*i*P	P	02 39 52.7	+0.9
CD2				pP	pP	02 40 32.0	0.0
CD2				sP	sP	02 40 49.5	-0.1
CD2				PP	PP	02 42 45.5	+0.6
CD2				S	S	02 49 23.7	+2.1
CD2				pmax	pmax		
	comp=Z,580nm,0.9s						
CD2				pmax	pmax		
	comp=Z,8µm,5.3s						
CD2				LR	LR		
	comp=Z,10µm,20.6s						
CD2				LR	LR		
	comp=Z,7µm,24.5s						
CD2				LR	LR		
	comp=Z,8µm,19.6s						
HIA	Hailar	76.24	330	*e*P	P	02 39 53.4	+0.6
	comp=Z,238nm,1.2s						
HIA				*e*pP	pP	02 40 32.5	-0.5
HIA	Hailar	76.24	330	*e*P	P	02 39 53.4	+0.6
HIA				*e**PP	pP	02 40 32.5	-0.5
HIA				pmax	pmax		
	comp=Z,238nm,1.2s						
ZEA	Zeya	76.24	337	*ce*P	P	02 39 54.0	+1.4
ZEA				*e**PP	pP	02 40 33.0	+0.1
ZEA				*e*S	S	02 49 20.0	-3.2
ZEA				pmax	pmax		
	comp=N,140nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,260nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,4µm,8.0s						
ZEA				pmax	pmax		
	comp=N,2µm,6.0s						
ZEA				pmax	pmax		
	comp=Z,900nm,10.0s						
ZEA				smax	smax		
	comp=Z,2µm,6.0s						
ZEA				smax	smax		
	comp=E,3µm,10.0s						
ZEA				smax	smax		
	comp=N,4µm,9.0s						
CHGN	Chignik	76.29	19	*e*P	P	02 39 51.7	-1.1
	comp=N,305nm,1.5s						
BTO	Baotou	76.39	319	*e*P	P	02 39 54.6	+0.7
BTO				S	S	02 49 22.7	-3.0
RPN	Rapa Nui	77.66	115	LR	LR	03 09 03.4	
	comp=N,1µm,18.5s,baz=250,slow=32						
SEY	Seymchan	78.22	353	*c i*P	P	02 40 03.8	+0.4
LZH	Lanzhou	78.30	312	*e*P	P	02 40 06.5	+1.8
LZH				pP	pP	02 40 46.6	+1.5
LZH				sP	sP	02 41 05.1	+2.5
LZH				PP	PP	02 43 04.0	-0.2
LZH				*e*S	S	02 49 48.5	+1.9
LZH				SKS	SKSac	02 49 58.1	-6.0
LZH				sS	sS	02 50 57.7	+1.1
LZH				SS	SS	02 54 51.1	-2.0
LZH				pmax	pmax		
	comp=N,580nm,1.3s						
LZH				pmax	pmax		
	comp=N,3µm,4.0s						
LZH				LR	LR		
	comp=N,3µm,19.5s						
LZH				LR	LR		
	comp=N,4µm,19.5s						
LZH				LR	LR		
	comp=N,6µm,20.7s						
OHAK	Old Harbor	78.71	21	*e*P	P	02 40 04.6	-1.6
KDAK	Kodiak Island	79.39	21	LR	LR	03 11 46.0	
	comp=N,2µm,18.8s,baz=223,slow=33						
KDAK	Kodiak Island	79.39	21	*e*P	P	02 40 09.2	-0.7

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      comp=N,82nm,0.9s
KDAK  Kodiak Island     79.39  21  i P     P        02 40 09.8 -0.1
CLNS  Chul'man          79.47 338  eP      P        02 40 10.3 -0.2
CLNS                               e                02 40 17.0
CLNS                               e                02 43 12.3
CLNS                               ePPP    PPP      02 45 03.7
CLNS                               eS      S        02 50 01.0 +3.1
CLNS                               e                02 50 42.9
CLNS                               e*SS    sS       02 51 04.9 -3.3
CLNS                                pmax   pmax
      comp=E,21nm,1.0s
CLNS                                pmax   pmax
      comp=N,68nm,1.1s
CLNS                                pmax   pmax
      comp=Z,155nm,1.0s
CLNS                                pmax   pmax
      comp=Z,39nm,1.2s
CLNS                                pmax   pmax
      comp=N,71nm,1.1s
CLNS                                pmax   pmax
      comp=E,30nm,1.4s
CLNS                                smax   smax
      comp=E,2µm,12.5s
CLNS                                smax   smax
      comp=N,4µm,12.1s
LKP   Lekhapani         80.85 301  eP      P        02 40 18.3 -0.2
CIT   Chita             81.03 330  eP      P        02 40 19.8 +0.9
CIT                                e                02 41 00.0
CIT                                 pmax   pmax
      comp=Z,681nm,1.1s
CNPM  China Poot        81.18  20  eP      P        02 40 19.5  0.0
      comp=Z,678nm,1.9s
BRLK  Bradley Lake      81.47  20  eP      P        02 40 20.8 -0.3
      comp=Z,101nm,0.8s
IMP   Imphal            81.56 298  eP      P        02 40 21.9 -0.5
SAIH  SAIHA             81.58 296  eP      P        02 40 21.6 -1.0
MOKO  MOKOCHONG         81.60 300  eP      P        02 40 22.6  0.0
DIBR  DIBRUGARH         81.68 301  eP      P        02 40 24.0 +1.2
ANM   Nome              81.69  12  eP      P        02 40 23.2 +1.1
      comp=Z,152nm,1.2s
ANM   Nome              81.69  12  eP      P        02 40 23.2 +1.1
ANM                                 pmax   pmax
      comp=Z,152nm,1.2s
KOHI  KOHIMA            81.73 299  eP      P        02 40 22.7 -0.6
MAW   Mawson            81.96 202   P      P        02 40 24.1 +0.5
      comp=Z,266nm,1.1s,baz=101,slow=6.3,SNR=52
MAW                                 PKKPbc PKKPbc   02 58 54.0 -0.9
      comp=Z,3.7nm,0.7s,baz=227,slow=3.6,SNR=4.3
MAW                                 LR     LR       03 12 57.0
      comp=Z,3µm,19.8s,baz=88,slow=33
MAW   Mawson            81.96 202  eP      P        02 40 23.9 +0.4
      comp=Z,101nm,1.2s
MAW                                 PKKPbc PKKPbc   02 58 54.0 -0.9
JORH  JORHAT            81.97 300  eP      P        02 40 24.4 +0.1
YAK   Yakutsk           81.97 343   S      S        02 50 22.2 -1.3
      comp=Z,15nm,0.4s,baz=154,slow=22,SNR=9.6
YAK   Yakutsk           81.97 343  eP      P        02 40 24.1 +0.5
      comp=Z,1µm,1.0s
YAK                                 S      S        02 50 22.2 -1.3
YAK   Yakutsk           81.97 343c iP      P        02 40 23.8 +0.3
YAK                                e                02 43 31.4
YAK                                ePPP    PPP      02 45 21.9
YAK                                eS      S        02 50 22.1 -1.3
YAK                                e*SS    sS       02 51 40.2 +6.1
YAK                                eSS     SS       02 55 41.4 -5.1
YAK                                eSSS    SSS      02 59 07.4
YAK                                 pmax   pmax
      comp=Z,1µm,1.0s
YAK                                 pmax   pmax
      comp=E,213nm,1.3s
YAK                                 pmax   pmax
      comp=N,300nm,1.1s
YAK                                 pmax   pmax
      comp=Z,439nm,4.1s
YAK                                 pmax   pmax
      comp=N,238nm,3.4s
YAK                                 pmax   pmax
      comp=E,263nm,3.5s
YAK                                 smax   smax
      comp=N,2µm,4.0s
YAK                                 smax   smax
      comp=E,716nm,3.5s
ULN   Ulaanbaatar       82.10 324  eP      P        02 40 25.4 +0.6
      comp=E,951nm,1.8s
ULN                                epP     pP       02 41 05.2 -0.4
ULN   Ulaanbaatar       82.10 324c iP      P        02 40 25.5 +0.7
ULN                                 pmax   pmax
      comp=Z,404nm,1.6s
AZL   Aizawl            82.26 297  eP      P        02 40 26.5 +0.4
AZL                                 IAmb   IAmb     02 40 27.7
      comp=Z,170nm,0.9s
SONM  Songino Array     82.46 324   P      P        02 40 27.3 +0.6
      comp=Z,207nm,1.2s,baz=136,slow=3.7,SNR=261
SONM                                pP     pP       02 41 07.3 -0.1
      comp=Z,35nm,0.8s,baz=152,slow=5.5,SNR=3.1
SONM                                S      S        02 50 30.7 +1.4
      comp=Z,1.9nm,1.0s,baz=186,slow=7.3,SNR=4.9
SONM                                PKKPbc PKKPbc   02 58 53.1 -1.2
      comp=Z,1.1nm,0.6s,baz=271,slow=3.5,SNR=4.9
SONM                                PKPPKP P'P'df   03 06 56.6 +0.3
      comp=Z,0.9nm,0.7s,baz=225,slow=1.9,SNR=5.6
SONM                                LR     LR       03 14 37.3
      comp=Z,2µm,21.7s,baz=113,slow=34
SONA1 Songino Array     82.46 324  eP      P        02 40 27.2 +0.6
SONA1                              eS      S        02 50 33.3 +3.9
BILL  Bilibino          82.47 360  eP      P        02 40 25.9 -0.1
      comp=Z,663nm,1.3s
BILL  Bilibino          82.47 360c iP      P        02 40 26.0 -0.1
BILL                               e*PP    pP       02 41 08.2 +1.3
BILL                               e                02 43 38.6
BILL                               eS      S        02 50 23.7 -4.7
BILL                                pmax   pmax
      comp=Z,529nm,1.2s
ITAN  ITANAGAR          82.55 300  eP      P        02 40 28.0 +0.6
ZIRO  ZIRO              82.58 301  eP      P        02 40 28.1 +0.4
GTA   Gaotai            82.64 314  ⇑P      P        02 40 28.8 +1.0
GTA                                 pP     pP       02 41 08.3 -0.3
GTA                                 sP     sP       02 41 29.5 +3.5
GTA                                 SKS    S        02 50 27.7 -3.9
GTA                                 S      SKSac    02 50 32.0 -1.7
GTA                                 pmax   pmax
      comp=Z,150nm,1.3s
GTA                                 pmax   pmax
      comp=Z,3µm,7.5s
GTA                                 LR     LR
      comp=Z,1µm,17.5s
GTA                                 LR     LR
      comp=Z,2µm,21.9s
GTA                                 LR     LR
      comp=Z,2µm,22.9s
SUA   Susitna One       82.81  19  eP      P        02 40 27.8 -0.3
      comp=Z,237nm,1.0s
BRDH  Bariadhala        82.82 296   P      P        02 40 31.1 +2.2
      comp=Z,302nm,0.8s,baz=78,slow=9.9,SNR=18
RC01  Rabbit Creek A    82.85  19  eP      P        02 40 28.3 +0.2
      comp=Z,269nm,1.0s
SKT   Skwentna          82.97  18  eP      P        02 40 27.4 -1.4
      comp=Z,45nm,1.0s
TEZP  TEZPUR            83.14 300  eP      P        02 40 30.3 -0.1
BELO  BELONIA           83.18 296  eP      P        02 40 30.9 +0.2
PMR   Palmer            83.42  19  eP      P        02 40 30.5 -0.5
      comp=Z,689nm,1.7s
PMR   Palmer            83.42  19  eP      P        02 40 30.5 -0.5
PMR                                 pmax   pmax
      comp=Z,689nm,1.7s
PPLA  Purkeypile        83.48  17  eP      P        02 40 30.6 -1.0
      comp=Z,290nm,1.8s
AGT   Agartala          83.55 297  eP      P        02 40 34.3 +1.8
SHL   Shillong          83.56 298  eP      P        02 40 33.2 +0.3
SHL                                i P     P        02 40 33.5 +0.6
SHL                                eS      S        02 50 39.5 -2.0
PAF   Port-aux-Franc    83.56 221  eP      P        02 40 33.6 +1.4
      comp=Z,711nm,1.1s
GHO   Glory Hole Cre    83.62  19  eP      P        02 40 31.8 -0.4
      comp=Z,240nm,1.0s
SML   Sawmill           83.84  20  eP      P        02 40 33.4 +0.1
      comp=Z,217nm,1.0s
SML   Sawmill           83.84  20  eP      P        02 40 33.4 +0.1
SML                                 pmax   pmax
      comp=Z,217nm,1.0s
KCPM  Cahto Peak        83.89  46  eP      P        02 40 35.0 +0.9
      comp=Z,140nm,1.0s
CAST  Castle Rocks      83.92  17  eP      P        02 40 32.3 -1.3
      comp=Z,346nm,0.8s
GUWA  GUWAHATI          83.93 299  eP      P        02 40 34.8 +0.3
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HOPS  Hopland Field     83.97  47  eP      P        02 40 34.0 -0.4
      comp=Z,131nm,1.3s
KMRM  Mail Ridge        84.03  46  eP      P        02 40 35.8 +1.0
      comp=Z,146nm,1.2s
GDXM  Geysers           84.09  48  eP      P        02 40 36.2 +1.0
      comp=Z,48nm,1.0s
SCM   Sheep Creek Mo    84.19  20  eP      P        02 40 35.2 +0.1
      comp=Z,145nm,0.8s
SCM   Sheep Creek Mo    84.19  20  eP      P        02 40 35.2 +0.1
SCM                                 pmax   pmax
      comp=Z,145nm,0.8s
DIV   Divide            84.20  21  eP      P        02 40 35.3 +0.1
      comp=Z,91nm,0.9s
SAO   San Andreas Ge    84.26  50  eP      P        02 40 35.6 -0.3
      comp=Z,62nm,0.9s
SAO   San Andreas Ge    84.26  50  eP      P        02 40 35.6 -0.3
SAO                                 pmax   pmax
      comp=Z,62nm,0.9s
KHMM  Horse Mountain    84.29  45  eP      P        02 40 37.2 +1.1
      comp=Z,90nm,1.1s
SNCC  San Nicolas Is    84.40  54   P      P        02 40 36.3 -0.4
      baz=248
KLU   Klutina           84.41  21  eP      P        02 40 36.4 +0.2
      comp=Z,67nm,0.9s
BOD   Bodaibo           84.42 334  eP      P        02 40 35.9 -0.3
BOD                                eS      S        02 50 43.9 -4.4
BOD                                 pmax   pmax
      comp=Z,256nm,1.9s
BMRM  Bremner River     84.50  21  eP      P        02 40 36.3 -0.3
      comp=Z,423nm,1.9s
KBO   Bosley Butte      84.52  44  eP      P        02 40 38.7 +1.5
      comp=Z,97nm,1.2s
PMPB  Monarch Peak      84.53  51  eP      P        02 40 38.4 +1.0
      comp=Z,99nm,1.1s
SCZ2  Santa Cruz Isl    84.59  53   P      P        02 40 36.5 -1.2
      baz=248
SBC   Santa Barbara     84.69  53   P      P        02 40 38.6 +0.5
      baz=248
KEBM  Edson Butte       84.73  43  eP      P        02 40 39.0 +0.8
      comp=Z,61nm,0.9s
BPAW  Bear Paw Mtn.     84.75  17  eP      P        02 40 36.4 -1.4
      comp=Z,94nm,0.9s
PAGB  Antelope Grade    84.76  51  eP      P        02 40 39.3 +0.8
      comp=Z,26nm,0.9s
PKM   Mcpherson Peak    84.78  52   P      P        02 40 39.0 +0.2
      baz=248,SNR=23
SMMC  Simmler           84.80  52   P      P        02 40 39.0 +0.3
      baz=248
L02D  Cave Junction,    84.91  44   P      P        02 40 39.6 +0.5
      baz=245,SNR=12
DIB   Dawson Inlet,     84.93  32  eP      P        02 40 39.0 +0.2
      comp=Z,65nm,0.8s
WDC   Whiskeytown Da    84.99  46  eP      P        02 40 39.4  0.0
      comp=Z,133nm,1.4s
TGL   Tana Glacier      84.99  22  eP      P        02 40 38.9 -0.3
      comp=Z,70nm,0.8s
N02D  Trinity Center    85.04  46   P      P        02 40 40.1 +0.3
      baz=246,SNR=24
BLG   Laguna Peak, P    85.07  53   P      P        02 40 39.7 -0.4
      baz=249
SCI2  San Clemente I    85.07  54   P      P        02 40 40.0 -0.1
      baz=249,SNR=13
MCK   McKinley          85.07  18  eP      P        02 40 38.3 -1.1
      comp=Z,248nm,1.0s
MCK   McKinley          85.07  18  eP      P        02 40 38.3 -1.1
MCK                                 pmax   pmax
      comp=Z,248nm,1.0s
M02C  Callahan          85.11  45   P      P        02 40 40.9 +0.7
      baz=246,SNR=27
BWN   Browne            85.25  18  eP      P        02 40 40.0 -0.2
      comp=Z,608nm,1.0s
RDOG  Red Dog Mine      85.25  11  eP      P        02 40 40.9 +0.8
      comp=Z,131nm,1.2s
HARP  HAARP             85.31  20  eP      P        02 40 41.0 +0.3
      comp=Z,84nm,0.8s
ORV   Oroville          85.31  47  eP      P        02 40 41.0 -0.1
      comp=Z,56nm,1.0s
ORV   Oroville          85.31  47  eP      P        02 40 41.0 -0.1
ORV                                 pmax   pmax
      comp=Z,56nm,1.0s
CIS   Catalina Islan    85.32  54   P      P        02 40 41.0 -0.3
      baz=249
YBH   Yreka Blue Hor    85.34  45   P      P        02 40 41.5 +0.2
      comp=Z,49nm,1.0s,baz=157,slow=4.4,SNR=32
YBH                                 pP     pP       02 41 21.9 -0.5
      comp=Z,23nm,1.1s,baz=194,slow=5.0,SNR=1.7
O03D  Paynes Creek      85.39  46   P      P        02 40 41.2 -0.4
      baz=246,SNR=42
O03D  Paynes Creek      85.39  46  eP      P        02 40 41.2 -0.4
AFDM  Forest Hills D    85.45  48  eP      P        02 40 41.7 -0.2
      comp=Z,86nm,1.0s
ZAK   Zakamensk         85.51 325  eP      P        02 40 41.2 -0.8
ZAK                                e                02 41 21.1
ZAK                                e                02 50 51.0
ZAK                                 pmax   pmax
      comp=Z,266nm,1.2s
ZAK                                 pmax   pmax
      comp=Z,202nm,2.1s
ZAK                                 pmax   pmax
      comp=Z,86nm,1.3s
OSI   Osito Audit: C    85.51  53   P      P        02 40 42.1 -0.2
      baz=249
OSI   Osito Audit: C    85.51  53  eP      P        02 40 43.9 +1.6
      comp=Z,109nm,1.3s
FMP   Fort Macarthur    85.53  54   P      P        02 40 42.3  0.0
      baz=249
CMB   Columbia Colle    85.53  49  eP      P        02 40 42.0 -0.3
      comp=Z,68nm,0.9s
CMB   Columbia Colle    85.53  49  eP      P        02 40 42.0 -0.3
CMB                                 pmax   pmax
      comp=Z,68nm,0.9s
HUMO  Hull Mountain     85.53  44  eP      P        02 40 42.4 +0.2
      comp=Z,74nm,0.9s
MLY   Manley            85.53  17  eP      P        02 40 40.8 -0.9
      comp=Z,78nm,1.0s
LSA   Lhasa             85.55 302  eP      P        02 40 44.2 +1.1
      comp=Z,163nm,1.0s
LSA   Lhasa             85.55 302  i P     P        02 40 44.2 +1.1
      SNR=34
ARVC  Arvin             85.62  52   P      P        02 40 42.8 +0.1
      baz=249,SNR=12
VES   Vestal, Richgr    85.68  51   P      P        02 40 42.5 -0.5
      baz=248,SNR=24
DECC  Green Verdugo     85.69  53   P      P        02 40 42.7 -0.4
      baz=249
I03D  Drain, OR         85.73  43   P      P        02 40 43.0  0.0
      baz=245,SNR=18
PASC  Pasadena Art C    85.77  53  eP      P        02 40 43.8 +0.3
      comp=Z,95nm,1.3s
MWC   Mount Wilson      85.89  53  eP      P        02 40 44.0 -0.3
      comp=Z,477nm,1.9s
IRK   Irkutsk           85.89 327⇑iP      P        02 40 43.4 -0.3
IRK                                 pmax   pmax
      comp=Z,364nm,2.6s
TLY   Talaya            85.95 326  eP      P        02 40 44.0  0.0
      comp=Z,127nm,0.8s
TLY                                epP     pP       02 41 24.5 -0.6
TLY   Talaya            85.95 326c iP      P        02 40 43.7 -0.3
TLY                                e*PP    pP       02 41 23.2 -1.9
TLY                                eS      S        02 50 54.2 -9.5
TLY                                 pmax   pmax
      comp=Z,239nm,1.1s
TLY                                 MLR    MLR
      comp=Z,2µm,24.0s
M04C  Macdoel           85.96  45   P      P        02 40 44.4  0.0
      baz=246,SNR=30
ISA   Isabella, Lake    86.08  52   P      P        02 40 45.2 +0.1
      baz=249,SNR=43
ISA   Isabella, Lake    86.08  52  eP      P        02 40 45.3 +0.2
      comp=Z,86nm,1.1s
CCB   Clear Creek Bu    86.08  18  eP      P        02 40 42.7 -1.6
      comp=Z,74nm,0.8s
COR   Corvallis         86.13  42  eP      P        02 40 45.0  0.0
      comp=Z,188nm,1.5s
EDW2  Edwards Air Fo    86.17  53   P      P        02 40 45.6  0.0
      baz=249,SNR=56
109C  Camp Elliot, M    86.17  55   P      P        02 40 45.5  0.0
      baz=250,SNR=7.3
CPE   Camp Elliot       86.17  55  eP      P        02 40 45.7 +0.2
      comp=Z,124nm,1.3s
BFSC  Mount Baldy Ra    86.20  53   P      P        02 40 45.1 -0.7
      baz=250,SNR=50
COLA  College           86.24  18  eP      P        02 40 44.1 -0.9
      comp=Z,141nm,0.8s
COLA  College           86.24  18  eP      P        02 40 44.1 -0.9
COLA                                pmax   pmax
      comp=Z,141nm,0.8s
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MDPB  Devils Postpil    86.34  50  eP      P        02 40 46.7 +0.1
      comp=Z,105nm,1.0s
MURC  Murrieta          86.34  54   P      P        02 40 46.0 -0.4
      baz=250,SNR=12
K04D  Chiloquin, OR     86.35  44   P      P        02 40 46.5 +0.1
      baz=246
J04D  Umpqua Nationa    86.36  44   P      P        02 40 46.5  0.0
      baz=246,SNR=18
I04A  Tendick Farm,     86.39  43   P      P        02 40 46.0 -0.4
      baz=246,SNR=27
OMMB  Old Mammoth Mi    86.39  50  eP      P        02 40 46.8 -0.1
      comp=Z,95nm,1.2s
WAKR  Walker            86.40  49  eP      P        02 40 47.0 +0.2
      comp=Z,141nm,1.3s
G03D  McMinnville, O    86.42  42   P      P        02 40 46.3 -0.1
      baz=245,SNR=16
BAR   Barrett           86.44  55  eP      P        02 40 46.7 -0.2
      comp=Z,61nm,1.2s
ILAR  Eielson Array     86.45  18   P      P        02 40 44.4 -1.8
      comp=Z,95nm,0.7s,baz=236,slow=5.3,SNR=298
ILAR                                S      SKSac    02 50 54.6 -2.0
      comp=Z,3.8nm,1.1s,baz=252,slow=6.8,SNR=11
ILAR                                PKKPbc PKKPbc   02 58 42.8 -2.7
      comp=Z,1.8nm,0.6s,baz=3.2,slow=1.7,SNR=11
ILAR                                PKPPKP P'P'df   03 06 47.7 +0.1
      comp=Z,2.1nm,1.0s,baz=347,slow=1.4,SNR=7.4
ILAR                                LR     LR       03 12 47.4
      comp=Z,2µm,21.7s,baz=232,slow=31
ILB   Eielson Array     86.45  18  eP      P        02 40 44.5 -1.6
ILB                                eS      S        02 51 07.4 -0.6
PNTR  Pine Nut          86.50  48  eP      P        02 40 47.5 +0.2
      comp=Z,80nm,1.1s
MLAC  Mammoth, Mammo    86.52  50   P      P        02 40 47.4  0.0
      baz=249,SNR=6.4
F03A  Seaside           86.53  41  eP      P        02 40 47.7 +0.7
      comp=Z,119nm,0.9s
VCNR  Virginia City     86.54  48  eP      P        02 40 48.0 +0.6
      comp=Z,22nm,0.9s
LRMC  Laurel Mtn Rad    86.62  52   P      P        02 40 47.9 +0.1
      baz=249,SNR=14
CWC   Cottonwood Cre    86.66  51   P      P        02 40 48.0  0.0
      baz=249
BBB   Bella Bella       86.70  34  eP      P        02 40 47.8 +0.2
      comp=Z,46nm,0.9s
MONP2 Monument Peak     86.71  55   P      P        02 40 48.8 +0.3
      baz=250,SNR=68
YERR  Yerington         86.72  48  eP      P        02 40 48.2 -0.1
      comp=Z,161nm,1.9s
WRAK  Wrangell Islan    86.73  29  eP      P        02 40 46.1 -1.5
      comp=Z,24nm,0.9s
TIN   Tinemaha, Big     86.76  51   P      P        02 40 48.4  0.0
      baz=249,SNR=9.5
BBRC  Big Bear Solar    86.78  54   P      P        02 40 48.4 -0.4
      baz=250
E03A  Lebam             86.79  40  eP      P        02 40 48.4 +0.3
      comp=Z,136nm,0.9s
BESE  Bessie Mountai    86.81  26  eP      P        02 40 47.6 -0.5
      comp=Z,55nm,1.2s
JIS   Juneau Island     86.84  27  eP      P        02 40 49.5 +1.4
      comp=Z,23nm,1.0s
IKP   In-Ko-Pah, Jac    86.88  55   P      P        02 40 49.4 +0.3
      baz=250,SNR=27
PAHR  Pah Rah Range     86.88  48  eP      P        02 40 48.5 -0.5
      comp=Z,69nm,1.1s
H04A  Detroit Lake      86.90  42  eP      P        02 40 48.3 -0.5
      comp=Z,74nm,1.0s
GTK   Tadong            86.91 299  eP      P        02 40 50.0 +0.6
PFO   Pinyon Flats O    86.93  54   P      P        02 40 49.3  0.0
      baz=250,SNR=24
PFO   Pinyon Flats O    86.93  54  eP      P        02 40 49.3  0.0
      comp=Z,269nm,1.9s
XPFO  Piæon Flat        86.93  54  eP      P        02 40 49.3  0.0
      comp=Z,231nm,1.9s
RRX   Edison Barstow    86.94  53   P      P        02 40 49.2  0.0
      baz=250
F04D  Rainier, OR       86.94  41   P      P        02 40 49.4 +0.4
      baz=245
NLWA  Neilton Lookou    86.96  39  eP      P        02 40 49.5 +0.5
      comp=Z,48nm,0.9s
NLWA                               epP     pP       02 41 29.9 -0.3
DAC   Darwin (Calif)    86.97  51  eP      P        02 40 49.0 -0.5
      comp=Z,68nm,1.2s
DAC                                epP     pP       02 41 31.0 +0.2
DAC   Darwin (Calif)    86.97  51  eP      P        02 40 49.0 -0.5
DAC                                e*PP    pP       02 41 31.0 +0.2
DAC                                 pmax   pmax
      comp=Z,68nm,1.2s
J05D  Fort Rock, OR     86.97  44   P      P        02 40 49.7 +0.3
      baz=247,SNR=46
MPMC  Manual Prospec    86.97  52   P      P        02 40 49.7 +0.2
      baz=250,SNR=17
K05A  Summer Lake       86.98  45  eP      P        02 40 49.7 +0.2
      comp=Z,88nm,1.0s
MOD   Modoc Plateau     87.06  45  eP      P        02 40 49.3 -0.6
      comp=Z,56nm,1.1s
RYN   Ryan              87.11  49  eP      P        02 40 50.0 -0.1
      comp=Z,40nm,0.9s
SKAG  Skagway           87.11  26  eP      P        02 40 48.5 -0.9
      comp=Z,38nm,1.1s
NV01  Mina Array Sit    87.20  49  eP      P        02 40 49.7 -1.0
NVAR  Mina Array Bea    87.20  49   P      P        02 40 50.6 -0.1
      comp=Z,33nm,0.9s,baz=231,slow=7.5,SNR=78
NVAR                                pP     pP       02 41 32.2 +0.3
      comp=Z,16nm,0.9s,baz=232,slow=8.3,SNR=2.9
NVAR                                PKKPbc PKKPbc   02 58 42.5 -0.1
      comp=Z,2.7nm,0.6s,baz=103,slow=4.1,SNR=19
NVAR                                PKPPKP P'P'df   03 06 49.0 +0.5
      comp=Z,2.8nm,0.7s,baz=102,slow=3.4,SNR=13
NVAR                                LR     LR       03 11 29.7
      comp=Z,5µm,21.7s,baz=114,slow=30
SWSC  Sam W. Stewart    87.22  55   P      P        02 40 50.9 +0.3
      baz=251,SNR=41
GSC   Goldstone, Bar    87.23  53   P      P        02 40 50.7 -0.1
      baz=250,SNR=32
GSC   Goldstone, Bar    87.23  53  eP      P        02 40 50.6 -0.1
      comp=Z,98nm,1.4s
GSC   Goldstone, Bar    87.23  53  eP      P        02 40 50.6 -0.1
GSC                                 pmax   pmax
      comp=Z,98nm,1.4s
BWNR  Bhubaneshwar      87.27 292  ex      P        02 40 43.8 -7.3
NV11  Mina Array Sit    87.31  49  eP      P        02 40 50.9 -0.2
      comp=Z,3.4nm,1.0s
I05D  Terrebonne, OR    87.31  43   P      P        02 40 50.8 -0.1
      baz=247,SNR=27
COLD  Coldfoot          87.35  15  eP      P        02 40 50.8 +0.4
      comp=Z,80nm,1.2s
PINE  Pine Mountain     87.36  44  eP      P        02 40 51.5 +0.2
      comp=Z,69nm,0.9s
GRAC  Grapevine Rang    87.39  51   P      P        02 40 51.7 +0.3
      baz=250,SNR=30
MOY   Mondy             87.39 325  eP      P        02 40 52.6 +1.5
MOY                                 pmax   pmax
      comp=Z,477nm,3.1s
BELC  Belle Mtn. Jos    87.42  54   P      P        02 40 51.9 +0.2
      baz=250,SNR=91
HEC   Hector,Ludlow     87.43  53   P      P        02 40 51.6  0.0
      baz=250,SNR=50
TDL   Tradedollar La    87.56  41  eP      P        02 40 52.3 +0.3
KVN   Kaiserville       87.57  49  eP      P        02 40 52.2 -0.2
      comp=Z,217nm,1.9s
KVN   Kaiserville       87.57  49  eP      P        02 40 52.2 -0.2
KVN                                 pmax   pmax
      comp=Z,217nm,1.9s
FURC  Furnace Creek,    87.58  51   P      P        02 40 52.5 +0.3
      baz=250,SNR=63
TAPN  Taplejung         87.67 299  eP      P        02 40 53.9 +0.6
      comp=Z,415nm,0.8s
G05D  Wamic, OR         87.69  42   P      P        02 40 52.5  0.0
      baz=246,SNR=12
BC3   Big Chuckawall    87.73  55   P      P        02 40 53.5 +0.3
      baz=251,SNR=52
PGC   Sidney            87.75  38  eP      P        02 40 53.2 +0.5
      comp=Z,83nm,0.9s
ODAN  Odare             87.80 298  eP      P        02 40 54.3 +0.5
      comp=Z,1µm,1.3s
SHOC  Shoshone, Teco    87.84  52   P      P        02 40 53.4 -0.1
      baz=250,SNR=19
GMRC  Granite Mounta    87.94  53   P      P        02 40 54.2 +0.1
      baz=251,SNR=53
TUQ   Turquoise Moun    87.95  53   P      P        02 40 54.2  0.0
      baz=250,SNR=94
LON   Longmire          87.97  41  eP      P        02 40 53.5 -0.4
      comp=Z,22nm,0.8s
LON   Longmire          87.97  41  eP      P        02 40 53.5 -0.4
LON                                 pmax   pmax
      comp=Z,22nm,0.8s
GLA   Glamis            88.03  55   P      P        02 40 55.2 +0.7
      baz=251,SNR=33
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GLA   Glamis           88.03  55   eP       P        02 40 55.2 +0.7
      comp=Z,89nm,0.8s
GLA   Glamis           88.03  55   eP       P        02 40 55.2 +0.7
GLA                                pmax     pmax
      comp=Z,89nm,0.8s
D05A  Enumclaw         88.04  40   eP       P        02 40 54.6 +0.5
      comp=Z,548nm,1.8s
G06A  Carlson Farm,    88.12  42   eP       P        02 40 54.5 -0.2
      comp=Z,94nm,1.7s
IRM   Iron Mountain    88.14  54    P       P        02 40 55.4 +0.4
      baz=251,SNR=92
BOK   Bokaro           88.20 295   eP       P        02 40 55.7 +0.2
BOK                                IAmb     IAmb     02 40 58.8
      comp=Z,67nm,0.9s
TPNV  Topopah Spring   88.21  51    P       P        02 40 55.6 +0.2
      baz=250,SNR=84
TPNV  Topopah Spring   88.21  51   eP       P        02 40 55.4  0.0
      comp=Z,48nm,0.9s
TPNV  Topopah Spring   88.21  51   eP       P        02 40 55.4  0.0
TPNV                               pmax     pmax
      comp=Z,48nm,0.9s
A04D  Lummi Island     88.23  39    P       P        02 40 55.2 +0.3
      baz=245,SNR=41
EGAK  Eagle            88.24  20   eP       P        02 40 54.0 -0.7
      comp=Z,43nm,0.8s
CHLP  Challavanipeta   88.36 289   eP       P        02 40 56.4 +0.1
CHLP                               IAmb     IAmb     02 40 59.3
      comp=Z,155nm,1.0s
SRIG  Santa Rosalia    88.39  61   eP       P        02 40 56.2 -0.1
      comp=Z,56nm,0.9s
B05A  Bryant           88.41  39    P       P        02 40 55.9 +0.1
      baz=246,SNR=23
I07A  Izee             88.43  44   eP       P        02 40 56.4 +0.2
      comp=Z,214nm,1.8s
LDFC  Landfair         88.46  53   eP       P        02 40 57.2 +0.6
      comp=Z,284nm,1.2s
Y12C  Blythe           88.50  55    P       P        02 40 57.0 +0.4
      baz=251,SNR=52
Y12C  Blythe           88.50  55   eP       P        02 40 57.0 +0.4
      comp=Z,127nm,1.1s
RAMN  Ramite           88.50 298   eP       P        02 40 57.5 +0.4
      comp=Z,392nm,0.9s
PALK  Pallekele        88.55 278    P       P        02 40 58.6 +1.3
      comp=Z,36nm,0.8s,baz=114,slow=4.2,SNR=14
PALK                               LR       LR       03 23 10.5
      comp=Z,2µm,18.4s,baz=188,slow=37
PALK  Pallekele        88.55 278   eP       P        02 40 58.4 +1.0
      comp=Z,416nm,1.8s
PALK  Pallekele        88.55 278   i P      P        02 40 58.7 +1.3
      SNR=7.0
PALK  Pallekele        88.55 278   i P      P        02 40 59.2 +1.8
TOLK  Toolik Lake Re   88.58  15    P       P        02 40 56.2 -0.1
      baz=221
TOLK  Toolik Lake Re   88.58  15   eP       P        02 40 56.8 +0.5
      comp=Z,220nm,1.8s
BMN   Battle Mountai   88.69  48   eP       P        02 40 57.6  0.0
      comp=Z,133nm,1.4s
BMN                                epP      pP       02 41 37.8 -1.1
BMN   Battle Mountai   88.69  48   eP       P        02 40 57.6  0.0
BMN                                e*PP     pP       02 41 37.8 -1.1
BMN                                pmax     pmax
      comp=Z,133nm,1.4s
NEE2  Needles Airpor   88.75  54    P       P        02 40 58.0 +0.2
      baz=251
SYO   Syowa Base       88.78 197⇓iP     P        02 40 56.6 -0.7
SYO   Syowa Base       88.78 197⇓iPcP   P        02 40 58.0 +0.7
SYO   Syowa Base       88.78 197⇓ipP    pP       02 41 36.4 -2.2
113A  Mohawk Valley,   88.79  56   eP       P        02 40 58.3 +0.3
      comp=Z,46nm,0.9s
F07A  Phinny Hill Vi   88.84  42   eP       P        02 40 58.6 +0.7
      comp=Z,87nm,1.1s
J08A  Circle Bar Ran   88.86  45   eP       P        02 40 59.0 +0.7
      comp=Z,122nm,1.1s
DLBC  Dease Lake       88.86  28   eP       P        02 40 57.2 -0.6
      comp=Z,49nm,1.3s
B06A  Marblemount      88.89  39   eP       P        02 40 58.2 +0.2
      comp=Z,224nm,1.8s
SHPR  Sheep Range      88.89  52   eP       P        02 40 59.0 +0.4
      comp=Z,110nm,1.2s
PDMCI Parker Dam,Lak   88.97  54    P       P        02 40 59.1 +0.3
      baz=252,SNR=42
C06D  Leavenworth      89.01  40    P       P        02 40 58.4 -0.3
      baz=247
JIRN  Jiri             89.06 299   eP       P        02 41 00.2 +0.3
      comp=Z,1µm,1.4s
E07A  Sunnyside        89.14  41   eP       P        02 41 00.7 +1.3
      comp=Z,91nm,0.8s
LPIG  La Paz           89.14  65   LR       LR       03 14 01.1
      comp=Z,2µm,19.0s,baz=248,slow=31
R11A  Troy Canyon, C   89.17  50    P       P        02 40 59.9 -0.1
      baz=251,SNR=98
R11A  Troy Canyon, C   89.17  50   eP       P        02 40 59.7 -0.2
      comp=Z,58nm,1.1s
G08A  Pilot Rock       89.24  43   eP       P        02 40 59.8 -0.2
      comp=Z,100nm,0.9s
HAWA  Hanford          89.28  41   eP       P        02 40 59.9 -0.1
      comp=Z,88nm,0.9s
214A  Organ Pipe Nat   89.31  57    P       P        02 41 01.1 +0.6
      baz=252
SLBS  Sierra La Lagu   89.34  65   eP       P        02 41 01.6 +0.7
      comp=Z,59nm,1.0s
GUN   Gumba            89.39 299   eP       P        02 41 01.7 +0.3
      comp=Z,437nm,1.0s
W13A  Hualapai Mount   89.42  54   eP       P        02 41 01.6 +0.3
      comp=Z,143nm,1.4s
LLLB  Lillooet         89.49  37   eP       P        02 41 01.0 +0.1
      comp=Z,96nm,1.3s
E08A  Dider Farm, El   89.62  42   eP       P        02 41 01.9 +0.4
      comp=Z,162nm,1.0s
E08A                               epP      pP       02 41 42.7 -0.3
PKIN  Phulchoki        89.70 298   eP       P        02 41 02.8  0.0
      comp=Z,697nm,1.2s
Y14A  Wickenburg       89.75  55   eP       P        02 41 02.7 +0.1
      comp=Z,49nm,1.2s
KKN   Kakani           89.86 299   eP       P        02 41 03.5 +0.1
      comp=Z,374nm,1.0s
TIXI  Tiksi            89.91 349   eP       P        02 41 01.8 -0.5
      comp=Z,208nm,1.1s
TIXI  Tiksi            89.91 349c iP       P        02 41 01.7 -0.6
TIXI                               pmax     pmax
      comp=Z,244nm,1.2s
D08A  Wollman Farm,    89.92  41   eP       P        02 41 03.2 +0.3
      comp=Z,91nm,1.1s
DMN   Daman            89.96 298   eP       P        02 41 04.3 +0.3
      comp=Z,1µm,1.1s
HSIG                   89.98  60   eP       P        02 41 03.7  0.0
      comp=Z,104nm,1.2s
B08A  Colville Reser   90.14  40   eP       P        02 41 03.6 -0.4
      comp=Z,105nm,1.2s
BMO   Blue Mountains   90.18  43   eP       P        02 41 04.0 -0.3
      comp=Z,77nm,1.1s
BMO   Blue Mountains   90.18  43   eP       P        02 41 04.0 -0.3
BMO                                pmax     pmax
      comp=Z,77nm,1.1s
E09A  Wood Farm, Sta   90.22  42   eP       P        02 41 04.3 -0.1
      comp=Z,133nm,1.3s
PVM   Polavaram        90.25 288   eP       P        02 41 03.8 -1.4
PVM                                IAmb     IAmb     02 41 07.5
      comp=Z,400nm,1.9s
GKN   Gorkha           90.47 299   eP       P        02 41 05.8 -0.4
      comp=Z,479nm,1.1s
LCMT  Little Creek M   90.51  52   eP       P        02 41 06.4 +0.3
      comp=Z,78nm,1.0s
PSUT  Pine Spring      90.52  50   eP       P        02 41 06.3 +0.1
      comp=Z,47nm,0.9s
CCUT  Cedar City       90.58  51   eP       P        02 41 07.1 +0.5
      comp=Z,36nm,1.0s
C09A  Chrisman Ranch   90.60  40   eP       P        02 41 06.5 +0.3
      comp=Z,160nm,1.7s
MFID  Camas Ranch      90.69  45   eP       P        02 41 06.6 -0.2
      comp=Z,63nm,0.9s
SZCU  Shurtz Canyon    90.81  51   eP       P        02 41 08.0 +0.4
      comp=Z,30nm,1.0s
KNB   Kanab            90.83  52   eP       P        02 41 08.2 +0.5
      comp=Z,108nm,1.4s
KNB   Kanab            90.83  52   eP       P        02 41 08.2 +0.5
KNB                                pmax     pmax
      comp=Z,108nm,1.4s
TUC   Tucson           91.06  57    P       P        02 41 09.1 +0.5
      baz=253
TUC   Tucson           91.06  57   eP       P        02 41 09.2 +0.5
      comp=Z,95nm,1.3s
TUC                                ePKKPbc  PKKPbc   02 58 32.3 -0.2
TUC   Tucson           91.06  57   eP       P        02 41 09.2 +0.5
TUC                                pmax     pmax
      comp=Z,95nm,1.3s
U15A  North Rim        91.06  53   eP       P        02 41 09.3 +0.4
      comp=Z,265nm,1.8s
X16A  Lo Mia Camp, P   91.14  55   eP       P        02 41 09.7 +0.5
      comp=Z,55nm,1.1s
SKHT  Srikalahasti     91.14 284   eP       P        02 41 09.6 +0.3
SKHT                               IAmb     IAmb     02 41 12.5
      comp=Z,150nm,1.1s
KOLN  Koldanda         91.29 298   eP       P        02 41 09.2 -0.8
DANN  Dangsing         91.31 299   eP       P        02 41 09.7 -0.5
ADKI  Addanki          91.43 286   eP       P        02 41 09.2 -1.5
ADKI                               IAmb     IAmb     02 41 13.4
      comp=Z,105nm,1.3s
NEW   Newport          91.49  40    P       P        02 41 09.8 -0.4
      baz=250,SNR=33
NEW   Newport          91.49  40   eP       P        02 41 09.9 -0.4
      comp=Z,51nm,0.9s
NEW   Newport          91.49  40   eP       P        02 41 09.9 -0.4
NEW                                pmax     pmax
      comp=Z,51nm,0.9s
WUAZ  Wupatki          91.51  54    P       P        02 41 11.1 +0.3
      baz=253
WUAZ  Wupatki          91.51  54   eP       P        02 41 11.3 +0.5
      comp=Z,100nm,1.4s
MTPU  Mount Pierson    91.62  51   eP       P        02 41 12.4 +0.9
      comp=Z,58nm,1.1s
HLID  Hailey           91.71  45    P       P        02 41 11.7 +0.1
      baz=251,SNR=48
HLID  Hailey           91.71  45   eP       P        02 41 11.6  0.0
      comp=Z,67nm,1.5s
MSU   Marysvale        91.77  51   eP       P        02 41 12.7 +0.6
MSU   Marysvale        91.77  51   eP       P        02 41 12.7 +0.6
DUG   Dugway, Tooele   91.80  49    P       P        02 41 12.0 -0.1
      baz=252
PMSA  Palmer Station   91.83 160    P       P        02 41 10.9 -0.6
      comp=Z,28nm,0.6s,baz=222,slow=7.1,SNR=35
PMSA                               LR       LR       03 13 33.5
      comp=Z,870nm,21.4s,baz=222,slow=30
PMSA  Palmer Station   91.83 160   eP       P        02 41 11.3 -0.2
      comp=Z,176nm,1.4s
BGU   Big Grassy Mou   91.86  48   eP       P        02 41 12.2 -0.2
      comp=Z,104nm,1.9s
PYUN  Piuthan          91.90 298   eP       P        02 41 12.0 -0.9
      comp=Z,300nm,1.2s
319A  Douglas          92.03  58   eP       P        02 41 14.0 +0.8
      comp=Z,90nm,1.0s
NJS   Nagarjunasagar   92.22 286   eP       P        02 41 13.3 -1.0
NJS                                IAmb     IAmb     02 41 16.8
      comp=Z,221nm,1.2s
HVU   Hansel Valley    92.30  47   eP       P        02 41 14.3  0.0
      comp=Z,137nm,1.9s
X18A  Snowflake        92.35  55   eP       P        02 41 15.2 +0.4
      comp=Z,32nm,1.0s
SPUT  South Promonto   92.40  48   eP       P        02 41 15.3 +0.5
      comp=Z,98nm,1.8s
SRLM  Srisailam        92.50 286   eP       P        02 41 14.9 -0.7
SRLM                               IAmb     IAmb     02 41 18.2
      comp=Z,214nm,1.1s
MPU   Maple Canyon     92.61  49   eP       P        02 41 16.4 +0.5
      comp=Z,20nm,1.1s
W18A  Petrified Fore   92.68  55    P       P        02 41 16.3  0.0
      baz=254
WMQ   Urumqi           92.70 315    P       P        02 41 16.5 +0.5
WMQ                                pP       pP       02 41 57.1 -0.4
WMQ                                sP       sP       02 42 12.4 -2.3
WMQ                                PP       PP       02 44 59.1 -1.3
WMQ                                SKS      SKSac    02 51 33.9 -0.3
WMQ                                S        S        02 52 05.3 -1.5
WMQ                                SS       SS       02 58 24.0 +0.1
WMQ                                pmax     pmax
      comp=Z,330nm,1.1s
WMQ                                LR       LR
      comp=Z,3µm,30.1s
WMQ                                LR       LR
      comp=Z,3µm,30.1s
WMQ                                LR       LR
      comp=Z,3µm,33.1s
TMUT  Trail Mountain   92.72  50   eP       P        02 41 17.3 +0.8
      comp=Z,21nm,0.9s
CTU   Camp Tracy       92.72  49   eP       P        02 41 16.6 +0.2
      comp=Z,21nm,0.9s
RPR   Rampur           92.81 289   eP       P        02 41 16.6 -0.4
RPR                                IAmb     IAmb     02 41 19.2
      comp=Z,258nm,1.0s
INK   Inuvik           92.81  19   PKKP     PKKPdf   02 58 26.7 -0.5
      comp=Z,4.7nm,0.8s,baz=4.4,slow=4.7,SNR=8.5
INK                                LR       LR       03 20 29.9
      comp=Z,1µm,19.7s,baz=231,slow=34
INK   Inuvik           92.81  19   eP       P        02 41 14.0 -1.8
      comp=Z,15nm,1.0s
INK                                PKKP     PKKPdf   02 58 26.8 -0.5
INK   Inuvik           92.81  19   eP       P        02 41 14.0 -1.8
INK                                                  02 58 26.8
INK                                pmax     pmax
      comp=Z,15nm,1.0s
JLU   Jordanelle       92.91  49   eP       P        02 41 17.3 -0.1
      comp=Z,20nm,0.9s
MSO   Missoula         93.05  42    P       P        02 41 16.3 -1.3
      baz=252,SNR=5.7
MSO   Missoula         93.05  42   eP       P        02 41 18.7 +1.0
      comp=Z,12nm,1.0s
TCUT  Toone Canyon     93.09  48   eP       P        02 41 19.1 +1.0
      comp=Z,37nm,0.9s
JTMT  Jette            93.11  41   eP       P        02 41 18.1 +0.1
      comp=Z,37nm,1.4s
P17A  Butcher Ranch,   93.12  50   eP       P        02 41 18.7 +0.5
      comp=Z,12nm,0.8s
HWUT  Hardware Ranch   93.12  48   eP       P        02 41 18.0 -0.2
      comp=Z,14nm,0.9s
NVL   N'lazarevskaya   93.13 188⇑iP     P        02 41 14.9 -2.5
NVL                                e*PP     pP       02 42 00.2 +1.3
NVL                                e                 02 45 04.2
NVL                                eS       SKSac    02 51 34.5 -1.1
NVL                                e                 02 52 02.8
NVL                                ePS      SP       02 53 19.5 -2.6
NVL                                eSP      PS       02 53 42.7 -0.8
NVL                                e                 02 58 31.6
NVL                                eSS      SS       02 58 42.6  +15
NVL                                pmax     pmax
      comp=Z,189nm,0.9s
NVL                                MLR      MLR
      comp=Z,2µm,17.0s
HYB   Hyderabad        93.13 287   i P      P        02 41 17.0 -1.5
HYB                                epP      pP       02 41 59.0 -1.0
HYB   Hyderabad        93.13 287   eP       P        02 41 18.1 -0.4
HYBB  Hyderabad (bro   93.14 287   eP       P        02 41 18.1 -0.5
HYBB                               IAmb     IAmb     02 41 20.6
      comp=Z,268nm,1.7s
MCMT  McKenzie Canyo   93.17  45   eP       P        02 41 18.4  0.0
SRU   San Rafael Swe   93.18  51   eP       P        02 41 18.7 +0.2
      comp=Z,19nm,1.0s
DLMT  Dillon           93.50  44   eP       P        02 41 19.5 -0.2
      comp=Z,20nm,0.9s
P18A  Preston Nutter   93.53  50   eP       P        02 41 19.7 -0.5
      comp=Z,29nm,0.4s
121A  Cookes Peak, D   93.56  57    P       P        02 41 20.6 +0.2
      baz=255,SNR=12
KRAR  Krasnoyarsk      93.56 327⇑eP     P        02 41 18.5 -1.1
SNAA  Sanae            93.62 183    P       P        02 41 18.5 -1.3
SNAA  Sanae            93.62 183   PKiKP    PKiKP    02 46 04.4 +0.1
SNAA  Sanae            93.62 183    P       P        02 41 18.5 -1.3
      comp=Z,72nm,0.7s,baz=181,slow=4.9,SNR=212
SNAA  Sanae            93.62 183   eP       P        02 41 18.4 -1.4
      comp=Z,827nm,1.8s
SNAA  Sanae            93.62 183c iP       P        02 41 18.6 -1.3
SRSP  Sriramsagar      93.70 288   eP       P        02 41 19.8 -1.3
SRSP                               IAmb     IAmb     02 41 23.1
      comp=Z,316nm,1.3s
LRM   Limekiln Ridge   93.73  44   eP       P        02 41 20.4 -0.5
URV   Uravakonda       93.74 284   eP       P        02 41 20.8 -0.5
URV                                IAmb     IAmb     02 41 23.7
      comp=Z,95nm,1.1s
WALA  Waterton Lakes   93.76  40   eP       P        02 41 21.3 +0.4
      comp=Z,47nm,1.3s
AHID  Auburn Hatcher   93.78  47   eP       P        02 41 21.1 -0.1
      comp=Z,5.0nm,0.7s
HPIG                   93.93  63   eP       P        02 41 23.6 +1.3
      comp=Z,17nm,1.0s
PV05  Paradox Valley   93.97  52   eP       P        02 41 23.0 +0.8
      comp=Z,22nm,1.1s
PV09  Paradox Valley   94.06  51   eP       P        02 41 22.7  0.0
FXWY  Fox Creek        94.08  46   eP       P        02 41 22.8 +0.2
      comp=Z,6.7nm,0.8s
TPAW  Teton Pass       94.09  46   eP       P        02 41 23.0 +0.3
      comp=Z,48nm,1.8s
PV10  Paradox Valley   94.09  52   eP       P        02 41 23.3 +0.5
      comp=Z,19nm,0.8s
REDW  Red Top Meadow   94.12  46   eP       P        02 41 22.9 +0.1
      comp=Z,36nm,1.5s
QLMT  Earthquake Lak   94.13  45   eP       P        02 41 23.8 +1.0
PV04  Paradox Valley   94.20  52   eP       P        02 41 23.2  0.0
      comp=Z,23nm,1.0s
MVCO  Mesa Verde       94.20  53    P       P        02 41 22.9 -0.5
      baz=255,SNR=7.0
MVCO  Mesa Verde       94.20  53   eP       P        02 41 22.7 -0.6
      comp=Z,33nm,1.4s
PV03  Paradox Valley   94.21  52   eP       P        02 41 23.4 +0.1
      comp=Z,67nm,2.0s
IMW   Indian Meadow    94.21  46   eP       P        02 41 23.2  0.0
      comp=Z,9.2nm,0.9s
BOZ   Bozeman (W)      94.22  44    P       P        02 41 22.7 -0.4
      baz=253,SNR=18
BOZ   Bozeman (W)      94.22  44   eP       P        02 41 22.7 -0.4
      comp=Z,26nm,1.4s
BOZ   Bozeman (W)      94.22  44   eP       P        02 41 22.7 -0.4
BOZ                                pmax     pmax
      comp=Z,26nm,1.4s
SNOW  Snow King Moun   94.22  46   eP       P        02 41 24.7 +1.4
      comp=Z,59nm,1.9s
YHB   Horse Butte      94.27  45   eP       P        02 41 25.2 +1.7
      comp=Z,17nm,0.9s
PV02  Paradox Valley   94.28  52   eP       P        02 41 23.8 +0.2
      comp=Z,12nm,1.0s
VNA3  Neumayer Olymp   94.29 181    P       P        02 41 21.6 -1.3
VNA3  Neumayer Olymp   94.29 181   PKiKP    PKiKP    02 46 05.0 -0.4
VNA3                               SKS      SKSac    02 51 41.5 -0.5
VNA3                               S        ScS      02 52 20.3 -0.5
MOOW  Moose Ponds      94.30  46   eP       P        02 41 23.1 -0.5
      comp=Z,14nm,1.5s
LOHW  Long Hollow      94.36  46   eP       P        02 41 23.5 -0.3
      comp=Z,32nm,1.6s
PV01  Paradox Valley   94.39  52   eP       P        02 41 24.1  0.0
      comp=Z,12nm,0.9s
YMR   Madison River    94.41  45   eP       P        02 41 25.9 +1.9
      comp=Z,16nm,0.8s
YPP   Pitchstone Pla   94.41  46   eP       P        02 41 25.9 +1.7
      comp=Z,16nm,1.5s
PV07  Paradox Valley   94.41  52   eP       P        02 41 24.3 +0.1
      comp=Z,25nm,1.0s
FLWY  Flagg Ranch      94.43  46   eP       P        02 41 25.4 +1.2
      comp=Z,12nm,1.1s
PV15  Paradox Valley   94.51  52   eP       P        02 41 24.8 +0.1
      comp=Z,27nm,1.1s
LAZ   Ladron           94.56  56   eP       P        02 41 25.0  0.0
LAZ                                epP      pP       02 42 07.7 +1.3
H17A  Grant Village    94.60  45    P       P        02 41 25.6 +0.6
      baz=254,SNR=7.5
H17A  Grant Village    94.60  45   eP       P        02 41 26.3 +1.3
      comp=Z,7.7nm,0.8s
DGZ   Jazzator, Alta   94.63 320   i P      P        02 41 25.1 +0.2
DGZ                                pmax     pmax
      comp=Z,73nm,0.9s
Y22D  IRIS PASSCAL I   94.65  56    P       P        02 41 24.9 -0.4
      baz=256
Y22E  IRIS PASSCAL I   94.65  56    P       P        02 41 25.1 -0.2
      baz=256
VNA1  Neumayer--Stat   94.85 181    P       P        02 41 24.2 -1.1
VNA1  Neumayer--Stat   94.85 181   PKiKP    PKiKP    02 46 03.3 -3.0
BW06  Boulder Array    94.87  47    P       P        02 41 25.2 -1.0
      baz=255
BW06  Boulder Array    94.87  47   eP       P        02 41 25.1 -1.1
      comp=Z,11nm,1.3s
PD31  Pinedale Array   94.87  47   eP       P        02 41 25.1 -1.2
PDAR  Pinedale Array   94.87  47    P       P        02 41 25.1 -1.2
      comp=Z,3.6nm,0.8s,baz=184,slow=4.0,SNR=18
PDAR                               PKKP     PKKPdf   02 58 19.9 -3.2
      comp=Z,3.7nm,0.7s,baz=83,slow=4.6,SNR=20
PDAR                               PKPPKP   P'P'df   03 06 34.1 +0.1
      comp=Z,1.5nm,0.9s,baz=106,slow=3.2,SNR=7.2
PDAR                               LR       LR       03 19 37.1
      comp=Z,1µm,19.1s,baz=278,slow=32
PDAR  Pinedale Array   94.87  47   eP       P        02 41 23.5 -2.7
PDAR                               PKKP     PKKPdf   02 58 19.9 -3.2
PDAR                               P'P'              03 06 34.1
BNM   Barren Site      94.90  56   eP       P        02 41 26.3 -0.3
BNM                                epP      pP       02 42 06.4 -1.7
LPM   Los Pinos Moun   94.94  56   eP       P        02 41 26.9 +0.2
KLRI  Killari          95.10 287   eP       P        02 41 25.0 -2.6
KLRI                               IAmb     IAmb     02 41 29.2
      comp=Z,198nm,1.6s
O20A  White River Ci   95.15  50    P       P        02 41 27.3 -0.2
      baz=255,SNR=22
TASM  ASL Pad, Albuq   95.23  55    P       P        02 41 27.7 -0.3
      baz=256,SNR=23
ANMO  Albuquerque      95.23  55    P       P        02 41 27.5 -0.5
      comp=Z,11nm,1.0s,baz=263,slow=6.2,SNR=22
ANMO                               PKKPbc   PKKPdf   02 58 22.4 +0.3
      comp=Z,4.6nm,0.8s,baz=87,slow=5.7,SNR=15
ANMO                               LR       LR       03 18 53.1
      comp=Z,2µm,19.1s,baz=275,slow=32
ANMO  Albuquerque      95.23  55    P       P        02 41 27.6 -0.5
      baz=256
ANMO  Albuquerque      95.23  55   eP       P        02 41 27.6 -0.5
      comp=Z,24nm,1.3s
ANMO                               PKKPbc   PKKPdf   02 58 22.4 +0.3
ANMO  Albuquerque      95.23  55   eP       P        02 41 27.6 -0.4
ANMO                               pmax     pmax
      comp=Z,24nm,1.3s
TASL  Snake Pit, Alb   95.23  55    P       P        02 41 27.5 -0.5
      baz=256,SNR=26
MNTX  Cornudas Mount   95.33  59    P       P        02 41 27.9 -0.4
      baz=256,SNR=13
MNTX  Cornudas Mount   95.33  59   eP       P        02 41 27.9 -0.4
      comp=Z,11nm,1.0s
BHPL  Bhopal           95.55 292   eP       P        02 41 29.3 -0.2
BHPL                               IAmb     IAmb     02 41 31.1
      comp=Z,268nm,0.1s
GCMT  Greycliff        95.59  44   eP       P        02 41 29.4 +0.1
S22A  4UR Ranch, Cre   95.62  53    P       P        02 41 29.9 +0.1
      baz=256,SNR=22
S22A  4UR Ranch, Cre   95.62  53   eP       P        02 41 30.4 +0.5
      comp=Z,26nm,1.3s
ZSN   Zaisan           95.64 317⇑iP     P        02 41 29.9 +0.6
      comp=Z,25nm,1.0s
ZSN                                i pP     pP       02 42 10.5 -0.4
ZSN                                i S      SKSac    02 51 50.0 +0.2
ZAIG  Zacatecas        95.67  68   eP       P        02 41 31.7 +1.3
      comp=Z,84nm,2.0s
RLMT  Red Lodge        95.69  45    P       P        02 41 30.0 +0.1
      baz=255
RLMT  Red Lodge        95.69  45   eP       P        02 41 29.2 -0.7
      comp=Z,16nm,1.3s
SMCO  Snowmass         95.86  51   eP       P        02 41 31.1 +0.1
      comp=Z,17nm,1.2s
EGMT  Eagleton         96.11  42    P       P        02 41 31.1 -0.5
      baz=255
EGMT  Eagleton         96.11  42   eP       P        02 41 32.6 +1.0
      comp=Z,12nm,0.9s
TX31  Lajitas Ar. Si   96.21  61   eP       P        02 41 32.7 +0.2
TXAR  Lajitas Array    96.21  61    P       P        02 41 32.1 -0.3
      comp=Z,5.2nm,0.7s,baz=226,slow=4.6,SNR=68
TXAR                               pP       pP       02 42 12.0 -2.0
      comp=Z,2.9nm,0.9s,baz=232,slow=6.2,SNR=2.1
TXAR                               PP       PP       02 45 26.7 -1.4
      comp=Z,17nm,1.3s,baz=229,slow=5.8,SNR=7.3
TXAR                               PKiKP    PKiKP    02 46 10.9 +0.9
      comp=Z,4.7nm,1.1s,baz=234,slow=5.5,SNR=3.4
TXAR                               PKKPbc   PKKPbc   02 58 18.8 -0.1
      comp=Z,4.3nm,0.9s,baz=98,slow=4.4,SNR=15
TXAR                               PKPPKP   P'P'df   03 06 30.7 -1.7
      comp=Z,1.4nm,1.0s,baz=123,slow=4.6,SNR=4.7
GDL2  Guadalupe Moun   96.28  58   eP       P        02 41 34.3 +1.5
RWWY  Rawlins          96.29  49   eP       P        02 41 32.3 -0.4
      comp=Z,13nm,1.0s
SDCO  Great Sand Dun   96.64  53    P       P        02 41 34.2 -0.3
      baz=257
SDCO  Great Sand Dun   96.64  53   eP       P        02 41 33.8 -0.7
      comp=Z,9.3nm,1.3s
K22A  Casper           97.01  48    P       P        02 41 35.0 -0.8
      baz=257
ISCO  Idaho Springs    97.03  51    P       P        02 41 35.8 -0.4
      baz=257,SNR=9.8
ISCO  Idaho Springs    97.03  51   eP       Pdif     02 41 36.5 +0.2
      comp=Z,13nm,1.3s
MK01  Makanchi Array   97.16 316   eP       P        02 41 35.8 -0.5
MK31  Makanchi Array   97.17 316   eP       Pdif     02 41 36.7 +0.3
MKAR  Makanchi Array   97.17 316    P       Pdif     02 41 36.6 +0.2
      comp=Z,106nm,0.8s,baz=98,slow=6.1,SNR=232
MKAR                               pP       pP       02 42 17.4 -0.5
      comp=Z,24nm,0.9s,baz=102,slow=5.6,SNR=2.4
MKAR                               PKiKP    PKiKP    02 46 11.6 +0.5
      comp=Z,3.3nm,0.7s,baz=92,slow=2.1,SNR=8.0
MKAR                               PKKPbc   PKKPbc   02 58 16.1 -0.9
      comp=Z,1.8nm,0.7s,baz=282,slow=5.1,SNR=5.4
MKAR                               LR       LR       03 25 38.8
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	comp=Z,525nm,21.7s,baz=109,slow=35						
MKAR	**Makanchi Array**	**97.17**	**316**	*e*P	Pdif	02 41 36.7	+0.3
	comp=Z,748nm,0.9s						
MKAR				pP	pP	02 42 17.4	-0.5
MKAR				PKiKP	**PKiKP**	**02 46 11.6**	**+0.5**
MKAR				PKKPbc	**PKKPbc**	**02 58 16.1**	**-0.9**
Q24A	**Divide**	**97.19**	**52**	P	**P**	**02 41 36.4**	**-0.5**
	baz=257,SNR=6.8						
ZAA0	**Zalesovo Array**	**97.35**	**324**	*e*P	**P**	**02 41 35.8**	**-1.1**
	comp=Z,142nm,0.9s						
ZALV	**Zalesovo Beam**	**97.35**	**324**	P	**P**	**02 41 36.2**	**-0.7**
	comp=Z,96nm,0.7s,baz=118,slow=4.6,SNR=161						
ZALV				pP	**pP**	**02 42 16.8**	**-1.6**
	comp=Z,32nm,1.0s,baz=96,slow=4.5,SNR=2.1						
ZALV				PKiKP	**PKiKP**	**02 46 11.8**	**+0.7**
	comp=Z,6.0nm,0.8s,baz=144,slow=1.3,SNR=3.9						
ZALV				LR	LR	03 24 29.3	
	comp=Z,1µm,21.6s,baz=102,slow=35						
T25A	**Trinidad**	**97.36**	**54**	P	**P**	**02 41 36.9**	**-0.8**
	baz=257						
MAKZ	**Makanchi**	**97.39**	**316**	*e*P	Pdif	02 41 37.4	+0.1
	comp=Z,126nm,1.0s						
MAKZ	**Makanchi**	**97.39**	**316**	P	**P**	**02 41 36.1**	**-1.2**
MAKZ				pmax	pmax		
	comp=Z,189nm,1.4s						
YKA	**Yellowknife Ar**	**97.47**	**27**	P	**P**	**02 41 35.7**	**-1.4**
	comp=Z,17nm,0.7s,baz=254,slow=4.6,SNR=86						
YKA				PKiKP	**PKiKP**	**02 46 10.7**	**-0.3**
	comp=Z,2.1nm,0.8s,baz=252,slow=1.2,SNR=5.7						
YKA				PKKPbc	**PKKPbc**	**02 58 13.8**	**-2.9**
	comp=Z,5.0nm,0.9s,baz=75,slow=2.6,SNR=16						
YKA				PKPPKP	**P’P’df**	**03 06 23.0**	**-4.4**
	comp=Z,0.5nm,0.7s,baz=21,slow=2.3,SNR=6.2						
YKA				LR	LR	03 22 49.5	
	comp=Z,126nm,18.5s,baz=244,slow=34						
YKW3	**Yellowknife Ar**	**97.48**	**27**	*e*P	**P**	**02 41 35.9**	**-1.3**
	comp=Z,32nm,1.0s						
SMLA	**Simla**	**97.55**	**300**	*e*P	**P**	**02 41 37.9**	**-0.4**
POO	**Poona**	**97.75**	**287**	*e*x	**P**	**02 41 35.7**	**-3.8**
MSTX	**Muleshoe**	**97.98**	**57**	Pdiff	**P**	**02 41 39.2**	**-1.1**
	baz=258						
LAO	**LASA Array**	**98.13**	**44**	Pdiff	**P**	**02 41 40.6**	**-0.1**
	baz=257						
SHLS	**Shalkode**	**98.32**	**312**	*e*P	**P**	**02 41 41.1**	**-0.6**
	comp=Z,17nm,1.0s						
SHLS				*i* pP	**pP**	**02 42 21.8**	**-1.5**
SHLS				*i* S	**SKSac**	**02 52 03.0**	**-1.1**
NVS	**Novosibirsk**	**98.47**	**324**	⇓*i*P	**P**	**02 41 41.8**	**0.0**
NVS				*e**PP	**pP**	**02 42 22.9**	**-0.6**
NVS				*e*		02 45 42.9	
NVS				*e*		02 52 05.2	
NVS				*e*S	**S**	**02 52 57.4**	**+1.5**
NVS				pmax	pmax		
	comp=Z,159nm,1.8s						
NVS				pmax	pmax		
	comp=N,27nm,1.3s						
NVS				pmax	pmax		
	comp=E,100nm,1.9s						
NVS				pmax	pmax		
	comp=Z,144nm,2.3s						
NVS				pmax	pmax		
	comp=N,25nm,2.1s						
NVS				pmax	pmax		
	comp=E,57nm,2.2s						
NVS				smax	smax		
	comp=N,90nm,2.5s						
NVS				smax	smax		
	comp=E,133nm,2.2s						
DHRM	**DHARAMSHALA**	**98.50**	**301**	*e*P	**P**	**02 41 42.8**	**-0.2**
DHRM				IAmb	IAmb	02 41 44.8	
	comp=Z,30nm,0.9s						
UZB	**Uzynbulak**	**98.63**	**312**	⇑*i*P	Pdif	02 41 43.4	+0.2
	comp=Z,15nm,2.3s						
UZB				*i* pP	pP	02 42 23.8	-0.9
UZB				*i* S	**SKSac**	**02 52 05.8**	**+0.2**
KPKS	**Kokpek**	**98.94**	**313**	⇑*i*P	Pdif	02 41 44.5	+0.1
	comp=Z,33nm,2.6s						
KPKS				*i* S	**SKSac**	**02 52 07.0**	**-0.1**
AMTX	**Amarillo**	**99.05**	**56**	Pdiff	**Pdif**	**02 41 44.0**	**-1.1**
	baz=258						
SATY	**Saty**	**99.06**	**312**	⇑*i*P	**Pdif**	**02 41 45.2**	**+0.2**
	comp=Z,16nm,1.8s						
SATY				*i* S	**SKSac**	**02 52 07.9**	**+0.2**
ZHN	**Zhinishke**	**99.06**	**312**	*i* P	**Pdif**	**02 41 45.0**	**0.0**
	comp=Z,7.8nm,1.9s						
ZHN				*i* pP	**pP**	**02 42 25.8**	**-0.8**
ZHN				*i* S	**SKSac**	**02 52 07.5**	**-0.2**
RSSD	**Black Hills**	**99.10**	**47**	Pdiff	**Pdif**	**02 41 44.2**	**-1.1**
	baz=258						
RSSD	**Black Hills**	**99.10**	**47**	*e*P	**Pdif**	**02 41 44.8**	**-0.5**
	comp=Z,3.3nm,0.8s						
RSSD	**Black Hills**	**99.10**	**47**	*e*P	**Pdif**	**02 41 44.8**	**-0.5**
RSSD				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KSCO	**Kaye Shedlock’**	**99.12**	**52**	Pdiff	**Pdif**	**02 41 44.6**	**-0.8**
	baz=258						
SEM	**Semipalatinsk**	**99.29**	**320**	*e*P	**Pdif**	**02 41 50.0**	**+4.0**
	comp=Z,26nm,1.1s						
SEM				*e*S	**SKSac**	**02 52 11.7**	**+2.9**
TDK	**Taldyqorghan**	**99.44**	**314**	*e*P	**Pdif**	**02 41 46.5**	**0.0**
	comp=Z,34nm,1.6s						
TDK				*i* pP	**pP**	**02 42 27.1**	**-1.0**
TDK				*e*S	**SKSac**	**02 52 09.3**	**0.0**
833A	**Chaparral WMA,**	**99.66**	**63**	Pdiff	**Pdif**	**02 41 46.6**	**-1.2**
	baz=258						
JCT	**Junction City**	**99.73**	**61**	Pdiff	**Pdif**	**02 41 47.0**	**-1.3**
	baz=259						
JCT	**Junction City**	**99.73**	**61**	*e*Pdif	**Pdif**	**02 41 46.9**	**-1.3**
	comp=Z,25nm,1.1s						
JCT	**Junction City**	**99.73**	**61**	*e*P	**Pdif**	**02 41 46.9**	**-1.3**
JCT				pmax	pmax		
	comp=Z,25nm,1.1s						
DGMT	**Dagmar**	**99.83**	**42**	Pdiff	**Pdif**	**02 41 47.4**	**-0.8**
	baz=259						
OGNE	**Ogallala**	**99.94**	**50**	Pdiff	**Pdif**	**02 41 48.2**	**-0.7**
	baz=259						
MDOK	**Medeo**	**100.05**	**312**	*i* P	**Pdif**	**02 41 49.8**	**+0.3**
	comp=Z,82nm,2.3s						
MDOK				*i* pP	**pPdif**	**02 42 30.2**	**-0.8**
MDOK				*e*S	**SKSac**	**02 52 12.9**	**+0.2**
AAA	**Alma-Ata**	**100.16**	**312**	*e*S	**SKSac**	**02 52 13.7**	**+0.6**
AAA	**Alma-Ata**	**100.16**	**312**	*i* P	**Pdif**	**02 41 50.0**	**+0.2**
AAA				*i* S	**SKSac**	**02 52 14.7**	**+1.7**
AAA				pmax	pmax		
	comp=Z,400nm,5.6s						
AAA				smax	smax		
	comp=E,3µm,6.1s						
KSH	**Kashi**	**100.18**	**308**	P	**Pdif**	**02 41 51.6**	**+1.5**
KSH				PP	**PP**	**02 46 03.3**	**+5.1**
KSH				SKS		02 52 16.3	
KSH				S	**Sdif**	**02 53 05.9**	**-5.4**
KSH				pmax	pmax		
	comp=E,52nm,1.6s						
KSH				pmax	pmax		
	comp=E,630nm,8.6s						
KSH				LR	LR		
	comp=E,540nm,17.0s						
KSH				LR	LR		
	comp=E,1µm,19.7s						
ABTX	**Abilene, Hawle**	**100.28**	**59**	Pdiff	**Pdif**	**02 41 49.3**	**-1.2**
	baz=259						
KURK	**Kurchatov**	**100.37**	**320**	*e*Pdif	**Pdif**	**02 41 49.7**	**-0.7**
	comp=E,426nm,1.4s						
KURK				pP	**pPdif**	**02 42 30.0**	**-1.9**
KURK				PP	**PP**	**02 45 56.3**	**-2.7**
KURK				PKiKP	**PKiKP**	**02 46 16.4**	**-0.2**
KURK				PKKPbc	**PKKPbc**	**02 58 05.8**	**-2.3**
KURK	**Kurchatov**	**100.37**	**320**	*c i*P	**Pdif**	**02 41 49.9**	**-0.5**
KURBB	**Kurchatov Arra**	**100.41**	**320**	P	**Pdif**	**02 41 49.9**	**-0.7**
	comp=E,16nm,1.0s,baz=98,slow=4.3,SNR=57						
KURBB				pP	**pPdif**	**02 42 30.0**	**-2.1**
	comp=E,3.5nm,1.0s,baz=91,slow=3.7,SNR=1.4						
KURBB				PP	**PP**	**02 45 56.3**	**-3.0**
	comp=E,15nm,1.1s,baz=104,slow=7.1,SNR=4.4						
KURBB				PKiKP	**PKiKP**	**02 46 16.4**	**-0.2**
	comp=E,5.8nm,0.8s,baz=114,slow=1.6,SNR=12						
KURBB				PKKPbc	**PKKPbc**	**02 58 05.8**	**-2.2**
	comp=E,3.1nm,0.7s,baz=284,slow=3.3,SNR=8.5						
KUU	**Kurty**	**100.69**	**313**	*i* P	**Pdif**	**02 41 51.9**	**-0.2**
	comp=E,14nm,1.0s						
KUU				*i* pP	**pPdif**	**02 42 32.4**	**-1.3**
KUU				*e*S	**SKSac**	**02 52 15.2**	**-0.3**
NIL	**Nilore**	**101.29**	**302**	*e*Pdif	**Pdif**	**02 41 54.7**	**-0.3**
	comp=E,54nm,1.4s						
NIL	**Nilore**	**101.29**	**302**	*e*P	**Pdif**	**02 41 54.7**	**-0.3**
NIL				pmax	pmax		
	comp=Z,54nm,1.4s						
CBKS	**Cedar Bluff**	**101.30**	**53**	Pdiff	**Pdif**	**02 41 54.0**	**-1.0**
	baz=260						
WMOK	**Wichita Mounta**	**101.36**	**57**	Pdiff	**Pdif**	**02 41 53.8**	**-1.5**
	baz=260						
435B	**Jarrell**	**101.67**	**61**	Pdiff	**Pdif**	**02 41 54.7**	**-2.0**
	baz=260						
FRU	**Bishkek**	**101.75**	**311**	*e*P	**Pdif**	**02 41 56.0**	**-0.9**
FRU				*i*		02 52 22.0	
FRU				*e*SS	SS	03 00 30.0	-1.1
FRU				pmax	pmax		
	comp=Z,230nm,4.0s						
AAK	**Ala-Archa**	**101.81**	**311**	P	**Pdif**	**02 41 56.3**	**-1.0**
	comp=Z,2.2nm,0.5s,baz=119,slow=5.9,SNR=5.6						
AAK	**Ala-Archa**	**101.81**	**311**	P	**Pdif**	**02 41 56.3**	**-1.0**
AAK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
WHTX	**Lake Whitney,**	**101.99**	**60**	Pdiff	**Pdif**	**02 41 57.0**	**-1.1**
	baz=260						
FFC	**Flin Flon**	**102.23**	**36**	*e*Pdif	**Pdif**	**02 41 58.1**	**-0.5**
	comp=Z,8.4nm,1.1s						
FFC	**Flin Flon**	**102.23**	**36**	*e*P	**Pdif**	**02 41 58.1**	**-0.5**
FFC				pmax	pmax		
	comp=Z,8.0nm,1.1s						
BTLS	**Baital**	**102.49**	**314**	⇑*i*P	**Pdif**	**02 42 00.1**	**0.0**
	comp=Z,9.2nm,2.0s						
BTLS				*i* pP	**pPdif**	**02 42 40.5**	**-1.1**
BTLS				*e*S	**SKSac**	**02 52 24.4**	**+0.5**
SUSD	**Miller**	**102.75**	**47**	Pdiff	**Pdif**	**02 42 00.6**	**-0.7**
	baz=262						
MDND	**Maddock**	**102.77**	**44**	Pdiff	**Pdif**	**02 42 00.9**	**-0.3**
	baz=262						
BGNE	**Belgrade**	**102.91**	**50**	Pdiff	**Pdif**	**02 42 01.7**	**-0.3**
	baz=262						
PLCA	**Paso Flores**	**103.17**	**139**	PKKPbc	PKKPbc	02 57 58.3	-1.2
	comp=Z,6.4nm,0.8s,baz=95,slow=2.9,SNR=12						
KSU1	**Kansas State U**	**103.76**	**53**	Pdiff	**Pdif**	**02 42 04.9**	**-0.9**
	baz=262						
H32A	**Carlson Farm,**	**103.83**	**47**	Pdiff	**Pdif**	**02 42 04.6**	**-1.5**
	baz=263						
G32A	**Webster**	**103.88**	**46**	Pdiff	**Pdif**	**02 42 04.9**	**-1.4**
	baz=263						
TUL1	**Leonard**	**103.96**	**56**	Pdiff	**Pdif**	**02 42 05.7**	**-1.0**
	baz=262						
BRZS	**Berezniki**	**104.03**	**318**	*i* Pdif	**Pdif**	**02 42 06.0**	**-0.8**
	comp=Z,10nm,2.0s						
BRZS				*i* pPdif	**pPdif**	**02 42 46.6**	**-1.7**
BRZS				*i* S	**SKSac**	**02 52 30.2**	**-0.7**
F32A	**Veblen**	**104.21**	**46**	Pdiff	**Pdif**	**02 42 05.4**	**-2.2**
	baz=264						
NATX	**Nacogdoches**	**104.30**	**61**	Pdiff	**Pdif**	**02 42 07.1**	**-1.3**
	baz=261						
ECSD	**EROS Data Cent**	**104.33**	**48**	Pdiff	**Pdif**	**02 42 07.1**	**-1.2**
	baz=263						
ECSD	**EROS Data Cent**	**104.33**	**48**	*e*Pdif	**Pdif**	**02 42 08.9**	**+0.6**
G33A	**Ortonville**	**104.62**	**47**	Pdiff	**Pdif**	**02 42 08.3**	**-1.2**
	baz=264						
KK31	**Karatay Array**	**104.78**	**311**	P	**Pdif**	**02 42 07.9**	**-2.4**
KK31				pmax	pmax		
	comp=Z,5.0nm,0.8s						
IUG	**Iuzhnay**	**105.02**	**310**	*e*Pdif	**Pdif**	**02 42 11.6**	**+0.1**
	comp=Z,7.1nm,2.6s						
IUG				*i* SKSac	**SKSac**	**02 52 36.0**	**0.0**
240A	**Hunter Patters**	**105.09**	**60**	Pdiff	**Pdif**	**02 42 11.7**	**-0.2**
	baz=262						
X39A	**Fountain Ranch**	**105.13**	**58**	Pdiff	**Pdif**	**02 42 11.7**	**-0.4**
	baz=262						
G34A	**Benson**	**105.19**	**47**	Pdiff	**Pdif**	**02 42 11.0**	**-1.0**
	baz=264						
N36A	**Muff Farm, Cla**	**105.22**	**51**	Pdiff	**Pdif**	**02 42 11.4**	**-0.9**
	baz=264						
BRLS	**Borolday**	**105.26**	**311**	*i* SKSac	**SKSac**	**02 52 37.8**	**+1.0**
541A	**Lake Charles**	**105.30**	**62**	Pdiff	**Pdif**	**02 42 13.1**	**+0.2**
	baz=262						
T38A	**Diamond**	**105.31**	**55**	Pdiff	**Pdif**	**02 42 12.1**	**-0.6**
	baz=263						
AGMN	**Agassiz Nation**	**105.31**	**43**	Pdiff	**Pdif**	**02 42 11.5**	**-1.0**
	baz=265						
AGMN	**Agassiz Nation**	**105.31**	**43**	*e*PKP	**PKiKP**	**02 46 25.0**	**-0.7**
C33A	**Trail**	**105.33**	**44**	Pdiff	**Pdif**	**02 42 11.5**	**-1.1**
	baz=265						
140A	**Cam and Jess,**	**105.33**	**60**	Pdiff	**Pdif**	**02 42 12.9**	**-0.1**
	baz=262						
Q37A	**Longview Farm,**	**105.40**	**53**	Pdiff	**Pdif**	**02 42 12.2**	**-0.9**
	baz=263						
441A	**DeRidder**	**105.40**	**62**	Pdiff	**Pdif**	**02 42 13.8**	**+0.5**
	baz=262						
M36A	**Felix, Anita**	**105.41**	**51**	Pdiff	**Pdif**	**02 42 12.3**	**-0.8**
	baz=264						
ULM	**Lac du Bonnet**	**105.46**	**41**	PKiKP	**PKiKP**	**02 46 25.6**	**-0.3**
	comp=Z,5.3nm,0.7s,baz=317,slow=3.0,SNR=4.7						
ULM				PKKPbc	**PKKPbc**	**02 57 51.3**	**-1.6**
	comp=Z,4.9nm,0.6s,baz=45,slow=2.9,SNR=5.3						
ULM				PKPPKP	**P’P’df**	**03 06 13.3**	**+0.1**
	comp=Z,2.6nm,0.6s,baz=345,slow=0.8,SNR=5.5						
W39A	**Magazine**	**105.49**	**57**	Pdiff	**Pdif**	**02 42 13.2**	**-0.4**
	baz=263						
341A	**Kurthwood**	**105.50**	**61**	Pdiff	**Pdif**	**02 42 14.1**	**+0.4**
	baz=262						
F34A	**Alexandria**	**105.50**	**46**	Pdiff	**Pdif**	**02 42 12.1**	**-1.3**
	baz=265						
P37A	**Lathrop**	**105.56**	**53**	Pdiff	**Pdif**	**02 42 13.2**	**-0.6**
	baz=264						
Z40A	**Long Farm, Mag**	**105.56**	**59**	Pdiff	**Pdif**	**02 42 14.0**	**0.0**
	baz=262						
L36A	**Harm Buss Farm**	**105.58**	**50**	Pdiff	**Pdif**	**02 42 12.8**	**-1.1**
	baz=264						
MIAR	**Mount Ida**	**105.58**	**58**	Pdiff	**Pdif**	**02 42 13.7**	**-0.3**
	baz=263						
E34A	**Wadena**	**105.63**	**45**	Pdiff	**Pdif**	**02 42 12.1**	**-1.9**
	baz=265						
A33A	**Warroad**	**105.67**	**43**	Pdiff	**Pdif**	**02 42 13.3**	**-0.8**
	baz=266						
S38A	**Stockton**	**105.68**	**55**	Pdiff	**Pdif**	**02 42 13.5**	**-0.9**
	baz=263						
V39A	**Pettigrew**	**105.68**	**56**	Pdiff	**Pdif**	**02 42 13.9**	**-0.6**
	baz=263						
H35A	**Sunnyside Ranc**	**105.71**	**47**	Pdiff	**Pdif**	**02 42 13.7**	**-0.6**
	baz=265						
BVA0	**Borovoye Array**	**105.71**	**321**	*i* P	**Pdif**	**02 42 12.6**	**-1.6**
BVA0				pmax	pmax		
	comp=Z,37nm,1.3s						
BVAR	**Borovoye Array**	**105.71**	**321**	Pdiff	**Pdif**	**02 42 13.5**	**-0.6**
	comp=Z,11nm,0.9s,baz=103,slow=4.7,SNR=41						
BVAR				PKiKP	**PKiKP**	**02 46 26.5**	**+0.2**
	comp=Z,6.9nm,0.6s,baz=149,slow=1.4,SNR=15						
R38A	**Fenwick Farm,**	**105.75**	**54**	Pdiff	**Pdif**	**02 42 14.2**	**-0.5**
	baz=264						
Y40A	**Okolona**	**105.75**	**58**	Pdiff	**Pdif**	**02 42 14.2**	**-0.6**
	baz=263						
O37A	**Wolven Farm, M**	**105.77**	**52**	Pdiff	**Pdif**	**02 42 14.0**	**-0.8**
	baz=264						
BRVK	**Borovoye**	**105.78**	**322**	*e*Pdif	**Pdif**	**02 42 13.9**	**-0.5**
	comp=Z,74nm,1.2s						
BRVK				*e*PKP	**PKiKP**	**02 46 26.1**	**-0.2**
BRVK	**Borovoye**	**105.78**	**322**	*c i*P	**Pdif**	**02 42 13.9**	**-0.5**
N37A	**Lee Faris, Mou**	**105.78**	**51**	Pdiff	**Pdif**	**02 42 14.8**	**0.0**
	baz=264						
K36A	**Gilmore City**	**105.79**	**49**	Pdiff	**Pdif**	**02 42 13.6**	**-1.2**
	baz=264						
241A	**Mo Tay, Goldon**	**105.80**	**60**	Pdiff	**Pdif**	**02 42 15.0**	**-0.1**
	baz=262						
542A	**Morse**	**105.86**	**62**	Pdiff	**Pdif**	**02 42 15.9**	**+0.6**
	baz=262						
U39A	**Green Forest**	**105.88**	**56**	Pdiff	**Pdif**	**02 42 14.6**	**-0.8**
	baz=263						
141A	**Papa Simpson,**	**105.89**	**60**	Pdiff	**Pdif**	**02 42 15.7**	**+0.3**
	baz=262						
C34A	**RKJ Ranch, Bem**	**105.90**	**44**	Pdiff	**Pdif**	**02 42 14.2**	**-0.9**
	baz=266						
J36A	**Seneca 1, Swea**	**105.94**	**49**	Pdiff	**Pdif**	**02 42 14.3**	**-1.1**
	baz=265						
M37A	**Trindle Farm,**	**105.96**	**51**	Pdiff	**Pdif**	**02 42 15.3**	**-0.3**
	baz=264						
F35A	**Swanville**	**105.99**	**46**	Pdiff	**Pdif**	**02 42 14.8**	**-0.8**
	baz=265						
G35A	**Watkins**	**106.00**	**47**	Pdiff	**Pdif**	**02 42 14.3**	**-1.4**
	baz=265						
T39A	**Clever**	**106.03**	**55**	Pdiff	**Pdif**	**02 42 15.4**	**-0.6**
	baz=264						
442A	**Mamou**	**106.04**	**62**	Pdiff	**Pdif**	**02 42 17.1**	**+0.9**
	baz=262						
Q38A	**Cooks Store, C**	**106.05**	**53**	Pdiff	**Pdif**	**02 42 14.9**	**-1.1**
	baz=264						
Z41A	**Richland Creek**	**106.06**	**59**	Pdiff	**Pdif**	**02 42 15.4**	**-0.7**
	baz=263						
W40A	**Ferguson Farm,**	**106.07**	**57**	Pdiff	**Pdif**	**02 42 15.3**	**-0.8**
	baz=263						
RES	**Resolute Bay**	**106.10**	**16**	PKKPbc	PKKPbc	02 57 49.6	-2.1
	comp=Z,4.2nm,0.6s,baz=127,slow=4.1,SNR=14						
RES				PKKPab	**PKKPab**	**02 58 05.0**	**+0.3**
	comp=Z,7.4nm,0.8s,baz=92,slow=5.7,SNR=9.9						
RES	**Resolute Bay**	**106.10**	**16**	*e*PKP	**PKiKP**	**02 46 26.2**	**-0.2**
RES				PKKPbc	**PKKPbc**	**02 57 49.6**	**-2.1**
RES				PKKPab	**PKKPab**	**02 58 05.0**	**+0.3**
B34A	**Aery, Baudette**	**106.13**	**43**	Pdiff	**Pdif**	**02 42 15.5**	**-0.7**
	baz=266						
S39A	**Bolivar**	**106.15**	**55**	Pdiff	**Pdif**	**02 42 15.9**	**-0.6**
	baz=264						
E35A	**Pequot Lakes**	**106.16**	**45**	Pdiff	**Pdif**	**02 42 14.8**	**-1.5**
	baz=266						
X40A	**Basin Creek Fa**	**106.18**	**58**	Pdiff	**Pdif**	**02 42 15.5**	**-1.1**
	baz=263						
P38A	**Dawn**	**106.19**	**53**	Pdiff	**Pdif**	**02 42 15.2**	**-1.4**
	baz=264						
342A	**Flagon Creek P**	**106.22**	**61**	Pdiff	**Pdif**	**02 42 18.0**	**+1.1**
	baz=262						
I36A	**Fitzsimmons Fa**	**106.23**	**48**	Pdiff	**Pdif**	**02 42 15.4**	**-1.3**
	baz=265						
I36A				SKSac	**SKSac**	**02 52 40.2**	**-0.8**
	baz=265						
L37A	**Phoenix Point,**	**106.26**	**50**	Pdiff	**Pdif**	**02 42 16.8**	**0.0**
	baz=265						
O38A	**Galt**	**106.28**	**52**	Pdiff	**Pdif**	**02 42 16.2**	**-0.8**
	baz=264						
Y41A	**Eaglette Beard**	**106.29**	**59**	Pdiff	**Pdif**	**02 42 17.0**	**-0.2**
	baz=263						
H36A	**Jessenland, He**	**106.34**	**47**	Pdiff	**Pdif**	**02 42 16.3**	**-0.9**
	baz=265						
V40A	**Witts Springs**	**106.34**	**57**	Pdiff	**Pdif**	**02 42 17.0**	**-0.5**
	baz=264						
U40A	**Yellville**	**106.38**	**56**	Pdiff	**Pdif**	**02 42 16.5**	**-1.1**
	baz=264						
K37A	**Belmond**	**106.40**	**49**	Pdiff	**Pdif**	**02 42 16.7**	**-0.8**
	baz=265						
D35A	**Remer**	**106.44**	**45**	Pdiff	**Pdif**	**02 42 16.3**	**-1.2**
	baz=266						
R39A	**Chumby, Stover**	**106.44**	**54**	Pdiff	**Pdif**	**02 42 17.6**	**-0.2**
	baz=264						
X41A	**Kaden, Bauxite**	**106.44**	**58**	Pdiff	**Pdif**	**02 42 17.1**	**-0.7**
	baz=263						
543A	**St. Martinvill**	**106.45**	**63**	Pdiff	**Pdif**	**02 42 17.6**	**-0.4**
	baz=262						
242A	**Grayson**	**106.45**	**61**	Pdiff	**Pdif**	**02 42 18.1**	**+0.2**
	baz=263						
J37A	**Redenius Farm,**	**106.51**	**49**	Pdiff	**Pdif**	**02 42 17.0**	**-0.9**
	baz=265						
G36A	**St. Michael**	**106.52**	**47**	Pdiff	**Pdif**	**02 42 17.6**	**-0.3**
	baz=266						
N38A	**Joes South For**	**106.53**	**51**	Pdiff	**Pdif**	**02 42 16.9**	**-1.2**
	baz=265						
C35A	**Jirik Farms, M**	**106.53**	**44**	Pdiff	**Pdif**	**02 42 16.5**	**-1.4**
	baz=266						
Q39A	**Willow Grove F**	**106.56**	**53**	Pdiff	**Pdif**	**02 42 18.3**	**+0.1**
	baz=264						
443A	**Delano Plantat**	**106.60**	**62**	Pdiff	**Pdif**	**02 42 19.5**	**+0.9**
	baz=263						
M38A	**Pleasantville**	**106.61**	**51**	Pdiff	**Pdif**	**02 42 17.7**	**-0.7**
	baz=265						
SCIA	**State Center**	**106.64**	**50**	Pdiff	**Pdif**	**02 42 17.7**	**-0.9**
	baz=265						
I37A	**Lemond, Waseca**	**106.67**	**48**	Pdiff	**Pdif**	**02 42 18.0**	**-0.7**
	baz=266						
142A	**Monroe**	**106.69**	**60**	Pdiff	**Pdif**	**02 42 18.4**	**-0.5**
	baz=263						
F36A	**Milaca**	**106.72**	**46**	Pdiff	**Pdif**	**02 42 17.3**	**-1.6**
	baz=266						
T40A	**Mansfield**	**106.73**	**55**	Pdiff	**Pdif**	**02 42 18.6**	**-0.5**
	baz=264						
W41B	**Gary Mavity, V**	**106.74**	**57**	Pdiff	**Pdif**	**02 42 17.8**	**-1.3**
	baz=264						
B35A	**Bob, Littlefor**	**106.74**	**43**	Pdiff	**Pdif**	**02 42 17.3**	**-1.5**
	baz=267						
Z42A	**Norrel Spur, H**	**106.77**	**59**	Pdiff	**Pdif**	**02 42 19.0**	**-0.3**
	baz=263						
P39B	**Salisbury**	**106.77**	**53**	Pdiff	**Pdif**	**02 42 17.8**	**-1.4**
	baz=265						
S40A	**Lebanon**	**106.79**	**55**	Pdiff	**Pdif**	**02 42 18.8**	**-0.6**
	baz=264						
343A	**Vidalia**	**106.81**	**61**	Pdiff	**Pdif**	**02 42 20.7**	**+1.2**
	baz=263						
L38A	**Oak Wood Farm,**	**106.85**	**50**	Pdiff	**Pdif**	**02 42 19.6**	**+0.1**
	baz=265						
FCC	**Fort Churchill**	**106.86**	**33**	*e*PKP	**PKiKP**	**02 46 27.7**	**-0.5**
V41A	**Mountainview**	**106.88**	**57**	Pdiff	**Pdif**	**02 42 18.6**	**-1.2**
	baz=264						
E36A	**McGregor**	**106.95**	**45**	Pdiff	**Pdif**	**02 42 18.8**	**-1.0**
	baz=266						
Y42A	**Garnett, Star**	**106.97**	**59**	Pdiff	**Pdif**	**02 42 20.5**	**+0.3**
	baz=264						
243A	**Waterproof**	**106.99**	**61**	Pdiff	**Pdif**	**02 42 21.2**	**+0.9**
	baz=263						
O39A	**Kirksville**	**107.00**	**52**	Pdiff	**Pdif**	**02 42 20.1**	**-0.1**
	baz=265						
K38A	**Parkersburg**	**107.03**	**49**	Pdiff	**Pdif**	**02 42 19.3**	**-0.9**
	baz=266						
R40A	**Maddies Statio**	**107.04**	**54**	Pdiff	**Pdif**	**02 42 19.4**	**-1.1**
	baz=265						
D36A	**Goodland**	**107.05**	**45**	Pdiff	**Pdif**	**02 42 19.3**	**-1.0**
	baz=267						
544A	**White Castle**	**107.05**	**63**	Pdiff	**Pdif**	**02 42 21.0**	**+0.4**
	baz=263						
H37A	**Dierke Farm, C**	**107.06**	**47**	Pdiff	**Pdif**	**02 42 19.1**	**-1.2**
	baz=266						
N39A	**Derby Farms, D**	**107.09**	**51**	Pdiff	**Pdif**	**02 42 19.9**	**-0.7**
	baz=265						
U41A	**Viola**	**107.12**	**56**	Pdiff	**Pdif**	**02 42 20.3**	**-0.5**
	baz=264						
143A	**Socs Landing,**	**107.16**	**60**	Pdiff	**Pdif**	**02 42 21.4**	**+0.3**
	baz=263						
X42A	**Stuttgart**	**107.18**	**58**	Pdiff	**Pdif**	**02 42 21.4**	**+0.3**
	baz=264						
SPMN	**Marine on St.**	**107.18**	**47**	Pdiff	**Pdif**	**02 42 20.5**	**-0.4**
	baz=266						
Q40A	**Laux Farm, Aux**	**107.25**	**53**	Pdiff	**Pdif**	**02 42 20.3**	**-1.0**
	baz=265						
J38A	**Wedel Dairy, R**	**107.29**	**49**	Pdiff	**Pdif**	**02 42 20.4**	**-1.0**
	baz=266						
C36A	**Pine Crest Far**	**107.30**	**44**	Pdiff	**Pdif**	**02 42 20.3**	**-1.1**
	baz=267						
T41A	**Mountain View**	**107.32**	**55**	Pdiff	**Pdif**	**02 42 20.3**	**-1.4**
	baz=264						
P40A	**Paris**	**107.32**	**53**	Pdiff	**Pdif**	**02 42 20.9**	**-0.8**
	baz=265						
F37A	**Hinrichs Farm,**	**107.34**	**46**	Pdiff	**Pdif**	**02 42 21.2**	**-0.4**
	baz=267						
W42A	**Bald Knob**	**107.34**	**57**	Pdiff	**Pdif**	**02 42 21.4**	**-0.4**
	baz=264						
Z43A	**Armstrong Fami**	**107.35**	**59**	Pdiff	**Pdif**	**02 42 22.3**	**+0.4**
	baz=264						
M39A	**Webster**	**107.38**	**51**	Pdiff	**Pdif**	**02 42 21.0**	**-0.9**
	baz=266						
S41A	**Jillco Farms,**	**107.38**	**55**	Pdiff	**Pdif**	**02 42 21.2**	**-0.7**
	baz=265						
I38A	**Scanlan Farm,**	**107.44**	**48**	Pdiff	**Pdif**	**02 42 21.8**	**-0.3**
	baz=266						
645A	**Chauvin**	**107.45**	**63**	Pdiff	**Pdif**	**02 42 23.6**	**+1.1**
	baz=263						
444A	**Pine Grove**	**107.48**	**62**	Pdiff	**Pdif**	**02 42 23.2**	**+0.7**
	baz=263						
V42A	**Cord**	**107.50**	**57**	Pdiff	**Pdif**	**02 42 22.8**	**+0.3**
	baz=264						
O40A	**La Belle**	**107.50**	**52**	Pdiff	**Pdif**	**02 42 21.6**	**-0.8**
	baz=265						
H38A	**Maiden Rock**	**107.52**	**47**	Pdiff	**Pdif**	**02 42 22.2**	**-0.2**
	baz=267						
E37A	**Wrenshall**	**107.54**	**45**	Pdiff	**Pdif**	**02 42 21.4**	**-1.0**
	baz=267						
D37A	**Cotton**	**107.55**	**45**	Pdiff	**Pdif**	**02 42 22.3**	**-0.2**
	baz=267						
L39A	**Vinton**	**107.56**	**50**	Pdiff	**Pdif**	**02 42 21.7**	**-0.9**
	baz=266						
344A	**Westbrook Farm**	**107.58**	**61**	Pdiff	**Pdif**	**02 42 24.6**	**+1.7**
	baz=263						
545A	**Edgard**	**107.62**	**63**	Pdiff	**Pdif**	**02 42 25.3**	**+2.1**
	baz=263						
U42A	**Revenden**	**107.67**	**56**	Pdiff	**Pdif**	**02 42 23.0**	**-0.2**
	baz=265						
K39A	**Oelwein**	**107.68**	**49**	Pdiff	**Pdif**	**02 42 22.4**	**-0.8**
	baz=266						
Y43A	**Makayla and Ka**	**107.69**	**59**	Pdiff	**Pdif**	**02 42 24.4**	**+1.1**
	baz=264						
244A	**Avery, Jackson**	**107.69**	**61**	Pdiff	**Pdif**	**02 42 24.0**	**+0.6**
	baz=264						
R41A	**Rosebud**	**107.73**	**54**	Pdiff	**Pdif**	**02 42 23.7**	**+0.2**
	baz=265						

C37A	Embarrass	107.74	44	Pdiff	Pdif	02 42 22.1	-1.3
	baz=268						
N40A	Mertquake, Sal	107.78	51	Pdiff	Pdif	02 42 23.9	+0.3
	baz=266						
X43A	Marvell	107.79	58	Pdiff	Pdif	02 42 24.5	+0.7
	baz=264						
CCM	Cathedral Cave	107.82	54	Pdiff	Pdif	02 42 24.3	+0.4
	baz=265						
445A	Amite	107.83	62	Pdiff	Pdif	02 42 24.1	0.0
	baz=263						
VBMS	Vicksburg	107.85	61	Pdiff	Pdif	02 42 25.4	+1.3
	baz=264						
G38A	Ridgeland	107.85	47	Pdiff	Pdif	02 42 23.7	-0.2
	baz=267						
J39A	Decorah	107.85	49	Pdiff	Pdif	02 42 23.8	-0.1
	baz=266						
T42A	Van Buren	107.85	55	Pdiff	Pdif	02 42 23.5	-0.5
	baz=265						
F38A	Pierce - Schro	107.87	46	Pdiff	Pdif	02 42 24.5	+0.6
	baz=267						
M40A	Post Highland	107.87	51	Pdiff	Pdif	02 42 23.7	-0.3
	baz=266						
Q41A	Truxton	107.90	53	Pdiff	Pdif	02 42 24.7	+0.5
	baz=265						
144A	Alexander Plac	107.97	60	Pdiff	Pdif	02 42 25.0	+0.3
	baz=264						
W43A	Forest City	107.98	58	Pdiff	Pdif	02 42 24.7	0.0
	baz=264						
I39A	Houston	108.02	48	Pdiff	Pdif	02 42 24.0	-0.7
	baz=267						
Z44A	Pea Ridge, Bel	108.03	59	Pdiff	Pdif	02 42 23.7	-1.2
	baz=264						
P41A	Barry, Barry	108.09	53	Pdiff	Pdif	02 42 25.1	0.0
	baz=266						
E38A	The Farm, Brul	108.12	45	Pdiff	Pdif	02 42 23.2	-1.8
	baz=268						
L40A	Anamosa	108.13	50	Pdiff	Pdif	02 42 24.3	-0.9
	baz=266						
646A	Port Sulphur	108.14	63	Pdiff	Pdif	02 42 25.5	+0.1
	baz=263						
S42A	Caledonia	108.15	55	Pdiff	Pdif	02 42 25.0	-0.4
	baz=265						
345A	Thompson Farm,	108.16	62	Pdiff	Pdif	02 42 26.1	+0.6
	baz=264						
V43A	Jonesboro	108.18	57	Pdiff	Pdif	02 42 25.6	+0.1
	baz=265						
R42A	Luebbering	108.19	54	Pdiff	Pdif	02 42 23.9	-1.7
	baz=265						
EYMN	Ely	108.21	44	Pdiff	Pdif	02 42 23.6	-1.8
	baz=268						
H39A	Augusta	108.23	47	Pdiff	Pdif	02 42 25.1	-0.5
	baz=267						
K40A	Colesburg	108.23	50	Pdiff	Pdif	02 42 24.5	-1.1
	baz=267						
O41A	Passleys Farm,	108.26	52	Pdiff	Pdif	02 42 25.2	-0.6
	baz=266						
Y44A	Strider, Charl	108.28	59	Pdiff	Pdif	02 42 25.6	-0.5
	baz=264						
N41A	Harden Midland	108.32	52	Pdiff	Pdif	02 42 25.4	-0.7
	baz=266						
G39A	Holcombe	108.34	47	Pdiff	Pdif	02 42 25.4	-0.6
	baz=268						
U43A	Rector	108.34	56	Pdiff	Pdif	02 42 25.7	-0.6
	baz=265						
245A	Little AP, Sta	108.35	61	Pdiff	Pdif	02 42 26.5	+0.1
	baz=264						
C38A	Sawbill Land.	108.35	44	Pdiff	Pdif	02 42 24.9	-1.2
	baz=268						
145A	Houston Renfro	108.38	60	Pdiff	Pdif	02 42 27.4	+0.9
	baz=264						
X44A	Crenshaw	108.39	58	Pdiff	Pdif	02 42 26.6	+0.1
	baz=265						
Q42A	Golden Eagle	108.44	54	Pdiff	Pdif	02 42 27.0	+0.3
	baz=266						
T43A	Greenville	108.50	55	Pdiff	Pdif	02 42 26.9	0.0
	baz=265						
F39A	Loretta	108.54	46	Pdiff	Pdif	02 42 26.3	-0.6
	baz=268						
J40A	Soldiers Grove	108.56	49	Pdiff	Pdif	02 42 25.7	-1.4
	baz=267						
M41A	Milan	108.60	51	Pdiff	Pdif	02 42 25.9	-1.4
	baz=267						
P42A	Winchester	108.64	53	Pdiff	Pdif	02 42 27.1	-0.4
	baz=266						
346A	Big Creek Wild	108.65	61	Pdiff	Pdif	02 42 28.4	+0.7
	baz=264						
Z45A	Winona	108.66	59	Pdiff	Pdif	02 42 27.8	+0.1
	baz=264						
L41A	Preston	108.67	50	Pdiff	Pdif	02 42 27.3	-0.3
	baz=267						
446A	Poplarville	108.67	62	Pdiff	Pdif	02 42 27.1	-0.7
	baz=264						
I40A	Norwalk	108.67	48	Pdiff	Pdif	02 42 25.7	-1.8
	baz=267						
S43A	Fulton Ridge,	108.70	55	Pdiff	Pdif	02 42 26.9	-0.9
	baz=266						
V44A	Blytheville	108.71	57	Pdiff	Pdif	02 42 26.4	-1.5
	baz=265						
W44A	Shelby Farms P	108.72	58	Pdiff	Pdif	02 42 27.6	-0.3
	baz=265						
E39A	Mellen	108.81	46	Pdiff	Pdif	02 42 26.0	-2.1
	baz=268						
Y45A	Yeager Farm, C	108.83	59	Pdiff	Pdif	02 42 28.4	-0.1
	baz=265						
K41A	Shullsburg	108.84	50	Pdiff	Pdif	02 42 28.0	-0.3
	baz=267						
H40A	Chili	108.86	48	Pdiff	Pdif	02 42 27.6	-0.8
	baz=268						
R43A	Red Bud	108.87	54	Pdiff	Pdif	02 42 28.3	-0.2
	baz=266						
O42A	Bath	108.88	52	Pdiff	Pdif	02 42 28.5	-0.1
	baz=266						
JFWS	Jewell Farm	108.90	49	Pdiff	Pdif	02 42 28.1	-0.5
	baz=267						
JFWS	Jewell Farm	108.90	49	*e*PKP	PKiKP	02 46 31.6	-0.9
U44A	Portageville	108.93	56	Pdiff	Pdif	02 42 28.4	-0.4
	baz=266						
N42A	Yates City	108.95	52	Pdiff	Pdif	02 42 28.5	-0.4
	baz=267						
OXF	Oxford	109.00	58	Pdiff	Pdif	02 42 28.8	-0.4
	baz=265						
246A	Jackson Lee, B	109.00	61	Pdiff	Pdif	02 42 28.7	-0.6
	baz=264						
X45A	UM Field Stati	109.00	58	Pdiff	Pdif	02 42 29.7	+0.4
	baz=265						
G40A	Rib Lake	109.02	47	Pdiff	Pdif	02 42 28.3	-0.8
	baz=268						
T44A	Benton	109.06	55	Pdiff	Pdif	02 42 27.8	-1.6
	baz=266						
J41A	Loganville	109.09	49	Pdiff	Pdif	02 42 27.6	-1.8
	baz=268						
F40A	Park Falls	109.09	46	Pdiff	Pdif	02 42 28.3	-1.1
	baz=268						
Q43A	New Douglas	109.09	54	Pdiff	Pdif	02 42 28.7	-0.8
	baz=266						
146A	Union	109.12	60	Pdiff	Pdif	02 42 29.6	-0.2
	baz=264						
C39A	Grand Marais	109.13	44	Pdiff	Pdif	02 42 27.7	-1.8
	baz=269						
M42A	Sheffield	109.19	51	Pdiff	Pdif	02 42 28.4	-1.5
	baz=267						
U44B	Burton Farm, H	109.19	56	Pdiff	Pdif	02 42 29.8	-0.3
	baz=266						
I41A	Arkdale	109.22	48	Pdiff	Pdif	02 42 27.0	-2.9
	baz=268						
W45A	Hickory Valley	109.23	58	Pdiff	Pdif	02 42 28.4	-1.8
	baz=265						
E40A	Wakefield	109.26	46	Pdiff	Pdif	02 42 28.5	-1.6
	baz=269						
Z46A	Louisville	109.27	60	Pdiff	Pdif	02 42 29.3	-1.2
	baz=265						
P43A	Skaggs, Pawnee	109.28	53	Pdiff	Pdif	02 42 29.3	-1.0
	baz=267						
447A	Lucedale	109.28	62	Pdiff	Pdif	02 42 31.1	+0.6
	baz=264						
L42A	Oliver, Polo	109.28	50	Pdiff	Pdif	02 42 26.7	-3.6
	baz=267						
S44A	Carbondale	109.36	55	Pdiff	Pdif	02 42 29.6	-1.2
	baz=266						
H41A	Junction City	109.39	48	Pdiff	Pdif	02 42 29.6	-1.1
	baz=268						
Y46A	Houston	109.40	59	Pdiff	Pdif	02 42 30.5	-0.5
	baz=265						
347A	Saraland	109.44	62	Pdiff	Pdif	02 42 31.5	+0.3
	baz=264						
247A	Quitman	109.44	61	Pdiff	Pdif	02 42 33.0	+1.7
	baz=264						
V45A	Humboldt	109.46	57	Pdiff	Pdif	02 42 30.3	-0.9
	baz=266						
O43A	Sugar Creek Fa	109.47	52	Pdiff	Pdif	02 42 29.8	-1.4
	baz=267						
HDIL	Hopedale	109.50	52	Pdiff	Pdif	02 42 28.9	-2.4
	baz=267						
R44A	Waltonville	109.54	54	Pdiff	Pdif	02 42 31.3	-0.3
	baz=266						
K42A	Prairie Point,	109.55	49	Pdiff	Pdif	02 42 29.2	-2.3
	baz=268						
N43A	Stutzman Famil	109.61	51	Pdiff	Pdif	02 42 30.5	-1.3
	baz=267						
Q44A	Meyer Farm, Va	109.62	54	Pdiff	Pdif	02 42 31.5	-0.4
	baz=267						
U45A	Rockin P Farm,	109.67	56	Pdiff	Pdif	02 42 31.9	-0.2
	baz=266						
X46A	Booneville	109.68	58	Pdiff	Pdif	02 42 31.2	-1.0
	baz=265						
J42A	Columbus	109.73	49	Pdiff	Pdif	02 42 31.0	-1.3
	baz=268						
G41A	Antigo	109.74	47	Pdiff	Pdif	02 42 31.7	-0.6
	baz=269						
147A	Livingston	109.78	60	Pdiff	Pdif	02 42 33.3	+0.5
	baz=265						
COWI	Conover	109.78	46	*e*PKP	PKiKP	02 46 32.7	-1.4
C40A	Isle Royale Na	109.79	44	Pdiff	Pdif	02 42 32.6	+0.2
	baz=270						
M43A	Waltham Townsh	109.79	51	Pdiff	Pdif	02 42 31.8	-0.7
	baz=268						
F41A	Three Lakes	109.80	46	Pdiff	Pdif	02 42 31.5	-1.1
	baz=269						
T45A	Paducah	109.81	56	Pdiff	Pdif	02 42 32.2	-0.5
	baz=266						
W46A	Michie	109.89	58	Pdiff	Pdif	02 42 31.6	-1.5
	baz=266						
S45A	Carrier Mills	109.90	55	Pdiff	Pdif	02 42 33.5	+0.4
	baz=267						
I42A	Draeger Farm,	109.90	48	Pdiff	Pdif	02 42 32.4	-0.6
	baz=269						
E41A	Kenton	109.91	46	Pdiff	Pdif	02 42 32.8	-0.2
	baz=270						
P44A	Sand Creek, Wi	109.96	53	Pdiff	Pdif	02 42 31.4	-2.0
	baz=267						
448A	Bay Minette	109.97	62	Pdiff	Pdif	02 42 35.1	+1.5
	baz=264						
L43A	Garden Prairie	109.98	50	Pdiff	Pdif	02 42 32.6	-0.8
	baz=268						
348A	Jackson	109.98	62	Pdiff	Pdif	02 42 31.4	-2.2
	baz=265						
Z47A	Carrollton	110.00	60	Pdiff	Pdif	02 42 31.8	-1.8
	baz=265						
O44A	Mansfield	110.11	52	Pdiff	Pdif	02 42 33.5	-0.5
	baz=268						
U46A	Springville	110.14	56	Pdiff	Pdif	02 42 33.9	-0.3
	baz=266						
V46A	Holladay	110.15	57	Pdiff	Pdif	02 42 34.7	+0.4
	baz=266						
R45A	Skylar, Fairfi	110.17	54	Pdiff	Pdif	02 42 34.0	-0.3
	baz=267						
248A	Dixon Mills	110.18	61	Pdiff	Pdif	02 42 34.8	+0.2
	baz=265						
D41A	Chassel	110.18	45	Pdiff	Pdif	02 42 31.5	-2.7
	baz=270						
H42A	Shiocton	110.19	48	Pdiff	Pdif	02 42 33.3	-0.9
	baz=269						
Y47A	UCPARC, Winfie	110.23	59	Pdiff	Pdif	02 42 33.8	-1.0
	baz=266						
J43A	Natural Harves	110.25	49	Pdiff	Pdif	02 42 33.8	-0.8
	baz=269						
G42A	Mountain	110.27	47	Pdiff	Pdif	02 42 33.8	-0.8
	baz=269						
X47A	Russelville	110.27	58	Pdiff	Pdif	02 42 34.2	-0.7
	baz=266						
Q45A	Warren Harvey,	110.29	54	Pdiff	Pdif	02 42 33.1	-1.7
	baz=267						
K43A	Burlington	110.30	50	Pdiff	Pdif	02 42 32.8	-2.0
	baz=269						
148A	Greensboro	110.37	60	Pdiff	Pdif	02 42 34.0	-1.3
	baz=265						
N44A	Piper City	110.39	52	Pdiff	Pdif	02 42 33.7	-1.6
	baz=268						
WVT	Waverly	110.40	57	Pdiff	Pdif	02 42 35.6	+0.1
	baz=266						
T46A	Princeton	110.41	56	Pdiff	Pdif	02 42 33.3	-2.1
	baz=267						
Z48A	Northport	110.44	60	Pdiff	Pdif	02 42 35.6	0.0
	baz=266						
I43A	Langenfeld Bro	110.46	48	Pdiff	Pdif	02 42 32.7	-2.8
	baz=269						
M44A	Midewin, Midew	110.48	51	Pdiff	Pdif	02 42 33.9	-1.8
	baz=268						
F42A	Maple Grove Fa	110.48	46	Pdiff	Pdif	02 42 36.5	+0.9
	baz=270						
449A	Pace	110.51	62	Pdiff	Pdif	02 42 35.7	-0.3
	baz=265						
W47A	Westpoint	110.54	58	Pdiff	Pdif	02 42 35.1	-1.0
	baz=266						
349A	Repton	110.58	62	Pdiff	Pdif	02 42 35.9	-0.4
	baz=265						
S46A	Don Dixon Farm	110.58	55	Pdiff	Pdif	02 42 35.2	-1.0
	baz=267						
L44A	Lake County Fo	110.60	50	Pdiff	Pdif	02 42 35.2	-0.9
	baz=269						
E42A	Champion	110.63	46	Pdiff	Pdif	02 42 36.4	+0.1
	baz=270						
V47A	Nunnelly	110.64	57	Pdiff	Pdif	02 42 36.4	-0.1
	baz=266						
P45A	Graceland, Par	110.64	53	Pdiff	Pdif	02 42 37.1	+0.7
	baz=268						
O45A	Potomac	110.68	52	Pdiff	Pdif	02 42 36.5	-0.1
	baz=268						
BRAL	Brewton	110.69	62	Pdiff	Pdif	02 42 38.7	+1.9
	baz=265						
249A	Camden	110.69	61	Pdiff	Pdif	02 42 37.6	+0.8
	baz=265						
H43A	Windswept, Lux	110.73	48	Pdiff	Pdif	02 42 35.5	-1.2
	baz=270						
R46A	Gibon Southern	110.77	54	Pdiff	Pdif	02 42 36.3	-0.7
	baz=267						
G43A	Wallace	110.80	47	Pdiff	Pdif	02 42 36.3	-0.6
	baz=270						
Y48A	Jasper	110.80	59	Pdiff	Pdif	02 42 37.0	-0.2
	baz=266						
U47A	Clarksville	110.86	56	Pdiff	Pdif	02 42 35.7	-1.8
	baz=267						
N45A	Kentland	110.86	52	Pdiff	Pdif	02 42 37.2	-0.2
	baz=268						
LRAL	Lakeview Retre	110.88	60	Pdiff	Pdif	02 42 36.8	-0.8
	baz=266						
Q46A	CEJHS Indians,	110.92	54	Pdiff	Pdif	02 42 34.7	-3.0
	baz=268						
X48A	Hartselle	110.94	58	Pdiff	Pdif	02 42 37.7	-0.2
	baz=266						
149A	Jones	111.02	60	Pdiff	Pdif	02 42 36.7	-1.5
	baz=266						
T47A	Sharon Grove	111.03	56	Pdiff	Pdif	02 42 38.6	+0.4
	baz=267						
450A	Crestview	111.05	62	Pdiff	Pdif	02 42 38.6	+0.2
	baz=265						
P46A	Rosedale	111.06	53	Pdiff	Pdif	02 42 37.5	-0.7
	baz=268						
M45A	Boilermakers S	111.07	51	Pdiff	Pdif	02 42 39.1	+0.8
	baz=269						
W48A	Pulaski	111.07	58	Pdiff	Pdif	02 42 38.3	-0.1
	baz=267						
F43A	Flat Rock, Esc	111.16	46	Pdiff	Pdif	02 42 37.0	-1.5
	baz=271						
SFIN	Lafayette	111.17	52	Pdiff	Pdif	02 42 38.5	-0.2
	baz=268						
V48A	Smith Brothers	111.20	57	Pdiff	Pdif	02 42 38.2	-0.8
	baz=267						
E43A	Lone Tree Farm	111.27	46	Pdiff	Pdif	02 42 38.3	-0.7
	baz=271						
Z49A	Columbiana	111.28	60	Pdiff	Pdif	02 42 38.0	-1.4
	baz=266						
350A	Dozier	111.32	62	Pdiff	Pdif	02 42 40.2	+0.7
	baz=265						
250A	Grady	111.42	61	Pdiff	Pdif	02 42 39.4	-0.6
	baz=266						
Y49A	Blount Mountai	111.42	59	Pdiff	Pdif	02 42 39.6	-0.4
	baz=266						
N46A	Monticello	111.45	52	Pdiff	Pdif	02 42 38.9	-1.1
	baz=269						
U48A	Cassie Pea, Po	111.46	56	Pdiff	Pdif	02 42 39.1	-1.1
	baz=267						
X49A	Woodville	111.53	58	Pdiff	Pdif	02 42 40.1	-0.4
	baz=267						
R47A	Wooly Knot Far	111.55	54	Pdiff	Pdif	02 42 39.9	-0.6
	baz=268						
W49A	Belvidere	111.62	58	Pdiff	Pdif	02 42 41.3	+0.4
	baz=267						
Q47A	Bedord North L	111.64	54	Pdiff	Pdif	02 42 40.5	-0.4
	baz=268						
150A	Eclectic	111.67	60	Pdiff	Pdif	02 42 42.0	+0.9
	baz=266						
F44A	Big Bay de Noc	111.67	46	Pdiff	Pdif	02 42 41.0	+0.2
	baz=271						
WCI	Wyandotte Cave	111.73	54	Pdiff	Pdif	02 42 41.3	0.0
	baz=268						
WCI	Wyandotte Cave	111.73	54	*e*PKP	PKiKP	02 46 37.0	-1.0
WCI	Wyandotte Cave	111.73	54	*e*PKIKP	PKiKP	02 46 37.0	-1.0
M46A	Old House Fiel	111.75	51	Pdiff	Pdif	02 42 41.4	+0.1
	baz=269						
451A	Vernon	111.76	63	Pdiff	Pdif	02 42 41.4	-0.2
	baz=265						
P47A	Martinsville	111.78	53	Pdiff	Pdif	02 42 41.0	-0.5
	baz=269						
Z50A	Ashland	111.79	60	Pdiff	Pdif	02 42 42.1	+0.4
	baz=266						
O47A	Sheridan	111.87	52	Pdiff	Pdif	02 42 42.0	+0.2
	baz=269						
S48A	Wiedeman Farm,	111.90	55	Pdiff	Pdif	02 42 41.8	-0.2
	baz=268						
351A	Pinckard	111.93	62	Pdiff	Pdif	02 42 43.0	+0.7
	baz=266						
V49A	McMinnville	111.94	57	Pdiff	Pdif	02 42 40.6	-1.7
	baz=267						
Y50A	Piedmont	111.99	59	Pdiff	Pdif	02 42 43.1	+0.6
	baz=267						
E44A	Grand Marais A	112.01	45	Pdiff	Pdif	02 42 42.3	0.0
	baz=272						
R48A	Northridge Ran	112.06	54	Pdiff	Pdif	02 42 42.4	-0.4
	baz=268						
U49A	Red Boiling Sp	112.08	56	Pdiff	Pdif	02 42 42.6	-0.2
	baz=268						
X50B	Fort Payne	112.09	58	Pdiff	Pdif	02 42 43.3	+0.3
	baz=267						
552A	Lynn Haven	112.11	63	Pdiff	Pdif	02 42 43.7	+0.6
	baz=265						
251A	Midway	112.15	61	Pdiff	Pdif	02 42 43.8	+0.5
	baz=266						
151A	Opelika	112.25	61	Pdiff	Pdif	02 42 44.0	+0.3
	baz=266						
452A	Marianna	112.26	62	Pdiff	Pdif	02 42 43.8	0.0
	baz=266						
AB31	Akbulak array	112.28	317	*i* P	Pdif	02 42 43.3	-0.2
AB31				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ABKAR	Akbulak array	112.28	317	*e*Pdif	Pdif	02 42 44.9	+1.5
T49A	Edmonton	112.30	56	Pdiff	Pdif	02 42 43.9	+0.1
	baz=268						
F45A	CMU Biological	112.32	46	Pdiff	Pdif	02 42 42.9	-0.8
	baz=272						
W50A	Signal Mountai	112.40	58	Pdiff	Pdif	02 42 44.1	-0.3
	baz=268						
Z51A	Franklin	112.42	60	Pdiff	Pdif	02 42 44.8	+0.3
	baz=267						
ARU	Arti	112.45	325	PKiKP	PKiKP	02 46 38.3	-0.4
	comp=Z,24nm,0.5s,baz=61,slow=0.6,SNR=35						
ARU	Arti	112.45	325	*e*PKP	PKiKP	02 46 38.8	0.0
ARU	Arti	112.45	325	*i* PKIKP	PKiKP	02 46 38.5	-0.3
ARU						02 47 27.8	
ARU				PPP	PPP	02 49 51.1	
ARU						02 53 06.3	
ARU				SP	SP	02 56 41.7	-1.9
352A	Blakely	112.52	62	Pdiff	Pdif	02 42 45.4	+0.5
	baz=266						
E45A	Wooded Hills,	112.53	46	Pdiff	Pdif	02 42 45.2	+0.6
	baz=272						
Y51A	Rockmart	112.55	59	Pdiff	Pdif	02 42 45.2	+0.2
	baz=267						
V50A	Pikevile	112.59	57	Pdiff	Pdif	02 42 45.8	+0.6
	baz=268						
252A	Lumpkin	112.72	61	Pdiff	Pdif	02 42 46.4	+0.6
	baz=266						
X51A	Calhoun	112.75	58	Pdiff	Pdif	02 42 45.4	-0.5
	baz=268						
152A	Waverly Hall	112.77	60	Pdiff	Pdif	02 42 45.9	-0.2
	baz=267						
F46A	Macinaw City C	112.84	46	Pdiff	Pdif	02 42 46.5	+0.4
	baz=272						
T50A	Nancy	112.85	56	Pdiff	Pdif	02 42 46.2	-0.1
	baz=268						
553A	Crawfordville	112.86	63	Pdiff	Pdif	02 42 47.8	+1.3
	baz=266						
453A	Whigham	113.00	62	Pdiff	Pdif	02 42 48.7	+1.6
	baz=266						
Z52A	Williamson	113.05	60	Pdiff	Pdif	02 42 47.9	+0.6
	baz=267						
353A	Camilla	113.12	62	Pdiff	Pdif	02 42 47.6	0.0
	baz=266						
V51A	Loudon	113.21	57	Pdiff	Pdif	02 42 47.8	-0.1
	baz=268						
253A	Americus	113.23	61	Pdiff	Pdif	02 42 47.8	-0.3
	baz=267						
Y52A	Lilburn	113.38	59	Pdiff	Pdif	02 42 48.8	0.0
	baz=268						
AKTO	Aktyubinsk	113.44	319	PKiKP	PKiKP	02 46 40.6	-0.3
	comp=Z,20nm,0.6s,baz=92,slow=4.0,SNR=80						
AKTO				PKKPab	PKKPab	02 57 32.4	-0.3
	comp=Z,1.8nm,0.9s,baz=279,slow=1.9,SNR=5.0						
OTAV	Otavalo	113.48	96	*e*PKP	PKiKP	02 46 42.1	-0.5
554A	Perry	113.50	63	Pdiff	Pdif	02 42 49.8	+0.5
	baz=266						
153A	Fort Valley	113.52	61	Pdiff	Pdif	02 42 49.2	-0.1
	baz=267						
W52A	Murphy	113.53	58	Pdiff	Pdif	02 42 48.8	-0.6
	baz=268						
X52A	Dahlonega	113.54	58	Pdiff	Pdif	02 42 49.1	-0.4
	baz=268						
454A	Quitman	113.58	63	Pdiff	Pdif	02 42 50.4	+0.8
	baz=266						
TIGA	Tifton	113.66	62	Pdiff	Pdif	02 42 50.4	+0.4
	baz=267						
TKL	Tuckaleechee C	113.67	57	PKiKP	PKiKP	02 46 41.5	-0.3
	comp=Z,12nm,1.0s,baz=176,slow=4.3,SNR=10						
P50A	Jamestown	113.69	53	Pdiff	Pdif	02 42 50.4	+0.5
	baz=270						
AAM	Ann Arbor	113.75	50	Pdiff	Pdif	02 42 50.1	0.0
	baz=272						
AAM	Ann Arbor	113.75	50	*e*PKP	PKiKP	02 46 42.1	+0.4
Z53A	Monticello	113.76	60	Pdiff	Pdif	02 42 50.1	-0.3
	baz=268						
Y53A	Monroe	113.78	59	Pdiff	Pdif	02 42 49.5	-1.0
	baz=268						
V52A	Sevierville	113.82	57	Pdiff	Pdif	02 42 50.3	-0.4
	baz=269						
O50A	Cable	113.83	52	Pdiff	Pdif	02 42 50.7	+0.1
	baz=271						
655A	Horseshoe Beac	113.83	64	Pdiff	Pdif	02 42 50.0	-0.7
	baz=266						
S51A	Beattyville	113.85	55	Pdiff	Pdif	02 42 51.4	+0.7
	baz=270						
GOGA	Godfrey	113.86	60	Pdiff	Pdif	02 42 52.3	+1.4
	baz=268						
GOGA	Godfrey	113.86	60	*e*PKP	PKiKP	02 46 41.7	-0.5
GOGA	Godfrey	113.86	60	*e*PKIKP	PKiKP	02 46 41.7	-0.5
TZTN	Tazewell	113.87	56	Pdiff	Pdif	02 42 51.2	+0.3
	baz=269						
GEYT	Alibeck	113.92	305	PKiKP	PKiKP	02 46 42.7	+0.4
	comp=Z,7.8nm,0.7s,baz=88,slow=5.2,SNR=15						
254A	Abbeville	113.94	61	Pdiff	Pdif	02 42 51.5	+0.3
	baz=267						
X53A	Estanollee	114.03	59	Pdiff	Pdif	02 42 52.4	+0.8
	baz=268						
455A	Stateville	114.10	63	Pdiff	Pdif	02 42 53.6	+1.6
	baz=267						
555A	McAlpin	114.12	63	Pdiff	Pdif	02 42 52.7	+0.7
	baz=266						
154A	Montrose	114.13	61	Pdiff	Pdif	02 42 52.8	+0.7
	baz=268						
W53A	Cullowhee	114.16	58	Pdiff	Pdif	02 42 52.4	+0.1
	baz=269						
N50A	Nevada	114.17	52	Pdiff	Pdif	02 42 51.4	-0.7
	baz=271						
S52A	Salyersville	114.26	55	Pdiff	Pdif	02 42 51.7	-0.8
	baz=270						
355A	Pearson	114.28	62	Pdiff	Pdif	02 42 53.3	+0.5
	baz=267						
ACSO	Alum Creek Sta	114.31	52	Pdiff	Pdif	02 42 52.7	0.0
	baz=271						
ACSO	Alum Creek Sta	114.31	52	*e*PKP	PKPdf	02 46 41.8	-1.1
T52A	Hallie	114.33	56	Pdiff	Pdif	02 42 53.8	+0.9
	baz=270						
Z54A	Sparta	114.37	60	Pdiff	Pdif	02 42 51.9	-1.2
	baz=268						
656A	Willston	114.45	64	Pdiff	Pdif	02 42 52.7	-0.8

	baz=266						
V53A	Saluda	114.46	57	Pdiff	Pdif	02 42 52.1	-1.4
	baz=269						
Y54A	Tignall	114.52	59	Pdiff	Pdif	02 42 52.9	-0.9
	baz=268						
SOHO	SOHO	114.57	290	i P	PKPdf	02 46 43.4	-0.4
	SNR=23						
957A	Wimauma	114.60	66	Pdiff	Pdif	02 42 53.7	-0.6
	baz=266						
556A	Lake Butler	114.60	63	Pdiff	Pdif	02 42 54.1	-0.1
	baz=267						
255A	Hazlehurst	114.63	61	Pdiff	Pdif	02 42 54.4	+0.1
	baz=268						
KBS	Kingsbay	114.63	355	ePdif	Pdif	02 42 53.3	0.0
KBS				ePP	PP	02 47 42.9	+0.8
857A	Zephyrhills	114.64	65	Pdiff	Pdif	02 42 54.2	-0.3
	baz=266						
U53A	Fall Branch	114.66	57	Pdiff	Pdif	02 42 54.4	0.0
	baz=270						
155A	Kite	114.67	61	Pdiff	Pdif	02 42 54.2	-0.2
	baz=268						
757A	Oxford	114.83	65	Pdiff	Pdif	02 42 54.1	-1.1
	baz=266						
SPA0	Spitsbergen Ar	114.86	354	ePdif	Pdif	02 42 54.4	0.0
SPA0				ePKPdf	PKiKP	02 46 42.8	-0.1
SPA0				IVmBBB		02 46 45.8	
	comp=Z,931nm,2.0s						
SPITS	Spitsbergen Ar	114.86	354	PKP	PKPdf	02 46 41.8	-1.1
	comp=Z,75nm,0.9s,baz=29,slow=3.3,SNR=22						
SPITS				PKKPbc	PKKPbc	02 57 21.1	-2.2
	comp=Z,1.8nm,0.5s,baz=205,slow=3.5,SNR=8.1						
MDH	Madha	114.89	291	P	PKPdf	02 46 42.8	-1.6
356A	Blackshear	114.90	62	Pdiff	Pdif	02 42 55.3	-0.2
	baz=268						
058A	Arcadia	114.93	67	Pdiff	Pdif	02 42 54.1	-1.7
	baz=266						
UOSS	Minazif	114.95	291	P	PKPdf	02 46 42.7	-1.8
UOSS	Minazif	114.95	291	P	PKPdf	02 46 43.7	-0.8
Z55A	Blythe	114.96	60	Pdiff	Pdif	02 42 56.1	+0.3
	baz=268						
456A	Hilliard	114.97	63	Pdiff	Pdif	02 42 55.7	-0.1
	baz=267						
HATD	Hatta, Dubai	115.00	291	P	PKPdf	02 46 43.6	-1.0
HATD	Hatta, Dubai	115.00	291	i P	PKPdf	02 46 44.2	-0.5
	SNR=10						
958A	Wauchula	115.02	66	Pdiff	Pdif	02 42 56.8	+0.7
	baz=266						
657A	Interlachen	115.04	64	Pdiff	Pdif	02 42 55.8	-0.4
	baz=267						
ASHO	Ashiyiah	115.05	291	P	PKPdf	02 46 43.1	-1.6
ASHO	Ashiyiah	115.05	291	i P	PKPdf	02 46 44.2	-0.6
	SNR=8.2						
SHME	Shamm	115.10	292	P	PKPdf	02 46 44.1	-0.7
256A	Glennville	115.13	61	Pdiff	Pdif	02 42 56.2	-0.3
	baz=268						
557A	Orange Park	115.18	64	Pdiff	Pdif	02 42 55.6	-1.2
	baz=267						
059Z	Ave Maria	115.20	68	Pdiff	Pdif	02 42 58.5	+1.5
	baz=266						
KULLO	Kullorsuaq	115.27	12	i P	PKPdf	02 46 42.4	-1.3
	comp=Z,70nm,1.0s						
KULLO				e		02 47 40.4	
KULLO				i		02 48 21.4	
	comp=Z,1µm,19.0s						
KULLO	Kullorsuaq	115.27	12	i PKIKP	PKPdf	02 46 42.4	-1.3
KULLO				pmax	pmax		
	comp=Z,70nm,1.0s						
KULLO				MLR	MLR		
	comp=Z,1µm,19.0s						
ALNE	Al Ain	115.28	290	i P	PKPdf	02 46 45.1	-0.1
	SNR=7.0						
DWPF	Disney Wildern	115.33	66	Pdiff	Pdif	02 42 59.4	+1.9
	baz=266						
457A	Yulee	115.36	63	Pdiff	Pdif	02 42 56.6	-0.9
	baz=267						
858A	St. Cloud	115.40	66	Pdiff	Pdif	02 42 58.0	+0.2
	baz=266						
NAZ	Nazwa, Dubai	115.44	291	P	PKPdf	02 46 44.6	-0.9
NAZ	Nazwa, Dubai	115.44	291	i P	PKPdf	02 46 45.1	-0.3
	SNR=5.5						
357A	Townsend	115.45	62	Pdiff	Pdif	02 42 57.0	-0.9
	baz=268						
156A	Sylvania	115.49	61	Pdiff	Pdif	02 42 57.3	-0.8
	baz=268						
059A	Moore Haven	115.51	67	Pdiff	Pdif	02 42 59.9	+1.6
	baz=266						
658A	Bunnell	115.56	64	Pdiff	Pdif	02 42 57.7	-0.8
	baz=267						
758A	Lake Helen	115.59	65	Pdiff	Pdif	02 42 57.9	-0.7
	baz=267						
KMSC	Kings Mountain	115.66	58	Pdiff	Pdif	02 42 58.5	-0.3
	baz=270						
KMSC	Kings Mountain	115.66	58	ePKPdf	PKPdf	02 46 45.4	-0.3
ASUD	Al Ashush, Dub	115.71	290	i P	PKPdf	02 46 45.8	-0.2
	SNR=8.6						
JSC	Jenkinsville	115.71	59	ePKPdf	PKPdf	02 46 46.7	+1.0
JSC	Jenkinsville	115.71	59	ePKIKP	PKPdf	02 46 46.7	+1.0
959A	Okeechobee	115.79	66	Pdiff	Pdif	02 42 59.4	-0.2
	baz=266						
859A	Kempfer Cattle	115.80	66	Pdiff	Pdif	02 43 00.5	+0.9
	baz=266						
HSPB	Hornsund (broa	115.97	353	eP	Pdif	02 43 05.0	+5.7
HSPB				e		02 47 51.2	
HSPB				eSP	SP	02 57 28.5	+14
HSPB	Hornsund (broa	115.97	353	ePdif	Pdif	02 42 59.3	0.0
HSPB				ePKPdf	PKiKP	02 46 45.7	+0.7
HSPB				IVmB_BB		02 46 46.5	
	comp=Z,322nm,0.5s						
060Z	West Palm Beac	116.00	68	PKiKP	PKPdf	02 46 44.3	-2.2
	baz=266						
060A	Indiantown	116.22	67	PKiKP	PKPdf	02 46 45.6	-1.3
	baz=266						
BLA	Blacksburg	116.38	56	PKiKP	PKPdf	02 46 45.9	-1.1
	baz=271						
ERPA	Erie	116.49	50	PKiKP	PKPdf	02 46 45.5	-1.5
	baz=274						
ERPA	Erie	116.49	50	ePKPdf	PKPdf	02 46 47.6	+0.6
N54A	Moraine State	116.56	51	PKiKP	PKPdf	02 46 45.6	-1.6
	baz=273						
N54A	Moraine State	116.56	51	ePKPdf	PKPdf	02 46 46.6	-0.6
NHSC	New Hope	116.60	60	PKiKP	PKPdf	02 46 46.3	-1.1
	baz=269						
VWCC	Virginia Weste	116.73	56	ePKPdf	PKPdf	02 46 47.7	+0.1
MCWV	Mont Chateau	116.74	53	PKiKP	PKPdf	02 46 46.6	-0.9
	baz=273						
M54A	Oil Creek Stat	116.77	51	PKiKP	PKPdf	02 46 46.2	-1.4
	baz=274						
M54A	Oil Creek Stat	116.77	51	ePKPdf	PKPdf	02 46 46.8	-0.8
SADO	Sadowa	116.87	47	PKP	PKPdf	02 46 46.3	-1.3
	comp=Z,11nm,0.9s,baz=343,slow=2.1,SNR=8.3						
SADO	Sadowa	116.87	47	ePKPdf	PKPdf	02 46 47.0	-0.6
NCAT	North Carolina	116.92	57	ePKPdf	PKPdf	02 46 48.3	+0.3
LPAZ	La Paz	117.21	117	PKP	PKPdf	02 46 48.9	-1.1
	comp=Z,6.3nm,0.9s,baz=354,slow=1.4,SNR=14						
LPAZ				PKKPbc	PKKPbc	02 57 14.3	+0.1
	comp=Z,8.0nm,0.8s,baz=247,slow=0.7,SNR=14						
BJO	Bjornoya	117.59	351	ePdif	Pdif	02 43 09.2	+2.7
PRGR	Permogore	117.62	333⇑	ePKIKP	PKPdf	02 46 47.9	-0.6
PRGR				e		02 48 04.2	
PRGR				pmax	pmax		
	comp=Z,114nm,0.9s						
O56A	Blue Knob Stat	117.69	52	PKiKP	PKPdf	02 46 48.0	-1.4
	baz=274						
O56A	Blue Knob Stat	117.69	52	ePKPdf	PKPdf	02 46 48.8	-0.7
HELC	Santa Helena	117.80	91	ePKPdf	PKPdf	02 46 51.3	+0.5
DAG	Danmarks Havn	117.80	2	i P	PKPdf	02 46 47.6	-0.9
	comp=Z,37nm,0.8s						
DAG				i		02 48 02.1	
DAG				e		02 48 40.8	
	comp=Z,1µm,23.0s						
DAG	Danmarks Havn	117.80	2	i PKIKP	PKPdf	02 46 47.6	-0.9
DAG				i		02 48 02.1	
DAG				pmax	pmax		
	comp=Z,37nm,0.8s						
DAG				MLR	MLR		
	comp=Z,1µm,23.0s						
PRAC	Prado	117.83	94	ePKPdf	PKPdf	02 46 49.1	-1.4
FRB	Frobisher Bay	117.83	25	PKP	PKPdf	02 46 47.9	-1.0
	comp=Z,28nm,1.0s,baz=332,slow=3.0,SNR=20						
MMNY	Mt. Morris Dam	117.97	49	ePKPdf	PKPdf	02 46 50.3	+0.5
SSPA	Standing Stone	118.17	52	PKiKP	PKPdf	02 46 49.1	-1.2
	baz=275						
SSPA	Standing Stone	118.17	52	ePKPdf	PKPdf	02 46 49.4	-0.9
IP04	Greensprings	118.19	54	ePKPdf	PKPdf	02 46 49.4	-0.9
IP07	Quail	118.25	55	ePKPdf	PKPdf	02 46 50.5	0.0
IP03	Louisa	118.26	55	ePKPdf	PKPdf	02 46 49.9	-0.6
IP06	Yanceyville	118.29	55	ePKPdf	PKPdf	02 46 49.5	-1.0
PLVO	Plevna	118.30	47	ePKPdf	PKPdf	02 46 49.4	-1.0
IP01	Cuckoo	118.34	55	ePKPdf	PKPdf	02 46 50.2	-0.5
CVRD	Centerville Ro	118.42	54	ePKPdf	PKPdf	02 46 50.9	+0.1
IP05	Hopewell Churc	118.47	55	ePKPdf	PKPdf	02 46 50.5	-0.4
CNNC	Cliffs of the	118.48	58	PKiKP	PKPdf	02 46 49.9	-1.1
	baz=272						
ROSC	El Rosal	118.65	92	PKP	PKPdf	02 46 51.5	-1.0
	comp=Z,4.5nm,0.4s,baz=103,slow=21,SNR=4.9						
ROSC	El Rosal	118.65	92	ePKPdf	PKPdf	02 46 52.9	+0.4
URVA	University of	118.66	55	ePKPdf	PKPdf	02 46 50.4	-0.9
CBN	Corbin Frederi	118.75	54	PKiKP	PKPdf	02 46 50.2	-1.2
	baz=274						
CBN	Corbin Frederi	118.75	54	ePKPdf	PKPdf	02 46 52.1	+0.6
SDMD	Soldier's Deli	119.08	53	ePKPdf	PKPdf	02 46 51.7	-0.4
PAGS	Pennsylvania G	119.10	52	ePKPdf	PKPdf	02 46 51.0	-1.0
APA	Apatity	119.32	342⇓	iPKIKP	PKPdf	02 46 50.3	-1.4
APA				i		02 47 35.1	
APA				i		02 48 18.7	
APA				i		02 53 31.0	
APA				i		02 57 58.0	
APA				pmax	pmax		
	comp=Z,77nm,0.9s						
MVL	Millersville	119.40	52	ePKPdf	PKPdf	02 46 52.1	-0.6
BINY	Binghamton	119.44	50	PKiKP	PKPdf	02 46 52.0	-0.7
	baz=277						
BINY	Binghamton	119.44	50	ePKPdf	PKPdf	02 46 52.2	-0.5
KEV	Kevo	119.66	345	ePKPdf	PKPdf	02 46 52.0	-0.3
KEV	Kevo	119.66	345	ePKIKP	PKPdf	02 46 52.0	-0.3
KSPA	Keystone Colle	119.68	50	ePKPdf	PKPdf	02 46 53.1	0.0
N59A	State Game Lan	119.75	51	PKiKP	PKPdf	02 46 52.4	-1.0
	baz=276						
N59A	State Game Lan	119.75	51	ePKPdf	PKPdf	02 46 52.8	-0.5
HAMF	Hammerfest	119.79	347	ePKPdf	PKPdf	02 46 52.1	-0.4
HAMF				IVmB_BB		02 46 54.6	
	comp=Z,907nm,1.1s						
LUPA	Lehigh Univers	120.08	51	ePKPdf	PKPdf	02 46 54.8	+0.8
RUSC	La Rusia	120.09	92	ePKPdf	PKPdf	02 46 54.2	-1.2
PSUB	Penn St. - Bra	120.10	52	ePKPdf	PKPdf	02 46 53.2	-0.8
LONY	Lake Ozonia	120.11	47	PKiKP	PKPdf	02 46 52.2	-1.7
	baz=279						
LONY	Lake Ozonia	120.11	47	ePKPdf	PKPdf	02 46 53.0	-0.9
SUMG	Summit	120.16	9	ePKPdf	PKPdf	02 46 53.6	-0.1
SUMG	Summit	120.16	9⇑	iP	PKPdf	02 46 53.5	-0.2
	comp=Z,120nm,1.1s						
SUMG				i		02 57 00.1	
	comp=Z,2µm,21.0s						
SUMG	Summit	120.16	9⇑	iPKIKP	PKPdf	02 46 53.5	-0.2
SUMG				pmax	pmax		
	comp=Z,120nm,1.1s						
SUMG				MLR	MLR		
	comp=Z,2µm,21.0s						
ARCES	ARCESS Array B	120.19	345	PKP	PKPdf	02 46 52.8	-0.6
	comp=Z,81nm,0.6s,baz=5.7,slow=1.2,SNR=37						
ARCES				PKKPab	PKKPab	02 57 00.2	-2.3
	comp=Z,3.1nm,0.7s,baz=222,slow=2.0,SNR=9.1						
ARCES	ARCESS Array B	120.19	345	ePKIKP	PKPdf	02 46 52.9	-0.4
ARE0	ARCESS Array S	120.19	345	ePKPdf	PKPdf	02 46 53.5	+0.2
ARE0	ARCESS Array S	120.19	345	ePdif	Pdif	02 43 18.5	+0.2
ARE0				ePKPdf	PKPdf	02 46 52.4	-0.9
ARE0				IVmBBB		02 46 54.9	
	comp=Z,1µm,0.8s						
ILULI	Ilulissat	120.37	15	i P	PKPdf	02 46 52.3	-1.3
	comp=Z,190nm,1.1s						
ILULI				i		02 48 56.8	
	comp=Z,1µm,18.0s						
ILULI	Ilulissat	120.37	15	i PKIKP	PKPdf	02 46 52.3	-1.3
ILULI				pmax	pmax		
	comp=Z,190nm,1.1s						
ILULI				MLR	MLR		
	comp=Z,2µm,18.0s						
NCB	Newcomb	120.47	47	ePKPdf	PKPdf	02 46 53.9	-0.8
CPUP	Villa Florida	120.48	133	PKP	PKPdf	02 46 54.8	-0.3
	comp=Z,6.5nm,0.8s,baz=285,slow=1.5,SNR=9.9						
CPUP				SKP		02 50 18.2	
	comp=Z,6.7nm,1.2s,baz=302,slow=1.7,SNR=3.3						
CPUP				PKKPbc	PKKPbc	02 57 01.8	-0.1
	comp=Z,9.5nm,0.7s,baz=54,slow=3.8,SNR=17						
ODNJ	Ogdensburg	120.61	51	ePKPdf	PKPdf	02 46 54.4	-0.6
KLMR	Klimovskoe	120.63	333	eP	Pdif	02 43 18.6	-1.7
KLMR				e		02 46 52.9	
KLMR				e		02 47 36.8	
KLMR				pmax	pmax		
	comp=Z,12nm,1.3s						
KLMR	Klimovskoe	120.63	333	ePdif	Pdif	02 43 18.6	-1.7
KLMR				AMP		02 43 26.0	
	comp=Z,12nm,1.3s						
KLMR				ePKPdf	PKPdf	02 46 52.9	-1.5
KLMR				epPKPdf	pPKPdf	02 47 36.9	-0.8
KLMR				eSKKP		03 00 52.8	
BRNJ	Basking Ridge	120.68	51	ePKPdf	PKPdf	02 46 54.3	-0.8
ACCN	Adirondack Com	120.96	48	ePKPdf	PKPdf	02 46 55.5	0.0
TRY	Troy	121.07	49	ePKPdf	PKPdf	02 46 55.6	-0.2
KTK1	Kautokeino	121.12	346	ePKPdf	PKPdf	02 46 54.7	-0.4
KTK1				eP	PKPdf	02 46 54.8	-0.4
CPNY	Central Park	121.13	51	ePKPdf	PKPdf	02 46 56.8	+0.9
PAL	Palisades	121.14	51	PKiKP	PKPdf	02 46 54.8	-1.2
	baz=278						
PAL	Palisades	121.14	51	ePKPdf	PKPdf	02 46 55.5	-0.4
PAL	Palisades	121.14	51	ePKIKP	PKPdf	02 46 55.5	-0.4
VT1	Waterbury	121.45	47	ePKPdf	PKPdf	02 46 56.1	-0.4
MAK	Makhachkala	121.59	312	eP	Pdif	02 43 25.4	+0.4
MAK				i		02 46 57.2	
MAK				e		02 48 30.0	
MAK				ePPP	PPP	02 51 09.0	
MAK				eSP	SP	02 58 04.2	-2.8
MAK				eSS	SS	03 04 52.2	-1.9
MAK				pmax	pmax		
	comp=Z,231nm,0.8s						
TRO	Tromso	121.61	348	ePdif	Pdif	02 43 25.1	+0.7
TRO				ePKPdf	PKiKP	02 46 56.6	+0.4
TRO				IVmB_BB		02 46 57.0	
	comp=Z,1µm,1.0s						
TRO				eSKSac	SKSac	02 53 40.3	+0.7
TRO				eSKSac	SKSac	02 53 40.3	+0.7
TRO				eSP	SP	02 58 07.2	+1.9
AKT	Akhty	121.66	310	i PKIKP	PKPdf	02 46 57.4	+0.3
AKT				e		02 47 40.0	
AKT				e		02 48 30.2	
AKT				pmax	pmax		
	comp=Z,109nm,0.7s						
YLE	Yale	121.82	50	ePKPdf	PKPdf	02 46 58.2	+1.0
LBNH	Lisbon	122.05	47	PKiKP	PKPdf	02 46 57.2	-0.5
	baz=281						
LBNH	Lisbon	122.05	47	ePKPdf	PKPdf	02 46 57.4	-0.2
SFJD	Kangerlussuaq	122.09	17	PKP	PKPdf	02 46 56.6	-0.4
	comp=Z,57nm,1.0s,baz=274,slow=2.2,SNR=12						
SFJD	Kangerlussuaq	122.09	17	ePKPdf	PKPdf	02 46 56.7	-0.3
SFJD	Kangerlussuaq	122.09	17	i P	PKPdf	02 46 55.1	-1.9
	comp=Z,73nm,1.1s						
SFJD				i		02 48 31.9	
	comp=Z,2µm,20.0s						
SFJD	Kangerlussuaq	122.09	17	ePKIKP	PKPdf	02 46 56.7	-0.3
QUA2	Belchertown	122.10	49	ePKPdf	PKPdf	02 46 57.9	+0.1
SCHQ	Schefferville	122.22	34	PKP	PKPdf	02 46 56.6	-1.0
	comp=Z,21nm,0.9s,baz=345,slow=1.0,SNR=19						
SCHQ				PKKPab	PKKPbc	02 56 55.2	-0.8
	comp=Z,4.4nm,0.5s,baz=159,slow=3.1,SNR=16						
FFD	Franklin Falls	122.39	48	ePKPdf	PKPdf	02 46 58.2	-0.1
HRV	Adam Dziewonsk	122.64	49	PKiKP	PKPdf	02 46 57.9	-0.9
	baz=280						
HRV	Adam Dziewonsk	122.64	49	ePKPdf	PKPdf	02 46 58.6	-0.2
HRV	Adam Dziewonsk	122.64	49	ePKIKP	PKPdf	02 46 58.6	-0.2
BRYW	Bryant College	122.76	49	ePKPdf	PKPdf	02 46 58.6	-0.4
GROC	Groznyy	122.78	312	i PKIKP	PKPdf	02 46 58.6	-0.4
GROC				e		02 48 37.7	
GROC				pmax	pmax		
	comp=Z,111nm,0.7s						
WES	Weston	122.83	49	ePKPdf	PKPdf	02 46 58.8	-0.4
WES	Weston	122.83	49	ePKIKP	PKPdf	02 46 58.8	-0.4
BCX	Boston College	122.95	49	ePKPdf	PKPdf	02 46 58.9	-0.4
SDV	Santo Domingo	123.11	89	ePKPdf	PKPdf	02 46 59.8	-1.0
SUR	Sutherland	123.29	214	ePKPdf	PKPdf	02 47 01.5	+0.8
BOSA	Boshof	123.45	220	PKP	PKPdf	02 47 01.1	0.0
	comp=Z,35nm,0.6s,baz=138,slow=2.2,SNR=81						
BOSA	Boshof	123.45	220	ePKPdf	PKPdf	02 47 01.6	+0.5
BOSA	Boshof	123.45	220	ePKIKP	PKPdf	02 47 01.6	+0.5
M65A	Busby, Falmout	123.48	50	PKiKP	PKPdf	02 46 59.4	-1.0
	baz=280						
WVL	Waterville	123.58	46	ePKPdf	PKPdf	02 47 00.4	-0.1
JMIC	Jan Mayen	123.64	358	ePdif	Pdif	02 43 34.7	+1.2
JMIC				ePKPdf	PKiKP	02 47 00.3	+0.2
JMIC				IVmB_BB		02 47 02.5	
	comp=Z,852nm,1.0s						
PKME	Peaks-Kenny Pk	123.66	45	PKiKP	PKPdf	02 46 59.8	-0.9
	baz=284						
PKME	Peaks-Kenny Pk	123.66	45	ePKPdf	PKPdf	02 47 00.6	-0.1
STEI	Steigen	123.78	348	ePdif	Pdif	02 43 34.6	+0.4
STEI				ePKPdf	PKPdf	02 46 59.5	-0.7
STEI				IVmB_BB		02 47 01.6	
	comp=Z,2µm,1.4s						
TBLG	Delisi	123.83	311	ePKPdf	PKPdf	02 47 01.8	+0.6
TBLG	Delisi	123.83	311	ePKIKP	PKPdf	02 47 01.8	+0.6
MOS	Moscow	123.84	328	i PKIKP	PKPdf	02 47 00.7	0.0
MOS				e		02 47 44.0	
MOS				e		02 53 48.9	
MOS				ePS	SP	02 58 30.9	+5.0
MOS				eSS	SS	03 05 14.6	-6.9
MOS				pmax	pmax		
	comp=Z,253nm,1.3s						
MOS				pmax	pmax		
	comp=Z,300nm,1.3s						
MOS				MLR	MLR		
	comp=Z,2µm,21.0s						
LOF	Lofoten	123.94	348	ePdif	Pdif	02 43 34.5	-0.4
LOF				IVmBBB		02 47 03.1	
	comp=Z,1µm,1.7s						
LOF				e		02 48 40.3	
GNI	Garni	124.11	309	PKP	PKPdf	02 47 02.4	+0.5
	comp=Z,56nm,0.8s,baz=354,slow=2.1,SNR=28						
GNI	Garni	124.11	309	eP	PKPdf	02 47 00.7	-1.2
GNI	Garni	124.11	309	ePKPdf	PKPdf	02 47 02.9	+0.9
GNI	Garni	124.11	309	i P	PKPdf	02 47 02.6	+0.7
	SNR=21						
PQI	Presque Isle	124.16	43	ePKPdf	PKPdf	02 46 59.9	-1.7
RAYN	Ar Rayn	124.61	289	ePKPdf	PKPdf	02 47 03.2	0.0
RAYN	Ar Rayn	124.61	289	i P	PKPdf	02 47 03.4	+0.2
	SNR=36						
VORR	Voronezh	124.65	323	ePKIKP	PKPdf	02 47 00.0	-2.4
VORR				pmax	pmax		
	comp=Z,750nm,1.4s						
OBN	Obninsk	124.66	328	ePKPdf	PKPdf	02 47 02.2	0.0
OBN	Obninsk	124.66	328c	iPKIKP	PKPdf	02 47 01.8	-0.4
OBN				e		02 47 44.3	
OBN				e		02 48 51.8	
OBN				e		02 53 40.9	
OBN				pmax	pmax		
	comp=Z,449nm,1.5s						
SAML	Samuel	124.72	112	ePKPdf	PKPdf	02 47 02.2	-1.4
SAML	Samuel	124.72	112	ePKIKP	PKPdf	02 47 02.2	-1.4
KBZ	Khabaz	124.73	313	PKP	PKPdf	02 47 02.9	+0.1
	comp=Z,18nm,0.7s,baz=122,slow=2.9,SNR=29						
AKH	Akhalkalaki	124.81	310⇓	iP	PKPdf	02 47 04.2	+0.9
AKH	Akhalkalaki	124.81	310	ePKPdf	PKPdf	02 47 04.1	+0.9
KVAR	Kislovodsk Arr	124.81	314	PKP	PKPdf	02 47 03.1	0.0
	comp=Z,142nm,1.2s,baz=21,slow=1.8,SNR=31						
KVAR				PP	PP	02 48 53.6	+0.5
	comp=Z,16nm,0.9s,baz=37,slow=9.3,SNR=3.5						
KIV	Kislovodsk	124.82	314	ePKPdf	PKPdf	02 47 03.1	0.0
KIV	Kislovodsk	124.82	314	i P	PKPdf	02 47 03.2	+0.2
	SNR=19						
KIV	Kislovodsk	124.82	314	eP	Pdif	02 43 38.5	-1.0
KIV				i		02 47 03.4	
KIV				e*PP	pPKPdf	02 47 45.2	-1.2
KIV				e		02 48 52.6	
KIV				e		02 53 51.3	
KIV				ePS	PS	02 58 56.0	+0.6
KIV				eSS	SS	03 05 34.7	-0.4
KIV				pmax	pmax		
	comp=Z,111nm,1.1s						
KIV				MLR	MLR		
	comp=Z,1µm,22.0s						
VSR	Storozhevoye	124.85	323	ePKIKP	PKPdf	02 47 02.6	-0.1
VSR				pmax	pmax		
	comp=Z,140nm,0.7s						
VORD	Divnogorie	124.87	323	ePKIKP	PKPdf	02 47 03.0	+0.2
VORD				pmax	pmax		
	comp=Z,230nm,1.6s						
DAMY	Dhamar	124.89	278	ePKPdf	PKPdf	02 47 05.4	+1.1
CLDR	Caldiran	124.91	308	eP	PKPpre	02 47 00.6	
EMMW	East Machias	125.06	45	ePKPdf	PKPdf	02 47 02.9	-0.4
PUL	Pulkovo	125.10	335⇑	ePKIKP	PKPdf	02 47 03.9	+1.0
KARS	Kars	125.27	310	eP	PKPpre	02 47 00.1	
VANB	Van	125.41	307	eP	PKPdf	02 47 02.5	-1.9
MOR8	Moi Rana	125.43	347	ePdif	Pdif	02 43 40.7	-0.9
MOR8				ePKPdf	PKPdf	02 47 02.6	-0.9
MOR8				IVmB_BB		02 47 04.5	
	comp=Z,908nm,1.0s						
MOR8				ePP	PP	02 48 54.8	-1.2
KONS	Konsvik	125.43	348	ePKPdf	PKPdf	02 47 03.4	0.0
KONS				IVmB_BB		02 47 05.7	
	comp=Z,1µm,0.8s						
CUKT	Cukurca	125.45	305	eP	PKPdf	02 47 03.5	-1.1
AGRB	Hanur-Agry	125.54	308	eP	PKPdf	02 47 02.0	-2.7
FIA1	FINESS Array S	125.67	338	ePKPdf	PKPdf	02 47 03.8	-0.2
FINES	FINESS Array B	125.67	338	PKP	PKPdf	02 47 03.2	-0.8
	comp=Z,163nm,1.0s,baz=70,slow=2.2,SNR=27						
FINES				pPKP	pPKPdf	02 47 47.2	-0.2
	comp=Z,41nm,1.1s,baz=102,slow=4.7,SNR=2.3						
LBTB	Lobatse	125.69	224	ePKPdf	PKPdf	02 47 05.5	+0.1
LBTB	Lobatse	125.69	224	ePKIKP	PKPdf	02 47 05.5	+0.1
SENK	Senkaya-Erzuru	125.83	310	eP	PKPdf	02 47 04.5	-0.8
ATD	Arta Tunnel	125.92	274	PKP	PKPdf	02 47 07.3	+1.4
	comp=Z,40nm,1.0s,baz=306,slow=3.5,SNR=5.6						
ATD	Arta Tunnel	125.92	274	ePKPdf	PKPdf	02 47 07.8	+1.9
BCA	Borcka	126.17	311	eP	PKPpre	02 47 00.6	
SIRT	Sirnak	126.33	306	eP	PKPpre	02 47 01.6	
ANGG	Ammassalik, Gr	126.38	13	ePKPdf	PKPdf	02 47 04.4	-0.8
GURO	Guroymak-BITLI	126.46	307	eP	PKPdf	02 47 05.5	-1.0
VRTB	Varto-Mus	126.79	308	eP	PKPdf	02 47 07.9	+0.8
CHOM	Cayeli-Rize	126.89	311	eP	PKPpre	02 47 02.0	
IVI	Ivigtut	126.99	21	ePKPdf	PKPdf	02 47 05.7	-0.9
SOC	Sochi	127.00	314c	iPKIKP	PKPdf	02 47 06.7	-0.4
SOC				i		02 47 49.6	
SOC				i		02 49 06.8	
SOC				ePPP	PPP	02 51 51.2	
SOC				e		02 53 58.4	
SOC				ePS	PS	02 59 18.5	+4.3
SOC				eSS	SS	03 06 03.9	+1.9
SOC				pmax	pmax		
	comp=Z,59nm,0.9s						
SVAN	Silvan-Diyarba	127.18	307	eP	PKPdf	02 47 06.4	-1.3
VSU	Vasula	127.36	335c	iPKIKP	PKPdf	02 47 06.9	-0.4
NSS	Namsos	127.38	347	ePKPdf	PKPdf	02 47 07.2	0.0
NSS				IVmB_BB		02 47 08.9	
	comp=Z,1µm,0.7s						
BNGB	Bingˆ¶l	127.41	308	eP	PKPdf	02 47 07.9	-0.3
YEDI	Yedisu-Bingol	127.42	309	eP	PKPdf	02 47 07.4	-0.9
BAYT	Ayd˜–ntepe-Bay	127.51	310	eP	PKPdf	02 47 09.9	+1.5
CRPR	Cabo Rojo, PR	127.82	78	ePKPdf	PKPdf	02 47 09.0	-0.4
MAZI	Mazidag	127.90	306	eP	PKPdf	02 47 09.9	+0.7
NRS	Narsarsuaq	127.93	19	i P	PKPdf	02 47 07.3	-1.0
	comp=Z,233nm,1.1s						
	comp=Z,3µm,18.0s						
NRS	Narsarsuaq	127.93	19	i PKIKP	PKPdf	02 47 07.3	-1.0
NRS				pmax	pmax		
	comp=Z,230nm,1.1s						
NRS				MLR	MLR		
	comp=Z,3µm,18.0s						
ANN	Anapa	128.19	316	i PKIKP	PKPdf	02 47 08.5	-0.8
ANN				e		02 49 15.6	
ANN				eSS	SS	03 06 13.4	-3.2
ANN				pmax	pmax		
	comp=Z,149nm,1.5s						
OBIP	Obispado Ponce	128.31	78	ePKPdf	PKPdf	02 47 09.6	-0.7
PTK	Pertek	128.41	308	eP	PKPdf	02 47 10.8	+0.6
ESPY	Espiye-Giresun	128.42	311	eP	PKPdf	02 47 06.9	-3.1
SVRC	Sivrice-ELAZID	128.59	308	eP	PKPdf	02 47 09.9	-0.7
SJG	San Juan	128.74	78	ePKPdf	PKPdf	02 47 10.1	-1.0
TBLU	Trondheim	128.87	347	ePKPdf	PKPdf	02 47 10.1	0.0
SPB	Sao Paulo	129.02	138	ePKPdf	PKPdf	02 47 11.5	-0.1
HUMP	Col San Antoni	129.03	78	ePKPdf	PKPdf	02 47 10.9	-0.8
URFA	Urfa	129.17	307	eP	PKPdf	02 47 10.8	-0.8
MICGM	Minsk	129.27	331⇑	ePKP	PKPdf	02 47 10.0	-1.1
MICGM				PKPM		02 47 13.0	
	comp=Z,0.4nm,1.2s						
MICGM				epPKP	pPKPdf	02 47 53.0	-1.5
MICGM				ePP	PP	02 49 18.0	-3.6
MICGM				eSKP		02 50 20.0	
MICGM				ePKS	PKSdf	02 50 32.0	-15
MICGM				ePPP	PPP	02 51 34.0	
MICGM				eSKKS		02 56 00.0	
MICGM				eSS	SS	03 06 50.0	+21
MICGM				eSSS	SSS	03 08 54.0	
MICGM				eLR	LR	03 38 40.0	
MNK	Minsk	129.27	331⇑	ePKIKP	PKPdf	02 47 10.0	-1.1

MNK				*e*		02 47 53.0	
MNK				*e*		02 49 18.0	
MNK				*e*SS	SS	03 06 50.0	+21
MNK				pmax	pmax		
	comp=Z,410nm,1.2s						
MNK				pmax	pmax		
	comp=Z,19µm,3.0s						
MALT	**Malatya**	**129.28**	**308**	*e*P	**PKPdf**	**02 47 10.3**	**-1.5**
IDID	**Didziasalis**	**129.32**	**332**	*e*P	**PKPdf**	**02 47 10.8**	**-0.3**
IDID				IAmb	IAmb	02 47 14.7	
	comp=Z,145nm,1.3s						
IIGN	**Ignalina**	**129.53**	**332**	*e*P	**PKPdf**	**02 47 11.6**	**0.0**
IIGN				IAmb	IAmb	02 47 15.3	
	comp=Z,155nm,1.2s						
NACGM	**Naroch**	**129.55**	**332**	*e*PKP1	**PKPdf**	**02 47 12.0**	**+0.4**
NACGM				*e*PKP1	**PKPdf**	**02 47 12.0**	**+0.4**
NACGM				PKP1M		02 47 15.0	
	comp=Z,0.5nm,0.9s						
NACGM				pPKP1		02 47 51.0	
NACGM				*e*PP	**PP**	**02 49 22.0**	**-1.4**
NACGM				*e*SKP		02 50 20.0	
NACGM				*e*PPP	PPP	02 51 13.0	
NACGM				*e*SKS	**SKSdf**	**02 54 08.0**	**+0.4**
NACGM				*e*SKKS	**SKKSac**	**02 55 57.0**	**-7.0**
NACGM				*e*SPP	SPP	02 59 18.0	
NACGM				*e*SS	**SS**	**03 06 36.0**	**+3.7**
NACGM				*e*SSS	SSS	03 10 28.0	
NACGM				*e*LR	LR	03 41 16.0	
RSDY	**Resadiye-TOKAT**	**129.59**	**311**	*e*P	**PKPdf**	**02 47 11.3**	**-0.9**
BORG	**Borgarnes**	**129.61**	**5**	*e*PKPdf	**PKPdf**	**02 47 13.0**	**+1.5**
LSZ	**Lusaka**	**129.82**	**235**	*e*PKPdf	**PKPdf**	**02 47 13.9**	**+0.4**
DARE	**Darende-Malaty**	**129.94**	**308**	*e*P	**PKPdf**	**02 47 12.3**	**-0.7**
SVSK	**Karacayir**	**129.96**	**310**	*e*P	**PKPdf**	**02 47 12.8**	**0.0**
CDVI	**St. Croix**	**130.03**	**79**	*e*PKPdf	**PKPdf**	**02 47 13.3**	**-0.3**
MOL	**Molde**	**130.04**	**348**	*e*PKPdf	**PKPdf**	**02 47 12.3**	**0.0**
MOL				IVmB_BB		02 47 14.7	
	comp=Z,1µm,1.0s						
MOL				*e*		02 50 25.0	
TOKT	**Tokat**	**130.18**	**311**	*e*P	**PKPdf**	**02 47 13.7**	**+0.3**
DOMB	**Dombas**	**130.20**	**347**	*e*PKPdf	**PKPdf**	**02 47 12.9**	**+0.2**
KVT	**Kavak**	**130.32**	**312**	*e*P	**PKPdf**	**02 47 14.2**	**+0.6**
SIM	**Simferopol’**	**130.35**	**317**	*ce*PKIKP	**PKPdf**	**02 47 13.8**	**+0.3**
SIM				*e*		02 47 57.0	
SIM				*e*		02 49 28.0	
SIM				*e*PS	**SP**	**02 59 23.0**	**-0.4**
SIM				pmax	pmax		
	comp=Z,51nm,0.7s						
SIM				pmax	pmax		
	comp=Z,300nm,9.2s						
NC303	**NORSAR Array S**	**130.37**	**345**	*e*P	**PKPdf**	**02 47 12.5**	**-0.5**
NC303				IVmB_BB		02 47 15.7	
	comp=Z,4µm,1.3s						
NC405	**NORSAR Array S**	**130.37**	**345**	*e*PKPdf	**PKPdf**	**02 47 13.0**	**-0.1**
NC204	**NORSAR Array S**	**130.47**	**345**	*e*PKPdf	**PKPdf**	**02 47 14.3**	**+1.0**
GAZ	**Gaziantep**	**130.48**	**307**	*e*P	**PKPdf**	**02 47 14.7**	**+0.6**
AKN	**Aaknes**	**130.51**	**348**	*e*PKPdf	**PKPdf**	**02 47 13.4**	**+0.1**
AKN				IVmBBB		02 47 18.4	
	comp=Z,2µm,1.8s						
NB201	**NORSAR Array S**	**130.53**	**345**	*e*PKPdf	**PKPdf**	**02 47 14.2**	**+0.9**
NB2	**NORSAR Subarra**	**130.56**	**345**	PKPdf	**PKPdf**	**02 47 13.0**	**-0.4**
	comp=Z,192nm,1.7s,baz=31,slow=1.9						
NB2	**NORSAR Subarra**	**130.56**	**345**	PKPdf	**PKPdf**	**02 47 13.0**	**-0.4**
	baz=31,slow=1.9						
KMRS	**Kahramanmaras**	**130.64**	**307**	*e*P	**PKPdf**	**02 47 12.8**	**-1.5**
HFS	**Hagfors**	**130.66**	**343**	PKP	**PKPdf**	**02 47 13.3**	**-0.3**
	comp=Z,48nm,0.9s,baz=90,slow=0.3,SNR=38						
HFS				SKPab	**SKPab**	**02 50 24.3**	**+2.0**
	comp=Z,41nm,0.7s,baz=84,slow=4.6,SNR=24						
NBO00	**NORSAR Array S**	**130.68**	**345**	*e*Pdif	**Pdif**	**02 44 04.9**	**-0.2**
NBO00				*e*PKPdf	**PKPdf**	**02 47 13.6**	**0.0**
NBO00				IVmB_BB		02 47 15.5	
	comp=Z,4µm,2.1s						
AKASG	**Malin Array Be**	**130.69**	**326**	PKP	**PKPdf**	**02 47 13.6**	**-0.4**
	comp=Z,15nm,0.6s,baz=51,slow=2.3,SNR=57						
AKASG				pPKP	**pPKPdf**	**02 47 55.9**	**-1.4**
	comp=Z,8.7nm,0.8s,baz=54,slow=2.8,SNR=1.7						
AKASG				SKPab	**SKPab**	**02 50 24.6**	**+1.9**
	comp=Z,38nm,0.7s,baz=44,slow=4.5,SNR=31						
KIEV	**Kiev**	**130.71**	**326**	*e*PKPdf	**PKPdf**	**02 47 13.4**	**-0.5**
KIEV				*e*SKPbc	**SKPab**	**02 50 23.5**	**+0.7**
KIEV	**Kiev**	**130.71**	**326**	*i* P	**PKPdf**	**02 47 14.2**	**+0.3**
	SNR=26						
KIEV	**Kiev**	**130.71**	**326**	*c i*PKIKP	**PKPdf**	**02 47 13.4**	**-0.5**
DIKM	**Dikmen**	**130.71**	**313**	*e*P	**PKPdf**	**02 47 14.9**	**+0.6**
AK11	**Malin Array Si**	**130.74**	**326**	*e*PKPdf	**PKPdf**	**02 47 13.6**	**-0.4**
NC602	**NORSAR Array S**	**130.74**	**345**	*e*P	**PKPdf**	**02 47 13.2**	**-0.5**
NC602				IVmBBB		02 47 15.6	
	comp=Z,5µm,0.8s						
NC602				IVmB_BB		02 47 15.9	
	comp=Z,5µm,0.8s						
SARI	**SarD1z-Kayseri**	**130.79**	**308**	*e*P	**PKPdf**	**02 47 13.8**	**-1.0**
PTGA	**Pitinga**	**130.81**	**104**	*e*PKPdf	**PKPdf**	**02 47 14.0**	**-1.3**
NAO01	**NORSAR Array S**	**130.81**	**345**	*e*Pdif	**Pdif**	**02 44 12.6**	**+6.9**
NAO01				*e*PKPdf	**PKPdf**	**02 47 14.1**	**+0.2**
NAO01				IVmB_BB		02 47 18.2	
	comp=Z,4µm,2.4s						
BNN	**Bunyan**	**131.10**	**309**	*e*P	PKPpre	02 47 10.0	
YOZ	**Yozgat**	**131.28**	**310**	*e*P	**PKPdf**	**02 47 15.0**	**-0.6**
TAHT	**Tahtakopru-Hat**	**131.46**	**306**	*e*P	**PKPdf**	**02 47 17.1**	**+1.2**
BZK	**Bozkurt**	**131.50**	**314**	*e*P	**PKPdf**	**02 47 14.7**	**-1.0**
HYA	**Hoyanger**	**131.59**	**348**	*e*PKPdf	**PKPdf**	**02 47 15.7**	**+0.4**
HYA				IVmBBB		02 47 18.9	
	comp=Z,1µm,1.3s						
YAYL	**Yayladag**	**131.60**	**305**	*e*P	**PKPdf**	**02 47 17.7**	**+1.4**
CORM	**Corum**	**131.62**	**311**	*e*P	**PKPdf**	**02 47 16.9**	**+0.7**
OSL	**Oslo**	**131.64**	**344**	*e*P	**PKPdf**	**02 47 13.8**	**-1.6**
OSL				IVmB_BB		02 47 18.1	
	comp=Z,1µm,7.6s						
ASF	**Jabal al Asfar**	**131.71**	**300**	PKP	**PKPdf**	**02 47 16.7**	**+0.2**
	comp=Z,12nm,0.7s,baz=46,slow=1.6,SNR=20						
ASF				pPKP	**pPKPdf**	**02 47 59.1**	**-0.9**
	comp=Z,9.7nm,0.8s,baz=180,slow=1.5,SNR=3.7						
ASF				SKPbc	**SKPbc**	**02 50 26.4**	**-0.6**
	comp=Z,11nm,0.9s,baz=8.7,slow=1.7,SNR=5.1						
SUW	**Suwalki**	**131.75**	**332**	*e*PKPc	**PKPdf**	**02 47 15.6**	**-0.2**
SUW				*e*pPKPdf	**pPKPdf**	**02 47 58.8**	**-0.4**
SUW				*e*PP	**PP**	**02 49 34.5**	**-3.1**
SUW				*e*SKPdf	**SKPab**	**02 50 27.7**	**+0.6**
SUW				*e*PKS	PKSdf	02 50 43.8	-8.2
SUW				*e*		02 51 23.3	
SUW				*e*		02 51 42.2	
SUW				*e*SKKSac	**SKKSac**	**02 56 15.4**	**-2.2**
SUW	**Suwalki**	**131.75**	**332**	*e*PKPdf	**PKPdf**	**02 47 17.3**	**+1.5**
SUW	**Suwalki**	**131.75**	**332**	⇑*e*PKIKP	**PKPdf**	**02 47 15.6**	**-0.2**
SUW				*e*		02 47 58.7	
SUW				*e*		02 49 34.5	
YURE	**YUREGIR**	**131.79**	**306**	*e*P	**PKPdf**	**02 47 18.6**	**+2.1**
SUE	**Sulen**	**131.97**	**349**	*e*PKPdf	**PKPdf**	**02 47 15.0**	**-1.0**
ILGA	**Ilgaz**	**132.00**	**313**	*e*PKPdf	**PKPdf**	**02 47 17.7**	**+0.7**
KRTS	**Karatas**	**132.05**	**306**	*e*P	**PKPdf**	**02 47 17.1**	**+0.2**
KARA	**Karaisali**	**132.13**	**307**	*e*P	**PKPdf**	**02 47 15.7**	**-1.4**
KONO	**Kongsberg**	**132.17**	**345**	*e*PKPdf	**PKPdf**	**02 47 15.9**	**-0.6**
KONO	**Kongsberg**	**132.17**	**345**	*e*Pdif	**Pdif**	**02 44 12.0**	**+0.3**
KONO				*e*PKPdf	PKPpre	02 47 11.8	
CANT	**Cankiri**	**132.22**	**312**	*e*P	**PKPdf**	**02 47 17.7**	**+0.5**
ASK	**Askoy**	**132.42**	**348**	*e*PKPdf	**PKPdf**	**02 47 17.0**	**+0.2**
ASK				IVmB_BB		02 47 21.1	
	comp=Z,1µm,1.9s						
ASK				*i*		02 50 31.8	
BER	**Bergen**	**132.48**	**348**	*e*PKPdf	**PKPdf**	**02 47 17.1**	**+0.1**
BRTR	**Keskin Array B**	**132.49**	**311**	PKP	**PKPdf**	**02 47 16.9**	**-1.0**
	comp=Z,12nm,0.6s,baz=147,slow=3.1,SNR=28						
BRTR				pPKP	**pPKPdf**	**02 48 00.1**	**-1.2**
	comp=Z,3.7nm,0.8s,baz=85,slow=29,SNR=2.6						
BRTR				SKPbc	**SKPbc**	**02 50 27.4**	**-2.2**
	comp=Z,5.9nm,0.9s,baz=125,slow=6.4,SNR=3.4						
BRTR				SKPab	**SKPab**	**02 50 32.7**	**+1.7**
	comp=Z,36nm,1.1s,baz=132,slow=1.8,SNR=12						
SORM	**Soroca**	**132.50**	**323**	⇑*i*P	PKPpre	02 47 00.9	
ODD1	**Odda**	**132.64**	**347**	*e*PKPdf	**PKPdf**	**02 47 17.7**	**+0.3**
MERS	**Mersin**	**132.64**	**307**	*e*P	**PKPdf**	**02 47 17.7**	**-0.5**
SERE	**Sereflikochisa**	**132.78**	**310**	*e*P	**PKPdf**	**02 47 18.7**	**+0.3**
KIS	**Kishinev**	**132.79**	**322**	⇑*i*PKP	**PKPdf**	**02 47 18.0**	**0.0**
KIS				M	M	02 47 20.0	
	comp=Z,900nm,3.0s						
KIS				*e*pPKP	**pPKPdf**	**02 48 00.0**	**-1.4**
KIS	**Kishinev**	**132.79**	**322**	*i* PP	PP	02 49 40.0	-4.6
	comp=Z,900nm,8.0s						
KIS	**Kishinev**	**132.79**	**322**	*i* PKS	**PKSbc**	**02 50 44.0**	**-2.9**
KIS	**Kishinev**	**132.79**	**322**	*e*PS	PS	03 01 10.0	+66
KIS				LRM	MLR	03 45 20.0	
	comp=Z,700nm,20.0s						
MMAI	**Mount Meron Ar**	**132.80**	**302**	PKP	**PKPdf**	**02 47 18.7**	**+0.1**
	comp=Z,16nm,0.7s,baz=73,slow=6.5,SNR=19						
MMAI				SKPbc	**SKPbc**	**02 50 28.5**	**-2.3**
	comp=Z,2.2nm,0.7s,baz=343,slow=16,SNR=2.9						
MMAI				SKPab	**SKPab**	**02 50 34.6**	**+2.1**
	comp=Z,26nm,0.9s,baz=60,slow=4.9,SNR=9.3						
AFSR	**Af¯ar-Bala (A**	**132.99**	**311**	*e*P	**PKPdf**	**02 47 19.0**	**+0.2**
KIZK	**Mersin**	**133.03**	**306**	*e*P	**PKPdf**	**02 47 19.1**	**+0.3**
SULT	**Sultanhani-AKS**	**133.04**	**309**	*e*P	**PKPdf**	**02 47 18.7**	**-0.2**
ANTO	**Ankara**	**133.06**	**311**	*e*P	**PKPdf**	**02 47 19.3**	**+0.4**
ANTO	**Ankara**	**133.06**	**311**	⇑*i*P	**PKPdf**	**02 47 19.9**	**+1.0**
ANTO	**Ankara**	**133.06**	**311**	*e*PKPpre	PKPpre	02 47 08.8	
ANTO				*e*PKPdf	**PKPdf**	**02 47 19.0**	**+0.1**
ANTO				*e*SKPbc	**SKPbc**	**02 50 30.6**	**-0.8**
ANTO	**Ankara**	**133.06**	**311**	*e*PKHKP	PKPpre	02 47 08.8	
ANTO				*e*		02 47 19.0	
LOD	**Lodumlu**	**133.07**	**311**	*e*P	**PKPdf**	**02 47 19.2**	**+0.3**
BR231	**Keskin MP Arra**	**133.08**	**311**	*e*PKPdf	**PKPdf**	**02 47 20.1**	**+1.1**
BLS5	**Blasjo**	**133.12**	**347**	*e*Pdif	**Pdif**	**02 44 18.1**	**+2.1**
BLS5				*e*PKPdf	**PKPdf**	**02 47 17.7**	**-0.6**
BLS5				IVmB_BB		02 47 22.7	
	comp=Z,2µm,1.5s						
BLS5				*e*SKPdf	**SKPdf**	**02 50 35.8**	**-2.3**
KULU	**Kulu**	**133.17**	**310**	*e*P	**PKPdf**	**02 47 18.7**	**-0.4**
EREN	**Erenkoy**	**133.25**	**305**	*e*P	**PKPdf**	**02 47 18.7**	**-0.5**
KEBE	**Keben-Mersin**	**133.38**	**307**	*e*P	**PKPdf**	**02 47 19.4**	**-0.1**
LEOM	**Leova**	**133.39**	**321**	⇑*i*P	**PKPdf**	**02 47 19.4**	**+0.3**
CHBY	**Cihanbeyli**	**133.40**	**310**	*e*P	**PKPdf**	**02 47 20.1**	**+0.5**
IKL	**Isikli**	**133.46**	**306**	*e*P	**PKPdf**	**02 47 18.8**	**-0.8**
AKKU	**Akkuyu-Mersin**	**133.58**	**306**	*e*P	**PKPdf**	**02 47 20.1**	**+0.3**
HOMB	**Homborsund**	**133.66**	**345**	*e*PKPdf	**PKPdf**	**02 47 19.1**	**-0.1**
HOMB				IVmB_BB		02 47 22.7	
	comp=Z,3µm,1.5s						
STAV	**Stavanger**	**133.73**	**347**	*e*Pdif	**Pdif**	**02 44 18.5**	**-0.1**
STAV				*e*PKPdf	**PKPdf**	**02 47 19.5**	**+0.1**
STAV				IVmBBB		02 47 23.3	
	comp=Z,2µm,1.8s						
STAV				*e*PP	**PP**	**02 49 51.2**	**+1.4**
STAV				*e*		02 50 30.3	
STAV				*i*		02 59 37.6	
EIL	**Elat**	**133.74**	**297**	SKP	**SKPdf**	**02 50 41.9**	**+1.8**
	comp=Z,37nm,1.0s,baz=100,slow=4.6,SNR=5.8						
BERE	**Bereket-Mersin**	**133.79**	**307**	*e*P	**PKPdf**	**02 47 20.1**	**-0.3**
LADK	**Ladik-KONYA**	**133.91**	**309**	*e*P	**PKPdf**	**02 47 19.4**	**-1.2**
SNART	**Snartemo**	**133.92**	**346**	*e*PKPdf	**PKPdf**	**02 47 20.0**	**+0.2**
TEKE	**Tekeli-Mersin**	**133.93**	**306**	*e*P	**PKPdf**	**02 47 19.1**	**-1.4**
LVV	**L’vov**	**133.95**	**327**	*e*PKIKP	**PKPdf**	**02 47 18.2**	**-1.9**
KONT	**Konya--Tatoy**	**133.99**	**309**	*e*P	**PKPdf**	**02 47 19.4**	**-1.2**
MDUB	**Mudurnu**	**134.00**	**313**	*e*P	**PKPdf**	**02 47 20.5**	**-0.1**
AUMIH	**MIHALICIK**	**134.01**	**312**	*e*P	**PKPdf**	**02 47 21.4**	**+0.7**
KIZT	**Kizilcal**	**134.05**	**310**	*e*P	**PKPdf**	**02 47 20.8**	**0.0**
CSS	**Mathiatis**	**134.06**	**305**	*e*P	**PKPdf**	**02 47 21.3**	**+0.5**
CSS	**Mathiatis**	**134.06**	**305**	*e*PKPdf	**PKPdf**	**02 47 21.8**	**+1.0**
CSS	**Mathiatis**	**134.06**	**305**	P	**PKPdf**	**02 47 19.3**	**-1.5**
CSS	**Mathiatis**	**134.06**	**305**	P	**PKPdf**	**02 47 22.4**	**+1.6**
CFR	**Carcaliu**	**134.08**	**320**	⇓*i*P	PKPpre	02 47 07.7	
MAMC	**Mammari**	**134.10**	**305**	P	**PKPdf**	**02 47 22.7**	**+1.9**
AUSIV	**SIVRIHISAR**	**134.12**	**311**	*e*P	**PKPdf**	**02 47 21.1**	**+0.2**
TIRR	**Tirgusor**	**134.25**	**319**	*e*PKPdf	**PKPdf**	**02 47 21.9**	**+1.1**
BEL	**Belsk**	**134.27**	**331**	*e*PKPc		02 47 21.3	
BEL				*e*pPKPdf	pPKPdf	02 48 03.9	-0.1
BEL				*e*PP	**PP**	**02 49 54.6**	**+1.0**
BEL				*e*SKPdf	**SKPbc**	**02 50 36.2**	**+1.2**
BEL				*e*PKS	**PKSdf**	**02 50 53.1**	**-3.7**
BEL				*e*		02 51 34.9	
BEL	**Belsk**	**134.27**	**331**	⇑*e*PKIKP	**PKPdf**	**02 47 21.3**	**+0.7**
BEL				*e*		02 48 03.9	
BEL				*e*		02 49 54.6	
BSD	**Bornholm Skovb**	**134.31**	**338**	*i* P	**PKPdf**	**02 47 19.9**	**-0.7**
	comp=Z,158nm,1.1s						
BSD				*i*		02 50 35.4	
	comp=Z,2µm,21.0s						
BSD	**Bornholm Skovb**	**134.31**	**338**	*i* PKIKP	**PKPdf**	**02 47 19.9**	**-0.7**
BSD				pmax	pmax		
	comp=Z,160nm,1.1s						
BSD				MLR	MLR		
	comp=Z,2µm,21.0s						
TESR	**Tescani**	**134.33**	**322**	⇓*i*P	PKPpre	02 47 06.9	
LEF	**Lefka**	**134.37**	**305**	*e*P	**PKPdf**	**02 47 21.1**	**-0.2**
TLB	**Topalu**	**134.42**	**319**	⇓*i*P	PKPpre	02 47 08.3	
BIZ	**Bicaz**	**134.43**	**323**	⇑*i*P	PKPpre	02 47 08.6	
MBAR	**Mbarara**	**134.44**	**254**	*e*PKPdf	**PKPdf**	**02 47 23.2**	**+0.8**
MBAR	**Mbarara**	**134.44**	**254**	*e*P	**PKPdf**	**02 47 22.5**	**+0.1**
HARR	**Harsova**	**134.44**	**319**	⇑*i*P	PKPpre	02 47 09.6	
SZAC	**Souni**	**134.47**	**305**	P	**PKPdf**	**02 47 23.3**	**+1.7**
GULT	**Gulveren**	**134.50**	**313**	*e*P	**PKPdf**	**02 47 23.5**	**+1.9**
SAUV	**Serdivan-Sakar**	**134.52**	**313**	*e*P	**PKPdf**	**02 47 20.8**	**-0.6**
GAZI	**Gazipasa**	**134.52**	**307**	*e*P	**PKPdf**	**02 47 20.8**	**-0.8**
SPNC	**Sapanca-Adapaz**	**134.55**	**313**	*e*P	**PKPdf**	**02 47 22.1**	**+0.6**
BURAR	**Bucovina Array**	**134.57**	**324**	⇑*i*P	PKPpre	02 47 12.7	
ALFC	**Alefka**	**134.59**	**305**	P	**PKPdf**	**02 47 23.1**	**+1.3**
VRI	**Vrincioaia**	**134.61**	**321**	⇓*i*P	PKPpre	02 47 09.1	
COP	**Copenhagen**	**134.71**	**340**	*i* P	**PKPdf**	**02 47 20.7**	**-0.6**
	comp=Z,80nm,1.1s						
COP				*i*		02 49 57.4	
	comp=Z,1µm,24.0s						
COP	**Copenhagen**	**134.71**	**340**	*i* PKIKP	**PKPdf**	**02 47 20.7**	**-0.6**
COP				*i*		02 49 57.4	
COP				pmax	pmax		
	comp=Z,80nm,1.1s						
COP				MLR	MLR		
	comp=Z,1µm,24.0s						
BORA	**Eskisehir**	**134.75**	**312**	*e*P	**PKPdf**	**02 47 22.1**	**+0.1**
PSN	**Preselentsi**	**134.75**	**318**	*e*P	**PKPdf**	**02 47 21.9**	**+0.1**
KWP	**Kalwaria Pacla**	**134.75**	**328**	*e*PKPc	**PKPdf**	**02 47 21.9**	**+0.3**
KWP				*e*pPKPdf	**pPKPdf**	**02 48 04.4**	**-0.6**
KWP				*e*PP	**PP**	**02 49 57.5**	**+0.7**
KWP				*e*SKPdf	**SKPbc**	**02 50 36.1**	**-0.5**
KWP				*e*		02 51 43.5	
KWP				*e*		03 10 52.9	
KWP	**Kalwaria Pacla**	**134.75**	**328**	⇑*e*PKIKP	**PKPdf**	**02 47 21.9**	**+0.3**
KWP				*e*		02 48 04.4	
KWP				*e*		02 49 57.5	
ICOR	**Ion Corvin**	**134.79**	**319**	⇓*i*P	PKPpre	02 47 11.5	
GKP	**Gorka Klasztor**	**134.81**	**335**	*e*PKPc	**PKPdf**	**02 47 21.9**	**+0.3**
GKP				*e*pPKPdf	**pPKPdf**	**02 48 03.7**	**-1.3**
GKP				*e*PP	**PP**	**02 49 58.6**	**+1.7**
GKP				*e*SKPdf	**SKPbc**	**02 50 36.5**	**-0.1**
GKP				*e*PKS	**PKSdf**	**02 50 55.0**	**-2.6**
GKP				*e*		02 51 36.6	
GKP				*e*SKKSac	**SKKSac**	**02 56 37.1**	**+0.9**
GKP	**Gorka Klasztor**	**134.81**	**335**	⇑*e*PKIKP	**PKPdf**	**02 47 21.9**	**+0.3**
GKP				*e*		02 48 03.7	
GKP				*e*		02 49 58.6	
AKMC	**Akamas**	**134.84**	**305**	P	**PKPdf**	**02 47 23.7**	**+1.4**
PPCY	**Paphos**	**134.86**	**305**	P	**PKPdf**	**02 47 23.5**	**+1.2**
TSUM	**Tsumeb**	**135.05**	**222**	*e*PKPpre	PKPpre	02 47 10.1	
TSUM				*e*PKPdf	**PKPdf**	**02 47 23.7**	**+0.4**
TSUM				*e*SKPbc	**SKPbc**	**02 50 39.1**	**+0.4**
MUD	**Monsted U’grnd**	**135.06**	**343**	*i* P	**PKPdf**	**02 47 21.1**	**-0.8**
	comp=Z,79nm,1.0s						
	comp=Z,2µm,22.0s						
MUD	**Monsted U’grnd**	**135.06**	**343**	*i* PKIKP	**PKPdf**	**02 47 21.1**	**-0.8**
MUD				pmax	pmax		
	comp=Z,79nm,1.0s						
MUD				MLR	MLR		
	comp=Z,2µm,22.0s						
LLD	**Lille Linde**	**135.07**	**340**	*i* P	**PKPdf**	**02 47 23.4**	**+1.4**
	comp=Z,251nm,1.2s						
LLD	**Lille Linde**	**135.07**	**340**	*e*PKIKP	**PKPdf**	**02 47 23.4**	**+1.4**
LLD				pmax	pmax		
	comp=Z,250nm,1.2s						
SUTC	**Sutluce-Ispart**	**135.16**	**309**	*e*P	**PKPdf**	**02 47 22.0**	**-0.9**
MLR	**Muntele Rosu**	**135.28**	**321**	PKP	**PKPdf**	**02 47 22.5**	**-0.4**
	comp=Z,16nm,1.1s,baz=17,slow=4.0						
MLR				SKPbc	**SKPbc**	**02 50 39.2**	**+0.6**
	comp=Z,5.3nm,1.0s,baz=8.3,slow=7.2,SNR=4.6						
MLR	**Muntele Rosu**	**135.28**	**321**	⇑*i*P	PKPpre	02 47 11.0	
ISP	**Isparta**	**135.41**	**309**	*e*P	**PKPdf**	**02 47 22.7**	**-0.7**
ISP	**Isparta**	**135.41**	**309**	*e*PKPdf	**PKPdf**	**02 47 24.2**	**+0.9**
BCK	**Bucak**	**135.47**	**309**	*e*P	**PKPdf**	**02 47 22.4**	**-1.1**
PRD	**Provadia**	**135.47**	**318**	*e*P	**PKPdf**	**02 47 23.6**	**+0.5**
UZH	**Uzhgorod**	**135.58**	**327**	*e*PKIKP	**PKPdf**	**02 47 22.0**	**-1.2**
UZH				*i*		02 50 03.0	
ANTB	**Antalya**	**135.60**	**308**	*e*P	**PKPdf**	**02 47 22.1**	**-1.5**
TRPA	**Tarpa**	**135.75**	**326**	⇓*i*P	PKPpre	02 47 14.6	
TRPA	**Tarpa**	**135.75**	**326**	⇑*e*PKPdf	**PKPdf**	**02 47 24.0**	**+0.5**
KORT	**Korkueli**	**135.80**	**308**	*e*P	**PKPdf**	**02 47 23.1**	**-1.1**
OJC	**Ojcow**	**135.82**	**330**	*e*PKP	**PKPdf**	**02 47 23.7**	**+0.1**
OJC				*e*pPKPdf	**pPKPdf**	**02 48 05.5**	**-1.5**
OJC				*e*PP	**PP**	**02 50 03.5**	**+0.1**
OJC				*e*SKPdf	**SKPbc**	**02 50 40.4**	**+0.4**
OJC				*e*		02 51 38.6	
OJC				*e*		02 51 57.5	
OJC				*e*SKKSac	**SKKSac**	**02 56 39.8**	**-2.6**
OJC	**Ojcow**	**135.82**	**330**	*e*PKIKP	**PKPdf**	**02 47 23.7**	**+0.1**
OJC				*e*		02 48 05.5	
OJC				*e*		02 50 03.5	
VOIR		**135.84**	**322**	⇓*i*P	PKPpre	02 47 14.6	
CRVS	**Cervenica-Dubn**	**135.84**	**328**	*e*PKHKP	PKPpre	02 47 11.7	
CRVS				*e*		02 47 23.9	
CRVS				*e*		02 50 04.6	
CRVS	**Cervenica-Dubn**	**135.84**	**328**	*e*	PKPpre	02 47 11.7	
CRVS	**Cervenica-Dubn**	**135.84**	**328**	*e*PKP	**PKPdf**	**02 47 23.9**	**+0.2**
CRVS				*e*PP	**PP**	**02 50 04.6**	**+0.9**
CRVS				*e*SKPDF		02 50 42.4	
NIE	**Niedzica**	**136.10**	**329**	*e*PKPc	**PKPdf**	**02 47 25.2**	**+1.0**
NIE				*e*pPKPdf	**pPKPdf**	**02 48 07.2**	**-0.4**
NIE				*e*PP	**PP**	**02 50 06.6**	**+1.3**
NIE				*e*SKPdf	**SKPdf**	**02 50 42.7**	**-1.1**
NIE				*e*		02 51 41.2	
NIE				*e*SP	SKKPbc	02 59 28.6	-13
NIE				*e*		03 10 56.7	
NIE	**Niedzica**	**136.10**	**329**	⇑*e*PKIKP	**PKPdf**	**02 47 25.2**	**+1.0**
NIE				*e*		02 48 07.2	
NIE				*e*		02 50 06.6	
ARR	**Arges**	**136.13**	**322**	⇓*i*P	PKPpre	02 47 14.9	
JMB	**Yambol**	**136.34**	**317**	*e*P	**PKPdf**	**02 47 24.2**	**-0.6**
HUMR	**Humele**	**136.36**	**321**	⇓*i*P	PKPpre	02 47 16.8	
SZH	**Strazhica**	**136.39**	**319**	*e*P	**PKPdf**	**02 47 24.6**	**-0.3**
DRGR		**136.44**	**325**	⇑*i*P	PKPpre	02 47 11.4	
LTVH	**L^'tav^'rtes,**	**136.54**	**326**	⇑*e*PKPdf	**PKPdf**	**02 47 27.3**	**+2.3**
LOT	**Lotru**	**136.60**	**322**	⇑*i*P	PKPpre	02 47 20.6	
MANT	**Manisa**	**136.62**	**311**	*e*PKPdf	**PKPdf**	**02 47 27.7**	**+1.9**
LANS	**Liptovska Anna**	**136.69**	**329**	*e*PKHKP	PKPpre	02 47 16.9	
LANS	**Liptovska Anna**	**136.69**	**329**	*e*	PKPpre	02 47 16.9	
LANS	**Liptovska Anna**	**136.69**	**329**	*e*PKP	**PKPdf**	**02 47 27.8**	**+2.5**
LANS				*e*SKP		02 50 47.1	
PVL	**Pavlikeni**	**136.80**	**319**	*e*P	**PKPdf**	**02 47 25.6**	**0.0**
DEV	**Deva**	**136.86**	**324**	⇓*i*P	PKPpre	02 47 14.9	
OKC	**Ostrava-Krasne**	**136.86**	**331**	*e*PKPpre	PKPpre	02 47 11.0	
OKC				*e*PKPdf	**PKPdf**	**02 47 20.3**	**-5.2**
OKC				*e*pPKP	pPKPdf	02 48 09.2	+0.3
OKC				AMS	AMS	03 51 10.0	
	comp=Z,1µm,18.8s						
OKC	**Ostrava-Krasne**	**136.86**	**331**	*e*PKHKP	PKPpre	02 47 11.0	
OKC				MLR	MLR		
	comp=Z,1µm,18.8s						
KSP	**Ksiaz**	**136.99**	**333**	*e*PKPc	**PKPdf**	**02 47 26.2**	**+0.4**
KSP				*e*pPKPdf	**pPKPdf**	**02 48 08.9**	**-0.2**
KSP				*e*PP	**PP**	**02 50 10.2**	**-0.4**
KSP				*e*SKPdf	**SKPdf**	**02 50 44.5**	**-0.9**
KSP				*e*		02 51 41.4	
KSP				*e*		02 51 59.8	
KSP				*e*SKKSac	**SKKSac**	**02 56 50.9**	**+1.6**
KSP				*e*PS	PS	02 59 51.4	-48
KSP				*e*		03 10 56.6	
KSP	**Ksiaz**	**136.99**	**333**	⇑*e*PKIKP	**PKPdf**	**02 47 26.2**	**+0.4**
KSP				*e*		02 48 09.0	
KSP				*e*		02 50 10.2	
KPL	**Plockton**	**137.06**	**354**	*e*P	PKPpre	02 47 18.7	
DRUM	**Mains of Drumt**	**137.11**	**352**	*e*P	PKPpre	02 47 22.0	
MORC	**Moravsky Berou**	**137.18**	**331**	⇓*i*P	PKPpre	02 47 16.7	
MORC	**Moravsky Berou**	**137.18**	**331**	*e*PKP	PKPpre	02 47 15.2	
MORC				*e*		02 47 26.5	
MORC				*e*		02 48 09.6	
MORC				*e*PP	**PP**	**02 50 13.8**	**+1.8**
MORC				*e*SKP		02 50 45.5	
PSZ	**Piszkesteto**	**137.27**	**328**	⇑*i*P	PKPpre	02 47 21.9	
PSZ	**Piszkesteto**	**137.27**	**328**	⇑*e*PKPdf	**PKPdf**	**02 47 26.7**	**+0.2**
YER	**Yerkesik**	**137.31**	**309**	P	PKPpre	02 47 21.7	
YER	**Yerkesik**	**137.31**	**309**	P	PKPpre	02 47 21.7	
KRLC	**Kraliky**	**137.32**	**332**	*e*PKPpre	PKPpre	02 47 15.8	
KRLC				*e*PKPdf	**PKPdf**	**02 47 27.3**	**+0.8**
KRLC	**Kraliky**	**137.32**	**332**	*e*PKHKP	PKPpre	02 47 15.8	
KRLC				*e*		02 47 27.3	
DPC	**Dobruska-Polom**	**137.33**	**333**	*e*PKPpre	PKPpre	02 47 16.7	
DPC				*e*PKPdf	**PKiKP**	**02 47 28.9**	**+0.5**
DPC				*e*pPKP	pPKPdf	02 48 05.8	-4.1
DPC				*e*PP	**PP**	**02 50 13.1**	**+0.2**
DPC				*e*SKP		02 50 44.7	
DPC				AMS	AMS	03 46 10.0	
	comp=Z,3µm,26.9s						
DPC	**Dobruska-Polom**	**137.33**	**333**	*e*PKHKP	PKPpre	02 47 16.7	
DPC				*e*		02 50 13.1	
DPC				MLR	MLR		
	comp=Z,3µm,26.9s						
UPC	**Upice**	**137.35**	**333**	*e*PP	PP	02 50 13.7	+0.7
UPC				AMS	AMS	03 45 00.0	
	comp=Z,2µm,23.1s						
ALN	**Alexandroupoli**	**137.41**	**315**	P	**PKPdf**	**02 47 24.4**	**-2.4**
ALN	**Alexandroupoli**	**137.41**	**315**	P	**PKPdf**	**02 47 24.4**	**-2.4**
VYHS	**Vyhne**	**137.44**	**329**	*e*PKHKP	PKPpre	02 47 13.7	
VYHS				*e*		02 47 26.8	
VYHS				*e*		02 50 15.7	
VYHS	**Vyhne**	**137.44**	**329**	*e*	PKPpre	02 47 13.7	
VYHS				*e*		02 47 19.0	
VYHS	**Vyhne**	**137.44**	**329**	*e*PKP	**PKPdf**	**02 47 26.8**	**+0.1**
VYHS				*e*PP	**PP**	**02 50 15.7**	**+2.1**
VYHS				*e*SKP		02 50 47.0	
KDZ	**Kurdzhali**	**137.49**	**317**	*e*P	**PKPdf**	**02 47 26.1**	**-0.9**
RDO	**Rodhopi**	**137.64**	**316**	P	PKPpre	02 47 15.4	
RDO	**Rodhopi**	**137.64**	**316**	P	PKPpre	02 47 15.4	
HERR	**Herculane**	**137.71**	**323**	⇓*i*P	PKPpre	02 47 16.4	
BZS	**Buzias**	**137.75**	**324**	⇓*i*P	PKPpre	02 47 15.2	
JAVC	**Velka Javorina**	**137.76**	**330**	*e*PKP	PKPpre	02 47 18.4	
JAVC				*e*		02 47 28.8	
JAVC				*e*		02 48 11.9	
JAVC				*e*PP	**PP**	**02 50 18.6**	**+3.0**
JAVC				*e*SKP		02 50 49.0	
PGB	**Panagyurishte**	**137.87**	**319**	*e*P	**PKPdf**	**02 47 26.0**	**-1.7**
RZN	**Rozhen**	**137.94**	**317**	*e*P	PKPpre	02 47 22.8	
VRAC	**Vranov**	**137.95**	**331**	⇑*i*P	PKPpre	02 47 16.9	
VRAC	**Vranov**	**137.95**	**331**	*e*PKP	PKPpre	02 47 18.4	
VRAC				*e*		02 47 27.8	
VRAC				*e*		02 48 11.0	
VRAC				*e*PP	**PP**	**02 50 18.6**	**+1.9**
VRAC				*e*SKP		02 50 48.3	
SMTH	**Samothraki Isl**	**137.96**	**315**	P	PKPpre	02 47 16.8	
SMTH	**Samothraki Isl**	**137.96**	**315**	P	PKPpre	02 47 16.8	
BRG	**Berggiesshubel**	**137.96**	**335**	*e*PDIFF	**Pdif**	**02 44 31.1**	**-6.6**
	comp=Z,2.6nm,0.9s						
BRG				*e*pPDIFF		02 45 09.2	
	comp=Z,1.9nm,1.2s						
BRG				*e*sPDIFF		02 45 26.6	
	comp=Z,2.6nm,1.2s						
BRG	**Berggiesshubel**	**137.96**	**335**	*e*PKP	PKPpre	02 47 17.7	
	comp=Z,23nm,1.1s						
BRG				*i*		02 47 28.1	
	comp=Z,208nm,1.3s						
BRG				SKP		02 50 18.0	
BRG				SS	SS	03 08 03.0	-10
	comp=N,1µm,19.9s						
	comp=E,910nm,23.1s						
	comp=Z,2µm,22.9s						
BRG	**Berggiesshubel**	**137.96**	**335**	*e*PKHKP	PKPpre	02 47 17.7	
BRG				*i*		02 47 28.1	
BRG						02 50 18.0	
BRG				pmax	pmax		
	comp=Z,23nm,1.1s						
BRG				pmax	pmax		
	comp=Z,208nm,1.3s						
BRG				MLR	MLR		
	comp=N,1µm,19.9s						
BRG				MLR	MLR		
	comp=E,910nm,23.1s						
BRG				MLR	MLR		
	comp=Z,2µm,22.9s						
PVCC	**Panska Ves**	**137.96**	**334**	*e*PKPpre	PKPpre	02 47 18.9	
PVCC				*e*PKPdf	**PKPdf**	**02 47 28.0**	**+0.5**
PVCC				*e*PP	**PP**	**02 50 16.7**	**0.0**
PVCC				AMS	AMS	03 50 20.0	
	comp=Z,1µm,24.4s						
PVCC	**Panska Ves**	**137.96**	**334**	*e*PKHKP	PKPpre	02 47 18.9	
PVCC				*e*		02 47 28.0	
PVCC				*e*		02 50 16.7	
PVCC				MLR	MLR		
	comp=Z,1µm,24.4s						
PRK	**Paraskevi**	**137.97**	**313**	P	PKPpre	02 47 13.3	
PRK	**Paraskevi**	**137.97**	**313**	P	PKPpre	02 47 13.3	
PRK	**Paraskevi**	**137.97**	**313**	PKHKP	PKPpre	02 47 13.3	
BUD	**Budapest**	**138.00**	**328**	⇑*e*PKPdf	**PKPdf**	**02 47 27.8**	**+0.1**
CLL	**Collm**	**138.00**	**336**	*e*PKPpre	PKPpre	02 47 18.0	
	comp=Z,15nm,0.8s						

CLL				iPKiKP	PKPdf	02 47 29.2	+1.6
	comp=Z,208nm,1.5s						
CLL				ipPKiKP	pPKPdf	02 48 10.8	-0.2
	comp=Z,61nm,1.4s						
CLL				esPKiKP	sPKiKP	02 48 30.0	+0.2
CLL				ePP	PP	02 50 19.0	+2.1
	comp=Z,1µm,14.7s						
CLL				iSKPdf	SKPdf	02 50 48.7	+1.6
CLL				iPKSdf	PKSdf	02 51 03.2	-0.3
CLL				eSS	SS	03 08 24.0	+10
CLL				esSS		03 09 48.0	
CLL				eSSS	SSS	03 14 00.0	
CLL	Collm	138.00	336	iPKIKP	PKPdf	02 47 29.2	+1.6
CLL				i		02 48 10.8	
CLL				pmax	pmax		
	comp=Z,208nm,1.5s						
CLL				MLR	MLR		
	comp=Z,2µm,23.8s						
SMOL	Smolenice	138.11	330	ePKIKP	PKPdf	02 47 28.5	+0.6
SMOL	Smolenice	138.11	330	ePKP	PKPdf	02 47 28.5	+0.6
MDVR	Moldovita	138.18	323	⇓iP	PKPpre	02 47 18.1	
KRUC	Moravsky	138.22	331	ePKP	PKPpre	02 47 18.2	
KRUC				e		02 47 28.2	
KRUC				e		02 48 11.4	
KRUC				ePP	PP	02 50 20.3	+1.9
KRUC				eSKP		02 50 49.5	
SIGR	SIGRI	138.28	313	P	PKPpre	02 47 24.8	
SIGR	SIGRI	138.28	313	P	PKPpre	02 47 24.8	
MODS	Modra-Piesok	138.28	330	ePKHKP	PKPpre	02 47 20.9	
MODS				e		02 47 28.8	
MODS				e		02 50 21.3	
MODS	Modra-Piesok	138.28	330	e	PKPpre	02 47 20.9	
MODS	Modra-Piesok	138.28	330	ePKP	PKPdf	02 47 28.8	+0.6
MODS				ePP	PP	02 50 21.3	+2.5
MODS				eSKP		02 50 50.2	
GOPC	GO Pecny, Ondr	138.32	333	ePKPpre	PKPpre	02 47 19.6	
GOPC				ePKPdf	PKPdf	02 47 28.6	+0.3
GOPC				epPKP	pPKPdf	02 48 12.4	+0.7
GOPC				ePP	PP	02 50 19.3	+0.3
GOPC				AMS	AMS	03 49 40.0	
	comp=Z,1µm,17.7s						
GOPC	GO Pecny, Ondr	138.32	333	ePKHKP	PKPpre	02 47 19.6	
GOPC				e		02 47 28.6	
GOPC				e		02 48 12.4	
GOPC				e		02 50 19.3	
GOPC				MLR	MLR		
	comp=Z,1µm,17.7s						
PRA	Prague	138.36	334	AMS	AMS	03 50 00.0	
	comp=Z,1µm,21.1s						
PRU	Pruhonice	138.38	334	ePKPpre	PKPpre	02 47 12.7	
PRU				ePKPdf	PKPdf	02 47 28.9	+0.6
PRU				ePP	PP	02 50 17.8	-1.5
PRU				eSKP		02 50 58.7	
PRU				AMS	AMS	03 49 10.0	
	comp=Z,1µm,19.0s						
PRU	Pruhonice	138.38	334	ePKHKP	PKPpre	02 47 12.7	
PRU				e		02 47 28.9	
PRU				e		02 50 17.8	
PRU				MLR	MLR		
	comp=Z,1µm,19.0s						
THAS	Thassos island	138.44	316	P	PKPpre	02 47 20.4	
LIA	Limnos Island	138.45	315	P	PKPpre	02 47 15.5	
LIA	Limnos Island	138.45	315	P	PKPpre	02 47 15.5	
VTS	Vitosha	138.46	319	⇑iP	PKPpre	02 47 20.8	
VTS	Vitosha	138.46	319	P	PKPpre	02 47 19.4	
VTS	Vitosha	138.46	319	eP	PKPpre	02 47 22.8	
VTS	Vitosha	138.46	319	P	PKPpre	02 47 19.4	
CSKK	Csˆ‡kako	138.47	328	⇑ePKPdf	PKPpre	02 47 21.5	
CHOS	Chios island	138.48	312	P	PKPpre	02 47 20.2	
CHOS	Chios island	138.48	312	P	PKPpre	02 47 20.2	
NVR	Nevrokopi	138.66	317	P	PKPpre	02 47 19.2	
NVR	Nevrokopi	138.66	317	P	PKPpre	02 47 19.2	
EKA	Eskdalemuir Ar	138.74	352	PKhKP	PKPpre	02 47 17.6	
	comp=Z,8.8nm,0.7s,baz=12,slow=2.4,SNR=26						
ESK	Eskdalemuir	138.76	352	ePKPpre	PKPpre	02 47 19.0	
ESK				ePKPdf	PKPdf	02 47 29.5	+0.7
ESK	Eskdalemuir	138.76	352	eP	PKPpre	02 47 15.8	
KKB	Krupnik	138.91	318	eP	PKPpre	02 47 21.0	
SRS	Serrai	138.95	317	P	PKPpre	02 47 17.8	
SRS	Serrai	138.95	317	P	PKPpre	02 47 17.8	
MORH	Mˆ‡rˆ¡gy, Hung	139.02	327	⇑ePKPdf	PKPdf	02 47 29.7	+0.1
NKC	Novy Kostel	139.06	335	ePKPpre	PKPpre	02 47 17.9	
NKC				ePKPdf	PKPdf	02 47 30.1	+0.5
NKC				ePP	PP	02 50 23.3	-0.2
NKC				AMS	AMS	03 49 50.0	
	comp=Z,2µm,22.2s						
NKC	Novy Kostel	139.06	335	ePKHKP	PKPpre	02 47 17.9	
NKC				e		02 47 30.1	
NKC				e		02 50 23.3	
NKC				MLR	MLR		
	comp=Z,2µm,22.2s						
OUR	Ouranopolis	139.07	316	P	PKPpre	02 47 18.3	
OUR	Ouranopolis	139.07	316	P	PKPpre	02 47 18.3	
GDLE	Glaisdale, N Y	139.25	349	eP	PKPpre	02 47 19.5	
CONA	Conrad Observa	139.27	330	ePKPdf	PKPpre	02 47 21.3	
	comp=Z,5.8nm,0.7s,SNR=9.7						
CONA				SKPbc	SKiKP	02 50 52.9	-0.3
	comp=Z,58nm,2.0s						
KNT	Kendrikon	139.39	318	P	PKPpre	02 47 20.0	
KNT	Kendrikon	139.39	318	P	PKPpre	02 47 20.0	
PLG	Polygyros	139.41	316	P	PKPpre	02 47 21.3	
PLG	Polygyros	139.41	316	P	PKPpre	02 47 21.3	
KHC	Kasperske Hory	139.43	333	ePKPpre	PKPpre	02 47 14.6	
KHC				ePKPdf	PKPdf	02 47 30.4	+0.1
KHC				ePP	PP	02 50 21.8	-4.0
KHC				eSKP		02 51 00.6	
KHC				AMS	AMS	03 49 40.0	
	comp=Z,1µm,21.6s						
KHC	Kasperske Hory	139.43	333	ePKHKP	PKPpre	02 47 14.6	
KHC				e		02 47 30.4	
KHC				e		02 50 21.8	
KHC				MLR	MLR		
	comp=Z,1µm,21.6s						
KESW	Keswick, Cumbr	139.46	351	eP	PKPpre	02 47 17.6	
PAIG	Paliouri	139.46	315	P	PKPpre	02 47 17.4	
PAIG	Paliouri	139.46	315	P	PKPpre	02 47 17.4	
PAIG	Paliouri	139.46	315	PKHKP	PKPpre	02 47 17.4	
IDGL	Inch Island, C	139.47	355	eP	PKPpre	02 47 19.1	
VAY	Valandovo	139.52	318	iP	PKPpre	02 47 22.0	
STIP	Stip	139.57	319	iP	PKPpre	02 47 21.5	
GERES	GERESS Array B	139.59	333	PKhKP	PKPpre	02 47 22.2	
	comp=Z,4.8nm,0.5s,baz=35,slow=4.6,SNR=23						
GERES				SKPbc	SKiKP	02 50 53.5	-0.4
	comp=Z,16nm,0.8s,baz=56,slow=3.4,SNR=9.6						
GERES				SKPab	SKPab	02 51 04.6	+2.8
	comp=Z,6.0nm,0.9s,baz=56,slow=3.4,SNR=2.9						
WTSB	Winterswijk	139.64	341	ePKPab	PKPpre	02 47 23.1	
WTSB				ePKPbc	PKiKP	02 47 30.5	-2.4
WTSB				ePKPdf	PKPdf	02 47 34.4	+3.9
AOS	Alonnisos	139.68	314	P	PKPpre	02 47 21.8	
AOS	Alonnisos	139.68	314	P	PKPpre	02 47 21.8	
IOSP	Ios island	139.69	310	P	PKPpre	02 47 22.3	
KARY	Karystos	139.78	312	P	PKPpre	02 47 24.0	
GRG	Griva	139.81	318	P	PKPpre	02 47 21.5	
GRG	Griva	139.81	318	P	PKPpre	02 47 21.5	
BEHE	Becsehely	139.83	328	⇑ePKPdf	PKPdf	02 47 30.6	-0.5
HPK	Haverah Park	139.83	350	eP	PKPpre	02 47 18.8	
SKO	Skopje	139.90	319	iP	PKPpre	02 47 23.6	
ARSA	Arzberg	139.91	330	ePKPdf	PKPpre	02 47 24.3	
	comp=Z,11nm,0.9s						
ARSA				eSKPab	SKPab	02 51 05.6	+2.3
	comp=Z,44nm,1.7s						
SKIA	Skiathos	139.96	315	P	PKPpre	02 47 28.0	
IOMK	Kirk Michael	139.97	353	eP	PKPpre	02 47 18.0	
GRFO	Grafenberg	139.98	336	ePKPpre	PKPpre	02 47 24.9	
XOR	Xorichti	140.06	315	P	PKPpre	02 47 22.3	
XOR	Xorichti	140.06	315	P	PKPpre	02 47 22.3	
MOA	Molln	140.08	332	ePKPdf	PKPpre	02 47 25.0	
	comp=Z,66nm,1.9s,SNR=12						
MOA				eSKPab	SKPab	02 51 08.6	+4.6
	comp=Z,28nm,1.4s						
WIM	Isle of Man	140.10	353	eP	PKPpre	02 47 24.9	
KOGS	Kog	140.11	329	iPKPdf	PKPpre	02 47 22.3	
KOGS				ePP	PP	02 50 28.7	-1.3
KOGS				eSKPdf	SKiKP	02 50 53.9	-1.0
KOGS				epPP		02 51 06.7	
KOGS				e		02 52 06.2	
KOGS				eSKKSac	SKKSac	02 57 09.1	+1.1
KOGS				e		03 03 27.9	
LAST	Lasithi	140.14	308	P	PKPpre	02 47 24.3	
LAST	Lasithi	140.14	308	P	PKPpre	02 47 24.3	
LIT	Litokhoron	140.18	316	P	PKPpre	02 47 22.5	
LIT	Litokhoron	140.18	316	P	PKPpre	02 47 22.5	
PTL	Penteli	140.18	313	P	PKPpre	02 47 22.3	
PTL	Penteli	140.18	313	P	PKPpre	02 47 22.3	
SMIA	Simia	140.27	314	P	PKPpre	02 47 22.8	
VLY	Voula,Athens	140.32	313	P	PKPpre	02 47 22.4	
VLY	Voula,Athens	140.32	313	P	PKPpre	02 47 22.4	
KRUS	Krusevo	140.34	319	iP	PKPpre	02 47 24.4	
IVA	Berane	140.35	322	ePKP	PKPpre	02 47 23.5	
MHLO	Agia Marina, M	140.36	311	P	PKPpre	02 47 24.6	
PLE	Pljevlja	140.38	323	ePKP	PKPpre	02 47 21.2	
LBWR	Ladybower, Pea	140.38	350	eP	PKPpre	02 47 18.3	
PVY	Plav	140.47	321	ePKP	PKPpre	02 47 24.7	
BIA	Bitola	140.48	318	iP	PKPpre	02 47 26.6	
LKR	Lokris	140.52	314	P	PKPpre	02 47 22.6	
LKR	Lokris	140.52	314	P	PKPpre	02 47 22.6	
VILL	Villia	140.52	313	P	PKPpre	02 47 21.0	
IDI	Anoyia	140.54	308	PKhKP	PKPpre	02 47 21.5	
	comp=Z,4.7nm,0.5s,baz=354,slow=17,SNR=2.0						
IDI	Anoyia	140.54	308	⇑iP	PKPpre	02 47 26.7	
SOKA	Soboth	140.56	330	ePKPdf	PKPpre	02 47 25.7	
	comp=Z,11nm,0.6s,SNR=24						
KZN	Kozani	140.56	317	P	PKPpre	02 47 20.7	
KZN	Kozani	140.56	317	P	PKPpre	02 47 20.7	
KZN	Kozani	140.56	317	PKHKP	PKPpre	02 47 20.7	
FNA	Florina	140.57	318	P	PKPpre	02 47 23.3	
FNA	Florina	140.57	318	P	PKPpre	02 47 23.3	
FNA	Florina	140.57	318	PKHKP	PKPpre	02 47 23.3	
WACR	West Acre	140.57	347	eP	PKPpre	02 47 23.6	
KOME	Kolasin	140.59	322	⇑iPKP	PKPpre	02 47 24.0	
SIVA	Sivas	140.70	308	P	PKPpre	02 47 26.2	
SIVA	Sivas	140.70	308	P	PKPpre	02 47 26.2	
UPM	Unac-Piva	140.74	323	ePKP	PKPpre	02 47 23.2	
BLY	Banja Luka	140.75	326	⇑iP	PKPpre	02 47 24.6	
THL	Klokotos Trika	140.76	316	P	PKPpre	02 47 20.2	
STNC	Stoke	140.76	350	eP	PKPpre	02 47 22.9	
OHR	Ohrid	140.77	319	iP	PKPpre	02 47 26.0	
WME	Myndd Eilian	140.78	352	eP	PKPpre	02 47 26.6	
WPS	Cemaes, Angles	140.81	352	eP	PKPpre	02 47 21.8	
AGG	Agios Georgios	140.81	315	P	PKPpre	02 47 25.1	
AGG	Agios Georgios	140.81	315	P	PKPpre	02 47 25.1	
AGG	Agios Georgios	140.81	315	PKHKP	PKPpre	02 47 25.1	
LTK	Loutraki	140.83	313	P	PKPpre	02 47 23.3	
LTK	Loutraki	140.83	313	P	PKPpre	02 47 23.3	
WPM1	Penmaenmawr	140.87	352	eP	PKPpre	02 47 26.8	
DID	Didima	140.87	312	P	PKPpre	02 47 24.3	
DID	Didima	140.87	312	P	PKPpre	02 47 24.3	
WLF1	Llynfaes	140.90	352	eP	PKPpre	02 47 22.5	
OBKA	Obir	140.91	330	ePKPdf	PKPpre	02 47 27.8	
	comp=Z,6.9nm,0.6s						
NKY	Niksic	140.92	322	ePKP	PKPpre	02 47 24.5	
CWF	Charnwood Fore	140.94	349	eP	PKPpre	02 47 23.2	
HGN	Heimansgroeve	140.96	341	ePKPab	PKPpre	02 47 24.5	
HGN				ePKPbc	PKPdf	02 47 33.5	+0.5
DSF	Desfina	140.96	314	P	PKPpre	02 47 22.6	
DSF	Desfina	140.96	314	P	PKPpre	02 47 22.6	
YRC	Rhoscolyn	140.96	352	eP	PKPpre	02 47 25.9	
NKME	Niksic	140.97	322	⇑iPKP	PKPpre	02 47 25.2	
NEST	Nestorio	140.97	318	P	PKPdf	02 47 25.3	-8.2
KRND	KRANIDI	140.98	312	P	PKPpre	02 47 24.0	
TTG	Podgorica	140.99	322	⇑iPKP	PKPpre	02 47 25.6	
KPRO	Kipourio	141.00	317	P	PKPpre	02 47 24.1	
BEBN	Eben Emael	141.01	341	⇓PKP	PKPpre	02 47 27.9	
BEBN				⇑PP	PP	02 50 36.3	+1.1
VAM	Vamos	141.02	309	P	PKPpre	02 47 25.3	
VAM	Vamos	141.02	309	P	PKPpre	02 47 25.3	
KBA	Koelnbreinsper	141.07	331	ePKPdf	PKPpre	02 47 27.1	
	comp=Z,10nm,0.6s,SNR=20						
MEM	Membach	141.07	341	⇓PKP	PKPpre	02 47 27.3	
OZLJ	Ozalj	141.08	328	P	PKPpre	02 47 28.2	
CHAN	Chania	141.09	309	P	PKPpre	02 47 22.8	
FOEL	Foel Wylfa	141.12	351	eP	PKPpre	02 47 21.7	
CEME	Cevo	141.12	322	⇑iPKP	PKPpre	02 47 25.6	
BRY	Bratogost	141.14	323	⇑iPKP	PKPpre	02 47 25.1	
IMMV	Iera Moni Meta	141.16	309	P	PKPpre	02 47 24.1	
DRME	Dracevica, Mon	141.17	321	⇑iPKP	PKPpre	02 47 25.1	
EVR	Evrytania	141.22	315	P	PKPpre	02 47 22.3	
EVR	Evrytania	141.22	315	P	PKPpre	02 47 22.3	
LLW	Llanuwychllyn	141.23	351	eP	PKPpre	02 47 24.6	
LJU	Ljubljana	141.25	329	ePKPdf	PKPpre	02 47 26.2	
LJU				ePP	PP	02 50 36.7	-0.3
LJU				epPP		02 51 16.3	
LJU				e		02 52 10.5	
LJU				eSKKSac	SKKSac	02 57 14.8	+0.1
MYKA	Terra Mystica	141.26	331	ePKPdf	PKPpre	02 47 27.5	
	comp=Z,13nm,0.6s,SNR=22						
BOJS	Bojanci	141.26	328	ePKPdf	PKPpre	02 47 25.5	
ULC	Ulcinj	141.27	321	⇑iPKP	PKPpre	02 47 25.7	
BUM	Brajici-Budva	141.28	322	⇑iPKP	PKPpre	02 47 25.7	
SERG	Sergoula	141.29	314	P	PKPpre	02 47 24.6	
TRIZ	Trizonia	141.30	314	P	PKPpre	02 47 23.1	
GUR	Goura	141.31	313	P	PKPpre	02 47 24.9	
GUR	Goura	141.31	313	P	PKPpre	02 47 24.9	
GVD	Gavdhos	141.32	308	P	PKPpre	02 47 25.3	
GVD	Gavdhos	141.32	308	P	PKPpre	02 47 25.3	
EFP	Efpalio	141.39	314	P	PKPpre	02 47 28.5	
KLV	Kalavryta, Ach	141.40	314	P	PKPpre	02 47 25.8	
KLV	Kalavryta, Ach	141.40	314	P	PKPpre	02 47 25.8	
UCC	Uccle	141.40	343	⇑PKP	PKPpre	02 47 25.2	
UCC				⇓PP	PP	02 50 35.5	-1.9
VLI	Veliai	141.42	311	P	PKPpre	02 47 24.8	
VLI	Veliai	141.42	311	P	PKPpre	02 47 24.8	
LAKA	Lakka	141.42	314	P	PKPpre	02 47 24.4	
LAKA	Lakka	141.42	314	P	PKPpre	02 47 24.4	
HLM1	Long Mynd	141.43	350	eP	PKPpre	02 47 25.2	
HCY	Herceg Novi	141.44	322	⇑iPKP	PKPpre	02 47 26.7	
JAN	Janina	141.50	317	P	PKPpre	02 47 25.1	
JAN	Janina	141.50	317	P	PKPpre	02 47 25.1	
JAN	Janina	141.50	317	PKHKP	PKPpre	02 47 25.1	
CADS	Cadrg	141.50	330	ePKPdf	PKPpre	02 47 26.2	
CADS				epPKPdf	pPKPdf	02 48 10.2	-7.4
CADS				esPKPdf	sPKPdf	02 48 38.5	+4.1
ANKY	Antikythira Is	141.51	310	P	PKPpre	02 47 26.1	
ANKY	Antikythira Is	141.51	310	P	PKPpre	02 47 26.1	
KYTH	Kithira	141.53	311	P	PKPpre	02 47 26.2	
KYTH	Kithira	141.53	311	P	PKPpre	02 47 26.2	
VLX	Vlachokerasia	141.54	313	P	PKPpre	02 47 22.8	
VLX	Vlachokerasia	141.54	313	P	PKPpre	02 47 22.8	
PVO	Paravola	141.56	315	P	PKPpre	02 47 23.0	
KTHR	Kythira	141.57	311	P	PKPpre	02 47 24.1	
STON	Ston	141.65	323	P	PKPpre	02 47 28.4	
UDBI	Udbina	141.66	327	P	PKPpre	02 47 29.6	
WATA	Walderalm	141.67	333	ePKPdf	PKPpre	02 47 30.6	
	comp=Z,27nm,0.7s,SNR=33						
KNDS	Knezji Dol	141.69	329	ePKPdf	PKPpre	02 47 27.4	
ABTA	Abfaltersbach	141.70	332	ePKPdf	PKPpre	02 47 28.6	
	comp=Z,26nm,0.7s,SNR=34						
WTTA	Wattenberg	141.70	333	ePKPdf	PKPpre	02 47 30.0	
	comp=Z,153nm,1.3s,SNR=43						
DRO	Drossia	141.75	314	P	PKPpre	02 47 26.2	
SSW	Stow on the Wo	141.78	349	eP	PKPpre	02 47 29.9	
PDO	Prodromos	141.80	315	P	PKPpre	02 47 26.4	
DYR	Agios Nikonas	141.84	312	P	PKPpre	02 47 25.9	
WLF	Walferdange	141.84	340	⇑PKP	PKPpre	02 47 30.4	
MOTA	Moosalm	141.87	334	ePKPdf	PKPpre	02 47 31.7	
	comp=Z,206nm,1.2s,SNR=36						
MOTA				SKPbc	SKiKP	02 50 58.5	-0.2
	comp=Z,19nm,0.9s,SNR=5.3						
IGT	Igoumenitsa	141.90	317	P	PKPpre	02 47 25.9	
IGT	Igoumenitsa	141.90	317	P	PKPpre	02 47 25.9	
IGT	Igoumenitsa	141.90	317	PKHKP	PKPpre	02 47 25.9	
RETA	Reutte	141.90	334	ePKPdf	PKPpre	02 47 30.9	
	comp=Z,129nm,1.2s,SNR=62						
SGD	Sagiada	141.93	317	P	PKPpre	02 47 23.1	
ELSH	Elham, Standar	141.93	346	eP	PKPpre	02 47 27.3	
AMT	Artemida-Makis	141.94	313	P	PKPpre	02 47 25.6	
ITM	Ithomi	141.95	313	P	PKPpre	02 47 26.6	
ITM	Ithomi	141.95	313	P	PKPpre	02 47 26.6	
MCH1	Michaelchurch	141.95	350	eP	PKPpre	02 47 27.8	
DOU	Dourbes	141.96	342	⇑PKP	PKPpre	02 47 30.6	
STRD	Stroud	142.02	349	eP	PKPpre	02 47 24.5	
LKD2	Lefkada island	142.06	316	P	PKPpre	02 47 25.9	
LKD2	Lefkada island	142.06	316	P	PKPpre	02 47 25.9	
MONM	Monmouth	142.07	350	eP	PKPpre	02 47 27.3	
IWEX	Carrickbyrne,	142.08	354	eP	PKPpre	02 47 25.0	
NVLJ	Novalja	142.11	327	P	PKPpre	02 47 30.8	
KEK	Kerkira	142.16	318	P	PKPpre	02 47 27.7	
KEK	Kerkira	142.16	318	P	PKPpre	02 47 27.7	
OLDB	Oldbury-Upon-S	142.20	350	eP	PKPpre	02 47 27.7	
BFO	Black Forest	142.20	337	ePKPdf	PKPpre	02 47 31.4	
SWN1	Swindon	142.21	349	eP	PKPpre	02 47 27.0	
PYL	PYLOS	142.21	312	P	PKPpre	02 47 26.2	
PYL	PYLOS	142.21	312	P	PKPpre	02 47 26.2	
HGH	Gray Hill	142.26	350	eP	PKPpre	02 47 30.3	
FETA	Feichten	142.28	334	ePKPdf	PKPpre	02 47 31.6	
	comp=Z,118nm,1.0s,SNR=148						
KFL	Anninata	142.31	315	P	PKPpre	02 47 25.1	
HMNX	Herstmonceux	142.38	346	eP	PKPpre	02 47 24.5	
VLS	Valsamata	142.41	315	P	PKPpre	02 47 27.6	
VLS	Valsamata	142.41	315	P	PKPpre	02 47 27.6	
VLS	Valsamata	142.41	315	PKHKP	PKPpre	02 47 27.6	
DAVA	Damuels	142.43	335	ePKPdf	PKPpre	02 47 32.6	
	comp=Z,181nm,1.3s,SNR=51						
VAL	Valentia	142.76	357	⇓iP	PKPpre	02 47 28.5	
DAVOX	Davos/Dischmat	142.83	334	PKhKP	PKPpre	02 47 32.5	
	comp=Z,173nm,0.8s,baz=35,slow=2.9,SNR=87						
FASA	Fasano	143.09	321	eP	PKPbc	02 47 34.3	-0.1
CGL1	Ceglie Messapi	143.11	320	eP	PKPbc	02 47 34.6	+0.1
HTL	Hartland	143.15	351	eP	PKPab	02 47 30.9	-1.8
BAI	Bari	143.21	321	eP	PKPbc	02 47 34.7	0.0
TUE	Stuetta	143.30	334	ePKPdf	PKPbc	02 47 35.7	+0.6
TAR1	Taranto	143.30	320	eP	PKPab	02 47 34.1	+0.4
MASS	Massafra	143.33	321	eP	PKPab	02 47 33.4	-0.4
MS1	Monte Sant'Ang	143.39	323	eP	PKPbc	02 47 35.7	+0.4
SG1	Sgolgore (BA)	143.49	321	eP	PKPbc	02 47 35.3	-0.3
DYA	Yadsworthy	143.61	351	eP	PKPab	02 47 33.5	-1.2
SENIN	Lac Senin/Sane	144.22	336	ePKPdf	PKPbc	02 47 38.2	+0.4
TIP	Timpagrande	144.41	319	⇑iP	PKPdf	02 47 39.5	-0.1
TIP	Timpagrande	144.41	319	ePKPdf	PKPbc	02 47 38.9	+0.4
TIP	Timpagrande	144.41	319	P	PKPab	02 47 36.2	-2.0
CUC	Castrocucco	144.52	321	ePKPdf	PKPab	02 47 37.9	-0.7
VLC	Villacollemand	144.63	331	ePKPbc	PKPab	02 47 38.5	-0.3
CEL	Celeste	145.50	318	ePKPdf	PKPdf	02 47 40.8	-0.6
BNI	Bardonecchia	145.54	335	ePKPdf	PKPbc	02 47 41.8	-0.1
BNI	Bardonecchia	145.54	335	ePKP2	PKPbc	02 47 41.8	-0.1
VAE	Valguarnera	146.90	318	PKP	PKPdf	02 47 44.2	+0.3
	comp=Z,19nm,0.9s,baz=354,slow=2.8,SNR=10						
VAE				PKPbc	PKPab	02 47 47.3	-0.4
	comp=Z,138nm,1.0s,baz=323,slow=3.6,SNR=21						
CLTB	Caltabellotta	147.60	320	ePKPdf	PKPdf	02 47 45.0	-0.1
SHEL	Horse Pasture	148.81	193	ePKPbc	PKPbc	02 47 50.7	-0.9
SHEL	Horse Pasture	148.81	193	ePKP2	PKPbc	02 47 50.7	-0.9
H07N1	FLORES T-PHASE	150.28	29	ePKP	PKPbc	02 47 55.4	+0.9
TAMR	Tamra	150.44	323	ePKPdf	PKPdf	02 47 51.3	+1.8
KEST	Kesra	151.18	321	PKP	PKPdf	02 47 50.6	-0.2
	comp=Z,31nm,1.1s,baz=150,slow=0.4,SNR=20						
KEST				PKPbc	PKiKP	02 47 57.6	+0.3
	comp=Z,229nm,0.6s,baz=155,slow=0.6,SNR=209						
KEST	Kesra	151.18	321	ePKPdf	PKPdf	02 47 51.5	+0.7
KEST				PKPbc	PKiKP	02 47 57.6	+0.3
THTN	Thala	151.69	321	ePKPdf	PKPdf	02 47 52.4	+0.8
CMAH	Djebel Manchou	151.70	324	P	PKPdf	02 47 51.4	-0.2
CAEH	'Ain El Ouahch	151.91	325	P	PKPdf	02 47 51.3	-0.5
ABSA	Djebel Ababsia	151.92	324	P	PKPdf	02 47 51.9	0.0
PGRA	Graciosa	152.24	26	ePKP	PKPdf	02 47 54.6	+2.4
PCED	Cedros	152.25	28	ePKP	PKPbc	02 47 59.3	+0.2
CKFL	Kef-Lekhel	152.25	325	P	PKPdf	02 47 51.9	-0.6
CALA	Caldeira	152.29	28	ePKP	PKPdf	02 47 54.4	+2.0
HOR	Horta	152.37	28	ePKP	PKPbc	02 48 00.3	+1.0
ROSA	Rosais	152.38	27	ePKP	PKPdf	02 47 54.0	+1.6
ROSA	Rosais	152.38	27	ePKPdf	PKPdf	02 47 55.2	+2.8
PBRG	Braganca	152.46	350	ePKPdf	PKPdf	02 47 52.2	-0.3
PBRG	Braganca	152.46	350	ePKPbc	PKPbc	02 48 01.1	+1.6
PBRG	Braganca	152.46	350	ePKPab	PKPab	02 48 10.7	+0.4
PICO	Pico	152.48	27	ePKP	PKPdf	02 47 53.9	+1.2
CASM	Ain Smara	152.48	325	P	PKPdf	02 47 52.5	-0.2
PCAN	Candelaria	152.49	28	ePKP	PKPbc	02 48 00.0	+0.4
PGAV	Gavieira, Arco	152.52	353	ePKPdf	PKPdf	02 47 52.7	+0.1
PGAV	Gavieira, Arco	152.52	353	ePKPbc	PKPbc	02 47 59.8	+0.1
PGAV	Gavieira, Arco	152.52	353	ePKPab	PKPab	02 48 11.8	+1.2
PGAV	Gavieira, Arco	152.52	353	ePP	PP	02 51 44.9	+2.2
PMAN	Manadas	152.52	27	ePKP	PKPdf	02 47 54.6	+2.0
DFRA	Djebel Bou Aff	152.61	326	P	PKPdf	02 47 53.7	+0.7
CTEI	Djebel Teioual	152.67	325	P	PKPdf	02 47 53.1	0.0
PCAB	Cabril	152.74	352	ePKPdf	PKPdf	02 47 54.3	+1.4
PCAB	Cabril	152.74	352	ePKPbc	PKPbc	02 48 01.1	+1.0
PCAB	Cabril	152.74	352	ePKPab	PKPab	02 48 12.4	+1.0
PCAB	Cabril	152.74	352	ePP	PP	02 51 45.2	+1.4
ADH	Angra Heroismo	152.87	26	ePKP	PKPdf	02 47 54.5	+1.4
PSCM	Serra do Cume	152.88	25	ePKP	PKPdf	02 47 54.0	+0.8
POLO	Lamas de Olo	153.04	352	ePKPdf	PKPdf	02 47 53.9	+0.5
POLO	Lamas de Olo	153.04	352	ePKPbc	PKPbc	02 48 01.4	+0.5
POLO	Lamas de Olo	153.04	352	ePKPab	PKPab	02 48 14.0	+1.2
POLO	Lamas de Olo	153.04	352	ePP	PP	02 51 47.0	+1.4
SET	Setif	153.12	326	P	PKPdf	02 47 55.0	+1.3
PVRL	Vila Real	153.13	352	ePKPdf	PKPdf	02 47 54.2	+0.7
PVRL	Vila Real	153.13	352	ePKPbc	PKPbc	02 48 02.0	+1.0
PVRL	Vila Real	153.13	352	ePKPab	PKPab	02 48 13.3	+0.2
PVRL	Vila Real	153.13	352	ePP	PP	02 51 47.5	+1.5
MVO	Moncorvo	153.13	351	ePKPdf	PKPdf	02 47 53.4	-0.1
MVO	Moncorvo	153.13	351	ePKPbc	PKPbc	02 48 01.5	+0.5
MVO	Moncorvo	153.13	351	ePKPab	PKPab	02 48 14.7	+1.6
MVO	Moncorvo	153.13	351	ePP	PP	02 51 48.2	+2.1
PTO	Porto	153.38	353	ePKPbc	PKPbc	02 48 02.0	+0.6
PTO	Porto	153.38	353	ePKPab	PKPab	02 48 16.4	+2.4
PVIS	Viseu	153.70	352	ePKPdf	PKPdf	02 47 54.3	0.0
PVIS	Viseu	153.70	352	ePKPbc	PKPbc	02 48 03.0	+0.7
PVIS	Viseu	153.70	352	ePKPab	PKPab	02 48 16.6	+1.1
ES19	SONSECA Array	153.88	344	ePKPdf	PKPdf	02 47 54.5	-0.2
ESDC	Sonseca Array	153.93	345	PKP	PKPdf	02 47 54.4	-0.2
	comp=Z,24nm,1.2s,baz=5.0,slow=2.3,SNR=36						
ESDC				PKPbc	PKiKP	02 48 03.0	+0.2
	comp=Z,37nm,0.9s,baz=10,slow=2.4,SNR=41						
ESDC				PKPab	PKPab	02 48 17.8	+1.2
	comp=Z,72nm,0.9s,baz=12,slow=3.9,SNR=20						
ESDC				PP	PP	02 51 48.1	-2.5
	comp=Z,22nm,1.0s,baz=17,slow=7.0,SNR=7.2						
ESLA	Sonseca Array	153.93	345	ePKPdf	PKPdf	02 47 55.0	+0.3
MTE	Manteigas	153.96	351	ePKPdf	PKPdf	02 47 54.8	+0.1
MTE	Manteigas	153.96	351	ePKPbc	PKPbc	02 48 03.2	+0.3
MTE	Manteigas	153.96	351	ePKPab	PKPab	02 48 18.4	+1.7
MTE	Manteigas	153.96	351	ePP	PP	02 51 53.4	+2.6
MTE	Manteigas	153.96	351	ePKPdf	PKPdf	02 47 54.3	-0.5
PAB	San Pablo	154.14	345	ePKPdf	PKPdf	02 47 55.2	+0.1
PAB				ePKPbc	PKiKP	02 48 03.7	+0.3
PAB				ePKPab	PKPab	02 48 18.8	+1.3
PAB	San Pablo	154.14	345	ePKIKP	PKPdf	02 47 55.2	+0.1
PSET	Sete Cidades	154.19	24	ePKP	PKPdf	02 47 58.0	+2.9
COI	Coimbra	154.27	352	ePKPdf	PKPdf	02 47 54.8	-0.3
COI	Coimbra	154.27	352	ePKPbc	PKPbc	02 48 03.5	+0.1
COI	Coimbra	154.27	352	ePKPab	PKPab	02 48 19.0	+1.1
COI	Coimbra	154.27	352	ePP	PP	02 51 54.9	+2.5
PDA	Ponta Delgada	154.28	24	ePKP	PKPdf	02 47 58.9	+3.8
CMLA	Cha da Macela	154.32	24	ePKP	PKPdf	02 47 57.5	+2.3
CMLA	Cha da Macela	154.32	24	ePKPbc	PKPbc	02 48 01.8	-1.8
CMLA	Cha da Macela	154.32	24	ePKIKP	PKPbc	02 48 01.8	-1.8
EMHD	Djebel Mahouad	154.38	330	P	PKPdf	02 47 55.8	+0.3
PCAS	Casmilo, Conde	154.43	353	ePKPdf	PKPdf	02 47 55.4	+0.1
PCAS	Casmilo, Conde	154.43	353	ePKPbc	PKPbc	02 48 05.6	+1.8
PCAS	Casmilo, Conde	154.43	353	ePKPab	PKPab	02 48 19.6	+1.0
PCAS	Casmilo, Conde	154.43	353	ePP	PP	02 51 56.1	+2.8
BART	Pico Bartolome	154.45	23	ePKP	PKPdf	02 47 56.3	+0.8
PCBR	Castelo Branco	154.50	351	ePKPdf	PKPdf	02 47 55.2	-0.2
PCBR	Castelo Branco	154.50	351	ePKPab	PKPab	02 48 19.9	+1.1
PCBR	Castelo Branco	154.50	351	ePP	PP	02 51 57.4	+3.7
PTOM	Tomar	154.85	352	ePKPdf	PKPdf	02 47 55.9	0.0
PTOM	Tomar	154.85	352	ePKPbc	PKPbc	02 48 05.0	+0.3
PTOM	Tomar	154.85	352	ePKPab	PKPab	02 48 21.5	+1.1
PTOM	Tomar	154.85	352	ePP	PP	02 51 58.7	+3.1
PMRV	Marv??o	154.89	350	ePKPdf	PKPdf	02 47 56.0	0.0
PMRV	Marv??o	154.89	350	ePKPbc	PKPbc	02 48 05.3	+0.5
PMRV	Marv??o	154.89	350	ePKPab	PKPab	02 48 22.3	+1.7
PMRV	Marv??o	154.89	350	ePP	PP	02 51 58.9	+3.0
CART	Cartagena	154.91	338	ePKPbc	PKPbc	02 48 05.1	+0.2
EBNR	Beni Rached	154.98	332	P	PKPdf	02 47 58.6	+2.4
PSMA	Santa Maria	155.15	24	ePKP	PKPdf	02 47 56.8	+0.4
PSMN	Pico do Norte,	155.16	24	ePKP	PKPdf	02 47 54.6	-1.8
ECHA	Ech Chlef	155.17	332	P	PKPdf	02 48 04.8	+8.4
ALMR	Almeirim	155.33	352	ePKP	PKPdf	02 47 56.1	-0.4
ALMR				ePP	PP	02 51 60.0	+1.7
ALMR				AMS	AMS	04 01 36.5	
	comp=Z,2µm,25.0s						
ALMR	Almeirim	155.33	352	ePKPdf	PKPdf	02 47 56.1	-0.4
ALMR	Almeirim	155.33	352	ePKPab	PKPab	02 48 23.4	+1.0
ALMR	Almeirim	155.33	352	ePP	PP	02 52 00.7	+2.4
ALMR	Almeirim	155.33	352	ePKIKP	PKPdf	02 47 56.1	-0.4
ALMR				e		02 51 59.9	
PMTG	Montargil	155.37	352	ePKPdf	PKPdf	02 47 56.2	-0.4
PMTG	Montargil	155.37	352	ePKPab	PKPab	02 48 23.4	+0.8
PMTG	Montargil	155.37	352	ePP	PP	02 52 00.8	+2.3
EANR	'Ain N'Sour	155.46	332	P	PKPdf	02 48 07.6	+11

PESTR	Estremoz	155.47	350	ePKPdf	PKPdf	02 47 56.8	0.0
PESTR	Estremoz	155.47	350	ePKPab	PKPab	02 48 23.3	+0.2
PESTR	Estremoz	155.47	350	ePP	PP	02 52 01.5	+2.4
PESTR	Estremoz	155.47	350	ePKPdf	PKPdf	02 47 57.2	+0.4
PMAFR	Mafra	155.61	354	ePKPdf	PKPdf	02 47 56.6	-0.4
PMAFR	Mafra	155.61	354	ePKPab	PKPab	02 48 24.9	+1.3
PMAFR	Mafra	155.61	354	ePP	PP	02 52 02.3	+2.5
PMST	Lisbon--Monsan	155.81	353	ePKPdf	PKPdf	02 47 57.1	-0.1
PMST	Lisbon--Monsan	155.81	353	ePKPab	PKPab	02 48 25.7	+1.2
PMST	Lisbon--Monsan	155.81	353	ePP	PP	02 52 03.1	+2.1
ETRT	Tiaret	155.83	331	P	PKPdf	02 48 10.0	+12
LIS	Lisbon	155.83	353	ePKP	PKPdf	02 47 56.7	-0.6
LIS				ePP	PP	02 52 02.6	+1.6
LIS				AMS	AMS	04 00 02.1	
	comp=E,2µm,19.4s						
LIS	Lisbon	155.83	353	ePKIKP	PKPdf	02 47 56.6	-0.6
LIS				e		02 52 02.6	
EVO	Evora	155.86	351	ePKPdf	PKPdf	02 47 57.3	0.0
EVO	Evora	155.86	351	ePKPab	PKPab	02 48 26.0	+1.3
EVO	Evora	155.86	351	ePP	PP	02 52 03.7	+2.4
PBAR	Barrancos	156.04	349	ePKPdf	PKPdf	02 47 57.5	0.0
PBAR	Barrancos	156.04	349	ePKPab	PKPab	02 48 26.6	+1.1
PBAR	Barrancos	156.04	349	ePP	PP	02 52 04.5	+2.2
PBEJ	Beja	156.33	350	ePKPdf	PKPdf	02 47 57.3	-0.6
PBEJ	Beja	156.33	350	ePKPab	PKPab	02 48 29.1	+2.3
PBEJ	Beja	156.33	350	ePP	PP	02 52 07.8	+3.9
PNCL	Nicolau / Gran	156.35	352	ePKPdf	PKPdf	02 47 58.1	+0.2
PNCL	Nicolau / Gran	156.35	352	ePKPab	PKPab	02 48 28.6	+1.8
PNCL	Nicolau / Gran	156.35	352	ePP	PP	02 52 04.6	+0.7
MESJ	Messejana	156.57	351	ePKP	PKPdf	02 47 57.8	-0.5
MESJ				ePP	PP	02 52 06.9	+1.7
MESJ				AMS	AMS	03 54 11.8	
	comp=Z,954nm,19.3s						
MESJ	Messejana	156.57	351	ePKPdf	PKPdf	02 47 58.4	+0.2
MESJ	Messejana	156.57	351	ePKPab	PKPab	02 48 28.4	+0.6
MESJ	Messejana	156.57	351	ePP	PP	02 52 08.1	+2.9
MESJ	Messejana	156.57	351	ePKIKP	PKPdf	02 47 57.7	-0.5
MESJ				e		02 52 06.8	
PCVE	Castro Verde	156.75	351	ePKPdf	PKPdf	02 47 58.7	+0.2
PCVE	Castro Verde	156.75	351	ePKPab	PKPab	02 48 29.7	+1.1
PCVE	Castro Verde	156.75	351	ePP	PP	02 52 08.8	+2.6
PVAQ	Vaqueiros	156.92	350	ePKPdf	PKPdf	02 47 58.8	+0.1
PVAQ	Vaqueiros	156.92	350	ePKPab	PKPab	02 48 30.0	+0.7
PVAQ	Vaqueiros	156.92	350	ePP	PP	02 52 09.9	+2.8
PTEO	Sao Teotonio	156.93	352	ePKPdf	PKPdf	02 48 00.7	+2.0
PTEO	Sao Teotonio	156.93	352	ePKPab	PKPab	02 48 30.6	+1.3
PTEO	Sao Teotonio	156.93	352	ePP	PP	02 52 11.0	+3.9
PBDV	Barranco-do-Ve	157.11	350	ePKPdf	PKPdf	02 47 59.3	+0.3
PBDV	Barranco-do-Ve	157.11	350	ePKPab	PKPab	02 48 31.8	+1.6
PBDV	Barranco-do-Ve	157.11	350	ePP	PP	02 52 12.2	+4.0
MORF	Marmelete	157.16	352	ePKP	PKPdf	02 47 58.5	-0.6
MORF				ePP	PP	02 52 10.1	+1.6
MORF				AMS	AMS	03 52 26.5	
	comp=Z,1µm,22.4s						
MORF	Marmelete	157.16	352	ePKPdf	PKPdf	02 47 58.9	-0.2
MORF	Marmelete	157.16	352	ePKPab	PKPab	02 48 31.8	+1.4
MORF	Marmelete	157.16	352	ePKIKP	PKPdf	02 47 58.5	-0.6
MORF				e		02 52 10.0	
PFVI	Vila Bisbo	157.35	352	ePKPdf	PKPdf	02 47 59.6	+0.4
PFVI	Vila Bisbo	157.35	352	ePKPab	PKPab	02 48 32.2	+1.0
PFVI	Vila Bisbo	157.35	352	ePP	PP	02 52 11.8	+2.3
PFVI	Vila Bisbo	157.35	352	ePKPab	PKPab	02 48 32.6	+1.4
ASCN	Ascension	157.50	176	ePKPdf	PKPdf	02 47 59.9	-0.3
RTC	Rabat Centre	160.04	346	ePKPab	PKPab	02 48 44.7	+1.8
MDT	Midelt	160.48	339	PKP	PKPdf	02 48 02.9	-0.4
	comp=Z,41nm,1.2s,baz=23,slow=2.9,SNR=16						
MDT				PKPab	PKPab	02 48 45.9	+0.8
	comp=Z,66nm,1.0s,baz=49,slow=5.0,SNR=9.8						
TAM	Tamanrasset	160.96	298	ePKPdf	PKPdf	02 48 04.3	+0.2
TAM	Tamanrasset	160.96	298	ePKIKP	PKPdf	02 48 04.3	+0.2
PMPS	Porto Santo	161.38	10	ePKPdf	PKPdf	02 48 06.0	+2.0
PMOZ	Porto Moniz, M	161.46	12	ePKPdf	PKPdf	02 48 04.5	+0.3
PMOZ	Porto Moniz, M	161.46	12	ePKPab	PKPab	02 48 49.0	-0.3
PMOZ	Porto Moniz, M	161.46	12	ePP	PP	02 52 34.0	+2.1
PMAR	Madeira	161.61	11	ePKPdf	PKPdf	02 48 07.0	+2.5
PMAR	Madeira	161.61	11	ePKPab	PKPab	02 48 52.4	+2.4
PMAR	Madeira	161.61	11	ePP	PP	02 52 34.7	+2.0
TOA0	Torodi Ar. Sit	165.95	266	ePKPdf	PKPdf	02 48 08.1	-0.6
TORD	Torodi Ar. Bea	165.95	266	PKP	PKPdf	02 48 06.5	-2.2
	comp=Z,9.7nm,0.7s,baz=23,slow=0.5						
TORD				PKPab	PKPab	02 49 09.9	+0.3
	baz=108,slow=4.7						
KIC	Kosan Boka	168.64	224	ePKIKP	PKPdf	02 48 08.7	-2.0
	comp=Z,807nm,1.8s						
LIC	Lamto	168.73	223	ePKIKP	PKPdf	02 48 08.9	-1.9
	comp=Z,478nm,1.6s						
DBIC	Dimbokro	168.94	225	PKP	PKPdf	02 48 10.2	-0.7
	comp=Z,49nm,1.0s,baz=132,slow=2.6,SNR=15						
DBIC				PP	PP	02 53 10.1	-1.5
	comp=Z,12nm,1.1s,baz=130,slow=7.0,SNR=3.6						
TIC	Toumodi	169.03	224	ePKIKP	PKPdf	02 48 08.7	-2.3
SACV	Santiago Islan	169.44	87	ePKPdf	PKPdf	02 48 10.0	-1.2
KOWA	Kowa	171.60	270	ePKPdf	PKPdf	02 48 11.7	-0.7
KOWA				ePKPab	PKPab	02 49 35.6	+0.9

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*SKO **06** 02:30:39.0, 40°.21N×18°.61E, h0^{km}*
*CSEM **06** 02:30:47.8±0.1, 40°.19N×19°.40E, h2^{km}, ML2.9, Error ellipse: s-maj=2.9km s-min=1.6km az=51.0*
*ATH **06** 02:30:47.3, 40°.22N×19°.38E, h21^{km}±1^{km}, ML2.9/12, Error ellipse: s-maj=2.4km s-min=1.3km az=150.0*
*THE **06** 02:30:48.1, 40°.20N×19°.41E, h0^{km}±1^{km}, ML2.9/9, Error ellipse: s-maj=1.9km s-min=0.8km az=266.0*
*PDG **06** 02:30:48.5±0.6, 40°.21N×19°.45E, h16^{km}±1^{km}, ML2.9/10, Error ellipse: s-maj=1.0km s-min=1.0km az=90.0*
ISC 06 02:30:48.5±1.0**, 40°.21N**±0°.02×**19°.41E**±0°.02**, h11**^{km}±9^{km}**, n149, σ1^{s}.36**/212**, 6C-8D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEK	Kerkira	0.58	149	P	Pg	02 30 59.5	-0.4
KEK				S	Sg	02 31 07.9	+0.3
KEK				AML	AML	02 31 14.6	
	comp=E,1384µm,0.3s						
KEK				AML	AML	02 31 14.9	
	comp=N,1081µm,0.4s						
KEK	Kerkira	0.58	149	P	Pg	02 30 59.4	-0.4
KEK				S	Sg	02 31 07.9	+0.3
KEK	Kerkira	0.58	149	P	Pg	02 30 59.3	-0.6
KEK				S	Sg	02 31 07.8	+0.3
KASA	Kassiopi	0.62	139	P	Pg	02 30 58.8	-1.7
KASA				AML	AML	02 31 11.0	
	comp=E,1666µm,0.6s						
KASA				AML	AML	02 31 17.7	
	comp=N,1161µm,0.3s						
KASA	Kassiopi	0.62	139	P	Pg	02 30 59.3	-1.2
SGD	Sagiada	0.88	133	P	Pg	02 31 04.3	-1.0
SGD	Sagiada	0.88	133	P	Pg	02 31 04.2	-1.2
SGD	Sagiada	0.88	133	P	Pg	02 31 04.4	-1.0
IGT	Igoumenitsa	0.99	133	P	Pg	02 31 06.0	-1.4
IGT				S	Sb	02 31 21.3	+0.7
IGT				AML	AML	02 31 24.9	
	comp=E,1083µm,0.4s						
IGT				AML	AML	02 31 25.1	
	comp=N,915µm,0.4s						
IGT	Igoumenitsa	0.99	133	P	Pg	02 31 06.1	-1.4
IGT				S	Sb	02 31 20.3	-0.3
IGT	Igoumenitsa	0.99	133	P	Pg	02 31 06.2	-1.3
IGT				S	Sb	02 31 20.3	-0.3
JAN	Janina	1.24	116	P	Pb	02 31 12.0	0.0
JAN				AML	AML	02 31 30.9	
	comp=E,1481µm,0.5s						
JAN				AML	AML	02 31 32.4	
	comp=N,1292µm,0.4s						
JAN	Janina	1.24	116	P	Pg	02 31 11.0	-1.4
JAN				S	Sb	02 31 28.6	+0.6
JAN	Janina	1.24	116	P	Pg	02 31 11.6	-0.8
JAN				S	Sb	02 31 28.6	+0.6
NEST	Nestorio	1.27	80	P	Pg	02 31 11.8	-1.1
NEST				AML	AML	02 31 34.2	
	comp=E,675µm,0.4s						
NEST				AML	AML	02 31 34.8	
	comp=N,712µm,0.5s						
NEST	Nestorio	1.27	80	P	Pg	02 31 11.5	-1.4
NEST				S	Sn	02 31 31.1	+1.7
NEST	Nestorio	1.27	80	P	Pg	02 31 11.8	-1.1
NEST				S	Sn	02 31 31.1	+1.7
OHR	Ohrid	1.39	49	ePg	Pn	02 31 13.7	-0.2
KPRO	Kipourio	1.52	99	P	Pb	02 31 16.6	-0.2
KPRO				AML	AML	02 31 42.0	
	comp=N,760µm,0.6s						
KPRO				AML	AML	02 31 43.1	
	comp=E,1182µm,0.7s						
KPRO	Kipourio	1.52	99	P	Pn	02 31 16.1	+0.3
KPRO				S	Sg	02 31 37.6	+0.1
KPRO	Kipourio	1.52	99	P	Pn	02 31 16.1	+0.3
KPRO				S	Sg	02 31 37.6	+0.1
CGL1	Ceglie Messapi	1.54	287	ePn	Pn	02 31 15.6	-0.3
CGL1	Ceglie Messapi	1.54	287	ePn	Pn	02 31 15.6	-0.3
CGL1				Sn	Sg	02 31 41.5	+3.5
FNA	Florina	1.61	69	P	Pn	02 31 17.8	+0.9
FNA				AML	AML	02 31 43.6	
	comp=N,787µm,0.4s						
FNA				AML	AML	02 31 45.6	
	comp=E,823µm,0.6s						
FNA	Florina	1.61	69	P	Pn	02 31 17.1	+0.2
FNA				S	Sg	02 31 39.8	-0.4
FNA	Florina	1.61	69	P	Pn	02 31 17.4	+0.5
FNA				S	Sg	02 31 39.8	-0.4
TAR1	Taranto	1.65	282	ePn	Pn	02 31 17.1	-0.3
TAR1	Taranto	1.65	282	ePn	Pn	02 31 17.1	-0.3
BIA	Bitola	1.67	61	P	Pn	02 31 18.4	+0.7
BIA				S	Sn	02 31 40.4	+1.3
BIA	Bitola	1.67	61	ePg	Pn	02 31 18.6	+0.9
BIA	Bitola	1.67	61	P	Pn	02 31 18.4	+0.7
BIA				S	Sn	02 31 40.4	+1.3
FASA	Fasano	1.68	292	ePn	Pg	02 31 20.2	-0.5
FASA	Fasano	1.68	292	ePn	Pg	02 31 20.2	-0.5
FASA				Sn	Sg	02 31 46.2	+3.8
LKD2	Lefkada island	1.72	145	P	Pn	02 31 18.2	-0.2
LKD2				AML	AML	02 31 47.6	
	comp=E,386µm,0.4s						
LKD2				AML	AML	02 31 49.4	
	comp=N,366µm,0.5s						
LKD2	Lefkada island	1.72	145	P	Pn	02 31 18.3	-0.1
LKD2				S	Sb	02 31 42.4	+0.6
LKD2	Lefkada island	1.72	145	P	Pn	02 31 18.3	-0.1
LKD2				S	Sb	02 31 42.4	+0.6
ULC	Ulcinj	1.75	356	⇑iPn	Pn	02 31 19.2	+0.3
ULC				eSn	Sg	02 31 44.4	-0.4
ULC	Ulcinj	1.75	356	⇑iPn	Pn	02 31 19.2	+0.3
ULC				eSn	Sg	02 31 44.4	-0.4
MASS	Massafra	1.78	284	ePn	Pb	02 31 21.3	+0.2
MASS	Massafra	1.78	284	ePn	Pb	02 31 21.3	+0.2
KZN	Kozani	1.81	86	P	Pn	02 31 20.0	+0.3
KZN				AML	AML	02 31 50.9	
	comp=N,640µm,0.5s						
KZN				AML	AML	02 31 51.2	
	comp=E,589µm,0.7s						
KZN	Kozani	1.81	86	P	Pn	02 31 19.8	+0.1
KZN				S	Sb	02 31 45.3	+0.8
KZN	Kozani	1.81	86	P	Pn	02 31 20.0	+0.3
KZN				S	Sb	02 31 45.3	+0.8
KRUS	Krusevo	1.81	50	ePg	Pn	02 31 19.9	+0.1
NOCI	Noci	1.88	289	P	Pn	02 31 20.3	-0.2
NOCI	Noci	1.88	289	P	Pn	02 31 20.2	-0.4
DRME	Dracevica, Mon	1.98	355	⇑iPn	Pn	02 31 22.5	+0.6
DRME				eSn	Sb	02 31 49.3	+0.1
DRME	Dracevica, Mon	1.98	355	⇑iPn	Pn	02 31 22.5	+0.6
DRME				eSn	Sb	02 31 49.3	+0.1
THL	Klokotos Trika	2.11	107	P	Pn	02 31 24.8	+1.1
THL				AML	AML	02 32 01.1	
	comp=N,160µm,0.6s						
THL				AML	AML	02 32 02.2	
	comp=E,191µm,0.5s						
THL	Klokotos Trika	2.11	107	P	Pn	02 31 24.2	+0.5
THL				S	Sn	02 31 51.0	+1.1
THL	Klokotos Trika	2.11	107	P	Pn	02 31 24.2	+0.5
THL				S	Sn	02 31 51.0	+1.1
BAI	Bari	2.12	296	ePn	Pn	02 31 23.6	-0.3
BAI	Bari	2.12	296	ePn	Pn	02 31 23.6	-0.3
BAI				Pg	Pg	02 31 29.4	+0.3
BAI				Sn	Sg	02 31 59.3	+2.7
BUM	Brajici-Budva	2.12	350	⇓iPn	Pn	02 31 24.5	+0.5
BUM				eSn	Sb	02 31 52.9	-0.4
BUM	Brajici-Budva	2.12	350	⇓iPn	Pn	02 31 24.5	+0.5
BUM				eSn	Sb	02 31 52.9	-0.4
PDO	Prodromos	2.12	139	P	Pn	02 31 23.7	-0.2
PDO				AML	AML	02 31 57.8	
	comp=E,395µm,0.4s						
PDO				AML	AML	02 32 01.5	
	comp=N,513µm,0.4s						
PDO	Prodromos	2.12	139	P	Pn	02 31 23.9	0.0
SG1	Sgolgore (BA)	2.17	288	ePn	Pn	02 31 24.3	-0.3
SG1	Sgolgore (BA)	2.17	288	ePn	Pn	02 31 24.3	-0.3
SG1				Sn	Sg	02 32 00.4	+2.1
PDG	Podgorica	2.22	357	P	Pn	02 31 25.5	+0.3
PDG	Podgorica	2.22	357	⇑iPn	Pn	02 31 25.3	+0.1
PDG	Podgorica	2.22	357	P	Pn	02 31 25.5	+0.3
PDG				eSn	Sb	02 31 55.3	-0.7
TTG	Podgorica	2.22	357	⇑iPn	Pn	02 31 25.3	+0.1
TTG				eSn	Sb	02 31 55.3	-0.7
VLS	Valsamata	2.23	155	P	Pn	02 31 23.7	-1.7
VLS	Valsamata	2.23	155	P	Pn	02 31 24.6	-0.8
EVR	Evrytania	2.26	124	P	Pn	02 31 27.7	+1.8
EVR	Evrytania	2.26	124	P	Pn	02 31 26.9	+0.9
TIP	Timpagrande	2.29	244	P	Pn	02 31 26.8	+0.5
TIP	Timpagrande	2.29	244	P	Pn	02 31 26.2	-0.1
TIP	Timpagrande	2.29	244	P	Pn	02 31 26.2	-0.1
HCY	Herceg Novi	2.33	343	⇓iPn	Pn	02 31 27.5	+0.7
HCY				eSn	Sn	02 31 58.0	+2.5
HCY	Herceg Novi	2.33	343	⇓iPn	Pn	02 31 27.5	+0.7
HCY				eSn	Sn	02 31 58.0	+2.5
CEME	Cevo	2.36	351	ePn	Pn	02 31 27.9	+0.7
CEME				eSn	Sn	02 31 58.4	+2.2
CEME	Cevo	2.36	351	ePn	Pn	02 31 27.9	+0.7
CEME				eSn	Sn	02 31 58.4	+2.2
KFL	Anninata	2.36	153	P	Pn	02 31 25.9	-1.3
KFL	Anninata	2.36	153	P	Pn	02 31 26.6	-0.6
LIT	Litokhoron	2.37	92	P	Pn	02 31 27.5	+0.3
LIT	Litokhoron	2.37	92	P	Pn	02 31 27.3	0.0
LIT	Litokhoron	2.37	92	P	Pn	02 31 27.6	+0.3
PVY	Plav	2.41	10	ePn	Pn	02 31 28.7	+0.6
PVY				eSn	Sn	02 31 59.4	+1.7
PVY	Plav	2.41	10	ePn	Pn	02 31 28.7	+0.6
PVY				eSn	Sn	02 31 59.4	+1.7
AGG	Agios Georgios	2.55	117	P	Pn	02 31 31.5	+1.7
AGG				AML	AML	02 32 12.3	
	comp=N,521µm,0.4s						
AGG				AML	AML	02 32 18.3	
	comp=E,540µm,0.6s						
AGG	Agios Georgios	2.55	117	P	Pn	02 31 30.7	+0.8
AGG	Agios Georgios	2.55	117	P	Pn	02 31 30.7	+0.8
STIP	Stip	2.57	54	ePn	Pn	02 31 31.7	+1.6
NKME	Niksic	2.57	353	ePn	Pn	02 31 31.0	+0.8
NKME				eSn	Sn	02 32 03.5	+2.0
NKME	Niksic	2.57	353	ePn	Pn	02 31 31.0	+0.8
NKME				eSn	Sn	02 32 03.5	+2.0
NKY	Niksic	2.62	353	⇓iPn	Pn	02 31 31.8	+1.0
NKY				eSn	Sn	02 32 04.3	+1.7
NKY	Niksic	2.62	353	⇓iPn	Pn	02 31 31.8	+1.0
NKY				eSn	Sn	02 32 04.3	+1.7
EFP	Efpalio	2.63	132	P	Pn	02 31 32.3	+1.4
EFP	Efpalio	2.63	132	P	Pn	02 31 31.8	+0.8
KOME	Kolasin	2.63	2	ePn	Pn	02 31 31.8	+0.7
KOME				eSn	Sn	02 32 05.2	+2.1
KOME	Kolasin	2.63	2	ePn	Pn	02 31 31.8	+0.7
KOME				eSn	Sn	02 32 05.2	+2.1
VAY	Valandovo	2.65	64	ePn	Pn	02 31 30.5	-0.6
BEY	Berane	2.68	8	ePn	Pn	02 31 32.6	+0.9
BEY				eSn	Sn	02 32 05.7	+1.5
IVA	Berane	2.68	8	ePn	Pn	02 31 32.6	+0.9
IVA				eSn	Sn	02 32 05.7	+1.5
SERG	Sergoula	2.73	130	P	Pn	02 31 34.6	+2.3
SERG	Sergoula	2.73	130	P	Pn	02 31 33.7	+1.4
BRY	Bratogost	2.76	347	⇓iPn	Pn	02 31 32.6	-0.3
BRY				eSn	Sn	02 32 08.2	+1.9
BRY	Bratogost	2.76	347	⇓iPn	Pn	02 31 32.6	-0.3
BRY				eSn	Sn	02 32 08.2	+1.9
TRIZ	Trizonia	2.77	131	P	Pn	02 31 34.5	+1.6
TRIZ	Trizonia	2.77	131	P	Pn	02 31 33.9	+1.1
LAKA	Lakka	2.81	134	P	Pn	02 31 34.2	+0.9
LAKA	Lakka	2.81	134	P	Pn	02 31 34.0	+0.6
KNT	Kendrikon	2.82	69	P	Pn	02 31 32.6	-0.9
KNT	Kendrikon	2.82	69	P	Pn	02 31 33.3	-0.2
HORT	Hortiatis	2.85	81	P	Pn	02 31 32.4	-1.6
HORT	Hortiatis	2.85	81	P	Pn	02 31 33.4	-0.5
STON	Ston	2.95	335	ePn	Pn	02 31 34.1	-1.2
STON				Sn	Sn	02 32 08.2	-2.4
UPM	Unac-Piva	3.01	353	ePn	Pn	02 31 36.9	+0.6
UPM				eSn	Sn	02 32 14.1	+1.6
UPM	Unac-Piva	3.01	353	ePn	Pn	02 31 36.9	+0.6
UPM				eSn	Sn	02 32 14.1	+1.6
XOR	Xorichti	3.04	105	P	Pn	02 31 36.3	-0.2
XOR	Xorichti	3.04	105	P	Pn	02 31 36.7	+0.2
KLV	Kalavryta, Ach	3.04	135	P	Pn	02 31 37.0	+0.4
KLV	Kalavryta, Ach	3.04	135	P	Pn	02 31 37.0	+0.4
PLE	Pljevlja	3.11	360	ePn	Pn	02 31 38.9	+1.2
PLE				eSn	Sn	02 32 16.4	+1.5
PLE	Pljevlja	3.11	360	ePn	Pn	02 31 38.9	+1.2
PLE				eSn	Sn	02 32 16.4	+1.5
GUR	Goura	3.22	134	P	Pn	02 31 40.0	+0.9
GUR	Goura	3.22	134	P	Pn	02 31 39.8	+0.6
AMT	Artemida-Makis	3.23	145	P	Pn	02 31 39.5	+0.5
AMT	Artemida-Makis	3.23	145	P	Pn	02 31 39.6	+0.5
PAIG	Paliouri	3.29	94	P	Pn	02 31 38.5	-1.5
PAIG	Paliouri	3.29	94	P	Pn	02 31 39.5	-0.5
SRS	Serrai	3.31	73	P	Pn	02 31 39.3	-1.0
SRS	Serrai	3.31	73	P	Pn	02 31 40.0	-0.2
PROD	Prodromos	3.34	125	P	Pn	02 31 39.5	-1.2
PROD	Prodromos	3.34	125	P	Pn	02 31 40.4	-0.3
LTK	Loutraki	3.53	127	P	Pn	02 31 44.1	+0.8
LTK	Loutraki	3.53	127	P	Pn	02 31 44.0	+0.8
AOS	Alonnisos	3.60	105	P	Pn	02 31 44.2	-0.1
AOS	Alonnisos	3.60	105	P	Pn	02 31 44.7	+0.4
PYL	PYLOS	3.79	150	P	Pn	02 31 45.5	-1.3
PYL	PYLOS	3.79	150	P	Pn	02 31 46.5	-0.3
DID	Didima	4.03	131	P	Pn	02 31 49.6	-0.6
DID	Didima	4.03	131	P	Pn	02 31 50.3	+0.1
DYR	Agios Nikonas	4.14	145	P	Pn	02 31 51.6	-0.1
DYR	Agios Nikonas	4.14	145	P	Pn	02 31 52.1	+0.4
VLI	Veliai	4.46	140	P	Pn	02 31 55.1	-0.9
VLI	Veliai	4.46	140	P	Pn	02 31 56.1	+0.1
UDBI	Udbina	5.08	329	i Pn	Pn	02 32 05.4	+0.7
UDBI				Sn	Sn	02 33 02.6	-0.8
NVLJ	Novalja	5.49	324	ePn	Pn	02 32 09.8	-0.4
NVLJ				Sn	Sn	02 33 09.7	-3.6
BOJS	Bojanci	6.10	331	i Pn	Pn	02 32 18.2	-0.4
BOJS				i Sn	Sn	02 33 24.8	-3.6
	comp=Z,2.0nm,0.2s						
SKDS	Skadanscina	6.64	325	i Pn	Pn	02 32 24.8	-1.2
SOKA	Soboth	7.20	335	ePn	Pn	02 32 32.3	-1.5
	comp=Z,0.7nm,0.2s						
SOKA				eSn	Sn	02 33 48.9	-6.6
	comp=Z,1.0nm,0.4s						
OBKA	Obir	7.22	332	ePn	Pn	02 32 33.1	-0.9
	comp=Z,0.5nm,0.2s						
OBKA				eSn	Sn	02 33 51.0	-5.0
	comp=Z,1.8nm,0.3s						
ABTA	Abfaltersbach	8.23	325	Pn	Pn	02 32 48.5	+0.6
	comp=Z,0.2nm,0.2s						
ABTA				eSn	Sn	02 34 14.4	-6.5
	comp=Z,3.6nm,0.7s						
MOA	Molln	8.48	336	ePn	Pn	02 32 51.3	+0.1
	comp=Z,0.5nm,0.2s						
MOA				eSn	Sn	02 34 22.7	-4.3
	comp=Z,1.5nm,0.4s						
WATA	Walderalm	9.09	324	ePn	Pn	02 33 00.7	+0.9
	comp=Z,2.5nm,0.4s						
MOTA	Moosalm	9.31	323	ePn	Pn	02 33 03.7	+0.9
	comp=Z,1.0nm,0.4s						

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*ROM **06** 02:44:41.9±0.2, 44°.917N±0°.007×10°.93E±0°.01, h8^{km}, ML2.5/25*
*CSEM **06** 02:44:42.0±0.7, 44°.84N×11°.31E, h5^{km}, ML2.9, Error ellipse: s-maj=19.4km s-min=8.4km az=137.0*
*VIE **06** 02:44:43.5±1.0, 44°.81N×11°.38E, h8^{km}, mb2.5/7, ml2.9/8, Error ellipse: s-maj=10.9km s-min=7.6km az=118.0 35 km N of Bologna*
*ISCJB **06** 02:44:44.3±0.3, 44°.92N±0°.02×10°.98E±0°.02, h10^{km}±2^{km}, Error ellipse: s-maj=3.3km s-min=2.6km az=135.9*
*LDG **06** 02:44:45.7±0.3, 44°.89N×11°.13E, h2^{km}, Ml2.5/8, Error ellipse: s-maj=7.7km s-min=3.9km az=124.0*
ISC 06 02:44:44.6±0.8**, 44°.92N**±0°.02×**10°.96E**±0°.02**, h5**^{km}±5^{km}**, n96, σ1^{s}.42**/122**, 6C-2D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NDIM	Novi di Modena	0.05	236	i P	Pg	02 44 44.8	-1.1
NDIM				S	Sb	02 44 46.1	-0.7
T0825	Gonzaga (MN)	0.10	305	i P	Pg	02 44 46.9	+0.2
T0825				S	Sg	02 44 50.2	+2.1
T0825				AML	AML		
	comp=E,33750µm,0.4s						
T0825				AML	AML		
	comp=N,59700µm,0.4s						
T0826	Rio Saliceto (	0.13	234	AML	AML		
	comp=N,20000µm,0.4s						
T0826				AML	AML		
	comp=E,20450µm,0.2s						
T0826				AML	AML		
	comp=N,20000µm,0.4s						
T0826				AML	AML		
	comp=E,20400µm,0.2s						
T0826				AML	AML		
	comp=N,20000µm,0.4s						
T0826				AML	AML		
	comp=E,20400µm,0.2s						
SBPO	S.Benedetto Po	0.14	348	P	Pg	02 44 48.2	+0.8
T0802	SanFelice sul	0.16	105	P	Pg	02 44 48.5	+0.7
T0802				S	Sg	02 44 53.4	+3.4
RAVA	Ravarino	0.20	145	P	Pg	02 44 48.8	+0.4
RAVA				S	Sg	02 44 51.8	+0.8
RAVA				AML	AML		
	comp=E,3990µm,0.6s						
RAVA				AML	AML		
	comp=N,4525µm,0.3s						
RAVA				AML	AML		
	comp=E,3985µm,0.6s						
RAVA				AML	AML		
	comp=N,4525µm,0.3s						
RAVA				AML	AML		
	comp=E,3990µm,0.6s						
RAVA				AML	AML		
	comp=N,4525µm,0.3s						
RAVA				AML	AML		
	comp=E,3990µm,0.6s						
RAVA				AML	AML		
	comp=N,4525µm,0.3s						
NOVE	Novellara	0.21	236	i P	Pg	02 44 47.8	-0.9
NOVE				S	Sg	02 44 52.4	+1.0
NOVE				AML	AML		
	comp=E,5865µm,0.3s						
NOVE				AML	AML		
	comp=N,8580µm,0.4s						
NOVE				AML	AML		
	comp=E,5870µm,0.3s						
NOVE				AML	AML		
	comp=N,8580µm,0.4s						
NOVE				AML	AML		
	comp=E,5870µm,0.3s						
NOVE				AML	AML		
	comp=N,8580µm,0.4s						
NOVE				AML	AML		
	comp=E,5870µm,0.3s						
NOVE				AML	AML		
	comp=N,8580µm,0.4s						
T0800	Massa Finalese	0.22	108	AML	AML		
	comp=E,4715µm,0.7s						
T0800				AML	AML		
	comp=E,4350µm,0.7s						
T0800				AML	AML		
	comp=N,4370µm,0.4s						
T0800				AML	AML		
	comp=N,4095µm,0.2s						
T0800				AML	AML		
	comp=E,4350µm,0.7s						
T0800				AML	AML		
	comp=N,4370µm,0.4s						
T0800				AML	AML		
	comp=E,4720µm,0.7s						
T0800				AML	AML		
	comp=N,4095µm,0.2s						
T0800				AML	AML		
	comp=E,4350µm,0.7s						
T0800				AML	AML		
	comp=N,4370µm,0.4s						
T0800				AML	AML		
	comp=E,4720µm,0.7s						
T0800				AML	AML		
	comp=N,4095µm,0.2s						
T0800				AML	AML		
	comp=E,4720µm,0.7s						
T0800				AML	AML		
	comp=N,4370µm,0.4s						

T0800				AML	AML		
	comp=N,4095µm,0.2s						
T0800				AML	AML		
	comp=E,4350µm,0.7s						
GAZZ	**Gazzo Veronese**	0.22	26	⇑*e*Pg	Pg	02 44 49.8	+0.9
SERM	**Sermide**	0.26	69	P	Pg	02 44 50.4	+0.9
MODE	**Modena**	0.29	181	P	Pg	02 44 50.3	+0.2
MODE				AML	AML		
	comp=E,4320µm,0.6s						
MODE				AML	AML		
	comp=N,5155µm,0.7s						
MODE				AML	AML		
	comp=E,4325µm,0.6s						
MODE				AML	AML		
	comp=N,5160µm,0.7s						
MODE				AML	AML		
	comp=E,4325µm,0.6s						
MODE				AML	AML		
	comp=N,5155µm,0.7s						
MODE				AML	AML		
	comp=N,5155µm,0.7s						
MODE				AML	AML		
	comp=E,4325µm,0.6s						
T0822	**Casumaru (Bond**	0.29	107	P	Pg	02 44 50.4	+0.2
T0822				AML	AML		
	comp=E,1830µm,0.3s						
T0822				AML	AML		
	comp=N,1460µm,0.4s						
ZCCA	**Zocca**	0.57	179	P	Pg	02 44 56.5	+1.0
ZCCA				AML	AML		
	comp=E,264µm,1.6s						
ZCCA				AML	AML		
	comp=N,286µm,0.4s						
ZCCA				AML	AML		
	comp=E,264µm,1.6s						
ZCCA				AML	AML		
	comp=N,286µm,0.4s						
ZCCA				AML	AML		
	comp=N,286µm,0.4s						
ZCCA				AML	AML		
	comp=E,264µm,1.6s						
ERBM	**Eremo**	0.63	218	P	Pg	02 44 57.3	+0.6
ERBM				AML	AML		
	comp=E,118µm,0.9s						
ERBM				AML	AML		
	comp=N,176µm,0.8s						
ERBM				AML	AML		
	comp=E,118µm,0.9s						
ERBM				AML	AML		
	comp=N,176µm,0.8s						
ERBM				AML	AML		
	comp=N,176µm,0.8s						
ERBM				AML	AML		
	comp=E,118µm,0.9s						
TEOL	**Teolo**	0.67	48	P	Pg	02 44 57.7	+0.3
TEOL				AML	AML		
	comp=E,1440µm,0.3s						
TEOL				AML	AML		
	comp=N,1450µm,0.3s						
TEOL				AML	AML		
	comp=E,1440µm,0.3s						
TEOL				AML	AML		
	comp=N,1450µm,0.3s						
TEOL				AML	AML		
	comp=N,1450µm,0.3s						
TEOL				AML	AML		
	comp=E,1440µm,0.3s						
ROVR	**Roverˆ¤ Verone**	0.73	6	P	Pb	02 44 58.6	-1.3
ROVR				AML	AML		
	comp=E,258µm,0.2s						
ROVR				AML	AML		
	comp=N,466µm,0.2s						
ROVR				AML	AML		
	comp=E,258µm,0.2s						
ROVR				AML	AML		
	comp=N,466µm,0.2s						
ROVR				AML	AML		
	comp=N,466µm,0.2s						
ROVR				AML	AML		
	comp=E,258µm,0.2s						
MARN	**Marana (Italy)**	0.74	14	⇑*e*Pg	Pb	02 44 58.6	-1.4
MARN				*e*Sg	Sn	02 45 12.6	-0.9
FNVD	**Fontana Vidola**	0.76	171	P	Pg	02 45 00.2	+1.1
FNVD				AML	AML		
	comp=E,366µm,0.3s						
FNVD				AML	AML		
	comp=N,254µm,0.2s						
FNVD				AML	AML		
	comp=E,366µm,0.3s						
FNVD				AML	AML		
	comp=N,254µm,0.2s						
FNVD				AML	AML		
	comp=N,254µm,0.2s						
FNVD				AML	AML		
	comp=E,366µm,0.3s						
ADRI	**Adria, Italy**	0.76	80	*e*Pg	Pn	02 45 01.1	-0.8
SALO	**Salr**	0.77	337	P	Pb	02 44 59.2	-1.1
SALO				AML	AML		
	comp=E,270µm,0.5s						
SALO				AML	AML		
	comp=N,324µm,0.5s						
SALO				AML	AML		
	comp=E,270µm,0.5s						
SALO				AML	AML		
	comp=N,324µm,0.5s						
SALO				AML	AML		
	comp=N,324µm,0.5s						
SALO				AML	AML		
	comp=E,270µm,0.5s						
BALD	**Monte Baldo**	0.77	353	⇑*e*Pg	Pb	02 44 59.2	-1.4
POPM	**Popiglio**	0.88	189	P	Pb	02 45 01.7	-0.6
POPM				AML	AML		
	comp=E,116µm,0.8s						
POPM				AML	AML		
	comp=N,146µm,1.0s						
POPM				AML	AML		
	comp=E,116µm,0.8s						
POPM				AML	AML		
	comp=N,146µm,1.0s						
POPM				AML	AML		
	comp=E,116µm,0.8s						
POPM				AML	AML		
	comp=N,146µm,1.0s						
MAGA	**Magasa**	0.89	345	P	Pb	02 45 00.8	-1.8
MAGA				AML	AML		
	comp=E,1115µm,0.3s						
MAGA				AML	AML		
	comp=N,920µm,0.3s						
MAGA				AML	AML		
	comp=E,1115µm,0.3s						
MAGA				AML	AML		
	comp=N,920µm,0.3s						
MAGA				AML	AML		
	comp=N,920µm,0.3s						
MAGA				AML	AML		
	comp=E,1115µm,0.3s						
DOSS	**Dosso del Somm**	0.98	9	⇑*e*Pg	Pb	02 45 02.7	-1.4
DOSS				*e*Sg	Sn	02 45 18.6	-0.8
BOB	**Bobbio (Coli)**	1.08	263	P	Pn	02 45 05.6	-0.8
BOB				AML	AML		
	comp=E,346µm,0.5s						
BOB				AML	AML		
	comp=N,456µm,1.5s						
BOB				AML	AML		
	comp=E,346µm,0.5s						
BOB				AML	AML		
	comp=N,456µm,1.5s						
BOB				AML	AML		
	comp=N,456µm,1.5s						
BOB				AML	AML		
	comp=E,346µm,0.5s						
CGRP	**Cima Grappa**	1.13	31	⇓*e*Pg	Pb	02 45 06.1	-0.6
CGRP	**Cima Grappa**	1.13	31	P	Pb	02 45 05.6	-1.1
CGRP				AML	AML		
	comp=E,146µm,1.3s						
CGRP				AML	AML		
	comp=N,121µm,0.7s						
CGRP				AML	AML		
	comp=E,146µm,1.3s						
CGRP				AML	AML		
	comp=N,121µm,0.7s						
CGRP				AML	AML		
	comp=E,146µm,1.3s						
CGRP				AML	AML		
	comp=N,121µm,0.7s						
PANI	**Panarotta**	1.16	13	*e*Pg	Pn	02 45 06.3	-1.4
PLMA	**Palmaria, Port**	1.18	223	P	Pn	02 45 06.4	-1.2
PLMA				AML	AML		
	comp=E,124µm,0.4s						
PLMA				AML	AML		
	comp=N,245µm,0.6s						
PLMA				AML	AML		
	comp=E,124µm,0.4s						
PLMA				AML	AML		
	comp=N,245µm,0.6s						
PLMA				AML	AML		
	comp=N,245µm,0.6s						
PLMA				AML	AML		
	comp=E,124µm,0.4s						
MABI	**Malga Bissina**	1.18	345	P	Pn	02 45 05.8	-2.1
MABI				AML	AML		
	comp=E,54µm,1.3s						
MABI				AML	AML		
	comp=N,55µm,1.0s						
MABI				AML	AML		
	comp=E,54µm,1.3s						
MABI				AML	AML		
	comp=N,55µm,1.0s						
MABI				AML	AML		
	comp=E,54µm,1.3s						
MABI				AML	AML		
	comp=N,55µm,1.0s						
MSSA	**Maissana**	1.19	240	P	Pn	02 45 06.7	-1.2
MSSA				AML	AML		
	comp=E,119µm,1.2s						
MSSA				AML	AML		
	comp=N,174µm,1.3s						
MSSA				AML	AML		
	comp=E,119µm,1.2s						
MSSA				AML	AML		
	comp=N,174µm,1.3s						
MSSA				AML	AML		
	comp=E,119µm,1.2s						
MSSA				AML	AML		
	comp=N,174µm,1.3s						
MTLO	**Montello**	1.20	41	⇑*e*Pg	Pn	02 45 06.9	-1.1
MTLO				*e*Sg	Sg	02 45 26.6	+3.3
CTI	**Castel Tesino**	1.23	23	P	Pn	02 45 07.9	-0.6
CTI				AML	AML		
	comp=E,310µm,0.2s						
CTI				AML	AML		
	comp=N,340µm,0.3s						
CTI				AML	AML		
	comp=E,310µm,0.2s						
CTI				AML	AML		
	comp=N,341µm,0.3s						
CTI				AML	AML		
	comp=E,310µm,0.2s						
CTI				AML	AML		
	comp=N,341µm,0.3s						
CRE	**Caprese Michel**	1.48	151	P	Pb	02 45 12.3	-0.3
CRE				AML	AML		
	comp=E,52µm,1.1s						
CRE				AML	AML		
	comp=N,55µm,1.2s						
CRE				AML	AML		
	comp=E,52µm,1.1s						
CRE				AML	AML		
	comp=N,55µm,1.2s						
CRE				AML	AML		
	comp=E,52µm,1.1s						
CRE				AML	AML		
	comp=N,55µm,1.2s						
OZOL	**Ozolo**	1.49	2	⇓*e*Pg	Pn	02 45 11.4	-0.7
CARE	**Lago del Cares**	1.52	353	⇑*e*Pg	Pn	02 45 12.0	-0.7
POLC	**Polcenigo**	1.55	44	*e*Pg	Pb	02 45 13.4	-0.3
AGOR	**Agordo**	1.57	29	*e*Pg	Pn	02 45 12.2	-0.8
APPI	**Appiano**	1.57	7	P	Pn	02 45 12.5	-0.7
APPI				AML	AML		
	comp=E,148µm,0.5s						
APPI				AML	AML		
	comp=N,110µm,0.3s						
APPI				AML	AML		
	comp=E,147µm,0.5s						
APPI				AML	AML		
	comp=N,110µm,0.3s						
APPI				AML	AML		
	comp=E,147µm,0.5s						
APPI				AML	AML		
	comp=N,110µm,0.3s						
KOSI	**Kohlern**	1.57	11	P	Pn	02 45 12.6	-0.7
KOSI				AML	AML		
	comp=E,91µm,0.4s						
KOSI				AML	AML		
	comp=N,106µm,0.8s						
KOSI				AML	AML		
	comp=E,91µm,0.4s						
KOSI				AML	AML		
	comp=N,106µm,0.8s						
KOSI				AML	AML		
	comp=E,91µm,0.4s						
KOSI				AML	AML		
	comp=N,106µm,0.8s						
BRMO	**Bormio**	1.61	345	P	Pn	02 45 13.5	-0.3
BRMO				AML	AML		
	comp=E,53µm,0.5s						
BRMO				AML	AML		
	comp=N,60µm,0.6s						
BRMO				AML	AML		
	comp=E,53µm,0.5s						
BRMO				AML	AML		
	comp=N,60µm,0.6s						
BRMO				AML	AML		
	comp=E,53µm,0.5s						
BRMO				AML	AML		
	comp=N,60µm,0.6s						
MOSI	**Grossmontoni**	1.72	351	P	Pn	02 45 15.7	+0.3
MOSI				AML	AML		
	comp=E,160µm,0.9s						
MOSI				AML	AML		
	comp=N,272µm,0.8s						
ABSI	**Aberstueckl**	1.83	8	P	Pn	02 45 15.9	-0.9
ABSI				AML	AML		
	comp=E,219µm,0.6s						
ABSI				AML	AML		
	comp=N,181µm,0.7s						
ABSI				AML	AML		
	comp=E,219µm,0.6s						
ABSI				AML	AML		
	comp=N,181µm,0.7s						
FINB	**Finale Ligure**	2.02	249	P	Pn	02 45 19.2	0.0
FINB				AML	AML		
	comp=E,179µm,0.3s						
FINB				AML	AML		
	comp=N,2µm,0.4s						
FINB				AML	AML		
	comp=E,179µm,0.3s						
FINB				AML	AML		
	comp=N,2µm,0.4s						
ROSI	**Rosskopf**	2.04	9	AML	AML		
	comp=E,89µm,0.5s						
ROSI				AML	AML		
	comp=E,89µm,0.5s						
ROSI				AML	AML		
	comp=N,80µm,0.8s						
ROSI				AML	AML		
	comp=N,80µm,0.8s						
FETA	**Feichten**	2.11	356	*e*Pn	Pb	02 45 22.0	-1.4
	comp=N,0.2nm,0.1s,SNR=8.3						
FETA				Sn	Sb	02 45 51.7	+1.7
	comp=N,2.3nm,0.4s						
FETA	**Feichten**	2.11	356	Pn	Pb	02 45 22.0	-1.4
	comp=N,0.2nm,0.1s,SNR=8.3						
FETA				Sn	Sb	02 45 51.7	+1.7
	comp=N,2.3nm,0.4s						
ABTA	**Abfaltersbach**	2.13	30	Pg	Pn	02 45 21.2	+0.4
	comp=N,1.2nm,0.3s,SNR=4.9						
ABTA	**Abfaltersbach**	2.13	30	Pg	Pn	02 45 21.2	+0.4
	comp=N,1.2nm,0.3s,SNR=4.9						
RISI	**Rein**	2.18	21	AML	AML		
	comp=N,114µm,0.4s						
RISI				AML	AML		
	comp=E,90µm,0.4s						
RISI				AML	AML		
	comp=N,114µm,0.4s						
RISI				AML	AML		
	comp=E,90µm,0.4s						
SKDS	**Skadanscina**	2.25	73	*i* Pn	Pn	02 45 20.8	-1.6
SKDS				*i* Sn	Sn	02 45 48.5	-2.0
WTTA	**Wattenberg**	2.40	11	*e*Pn	Pb	02 45 26.6	-1.6
	comp=E,4.1nm,0.2s,SNR=5.4						
WTTA	**Wattenberg**	2.40	11	Pn	Pb	02 45 26.6	-1.6
	comp=E,4.1nm,0.2s,SNR=5.4						
MOTA	**Moosalm**	2.43	2	*e*Pn	Pb	02 45 27.4	-1.5
	comp=E,1.0nm,0.2s,SNR=4.7						
MOTA	**Moosalm**	2.43	2	Pn	Pb	02 45 27.4	-1.5
	comp=E,1.0nm,0.2s,SNR=4.7						
WATA	**Walderalm**	2.46	10	*e*Pn	Pb	02 45 27.3	-2.0
	comp=E,3.9nm,0.2s,SNR=11						
WATA	**Walderalm**	2.46	10	Pn	Pb	02 45 27.3	-2.0
	comp=E,3.9nm,0.2s,SNR=11						
DAVA	**Damuels**	2.49	343	*e*Pn	Pn	02 45 27.3	+1.5
	comp=E,1.2nm,0.2s						
DAVA	**Damuels**	2.49	343	Pn	Pn	02 45 27.3	+1.5
	comp=E,1.2nm,0.2s						
MYKA	**Terra Mystica**	2.54	47	Pg	Pn	02 45 26.8	+0.3
	comp=E,1.0nm,0.2s,SNR=5.1						
MYKA	**Terra Mystica**	2.54	47	Pg	Pn	02 45 26.8	+0.3
	comp=E,1.0nm,0.2s,SNR=5.1						
RETA	**Reutte**	2.58	357	*e*Pn	Pn	02 45 28.1	+1.1
	comp=E,2.0nm,0.2s						
RETA	**Reutte**	2.58	357	Pn	Pn	02 45 28.1	+1.1
	comp=E,2.0nm,0.2s						
KBA	**Koelnbreinsper**	2.73	37	*e*Pn	Pn	02 45 23.8	-5.4
	comp=E,5.8nm,0.4s						
KBA	**Koelnbreinsper**	2.73	37	Pn	Pn	02 45 23.8	-5.4
	comp=E,5.8nm,0.4s						
SBF	**Sospel**	2.74	249	*e*Pn	Pn	02 45 30.5	+1.3
SBF				*e*Sn	Sn	02 46 04.4	+1.8
SBF	**Sospel**	2.74	249	*e*Pn	Pn	02 45 30.5	+1.3
SBF				*e*Sn	Sn	02 46 04.4	+1.8
PGF	**Pioggiola**	2.76	212	*e*Pn	Pn	02 45 28.6	-0.9
PGF				*e*Sn	Sn	02 46 01.0	-2.3
PGF	**Pioggiola**	2.76	212	*e*Pn	Pn	02 45 28.6	-0.9
PGF				*e*Sn	Sn	02 46 01.0	-2.3
NVLJ	**Novalja**	2.81	96	*i* Pn	Pn	02 45 29.2	-0.9
NVLJ				Sn	Sn	02 46 02.3	-2.0
OBKA	**Obir**	2.98	56	Pg	Pn	02 45 32.4	-0.1
	comp=E,0.3nm,0.2s						
OBKA	**Obir**	2.98	56	Pg	Pn	02 45 32.4	-0.1
	comp=E,0.3nm,0.2s						
MBDF	**Montbardon**	2.99	268	*e*Pn	Pn	02 45 33.7	+1.0
MBDF				*e*Sn	Sn	02 46 09.7	+0.8
	comp=E,4.3nm,0.5s						
MBDF	**Montbardon**	2.99	268	*e*Pn	Pn	02 45 33.7	+1.0
MBDF				*e*Sn	Sn	02 46 09.7	+0.8
	comp=E,2.2nm,0.5s						
LPG	**La Plagne**	3.03	283	*e*Pn	Pn	02 45 35.3	+1.9
LPG				*e*Sn	Sn	02 46 11.0	+0.8
	comp=E,7.1nm,0.5s						
LPG	**La Plagne**	3.03	283	*e*Pn	Pn	02 45 35.3	+1.9
LPG				*e*Sn	Sn	02 46 11.0	+0.8
	comp=E,3.5nm,0.5s						
LPL	**La Plagne**	3.05	283	*e*Pn	Pn	02 45 34.7	+1.1
LPL				*e*Sn	Sn	02 46 11.5	+1.0
	comp=E,6.0nm,0.5s						
LPL	**La Plagne**	3.05	283	*e*Pn	Pn	02 45 34.7	+1.1
LPL				*e*Sn	Sn	02 46 11.5	+1.0
	comp=E,3.0nm,0.5s						
SOKA	**Soboth**	3.35	57	*e*Pg	Pn	02 45 37.2	-0.4
	comp=E,0.6nm,0.3s						
SOKA	**Soboth**	3.35	57	Pg	Pn	02 45 37.2	-0.4
	comp=E,0.6nm,0.3s						
FRF	**La Foret Royal**	3.38	248	*e*Pn	Pn	02 45 38.5	+0.5
FRF				*e*Sn	Sn	02 46 18.2	-0.3
	comp=E,1.8nm,0.3s						
FRF	**La Foret Royal**	3.38	248	*e*Pn	Pn	02 45 38.5	+0.5
FRF				*e*Sn	Sn	02 46 18.2	-0.3
	comp=E,0.9nm,0.3s						
UDBI	**Udbina**	3.45	95	*e*Pn	Pn	02 45 39.1	+0.2
LMR	**La Mourre**	3.57	245	*e*Pn	Pn	02 45 41.1	+0.5
LMR				*e*Sn	Sn	02 46 20.8	-2.3
	comp=E,4.0nm,0.4s						
LMR	**La Mourre**	3.57	245	*e*Pn	Pn	02 45 41.1	+0.5
LMR				*e*Sn	Sn	02 46 20.8	-2.3
	comp=E,2.0nm,0.4s						
ORIF	**Oris-en-Rattie**	3.61	272	*e*Sn	Sn	02 46 23.4	-0.8
	comp=E,2.2nm,0.3s						
ORIF	**Oris-en-Rattie**	3.61	272	*e*Sn	Sn	02 46 23.4	-0.8
	comp=E,1.1nm,0.3s						
MOA	**Molln**	3.72	37	*i* Pn	Pn	02 45 40.7	-1.9
	comp=E,0.1nm,0.1s						
MOA	**Molln**	3.72	37	Pn	Pn	02 45 40.7	-1.9
	comp=E,0.1nm,0.1s						
HINF	**Hinteralfeld**	4.06	317	*e*Pn	Pn	02 45 45.9	-1.4
HINF				*e*Sn	Sn	02 46 31.0	-4.2
HINF	**Hinteralfeld**	4.06	317	*e*Pn	Pn	02 45 45.9	-1.4
HINF				*e*Sn	Sn	02 46 31.0	-4.2
CDF	**Champ du Feu**	4.32	325	*e*Pn	Pn	02 45 49.7	-1.2
CDF				*e*Sn	Sn	02 46 40.7	-1.0
	comp=E,1.1nm,0.3s						
CDF	**Champ du Feu**	4.32	325	*e*Pn	Pn	02 45 49.7	-1.2
CDF				*e*Sn	Sn	02 46 40.7	-1.0
	comp=E,0.6nm,0.3s						
HAU	**Haudompre**	4.44	316	*e*Pn	Pn	02 45 53.9	+1.4
HAU				*e*Sn	Sn	02 46 41.7	-2.8
	comp=E,2.9nm,0.3s						
HAU	**Haudompre**	4.44	316	*e*Pn	Pn	02 45 53.9	+1.4
HAU				*e*Sn	Sn	02 46 41.7	-2.8
	comp=E,1.5nm,0.3s						
STON	**Ston**	5.28	110	*e*Pn	Pn	02 46 03.6	-0.4

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*IDC **06** 02:48:45.1±4.6, 52°.20N×174°.89E, h0km, mb3.7/6, mb1 3.9/8, mb1mx3.5/87, mbtmp3.8/8, ML4.6/1, Error ellipse: s-maj=117.5km s-min=22.2km az=172.0*

*ISCJB **06** 02:48:46.7±0.8, 51°.8N±0°.1×174°.73E±0°.08, h39km, mb3.8/6, Error ellipse: s-maj=15.4km s-min=5.4km az=20.1*

*NEIC **06** 02:48:46.8±0.0, 52°.02N×174°.74E, h95km, ML3.6(AEIC), After AEIC.*

ISC 06 02:48:49.7±1.1**, 52°.0N**±0°.2×**174°.85E**±0°.07**, h39km, n26, σ1§10/**23**, mb3.9/**6**, Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMY	**Shemya**	0.87	329	P	Pn	02 49 05.0	-0.4
SMY				S	Sn	02 49 18.1	+1.2
LSNW	**Little Sitkin**	2.27	89	P	Pn	02 49 24.5	0.0
LSNW				S	Sn	02 49 52.6	+1.3
LSSE	**Little Sitkin**	2.30	90	P	Pn	02 49 25.3	+0.2
LSPA	**Little Sitkin**	2.30	89	P	Pn	02 49 24.8	-0.3
LSPA				S	Sn	02 49 55.1	+2.9
AMKA	**Amchitka**	2.84	101	P	Pn	02 49 31.3	-1.1
CETU	**Semis' Tuman**	2.87	89	P	Pn	02 49 32.9	+0.1
CEAP	**Semis' Anvil P**	2.92	88	P	Pn	02 49 33.2	-0.4
GAEA	**Gareloi East**	3.97	90	P	Pn	02 49 46.9	-1.1
TASE	**Tanaga Southea**	4.41	89	P	Pn	02 49 54.0	-0.1
KIMD	**Kanaga Island**	4.91	90	P	Pn	02 49 59.7	-1.1
KIKV	**Kanaga Island**	4.94	88	P	Pn	02 50 00.4	-0.9
ADAG	**Mount Adagdak**	5.29	87	P	Pn	02 50 05.1	-0.8
PETK	**Petropavlovsk-**	10.51	283	Pn	Pn	02 51 18.6	+1.1
	baz=100,slow=19						
KDAK	**Kodiak Island**	19.48	60	P	P	02 53 11.1	-1.7
	1.7nm,0.3s,baz=288,slow=5.0,SNR=21						
ILAR	**Eielson Array**	23.35	42	P	P	02 53 52.7	-1.4
	0.6nm,0.4s,baz=253,slow=6.1,SNR=19						
H11N2	**WAKE ISLAND Hy**	32.79	194	T	T	03 30 03.2	
	baz=9.3,slow=76,SNR=37						
H11N3	**WAKE ISLAND Hy**	32.80	194	T	T	03 30 09.7	
	baz=9.3,slow=76,SNR=36						
H11N1	**WAKE ISLAND Hy**	32.81	194	T	T	03 30 05.4	
	baz=9.3,slow=76,SNR=42						
H11S1	**WAKE ISLAND Hy**	34.02	194	T	T	03 31 41.2	
	baz=9.0,slow=76,SNR=55						
H11S3	**WAKE ISLAND Hy**	34.04	194	T	T	03 31 40.8	
	baz=9.0,slow=76,SNR=34						
H11S2	**WAKE ISLAND Hy**	34.04	194	T	T	03 31 42.3	
	baz=9.0,slow=76,SNR=32						
YKA	**Yellowknife Ar**	37.66	46	P	P	02 56 00.6	+0.1
	0.2nm,0.6s,baz=288,slow=7.8,SNR=4.1						
SPITS	**Spitsbergen Ar**	49.43	354	P	P	02 57 34.7	-0.3
	2.0nm,0.4s,baz=18,slow=9.7,SNR=7.8						
MKAR	**Makanchi Array**	56.49	305	P	P	02 58 26.8	-0.7
	0.8nm,0.6s,baz=69,slow=6.0,SNR=4.8						
BVAR	**Borovoye Array**	57.79	316	P	P	02 58 36.5	0.0
	0.5nm,0.3s,baz=46,slow=8.3,SNR=3.2						
BRTR	**Keskin Array B**	82.61	331	P	P	03 01 09.2	+0.5
	0.8nm,0.6s,baz=44,slow=2.7,SNR=4.7						

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*ISCJB **06** 02:52:22.1±0.6, 17°.68S±0°.04×178°.48W±0°.03, h564km±7km, mb4.6/157, Error ellipse: s-maj=7.1km s-min=3.5km az=156.0*

*BJI **06** 02:52:23.7, 17°.60S×178°.50W, h583km, mb4.9/34, mB5.1/5*

*IDC **06** 02:52:24.0±0.7, 17°.74S×178°.43W, h577km±7km, mb4.3/32,* *mb1 4.4/34, mb1mx4.2/54, mbtmp5.2/34, Error ellipse: s-maj=8.9km s-min=7.6km az=139.0*

NEIC ***06*** *02:52:24.5±0.1, 17°.65S×178°.53W, mb4.6/114, Error ellipse: s-maj=5.0km s-min=3.1km az=139.0*

ISC 06 02:52:24.2±0.5**, 17°.65S**±0°.06×**178°.42W**±0°.05**, h583**^{km}±5^{km}**, h584**^{km}**:pP-P, n523,** σ1^{s}**.05**/534**, mb4.7**/157**, 24C-23D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	7.39	61	P	P	02 54 14.6	-2.8
	47nm,0.3s,baz=3.5,slow=3.2,SNR=52						
AFI	Afiamalu	7.39	61	eP	P	02 54 14.9	-2.4
AFI				eS	S	02 55 45.0	-4.9
NIUE	Niue	8.18	101	P	P	02 54 24.8	+0.1
	baz=8.2,SNR=9.3						
DZM	Mont Dzumac	14.90	250	P	P	02 55 31.2	-0.9
	4.0nm,0.3s,baz=82,slow=18,SNR=32						
DZM	Mont Dzumac	14.90	250	eP	P	02 55 31.9	-0.2
	144nm,0.9s						
KNTN	Kanton	16.18	25	eP	P	02 55 45.4	+1.3
	183nm,1.4s						
NFK	Norfolk Island	16.88	225	P	P	02 55 51.0	+0.7
	baz=17,SNR=3.6						
RAR	Rarotonga	17.93	104	P	P	02 55 59.8	-0.2
	2.0nm,0.3s,baz=261,slow=6.6,SNR=23						
RAR	Rarotonga	17.93	104	eP	P	02 56 00.2	+0.3
OUZ	Omahuta	18.89	201	eP	P	02 56 10.8	+2.4
	94nm,0.8s						
MXZ	Matakaoa Point	20.04	188	eP	P	02 56 19.5	+0.6
	74nm,0.9s						
URZ	Urewera	20.90	190	P	P	02 56 24.4	-2.2
	26nm,0.5s,baz=17,slow=1.6,SNR=19						
HIZ	Hauiti	21.60	194	eP	P	02 56 34.0	+1.1
	67nm,1.2s						
BKZ	Black Stump Fm	21.89	191	eP	P	02 56 35.7	+0.2
	49nm,1.4s						
SNZO	South Karori	24.31	193	eP	P	02 56 54.8	-2.1
LHI	Lord Howe Isla	24.63	232	eP	P	02 57 01.2	+1.3
	97nm,0.8s						
THZ	Tophouse	25.15	195	eP	P	02 57 04.6	+0.1
	72nm,1.3s						
KHZ	Kahutara	25.62	194	eP	P	02 57 08.7	+0.2
	96nm,1.4s						
MQZ	McQueen’s Vall	27.05	194	eP	P	02 57 20.6	-0.4
	42nm,1.2s						
RPZ	Rata Peaks	27.46	197	P	P	02 57 22.4	-2.3
	16nm,0.7s,baz=14,slow=3.5,SNR=9.3						
PAE	Paea	27.47	94	eP	P	02 57 25.0	0.0
	12nm,0.7s						
PPT2	Papeete2	27.48	94	eP	P	02 57 25.2	0.0
	100nm,0.8s						
PPT	Papeete	27.48	94	P	P	02 57 25.4	+0.3
	104nm,0.6s,baz=99,slow=1.5,SNR=13						
PPT	Papeete	27.48	94	eP	P	02 57 25.9	+0.8
TBI	Tubuai	27.68	107	eP	P	02 57 27.2	+0.4
	192nm,0.8s						
TIAR	Tiarei	27.70	94	eP	P	02 57 27.0	-0.1
	36nm,0.9s						
TVO	Taravao	27.77	95	eP	P	02 57 27.7	-0.1
	25nm,0.7s						
EIDS	Eidsvold	29.35	250	P	P	02 57 40.6	-0.7
	baz=29,SNR=16						
EIDS	Eidsvold	29.35	250	eP	P	02 57 40.9	-0.4
	52nm,0.8s						
PMOR	Pomariorio Ree	29.39	89	eP	P	02 57 41.0	-0.8
	144nm,1.1s						
VAH	Vaihoa	29.61	90	eP	P	02 57 43.2	-0.4
	119nm,1.3s						
ARMA	Armidale	30.06	239	P	P	02 57 47.9	+0.4
	baz=30,SNR=28						
ARMA	Armidale	30.06	239	eP	P	02 57 47.9	+0.4
	66nm,0.8s						
MGCD	Mangrove Creek	31.43	235	P	P	02 58 00.0	+0.9
	baz=32,SNR=16						
RMQ	Roma	31.59	248	P	P	02 58 00.8	+0.3
	baz=32,SNR=36						
CTA	Charters Tower	33.48	260	P	P	02 58 16.2	-0.3
	39nm,0.7s,baz=91,slow=10,SNR=31						
CTAO	Charters Tower	33.48	260	eP	P	02 58 16.3	-0.3
CNB	Canberra Magne	33.58	232	P	P	02 58 17.6	+0.4
	baz=34,SNR=54						
CAN	Canberra	33.85	232	eP	P	02 58 19.6	0.0
	60nm,0.9s						
YNG	Young	33.93	234	P	P	02 58 20.8	+0.6
	baz=34,SNR=5.5						
PMG	Port Moresby	34.41	279	P	P	02 58 25.3	+0.9
	179nm,0.8s,baz=75,slow=6.6,SNR=25						
PMG	Port Moresby	34.41	279	eP	P	02 58 25.1	+0.7
MILA	Mila	34.44	229	P	P	02 58 24.6	+0.2
	baz=34,SNR=11						
CMSA	Cobar Meteorol	35.27	240	P	P	02 58 31.2	-0.1
	baz=35,SNR=8.2						
MTSU	Mount Surprise	35.43	263	P	P	02 58 32.5	-0.3
	baz=35,SNR=23						
QLP	Quilpie	35.62	249	P	P	02 58 33.9	-0.3
	baz=36,SNR=24						
COEN	Coen	37.10	270	P	P	02 58 47.1	+0.6
	baz=37,SNR=15						
TOO	Toolangi	37.33	231	P	P	02 58 48.3	+0.2
	baz=37,SNR=27						
MOO	Moorlands	38.27	222	P	P	02 58 56.0	+0.3
	baz=38,SNR=7.9						
TAU	Tasmania Unive	38.42	222	eP	P	02 58 56.6	-0.2
STKA	Stephens Creek	38.75	241	P	P	02 59 00.1	+0.4
	baz=39,SNR=102						
STKA	Stephens Creek	38.75	241	P	P	02 59 00.1	+0.4
	114nm,0.7s,baz=90,slow=9.6,SNR=142						
STKA	Stephens Creek	38.75	241	eP	P	02 59 00.1	+0.4
	28nm,0.9s						
RKT	Rikitea	40.97	105	eP	P	02 59 17.6	0.0
	132nm,1.3s						
HTT	Hallett	41.27	239	P	P	02 59 20.0	+0.1
	baz=41,SNR=118						
JAY	Jayapura	42.83	286	P	P	02 59 32.9	+0.6
	87nm,0.7s,baz=123,slow=2.6,SNR=45						
JAY	Jayapura	42.83	286	P	P	02 59 32.4	+0.1
WRAB	Tennant Creek	44.66	259	eP	P	02 59 45.2	-1.2
WRA	Warramunga Arr	44.67	259	P	P	02 59 45.4	-1.1
	72nm,0.7s,baz=89,slow=7.6,SNR=414						
WRA				ScP	ScP	03 04 16.2	+2.7
	3.6nm,0.9s,baz=89,slow=3.4,SNR=4.7						
WRA				S	S	03 05 37.7	-3.8
	4.7nm,0.9s,baz=90,slow=13,SNR=6.9						
AS31	Alice Springs	44.85	254	eP	P	02 59 47.5	-0.3
	148nm,0.6s						
ASAR	Alice Springs	44.85	254	P	P	02 59 47.5	-0.3
	572nm,0.8s,baz=87,slow=8.4,SNR=2041						
ASAR				PcP	PcP	03 01 16.6	-0.3
	20nm,0.7s,baz=97,slow=4.7,SNR=5.1						
ASAR				ScP	ScP	03 04 16.7	+2.5
	2.0nm,0.6s,baz=99,slow=5.0,SNR=5.4						
ASAR				S	S	03 05 41.7	-2.3
	18nm,0.9s,baz=89,slow=15,SNR=28						
KDU	Kakadu	47.56	269	P	P	03 00 07.6	-0.7
	baz=48,SNR=24						
GUMO	Guam	47.71	308	P	P	03 00 09.7	+0.3
	61nm,0.4s,baz=191,slow=8.6,SNR=8.1						
GUMO	Guam	47.71	308	eP	P	03 00 09.3	-0.1
MTN	Manton Dam	48.80	268	P	P	03 00 16.9	-0.7
	baz=49,SNR=18						
WRKA	Warakurna	49.92	252	P	P	03 00 25.4	-0.3
	baz=50,SNR=286						
KNRA	Kununurra	50.51	264	P	P	03 00 29.4	-0.6
	baz=50,SNR=25						
FAKI	Fak Fak	50.52	281	P	P	03 00 30.3	+0.1
	55nm,1.2s						
FAKI	Fak Fak	50.52	281	eP	P	03 00 29.6	-0.5
	73nm,1.2s						
FITZ	Fitzroy Crossi	53.06	260	P	P	03 00 48.1	-0.2
	baz=53,SNR=87						
FITZ	Fitzroy Crossi	53.06	260	eP	P	03 00 48.2	-0.2
	31nm,0.9s						
SOEI	Soe	56.06	270	P	P	03 01 10.2	+0.7
SOEI	Soe	56.06	270	eP	P	03 01 10.5	+0.9
	199nm,0.8s						
TNTI	Ternate	56.40	283	eP	P	03 01 11.8	+0.1
	98nm,1.0s						
MBWA	Marble Bar	58.13	256	eP	P	03 01 22.5	-0.8
MMRI	Maumere	58.29	271	eP	P	03 01 23.6	-0.9
	122nm,0.8s						
MEEK	Meekatharra	58.52	249	P	P	03 01 24.9	-1.0
	baz=58,SNR=29						
CBIJ	Chichi jima	58.65	319	eP	P	03 01 26.1	-0.5
	54nm,0.9s						
NWAO	Narrogin (SRO)	59.32	242	eP	P	03 01 30.5	-0.7
BLDU	Ballidu	59.88	244	P	P	03 01 34.0	-1.0
	baz=60,SNR=46						
LUWI	Luwuk	60.06	279	eP	P	03 01 35.3	-1.1
	168nm,1.1s						
MUN	Mundaring	60.23	243	P	P	03 01 36.5	-0.7
	baz=60,SNR=11						
MORW	Morawa	60.58	246	P	P	03 01 38.6	-0.9
	baz=60,SNR=16						
SBA	Scott Base	60.67	184	eP	P	03 01 40.7	+1.5
	23nm,0.9s						
VNDA	Vanda	60.70	185	P	P	03 01 40.2	+0.8
	5.7nm,0.8s,baz=357,slow=7.6,SNR=27						
VNDA	Vanda	60.70	185	eP	P	03 01 40.3	+0.8
	31nm,1.6s						
GIRL	Giralia	62.96	253	P	P	03 01 55.1	0.0
	baz=63,SNR=15						
CASY	Casey	66.36	205	eP	P	03 02 15.5	-0.1
MJAR	Matsushiro Arr	67.70	323	P	P	03 02 24.0	-0.3
	20nm,0.8s,baz=165,slow=6.5,SNR=6.4						
MAJO	Matsushiro	67.70	323	eP	P	03 02 23.8	-0.6
	23nm,0.7s						
KIWB	Kanaga Island	69.22	1	eP	P	03 02 32.1	-1.0
ATKA	Atka Island	69.66	3	eP	P	03 02 35.1	-0.6
	37nm,0.9s						
ASAJ	Asahikawa	71.05	331	P	P	03 02 45.6	+1.5
	22nm,0.7s,baz=210,slow=7.0,SNR=39						
ASAJ	Asahikawa	71.05	331	eP	P	03 02 44.5	+0.3
	30nm,0.8s						
YULB	Yu-li	71.63	303	eP	P	03 02 47.4	-0.6
	16nm,0.8s						
NACB	Ninganchiao	71.77	304	eP	P	03 02 48.6	-0.2
	69nm,1.2s						
SSLB	Suanglung	72.09	303	eP	P	03 02 49.4	-1.4
	24nm,0.9s						
QSPA	South Pole Qui	72.40	180	P	P	03 02 51.8	-0.1
	45nm,0.8s,baz=36,slow=3.7,SNR=89						
QSPA	South Pole Qui	72.40	180	eP	P	03 02 52.2	+0.3
LEM	Lembang	72.72	268	P	P	03 02 54.8	+0.1
	151nm,0.7s,baz=86,slow=7.2,SNR=13						
PETK	Petropavlovsk-	73.43	345	P	P	03 02 57.6	0.0
	20nm,0.7s,baz=127,slow=7.5						
PETK	Petropavlovsk-	73.43	345	eP	P	03 02 57.5	-0.2
KSRS	Korea Array	74.51	318	P	P	03 03 05.1	+1.0
	6.7nm,0.7s,baz=130,slow=6.6,SNR=22						
KSAR	Wonju Array Be	74.53	318	P	P	03 03 05.1	+0.9
SNCC	San Nicolas Is	75.62	48	P	P	03 03 11.4	+1.0
	baz=237						
SCI2	San Clemente I	76.17	48	P	P	03 03 14.5	+1.1
	baz=238						
PKM	Mcpherson Peak	76.31	46	P	P	03 03 15.2	+0.8
	baz=237						
USRK	Ussuriysk Ar.	76.40	326	P	P	03 03 15.6	+1.1
	6.2nm,0.6s,baz=114,slow=5.3						
BLG	Laguna Peak, P	76.40	47	P	P	03 03 15.9	+1.2
	baz=238						
SMMC	Simmler	76.41	46	P	P	03 03 15.9	+1.1
	baz=237						
CIS	Catalina Islan	76.49	48	P	P	03 03 15.9	+0.7
	baz=238						
OSI	Osito Audit: C	76.91	47	P	P	03 03 18.3	+0.7
	baz=238						
ARVC	Arvin	77.11	46	P	P	03 03 19.4	+0.8
	baz=238						
109C	Camp Elliot, M	77.16	49	P	P	03 03 19.5	+0.7
	baz=239						
MWC	Mount Wilson	77.17	48	eP	P	03 03 19.8	+0.6
	13nm,0.4s						
VES	Vestal, Richgr	77.32	46	P	P	03 03 20.5	+0.8
	baz=237						
MURC	Murrieta	77.46	49	P	P	03 03 21.2	+0.6
	baz=239						
BFSC	Mount Baldy Ra	77.46	48	P	P	03 03 21.2	+0.6
	baz=238						
OHAK	Old Harbor	77.49	14	eP	P	03 03 18.9	-1.1
	21nm,0.8s						
EDW2	Edwards Air Fo	77.56	47	P	P	03 03 21.9	+0.8
	baz=238						
ISA	Isabella, Lake	77.65	46	P	P	03 03 22.4	+0.8
	baz=238						
ISA	Isabella, Lake	77.65	46	eP	P	03 03 22.9	+1.4
	9.9nm,0.8s						
MONP2	Monument Peak	77.66	50	P	P	03 03 22.7	+0.9
	baz=240						
IKP	In-Ko-Pah, Jac	77.76	50	P	P	03 03 23.2	+1.0
	baz=240						
NJ2	Nanjing	77.77	309	eP	P	03 03 23.9	+1.7
NJ2				pmax	pmax		
	comp=Z,15nm,0.6s						
AFDM	Forest Hills D	77.80	42	eP	P	03 03 23.2	+1.0
	8.3nm,1.1s						
N02D	Trinity Center	77.89	40	P	P	03 03 23.8	+1.1
	baz=234						
MDJ	Mudanjiang	77.98	325	P	P	03 03 22.0	-1.0
MDJ				pmax	pmax		
	comp=Z,52nm,0.8s						
MDJ	Mudanjiang	77.98	325	eP	P	03 03 24.0	+1.0
	38nm,0.9s						
PFO	Pinyon Flats O	77.99	49	P	P	03 03 24.1	+0.6
	baz=239						
M02C	Callahan	78.04	39	P	P	03 03 24.8	+1.3
	baz=234						
O03D	Paynes Creek	78.05	41	P	P	03 03 24.3	+0.7
	baz=234						
L02D	Cave Junction,	78.06	38	P	P	03 03 24.6	+1.1
	baz=233						
LRMC	Laurel Mtn Rad	78.10	47	P	P	03 03 24.8	+0.7
	baz=238						
SWSC	Sam W. Stewart	78.13	50	P	P	03 03 25.0	+0.9
	baz=240						
KDAK	Kodiak Island	78.16	14	P	P	03 03 24.2	+0.7
	14nm,0.6s,baz=207,slow=5.3,SNR=15						
MDPB	Devils Postpil	78.30	44	eP	P	03 03 26.2	+0.9
	11nm,0.8s						
CWC	Cottonwood Cre	78.33	46	P	P	03 03 25.9	+0.6
	baz=238						
YBH	Yreka Blue Hor	78.33	39	P	P	03 03 26.9	+1.8
	5.6nm,0.5s,baz=236,slow=2.6,SNR=9.7						
OMMB	Old Mammoth Mi	78.34	44	eP	P	03 03 26.8	+1.3
	6.8nm,0.7s						
MLAC	Mammoth, Mammo	78.46	44	P	P	03 03 27.1	+1.0
	baz=237						
BELC	Belle Mtn. Jos	78.52	49	P	P	03 03 27.1	+0.7
	baz=240						
MPMC	Manual Prospec	78.53	46	P	P	03 03 27.3	+0.9
	baz=238						
WAKR	Walker	78.54	43	eP	P	03 03 27.6	+1.2
	10nm,0.9s						
GSC	Goldstone, Bar	78.61	47	P	P	03 03 27.6	+0.9
	baz=239						
HEC	Hector,Ludlow	78.70	48	P	P	03 03 27.9	+0.7
	baz=239						
BEKR	Beckworth	78.71	42	eP	P	03 03 28.1	+0.8
	12nm,0.5s						
HUMO	Hull Mountain	78.71	38	eP	P	03 03 27.6	+0.6
	6.0nm,0.8s						
BC3	Big Chuckawall	78.74	49	P	P	03 03 28.4	+0.9
	baz=240						
PNTR	Pine Nut	78.76	43	eP	P	03 03 29.0	+1.4
	16nm,0.6s						
M04C	Macdoel	78.89	40	P	P	03 03 29.1	+1.0
	baz=234						
GLA	Glamis	78.90	50	P	P	03 03 29.5	+1.3
	baz=240						
YERR	Yerington	78.94	43	eP	P	03 03 29.4	+1.0
	19nm,0.5s						
GRAC	Grapevine Rang	79.11	46	P	P	03 03 30.4	+1.2
	baz=238						
I03D	Drain, OR	79.13	37	P	P	03 03 30.3	+1.2
	baz=233						
GMRC	Granite Mounta	79.16	48	P	P	03 03 30.3	+0.6
	baz=240,SNR=5.3						
FURC	Furnace Creek,	79.18	46	P	P	03 03 30.4	+0.9
	baz=239						
IRM	Iron Mountain	79.21	49	P	P	03 03 30.7	+0.9
	baz=240,SNR=7.0						
PAHR	Pah Rah Range	79.24	42	eP	P	03 03 31.2	+1.2
	12nm,1.2s						
NV01	Mina Array Sit	79.25	44	eP	P	03 03 30.9	+0.7
NV01				epP	pP	03 05 33.6	+0.7
NVAR	Mina Array Bea	79.25	44	P	P	03 03 31.0	+0.9
	3.8nm,0.5s,baz=227,slow=8.4,SNR=39						
NVAR				pP	pP	03 05 33.4	+0.5
	0.8nm,0.7s,baz=228,slow=9.4,SNR=4.5						
SHOC	Shoshone, Teco	79.29	47	P	P	03 03 30.9	+0.7
	baz=239						
TUQ	Turquoise Moun	79.30	47	P	P	03 03 31.0	+0.6
	baz=239						
NV11	Mina Array Sit	79.34	44	eP	P	03 03 31.4	+0.7
	2.2nm,1.4s						
Y12C	Blythe	79.46	50	P	P	03 03 32.1	+1.0
	baz=240						
113A	Mohawk Valley,	79.54	51	eP	P	03 03 33.2	+1.6
	45nm,1.9s						
J04D	Umpqua Nationa	79.58	38	P	P	03 03 32.8	+1.0
	baz=234,SNR=7.2						
LDFC	Landfair	79.70	48	eP	P	03 03 34.1	+1.6
	26nm,1.0s						
KVN	Kaiserville	79.72	43	eP	P	03 03 33.4	+0.8
	8.7nm,0.6s						
I04A	Tendick Farm,	79.74	38	P	P	03 03 33.5	+1.1
	baz=233						
CN2	Changchun	79.82	322	eP	P	03 03 33.0	+0.3
CN2				pmax	pmax		
	comp=Z,30nm,1.3s						
CN2				pmax	pmax		
	comp=Z,200nm,6.0s						
TPNV	Topopah Spring	79.85	46	P	P	03 03 34.1	+0.8
	baz=239,SNR=6.6						
TPNV	Topopah Spring	79.85	46	eP	P	03 03 34.3	+1.0
	38nm,1.9s						
214A	Organ Pipe Nat	79.86	52	P	P	03 03 34.1	+0.8
	baz=242						
KLR	Kul’dur	79.89	329	P	P	03 03 33.4	+0.4
	0.4nm,0.7s,baz=95,slow=4.7,SNR=16						
NEE2	Needles Airpor	79.89	49	P	P	03 03 34.5	+1.1
	baz=240						
MOD	Modoc Plateau	79.89	40	eP	P	03 03 34.1	+0.7
	10nm,0.7s						
PDMCI	Parker Dam,Lak	80.01	49	P	P	03 03 35.0	+1.1
	baz=241						
K05A	Summer Lake	80.01	39	eP	P	03 03 35.2	+1.2
	20nm,0.5s						
G03D	McMinnville, O	80.10	36	P	P	03 03 35.3	+1.2
	baz=233						
J05D	Fort Rock, OR	80.13	39	P	P	03 03 35.4	+0.8
	baz=234,SNR=9.6						
SHPR	Sheep Range	80.38	47	eP	P	03 03 37.5	+1.5
	29nm,1.9s						
H04A	Detroit Lake	80.39	37	eP	P	03 03 36.0	+0.2
	13nm,0.6s						
WHN	Wuhan	80.45	306	P	P	03 03 37.4	+1.1
PINE	Pine Mountain	80.60	38	eP	P	03 03 38.3	+1.3
	16nm,0.8s						
I05D	Terrebonne, OR	80.68	38	P	P	03 03 38.2	+0.9
	baz=234						
R11A	Troy Canyon, C	81.02	45	P	P	03 03 40.0	+0.7
	baz=239						
BMN	Battle Mountai	81.03	43	eP	P	03 03 39.7	+0.4
	23nm,1.4s						
WVOR	Wild Horse Val	81.22	40	eP	P	03 03 41.1	+0.9
	13nm,0.9s						
G05D	Wamic, OR	81.22	37	P	P	03 03 40.9	+0.8
	baz=234						
TUC	Tucson	81.55	52	P	P	03 03 42.6	+0.6
	baz=243						
TUC	Tucson	81.55	52	eP	P	03 03 44.1	+2.0
	11nm,1.0s						
UBPT	Khong Chiam	81.84	289	P	P	03 03 44.9	+1.1
LCMT	Little Creek M	81.96	47	eP	P	03 03 45.2	+1.1
	7.8nm,0.8s						
X16A	Lo Mia Camp, P	82.03	50	eP	P	03 03 46.1	+1.5
	13nm,1.0s						
CCUT	Cedar City	82.14	47	eP	P	03 03 46.5	+1.4
	42nm,1.9s						
KNB	Kanab	82.26	47	eP	P	03 03 47.0	+1.3
	78nm,2.0s						
PSUT	Pine Spring	82.29	46	eP	P	03 03 46.7	+0.9
	6.7nm,0.7s						
U15A	North Rim	82.35	48	eP	P	03 03 47.8	+1.5
	17nm,0.8s						
SZCU	Shurtz Canyon	82.36	47	eP	P	03 03 47.8	+1.6
	29nm,1.6s						
A04D	Lummi Island	82.54	33	P	P	03 03 47.5	+1.0
	baz=233						
GHO	Glory Hole Cre	82.56	14	eP	P	03 03 46.8	+0.3
	35nm,0.7s						
WUAZ	Wupatki	82.58	49	P	P	03 03 47.7	+0.4
	baz=242						
WUAZ	Wupatki	82.58	49	eP	P	03 03 48.0	+0.6
	15nm,1.1s						
B05A	Bryant	82.58	34	P	P	03 03 47.6	+0.8
	baz=233						
G08A	Pilot Rock	82.61	38	eP	P	03 03 48.4	+1.2
	9.9nm,0.6s						
DIV	Divide	82.75	15	eP	P	03 03 47.8	+0.3
	20nm,0.6s						
HAWA	Hanford	82.91	37	eP	P	03 03 49.6	+1.1
	11nm,0.4s						
X18A	Snowflake	83.17	51	eP	P	03 03 52.0	+1.7
	16nm,1.4s						
MTPU	Mount Pierson	83.20	47	eP	P	03 03 52.4	+1.8
	44nm,1.7s						
E08A	Dider Farm, El	83.23	37	eP	P	03 03 51.2	+1.2
	23nm,1.1s						
BMO	Blue Mountains	83.35	39	eP	P	03 03 51.6	+0.8
	40nm,1.8s						
MSU	Marysvale	83.43	46	eP	P	03 03 52.9	+1.3
MFID	Camas Ranch	83.48	41	eP	P	03 03 52.3	+0.7
	10nm,1.0s						
SEY	Seymchan	83.53	347	P	P	03 03 50.8	-0.3
	30nm,0.8s,baz=156,slow=5.2,SNR=88						
W18A	Petrified Fore	83.59	50	P	P	03 03 52.7	+0.3
	baz=243						
W18A	Petrified Fore	83.59	50	eP	P	03 03 51.0	-1.5
	12nm,1.3s						
BJT	Baijiatuau	83.59	315	eP	P	03 03 52.5	+0.4
	24nm,0.8s						
BJI	Beijing	83.60	315⇓	eP	P	03 03 52.6	+0.6
BJI				pmax	pmax		
	comp=Z,43nm,1.6s						
TRF	Thorofare Moun	83.77	12	eP	P	03 03 52.0	-0.6
	39nm,0.7s						
SKNT	Sakolnakorn	83.78	290	P	P	03 03 53.8	+0.4
DUG	Dugway, Tooele	83.81	45	P	P	03 03 53.7	+0.4
	baz=241						
121A	Cookes Peak, D	83.93	53	P	P	03 03 54.5	+0.4
	baz=245						
HARP	HAARP	84.00	15	eP	P	03 03 54.4	+0.9
	38nm,0.9s						
F10A	Beach Ranch, E	84.00	38	eP	P	03 03 54.8	+0.7
	9.8nm,0.8s						
MAW	Mawson	84.09	200	P	P	03 03 54.2	+0.2
	17nm,0.7s,baz=130,slow=6.2,SNR=25						
MAW	Mawson	84.09	200	eP	P	03 03 54.5	+0.5
	5.5nm,0.8s						
ENH	Enshi	84.12	304	eP	P	03 03 55.5	+0.5
BPAW	Bear Paw Mtn.	84.21	12	eP	P	03 03 53.9	-0.7
	3.9nm,0.6s						
MCK	McKinley	84.30	13	eP	P	03 03 55.0	0.0
	21nm,1.0s						
ZAIG	Zacatecas	84.31	64	eP	P	03 03 56.4	+0.1
	40nm,1.9s						
HLID	Hailey	84.44	41	P	P	03 03 57.5	+1.1
	baz=239						
HLID	Hailey	84.44	41	eP	P	03 03 57.5	+1.1
	5.2nm,0.8s						
HLID				epP	pP	03 06 02.7	+1.5
TMUT	Trail Mountain	84.46	46	eP	P	03 03 58.1	+1.4
TMUT				epP	pP	03 06 03.9	+2.4
SRAK	Srakaew	84.52	286	P	P	03 03 57.0	-0.1
HVU	Hansel Valley	84.60	43	eP	P	03 03 58.3	+1.1
	56nm,1.9s						
SRU	San Rafael Swe	84.85	46	eP	P	03 04 00.1	+1.6
	11nm,0.8s						
NONG	Nongkai	84.90	291	P	P	03 03 59.5	+0.6
GYA	Guiyang	84.91	300	eP	P	03 03 59.8	+0.8
GYA				pP	pP	03 06 06.6	+2.7
GYA				sP	sP	03 07 04.0	+1.4
GYA				PP	PP	03 07 29.4	+2.5
GYA				SKS	SKSac	03 13 27.2	-1.4
GYA				S	S	03 13 39.1	-1.0
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MLY	Manley	85.10	11	eP	P	03 03 58.2	-0.7
	16nm,1.3s						
LAZ	Ladron	85.21	52	eP	P	03 04 00.6	+0.2
NEW	Newport	85.31	36	P	P	03 04 01.2	+0.9
	baz=237						
NEW	Newport	85.31	36	eP	P	03 04 00.9	+0.6
	4.6nm,0.7s						
HWUT	Hardware Ranch	85.31	44	eP	P	03 04 01.6	+0.9
	36nm,1.8s						
CCB	Clear Creek Bu	85.34	13	eP	P	03 03 59.0	-1.0
	9.8nm,0.8s						
MNTX	Cornudas Mount	85.44	55	P	P	03 04 01.8	+0.5
	baz=246						

MNTX	Cornudas Mount	85.44	55	*e*P	P	03 04 02.0	+0.8
	11nm,1.3s						
MNTX				*e*pP	pP	03 06 06.6	+0.2
PV09	Paradox Valley	85.54	47	*e*P	P	03 04 04.9	+2.9
DLBC	Dease Lake	85.60	23	*e*P	P	03 04 02.7	+1.2
	33nm,1.5s						
ILAR	Eielson Array	85.64	13	P	P	03 04 00.5	-1.0
	4.4nm,0.5s,baz=220,slow=5.2,SNR=84						
ILAR				pP	pP	03 06 07.4	+0.7
	1.7nm,0.9s,baz=231,slow=6.1,SNR=5.0						
ILB	Eielson Array	85.64	13	*e*P	P	03 04 00.7	-0.7
IL1	Eielson Array	85.64	13	*e*P	P	03 04 01.2	-0.2
IL1				*e*pP	pP	03 06 08.6	+1.9
TX31	Lajitas Ar. Si	85.86	58	*e*P	P	03 04 05.2	+1.8
TXAR	Lajitas Array	85.86	58	P	P	03 04 05.1	+1.7
	4.2nm,0.6s,baz=215,slow=8.0,SNR=83						
TXAR				PKKPbc	PKKPbc	03 22 01.6	+0.7
	0.1nm,0.4s,baz=133,slow=3.4,SNR=4.6						
TASM	ASL Pad, Albuq	85.94	52	P	P	03 04 04.4	+0.6
	baz=245						
ANMO	Albuquerque	85.94	52	P	P	03 04 04.6	+0.8
	1.6nm,0.5s,baz=224,slow=4.7,SNR=8.3						
ANMO	Albuquerque	85.94	52	P	P	03 04 04.2	+0.4
	baz=245						
ANMO	Albuquerque	85.94	52	*e*P	P	03 04 04.0	+0.2
	7.1nm,1.2s						
TASL	Snake Pit, Alb	85.94	52	P	P	03 04 04.4	+0.5
	baz=245						
MCMT	McKenzie Canyo	86.05	40	*e*P	P	03 04 05.5	+1.3
XAN	Xi'an	86.10	307	P	P	03 04 05.0	+0.6
XAN				pmax	pmax		
	comp=Z,39nm,1.0s						
BILL	Bilibino	86.18	354	*e*P	P	03 04 03.9	0.0
	9.6nm,0.8s						
PBKT	Sadao Pong	86.35	289	P	P	03 04 07.6	+1.8
PHET	Kaeng Krachan	86.38	285	P	P	03 04 07.9	+1.9
MSO	Missoula	86.39	38	*e*P	P	03 04 06.7	+1.2
	4.5nm,0.4s						
DLMT	Dillon	86.47	40	*e*P	P	03 04 07.2	+1.2
	6.6nm,0.8s						
REDW	Red Top Meadow	86.61	42	*e*P	P	03 04 07.9	+1.1
	13nm,1.1s						
FXWY	Fox Creek	86.62	42	*e*P	P	03 04 08.1	+1.2
	30nm,1.9s						
IMW	Indian Meadow	86.80	42	*e*P	P	03 04 08.4	+0.6
	11nm,0.8s						
S22A	4UR Ranch, Cre	86.85	49	P	P	03 04 08.7	+0.5
	baz=245						
S22A	4UR Ranch, Cre	86.85	49	*e*P	P	03 04 09.4	+1.3
	8.6nm,1.3s						
DAWY	Dawson	86.85	16	*e*P	P	03 04 07.4	+0.2
	31nm,1.8s						
MOOW	Moose Ponds	86.86	42	*e*P	P	03 04 09.1	+1.1
	4.4nm,1.1s						
O20A	White River Ci	86.88	46	P	P	03 04 08.6	+0.4
	baz=244						
LOHW	Long Hollow	86.88	42	*e*P	P	03 04 08.8	+0.7
	4.5nm,0.6s						
QLMT	Earthquake Lak	86.94	41	*e*P	P	03 04 10.2	+1.9
EGAK	Eagle	86.97	15	*e*P	P	03 04 08.2	+0.5
	26nm,1.6s						
HHC	Hu-ho-hao-te	87.09	314	*e*P	P	03 04 14.6	+5.6
HHC				pmax	pmax		
	comp=Z,24nm,1.1s						
COLD	Coldfoot	87.17	11	*e*P	P	03 04 09.1	+0.6
	7.6nm,0.9s						
BW06	Boulder Array	87.17	43	P	P	03 04 09.6	+0.1
	baz=243						
PD31	Pinedale Array	87.17	43	*e*P	P	03 04 10.1	+0.6
PD31				*e*pP	pP	03 06 18.9	+3.5
PDAR	Pinedale Array	87.17	43	P	P	03 04 09.7	+0.2
	4.2nm,0.4s,baz=210,slow=3.2,SNR=52						
PDAR				pP	pP	03 06 14.9	-0.4
	1.4nm,0.7s,baz=212,slow=3.6,SNR=7.1						
PDAR	Pinedale Array	87.17	43	*e*P	P	03 04 09.3	-0.1
PDAR				*e*pP	pP	03 06 16.1	+0.8
BOZ	Bozeman (W)	87.18	40	P	P	03 04 10.0	+0.6
	baz=241						
BOZ	Bozeman (W)	87.18	40	*e*P	P	03 04 10.7	+1.4
	10nm,1.4s						
H17A	Grant Village	87.27	42	P	P	03 04 10.9	+0.9
	baz=242						
UTHA	Uthaitani	87.40	287	P	P	03 04 12.7	+1.9
WALA	Waterton Lakes	87.54	36	*e*P	P	03 04 11.7	+0.8
	39nm,1.6s						
KMI	Kunming	87.71	297	P	P	03 04 13.2	+0.8
KMI				pmax	pmax		
	comp=Z,25nm,1.2s						
LNIG	Linares	87.72	63	*e*P	P	03 04 12.9	+0.8
	10nm,0.9s						
SDCO	Great Sand Dun	87.80	49	P	P	03 04 13.0	+0.4
	baz=246						
SDCO	Great Sand Dun	87.80	49	*e*P	P	03 04 12.2	-0.5
	8.1nm,1.5s						
PAYA	Payao	88.26	291	P	P	03 04 16.0	+1.2
MSTX	Muleshoe	88.35	54	P	P	03 04 15.5	+0.5
	baz=248						
MSTX	Muleshoe	88.35	54	*e*P	P	03 04 15.8	+0.7
	8.2nm,0.6s						
RLMT	Red Lodge	88.43	41	P	P	03 04 15.8	+0.5
	baz=243						
RLMT	Red Lodge	88.43	41	*e*P	P	03 04 16.9	+1.6
	6.0nm,1.0s						
TOLK	Toolik Lake Re	88.54	10	P	P	03 04 16.0	+0.9
	baz=208						
Q24A	Divide	88.55	48	P	P	03 04 16.7	+0.5
	baz=246						
ISCO	Idaho Springs	88.57	47	P	P	03 04 16.4	+0.2
	baz=246						
ISCO	Idaho Springs	88.57	47	*e*P	P	03 04 15.6	-0.5
	14nm,1.6s						
CM01	Chiang Mai Arr	88.77	290	*e*P	P	03 04 17.8	+0.7
CMAR	Chiang Mai Arr	88.79	290	P	P	03 04 18.5	+1.2
	10nm,0.8s,baz=109,slow=2.5,SNR=34						
CMMT	Chiang Mai	88.90	290	P	P	03 04 18.8	+1.0
CHTO	Chiang Mai	88.91	290	*e*P	P	03 04 18.8	+1.0
	17nm,0.8s						
CHTO	Chiang Mai	88.91	290	P	P	03 04 18.9	+1.1
833A	Chaparral WMA,	88.98	60	P	P	03 04 18.8	+0.8
	baz=249						
K22A	Casper	89.13	45	P	P	03 04 18.9	+0.4
	baz=245						
CMIG	Matias Romero	89.16	72	P	P	03 04 20.2	+1.2
	2.1nm,0.5s,baz=352,slow=4.6,SNR=5.2						
CMAI	Chiengmai2	89.18	291	P	P	03 04 20.4	+1.1
SYO	Syowa Base	89.40	193	⇑*e*P	P	03 04 17.7	-1.4
SYO	Syowa Base	89.40	193	⇑*e*pP	pP	03 06 23.0	-2.5
JCT	Junction City	89.41	58	P	P	03 04 20.3	+0.4
	baz=249						
JCT	Junction City	89.41	58	*e*P	P	03 04 20.7	+0.7
	28nm,1.7s						
EGMT	Eagleton	89.45	39	P	P	03 04 20.2	+0.4
	baz=243						
AMTX	Amarillo	89.53	53	P	P	03 04 20.7	+0.2
	baz=248						
ABTX	Abilene, Hawle	90.29	56	P	P	03 04 24.2	+0.3
	baz=249						
ABTX	Abilene, Hawle	90.29	56	*e*P	P	03 04 24.8	+0.9
	11nm,0.7s						
LZH	Lanzhou	90.73	308	*e*P	P	03 04 27.5	+1.4
LZH				pP	pP	03 06 37.8	+4.9
LZH				pmax	pmax		
	comp=Z,20nm,1.1s						
SNAA	Sanae	90.85	179	P	P	03 04 25.4	-0.5
	10nm,0.7s,baz=185,slow=6.2,SNR=124						
SNAA	Sanae	90.85	179	*e*P	P	03 04 24.8	-1.1
	62nm,1.8s						
LAO	LASA Array	91.03	41	P	P	03 04 28.0	+1.0
	baz=245						
435B	Jarrell	91.30	58	P	P	03 04 29.4	+0.8
	baz=250						
RSSD	Black Hills	91.39	44	P	P	03 04 29.5	+0.6
	baz=247						
RSSD	Black Hills	91.39	44	*e*P	P	03 04 28.6	-0.4
	2.0nm,0.6s						
RSSD				*e*pP	pP	03 06 27.6	-8.2
INK	Inuvik	91.64	15	P	P	03 04 29.0	-0.2
	4.7nm,0.7s,baz=233,slow=3.7,SNR=18						
INK	Inuvik	91.64	15	*e*P	P	03 04 28.9	-0.4
INK				*e*pP	pP	03 06 30.3	-5.9
ULN	Ulaanbaatar	92.96	319	*e*P	P	03 04 35.8	-0.2
	7.2nm,0.9s						
DGMT	Dagmar	93.00	40	P	P	03 04 37.2	+1.1
	baz=247						
SONA1	Songino Array	93.36	319	*e*P	P	03 04 37.4	-0.5
SONM	Songino Array	93.36	319	P	P	03 04 37.6	-0.2
	2.4nm,0.7s,baz=137,slow=6.5,SNR=15						
YKA	Yellowknife Ar	94.11	25	P	P	03 04 40.4	-0.3
	2.2nm,0.7s,baz=236,slow=4.6,SNR=15						
YKA				PKKP	PKKPdf	03 21 38.4	-1.9
	0.4nm,0.7s,baz=42,slow=2.2,SNR=4.8						
BGNE	Belgrade	94.44	48	P	P	03 04 43.7	+1.0
	baz=250						
KSU1	Kansas State U	94.80	51	P	P	03 04 45.3	+0.9
	baz=251						
GTA	Gaotai	94.87	310	*e*P	P	03 04 45.4	+0.5
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
T38A	Diamond	95.89	53	P	P	03 04 49.8	+0.3
	baz=252						
ECSD	EROS Data Cent	96.26	46	Pdiff	P	03 04 51.3	+0.3
	baz=252						
U39A	Green Forest	96.32	54	Pdiff	P	03 04 51.4	+0.1
	baz=253						
544A	White Castle	96.37	61	Pdiff	P	03 04 52.0	+0.3
	baz=253						
R38A	Fenwick Farm,	96.53	52	Pdiff	P	03 04 52.6	+0.4
	baz=253						
P37A	Lathrop	96.61	51	Pdiff	P	03 04 53.3	+0.8
	baz=253						
S39A	Bolivar	96.82	53	Pdiff	P	03 04 53.8	+0.3
	baz=253						
R39A	Chumby, Stover	97.22	52	Pdiff	P	03 04 56.1	+0.8
	baz=253						
M37A	Trindle Farm,	97.36	49	Pdiff	P	03 04 56.9	+1.0
	baz=253						
S40A	Lebanon	97.42	53	Pdiff	P	03 04 57.0	+0.7
	baz=254						
K36A	Gilmore City	97.44	48	Pdiff	P	03 04 57.3	+1.1
	baz=253						
Q39A	Willow Grove F	97.47	52	Pdiff	P	03 04 57.6	+1.2
	baz=254						
J36A	Seneca 1, Swea	97.72	47	Pdiff	P	03 04 58.0	+0.6
	baz=253						
P39B	Salisbury	97.76	51	Pdiff	P	03 04 58.3	+0.6
	baz=254						
M38A	Pleasantville	97.98	49	Pdiff	P	03 04 59.6	+0.9
	baz=254						
S41A	Jillco Farms,	98.00	53	Pdiff	P	03 04 59.6	+0.7
	baz=254						
I38A	Scanlan Farm,	99.31	47	Pdiff	Pdif	03 05 05.4	+0.9
	baz=255						
R43A	Red Bud	99.56	53	Pdiff	Pdif	03 05 06.6	+0.8
	baz=255						
J39A	Decorah	99.57	48	Pdiff	Pdif	03 05 06.4	+0.7
	baz=255						
J40A	Soldiers Grove	100.26	48	Pdiff	Pdif	03 05 09.9	+1.2
	baz=256						
JFWS	Jewell Farm	100.49	48	Pdiff	Pdif	03 05 10.9	+1.1
	baz=256						
E38A	The Farm, Brul	100.51	44	*e*S	Pdif	03 05 05.3	-4.4
J41A	Loganville	100.77	48	Pdiff	Pdif	03 05 12.3	+1.3
	baz=256						
H40A	Chili	100.81	47	Pdiff	Pdif	03 05 12.4	+1.2
	baz=256						
LPAZ	La Paz	103.50	112	PKKPbc	PKKPbc	03 21 14.8	-0.3
	1.2nm,0.7s,baz=217,slow=7.1,SNR=4.7						
ZALV	Zalesovo Beam	108.03	322	PKiKP	PKiKP	03 09 44.9	-1.2
	2.2nm,0.7s,baz=139,slow=2.0,SNR=6.9						
MKAR	Makanchi Array	108.95	314	PKiKP	PKiKP	03 09 47.0	-1.2
	2.6nm,0.6s,baz=99,slow=0.6,SNR=17						
KURK	Kurchatov	111.63	318	*e*PKP	PKiKP	03 09 51.8	-1.2
KURBB	Kurchatov Arra	111.69	318	PKiKP	PKiKP	03 09 52.0	-1.1
	4.0nm,0.7s,baz=95,slow=1.8,SNR=38						
KSH	Kashi	112.92	306	*e*PKP	PKiKP	03 09 53.8	-2.2
KSH				*e*PP	PP	03 11 00.9	+4.6
BVAR	Borovoye Array	116.64	321	PKP	PKPdf	03 10 01.6	-1.0
	5.1nm,0.6s,baz=100,slow=1.6,SNR=35						
BRVK	Borovoye	116.70	321	*e*PKPdf	PKPdf	03 10 01.8	-0.9
KK31	Karatay Array	117.15	310	*e*PKPdf	PKPdf	03 10 03.1	-0.8
KKAR	Karatay Array	117.15	310	*e*PKPdf	PKPdf	03 10 03.1	-0.8
KBL	Kabul	118.16	300	*e*PKPdf	PKPdf	03 10 06.5	+0.1
ARU	Arti	122.64	326	*e*PKPdf	PKPdf	03 10 13.1	-0.8
ABKAR	Akbulak array	123.74	318	*e*PKPdf	PKPdf	03 10 15.8	-0.5
AKTO	Aktyubinsk	124.67	320	PKP	PKPdf	03 10 17.7	-0.3
	6.4nm,0.8s,baz=44,slow=3.7,SNR=27						
ARCES	ARCESS Array B	126.06	350	PKP	PKPdf	03 10 20.1	-0.1
	9.5nm,0.8s,baz=13,slow=1.9,SNR=17						
GEYT	Alibeck	126.89	304	PKP	PKPdf	03 10 22.7	-0.1
	2.0nm,0.3s,baz=247,slow=11,SNR=4.8						
SUR	Sutherland	126.95	200	*e*PKPdf	PKPdf	03 10 23.7	+0.3
BOSA	Boshof	128.62	207	PKP	PKPdf	03 10 27.4	+0.8
	5.1nm,0.8s,baz=90,slow=2.5,SNR=8.6						
KLMR	Klimovskoe	129.12	337	*e*PKPdf	PKPdf	03 10 24.5	-1.7
KLMR				AMP		03 10 27.3	
	comp=Z,14nm,1.4s						
FINES	FINESS Array B	132.94	344	PKhKP	PKPpre	03 10 27.4	
	comp=Z,2.0nm,0.7s,baz=90,slow=1.4,SNR=4.7						
FINES				SKPbc	SKPab	03 13 08.7	-1.0
	comp=Z,3.8nm,0.6s,baz=59,slow=3.1,SNR=14						
NC303	NORSAR Array S	135.93	353	*e*PKPpre	PKPpre	03 10 28.4	
NC303				*e*PKPdf	PKiKP	03 10 40.1	-0.7
NB2	NORSAR Subarra	136.12	353	PKP	PKPpre	03 10 28.4	
	comp=Z,3.5nm,0.9s,baz=17,slow=2.6						
KIV	Kislovodsk	136.67	316	*e*PKPdf	PKPdf	03 10 40.7	-0.4
HFS	Hagfors	136.68	351	SKPbc	SKPbc	03 13 20.4	+1.4
	comp=Z,3.1nm,0.7s,baz=99,slow=4.5,SNR=6.6						
LSZ	Lusaka	138.06	220	*e*PKPdf	PKPdf	03 10 43.9	-0.6
LSZ				*e*PKPdf	PKiKP	03 10 45.5	-1.2
RAYN	Ar Rayn	138.59	286	*e*PKPdf	PKPdf	03 10 45.8	+0.6
RAYN				*e*SKPab	SKPab	03 13 35.5	-0.6
TSUM	Tsumeb	140.14	204	*e*PKPdf	PKPpre	03 10 44.2	
AKASG	Malin Array Be	140.33	332	PKhKP	PKPpre	03 10 40.0	
	comp=Z,2.3nm,0.4s,baz=43,slow=4.1,SNR=9.3						
AKBB	Malin Array Si	140.33	332	*e*PKPpre	PKPpre	03 10 41.2	
AK11	Malin Array Si	140.38	332	*e*PKPdf	PKPdf	03 10 48.4	+0.9
EKA	Eskdalemuir Ar	142.22	4	PKhKP	PKPpre	03 10 46.3	
	comp=Z,3.1nm,0.6s,baz=339,slow=3.0,SNR=13						
SORM	Soroca	142.57	330	⇑*i*P	PKPdf	03 10 48.3	-3.1
KIS	Kishinev	143.13	329	*e*PKP	PKPbc	03 10 51.0	+0.2
LEOM	Leova	143.78	328	⇑*i*P	PKPab	03 10 53.2	+0.3
KWP	Kalwaria Pacla	143.84	337	*e*PKPbc	PKPbc	03 10 52.3	-0.6
ILGA	Ilgaz	143.89	317	*e*PKPbc	PKPdf	03 10 54.8	+0.4
DSB	Dublin	143.94	8	*e*PKPbc	PKPbc	03 10 52.9	-0.2
TLCR		144.36	326	⇓*i*P	PKPab	03 10 55.2	0.0
BUR08	Bucovina Ar. S	144.37	332	*e*PKPbc	PKPab	03 10 55.1	-0.2
OJC	Ojcow	144.37	340	*e*PKPbc	PKPbc	03 10 54.6	0.0
OJC	Ojcow	144.37	340	*e*	PKPdf	03 10 54.6	0.0
BUR04	Bucovina Ar. S	144.39	332	*e*PKPbc	PKPbc	03 10 55.1	+0.2
BURAR	Bucovina Array	144.39	332	⇑*i*P	PKPab	03 10 55.5	+0.1
BIZ	Bicaz	144.49	331	⇑*i*P	PKPab	03 10 56.0	+0.4
TESR	Tescani	144.54	330	⇓*i*P	PKPbc	03 10 55.5	+0.3
BR131	Keskin Array S	144.60	315	*e*PKPdf	PKPdf	03 10 55.6	+0.2
BRTR	Keskin Array B	144.60	315	PKP	PKPdf	03 10 54.8	-0.7
	comp=Z,20nm,0.7s,baz=143,slow=5.0,SNR=127						
CFR	Carcaliu	144.72	327	⇑*i*P	PKPdf	03 10 55.5	+0.2
CRVS	Cervenica-Dubn	144.90	337	*e*PKP	PKPbc	03 10 56.4	+0.1
VRI	Vrincioaia	144.96	329	⇓*i*P	PKPdf	03 10 56.1	+0.4
PLOR	Plostina	145.01	329	⇓*i*P	PKPbc	03 10 56.8	+0.1
ASF	Jabal al Asfar	145.04	301	PKPbc	PKPbc	03 10 57.5	+0.2
	comp=Z,15nm,0.7s,baz=350,slow=1.6,SNR=33						
TIRR	Tirgusor	145.06	326	⇑*i*P	PKPbc	03 10 57.2	+0.4
TIRR	Tirgusor	145.06	326	*e*PKPdf	PKPbc	03 10 57.2	+0.4
BMR	Baia Mare	145.09	334	⇑*i*P	PKPbc	03 10 57.3	+0.5
ANTO	Ankara	145.09	316	⇑*i*P	PKPdf	03 10 56.1	-0.1
ANTO	Ankara	145.09	316	*e*PKPdf	PKPbc	03 10 57.4	+0.2
TRPA	Tarpa	145.12	335	⇑*i*P	PKPbc	03 10 57.2	+0.3
TRPA	Tarpa	145.12	335	⇓*e*S	PKPbc	03 10 57.2	+0.3
BR231	Keskin MP Arra	145.12	316	*e*PKPdf	PKPbc	03 10 57.8	+0.5
HARR	Harsova	145.16	326	⇓*i*P	PKPab	03 10 57.8	-0.5
TLB	Topalu	145.17	326	⇓*i*P	PKPab	03 10 57.8	-0.5
ARCR	ARCALIA	145.17	332	⇑*i*P	PKPab	03 10 58.0	-0.3
CLL	Collm	145.22	347	*i* PKPbc	PKPbc	03 10 57.0	0.0
	comp=Z,62nm,0.9s						
CLL				*i* (pPKPdf)		03 13 22.4	
CLL	Collm	145.22	347	*e*PKPdf	PKPbc	03 10 57.0	0.0
OKC	Ostrava-Krasne	145.23	341	*e*PKP	PKPbc	03 10 57.5	+0.3
UPC	Upice	145.25	344	*e*PKP	PKPbc	03 10 57.7	+0.5
DPC	Dobruska-Polom	145.31	343	*e*PKP	PKPbc	03 10 58.0	+0.6
LANS	Liptovska Anna	145.40	339	*e*PKP	PKPab	03 10 58.5	-0.7
BRG	Berggiesshubel	145.42	346	*i* PKP	PKPbc	03 10 57.5	-0.2
	comp=Z,41nm,1.3s						
BRG				*e*pPKP	pPKPdf	03 13 17.6	+5.6
	comp=Z,2.9nm,0.8s						
KRLC	Kraliky	145.43	343	*e*PKP	PKPbc	03 10 58.2	+0.4
MORC	Moravsky Berou	145.47	342	⇓*i*P	PKPbc	03 10 58.3	+0.4
MORC	Moravsky Berou	145.47	342	*e*PKPdf	PKPdf	03 10 56.7	+0.2
MORC	Moravsky Berou	145.47	342	*e*PKP	PKPbc	03 10 58.0	+0.1
WTSB	Winterswijk	145.52	354	*e*PKP	PKPbc	03 10 57.6	-0.3
DOPR	Dopca	145.53	330	⇑*i*P	PKPbc	03 10 58.5	+0.3
PVCC	Panska Ves	145.59	345	*e*PKP	PKPbc	03 10 58.5	+0.3
MLR	Muntele Rosu	145.61	329	⇓*i*P	PKPbc	03 10 58.6	0.0
MLR	Muntele Rosu	145.61	329	*e*PKPdf	PKPbc	03 10 58.5	-0.1
CJR	Cluj-Napoca	145.79	333	⇑*i*P	PKPbc	03 10 59.3	+0.4
LTVH	Lˆ'tavˆ'rtes,	145.97	335	⇓*e*S	PKPbc	03 11 01.0	+1.7
MMAI	Mount Meron Ar	146.00	303	PKPbc	PKPbc	03 10 59.6	-0.4
	comp=Z,27nm,0.6s,baz=72,slow=4.7,SNR=35						
MBAR	Mbarara	146.05	241	*e*PKPdf	PKPbc	03 11 00.8	0.0
PRA	Prague	146.05	345	*e*PKP	PKPbc	03 11 00.1	+0.6
VOIR		146.09	330	⇓*i*P	PKPbc	03 10 59.4	-0.5
PRU	Pruhonice	146.10	345	*e*PKP	PKPbc	03 10 59.9	+0.3
GOPC	GO Pecny, Ondr	146.11	345	*e*PKP	PKPbc	03 10 59.6	-0.1
DRGR		146.11	334	⇓*i*P	PKPbc	03 11 00.1	+0.2
VRAC	Vranov	146.17	342	⇑*i*P	PKPbc	03 11 00.4	+0.5
VRAC	Vranov	146.17	342	*e*PKP	PKPbc	03 11 00.1	+0.2
VYHS	Vyhne	146.18	339	*e*PKP	PKPbc	03 11 00.2	+0.3
JAVC	Velka Javorina	146.24	341	*e*PKP	PKPab	03 11 01.4	-1.1
PSZ	Piszkesteto	146.30	338	⇓*i*P	PKPbc	03 11 00.6	+0.2
PSZ	Piszkesteto	146.30	338	⇑*e*S	PKPbc	03 11 01.7	+1.3
PSZ	Piszkesteto	146.30	338	*e*PKPdf	PKPbc	03 11 00.2	-0.2
ARR	Arges	146.34	330	⇑*i*P	PKPbc	03 10 59.5	-1.0
NKC	Novy Kostel	146.35	347	*e*PKP	PKPbc	03 11 01.0	+0.7
KRUC	Moravsky	146.45	342	*e*PKP	PKPbc	03 11 00.7	+0.1
SMOL	Smolenice	146.62	341	*e*PKP	PKPbc	03 11 02.1	+1.0
LOT	Lotru	146.68	331	⇓*i*P	PKPbc	03 11 00.8	-0.7
HGN	Heimansgroeve	146.78	355	*e*PKP	PKPbc	03 11 00.7	-0.8
MODS	Modra-Piesok	146.79	341	*e*PKP	PKPbc	03 11 02.1	+0.5
UCC	Uccle	146.86	357	⇓PKP	PKPbc	03 11 01.5	-0.1
UCC	Uccle	146.86	357	*e*PKPbc	PKPbc	03 11 02.0	+0.3
CSS	Mathiatis	146.92	308	*e*PKPdf	PKPbc	03 11 01.9	-0.4
MEM	Membach	146.93	355	⇑PKP	PKPbc	03 11 01.5	-0.4
BUD	Budapest	146.98	338	⇓*e*S	PKPbc	03 11 02.1	0.0
GRFO	Grafenberg	147.11	348	*e*PKPbc	PKPbc	03 11 03.1	+0.7
KHC	Kasperske Hory	147.13	345	*e*PKP	PKPbc	03 11 02.9	+0.5
KHC				*e*x	x	03 11 07.0	
KHC	Kasperske Hory	147.13	345	*e*PKPbc	PKPbc	03 11 03.0	+0.5
SNF	Seneffe	147.15	357	⇑PKP	PKPbc	03 11 02.6	+0.2
CSKK	Csˆ‡kako	147.35	339	⇓*e*S	PKPbc	03 11 02.9	-0.2
GEC2	GERESS Array S	147.37	345	*e*PKPbc	PKPbc	03 11 03.3	0.0
GERES	GERESS Array B	147.37	345	PKPbc	PKPbc	03 11 03.2	0.0
	comp=Z,19nm,0.6s,baz=22,slow=3.1,SNR=166						
GEA0	GERESS Array S	147.37	345	*e*PKPbc	PKPbc	03 11 02.8	-0.4
BZS	Buzias	147.50	333	⇓*i*P	PKPdf	03 11 01.0	+1.0
DOU	Dourbes	147.55	356	⇓PKP	PKPbc	03 11 03.5	0.0
CONA	Conrad Observa	147.62	342	*e*PKPbc	PKPbc	03 11 04.2	+0.3
	comp=Z,17nm,0.7s,SNR=25						
ISP	Isparta	147.66	314	*e*PKPbc	PKPbc	03 11 05.3	+1.0
HERR	Herculane	147.73	332	⇓*i*P	PKPbc	03 11 03.2	-0.9
WLF	Walferdange	147.86	354	⇑PKP	PKPbc	03 11 05.0	+0.7
WLF	Walferdange	147.86	354	*e*PKPbc	PKPbc	03 11 05.0	+0.7
MDVR	Moldovita	148.12	332	⇑*i*P	PKPbc	03 11 04.2	-1.0
MOA	Molln	148.14	344	*e*PKPbc	PKPbc	03 11 04.9	-0.2
	comp=Z,5.6nm,0.7s,SNR=7.5						
MORH	Mˆ‡rˆ¡gy, Hung	148.20	337	⇓*e*S	PKPbc	03 11 05.0	-0.2
ARSA	Arzberg	148.33	342	*e*PKPbc	PKPbc	03 11 05.6	0.0
	comp=Z,9.0nm,0.8s,SNR=5.2						
MANT	Manisa	148.61	317	*e*PKPbc	PKPbc	03 11 07.0	+0.2
BEHE	Becsehely	148.63	340	⇑*e*S	PKPbc	03 11 07.5	+1.2
KOGS	Kog	148.82	340	*i* PKPbc	PKPbc	03 11 06.0	-0.7
BFO	Black Forest	148.91	351	*e*PKPbc	PKPbc	03 11 06.6	-0.4
BFO				*e*PKPab	PKPab	03 11 12.5	-0.8
SOKA	Soboth	148.99	342	*e*PKPbc	PKPbc	03 11 06.8	-0.5
	comp=Z,4.0nm,0.5s,SNR=10						
VTS	Vitosha	149.07	328	⇑*i*P	PKPdf	03 11 03.6	+0.8
VTS	Vitosha	149.07	328	*e*PKPbc	PKPbc	03 11 07.6	-0.1
KBA	Koelnbreinsper	149.09	344	*e*PKPbc	PKPbc	03 11 06.6	-1.0
	comp=Z,12nm,0.5s,SNR=7.7						
ECH	Echery	149.18	353	*e*PKPbc	PKPbc	03 11 07.6	0.0
WATA	Walderalm	149.28	347	*e*PKiKP	PKiKP	03 11 08.7	-0.2
	comp=Z,16nm,0.9s,SNR=7.0						
OBKA	Obir	149.29	342	*e*PKPbc	PKPbc	03 11 06.3	-1.7
	comp=Z,11nm,1.4s						
RETA	Reutte	149.31	348	*e*PKPbc	PKPbc	03 11 07.5	-0.5
	comp=Z,8.0nm,0.7s,SNR=9.0						
WTTA	Wattenberg	149.33	347	*i* PKPbc	PKPbc	03 11 08.1	-0.2
	comp=Z,22nm,0.7s,SNR=11						
MOTA	Moosalm	149.37	347	*e*PKiKP	PKiKP	03 11 09.0	0.0
	comp=Z,11nm,0.6s,SNR=14						
DIVS	Divibare	149.41	333	*e*PKPbc	PKPbc	03 11 08.3	-0.1
MYKA	Terra Mystica	149.43	344	*e*PKPbc	PKPbc	03 11 07.4	-1.0
	comp=Z,17nm,0.5s,SNR=12						
ABTA	Abfaltersbach	149.61	345	*i* PKPbc	PKPbc	03 11 08.2	-0.6
	SNR=16						
DAVA	Damuels	149.67	349	*e*PKiKP	PKiKP	03 11 09.4	-0.3
	comp=Z,45nm,1.6s,SNR=9.2						
LJU	Ljubljana	149.72	342	*i* PKPbc	PKPbc	03 11 08.6	-0.3
FETA	Feichten	149.76	348	*i* PKPbc	PKPbc	03 11 08.9	-0.3
	comp=Z,10nm,0.6s						
BOJS	Bojanci	149.98	341	*i* PKPbc	PKPbc	03 11 09.5	-0.1
BLY	Banja Luka	149.98	337	⇓*i*P	PKPbc	03 11 09.2	-0.4
BLY	Banja Luka	149.98	337	*e*PKPbc	PKPbc	03 11 09.2	-0.4
DAVOX	Davos/Dischmat	150.16	349	PKPbc	PKPbc	03 11 10.3	+0.1
	comp=Z,51nm,0.7s,baz=0.0,slow=9.1,SNR=77						
STIP	Stip	150.25	328	*i* P	PKPbc	03 11 08.7	-1.6
VAY	Valandovo	150.32	327	*i* P	PKPbc	03 11 08.8	-1.6
SKO	Skopje	150.41	329	*i* P	PKPbc	03 11 10.6	-0.1
KRUS	Krusevo	150.96	329	*i* P	PKPbc	03 11 11.3	-0.8
SENIN	Lac Senin/Sane	150.98	352	*e*PKPbc	PKPbc	03 11 12.6	+0.5
PDG	Podgorica	151.07	332	⇑*i*P	PKPbc	03 11 12.0	-0.1
TTG	Podgorica	151.07	332	*e*PKPbc	PKPbc	03 11 11.6	-0.6
BNI	Bardonecchia	152.35	352	*e*PKPbc	PKPbc	03 11 15.3	+0.2
IDI	Anoyia	152.84	315	*e*PKPbc	PKPbc	03 11 15.9	-0.5
ES19	SONSECA Array	157.52	11	*e*PKPab	PKPab	03 11 50.5	+0.2
ESDC	Sonseca Array	157.53	11	PKPab	PKPab	03 11 50.0	-0.3
	comp=Z,1.6nm,0.7s,baz=338,slow=3.2,SNR=7.5						
KEST	Kesra	160.72	341	PKPab	PKPab	03 12 04.6	+0.1
	comp=Z,3.4nm,0.6s,baz=90,slow=1.0,SNR=7.5						
THTN	Thala	161.08	342	*e*PKPab	PKPab	03 12 06.5	+0.4
TORD	Torodi Ar. Bea	175.52	181	PKPab	PKPab	03 13 10.6	+0.5
	baz=188,slow=4.0						

ISCJB ***06*** *02:57:25.8±0.6, 38°.72N±0°.03×43°.70E±0°.05, h12^{km}±4^{km}, Error ellipse: s-maj=6.3km s-min=4.4km az=12.2*

CSEM ***06*** *02:57:25.5±0.2, 38°.72N×43°.67E, h12^{km}, ML2.6, Error ellipse: s-maj=5.4km s-min=3.5km az=106.0*

DDA ***06*** *02:57:25.6, 38°.72N×43°.64E, h7^{km}, Ml2.9*

ISK ***06*** *02:57:25.6, 38°.75N×43°.67E, h17^{km}, ML2.6/6*

ISC 06 02:57:26.3±0.9**, 38°.75N**±0°.02×**43°.63E**±0°.03**, h14**^{km}±7^{km}**, n33,** σ1^{s}.**15**/59**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	Van	0.24	230	PG	Pg	02 57 31.7	0.0
VANB				SG	Sb	02 57 38.5	+1.8
VANB	Van	0.24	230	*e*Pg	Pg	02 57 31.7	0.0
VMUR	Van-Muradiye	0.24	350	*i* P	Pg	02 57 31.2	-0.6
VMUR				*i* S	Sb	02 57 36.7	-0.1
VMUR	Van-Muradiye	0.24	350	P	Pg	02 57 31.2	-0.6
VMUR				S	Sb	02 57 36.7	-0.1
CLDR	Caldiran	0.45	30	PG	Pg	02 57 34.9	-0.5
CLDR				SG	Sg	02 57 41.9	+0.3
CLDR	Caldiran	0.45	30	*i* P	Pg	02 57 34.9	-0.5
CLDR				*i* S	Sb	02 57 42.9	+0.1
CLDR	Caldiran	0.45	30	P	Pg	02 57 34.9	-0.5
CLDR				*e*Sg	Sg	02 57 41.9	+0.3
CLDR				S	Sb	02 57 42.9	+0.1
GEVA	Gevas	0.62	226	*i* P	Pg	02 57 37.1	-1.5
GEVA				*i* S	Sg	02 57 47.1	+0.2
GEVA	Gevas	0.62	226	P	Pg	02 57 37.1	-1.5
GEVA				S	Sg	02 57 47.1	+0.2
ADCV	BITLIS_Adilcev	0.71	275	*i* P	Pg	02 57 39.9	-0.3
ADCV				*i* S	Sb	02 57 50.8	+0.7
ADCV	BITLIS_Adilcev	0.71	275	P	Pg	02 57 39.9	-0.3
ADCV				S	Sb	02 57 50.8	+0.7
DYDN	Diyadin	0.79	3	*i* P	Pg	02 57 41.8	0.0
DYDN				*i* S	Sb	02 57 53.4	+0.6
DYDN	Diyadin	0.79	3	P	Pg	02 57 41.8	0.0
DYDN				S	Sb	02 57 53.3	+0.6
TUTA	Tutak	0.91	316	*i* P	Pg	02 57 42.7	-1.2
TUTA				*i* S	Sb	02 57 56.3	+0.3
TUTA	Tutak	0.91	316	P	Pg	02 57 42.7	-1.2
TUTA				S	Sb	02 57 56.3	+0.3
AGRB	Hanur-Agry	0.96	329	PG	Pg	02 57 44.9	0.0
AGRB				SG	Sn	02 57 58.9	-0.2
AGRB	Hanur-Agry	0.96	329	*e*Pg	Pg	02 57 44.9	0.0
AGRB				*e*Sg	Sn	02 57 58.9	-0.2
HAKT	HAKKARI	1.19	177	*i* P	Pb	02 57 46.3	-2.5
HAKT				*i* S	Sn	02 58 06.6	+1.8
HAKT	HAKKARI	1.19	177	P	Pb	02 57 46.3	-2.5
HAKT				S	Sn	02 58 06.6	+1.8
GURO	Guroymak-BITLI	1.27	261	PN	Pn	02 57 48.9	-0.7
GURO				SN	Sg	02 58 07.1	-0.1

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GURO	Guroymak-BITLI	1.27	261	*e*Pn	Pn	02 57 48.9	-0.7
GURO				*e*Sn	Sg	02 58 07.1	-0.1
YOVA	Hakkari_Yˆ…kse	1.27	156	*i* P	Pn	02 57 49.2	-0.6
YOVA				*i* S	Sg	02 58 12.4	+5.0
YOVA	Hakkari_Yˆ…kse	1.27	156	P	Pn	02 57 49.2	-0.6
EATA	Eleskirt	1.42	322	*i* P	Pn	02 57 52.0	+0.1
EATA				*i* S	Sg	02 58 14.5	+2.4
EATA	Eleskirt	1.42	322	P	Pn	02 57 52.0	+0.1
EATA				S	Sg	02 58 14.5	+2.4
CUKT	Cukurca	1.50	181	PN	Pn	02 57 52.4	-0.5
CUKT	Cukurca	1.50	181	*e*Pn	Pn	02 57 52.4	-0.5
SRTM	Siirt_Merkez	1.54	241	*i* P	Pb	02 57 54.9	+0.2
SRTM				*i* S	Sg	02 58 16.1	+0.1
SRTM	Siirt_Merkez	1.54	241	P	Pb	02 57 54.9	+0.2
SRTM				S	Sg	02 58 16.1	+0.1
SIRT	Sirnak	1.56	217	PN	Pn	02 57 53.6	-0.1
SIRT	Sirnak	1.56	217	*e*Pn	Pn	02 57 53.6	-0.1
GNI	Garni	1.64	31	PN	Pn	02 57 54.5	-0.4
GNI	Garni	1.64	31	*e*Pn	Pn	02 57 54.5	-0.4

ROM 06 03:08:29.6±0.1**, 43°.162N**±0°.002×**12°.992E**±0°.004**, h23^{km}, ML0.9**/7**, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FDMO	Fiordimonte	0.14	151	P	Pb	03 08 34.5	0.0
FDMO				S	Sb	03 08 38.0	+0.3
FDMO				AML	AML		
	comp=E,61µm,0.2s						
FDMO				AML	AML		
	comp=N,82µm,0.1s						
FDMO				AML	AML		
	comp=E,61µm,0.2s						
FDMO				AML	AML		
	comp=N,82µm,0.1s						
FDMO				AML	AML		
	comp=N,82µm,0.1s						
FDMO				AML	AML		
	comp=E,61µm,0.2s						
CESI	CESI - Serrava	0.17	202	P	Pb	03 08 34.9	+0.1
CESI				S	Sb	03 08 38.6	+0.4
CESI				AML	AML		
	comp=E,10µm,0.3s						
CESI				AML	AML		
	comp=N,25µm,0.3s						
CESI				AML	AML		
	comp=E,10µm,0.3s						
CESI				AML	AML		
	comp=N,25µm,0.3s						
CESI				AML	AML		
	comp=E,10µm,0.3s						
CESI				AML	AML		
	comp=N,25µm,0.3s						
CING	Cingoli	0.26	35	P	Pb	03 08 36.0	0.0
CING				S	Sb	03 08 40.9	+0.6
CING				AML	AML		
	comp=E,27µm,0.8s						
CING				AML	AML		
	comp=N,22µm,1.3s						
CING				AML	AML		
	comp=E,27µm,0.8s						
CING				AML	AML		
	comp=N,22µm,1.3s						
CING				AML	AML		
	comp=E,27µm,0.8s						
CING				AML	AML		
	comp=N,22µm,1.3s						
ASSB	Assisi San Ben	0.27	244	P	Pb	03 08 36.2	0.0
ASSB				S	Sb	03 08 41.2	+0.7
ASSB				AML	AML		
	comp=E,44µm,0.7s						
ASSB				AML	AML		
	comp=N,41µm,0.8s						
ASSB				AML	AML		
	comp=E,44µm,0.7s						
ASSB				AML	AML		
	comp=N,41µm,0.8s						
ASSB				AML	AML		
	comp=E,44µm,0.7s						
ASSB				AML	AML		
	comp=N,41µm,0.8s						
ARVD	Arcevia	0.34	354	P	Pb	03 08 37.1	0.0
ARVD				S	Sb	03 08 42.7	+0.5
ARVD				AML	AML		
	comp=E,28µm,0.1s						
ARVD				AML	AML		
	comp=N,18µm,0.2s						
ARVD				AML	AML		
	comp=E,28µm,0.1s						
ARVD				AML	AML		
	comp=N,18µm,0.2s						
ARVD				AML	AML		
	comp=N,18µm,0.2s						
ARVD				AML	AML		
	comp=E,28µm,0.1s						
NRCA	Norcia	0.34	165	P	Pb	03 08 37.4	+0.2
NRCA				S	Sb	03 08 43.3	+1.0
NRCA				AML	AML		
	comp=E,35µm,0.4s						
NRCA				AML	AML		
	comp=N,30µm,1.1s						
NRCA				AML	AML		
	comp=E,35µm,0.4s						
NRCA				AML	AML		
	comp=N,30µm,1.1s						
NRCA				AML	AML		
	comp=E,35µm,0.4s						
NRCA				AML	AML		
	comp=N,30µm,1.1s						
PIEI	Pieia	0.50	318	P	Pb	03 08 39.7	-0.1
PIEI				S	Sb	03 08 47.6	+0.8
PIEI				AML	AML		
	comp=E,19µm,1.3s						
PIEI				AML	AML		
	comp=N,14µm,0.9s						
PIEI				AML	AML		
	comp=E,19µm,1.3s						
PIEI				AML	AML		
	comp=N,14µm,0.9s						
PIEI				AML	AML		
	comp=N,14µm,0.9s						
PIEI				AML	AML		
	comp=E,19µm,1.3s						

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*IDC **06** 03:26:34.9±0.8, 26°.91N×143°.87E, h0^{km}, mb4.0/11, mb1 4.2/14, mb1mx3.9/68, mbtmp4.1/14, ML4.2/3, MS3.9/1, Ms1 3.9/1, ms1mx3.0/73, Error ellipse: s-maj=21.5km s-min=17.2km az=73.0*

*ISCJB **06** 03:26:38.0±0.6, 27°.08N±0°.05×143°.85E±0°.05, h33^{km}, mb3.9/15, MS3.9/1, Error ellipse: s-maj=7.7km s-min=5.7km az=152.2*

*JMA **06** 03:26:37.3±0.2, 27°.15N×143°.86E, h36^{km}, M4.2*

*NEIC **06** 03:26:40.2±0.5, 26°.94N×143°.77E, h35^{km}, mb4.1/3, Error ellipse: s-maj=14.0km s-min=10.3km az=69.0*

ISC 06 03:26:40.5±0.8**, 27°.00N**±0°.08×**143°.78E**±0°.08**, h35^{km}, n32, σ1^{s}29**/37**, mb4.0**/15**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	1.43	274	Pn	Pn	03 27 02.9	-1.0
CBIJ				Sn	Sn	03 27 20.7	-0.7
CBIJ	Chichi jima	1.43	274	P	Pn	03 27 02.6	-1.3
CBIJ				S	Sn	03 27 20.8	-0.6
JCJ	Chichijima	1.43	274	Pn	Pn	03 27 02.9	-1.0
JCJ				Sn	Sn	03 27 20.7	-0.7
	212nm,0.3s,baz=276,slow=22,SNR=34						
JHHJ	Haha-jima-NKT	1.48	256	P	Pn	03 27 03.7	-0.9
JHHJ				*e*S	Sn	03 27 24.0	+1.3
JHJ	Hachijo jima 2	7.01	331	Pn	Pn	03 28 18.5	-2.2
	11nm,0.3s,baz=95,slow=21,SNR=7.8						
BSO3	Boso 3	8.27	341	P	Pn	03 28 36.1	-1.6
JOD2	Odawara 2	9.17	335	P	Pn	03 28 48.8	-1.4
JRY	Ryogami san	9.91	336	P	Pn	03 28 58.5	-1.9
MJAR	Matsushiro Arr	10.63	335	Pn	Pn	03 29 08.3	-1.9
	4.5nm,0.3s,baz=166,slow=12,SNR=39						
MJAR				Sn	Sn	03 31 10.2	+2.2
	0.2nm,0.3s,baz=159,slow=25,SNR=4.5						
MAJO	Matsushiro	10.63	335	*e*Pn	Pn	03 29 08.8	-1.5
	17nm,0.3s						
MAT	Matsushiro	10.63	335	P	Pn	03 29 08.4	-1.9
MAT				*e*S	Sn	03 31 05.7	-2.3
KSRS	Korea Array	16.97	312	P	Pn	03 30 35.6	+0.5
	0.3nm,0.3s,baz=114,slow=11,SNR=9.7						
KSAR	Wonju Array Be	16.99	312	P	Pn	03 30 35.6	+0.2
KLR	Kul'dur	24.07	340	P	P	03 31 53.2	+0.8
	0.2nm,0.6s,baz=143,slow=7.7,SNR=16						
ULN	Ulaanbaatar	35.38	316	*e*P	P	03 33 33.7	+0.8
	1.4nm,0.6s						
SONM	Songino Array	35.77	316	P	P	03 33 37.6	+1.4
	1.2nm,0.7s,baz=112,slow=7.5,SNR=6.8						
WRAB	Tennant Creek	47.54	192	*e*P	P	03 35 10.8	-1.8
	1.9nm,0.6s						
WRA	Warramunga Arr	47.55	192	P	P	03 35 11.1	-1.5
	2.7nm,0.7s,baz=13,slow=8.6,SNR=11						
FITZ	Fitzroy Crossi	48.16	203	LR	LR	03 55 01.1	
	comp=Z,128nm,21.3s,baz=136,slow=36						
ASAR	Alice Springs	51.26	192	P	P	03 35 39.5	-1.4
	0.4nm,0.5s,baz=16,slow=5.7,SNR=4.7						
MKAR	Makanchi Array	51.63	310	P	P	03 35 44.1	+0.5
	1.2nm,0.4s,baz=85,slow=10,SNR=21						
KURK	Kurchatov	54.07	315	*e*P	P	03 36 01.7	+0.2
KURBB	Kurchatov Arra	54.12	314	P	P	03 36 02.2	+0.3
	1.7nm,0.6s,baz=90,slow=8.0,SNR=29						
ILAR	Eielson Array	57.12	29	P	P	03 36 22.1	-1.0
	0.7nm,0.9s,baz=257,slow=6.0,SNR=7.6						
BVAR	Borovoye Array	59.08	318	P	P	03 36 37.7	+0.6
	1.3nm,0.5s,baz=84,slow=7.3,SNR=5.1						
INK	Inuvik	62.53	25	P	P	03 37 00.4	+0.2
	0.6nm,0.6s,baz=284,slow=3.5,SNR=5.7						
ARU	Arti	65.37	322	*e*P	P	03 37 19.4	+0.2
YKA	Yellowknife Ar	71.55	29	P	P	03 37 57.3	-0.3
	0.5nm,0.8s,baz=298,slow=4.9,SNR=4.1						
BMO	Blue Mountains	77.35	46	*e*P	P	03 38 32.1	+0.3
	0.7nm,0.5s						
FINES	FINESS Array B	78.66	334	P	P	03 38 39.9	+1.3
	1.0nm,0.8s,baz=102,slow=2.7,SNR=5.5						
KBZ	Khabaz	79.11	314	P	P	03 38 42.8	+1.4
	1.2nm,0.5s,baz=82,slow=6.8,SNR=4.1						
LPAZ	La Paz	148.57	77	PKPbc	PKPbc	03 46 25.6	+0.5
	0.4nm,0.4s,baz=297,slow=4.5,SNR=5.2						

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*IDC **06** 03:29:29.8±1.4, 43°.40S×172°.34E, h0^{km}, mb4.3/2, mb1 4.5/3, mb1mx3.9/44, mbtmp4.3/3, ML4.2/1, Error ellipse: s-maj=45.2km s-min=12.1km az=155.0*

*WEL **06** 03:29:29.9, 43°.6S±0°.8×172°.3E±0°.8, h10^{km}±1^{km}, ML5.1/12*

*ISCJB **06** 03:29:30.3±0.3, 43°.62S±0°.03×172°.44E±0°.03, h27^{km}±3^{km}, mb4.9/7, MS4.7/1, Error ellipse: s-maj=5.2km s-min=3.0km az=142.8*

*NEIC **06** 03:29:30.9±0.0, 43°.63S×172°.33E, h11^{km}, mb4.8/1, ML4.8(WEL), After WEL.*

NEIC Felt at Christchurch.

*BJI **06** 03:29:31.2, 43°.19S×172°.93E, h28^{km}, mb5.3/8, Ms5.0/2, Ms7 4.7/2*

ISC 06 03:29:31.2±0.8**, 43°.57S**±0°.03×**172°.41E**±0°.02**, h16**^{km}±5^{km}**, n188, σ1^{s}53**/200**, mb5.2**/7**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EYCZ	Eyrewell	0.15	344	P	Pb	03 29 35.5	-0.2
EYCZ				S	Sb	03 29 38.5	-0.1
MQZ	McQueen's Vall	0.22	128	*e*Pg	Pg	03 29 36.5	+0.2
MQZ				*e*Sg	Sg	03 29 39.9	+0.2
MQZ	McQueen's Vall	0.22	128	P	Pg	03 29 36.5	+0.2
MQZ				S	Sb	03 29 40.5	0.0
OXZ	Oxford	0.37	312	*e*Pg	Pg	03 29 38.8	0.0
OXZ				*e*Sg	Sg	03 29 43.8	-0.1
OXZ	Oxford	0.37	312	P	Pg	03 29 38.4	-0.3
OXZ				S	Sg	03 29 43.6	-0.3
AKCZ	Akaroa Harbour	0.47	130	P	Pb	03 29 41.1	0.0
OKCZ	Okains Bay	0.49	108	P	Pb	03 29 42.1	+0.6
LTZ	Lake Taylor	0.80	352	*e*Pn	Pn	03 29 47.3	-0.5
LTZ				*e*Sn	Sg	03 29 58.0	+0.9
LTZ	Lake Taylor	0.80	352	P	Pn	03 29 47.2	-0.5
RPZ	Rata Peaks	1.00	261	Pg	Pb	03 29 49.3	-0.7
	3µm,0.3s,baz=115,slow=4.8,SNR=3804						
RPZ				Lg	Lg	03 30 01.9	
	2µm,0.3s,baz=90,slow=7.6,SNR=34						
RPZ	Rata Peaks	1.00	261	*e*Pg	Pb	03 29 49.4	-0.7
RPZ				*e*Sg	Sb	03 30 03.2	+0.3
RPZ	Rata Peaks	1.00	261	P	Pb	03 29 49.4	-0.7
INZ	Inchbonnie	1.10	320	P	Pb	03 29 51.2	-0.7
WVZ	Waitaha Valley	1.32	292	Pn	Pn	03 29 54.3	-0.6
WVZ	Waitaha Valley	1.32	292	P	Pn	03 29 54.5	-0.4
KHZ	Kahutara	1.42	36	*e*Pn	Pn	03 29 56.2	-0.1
KHZ				*e*Sn	Sn	03 30 14.7	+0.1
KHZ	Kahutara	1.42	36	P	Pn	03 29 56.0	-0.2
LBZ	Lake Benmore	1.80	242	*e*Pn	Pn	03 30 01.0	-0.6
LBZ	Lake Benmore	1.80	242	P	Pn	03 30 00.7	-0.9
THZ	Tophouse	1.84	12	*e*Pn	Pn	03 30 02.2	+0.1
THZ	Tophouse	1.84	12	P	Pn	03 30 02.0	-0.2
DSZ	Denniston Nort	1.88	346	P	Pn	03 30 02.7	+0.1
FOZ	Fox Glacier	1.89	270	*e*Pn	Pn	03 30 02.8	+0.1
FOZ	Fox Glacier	1.89	270	P	Pn	03 30 02.9	+0.2
ODZ	Otahua Downs	1.94	220	*e*Pn	Pn	03 30 02.3	-1.2
ODZ	Otahua Downs	1.94	220	P	Pn	03 30 02.2	-1.2
BSWZ	Blackbirch Sta	2.15	31	Pn	Pn	03 30 06.3	+0.1
BSWZ	Blackbirch Sta	2.15	31	P	Pn	03 30 06.5	+0.2
CMWZ	Cape Campbell	2.25	37	Pn	Pn	03 30 08.6	+0.9
CMWZ	Cape Campbell	2.25	37	P	Pn	03 30 08.7	+0.9
TUWZ	Tuamarina	2.42	28	P	Pn	03 30 10.1	+0.1
NNZ	Nelson	2.46	17	Pn	Pn	03 30 10.8	+0.2
NNZ	Nelson	2.46	17	P	Pn	03 30 11.1	+0.5
HHSZ	Highcliff Hill	2.65	209	Pn	Pn	03 30 11.6	-1.6
HHSZ	Highcliff Hill	2.65	209	P	Pn	03 30 11.7	-1.6
JCZ	Jackson Bay	2.67	258	Pn	Pn	03 30 12.6	-1.0
JCZ	Jackson Bay	2.67	258	P	Pn	03 30 12.6	-1.0
TCW	Tory Channel	2.73	31	Pn	Pn	03 30 14.1	-0.2
TCW	Tory Channel	2.73	31	P	Pn	03 30 14.1	-0.2
QRZ	Quartz Range	2.75	2	Pn	Pn	03 30 14.1	-0.4
QRZ	Quartz Range	2.75	2	P	Pn	03 30 14.1	-0.4
WKZ	Wanaka	2.75	242	*e*Pn	Pn	03 30 14.1	-0.5
WKZ	Wanaka	2.75	242	P	Pn	03 30 13.2	-1.4
EAZ	Earnscleugh	2.78	232	Pn	Pn	03 30 13.7	-1.2
EAZ	Earnscleugh	2.78	232	P	Pn	03 30 13.8	-1.2
BHW	Baring Head	2.82	41	Pn	Pn	03 30 15.1	-0.4
BHW	Baring Head	2.82	41	P	Pn	03 30 15.1	-0.4
SNZO	South Karori	2.83	38	*e*Pn	Pn	03 30 15.6	+0.1
WEL	Wellington	2.88	38	Pn	Pn	03 30 16.2	-0.1
PLWZ	Palliser	2.90	47	Pn	Pn	03 30 15.9	-0.7
PLWZ	Palliser	2.90	47	P	Pn	03 30 15.9	-0.7
DUWZ	D'Urville Isla	2.99	23	Pn	Pn	03 30 18.6	+0.8
DUWZ	D'Urville Isla	2.99	23	P	Pn	03 30 19.9	+2.1
MSWZ	Moikau Station	3.01	45	Pn	Pn	03 30 17.1	-1.0
MSWZ	Moikau Station	3.01	45	P	Pn	03 30 17.1	-1.0
TUZ	Tuapeka	3.10	219	Pn	Pn	03 30 18.0	-1.3
TUZ	Tuapeka	3.10	219	P	Pn	03 30 18.0	-1.3
PAWZ	Paruwai Farm	3.12	47	P	Pn	03 30 18.6	-1.1
CAW	Cannon Point	3.15	40	Pn	Pn	03 30 19.4	-0.8
CAW	Cannon Point	3.15	40	P	Pn	03 30 19.3	-0.8
TRWZ	Traveller	3.25	49	P	Pn	03 30 20.5	-1.0
KIW	Kapiti Island	3.28	35	Pn	Pn	03 30 21.7	-0.2
KIW	Kapiti Island	3.28	35	P	Pn	03 30 21.5	-0.4
MTW	Mount Morrison	3.32	45	Pn	Pn	03 30 21.3	-1.2
MTW	Mount Morrison	3.32	45	P	Pn	03 30 21.3	-1.2
MSZ	Milford Sound	3.41	250	Pn	Pn	03 30 22.2	-1.5
MSZ	Milford Sound	3.41	250	P	Pn	03 30 22.5	-1.1
OGWZ	Otaki Gorge	3.43	38	Pn	Pn	03 30 23.0	-0.9
OGWZ	Otaki Gorge	3.43	38	P	Pn	03 30 23.0	-0.9
HOWZ	Holdsworth Sta	3.53	42	Pn	Pn	03 30 24.3	-1.0
HOWZ	Holdsworth Sta	3.53	42	P	Pn	03 30 24.4	-1.0
MLZ	Mavora Lakes	3.56	238	*e*Pn	Pn	03 30 24.6	-1.2
MLZ	Mavora Lakes	3.56	238	P	Pn	03 30 24.2	-1.5
TMWZ	Te Maipa	3.56	47	Pn	Pn	03 30 25.4	-0.4
TMWZ	Te Maipa	3.56	47	P	Pn	03 30 24.6	-1.2
MRZ	Mangatainoka R	3.74	40	P	Pn	03 30 26.8	-1.4
TIWZ	Tintock	3.80	44	P	Pn	03 30 28.6	-0.5
CPWZ	Castlepoint	3.87	48	P	Pn	03 30 31.1	+1.1
WHZ	Wether Hill Ro	3.94	232	*e*Pn	Pn	03 30 28.7	-2.2
WHZ	Wether Hill Ro	3.94	232	P	Pn	03 30 28.7	-2.2
OHWZ	Ohakea	4.00	34	P	Pn	03 30 35.6	+3.9
PRWZ	Pori Road	4.01	43	P	Pn	03 30 30.9	-1.0
POWZ	Post Office Ro	4.04	39	Pn	Pn	03 30 31.8	-0.5
POWZ	Post Office Ro	4.04	39	P	Pn	03 30 32.1	-0.2
BFZ	Birch Farm	4.06	46	*e*Pn	Pn	03 30 31.8	-0.8
BFZ	Birch Farm	4.06	46	P	Pn	03 30 31.0	-1.6
DCZ	Deep Cove	4.21	241	*e*Pn	Pn	03 30 33.7	-0.9
DCZ	Deep Cove	4.21	241	P	Pn	03 30 33.4	-1.2
WAZ	Wanganui	4.27	28	P	Pn	03 30 36.6	+1.1
NMEZ	Namu Road	4.30	15	Pn	Pn	03 30 37.2	+1.4
NMEZ	Namu Road	4.30	15	P	Pn	03 30 37.1	+1.3
DVHZ	Dannevirke	4.30	42	Pn	Pn	03 30 34.8	-1.2
DVHZ	Dannevirke	4.30	42	P	Pn	03 30 34.9	-1.0
ANWZ	Angora Road	4.34	46	P	Pn	03 30 35.8	-0.6
LREZ	Lake Rotokare	4.37	21	P	Pn	03 30 38.7	+1.8
TSZ	Takapari Road	4.40	38	P	Pn	03 30 36.6	-0.7
PREZ	Palmer Road	4.42	18	Pn	Pn	03 30 39.0	+1.4
PREZ	Palmer Road	4.42	18	P	Pn	03 30 39.3	+1.6
KHEZ	Kahui Hut	4.44	16	Pn	Pn	03 30 39.0	+1.1
KHEZ	Kahui Hut	4.44	16	P	Pn	03 30 39.1	+1.2
NEZ	North Egmont	4.48	17	Pn	Pn	03 30 39.2	+0.8
APZ	The Paps	4.52	222	Pn	Pn	03 30 36.9	-1.9
APZ	The Paps	4.52	222	P	Pn	03 30 37.0	-1.8
PKE	Pukeiti	4.53	16	Pn	Pn	03 30 40.1	+1.0
PKE	Pukeiti	4.53	16	P	Pn	03 30 40.2	+1.1
PRHZ	Porangahau	4.56	45	Pn	Pn	03 30 39.5	0.0
PRHZ	Porangahau	4.56	45	P	Pn	03 30 39.5	0.0
WPHZ	Waipukurau	4.62	42	P	Pn	03 30 41.9	+1.7
PNHZ	Pukenui	4.62	39	Pn	Pn	03 30 39.0	-1.4
PNHZ	Pukenui	4.62	39	P	Pn	03 30 39.0	-1.4
VRZ	Vera Road	4.78	22	Pn	Pn	03 30 43.4	+0.9
VRZ	Vera Road	4.78	22	P	Pn	03 30 43.4	+0.9
PXZ	Pawanui	4.86	45	Pn	Pn	03 30 43.2	-0.3
PXZ	Pawanui	4.86	45	P	Pn	03 30 43.7	+0.2
MOVZ	Moawhango	4.86	32	Pn	Pn	03 30 43.5	-0.1
MOVZ	Moawhango	4.86	32	P	Pn	03 30 43.7	+0.1
DRZ	Dome Shelter	4.90	30	P	Pn	03 30 46.5	+2.1
WHVZ	Whangaehu Hut	4.90	30	P	Pn	03 30 44.1	-0.3
BHHZ	Black Hill Sta	4.91	35	Pn	Pn	03 30 44.5	+0.1
BHHZ	Black Hill Sta	4.91	35	P	Pn	03 30 44.5	+0.1
FWVZ	Far West T-bar	4.92	30	Pn	Pn	03 30 45.6	+1.1
FWVZ	Far West T-bar	4.92	30	P	Pn	03 30 45.5	+1.0
FWVZ				P	Pn	03 30 46.6	+2.1
KRHZ	Kereru	4.92	38	P	Pn	03 30 42.8	-1.6
TUVZ	Tukino	4.94	31	P	Pn	03 30 46.8	+2.0
COVZ	Chateau Observ	4.96	29	P	Pn	03 30 46.2	+1.2
NGZ	Ngauruhoe	5.00	30	P	Pn	03 30 46.1	+0.4
OTVZ	Oturere	5.04	30	Pn	Pn	03 30 46.1	-0.1
KAHZ	Kahuranaki	5.04	43	Pn	Pn	03 30 45.6	-0.4
KAHZ	Kahuranaki	5.04	43	P	Pn	03 30 45.7	-0.4
TWVZ	Taurewa	5.04	28	P	Pn	03 30 47.0	+0.8
WTVZ	West Tongariro	5.05	29	P	Pn	03 30 49.0	+2.7
KWHZ	Kaweka Forest	5.12	37	P	Pn	03 30 47.4	+0.2
KATZ	Kakaramea	5.21	29	Pn	Pb	03 30 55.5	-6.5
KATZ	Kakaramea	5.21	29	P	Pn	03 30 52.9	+4.3
MCHZ	McNeill Hill	5.23	39	Pn	Pn	03 30 50.1	+1.5
MCHZ	McNeill Hill	5.23	39	P	Pn	03 30 49.3	+0.6
RITZ	Rihia Road	5.27	31	P	Pn	03 30 52.4	+3.2
RATZ	Rangitukua	5.34	29	P	Pn	03 30 54.4	+4.2
BKZ	Black Stump Fm	5.37	36	*e*Pn	Pn	03 30 50.7	+0.1
BKZ	Black Stump Fm	5.37	36	P	Pn	03 30 49.8	-0.8
HIZ	Hauiti	5.38	21	*e*Pn	Pn	03 30 50.7	0.0
HIZ	Hauiti	5.38	21	P	Pn	03 30 50.7	0.0
ARHZ	Aropaoanui	5.51	40	Pn	Pn	03 30 52.2	-0.3
ARHZ	Aropaoanui	5.51	40	P	Pn	03 30 53.3	+0.7
NMHZ	Naumai	5.56	38	Pn	Pn	03 30 52.6	-0.6
NMHZ	Naumai	5.56	38	P	Pn	03 30 54.2	+0.9
MRHZ	Matea Rd	5.61	34	P	Pn	03 30 53.6	-0.4
TLZ	Tolley Road	5.75	25	Pn	Pn	03 30 55.5	-0.3
TLZ	Tolley Road	5.75	25	P	Pn	03 30 56.4	+0.6
WHHZ	Waihua	5.77	41	P	Pn	03 30 58.0	+1.9
MTHZ	Maungataniwha	5.78	37	P	Pn	03 30 56.5	+0.3
ALRZ	Allen Road	5.82	32	P	Pn	03 30 60.0	+3.2
RAHZ	Arahi	5.83	39	P	Pn	03 30 57.5	+0.5
KNZ	Kokohu	6.03	43	Pn	Pn	03 30 58.0	-1.6
KNZ	Kokohu	6.03	43	P	Pn	03 30 57.8	-1.8
RTZ	Ruatahuna	6.03	36	P	Pn	03 30 59.8	0.0
MHGZ	Mahia Peninsul	6.05	45	Pn	Pn	03 30 59.6	-0.3
MHGZ	Mahia Peninsul	6.05	45	P	Pn	03 30 59.5	-0.3
URZ	Urewera	6.39	35	Pn	Pn	03 31 02.5	-2.1
	5.0nm,0.3s,baz=224,slow=6.4,SNR=25						
URZ				Sn	Sn	03 32 11.1	-6.0
	20nm,0.3s,baz=106,slow=17,SNR=9.4						
URZ	Urewera	6.39	35	*e*Pn	Pn	03 31 02.9	-1.6
URZ				Sn	Sn	03 32 11.1	-6.0
MWZ	Matawai	6.51	38	Pn	Pn	03 31 03.6	-2.6
MWZ	Matawai	6.51	38	P	Pn	03 31 03.7	-2.6
CNGZ	Carnagh Statio	6.71	43	Pn	Pn	03 31 07.8	-1.2
MKAZ	Moumakai	6.79	19	Pn	Pn	03 31 08.0	-2.1
I36NZ	CHATHAM INFRAS	8.05	96	*i*		04 13 30.0	
	baz=265,slow=319,SNR=0.3						
OUZ	Omahuta	8.39	7	*e*Pn	Pn	03 31 31.9	-0.1
CTAO	Charters Tower	32.04	309	*e*P	P	03 35 56.5	-0.5
	77nm,1.8s						
AFI	Afiamalu	32.53	29	*e*P	P	03 35 59.4	-2.0
AS01	Alice Springs	37.26	290	*e*P	P	03 36 41.5	-0.7
ASAR	Alice Springs	37.29	290	P	P	03 36 42.3	-0.1
	3.5nm,0.8s,baz=134,slow=8.5,SNR=20						
WRAB	Tennant Creek	39.54	294	*e*P	P	03 37 04.6	+3.2
WRA	Warramunga Arr	39.54	294	P	P	03 37 01.9	+0.5
	4.8nm,0.9s,baz=131,slow=8.2,SNR=17						
KKH	Kailua Kona	69.27	32	*e*P	P	03 40 37.1	-0.3
TRQA	Tornquist	84.98	140	*e*P	P	03 42 04.4	-1.3
	5.7nm,1.0s						
NJ2	Nanjing	89.78	317	*e*P	P	03 42 30.8	+2.3
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
GYA	Guiyang	92.11	305	*e*P	P	03 42 41.8	+2.1
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KMI	Kunming	93.50	302	P	P	03 42 45.4	-0.9
KMI				pmax	pmax		
	comp=Z,11nm,0.6s						
CN2	Changchun	96.58	328	*e*P	P	03 42 56.4	-3.2
CD2	Chengdu	97.11	306	*e*P	P	03 43 02.0	-0.4
HHC	Hu-ho-hao-te	100.31	318	*e*P	Pdif	03 43 16.4	-0.2
HHC				pP	sP	03 43 26.4	+2.4
HHC				PP	PP	03 47 23.2	-0.2
HHC				S	Sdif	03 54 53.6	+2.1
HHC				LR	LR		
	comp=N,200nm,19.0s						
HHC				LR	LR		
	comp=E,190nm,19.2s						
HHC				LR	LR		
	comp=Z,150nm,19.1s						
LZH	Lanzhou	100.82	310	*e*P	Pdif	03 43 25.7	+6.7
LZH				pP	sP	03 43 27.5	+1.0
LZH				sP	sPdif	03 43 28.9	+2.5
LZH				pmax	pmax		
	comp=Z,21nm,1.0s						
WMQ	Urumqi	115.18	307	PKP	PKPdf	03 48 11.8	+0.6
WMQ				LR	LR		
	comp=Z,220nm,26.7s						
WMQ				LR	LR		
	comp=Z,290nm,36.7s						
WMQ				LR	LR		
	comp=Z,570nm,33.3s						
KSH	Kashi	119.89	298	*e*PKP	PKPdf	03 48 23.2	+2.7
KSH				PP	PP	03 49 51.1	+6.0
BRVK	Borovoye	129.78	310	*e*PKPdf	PKPdf	03 48 37.1	-1.7
TORD	Torodi Ar. Bea	148.65	198	PKPbc	PKPbc	03 49 18.7	+1.0
	baz=173,slow=3.2						
ARCES	ARCESS Array B	148.99	338	PKPbc	PKPbc	03 49 17.6	+0.5
	comp=Z,1.9nm,0.9s,baz=352,slow=1.8,SNR=6.3						
BRTR	Keskin Array B	149.18	277	PKPbc	PKPbc	03 49 19.4	+0.8
	comp=Z,2.5nm,0.8s,baz=133,slow=8.9,SNR=8.7						
FINES	FINESS Array B	153.25	324	PKPbc	PKPbc	03 49 28.1	+0.9
	comp=Z,1.0nm,0.6s,baz=107,slow=2.0,SNR=4.2						

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*ISCJB **06** 03:40:44.7±1.2, 39°.06N±0°.10×40°.69E±0°.06, h7^{km}, Error ellipse: s-maj=13.9km s-min=6.1km az=9.8*

*DDA **06** 03:40:44.6, 39°.00N×40°.68E, h11^{km}, Ml2.5*

ISC 06 03:40:44.1±1.5**, 39°.1N**±0°.1×**40°.71E**±0°.05**, h7^{km}, n4, σ0^{s}66**/7**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNGB	Bingˆ¶l	0.08	197	*e*PG	Pg	03 40 46.0	-0.1
BGOL	Bingol	0.09	200	*i* P	Pg	03 40 46.4	+0.2
BGOL				*i* S	Sg	03 40 48.4	+0.7
BNGL	BINGOL	0.36	108	*i* P	Pg	03 40 51.8	+0.6
BNGL				*i* S	Sb	03 40 58.1	-0.9
TNCL	Tunceli-Merkez	0.91	273	*i* P	Pb	03 41 01.9	-0.4
TNCL				*i* S	Sb	03 41 14.8	+0.2

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*DDA **06** 03:43:17.2, 38°.67N×43°.08E, h6^{km}, Ml2.5*

*ISK **06** 03:43:17.3, 38°.61N×42°.92E, h4^{km}±1^{km}, ML2.2/4*

*CSEM **06** 03:43:18.0±0.2, 38°.63N×42°.93E, h8^{km}, ML2.5, Error ellipse: s-maj=4.6km s-min=3.9km az=138.0*

ISC 06 03:43:18.0±0.9**, 38°.63N**±0°.02×**42°.96E**±0°.03**, h11**^{km}±8^{km}**, n22, σ0^{s}88**/35**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADCV	BITLIS_Adilcev	0.26	315	*i* P	Pg	03 43 23.4	0.0
ADCV				*i* S	Sg	03 43 28.3	+1.3
ADCV	BITLIS_Adilcev	0.26	315	P	Pg	03 43 23.4	0.0
ADCV				S	Sg	03 43 28.3	+1.3
GEVA	Gevas	0.33	166	*i* P	Pg	03 43 24.0	-0.6
GEVA				*i* S	Sg	03 43 29.8	+0.8
GEVA	Gevas	0.33	166	P	Pg	03 43 24.0	-0.6
GEVA				S	Sg	03 43 29.8	+0.8
VANB	Van	0.34	95	PG	Pb	03 43 25.4	-0.8
VANB	Van	0.34	95	*e*Pg	Pb	03 43 25.4	-0.8
VMUR	Van-Muradiye	0.60	53	*i* P	Pg	03 43 29.4	-0.4
VMUR				*i* S	Sb	03 43 39.9	+0.7
VMUR	Van-Muradiye	0.60	53	P	Pg	03 43 29.4	-0.4
VMUR				S	Sb	03 43 39.9	+0.7
GURO	Guroymak-BITLI	0.73	264	PG	Pg	03 43 31.4	-0.7
GURO				SG	Sb	03 43 41.6	-1.2
GURO	Guroymak-BITLI	0.73	264	*e*Pg	Pg	03 43 31.4	-0.7
GURO				*e*Sg	Sb	03 43 41.6	-1.2
TUTA	Tutak	0.78	352	*i* P	Pg	03 43 32.6	-0.5
TUTA				*i* S	Sg	03 43 42.4	-1.1
TUTA	Tutak	0.78	352	P	Pg	03 43 32.7	-0.5
TUTA				S	Sg	03 43 42.4	-1.1
CLDR	Caldiran	0.91	55	PG	Pn	03 43 36.8	-0.2
CLDR	Caldiran	0.91	55	*e*Pg	Pn	03 43 36.8	-0.2
AGRB	Hanur-Agry	0.95	2	PG	Pb	03 43 36.2	-0.4
AGRB	Hanur-Agry	0.95	2	*e*Pg	Pb	03 43 36.2	-0.4
SRTM	Siirt_Merkez	1.03	232	*i* P	Pn	03 43 38.6	+0.1
SRTM				*i* S	Sn	03 43 55.4	+2.4
SRTM	Siirt_Merkez	1.03	232	P	Pn	03 43 38.6	+0.1
EATA	Eleskirt	1.28	344	*i* P	Pn	03 43 42.1	-0.1
EATA				*i* S	Sn	03 44 00.8	+1.2
EATA	Eleskirt	1.28	344	P	Pn	03 43 42.1	-0.1
EATA				S	Sn	03 44 00.8	+1.2
SVAN	Silvan-Diyarba	1.46	252	PN	Pb	03 43 44.8	-0.4
SVAN	Silvan-Diyarba	1.46	252	*e*Pn	Pb	03 43 44.8	-0.4

ISCJB ***06*** *03:44:38.4±1.1, 39°.0N±0°.1×110°.8E±0°.3, h10^{km}, mb3.6/7, Error ellipse: s-maj=28.8km s-min=15.5km az=164.9*

IDC ***06*** *03:44:38.8±1.2, 38°.98N×110°.72E, h0^{km}, mb3.6/7, mb1 3.9/8, mb1mx3.6/81, mbtmp3.7/8, ML3.2/1, Error ellipse: s-maj=33.7km s-min=21.2km az=70.0*

ISC 06 03:44:40.4±1.2**, 39°.0N**±0°.1×**110°.7E**±0°.2**, h10^{km}, n8, σ0^{s}.34**/8**, mb3.7**/7**, Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	9.37	342	Pn	Pn	03 46 55.2	-0.4
	0.2nm,0.3s,baz=160,slow=14,SNR=21						
SONM				Lg	Lg	03 49 29.9	
	0.1nm,0.3s,baz=165,slow=23,SNR=3.7						
MKAR	Makanchi Array	22.14	300	P	P	03 49 36.0	-0.1
	2.2nm,0.9s,baz=104,slow=10,SNR=7.5						
CMAR	Chiang Mai Arr	22.88	210	P	P	03 49 44.1	0.0
	4.9nm,0.8s,baz=12,slow=9.5,SNR=21						
ZALV	Zalesovo Beam	23.09	319	P	P	03 49 46.5	+0.5
	1.0nm,0.6s,baz=246,slow=2.6,SNR=4.0						
KURBB	Kurchatov Arra	25.41	308	P	P	03 50 07.7	-0.2
	0.9nm,0.8s,baz=99,slow=8.8,SNR=5.0						
BRTR	Keskin Array B	57.76	297	P	P	03 54 32.0	+0.2
	0.8nm,0.9s,baz=74,slow=4.5,SNR=3.8						
ASAR	Alice Springs	66.01	157	P	P	03 55 26.9	-0.2
	0.5nm,0.8s,baz=341,slow=7.3,SNR=4.1						
YKA	Yellowknife Ar	72.51	20	P	P	03 56 07.2	+0.3
	0.6nm,0.8s,baz=330,slow=5.3,SNR=5.7						

IDC 06 03:47:37.1±1.2**, 40°.14N**×**113°.51E, h0^{km}, mb3.5**/4**, mb1 3.7**/4**, mb1mx3.3**/77**, mbtmp3.5**/4**, Error ellipse: s-maj=42.8km s-min=26.7km az=48.0, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	23.51	297	P	P	03 52 47.8	-0.9
	0.6nm,0.8s,baz=93,slow=13,SNR=3.3						
KURBB	Kurchatov Arra	26.48	305	P	P	03 53 16.7	+0.9
	0.5nm,0.7s,baz=100,slow=11,SNR=5.3						
ASAR	Alice Springs	66.26	160	P	P	03 58 27.1	0.0
	0.4nm,0.7s,baz=344,slow=8.0,SNR=3.1						
YKA	Yellowknife Ar	70.67	21	P	P	03 58 54.1	-0.1
	0.9nm,0.7s,baz=326,slow=5.8,SNR=9.4						

ISCJB ***06*** *03:53:11.2±0.6, 73°.19N±0°.06×6°.7E±0°.3, h12^{km}, mb3.3/4, Error ellipse: s-maj=12.0km s-min=7.9km az=156.5*

IDC ***06*** *03:53:12.4±1.1, 73°.17N×6°.52E, h0^{km}, mb3.4/4, mb1 3.7/8, mb1mx3.3/79, mbtmp3.5/8, ML3.2/4, Error ellipse: s-maj=21.8km s-min=16.7km az=52.0*

BER ***06*** *03:53:15.7±2.2, 73°.19N×7°.23E, h10^{km}, ML1.9*

ISC 06 03:53:13.2±0.8**, 73°.08N**±0°.07×**6°.90E**±0°.08**, h12^{km}, n15, σ2^{s}.86**/20**, mb3.4**/4**, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRO	Tromso	5.18	126	*e*P	Pn	03 54 32.5	+2.2
TRO				*e*S	Sn	03 55 25.7	-4.1
TRO				IAML		03 55 33.7	
	comp=Z,2.8nm,0.2s						
JMIC	Jan Mayen	5.21	254	Pn	Pn	03 54 29.3	-1.4
	comp=Z,2.7nm,0.3s,baz=70,slow=2.5,SNR=7.7						
LOF	Lofoten	5.44	153	*e*P	Pn	03 54 36.5	+2.6
LOF				*e*S	Sn	03 55 33.0	-3.3
LOF				IAML		03 55 40.0	
	comp=Z,4.4nm,0.5s						
SPA0	Spitsbergen Ar	5.63	20	*e*P	Pn	03 54 34.4	-2.2
SPITS	Spitsbergen Ar	5.63	20	Pn	Pn	03 54 34.4	-2.2
	baz=210,slow=12,SNR=15						
STEI	Steigen	5.87	148	*e*P	Pn	03 54 41.1	+1.2
STEI				*e*S	Sn	03 55 43.1	-3.8
STEI				IAML		03 55 49.1	
	comp=Z,2.6nm,0.5s						
KBS	Kingsbay	6.00	9	*e*P	Pn	03 54 39.7	-1.9
KIF	Kilpisjarvi	6.09	125	*e*P	Pn	03 54 43.7	+0.8
KIF				*e*S	Sn	03 55 48.8	-3.6
ARCES	ARCESS Array B	6.94	112	Pn	Pn	03 54 56.0	+1.5
	comp=Z,0.4nm,0.3s,baz=321,slow=11,SNR=10						
KONS	Konsvik	6.95	159	*e*P	Pn	03 54 56.8	+2.2
KONS				*e*S	Sn	03 56 08.5	-5.0
KONS				IAML		03 56 14.4	
	comp=Z,1.9nm,0.4s						
HFS	Hagfors	13.27	165	Pn	Pn	03 56 23.4	+2.3
	comp=Z,0.1nm,0.3s,baz=356,slow=12,SNR=4.0						
GERES	GERESS Array B	24.51	169	P	P	03 58 35.3	+3.2
	comp=Z,0.4nm,0.7s,baz=0.8,slow=7.4,SNR=4.0						
KURBB	Kurchatov Arra	37.26	87	P	P	04 00 26.8	+2.6
	comp=Z,0.5nm,0.8s,baz=336,slow=7.4,SNR=3.4						
ILAR	Eielson Array	41.30	343	P	P	04 00 58.6	+0.9
	comp=Z,0.7nm,1.0s,baz=5.3,slow=8.3,SNR=5.7						
PDAR	Pinedale Array	56.58	308	P	P	04 02 55.0	-0.5
	comp=Z,0.5nm,0.9s,baz=38,slow=7.5,SNR=4.2						

ISCJB ***06*** *04:00:00.2±0.9, 73°.17N±0°.09×6°.7E±0°.4, h11^{km}, mb3.3/3, Error ellipse: s-maj=15.1km s-min=12.7km az=154.2*

IDC ***06*** *04:00:01.9±1.2, 73°.19N×6°.69E, h0^{km}, mb3.5/3, mb1 3.7/8, mb1mx3.3/74, mbtmp3.6/8, ML3.3/5, Error ellipse: s-maj=23.3km s-min=16.0km az=71.0*

ISC 06 04:00:02.6±0.9**, 73°.22N**±0°.10×**6°.7E**±0°.1**, h11^{km}, n8, σ1^{s}.70**/8**, mb3.3**/3**, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMIC	Jan Mayen	5.18	252	Pn	Pn	04 01 18.5	-1.4
	2.5nm,0.3s,baz=48,slow=5.0,SNR=11						
SPITS	Spitsbergen Ar	5.53	21	Pn	Pn	04 01 24.1	-0.6
	baz=215,slow=13,SNR=14						
ARCES	ARCESS Array B	7.05	112	Pn	Pn	04 01 45.3	-0.4
	0.8nm,0.3s,baz=323,slow=12,SNR=18						
HFS	Hagfors	13.42	165	Pn	Pn	04 03 12.5	-0.2
	0.1nm,0.3s,baz=0.0,slow=10,SNR=5.7						
FINES	FINESS Array B	13.88	138	Pn	Pn	04 03 17.6	-1.3
	0.3nm,0.3s,baz=349,slow=20,SNR=4.5						
VRAC	Vranov	24.39	164	P	P	04 05 23.0	+2.4
	2.2nm,0.8s,baz=356,slow=12,SNR=3.7						
GERES	GERESS Array B	24.66	169	P	P	04 05 24.8	+1.7
	0.6nm,0.8s,baz=0.0,slow=8.4,SNR=5.6						
ILAR	Eielson Array	41.14	343	P	P	04 07 47.3	+1.2
	0.4nm,0.7s,baz=1.9,slow=8.1,SNR=5.1						

DJA 06 04:15:59.0±0.4**, 4°S**±5°×**12°3E**±°**, h10^{km}, M4.2**/7**, mb4.5**/2**, MLv4.1**/7**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDI	Kendari	0.73	241	P	Pg	04 16 12.4	-0.8
LUWI	Luwuk	2.59	349	P	Pn	04 16 40.5	-0.5
APSI	Ampana	3.12	329	P	Pn	04 16 48.1	-0.2
SANI	Sanana	3.13	61	P	Pn	04 16 47.7	-0.7
SPSI	Sidrap Palu	3.50	264	P	Pn	04 16 53.6	+0.1
BKSI	Bulukumba	3.56	241	P	Pn	04 16 54.7	+0.3
BSSI	Bau Bau, Buton	3.74	227	P	Pn	04 16 49.4	-7.5
LBMI	Labuha	5.16	55	P	Pn	04 17 16.6	+0.2
EDFI	Ende, Flores	5.35	197	P	Pn	04 17 18.7	-0.4

ISCJB ***06*** *04:16:15.3±0.9, 7°.67N±0°.05×82°.57W±0°.04, h16^{km}±7^{km}, Error ellipse: s-maj=10.1km s-min=3.7km az=32.6*

CASC ***06*** *04:16:17.9±2.8, 7°.84N×82°.54W, h15^{km}±7^{km}, MD4.2*

ISC 06 04:16:15.3±3.3**, 7°.74N**±0°.10×**82°.56W**±0°.05**, h8^{km}**±23^{km}**, n27, σ1^{s}.43**/46**, 7C-2D, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBS2		1.05	355⇓	*i*P	Pb	04 16 35.5	-0.3
TBS2				*e*S	Sb	04 16 46.1	-3.6
ACR	Cerro Adams	1.09	326⇑	*e*P	Pb	04 16 36.3	-0.1
ACR				*e*S	Sb	04 16 50.0	-0.7
EDSV	San Vito	1.15	339	*e*P	Pb	04 16 37.5	0.0
EDSV				*e*S	Sb	04 16 52.0	-0.5
EDPN	Palmar Norte	1.50	324⇑	*i*P	Pn	04 16 43.2	+0.6
EDPN				*e*S	Sn	04 17 02.2	-0.1
DRK0	Durika	1.66	336⇑	*i*P	Pn	04 16 44.7	-0.1
DRK0				*e*S	Sn	04 17 06.1	-0.3
EDLM	Las Mercedes	1.83	326	*e*P	Pn	04 16 47.5	+0.3
EDLM				*e*S	Sn	04 17 10.9	+0.2
EDDO	Dominical	1.98	319	*e*P	Pn	04 16 49.6	+0.5
EDDO				*e*S	Sn	04 17 13.2	-0.9
BUS	Buena Vista	2.16	327⇑	*e*P	Pn	04 16 52.3	+0.4
BUS				*e*S	Sn	04 17 18.6	-0.6
AZU	Azuero	2.27	89⇑	*e*P	Pn	04 16 52.8	-0.3
AZU				*e*S	Sn	04 17 20.4	-0.7
QCR1	Quepos	2.31	317	*e*P	Pn	04 16 54.0	+0.3
PNME	Penonome	2.33	71	*e*P	Pn	04 16 55.6	+1.6
PNME				*e*S	Sn	04 17 19.0	-3.8
URSC	Urasca	2.40	330⇓	*e*P	Pn	04 16 56.2	+1.1
URSC				*e*S	Sn	04 17 23.5	-1.4
LCR2	La Lucha 2	2.45	324⇑	*e*P	Pn	04 16 56.5	+0.8
LCR2				*e*S	Sn	04 17 25.8	-0.1
CVTR	Volcan Turrial	2.55	332⇑	*e*P	Pn	04 16 58.7	+1.3
CVTR				*e*S	Sn	04 17 30.6	+1.6
SJS	Escuela Geolog	2.63	326	*e*S	Sn	04 17 31.1	+0.6
HDC	Heredia	2.72	326	*e*P	Pn	04 17 00.4	+1.0
HDC				*e*S	Sn	04 17 32.5	-0.1
CGA2	Cerro Gallo 2	2.94	320	*e*P	Pn	04 17 03.9	+1.4
SRA1	San Ramˆ‡n	3.00	321	*e*P	Pn	04 17 04.4	+1.1
BCIP	Isla Barro Col	3.04	62	*e*P	Pn	04 17 04.9	+1.1
BCIP				*e*S	Sn	04 17 41.2	+0.8
BCIP				*i*		04 17 53.0	
	comp=Z,138nm,0.4s						
BCIP	Isla Barro Col	3.04	62	*e*P	Pn	04 17 05.5	+1.8
BCIP				*e*S	Sn	04 17 41.6	+1.2
UPA	Univ. de Panam	3.24	67	*e*P	Pn	04 17 08.5	+2.1
UPA				*e*S	Sn	04 17 47.5	+2.3
VCR	Vista de Mar	3.85	308	*e*P	Pn	04 17 15.6	+0.7
CUI	Cuipilapa	3.87	319	*e*P	Pn	04 17 16.6	+1.4
CUI				*e*S	Sn	04 18 05.0	+4.0
MESS	Mesas	3.95	319	*e*P	Pn	04 17 17.8	+1.4
MALC	Bahia Malaga	6.38	125	*e*P	Pn	04 17 50.4	+0.7
HELC	Santa Helena	7.15	102	*e*P	Pn	04 18 01.2	+0.7
YOTC	Yotoco, Valle	7.22	121	*e*P	Pn	04 18 01.6	+0.3
YOTC				*i*		04 18 04.0	
	comp=Z,4.1nm,0.2s						
YOTC				*e*S	Sn	04 19 22.3	-1.4

OTT 06 04:38:58.8±2.5**, 35°.38N**×**55°.34W, h18^{km}, ML3.5**/3**, Atlantic Ocean. 1234km south from Louisbourg, Ns, North Atlantic Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GBN	Guysborough	11.06	337	PN	Pn	04 41 33.9	-2.2
GBN				SN	Sn	04 43 28.7	-11
GBN				Trac		04 43 41.8	
	comp=Z,1.1nm,0.2s						
LMN	Caledonia Moun	12.68	328	PN	Pn	04 41 57.2	-1.0
LMN				SN	Sn	04 44 09.4	-10
LMN				Trac		04 44 17.3	
	comp=Z,1.2nm,0.3s						
DRLN	Deer Lake	13.96	354	PN	Pn	04 42 13.3	-2.3
DRLN				SN	Sn	04 44 46.9	-3.2
DRLN				Trac		04 44 49.7	
	comp=Z,0.9nm,0.4s						
BATG	Bathurst New B	14.34	329	PN	Pn	04 42 18.0	-2.9
BATG				SN	Sn	04 44 46.4	-13
NATG	Natashquan Que	15.86	342	PN	Pn	04 42 40.6	-0.4
GSQ	Grosses Roches	16.07	331	PN	Pn	04 42 42.6	-1.1

SJA 06 04:46:24.6±0.7**, 31°.42S**×**68°.54W, h107^{km}**±5^{km}**, ML2.8, MW3.5, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTLL	Cerro Villicun	0.11	33	*i* P	Pn	04 46 39.8	+0.3
RTCV	Cerro Valdivia	0.44	180	*i* P	Pn	04 46 41.7	+0.8
RTCV				*i* S	Sn	04 46 53.8	+0.7
AMOG	MOGNA	0.48	5	*i* P	Pn	04 46 41.8	+0.6
RTLS	Leoncito	0.74	239	*i* P	Pn	04 46 44.3	+0.9
RTLS				*i* S	Sn	04 46 59.5	+2.0
RTLS				IAML		04 47 01.0	
	comp=Z,123nm,0.2s						
AUSP	Uspallata	1.07	222	*i* P	Pn	04 46 48.3	+1.6
ASAL	Salagasta	1.19	192	*i* P	Pn	04 46 48.8	+1.0
ACAN	Cantantal	1.43	127	*i* P	Pn	04 46 51.7	+1.2
ARCO	CERRO ARCO	1.45	193	*i* P	Pn	04 46 51.9	+1.0
ARCO				IAML		04 46 57.5	
	comp=Z,132nm,0.2s						
AAGR	Agrelo	1.68	188	*i* P	Pn	04 46 54.1	+0.6

MEX 06 05:11:40.5±0.3**, 18°.17N**×**103°.31W, h17^{km}**±4^{km}**, MD3.7, Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMIG	Aquila	0.12	345	*e*P	Pg	05 11 43.6	-0.8
MMIG				*e*S	Sg	05 11 46.0	-1.0
R15V		1.18	328	*e*P	Pn	05 11 58.8	-3.5
R15V				*e*S	Sb	05 12 12.9	-4.6
EZ5V		1.33	348	*e*P	Pn	05 12 01.0	-3.5
EZ5V				*e*S	Sn	05 12 17.1	-4.9

CSEM ***06*** *05:17:33.3±0.3, 35°.47N×23°.36E, h2^{km}, ML4.0, Error ellipse: s-maj=8.1km s-min=3.2km az=40.0*

THE ***06*** *05:17:34.1, 35°.49N×23°.44E, h4^{km}±1^{km}, ML3.7/10, Error ellipse: s-maj=1.4km s-min=0.5km az=179.0*

ATH ***06*** *05:17:34.1, 35°.53N×23°.45E, h17^{km}±1^{km}, ML3.7/15, Error ellipse: s-maj=1.7km s-min=0.8km az=50.0*

ISCJB ***06*** *05:17:34.1±0.6, 35°.45N±0°.03×23°.39E±0°.03, h15^{km}±5^{km}, mb3.7/10, Error ellipse: s-maj=5.8km s-min=3.2km az=41.7*

IDC ***06*** *05:17:37.5±2.1, 35°.33N×23°.58E, h53^{km}±23^{km}, mb3.6/9, mb1 3.7/10, mb1mx3.4/53, mbtmp3.8/10, ML4.0/1, MS3.0/2, Ms1 3.0/2, ms1mx2.5/53, Error ellipse: s-maj=26.2km s-min=18.1km az=168.0*

DDA ***06*** *05:18:12.7, 35°.41N×23°.53E, h28^{km}, Ml4.0*

ISC 06 05:17:34.1±0.9**, 35°.49N**±0°.03×**23°.44E**±0°.02**, h18^{km}**±4^{km}**, n103, σ1^{s}.68**/148**, mb3.8**/10**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANKY	Antikythira Is	0.40	343	P	Pb	05 17 43.4	+0.7
ANKY				S	Sg	05 17 47.8	-0.1
ANKY				AML	AML	05 17 48.6	
	comp=N,47333μm,0.3s						
ANKY				AML	AML	05 17 49.8	
	comp=E,49433μm,0.6s						
ANKY	Antikythira Is	0.40	343	P	Pg	05 17 42.3	0.0
ANKY				S	Sg	05 17 47.4	-0.5
ANKY	Antikythira Is	0.40	343	P	Pg	05 17 42.3	0.0
ANKY				S	Sg	05 17 47.3	-0.6
IMMV	Iera Moni Meta	0.44	93	P	Pb	05 17 43.6	+0.2
IMMV				S	Sb	05 17 49.6	-0.1
IMMV				AML	AML	05 17 51.9	
	comp=E,17458μm,0.3s						
IMMV				AML	AML	05 17 52.1	
	comp=N,16822μm,0.1s						
IMMV	Iera Moni Meta	0.44	93	P	Pb	05 17 43.2	-0.2
IMMV				S	Sg	05 17 49.2	0.0
IMMV	Iera Moni Meta	0.44	93	P	Pb	05 17 43.2	-0.2
IMMV				S	Sg	05 17 49.2	0.0
CHAN	Chania	0.49	86	P	Pb	05 17 44.2	0.0
CHAN				S	Sg	05 17 50.6	-0.1
CHAN	Chania	0.49	86	P	Pb	05 17 44.2	0.0
CHAN				S	Sg	05 17 50.6	-0.1
VAM	Vamos	0.63	97	P	Pb	05 17 46.5	0.0
VAM				S	Sb	05 17 56.0	+1.1
VAM				AML	AML	05 17 58.4	
	comp=E,17657μm,0.6s						
VAM				AML	AML	05 17 60.0	
	comp=N,11837μm,0.3s						
VAM	Vamos	0.63	97	P	Pg	05 17 46.3	-0.2
VAM				S	Sb	05 17 55.1	+0.2
VAM	Vamos	0.63	97	P	Pg	05 17 46.3	-0.2
VAM				S	Sb	05 17 55.1	+0.2
GVDS	Gavdos	0.83	140	P	Pb	05 17 49.7	-0.4
GVDS				S	Sg	05 18 01.6	+0.2
GVDS	Gavdos	0.83	140	P	Pb	05 17 49.7	-0.4
GVDS				S	Sg	05 18 01.6	+0.2
GVD	Gavdhos	0.84	140	P	Pb	05 17 49.7	-0.5
GVD				S	Sn	05 18 02.0	-0.8
GVD				AML	AML	05 18 09.7	
	comp=E,19904μm,0.7s						
GVD				AML	AML	05 18 11.4	
	comp=N,13498μm,0.6s						
GVD	Gavdhos	0.84	140	P	Pb	05 17 49.6	-0.5
GVD				S	Sn	05 18 02.0	-0.8
GVD	Gavdhos	0.84	140	P	Pb	05 17 49.6	-0.5
GVD				S	Sn	05 18 02.0	-0.8
KYTH	Kithira	0.84	338	P	Pb	05 17 50.2	0.0
KYTH				S	Sb	05 18 00.5	-0.6
KYTH				AML	AML	05 18 02.1	
	comp=N,16031μm,0.6s						
KYTH				AML	AML	05 18 04.3	
	comp=E,15050μm,0.4s						
KYTH	Kithira	0.84	338	P	Pb	05 17 50.0	-0.2
KYTH				S	Sb	05 18 01.6	+0.4
KTHR	Kythira	0.85	335	P	Pb	05 17 50.1	-0.3
KTHR	Kythira	0.85	335	P	Pb	05 17 50.1	-0.3
PRNS	Prines Rethymn	0.88	98	P	Pb	05 17 50.0	-0.8
PRNS				S	Sb	05 18 01.8	-0.3
PRNS	Prines Rethymn	0.88	98	P	Pb	05 17 50.0	-0.8
PRNS				S	Sb	05 18 01.8	-0.3
IDI	Anoyia	1.20	99	P	Pb	05 17 56.2	-0.2
	comp=E,123nm,0.3s,baz=248,slow=8.6,SNR=794						
SIVA	Sivas	1.22	112	P	Pn	05 17 55.9	-0.3
SIVA				AML	AML	05 18 20.1	
	comp=E,10358μm,0.7s						
SIVA				AML	AML	05 18 27.5	
	comp=N,6082μm,0.6s						
SIVA	Sivas	1.22	112	P	Pn	05 17 56.2	0.0
SIVA	Sivas	1.22	112	P	Pn	05 17 56.2	0.0
VLI	Veliai	1.29	342	P	Pb	05 17 58.4	+0.5
VLI				S	Sn	05 18 13.8	-0.4
VLI				AML	AML	05 18 25.5	
	comp=N,5612μm,0.4s						
VLI				AML	AML	05 18 26.6	
	comp=E,4164μm,0.5s						
VLI	Veliai	1.29	342	P	Pn	05 17 57.9	+0.6
VLI				S	Sb	05 18 15.7	+1.5
VLI	Veliai	1.29	342	P	Pn	05 17 57.9	+0.6
VLI				S	Sn	05 18 14.4	+0.2
IACM	Heraklion	1.34	97	P	Pg	05 17 59.6	-0.5
IACM	Heraklion	1.34	97	P	Pg	05 17 59.5	-0.5
MHLO	Agia Marina, M	1.43	33	P	Pn	05 17 59.9	+0.7
MHLO				S	Sb	05 18 18.7	+0.6
MHLO				AML	AML	05 18 27.4	
	comp=N,12338μm,0.4s						
MHLO				AML	AML	05 18 29.5	
	comp=E,13026μm,0.4s						
MHLO	Agia Marina, M	1.43	33	P	Pn	05 17 59.9	+0.7
MHLO				S	Sg	05 18 20.7	+0.3
MHLO	Agia Marina, M	1.43	33	P	Pn	05 17 59.9	+0.7
MHLO				S	Sb	05 18 19.0	+0.8
MHLA	Plaka, Milos I	1.49	32	P	Pn	05 18 00.5	+0.6
MHLA				S	Sb	05 18 20.7	+1.0
MHLA				AML	AML	05 18 28.8	
	comp=N,7500μm,0.8s						
MHLA				AML	AML	05 18 30.0	
	comp=E,7257μm,0.9s						
MHLA	Plaka, Milos I	1.49	32	P	Pb	05 18 00.9	-0.3
MHLA				S	Sb	05 18 20.9	+1.2
DYR	Agios Nikonas	1.56	325	P	Pb	05 18 03.0	+0.6
DYR				S	Sg	05 18 24.3	-0.1
DYR				AML	AML	05 18 29.8	
	comp=E,2232μm,0.7s						
DYR				AML	AML	05 18 37.0	
	comp=N,1313μm,1.1s						
DYR	Agios Nikonas	1.56	325	P	Pb	05 18 02.4	0.0
DYR				S	Sb	05 18 22.4	+0.6
DYR	Agios Nikonas	1.56	325	P	Pb	05 18 02.4	0.0
DYR				S	Sb	05 18 22.4	+0.6
LAST	Lasithi	1.70	100	P	Pg	05 18 05.9	-0.9
LAST				AML	AML	05 18 37.3	
	comp=N,1879μm,0.8s						
LAST				AML	AML	05 18 38.5	
	comp=E,1177μm,0.9s						
LAST	Lasithi	1.70	100	P	Pb	05 18 05.5	+0.6
NPS	Neapolis	1.79	97	P	Pg	05 18 07.3	-1.2
NPS				AML	AML	05 18 40.3	
	comp=N,1828μm,0.7s						
NPS				AML	AML	05 18 40.4	
	comp=E,1740μm,0.9s						
NPS	Neapolis	1.79	97	P	Pb	05 18 06.8	+0.4
SANT	Santorini	1.86	61	P	Pb	05 18 07.1	-0.6
SANT				S	Sb	05 18 32.3	+1.8
SANT				AML	AML	05 18 35.3	
	comp=E,3689μm,0.6s						
SANT				AML	AML	05 18 37.0	
	comp=N,1958μm,0.8s						
SANT	Santorini	1.86	61	P	Pb	05 18 07.0	-0.6
SANT				S	Sb	05 18 31.7	+1.1
KRND	KRANIDI	1.91	353	P	Pn	05 18 07.0	+1.3
KRND				S	Sn	05 18 30.8	+1.5
KRND	KRANIDI	1.91	353	P	Pn	05 18 07.0	+1.3
KRND				S	Sn	05 18 30.8	+1.5
IOSP	Ios island	1.94	50	P	Pn	05 18 06.9	+0.7
IOSP	Ios island	1.94	50	P	Pn	05 18 07.2	+1.0
IOSP				S	Sb	05 18 31.9	-0.9
IOSP	Ios island	1.94	50	P	Pn	05 18 07.2	+1.0
IOSP				S	Sb	05 18 31.9	-0.9
PYL	PYLOS	1.96	316	P	Pn	05 18 07.5	+0.9
PYL	PYLOS	1.96	316	P	Pn	05 18 07.7	+1.2
PYL				S	Sb	05 18 32.8	-0.7
PYL	PYLOS	1.96	316	P	Pn	05 18 07.7	+1.2
PYL				S	Sb	05 18 32.8	-0.7
DID	Didima	2.02	355	P	Pn	05 18 08.0	+0.6
DID				AML	AML	05 18 42.1	
	comp=E,1517μm,0.4s						
DID				AML	AML	05 18 45.6	
	comp=N,1251μm,0.5s						
DID	Didima	2.02	355	P	Pn	05 18 08.5	+1.1
ANAF	Anafi Island	2.08	65	P	Pb	05 18 10.4	-1.0
ANAF	Anafi Island	2.08	65	P	Pb	05 18 10.3	-1.0
ITM	Ithomi	2.08	325	P	Pb	05 18 10.7	-0.7
ITM	Ithomi	2.08	325	P	Pb	05 18 10.4	-1.0
VLY	Voula,Athens	2.38	7	P	Pn	05 18 13.5	+1.2
VLY				AML	AML	05 18 55.8	
	comp=E,1408μm,0.4s						
VLY				AML	AML	05 18 58.4	
	comp=N,886μm,0.5s						
VLY	Voula,Athens	2.38	7	P	Pn	05 18 13.7	+1.5
AMGA	Amorgos Island	2.40	55	P	Pn	05 18 13.4	+0.9
AMGA	Amorgos Island	2.40	55	P	Pn	05 18 13.6	+1.1
AMGA	Amorgos Island	2.40	55	P	Pn	05 18 13.6	+1.1
DGB	˜zmir	3.77	46	*i* P	Pn	05 18 35.8	+4.5
DGB				*i* S	Sg	05 19 30.7	-4.4
URLA	Izmir	3.82	40	*i* P	Pn	05 18 34.6	+2.5
URLA	Izmir	3.82	40	P	Pn	05 18 34.6	+2.5
AYDN	Tasoluk	4.18	57	*i* P	Pn	05 18 40.2	+3.2
AYDN	Tasoluk	4.18	57	P	Pn	05 18 40.2	+3.2

TURN	Turunc	4.40	70	*i* P	Pn	05 18 37.9	-2.1
TURN	Turunc	4.40	70	P	Pn	05 18 37.9	-2.1
DALY	Dalyan (Mu˜la	4.42	71	*i* P	Pn	05 18 43.8	+3.5
DALY				*i* S	Sn	05 19 29.5	-1.8
DALY	Dalyan (Mu˜la	4.42	71	P	Pn	05 18 43.8	+3.5
DALY				S	Sn	05 19 29.5	-1.8
FETY	Fethiye	4.71	74	P	Pn	05 18 47.3	+3.0
TAVA	DENIZLI_Tavas	4.83	64	*i* P	Pn	05 18 50.4	+4.4
TAVA	DENIZLI_Tavas	4.83	64	P	Pn	05 18 50.4	+4.4
AKAS	Kas	5.06	80	*i* P	Pn	05 18 51.5	+2.3
AKAS				*i* S	Sn	05 19 42.0	-5.4
AKAS	Kas	5.06	80	P	Pn	05 18 51.5	+2.3
GOLH	Golhisar	5.24	69	*i* P	Pn	05 18 55.3	+3.7
GOLH				*i* S	Sn	05 19 50.7	-0.9
GOLH	Golhisar	5.24	69	P	Pn	05 18 55.3	+3.7
GOLH				S	Sn	05 19 50.7	-0.9
KORT	Korkueli	5.79	73	*i* P	Pn	05 19 01.8	+2.6
KORT	Korkueli	5.79	73	P	Pn	05 19 01.8	+2.6
DRME	Dracevica, Mon	7.47	335	*e*Pn	Pn	05 19 21.2	-0.9
UPM	Unac-Piva	8.47	337	*e*Pn	Pn	05 19 35.8	-0.2
IVAS	Ivanjica	8.47	344	*e*Pn	Pn	05 19 35.0	-0.9
STON	Ston	8.61	331	*e*Pn	Pn	05 19 36.2	-1.6
STON				Sn	Sn	05 21 06.9	-7.5
DIVS	Divibare	9.00	344	*e*Pn	Pn	05 19 42.3	-0.9
BRTR	Keskin Array B	9.13	59	P	Pn	05 19 49.7	+4.7
	comp=N,0.3nm,0.3s,baz=237,slow=14,SNR=8.8						
BRTR				LR	LR	05 23 59.2	
	comp=N,94nm,18.7s,baz=145,slow=42						
UDBI	Udbina	10.77	329	*e*Pn	Pn	05 20 07.8	+0.3
NVLJ	Novalja	11.19	327	*e*Pn	Pn	05 20 10.6	-2.5
OZLJ	Ozalj	11.79	332	*e*Pn	Pn	05 20 20.3	-1.0
GERES	GERESS Array B	15.16	335	P	P	05 21 11.7	-0.6
	comp=N,0.3nm,0.3s,baz=142,slow=14,SNR=4.7						
KVAR	Kislovodsk Arr	17.03	54	LR	LR	05 29 30.8	
	comp=N,59nm,20.6s,baz=358,slow=42						
ESDC	Sonseca Array	22.08	289	P	P	05 22 29.4	+1.2
	comp=N,0.6nm,0.6s,baz=83,slow=11,SNR=4.5						
HFS	Hagfors	25.46	349	P	P	05 23 00.6	-0.2
	comp=N,1.1nm,0.5s,baz=145,slow=9.0,SNR=6.1						
NB2	NORSAR Subarra	26.74	347	P	P	05 23 15.5	+3.1
	comp=Z,2.1nm,1.1s,baz=153,slow=10						
EKA	Eskdalemuir Ar	26.97	326	P	P	05 23 16.5	+2.1
	comp=Z,1.6nm,0.4s,baz=126,slow=8.2,SNR=7.8						
TORD	Torodi Ar. Bea	29.66	227	P	P	05 23 38.0	-0.8
	comp=Z,1.1nm,0.5s,baz=35,slow=9.0						
ARCES	ARCESS Array B	34.12	1	P	P	05 24 18.3	+0.8
	comp=Z,1.7nm,0.8s,baz=164,slow=10.0,SNR=6.1						
KURBB	Kurchatov Arra	42.01	51	P	P	05 25 23.4	-0.8
	comp=Z,0.6nm,0.5s,baz=273,slow=8.8,SNR=8.9						
MKAR	Makanchi Array	44.77	57	P	P	05 25 45.8	-0.7
	comp=Z,0.8nm,0.5s,baz=272,slow=8.8,SNR=8.0						
ZALV	Zalesovo Beam	45.80	46	P	P	05 25 53.7	-0.8
	comp=Z,0.6nm,0.3s,baz=273,slow=9.5,SNR=2.2						
YKA	Yellowknife Ar	76.70	341	P	P	05 29 23.6	-0.1
	comp=Z,0.3nm,0.7s,baz=32,slow=5.0,SNR=3.6						

JMA 06 05:23:00.1±0.3, 40°.48N×145°.46E, h52km, M3.7, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JEM	Erimo	2.32	312	P	Pn	05 23 37.4	+1.6
JEM				*e*S	Sn	05 24 03.1	+0.1
JTHR	Tokachihiroo	2.43	319	P	Pn	05 23 39.2	+1.9
JTHR				S	Sn	05 24 06.9	+1.0
JAK	Akkeshi	2.58	347	P	Pn	05 23 40.5	+1.2
JAK				*e*S	Sn	05 24 10.9	+1.5
JCH	Churui	2.65	324	S	Sn	05 24 11.7	+0.5
JOB	Onbets	2.71	334	*e*S	Sn	05 24 14.0	+1.3
JNBK	Urakawa-nobuka	2.72	312	P	Pn	05 23 43.4	+2.2
JNBK				*e*S	Sn	05 24 15.0	+2.1
NEM2	Nemuro 2	2.89	4	P	Pn	05 23 44.8	+1.2
NEM2				S	Sn	05 24 16.7	-0.4
JANG	Nango	3.01	269	P	Pn	05 23 45.9	+0.6
JANG				S	Sn	05 24 19.9	-0.3
JAR	Ashorobuto	3.08	336	P	Pn	05 23 47.4	+1.1
JAR				*e*S	Sn	05 24 21.3	-0.6
JOM	Ohasama	3.36	254	P	Pn	05 23 51.0	+1.0
JOM				*e*S	Sn	05 24 26.5	-2.1
JFR	Furan	3.43	322	P	Pn	05 23 53.2	+2.1
JFR				S	Sn	05 24 30.4	-0.1
JOT	Ohata	3.46	287	P	Pn	05 23 52.9	+1.5
JOT				S	Sn	05 24 30.3	-0.9
JMK	Ichinoseki	3.61	246	P	Pn	05 23 54.2	+0.7
JMK				*e*S	Sn	05 24 32.4	-2.4
JKB	Kayabe	3.62	294	P	Pn	05 23 55.3	+1.6
JKB				S	Sn	05 24 34.6	-0.6
JTKR	Abashiri--Toko	3.67	342	P	Pn	05 23 57.0	+2.7
JTKR				S	Sn	05 24 38.4	+2.0
JEW	Eniwo	3.82	309	S	Sn	05 24 41.8	+1.8
JKK2	Kamakawa 2	3.94	330	P	Pn	05 24 01.3	+3.2
JKK2				*e*S	Sn	05 24 46.2	+3.1
JYK	Kaneyama	4.23	250	P	Pn	05 24 03.5	+1.5
JYK				*e*S	Sn	05 24 50.4	+0.2

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*NEIC **06** 05:32:24.8±0.0, 19°.47N×96°.55W, h17km, MD4.1(MEX), After MEX.*

MEX 06 05:32:24.8±0.5, 19°.47N×96°.55W, h17km±4km, MD4.1, Veracruz

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LVIG	Laguna Verde	0.28	26	*i* P	Pg	05 32 29.5	-1.4
LVIG				*i* S	Sg	05 32 34.6	-0.5
LVIG	Laguna Verde	0.28	26	*i* P	Pg	05 32 29.5	-1.4
LVIG				*i* S	Sg	05 32 34.6	-0.5
TPIG	Tehuac#an	1.30	217	*e*P	Pn	05 32 44.8	-3.5
TPIG				*e*S	Sb	05 33 00.2	-5.1
TPIG	Tehuac#an	1.30	217	*e*P	Pn	05 32 44.8	-3.5
TPIG				*e*S	Sb	05 33 00.2	-5.1
PPM	Popocatepetl	2.00	259	*i* P	Pn	05 32 55.6	-2.7
PPM				*i* S	Sn	05 33 18.5	-4.7
PPM	Popocatepetl	2.00	259	*i* P	Pn	05 32 55.6	-2.7
PPM				*i* S	Sn	05 33 18.5	-4.7
VHO	Vista Hermosa	2.39	184	*e*P	Pn	05 33 00.7	-2.7
VHO				*e*S	Sn	05 33 27.9	-4.4
VHO	Vista Hermosa	2.39	184	*e*P	Pn	05 33 00.7	-2.7
VHO				*e*S	Sn	05 33 27.9	-4.4
ZUVM	ZUMPANGO	2.41	279	*i* P	Pn	05 33 01.1	-2.6
ZUVM				*i* S	Sn	05 33 29.1	-3.9
YAIG	Yautepec	2.46	256	*i* P	Pn	05 33 01.9	-2.3
YAIG				*i* S	Sn	05 33 29.2	-4.7
YAIG	Yautepec	2.46	256	*i* P	Pn	05 33 01.9	-2.3
YAIG				*i* S	Sn	05 33 29.2	-4.7
DEIG	Demacu	2.48	290	*e*P	Pn	05 33 01.7	-3.0
DEIG				*e*S	Sn	05 33 30.2	-4.5
DEIG	Demacu	2.48	290	*e*P	Pn	05 33 01.7	-3.0
DEIG				*e*S	Sn	05 33 30.2	-4.5
TLIG	Tlapa	2.70	226	*e*P	Pn	05 33 04.7	-2.8
TLIG				*e*S	Sn	05 33 36.0	-3.8
TLIG	Tlapa	2.70	226	*e*P	Pn	05 33 04.7	-2.8
TLIG				*e*S	Sn	05 33 36.0	-3.8
PLIG	Platanillo	3.00	250	*e*P	Pn	05 33 09.3	-2.3
PLIG				*e*S	Sn	05 33 43.4	-3.7
PLIG	Platanillo	3.00	250	*e*P	Pn	05 33 09.3	-2.3
PLIG				*e*S	Sn	05 33 43.4	-3.7
PNIG	Pinotepa	3.41	206	*e*P	Pn	05 33 14.9	-2.3
PNIG				*e*S	Sn	05 33 53.8	-3.5
PNIG	Pinotepa	3.41	206	*e*P	Pn	05 33 14.9	-2.3
PNIG				*e*S	Sn	05 33 53.8	-3.5

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*NNC **06** 05:41:28.7±3.9, 44°.34N×82°.90E, h0km, mb2.5, mpv2.1, Error ellipse: s-maj=35.3km s-min=15.1km az=125.0*

*SOME **06** 05:41:28.9, 44°.32N×83°.00E, h20km*

ISC 06 05:41:30.5±2.9, 44°.33N±0°.09×82°.9E±0°.1, h17km, n7, σ1^{s}42/11, 5C-1D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJR	Jarkent	2.24	271	*e*P	Pb	05 42 11.0	+0.5
	2.3nm,0.2s						
DJR				*e*S	Sg	05 42 41.6	-0.8
	2.3nm,0.4s						
MK31	Makanchi Array	2.50	350	⇑Pg	Pb	05 42 14.2	-0.8
	0.2nm,0.3s,baz=165,slow=16,SNR=9.5						
MK31				⇑Lg	Lg	05 42 45.9	
	0.7nm,0.3s,baz=170,slow=28,SNR=11						
MAKZ	Makanchi	2.56	346	⇑Pg	Pb	05 42 16.9	+0.8
	0.7nm,0.6s						
MAKZ				⇓Lg	Lg	05 42 47.5	
	1.4nm,0.7s						
PDGK	Podgornoye	2.67	249	⇑Pg	Pb	05 42 16.9	-1.0
	1.0nm,0.5s						
PDGK				⇑Lg	Lg	05 42 53.2	
	4.5nm,0.8s						
KAPS	Kapalarasan	2.70	292	*e*P	Pb	05 42 18.7	+0.3
	0.3nm,0.1s						
KAPS				*e*S	Sg	05 42 55.1	-2.2
	1.7nm,0.4s						
UZB	Uzynbulak	3.05	249	*e*P	Pb	05 42 24.0	-0.5
	1.1nm,0.3s						
UZB				*e*S	Sb	05 43 03.5	+2.1
	2.0nm,0.4s						
KPKS	Kokpek	3.17	256	*e*P	Pb	05 42 25.6	-0.8
	3.3nm,0.2s						
KPKS				*e*S	Sb	05 43 06.6	+1.8
	4.1nm,0.7s						

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*ISCJB **06** 06:16:46.4±0.1, 42°.56S±0°.03×73°.86W±0°.07, h33km, mb5.0/191, MS4.5/21, Error ellipse: s-maj=7.3km s-min=4.0km az=167.6*

*MOS **06** 06:16:47.0±1.1, 42°.54S×74°.00W, h33km, mb5.3/34, Error ellipse: s-maj=14.8km s-min=7.6km az=91.6*

*NEIC **06** 06:16:47.0±0.0, 42°.65S×74°.02W, h32km, mb5.0/183, ML5.1(GUC), After GUC.*

NEIC Felt [IV] at Castro, Chonchi, Dalcahue, Puqueldon and Queilen and [III] at Quellon and Quemchi. Also felt at Ancud and Puerto Montt.

*IDC **06** 06:16:47.2±0.4, 42°.56S×73°.80W, h26km±2km, mb4.5/16, mb1 4.7/16, mb1mx4.4/37, mbtmp4.7/16, MS4.4/21, Ms1 4.4/21, ms1mx4.2/33, Error ellipse: s-maj=18.4km s-min=11.8km az=85.0*

*GUC **06** 06:16:47.4±0.7, 42°.65S×74°.02W, h32km±5km, ML5.1*

*BJI **06** 06:16:48.6, 42°.60S×74°.00W, h32km, mB4.9/7, Ms5.1/7, Ms7 4.8/7*

ISC 06 06:16:47.2±0.4, 42°.61S±0°.03×73°.83W±0°.05, h25km±2km, h25km:pP-P, n762, σ1^{s}21/795, mb5.0/191, MS4.5/21, 6C-5D, Southern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO07	Milladeo Hill,	0.52	167	*e*P	Pb	06 16 58.0	+0.2
GO07				⇓*i*P	Pn	06 16 58.2	-0.9
GO07				*e*S	Sb	06 17 06.1	+1.1
GO07				*e*S	Sn	06 17 06.2	-0.9
GO07				IAML		06 17 07.3	
	comp=E,190μm,0.7s						
PMCH	Puerto Montt	1.31	32	*e*P	Pb	06 17 11.8	+0.6
PMCH				*e*S	Sb	06 17 30.5	+2.9
PUEL	Puelo Alto	1.48	51	*e*P	Pb	06 17 14.8	+0.8
PUEL				*e*S	Sb	06 17 35.7	+3.4
VLCH	Valdivia	2.83	9	*e*P	Pn	06 17 32.4	+1.6
PLCA	Paso Flores	3.09	54	Pn	Pn	06 17 38.6	+4.2
	comp=E,6.2nm,0.3s,baz=253,slow=12,SNR=184						
PLCA				LR	LR	06 19 00.7	
	comp=E,10μm,19.1s,baz=300,slow=44						
PLCA	Paso Flores	3.09	54	*e*Pn	Pn	06 17 38.4	+4.0
PLCA	Paso Flores	3.09	54	⇑*e*P	Pn	06 17 38.6	+4.2
PLCA				*e*S	Sb	06 18 20.7	+2.0
PLCA	Paso Flores	3.09	54	*e*P	Pn	06 17 38.0	+3.6
COYC	Coyhaique	3.22	158	*e*P	Pn	06 17 37.5	+1.3
COYC				IAML		06 18 30.4	
	comp=N,5μm,0.9s						
TMU	Temuco	3.98	14	*e*P	Pn	06 17 49.3	+2.7
TMU				*e*S	Sn	06 18 35.3	+2.9
GO05	HualaæØ	7.73	12	*e*Pn	Pn	06 18 38.4	+0.2
PEL	Peldehue	9.77	16	*e*Pn	Pn	06 19 05.5	-0.7
PEL	Peldehue	9.77	16	*e*P	Pn	06 19 05.5	-0.7
ROC1	El Roble	9.87	14	*e*Pn	Pn	06 19 09.1	+1.4
TRQA	Tornquist	10.12	67	*e*Pn	Pn	06 19 15.3	+4.4
TRQA	Tornquist	10.12	67	*e*P	Pn	06 19 15.3	+4.4
GO04	Tololo Observa	12.64	12	*e*Pn	Pn	06 19 47.7	+2.0
EFI	East Falkland	14.02	136	*e*Pn	P	06 20 12.3	+0.6
EFI	East Falkland	14.02	136	*i* P	P	06 20 08.7	-3.0
EFI				pmax	pmax		
	comp=Z,32nm,0.8s						
GO03	Copiap	15.26	12	*e*Pn	Pn	06 20 22.6	+1.5
	comp=Z,57nm,1.0s						
GO02	Mina Guanaco	17.75	13	*e*Pn	P	06 20 54.1	+0.5
	comp=Z,50nm,0.8s						
PB04	IPOC Station P	20.45	10	*e*P	P	06 21 23.7	+0.7
	comp=Z,69nm,1.0s						
CPUP	Villa Florida	21.12	45	P	P	06 21 29.7	-0.3
	comp=Z,12nm,0.5s,baz=228,slow=8.0,SNR=39						
CPUP				LR	LR	06 30 31.1	
	comp=Z,2μm,19.6s,baz=218,slow=39						
CPUP	Villa Florida	21.12	45	*e*P	P	06 21 30.7	+0.7
	comp=Z,127nm,1.8s						
CPUP	Villa Florida	21.12	45	*e*P	P	06 21 30.7	+0.7
CPUP				pmax	pmax		
	comp=Z,127nm,1.8s						
PB01	IPOC Station P	21.81	11	*e*P	P	06 21 37.8	+0.3
	comp=Z,134nm,1.7s						
PMSA	Palmer Station	22.90	169	LR	LR	06 30 37.7	
	comp=Z,770nm,18.2s,baz=336,slow=36						
MNMC	Minye Minye	23.68	10	*e*P	P	06 21 57.2	0.0
	comp=Z,64nm,1.0s						
LPAZ	La Paz	26.68	12	P	P	06 22 25.2	+0.2
	comp=Z,6.8nm,0.7s,baz=209,slow=8.1,SNR=24						
LPAZ	La Paz	26.68	12	*e*P	P	06 22 25.2	+0.2
	comp=Z,18nm,0.9s						
LPAZ	La Paz	26.68	12	*e*P	P	06 22 25.2	+0.2
LPAZ				pmax	pmax		
	comp=Z,18nm,0.9s						
SIV	San Ignacio	28.69	26	P	P	06 22 41.4	-0.9
	comp=Z,6.3nm,0.8s,baz=214,slow=9.0,SNR=28						
SPB	Sao Paulo	28.94	57	*e*P	P	06 22 43.8	-0.7
	comp=Z,92nm,1.9s						
NNA	Nana	30.62	354	LR	LR	06 32 36.7	
	comp=Z,422nm,20.2s,baz=156,slow=31						
NNA	Nana	30.62	354	*e*P	P	06 22 58.6	-0.7
	comp=Z,176nm,1.9s						
NNA	Nana	30.62	354	*e*P	P	06 22 58.7	-0.7
NNA				pmax	pmax		
	comp=Z,176nm,1.9s						
RPN	Rapa Nui	32.70	287	LR	LR	06 32 39.3	
	comp=Z,1μm,18.9s,baz=112,slow=29						
SAML	Samuel	34.80	19	*e*P	P	06 23 35.6	-0.3
	comp=Z,14nm,0.9s						
SAML	Samuel	34.80	19	*e*P	P	06 23 35.7	-0.3
SAML				pmax	pmax		
	comp=Z,14nm,0.9s						
VNA3	Neumayer Olymp	42.07	154	P	P	06 24 35.9	-0.6
VNA3				S	S	06 30 59.5	+5.6
VNA1	Neumayer--Stat	42.46	153	P	P	06 24 39.7	+0.1
VNA1				S	S	06 31 10.3	+11
OTAV	Otavalo	42.85	353	*e*P	P	06 24 43.8	-0.1
	comp=Z,34nm,1.6s						
OTAV	Otavalo	42.85	353	*e*P	P	06 24 45.9	+2.0
OTAV	Otavalo	42.85	353	*e*P	P	06 24 43.8	-0.1
OTAV				pmax	pmax		
	comp=Z,34nm,1.6s						
PTGA	Pitinga	43.51	20	P	P	06 24 47.7	-1.0
	comp=Z,11nm,0.8s,baz=209,slow=10,SNR=24						
PTGA	Pitinga	43.51	20	*e*P	P	06 24 47.9	-0.8
	comp=Z,20nm,0.9s						
SNAA	Sanae	44.28	155	P	P	06 24 53.9	-0.5
SNAA				S	S	06 31 29.1	+2.7
SNAA	Sanae	44.28	155	P	P	06 24 53.8	-0.5
	comp=Z,38nm,1.0s,baz=271,slow=7.2,SNR=101						
SNAA	Sanae	44.28	155	*e*P	P	06 24 53.7	-0.7
	comp=Z,47nm,1.0s						
TUMC	Tumaco	44.45	353	*e*P	P	06 24 54.3	-1.9
	comp=Z,144nm,0.7s						
PRAC	Prado	46.11	359	*e*P	P	06 25 09.0	-0.5
	comp=Z,60nm,1.9s						
CHIC	Chingaza	47.01	0	*e*P	P	06 25 13.3	-3.6
QSPA	South Pole Qui	47.64	180	P	P	06 25 21.2	+0.1
	comp=Z,5.7nm,0.8s,baz=131,slow=3.8,SNR=13						
QSPA				LR	LR	06 45 09.1	
	comp=Z,155nm,18.8s,baz=164,slow=36						
QSPA	South Pole Qui	47.64	180	*e*P	P	06 25 21.1	+0.1
	comp=Z,18nm,1.0s						
RUSC	La Rusia	48.27	1	*e*P	P	06 25 26.5	-0.3
	comp=Z,4.7nm,0.9s						
RUSC	La Rusia	48.27	1	*e*P	P	06 25 27.0	+0.2
HELC	Santa Helena	48.59	358	*e*P	P	06 25 28.8	-0.3
	comp=Z,20nm,0.8s						
NVL	N’lazarevskaya	49.09	154	⇓*i*P	P	06 25 31.7	-0.2
NVL				*e*S	S	06 32 35.8	+0.9
NVL				pmax	pmax		
	comp=Z,40nm,0.8s						
ZARC	Zaragoza, Cauc	49.87	359	*e*P	P	06 25 35.8	-2.6
SDV	Santo Domingo	51.33	4	P	P	06 25 48.7	-1.0
	comp=Z,10.0nm,0.7s,baz=307,slow=0.8,SNR=5.5						
SDV	Santo Domingo	51.33	4	*e*P	P	06 25 48.6	-1.1
	comp=Z,8.7nm,0.6s						
RKT	Rikitea	53.75	271	*e*S	S	06 33 47.5	+7.1
	comp=Z,238nm,26.5s						
RKT				*e*LR	LR	06 41 46.5	
	comp=Z,679nm,24.0s,baz=123						
RKT	Rikitea	53.75	271	*e*T	T	07 23 18.9	
	comp=Z,3.2nm,0.2s						
SBA	Scott Base	54.38	193	*e*P	P	06 26 11.9	+0.6
	comp=Z,45nm,1.8s						
SBA	Scott Base	54.38	193	*e*P	P	06 26 11.9	+0.6
SBA				pmax	pmax		
	comp=Z,45nm,1.8s						
VNDA	Vanda	55.40	193	P	P	06 26 19.9	+1.2
	comp=Z,2.4nm,0.9s,baz=168,slow=2.1,SNR=9.6						
VNDA				pP	pP	06 26 27.5	+1.0
	comp=Z,4.5nm,1.1s,baz=154,slow=5.2,SNR=9.9						
VNDA				LR	LR	06 46 30.0	
	comp=Z,76nm,20.6s,baz=134,slow=32						
VNDA	Vanda	55.40	193	*e*P	P	06 26 19.5	+0.8
	comp=Z,13nm,1.3s						
VNDA				pP	pP	06 26 27.5	+1.0
SYO	Syowa Base	58.44	157	⇑*e*P	P	06 26 35.0	-5.3
SYO	Syowa Base	58.44	157	⇓*i*X	P	06 26 39.0	-1.3
TBI	Tubuai	64.27	261	*e*S	S	06 36 00.8	+4.0
	comp=Z,392nm,29.2s						
TBI	Tubuai	64.27	261	*e*LR	LR	06 46 23.9	
	comp=Z,336nm,28.0s						
MAW	Mawson	65.35	163	P	P	06 27 26.7	0.0
	comp=Z,4.2nm,0.8s,baz=214,slow=9.8,SNR=4.5						
MAW				LR	LR	06 56 34.4	
	comp=Z,461nm,18.2s,baz=233,slow=36						
TAOE	Nuku Hiva Isla	66.66	280	*e*S	S	06 36 32.0	+5.6
	comp=Z,166nm,24.2s						
TAOE	Nuku Hiva Isla	66.66	280	*e*LR	LR	06 47 50.4	
	comp=Z,776nm,25.8s						
PPT2	Papeete2	67.92	266	*e*S	S	06 36 43.9	+2.4
	comp=Z,141nm,23.8s						
PPT2	Papeete2	67.92	266	*e*LR	LR	06 48 04.5	
	comp=Z,266nm,26.8s						
PPT	Papeete	67.93	266	LR	LR	06 49 55.2	
	comp=Z,277nm,18.1s,baz=167,slow=29						
059Z	Ave Maria	68.96	353	P	P	06 27 49.4	-0.6
	baz=174						
058A	Arcadia	69.71	352	P	P	06 27 53.7	-1.0
	baz=174						
859A	Kempfer Cattle	70.62	353	P	P	06 27 59.2	-1.0
	baz=175						
DWPF	Disney Wildern	70.72	353	P	P	06 27 59.7	-1.1
	baz=174						
CASY	Casey	71.39	182	*e*P	P	06 28 04.1	-0.5
	comp=Z,15nm,0.9s						
758A	Lake Helen	71.54	353	P	P	06 28 04.7	-1.1
	baz=174						
757A	Oxford	71.60	352	P	P	06 28 05.4	-0.7
	baz=174						
SUR	Sutherland	72.00	118	*e*P	P	06 28 09.8	+0.7
	comp=Z,36nm,0.9s						
656A	Willston	72.07	352	P	P	06 28 07.7	-1.3
	baz=173						
557A	Orange Park	72.63	353	P	P	06 28 10.9	-1.4
	baz=174						
556A	Lake Butler	72.68	352	P	P	06 28 11.3	-1.3
	baz=174						
554A	Perry	72.90	351	P	P	06 28 12.9	-1.0
	baz=173						
RAR	Rarotonga	73.06	257	LR	LR	06 51 43.6	
	comp=Z,365nm,18.5s,baz=120,slow=29						
553A	Crawfordville	73.09	350	P	P	06 28 13.8	-1.3
	baz=172						
646A	Port Sulphur	73.33	345	P	P	06 28 15.6	-0.9
	baz=168						
454A	Quitman	73.52	351	P	P	06 28 16.4	-1.2
	baz=173						
453A	Whigham	73.73	351	P	P	06 28 17.8	-1.0
	baz=172						
452A	Marianna	73.84	350	P	P	06 28 18.4	-1.0
	baz=172						
449A	Pace	74.04	348	P	P	06 28 18.7	-1.9
	baz=170						
355A	Pearson	74.06	352	P	P	06 28 18.8	-1.9
	baz=173						
447A	Lucedale	74.31	347	P	P	06 28 22.4	+0.3
	baz=169						
448A	Bay Minette	74.31	347	P	P	06 28 22.3	+0.1
	baz=170						
351A	Pinckard	74.31	350	P	P	06 28 21.3	-0.8
	baz=171						
833A	Chaparral WMA,	74.41	337	P	P	06 28 22.8	0.0
	baz=161						
BRAL	Brewton	74.41	348	P	P	06 28 22.7	-0.1
	baz=170						
BRAL	Brewton	74.41	348	*e*P	P	06 28 23.2	+0.4
	comp=Z,46nm,1.0s						
LPIG	La Paz	74.42	326	LR	LR	06 53 37.9	
	comp=Z,296nm,18.2s,baz=182,slow=30						
446A	Poplarville	74.42	346	P	P	06 28 23.2	+0.3
	baz=168						
349A	Repton	74.61	348	P	P	06 28 24.1	+0.2
	baz=170						
254A	Abbeville	74.70	352	P	P	06 28 23.3	-1.1
	baz=173						
347A	Saraland	74.88	347	P	P	06 28 24.8	-0.7
	baz=169						
253A	Americus	74.90	351	P	P	06 28 24.1	-1.5
	baz=172						
252A	Lumpkin	74.91	350	P	P	06 28 24.2	-1.4
	baz=172						
442A	Mamou	74.94	343	P	P	06 28 25.8	-0.1
	baz=166						
346A	Big Creek Wild	75.02	346	P	P	06 28 26.1	-0.3
	baz=168						
345A	Thompson Farm,	75.05	346	P	P	06 28 26.1	-0.3
	baz=168						
250A	Grady	75.10	349	P	P	06 28 26.1	-0.6
	baz=171						
250A	Grady	75.10	349	*e*P	P	06 28 26.0	-0.7
	comp=Z,84nm,1.9s						
249A	Camden	75.22	348	P	P	06 28 26.8	-0.6
	baz=170						
155A	Kite	75.28	352	P	P	06 28 26.6	-1.1
	baz=174						
344A	Westbrook Farm	75.32	345	P	P	06 28 28.2	+0.2
	baz=167						
154A	Montrose	75.34	352	P	P	06 28 27.0	-1.1
	baz=173						
248A	Dixon Mills	75.43	348	P	P	06 28 28.7	+0.1
	baz=170						
153A	Fort Valley	75.45	351	P	P	06 28 28.0	-0.7
	baz=173						
151A	Opelika	75.51	350	P	P	06 28 28.3	-0.8
	baz=171,SNR=7.0						
247A	Quitman	75.53	347	P	P	06 28 29.3	+0.1
	baz=169						
342A	Flagon Creek P	75.56	344	P	P	06 28 29.5	+0.1
	baz=166						
NHSC	New Hope	75.57	354	P	P	06 28 29.2	-0.2
	baz=175						
152A	Waverly Hall	75.57	351	P	P	06 28 28.5	-0.9
	baz=172						
152A	Waverly Hall	75.57	351	*e*P	P	06 28 28.9	-0.6
	comp=Z,12nm,1.3s						
150A	Eclectic	75.68	349	P	P	06 28 29.7	-0.4
	baz=171						
341A	Kurthwood	75.70	343	P	P	06 28 30.3	+0.1
	baz=166						
341A	Kurthwood	75.70	343	*e*P	P	06 28 30.3	+0.1
	comp=Z,29nm,0.8s						
245A	Little AP, Sta	75.73	346	P	P	06 28 30.4	+0.1
	baz=168						
149A	Jones	75.78	349	P	P	06 28 30.1	-0.5
	baz=170						
Z55A	Blythe	75.84	353	P	P	06 28 30.3	-0.7
	baz=174						
244A	Avery, Jackson	75.88	345	P	P	06 28 31.1	-0.1
	baz=167						
Z54A	Sparta	75.93	352	P	P	06 28 30.6	-0.8
	baz=173						
148A	Greensboro	75.94	348	P	P	06 28 31.2	-0.4
	baz=170						
Z53A	Monticello	76.05	352	P	P	06 28 31.2	-0.9
	baz=173						
Z52A	Williamson	76.05	351	P	P	06 28 31.6	-0.6
	baz=172						

147A	Livingston	76.08	347	P	P	06 28 32.0	-0.3
	baz=169						
147A	Livingston	76.08	347	*e*P	P	06 28 32.0	-0.3
	comp=Z,22nm,1.1s						
GOGA	Godfrey	76.17	352	P	P	06 28 32.0	-0.8
	baz=173						
GOGA	Godfrey	76.17	352	*e*P	P	06 28 32.2	-0.6
	comp=Z,58nm,2.0s						
GOGA	Godfrey	76.17	352	*e*P	P	06 28 32.2	-0.6
GOGA				pmax	pmax		
	comp=Z,58nm,2.0s						
146A	Union	76.17	347	P	P	06 28 32.6	-0.3
	baz=169						
LRAL	Lakeview Retre	76.24	349	P	P	06 28 32.9	-0.3
	baz=170						
LRAL	Lakeview Retre	76.24	349	*e*P	P	06 28 32.9	-0.3
	comp=Z,11nm,0.8s						
145A	Houston Renfro	76.29	346	P	P	06 28 33.8	+0.3
	baz=168						
Z50A	Ashland	76.30	350	P	P	06 28 33.2	-0.4
	baz=171,SNR=11						
Z50A	Ashland	76.30	350	*e*P	P	06 28 33.2	-0.4
	comp=Z,17nm,0.8s						
241A	Mo Tay, Goldon	76.31	343	P	P	06 28 33.8	+0.2
	baz=166						
241A	Mo Tay, Goldon	76.31	343	*e*P	P	06 28 33.6	0.0
	comp=Z,19nm,0.9s						
Z49A	Columbiana	76.33	349	P	P	06 28 33.2	-0.5
	baz=171						
NATX	Nacogdoches	76.44	342	P	P	06 28 34.1	-0.3
	baz=165						
240A	Hunter Patters	76.51	343	P	P	06 28 34.4	-0.3
	baz=165						
Y54A	Tignall	76.53	352	P	P	06 28 34.4	-0.5
	baz=174						
JCT	Junction City	76.55	337	P	P	06 28 35.0	-0.1
	baz=161						
JCT	Junction City	76.55	337	*e*P	P	06 28 34.5	-0.7
	comp=Z,11nm,1.0s						
JCT	Junction City	76.55	337	*e*P	P	06 28 34.5	-0.7
JCT				pmax	pmax		
	comp=Z,11nm,1.0s						
Z47A	Carrollton	76.56	348	P	P	06 28 34.9	-0.1
	baz=169						
Y53A	Monroe	76.62	352	P	P	06 28 34.8	-0.6
	baz=173,SNR=5.0						
Z48A	Northport	76.66	348	P	P	06 28 35.1	-0.4
	baz=170						
143A	Socs Landing,	76.66	345	P	P	06 28 35.2	-0.4
	baz=167						
143A	Socs Landing,	76.66	345	*e*P	P	06 28 35.6	0.0
	comp=Z,40nm,0.9s						
TXAR	Lajitas Array	76.68	333	P	P	06 28 35.8	-0.1
	comp=Z,1.5nm,0.7s,baz=157,slow=8.7,SNR=26						
TXAR				pP	pP	06 28 43.9	0.0
	comp=Z,4.2nm,0.9s,baz=147,slow=4.9,SNR=19						
TXAR				LR	LR	06 56 18.4	
	comp=Z,205nm,21.9s,baz=0.0,slow=31						
Y52A	Lilburn	76.68	351	P	P	06 28 35.2	-0.5
	baz=172,SNR=7.2						
Y52A	Lilburn	76.68	351	*e*P	P	06 28 35.6	-0.1
	comp=Z,17nm,0.9s						
TX31	Lajitas Ar. Si	76.68	333	*e*P	P	06 28 35.9	-0.1
JSC	Jenkinsville	76.82	354	*e*P	P	06 28 35.7	-0.8
	comp=Z,9.7nm,0.9s						
JSC	Jenkinsville	76.82	354	*e*P	P	06 28 35.7	-0.8
JSC				pmax	pmax		
	comp=Z,10.0nm,0.9s						
Y51A	Rockmart	76.83	350	P	P	06 28 36.1	-0.5
	baz=172,SNR=8.1						
141A	Papa Simpson,	76.87	344	P	P	06 28 36.7	-0.1
	baz=166						
Y50A	Piedmont	76.91	350	P	P	06 28 36.5	-0.5
	baz=171						
Y49A	Blount Mountai	76.97	349	P	P	06 28 36.9	-0.5
	baz=171						
Y49A	Blount Mountai	76.97	349	*e*P	P	06 28 36.7	-0.7
	comp=Z,7.8nm,0.9s						
Z45A	Winona	77.00	346	P	P	06 28 37.2	-0.3
	baz=168						
Z44A	Pea Ridge, Bel	77.04	346	P	P	06 28 37.5	-0.3
	baz=168						
140A	Cam and Jess,	77.05	343	P	P	06 28 37.6	-0.1
	baz=165						
Y48A	Jasper	77.13	349	P	P	06 28 37.5	-0.7
	baz=170						
Y47A	UCPARC, Winfie	77.22	348	P	P	06 28 38.1	-0.7
	baz=170						
X53A	Estanollee	77.23	352	P	P	06 28 38.3	-0.5
	baz=173,SNR=11						
WHTX	Lake Whitney,	77.34	340	P	P	06 28 38.6	-0.9
	baz=163						
BOSA	Boshof	77.36	117	P	P	06 28 39.7	-0.4
	comp=Z,31nm,1.0s,baz=216,slow=4.9,SNR=26						
BOSA				pP	pP	06 28 48.2	+0.1
	comp=Z,26nm,0.8s,baz=213,slow=2.9,SNR=11						
BOSA				LR	LR	07 00 22.2	
	comp=Z,242nm,19.4s,baz=212,slow=34						
BOSA	Boshof	77.36	117	*e*P	P	06 28 39.4	-0.8
	comp=Z,79nm,1.3s						
BOSA				pP	pP	06 28 48.2	+0.1
Y46A	Houston	77.36	347	P	P	06 28 38.8	-0.7
	baz=169						
X52A	Dahlonega	77.39	352	P	P	06 28 39.0	-0.8
	baz=173,SNR=6.1						
Y45A	Yeager Farm, C	77.45	347	P	P	06 28 39.6	-0.5
	baz=168						
X50B	Fort Payne	77.46	350	P	P	06 28 39.5	-0.7
	baz=171,SNR=13						
X51A	Calhoun	77.46	351	P	P	06 28 39.8	-0.3
	baz=172,SNR=7.7						
X51A	Calhoun	77.46	351	*e*P	P	06 28 40.2	+0.1
	comp=Z,36nm,1.0s						
Z41A	Richland Creek	77.48	344	P	P	06 28 39.6	-0.6
	baz=166						
X49A	Woodville	77.60	349	P	P	06 28 40.4	-0.5
	baz=171,SNR=14						
X48A	Hartselle	77.64	349	P	P	06 28 40.6	-0.5
	baz=170,SNR=11						
X48A	Hartselle	77.64	349	*e*P	P	06 28 40.6	-0.5
	comp=Z,14nm,0.8s						
Y44A	Strider, Charl	77.67	346	P	P	06 28 40.4	-0.9
	baz=168						
BG3	Lake Jocassee	77.68	352	*e*P	P	06 28 41.0	-0.3
	comp=Z,12nm,0.9s						
KMSC	Kings Mountain	77.68	354	P	P	06 28 40.5	-0.9
	baz=174						
KMSC	Kings Mountain	77.68	354	*e*P	P	06 28 40.4	-1.0
	comp=Z,12nm,0.7s						
Y43A	Makayla and Ka	77.75	346	P	P	06 28 41.0	-0.7
	baz=167						
X47A	Russelville	77.82	348	P	P	06 28 41.1	-1.0
	baz=170,SNR=6.9						
W53A	Cullowhee	77.87	352	P	P	06 28 41.6	-0.9
	baz=173						
W52A	Murphy	77.88	352	P	P	06 28 41.5	-0.9
	baz=173						
W52A	Murphy	77.88	352	*e*P	P	06 28 41.9	-0.6
	comp=Z,9.1nm,1.0s						
X45A	UM Field Stati	77.97	347	P	P	06 28 41.8	-1.1
	baz=168						
Y41A	Eaglette Beard	78.04	344	P	P	06 28 42.9	-0.4
	baz=166						
OXF	Oxford	78.06	347	P	P	06 28 42.1	-1.4
	baz=168						
OXF	Oxford	78.06	347	*e*P	P	06 28 43.2	-0.2
	comp=Z,18nm,0.8s						
OXF	Oxford	78.06	347	*e*P	P	06 28 43.2	-0.2
OXF				pmax	pmax		
	comp=Z,18nm,0.8s						
W50A	Signal Mountai	78.14	350	P	P	06 28 43.3	-0.7
	baz=172,SNR=7.2						
W50A	Signal Mountai	78.14	350	*e*P	P	06 28 43.6	-0.3
	comp=Z,12nm,0.9s						
X44A	Crenshaw	78.18	346	P	P	06 28 42.8	-1.3
	baz=168						
W49A	Belvidere	78.19	350	P	P	06 28 43.4	-0.7
	baz=171,SNR=6.0						
SWET	Sewanee	78.24	350	*e*P	P	06 28 43.9	-0.6
	comp=Z,14nm,0.8s						
TSUM	Tsumeb	78.27	105	*e*P	P	06 28 44.5	-0.8
	comp=Z,86nm,2.0s						
CPCT	Cooper Cave	78.30	351	*e*P	P	06 28 44.1	-0.7
	comp=Z,10nm,0.8s						
W48A	Pulaski	78.30	349	P	P	06 28 44.1	-0.7
	baz=170,SNR=6.5						
Y40A	Okolona	78.31	344	P	P	06 28 43.9	-0.9
	baz=166						
PLAL	Pickwick Lake	78.31	348	*e*P	P	06 28 44.0	-0.8
	comp=Z,9.7nm,1.0s						
V53A	Saluda	78.33	353	P	P	06 28 44.0	-1.0
	baz=173						
W47A	Westpoint	78.50	349	P	P	06 28 45.0	-0.9
	baz=170,SNR=10						
W46A	Michie	78.50	348	P	P	06 28 44.4	-1.5
	baz=169						
ABTX	Abilene, Hawle	78.53	338	P	P	06 28 45.5	-0.6
	baz=161						
ABTX	Abilene, Hawle	78.53	338	*e*P	P	06 28 45.2	-0.9
	comp=Z,7.7nm,1.0s						
V50A	Pikevile	78.58	351	P	P	06 28 45.3	-1.0
	baz=172,SNR=5.8						
V52A	Sevierville	78.58	352	P	P	06 28 45.0	-1.3
	baz=173						
V52A	Sevierville	78.58	352	*e*P	P	06 28 45.2	-1.1
	comp=Z,7.8nm,1.0s						
X41A	Kaden, Bauxite	78.62	344	P	P	06 28 45.4	-1.1
	baz=166						
V51A	Loudon	78.63	351	P	P	06 28 45.5	-1.1
	baz=172						
V51A	Loudon	78.63	351	*e*P	P	06 28 45.5	-1.1
	comp=Z,6.6nm,0.8s						
W45A	Hickory Valley	78.66	347	P	P	06 28 45.8	-0.9
	baz=169						
V49A	McMinnville	78.78	350	P	P	06 28 46.3	-1.1
	baz=171,SNR=8.3						
V48A	Smith Brothers	78.87	349	P	P	06 28 47.0	-0.9
	baz=170						
V48A	Smith Brothers	78.87	349	*e*P	P	06 28 47.1	-0.9
	comp=Z,17nm,0.9s						
MIAR	Mount Ida	78.88	343	P	P	06 28 47.2	-0.8
	baz=166						
MIAR	Mount Ida	78.88	343	*e*P	P	06 28 46.9	-1.1
	comp=Z,6.6nm,1.0s						
MIAR	Mount Ida	78.88	343	*e*P	P	06 28 46.9	-1.1
MIAR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
LIC	Lamto	78.88	71	*e*P	P	06 28 48.4	-0.1
	comp=Z,199nm,1.0s						
X39A	Fountain Ranch	78.96	343	P	P	06 28 47.9	-0.5
	baz=165						
U53A	Fall Branch	79.00	353	P	P	06 28 47.3	-1.3
	baz=174						
V47A	Nunnelly	79.06	349	P	P	06 28 47.7	-1.2
	baz=170,SNR=17						
V46A	Holladay	79.12	348	P	P	06 28 48.0	-1.3
	baz=170,SNR=14						
KIC	Kosan Boka	79.18	71	*e*P	P	06 28 50.1	-0.1
	comp=Z,115nm,1.1s						
W42A	Bald Knob	79.18	345	P	P	06 28 48.3	-1.3
	baz=167						
TIC	Toumodi	79.19	71	*e*P	P	06 28 50.2	0.0
V45A	Humboldt	79.19	348	P	P	06 28 48.4	-1.2
	baz=169						
W41B	Gary Mavity, V	79.22	345	P	P	06 28 49.0	-0.8
	baz=166						
W41B	Gary Mavity, V	79.22	345	*e*P	P	06 28 49.1	-0.7
	comp=Z,6.3nm,0.9s						
TZTN	Tazewell	79.27	352	P	P	06 28 49.0	-1.1
	baz=173						
TZTN	Tazewell	79.27	352	*e*P	P	06 28 49.5	-0.6
DBIC	Dimbokro	79.32	71	P	P	06 28 51.3	+0.4
	comp=Z,40nm,0.8s,baz=202,slow=6.0,SNR=23						
DBIC				LR	LR	07 02 14.4	
	comp=Z,249nm,18.1s,baz=208,slow=34						
DBIC	Dimbokro	79.32	71	*e*P	P	06 28 50.2	-0.7
	comp=Z,55nm,0.9s						
DBIC	Dimbokro	79.32	71	*e*P	P	06 28 50.2	-0.7
DBIC				pmax	pmax		
	comp=Z,55nm,0.9s						
WHAR	Wooly Hollow	79.34	345	*e*P	P	06 28 49.7	-0.8
	comp=Z,16nm,1.2s						
WVT	Waverly	79.40	349	P	P	06 28 49.7	-1.1
	baz=170						
WVT	Waverly	79.40	349	*e*P	P	06 28 49.7	-1.1
	comp=Z,23nm,1.3s						
WVT	Waverly	79.40	349	*e*P	P	06 28 49.7	-1.1
WVT				pmax	pmax		
	comp=Z,23nm,1.3s						
W40A	Ferguson Farm,	79.40	344	P	P	06 28 50.1	-0.7
	baz=166						
MNTX	Cornudas Mount	79.42	333	P	P	06 28 49.8	-1.3
	baz=157						
MNTX	Cornudas Mount	79.42	333	*e*P	P	06 28 50.0	-1.0
	comp=Z,4.4nm,1.2s						
U49A	Red Boiling Sp	79.50	350	P	P	06 28 50.1	-1.2
	baz=171						
W39A	Magazine	79.55	343	P	P	06 28 51.2	-0.4
	baz=165						
W39A	Magazine	79.55	343	*e*P	P	06 28 51.4	-0.3
	comp=Z,39nm,1.7s						
U48A	Cassie Pea, Po	79.59	350	P	P	06 28 50.7	-1.1
	baz=171						
U47A	Clarksville	79.63	349	P	P	06 28 50.7	-1.3
	baz=170,SNR=7.7						
BLA	Blacksburg	79.67	355	P	P	06 28 51.4	-0.9
	baz=175						
V42A	Cord	79.67	346	P	P	06 28 50.7	-1.5
	baz=167						
U46A	Springville	79.68	348	P	P	06 28 51.2	-1.1
	baz=170						
U45A	Rockin P Farm,	79.75	348	P	P	06 28 51.8	-0.8
	baz=169						
V41A	Mountainview	79.80	345	P	P	06 28 51.9	-1.0
	baz=167						
U44B	Burton Farm, H	79.84	347	P	P	06 28 52.6	-0.6
	baz=169						
T50A	Nancy	79.89	351	P	P	06 28 52.0	-1.4
	baz=172						
V40A	Witts Springs	79.94	344	P	P	06 28 52.6	-1.2
	baz=166						
LBTB	Lobatse	79.98	115	*e*P	P	06 28 53.7	-0.9
	comp=Z,49nm,0.9s						
LBTB	Lobatse	79.98	115	*e*P	P	06 28 53.7	-0.9
LBTB				pmax	pmax		
	comp=Z,49nm,0.9s						
U43A	Rector	80.05	346	P	P	06 28 53.3	-1.0
	baz=168						
T49A	Edmonton	80.05	351	P	P	06 28 53.1	-1.2
	baz=171,SNR=8.2						
U44A	Portageville	80.06	347	P	P	06 28 53.3	-1.0
	baz=168						
T47A	Sharon Grove	80.14	349	P	P	06 28 53.4	-1.3
	baz=170,SNR=5.5						
T47A	Sharon Grove	80.14	349	*e*P	P	06 28 53.5	-1.3
	comp=Z,13nm,0.9s						
V39A	Pettigrew	80.14	344	P	P	06 28 54.1	-0.8
	baz=166						
U42A	Revenden	80.17	346	P	P	06 28 54.1	-0.9
	baz=167,SNR=5.8						
IP07	Quail	80.24	357	*e*P	P	06 28 55.0	-0.2
	comp=Z,9.5nm,0.8s						
IP06	Yanceyville	80.25	357	*e*P	P	06 28 55.1	-0.2
	comp=Z,18nm,1.4s						
IP01	Cuckoo	80.27	357	*e*P	P	06 28 55.5	0.0
	comp=Z,11nm,1.0s						
WMOK	Wichita Mounta	80.29	339	P	P	06 28 54.6	-1.1
	baz=162						
WMOK	Wichita Mounta	80.29	339	*e*P	P	06 28 54.3	-1.4
	comp=Z,7.6nm,1.0s						
WMOK	Wichita Mounta	80.29	339	*e*P	P	06 28 54.3	-1.4
WMOK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
U41A	Viola	80.29	345	P	P	06 28 54.4	-1.2
	baz=167						
T46A	Princeton	80.30	349	P	P	06 28 54.4	-1.2
	baz=170						
IP03	Louisa	80.34	357	*e*P	P	06 28 55.6	-0.2
	comp=Z,15nm,1.0s						
S52A	Salyersville	80.35	353	P	P	06 28 55.0	-0.9
	baz=173						
S51A	Beattyville	80.36	352	P	P	06 28 55.2	-0.7
	baz=173						
T45A	Paducah	80.39	348	P	P	06 28 54.9	-1.2
	baz=169						
IP04	Greensprings	80.42	357	*e*P	P	06 28 56.2	0.0
	comp=Z,15nm,0.9s						
PBMO	Poplar Bluff	80.45	347	*e*P	P	06 28 55.1	-1.3
	comp=Z,16nm,1.0s						
U40A	Yellville	80.48	345	P	P	06 28 55.7	-1.0
	baz=166,SNR=5.4						
CBN	Corbin Frederi	80.50	357	P	P	06 28 55.1	-1.5
	baz=178						
T44A	Benton	80.61	347	P	P	06 28 56.2	-1.0
	baz=168						
HHAR	Hobbs	80.63	344	*e*P	P	06 28 56.4	-1.1
	comp=Z,7.4nm,0.9s						
U39A	Green Forest	80.64	344	P	P	06 28 56.6	-0.9
	baz=166,SNR=7.1						
S48A	Wiedeman Farm,	80.66	350	P	P	06 28 55.7	-1.9
	baz=171						
TUL1	Leonard	80.68	342	P	P	06 28 56.9	-0.8
	baz=164						
TUL1	Leonard	80.68	342	*e*P	P	06 28 56.9	-0.8
	comp=Z,18nm,0.8s						
MSTX	Muleshoe	80.69	336	P	P	06 28 57.3	-0.6
	baz=159						
MSTX	Muleshoe	80.69	336	*e*P	P	06 28 57.0	-0.9
	comp=Z,8.6nm,0.8s						
T43A	Greenville	80.72	347	P	P	06 28 56.8	-1.1
	baz=168,SNR=7.7						
T42A	Van Buren	80.81	346	P	P	06 28 57.3	-1.1
	baz=167,SNR=9.0						
T42A	Van Buren	80.81	346	*e*P	P	06 28 57.0	-1.3
	comp=Z,9.8nm,0.9s						
S46A	Don Dixon Farm	80.91	349	P	P	06 28 57.3	-1.6
	baz=170						
T41A	Mountain View	80.94	346	P	P	06 28 58.1	-1.0
	baz=167,SNR=6.5						
S44A	Carbondale	81.15	348	P	P	06 28 59.2	-1.0
	baz=169						
S43A	Fulton Ridge,	81.16	347	P	P	06 28 59.1	-1.1
	baz=168,SNR=16						
SIUC	Southern Illin	81.16	348	*e*P	P	06 28 59.1	-1.1
	comp=Z,14nm,0.8s						
USIN	University of	81.18	349	*e*P	P	06 28 58.6	-1.7
	comp=Z,21nm,0.8s						
T40A	Mansfield	81.19	345	P	P	06 28 59.4	-1.0
	baz=166						
AMTX	Amarillo	81.22	337	P	P	06 29 00.4	-0.4
	baz=160						
AMTX	Amarillo	81.22	337	*e*P	P	06 29 00.5	-0.3
	comp=Z,19nm,1.1s						
T39A	Clever	81.23	344	P	P	06 28 59.9	-0.8
	baz=166						
WCI	Wyandotte Cave	81.25	350	P	P	06 28 59.1	-1.6
	baz=171						
R47A	Wooly Knot Far	81.35	350	P	P	06 28 59.2	-2.0
	baz=171						
R48A	Northridge Ran	81.37	350	P	P	06 28 59.9	-1.4
	baz=171						
R46A	Gibon Southern	81.40	349	P	P	06 28 59.5	-2.0
	baz=170						
T38A	Diamond	81.43	344	P	P	06 29 00.9	-0.8
	baz=165						
S41A	Jillco Farms,	81.47	346	P	P	06 29 01.2	-0.7
	baz=167,SNR=14						
S42A	Caledonia	81.48	346	P	P	06 29 00.6	-1.3
	baz=168,SNR=6.2						
S40A	Lebanon	81.62	345	P	P	06 29 01.9	-0.8
	baz=166,SNR=6.6						
FVM	French Village	81.62	347	*e*P	P	06 29 02.5	-0.2
	comp=Z,68nm,1.8s						
FVM	French Village	81.62	347	*e*P	P	06 29 02.5	-0.2
FVM				pmax	pmax		
	comp=Z,69nm,1.8s						
R44A	Waltonville	81.66	348	P	P	06 29 01.4	-1.5
	baz=169						
R43A	Red Bud	81.83	347	P	P	06 29 02.8	-0.9
	baz=168,SNR=6.9						
CCM	Cathedral Cave	81.83	346	P	P	06 29 04.0	+0.2
	baz=167						
CCM	Cathedral Cave	81.83	346	*e*P	P	06 29 03.7	-0.1
	comp=Z,28nm,0.8s						
CCM	Cathedral Cave	81.83	346	*e*P	P	06 29 03.7	-0.1
CCM				pmax	pmax		
	comp=Z,28nm,0.8s						
S39A	Bolivar	81.87	344	P	P	06 29 03.1	-0.9
	baz=166,SNR=14						
S39A	Bolivar	81.87	344	*e*P	P	06 29 03.1	-0.9
	comp=Z,12nm,0.8s						
TUC	Tucson	81.91	329	*e*P	P	06 29 04.0	-0.4
TUC	Tucson	81.91	329	*e*P	P	06 29 04.0	-0.4
S38A	Stockton	81.93	344	P	P	06 29 03.3	-0.9
	baz=165,SNR=14						
Q47A	Bedord North L	81.97	350	P	P	06 29 02.7	-1.8
	baz=171						
R42A	Luebbering	81.97	347	P	P	06 29 03.3	-1.2
	baz=168						
OLIL	Olney	81.99	349	*e*P	P	06 29 03.1	-1.4
	comp=Z,10nm,0.9s						
MCWV	Mont Chateau	82.07	355	P	P	06 29 03.0	-2.0
	baz=176						
R41A	Rosebud	82.09	346	P	P	06 29 04.3	-0.8
	baz=167,SNR=11						
Q45A	Warren Harvey,	82.16	349	P	P	06 29 04.0	-1.4
	baz=170,SNR=6.6						
BLO	Bloomington	82.21	350	*e*P	P	06 29 04.2	-1.5
	comp=Z,14nm,0.8s						
BLO	Bloomington	82.21	350	*e*P	P	06 29 04.2	-1.5
BLO				pmax	pmax		
	comp=Z,14nm,0.8s						
LENM	Lemitar	82.21	333	*e*P	P	06 29 06.7	+0.6
SLM	Saint Louis	82.23	347	*e*P	P	06 29 05.1	-0.7
	comp=Z,18nm,0.9s						
SLM	Saint Louis	82.23	347	*e*P	P	06 29 05.1	-0.7
SLM				pmax	pmax		
	comp=Z,18nm,0.9s						
R40A	Maddies Statio	82.25	345	P	P	06 29 05.0	-1.0
	baz=167,SNR=5.9						
R40A	Maddies Statio	82.25	345	*e*P	P	06 29 05.0	-1.0
	comp=Z,21nm,1.4s						
MVL	Millersville	82.26	358	*e*P	P	06 29 06.2	+0.3
	comp=Z,7.7nm,0.9s						
Q44A	Meyer Farm, Va	82.30	348	P	P	06 29 04.8	-1.4
	baz=169						
P50A	Jamestown	82.33	352	P	P	06 29 05.4	-1.0
	baz=173						
214A	Organ Pipe Nat	82.38	327	P	P	06 29 07.5	+0.6
	baz=152						
R39A	Chumby, Stover	82.42	345	P	P	06 29 06.0	-0.8
	baz=166,SNR=14						
Q43A	New Douglas	82.44	348	P	P	06 29 05.9	-1.0
	baz=168,SNR=6.2						
R38A	Fenwick Farm,	82.46	344	P	P	06 29 05.9	-1.2
	baz=165						
LAZ	Ladron	82.48	333	*e*P	P	06 29 07.9	+0.4
P47A	Martinsville	82.49	350	P	P	06 29 05.7	-1.5
	baz=171						
Q42A	Golden Eagle	82.55	347	P	P	06 29 06.4	-1.0
	baz=168						
Q41A	Truxton	82.71	346	P	P	06 29 07.5	-0.8
	baz=167,SNR=5.4						
P45A	Graceland, Par	82.72	349	P	P	06 29 06.7	-1.7
	baz=170						
P45A	Graceland, Par	82.72	349	*e*P	P	06 29 06.9	-1.5
	comp=Z,12nm,0.9s						
P46A	Rosedale	82.74	350	P	P	06 29 06.7	-1.7
	baz=170						
TASL	Snake Pit, Alb	82.75	333	P	P	06 29 09.2	+0.3
	baz=157,SNR=8.6						
ANMO	Albuquerque	82.75	333	P	P	06 29 09.3	+0.4
	comp=Z,3.8nm,0.8s,baz=144,slow=10,SNR=18						
ANMO				LR	LR	07 01 50.5	
	comp=Z,123nm,18.1s,baz=158,slow=33						
ANMO	Albuquerque	82.75	333	P	P	06 29 09.4	+0.4
	baz=157						
ANMO	Albuquerque	82.75	333	*e*P	P	06 29 09.1	+0.1
	comp=Z,9.7nm,1.0s						
ANMO	Albuquerque	82.75	333	*ce*P	P	06 29 09.3	+0.4
ANMO				pmax	pmax		
	comp=Z,19nm,2.5s						
TASM	ASL Pad, Albuq	82.75	333	P	P	06 29 09.2	+0.3
	baz=157,SNR=8.5						
P44A	Sand Creek, Wi	82.79	349	P	P	06 29 07.5	-1.2
	baz=169						
O50A	Cable	82.85	352	P	P	06 29 07.8	-1.3
	baz=173						
ACSO	Alum Creek Sta	82.87	353	P	P	06 29 08.1	-1.1
	baz=173						
ACSO	Alum Creek Sta	82.87	353	*e*P	P	06 29 08.1	-1.1
	comp=Z,14nm,0.9s						
Q40A	Laux Farm, Aux	82.90	346	P	P	06 29 08.6	-0.7
	baz=167,SNR=12						
SSPA	Standing Stone	82.94	357	P	P	06 29 08.8	-0.7
	baz=177						
SSPA	Standing Stone	82.94	357	*e*P	P	06 29 09.5	0.0
	comp=Z,11nm,1.1s						
P43A	Skaggs, Pawnee	83.10	348	P	P	06 29 09.2	-1.1
	baz=169						
Q39A	Willow Grove F	83.11	345	P	P	06 29 09.5	-0.9
	baz=166						
Q38A	Cooks Store, C	83.16	345	P	P	06 29 09.9	-0.8
	baz=166,SNR=7.2						

N59A	State Game Lan	83.16	359	P	P	06 29 10.6	0.0
	baz=179						
N59A	State Game Lan	83.16	359	*e*P	P	06 29 10.2	-0.5
	comp=Z,22nm,1.4s						
P42A	Winchester	83.17	347	P	P	06 29 09.6	-1.2
	baz=168						
P42A	Winchester	83.17	347	*e*P	P	06 29 09.5	-1.2
	comp=Z,7.6nm,0.8s						
O47A	Sheridan	83.22	351	P	P	06 29 09.2	-1.7
	baz=171						
PAL	Palisades	83.23	360	P	P	06 29 10.4	-0.6
	baz=180						
Q37A	Longview Farm,	83.24	344	P	P	06 29 10.0	-1.1
	baz=165						
N54A	Moraine State	83.37	355	P	P	06 29 11.1	-0.7
	baz=176						
P41A	Barry, Barry	83.38	347	P	P	06 29 10.7	-1.0
	baz=168						
P40A	Paris	83.41	346	P	P	06 29 11.3	-0.7
	baz=167,SNR=12						
P40A	Paris	83.41	346	*e*P	P	06 29 11.4	-0.5
	comp=Z,23nm,0.8s						
N50A	Nevada	83.42	353	P	P	06 29 11.0	-1.0
	baz=173						
O45A	Potomac	83.43	349	P	P	06 29 10.5	-1.5
	baz=170						
O44A	Mansfield	83.44	349	P	P	06 29 10.8	-1.3
	baz=169						
SFIN	Lafayette	83.47	350	P	P	06 29 10.4	-1.8
	baz=170						
SFIN	Lafayette	83.47	350	*e*P	P	06 29 09.8	-2.4
	comp=Z,7.1nm,1.0s						
113A	Mohawk Valley,	83.48	327	*e*P	P	06 29 11.2	-1.2
	comp=Z,4.4nm,1.0s						
P39B	Salisbury	83.50	345	P	P	06 29 11.3	-1.0
	baz=166						
X18A	Snowflake	83.58	331	*e*P	P	06 29 13.1	-0.1
	comp=Z,4.2nm,0.9s						
O43A	Sugar Creek Fa	83.69	348	P	P	06 29 12.3	-1.1
	baz=169						
O41A	Passleys Farm,	83.78	347	P	P	06 29 12.5	-1.3
	baz=168						
P38A	Dawn	83.78	345	P	P	06 29 12.9	-0.9
	baz=166,SNR=8.9						
P38A	Dawn	83.78	345	*e*P	P	06 29 12.8	-1.0
	comp=Z,20nm,0.8s						
M54A	Oil Creek Stat	83.90	356	P	P	06 29 13.4	-1.0
	baz=176						
M54A	Oil Creek Stat	83.90	356	*e*P	P	06 29 13.3	-1.1
	comp=Z,19nm,1.3s						
P37A	Lathrop	83.91	344	P	P	06 29 13.1	-1.4
	baz=165						
KSU1	Kansas State U	83.92	342	P	P	06 29 13.6	-0.9
	baz=164						
KSU1	Kansas State U	83.92	342	*e*P	P	06 29 13.5	-1.1
	comp=Z,8.3nm,0.8s						
N46A	Monticello	83.94	350	P	P	06 29 12.7	-1.9
	baz=171						
O40A	La Belle	83.95	346	P	P	06 29 13.6	-1.1
	baz=167						
HDIL	Hopedale	83.96	348	P	P	06 29 13.6	-1.1
	baz=169						
HDIL	Hopedale	83.96	348	*e*P	P	06 29 13.8	-0.9
	comp=Z,18nm,0.8s						
N45A	Kentland	83.99	350	P	P	06 29 13.5	-1.4
	baz=170						
N44A	Piper City	84.02	349	P	P	06 29 13.7	-1.3
	baz=170						
X16A	Lo Mia Camp, P	84.03	330	*e*P	P	06 29 15.4	-0.1
	comp=Z,5.0nm,1.0s						
ALLY	Alegheny Colle	84.07	355	*e*P	P	06 29 14.5	-0.8
	comp=Z,20nm,1.0s						
T25A	Trinidad	84.12	336	P	P	06 29 16.2	+0.3
	baz=158,SNR=5.7						
T25A	Trinidad	84.12	336	*e*P	P	06 29 15.9	0.0
	comp=Z,12nm,1.0s						
O39A	Kirksville	84.20	346	P	P	06 29 15.2	-0.8
	baz=166						
Y14A	Wickenburg	84.21	328	*e*P	P	06 29 16.1	-0.1
	comp=Z,5.5nm,1.0s						
O38A	Galt	84.25	345	P	P	06 29 15.2	-1.0
	baz=166						
N43A	Stutzman Famil	84.31	348	P	P	06 29 15.4	-1.1
	baz=169						
N41A	Harden Midland	84.35	347	P	P	06 29 15.3	-1.4
	baz=168						
N41A	Harden Midland	84.35	347	*e*P	P	06 29 15.6	-1.1
	comp=Z,12nm,1.0s						
CBKS	Cedar Bluff	84.39	340	P	P	06 29 16.5	-0.5
	baz=161						
O37A	Wolven Farm, M	84.42	344	P	P	06 29 16.0	-1.1
	baz=165						
BINY	Binghamton	84.44	358	P	P	06 29 16.8	-0.4
	baz=178						
ERPA	Erie	84.52	355	P	P	06 29 16.5	-1.0
	baz=176						
M44A	Midewin, Midew	84.59	349	P	P	06 29 16.6	-1.3
	baz=170						
M44A	Midewin, Midew	84.59	349	*e*P	P	06 29 17.0	-0.9
	comp=Z,78nm,1.9s						
Y12C	Blythe	84.64	327	*e*P	P	06 29 19.2	+0.9
	comp=Z,9.7nm,0.9s						
N40A	Mertquake, Sal	84.65	347	P	P	06 29 17.1	-1.1
	baz=167						
M43A	Waltham Townsh	84.77	349	P	P	06 29 17.3	-1.5
	baz=169						
N39A	Derby Farms, D	84.80	346	P	P	06 29 18.2	-0.8
	baz=166,SNR=12						
N39A	Derby Farms, D	84.80	346	*e*P	P	06 29 18.1	-0.9
	comp=Z,30nm,0.9s						
N38A	Joes South For	84.85	345	P	P	06 29 18.3	-0.9
	baz=166						
M42A	Sheffield	84.91	348	P	P	06 29 18.0	-1.4
	baz=168						
BC3	Big Chuckawall	84.94	326	P	P	06 29 20.0	0.0
	baz=151						
M41A	Milan	84.95	347	P	P	06 29 18.2	-1.5
	baz=168						
WUAZ	Wupatki	84.99	330	*e*P	P	06 29 20.1	-0.2
	comp=Z,12nm,1.4s						
N37A	Lee Faris, Mou	85.01	345	P	P	06 29 19.0	-1.1
	baz=165						
N37A	Lee Faris, Mou	85.01	345	*e*P	P	06 29 19.1	-0.9
	comp=Z,14nm,1.0s						
SDCO	Great Sand Dun	85.02	335	P	P	06 29 20.1	-0.5
	baz=157						
SDCO	Great Sand Dun	85.02	335	*e*P	P	06 29 19.4	-1.1
	comp=Z,4.0nm,1.0s						
MMNY	Mt. Morris Dam	85.03	357	*e*P	P	06 29 19.5	-0.6
	comp=Z,16nm,1.0s						
M40A	Post Highland	85.14	347	P	P	06 29 19.3	-1.4
	baz=167						
N36A	Muff Farm, Cla	85.21	344	P	P	06 29 19.9	-1.2
	baz=165						
IRM	Iron Mountain	85.25	327	P	P	06 29 21.7	+0.2
	baz=151						
XPFO	Piæon Flat	85.31	325	*e*P	P	06 29 20.4	-1.5
	comp=Z,5.3nm,0.9s						
PFO	Pinyon Flats O	85.32	325	P	P	06 29 22.0	0.0
	baz=150						
PFO	Pinyon Flats O	85.32	325	*e*P	P	06 29 20.7	-1.2
	comp=Z,6.3nm,0.9s						
PFO	Pinyon Flats O	85.32	325	*e*P	P	06 29 20.7	-1.2
PFO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
M39A	Webster	85.33	346	P	P	06 29 20.6	-1.0
	baz=167,SNR=5.7						
L42A	Oliver, Polo	85.43	348	P	P	06 29 21.0	-1.1
	baz=168						
S22A	4UR Ranch, Cre	85.43	334	P	P	06 29 22.7	+0.1
	baz=156,SNR=7.8						
S22A	4UR Ranch, Cre	85.43	334	*e*P	P	06 29 22.4	-0.3
	comp=Z,9.3nm,0.9s						
M38A	Pleasantville	85.45	346	P	P	06 29 21.4	-0.8
	baz=166,SNR=7.2						
BELC	Belle Mtn. Jos	85.46	326	P	P	06 29 22.6	-0.1
	baz=150						
MVCO	Mesa Verde	85.49	333	P	P	06 29 22.9	0.0
	baz=155						
MVCO	Mesa Verde	85.49	333	*e*P	P	06 29 21.3	-1.6
	comp=Z,5.0nm,0.9s						
W13A	Hualapai Mount	85.57	328	*e*P	P	06 29 23.4	+0.2
	comp=Z,5.5nm,1.0s						
M37A	Trindle Farm,	85.60	345	P	P	06 29 22.3	-0.7
	baz=165						
L41A	Preston	85.63	348	P	P	06 29 21.8	-1.3
	baz=168						
L40A	Anamosa	85.73	347	P	P	06 29 22.4	-1.2
	baz=167,SNR=5.4						
L40A	Anamosa	85.73	347	*e*P	P	06 29 22.4	-1.2
	comp=Z,13nm,1.0s						
M36A	Felix, Anita	85.79	344	P	P	06 29 22.7	-1.3
	baz=165						
L39A	Vinton	85.92	347	P	P	06 29 23.4	-1.2
	baz=167,SNR=7.9						
K43A	Burlington	85.92	349	P	P	06 29 23.4	-1.2
	baz=170						
SCIA	State Center	85.93	346	P	P	06 29 23.6	-1.0
	baz=166						
SCIA	State Center	85.93	346	*e*P	P	06 29 24.1	-0.5
	comp=Z,17nm,0.4s						
CIS	Catalina Islan	85.97	324	P	P	06 29 24.6	-0.4
	baz=149						
GMRC	Granite Mounta	86.00	327	P	P	06 29 25.1	-0.2
	baz=151						
Q24A	Divide	86.03	336	P	P	06 29 25.2	-0.3
	baz=158						
Q24A	Divide	86.03	336	*e*P	P	06 29 25.3	-0.3
	comp=Z,9.7nm,0.8s						
L38A	Oak Wood Farm,	86.11	346	P	P	06 29 24.5	-1.0
	baz=166						
K41A	Shullsburg	86.12	348	P	P	06 29 24.4	-1.1
	baz=168						
U15A	North Rim	86.13	330	*e*P	P	06 29 26.4	+0.2
	comp=Z,7.1nm,1.0s						
K42A	Prairie Point,	86.14	349	P	P	06 29 24.6	-1.0
	baz=169,SNR=5.8						
L37A	Phoenix Point,	86.24	345	P	P	06 29 25.1	-1.0
	baz=166						
K40A	Colesburg	86.34	347	P	P	06 29 25.5	-1.1
	baz=168,SNR=6.7						
PV01	Paradox Valley	86.35	333	*e*P	P	06 29 27.1	0.0
	comp=Z,5.8nm,1.0s						
BFSC	Mount Baldy Ra	86.36	325	P	P	06 29 25.7	-1.4
	baz=149						
L36A	Harm Buss Farm	86.39	345	P	P	06 29 25.8	-1.0
	baz=165						
JFWS	Jewell Farm	86.41	348	P	P	06 29 26.1	-0.8
	baz=168						
JFWS	Jewell Farm	86.41	348	*e*P	P	06 29 26.0	-0.9
	comp=Z,14nm,1.0s						
JFWS	Jewell Farm	86.41	348	*e*P	P	06 29 26.0	-0.9
JFWS				pmax	pmax		
	comp=Z,14nm,1.0s						
AFI	Afiamalu	86.45	254	LR	LR	07 00 46.9	
	comp=Z,308nm,18.4s,baz=114,slow=30						
BGNE	Belgrade	86.47	342	P	P	06 29 26.5	-0.8
	baz=162						
BGNE	Belgrade	86.47	342	*e*P	P	06 29 27.0	-0.3
	comp=Z,25nm,1.0s						
K39A	Oelwein	86.47	347	P	P	06 29 26.0	-1.3
	baz=167,SNR=5.7						
LBNH	Lisbon	86.48	1	P	P	06 29 26.7	-0.5
	baz=182						
PV03	Paradox Valley	86.55	333	*e*P	P	06 29 27.1	-1.0
	comp=Z,5.7nm,1.1s						
K38A	Parkersburg	86.57	346	P	P	06 29 26.4	-1.3
	baz=166						
J43A	Natural Harves	86.60	349	P	P	06 29 26.7	-1.1
	baz=169						
J42A	Columbus	86.64	349	P	P	06 29 27.0	-1.1
	baz=169						
PV04	Paradox Valley	86.70	333	*e*P	P	06 29 28.4	-0.3
	comp=Z,14nm,1.3s						
SMCO	Snowmass	86.79	335	*e*P	P	06 29 29.0	-0.4
	comp=Z,9.9nm,1.1s						
J41A	Loganville	86.81	348	P	P	06 29 28.0	-1.0
	baz=168,SNR=5.7						
K37A	Belmond	86.84	346	P	P	06 29 27.9	-1.1
	baz=166,SNR=5.1						
LONY	Lake Ozonia	86.84	359	P	P	06 29 28.6	-0.4
	baz=180,SNR=5.7						
LONY	Lake Ozonia	86.84	359	*e*P	P	06 29 28.4	-0.6
	comp=Z,43nm,2.0s						
KNB	Kanab	86.85	330	*e*P	P	06 29 29.9	+0.4
	comp=Z,13nm,1.0s						
K36A	Gilmore City	86.87	345	P	P	06 29 28.7	-0.5
	baz=165,SNR=8.6						
PV09	Paradox Valley	86.87	333	*e*P	P	06 29 29.6	-0.2
GSC	Goldstone, Bar	86.92	326	P	P	06 29 29.4	-0.3
	baz=150						
GSC	Goldstone, Bar	86.92	326	*e*P	P	06 29 30.2	+0.5
	comp=Z,3.7nm,0.9s						
ISCO	Idaho Springs	86.94	336	P	P	06 29 29.7	-0.3
	baz=157						
ISCO	Idaho Springs	86.94	336	*e*P	P	06 29 29.7	-0.3
	comp=Z,3.7nm,1.0s						
ISCO	Idaho Springs	86.94	336	*e*P	P	06 29 29.7	-0.3
ISCO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
J40A	Soldiers Grove	86.96	348	P	P	06 29 28.7	-1.0
	baz=168,SNR=9.9						
LCMT	Little Creek M	87.01	329	*e*P	P	06 29 29.8	-0.4
	comp=Z,11nm,1.8s						
J39A	Decorah	87.05	347	P	P	06 29 29.0	-1.1
	baz=167,SNR=10						
EDW2	Edwards Air Fo	87.05	325	P	P	06 29 30.4	0.0
	baz=149						
I43A	Langenfeld Bro	87.06	350	P	P	06 29 29.0	-1.1
	baz=170						
J38A	Wedel Dairy, R	87.17	346	P	P	06 29 29.4	-1.2
	baz=166,SNR=6.6						
I42A	Draeger Farm,	87.17	349	P	P	06 29 29.7	-0.9
	baz=169,SNR=5.0						
I42A	Draeger Farm,	87.17	349	*e*P	P	06 29 29.7	-0.9
	comp=Z,6.9nm,0.8s						
SHPR	Sheep Range	87.30	328	*e*P	P	06 29 31.1	-0.5
	comp=Z,4.6nm,0.9s						
PLVO	Plevna	87.31	358	*e*P	P	06 29 30.7	-0.6
	comp=Z,9.8nm,0.8s						
J37A	Redenius Farm,	87.35	346	P	P	06 29 30.7	-0.8
	baz=166,SNR=7.5						
I40A	Norwalk	87.42	348	P	P	06 29 30.8	-1.1
	baz=168						
SZCU	Shurtz Canyon	87.46	330	*e*P	P	06 29 32.0	-0.5
	comp=Z,5.6nm,0.9s						
I41A	Arkdale	87.47	348	P	P	06 29 30.8	-1.3
	baz=168						
I41A	Arkdale	87.47	348	*e*P	P	06 29 31.5	-0.6
	comp=Z,12nm,1.0s						
J36A	Seneca 1, Swea	87.51	345	P	P	06 29 31.7	-0.6
	baz=165,SNR=20						
J36A	Seneca 1, Swea	87.51	345	*e*P	P	06 29 31.9	-0.4
	comp=Z,40nm,0.8s						
CCUT	Cedar City	87.53	330	*e*P	P	06 29 33.4	+0.6
	comp=Z,6.6nm,0.5s						
MTPU	Mount Pierson	87.53	331	*e*P	P	06 29 31.2	-1.8
	comp=Z,7.7nm,1.1s						
I39A	Houston	87.53	347	P	P	06 29 31.4	-1.0
	baz=167,SNR=15						
I39A	Houston	87.53	347	*e*P	P	06 29 31.4	-1.0
	comp=Z,24nm,0.8s						
H43A	Windswept, Lux	87.59	350	P	P	06 29 31.9	-0.7
	baz=170						
H43A	Windswept, Lux	87.59	350	*e*P	P	06 29 31.7	-0.9
	comp=Z,9.8nm,0.8s						
H42A	Shiocton	87.72	350	P	P	06 29 32.4	-0.9
	baz=169						
H42A	Shiocton	87.72	350	*e*P	P	06 29 32.4	-0.9
	comp=Z,12nm,1.0s						
I38A	Scanlan Farm,	87.84	347	P	P	06 29 32.9	-1.0
	baz=167,SNR=12						
MPMC	Manual Prospec	87.85	326	P	P	06 29 34.2	-0.2
	baz=150						
SRU	San Rafael Swe	87.89	332	*e*P	P	06 29 33.5	-1.0
	comp=Z,12nm,1.0s						
SRU	San Rafael Swe	87.89	332	*e*P	P	06 29 33.5	-1.0
SRU				pmax	pmax		
	comp=Z,12nm,1.0s						
ISA	Isabella, Lake	87.92	325	*e*P	P	06 29 34.9	+0.3
	comp=Z,10nm,1.0s						
ISA	Isabella, Lake	87.92	325	*e*P	P	06 29 34.9	+0.3
ISA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MSU	Marysvale	87.94	331	*e*P	P	06 29 35.6	+0.9
MSU	Marysvale	87.94	331	*e*P	P	06 29 35.7	+0.9
H41A	Junction City	87.99	349	P	P	06 29 33.5	-1.0
	baz=169,SNR=8.1						
H41A	Junction City	87.99	349	*e*P	P	06 29 33.8	-0.8
	comp=Z,9.7nm,0.8s						
I37A	Lemond, Waseca	88.00	346	P	P	06 29 34.1	-0.6
	baz=166,SNR=7.9						
I37A	Lemond, Waseca	88.00	346	*e*P	P	06 29 34.0	-0.6
	comp=Z,33nm,1.0s						
O20A	White River Ci	88.06	334	P	P	06 29 34.9	-0.4
	baz=156						
O20A	White River Ci	88.06	334	*e*P	P	06 29 34.8	-0.4
	comp=Z,9.1nm,0.9s						
DAC	Darwin (Calif)	88.08	326	*e*P	P	06 29 36.0	+0.6
	comp=Z,10nm,1.0s						
DAC	Darwin (Calif)	88.08	326	*e*P	P	06 29 36.1	+0.6
DAC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
H40A	Chili	88.10	348	P	P	06 29 34.1	-1.0
	baz=168,SNR=5.9						
TPNV	Topopah Spring	88.12	327	P	P	06 29 35.5	-0.1
	baz=150						
TPNV	Topopah Spring	88.12	327	*e*P	P	06 29 36.2	+0.6
	comp=Z,15nm,1.4s						
TPNV	Topopah Spring	88.12	327	*e*P	P	06 29 36.2	+0.6
TPNV				pmax	pmax		
	comp=Z,15nm,1.4s						
I36A	Fitzsimmons Fa	88.12	346	P	P	06 29 34.3	-0.9
	baz=165,SNR=5.0						
P18A	Preston Nutter	88.26	333	*e*P	P	06 29 35.8	-0.6
	comp=Z,30nm,0.3s						
P17A	Butcher Ranch,	88.29	332	*e*P	P	06 29 36.6	+0.3
	comp=Z,12nm,0.9s						
H39A	Augusta	88.29	348	P	P	06 29 35.3	-0.7
	baz=167						
G43A	Wallace	88.35	350	P	P	06 29 35.5	-0.7
	baz=170,SNR=6.0						
G43A	Wallace	88.35	350	*e*P	P	06 29 35.6	-0.6
	comp=Z,11nm,0.8s						
ECSD	EROS Data Cent	88.35	344	P	P	06 29 35.5	-0.8
	baz=164						
ECSD	EROS Data Cent	88.35	344	*e*P	P	06 29 35.7	-0.6
	comp=Z,20nm,0.8s						
LSZ	Lusaka	88.38	109	*e*P	P	06 29 37.4	0.0
	comp=Z,21nm,1.0s						
LSZ	Lusaka	88.38	109	*e*P	P	06 29 37.4	0.0
LSZ				pmax	pmax		
	comp=Z,21nm,1.0s						
CWC	Cottonwood Cre	88.42	326	P	P	06 29 36.6	-0.5
	baz=149						
G42A	Mountain	88.43	350	P	P	06 29 36.0	-0.6
	baz=169,SNR=11						
G42A	Mountain	88.43	350	*e*P	P	06 29 36.2	-0.4
	comp=Z,18nm,0.8s						
TOA0	Torodi Ar. Sit	88.43	71	*e*P	P	06 29 36.5	-0.9
	comp=Z,20nm,0.9s						
TORD	Torodi Ar. Bea	88.43	71	P	P	06 29 35.5	-1.9
	comp=Z,12nm,0.8s,baz=261,slow=5.4						
TORD				LR	LR	07 04 06.0	
	comp=Z,190nm,21.8s,baz=265,slow=32						
TRQ	Mont Tremblant	88.45	359	*e*P	P	06 29 35.8	-1.0
H38A	Maiden Rock	88.45	347	P	P	06 29 35.9	-0.9
	baz=167						
H37A	Dierke Farm, C	88.47	346	P	P	06 29 36.0	-0.8
	baz=166						
G41A	Antigo	88.50	349	P	P	06 29 36.1	-0.9
	baz=169						
F45A	CMU Biological	88.52	352	P	P	06 29 36.3	-0.8
	baz=172						
F46A	Macinaw City C	88.53	352	P	P	06 29 36.2	-0.9
	baz=172						
PSUT	Pine Spring	88.57	330	*e*P	P	06 29 37.0	-0.8
	comp=Z,4.6nm,0.7s						
GRAC	Grapevine Rang	88.61	327	P	P	06 29 37.9	+0.2
	baz=150						
H36A	Jessenland, He	88.64	346	P	P	06 29 37.1	-0.5
	baz=166,SNR=8.2						
G40A	Rib Lake	88.70	349	P	P	06 29 37.2	-0.7
	baz=168,SNR=11						
G40A	Rib Lake	88.70	349	*e*P	P	06 29 37.4	-0.5
	comp=Z,15nm,0.9s						
F43A	Flat Rock, Esc	88.85	351	P	P	06 29 38.0	-0.6
	baz=170						
G38A	Ridgeland	88.86	347	P	P	06 29 37.5	-1.2
	baz=167						
G39A	Holcombe	88.87	348	P	P	06 29 37.8	-0.9
	baz=168,SNR=6.9						
F42A	Maple Grove Fa	88.90	350	P	P	06 29 38.3	-0.5
	baz=170						
F44A	Big Bay de Noc	88.91	351	P	P	06 29 38.2	-0.6
	baz=171,SNR=8.3						
H35A	Sunnyside Ranc	88.93	345	P	P	06 29 38.0	-0.9
	baz=165,SNR=12						
F41A	Three Lakes	89.01	349	P	P	06 29 38.8	-0.6
	baz=169,SNR=7.9						
F41A	Three Lakes	89.01	349	*e*P	P	06 29 38.5	-0.9
	comp=Z,10nm,0.9s						
R11A	Troy Canyon, C	89.07	328	*e*P	P	06 29 40.2	+0.1
	comp=Z,4.2nm,1.1s						
SPMN	Marine on St.	89.07	347	P	P	06 29 38.5	-1.2
	baz=166						
SPMN	Marine on St.	89.07	347	*e*P	P	06 29 38.2	-1.4
	comp=Z,7.0nm,0.8s						
MPU	Maple Canyon	89.08	332	*e*P	P	06 29 39.8	-0.3
	comp=Z,7.0nm,1.0s						
E45A	Wooded Hills,	89.15	352	P	P	06 29 39.4	-0.6
	baz=172						
RWWY	Rawlins	89.15	336	*e*P	P	06 29 40.0	-0.5
	comp=Z,16nm,1.1s						
G36A	St. Michael	89.25	346	P	P	06 29 39.6	-0.8
	baz=166						
H32A	Carlson Farm,	89.26	343	P	P	06 29 39.5	-1.0
	baz=163						
F40A	Park Falls	89.33	349	P	P	06 29 40.3	-0.5
	baz=168,SNR=10						
G35A	Watkins	89.37	346	P	P	06 29 40.5	-0.5
	baz=165						
G35A	Watkins	89.37	346	*e*P	P	06 29 39.9	-1.2
	comp=Z,10nm,0.9s						
COWI	Conover	89.37	349	*e*P	P	06 29 40.6	-0.4
E43A	Lone Tree Farm	89.37	351	P	P	06 29 40.6	-0.4
	baz=170,SNR=6.3						
E43A	Lone Tree Farm	89.37	351	*e*P	P	06 29 41.0	0.0
	comp=Z,15nm,0.8s						
F39A	Loretta	89.44	348	P	P	06 29 40.7	-0.7
	baz=168						
F37A	Hinrichs Farm,	89.53	347	P	P	06 29 40.8	-1.0
	baz=166						
E42A	Champion	89.53	350	P	P	06 29 41.1	-0.7
	baz=170						
SUSD	Miller	89.53	342	P	P	06 29 40.6	-1.3
	baz=162						
JLU	Jordanelle	89.54	332	*e*P	P	06 29 41.8	-0.5
	comp=Z,4.4nm,1.0s						
G34A	Benson	89.61	345	P	P	06 29 40.8	-1.3
	baz=164						
F38A	Pierce - Schro	89.63	348	P	P	06 29 40.7	-1.6
	baz=167						
DUG	Dugway, Tooele	89.66	331	P	P	06 29 41.5	-1.2
	baz=153						
DUG	Dugway, Tooele	89.66	331	*e*P	P	06 29 42.6	-0.1
	comp=Z,9.1nm,1.4s						
DUG	Dugway, Tooele	89.66	331	*e*P	P	06 29 42.6	-0.1
DUG				pmax	pmax		
	comp=Z,9.0nm,1.4s						
E41A	Kenton	89.70	350	P	P	06 29 41.9	-0.6
	baz=169,SNR=5.4						
G33A	Ortonville	89.72	344	P	P	06 29 41.5	-1.1
	baz=164						
MLAC	Mammoth, Mammo	89.75	326	P	P	06 29 41.7	-1.6
	baz=149						
OMMB	Old Mammoth Mi	89.81	326	*e*P	P	06 29 43.6	-0.1
	comp=Z,13nm,1.1s						
E40A	Wakefield	89.81	349	P	P	06 29 41.8	-1.3
	baz=168						
F36A	Milaca	89.81	346	P	P	06 29 42.2	-0.9
	baz=166						
F36A	Milaca	89.81	346	*e*P	P	06 29 41.8	-1.3
	comp=Z,6.3nm,0.9s						
K22A	Casper	89.83	337	P	P	06 29 43.0	-0.5
	baz=157						
K22A	Casper	89.83	337	*e*P	P	06 29 42.9	-0.6
	comp=Z,12nm,0.9s						
E39A	Mellen	89.84	349	P	P	06 29 42.1	-1.1
	baz=168						
TCUT	Toone Canyon	89.99	333	*e*P	P	06 29 44.0	-0.4
	comp=Z,20nm,1.3s						
G32A	Webster	89.99	344	P	P	06 29 42.7	-1.3
	baz=163						
F35A	Swanville	90.00	346	P	P	06 29 43.0	-0.9
	baz=165						
F34A	Alexandria	90.06	345	P	P	06 29 43.0	-1.3
	baz=164						
NV11	Mina Array Sit	90.16	327	*e*P	P	06 29 44.3	-0.8
	comp=Z,0.3nm,1.0s						
NV01	Mina Array Sit	90.22	327	*e*P	P	06 29 45.9	+0.4
NVAR	Mina Array Bea	90.22	327	P	P	06 29 45.4	-0.1
	comp=Z,0.9nm,0.9s,baz=160,slow=6.2,SNR=6.6						
NVAR				PKKPbc	PKKPbc	06 47 15.8	+0.5

	comp=Z,0.1nm,0.4s,baz=207,slow=2.3,SNR=3.8						
E36A	McGregor	90.40	347	P	P	06 29 44.3	-1.6
	baz=166						
HWUT	Hardware Ranch	90.48	333	eP	P	06 29 45.8	-0.8
	comp=Z,8.7nm,0.9s						
RSSD	Black Hills	90.48	339	P	P	06 29 45.1	-1.5
	baz=158						
KVN	Kaiserville	90.67	327	eP	P	06 29 47.2	-0.3
	comp=Z,4.5nm,1.0s						
KVN	Kaiserville	90.67	327	eP	P	06 29 47.2	-0.3
KVN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
WAKR	Walker	90.75	326	eP	P	06 29 48.6	+0.7
	comp=Z,8.2nm,1.0s						
BW06	Boulder Array	90.86	335	P	P	06 29 47.2	-1.2
	baz=155						
PD31	Pinedale Array	90.86	335	eP	P	06 29 47.2	-1.2
PDAR	Pinedale Array	90.86	335	P	P	06 29 47.5	-0.8
	comp=Z,1.9nm,0.8s,baz=141,slow=5.2,SNR=19						
PDAR				pP	pP	06 29 55.7	-0.8
	comp=Z,3.4nm,0.9s,baz=144,slow=5.3,SNR=12						
PDAR				LR	LR	07 06 27.8	
	comp=Z,142nm,18.3s,baz=154,slow=33						
HVU	Hansel Valley	91.05	332	eP	P	06 29 48.6	-0.6
	comp=Z,3.7nm,0.9s						
HVU	Hansel Valley	91.05	332	eP	P	06 29 48.6	-0.6
HVU				pmax	pmax		
	comp=Z,4.0nm,0.9s						
YERR	Yerington	91.07	326	eP	P	06 29 47.8	-1.6
YERR				epP	sP	06 30 05.4	+4.9
D35A	Remer	91.09	346	P	P	06 29 48.0	-1.0
	baz=165						
C39A	Grand Marais	91.19	349	P	P	06 29 48.2	-1.3
	baz=168						
C35A	Jirik Farms, M	91.67	347	P	P	06 29 50.3	-1.5
	baz=165						
C34A	RKJ Ranch, Bem	91.79	346	P	P	06 29 50.7	-1.6
	baz=165						
REDW	Red Top Meadow	91.81	334	eP	P	06 29 51.6	-1.1
	comp=Z,12nm,1.5s						
LOHW	Long Hollow	91.95	334	eP	P	06 29 52.6	-0.9
	comp=Z,4.4nm,1.0s						
TPAW	Teton Pass	91.96	334	eP	P	06 29 52.9	-0.7
	comp=Z,4.3nm,0.9s						
C33A	Trail	92.05	345	P	P	06 29 51.9	-1.5
	baz=164						
FXWY	Fox Creek	92.11	334	eP	P	06 29 53.6	-0.6
	comp=Z,5.5nm,1.2s						
B35A	Bob, Littlefor	92.27	347	P	P	06 29 52.8	-1.6
	baz=166						
IMW	Indian Meadow	92.32	334	eP	P	06 29 54.5	-0.7
	comp=Z,4.7nm,1.0s						
FLWY	Flagg Ranch	92.41	334	eP	P	06 29 55.2	-0.3
	comp=Z,9.8nm,1.1s						
AGMN	Agassiz Nation	92.59	345	P	P	06 29 54.6	-1.3
	baz=164						
AGMN	Agassiz Nation	92.59	345	eP	P	06 29 55.0	-1.0
	comp=Z,4.1nm,0.8s						
RLMT	Red Lodge	92.90	336	P	P	06 29 56.2	-1.5
	baz=155						
RLMT	Red Lodge	92.90	336	eP	P	06 29 57.1	-0.6
	comp=Z,8.6nm,1.3s						
MDND	Maddock	92.91	343	P	P	06 29 56.1	-1.3
	baz=161						
YMR	Madison River	93.02	334	eP	P	06 29 57.8	-0.6
	comp=Z,8.2nm,1.0s						
HLID	Hailey	93.19	332	P	P	06 29 58.7	-0.4
	baz=152						
HLID	Hailey	93.19	332	eP	P	06 29 58.7	-0.4
	comp=Z,2.9nm,0.9s						
O03D	Paynes Creek	93.24	325	P	P	06 29 58.6	-0.7
	baz=147						
MCMT	McKenzie Canyo	93.77	333	eP	P	06 30 01.5	-0.3
BOZ	Bozeman (W)	94.06	334	P	P	06 30 02.6	-0.4
	baz=153						
DGMT	Dagmar	94.56	340	P	P	06 30 04.0	-1.1
	baz=158						
DZM	Mont Dzumac	95.03	234	LR	LR	07 07 31.5	
	comp=Z,124nm,18.3s,baz=198,slow=32						
DZM	Mont Dzumac	95.03	234	eLR	LR	07 00 53.3	
	comp=Z,355nm,29.9s						
MDT	Midelt	98.23	53	LR	LR	07 13 02.8	
	comp=Z,708nm,21.8s,baz=242,slow=34						
STKA	Stephens Creek	99.06	210	LR	LR	07 06 29.6	
	comp=Z,130nm,21.7s,baz=196,slow=30						
PVAQ	Vaqueiros	99.78	48	eLR	LR	07 08 46.0	
	comp=Z,576nm,20.0s						
PMRV	Marv??o	101.42	46	eLR	LR	07 12 00.3	
	comp=Z,395nm,20.0s						
MTE	Manteigas	102.04	46	eLR	LR	07 11 47.1	
	comp=Z,537nm,20.0s						
PGAV	Gavieira, Arco	102.80	44	eLR	LR	07 14 59.1	
	comp=Z,374nm,18.0s						
MVO	Moncorvo	102.87	45	eLR	LR	07 12 28.4	
	comp=Z,524nm,18.0s						
ASAR	Alice Springs	109.27	207	PKKP	PKKPdf	06 46 33.1	-0.9
	comp=Z,0.8nm,0.9s,baz=346,slow=5.7,SNR=4.8						
GEA0	GERESS Array S	119.03	49	ePKPdf	PKPdf	06 35 32.4	-0.8
GEC2	GERESS Array S	119.03	49	ePKPdf	PKPdf	06 35 32.3	-0.8
GEC2	GERESS Array S	119.03	49	ePKIKP	PKPdf	06 35 32.3	-0.8
GERES	GERESS Array B	119.03	49	PKP	PKPdf	06 35 32.3	-0.8
	comp=Z,1.8nm,0.7s,baz=207,slow=1.5,SNR=16						
GERES				pPKP	pPKPdf	06 35 40.6	-0.9
	comp=Z,1.7nm,0.8s,baz=236,slow=1.4,SNR=4.4						
IL1	Eielson Array	121.15	331	ePKPdf	PKPdf	06 35 35.5	-1.1
ILAR	Eielson Array	121.15	331	PKP	PKPdf	06 35 35.1	-1.5
	comp=Z,0.7nm,0.7s,baz=162,slow=2.8,SNR=9.5						
ILAR				pPKP	pPKPdf	06 35 43.8	-1.2
	comp=Z,1.1nm,0.9s,baz=193,slow=0.9,SNR=7.3						
ILAR				PKKPbc	PKKPab	06 45 37.4	+0.3
	comp=Z,0.3nm,0.8s,baz=266,slow=6.0,SNR=4.4						
VYHS	Vyhne	121.77	51	ePKIKP	PKPdf	06 35 38.4	+0.1
VYHS	Vyhne	121.77	51	ePKP	PKPdf	06 35 38.4	+0.1
H11S2	WAKE ISLAND Hy	123.87	264	T	T	08 51 14.2	
	baz=129,slow=74,SNR=112						
H11S1	WAKE ISLAND Hy	123.88	264	T	T	08 51 15.4	
	baz=129,slow=74,SNR=61						
H11S3	WAKE ISLAND Hy	123.89	264	T	T	08 51 27.6	
	baz=129,slow=74,SNR=116						
TOLK	Toolik Lake Re	124.13	335	P	PKPdf	06 35 41.7	-0.6
	baz=120						
TOLK	Toolik Lake Re	124.13	335	ePKPdf	PKPdf	06 35 42.2	-0.1
MLR	Muntele Rosu	124.58	57	ePKPdf	PKPdf	06 35 43.0	-1.0
MLR	Muntele Rosu	124.58	57	ePKIKP	PKPdf	06 35 43.0	-1.0
BUR04	Bucovina Ar. S	125.11	55	ePKPdf	PKPdf	06 35 44.5	-0.3
BUR08	Bucovina Ar. S	125.12	55	ePKPdf	PKPdf	06 35 45.1	+0.2
RAYN	Ar Rayn	126.84	91	ePKPdf	PKPdf	06 35 48.0	-0.9
BR131	Keskin Array S	126.89	67	ePKPdf	PKPdf	06 35 48.0	-0.6
BRTR	Keskin Array B	126.89	67	PKP	PKPdf	06 35 47.6	-0.9
	comp=Z,5.0nm,0.8s,baz=192,slow=2.8,SNR=26						
BRTR				pPKP	pPKPdf	06 35 56.0	-0.9
	comp=Z,2.0nm,0.9s,baz=212,slow=4.4,SNR=4.3						
AK11	Malin Array Si	128.75	53	ePKPdf	PKPdf	06 35 50.0	-1.5
KIEV	Kiev	128.78	53	ePKPdf	PKPdf	06 35 50.5	-1.1
KIEV	Kiev	128.78	53	i PKIKP	PKPdf	06 35 49.4	-2.2
AKASG	Malin Array Be	128.80	53	PKP	PKPdf	06 35 50.4	-1.2
	comp=Z,3.2nm,0.8s,baz=266,slow=2.5,SNR=11						
AKASG				pPKP	pPKPdf	06 35 59.0	-1.0
	comp=Z,0.3nm,0.3s,baz=270,slow=3.0,SNR=2.5						
AKBB	Malin Array Si	128.80	53	ePKPdf	PKPdf	06 35 50.4	-1.3
AKBB	Malin Array Si	128.80	53	ePKIKP	PKPdf	06 35 50.4	-1.3
OBN	Obninsk	134.42	49	⇓iPKIKP	PKPdf	06 36 02.0	-0.1
OBN				e		06 38 37.2	
OBN				pmax	pmax		
	comp=Z,15nm,0.6s						
GNI	Garni	134.73	71	i PKIKP	PKPdf	06 36 01.9	-1.6
KIV	Kislovodsk	134.79	66	i PKIKP	PKPdf	06 36 02.6	-0.8
KIV				pmax	pmax		
	comp=Z,11nm,1.0s						
KBZ	Khabaz	134.85	66	PKP	PKPdf	06 36 03.4	+0.1
	comp=Z,3.3nm,0.8s,baz=188,slow=1.4,SNR=5.4						
VSR	Storozhevoye	134.89	55	i PKIKP	PKPdf	06 36 01.9	-1.2
KLMR	Klimovskoe	137.00	41	ePKIKP	PKPdf	06 36 04.5	-2.3
KLMR				pmax	pmax		
	comp=Z,21nm,1.3s						
KLMR	Klimovskoe	137.00	41	ePKPdf	PKPdf	06 36 04.5	-2.3
KLMR				AMP		06 36 08.4	
	comp=Z,21nm,1.3s						
BILL	Bilibino	139.76	330	dePKIKP	PKPdf	06 36 10.9	-0.8
BILL				pmax	pmax		
	comp=Z,1.0nm,1.0s						
PRGR	Permogore	139.99	40	ePKIKP	PKPdf	06 36 09.1	-3.1
PRGR				pmax	pmax		
	comp=Z,11nm,0.9s						
PETK	Petropavlovsk-	144.59	305	PKP	PKPab	06 36 18.1	-1.2
	comp=Z,4.1nm,0.7s,baz=86,slow=7.1						
PETK				pPKP	pPKPdf	06 36 26.6	-2.5
	baz=103,slow=6.4						
HYB	Hyderabad	145.61	128	i PKP	PKPbc	06 36 24.0	+0.2
AKTO	Aktyubinsk	146.46	60	PKPbc	PKPbc	06 36 24.7	-0.8
	comp=Z,17nm,0.9s,baz=249,slow=3.0,SNR=41						
SEY	Seymchan	146.46	323	PKPbc	PKPdf	06 36 23.9	+0.3
	comp=Z,3.1nm,0.7s,baz=118,slow=4.4,SNR=12						
SEY				pPKPbc	pPKPbc	06 36 33.0	-0.3
	comp=Z,12nm,0.9s,baz=122,slow=3.8,SNR=15						
SEY	Seymchan	146.46	323	c iPKP2	PKPbc	06 36 24.6	-0.4
ARU	Arti	146.86	49	PKPbc	PKPbc	06 36 25.9	-0.4
	comp=Z,17nm,0.7s,baz=268,slow=2.2,SNR=33						
ARU				pPKPbc	pPKPbc	06 36 34.9	+0.2
	comp=Z,8.9nm,0.8s,baz=294,slow=3.8,SNR=3.9						
ARU	Arti	146.86	49	ePKPdf	PKPdf	06 36 24.2	-0.3
ARU				ePKPbc	PKPbc	06 36 26.1	-0.2
ARU				pPKPbc	pPKPbc	06 36 34.9	+0.2
ARU	Arti	146.86	49	i PKIKP	PKPdf	06 36 24.2	-0.3
ARU						06 39 47.7	
ARU				SS	SS	06 58 44.3	-5.2
ARU				MLR	MLR		
	comp=Z,226nm,22.0s						
ABKAR	Akbulak array	147.58	62	ePKPdf	PKPdf	06 36 25.5	-0.4
ABKAR				ePKPbc	PKPbc	06 36 28.5	-0.2
TIXI	Tiksi	148.82	346	ePKPbc	PKPbc	06 36 29.7	-1.4
TIXI	Tiksi	148.82	346	c iPKIKP	PKPdf	06 36 28.5	+1.3
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KBL	Kabul	150.06	93	ePKPbc	PKPbc	06 36 34.7	-1.0
KBL	Kabul	150.06	93	ePKIKP	PKPbc	06 36 34.7	-1.0
NIL	Nilore	152.74	98	ePKPbc	PKPbc	06 36 41.2	-0.5
UBPT	Khong Chiam	152.76	179	PKP	PKPbc	06 36 42.2	+0.1
PBKT	Sadao Pong	153.67	169	PKP	PKPbc	06 36 48.1	+4.0
YSS	Yuzh-Sakhalins	153.83	292	PKP2	PKPab	06 37 08.0	+11
KK31	Karatay Array	153.97	77	ePKPdf	PKPdf	06 36 35.7	-0.3
KK31				ePKPbc	PKPbc	06 36 43.2	-0.8
KK31				ePKPab	PKPab	06 36 56.5	-1.1
KKAR	Karatay Array	153.97	77	ePKPdf	PKPdf	06 36 35.5	-0.5
KKAR				ePKPbc	PKPbc	06 36 43.4	-0.7
KKAR				ePKPab	PKPab	06 36 56.5	-1.1
KKAR	Karatay Array	153.97	77	ePKIKP	PKPdf	06 36 35.5	-0.5
KKAR				e		06 36 43.4	
KKAR				e		06 36 56.5	
BRVK	Borovoye	154.00	54	c iPKIKP	PKPbc	06 36 43.8	+0.1
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BVAR	Borovoye Array	154.07	54	PKP	PKPdf	06 36 35.7	-0.1
	comp=Z,1.6nm,0.7s,baz=321,slow=2.1,SNR=8.4						
BVAR				pPKP	pPKPdf	06 36 44.0	-0.2
	comp=Z,3.4nm,0.9s,baz=299,slow=3.1,SNR=4.5						
BVAR				PKPab	PKPab	06 36 57.0	-0.6
	comp=Z,2.5nm,0.6s,baz=286,slow=2.6,SNR=6.9						
MJAR	Matsushiro Arr	154.67	267	PKPab	PKPab	06 37 00.1	-0.6
	comp=Z,1.3nm,0.5s,baz=145,slow=4.1,SNR=3.2						
MJAR				pPKPab	pPKPab	06 37 07.3	-1.6
	comp=Z,2.2nm,0.6s,baz=170,slow=4.0,SNR=4.3						
CM01	Chiang Mai Arr	155.12	164	ePKPbc	PKPdf	06 36 46.0	+7.7
AAK	Ala-Archa	156.75	79	PKPab	PKPab	06 37 09.6	-0.1
	comp=Z,4.8nm,0.5s,baz=226,slow=6.0,SNR=7.4						
AAK	Ala-Archa	156.75	79	ePKPdf	PKPdf	06 36 40.0	0.0
AAK				ePKPab	PKPab	06 37 09.2	-0.4
AAK	Ala-Archa	156.75	79	ePKIKP	PKPdf	06 36 40.0	0.0
FRU	Bishkek	156.88	79	ePKIKP	PKPdf	06 36 44.0	+4.0
KSH	Kashi	157.08	88	ePKP	PKPdf	06 36 40.2	-0.3
KSH				PKS	PKSdf	06 40 13.4	-0.9
KSH				PP	PP	06 40 50.1	-0.3
KSH				SKS	SKSdf	06 43 45.1	+0.3
KSH				SKKS	SKKSac	06 47 37.0	-0.6
KSH				SS	SS	07 00 39.3	-4.2
KSH				AMB	AMB		
	comp=Z,160nm,5.5s						
TARG	Taragay, Kyrgy	158.99	83	ePKPab	PKPab	06 37 19.0	-0.7
KURBB	Kurchatov Arra	159.48	57	PKP	PKPdf	06 36 42.2	-0.6
	comp=Z,0.9nm,0.9s,baz=279,slow=1.6,SNR=7.7						
KURBB				pPKP	pPKPdf	06 36 50.9	-0.2
	comp=Z,1.7nm,1.1s,baz=277,slow=1.5,SNR=4.8						
KURBB				PKPab	PKPab	06 37 20.7	-0.3
	comp=Z,5.2nm,0.7s,baz=284,slow=5.0,SNR=22						
KURK	Kurchatov	159.51	57	ePKPdf	PKPdf	06 36 42.1	-0.7
KURK				pPKP	pPKPdf	06 36 50.9	-0.3
KURK				ePKPab	PKPab	06 37 20.8	-0.3
KURK	Kurchatov	159.51	57	PKIKP	PKPdf	06 36 42.2	-0.7
KURK						06 36 50.9	
KURK						06 37 20.7	
KURK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KURK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
KURK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
NVS	Novosibirsk	160.64	43	ePKIKP	PKPdf	06 36 41.4	-2.6
NVS				e		06 37 25.0	
ZALV	Zalesovo Beam	161.89	44	PKP	PKPdf	06 36 43.8	-1.5
	comp=Z,0.5nm,0.3s,baz=243,slow=1.7,SNR=5.0						
ZALV				pPKP	pPKPdf	06 36 52.7	-1.0
	comp=Z,1.2nm,0.6s,baz=298,slow=3.2,SNR=3.1						
ZALV				PKPab	PKPab	06 37 31.2	-0.1
	comp=Z,3.4nm,0.7s,baz=295,slow=5.9,SNR=7.0						
ZALV	Zalesovo Beam	161.89	44	ePKPdf	PKPdf	06 36 43.4	-2.0
ZALV				pPKP	pPKPdf	06 36 52.7	-1.0
ZALV				ePKPab	PKPab	06 37 31.3	-0.1
MAKZ	Makanchi	162.32	68	ePKPdf	PKPdf	06 36 45.4	-0.6
MAKZ				ePKPab	PKPab	06 37 33.3	-0.3
KMI	Kunming	162.33	170	PKP	PKPdf	06 36 45.1	-1.9
LSA	Lhasa	162.34	132	ePKPab	PKPab	06 37 33.8	-0.8
MK31	Makanchi Array	162.53	68	ePKPab	PKPab	06 37 34.4	-0.2
MKAR	Makanchi Array	162.53	68	PKP	PKPdf	06 36 44.8	-1.5
	comp=Z,0.7nm,1.0s,baz=316,slow=3.3,SNR=4.0						
MKAR				PKPab	PKPab	06 37 34.0	-0.5
	comp=Z,12nm,0.8s,baz=276,slow=4.1,SNR=38						
MKAR				PP	PP	06 41 18.5	-1.1
	comp=Z,2.7nm,1.1s,baz=269,slow=7.3,SNR=6.4						
MK01	Makanchi Array	162.54	68	ePKPab	PKPab	06 37 34.1	-0.5
GYA	Guiyang	163.88	182	ePKP	PKPdf	06 36 49.2	+0.9
GYA				PKPab	PKPab	06 37 44.0	+3.1
GYA				PKS	PKSdf	06 40 21.8	+0.3
GYA				PP	PP	06 41 30.3	+4.7
GYA				AMB	AMB		
	comp=Z,120nm,8.2s						
NJ2	Nanjing	165.43	228	ePKP	PKPdf	06 36 51.3	+2.0
WMQ	Urumqi	166.46	79	PKP	PKPdf	06 36 51.7	+1.8
WMQ				LR	LR		
	comp=Z,290nm,20.9s						
WMQ				LR	LR		
	comp=Z,190nm,23.1s						
WMQ				LR	LR		
	comp=Z,260nm,23.1s						
BJI	Beijing	172.05	255	PKP	PKPdf	06 36 53.3	0.0
LZH	Lanzhou	173.24	164	ePKP	PKPdf	06 36 48.6	-5.6
LZH				PKPab	PKPab	06 38 19.7	-2.4
LZH				SS	SS	07 03 23.7	-2.5
GTA	Gaotai	174.23	121	ePKP	PKPdf	06 36 54.1	-0.3
GTA				pPKP	sPKPdf	06 37 04.4	-1.3
GTA				PKPab	PKPab	06 38 25.0	-1.5
GTA				PP	PP	06 42 20.3	+1.3
GTA				SS	SS	07 03 32.8	-4.7
GTA				AMB	AMB		
	comp=Z,70nm,6.3s						
GTA				LR	LR		
	comp=Z,82nm,19.4s						
GTA				LR	LR		
	comp=Z,93nm,19.7s						
GTA				LR	LR		
	comp=Z,160nm,19.4s						
ULN	Ulaanbaatar	174.71	354	ePKPab	PKPab	06 38 28.6	+0.3
SONA1	Songino Array	174.76	358	ePKPab	PKPab	06 38 28.0	-0.5
SONM	Songino Array	174.77	358	pPKP	pPKPdf	06 37 01.3	-1.4
	comp=Z,1.1nm,0.9s,baz=202,slow=1.6,SNR=3.8						
SONM				PKPab	PKPab	06 38 28.1	-0.4
	comp=Z,1.7nm,0.6s,baz=343,slow=2.6,SNR=9.6						
HHC	Hu-ho-hao-te	175.60	248	ePKP	PKPdf	06 36 58.8	+4.0
HHC				PP	PP	06 42 32.4	+6.6
HHC				SKS	SKSdf	06 43 56.3	+0.2
HHC				AMB	AMB		
	comp=Z,28nm,7.4s						
HHC				LR	LR		
	comp=Z,190nm,19.9s						
HHC				LR	LR		
	comp=Z,180nm,19.9s						
HHC				LR	LR		
	comp=Z,110nm,19.1s						

MEX 06 06:41:24.5±0.7**,16.°24N**×**98.°31W,h23**^{km}±11^{km}**,MD3.9,**
Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.23	48	i P	Pb	06 41 28.9	-1.5
PNIG				eS	Sb	06 41 33.7	-0.7
TLIG	Tlapa	1.34	349	eP	Pn	06 41 45.2	-2.8
TLIG				eS	Sn	06 42 00.7	-4.5
VHO	Vista Hermosa	1.72	61	eP	Pn	06 41 50.6	-2.7
VHO				eS	Sn	06 42 11.2	-3.5
PLIG	Platanillo	2.43	332	eP	Pn	06 42 01.1	-1.8
PLIG				eS	Sn	06 42 29.2	-2.8
YAIG	Yautepec	2.71	345	i P	Pn	06 42 05.4	-1.5
YAIG				i S	Sn	06 42 35.8	-3.3

ISCJB ***06*** *06:51:10.8±0.7,24.°61N±0.°04×122.°47E±0.°02,h10*^{km}*±5*^{km}*,*
Error ellipse: s-maj=6.0km s-min=2.4km az=8.8
TAP ***06*** *06:51:10.8,24.°64N×122.°47E,h15*^{km}*,ML2.9,C*
JMA ***06*** *06:51:11.6,24.°60N×122.°46E,h25*^{km}*±2*^{km}*,M2.2*
ISC 06 06:51:09.6±1.2**,24.°63N**±0.°04×**122.°50E**±0.°02**,h6**^{km}±11^{km}**,**
n41,σ**0.**^{s}**57**/63**,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS1	EOS1	0.34	257	P	Pb	06 51 18.0	-0.1
	baz=255						
EOS1				S	Sb	06 51 23.4	-0.4
	baz=255						
JYNG	Yonagunijimaku	0.44	113	P	Pn	06 51 21.1	-1.3
JYNG				eS	Sb	06 51 28.0	+1.3
YOJ	Yonaguni jima	0.50	109	P	Pn	06 51 21.9	-1.3
YOJ				S	Sb	06 51 29.3	+1.1
EGS		0.56	293	eP	Pb	06 51 21.1	-0.7
	baz=293						
TWC	Suao	0.59	268	eP	Pg	06 51 21.2	+0.3
	baz=267						
TWC				eS	Sb	06 51 30.7	-0.2
	baz=267						
TWB1	Santiao Chiao	0.60	309	eP	Pb	06 51 22.1	-0.4
	baz=310						
NTC	Toucheng	0.65	291	eP	Pb	06 51 22.7	-0.5
	baz=290						
NTC				eS	Sb	06 51 32.6	0.0
	baz=290						
ENAH	Nanao	0.65	254	eP	Pb	06 51 22.9	-0.4
	baz=253						
TIPB	Shuangxi	0.70	299	P	Pb	06 51 24.0	-0.2
	baz=299						
NANB	Nanao	0.71	254	eP	Pb	06 51 23.8	-0.5
	baz=253						
NANB				eS	Sb	06 51 33.6	-0.7
	baz=253						
ENA	Nanau	0.72	254	eP	Pb	06 51 23.9	-0.6
	baz=252						
ENA				eS	Sb	06 51 33.9	-0.7
	baz=252						
TWE	Neicheng	0.76	277	eP	Pg	06 51 24.5	+0.3
	baz=276						
TWE				eS	Sb	06 51 35.3	-0.5
	baz=276						
ENTT	Nioudou	0.85	271	eP	Pb	06 51 27.2	+0.5
	baz=270						
ENTT				eS	Sb	06 51 38.7	+0.3
	baz=270						
NWLT	Wulai	0.92	280	eP	Pb	06 51 27.9	0.0
	baz=279						
NWLT				eS	Sb	06 51 40.1	-0.3
	baz=279						
NACB	Ninganchiao	0.94	241	eP	Pb	06 51 28.0	-0.2
	baz=232						
NACB				eS	Sb	06 51 40.5	-0.4
	baz=232						
TATO	Taipei	0.98	291	eP	Pn	06 51 29.7	-0.1
	baz=291						
TATO				eS	Sb	06 51 42.4	+0.3
	baz=291						
YHNB	Yeheng	1.02	273	eP	Pb	06 51 29.4	-0.3
	baz=272						
YHNB				eS	Sb	06 51 43.6	+0.2
	baz=272						
NNSH	Datong	1.03	259	eP	Pb	06 51 29.7	-0.3
	baz=258						
NNSH				eS	Sg	06 51 43.1	+0.2
	baz=258						
NNSB	Datong	1.03	259	eP	Pb	06 51 29.6	-0.3
	baz=258						
NNSB				eS	Sb	06 51 43.4	-0.5
	baz=258						
NSK	Sanguang	1.04	273	eP	Pb	06 51 29.9	-0.1
	baz=272						
NSK				eS	Sg	06 51 43.2	+0.2
	baz=272						
TWY	Chenhua	1.04	309	eP	Pn	06 51 30.2	-0.5
	baz=309						
TWY				eS	Sb	06 51 44.4	+0.5
	baz=309						
NNS	Nan Shan	1.04	260	eP	Pn	06 51 31.1	+0.3
	baz=259						
NNS				eS	Sb	06 51 44.0	0.0
	baz=259						
PCYT	Pengchaiyu	1.07	339	eP	Pb	06 51 30.3	-0.2
	baz=340						
IRIF	Iriomote-Funau	1.16	104	P	Pn	06 51 32.5	+0.2
IRIF				eS	Sn	06 51 48.6	+0.1
WHF	Hehuan Shan	1.22	247	eP	Pg	06 51 33.0	-0.1
	baz=246						
HATJ	Hateruma jima	1.32	115	P	Pg	06 51 35.5	+0.6
HATJ				eS	Sn	06 51 53.4	+1.0
CHGB	Renai	1.33	245	eP	Pb	06 51 34.9	-0.2
	baz=238						
LIOB	Emei	1.35	271	eP	Pg	06 51 35.6	+0.1
	baz=288						
JKRS	Kuro-shima	1.43	105	P	Pg	06 51 36.9	-0.1
JKRS				S	Sg	06 51 56.2	+0.6
HGSD	Ruisui	1.50	221	eP	Pn	06 51 36.7	-0.3
	baz=204						
VWDT	VWDT	1.51	235	eP	Pn	06 51 36.8	-0.4
	baz=218						
JIJ	Ishigaki jima	1.52	100	P	Pg	06 51 39.0	+0.2
JIJ				S	Sg	06 51 57.9	-0.6
EHY	Hungye	1.55	224	eP	Pn	06 51 37.5	-0.2
	baz=223						
SSLB	Suanglung	1.64	240	eP	Pn	06 51 39.3	+0.4
	baz=224						
YULB	Yu-li	1.65	222	eP	Pn	06 51 38.2	-0.8
	baz=236						
JISG	Ishigakijimahi	1.65	91	P	Pb	06 51 39.4	-1.0
TYC	Yuchr	1.66	245	eP	Pb	06 51 39.9	-0.7
	baz=228						
TWF1	Yuli	1.68	221	eP	Pn	06 51 39.0	-0.5
	baz=235						
FULB	Fuli	1.80	218	eP	Pn	06 51 40.6	-0.6
	baz=203						
TWH	Lutao	2.12	206	eP	Pn	06 51 46.3	+0.7
	baz=205						
TPUB	Ta-pu	2.16	233	eP	Pn	06 51 47.3	+1.2
	baz=219						

GUC 06 07:15:06.8±0.6**,40.°55S**×**72.°47W,h93**^{km}±4^{km}**,ML3.6,**
Central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VLCH	Valdivia	0.95	321	eP	Pn	07 15 25.8	-0.3
VLCH				eS	Sn	07 15 40.5	-0.1
PLCA	Paso Flores	1.47	98	eP	Pn	07 15 32.3	-0.1
PLCA				eS	Sn	07 15 51.9	0.0
TMU	Temuco	1.81	357	eP	Pn	07 15 36.7	+0.1
TMU				eS	Sn	07 15 59.0	-0.3
TMU				IAML		07 16 00.7	
	comp=E,506nm,0.3s						
GO07	Milladeo Hill,	2.72	199	eP	Pn	07 15 45.3	-3.3
GO07				eS	Sn	07 16 14.3	-6.3
CCHI	Chillan	3.95	5	eP	Pn	07 16 04.1	-1.0
CCHI				eS	Sn	07 16 46.5	-3.9

ISCJB ***06*** *07:20:55.6±0.8,37.°26N±0.°04×43.°92E±0.°06,h4*^{km}*±6*^{km}*,*
Error ellipse: s-maj=8.7km s-min=5.4km az=39.3
CSEM ***06*** *07:20:55.8±0.3,37.°26N×43.°92E,h2*^{km}*,ML2.8,Error*
ellipse: s-maj=7.7km s-min=6.5km az=94.0
DDA ***06*** *07:20:55.8,37.°31N×43.°89E,h7*^{km}*,Ml3.0*
ISN ***06*** *07:20:55.0±0.4,37.°19N×43.°82E,h0*^{km}*±1*^{km}*,ML3.0*

*ISK **06** 07:20:56.7, 37.°19N×43.°77E, h4^{km}, ML2.8/3*

ISC 06 07:20:55.9±1.1, **37.°28N**±0.°04×**43.°90E**±0.°04, **h11**^{km}±8^{km}, **n24**, σ**1^{s}01**/34, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CUKT	Cukurca	0.24	261	PG	Pg	07 21 00.3	-0.7
CUKT	Cukurca	0.24	261	*i* P	Pg	07 21 00.7	-0.3
CUKT				*i* S	Sg	07 21 05.2	+0.8
CUKT	Cukurca	0.24	261	*e*Pg	Pg	07 21 00.3	-0.7
CUKT	Cukurca	0.24	261	P	Pg	07 21 00.7	-0.3
CUKT				S	Sg	07 21 05.2	+0.8
HAKT	HAKKARI	0.32	330	*i* P	Pg	07 21 01.6	-0.8
HAKT				*i* S	Sg	07 21 06.2	-0.6
HAKT	HAKKARI	0.32	330	P	Pg	07 21 01.6	-0.8
HAKT				S	Sg	07 21 06.2	-0.6
YOVA	Hakkari_Yˆ…kse	0.43	45	*i* P	Pg	07 21 04.2	-0.3
YOVA				*i* S	Sg	07 21 10.6	+0.3
YOVA	Hakkari_Yˆ…kse	0.43	45	P	Pg	07 21 04.2	-0.3
YOVA				S	Sg	07 21 10.6	+0.3
MSL	Mosul	1.09	216	*e*Pg	Pg	07 21 16.8	0.0
	SNR=9.0						
MSL				*e*Sg	Sn	07 21 31.6	-0.4
	SNR=9.0						
SIRT	Sirnak	1.19	281	PN	Pb	07 21 18.4	-0.1
SIRT				SN	Sg	07 21 34.5	+0.3
SIRT	Sirnak	1.19	281	*e*Pn	Pb	07 21 18.4	-0.1
SIRT				*e*Sn	Sg	07 21 34.5	+0.3
SIRN	S˜–rnak	1.21	281	*i* P	Pn	07 21 18.6	-0.2
SIRN	S˜–rnak	1.21	281	P	Pn	07 21 18.6	-0.2
SRTM	Siirt_Merkez	1.72	295	*i* P	Pb	07 21 27.8	+0.2
SRTM	Siirt_Merkez	1.72	295	P	Pb	07 21 27.8	+0.2
ADCV	BITLIS_Adilcev	1.78	329	*i* P	Pg	07 21 30.2	0.0
ADCV	BITLIS_Adilcev	1.78	329	P	Pg	07 21 30.2	0.0
GURO	Guroymak-BITLI	1.95	311	PN	Pb	07 21 31.4	-0.1
GURO	Guroymak-BITLI	1.95	311	*e*Pn	Pb	07 21 31.4	-0.1
SVAN	Silvan-Diyarba	2.31	293	PN	Pn	07 21 35.9	+1.9
SVAN	Silvan-Diyarba	2.31	293	*e*Pn	Pn	07 21 35.9	+1.9
MAZI	Mazidag	2.76	275	PN	Pn	07 21 41.9	+1.8
MAZI	Mazidag	2.76	275	*e*Pn	Pn	07 21 41.9	+1.8
RTB	Rutbah	5.17	216	*e*Pn	Pn	07 22 14.0	+0.8
	SNR=3.0						
RTB				*e*Sn	Sn	07 23 09.5	-3.3
	SNR=3.0						

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*ISCJB **06** 07:22:14.6±1.4, 19.°5S±0.°6×178.°0W±0.°3, h550^{km}, mb3.5/8, Error ellipse: s-maj=84.6km s-min=14.8km az=153.5*

*IDC **06** 07:22:16.8±6.2, 19.°52S×178.°07W, h567^{km}±74^{km}, mb3.0/8, mb1 3.3/9, mb1mx2.9/52, mbtmp4.0/9, Error ellipse: s-maj=83.9km s-min=28.3km az=155.0*

ISC 06 07:22:15.4±1.5, **19.°5S**±0.°6×**178.°0W**±0.°3, **h550**^{km}, **n10**, σ**0^{s}72**/10, **mb3.5**/8, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.77	257	P	P	07 25 23.5	+0.9
	0.3nm,0.3s,baz=114,slow=18,SNR=2.5						
CTA	Charters Tower	33.60	263	P	P	07 28 10.9	+0.2
	3.4nm,0.5s,baz=94,slow=12,SNR=6.4						
STKA	Stephens Creek	38.23	243	P	P	07 28 48.3	-0.4
	1.0nm,0.5s,baz=99,slow=8.7,SNR=5.1						
WRA	Warramunga Arr	44.74	261	P	P	07 29 39.6	-0.8
	1.5nm,0.3s,baz=97,slow=7.6,SNR=32						
ASAR	Alice Springs	44.75	256	P	P	07 29 40.0	-0.5
	5.2nm,0.8s,baz=92,slow=7.6,SNR=50						
NVAR	Mina Array Bea	80.30	43	P	P	07 33 30.3	+0.5
	0.5nm,0.9s,baz=238,slow=5.2,SNR=3.6						
TXAR	Lajitas Array	86.52	57	P	P	07 34 01.3	+0.6
	0.3nm,0.7s,baz=214,slow=6.0,SNR=5.3						
ILAR	Eielson Array	87.34	13	P	P	07 34 03.1	-0.5
	0.3nm,0.5s,baz=227,slow=5.9,SNR=5.3						
PDAR	Pinedale Array	88.24	43	P	P	07 34 07.8	-0.8
	0.2nm,0.7s,baz=195,slow=2.8,SNR=2.9						
GERES	GERESS Array B	149.24	345	PKPbc	PKPbc	07 41 02.6	+0.3
	0.4nm,0.5s,baz=0.0,slow=1.5,SNR=3.7						

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*JMA **06** 07:24:27.9±0.2, 32.°52N×141.°93E, h21^{km}, M3.5*

*ISCJB **06** 07:24:29.4±1.0, 32.°49N±0.°06×141.°94E±0.°09, h39^{km}, mb3.7/4, Error ellipse: s-maj=11.4km s-min=8.1km az=145.1*

*IDC **06** 07:24:32.4±6.6, 32.°36N×141.°69E, h36^{km}±48^{km}, mb3.4/4, mb1 3.5/5, mb1mx3.2/68, mbtmp3.5/5, ML3.2/1, Error ellipse: s-maj=74.2km s-min=24.2km az=66.0*

ISC 06 07:24:31.7±1.4, **32.°47N**±0.°08×**141.°8E**±0.°1, **h39**^{km}, **n13**, σ**0^{s}88**/16, **mb3.6**/4, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	1.76	270	P	Pn	07 24 59.0	-0.7
JHJ2	Mitsune	1.82	291	P	Pn	07 24 59.8	-0.7
JHJ2				*e*S	Sn	07 25 23.6	+1.2
JHCJ	Hachijojimakas	1.82	290	P	Pn	07 24 59.6	-1.0
JHCJ				*e*S	Sn	07 25 22.3	-0.2
JHJ	Hachijo jima 2	1.85	291	Pn	Pn	07 24 59.9	-1.1
	20nm,0.3s,baz=59,slow=24,SNR=13						
JHJ				Sn	Sn	07 25 22.9	-0.3
	38nm,0.3s,baz=81,slow=21,SNR=9.2						
BSO1	Boso 1	2.29	342	P	Pn	07 25 05.8	-0.7
BSO3	Boso 3	2.58	335	P	Pn	07 25 09.2	-1.5
BSO4	Boso 4	2.81	334	*e*S	Sn	07 25 46.3	-0.3
JHU	Hanno	3.98	329	*e*S	Sn	07 26 16.3	+0.6
MJAR	Matsushiro Arr	5.05	325	Pn	Pn	07 25 45.6	+0.7
	0.9nm,0.3s,baz=160,slow=12,SNR=3.2						
MKAR	Makanchi Array	46.96	306	P	P	07 32 59.5	+0.8
	0.6nm,0.7s,baz=89,slow=8.3,SNR=5.4						
KURBB	Kurchatov Arra	49.18	311	P	P	07 33 15.9	+0.2
	0.4nm,0.7s,baz=88,slow=8.2,SNR=5.7						
WRA	Warramunga Arr	52.61	189	P	P	07 33 41.1	-0.7
	0.8nm,0.4s,baz=5.3,slow=7.6,SNR=15						
ASAR	Alice Springs	56.34	189	P	P	07 34 09.7	+0.8
	0.2nm,0.4s,baz=10,slow=8.6,SNR=4.7						

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*ISCJB **06** 07:36:40.8±0.8, 20.°67N±0.°08×144.°6E±0.°2, h200^{km}, mb3.3/8, Error ellipse: s-maj=27.3km s-min=10.6km az=168.7*

*IDC **06** 07:36:41.4±2.8, 20.°69N×144.°65E, h190^{km}±25^{km}, mb3.2/8, mb1 3.4/9, mb1mx3.2/66, mbtmp3.8/9, MS3.3/1, Ms1 3.3/1, ms1mx2.4/28, Error ellipse: s-maj=27.4km s-min=15.2km az=96.0*

ISC 06 07:36:42.4±0.9, **20.°7N**±0.°1×**144.°6E**±0.°2, **h200**^{km}, **n9**, σ**0^{s}80**/10, **mb3.5**/8, **Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	6.72	341	P	Pn	07 38 19.3	+0.3
	2.9nm,0.3s,baz=112,slow=24,SNR=3.3						
JCJ				S	Sn	07 39 35.0	-0.7
	2.9nm,0.3s,baz=295,slow=23,SNR=3.6						
WRA	Warramunga Arr	41.63	195	P	P	07 44 10.9	-0.3
	0.4nm,0.6s,baz=17,slow=9.0,SNR=5.4						
ASAR	Alice Springs	45.32	194	P	P	07 44 40.2	-0.4
	0.4nm,0.7s,baz=11,slow=7.5,SNR=3.9						
ASAR				LR	LR	08 04 22.2	
	comp=Z,31nm,18.4s,baz=331,slow=37						
MKAR	Makanchi Array	56.32	313	P	P	07 46 03.6	+1.1
	0.7nm,0.8s,baz=90,slow=10,SNR=6.7						
KURBB	Kurchatov Arra	59.13	317	P	P	07 46 22.5	+0.6
	1.4nm,0.8s,baz=93,slow=7.6,SNR=13						
ILAR	Eielson Array	62.33	27	P	P	07 46 42.6	-0.7
	1.1nm,1.1s,baz=236,slow=5.4,SNR=6.6						
YKA	Yellowknife Ar	76.72	28	P	P	07 48 11.3	+0.1
	0.6nm,0.7s,baz=292,slow=5.5,SNR=4.5						
NVAR	Mina Array Bea	82.73	52	P	P	07 48 45.2	+0.9
	0.8nm,0.7s,baz=269,slow=5.1,SNR=7.6						
FINES	FINESS Array B	84.62	335	P	P	07 48 52.2	-0.9
	0.8nm,0.5s,baz=46,slow=4.0,SNR=5.1						

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*ISCJB **06** 08:04:00.9±0.6, 67.°55N±0.°06×167.°3W±0.°1, h10^{km}, mb3.8/9, MS2.7/1, Error ellipse: s-maj=8.3km s-min=6.7km az=9.8*

*NEIC **06** 08:04:02.4±0.0, 67.°52N×167.°55W, h20^{km}, ML3.7(AEIC), After AEIC.*

*IDC **06** 08:04:02.5±0.8, 68.°19N×167.°27W, h0^{km}, mb3.7/9, mb1 4.0/12, mb1mx3.6/84, mbtmp3.8/12, ML3.5/3, MS2.9/1, Ms1 2.9/1, ms1mx2.3/76, Error ellipse: s-maj=33.6km s-min=13.8km az=21.0*

ISC 06 08:04:02.4±0.7, **67.°63N**±0.°07×**167.°28W**±0.°06, **h10**^{km}, **n29**, σ**2^{s}01**/32, **mb3.9**/9, **Bering Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RDOG	Red Dog Mine	1.71	73	P	Pn	08 04 33.1	+0.8
RDOG				S	Sb	08 04 56.1	+0.6
ANM	Nome	3.17	165	P	Pn	08 04 50.5	-1.8
ANM				S	Sn	08 05 27.8	-2.3
IM01	Indian Mountai	5.60	101	P	Pn	08 05 25.5	-0.1
COLD	Coldfoot	6.58	86	P	Pn	08 05 40.1	+1.0
TT01	Tatalina	6.68	130	P	Pn	08 05 40.6	+0.1
TOLK	Toolik Lake Re	6.69	73	P	Pn	08 05 41.9	+1.3
PPLA	Purkeypile	7.90	120	P	Pn	08 05 57.9	+0.6
KTH	Kantishna Hill	7.90	113	P	Pn	08 05 58.0	+0.8
NEA	Nenana	7.99	104	P	Pn	08 05 59.3	+0.9
MDM	Murphy Dome	8.12	100	P	Pn	08 06 01.2	+1.1
WRH	Wood River Hil	8.41	103	P	Pn	08 06 05.3	+1.2
CCB	Clear Creek Bu	8.43	102	P	Pn	08 06 05.0	+0.6
BM3	Burnt Mountain	8.67	81	P	Pn	08 06 08.0	+0.2
ILAR	Eielson Array	8.71	100	Pn	Pn	08 06 09.0	+0.7
	0.7nm,0.3s,baz=293,slow=14,SNR=55						
ILAR				Sn	Sn	08 07 43.8	-2.6
	0.3nm,0.3s,baz=297,slow=22,SNR=4.1						
ILB	Eielson Array	8.71	100	P	Pn	08 06 09.3	+1.1
KDAK	Kodiak Island	11.91	139	Pn	Pn	08 06 55.3	+3.2
	0.2nm,0.3s,baz=103,slow=4.8,SNR=4.1						
INK	Inuvik	12.60	71	Pn	Pn	08 07 00.1	-1.2
	0.3nm,0.3s,baz=296,slow=14,SNR=8.4						
INK				Sn	Sn	08 09 14.5	-6.9
	0.1nm,0.3s,baz=203,slow=19,SNR=2.8						
INK	Inuvik	12.60	71	*e*Pn	Pn	08 07 01.3	0.0
	1.3nm,0.5s						
SEY	Seymchan	17.26	274	P	P	08 08 05.2	+0.6
	0.1nm,0.3s,baz=76,slow=10,SNR=8.2						
YKA	Yellowknife Ar	22.18	78	P	P	08 08 58.5	+0.3
	0.6nm,0.5s,baz=304,slow=9.9,SNR=5.0						
RES	Resolute Bay	22.87	41	LR	LR	08 19 45.4	
	comp=Z,26nm,19.1s,baz=110,slow=42						
PDAR	Pinedale Array	39.14	100	P	P	08 11 33.2	+3.1
	2.1nm,0.6s,baz=326,slow=6.9,SNR=13						
NVAR	Mina Array Bea	39.72	112	P	P	08 11 37.6	+2.8
	0.6nm,0.7s,baz=314,slow=6.5,SNR=7.9						
SONM	Songino Array	45.64	290	P	P	08 12 24.0	+1.3
	1.1nm,0.8s,baz=43,slow=6.7,SNR=5.6						
KURBB	Kurchatov Arra	52.25	313	P	P	08 13 12.7	-0.5
	0.9nm,0.7s,baz=30,slow=7.4,SNR=5.9						
TXAR	Lajitas Array	53.21	102	P	P	08 13 22.4	+1.8
	1.2nm,0.8s,baz=330,slow=5.6,SNR=12						
MKAR	Makanchi Array	54.59	308	P	P	08 13 29.6	-0.9
	0.3nm,0.6s,baz=52,slow=7.5,SNR=2.6						
AKASG	Malin Array Be	61.34	348	P	P	08 14 14.8	-2.9
	0.5nm,0.4s,baz=11,slow=6.6,SNR=5.2						
CMAR	Chiang Mai Arr	74.53	281	P	P	08 15 40.6	-0.4
	0.8nm,0.3s,baz=356,slow=6.5,SNR=4.5						

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*ISCJB **06** 08:11:02.7±0.7, 77.°7N±0.°1×126.°9E±0.°5, h10^{km}, mb3.5/9, Error ellipse: s-maj=17.1km s-min=13.0km az=144.9*

*IDC **06** 08:11:03.3±0.9, 77.°81N×126.°79E, h0^{km}, mb3.5/9, mb1 3.8/10, mb1mx3.5/81, mbtmp3.6/10, ML6.1/1, Error ellipse: s-maj=29.8km s-min=16.1km az=154.0*

ISC 06 08:11:04.4±0.8, **77.°64N**±0.°09×**127.°0E**±0.°1, **h10**^{km}, **n10**, σ**1^{s}38**/11, **mb3.6**/9, **Laptev Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIXI	Tiksi	6.05	174	Pn	Pn	08 12 35.0	+1.3
	1.8nm,0.3s,baz=350,slow=12,SNR=11						
TIXI				Sn	Sn	08 13 40.5	-2.4
	2.6nm,0.3s,baz=111,slow=23,SNR=12						
ARCES	ARCESS Array B	25.97	308	P	P	08 16 36.1	-0.4
	5.5nm,0.9s,baz=36,slow=11,SNR=5.5						
ILAR	Eielson Array	27.30	69	P	P	08 16 50.0	+1.4
	0.4nm,0.8s,baz=327,slow=7.7,SNR=5.3						
BVAR	Borovoye Array	31.81	253	P	P	08 17 28.5	-0.1
	0.3nm,0.4s,baz=21,slow=8.5,SNR=3.6						
KURBB	Kurchatov Arra	32.46	243	P	P	08 17 35.3	+0.9
	0.2nm,0.3s,baz=23,slow=8.7,SNR=2.6						
YKA	Yellowknife Ar	35.18	45	P	P	08 17 56.2	-1.6
	0.4nm,0.8s,baz=348,slow=5.7,SNR=3.5						
MKAR	Makanchi Array	35.45	236	P	P	08 18 01.4	+1.1
	0.2nm,0.6s,baz=0.1,slow=8.0,SNR=4.8						
AKASG	Malin Array Be	42.69	292	P	P	08 19 00.1	-0.6
	0.2nm,0.3s,baz=19,slow=9.0,SNR=3.1						
NVAR	Mina Array Bea	57.73	58	P	P	08 20 56.1	+1.0
	0.4nm,0.7s,baz=353,slow=5.1,SNR=4.6						
TXAR	Lajitas Array	69.10	46	P	P	08 22 09.8	-0.5
	0.6nm,1.0s,baz=354,slow=4.7,SNR=5.9						

NNC 06 08:34:13.2±2.8, **53.°45N**×**87.°64E**, **h0**^{km}, **mb3.8**, **mpv3.5**, **8C-4D**, **Error ellipse: s-maj=24.0km s-min=11.7km az=59.0**, **Suspected Mining explosion.**, **Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	1.75	288	⇓Pn	Pn	08 34 43.6	-1.2
	8.7nm,0.5s						
ZAA0				⇑Sn	Sg	08 35 09.2	-0.2
	47nm,0.9s						
KURK	Kurchatov	6.20	247	⇓Pn	Pn	08 35 47.2	+1.3
	3.3nm,0.8s						
KURK				⇑Lg	Lg	08 37 28.6	
	8.7nm,0.8s						
KURBB	Kurchatov Arra	6.29	247	⇑Pn	Pn	08 35 48.0	+0.7
	5.5nm,0.6s						
KURBB				⇑Sn	Sn	08 36 58.8	-1.0
	6.2nm,0.7s						
KURBB				⇑Lg	Lg	08 37 30.7	
	18nm,1.0s						
MK31	Makanchi Array	7.50	209	⇓Pn	Pn	08 36 05.8	+2.0
	1.1nm,0.5s,baz=29,slow=13,SNR=18						
MK31				⇑Sn	Sn	08 37 30.8	+1.3
	4.4nm,1.1s,baz=32,slow=31,SNR=5.4						
MK31				⇑Lg	Lg	08 38 09.2	
	9.1nm,1.2s,baz=32,slow=31,SNR=5.4						
MAKZ	Makanchi	7.58	211	⇓Pn	Pn	08 36 06.9	+1.9
	1.2nm,0.6s						
MAKZ				⇑Lg	Lg	08 38 10.2	
	4.9nm,1.1s						

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*ISCJB **06** 08:49:16.6±0.7, 35.°48N±0.°03×23.°43E±0.°03, h9^{km}±4^{km}, mb3.3/3, Error ellipse: s-maj=6.5km s-min=2.8km az=39.2*

*ATH **06** 08:49:16.6, 35.°50N×23.°43E, h20^{km}, ML3.4/14, Error ellipse: s-maj=1.6km s-min=0.5km az=224.0*

*THE **06** 08:49:16.8, 35.°49N×23.°44E, h3^{km}±1^{km}, ML3.4/9, Error ellipse: s-maj=1.5km s-min=0.5km az=191.0*

*CSEM **06** 08:49:17.5±0.2, 35.°48N×23.°46E, h10^{km}, ML3.4, Error ellipse: s-maj=5.9km s-min=2.2km az=38.0*

*IDC **06** 08:49:21.1±2.3, 35.°17N×23.°73E, h60^{km}±23^{km}, mb3.2/3, mb1 3.3/4, mb1mx3.0/56, mbtmp3.5/4, ML3.7/1, Error ellipse: s-maj=50.6km s-min=22.9km az=143.0*

ISC 06 08:49:16.0±1.1, **35.°44N**±0.°03×**23.°39E**±0.°03, **h11**^{km}±7^{km}, **n124**, σ**1^{s}17**/160, **mb3.5**/3, **Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANKY	Antikythira Is	0.44	350	P	Pg	08 49 25.0	+0.4
ANKY				AML	AML	08 49 31.4	
	comp=N,16936µm,0.4s						
ANKY				S	Sb	08 49 31.6	-0.6
ANKY				AML	AML	08 49 32.7	
	comp=E,21269µm,0.5s						
ANKY	Antikythira Is	0.44	350	P	Pg	08 49 24.8	+0.2
ANKY				S	Sg	08 49 30.3	-0.1
ANKY	Antikythira Is	0.44	350	P	Pg	08 49 24.8	+0.2
ANKY				S	Sg	08 49 30.3	-0.1
IMMV	Iera Moni Meta	0.48	87	P	Pg	08 49 25.9	+0.5
IMMV				S	Sg	08 49 32.0	+0.2
IMMV				AML	AML	08 49 32.4	
	comp=N,22791µm,0.2s						
IMMV				AML	AML	08 49 33.3	
	comp=E,16209µm,0.4s						
IMMV	Iera Moni Meta	0.48	87	P	Pg	08 49 25.7	+0.3
IMMV				S	Sg	08 49 32.0	+0.2
IMMV	Iera Moni Meta	0.48	87	P	Pg	08 49 25.7	+0.3
IMMV				S	Sg	08 49 32.0	+0.2
CHAN	Chania	0.54	81	P	Pg	08 49 26.7	+0.3
CHAN				S	Sg	08 49 33.2	-0.3
CHAN	Chania	0.54	81	P	Pg	08 49 26.7	+0.3
CHAN				S	Sg	08 49 33.2	-0.3
VAM	Vamos	0.66	92	P	Pg	08 49 28.8	0.0
VAM				S	Sb	08 49 39.6	+0.9
VAM				AML	AML	08 49 40.6	
	comp=E,9624µm,0.4s						
VAM				AML	AML	08 49 41.0	
	comp=N,10265µm,0.3s						
VAM	Vamos	0.66	92	P	Pg	08 49 28.7	0.0
VAM				S	Sb	08 49 38.1	-0.6
VAM	Vamos	0.66	92	P	Pg	08 49 28.9	+0.1
VAM				S	Sb	08 49 38.1	-0.6
GVDS	Gavdos	0.82	136	P	Pg	08 49 32.0	+0.1
GVDS	Gavdos	0.82	136	P	Pg	08 49 32.0	+0.1
GVD	Gavdhos	0.82	136	P	Pg	08 49 32.1	+0.3
GVD				S	Sn	08 49 45.6	-0.1
GVD				AML	AML	08 49 49.1	
	comp=N,11974µm,0.3s						
GVD				AML	AML	08 49 54.1	
	comp=E,11820µm,0.3s						
GVD	Gavdhos	0.82	136	P	Pb	08 49 32.4	+0.1
GVD				S	Sn	08 49 45.2	-0.4
GVD	Gavdhos	0.82	136	P	Pb	08 49 32.6	+0.3
GVD				S	Sn	08 49 45.2	-0.4
KYTH	Kithira	0.87	341	P	Pg	08 49 32.3	-0.5
KYTH				S	Sg	08 49 43.3	-1.0
KYTH				AML	AML	08 49 46.6	
	comp=N,6039µm,0.4s						
KYTH				AML	AML	08 49 47.2	
	comp=E,6977µm,0.4s						
KYTH	Kithira	0.87	341	P	Pg	08 49 32.5	-0.4
KYTH				S	Sg	08 49 44.4	+0.1
KTHR	Kythira	0.88	339	P	Pg	08 49 32.4	-0.6
KTHR	Kythira	0.88	339	P	Pg	08 49 32.4	-0.6
PRNS	Prines Rethymn	0.91	94	P	Pg	08 49 33.1	-0.4
PRNS				S	Sg	08 49 44.1	-1.2
PRNS	Prines Rethymn	0.91	94	P	Pg	08 49 33.1	-0.4
PRNS				S	Sg	08 49 44.1	-1.2
IDI	Anoyia	1.23	96	P	Pn	08 49 38.7	-0.5
	comp=E,90nm,0.3s,baz=264,slow=9.2,SNR=354						
SIVA	Sivas	1.23	109	P	Pn	08 49 38.2	-1.0
SIVA				S	Sn	08 49 57.2	+1.4
SIVA				AML	AML	08 50 02.2	
	comp=E,5912µm,0.6s						
SIVA				AML	AML	08 50 10.2	
	comp=N,2819µm,0.3s						
SIVA	Sivas	1.23	109	P	Pn	08 49 38.6	-0.5
SIVA	Sivas	1.23	109	P	Pn	08 49 39.0	-0.1
SIVA				S	Sn	08 49 57.0	+1.3
VLI	Veliai	1.33	344	P	Pb	08 49 41.1	+0.2
VLI				S	Sg	08 49 59.2	+0.3
VLI				AML	AML	08 50 05.6	
	comp=E,1366µm,0.5s						
VLI				AML	AML	08 50 08.5	
	comp=N,2228µm,0.7s						
VLI	Veliai	1.33	344	P	Pn	08 49 40.4	-0.1
VLI				S	Sn	08 49 58.3	+0.1
VLI	Veliai	1.33	344	P	Pb	08 49 41.0	0.0
VLI				S	Sn	08 49 58.3	+0.1
IACM	Heraklion	1.38	95	P	Pb	08 49 41.9	+0.2
IACM	Heraklion	1.38	95	P	Pb	08 49 42.0	+0.2
MHLO	Agia Marina, M	1.49	33	P	Pn	08 49 42.6	-0.2
MHLO				S	Sb	08 50 03.4	+0.7
MHLO	Agia Marina, M	1.49	33	P	Pn	08 49 42.5	-0.2
MHLO				S	Sb	08 50 03.1	+0.4
MHLO	Agia Marina, M	1.49	33	P	Pn	08 49 43.0	+0.3
MHLO				S	Sb	08 50 03.1	+0.4
DYR	Agios Nikonas	1.58	327	P	Pb	08 49 45.8	+0.6
DYR				AML	AML	08 50 19.0	
	comp=N,900µm,1.0s						
DYR				AML	AML	08 50 19.8	
	comp=E,1161µm,1.6s						
DYR	Agios Nikonas	1.58	327	P	Pb	08 49 45.2	0.0
DYR				S	Sb	08 50 05.3	+0.2
DYR	Agios Nikonas	1.58	327	P	Pb	08 49 45.2	0.0
DYR				S	Sb	08 50 05.3	+0.2
LAST	Lasithi	1.73	99	P	Pb	08 49 47.9	+0.2
LAST				AML	AML	08 50 18.9	
	comp=E,793µm,0.4s						
LAST				AML	AML	08 50 19.4	
	comp=N,1489µm,0.4s						
LAST	Lasithi	1.73	99	P	Pb	08 49 47.7	-0.1
THR5	Thira Island,	1.86	58	P	Pn	08 49 48.2	+0.4
THR5	Thira Island,	1.86	58	P	Pn	08 49 48.2	+0.4
CMBO	Columbo, Santo	1.93	57	P	Pn	08 49 48.9	+0.2
CMBO				S	Sb	08 50 14.6	-0.7
CMBO				AML	AML	08 50 19.6	
	comp=N,4068µm,0.5s						
CMBO				AML	AML	08 50 19.9	
	comp=E,3413µm,0.5s						
CMBO	Columbo, Santo	1.93	57	P	Pn	08 49 49.3	+0.6
CMBO				S	Sb	08 50 14.2	-1.1
KRND	KRANIDI	1.95	354	P	Pn	08 49 50.2	+1.1
KRND				S	Sn	08 50 13.4	-0.1
KRND				AML	AML	08 50 27.3	
	comp=E,1006µm,0.9s						
KRND				AML	AML	08 50 28.9	
	comp=N,937µm,0.4s						
KRND	KRANIDI	1.95	354	P	Pn	08 49 49.7	+0.7
KRND				S	Sn	08 50 13.8	+0.3
KRND	KRANIDI	1.95	354	P	Pn	08 49 50.1	+1.1
KRND				S	Sn	08 50 13.9	+0.4
PYL	PYLOS	1.98	318	P	Pn	08 49 49.4	+0.1
PYL	PYLOS	1.98	318	P	Pn	08 49 50.4	+1.0
PYL	PYLOS	1.98	318	P	Pn	08 49 50.1	+0.7
DID	Didima	2.07	357	P	Pn	08 49 50.7	0.0
DID				S	Sn	08 50 17.8	+1.3
DID				AML	AML	08 50 28.0	
	comp=N,760µm,0.4s						
DID				AML	AML	08 50 28.5	
	comp=E,765µm,0.4s						
DID	Didima	2.07	357	P	Pn	08 49 51.1	+0.4
DID	Didima	2.07	357	P	Pn	08 49 51.2	+0.5
DID				S	Sn	08 50 17.5	+1.0
VLX	Vlachokerasia	2.10	337	P	Pn	08 49 51.2	+0.1
VLX	Vlachokerasia	2.10	337	P	Pn	08 49 51.7	+0.6
ITM	Ithomi	2.10	326	P	Pb	08 49 54.4	+0.2
ITM	Ithomi	2.10	326	P	Pb	08 49 53.4	-0.8
ZKR	Zakros	2.33	97	P	Pb	08 49 58.1	+0.1
ZKR	Zakros	2.33	97	P	Pb	08 49 57.0	-1.0
VLY	Voula,Athens	2.43	7	P	Pn	08 49 55.7	0.0
VLY	Voula,Athens	2.43	7	P	Pn	08 49 56.2	+0.6
AMT	Artemida-Makis	2.49	328	P	Pb	08 49 59.3	-1.5
AMT	Artemida-Makis	2.49	328	P	Pn	08 49 58.7	+2.2
LOUT	Loutraki	2.57	353	P	Pn	08 49 59.0	+1.5
LOUT	Loutraki	2.57	353	P	Pn	08 49 58.9	+1.4
LTK	Loutraki	2.60	353	P	Pn	08 49 59.4	+1.4
LTK				AML	AML	08 50 35.9	
	comp=E,392µm,0.7s						
LTK				AML	AML	08 50 43.4	
	comp=N,405µm,0.6s						
LTK	Loutraki	2.60	353	P	Pn	08 49 59.3	+1.3
GUR	Goura	2.63	342	P	Pb	08 50 01.8	-1.4
GUR	Goura	2.63	342	P	Pn	08 50 00.8	+2.3
PTL	Penteli	2.63	8	P	Pn	08 49 58.4	-0.1
PTL	Penteli	2.63	8	P	Pn	08 49 58.9	+0.4
THAL	Thalero	2.66	347	P	Pn	08 50 00.4	+1.6
THAL	Thalero	2.66	347	P	Pn	08 50 00.2	+1.4
DION	Dionisos Attik	2.67	9	P	Pn	08 49 57.7	-1.3
DION				S	Sn	08 50 30.7	-0.6
DION				AML	AML	08 50 38.3	
	comp=N,420µm,0.5s						
DION				AML	AML	08 50 39.0	
	comp=E,338µm,0.7s						
DION	Dionisos Attik	2.67	9	P	Pn	08 49 58.8	-0.2
DION				S	Sn	08 50 31.2	-0.1
KARY	Karystos	2.72	18	P	Pn	08 49 58.8	-0.8
KARY	Karystos	2.72	18	P	Pn	08 49 59.8	+0.2
KLV	Kalavryta, Ach	2.79	339	P	Pb	08 50 04.3	-1.5
KLV	Kalavryta, Ach	2.79	339	P	Pn	08 50 03.1	+2.5
DSF	Desfina	3.05	347	P	Pn	08 50 04.2	+0.1
DSF	Desfina	3.05	347	P	Pn	08 50 04.9	+0.7
KARP	Karpathos	3.08	87	P	Pn	08 50 05.6	+1.1
KARP	Karpathos	3.08	87	P	Pn	08 50 05.9	+1.4
TRIZ	Trizonia	3.11	340	P	Pn	08 50 07.9	+3.0
TRIZ	Trizonia	3.11	340	P	Pn	08 50 07.2	+2.3
SERG	Sergoula	3.16	341	P	Pn	08 50 08.1	+2.4
SERG	Sergoula	3.16	341	P	Pn	08 50 07.6	+2.0
EFP	Efpalio	3.21	339	P	Pn	08 50 09.3	+3.0
EFP	Efpalio	3.21	339	P	Pn	08 50 08.6	+2.2
LKR	Lokris	3.22	355	P	Pn	08 50 06.2	-0.3
LKR	Lokris	3.22	355	P	Pn	08 50 07.0	+0.5
ANX	Ano Chora	3.36	340	P	Pn	08 50 10.8	+2.3
ANX	Ano Chora	3.36	340	P	Pn	08 50 10.4	+1.9
KFL	Anninata	3.39	323	P	Pn	08 50 09.9	+1.1
KFL	Anninata	3.39	323	P	Pn	08 50 10.3	+1.5

PVO	Paravola	3.51	335	P	Pn	08 50 13.3	+2.9
PVO	Paravola	3.51	335	P	Pn	08 50 12.7	+2.3
VLS	Valsamata	3.54	321	P	Pn	08 50 11.2	+0.3
VLS	Valsamata	3.54	321	P	Pn	08 50 12.0	+1.1
SMG	Samos	3.58	50	P	Pn	08 50 12.9	+1.4
SMG	Samos	3.58	50	P	Pn	08 50 12.8	+1.4
PDO	Prodromos	3.62	331	P	Pn	08 50 15.1	+3.2
PDO	Prodromos	3.62	331	P	Pn	08 50 14.4	+2.5
CHOS	Chios island	3.64	35	P	Pn	08 50 12.5	+0.3
CHOS	Chios island	3.64	35	P	Pn	08 50 13.0	+0.7
AGG	Agios Georgios	3.68	347	P	Pn	08 50 15.1	+2.2
AGG	Agios Georgios	3.68	347	P	Pn	08 50 14.7	+1.9
EVR	Evrytania	3.70	340	P	Pn	08 50 14.1	+1.0
EVR	Evrytania	3.70	340	P	Pn	08 50 14.4	+1.3
XOR	Xorichti	3.93	358	P	Pn	08 50 16.1	-0.1
XOR	Xorichti	3.93	358	P	Pn	08 50 16.9	+0.7
LKD2	Lefkada island	4.00	328	P	Pn	08 50 19.8	+2.6
LKD2	Lefkada island	4.00	328	P	Pn	08 50 19.5	+2.3
THL	Klokotos Trika	4.26	346	P	Pn	08 50 22.0	+1.2
THL	Klokotos Trika	4.26	346	P	Pn	08 50 22.3	+1.5
PAIG	Paliouri	4.49	3	P	Pn	08 50 24.0	+0.1
PAIG	Paliouri	4.49	3	P	Pn	08 50 24.9	+1.0
KSL	Kastellorizon	5.08	80	P	Pn	08 50 33.4	+1.3
KSL	Kastellorizon	5.08	80	P	Pn	08 50 33.9	+1.9
BRTR	Keskin Array B	9.19	59	P	Pn	08 51 33.0	+4.4
	comp=E,0.1nm,0.3s,baz=244,slow=16,SNR=7.4						
GERES	GERESS Array B	15.19	335	P	P	08 52 56.5	+1.0
	comp=E,0.1nm,0.3s,baz=144,slow=13,SNR=2.6						
BRG	Berggiesshubel	16.88	339	SG	S	08 56 41.6	+12
	comp=E,3.5nm,0.7s						
TORD	Torodi Ar. Bea	29.59	227	P	P	08 55 20.8	-0.3
	comp=E,0.6nm,0.6s,baz=39,slow=8.5						
KURBB	Kurchatov Arra	42.07	51	P	P	08 57 06.4	-1.2
	comp=E,0.1nm,0.3s,baz=276,slow=8.3,SNR=3.2						
MKAR	Makanchi Array	44.83	57	P	P	08 57 28.4	-1.5
	comp=E,0.4nm,0.6s,baz=276,slow=5.7,SNR=3.3						

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*ISCJB **06** 08:55:02.6±0.7, 10°.82N±0°.09×69°.20W±0°.05, h12^{km}, mb3.3/3, Error ellipse: s-maj=13.2km s-min=6.7km az=160.5*

*IDC **06** 08:55:02.6±1.1, 10°.78N×69°.14W, h0^{km}, mb3.3/3, mb1 3.6/6, mb1mx3.4/51, mbtmp3.5/6, ML2.7/3, Error ellipse: s-maj=27.3km s-min=20.1km az=159.0*

ISC 06 08:55:04.5±1.0, 10°.8N±0°.1×69°.22W±0°.07, h12^{km}, n11, σ0.^{s}82/14, mb3.5/3, Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDV	Santo Domingo	2.34	216	Pn	Pn	08 55 43.3	+0.3
	21nm,0.3s,baz=46,slow=12,SNR=31						
SDV				Sn	Sn	08 56 12.5	+0.6
	14nm,0.3s,baz=282,slow=9.2,SNR=7.3						
SDV	Santo Domingo	2.34	216	*e*P	Pn	08 55 43.2	+0.1
SDV				*e*S	Sn	08 56 11.4	-0.5
SDV				*i*		08 56 19.5	
	comp=Z,17nm,0.5s						
CODC	Agustˆ›n Codaz	4.24	259	*e*P	Pn	08 56 09.1	+0.2
PCRV	Puerto La Cruz	4.55	97	Pn	Pn	08 56 13.3	0.0
	comp=Z,1.2nm,0.3s,baz=308,slow=4.8,SNR=7.1						
PCRV				Sn	Sn	08 57 06.0	-0.3
	comp=Z,3.1nm,0.3s,baz=21,slow=11,SNR=5.0						
OCAC	Ocana	4.77	238	*e*P	Pn	08 56 15.9	-0.5
PAMC	Pamplona, Colo	4.85	225	*e*P	Pn	08 56 17.6	-0.1
PTBC	PUERTO BERRIO,	6.67	231	*e*P	Pn	08 56 40.5	-2.0
ROSC	El Rosal	7.77	221	Pn	Pn	08 56 58.8	+0.9
	comp=Z,1.1nm,0.3s,baz=202,slow=7.4,SNR=7.4						
TXAR	Lajitas Array	37.04	305	P	P	09 02 15.8	+1.1
	comp=Z,0.1nm,0.4s,baz=126,slow=9.3,SNR=4.6						
YKA	Yellowknife Ar	60.98	338	P	P	09 05 17.1	-0.4
	comp=Z,0.4nm,0.7s,baz=122,slow=7.1,SNR=3.8						
TORD	Torodi Ar. Bea	69.21	80	P	P	09 06 11.3	-0.5
	comp=Z,0.3nm,0.8s,baz=292,slow=7.6						

MEX 06 09:01:21.3±1.2, 17°.43N×94°.81W, h146^{km}±9^{km}, MD3.8, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.35	192	*i* P	Pn	09 01 40.5	-1.1
CMIG				*i* S	Sn	09 01 54.8	-2.1
TUIG	Tuzandepetl	0.70	31	*i* P	Pn	09 01 41.9	-1.5
TUIG				*i* S	Sn	09 01 57.8	-2.3
TGIG		1.74	112	*e*P	Pn	09 01 52.0	-1.2
TGIG				*i* S	Sn	09 02 15.1	-2.5
VHO	Vista Hermosa	1.88	259	*e*P	Pn	09 01 54.7	-0.3
VHO				*i* S	Sn	09 02 18.9	-1.8
HUIG	Huatulco	2.08	217	*e*P	Pn	09 01 54.6	-2.5
HUIG				*e*S	Sn	09 02 22.8	-1.8
PCIG		2.30	138	*e*P	Pn	09 01 59.3	-0.5
PCIG				*e*S	Sn	09 02 28.2	-1.0
TPIG	Tehuac#an	2.62	292	*i* P	Pn	09 02 02.7	-1.2
TPIG				*i* S	Sn	09 02 35.1	-1.6
PNIG	Pinotepa	3.34	252	*e*P	Pn	09 02 10.5	-2.5
PNIG				*i* S	Sn	09 02 51.5	-1.4
TLIG	Tlapa	3.59	273	*e*P	Pn	09 02 15.1	-1.1
TLIG				*i* S	Sn	09 02 57.5	-1.4

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*IDC **06** 09:04:13.3±5.0, 20°.39N×124°.70E, h0^{km}, mb3.5/3, mb1 3.7/3, mb1mx3.3/67, mbtmp3.5/3, Error ellipse: s-maj=334.6km s-min=27.6km az=62.0*

JMA 06 09:03:17.1±0.2, 24°.81N×122°.88E, h33^{km}±4^{km}, M2.0, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.36	171	P	Pb	09 03 25.3	-0.4
JYNG				*e*S	Sb	09 03 31.2	-0.3
YOJ	Yonaguni jima	0.37	161	P	Pb	09 03 25.5	-0.2
YOJ				*e*S	Sb	09 03 31.8	+0.2
IRIF	Iriomote-Funau	0.91	121	P	Pn	09 03 33.5	0.0
HATJ	Hateruma jima	1.13	131	P	Pn	09 03 36.6	0.0
JKRS	Kuro-shima	1.18	119	P	Pb	09 03 38.1	-0.8
JIJ	Ishigaki jima	1.23	111	P	Pn	09 03 38.9	+0.9
JIJ				*e*S	Sn	09 03 54.2	+0.7
JISG	Ishigakijimahi	1.32	99	P	Pn	09 03 39.9	+0.7
JTJ	Tarama	1.67	95	P	Pb	09 03 45.6	-1.6
WRA	Warramunga Arr	45.86	165	P	P	09 11 59.2	+23
	1.2nm,0.8s,baz=347,slow=8.7,SNR=4.9						
ASAR	Alice Springs	49.36	167	P	P	09 12 28.5	+25
	0.4nm,0.7s,baz=352,slow=13,SNR=2.7						

MEX 06 09:09:00.3±0.5, 15°.13N×93°.14W, h72^{km}±7^{km}, MD3.8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.58	352	*i* P	Pn	09 09 12.5	-1.6
PCIG				*i* S	Sn	09 09 22.6	-1.6
CCIG	Comitan	1.50	40	*e*P	Pn	09 09 24.4	-1.2
CCIG				*i* S	Sn	09 09 42.3	-2.2
TGIG		1.64	1	*e*P	Pn	09 09 26.1	-1.2
TGIG				*e*S	Sn	09 09 45.6	-2.1

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*DDA **06** 09:16:15.0, 37°.21N×28°.18E, h7^{km}, Ml2.3, Suspected Mining explosion.*

*ISCJB **06** 09:16:15.5±0.5, 37°.22N±0°.03×28°.21E±0°.03, h0^{km}, Error ellipse: s-maj=5.0km s-min=3.3km az=31.0*

*CSEM **06** 09:16:15.5±0.3, 37°.23N×28°.20E, h1^{km}, ML1.9, Error ellipse: s-maj=6.4km s-min=4.2km az=36.0, Suspected Mining explosion.*

*ISK **06** 09:16:15.4, 37°.21N×28°.18E, h5^{km}, ML1.9/7*

ISC 06 09:16:15.6±0.9, 37°.21N±0°.03×28°.19E±0°.02, h0^{km}, n25, σ0.^{s}74/35, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	Yerkesik	0.10	136	PG	Pg	09 16 18.1	+0.5
YER				SG	Sg	09 16 20.4	+1.5
YER	Yerkesik	0.10	136	*e*Pg	Pg	09 16 18.1	+0.5
YER				*e*Sg	Sg	09 16 20.4	+1.5
MLSB	Milas	0.34	284	PG	Pg	09 16 22.3	+0.1
MLSB				SG	Sg	09 16 27.7	+1.1
MLSB	Milas	0.34	284	*e*Pg	Pg	09 16 22.3	+0.1
MLSB				*e*Sg	Sg	09 16 27.7	+1.1
TURN	Turunc	0.47	136	PG	Pg	09 16 24.4	-0.2
TURN				SG	Sg	09 16 30.9	+0.2
TURN	Turunc	0.47	136	*i* P	Pg	09 16 23.5	-1.1
TURN	Turunc	0.47	136	P	Pg	09 16 23.5	-1.1
TURN	Turunc	0.47	136	*e*Pg	Pg	09 16 24.4	-0.2
TURN				*e*Sg	Sg	09 16 30.9	+0.2
AYDN	Tasoluk	0.51	331	*i* P	Pg	09 16 25.1	-0.3
AYDN				*i* S	Sg	09 16 32.6	+0.4
DALY	Dalyan (Mu˜la	0.54	137	PG	Pg	09 16 26.4	+0.5
DALY	Dalyan (Mu˜la	0.54	137	*e*Pg	Pg	09 16 26.4	+0.5
BDRM	Kayabasi	0.61	257	*i* P	Pg	09 16 27.2	-0.2
BDRM				*i* S	Sb	09 16 38.0	-0.5
BDRM	Kayabasi	0.61	257	S	Sb	09 16 38.0	-0.5
TAVA	DENIZLI_Tavas	0.63	66	*i* P	Pg	09 16 27.2	-0.5
TAVA				*i* S	Sg	09 16 37.1	+1.3
TAVA	DENIZLI_Tavas	0.63	66	P	Pg	09 16 27.2	-0.5
TAVA				S	Sg	09 16 37.1	+1.3
DAT	Datca	0.69	226	PG	Pg	09 16 29.1	+0.3
DAT	Datca	0.69	226	*e*Pg	Pg	09 16 29.1	+0.3
AYDB	Zeytinkoy-Aydi	0.77	342	PG	Pg	09 16 30.9	+0.5
AYDB	Zeytinkoy-Aydi	0.77	342	*e*Pg	Pg	09 16 30.9	+0.5
FETY	Fethiye	0.92	129	PG	Pg	09 16 33.6	+0.4
FETY	Fethiye	0.92	129	*e*Pg	Pg	09 16 33.6	+0.4
ARG	Arkhangelos	0.99	183	PG	Pb	09 16 34.9	-0.8
ARG	Arkhangelos	0.99	183	*e*Pg	Pb	09 16 34.9	-0.8
AKAS	Kas	1.50	130	PN	Pn	09 16 43.7	-0.1
AKAS	Kas	1.50	130	*e*Pn	Pn	09 16 43.7	-0.1

IDC 06 09:52:14.9±1.5, 16°.40S×178°.58W, h0^{km}, mb4.0/6, mb1 4.3/6, mb1mx3.8/46, mbtmp4.0/6, Error ellipse: s-maj=130.5km s-min=22.3km az=154.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.23	239	P	P	09 59 45.3	+0.1
	0.8nm,0.4s,baz=81,slow=8.8,SNR=7.5						
WRA	Warramunga Arr	44.76	258	P	P	10 00 30.8	+0.2
	0.7nm,0.4s,baz=91,slow=7.2,SNR=31						
ASAR	Alice Springs	45.06	253	P	P	10 00 32.9	0.0
	7.8nm,0.6s,baz=88,slow=8.2,SNR=149						
FITZ	Fitzroy Crossi	53.13	259	P	P	10 01 33.9	-0.9
	1.5nm,0.7s,baz=101,slow=5.2,SNR=4.2						
NVAR	Mina Array Bea	78.45	44	P	P	10 04 19.2	+1.1
	0.2nm,0.4s,baz=232,slow=7.3,SNR=3.8						
TXAR	Lajitas Array	85.33	58	P	P	10 04 53.6	-0.8
	0.5nm,0.7s,baz=227,slow=5.8,SNR=7.4						

MAN 06 10:01:01.0, 18°.91N×121°.27E, h13^{km}, mb4.3, ML3.1, MS2.9, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SGCP	Mt. Cagua	0.99	132	*e*P	Pb	10 01 19.4	-0.7
APYP	Conner	1.04	181	*e*P	Pb	10 01 19.4	-1.5
APYP				*e*S	Sn	10 01 36.5	+0.7
CVP	Callao Caves	1.31	156	*e*P	Pn	10 01 24.4	-0.6
CVP				*e*S	Sg	10 01 43.1	-0.1
CAUP	Cauayan	2.02	165	*e*P	Pn	10 01 36.1	+1.3

MAN 06 10:17:57.6, 11°.27N×125°.67E, h3^{km}, mb4.1, ML2.9, MS2.6, 1D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	Borongan	0.40	325	*e*P	Pg	10 18 05.6	+0.4
BESP				*e*S	Sb	10 18 14.9	+1.2
PLP	Palo	0.69	261⇓	*e*P	Pg	10 18 11.2	+0.4
PLP				*e*S	Sg	10 18 20.7	+1.1
MSLP	Maasin	1.39	215	*e*P	Pg	10 18 28.4	+4.3
MSLP				*e*S	Sn	10 18 45.5	+2.8
CNP	Catarman	1.57	321	*e*P	Pn	10 18 26.0	-0.5
CNP				*e*S	Sb	10 18 47.8	+0.1

MEX 06 10:25:06.7±0.4, 19°.32N×104°.67W, h16^{km}±5^{km}, MD3.7, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CJM	Chamela	0.39	297	*i* P	Pg	10 25 13.6	-1.1
CJM				*e*S	Sg	10 25 18.4	-1.8
R15V		0.67	103	*i* P	Pg	10 25 17.6	-2.2
R15V				*e*S	Sg	10 25 25.5	-3.2
EZ5V		1.02	81	*e*P	Pb	10 25 22.8	-3.4
EZ5V				*e*S	Sb	10 25 35.0	-4.4
MMIG	Aquila	1.62	129	*e*P	Pn	10 25 30.8	-3.8
MMIG				*e*S	Sn	10 25 50.1	-5.1

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*CSEM **06** 10:41:17.9±0.3, 37°.28N×41°.84E, h2^{km}, ML2.3, Error ellipse: s-maj=9.0km s-min=5.2km az=19.0*

*ISN **06** 10:41:20.8±0.3, 37°.16N×42°.17E, h0^{km}, ML2.5*

ISK 06 10:41:17.8, 37°.37N×41°.81E, h5^{km}, ML2.3/8, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIRT	Sirnak	0.52	75	PG	Pb	10 41 28.7	-0.7
SIRT				SG	Sb	10 41 37.3	+0.1
SIRT	Sirnak	0.52	75	*e*Pg	Pb	10 41 28.7	-0.7
SIRT				*e*Sg	Sb	10 41 37.3	+0.1
SVAN	Silvan-Diyarba	0.92	328	PG	Pb	10 41 36.4	+0.1
SVAN				SG	Sn	10 41 50.3	-0.8
SVAN	Silvan-Diyarba	0.92	328	*e*Pg	Pb	10 41 36.4	+0.1
SVAN				*e*Sg	Sn	10 41 50.3	-0.8
MAZI	Mazidag	1.09	275	PN	Pn	10 41 39.6	-0.3
MAZI				SN	Sn	10 41 56.2	+0.8
MAZI	Mazidag	1.09	275	*e*Pn	Pn	10 41 39.6	-0.3
MAZI				*e*Sn	Sn	10 41 56.2	+0.8
GURO	Guroymak-BITLI	1.19	8	PN	Pn	10 41 41.7	+0.4
GURO	Guroymak-BITLI	1.19	8	*e*Pn	Pn	10 41 41.7	+0.4
DIY	Diyarbakir	1.36	293	*e*Pn	Pg	10 41 45.8	+1.8
DYBB	Diyarbakir	1.45	294	PN	Pg	10 41 45.8	+0.2
DYBB				SN	Sg	10 42 06.9	+2.5
SVRC	Sivrice-ELAZID	2.23	298	PN	Pb	10 41 57.4	-1.2
SVRC				SN	Sb	10 42 26.4	-0.1
SVRC	Sivrice-ELAZID	2.23	298	*e*Pn	Pb	10 41 57.4	-1.2
SVRC				*e*Sn	Sb	10 42 26.4	-0.1
URFA	Urfa	2.38	273	PN	Pn	10 41 58.9	+1.3
URFA				SN	Sb	10 42 30.5	-0.5
URFA	Urfa	2.38	273	*e*Pn	Pn	10 41 58.9	+1.3
URFA				*e*Sn	Sb	10 42 30.5	-0.5
PTK	Pertek	2.44	309	PN	Pn	10 42 00.0	+1.5
PTK	Pertek	2.44	309	*e*Pn	Pn	10 42 00.0	+1.5

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*ISCJB **06** 10:53:18.3±0.5, 32°.17N±0°.05×138°.27E±0°.08, h396^{km}, mb3.1/4, Error ellipse: s-maj=9.4km s-min=6.2km az=153.3*

*JMA **06** 10:53:18.2±0.4, 32°.10N×138°.19E, h396^{km}, M3.3*

*IDC **06** 10:53:21.2±1.2, 32°.11N×137°.97E, h365^{km}±26^{km}, mb3.0/4, mb1 3.1/6, mb1mx2.7/62, mbtmp3.7/6, Error ellipse: s-maj=70.4km s-min=14.8km az=73.0*

ISC 06 10:53:18.3±1.1, 32°.09N±0°.07×138°.26E±0°.08, h396^{km}, n26, σ1.^{s}82/29, mb3.1/4, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	1.65	51	P	Pn	10 54 13.2	+1.4
	44nm,0.3s,baz=327,slow=22,SNR=35						
JHJ				S	S	10 54 54.8	-0.2
	11nm,0.3s,baz=342,slow=20,SNR=5.3						
JHJ2	Mitsune	1.67	52	P	Pn	10 54 13.0	+1.1
TK02	Tokai 2	1.90	347	P	Pn	10 54 13.5	+0.6
TTO2	TONANKAI O.B.S	1.94	328	P	Pn	10 54 13.6	+0.5
TTO2				S	S	10 54 56.4	-1.1
TTO1	TONANKAI O.B.S	1.97	321	P	Pn	10 54 13.4	+0.2
JWZ	Kozaga	2.58	305	P	Pn	10 54 16.7	-1.1
JIE	Ise	2.64	331	P	Pn	10 54 18.3	+0.1
JWY	Kouya	3.08	314	P	Pn	10 54 21.6	-0.3
JOD2	Odawara 2	3.25	12	P	Pn	10 54 23.9	+0.7
JYN	Shimob	3.41	4	P	Pn	10 54 26.0	+1.3
BSO1	Boso 1	3.43	41	P	Pn	10 54 24.5	+0.4
BSO1				S	S	10 55 14.9	-2.7
JAI	Aioi	3.62	299	P	Pn	10 54 25.7	-0.8
JRY	Ryogami san	3.96	8	P	Pn	10 54 30.7	+1.1
JWT	Wachi	3.98	324	P	Pn	10 54 29.7	-0.1
JMN	Monobe	4.03	295	P	Pn	10 54 29.8	-0.6
JAG	Ashikaga	4.44	13	P	Pn	10 54 34.1	-0.2
JAG				S	S	10 55 31.7	-4.4
MJAR	Matsushiro Arr	4.45	360	P	Pn	10 54 35.1	+0.8
	1.1nm,0.3s,baz=175,slow=9.8,SNR=9.0						
MAT	Matsushiro	4.45	359	P	Pn	10 54 35.0	+0.6
MAT	Matsushiro	4.45	359	P	Pn	10 54 35.0	+0.6
MAT				*e*S	S	10 55 32.1	-4.1
JTO	Tosashimizu	4.67	281	P	Pn	10 54 36.2	-0.5
CBIJ	Chichi jima	6.03	144	*e*S	S	10 56 05.6	-1.3
JCJ	Chichijima	6.04	144	P	Pn	10 54 53.4	+2.2
	2.5nm,0.3s,baz=357,slow=21,SNR=7.7						
JCJ				S	S	10 56 03.9	-3.0
	12nm,0.3s,baz=135,slow=24,SNR=17						
MKAR	Makanchi Array	44.72	306	P	P	11 00 57.9	+3.8
	0.6nm,0.7s,baz=87,slow=10,SNR=6.0						
WRA	Warramunga Arr	51.87	185	P	P	11 01 53.6	+5.6
	0.3nm,0.3s,baz=0.1,slow=7.6,SNR=17						
ASAR	Alice Springs	55.59	185	P	P	11 02 20.8	+6.2
	0.4nm,0.6s,baz=14,slow=12,SNR=7.3						
FINES	FINESS Array B	71.96	332	P	P	11 04 04.5	+4.9
	0.9nm,0.4s,baz=67,slow=5.0,SNR=9.2						

MAN 06 11:17:33.6, 11°.07N×124°.63E, h58^{km}, mb3.6, ML2.3, MS1.7, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OCLP	Ormoc	0.03	226	*e*P	Pn	11 17 42.5	+0.2
OCLP				*e*S	Sn	11 17 49.0	+0.6
PLP	Palo	0.35	75⇓	*e*P	Pn	11 17 46.4	+2.5
PLP				*e*S	Sn	11 17 54.5	+3.0
CNP	Catarman	1.43	1	*e*P	Pn	11 17 57.6	+0.3
CNP				*e*S	Sn	11 18 16.9	+1.8

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*THR **06** 11:19:00.5±0.4, 26°.63N×62°.41E, h14^{km}±5^{km}, ML3.7*

*CSEM **06** 11:19:04.5±0.7, 25°.85N×62°.46E, h10^{km}, ML3.9, Error ellipse: s-maj=12.4km s-min=10.3km az=66.0*

*OMAN **06** 11:19:06.0±1.8, 25°.93N×62°.52E, h26^{km}±48^{km}, Error ellipse: s-maj=37.6km s-min=7.4km az=66.0*

*DSN **06** 11:19:09.5±1.7, 26°.04N×62°.00E, h5^{km}, ML3.9/8, Error ellipse: s-maj=48.9km s-min=14.8km az=173.0*

ISC 06 11:19:00.6±2.5, 26°.07N±0°.06×62°.8E±0°.1, h35^{km}, n44, σ2.^{s}07/65, Southwestern Pakistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHBR	Chabahar	2.18	258	*e*Pg	Pn	11 19 37.1	+2.8
CHBR				*e*Sg	Sn	11 20 03.9	+3.8
CHBR				IAML		11 20 04.6	
	comp=E,569nm,0.3s						
CHBR				IAML		11 20 09.8	
	comp=N,347nm,0.3s						
ZHSF	Zahedan	3.97	333	*e*Pg	Pn	11 20 00.0	+0.8
WSAR	Wadi Sarin	4.76	235	P	Pn	11 20 10.7	+0.9
WSAR				S	Sn	11 21 00.9	-2.9
WSAR	Wadi Sarin	4.76	235	P	Pn	11 20 10.7	+0.9
WSAR				S	Sn	11 21 00.9	-2.9
WBK	Wadi Bani Khal	4.93	227	P	Pn	11 20 12.6	+0.3
	SNR=40						
WBK				S	Sn	11 21 05.0	-3.2
WBK	Wadi Bani Khal	4.93	227	P	Pn	11 20 12.6	+0.3
	SNR=40						
WBK				S	Sn	11 21 05.0	-3.2
BIDO	Bidbid	4.98	240	P	Pn	11 20 15.0	+2.1
	SNR=16						
BIDO				S	Sn	11 21 09.1	-0.2
BIDO	Bidbid	4.98	240	P	Pn	11 20 15.0	+2.1
	SNR=16						
BIDO				S	Sn	11 21 09.1	-0.2
JLN	Jalan Bani Buh	5.01	219	P	Pn	11 20 13.0	-0.2
	SNR=17						
JLN				S	Sn	11 21 09.2	-0.7
SMDO	Samad	5.29	237	P	Pn	11 20 18.1	+0.8
	SNR=20						
SMDO				S	Sn	11 21 16.9	-0.3
SMDO	Samad	5.29	237	P	Pn	11 20 18.1	+0.8
	SNR=20						
SMDO				S	Sn	11 21 16.9	-0.3
HOQ	Hoqain	5.60	245	P	Pn	11 20 22.3	+0.8
HOQ	Hoqain	5.60	245	P	Pn	11 20 22.3	+0.8
JMDO	Jabal Madar	5.68	231	P	Pn	11 20 25.0	+2.4
	SNR=20						
JMDO				S	Sn	11 21 24.9	-1.7
JMDO	Jabal Madar	5.68	231	P	Pn	11 20 25.0	+2.4
	SNR=20						
JMDO				S	Sn	11 21 24.9	-1.7
BANOM	Banah	5.89	270	P	Pn	11 20 26.8	+1.4
	SNR=19						
BANOM				S	Sn	11 21 32.0	+0.3
BANOM	Banah	5.89	270	*i* P	Pn	11 20 27.4	+2.0
	SNR=19						
BANOM	Banah	5.89	270	P	Pn	11 20 27.4	+2.0
	SNR=19						
BANOM				S	Sn	11 21 32.0	+0.3
MDH	Madha	5.96	264	*i* P	Pn	11 20 27.6	+1.3
	SNR=5.7						
MDH	Madha	5.96	264	P	Pn	11 20 27.6	+1.3
	SNR=5.7						
MDH				S	Sn	11 21 31.0	-2.3
SHME	Shamm	6.03	271	*i* P	Pn	11 20 29.6	+2.3
	SNR=11						
SHME	Shamm	6.03	271	P	Pn	11 20 30.5	+3.2
	SNR=11						
SOHO	SOHO	6.04	253	*i* P	Pn	11 20 27.9	+0.5
	SNR=35						
SOHO	SOHO	6.04	253	P	Pn	11 20 27.9	+0.5
	SNR=35						
SOHO				S	Sn	11 21 33.5	-1.8
MSFE	Esma-Masafi	6.07	265	P	Pn	11 20 29.1	+1.2
MSFE				S	Sn	11 21 31.6	-4.6
MSFE	Esma-Masafi	6.07	265	P	Pn	11 20 29.8	+1.9
MSFE				S	Sn	11 21 35.0	-1.2
UOSS	Minazif	6.10	261	P	Pn	11 20 29.3	+1.0
UOSS				S	Sn	11 21 33.6	-3.3
UOSS	Minazif	6.10	261	*i* P	Pn	11 20 28.6	+0.3
	SNR=14						
UOSS	Minazif	6.10	261	P	Pn	11 20 29.3	+1.0
UOSS				S	Sn	11 21 33.6	-3.3
BNDS	Bandar-Abbas	6.11	284	*e*Pn	Pn	11 20 26.2	-2.4
BNDS				IAML		11 21 40.9	
	comp=N,57nm,0.2s						
BSY	Bisya	6.12	238	P	Pn	11 20 32.0	+3.4
	SNR=17						
BSY				S	Sn	11 21 38.2	+0.8
HATD	Hatta, Dubai	6.19	260	P	Pn	11 20 30.4	+0.9
HATD				S	Sn	11 21 37.0	-2.1
	SNR=11						
HATD	Hatta, Dubai	6.19	260	P	Pn	11 20 30.0	+0.5
HATD				S	Sn	11 21 35.8	-3.4
HATD	Hatta, Dubai	6.19	260	P	Pn	11 20 30.4	+0.9
HATD				S	Sn	11 21 37.0	-2.1
	SNR=11						
ASHO	Ashiyiah	6.29	259	P	Pn	11 20 32.7	+1.8
	SNR=16						
ASHO	Ashiyiah	6.29	259	P	Pn	11 20 32.2	+1.3
ASHO	Ashiyiah	6.29	259	P	Pn	11 20 32.2	+1.3
NAZ	Nazwa, Dubai	6.58	262	S	Sn	11 21 45.9	-2.7
NAZ	Nazwa, Dubai	6.58	262	S	Sn	11 21 45.9	-2.7
ALNE	Al Ain	6.74	254	P	Pn	11 20 39.8	+2.8
ASUD	Al Ashush, Dub	6.95	260	P	Pn	11 20 43.8	+3.9
THW	Thamme Wali	10.25	47	P	Pn	11 21 17.4	-7.8
SARP	Sargodha	10.39	54	P	Pn	11 21 18.8	-8.3
CEP	Cherat	11.02	43	P	Pn	11 21 28.6	-7.2

IDC 06 11:20:45.8±2.7, 54°.12N×86°.35E, h0^{km}, mb1 2.7/2, mb1mx2.6/71, mbtmp2.7/2, ML2.3/2, Error ellipse: s-maj=21.3km s-min=13.4km az=54.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.92	260	*i*		11 26 06.7	
	baz=80,slow=329,SNR=5.0						
ZALV	Zalesovo Beam	0.92	260	Pg	Pg	11 21 01.5	-1.9
	2.0nm,0.3s,baz=75,slow=16,SNR=14						
ZALV				Lg	Lg	11 21 17.0	
	1.9nm,0.3s,baz=80,slow=34,SNR=14						
ZALV				Rg	Rg	11 21 19.9	
	5.6nm,0.7s,baz=74,slow=36,SNR=12						
KURBB	Kurchatov Arra	5.93	237	Pn	Pn	11 22 16.5	+1.6
	0.0nm,0.3s,baz=54,slow=13,SNR=6.8						
MKAR	Makanchi Array	7.78	201	Pn	Pn	11 22 40.9	+0.7
	0.1nm,0.3s,baz=24,slow=13,SNR=5.2						

*CSEM **06** 11:24:21.0, 34°.94N×2°.89W, h20km, ML2.0*

CNRM 06 11:24:21.0, 34°.94N×2°.89W, h20km, ML2.0, Morocco

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MPAL	Palemas	0.90	288	P	Pn	11 24 38.9	+0.3
MPAL				S	Sn	11 24 50.5	-0.6
MDT	Midelt	2.56	214	P	Pn	11 25 01.5	0.0
MDT				S	Sn	11 25 34.5	+2.4

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*ISCJB **06** 11:40:12.8±0.4, 50°.32N±0°.03×19°.01E±0°.03, h0km, Error ellipse: s-maj=4.1km s-min=2.4km az=18.5*
*IPEC **06** 11:40:13.4±3.5, 50°.24N×19°.19E, h0km, ML2.6/4, Error ellipse: s-maj=28.9km s-min=22.1km az=165.0*
*CSEM **06** 11:40:14.3±0.2, 50°.29N×19°.02E, h2km, ML3.3/10, Error ellipse: s-maj=5.4km s-min=2.4km az=12.0*
*IDC **06** 11:40:14.6±2.8, 49°.93N×19°.32E, h0km, mb1 3.5/4, mb1mx3.2/58, mbtmp3.4/4, ML3.0/4, Error ellipse: s-maj=46.4km s-min=9.9km az=136.0*
*PRU **06** 11:40:15.0, 50°.26N×19°.02E, h0km*
*WAR **06** 11:40:15.8, 50°.21N×19°.08E, h1km, Mw2.9*

ISC 06 11:40:14.7±0.7**, 50°.23N**±0°.02×**19°.01E**±0°.02**, h0km, n63, σ1ˢ.04**/107**, 6C-7D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHZP	Chorzow	0.07	348	ePg	Pg	11 40 18.0	+2.0
CHZP				eSg	Sg	11 40 19.9	+3.0
CHZP	Chorzow	0.07	348	ePg	Pg	11 40 18.0	+2.0
CHZP				eSg	Sg	11 40 19.9	+3.0
OJC	Ojcow	0.50	90	ePg	Pg	11 40 24.6	+0.2
OJC				eSg	Sg	11 40 31.3	+0.4
OJC	Ojcow	0.50	90	ePg	Pg	11 40 24.6	+0.2
OJC				eSg	Sg	11 40 31.3	+0.4
OJC	Ojcow	0.50	90	ePg	Pg	11 40 24.6	+0.2
OJC				eSg	Sg	11 40 31.3	+0.4
RAC	Raciborz	0.55	255	eSg	Sb	11 40 36.4	+0.9
OKC	Ostrava-Krasne	0.68	236	ePG	Pb	11 40 29.0	-0.4
OKC				eSG	Sg	11 40 36.6	+0.1
OKC	Ostrava-Krasne	0.68	236	Pg	Pb	11 40 29.0	-0.4
OKC				Sg	Sg	11 40 36.6	+0.1
MORC	Moravsky Berou	1.05	245	⇓iP	Pg	11 40 35.2	+0.4
MORC	Moravsky Berou	1.05	245	ePg	Pg	11 40 35.2	+0.4
	baz=66						
MORC				S	Sb	11 40 49.9	-0.2
MORC	Moravsky Berou	1.05	245	ePG	Pg	11 40 35.2	+0.4
MORC				eSG	Sb	11 40 49.9	-0.2
MORC	Moravsky Berou	1.05	245	ePg	Pg	11 40 35.2	+0.4
	baz=66						
MORC				eSg	Sb	11 40 49.9	-0.2
	88nm,0.4s,baz=66						
LANS	Liptovska Anna	1.11	165	ePG	Pg	11 40 36.5	+0.5
LANS				eSG	Sb	11 40 51.5	-0.4
LANS	Liptovska Anna	1.11	165	ePg	Pg	11 40 36.5	+0.5
LANS				eSg	Sb	11 40 51.5	-0.4
NIE	Niedzica	1.16	134	ePg	Pb	11 40 37.3	-0.3
NIE				eSg	Sb	11 40 53.3	+0.1
NIE	Niedzica	1.16	134	ePg	Pb	11 40 37.3	-0.3
NIE				eSg	Sb	11 40 53.3	+0.1
NIE	Niedzica	1.16	134	ePg	Pb	11 40 37.3	-0.3
NIE				eSg	Sb	11 40 53.3	+0.1
KRLC	Kraliky	1.44	265	ePG	Pn	11 40 41.9	-0.2
KRLC				eSG	Sb	11 41 01.6	+0.2
	comp=Z,12nm,0.3s						
KRLC	Kraliky	1.44	265	Pg	Pn	11 40 41.9	-0.2
KRLC				Sg	Sb	11 41 01.6	+0.2
	12nm,0.3s						
JAVC	Velka Javorina	1.62	213	ePn	Pn	11 40 45.2	+0.6
JAVC				eSg	Sg	11 41 09.3	+2.5
	56nm,0.7s						
JAVC	Velka Javorina	1.62	213	ePN	Pn	11 40 45.2	+0.6
JAVC				eSG	Sg	11 41 09.4	+2.6
JAVC	Velka Javorina	1.62	213	eSg	Sg	11 41 09.3	+2.5
	56nm,0.7s						
DPC	Dobruska-Polom	1.73	275	ePG	Pn	11 40 46.3	+0.2
DPC				eSG	Sg	11 41 10.9	+0.6
	comp=Z,33nm,0.4s						
DPC	Dobruska-Polom	1.73	275	Pg	Pn	11 40 46.3	+0.2
DPC				Sg	Sg	11 41 10.9	+0.6
	33nm,0.4s						
VYHS	Vyhne	1.74	184	ePN	Pn	11 40 45.7	-0.4
VYHS				eSN	Sn	11 41 08.6	-0.4
VYHS				eLG	Lg	11 41 11.5	
VYHS	Vyhne	1.74	184	ePg	Pn	11 40 45.7	-0.4
VYHS				eSn	Sn	11 41 08.6	-0.4
VRAC	Vranov	1.82	241	Pn	Pn	11 40 47.6	+0.4
	13nm,0.3s,baz=56,slow=14,SNR=66						
VRAC				Lg	Lg	11 41 13.3	
	12nm,0.3s,baz=140,slow=21,SNR=15						
VRAC	Vranov	1.82	241	⇓iP	Pn	11 40 47.6	+0.4
VRAC	Vranov	1.82	241	⇓iP	Pn	11 40 47.6	+0.4
VRAC				S	Sb	11 41 12.1	0.0
VRAC				eSg	Sg	11 41 13.3	+0.2
	25nm,0.3s,baz=60						
VRAC	Vranov	1.82	241	ePN	Pn	11 40 47.7	+0.4
VRAC				eSG	Sg	11 41 13.3	+0.2
VRAC	Vranov	1.82	241	ePn	Pn	11 40 47.6	+0.4
	baz=60						
VRAC				eSg	Sg	11 41 13.3	+0.2
	25nm,0.3s,baz=60						
KSP	Ksiaz	1.84	291	ePn	Pn	11 40 46.7	-0.9
KSP				ePb	Pb	11 40 48.1	-1.1
KSP				i Pg	Pg	11 40 50.5	+0.5
KSP				eSg	Sg	11 41 15.1	+1.2
KSP	Ksiaz	1.84	291	ePn	Pn	11 40 46.7	-0.9
KSP				ePb	Pb	11 40 48.1	-1.1
KSP				i Pg	Pg	11 40 50.5	+0.5
KSP				eSg	Sg	11 41 15.1	+1.2
UPC	Upice	1.94	280	ePG	Pn	11 40 49.5	+0.5
UPC				eSG	Sb	11 41 16.6	+0.9
	comp=Z,19nm,0.3s						
KRUC	Moravsky	2.06	237	ePn	Pn	11 40 50.5	-0.1
KRUC				eSn	Sb	11 41 19.8	+0.6
	26nm,0.5s,baz=56						
KRUC	Moravsky	2.06	237	ePN	Pn	11 40 50.5	-0.1
KRUC				eSN	Sb	11 41 19.9	+0.7
KRUC	Moravsky	2.06	237	ePn	Pn	11 40 50.5	-0.1
	baz=56						
KRUC				eSn	Sb	11 41 19.8	+0.6
	26nm,0.5s,baz=56						
CRVS	Cervenica-Dubn	2.07	129	ePG	Pb	11 40 53.3	+0.1
CRVS				eLG	Lg	11 41 28.3	
CRVS	Cervenica-Dubn	2.07	129	ePg	Pb	11 40 53.3	+0.1
MODS	Modra-Piesok	2.17	212	ePG	Pg	11 40 57.5	+1.2
MODS				eLG	Lg	11 41 26.7	
MODS	Modra-Piesok	2.17	212	ePg	Pg	11 40 57.5	+1.2
PSZ	Piszkesteto	2.38	166	⇑iP	Pn	11 40 55.3	+0.3
PSZ	Piszkesteto	2.38	166	⇓ex	Pg	11 41 03.3	+3.0
PSZ	Piszkesteto	2.38	166	⇑iP	Pn	11 40 55.3	+0.3
PSZ				S	Sb	11 41 29.3	+0.9
GOPC	GO Pecny, Ondr	2.74	265	eSG	Sb	11 41 40.9	+2.2
	comp=Z,13nm,0.3s						
GOPC	GO Pecny, Ondr	2.74	265	Sg	Sb	11 41 40.9	+2.2
	13nm,0.3s						
PVCC	Panska Ves	2.86	278	eSG	Sg	11 41 46.9	+0.3
	comp=Z,29nm,0.2s						
PVCC	Panska Ves	2.86	278	Sg	Sg	11 41 46.9	+0.3
	29nm,0.2s						
PRU	Pruhonice	2.89	267	ePG	Pb	11 41 07.0	-0.1
PRU				eSG	Sg	11 41 45.8	-1.7
	comp=Z,14nm,0.5s						
CSKK	Csˆ‡kako	2.91	190	⇓ex	Pg	11 41 11.3	+0.9
KHC	Kasperske Hory	3.70	255	ePN	Pn	11 41 13.3	+0.2
KHC				ePG	Pb	11 41 20.2	-0.7
KHC				eSG	Sg	11 42 11.9	-1.5
	comp=Z,17nm,0.6s						
KHC	Kasperske Hory	3.70	255	Pn	Pn	11 41 13.3	+0.2
KHC				Sg	Sg	11 42 11.9	-1.5
	17nm,0.6s						
GERES	GERESS Array B	3.73	250	Pn	Pn	11 41 14.4	+0.8
	0.6nm,0.3s,baz=67,slow=14,SNR=10						
GERES				Pg	Pb	11 41 23.7	+2.3
	1.2nm,0.3s,baz=65,slow=17,SNR=14						
GERES				Lg	Lg	11 42 09.8	
	3.3nm,0.3s,baz=66,slow=26,SNR=8.1						
CLL	Collm	3.97	288	ePg	Pg	11 41 30.0	-0.7
CLL				i Sg	Sg	11 42 22.2	+0.1
	comp=Z,13nm,0.8s						
DRGR		4.22	143	⇓iP	Pn	11 41 20.4	0.0
DRGR		4.22	143	⇓iP	Pn	11 41 20.4	0.0
BURAR	Bucovina Array	4.85	120	⇑iP	Pn	11 41 29.1	+0.1
BURAR	Bucovina Array	4.85	120	⇑iP	Pn	11 41 29.1	+0.1
BZS	Buzias	4.93	158	⇑iP	Pn	11 41 30.9	+0.9
BZS	Buzias	4.93	158	⇑iP	Pn	11 41 30.9	+0.9
HFS	Hagfors	10.38	345	Pn	Pn	11 42 43.4	-1.3
	comp=Z,0.2nm,0.3s,baz=153,slow=13,SNR=5.9						
FINES	FINESS Array B	11.91	17	Pn	Pn	11 43 02.8	-2.8
	comp=Z,0.5nm,0.3s,baz=200,slow=12,SNR=13						
ARCES	ARCESS Array B	19.62	7	Pn	P	11 44 43.9	-0.5
	comp=Z,0.1nm,0.3s,baz=193,slow=9.5,SNR=4.2						

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*IDC **06** 12:04:53.2±1.2, 46°.15S×166°.15E, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.6/42, mbtmp3.7/4, ML3.8/1, MS2.9/1, Ms1 2.9/1, ms1mx2.4/36, Error ellipse: s-maj=30.5km s-min=28.0km az=8.0*
*WEL **06** 12:04:53.0, 47°S±17°×16°6E±1°1, h5km, ML4.4/13*
*ISCJB **06** 12:04:54.7±1.6, 46°.16S±0°.06×166°.02E±0°.07, h15km±12km, mb3.7/3, MS2.9/1, Error ellipse: s-maj=9.4km s-min=7.7km az=172.4*

ISC 06 12:04:56.9±3.2**, 46°.19S**±0°.07×**166°.10E**±0°.08**, h23km**±22km**, n43, σ1ˢ.33**/46**, mb3.5**/3**, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DCZ	Deep Cove	1.03	46	P	Pn	12 05 13.8	-2.1
DCZ				S	Sn	12 05 26.8	-2.7
WHZ	Wether Hill Ro	1.32	78	P	Pn	12 05 19.2	-0.7
WHZ				S	Sn	12 05 36.2	-0.5
APZ	The Paps	1.45	117	P	Pn	12 05 20.7	-1.1
APZ				S	Sn	12 05 39.1	-1.0
MLZ	Mavora Lakes	1.63	61	P	Pn	12 05 24.7	+0.5
MLZ				S	Sb	12 05 48.8	+2.3
MSZ	Milford Sound	1.98	41	P	Pn	12 05 28.5	-0.4
EAZ	Earnscleugh	2.44	68	P	Pn	12 05 36.7	+1.5
EAZ				S	Sb	12 06 07.1	-2.6
WKZ	Wanaka	2.46	57	P	Pn	12 05 37.6	+2.1
WKZ				S	Sb	12 06 09.5	-0.7
TUZ	Tuapeka	2.47	86	P	Pn	12 05 35.8	+0.2
TUZ				S	Sn	12 06 06.7	+1.7
JCZ	Jackson Bay	2.84	43	P	Pn	12 05 41.9	+1.1
HHSZ	Highcliff Hill	3.15	86	P	Pn	12 05 46.1	+1.2
ODZ	Otahua Downs	3.39	72	P	Pn	12 05 47.7	-0.6
LBZ	Lake Benmore	3.40	59	P	Pn	12 05 48.9	+0.5
LBZ				S	Sn	12 06 27.5	-0.5
FOZ	Fox Glacier	3.74	46	P	Pn	12 05 53.3	+0.2
RPZ	Rata Peaks	4.30	57	Pn	Pn	12 06 00.0	-0.8
	5.0nm,0.3s,baz=173,slow=3.6,SNR=28						
RPZ				Sn	Sn	12 06 49.7	-0.4
	9.3nm,0.3s,baz=52,slow=14,SNR=7.8						
RPZ	Rata Peaks	4.30	57	P	Pn	12 06 00.4	-0.4
RPZ				S	Sn	12 06 50.2	0.0
WVZ	Waitaha Valley	4.54	48	P	Pn	12 06 04.1	-0.1
OXZ	Oxford	5.10	58	P	Pn	12 06 10.8	-1.1
INZ	Inchbonnie	5.16	50	P	Pn	12 06 12.4	-0.2
MQZ	McQueen's Vall	5.27	64	P	Pn	12 06 13.7	-0.4
OKCZ	Okains Bay	5.52	66	P	Pn	12 06 18.9	+1.3
LTZ	Lake Taylor	5.57	55	P	Pn	12 06 19.9	+1.6
DSZ	Denniston Nort	6.05	45	P	Pn	12 06 24.6	-0.3
THZ	Tophouse	6.61	50	P	Pn	12 06 32.1	-0.4
QRZ	Quartz Range	7.11	43	P	Pn	12 06 39.9	+0.5
NNZ	Nelson	7.24	49	P	Pn	12 06 44.2	+3.0
TCW	Tory Channel	7.73	53	P	Pn	12 06 50.1	+2.1
CAW	Cannon Point	8.24	55	P	Pn	12 06 55.2	+0.3
KIW	Kapiti Island	8.32	53	P	Pn	12 06 58.1	+2.1
OGWZ	Otaki Gorge	8.50	54	P	Pn	12 07 00.6	+2.2
MRZ	Mangatainoka R	8.83	55	P	Pn	12 07 03.0	0.0
PKE	Pukeiti	9.08	42	P	Pn	12 07 07.6	+1.1
ASAR	Alice Springs	34.30	300	P	P	12 11 41.6	+0.2
	0.4nm,0.7s,baz=130,slow=7.6,SNR=7.6						
WRA	Warramunga Arr	36.91	304	P	P	12 12 03.9	0.0
	0.8nm,0.9s,baz=136,slow=8.1,SNR=5.0						
AFI	Afiamalu	37.18	37	LR	LR	12 24 53.4	
	comp=Z,20nm,21.5s,baz=130,slow=32						
H01W1	Cape Leeuwin H	40.40	267	T	T	12 55 15.1	
	baz=122,slow=75,SNR=37						
H01W2	Cape Leeuwin H	40.41	267	T	T	12 55 24.5	
	baz=122,slow=75,SNR=38						
H01W3	Cape Leeuwin H	40.41	267	T	T	12 55 25.4	
	baz=122,slow=75,SNR=34						
SNAA	Sanae	62.19	184	P	P	12 15 16.5	+0.6
	2.1nm,1.1s,baz=180,slow=5.1,SNR=4.0						
H08S2	Diego Garcia H	87.04	262	T	T	13 53 29.2	
	baz=144						
H08S1	Diego Carcia H	87.05	262	T	T	13 53 37.4	
	baz=144						
H08S3	Diego Garcia H	87.06	262	T	T	13 53 36.5	
	baz=144						
TORD	Torodi Ar. Bea	144.53	207	PKP	PKPab	12 24 30.4	+0.5
	0.5nm,0.8s,baz=156,slow=3.9						
BRTR	Keskin Array B	145.04	277	PKPbc	PKPbc	12 24 30.1	-1.3
	0.5nm,0.6s,baz=149,slow=3.4,SNR=3.1						

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*ISCJB **06** 12:07:29.2±0.8, 7°.92S±0°.09×74°.6W±0°.1, h151km, mb3.5/6, Error ellipse: s-maj=16.5km s-min=9.5km az=38.1*
*IDC **06** 12:07:30.0±2.2, 7°.96S×74°.49W, h145km±20km, mb3.4/6, mb1 3.5/10, mb1mx3.3/46, mbtmp3.9/10, MS3.4/2, Ms1 3.4/2, ms1mx2.6/21, Error ellipse: s-maj=21.0km s-min=18.0km az=133.0*

ISC 06 12:07:30.6±0.8**, 8°.0S**±0°.1×**74°.5W**±0°.1**, h151km, n15, σ0ˢ.92**/14**, mb3.6**/6**, Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	4.61	209	P	Pn	12 08 39.8	+0.9
	3.0nm,0.3s,baz=91,slow=8.1,SNR=8.6						
NNA				S	Sn	12 09 30.3	-1.9
	13nm,0.3s,baz=205,slow=20,SNR=16						
LPAZ	La Paz	10.38	144	P	Pn	12 09 56.8	+0.7
	0.2nm,0.3s,baz=338,slow=10.0,SNR=6.9						
SIV	San Ignacio	15.39	122	P	P	12 11 01.1	0.0
	0.3nm,0.3s,baz=308,slow=10.0,SNR=14						
PTGA	Pitinga	16.19	64	P	P	12 11 10.6	+0.5
	1.2nm,0.3s,baz=254,slow=17,SNR=8.8						
PLCA	Paso Flores	32.83	174	P	P	12 13 50.2	+0.4
	1.4nm,0.8s,baz=11,slow=10,SNR=4.0						
TXAR	Lajitas Array	46.49	324	P	P	12 15 43.5	+0.6
	0.2nm,0.7s,baz=134,slow=7.7,SNR=2.8						
PDAR	Pinedale Array	59.72	331	LR	LR	12 49 05.9	
	comp=Z,20nm,19.0s,baz=238,slow=42						
YBH	Yreka Blue Hor	66.22	322	LR	LR	12 48 29.1	
	comp=Z,44nm,18.0s,baz=246,slow=37						
DBIC	Dimbokro	70.98	80	P	P	12 18 31.4	-1.0
	1.8nm,0.4s,baz=263,slow=7.4,SNR=5.8						
SNAA	Sanae	76.77	162	P	P	12 19 05.3	+0.2
	0.6nm,0.6s,baz=264,slow=7.4,SNR=7.7						
TORD	Torodi Ar. Bea	78.54	75	P	P	12 19 14.5	-1.4
	0.1nm,0.3s,baz=249,slow=6.0						
QSPA	South Pole Qui	82.15	180	P	P	12 19 35.1	+0.7
	1.5nm,0.8s,baz=145,slow=3.6,SNR=4.0						
ASAR	Alice Springs	138.05	221	PKhKP	PKPpre	12 26 31.1	
	0.2nm,0.8s,baz=123,slow=3.4,SNR=3.1						
ASAR				PKP	PKPdf	12 26 38.1	-0.3
	0.4nm,0.6s,baz=120,slow=2.1,SNR=6.0						
WRA	Warramunga Arr	140.30	225	PKhKP	PKPpre	12 26 35.9	
	0.3nm,0.4s,baz=132,slow=2.6,SNR=9.0						
WRA				PKP	PKPdf	12 26 42.5	-0.1
	0.4nm,0.5s,baz=120,slow=2.1,SNR=8.0						
FITZ	Fitzroy Crossi	147.34	217	PKPbc	PKPbc	12 26 57.2	-0.2
	2.9nm,0.8s,baz=186,slow=4.1,SNR=4.4						

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*ISCJB **06** 13:02:01.7±0.6, 37°.63N±0°.03×26°.69E±0°.04, h3km±5km, Error ellipse: s-maj=5.2km s-min=4.1km az=153.3*
*DDA **06** 13:02:01.6, 37°.64N×26°.69E, h7km, Ml3.0*
*CSEM **06** 13:02:02.0±0.2, 37°.62N×26°.68E, h5km, ML2.6, Error ellipse: s-maj=5.0km s-min=4.0km az=63.0*
*ATH **06** 13:02:02.0, 37°.62N×26°.70E, h12km±2km, ML2.6/4, Error ellipse: s-maj=3.5km s-min=1.5km az=116.0*
*ISK **06** 13:02:02.1, 37°.68N×26°.72E, h17km, ML2.5/8*

ISC 06 13:02:02.0±0.9**, 37°.64N**±0°.02×**26°.71E**±0°.03**, h13km**±6km**, n45, σ0ˢ.32**/63**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMG	Samos	0.12	58	P	Pg	13 02 05.4	0.0
SMG				S	Sg	13 02 07.5	-0.2
SMG				AML	AML	13 02 07.7	
	comp=N,30193µm,0.3s						
SMG				AML	AML	13 02 07.7	
	comp=E,28483µm,0.2s						
SMG	Samos	0.12	58	P	Pg	13 02 05.4	0.0
SMG				S	Sg	13 02 07.7	0.0
DGB	˜zmir	0.43	19	i P	Pg	13 02 10.4	-0.2
DGB				i S	Sg	13 02 16.6	+0.2
URLA	Izmir	0.72	353	PG	Pg	13 02 16.0	-0.1
URLA				SG	Sb	13 02 26.3	0.0
URLA	Izmir	0.72	353	i P	Pg	13 02 15.9	-0.1
URLA				i S	Sg	13 02 26.1	+0.5
URLA	Izmir	0.72	353	ePg	Pg	13 02 16.0	-0.1
URLA				S	Sg	13 02 26.1	+0.5
BODT	Bodrum	0.76	140	PG	Pb	13 02 17.3	+0.3
BODT	Bodrum	0.76	140	ePg	Pb	13 02 17.3	+0.3
BLCB	Balcova	0.79	20	PG	Pg	13 02 17.1	-0.2
BLCB				SG	Sg	13 02 27.9	+0.3
BLCB	Balcova	0.79	20	ePg	Pg	13 02 17.1	-0.2
BLCB				eSg	Sg	13 02 27.9	+0.3
CHOS	Chios island	0.90	325	PG	Pb	13 02 19.8	+0.2
CHOS	Chios island	0.90	325	P	Pn	13 02 20.2	-0.2
CHOS				S	Sb	13 02 31.8	+0.2
CHOS				AML	AML	13 02 36.3	
	comp=N,358µm,0.4s						
CHOS				AML	AML	13 02 36.4	
	comp=E,604µm,0.3s						
CHOS	Chios island	0.90	325	ePg	Pb	13 02 19.8	+0.2
CHOS				S	Sb	13 02 32.1	+0.6
MLSB	Milas	0.92	112	PG	Pn	13 02 20.5	-0.2
MLSB	Milas	0.92	112	ePg	Pn	13 02 20.5	-0.2
AYDN	Tasoluk	0.93	89	i P	Pg	13 02 19.9	-0.1
AYDN				i S	Sg	13 02 32.2	-0.1
AYDN	Tasoluk	0.93	89	P	Pg	13 02 19.9	-0.1
AYDN				S	Sg	13 02 32.2	-0.1
KRBN	Karaburun	0.96	353	PG	Pg	13 02 20.0	-0.5
KRBN	Karaburun	0.96	353	ePg	Pg	13 02 20.0	-0.5
AYDB	Zeytinkoy-Aydi	0.99	72	PG	Pb	13 02 21.3	+0.3
AYDB	Zeytinkoy-Aydi	0.99	72	ePg	Pb	13 02 21.3	+0.3
AMGA	Amorgos Island	1.04	219	P	Pb	13 02 21.3	-0.5
AMGA	Amorgos Island	1.04	219	P	Pb	13 02 21.3	-0.5
APE	Apeiranthos	1.10	239	PN	Pn	13 02 23.7	+0.6
APE	Apeiranthos	1.10	239	P	Pb	13 02 22.4	-0.5
APE				AML	AML	13 02 41.6	
	comp=N,232µm,0.3s						
APE				AML	AML	13 02 43.5	
	comp=E,202µm,0.4s						
APE	Apeiranthos	1.10	239	P	Pb	13 02 22.5	-0.4
APE	Apeiranthos	1.10	239	ePn	Pn	13 02 23.7	+0.6
DAT	Datca	1.15	142	PN	Pg	13 02 24.3	+0.1
DAT	Datca	1.15	142	i P	Pb	13 02 23.6	-0.2
DAT				i S	Sg	13 02 39.2	+0.1
DAT	Datca	1.15	142	P	Pb	13 02 23.6	-0.2
DAT	Datca	1.15	142	ePn	Pg	13 02 24.3	+0.1
DAT				S	Sg	13 02 39.2	+0.1
YER	Yerkesik	1.35	112	PN	Pn	13 02 26.7	0.0
YER	Yerkesik	1.35	112	ePn	Pn	13 02 26.7	0.0
DKL	Dikili	1.43	6	PN	Pn	13 02 26.9	-0.8
DKL	Dikili	1.43	6	ePn	Pn	13 02 26.9	-0.8
PRK	Paraskevi	1.64	348	P	Pg	13 02 33.8	+0.3
PRK				AML	AML	13 02 56.5	
	comp=N,272µm,0.5s						
PRK				AML	AML	13 02 57.0	
	comp=E,370µm,0.7s						
PRK	Paraskevi	1.64	348	P	Pg	13 02 33.4	0.0
MANT	Manisa	1.69	59	i P	Pg	13 02 34.6	+0.1
MANT				i S	Sb	13 02 54.1	-0.1
MANT	Manisa	1.69	59	P	Pg	13 02 34.6	+0.1
MANT				S	Sb	13 02 54.2	-0.1
SIGR	SIGRI	1.70	337	PN	Pn	13 02 31.1	-0.3
SIGR	SIGRI	1.70	337	P	Pb	13 02 33.1	0.0
SIGR	SIGRI	1.70	337	ePn	Pn	13 02 31.1	-0.3
SIGR	SIGRI	1.70	337	P	Pb	13 02 33.6	+0.4
STEP	BALIKESIR_Sava	1.90	24	i P	Pb	13 02 36.7	+0.1
STEP				i S	Sg	13 03 03.3	0.0
STEP	BALIKESIR_Sava	1.90	24	P	Pb	13 02 36.7	+0.1
STEP				S	Sg	13 03 03.3	0.0

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*ISCJB **06** 13:07:20.6±1.0, 38°.15N±0°.07×73°.09E±0°.09, h100km, mb3.7/5, Error ellipse: s-maj=10.2km s-min=9.7km az=34.1*
*IDC **06** 13:07:21.9±5.3, 38°.14N×73°.48E, h116km±39km, mb3.4/5, mb1 3.4/9, mb1mx3.1/71, mbtmp3.8/9, MS2.8/3, Ms1 2.8/3, ms1mx2.3/48, Error ellipse: s-maj=48.3km s-min=33.8km az=140.0*
*NNC **06** 13:07:27.9±3.8, 38°.58N×73°.42E, h146km±19km, mb2.4, mpv3.4, Error ellipse: s-maj=34.6km s-min=30.4km az=98.0*

ISC 06 13:07:21.3±1.4**, 38°.2N**±0°.1×**73°.22E**±0°.09**, h100km, n25, σ2ˢ.11**/30**, mb3.8**/5**, 6C-4D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	1.87	7	⇑P	Pn	13 07 56.1	+3.7
	11nm,0.3s						
SFK				⇑S	Sn	13 08 18.9	+2.9
	257nm,0.3s						
AML	Almayashu	3.99	5	P	Pn	13 08 24.0	+3.3
	SNR=14						
UCH	Uchtor	4.18	13	P	Pn	13 08 25.4	+2.0
	SNR=11						
KZA	Kyzart	4.21	21	P	Pn	13 08 25.3	+1.6
	SNR=15						
MNAS	Manas	4.36	353	⇑P	Pn	13 08 28.3	+2.8
	5.8nm,0.6s						
MNAS				⇑S	Sn	13 09 15.4	+0.2
	34nm,0.6s						
EKS2	Erkin-Say	4.52	5	P	Pn	13 08 31.1	+3.5
	SNR=8.6						
AAK	Ala-Archa	4.58	12	P	Pn	13 08 30.3	+1.9
	1.2nm,0.3s,baz=182,slow=6.8,SNR=2.8						
AAK				S	Sn	13 09 20.9	+0.3
	3.5nm,0.3s,baz=334,slow=20,SNR=15						
AAK	Ala-Archa	4.58	12	P	Pn	13 08 31.1	+2.6
	2.0nm,0.5s						
AAK				S	Sn	13 09 19.9	-0.6
	26nm,0.8s						
ULHL	Ulahol	4.69	29	P	Pn	13 08 31.8	+1.8
	SNR=8.0						
TKM2	Tokmak 2	5.09	20	⇓P	Pn	13 08 36.9	+1.5
	2.5nm,0.3s						
TKM2				⇓S	Sn	13 09 30.7	-2.4
	5.3nm,0.4s						
TKM2	Tokmak 2	5.09	20	P	Pn	13 08 37.2	+1.8
	SNR=7.3						
KK31	Karatay Array	5.35	338	⇑P	Pn	13 08 41.4	+2.6
	2.1nm,0.3s,baz=139,slow=12,SNR=64						
KK31				⇓S	Sn	13 09 37.7	-1.4
	13nm,0.5s,baz=146,slow=24,SNR=20						
MKAR	Makanchi Array	10.92	35	P	Pn	13 09 54.1	-0.3
	0.1nm,0.3s,baz=220,slow=15,SNR=2.8						
WMQ	Urumqi	12.31	58	eP	Pn	13 10 13.1	+0.1
KURBB	Kurchatov Arra	13.02	15	P	Pn	13 10 19.3	-3.0
	0.0nm,0.3s,baz=199,slow=12,SNR=3.9						
AB31	Akbulak array	14.65	323	⇑P	Pn	13 10 43.8	+0.4
	0.6nm,0.6s,baz=131,slow=12,SNR=7.2						
AB31				⇓S	Sn	13 13 21.5	-3.2
	0.9nm,0.7s,baz=151,slow=19,SNR=3.5						
BVAR	Borovoye Array	15.00	353	P	Pn	13 10 47.6	-0.2
	0.3nm,0.3s,baz=152,slow=11,SNR=3.6						
BVAR				LR	LR	13 16 15.6	
	comp=Z,19nm,21.0s,baz=116,slow=36						
ZALV	Zalesovo Beam	17.69	23	P	P	13 11 18.9	-1.6
	1.2nm,0.3s,baz=212,slow=11,SNR=22						
FINES	FINESS Array B	37.14	324	P	P	13 14 21.9	0.0
	1.1nm,0.8s,baz=128,slow=12,SNR=4.0						
ARCES	ARCESS Array B	40.32	336	P	P	13 14 48.6	+0.2
	0.8nm,0.5s,baz=105,slow=8.9,SNR=5.0						
YAK	Yakutsk	41.59	36	LR	LR	13 31 44.7	
	comp=Z,17nm,18.6s,baz=132,slow=35						
HFS	Hagfors	42.88	321	P	P	13 15 10.4	+1.0
	0.8nm,0.5s,baz=97,slow=12,SNR=2.3						
GERES	GERESS Array B	43.45	304	LR	LR	13 37 12.3	
	comp=Z,14nm,18.1s,baz=278,slow=41						
TORD	Torodi Ar. Bea	67.52	269	P	P	13 18 06.6	-0.4
	0.2nm,0.3s,baz=40,slow=6.5						
INK	Inuvik	71.98	10	P	P	13 18 32.1	-1.4
	0.4nm,0.4s,baz=316,slow=5.2,SNR=5.0						

IDC 06 13:47:47.3±5.0**, 36°.72N×82°.51E, h0km, mb3.5**/1**, mb1 3.5**/4**, mb1mx3.2**/66**, mbtmp3.5**/4**, ML3.2**/3**, MS2.6**/1**, Ms1 2.6**/1**, ms1mx2.1**/56**, Error ellipse: s-maj=67.5km s-min=40.4km az=54.0, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAK	Ala-Archa	8.55	316	LR	LR	13 53 40.9	
	comp=Z,36nm,18.3s,baz=124,slow=41						
MKAR	Makanchi Array	10.07	359	Pn	Pn	13 50 13.5	+0.4
	0.2nm,0.3s,baz=185,slow=14,SNR=4.3						
MKAR				Sn	Sn	13 52 05.2	-1.5
	0.1nm,0.3s,baz=176,slow=20,SNR=3.0						
MKAR				Lg	Lg	13 53 08.8	
	0.2nm,0.3s,baz=174,slow=30,SNR=3.0						
ZALV	Zalesovo Beam	17.30	5	P	Pn	13 51 48.3	-1.8
	0.1nm,0.3s,baz=178,slow=14,SNR=3.5						
BVAR	Borovoye Array	18.38	336	P	P	13 52 03.9	+0.3
	0.3nm,0.3s,baz=163,slow=11,SNR=4.1						
SONM	Songino Array	20.79	50	P	P	13 52 30.5	+0.5
	2.1nm,0.8s,baz=240,slow=12,SNR=9.4						

IDC 06 14:13:00.7±52.0, 19°.19S×178°.37W, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.6/46, mbtmp4.0/3, Error ellipse: s-maj=958.8km s-min=158.4km az=81.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.06	243	P	P	14 20 21.0	-0.2
	1.0nm,0.5s,baz=93,slow=10,SNR=3.3						
WRA	Warramunga Arr	44.45	261	P	P	14 21 13.9	0.0
	0.4nm,0.3s,baz=96,slow=7.6,SNR=23						
ASAR	Alice Springs	44.50	255	P	P	14 21 14.1	-0.2
	3.4nm,0.8s,baz=92,slow=7.5,SNR=51						

ISCJB 06 14:18:26.3±0.5, 5°.15N±0°.08×77°.00E±0°.07, h10km, mb4.2/37, MS3.2/13, Error ellipse: s-maj=11.8km s-min=9.6km az=35.2

MOS 06 14:18:26.1±1.3, 5°.11N×76°.95E, h10km, mb4.5/9, Error ellipse: s-maj=12.4km s-min=8.5km az=92.7

IDC 06 14:18:26.8±0.6, 5°.12N×77°.01E, h0km, mb4.1/19, mb1 4.2/20, mb1mx4.0/67, mbtmp4.1/20, ML4.3/1, MS3.2/11, Ms1 3.2/11, ms1mx2.8/61, Error ellipse: s-maj=19.7km s-min=13.4km az=46.0

NEIC 06 14:18:28.4±0.4, 5°.14N×77°.02E, h10km, mb4.2/3, Error ellipse: s-maj=12.4km s-min=9.7km az=209.0

ISC 06 14:18:28.4±0.6, 5°.19N±0°.09×77°.10E±0°.08, h10km, n59, σ1s.82/59, mb4.3/37, MS3.2/13, 7C-1D, Laccadive Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	Pallekele	4.14	60	Pn	Pn	14 19 31.5	-0.2
	17nm,0.3s,baz=296,slow=9.6,SNR=68						
PALK				Sn	Sn	14 20 15.1	-5.1
	100nm,0.3s,baz=296,slow=4.6,SNR=22						
PALK				LR	LR	14 20 53.1	
	comp=Z,147nm,20.3s,baz=296,slow=34						
HYB	Hyderabad	12.24	7	i P	Pn	14 21 23.0	0.0
BRDH	Bariadhala	22.36	38	LR	LR	14 32 31.9	
	comp=Z,61nm,20.7s,baz=172,slow=38						
CMAR	Chiang Mai Arr	25.07	56	P	P	14 23 54.7	+1.3
	1.8nm,0.8s,baz=247,slow=11,SNR=10						
CMAR				LR	LR	14 32 35.0	
	comp=Z,41nm,21.4s,baz=210,slow=34						
CHTO	Chiang Mai	25.25	56	eP	P	14 23 58.5	+3.5
	0.4nm,0.4s						
CHTO	Chiang Mai	25.25	56	eP	P	14 23 58.5	+3.5
KMI	Kunming	31.59	48	P	P	14 24 55.8	+4.0
KMI				pmax	pmax		
	comp=Z,12nm,0.6s						
KSH	Kashi	34.19	358	eP	P	14 25 17.9	+3.7
KSH				sP	sP	14 25 27.1	+8.5
KSH				PP	PP	14 26 36.7	+5.0
MNAS	Manas	37.37	354	eP	P	14 25 42.6	+1.1
XAN	Xi'an	41.17	42	P	P	14 26 13.4	+0.1
XAN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MKAR	Makanchi Array	41.69	5	P	P	14 26 17.7	+0.3
	comp=Z,1.2nm,0.5s,baz=183,slow=8.2,SNR=16						
MKAR				PcP	PcP	14 28 14.2	+0.3
	comp=Z,0.9nm,0.8s,baz=252,slow=2.4,SNR=4.3						
MKAR				LR	LR	14 43 16.9	
	comp=Z,34nm,20.7s,baz=204,slow=36						
DGZ	Jazzator, Alta	45.21	9	i P	P	14 26 47.3	+1.4
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.0s						
KURBB	Kurchatov Arra	45.30	1	P	P	14 26 46.7	+0.4
	comp=Z,2.6nm,0.8s,baz=194,slow=7.8,SNR=18						
GNI	Garni	45.37	325	ceP	P	14 26 45.5	-1.8
GNI				pmax	pmax		
	comp=Z,31nm,1.3s						
KURK	Kurchatov	45.39	1	P	P	14 26 46.7	-0.3
KURK	Kurchatov	45.39	1	ceP	P	14 26 46.9	-0.2
KURK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AKTO	Aktyubinsk	47.86	344	P	P	14 27 06.6	+0.1
	comp=Z,1.5nm,0.7s,baz=142,slow=10.0,SNR=4.5						
AKTO				LR	LR	14 48 40.5	
	comp=Z,24nm,20.1s,baz=147,slow=38						
BVAR	Borovoye Array	48.01	355	P	P	14 27 08.6	+1.0
	comp=Z,0.5nm,0.5s,baz=181,slow=14,SNR=3.0						
BVAR				LR	LR	14 45 36.6	
	comp=Z,33nm,18.0s,baz=114,slow=34						
BRVK	Borovoye	48.05	354	i P	P	14 27 08.1	+0.2
BRVK				pmax	pmax		
	comp=Z,2.0nm,2.3s						
KBZ	Khabaz	48.78	327	P	P	14 27 14.9	+1.3
	comp=Z,2.4nm,0.7s,baz=121,slow=9.2,SNR=4.7						
ZALV	Zalesovo Beam	49.02	6	P	P	14 27 15.4	+0.2
	comp=Z,2.4nm,0.7s,baz=216,slow=7.3,SNR=9.2						
ZALV				LR	LR	14 49 05.6	
	comp=Z,36nm,18.6s,baz=68,slow=38						
KIV	Kislovodsk	49.04	327	eP	P	14 27 15.5	-0.3
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,13nm,16.0s						
SONM	Songino Array	49.34	26	P	P	14 27 20.2	+2.1
	comp=Z,4.5nm,0.7s,baz=214,slow=8.2,SNR=24						
ULN	Ulaanbaatar	49.65	26	ceP	P	14 27 21.3	+0.8
ULN				pmax	pmax		
	comp=Z,8.0nm,2.5s						
NVS	Novosibirsk	49.76	5	eP	P	14 27 19.7	-1.2
TLY	Talaya	51.32	21	LR	LR	14 50 12.3	
	comp=Z,22nm,21.4s,baz=215,slow=37						
TLY	Talaya	51.32	21	⇑eP	P	14 27 34.4	+1.6
TLY				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRTR	Keskin Array B	52.07	318	P	P	14 27 39.1	+0.3
	comp=Z,2.6nm,0.8s,baz=128,slow=8.0,SNR=13						
H01W3	Cape Leeuwin H	52.95	142	T	T	15 24 30.9	
	baz=309,slow=74,SNR=2.4						
H01W2	Cape Leeuwin H	52.96	142	T	T	15 24 32.5	
H01W1	Cape Leeuwin H	52.97	142	T	T	15 24 37.4	
	baz=298,slow=74,SNR=2.4						
ARU	Arti	53.18	347	eP	P	14 27 42.1	-4.5
	comp=Z,6.8nm,0.9s						
ARU	Arti	53.18	347	c iP	P	14 27 46.5	-0.1
ARU						14 29 46.4	
ARU				PPP	PPP	14 30 53.4	
ARU				S	S	14 35 20.7	+3.4
ARU				SS	SS	14 38 54.4	-2.5
ARU				pmax	pmax		
	comp=Z,11nm,1.2s						
OBN	Obninsk	59.44	334	ceP	P	14 28 31.4	+0.2
OBN				e		14 30 40.0	
OBN				pmax	pmax		
	comp=Z,8.0nm,0.5s						
OBN				MLR	MLR		
	comp=Z,28nm,19.0s						
BOSA	Boshof	60.12	233	P	P	14 28 36.6	+0.1
	comp=Z,1.7nm,0.8s,baz=49,slow=5.2,SNR=4.0						
AKASG	Malin Array Be	60.39	327	P	P	14 28 36.4	-1.5
	comp=Z,0.9nm,0.5s,baz=119,slow=5.7,SNR=5.8						
KIEV	Kiev	60.40	327	i P	P	14 28 35.5	-2.4
KIEV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
WRA	Warramunga Arr	61.54	116	P	P	14 28 46.4	+0.2
	comp=Z,3.7nm,0.7s,baz=293,slow=7.2,SNR=24						
WRAB	Tennant Creek	61.54	116	eP	P	14 28 46.6	+0.3
	comp=Z,1.6nm,0.6s						
WRAB	Tennant Creek	61.54	116	eP	P	14 28 46.6	+0.3
WRAB				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KLMR	Klimovskoe	62.31	340	eP	P	14 28 48.7	-1.9
KLMR				pmax	pmax		
	comp=Z,8.0nm,1.5s						
KLMR	Klimovskoe	62.31	340	eP	P	14 28 48.8	-1.9
KLMR				AMP		14 28 50.6	
	comp=Z,8.0nm,1.5s						
ASAR	Alice Springs	62.34	120	P	P	14 28 51.7	0.0
	comp=Z,2.7nm,0.8s,baz=292,slow=6.5,SNR=39						
ASAR				PcP	PcP	14 29 31.2	-0.1
	comp=Z,0.7nm,0.6s,baz=290,slow=3.8,SNR=4.8						
KLR	Kul'dur	63.54	37	i P	P	14 28 57.8	-1.3
FINES	FINESS Array B	67.68	336	P	P	14 29 24.7	-0.9
	comp=Z,0.9nm,0.6s,baz=186,slow=25,SNR=2.9						
GERES	GERESS Array B	68.78	321	LR	LR	15 03 08.3	
	comp=Z,7.7nm,18.7s,baz=110,slow=39						
YSS	Yuzh-Sakhalins	69.72	42	eP	P	14 29 38.5	-0.1
YSS				e		14 29 40.9	
YSS				pmax	pmax		
	comp=Z,10.0nm,0.7s						
STKA	Stephens Creek	71.48	126	P	P	14 29 49.2	-0.4
	comp=Z,1.6nm,0.7s,baz=305,slow=12,SNR=4.6						
CTA	Charters Tower	72.39	113	P	P	14 29 55.9	+0.5
	comp=Z,3.9nm,0.7s,baz=269,slow=12,SNR=4.6						
ARCES	ARCESS Array B	72.44	343	P	P	14 29 54.2	-0.5
	comp=Z,2.8nm,0.7s,baz=140,slow=5.9,SNR=8.8						
HFS	Hagfors	72.49	332	P	P	14 29 54.1	-1.1
	comp=Z,1.9nm,0.6s,baz=105,slow=11,SNR=6.5						
HFS				LR	LR	15 03 42.9	
	comp=Z,36nm,19.0s,baz=76,slow=38						
TIXI	Tiksi	73.72	15	i P	P	14 30 02.1	-0.1
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SEY	Seymchan	78.72	27	ceP	P	14 30 30.9	+0.1
ESDC	Sonseca Array	79.83	309	P	P	14 30 37.0	-0.5
	comp=Z,0.5nm,0.5s,baz=64,slow=4.6,SNR=6.5						
ESDC				LR	LR	15 08 26.0	
	comp=Z,9.0nm,20.4s,baz=255,slow=38						
DBIC	Dimbokro	81.44	276	P	P	14 30 46.7	+0.1
	comp=Z,6.4nm,1.0s,baz=56,slow=3.6,SNR=2.8						
BILL	Bilibino	84.92	22	deP	P	14 31 03.6	+0.2
BILL				pmax	pmax		
	comp=Z,1.0nm,1.2s						
BILL				MLR	MLR		
	comp=Z,29nm,18.0s						
PDAR	Pinedale Array	131.89	7	PKP	PKPdf	14 37 42.6	-0.1
	comp=Z,0.9nm,0.7s,baz=38,slow=2.5,SNR=10						
NVAR	Mina Array Bea	134.31	17	PKP	PKPdf	14 37 48.0	+0.6
	comp=Z,0.4nm,0.6s,baz=325,slow=1.7,SNR=5.2						
TXAR	Lajitas Array	145.67	1	PKPbc	PKPab	14 38 08.7	+0.1
	comp=Z,0.9nm,0.7s,baz=15,slow=1.1,SNR=13						

IDC 06 14:41:03.0±1.0, 52°.68N×159°.54E, h0km, mb3.4/6, mb1 3.8/7, mb1mx3.4/82, mbtmp3.5/7, ML3.5/1, MS3.0/4, Ms1 3.0/4, ms1mx2.5/46, Error ellipse: s-maj=31.2km s-min=16.8km az=172.0

KRSC 06 14:41:05.3±1.1, 52°.46N×159°.53E, h36km±14km, ML4.1

ISCJB 06 14:41:06.1±0.7, 52°.46N±0°.03×159°.50E±0°.05, h26km±4km, mb3.3/6, MS3.0/4, Error ellipse: s-maj=6.2km s-min=3.3km az=43.3

MOS 06 14:41:07.0±1.4, 52°.47N×159°.43E, h41km, mb4.2/1, Error ellipse: s-maj=10.2km s-min=4.8km az=87.8

ISC 06 14:41:06.1±1.2, 52°.48N±0°.03×159°.47E±0°.03, h17km±7km, n84, σ1s.32/111, mb3.4/6, MS3.1/4, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUS	Russkaya	0.59	266	eP	Pb	14 41 18.6	+0.8
RUS				eS	Sb	14 41 27.1	+1.3
RUS	Russkaya	0.59	266	PN	Pb	14 41 18.6	+0.8
RUS				S	Sb	14 41 27.1	+1.3
NLC	Nalytchevo	0.69	354	eP	Pg	14 41 19.5	-0.2
NLC				eS	Sg	14 41 28.9	0.0
NLC	Nalytchevo	0.69	354	PN	Pg	14 41 19.5	-0.2
NLC				S	Sg	14 41 28.9	0.0
DALK	Dalny	0.70	322	eP	Pg	14 41 19.8	0.0
DALK				eS	Sg	14 41 29.0	-0.2
DALK	Dalny	0.70	322	PN	Pg	14 41 19.8	0.0
DALK				S	Sg	14 41 29.0	-0.2
SPN	Mys Shipunski	0.70	28	eP	Pg	14 41 20.3	+0.4
SPN				eS	Sb	14 41 30.3	+1.1
SPN	Mys Shipunski	0.70	28	PN	Pg	14 41 20.3	+0.4
SPN				S	Sb	14 41 30.3	+1.1
PET	Petropavlovsk	0.74	318	eP	Pg	14 41 20.3	-0.2
PET				eS	Sg	14 41 30.0	-0.2
PET	Petropavlovsk	0.74	318	ePN	Pg	14 41 19.8	-0.7
PET				eS	Sg	14 41 29.2	-1.0
PET				pmax	pmax		
	comp=Z,157nm,0.4s						
PET				smax	smax		
	comp=N,956nm,0.5s						
PET				smax	smax		
	comp=E,726nm,0.5s						
MTVR	Mutnovka	0.79	271	eP	Pg	14 41 21.7	+0.2
MTVR				eS	Sg	14 41 32.1	+0.2
MTVR	Mutnovka	0.79	271	PN	Pg	14 41 21.7	+0.2
MTVR				S	Sg	14 41 32.1	+0.2
UGLR	Uglovaya	0.83	332	eP	Pg	14 41 22.1	-0.1
UGLR	Uglovaya	0.83	332	PN	Pg	14 41 22.1	-0.1
GRL	Gorelyy	0.86	275	eP	Pg	14 41 23.1	+0.3
GRL				eS	Sn	14 41 35.9	+0.3
GRL	Gorelyy	0.86	275	PN	Pg	14 41 23.1	+0.3
GRL				S	Sn	14 41 35.9	+0.3
SDLR	Sedlovina	0.87	336	eP	Pg	14 41 22.4	-0.7
SDLR				eS	Sg	14 41 33.8	-0.8
SDLR	Sedlovina	0.87	336	PN	Pg	14 41 22.4	-0.7
SDLR				S	Sg	14 41 33.8	-0.8
SMAR	Somma	0.88	333	eP	Pg	14 41 22.6	-0.7
SMAR	Somma	0.88	333	PN	Pg	14 41 22.6	-0.7
KRMR	Karymshinskiy	0.89	294	eP	Pb	14 41 22.7	-0.3
KRMR				eS	Sg	14 41 34.3	-0.7
KRMR	Karymshinskiy	0.89	294	PN	Pb	14 41 22.7	-0.3
KRMR				S	Sg	14 41 34.3	-0.7
AVH	Avacha	0.90	331	eP	Pg	14 41 23.1	-0.5
AVH	Avacha	0.90	331	PN	Pg	14 41 23.1	-0.5
KOK	Koryaka	0.96	328	eP	Pb	14 41 24.4	+0.2
KOK	Koryaka	0.96	328	PN	Pb	14 41 24.4	+0.2
ASAK	Asacha	0.97	265	eP	Pb	14 41 24.7	+0.3
ASAK				eS	Sb	14 41 37.9	+1.1
ASAK	Asacha	0.97	265	PN	Pb	14 41 24.7	+0.3
ASAK				S	Sb	14 41 37.9	+1.1
KRX	Arik	1.01	331	eP	Pb	14 41 24.8	-0.3
KRX				eS	Sb	14 41 37.3	-0.9
KRX	Arik	1.01	331	PN	Pb	14 41 24.8	-0.3
KRX				S	Sb	14 41 37.3	-0.9
KDTR	Khodutka, Kamc	1.09	232	eP	Pb	14 41 26.0	-0.4
KDTR				eS	Sb	14 41 39.8	-0.5
PETK	Petropavlovsk-	1.25	301	Pn	Pn	14 41 27.7	-0.9
	baz=103,slow=19						
PETK				Sn	Sb	14 41 43.5	-1.3
PETK				LR	LR	14 42 03.3	
	comp=E,38nm,18.6s,baz=77,slow=50						
APC	Apacha	1.48	288	eP	Pn	14 41 32.2	+0.4
APC				eS	Sn	14 41 51.1	+0.5
APC	Apacha	1.48	288	PN	Pn	14 41 32.2	+0.4
APC				S	Sn	14 41 51.1	+0.5
GNL	Ganaly	1.53	323	eP	Pn	14 41 32.4	-0.2
GNL				eS	Sn	14 41 52.1	0.0
GNL	Ganaly	1.53	323	PN	Pn	14 41 32.4	-0.2
GNL				S	Sn	14 41 52.1	0.0
KII	Karymskiy	1.56	360	eP	Pn	14 41 33.2	+0.2
KII				eS	Sn	14 41 53.1	+0.3
KII	Karymskiy	1.56	360	PN	Pn	14 41 33.2	+0.2
KII				S	Sn	14 41 53.1	+0.3
MIPR	Malaya Ipel'ka	1.68	264	eP	Pn	14 41 35.1	+0.6
MIPR	Malaya Ipel'ka	1.68	264	PN	Pn	14 41 35.1	+0.6
PAU	Pauzhetka	1.93	239	eP	Pn	14 41 38.5	+0.4
PAU				eS	Sn	14 42 01.9	0.0
PAU	Pauzhetka	1.93	239	PN	Pn	14 41 38.5	+0.4
PAU				S	Sn	14 42 01.9	0.0
MKZ	Mys Kozlova	2.48	32	eP	Pn	14 41 44.1	-1.4
MKZ	Mys Kozlova	2.48	32	PN	Pn	14 41 44.1	-1.4
SKR	Severo-Kuril's	2.76	231	eP	Pn	14 41 49.8	+0.4
SKR				eS	Sn	14 42 20.8	-1.5
SKR	Severo-Kuril's	2.76	231	ePN	Pn	14 41 50.6	+1.2
SKR				eS	Sn	14 42 20.6	-1.7
SKR				pmax	pmax		
	comp=Z,37nm,0.5s						
SKR				smax	smax		
	comp=N,182nm,0.4s						
SKR				smax	smax		
	comp=E,239nm,0.5s						
TUMD	Tumrok D	2.78	11	eP	Pn	14 41 50.5	+0.7
TUMD				eS	Sn	14 42 24.3	+1.4
TUMR	Tumrok	2.84	8	eP	Pn	14 41 52.0	+1.4
TUMR	Tumrok	2.84	8	PN	Pn	14 41 52.0	+1.4
KMNR	Kamenistaya	3.31	8	eP	Pn	14 42 00.1	+3.0
KMNR	Kamenistaya	3.31	8	PN	Pn	14 42 00.1	+3.0
ESO	Esso	3.48	353	eP	Pn	14 42 01.6	+2.2
ESO	Esso	3.48	353	PN	Pn	14 42 01.6	+2.2
BZMR	Bezymyannaya	3.51	9	eP	Pn	14 42 03.1	+3.2
BZMR	Bezymyannaya	3.51	9	PN	Pn	14 42 03.1	+3.2
KOZ	Kozyrevsk	3.59	4	eP	Pn	14 42 02.7	+1.8
KOZ	Kozyrevsk	3.59	4	PN	Pn	14 42 02.7	+1.8
LGNR	Loginova	3.68	11	eP	Pn	14 42 06.2	+3.9
LGNR	Loginova	3.68	11	PN	Pn	14 42 06.2	+3.9
KLY	Klyuchi	3.90	10	eP	Pn	14 42 08.2	+3.1
KLY	Klyuchi	3.90	10	PN	Pn	14 42 08.2	+3.1
KBTR	Krutoberegovo	4.22	26	eP	Pn	14 42 11.0	+1.6
KBTR	Krutoberegovo	4.22	26	PN	Pn	14 42 11.0	+1.6
BDR	Baidarnaya	4.22	13	eP	Pn	14 42 12.6	+3.1
BDR	Baidarnaya	4.22	13	PN	Pn	14 42 12.6	+3.1
SMKR	Semkarok	4.27	15	eP	Pn	14 42 11.2	+0.9
SMKR	Semkarok	4.27	15	PN	Pn	14 42 11.2	+0.9
BKI	Bering	4.72	52	eP	Pn	14 42 16.8	+0.5
BKI	Bering	4.72	52	PN	Pn	14 42 16.8	+0.5
ASAJ	Asahikawa	13.98	240	Pn	Pn	14 44 24.8	+1.7
	comp=E,0.3nm,0.3s,baz=69,slow=11,SNR=6.0						
MJAR	Matsushiro Arr	21.87	232	P	P	14 45 57.5	-0.3
	comp=E,0.6nm,0.5s,baz=30,slow=9.9,SNR=2.8						
JHJ	Hachijo jima 2	24.01	224	LR	LR	14 57 44.7	
	comp=E,73nm,19.1s,baz=86,slow=42						
KSRS	Korea Array	26.64	248	LR	LR	14 56 29.6	
	comp=E,7.6nm,19.0s,baz=115,slow=35						
ILAR	Eielson Array	29.52	44	P	P	14 47 07.1	-1.9
	comp=E,0.3nm,0.8s,baz=264,slow=5.3,SNR=4.2						
H11N2	WAKE ISLAND Hy	33.20	167	T	T	15 23 24.4	
	baz=352,slow=76,SNR=136						
H11N3	WAKE ISLAND Hy	33.21	167	T	T	15 23 23.1	
	baz=352,slow=76,SNR=66						
H11N1	WAKE ISLAND Hy	33.21	167	T	T	15 23 27.9	
	baz=352,slow=76,SNR=132						
H11S1	WAKE ISLAND Hy	34.37	168	T	T	15 24 53.6	
	baz=352,slow=76,SNR=38						
H11S3	WAKE ISLAND Hy	34.38	168	T	T	15 24 54.6	
	baz=352,slow=76,SNR=66						
H11S2	WAKE ISLAND Hy	34.39	168	T	T	15 24 58.3	
	baz=352,slow=76,SNR=20						
NVAR	Mina Array Bea	56.31	69	P	P	14 50 45.1	-0.8
	comp=E,0.2nm,0.6s,baz=296,slow=6.9,SNR=2.6						
NVAR				LR	LR	15 14 35.6	
	comp=E,23nm,18.1s,baz=238,slow=36						
PDAR	Pinedale Array	58.15	60	P	P	14 50 57.4	-1.5
	comp=E,0.3nm,0.6s,baz=270,slow=1.5,SNR=5.0						
TXAR	Lajitas Array	71.23	66	P	P	14 52 22.9	-1.3
	comp=E,0.2nm,0.5s,baz=306,slow=4.2,SNR=4.0						
TXAR				LR	LR	15 21 49.2	
	comp=E,11nm,20.2s,baz=0.0,slow=34						
ASAR	Alice Springs	79.04	204	P	P	14 53 10.5	+1.6
	comp=E,0.4nm,1.0s,baz=20,slow=5.0,SNR=2.6						

ISCJB 06 15:01:00.5±0.7, 50°.26N±0°.04×19°.19E±0°.04, h0km, Error ellipse: s-maj=6.6km s-min=2.9km az=14.8

CSEM 06 15:01:01.7±0.4, 50°.26N×19°.22E, h2km, ML2.5/6, Error ellipse: s-maj=9.7km s-min=4.1km az=10.0

PRU 06 15:01:02.2, 50°.24N×19°.22E, h0km

WAR 06 15:01:03.4, 50°.18N×19°.34E, h1km, Mw2.2

ISC 06 15:01:01.4±0.9, 50°.23N±0°.04×19°.22E±0°.02, h0km, n27, σ0s.55/47, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	Ojcow	0.37	92	ePg	Pg	15 01 09.0	+0.4
OJC				eSg	Sg	15 01 13.2	-0.2
OJC	Ojcow	0.37	92	ePg	Pg	15 01 09.0	+0.4
OJC				eSg	Sg	15 01 13.2	-0.2
OJC	Ojcow	0.37	92	ePg	Pg	15 01 09.0	+0.4
OJC				eSg	Sg	15 01 13.2	-0.2
OKC	Ostrava-Krasne	0.80	241	ePG	Pb	15 01 18.3	+0.1
OKC				eSG	Sg	15 01 27.7	+0.7
	comp=Z,9.0nm,0.3s						
OKC	Ostrava-Krasne	0.80	241	Pg	Pb	15 01 18.3	+0.1
OKC				Sg	Sg	15 01 27.7	+0.7
	9.0nm,0.3s						
NIE	Niedzica	1.07	139	ePg	Pb	15 01 23.2	+0.3
NIE				eSg	Sb	15 01 37.6	+0.1
NIE	Niedzica	1.07	139	ePg	Pb	15 01 23.2	+0.3
NIE				eSg	Sb	15 01 37.6	+0.1
NIE	Niedzica	1.07	139	ePg	Pb	15 01 23.2	+0.3
NIE				eSg	Sb	15 01 37.6	+0.1
LANS	Liptovska Anna	1.09	171	ePG	Pg	15 01 22.8	+0.4
LANS				eSG	Sg	15 01 36.6	0.0
LANS	Liptovska Anna	1.09	171	ePg	Pg	15 01 22.8	+0.4
LANS				eSg	Sg	15 01 36.6	0.0
MORC	Moravsky Berou	1.18	248	ePg	Pn	15 01 25.3	+0.1
MORC				eSg	Sn	15 01 41.5	-0.4
MORC	Moravsky Berou	1.18	248	ePG	Pn	15 01 25.3	+0.1
MORC				eSG	Sn	15 01 41.5	-0.4
KRLC	Kraliky	1.58	265	ePG	Pb	15 01 31.6	+0.1
KRLC				eSG	Sb	15 01 52.1	+0.1
	comp=Z,3.4nm,0.3s						
KRLC	Kraliky	1.58	265	Pg	Pb	15 01 31.6	+0.1
KRLC				Sg	Sb	15 01 52.1	+0.1
	3.4nm,0.3s						
VYHS	Vyhne	1.76	188	ePN	Pn	15 01 32.9	-0.3
VYHS				eSN	Sn	15 01 55.1	-1.1
VYHS				eLG	Lg	15 01 56.9	
VYHS	Vyhne	1.76	188	ePg	Pn	15 01 32.9	-0.3
VYHS				eSn	Sn	15 01 55.1	-1.1
DPC	Dobruska-Polom	1.86	275	ePG	Pb	15 01 36.1	-0.3
DPC				eSG	Sg	15 02 01.7	+0.4
	comp=Z,9.5nm,0.4s						
DPC	Dobruska-Polom	1.86	275	Pg	Pb	15 01 36.1	-0.3
DPC				Sg	Sg	15 02 01.7	+0.4
	9.5nm,0.4s						
VRAC	Vranov	1.94	243	ePn	Pb	15 01 37.9	+0.3
VRAC				eSg	Sg	15 02 04.4	+0.7
VRAC	Vranov	1.94	243	ePN	Pb	15 01 37.9	+0.3
VRAC				eSG	Sg	15 02 04.4	+0.7
UPC	Upice	2.07	279	eSG	Sg	15 02 08.0	0.0
	comp=Z,5.5nm,0.4s						
UPC	Upice	2.07	279	Sg	Sg	15 02 08.0	0.0
	5.5nm,0.4s						
PRU	Pruhonice	3.02	267	eSG	Sg	15 02 37.3	-1.2
	comp=Z,3.7nm,0.6s						
PRU	Pruhonice	3.02	267	Sg	Sg	15 02 37.3	-1.2
	3.7nm,0.6s						
BRG	Berggiesshubel	3.43	283	SG	Sg	15 02 52.6	+1.2
	2.8nm,0.4s						
KHC	Kasperske Hory	3.83	255	eSG	Sg	15 03 03.3	-1.0
	comp=Z,3.3nm,0.6s						
KHC	Kasperske Hory	3.83	255	Sg	Sg	15 03 03.3	-1.0
	3.3nm,0.6s						

ISCJB 06 15:02:23.0±0.7, 50°.54N±0°.04×129°.94W±0°.08, h10km, mb3.2/1, MS2.9/2, Error ellipse: s-maj=8.1km s-min=5.6km az=150.5

PGC 06 15:02:23.9±0.3, 50°.44N×130°.06W, h10km, MLSn3.1/20, Mw3.8/20, 188km west of Pt. Hardy, Bc Vancouver Island, Canada Region

IDC 06 15:02:26.4±1.8, 50°.57N×129°.56W, h0km, mb3.5/1, mb1 3.8/6, mb1mx3.4/69, mbtmp3.5/6, ML3.3/5, MS2.9/5, Ms1 2.9/5, ms1mx2.6/50, Error ellipse: s-maj=29.6km s-min=13.1km az=79.0

ISC 06 15:02:24.5±1.1, 50°.54N±0°.06×129°.91W±0°.06, h10km, n50, σ1s.59/44, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOLB	Holberg	1.14	84	Pn	Pg	15 02 45.3	-1.0
HOLB				Sn	Sb	15 03 00.5	-0.5
BPBC	Brooks Peninsu	1.42	105	Pn	Pn	15 02 48.2	-2.2
PHC	Port Hardy	1.58	83	Pn	Pn	15 02 51.9	-0.7
PHC				Sn	Sn	15 03 12.1	-1.0
MAYB	Maynard	1.75	93	Pn	Pn	15 02 53.7	-1.3
EDB	Eliza Dome	1.91	109	Pn	Pn	15 02 55.1	-2.0
TLCB	Telegraph Cove	1.96	89	Pn	Pn	15 02 57.4	-0.3
BBB	Bella Bella	2.00	34	Pn	Pn	15 02 58.0	-0.3
	9.1nm,0.3s,baz=220,slow=5.9,SNR=160						
BBB				Sn	Sn	15 03 22.2	-1.0
	26nm,0.3s,baz=296,slow=21,SNR=5.7						
BBB				LR	LR	15 03 53.1	
	comp=Z,102nm,20.5s,baz=22,slow=47						
BBB	Bella Bella	2.00	34	Pn	Pn	15 02 58.0	-0.3

BBB				Sn	Sn	15 03 22.0	-1.3
WOSB	Woss	2.17	99	Pn	Pn	15 02 59.9	-0.9
BNB	Barry Inlet	2.35	331	Pn	Pn	15 03 01.5	-1.6
NCRB	Newcastle Ridg	2.46	92	Pn	Pn	15 03 04.1	-0.8
GDR	Gold River	2.60	105	Pn	Pn	15 03 05.4	-1.2
CBB	Campbell River	2.96	98	Pn	Pn	15 03 11.1	-0.3
BNAB	Bonilla	3.00	352	Pn	Pb	15 03 16.6	-1.3
BTB	Buttle Lake	3.02	109	Pn	Pn	15 03 11.2	-1.3
DIB	Dawson Inlet,	3.11	330	Pn	Pn	15 03 12.0	-1.5
OZB	Mount Ozzard	3.27	117	Pn	Pn	15 03 14.1	-1.7
TXB	Texada	3.62	101	Pn	Pn	15 03 20.1	-0.5
MGB	Mount Grey	3.71	112	Pn	Pn	15 03 21.4	-0.5
SHB	Sechelt	4.00	101	Pn	Pn	15 03 25.6	-0.3
YOUB	Youbou, Lake C	4.01	112	Pn	Pn	15 03 25.6	-0.4
UBRB	Upper Baezaeko	4.32	55	Pn	Pn	15 03 32.6	+2.3
UBRB				Sn	Sn	15 04 23.2	+2.4
LZB	Mount Lazard	4.40	114	Pn	Pn	15 03 32.5	+1.1
GOBB	Galiano Island	4.44	108	Pn	Pn	15 03 33.1	+1.3
OBC	Olympics--Boni	4.56	121	Pn	Pn	15 03 34.4	+0.8
SNB	Saturna Island	4.72	109	Pn	Pn	15 03 37.4	+1.7
MCW	Mount Constitu	4.96	109	Pn	Pn	15 03 40.5	+1.5
LLLB	Lillooet	5.11	86	Pn	Pn	15 03 42.0	+0.9
VDB	Vedder Mountai	5.28	104	Pn	Pn	15 03 45.1	+1.8
MBW	Mount Baker	5.49	106	Pn	Pn	15 03 48.1	+1.7
JCW	Jim Creek	5.71	111	Pn	Pn	15 03 51.0	+1.7
B06A	Marblemount	5.84	107	Pn	Pn	15 03 52.6	+1.5
FMW	Mount Fremont	6.53	120	Pn	Pn	15 04 01.9	+1.1
DLBC	Dease Lake	7.92	360	Pn	Pn	15 04 22.2	+2.6
	0.3nm,0.3s,baz=201,slow=15,SNR=4.2						
NEW	Newport	8.64	100	LR	LR	15 08 06.9	
	comp=Z,63nm,18.5s,baz=224,slow=40						
YBH	Yreka Blue Hor	10.12	148	Pn	Pn	15 04 53.9	+4.0
	0.2nm,0.3s,baz=342,slow=13,SNR=4.7						
YKA	Yellowknife Ar	14.61	29	Pn	Pn	15 05 48.9	-2.1
	0.1nm,0.3s,baz=220,slow=10,SNR=2.6						
KDAK	Kodiak Island	15.08	307	LR	LR	15 10 38.3	
	comp=Z,45nm,19.0s,baz=123,slow=32						
PDAR	Pinedale Array	15.95	111	Pn	P	15 06 12.7	-0.1
	0.1nm,0.3s,baz=306,slow=11,SNR=13						
ILAR	Eielson Array	16.82	334	Pn	P	15 06 25.5	+3.5
	0.0nm,0.3s,baz=146,slow=11,SNR=8.0						
INK	Inuvik	17.92	356	LR	LR	15 13 39.6	
	comp=Z,36nm,18.7s,baz=154,slow=38						
ULM	Lac du Bonnet	21.59	78	LR	LR	15 15 01.0	
	comp=Z,34nm,20.7s,baz=120,slow=35						
TXAR	Lajitas Array	28.95	127	P	P	15 08 24.2	+0.2
	0.4nm,0.9s,baz=319,slow=3.6,SNR=4.5						
H11N2	WAKE ISLAND Hy	58.03	262	T	T	16 15 06.7	
	baz=42,slow=75,SNR=109						
H11N3	WAKE ISLAND Hy	58.03	262	T	T	16 15 06.8	
	baz=42,slow=75,SNR=140						
H11N1	WAKE ISLAND Hy	58.05	262	T	T	16 15 08.0	
	baz=42,slow=75,SNR=106						
H11S1	WAKE ISLAND Hy	59.06	262	T	T	16 16 18.4	
	baz=31						
H11S2	WAKE ISLAND Hy	59.07	262	T	T	16 16 20.9	
	baz=31						
H11S3	WAKE ISLAND Hy	59.08	262	T	T	16 16 29.3	
	baz=31						
AKTO	Aktyubinsk	79.18	355	LR	LR	15 53 34.0	
	comp=Z,7.6nm,18.1s,baz=320,slow=39						

MEX 06 15:19:32.0±0.6**, 14°.20N×93°.40W, h16**km±96km**, MD3.8, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.30	57	*i* P	Pn	15 19 52.2	-3.3
THIG				*e*S	Sn	15 20 07.2	-5.5
PCIG		1.51	7	*e*P	Pn	15 19 54.2	-4.1
CCIG	Comitan	2.40	30	*e*P	Pn	15 20 08.8	-2.1
CCIG				*e*S	Sn	15 20 36.1	-4.0
TGIG		2.58	6	*e*P	Pn	15 20 10.9	-2.2
TGIG				*e*S	Sn	15 20 40.8	-3.4

IDC 06 15:30:19.1±16.0**, 8°.72S×129°.59E, h250**km±205km**, mb3.2**/1**, mb1 3.0**/3**, mb1mx2.7**/48**, mbtmp3.6**/3**, Error ellipse: s-maj=127.5km s-min=97.5km az=87.0, Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	12.07	158	P	Pn	15 33 03.6	0.0
	0.1nm,0.3s,baz=340,slow=12,SNR=1.8						
ASAR	Alice Springs	15.43	165	P	P	15 33 43.8	0.0
	0.3nm,0.3s,baz=348,slow=11,SNR=40						
MKAR	Makanchi Array	69.44	327	P	P	15 41 00.4	0.0
	0.4nm,0.4s,baz=117,slow=8.0,SNR=7.0						

WEL 06 15:34:05.5, 47°S±21°**×16°6E**±°**, h5**km**, ML3.5**/8**, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APZ	The Paps	1.10	106	P	Pn	15 34 27.4	-0.2
APZ				S	Sn	15 34 43.6	+0.3
DCZ	Deep Cove	1.19	25	P	Pg	15 34 23.8	-4.4
DCZ				S	Sg	15 34 37.4	-6.2
WHZ	Wether Hill Ro	1.23	59	P	Pg	15 34 27.9	-1.1
WHZ				S	Sn	15 34 46.0	-0.3
MLZ	Mavora Lakes	1.66	45	P	Pn	15 34 34.5	-0.7
MLZ				S	Sg	15 34 58.7	0.0
MSZ	Milford Sound	2.14	30	P	Pn	15 34 40.7	-1.1
TUZ	Tuapeka	2.29	76	P	Pn	15 34 43.4	-0.5
TUZ				S	Sn	15 35 13.5	+1.1
EAZ	Earnscleugh	2.39	58	P	Pn	15 34 44.8	-0.5
WKZ	Wanaka	2.49	47	P	Pn	15 34 46.9	+0.2
JCZ	Jackson Bay	2.97	35	P	Pn	15 34 53.2	-0.2
ODZ	Otahua Downs	3.30	64	P	Pn	15 34 55.3	-2.5
FOZ	Fox Glacier	3.84	40	P	Pn	15 35 03.7	-1.5

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*ISCJB **06** 15:50:40.8±0.7, 38°.19N±0°.04×38°.30E±0°.07, h22km±7km, Error ellipse: s-maj=9.7km s-min=6.4km az=168.6*
*CSEM **06** 15:50:40.4±0.2, 38°.17N×38°.31E, h18km±1km, ML1.6, Error ellipse: s-maj=5.0km s-min=3.8km az=81.0*
*ISK **06** 15:50:40.2, 38°.15N×38°.30E, h19km, ML1.6/4*
*DDA **06** 15:50:43.2, 38°.04N×38°.81E, h7km, Ml2.6*
ISC 06 15:50:40.0±1.1**, 38°.16N**±0°.03×**38°.28E**±0°.05**, h15**km±8km**, n18, σ0ˢ.37**/28**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MALT	Malatya	0.19	37	PG	Pg	15 50 44.6	-0.1
MALT				SG	Sb	15 50 49.3	+0.4
MALT	Malatya	0.19	37	*e*Pg	Pg	15 50 44.6	-0.1
MALT				*e*Sg	Sb	15 50 49.3	+0.4
ELZG	Elazig	0.65	58	*i* P	Pg	15 50 52.8	0.0
ELZG				*i* S	Sg	15 51 01.2	-0.2
ELZG	Elazig	0.65	58	P	Pg	15 50 52.8	0.0
ELZG				S	Sg	15 51 01.2	-0.2
DARE	Darende-Malaty	0.75	304	PG	Pn	15 50 56.1	-0.1
DARE	Darende-Malaty	0.75	304	*e*Pg	Pn	15 50 56.1	-0.1
URFA	Urfa	0.83	149	PG	Pg	15 50 56.8	+0.6
URFA				SG	Sn	15 51 08.6	-0.7
URFA	Urfa	0.83	149	*e*Pg	Pg	15 50 56.8	+0.6
URFA				*e*Sg	Sn	15 51 08.6	-0.7
KEMA	Kemaliye	1.12	8	*i* P	Pb	15 51 01.3	+0.1
KEMA	Kemaliye	1.12	8	P	Pb	15 51 01.3	+0.1
SANL	SANLIURFA_Merk	1.13	150	*i* P	Pn	15 51 00.8	-0.6
SANL				*i* S	Sn	15 51 16.5	-0.2
SANL	SANLIURFA_Merk	1.13	150	P	Pn	15 51 00.8	-0.6
SANL				S	Sn	15 51 16.5	-0.2
PTK	Pertek	1.14	50	PN	Pn	15 51 01.9	+0.3
PTK	Pertek	1.14	50	*e*Pn	Pn	15 51 01.9	+0.3
KMRS	Kahramanmaras	1.27	240	PN	Pn	15 51 03.1	-0.2
KMRS	Kahramanmaras	1.27	240	*e*Pn	Pn	15 51 03.1	-0.2
SURC	SANLIURFA_SURC	1.30	168	*i* P	Pn	15 51 03.6	-0.1
SURC				*i* S	Sg	15 51 22.2	+0.1
SURC	SANLIURFA_SURC	1.30	168	P	Pn	15 51 03.6	-0.1
SURC				S	Sg	15 51 22.2	+0.1

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*IDC **06** 16:01:20.4±1.2, 32°.21N×141°.54E, h0km, mb3.7/7, mb1 3.8/9, mb1mx3.5/71, mbtmp3.7/9, ML3.4/3, MS2.6/2, Ms1 2.6/2, ms1mx2.2/66, Error ellipse: s-maj=40.6km s-min=15.3km az=63.0*
*ISCJB **06** 16:01:21.6±0.7, 32°.44N±0°.05×141°.95E±0°.09, h39km, mb3.7/7, Error ellipse: s-maj=11.0km s-min=6.4km az=160.0*
*JMA **06** 16:01:24.1±0.7, 32°.54N×141°.74E, h60km, M3.3*
ISC 06 16:01:23.3±0.9**, 32°.36N**±0°.06×**141°.96E**±0°.09**, h39**km**, n23, σ1ˢ.70**/27**, mb3.8**/7**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	1.86	274	P	Pn	16 01 51.7	-1.0
JHCJ	Hachijojimakas	1.96	292	P	Pn	16 01 51.9	-2.1
JHJ2	Mitsune	1.96	293	P	Pn	16 01 52.8	-1.2
JHJ	Hachijo jima 2	1.99	293	Pn	Pn	16 01 52.5	-1.8
	55nm,0.3s,baz=107,slow=23,SNR=16						
JHJ				Sn	Sn	16 02 15.2	-2.8
	34nm,0.3s,baz=78,slow=21,SNR=2.6						
BSO1	Boso 1	2.43	340	P	Pn	16 01 59.3	-0.7
JHU	Hanno	4.13	328	P	Pn	16 02 23.7	-0.2
JHU				*e*S	Sn	16 03 07.6	-3.3
JHO	Hitachi	4.39	345	P	Pn	16 02 26.3	-1.1
JRY	Ryogami san	4.44	326	P	Pn	16 02 28.1	-0.1
JAG	Ashikaga	4.55	334	P	Pn	16 02 28.9	-0.8
MJAR	Matsushiro Arr	5.20	324	Pn	Pn	16 02 38.1	-0.4
	1.8nm,0.3s,baz=160,slow=12,SNR=20						
MJAR				Sn	Sn	16 03 37.0	-0.2
	0.8nm,0.3s,baz=227,slow=25,SNR=1.9						
MAT	Matsushiro	5.20	324	P	Pn	16 02 38.6	+0.1
MAT				*e*S	Sn	16 03 37.4	+0.2
JCJ	Chichijima	5.25	178	Pn	Pn	16 02 38.8	-0.5
	8.3nm,0.3s,baz=304,slow=22,SNR=2.3						
JCJ				Sn	Sn	16 03 35.7	-2.9
JCJ				LR	LR	16 04 35.2	
	comp=Z,116nm,20.6s,baz=96,slow=38						
JFT	Otama	5.32	346	P	Pn	16 02 39.0	-1.1
JFT				S	Sn	16 03 36.5	-3.6
ASAJ	Asahikawa	11.75	2	Pn	Pn	16 04 06.5	-1.7
	0.2nm,0.3s,baz=197,slow=14,SNR=1.1						
ASAJ				Sn	Sn	16 06 07.7	-10
	0.2nm,0.3s,baz=92,slow=29,SNR=1.8						
KSRS	Korea Array	12.59	298	LR	LR	16 08 36.1	
	comp=Z,20nm,20.6s,baz=188,slow=35						
KLR	Kul'dur	18.51	339	P	Pn	16 05 37.1	+0.6
	0.0nm,0.3s,baz=269,slow=7.2,SNR=4.3						
SONM	Songino Array	30.97	310	P	P	16 07 38.6	+1.7
	0.6nm,0.6s,baz=107,slow=10,SNR=2.7						
MKAR	Makanchi Array	47.10	306	P	P	16 09 51.9	+0.5
	1.0nm,0.7s,baz=87,slow=10,SNR=7.5						
KURBB	Kurchatov Arra	49.33	311	P	P	16 10 08.5	+0.1
	0.6nm,0.5s,baz=90,slow=8.2,SNR=5.5						
WRA	Warramunga Arr	52.52	189	P	P	16 10 33.7	+1.0
	0.9nm,0.5s,baz=6.0,slow=7.7,SNR=23						
BVAR	Borovoye Array	54.12	315	P	P	16 10 46.7	+2.5
	0.5nm,0.5s,baz=104,slow=6.1,SNR=4.4						
ASAR	Alice Springs	56.24	189	P	P	16 11 00.8	+1.1
	0.3nm,0.7s,baz=22,slow=11,SNR=6.7						
TXAR	Lajitas Array	92.59	53	P	P	16 14 36.7	+5.5
	0.2nm,0.7s,baz=312,slow=4.5,SNR=2.9						

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*ISN **06** 16:10:48.5±0.5, 35°.72N×43°.38E, h5km±11km, ML2.6*
*CSEM **06** 16:10:51.6±0.4, 35°.62N×43°.29E, h2km, ML2.6, Error ellipse: s-maj=12.0km s-min=8.4km az=67.0*
*DDA **06** 16:11:02.8, 36°.43N×42°.96E, h6km, Ml2.6*
ISC 06 16:10:50.4±1.8**, 35°.68N**±0°.06×**43°.28E**±0°.08**, h6**km±14km**, n15, σ0ˢ.92**/27**, Iraq**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CUKT	Cukurca	1.59	9	P	Pg	16 11 21.7	+0.8
CUKT	Cukurca	1.59	9	*i* P	Pg	16 11 21.8	+0.8
CUKT				*i* S	Sb	16 11 41.0	+0.3
CUKT	Cukurca	1.59	9	P	Pg	16 11 21.8	+0.8
CUKT				S	Sb	16 11 41.0	+0.3
HAKT	HAKKARI	1.91	10	*i* P	Pg	16 11 26.6	-0.4
HAKT				*i* S	Sg	16 11 51.5	-0.3
HAKT	HAKKARI	1.91	10	P	Pg	16 11 26.6	-0.4
HAKT				S	Sg	16 11 51.5	-0.3
SIRT	Sirnak	1.94	340	P	Pb	16 11 25.6	-0.7
SIRN	S˜–rnak	1.94	339	*i* P	Pb	16 11 25.5	-0.8
SIRN				*i* S	Sg	16 11 53.0	0.0
SIRN	S˜–rnak	1.94	339	P	Pb	16 11 25.5	-0.8
SIRN				S	Sg	16 11 53.0	0.0
SRTM	Siirt_Merkez	2.55	335	*i* P	Pb	16 11 35.2	-1.5
SRTM				*i* S	Sb	16 12 09.6	+1.1
SRTM	Siirt_Merkez	2.55	335	P	Pb	16 11 35.2	-1.5
SRTM				S	Sb	16 12 09.6	+1.1
MARD	Mardin	2.59	310	*i* P	Pb	16 11 35.8	-1.6
MARD				*i* S	Sb	16 12 10.4	+0.7
BTMN	Batman	2.74	324	*i* P	Pb	16 11 39.7	-0.1
BTMN				*i* S	Sn	16 12 08.0	-0.4
BTMN	Batman	2.74	324	P	Pb	16 11 39.7	-0.1
BTMN				S	Sn	16 12 08.0	-0.4
MAZI	Mazidag	2.89	309	P	Pb	16 11 41.1	-1.4
RTB	Rutbah	3.61	224	*e*Pn	Pn	16 11 48.0	+1.1
	SNR=39						
RTB				*e*Sn	Sn	16 12 29.0	-0.9
	SNR=3.0						

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*ISCJB **06** 16:11:47.1±0.6, 43°.86N±0°.04×105°.44W±0°.05, h0km, Error ellipse: s-maj=5.6km s-min=4.7km az=157.0*
*NEIC **06** 16:11:49.2±0.8, 43°.95N×105°.41W, h0km, ML2.9, Error ellipse: s-maj=12.6km s-min=9.1km az=153.0, Suspected Mining explosion.*
NEIC 39 km [24 miles] S of Gillette.
*IDC **06** 16:11:49.1±2.0, 43°.86N×105°.40W, h0km, mb1 3.8/2, mb1mx3.2/66, mbtmp3.6/2, ML3.4/2, Error ellipse: s-maj=57.3km s-min=8.8km az=149.0*
ISC 06 16:11:47.9±0.9**, 43°.87N**±0°.05×**105°.41W**±0°.04**, h0**km**, n12, σ0ˢ.96**/19**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	1.02	75	*e*Pg	Pn	16 12 09.6	-0.1
RSSD				*e*Sg	Sg	16 12 20.9	+0.2
LAO	LASA Array	2.88	349	*e*Pn	Pn	16 12 35.0	-0.1
LAO				*e*Sn	Sn	16 13 12.1	+1.7
RLMT	Red Lodge	3.03	296	*e*Pn	Pn	16 12 37.4	0.0
RLMT				*e*Sn	Sn	16 13 15.3	+0.8
BW06	Boulder Array	3.23	251	Pn	Pn	16 12 40.2	+0.2
BW06				*e*Sg	Sg	16 13 32.8	+1.3
PDAR	Pinedale Array	3.23	251	Pn	Pb	16 12 44.9	-1.3
	4.9nm,0.3s,baz=70,slow=14,SNR=35						
PDAR				Pg	Pg	16 12 49.6	-0.2
	4.9nm,0.3s,baz=75,slow=17,SNR=44						
PDAR				Lg	Lg	16 13 30.7	
	8.4nm,0.3s,baz=73,slow=33,SNR=12						
ISCO	Idaho Springs	4.07	182	*e*Pn	Pn	16 12 52.9	+1.1
ISCO				*e*Sn	Sn	16 13 40.2	0.0
BOZ	Bozeman (W)	4.76	293	*e*Pn	Pn	16 13 01.4	+0.3
HWUT	Hardware Ranch	5.07	246	*e*Pn	Pn	16 13 07.0	+1.6
	5.8nm,0.4s						
HWUT				*e*Sg	Sg	16 14 29.5	-1.2
EGMT	Eagleton	5.14	325	*e*Pn	Pn	16 13 06.8	+0.6
	16nm,0.8s						
EGMT				*e*Sn	Sn	16 14 06.9	+0.6
DUG	Dugway, Tooele	6.62	239	*e*Pn	Pn	16 13 27.7	+1.1
	5.0nm,0.4s						
ULM	Lac du Bonnet	9.11	42	Pn	Pn	16 13 59.9	-0.7
	0.7nm,0.3s,baz=237,slow=11,SNR=6.8						
ULM				Lg	Lg	16 16 28.6	
	0.3nm,0.3s,baz=139,slow=20,SNR=2.1						
I56US	NEWPORT INFRAS	9.26	302	*i*		17 05 30.0	
	baz=115,slow=307,SNR=2.9						

DJA 06 16:33:28.7±1.6**, 6°S**±6°**×10°2E**±°**, h34**km±26km**, M3.5**/5**, MLv3.5**/5**, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNAI	Manna	2.11	15	P	Pn	16 34 01.0	-0.6
MNAI				S	Sn	16 34 28.5	+1.8
LWLI	Liwa	2.15	50	P	Pn	16 34 02.6	+0.3
LWLI				S	Sn	16 34 29.4	+1.5
KASI	Kota Agung	2.26	67	P	Pn	16 34 04.3	+0.6
KASI				S	Sn	16 34 31.7	+1.2
MDSI	Maura Dua	2.60	43	P	Pn	16 34 08.9	+0.5
MDSI				S	Sn	16 34 41.0	+2.1

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*IDC **06** 16:40:18.8±1.6, 15°.91S×172°.95W, h0km, mb4.1/8, mb1 4.3/8, mb1mx3.9/55, mbtmp4.1/8, MS3.4/13, Ms1 3.4/13, ms1mx3.1/51, Error ellipse: s-maj=96.1km s-min=19.8km az=147.0*
ISC 06 16:40:22.8±1.5**, 15°.8S**±0°.5×**173°.0W**±0°.3**, h26**km**, n25, σ0ˢ.33**/10**, mb4.1**/8**, MS3.4**/12**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.25	32	Pn	Pn	16 40 52.5	-6.0
	19nm,0.3s,baz=191,slow=3.9,SNR=36						
AFI				Sn	Sn	16 41 16.3	-9.2
	107nm,0.3s,baz=219,slow=23,SNR=9.4						
RAR	Rarotonga	13.65	115	LR	LR	16 47 22.0	
	comp=Z,118nm,21.2s,baz=306,slow=31						
DZM	Mont Dzumac	20.39	249	LR	LR	16 51 52.6	
	comp=Z,174nm,18.3s,baz=48,slow=34						
DZM	Mont Dzumac	20.39	249	*e*LR	LR	16 50 05.1	
	218nm,23.8s						
PPT	Papeete	22.51	98	LR	LR	16 51 23.1	
	comp=Z,54nm,21.7s,baz=298,slow=30						
PPT2	Papeete2	22.51	98	*e*LR	LR	16 50 23.4	
	183nm,26.5s						
TBI	Tubuai	23.39	112	*e*LR	LR	16 50 54.1	
	226nm,29.2s						
URZ	Urewera	23.98	199	LR	LR	16 53 05.5	
	comp=Z,71nm,21.6s,baz=10,slow=32						
HNR	Honiara	27.12	280	LR	LR	16 55 20.7	
	comp=Z,136nm,18.6s,baz=128,slow=33						
CTA	Charters Tower	38.91	258	P	P	16 47 46.7	0.0
	2.9nm,0.8s,baz=120,slow=16,SNR=1.7						
STKA	Stephens Creek	44.15	240	P	P	16 48 29.4	-0.1
	3.6nm,0.7s,baz=90,slow=11,SNR=8.6						
WRA	Warramunga Arr	50.11	257	P	P	16 49 16.1	-0.2
	1.5nm,0.7s,baz=92,slow=6.7,SNR=29						
ASAR	Alice Springs	50.33	252	P	P	16 49 17.4	-0.5
	8.4nm,1.0s,baz=89,slow=8.0,SNR=37						
ASAR				LR	LR	17 09 49.0	
	comp=Z,73nm,18.2s,baz=92,slow=35						
GUMO	Guam	50.88	303	LR	LR	17 09 25.4	
	comp=Z,15nm,18.4s,baz=139,slow=34						
FITZ	Fitzroy Crossi	58.49	258	P	P	16 50 17.9	+0.6
	2.4nm,0.9s,baz=124,slow=7.3,SNR=1.8						
FITZ				LR	LR	17 13 27.1	
	comp=Z,28nm,18.6s,baz=98,slow=34						
MJAR	Matsushiro Arr	69.51	320	LR	LR	17 16 32.6	
	comp=Z,21nm,21.7s,baz=175,slow=31						
LPIG	La Paz	72.95	58	LR	LR	17 15 47.0	
	comp=Z,35nm,18.8s,baz=214,slow=29						
NVAR	Mina Array Bea	74.40	42	LR	LR	17 21 05.4	
	comp=Z,26nm,18.1s,baz=124,slow=33						
TXAR	Lajitas Array	80.54	56	P	P	16 52 33.4	0.0
	0.5nm,1.0s,baz=239,slow=3.9,SNR=4.1						
ANMO	Albuquerque	80.79	50	LR	LR	17 24 57.5	
	comp=Z,25nm,18.7s,baz=264,slow=33						
PDAR	Pinedale Array	82.34	42	P	P	16 52 42.8	+0.1
	0.4nm,0.6s,baz=222,slow=2.0,SNR=3.9						
ILAR	Eielson Array	82.80	11	P	P	16 52 44.0	-0.2
	0.8nm,0.7s,baz=226,slow=6.1,SNR=13						
CMAR	Chiang Mai Arr	93.10	288	LR	LR	17 34 29.5	
	comp=Z,9.2nm,19.3s,baz=155,slow=35						
GERES	GERESS Array B	146.62	352	PKPbc	PKPbc	17 00 02.4	+0.1
	0.1nm,0.3s,baz=32,slow=5.8,SNR=1.8						
BRTR	Keskin Array B	146.73	321	PKPbc	PKPab	17 00 04.0	-0.1
	2.1nm,0.8s,baz=113,slow=2.8,SNR=12						

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*ISN **06** 16:41:40.6±0.3, 37°.16N×43°.75E, h0km, ML2.8*
*CSEM **06** 16:41:42.9±0.6, 37°.24N×42°.60E, h2km, ML2.5, Error ellipse: s-maj=20.5km s-min=9.3km az=33.0*
DDA 06 16:41:42.9, 37°.29N×42°.67E, h7km**, Ml2.5, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIRN	S˜–rnak	0.29	315	*i* P	Pg	16 41 47.6	-0.9
SIRN				*i* S	Sg	16 41 52.7	+0.3
SIRN	S˜–rnak	0.29	315	P	Pg	16 41 47.6	-0.9
SIRN				S	Sg	16 41 52.7	+0.4
CUKT	Cukurca	0.75	93	*i* P	Pn	16 42 00.7	+0.6
CUKT	Cukurca	0.75	93	P	Pn	16 42 00.7	+0.6
HAKT	HAKKARI	0.87	72	*i* P	Pb	16 42 00.1	-0.3
HAKT	HAKKARI	0.87	72	P	Pb	16 42 00.2	-0.2
SRTM	Siirt_Merkez	0.91	320	*i* P	Pg	16 42 00.0	-0.4
SRTM				*i* S	Sb	16 42 14.3	+0.7
SRTM	Siirt_Merkez	0.91	320	P	Pg	16 42 00.0	-0.4
SRTM				S	Sb	16 42 14.3	+0.7
BTMN	Batman	1.26	299	*i* P	Pg	16 42 07.0	0.0
BTMN				*i* S	Sn	16 42 25.7	+1.4
BTMN	Batman	1.26	299	P	Pn	16 42 07.0	0.0
BTMN				S	Sn	16 42 25.7	+1.4
MARD	Mardin	1.51	271	*i* P	Pb	16 42 10.9	-0.4
MARD				*i* S	Sg	16 42 33.0	+1.7

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*ISCJB **06** 16:55:47.8±0.7, 41°.08N±0°.04×39°.79E±0°.03, h12km±4km, Error ellipse: s-maj=7.4km s-min=3.5km az=158.9*
*ISK **06** 16:55:47.6, 41°.03N×39°.79E, h11km, ML2.6/7*
*CSEM **06** 16:55:48.2±0.4, 41°.04N×39°.77E, h15km, ML2.8, Error ellipse: s-maj=10.6km s-min=6.6km az=166.0*
*DDA **06** 16:55:49.8, 40°.98N×39°.61E, h7km, Ml2.8*
ISC 06 16:55:48.6±1.0**, 41°.04N**±0°.04×**39°.77E**±0°.02**, h20**km±4km**, n28, σ0ˢ.79**/46**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MACK	Trabzon	0.10	180	*i* P	Pg	16 55 52.6	0.0
MACK				*i* S	Sg	16 55 55.3	+0.1
MACK	Trabzon	0.10	180	P	Pg	16 55 52.6	0.0
MACK				S	Sg	16 55 55.3	+0.1
GUMT	Gumushane	0.62	201	PG	Pb	16 55 59.8	-1.0
GUMT	Gumushane	0.62	201	*e*Pg	Pb	16 55 59.8	-1.0
BAYT	Ayd˜–ntepe-Bay	0.71	156	PG	Pb	16 56 01.8	-0.5
BAYT				SG	Sb	16 56 11.1	-0.6
BAYT	Ayd˜–ntepe-Bay	0.71	156	*e*Pg	Pb	16 56 01.8	-0.5
BAYT				*e*Sg	Sb	16 56 11.1	-0.6
CHOM	Cayeli-Rize	0.75	85	PG	Pb	16 56 02.7	-0.3
CHOM				SG	Sb	16 56 12.9	0.0
CHOM	Cayeli-Rize	0.75	85	*e*Pg	Pb	16 56 02.7	-0.3
CHOM				*e*Sg	Sb	16 56 12.9	0.0
ESPY	Espiye-Giresun	0.80	261	PG	Pb	16 56 03.4	-0.4
ESPY	Espiye-Giresun	0.80	261	*e*Pg	Pb	16 56 03.4	-0.4
KELT	Kelkit	0.97	204	*i* P	Pb	16 56 06.6	-0.3
KELT				*i* S	Sb	16 56 19.2	-0.2
KELT	Kelkit	0.97	204	P	Pb	16 56 06.6	-0.3
KELT				S	Sb	16 56 19.2	-0.2
GRSN	GIRESUNGRSN	1.14	265	*i* P	Pn	16 56 09.1	-0.4
GRSN				*i* S	Sb	16 56 24.1	0.0
GRSN	GIRESUNGRSN	1.14	265	P	Pn	16 56 09.1	-0.4
GRSN				S	Sb	16 56 24.1	0.0
EZC	Erzincan	1.33	194	*e*Pn	Pg	16 56 14.7	+0.4
EZC				*e*Sn	Sg	16 56 33.6	+2.0
ERZN	Erzincan	1.45	181	PN	Pb	16 56 14.7	-0.3
ERZN				SN	Sb	16 56 33.6	+0.5
SUSE	Susehri	1.45	236	*i* P	Pb	16 56 15.1	0.0
SUSE				*i* S	Sb	16 56 34.4	+1.1
SUSE	Susehri	1.45	236	P	Pb	16 56 15.1	0.0
SUSE				S	Sb	16 56 34.3	+1.1
BCA	Borcka	1.46	73	PN	Pn	16 56 13.9	+0.1
BCA	Borcka	1.46	73	*e*Pn	Pn	16 56 13.9	+0.1
DBAD	Bademkaya	1.46	90	*i* P	Pn	16 56 13.8	-0.1
DBAD				*i* S	Sn	16 56 32.7	+0.2
DBOC	Borcka	1.46	77	*i* P	Pn	16 56 12.8	-1.1
DBOC				*i* S	Sn	16 56 32.0	-0.6
DDEM	Demirkent	1.51	95	*i* P	Pn	16 56 15.1	+0.5
DDEM				*i* S	Sb	16 56 34.8	+0.1
DAGI	Agillar	1.62	88	*i* P	Pn	16 56 16.5	+0.3
DAGI				*i* S	Sn	16 56 36.9	+0.3
REFA	Refahiye_ERZ˜	1.81	205	*i* P	Pn	16 56 16.6	-2.3
REFA				*i* S	Sn	16 56 31.0	-10
REFA	Refahiye_ERZ˜	1.81	205	P	Pn	16 56 16.6	-2.3
PTK	Pertek	2.17	188	PN	Pn	16 56 24.8	+1.1
PTK	Pertek	2.17	188	*e*Pn	Pn	16 56 24.8	+1.1

MAN 06 16:56:34.6, 18°.47N×120°.62E, h1km**, mb4.4, ML3.3, MS3.0, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABRA	Dolores	0.82	174	*e*P	Pg	16 56 50.1	-0.2
ABRA				*e*S	Sg	16 57 01.8	+0.8
APYP	Conner	0.84	136	*e*P	Pg	16 56 51.2	+0.4
APYP				*e*S	Sn	16 57 06.3	-0.4
SGCP	Mt. Cagua	1.37	99	*e*P	Pn	16 57 00.3	-0.6
SGCP				*e*S	Sn	16 57 20.6	+0.9
CVP	Callao Caves	1.37	124	*e*P	Pn	16 57 00.3	-0.6
CVP				*e*S	Sn	16 57 20.1	+0.4

CAUP	**Cauayan**	**1.90**	**143**	*e*P	Pb	16 57 09.2	-0.8
CAUP				*e*S	Sg	16 57 38.4	+2.7
BOLP	**Bolinao**	**2.18**	**198**	*e*P	Pn	16 57 12.8	+0.7
BALP	**Baler**	**2.86**	**161**	*e*P	Pn	16 57 19.2	-2.2

IDC 06 17:15:40.9±2.9**, 6°.54S×129°.32E, h83**^{km}±40^{km}**, mb2.8**/1**, mb1 3.6**/5**, mb1mx3.1**/52**, mbtmp3.7**/5**, Error ellipse: s-maj=61.5km s-min=20.8km az=96.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.96**	**19**	P	Pn	17 17 06.1	-0.4
	2.2nm,0.3s,baz=24,slow=19,SNR=22						
SIJI				S	Sn	17 18 07.3	-6.1
	1.7nm,0.3s,baz=221,slow=22,SNR=9.6						
FITZ	**Fitzroy Crossi**	**12.04**	**197**	P	Pn	17 18 31.1	+1.7
	0.7nm,0.3s,baz=26,slow=11,SNR=3.0						
FITZ				S	Sn	17 20 41.2	-0.6
	0.3nm,0.3s,baz=106,slow=9.5,SNR=2.1						
WRA	**Warramunga Arr**	**14.19**	**160**	P	Pn	17 18 57.7	-0.3
	0.5nm,0.3s,baz=337,slow=13,SNR=23						
WRA				S	Sn	17 21 29.3	-5.0
	0.5nm,0.3s,baz=330,slow=22,SNR=6.2						
ASAR	**Alice Springs**	**17.59**	**166**	P	P	17 19 39.6	-1.0
	0.4nm,0.3s,baz=343,slow=9.6,SNR=51						
ASAR				S	Sn	17 22 50.1	-6.4
	0.1nm,0.3s,baz=348,slow=25,SNR=4.8						
MKAR	**Makanchi Array**	**67.47**	**327**	P	P	17 26 28.1	+0.2
	0.1nm,0.5s,baz=112,slow=7.7,SNR=1.4						

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*ISCJB **06** 17:22:00.7±0.9, 45°.92N±0°.09×106°.8W±0°.1, h0^{km}, Error ellipse: s-maj=16.1km s-min=10.6km az=39.6*

*IDC **06** 17:22:00.7±3.6, 45°.83N×106°.75W, h0^{km}, mb1 2.8/1, mb1mx2.8/58, mbtmp2.4/1, ML3.5/1, Error ellipse: s-maj=63.4km s-min=27.2km az=124.0*

*NEIC **06** 17:22:01.3±0.9, 45°.95N×106°.80W, h0^{km}, ML2.8, Error ellipse: s-maj=16.6km s-min=10.8km az=133.0, Suspected Mining explosion.*

NEIC 15 km [9 miles] WNW of Colstrip.

ISC 06 17:21:60.0±1.3**, 46°.07N**±0°.07×**106°.76W**±0°.07**, h0**^{km}**, n9, σ0**^{s}**.84**/8**, Montana**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LAO	**LASA Array**	**0.72**	**31**	*e*Pg	**Pn**	**17 22 17.9**	**+0.4**
RLMT	**Red Lodge**	**2.00**	**243**	*e*Pn	**Pn**	**17 22 36.1**	**+0.9**
RSSD	**Black Hills**	**2.74**	**134**	*e*Pn	**Pn**	**17 22 44.9**	**-0.5**
EGMT	**Eagleton**	**2.83**	**315**	*e*Pn	**Pg**	**17 22 54.1**	**-0.1**
BOZ	**Bozeman (W)**	**3.44**	**264**	Pn	**Pn**	**17 22 53.8**	**-1.1**
BW06	**Boulder Array**	**3.86**	**212**	*e*Pn	**Pn**	**17 23 00.4**	**-0.4**
PDAR	**Pinedale Array**	**3.86**	**212**	Pn	**Pn**	**17 23 01.8**	**+0.9**
	0.4nm,0.3s,baz=43,slow=13,SNR=14						
PDAR				Pg	**Pb**	**17 23 09.2**	**+0.1**
	2.3nm,0.3s,baz=45,slow=18,SNR=32						
PDAR				Lg	Lg	17 23 54.9	
	3.3nm,0.3s,baz=38,slow=32,SNR=10						
I56US	**NEWPORT INFRAS**	**7.40**	**291**	*i*		18 07 10.0	
	baz=106,slow=306,SNR=2.1						
I10CA	**LAC DU BONNET**	**8.28**	**56**	*i*		18 24 00.0	
	baz=244,slow=297,SNR=1.5						

IDC 06 17:29:17.3±9.1**, 15°.86S×170°.61W, h0**^{km}**, mb3.9**/4**, mb1 4.1**/4**, mb1mx3.6**/53**, mbtmp3.9**/4**, Error ellipse: s-maj=244.9km s-min=44.3km az=27.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**46.15**	**241**	P	P	17 37 44.4	+0.6
	0.5nm,0.4s,baz=107,slow=11,SNR=3.9						
WRA	**Warramunga Arr**	**52.36**	**257**	P	P	17 38 31.1	-0.4
	0.3nm,0.4s,baz=97,slow=6.8,SNR=7.7						
ASAR	**Alice Springs**	**52.53**	**252**	P	P	17 38 32.5	-0.3
	3.5nm,0.5s,baz=89,slow=7.8,SNR=115						
QSPA	**South Pole Qui**	**74.19**	**180**	P	P	17 40 55.8	+0.1
	0.3nm,0.3s,baz=120,slow=9.0,SNR=4.6						

MAN 06 17:29:43.8, 5°.33N×126°.17E, h112^{km}**, mb4.7, ML3.6, MS3.4, 1C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSPH	**General Santos**	**1.43**	**302**	⇓*e*P	Pn	17 30 08.5	-1.5
GSPH				*e*S	Sn	17 30 27.3	-2.7
MATI	**Mati**	**1.61**	**3**	*e*P	Pn	17 30 12.8	+0.7
MATI				*e*S	Sn	17 30 34.4	+0.7
DMPH	**Davao City--Mi**	**1.86**	**339**	⇑*i*P	Pn	17 30 17.8	+2.6
DMPH				*i* S	Sn	17 30 40.8	+1.6
SKMP	**Bagumbayan, Su**	**2.00**	**306**	*e*P	Pn	17 30 16.7	-0.2
SKMP				*e*S	Sn	17 30 41.2	-1.1
BUKP	**Musuan**	**2.77**	**337**	*e*P	Pn	17 30 29.4	+2.6

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*IDC **06** 17:36:30.5±2.0, 4°.64N×125°.59E, h0^{km}, mb3.4/4, mb1 3.6/4, mb1mx3.3/60, mbtmp3.4/4, Error ellipse: s-maj=120.0km s-min=25.4km az=68.0*

*ISCJB **06** 17:36:47.3±0.8, 4°.41N±0°.06×126°.0E±0°.1, h150^{km}, mb3.4/4, Error ellipse: s-maj=19.7km s-min=7.1km az=165.6*

*MAN **06** 17:36:47.7, 4°.79N×125°.84E, h206^{km}, mb4.9, ML3.8, MS3.8*

ISC 06 17:36:47.8±1.1**, 4°.45N**±0°.09×**125°.9E**±0°.1**, h150**^{km}**, n8, σ1**^{s}**.15**/11**, mb3.4**/4**, 2C, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSPH	**General Santos**	**1.90**	**329**	⇑*i*P	**Pn**	**17 37 23.2**	**+1.3**
GSPH				*i* S	**Sn**	**17 37 48.8**	**+0.7**
SKMP	**Bagumbayan, Su**	**2.48**	**326**	*e*P	**Pn**	**17 37 28.2**	**-0.4**
SKMP				*e*S	**Sn**	**17 38 00.8**	**+0.6**
MATI	**Mati**	**2.50**	**7**	*e*P	**Pn**	**17 37 28.8**	**-0.1**
MATI				*e*S	**Sn**	**17 38 01.3**	**+0.6**
DMPH	**Davao City--Mi**	**2.65**	**351**	⇑*i*P	Pn	17 37 33.8	+3.1
DMPH				*i* S	**Sn**	**17 38 05.3**	**+1.4**
FITZ	**Fitzroy Crossi**	**22.41**	**181**	P	**P**	**17 41 34.6**	**+0.6**
	1.7nm,0.8s,baz=342,slow=8.4,SNR=7.3						
WRA	**Warramunga Arr**	**25.61**	**161**	P	**P**	**17 42 03.5**	**+0.1**
	0.3nm,0.3s,baz=337,slow=10,SNR=5.7						
ASAR	**Alice Springs**	**29.01**	**165**	P	**P**	**17 42 34.2**	**+0.6**
	0.3nm,0.6s,baz=341,slow=7.0,SNR=12						
MKAR	**Makanchi Array**	**56.52**	**325**	P	**P**	**17 46 12.2**	**-2.2**
	0.2nm,0.4s,baz=118,slow=6.8,SNR=4.8						

MAN 06 17:42:52.4, 11°.50N×125°.50E, h22^{km}**, mb3.9, ML2.6, MS2.2, 1D, Samar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BESP	**Borongan**	**0.12**	**327**	*e*P	Pb	17 42 57.7	0.0
BESP				*e*S	Sb	17 43 04.1	+2.7
PLP	**Palo**	**0.61**	**237**	⇓*e*P	Pn	17 43 05.4	-0.3
PLP				*e*S	Sn	17 43 15.6	+0.6
OCLP	**Ormoc**	**0.98**	**243**	*e*P	Pn	17 43 14.5	+3.7
CNP	**Catarman**	**1.29**	**321**	*e*P	Pn	17 43 14.3	-0.8
CNP				*e*S	Sb	17 43 33.1	+0.9

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*ISCJB **06** 17:46:59.9±1.1, 38°.66N±0°.07×43°.26E±0°.07, h13^{km}, Error ellipse: s-maj=11.6km s-min=6.1km az=33.1*

*DDA **06** 17:47:00.2, 38°.65N×43°.27E, h7^{km}, Ml2.6*

ISC 06 17:46:57.6±1.8**, 38°.8N**±0°.1×**43°.24E**±0°.07**, h13**^{km}**, n5, σ0**^{s}**.38**/8**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VANB	**Van**	**0.21**	**147**	PG	**Pb**	**17 47 03.9**	**+0.4**
TVAN	**Van**	**0.28**	**152**	*i* P	**Pg**	**17 47 03.5**	**-0.1**
TVAN				*i* S	**Sg**	**17 47 07.8**	**+0.2**
ADCV	**BITLIS_Adilcev**	**0.41**	**275**	*i* P	**Pn**	**17 47 08.9**	**-0.4**
ADCV				*i* S	**Sn**	**17 47 16.8**	**-0.2**
GEVA	**Gevas**	**0.48**	**197**	*i* P	**Pg**	**17 47 06.9**	**-0.3**
GEVA				*i* S	**Sg**	**17 47 14.0**	**+0.2**
GURO	**Guroymak-BITLI**	**0.97**	**257**	*e*PG	**Pg**	**17 47 16.8**	**+0.3**

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*ISCJB **06** 17:47:06.0±0.7, 24°.83N±0°.05×122°.87E±0°.02, h22^{km}±4^{km}, Error ellipse: s-maj=8.2km s-min=3.6km az=6.8*

*TAP **06** 17:47:06.5, 24°.77N×122°.77E, h10^{km}±1^{km}, ML2.5, D*

*JMA **06** 17:47:06.4±0.1, 24°.76N×122°.85E, h35^{km}±3^{km}, M1.6*

ISC 06 17:47:04.3±1.4**, 24°.83N**±0°.06×**122°.85E**±0°.03**, h5**^{km}±11^{km}**, n24, σ0**^{s}**.66**/43**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.39**	**167**	P	**Pb**	**17 47 14.3**	**+0.6**
JYNG				*e*S	**Sb**	**17 47 20.0**	**0.0**
YOJ	**Yonaguni jima**	**0.40**	**159**	P	**Pb**	**17 47 14.7**	**+0.9**
	baz=144						
YOJ				S	**Sb**	**17 47 20.9**	**+0.7**
	baz=144						
YOJ	**Yonaguni jima**	**0.40**	**159**	P	**Pb**	**17 47 14.5**	**+0.7**
YOJ				*e*S	**Sb**	**17 47 20.1**	**-0.1**
EOS1	**EOS1**	**0.72**	**247**	*e*P	**Pb**	**17 47 19.6**	**+0.3**
	baz=249						
EOS1				*e*S	**Sb**	**17 47 28.8**	**-0.6**
	baz=249						
TWC	**Suao**	**0.94**	**256**	P	**Pb**	**17 47 23.5**	**+0.4**
	baz=258						
TWC				S	**Sb**	**17 47 35.3**	**-0.5**
	baz=258						
IRIF	**Iriomote-Funau**	**0.94**	**122**	P	**Pg**	**17 47 22.4**	**+0.1**
TIPB	**Shuangxi**	**0.94**	**279**	P	**Pg**	**17 47 21.9**	**-0.5**
	baz=283						
TIPB				*e*S	**Sb**	**17 47 37.0**	**+1.0**
	baz=283						
NANB	**Nanao**	**1.08**	**248**	P	**Pb**	**17 47 26.0**	**+0.5**
	baz=249						
NANB				*e*S	**Sb**	**17 47 39.8**	**-0.2**
	baz=249						
ENA	**Nanau**	**1.09**	**248**	P	**Pg**	**17 47 25.6**	**+0.4**
	baz=249						
ENA				*e*S	**Sb**	**17 47 39.9**	**-0.2**
	baz=249						
HATJ	**Hateruma jima**	**1.16**	**132**	P	**Pg**	**17 47 26.4**	**-0.2**
HATJ				*e*S	**Sg**	**17 47 41.0**	**-0.7**
ENTT	**Nioudou**	**1.19**	**261**	*e*P	**Pb**	**17 47 27.7**	**+0.4**
	baz=262						
ENTT				*e*S	**Sb**	**17 47 43.1**	**+0.1**
	baz=262						
JKRS	**Kuro-shima**	**1.21**	**119**	P	**Pg**	**17 47 28.0**	**+0.5**
JIJ	**Ishigaki jima**	**1.27**	**111**	P	**Pg**	**17 47 27.5**	**-1.1**
NACB	**Ninganchiao**	**1.32**	**240**	*e*P	**Pg**	**17 47 29.4**	**-0.2**
	baz=240						
NACB				*e*S	**Sg**	**17 47 46.1**	**-0.7**
	baz=240						
JISG	**Ishigakijimahi**	**1.35**	**100**	P	**Pn**	**17 47 29.5**	**-0.3**
YHNB	**Yeheng**	**1.35**	**263**	*e*P	**Pg**	**17 47 30.4**	**+0.2**
	baz=265						
YHNB				*e*S	**Sb**	**17 47 48.3**	**+0.5**
	baz=265						
WHF	**Hehuan Shan**	**1.60**	**245**	*e*P	**Pn**	**17 47 33.8**	**+0.1**
	baz=245						
WHF				*e*S	**Sn**	**17 47 54.1**	**-0.8**
	baz=245						
JTJ	**Tarama**	**1.69**	**96**	P	**Pn**	**17 47 35.2**	**+0.7**
CHGB	**Renai**	**1.71**	**244**	*e*P	**Pn**	**17 47 35.9**	**+0.8**
	baz=243						
CHGB				*e*S	**Sn**	**17 47 56.0**	**-1.5**
	baz=243						
SMLT	**Sun Moon Lake**	**2.02**	**242**	*e*P	**Pn**	**17 47 40.2**	**+1.1**
	baz=242						
SMLT				*e*S	**Sn**	**17 48 04.7**	**-0.1**
	baz=242						
YULB	**Yu-li**	**2.02**	**225**	*e*P	**Pn**	**17 47 39.5**	**+0.4**
	baz=224						
YULB				*e*S	**Sn**	**17 48 03.5**	**-1.2**
	baz=224						
FULB	**Fuli**	**2.16**	**222**	*e*P	**Pn**	**17 47 40.9**	**-0.1**
	baz=220						
FULB				*e*S	**Sn**	**17 48 07.6**	**-0.7**
	baz=220						
TPUB	**Ta-pu**	**2.54**	**234**	*e*P	**Pn**	**17 47 47.6**	**+1.4**
	baz=233						
TPUB				*e*S	**Sn**	**17 48 17.6**	**0.0**
	baz=233						
WTP	**Ta-pu**	**2.59**	**233**	*e*P	**Pn**	**17 47 47.2**	**+0.3**
	baz=232						
WTP				*e*S	**Sn**	**17 48 18.1**	**-0.6**
	baz=232						

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*BJI **06** 17:50:11.0, 10°.38S×161°.80E, h90^{km}, mb4.7/26, mB4.8/17*

*IDC **06** 17:50:12.6±0.6, 10°.50S×161°.47E, h82^{km}±4^{km}, mb4.2/27, mb1 4.3/27, mb1mx4.2/55, mbtmp4.5/27, MS3.2/16, Ms1 3.3/16, ms1mx3.1/41, Error ellipse: s-maj=11.3km s-min=7.8km az=43.0*

*ISCJB **06** 17:50:13.6±0.2, 10°.46S±0°.03×161°.35E±0°.03, h100^{km}, mb4.8/126, Error ellipse: s-maj=4.8km s-min=4.4km az=150.6*

*NEIC **06** 17:50:14.2±0.6, 10°.43S×161°.41E, h93^{km}±5^{km}, mb4.8/100, Error ellipse: s-maj=4.4km s-min=3.8km az=120.0*

ISC 06 17:50:14.2±0.3**, 10°.48S**±0°.05×**161°.47E**±0°.06**, h100**^{km}**, n207, σ1**^{s}**.49**/206**, mb4.8**/127**, 3C, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.83**	**305**	P	**Pn**	**17 50 44.0**	**-0.7**
	622nm,0.3s,baz=144,slow=6.8,SNR=141						
HNR				S	**Sn**	**17 51 05.5**	**-2.3**
	826nm,0.3s,baz=27,slow=23,SNR=13						
HNR	**Honiara**	**1.83**	**305**	*i* P	**Pn**	**17 50 44.5**	**-0.1**
HNR				*i* S	**Sn**	**17 51 03.0**	**-4.8**
HNR	**Honiara**	**1.83**	**305**	*e*Pn	**Pn**	**17 50 43.5**	**-1.1**
HNR				*e*Sn	**Sn**	**17 51 05.5**	**-2.3**
HNR				*e*Sn	Sn	17 51 06.3	-1.6
RABL	**Rabaul**	**11.15**	**303**	*e*Pn	**Pn**	**17 52 51.9**	**+1.3**
DZM	**Mont Dzumac**	**12.47**	**158**	P	**Pn**	**17 53 09.6**	**+1.3**
	4.9nm,0.3s,baz=28,slow=6.2,SNR=162						
DZM				S	**Sn**	**17 55 20.7**	**-4.8**
	1.2nm,0.3s,baz=280,slow=23,SNR=4.1						
DZM				LR	LR	17 57 12.6	
	comp=Z,215nm,19.1s,baz=27,slow=34						
DZM	**Mont Dzumac**	**12.47**	**158**	*e*Pn	**Pn**	**17 53 09.5**	**+1.3**
	14nm,0.2s						
DZM				*e*Sn	**Sn**	**17 55 18.6**	**-6.9**
	6.8nm,0.3s						
DZM				*e*LR	LR	17 56 02.5	
	764nm,28.4s						
DZM	**Mont Dzumac**	**12.47**	**158**	*e*Pn	**Pn**	**17 53 09.5**	**+1.3**
DZM				*e*Sn	**Sn**	**17 55 21.6**	**-3.8**
PMG	**Port Moresby**	**14.14**	**273**	LR	LR	17 58 01.8	
	comp=Z,280nm,18.1s,baz=100,slow=33						
MANU	**Manus Island**	**16.33**	**300**	*e*Pn	**P**	**17 53 57.5**	**-1.3**
	36nm,0.8s						
PATS	**Pohnpei**	**17.49**	**350**	*e*P	**Pn**	**17 54 12.1**	**+0.2**
	72nm,0.9s						
CTA	**Charters Tower**	**17.50**	**235**	P	**Pn**	**17 54 13.6**	**+1.6**
	1.1nm,0.3s,baz=62,slow=12,SNR=15						
CTAO	**Charters Tower**	**17.50**	**235**	*e*P	**Pn**	**17 54 14.2**	**+2.2**
	66nm,1.6s						
EIDS	**Eidsvold**	**17.79**	**212**	*e*P	**Pn**	**17 54 16.9**	**+1.5**
	68nm,1.7s						
COEN	**Coen**	**18.21**	**257**	*e*P	**Pn**	**17 54 22.1**	**+1.5**
	65nm,1.4s						
ARMA	**Armidale**	**21.85**	**203**	*e*P	**P**	**17 55 00.1**	**+1.2**
	53nm,1.4s						
JAY	**Jayapura**	**22.09**	**290**	P	**P**	**17 55 00.8**	**-0.6**
	7.5nm,0.4s,baz=176,slow=5.4,SNR=20						
AFI	**Afiamalu**	**26.36**	**100**	LR	LR	18 05 15.4	
	comp=Z,23nm,18.1s,baz=262,slow=34						
AFI	**Afiamalu**	**26.36**	**100**	*e*P	**P**	**17 55 41.8**	**+0.4**
	132nm,1.5s						
CAN	**Canberra**	**27.21**	**203**	*e*P	**P**	**17 55 49.9**	**+1.1**
	43nm,1.5s						
WRAB	**Tennant Creek**	**27.77**	**247**	*e*P	**P**	**17 55 54.0**	**+0.1**
	12nm,0.6s						
WB2	**Warramunga Arr**	**27.77**	**247**	*e*P	**P**	**17 55 53.6**	**-0.3**
WR1	**Warramunga Arr**	**27.78**	**247**	*e*P	**P**	**17 55 54.0**	**0.0**
	25nm,1.4s						
WR1				*e*ScP	**ScP**	**18 02 41.4**	**+1.3**
WRA	**Warramunga Arr**	**27.78**	**247**	P	**P**	**17 55 54.0**	**0.0**
	2.8nm,0.7s,baz=78,slow=9.2,SNR=19						
WRA				ScP	**ScP**	**18 02 41.4**	**+1.3**
	0.7nm,0.8s,baz=75,slow=3.6,SNR=7.0						
STKA	**Stephens Creek**	**28.13**	**218**	P	**P**	**17 55 57.1**	**+0.2**
	2.9nm,0.7s,baz=35,slow=12,SNR=6.2						
STKA	**Stephens Creek**	**28.13**	**218**	*e*P	**P**	**17 55 57.6**	**+0.7**
	3.2nm,1.4s						
GUMO	**Guam**	**29.04**	**325**	LR	LR	18 06 49.9	
	comp=Z,90nm,21.7s,baz=139,slow=34						
AS01	**Alice Springs**	**29.32**	**240**	*e*P	**P**	**17 56 07.0**	**-0.7**
AS31	**Alice Springs**	**29.36**	**240**	*e*P	**P**	**17 56 07.5**	**-0.6**
	1.4nm,0.8s						
ASAR	**Alice Springs**	**29.36**	**240**	P	**P**	**17 56 07.2**	**-0.8**
	2.1nm,0.8s,baz=65,slow=10.0,SNR=20						
ASAR				ScP	**ScP**	**18 02 46.1**	**+1.1**
	0.5nm,0.8s,baz=77,slow=2.5,SNR=5.0						
ASAR				LR	LR	18 07 31.3	
	comp=Z,88nm,19.1s,baz=62,slow=35						
SAUI	**Saumlaki**	**29.88**	**272**	*e*P	**P**	**17 56 13.3**	**+0.7**
	406nm,0.9s						
FAKI	**Fak Fak**	**29.96**	**282**	*e*P	**P**	**17 56 14.0**	**+0.6**
	101nm,1.6s						
URZ	**Urewera**	**31.01**	**156**	*e*P	**P**	**17 56 24.1**	**+1.8**
	59nm,1.6s						
BKZ	**Black Stump Fm**	**31.55**	**157**	*e*P	**P**	**17 56 27.7**	**+0.6**
	96nm,1.6s						
BBOO	**Buckleboo**	**32.27**	**223**	*e*P	**P**	**17 56 33.7**	**+0.2**
	36nm,1.5s						
FOZ	**Fox Glacier**	**33.72**	**169**	*e*P	**P**	**17 56 48.0**	**+2.1**
	95nm,1.7s						
RPZ	**Rata Peaks**	**34.14**	**168**	P	**P**	**17 56 50.3**	**+0.7**
	4.7nm,0.6s,baz=79,slow=2.6,SNR=3.8						
RPZ	**Rata Peaks**	**34.14**	**168**	*e*P	**P**	**17 56 50.0**	**+0.4**
	138nm,1.9s						
MQZ	**McQueen’s Vall**	**34.49**	**166**	*e*P	**P**	**17 56 52.9**	**+0.3**
	21nm,1.4s						
MLZ	**Mavora Lakes**	**35.23**	**172**	*e*P	**P**	**17 56 59.7**	**+0.8**
	94nm,1.8s						
FITZ	**Fitzroy Crossi**	**35.49**	**254**	P	**P**	**17 57 01.1**	**-0.4**
	4.1nm,0.8s,baz=74,slow=8.7,SNR=6.3						
FITZ				LR	LR	18 12 18.6	
	comp=Z,56nm,18.1s,baz=72,slow=37						
FITZ	**Fitzroy Crossi**	**35.49**	**254**	*e*P	**P**	**17 57 01.2**	**-0.3**
	46nm,1.9s						
FORT	**Forrest**	**37.00**	**232**	*e*P	**P**	**17 57 15.5**	**+1.2**
	26nm,0.9s						
LUWI	**Luwuk**	**39.58**	**281**	*e*P	**P**	**17 57 36.4**	**+0.2**
	46nm,1.0s						
DAV	**Davao City (W)**	**39.76**	**295**	LR	LR	18 14 43.7	
	comp=Z,19nm,19.0s,baz=131,slow=37						
MBWA	**Marble Bar**	**41.42**	**250**	*e*P	**P**	**17 57 53.3**	**+2.1**
	19nm,1.3s						
NWAO	**Narrogin (SRO)**	**46.34**	**234**	*e*P	**P**	**17 58 30.4**	**0.0**
	104nm,1.7s						
JAGI	**Jajag, Banyuwa**	**46.69**	**268**	*e*P	**P**	**17 58 32.9**	**-0.5**
	92nm,1.3s						
TGY	**Tagaytay City**	**47.04**	**300**	LR	LR	18 18 29.7	
	comp=Z,12nm,20.1s,baz=274,slow=36						
PPT	**Papeete**	**47.91**	**104**	LR	LR	18 14 54.9	
	comp=Z,16nm,19.4s,baz=354,slow=31						
PPT2	**Papeete2**	**47.91**	**104**	*e*LR	LR	18 12 29.0	
	103nm,30.0s						
JOW	**Kunigami**	**49.14**	**320**	LR	LR	18 17 48.6	
	comp=Z,36nm,20.1s,baz=132,slow=34						
MJAR	**Matsushiro Arr**	**51.65**	**336**	P	**P**	**17 59 10.0**	**-0.8**
	3.0nm,0.6s,baz=170,slow=8.4,SNR=17						
MJAR				LR	LR	18 19 30.0	
	comp=Z,15nm,21.6s,baz=180,slow=34						
MAJO	**Matsushiro**	**51.65**	**336**	*e*P	**P**	**17 59 10.0**	**-0.8**
	8.6nm,0.7s						
MAJO				*e*		18 19 30.0	
MAT	**Matsushiro**	**51.65**	**336**	P	**P**	**17 59 09.8**	**-1.0**
MJB9	**Matsu-Tunnel**	**51.65**	**336**	*e*P	**P**	**17 59 10.2**	**-0.6**
	8.6nm,0.7s						
MWH	**Moku‘aweowe**	**51.72**	**55**	*e*P	**P**	**17 59 11.8**	**-0.4**
	307nm,1.4s						
YULB	**Yu-li**	**51.75**	**311**	*e*P	**P**	**17 59 11.9**	**+0.1**
	39nm,1.8s						
POHA	**Pohakuloa**	**51.92**	**55**	*e*P	**P**	**17 59 13.4**	**0.0**
	250nm,1.5s						
SSLB	**Suanglung**	**52.24**	**311**	*e*P	**P**	**17 59 15.1**	**-0.3**
	46nm,2.0s						
JNU	**Nakatsue**	**52.25**	**327**	*e*P	**P**	**17 59 15.9**	**+0.5**
	174nm,2.0s						
ASAJ	**Asahikawa**	**56.98**	**344**	P	**P**	**17 59 50.3**	**+1.0**
	8.1nm,0.7s,baz=171,slow=5.5,SNR=15						
ASAJ				LR	LR	18 23 52.3	
	comp=Z,27nm,20.1s,baz=162,slow=35						
ASAJ	**Asahikawa**	**56.98**	**344**	*e*P	**P**	**17 59 50.4**	**+1.1**
KSRS	**Korea Array**	**57.12**	**328**	P	**P**	**17 59 50.9**	**+0.4**
	5.0nm,0.8s,baz=144,slow=7.1,SNR=11						
KSRS				LR	LR	18 22 33.3	
	comp=Z,22nm,20.5s,baz=156,slow=34						
KS15	**Wonju Array Si**	**57.13**	**328**	*e*P	**P**	**17 59 50.4**	**-0.1**
KSAR	**Wonju Array Be**	**57.13**	**328**	P	**P**	**17 59 50.9**	**+0.3**
KS01	**Wonju Array Si**	**57.15**	**328**	*e*P	**P**	**17 59 50.3**	**-0.4**
NJ2	**Nanjing**	**58.73**	**318**	*e*P	**P**	**18 00 04.6**	**+2.8**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
USA0B	**Ussuriysk Arra**	**60.65**	**336**	*e*P	**P**	**18 00 16.0**	**+1.3**
USRK	**Ussuriysk Ar.**	**60.65**	**336**	P	**P**	**18 00 15.5**	**+0.8**
	9.1nm,0.9s,baz=133,slow=6.3						
CN2	**Changchun**	**63.17**	**331**	*e*P	**P**	**18 00 29.7**	**-1.9**
CN2				*e*pP	pP	18 00 53.4	-3.1
CN2				*e*sP	sP	18 01 05.0	-2.5
PETK	**Petropavlovsk-**	**63.42**	**357**	*e*P	**P**	**18 00 33.8**	**+0.7**
GYA	**Guiyang**	**64.66**	**306**	*e*P	P	18 00 45.2	+3.3
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KIWB	**Kanaga Island**	**64.77**	**14**	*e*P	**P**	**18 00 43.0**	**+1.1**
CASY	**Casey**	**65.42**	**200**	*e*P	**P**	**18 00 46.4**	**+0.4**
	14nm,1.0s						
BJI	**Beijing**	**65.46**	**323**	⇑*e*P	P	18 00 50.0	+3.4
BJI				pmax	pmax		
	comp=Z,6.0nm,0.6s						
VNDA	**Vanda**	**67.02**	**180**	P	**P**	**18 00 56.7**	**+0.7**
	2.9nm,0.8s,baz=343,slow=6.8,SNR=15						
VNDA				pP	**pP**	**18 01 18.2**	**-3.0**
	1.5nm,0.9s,baz=327,slow=5.1,SNR=3.0						
VNDA				LR	LR	18 26 38.9	
	comp=Z,12nm,19.3s,baz=34,slow=33						
VNDA	**Vanda**	**67.02**	**180**	*e*P	**P**	**18 00 56.5**	**+0.5**
KMI	**Kunming**	**67.27**	**303**	P	**P**	**18 00 59.8**	**+1.0**
KMI				pmax	pmax		
	comp=Z,13nm,0.5s						
SBA	**Scott Base**	**67.41**	**179**	*e*P	**P**	**18 01 00.5**	**+2.0**
	6.9nm,0.6s						
CM01	**Chiang Mai Arr**	**68.03**	**295**	*e*P	**P**	**18 01 03.8**	**+0.4**
CM31	**Chiang Mai Arr**	**68.05**	**295**	*e*P	**P**	**18 01 03.3**	**-0.3**
CMAR	**Chiang Mai Arr**	**68.05**	**295**	P	**P**	**18 01 03.8**	**+0.2**
	1.3nm,0.7s,baz=126,slow=4.8,SNR=12						
CMAR				pP	**pP**	**18 01 24.7**	**-4.1**
	2.3nm,0.9s,baz=115,slow=5.3,SNR=8.2						
CMAR				LR	LR	18 31 32.0	
	comp=Z,24nm,20.0s,baz=194,slow=36						
NIKH	**Nikolski High**	**68.11**	**19**	*e*P	**P**	**18 01 04.2**	**+1.0**
	25nm,1.1s						
HHC	**Hu-ho-hao-te**	**68.73**	**321**	*e*P	**P**	**18 01 08.8**	**+1.3**
HHC				pP	pP	18 01 33.1	+0.3
HHC				S	**S**	**18 10 06.2**	**+3.1**
HHC				sS	sS	18 10 43.7	-2.7
HHC				pmax	pmax		
	comp=Z,19nm,0.9s						
HHC				pmax	pmax		
	comp=Z,62nm,4.5s						
CD2	**Chengdu**	**68.95**	**309**	*e*P	**P**	**18 01 09.5**	**+0.5**
MA2	**Magadan**	**70.35**	**354**	pP	pP	18 01 37.9	-4.4
	2.1nm,0.5s,baz=133,slow=4.8,SNR=2.7						
LZH	**Lanzhou**	**71.31**	**314**	*e*P	**P**	**18 01 24.2**	**+0.8**
LZH				pP	pP	18 01 46.2	-2.6
LZH				sP	sP	18 01 56.4	-3.3
LZH				pmax	pmax		
	comp=Z,18nm,1.2s						
LZH				pmax	pmax		
	comp=Z,56nm,4.3s						
LZH				LR	LR		
	comp=N,310nm,13.8s						
LZH				LR	LR		
	comp=E,250nm,14.6s						
LZH				LR	LR		
	comp=Z,240nm,14.9s						
SEY	**Seymchan**	**73.53**	**356**	P	**P**	**18 01 36.6**	**+0.8**
	0.9nm,0.6s,baz=161,slow=8.7,SNR=7.5						
SEY				pP	**pP**	**18 01 57.6**	**-3.7**
	3.3nm,1.0s,baz=156,slow=2.2,SNR=5.6						
ULN	**Ulaanbaatar**	**75.42**	**326**	*e*P	**P**	**18 01 48.2**	**+0.9**
GTA	**Gaotai**	**75.67**	**315**	⇑P	**P**	**18 01 50.0**	**+1.1**
GTA				pP	pP	18 02 11.2	-3.4
GTA				sP	sP	18 02 22.2	-3.2
GTA				S	**S**	**18 11 22.1**	**-0.5**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,35nm,5.2s						
GTA				LR	LR		
	comp=N,75nm,20.3s						
GTA				LR	LR		
	comp=E,64nm,19.4s						

GTA				LR	LR		
	comp=Z,140nm,20.3s						
SONA0	Songino Array	75.77	325	eP	P	18 01 50.3	+1.0
SONM	Songino Array	75.77	325	P	P	18 01 50.3	+1.0
	2.8nm,0.6s,baz=138,slow=5.3,SNR=12						
SONM				pP	pP	18 02 11.6	-3.4
	11nm,0.9s,baz=134,slow=6.0,SNR=18						
SONA1	Songino Array	75.78	325	eP	P	18 01 49.5	+0.2
YAK	Yakutsk	76.43	345	pP	pP	18 02 14.2	-4.0
	34nm,0.8s,baz=199,slow=1.5,SNR=5.6						
YAK	Yakutsk	76.43	345	eP	P	18 01 52.6	+0.1
KDAK	Kodiak Island	77.66	23	P	P	18 02 00.2	+0.8
	7.5nm,0.7s,baz=214,slow=6.4,SNR=7.9						
KDAK	Kodiak Island	77.66	23	eP	P	18 01 60.0	+0.5
	86nm,1.9s						
BILL	Bilibino	78.39	2	eP	P	18 02 03.8	+0.4
TLY	Talaya	79.36	328	eP	P	18 02 10.3	+1.3
QSPA	South Pole Qui	79.52	180	P	P	18 02 10.4	+0.6
	4.6nm,0.7s,baz=282,slow=1.0,SNR=15						
QSPA	South Pole Qui	79.52	180	eP	P	18 02 10.1	+0.3
	22nm,1.5s						
CAST	Castle Rocks	81.75	19	eP	P	18 02 21.4	-0.2
	9.9nm,0.8s						
KTH	Kantishna Hill	82.22	19	eP	P	18 02 23.7	-0.4
	8.2nm,0.9s						
RDOG	Red Dog Mine	82.36	13	eP	P	18 02 24.2	-0.4
	6.1nm,0.7s						
TRF	Thorofare Moun	82.36	20	eP	P	18 02 24.6	-0.4
	34nm,1.9s						
DIV	Divide	82.48	23	eP	P	18 02 27.8	+2.3
	51nm,1.7s						
KLU	Klutina	82.65	23	eP	P	18 02 27.5	+1.2
	14nm,1.2s						
MCK	McKinley	83.00	20	eP	P	18 02 28.0	-0.1
DHY	Denali Highway	83.11	21	eP	P	18 02 29.7	+0.9
	14nm,1.5s						
CRQM	Cirque	83.29	24	eP	P	18 02 31.2	+1.4
	15nm,0.9s						
MLY	Manley	83.29	18	eP	P	18 02 30.2	+0.6
	5.2nm,0.7s						
TGL	Tana Glacier	83.41	24	eP	P	18 02 31.8	+1.4
	21nm,0.7s						
HARP	HAARP	83.50	22	eP	P	18 02 31.8	+1.1
	88nm,1.7s						
MAW	Mawson	83.65	202	P	P	18 02 31.9	+0.5
	7.7nm,1.0s,baz=115,slow=7.0,SNR=6.3						
MAW				LR	LR	18 37 36.5	
	comp=Z,14nm,18.1s,baz=285,slow=34						
MAW	Mawson	83.65	202	eP	P	18 02 32.2	+0.8
	3.4nm,1.3s						
BALM	Baldy	83.77	24	eP	P	18 02 32.8	+0.6
	19nm,1.4s						
WRH	Wood River Hil	83.77	20	eP	P	18 02 31.9	0.0
	10nm,1.2s						
CCB	Clear Creek Bu	83.98	20	eP	P	18 02 32.6	-0.4
	2.9nm,0.6s						
MDM	Murphy Dome	84.04	19	eP	P	18 02 33.7	+0.4
HDA	Harding Lake	84.11	20	eP	P	18 02 33.8	+0.1
	7.0nm,0.9s						
ILAR	Eielson Array	84.36	20	P	P	18 02 34.8	-0.1
	1.5nm,0.6s,baz=254,slow=4.9,SNR=19						
ILAR				pP	pP	18 02 56.2	-4.8
	2.2nm,1.0s,baz=247,slow=4.3,SNR=5.6						
ILB	Eielson Array	84.36	20	eP	P	18 02 34.7	-0.3
IL1	Eielson Array	84.36	20	eP	P	18 02 34.4	-0.5
DIB	Dawson Inlet,	84.50	34	eP	P	18 02 36.4	+0.5
	26nm,1.5s						
TIXI	Tiksi	84.78	350	eP	P	18 02 36.4	-0.5
WMQ	Urumqi	85.75	316	P	P	18 02 44.1	+1.7
WMQ				LR	LR		
	comp=N,100nm,23.3s						
WMQ				LR	LR		
	comp=E,140nm,32.5s						
WMQ				LR	LR		
	comp=Z,140nm,23.3s						
EGAK	Eagle	86.33	21	eP	P	18 02 46.0	+1.2
	12nm,1.1s						
YBH	Yreka Blue Hor	86.53	47	P	P	18 02 47.9	+1.5
	2.9nm,0.7s,baz=230,slow=2.1,SNR=9.7						
YBH	Yreka Blue Hor	86.53	47	eP	P	18 02 47.4	+1.1
	4.1nm,0.8s						
DAWY	Dawson	86.59	22	eP	P	18 02 47.5	+1.4
	13nm,1.3s						
HUMO	Hull Mountain	86.62	46	eP	P	18 02 48.0	+1.3
	6.5nm,0.9s						
AFDM	Forest Hills D	87.01	50	eP	P	18 02 49.9	+1.2
	3.6nm,0.7s						
SBI	Santa Barbara	87.10	55	eP	P	18 02 50.8	+1.6
CMB	Columbia Colle	87.21	51	eP	P	18 02 50.5	+0.8
	4.8nm,1.1s						
PASC	Pasadena Art C	87.95	55	eP	P	18 02 52.9	-0.4
WAKR	Walker	88.05	50	eP	P	18 02 55.2	+1.2
	15nm,1.8s						
MWC	Mount Wilson	88.07	55	eP	P	18 02 55.0	+0.9
	12nm,0.9s						
PNTR	Pine Nut	88.08	50	eP	P	18 02 55.7	+1.6
	4.6nm,0.7s						
ISA	Isabella, Lake	88.08	53	eP	P	18 02 54.9	+0.9
	21nm,1.8s						
MDPB	Devils Postpil	88.10	51	eP	P	18 02 55.5	+1.3
	4.1nm,0.8s						
K05A	Summer Lake	88.11	46	eP	P	18 02 55.7	+1.6
	12nm,1.0s						
OMMB	Old Mammoth Mi	88.16	51	eP	P	18 02 55.7	+1.1
	12nm,1.6s						
PSRC	Puddingstone R	88.24	55	eP	P	18 02 57.0	+2.3
MOD	Modoc Plateau	88.31	47	eP	P	18 02 56.2	+1.2
	5.1nm,1.1s						
YERR	Yerington	88.33	50	eP	P	18 02 56.0	+0.9
	16nm,1.8s						
PINE	Pine Mountain	88.37	45	eP	P	18 02 56.2	+1.0
	6.8nm,0.8s						
PAHR	Pah Rah Range	88.40	49	eP	P	18 02 57.1	+1.6
	16nm,1.7s						
CPE	Camp Elliot	88.53	56	eP	P	18 02 57.3	+1.3
	113nm,0.3s						
D05A	Enumclaw	88.63	42	eP	P	18 02 56.5	+0.4
	21nm,1.4s						
EML	El Monte Cty P	88.74	56	eP	P	18 02 59.9	+2.9
RYN	Ryan	88.78	50	eP	P	18 02 58.3	+1.0
	5.4nm,0.9s						
BAR	Barrett	88.83	57	eP	P	18 02 58.6	+1.1
	12nm,1.3s						
NV01	Mina Array Sit	88.89	51	eP	P	18 02 59.1	+1.2
NVAR	Mina Array Bea	88.89	51	P	P	18 02 59.3	+1.4
	3.8nm,0.7s,baz=236,slow=6.7,SNR=25						
DAC	Darwin (Calif)	88.93	53	eP	P	18 02 59.4	+1.4
	7.1nm,1.0s						
NV11	Mina Array Sit	89.01	51	eP	P	18 02 59.7	+1.3
	0.5nm,1.0s						
KVN	Kaiserville	89.20	50	eP	P	18 03 00.6	+1.3
	7.1nm,1.0s						
PFO	Pinyon Flats O	89.22	56	eP	P	18 03 00.3	+0.9
	3.9nm,1.0s						
XPFO	Piæon Flat	89.22	56	eP	P	18 03 00.4	+1.0
	3.4nm,1.0s						
GSC	Goldstone, Bar	89.32	54	eP	P	18 03 00.7	+0.9
	7.2nm,1.3s						
I07A	Izee	89.45	45	eP	P	18 03 01.2	+0.9
	15nm,1.8s						
LTY	Liberty	89.51	42	eP	P	18 03 01.5	+1.1
	16nm,1.8s						
WVOR	Wild Horse Val	89.64	47	eP	P	18 03 02.6	+1.4
	17nm,1.3s						
J08A	Circle Bar Ran	89.98	46	eP	P	18 03 03.8	+1.1
	22nm,0.3s						
TPNV	Topopah Spring	90.13	53	eP	P	18 03 04.9	+1.3
	7.8nm,0.8s						
BMN	Battle Mountai	90.19	49	eP	P	18 03 05.2	+1.3
	6.0nm,0.9s						
MK01	Makanchi Array	90.25	318	eP	P	18 03 03.4	-0.4
MK31	Makanchi Array	90.26	318	eP	P	18 03 02.5	-1.3
MK32	Makanchi Array	90.26	318	eP	P	18 03 03.4	-0.4
MKAR	Makanchi Array	90.26	318	P	P	18 03 03.4	-0.5
	2.6nm,0.5s,baz=91,slow=6.2,SNR=27						
MKAR				pP	pP	18 03 25.4	-4.8
	2.2nm,0.9s,baz=97,slow=6.2,SNR=5.2						
MKAR	Makanchi Array	90.26	318	eP	P	18 03 03.3	-0.5
	20nm,0.4s						
MAKZ	Makanchi	90.47	318	eP	P	18 03 04.2	-0.6
LDFC	Landfair	90.63	55	eP	P	18 03 07.3	+1.3
	27nm,0.4s						
ZALV	Zalesovo Beam	90.67	325	P	P	18 03 04.3	-1.2
	1.1nm,0.6s,baz=100,slow=3.6,SNR=4.6						
ZAA1	Zalesovo Array	90.67	325	eP	P	18 03 04.3	-1.2
INK	Inuvik	90.76	20	P	P	18 03 06.0	+0.4
	2.0nm,1.1s,baz=270,slow=7.1,SNR=4.0						
INK	Inuvik	90.76	20	eP	P	18 03 05.6	0.0
	10nm,1.6s						
SHPR	Sheep Range	90.89	53	eP	P	18 03 08.6	+1.4
	7.3nm,0.9s						
R11A	Troy Canyon, C	90.95	51	eP	P	18 03 08.5	+1.0
	7.1nm,1.1s						
H06N1	SOCORRO T-PHAS	91.04	71	T	T	19 46 00.8	
	SNR=5.0						
SYO	Syowa Base	91.06	198⇑	esP	sP	18 03 39.4	-4.7
BMO	Blue Mountains	91.16	45	eP	P	18 03 09.0	+0.8
	3.9nm,0.9s						
F10A	Beach Ranch, E	91.48	44	eP	P	18 03 10.4	+0.8
	9.1nm,0.9s						
MFID	Camas Ranch	91.88	46	eP	P	18 03 12.3	+0.8
	4.2nm,0.9s						
NEW	Newport	92.08	41	eP	P	18 03 13.0	+0.7
	4.2nm,0.8s						
KNB	Kanab	92.83	53	eP	P	18 03 18.2	+2.0
	5.2nm,1.1s						
HLID	Hailey	92.91	46	eP	P	18 03 17.2	+0.8
	6.4nm,1.1s						
U15A	North Rim	93.14	54	eP	P	18 03 19.0	+1.2
	2.7nm,0.9s						
KSH	Kashi	93.14	309	eP	P	18 03 20.5	+3.0
MTPU	Mount Pierson	93.52	52	eP	P	18 03 22.4	+2.8
	9.2nm,1.8s						
KURK	Kurchatov	93.54	321	eP	P	18 03 17.9	-0.9
KURBB	Kurchatov Arra	93.58	321	P	P	18 03 18.0	-1.1
	1.1nm,0.7s,baz=93,slow=5.4,SNR=8.9						
HVU	Hansel Valley	93.75	48	eP	P	18 03 21.7	+1.4
	4.0nm,0.9s						
WALA	Waterton Lakes	94.33	41	eP	P	18 03 23.9	+1.2
	3.7nm,0.7s						
BOZ	Bozeman (W)	95.24	45	eP	P	18 03 28.0	+0.9
	2.2nm,0.8s						
PD31	Pinedale Array	96.27	48	eP	P	18 03 32.7	+0.8
PDAR	Pinedale Array	96.27	48	P	P	18 03 33.1	+1.3
	0.9nm,0.8s,baz=207,slow=1.7,SNR=8.5						
YKA	Yellowknife Ar	96.42	28	P	P	18 03 31.6	-0.1
	1.5nm,0.5s,baz=262,slow=4.7,SNR=9.1						
EGMT	Eagleton	96.88	43	eP	P	18 03 35.0	+0.6
	4.4nm,0.8s						
ANMO	Albuquerque	97.60	56	P	Pdif	18 03 39.1	+1.1
	0.9nm,0.4s,baz=219,slow=5.8,SNR=3.2						
ANMO	Albuquerque	97.60	56	eP	Pdif	18 03 38.6	+0.5
	2.6nm,1.2s						
ARA0	ARCESS Array S	114.70	344	ePKiKP	PKPdf	18 08 42.0	-0.5
ARCES	ARCESS Array B	114.70	344	PKP	PKPdf	18 08 42.0	-0.5
	1.3nm,0.9s,baz=38,slow=2.1,SNR=7.1						
IP06	Yanceyville	120.39	52	ePKPdf	PKPdf	18 08 54.1	-0.2
CPUP	Villa Florida	127.45	135	PKP	PKPdf	18 09 07.6	-0.6
	2.1nm,0.8s,baz=280,slow=5.2,SNR=3.7						
EKA	Eskdalemuir Ar	133.65	348	PKP	PKPdf	18 09 17.3	-1.8
	2.9nm,0.9s,baz=44,slow=6.3,SNR=4.7						
THTN	Thala	144.86	320	ePKPbc	PKPdf	18 09 39.5	-0.7

IDC ***06*** *17:50:25.6±0.8, 43°.60N×127°.39W, h0^{km}, mb4.0/13, mb1 4.2/19, mb1mx4.0/71, mbtmp4.0/19, ML3.8/6, MS3.8/32, Ms1 3.8/32, ms1mx3.6/61, Error ellipse: s-maj=20.4km s-min=10.3km az=44.0*

BJI ***06*** *17:50:25.8, 43°.60N×127°.40W, h10^{km}, mb4.9/10, mB5.1/3, Ms4.7/2, Ms7 4.4/3*

ISCJB ***06*** *17:50:27.6±0.2, 43°.63N±0°.01×127°.41W±0°.02, h15^{km}, mb4.6/107, MS3.8/28, Error ellipse: s-maj=2.7km s-min=1.8km az=146.4*

NEIC ***06*** *17:50:28.6±0.2, 43°.65N×127°.45W, h10^{km}, mb4.6/138, Error ellipse: s-maj=3.2km s-min=1.8km az=54.0*

GCMT ***06*** *17:50:28.6±0.5, 43°.45N×127°.77W, h24^{km}±2^{km}, MW4.8/73, Moment Tensor Solution. s7,c8; s73,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.50±.17; $M_{\theta\theta}$-2.29±.15; $M_{\phi\phi}$1.79±.11; $M_{r\theta}$-0.25±.32; $M_{\theta\phi}$-0.87±.10; $M_{\phi r}$-0.13±.23; Best double couple: $M_0$2.23200×10^{16} NP1:ϕ_s33.00000°, δ88.00000°, λ-6.00000°. NP2: ϕ_s124.00000°, δ84.00000°, λ-178.00000°. Principal axes: T 1.9720, Plg3.0000°, Azm79.0000°; N 0.5210, Plg84.0000°, Azm198.0000°; P -2.4920, Plg5.0000°, Azm348.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 06 17:50:28.3±0.5**, 43°.49N**±0°.05×**127°.50W**±0°.06**, h15^{km}, n428, σ1^{s}48**/409**, mb4.7**/107**, MS3.8**/28**, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEBM	Edson Butte	2.40	104	ePn	Pn	17 51 04.2	-2.9
KEBM				eSn	Sn	17 51 35.3	-0.9
KBO	Bosley Butte	2.73	117	ePn	Pn	17 51 09.4	-2.2
I03D	Drain, OR	3.02	85	P	Pn	17 51 13.4	-2.2
	baz=270,SNR=176						
I03D				S	Sn	17 51 49.4	-2.1
	baz=270						
UMPQ	Umpqua Communi	3.04	92	ePn	Pn	17 51 14.3	-1.6
DBO	Dodson Butte	3.13	95	ePn	Pn	17 51 15.0	-2.2
L02D	Cave Junction,	3.16	114	P	Pn	17 51 15.5	-2.0
	baz=299,SNR=16						
L02D				S	Sn	17 51 53.3	-1.7
	baz=299						
COR	Corvallis	3.22	69	ePn	Pn	17 51 15.8	-2.4
HUMO	Hull Mountain	3.44	103	ePn	Pn	17 51 19.0	-2.5
HUMO				eSn	Sn	17 51 59.9	-2.2
G03D	McMinnville, O	3.49	59	P	Pn	17 51 20.6	-1.4
	baz=244,SNR=87						
G03D				S	Sn	17 52 02.6	-0.4
	baz=244						
TCBU	Trout Butte	3.58	76	ePn	Pb	17 51 33.6	+2.3
I04A	Tendick Farm,	3.71	84	P	Pn	17 51 23.8	-1.3
	baz=269,SNR=304						
JCC	Jacoby Creek,	3.71	135	ePn	Pn	17 51 25.7	+0.6
F03A	Seaside	3.72	48	ePn	Pn	17 51 23.4	-1.8
MEGW	Megler CREST B	3.78	42	ePn	Pn	17 51 24.4	-1.6
KHMM	Horse Mountain	3.83	132	ePn	Pn	17 51 26.8	-0.1
IRO	Indian Ridge	3.83	81	ePn	Pn	17 51 25.7	-1.2
J04D	Umpqua Nationa	3.94	92	P	Pn	17 51 27.7	-0.7
	baz=278,SNR=104						
J04D				S	Sn	17 52 16.1	+1.7
	baz=278						
YBH	Yreka Blue Hor	3.95	115	Pn	Pn	17 51 28.0	-0.4
	3.8nm,0.3s,baz=288,slow=12,SNR=80						
YBH				Sn	Sn	17 52 09.7	-4.8
	0.5nm,0.3s,baz=70,slow=22,SNR=1.9						
YBH				LR	LR	17 52 49.7	
	comp=Z,262nm,18.4s,baz=284,slow=37						
YBH	Yreka Blue Hor	3.95	115	ePn	Pn	17 51 28.1	-0.4
YBH				Sn	Sn	17 52 09.7	-4.8
YBH				eSn	Sb	17 52 16.3	-9.0
FRIS	Frissel Point	3.97	78	ePn	Pn	17 51 28.7	-0.1
H04A	Detroit Lake	4.01	71	ePn	Pn	17 51 27.8	-1.4
M02C	Callahan	4.03	120	P	Pn	17 51 28.0	-1.5
	baz=305						
PRLK	Prince Lake	4.07	78	ePn	Pn	17 51 29.4	-0.7
B023	Clatskanie	4.09	49	ePn	Pn	17 51 29.1	-1.2
F04D	Rainier, OR	4.11	49	P	Pn	17 51 29.4	-1.2
	baz=234,SNR=21						
F04D				S	Sn	17 52 18.5	+0.1
	baz=234						
E03A	Lebam	4.14	41	ePn	Pn	17 51 29.0	-1.9
E03A				eSn	Sn	17 52 17.8	-1.1
WIFE	Three Sisters-	4.15	80	ePn	Pn	17 51 30.7	-0.7
B019	Raymond	4.17	39	ePn	Pn	17 51 30.1	-1.3
BMW	Boistfort Moun	4.25	44	ePn	Pn	17 51 31.0	-1.6
K04D	Chiloquin, OR	4.30	100	P	Pn	17 51 32.3	-1.0
	baz=286,SNR=8.4						
KMRM	Mail Ridge	4.32	138	ePn	Pn	17 51 34.4	+0.8
BPO	Bald Peter	4.34	73	ePn	Pn	17 51 34.2	+0.2
LVP	Lakeview Peak	4.45	53	ePn	Pn	17 51 34.9	-0.4
TDH	Tom, Dick, Har	4.47	64	ePn	Pn	17 51 35.4	-0.2
B017	Montesano	4.47	37	ePn	Pn	17 51 34.2	-1.3
M04C	Macdoel	4.51	110	P	Pn	17 51 35.5	-0.7
	baz=296						
I05D	Terrebonne, OR	4.53	77	P	Pn	17 51 35.5	-0.9
	baz=263,SNR=84						
MTMW	Mount Mitchell	4.54	54	ePn	Pn	17 51 36.1	-0.4
B203	Quarry, Mount	4.54	52	ePn	Pn	17 51 36.1	-0.4
J05D	Fort Rock, OR	4.57	90	P	Pn	17 51 35.5	-1.5
	baz=277,SNR=33						
SHW	Mount Saint He	4.61	52	ePn	Pn	17 51 37.5	-0.1
ERK	Elk Rock	4.62	51	ePn	Pn	17 51 36.9	-0.7
JLK	June Lake	4.64	53	ePn	Pn	17 51 37.7	-0.2
B201	Coldwater, Mou	4.66	51	ePn	Pn	17 51 37.7	-0.5
NLWA	Neilton Lookou	4.66	32	ePn	Pn	17 51 35.2	-3.0
NLWA				eSn	Sn	17 52 28.4	-3.6
ESD	East Dome	4.67	53	ePn	Pn	17 51 38.3	-0.1
SOSW	Source of Smit	4.70	52	ePn	Pn	17 51 38.5	-0.3
B202	Windy Ridge, M	4.70	52	ePn	Pn	17 51 38.3	-0.4
WDC	Whiskeytown Da	4.70	127	ePn	Pn	17 51 39.5	+0.8
TDL	Tradedollar La	4.72	51	ePn	Pn	17 51 38.5	-0.5
G05D	Wamic, OR	4.76	66	P	Pn	17 51 39.1	-0.5
	baz=252,SNR=39						
PINE	Pine Mountain	4.77	84	ePn	Pn	17 51 38.6	-1.2
KCPM	Cahto Peak	4.80	141	ePn	Pn	17 51 41.0	+0.8
SMW	South Mountain	4.82	36	ePn	Pn	17 51 38.7	-1.6
K05A	Summer Lake	4.90	97	ePn	Pn	17 51 40.2	-1.3
LTIM	Timbered Crate	5.02	115	ePn	Pn	17 51 45.4	+2.2
B941	Kapowsin	5.11	45	ePn	Pn	17 51 43.5	-0.7
LON	Longmire	5.18	49	ePn	Pn	17 51 44.7	-0.6
GLK	Glacier Lake	5.18	52	ePn	Pn	17 51 45.5	+0.1
HDW	Hoodsport	5.20	35	ePn	Pn	17 51 44.4	-1.1
G06A	Carlson Farm,	5.22	68	ePn	Pn	17 51 44.5	-1.4
GNW	Green Mountain	5.23	37	ePn	Pn	17 51 44.5	-1.4
GMW	Gold Mountain	5.24	38	ePn	Pn	17 51 44.5	-1.5
OBSR	Observation Ro	5.27	48	ePn	Pn	17 51 46.3	-0.4
WPW	White Pass	5.29	51	ePn	Pn	17 51 46.8	-0.1
D05A	Enumclaw	5.36	45	ePn	Pn	17 51 47.2	-0.5
FMW	Mount Fremont	5.36	48	ePn	Pn	17 51 47.7	-0.3
GSM	Grass Mountain	5.47	45	ePn	Pn	17 51 49.1	-0.3
BLN	Blyn Mountain	5.51	33	ePn	Pn	17 51 49.5	-0.4
MOD	Modoc Plateau	5.54	104	ePn	Pn	17 51 49.2	-1.1
HOPS	Hopland Field	5.60	142	ePn	Pn	17 51 51.6	+0.6
RATT	Rattlesnake La	5.61	44	ePn	Pn	17 51 50.7	-0.5
TRW	Toppenish Ridg	5.68	58	ePn	Pn	17 51 52.2	0.0
NAC	Naches	5.73	53	ePn	Pn	17 51 53.0	+0.1
MGL	Magalia	5.77	128	ePn	Pn	17 52 00.9	+7.4
I07A	Izee	5.82	81	ePn	Pn	17 51 53.5	-0.6
C05A	Tolt Reservoir	5.85	42	ePn	Pn	17 51 54.2	-0.4
GDXM	Geysers	5.87	141	ePn	Pn	17 51 56.5	+1.6
PGC	Sidney	5.88	27	ePn	Pn	17 51 53.0	-1.7
HTW	Haystack Looko	5.89	41	ePn	Pn	17 51 54.1	-0.9
F07A	Phinny Hill Vi	5.91	63	ePn	Pn	17 51 54.7	-0.6
EBG	Ellensburg	5.97	53	ePn	Pn	17 51 56.7	+0.5
ORV	Oroville	5.98	129	ePn	Pn	17 51 58.9	+2.7
B05A	Bryant	6.08	36	P	Pn	17 51 56.8	-0.8
	baz=221,SNR=12						
B05A				S	Sn	17 53 06.2	-0.7
	baz=221						
TBM	Table Mountain	6.10	51	ePn	Pn	17 51 58.2	+0.3
JCW	Jim Creek	6.10	38	ePn	Pn	17 51 57.4	-0.5
LTY	Liberty	6.11	50	ePn	Pn	17 51 57.6	-0.4
A04D	Lummi Island	6.20	31	S	Sn	17 53 08.5	-1.2
	baz=215						
E07A	Sunnyside	6.22	58	ePn	Pn	17 51 59.8	+0.2
HAWA	Hanford	6.35	60	ePn	Pn	17 52 01.1	-0.3
WRW	Wenatchee Ridg	6.37	44	ePn	Pn	17 52 01.8	+0.1
G08A	Pilot Rock	6.38	71	ePn	Pn	17 52 00.7	-1.1
C06D	Leavenworth	6.40	44	S	Sn	17 53 15.8	+0.9
	baz=229						
BEKR	Beckworth	6.46	122	ePn	Pn	17 52 04.9	+1.9
GBL	Gable Mountain	6.49	59	ePn	Pn	17 52 03.2	0.0
B06A	Marblemount	6.54	38	ePn	Pn	17 52 03.2	-0.7
MBW	Mount Baker	6.57	34	ePn	Pn	17 52 05.4	+1.0
J08A	Circle Bar Ran	6.57	88	ePn	Pn	17 52 04.3	-0.2
WVOR	Wild Horse Val	6.59	96	ePn	Pn	17 52 03.2	-1.6
E08A	Dider Farm, El	6.69	60	ePn	Pn	17 52 05.5	-0.5
AFDM	Forest Hills D	6.69	130	ePn	Pn	17 52 08.5	+2.4
D08A	Wollman Farm,	7.02	57	ePn	Pn	17 52 10.0	-0.5
SAW	Saint Andrews	7.07	51	ePn	Pn	17 52 10.9	-0.3
PAHR	Pah Rah Range	7.16	119	ePn	Pn	17 52 16.9	+4.2
VCNR	Virginia City	7.24	123	ePn	Pn	17 52 16.6	+2.8
E09A	Wood Farm, Sta	7.29	62	ePn	Pn	17 52 12.6	-1.6
PNTR	Pine Nut	7.40	124	ePn	Pn	17 52 18.7	+2.8
BMO	Blue Mountains	7.46	76	ePn	Pn	17 52 15.3	-1.3
B08A	Colville Reser	7.49	47	ePn	Pn	17 52 15.3	-1.7
CMB	Columbia Colle	7.67	133	ePn	Pn	17 52 22.4	+2.9
YERR	Yerington	7.68	123	ePn	Pn	17 52 21.7	+1.9
F10A	Beach Ranch, E	7.72	68	ePn	Pn	17 52 18.8	-1.4
C09A	Chrisman Ranch	7.77	53	ePn	Pn	17 52 20.1	-0.7
WAKR	Walker	7.87	127	ePn	Pn	17 52 24.7	+2.2
LLLB	Lillooet	8.08	26	ePn	Pn	17 52 23.4	-1.8
SAO	San Andreas Ge	8.16	143	ePn	Pn	17 52 28.8	+2.6
BMN	Battle Mountai	8.25	108	ePn	Pn	17 52 29.2	+1.7
RYN	Ryan	8.34	123	ePn	Pn	17 52 31.2	+2.4
KVN	Kaiserville	8.35	119	ePn	Pn	17 52 30.8	+1.8
MFID	Camas Ranch	8.49	87	ePn	Pn	17 52 30.5	-0.4
BPIM	Pinnacles	8.51	143	ePn	Pn	17 52 35.7	+4.7
NV01	Mina Array Sit	8.60	123	ePn	Pn	17 52 33.7	+1.3
NVAR	Mina Array Bea	8.60	123	Pn	Pn	17 52 32.4	0.0
	0.5nm,0.3s,baz=295,slow=14,SNR=24						
NVAR				LR	LR	17 55 51.2	
	comp=Z,335nm,20.7s,baz=50,slow=38						
NEW	Newport	8.67	53	Pn	Pn	17 52 31.9	-1.3
	1.3nm,0.3s,baz=236,slow=9.5,SNR=15						
NEW				LR	LR	17 55 53.5	
	comp=Z,1µm,20.3s,baz=246,slow=38						
NEW	Newport	8.67	53	P	Pn	17 52 31.8	-1.3
	baz=241						
MDPB	Devils Postpil	8.68	130	ePn	Pn	17 52 37.1	+3.6
NV11	Mina Array Sit	8.69	122	ePn	Pn	17 52 34.9	+1.3
BBB	Bella Bella	8.71	358	Pn	Pn	17 52 33.9	+0.3
	0.7nm,0.3s,baz=219,slow=5.6,SNR=8.9						
BBB				LR	LR	17 55 16.6	
	comp=Z,692nm,18.6s,baz=225,slow=34						
BBB	Bella Bella	8.71	358	ePn	Pn	17 52 33.6	0.0
OMMB	Old Mammoth Mi	8.73	129	ePn	Pn	17 52 37.6	+3.2
PMPB	Monarch Peak	8.90	142	ePn	Pn	17 52 38.3	+1.8
HLID	Hailey	9.51	85	ePn	Pn	17 52 45.7	+0.9
ELK	Elko	9.52	103	Pn	Pn	17 52 50.5	+5.5
	0.3nm,0.3s,baz=329,slow=13,SNR=18						
PAGB	Antelope Grade	9.55	142	ePn	Pn	17 52 48.5	+3.2
MSO	Missoula	10.14	66	P	Pn	17 52 52.3	-1.1
	baz=256						
MSO	Missoula	10.14	66	ePn	Pn	17 52 51.9	-1.5
JTMT	Jette	10.19	61	ePn	Pn	17 52 53.8	-0.2
WASM	Alta Sierra Ca	10.37	135	ePn	Pn	17 52 57.0	+0.4
R11A	Troy Canyon, C	10.37	116	ePn	Pn	17 52 59.7	+3.0
ISA	Isabella, Lake	10.47	135	ePn	Pn	17 53 01.4	+3.6
DAC	Darwin (Calif)	10.48	130	ePn	Pn	17 53 02.0	+3.9
MCMT	McKenzie Canyo	10.61	78	ePn	Pn	17 53 00.2	+0.2
TPNV	Topopah Spring	10.80	123	ePn	Pn	17 53 06.0	+3.5
DLMT	Dillon	10.82	75	ePn	Pn	17 53 03.0	+0.2
WALA	Waterton Lakes	10.92	55	ePn	Pn	17 53 03.8	-0.3
LRM	Limekiln Ridge	10.97	73	ePn	Pn	17 53 04.5	-0.4
HVU	Hansel Valley	10.98	94	ePn	Pn	17 53 06.3	+1.3
BGU	Big Grassy Mou	11.04	98	ePn	Pn	17 53 07.0	+1.3
OSI	Osito Audit: C	11.18	140	ePn	Pn	17 53 10.9	+3.3
SPUT	South Promonto	11.34	96	ePn	Pn	17 53 10.9	+1.0
PSUT	Pine Spring	11.43	111	ePn	Pn	17 53 13.7	+2.5
DUG	Dugway, Tooele	11.44	102	ePn	Pn	17 53 12.0	+0.7
BOZ	Bozeman (W)	11.52	74	ePn	Pn	17 53 12.0	-0.4
HRY	Holter Researc	11.53	68	ePn	Pn	17 53 11.4	-1.0
QLMT	Earthquake Lak	11.62	78	ePn	Pn	17 53 14.4	+0.7
GSC	Goldstone, Bar	11.62	131	ePn	Pn	17 53 17.5	+3.8
SHPR	Sheep Range	11.75	122	ePn	Pn	17 53 19.1	+3.5
YHB	Horse Butte	11.79	78	ePn	Pn	17 53 17.0	+0.9
PASC	Pasadena Art C	11.80	139	ePn	Pn	17 53 18.3	+2.3
PASC				eSn	Sn	17 55 40.0	+13
MWC	Mount Wilson	11.82	138	ePn	Pn	17 53 18.6	+2.1
HWUT	Hardware Ranch	11.91	94	ePn	Pn	17 53 18.8	+1.2
YMR	Madison River	11.95	79	ePn	Pn	17 53 19.7	+1.4
FXWY	Fox Creek	11.96	84	ePn	Pn	17 53 20.2	+1.9
IMW	Indian Meadow	12.00	82	ePn	Pn	17 53 20.2	+1.2
AHID	Auburn Hatcher	12.01	88	ePn	Pn	17 53 21.0	+2.0
TPAW	Teton Pass	12.02	84	ePn	Pn	17 53 21.8	+2.4
CTU	Camp Tracy	12.03	98	ePn	Pn	17 53 19.7	+0.3
YFT	Old Faithful	12.05	80	ePn	Pn	17 53 21.5	+1.8
NLU	North Lily Min	12.05	102	ePn	Pn	17 53 18.7	-1.1
YPP	Pitchstone Pla	12.08	81	ePn	Pn	17 53 21.8	+1.7
REDW	Red Top Meadow	12.11	85	ePn	Pn	17 53 21.2	+0.7
MOOW	Moose Ponds	12.15	83	ePn	Pn	17 53 21.9	+0.9
TCUT	Toone Canyon	12.15	96	ePn	Pn	17 53 23.8	+2.7
FLWY	Flagg Ranch	12.16	81	ePn	Pn	17 53 22.9	+1.8
SNOW	Snow King Moun	12.17	84	ePn	Pn	17 53 23.5	+2.2
H17A	Grant Village	12.24	80	ePn	Pn	17 53 24.7	+2.5
LOHW	Long Hollow	12.26	84	ePn	Pn	17 53 24.1	+1.5
JLU	Jordanelle	12.28	98	ePn	Pn	17 53 23.0	+0.2
CCUT	Cedar City	12.28	114	ePn	Pn	17 53 26.1	+3.3
CIAC	Catalina I. Ai	12.33	142	ePn	Pn	17 53 28.4	+5.1
MPU	Maple Canyon	12.35	101	ePn	Pn	17 53 24.3	+0.6
TCRU	Three Creeks R	12.36	108	ePn	Pn	17 53 25.4	+1.5
SZCU	Shurtz Canyon	12.44	113	ePn	Pn	17 53 26.8	+1.8
CRAG	Craig	12.53	345	ePn	Pn	17 53 25.7	-0.1
MSU	Marysvale	12.60	108	ePn	Pn	17 53 29.1	+2.0
GMRC	Granite Mounta	12.64	129	ePn	Pn	17 53 21.1	-6.5
LCMT	Little Creek M	12.66	116	ePn	Pn	17 53 30.2	+2.2

LDFC	Landfair	12.74	127	*e*Pn	Pn	17 53 32.5	+3.5
DEVC	Devers	12.79	135	*e*Pn	Pn	17 53 31.0	+1.5
MTPU	Mount Pierson	12.82	110	*e*Pn	Pn	17 53 36.0	+5.7
GCMT	Greycliff	12.91	74	*e*Pn	Pn	17 53 31.9	+0.6
TMUT	Trail Mountain	12.93	103	*e*Pn	Pn	17 53 33.0	+1.2
KNB	Kanab	12.94	115	*e*Pn	Pn	17 53 33.9	+2.2
PKCU	Pink Cliffs	13.04	112	*e*Pn	Pn	17 53 38.5	+5.2
DNR	Dunn Ranch,Anz	13.05	136	*e*Pn	Pn	17 53 32.6	-0.6
PFO	Pinyon Flats O	13.10	135	*e*Pn	Pn	17 53 33.8	-0.2
XPFO	Piæon Flat	13.10	135	*e*Pn	Pn	17 53 35.9	+1.9
BW06	Boulder Array	13.13	87	*e*Pn	Pn	17 53 35.6	+1.2
PD31	Pinedale Array	13.13	87	*e*Pn	Pn	17 53 35.1	+0.7
PDAR	Pinedale Array	13.13	87	Pn	Pn	17 53 35.5	+1.1
	0.1nm,0.3s,baz=267,slow=13,SNR=39						
PDAR				LR	LR	17 58 59.1	
	comp=Z,827nm,18.2s,baz=282,slow=39						
PDAR	Pinedale Array	13.13	87	*e*Pn	Pn	17 53 35.0	+0.5
RLMT	Red Lodge	13.16	77	*e*Pn	Pn	17 53 35.3	+0.5
EGMT	Eagleton	13.19	64	*e*Pn	Pn	17 53 33.5	-1.5
P17A	Butcher Ranch,	13.19	102	*e*Pn	Pn	17 53 35.8	+0.6
WRAK	Wrangell Islan	13.31	348	*e*Pn	Pn	17 53 36.3	-0.1
W13A	Hualapai Mount	13.46	124	*e*Pn	Pn	17 53 41.6	+2.7
P18A	Preston Nutter	13.48	101	*e*Pn	Pn	17 53 39.8	+0.5
EML	El Monte Cty P	13.49	138	*e*Pn	Pn	17 53 41.0	+2.0
SRU	San Rafael Swe	13.49	103	*e*Pn	Pn	17 53 39.7	+0.4
U15A	North Rim	13.62	116	*e*Pn	Pn	17 53 44.3	+3.1
BAR	Barrett	13.74	138	*e*Pn	Pn	17 53 45.0	+2.4
Y12C	Blythe	14.04	130	*e*Pn	Pn	17 53 49.5	+2.9
GLA	Glamis	14.39	132	*e*Pn	Pn	17 53 52.8	+1.3
PV09	Paradox Valley	14.73	104	*e*Pn	Pn	17 53 57.6	+1.2
O20A	White River Ci	14.75	97	*e*Pn	Pn	17 53 55.8	-0.7
WUAZ	Wupatki	14.76	117	*e*Pn	Pn	17 53 59.6	+2.9
Y14A	Wickenburg	14.78	125	*e*Pn	Pn	17 53 59.3	+2.5
PV21	Cone Mtn., Par	14.82	103	*e*Pn	Pn	17 53 58.8	+1.3
PV23	Carpenter Ridg	14.84	104	*e*Pn	Pn	17 53 58.1	+0.3
PV10	Paradox Valley	14.85	104	*e*Pn	Pn	17 53 58.0	0.0
PV14	Lion Creek, Pa	14.87	104	*e*Pn	Pn	17 53 59.4	+1.3
PV20	West Nyswonger	14.92	104	*e*Pn	Pn	17 53 59.6	+0.8
PV19	Morning Glory	14.92	104	*e*Pn	Pn	17 53 59.9	+1.1
PV04	Paradox Valley	14.94	104	*e*Pn	Pn	17 54 00.6	+1.5
PV05	Paradox Valley	14.94	105	*e*Pn	Pn	17 54 00.7	+1.5
PV17	East Wray Mesa	14.95	104	*e*Pn	Pn	17 54 00.6	+1.4
PV22	Blue Mesa, Par	14.96	103	*e*Pn	Pn	17 54 00.3	+0.9
PV16	Nyswonger Mesa	14.97	104	*e*Pn	Pn	17 54 00.8	+1.4
PV18	Skein Mesa, Pa	15.00	104	*e*Pn	Pn	17 54 01.0	+1.1
PV11	David Mesa, Pa	15.00	104	*e*Pn	Pn	17 54 00.2	+0.3
PV03	Paradox Valley	15.04	104	*e*Pn	Pn	17 54 00.5	0.0
	11nm,1.1s						
PV12	Saucer Basin,	15.05	104	*e*Pn	Pn	17 54 00.1	-0.4
	10nm,0.9s						
DLBC	Dease Lake	15.05	355	Pn	Pn	17 53 60.0	-0.3
	0.1nm,0.3s,baz=180,slow=9.0,SNR=5.6						
DLBC				LR	LR	17 59 07.6	
	comp=Z,508nm,18.2s,baz=324,slow=35						
DLBC	Dease Lake	15.05	355	*e*Pn	Pn	17 53 59.4	-0.9
RWWY	Rawlins	15.05	90	*e*Pn	Pn	17 53 58.5	-2.2
	44nm,1.2s						
PV07	Paradox Valley	15.10	103	*e*Pn	Pn	17 54 01.0	-0.3
	19nm,1.2s						
PV13	Radium Mtn., P	15.10	104	*e*Pn	Pn	17 54 00.9	-0.4
	8.8nm,1.0s						
PV02	Paradox Valley	15.14	104	*e*Pn	Pn	17 54 01.6	-0.2
	6.3nm,0.9s						
113A	Mohawk Valley,	15.19	130	*e*Pn	P	17 54 05.1	-2.1
	6.9nm,0.8s						
PV15	Paradox Valley	15.26	103	*e*Pn	Pn	17 54 02.6	-0.8
	12nm,1.0s						
PV01	Paradox Valley	15.29	104	*e*Pn	Pn	17 54 03.8	0.0
	9.2nm,0.9s						
K22A	Casper	15.35	86	*e*Pn	Pn	17 54 03.9	-0.6
	26nm,1.1s						
LAO	LASA Array	15.36	71	*e*Pn	Pn	17 54 03.6	-0.8
	46nm,0.8s						
JIS	Juneau Island	15.41	346	*e*Pn	Pn	17 54 04.5	-0.4
	26nm,1.1s						
X16A	Lo Mia Camp, P	15.41	121	*e*Pn	Pn	17 54 07.5	+2.1
	22nm,1.0s						
MVCO	Mesa Verde	15.77	107	*e*Pn	Pn	17 54 11.7	+1.6
	10nm,0.8s						
BESE	Bessie Mountai	15.78	346	*e*Pn	Pn	17 54 09.7	-0.2
	29nm,1.1s						
SMCO	Snowmass	16.00	99	*e*Pn	Pn	17 54 13.1	0.0
	22nm,1.3s						
W18A	Petrified Fore	16.07	115	*e*Pn	P	17 54 16.1	-1.1
	28nm,0.9s						
X18A	Snowflake	16.29	117	*e*Pn	Pn	17 54 17.7	+1.1
	63nm,1.5s						
PHWY	Pilot Hill	16.43	90	*e*Pn	Pn	17 54 16.4	-2.0
	13nm,0.8s						
S22A	4UR Ranch, Cre	16.70	103	*e*Pn	Pn	17 54 22.4	+0.5
	17nm,1.1s						
SKAG	Skagway	16.70	346	*e*Pn	Pn	17 54 21.6	+0.2
	25nm,1.3s						
ISCO	Idaho Springs	16.76	95	*e*Pn	Pn	17 54 21.9	-0.8
	36nm,1.0s						
DGMT	Dagmar	16.92	65	*e*Pn	Pn	17 54 22.8	-1.7
	62nm,1.1s						
RSSD	Black Hills	16.94	80	*e*Pn	Pn	17 54 25.1	+0.2
	30nm,1.0s						
TUC	Tucson	17.25	125	*e*Pn	P	17 54 30.8	+0.7
	29nm,1.4s						
Q24A	Divide	17.40	97	*e*Pn	Pn	17 54 31.1	+0.3
	56nm,1.1s						
SDCO	Great Sand Dun	17.64	102	*e*Pn	Pn	17 54 34.3	+0.5
	33nm,1.1s						
YKU2	Yakutat	17.69	339	*e*Pn	Pn	17 54 33.3	-0.5
LAZ	Ladron	18.22	113	*e*P	P	17 54 43.7	+2.8
ANMO	Albuquerque	18.37	111	P	Pn	17 54 43.2	+0.6
	0.1nm,0.3s,baz=307,slow=12,SNR=15						
ANMO				LR	LR	18 01 28.8	
	comp=Z,142nm,20.5s,baz=298,slow=36						
ANMO	Albuquerque	18.37	111	*e*P	Pn	17 54 44.0	+1.4
	9.8nm,1.0s						
LENM	Lemitar	18.47	113	*e*P	Pn	17 54 46.9	+3.0
Y22D	IRIS PASSCAL I	18.56	114	*e*P	Pn	17 54 47.7	+2.8
	49nm,1.0s						
LPM	Los Pinos Moun	18.61	112	*e*P	Pn	17 54 47.9	+2.3
T25A	Trinidad	18.69	102	*e*P	Pn	17 54 47.8	+1.3
	15nm,0.9s						
BNM	Barren Site	18.71	113	*e*P	Pn	17 54 49.1	+2.3
319A	Douglas	18.81	124	*e*P	Pn	17 54 50.0	+2.1
	82nm,1.5s						
OGNE	Ogallala	19.01	89	*e*P	P	17 54 48.0	-1.5
	104nm,1.9s						
KSCO	Kaye Shedlock’	19.20	95	*e*P	Pn	17 54 53.3	+0.7
	50nm,1.3s						
HSIG		19.61	132	*e*P	Pn	17 54 58.5	+1.1
	14nm,1.2s						
CRQM	Cirque	19.68	337	*e*P	P	17 54 56.4	-0.4
	45nm,1.4s						
BALM	Baldy	19.69	338	*e*P	P	17 54 56.7	-0.1
	101nm,1.9s						
RAGM	Ragged Mountai	19.85	334	*e*P	Pn	17 54 59.8	-0.3
	36nm,0.8s						
MDND	Maddock	19.92	68	*e*P	P	17 54 59.8	+0.5
	44nm,1.1s						
FFC	Flin Flon	20.01	47	*e*P	P	17 55 00.5	+0.2
	67nm,1.1s						
EPT	El Paso	20.27	118	*e*P	Pn	17 55 06.0	+0.7
	20nm,0.6s						
BMRM	Bremner River	20.28	336	*e*P	P	17 55 02.9	-0.3
	60nm,1.8s						
EYAK	Cordova Ski Ar	20.32	334	*e*P	Pn	17 55 05.9	+0.4
	0.2nm,1.0s						
SRIG	Santa Rosalia	20.32	138	*e*P	Pn	17 55 06.0	+0.2
	17nm,1.2s						
YKA	Yellowknife Ar	20.48	17	P	P	17 55 04.6	-0.6
	1.9nm,0.7s,baz=206,slow=11,SNR=4.5						
YKA				LR	LR	18 02 04.6	
	comp=Z,7.7nm,21.1s,baz=210,slow=34						
YKW3	Yellowknife Ar	20.54	17	*e*P	P	17 55 06.6	+0.7
	6.8nm,0.8s						
DIV	Divide	20.77	335	*e*P	P	17 55 09.2	+0.7
	9.3nm,0.9s						
MNTX	Cornudas Mount	21.04	117	*e*P	P	17 55 13.5	+1.8
	9.1nm,0.9s						
KLU	Klutina	21.09	335	*e*P	P	17 55 12.5	+0.5
	32nm,1.3s						
KDAK	Kodiak Island	21.22	321	P	P	17 55 13.4	+0.2
	12nm,0.9s,baz=114,slow=7.5,SNR=6.4						
KDAK				LR	LR	18 01 17.5	
	comp=Z,516nm,21.5s,baz=119,slow=31						
KDAK	Kodiak Island	21.22	321	*e*P	P	17 55 13.0	-0.3
	35nm,1.1s						
CPRX	Cap Rock	21.23	112	*e*P	P	17 55 18.6	+4.8
OHAK	Old Harbor	21.26	319	*e*P	P	17 55 12.6	-1.2
	94nm,1.8s						
CBKS	Cedar Bluff	21.37	93	*e*P	P	17 55 14.3	-0.8
	26nm,1.0s						
GDL2	Guadalupe Moun	21.40	114	*e*P	P	17 55 17.5	+1.9
MSTX	Muleshoe	21.44	108	*e*P	P	17 55 16.2	+0.3
	28nm,1.4s						
G32A	Webster	21.46	75	*e*P	P	17 55 18.2	+2.1
	120nm,0.9s						
HARP	HAARP	21.59	337	*e*P	P	17 55 18.6	+1.4
	56nm,1.4s						
CNPM	China Poot	21.63	326	*e*P	P	17 55 17.0	-0.7
	44nm,1.3s						
BRLK	Bradley Lake	21.63	327	*e*P	P	17 55 17.8	+0.1
	35nm,1.0s						
DAWY	Dawson	21.70	346	*e*P	P	17 55 17.7	-0.8
	23nm,1.3s						
BGNE	Belgrade	21.71	85	*e*P	P	17 55 18.5	-0.2
	18nm,0.8s						
AMTX	Amarillo	21.71	105	*e*P	P	17 55 20.3	+1.4
	56nm,1.1s						
SCM	Sheep Creek Mo	21.79	334	*e*P	P	17 55 20.4	+0.9
	65nm,1.4s						
RC01	Rabbit Creek A	22.07	331	*e*P	P	17 55 22.4	0.0
	23nm,1.2s						
SML	Sawmill	22.09	333	*e*P	P	17 55 22.9	+0.2
	76nm,1.8s						
PAX	Paxson	22.13	338	*e*P	P	17 55 23.1	0.0
	25nm,1.8s						
PMR	Palmer	22.20	332	*e*P	P	17 55 22.9	-0.9
	50nm,1.8s						
GHO	Glory Hole Cre	22.26	333	*e*P	P	17 55 24.3	-0.3
	33nm,1.4s						
ECSD	EROS Data Cent	22.30	79	*e*P	P	17 55 24.8	-0.3
	22nm,0.9s						
AGMN	Agassiz Nation	22.44	67	*e*P	P	17 55 25.7	-0.8
	59nm,1.3s						
ULM	Lac du Bonnet	22.53	61	P	P	17 55 26.8	-0.7
	9.7nm,0.9s,baz=268,slow=11,SNR=10						
ULM				LR	LR	18 04 27.7	
	comp=Z,446nm,20.6s,baz=257,slow=38						
ULM	Lac du Bonnet	22.53	61	*e*P	P	17 55 26.3	-1.1
	17nm,1.0s						
EGAK	Eagle	22.68	345	*e*P	P	17 55 28.8	0.0
	8.6nm,1.1s						
DHY	Denali Highway	22.75	336	*e*P	P	17 55 29.6	-0.2
	16nm,1.0s						
SKT	Skwentna	23.30	331	*e*P	P	17 55 35.8	+0.4
	34nm,1.6s						
KSU1	Kansas State U	23.55	90	*e*P	P	17 55 39.4	+1.4
	33nm,1.0s						
G35A	Watkins	23.58	74	*e*P	P	17 55 38.6	+0.4
	45nm,0.9s						
HDA	Harding Lake	23.68	339	*e*P	P	17 55 38.8	-0.2
	30nm,1.7s						
MCK	McKinley	23.71	336	*e*P	P	17 55 39.0	-0.3
	36nm,1.7s						
TX31	Lajitas Ar. Si	23.71	119	*e*P	P	17 55 40.6	+0.8
TXAR	Lajitas Array	23.72	119	P	P	17 55 40.6	+0.8
	3.4nm,0.6s,baz=300,slow=8.2,SNR=38						
TXAR				LR	LR	18 05 12.2	
	comp=Z,149nm,18.9s,baz=0.0,slow=37						
WMOK	Wichita Mounta	23.84	102	*e*P	P	17 55 41.2	+0.3
	43nm,1.1s						
B35A	Bob, Littlefor	23.87	66	*e*P	P	17 55 41.0	+0.1
	35nm,1.8s						
TRF	Thorofare Moun	23.91	335	*e*P	P	17 55 43.1	+1.7
	33nm,1.6s						
IL1	Eielson Array	23.95	339	*e*P	P	17 55 40.8	-0.8
ILAR	Eielson Array	23.95	339	P	P	17 55 41.4	-0.3
	2.4nm,0.8s,baz=151,slow=9.0,SNR=26						
ILAR				PcP	PcP	17 59 23.8	+0.3
	0.3nm,0.6s,baz=191,slow=1.7,SNR=4.8						
ILAR				LR	LR	18 03 27.2	
	comp=Z,281nm,21.9s,baz=158,slow=33						
ILB	Eielson Array	23.95	339	*e*P	P	17 55 40.8	-0.8
LPIG	La Paz	23.96	138	P	P	17 55 43.1	+1.1
	46nm,0.3s,baz=241,slow=23,SNR=6.1						
LPIG				LR	LR	18 04 18.0	
	comp=Z,257nm,19.7s,baz=272,slow=35						
J36A	Seneca 1, Swea	24.00	79	*e*P	P	17 55 42.2	-0.2
	158nm,1.6s						
WRH	Wood River Hil	24.03	338	*e*P	P	17 55 42.0	-0.4
	60nm,1.9s						
CCB	Clear Creek Bu	24.09	339	*e*P	P	17 55 42.5	-0.4
	34nm,1.8s						
PPLA	Purkeypile	24.14	332	*e*P	P	17 55 43.4	-0.2
	39nm,1.4s						
F36A	Milaca	24.17	72	*e*P	P	17 55 44.0	+0.1
	38nm,1.3s						
BWN	Browne	24.19	336	*e*P	P	17 55 43.6	-0.3
	146nm,1.9s						
HPIG		24.20	126	*e*P	P	17 55 45.5	+1.0
	17nm,1.2s						
COLA	College	24.29	339	*e*P	P	17 55 45.2	+0.6
	11nm,0.3s						
D36A	Goodland	24.30	69	*e*P	P	17 55 45.0	0.0
	89nm,1.8s						
ABTX	Abilene, Hawle	24.36	107	*e*P	P	17 55 46.8	+1.0
	93nm,1.7s						
MDM	Murphy Dome	24.45	339	*e*P	P	17 55 46.9	+0.6
	12nm,1.3s						
CAST	Castle Rocks	24.46	333	*e*P	P	17 55 46.7	+0.3
	9.9nm,1.5s						
SLBS	Sierra La Lagu	24.49	138	*e*P	P	17 55 48.7	+1.8
	22nm,1.5s						
I37A	Lemond, Waseca	24.54	77	*e*P	P	17 55 48.4	+1.1
	55nm,0.8s						
BPAW	Bear Paw Mtn.	24.59	335	*e*P	P	17 55 46.3	-1.2
	6.3nm,1.0s						
N37A	Lee Faris, Mou	24.75	85	*e*P	P	17 55 49.4	+0.2
	24nm,0.6s						
SPMN	Marine on St.	24.76	74	*e*P	P	17 55 50.0	+0.8
	56nm,1.0s						
FYU	Fort Yukon	25.07	343	*e*P	P	17 55 52.0	+0.3
	41nm,1.5s						
INK	Inuvik	25.08	355	P	P	17 55 51.9	+0.1
	2.6nm,0.8s,baz=166,slow=12,SNR=8.0						
INK				LR	LR	18 05 12.1	
	comp=Z,348nm,18.9s,baz=159,slow=36						
INK	Inuvik	25.08	355	*e*P	P	17 55 51.3	-0.4
	7.6nm,1.2s						
SCIA	State Center	25.15	82	*e*P	P	17 55 54.4	+1.7
	25nm,1.1s						
MLY	Manley	25.20	337	*e*P	P	17 55 52.4	-0.7
	14nm,1.1s						
K38A	Parkersburg	25.28	80	*e*P	P	17 55 55.9	+1.9
	17nm,0.8s						
EYMN	Ely	25.38	67	*e*P	P	17 55 55.1	+0.3
	15nm,1.0s						
TUL1	Leonard	25.43	97	*e*P	P	17 55 55.8	+0.4
	40nm,1.6s						
JCT	Junction City	25.52	111	*e*P	P	17 55 56.7	+0.5
	22nm,1.2s						
FCC	Fort Churchill	25.59	42	*e*P	P	17 55 56.4	-0.2
	18nm,1.0s						
P38A	Dawn	25.60	87	*e*P	P	17 55 57.6	+0.7
	15nm,0.8s						
I39A	Houston	25.90	77	*e*P	P	17 56 01.0	+1.4
	16nm,0.6s						
N39A	Derby Farms, D	25.95	84	*e*P	P	17 56 00.5	+0.5
	37nm,1.6s						
WHTX	Lake Whitney,	26.25	106	*e*P	P	17 56 02.6	-0.2
	22nm,1.1s						
S39A	Bolivar	26.47	91	*e*P	P	17 56 03.9	-0.8
	14nm,1.2s						
L40A	Anamosa	26.54	80	*e*P	P	17 56 04.2	-1.2
	44nm,0.9s						
G40A	Rib Lake	26.57	73	*e*P	P	17 56 06.0	+0.4
	49nm,1.8s						
HHAR	Hobbs	26.61	94	*e*P	P	17 56 06.1	0.0
	5.2nm,0.7s						
P40A	Paris	26.71	86	*e*P	P	17 56 08.3	+1.4
	38nm,1.6s						
COLD	Coldfoot	26.74	340	*e*P	P	17 56 06.8	-0.1
	25nm,2.0s						
435B	Jarrell	26.86	108	*e*P	P	17 56 08.7	+0.4
	17nm,1.1s						
C40A	Isle Royale Na	26.95	67	*e*P	P	17 56 07.7	-1.3
	10nm,0.9s						
R40A	Maddies Statio	27.00	89	*e*P	P	17 56 09.0	-0.5
	8.8nm,1.1s						
JFWS	Jewell Farm	27.02	78	*e*P	P	17 56 08.9	-0.7
	13nm,0.9s						
I41A	Arkdale	27.03	76	*e*P	P	17 56 11.3	+1.5
	14nm,0.8s						
H41A	Junction City	27.07	74	*e*P	P	17 56 09.6	-0.5
	42nm,1.4s						
833A	Chaparral WMA,	27.17	115	*e*P	P	17 56 11.1	0.0
	10nm,0.8s						
COWI	Conover	27.17	71	*e*P	P	17 56 09.9	-1.2
	6.7nm,0.8s						
N41A	Harden Midland	27.19	83	*e*P	P	17 56 09.9	-1.3
	44nm,1.7s						
W39A	Magazine	27.21	96	*e*P	P	17 56 11.8	+0.4
	17nm,1.1s						
F41A	Three Lakes	27.25	72	*e*P	P	17 56 11.6	-0.2
	14nm,1.4s						
D41A	Chassel	27.43	69	*e*P	P	17 56 13.0	-0.3
	13nm,0.9s						
L42A	Oliver, Polo	27.67	80	*e*P	P	17 56 15.0	-0.5
	64nm,1.4s						
TOLK	Toolik Lake Re	27.72	343	*e*P	P	17 56 16.9	+1.1
	21nm,1.4s						
I42A	Draeger Farm,	27.74	76	*e*P	P	17 56 15.2	-0.9
	5.9nm,0.8s						
H42A	Shiocton	27.87	74	*e*P	P	17 56 16.5	-0.8
	22nm,1.1s						
W41B	Gary Mavity, V	28.34	95	*e*P	P	17 56 21.9	+0.4
	15nm,1.4s						
T42A	Van Buren	28.36	91	*e*P	P	17 56 21.4	-0.3
	35nm,1.9s						
WLAR	White Oak Lake	28.43	98	*e*P	P	17 56 22.5	+0.2
	35nm,0.9s						
HKT	Hockley	28.57	108	*e*P	P	17 56 24.9	+1.4
	35nm,1.6s						
Z50A	Ashland	33.85	93	*e*P	P	17 57 10.0	-0.2
	12nm,0.9s						
TKL	Tuckaleechee C	34.28	88	LR	LR	18 11 57.2	
	comp=Z,429nm,18.4s,baz=306,slow=38						
TKL	Tuckaleechee C	34.28	88	*e*P	P	17 57 14.4	+0.6
	15nm,1.4s						
SADO	Sadowa	34.33	71	LR	LR	18 11 37.5	
	comp=Z,368nm,18.6s,baz=318,slow=37						
Y52A	Lilburn	34.90	91	*e*P	P	17 57 19.3	+0.1
	19nm,0.9s						
CMIG	Matias Romero	38.13	123	P	P	17 57 47.5	+0.6
	4.0nm,0.8s,baz=322,slow=10,SNR=4.4						
SCHQ	Schefferville	40.03	52	LR	LR	18 14 51.7	
	comp=Z,292nm,19.5s,baz=278,slow=37						
SFJD	Kangerlussuaq	45.93	32	LR	LR	18 18 24.3	
	comp=Z,84nm,18.1s,baz=276,slow=37						
SEY	Seymchan	48.16	323	P	P	17 59 05.6	-1.9
	2.2nm,1.0s,baz=75,slow=8.5,SNR=7.0						
SPITS	Spitsbergen Ar	56.64	8	LR	LR	18 26 11.3	
	comp=Z,45nm,18.1s,baz=15,slow=38						
H11N3	WAKE ISLAND Hy	59.11	268	T	T	19 04 12.7	
	baz=50,slow=75,SNR=248						
H11N2	WAKE ISLAND Hy	59.11	268	T	T	19 04 21.9	
	baz=50,slow=75,SNR=199						
H11N1	WAKE ISLAND Hy	59.13	268	T	T	19 04 20.7	
	baz=50,slow=75,SNR=230						
H11S1	WAKE ISLAND Hy	60.03	268	T	T	19 05 33.1	
	baz=50,slow=75,SNR=1155						
H11S2	WAKE ISLAND Hy	60.04	268	T	T	19 05 21.2	
	baz=50,slow=75,SNR=736						
H11S3	WAKE ISLAND Hy	60.05	268	T	T	19 05 20.4	
	baz=50,slow=75,SNR=767						
AFI	Afiamalu	69.99	226	LR	LR	18 23 08.5	
	comp=Z,65nm,21.2s,baz=110,slow=28						
HFS	Hagfors	71.95	19	LR	LR	18 31 41.7	
	comp=Z,37nm,19.2s,baz=52,slow=34						
KLMR	Klimovskoe	75.47	7	*e*P	P	18 02 11.8	+0.5
KLMR				AMP		18 02 20.4	
	comp=Z,8.0nm,1.2s						
ZAA1	Zalesovo Array	79.06	341	*e*P	P	18 02 29.7	-1.9
ZALV	Zalesovo Beam	79.07	341	P	P	18 02 29.7	-1.9
	comp=Z,0.5nm,0.5s,baz=20,slow=4.7,SNR=4.0						
ZALV				LR	LR	18 39 41.5	
	comp=Z,37nm,18.6s,baz=68,slow=37						
BRG	Berggiesshubel	80.21	24	*e*P	P	18 02 38.6	+0.8
	comp=Z,4.1nm,1.2s						
BRG				*e*		18 02 45.1	
	comp=Z,4.4nm,1.1s						
LPAZ	La Paz	80.51	123	P	P	18 02 39.0	-1.5
	comp=Z,1.9nm,0.8s,baz=314,slow=5.0,SNR=6.4						
LPAZ				LR	LR	18 39 05.2	
	comp=Z,36nm,18.6s,baz=308,slow=36						
LPAZ	La Paz	80.51	123	*e*P	P	18 02 38.0	-2.6
HHC	Hu-ho-hao-te	80.62	319	*e*P	P	18 02 40.4	0.0
HHC				pmax	pmax		
	comp=Z,20nm,1.1s						
HHC				pmax	pmax		
	comp=Z,62nm,5.6s						
GEC2	GERESS Array S	81.94	25	*e*P	P	18 02 45.2	-2.0
	comp=Z,12nm,1.9s						
GERES	GERESS Array B	81.94	25	P	P	18 02 45.9	-1.4
	comp=Z,0.2nm,0.3s,baz=344,slow=6.1,SNR=3.0						
DAVOX	Davos/Dischmat	82.52	28	LR	LR	18 40 34.3	
	comp=Z,41nm,18.8s,baz=322,slow=36						
BRVK	Borovoye	82.61	349	*e*P	P	18 02 49.3	-1.3
	comp=Z,2.7nm,0.8s						
BVAR	Borovoye Array	82.63	349	P	P	18 02 49.7	-1.0
	comp=Z,1.5nm,0.8s,baz=329,slow=2.5,SNR=8.8						
ESDC	Sonseca Array	82.77	40	LR	LR	18 36 57.9	
	comp=Z,22nm,20.1s,baz=315,slow=34						
KURK	Kurchatov	83.45	344	*e*P	P	18 02 53.2	-1.7
	comp=Z,3.6nm,1.0s						
KURBB	Kurchatov Arra	83.56	344	P	P	18 02 53.8	-1.7
	comp=Z,1.6nm,0.8s,baz=19,slow=4.9,SNR=13						
HNR	Honiara	84.05	251	LR	LR	18 32 10.6	
	comp=Z,58nm,21.7s,baz=158,slow=30						
AKTO	Aktyubinsk	86.33	356	LR	LR	18 45 52.1	
	comp=Z,26nm,18.2s,baz=9.2,slow=39						
ABKAR	Akbulak array	87.40	355	*e*P	P	18 03 13.4	-1.3
WMQ	Urumqi	87.55	335	P	P	18 03 18.6	+3.0
WMQ				LR	LR		
	comp=Z,100nm,20.5s						
WMQ				LR	LR		
	comp=Z,140nm,31.5s						
WMQ				LR	LR		
	comp=Z,140nm,22.1s						
LZH	Lanzhou	88.05	321	*e*P	P	18 03 19.1	+0.8
LZH				pP	PcP	18 03 21.6	+1.5
LZH				sP	pP	18 03 23.7	+0.4
LZH				pmax	pmax		
	comp=Z,21nm,1.0s						
LZH				pmax	pmax		
	comp=Z,110nm,5.1s						
LZH				LR	LR		
	comp=Z,240nm,14.9s						
MLR	Muntele Rosu	88.31	18	LR	LR	18 42 55.2	
	comp=Z,13nm,18.5s,baz=14,slow=36						
DZM	Mont Dzumac	88.98	238	LR	LR	18 35 30.7	
	comp=Z,60nm,19.7s,baz=24,slow=30						
PMG	Port Moresby	93.04	260	LR	LR	18 36 32.1	
	comp=Z,64nm,21.6s,baz=82,slow=30						
GYA	Guiyang	94.47	313	*e*P	P	18 03 49.0	+0.8
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
DAV	Davao City (W)	97.26	287	LR	LR	18 41 51.8	
	comp=Z,45nm,20.1s,baz=90,slow=32						
PLCA	Paso Flores	98.29	140	LR	LR	18 42 34.7	
	comp=Z,20nm,19.3s,baz=321,slow=32						
GEYT	Alibeck	98.80	356	LR	LR	18 55 25.5	
	comp=Z,40nm,18.2s,baz=245,slow=40						

IDC 06 18:23:11.6±17.0**, 30°.52S**×**178°.85W, h330**^{km}±205^{km}**,**
mb2.7/2**, mb1 3.0**/3**, mb1mx2.8**/42**, mbtmp3.6**/3**, Error**
ellipse: s-maj=241.6km s-min=48.8km az=180.0,
Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
URZ	Urewera	8.41	202	P	Pn	18 25 10.1	-0.2
	0.2nm,0.3s,baz=338,slow=19,SNR=2.1						
URZ				S	S	18 26 55.0	+8.0
	1.0nm,0.3s,baz=94,slow=15,SNR=5.8						
ASAR	Alice Springs	42.37	267	P	P	18 30 34.0	-0.7
	0.4nm,1.0s,baz=98,slow=6.5,SNR=4.7						
WRA	Warramunga Arr	43.37	273	P	P	18 30 42.8	+0.2
	0.6nm,0.5s,baz=110,slow=7.7,SNR=10.0						
FINES	FINESS Array B	145.00	339	PKPbc	PKPdf	18 42 08.5	-0.6
	0.3nm,0.3s,baz=64,slow=3.2,SNR=4.4						

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*DDA **06** 18:29:20.6, 37°.56N×32°.09E, h7^{km}, Ml2.8*
*ISK **06** 18:29:20.5, 37°.59N×32°.09E, h2^{km}, ML2.2/11*
*CSEM **06** 18:29:21.0±0.1, 37°.57N×32°.07E, h2^{km}, ML2.8, Error*
ellipse: s-maj=4.2km s-min=2.5km az=99.0
ISC 06 18:29:20.9±1.1**, 37°.56N**±0°.02×**32°.09E**±0°.03**, h7**^{km}±10^{km}**,**
n31, σ0ˢ.64/46**, Turkey**

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

KMER	Konya-Meram	0.30	46	*i* P	Pg	18 29 26.4	-0.5
KMER				*i* S	Sg	18 29 31.6	+0.6
KMER	Konya-Meram	0.30	46	P	Pg	18 29 26.4	-0.5
KMER				S	Sg	18 29 31.6	+0.6
KONT	Konya--Tatoy	0.44	29	PG	Pg	18 29 29.5	0.0
KONT				SG	Sg	18 29 36.4	+1.1
KONT	Konya--Tatoy	0.44	29	*i* P	Pg	18 29 29.4	0.0
KONT				*i* S	Sb	18 29 36.5	-1.4
KONT	Konya--Tatoy	0.44	29	*i* Pg	Pg	18 29 29.5	0.0
KONT				*i* Sg	Sg	18 29 36.4	+1.1
LADK	Ladik-KONYA	0.68	18	PG	Pb	18 29 34.4	-0.7
LADK				SG	Sb	18 29 43.7	-1.1
LADK	Ladik-KONYA	0.68	18	*e*Pg	Pb	18 29 34.4	-0.7
LADK				*e*Sg	Sb	18 29 43.7	-1.1
KEPZ	Antalya-Kepez	0.76	211	*i* P	Pg	18 29 35.8	+0.2
KEPZ				*i* S	Sg	18 29 46.0	+0.5
KEPZ	Antalya-Kepez	0.76	211	P	Pg	18 29 35.8	+0.2
KEPZ				S	Sg	18 29 46.0	+0.5
SUTC	Sutluce-Ispart	0.87	265	PG	Pb	18 29 37.9	-0.6
SUTC	Sutluce-Ispart	0.87	265	*e*Pg	Pb	18 29 37.9	-0.6
BAGO	Egridir - ISPA	1.12	293	*i* P	Pg	18 29 42.2	-0.3
ERMK	Ermenek	1.12	144	*i* P	Pg	18 29 42.5	0.0
ERMK	Ermenek	1.12	144	P	Pg	18 29 42.5	0.0
CHBY	Cihanbeyli	1.20	31	PN	Pb	18 29 44.2	+0.1
CHBY	Cihanbeyli	1.20	31	*e*Pn	Pb	18 29 44.2	+0.1
KIZT	Kizilcal	1.33	353	PN	Pb	18 29 46.6	+0.3
KIZT				SN	Sn	18 30 05.2	+1.1
KIZT	Kizilcal	1.33	353	*e*Pn	Pb	18 29 46.6	+0.3
KIZT				*e*Sn	Sn	18 30 05.2	+1.1
GAZI	Gazipasa	1.33	172	PN	Pg	18 29 46.4	-0.1
GAZI	Gazipasa	1.33	172	*i* P	Pn	18 29 45.7	-0.3
GAZI	Gazipasa	1.33	172	P	Pn	18 29 45.7	-0.3
GAZI	Gazipasa	1.33	172	*e*Pn	Pg	18 29 46.4	-0.1
BERE	Bereket-Mersin	1.51	143	PN	Pg	18 29 49.8	-0.1
BERE	Bereket-Mersin	1.51	143	*e*Pn	Pg	18 29 49.8	-0.1
TEVE	Tevekalti-Mers	1.56	136	PN	Pb	18 29 50.1	0.0
TEVE	Tevekalti-Mers	1.56	136	*e*Pn	Pb	18 29 50.1	0.0
AKKU	Akkuyu-Mersin	1.82	140	PN	Pb	18 29 54.0	-0.6
AKKU				SN	Sg	18 30 18.9	-0.5
AKKU	Akkuyu-Mersin	1.82	140	*e*Pn	Pb	18 29 54.0	-0.6
AKKU				*e*Sn	Sg	18 30 18.9	-0.5
IKL	Isikli	1.83	135	PN	Pb	18 29 54.3	-0.5
IKL				SN	Sb	18 30 18.9	+0.9
IKL	Isikli	1.83	135	*e*Pn	Pb	18 29 54.3	-0.5
IKL				*e*Sn	Sb	18 30 18.9	+0.9
KIZK	Mersin	1.96	123	PN	Pb	18 29 56.7	-0.3

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*CSEM **06** 18:39:21.5±0.6, 51°.50N×16°.14E, h1km, ML2.7/4, Error ellipse: s-maj=8.8km s-min=5.3km az=173.0*

*PRU **06** 18:39:22.1, 51°.50N×16°.09E, h0km*

ISC 06 18:39:22.0±1.8**, 51°.48N**±0°.08×**16°.12E**±0°.05**, h0km, n21, σ0.61**/32**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.65	171	*e*Pg	Pg	18 39 35.1	+0.7
KSP				*e*Sg	Sg	18 39 44.3	+1.5
UPC	Upice	0.98	184	*e*PG	Pb	18 39 41.5	-0.3
UPC				*e*SG	Sg	18 39 53.8	+0.4
	comp=Z,11nm,0.3s						
UPC	Upice	0.98	184	Pg	Pb	18 39 41.5	-0.3
UPC				Sg	Sg	18 39 53.8	+0.4
	11nm,0.3s						
DPC	Dobruska-Polom	1.14	174	*e*PG	Pg	18 39 43.8	0.0
DPC				*e*SG	Sg	18 39 58.8	+0.2
	comp=Z,3.6nm,0.3s						
DPC	Dobruska-Polom	1.14	174	Pg	Pg	18 39 43.8	0.0
DPC				Sg	Sg	18 39 58.8	+0.2
	3.6nm,0.3s						
PVCC	Panska Ves	1.37	226	*e*SG	Sb	18 40 06.7	+0.2
	comp=Z,14nm,0.1s						
PVCC	Panska Ves	1.37	226	Sg	Sb	18 40 06.7	+0.2
	14nm,0.1s						
KRLC	Kraliky	1.47	163	*e*PG	Pb	18 39 50.3	+0.1
KRLC				*e*SG	Sn	18 40 09.7	0.0
KRLC	Kraliky	1.47	163	Pg	Pb	18 39 50.3	+0.1
KRLC				Sg	Sn	18 40 09.7	0.0
BRG	Berggiesshubel	1.50	247	PG	Pn	18 39 49.4	-0.8
BRG				SG	Sg	18 40 10.1	-0.1
	7.2nm,0.3s						
PRU	Pruhonice	1.80	215	*e*SG	Sb	18 40 19.3	+0.4
	comp=Z,4.1nm,0.3s						
PRU	Pruhonice	1.80	215	Sg	Sb	18 40 19.3	+0.4
	4.1nm,0.3s						
MORC	Moravsky Berou	1.93	152	*e*Pn	Pn	18 39 55.2	-0.9
MORC				*e*Sg	Sg	18 40 24.0	0.0
MORC	Moravsky Berou	1.93	152	*e*PN	Pn	18 39 55.2	-0.9
MORC				*e*SG	Sg	18 40 24.0	0.0
CLL	Collm	1.96	266	*i* Pg	Pn	18 39 56.8	+0.3
CLL				*i* Sg	Sb	18 40 23.6	0.0
VRAC	Vranov	2.20	172	*e*Pn	Pn	18 39 59.5	-0.2
VRAC	Vranov	2.20	172	*e*PN	Pn	18 39 59.5	-0.2
NKC	Novy Kostel	2.64	243	*e*SG	Sg	18 40 47.7	+0.8
NKC	Novy Kostel	2.64	243	Sg	Sg	18 40 47.7	+0.8
KHC	Kasperske Hory	2.87	216	*e*SG	Sg	18 40 52.7	-1.2
KHC	Kasperske Hory	2.87	216	Sg	Sg	18 40 52.7	-1.2

MEX 06 18:52:33.8±0.3**, 14°.84N×93°.24W, h16km**±28km**, MD3.7, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		0.86	1	*i* P	Pb	18 52 47.4	-3.0
PCIG				*i* S	Sb	18 52 58.0	-3.7
THIG		0.94	86	*i* P	Pb	18 52 47.7	-4.0
THIG				*i* S	Sb	18 53 00.0	-3.9

IDC 06 18:56:22.4±1.7**, 8°.69S×130°.66E, h0km, mb3.5**/1**, mb1 3.7**/5**, mb1mx3.4**/48**, mbtmp3.6**/5**, ML3.5**/4**, Error ellipse: s-maj=50.3km s-min=24.7km az=88.0, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	7.79	4	Pn	Pn	18 58 15.5	-1.6
	1.0nm,0.3s,baz=221,slow=20,SNR=4.6						
SIJI				Sn	Sn	18 59 35.3	-11
	0.2nm,0.3s,baz=180,slow=20,SNR=3.8						
FITZ	Fitzroy Crossi	10.55	207	Pn	Pn	18 58 55.6	+0.6
	0.2nm,0.3s,baz=27,slow=11,SNR=15						
FITZ				Sn	Sn	19 00 47.9	-6.2
	0.6nm,0.3s,baz=192,slow=19,SNR=5.9						
WRA	Warramunga Arr	11.74	163	Pn	Pn	18 59 10.6	-0.7
	0.3nm,0.3s,baz=341,slow=14,SNR=15						
WRA				Sn	Sn	19 01 10.9	-12
	0.1nm,0.3s,baz=343,slow=17,SNR=2.7						
ASAR	Alice Springs	15.22	169	Pn	Pn	18 59 58.1	-0.6
	0.1nm,0.3s,baz=355,slow=15,SNR=12						
ASAR				Sn	Sn	19 02 37.3	-11
	0.0nm,0.3s,baz=353,slow=24,SNR=2.9						
MKAR	Makanchi Array	69.99	327	P	P	19 07 36.3	+0.5
	0.2nm,0.4s,baz=112,slow=7.9,SNR=5.6						

NEIC 06 18:59:07.5±0.7**, 11°.70S×76°.50W, h10km, ML4.0**(ARE)**, Error ellipse: s-maj=13.7km s-min=10.6km az=191.0, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	Nana	0.44	230	*e*Pg	Pg	18 59 16.0	-0.2
NNA				*e*Sg	Sg	18 59 22.6	+0.5
LPAZ	La Paz	9.31	120	*e*Pn	Pn	19 01 23.5	+1.0
MNMC	Minye Minye	9.94	139	*e*Pn	Pn	19 01 30.3	-0.5
SAML	Samuel	13.38	79	*e*Pn	Pn	19 02 16.9	-0.7
GMRC	Granite Mounta	59.29	323	*e*P	P	19 09 08.3	-1.4
BTPC	Burnt Peak	60.98	321	*e*P	P	19 09 22.0	+0.5
CWC	Cottonwood Cre	61.86	323	*e*P	P	19 09 28.8	+1.5
LRDM	Redding Peak	66.51	324	*e*P	P	19 09 57.4	-0.3

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*NIED **06** 19:21:00, 25°.90N×126°.90E, h23km, Mw3.9 Best double couple: $M_0$8.57000×10^{14} NP1:ϕ_s12.00000°, δ82.00000°, λ-3.00000°. NP2:ϕ_s103.00000°, δ87.00000°, λ-172.00000°.*

*ISCJB **06** 19:21:60.0±0.8, 25°.95N±0°.06×126°.85E±0°.06, h36km±7km, mb3.7/15, MS3.0/3, Error ellipse: s-maj=9.7km s-min=8.5km az=165.2*

*JMA **06** 19:21:59.0±0.1, 25°.87N×126°.89E, h16km±3km, M3.9*

*IDC **06** 19:22:02.3±2.7, 25°.98N×126°.93E, h41km±26km, mb3.5/15, mb1 3.7/17, mb1mx3.5/64, mbtmp3.7/17, ML3.3/2, MS2.9/4, Ms1 2.9/4, ms1mx2.6/45, Error ellipse: s-maj=17.7km s-min=14.4km az=75.0*

ISC 06 19:21:59.6±1.1**, 25°.89N**±0°.08×**126°.92E**±0°.05**, h22km**±7km**, n32, σ0.93**/31**, mb3.8**/15**, MS3.0**/3**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JKE	Kume jima 2	0.45	345	P	Pb	19 22 08.2	-0.6
JKE				S	Sb	19 22 14.6	-0.4
JAGN	Aguni-jima	0.75	23	P	Pb	19 22 13.7	-0.3
JAGN				S	Sb	19 22 24.7	+0.9
JJT3	Tamagusuku3	0.82	72	P	Pn	19 22 15.4	-0.4
JJT3				*e*S	Sn	19 22 26.3	-1.0
JNTH	Nagotoyohara	1.17	58	P	Pn	19 22 20.4	-0.3
JIH	Iheya	1.48	39	P	Pn	19 22 25.3	+0.4
JOW	Kunigami	1.54	52	P	Pb	19 22 27.1	-0.3
	331nm,0.3s,baz=211,slow=8.1,SNR=1089						
JOW				LR	LR	19 22 33.9	
	comp=Z,22nm,21.5s,baz=300,slow=21						
JOW				S	Sn	19 22 43.9	-1.1
	135nm,0.3s,baz=116,slow=21,SNR=4.9						
JOW	Kunigami	1.54	52	P	Pb	19 22 26.7	-0.7
JOW				*e*S	Sb	19 22 47.0	+0.6
JOGS	Gusukube	1.77	231	P	Pn	19 22 29.4	+0.5
JNU	Nakatsue	7.99	25	P	Pn	19 23 56.1	+1.7
	0.4nm,0.3s,baz=240,slow=14,SNR=2.1						
KSRS	Korea Array	11.56	4	P	Pn	19 24 45.1	+1.9
	0.1nm,0.3s,baz=184,slow=15,SNR=2.7						
MJAR	Matsushiro Arr	14.34	40	LR	LR	19 31 07.5	
	comp=Z,18nm,22.0s,baz=225,slow=38						
SONM	Songino Array	27.21	329	P	P	19 27 42.5	+0.6
	0.6nm,0.8s,baz=137,slow=9.4,SNR=2.9						
SONM				LR	LR	19 40 08.4	
	comp=Z,45nm,19.9s,baz=130,slow=40						
PETK	Petropavlovsk-	35.60	32	P	P	19 28 56.1	+0.6
	0.5nm,0.5s,baz=205,slow=6.2						
PETK				LR	LR	19 45 10.4	
	comp=Z,14nm,18.8s,baz=58,slow=39						
H11N1	WAKE ISLAND Hy	37.26	91	T	T	20 08 59.0	
	baz=283,slow=75,SNR=17						
H11N2	WAKE ISLAND Hy	37.26	91	T	T	20 08 55.9	
	baz=283,slow=75,SNR=21						
H11N3	WAKE ISLAND Hy	37.27	91	T	T	20 09 02.0	
	baz=283,slow=75,SNR=23						
H11S3	WAKE ISLAND Hy	37.44	93	T	T	20 09 08.2	
	baz=289,slow=75,SNR=34						
H11S1	WAKE ISLAND Hy	37.45	93	T	T	20 09 06.8	
	baz=289,slow=75,SNR=40						
H11S2	WAKE ISLAND Hy	37.46	93	T	T	20 09 09.6	
	baz=289,slow=75,SNR=54						
MKAR	Makanchi Array	40.88	312	P	P	19 29 39.5	-0.5
	1.1nm,0.5s,baz=98,slow=10,SNR=18						
MKAR				PcP	PcP	19 31 41.5	+1.1
	0.3nm,0.7s,baz=86,slow=3.7,SNR=3.5						
ZALV	Zalesovo Beam	41.81	324	P	P	19 29 46.5	-0.9
	0.7nm,0.5s,baz=120,slow=9.9,SNR=3.6						
ZALV				LR	LR	19 47 24.8	
	comp=Z,25nm,18.7s,baz=70,slow=36						
FITZ	Fitzroy Crossi	43.75	182	P	P	19 30 04.5	+1.0
	1.2nm,0.5s,baz=0.0,slow=7.1,SNR=5.0						
KURBB	Kurchatov Arra	44.29	317	P	P	19 30 06.6	-1.0
	1.2nm,0.6s,baz=108,slow=8.8,SNR=3.5						
WRA	Warramunga Arr	46.13	170	P	P	19 30 22.0	-0.5
	0.5nm,1.0s,baz=350,slow=8.8,SNR=3.4						
ASAR	Alice Springs	49.73	172	P	P	19 30 52.1	+1.7
	0.3nm,0.6s,baz=356,slow=9.6,SNR=6.3						
BVAR	Borovoye Array	49.74	319	P	P	19 30 49.4	-0.7
	0.9nm,0.5s,baz=104,slow=9.1,SNR=6.9						
ILAR	Eielson Array	65.29	28	P	P	19 32 38.5	-1.0
	0.2nm,0.7s,baz=270,slow=5.4,SNR=4.1						
FINES	FINESS Array B	72.57	330	P	P	19 33 24.0	-0.8
	1.0nm,0.8s,baz=30,slow=8.8,SNR=4.7						
AKASG	Malin Array Be	75.02	319	P	P	19 33 38.4	-1.0
	0.6nm,0.5s,baz=61,slow=6.1,SNR=3.8						
BRTR	Keskin Array B	76.30	308	P	P	19 33 46.8	-0.4
	0.8nm,0.6s,baz=79,slow=6.4,SNR=4.7						
YKA	Yellowknife Ar	79.32	25	P	P	19 34 03.8	+0.5
	0.8nm,0.9s,baz=300,slow=4.9,SNR=2.4						
GERES	GERESS Array B	84.75	322	P	P	19 34 32.5	+0.3
	0.5nm,0.7s,baz=64,slow=6.1,SNR=4.8						

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*JMA **06** 19:26:06.5±0.1, 33°.34N×137°.64E, h386km, M3.2*

*ISCJB **06** 19:26:10.5±0.4, 33°.54N±0°.06×137°.66E±0°.07, h352km, mb3.2/8, Error ellipse: s-maj=9.1km s-min=6.9km az=39.1*

*IDC **06** 19:26:12.1±0.5, 33°.55N×137°.52E, h344km±9km, mb3.1/8, mb1 3.2/13, mb1mx3.0/74, mbtmp3.8/13, Error ellipse: s-maj=22.2km s-min=9.4km az=66.0*

ISC 06 19:26:12.2±0.8**, 33°.59N**±0°.07×**137°.58E**±0°.07**, h352km, n32, σ1.39**/36**, mb3.3**/8**, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TK01	Tokai 1	0.17	2	P	Pn	19 26 54.3	-1.4
TTO3	TONANKAI O.B.S	0.31	330	P	Pn	19 26 55.6	-0.4
TK02	Tokai 2	0.38	22	P	Pn	19 26 55.5	-0.5
TTO4	TONANKAI O.B.S	0.42	355	P	Pn	19 26 55.5	-0.6
TTO2	TONANKAI O.B.S	0.48	287	P	Pn	19 26 55.5	-0.7
TTO1	TONANKAI O.B.S	0.67	273	P	Pn	19 26 55.7	-0.9
JIE	Ise	1.08	318	P	Pn	19 26 57.2	-1.2
JWZ	Kozaga	1.56	268	P	Pn	19 26 58.7	-2.1
JWY	Kouya	1.77	291	P	Pn	19 27 00.8	-1.4
JHJ	Hachijo jima 2	1.90	104	P	Pn	19 27 01.9	-1.1
	16nm,0.3s,baz=66,slow=20,SNR=3.4						
JHJ				S	S	19 27 44.5	+0.8
	10.0nm,0.3s,baz=73,slow=19,SNR=2.4						
JWT	Wachi	2.47	314	P	Pn	19 27 05.9	-1.2
JRY	Ryogami san	2.65	24	P	Pn	19 27 09.0	+0.4
JKG	Kaga	2.87	339	P	Pn	19 27 09.8	-0.6
MJAR	Matsushiro Arr	2.99	10	P	Pn	19 27 11.0	-0.4
	1.5nm,0.3s,baz=193,slow=10,SNR=26						
MJAR				S	S	19 27 56.9	-2.3
	0.5nm,0.3s,baz=326,slow=23,SNR=7.2						
MAT	Matsushiro	2.99	10	P	Pn	19 27 11.4	-0.1
MAT	Matsushiro	2.99	10	P	Pn	19 27 10.7	-0.8
MAT				S	S	19 27 56.9	-2.4
BSO1	Boso 1	3.01	68	P	Pn	19 27 08.9	-2.1
BSO1				*e*S	S	19 27 56.4	-2.2
JMN	Monobe	3.09	274	P	Pn	19 27 11.0	-1.5
JAG	Ashikaga	3.22	28	P	Pn	19 27 12.2	-1.3
JAG				S	S	19 27 59.5	-3.5
JNU	Nakatsue	5.63	267	P	Pn	19 27 37.4	-1.5
	1.3nm,0.3s,baz=107,slow=5.9,SNR=4.1						
JCJ	Chichijima	7.60	147	P	Pn	19 27 55.9	-5.8
	2.2nm,0.3s,baz=248,slow=19,SNR=7.4						
JCJ				S	S	19 29 19.4	-11
	5.1nm,0.3s,baz=308,slow=19,SNR=7.8						
KSRS	Korea Array	8.77	299	P	Pn	19 28 15.6	+0.3
	0.8nm,0.3s,baz=110,slow=13,SNR=32						
ASAJ	Asahikawa	11.21	19	P	P	19 28 45.8	+1.1
	0.2nm,0.3s,baz=222,slow=15,SNR=3.9						
USRK	Ussuriysk Ar.	11.45	339	P	P	19 28 48.5	+1.1
	baz=143,slow=11						
SONM	Songino Array	27.37	311	P	P	19 31 28.6	+2.3
	1.0nm,0.6s,baz=107,slow=9.6,SNR=5.1						
CMAR	Chiang Mai Arr	37.61	256	P	P	19 32 54.6	0.0
	0.4nm,0.4s,baz=55,slow=8.4,SNR=4.4						
MKAR	Makanchi Array	43.39	305	P	P	19 33 41.4	+0.3
	0.3nm,0.5s,baz=88,slow=9.2,SNR=7.6						
KURBB	Kurchatov Arra	45.74	310	P	P	19 33 59.6	+0.3
	0.8nm,0.5s,baz=88,slow=9.3,SNR=9.4						
FITZ	Fitzroy Crossi	52.65	194	P	P	19 34 51.6	+0.1
	2.4nm,1.0s,baz=37,slow=10,SNR=3.3						
WRA	Warramunga Arr	53.32	184	P	P	19 34 56.0	-0.3
	0.9nm,0.4s,baz=1.6,slow=7.6,SNR=19						
ASAR	Alice Springs	57.05	184	P	P	19 35 22.5	-0.1
	0.3nm,0.3s,baz=353,slow=3.4,SNR=15						
FINES	FINESS Array B	70.37	332	P	P	19 36 49.0	+0.7
	0.9nm,0.9s,baz=45,slow=5.7,SNR=4.8						

IDC 06 19:37:31.9±6.3**, 22°.89S×172°.71E, h82km**±50km**, mb3.5**/5**, mb1 3.6**/6**, mb1mx3.3**/47**, mbtmp3.8**/6**, ML3.1**/1**, MS3.8**/2**, Ms1 3.8**/2**, ms1mx3.3**/13**, Error ellipse: s-maj=44.6km s-min=32.7km az=119.0, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	5.85	277	P	Pn	19 38 56.1	-0.1
	0.5nm,0.3s,baz=118,slow=15,SNR=9.7						
AFI	Afiamalu	17.21	61	LR	LR	19 47 00.4	
	comp=Z,208nm,18.1s,baz=191,slow=33						
ASAR	Alice Springs	35.58	261	P	P	19 44 22.4	+0.6
	0.6nm,0.7s,baz=84,slow=9.5,SNR=4.2						
WRA	Warramunga Arr	35.78	267	P	P	19 44 24.3	+0.8
	0.6nm,0.9s,baz=97,slow=8.3,SNR=3.8						
FITZ	Fitzroy Crossi	44.21	267	P	P	19 45 31.4	-1.8
	1.4nm,0.7s,baz=120,slow=8.1,SNR=2.0						
LEM	Lembang	64.45	273	LR	LR	20 15 48.4	
	comp=Z,97nm,20.6s,baz=360,slow=36						
PETK	Petropavlovsk-	76.80	351	P	P	19 49 14.8	+0.5
	1.6nm,0.8s,baz=138,slow=8.0						
SNAA	Sanae	85.64	181	P	P	19 50 01.3	+0.2
	0.9nm,0.9s,baz=162,slow=3.2,SNR=3.0						
EKA	Eskdalemuir Ar	147.46	356	PKPbc	PKPdf	19 57 04.8	+1.3
	1.8nm,0.8s,baz=349,slow=3.3,SNR=2.7						

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*ISCJB **06** 19:37:58.0±0.3, 22°.62S±0°.04×173°.04E±0°.05, h32km, mb4.7/38, Error ellipse: s-maj=6.9km s-min=5.9km az=148.8*

*NEIC **06** 19:38:02.0±1.4, 22°.61S×173°.06E, h54km±13km, mb4.9/37, Error ellipse: s-maj=8.1km s-min=7.1km az=56.0*

*IDC **06** 19:38:02.2±4.0, 22°.65S×172°.99E, h55km±33km, mb4.1/17, mb1 4.2/19, mb1mx4.0/48, mbtmp4.4/19, ML3.8/2, Error ellipse: s-maj=22.0km s-min=15.2km az=72.0*

ISC 06 19:37:59.7±0.4**, 22°.63S**±0°.08×**173°.07E**±0°.06**, h32km, n79, σ1.15**/74**, mb4.8**/38**, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	6.16	274	P	Pn	19 39 29.8	+1.2
	3.1nm,0.3s,baz=130,slow=15,SNR=12						
DZM				S	Sn	19 40 38.1	+0.1
	7.5nm,0.3s,baz=156,slow=20,SNR=2.6						
DZM	Mont Dzumac	6.16	274	*e*Pn	Pn	19 39 30.0	+1.4
	32nm,0.2s						
DZM				*e*LR	LR	19 40 58.5	
	868nm,23.4s						
DZM	Mont Dzumac	6.16	274	*e*Pn	Pn	19 39 29.7	+1.2
DZM				*e*Sn	Sn	19 40 34.9	-3.1
HIZ	Hauiti	15.91	175	*e*Pn	P	19 41 43.7	-0.8
	80nm,1.3s						
URZ	Urewera	15.96	168	P	Pn	19 41 42.8	+0.9
	0.3nm,0.3s,baz=56,slow=3.6,SNR=3.4						
BKZ	Black Stump Fm	16.74	171	*e*Pn	Pn	19 41 51.7	-0.2
	55nm,1.4s						
AFI	Afiamalu	16.79	61	*e*Pn	Pn	19 41 52.7	+0.1
	53nm,1.1s						
BFZ	Birch Farm	18.20	172	*e*P	Pn	19 42 08.3	-1.6
	188nm,1.5s						
SNZO	South Karori	18.68	176	*e*P	Pn	19 42 15.7	0.0
	196nm,1.4s						
THZ	Tophouse	19.08	180	*e*P	Pn	19 42 21.2	+0.7
	135nm,1.8s						
KHZ	Kahutara	19.74	179	*e*P	P	19 42 26.2	-0.5
	165nm,1.8s						
LTZ	Lake Taylor	20.11	182	*e*P	P	19 42 31.2	+0.4
	104nm,1.5s						
EIDS	Eidsvold	20.27	258	*e*P	Pn	19 42 37.9	+3.1
	28nm,0.9s						
OXZ	Oxford	20.66	182	*e*P	Pn	19 42 39.7	+0.5
	80nm,1.4s						
ARMA	Armidale	20.67	243	*e*P	Pn	19 42 42.0	+2.4
	47nm,1.4s						
FOZ	Fox Glacier	21.02	187	*e*P	P	19 42 41.6	+1.0
	72nm,1.2s						
MQZ	McQueen’s Vall	21.02	181	*e*P	P	19 42 42.0	+1.4
	46nm,1.7s						
RPZ	Rata Peaks	21.10	184	P	P	19 42 41.5	+0.1
	13nm,0.9s,baz=0.9,slow=9.2,SNR=2.5						
MLZ	Mavora Lakes	23.04	189	*e*P	P	19 43 03.9	+1.7
	99nm,1.5s						
DCZ	Deep Cove	23.29	191	*e*P	P	19 43 07.5	+2.9
	61nm,1.4s						
CTAO	Charters Tower	25.09	271	*e*P	P	19 43 22.8	+1.2
	25nm,1.3s						
RABL	Rabaul	27.30	309	*e*P	P	19 43 43.1	+1.4
	13nm,0.9s						
STKA	Stephens Creek	29.37	245	P	P	19 44 00.3	+0.3
	3.2nm,0.9s,baz=80,slow=13,SNR=4.1						
STKA	Stephens Creek	29.37	245	*e*P	P	19 44 01.6	+1.6
	8.4nm,1.8s						
BBOO	Buckleboo	34.15	245	*e*P	P	19 44 43.1	+1.1
	20nm,1.1s						
PPT2	Papeete2	35.37	89	*e*LR	LR	19 54 09.9	
	199nm,26.5s						
PPT	Papeete	35.37	89	*e*P	P	19 44 53.7	+1.0
PPTF	Pamatai, Papee	35.38	89	*e*P	P	19 44 53.0	+0.1
	299nm,2.0s						
AS01	Alice Springs	35.91	261	*e*P	P	19 44 55.9	-1.4
AS31	Alice Springs	35.95	261	*e*P	P	19 44 58.2	+0.6
	1.8nm,0.9s						
ASAR	Alice Springs	35.95	261	P	P	19 44 56.1	-1.6
	4.4nm,0.9s,baz=90,slow=8.5,SNR=12						
WB2	Warramunga Arr	36.11	267	*e*P	P	19 44 57.9	-1.1
	49nm,1.9s						
WRAB	Tennant Creek	36.12	267	*e*P	P	19 44 58.8	-0.3
	36nm,1.8s						
WR1	Warramunga Arr	36.12	267	*e*P	P	19 44 57.8	-1.4
	24nm,1.6s						
WRA	Warramunga Arr	36.12	267	P	P	19 44 57.8	-1.4
	0.8nm,0.4s,baz=97,slow=8.6,SNR=9.2						
FORT	Forrest	40.80	249	*e*P	P	19 45 38.3	0.0
	28nm,0.8s						
MTN	Manton Dam	40.99	276	*e*P	P	19 45 39.5	-0.5
	54nm,1.4s						
H11S2	WAKE ISLAND Hy	41.34	351	T	T	20 29 54.5	
	baz=171,slow=76,SNR=17						
H11S3	WAKE ISLAND Hy	41.34	351	T	T	20 29 54.9	
	baz=171,slow=76,SNR=15						
H11S1	WAKE ISLAND Hy	41.36	351	T	T	20 29 55.2	
	baz=171,slow=76,SNR=17						
FITZ	Fitzroy Crossi	44.55	267	P	P	19 46 08.8	-0.1
	7.7nm,0.9s,baz=113,slow=7.7,SNR=6.3						
FITZ	Fitzroy Crossi	44.55	267	*e*P	P	19 46 08.7	-0.2
	9.2nm,0.9s						
MBWA	Marble Bar	49.29	261	*e*P	P	19 46 46.5	+0.5
	31nm,1.4s						
NWAO	Narrogin (SRO)	49.96	245	P	P	19 46 51.0	+0.2
	6.9nm,0.8s,baz=162,slow=16,SNR=4.5						
NWAO	Narrogin (SRO)	49.96	245	*e*P	P	19 46 50.8	-0.1
	92nm,1.6s						
VNDA	Vanda	55.21	183	P	P	19 47 29.1	0.0
	0.9nm,0.7s,baz=0.5,slow=5.4,SNR=3.9						
VNDA	Vanda	55.21	183	*e*P	P	19 47 28.8	-0.3
SBA	Scott Base	55.36	182	*e*P	P	19 47 31.4	+1.2
	13nm,1.0s						
LEM	Lembang	64.77	273	P	P	19 48 35.4	-0.4
	14nm,0.7s,baz=346,slow=19,SNR=3.2						
MJAR	Matsushiro Arr	67.43	330	P	P	19 48 52.1	-0.1
	1.9nm,0.9s,baz=158,slow=5.4,SNR=4.0						
MAJO	Matsushiro	67.44	330	*e*P	P	19 48 52.1	-0.2
QSPA	South Pole Qui	67.44	180	*e*P	P	19 48 51.6	-0.5
	22nm,1.0s						
ASAJ	Asahikawa	72.05	337	P	P	19 49 22.2	+1.7
	6.0nm,0.9s,baz=235,slow=12,SNR=5.0						
ASAJ	Asahikawa	72.05	337	*e*P	P	19 49 22.5	+2.0
	7.4nm,1.0s						
PEA0B	Petropavlovsk-	76.59	351	*e*P	P	19 49 48.5	+1.8
	37nm,1.5s						
PETK	Petropavlovsk-	76.59	351	P	P	19 49 47.2	+0.5
	2.6nm,0.7s,baz=126,slow=6.4						
PETK	Petropavlovsk-	76.59	351	*e*P	P	19 49 48.0	+1.3
PEA1	Petropavlovsk-	76.60	351	*e*P	P	19 49 47.2	+0.5
MAW	Mawson	76.64	202	P	P	19 49 47.0	+0.1
	7.1nm,0.7s,baz=141,slow=8.1,SNR=11						
MAW	Mawson	76.64	202	*e*P	P	19 49 47.1	+0.2
	2.7nm,0.9s						
NIKH	Nikolski High	76.91	11	*e*P	P	19 49 49.2	+0.7
	54nm,1.5s						
PAF	Port-aux-Franc	81.09	220	*e*P	P	19 50 10.7	-1.0
	422nm,1.6s						
PMSA	Palmer Station	82.49	159	P	P	19 50 18.9	+0.1
	5.1nm,0.8s,baz=260,slow=8.0,SNR=3.8						
SNAA	Sanae	85.91	181	P	P	19 50 35.2	-1.0
	3.4nm,0.9s,baz=178,slow=5.7,SNR=12						
SNAA	Sanae	85.91	181	*e*P	P	19 50 35.0	-1.1
	24nm,1.8s						
NV01	Mina Array Sit	88.41	47	*e*P	P	19 50 48.3	-0.7
NVAR	Mina Array Bea	88.41	47	P	P	19 50 48.8	-0.2
	0.6nm,0.7s,baz=186,slow=2.4,SNR=3.6						
I07A	Izee	90.55	42	*e*P	P	19 50 56.8	-1.9
	2.9nm,0.9s						
SONA0	Songino Array	92.08	322	*e*P	P	19 51 03.8	-1.9
SONM	Songino Array	92.08	322	P	P	19 51 03.8	-1.9
	0.4nm,0.7s,baz=132,slow=4.1,SNR=2.7						
ILAR	Eielson Array	92.44	16	P	P	19 51 05.8	-1.0
	0.5nm,0.8s,baz=210,slow=7.7,SNR=5.0						
ARA0	ARCESS Array S	129.22	346	*e*PKPdf	PKPdf	19 57 02.6	-1.4

ARCES	**ARCESS Array B**	**129.22**	**346**	PKP	**PKPdf**	**19 57 02.6**	**-1.4**
	3.7nm,1.0s,baz=45,slow=2.7,SNR=3.9						
EKA	**Eskdalemuir Ar**	**147.22**	**356**	PKPbc	**PKPdf**	**19 57 37.7**	**+0.5**
	2.4nm,0.6s,baz=346,slow=2.3,SNR=6.4						
BRG	**Berggiesshubel**	**147.45**	**335**	ePKP	**PKPdf**	**19 57 38.8**	**+1.1**
	7.6nm,1.4s						
CLL	**Collm**	**147.46**	**337**	i PKPbc	**PKPbc**	**19 57 39.9**	**-0.3**
GERES	**GERESS Array B**	**149.14**	**333**	PKPbc	**PKPdf**	**19 57 42.1**	**+1.4**
	0.4nm,0.7s,baz=129,slow=4.3,SNR=4.5						
TORD	**Torodi Ar. Bea**	**167.50**	**222**	PKPab	**PKPab**	**19 59 07.8**	**-1.2**
	baz=140,slow=5.6						
TOA1	**Torodi Ar. Sit**	**167.51**	**222**	ePKPab	**PKPab**	**19 59 07.8**	**-1.2**

ISCJB ***06*** *19:44:10.2±0.5, 32.°19N±0.°02×115.°21W±0.°02, h11^{km}±3^{km}, Error ellipse: s-maj=3.8km s-min=3.0km az=5.9*

ECX ***06*** *19:44:11.9±0.6, 32.°20N×115.°24W, h6^{km}, MD2.7, ML2.9*

NEIC ***06*** *19:44:11.9±0.0, 32.°20N×115.°24W, h6^{km}, ML2.7(PAS), ML2.9(ECX), After ECX.*

ISC 06 19:44:10.2±1.0**, 32.°19N**±0.°02×**115.°24W**±0.°02**, h12**^{km}±8^{km}**, n61,** σ**1.^{s}15**/80**, 2C-1D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPBX	**Cerro Prieto**	**0.24**	**347**	eP	**Pg**	**19 44 15.6**	**+0.4**
CPBX				eS	**Sg**	**19 44 19.6**	**+1.1**
EMSC	**East Mesa**	**0.59**	**21**	eP	**Pb**	**19 44 23.0**	**+0.6**
EMSC	**East Mesa**	**0.59**	**21**	ePg	**Pb**	**19 44 23.0**	**+0.6**
SGL	**Mount Signal**	**0.62**	**318**	⇓ iP	**Pb**	**19 44 22.9**	**+0.1**
ERPC	**Ernies Place**	**0.66**	**327**	ePg	**Pb**	**19 44 24.5**	**+0.9**
COA	**Coachella**	**0.68**	**8**	eP	**Pb**	**19 44 24.2**	**+0.2**
COA	**Coachella**	**0.68**	**8**	ePg	**Pb**	**19 44 24.2**	**+0.2**
YMD	**Yuma Desert**	**0.69**	**58**	eP	**Pb**	**19 44 24.4**	**+0.3**
ECBX	**El Chinero**	**0.73**	**167**	eP	**Pb**	**19 44 25.0**	**+0.2**
ECBX				eS	**Sb**	**19 44 35.3**	**+0.6**
YUH	**Yuha Desert**	**0.74**	**309**	eP	**Pb**	**19 44 24.9**	**-0.1**
YUH	**Yuha Desert**	**0.74**	**309**	ePg	**Pb**	**19 44 24.9**	**-0.1**
RMX	**La Rumorosa**	**0.82**	**301**	eP	**Pg**	**19 44 25.2**	**-0.9**
RMX				eS	**Sg**	**19 44 35.4**	**-1.4**
RMX				⇑e		19 44 35.7	
RMX				IAML		19 44 35.7	
	comp=E,327nm,0.2s						
IKP	**In-Ko-Pah, Jac**	**0.87**	**302**	P	**Pb**	**19 44 27.2**	**0.0**
	baz=123,SNR=39						
IKP				S	**Sg**	**19 44 38.3**	**-0.1**
	baz=123						
IKP	**In-Ko-Pah, Jac**	**0.87**	**302**	eP	**Pb**	**19 44 27.2**	**0.0**
SWSC	**Sam W. Stewart**	**0.89**	**328**	P	**Pg**	**19 44 26.9**	**-0.5**
	baz=149,SNR=8.7						
SWSC				S	**Sg**	**19 44 38.7**	**-0.3**
	baz=149						
CRR	**Carrizo Plain**	**0.93**	**319**	ePg	**Pb**	**19 44 28.7**	**+0.5**
GLA	**Glamis**	**0.93**	**22**	P	**Pg**	**19 44 27.6**	**-0.5**
	baz=203,SNR=40						
GLA				S	**Sb**	**19 44 40.5**	**-0.1**
	baz=203						
GLA	**Glamis**	**0.93**	**22**	ePg	**Pg**	**19 44 27.6**	**-0.5**
GLA				eSg	**Sb**	**19 44 41.1**	**+0.5**
ZAX	**El Zacaton**	**1.11**	**233**	eP	**Pb**	**19 44 31.6**	**+0.3**
ZAX				eS	**Sg**	**19 44 46.3**	**+0.4**
CBKC	**Canebrake**	**1.11**	**310**	ePn	**Pn**	**19 44 32.2**	**+0.7**
SPIG	**San Pedro Mart**	**1.15**	**190**	eP	**Pb**	**19 44 32.4**	**+0.1**
SPX	**San Pedro Mart**	**1.16**	**190**	IAML		19 44 51.9	
	comp=E,242nm,0.5s						
CBX	**Cerro Bola**	**1.21**	**276**	eP	**Pb**	**19 44 33.3**	**+0.2**
CBX				eS	**Sg**	**19 44 49.3**	**0.0**
CBX				⇑e		19 44 50.4	
CBX				IAML		19 44 50.4	
	comp=E,293nm,0.5s						
MONP2	**Monument Peak**	**1.22**	**305**	P	**Pg**	**19 44 33.6**	**-0.1**
	baz=125,SNR=26						
MONP2				S	**Sb**	**19 44 49.1**	**0.0**
	baz=125						
ECNX	**Esteban Cantu**	**1.27**	**246**	eP	**Pn**	**19 44 34.1**	**+0.3**
BAR	**Barrett**	**1.31**	**292**	ePn	**Pn**	**19 44 34.6**	**+0.4**
BAR				eSn	**Sb**	**19 44 51.2**	**-0.2**
PBX	**Punta Banda**	**1.34**	**251**	eP	**Pn**	**19 44 34.8**	**+0.1**
113A	**Mohawk Valley,**	**1.37**	**65**	ePn	**Pn**	**19 44 34.1**	**-1.0**
113A				eSn	**Sb**	**19 44 51.8**	**-1.5**
BC3	**Big Chuckawall**	**1.48**	**353**	P	**Pn**	**19 44 35.7**	**-1.0**
	baz=174,SNR=11						
Y12C	**Blythe**	**1.67**	**21**	ePn	**Pb**	**19 44 40.9**	**0.0**
Y12C				eSn	**Sg**	**19 45 05.0**	**+1.1**
109C	**Camp Elliot, M**	**1.72**	**294**	Sb	**Sb**	**19 45 03.9**	**+0.6**
	baz=114						
CPE	**Camp Elliot**	**1.72**	**294**	ePn	**Pn**	**19 44 39.4**	**-0.6**
CPE				eSn	**Sb**	**19 45 03.7**	**+0.4**
CPE				eSn	**Sg**	**19 45 03.9**	**-1.7**
XPFO	**Piæon Flat**	**1.75**	**325**	ePn	**Pn**	**19 44 40.2**	**-0.2**
XPFO				eSn	**Sb**	**19 45 05.2**	**+0.9**
PFO	**Pinyon Flats O**	**1.75**	**325**	P	**Pn**	**19 44 39.5**	**-1.1**
	baz=144						
PFO	**Pinyon Flats O**	**1.75**	**325**	ePn	**Pn**	**19 44 39.4**	**-1.1**
PFO				eSn	**Sb**	**19 45 04.9**	**+0.5**
SNDA	**J Saunders Pla**	**1.79**	**320**	eSn	**Sg**	**19 45 07.7**	**+0.1**
IRM	**Iron Mountain**	**1.97**	**2**	P	**Pn**	**19 44 43.1**	**-0.3**
	baz=183						
214A	**Organ Pipe Nat**	**2.08**	**96**	P	**Pn**	**19 44 44.1**	**-0.7**
	baz=277						
214A				S	**Sn**	**19 45 10.6**	**-0.1**
	baz=277						
MURC	**Murrieta**	**2.17**	**311**	Sb	**Sg**	**19 45 18.3**	**-1.5**
	baz=130						
BBSC	**Beaumont Base**	**2.26**	**320**	eSn	**Sb**	**19 45 18.3**	**-0.7**
Y14A	**Wickenburg**	**2.56**	**46**	ePn	**Pn**	**19 44 52.9**	**+1.3**
GMRC	**Granite Mounta**	**2.61**	**352**	ePn	**Pn**	**19 44 49.5**	**-2.8**
CHNC	**Chino**	**2.73**	**312**	ePn	**Pb**	**19 44 56.9**	**-2.0**
BFSC	**Mount Baldy Ra**	**2.88**	**316**	ePn	**Pb**	**19 45 02.7**	**+1.1**
CIAC	**Catalina I. Ai**	**2.93**	**295**	ePn	**Pn**	**19 44 58.2**	**+1.6**
MWC	**Mount Wilson**	**3.12**	**311**	ePn	**Pn**	**19 44 59.3**	**+0.1**
W13A	**Hualapai Mount**	**3.12**	**21**	ePn	**Pn**	**19 45 01.1**	**+1.7**
W13A				ePg	**Pg**	**19 45 10.3**	**+0.4**
TUC	**Tucson**	**3.78**	**87**	ePn	**Pn**	**19 45 10.6**	**+2.3**
TUC				eSg	**Sg**	**19 46 09.1**	**-2.4**
X16A	**Lo Mia Camp, P**	**3.88**	**54**	ePn	**Pn**	**19 45 11.2**	**+1.4**
SHPR	**Sheep Range**	**4.31**	**1**	ePn	**Pn**	**19 45 14.3**	**-1.3**
WUAZ	**Wupatki**	**4.62**	**43**	ePn	**Pn**	**19 45 22.3**	**+2.3**
TPNV	**Topopah Spring**	**4.82**	**350**	ePn	**Pn**	**19 45 21.5**	**-1.3**
U15A	**North Rim**	**4.88**	**29**	ePn	**Pn**	**19 45 25.8**	**+2.1**
U15A				ePg	**Pg**	**19 45 40.8**	**-2.9**
X18A	**Snowflake**	**5.00**	**61**	ePn	**Pn**	**19 45 24.0**	**-1.3**
LCMT	**Little Creek M**	**5.09**	**18**	ePn	**Pn**	**19 45 27.9**	**+1.5**
KNB	**Kanab**	**5.21**	**22**	ePn	**Pn**	**19 45 30.3**	**+2.2**
W18A	**Petrified Fore**	**5.44**	**56**	ePn	**Pn**	**19 45 33.6**	**+2.3**
SRIG	**Santa Rosalia**	**5.51**	**151**	ePn	Pn	19 45 25.5	-6.5
RCCR	**Rock Creek Can**	**6.01**	**333**	eSn	**Sn**	**19 46 49.7**	**+1.6**
R11A	**Troy Canyon, C**	**6.15**	**357**	ePn	**Pn**	**19 45 43.0**	**+2.0**
MTPU	**Mount Pierson**	**6.35**	**22**	ePn	**Pn**	**19 45 44.5**	**+0.5**

IDC 06 19:45:04.2±3.1**, 21.°04S**×**168.°49E, h0**^{km}**, mb3.5**/2**, mb1 3.7**/3**, mb1mx3.4**/45**, mbtmp3.5**/3**, ML3.6**/1**, Error ellipse: s-maj=75.8km s-min=42.6km az=137.0, Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**2.17**	**241**	Pn	Pn	19 45 41.4	-0.3
	17nm,0.3s,baz=62,slow=22,SNR=17						
DZM				Sn	Sn	19 46 06.9	-2.4
	11nm,0.3s,baz=68,slow=20,SNR=3.9						
WRA	**Warramunga Arr**	**31.98**	**266**	P	P	19 51 31.9	-0.4
	0.5nm,1.0s,baz=98,slow=8.0,SNR=2.5						
ASAR	**Alice Springs**	**32.05**	**259**	P	P	19 51 33.7	+0.7
	0.7nm,1.0s,baz=88,slow=9.1,SNR=4.1						
GERES	**GERESS Array B**	**145.72**	**330**	PKPbc	PKPdf	20 04 44.2	-0.6
	0.6nm,0.6s,baz=14,slow=4.5,SNR=5.1						

ISK ***06*** *19:51:21.6, 38.°59N×43.°11E, h27^{km}±1^{km}, ML2.2/3*

CSEM ***06*** *19:51:22.6±0.2, 38.°66N×43.°09E, h15^{km}, ML2.2, Error ellipse: s-maj=4.6km s-min=4.2km az=51.0*

ISCJB ***06*** *19:51:23.2±0.5, 38.°68N±0.°03×43.°07E±0.°03, h5^{km}±6^{km}, Error ellipse: s-maj=4.8km s-min=4.1km az=44.2*

DDA ***06*** *19:51:23.0, 38.°66N×43.°11E, h7^{km}, Ml2.6*

ISC 06 19:51:22.9±1.0**, 38.°67N**±0.°03×**43.°10E**±0.°02**, h17**^{km}±9^{km}**, n22,** σ**0.^{s}86**/40**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VANB	**Van**	**0.24**	**109**	PG	**Pb**	**19 51 28.5**	**-0.4**
VANB				SG	**Sb**	**19 51 33.2**	**+0.3**
VANB	**Van**	**0.24**	**109**	ePg	**Pb**	**19 51 28.5**	**-0.4**
VANB				eSg	**Sb**	**19 51 33.2**	**+0.3**
TVAN	**Van**	**0.28**	**121**	i P	**Pg**	**19 51 28.5**	**-0.6**
TVAN				i S	**Sb**	**19 51 33.8**	**-0.4**
TVAN	**Van**	**0.28**	**121**	P	**Pg**	**19 51 28.5**	**-0.6**
TVAN				S	**Sb**	**19 51 33.8**	**-0.4**
ADCV	**BITLIS_Adilcev**	**0.32**	**295**	i P	**Pb**	**19 51 30.0**	**-0.3**
ADCV				i S	**Sb**	**19 51 35.9**	**+0.6**
ADCV	**BITLIS_Adilcev**	**0.32**	**295**	P	**Pb**	**19 51 30.0**	**-0.3**
ADCV				S	**Sb**	**19 51 35.9**	**+0.6**
GEVA	**Gevas**	**0.36**	**185**	i P	**Pg**	**19 51 29.6**	**-0.9**
GEVA				i S	**Sb**	**19 51 35.7**	**-0.8**
GEVA	**Gevas**	**0.36**	**185**	P	**Pg**	**19 51 29.6**	**-0.9**
GEVA				S	**Sb**	**19 51 35.7**	**-0.8**
VMUR	**Van-Muradiye**	**0.49**	**49**	i P	**Pg**	**19 51 32.5**	**-0.2**
VMUR				i S	**Sb**	**19 51 40.8**	**+0.8**
VMUR	**Van-Muradiye**	**0.49**	**49**	P	**Pg**	**19 51 32.5**	**-0.2**
VMUR				S	**Sb**	**19 51 40.8**	**+0.8**
TUTA	**Tutak**	**0.76**	**343**	i P	**Pg**	**19 51 37.2**	**-0.6**
TUTA	**Tutak**	**0.76**	**343**	P	**Pg**	**19 51 37.2**	**-0.6**
GURO	**Guroymak-BITLI**	**0.84**	**262**	PG	**Pg**	**19 51 38.5**	**-0.8**
GURO				SG	**Sg**	**19 51 49.7**	**-0.8**
GURO	**Guroymak-BITLI**	**0.84**	**262**	ePg	**Pg**	**19 51 38.5**	**-0.8**
GURO				eSg	**Sg**	**19 51 49.7**	**-0.8**
AGRB	**Hanur-Agry**	**0.90**	**355**	PG	**Pn**	**19 51 40.8**	**-0.2**
AGRB				SG	**Sn**	**19 51 53.4**	**-0.4**
AGRB	**Hanur-Agry**	**0.90**	**355**	ePg	**Pn**	**19 51 40.8**	**-0.2**
AGRB				eSg	**Sn**	**19 51 53.4**	**-0.4**
SRTM	**Siirt_Merkez**	**1.15**	**234**	i P	**Pg**	**19 51 45.7**	**+0.6**
SRTM				i S	**Sg**	**19 52 02.4**	**+2.3**
SRTM	**Siirt_Merkez**	**1.15**	**234**	P	**Pg**	**19 51 45.7**	**+0.6**
SRTM				S	**Sg**	**19 52 02.4**	**+2.3**
HAKT	**HAKKARI**	**1.21**	**156**	i P	**Pn**	**19 51 45.1**	**-0.2**
HAKT				i S	**Sg**	**19 52 03.8**	**+1.6**
HAKT	**HAKKARI**	**1.21**	**156**	P	**Pn**	**19 51 45.1**	**-0.2**
HAKT				S	**Sg**	**19 52 03.8**	**+1.6**
EATA	**Eleskirt**	**1.28**	**339**	i P	**Pn**	**19 51 46.5**	**+0.2**
EATA	**Eleskirt**	**1.28**	**339**	P	**Pn**	**19 51 46.5**	**+0.2**

JMA 06 20:00:24.2±0.1**, 28.°00N**×**129.°60E, h26**^{km}±2^{km}**, M1.1, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAM	**Amami Oshima**	**0.41**	**1**	P	Pb	20 00 32.8	-0.2
JAM				eS	Sb	20 00 38.7	-0.3
JAMN	**Amaminishikomi**	**0.45**	**303**	P	Pb	20 00 33.3	-0.3
JAMN				eS	Sb	20 00 39.9	-0.1
JTK	**Tokunoshima**	**0.61**	**250**	eS	Sb	20 00 44.0	-0.6

NIED ***06*** *20:03:00, 46.°80N×152.°90E, h32^{km}, Mw3.8 Best double couple: M$_0$5.29000×10^{14} NP1:φ$_s$217.00000°, δ59.00000°, λ178.00000°. NP2:φ$_s$308.00000°, δ88.00000°, λ31.00000°.*

SKHL ***06*** *20:03:45.0±0.7, 46.°05N×153.°76E, h61^{km}±3^{km}, mb4.4/2*

MOS ***06*** *20:03:50.2±1.5, 46.°56N×152.°98E, h66^{km}, mb4.0/4, Error ellipse: s-maj=20.2km s-min=14.0km az=140.6*

IDC ***06*** *20:03:54.5±3.3, 46.°77N×152.°74E, h76^{km}±27^{km}, mb3.3/7, mb1 3.4/9, mb1mx3.1/80, mbtmp3.7/9, MS3.4/1, Ms1 3.4/1, ms1mx2.3/33, Error ellipse: s-maj=37.1km s-min=21.8km az=113.0*

ISC 06 20:03:43.8±1.5**, 46.°0N**±0.°1×**153.°7E**±0.°1**, h27**^{km}**, n38,** σ**2.^{s}87**/42**, mb3.8**/9**, 2D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**4.14**	**262**	i P	**Pn**	**20 04 47.0**	**+1.8**
KUR				AMB	AMB	20 04 50.0	
	33nm,0.5s						
KUR				i S	**Sn**	**20 05 33.0**	**+0.3**
KUR				A	A	20 05 47.0	
	158nm,0.7s						
KUR				A	A	20 05 47.0	
	193nm,0.7s						
KUR	**Kuril'sk**	**4.14**	**262**	d iPN	**Pn**	**20 04 47.4**	**+2.2**
KUR				i S	**Sn**	**20 05 33.5**	**+0.8**
KUR				pmax	pmax		
	comp=Z,45nm,0.4s						
KUR				pmax	pmax		
	comp=N,18nm,0.2s						
KUR				pmax	pmax		
	comp=E,22nm,0.2s						
KUR				smax	smax		
	comp=N,86nm,0.6s						
KUR				smax	smax		
	comp=E,123nm,0.7s						
SKR	**Severo-Kuril's**	**5.01**	**18**	eP	**Pn**	**20 04 56.5**	**-0.6**
SHO	**Shikotan**	**5.29**	**249**	i P	**Pn**	**20 05 04.0**	**+3.0**
SHO				AMB	AMB	20 05 08.0	
	comp=E,7.0nm,0.3s						
SHO				AMB	AMB	20 05 08.0	
	comp=E,9.0nm,0.3s						
SHO				AMB	AMB	20 05 08.0	
	comp=E,14nm,0.3s						
SHO				i S	**Sn**	**20 06 04.0**	**+3.0**
SHO				A	A	20 06 23.0	
	comp=E,50nm,0.3s						
SHO				A	A	20 06 23.0	
	comp=E,22nm,0.3s						
SHO	**Shikotan**	**5.29**	**249**	d iPN	**Pn**	**20 05 04.4**	**+3.4**
SHO				i S	**Sn**	**20 06 04.0**	**+3.0**
SHO				pmax	pmax		
	comp=Z,14nm,0.3s						
SHO				pmax	pmax		
	comp=N,7.0nm,0.2s						
SHO				pmax	pmax		
	comp=E,9.0nm,0.4s						
SHO				smax	smax		
	comp=N,50nm,0.6s						
SHO				smax	smax		
	comp=E,22nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**5.87**	**254**	eP	**Pn**	**20 05 11.0**	**+2.1**
YUK				i S	**Sn**	**20 06 16.0**	**+0.8**
YUK				A	A	20 06 34.0	
	comp=E,97nm,0.5s						
YUK				A	A	20 06 34.0	
	comp=E,116nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**5.87**	**254**	ePN	**Pn**	**20 05 11.9**	**+3.0**
YUK				i S	**Sn**	**20 06 16.5**	**+1.3**
YUK				smax	smax		
	comp=E,116nm,0.5s						
YUK				smax	smax		
	comp=N,97nm,0.6s						
NEM2	**Nemuro 2**	**6.22**	**248**	P	**Pn**	**20 05 16.5**	**+2.7**
NEM2				eS	**Sn**	**20 06 21.6**	**-2.3**
JRA	**Rausu**	**6.40**	**255**	P	**Pn**	**20 05 20.2**	**+4.0**
JNK	**Nakash**	**6.80**	**253**	P	**Pn**	**20 05 25.3**	**+3.6**
JAK	**Akkeshi**	**7.07**	**249**	P	**Pn**	**20 05 28.0**	**+2.6**
JAK				eS	**Sn**	**20 06 41.0**	**-3.8**
JAR	**Ashorobuto**	**7.55**	**253**	P	**Pn**	**20 05 35.3**	**+3.3**
YSS	**Yuzh-Sakhalins**	**7.62**	**282**	eP	**Pn**	**20 05 34.8**	**+1.9**
YSS	**Yuzh-Sakhalins**	**7.62**	**282**	ePN	**Pn**	**20 05 35.8**	**+2.9**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PETK	**Petropavlovsk-**	**7.63**	**19**	P	**Pn**	**20 05 35.5**	**+2.4**
	baz=188,slow=13						
PETK				S	Sb	20 07 07.8	-18
	baz=256,slow=16						
JKK2	**Kamakawa 2**	**8.03**	**259**	P	**Pn**	**20 05 42.1**	**+3.5**
ASAJ	**Asahikawa**	**8.06**	**261**	P	**Pn**	**20 05 42.8**	**+3.7**
	comp=Z,0.5nm,0.3s,baz=84,slow=15,SNR=11						
ASAJ	**Asahikawa**	**8.06**	**261**	P	**Pn**	**20 05 43.0**	**+4.0**
JCH	**Churui**	**8.12**	**249**	P	**Pn**	**20 05 42.5**	**+2.7**
JCH				eS	**Sn**	**20 07 07.5**	**-3.1**
MYR	**Moyori**	**8.32**	**248**	eP	**Pn**	**20 05 45.6**	**+3.0**
JNBK	**Urakawa-nobuka**	**8.67**	**249**	P	**Pn**	**20 05 49.6**	**+2.2**
JNBK				eS	**Sn**	**20 07 19.5**	**-4.8**
JBT2	**Biratori 2**	**8.71**	**253**	P	**Pn**	**20 05 50.2**	**+2.4**
JKB	**Kayabe**	**9.99**	**251**	P	**Pn**	**20 06 07.2**	**+1.8**
JKB				eS	**Sn**	**20 07 50.3**	**-6.2**
H11N2	**WAKE ISLAND Hy**	**28.32**	**153**	T	T	20 41 12.9	
	baz=340,slow=76,SNR=94						
H11N1	**WAKE ISLAND Hy**	**28.34**	**153**	T	T	20 41 12.4	
	baz=340,slow=76,SNR=64						
H11N3	**WAKE ISLAND Hy**	**28.34**	**153**	T	T	20 41 18.4	
	baz=340,slow=76,SNR=46						
H11S1	**WAKE ISLAND Hy**	**29.41**	**154**	T	T	20 42 41.1	
	baz=341,slow=76,SNR=64						
H11S3	**WAKE ISLAND Hy**	**29.42**	**154**	T	T	20 42 32.9	
	baz=341,slow=76,SNR=58						
H11S2	**WAKE ISLAND Hy**	**29.43**	**154**	T	T	20 42 33.5	
	baz=341,slow=76,SNR=57						
MKAR	**Makanchi Array**	**47.66**	**298**	P	**P**	**20 12 15.9**	**-1.6**
	comp=Z,0.3nm,0.6s,baz=70,slow=6.6,SNR=4.4						
MKAR				LR	LR	20 32 53.0	
	comp=Z,38nm,18.1s,baz=62,slow=37						
KURK	**Kurchatov**	**48.14**	**304**	P	**P**	**20 12 19.2**	**-1.9**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURBB	**Kurchatov Arra**	**48.23**	**304**	P	**P**	**20 12 19.2**	**-2.6**
	comp=Z,0.5nm,0.7s,baz=63,slow=8.6,SNR=3.4						
CMAR	**Chiang Mai Arr**	**52.57**	**257**	P	**P**	**20 12 56.5**	**+1.4**
	comp=Z,0.4nm,0.7s,baz=33,slow=8.9,SNR=3.7						
FINES	**FINESS Array B**	**64.94**	**335**	P	**P**	**20 14 18.6**	**-1.8**
	comp=Z,1.0nm,0.7s,baz=54,slow=9.7,SNR=4.5						
NB2	**NORSAR Subarra**	**69.12**	**341**	P	**P**	**20 14 46.0**	**-1.0**
	comp=Z,0.5nm,0.6s,baz=26,slow=6.5						
HFS	**Hagfors**	**69.35**	**340**	P	**P**	**20 14 47.6**	**-0.8**
	comp=Z,1.4nm,0.7s,baz=55,slow=5.5,SNR=4.3						
ASAR	**Alice Springs**	**71.57**	**199**	P	P	20 15 10.9	+8.5
	comp=Z,0.3nm,0.6s,baz=12,slow=6.6,SNR=6.6						
AKASG	**Malin Array Be**	**72.44**	**327**	P	**P**	**20 15 05.6**	**-1.7**
	comp=Z,0.5nm,0.5s,baz=34,slow=6.7,SNR=2.6						

ISCJB ***06*** *20:13:08.1±0.4, 43.°83N±0.°04×105.°35W±0.°05, h0^{km}, mb3.9/6, MS3.6/3, Error ellipse: s-maj=5.6km s-min=4.8km az=136.4*

IDC ***06*** *20:13:08.1±2.6, 43.°56N×105.°33W, h0^{km}, mb3.8/6, mb1 3.8/9, mb1mx3.5/62, mbtmp3.7/9, ML3.6/2, MS3.6/3, Ms1 3.6/3, ms1mx2.6/66, Error ellipse: s-maj=80.8km s-min=8.4km az=153.0*

NEIC ***06*** *20:13:09.4±0.5, 43.°78N×105.°31W, h0^{km}, ML3.6, Error ellipse: s-maj=8.5km s-min=6.4km az=144.0, Suspected Mining explosion.*

NEIC 58 km [36 miles] SSE of Gillette.

ISC 06 20:13:09.0±0.7**, 43.°84N**±0.°04×**105.°31W**±0.°06**, h0**^{km}**, n35,** σ**1.^{s}52**/35**, mb3.8**/6**, MS3.6**/3**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**0.97**	**72**	P	**Pb**	**20 13 29.1**	**+0.3**
	baz=250						
RSSD	**Black Hills**	**0.97**	**72**	ePg	**Pb**	**20 13 28.7**	**-0.1**
K22A	**Casper**	**1.48**	**217**	P	**Pn**	**20 13 34.8**	**-2.3**
	baz=38						
K22A				S	**Sg**	**20 13 54.8**	**-1.7**
	baz=38						
LAO	**LASA Array**	**2.92**	**348**	ePn	**Pn**	**20 13 55.9**	**-0.9**
RLMT	**Red Lodge**	**3.11**	**296**	P	**Pn**	**20 14 01.1**	**+1.7**
	baz=114						
BW06	**Boulder Array**	**3.28**	**252**	P	**Pn**	**20 14 02.2**	**+0.4**
	baz=70						
PDAR	**Pinedale Array**	**3.28**	**252**	Pn	**Pn**	**20 14 02.5**	**+0.6**
	4.2nm,0.3s,baz=74,slow=14,SNR=34						
PDAR				Lg	Lg	20 14 47.4	
	14nm,0.3s,baz=57,slow=30,SNR=11						
OGNE	**Ogallala**	**3.78**	**139**	P	**Pn**	**20 14 08.8**	**+0.2**
	baz=321						
OGNE				Sb	**Sb**	**20 15 04.3**	**+1.4**
	baz=321						
OGNE	**Ogallala**	**3.78**	**139**	ePn	**Pn**	**20 14 08.5**	**-0.1**
ISCO	**Idaho Springs**	**4.04**	**183**	P	**Pn**	**20 14 12.0**	**-0.4**
	baz=3.2						
ISCO				Sb	**Sb**	**20 15 12.7**	**+2.0**
	baz=3.2						
ISCO	**Idaho Springs**	**4.04**	**183**	ePn	**Pn**	**20 14 11.0**	**-1.4**
O20A	**White River Ci**	**4.29**	**212**	P	**Pn**	**20 14 15.9**	**+0.1**
	baz=30						
O20A	**White River Ci**	**4.29**	**212**	ePn	**Pn**	**20 14 15.7**	**-0.1**
AHID	**Auburn Hatcher**	**4.36**	**258**	ePn	**Pn**	**20 14 13.8**	**-2.9**
DGMT	**Dagmar**	**4.70**	**9**	P	**Pn**	**20 14 24.0**	**+2.8**
	baz=190						
DGMT				Sb	**Sg**	**20 15 36.1**	**-3.8**
	baz=190						
DGMT	**Dagmar**	**4.70**	**9**	ePn	**Pn**	**20 14 23.6**	**+2.4**
BOZ	**Bozeman (W)**	**4.83**	**294**	ePn	**Pn**	**20 14 23.5**	**+0.3**
EGMT	**Eagleton**	**5.21**	**325**	ePn	**Pn**	**20 14 30.1**	**+1.9**
	20nm,0.6s						
ECSD	**EROS Data Cent**	**6.30**	**88**	ePn	**Pn**	**20 14 43.8**	**+0.6**
	5.8nm,0.3s						
HLID	**Hailey**	**6.60**	**271**	ePn	**Pn**	**20 14 50.0**	**+2.5**
	1.7nm,0.8s						
DUG	**Dugway, Tooele**	**6.66**	**239**	ePn	**Pn**	**20 14 48.7**	**+0.4**
	3.2nm,0.4s						
ELK	**Elko**	**7.98**	**251**	Pn	**Pn**	**20 15 08.2**	**+1.7**
	baz=88,slow=11,SNR=1.8						
ELK				Lg	Lg	20 17 18.9	
	0.1nm,0.3s,baz=30,slow=20,SNR=2.3						
ULM	**Lac du Bonnet**	**9.09**	**42**	Pn	**Pn**	**20 15 21.8**	**+0.4**
	1.9nm,0.3s,baz=235,slow=10,SNR=10						
I56US	**NEWPORT INFRAS**	**9.33**	**302**	i		21 10 30.0	
	baz=116,slow=316,SNR=2.3						
WUAZ	**Wupatki**	**9.53**	**211**	ePn	**Pn**	**20 15 27.0**	**-0.6**
	3.9nm,0.5s						
PCRV	**Puerto La Cruz**	**48.59**	**121**	LR	LR	20 43 53.4	
	comp=Z,89nm,19.4s,baz=318,slow=38						
ARCES	**ARCESS Array B**	**61.33**	**18**	P	**P**	**20 23 26.0**	**+0.1**
	1.6nm,0.9s,baz=321,slow=7.1,SNR=4.2						
FINES	**FINESS Array B**	**67.95**	**23**	LR	LR	20 53 46.3	
	comp=Z,34nm,19.1s,baz=55,slow=36						
AKASG	**Malin Array Be**	**77.88**	**28**	LR	LR	21 00 37.7	
	comp=Z,24nm,19.8s,baz=140,slow=36						
ZALV	**Zalesovo Beam**	**82.20**	**354**	P	**P**	**20 25 31.7**	**+0.1**
	0.4nm,0.4s,baz=348,slow=2.1,SNR=3.4						
BVAR	**Borovoye Array**	**83.44**	**3**	P	**P**	**20 25 38.2**	**+0.2**
	0.3nm,0.6s,baz=0.0,slow=2.9,SNR=3.3						
SONM	**Songino Array**	**84.53**	**339**	P	**P**	**20 25 45.0**	**+1.1**
	0.2nm,0.5s,baz=50,slow=2.3,SNR=2.6						
KURK	**Kurchatov**	**85.77**	**357**	P	**P**	**20 25 49.1**	**-0.7**
KURBB	**Kurchatov Arra**	**85.86**	**358**	P	**P**	**20 25 49.2**	**-1.1**
	0.3nm,0.2s,baz=1.0,slow=6.4,SNR=2.8						
MKAR	**Makanchi Array**	**89.50**	**355**	P	**P**	**20 26 08.3**	**+0.4**
	0.4nm,0.8s,baz=357,slow=5.8,SNR=4.6						

MEX 06 20:38:00.8±0.6**, 18.°57N**×**103.°07W, h41**^{km}±42^{km}**, MD3.7, Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMIG	**Aquila**	**0.38**	**223**	eP	Pn	20 38 08.8	-1.3
MMIG				eS	Sn	20 38 14.4	-2.1
EZ5V		**1.04**	**331**	i P	Pn	20 38 17.4	-1.8
EZ5V				i S	Sn	20 38 30.4	-2.2
R15V		**1.05**	**305**	eP	Pn	20 38 18.0	-1.1
R15V				i S	Sn	20 38 29.9	-2.7
CJM	**Chamela**	**2.08**	**297**	eP	Pn	20 38 31.2	-2.1
CJM				i S	Sn	20 38 55.6	-2.3
ARIG	**Puente Sto Nin**	**2.60**	**96**	eP	Pn	20 38 38.6	-1.8
ARIG				i S	Sn	20 39 08.6	-2.2

ISCJB ***06*** *20:45:02.5±0.6, 29.°08S±0.°10×74.°9E±0.°1, h10^{km}, mb4.1/15, MS3.6/27, Error ellipse: s-maj=19.2km s-min=12.6km az=152.6*

IDC ***06*** *20:45:02.6±0.8, 29.°10S×74.°86E, h0^{km}, mb3.8/12, mb1 4.0/12, mb1mx3.7/62, mbtmp3.8/12, MS3.6/27, Ms1 3.6/27, ms1mx3.4/58, Error ellipse: s-maj=30.9km s-min=18.7km az=70.0*

NEIC ***06*** *20:45:04.5±0.5, 29.°03S×74.°89E, h10^{km}, mb4.9/5, Error ellipse: s-maj=17.8km s-min=12.3km az=68.0*

ISC 06 20:45:04.8±0.7**, 29.°1S**±0.°1×**74.°9E**±0.°2**, h10**^{km}**, n55,** σ**1.^{s}16**/28**, mb4.1**/15**, MS3.6**/27**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S2	**Diego Garcia H**	**21.41**	**353**	T	T	21 12 03.5	
	baz=174,slow=76,SNR=29						
H08S1	**Diego Carcia H**	**21.42**	**353**	T	T	21 12 02.8	
	baz=174,slow=76,SNR=4.7						
H08S3	**Diego Garcia H**	**21.43**	**353**	T	T	21 12 05.7	
	baz=174,slow=76,SNR=55						
H01W2	**Cape Leeuwin H**	**33.60**	**110**	T	T	21 27 08.6	
	baz=269,slow=75,SNR=7.1						
H01W3	**Cape Leeuwin H**	**33.60**	**110**	T	T	21 27 08.8	
	baz=269,slow=75,SNR=6.6						
H01W1	**Cape Leeuwin H**	**33.62**	**110**	T	T	21 27 07.9	
	baz=269,slow=75,SNR=7.8						
NWAO	**Narrogin (SRO)**	**36.29**	**107**	LR	LR	21 04 52.9	
	comp=Z,88nm,19.4s,baz=198,slow=33						
PALK	**Pallekele**	**36.53**	**10**	LR	LR	21 02 33.3	
	comp=Z,113nm,21.6s,baz=117,slow=29						
LEM	**Lembang**	**37.91**	**61**	LR	LR	21 04 02.1	
	comp=Z,94nm,20.7s,baz=164,slow=30						

PSI	Prapat	39.14	40	LR	LR	21 05 11.0	
	comp=Z,141nm,19.4s,baz=269,slow=31						
MAW	Mawson	39.26	187	LR	LR	21 05 01.1	
	comp=Z,99nm,19.9s,baz=53,slow=31						
BOSA	Boshof	43.27	258	LR	LR	21 07 07.5	
	comp=Z,112nm,18.7s,baz=60,slow=31						
FITZ	Fitzroy Crossi	47.41	88	LR	LR	21 12 17.4	
	comp=Z,76nm,18.7s,baz=280,slow=34						
CM01	Chiang Mai Arr	52.58	29	eP	P	20 54 20.0	+1.2
CM31	Chiang Mai Arr	52.61	29	eP	P	20 54 19.9	+0.9
CMAR	Chiang Mai Arr	52.61	29	P	P	20 54 19.1	+0.1
	1.1nm,0.9s,baz=210,slow=8.8,SNR=5.8						
CMAR				LR	LR	21 14 36.1	
	comp=Z,36nm,18.3s,baz=205,slow=34						
ASAR	Alice Springs	52.64	99	P	P	20 54 17.8	-1.6
	0.2nm,0.5s,baz=254,slow=6.2,SNR=6.6						
ASAR				LR	LR	21 13 09.9	
	comp=Z,72nm,21.5s,baz=275,slow=32						
AS01	Alice Springs	52.68	99	eP	P	20 54 19.6	-0.1
BRDH	Bariadhala	53.88	19	LR	LR	21 12 46.4	
	comp=Z,97nm,21.8s,baz=116,slow=31						
WR1	Warramunga Arr	54.33	95	eP	P	20 54 31.6	-0.2
	29nm,1.6s						
WRA	Warramunga Arr	54.33	95	P	P	20 54 31.6	-0.2
	2.6nm,0.9s,baz=251,slow=7.0,SNR=6.7						
WB2	Warramunga Arr	54.34	95	eP	P	20 54 32.4	+0.5
WRAB	Tennant Creek	54.34	95	eP	P	20 54 32.8	+0.9
	16nm,1.4s						
STKA	Stephens Creek	56.70	111	P	P	20 54 50.4	+1.6
	1.5nm,0.9s,baz=254,slow=7.4,SNR=2.3						
STKA				LR	LR	21 16 33.3	
	comp=Z,50nm,19.4s,baz=226,slow=33						
SNAA	Sanae	58.88	201	eP	P	20 55 06.0	+2.5
	18nm,2.0s						
DAV	Davao City (W)	60.52	62	LR	LR	21 19 56.9	
	comp=Z,29nm,20.1s,baz=106,slow=35						
QSPA	South Pole Qui	61.09	180	P	P	20 55 17.9	-1.0
	1.6nm,1.0s,baz=308,slow=3.9,SNR=3.1						
VNDA	Vanda	61.20	166	P	P	20 55 17.9	-1.3
	0.4nm,0.4s,baz=297,slow=6.8,SNR=4.6						
VNDA	Vanda	61.20	166	eP	P	20 55 17.0	-2.3
PMG	Port Moresby	69.98	90	LR	LR	21 27 00.4	
	comp=Z,56nm,18.0s,baz=267,slow=36						
AAK	Ala-Archa	71.33	360	LR	LR	21 24 40.7	
	comp=Z,39nm,19.4s,baz=198,slow=33						
MK01	Makanchi Array	75.75	5	eP	P	20 56 49.0	-1.5
MK31	Makanchi Array	75.78	5	eP	P	20 56 49.2	-1.4
MK32	Makanchi Array	75.78	5	eP	P	20 56 49.8	-0.8
MKAR	Makanchi Array	75.78	5	P	P	20 56 49.8	-0.8
	1.1nm,1.0s,baz=173,slow=4.9,SNR=5.9						
MKAR				LR	LR	21 26 49.8	
	comp=Z,22nm,20.6s,baz=196,slow=33						
MKAR	Makanchi Array	75.78	5	eP	P	20 56 49.2	-1.4
	25nm,1.8s						
AKTO	Aktyubinsk	80.54	349	LR	LR	21 33 06.7	
	comp=Z,16nm,18.1s,baz=177,slow=36						
JNU	Nakatsue	81.44	45	LR	LR	21 29 36.7	
	comp=Z,51nm,22.0s,baz=122,slow=33						
SONA0	Songino Array	81.59	21	eP	P	20 57 22.6	-0.1
SONM	Songino Array	81.59	21	P	P	20 57 22.6	-0.1
	0.5nm,0.8s,baz=180,slow=2.9,SNR=2.0						
SONM				LR	LR	21 34 45.1	
	comp=Z,20nm,19.3s,baz=216,slow=36						
BVAR	Borovoye Array	81.82	357	P	P	20 57 23.8	+0.2
	0.5nm,0.8s,baz=199,slow=3.1,SNR=2.9						
TORD	Torodi Ar. Bea	82.15	290	LR	LR	21 31 41.7	
	comp=Z,43nm,19.4s,baz=300,slow=34						
KSRS	Korea Array	82.70	40	LR	LR	21 31 00.3	
	comp=Z,36nm,22.0s,baz=216,slow=33						
ZALV	Zalesovo Beam	83.09	6	P	P	20 57 29.2	-1.0
	0.2nm,0.3s,baz=186,slow=4.3,SNR=2.5						
ZALV				LR	LR	21 33 24.7	
	comp=Z,21nm,19.6s,baz=251,slow=35						
ZAA1	Zalesovo Array	83.10	6	eP	P	20 57 29.2	-1.1
TLY	Talaya	84.25	17	LR	LR	21 33 30.7	
	comp=Z,30nm,21.8s,baz=192,slow=34						
DBIC	Dimbokro	84.36	281	LR	LR	21 34 25.7	
	comp=Z,21nm,18.1s,baz=126,slow=35						
ARU	Arti	86.27	351	LR	LR	21 34 12.5	
	comp=Z,19nm,18.9s,baz=115,slow=34						
MLR	Muntele Rosu	86.52	328	P	P	20 57 48.5	+0.6
	0.5nm,0.7s,baz=196,slow=7.2,SNR=4.6						
MLR	Muntele Rosu	86.52	328	eP	P	20 57 48.1	+0.2
	3.5nm,0.9s						
KOWA	Kowa	87.58	288	LR	LR	21 35 28.7	
	comp=Z,49nm,18.3s,baz=86,slow=35						
MJAR	Matsushiro Arr	88.23	46	LR	LR	21 36 36.7	
	comp=Z,14nm,18.5s,baz=165,slow=35						
AKASG	Malin Array Be	89.09	333	P	P	20 57 59.0	-0.9
	1.2nm,0.7s,baz=131,slow=4.2,SNR=3.1						
ASAJ	Asahikawa	95.47	42	LR	LR	21 39 25.0	
	comp=Z,13nm,20.1s,baz=160,slow=34						
YKA	Yellowknife Ar	145.97	8	PKPbc	PKPdf	21 04 43.3	0.0
	1.1nm,0.9s,baz=341,slow=3.3,SNR=3.1						

IDC 06 21:07:07.2±5.2**, 5°.99S×127°.93E, h401^{km}**±77^{km}**, mb2.7**/2**, mb1 2.6**/5**, mb1mx2.5**/50**, mbtmp3.4**/5**, Error ellipse: s-maj=114.3km s-min=17.4km az=82.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	6.08	33	P	P	21 08 42.0	+1.5
	1.5nm,0.3s,baz=162,slow=23,SNR=10						
SIJI				S	S	21 09 56.4	-0.7
	1.0nm,0.3s,baz=217,slow=20,SNR=5.4						
WRA	Warramunga Arr	15.20	156	P	P	21 10 21.9	0.0
	0.1nm,0.3s,baz=334,slow=11,SNR=6.3						
ASAR	Alice Springs	18.49	162	P	P	21 10 56.9	-0.2
	0.1nm,0.3s,baz=344,slow=11,SNR=8.6						
MKAR	Makanchi Array	66.27	328	P	P	21 17 14.3	+0.3
	0.3nm,0.4s,baz=120,slow=8.0,SNR=5.5						
KURBB	Kurchatov Arra	70.59	329	P	P	21 17 40.1	-0.2
	0.1nm,0.4s,baz=124,slow=4.6,SNR=4.1						

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*IDC **06** 21:26:02.1±2.3, 39°.15N×73°.94E, h0^{km}, mb3.7/3, mb1 3.4/8, mb1mx3.2/74, mbtmp3.4/8, ML3.0/5, Error ellipse: s-maj=43.0km s-min=16.4km az=135.0*
*SOME **06** 21:26:06.9, 39°.62N×73°.38E, h5^{km}*
*KRNET **06** 21:26:07.4±0.1, 39°.66N×73°.38E, h9^{km}, mb3.9*
*ISCJB **06** 21:26:08.8±0.8, 39°.58N±0°.05×73°.40E±0°.04, h10^{km}, mb3.6/3, Error ellipse: s-maj=7.2km s-min=3.6km az=153.0*
*NNC **06** 21:26:08.7±1.6, 39°.70N×73°.59E, h0^{km}, mb3.8, mpv3.6, Error ellipse: s-maj=20.7km s-min=7.9km az=75.0*
ISC 06 21:26:08.0±0.9**, 39°.60N**±0°.05×**73°.32E**±0°.03**, h10^{km}, n54, σ2^s.48**/87**, mb3.7**/3**, 39C-18D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	0.43	18	⇑P	Pg	21 26 14.6	-2.1
	545nm,0.3s						
SFK				⇑S	Sg	21 26 20.1	-2.4
	480nm,0.3s						
SFK	Sufi-Kurgan	0.43	18	⇓iP	Pg	21 26 14.8	-1.9
	baz=14						
SFK				⇓iS	Sg	21 26 20.0	-2.4
	baz=14						
DRK	Karamyk	1.19	265	⇑iP	Pn	21 26 30.8	-0.2
	baz=62						
DRK				⇑iS	Sn	21 26 48.3	+1.0
	baz=62						
ARSB	Arslanbob	1.74	351	⇑iP	Pn	21 26 38.8	+0.3
	baz=50						
ARSB				⇑iS	Sn	21 27 02.4	+1.5
	baz=50						
BTK	Batken	1.98	284	⇓eP	Pg	21 26 44.6	-1.5
	baz=82						
BTK				⇓iS	Sg	21 27 11.4	-0.4
	baz=82						
ARK	Arkit	2.43	335	⇑iP	Pn	21 26 49.8	+1.9
	baz=34						
ARK				⇑iS	Sn	21 27 20.5	+2.8
	baz=34						
AML	Almayashu	2.54	6	P	Pb	21 26 52.3	-1.8
	SNR=133						
AML	Almayashu	2.54	6	⇑iP	Pn	21 26 51.2	+1.4
	baz=5.0						
AML				⇑iS	Sn	21 27 23.5	+2.5
	baz=5.0						
UCH	Uchtor	2.78	19	P	Pn	21 26 55.1	+2.1
	SNR=73						
UCH	Uchtor	2.78	19	⇑iP	Pn	21 26 54.4	+1.4
	baz=18						
UCH				⇑iS	Sn	21 27 29.1	+2.3
	baz=18						
KZA	Kyzart	2.88	30	P	Pb	21 26 57.2	-2.5
	SNR=8.3						
KZA	Kyzart	2.88	30	⇓iP	Pn	21 26 55.7	+1.4
	baz=30						
KZA				⇓iS	Sn	21 27 31.3	+2.1
	baz=30						
MNAS	Manas	2.95	348	⇓Pn	Pb	21 26 58.9	-2.0
	22nm,0.7s						
MNAS				⇓Lg	Lg	21 27 41.2	
	63nm,0.4s						
MNAS	Manas	2.95	348	⇑iP	Pn	21 26 56.9	+1.8
	baz=47						
MNAS				⇑iS	Sn	21 27 33.0	+2.3
	baz=47						
EKS2	Erkin-Say	3.08	6	P	Pn	21 26 59.9	+3.0
	SNR=46						
EKS2	Erkin-Say	3.08	6	⇑iP	Pn	21 26 58.6	+1.7
	baz=6.0						
EKS2				⇑iS	Sn	21 27 35.9	+2.1
	baz=6.0						
MRKS	Merke	3.14	359	eP	Pb	21 27 03.8	-0.3
	78nm,0.3s						
MRKS				eS	Sb	21 27 44.7	+2.2
	77nm,0.5s						
AAK	Ala-Archa	3.16	16	Pn	Pb	21 27 01.3	-3.1
	5.2nm,0.3s,baz=183,slow=9.9,SNR=26						
AAK				Sn	Sb	21 27 41.4	-1.6
	6.6nm,0.3s,baz=340,slow=17,SNR=8.9						
AAK	Ala-Archa	3.16	16	⇑Pn	Pn	21 26 59.8	+1.8
	63nm,0.8s						
AAK				⇓Lg	Lg	21 27 45.2	
	46nm,0.5s						
AAK	Ala-Archa	3.16	16	P	Pb	21 27 01.4	-3.1
	SNR=18						
AAK	Ala-Archa	3.16	16	⇑iP	Pn	21 26 59.6	+1.6
	baz=15						
AAK				⇑iS	Sn	21 27 37.9	+2.0
	baz=15						
KBK	Karagaybulak	3.29	21	P	Pb	21 27 03.3	-3.3
	SNR=42						
KBK	Karagaybulak	3.29	21	⇑iP	Pn	21 27 01.6	+1.8
	baz=21						
KBK				⇑iS	Sn	21 27 40.7	+1.6
	baz=21						
FRU1	Bishkek	3.36	17	⇑eP	Pn	21 27 02.3	+1.7
	baz=16						
FRU1				⇑iS	Sn	21 27 42.3	+1.8
	baz=16						
ULHL	Ulahol	3.45	39	P	Pb	21 27 09.1	-0.2
	SNR=21						
ULHL	Ulahol	3.45	39	⇓iP	Pn	21 27 03.5	+1.5
	baz=39						
ULHL				⇓iS	Sn	21 27 44.6	+1.6
	baz=39						
TAS	Tashkent	3.53	301	⇑iP	Pn	21 27 05.5	+2.5
	baz=99						
TAS				⇑iS	Sn	21 27 47.9	+3.1
	baz=99						
CHMS	Chumysh	3.56	17	P	Pn	21 27 06.5	+3.1
	SNR=16						
CHMS	Chumysh	3.56	17	⇑iP	Pn	21 27 05.0	+1.6
	baz=17						
CHMS				⇑iS	Sn	21 27 47.4	+1.8
	baz=17						
TKM2	Tokmak 2	3.73	27	⇓Pn	Pn	21 27 08.2	+2.2
	2.2nm,0.8s						
TKM2				⇑Pg	Pb	21 27 16.4	+2.2
	14nm,0.5s						
TKM2				⇑Lg	Lg	21 28 03.3	
	56nm,0.9s						
TKM2	Tokmak 2	3.73	27	P	Pb	21 27 16.8	+2.6
	SNR=14						
TKM2	Tokmak 2	3.73	27	⇑eP	Pn	21 27 07.6	+1.7
	baz=26						
TKM2				⇑iS	Sn	21 27 51.3	+1.2
	baz=26						
USP	Ospenovka	3.77	13	P	Pn	21 27 08.9	+2.6
	SNR=11						
USP	Ospenovka	3.77	13	⇑iP	Pn	21 27 08.2	+1.9
	baz=13						
USP				⇑iS	Sn	21 27 52.2	+1.5
	baz=13						
KST	Kastek	3.97	29	eP	Pb	21 27 18.8	+0.6
	14nm,0.6s						
KST				eS	Sb	21 28 11.0	+4.6
	92nm,0.6s						
TARG	Taragay, Kyrgy	4.02	57	⇑iP	Pn	21 27 11.7	+1.7
	baz=57						
TARG				⇑iS	Sn	21 27 58.5	+1.2
	baz=57						
KK31	Karatay Array	4.09	330	⇓Pn	Pn	21 27 15.4	+4.7
	4.3nm,0.7s,baz=151,slow=12,SNR=58						
KK31				⇑Pg	Pb	21 27 23.1	+3.0
	2.5nm,0.3s,baz=146,slow=16,SNR=21						
KK31				⇓Sn	Sb	21 28 05.2	-4.4
	6.7nm,0.3s,baz=134,slow=23,SNR=3.5						
KK31				⇓Lg	Lg	21 28 16.2	
	11nm,0.3s,baz=141,slow=32,SNR=4.9						
MTBS	Maitube	4.23	33	eP	Pb	21 27 23.8	+1.2
	8.9nm,0.3s						
MTBS				eS	Sg	21 28 20.2	-3.7
	34nm,0.6s						
IZV	Izvestkoviy	4.23	35	eP	Pb	21 27 23.4	+0.7
	9.3nm,0.4s						
IZV				eS	Sb	21 28 18.8	+4.9
	18nm,1.0s						
MDOK	Medeo	4.53	37	Pg	Pb	21 27 28.8	+1.1
	9.5nm,0.8s						
MDOK				Lg	Lg	21 28 29.4	
	67nm,0.8s						
MDOK	Medeo	4.53	37	eP	Pb	21 27 28.9	+1.1
	6.4nm,0.6s						
MDOK				eS	Sg	21 28 29.2	-4.3
	23nm,0.7s						
KOTS	Kotyrbulak	4.61	37	eP	Pb	21 27 29.5	+0.3
	8.9nm,0.5s						
KOTS				eS	Sb	21 28 30.3	+5.4
	38nm,0.7s						
KUU	Kurty	4.85	27	eP	Pb	21 27 35.2	+2.2
	6.7nm,0.5s						
KUU				eS	Sb	21 28 38.4	+7.0
	37nm,0.8s						
ARXS	Arharly	5.70	35	eP	Pb	21 27 51.3	+3.6
	3.3nm,0.7s						
ARXS				eS	Sg	21 29 05.7	-5.4
	20nm,0.6s						
PDGK	Podgornoye	5.94	49	⇑Pn	Pn	21 27 35.3	-0.9
	1.7nm,0.6s						
PDGK				⇓Lg	Lg	21 29 11.6	
	11nm,0.6s						
OTUK	Ortayu	8.67	356	⇑Pn	Pn	21 28 15.1	+1.6
	1.1nm,0.5s						
OTUK				⇑Lg	Lg	21 30 39.5	
	11nm,0.6s						
MKAR	Makanchi Array	9.72	39	Pn	Pn	21 28 25.8	-2.1
	0.1nm,0.3s,baz=221,slow=14,SNR=3.9						
MKAR				Lg	Lg	21 31 07.5	
	0.1nm,0.3s,baz=204,slow=20,SNR=3.3						
KURBB	Kurchatov Arra	11.62	17	Pn	Pn	21 28 51.8	-2.0
	0.0nm,0.3s,baz=209,slow=13,SNR=2.8						
KURBB				Lg	Lg	21 32 11.0	
	0.0nm,0.3s,baz=207,slow=26,SNR=9.4						
GEYT	Alibeck	11.99	267	Pn	Pn	21 28 59.0	0.0
	0.2nm,0.3s,baz=82,slow=10,SNR=5.1						
GEYT				Sn	Sn	21 31 11.9	-0.9
	0.1nm,0.3s,baz=121,slow=31,SNR=2.6						
AB31	Akbulak array	13.57	320	⇓P	P	21 29 25.1	-4.5
	0.4nm,0.4s,baz=121,slow=12,SNR=3.5						
AB31				⇓S	Sn	21 31 53.9	+2.7
	0.7nm,0.6s,baz=136,slow=23,SNR=4.9						
BVAR	Borovoye Array	13.58	352	Pn	Pn	21 29 19.8	-0.8
	0.1nm,0.3s,baz=165,slow=12,SNR=6.1						
BRTR	Keskin Array B	30.38	283	P	P	21 32 21.8	+1.5
	0.6nm,0.6s,baz=109,slow=8.8,SNR=4.4						
FINES	FINESS Array B	36.02	323	P	P	21 33 10.1	+1.0
	0.8nm,0.7s,baz=122,slow=10.0,SNR=2.9						
TORD	Torodi Ar. Bea	67.62	269	P	P	21 37 04.2	-1.1
	0.4nm,0.6s,baz=55,slow=5.5						

MEX 06 21:31:49.7±0.5**, 16°.24N×98°.25W, h5^{km}, MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.19	38	eP	Pg	21 31 52.9	-0.5
PNIG				i S	Sg	21 31 55.8	-0.1
TLIG	Tlapa	1.35	347	eP	Pn	21 32 11.1	-4.3
TLIG				i S	Sg	21 32 28.2	-4.9

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*NNC **06** 21:46:11.4±4.1, 38°.33N×76°.89E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=34.4km s-min=19.7km az=173.0*
*BJI **06** 21:46:18.4, 38°.84N×77°.02E, h7^{km}, ML3.5/7*
ISC 06 21:46:14.0±2.6**, 38°.5N**±0°.2×**76°.78E**±0°.07**, h10^{km}, n11, σ2^s.26**/14**, 9C-9D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	Kashi	1.24	330	Pg	Pg	21 46 39.0	+1.2
KSH				Sg	Sb	21 46 53.8	+0.1
KSH				smax	smax		
	comp=N,2μm,0.8s						
KSH				smax	smax		
	comp=E,1μm,0.7s						
SFK	Sufi-Kurgan	2.99	303	⇑Pg	Pb	21 47 07.8	+0.4
	11nm,0.3s						
SFK				⇓Lg	Lg	21 47 52.6	
	84nm,0.4s						
AAK	Ala-Archa	4.53	338	⇓Pg	Pg	21 47 37.5	-3.3
	33nm,1.2s						
AAK				⇑Lg	Lg	21 48 36.4	
	110nm,1.1s						
TKM2	Tokmak 2	4.56	349	⇓Pn	Pn	21 47 25.6	+2.4
	2.9nm,0.7s						
TKM2				⇓Pg	Pg	21 47 40.0	-1.3
	8.5nm,0.7s						
TKM2				⇓Lg	Lg	21 48 38.2	
	65nm,0.8s						
MDOK	Medeo	4.71	2	Pg	Pb	21 47 38.0	+1.2
	11nm,0.9s						
MDOK				Lg	Lg	21 48 43.4	
	102nm,1.0s						
MNAS	Manas	5.19	322	⇓Pg	Pb	21 47 48.2	+3.3
	6.7nm,0.6s						
MNAS				⇑Lg	Lg	21 48 58.5	
	18nm,0.8s						
PDGK	Podgornoye	5.29	22	⇑Pn	Pn	21 47 33.1	-0.1
	2.0nm,0.7s						
PDGK				⇑Pg	Pb	21 47 47.3	+0.7
	15nm,0.7s						
PDGK				⇑Lg	Lg	21 48 59.5	
	52nm,0.8s						
KK31	Karatay Array	6.65	316	⇓Pg	Pg	21 48 17.1	-4.2
	4.3nm,0.8s,baz=133,slow=16,SNR=8.8						
KK31				⇑Lg	Lg	21 49 47.4	
	6.4nm,0.8s,baz=142,slow=24						
MAKZ	Makanchi	9.19	23	⇑Pn	Pn	21 48 25.3	-1.3
	1.5nm,1.1s						
MAKZ				⇓Lg	Lg	21 51 03.2	
	3.6nm,1.0s						
MK31	Makanchi Array	9.27	24	⇑Pn	Pn	21 48 26.5	-1.3
	0.6nm,0.7s,baz=202,slow=13,SNR=13						
MK31				⇓Lg	Lg	21 51 05.0	
	3.3nm,0.8s						
WMQ	Urumqi	9.82	53	P	Pn	21 48 36.9	+1.5

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*IDC **06** 22:20:09.8±1.5, 27°.01N×52°.69E, h0^{km}, mb3.7/8, mb1 3.8/10, mb1mx3.5/70, mbtmp3.7/10, ML3.3/2, Error ellipse: s-maj=30.0km s-min=23.6km az=175.0*
*ISCJB **06** 22:20:10.6±0.4, 27°.16N±0°.04×52°.78E±0°.04, h10^{km}, mb3.6/8, Error ellipse: s-maj=6.9km s-min=4.5km az=37.0*
*DSN **06** 22:20:11.5±1.3, 27°.26N×52°.73E, h15^{km}, ML3.3/6, Error ellipse: s-maj=24.8km s-min=5.8km az=1.0*
*CSEM **06** 22:20:12.1±0.7, 27°.13N×52°.74E, h10^{km}, ML3.3, Error ellipse: s-maj=24.8km s-min=7.7km az=6.0*
*OMAN **06** 22:20:16.1±2.3, 26°.86N×52°.90E, h10^{km}, Error ellipse: s-maj=19.7km s-min=16.5km az=23.0*
ISC 06 22:20:11.9±0.7**, 27°.13N**±0°.07×**52°.80E**±0°.05**, h10^{km}, n35, σ1^s.40**/45**, mb3.5**/8**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOQSS		3.31	249	P	Pn	22 21 05.7	+1.8
BANOM	Banah	3.36	110	P	Pn	22 21 05.7	+1.2
	SNR=5.3						
BANOM				S	Sn	22 21 45.0	+0.6
BANOM	Banah	3.36	110	P	Pn	22 21 05.3	+0.8
BANOM	Banah	3.36	110	P	Pn	22 21 05.7	+1.2
	SNR=5.3						
BANOM				S	Sn	22 21 45.0	+0.6
ASUD	Al Ashush, Dub	3.38	137	P	Pn	22 21 08.0	+3.4
	SNR=7.1						
ASUD				S	Sn	22 21 46.5	+1.7
ASUD	Al Ashush, Dub	3.38	137	i P	Pn	22 21 06.8	+2.1
	SNR=6.8						
ASUD	Al Ashush, Dub	3.38	137	P	Pn	22 21 06.8	+2.1
	SNR=6.8						
ASUD				S	Sn	22 21 46.5	+1.7
MSFE	Esma-Masafi	3.49	119	i P	Pn	22 21 07.2	+0.8
	SNR=8.1						
MSFE	Esma-Masafi	3.49	119	P	Pn	22 21 07.4	+1.0
	SNR=8.0						
MSFE				S	Sn	22 21 47.8	0.0
BTHS		3.54	210	P	Pn	22 21 08.0	+1.1
BTHS				S	Sn	22 21 49.8	+1.0
MDH	Madha	3.63	119	P	Pn	22 21 08.6	+0.3
MDH	Madha	3.63	119	P	Pn	22 21 08.9	+0.7
UOSS	Minazif	3.75	125	P	Pn	22 21 10.5	+0.6
UOSS	Minazif	3.75	125	P	Pn	22 21 10.5	+0.6
HATD	Hatta, Dubai	3.77	127	P	Pn	22 21 10.9	+0.7
HATD	Hatta, Dubai	3.77	127	P	Pn	22 21 10.9	+0.7
ASHO	Ashiyiah	3.81	129	P	Pn	22 21 12.7	+1.9
	SNR=9.1						
ASHO				S	Sn	22 21 55.1	-0.6
ASHO	Ashiyiah	3.81	129	i P	Pn	22 21 12.1	+1.4
	SNR=8.4						
ASHO	Ashiyiah	3.81	129	P	Pn	22 21 12.1	+1.4
	SNR=8.4						
ASHO				S	Sn	22 21 55.1	-0.6
SOHO	SOHO	4.50	131	P	Pn	22 21 20.5	+0.4
SOHO	SOHO	4.50	131	P	Pn	22 21 20.5	+0.4
WSAR	Wadi Sarin	6.55	125	Pn	Pn	22 21 48.7	+0.4
	0.4nm,0.3s,baz=300,slow=9.0,SNR=22						
WSAR				Sn	Sn	22 22 59.8	-3.3
	0.3nm,0.3s,baz=93,slow=21,SNR=6.1						
RAYN	Ar Rayn	7.51	243	i P	Pn	22 22 00.6	-1.0
	SNR=17						
RAYN	Ar Rayn	7.51	243	P	Pn	22 22 00.6	-1.0
	SNR=17						
MHTO	MHTO	7.72	141	P	Pn	22 22 05.4	+0.9
MHTO				S	Sn	22 23 29.0	-3.0
KBZ	Khabaz	18.40	337	P	P	22 24 28.9	+1.8
	0.2nm,0.3s,baz=174,slow=9.2,SNR=3.7						
BRTR	Keskin Array B	20.29	313	P	P	22 24 48.4	+0.5
	0.5nm,0.6s,baz=112,slow=11,SNR=2.9						
AKTO	Aktyubinsk	23.62	8	P	P	22 25 23.3	+0.4
	0.5nm,0.5s,baz=165,slow=9.3,SNR=3.9						
BVAR	Borovoye Array	29.00	22	P	P	22 26 12.6	+0.9
	0.4nm,0.6s,baz=218,slow=9.1,SNR=5.6						
KURBB	Kurchatov Arra	30.57	33	P	P	22 26 26.4	+0.8
	0.5nm,0.7s,baz=233,slow=8.2,SNR=3.8						
ZALV	Zalesovo Beam	35.66	33	P	P	22 27 10.1	0.0
	1.0nm,0.4s,baz=238,slow=8.3,SNR=7.0						
FINES	FINESS Array B	38.72	340	P	P	22 27 35.5	-0.4
	4.3nm,1.1s,baz=150,slow=12,SNR=9.7						
HFS	Hagfors	42.37	332	P	P	22 28 05.6	-0.5
	3.1nm,0.9s,baz=127,slow=12,SNR=7.3						
NB2	NORSAR Subarra	43.89	332	P	P	22 28 17.1	-1.4
	comp=Z,0.5nm,0.6s,baz=121,slow=7.9						
TORD	Torodi Ar. Bea	49.64	264	P	P	22 29 02.2	-1.8
	comp=Z,0.3nm,0.6s,baz=56,slow=8.3						

IDC 06 22:20:34.7±6.6**, 12°.69N×92°.57E, h0^{km}, mb3.7**/4**, mb1 3.6**/5**, mb1mx3.3**/79**, mbtmp3.5**/5**, ML3.4**/1**, Error ellipse: s-maj=124.5km s-min=47.6km az=169.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	8.40	46	Pn	Pn	22 22 37.0	-0.7
	0.1nm,0.3s,baz=236,slow=16,SNR=3.0						
CMAR				Sn	Sn	22 24 03.4	-10
	0.1nm,0.3s,baz=196,slow=25,SNR=3.2						
H08S3	Diego Garcia H	28.39	226	T	T	22 56 19.1	
	baz=45,slow=74						
H08S2	Diego Garcia H	28.40	226	T	T	22 56 20.4	
	baz=45,slow=74						
H08S1	Diego Carcia H	28.41	226	T	T	22 56 21.7	
	baz=45						

MKAR	**Makanchi Array**	**35.08**	**348**	P	P	22 27 29.1	-0.4
	0.7nm,0.8s,baz=165,slow=9.8,SNR=6.4						
SONM	**Songino Array**	**36.89**	**16**	P	P	22 27 45.7	+0.5
	0.3nm,0.4s,baz=191,slow=6.9,SNR=2.6						
KURBB	**Kurchatov Arra**	**39.53**	**346**	P	P	22 28 07.1	-0.1
	0.4nm,0.5s,baz=158,slow=7.4,SNR=4.3						
FINES	**FINESS Array B**	**67.76**	**332**	P	P	22 31 34.0	-0.1
	1.8nm,1.1s,baz=90,slow=0.1,SNR=4.6						

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*IDC **06** 22:21:26.1±3.3, 79.°53N×2.°95E, h0^{km}, mb3.5/2, mb1 3.8/6, mb1mx3.3/74, mbtmp3.8/6, ML3.1/4, MS3.0/11, Ms1 3.0/11, ms1mx2.7/60, Error ellipse: s-maj=48.2km s-min=32.4km az=126.0*

*BER **06** 22:21:28.9±1.3, 79.°65N×4.°90E, h0^{km}±11^{km}, ML2.3*

ISC 06 22:21:25.2±1.2**, 79.°4N**±0.°1×**2.°94E**±0.°05**, h10^{km}, n19, σ2.^{s}99**/18**, MS3.1**/7**, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	**Kingsbay**	**1.77**	**102**	*e*P	**Pn**	**22 21 54.6**	**-1.2**
KBS				*e*Pg	**Pb**	**22 21 55.8**	**-1.9**
KBS				*e*S	**Sn**	**22 22 13.8**	**-4.5**
KBS				IAML		22 22 19.8	
	comp=Z,45nm,0.3s						
SPA0	**Spitsbergen Ar**	**2.90**	**109**	*e*P	**Pn**	**22 22 11.3**	**0.0**
SPA0				*e*S	**Sn**	**22 22 43.1**	**-2.9**
SPA0				IAML		22 22 48.7	
	comp=Z,18nm,0.2s						
SPITS	**Spitsbergen Ar**	**2.90**	**109**	Pn	**Pn**	**22 22 11.2**	**0.0**
	baz=306,slow=10,SNR=83						
SPITS				Sn	**Sn**	**22 22 42.0**	**-4.0**
	baz=327,slow=20,SNR=6.7						
SPITS				LR	LR	22 23 25.3	
	comp=Z,314nm,18.5s,baz=325,slow=41						
HSPB	**Hornsund (broa**	**3.54**	**127**	*e*P	**Pn**	**22 22 21.8**	**+1.8**
HSPB				*e*S	**Sn**	**22 23 00.1**	**-1.7**
HSPB				IAML		22 23 01.5	
	comp=Z,34nm,0.4s						
DAG	**Danmarks Havn**	**5.17**	**250**	*i* P	**Pn**	**22 22 43.2**	**+0.8**
DAG				*e*S	**Sn**	**22 23 35.8**	**-6.1**
JMIC	**Jan Mayen**	**8.93**	**205**	Pn	**Pn**	**22 23 36.3**	**+2.4**
	comp=Z,1.7nm,0.3s,baz=163,slow=13,SNR=5.8						
JMIC				Sn	**Sn**	**22 25 11.9**	**-2.5**
	comp=Z,1.4nm,0.3s,baz=113,slow=13,SNR=2.4						
JMIC				LR	LR	22 26 18.1	
	comp=Z,26nm,19.3s,baz=244,slow=32						
ARCES	**ARCESS Array B**	**11.47**	**137**	Pn	**Pn**	**22 24 10.1**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=353,slow=14,SNR=2.7						
SUMG	**Summit**	**11.79**	**257**	*i* P	**Pn**	**22 24 13.4**	**-0.1**
NOA	**NORSAR Array B**	**18.63**	**167**	LR	LR	22 31 54.3	
	comp=Z,16nm,21.5s,baz=320,slow=34						
FINES	**FINESS Array B**	**19.34**	**145**	P	**Pn**	**22 25 54.8**	**+3.6**
	comp=Z,0.1nm,0.3s,baz=330,slow=9.7,SNR=4.8						
HFS	**Hagfors**	**19.65**	**164**	LR	LR	22 32 15.3	
	comp=Z,42nm,19.6s,baz=7.5,slow=33						
SCHQ	**Schefferville**	**33.01**	**265**	LR	LR	22 42 54.8	
	comp=Z,36nm,19.3s,baz=32,slow=39						
ZALV	**Zalesovo Beam**	**36.09**	**83**	LR	LR	22 46 06.2	
	comp=Z,19nm,19.4s,baz=72,slow=41						
KURBB	**Kurchatov Arra**	**38.10**	**91**	P	**P**	**22 28 45.7**	**+2.1**
	comp=Z,0.5nm,0.6s,baz=346,slow=7.1,SNR=3.5						
MKAR	**Makanchi Array**	**42.48**	**89**	P	**P**	**22 29 22.8**	**+2.9**
	comp=Z,0.4nm,0.6s,baz=326,slow=7.0,SNR=5.4						
MKAR				LR	LR	22 51 44.6	
	comp=Z,23nm,18.8s,baz=27,slow=43						
GNI	**Garni**	**42.54**	**131**	LR	LR	22 47 40.8	
	comp=Z,23nm,18.4s,baz=170,slow=37						
ULM	**Lac du Bonnet**	**42.67**	**291**	LR	LR	22 47 17.1	
	comp=Z,33nm,20.3s,baz=218,slow=36						
TKL	**Tuckaleechee C**	**54.62**	**274**	LR	LR	22 55 25.3	
	comp=Z,30nm,19.2s,baz=10.0,slow=37						
ANMO	**Albuquerque**	**59.34**	**296**	LR	LR	22 56 13.5	
	comp=Z,32nm,21.1s,baz=54,slow=35						

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*NIED **06** 22:42:00, 45.°50N×151.°70E, h14^{km}, Mw4.0 Best double couple: $M_0$1.29000×10^{15} NP1:ϕ_s221.00000°, δ30.00000°, λ87.00000°. NP2:ϕ_s44.00000°, δ60.00000°, λ92.00000°.*

*JMA **06** 22:42:36.0±0.5, 45.°55N×151.°66E, h30^{km}, M4.7*

*ISCJB **06** 22:42:36.7±0.9, 45.°1N±0.°1×151.°59E±0.°09, h32^{km}, mb3.3/4, MS3.4/6, Error ellipse: s-maj=17.9km s-min=6.4km az=156.3*

*SKHL **06** 22:42:40.0±0.3, 45.°07N×151.°46E, h53^{km}±11^{km}, mb4.8/4*

*IDC **06** 22:42:42.1±2.0, 46.°76N×150.°62E, h0^{km}, mb3.3/4, mb1 3.6/5, mb1mx3.4/75, mbtmp3.4/5, ML3.9/1, MS3.2/9, Ms1 3.2/9, ms1mx2.9/31, Error ellipse: s-maj=66.1km s-min=21.9km az=164.0*

*MOS **06** 22:42:43.6±2.8, 45.°43N×150.°96E, h71^{km}, mb4.2/1, Error ellipse: s-maj=30.4km s-min=14.9km az=163.8*

ISC 06 22:42:36.7±1.5**, 45.°03N**±0.°10×**151.°71E**±0.°10**, h32^{km}, n48, σ2.^{s}14**/47**, mb3.3**/4**, MS3.3**/6**, 2C, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.73**	**276**	*i* P	**Pn**	**22 43 19.0**	**+0.8**
KUR				AMB	AMB	22 43 19.0	
	38nm,0.4s						
KUR				AMB	AMB	22 43 19.0	
	7.0nm,0.4s						
KUR				AMB	AMB	22 43 19.0	
	121nm,0.4s						
KUR				*i* S	**Sn**	**22 43 48.0**	**-2.0**
KUR				A	A	22 43 56.0	
	874nm,0.5s						
KUR				A	A	22 43 56.0	
	238nm,0.5s						
KUR	**Kuril'sk**	**2.73**	**276*c***	*i*PN	**Pn**	**22 43 19.2**	**+1.0**
KUR				*i* S	**Sn**	**22 43 48.3**	**-1.7**
KUR				pmax	pmax		
	comp=Z,121nm,0.2s						
KUR				pmax	pmax		
	comp=N,38nm,0.1s						
KUR				pmax	pmax		
	comp=E,7.0nm,0.1s						
KUR				smax	smax		
	comp=E,238nm,0.4s						
KUR				smax	smax		
	comp=N,874nm,0.5s						
SHO	**Shikotan**	**3.68**	**253**	*i* P	**Pn**	**22 43 33.0**	**+1.7**
SHO				AMB	AMB	22 43 37.0	
	comp=N,19nm,0.3s						
SHO				AMB	AMB	22 43 37.0	
	comp=N,25nm,0.3s						
SHO				AMB	AMB	22 43 37.0	
	comp=N,55nm,0.3s						
SHO				*i* S	**Sn**	**22 44 13.0**	**-0.5**
SHO				A	A	22 44 18.0	
	comp=N,145nm,0.3s						
SHO				A	A	22 44 18.0	
	comp=N,70nm,0.3s						
SHO	**Shikotan**	**3.68**	**253*c***	*i*PN	**Pn**	**22 43 33.2**	**+1.9**
SHO				*i* S	**Sn**	**22 44 13.2**	**-0.3**
SHO				pmax	pmax		
	comp=Z,55nm,0.2s						
SHO				pmax	pmax		
	comp=N,19nm,0.1s						
SHO				pmax	pmax		
	comp=E,25nm,0.3s						
SHO				smax	smax		
	comp=N,145nm,0.2s						
SHO				smax	smax		
	comp=E,70nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**4.29**	**259**	*e*P	**Pn**	**22 43 42.0**	**+2.2**
YUK				AMB	AMB	22 43 47.0	
	comp=E,112nm,0.4s						
YUK				*e*S	**Sn**	**22 44 30.0**	**+1.2**
YUK				A	A	22 44 39.0	
	comp=E,102nm,0.4s						
YUK				A	A	22 44 39.0	
	comp=E,318nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**4.29**	**259**	*e*PN	**Pn**	**22 43 42.0**	**+2.2**
YUK				*e*S	**Sn**	**22 44 30.0**	**+1.2**
YUK				pmax	pmax		
	comp=Z,112nm,0.3s						
YUK				smax	smax		
	comp=N,102nm,0.4s						
YUK				smax	smax		
	comp=E,318nm,0.4s						
LAGR	**Lagunnoye**	**4.34**	**259**	*e*S	**Sn**	**22 44 31.0**	**+1.1**
GRPR	**Tuman**	**4.37**	**258**	*e*P	**Pn**	**22 43 42.0**	**+1.2**
GRPR				AMB	AMB	22 43 49.0	
	comp=E,105nm,0.4s						
GRPR				AMB	AMB	22 43 49.0	
	comp=E,53nm,0.4s						
GRPR				AMB	AMB	22 43 49.0	
	comp=E,85nm,0.4s						
GRPR				*e*S	**Sn**	**22 44 30.0**	**-0.6**
GRPR				A	A	22 44 37.0	
	comp=E,151nm,0.4s						
GRPR				A	A	22 44 37.0	
	comp=E,137nm,0.4s						
GRPR	**Tuman**	**4.37**	**258**	*e*PN	**Pn**	**22 43 42.9**	**+2.1**
GRPR				*e*S	**Sn**	**22 44 30.7**	**+0.1**
GRPR				pmax	pmax		
	comp=N,105nm,0.2s						
GRPR				pmax	pmax		
	comp=E,53nm,0.2s						
GRPR				pmax	pmax		
	comp=Z,85nm,0.2s						
GRPR				smax	smax		
	comp=N,151nm,0.4s						
GRPR				smax	smax		
	comp=E,137nm,0.4s						
NEM2	**Nemuro 2**	**4.60**	**251**	P	**Pn**	**22 43 44.8**	**+0.8**
NEM2				*e*S	**Sn**	**22 44 36.1**	**-0.1**
GLVR	**Golovnino**	**4.62**	**256**	*e*S	**Sn**	**22 44 38.0**	**+1.3**
JRA	**Rausu**	**4.83**	**259**	P	**Pn**	**22 43 49.9**	**+2.7**
JNK	**Nakash**	**5.22**	**256**	P	**Pn**	**22 43 54.4**	**+1.9**
JNK				*e*S	**Sn**	**22 44 52.1**	**+0.6**
JAK	**Akkeshi**	**5.45**	**251**	P	**Pn**	**22 43 56.7**	**+1.1**
JAK				*e*S	**Sn**	**22 44 57.1**	**-0.1**
JTKR	**Abashiri--Toko**	**5.68**	**262**	P	**Pn**	**22 44 01.3**	**+2.5**
JAR	**Ashorobuto**	**5.96**	**256**	P	**Pn**	**22 44 05.5**	**+2.7**
JAR				*e*S	**Sn**	**22 45 12.1**	**+2.2**
JMP	**Maruseppu**	**6.05**	**263**	P	**Pn**	**22 44 07.2**	**+3.2**
JOB	**Onbets**	**6.06**	**252**	P	**Pn**	**22 44 05.6**	**+1.5**
JCH	**Churui**	**6.50**	**251**	P	**Pn**	**22 44 11.4**	**+1.3**
JKK2	**Kamakawa 2**	**6.51**	**263**	P	**Pn**	**22 44 13.2**	**+2.9**
YSS	**Yuzh-Sakhalins**	**6.53**	**290**	*e*PN	**Pn**	**22 44 12.7**	**+2.3**
YSS				*e*S	**Sn**	**22 45 19.1**	**-4.6**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.4s						
YSS				MLR	MLR		
	comp=N,100nm,16.0s						
YSS				MLR	MLR		
	comp=Z,300nm,16.0s						
ASAJ	**Asahikawa**	**6.57**	**265**	Pn	**Pn**	**22 44 13.6**	**+2.6**
	comp=Z,2.4nm,0.3s,baz=78,slow=10,SNR=15						
ASAJ				Sn	**Sn**	**22 45 26.9**	**+2.1**
	comp=Z,0.1nm,0.3s,baz=18,slow=6.4,SNR=2.5						
ASAJ				LR	LR	22 46 56.5	
	comp=Z,227nm,18.4s,baz=193,slow=41						
MYR	**Moyori**	**6.69**	**249**	*e*S	**Sn**	**22 45 27.0**	**-0.8**
JNBK	**Urakawa-nobuka**	**7.05**	**250**	P	**Pn**	**22 44 18.4**	**+0.8**
JBT2	**Biratori 2**	**7.11**	**255**	P	**Pn**	**22 44 19.8**	**+1.3**
JNB	**Noboribetsu**	**8.13**	**255**	P	**Pn**	**22 44 34.4**	**+1.9**
JKB	**Kayabe**	**8.37**	**252**	*e*S	**Sn**	**22 46 05.0**	**-4.2**
JANG	**Nango**	**8.82**	**242**	*e*S	**Sn**	**22 46 14.9**	**-5.4**
JTM	**Tenmabayashi**	**8.88**	**245**	*e*S	**Sn**	**22 46 18.1**	**-3.5**
MJAR	**Matsushiro Arr**	**13.27**	**235**	LR	LR	22 51 08.1	
	comp=Z,24nm,19.1s,baz=40,slow=37						
KSRS	**Korea Array**	**19.37**	**255**	LR	LR	22 54 20.4	
	comp=Z,39nm,18.1s,baz=58,slow=36						
H11N2	**WAKE ISLAND Hy**	**28.20**	**149**	T	T	23 19 16.4	
	baz=336,slow=74						
H11N1	**WAKE ISLAND Hy**	**28.22**	**149**	T	T	23 19 16.4	
	baz=336						
H11N3	**WAKE ISLAND Hy**	**28.22**	**148**	T	T	23 19 19.8	
	baz=336,slow=74						
H11S1	**WAKE ISLAND Hy**	**29.25**	**150**	T	T	23 20 39.0	
	baz=338,slow=76						
H11S3	**WAKE ISLAND Hy**	**29.26**	**150**	T	T	23 20 36.8	
	baz=338,slow=76						
H11S2	**WAKE ISLAND Hy**	**29.27**	**150**	T	T	23 20 39.0	
	baz=338,slow=76						
SONM	**Songino Array**	**31.02**	**292**	LR	LR	23 02 08.4	
	comp=Z,46nm,20.0s,baz=72,slow=39						
KDAK	**Kodiak Island**	**35.96**	**49**	LR	LR	23 06 24.4	
	comp=Z,38nm,18.0s,baz=224,slow=40						
ILAR	**Eielson Array**	**38.51**	**37**	P	**P**	**22 49 56.2**	**+0.6**
	comp=Z,0.3nm,0.8s,baz=250,slow=7.6,SNR=4.0						
ZALV	**Zalesovo Beam**	**42.84**	**307**	LR	LR	23 09 21.7	
	comp=Z,58nm,18.2s,baz=68,slow=39						
MKAR	**Makanchi Array**	**46.87**	**298**	P	**P**	**22 51 02.3**	**-1.4**
	comp=Z,0.4nm,0.8s,baz=47,slow=6.9,SNR=4.2						
KURK	**Kurchatov**	**47.51**	**304**	P	**P**	**22 51 07.6**	**-1.0**
KURBB	**Kurchatov Arra**	**47.60**	**304**	P	**P**	**22 51 07.5**	**-1.7**
	comp=Z,0.6nm,0.6s,baz=71,slow=8.4,SNR=4.4						
BVAR	**Borovoye Array**	**51.20**	**310**	LR	LR	23 14 42.3	
	comp=Z,39nm,19.4s,baz=222,slow=39						
AKTO	**Aktyubinsk**	**59.14**	**312**	LR	LR	23 20 24.0	
	comp=Z,66nm,18.1s,baz=45,slow=39						
NOA	**NORSAR Array B**	**69.53**	**341**	LR	LR	23 26 18.3	
	comp=Z,8.1nm,18.6s,baz=325,slow=39						
TXAR	**Lajitas Array**	**79.21**	**59**	P	P	22 54 48.9	+10
	comp=Z,0.1nm,0.6s,baz=297,slow=4.0,SNR=2.6						

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*CSEM **06** 22:45:53.3±0.6, 50.°29N×19.°03E, h1^{km}, ML2.2/4, Error ellipse: s-maj=11.8km s-min=5.6km az=10.0*

PRU 06 22:45:54.3, 50.°22N×19.°01E, h0^{km}, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHZP	**Chorzow**	**0.07**	**351**	*e*Pg	Pg	22 45 57.3	+1.6
CHZP				*e*Sg	Sg	22 45 59.5	+2.9
OJC	**Ojcow**	**0.51**	**90**	*e*Pg	Pg	22 46 03.2	-0.8
OJC				*e*Sg	Sg	22 46 10.0	-0.6
OJC	**Ojcow**	**0.51**	**90**	*e*Pg	Pg	22 46 03.2	-0.8
OKC	**Ostrava-Krasne**	**0.68**	**236**	*e*PG	Pb	22 46 08.6	-0.3
OKC				*e*SG	Sg	22 46 17.0	+1.0
	comp=Z,3.2nm,0.4s						
OKC	**Ostrava-Krasne**	**0.68**	**236**	Pg	Pb	22 46 08.6	-0.3
OKC	**Ostrava-Krasne**	**0.68**	**236**	Pg	Pb	22 46 08.6	-0.3
OKC				Sg	Sg	22 46 17.0	+1.0
	3.2nm,0.4s						
MORC	**Moravsky Berou**	**1.05**	**245**	*e*Pg	Pb	22 46 15.2	-0.1
MORC	**Moravsky Berou**	**1.05**	**245**	*e*PG	Pb	22 46 15.2	-0.1
MORC				*e*SG	Sb	22 46 29.1	-0.5
LANS	**Liptovska Anna**	**1.11**	**164**	*e*PG	Pg	22 46 15.3	-0.3
LANS				*e*SG	Sg	22 46 30.4	+0.5
NIE	**Niedzica**	**1.16**	**133**	*e*Pg	Pg	22 46 15.9	-0.5
NIE				*e*Sg	Sg	22 46 31.3	-0.2
KRLC	**Kraliky**	**1.44**	**265**	*e*PG	Pn	22 46 20.9	-0.8
KRLC				*e*SG	Sg	22 46 40.7	+0.1
	comp=Z,1.5nm,0.3s						
KRLC	**Kraliky**	**1.44**	**265**	Pg	Pn	22 46 20.9	-0.8
KRLC				Sg	Sg	22 46 40.7	+0.1
	1.5nm,0.3s						
DPC	**Dobruska-Polom**	**1.73**	**275**	*e*PG	Pn	22 46 25.2	-0.5
DPC				*e*SG	Sb	22 46 49.4	+0.2
	comp=Z,4.1nm,0.3s						
DPC	**Dobruska-Polom**	**1.73**	**275**	Pg	Pn	22 46 25.2	-0.5
DPC				Sg	Sb	22 46 49.4	+0.2
	4.1nm,0.3s						
VYHS	**Vyhne**	**1.73**	**184**	*e*PN	Pn	22 46 24.7	-1.0
VYHS				*e*SN	Sn	22 46 47.3	-1.1
VYHS				*e*LG	Lg	22 46 50.7	
VRAC	**Vranov**	**1.81**	**241**	*e*PN	Pn	22 46 27.5	+0.7
VRAC				*e*SG	Sb	22 46 51.7	+0.1
UPC	**Upice**	**1.94**	**280**	*e*SG	Sg	22 46 57.6	+1.0
UPC	**Upice**	**1.94**	**280**	Sg	Sg	22 46 57.6	+1.0
PRU	**Pruhonice**	**2.89**	**267**	*e*SG	Sg	22 47 26.0	-1.0
PRU	**Pruhonice**	**2.89**	**267**	Sg	Sg	22 47 26.0	-1.0
KHC	**Kasperske Hory**	**3.69**	**255**	*e*SG	Sg	22 47 50.4	-2.5
KHC	**Kasperske Hory**	**3.69**	**255**	Sg	Sg	22 47 50.4	-2.5

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*SIGU **06** 22:47:58.4±0.8, 46°N±1°×2°7E±°, h135^{km}±2^{km}, mb4.4/15*

*MOS **06** 22:47:59.3±0.8, 45.°72N×26.°65E, h106^{km}, mb4.3/12, Error ellipse: s-maj=5.1km s-min=3.4km az=116.4*

*ISCJB **06** 22:47:59.5±0.1, 45.°699N±0.°010×26.°65E±0.°02, h114^{km}±1^{km}, mb4.3/62, Error ellipse: s-maj=1.9km s-min=1.5km az=142.9*

*SOF **06** 22:47:59.8, 45.°62N×26.°58E, h124^{km}, MD3.7*

*IDC **06** 22:48:00.6±0.3, 45.°68N×26.°49E, h108^{km}±2^{km}, mb3.9/28, mb1 3.9/39, mb1mx3.8/73, mbtmp4.2/39, MS2.7/6, Ms1 2.7/6, ms1mx2.4/71, Error ellipse: s-maj=9.4km s-min=6.4km az=155.0*

*NEIC **06** 22:48:00.5±0.0, 45.°68N×26.°67E, h113^{km}, mb4.4/17, MW4.1, ML4.4(BUC), Moment Tensor Solution. s8 Moment tensor: Scale 10^{15}Nm; M_{rr}1.74; $M_{\theta\theta}$-1.49; $M_{\phi\phi}$-0.25; $M_{r\theta}$-0.87; $M_{\theta\phi}$0.42; $M_{\phi r}$0.04; Best double couple: $M_0$1.90000×10^{15} NP1:ϕ_s112.00000°, δ32.00000°, λ100.00000°. NP2:ϕ_s281.00000°, δ59.00000°, λ84.00000°. Principal axes: T 1.9600, Plg76.0000°, Azm173.0000°; N -0.1400, Plg5.0000°, Azm284.0000°; P -1.8200, Plg13.0000°, Azm15.0000°; After BUC.*

NEIC Felt at Bucharest and Constanta. Also felt at Cahul, Moldova.

*CSEM **06** 22:48:00.5±0.1, 45.°71N×26.°65E, h107^{km}, mb4.6/16, Mw4.1 Error ellipse: s-maj=2.3km s-min=1.8km az=35.0*

*BUC **06** 22:48:00.6±0.5, 45.°69N×26.°67E, h116^{km}±6^{km}, MD4.7/11, Error ellipse: s-maj=3.8km s-min=3.0km az=62.0*

ISC 06 22:48:00.8±0.4**, 45.°75N**±0.°02×**26.°65E**±0.°02**, h111^{km}**±3^{km}**, h111^{km}:pP-P, n711, σ1.^{s}55**/872**, mb4.4**/67**, 85C-107D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLOR	**Plostina**	**0.10**	**358**	⇑*i*P	**Pn**	**22 48 16.3**	**+0.1**
PLOR	**Plostina**	**0.10**	**358**	⇑*i*P	**Pn**	**22 48 16.3**	**+0.1**
PLOR				*i* S	**Sn**	**22 48 28.8**	**+1.0**
PLOR	**Plostina**	**0.10**	**358**	P	**Pn**	**22 48 16.3**	**+0.1**
PLOR	**Plostina**	**0.10**	**358**	⇑*i*P	**Pn**	**22 48 16.3**	**+0.1**
PLOR				⇑*i*S	**Sn**	**22 48 27.5**	**-0.3**
VRI	**Vrincioaia**	**0.13**	**23**	P	**Pn**	**22 48 17.6**	**+1.4**
VRI	**Vrincioaia**	**0.13**	**23**	⇑*i*P	**Pn**	**22 48 16.5**	**+0.3**
VRI	**Vrincioaia**	**0.13**	**23**	⇑*i*P	**Pn**	**22 48 16.5**	**+0.3**
VRI				*i* S	**Sn**	**22 48 27.5**	**-0.3**
VRI	**Vrincioaia**	**0.13**	**23**	P	**Pn**	**22 48 16.5**	**+0.3**
VRI	**Vrincioaia**	**0.13**	**23**	⇑*i*P	**Pn**	**22 48 16.5**	**+0.3**
VRI				⇓*i*S	**Sn**	**22 48 27.6**	**-0.3**
ODBI	**Odobesti**	**0.28**	**86**	⇑*i*P	**Pn**	**22 48 17.7**	**+1.1**
ODBI	**Odobesti**	**0.28**	**86**	⇑*i*P	**Pn**	**22 48 17.7**	**+1.1**
ODBI				*i* S	**Sn**	**22 48 30.0**	**+1.5**
ODBI	**Odobesti**	**0.28**	**86**	⇑*i*P	**Pn**	**22 48 17.7**	**+1.1**
PETR	**Petresti**	**0.41**	**93**	⇑*i*P	**Pn**	**22 48 17.9**	**+0.8**
PETR	**Petresti**	**0.41**	**93**	⇑*i*P	**Pn**	**22 48 17.9**	**+0.8**
PETR				*i* S	**Sn**	**22 48 30.5**	**+1.0**
PETR	**Petresti**	**0.41**	**93**	⇓*e*P	**Pn**	**22 48 17.7**	**+0.6**
PETR				⇓*i*S	**Sn**	**22 48 30.4**	**+1.0**
GRER		**0.43**	**148**	⇑*i*P	**Pn**	**22 48 18.2**	**+0.9**
GRER		**0.43**	**148**	⇑*i*P	**Pn**	**22 48 18.2**	**+0.9**
GRER				*i* S	**Sn**	**22 48 31.3**	**+1.5**
GRER		**0.43**	**148**	⇑*i*P	**Pn**	**22 48 18.2**	**+0.9**
GRER				*i* S	**Sn**	**22 48 31.3**	**+1.5**
MLR	**Muntele Rosu**	**0.56**	**243**	P	**Pn**	**22 48 18.3**	**0.0**
	168nm,0.3s,baz=340,slow=6.0						
MLR				S	**Sn**	**22 48 30.9**	**-0.6**
	882nm,0.3s,baz=127,slow=20,SNR=84						
MLR	**Muntele Rosu**	**0.56**	**243**	⇑*i*P	**Pn**	**22 48 18.4**	**0.0**
MLR	**Muntele Rosu**	**0.56**	**243**	⇑*i*P	**Pn**	**22 48 18.4**	**0.0**
MLR				*i* S	**Sn**	**22 48 31.0**	**-0.5**
MLR	**Muntele Rosu**	**0.56**	**243**	*e*Pn	**Pn**	**22 48 18.1**	**-0.3**
MLR				*e*Sn	**Sn**	**22 48 30.7**	**-0.8**
MLR				S	**Sn**	**22 48 30.9**	**-0.6**
MLR	**Muntele Rosu**	**0.56**	**243**	*e*P	**Pn**	**22 48 18.1**	**-0.3**
MLR				*e*Sn	**Sn**	**22 48 30.7**	**-0.8**
MLR				*i* S	**Sn**	**22 48 31.0**	**-0.5**
ISR	**Istrita**	**0.63**	**187**	⇓*i*P	**Pn**	**22 48 18.9**	**+0.1**
ISR	**Istrita**	**0.63**	**187**	⇓*i*P	**Pn**	**22 48 18.9**	**+0.1**
ISR	**Istrita**	**0.63**	**187**	⇓*i*P	**Pn**	**22 48 18.9**	**+0.1**
TESR	**Tescani**	**0.77**	**360**	⇑*i*P	**Pn**	**22 48 20.3**	**+0.5**
TESR	**Tescani**	**0.77**	**360**	⇑*i*P	**Pn**	**22 48 20.3**	**+0.5**
TESR				*i* S	**Sn**	**22 48 34.0**	**-0.2**
TESR	**Tescani**	**0.77**	**360**	⇑*i*P	**Pn**	**22 48 20.3**	**+0.5**
TESR				*i* S	**Sn**	**22 48 34.0**	**-0.2**
SECR		**0.82**	**210**	⇓*i*P	**Pn**	**22 48 20.8**	**+0.4**
SECR		**0.82**	**210**	⇓*i*P	**Pn**	**22 48 20.8**	**+0.4**
SECR				*i* S	**Sn**	**22 48 33.3**	**-1.8**
SECR		**0.82**	**210**	⇓*i*P	**Pn**	**22 48 20.8**	**+0.4**
PGOR	**Pogoanele**	**0.87**	**164**	⇓*i*P	**Pn**	**22 48 20.8**	**0.0**
PGOR	**Pogoanele**	**0.87**	**164**	⇓*i*P	**Pn**	**22 48 20.8**	**0.0**
PGOR				*i* S	**Sn**	**22 48 36.2**	**+0.4**
PGOR	**Pogoanele**	**0.87**	**164**	⇓*i*P	**Pn**	**22 48 20.8**	**0.0**
PGOR				*i* S	**Sn**	**22 48 36.2**	**+0.4**
DOPR	**Dopca**	**0.91**	**285**	⇑*i*P	**Pn**	**22 48 22.4**	**+1.2**
DOPR	**Dopca**	**0.91**	**285**	⇑*i*P	**Pn**	**22 48 22.4**	**+1.2**
DOPR				*i* S	**Sn**	**22 48 37.3**	**+0.7**
DOPR	**Dopca**	**0.91**	**285**	⇑*i*P	**Pn**	**22 48 22.4**	**+1.2**
DOPR				*i* S	**Sn**	**22 48 37.3**	**+0.7**
PLAR	**PLOIESTI**	**0.94**	**208**	⇓*i*P	**Pn**	**22 48 21.7**	**+0.2**
PLAR	**PLOIESTI**	**0.94**	**208**	⇓*i*P	**Pn**	**22 48 21.7**	**+0.2**
PLAR				*i* S	**Sn**	**22 48 37.8**	**+0.7**
PLAR	**PLOIESTI**	**0.94**	**208**	⇓*i*P	**Pn**	**22 48 21.7**	**+0.2**
PLAR				*i* S	**Sn**	**22 48 37.8**	**+0.7**
SULR		**1.10**	**195**	⇓*i*P	**Pn**	**22 48 23.1**	**0.0**
SULR		**1.10**	**195**	⇓*i*P	**Pn**	**22 48 23.1**	**0.0**
SULR				*i* S	**Sn**	**22 48 39.9**	**-0.1**
SULR		**1.10**	**195**	⇓*i*P	**Pn**	**22 48 23.1**	**0.0**
GIUM	**Giurgiulesti**	**1.12**	**103**	⇓*i*P	**Pn**	**22 48 23.7**	**+0.4**
GIUM	**Giurgiulesti**	**1.12**	**103**	⇓*i*P	**Pn**	**22 48 23.7**	**+0.4**
GIUM				*i* S	**Sn**	**22 48 40.2**	**-0.1**
GIUM	**Giurgiulesti**	**1.12**	**103**	P	**Pn**	**22 48 23.7**	**+0.4**
GIUM	**Giurgiulesti**	**1.12**	**103**	⇓*e*P	**Pn**	**22 48 23.7**	**+0.4**
GIUM				*i* S	**Sn**	**22 48 40.2**	**-0.1**
VOIR		**1.17**	**255**	⇑*i*P	**Pn**	**22 48 23.6**	**-0.3**
VOIR		**1.17**	**255**	⇑*i*P	**Pn**	**22 48 23.6**	**-0.3**
VOIR				*i* S	**Sn**	**22 48 40.0**	**-1.4**
VOIR		**1.17**	**255**	⇑*i*P	**Pn**	**22 48 23.6**	**-0.3**
VOIR				*i* S	**Sn**	**22 48 40.0**	**-1.4**
CFR	**Carcaliu**	**1.19**	**118**	⇓*i*P	**Pn**	**22 48 23.4**	**-0.6**
CFR	**Carcaliu**	**1.19**	**118**	⇓*i*P	**Pn**	**22 48 23.4**	**-0.6**
CFR				*i* S	**Sn**	**22 48 39.9**	**-1.7**
CFR	**Carcaliu**	**1.19**	**118**	⇓*i*P	**Pn**	**22 48 23.4**	**-0.6**
CFR				*i* S	**Sn**	**22 48 39.9**	**-1.7**
GIRR	**Girov**	**1.21**	**355**	⇑*i*P	**Pn**	**22 48 25.2**	**+0.9**
GIRR	**Girov**	**1.21**	**355**	⇑*i*P	**Pn**	**22 48 25.2**	**+0.9**
GIRR	**Girov**	**1.21**	**355**	⇑*i*P	**Pn**	**22 48 25.2**	**+0.9**
AMRR	**Amara**	**1.23**	**157**	⇓*i*P	**Pn**	**22 48 24.3**	**-0.2**
AMRR	**Amara**	**1.23**	**157**	⇓*i*P	**Pn**	**22 48 24.3**	**-0.2**
AMRR				*i* S	**Sn**	**22 48 41.7**	**-0.8**
AMRR	**Amara**	**1.23**	**157**	⇓*i*P	**Pn**	**22 48 24.3**	**-0.2**
AMRR				*i* S	**Sn**	**22 48 41.7**	**-0.8**
MTUR	**Matau**	**1.23**	**246**	⇑*i*P	**Pn**	**22 48 25.1**	**+0.4**
MTUR	**Matau**	**1.23**	**246**	⇑*i*P	**Pn**	**22 48 25.1**	**+0.4**
MTUR	**Matau**	**1.23**	**246**	⇑*i*P	**Pn**	**22 48 25.1**	**+0.4**
JOSR	**Joseni**	**1.24**	**321**	⇑*i*P	**Pn**	**22 48 25.1**	**+0.4**
JOSR	**Joseni**	**1.24**	**321**	⇑*i*P	**Pn**	**22 48 25.1**	**+0.4**
JOSR	**Joseni**	**1.24**	**321**	⇑*i*P	**Pn**	**22 48 25.1**	**+0.4**
BIZ	**Bicaz**	**1.25**	**343**	⇑*i*P	**Pn**	**22 48 26.2**	**+1.4**
BIZ	**Bicaz**	**1.25**	**343**	⇑*i*P	**Pn**	**22 48 26.2**	**+1.4**
BIZ				*i* S	**Sn**	**22 48 43.4**	**+0.4**
BIZ	**Bicaz**	**1.25**	**343**	⇑*i*P	**Pn**	**22 48 26.2**	**+1.4**
BIZ				*i* S	**Sn**	**22 48 43.4**	**+0.4**
LEOM	**Leova**	**1.32**	**56**	P	**Pn**	**22 48 27.3**	**+1.8**
LEOM	**Leova**	**1.32**	**56**	⇑*i*P	**Pn**	**22 48 26.3**	**+0.8**
LEOM	**Leova**	**1.32**	**56**	⇑*i*P	**Pn**	**22 48 26.3**	**+0.8**
LEOM				*i* S	**Sn**	**22 48 44.8**	**+0.4**
LEOM	**Leova**	**1.32**	**56**	P	**Pn**	**22 48 26.3**	**+0.8**
LEOM	**Leova**	**1.32**	**56**	⇑*i*P	**Pn**	**22 48 26.3**	**+0.8**
LEOM				*i* S	**Sn**	**22 48 44.8**	**+0.4**
INCR	**INCERC-Sediu C**	**1.35**	**195**	⇓*i*P	**Pn**	**22 48 25.4**	**-0.5**
INCR	**INCERC-Sediu C**	**1.35**	**195**	⇓*i*P	**Pn**	**22 48 25.4**	**-0.5**
INCR				*i* S	**Sn**	**22 48 43.7**	**-1.2**
INCR	**INCERC-Sediu C**	**1.35**	**195**	⇓*i*P	**Pn**	**22 48 25.4**	**-0.5**
HARR	**Harsova**	**1.39**	**139**	⇓*i*P	**Pn**	**22 48 25.8**	**-0.5**
HARR	**Harsova**	**1.39**	**139**	⇓*i*P	**Pn**	**22 48 25.8**	**-0.5**
HARR	**Harsova**	**1.39**	**139**	⇓*i*P	**Pn**	**22 48 25.8**	**-0.5**
BUC1	**Bucharest**	**1.47**	**198**	⇓*i*P	**Pn**	**22 48 26.8**	**-0.5**
BUC1	**Bucharest**	**1.47**	**198**	⇓*i*P	**Pn**	**22 48 26.8**	**-0.5**
BUC1				*i* S	**Sn**	**22 48 45.9**	**-1.4**
BUC1	**Bucharest**	**1.47**	**198**	⇓*i*P	**Pn**	**22 48 26.7**	**-0.5**
BUC1				⇓*e*S	**Sn**	**22 48 45.8**	**-1.5**
GOLR		**1.50**	**233**	⇑*i*P	**Pn**	**22 48 27.9**	**+0.3**
GOLR				S	**Sn**	**22 48 48.0**	**0.0**
GOLR		**1.50**	**233**	⇑*i*P	**Pn**	**22 48 27.9**	**+0.3**
GOLR				*i* S	**Sn**	**22 48 48.0**	**0.0**
GOLR		**1.50**	**233**	⇑*i*P	**Pn**	**22 48 27.9**	**+0.3**
GOLR				*i* S	**Sn**	**22 48 48.0**	**0.0**
TLB	**Topalu**	**1.52**	**139**	⇓*i*P	**Pn**	**22 48 27.3**	**-0.6**
TLB	**Topalu**	**1.52**	**139**	⇓*i*P	**Pn**	**22 48 27.3**	**-0.6**
TLB				*i* S	**Sn**	**22 48 46.0**	**-2.4**
TLB	**Topalu**	**1.52**	**139**	⇓*i*P	**Pn**	**22 48 27.3**	**-0.6**
TLB				*i* S	**Sn**	**22 48 46.0**	**-2.4**
IAS	**Iasi**	**1.58**	**23**	⇑*i*P	**Pn**	**22 48 29.3**	**+0.8**
IAS	**Iasi**	**1.58**	**23**	⇑*i*P	**Pn**	**22 48 29.3**	**+0.8**
IAS				*i* S	**Sn**	**22 48 49.5**	**-0.1**
IAS	**Iasi**	**1.58**	**23**	⇑*i*P	**Pn**	**22 48 29.3**	**+0.8**
IAS				⇑*i*S	**Sn**	**22 48 49.6**	**-0.1**
SGRR	**Singureni**	**1.60**	**198**	⇓*i*P	**Pn**	**22 48 28.1**	**-0.7**
SGRR	**Singureni**	**1.60**	**198**	⇓*i*P	**Pn**	**22 48 28.1**	**-0.7**
SGRR				*i* S	**Sn**	**22 48 48.1**	**-2.0**

SGRR	Singureni	1.60	198	⇓iP	Pn	22 48 28.1	-0.7
TLCR		1.62	109	⇓iP	Pn	22 48 28.8	-0.2
TLCR		1.62	109	⇓iP	Pn	22 48 28.8	-0.2
TLCR				iS	Sn	22 48 49.5	-1.1
TLCR		1.62	109	⇓iP	Pn	22 48 28.8	-0.2
TLCR				iS	Sn	22 48 49.5	-1.1
PRAR	RASCA	1.64	350	⇓iP	Pn	22 48 30.5	+1.1
PRAR	RASCA	1.64	350	⇓iP	Pn	22 48 30.5	+1.1
PRAR	RASCA	1.64	350	⇓iP	Pn	22 48 30.5	+1.1
HUMR	Humele	1.70	225	⇓iP	Pn	22 48 29.3	-0.7
HUMR	Humele	1.70	225	⇓iP	Pn	22 48 29.3	-0.7
HUMR				iS	Sn	22 48 50.6	-1.7
HUMR	Humele	1.70	225	⇓iP	Pn	22 48 29.3	-0.7
HUMR				iS	Sn	22 48 50.6	-1.7
CVDA	Cernavoda	1.72	145	⇓iP	Pn	22 48 29.9	-0.4
CVDA	Cernavoda	1.72	145	⇓iP	Pn	22 48 29.9	-0.4
CVDA				iS	Sn	22 48 50.5	-2.2
CVDA	Cernavoda	1.72	145	⇓iP	Pn	22 48 29.9	-0.4
CVDA				iS	Sn	22 48 50.5	-2.2
TIRR	Tirgusor	1.79	135	⇓iP	Pn	22 48 30.7	-0.5
TIRR	Tirgusor	1.79	135	⇓iP	Pn	22 48 30.7	-0.5
TIRR				iS	Sn	22 48 51.6	-2.7
TIRR	Tirgusor	1.79	135	ePn	Pn	22 48 30.3	-0.9
TIRR				eSn	Sn	22 48 52.0	-2.3
TIRR	Tirgusor	1.79	135	eP	Pn	22 48 30.3	-0.9
TIRR				e		22 48 52.0	
TIRR	Tirgusor	1.79	135	ePn	Pn	22 48 30.3	-0.9
TIRR	Tirgusor	1.79	135	⇓iP	Pn	22 48 30.7	-0.5
TIRR				eS	Sn	22 48 52.0	-2.3
ICOR	Ion Corvin	1.82	153	⇓iP	Pn	22 48 31.3	-0.2
ICOR	Ion Corvin	1.82	153	⇓iP	Pn	22 48 31.3	-0.2
ICOR				iS	Sn	22 48 52.7	-2.3
ICOR	Ion Corvin	1.82	153	⇓iP	Pn	22 48 31.3	-0.2
ICOR				iS	Sn	22 48 52.7	-2.3
MILM	Milestii Mici	1.90	51	⇑iP	Pn	22 48 33.1	+0.6
MILM	Milestii Mici	1.90	51	⇑iP	Pn	22 48 33.1	+0.6
MILM				iS	Sn	22 48 56.0	-0.7
MILM	Milestii Mici	1.90	51	⇑iP	Pn	22 48 33.0	+0.6
MILM				⇑iS	Sn	22 48 56.0	-0.7
KIS	Kishinev	1.95	49	iP	Pn	22 48 33.3	+0.1
	4µm,0.6s						
KIS				iS	Sn	22 48 57.0	-0.9
	13µm,0.8s						
KIS	Kishinev	1.95	49	⇑iP	Pn	22 48 33.9	+0.7
KIS	Kishinev	1.95	49	⇑iP	Pn	22 48 33.9	+0.7
KIS				iS	Sn	22 48 57.7	-0.2
KIS	Kishinev	1.95	49	P	Pn	22 48 33.3	+0.1
KIS				Pm		22 48 34.0	
KIS				S	Sn	22 48 57.0	-0.9
KIS				Sm		22 48 58.0	
KIS	Kishinev	1.95	49	κiP	Pn	22 48 33.3	+0.1
KIS				iS	Sn	22 48 57.0	-0.9
KIS				pmax	pmax		
	comp=Z,4µm,0.6s						
KIS				pmax	pmax		
	comp=Z,10µm,1.0s						
KIS				smax	smax		
	comp=N,13µm,0.8s						
KIS				smax	smax		
	comp=E,15µm,1.2s						
KIS	Kishinev	1.95	49	⇑iP	Pn	22 48 33.9	+0.7
	comp=E,4µm,0.6s						
KIS				iS	Sn	22 48 57.7	-0.2
LOT	Lotru	2.05	263	P	Pn	22 48 34.8	+0.3
LOT	Lotru	2.05	263	⇑iP	Pn	22 48 34.1	-0.4
LOT	Lotru	2.05	263	⇑iP	Pn	22 48 34.1	-0.4
LOT	Lotru	2.05	263	⇑iP	Pn	22 48 34.1	-0.4
ARCR	ARCALIA	2.08	311	⇓iP	Pn	22 48 35.2	+0.4
ARCR	ARCALIA	2.08	311	⇓iP	Pn	22 48 35.2	+0.4
ARCR	ARCALIA	2.08	311	⇓iP	Pn	22 48 35.2	+0.4
BURAR	Bucovina Array	2.12	333	⇓iP	Pn	22 48 37.3	+2.0
BURAR	Bucovina Array	2.12	333	⇓iP	Pn	22 48 37.3	+2.0
BURAR				iS	Sn	22 49 02.0	+0.2
BURAR	Bucovina Array	2.12	333	⇓iP	Pn	22 48 37.3	+2.0
BURAR				iS	Sn	22 49 02.0	+0.2
BUR04	Bucovina Ar. S	2.12	333	ePn	Pn	22 48 36.0	+0.6
BUR04	Bucovina Ar. S	2.12	333	ePn	Pn	22 48 36.0	+0.6
BUR08	Bucovina Ar. S	2.15	333	ePn	Pn	22 48 37.2	+1.5
BUR08	Bucovina Ar. S	2.15	333	ePn	Pn	22 48 37.2	+1.5
EFOR	EFORIE	2.18	139	⇓iP	Pn	22 48 35.8	-0.3
EFOR	EFORIE	2.18	139	⇓iP	Pn	22 48 35.8	-0.3
EFOR				iS	Sn	22 49 01.0	-2.1
EFOR	EFORIE	2.18	139	⇓iP	Pn	22 48 35.8	-0.3
EFOR				eS	Sn	22 49 01.9	-1.2
ZIMR		2.28	204	⇑iP	Pn	22 48 36.4	-1.0
ZIMR		2.28	204	⇑iP	Pn	22 48 36.4	-1.0
ZIMR				iS	Sn	22 49 02.5	-2.9
CJR	Cluj-Napoca	2.33	296	⇓iP	Pn	22 48 38.2	+0.1
CJR	Cluj-Napoca	2.33	296	⇓iP	Pn	22 48 38.2	+0.1
CJR	Cluj-Napoca	2.33	296	⇓iP	Pn	22 48 38.2	+0.1
PSN	Preselentsi	2.33	152	iP	Pn	22 48 37.9	-0.2
PSN	Preselentsi	2.33	152	iP	Pn	22 48 37.9	-0.2
MANR	Mangalia	2.37	144	⇓iP	Pn	22 48 38.0	-0.5
MANR	Mangalia	2.37	144	⇓iP	Pn	22 48 38.0	-0.5
MANR	Mangalia	2.37	144	⇓iP	Pn	22 48 38.0	-0.5
SZH	Strazhica	2.53	192	iP	Pn	22 48 39.8	-0.9
SZH	Strazhica	2.53	192	iP	Pn	22 48 39.8	-0.9
CHRU	Chernivtsi	2.60	349	eP	Pn	22 48 40.9	-0.6
CHRU				Pm		22 48 43.1	
CHRU				eS	Sn	22 49 12.6	-0.2
CHRU				Sm		22 49 14.8	
CHRU	Chernivtsi	2.60	349	P	Pn	22 48 42.2	+0.7
PRD	Provadia	2.60	168	iP	Pn	22 48 41.6	+0.1
PRD	Provadia	2.60	168	iP	Pn	22 48 41.6	+0.1
DEV	Deva	2.63	274	⇓iP	Pn	22 48 42.5	+0.7
DEV	Deva	2.63	274	⇓iP	Pn	22 48 42.5	+0.7
DEV				iS	Sn	22 49 13.0	-0.4
DEV	Deva	2.63	274	⇓iP	Pn	22 48 42.5	+0.7
DEV				iS	Sn	22 49 13.0	-0.4
SORM	Soroca	2.66	25	⇑iP	Pn	22 48 42.3	+0.1
SORM	Soroca	2.66	25	⇑iP	Pn	22 48 42.3	+0.1
SORM				iS	Sn	22 49 12.3	-1.8
SORM	Soroca	2.66	25	⇑iP	Pn	22 48 42.3	+0.1
SORM				iS	Sn	22 49 12.3	-1.8
SRE	Strehaia	2.67	247	⇑iP	Pn	22 48 41.8	-0.6
SRE	Strehaia	2.67	247	⇑iP	Pn	22 48 41.8	-0.6
SRE				iS	Sn	22 49 11.9	-2.5
SRE	Strehaia	2.67	247	⇑iP	Pn	22 48 41.8	-0.6
SRE				iS	Sn	22 49 11.9	-2.5
PVL	Pavlikeni	2.70	201	iP	Pn	22 48 43.8	+1.0
PVL	Pavlikeni	2.70	201	iP	Pn	22 48 43.8	+1.0
KSV	Kosov	2.79	338	eP	Pn	22 48 43.6	-0.4
KSV				Pm		22 48 47.6	
KSV				eS	Sn	22 49 17.9	+0.6
KSV				Sm		22 49 21.2	
KSV	Kosov	2.79	338	P	Pn	22 48 44.5	+0.5
KMPD	K-Podol’skiy	2.82	357	eP	Pn	22 48 43.4	-1.0
KMPD				eS	Sn	22 49 15.5	-2.5
RAKU	Rahkiv	2.85	324	eP	Pn	22 48 44.9	+0.1
RAKU				Pm		22 48 47.5	
RAKU				eS	Sn	22 49 19.5	+0.9
RAKU				Sm		22 49 20.9	
NSLU	Nyzhne Selyshc	2.88	329	eP	Pn	22 48 49.8	+4.7
NSLU				Pm		22 48 52.4	
NSLU				eS	Sn	22 49 31.2	+12
NSLU				Sm		22 49 55.3	
NDNU	Novodnistrovsk	2.89	9	eP	Pn	22 48 44.3	-1.0
NDNU				Pm		22 48 46.0	
NDNU				eS	Sn	22 49 17.1	-2.5
NDNU				Sm		22 49 19.4	
NDNU	Novodnistrovsk	2.89	9	P	Pn	22 48 44.3	-1.0
BMR	Baia Mare	2.91	313	⇓iP	Pn	22 48 46.1	+0.6
BMR	Baia Mare	2.91	313	⇓iP	Pn	22 48 46.1	+0.6
BMR	Baia Mare	2.91	313	⇓iP	Pn	22 48 46.1	+0.6
DRGR		2.93	292	⇓iP	Pn	22 48 45.3	-0.6
DRGR		2.93	292	⇓iP	Pn	22 48 45.3	-0.6
DRGR				iS	Sn	22 49 19.1	-1.5
DRGR		2.93	292	⇓iP	Pn	22 48 45.3	-0.6
DRGR				iS	Sn	22 49 19.1	-1.5
HERR	Herculane	3.11	255	⇑iP	Pn	22 48 47.4	-0.8
HERR	Herculane	3.11	255	⇑iP	Pn	22 48 47.4	-0.8
HERR	Herculane	3.11	255	⇑iP	Pn	22 48 47.4	-0.8
JMB	Yambol	3.28	181	iP	Pn	22 48 49.3	-1.2
JMB	Yambol	3.28	181	iP	Pn	22 48 49.3	-1.2
STNU	Starunia	3.31	334	eP	Pn	22 48 51.3	+0.5
STNU				eS	Sn	22 49 30.4	+0.9
KORU	Korolevo	3.41	316	eP	Pn	22 48 52.7	+0.5
KORU	Korolevo	3.41	316	P	Pn	22 48 51.1	-1.1
HORU	Horodok	3.47	358	eP	Pn	22 48 52.4	-0.6
HORU				eS	Sn	22 49 32.7	-0.7
HORU	Horodok	3.47	358	P	Pn	22 48 53.2	+0.2
MEZ	Mezhgor’ye	3.50	323	eP	Pn	22 48 52.8	-0.6
MEZ	Mezhgor’ye	3.50	323	P	Pn	22 48 54.2	+0.8
BZS	Buzias	3.53	270	⇓iP	Pn	22 48 53.5	-0.3
BZS	Buzias	3.53	270	⇓iP	Pn	22 48 53.5	-0.3
BZS	Buzias	3.53	270	⇓iP	Pn	22 48 53.5	-0.3
BRIU	Brid	3.59	318	eP	Pn	22 48 55.3	+0.7
BRIU				Pm		22 48 56.0	
BRIU				eS	Sn	22 49 37.1	+0.9
BRIU				Sm		22 49 43.1	
BRIU	Brid	3.59	318	P	Pn	22 48 53.2	-1.4
MDVR	Moldovita	3.62	256	⇑iP	Pn	22 48 54.4	-0.7
MDVR	Moldovita	3.62	256	⇑iP	Pn	22 48 54.4	-0.7
MDVR	Moldovita	3.62	256	⇑iP	Pn	22 48 54.4	-0.7
LTVH	Lˆ'tavˆ'rtes,	3.67	298	⇑ePn	Pn	22 48 56.9	+1.3
LTVH				eSb	Sn	22 49 54.6	+17
TRPA	Tarpa	3.69	312	⇑iP	Pn	22 48 55.9	0.0
TRPA	Tarpa	3.69	312	⇑iP	Pn	22 48 55.9	0.0
TRPA	Tarpa	3.69	312	ePn	Pn	22 48 56.0	0.0
TRPA	Tarpa	3.69	312	⇑iP	Pn	22 48 55.9	0.0
BERU	Beregovo	3.70	314	eP	Pn	22 48 56.3	+0.2
BERU				eS	Sn	22 49 38.5	-0.4
BERU	Beregovo	3.70	314	P	Pn	22 48 55.7	-0.4
DIM	Dimitrovgrad	3.78	193	iP	Pn	22 48 56.5	-0.7
DIM	Dimitrovgrad	3.78	193	iP	Pn	22 48 56.5	-0.7
MUKU	Mukachevo	3.83	316	eP	Pn	22 48 57.3	-0.5
MUKU	Mukachevo	3.83	316	P	Pn	22 48 56.4	-1.4
EDRB	Edirne	3.90	179	P	Pn	22 48 58.1	-0.7
PLD	Plovdiv	3.90	202	P	Pn	22 48 57.7	-1.1
VTS	Vitosha	4.01	219	⇓iP	Pn	22 48 59.0	-1.4
VTS	Vitosha	4.01	219	⇓iP	Pn	22 48 59.0	-1.4
VTS	Vitosha	4.01	219	ePn	Pn	22 48 58.9	-1.4
VTS	Vitosha	4.01	219	eP	Pn	22 48 58.9	-1.4
VTS	Vitosha	4.01	219	⇓iP	Pn	22 48 59.0	-1.4
SHIU	Shidnytsya	4.13	329	eP	Pn	22 49 02.6	+0.7
SHIU	Shidnytsya	4.13	329	P	Pn	22 49 02.9	+1.0
UZH	Uzhgorod	4.14	316	eP	Pn	22 49 02.0	0.0
UZH	Uzhgorod	4.14	316	eP	Pn	22 49 01.0	-1.0
UZH				eS	Sn	22 49 48.4	-1.1
UZH				smax	smax		
	comp=N,18nm,0.8s						
UZH	Uzhgorod	4.14	316	P	Pn	22 49 02.0	0.0
UZH				eS	Sn	22 49 48.4	-1.1
	comp=N,18nm,0.8s						
PHSR	Pinarhisar	4.16	171	P	Pn	22 49 00.7	-1.6
STZU	Stuzhytsa	4.27	322	eP	Pn	22 49 04.1	+0.5
STZU				Pm		22 49 06.3	
STZU				eS	Sn	22 49 53.9	+1.5
STZU				Sm		22 50 10.7	
CTYL	Yalikoy Yolu	4.43	164	P	Pn	22 49 04.8	-1.1
LVV	L’vov	4.44	337	eP	Pn	22 49 06.0	0.0
LVV				Pm		22 49 09.8	
LVV				eS	Sn	22 49 57.5	+0.8
LVV				Sm		22 50 00.4	
LVV	L’vov	4.44	337	eP	Pn	22 49 07.1	+1.1
LVV				eS	Sn	22 49 57.7	+1.0
LVV	L’vov	4.44	337	P	Pn	22 49 07.1	+1.1
LVV				eS	Sn	22 49 57.7	+1.0
SLVT	Silivri	4.65	165	P	Pn	22 49 08.2	-0.7
MMB	Musomiste	4.67	208	iP	Pn	22 49 08.9	-0.2
MMB	Musomiste	4.67	208	iP	Pn	22 49 08.9	-0.2
RDO	Rodhopi	4.67	190	P	Pn	22 49 07.4	-1.7
CRLT	Corlu	4.68	170	P	Pn	22 49 08.8	-0.5
CTKS	Kestanelik-??a	4.71	163	P	Pn	22 49 08.0	-1.6
KWP	Kalwaria Pacla	4.71	327	eP	Pn	22 49 11.3	+1.7
KWP	Kalwaria Pacla	4.71	327	ePn	Pn	22 49 11.4	+1.7
KWP	Kalwaria Pacla	4.71	327	⇓eP	Pn	22 49 11.3	+1.7
KWP	Kalwaria Pacla	4.71	327	⇓eP	Pn	22 49 11.3	+1.7
CRVS	Cervenica-Dubn	4.74	314	eP	Pn	22 49 10.7	+0.7
CRVS	Cervenica-Dubn	4.74	314	ePN	Pn	22 49 10.7	+0.7
CRVS	Cervenica-Dubn	4.74	314	eP	Pn	22 49 10.7	+0.7
TKR	Tekirdag	4.80	172	P	Pn	22 49 10.3	-0.5
KLYT	Kilyos	4.81	158	P	Pn	22 49 09.2	-1.9
FRGS	Fruska Gora	4.85	265	ePn	Pn	22 49 11.7	+0.1
ALN	Alexandroupoli	4.87	185	P	Pn	22 49 10.3	-1.5
ALN	Alexandroupoli	4.87	185	ePn	Pn	22 49 10.5	-1.3
ALN	Alexandroupoli	4.87	185	eP	Pn	22 49 10.5	-1.3
ALN	Alexandroupoli	4.87	185	eP	Pn	22 49 10.5	-1.3
KESN	Edirne-Kesan	4.92	180	iP	Pn	22 49 11.0	-1.8
KESN	Edirne-Kesan	4.92	180	P	Pn	22 49 11.0	-1.8
SBT3	Marmara-Eregli	4.95	168	P	Pn	22 49 11.9	-0.9
ISK	Istanbul-Kandi	5.00	159	P	Pn	22 49 12.2	-1.3
KAVV	Kandilli-Istan	5.00	159	P	Pn	22 49 12.2	-1.3
DIVS	Divibare	5.01	253	ePn	Pn	22 49 12.2	-1.6
ENEZ	Enez	5.02	184	P	Pn	22 49 12.7	-1.1
KECS	Kecovo	5.02	305	eP	Pn	22 49 14.3	+0.5
KECS	Kecovo	5.02	305	ePN	Pn	22 49 14.2	+0.5
KECS	Kecovo	5.02	305	eP	Pn	22 49 14.3	+0.5
SART	Tekirdag	5.07	175	iP	Pn	22 49 12.8	-1.8
SART	Tekirdag	5.07	175	P	Pn	22 49 12.8	-1.8
RKY	Sarkoy-Tekirda	5.07	175	P	Pn	22 49 13.4	-1.2
ERIK	Erikli-Kesan	5.07	181	P	Pn	22 49 13.2	-1.4
SILT	Sile	5.08	154	P	Pn	22 49 13.2	-1.4
SEV	Sevastopol’	5.11	101	P	Pn	22 49 13.1	-1.8
SEV				Pm		22 49 14.7	
SEV				S	Sn	22 50 10.2	-2.5
SEV				Sm		22 50 12.0	
SEV	Sevastopol’	5.11	101	iP	Pn	22 49 13.1	-1.8
SEV				eS	Sn	22 50 10.2	-2.5
SEV	Sevastopol’	5.11	101	iP	Pn	22 49 13.1	-1.8
SEV				eS	Sn	22 50 10.2	-2.5
PSZ	Piszkesteto	5.12	298	⇓iP	Pn	22 49 13.8	-1.4
PSZ	Piszkesteto	5.12	298	⇓iP	Pn	22 49 13.8	-1.4
PSZ	Piszkesteto	5.12	298	ePn	Pn	22 49 14.4	-0.8
PSZ	Piszkesteto	5.12	298	ePn	Pn	22 49 14.4	-0.8
PSZ	Piszkesteto	5.12	298	eP	Pn	22 49 14.4	-0.8
PSZ	Piszkesteto	5.12	298	eP	Pn	22 49 14.4	-0.8
TEKS	Tekeris	5.18	259	ePn	Pn	22 49 15.0	-1.0
STIP	Stip	5.18	220	⇓iPn	Pn	22 49 12.1	-4.0
STIP				eSg	Sn	22 50 07.2	-7.5
AK11	Malin Array Si	5.21	18	ePn	Pn	22 49 15.4	-1.0
AK11	Malin Array Si	5.21	18	ePn	Pn	22 49 15.4	-1.0
KIEV	Kiev	5.24	18	ePn	Pn	22 49 16.6	-0.1
KIEV	Kiev	5.24	18	iP	Pn	22 49 16.9	+0.1
	SNR=13						
KIEV	Kiev	5.24	18	deP	Pn	22 49 16.8	+0.1
KIEV				pmax	pmax		
	comp=Z,16nm,0.7s						
KIEV	Kiev	5.24	18	eP	Pn	22 49 16.8	+0.1
	comp=Z,16nm,0.7s						
AKASG	Malin Array Be	5.25	18	P	Pn	22 49 16.3	-0.5
	comp=Z,31nm,0.3s,baz=207,slow=12,SNR=56						
AKASG				S	Sn	22 50 12.3	-3.8
	comp=Z,213nm,0.3s,baz=200,slow=22,SNR=6.4						
AKBB	Malin Array Si	5.25	18	ePn	Pn	22 49 17.2	+0.4
AKBB	Malin Array Si	5.25	18	eP	Pn	22 49 17.2	+0.4
AKBB	Malin Array Si	5.25	18	eP	Pn	22 49 17.2	+0.4
KAND	Kocaeli-Kandir	5.32	150	iP	Pn	22 49 15.9	-1.9
KAND	Kocaeli-Kandir	5.32	150	P	Pn	22 49 15.9	-1.9
SIM	Simferopol’	5.32	96	P	Pn	22 49 15.3	-2.6
SIM				Pm		22 49 17.0	
SIM				S	Sn	22 50 14.0	-3.9
SIM				Sm		22 50 18.1	
SIM	Simferopol’	5.32	96	c iP	Pn	22 49 16.5	-1.4
SIM				eS	Sn	22 50 15.5	-2.4
SIM				pmax	pmax		
	comp=Z,198nm,0.3s						
SIM				smax	smax		
	comp=E,366µm,0.9s						
SIM				MLR	MLR		
	comp=Z,60nm,15.2s						
SIM	Simferopol’	5.32	96	iP	Pn	22 49 16.5	-1.4
	comp=Z,198nm,0.3s						
VAY	Valandovo	5.33	215	iPn	Pn	22 49 17.2	-0.8
KNT	Kendrikon	5.33	212	P	Pn	22 49 17.5	-0.6
GELI	Tayfur-Gelibol	5.35	181	P	Pn	22 49 16.8	-1.5
SBT5	Esenkoy-Cinarc	5.37	162	P	Pn	22 49 17.6	-0.8
LPK	Lapseki	5.37	179	P	Pn	22 49 17.6	-1.0
HRT	Hereke	5.39	155	P	Pn	22 49 17.9	-1.0
YAL	Yalta	5.46	101	P	Pn	22 49 18.1	-1.6
YAL				Pm		22 49 26.9	
YAL				S	Sn	22 50 18.0	-3.2
YAL				Sm		22 50 19.7	
YAL	Yalta	5.46	101	⇓iP	Pn	22 49 18.1	-1.6
YAL				eS	Sn	22 50 18.0	-3.2
YAL	Yalta	5.46	101	iP	Pn	22 49 18.1	-1.6
EDC	Edincik	5.47	170	P	Pn	22 49 18.0	-1.9
KNL	Bal˜–kesir	5.51	173	iP	Pn	22 49 19.4	-1.1
YLV	Yalova	5.54	158	P	Pn	22 49 19.9	-1.1
ALU	Alushta	5.58	98	P	Pn	22 49 20.6	-0.7
ALU				Pm		22 49 20.9	
ALU				S	Sn	22 50 22.0	-2.1
ALU				Sm		22 50 22.0	
ALU	Alushta	5.58	98	⇓iP	Pn	22 49 20.6	-0.7
ALU				eS	Sn	22 50 22.0	-2.1
ALU	Alushta	5.58	98	iP	Pn	22 49 20.6	-0.7
GADA	Gvkgeada	5.58	186	P	Pn	22 49 21.0	-0.4
MORH	Mˆ‡rˆ¡gy, Hung	5.60	278	ePn	Pn	22 49 21.9	+0.2
KCTX	Karacabey (Bur	5.62	167	P	Pn	22 49 21.5	-0.5
SAUV	Serdivan-Sakar	5.68	151	P	Pn	22 49 21.3	-1.4
GRG	Griva	5.70	214	eP	Pn	22 49 22.9	-0.2
SPNC	Sapanca-Adapaz	5.72	151	eP	Pn	22 49 22.9	-0.4
GONE	Gonen-Balikesi	5.75	172	eP	Pn	22 49 22.7	-1.0
HORT	Hortiatis	5.76	208	eP	Pn	22 49 22.7	-1.3
ADVT	Abdulvahap	5.77	156	eP	Pn	22 49 23.1	-0.9
KRUS	Krusevo	5.88	224	iPn	Pn	22 49 25.1	-0.4
GEYV	SAKARYA_Geyve	5.89	152	iP	Pn	22 49 24.6	-1.1
BOZC	Bozcaada	5.92	184	eP	Pn	22 49 25.6	-0.4
BOZC	Bozcaada	5.92	184	iP	Pn	22 49 25.5	-0.4
EZN	Ezine	5.92	182	eP	Pn	22 49 24.9	-1.1
LANS	Liptovska Anna	5.95	308	eP	Pn	22 49 27.2	+0.9
LANS	Liptovska Anna	5.95	308	ePN	Pn	22 49 27.2	+0.9
LANS	Liptovska Anna	5.95	308	eP	Pn	22 49 27.2	+0.9
SUDU	Sudak	5.95	95	P	Pn	22 49 25.0	-1.3
SUDU				Pm		22 49 45.4	
SUDU				S	Sn	22 50 29.9	-3.2
SUDU				Sm		22 50 32.7	
SUDU	Sudak	5.95	95	eP	Pn	22 49 25.2	-1.1
SUDU				eS	Sn	22 50 29.9	-3.2
SUDU	Sudak	5.95	95	eP	Pn	22 49 25.2	-1.1
VYHS	Vyhne	6.00	300	eP	Pn	22 49 27.3	+0.2
VYHS	Vyhne	6.00	300	ePN	Pn	22 49 27.3	+0.2
VYHS	Vyhne	6.00	300	eP	Pn	22 49 27.3	+0.2
BAYC	CANAKKALE_Bayr	6.00	181	iP	Pn	22 49 25.5	-1.7
CSKK	Csˆ‡kako	6.01	289	⇑ePn	Pn	22 49 28.7	+1.5
CAVI	Cavuskoy	6.01	156	eP	Pn	22 49 26.6	-0.7
GULT	Gulveren	6.02	151	eP	Pn	22 49 26.8	-0.6
FEO	Feodosiya	6.20	94	P	Pn	22 49 28.5	-1.2
FEO				Pm		22 49 36.1	
FEO				S	Sn	22 50 38.5	-0.6
FEO				Sm		22 50 40.5	
FEO	Feodosiya	6.20	94	⇓eP	Pn	22 49 28.5	-1.2
FEO				eS	Sn	22 50 38.5	-0.6
FEO	Feodosiya	6.20	94	eP	Pn	22 49 28.5	-1.2
FEO				eS	Sn	22 50 38.5	-0.6
MDUB	Mudurnu	6.23	146	eP	Pn	22 49 29.7	-0.6
FNA	Florina	6.28	220	ePn	Pn	22 49 30.7	-0.2
FNA	Florina	6.28	220	eP	Pn	22 49 30.7	-0.2
FNA	Florina	6.28	220	eP	Pn	22 49 30.7	-0.2
DURS	Dursunbey	6.29	167	iP	Pn	22 49 29.0	-2.1
AUBOZ	BOZOYUK	6.34	156	iP	Pn	22 49 32.1	+0.3
STEP	BALIKESIR_Sava	6.41	173	iP	Pn	22 49 30.6	-2.2
LIT	Litokhoron	6.42	210	ePn	Pn	22 49 31.6	-1.2
LIT	Litokhoron	6.42	210	eP	Pn	22 49 31.6	-1.2
LIT	Litokhoron	6.42	210	eP	Pn	22 49 31.6	-1.2
OJC	Ojcow	6.42	317	eP	Pn	22 49 32.6	0.0
OJC				eS	Sn	22 50 51.7	+7.2
OJC	Ojcow	6.42	317	ePn	Pn	22 49 33.1	+0.4
OJC	Ojcow	6.42	317	eP	Pn	22 49 33.1	+0.4
OJC	Ojcow	6.42	317	eP	Pn	22 49 33.1	+0.4
AYVA	Ayvalik	6.43	180	iP	Pn	22 49 28.4	-4.5
BORA	Eskisehir	6.49	153	iP	Pn	22 49 32.7	-1.2
SIGR	SIGRI	6.56	185	eP	Pn	22 49 33.6	-1.0
TVSB	Tavsanli	6.62	161	eP	Pn	22 49 34.9	-0.8
DKL	Dikili	6.67	178	eP	Pn	22 49 35.2	-1.0
JAVC	Velka Javorina	6.86	300	ePn	Pn	22 49 39.7	+1.0
JAVC	Velka Javorina	6.86	300	ePN	Pn	22 49 39.7	+1.0
AUMIH	MIHALICIK	6.86	147	eP	Pn	22 49 38.2	-0.7
DEMI	Demirci	6.87	166	iP	Pn	22 49 37.3	-1.7
SMOL	Smolenice	6.88	297	eP	Pn	22 49 39.2	+0.3
SMOL	Smolenice	6.88	297	ePN	Pn	22 49 39.2	+0.3
SMOL	Smolenice	6.88	297	eP	Pn	22 49 39.2	+0.3
SIMA	Simav-Kutahya	6.88	165	eP	Pn	22 49 38.7	-0.4
AKHS	Akhisar	6.92	172	iP	Pn	22 49 37.3	-2.2
MODS	Modra-Piesok	6.92	296	eP	Pn	22 49 40.1	+0.6
MODS	Modra-Piesok	6.92	296	ePN	Pn	22 49 40.1	+0.6
MODS	Modra-Piesok	6.92	296	eP	Pn	22 49 40.1	+0.6
ILGA	Ilgaz	6.96	130	ePn	Pn	22 49 40.0	-0.3
ILGA	Ilgaz	6.96	130	ePn	Pn	22 49 40.0	-0.3
GDZ	Gediz	6.97	162	iP	Pn	22 49 38.8	-1.6
STON	Ston	7.04	249	ePn	Pn	22 49 42.1	+1.1
STON				Sn	Sn	22 50 58.5	-1.0
OKC	Ostrava-Krasne	7.04	309	ePN	Pn	22 49 40.7	-0.4
OKC	Ostrava-Krasne	7.04	309	eP	Pn	22 49 40.7	-0.4
OKC	Ostrava-Krasne	7.04	309	eP	Pn	22 49 40.7	-0.4
BEL	Belsk	7.22	330	eP	Pn	22 49 44.4	+0.9
BEL	Belsk	7.22	330	eP	Pn	22 49 44.4	+0.9
BEL	Belsk	7.22	330	eP	Pn	22 49 44.4	+0.9
AUSIV	SIVRIHISAR	7.26	149	eP	Pn	22 49 44.0	-0.3
MORC	Moravsky Berou	7.34	307	ePn	Pn	22 49 44.2	-1.1
MORC	Moravsky Berou	7.34	307	eP	Pn	22 49 44.2	-1.1
MORC	Moravsky Berou	7.34	307	eP	Pn	22 49 44.2	-1.1
MORC	Moravsky Berou	7.34	307	ePN	Pn	22 49 44.6	-0.7
URLA	Izmir	7.38	180	eP	Pn	22 49 45.4	-0.4
MANT	Manisa	7.39	168	iP	Pn	22 49 43.3	-2.8
MANT	Manisa	7.39	168	ePn	Pn	22 49 44.6	-1.4
MANT	Manisa	7.39	168	ePn	Pn	22 49 44.7	-1.4
ANTO	Ankara	7.41	140	ePn	Pn	22 49 45.2	-1.0
ANTO	Ankara	7.41	140	ePn	Pn	22 49 45.2	-1.0
BR231	Keskin MP Arra	7.42	141	ePn	Pn	22 49 45.2	-1.2
BR231	Keskin MP Arra	7.42	141	ePn	Pn	22 49 45.2	-1.2
AGG	Agios Georgios	7.44	207	ePn	Pn	22 49 46.1	-0.5
AGG	Agios Georgios	7.44	207	eP	Pn	22 49 46.2	-0.5
AGG	Agios Georgios	7.44	207	eP	Pn	22 49 46.2	-0.5
ANN	Anapa	7.66	93	eP	Pn	22 49 46.5	-3.1
ANN				eS	Sn	22 51 07.9	-6.8
ANN				pmax	pmax		
	comp=Z,97nm,1.6s						
VRAC	Vranov	7.69	301	P	Pn	22 49 50.1	+0.3
	comp=Z,0.7nm,0.3s,baz=108,slow=12,SNR=33						
VRAC				LR	LR	22 53 36.8	
	comp=Z,25nm,19.1s,baz=94,slow=44						
VRAC	Vranov	7.69	301	ePN	Pn	22 49 50.2	+0.3
KRUC	Moravsky	7.71	299	ePn	Pn	22 49 50.2	0.0
KRUC	Moravsky	7.71	299	ePN	Pn	22 49 50.2	0.0
CONA	Conrad Observa	7.72	290	iPn	Pn	22 49 49.8	-0.6
	comp=Z,0.5nm,0.2s						
CONA	Conrad Observa	7.72	290	Pn	Pn	22 49 49.8	-0.6
	comp=Z,0.5nm,0.2s						
ARSA	Arzberg	7.83	285	ePn	Pn	22 49 52.7	+0.9
	comp=Z,1.0nm,0.3s						
ARSA	Arzberg	7.83	285	Pn	Pn	22 49 52.7	+0.9
	comp=Z,1.0nm,0.3s						
BR131	Keskin Array S	7.91	137	ePn	Pn	22 49 51.6	-1.6
BR131	Keskin Array S	7.91	137	ePn	Pn	22 49 51.6	-1.6
BRTR	Keskin Array B	7.91	137	P	Pn	22 49 51.5	-1.6
	comp=Z,1.6nm,0.3s,baz=0.6,slow=25,SNR=56						
BRTR				S	Sn	22 51 18.2	-2.9
	baz=309,slow=20,SNR=2.1						
KRLC	Kraliky	7.92	307	ePN	Pn	22 49 52.4	-0.7
KRLC	Kraliky	7.92	307	eP	Pn	22 49 52.4	-0.7
KRLC	Kraliky	7.92	307	eP	Pn	22 49 52.4	-0.7
SOKA	Soboth	8.12	281	iPn	Pn	22 49 56.7	+0.9
	comp=Z,5.4nm,0.9s,SNR=6.1						
SOKA	Soboth	8.12	281	Pn	Pn	22 49 56.7	+0.9
	comp=Z,5.4nm,0.9s,SNR=6.1						
DPC	Dobruska-Polom	8.31	307	ePN	Pn	22 49 58.2	-0.2
DPC	Dobruska-Polom	8.31	307	eP	Pn	22 49 58.2	-0.2
DPC	Dobruska-Polom	8.31	307	eP	Pn	22 49 58.2	-0.2
ISP	Isparta	8.43	159	ePn	Pn	22 49 59.0	-1.1
ISP	Isparta	8.43	159	eP	Pn	22 49 59.0	-1.1
ISP	Isparta	8.43	159	eP	Pn	22 49 59.0	-1.1
OBKA	Obir	8.45	280	iPn	Pn	22 50 01.1	+0.9
	comp=Z,1.2nm,0.4s						
OBKA	Obir	8.45	280	Pn	Pn	22 50 01.1	+0.9
	comp=Z,1.2nm,0.4s						
UPC	Upice	8.56	308	ePN	Pn	22 50 01.6	-0.1
UPC	Upice	8.56	308	eP	Pn	22 50 01.6	-0.1
UPC	Upice	8.56	308	eP	Pn	22 50 01.6	-0.1
SUW	Suwalki	8.57	346	eP	Pn	22 50 00.8	-1.0
SUW				eS	Sn	22 51 31.8	-4.8
SUW	Suwalki	8.57	346	ePn	Pn	22 50 00.8	-1.0
SUW	Suwalki	8.57	346	eP	Pn	22 50 00.8	-1.0
SUW				eS	Sn	22 51 31.8	-4.8
SUW	Suwalki	8.57	346	eP	Pn	22 50 00.8	-1.0
KSP	Ksiaz	8.58	310	eP	Pn	22 50 01.2	-0.8
KSP	Ksiaz	8.58	310	eP	Pn	22 50 01.2	-0.8
KSP	Ksiaz	8.58	310	eP	Pn	22 50 01.2	-0.8
YER	Yerkesik	8.69	171	eP	Pn	22 50 02.6	-1.0
APE	Apeiranthos	8.71	186	⇓eP	Pn	22 50 02.9	-1.0
APE	Apeiranthos	8.71	186	eP	Pn	22 50 02.9	-1.0

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MOA   Molln             8.76 288 i Pn   Pn     22 50 05.4 +1.0
            comp=Z,0.6nm,0.3s
MOA   Molln             8.76 288   Pn   Pn     22 50 05.4 +1.0
            comp=Z,0.6nm,0.3s
MICGM Minsk             8.80   5 eP     Pn     22 50 03.0 -1.9
MICGM                            eS     Sn     22 51 33.0 -9.2
MICGM                            esS           22 51 53.0
MNK   Minsk             8.80   5 eP     Pn     22 50 03.0 -1.9
MNK                              e             22 51 53.0
SUTC  Sutluce-Ispart    8.88 157 eP     Pn     22 50 05.4 -0.8
GOPC  GO Pecny, Ondr    9.00 302 ePN    Pn     22 50 07.6 -0.1
GOPC  GO Pecny, Ondr    9.00 302 eP     Pn     22 50 07.6 -0.1
GOPC  GO Pecny, Ondr    9.00 302 eP     Pn     22 50 07.6 -0.1
NACGM Naroch            9.17   0 eP     Pn     22 50 08.0 -1.9
NACGM                            eS     Sn     22 51 42.0 -9.1
PRU   Pruhonice         9.18 302 ePN    Pn     22 50 09.8 -0.3
PRU   Pruhonice         9.18 302 eP     Pn     22 50 09.8 -0.3
PRA   Prague            9.28 302 ePN    Pn     22 50 13.0 +1.6
PRA   Prague            9.28 302 eP     Pn     22 50 13.0 +1.6
PRA   Prague            9.28 302 eP     Pn     22 50 13.0 +1.6
KBA   Koelnbreinsper    9.29 283 i Pn   Pn     22 50 14.0 +2.2
            comp=Z,3.4nm,0.6s
KBA   Koelnbreinsper    9.29 283   Pn   Pn     22 50 14.0 +2.2
            comp=Z,3.4nm,0.6s
GEA0  GERESS Array S    9.33 294 ePn    Pn     22 50 12.9 +0.7
GEA0  GERESS Array S    9.33 294 ePn    Pn     22 50 12.9 +0.7
GEC2  GERESS Array S    9.33 294 ePn    Pn     22 50 13.5 +1.3
GEC2  GERESS Array S    9.33 294 eP     Pn     22 50 13.5 +1.3
GEC2  GERESS Array S    9.33 294 eP     Pn     22 50 13.5 +1.3
GERES GERESS Array B    9.33 294   P    Pn     22 50 12.8 +0.6
            comp=Z,0.4nm,0.3s,baz=102,slow=13,SNR=36
GERES GERESS Array B    9.33 294 eP     Pn     22 50 14.0 +1.8
PVCC  Panska Ves        9.39 305 ePN    Pn     22 50 13.2 +0.3
PVCC  Panska Ves        9.39 305 eP     Pn     22 50 13.2 +0.3
KHC   Kasperske Hory    9.48 296 ePN    Pn     22 50 16.2 +1.9
KHC   Kasperske Hory    9.48 296 ePn    Pn     22 50 15.3 +1.0
KHC   Kasperske Hory    9.48 296 eP     Pn     22 50 16.2 +1.9
KHC   Kasperske Hory    9.48 296 ePn    Pn     22 50 15.3 +1.0
KHC   Kasperske Hory    9.48 296 eP     Pn     22 50 16.2 +1.9
IDID  Didziasalis       9.58   0 eP     Pn     22 50 13.3 -2.1
IDID                               IAmb IAmb   22 50 15.1
            comp=Z,32nm,0.6s
IDID  Didziasalis       9.58   0 eP     Pn     22 50 13.3 -2.1
IIGN  Ignalina          9.62 359 eP     Pn     22 50 13.8 -2.2
IIGN                               IAmb IAmb   22 50 14.9
            comp=Z,33nm,0.4s
GKP   Gorka Klasztor    9.70 324 eP     Pn     22 50 16.7 -0.4
GKP   Gorka Klasztor    9.70 324 eP     Pn     22 50 16.7 -0.4
ABTA  Abfaltersbach     9.85 281 ePn    Pn     22 50 21.8 +2.5
            comp=Z,2.8nm,0.8s
BRG   Berggiesshubel    9.90 306 eP     Pn     22 50 18.6 -1.2
            comp=Z,15nm,1.7s
BRG   Berggiesshubel    9.90 306 eP     Pn     22 50 18.6 -1.2
BRG                                pmax pmax
            comp=Z,15nm,1.7s
VORD  Divnogorie        9.90  54 eP     Pn     22 50 19.7 -0.1
VORD                             eS     Sn     22 52 00.9 -7.9
VORD                               pmax pmax
            comp=Z,30nm,1.0s
VORD                               smax smax
            comp=E,370nm,0.9s
VORD  Divnogorie        9.90  54 eP     Pn     22 50 19.7 -0.1
            comp=E,30nm,1.0s
VSR   Storozhevoye      9.94  52 eP     Pn     22 50 19.7 -0.7
VSR                              eS     Sn     22 52 04.1 -5.9
VSR                                pmax pmax
            comp=Z,7.0nm,0.4s
VSR                                smax smax
            comp=N,560nm,1.1s
VSR   Storozhevoye      9.94  52 eP     Pn     22 50 19.7 -0.7
            comp=N,7.0nm,0.4s
IDI   Anoyia           10.53 188   P    Pn     22 50 27.4 -1.2
            comp=N,0.8nm,0.3s,baz=321,slow=15,SNR=9.2
CLL   Collm            10.62 307 i P    Pn     22 50 28.6 -1.0
CLL   Collm            10.62 307 i P    Pn     22 50 28.6 -1.0
CLL   Collm            10.62 307 i P    Pn     22 50 28.6 -1.0
MACK  Trabzon          10.69 112 i P    Pn     22 50 27.7 -2.9
KELT  Kelkit           10.79 117 i P    Pn     22 50 30.4 -1.9
MOTA  Moosalm          10.83 284 ePn    Pn     22 50 34.7 +2.1
MOTA  Moosalm          10.83 284   Pn   Pn     22 50 34.7 +2.1
RETA  Reutte           11.07 285 i Pn   Pn     22 50 36.6 +0.8
            comp=N,1.0nm,0.5s
RETA  Reutte           11.07 285   Pn   Pn     22 50 36.6 +0.8
            comp=N,1.0nm,0.5s
FETA  Feichten         11.08 282 ePn    Pn     22 50 38.4 +2.5
            comp=N,2.1nm,0.7s
FETA  Feichten         11.08 282   Pn   Pn     22 50 38.4 +2.5
            comp=N,2.1nm,0.7s
GRFO  Grafenberg       11.12 296 ePn    Pn     22 50 36.6 +0.3
GRFO  Grafenberg       11.12 296 eP     Pn     22 50 36.6 +0.3
GRFO  Grafenberg       11.12 296 eP     Pn     22 50 36.6 +0.3
OBN   Obninsk          11.30  30 ePn    Pn     22 50 35.5 -3.1
            comp=N,140nm,0.4s
OBN   Obninsk          11.30  30⇓iP     Pn     22 50 35.1 -3.5
OBN                                pmax pmax
            comp=Z,4.0nm,0.3s
OBN   Obninsk          11.30  30 ePn    Pn     22 50 35.5 -3.1
            comp=Z,140nm,0.4s
KIV   Kislovodsk       11.52  93 eP     Pn     22 50 43.0 +1.2
KIV                              eS     Sn     22 52 50.3 +1.7
KIV                                pmax pmax
            comp=Z,7.0nm,1.0s
KIV   Kislovodsk       11.52  93 eP     Pn     22 50 43.0 +1.2
            comp=Z,7.0nm,1.0s
KIV                              eS     Sn     22 52 50.3 +1.7
KVAR  Kislovodsk Arr   11.53  93   P    Pn     22 50 42.5 +0.6
            baz=287,slow=19,SNR=3.6
KVAR                               S    Sn     22 52 45.1 -3.6
            baz=131,slow=14,SNR=3.4
KOPT  Kop Dagi         11.65 115 i P    Pn     22 50 44.5 +0.8
DAVOX Davos/Dischmat   11.66 281   P    Pn     22 50 47.8 +4.0
            comp=Z,0.1nm,0.3s,baz=170,slow=18,SNR=2.5
DAVOX                              LR   LR     22 56 23.2
            comp=Z,61nm,18.4s,baz=68,slow=44
DAVA  Damuels          11.66 284 ePn    Pn     22 50 44.6 +0.9
            comp=Z,2.1nm,0.5s
DAVA  Damuels          11.66 284   Pn   Pn     22 50 44.6 +0.9
            comp=Z,2.1nm,0.5s
KBZ   Khabaz           11.73  94   P    Pn     22 50 44.3 -0.1
            comp=Z,0.2nm,0.3s,baz=274,slow=6.8,SNR=3.5
KBZ                                S    Sn     22 52 48.1 -5.2
            comp=Z,0.5nm,0.3s,baz=333,slow=16,SNR=2.2
DBAD  Bademkaya        11.92 108 i P    Pn     22 50 43.7 -3.4
BSD   Bornholm Skovb   11.98 326 i P    Pn     22 50 46.5 -1.2
BSD                              eS     Sn     22 52 55.5 -3.8
BSD   Bornholm Skovb   11.98 326 i P    Pn     22 50 46.5 -1.2
BSD                              eS     Sn     22 52 55.5 -3.8
ARTV  Artvin           11.99 107 i P    Pn     22 50 45.1 -3.1
DDEM  Demirkent        12.01 108 i P    Pn     22 50 46.8 -1.5
DAGI  Agillar          12.04 107 i P    Pn     22 50 46.4 -2.2
MOS   Moscow           12.16  31 eP     P      22 50 57.4 -0.5
STU   Stuttgart        12.24 291 ePn    Pn     22 50 51.4 +0.2
STU   Stuttgart        12.24 291 eP     Pn     22 50 51.4 +0.2
STU   Stuttgart        12.24 291 eP     Pn     22 50 51.4 +0.2
RGN   Rugen            12.26 321 ePn    Pn     22 50 52.3 +1.0
RGN   Rugen            12.26 321 ePn    Pn     22 50 52.3 +1.0
ERZM  Erzurum          12.27 113 i P    Pn     22 50 54.0 +2.1
VSU   Vasula           12.74   0deP     Pn     22 50 54.6 -2.9
VSU                                pmax pmax
            comp=Z,220nm,0.8s
BFO   Black Forest     12.76 288 ePn    Pn     22 50 58.1  0.0
BFO   Black Forest     12.76 288 eP     Pn     22 50 58.1  0.0
BFO   Black Forest     12.76 288 eP     Pn     22 50 58.1  0.0
AKH   Akhalkalaki      12.95 104 ePn    Pn     22 51 01.0 +0.3
AKH   Akhalkalaki      12.95 104 eP     Pn     22 51 01.0 +0.3
AKH   Akhalkalaki      12.95 104 eP     Pn     22 51 01.0 +0.3
EATA  Eleskirt         13.02 111 i P    P      22 51 09.3 +1.3
LLD   Lille Linde      13.26 322 i P    Pn     22 51 03.8 -0.5
LLD   Lille Linde      13.26 322 eP     Pn     22 51 03.8 -0.5
COP   Copenhagen       13.39 323 i P    Pn     22 51 04.1 -2.0
COP   Copenhagen       13.39 323 i P    Pn     22 51 04.1 -2.0
SENIN Lac Senin/Sane   13.46 280 ePn    Pn     22 51 07.9 +0.6
SENIN Lac Senin/Sane   13.46 280 ePn    Pn     22 51 07.9 +0.6
WLF   Walferdange      14.34 293 ⇓P     Pn     22 51 19.5 +1.1
WLF   Walferdange      14.34 293 ePn    Pn     22 51 19.0 +0.6
WLF   Walferdange      14.34 293 eP     Pn     22 51 19.0 +0.6
WLF   Walferdange      14.34 293 ePn    Pn     22 51 19.0 +0.6
GNI   Garni            14.37 106   P    P      22 51 22.0 -0.7
            comp=Z,0.2nm,0.3s,baz=3.4,slow=17,SNR=2.6
GNI   Garni            14.37 106 i P    Pn     22 51 19.8 +0.8
GNI                                pmax pmax
            comp=Z,13nm,1.1s
GNI   Garni            14.37 106   P    P      22 51 22.0 -0.7
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MMAI  Mount Meron Ar   14.39 149   P    Pn     22 51 20.9 +1.7
            comp=Z,0.4nm,0.3s,baz=346,slow=11,SNR=2.8
MMAI                               LR   LR     22 58 24.5
            comp=Z,25nm,19.0s,baz=305,slow=43
MEM   Membach          14.59 297 ⇑P     P      22 51 27.2 +2.2
ASF   Jabal al Asfar   15.70 146   P    P      22 51 37.5  0.0
            comp=Z,0.1nm,0.3s,baz=308,slow=6.5,SNR=5.0
FIA1  FINESS Array S   15.73 359 ePn    Pn     22 51 31.1 -4.7
FIA1                             eSn    Sn     22 54 17.8  -12
FINES FINESS Array B   15.73 359   P    Pn     22 51 30.8 -5.0
            comp=Z,2.0nm,0.3s,baz=185,slow=11,SNR=40
FINES                              S    Sn     22 54 15.4  -14
            comp=Z,2.0nm,0.3s,baz=173,slow=24,SNR=7.4
FINES                              LR   LR     22 57 40.7
            comp=Z,24nm,21.0s,baz=216,slow=37
AKT   Akhty            15.84  98 eP     P      22 51 43.7 +4.7
AKT                              eS     S      22 54 36.8 -2.4
AKT                                pmax pmax
            comp=Z,7.0nm,0.7s
HFS   Hagfors          16.34 336   P    Pn     22 51 40.4 -3.0
            comp=Z,1.6nm,0.3s,baz=139,slow=14,SNR=46
HFS                                S    Sn     22 54 34.9  -10
            comp=Z,0.4nm,0.3s,baz=138,slow=18,SNR=2.2
KEST  Kesra            16.46 239   P    Pn     22 51 44.9 -0.3
            comp=Z,0.7nm,0.3s,baz=341,slow=4.1,SNR=14
KLMR  Klimovskoe       16.92  22 eP     Pn     22 51 44.6 -5.8
KLMR                             e             22 54 48.0
KLMR                               pmax pmax
            comp=Z,24nm,0.9s
KLMR  Klimovskoe       16.92  22 ePn    Pn     22 51 44.7 -5.7
KLMR                               AMP         22 51 52.3
            comp=Z,24nm,0.9s
KLMR                             eSn    Sn     22 54 48.0  -10
THTN  Thala            16.97 239 ePn    Pn     22 51 51.1 -0.3
            comp=Z,12nm,1.0s
THTN  Thala            16.97 239 ePn    Pn     22 51 51.1 -0.3
            comp=Z,12nm,1.0s
OSL   Oslo             17.09 332 eP     P      22 51 51.0 -1.4
OSL                                IAmb IAmb   22 51 55.3
            comp=Z,15nm,0.5s
KONO  Kongsberg        17.26 330 eP     P      22 51 53.8 -0.5
            comp=Z,18nm,1.3s
KONO  Kongsberg        17.26 330 i P    P      22 51 53.6 -0.7
KONO                               pmax pmax
            comp=Z,15nm,1.4s
KONO  Kongsberg        17.26 330 eP     P      22 51 53.7 -0.7
KONO                               IAmb IAmb   22 51 54.9
            comp=Z,6.4nm,0.6s
NC602 NORSAR Array S   17.46 335 eP     P      22 51 53.8 -2.7
NC405 NORSAR Array S   17.71 336 eP     P      22 51 57.6 -1.7
NAO01 NORSAR Array S   17.74 334 eP     P      22 51 58.4 -1.2
NAO01 NORSAR Array S   17.74 334 eP     P      22 51 57.9 -1.7
NAO01                              IAmb IAmb   22 52 01.9
            comp=Z,47nm,0.7s
NB201 NORSAR Array S   17.78 335 eP     P      22 52 00.2 +0.2
NB2   NORSAR Subarra   17.80 335   P    P      22 51 57.5 -2.8
            comp=Z,3.7nm,0.5s,baz=142,slow=11
NB2   NORSAR Subarra   17.80 335   P    P      22 51 57.5 -2.8
            baz=142,slow=11
NOA   NORSAR Array B   17.80 335   LR   LR     22 59 19.2
            comp=Z,19nm,21.1s,baz=145,slow=38
NC303 NORSAR Array S   17.90 335 eP     P      22 51 59.3 -2.1
NBO00 NORSAR Array S   17.92 334 eP     P      22 52 00.1 -1.5
NC204 NORSAR Array S   18.12 335 eP     P      22 52 02.7 -1.1
BLS5  Blasjo           18.28 326 eP     P      22 52 06.0 +0.4
BLS5                               IAmb IAmb   22 52 08.8
            comp=Z,11nm,1.0s
DOMB  Dombas           19.23 334 eP     Pn     22 52 17.1 -0.9
DOMB                               IAmb IAmb   22 52 18.9
            comp=Z,12nm,0.9s
BER   Bergen           19.33 327 eP     P      22 52 17.9 +1.0
BER                                IAmb IAmb   22 52 20.3
            comp=Z,16nm,0.6s
PRGR  Permogore        19.36  28⇑iP     P      22 52 17.9 +0.7
PRGR                             eS     S      22 55 45.7 -4.2
PRGR                               pmax pmax
            comp=Z,12nm,0.6s
HYA   Hoyanger         19.54 330 eP     Pn     22 52 20.7 -0.8
HYA                                IAmb IAmb   22 52 21.2
            comp=Z,27nm,0.7s
TBLU  Trondheim        19.85 338 eP     Pn     22 52 25.5 +0.4
TBLU                               IAmb IAmb   22 52 29.4
            comp=Z,13nm,0.7s
AKN   Aaknes           19.97 332 eP     Pn     22 52 25.9 -0.8
AKN                                IAmb IAmb   22 52 26.8
            comp=Z,48nm,1.3s
NSS   Namsos           20.51 342 eP     P      22 52 30.0 +0.4
NSS                                IAmb IAmb   22 52 30.4
            comp=Z,12nm,0.5s
EKA   Eskdalemuir Ar   21.09 308   P    P      22 52 35.7 -0.2
            comp=Z,2.2nm,0.6s,baz=104,slow=11,SNR=9.0
AKTO  Aktyubinsk       21.37  66   P    P      22 52 40.1 +1.1
            comp=Z,3.3nm,0.5s,baz=271,slow=11,SNR=12
AKTO                               S    S      22 56 24.4 -5.4
            comp=Z,0.6nm,0.3s,baz=260,slow=17,SNR=2.8
KONS  Konsvik          22.03 346 eP     P      22 52 47.1 +1.3
KONS                               IAmb IAmb   22 52 52.0
            comp=Z,35nm,0.7s
CART  Cartagena        22.13 258 eP     P      22 52 46.7 -0.4
            comp=Z,18nm,0.7s
CART  Cartagena        22.13 258 eP     P      22 52 46.7 -0.4
            comp=Z,18nm,0.7s
APA   Apatity          22.16   7⇑iP     P      22 52 48.7 +1.5
APA                                pmax pmax
            comp=Z,8.0nm,0.7s
APA                                MLR  MLR
            comp=Z,300nm,10.0s
ARU   Arti             22.51  50   P    P      22 52 51.1 +0.2
            comp=Z,3.3nm,0.4s,baz=250,slow=3.6,SNR=7.3
ARU                                S    S      22 56 46.8 -2.7
            comp=Z,0.9nm,0.3s,baz=270,slow=20,SNR=2.0
ARU   Arti             22.51  50d iP    P      22 52 51.6 +0.8
ARU                                *PP  pP     22 53 11.1 -1.1
ARU                                            22 53 18.7
ARU                                S    S      22 56 52.9 +3.4
ARU                                SS   SnSn   22 57 32.7 +2.3
ARU                                pmax pmax
            comp=Z,15nm,2.5s
ABKAR Akbulak array    22.66  69 eP     P      22 52 52.7 +0.3
STEI  Steigen          23.02 349 eP     P      22 52 59.8 +4.0
STEI                               IAmb IAmb   22 53 02.2
            comp=Z,53nm,1.7s
ES19  SONSECA Array    23.16 266 eP     P      22 52 56.5 -0.9
ES19  SONSECA Array    23.16 266 eP     P      22 52 56.5 -0.9
ESDC  Sonseca Array    23.21 266   P    P      22 52 56.4 -1.5
            comp=Z,1.8nm,0.4s,baz=67,slow=9.3,SNR=36
ESLA  Sonseca Array    23.21 266 eP     P      22 52 56.4 -1.5
            comp=Z,4.9nm,0.9s
KTK1  Kautokeino       23.39 357 eP     P      22 53 00.2 +1.0
LOF   Lofoten          23.45 348 eP     P      22 53 03.6 +4.0
LOF                                IAmb IAmb   22 53 05.1
            comp=Z,86nm,1.5s
PAB   San Pablo        23.54 266 eP     P      22 53 00.5 -0.4
            comp=Z,13nm,1.4s
PAB   San Pablo        23.54 266 eP     P      22 53 00.5 -0.4
PAB                                pmax pmax
            comp=Z,13nm,1.4s
PAB   San Pablo        23.54 266 eP     P      22 53 00.5 -0.4
            comp=Z,13nm,1.4s
ARCES ARCESS Array B   23.86 359   P    P      22 53 04.2 +0.7
            comp=Z,4.0nm,0.5s,baz=180,slow=9.8,SNR=34
ARCES                              S    S      22 57 24.1  +13
            comp=Z,2.0nm,0.8s,baz=174,slow=19,SNR=2.8
ARE0  ARCESS Array S   23.86 359 eP     P      22 53 04.6 +1.2
ARE0                               IAmb IAmb   22 53 06.7
            comp=Z,16nm,1.0s
TRO   Tromso           24.27 353 eP     P      22 53 09.8 +2.8
TRO                                IAmb IAmb   22 53 10.9
            comp=Z,17nm,0.9s
PBRG  Braganca         24.33 273 eP     P      22 53 07.8 -0.2
            comp=Z,21nm,1.6s
GEYT  Alibeck          24.59  97   P    P      22 53 12.0 +1.6
            comp=Z,3.4nm,0.6s,baz=327,slow=6.9,SNR=13
GYA0B ALIBECK ARRAY    24.59  97 eP     P      22 53 12.0 +1.6
            comp=Z,8.8nm,0.7s
MVO   Moncorvo         24.76 271 eP     P      22 53 11.4 -0.6
            comp=Z,21nm,1.8s
PVRL  Vila Real        25.20 272 eP     P      22 53 14.7 -1.2
            comp=Z,14nm,1.5s
PVIS  Viseu            25.54 271 eP     P      22 53 18.2 -0.8
PCBR  Castelo Branco   25.60 269 eP     P      22 53 18.3 -1.2
            comp=Z,18nm,1.5s
PMRV  Marv??o          25.71 268 eP     P      22 53 19.1 -1.4
            comp=Z,23nm,1.8s
PBAR  Barrancos        26.03 265 eP     P      22 53 22.0 -1.3
            comp=Z,36nm,1.4s
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PESTR Estremoz         26.10 267 eP     P      22 53 23.4 -0.6
            comp=Z,17nm,1.7s
PESTR Estremoz         26.10 267 eP     P      22 53 23.4 -0.6
            comp=Z,3.8nm,0.8s
PTOM  Tomar            26.35 269 eP     P      22 53 26.8 +0.6
            comp=Z,25nm,1.4s
PMTG  Montargil        26.45 268 eP     P      22 53 26.9 -0.3
            comp=Z,20nm,2.1s
RAYN  Ar Rayn          26.93 139   P    P      22 53 32.8 +1.2
RAYN  Ar Rayn          26.93 139   P    P      22 53 32.8 +1.2
MDT   Midelt           27.24 253   P    P      22 53 33.4 -1.1
            comp=Z,3.7nm,0.5s,baz=80,slow=11,SNR=13
TAM   Tamanrasset      28.63 224 eP     P      22 53 47.2 +0.3
            comp=Z,19nm,1.9s
TAM   Tamanrasset      28.63 224 eP     P      22 53 47.2 +0.3
TAM                                pmax pmax
            comp=Z,19nm,1.9s
TAM   Tamanrasset      28.63 224 eP     P      22 53 47.2 +0.3
            comp=Z,19nm,1.9s
BRVK  Borovoye         28.94  59 eP     P      22 53 50.9 +1.8
            comp=Z,6.4nm,0.8s
BRVK  Borovoye         28.94  59ceP     P      22 53 51.0 +1.8
BRVK                               pmax pmax
            comp=Z,2.0nm,0.6s
BVAR  Borovoye Array   29.01  59   P    P      22 53 51.7 +2.0
            comp=Z,0.7nm,0.6s,baz=248,slow=7.8,SNR=6.3
BVAR                               pP   pP     22 54 13.4 -0.9
            comp=Z,2.5nm,0.7s,baz=280,slow=8.4,SNR=11
SHME  Shamm            30.67 120   P    P      22 54 05.2 +0.5
UMQ   Umm Al-Quwin     30.77 121   P    P      22 54 06.5 +1.0
BANOM Banah            30.86 120 i P    P      22 54 07.4 +1.0
            SNR=8.7
BANOM Banah            30.86 120   P    P      22 54 07.4 +1.0
            SNR=8.7
NAZ   Nazwa, Dubai     31.17 122   P    P      22 54 10.0 +0.9
NAZ   Nazwa, Dubai     31.17 122   P    P      22 54 10.0 +0.9
MSFE  Esma-Masafi      31.19 121   P    P      22 54 09.7 +0.4
ASUD  Al Ashush, Dub   31.25 123 i P    P      22 54 11.0 +1.2
            SNR=11
ASUD  Al Ashush, Dub   31.25 123   P    P      22 54 11.0 +1.2
            SNR=11
MDH   Madha            31.32 121   P    P      22 54 11.1 +0.7
MDH   Madha            31.32 121   P    P      22 54 11.1 +0.7
MZR   Muzera           31.44 127   P    P      22 54 12.5 +0.9
UOSS  Minazif          31.52 121   P    P      22 54 12.4 +0.2
UOSS  Minazif          31.52 121   P    P      22 54 12.4 +0.2
HATD  Hatta, Dubai     31.57 121   P    P      22 54 12.9 +0.2
HATD  Hatta, Dubai     31.57 121   P    P      22 54 12.9 +0.2
ASHO  Ashiyiah         31.63 122 i P    P      22 54 13.6 +0.3
            SNR=9.9
ASHO  Ashiyiah         31.63 122   P    P      22 54 13.6 +0.3
            SNR=9.9
ALNE  Al Ain           31.93 123   P    P      22 54 16.2 +0.4
SOHO  SOHO             32.33 122   P    P      22 54 19.9 +0.6
SOHO  SOHO             32.33 122   P    P      22 54 19.9 +0.6
SPITS Spitsbergen Ar   32.79 356   P    P      22 54 24.5 +1.7
            comp=Z,12nm,1.0s,baz=352,slow=5.8,SNR=3.5
AAK   Ala-Archa        34.04  78   P    P      22 54 36.5 +2.3
            comp=Z,3.1nm,0.6s,baz=258,slow=6.6,SNR=4.9
WSAR  Wadi Sarin       34.26 120   P    P      22 54 37.0 +0.9
            comp=Z,5.4nm,0.8s,baz=357,slow=7.6,SNR=7.6
KURBB Kurchatov Arra   34.34  63   P    P      22 54 37.8 +1.3
            comp=Z,1.0nm,0.5s,baz=288,slow=8.9,SNR=6.4
KURBB                              pP   pP     22 55 01.8 +0.5
            comp=Z,0.8nm,0.6s,baz=278,slow=9.8,SNR=3.7
KURK  Kurchatov        34.38  62   P    P      22 54 37.8 +1.0
KURK                               pP   pP     22 55 01.8 +0.2
KURK  Kurchatov        34.38  62   P    P      22 54 37.8 +1.0
KURK                               *PP  pP     22 55 01.8 +0.2
KSH   Kashi            36.34  82 eP     P      22 54 55.4 +1.5
KSH                                pP   pP     22 55 20.9 +2.0
KSH                              ePP    PnPn   22 56 21.8 +2.3
KSH                                S    S      23 00 26.7  0.0
KSH                                PcS  PcS    23 01 05.6 +1.5
KSH                                SS   SnSn   23 02 57.5 -8.4
KSH                                pmax pmax
            comp=Z,8.0nm,1.2s
KSH                                pmax pmax
            comp=Z,100nm,4.5s
NVS   Novosibirsk      36.35  55 eP     P      22 54 56.1 +2.5
NVS                              e             22 55 20.4
NVS                                pmax pmax
            comp=Z,3.0nm,0.5s
NVS                                pmax pmax
            comp=E,4.0nm,1.1s
ZAA0  Zalesovo Array   37.42  56 eP     P      22 55 04.3 +1.5
ZAA0                             epP    pP     22 55 28.3 +0.5
ZALV  Zalesovo Beam    37.42  56   P    P      22 55 04.2 +1.4
            comp=E,3.1nm,0.3s,baz=281,slow=8.7,SNR=14
ZALV                               pP   pP     22 55 28.8 +1.0
            comp=E,11nm,0.8s,baz=278,slow=9.4,SNR=15
ZALV  Zalesovo Beam    37.42  56 eP     P      22 55 04.1 +1.4
ZALV                             epP    pP     22 55 28.4 +0.7
ZALV                               pP   pP     22 55 28.8 +1.0
ZALV  Zalesovo Beam    37.42  56 eP     P      22 55 04.1 +1.4
ZALV                             e*PP   pP     22 55 28.5 +0.7
MAKZ  Makanchi         37.58  68 eP     P      22 55 04.2  0.0
            comp=E,3.9nm,1.4s
MAKZ  Makanchi         37.58  68 eP     P      22 55 04.2  0.0
MAKZ                               pmax pmax
            comp=Z,4.0nm,1.4s
MK31  Makanchi Array   37.79  68 eP     P      22 55 07.5 +1.5
MK31                             epP    pP     22 55 32.4 +1.4
MK31  Makanchi Array   37.79  68 eP     P      22 55 07.5 +1.5
MK31                             e*PP   pP     22 55 32.4 +1.4
MKAR  Makanchi Array   37.79  68   P    P      22 55 07.5 +1.5
            comp=Z,2.5nm,0.5s,baz=272,slow=8.2,SNR=51
MKAR                               pP   pP     22 55 32.3 +1.3
            comp=Z,1.2nm,0.5s,baz=280,slow=7.9,SNR=5.6
MKAR  Makanchi Array   37.79  68 eP     P      22 55 07.5 +1.5
            comp=Z,23nm,0.4s
MKAR                               pP   pP     22 55 32.3 +1.3
MKAR                             epP    pP     22 55 32.4 +1.4
MKAR  Makanchi Array   37.79  68 eP     P      22 55 07.5 +1.5
MKAR                               *PP  pP     22 55 32.3 +1.3
MKAR                               pmax pmax
            comp=Z,23nm,0.4s
MK01  Makanchi Array   37.80  68 eP     P      22 55 07.5 +1.4
MK01                             epP    pP     22 55 32.1 +0.9
TOA0  Torodi Ar. Sit   38.76 221 eP     P      22 55 14.0 -0.3
TOA0  Torodi Ar. Sit   38.76 221 eP     P      22 55 14.0 -0.3
TORD  Torodi Ar. Bea   38.76 221   P    P      22 55 13.3 -1.0
            comp=Z,18nm,0.7s,baz=28,slow=8.5
TORD                               PcP  PcP    22 57 22.9 -0.8
            baz=358,slow=4.3
SUMG  Summit           39.69 335 eP     P      22 55 23.0 +1.1
            comp=Z,39nm,2.0s
SUMG  Summit           39.69 335 eP     P      22 55 23.0 +1.1
SUMG                               pmax pmax
            comp=Z,39nm,2.0s
KOWA  Kowa             40.45 230   P    P      22 55 27.7 -0.7
            comp=Z,2.5nm,0.3s,baz=38,slow=7.0,SNR=25
KOWA                               PcP  PcP    22 57 28.7 -0.4
            comp=Z,2.5nm,0.5s,baz=64,slow=5.5,SNR=5.2
ROSA  Rosais           40.56 280 eP     P      22 55 28.9 -0.1
            comp=Z,47nm,1.1s
WMQ   Urumqi           42.44  70   P    P      22 55 46.9 +2.5
PYUN  Piuthan          47.36  92 eP     P      22 56 25.5 +1.8
            comp=Z,18nm,0.6s
DBIC  Dimbokro         47.52 225   P    P      22 56 23.6 -1.2
            comp=Z,20nm,0.4s,baz=17,slow=6.0,SNR=79
DBIC                               LR   LR     23 18 22.3
            comp=Z,13nm,18.9s,baz=116,slow=38
TIC   Toumodi          47.62 225 eP     P      22 56 24.5 -1.1
KIC   Kosan Boka       47.73 224 eP     P      22 56 25.7 -0.7
            comp=Z,32nm,0.5s
LIC   Lamto            47.99 225 eP     P      22 56 27.6 -0.8
            comp=Z,82nm,0.5s
GKN   Gorkha           48.57  91 eP     P      22 56 34.2 +1.2
            comp=Z,20nm,0.4s
TLY   Talaya           48.94  54⇑eP     P      22 56 36.9 +1.5
TLY                                pmax pmax
            comp=Z,6.0nm,0.7s
DMN   Daman            49.14  91 eP     P      22 56 39.0 +1.5
            comp=Z,10nm,0.4s
KKN   Kakani           49.15  90 eP     P      22 56 38.7 +1.2
            comp=Z,21nm,0.5s
PKIN  Phulchoki        49.36  90 eP     P      22 56 40.2 +1.0
            comp=Z,10nm,0.6s
GUN   Gumba            49.50  90 eP     P      22 56 41.6 +1.3
            comp=Z,21nm,0.5s
JIRN  Jiri             49.87  90 eP     P      22 56 44.6 +1.5
            comp=Z,34nm,0.7s
TIXI  Tiksi            50.93  23 i P    P      22 56 50.4 +0.3
TIXI                               pmax pmax
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	comp=Z,1.0nm,0.9s						
TAPN	Taplejung	51.12	89	*e*P	P	22 56 54.2	+1.7
ODAN	Odare	51.20	90	*e*P	P	22 56 54.4	+1.4
SACV	Santiago Islan	51.98	251	*e*P	P	22 56 58.4	-0.2
	comp=Z,38nm,0.9s						
SONA1	Songino Array	52.30	57	*e*P	P	22 57 01.6	+0.8
SONA1				*e*pP	pP	22 57 28.0	+0.8
SONM	Songino Array	52.30	57	P	P	22 57 02.5	+1.8
	comp=Z,1.9nm,0.6s,baz=296,slow=8.3,SNR=13						
SONM				pP	pP	22 57 27.3	+0.2
	comp=Z,3.3nm,0.8s,baz=294,slow=8.9,SNR=12						
SCHQ	Schefferville	56.11	316	P	P	22 57 27.2	-0.9
	comp=Z,2.8nm,0.9s,baz=42,slow=15,SNR=4.1						
HHC	Hu-ho-hao-te	59.18	62	*e*P	P	22 57 51.7	+1.7
HHC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,87nm,5.0s						
PALK	Pallekele	60.16	112	P	P	22 57 57.3	+0.4
	comp=Z,7.2nm,0.5s,baz=296,slow=10,SNR=7.0						
LSZ	Lusaka	60.75	178	*e*P	P	22 58 01.5	+0.7
	comp=Z,10nm,1.2s						
LSZ	Lusaka	60.75	178	*e*P	P	22 58 01.5	+0.7
LSZ				pmax	pmax		
	comp=Z,10.0nm,1.2s						
BILL	Bilibino	62.56	16⇑	*e*P	P	22 58 13.7	+1.5
BILL				*e**PP	pP	22 58 40.6	+1.1
BILL				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SEY	Seymchan	63.40	25	P	P	22 58 19.4	+1.6
	comp=Z,1.2nm,0.5s,baz=261,slow=9.4,SNR=5.5						
SEY				pP	pP	22 58 45.6	+0.5
	comp=Z,1.4nm,0.3s,baz=297,slow=3.0,SNR=4.4						
CHTO	Chiang Mai	64.49	89	*e*P	P	22 58 25.8	+0.1
	comp=Z,6.1nm,0.9s						
CHTO	Chiang Mai	64.49	89	*e*P	P	22 58 25.8	+0.1
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CHTO	Chiang Mai	64.49	89	*e*P	P	22 58 25.8	+0.1
	comp=Z,6.1nm,0.9s						
CMAR	Chiang Mai Arr	64.73	89	P	P	22 58 27.9	+0.7
	comp=Z,2.9nm,0.5s,baz=305,slow=7.7,SNR=17						
CMAR				pP	pP	22 58 55.0	+0.4
	comp=Z,0.8nm,0.4s,baz=302,slow=7.1,SNR=1.8						
GYA	Guiyang	64.83	77	*e*P	P	22 58 29.7	+1.7
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KLR	Kul'dur	65.19	44	P	P	22 58 30.8	+1.0
	comp=Z,0.1nm,0.6s,baz=316,slow=8.3,SNR=4.7						
KLR				pP	pP	22 58 57.8	+0.5
	comp=Z,0.1nm,0.4s,baz=348,slow=8.6,SNR=3.7						
KLR	Kul'dur	65.19	44	*ce*P	P	22 58 32.1	+2.3
OPO	Ambohidratompo	66.67	159	P	P	22 58 39.9	+0.3
	comp=Z,5.3nm,0.6s,baz=344,slow=4.3,SNR=11						
YKA	Yellowknife Ar	67.75	342	P	P	22 58 46.1	+0.3
	comp=Z,1.2nm,0.5s,baz=27,slow=5.8,SNR=12						
YKA				pP	PcP	22 59 12.1	+0.4
	comp=Z,1.3nm,0.7s,baz=33,slow=6.1,SNR=4.8						
NJ2	Nanjing	69.25	65	*e*P	P	22 58 56.9	+1.2
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
ILAR	Eielson Array	69.71	357	P	P	22 58 59.1	+1.2
	comp=Z,0.3nm,0.7s,baz=348,slow=4.3,SNR=4.8						
ILAR	Eielson Array	69.71	357	*e*P	P	22 58 59.4	+1.5
KSAR	Wonju Array Be	71.12	56	P	P	22 59 08.0	+1.0
KSAR	Wonju Array Be	71.12	56	P	P	22 59 08.0	+1.0
KSRS	Korea Array	71.13	56	P	P	22 59 08.0	+1.0
	comp=Z,1.8nm,0.8s,baz=323,slow=5.6,SNR=5.2						
KSRS	Korea Array	71.13	56	P	P	22 59 08.0	+1.0
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BOSA	Boshof	74.02	181	P	P	22 59 23.6	-0.5
	comp=Z,1.7nm,0.5s,baz=353,slow=4.8,SNR=8.3						
ECSD	EROS Data Cent	77.68	322	*e*P	P	22 59 44.9	0.0
PDAR	Pinedale Array	83.64	329	P	P	23 00 16.9	-0.1
	comp=Z,0.4nm,0.5s,baz=57,slow=4.0,SNR=5.2						
BMO	Blue Mountains	84.31	335	*e*P	P	23 00 20.0	-0.2
BMO	Blue Mountains	84.31	335	*e*P	P	23 00 20.0	-0.2
TXAR	Lajitas Array	92.73	318	P	P	23 00 59.4	-1.1
	comp=Z,0.1nm,0.5s,baz=56,slow=5.5,SNR=3.1						
SNAA	Sanae	118.97	190	PKP	PKPdf	23 06 34.0	-0.8
	comp=Z,0.9nm,0.8s,baz=323,slow=5.9,SNR=6.5						
PLCA	Paso Flores	122.06	243	PKP	PKPdf	23 06 41.1	-0.6
	comp=Z,0.6nm,0.4s,baz=0.4,slow=1.3,SNR=5.1						

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*NIED **06** 22:56:00, 31°.80N×141°.30E, h53^{km}, Mw3.7 Best double couple: M$_0$4.44000×10^{14} NP1:φ$_s$123.00000°, δ13.00000°, λ-167.00000°. NP2:φ$_s$20.00000°, δ87.00000°, λ-78.00000°.*

*ISCJB **06** 22:56:18.9±0.4, 31°.68N±0°.04×141°.05E±0°.09, h57^{km}, mb3.8/17, MS4.1/1, Error ellipse: s-maj=11.9km s-min=4.2km az=155.3*

*JMA **06** 22:56:18.1±0.4, 31°.83N×141°.31E, h38^{km}, M4.2*

*NEIC **06** 22:56:20.7±0.9, 31°.66N×141°.06E, h54^{km}±8^{km}, mb4.1/4, Error ellipse: s-maj=14.0km s-min=7.3km az=78.0*

*IDC **06** 22:56:20.5±1.9, 31°.66N×140°.98E, h50^{km}±17^{km}, mb3.6/14, mb1 3.8/16, mb1mx3.5/74, mbtmp3.8/16, ML3.9/2, MS2.5/3, Ms1 2.5/3, ms1mx2.3/55, Error ellipse: s-maj=22.4km s-min=12.6km az=75.0*

ISC 06 22:56:20.6±0.6**, 31°.69N**±0°.06×**141°.14E**±0°.10**, h57^{km}, n39, σ1^s.53**/45**, mb3.8**/17**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	1.40	304	P	Pn	22 56 42.3	-1.5
JHCJ	Hachijojimakas	1.78	321	P	Pn	22 56 47.2	-1.8
JHCJ				S	Sn	22 57 08.9	-1.7
JHJ2	Mitsune	1.80	322	P	Pn	22 56 47.8	-1.5
JHJ2				S	Sn	22 57 09.6	-1.5
JHJ	Hachijo jima 2	1.83	321	P	Pn	22 56 47.9	-1.7
	82nm,0.3s,baz=106,slow=23,SNR=35						
JHJ				S	Sn	22 57 08.3	-3.4
	155nm,0.3s,baz=52,slow=21,SNR=8.0						
BSO1	Boso 1	2.96	357	P	Pn	22 57 02.4	-2.1
JKO	Kozu shima	3.00	326	P	Pn	22 57 05.5	-0.2
JOD2	Odawara 2	3.95	335	P	Pn	22 57 17.6	-1.1
JYN	Shimob	4.37	331	P	Pn	22 57 24.7	+0.2
JIE	Ise	4.59	307	P	Pn	22 57 28.0	+0.5
CBIJ	Chichi jima	4.67	169	P	Pn	22 57 27.8	-0.8
CBIJ				S	Sn	22 58 18.7	-2.8
CBIJ	Chichi jima	4.67	169	P	Pn	22 57 28.5	-0.1
CBIJ				S	Sn	22 58 18.3	-3.2
JCJ	Chichijima	4.67	169	P	Pn	22 57 27.8	-0.8
	7.3nm,0.3s,baz=360,slow=17,SNR=14						
JCJ				S	Sn	22 58 18.7	-2.8
	27nm,0.3s,baz=290,slow=20,SNR=12						
JRY	Ryogami san	4.70	337	P	Pn	22 57 27.7	-1.2
JAG	Ashikaga	4.92	344	P	Pn	22 57 30.3	-1.7
JAG				S	Sn	22 58 24.4	-3.2
MJAR	Matsushiro Arr	5.41	334	P	Pn	22 57 40.0	+1.2
	3.6nm,0.3s,baz=171,slow=14,SNR=24						
MJAR				S	Sn	22 58 39.2	-0.5
	0.9nm,0.3s,baz=135,slow=22,SNR=4.9						
MJAR				LR	LR	22 59 53.2	
	comp=Z,28nm,18.4s,baz=60,slow=40						
MAJO	Matsushiro	5.41	334	*e*Pn	Pn	22 57 38.5	-0.3
	14nm,0.6s						
MAT	Matsushiro	5.41	334	P	Pn	22 57 40.4	+1.7
MAT				*e*S	Sn	22 58 38.5	-1.2
JNU	Nakatsue	8.79	282	LR	LR	23 01 36.7	
	comp=Z,34nm,18.7s,baz=304,slow=36						
ERM	Erimo	10.43	8	Pn	Pn	22 58 48.0	+0.8
KSRS	Korea Array	12.31	301	LR	LR	23 03 57.7	
	comp=Z,32nm,18.2s,baz=159,slow=37						
GUMO	Guam	18.34	168	P	P	23 00 30.8	+0.4
	3.7nm,0.3s						
SONM	Songino Array	30.88	312	P	P	23 02 32.0	+0.4
	0.5nm,0.5s,baz=100,slow=7.0,SNR=3.6						
ZALV	Zalesovo Beam	45.48	316	P	P	23 04 32.7	-1.2
	0.4nm,0.3s,baz=92,slow=8.2,SNR=3.1						
MKAR	Makanchi Array	46.94	306	P	P	23 04 45.1	-0.4
	0.2nm,0.3s,baz=87,slow=7.7,SNR=9.0						
KURK	Kurchatov	49.18	312	*e*P	P	23 05 02.4	-0.3
	0.9nm,0.3s						
KURBB	Kurchatov Arra	49.24	312	P	P	23 05 03.1	-0.1
	1.0nm,0.3s,baz=87,slow=7.2,SNR=5.4						
WRA	Warramunga Arr	51.75	188	P	P	23 05 22.2	-0.2
	0.5nm,0.5s,baz=6.0,slow=7.7,SNR=6.0						
BVAR	Borovoye Array	54.10	315	P	P	23 05 39.6	+0.2
	0.4nm,0.5s,baz=90,slow=7.2,SNR=4.1						
ILAR	Eielson Array	54.17	30	P	P	23 05 40.4	+0.7
	0.6nm,0.7s,baz=271,slow=6.2,SNR=6.6						
ASAR	Alice Springs	55.48	188	P	P	23 05 49.8	+0.1
	0.3nm,0.5s,baz=16,slow=14,SNR=5.7						
INK	Inuvik	59.26	26	P	P	23 06 14.0	-1.7
	3.8nm,1.3s						
NWAO	Narrogin (SRO)	68.13	202	P	P	23 07 15.6	+1.1
	3.7nm,0.6s,baz=338,slow=5.4,SNR=4.2						
FINES	FINESS Array B	73.44	333	P	P	23 07 47.5	+1.1
	0.9nm,0.6s,baz=78,slow=7.3,SNR=3.5						
GNI	Garni	74.75	308	LR	LR	23 41 52.9	
	comp=Z,88nm,18.6s,baz=119,slow=37						
NVAR	Mina Array Bea	78.41	52	P	P	23 08 17.3	+1.8
	0.5nm,0.5s,baz=294,slow=6.6,SNR=3.8						
HFS	Hagfors	78.86	336	P	P	23 08 17.8	+0.6
	1.4nm,0.8s,baz=66,slow=4.9,SNR=3.5						
DUG	Dugway, Tooele	81.05	48	P	P	23 08 30.1	+0.4
	0.3nm,0.6s						
PDAR	Pinedale Array	81.59	45	P	P	23 08 34.2	+1.6
	0.2nm,0.7s,baz=308,slow=4.4,SNR=2.5						
TXAR	Lajitas Array	93.55	52	P	P	23 09 32.5	+1.8
	0.6nm,0.7s,baz=292,slow=3.3,SNR=9.5						

NEIC 06 22:59:45.0±0.0**, 11°.86S**×**76°.37W, h24^{km}, mb4.0**/1**, ML4.1**(ARE)**, After ARE., Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	0.48	255	*e*Pb	Pb	22 59 55.6	+0.8
NNA				*e*Sb	Sb	23 00 02.6	+1.0
OTAV	Otavalo	12.20	350	*e*Pn	Pn	23 02 37.7	0.0
SAML	Samuel	13.29	79	*e*Pn	Pn	23 02 52.1	-0.2
TRQA	Tornquist	29.09	156	P	P	23 05 44.8	+1.0
	3.1nm,1.0s						

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*NEIC **06** 23:02:21.9±3.9, 16°.38S×173°.57W, h10^{km}, mb4.1/3, Error ellipse: s-maj=80.0km s-min=10.9km az=73.0*

*IDC **06** 23:02:23.3±43.0, 16°.37S×173°.98W, h0^{km}, mb4.1/3, mb1 4.3/3, mb1mx3.7/48, mbtmp4.1/3, MS4.1/2, Ms1 4.1/2, ms1mx2.8/49, Error ellipse: s-maj=827.4km s-min=170.6km az=79.0*

ISC 06 23:02:21.4±7.1**, 16°.4S**±0°.3×**173°.5W**±1°.0**, h10^{km}, n12, σ0^s.51**/10**, mb3.9**/6**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FUNA	Funafuti	10.56	317	Pn	Pn	23 04 53.2	+0.2
RAO	Raoul Island	13.47	197	Pn	Pn	23 05 32.9	+0.3
HNR	Honiara	26.78	282	P	P	23 08 01.9	+0.1
SNZO	South Karori	26.88	200	P	P	23 08 02.5	+0.1
PMG	Port Moresby	38.93	275	LR	LR	23 24 19.1	
	comp=Z,76nm,18.4s,baz=11,slow=34						
TAU	Tasmania Unive	42.57	223	P	P	23 10 16.9	-0.6
	1.8nm,0.7s						
STKA	Stephens Creek	43.49	241	P	P	23 10 25.9	+0.7
	0.5nm,0.3s,baz=79,slow=5.2,SNR=6.6						
WRAB	Tennant Creek	49.54	258	P	P	23 11 12.4	-0.5
	1.2nm,0.9s						
WRA	Warramunga Arr	49.55	258	P	P	23 11 12.4	-0.6
	0.7nm,0.7s,baz=97,slow=6.9,SNR=8.9						
ASAR	Alice Springs	49.74	253	P	P	23 11 14.0	-0.4
	4.3nm,0.5s,baz=88,slow=8.6,SNR=68						
NWAO	Narrogin (SRO)	64.08	241	P	P	23 12 56.1	+0.1
	10.0nm,0.8s						
PFO	Pinyon Flats O	73.63	47	LR	LR	23 37 48.5	
	comp=Z,344nm,19.6s,baz=178,slow=29						

IDC 06 23:21:14.7±9.0**, 6°.84S**×**129°.56E, h132^{km}**±90^{km}**, mb2.9**/1**, mb1 3.6**/5**, mb1mx3.1**/58**, mbtmp3.9**/5**, Error ellipse: s-maj=91.6km s-min=31.8km az=47.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	6.73	240	P	Pn	23 22 52.4	+1.3
	6.2nm,0.3s,baz=98,slow=7.3,SNR=6.2						
BATI				S	Sn	23 24 01.8	-4.6
	3.0nm,0.3s,baz=186,slow=10,SNR=3.1						
FITZ	Fitzroy Crossi	11.83	199	P	Pn	23 23 58.5	-0.8
	0.5nm,0.3s,baz=20,slow=9.7,SNR=14						
FITZ				S	Sn	23 25 56.9	-13
	0.3nm,0.3s,baz=72,slow=20,SNR=3.6						
WRA	Warramunga Arr	13.83	161	P	Pn	23 24 23.6	-1.6
	0.1nm,0.3s,baz=338,slow=13,SNR=4.8						
WRA				S	Sn	23 26 47.7	-10
	0.1nm,0.3s,baz=337,slow=22,SNR=3.3						
ASAR	Alice Springs	17.25	166	P	Pn	23 25 08.4	+0.9
	1.4nm,0.3s,baz=340,slow=9.9,SNR=89						
MKAR	Makanchi Array	67.85	327	P	P	23 31 58.5	-0.2
	0.1nm,0.4s,baz=117,slow=7.9,SNR=4.2						

IDC 06 23:21:20.3±2.6**, 6°.08S**×**147°.89E, h0^{km}, mb3.7**/3**, mb1 3.8**/5**, mb1mx3.5**/55**, mbtmp3.7**/5**, ML3.7**/1**, Error ellipse: s-maj=78.1km s-min=24.1km az=93.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.39	192	Pn	Pn	23 22 15.7	+1.3
	8.9nm,0.3s,baz=45,slow=16,SNR=11						
PMG				Sn	Sn	23 22 55.4	0.0
	4.2nm,0.3s,baz=22,slow=19,SNR=3.2						
WRA	Warramunga Arr	19.06	222	P	P	23 25 44.2	-0.2
	0.2nm,0.3s,baz=49,slow=11,SNR=5.2						
ASAR	Alice Springs	22.07	216	P	P	23 26 17.1	0.0
	1.5nm,0.5s,baz=49,slow=9.8,SNR=22						
STKA	Stephens Creek	26.34	192	P	P	23 26 57.8	-0.3
	0.9nm,0.4s,baz=1.2,slow=12,SNR=5.6						
MKAR	Makanchi Array	78.12	320	P	P	23 33 21.4	0.0
	0.2nm,0.5s,baz=111,slow=6.3,SNR=2.6						

MEX 06 23:28:49.3±0.5**, 17°.31N**×**100°.75W, h10^{km}**±4^{km}**, MD3.8, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.53	120	*e*P	Pg	23 28 58.6	-1.0
CAIG				*e*S	Sg	23 29 06.1	-0.4
ZIIG	Zihuatanejo	0.75	293	*e*P	Pg	23 29 01.7	-2.1
ZIIG				*e*S	Sg	23 29 11.8	-1.7
ACP2	Acapulco	0.93	118	*e*P	Pg	23 29 04.3	-2.9
ACP2				*e*S	Sg	23 29 16.3	-3.0
ACX	Acapulco	0.95	117	*e*P	Pg	23 29 03.6	-4.1
ACX				*e*S	Sg	23 29 14.4	-5.8
ARIG	Puente Sto Nin	1.04	21	*e*P	Pg	23 29 05.8	-3.5
ARIG				*e*S	Sg	23 29 19.0	-3.8
MEIG	Mezcala	1.24	60	*e*P	Pn	23 29 09.0	-3.7
MEIG				*e*S	Sb	23 29 24.5	-4.3
PLIG	Platanillo	1.60	48	*e*P	Pn	23 29 14.7	-3.0
PLIG				*e*S	Sn	23 29 33.5	-5.0
TLIG	Tlapa	2.10	83	*i* P	Pn	23 29 21.9	-2.7
TLIG				*e*S	Sn	23 29 45.8	-5.0

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*ISCJB **06** 23:35:18.7±1.4, 36°.55N±0°.04×42°.17E±0°.04, h3^{km}±8^{km}, Error ellipse: s-maj=7.4km s-min=4.9km az=22.4*

*DDA **06** 23:35:18.7, 36°.57N×42°.17E, h7^{km}, Ml2.4*

*CSEM **06** 23:35:19.0±0.2, 36°.55N×42°.20E, h2^{km}, ML2.1, Error ellipse: s-maj=4.4km s-min=2.7km az=43.0*

*ISN **06** 23:35:20.0±1.6, 36°.60N×42°.39E, h0^{km}±8^{km}, ML2.5*

*ISK **06** 23:35:20.9, 36°.64N×42°.19E, h12^{km}, ML2.1/4*

ISC 06 23:35:19.8±1.7**, 36°.59N**±0°.05×**42°.18E**±0°.03**, h8^{km}**±11^{km}**, n20, σ0^s.84**/39**, Iraq**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIRN	S˜–rnak	0.92	12	*i* P	Pg	23 35 37.0	-0.5
SIRN				*i* S	Sb	23 35 50.4	-0.2
SIRN	S˜–rnak	0.92	12	P	Pg	23 35 37.0	-0.5
SIRN				S	Sb	23 35 50.4	-0.2
SIRT	Sirnak	0.93	13	PG	Pg	23 35 37.8	+0.1
SIRT				SG	Sb	23 35 51.1	+0.3
SIRT	Sirnak	0.93	13	*e*Pg	Pg	23 35 37.8	+0.1
SIRT				*e*Sg	Sb	23 35 51.1	+0.3
CUKT	Cukurca	1.32	60	PN	Pg	23 35 45.6	+0.5
CUKT				SN	Sn	23 36 02.8	+0.3
CUKT	Cukurca	1.32	60	*i* P	Pn	23 35 44.3	-0.3
CUKT				*i* S	Sn	23 36 02.2	-0.3
CUKT	Cukurca	1.32	60	P	Pn	23 35 44.3	-0.3
CUKT	Cukurca	1.32	60	*e*Pn	Pg	23 35 45.6	+0.5
CUKT				S	Sn	23 36 02.2	-0.3
MARD	Mardin	1.33	303	*i* P	Pn	23 35 43.9	-0.9
MARD				*i* S	Sb	23 36 02.4	-0.1
SRTM	Siirt_Merkez	1.41	352	*i* P	Pn	23 35 46.0	+0.1
SRTM				*i* S	Sg	23 36 05.6	+0.4
SRTM	Siirt_Merkez	1.41	352	P	Pn	23 35 46.0	+0.1
SRTM				S	Sg	23 36 05.6	+0.4
BTMN	Batman	1.49	331	*i* P	Pn	23 35 44.0	-2.9
BTMN				*i* S	Sn	23 36 06.8	+0.2
BTMN	Batman	1.49	331	P	Pn	23 35 44.0	-2.9
BTMN				S	Sn	23 36 06.8	+0.2
HAKT	HAKKARI	1.56	51	*i* P	Pn	23 35 48.1	+0.1
HAKT				*i* S	Sg	23 36 09.4	-0.4
HAKT	HAKKARI	1.56	51	P	Pn	23 35 48.1	+0.1
HAKT				S	Sg	23 36 09.4	-0.4
MAZI	Mazidag	1.64	302	PN	Pn	23 35 49.9	+0.9
MAZI				SN	Sn	23 36 11.0	+0.7
MAZI	Mazidag	1.64	302	*e*Pn	Pn	23 35 49.9	+0.9
MAZI				*e*Sn	Sn	23 36 11.0	+0.7
GURO	Guroymak-BITLI	1.96	357	PN	Pn	23 35 54.3	+0.8
GURO				SN	Sn	23 36 18.4	+0.1
GURO	Guroymak-BITLI	1.96	357	*e*Pn	Pn	23 35 54.3	+0.8
GURO				*e*Sn	Sn	23 36 18.4	+0.1
IKRK	Kirkuk	2.12	124	*e*Pn	Pn	23 35 55.0	-0.5
	SNR=39						
IKRK				*e*Sn	Sn	23 36 22.0	0.0
	SNR=3.0						

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*PRU **06** 23:39:38.6, 51°.52N×16°.15E, h0^{km}*

*CSEM **06** 23:39:38.0±0.6, 51°.52N×16°.10E, h2^{km}, ML2.7/8, Error ellipse: s-maj=9.2km s-min=6.0km az=18.0*

*VIE **06** 23:39:44.0±1.1, 51°.19N×16°.44E, h0^{km}, ml2.0/4, Error ellipse: s-maj=15.9km s-min=6.6km az=109.0 41 km WNW of Wroclaw Suspected Mining induced.*

ISC 06 23:39:37.7±1.8**, 51°.55N**±0°.08×**16°.19E**±0°.05**, h0^{km}, n28, σ0^s.64**/50**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.71	174	*e*Pg	Pg	23 39 51.6	+0.3
KSP				*e*Sg	Sg	23 40 01.2	+0.7
KSP	Ksiaz	0.71	174	*e*Pg	Pg	23 39 51.6	+0.3
KSP				*e*Sg	Sg	23 40 01.2	+0.7
UPC	Upice	1.05	186	*e*PG	Pg	23 39 57.9	+0.1
UPC				*e*SG	Sg	23 40 11.6	+0.3
	comp=Z,11nm,0.3s						
UPC	Upice	1.05	186	Pg	Pg	23 39 57.9	+0.1
UPC				Sg	Sg	23 40 11.6	+0.3
	11nm,0.3s						
DPC	Dobruska-Polom	1.20	176	*e*PG	Pg	23 40 00.5	-0.2
DPC				*e*SG	Sg	23 40 15.9	-0.4
	comp=Z,5.7nm,0.3s						
DPC	Dobruska-Polom	1.20	176	Pg	Pg	23 40 00.5	-0.2
DPC				Sg	Sg	23 40 15.9	-0.4
	5.7nm,0.3s						
PVCC	Panska Ves	1.44	226	*e*PG	Pn	23 40 05.0	-0.1
PVCC				*e*SG	Sg	23 40 24.2	+0.1
	comp=Z,22nm,0.3s						
PVCC	Panska Ves	1.44	226	Pg	Pn	23 40 05.0	-0.1
PVCC				Sg	Sg	23 40 24.2	+0.1
	22nm,0.3s						
KRLC	Kraliky	1.52	165	*e*PG	Pn	23 40 05.8	-0.4
KRLC	Kraliky	1.52	165	Pg	Pn	23 40 05.8	-0.4
BRG	Berggiesshubel	1.56	245	PG	Pn	23 40 06.8	+0.1
BRG				SG	Sg	23 40 28.0	+0.1
	24nm,0.3s						
GOPC	GO Pecny, Ondr	1.86	209	*e*PG	Pb	23 40 12.4	-0.2
GOPC	GO Pecny, Ondr	1.86	209	Pg	Pb	23 40 12.4	-0.2
PRU	Pruhonice	1.88	214	*e*PG	Pb	23 40 12.3	-0.6
PRU				*e*SG	Sb	23 40 37.1	+0.2
	comp=Z,7.5nm,0.4s						
PRU	Pruhonice	1.88	214	Pg	Pb	23 40 12.3	-0.6
PRU				Sg	Sb	23 40 37.1	+0.2
	7.5nm,0.4s						
MORC	Moravsky Berou	1.97	154	*e*Pn	Pn	23 40 12.1	-0.3
MORC				*e*Sn	Sn	23 40 37.4	-0.5
MORC	Moravsky Berou	1.97	154	*e*PN	Pn	23 40 12.1	-0.3
MORC				*e*SN	Sn	23 40 37.4	-0.5
CLL	Collm	2.01	264	*e*Pg	Pb	23 40 15.0	-0.1
CLL				*i* Sg	Sg	23 40 41.7	-0.5
VRAC	Vranov	2.26	173	*e*Pn	Pn	23 40 17.3	+1.0
VRAC				*e*Sg	Sg	23 40 49.7	-0.5
VRAC	Vranov	2.26	173	*e*PN	Pn	23 40 17.3	+1.0
VRAC				*e*SG	Sg	23 40 49.7	-0.5
NKC	Novy Kostel	2.71	242	*e*PN	Pn	23 40 22.5	0.0
NKC				*e*PG	Pb	23 40 28.2	+1.2
NKC				*e*SG	Sg	23 41 03.9	-0.8
	comp=Z,5.5nm,0.3s						
NKC	Novy Kostel	2.71	242	Pn	Pn	23 40 22.5	0.0
KHC	Kasperske Hory	2.94	216	*e*PG	Pb	23 40 31.7	+0.7
KHC				*e*SG	Sg	23 41 10.7	-1.4
	comp=Z,2.1nm,0.3s						
KHC	Kasperske Hory	2.94	216	Pg	Pb	23 40 31.7	+0.7
KHC				Sg	Sg	23 41 10.7	-1.4
	2.1nm,0.3s						
CONA	Conrad Observa	3.63	183	*i* Pn	Pn	23 40 36.3	+1.1
	0.2nm,0.1s						
CONA				*e*Sg	Sg	23 41 33.0	-1.3
	1.2nm,0.3s						
CONA	Conrad Observa	3.63	183	Pn	Pn	23 40 36.3	+1.1
	0.2nm,0.1s						
CONA				Sg	Sg	23 41 33.0	-1.3
	1.2nm,0.3s						
MOA	Molln	3.91	199	*e*Sg	Sg	23 41 43.2	0.0
	0.9nm,0.3s						
MOA	Molln	3.91	199	Sg	Sg	23 41 43.2	0.0
	0.9nm,0.3s						

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*TEH **06** 23:40:08.2, 34°.51N×59°.92E, h19^{km}, ML3.7*

*ISCJB **06** 23:40:09.8±0.5, 34°.49N±0°.03×59°.84E±0°.06, h10^{km}, mb3.4/6, MS2.4/1, Error ellipse: s-maj=7.4km s-min=3.9km az=0.5*

*CSEM **06** 23:40:11.1±0.2, 34°.51N×59°.95E, h20^{km}, ML3.7, Error ellipse: s-maj=7.2km s-min=3.6km az=86.0*

*IDC **06** 23:40:11.8±2.2, 34°.69N×60°.13E, h0^{km}, mb3.3/7, mb1 3.5/9, mb1mx3.3/66, mbtmp3.4/9, ML3.3/2, MS2.6/1, Ms1 2.6/1, ms1mx2.0/42, Error ellipse: s-maj=33.1km s-min=21.8km az=2.0*

*THR **06** 23:40:12.1±0.4, 34°.38N×59°.88E, h40^{km}±3^{km}, ML3.7*

ISC 06 23:40:11.4±0.8**, 34°.51N**±0°.03×**60°.08E**±0°.05**, h10^{km}, n74, σ1^s.90**/61**, mb3.6**/5**, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHRT	Shahrakht	0.88	168	*e*Pg	Pg	23 40 28.1	-0.2
SHRT				IAML		23 40 41.6	
	comp=N,3μm,0.3s						
SHRT				IAML		23 40 43.5	
	comp=E,2μm,0.3s						
SHRT	Shahrakht	0.88	168	*e*Pg	Pg	23 40 28.1	-0.2
SHRT	Shahrakht	0.88	168	*e*Pg	Pg	23 40 28.1	-0.2
IMON	Monand	1.35	195	*e*Pg	Pn	23 40 34.7	-1.9
IMON				*e*Sg	Sb	23 40 53.5	-0.9
IMON				*e*		23 40 56.8	
	comp=N,11μm,0.2s						
IMON				*e*		23 40 57.2	
	comp=Z,93μm,0.2s						
IMON				*e*		23 40 59.3	
	comp=E,740nm,0.1s						
IMON	Monand	1.35	195	*e*Pg	Pn	23 40 34.7	-1.9
IMON				*e*Sg	Sb	23 40 53.5	-0.9
IMOG	Moghan	1.71	340	*e*Pn	Pn	23 40 40.1	-1.4
IMOG				*e*		23 40 43.3	
	comp=Z,8μm,0.1s						
IMOG				*e*		23 41 04.0	
	comp=E,11μm,0.2s						
IMOG				*e*		23 41 05.8	
	comp=N,11μm,0.1s						
IMOG	Moghan	1.71	340	*e*Pn	Pn	23 40 40.1	-1.4
IDAH	Dahanechah	1.77	186	*e*Pn	Pn	23 40 41.3	-1.0
IDAH				*e*		23 41 08.7	
	comp=E,69μm,0.2s						
IDAH				*e*		23 41 08.8	
	comp=N,56μm,0.2s						
IDAH				*e*		23 41 10.5	
	comp=Z,17μm,0.2s						
IDAH	Dahanechah	1.77	186	*e*Pn	Pn	23 40 41.3	-1.0
IMYA	Miami	1.83	1	*e*Pn	Pn	23 40 41.1	-2.0
IMYA				*e*		23 41 08.1	
	comp=N,13μm,0.1s						
IMYA				*e*		23 41 08.6	
	comp=Z,12μm,0.2s						
IMYA				*e*		23 41 11.4	

	comp=E,18µm,0.4s						
IMYA	Miami	1.83	1	ePn	Pn	23 40 41.1	-2.0
ISRO	Mashad	1.86	345	ePn	Pn	23 40 41.6	-1.9
ISRO				e		23 40 45.6	
	comp=N,9µm,0.2s						
ISRO				e		23 41 11.2	
	comp=Z,9µm,0.2s						
ISRO				e		23 41 12.2	
	comp=E,6µm,0.3s						
ISRO	Mashad	1.86	345	ePn	Pn	23 40 41.6	-1.9
ITEG	Tejag	1.95	215	ePn	Pn	23 40 42.6	-2.1
ITEG				e		23 40 45.8	
	comp=Z,11µm,0.1s						
ITEG				e		23 41 11.5	
	comp=N,24µm,0.2s						
ITEG				e		23 41 11.6	
	comp=E,28µm,0.2s						
ITEG	Tejag	1.95	215	ePn	Pn	23 40 42.6	-2.1
IPAY	Payeh	2.13	336	ePn	Pn	23 40 44.8	-2.4
IPAY				e		23 40 49.8	
	comp=E,5µm,0.1s						
IPAY				e		23 40 50.5	
	comp=Z,5µm,0.1s						
IPAY				e		23 41 18.4	
	comp=N,8µm,0.2s						
IPAY	Payeh	2.13	336	ePn	Pn	23 40 44.8	-2.4
IKOO	Kooshah	2.26	204	ePn	Pn	23 40 47.0	-2.1
IKOO				e		23 40 52.8	
	comp=Z,5µm,0.1s						
IKOO				e		23 41 23.4	
	comp=N,5µm,0.2s						
IKOO				e		23 41 26.4	
	comp=E,8µm,0.3s						
IKOO	Kooshah	2.26	204	ePn	Pn	23 40 47.0	-2.1
IAKL	Akhelmad	2.35	333	ePn	Pn	23 40 48.4	-1.9
IAKL				e		23 41 22.0	
	comp=N,5µm,0.2s						
IAKL				e		23 41 23.9	
	comp=E,6µm,0.3s						
IAKL				e		23 41 26.6	
	comp=Z,3µm,0.2s						
IKRD	Kardeh	2.60	331	ePn	Pn	23 40 47.4	-6.3
IKRD				e		23 41 27.4	
	comp=Z,4µm,0.4s						
IKRD				e		23 41 29.9	
	comp=N,4µm,0.2s						
IKRD				e		23 41 31.9	
	comp=E,6µm,0.3s						
IKRD	Kardeh	2.60	331	ePn	Pn	23 40 47.4	-6.3
TABS	Tabas	2.60	252	ePn	Pn	23 40 50.8	-2.8
TABS				eSg	Sn	23 41 26.2	+1.0
TABS				IAML		23 41 36.9	
	comp=N,272nm,0.6s						
TABS	Tabas	2.60	252	ePn	Pn	23 40 50.8	-2.8
TABS	Tabas	2.60	252	ePn	Pn	23 40 50.8	-2.8
TABS				eSg	Sn	23 41 26.2	+1.0
TKDS	Koohdasht(Taba	2.61	251	ePn	Pn	23 40 50.3	-3.4
TKDS				e		23 40 56.6	
	comp=Z,99nm,0.1s						
TKDS				e		23 41 32.1	
	comp=N,99nm,0.2s						
TKDS				e		23 41 39.3	
	comp=E,99nm,0.2s						
TKDS	Koohdasht(Taba	2.61	251	ePn	Pn	23 40 50.3	-3.4
TNSJ	Nastanj	2.92	260	ePn	Pn	23 40 54.9	-3.1
TNSJ				e		23 41 42.5	
	comp=Z,99nm,0.3s						
TNSJ	Nastanj	2.92	260	ePn	Pn	23 40 54.9	-3.1
ISFR	Sfrayin	3.05	327	ePn	Pn	23 40 58.4	-1.5
ISFR				e		23 41 25.5	
	comp=N,3µm,0.2s						
ISFR				e		23 41 54.7	
	comp=E,5µm,0.2s						
ISFR				e		23 41 56.4	
	comp=Z,2µm,0.3s						
IEMG	Emamgholi	3.12	339	e		23 41 15.0	
	comp=N,4µm,0.2s						
IEMG				e		23 41 17.5	
	comp=E,4µm,0.1s						
IEMG				e		23 41 23.2	
	comp=Z,2µm,0.0s						
TPRV	Parvadeh(Tabas	3.19	243	ePn	Pn	23 40 58.3	-3.3
TPRV				e		23 41 55.1	
	comp=N,99nm,0.3s						
TPRV				e		23 42 01.4	
	comp=Z,99nm,0.1s						
TPRV				e		23 42 08.7	
	comp=E,99nm,0.3s						
TPRV	Parvadeh(Tabas	3.19	243	ePn	Pn	23 40 58.3	-3.3
SHRO	Shahrood	3.64	295	ePn	Pn	23 41 06.8	-1.1
SHRO				eSg	Sb	23 41 60.0	-0.2
SHRO	Shahrood	3.64	295	ePn	Pn	23 41 06.8	-1.1
SHRO	Shahrood	3.64	295	ePn	Pn	23 41 06.8	-1.1
SHRO				eSg	Sb	23 42 00.0	-0.2
GEYT	Alibeck	3.77	336	Pn	Pn	23 41 08.1	-1.5
	comp=E,1.0nm,0.3s,baz=153,slow=11,SNR=13						
GEYT				Lg	Lg	23 42 07.2	
	comp=E,0.7nm,0.3s,baz=178,slow=39,SNR=2.5						
IBAF	Bafgh	4.77	234	ePn	Pn	23 41 21.4	-2.1
IBAF				e		23 41 55.7	
	comp=Z,512nm,0.2s						
IBAF				e		23 41 60.0	
	comp=N,563nm,0.2s						
IBAF				e		23 42 50.6	
	comp=E,747nm,0.4s						
IBAF	Bafgh	4.77	234	ePn	Pn	23 41 21.4	-2.1
CHMN	Cheshme madani	5.11	206	ePn	Pn	23 41 26.6	-1.7
CHMN				e		23 43 01.9	
	comp=E,99nm,0.3s						
CHMN				e		23 43 04.1	
	comp=N,99nm,0.6s						
CHMN	Cheshme madani	5.11	206	ePn	Pn	23 41 26.6	-1.7
KHGB	Koh Gabri	5.12	217	ePn	Pn	23 41 26.8	-1.5
KHGB				e		23 43 04.2	
	comp=Z,99nm,0.5s						
KHGB				e		23 43 05.3	
	comp=N,99nm,0.4s						
KHGB				e		23 43 05.9	
	comp=E,99nm,0.5s						
KHGB	Koh Gabri	5.12	217	ePn	Pn	23 41 26.8	-1.5
ICHK	Chekchek	5.25	246	ePn	Pn	23 41 27.4	-2.7
ICHK				e		23 42 51.6	
	comp=E,906nm,0.0s						
ICHK				e		23 43 07.7	
	comp=Z,806nm,0.2s						
ICHK				e		23 43 11.1	
	comp=N,886nm,0.3s						
ICHK	Chekchek	5.25	246	ePn	Pn	23 41 27.4	-2.7
KRBR	Kerman	5.31	213	ePn	Pn	23 41 28.2	-2.8
KRBR	Kerman	5.31	213	ePn	Pn	23 41 28.2	-2.9
KRBR	Kerman	5.31	213	ePn	Pn	23 41 28.2	-2.9
IGLO	Ghaloghah	5.47	293	ePn	Pn	23 41 30.3	-2.8
IGLO				e		23 41 40.2	
	comp=Z,364nm,0.2s						
IGLO				e		23 43 14.9	
	comp=N,947nm,0.4s						
IGLO				e		23 43 23.3	
	comp=E,999nm,0.4s						
IMEH	Mehriz	5.54	237	ePn	Pn	23 41 33.2	-1.0
IMEH				e		23 41 57.2	
	comp=Z,353nm,0.3s						
IMEH				e		23 41 59.5	
	comp=N,363nm,0.2s						
IMEH	Mehriz	5.54	237	ePn	Pn	23 41 33.2	-1.0
NGRK	Negar Kerman	5.62	211	ePn	Pn	23 41 34.1	-1.2
NGRK				e		23 43 12.2	
	comp=N,99nm,0.4s						
NGRK				e		23 43 27.3	
	comp=E,99nm,0.5s						
NGRK				e		23 43 28.9	
	comp=Z,99nm,0.3s						
NGRK	Negar Kerman	5.62	211	ePn	Pn	23 41 34.1	-1.2
ISHM	Shahmirzad	5.71	285	ePn	Pn	23 41 33.9	-2.5
ISHM				e		23 43 10.9	
	comp=Z,502nm,0.3s						
ILAS	Lasjerd	5.91	281	ePn	Pn	23 41 36.8	-2.4
ILAS				e		23 43 21.6	
	comp=E,615nm,0.3s						
ILAS	Lasjerd	5.91	281	ePn	Pn	23 41 36.8	-2.4
ISAD	Sadrabad	5.95	246	ePn	Pn	23 41 43.8	+4.1
ISAD				e		23 43 16.5	
	comp=E,500nm,0.2s						
ISAD				e		23 43 23.7	
	comp=Z,724nm,0.4s						
ISAD				e		23 43 29.0	
	comp=N,638nm,0.3s						
IFIR	Firoozkooh	6.11	283	ePn	Pn	23 41 38.6	-3.4
IFIR				e		23 41 52.2	
	comp=Z,228nm,0.1s						
IFIR				e		23 43 34.3	
	comp=N,305nm,0.3s						
IFIR	Firoozkooh	6.11	283	ePn	Pn	23 41 38.6	-3.4
IALA	Alasht	6.15	287	ePn	Pn	23 41 40.0	-2.5
IALA				e		23 41 44.8	
	comp=Z,216nm,0.1s						
IALA				e		23 41 45.3	
	comp=E,287nm,0.1s						
IALA	Alasht	6.15	287	ePn	Pn	23 41 40.0	-2.5
IPRN	Peran	6.55	288	e		23 41 57.7	
	comp=E,763nm,0.1s						
IPRN				e		23 42 01.8	
	comp=Z,238nm,0.2s						
IPRN				e		23 43 05.6	
	comp=N,496nm,0.2s						
IDMV	Damavand	6.68	281	ePn	Pn	23 41 46.1	-3.8
IDMV				e		23 43 52.9	
	comp=N,378nm,0.2s						
IDMV				e		23 44 04.8	
	comp=E,249nm,0.3s						
IDMV				e		23 44 11.1	
	comp=Z,262nm,0.5s						
IDMV	Damavand	6.68	281	ePn	Pn	23 41 46.1	-3.8
IRAZ	Razeghan	8.38	279	ePn	Pn	23 42 09.8	-3.3
IRAZ	Razeghan	8.38	279	ePn	Pn	23 42 09.8	-3.3
BVAR	Borovoye Array	19.92	19	P	P	23 44 41.8	-1.3
	comp=Z,0.2nm,0.3s,baz=197,slow=9.0,SNR=6.1						
MKAR	Makanchi Array	20.77	47	P	P	23 44 51.2	-1.2
	comp=Z,0.2nm,0.6s,baz=236,slow=10,SNR=2.8						
KURBB	Kurchatov Arra	20.98	34	P	P	23 44 53.4	-1.2
	comp=Z,0.3nm,0.4s,baz=234,slow=12,SNR=4.9						
BRTR	Keskin Array B	21.68	292	P	P	23 45 02.3	-0.1
	comp=Z,0.9nm,0.9s,baz=111,slow=11,SNR=2.6						
ARU	Arti	21.95	358	P	P	23 45 06.0	+1.0
	comp=Z,0.8nm,0.3s,baz=170,slow=3.9,SNR=5.5						
ARU				LR	LR	23 54 39.5	
	comp=Z,15nm,18.8s,baz=128,slow=40						
ZALV	Zalesovo Beam	26.08	34	P	P	23 45 47.2	+2.3
	comp=Z,1.2nm,0.6s,baz=243,slow=13,SNR=5.4						
MLR	Muntele Rosu	28.16	303	P	P	23 46 07.0	+3.1
	comp=Z,0.3nm,0.8s,baz=32,slow=3.1,SNR=3.2						
FINES	FINESS Array B	34.56	332	P	P	23 47 00.7	+0.8
	comp=Z,1.3nm,0.8s,baz=110,slow=12,SNR=3.2						

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*NSSP **06** 23:40:34.8, 38°.97N×43°.70E, h10^{km}, Ms3.5*
*AZER **06** 23:40:36.1±1.6, 39°.88N×43°.76E, h154^{km}±25^{km}, ml3.2/7, Error ellipse: s-maj=22.1km s-min=5.8km az=103.0*
*DDA **06** 23:40:37.0, 39°.01N×43°.65E, h5^{km}, Ml3.6*
*ISK **06** 23:40:37.6, 39°.02N×43°.65E, h5^{km}, ML3.2/16*
*CSEM **06** 23:40:38.3±0.2, 39°.02N×43°.66E, h2^{km}, ML3.6, Error ellipse: s-maj=4.3km s-min=3.4km az=135.0*
ISC 06 23:40:37.8±0.8**, 39°.00N**±0°.02×**43°.64E**±0°.02**, h5**^{km}±5^{km}**, n94, σ1**^{s}**57**/127**, 16C-10D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VMUR	Van-Muradiye	0.05	254	i P	Pg	23 40 39.1	-0.2
VMUR				i S	Sg	23 40 40.8	+0.4
VMUR	Van-Muradiye	0.05	254	P	Pg	23 40 39.1	-0.2
VMUR				S	Sg	23 40 40.8	+0.4
ERCV	ERCIS-VAN	0.23	274	PG	Pg	23 40 42.5	+0.1
ERCV				SG	Sg	23 40 47.6	+2.1
ERCV	ERCIS-VAN	0.23	274	ePg	Pg	23 40 42.5	+0.1
ERCV				eSg	Sg	23 40 47.6	+2.1
CLDR	Caldiran	0.26	57	PG	Pg	23 40 42.6	-0.3
CLDR	Caldiran	0.26	57	i P	Pg	23 40 42.7	-0.3
CLDR				i S	Sg	23 40 47.5	+1.1
CLDR	Caldiran	0.26	57	P	Pg	23 40 42.7	-0.3
CLDR				S	Sg	23 40 47.5	+1.1
VANB	Van	0.45	205	PG	Pb	23 40 48.4	+0.1
VANB	Van	0.45	205	ePg	Pb	23 40 48.4	+0.1
TVAN	Van	0.51	201	i P	Pb	23 40 48.5	-0.8
TVAN				i S	Sn	23 40 58.5	-2.5
TVAN	Van	0.51	201	P	Pb	23 40 48.5	-0.8
DYDN	Diyadin	0.54	4	i P	Pg	23 40 47.8	-0.5
DYDN				i S	Sb	23 40 56.6	-1.5
DYDN	Diyadin	0.54	4	P	Pg	23 40 47.8	-0.5
DYDN				S	Sb	23 40 56.6	-1.5
ADCV	BITLIS_Adilcev	0.74	255	i P	Pb	23 40 52.1	-1.1
ADCV				i S	Sb	23 41 03.8	+0.1
ADCV	BITLIS_Adilcev	0.74	255	P	Pb	23 40 52.1	-1.1
ADCV				S	Sb	23 41 03.8	+0.1
AGRB	Hanur-Agry	0.76	319	PG	Pg	23 40 51.9	-0.5
AGRB				SG	Sb	23 41 03.5	-0.8
AGRB	Hanur-Agry	0.76	319	ePg	Pg	23 40 51.9	-0.5
AGRB				eSg	Sb	23 41 03.5	-0.8
GEVA	Gevas	0.82	213	i P	Pg	23 40 53.4	-0.3
GEVA				i S	Sn	23 41 06.7	-2.2
GEVA	Gevas	0.82	213	P	Pg	23 40 53.4	-0.3
GEVA				S	Sn	23 41 06.7	-2.2
IGDI	IGDIR	0.93	22	i P	Pb	23 40 55.4	-1.1
IGDI				i S	Sn	23 41 08.7	-2.7
HYR	Heyderabad	1.18	52	⇓P	Pg	23 40 59.5	-1.0
HYR				⇑S	Sn	23 41 19.2	+1.6
HYR	Heyderabad	1.18	52	⇓P	Pg	23 40 59.5	-1.0
HYR				⇑S	Sn	23 41 19.2	+1.6
EATA	Eleskirt	1.23	314	i P	Pg	23 41 00.9	-0.6
EATA				i S	Sn	23 41 18.8	-0.4
EATA	Eleskirt	1.23	314	P	Pg	23 41 00.9	-0.6
EATA				S	Sn	23 41 18.8	-0.4
EKAR	Karacoban	1.25	282	i P	Pg	23 41 02.0	+0.3
EKAR	Karacoban	1.25	282	P	Pg	23 41 02.0	+0.3
GURO	Guroymak-BITLI	1.33	251	PN	Pg	23 41 02.7	-0.6
GURO				SN	Sg	23 41 21.6	+1.0
GURO	Guroymak-BITLI	1.33	251	ePn	Pg	23 41 02.7	-0.6
GURO				eSn	Sg	23 41 21.6	+1.0
DIGO	Kars	1.42	352	i P	Pg	23 41 05.4	+0.3
DIGO				i S	Sg	23 41 29.9	+6.2
DIGO	Kars	1.42	352	P	Pg	23 41 05.4	+0.3
GNI	Garni	1.43	36	PN	Pg	23 41 04.5	-0.8
GNI	Garni	1.43	36	⇑iP	Pg	23 41 04.4	-0.8
GNI				⇑iS	Sg	23 41 24.8	+1.0
GNI	Garni	1.43	36	⇑P	Pg	23 41 04.4	-0.8
GNI				S	Sg	23 41 24.8	+1.0
HAKT	HAKKARI	1.44	178	i P	Pb	23 41 04.2	-1.1
HAKT				i S	Sg	23 41 28.5	+4.2
HAKT	HAKKARI	1.44	178	P	Pb	23 41 04.2	-1.1
NAX	Nakhchivan	1.46	83	⇑P	Pg	23 41 06.0	+0.2
	SNR=99						
NAX	Nakhchivan	1.46	83	⇑P	Pg	23 41 06.0	+0.2
	SNR=99						
NAX				⇑S	Sg	23 41 29.4	+4.7
YOVA	Hakkari_Yˆ…kse	1.50	160	i P	Pg	23 41 05.7	-0.9
YOVA				i S	Sg	23 41 28.9	+2.8
YOVA	Hakkari_Yˆ…kse	1.50	160	P	Pg	23 41 05.7	-0.9
SBZ	Shahbuz	1.54	75	⇑P	Pg	23 41 06.0	-1.3
SBZ				⇑S	Sg	23 41 28.4	+1.0
SBZ	Shahbuz	1.54	75	⇑P	Pg	23 41 06.0	-1.3
SBZ				⇑S	Sg	23 41 28.4	+1.0
KARS	Kars	1.68	345	PN	Pb	23 41 08.4	-0.9
KARS	Kars	1.68	345	ePn	Pb	23 41 08.4	-0.9
SRTM	Siirt_Merkez	1.68	234	i P	Pg	23 41 09.2	-0.9
SRTM				i S	Sg	23 41 36.2	+4.4
SRTM	Siirt_Merkez	1.68	234	P	Pg	23 41 09.2	-0.9
HOMI	Horasan	1.69	308	i P	Pg	23 41 10.6	+0.3
VRTB	Varto-Mus	1.70	276	PN	Pb	23 41 09.1	-0.6
VRTB	Varto-Mus	1.70	276	i P	Pg	23 41 10.1	-0.4
VRTB				i S	Sg	23 41 35.3	+2.7
VRTB	Varto-Mus	1.70	276	ePn	Pb	23 41 09.1	-0.6
VRTB	Varto-Mus	1.70	276	P	Pg	23 41 10.1	-0.4
CUKT	Cukurca	1.75	181	PN	Pg	23 41 10.2	-1.2
CUKT	Cukurca	1.75	181	ePn	Pg	23 41 10.2	-1.2
SIRT	Sirnak	1.77	212	PN	Pg	23 41 10.5	-1.2
SIRT	Sirnak	1.77	212	ePn	Pg	23 41 10.5	-1.2
SIRN	S˜–rnak	1.79	213	i P	Pg	23 41 11.2	-0.8
SIRN	S˜–rnak	1.79	213	P	Pg	23 41 11.2	-0.8
ORD	Ordubad	1.84	92	⇓P	Pb	23 41 11.1	-0.9
ORD	Ordubad	1.84	92	⇓P	Pb	23 41 11.1	-0.9
ORD				⇓S	Sg	23 41 38.9	+1.9
BNGL	BINGOL	1.94	269	i P	Pg	23 41 14.2	-0.8
BNGL				i S	Sg	23 41 41.7	+1.6
ERZM	Erzurum	1.97	298	i P	Pg	23 41 15.0	-0.7
ERZM	Erzurum	1.97	298	P	Pg	23 41 15.0	-0.7
STE	Stepanavan	2.07	16	⇑P	Pb	23 41 15.0	-1.0
STEZ	Stepenevan	2.08	16	⇑eP	Pb	23 41 15.0	-1.1
STEZ				⇑S	Sg	23 41 46.0	+1.4
SVAN	Silvan-Diyarba	2.09	247	PN	Pb	23 41 14.9	-1.3
SVAN	Silvan-Diyarba	2.09	247	i P	Pb	23 41 16.0	-0.2
SVAN				i S	Sn	23 41 39.1	-0.8
SVAN	Silvan-Diyarba	2.09	247	ePn	Pb	23 41 14.9	-1.3
SVAN	Silvan-Diyarba	2.09	247	P	Pb	23 41 16.0	-0.2
BTMN	Batman	2.16	240	i P	Pg	23 41 18.0	-1.3
BTMN	Batman	2.16	240	P	Pg	23 41 18.0	-1.3
BNGB	Bingˆ¶l	2.30	271	PN	Pb	23 41 17.8	-2.1
BGOL	Bingol	2.31	271	i P	Pb	23 41 19.6	-0.4
BGOL	Bingol	2.31	271	P	Pb	23 41 19.6	-0.4
GDB	GEDABAY	2.37	43	⇓P	Pn	23 41 08.9	-8.6
	SNR=10						
GDB				⇓S	Sn	23 41 34.5	-12
AKH	Akhalkalaki	2.41	357	PN	Pb	23 41 18.9	-2.8
AKH	Akhalkalaki	2.41	357	ePn	Pb	23 41 18.9	-2.8
YEDI	Yedisu-Bingol	2.44	281	PN	Pb	23 41 19.8	-2.4
YEDI	Yedisu-Bingol	2.44	281	ePn	Pb	23 41 19.8	-2.4
QZX	Qazax, Azerbai	2.45	32	⇓P	Pn	23 41 08.1	-10
	SNR=2.8						
QZX				⇑S	Sn	23 41 33.3	-15
BINT	Bingol	2.46	268	ePn	Pn	23 41 17.8	-0.8
GANJ	Ganja	2.64	51	⇓P	Pn	23 41 12.8	-8.3
	SNR=25						
GANJ				⇓S	Sn	23 41 41.4	-12
BCA	Borcka	2.88	328	PN	Pn	23 41 25.8	+1.4
BCA	Borcka	2.88	328	ePn	Pn	23 41 25.8	+1.4
DIY	Diyarbakir	2.90	249	ePn	Pb	23 41 27.0	-3.0
DYBB	Diyarbakir	2.94	250	PN	Pb	23 41 27.0	-3.7
MAZI	Mazidag	2.95	239	PN	Pn	23 41 27.0	+1.6
MAZI	Mazidag	2.95	239	ePn	Pn	23 41 27.0	+1.6
BAYT	Ayd˜–ntepe-Bay	3.03	298	PN	Pn	23 41 27.8	+1.2
BAYT	Ayd˜–ntepe-Bay	3.03	298	ePn	Pn	23 41 27.8	+1.2
PTK	Pertek	3.31	269	PN	Pn	23 41 31.9	+1.5
PTK	Pertek	3.31	269	ePn	Pn	23 41 31.9	+1.5
SVRC	Sivrice-ELAZID	3.44	261	PN	Pn	23 41 33.9	+1.6
SVRC	Sivrice-ELAZID	3.44	261	ePn	Pn	23 41 33.9	+1.6
MALT	Malatya	4.13	262	PN	Pn	23 41 43.7	+2.0
MALT	Malatya	4.13	262	ePn	Pn	23 41 43.7	+2.0

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*ISK **07** 00:02:33.6, 38°.60N×43°.14E, h16^{km}±1^{km}, ML2.3/3*
*CSEM **07** 00:02:34.5±0.2, 38°.62N×43°.16E, h15^{km}, ML2.3, Error ellipse: s-maj=4.8km s-min=4.1km az=143.0*
*ISCJB **07** 00:02:35.2±0.4, 38°.63N±0°.03×43°.14E±0°.03, h9^{km}±5^{km}, Error ellipse: s-maj=4.7km s-min=3.9km az=152.0*
*DDA **07** 00:02:35.2, 38°.63N×43°.18E, h7^{km}, Ml2.5*
ISC 07 00:02:34.9±0.8**, 38°.64N**±0°.02×**43°.18E**±0°.02**, h12**^{km}±5^{km}**, n25, σ1**^{s}**09**/49**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VANB	Van	0.17	106	PG	Pg	00 02 39.1	+0.1
VANB				SG	Sb	00 02 43.0	+1.2
VANB	Van	0.17	106	ePg	Pg	00 02 39.1	+0.1
VANB				eSg	Sb	00 02 43.0	+1.2
TVAN	Van	0.21	122	i P	Pg	00 02 39.2	-0.5
TVAN				i S	Sg	00 02 43.4	+0.5
TVAN	Van	0.21	122	P	Pg	00 02 39.2	-0.5
TVAN				S	Sg	00 02 43.4	+0.5
GEVA	Gevas	0.34	195	i P	Pg	00 02 41.4	-0.6
GEVA				i S	Sb	00 02 48.3	-0.2
GEVA	Gevas	0.34	195	P	Pg	00 02 41.3	-0.6
GEVA				S	Sb	00 02 48.3	-0.2
ADCV	BITLIS_Adilcev	0.39	295	i P	Pg	00 02 42.9	+0.1
ADCV				i S	Sb	00 02 50.1	+0.3
ADCV	BITLIS_Adilcev	0.39	295	P	Pg	00 02 42.9	+0.1
ADCV				S	Sb	00 02 50.1	+0.3
ERCV	ERCIS-VAN	0.40	19	PG	Pg	00 02 42.8	-0.1
ERCV				SG	Sb	00 02 49.9	-0.2
ERCV	ERCIS-VAN	0.40	19	ePg	Pg	00 02 42.8	-0.1
ERCV				eSg	Sb	00 02 49.9	-0.2
VMUR	Van-Muradiye	0.46	42	i P	Pb	00 02 44.5	-0.6
VMUR				i S	Sb	00 02 52.8	+0.8
VMUR	Van-Muradiye	0.46	42	P	Pb	00 02 44.5	-0.6
VMUR				S	Sb	00 02 52.8	+0.8
CLDR	Caldiran	0.76	49	PG	Pg	00 02 49.9	+0.1
CLDR				SG	Sb	00 03 01.6	+0.9
CLDR	Caldiran	0.76	49	i P	Pg	00 02 49.9	+0.1
CLDR				i S	Sn	00 03 02.0	-1.3
CLDR	Caldiran	0.76	49	P	Pg	00 02 49.9	+0.1
CLDR				eSg	Sb	00 03 01.6	+0.9
CLDR				S	Sn	00 03 02.0	-1.3
TUTA	Tutak	0.81	340	i P	Pg	00 02 50.2	-0.4
TUTA				i S	Sb	00 03 01.7	-0.3
TUTA	Tutak	0.81	340	P	Pg	00 02 50.2	-0.4
TUTA				S	Sb	00 03 01.7	-0.3
GURO	Guroymak-BITLI	0.90	264	PG	Pg	00 02 50.9	-1.4
GURO				SG	Sg	00 03 03.6	-0.5
GURO	Guroymak-BITLI	0.90	264	ePg	Pg	00 02 50.9	-1.4
GURO				eSg	Sg	00 03 03.6	-0.5
HAKT	HAKKARI	1.16	159	i P	Pb	00 02 56.2	-0.9
HAKT				i S	Sn	00 03 16.0	+2.9
HAKT	HAKKARI	1.16	159	P	Pb	00 02 56.2	-0.9
SRTM	Siirt_Merkez	1.18	237	i P	Pg	00 02 58.0	+0.4
SRTM				i S	Sn	00 03 17.9	+4.5
SRTM	Siirt_Merkez	1.18	237	P	Pg	00 02 58.0	+0.4
EATA	Eleskirt	1.33	337	i P	Pn	00 02 58.8	-0.8
EATA				i S	Sg	00 03 19.4	+1.6
EATA	Eleskirt	1.33	337	P	Pn	00 02 58.8	-0.8
EATA				S	Sg	00 03 19.4	+1.6

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*IDC **07** 00:08:23.7±2.3, 21°.96S×69°.74W, h0^{km}, mb3.3/2, mb1 3.7/3, mb1mx3.4/37, mbtmp3.4/3, ML3.6/1, Error ellipse: s-maj=65.5km s-min=42.3km az=30.0*
*ISCJB **07** 00:08:40.5±0.6, 20°.79S±0°.04×69°.50W±0°.10, h106^{km}±5^{km}, mb3.2/2, Error ellipse: s-maj=15.5km s-min=5.6km az=6.6*
*GUC **07** 00:08:40.8±0.6, 20°.76S×69°.41W, h97^{km}±3^{km}, ML3.8*
ISC 07 00:08:41.0±0.9**, 20°.80S**±0°.04×**69°.48W**±0°.10**, h101**^{km}±7^{km}**, n20, σ0**^{s}**86**/24**, 7C-2D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB01	IPOC Station P	0.24	181	⇓iP	Pn	00 08 55.5	-0.1
PB01				i S	Sn	00 09 06.2	-0.3
PB01				IAML		00 09 06.9	
	comp=E,36µm,0.3s						
PB02	IPOC Station P	0.65	216	⇑iP	Pn	00 08 59.0	+0.9
PB02				i S	Sn	00 09 11.9	+0.8
PB02				IAML		00 09 13.6	
	comp=N,9µm,0.1s						
PB08	IPOC Station P	0.72	25	⇓iP	Pn	00 08 58.9	-0.3
PB08				i S	Sn	00 09 11.8	-0.9
PB08				IAML		00 09 13.0	
	comp=E,3µm,0.2s						
PB07	IPOC Station P	1.00	202	⇑iP	Pn	00 09 02.3	+0.6
PB07				i S	Sn	00 09 17.5	+0.3
PB07				IAML		00 09 19.6	
	comp=N,3µm,0.2s						
PB09	IPOC Station P	1.02	167	⇑iP	Pn	00 09 02.7	+0.8
PB09				eS	Sn	00 09 18.4	+0.8
PB09				IAML		00 09 20.3	
	comp=E,3µm,0.4s						
PB03	IPOC Station P	1.27	191	⇑iP	Pn	00 09 05.4	+0.6
PB03				eS	Sn	00 09 22.8	+0.1
PB03				IAML		00 09 24.3	
	comp=E,1µm,0.2s						
PSGC	Pisagua	1.34	333	⇑iP	Pn	00 09 05.3	-0.2
PSGC				i S	Sn	00 09 23.7	-0.3
PSGC				IAML		00 09 24.3	
	comp=N,2µm,0.4s						
PB04	IPOC Station P	1.65	202	⇑iP	Pn	00 09 09.9	+0.5
PB04				i S	Sn	00 09 30.7	-0.2
PB04				IAML		00 09 31.7	
	comp=E,1µm,0.2s						
PB06	IPOC Station P	1.90	182	⇑iP	Pn	00 09 12.9	+0.4
PB06				i S	Sn	00 09 35.8	-0.7
PB06				IAML		00 09 36.9	
	comp=N,737nm,0.3s						
PB05	IPOC Station P	2.15	198	eP	Pn	00 09 15.8	+0.1
PB05				i S	Sn	00 09 41.4	-0.9
PB05				IAML		00 09 45.2	
	comp=N,332nm,0.3s						
LPAZ	La Paz	4.67	16	Pn	Pn	00 09 52.2	+2.4
	comp=N,0.8nm,0.3s,baz=198,slow=8.0,SNR=21						
TXAR	Lajitas Array	59.75	325	P	P	00 18 36.3	+0.7
	comp=N,0.2nm,0.6s,baz=145,slow=9.9,SNR=2.6						
TORD	Torodi Ar. Bea	77.63	71	P	P	00 20 25.9	-0.9
	comp=N,0.3nm,0.7s,baz=263,slow=5.8						
H11S2	WAKE ISLAND Hy	127.25	278	T	T	02 47 22.3	
	baz=95						
H11S1	WAKE ISLAND Hy	127.26	278	T	T	02 47 25.3	

	baz=95						
H11S3	WAKE ISLAND Hy	127.27	278	T	T	02 47 23.2	
	baz=95						
H11N3	WAKE ISLAND Hy	127.32	279	T	T	02 47 24.9	
	baz=104						
H11N2	WAKE ISLAND Hy	127.33	279	T	T	02 47 29.0	
	baz=104						
H11N1	WAKE ISLAND Hy	127.33	279	T	T	02 47 28.7	
	baz=104						
MKAR	Makanchi Array	145.37	35	PKPbc	PKPdf	00 28 05.9	-1.2
	comp=N,0.6nm,0.7s,baz=301,slow=4.1,SNR=4.6						

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*ISCJB **07** 00:24:37.8±0.6, 23°.75S±0°.05×67°.05W±0°.08, h187^{km}±11^{km}, mb3.7/3, Error ellipse: s-maj=12.0km s-min=6.9km az=20.8*

*IDC **07** 00:24:39.0±2.2, 23°.71S×66°.86W, h178^{km}±22^{km}, mb3.5/3, mb1 3.4/7, mb1mx3.2/40, mbtmp3.8/7, Error ellipse: s-maj=28.3km s-min=17.4km az=91.0*

*GUC **07** 00:24:39.8±0.5, 23°.79S×67°.64W, h229^{km}±27^{km}, ML4.0*

ISC 07 00:24:38.1±0.9**, 23°.75S**±0°.06×**66°.99W**±0°.08**, h174**^{km}±12^{km}**, n18, σ1^{s}33**/28**, mb3.6**/3**, 1C, Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB06	IPOC Station P	2.59	293	eP	Pn	00 25 23.4	+1.7
PB06				eS	Sn	00 25 55.4	-0.2
PB06				IAML		00 25 56.5	
	comp=N,725nm,0.2s						
GO02	Mina Guanaco	2.75	239	⇑iP	Pn	00 25 25.0	+1.2
GO02				eS	Sn	00 25 59.4	+0.1
GO02				IAML		00 26 01.0	
	comp=N,333nm,0.2s						
PB09	IPOC Station P	2.85	313	eP	Pn	00 25 27.2	+2.3
PB09				eS	Sn	00 26 02.3	+1.1
PB09				IAML		00 26 03.1	
	comp=E,203nm,0.4s						
PB03	IPOC Station P	3.06	303	eP	Pn	00 25 28.7	+1.2
PB03				i S	Sn	00 26 05.0	-0.8
PB03				IAML		00 26 05.6	
	comp=E,506nm,0.3s						
PB05	IPOC Station P	3.09	286	eP	Pn	00 25 28.5	+0.8
PB05				eS	Sn	00 26 04.2	-2.0
PB05				IAML		00 26 07.4	
	comp=N,170nm,0.3s						
PB04	IPOC Station P	3.23	295	eP	Pn	00 25 30.4	+0.8
PB04				i S	Sn	00 26 08.2	-1.5
PB04				IAML		00 26 13.1	
	comp=E,339nm,0.4s						
PB14	IPOC Station P	3.24	254	eP	Pn	00 25 30.2	+0.5
PB14				eS	Sn	00 26 08.0	-1.8
PB10	IPOC Station P	3.28	273	eP	Pn	00 25 30.8	+0.9
PB10				eS	Sn	00 26 08.8	-1.4
PB10				IAML		00 26 13.3	
	comp=N,121nm,0.3s						
PB07	IPOC Station P	3.35	306	IAML		00 26 12.5	
	comp=E,345nm,0.3s						
PB01	IPOC Station P	3.55	319	eP	Pn	00 25 34.8	+1.2
PB01				i S	Sn	00 26 15.5	-1.2
LPAZ	La Paz	7.50	352	P	Pn	00 26 27.2	+1.6
	comp=E,1.3nm,0.3s,baz=166,slow=7.3,SNR=40						
LPAZ				S	Sn	00 27 49.3	-1.0
	comp=E,0.1nm,0.3s,baz=300,slow=14,SNR=4.8						
CPUP	Villa Florida	9.13	108	P	Pn	00 26 46.4	+0.1
	comp=E,0.1nm,0.3s,baz=28,slow=17,SNR=2.8						
SIV	San Ignacio	9.52	37	P	Pn	00 26 51.8	+0.2
	comp=E,1.7nm,0.3s,baz=247,slow=13,SNR=20						
SIV				S	Sn	00 28 35.0	-2.6
	comp=E,0.0nm,0.3s,baz=259,slow=13,SNR=2.8						
PLCA	Paso Flores	17.19	189	P	P	00 28 26.9	0.0
	comp=E,0.1nm,0.3s,baz=26,slow=12,SNR=3.9						
SNAA	Sanae	59.58	161	P	P	00 34 23.1	-0.1
	comp=E,0.9nm,1.0s,baz=276,slow=9.2,SNR=3.1						
QSPA	South Pole Qui	66.45	180	P	P	00 35 09.6	+1.0
	comp=E,1.3nm,0.5s,baz=140,slow=3.9,SNR=6.5						
TORD	Torodi Ar. Bea	76.47	69	P	P	00 36 08.5	-0.8
	comp=E,0.6nm,0.5s,baz=254,slow=5.5						
MKAR	Makanchi Array	146.33	39	PKPbc	PKPbc	00 43 58.4	0.0
	comp=E,0.2nm,0.6s,baz=298,slow=3.1,SNR=3.4						

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*IDC **07** 00:27:27.6±5.9, 7°.81S×106°.63E, h71^{km}±48^{km}, mb3.5/4, mb1 3.6/4, mb1mx3.1/57, mbtmp3.8/4, Error ellipse: s-maj=59.3km s-min=21.2km az=56.0*

*DJA **07** 00:27:29.0±0.7, 8°S±5°×10°7E±°, h17^{km}±7^{km}, M3.8/7, MLv3.8/7*

ISC 07 00:27:26.6±1.7**, 8°.03S**±0°.07×**107°.13E**±0°.05**, h19**^{km}±4^{km}**, n12, σ1^{s}17**/17**, mb3.6**/4**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CISI	Cisompet, Garu	0.82	55	P	Pn	00 27 43.5	+0.2
CISI				S	Sg	00 27 53.3	-0.5
SKJI	Sukabumi	1.17	331	P	Pb	00 27 48.9	+0.7
SKJI				S	Sb	00 28 03.4	+0.4
LEM	Lembang	1.29	22	P	Pg	00 27 51.2	-0.5
	159nm,0.3s,baz=84,slow=7.1,SNR=35						
LEM				S	Sg	00 28 09.0	+0.5
	148nm,0.3s,baz=330,slow=20,SNR=13						
LEM				LR	LR	00 28 24.7	
	comp=Z,96nm,20.1s,baz=308,slow=41						
CMJI	Cimerak	1.33	79	P	Pb	00 27 51.1	+0.2
CMJI				S	Sb	00 28 06.7	-0.8
DBJI	Dramaga	1.52	345	P	Pb	00 27 54.2	0.0
DBJI				S	Sn	00 28 11.6	-0.4
KPJI	Karang Pucung	1.91	69	P	Pb	00 28 00.5	-0.4
KPJI				S	Sn	00 28 23.3	+1.6
CGJI	Cibinong	2.01	315	P	Pn	00 28 00.1	+0.6
CGJI				S	Sn	00 28 20.8	-3.3
MDSI	Maura Dua	4.59	320	P	Pn	00 28 36.4	+1.4
WRA	Warramunga Arr	28.88	117	P	P	00 33 24.5	+0.1
	0.4nm,0.7s,baz=295,slow=9.9,SNR=2.5						
STKA	Stephens Creek	39.86	131	P	P	00 34 59.0	-0.1
	0.8nm,0.4s,baz=291,slow=10,SNR=3.3						
MKAR	Makanchi Array	58.90	340	P	P	00 37 18.5	-5.8
	0.2nm,0.5s,baz=152,slow=7.6,SNR=2.9						
KURBB	Kurchatov Arra	63.46	340	P	P	00 37 45.5	-10
	0.4nm,0.2s,baz=133,slow=6.4,SNR=2.0						

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*BJI **07** 00:50:23.7, 39°.64S×176°.07E, h91^{km}, mb5.5/14, mB5.8/8*

*MOS **07** 00:50:24.3±1.2, 39°.03S×175°.78E, h87^{km}, mb5.1/14, Error ellipse: s-maj=12.2km s-min=9.7km az=75.9*

*ISCJB **07** 00:50:25.6±0.1, 39°.12S±0°.02×175°.76E±0°.03, h99^{km}±1^{km}, mb5.2/55, Error ellipse: s-maj=3.5km s-min=2.5km az=26.4*

*WEL **07** 00:50:26.8, 39°.1S±0°.8×17°6E±°, h90^{km}±1^{km}*

*IDC **07** 00:50:27.1±0.8, 38°.94S×175°.82E, h102^{km}±8^{km}, mb4.8/22, mb1 4.9/23, mb1mx4.7/46, mbtmp5.1/23, MS3.6/11, Ms1 3.5/11, ms1mx3.4/40, Error ellipse: s-maj=11.8km s-min=10.5km az=20.0*

*GCMT **07** 00:50:27.0±0.2, 39°.11S×175°.74E, h104^{km}±3^{km}, MW5.0/83, Moment Tensor Solution. s29,c34; s83,c114; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.03±.14; $M_{\theta\theta}$2.38±.15; $M_{\phi\phi}$-3.41±.14; $M_{r\theta}$1.26±.09; $M_{\theta\phi}$-0.01±.13; $M_{\phi r}$-2.25±.09; Best double couple: $M_0$3.88100×10^{16} NP1:ϕ_s143.00000°, δ81.00000°, λ46.00000°. NP2: ϕ_s44.00000°, δ45.00000°, λ168.00000°. Principal axes: T 3.3760, Plg37.0000°, Azm15.0000°; N 1.0110, Plg44.0000°, Azm151.0000°; P -4.3860, Plg23.0000°, Azm265.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **07** 00:50:27.0±0.0, 39°.07S×175°.81E, h91^{km}, mb5.3/29, ML5.7(WEL), After WEL.*

NEIC Felt at Opotiki and Taihape. Felt widely on the North Island.

ISC 07 00:50:26.7±0.5**, 39°.16S**±0°.03×**175°.74E**±0°.03**, h100**^{km}±3^{km}**, n417, σ1^{s}61**/439**, mb5.3**/55**, 5C-4D, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OTVZ	Oturere	0.06	271	eP*	Pn	00 50 38.8	-2.0
KRVZ	Karewarewa	0.10	313	P	Pn	00 50 39.6	-1.2
NGZ	Ngauruhoe	0.11	264	P*	Pn	00 50 39.7	-1.1
NGZ	Ngauruhoe	0.11	264	P	Pn	00 50 39.8	-1.1
TUVZ	Tukino	0.12	212	P*	Pn	00 50 40.4	-0.5
TUVZ	Tukino	0.12	212	P	Pn	00 50 40.5	-0.5
TUVZ				S	Sn	00 50 50.1	-1.3
WTVZ	West Tongariro	0.13	293	P*	Pn	00 50 39.7	-1.2
WTVZ	West Tongariro	0.13	293	P	Pn	00 50 39.7	-1.2
WTVZ				S	Sn	00 50 49.8	-1.6
COVZ	Chateau Observ	0.16	257	P	Pn	00 50 40.0	-0.9
WHVZ	Whangaehu Hut	0.17	224	eP*	Pn	00 50 39.4	-1.7
WHVZ	Whangaehu Hut	0.17	224	P	Pn	00 50 40.6	-0.5
WHVZ				S	Sn	00 50 50.1	-1.8
FWVZ	Far West T-bar	0.17	238	P	Pn	00 50 40.4	-0.7
DRZ	Dome Shelter	0.17	231	P*	Pn	00 50 40.6	-0.6
DRZ	Dome Shelter	0.17	231	P	Pn	00 50 40.7	-0.6
KATZ	Kakaramea	0.19	350	P*	Pn	00 50 39.6	-1.4
KATZ	Kakaramea	0.19	350	P	Pn	00 50 39.7	-1.4
WNVZ	Wahianoa	0.20	214	P*	Pn	00 50 40.7	-0.4
TRVZ	Turoa	0.20	228	eP*	Pn	00 50 39.7	-1.5
TRVZ	Turoa	0.20	228	P	Pn	00 50 40.8	-0.4
TRVZ				S	Sn	00 50 50.9	-1.1
RITZ	Rihia Road	0.21	27	P*	Pn	00 50 40.0	-1.0
RITZ	Rihia Road	0.21	27	P	Pn	00 50 40.0	-1.0
RITZ				S	Sn	00 50 50.3	-1.3
MOVZ	Moawhango	0.24	177	P*	Pn	00 50 40.6	-0.6
MOVZ	Moawhango	0.24	177	P	Pn	00 50 40.6	-0.6
MOVZ				S	Sn	00 50 50.5	-1.4
TWVZ	Taurewa	0.25	292	P*	Pn	00 50 40.3	-0.9
TWVZ	Taurewa	0.25	292	P	Pn	00 50 40.3	-0.9
TWVZ				S	Sn	00 50 50.3	-1.8
RATZ	Rangitukua	0.30	5	P*	Pn	00 50 39.4	-2.0
RATZ	Rangitukua	0.30	5	P	Pn	00 50 39.9	-1.5
MTVZ	Mangateitei	0.30	223	P*	Pn	00 50 41.1	-0.3
MTVZ	Mangateitei	0.30	223	P	Pn	00 50 41.1	-0.3
PKVZ	Pokaka	0.33	248	P*	Pn	00 50 41.2	-0.3
PKVZ	Pokaka	0.33	248	P	Pn	00 50 41.2	-0.3
HATZ	Hinemaiaia	0.39	45	P*	Pn	00 50 40.2	-1.6
HATZ	Hinemaiaia	0.39	45	P	Pn	00 50 40.2	-1.6
HATZ				S	Sn	00 50 50.6	-2.5
BHHZ	Black Hill Sta	0.41	142	P*	Pn	00 50 41.5	-0.5
BHHZ	Black Hill Sta	0.41	142	P	Pn	00 50 41.5	-0.5
WATZ	Wairara	0.46	359	P*	Pn	00 50 40.7	-1.5
WATZ	Wairara	0.46	359	P	Pn	00 50 40.8	-1.5
WHTZ	Whakaora	0.53	19	P*	Pn	00 50 41.5	-1.3
WHTZ	Whakaora	0.53	19	P	Pn	00 50 41.5	-1.3
BKZ	Black Stump Fm	0.59	90	ePn	Pn	00 50 42.3	-1.0
BKZ				eSn	Sn	00 50 53.7	-1.8
BKZ	Black Stump Fm	0.59	90	P	Pn	00 50 42.2	-1.0
KWHZ	Kaweka Forest	0.59	116	P	Pn	00 50 42.9	-0.4
MRHZ	Matea Rd	0.62	58	P	Pn	00 50 41.9	-1.6
KUTZ	Kaahu Road	0.68	6	P*	Pn	00 50 42.5	-1.4
KUTZ	Kaahu Road	0.68	6	P	Pn	00 50 42.6	-1.4
KRHZ	Kereru	0.68	135	P	Pn	00 50 44.0	0.0
WPRZ	Whakapapatarin	0.72	27	P*	Pn	00 50 42.8	-1.6
WPRZ	Whakapapatarin	0.72	27	P	Pn	00 50 42.8	-1.6
VRZ	Vera Road	0.76	273	P	Pn	00 50 44.8	+0.1
ALRZ	Allen Road	0.76	38	P*	Pn	00 50 43.0	-1.7
ALRZ	Allen Road	0.76	38	P	Pn	00 50 43.0	-1.7
MCHZ	McNeill Hill	0.79	111	Pn	Pn	00 50 45.2	+0.2
MCHZ	McNeill Hill	0.79	111	P	Pn	00 50 45.3	+0.2
PNHZ	Pukenui	0.83	155	Pn	Pn	00 50 45.7	+0.3
PNHZ	Pukenui	0.83	155	P	Pn	00 50 46.0	+0.6
WAZ	Wanganui	0.83	224	ePn	Pn	00 50 45.2	-0.2
WAZ	Wanganui	0.83	224	P	Pn	00 50 46.4	+1.1
NMHZ	Naumai	0.83	86	Pn	Pn	00 50 45.2	-0.2
NMHZ	Naumai	0.83	86	P	Pn	00 50 45.3	-0.2
PRRZ	Plateau Road	0.84	38	P*	Pn	00 50 43.7	-1.7
PRRZ	Plateau Road	0.84	38	P	Pn	00 50 43.7	-1.7
TLZ	Tolley Road	0.85	349	P*	Pn	00 50 43.5	-2.1
TLZ	Tolley Road	0.85	349	P	Pn	00 50 44.3	-1.3
GRRZ	Galatos Road	0.86	20	P	Pn	00 50 44.6	-1.2
HRRZ	Handcock Road	0.88	29	P*	Pn	00 50 44.6	-1.4
HRRZ	Handcock Road	0.88	29	P	Pn	00 50 44.6	-1.4
TSZ	Takapari Road	0.91	169	Pn	Pn	00 50 46.2	-0.1
TSZ	Takapari Road	0.91	169	P	Pn	00 50 47.0	+0.7
MTHZ	Maungataniwha	0.91	70	P	Pn	00 50 44.9	-1.3
HSRZ	Hossack Road	0.94	25	P	Pn	00 50 45.1	-1.4
HIZ	Hauiti	0.95	313	ePn	Pn	00 50 45.7	-0.9
HIZ	Hauiti	0.95	313	P	Pn	00 50 45.8	-0.7
ARHZ	Aropaoanui	0.98	96	Pn	Pn	00 50 46.6	-0.3
ARHZ	Aropaoanui	0.98	96	P	Pn	00 50 46.6	-0.3
RRRZ	Republican Roa	1.02	37	P*	Pn	00 50 45.8	-1.6
RRRZ	Republican Roa	1.02	37	P	Pn	00 50 45.9	-1.6
HLRZ	Highlands Stat	1.03	28	P	Pn	00 50 46.5	-1.0
UTU	Utuhina	1.05	20	P*	Pn	00 50 46.5	-1.3
UTU	Utuhina	1.05	20	P	Pn	00 50 46.6	-1.1
WPHZ	Waipukurau	1.05	149	Pn	Pn	00 50 48.1	+0.4
WPHZ	Waipukurau	1.05	149	P	Pn	00 50 48.1	+0.4
MUGZ	Murupara	1.06	50	P	Pn	00 50 46.1	-1.7
LREZ	Lake Rotokare	1.08	254	P	Pn	00 50 48.9	+0.9
RAHZ	Arahi	1.08	77	P	Pn	00 50 47.2	-0.8
KAHZ	Kahuranaki	1.08	126	Pn	Pn	00 50 48.2	+0.1
KAHZ	Kahuranaki	1.08	126	P	Pn	00 50 48.2	+0.1
OHWZ	Ohakea	1.09	197	P	Pn	00 50 49.7	+1.6
MHEZ	Mangahewa	1.10	274	Pn	Pn	00 50 49.0	+0.7
MHEZ	Mangahewa	1.10	274	P	Pn	00 50 49.0	+0.7
TARZ	Mount Tarawera	1.10	33	P*	Pn	00 50 47.0	-1.4
TARZ	Mount Tarawera	1.10	33	P	Pn	00 50 47.1	-1.4
RTZ	Ruatahuna	1.11	61	P	Pn	00 50 46.9	-1.6
NGRZ	Ngongotaha	1.12	18	P	Pn	00 50 47.2	-1.3
CKHZ	Cape Kidnapper	1.15	116	Pn	Pn	00 50 49.1	+0.3
CKHZ	Cape Kidnapper	1.15	116	P	Pn	00 50 49.0	+0.2
OMRZ	Omania	1.17	25	P*	Pn	00 50 47.2	-1.9
OMRZ	Omania	1.17	25	P	Pn	00 50 47.6	-1.4
WHHZ	Waihua	1.17	86	P	Pn	00 50 48.3	-0.7
MKRZ	Makatiti	1.17	29	P*	Pn	00 50 48.0	-1.2
MKRZ	Makatiti	1.17	29	P	Pn	00 50 48.1	-1.0
DVHZ	Dannevirke	1.18	164	Pn	Pn	00 50 49.5	+0.3
DVHZ	Dannevirke	1.18	164	P	Pn	00 50 49.5	+0.3
DREZ	Durham Road	1.20	268	Pn	Pn	00 50 50.1	+0.8
DREZ	Durham Road	1.20	268	P	Pn	00 50 50.1	+0.8
KARZ	Kaharoa	1.21	19	P*	Pn	00 50 48.1	-1.4
KARZ	Kaharoa	1.21	19	P	Pn	00 50 48.2	-1.3
POWZ	Post Office Ro	1.23	179	Pn	Pn	00 50 50.2	+0.5
POWZ	Post Office Ro	1.23	179	P	Pn	00 50 50.2	+0.5
PXZ	Pawanui	1.23	135	Pn	Pn	00 50 49.2	-0.4
PXZ	Pawanui	1.23	135	P	Pn	00 50 49.8	+0.2
PREZ	Palmer Road	1.24	261	Pn	Pn	00 50 51.1	+1.2
PREZ	Palmer Road	1.24	261	P	Pn	00 50 51.1	+1.2
LIRZ	Lichensteins R	1.27	24	P*	Pn	00 50 48.9	-1.3
LIRZ	Lichensteins R	1.27	24	P	Pn	00 50 48.9	-1.3
NEZ	North Egmont	1.28	265	Pn	Pn	00 50 51.3	+0.9
PRHZ	Porangahau	1.30	148	Pn	Pn	00 50 51.0	+0.4
PRHZ	Porangahau	1.30	148	P	Pn	00 50 51.0	+0.4
EDRZ	Edgecumbe	1.31	37	P*	Pn	00 50 49.2	-1.6
EDRZ	Edgecumbe	1.31	37	P	Pn	00 50 49.2	-1.6
KMRZ	Kaimai	1.33	7	P	Pn	00 50 49.8	-1.2
KHEZ	Kahui Hut	1.34	264	Pn	Pn	00 50 51.7	+0.5
KHEZ	Kahui Hut	1.34	264	P	Pn	00 50 52.0	+0.8
PKE	Pukeiti	1.36	268	Pn	Pn	00 50 51.9	+0.6
PKE	Pukeiti	1.36	268	P	Pn	00 50 51.9	+0.6
MARZ	Manawahe	1.39	32	P*	Pn	00 50 50.2	-1.4
MARZ	Manawahe	1.39	32	P	Pn	00 50 50.3	-1.4
PRWZ	Pori Road	1.40	173	Pn	Pn	00 50 52.4	+0.7
PRWZ	Pori Road	1.40	173	P	Pn	00 50 52.4	+0.7
URZ	Urewera	1.40	50	P	Pn	00 50 50.1	-1.7
	5μm,0.3s,baz=271,slow=3.5						
URZ				S	Sn	00 51 07.2	-3.6
	7μm,0.3s,baz=111,slow=21,SNR=38						
URZ				LR	LR	00 51 24.6	
	comp=Z,5μm,20.0s,baz=260,slow=47						
URZ	Urewera	1.40	50	P	Pn	00 50 50.1	-1.7
ANWZ	Angora Road	1.41	157	P	Pn	00 50 52.5	+0.6
TOZ	Tahuroa Road	1.44	353	P*	Pn	00 50 50.5	-1.8
TOZ	Tahuroa Road	1.44	353	P	Pn	00 50 51.2	-1.1
NWEZ	Newall Road	1.46	265	Pn	Pn	00 50 53.0	+0.6
NMEZ	Namu Road	1.47	260	Pn	Pn	00 50 53.4	+0.9
NMEZ	Namu Road	1.47	260	P	Pn	00 50 53.4	+0.9
OPRZ	Ohinepanea	1.47	26	P*	Pn	00 50 50.5	-2.0
OPRZ	Ohinepanea	1.47	26	P	Pn	00 50 51.1	-1.5
RAGZ	Rawiri	1.47	64	P*	Pn	00 50 51.3	-1.4
RAGZ	Rawiri	1.47	64	P	Pn	00 50 51.4	-1.3
TGRZ	Tauranga	1.49	16	P	Pn	00 50 51.6	-1.2
MRZ	Mangatainoka R	1.50	185	ePn	Pn	00 50 52.4	-0.6
MRZ	Mangatainoka R	1.50	185	P	Pn	00 50 53.3	+0.3
KNZ	Kokohu	1.51	85	Pn	Pn	00 50 51.6	-1.5
KNZ	Kokohu	1.51	85	P	Pn	00 50 51.7	-1.5
BFZ	Birch Farm	1.56	166	ePn	Pn	00 50 54.1	+0.2
BFZ				eSn	Sn	00 51 13.1	-1.2
BFZ	Birch Farm	1.56	166	P	Pn	00 50 54.0	+0.2
TIWZ	Tintock	1.61	176	Pn	Pn	00 50 54.8	+0.3
TIWZ	Tintock	1.61	176	P	Pn	00 50 54.8	+0.3
MWZ	Matawai	1.63	60	P*	Pn	00 50 52.4	-2.2
MWZ	Matawai	1.63	60	P	Pn	00 50 52.9	-1.7
WHRZ	Whale Island	1.63	37	P	Pn	00 50 53.0	-1.5
RIGZ	Rimuhau	1.64	74	P	Pn	00 50 53.4	-1.4
MHGZ	Mahia Peninsul	1.69	90	Pn	Pn	00 50 54.2	-1.0
MHGZ	Mahia Peninsul	1.69	90	P	Pn	00 50 54.3	-1.0
PRGZ	Paritu Road	1.69	82	Pn	Pn	00 50 54.0	-1.3
PRGZ	Paritu Road	1.69	82	P	Pn	00 50 54.0	-1.3
OGWZ	Otaki Gorge	1.71	195	Pn	Pn	00 50 55.9	+0.4
OGWZ	Otaki Gorge	1.71	195	P	Pn	00 50 56.0	+0.4
HOWZ	Holdsworth Sta	1.74	186	Pn	Pn	00 50 56.0	0.0
HOWZ	Holdsworth Sta	1.74	186	P	Pn	00 50 56.0	0.0
CPWZ	Castlepoint	1.78	169	Pn	Pn	00 50 57.1	+0.7
CPWZ	Castlepoint	1.78	169	P	Pn	00 50 57.2	+0.7
TKGZ	Te Karaka	1.80	67	Pn	Pn	00 50 55.3	-1.4
TKGZ	Te Karaka	1.80	67	P	Pn	00 50 55.3	-1.4
KIW	Kapiti Island	1.81	200	Pn	Pn	00 50 56.9	0.0
KIW	Kapiti Island	1.81	200	P	Pn	00 50 56.9	0.0
RUGZ	Raukumara Rang	1.94	52	P	Pn	00 50 56.3	-2.3
TMWZ	Te Maipa	1.94	177	Pn	Pn	00 50 58.5	-0.1
TMWZ	Te Maipa	1.94	177	P	Pn	00 50 58.5	-0.1
WIZ	White Island	1.99	35	Pn	Pn	00 50 57.6	-1.5
WIZ	White Island	1.99	35	P	Pn	00 50 57.7	-1.5
MTW	Mount Morrison	2.00	185	Pn	Pn	00 50 58.9	-0.3
MTW	Mount Morrison	2.00	185	P	Pn	00 50 59.0	-0.3
CAW	Cannon Point	2.01	195	Pn	Pn	00 50 59.2	-0.2
CAW	Cannon Point	2.01	195	P	Pn	00 50 59.2	-0.2
TWGZ	Tauwhareparae	2.01	61	Pn	Pn	00 50 58.3	-1.1
TWGZ	Tauwhareparae	2.01	61	P	Pn	00 50 58.4	-1.1
CNGZ	Carnagh Statio	2.04	71	Pn	Pn	00 50 58.6	-1.3
CNGZ	Carnagh Statio	2.04	71	P	Pn	00 50 58.6	-1.3
MKAZ	Moumakai	2.11	347	Pn	Pn	00 50 58.9	-1.8
MKAZ	Moumakai	2.11	347	P	Pn	00 50 59.5	-1.2
HAZ	Te Kaha	2.13	49	P	Pn	00 50 58.5	-2.5
DUWZ	D’Urville Isla	2.15	220	Pn	Pn	00 51 01.0	-0.3
DUWZ	D’Urville Isla	2.15	220	P	Pn	00 51 01.0	-0.3
KBAZ	Karaka Road Bo	2.17	342	P	Pn	00 51 00.7	-0.8
KBAZ				P	Pn	00 51 00.7	-0.8
PAWZ	Paruwai Farm	2.23	186	Pn	Pn	00 51 01.7	-0.6
PAWZ	Paruwai Farm	2.23	186	P	Pn	00 51 01.7	-0.6
TRWZ	Traveller	2.23	181	Pn	Pn	00 51 01.8	-0.5
TRWZ	Traveller	2.23	181	P	Pn	00 51 01.8	-0.5
PKGZ	Pakihiroa	2.23	56	P	Pn	00 51 00.8	-1.5
WEL	Wellington	2.24	199	Pn	Pn	00 51 01.9	-0.5
WEL	Wellington	2.24	199	P	Pn	00 51 01.9	-0.5
PUZ	Puketiti	2.25	62	Pn	Pn	00 51 00.1	-2.5
PUZ	Puketiti	2.25	62	P	Pn	00 51 00.7	-1.9
AWAZ	Awhitu Peninsu	2.27	337	P	Pn	00 51 01.9	-0.9
MSWZ	Moikau Station	2.28	189	Pn	Pn	00 51 02.3	-0.7
MSWZ	Moikau Station	2.28	189	P	Pn	00 51 02.3	-0.7
SNZO	South Karori	2.29	200	ePn	Pn	00 51 02.4	-0.6
ETAZ	East Tamaki Re	2.30	344	Pn	Pn	00 51 02.0	-1.1
ETAZ	East Tamaki Re	2.30	344	P	Pn	00 51 02.1	-1.1
TCW	Tory Channel	2.33	208	Pn	Pn	00 51 03.1	-0.5
TCW	Tory Channel	2.33	208	P	Pn	00 51 03.1	-0.5
BHW	Baring Head	2.34	196	Pn	Pn	00 51 03.0	-0.7
BHW	Baring Head	2.34	196	P	Pn	00 51 03.0	-0.7
BHW				P	Pn	00 51 03.0	-0.7
WTAZ	Waiatarua	2.41	337	P	Pn	00 51 04.0	-0.7
KUZ	Kuaotunu	2.42	360	Pn	Pn	00 51 02.9	-1.8
KUZ	Kuaotunu	2.42	360	P	Pn	00 51 03.4	-1.3
WIAZ	Waiheke Island	2.42	348	P	Pn	00 51 03.6	-1.1
EPAZ	Eden Park BICE	2.42	341	P	Pn	00 51 03.9	-0.8
PLWZ	Palliser	2.43	189	Pn	Pn	00 51 04.0	-0.9
PLWZ	Palliser	2.43	189	P	Pn	00 51 04.0	-0.9
HBAZ	Herne Bay Bore	2.44	341	P	Pn	00 51 04.1	-0.9
WMGZ	Waiomatatini S	2.49	58	Pn	Pn	00 51 03.8	-1.9
WMGZ	Waiomatatini S	2.49	58	P	Pn	00 51 03.8	-1.9
RVAZ	Riverhead Bore	2.56	339	Pn	Pn	00 51 05.6	-1.0
RVAZ	Riverhead Bore	2.56	339	P	Pn	00 51 05.8	-0.8
MXZ	Matakaoa Point	2.58	52	ePn	Pn	00 51 05.2	-1.7
MXZ	Matakaoa Point	2.58	52	P	Pn	00 51 05.1	-1.7
TUWZ	Tuamarina	2.65	211	Pn	Pn	00 51 07.0	-0.7
TUWZ	Tuamarina	2.65	211	P	Pn	00 51 07.0	-0.7
ABAZ	Army Bay	2.66	344	Pn	Pn	00 51 07.0	-0.9
ABAZ	Army Bay	2.66	344	P	Pn	00 51 07.0	-0.9
NNZ	Nelson	2.73	221	Pn	Pn	00 51 07.9	-0.9
NNZ	Nelson	2.73	221	P	Pn	00 51 08.0	-0.9
CMWZ	Cape Campbell	2.83	204	Pn	Pn	00 51 09.8	-0.4
CMWZ	Cape Campbell	2.83	204	P	Pn	00 51 09.8	-0.4
GRZ	Great Barrier	2.92	356	P	Pn	00 51 10.2	-1.2
BSWZ	Blackbirch Sta	2.92	209	P	Pn	00 51 10.4	-1.0
QRZ	Quartz Range	2.97	235	Pn	Pn	00 51 11.1	-0.9
QRZ	Quartz Range	2.97	235	P	Pn	00 51 11.1	-0.9
THZ	Tophouse	3.38	219	ePn	Pn	00 51 16.7	-0.8
THZ	Tophouse	3.38	219	P	Pn	00 51 16.5	-1.0
WCZ	Waipu Caves	3.41	341	P	Pn	00 51 17.7	-0.2
KHZ	Kahutara	3.65	206	ePn	Pn	00 51 19.9	-1.3
KHZ				eSn	Sn	00 52 01.3	-2.0
KHZ	Kahutara	3.65	206	P	Pn	00 51 19.7	-1.5
DSZ	Denniston Nort	3.96	228	Pn	Pn	00 51 23.6	-1.7
DSZ	Denniston Nort	3.96	228	P	Pn	00 51 23.6	-1.7
OUZ	Omahuta	4.29	336	ePn	Pn	00 51 28.5	-1.3
OUZ	Omahuta	4.29	336	P	Pn	00 51 29.3	-0.5
LTZ	Lake Taylor	4.47	215	ePn	Pn	00 51 30.9	-1.3
EYCZ	Eyrewell	4.96	210	P	Sn	00 52 30.0	-4.9
OKCZ	Okains Bay	4.98	203	P	Sn	00 52 31.4	-4.0
OXZ	Oxford	5.01	213	ePn	Pn	00 51 36.2	-3.2
OXZ				eSn	Sn	00 52 31.9	-4.2
OXZ	Oxford	5.01	213	P	Sn	00 52 31.8	-4.2
MQZ	McQueen’s Vall	5.09	206	ePn	Pn	00 51 37.5	-3.2
MQZ				eSn	Sn	00 52 32.7	-5.5
MQZ	McQueen’s Vall	5.09	206	P	Sn	00 52 31.8	-6.4
AKCZ	Akaroa Harbour	5.16	203	P	Sn	00 52 33.3	-6.5
WVZ	Waitaha Valley	5.43	222	Pn	Pn	00 51 43.3	-1.9
WVZ	Waitaha Valley	5.43	222	P	Pn	00 51 43.4	-1.8
RPZ	Rata Peaks	5.75	216	P	Pn	00 51 47.6	-1.9
	25nm,0.3s,baz=190,slow=2.4,SNR=124						
RPZ				S	Sn	00 52 48.4	-5.7
	270nm,0.3s,baz=44,slow=2.6,SNR=6.1						
RPZ	Rata Peaks	5.75	216	ePn	Pn	00 51 48.0	-1.5
RPZ				S	Sn	00 52 48.4	-5.7
FOZ	Fox Glacier	6.24	224	ePn	Pn	00 51 53.3	-2.9
LBZ	Lake Benmore	6.67	217	ePn	Pn	00 52 00.6	-1.4
ODZ	Otahua Downs	6.99	211	ePn	Pn	00 52 04.3	-2.1
JCZ	Jackson Bay	7.15	224	Pn	Pn	00 52 04.9	-3.8
CTZ	Chatham Island	7.33	131	Pn	Pn	00 52 09.7	-1.4
CTZ	Chatham Island	7.33	131	P	Pn	00 52 09.7	-1.4
I36NZ	CHATHAM INFRAS	7.52	132	i		01 31 30.0	
	baz=305,slow=311,SNR=0.2						
WKZ	Wanaka	7.55	219	ePn	Pn	00 52 12.0	-2.1
HHSZ	Highcliff Hill	7.71	208	Pn	Pn	00 52 13.3	-2.9
EAZ	Earnscleugh	7.71	216	Pn	Pn	00 52 13.1	-3.2
TUZ	Tuapeka	8.14	212	Pn	Pn	00 52 19.1	-3.0
MLZ	Mavora Lakes	8.38	220	ePn	Pn	00 52 25.2	-0.2
WHZ	Wether Hill Ro	8.85	218	ePn	Pn	00 52 30.2	-1.5
DCZ	Deep Cove	8.95	223	ePn	Pn	00 52 32.7	-0.2
DCZ	Deep Cove	8.95	223	P	Pn	00 52 30.1	-2.9
RAO	Raoul Island	11.19	30	ePn	Pn	00 53 01.5	-2.1
RAO	Raoul Island	11.19	30	eP	Pn	00 53 01.5	-2.1
DZM	Mont Dzumac	18.80	332	P	P	00 54 37.8	-0.8
	0.2nm,0.3s,baz=130,slow=17,SNR=3.7						
DZM	Mont Dzumac	18.80	332	eP	Pn	00 54 40.5	+0.4
	98nm,1.4s						
DZM				eLR	LR	00 58 57.5	
	262nm,22.8s						
DZM	Mont Dzumac	18.80	332	eP	P	00 54 38.5	0.0
	49nm,1.3s						
ARMA	Armidale	21.59	286	eP	P	00 55 10.1	+1.5
	51nm,1.0s						
CAN	Canberra	21.60	272	eP	P	00 55 10.1	+1.5
	22nm,1.0s						
CAN	Canberra	21.60	272	eP	P	00 55 10.1	+1.5
CAN				pmax	pmax		
	comp=Z,22nm,1.0s						
TAU	Tasmania Unive	21.71	251	eP	P	00 55 11.0	+1.3
	comp=Z,28nm,0.8s						
TAU	Tasmania Unive	21.71	251	eP	P	00 55 11.0	+1.3
TAU				pmax	pmax		
	comp=Z,28nm,0.8s						
EIDS	Eidsvold	24.88	296	eP	P	00 55 41.3	+1.2
	comp=Z,24nm,1.0s						
AFI	Afiamalu	27.46	27	P	P	00 56 02.7	-0.9
	comp=Z,17nm,0.3s,baz=68,slow=19,SNR=4.7						
RAR	Rarotonga	27.58	57	P	P	00 56 03.7	-0.8
	comp=Z,8.1nm,0.4s,baz=228,slow=4.9,SNR=3.7						
RAR				LR	LR	01 06 11.7	
	comp=Z,51nm,19.3s,baz=260,slow=34						
RAR	Rarotonga	27.58	57	eP	P	00 56 04.4	-0.1
	comp=Z,66nm,1.4s						
RAR	Rarotonga	27.58	57	eP	P	00 56 04.4	-0.1
RAR				pmax	pmax		
	comp=Z,66nm,1.4s						
STKA	Stephens Creek	28.60	274	P	P	00 56 15.6	+2.0
	comp=Z,33nm,0.6s,baz=108,slow=11,SNR=69						

STKA				LR	LR	01 06 01.3	
	comp=Z,102nm,21.7s,baz=146,slow=33						
STKA	Stephens Creek	28.60	274	eP	P	00 56 15.6	+2.0
	comp=Z,7.6nm,0.7s						
STKA	Stephens Creek	28.60	274	eP	P	00 56 15.6	+2.0
STKA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
CTA	Charters Tower	31.70	298	P	P	00 56 42.3	+1.3
	comp=Z,8.4nm,0.9s,baz=128,slow=14,SNR=5.0						
CTAO	Charters Tower	31.70	298	eP	P	00 56 42.0	+1.0
	comp=Z,74nm,1.8s						
CTAO	Charters Tower	31.70	298	eP	P	00 56 42.0	+1.0
CTAO				pmax	pmax		
	comp=Z,74nm,1.8s						
BBOO	Buckleboo	32.53	269	eP	P	00 56 48.8	+0.6
	comp=Z,61nm,0.6s						
HNR	Honiara	32.81	330	P	P	00 56 50.3	-0.3
	comp=Z,28nm,0.3s,baz=225,slow=7.1,SNR=2.0						
TBI	Tubuai	33.43	72	eLR	LR	01 05 53.4	
	comp=Z,427nm,33.8s,baz=235						
PAE	Paea	36.95	65	eP	P	00 57 27.9	+1.7
	comp=Z,12nm,1.1s						
PPT2	Papeete2	37.00	64	eP	P	00 57 28.5	+1.7
	comp=Z,91nm,1.2s						
PPT2	Papeete2	37.00	64	eLR	LR	01 07 29.6	
	comp=Z,728nm,34.0s,baz=220						
PPTF	Pamatai, Papee	37.01	64	eP	P	00 57 26.8	0.0
	comp=Z,90nm,0.9s						
PPT	Papeete	37.01	64	P	P	00 57 27.1	+0.3
	comp=Z,59nm,0.7s,baz=37,slow=0.7,SNR=11						
PPT				LR	LR	01 09 48.8	
	comp=Z,59nm,21.9s,baz=203,slow=32						
PPT	Papeete	37.01	64	eP	P	00 57 27.6	+0.8
PPT	Papeete	37.01	64	eP	P	00 57 27.7	+0.8
TVO	Taravao	37.10	65	eP	P	00 57 29.4	+1.8
	comp=Z,13nm,0.8s						
TIAR	Tiarei	37.18	65	eP	P	00 57 30.1	+1.8
	comp=Z,30nm,0.8s						
COEN	Coen	38.11	302	eP	P	00 57 36.7	+0.6
	comp=Z,49nm,0.8s						
AS01	Alice Springs	38.51	281	eP	P	00 57 39.1	-0.4
AS31	Alice Springs	38.54	281	eP	P	00 57 40.4	+0.6
	comp=Z,45nm,1.1s						
ASAR	Alice Springs	38.54	281	P	P	00 57 40.2	+0.5
	comp=Z,74nm,0.8s,baz=123,slow=7.8,SNR=388						
ASAR				LR	LR	01 14 17.2	
	comp=Z,134nm,18.7s,baz=145,slow=37						
VNDA	Vanda	38.91	185	P	P	00 57 44.9	+2.8
	comp=Z,4.6nm,0.6s,baz=0.7,slow=4.4,SNR=10.0						
VNDA				LR	LR	01 13 06.4	
	comp=Z,41nm,18.4s,baz=21,slow=35						
VNDA	Vanda	38.91	185	eP	P	00 57 45.2	+3.1
	comp=Z,7.8nm,0.9s						
VNDA	Vanda	38.91	185	P	P	00 57 44.9	+2.8
VNDA				pmax	pmax		
	comp=Z,2.0nm,0.4s						
VNDA				MLR	MLR		
	comp=Z,41nm,18.4s						
SBA	Scott Base	38.98	183	eP	P	00 57 43.7	+1.0
	comp=Z,30nm,1.4s						
SBA	Scott Base	38.98	183	eP	P	00 57 43.7	+1.0
SBA				pmax	pmax		
	comp=Z,30nm,1.4s						
FORT	Forrest	39.58	267	eP	P	00 57 48.6	+0.4
	comp=Z,117nm,0.8s						
WB2	Warramunga Arr	40.36	286	eP	P	00 57 55.3	+0.5
	comp=Z,96nm,0.7s						
WRAB	Tennant Creek	40.37	286	eP	P	00 57 55.4	+0.5
	comp=Z,87nm,0.7s						
WRAB	Tennant Creek	40.37	286d	iP	P	00 57 55.3	+0.4
WRAB				pmax	pmax		
	comp=Z,51nm,0.8s						
WRA	Warramunga Arr	40.37	286	P	P	00 57 55.4	+0.5
	comp=Z,70nm,0.7s,baz=125,slow=8.1,SNR=397						
WRA				LR	LR	01 14 50.1	
	comp=Z,119nm,18.2s,baz=125,slow=36						
RKT	Rikitea	44.57	84	eLR	LR	01 10 58.6	
	comp=Z,339nm,33.5s						
CASY	Casey	45.00	211	eP	P	00 58 32.5	+0.8
	comp=Z,113nm,1.0s						
NWAO	Narrogin (SRO)	47.01	259	P	P	00 58 47.4	-0.5
	comp=Z,35nm,0.5s,baz=357,slow=8.3,SNR=45						
NWAO				LR	LR	01 15 54.5	
	comp=Z,45nm,21.1s,baz=12,slow=32						
NWAO	Narrogin (SRO)	47.01	259	eP	P	00 58 47.5	-0.5
	comp=Z,41nm,0.8s						
NWAO	Narrogin (SRO)	47.01	259	eP	P	00 58 47.5	-0.5
NWAO				pmax	pmax		
	comp=Z,41nm,0.8s						
MTN	Manton Dam	47.26	291	eP	P	00 58 50.3	+0.3
	comp=Z,50nm,0.6s						
FITZ	Fitzroy Crossi	48.05	281	P	P	00 58 56.7	+0.6
	comp=Z,76nm,0.6s,baz=180,slow=20						
FITZ				LR	LR	01 19 44.6	
	comp=Z,50nm,19.5s,baz=128,slow=37						
FITZ	Fitzroy Crossi	48.05	281	eP	P	00 58 56.9	+0.8
TAOE	Nuku Hiva Isla	49.63	65	eLR	LR	01 13 03.4	
	comp=Z,354nm,29.4s						
MBWA	Marble Bar	50.85	274	eP	P	00 59 16.5	-0.9
	comp=Z,116nm,1.7s						
QSPA	South Pole Qui	50.96	180	P	P	00 59 20.1	+2.2
	comp=Z,21nm,0.4s,baz=230,slow=1.0,SNR=77						
QSPA	South Pole Qui	50.96	180	eP	P	00 59 20.9	+3.1
	comp=Z,310nm,0.5s						
FAKI	Fak Fak	53.48	301	eP	P	00 59 36.2	-0.7
	comp=Z,61nm,1.3s						
SOEI	Soe	54.32	288	P	P	00 59 42.7	-0.5
SOEI	Soe	54.32	288	eP	P	00 59 43.5	+0.3
	comp=Z,86nm,0.9s						
BATI	Baumata	54.47	287	P	P	00 59 45.1	+0.9
	comp=Z,67nm,0.6s,baz=212,slow=3.3,SNR=7.5						
EDFI	Ende, Flores	56.89	287	P	P	01 00 00.0	-1.6
RPN	Rapa Nui	62.26	104	LR	LR	01 21 08.7	
	comp=Z,32nm,21.8s,baz=16,slow=30						
MAW	Mawson	62.28	204	P	P	01 00 39.4	+1.7
	comp=Z,15nm,0.4s,baz=127,slow=5.5,SNR=152						
MAW				LR	LR	01 26 16.2	
	comp=Z,34nm,20.6s,baz=76,slow=34						
MAW	Mawson	62.28	204	eP	P	01 00 39.3	+1.6
	comp=Z,21nm,1.5s						
MAW	Mawson	62.28	204	eP	P	01 00 39.3	+1.6
MAW				pmax	pmax		
	comp=Z,21nm,1.5s						
JAGI	Jajag, Banyuwa	62.74	282	eP	P	01 00 42.2	+0.6
	comp=Z,65nm,1.1s						
KIP	Kipapa	65.09	27⇓	iP	P	01 00 57.1	+0.5
DAV	Davao City (W)	65.33	303	LR	LR	01 28 30.5	
	comp=Z,219nm,20.9s,baz=340,slow=35						
SYO	Syowa Base	67.37	196⇑	iP	P	01 01 11.1	+0.4
SYO	Syowa Base	67.37	196⇑	ePcP	PcP	01 01 38.4	+0.9
LEM	Lembang	68.78	279	P	P	01 01 19.6	-1.0
	comp=Z,58nm,0.7s,baz=20,slow=15,SNR=4.5						
SNAA	Sanae	69.46	180	P	P	01 01 25.8	+2.0
SNAA	Sanae	69.46	180	P	P	01 01 25.2	+1.4
	comp=Z,7.5nm,0.3s,baz=208,slow=11,SNR=78						
SNAA	Sanae	69.46	180	eP	P	01 01 25.4	+1.6
	comp=Z,13nm,1.0s						
SNAA	Sanae	69.46	180⇑	iP	P	01 01 25.6	+1.8
SNAA				i		01 01 47.7	
SNAA				i *SP	sP	01 01 58.0	-1.8
SNAA				pmax	pmax		
	comp=Z,428nm,0.9s						
NVL	N'lazarevskaya	69.76	186⇑	iP	P	01 01 28.0	+2.5
NVL				eS	S	01 10 23.7	-2.5
NVL				pmax	pmax		
	comp=Z,11nm,0.5s						
VNA3	Neumayer Olymp	69.83	178	P	P	01 01 27.8	+1.8
VNA1	Neumayer--Stat	70.46	179	P	P	01 01 31.9	+2.2
PLCA	Paso Flores	80.14	135	P	P	01 02 27.8	+1.9
	comp=Z,5.1nm,0.6s,baz=260,slow=5.8,SNR=28						
PLCA	Paso Flores	80.14	135	eP	P	01 02 27.7	+1.9
	comp=Z,70nm,2.0s						
PSI	Prapat	81.57	281	P	P	01 02 32.3	-1.6
	comp=Z,11nm,0.7s,baz=180,slow=18,SNR=8.1						
PSI	Prapat	81.57	281	eP	P	01 02 32.4	-1.5
	comp=Z,12nm,0.7s						
PSI	Prapat	81.57	281	eP	P	01 02 32.4	-1.5
PSI				pmax	pmax		
	comp=Z,12nm,0.7s						
MAJO	Matsushiro	82.90	330⇓	iP	P	01 02 41.3	+1.2
MAJO				pmax	pmax		
	comp=Z,40nm,1.0s						
KRAB	Krabi	84.85	285	P	P	01 02 50.9	+0.3
CHBT	CHBT	85.49	290	P	P	01 03 00.8	+7.1
SRAK	Srakaew	86.53	291	P	P	01 02 57.3	-1.5
SKNT	Sakolnakorn	87.11	294	P	P	01 03 01.7	+0.1
PHET	Kaeng Krachan	87.57	289	P	P	01 03 05.2	+1.3
KSRS	Korea Array	88.02	324	P	P	01 03 04.9	-0.5
	comp=Z,4.8nm,1.0s,baz=58,slow=10,SNR=3.2						
KSAR	Wonju Array Be	88.03	324	P	P	01 03 04.9	-0.6
KSAR	Wonju Array Be	88.03	324	P	P	01 03 04.9	-0.6
NJ2	Nanjing	88.37	315	eP	P	01 03 10.6	+3.4
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
NJ2				LR	LR		
	comp=N,800nm,13.6s						
NJ2				LR	LR		
	comp=E,900nm,17.3s						
NJ2				LR	LR		
	comp=Z,800nm,16.0s						
NONG	Nongkai	88.43	295	P	P	01 03 08.9	+1.0
YSS	Yuzh-Sakhalins	90.66	338⇑	eP	P	01 03 18.0	+0.5
YSS				pmax	pmax		
	comp=Z,37nm,1.0s						
CM01	Chiang Mai Arr	91.65	292	eP	P	01 03 23.4	+0.5
CMAR	Chiang Mai Arr	91.68	292	P	P	01 03 23.6	+0.5
	comp=Z,1.8nm,0.4s,baz=154,slow=3.5,SNR=11						
CMAR	Chiang Mai Arr	91.68	292	eP	P	01 03 24.0	+0.9
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
GYA	Guiyang	91.71	303	eP	P	01 03 24.8	+1.6
GYA				pP	pP	01 03 49.6	+0.2
GYA				sP	sP	01 03 59.0	-1.0
GYA				PP	PP	01 07 07.2	+3.7
GYA				SKS	SKSac	01 13 48.5	+1.7
GYA				S	S	01 14 15.5	0.0
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ENH	Enshi	92.56	308	eP	P	01 03 25.5	-1.4
	comp=Z,36nm,0.9s						
PETK	Petropavlovsk-	93.22	349	P	P	01 03 30.1	+0.8
	comp=Z,1.3nm,0.5s,baz=163,slow=7.3						
CN2	Changchun	94.26	326	eP	P	01 03 35.1	+0.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BJI	Beijing	95.78	318	P	P	01 03 41.5	+0.2
BJI				pmax	pmax		
	comp=Z,10.0nm,0.4s						
GLA	Glamis	96.44	52	eP	P	01 03 46.3	+1.7
	comp=Z,5.8nm,0.8s						
GLA	Glamis	96.44	52	eP	P	01 03 46.3	+1.7
GLA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CD2	Chengdu	96.59	305	P	P	01 03 46.5	+1.1
CD2				sP	sP	01 04 18.0	-4.2
CD2				SKS	SKSac	01 14 15.5	+2.6
CD2				S	ScS	01 15 01.1	+2.8
CD2				SS	SS	01 21 39.4	+4.3
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
CD2				pmax	pmax		
	comp=Z,220nm,5.2s						
CD2				LR	LR		
	comp=Z,2µm,15.2s						
CD2				LR	LR		
	comp=Z,2µm,15.2s						
CD2				LR	LR		
	comp=Z,2µm,17.2s						
NVAR	Mina Array Bea	98.08	46	P	P	01 03 51.4	-0.7
	comp=Z,0.6nm,0.7s,baz=220,slow=8.2,SNR=4.6						
HHC	Hu-ho-hao-te	98.80	316	eP	Pdif	01 03 56.2	+1.1
HHC				pP	pP	01 04 24.7	+3.2
HHC				PP	PP	01 07 57.6	-0.6
HHC				S	S	01 15 12.1	-4.2
HHC				sS	sS	01 16 02.2	+0.2
HHC				pmax	pmax		
	comp=Z,21nm,1.0s						
HHC				pmax	pmax		
	comp=Z,130nm,5.4s						
HHC				LR	LR		
	comp=Z,820nm,17.2s						
HHC				LR	LR		
	comp=Z,1µm,16.3s						
HHC				LR	LR		
	comp=Z,2µm,17.5s						
TXAR	Lajitas Array	101.28	61	P	Pdif	01 04 06.3	-0.2
	comp=Z,0.2nm,0.8s,baz=206,slow=5.9,SNR=2.9						
BOSA	Boshof	107.17	207	Pdiff	Pdif	01 04 33.1	+0.3
	comp=Z,4.2nm,1.0s,baz=166,slow=4.2,SNR=4.3						
ILAR	Eielson Array	107.67	16	PKKPbc	PKKPbc	01 19 56.0	-0.9
	comp=Z,0.3nm,0.4s,baz=5.1,slow=3.2,SNR=3.9						
ILAR				PKKP	PKKPdf	01 20 10.7	0.0
	comp=Z,0.6nm,0.7s,baz=359,slow=4.6,SNR=4.2						
INK	Inuvik	113.64	18	PKKPbc	PKKPbc	01 19 43.1	+5.9
	comp=Z,1.6nm,0.4s,baz=345,slow=2.7,SNR=6.2						
WMQ	Urumqi	114.51	307	PKP	PKPdf	01 08 55.5	+0.8
WMQ				LR	LR		
	comp=Z,740nm,16.9s						
WMQ				LR	LR		
	comp=Z,350nm,17.9s						
WMQ				LR	LR		
	comp=Z,650nm,19.7s						
YKA	Yellowknife Ar	115.57	29	PKP	PKPdf	01 08 55.5	-0.5
	comp=Z,0.5nm,0.7s,baz=222,slow=0.8,SNR=3.5						
YKA				PKKPbc	PKKPbc	01 19 29.6	-0.9
	comp=Z,0.7nm,0.5s,baz=50,slow=3.8,SNR=7.1						
TSUM	Tsumeb	118.44	204	PKP	PKPdf	01 09 03.3	+0.1
	comp=Z,0.8nm,0.5s,baz=229,slow=9.3,SNR=4.2						
MKAR	Makanchi Array	119.28	308	PKP	PKPdf	01 09 01.0	-2.8
	comp=Z,0.5nm,0.6s,baz=170,slow=1.7,SNR=4.1						
MKAR				PKKPbc	PKKPbc	01 19 15.5	-1.3
	comp=Z,0.5nm,0.8s,baz=350,slow=4.4,SNR=4.7						
MKAR	Makanchi Array	119.28	308	PKIKP	PKPdf	01 09 01.0	-2.8
KSH	Kashi	120.04	298	ePKP	PKPdf	01 09 03.8	-1.8
KSH				sPKP		01 09 41.4	
KSH				PP	PP	01 10 34.0	+1.9
KSH				PKS	PKSdf	01 12 39.2	-3.1
KSH				SKS	SKSdf	01 16 04.8	-3.7
KSH				SS	SS	01 26 51.1	-0.1
KSH				AMB	AMB		
	comp=Z,90nm,4.7s						
KSH				LR	LR		
	comp=Z,130nm,13.0s						
KSH				LR	LR		
	comp=Z,230nm,13.1s						
KSH				LR	LR		
	comp=Z,310nm,13.3s						
KURK	Kurchatov	123.15	311	PKP	PKPdf	01 09 08.6	-2.4
KURK	Kurchatov	123.15	311	PKIKP	PKPdf	01 09 08.6	-2.4
KURBB	Kurchatov Arra	123.16	311	PKP	PKPdf	01 09 08.6	-2.4
	comp=Z,0.5nm,0.4s,baz=114,slow=2.0,SNR=3.8						
BVAR	Borovoye Array	128.72	312	PKP	PKPdf	01 09 19.9	-1.7
	comp=Z,0.7nm,0.7s,baz=64,slow=3.4,SNR=3.2						
BVAR				SKPbc	SKPbc	01 12 27.9	
	comp=Z,1.9nm,0.8s,baz=92,slow=4.3,SNR=5.9						
GEYT	Alibeck	132.07	289	SKPbc	SKPbc	01 12 40.1	-5.6
	comp=Z,2.4nm,0.9s,baz=64,slow=9.8,SNR=6.2						
FRB	Frobisher Bay	135.51	35	PKP	PKPdf	01 09 31.9	-2.0
	comp=Z,5.8nm,1.0s,baz=285,slow=10,SNR=2.9						
FRB	Frobisher Bay	135.51	35	PKIKP	PKPdf	01 09 32.0	-2.0
KBZ	Khabaz	144.73	293	PKP	PKPab	01 09 49.8	-0.7
	comp=Z,11nm,0.9s,baz=125,slow=5.2,SNR=4.1						
KLMR	Klimovskoe	145.41	323	ePKHKP	PKPpre	01 09 48.8	
KLMR				pmax	pmax		
	comp=Z,20nm,0.9s						
KLMR	Klimovskoe	145.41	323	ePKPdf	PKPpre	01 09 48.9	
KLMR				AMP		01 09 50.9	
	comp=Z,20nm,0.9s						
ARCES	ARCESS Array B	145.71	342	PKPbc	PKPdf	01 09 51.6	-0.7
	comp=Z,21nm,0.6s,baz=56,slow=2.3,SNR=47						
ASF	Jabal al Asfar	146.07	271	PKPbc	PKPab	01 09 55.8	-0.2
	comp=Z,2.6nm,0.8s,baz=162,slow=2.8,SNR=2.1						
LIC	Lamto	147.20	179	ePKP1	PKPbc	01 09 58.8	0.0
	comp=Z,71nm,0.9s						
KIC	Kosan Boka	147.34	179	ePKP1	PKPbc	01 09 59.2	0.0
	comp=Z,31nm,0.4s						
MMAI	Mount Meron Ar	147.56	272	PKPbc	PKPbc	01 09 58.6	-0.9
	comp=Z,4.0nm,0.6s,baz=106,slow=8.3,SNR=3.6						
VSR	Storozhevoye	147.58	306⇓	ePKIKP	PKPdf	01 09 57.1	+1.2
TIC	Toumodi	147.62	179	ePKP1	PKPbc	01 09 59.8	-0.2
DBIC	Dimbokro	147.65	179	PKPbc	PKPbc	01 09 59.8	-0.3
	comp=Z,5.4nm,0.3s,baz=168,slow=2.5,SNR=26						
BRTR	Keskin Array B	150.87	283	PKPbc	PKPbc	01 10 06.1	-1.5
	comp=Z,1.6nm,0.7s,baz=155,slow=5.3,SNR=5.0						
FINES	FINESS Array B	150.93	330	PKPbc	PKPbc	01 10 04.9	-1.9
	comp=Z,2.0nm,0.4s,baz=42,slow=2.9,SNR=7.2						
TORD	Torodi Ar. Bea	153.56	193	PKP	PKPdf	01 10 06.6	+0.3
	comp=Z,0.3nm,0.7s,baz=138,slow=0.7						
TORD				PKPbc	PKPbc	01 10 12.9	-1.2
	baz=157,slow=7.8						
TORD				PKPab	PKPab	01 10 26.3	-0.4
	baz=158,slow=4.4						
KOWA	Kowa	155.43	181	PKPbc	PKPbc	01 10 18.1	
	comp=Z,0.7nm,0.3s,baz=196,slow=3.0,SNR=4.2						
KOWA				PKPab	pPKPdf	01 10 36.7	+0.3
	comp=Z,4.9nm,0.7s,baz=148,slow=8.0,SNR=10						
HFS	Hagfors	156.16	338	PKPab	PKPab	01 10 34.5	-2.2
	comp=Z,3.1nm,0.8s,baz=120,slow=5.7,SNR=4.5						
IDI	Anoyia	156.51	270	PKPab	PKPab	01 10 38.1	-1.1
	comp=Z,6.1nm,0.5s,baz=120,slow=8.8,SNR=5.5						
CLL	Collm	162.87	321	ePKPdf	PKPdf	01 10 18.0	+1.5
CLL				ePKPab	PKPab	01 11 10.0	+3.8
EKA	Eskdalemuir Ar	163.81	358	PKPab	PKPab	01 11 08.2	-1.9
	comp=Z,2.2nm,0.8s,baz=4.2,slow=2.9,SNR=3.3						
KEST	Kesra	168.65	257	PKPab	PKPab	01 11 32.8	+0.3
	comp=Z,4.2nm,0.9s,baz=201,slow=4.2,SNR=5.3						
MDT	Midelt	173.66	177	PKPab	PKPab	01 11 55.7	+1.3
	comp=Z,2.0nm,0.8s,baz=182,slow=2.8,SNR=3.8						
ESDC	Sonseca Array	179.44	336	PKPab	PKPab	01 12 18.3	
	comp=Z,1.2nm,0.9s,baz=35,slow=2.2,SNR=5.8						

NIED ***07*** *00:56:00, 45°.40N×151°.50E, h20km, Mw5.1 Best double couple: M0 4.67000×10^{16} NP1:φs225.00000°, δ25.00000°, λ93.00000°. NP2:φs43.00000°, δ65.00000°, λ89.00000°.*

ISCJB ***07*** *00:56:24.8±0.6, 45°.37N±0°.02×151°.42E±0°.02, h23km±4km, mb5.0/329, MS4.7/96, Error ellipse: s-maj=4.1km s-min=1.8km az=160.9*

SKHL ***07*** *00:56:25.8±1.4, 45°.18N×151°.67E, h42km±9km, mb5.6/13, Ms5.0/5*

JMA ***07*** *00:56:26.0±0.5, 45°.44N×151°.55E, h30km, M5.2*

MOS ***07*** *00:56:27.5±0.9, 45°.44N×151°.30E, h40km, mb5.3/81, MS4.8/37, Error ellipse: s-maj=5.4km s-min=4.1km az=98.8*

BJI ***07*** *00:56:28.3, 45°.41N×151°.10E, h40km, mb5.3/79, mB5.1/63, Ms5.0/85, Ms7 4.8/76*

GCMT ***07*** *00:56:29.7±0.3, 45°.46N×151°.58E, h27km, MW5.1/93, Moment Tensor Solution. s61,c97; s93,c148; Duration: 0 Moment tensor: Scale 10^{16}Nm; Mrr4.80±.15; Mθθ-1.84±.10; Mφφ-2.95±.10; Mrθ0.97±.18; Mθφ-2.42±.06; Mφr2.81±.17; Best double couple: M0 5.68000×10^{16} NP1:φs29.00000°, δ61.00000°, λ80.00000°. NP2: φs228.00000°, δ31.00000°, λ107.00000°. Principal axes: T 5.7160, Plg72.0000°, Azm275.0000°; N -0.0630, Plg9.0000°, Azm33.0000°; P -5.6430, Plg15.0000°, Azm126.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***07*** *00:56:29.7±0.6, 45°.47N×151°.23E, h44km±5km, mb5.1/208 Error ellipse: s-maj=5.2km s-min=2.8km az=161.0*

IDC ***07*** *00:56:29.3±1.9, 45°.45N×151°.38E, h43km±17km, mb4.6/49, mb1 4.7/57, mb1mx4.6/80, mbtmp4.8/57, ML4.6/4, MS4.5/63, Ms1 4.5/63, ms1mx4.4/76, Error ellipse: s-maj=11.6km s-min=8.3km az=139.0*

ISC 07 00:56:28.0±0.3**, 45°.42N**±0°.04×**151°.35E**±0°.03**, h32km**±1km**, h32km:pP-P, n1234, σ1s.38**/1325**, mb5.1**/335**, MS4.7**/97**, 86C-27D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.46	267	i P	Pn	00 57 07.3	+1.4
KUR				AMB	AMB	00 57 10.0	
	2µm,0.6s						
KUR				i S	Sb	00 57 38.2	-3.2
KUR				A	A	00 57 44.0	
	16µm,0.6s						
KUR				A	A	00 57 44.0	
	2µm,0.6s						
KUR				AMS	AMS	00 58 20.0	
	42µm,13.0s						
KUR				AMS	AMS	00 58 20.0	
	43µm,13.0s						
KUR				AMS	AMS	00 58 20.0	
	31µm,13.0s						
KUR	Kuril'sk	2.46	267c	iPN	Pn	00 57 07.0	+1.1
KUR				i S	Sn	00 57 36.0	+1.1
KUR				pmax	pmax		
	comp=Z,3µm,1.6s						
KUR				pmax	pmax		
	comp=Z,1µm,0.6s						
KUR				pmax	pmax		
	comp=N,394nm,0.4s						
KUR				smax	smax		
	comp=N,20µm,1.7s						
KUR				smax	smax		
	comp=E,11µm,2.5s						
KUR				smax	smax		
	comp=N,14µm,0.5s						
KUR				smax	smax		
	comp=E,3µm,0.3s						
SHO	Shikotan	3.58	246	i P	Pn	00 57 21.0	-0.2
SHO				AMB	AMB	00 57 24.3	
	comp=E,529nm,0.5s						
SHO				i S	Sn	00 58 03.3	+0.9
SHO				A	A	00 58 11.0	
	comp=E,3µm,0.4s						
SHO				A	A	00 58 11.0	
	comp=E,1µm,0.4s						
SHO				AMS	AMS	00 59 29.0	
	comp=E,9µm,15.0s						
SHO				AMS	AMS	00 59 29.0	
	comp=E,12µm,15.0s						
SHO				AMS	AMS	00 59 29.0	
	comp=E,8µm,15.0s						
SHO	Shikotan	3.58	246d	iPN	Pn	00 57 21.1	-0.2
SHO				i S	Sn	00 58 04.3	+1.9
SHO				pmax	pmax		
	comp=Z,529nm,0.5s						
SHO				pmax	pmax		
	comp=N,75nm,0.3s						
SHO				pmax	pmax		
	comp=E,408nm,0.6s						
SHO				smax	smax		
	comp=E,1µm,0.4s						
SHO				smax	smax		
	comp=N,3µm,0.5s						
SHO				MLR	MLR		
	comp=N,9µm,15.0s						
SHO				MLR	MLR		
	comp=Z,7µm,15.0s						
YUK	Yuzh-Kuril'sk	4.15	252	i P	Pn	00 57 29.8	+0.7
YUK				AMB	AMB	00 57 37.0	
	comp=Z,1µm,0.7s						
YUK				i S	Sn	00 58 18.2	+1.8
YUK				A	A	00 58 30.0	
	comp=Z,3µm,0.7s						
YUK				A	A	00 58 30.0	
	comp=Z,7µm,0.7s						
YUK				AMS	AMS	00 59 19.4	
	comp=Z,7µm,20.0s						
YUK	Yuzh-Kuril'sk	4.15	252d	iPN	Pn	00 57 29.6	+0.5
YUK				i S	Sn	00 58 19.1	+2.7
YUK				pmax	pmax		
	comp=Z,1µm,0.8s						
YUK				pmax	pmax		
	comp=N,804nm,0.3s						
YUK				pmax	pmax		
	comp=E,659nm,0.2s						
YUK				smax	smax		
	comp=N,3µm,0.7s						
YUK				smax	smax		
	comp=E,7µm,0.6s						
LAGR	Lagunnoye	4.19	253	i P	Pn	00 57 30.0	+0.3
LAGR				AMB	AMB	00 57 45.0	
	comp=E,273nm,0.4s						
LAGR				AMB	AMB	00 57 45.0	
	comp=E,2µm,0.4s						
LAGR				i S	Sn	00 58 20.0	+2.5
LAGR				A	A	00 58 33.0	
	comp=E,9µm,0.6s						
LAGR				A	A	00 58 33.0	
	comp=E,6µm,0.6s						
LAGR	Lagunnoye	4.19	253d	iPN	Pn	00 57 30.2	+0.5
LAGR				i S	Sn	00 58 20.4	+2.9
LAGR				pmax	pmax		
	comp=N,273nm,0.4s						
LAGR				pmax	pmax		
	comp=Z,2µm,0.4s						
LAGR				pmax	pmax		
	comp=E,2µm,0.6s						
LAGR				smax	smax		
	comp=N,9µm,0.6s						
LAGR				smax	smax		
	comp=E,6µm,0.6s						
GRPR	Tuman	4.22	252	i P	Pn	00 57 30.0	-0.1
GRPR				AMB	AMB	00 57 42.0	

	comp=E,2μm,0.4s						
GRPR				*i* S	Sn	00 58 21.0	+2.7
GRPR				A	A	00 58 36.0	
	comp=E,5μm,0.5s						
GRPR				A	A	00 58 36.0	
	comp=E,3μm,0.5s						
GRPR	**Tuman**	4.22	252	*c i*PN	Pn	00 57 30.8	+0.7
GRPR				*i* S	Sn	00 58 21.1	+2.7
GRPR				pmax	pmax		
	comp=Z,2μm,0.4s						
GRPR				pmax	pmax		
	comp=E,763nm,0.6s						
GRPR				pmax	pmax		
	comp=N,398nm,0.3s						
GRPR				smax	smax		
	comp=N,5μm,0.5s						
GRPR				smax	smax		
	comp=E,3μm,0.5s						
GLVR	**Golovnino**	4.49	250	*i* P	Pn	00 57 34.0	+0.2
GLVR				AMB	AMB	00 57 36.0	
	comp=E,2μm,0.5s						
GLVR				*i* S	Sn	00 58 26.0	+1.1
GLVR				A	A	00 58 40.0	
	comp=E,3μm,0.5s						
GLVR				A	A	00 58 40.0	
	comp=E,5μm,0.5s						
GLVR	**Golovnino**	4.49	250	*c i*PN	Pn	00 57 34.8	+1.0
GLVR				*i* S	Sn	00 58 26.7	+1.8
GLVR				pmax	pmax		
	comp=Z,2μm,0.5s						
GLVR				pmax	pmax		
	comp=N,126nm,0.2s						
GLVR				pmax	pmax		
	comp=E,226nm,0.2s						
GLVR				smax	smax		
	comp=E,3μm,0.4s						
GLVR				smax	smax		
	comp=N,5μm,0.6s						
NEM2	**Nemuro 2**	4.51	245	P	Pn	00 57 33.3	-0.8
NEM2				*e*S	Sn	00 58 24.0	-1.4
JRA	**Rausu**	4.68	254	P	Pn	00 57 38.1	+1.7
JRA				*e*S	Sn	00 58 32.7	+3.1
JNK	**Nakash**	5.08	251	P	Pn	00 57 42.9	+0.9
JNK				*e*S	Sn	00 58 40.1	+0.6
JAK	**Akkeshi**	5.36	245	P	Pn	00 57 45.2	-0.5
JAK				*e*S	Sn	00 58 44.7	-1.6
JTKR	**Abashiri--Toko**	5.50	257	P	Pn	00 57 49.6	+2.0
JAR	**Ashorobuto**	5.83	251	P	Pn	00 57 53.1	+0.9
JAR				*e*S	Sn	00 58 59.6	+1.6
JMP	**Maruseppu**	5.86	259	P	Pn	00 57 54.8	+2.1
JOB	**Onbets**	5.96	248	P	Pn	00 57 54.1	+0.1
JOB				*e*S	Sn	00 59 01.3	+0.2
YSS	**Yuzh-Sakhalins**	6.16	288	*e*P	Pn	00 58 00.3	+3.5
YSS				AMB	AMB	00 58 08.1	
	comp=N,274nm,0.9s						
YSS				*e*S	Sn	00 59 10.0	+4.0
YSS				AMS	AMS	01 00 20.0	
	comp=N,4μm,16.0s						
YSS				AMS	AMS	01 00 20.0	
	comp=N,8μm,16.0s						
YSS				AMS	AMS	01 00 20.0	
	comp=N,9μm,16.0s						
YSS	**Yuzh-Sakhalins**	6.16	288	*e*Pn	Pn	00 57 59.7	+3.0
YSS	**Yuzh-Sakhalins**	6.16	288	α *i*PN	Pn	00 58 00.2	+3.5
YSS				*e*S	Sn	00 59 07.7	+1.7
YSS				pmax	pmax		
	comp=N,70nm,0.6s						
YSS				pmax	pmax		
	comp=Z,100nm,0.6s						
YSS				pmax	pmax		
	comp=E,110nm,0.8s						
YSS				pmax	pmax		
	comp=Z,300nm,2.5s						
YSS				MLR	MLR		
	comp=Z,9μm,16.0s						
SKR	**Severo-Kuril's**	6.16	30	*i* P	Pn	00 57 56.8	+0.1
SKR				AMB	AMB	00 58 01.0	
	comp=Z,597nm,1.1s						
SKR				*e*S	Sn	00 59 04.6	-1.4
SKR				A	A	00 59 45.6	
	comp=Z,520nm,0.8s						
SKR				A	A	00 59 45.6	
	comp=Z,880nm,0.8s						
SKR				AMS	AMS	01 00 29.0	
	comp=Z,6μm,14.0s						
SKR				AMS	AMS	01 00 29.0	
	comp=Z,7μm,14.0s						
SKR				AMS	AMS	01 00 29.0	
	comp=Z,4μm,14.0s						
SKR	**Severo-Kuril's**	6.16	30	⇑ *i*PN	Pn	00 57 57.1	+0.4
SKR				pmax	pmax		
	comp=Z,800nm,1.1s						
SKR				pmax	pmax		
	comp=Z,597nm,1.2s						
SKR				MLR	MLR		
	comp=Z,3μm,16.0s						
SKR				MLR	MLR		
	comp=Z,4μm,14.0s						
HRK	**Horoka**	6.20	255	*e*P	Pn	00 57 59.3	+2.0
JSE	**Soyaes**	6.21	269	P	Pn	00 58 00.3	+2.9
JKK2	**Kamakawa 2**	6.33	259	P	Pn	00 58 01.1	+2.1
ASAJ	**Asahikawa**	6.36	261	P	Pn	00 58 01.8	+2.3
	comp=Z,23nm,0.3s,baz=91,slow=16,SNR=141						
ASAJ				S	Sn	00 59 20.4	+9.3
	comp=Z,6.6nm,0.3s,baz=99,slow=33,SNR=1.7						
ASAJ				LR	LR	01 00 44.9	
	comp=Z,8μm,18.7s,baz=78,slow=40						
ASAJ	**Asahikawa**	6.36	261	*e*Pn	Pn	00 58 02.2	+2.6
ASAJ				S	Sn	00 59 20.4	+9.3
ASAJ	**Asahikawa**	6.36	261	P	Pn	00 58 02.4	+2.9
JCH	**Churui**	6.40	247	P	Pn	00 57 59.7	-0.4
JCH				*e*S	Sn	00 59 10.1	-1.9
MYR	**Moyori**	6.61	245	*e*P	Pn	00 58 02.3	-0.7
JWK2	**Keihoku**	6.66	272	P	Pn	00 58 08.2	+4.6
JFR	**Furan**	6.67	253	P	Pn	00 58 05.7	+1.9
JAB	**Ashibetsu**	6.80	257	P	Pn	00 58 08.2	+2.6
JSS	**Shosan**	6.82	265	P	Pn	00 58 10.0	+4.2
JEM	**Erimo**	6.84	243	P	Pn	00 58 07.0	+1.0
ERM	**Erimo**	6.84	243	*e*P	Pn	00 58 07.6	+1.5
ERM	**Erimo**	6.84	243	*e*Pn	Pn	00 58 06.5	+0.4
ERM	**Erimo**	6.84	243	*ce*PN	Pn	00 58 07.6	+1.5
ERM				pmax	pmax		
	comp=Z,424nm,1.0s						
JNBK	**Urakawa-nobuka**	6.96	246	P	Pn	00 58 06.9	-0.8
JNBK				*e*S	Sn	00 59 22.5	-3.2
JBT2	**Biratori 2**	6.98	251	P	Pn	00 58 08.0	-0.1
PAU	**Pauzhetka**	7.06	29	*e*P	Pn	00 58 09.7	+0.7
PAU				AMB	AMB	00 58 10.3	
	comp=Z,193nm,0.4s						
PAU				*e*S	Sn	00 59 26.2	-1.9
PAU				A	A	00 59 27.1	
	comp=Z,409nm,0.7s						
JHR	**Hokuryu**	7.07	260	P	Pn	00 58 12.3	+3.0
UGL	**Uglegorsk**	7.30	303	*e*P	Pn	00 58 17.3	+5.0
UGL				AMB	AMB	00 58 18.6	
	comp=Z,380nm,0.9s						
UGL				*e*S	Sn	00 59 38.2	+4.2
UGL				AMS	AMS	01 01 19.5	
	comp=Z,7μm,17.0s						
UGL				AMS	AMS	01 01 19.5	
	comp=Z,9μm,17.0s						
UGL				AMS	AMS	01 01 19.5	
	comp=Z,11μm,17.0s						
JEW	**Eniwo**	7.57	254	P	Pn	00 58 18.0	+1.9
TYV	**Tymovskoe**	7.96	316	*e*P	Pn	00 58 25.0	+3.5
TYV				AMB	AMB	00 58 26.1	
	comp=Z,96nm,0.8s						
TYV				*e*S	Sn	00 59 55.7	+5.3
TYV				A	A	00 59 58.0	
	comp=Z,65nm,0.9s						
TYV	**Tymovskoe**	7.96	316	*e*PN	Pn	00 58 25.2	+3.7
TYV				pmax	pmax		
	comp=Z,107nm,1.2s						
TYV				pmax	pmax		
	comp=Z,600nm,1.8s						
TYV				MLR	MLR		
	comp=E,7μm,14.0s						
TYV				MLR	MLR		
	comp=Z,8μm,14.0s						
JNB	**Noboribetsu**	8.00	252	P	Pn	00 58 21.6	-0.4
JNB				*e*S	Sn	00 59 50.2	-1.2
JKB	**Kayabe**	8.27	248	P	Pn	00 58 24.6	-1.1
JKB				*e*S	Sn	00 59 52.9	-5.0
JYM2	**Yakumo 2**	8.60	251	P	Pn	00 58 30.0	-0.2
JSH	**Shimam**	8.60	255	P	Pn	00 58 32.0	+1.8
PEA0B	**Petropavlovsk-**	8.74	26	*e*Pn	Pn	00 58 32.4	+0.2
PETK	**Petropavlovsk-**	8.74	26	P	Pn	00 58 32.6	+0.4
	baz=174,slow=12						
PETK	**Petropavlovsk-**	8.74	26	*e*Pn	Pn	00 58 31.8	-0.4
JANG	**Nango**	8.80	239	P	Pn	00 58 30.0	-3.0
JANG				*e*S	Sn	01 00 02.0	-9.0
JTM	**Tenmabayashi**	8.83	242	P	Pn	00 58 31.6	-1.7
JTM				*e*S	Sn	01 00 05.3	-6.4
JSR	**Shiriuchi**	8.85	248	P	Pn	00 58 32.8	-0.8
JSR				*e*S	Sn	01 00 06.2	-5.9
JTH	**Tanohata**	8.87	235	P	Pn	00 58 30.2	-3.8
JTH				*e*S	Sn	01 00 03.3	-9.5
PET	**Petropavlovsk**	8.98	29	*e*P	Pn	00 58 35.4	0.0
PET				AMB	AMB	00 58 41.1	
	comp=Z,17nm,0.5s						
PET	**Petropavlovsk**	8.98	29	*e*Pn	Pn	00 58 35.5	+0.1
PET	**Petropavlovsk**	8.98	29	*e*PN	Pn	00 58 35.7	+0.3
PET				pmax	pmax		
	comp=Z,65nm,1.3s						
PET				MLR	MLR		
	comp=Z,2μm,18.0s						
PET				MLR	MLR		
	comp=Z,2μm,14.0s						
JOSM	**Okushiri--Mats**	9.21	253	P	Pn	00 58 38.3	-0.3
JOSM				*e*S	Sn	01 00 20.8	-0.4
OFUJ	**Ofunato**	9.57	232	P	Pn	00 58 40.3	-3.2
OFUJ				*e*S	Sn	01 00 21.0	-8.8
OKH	**Okha**	9.80	329	*i* P	Pn	00 58 51.8	+5.2
OKH				AMS	AMS	01 03 44.7	
	comp=Z,4μm,14.0s						
OKH	**Okha**	9.80	329	⇑ *i*PN	Pn	00 58 51.8	+5.2
OKH				pmax	pmax		
	comp=Z,300nm,14.6s						
OKH				MLR	MLR		
	comp=Z,4μm,14.0s						
JRG	**Rokugo**	9.94	237	P	Pn	00 58 46.4	-2.2
JRG				*e*S	Sn	01 00 33.0	-6.1
JIO	**Ouri**	10.19	230	P	Pn	00 58 48.7	-3.3
JIO				*e*S	Sn	01 00 35.0	-10
NKL	**Nikolayevsk**	10.40	322	*i* PN	Pn	00 58 58.0	+3.2
NKL				pmax	pmax		
	comp=N,500nm,4.0s						
NKL				pmax	pmax		
	comp=E,700nm,4.0s						
NKL				pmax	pmax		
	comp=Z,1μm,4.0s						
NKL				pmax	pmax		
	comp=N,100nm,1.0s						
NKL				pmax	pmax		
	comp=Z,110nm,1.0s						
NKL				MLR	MLR		
	comp=N,2μm,16.0s						
NKL				MLR	MLR		
	comp=E,2μm,16.0s						
NKL				MLR	MLR		
	comp=Z,7μm,16.0s						
JYA	**Atsumi**	11.01	236	P	Pn	00 59 01.0	-2.3
JFK	**Kawauchi**	11.24	228	P	Pn	00 59 02.9	-3.6
JFK				*e*S	Sn	01 00 59.0	-12
GRNR	**Gornyy**	11.32	304	*e*PN	Pn	00 59 13.5	+6.1
GRNR				pmax	pmax		
	comp=Z,42nm,1.0s						
JFY	**Yanaizu**	11.84	232	P	Pn	00 59 12.1	-2.5
MJAR	**Matsushiro Arr**	13.29	233	P	Pn	00 59 32.4	-2.1
	comp=Z,1.2nm,0.3s,baz=63,slow=10,SNR=20						
MJAR				S	Sn	01 02 07.8	+6.7
	comp=Z,1.5nm,0.3s,baz=36,slow=15,SNR=4.2						
MJAR				LR	LR	01 05 20.6	
	comp=Z,936nm,21.1s,baz=55,slow=40						
MJB9	**Matsu-Tunnel**	13.29	233	*e*Pn	Pn	00 59 33.3	-1.2
MAJO	**Matsushiro**	13.29	233	*e*Pn	Pn	00 59 33.0	-1.5
MAJO	**Matsushiro**	13.29	233	⇑ *i*PN	Pn	00 59 32.2	-2.3
MAT	**Matsushiro**	13.29	233	P	Pn	00 59 32.2	-2.3
MAT				S	Sn	01 02 02.6	+1.4
USRK	**Ussuriysk Ar.**	13.80	272	P	Pn	00 59 42.4	+1.1
	baz=79,slow=14						
USRK				LR	LR	01 05 05.1	
	comp=Z,3μm,18.9s,baz=73,slow=37						
KLR	**Kul'dur**	13.82	293	P	Pn	00 59 44.3	+2.7
	comp=Z,0.0nm,0.3s,baz=97,slow=13,SNR=33						
KLR				LR	LR	01 05 21.9	
	comp=Z,385nm,19.2s,baz=99,slow=38						
KLR	**Kul'dur**	13.82	293	*e*P	Pn	00 59 42.8	+1.2
KLR	**Kul'dur**	13.82	293	*i* P	Pn	00 59 42.8	+1.2
MA2	**Magadan**	14.19	359	P	Pn	00 59 47.5	+1.0
	comp=Z,5.4nm,0.3s,baz=188,slow=12,SNR=23						
MA2				LR	LR	01 05 25.9	
	comp=Z,2μm,18.1s,baz=180,slow=38						
MA2	**Magadan**	14.19	359	*e*Pn	Pn	00 59 46.5	0.0
MSHR	**Mys Shultsa**	14.80	266	⇓ *i*P	Pn	00 59 54.4	-0.5
JHJ	**Hachijo jima 2**	15.18	220	S	Sn	01 02 34.3	-13
	comp=Z,22nm,0.3s,baz=66,slow=22,SNR=5.8						
JHJ				LR	LR	01 09 17.4	
	comp=Z,699nm,18.0s,baz=78,slow=50						
MDJ	**Mudanjiang**	15.40	275	P	Pn	01 00 00.8	-2.1
MDJ				pP	P	01 00 08.2	+1.0
MDJ				S	Sn	01 02 53.0	+0.6
MDJ				sS	S	01 03 03.4	-4.4
MDJ				pmax	pmax		
	comp=Z,58nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,430nm,3.9s						
MDJ				LR	LR		
	comp=Z,2μm,15.6s						
MDJ				LR	LR		
	comp=Z,3μm,17.6s						
MDJ				LR	LR		
	comp=Z,5μm,16.3s						
MDJ	**Mudanjiang**	15.40	275	*e*Pn	Pn	01 00 03.2	+0.3
	comp=Z,168nm,1.0s						
SEY	**Seymchan**	17.56	2	P	Pn	01 00 29.1	-0.9
	comp=Z,1.0nm,0.3s,baz=178,slow=11,SNR=14						
SEY	**Seymchan**	17.56	2	*e*P	Pn	01 00 29.7	-0.4
SEY	**Seymchan**	17.56	2	⇓ *e*P	Pn	01 00 29.7	-0.4
ZEA	**Zeya**	17.64	307	*e*P	P	01 00 31.8	0.0
ZEA				*e*S	S	01 03 52.0	-1.2
ZEA				pmax	pmax		
	comp=N,200nm,6.0s						
ZEA				pmax	pmax		
	comp=E,600nm,6.0s						
ZEA				pmax	pmax		
	comp=Z,1μm,6.0s						
ZEA				pmax	pmax		
	comp=N,130nm,1.2s						
ZEA				pmax	pmax		
	comp=E,130nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,240nm,1.4s						
ZEA				smax	smax		
	comp=N,300nm,8.0s						
ZEA				smax	smax		
	comp=Z,5μm,8.0s						
ZEA				MLR	MLR		
	comp=N,800nm,15.0s						
ZEA				MLR	MLR		
	comp=E,4μm,15.0s						
ZEA				MLR	MLR		
	comp=Z,6μm,15.0s						
CN2	**Changchun**	18.49	274	⇓P	P	01 00 40.4	-0.9
CN2				*e*sP	sP	01 00 54.0	+0.3
CN2				*e*S	Sn	01 04 00.8	-6.4
CN2				pmax	pmax		
	comp=Z,40nm,0.9s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=Z,3μm,15.0s						
CN2				LR	LR		
	comp=Z,2μm,15.0s						
CN2				LR	LR		
	comp=Z,4μm,16.0s						
KSRS	**Korea Array**	19.23	254	P	P	01 00 48.6	-0.9
	comp=Z,1.3nm,0.3s,baz=64,slow=11,SNR=42						
KSRS				LR	LR	01 08 27.7	
	comp=Z,2μm,18.3s,baz=60,slow=37						
KS01	**Wonju Array Si**	19.24	254	*e*P	P	01 00 48.8	-0.8
KS15	**Wonju Array Si**	19.27	254	*e*P	P	01 00 50.3	+0.5
KSAR	**Wonju Array Be**	19.27	254	P	P	01 00 48.6	-1.3
KSAR	**Wonju Array Be**	19.27	254	P	P	01 00 48.6	-1.3
CBIJ	**Chichi jima**	19.70	205	*e*P	Pn	01 00 56.4	+0.3
	comp=Z,89nm,0.8s						
CBIJ				S	S	01 04 14.8	-20
JCJ	**Chichijima**	19.70	205	P	Pn	01 00 56.5	+0.3
	comp=Z,1.0nm,0.3s,baz=270,slow=19,SNR=2.5						
JCJ				S	S	01 04 14.8	-20
	baz=255,slow=20						
JNU	**Nakatsue**	19.98	239	P	Pn	01 00 59.8	+0.2
	comp=Z,104nm,1.0s,baz=36,slow=7.7,SNR=15						
JNU				LR	LR	01 10 15.1	
	comp=Z,2μm,18.6s,baz=312,slow=41						
JNU	**Nakatsue**	19.98	239	*e*P	Pn	01 00 59.2	-0.4
	comp=Z,112nm,1.0s						
CLNS	**Chul'man**	20.01	314	*e*P	Pn	01 00 59.7	-0.1
CLNS				*e*S	Sn	01 04 43.7	-0.1
CLNS				pmax	pmax		
	comp=Z,57nm,1.2s						
CLNS				pmax	pmax		
	comp=E,33nm,1.2s						
CLNS				pmax	pmax		
	comp=N,17nm,1.0s						
CLNS				smax	smax		
	comp=E,133nm,12.8s						
CLNS				smax	smax		
	comp=N,49nm,10.8s						
CLNS				MLR	MLR		
	comp=Z,2μm,16.0s						
CLNS				MLR	MLR		
	comp=E,1μm,15.0s						
CLNS				MLR	MLR		
	comp=N,962nm,12.0s						
INCN	**Inchon**	20.09	255	*e*P	P	01 00 60.0	+1.1
	comp=N,73nm,1.0s						
INCN	**Inchon**	20.09	255	*e*P	P	01 01 00.0	+1.1
INCN				pmax	pmax		
	comp=Z,73nm,1.0s						
TJN	**Taejon**	20.19	252	*d i*P	P	01 01 00.0	0.0
SNY	**Shenyang**	20.38	270	⇑P	P	01 01 02.4	+0.5
SNY				pmax	pmax		
	comp=Z,140nm,1.1s						
SNY				pmax	pmax		
	comp=Z,510nm,5.3s						
SNY				LR	LR		
	comp=Z,2μm,14.1s						
SNY				LR	LR		
	comp=Z,3μm,14.9s						
SNY				LR	LR		
	comp=Z,4μm,15.2s						
YAK	**Yakutsk**	20.83	331	P	P	01 01 06.1	-0.5
	comp=Z,26nm,0.3s,baz=202,slow=3.0,SNR=12						
YAK				LR	LR	01 09 17.5	
	comp=Z,1μm,18.5s,baz=84,slow=37						
YAK	**Yakutsk**	20.83	331	*e*P	P	01 01 07.2	+0.6
YAK	**Yakutsk**	20.83	331	*e*P	P	01 01 07.7	+1.0
	comp=Z,222nm,0.8s						
YAK	**Yakutsk**	20.83	331	*e*P	P	01 01 05.8	-0.8
YAK				*e*		01 01 20.6	
YAK				*e*S	S	01 04 55.6	-1.5
YAK				*e*SS	SnSn	01 05 14.4	-3.6
YAK				*e*SSS	SSS	01 05 30.4	
YAK				*e*		01 12 27.6	
YAK				pmax	pmax		
	comp=Z,78nm,0.9s						
YAK				pmax	pmax		
	comp=N,20nm,1.1s						
YAK				pmax	pmax		
	comp=E,14nm,1.0s						
YAK				smax	smax		
	comp=N,257nm,1.6s						
YAK				smax	smax		
	comp=E,183nm,1.5s						
YAK				MLR	MLR		
	comp=Z,1μm,14.0s						
YAK				MLR	MLR		
	comp=N,1μm,13.0s						
YAK				MLR	MLR		
	comp=E,317nm,13.0s						
KIWB	**Kanaga Island**	21.67	61	*e*P	P	01 01 16.2	+0.4
DL2	**Dalian**	22.89	264	⇑ *i*P	P	01 01 28.2	-0.6
DL2				S	S	01 05 34.4	-2.0
DL2				sS	sS	01 05 49.6	-1.5
DL2				pmax	pmax		
	comp=E,77nm,0.9s						
DL2				pmax	pmax		
	comp=E,450nm,5.6s						
DL2				LR	LR		
	comp=E,560nm,16.6s						
DL2				LR	LR		
	comp=E,510nm,16.5s						
DL2				LR	LR		
	comp=E,680nm,17.8s						
ATKA	**Atka Island**	23.52	61	*e*P	P	01 01 39.8	+4.8
	comp=E,38nm,1.1s						
BILL	**Bilibino**	23.97	14	*e*P	P	01 01 39.3	+0.1
BILL	**Bilibino**	23.97	14	*e*P	P	01 01 39.4	+0.2
	comp=E,12nm,1.0s						
BILL	**Bilibino**	23.97	14	*d i*P	P	01 01 39.3	+0.1
BILL				*i*		01 01 51.0	
BILL				*i*		01 02 07.2	
BILL				*i* S	S	01 05 45.2	-8.4
BILL				MLR	MLR		
	comp=Z,2μm,17.0s						
BOD	**Bodaibo**	25.93	312	*e*P	P	01 01 53.4	-3.7
BOD				pmax	pmax		
	comp=Z,11nm,1.4s						
JOW	**Kunigami**	26.14	233	P	P	01 01 58.5	-0.8
	comp=Z,56nm,1.0s,baz=52,slow=8.7,SNR=6.4						
JOW	**Kunigami**	26.14	233	*e*P	P	01 01 59.9	+0.7
	comp=Z,67nm,1.0s						
BJI	**Beijing**	26.25	271	⇑ *e*P	P	01 02 00.5	+0.4
BJI				pP	sP	01 02 11.1	-2.0
BJI				S	S	01 06 30.5	+0.2
BJI				pmax	pmax		
	comp=Z,180nm,0.9s						
BJI				LR	LR		
	comp=Z,2μm,14.3s						
BJI				LR	LR		
	comp=Z,3μm,14.9s						
BJI				LR	LR		
	comp=Z,2μm,23.5s						
BJT	**Baijiatuau**	26.26	271	*e*P	P	01 02 00.8	+0.5
	comp=Z,144nm,1.0s						
BJT	**Baijiatuau**	26.26	271	*e*P	P	01 02 00.8	+0.5
BJT				pmax	pmax		
	comp=Z,144nm,1.0s						
SPIA	**Saint Paul Isl**	26.37	50	*e*P	P	01 02 01.4	+0.4
	comp=Z,167nm,1.5s						
TIA	**Tai'an**	27.31	262	P	P	01 02 10.0	+0.2
TIA				pmax	pmax		
	comp=Z,22nm,1.4s						
TIA				pmax	pmax		
	comp=Z,180nm,5.7s						
TIA				LR	LR		
	comp=Z,630nm,17.1s						
TIA				LR	LR		
	comp=Z,590nm,16.3s						
TIA				LR	LR		
	comp=Z,520nm,18.1s						
SSE	**Sheshan**	27.47	249	P	P	01 02 12.3	+1.1
SSE				S	S	01 06 51.1	+1.3
SSE				pmax	pmax		
	comp=Z,30nm,1.3s						
SSE				pmax	pmax		
	comp=Z,130nm,3.9s						
SSE				LR	LR		
	comp=Z,330nm,17.6s						
SSE				LR	LR		
	comp=Z,540nm,17.4s						
TIXI	**Tiksi**	28.42	345	P	P	01 02 16.0	-3.3
	comp=Z,3.8nm,0.4s,baz=148,slow=7.9,SNR=11						
TIXI				LR	LR	01 14 02.5	
	comp=Z,951nm,19.1s,baz=137,slow=37						
TIXI	**Tiksi**	28.42	345	*e*P	P	01 02 16.2	-3.1
	comp=Z,15nm,1.3s						
TIXI	**Tiksi**	28.42	345	⇑ *i*P	P	01 02 17.4	-1.9
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NJ2	**Nanjing**	28.43	253	*e*P	P	01 02 20.1	+0.3
NJ2				pP	sP	01 02 31.2	-1.5
NJ2				S	S	01 07 09.9	+5.0
NJ2				sS	sS	01 07 24.2	+4.2
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,150nm,3.5s						
NJ2				LR	LR		
	comp=Z,2μm,15.7s						
NJ2				LR	LR		
	comp=Z,2μm,18.4s						
NJ2				LR	LR		
	comp=Z,3μm,17.4s						
H11N2	**WAKE ISLAND Hy**	28.67	148	T	T	01 34 08.1	
	baz=334,slow=74						

H11N1	**WAKE ISLAND Hy**	**28.68**	**148**	T	T	01 34 05.6	
	baz=334,slow=74,SNR=2845						
H11N3	**WAKE ISLAND Hy**	**28.68**	**148**	T	T	01 34 09.3	
	baz=334						
HHC	**Hu-ho-hao-te**	**29.18**	**275**	*e*P	**P**	**01 02 27.2**	**+0.7**
HHC				S	**S**	**01 07 15.9**	**-0.8**
HHC				sS	sS	01 07 35.6	+3.8
HHC				pmax	pmax		
	comp=Z,110nm,1.0s						
HHC				pmax	pmax		
	comp=Z,390nm,6.2s						
HHC				LR	LR		
	comp=Z,640nm,16.4s						
HHC				LR	LR		
	comp=Z,3µm,15.3s						
HHC				LR	LR		
	comp=Z,4µm,14.6s						
H11S1	**WAKE ISLAND Hy**	**29.72**	**150**	T	T	01 34 24.5	
	baz=338,slow=76,SNR=1612						
H11S3	**WAKE ISLAND Hy**	**29.73**	**150**	T	T	01 34 30.9	
	baz=338,slow=76,SNR=1256						
H11S2	**WAKE ISLAND Hy**	**29.74**	**150**	T	T	01 34 34.8	
	baz=338,slow=76,SNR=1405						
TIY	**Taiyuan**	**29.88**	**269**	*e*P	**P**	**01 02 33.9**	**+1.2**
TIY				S	**S**	**01 07 33.1**	**+5.3**
TIY				SS	**SnSn**	**01 09 00.0**	**+0.2**
TIY				pmax	pmax		
	comp=Z,57nm,1.1s						
TIY				pmax	pmax		
	comp=Z,210nm,4.9s						
TIY				LR	LR		
	comp=Z,520nm,12.4s						
TIY				LR	LR		
	comp=Z,840nm,14.8s						
TIY				LR	LR		
	comp=Z,920nm,15.9s						
BTO	**Baotou**	**30.35**	**276**	*e*P	**P**	**01 02 37.1**	**+0.2**
SONA1	**Songino Array**	**30.63**	**291**	*e*P	**P**	**01 02 38.7**	**-0.6**
SONM	**Songino Array**	**30.64**	**291**	P	**P**	**01 02 39.0**	**-0.3**
	comp=Z,12nm,0.9s,baz=73,slow=8.3,SNR=41						
SONM				PcP	**PcP**	**01 05 37.1**	**+0.1**
	comp=Z,5.1nm,1.2s,baz=85,slow=2.0,SNR=4.3						
SONM				LR	LR	01 16 05.8	
	comp=Z,2µm,18.4s,baz=79,slow=38						
TLY	**Talaya**	**31.72**	**299**	*e*P	**P**	**01 02 48.6**	**-0.1**
TLY	**Talaya**	**31.72**	**299**	*e*P	**P**	**01 02 44.6**	**-4.1**
TLY				*e*		01 03 49.1	
TLY				*e*S	**S**	**01 07 53.1**	**-3.1**
TLY				*e*SS	**SnSn**	**01 09 44.0**	**-0.1**
TLY				pmax	pmax		
	comp=Z,17nm,1.1s						
TLY				MLR	MLR		
	comp=Z,3µm,16.0s						
ZAK	**Zakamensk**	**32.15**	**296**	*e*P	**P**	**01 02 51.1**	**-1.5**
ZAK				*e*		01 05 40.0	
ZAK				pmax	pmax		
	comp=Z,12nm,1.1s						
GUMO	**Guam**	**32.20**	**192**	LR	LR	01 18 16.4	
	comp=Z,458nm,18.5s,baz=22,slow=41						
WHN	**Wuhan**	**32.41**	**256**	P	**P**	**01 02 54.9**	**0.0**
WHN				S	**S**	**01 08 09.8**	**+2.6**
WHN				pmax	pmax		
	comp=Z,66nm,0.8s						
WHN				LR	LR		
	comp=Z,6µm,22.2s						
WHN				LR	LR		
	comp=Z,1µm,16.3s						
WHN				LR	LR		
	comp=Z,3µm,16.5s						
TPUB	**Ta-pu**	**33.29**	**239**	*e*P	**P**	**01 03 03.3**	**+0.6**
	comp=Z,76nm,1.0s						
QZH	**Quanzhou**	**33.34**	**243**	⇑*i*P	**P**	**01 03 02.8**	**-0.3**
QZH				S	**S**	**01 08 25.8**	**+4.1**
QZH				pmax	pmax		
	comp=Z,120nm,3.8s						
QZH				LR	LR		
	comp=Z,480nm,18.9s						
QZH				LR	LR		
	comp=Z,450nm,11.8s						
QZH				LR	LR		
	comp=Z,520nm,18.5s						
MOY	**Mondy**	**33.35**	**299**	*e*P	**P**	**01 03 02.7**	**-0.4**
MOY				pmax	pmax		
	comp=Z,19nm,1.7s						
TWG	**Pinlang**	**33.39**	**238**	*e*P	**P**	**01 03 02.6**	**-0.9**
	comp=Z,156nm,0.8s						
XAN	**Xi’an**	**34.18**	**266**	P	**P**	**01 03 10.6**	**+0.2**
XAN				pP	pP	01 03 20.6	+1.0
XAN				PP	**PnPn**	**01 04 20.7**	**-4.0**
XAN				ScP	**ScP**	**01 09 26.3**	**-3.0**
XAN				pmax	pmax		
	comp=Z,44nm,1.0s						
XAN				LR	LR		
	comp=Z,970nm,15.3s						
XAN				LR	LR		
	comp=Z,740nm,14.5s						
XAN				LR	LR		
	comp=Z,900nm,16.2s						
KDAK	**Kodiak Island**	**35.90**	**49**	P	**P**	**01 03 24.0**	**-0.9**
	comp=Z,11nm,0.7s,baz=259,slow=5.9,SNR=8.1						
KDAK	**Kodiak Island**	**35.90**	**49**	*e*P	**P**	**01 03 24.1**	**-0.8**
KDAK	**Kodiak Island**	**35.90**	**49**	*e*P	**P**	**01 03 24.4**	**-0.5**
	comp=Z,50nm,1.1s						
KDAK	**Kodiak Island**	**35.90**	**49**	*ce*P	**P**	**01 03 24.1**	**-0.8**
PPLA	**Purkeypile**	**35.98**	**41**	*e*P	**P**	**01 03 27.1**	**+1.4**
	comp=Z,41nm,1.3s						
CAST	**Castle Rocks**	**36.05**	**40**	*e*P	**P**	**01 03 27.2**	**+1.0**
	comp=Z,23nm,1.3s						
SKT	**Skwentna**	**36.27**	**42**	*e*P	**P**	**01 03 29.3**	**+1.3**
	comp=Z,13nm,1.1s						
BPAW	**Bear Paw Mtn.**	**36.56**	**39**	*e*P	**P**	**01 03 31.3**	**+0.7**
	comp=Z,11nm,1.0s						
SUA	**Susitna One**	**36.64**	**43**	*e*P	**P**	**01 03 31.2**	**-0.2**
	comp=Z,14nm,1.0s						
LZH	**Lanzhou**	**36.71**	**272**	⇑P	**P**	**01 03 33.7**	**+1.5**
LZH				pP	sP	01 03 48.3	+3.0
LZH				PP	**PP**	**01 04 58.6**	**+2.6**
LZH				*e*S	**S**	**01 09 16.0**	**+2.2**
LZH				SS	**SnSn**	**01 11 40.4**	**-5.1**
LZH				pmax	pmax		
	comp=Z,330nm,1.2s						
LZH				pmax	pmax		
	comp=Z,760nm,4.3s						
LZH				LR	LR		
	comp=Z,1µm,16.3s						
LZH				LR	LR		
	comp=Z,2µm,15.2s						
LZH				LR	LR		
	comp=Z,2µm,16.5s						
MLY	**Manley**	**36.72**	**37**	*e*P	**P**	**01 03 32.8**	**+0.9**
	comp=Z,23nm,1.4s						
TRF	**Thorofare Moun**	**36.85**	**40**	*e*P	**P**	**01 03 33.6**	**+0.4**
	comp=Z,31nm,1.6s						
COLD	**Coldfoot**	**37.12**	**33**	*e*P	**P**	**01 03 35.8**	**+0.5**
	comp=Z,6.6nm,1.0s						
RC01	**Rabbit Creek A**	**37.14**	**44**	*e*P	**P**	**01 03 35.4**	**0.0**
	comp=Z,17nm,0.9s						
BWN	**Browne**	**37.23**	**38**	*e*P	**P**	**01 03 37.5**	**+1.3**
	comp=Z,172nm,1.4s						
PMR	**Palmer**	**37.41**	**43**	*e*P	**P**	**01 03 37.2**	**-0.5**
	comp=Z,16nm,1.1s						
PMR	**Palmer**	**37.41**	**43**	*e*P	**P**	**01 03 37.2**	**-0.5**
PMR				pmax	pmax		
	comp=Z,16nm,1.1s						
MCK	**McKinley**	**37.46**	**39**	*e*P	**P**	**01 03 38.5**	**+0.3**
MCK	**McKinley**	**37.46**	**39**	*e*P	**P**	**01 03 38.5**	**+0.3**
	comp=Z,23nm,1.2s						
MCK	**McKinley**	**37.46**	**39**	*e*P	**P**	**01 03 38.5**	**+0.3**
MCK				pmax	pmax		
	comp=Z,23nm,1.2s						
TOLK	**Toolik Lake Re**	**37.52**	**31**	P	**P**	**01 03 38.8**	**+0.1**
	baz=263						
TOLK	**Toolik Lake Re**	**37.52**	**31**	*e*P	**P**	**01 03 39.1**	**+0.5**
	comp=Z,13nm,0.9s						
MDM	**Murphy Dome**	**37.78**	**37**	*e*P	**P**	**01 03 41.5**	**+0.7**
	comp=Z,34nm,1.4s						
CCB	**Clear Creek Bu**	**37.96**	**38**	*e*P	**P**	**01 03 42.5**	**+0.2**
	comp=Z,11nm,1.2s						
GTA	**Gaotai**	**37.97**	**280**	*e*P	**P**	**01 03 43.8**	**+0.9**
GTA				pmax	pmax		
	comp=Z,60nm,1.2s						
GTA				pmax	pmax		
	comp=Z,270nm,6.5s						
GTA				LR	LR		
	comp=Z,190nm,13.9s						
GTA				LR	LR		
	comp=Z,460nm,14.6s						
GTA				LR	LR		
	comp=Z,600nm,13.9s						
GZH	**Guangzhou**	**38.02**	**247**	P	**P**	**01 03 38.8**	**-4.4**
GZH				PP	**PP**	**01 05 11.0**	**+0.7**
GZH				S	**S**	**01 09 30.2**	**-3.2**
GZH				LR	LR		
	comp=Z,1µm,20.8s						
GZH				LR	LR		
	comp=Z,710nm,20.2s						
SCM	**Sheep Creek Mo**	**38.26**	**42**	*e*P	**P**	**01 03 45.4**	**+0.4**
	comp=Z,32nm,1.2s						
IL1	**Eielson Array**	**38.35**	**37**	*e*P	**P**	**01 03 44.9**	**-0.7**
ILAR	**Eielson Array**	**38.35**	**37**	P	**P**	**01 03 45.1**	**-0.5**
	comp=Z,28nm,1.3s,baz=262,slow=7.0,SNR=49						
ILAR				LR	LR	01 21 08.4	
	comp=Z,457nm,20.5s,baz=276,slow=39						
ILB	**Eielson Array**	**38.35**	**37**	*e*P	**P**	**01 03 45.5**	**-0.1**
KLU	**Klutina**	**38.95**	**43**	*e*P	**P**	**01 03 51.4**	**+0.6**
	comp=Z,27nm,1.0s						
DIV	**Divide**	**39.06**	**43**	*e*P	**P**	**01 03 52.3**	**+0.6**
DIV	**Divide**	**39.06**	**43**	*e*P	**P**	**01 03 52.3**	**+0.6**
	comp=Z,60nm,1.5s						
HARP	**HAARP**	**39.23**	**41**	*e*P	**P**	**01 03 54.7**	**+1.6**
	comp=Z,124nm,1.7s						
CD2	**Chengdu**	**39.54**	**265**	⇑P	**P**	**01 03 56.5**	**+0.5**
CD2				pP	sP	01 04 09.0	-0.2
CD2				sP	pP	01 04 14.8	+9.4
CD2				PP	**PP**	**01 05 27.6**	**+0.6**
CD2				S	**S**	**01 09 55.4**	**-1.1**
CD2				sS	sS	01 10 17.1	+5.2
CD2				pmax	pmax		
	comp=Z,410nm,4.1s						
CD2				LR	LR		
	comp=Z,2µm,15.2s						
CD2				LR	LR		
	comp=Z,2µm,16.7s						
CD2				LR	LR		
	comp=Z,2µm,16.2s						
BMRM	**Bremner River**	**39.64**	**43**	*e*P	**P**	**01 03 57.4**	**+0.9**
	comp=Z,36nm,1.2s						
GYA	**Guiyang**	**40.23**	**257**	⇑*i*P	**P**	**01 04 01.6**	**-0.2**
GYA				PP	**PnPn**	**01 05 40.4**	**+2.1**
GYA				S	**S**	**01 10 06.2**	**-0.7**
GYA				sS	sS	01 10 26.0	+3.7
GYA				SS	**SS**	**01 12 58.8**	**-6.8**
GYA				pmax	pmax		
	comp=Z,30nm,0.9s						
GYA				pmax	pmax		
	comp=Z,130nm,5.2s						
GYA				LR	LR		
	comp=Z,680nm,16.4s						
GYA				LR	LR		
	comp=Z,840nm,16.4s						
GYA				LR	LR		
	comp=Z,1µm,17.4s						
TGL	**Tana Glacier**	**40.53**	**44**	*e*P	**P**	**01 04 05.8**	**+1.9**
	comp=Z,31nm,1.0s						
EGAK	**Eagle**	**40.81**	**37**	*e*P	**P**	**01 04 06.1**	**0.0**
	comp=Z,20nm,0.9s						
DAWY	**Dawson**	**41.65**	**38**	*e*P	**P**	**01 04 13.7**	**+0.7**
	comp=Z,14nm,1.4s						
ZAA0	**Zalesovo Array**	**42.40**	**306**	*e*P	**P**	**01 04 18.5**	**-0.7**
	comp=Z,17nm,1.8s						
ZAA0				*e*PcP	**PcP**	**01 06 12.1**	**+0.2**
ZALV	**Zalesovo Beam**	**42.40**	**306**	P	**P**	**01 04 17.4**	**-1.8**
	comp=Z,2.0nm,0.3s,baz=64,slow=6.8,SNR=7.9						
ZALV				PcP	**PcP**	**01 06 12.3**	**+0.5**
	comp=Z,13nm,0.9s,baz=90,slow=3.0,SNR=15						
ZALV				LR	LR	01 23 01.6	
	comp=Z,1µm,20.1s,baz=69,slow=38						
ZALV	**Zalesovo Beam**	**42.40**	**306**	*e*P	**P**	**01 04 16.9**	**-2.3**
ZALV				*e*PcP	**PcP**	**01 06 11.9**	**0.0**
NVS	**Novosibirsk**	**43.03**	**308**	*e*P	**P**	**01 04 21.9**	**-2.4**
NVS				*e*		01 06 13.0	
NVS				pmax	pmax		
	comp=Z,8.0nm,1.1s						
NVS				pmax	pmax		
	comp=E,8.0nm,1.4s						
QIZ	**Qiongzhong**	**43.19**	**246**	P	**P**	**01 04 25.9**	**-0.1**
QIZ				pP	**sP**	**01 04 37.5**	**-1.7**
QIZ				sS	**sS**	**01 11 11.5**	**+5.4**
QIZ				pmax	pmax		
	comp=E,110nm,5.7s						
QIZ				LR	LR		
	comp=E,700nm,21.1s						
QIZ				LR	LR		
	comp=E,700nm,21.1s						
QIZ				LR	LR		
	comp=E,820nm,16.7s						
INK	**Inuvik**	**43.43**	**32**	P	**P**	**01 04 27.0**	**-0.3**
	comp=E,12nm,0.9s,baz=274,slow=6.7,SNR=18						
INK				LR	LR	01 25 52.8	
	comp=E,342nm,18.9s,baz=288,slow=41						
INK	**Inuvik**	**43.43**	**32**	*e*P	**P**	**01 04 28.1**	**+0.7**
	comp=E,24nm,1.1s						
INK	**Inuvik**	**43.43**	**32**	*e*P	**P**	**01 04 28.1**	**+0.7**
INK				pmax	pmax		
	comp=Z,24nm,1.1s						
KMI	**Kunming**	**43.79**	**259**	P	**P**	**01 04 31.9**	**+0.8**
KMI				PP	**PcP**	**01 06 18.3**	**+1.0**
KMI				S	**S**	**01 10 57.7**	**-2.1**
KMI				pmax	pmax		
	comp=Z,42nm,1.3s						
KMI				pmax	pmax		
	comp=Z,220nm,3.6s						
KMI				LR	LR		
	comp=Z,670nm,18.6s						
KMI				LR	LR		
	comp=Z,350nm,21.8s						
KMI				LR	LR		
	comp=Z,650nm,17.0s						
WMQ	**Urumqi**	**44.27**	**292**	P	**P**	**01 04 36.2**	**+1.7**
WMQ				PcP	**PcP**	**01 06 19.7**	**+1.2**
WMQ				PcS	**PcS**	**01 10 08.4**	**-3.3**
WMQ				S	**S**	**01 11 13.5**	**+7.4**
WMQ				pmax	pmax		
	comp=Z,85nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,280nm,3.7s						
WMQ				LR	LR		
	comp=Z,3µm,17.3s						
WMQ				LR	LR		
	comp=Z,2µm,15.9s						
WMQ				LR	LR		
	comp=Z,2µm,21.7s						
SKAG	**Skagway**	**44.48**	**44**	*e*P	**P**	**01 04 39.2**	**+3.4**
JIS	**Juneau Island**	**45.28**	**46**	*e*P	**P**	**01 04 44.3**	**+2.0**
	comp=Z,36nm,1.1s						
MK31	**Makanchi Array**	**46.47**	**298**	*e*P	**P**	**01 04 51.1**	**-0.8**
MK31	**Makanchi Array**	**46.47**	**298**	*e*P	**P**	**01 04 51.1**	**-0.8**
MKAR	**Makanchi Array**	**46.47**	**298**	P	**P**	**01 04 51.8**	**-0.1**
	comp=Z,11nm,0.9s,baz=70,slow=7.4,SNR=45						
MKAR				PcP	**PcP**	**01 06 26.3**	**+0.3**
	comp=Z,9.0nm,0.9s,baz=39,slow=4.7,SNR=5.0						
MKAR				LR	LR	01 25 28.5	
	comp=Z,3µm,18.4s,baz=70,slow=37						
MKAR	**Makanchi Array**	**46.47**	**298**	*e*P	**P**	**01 04 51.1**	**-0.8**
	comp=Z,65nm,0.8s						
MKAR				PcP	**PcP**	**01 06 26.3**	**+0.3**
MK01	**Makanchi Array**	**46.47**	**298**	*e*P	**P**	**01 04 50.5**	**-1.4**
MAKZ	**Makanchi**	**46.66**	**298**	*e*P	**P**	**01 04 52.5**	**-0.8**
	comp=Z,11nm,0.9s						
MAKZ	**Makanchi**	**46.66**	**298**	*e*P	**P**	**01 04 52.5**	**-0.8**
MAKZ				pmax	pmax		
	comp=Z,11nm,0.9s						
KURK	**Kurchatov**	**47.08**	**304**	*e*P	**P**	**01 04 55.1**	**-1.5**
	comp=Z,18nm,1.1s						
KURK	**Kurchatov**	**47.08**	**304**	P	**P**	**01 04 55.4**	**-1.2**
	SNR=7.5						
KURK	**Kurchatov**	**47.08**	**304**	⇓*i*P	**P**	**01 04 55.0**	**-1.5**
KURK				pmax	pmax		
	comp=Z,18nm,1.3s						
KURBB	**Kurchatov Arra**	**47.17**	**304**	P	**P**	**01 04 55.7**	**-1.6**
	comp=Z,6.7nm,0.7s,baz=66,slow=8.1,SNR=25						
LKP	**Lekhapani**	**47.23**	**267**	*e*P	**P**	**01 04 59.1**	**+1.1**
DLBC	**Dease Lake**	**47.41**	**44**	P	**P**	**01 04 56.8**	**-2.2**
	comp=Z,15nm,1.2s,baz=170,slow=17,SNR=2.6						
DLBC	**Dease Lake**	**47.41**	**44**	*e*P	**P**	**01 05 01.3**	**+2.2**
	comp=Z,32nm,1.4s						
NONG	**Nongkai**	**48.29**	**252**	P	**P**	**01 05 07.6**	**+1.3**
	comp=Z,0.6nm,0.9s						
SKNT	**Sakolnakorn**	**48.51**	**250**	P	**P**	**01 05 09.1**	**+1.1**
	comp=Z,10nm,1.0s,comp=Z,855nm						
ZIRO	**ZIRO**	**48.51**	**269**	*e*P	**P**	**01 05 08.8**	**+0.7**
UBPT	**Khong Chiam**	**48.77**	**247**	P	**P**	**01 05 13.8**	**+3.9**
	comp=Z,17nm,1.1s,comp=Z,954nm						
MOKO	**MOKOCHONG**	**48.78**	**267**	*e*P	**P**	**01 05 10.8**	**+0.6**
LSA	**Lhasa**	**49.12**	**273**	*e*P	**P**	**01 05 13.8**	**+0.7**
	comp=Z,98nm,1.1s						
LSA	**Lhasa**	**49.12**	**273**	P	**P**	**01 05 15.2**	**+2.0**
LSA	**Lhasa**	**49.12**	**273**	*e*P	**P**	**01 05 13.8**	**+0.7**
LSA				pmax	pmax		
	comp=Z,98nm,1.1s						
KOHI	**KOHIMA**	**49.44**	**267**	*e*P	**P**	**01 05 13.7**	**-1.5**
CMAI	**Chiengmai2**	**49.77**	**257**	P	**P**	**01 05 19.3**	**+1.4**
	comp=Z,3.5nm,0.9s						
TEZP	**TEZPUR**	**49.81**	**269**	*e*P	**P**	**01 05 17.5**	**-0.3**
IMP	**Imphal**	**50.11**	**266**	*e*P	**P**	**01 05 19.9**	**-0.3**
IMP				IAmb	IAmb	01 05 21.7	
	comp=Z,29nm,1.0s						
CMMT	**Chiang Mai**	**50.61**	**256**	P	**P**	**01 05 25.0**	**+1.0**
	comp=Z,23nm,1.1s,comp=Z,459nm						
CHTO	**Chiang Mai**	**50.61**	**256**	*e*P	**P**	**01 05 24.8**	**+0.8**
	comp=Z,20nm,1.0s						
CHTO	**Chiang Mai**	**50.61**	**256**	P	**P**	**01 05 24.9**	**+0.8**
	SNR=8.5						
CHTO	**Chiang Mai**	**50.61**	**256**	P	**P**	**01 05 25.1**	**+1.1**
	comp=Z,100nm,1.1s,comp=Z,2µm						
BVA0	**Borovoye Array**	**50.76**	**310**	*i* P	**P**	**01 05 22.7**	**-2.0**
BVA0				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BVAR	**Borovoye Array**	**50.76**	**310**	P	**P**	**01 05 24.5**	**-0.2**
	comp=Z,4.0nm,0.7s,baz=60,slow=8.5,SNR=23						
BVAR				PcP	**PcP**	**01 06 41.3**	**-0.1**
	comp=Z,6.3nm,0.7s,baz=72,slow=4.7,SNR=7.0						
BVAR				LR	LR	01 28 31.1	
	comp=Z,1µm,19.6s,baz=57,slow=38						
BRVK	**Borovoye**	**50.80**	**310**	*e*P	**P**	**01 05 24.0**	**-1.1**
	comp=Z,15nm,0.9s						
BRVK	**Borovoye**	**50.80**	**310**	P	**P**	**01 05 24.6**	**-0.4**
	SNR=6.7						
BRVK	**Borovoye**	**50.80**	**310**	⇓*i*P	**P**	**01 05 23.4**	**-1.6**
BRVK				*i* *PP	**pP**	**01 05 34.8**	**+0.3**
BRVK				*i*		01 06 41.6	
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
PBKT	**Sadao Pong**	**50.80**	**252**	P	**P**	**01 05 26.7**	**+1.3**
	comp=Z,14nm,1.7s						
GUWA	**GUWAHATI**	**50.85**	**269**	*e*P	**P**	**01 05 25.7**	**-0.1**
CMAR	**Chiang Mai Arr**	**50.86**	**256**	P	**P**	**01 05 26.9**	**+1.0**
	comp=Z,14nm,1.0s,baz=37,slow=6.6,SNR=26						
CMAR				LR	LR	01 28 56.8	
	comp=Z,567nm,18.4s,baz=48,slow=38						
CM01	**Chiang Mai Arr**	**50.87**	**256**	*e*P	**P**	**01 05 26.9**	**+0.9**
PRZ	**Przheval’sk**	**50.91**	**294**	*e*P	**P**	**01 05 27.5**	**+1.2**
	comp=Z,93nm,1.4s						
PRZ	**Przheval’sk**	**50.91**	**294**	*e*P	**P**	**01 05 27.5**	**+1.2**
PRZ				pmax	pmax		
	comp=Z,93nm,1.4s						
SHL	**Shillong**	**51.10**	**268**	*e*P	**P**	**01 05 27.8**	**-0.1**
SHL	**Shillong**	**51.10**	**268**	*e*P	**P**	**01 05 30.0**	**+2.1**
SRAK	**Srakaew**	**51.94**	**249**	P	**P**	**01 05 32.3**	**-1.6**
	comp=Z,81nm,0.9s						
SAIH	**SAIHA**	**52.29**	**264**	*e*P	**P**	**01 05 36.1**	**-0.6**
GTK	**Tadong**	**52.34**	**272**	*e*x	P	01 05 31.8	-5.2
ULHL	**Ulahol**	**52.41**	**295**	P	**P**	**01 05 38.9**	**+1.3**
	SNR=17						
TKM2	**Tokmak 2**	**52.48**	**296**	P	**P**	**01 05 39.0**	**+1.0**
	SNR=19						
RES	**Resolute Bay**	**52.48**	**18**	P	**P**	**01 05 37.0**	**-0.3**
	comp=Z,6.3nm,0.4s,baz=4.7,slow=11,SNR=28						
RES	**Resolute Bay**	**52.48**	**18**	*e*P	**P**	**01 05 37.4**	**+0.1**
	comp=Z,13nm,0.9s						
RES	**Resolute Bay**	**52.48**	**18**	*e*P	**P**	**01 05 37.4**	**+0.1**
RES				pmax	pmax		
	comp=Z,13nm,0.9s						
UMPA	**Umpang Tak**	**52.48**	**254**	P	**P**	**01 05 41.1**	**+3.0**
	comp=Z,7.7nm,1.0s						
UTHA	**Uthaitani**	**52.55**	**253**	P	**P**	**01 05 40.8**	**+2.3**
	comp=Z,4.4nm,0.8s						
YKW3	**Yellowknife Ar**	**52.69**	**36**	*e*P	**P**	**01 05 39.1**	**+0.2**
	comp=Z,18nm,1.2s						
YKA	**Yellowknife Ar**	**52.73**	**36**	P	**P**	**01 05 39.8**	**+0.6**
	comp=Z,16nm,1.2s,baz=299,slow=7.6,SNR=24						
YKA				LR	LR	01 29 36.2	
	comp=Z,28nm,21.4s,baz=301,slow=38						
MPSI	**Mapaga**	**52.77**	**221**	P	**P**	**01 05 43.4**	**+3.3**
TAPN	**Taplejung**	**52.94**	**273**	*e*P	**P**	**01 05 42.9**	**+1.2**
	comp=Z,22nm,0.6s						
CHMS	**Chumysh**	**52.97**	**297**	P	**P**	**01 05 42.1**	**+0.7**
	SNR=9.6						
USP	**Ospenovka**	**52.99**	**297**	P	**P**	**01 05 42.1**	**+0.5**
	SNR=13						
KBK	**Karagaybulak**	**53.03**	**296**	P	**P**	**01 05 42.6**	**+0.6**
	SNR=17						
BRDH	**Bariadhala**	**53.11**	**266**	LR	LR	01 30 09.5	
	comp=Z,202nm,19.0s,baz=80,slow=38						
KZA	**Kyzart**	**53.13**	**295**	P	**P**	**01 05 44.7**	**+1.7**
	SNR=47						
FRU	**Bishkek**	**53.14**	**297**	*i* P	**P**	**01 05 44.0**	**+1.3**
FRU				pmax	pmax		
	comp=Z,110nm,2.0s						
AAK	**Ala-Archa**	**53.32**	**296**	P	**P**	**01 05 44.5**	**+0.4**
	SNR=12						
AAK	**Ala-Archa**	**53.32**	**296**	*e*P	**P**	**01 05 44.4**	**+0.3**
	comp=Z,31nm,0.9s						
AAK	**Ala-Archa**	**53.32**	**296**	*e*P	**P**	**01 05 44.4**	**+0.3**
AAK				pmax	pmax		
	comp=Z,31nm,0.9s						
ODAN	**Odare**	**53.47**	**273**	*e*P	**P**	**01 05 46.5**	**+1.0**
	comp=Z,26nm,0.5s						
UCH	**Uchtor**	**53.52**	**296**	P	**P**	**01 05 46.3**	**+0.3**
	SNR=5.4						
SPITS	**Spitsbergen Ar**	**53.70**	**350**	P	**P**	**01 05 45.4**	**-0.9**
	comp=Z,2.9nm,0.4s,baz=78,slow=18,SNR=20						
SPITS				LR	LR	01 31 15.5	
	comp=Z,367nm,18.2s,baz=15,slow=39						
EKS2	**Erkin-Say**	**53.76**	**297**	P	**P**	**01 05 47.8**	**+0.4**
	SNR=30						
JIRN	**Jiri**	**53.82**	**274**	*e*P	**P**	**01 05 49.0**	**+0.8**
	comp=Z,282nm,0.9s						
GUN	**Gumba**	**53.89**	**275**	*e*P	**P**	**01 05 49.4**	**+0.7**
	comp=Z,237nm,0.9s						
RAMN	**Ramite**	**53.97**	**273**	*e*P	**P**	**01 05 49.8**	**+0.6**
	comp=Z,304nm,0.9s						
SVE	**Sverdlovsk**	**53.97**	**317**	⇑*e*P	**P**	**01 05 47.2**	**-1.3**
SVE				pmax	pmax		
	comp=Z,25nm,0.9s						
SVE				MLR	MLR		
	comp=Z,853nm,15.0s						
KSH	**Kashi**	**54.02**	**292**	P	**P**	**01 05 53.7**	**+4.4**
KSH				sP	sP	01 06 11.8	+9.2
KSH				PcP	**PcP**	**01 06 57.7**	**+3.7**
KSH				PP	**PP**	**01 07 58.0**	**+7.4**
KSH				S	**S**	**01 13 25.5**	**+2.3**
KSH				ScS	**ScS**	**01 15 35.2**	**-1.0**
KSH				pmax	pmax		
	comp=Z,60nm,1.2s						
KSH				LR	LR		
	comp=Z,2µm,20.5s						
KSH				LR	LR		
	comp=Z,450nm,14.6s						
KSH				LR	LR		
	comp=Z,2µm,18.5s						
AML	**Almayashu**	**54.09**	**296**	P	**P**	**01 05 50.6**	**+0.5**
	SNR=22						
PHET	**Kaeng Krachan**	**54.33**	**250**	P	**P**	**01 05 53.8**	**+2.2**
	comp=Z,12nm,0.9s						
KKN	**Kakani**	**54.38**	**275**	*e*P	**P**	**01 05 52.9**	**+0.8**
	comp=Z,128nm,0.9s						
PKIN	**Phulchoki**	**54.43**	**275**	*e*P	**P**	**01 05 53.8**	**+1.2**
	comp=Z,94nm,0.9s						
DMN	**Daman**	**54.62**	**275**	*e*P	**P**	**01 05 54.8**	**+0.9**
	comp=Z,157nm,0.9s						
PMG	**Port Moresby**	**54.70**	**185**	LR	LR	01 25 30.2	
	comp=Z,254nm,21.9s,baz=276,slow=32						
GKN	**Gorkha**	**54.70**	**276**	*e*P	**P**	**01 05 55.2**	**+0.8**
	comp=Z,211nm,1.0s						
LLLB	**Lillooet**	**55.08**	**51**	*e*P	**P**	**01 06 01.1**	**+4.4**
	comp=Z,21nm,1.2s						
DANN	**Dangsing**	**55.11**	**277**	*e*P	**P**	**01 05 58.7**	**+1.2**
	comp=Z,142nm,0.7s						
HNR	**Honiara**	**55.14**	**170**	LR	LR	01 32 02.3	
	comp=Z,432nm,18.1s,baz=341,slow=39						
ARU	**Arti**	**55.16**	**317**	LR	LR	01 31 12.6	
	comp=Z,599nm,21.2s,baz=54,slow=38						
ARU	**Arti**	**55.16**	**317**	*e*P	**P**	**01 05 54.9**	**-2.3**
	comp=Z,17nm,0.8s						
ARU	**Arti**	**55.16**	**317**	*c i*P	**P**	**01 05 54.8**	**-2.3**
ARU						01 06 52.6	
ARU				S	**S**	**01 13 35.8**	**-2.0**
ARU						01 15 36.1	

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ARU                                 SS     SS      01 17 23.1 +1.8
ARU                                 pmax   pmax
      comp=Z,18nm,1.0s
ARU                                 MLR    MLR
      comp=Z,1µm,16.0s
KK31  Karatay Array     55.56 299  eP     P       01 06 00.1  -0.2
KK31  Karatay Array     55.56 299  eP     P       01 06 00.1  -0.2
KKAR  Karatay Array     55.56 299  eP     P       01 06 00.1  -0.2
KKAR  Karatay Array     55.56 299  eP     P       01 06 00.1  -0.2
PYUN  Piuthan           55.80 277  eP     P       01 06 03.2 +0.8
      comp=Z,260nm,1.0s
B05A  Bryant            56.19  53   P     P       01 06 05.3 +0.7
      baz=302
BOK   Bokaro            56.44 271  eP     P       01 06 07.8 +1.0
B08A  Colville Reser    57.69  52  eP     P       01 06 15.6 +0.3
      comp=Z,16nm,1.0s
PRGR  Permogore         57.82 327⇑iP     P       01 06 15.0  -0.9
PRGR                                pmax   pmax
      comp=Z,23nm,0.9s
DDI   Dehra Dun         57.88 282  eP     P       01 06 17.7 +0.8
DAG   Danmarks Havn     57.92 357⇑iP     P       01 06 15.8  -0.6
      comp=Z,50nm,1.2s
DAG   Danmarks Havn     57.92 357⇑iP     P       01 06 15.8  -0.6
DAG                                 pmax   pmax
      comp=Z,50nm,1.2s
DHRM  DHARAMSHALA       57.93 285  eP     P       01 06 17.3  -0.1
I03D  Drain, OR         57.96  59   P     P       01 06 18.1 +0.9
      baz=304
SMLA  Simla             58.01 283  eP     P       01 06 17.9 +0.2
APA   Apatity           58.07 336⇑iP     P       01 06 17.1  -0.5
APA                                 pmax   pmax
      comp=Z,7.0nm,1.1s
APA                                 MLR    MLR
      comp=Z,700nm,15.0s
KRAB  Krabi             58.09 247   P     P       01 06 20.1 +1.7
      comp=Z,45nm,0.9s
H04A  Detroit Lake      58.10  57  eP     P       01 06 22.8 +4.6
      comp=Z,38nm,1.1s
HAMF  Hammerfest        58.28 342  eP     P       01 06 18.8  -0.2
AB31  Akbulak array     58.33 310  i P    P       01 06 18.7  -1.0
AB31                                pmax   pmax
      comp=Z,9.0nm,0.5s
ABKAR Akbulak array     58.33 310  eP     P       01 06 18.8  -0.9
I04A  Tendick Farm,     58.47  58   P     P       01 06 21.0 +0.1
      baz=305
AKTO  Aktyubinsk        58.70 312   P     P       01 06 21.4  -0.8
      comp=Z,1.4nm,0.3s,baz=74,slow=8.5,SNR=7.4
AKTO                                LR     LR      01 34 12.4
      comp=Z,2µm,18.0s,baz=52,slow=39
ARCES ARCESS Array B    58.70 341   P     P       01 06 22.0   0.0
      comp=Z,14nm,0.9s,baz=31,slow=6.7,SNR=14
ARCES                               PcP    PcP     01 07 12.1 +0.5
      comp=Z,3.8nm,0.7s,baz=58,slow=4.6,SNR=4.5
ARCES                               LR     LR      01 35 29.2
      comp=Z,253nm,18.7s,baz=21,slow=40
ARE0  ARCESS Array S    58.70 341  eP     P       01 06 22.1 +0.1
I05D  Terrebonne, OR    58.79  57   P     P       01 06 22.5  -0.6
      baz=305
NEW   Newport           58.96  51   P     P       01 06 23.6  -0.6
      baz=305
NEW   Newport           58.96  51  eP     P       01 06 24.9 +0.7
      comp=Z,17nm,1.2s
NEW   Newport           58.96  51  eP     P       01 06 24.9 +0.7
NEW                                 pmax   pmax
      comp=Z,17nm,1.2s
NIL   Nilore            59.15 288  eP     P       01 06 26.8 +1.1
      comp=Z,480nm,0.9s
NIL   Nilore            59.15 288  eP     P       01 06 26.8 +1.1
PINE  Pine Mountain     59.34  57  eP     P       01 06 28.3 +1.3
      comp=Z,24nm,1.0s
E09A  Wood Farm, Sta    59.40  53  eP     P       01 06 29.1 +1.9
      comp=Z,18nm,1.0s
YBH   Yreka Blue Hor    59.47  60   P     P       01 06 28.7 +0.9
      comp=Z,3.7nm,1.1s,baz=332,slow=4.9,SNR=4.2
YBH   Yreka Blue Hor    59.47  60  eP     P       01 06 28.9 +1.1
YBH                                epP    sP      01 06 42.5 +1.3
YBH   Yreka Blue Hor    59.47  60  eP     P       01 06 28.9 +1.1
YBH                                e*PP   sP      01 06 42.5 +1.3
M02C  Callahan          59.57  60   P     P       01 06 28.2  -0.4
      baz=306
KTK1  Kautokeino        59.63 341  eP     P       01 06 28.3  -0.1
G08A  Pilot Rock        59.64  55  eP     P       01 06 30.1 +1.2
      comp=Z,10nm,1.0s
N02D  Trinity Center    59.91  61   P     P       01 06 30.3  -0.5
      baz=306
M04C  Macdoel           59.97  60   P     P       01 06 31.1  -0.2
      baz=306
K05A  Summer Lake       59.99  58  eP     P       01 06 32.8 +1.3
      comp=Z,26nm,1.1s
HEF   Hetta             59.99 340  eP     P       01 06 29.9  -1.0
TRO   Tromso            60.09 343  eP     P       01 06 30.9  -0.6
KIF   Kilpisjarvi       60.19 342  eP     P       01 06 30.9  -1.3
F10A  Beach Ranch, E    60.23  53  eP     P       01 06 34.2 +1.2
      comp=Z,16nm,1.1s
WALA  Waterton Lakes    60.24  49  eP     P       01 06 33.5 +0.4
      comp=Z,11nm,0.8s
WDC   Whiskeytown Da    60.24  61  eP     P       01 06 34.2 +1.2
      comp=Z,13nm,1.0s
WDC   Whiskeytown Da    60.24  61  eP     P       01 06 34.2 +1.2
WDC                                 pmax   pmax
      comp=Z,13nm,1.0s
KLMR  Klimovskoe        60.61 329  eP     P       01 06 34.2  -0.9
KLMR                                pmax   pmax
      comp=Z,13nm,1.0s
KLMR  Klimovskoe        60.61 329  eP     P       01 06 34.3  -0.9
KLMR                                AMP            01 06 35.5
      comp=Z,13nm,1.0s
KLMR                                LQ     LQ      01 28 29.8
KLMR                                LQ     LQ      01 28 29.8
JTMT  Jette             60.82  50  eP     P       01 06 42.1 +5.0
      comp=Z,14nm,1.1s
MOD   Modoc Plateau     60.83  59  eP     P       01 06 41.7 +4.5
      comp=Z,18nm,1.1s
MOD                                eS     S       01 14 53.3 +0.8
BMO   Blue Mountains    60.84  55  eP     P       01 06 37.8 +0.6
      comp=Z,12nm,1.2s
BMO   Blue Mountains    60.84  55  eP     P       01 06 37.8 +0.6
BMO                                 pmax   pmax
      comp=Z,12nm,1.2s
O03D  Paynes Creek      60.86  61   P     P       01 06 36.7  -0.7
      baz=307
KBL   Kabul             61.41 291  eP     P       01 06 40.9  -0.5
      comp=Z,116nm,1.0s
KBL   Kabul             61.41 291  eP     P       01 06 40.9  -0.5
KBL                                 pmax   pmax
      comp=Z,116nm,1.0s
WVOR  Wild Horse Val    61.51  57  eP     P       01 06 43.0 +1.2
      comp=Z,21nm,1.1s
WVOR  Wild Horse Val    61.51  57  eP     P       01 06 43.0 +1.2
WVOR                                pmax   pmax
      comp=Z,21nm,1.1s
MSO   Missoula          61.55  51   P     P       01 06 41.6  -0.5
      baz=307
MSO   Missoula          61.55  51  eP     P       01 06 42.4 +0.3
      comp=Z,30nm,1.3s
BEKR  Beckworth         62.01  61  eP     P       01 06 45.9 +0.7
      comp=Z,23nm,1.2s
SUMG  Summit            62.11   3  eP     P       01 06 45.0  -0.6
      comp=Z,90nm,1.1s
SUMG  Summit            62.11   3⇑iP     P       01 06 46.0 +0.3
      comp=Z,36nm,0.6s
      comp=Z,480nm,20.0s
SUMG  Summit            62.11   3⇑iP     P       01 06 46.0 +0.3
SUMG                                pmax   pmax
      comp=Z,36nm,0.6s
SUMG                                MLR    MLR
      comp=Z,500nm,20.0s
STEI  Steigen           62.26 343  eP     P       01 06 44.9  -1.3
PSI   Prapat            62.39 243   P     P       01 06 48.3 +0.3
      comp=Z,9.3nm,0.7s,baz=0.1,slow=10,SNR=5.6
PSI                                 LR     LR      01 35 38.0
      comp=Z,123nm,18.2s,baz=89,slow=38
PSI   Prapat            62.39 243  eP     P       01 06 48.7 +0.7
      comp=Z,29nm,1.2s
LOF   Lofoten           62.44 344  eP     P       01 06 47.0  -0.4
FFC   Flin Flon         62.55  39  eP     P       01 06 48.5 +0.1
FFC   Flin Flon         62.55  39  eP     P       01 06 48.5 +0.1
      comp=Z,20nm,1.0s
FFC   Flin Flon         62.55  39  eP     P       01 06 48.5 +0.1
FFC                                 pmax   pmax
      comp=Z,20nm,1.0s
PAHR  Pah Rah Range     62.70  60  eP     P       01 06 50.4 +0.5
      comp=Z,20nm,1.1s
BHPL  Bhopal            62.74 276  eP     P       01 06 50.3   0.0
PNTR  Pine Nut          62.95  61  eP     P       01 06 56.6 +5.0
      comp=Z,15nm,0.9s
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LRM   Limekiln Ridge    62.98  51  eP     P       01 06 51.9 +0.1
BKNI  Bangkinang        63.01 240   P     P       01 06 52.4 +0.4
FCC   Fort Churchill    63.05  32  eP     P       01 06 51.6   0.0
      comp=Z,15nm,1.1s
FCC   Fort Churchill    63.05  32  eP     P       01 06 51.6   0.0
FCC                                 pmax   pmax
      comp=Z,15nm,1.1s
EGMT  Eagleton          63.06  48   P     P       01 06 51.5  -0.6
      baz=309
EGMT  Eagleton          63.06  48  eP     P       01 06 52.5 +0.4
      comp=Z,15nm,0.9s
CMB   Columbia Colle    63.10  62  eP     P       01 06 54.1 +1.6
      comp=Z,14nm,1.1s
CMB   Columbia Colle    63.10  62  eP     P       01 06 54.1 +1.6
CMB                                 pmax   pmax
      comp=Z,14nm,1.1s
DLMT  Dillon            63.19  52  eP     P       01 06 54.1 +1.1
      comp=Z,23nm,1.6s
YERR  Yerington         63.23  61  eP     P       01 06 54.1 +0.7
      comp=Z,31nm,1.1s
HLID  Hailey            63.28  54   P     P       01 06 53.7   0.0
      baz=308
HLID  Hailey            63.28  54  eP     P       01 06 54.2 +0.5
      comp=Z,9.3nm,1.1s
BMN   Battle Mountai    63.57  58  eP     P       01 06 56.4 +0.8
      comp=Z,12nm,1.0s
BMN   Battle Mountai    63.57  58  eP     P       01 06 56.4 +0.8
BMN                                 pmax   pmax
      comp=Z,12nm,1.0s
BOZ   Bozeman (W)       63.58  51   P     P       01 06 55.7 +0.2
      baz=309
BOZ   Bozeman (W)       63.58  51  eP     P       01 06 56.1 +0.5
BOZ   Bozeman (W)       63.58  51  eP     P       01 06 56.0 +0.5
      comp=Z,56nm,1.9s
BOZ   Bozeman (W)       63.58  51  eP     P       01 06 56.0 +0.5
BOZ                                 pmax   pmax
      comp=Z,56nm,1.9s
KVN   Kaiserville       63.89  60  eP     P       01 06 58.3 +0.5
      comp=Z,22nm,1.1s
KVN   Kaiserville       63.89  60  eP     P       01 06 58.3 +0.5
KVN                                 pmax   pmax
      comp=Z,23nm,1.1s
RYN   Ryan              63.89  61  eP     P       01 06 58.8 +1.0
      comp=Z,15nm,1.1s
MOR8  Moi Rana          63.91 342  eP     P       01 06 55.3  -2.0
KONS  Konsvik           63.92 343  eP     P       01 06 57.4 +0.2
PWJI  Pagerwojo         63.93 225   P     P       01 06 55.6  -2.4
NV01  Mina Array Sit    64.15  61  eP     P       01 06 59.5   0.0
NVAR  Mina Array Bea    64.15  61   P     P       01 07 00.1 +0.5
      comp=Z,2.8nm,0.9s,baz=291,slow=6.6,SNR=8.5
NVAR                                LR     LR      01 32 15.2
      comp=Z,188nm,20.3s,baz=66,slow=33
NV11  Mina Array Sit    64.24  61  eP     P       01 07 00.5 +0.4
      comp=Z,1.6nm,1.4s
GCMT  Greycliff         64.52  50  eP     P       01 07 03.2 +1.4
FIA1  FINESS Array S    64.71 334  eP     P       01 07 01.9  -0.6
FINES FINESS Array B    64.71 334   P     P       01 07 01.2  -1.3
      comp=Z,29nm,0.9s,baz=46,slow=5.7,SNR=94
FINES                               LR     LR      01 37 54.7
      comp=Z,465nm,19.1s,baz=30,slow=38
H17A  Grant Village     64.91  52  eP     P       01 07 07.2 +2.7
      comp=Z,19nm,1.4s
IMW   Indian Meadow     65.03  52  eP     P       01 07 06.6 +1.3
      comp=Z,10nm,1.1s
FLWY  Flagg Ranch       65.05  52  eP     P       01 07 07.2 +1.9
FLWY                               epP    sP      01 07 19.3 +0.5
FXWY  Fox Creek         65.15  52  eP     P       01 07 07.1 +1.1
      comp=Z,11nm,1.4s
RLMT  Red Lodge         65.16  50   P     P       01 07 06.3 +0.3
      baz=310
RLMT  Red Lodge         65.16  50  eP     P       01 07 07.3 +1.2
      comp=Z,14nm,1.2s
MOOW  Moose Ponds       65.23  52  eP     P       01 07 07.6 +1.0
      comp=Z,15nm,1.4s
TPAW  Teton Pass        65.28  53  eP     P       01 07 08.1 +1.1
      comp=Z,25nm,1.1s
HVU   Hansel Valley     65.34  55  eP     P       01 07 07.8 +0.7
      comp=Z,6.0nm,1.0s
HVU   Hansel Valley     65.34  55  eP     P       01 07 07.9 +0.7
HVU                                 pmax   pmax
      comp=Z,6.0nm,1.0s
LOHW  Long Hollow       65.40  52  eP     P       01 07 09.4 +1.8
      comp=Z,22nm,1.4s
SNOW  Snow King Moun    65.41  52  eP     P       01 07 08.7 +0.9
      comp=Z,16nm,1.0s
REDW  Red Top Meadow    65.42  53  eP     P       01 07 08.8 +1.0
      comp=Z,22nm,1.1s
AHID  Auburn Hatcher    65.66  53  eP     P       01 07 09.8 +0.5
      comp=Z,14nm,1.3s
OBN   Obninsk           65.70 325  eP     P       01 07 08.5  -0.5
OBN   Obninsk           65.70 325d iP     P       01 07 08.5  -0.5
OBN                                e              01 09 30.9
OBN                                eS     S       01 15 42.0  -11
OBN                                 pmax   pmax
      comp=Z,22nm,1.1s
OBN                                 MLR    MLR
      comp=Z,702nm,16.0s
LAO   LASA Array        65.76  47  eP     P       01 07 10.1 +0.4
LAO                                epP    sP      01 07 22.1  -1.1
HYB   Hyderabad         65.79 271  i P    P       01 07 10.0  -0.2
HYB   Hyderabad         65.79 271  eP     P       01 07 09.7  -0.5
HYB                                 IAmb   IAmb    01 07 11.5
      comp=Z,10nm,0.4s
R11A  Troy Canyon, C    65.86  59   P     P       01 07 10.1  -0.5
      baz=310
R11A  Troy Canyon, C    65.86  59  eP     P       01 07 10.3  -0.3
      comp=Z,15nm,1.3s
NSS   Namsos            65.86 342  eP     P       01 07 09.1  -0.8
DAC   Darwin (Calif)    65.94  62  eP     P       01 07 11.7 +0.5
      comp=Z,10nm,1.5s
DAC   Darwin (Calif)    65.94  62  eP     P       01 07 11.7 +0.5
DAC                                 pmax   pmax
      comp=Z,10.0nm,1.5s
HWUT  Hardware Ranch    66.14  54  eP     P       01 07 12.3  -0.1
      comp=Z,19nm,1.4s
MPMC  Manual Prospec    66.15  62   P     P       01 07 12.2  -0.3
      baz=310
GEYT  Alibeck           66.22 300   P     P       01 07 12.9 +0.1
      comp=Z,26nm,1.0s,baz=0.0,slow=3.1,SNR=50
GEYT                                LR     LR      01 39 20.5
      comp=Z,499nm,18.1s,baz=305,slow=39
GYA0B ALIBECK ARRAY     66.22 300  eP     P       01 07 13.5 +0.7
FURC  Furnace Creek,    66.27  62   P     P       01 07 13.0   0.0
      baz=310
DUG   Dugway, Tooele    66.33  56   P     P       01 07 13.0  -0.5
      baz=310
DUG   Dugway, Tooele    66.33  56  eP     P       01 07 14.2 +0.6
      comp=Z,20nm,1.1s
TPNV  Topopah Spring    66.35  61   P     P       01 07 13.3  -0.5
      baz=310
TPNV  Topopah Spring    66.35  61  eP     P       01 07 13.9 +0.2
      comp=Z,22nm,1.3s
TPNV  Topopah Spring    66.35  61  eP     P       01 07 14.0 +0.2
TPNV                                pmax   pmax
      comp=Z,22nm,1.3s
BW06  Boulder Array     66.53  52   P     P       01 07 14.2  -0.7
      baz=311
BW06  Boulder Array     66.53  52  eP     P       01 07 14.8  -0.1
      comp=Z,28nm,1.6s
PD31  Pinedale Array    66.53  52  eP     P       01 07 15.5 +0.6
PDAR  Pinedale Array    66.53  52   P     P       01 07 14.3  -0.6
      comp=Z,1.5nm,1.0s,baz=270,slow=4.4,SNR=7.4
PDAR                                LR     LR      01 37 01.5
      comp=Z,110nm,19.5s,baz=334,slow=37
PDAR  Pinedale Array    66.53  52  eP     P       01 07 13.9  -1.0
SFJD  Kangerlussuaq     66.67   9   P     P       01 07 15.1 +0.1
      comp=Z,7.2nm,0.4s,baz=164,slow=2.8,SNR=2.5
SFJD                                LR     LR      01 40 33.8
      comp=Z,454nm,18.1s,baz=342,slow=40
FRB   Frobisher Bay     66.70  18   P     P       01 07 14.6  -0.8
      comp=Z,10nm,0.4s,baz=325,slow=7.1,SNR=32
PSUT  Pine Spring       66.78  58  eP     P       01 07 17.2 +0.7
      comp=Z,7.1nm,1.1s
VSU   Vasula            66.82 332d iP     P       01 07 15.9  -0.2
VSU                                 pmax   pmax
      comp=Z,69nm,0.9s
WRAB  Tennant Creek     66.85 197  eP     P       01 07 16.5  -0.2
      comp=Z,30nm,1.3s
WRAB  Tennant Creek     66.85 197deP     P       01 07 16.3  -0.5
WRAB                               i *PP  sP      01 07 29.2  -1.0
WRAB                                pmax   pmax
      comp=Z,17nm,1.3s
JLU   Jordanelle        66.86  55  eP     P       01 07 17.9 +0.8
      comp=Z,15nm,1.3s
WB2   Warramunga Arr    66.86 197  eP     P       01 07 16.4  -0.4
WB2                                epP    pP      01 07 28.1 +1.5
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WB2                                epP    pP      01 07 30.4 +3.8
WRA   Warramunga Arr    66.86 197   P     P       01 07 16.2  -0.7
      comp=Z,7.6nm,0.9s,baz=16,slow=6.7,SNR=20
WRA                                 LR     LR      01 32 03.8
      comp=Z,186nm,21.6s,baz=45,slow=32
SHPR  Sheep Range       67.30  61  eP     P       01 07 20.9 +1.1
      comp=Z,19nm,1.3s
TBLU  Trondheim         67.35 342  eP     P       01 07 18.1  -1.3
VSR   Storozhevoye      67.38 321  eP     P       01 07 19.4  -0.4
VSR                                 pmax   pmax
      comp=Z,10.0nm,0.5s
VSR                                 MLR    MLR
      comp=Z,2µm,16.0s
FITZ  Fitzroy Crossi    67.39 207   P     P       01 07 19.9  -0.3
      comp=Z,5.8nm,0.8s,baz=52,slow=8.1,SNR=5.6
VORD  Divnogorie        67.50 321  eP     P       01 07 20.1  -0.5
VORD                                pmax   pmax
      comp=Z,30nm,1.2s
CCUT  Cedar City        67.72  59  eP     P       01 07 23.1 +0.5
      comp=Z,13nm,1.2s
MSU   Marysvale         67.80  57  eP     P       01 07 23.5 +0.5
MSU                                epP    sP      01 07 36.7 +0.2
MSU   Marysvale         67.80  57  eP     P       01 07 23.5 +0.5
MSU                                e*PP   sP      01 07 36.7 +0.2
AFI   Afiamalu          67.82 141   LR    LR      01 39 01.0
      comp=Z,266nm,18.0s,baz=316,slow=38
MTPU  Mount Pierson     68.10  58  eP     P       01 07 25.9 +0.8
      comp=Z,10nm,1.2s
LCMT  Little Creek M    68.14  59  eP     P       01 07 25.7 +0.6
      comp=Z,18nm,1.1s
LDFC  Landfair          68.26  62  eP     P       01 07 25.8   0.0
      comp=Z,32nm,1.2s
ULM   Lac du Bonnet     68.33  40   P     P       01 07 24.1  -1.8
      comp=Z,2.3nm,0.5s,baz=270,slow=6.6,SNR=2.7
ULM                                 LR     LR      01 40 02.5
      comp=Z,220nm,18.8s,baz=336,slow=38
SRU   San Rafael Swe    68.38  56  eP     P       01 07 26.8 +0.2
      comp=Z,16nm,1.1s
SRU   San Rafael Swe    68.38  56  eP     P       01 07 26.8 +0.2
SRU                                 pmax   pmax
      comp=Z,16nm,1.1s
KNB   Kanab             68.39  59  eP     P       01 07 27.4 +0.7
      comp=Z,27nm,1.2s
KNB   Kanab             68.39  59  eP     P       01 07 27.4 +0.7
KNB                                 pmax   pmax
      comp=Z,27nm,1.2s
RWWY  Rawlins           68.55  52  eP     P       01 07 25.8  -1.9
RWWY                               epP    sP      01 07 41.0  -0.2
DZM   Mont Dzumac       68.56 165   LR    LR      01 37 22.2
      comp=Z,411nm,18.0s,baz=22,slow=36
DZM   Mont Dzumac       68.56 165  eLR    LR      01 28 14.5
RSSD  Black Hills       68.62  48   P     P       01 07 27.2  -0.9
      baz=313
RSSD  Black Hills       68.62  48  eP     P       01 07 28.0  -0.1
      comp=Z,15nm,1.1s
RSSD  Black Hills       68.62  48  eP     P       01 07 28.0  -0.1
RSSD                                pmax   pmax
      comp=Z,15nm,1.1s
DOMB  Dombas            68.68 342  eP     P       01 07 27.8  -0.1
NC303 NORSAR Array S    68.88 341  eP     P       01 07 28.2  -0.9
NC405 NORSAR Array S    68.90 340  eP     P       01 07 28.9  -0.3
NC204 NORSAR Array S    68.98 341  eP     P       01 07 29.5  -0.3
AKN   Aaknes            69.00 343  eP     P       01 07 31.1 +1.2
W13A  Hualapai Mount    69.00  61  eP     P       01 07 30.6   0.0
W13A                               epP    sP      01 07 44.2 +0.1
NB201 NORSAR Array S    69.05 340  eP     P       01 07 29.9  -0.3
NB2   NORSAR Subarra    69.08 340   P     P       01 07 29.9  -0.5
      comp=Z,12nm,0.5s,baz=29,slow=6.5
NB2   NORSAR Subarra    69.08 340   P     P       01 07 29.9  -0.5
      baz=29,slow=6.5
NB2                                 P     P       01 07 29.9  -0.5
      baz=29,slow=6.5
NOA   NORSAR Array B    69.08 340   LR    LR      01 42 56.5
      comp=Z,285nm,18.1s,baz=15,slow=40
U15A  North Rim         69.10  59  eP     P       01 07 31.3 +0.1
      comp=Z,19nm,1.3s
NBO00 NORSAR Array S    69.19 341  eP     P       01 07 31.0   0.0
HFS   Hagfors           69.27 339   P     P       01 07 31.4  -0.1
      comp=Z,16nm,0.3s,baz=57,slow=5.3,SNR=253
HFS                                 LR     LR      01 40 32.8
      comp=Z,404nm,21.2s,baz=8.0,slow=38
NC602 NORSAR Array S    69.27 340  eP     P       01 07 30.8  -0.8
NC602 NORSAR Array S    69.27 340  eP     P       01 07 31.1  -0.4
IDID  Didziasalis       69.28 330  eP     P       01 07 31.4  -0.3
IDID                                IAmb   IAmb    01 07 32.9
      comp=Z,19nm,0.9s
NAO01 NORSAR Array S    69.33 341  eP     P       01 07 31.8  -0.2
IIGN  Ignalina          69.44 330  eP     P       01 07 32.3  -0.3
IIGN                                IAmb   IAmb    01 07 33.9
      comp=Z,22nm,0.8s
NACGM Naroch            69.59 330  e      P       01 07 32.0  -1.6
AGMN  Agassiz Nation    69.74  41  eP     P       01 07 34.2  -0.5
      comp=Z,19nm,1.3s
GLA   Glamis            69.77  63  eP     P       01 07 36.7 +1.6
      comp=Z,8.0nm,1.1s
GLA   Glamis            69.77  63  eP     P       01 07 36.7 +1.6
GLA                                 pmax   pmax
      comp=Z,8.0nm,1.1s
PV04  Paradox Valley    69.80  56  eP     P       01 07 36.2 +0.8
      comp=Z,24nm,1.4s
AKT   Akhty             69.89 309⇑iP     P       01 07 36.6 +0.8
AKT                                e              01 07 54.5
AKT                                eS     S       01 16 42.4  -1.1
AKT                                 pmax   pmax
      comp=Z,144nm,1.0s
PV07  Paradox Valley    69.92  55  eP     P       01 07 38.2 +2.0
      comp=Z,16nm,1.4s
PV03  Paradox Valley    69.92  56  eP     P       01 07 37.7 +1.5
      comp=Z,22nm,1.5s
HYA   Hoyanger          70.08 343  eP     P       01 07 36.6 +0.2
PV01  Paradox Valley    70.17  56  eP     P       01 07 37.9 +0.1
      comp=Z,10nm,1.3s
WUAZ  Wupatki           70.26  59  eP     P       01 07 39.4 +1.1
WUAZ                               epP    sP      01 07 52.3 +0.5
Y14A  Wickenburg        70.31  61  eP     P       01 07 39.2 +0.7
      comp=Z,11nm,1.4s
SMCO  Snowmass          70.38  54  eP     P       01 07 39.1  -0.1
      comp=Z,10nm,1.3s
AS01  Alice Springs     70.55 197  eP     P       01 07 39.9 +0.1
AS31  Alice Springs     70.56 197  eP     P       01 07 40.5 +0.6
AS31                               epP    sP      01 07 54.6 +1.2
ASAR  Alice Springs     70.56 197   P     P       01 07 40.2 +0.3
      comp=Z,5.3nm,0.9s,baz=12,slow=5.5,SNR=21
ASAR                                LR     LR      01 37 30.6
      comp=Z,90nm,21.2s,baz=24,slow=35
B35A  Bob, Littlefor    70.67  40  eP     P       01 07 39.7  -0.6
      comp=Z,8.1nm,1.0s
KONO  Kongsberg         70.69 341  eP     P       01 07 40.5 +0.3
      comp=Z,35nm,1.1s
KONO  Kongsberg         70.69 341⇓iP     P       01 07 40.5 +0.3
KONO                                pmax   pmax
      comp=Z,35nm,1.7s
KONO  Kongsberg         70.69 341  eP     P       01 07 40.0  -0.3
ISCO  Idaho Springs     70.72  53  eP     P       01 07 42.5 +1.3
      comp=Z,31nm,0.6s
ISCO  Idaho Springs     70.72  53  eP     P       01 07 42.5 +1.3
ISCO                                pmax   pmax
      comp=Z,31nm,0.6s
KIV   Kislovodsk        70.84 314  eP     P       01 07 42.6 +1.0
      comp=Z,127nm,1.0s
KIV   Kislovodsk        70.84 314   P     P       01 07 42.3 +0.7
      SNR=32
KIV   Kislovodsk        70.84 314  i P    P       01 07 42.5 +1.0
      SNR=37
KIV   Kislovodsk        70.84 314  eP     P       01 07 42.5 +1.0
KIV                                e              01 10 19.3
KIV                                eS     S       01 16 55.7 +1.3
KIV                                 pmax   pmax
      comp=Z,152nm,1.1s
KIV                                 pmax   pmax
      comp=Z,29nm,3.5s
KIV                                 MLR    MLR
      comp=Z,1µm,18.0s
KBZ   Khabaz            70.89 313   P     P       01 07 42.5 +0.8
      comp=Z,110nm,0.9s,baz=54,slow=2.6,SNR=113
KBZ                                 LR     LR      01 43 00.9
      comp=Z,2µm,19.2s,baz=43,slow=39
ASK   Askoy             70.91 343  eP     P       01 07 41.4  -0.1
BER   Bergen            70.97 343  eP     P       01 07 42.4 +0.5
PALK  Pallekele         71.28 261   P     P       01 07 44.5  -0.1
      comp=Z,24nm,1.0s,baz=116,slow=3.7,SNR=3.3
PALK                                LR     LR      01 41 56.6
      comp=Z,220nm,19.1s,baz=44,slow=38
PALK  Pallekele         71.28 261   P     P       01 07 44.7 +0.1
TBLG  Delisi            71.33 311  eP     P       01 07 45.8 +1.3
      comp=Z,198nm,1.0s
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S22A  4UR Ranch, Cre   71.44  55  eP      P       01 07 46.1 +0.5
            comp=Z,11nm,1.3s
SUW   Suwalki          71.57 331  eP      P       01 07 45.0 -0.7
SUW   Suwalki          71.57 331  eP      P       01 07 44.7 -0.9
            comp=Z,70nm,1.0s
SUW                               epP     sP      01 07 59.0 -0.2
SUW   Suwalki          71.57 331  eP      P       01 07 44.7 -0.9
SUW                               e*PP    sP      01 07 59.0 -0.2
SUW                                pmax   pmax
            comp=Z,70nm,1.0s
BLS5  Blasjo           71.61 342  eP      P       01 07 46.2 +0.4
OGNE  Ogallala         71.89  50   P      P       01 07 48.2 +0.3
            baz=315
OGNE  Ogallala         71.89  50  eP      P       01 07 48.5 +0.5
            comp=Z,50nm,1.1s
AKASG Malin Array Be   71.96 326   P      P       01 07 47.5 -0.6
            comp=Z,12nm,0.3s,baz=36,slow=6.4,SNR=77
AKASG                              LR     LR      01 42 06.7
            comp=Z,725nm,18.4s,baz=25,slow=38
AKBB  Malin Array Si   71.96 326  eP      P       01 07 47.1 -1.0
            comp=Z,65nm,1.1s
KIEV  Kiev             71.97 326  eP      P       01 07 47.7 -0.4
KIEV  Kiev             71.97 326  eP      P       01 07 47.0 -1.1
            comp=Z,58nm,1.1s
KIEV  Kiev             71.97 326  i P     P       01 07 47.6 -0.6
            SNR=5.6
KIEV  Kiev             71.97 326d iP      P       01 07 47.7 -0.4
KIEV                               pmax   pmax
            comp=Z,38nm,0.9s
EYMN  Ely              71.98  39   P      P       01 07 47.2 -1.1
            baz=319
EYMN  Ely              71.98  39  eP      P       01 07 47.7 -0.6
            comp=Z,12nm,1.1s
AK11  Malin Array Si   72.00 326  eP      P       01 07 47.9 -0.4
STAV  Stavanger        72.21 342  eP      P       01 07 49.6 +0.2
AKH   Akhalkalaki      72.22 311⇑ iP      P       01 07 51.6 +1.6
AKH   Akhalkalaki      72.22 311  eP      P       01 07 51.8 +1.8
            comp=Z,70nm,1.0s
AKH   Akhalkalaki      72.22 311  eP      P       01 07 51.8 +1.8
AKH                                pmax   pmax
            comp=Z,70nm,1.0s
C38A  Sawbill Land.    72.25  39   P      P       01 07 49.0 -0.9
            baz=319
E36A  McGregor         72.25  41   P      P       01 07 48.8 -1.1
            baz=318
SNART Snartemo         72.42 341  eP      P       01 07 50.9 +0.2
GNI   Garni            72.44 310   P      P       01 07 53.0 +1.6
            comp=Z,49nm,1.0s,baz=173,slow=2.6,SNR=42
GNI                                LR     LR      01 44 26.7
            comp=Z,508nm,19.0s,baz=43,slow=40
GNI   Garni            72.44 310  eP      P       01 07 52.9 +1.6
GNI   Garni            72.44 310  eP      P       01 07 53.4 +2.0
            comp=Z,97nm,1.1s
GNI   Garni            72.44 310   P      P       01 07 52.7 +1.3
            SNR=31
GNI   Garni            72.44 310  i P     P       01 07 53.2 +1.9
            SNR=31
GNI   Garni            72.44 310c iP      P       01 07 53.0 +1.6
SOC   Sochi            72.60 315c iP      P       01 07 52.3 +0.3
SOC                               e*PP    sP      01 08 03.3 -2.3
SOC                               e               01 10 34.1
SOC                               eS      S       01 17 15.7 +1.2
SOC                                pmax   pmax
            comp=Z,37nm,0.7s
F36A  Milaca           72.61  42   P      P       01 07 51.7 -0.4
            baz=318
C39A  Grand Marais     72.68  38   P      P       01 07 51.2 -1.2
            baz=320
ECSD  EROS Data Cent   72.70  45   P      P       01 07 51.4 -1.2
            baz=317
ECSD  EROS Data Cent   72.70  45  eP      P       01 07 51.5 -1.1
            comp=Z,9.9nm,1.0s
TUC   Tucson           72.78  61   P      P       01 07 53.2 -0.2
            baz=313
TUC   Tucson           72.78  61  eP      P       01 07 55.0 +1.6
            comp=Z,7.4nm,1.3s
TUC   Tucson           72.78  61  eP      P       01 07 55.0 +1.6
TUC                                pmax   pmax
            comp=Z,7.0nm,1.3s
ANN   Anapa            72.83 317  eP      P       01 07 52.9 -0.4
ANN                               e*PP    sP      01 08 04.9 -2.0
ANN                               eS      S       01 17 19.1 +2.1
ANN                                pmax   pmax
            comp=Z,100nm,1.2s
H35A  Sunnyside Ranc   72.86  43   P      P       01 07 53.0 -0.6
            baz=318
E38A  The Farm, Brul   72.96  40  eP      P       01 07 53.4 -0.7
            comp=Z,24nm,0.5s
KARS  Kars             73.00 311  eP      P       01 07 56.5 +1.9
BCA   Borcka           73.18 312  eP      P       01 07 55.8 +0.3
T25A  Trinidad         73.25  54   P      P       01 07 55.1 -1.2
            baz=315
T25A  Trinidad         73.25  54  eP      P       01 07 56.3 +0.1
T25A                              epP     sP      01 08 10.5 +0.7
BSD   Bornholm Skovb   73.27 336  i P     P       01 07 55.7 -0.1
            comp=Z,640nm,20.0s
BSD   Bornholm Skovb   73.27 336  i P     P       01 07 55.7 -0.1
BSD                                MLR    MLR
            comp=Z,660nm,20.0s
F38A  Pierce - Schro   73.30  41   P      P       01 07 55.4 -0.8
            baz=319
COP   Copenhagen       73.47 337⇑ iP      P       01 07 57.0 +0.1
            comp=Z,30nm,0.9s
            comp=Z,290nm,22.0s
COP   Copenhagen       73.47 337⇑ iP      P       01 07 57.0 +0.1
COP                                pmax   pmax
            comp=Z,30nm,0.9s
COP                                MLR    MLR
            comp=Z,300nm,22.0s
E39A  Mellen           73.58  40   P      P       01 07 56.7 -1.2
            baz=320
ANMO  Albuquerque      73.59  57   LR     LR      01 36 40.3
            comp=Z,155nm,21.7s,baz=332,slow=33
ANMO  Albuquerque      73.59  57  eP      P       01 08 00.1 +1.8
            comp=Z,5.6nm,1.1s
ANMO  Albuquerque      73.59  57  eP      P       01 08 00.1 +1.8
ANMO                               pmax   pmax
            comp=Z,6.0nm,1.1s
CLDR  Caldiran         73.61 309  eP      P       01 07 56.9 -1.5
MUD   Monsted U'grnd   73.64 339⇑ iP      P       01 07 57.9  0.0
            comp=Z,36nm,1.2s
MUD   Monsted U'grnd   73.64 339⇑ iP      P       01 07 57.9  0.0
MUD                                pmax   pmax
            comp=Z,36nm,1.2s
F39A  Loretta          73.77  40   P      P       01 07 57.0 -1.9
            baz=320
AGRB  Hanur-Agry       73.80 310  eP      P       01 08 00.9 +1.5
E40A  Wakefield        73.83  39   P      P       01 07 57.8 -1.4
            baz=320
LLD   Lille Linde      73.84 337  i P     P       01 07 59.3 +0.2
            comp=Z,62nm,1.0s
LLD   Lille Linde      73.84 337  i P     P       01 07 59.3 +0.2
LLD                                pmax   pmax
            comp=Z,62nm,1.0s
H37A  Dierke Farm, C   73.86  42   P      P       01 07 58.8 -0.6
            baz=319
CHOM  Cayeli-Rize      73.88 313  eP      P       01 07 59.2 -0.4
D41A  Chassel          73.94  38   P      P       01 07 58.6 -1.3
            baz=321
I37A  Lemond, Waseca   74.05  43   P      P       01 07 60.0 -0.6
            baz=319
I37A  Lemond, Waseca   74.05  43  eP      P       01 08 00.4 -0.2
            comp=Z,49nm,1.1s
H38A  Maiden Rock      74.08  42   P      P       01 07 59.5 -1.3
            baz=319
J36A  Seneca 1, Swea   74.11  44   P      P       01 08 00.5 -0.5
            baz=318
F40A  Park Falls       74.13  40   P      P       01 07 60.0 -1.1
            baz=320
GKP   Gorka Klasztor   74.15 333  eP      P       01 08 00.8 -0.1
GKP   Gorka Klasztor   74.15 333⇑ eP      P       01 08 00.8 -0.1
BEL   Belsk            74.18 331  eP      P       01 08 01.8 +0.6
BEL   Belsk            74.18 331⇑ eP      P       01 08 01.8 +0.6
RGN   Rugen            74.22 336  eP      P       01 08 02.1 +0.8
            comp=Z,27nm,0.8s
SIM   Simferopol'      74.28 319⇓ iP      P       01 08 02.5 +0.6
SIM                               eS      SKiKP   01 17 26.0 -0.3
SIM                                pmax   pmax
            comp=Z,56nm,1.0s
SIM                                MLR    MLR
            comp=Z,1µm,16.0s
VANB  Van              74.28 309  eP      P       01 08 05.3 +3.1
SORM  Soroca           74.33 324⇑ iP      P       01 08 01.6 -0.5
319A  Douglas          74.35  61  eP      P       01 08 05.6 +2.9
319A                              epP     PcP     01 08 16.6 -0.7
121A  Cookes Peak, D   74.47  59   P      P       01 08 03.8 +0.4
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            baz=314
J37A  Redenius Farm,   74.51  43   P      P       01 08 02.8 -0.5
            baz=319
I38A  Scanlan Farm,    74.54  42   P      P       01 08 02.7 -0.8
            baz=319
H39A  Augusta          74.55  41   P      P       01 08 02.9 -0.5
            baz=320
K36A  Gilmore City     74.57  44   P      P       01 08 02.8 -0.8
            baz=318
G40A  Rib Lake         74.59  40   P      P       01 08 02.7 -1.1
            baz=320
LVV   L'vov            74.68 328  eP      P       01 08 04.1  0.0
LVV                               e               01 08 25.3
LVV                               e               01 10 50.1
LVV                               eS      S       01 17 45.1 +7.4
LVV                               e               01 18 16.1
E42A  Champion         74.71  38   P      P       01 08 03.1 -1.3
            baz=321
BAYT  Ayd˜–ntepe-Bay   74.71 312  eP      P       01 08 04.6 -0.1
K37A  Belmond          74.87  44   P      P       01 08 04.2 -1.2
            baz=319
VRTB  Varto-Mus        74.92 311  eP      P       01 08 08.6 +2.7
SCHQ  Schefferville    75.01  22   P      P       01 08 05.7 -0.3
            comp=Z,4.2nm,0.5s,baz=280,slow=6.3,SNR=14
SCHQ                               LR     LR      01 44 06.0
            comp=Z,266nm,20.4s,baz=348,slow=38
SCHQ  Schefferville    75.01  22  eP      P       01 08 06.6 +0.7
            comp=Z,38nm,1.5s
J38A  Wedel Dairy, R   75.02  43   P      P       01 08 05.3 -0.9
            baz=319
KIS   Kishinev         75.03 323  i P     P       01 08 06.0 -0.2
            comp=Z,400nm,1.4s
KIS   Kishinev         75.03 323  i PcP   PcP     01 08 20.0 +0.2
KIS                               eS      S       01 17 39.0 -2.7
KIS                               eLQ     LQ      01 36 40.0
            comp=Z,400nm,19.0s
KIS                               eLR     LR      01 42 12.0
            comp=Z,1µm,16.0s
KIS   Kishinev         75.03 323⇓ iP      P       01 08 06.3 +0.1
KIS   Kishinev         75.03 323  i P     P       01 08 06.0 -0.2
KIS                               i               01 08 20.0
KIS                               eS      S       01 17 39.0 -2.7
KIS                                MLR    MLR
            comp=N,1µm,16.0s
KIS                                MLR    MLR
            comp=E,400nm,16.0s
KIS                                MLR    MLR
            comp=Z,1µm,16.0s
KIS                                MLR    MLR
            comp=Z,1µm,16.0s
GURO  Guroymak-BITLI   75.05 310  eP      P       01 08 08.5 +1.8
ESPY  Espiye-Giresun   75.06 314  eP      P       01 08 06.8 +0.3
I39A  Houston          75.06  42   P      P       01 08 05.0 -1.5
            baz=320
I39A  Houston          75.06  42  eP      P       01 08 05.5 -1.0
            comp=Z,16nm,1.2s
CUKT  Cukurca          75.13 308  eP      P       01 08 08.3 +1.2
YEDI  Yedisu-Bingol    75.20 312  eP      P       01 08 09.8 +2.3
L37A  Phoenix Point,   75.30  44   P      P       01 08 06.5 -1.3
            baz=319
KWP   Kalwaria Pacla   75.32 328  eP      P       01 08 08.6 +0.7
KWP   Kalwaria Pacla   75.32 328  eP      P       01 08 08.2 +0.3
            comp=Z,1µm,1.0s
KWP   Kalwaria Pacla   75.32 328⇑ eP      P       01 08 08.6 +0.7
H41A  Junction City    75.34  40   P      P       01 08 06.8 -1.3
            baz=321
BANOM Banah            75.35 292  i P     P       01 08 08.9 +0.4
            SNR=8.9
SHME  Shamm            75.37 292  i P     P       01 08 08.7 +0.1
            SNR=7.8
J39A  Decorah          75.37  42   P      P       01 08 06.6 -1.6
            baz=320
IAS   Iasi             75.40 324⇑ iP      P       01 08 08.3  0.0
G42A  Mountain         75.41  39   P      P       01 08 07.4 -1.0
            baz=321
BNGB  Bingˆ¶l          75.46 311  eP      P       01 08 10.6 +1.6
I40A  Norwalk          75.46  41   P      P       01 08 07.7 -1.0
            baz=320
COCO  West Island      75.47 235c eP      P       01 08 11.0 +2.0
ARMA  Armidale         75.48 180  eP      P       01 08 10.8 +1.9
            comp=Z,68nm,1.6s
F43A  Flat Rock, Esc   75.50  38   P      P       01 08 07.4 -1.5
            baz=322
SIRT  Sirnak           75.59 309  eP      P       01 08 11.2 +1.5
WSAR  Wadi Sarin       75.65 288   P      P       01 08 10.3 +0.1
            comp=Z,11nm,1.0s,baz=120,slow=9.5,SNR=2.8
WSAR                               LR     LR      01 45 31.6
            comp=Z,360nm,20.4s,baz=65,slow=39
L38A  Oak Wood Farm,   75.67  44   P      P       01 08 09.0 -1.0
            baz=319
LEOM  Leova            75.69 323⇓ iP      P       01 08 09.9  0.0
G43A  Wallace          75.73  39   P      P       01 08 08.9 -1.3
            baz=322
G43A  Wallace          75.73  39  eP      P       01 08 09.8 -0.4
            comp=Z,15nm,0.9s
K39A  Oelwein          75.76  43   P      P       01 08 09.3 -1.2
            baz=320
SVAN  Silvan-Diyarba   75.79 310  eP      P       01 08 12.3 +1.5
OJC   Ojcow            75.88 330  eP      P       01 08 11.3 +0.3
OJC   Ojcow            75.88 330  eP      P       01 08 11.4 +0.3
            comp=Z,81nm,1.0s
OJC   Ojcow            75.88 330⇑ eP      P       01 08 11.3 +0.3
BUR08 Bucovina Ar. S   75.99 326  eP      P       01 08 12.2 +0.3
BUR04 Bucovina Ar. S   76.01 326  eP      P       01 08 12.1 +0.1
BURAR Bucovina Array   76.01 326⇑ iP      P       01 08 12.2 +0.3
MATQ  Matagami         76.08  30   P      P       01 08 11.4 -0.8
            baz=327
UOSS  Minazif          76.09 291  eP      P       01 08 13.1 +0.5
            comp=Z,48nm,1.1s
UOSS  Minazif          76.09 291  i P     P       01 08 13.2 +0.5
            SNR=7.0
KSU1  Kansas State U   76.10  48  eP      P       01 08 13.5 +1.0
            comp=Z,11nm,0.9s
M38A  Pleasantville    76.11  44   P      P       01 08 11.4 -1.1
            baz=319
K40A  Colesburg        76.12  42   P      P       01 08 11.6 -1.0
            baz=320
J41A  Loganville       76.14  41   P      P       01 08 11.6 -1.0
            baz=321
L39A  Vinton           76.15  43   P      P       01 08 12.0 -0.7
            baz=320
RSDY  Resadiye-TOKAT   76.15 314  eP      P       01 08 14.2 +1.4
BIZ   Bicaz            76.20 325⇑ iP      P       01 08 13.4 +0.5
PTK   Pertek           76.21 312  eP      P       01 08 15.0 +1.6
HATD  Hatta, Dubai     76.22 291  i P     P       01 08 13.7 +0.3
            SNR=8.3
I42A  Draeger Farm,    76.24  40   P      P       01 08 12.2 -1.0
            baz=321
KVT   Kavak            76.28 315  eP      P       01 08 15.1 +1.6
UZH   Uzhgorod         76.30 328d iP      P       01 08 13.0 -0.4
UZH                               i               01 08 19.6
UZH                               i               01 08 33.8
H43A  Windswept, Lux   76.31  39   P      P       01 08 12.8 -0.8
            baz=322
TESR  Tescani          76.32 324⇓ iP      P       01 08 13.8 +0.2
F45A  CMU Biological   76.33  37   P      P       01 08 12.7 -0.9
            baz=323
ASHO  Ashiyiah         76.36 291   P      P       01 08 14.3 +0.1
CRVS  Cervenica-Dubn   76.39 329  eP      P       01 08 14.4 +0.5
CRVS                               pmax   pmax
            comp=Z,34nm,1.1s
CRVS  Cervenica-Dubn   76.39 329  eP      P       01 08 14.4 +0.5
CRVS                              eL      L       01 43 05.8
AMTX  Amarillo         76.40  54  eP      P       01 08 15.1 +0.7
            comp=Z,12nm,0.9s
MSTX  Muleshoe         76.43  55  eP      P       01 08 15.9 +1.3
            comp=Z,14nm,1.1s
SOHO  SOHO             76.43 291  i P     P       01 08 14.3 -0.3
            SNR=6.0
TLCR                   76.46 322⇓ iP      P       01 08 14.9 +0.5
MNTX  Cornudas Mount   76.50  59   P      P       01 08 14.5 -0.4
            baz=315
MNTX  Cornudas Mount   76.50  59  eP      P       01 08 14.8 -0.1
            comp=Z,8.5nm,1.4s
KSP   Ksiaz            76.53 333  eP      P       01 08 14.9 +0.2
KSP   Ksiaz            76.53 333⇑ eP      P       01 08 14.9 +0.2
N38A  Joes South For   76.56  45   P      P       01 08 14.4 -0.7
            baz=319
M39A  Webster          76.56  44   P      P       01 08 14.3 -0.7
            baz=320
L40A  Anamosa          76.57  43   P      P       01 08 14.0 -1.1
            baz=320
J42A  Columbus         76.59  41   P      P       01 08 14.3 -0.9
            baz=321
K41A  Shullsburg       76.59  42   P      P       01 08 14.2 -1.0
            baz=321
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TOKT  Tokat            76.61 314  eP      P       01 08 15.7 +0.3
TRPA  Tarpa            76.62 328⇑ iP      P       01 08 15.6 +0.3
TRPA  Tarpa            76.62 328⇑ eP      P       01 08 15.8 +0.5
SVRC  Sivrice-ELAZID   76.63 312  eP      P       01 08 17.1 +1.4
BMR   Baia Mare        76.64 327⇑ iP      P       01 08 16.1 +0.7
SVSK  Karacayir        76.68 314  eP      P       01 08 17.3 +1.6
MAZI  Mazidag          76.70 310  eP      P       01 08 16.7 +0.6
PETR  Petresti         76.71 323⇓ iP      P       01 08 17.2 +1.4
CFR   Carcaliu         76.76 323⇑ iP      P       01 08 16.0 -0.1
OKC   Ostrava-Krasne   76.77 331  eP      P       01 08 16.7 +0.6
OKC                               eS      S       01 18 10.3 +9.4
OKC                                AMS    AMS     01 50 10.0
            comp=Z,300nm,15.6s
OKC   Ostrava-Krasne   76.77 331  eP      P       01 08 16.7 +0.6
OKC                                MLR    MLR
            comp=Z,300nm,15.6s
ARCR  ARCALIA          76.78 326⇑ iP      P       01 08 17.5 +1.3
VRI   Vrincioaia       76.81 324⇓ iP      P       01 08 16.8 +0.4
PLOR  Plostina         76.85 324⇑ iP      P       01 08 16.9 +0.2
N39A  Derby Farms, D   76.86  44   P      P       01 08 15.8 -0.9
            baz=320
N39A  Derby Farms, D   76.86  44  eP      P       01 08 16.0 -0.7
            comp=Z,17nm,1.2s
ASUD  Al Ashush, Dub   76.88 292   P      P       01 08 17.4 +0.3
LANS  Liptovska Anna   76.90 330  eP      P       01 08 17.7 +0.8
LANS  Liptovska Anna   76.90 330  eP      P       01 08 17.7 +0.8
LSQQ  Lebel-sur-Quev   76.90  30   P      P       01 08 15.3 -1.6
            baz=328
P37A  Lathrop          76.91  46   P      P       01 08 16.1 -0.9
            baz=319
K42A  Prairie Point,   76.91  41   P      P       01 08 16.6 -0.4
            baz=321
L41A  Preston          76.91  42   P      P       01 08 16.0 -1.0
            baz=321
UPC   Upice            76.91 333  eP      P       01 08 17.3 +0.4
UPC                               ex      x       01 08 35.7
UPC                                AMS    AMS     01 46 10.0
            comp=Z,600nm,17.4s
UPC   Upice            76.91 333  eP      P       01 08 17.3 +0.4
UPC                               e               01 08 35.7
UPC                                MLR    MLR
            comp=Z,600nm,17.4s
M40A  Post Highland    76.94  43   P      P       01 08 16.1 -1.1
            baz=320
DPC   Dobruska-Polom   76.94 332  eP      P       01 08 17.7 +0.6
DPC                               ex      x       01 08 25.6
DPC                                AMS    AMS     01 46 00.0
            comp=Z,600nm,16.8s
DPC   Dobruska-Polom   76.94 332  eP      P       01 08 17.7 +0.6
DPC                               e               01 08 25.6
DPC                                MLR    MLR
            comp=Z,600nm,16.8s
O38A  Galt             76.95  45   P      P       01 08 16.8 -0.4
            baz=319
ALNE  Al Ain           77.00 291  i P     P       01 08 18.3 +0.5
            SNR=6.1
KRLC  Kraliky          77.03 332  eP      P       01 08 18.2 +0.6
KRLC  Kraliky          77.03 332  eP      P       01 08 18.2 +0.6
MORC  Moravsky Berou   77.03 331⇑ iP      P       01 08 18.0 +0.4
MORC  Moravsky Berou   77.03 331  eP      P       01 08 17.3 -0.3
            comp=Z,384nm,1.1s
MORC  Moravsky Berou   77.03 331  eP      P       01 08 17.3 -0.3
MORC  Moravsky Berou   77.03 331⇑ iP      P       01 08 18.0 +0.4
CHGQ  Chibougamau      77.08  28   P      P       01 08 16.7 -1.1
            baz=329
KECS  Kecovo           77.09 329  eP      P       01 08 18.4 +0.5
KECS                               pmax   pmax
            comp=Z,19nm,0.9s
KECS  Kecovo           77.09 329  eP      P       01 08 18.4 +0.5
MALT  Malatya          77.14 312  eP      P       01 08 20.2 +1.7
CLL   Collm            77.16 335⇑ iP      P       01 08 17.9 -0.3
            comp=Z,97nm,1.1s
CLL                               eS      S       01 18 03.0 -2.0
CLL                               ePS     PnS     01 18 45.0 -1.1
CLL                               eSS     SS      01 23 36.0  +34
CLL   Collm            77.16 335  eP      P       01 08 17.9 -0.3
            comp=Z,61nm,0.9s
CLL   Collm            77.16 335⇑ iP      P       01 08 17.9 -0.3
CLL                               eS      S       01 18 03.0 -2.0
CLL                                pmax   pmax
            comp=Z,97nm,1.1s
TIRR  Tirgusor         77.22 322⇓ iP      P       01 08 18.8 +0.2
TIRR  Tirgusor         77.22 322  eP      P       01 08 17.6 -1.1
            comp=Z,51nm,1.1s
TIRR  Tirgusor         77.22 322  eP      P       01 08 17.6 -1.1
TIRR                               pmax   pmax
            comp=Z,51nm,1.1s
HARR  Harsova          77.24 322⇓ iP      P       01 08 19.4 +0.6
BRG   Berggiesshubel   77.25 334  i P     P       01 08 18.5 -0.3
            comp=Z,46nm,1.2s
BRG   Berggiesshubel   77.25 334  i P     P       01 08 18.5 -0.3
BRG                                pmax   pmax
            comp=Z,46nm,1.2s
TLB   Topalu           77.27 322⇓ iP      P       01 08 19.4 +0.4
DOPR  Dopca            77.28 325⇑ iP      P       01 08 21.0 +2.0
P38A  Dawn             77.29  46   P      P       01 08 18.4 -0.8
            baz=319
P38A  Dawn             77.29  46  eP      P       01 08 18.6 -0.6
            comp=Z,12nm,0.9s
N40A  Mertquake, Sal   77.30  44   P      P       01 08 18.1 -1.1
            baz=320
EKA   Eskdalemuir Ar   77.33 345   P      P       01 08 19.2 +0.1
            comp=Z,5.5nm,0.3s,baz=22,slow=4.8,SNR=102
EKA                                LR     LR      01 49 25.0
            comp=Z,65nm,18.0s,baz=5.0,slow=41
PVCC  Panska Ves       77.35 333  eP      P       01 08 20.0 +0.7
PVCC                               AMS    AMS     01 46 10.0
            comp=Z,700nm,20.4s
PVCC  Panska Ves       77.35 333  eP      P       01 08 20.0 +0.7
PVCC                               MLR    MLR
            comp=Z,700nm,20.4s
CJR   Cluj-Napoca      77.38 326⇑ iP      P       01 08 20.5 +0.8
M41A  Milan            77.43  43   P      P       01 08 18.9 -1.0
            baz=321
MLR   Muntele Rosu     77.43 324   P      P       01 08 20.1 +0.1
            comp=Z,11nm,1.0s,baz=315,slow=1.4,SNR=55
MLR                                LR     LR      01 45 54.0
            comp=Z,116nm,18.3s,baz=38,slow=38
MLR   Muntele Rosu     77.43 324⇑ iP      P       01 08 20.2 +0.1
MLR   Muntele Rosu     77.43 324  eP      P       01 08 20.2 +0.1
            comp=Z,58nm,1.0s
STKA  Stephens Creek   77.44 188   P      P       01 08 19.9 +0.1
            comp=Z,2.9nm,1.0s,baz=351,slow=19,SNR=3.0
STKA                               LR     LR      01 42 17.3
            comp=Z,202nm,21.0s,baz=23,slow=36
STKA  Stephens Creek   77.44 188  eP      P       01 08 19.6 -0.2
            comp=Z,3.8nm,1.4s
STKA  Stephens Creek   77.44 188  eP      P       01 08 19.6 -0.2
STKA                               pmax   pmax
            comp=Z,4.0nm,1.4s
DARE  Darende-Malaty   77.44 313  eP      P       01 08 22.1 +1.9
ILGA  Ilgaz            77.44 317  eP      P       01 08 22.4 +2.1
            comp=Z,85nm,0.9s
LTVH  Lˆ'tavˆ'rtes,    77.48 327⇑ eP      P       01 08 22.0 +1.9
ISR   Istrita          77.48 323⇑ iP      P       01 08 21.2 +0.9
AMRR  Amara            77.56 323⇑ iP      P       01 08 21.5 +0.9
URFA  Urfa             77.58 311  eP      P       01 08 22.1 +1.1
L43A  Garden Prairie   77.65  41   P      P       01 08 20.6 -0.5
            baz=322
DRGR                   77.67 327⇑ iP      P       01 08 21.4 +0.1
BELQ  Belleterre       77.67  32   P      P       01 08 19.8 -1.4
            baz=327
VYHS  Vyhne            77.67 330  eP      P       01 08 21.7 +0.5
VYHS                               pmax   pmax
            comp=Z,37nm,1.2s
VYHS  Vyhne            77.67 330  eP      P       01 08 21.7 +0.5
O40A  La Belle         77.74  44   P      P       01 08 21.1 -0.6
            baz=320
Q38A  Cooks Store, C   77.75  46   P      P       01 08 20.9 -0.9
            baz=319
VRAC  Vranov           77.75 332⇑ iP      P       01 08 22.0 +0.4
VRAC  Vranov           77.75 332⇑ iP      P       01 08 22.2 +0.6
ICOR  Ion Corvin       77.75 322⇑ iP      P       01 08 22.6 +0.9
JAVC  Velka Javorina   77.77 331⇑ iP      P       01 08 23.2 +1.4
PSZ   Piszkesteto      77.78 329⇑ iP      P       01 08 22.2 +0.3
PSZ   Piszkesteto      77.78 329⇑ eP      P       01 08 22.6 +0.7
PSZ   Piszkesteto      77.78 329  eP      P       01 08 22.1 +0.2
            comp=Z,65nm,1.1s
PSZ   Piszkesteto      77.78 329  eP      P       01 08 22.1 +0.2
PSZ                                pmax   pmax
            comp=Z,65nm,1.1s
P39B  Salisbury        77.79  45   P      P       01 08 21.7 -0.3
            baz=320
N41A  Harden Midland   77.79  43   P      P       01 08 21.2 -0.7
            baz=321
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N41A  Harden Midland   77.79  43  eP     P      01 08 21.4  -0.6
      comp=Z,24nm,1.1s
PRA   Prague           77.80 333  eP     P      01 08 22.5 +0.7
PRA                                AMS   AMS    01 46 20.0
      comp=Z,900nm,18.7s
PRA   Prague           77.80 333  eP     P      01 08 22.5 +0.7
PRA                                MLR   MLR
      comp=Z,900nm,18.7s
GOPC  GO Pecny, Ondr   77.82 333  eP     P      01 08 22.6 +0.6
GOPC                               AMS   AMS    01 46 00.0
      comp=Z,700nm,19.0s
GOPC  GO Pecny, Ondr   77.82 333  eP     P      01 08 22.6 +0.6
GOPC                               MLR   MLR
      comp=Z,700nm,19.0s
PRU   Pruhonice        77.83 333  eP     P      01 08 22.7 +0.7
PRU                               ex     x      01 08 30.4
PRU                               eS     S      01 18 12.5 +0.1
PRU                                AMS   AMS    01 46 20.0
      comp=Z,800nm,18.7s
PRU   Pruhonice        77.83 333  eP     P      01 08 22.7 +0.7
PRU                               e             01 08 30.4
PRU                               e             01 18 12.5
PRU                                MLR   MLR
      comp=Z,800nm,18.7s
VOIR                   77.85 325⇑iP      P      01 08 22.9 +0.6
PSN   Preselentsi      77.93 322  i P    P      01 08 23.7 +1.0
Q39A  Willow Grove F   78.01  46   P     P      01 08 22.3  -0.9
      baz=320
KRUC  Moravsky         78.03 332⇑iP      P      01 08 23.5 +0.4
L44A  Lake County Fo   78.04  41   P     P      01 08 22.7  -0.6
      baz=322
N42A  Yates City       78.09  43   P     P      01 08 22.0  -1.6
      baz=321
P40A  Paris            78.11  45   P     P      01 08 22.7  -1.1
      baz=320
P40A  Paris            78.11  45  eP     P      01 08 24.4 +0.7
      comp=Z,18nm,1.1s
SARI  SarD1z-Kayseri   78.11 313  eP     P      01 08 24.5 +0.5
M43A  Waltham Townsh   78.13  42   P     P      01 08 22.6  -1.2
      baz=322
WMOK  Wichita Mounta   78.14  52   P     P      01 08 22.7  -1.3
      baz=318
WMOK  Wichita Mounta   78.14  52  eP     P      01 08 25.6 +1.5
      comp=Z,6.6nm,1.0s
WMOK  Wichita Mounta   78.14  52  eP     P      01 08 25.6 +1.5
WMOK                               pmax  pmax
      comp=Z,7.0nm,1.0s
SMOL  Smolenice        78.15 331  eP     P      01 08 24.9 +1.1
SMOL  Smolenice        78.15 331  eP     P      01 08 24.9 +1.1
R38A  Fenwick Farm,    78.19  47   P     P      01 08 22.2  -2.0
      baz=319
O41A  Passleys Farm,   78.23  44   P     P      01 08 23.6  -0.8
      baz=321
NKC   Novy Kostel      78.27 334  eP     P      01 08 24.6 +0.1
NKC                                AMS   AMS    01 45 50.0
      comp=Z,600nm,18.2s
NKC   Novy Kostel      78.27 334  eP     P      01 08 24.6 +0.1
NKC                                MLR   MLR
      comp=Z,600nm,18.2s
WTSB  Winterswijk      78.30 339  i P    P      01 08 24.4  -0.2
      comp=Z,118nm,1.1s
MODS  Modra-Piesok     78.32 331  eP     P      01 08 25.5 +0.7
MODS                               pmax  pmax
      comp=Z,85nm,1.2s
MODS  Modra-Piesok     78.32 331  eP     P      01 08 25.5 +0.7
DEV   Deva             78.34 326⇓iP      P      01 08 25.4 +0.5
LOT   Lotru            78.36 325⇑iP      P      01 08 25.3 +0.1
TOBO  Tobermory, Bru   78.36  35   P     P      01 08 24.4  -0.6
      baz=325
N43A  Stutzman Famil   78.42  42   P     P      01 08 24.4  -1.0
      baz=321
BUD   Budapest         78.46 329⇑eP      P      01 08 25.9 +0.3
P41A  Barry, Barry     78.48  44   P     P      01 08 25.7  -0.1
      baz=321
BR131 Keskin Array S   78.50 316  eP     P      01 08 26.6 +0.5
BRTR  Keskin Array B   78.50 316   P     P      01 08 26.6 +0.5
      comp=Z,24nm,1.1s,baz=61,slow=3.1,SNR=73
BRTR                               LR    LR     01 48 24.8
      comp=Z,487nm,18.9s,baz=46,slow=40
Q40A  Laux Farm, Aux   78.50  45   P     P      01 08 24.5  -1.4
      baz=320
R39A  Chumby, Stover   78.54  46   P     P      01 08 24.7  -1.4
      baz=320
KMRS  Kahramanmaras    78.55 312  eP     P      01 08 26.5 +0.2
M44A  Midewin, Midew   78.60  41   P     P      01 08 25.3  -1.1
      baz=322
M44A  Midewin, Midew   78.60  41  eP     P      01 08 26.2  -0.2
M44A                              epP    sP     01 08 39.3  -0.7
S38A  Stockton         78.61  47   P     P      01 08 25.5  -1.0
      baz=320
GAZ   Gaziantep        78.64 312  eP     P      01 08 27.8 +1.0
HDIL  Hopedale         78.66  43   P     P      01 08 25.7  -1.1
      baz=321
HDIL  Hopedale         78.66  43  eP     P      01 08 26.3  -0.5
      comp=Z,30nm,1.0s
PRD   Provadia         78.66 322  i P    P      01 08 27.3 +0.6
KLBO  Killbear Provi   78.78  34   P     P      01 08 26.6  -0.7
      baz=326
ANTO  Ankara           78.80 316⇑iP      P      01 08 28.5 +0.8
ANTO  Ankara           78.80 316  eP     P      01 08 29.0 +1.3
      comp=Z,62nm,1.0s
ANTO  Ankara           78.80 316   P     P      01 08 28.5 +0.8
      SNR=15
BR231 Keskin MP Arra   78.83 316  eP     P      01 08 29.2 +1.4
CSKK  Csˆ‡kako         78.84 330⇑eP      P      01 08 28.3 +0.7
T38A  Diamond          78.86  48   P     P      01 08 27.0  -0.9
      baz=319
O43A  Sugar Creek Fa   78.86  43   P     P      01 08 27.3  -0.6
      baz=322
S39A  Bolivar          78.86  47   P     P      01 08 26.7  -1.3
      baz=320
S39A  Bolivar          78.86  47  eP     P      01 08 27.1  -0.9
      comp=Z,11nm,0.9s
KHC   Kasperske Hory   78.89 333  eP     P      01 08 28.6 +0.7
KHC                               ex     x      01 08 36.6
KHC                               eS     S      01 18 25.5 +1.7
KHC                                AMS   AMS    01 47 10.0
      comp=Z,900nm,15.7s
KHC   Kasperske Hory   78.89 333  eP     P      01 08 28.3 +0.3
      comp=Z,30nm,1.1s
KHC   Kasperske Hory   78.89 333  eP     P      01 08 28.6 +0.7
KHC                               e             01 08 36.6
KHC                               e             01 18 25.5
KHC                                MLR   MLR
      comp=Z,900nm,15.7s
P42A  Winchester       78.91  44   P     P      01 08 27.6  -0.6
      baz=321
P42A  Winchester       78.91  44  eP     P      01 08 27.6  -0.6
      comp=Z,19nm,1.1s
TUL1  Leonard          78.91  50   P     P      01 08 27.4  -0.9
      baz=319
R40A  Maddies Statio   78.94  46   P     P      01 08 26.8  -1.5
      baz=320
R40A  Maddies Statio   78.94  46  eP     P      01 08 27.4  -1.0
      comp=Z,17nm,1.1s
Q41A  Truxton          78.95  45   P     P      01 08 27.1  -1.3
      baz=321
BMRO  Meriville Lake   79.00  35   P     P      01 08 27.2  -1.3
      baz=326
N44A  Piper City       79.02  42   P     P      01 08 27.0  -1.7
      baz=322
BUKO  Buck Lake        79.02  34   P     P      01 08 27.3  -1.4
      baz=326
BZS   Buzias           79.06 327⇑iP      P      01 08 29.1 +0.2
GEC2  GERESS Array S   79.10 333  eP     P      01 08 29.4 +0.2
      comp=Z,27nm,1.0s
GEC2  GERESS Array S   79.10 333  eP     P      01 08 29.4 +0.2
GEC2                               pmax  pmax
      comp=Z,27nm,1.0s
GERES GERESS Array B   79.10 333   P     P      01 08 29.1   0.0
      comp=Z,4.5nm,0.4s,baz=36,slow=5.0,SNR=75
GERES                              LR    LR     01 47 37.2
      comp=Z,688nm,18.1s,baz=30,slow=39
GEA0  GERESS Array S   79.11 333  eP     P      01 08 29.0  -0.2
GRFO  Grafenberg       79.12 335  eP     P      01 08 29.8 +0.6
      comp=Z,80nm,1.1s
GRFO  Grafenberg       79.12 335  eP     P      01 08 29.8 +0.6
GRFO                               pmax  pmax
      comp=Z,80nm,1.1s
CONA  Conrad Observa   79.19 331  i P    P      01 08 30.4 +0.8
      comp=Z,66nm,1.4s,SNR=28
ABTX  Abilene, Hawle   79.20  54   P     P      01 08 28.8  -1.2
      baz=318
TX31  Lajitas Ar. Si   79.22  59  eP     P      01 08 30.0  -0.2
TXAR  Lajitas Array    79.22  59   P     P      01 08 29.8  -0.4
      comp=Z,2.4nm,0.9s,baz=298,slow=4.1,SNR=28
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SZH   Strazhica        79.24 323  i P    P      01 08 29.9   0.0
P43A  Skaggs, Pawnee   79.26  43   P     P      01 08 29.2  -0.8
      baz=321
N45A  Kentland         79.27  41   P     P      01 08 29.6  -0.5
      baz=322
BASO  Ashfield         79.29  36   P     P      01 08 29.7  -0.5
      baz=325
Q42A  Golden Eagle     79.33  44   P     P      01 08 29.7  -0.8
      baz=321
T39A  Clever           79.34  47   P     P      01 08 29.6  -1.0
      baz=320
S40A  Lebanon          79.36  47   P     P      01 08 29.6  -1.1
      baz=320
HERR  Herculane        79.36 326⇑iP      P      01 08 30.5   0.0
R41A  Rosebud          79.39  45   P     P      01 08 29.9  -0.9
      baz=321
CLWO  Collingwood      79.49  35   P     P      01 08 30.4  -0.9
      baz=326
JMB   Yambol           79.61 322  i P    P      01 08 32.4 +0.5
HHAR  Hobbs            79.61  48  eP     P      01 08 33.1 +1.0
      comp=Z,8.3nm,0.9s
HGN   Heimansgroeve    79.62 339  i P    P      01 08 31.9 +0.1
      comp=Z,128nm,1.3s
HGN   Heimansgroeve    79.62 339  eS     S      01 18 48.3  +17
CCM   Cathedral Cave   79.64  45   P     P      01 08 31.2  -0.9
      baz=321
CCM   Cathedral Cave   79.64  45  eP     P      01 08 32.2   0.0
      comp=Z,18nm,1.0s
CCM   Cathedral Cave   79.64  45  eP     P      01 08 32.2   0.0
CCM                                pmax  pmax
      comp=Z,19nm,1.0s
O45A  Potomac          79.64  42   P     P      01 08 31.5  -0.6
      baz=322
PEMO  Pembroke         79.65  32   P     P      01 08 31.2  -0.9
      baz=328
BEBN  Eben Emael       79.66 339 ⇑P      P      01 08 32.0   0.0
MORH  Mˆ‡rˆ¡gy, Hung   79.68 329⇑eP      P      01 08 31.7  -0.5
T40A  Mansfield        79.69  47   P     P      01 08 31.2  -1.3
      baz=320
R42A  Luebbering       79.69  45   P     P      01 08 31.4  -1.1
      baz=321
Q43A  New Douglas      79.72  44   P     P      01 08 31.5  -1.1
      baz=321
MEM   Membach          79.75 338 ⇑P      P      01 08 32.5   0.0
      comp=Z,45nm,1.3s
S41A  Jillco Farms,    79.75  46   P     P      01 08 32.0  -0.8
      baz=321
TAHT  Tahtakopru-Hat   79.78 312  eP     P      01 08 32.9   0.0
U39A  Green Forest     79.78  48   P     P      01 08 32.1  -0.9
      baz=320
MOA   Molln            79.79 332  i P    P      01 08 33.1 +0.3
      comp=Z,20nm,1.1s,SNR=14
LATQ  La Tuque         79.79  29   P     P      01 08 31.7  -1.1
      baz=330
RAR   Rarotonga        79.82 134   LR    LR     01 36 13.5
      comp=Z,302nm,20.1s,baz=308,slow=30
P44A  Sand Creek, Wi   79.83  43   P     P      01 08 32.3  -0.8
      baz=322
SFIN  Lafayette        79.83  41   P     P      01 08 32.4  -0.7
      baz=323
SFIN  Lafayette        79.83  41  eP     P      01 08 32.6  -0.6
      comp=Z,16nm,1.1s
ARSA  Arzberg          79.89 331  i P    P      01 08 33.8 +0.4
      comp=Z,27nm,1.2s,SNR=13
BANO  Bancroft         79.95  33   P     P      01 08 31.9  -1.8
      baz=327
YAYL  Yayladag         80.08 312  eP     P      01 08 35.6 +0.9
Q44A  Meyer Farm, Va   80.08  44   P     P      01 08 33.8  -0.7
      baz=322
S42A  Caledonia        80.09  45   P     P      01 08 33.8  -0.8
      baz=321
V39A  Pettigrew        80.10  48   P     P      01 08 33.6  -1.2
      baz=320
ELFO  Elginfield       80.11  36   P     P      01 08 33.2  -1.5
      baz=326
U40A  Yellville        80.12  48   P     P      01 08 33.7  -1.2
      baz=320
R43A  Red Bud          80.12  44   P     P      01 08 33.5  -1.3
      baz=321
BEHE  Becsehely        80.13 330⇑eP      P      01 08 35.3 +0.6
T41A  Mountain View    80.16  46   P     P      01 08 33.8  -1.2
      baz=321
TRQ   Mont Tremblant   80.18  30  eP     P      01 08 34.0  -1.0
P45A  Graceland, Par   80.20  42   P     P      01 08 34.4  -0.7
      baz=322
P45A  Graceland, Par   80.20  42  eP     P      01 08 34.8  -0.4
      comp=Z,15nm,1.0s
PLVO  Plevna           80.26  33   P     P      01 08 33.9  -1.5
      baz=328
KOGS  Kog              80.33 330  eP     P      01 08 35.1  -0.7
O47A  Sheridan         80.37  41   P     P      01 08 34.7  -1.4
      baz=323
P46A  Rosedale         80.38  42   P     P      01 08 35.4  -0.7
      baz=323
DELO  Deloro Mine      80.49  33   P     P      01 08 35.2  -1.4
      baz=328
ORIO  Orleans, Innes   80.49  31   P     P      01 08 35.3  -1.3
      baz=329
Q45A  Warren Harvey,   80.50  43   P     P      01 08 35.6  -1.2
      baz=322
T42A  Van Buren        80.51  46   P     P      01 08 35.6  -1.3
      baz=321
T42A  Van Buren        80.51  46  eP     P      01 08 36.0  -0.8
      comp=Z,8.2nm,1.0s
W39A  Magazine         80.52  49   P     P      01 08 36.4  -0.6
      baz=320
STU   Stuttgart        80.54 336  eP     P      01 08 36.4  -0.4
      comp=Z,63nm,1.3s
STU   Stuttgart        80.54 336  eP     P      01 08 36.4  -0.4
STU                                pmax  pmax
      comp=Z,63nm,1.3s
SOKA  Soboth           80.55 331  i P    P      01 08 37.3 +0.2
      comp=Z,60nm,1.4s,SNR=17
V40A  Witts Springs    80.56  48   P     P      01 08 35.9  -1.3
      baz=320
V40A  Witts Springs    80.56  48  eP     P      01 08 37.6 +0.4
      comp=Z,14nm,1.3s
PERS  Pernice          80.56 331  i P    P      01 08 37.2 +0.1
R44A  Waltonville      80.56  44   P     P      01 08 36.1  -1.1
      baz=322
ALFO  Alfred           80.57  31   P     P      01 08 35.2  -1.8
      baz=329
WLF   Walferdange      80.57 338 ⇑P      P      01 08 37.7 +0.7
      comp=Z,31nm,1.8s
WLF   Walferdange      80.57 338  eP     P      01 08 37.9 +0.9
      comp=Z,42nm,1.2s
WLF   Walferdange      80.57 338  eP     P      01 08 37.9 +0.9
WLF                                pmax  pmax
      comp=Z,42nm,1.2s
DOU   Dourbes          80.58 339 ⇑P      P      01 08 36.8  -0.3
      comp=Z,19nm,1.6s
DRWO  Darlington Wes   80.60  34   P     P      01 08 36.1  -1.1
      baz=327
S43A  Fulton Ridge,    80.60  45   P     P      01 08 36.3  -1.1
      baz=321
DRCO  St. Marys Ceme   80.61  34   P     P      01 08 36.5  -0.7
      baz=327
U41A  Viola            80.61  47   P     P      01 08 37.6 +0.1
      baz=321
WLVO  Wesleyville      80.69  34   P     P      01 08 36.9  -0.7
      baz=327
JCT   Junction City    80.69  56   P     P      01 08 37.4  -0.7
      baz=318
JCT   Junction City    80.69  56  eP     P      01 08 38.4 +0.4
      comp=Z,3.4nm,0.3s
JCT   Junction City    80.69  56  eP     P      01 08 38.4 +0.4
JCT                                pmax  pmax
      comp=Z,3.0nm,0.3s
KBA   Koelnbreinsper   80.77 332  i P    P      01 08 38.7 +0.4
      comp=Z,74nm,1.4s,SNR=21
X39A  Fountain Ranch   80.86  50   P     P      01 08 38.7  -0.1
      baz=320
OBKA  Obir             80.86 331  i P    P      01 08 38.6  -0.1
      comp=Z,12nm,1.1s
T43A  Greenville       80.87  45   P     P      01 08 38.3  -0.6
      baz=321
W40A  Ferguson Farm,   80.90  48   P     P      01 08 38.4  -0.6
      baz=320
W40A  Ferguson Farm,   80.90  48  eP     P      01 08 39.6 +0.6
W40A                              epP    sP     01 08 52.3  -0.3
S44A  Carbondale       80.91  44   P     P      01 08 38.4  -0.6
      baz=322
SIUC  Southern Illin   80.91  44  eP     P      01 08 39.2 +0.2
      comp=Z,26nm,0.9s
V41A  Mountainview     80.92  47   P     P      01 08 38.1  -1.1
      baz=321
P47A  Martinsville     80.93  41   P     P      01 08 38.4  -0.6
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      baz=323
GOLS  Golise           80.93 330  eP     P      01 08 38.8  -0.2
VTS   Vitosha          80.94 324⇑iP      P      01 08 39.6 +0.3
VTS   Vitosha          80.94 324  eP     P      01 08 39.4 +0.1
      comp=Z,88nm,1.1s
VTS   Vitosha          80.94 324  i P    P      01 08 39.5 +0.3
VTS   Vitosha          80.94 324   P     P      01 08 39.1  -0.2
VTS   Vitosha          80.94 324  eP     P      01 08 39.4 +0.1
VTS                                pmax  pmax
      comp=Z,89nm,1.1s
PBMO  Poplar Bluff     81.04  46  eP     P      01 08 39.3  -0.4
PBMO                              epP    sP     01 08 53.0  -0.4
GCIS  Gornji Cirnik    81.05 330  i P    P      01 08 39.4  -0.2
MYKA  Terra Mystica    81.06 332  i P    P      01 08 39.4  -0.4
      comp=Z,18nm,1.1s,SNR=8.8
WATA  Walderalm        81.10 334  i PcP  P      01 08 41.6 +1.5
      comp=Z,17nm,0.5s,SNR=12
ALN   Alexandroupoli   81.11 321  eP     P      01 08 40.3 +0.3
      comp=Z,31nm,1.1s
ALN   Alexandroupoli   81.11 321   P     P      01 08 40.1 +0.1
MIAR  Mount Ida        81.12  49   P     P      01 08 39.1  -1.1
      baz=320
MIAR  Mount Ida        81.12  49  eP     P      01 08 39.8  -0.4
      comp=Z,14nm,0.9s
MIAR  Mount Ida        81.12  49  eP     P      01 08 39.8  -0.4
MIAR                               pmax  pmax
      comp=Z,14nm,0.9s
RDO   Rodhopi          81.14 322   P     P      01 08 40.6 +0.5
RDO   Rodhopi          81.14 322   P     P      01 08 40.6 +0.5
WTTA  Wattenberg       81.15 334  i P    P      01 08 41.0 +0.6
      comp=Z,28nm,0.8s,SNR=11
BFO   Black Forest     81.19 336  eP     P      01 08 40.8 +0.4
      comp=Z,7.1nm,1.2s
BFO   Black Forest     81.19 336ceP      P      01 08 40.7 +0.4
T44A  Benton           81.22  45   P     P      01 08 40.2  -0.4
      baz=322
RETA  Reutte           81.22 334  i P    P      01 08 40.9 +0.3
      comp=Z,37nm,1.3s,SNR=19
WHAR  Wooly Hollow     81.23  48  eP     P      01 08 40.4  -0.3
      comp=Z,19nm,1.0s
MOTA  Moosalm          81.24 334  i PcP  P      01 08 42.0 +1.2
      comp=Z,58nm,1.2s,SNR=22
S45A  Carrier Mills    81.25  44   P     P      01 08 40.3  -0.6
      baz=322
Q47A  Bedord North L   81.29  42   P     P      01 08 39.9  -1.1
      baz=323
V42A  Cord             81.30  47   P     P      01 08 40.2  -0.9
      baz=321
N50A  Nevada           81.31  39   P     P      01 08 39.9  -1.2
      baz=325
ABTA  Abfaltersbach    81.33 333  i P    P      01 08 40.5  -0.7
      comp=Z,20nm,1.3s,SNR=7.4
W41B  Gary Mavity, V   81.34  48   P     P      01 08 40.7  -0.7
      baz=321
W41B  Gary Mavity, V   81.34  48  eP     P      01 08 40.7  -0.7
      comp=Z,12nm,0.9s
PMOR  Pomariorio Ree   81.38 121  eT     T      02 38 25.1
      comp=Z,8.7nm,0.2s
BLY   Banja Luka       81.47 329⇑iP      P      01 08 41.2  -0.6
BOJS  Bojanci          81.50 330  i P    P      01 08 41.7  -0.3
ISP   Isparta          81.51 317   P     P      01 08 41.9  -0.4
ISP   Isparta          81.51 317   P     P      01 08 41.9  -0.4
ISP   Isparta          81.51 317   P     P      01 08 41.9  -0.4
TAOE  Nuku Hiva Isla   81.58 112  eLR    LR     01 34 17.4
      comp=Z,594nm,24.2s
O50A  Cable            81.61  39   P     P      01 08 42.1  -0.6
      baz=324
ECH   Echery           81.62 337  eP     P      01 08 42.4  -0.2
      comp=Z,45nm,1.3s
ECH   Echery           81.62 337  eP     P      01 08 42.4  -0.2
ECH                                pmax  pmax
      comp=Z,45nm,1.3s
FETA  Feichten         81.65 334  i P    P      01 08 43.3 +0.3
      comp=Z,31nm,1.1s,SNR=23
DAVA  Damuels          81.67 335  i P    P      01 08 43.3 +0.2
      comp=Z,61nm,2.2s,SNR=12
SMTH  Samothraki Isl   81.69 321   P     P      01 08 42.5  -0.6
SMTH  Samothraki Isl   81.69 321   P     P      01 08 42.5  -0.6
NVR   Nevrokopi        81.69 323   P     P      01 08 43.4 +0.2
NVR   Nevrokopi        81.69 323   P     P      01 08 43.4 +0.2
GADA  Gvkgeada         81.75 321   P     P      01 08 43.0  -0.4
GADA  Gvkgeada         81.75 321   P     P      01 08 43.0  -0.4
R47A  Wooly Knot Far   81.75  42   P     P      01 08 42.7  -0.7
      baz=323
ACSO  Alum Creek Sta   81.82  39   P     P      01 08 43.1  -0.7
      baz=325
ALLY  Alegheny Colle   81.87  36  eP     P      01 08 43.9  -0.1
      comp=Z,18nm,1.0s
MANT  Manisa           81.91 318  eP     P      01 08 45.4 +0.8
      comp=Z,61nm,0.8s
WCI   Wyandotte Cave   81.92  42   P     P      01 08 43.6  -0.8
      baz=323
THAS  Thassos island   81.93 322   P     P      01 08 44.0  -0.4
P50A  Jamestown        81.96  40   P     P      01 08 43.4  -1.2
      baz=324
R48A  Northridge Ran   81.98  42   P     P      01 08 44.2  -0.5
      baz=324
SRS   Serrai           82.00 323   P     P      01 08 44.4  -0.3
SRS   Serrai           82.00 323   P     P      01 08 44.4  -0.3
SRS   Serrai           82.00 323   P     P      01 08 44.4  -0.3
T46A  Princeton        82.09  44   P     P      01 08 44.8  -0.5
      baz=323
STIP  Stip             82.11 324  i P    P      01 08 43.7  -1.6
DAVOX Davos/Dischmat   82.12 334   P     P      01 08 46.1 +0.6
      comp=Z,16nm,0.8s,baz=31,slow=4.9,SNR=22
DAVOX                              LR    LR     01 48 54.0
      comp=Z,402nm,19.2s,baz=18,slow=38
SKO   Skopje           82.18 325   P     P      01 08 46.1 +0.4
SKO   Skopje           82.18 325   P     P      01 08 46.1 +0.4
SKO   Skopje           82.18 325  i P    P      01 08 46.1 +0.4
M54A  Oil Creek Stat   82.19  36   P     P      01 08 45.7   0.0
      baz=327
M54A  Oil Creek Stat   82.19  36  eP     P      01 08 46.2 +0.4
      comp=Z,18nm,1.3s
KNT   Kendrikon        82.25 323   P     P      01 08 46.1   0.0
KNT   Kendrikon        82.25 323   P     P      01 08 46.1   0.0
VAY   Valandovo        82.26 324   P     P      01 08 46.3 +0.2
VAY   Valandovo        82.26 324   P     P      01 08 46.3 +0.2
VAY   Valandovo        82.26 324  i P    P      01 08 46.3 +0.2
LIA   Limnos Island    82.31 321   P     P      01 08 46.2  -0.1
LIA   Limnos Island    82.31 321   P     P      01 08 46.2  -0.1
CSS   Mathiatis        82.34 313  eP     P      01 08 47.3 +0.6
      comp=Z,19nm,1.5s
CSS   Mathiatis        82.34 313   P     P      01 08 46.7   0.0
PRK   Paraskevi        82.36 320   P     P      01 08 46.2  -0.4
PRK   Paraskevi        82.36 320   P     P      01 08 46.2  -0.4
PPT   Papeete          82.40 124   LR    LR     01 42 18.8
      comp=Z,342nm,18.3s,baz=338,slow=33
PPT2  Papeete2         82.41 124  eS     S      01 19 03.7 +2.4
      comp=Z,450nm,37.8s
PPT2  Papeete2         82.41 124  eLR    LR     01 34 51.8
      comp=Z,758nm,22.8s
PPT2  Papeete2         82.41 124  eT     T      02 39 43.6
      comp=Z,2.8nm,0.3s
NVLJ  Novalja          82.45 330   P     P      01 08 46.2  -0.8
OUR   Ouranopolis      82.48 322   P     P      01 08 44.5  -2.7
OUR   Ouranopolis      82.48 322   P     P      01 08 44.5  -2.7
OUR   Ouranopolis      82.48 322   P     P      01 08 44.5  -2.7
S48A  Wiedeman Farm,   82.49  42   P     P      01 08 46.1  -1.3
      baz=323
N54A  Moraine State    82.51  37   P     P      01 08 46.9  -0.5
      baz=326
N54A  Moraine State    82.51  37  eP     P      01 08 47.2  -0.3
      comp=Z,21nm,1.1s
T47A  Sharon Grove     82.52  43   P     P      01 08 47.2  -0.4
      baz=323
T47A  Sharon Grove     82.52  43  eP     P      01 08 47.5  -0.1
      comp=Z,20nm,1.0s
SIGR  SIGRI            82.57 320   P     P      01 08 45.4  -2.3
SIGR  SIGRI            82.57 320   P     P      01 08 45.4  -2.3
ASF   Jabal al Asfar   82.59 309   P     P      01 08 48.4 +0.3
      comp=Z,10nm,1.1s,baz=336,slow=3.0,SNR=11
ASF                                LR    LR     01 50 04.9
      comp=Z,234nm,18.2s,baz=328,slow=39
GRG   Griva            82.63 324   P     P      01 08 47.7  -0.4
GRG   Griva            82.63 324   P     P      01 08 47.7  -0.4
HORT  Hortiatis        82.64 323   P     P      01 08 47.4  -0.8
HORT  Hortiatis        82.64 323   P     P      01 08 47.4  -0.8
PDG   Podgorica        82.67 326⇑iP      P      01 08 47.6  -0.6
PDG   Podgorica        82.67 326   P     P      01 08 47.4  -0.8
THE   Thessaloniki     82.67 323   P     P      01 08 47.4  -0.8
THE   Thessaloniki     82.67 323   P     P      01 08 47.4  -0.8
THE   Thessaloniki     82.67 323   P     P      01 08 47.4  -0.8
TTG   Podgorica        82.67 326   P     P      01 08 47.4  -0.8
TTG   Podgorica        82.67 326   P     P      01 08 47.4  -0.8
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PLG	Polygyros	82.67	323	P	P	01 08 47.6	-0.7
PLG	Polygyros	82.67	323	P	P	01 08 47.6	-0.7
PLG	Polygyros	82.67	323	P	P	01 08 47.6	-0.7
S49A	Springfield	82.75	42	P	P	01 08 47.9	-0.8
	baz=324						
MMAI	Mount Meron Ar	82.76	310	P	P	01 08 49.6	+0.7
	comp=Z,18nm,0.9s,baz=48,slow=5.3,SNR=14						
MMAI				LR	LR	01 50 14.4	
	comp=Z,696nm,19.6s,baz=325,slow=39						
T48A	Bowling Green	82.77	43	P	P	01 08 47.4	-1.4
	baz=323						
PKME	Peaks-Kenny Pk	82.81	28	P	P	01 08 48.9	0.0
	baz=333						
WVT	Waverly	82.84	44	P	P	01 08 48.5	-0.7
	baz=323						
WVT	Waverly	82.84	44	eP	P	01 08 48.9	-0.3
	comp=Z,7.2nm,0.8s						
WVT	Waverly	82.84	44	eP	P	01 08 48.9	-0.3
WVT				pmax	pmax		
	comp=Z,7.0nm,0.8s						
U47A	Clarksville	82.86	44	P	P	01 08 48.2	-1.1
	baz=323						
STON	Ston	82.89	328	P	P	01 08 48.0	-1.3
PAIG	Paliouri	82.94	322	P	P	01 08 48.9	-0.8
PAIG	Paliouri	82.94	322	P	P	01 08 48.9	-0.8
V46A	Holladay	82.96	45	P	P	01 08 49.1	-0.7
	baz=322						
BIA	Bitola	83.03	324	i P	P	01 08 49.8	-0.3
YER	Yerkesik	83.13	318	P	P	01 08 51.6	+0.8
YER	Yerkesik	83.13	318	P	P	01 08 51.6	+0.8
FETY	Fethiye	83.14	317	P	P	01 08 50.5	-0.3
FETY	Fethiye	83.14	317	P	P	01 08 50.5	-0.3
OHR	Ohrid	83.17	325	i P	P	01 08 50.2	-0.7
U48A	Cassie Pea, Po	83.17	43	P	P	01 08 50.1	-0.9
	baz=323						
T49A	Edmonton	83.18	42	P	P	01 08 49.7	-1.3
	baz=324						
FNA	Florina	83.20	324	eP	P	01 08 51.0	-0.1
	comp=Z,50nm,1.5s						
FNA	Florina	83.20	324	P	P	01 08 50.3	-0.8
FNA	Florina	83.20	324	eP	P	01 08 51.0	-0.1
FNA				pmax	pmax		
	comp=Z,51nm,1.5s						
V47A	Nunnelly	83.24	44	P	P	01 08 50.0	-1.2
	baz=323						
S50A	Richmond	83.25	41	P	P	01 08 50.0	-1.3
	baz=324						
SENIN	Lac Senin/Sane	83.26	336	eP	P	01 08 52.1	+0.6
	comp=Z,15nm,0.9s						
LIT	Litokhoron	83.31	323	eP	P	01 08 51.1	-0.5
	comp=Z,15nm,0.9s						
LIT	Litokhoron	83.31	323	P	P	01 08 50.6	-1.0
LIT	Litokhoron	83.31	323	eP	P	01 08 51.1	-0.5
LIT				pmax	pmax		
	comp=Z,15nm,0.9s						
WVL	Waterville	83.31	28	eP	P	01 08 52.0	+0.5
	comp=Z,34nm,1.5s						
OXF	Oxford	83.33	47	P	P	01 08 50.9	-0.8
	baz=322						
OXF	Oxford	83.33	47	eP	P	01 08 51.3	-0.4
	comp=Z,24nm,1.0s						
OXF	Oxford	83.33	47	eP	P	01 08 51.3	-0.4
OXF				pmax	pmax		
	comp=Z,24nm,1.0s						
KZN	Kozani	83.44	324	P	P	01 08 51.2	-1.1
KZN	Kozani	83.44	324	P	P	01 08 51.2	-1.1
KZN	Kozani	83.44	324	P	P	01 08 51.2	-1.1
AOS	Alonnisos	83.48	322	P	P	01 08 51.9	-0.6
AOS	Alonnisos	83.48	322	P	P	01 08 51.9	-0.6
U49A	Red Boiling Sp	83.54	43	P	P	01 08 52.2	-0.6
	baz=324						
T50A	Nancy	83.58	42	P	P	01 08 52.3	-0.7
	baz=324						
XOR	Xorichti	83.62	322	P	P	01 08 52.2	-1.0
XOR	Xorichti	83.62	322	P	P	01 08 52.2	-1.0
NEST	Nestorio	83.65	324	P	P	01 08 53.1	-0.3
V48A	Smith Brothers	83.65	44	P	P	01 08 51.8	-1.6
	baz=323						
V48A	Smith Brothers	83.65	44	eP	P	01 08 53.0	-0.4
	comp=Z,7.6nm,0.8s						
NEO	Neokhori	83.65	322	P	P	01 08 53.6	+0.2
NEO	Neokhori	83.65	322	P	P	01 08 53.6	+0.2
SSPA	Standing Stone	83.65	35	P	P	01 08 52.2	-1.1
	baz=328						
SSPA	Standing Stone	83.65	35	eP	P	01 08 53.1	-0.2
	comp=Z,61nm,1.9s						
S51A	Beattyville	83.66	41	P	P	01 08 52.2	-1.2
	baz=325						
MCWV	Mont Chateau	83.66	37	P	P	01 08 52.1	-1.2
	baz=327						
W47A	Westpoint	83.66	45	P	P	01 08 52.0	-1.5
	baz=323						
O56A	Blue Knob Stat	83.68	36	P	P	01 08 52.5	-1.1
	baz=327						
FYTO	Fytoko, Volos	83.69	322	P	P	01 08 52.9	-0.6
FYTO	Fytoko, Volos	83.69	322	P	P	01 08 52.9	-0.6
NWAO	Narrogin (SRO)	83.89	208	LR	LR	01 45 22.6	
	comp=Z,50nm,21.6s,baz=288,slow=35						
EMMW	East Machias	83.89	27	eP	P	01 08 54.9	+0.5
	comp=Z,32nm,1.4s						
KPRO	Kipourio	83.90	324	P	P	01 08 53.6	-1.1
RAYN	Ar Rayn	83.96	297	eP	P	01 08 55.8	+0.6
	comp=Z,39nm,1.2s						
RAYN	Ar Rayn	83.96	297	i P	P	01 08 55.7	+0.5
	SNR=30						
SMIA	Simia	84.02	322	P	P	01 08 54.4	-0.8
T51A	Gray	84.04	41	P	P	01 08 54.6	-0.8
	baz=325						
U50A	Jamestown	84.06	42	P	P	01 08 55.0	-0.6
	baz=324						
W48A	Pulaski	84.07	44	P	P	01 08 55.1	-0.5
	baz=323						
V49A	McMinnville	84.08	43	P	P	01 08 54.7	-0.9
	baz=324						
Y46A	Houston	84.10	47	P	P	01 08 54.5	-1.2
	baz=322						
N59A	State Game Lan	84.26	34	eP	P	01 08 56.2	-0.3
	comp=Z,13nm,1.1s						
AGG	Agios Georgios	84.28	323	eP	P	01 08 55.8	-0.8
	comp=Z,128nm,0.7s						
AGG	Agios Georgios	84.28	323	eP	P	01 08 55.8	-0.8
JAN	Janina	84.37	324	P	P	01 08 56.9	-0.1
JAN	Janina	84.37	324	P	P	01 08 56.9	-0.1
JAN	Janina	84.37	324	P	P	01 08 56.9	-0.1
T52A	Hallie	84.37	41	P	P	01 08 56.1	-1.0
	baz=325						
PTL	Penteli	84.41	321	P	P	01 08 55.8	-1.5
PTL	Penteli	84.41	321	P	P	01 08 55.8	-1.5
W49A	Belvidere	84.42	44	P	P	01 08 56.5	-0.9
	baz=324						
U51A	La Follette	84.48	42	P	P	01 08 56.6	-1.1
	baz=325						
SWET	Sewanee	84.50	44	eP	P	01 08 57.0	-0.8
	comp=Z,18nm,0.9s						
V50A	Pikevile	84.54	43	P	P	01 08 56.7	-1.3
	baz=324						
X48A	Hartselle	84.56	45	P	P	01 08 56.6	-1.5
	baz=323						
TZTN	Tazewell	84.57	41	P	P	01 08 57.6	-0.4
	baz=325						
TZTN	Tazewell	84.57	41	eP	P	01 08 57.9	-0.2
	comp=Z,19nm,1.4s						
Y47A	UCPARC, Winfie	84.60	46	P	P	01 08 57.8	-0.4
	baz=323						
VLY	Voula,Athens	84.61	321	P	P	01 08 56.4	-1.8
VLY	Voula,Athens	84.61	321	P	P	01 08 56.4	-1.8
WES	Weston	84.66	30	eP	P	01 08 58.3	-0.1
	comp=Z,25nm,1.3s						
WES	Weston	84.66	30	eP	P	01 08 58.3	-0.1
WES				pmax	pmax		
	comp=Z,25nm,1.3s						
IGT	Igoumenitsa	84.69	324	P	P	01 08 57.8	-0.8
IGT	Igoumenitsa	84.69	324	P	P	01 08 57.8	-0.8
IGT	Igoumenitsa	84.69	324	P	P	01 08 57.8	-0.8
KEK	Kerkira	84.75	325	P	P	01 08 58.1	-0.8
KEK	Kerkira	84.75	325	P	P	01 08 58.1	-0.8
U52A	Thorn Hill	84.78	41	P	P	01 08 57.8	-1.3
	baz=325						
V51A	Loudon	84.79	42	P	P	01 08 58.5	-0.6
	baz=324						
V51A	Loudon	84.79	42	eP	P	01 09 01.1	+2.0
V51A				epP	sP	01 09 10.9	-1.9
W50A	Signal Mountai	84.82	43	P	P	01 08 58.5	-0.9
	baz=324						
W50A	Signal Mountai	84.82	43	eP	P	01 08 58.9	-0.5
W50A				epP	sP	01 09 12.6	-0.5
X49A	Woodville	84.87	44	P	P	01 08 58.0	-1.6
	baz=324						
KARP	Karpathos	84.94	317	P	P	01 08 58.7	-1.3
KARP	Karpathos	84.94	317	P	P	01 08 58.7	-1.3
CPCT	Cooper Cave	85.00	43	eP	P	01 08 59.8	-0.4
	comp=Z,13nm,1.0s						
Z47A	Carrollton	85.04	46	P	P	01 08 59.8	-0.7
	baz=323						
W51A	Cleveland	85.11	43	P	P	01 08 59.9	-0.9
	baz=324						
V52A	Sevierville	85.12	42	P	P	01 09 00.3	-0.5
	baz=325						
V52A	Sevierville	85.12	42	eP	P	01 09 00.6	-0.2
	comp=Z,11nm,0.9s						
U53A	Fall Branch	85.16	41	P	P	01 08 59.8	-1.3
	baz=325						
LKD2	Lefkada island	85.18	324	P	P	01 09 00.2	-0.9
LKD2	Lefkada island	85.18	324	P	P	01 09 00.2	-0.9
TKL	Tuckaleechee C	85.18	42	P	P	01 09 00.7	-0.5
	comp=Z,7.4nm,1.0s,baz=28,slow=2.3,SNR=7.3						
TKL				LR	LR	01 46 11.7	
	comp=Z,311nm,21.9s,baz=344,slow=35						
TKL	Tuckaleechee C	85.18	42	eP	P	01 09 00.8	-0.4
	comp=Z,15nm,1.0s						
TKL	Tuckaleechee C	85.18	42	eP	P	01 09 00.8	-0.4
TKL				pmax	pmax		
	comp=Z,15nm,1.0s						
EVGI	Lefkada island	85.32	323	P	P	01 09 00.9	-0.9
Y49A	Blount Mountai	85.35	45	P	P	01 09 01.2	-0.9
	baz=324						
147A	Livingston	85.36	47	P	P	01 09 01.6	-0.4
	baz=323						
BLA	Blacksburg	85.44	39	P	P	01 09 01.2	-1.3
	baz=326						
BLA	Blacksburg	85.44	39	eP	P	01 09 02.2	-0.2
	comp=Z,16nm,1.1s						
BLA	Blacksburg	85.44	39	eP	P	01 09 02.3	-0.2
BLA				pmax	pmax		
	comp=Z,16nm,1.1s						
RLS	Riolos of Patr	85.45	323	P	P	01 09 02.1	-0.3
RLS	Riolos of Patr	85.45	323	P	P	01 09 02.1	-0.3
EIL	Elat	85.58	309	P	P	01 09 08.3	+5.1
	comp=Z,21nm,1.1s,baz=37,slow=1.4,SNR=13						
V53A	Saluda	85.62	41	P	P	01 09 03.2	-0.2
	baz=325						
Y50A	Piedmont	85.66	44	P	P	01 09 03.0	-0.6
	baz=324						
247A	Quitman	85.67	47	P	P	01 09 02.9	-0.8
	baz=322						
IP04	Greensprings	85.71	37	eP	P	01 09 04.5	+0.8
	comp=Z,42nm,1.7s						
LRAL	Lakeview Retre	85.72	46	P	P	01 09 03.3	-0.6
	baz=323						
VLS	Valsamata	85.72	323	P	P	01 09 03.1	-0.7
VLS	Valsamata	85.72	323	P	P	01 09 03.1	-0.7
VLS	Valsamata	85.72	323	P	P	01 09 03.1	-0.7
Z49A	Columbiana	85.83	45	P	P	01 09 03.3	-1.1
	baz=324						
W53A	Cullowhee	85.87	42	P	P	01 09 03.9	-0.8
	baz=325						
VLI	Veliai	85.93	321	P	P	01 09 02.1	-2.7
VLI	Veliai	85.93	321	P	P	01 09 02.1	-2.7
X52A	Dahlonega	85.98	43	P	P	01 09 03.4	-1.8
	baz=325						
Y51A	Rockmart	85.99	44	P	P	01 09 04.2	-1.0
	baz=324						
ITM	Ithomi	85.99	322	eP	P	01 09 04.5	-0.7
	comp=Z,78nm,1.2s						
ITM	Ithomi	85.99	322	P	P	01 09 04.0	-1.2
LAST	Lasithi	86.05	318	P	P	01 09 05.4	-0.2
LAST	Lasithi	86.05	318	P	P	01 09 05.4	-0.2
Z50A	Ashland	86.08	45	P	P	01 09 04.8	-0.9
	baz=324						
Z50A	Ashland	86.08	45	eP	P	01 09 05.2	-0.5
	comp=Z,15nm,0.8s						
BG3	Lake Jocassee	86.12	42	eP	P	01 09 06.0	+0.2
	comp=Z,15nm,0.9s						
149A	Jones	86.17	46	P	P	01 09 06.0	-0.1
	baz=323						
347A	Saraland	86.22	48	P	P	01 09 05.7	-0.6
	baz=323						
IDI	Anoyia	86.22	319	P	P	01 09 05.0	-1.4
	comp=Z,8.1nm,0.5s,baz=38,slow=13,SNR=15						
IDI				LR	LR	01 54 05.4	
	comp=Z,215nm,18.0s,baz=22,slow=40						
X53A	Estanollee	86.35	42	P	P	01 09 06.9	0.0
	baz=325						
TIP	Timpagrande	86.42	326⇑	i P	P	01 09 07.1	-0.2
TIP	Timpagrande	86.42	326	P	P	01 09 06.9	-0.4
TIP	Timpagrande	86.42	326	P	P	01 09 06.9	-0.4
249A	Camden	86.50	47	P	P	01 09 07.3	-0.4
	baz=323						
IMMV	Iera Moni Meta	86.50	319	P	P	01 09 06.5	-1.2
Y52A	Lilburn	86.50	43	P	P	01 09 07.5	-0.3
	baz=325						
150A	Eclectic	86.55	45	P	P	01 09 07.0	-0.9
	baz=324						
NCAT	North Carolina	86.67	39	eP	P	01 09 08.9	+0.4
	comp=Z,13nm,1.1s						
Y53A	Monroe	86.74	43	P	P	01 09 08.4	-0.5
	baz=325						
KMSC	Kings Mountain	86.74	41	P	P	01 09 07.1	-1.8
	baz=326						
Z52A	Williamson	86.88	44	P	P	01 09 08.3	-1.2
	baz=325						
250A	Grady	86.93	46	P	P	01 09 09.7	-0.2
	baz=324						
250A	Grady	86.93	46	eP	P	01 09 09.9	+0.1
250A				epP	sP	01 09 23.5	0.0
TBI	Tubuai	87.03	128	eS	S	01 19 52.9	+6.1
	comp=Z,125nm,27.2s						
TBI	Tubuai	87.03	128	eLR	LR	01 36 47.6	
	comp=Z,449nm,22.0s						
TBI	Tubuai	87.03	128	eT	T	02 45 28.9	
	comp=Z,7.1nm,0.2s						
Y54A	Tignall	87.16	42	P	P	01 09 11.0	+0.1
	baz=325						
Z53A	Monticello	87.21	43	P	P	01 09 10.0	-1.2
	baz=325						
251A	Midway	87.27	45	P	P	01 09 10.3	-1.2
	baz=324						
Z54A	Sparta	87.60	43	P	P	01 09 12.7	-0.4
	baz=325						
353A	Camilla	88.47	45	P	P	01 09 16.9	-0.3
	baz=325						
TIGA	Tifton	88.70	44	P	P	01 09 18.1	-0.2
	baz=325						
VAE	Valguarnera	88.81	327	LR	LR	01 54 16.4	
	comp=Z,283nm,18.8s,baz=350,slow=39						
TAMR	Tamra	91.12	331	eP	P	01 09 30.0	+0.5
	comp=Z,12nm,0.9s						
DAMY	Dhamar	91.22	292	eP	P	01 09 30.7	0.0
	comp=Z,31nm,1.4s						
KEST	Kesra	92.23	330	P	P	01 09 33.7	-1.1
	comp=Z,19nm,1.0s,baz=334,slow=2.5,SNR=18						
KEST				LR	LR	01 55 21.5	
	comp=Z,267nm,18.8s,baz=308,slow=38						
KEST	Kesra	92.23	330	eP	P	01 09 35.0	+0.3
	comp=Z,26nm,1.1s						
ES19	SONSECA Array	92.39	341	eP	P	01 09 34.6	-0.8
ESDC	Sonseca Array	92.44	341	P	P	01 09 34.9	-0.7
	comp=Z,3.3nm,0.9s,baz=10,slow=4.3,SNR=15						
ESDC				LR	LR	01 57 12.9	
	comp=Z,191nm,18.4s,baz=20,slow=39						
ESLA	Sonseca Array	92.44	341	eP	P	01 09 35.5	-0.2
	comp=Z,7.4nm,1.1s						
THTN	Thala	92.61	330	eP	P	01 09 35.9	-0.7
	comp=Z,23nm,1.2s						
ATD	Arta Tunnel	94.48	291	LR	LR	01 58 08.6	
	comp=Z,203nm,18.2s,baz=294,slow=39						
RKT	Rikitea	95.45	117	eLR	LR	01 40 36.2	
	comp=Z,320nm,27.5s						
MDT	Midelt	99.13	340	LR	LR	02 03 02.8	
	comp=Z,143nm,18.2s,baz=34,slow=40						
TORD	Torodi Ar. Bea	115.57	327	PKP	PKPdf	01 15 04.6	-2.6
	comp=Z,0.3nm,0.4s,baz=50,slow=1.1						
RCBR	Riachuelo	140.06	11	PKP	PKPdf	01 15 50.5	-3.2
	comp=Z,72nm,0.8s,baz=187,slow=0.2,SNR=4.4						
NVL	N'lazarevskaya	147.92	204	ePKP2	PKPdf	01 16 06.9	+1.4
NVL				pmax	pmax		
	comp=Z,20nm,0.9s						
PLCA	Paso Flores	149.30	96	PKPbc	PKPbc	01 16 12.3	-0.9
	comp=Z,3.7nm,0.8s,baz=287,slow=4.2,SNR=7.8						
CPUP	Villa Florida	150.19	60	PKPbc	PKPbc	01 16 14.4	-1.3
	comp=Z,4.2nm,0.9s,baz=156,slow=2.1,SNR=4.6						
SNAA	Sanae	150.93	196	PKPbc	PKPbc	01 16 15.2	-0.9
	comp=Z,4.7nm,0.9s,baz=168,slow=3.2,SNR=14						

SKHL 07 01:06:07.6±0.7**, 45°.20N**×**151°.60E, h44**km±2km**, mb4.8**/6**,**
Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.64	272	i P	Pn	01 06 48.0	+0.4
KUR				AMB	AMB	01 06 56.5	
	41nm,0.5s						
KUR				AMB	AMB	01 06 56.5	
	26nm,0.5s						
KUR				AMB	AMB	01 06 56.5	
	61nm,0.5s						
KUR				i S	Sn	01 07 18.0	-0.4
KUR				A	A	01 07 26.0	
	346nm,0.4s						
KUR				A	A	01 07 26.0	
	144nm,0.4s						
SHO	Shikotan	3.66	250	i P	Pn	01 07 02.0	+0.3
SHO				AMB	AMB	01 07 05.0	
	18nm,0.3s						
SHO				AMB	AMB	01 07 05.0	
	43nm,0.3s						
SHO				AMB	AMB	01 07 05.0	
	41nm,0.3s						
SHO				eS	Sn	01 07 43.0	-0.5
SHO				A	A	01 07 49.9	
	59nm,0.3s						
SHO				A	A	01 07 49.9	
	112nm,0.3s						
YUK	Yuzh-Kuril'sk	4.26	256	eP	Pn	01 07 11.0	+1.1
YUK				AMB	AMB	01 07 24.2	
	82nm,0.5s						
YUK				AMB	AMB	01 07 24.2	
	60nm,0.5s						
YUK				AMB	AMB	01 07 24.2	
	76nm,0.5s						
YUK				eS	Sn	01 07 58.0	-0.3
YUK				A	A	01 08 09.0	
	115nm,0.4s						
YUK				A	A	01 08 09.0	
	152nm,0.4s						
LAGR	Lagunnoye	4.30	257	eP	Pn	01 07 12.0	+1.5
LAGR				AMB	AMB	01 07 14.4	
	143nm,0.4s						
LAGR				AMB	AMB	01 07 14.4	
	119nm,0.4s						
LAGR				AMB	AMB	01 07 14.4	
	180nm,0.4s						
LAGR				eS	Sn	01 08 01.0	+1.6
LAGR				A	A	01 08 02.0	
	198nm,0.3s						
LAGR				A	A	01 08 02.0	
	88nm,0.3s						
GRPR	Tuman	4.33	256	eP	Pn	01 07 12.0	+1.1
GRPR				AMB	AMB	01 07 18.0	
	29nm,0.2s						
GRPR				AMB	AMB	01 07 18.0	
	27nm,0.2s						
GRPR				AMB	AMB	01 07 18.0	
	62nm,0.2s						
GRPR				eS	Sn	01 08 00.0	-0.1
GRPR				A	A	01 08 08.8	
	76nm,0.4s						
GRPR				A	A	01 08 08.8	
	124nm,0.4s						
GLVR	Golovnino	4.59	254	eP	Pn	01 07 15.0	+0.6
GLVR				AMB	AMB	01 07 23.0	
	85nm,0.2s						
GLVR				eS	Sn	01 08 06.0	-0.4
GLVR				A	A	01 08 10.2	
	150nm,0.3s						
GLVR				A	A	01 08 10.2	
	168nm,0.3s						
TYV	Tymovskoe	8.24	317	eP	Pn	01 08 05.6	+1.1

IDC ***07*** *01:06:27.6±1.2, 16°.40S×176°.13W, h329km±12km, mb4.0/24, mb1 4.1/26, mb1mx3.9/51, mbtmp4.6/26, Error ellipse: s-maj=12.4km s-min=7.9km az=131.0*

NEIC ***07*** *01:06:28.9±0.9, 16°.39S×176°.16W, h345km±8km, mb4.4/8, Error ellipse: s-maj=10.1km s-min=7.3km az=125.0*

WEL ***07*** *01:06:28.0, 16°.39S×176°.16W, h345km*

ISC 07 01:06:30.3±0.4**, 16°.47S**±0°.06×**176°.05W**±0°.07**, h364**km**,**
n118, σ1°.57/118**, mb4.3**/33**, 9C-9D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	4.84	59	P	Pn	01 07 46.8	-2.2
	60nm,0.3s,baz=78,slow=22,SNR=18						
AFI				S	S	01 08 46.6	-6.1
	baz=233,slow=20,SNR=1.9						
FUNA	Funafuti	9.16	329	ePn	Pn	01 08 36.2	-2.2
	1µm,1.1s						
RIZ	Raoul Island	12.84	187	S	S	01 11 36.8	-4.7
RAO	Raoul Island	12.84	187	S	S	01 11 35.6	-5.9
	201nm,0.3s,baz=316,slow=20,SNR=6.6						
GLKZ	Green Lake	12.85	187	P	P	01 09 18.9	-1.7
GLKZ				S	S	01 11 37.0	-4.8
DZM	Mont Dzumac	17.44	249	P	P	01 10 10.2	-0.5
	1.8nm,0.3s,baz=68,slow=18,SNR=15						
TARA	Tarawa	20.79	327	eP	P	01 10 42.9	-1.7
	14nm,1.1s						
OUZ	Omahuta	20.84	204	P	P	01 10 47.4	+2.5
KUZ	Kuaotunu	21.48	198	P	P	01 10 52.5	+1.9
MXZ	Matakaoa Point	21.60	192	P	P	01 10 53.7	+2.0
MXZ				S	S	01 14 41.5	+16
WIAZ	Waiheke Island	21.70	199	P	P	01 10 54.7	+2.0
WMGZ	Waiomatatini S	21.82	192	P	P	01 10 55.7	+2.0
WMGZ				S	S	01 14 48.4	+20
HAZ	Te Kaha	21.89	193	P	P	01 10 55.4	+1.0
HAZ				S	S	01 14 46.7	+17
PKGZ	Pakihiroa	21.96	193	P	P	01 10 57.1	+2.0
PKGZ				S	S	01 14 50.1	+19
MKAZ	Moumakai	21.98	199	P	P	01 10 57.2	+2.1
PUZ	Puketiti	22.10	192	P	P	01 10 58.0	+1.7
PUZ				S	S	01 14 52.3	+19
AWAZ	Awhitu Peninsu	22.11	200	P	P	01 10 58.4	+2.1
RUGZ	Raukumara Rang	22.12	193	P	P	01 10 57.4	+0.8
TWGZ	Tauwhareparae	22.26	193	P	P	01 10 59.1	+1.3
TWGZ				S	S	01 14 58.8	+23
TOZ	Tahuroa Road	22.45	198	P	P	01 11 01.6	+2.1
MWZ	Matawai	22.50	193	P	P	01 11 01.1	+1.2
CNGZ	Carnagh Statio	22.51	192	P	P	01 11 02.1	+2.1
URZ	Urewera	22.53	194	P	P	01 10 58.5	-1.6
	23nm,0.3s,baz=253,slow=2.8,SNR=43						
URZ	Urewera	22.53	194	P	P	01 10 59.1	-1.0
TLZ	Tolley Road	23.00	197	P	P	01 11 06.8	+2.3
SNZO	South Karori	26.01	196	eP	P	01 11 30.7	-0.6
RPZ	Rata Peaks	29.29	199	P	P	01 11 59.1	-1.2
	14nm,0.6s,baz=249,slow=1.6,SNR=16						
CTA	Charters Tower	35.93	258	P	P	01 12 56.8	-0.9
	4.9nm,0.5s,baz=209,slow=19,SNR=5.7						
CTAO	Charters Tower	35.93	258	eP	P	01 12 56.7	-1.1
PMG	Port Moresby	36.49	276	P	P	01 13 02.7	+0.1
	11nm,0.5s,baz=204,slow=12,SNR=2.5						
STKA	Stephens Creek	41.30	240	P	P	01 13 42.3	+0.5
	20nm,0.5s,baz=89,slow=10,SNR=63						
WRAB	Tennant Creek	47.12	258	eP	P	01 14 26.3	-1.3
	6.3nm,0.4s						
WRA	Warramunga Arr	47.12	258	P	P	01 14 26.8	-0.9
	11nm,0.6s,baz=91,slow=7.0,SNR=227						
WRA				S	S	01 20 50.3	-1.8
	1.6nm,1.1s,baz=90,slow=13,SNR=3.8						
ASAR	Alice Springs	47.36	253	P	P	01 14 29.3	-0.2
	87nm,0.5s,baz=88,slow=7.9,SNR=1200						
ASAR				S	S	01 20 52.5	-2.8
	1.6nm,1.0s,baz=84,slow=17,SNR=6.2						
FITZ	Fitzroy Crossi	55.50	259	P	P	01 15 29.5	+0.3
	5.5nm,0.4s,baz=132,slow=16,SNR=42						
BATI	Baumata	58.82	268	P	P	01 15 53.7	+1.4
	22nm,0.4s,baz=245,slow=19,SNR=4.3						
MBWA	Marble Bar	60.62	255	eP	P	01 16 03.9	-0.4
NWAO	Narrogin (SRO)	61.88	241	P	P	01 16 12.5	0.0
	9.2nm,0.8s,baz=274,slow=11,SNR=9.6						
SBA	Scott Base	62.00	184	eP	P	01 16 16.2	+3.7
	12nm,0.8s						
VNDA	Vanda	62.07	185	P	P	01 16 15.7	+2.8
	6.0nm,0.8s,baz=19,slow=8.3,SNR=14						
MJAR	Matsushiro Arr	68.15	322	P	P	01 16 51.5	-0.8
	0.9nm,0.5s,baz=166,slow=5.1,SNR=4.8						
CASY	Casey	68.38	205	eP	P	01 16 54.3	+1.1
	10nm,1.0s						
ASAJ	Asahikawa	71.14	330	P	P	01 17 10.8	+0.6
	5.8nm,0.6s,baz=286,slow=1.6,SNR=6.6						

PETK	Petropavlovsk-	72.90	344	P	P	01 17 20.0	-0.3
	10nm,0.7s,baz=124,slow=7.9						
QSPA	South Pole Qui	73.58	180	P	P	01 17 26.5	+2.2
	14nm,0.9s,baz=24,slow=2.9,SNR=16						
QSPA	South Pole Qui	73.58	180	eP	P	01 17 26.3	+2.0
KSRS	Korea Array	75.16	317	P	P	01 17 34.4	+0.8
	1.3nm,0.8s,baz=125,slow=7.9,SNR=5.3						
KSAR	Wonju Array Be	75.18	317	P	P	01 17 34.4	+0.7
YBH	Yreka Blue Hor	76.00	38	P	P	01 17 40.0	+1.6
	3.0nm,0.5s,baz=167,slow=6.1,SNR=8.2						
USRK	Ussuriysk Ar.	76.73	324	P	P	01 17 43.0	+0.7
	1.6nm,0.8s,baz=234,slow=8.6						
NVAR	Mina Array Bea	76.83	43	P	P	01 17 44.6	+1.4
	0.9nm,0.6s,baz=230,slow=9.7,SNR=6.4						
KLR	Kul'dur	80.05	328	P	P	01 18 00.4	+0.2
	0.1nm,0.6s,baz=350,slow=6.1						
MNTX	Cornudas Mount	82.91	54	eP	P	01 18 16.9	+1.5
	1.1nm,0.6s						
TXAR	Lajitas Array	83.32	57	P	P	01 18 20.3	+2.6
	0.5nm,0.8s,baz=210,slow=4.3,SNR=6.8						
ILAR	Eielson Array	84.00	12	P	P	01 18 19.6	-0.5
	4.1nm,0.6s,baz=219,slow=5.8,SNR=60						
PDAR	Pinedale Array	84.77	43	P	P	01 18 25.5	+0.8
	0.6nm,0.9s,baz=232,slow=3.6,SNR=6.2						
BILL	Bilibino	85.25	353	eP	P	01 18 25.9	-0.3
	14nm,0.9s						
EGAK	Eagle	85.26	14	eP	P	01 18 26.3	0.0
	2.4nm,0.8s						
ENH	Enshi	85.35	303	eP	P	01 18 28.2	+0.5
	5.9nm,0.5s						
MAW	Mawson	85.96	199	P	P	01 18 31.3	+1.5
	8.2nm,0.9s,baz=119,slow=6.8,SNR=9.0						
SYO	Syowa Base	91.04	192	⇑eP	P	01 18 54.0	+0.3
SNAA	Sanae	91.96	178	P	P	01 18 59.0	+1.0
	2.6nm,1.0s,baz=188,slow=17,SNR=3.8						
YKA	Yellowknife Ar	92.09	24	P	P	01 18 58.5	0.0
	0.2nm,0.3s,baz=240,slow=4.6,SNR=4.7						
BVAR	Borovoye Array	117.14	322	PKP	PKPdf	01 24 32.9	+0.5
	0.4nm,0.5s,baz=19,slow=4.9,SNR=3.5						
ARCES	ARCESS Array B	125.28	351	PKP	PKPdf	01 24 47.3	-0.3
	2.2nm,0.8s,baz=56,slow=3.1,SNR=5.2						
FINES	FINESS Array B	132.39	346	PKP	PKPdf	01 25 01.6	+0.4
	0.6nm,0.8s,baz=26,slow=7.7,SNR=3.8						
BURAR	Bucovina Array	144.33	335	⇓iP	PKPdf	01 25 23.5	-0.1
CLL	Collm	144.50	350	i PKPbc	PKPbc	01 25 22.9	-0.3
	comp=Z,8.0nm,0.6s						
TESR	Tescani	144.60	333	⇓iP	PKPbc	01 25 23.7	0.0
CRVS	Cervenica-Dubn	144.63	340	ePKP	PKPdf	01 25 24.1	+0.1
UPC	Upice	144.68	347	ePKP	PKPdf	01 25 24.4	+0.4
BRG	Berggiesshubel	144.75	349	eP	PKPbc	01 25 24.0	0.0
	comp=Z,4.4nm,0.7s						
DPC	Dobruska-Polom	144.76	346	ePKP	PKPab	01 25 24.9	+0.6
OKC	Ostrava-Krasne	144.78	344	ePKP	PKPab	01 25 24.8	+0.4
OKC				ex	x	01 25 30.4	
CFR	Carcaliu	144.91	330	⇑iP	PKPbc	01 25 24.7	+0.1
KRLC	Kraliky	144.91	346	ePKP	PKPab	01 25 25.4	+0.5
TRPA	Tarpa	144.93	338	⇓iP	PKPbc	01 25 24.6	0.0
PVCC	Panska Ves	144.96	348	ePKP	PKPab	01 25 25.4	+0.4
MORC	Moravsky Berou	145.00	345	⇑iP	PKPab	01 25 25.4	+0.1
MORC	Moravsky Berou	145.00	345	ePKP	PKPab	01 25 25.2	-0.1
LANS	Liptovska Anna	145.04	342	ePKP	PKPab	01 25 26.3	+0.9
VRI	Vrincioaia	145.06	332	⇑iP	PKPab	01 25 25.5	-0.1
PLOR	Plostina	145.10	332	⇓iP	PKPab	01 25 25.8	0.0
BRTR	Keskin Array B	145.31	318	PKPbc	PKPab	01 25 26.9	-0.1
	comp=Z,3.3nm,0.7s,baz=96,slow=2.0,SNR=22						
HARR	Harsova	145.36	329	⇑iP	PKPab	01 25 27.2	+0.5
TLB	Topalu	145.38	329	⇑iP	PKPbc	01 25 26.0	-0.1
PRA	Prague	145.43	348	ePKP	PKPab	01 25 26.7	-0.1
PRU	Pruhonice	145.48	348	ePKP	PKPab	01 25 26.8	-0.2
PRU				ex	x	01 25 29.7	
DOPR	Dopca	145.57	333	⇑iP	PKPab	01 25 28.8	+1.2
VRAC	Vranov	145.67	345	⇓iP	PKPab	01 25 27.5	-0.3
VRAC	Vranov	145.67	345	ePKP	PKPab	01 25 28.2	+0.4
MLR	Muntele Rosu	145.69	332	PKPbc	PKPbc	01 25 27.2	0.0
	baz=0.0,slow=5.1						
MLR	Muntele Rosu	145.69	332	⇓iP	PKPbc	01 25 26.8	-0.4
JAVC	Velka Javorina	145.81	344	ePKP	PKPab	01 25 29.0	+0.6
VYHS	Vyhne	145.81	342	ePKP	PKPbc	01 25 27.6	+0.3
KRUC	Moravsky	145.94	345	ePKP	PKPbc	01 25 28.0	+0.4
DRGR		145.99	337	⇓iP	PKPbc	01 25 27.5	-0.4
VOIR		146.13	333	⇓iP	PKPab	01 25 29.4	-0.4
GRFO	Grafenberg	146.34	351	ePKPbc	PKPbc	01 25 29.3	+0.5
KHC	Kasperske Hory	146.49	349	ePKP	PKPbc	01 25 29.9	+0.7
GERES	GERESS Array B	146.74	348	PKPbc	PKPbc	01 25 30.3	+0.3
	comp=Z,1.0nm,0.6s,baz=24,slow=3.1,SNR=10						
CONA	Conrad Observa	147.13	345	ePKPbc	PKPbc	01 25 31.5	+0.4
	comp=Z,3.2nm,0.7s						
MMAI	Mount Meron Ar	147.19	306	PKPbc	PKPdf	01 25 29.4	+0.5
	comp=Z,3.5nm,0.8s,baz=244,slow=43,SNR=2.8						
BZS	Buzias	147.39	337	⇑iP	PKPbc	01 25 32.3	+0.6
MOA	Molln	147.57	347	ePKiKP	PKiKP	01 25 33.2	-0.7
	comp=Z,4.6nm,0.8s						
HERR	Herculane	147.69	335	⇑iP	PKPbc	01 25 33.2	+0.6
SOKA	Soboth	148.50	345	ePKPbc	PKPbc	01 25 34.0	-0.7
	comp=Z,3.2nm,0.8s						
RETA	Reutte	148.56	351	ePKPbc	PKPbc	01 25 33.4	-1.4
	comp=Z,1.2nm,0.5s						
WATA	Walderalm	148.58	350	i PKiKP	PKiKP	01 25 36.1	-0.2
	comp=Z,1.6nm,0.5s						
MOTA	Moosalm	148.65	351	i PKPab	PKPab	01 25 40.2	+0.2
	comp=Z,3.9nm,0.5s						
MYKA	Terra Mystica	148.86	347	ePKPbc	PKPbc	01 25 35.2	-0.4
	comp=Z,4.0nm,0.9s						
DAVA	Damuels	148.88	352	i PKiKP	PKiKP	01 25 36.5	-0.4
	comp=Z,7.4nm,1.1s						
ABTA	Abfaltersbach	148.98	349	ePKPbc	PKPbc	01 25 36.3	+0.4
	comp=Z,3.4nm,0.6s						
FETA	Feichten	149.02	351	ePKiKP	PKiKP	01 25 36.9	-0.3
	comp=Z,4.4nm,1.0s						
VTS	Vitosha	149.19	332	⇓iP	PKPbc	01 25 36.7	+0.1
DAVOX	Davos/Dischmat	149.38	352	PKPbc	PKPbc	01 25 37.7	+0.7
	comp=Z,5.9nm,0.6s,baz=206,slow=10,SNR=15						
ESDC	Sonseca Array	155.87	15	PKPab	PKPab	01 26 10.7	+0.3
	comp=Z,0.1nm,0.5s,baz=343,slow=5.7,SNR=4.8						
TORD	Torodi Ar. Bea	176.04	146	PKP	PKPdf	01 25 57.2	-0.9
	comp=Z,1.5nm,0.9s,baz=210,slow=4.6						
TORD				PKPab	PKPab	01 27 42.1	+2.3
	baz=235,slow=1.1						

NIED ***07*** *01:20:00, 45°.50N × 151°.60E, h20km, Mw4.8 Best double couple: $M_0$1.92000×10^{16} NP1:ϕ_s227.00000°, δ27.00000°, λ93.00000°. NP2:ϕ_s43.00000°, δ63.00000°, λ88.00000°.*

JMA ***07*** *01:20:23.5±0.6, 45°.48N × 151°.62E, h30km, M5.1*

ISCJB ***07*** *01:20:24.7±0.5, 45°.31N±0°.04 × 151°.44E±0°.05, h33km±3km, mb4.6/177, MS4.3/45, Error ellipse: s-maj=8.1km s-min=3.2km az=141.8*

SKHL ***07*** *01:20:25.9±1.0, 45°.20N × 151°.56E, h51km±8km, mb5.2/10, Ms4.6/3*

MOS ***07*** *01:20:25.8±0.8, 45°.36N × 151°.42E, h41km, mb4.9/42, MS4.1/13, Error ellipse: s-maj=6.1km s-min=4.7km az=103.2*

NEIC ***07*** *01:20:29.5±0.8, 45°.44N × 151°.31E, h62km±7km, mb4.4/16, Error ellipse: s-maj=13.0km s-min=4.3km az=139.0*

IDC ***07*** *01:20:29.2±2.0, 45°.42N × 151°.39E, h54km±17km, mb4.1/40, mb1 4.2/48, mb1mx4.1/76, mbtmp4.3/48, ML4.1/4, MS4.2/33, Ms1 4.2/33, ms1mx4.0/66, Error ellipse: s-maj=14.3km s-min=9.5km az=149.0*

GCMT ***07*** *01:20:29.5±0.6, 45°.41N × 151°.52E, h32km, MW4.9/65, Moment Tensor Solution. s28,c35; s65,c88; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.50±.21; $M_{\theta\theta}$-0.93±.13; $M_{\phi\phi}$-1.57±.13; $M_{r\theta}$0.39±.14; $M_{\theta\phi}$-1.39±.07; $M_{\phi r}$0.94±.11; Best double couple: $M_0$2.78100×10^{16} NP1:ϕ_s32.00000°, δ56.00000°, λ83.00000°. NP2: ϕ_s225.00000°, δ35.00000°, λ100.00000°. Principal axes: T 2.7070, Plg78.0000°, Azm277.0000°; N 0.1450, Plg6.0000°, Azm36.0000°; P -2.8550, Plg10.0000°, Azm128.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

BJI ***07*** *01:20:38.0, 47°.70N × 149°.60E, h45km, mb4.8/50, mB5.1/34, Ms4.6/38, Ms7 4.5/38*

ISC 07 01:20:27.8±0.6, **45°.23N**±0°.06 × **151°.35E**±0°.05, **h50**km±4km, **n518,** σ**1s.58**/470, **mb4.7**/177, **MS4.3**/46, **45C-23D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.46	271	i P	Pn	01 21 05.7	+0.3
KUR				AMB	AMB	01 21 09.7	
	265nm,0.4s						
KUR				AMB	AMB	01 21 09.7	
	206nm,0.4s						
KUR				AMB	AMB	01 21 09.7	
	441nm,0.4s						
KUR				i S	Sn	01 21 34.5	+0.3
KUR				A	A	01 21 42.6	
	8µm,0.4s						
KUR				A	A	01 21 42.6	
	1µm,0.4s						
KUR				AMS	AMS	01 22 18.0	
	13µm,11.0s						
KUR				AMS	AMS	01 22 18.0	
	13µm,11.0s						
KUR				AMS	AMS	01 22 18.0	
	11µm,11.0s						
KUR	Kuril'sk	2.46	271	d iPN	Pn	01 21 04.9	-0.5
KUR				i S	Sn	01 21 36.8	+2.6
KUR				pmax	pmax		
	comp=Z,441nm,0.4s						
KUR				pmax	pmax		
	comp=E,206nm,0.2s						
KUR				pmax	pmax		
	comp=N,265nm,0.1s						
KUR				smax	smax		
	comp=E,1.0nm,0.3s						
KUR				smax	smax		
	comp=N,8.0nm,0.4s						
KUR				MLR	MLR		
	comp=Z,7µm,13.0s						
KUR				MLR	MLR		
	comp=N,6µm,11.0s						
KUR				MLR	MLR		
	comp=E,7µm,10.0s						
SHO	Shikotan	3.51	249	i P	Pn	01 21 20.0	+0.2
SHO				AMB	AMB	01 21 32.1	
	comp=E,67nm,0.4s						
SHO				AMB	AMB	01 21 32.1	
	comp=E,92nm,0.4s						
SHO				AMB	AMB	01 21 32.1	
	comp=E,189nm,0.4s						
SHO				i S	Sn	01 22 00.2	+0.2
SHO				A	A	01 22 24.0	
	comp=E,3µm,0.6s						
SHO				A	A	01 22 24.0	
	comp=E,3µm,0.6s						
SHO				AMS	AMS	01 22 57.0	
	comp=E,4µm,13.0s						
SHO	Shikotan	3.51	249	d iPN	Pn	01 21 19.3	-0.5
SHO				i S	Sn	01 22 01.8	+1.9
SHO				pmax	pmax		
	comp=Z,189nm,0.4s						
SHO				pmax	pmax		
	comp=N,67nm,0.2s						
SHO				pmax	pmax		
	comp=E,92nm,0.2s						
SHO				smax	smax		
	comp=E,954nm,0.5s						
SHO				smax	smax		
	comp=N,719nm,0.6s						
SHO				MLR	MLR		
	comp=N,2µm,14.0s						
SHO				MLR	MLR		
	comp=Z,3µm,14.0s						
YUK	Yuzh-Kuril'sk	4.10	255	i P	Pn	01 21 28.4	+0.6
YUK				i S	Sn	01 22 15.5	+1.0
YUK				A	A	01 22 31.0	
	comp=Z,2µm,0.6s						
YUK				A	A	01 22 31.0	
	comp=Z,3µm,0.6s						
YUK	Yuzh-Kuril'sk	4.10	255	d iPN	Pn	01 21 27.8	0.0
YUK				i S	Sn	01 22 17.2	+2.7
YUK				pmax	pmax		
	comp=Z,531nm,0.2s						
YUK				pmax	pmax		
	comp=N,215nm,0.5s						
YUK				pmax	pmax		
	comp=E,371nm,0.5s						
YUK				smax	smax		
	comp=N,2µm,0.6s						
YUK				smax	smax		
	comp=E,3µm,0.6s						
YUK				MLR	MLR		
	comp=Z,2µm,16.0s						
LAGR	Lagunnoye	4.14	255	i P	Pn	01 21 29.6	+1.1
LAGR				AMB	AMB	01 21 45.0	
	comp=Z,484nm,0.4s						
LAGR				AMB	AMB	01 21 45.0	
	comp=Z,417nm,0.4s						
LAGR				AMB	AMB	01 21 45.0	
	comp=Z,491nm,0.4s						
LAGR				i S	Sn	01 22 18.0	+2.4
LAGR				A	A	01 22 29.0	
	comp=Z,2.0nm,0.5s						
LAGR				A	A	01 22 29.0	
	comp=Z,3.0nm,0.5s						
LAGR	Lagunnoye	4.14	255	⇓iPN	Pn	01 21 29.5	+1.1
LAGR				i S	Sn	01 22 18.9	+3.3
LAGR				pmax	pmax		
	comp=N,484nm,0.4s						
LAGR				pmax	pmax		
	comp=Z,491nm,0.4s						
LAGR				pmax	pmax		
	comp=E,417nm,0.5s						
LAGR				smax	smax		
	comp=N,2.0nm,0.5s						
LAGR				smax	smax		
	comp=E,3.0nm,0.5s						
GRPR	Tuman	4.17	255	i P	Pn	01 21 29.0	+0.1
GRPR				AMB	AMB	01 21 40.0	
	comp=E,498nm,0.4s						
GRPR				i S	Sn	01 22 19.0	+2.7
GRPR				A	A	01 22 34.0	
	comp=E,2µm,0.5s						
GRPR				A	A	01 22 34.0	
	comp=E,338nm,0.5s						
GRPR	Tuman	4.17	255	⇓iPN	Pn	01 21 29.5	+0.6
GRPR				i S	Sn	01 22 19.6	+3.3
GRPR				pmax	pmax		
	comp=Z,498nm,0.4s						
GRPR				pmax	pmax		
	comp=N,130nm,0.2s						
GRPR				pmax	pmax		
	comp=E,282nm,0.5s						
GRPR				smax	smax		
	comp=N,2µm,0.5s						
GRPR				smax	smax		
	comp=E,338nm,0.5s						
GLVR	Golovnino	4.43	252	i P	Pn	01 21 33.0	+0.6
GLVR				AMB	AMB	01 21 38.0	
	comp=E,130nm,0.4s						
GLVR				AMB	AMB	01 21 38.0	
	comp=E,144nm,0.4s						
GLVR				AMB	AMB	01 21 38.0	
	comp=E,477nm,0.4s						
GLVR				i S	Sn	01 22 24.0	+1.3
GLVR				A	A	01 22 40.0	
	comp=E,2µm,0.5s						
GLVR				A	A	01 22 40.0	
	comp=E,2µm,0.5s						
GLVR	Golovnino	4.43	252	⇓iPN	Pn	01 21 33.1	+0.6
GLVR				i S	Sn	01 22 24.9	+2.2
GLVR				pmax	pmax		
	comp=Z,477nm,0.4s						
GLVR				pmax	pmax		
	comp=N,130nm,0.2s						
GLVR				pmax	pmax		
	comp=E,144nm,0.2s						
GLVR				smax	smax		
	comp=E,2µm,0.5s						
GLVR				smax	smax		
	comp=N,2µm,0.6s						
NEM2	Nemuro 2	4.44	247	P	Pn	01 21 31.4	-1.1
NEM2				eS	Sn	01 22 22.4	-0.4
JRA	Rausu	4.63	256	P	Pn	01 21 35.8	+0.6
JNK	Nakash	5.03	253	P	Pn	01 21 41.0	+0.4
JNK				eS	Sn	01 22 38.3	+0.9
JAK	Akkeshi	5.29	247	P	Pn	01 21 43.4	-0.8
JAK				eS	Sn	01 22 42.0	-1.7
JTKR	Abashiri--Toko	5.46	259	P	Pn	01 21 48.0	+1.4
JAR	Ashorobuto	5.78	253	P	Pn	01 21 51.7	+0.8
JAR				eS	Sn	01 22 58.0	+2.2
JOB	Onbets	5.89	249	P	Pn	01 21 52.6	+0.1
JOB				eS	Sn	01 22 56.7	-2.0
HRK	Horoka	6.15	256	eP	Pn	01 21 58.0	+1.9
JSE	Soyaes	6.21	271	P	Pn	01 21 59.3	+2.5
YSS	Yuzh-Sakhalins	6.22	289	eP	Pn	01 21 57.1	+0.2
YSS				AMB	AMB	01 22 02.9	
	comp=N,42nm,0.6s						
YSS	Yuzh-Sakhalins	6.22	289	ePn	Pn	01 21 59.4	+2.4
YSS	Yuzh-Sakhalins	6.22	289	⇑ePN	Pn	01 21 58.7	+1.8
YSS				e		01 23 18.5	
YSS				pmax	pmax		
	comp=Z,30nm,0.4s						
YSS				MLR	MLR		
	comp=Z,3µm,16.0s						
YSS				MLR	MLR		
	comp=N,1µm,19.0s						
YSS				MLR	MLR		
	comp=E,2µm,14.0s						
JKK2	Kamakawa 2	6.29	261	P	Pn	01 21 59.9	+1.9
SKR	Severo-Kuril's	6.32	29	eP	Pn	01 21 57.0	-1.3
SKR				AMB	AMB	01 22 04.0	
	comp=E,321nm,1.1s						
SKR				eS	Sn	01 23 06.0	-3.1
SKR				A	A	01 23 39.4	
	comp=E,491nm,1.0s						
SKR				A	A	01 23 39.4	
	comp=E,328nm,1.0s						
SKR				AMS	AMS	01 24 27.0	
	comp=E,2µm,13.0s						
SKR				AMS	AMS	01 24 27.0	
	comp=E,3µm,13.0s						
SKR				AMS	AMS	01 24 27.0	
	comp=E,2µm,13.0s						
SKR	Severo-Kuril's	6.32	29	ePN	Pn	01 21 57.0	-1.3
SKR				pmax	pmax		
	comp=Z,321nm,1.1s						
SKR				MLR	MLR		
	comp=Z,2µm,13.0s						
SKR				MLR	MLR		
	comp=Z,2µm,16.0s						
JCH	Churui	6.33	248	P	Pn	01 21 57.9	-0.6
JCH				eS	Sn	01 23 09.2	-0.3
ASAJ	Asahikawa	6.34	263	P	Pn	01 22 00.8	+2.2
	comp=Z,9.4nm,0.3s,baz=78,slow=7.9,SNR=29						
ASAJ				S	Sn	01 23 24.6	+15
	comp=Z,1.0nm,0.3s,baz=37,slow=20,SNR=1.5						
ASAJ				LR	LR	01 24 43.4	
	comp=Z,3µm,18.6s,baz=90,slow=40						
ASAJ	Asahikawa	6.34	263	P	Pn	01 21 59.6	+1.0
MYR	Moyori	6.54	246	eP	Pn	01 22 01.0	-0.3
JFR	Furan	6.62	255	P	Pn	01 22 04.1	+1.6
JWK2	Keihoku	6.67	274	P	Pn	01 22 06.9	+3.8
JEM	Erimo	6.76	244	P	Pn	01 22 05.6	+1.3
JEM				eS	Sn	01 23 21.3	+1.4
ERM	Erimo	6.76	244	eP	Pn	01 22 06.8	+2.5
ERM	Erimo	6.76	244	ePn	Pn	01 22 05.9	+1.6
ERM	Erimo	6.76	244	cePN	Pn	01 22 06.8	+2.5
ERM				pmax	pmax		
	comp=Z,201nm,1.7s						
JAB	Ashibetsu	6.76	258	P	Pn	01 22 07.2	+2.8
JNBK	Urakawa-nobuka	6.89	248	P	Pn	01 22 05.0	-1.1
JBT2	Biratori 2	6.93	252	P	Pn	01 22 06.7	0.0
PAU	Pauzhetka	7.22	28	eP	Pn	01 22 08.4	-2.2
PAU				AMB	AMB	01 22 13.3	
	comp=Z,177nm,0.9s						
UGL	Uglegorsk	7.41	305	eP	Pn	01 22 16.5	+3.3
UGL				AMB	AMB	01 22 18.5	
	comp=Z,31nm,0.3s						
JEW	Eniwo	7.52	255	P	Pn	01 22 16.6	+1.8
JNB	Noboribetsu	7.95	253	P	Pn	01 22 21.6	+1.0
JNB				eS	Sn	01 23 43.4	-5.7
TYV	Tymovskoe	8.10	317	eP	Pn	01 22 23.9	+1.2
TYV				AMB	AMB	01 22 28.3	
	comp=Z,18nm,0.6s						
TYV	Tymovskoe	8.10	317	ePN	Pn	01 22 23.6	+0.9
TYV				pmax	pmax		
	comp=Z,22nm,1.5s						
TYV				pmax	pmax		
	comp=Z,400nm,3.3s						
TYV				MLR	MLR		
	comp=E,3µm,18.0s						
TYV				MLR	MLR		
	comp=Z,2µm,18.0s						
JKB	Kayabe	8.20	250	P	Pn	01 22 23.7	-0.4
JKB				eS	Sn	01 23 52.1	-3.3
JYM2	Yakumo 2	8.54	252	P	Pn	01 22 28.9	+0.1
JSH	Shimam	8.56	256	P	Pn	01 22 31.2	+2.2
JANG	Nango	8.71	240	P	Pn	01 22 28.8	-2.3
JANG				eS	Sn	01 24 01.2	-6.6
JTM	Tenmabayashi	8.74	243	P	Pn	01 22 31.0	-0.5
JTM				eS	Sn	01 24 03.3	-5.4
JTH	Tanohata	8.77	236	P	Pn	01 22 28.8	-3.1
JTH				eS	Sn	01 24 02.3	-7.0
JSR	Shiriuchi	8.78	249	P	Pn	01 22 31.5	-0.5
JSR				eS	Sn	01 24 05.7	-3.8
PEA0B	Petropavlovsk-	8.91	26	ePn	Pn	01 22 32.0	-1.8
PETK	Petropavlovsk-	8.91	26	P	Pn	01 22 31.4	-2.4
	baz=188,slow=11						
PETK				S	Sn	01 24 12.0	-0.6
	baz=208,slow=18						
PETK	Petropavlovsk-	8.91	26	ePn	Pn	01 22 32.9	-0.8
PETK	Petropavlovsk-	8.91	26	ePN	Pn	01 22 32.9	-0.8
PET	Petropavlovsk	9.14	29	ePn	Pn	01 22 38.1	+1.1
PET	Petropavlovsk	9.14	29	ePN	Pn	01 22 39.8	+2.8
PET				MLR	MLR		
	comp=Z,900nm,17.0s						
PET				MLR	MLR		
	comp=Z,800nm,12.0s						
JOSM	Okushiri--Mats	9.16	254	P	Pn	01 22 37.6	+0.3
OFUJ	Ofunato	9.45	233	P	Pn	01 22 39.5	-1.8
OFUJ				eS	Sn	01 24 18.5	-7.6
JRG	Rokugo	9.85	237	P	Pn	01 22 45.2	-1.4
JRG				eS	Sn	01 24 28.3	-7.4
JIO	Ouri	10.07	231	P	Pn	01 22 47.3	-2.4
JIO				eS	Sn	01 24 32.2	-9.0
NKL	Nikolayevsk	10.55	322	ePN	Pn	01 22 57.0	+0.8
NKL				e		01 25 06.0	
NKL				pmax	pmax		
	comp=N,26nm,1.1s						
NKL				pmax	pmax		
	comp=Z,66nm,1.1s						
NKL				pmax	pmax		
	comp=N,400nm,3.0s						
NKL				pmax	pmax		
	comp=E,400nm,3.0s						
NKL				pmax	pmax		
	comp=Z,500nm,3.0s						
NKL				MLR	MLR		
	comp=N,1µm,16.0s						
NKL				MLR	MLR		
	comp=E,1µm,16.0s						
NKL				MLR	MLR		
	comp=Z,3µm,16.0s						
GRNR	Gornyy	11.43	304	ePN	Pn	01 23 07.9	-0.3
MAJO	Matsushiro	13.19	233	ePn	Pn	01 23 30.1	-2.2
MAJO	Matsushiro	13.19	233	⇓ePN	Pn	01 23 35.0	+2.7
MAT	Matsushiro	13.19	233	P	Pn	01 23 34.3	+2.0
MAT				S	S	01 26 10.2	-10
MJAR	Matsushiro Arr	13.19	233	P	Pn	01 23 34.7	+2.4
	comp=Z,0.6nm,0.3s,baz=39,slow=10,SNR=7.2						
MJAR				S	Sn	01 26 07.6	+10
	comp=Z,0.5nm,0.3s,baz=80,slow=25,SNR=3.4						
MJAR				LR	LR	01 29 39.7	
	comp=Z,453nm,19.8s,baz=25,slow=41						
USRK	Ussuriysk Ar.	13.81	273	P	Pn	01 23 41.0	+0.2
	baz=80,slow=12						
USRK				LR	LR	01 29 12.6	
	comp=Z,984nm,18.0s,baz=72,slow=38						
KLR	Kul'dur	13.90	294	P	Pn	01 23 43.6	+1.7
	comp=Z,0.0nm,0.3s,baz=97,slow=13,SNR=14						
MA2	Magadan	14.37	359	P	Pn	01 23 47.3	-0.8
	comp=Z,3.2nm,0.3s,baz=187,slow=12,SNR=9.8						
MA2	Magadan	14.37	359	eP	Pn	01 23 47.2	-0.9
MA2	Magadan	14.37	359	ePn	Pn	01 23 46.2	-1.9
MA2	Magadan	14.37	359	eP	Pn	01 23 46.3	-1.9
MSHR	Mys Shultsa	14.79	267	ceP	Pn	01 23 54.5	+0.7
MDJ	Mudanjiang	15.42	275	P	Pn	01 23 59.8	-2.1
MDJ				pP	P	01 24 06.8	+1.1
MDJ				S	Sn	01 26 33.5	-18
MDJ				sS	S	01 26 45.9	-20
MDJ				pmax	pmax		
	comp=Z,48nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,130nm,7.7s						
MDJ				LR	LR		
	comp=Z,770nm,13.9s						
MDJ				LR	LR		
	comp=Z,1µm,18.2s						
MDJ				LR	LR		
	comp=Z,2µm,17.3s						
MDJ	Mudanjiang	15.42	275	ePn	P	01 24 05.0	-0.6

SEY	Seymchan	17.75	2	P	Pn	01 24 29.0	-2.0
	comp=Z,0.3nm,0.3s,baz=171,slow=9.0,SNR=6.9						
SEY	Seymchan	17.75	2	eP	Pn	01 24 29.4	-1.5
SEY	Seymchan	17.75	2	⇓iP	Pn	01 24 29.4	-1.5
ZEA	Zeya	17.75	307	eP	Pn	01 24 30.4	-0.7
ZEA				pmax	pmax		
	comp=E,47nm,1.0s						
ZEA				pmax	pmax		
	comp=N,43nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,57nm,1.2s						
ZEA				MLR	MLR		
	comp=E,1µm,15.0s						
ZEA				MLR	MLR		
	comp=Z,2µm,15.0s						
ZEA				MLR	MLR		
	comp=N,300nm,14.0s						
CN2	Changchun	18.51	275	eP	P	01 24 38.1	-1.6
CN2				esP	pP	01 24 51.0	-0.2
CN2				eS	Sn	01 27 46.3	-20
CN2				pmax	pmax		
	comp=N,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=N,200nm,3.0s						
CN2				LR	LR		
	comp=N,1µm,16.0s						
CN2				LR	LR		
	comp=N,1µm,16.0s						
CN2				LR	LR		
	comp=N,2µm,15.0s						
KSRS	Korea Array	19.18	254	P	Pn	01 24 49.2	+0.7
	comp=N,0.5nm,0.3s,baz=62,slow=11,SNR=11						
KSRS				LR	LR	01 32 26.3	
	comp=N,723nm,18.3s,baz=58,slow=37						
KS01	Wonju Array Si	19.19	254	eP	P	01 24 47.2	-0.1
KSAR	Wonju Array Be	19.22	254	P	Pn	01 24 49.2	+0.3
KSAR	Wonju Array Be	19.22	254	P	Pn	01 24 49.2	+0.3
JNU	Nakatsue	19.89	240	P	Pn	01 24 57.9	+0.9
	comp=N,34nm,1.2s,baz=359,slow=7.8,SNR=4.3						
TJN	Taejon	20.14	252	i P	P	01 24 58.3	+0.7
SNY	Shenyang	20.38	270	⇑P	P	01 25 00.8	+0.6
YAK	Yakutsk	20.99	331	P	P	01 25 06.5	-0.1
	comp=N,24nm,0.4s,baz=253,slow=0.7,SNR=5.9						
YAK	Yakutsk	20.99	331	eP	P	01 25 05.8	-0.8
YAK	Yakutsk	20.99	331	c iP	Pn	01 25 11.4	+1.7
YAK				e		01 25 25.9	
YAK				e*SS	S	01 28 55.8	-1.6
YAK				e		01 29 15.6	
YAK				pmax	pmax		
	comp=Z,36nm,0.9s						
YAK				pmax	pmax		
	comp=N,19nm,1.0s						
YAK				pmax	pmax		
	comp=E,20nm,0.9s						
YAK				pmax	pmax		
	comp=Z,63nm,1.2s						
YAK				pmax	pmax		
	comp=N,62nm,1.4s						
YAK				pmax	pmax		
	comp=E,80nm,1.5s						
YAK				MLR	MLR		
	comp=Z,502nm,20.0s						
YAK				MLR	MLR		
	comp=N,1µm,17.0s						
YAK				MLR	MLR		
	comp=E,313nm,14.0s						
DL2	Dalian	22.87	264	P	P	01 25 27.2	+0.4
DL2				S	S	01 29 27.4	-5.2
DL2				pmax	pmax		
	comp=E,26nm,1.1s						
DL2				LR	LR		
	comp=E,350nm,14.9s						
DL2				LR	LR		
	comp=E,240nm,14.7s						
DL2				LR	LR		
	comp=E,370nm,18.6s						
BILL	Bilibino	24.15	14	eP	P	01 25 38.8	0.0
BILL	Bilibino	24.15	14	eP	P	01 25 38.8	0.0
BILL				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BOD	Bodaibo	26.05	312	eP	P	01 25 48.8	-7.3
BOD				pmax	pmax		
	comp=Z,4.0nm,1.5s						
BJI	Beijing	26.25	271	P	P	01 26 00.1	+2.0
BJI				S	S	01 30 22.8	-4.1
BJI				pmax	pmax		
	comp=Z,43nm,1.1s						
BJI				LR	LR		
	comp=Z,730nm,14.2s						
BJI				LR	LR		
	comp=Z,1µm,14.2s						
BJI				LR	LR		
	comp=Z,780nm,23.7s						
BJT	Baijiatuau	26.27	271	eP	P	01 25 58.0	-0.2
	comp=Z,50nm,1.2s						
BJT	Baijiatuau	26.27	271	eP	P	01 25 58.0	-0.2
BJT				pmax	pmax		
	comp=Z,50nm,1.2s						
NJ2	Nanjing	28.38	254	eP	P	01 26 24.9	+7.7
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s						
H11N2	WAKE ISLAND Hy	28.51	148	T	T	01 57 04.6	
	baz=336						
H11N1	WAKE ISLAND Hy	28.52	148	T	T	01 58 06.1	
	baz=336,slow=74						
H11N3	WAKE ISLAND Hy	28.52	148	T	T	01 58 06.2	
	baz=336,slow=74						
TIXI	Tiksi	28.60	345	P	P	01 26 17.8	-1.0
	comp=Z,1.9nm,0.5s,baz=128,slow=12,SNR=3.5						
HHC	Hu-ho-hao-te	29.20	276	eP	P	01 26 25.5	+1.0
HHC				sP	sP	01 26 46.6	+3.2
HHC				PP	PnPn	01 27 13.7	-5.4
HHC				S	S	01 31 01.7	-12
HHC				pmax	pmax		
	comp=Z,40nm,1.0s						
HHC				pmax	pmax		
	comp=Z,460nm,7.1s						
HHC				LR	LR		
	comp=Z,820nm,16.1s						
HHC				LR	LR		
	comp=Z,1µm,15.5s						
HHC				LR	LR		
	comp=Z,2µm,14.8s						
H11S1	WAKE ISLAND Hy	29.56	149	T	T	01 58 31.2	
	baz=338,slow=76,SNR=792						
H11S3	WAKE ISLAND Hy	29.57	149	T	T	01 58 28.0	
	baz=338,slow=76,SNR=497						
H11S2	WAKE ISLAND Hy	29.58	149	T	T	01 58 24.8	
	baz=338,slow=76,SNR=635						
SONA1	Songino Array	30.70	291	eP	P	01 26 37.6	-0.2
SONM	Songino Array	30.71	291	P	P	01 26 38.9	+1.1
	comp=Z,1.3nm,0.6s,baz=75,slow=8.0,SNR=14						
SONM				LR	LR	01 40 04.3	
	comp=Z,890nm,18.2s,baz=80,slow=38						
SONM	Songino Array	30.71	291	eP	P	01 26 39.2	+1.3
SONM				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TLY	Talaya	31.81	299	eP	P	01 26 48.5	+1.1
GUMO	Guam	32.02	192	LR	LR	01 42 05.3	
	comp=Z,177nm,18.5s,baz=22,slow=40						
ZAK	Zakamensk	32.23	297	eP	P	01 26 49.5	-1.7
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.5s						
WHN	Wuhan	32.36	256	P	P	01 26 53.8	+1.4
XAN	Xi'an	34.17	266	P	P	01 27 08.8	+0.6
XAN				pP	pP	01 27 20.8	-0.4
XAN				pmax	pmax		
	comp=Z,12nm,1.2s						
XAN				LR	LR		
	comp=Z,320nm,14.3s						
XAN				LR	LR		
	comp=Z,280nm,14.5s						
XAN				LR	LR		
	comp=Z,310nm,14.1s						
ENH	Enshi	35.89	260	eP	P	01 27 23.4	+0.4
KDAK	Kodiak Island	36.02	49	P	P	01 27 23.3	-0.4
	comp=Z,7.8nm,0.6s,baz=308,slow=6.0,SNR=5.0						
KDAK	Kodiak Island	36.02	49	c eP	P	01 27 23.8	+0.1
LZH	Lanzhou	36.72	273	eP	P	01 27 32.0	+1.8
LZH				pP	sP	01 27 45.7	-3.5
LZH				sP	pP	01 27 49.5	+6.2
LZH				PP	PP	01 28 53.7	-0.7
LZH				eS	S	01 33 00.9	-9.4
LZH				sS	sS	01 33 20.8	-12
LZH				pmax	pmax		
	comp=Z,96nm,1.2s						
LZH				pmax	pmax		
	comp=Z,410nm,6.2s						
LZH				LR	LR		
	comp=Z,2µm,12.7s						
LZH				LR	LR		
	comp=Z,1µm,12.7s						
LZH				LR	LR		
	comp=Z,2µm,15.4s						
GTA	Gaotai	38.01	280	eP	P	01 27 42.4	+1.4
GTA				pP	pP	01 27 54.5	+0.3
GTA				sP	sP	01 27 59.5	-0.6
GTA				S	S	01 33 26.1	-3.6
GTA				pmax	pmax		
	comp=Z,16nm,1.2s						
GTA				pmax	pmax		
	comp=Z,290nm,8.1s						
GTA				LR	LR		
	comp=Z,160nm,14.6s						
GTA				LR	LR		
	comp=Z,150nm,14.1s						
GTA				LR	LR		
	comp=Z,190nm,14.1s						
ILAR	Eielson Array	38.50	37	P	P	01 27 44.1	-0.6
	comp=Z,6.3nm,1.2s,baz=263,slow=6.7,SNR=25						
ILAR				LR	LR	01 45 17.2	
	comp=Z,192nm,19.8s,baz=298,slow=39						
CD2	Chengdu	39.53	266	eP	P	01 28 02.0	+8.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.0s						
GYA	Guiyang	40.19	258	eP	P	01 28 05.7	+6.4
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
EGAK	Eagle	40.95	37	eP	P	01 28 04.6	-0.5
	comp=Z,12nm,1.1s						
ZALV	Zalesovo Beam	42.52	307	P	P	01 28 18.3	+0.4
	comp=Z,0.7nm,0.4s,baz=66,slow=7.6,SNR=3.7						
ZALV				PcP	PcP	01 30 10.9	+1.2
	comp=Z,3.3nm,0.8s,baz=87,slow=3.1,SNR=9.0						
ZALV				LR	LR	01 46 59.9	
	comp=Z,552nm,20.4s,baz=68,slow=38						
INK	Inuvik	43.59	31	P	P	01 28 26.8	+0.4
	comp=Z,6.3nm,0.9s,baz=268,slow=7.4,SNR=8.0						
INK	Inuvik	43.59	31	eP	P	01 28 27.1	+0.7
INK	Inuvik	43.59	31	eP	P	01 28 25.8	-0.6
	comp=Z,12nm,1.1s						
INK	Inuvik	43.59	31	eP	P	01 28 25.8	-0.6
INK				pmax	pmax		
	comp=Z,12nm,1.1s						
KMI	Kunming	43.76	260	P	P	01 28 35.2	+6.6
KMI				pmax	pmax		
	comp=Z,23nm,0.5s						
WMQ	Urumqi	44.34	292	P	P	01 28 33.9	+1.0
WMQ				pmax	pmax		
	comp=Z,800nm,11.6s						
WMQ				LR	LR		
	comp=Z,1µm,19.1s						
WMQ				LR	LR		
	comp=Z,850nm,16.5s						
WMQ				LR	LR		
	comp=Z,690nm,21.5s						
MK31	Makanchi Array	46.55	298	eP	P	01 28 50.3	0.0
MK31	Makanchi Array	46.55	298	eP	P	01 28 50.3	0.0
MKAR	Makanchi Array	46.55	298	P	P	01 28 50.8	+0.4
	comp=Z,1.1nm,0.4s,baz=67,slow=5.6,SNR=22						
MKAR				PcP	PcP	01 30 25.3	+1.5
	comp=Z,1.2nm,0.5s,baz=232,slow=0.4,SNR=4.3						
MKAR				LR	LR	01 49 26.9	
	comp=Z,1µm,18.6s,baz=66,slow=37						
MKAR	Makanchi Array	46.55	298	eP	P	01 28 51.2	+0.9
MKAR	Makanchi Array	46.55	298	eP	P	01 28 50.3	0.0
	comp=Z,42nm,1.1s						
MKAR				PcP	PcP	01 30 25.3	+1.5
MK01	Makanchi Array	46.56	298	eP	P	01 28 49.5	-0.9
MAKZ	Makanchi	46.74	298	eP	P	01 28 52.2	+0.4
	comp=Z,6.2nm,1.2s						
KURK	Kurchatov	47.19	304	eP	P	01 28 54.5	-0.6
KURK	Kurchatov	47.19	304	eP	P	01 28 51.6	-3.6
KURK	Kurchatov	47.19	304	c iP	P	01 28 54.5	-0.6
KURK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KURBB	Kurchatov Arra	47.28	304	P	P	01 28 55.2	-0.6
	comp=Z,1.9nm,0.4s,baz=75,slow=8.7,SNR=16						
NONG	Nongkai	48.23	252	P	P	01 29 07.1	+3.5
	comp=Z,0.2nm,1.3s						
SKNT	Sakolnakorn	48.45	250	P	P	01 29 09.2	+3.9
	comp=Z,3.9nm,1.1s,comp=Z,850nm						
LSA	Lhasa	49.13	273	eP	P	01 29 13.8	+2.9
LSA	Lhasa	49.13	273	P	P	01 29 14.0	+3.1
LSA	Lhasa	49.13	273	eP	P	01 29 13.9	+2.9
CMAI	Chiengmai2	49.74	257	P	P	01 29 18.9	+3.6
	comp=Z,1.3nm,0.6s						
CMMT	Chiang Mai	50.57	256	P	P	01 29 24.8	+3.4
	comp=Z,5.0nm,1.1s						
CHTO	Chiang Mai	50.57	256	eP	P	01 29 23.1	+1.6
	comp=Z,6.8nm,1.0s						
CHTO	Chiang Mai	50.57	256	eP	P	01 29 23.1	+1.6
CHTO				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CHTO	Chiang Mai	50.57	256	P	P	01 29 24.9	+3.5
	comp=Z,25nm,1.2s						
CMAR	Chiang Mai Arr	50.81	256	P	P	01 29 25.0	+1.7
	comp=Z,1.2nm,0.3s,baz=39,slow=7.9,SNR=9.5						
CMAR				LR	LR	01 53 04.1	
	comp=Z,234nm,18.0s,baz=49,slow=38						
CMAR	Chiang Mai Arr	50.81	256	P	P	01 29 25.0	+1.7
BVAR	Borovoye Array	50.88	310	P	P	01 29 24.0	+0.6
	comp=Z,0.9nm,0.6s,baz=45,slow=8.4,SNR=6.0						
BVAR				PcP	PcP	01 30 40.1	+0.8
	comp=Z,2.3nm,0.8s,baz=64,slow=3.4,SNR=6.2						
BVAR				LR	LR	01 52 29.5	
	comp=Z,468nm,19.9s,baz=55,slow=38						
BRVK	Borovoye	50.92	310	eP	P	01 29 21.8	-1.8
	comp=Z,3.4nm,0.8s						
BRVK	Borovoye	50.92	310	⇓iP	P	01 29 22.9	-0.8
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ULHL	Ulahol	52.50	295	P	P	01 29 37.0	+1.2
	SNR=13						
TKM2	Tokmak 2	52.56	296	P	P	01 29 37.4	+1.0
	SNR=8.4						
RES	Resolute Bay	52.66	18	eP	P	01 29 34.5	-1.8
	comp=Z,3.0nm,0.7s						
RES	Resolute Bay	52.66	18	eP	P	01 29 39.2	+2.9
	comp=Z,2.8nm,0.6s						
RES	Resolute Bay	52.66	18	eP	P	01 29 39.2	+2.9
RES				pmax	pmax		
	comp=Z,3.0nm,0.6s						
YKW3	Yellowknife Ar	52.84	35	eP	P	01 29 38.4	+0.7
	comp=Z,6.1nm,1.1s						
YKA	Yellowknife Ar	52.87	36	P	P	01 29 38.3	+0.3
	comp=Z,3.1nm,0.9s,baz=299,slow=7.6,SNR=13						
YKA				LR	LR	01 53 46.3	
	comp=Z,9.1nm,21.4s,baz=296,slow=38						
USP	Ospenovka	53.08	297	P	P	01 29 41.3	+1.4
	SNR=5.7						
KBK	Karagaybulak	53.11	296	P	P	01 29 41.1	+0.8
	SNR=6.2						
KZA	Kyzart	53.22	296	P	P	01 29 43.5	+2.1
	SNR=10						
FRU	Bishkek	53.23	297	eP	P	01 29 43.0	+2.0
AAK	Ala-Archa	53.41	296	eP	P	01 29 43.0	+0.5
AAK	Ala-Archa	53.41	296	eP	P	01 29 43.0	+0.5
	comp=Z,11nm,1.1s						
AAK	Ala-Archa	53.41	296	eP	P	01 29 43.0	+0.5
AAK				pmax	pmax		
	comp=Z,11nm,1.1s						
ODAN	Odare	53.48	273	eP	P	01 29 44.7	+1.4
	comp=Z,80nm,1.3s						
JIRN	Jiri	53.84	274	eP	P	01 29 47.7	+1.6
	comp=Z,43nm,0.7s						
EKS2	Erkin-Say	53.85	297	P	P	01 29 47.0	+1.4
	SNR=6.2						
SPITS	Spitsbergen Ar	53.88	350	P	P	01 29 44.6	-0.7
	comp=Z,2.5nm,0.4s,baz=52,slow=9.3,SNR=7.2						
SPITS				LR	LR	01 55 15.1	
	comp=Z,138nm,18.1s,baz=0.0,slow=39						
GUN	Gumba	53.91	275	eP	P	01 29 47.9	+1.4
	comp=Z,104nm,1.2s						
RAMN	Ramite	53.98	273	eP	P	01 29 47.9	+0.9
	comp=Z,35nm,0.6s						
KSH	Kashi	54.09	292	P	P	01 29 52.4	+4.9
KSH				sP	sP	01 30 10.1	+3.1
KSH				PcP	PcP	01 31 02.4	+11
KSH				S	S	01 37 14.6	-5.8
KSH				ScS	ScS	01 39 36.4	+4.0
KSH				SS	SKiKP	01 40 51.1	-3.5
KSH				pmax	pmax		
	comp=Z,210nm,2.4s						
KSH				pmax	pmax		
	comp=Z,120nm,7.7s						
KSH				LR	LR		
	comp=Z,470nm,15.9s						
KSH				LR	LR		
	comp=Z,220nm,15.7s						
KSH				LR	LR		
	comp=Z,480nm,20.5s						
SVE	Sverdlovsk	54.11	317	⇓eP	P	01 29 46.0	-1.2
SVE				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SVE				MLR	MLR		
	comp=Z,315nm,15.0s						
KKN	Kakani	54.40	275	eP	P	01 29 51.7	+1.7
	comp=Z,48nm,1.0s						
PMG	Port Moresby	54.52	185	LR	LR	01 50 02.0	
	comp=Z,77nm,21.8s,baz=18,slow=32						
DMN	Daman	54.63	275	eP	P	01 29 53.4	+1.7
	comp=Z,51nm,1.0s						
GKN	Gorkha	54.73	276	eP	P	01 29 53.7	+1.4
	comp=Z,29nm,0.6s						
HNR	Honiara	54.96	170	LR	LR	01 55 42.9	
	comp=Z,177nm,18.1s,baz=142,slow=38						
DANN	Dangsing	55.13	277	eP	P	01 29 57.1	+1.7
ARU	Arti	55.30	318	P	P	01 29 54.4	-1.4
	comp=Z,3.2nm,0.2s,baz=178,slow=1.5,SNR=7.4						
ARU	Arti	55.30	318	eP	P	01 29 54.7	-1.1
ARU	Arti	55.30	318	eP	P	01 29 54.3	-1.4
	comp=Z,4.9nm,0.7s						
ARU	Arti	55.30	318	d iP	P	01 29 54.7	-1.1
ARU						01 30 55.0	
ARU						01 31 56.4	
ARU				S	S	01 37 36.0	+0.2
ARU				SS	SS	01 41 19.3	-0.6
ARU				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ARU				MLR	MLR		
	comp=Z,435nm,17.0s						
KK31	Karatay Array	55.65	299	eP	P	01 29 58.5	-0.1
KK31	Karatay Array	55.65	299	eP	P	01 29 58.5	-0.1
KKAR	Karatay Array	55.65	299	eP	P	01 29 58.3	-0.3
KKAR	Karatay Array	55.65	299	eP	P	01 29 58.3	-0.3
PYUN	Piuthan	55.82	277	eP	P	01 30 02.0	+1.8
B08A	Colville Reser	57.80	52	eP	pP	01 30 26.8	-0.8
	comp=Z,7.2nm,1.0s						
PRGR	Permogore	57.98	327	eP	P	01 30 14.3	-0.4
PRGR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
DAG	Danmarks Havn	58.11	357	i P	P	01 30 14.4	-1.0
	comp=Z,17nm,1.2s						
DAG	Danmarks Havn	58.11	357	i P	P	01 30 14.4	-1.0
DAG				pmax	pmax		
	comp=Z,17nm,1.2s						
H04A	Detroit Lake	58.20	57	eP	pP	01 30 31.6	+1.1
	comp=Z,22nm,0.9s						
ABKAR	Akbulak array	58.45	310	eP	P	01 30 17.6	-0.6
HAWA	Hanford	58.78	54	eP	pP	01 30 34.1	-0.3
	comp=Z,9.1nm,1.2s						
G06A	Carlson Farm,	58.80	56	eP	pP	01 30 34.5	-0.2
AKTO	Aktyubinsk	58.82	312	P	P	01 30 20.6	-0.1
	comp=Z,0.9nm,0.5s,baz=45,slow=8.6,SNR=3.7						
AKTO				LR	LR	01 58 10.9	
	comp=Z,992nm,18.0s,baz=45,slow=38						
ARCES	ARCESS Array B	58.88	341	P	P	01 30 20.9	0.0
	comp=Z,4.1nm,0.9s,baz=42,slow=7.0,SNR=5.4						
NIL	Nilore	59.21	288	eP	P	01 30 25.5	+1.7
NIL	Nilore	59.21	288	eP	P	01 30 25.5	+1.7
KHMM	Horse Mountain	59.42	61	eP	pP	01 30 39.9	+0.7
	comp=Z,18nm,1.0s						
PINE	Pine Mountain	59.44	57	eP	pP	01 30 40.2	+0.9
	comp=Z,12nm,0.9s						
E09A	Wood Farm, Sta	59.51	53	eP	pP	01 30 40.4	+0.9
	comp=Z,8.6nm,1.0s						
YBH	Yreka Blue Hor	59.56	60	P	P	01 30 26.8	+0.7
	comp=Z,0.9nm,0.6s,baz=315,slow=8.6,SNR=2.8						
YBH				LR	LR	01 50 56.8	
	comp=Z,83nm,21.7s,baz=314,slow=31						
YBH	Yreka Blue Hor	59.56	60	eP	pP	01 30 41.4	+1.3
	comp=Z,12nm,1.3s						
G08A	Pilot Rock	59.74	55	eP	pP	01 30 42.0	+0.7
	comp=Z,4.4nm,1.0s						
K05A	Summer Lake	60.08	58	eP	pP	01 30 43.7	-0.1
	comp=Z,11nm,0.9s						
WDC	Whiskeytown Da	60.33	61	eP	pP	01 30 45.9	+0.6
	comp=Z,10nm,1.1s						
KLMR	Klimovskoe	60.77	329	eP	P	01 30 32.4	-1.5
KLMR				pmax	pmax		
	comp=Z,8.0nm,1.4s						
KLMR	Klimovskoe	60.77	329	eP	P	01 30 32.5	-1.5
KLMR				AMP		01 30 34.6	
	comp=Z,8.0nm,1.4s						
MOD	Modoc Plateau	60.92	59	eP	P	01 30 35.0	-0.6
	comp=Z,1.1nm,0.5s						
MOD	Modoc Plateau	60.92	59	eP	pP	01 30 49.5	+0.1
	comp=Z,9.3nm,1.1s						
BMO	Blue Mountains	60.95	54	eP	P	01 30 34.6	-1.0
	comp=Z,0.4nm,0.5s						
BMO	Blue Mountains	60.95	54	eP	pP	01 30 49.3	-0.3
	comp=Z,7.3nm,1.3s						
BMO	Blue Mountains	60.95	54	eP	P	01 30 34.6	-1.0
KBL	Kabul	61.48	291	eP	P	01 30 39.8	+0.3
	comp=Z,41nm,1.2s						
KBL	Kabul	61.48	291	eP	P	01 30 39.8	+0.3
KBL				pmax	pmax		
	comp=Z,41nm,1.2s						
WVOR	Wild Horse Val	61.60	57	eP	pP	01 30 53.8	-0.3
	comp=Z,11nm,1.1s						
WVOR	Wild Horse Val	61.60	57	eP	pP	01 30 53.8	-0.3
WVOR				pmax	pmax		
	comp=Z,11nm,1.1s						
MSO	Missoula	61.67	51	eP	pP	01 30 53.3	-1.1
	comp=Z,5.7nm,0.9s						
BEKR	Beckworth	62.09	61	eP	pP	01 30 56.8	-0.7
	comp=Z,8.7nm,1.0s						
AFDM	Forest Hills D	62.27	62	eP	pP	01 30 58.3	-0.2
	comp=Z,9.7nm,1.3s						
SUMG	Summit	62.29	3	eP	P	01 30 44.3	-0.2
	comp=Z,34nm,1.2s						
SUMG	Summit	62.29	3	⇑iP	P	01 30 44.5	-0.1
SUMG	Summit	62.29	3	⇑iP	P	01 30 44.5	-0.1
PSI	Prapat	62.31	243	LR	LR	01 59 43.2	
	comp=Z,102nm,18.5s,baz=25,slow=38						
FFC	Flin Flon	62.69	39	eP	P	01 30 48.0	+1.0
FFC	Flin Flon	62.69	39	eP	P	01 30 47.3	+0.3
	comp=Z,8.0nm,1.2s						
FFC	Flin Flon	62.69	39	eP	P	01 30 47.3	+0.3
FFC				pmax	pmax		
	comp=Z,8.0nm,1.2s						
PAHR	Pah Rah Range	62.79	60	eP	pP	01 31 01.9	-0.2
	comp=Z,9.1nm,1.1s						
PNTR	Pine Nut	63.03	61	eP	pP	01 31 04.2	+0.4
	comp=Z,11nm,0.8s						
LRM	Limekiln Ridge	63.10	51	eP	pP	01 31 02.6	-1.6
CMB	Columbia Colle	63.19	62	eP	pP	01 31 04.5	-0.2
	comp=Z,9.4nm,1.3s						
FCC	Fort Churchill	63.20	32	eP	P	01 30 50.1	-0.2
FCC	Fort Churchill	63.20	32	eP	P	01 30 50.1	-0.2
DLMT	Dillon	63.30	52	eP	pP	01 31 04.3	-1.1
	comp=Z,15nm,1.9s						
YERR	Yerington	63.32	61	eP	pP	01 31 05.5	-0.3
	comp=Z,14nm,1.1s						
HLID	Hailey	63.39	54	eP	P	01 30 52.0	0.0
	comp=Z,0.5nm,0.7s						
HLID	Hailey	63.39	54	eP	pP	01 31 05.7	-0.4
	comp=Z,5.2nm,1.1s						
WAKR	Walker	63.49	61	eP	pP	01 31 08.7	+1.8
	comp=Z,3.7nm,0.9s						
MCMT	McKenzie Canyo	63.49	52	eP	pP	01 31 06.2	-0.7
BMN	Battle Mountai	63.66	58	eP	P	01 30 53.5	-0.4
	comp=Z,1.3nm,0.4s						
BMN	Battle Mountai	63.66	58	eP	pP	01 31 08.7	+0.8
	comp=Z,7.1nm,0.9s						
BMN	Battle Mountai	63.66	58	eP	P	01 30 53.5	-0.4
BMN				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BOZ	Bozeman (W)	63.69	51	eP	P	01 30 52.7	-1.3
	comp=Z,2.1nm,0.9s						
BOZ	Bozeman (W)	63.69	51	eP	pP	01 31 01.7	-6.3
	comp=Z,18nm,1.8s						
BOZ	Bozeman (W)	63.69	51	eP	P	01 30 52.7	-1.3
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KVN	Kaiserville	63.98	60	eP	pP	01 31 10.4	+0.3

	comp=Z,11nm,1.0s						
KVN	**Kaiserville**	63.98	60	*e*P	**pP**	**01 31 10.4**	**+0.3**
KVN				pmax	pmax		
	comp=Z,11nm,1.0s						
RYN	**Ryan**	63.98	61	*e*P	pP	01 31 09.7	-0.3
	comp=Z,6.1nm,0.9s						
NV01	**Mina Array Sit**	64.24	61	*e*P	pP	01 31 12.1	+0.3
NVAR	**Mina Array Bea**	64.24	61	P	**P**	**01 30 57.8**	**0.0**
	comp=Z,0.4nm,0.7s,baz=279,slow=10,SNR=3.7						
NV11	**Mina Array Sit**	64.33	61	*e*P	pP	01 31 12.5	+0.1
	comp=Z,0.5nm,1.0s						
YHB	**Horse Butte**	64.46	52	*e*P	pP	01 31 12.4	-0.8
	comp=Z,12nm,1.3s						
FIA1	**FINESS Array S**	64.88	334	*e*P	**P**	**01 31 00.6**	**-0.7**
	comp=Z,15nm,1.1s						
FINES	**FINESS Array B**	64.88	334	P	**P**	**01 31 00.3**	**-1.0**
	comp=Z,2.6nm,0.4s,baz=50,slow=5.3,SNR=46						
FINES				LR	LR	02 03 46.3	
	comp=Z,308nm,18.2s,baz=38,slow=40						
FXWY	**Fox Creek**	65.26	52	*e*P	pP	01 31 18.1	-0.4
	comp=Z,4.4nm,1.1s						
RLMT	**Red Lodge**	65.28	50	*e*P	pP	01 31 17.6	-1.0
	comp=Z,6.6nm,1.3s						
TPAW	**Teton Pass**	65.39	52	*e*P	pP	01 31 18.1	-1.2
	comp=Z,14nm,1.3s						
LOHW	**Long Hollow**	65.51	52	*e*P	pP	01 31 19.0	-1.1
	comp=Z,8.5nm,1.4s						
REDW	**Red Top Meadow**	65.53	53	*e*P	pP	01 31 19.9	-0.4
	comp=Z,13nm,1.4s						
OBN	**Obninsk**	65.86	325	*e*P	**P**	**01 31 07.9**	**+0.2**
OBN	**Obninsk**	65.86	325	*e*P	**P**	**01 31 07.9**	**+0.2**
OBN				*e*		01 31 19.2	
OBN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,253nm,16.0s						
SPUT	**South Promonto**	65.93	55	*e*P	pP	01 31 22.4	-0.4
	comp=Z,6.0nm,1.1s						
R11A	**Troy Canyon, C**	65.95	59	*e*P	pP	01 31 22.1	-0.8
	comp=Z,7.6nm,1.2s						
HWUT	**Hardware Ranch**	66.25	54	*e*P	**P**	**01 31 10.4**	**-0.3**
	comp=Z,1.3nm,0.8s						
HWUT	**Hardware Ranch**	66.25	54	*e*P	pP	01 31 23.8	-1.0
	comp=Z,7.1nm,1.3s						
GEYT	**Alibeck**	66.32	300	P	**P**	**01 31 11.4**	**+0.4**
	comp=Z,8.1nm,1.0s,baz=42,slow=4.6,SNR=16						
GEYT				LR	LR	02 02 15.8	
	comp=Z,216nm,18.2s,baz=280,slow=38						
GYA0B	**ALIBECK ARRAY**	66.32	300	*e*P	**P**	**01 31 12.3**	**+1.3**
	comp=Z,18nm,1.0s						
DUG	**Dugway, Tooele**	66.43	56	*e*P	pP	01 31 25.7	-0.3
	comp=Z,10nm,1.1s						
TPNV	**Topopah Spring**	66.43	61	*e*P	pP	01 31 25.0	-1.0
	comp=Z,9.4nm,1.1s						
TPNV	**Topopah Spring**	66.43	61	*e*P	**pP**	**01 31 25.0**	**-1.0**
TPNV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
PDAR	**Pinedale Array**	66.64	52	P	**P**	**01 31 13.9**	**+0.6**
	comp=Z,0.7nm,0.8s,baz=274,slow=4.4,SNR=4.7						
PDAR				LR	LR	01 58 44.7	
	comp=Z,47nm,21.3s,baz=357,slow=34						
WRA	**Warramunga Arr**	66.69	197	P	**P**	**01 31 14.9**	**+1.6**
	comp=Z,1.3nm,0.7s,baz=15,slow=6.7,SNR=7.4						
WRA	**Warramunga Arr**	66.69	197	*e*P	**P**	**01 31 15.8**	**+2.5**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FRB	**Frobisher Bay**	66.88	18	P	**P**	**01 31 13.4**	**-0.6**
	comp=Z,14nm,1.0s,baz=300,slow=11,SNR=5.8						
PSUT	**Pine Spring**	66.88	58	*e*P	pP	01 31 29.0	+0.1
	comp=Z,4.6nm,1.2s						
SHPR	**Sheep Range**	67.39	61	*e*P	pP	01 31 31.8	-0.4
	comp=Z,8.0nm,1.1s						
AFI	**Afiamalu**	67.67	141	LR	LR	01 54 23.8	
	comp=Z,138nm,22.0s,baz=289,slow=30						
CCUT	**Cedar City**	67.81	59	*e*P	pP	01 31 35.2	+0.3
	comp=Z,7.1nm,1.2s						
MSU	**Marysvale**	67.89	57	*e*P	pP	01 31 35.0	-0.4
MSU	**Marysvale**	67.89	57	*e*P	pP	01 31 35.0	-0.4
TMUT	**Trail Mountain**	67.96	56	*e*P	pP	01 31 36.2	+0.3
	comp=Z,5.0nm,1.2s						
MTPU	**Mount Pierson**	68.20	58	*e*P	pP	01 31 37.6	+0.2
	comp=Z,5.0nm,1.0s						
LCMT	**Little Creek M**	68.23	59	*e*P	pP	01 31 37.6	+0.2
	comp=Z,6.0nm,0.9s						
DZM	**Mont Dzumac**	68.38	165	LR	LR	02 02 32.3	
	comp=Z,183nm,18.1s,baz=24,slow=37						
SRU	**San Rafael Swe**	68.48	56	*e*P	pP	01 31 38.6	-0.4
	comp=Z,6.7nm,0.9s						
SRU	**San Rafael Swe**	68.48	56	*e*P	**pP**	**01 31 38.6**	**-0.4**
SRU				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KNB	**Kanab**	68.48	59	*e*P	pP	01 31 39.2	+0.1
	comp=Z,9.7nm,1.1s						
KNB	**Kanab**	68.48	59	*e*P	**pP**	**01 31 39.2**	**+0.1**
KNB				pmax	pmax		
	comp=Z,10.0nm,1.1s						
NC303	**NORSAR Array S**	69.06	341	*e*P	**P**	**01 31 27.5**	**-0.3**
NC405	**NORSAR Array S**	69.07	340	*e*P	**P**	**01 31 28.2**	**+0.3**
NC204	**NORSAR Array S**	69.16	341	*e*P	**P**	**01 31 28.6**	**+0.1**
U15A	**North Rim**	69.19	59	*e*P	pP	01 31 43.5	-0.1
	comp=Z,7.7nm,1.1s						
NB201	**NORSAR Array S**	69.23	340	*e*P	**P**	**01 31 29.0**	**0.0**
NB2	**NORSAR Subarra**	69.26	341	P	**P**	**01 31 28.5**	**-0.6**
	comp=Z,4.3nm,0.5s,baz=29,slow=6.5						
NBO00	**NORSAR Array S**	69.37	341	*e*P	**P**	**01 31 30.2**	**+0.4**
HFS	**Hagfors**	69.44	339	P	**P**	**01 31 29.5**	**-0.7**
	comp=Z,4.7nm,0.4s,baz=56,slow=5.4,SNR=54						
HFS				LR	LR	02 06 47.8	
	comp=Z,120nm,18.3s,baz=28,slow=40						
NAO01	**NORSAR Array S**	69.51	341	*e*P	**P**	**01 31 29.7**	**-0.9**
PV04	**Paradox Valley**	69.90	56	*e*P	pP	01 31 47.6	-0.3
	comp=Z,8.4nm,1.2s						
AKT	**Akhty**	70.01	309	*e*P	**P**	**01 31 35.2**	**+1.0**
AKT				*e*		01 31 55.4	
AKT				*e*		01 34 07.3	
AKT				*e*S	**S**	**01 40 42.0**	**+1.2**
AKT				pmax	pmax		
	comp=Z,43nm,1.1s						
PV03	**Paradox Valley**	70.03	56	*e*P	pP	01 31 47.2	-1.5
	comp=Z,8.2nm,1.3s						
BORG	**Borgarnes**	70.21	357	*e*P	**P**	**01 31 35.8**	**+1.0**
	comp=Z,61nm,1.5s						
BORG	**Borgarnes**	70.21	357	*e*P	**P**	**01 31 35.8**	**+1.0**
BORG				pmax	pmax		
	comp=Z,61nm,1.5s						
WUAZ	**Wupatki**	70.35	59	*e*P	pP	01 31 50.4	-0.3
	comp=Z,6.3nm,1.2s						
ASAR	**Alice Springs**	70.39	197	P	**P**	**01 31 39.0**	**+2.6**
	comp=Z,1.2nm,0.8s,baz=8.4,slow=5.8,SNR=5.8						
ASAR				LR	LR	02 03 09.5	
	comp=Z,45nm,19.6s,baz=46,slow=36						
ASAR	**Alice Springs**	70.39	197	P	**P**	**01 31 39.0**	**+2.6**
Y14A	**Wickenburg**	70.40	61	*e*P	pP	01 31 50.6	-0.3
	comp=Z,4.1nm,1.1s						
SMCO	**Snowmass**	70.48	54	*e*P	pP	01 31 50.8	-0.9
	comp=Z,4.1nm,1.1s						
ISCO	**Idaho Springs**	70.83	53	*e*P	pP	01 31 53.2	-0.5
ISCO	**Idaho Springs**	70.83	53	*e*P	pP	01 31 53.2	-0.5
KIV	**Kislovodsk**	70.97	314	*e*P	**P**	**01 31 41.5**	**+1.6**
KIV	**Kislovodsk**	70.97	314	*e*P	**P**	**01 31 41.3**	**+1.3**
KIV	**Kislovodsk**	70.97	314	*i* P	**P**	**01 31 41.2**	**+1.3**
	SNR=5.3						
KIV	**Kislovodsk**	70.97	314	*e*P	**P**	**01 31 41.5**	**+1.6**
KIV				pmax	pmax		
	comp=Z,40nm,1.1s						
KIV				MLR	MLR		
	comp=Z,399nm,18.0s						
KBZ	**Khabaz**	71.02	313	P	**P**	**01 31 41.1**	**+1.0**
	comp=Z,28nm,0.9s,baz=49,slow=1.5,SNR=33						
KBZ				LR	LR	02 06 59.3	
	comp=Z,603nm,19.1s,baz=48,slow=39						
X16A	**Lo Mia Camp, P**	71.05	60	*e*P	pP	01 31 55.0	0.0
	comp=Z,4.3nm,1.0s						
PALK	**Pallekele**	71.26	261	P	**P**	**01 31 40.4**	**-1.7**
S22A	**4UR Ranch, Cre**	71.54	55	*e*P	pP	01 31 57.1	-1.0
	comp=Z,5.5nm,1.2s						
SUW	**Suwalki**	71.73	331	*e*P	**P**	**01 31 43.7**	**-0.5**
SUW	**Suwalki**	71.73	331	*e*P	**P**	**01 31 43.7**	**-0.5**
AKASG	**Malin Array Be**	72.11	326	P	**P**	**01 31 46.4**	**-0.1**
	comp=Z,3.5nm,0.4s,baz=37,slow=6.2,SNR=27						
AKASG				LR	LR	02 06 05.4	
	comp=Z,298nm,18.8s,baz=45,slow=38						
AKBB	**Malin Array Si**	72.11	326	*e*P	**P**	**01 31 45.7**	**-0.9**
	comp=Z,22nm,1.1s						
AKBB	**Malin Array Si**	72.11	326	*e*P	**P**	**01 31 45.7**	**-0.9**
AKBB				pmax	pmax		
	comp=Z,22nm,1.1s						
KIEV	**Kiev**	72.12	326	*e*P	**P**	**01 31 46.2**	**-0.4**
KIEV	**Kiev**	72.12	326	*e*P	**P**	**01 31 46.0**	**-0.6**
	comp=Z,19nm,1.1s						
KIEV	**Kiev**	72.12	326	*i* P	**P**	**01 31 46.1**	**-0.6**
	SNR=8.2						
KIEV	**Kiev**	72.12	326	*d i*P	**P**	**01 31 46.2**	**-0.4**
KIEV				pmax	pmax		
	comp=Z,14nm,1.1s						
AK11	**Malin Array Si**	72.15	326	*e*P	**P**	**01 31 46.5**	**-0.4**
AKH	**Akhalkalaki**	72.34	311	⇓*i*P	**P**	**01 31 50.0**	**+1.6**
AKH	**Akhalkalaki**	72.34	311	*e*P	**P**	**01 31 49.6**	**+1.2**
	comp=Z,28nm,1.2s						
AKH	**Akhalkalaki**	72.34	311	*e*P	**P**	**01 31 49.6**	**+1.2**
AKH				pmax	pmax		
	comp=Z,28nm,1.2s						
GNI	**Garni**	72.56	310	P	**P**	**01 31 51.1**	**+1.5**
	comp=Z,14nm,0.9s,baz=259,slow=5.2,SNR=16						
GNI				LR	LR	02 08 25.2	
	comp=Z,214nm,18.6s,baz=58,slow=40						
GNI	**Garni**	72.56	310	*e*P	**P**	**01 31 52.2**	**+2.5**
GNI	**Garni**	72.56	310	*i* P	**P**	**01 31 52.1**	**+2.4**
	SNR=11						
GNI	**Garni**	72.56	310	⇑*i*P	**P**	**01 31 51.4**	**+1.7**
GNI				pmax	pmax		
	comp=Z,119nm,1.3s						
SOC	**Sochi**	72.73	315	*c i*P	**P**	**01 31 50.3**	**-0.1**
ECSD	**EROS Data Cent**	72.83	45	*e*P	**P**	**01 31 50.9**	**-0.1**
	comp=Z,15nm,1.6s						
ANN	**Anapa**	72.96	317	*e*P	**P**	**01 31 52.4**	**+0.7**
ANN				pmax	pmax		
	comp=Z,115nm,1.3s						
ANMO	**Albuquerque**	73.69	57	LR	LR	02 00 49.3	
	comp=Z,85nm,21.0s,baz=340,slow=33						
GKP	**Gorka Klasztor**	74.32	333	*e*P	**P**	**01 31 59.6**	**+0.1**
GKP	**Gorka Klasztor**	74.32	333	*e*P	**P**	**01 31 59.6**	**+0.1**
BEL	**Belsk**	74.35	331	*e*P	**P**	**01 31 59.8**	**+0.1**
BEL	**Belsk**	74.35	331	*e*P	**P**	**01 31 59.8**	**+0.1**
SORM	**Soroca**	74.48	324	⇑*i*P	**P**	**01 32 00.0**	**-0.5**
LVV	**L'vov**	74.83	328	*e*P	**P**	**01 32 02.5**	**-0.1**
LVV				MLR	MLR		
	comp=N,50nm,15.0s						
LVV				MLR	MLR		
	comp=E,100nm,15.0s						
LVV				MLR	MLR		
	comp=Z,100nm,15.0s						
SCHQ	**Schefferville**	75.18	22	P	**P**	**01 32 05.0**	**+0.5**
	comp=Z,3.0nm,0.7s,baz=313,slow=4.4,SNR=5.0						
SCHQ	**Schefferville**	75.18	22	P	**P**	**01 32 05.0**	**+0.5**
KIS	**Kishinev**	75.18	323	*e*P	**P**	**01 32 05.0**	**+0.4**
KIS				*e*L	L	02 06 16.0	
KIS				LRM	MLR	02 08 02.0	
	comp=Z,600nm,16.0s						
KIS	**Kishinev**	75.18	323	*e*P	**P**	**01 32 05.0**	**+0.4**
KIS				*e*		01 32 14.0	
KIS				MLR	MLR		
	comp=N,500nm,16.0s						
KIS				MLR	MLR		
	comp=Z,600nm,16.0s						
KIS				MLR	MLR		
	comp=Z,600nm,16.0s						
BANOM	**Banah**	75.42	292	P	**P**	**01 32 07.8**	**+1.4**
SHME	**Shamm**	75.44	292	P	**P**	**01 32 07.6**	**+1.0**
KWP	**Kalwaria Pacla**	75.48	328	*e*P	**P**	**01 32 07.0**	**+0.6**
KWP	**Kalwaria Pacla**	75.48	328	*e*P	**P**	**01 32 07.0**	**+0.6**
WSAR	**Wadi Sarin**	75.71	289	LR	LR	02 09 39.5	
	comp=Z,168nm,18.8s,baz=66,slow=39						
LEOM	**Leova**	75.84	323	⇑*i*P	**P**	**01 32 08.7**	**+0.3**
MDH	**Madha**	75.85	292	P	**P**	**01 32 09.1**	**+0.3**
OJC	**Ojcow**	76.04	330	*e*P	**P**	**01 32 09.8**	**+0.3**
OJC	**Ojcow**	76.04	330	*e*P	**P**	**01 32 09.8**	**+0.3**
	comp=Z,41nm,1.2s						
OJC	**Ojcow**	76.04	330	*e*P	**P**	**01 32 09.8**	**+0.3**
BUR08	**Bucovina Ar. S**	76.15	326	*e*P	**P**	**01 32 10.5**	**+0.2**
UOSS	**Minazif**	76.16	291	P	**P**	**01 32 11.4**	**+0.8**
BUR04	**Bucovina Ar. S**	76.16	326	*e*P	**P**	**01 32 10.6**	**+0.2**
BURAR	**Bucovina Array**	76.16	326	⇑*i*P	**P**	**01 32 10.6**	**+0.2**
HATD	**Hatta, Dubai**	76.29	291	P	**P**	**01 32 12.8**	**+1.4**
BIZ	**Bicaz**	76.35	325	⇑*i*P	**P**	**01 32 11.9**	**+0.5**
ASHO	**Ashiyiah**	76.43	291	P	**P**	**01 32 12.2**	**-0.1**
UZH	**Uzhgorod**	76.46	328	*c i*P	**P**	**01 32 12.2**	**+0.3**
UZH				*i*		01 32 20.4	
TESR	**Tescani**	76.47	324	⇑*i*P	**P**	**01 32 12.3**	**+0.3**
CRVS	**Cervenica-Dubn**	76.55	329	*e*P	**P**	**01 32 12.8**	**+0.4**
CRVS				pmax	pmax		
	comp=Z,17nm,1.4s						
CRVS	**Cervenica-Dubn**	76.55	329	*e*P	**P**	**01 32 12.8**	**+0.4**
KSP	**Ksiaz**	76.70	333	*e*P	**P**	**01 32 13.3**	**+0.1**
KSP	**Ksiaz**	76.70	333	*e*P	**P**	**01 32 13.3**	**+0.1**
TRPA	**Tarpa**	76.78	328	⇑*e*P	**P**	**01 32 14.8**	**+1.1**
PETR	**Petresti**	76.86	323	⇑*i*P	**P**	**01 32 15.5**	**+1.3**
CFR	**Carcaliu**	76.91	323	⇑*i*P	**P**	**01 32 14.3**	**-0.2**
ARCR	**ARCALIA**	76.94	326	⇑*i*P	**P**	**01 32 16.0**	**+1.4**
VRI	**Vrincioaia**	76.96	324	⇓*i*P	**P**	**01 32 15.8**	**+1.0**
PLOR	**Plostina**	77.00	324	⇑*i*P	**P**	**01 32 15.6**	**+0.5**
LANS	**Liptovska Anna**	77.06	330	*e*P	**P**	**01 32 16.7**	**+1.4**
LANS	**Liptovska Anna**	77.06	330	*e*P	**P**	**01 32 16.7**	**+1.4**
UPC	**Upice**	77.08	333	*e*P	**P**	**01 32 16.3**	**+0.9**
UPC	**Upice**	77.08	333	*e*P	**P**	**01 32 16.3**	**+0.9**
DPC	**Dobruska-Polom**	77.11	332	*e*P	**P**	**01 32 16.6**	**+1.0**
DPC	**Dobruska-Polom**	77.11	332	*e*P	**P**	**01 32 16.6**	**+1.0**
KRLC	**Kraliky**	77.19	332	*e*P	**P**	**01 32 16.8**	**+0.7**
KRLC	**Kraliky**	77.19	332	*e*P	**P**	**01 32 16.8**	**+0.7**
MORC	**Moravsky Berou**	77.19	331	⇑*i*P	**P**	**01 32 16.5**	**+0.4**
MORC	**Moravsky Berou**	77.19	331	⇑*i*P	**P**	**01 32 16.5**	**+0.4**
KECS	**Kecovo**	77.25	329	*e*P	**P**	**01 32 16.6**	**+0.2**
KECS				pmax	pmax		
	comp=Z,9.0nm,1.2s						
KECS	**Kecovo**	77.25	329	*e*P	**P**	**01 32 16.6**	**+0.2**
CLL	**Collm**	77.32	335	*i* P	**P**	**01 32 16.4**	**-0.3**
	comp=Z,33nm,1.1s						
CLL				*i*		01 32 21.8	
CLL				*i* (pP)	**pP**	**01 32 30.8**	**-0.3**
CLL				Lm	MLR	02 09 00.0	
	comp=Z,300nm,18.7s						
CLL	**Collm**	77.32	335	*e*P	**P**	**01 32 16.5**	**-0.3**
CLL	**Collm**	77.32	335	*e*P	**P**	**01 32 16.4**	**-0.3**
	comp=Z,31nm,1.1s						
CLL	**Collm**	77.32	335	*e*P	**P**	**01 32 16.5**	**-0.3**
CLL				pmax	pmax		
	comp=Z,31nm,1.1s						
TIRR	**Tirgusor**	77.36	322	⇑*i*P	**P**	**01 32 17.3**	**+0.3**
HARR	**Harsova**	77.39	322	⇑*i*P	**P**	**01 32 17.6**	**+0.4**
BRG	**Berggiesshubel**	77.42	334	*i* P	**P**	**01 32 17.1**	**-0.1**
	comp=Z,17nm,1.2s						
BRG	**Berggiesshubel**	77.42	334	*i* P	**P**	**01 32 17.1**	**-0.1**
BRG				pmax	pmax		
	comp=Z,17nm,1.2s						
TLB	**Topalu**	77.42	322	⇑*i*P	**P**	**01 32 18.1**	**+0.7**
DOPR	**Dopca**	77.43	325	⇓*i*P	**P**	**01 32 19.5**	**+2.0**
EKA	**Eskdalemuir Ar**	77.51	345	P	**P**	**01 32 18.0**	**+0.3**
	comp=Z,1.5nm,0.3s,baz=19,slow=5.0,SNR=31						
PVCC	**Panska Ves**	77.52	333	*e*P	**P**	**01 32 18.5**	**+0.7**
PVCC	**Panska Ves**	77.52	333	*e*P	**P**	**01 32 18.5**	**+0.7**
CJR	**Cluj-Napoca**	77.54	326	⇑*i*P	**P**	**01 32 19.0**	**+0.9**
MLR	**Muntele Rosu**	77.58	324	P	**P**	**01 32 19.1**	**+0.6**
	comp=Z,4.0nm,1.1s,baz=65,slow=4.5,SNR=18						
MLR	**Muntele Rosu**	77.58	324	⇑*i*P	**P**	**01 32 18.9**	**+0.4**
MLR	**Muntele Rosu**	77.58	324	*e*P	**P**	**01 32 19.0**	**+0.6**
	comp=Z,23nm,1.1s						
ISR	**Istrita**	77.64	323	⇓*i*P	**P**	**01 32 19.5**	**+0.8**
LTVH	**Lˆ'tavˆ'rtes,**	77.64	328	⇑*e*P	**P**	**01 32 20.8**	**+2.3**
DRGR		77.82	327	⇑*i*P	**P**	**01 32 20.2**	**+0.5**
VYHS	**Vyhne**	77.84	330	*e*P	**P**	**01 32 20.0**	**+0.3**
VYHS				pmax	pmax		
	comp=Z,12nm,1.2s						
VYHS	**Vyhne**	77.84	330	*e*P	**P**	**01 32 20.0**	**+0.3**
ICOR	**Ion Corvin**	77.90	322	⇑*i*P	**P**	**01 32 21.1**	**+1.0**
VRAC	**Vranov**	77.92	332	⇓*i*P	**P**	**01 32 20.6**	**+0.5**
VRAC	**Vranov**	77.92	332	⇑*i*P	**P**	**01 32 21.0**	**+0.9**
JAVC	**Velka Javorina**	77.93	331	⇑*i*P	**P**	**01 32 21.7**	**+1.4**
PSZ	**Piszkesteto**	77.94	329	⇑*i*P	**P**	**01 32 20.8**	**+0.5**
PSZ	**Piszkesteto**	77.94	329	⇑*e*P	**P**	**01 32 21.4**	**+1.1**
PSZ	**Piszkesteto**	77.94	329	*e*P	**P**	**01 32 21.4**	**+1.1**
	comp=Z,26nm,1.2s						
PSZ	**Piszkesteto**	77.94	329	*e*P	**P**	**01 32 21.4**	**+1.1**
PSZ				pmax	pmax		
	comp=Z,26nm,1.2s						
GOPC	**GO Pecny, Ondr**	77.98	333	*e*P	**P**	**01 32 21.3**	**+0.8**
GOPC	**GO Pecny, Ondr**	77.98	333	*e*P	**P**	**01 32 21.3**	**+0.8**
VOIR		78.00	325	⇑*i*P	**P**	**01 32 21.4**	**+0.7**
PRU	**Pruhonice**	78.00	333	*e*P	**P**	**01 32 21.1**	**+0.6**
PRU				*e*x	x	01 32 24.8	
PRU	**Pruhonice**	78.00	333	*e*P	**P**	**01 32 21.1**	**+0.6**
PRU				*e*		01 32 24.8	
KRUC	**Moravsky**	78.19	332	⇑*i*P	**P**	**01 32 22.0**	**+0.4**
WMOK	**Wichita Mounta**	78.25	52	*e*P	pP	01 32 36.0	-0.7
	comp=Z,3.0nm,1.1s						
WMOK	**Wichita Mounta**	78.25	52	*e*P	**pP**	**01 32 36.0**	**-0.7**
WMOK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
SMOL	**Smolenice**	78.31	331	*e*P	**P**	**01 32 23.2**	**+0.9**
SMOL	**Smolenice**	78.31	331	*e*P	**P**	**01 32 23.2**	**+0.9**
MODS	**Modra-Piesok**	78.48	331	*e*P	**P**	**01 32 24.0**	**+0.7**
MODS				pmax	pmax		
	comp=Z,32nm,1.3s						
MODS	**Modra-Piesok**	78.48	331	*e*P	**P**	**01 32 24.0**	**+0.7**
LOT	**Lotru**	78.51	325	⇓*i*P	**P**	**01 32 22.8**	**-0.8**
BUD	**Budapest**	78.62	329	⇑*e*P	**P**	**01 32 25.0**	**+1.0**
BR131	**Keskin Array S**	78.64	316	*e*P	**P**	**01 32 25.5**	**+1.0**
BRTR	**Keskin Array B**	78.64	316	P	**P**	**01 32 25.4**	**+1.0**
	comp=Z,6.7nm,1.1s,baz=83,slow=3.9,SNR=26						
LPIG	**La Paz**	78.83	67	LR	LR	01 58 56.9	
	comp=Z,53nm,20.1s,baz=318,slow=29						
ANTO	**Ankara**	78.94	316	⇓*i*P	**P**	**01 32 26.6**	**+0.6**
ANTO	**Ankara**	78.94	316	*e*P	**P**	**01 32 26.6**	**+0.6**
	comp=Z,28nm,1.3s						
ANTO	**Ankara**	78.94	316	*e*P	**P**	**01 32 26.6**	**+0.6**
ANTO				pmax	pmax		
	comp=Z,28nm,1.3s						
CSKK	**Csˆ‡kako**	79.00	330	⇑*e*P	**P**	**01 32 26.7**	**+0.6**
KHC	**Kasperske Hory**	79.05	333	*e*P	**P**	**01 32 27.0**	**+0.6**
KHC				*e*PCP	**PcP**	**01 32 31.3**	**-3.5**
KHC	**Kasperske Hory**	79.05	333	*e*P	**P**	**01 32 26.9**	**+0.5**
	comp=Z,11nm,1.2s						
KHC	**Kasperske Hory**	79.05	333	*e*P	**P**	**01 32 27.0**	**+0.6**
KHC				*e*		01 32 31.3	
BZS	**Buzias**	79.22	327	⇑*i*P	**P**	**01 32 27.1**	**-0.2**
GEC2	**GERESS Array S**	79.27	333	*e*P	**P**	**01 32 28.1**	**+0.4**
	comp=Z,9.7nm,1.2s						
GEC2	**GERESS Array S**	79.27	333	*e*P	**P**	**01 32 28.1**	**+0.4**
GEC2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
GERES	**GERESS Array B**	79.27	333	P	**P**	**01 32 28.1**	**+0.4**
	comp=Z,1.2nm,0.4s,baz=45,slow=4.5,SNR=26						
GEA0	**GERESS Array S**	79.27	333	*e*P	**P**	**01 32 27.5**	**-0.1**
GRFO	**Grafenberg**	79.29	335	*e*P	**P**	**01 32 28.6**	**+1.0**
	comp=Z,18nm,0.9s						
GRFO	**Grafenberg**	79.29	335	*e*P	**P**	**01 32 28.6**	**+1.0**
GRFO				pmax	pmax		
	comp=Z,18nm,0.9s						
TXAR	**Lajitas Array**	79.32	59	P	**P**	**01 32 28.3**	**0.0**
	comp=Z,0.8nm,0.8s,baz=301,slow=3.4,SNR=6.4						
TXAR	**Lajitas Array**	79.32	59	*e*P	**P**	**01 32 28.8**	**+0.5**
TXAR	**Lajitas Array**	79.32	59	*e*P	**P**	**01 32 28.8**	**+0.5**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
CONA	**Conrad Observa**	79.35	331	*e*P	**P**	**01 32 29.0**	**+0.9**
	comp=Z,23nm,1.4s,SNR=15						
HERR	**Herculane**	79.52	326	⇑*i*P	**P**	**01 32 29.0**	**+0.1**
RAR	**Rarotonga**	79.68	134	LR	LR	02 00 12.8	
	comp=Z,132nm,20.7s,baz=312,slow=30						
CCM	**Cathedral Cave**	79.77	45	*e*P	**P**	**01 32 28.0**	**-2.4**
	comp=Z,12nm,1.3s						
CCM	**Cathedral Cave**	79.77	45	*e*P	**P**	**01 32 28.0**	**-2.4**
CCM				pmax	pmax		
	comp=Z,12nm,1.3s						
MORH	**Mˆ‡rˆ¡gy, Hung**	79.84	329	⇓*e*P	**P**	**01 32 31.1**	**+0.5**
MEM	**Membach**	79.92	338	⇓P	**P**	**01 32 31.7**	**+0.7**
MOA	**Molln**	79.95	332	*e*P	**P**	**01 32 31.6**	**+0.4**
	comp=Z,7.6nm,1.1s						
ARSA	**Arzberg**	80.05	331	*e*P	**P**	**01 32 32.3**	**+0.5**
BEHE	**Becsehely**	80.29	330	⇑*e*P	pP	01 32 47.9	+0.3
SOKA	**Soboth**	80.72	331	*e*P	**P**	**01 32 35.8**	**+0.3**
	comp=Z,14nm,1.0s,SNR=7.1						
WLF	**Walferdange**	80.74	338	⇑P	**P**	**01 32 36.5**	**+1.0**
DOU	**Dourbes**	80.75	339	⇓P	**P**	**01 32 35.8**	**+0.3**
	comp=Z,6.6nm,1.9s						
KBA	**Koelnbreinsper**	80.93	332	*e*P	**P**	**01 32 37.2**	**+0.5**
	comp=Z,17nm,1.1s,SNR=6.7						
VTS	**Vitosha**	81.09	324	⇓*i*P	**P**	**01 32 37.8**	**+0.1**
VTS	**Vitosha**	81.09	324	*e*P	**P**	**01 32 38.0**	**+0.4**
	comp=Z,36nm,1.2s						
VTS	**Vitosha**	81.09	324	*e*P	**P**	**01 32 38.0**	**+0.4**
VTS				pmax	pmax		
	comp=Z,37nm,1.2s						
DIVS	**Divibare**	81.12	327	*e*P	**P**	**01 32 37.5**	**-0.2**
	comp=Z,19nm,1.5s						
MYKA	**Terra Mystica**	81.23	332	*i* P	**P**	**01 32 37.9**	**-0.3**
	comp=Z,8.6nm,1.3s						
MIAR	**Mount Ida**	81.24	49	*e*P	**P**	**01 32 38.6**	**+0.2**
	comp=Z,2.3nm,0.8s						
MIAR	**Mount Ida**	81.24	49	*e*P	**P**	**01 32 38.6**	**+0.2**
MIAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ALN	**Alexandroupoli**	81.26	321	*e*P	**P**	**01 32 39.2**	**+0.8**
	comp=Z,14nm,1.3s						
ALN	**Alexandroupoli**	81.26	321	*e*P	**P**	**01 32 39.2**	**+0.8**
ALN				pmax	pmax		
	comp=Z,14nm,1.3s						
WATA	**Walderalm**	81.27	334	*i* P	**P**	**01 32 39.9**	**+1.4**
	comp=Z,4.3nm,0.4s						
WTTA	**Wattenberg**	81.31	334	*e*P	**P**	**01 32 39.4**	**+0.6**
	comp=Z,15nm,1.2s						
BFO	**Black Forest**	81.36	336	*e*P	**P**	**01 32 39.3**	**+0.5**
	comp=Z,1.4nm,1.0s						
BFO	**Black Forest**	81.36	336	*c e*P	**P**	**01 32 39.8**	**+1.0**
WHAR	**Wooly Hollow**	81.36	48	*e*P	pP	01 32 51.4	-2.1
	comp=Z,12nm,1.2s						
RETA	**Reutte**	81.39	334	*i* P	**P**	**01 32 39.4**	**+0.4**
	comp=Z,14nm,1.4s,SNR=5.2						
MOTA	**Moosalm**	81.41	334	*i* P	**P**	**01 32 40.4**	**+1.1**
	comp=Z,24nm,1.3s,SNR=8.7						
ABTA	**Abfaltersbach**	81.49	333	*i* P	**P**	**01 32 39.3**	**-0.3**
	comp=Z,6.1nm,1.3s						
ECH	**Echery**	81.79	337	*e*P	**P**	**01 32 41.4**	**+0.3**
	comp=Z,8.7nm,1.0s						
ECH	**Echery**	81.79	337	*e*P	**P**	**01 32 41.4**	**+0.3**
ECH				pmax	pmax		
	comp=Z,9.0nm,1.0s						
FETA	**Feichten**	81.81	334	*i* P	**P**	**01 32 41.6**	**+0.2**
	comp=Z,11nm,1.1s						
DAVOX	**Davos/Dischmat**	82.29	334	P	**P**	**01 32 42.3**	**-1.7**
	comp=Z,6.6nm,1.1s,baz=11,slow=5.2,SNR=4.1						
DAVOX				LR	LR	02 12 43.6	
	comp=Z,139nm,19.5s,baz=49,slow=38						
PPT	**Papeete**	82.29	124	LR	LR	02 01 53.4	
	comp=Z,168nm,20.7s,baz=338,slow=30						
T47A	**Sharon Grove**	82.65	43	*e*P	pP	01 32 58.4	-1.9
	comp=Z,13nm,1.1s						
MMAI	**Mount Meron Ar**	82.88	310	P	**P**	**01 32 48.5**	**+1.4**
	comp=Z,4.2nm,0.8s,baz=54,slow=7.4,SNR=4.4						
FNA	**Florina**	83.36	324	*e*P	**P**	**01 32 49.9**	**+0.5**
	comp=Z,6.2nm,1.0s						
FNA	**Florina**	83.36	324	*e*P	**P**	**01 32 49.9**	**+0.5**
FNA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
RAYN	**Ar Rayn**	84.05	297	*e*P	**P**	**01 32 53.3**	**+0.1**
	comp=Z,12nm,1.1s						
RAYN	**Ar Rayn**	84.05	297	*i* P	**P**	**01 32 54.9**	**+1.7**
	SNR=8.9						
RAYN	**Ar Rayn**	84.05	297	*e*P	**P**	**01 32 53.3**	**+0.1**
RAYN				pmax	pmax		
	comp=Z,12nm,1.1s						
SWET	**Sewanee**	84.64	44	*e*P	pP	01 33 07.4	-3.2
	comp=Z,12nm,1.1s						
CPCT	**Cooper Cave**	85.13	43	*e*P	pP	01 33 10.8	-2.2
	comp=Z,10nm,1.1s						
TKL	**Tuckaleechee C**	85.32	42	P	**P**	**01 32 58.1**	**-1.3**
	comp=Z,1.7nm,0.8s,baz=159,slow=17,SNR=2.9						
TKL	**Tuckaleechee C**	85.32	42	*e*P	pP	01 33 11.9	-2.1
	comp=Z,9.0nm,1.0s						
Z50A	**Ashland**	86.21	45	*e*P	pP	01 33 17.4	-1.0
	comp=Z,9.4nm,1.0s						
IDI	**Anoyia**	86.36	319	P	**P**	**01 33 03.9**	**-0.8**
	comp=Z,7.3nm,0.9s,baz=309,slow=13,SNR=4.0						
KEST	**Kesra**	92.39	330	P	**P**	**01 33 33.2**	**+0.2**
	comp=Z,6.0nm,1.0s,baz=267,slow=4.2,SNR=6.2						
ESDC	**Sonseca Array**	92.61	341	P	**P**	**01 33 32.2**	**-1.8**
	comp=Z,0.2nm,0.4s,baz=0.5,slow=4.0,SNR=6.2						
TORD	**Torodi Ar. Bea**	115.73	327	PKP	**PKPdf**	**01 39 04.6**	**-0.2**
	comp=Z,0.4nm,0.9s,baz=352,slow=3.8						
SAML	**Samuel**	133.19	50	*e*PKPdf	**PKPdf**	**01 39 38.0**	**-0.2**
SAML	**Samuel**	133.19	50	*e*PKIKP	**PKPdf**	**01 39 38.0**	**-0.2**
SNAA	**Sanae**	150.75	196	PKPbc	**PKPbc**	**01 40 13.7**	**+0.5**
	comp=Z,1.3nm,0.8s,baz=320,slow=7.9,SNR=5.0						

JMA 07 01:35:05.6±0.2, 38°.03N×144°.58E, h33^{km}, M3.7, Off east

coast of Honshu

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.51	296	P	Pn	01 35 45.9	+1.8
OFUJ				*e*S	Sn	01 36 15.5	+1.9
JIO	Ouri	2.58	280	P	Pn	01 35 46.6	+1.6
JIO				*e*S	Sn	01 36 16.8	+1.6
MIYJ	Miyakonagasawa	2.65	306	P	Pn	01 35 47.3	+1.3
MIYJ				*e*S	Sn	01 36 19.1	+2.1
JMK	Ichinoseki	2.79	290	*e*S	Sn	01 36 23.1	+2.6
JOM	Ohasama	2.95	300	P	Pn	01 35 52.2	+2.1
JOM				*e*S	Sn	01 36 27.0	+2.7
JFT	Otama	3.40	263	*e*S	Sn	01 36 37.8	+2.3
JYK	Kaneyama	3.43	286	P	Pn	01 35 59.9	+3.2
JYK				*e*S	Sn	01 36 39.6	+3.4
JOT	Ohata	4.32	322	*e*S	Sn	01 36 58.2	+0.2
JRY	Ryogami san	4.97	248	P	Pn	01 36 19.1	+1.2
JRY				*e*S	Sn	01 37 13.2	-1.0
NEM2	Nemuro 2	5.40	9	P	Pn	01 36 21.1	-2.7
NEM2				*e*S	Sn	01 37 18.7	-6.1
JTKR	Abashiri--Toko	5.96	355	P	Pn	01 36 31.6	+0.2
JTKR				*e*S	Sn	01 37 35.1	-3.3

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*IDC **07** 01:42:40.5±1.3, 35°.95N×67°.79E, h0^{km}, mb3.6/4, mb1 3.6/8, mb1mx3.4/62, mbtmp3.5/8, ML3.2/3, Error ellipse: s-maj=26.8km s-min=19.9km az=129.0*

*ISCJB **07** 01:42:44.1±0.8, 36°.54N±0°.07×67°.50E±0°.06, h22^{km}, mb3.7/4, Error ellipse: s-maj=10.3km s-min=6.5km az=156.7*

*NNC **07** 01:42:51.2±3.8, 36°.92N×67°.78E, h0^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=29.1km s-min=25.1km az=15.0*

ISC 07 01:42:46.4±0.8**, 36°.53N**±0°.07×**67°.49E**±0°.06**, h22**^{km}**, n13, σ1^{s}.94**/19**, mb3.8**/4**, 5C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
CEP	Cherat	4.51	126	P	Pn	01 43 53.1	-0.5
CEP				S	Sb	01 45 02.0	+2.9
CEP	Cherat	4.51	126	P	Sb	01 45 02.0	+2.9
SFK	Sufi-Kurgan	5.87	52	⇓Pn	Pn	01 44 13.4	+1.1
	1.1nm,0.3s						
SFK				⇑Sn	Sn	01 45 18.6	-0.3
	8.5nm,0.3s						
KK31	Karatay Array	6.96	19	⇑Pn	Pn	01 44 29.2	+2.1
	0.5nm,0.2s,baz=196,slow=13						
KK31				⇑Sn	Sn	01 45 44.0	-1.6
	3.8nm,0.4s,baz=201,slow=24						
MNAS	Manas	7.09	32	⇑Pn	Pn	01 44 30.2	+1.1
	0.7nm,0.2s						
MNAS				⇑Sn	Sn	01 45 48.6	-0.4
	8.9nm,0.9s						
GEYT	Alibeck	7.61	283	Pn	Pn	01 44 36.9	+0.9
	0.3nm,0.3s,baz=86,slow=12,SNR=4.5						
GEYT				Sn	Sn	01 46 01.8	+0.2
	0.7nm,0.3s,baz=258,slow=40,SNR=5.0						
MKAR	Makanchi Array	15.05	43	Pn	Pn	01 46 15.3	-2.4
	baz=232,slow=15,SNR=3.0						
KURBB	Kurchatov Arra	16.17	26	Pn	Pn	01 46 31.4	-0.7
	0.0nm,0.3s,baz=216,slow=9.5,SNR=4.0						
BVAR	Borovoye Array	16.61	6	Pn	Pn	01 46 37.2	-0.6
	0.3nm,0.3s,baz=184,slow=11,SNR=5.2						
BVAR				Sn	Sn	01 49 42.7	+1.2
	0.1nm,0.3s,baz=232,slow=35,SNR=3.2						
ZALV	Zalesovo Beam	21.16	29	P	P	01 47 29.4	-0.5
	0.4nm,0.3s,baz=219,slow=11,SNR=3.6						
FINES	FINESS Array B	35.90	327	P	P	01 49 46.9	+2.3
	1.5nm,0.8s,baz=127,slow=11,SNR=3.0						
TORD	Torodi Ar. Bea	62.90	266	P	P	01 53 10.4	-0.8
	0.4nm,0.8s,baz=56,slow=5.7						
WRA	Warramunga Arr	84.44	120	P	P	01 55 13.2	-4.3
	1.2nm,1.2s,baz=327,slow=4.9,SNR=3.7						

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*IDC **07** 02:54:15.9±2.2, 32°.18N×141°.57E, h0^{km}, mb3.7/5, mb1 3.7/6, mb1mx3.4/66, mbtmp3.6/6, ML3.3/1, MS2.8/1, Ms1 2.8/1, ms1mx2.1/64, Error ellipse: s-maj=74.8km s-min=23.4km az=60.0*

*ISCJB **07** 02:54:17.8±1.0, 32°.48N±0°.06×141°.97E±0°.09, h39^{km}, mb3.6/5, Error ellipse: s-maj=11.1km s-min=7.9km az=164.2*

*JMA **07** 02:54:17.3±0.2, 32°.42N×141°.94E, h81^{km}, M3.1*

ISC 07 02:54:20.4±1.4**, 32°.44N**±0°.08×**141°.9E**±0°.1**, h39**^{km}**, n16, σ1^{s}.31**/22**, mb3.7**/5**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JHJ2	Mitsune	1.85	292	P	Pn	02 54 48.7	-0.9
JHJ2				S	Sn	02 55 12.9	+1.1
JHCJ	Hachijojimakas	1.85	290	P	Pn	02 54 48.6	-1.0
JHJ	Hachijo jima 2	1.88	292	Pn	Pn	02 54 48.3	-1.7
	37nm,0.3s,baz=138,slow=24,SNR=9.2						
JHJ				Sn	Sn	02 55 11.3	-1.2
	25nm,0.3s,baz=54,slow=19,SNR=4.8						
BSO1	Boso 1	2.33	342	P	Pn	02 54 54.9	-0.8
BSO3	Boso 3	2.61	335	P	Pn	02 54 59.2	-0.6
BSO3				*e*S	Sn	02 55 30.4	+0.3
JHU	Hanno	4.02	328	*e*S	Sn	02 56 06.0	+0.7
JRY	Ryogami san	4.33	326	P	Pn	02 55 23.8	+0.1
JRY				*e*S	Sn	02 56 13.3	+0.4
JAG	Ashikaga	4.44	334	P	Pn	02 55 24.5	-0.8
JAG				*e*S	Sn	02 56 15.7	0.0
MJAR	Matsushiro Arr	5.08	325	Pn	Pn	02 55 33.4	-0.6
	1.0nm,0.3s,baz=159,slow=12,SNR=7.2						
MJAR				Sn	Sn	02 56 29.2	-2.3
	0.3nm,0.3s,baz=84,slow=33,SNR=2.5						
JFT	Otama	5.22	347	P	Pn	02 55 35.0	-0.9
JFT				*e*S	Sn	02 56 32.3	-2.5
JOW	Kunigami	13.07	248	LR	LR	03 02 05.7	
	comp=Z,38nm,19.1s,baz=234,slow=37						
SONM	Songino Array	30.85	310	P	P	03 00 33.4	+0.5
	0.4nm,0.6s,baz=128,slow=11,SNR=2.7						
MKAR	Makanchi Array	46.99	306	P	P	03 02 47.7	+0.1
	0.5nm,0.5s,baz=88,slow=9.0,SNR=6.0						
KURBB	Kurchatov Arra	49.21	311	P	P	03 03 04.0	-0.7
	0.3nm,0.3s,baz=89,slow=8.2,SNR=3.8						
WRA	Warramunga Arr	52.59	189	P	P	03 03 29.1	-1.1
	0.4nm,0.5s,baz=5.9,slow=7.7,SNR=5.7						
BVAR	Borovoye Array	54.00	315	P	P	03 03 43.2	+2.8
	0.4nm,0.4s,baz=100,slow=7.5,SNR=2.8						

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*ISCJB **07** 02:57:02.7±0.6, 41°.31N±0°.04×43°.91E±0°.03, h4^{km}±5^{km}, Error ellipse: s-maj=6.4km s-min=3.5km az=156.6*

*CSEM **07** 02:57:02.8±0.1, 41°.30N×43°.90E, h5^{km}, ML1.6, Error ellipse: s-maj=3.2km s-min=1.8km az=149.0*

*DDA **07** 02:57:02.1, 41°.34N×43°.86E, h7^{km}, Ml2.5*

*TIF **07** 02:57:02.3, 41°.36N×43°.91E, h15^{km}±2^{km}*

ISC 07 02:57:02.6±1.0**, 41°.33N**±0°.03×**43°.91E**±0°.02**, h11**^{km}±8^{km}**, n21, σ0^{s}.32**/42**, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
BGD	Bogdanovka	0.24	255	P	Pg	02 57 07.8	+0.1
BGD				S	Sg	02 57 11.5	+0.3
BGD	Bogdanovka	0.24	255	P	Pg	02 57 07.8	+0.1
BGD				S	Sg	02 57 11.5	+0.3
AKH	Akhalkalaki	0.32	285	P	Pg	02 57 09.1	-0.1
AKH				S	Sg	02 57 13.5	-0.1
AKH	Akhalkalaki	0.32	285	P	Pg	02 57 09.1	-0.1
AKH				S	Sg	02 57 13.5	-0.1
EAK	Akyaka	0.68	200	*i* P	Pg	02 57 15.4	-0.4
EAK				*i* S	Sg	02 57 25.2	+0.4
EAK	Akyaka	0.68	200	P	Pg	02 57 15.4	-0.4
EAK				S	Sg	02 57 25.2	+0.4
TBLG	Delisi	0.74	57	P	Pg	02 57 17.0	0.0
TBLG				S	Sb	02 57 27.5	-0.3
TBLG	Delisi	0.74	57	P	Pg	02 57 17.0	0.0
TBLG				S	Sb	02 57 27.4	-0.3
DUS	Dusheti	0.97	38	P	Pn	02 57 21.9	-0.2
DUS				S	Sn	02 57 36.2	+0.2
DUS	Dusheti	0.97	38	P	Pn	02 57 22.0	-0.2
DUS				S	Sn	02 57 36.2	+0.2
DIGO	Kars	1.00	204	*i* P	Pg	02 57 21.5	-0.4
DIGO				*i* S	Sb	02 57 35.3	0.0
DIGO	Kars	1.00	204	P	Pg	02 57 21.5	-0.4
DIGO				S	Sb	02 57 35.3	0.0
DGRG	David-gareji	1.11	83	P	Pn	02 57 24.2	+0.1
DGRG				S	Sb	02 57 38.9	+0.6
DGRG	David-gareji	1.11	83	P	Pn	02 57 24.2	+0.1
DGRG				S	Sb	02 57 38.9	+0.6
ARTV	Artvin	1.50	265	*i* P	Pn	02 57 30.1	+0.4
ARTV				*i* S	Sn	02 57 49.5	+0.1
ARTV	Artvin	1.50	265	P	Pn	02 57 30.0	+0.4
ARTV				S	Sn	02 57 49.5	+0.1
DAGI	Agillar	1.53	261	*i* P	Pb	02 57 30.9	-0.1
DAGI				*i* S	Sb	02 57 50.6	+0.2
DBOC	Borcka	1.69	271	*i* P	Pb	02 57 33.1	-0.6
DBOC				*i* S	Sb	02 57 55.3	+0.3
DBOC	Borcka	1.69	271	P	Pb	02 57 33.1	-0.6
DBOC				S	Sb	02 57 55.3	+0.3
DBAD	Bademkaya	1.70	260	*i* P	Pb	02 57 33.7	-0.2
DBAD				*i* S	Sb	02 57 55.5	+0.1
DBAD	Bademkaya	1.70	260	P	Pb	02 57 33.7	-0.2
DBAD				S	Sb	02 57 55.5	+0.1

JMA 07 03:13:47.8±0.2**, 37°.89N**×**144°.22E, h44**^{km}**, M3.6, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.33	301	P	Pn	03 14 24.9	+1.3
OFUJ				*e*S	Sn	03 14 52.8	+1.8
JIO	Ouri	2.33	285	P	Pn	03 14 24.9	+1.3
JIO				S	Sn	03 14 52.4	+1.4
MIYJ	Miyakonagasawa	2.52	313	P	Pn	03 14 27.2	+0.9
MIYJ				*e*S	Sn	03 14 56.8	+1.1
JMK	Ichinoseki	2.58	295	P	Pn	03 14 28.5	+1.4
JOM	Ohasama	2.78	306	P	Pn	03 14 31.8	+2.0
JOM				*e*S	Sn	03 15 04.1	+1.9
JOU	Okura	2.84	281	P	Pn	03 14 32.3	+1.6
JFT	Otama	3.10	264	P	Pn	03 14 35.8	+1.6
JFT				S	Sn	03 15 11.4	+1.3
JRG	Rokugo	3.19	299	P	Pn	03 14 37.3	+1.9
JYK	Kaneyama	3.20	290	P	Pn	03 14 37.7	+2.1
JAH	Hinai	3.61	311	P	Pn	03 14 43.2	+2.0
JTM	Tenmabayashi	3.79	321	P	Pn	03 14 45.4	+1.8
JOT	Ohata	4.26	326	P	Pn	03 14 52.3	+2.2
JRY	Ryogami san	4.65	248	P	Pn	03 14 56.2	+0.7
JKB	Kayabe	4.69	329	P	Pn	03 14 58.4	+2.5

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*ISCJB **07** 03:16:44.4±0.3, 31°.47N±0°.03×140°.69E±0°.08, h125^{km}, mb4.0/22, Error ellipse: s-maj=9.5km s-min=3.5km az=166.7*

*IDC **07** 03:16:45.5±0.8, 31°.37N×140°.49E, h113^{km}±7^{km}, mb3.6/21, mb1 3.7/25, mb1mx3.6/65, mbtmp4.0/25, Error ellipse: s-maj=13.5km s-min=7.2km az=78.0*

*JMA **07** 03:16:47.4±0.3, 31°.69N×140°.81E, h125^{km}±3^{km}, M3.6*

ISC 07 03:16:46.5±0.5**, 31°.47N**±0°.05×**140°.64E**±0°.08**, h125**^{km}**, n46, σ1^{s}.73**/58**, mb3.9**/22**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	1.24	324	*e*S	Sn	03 17 31.0	+0.7
JHJ2	Mitsune	1.78	337	*e*S	Sn	03 17 40.6	-0.6
JHJ	Hachijo jima 2	1.80	337	P	Pn	03 17 17.8	+0.1
	5.6nm,0.3s,baz=253,slow=19,SNR=5.0						
JHJ				S	Sn	03 17 40.2	-1.4
	70nm,0.3s,baz=236,slow=23,SNR=9.1						
BSO1	Boso 1	3.19	5	P	Pn	03 17 34.2	-0.6
BSO1				*e*S	Sn	03 18 09.4	-3.0
BSO3	Boso 3	3.33	358	P	Pn	03 17 36.7	-0.2
BSO4	Boso 4	3.52	356	P	Pn	03 17 40.6	+1.0
BSO4				*e*S	Sn	03 18 18.3	-2.5
JOD2	Odawara 2	4.00	342	P	Pn	03 17 46.1	0.0
JOD2				*e*S	Sn	03 18 31.4	-1.0
JHU	Hanno	4.52	346	P	Pn	03 17 51.8	-1.2
JHU				*e*S	Sn	03 18 40.7	-4.0
CBIJ	Chichi jima	4.56	162	P	Pn	03 17 52.5	-1.1
CBIJ				*e*S	Sn	03 18 42.2	-3.6
JCJ	Chichijima	4.56	162	P	Pn	03 17 52.4	-1.2
	32nm,0.3s,baz=286,slow=21,SNR=28						
JCJ				S	Sn	03 18 43.1	-2.7
	baz=360,slow=19						
JRY	Ryogami san	4.76	343	P	Pn	03 17 56.5	+0.2
JRY				*e*S	Sn	03 18 49.4	-1.2
JYT	Yasato	4.76	356	*e*S	Sn	03 18 47.7	-2.8
JAG	Ashikaga	5.04	349	P	Pn	03 17 58.8	-1.2
JAG				*e*S	Sn	03 18 55.0	-2.3
JHO	Hitachi	5.13	359	P	Pn	03 18 00.3	-0.9
JHO				S	Sn	03 18 54.5	-4.9
MJAR	Matsushiro Arr	5.45	339	P	Pn	03 18 06.3	+0.8
	1.2nm,0.3s,baz=164,slow=12,SNR=8.8						
MJAR				S	Sn	03 19 05.1	-2.0
	0.7nm,0.3s,baz=87,slow=25,SNR=3.3						
MAT	Matsushiro	5.45	339	P	Pn	03 18 07.3	+1.8
MAT				S	Sn	03 19 06.0	-1.1
JFK	Kawauchi	5.89	2	P	Pn	03 18 09.4	-2.0
JMK	Ichinoseki	7.48	3	P	Pn	03 18 31.3	-1.5
JNU	Nakatsue	8.42	284	P	Pn	03 18 44.9	-0.7
	0.5nm,0.3s,baz=86,slow=14,SNR=4.0						
KSRS	Korea Array	12.07	303	P	Pn	03 19 34.9	+0.7
	0.1nm,0.3s,baz=128,slow=9.4,SNR=4.6						
KLR	Kul'dur	18.97	342	P	Pn	03 20 58.4	-1.5
	0.0nm,0.3s,baz=142,slow=7.2,SNR=11						
H11S3	WAKE ISLAND Hy	26.83	113	T	T	03 51 12.9	
	baz=304,slow=75,SNR=6.5						
H11S1	WAKE ISLAND Hy	26.84	113	T	T	03 51 14.0	
	baz=304,slow=75,SNR=9.0						
H11S2	WAKE ISLAND Hy	26.85	113	T	T	03 51 13.8	
	baz=304,slow=75,SNR=5.3						
SONM	Songino Array	30.71	312	P	P	03 22 49.5	0.0
	1.0nm,0.5s,baz=108,slow=7.6,SNR=7.4						
SEY	Seymchan	32.37	10	P	P	03 23 05.1	+1.4
	0.5nm,0.3s,baz=198,slow=8.0,SNR=5.1						
CMAR	Chiang Mai Arr	39.73	261	P	P	03 24 06.2	-0.7
	0.8nm,0.3s,baz=35,slow=11,SNR=3.6						
MKAR	Makanchi Array	46.72	307	P	P	03 25 02.2	-0.6
	0.9nm,0.6s,baz=90,slow=9.7,SNR=10						
MKAR				ScP	ScP	03 30 16.4	+0.2
	0.5nm,0.7s,baz=79,slow=6.3,SNR=4.5						
KURBB	Kurchatov Arra	49.08	312	P	P	03 25 20.1	-0.7
	1.6nm,0.5s,baz=92,slow=6.9,SNR=22						
FITZ	Fitzroy Crossi	51.34	198	P	P	03 25 37.2	-0.9
	3.0nm,1.0s,baz=0.0,slow=4.0,SNR=4.9						
WRA	Warramunga Arr	51.47	188	P	P	03 25 37.9	-1.2
	1.6nm,0.6s,baz=3.5,slow=7.8,SNR=30						
WRA				pP	pP	03 26 05.3	-3.1
	0.7nm,0.5s,baz=4.7,slow=7.5,SNR=3.4						
KDAK	Kodiak Island	51.75	39	P	P	03 25 40.8	0.0
	2.6nm,0.5s,baz=176,slow=5.3,SNR=6.1						
BVAR	Borovoye Array	53.96	315	P	P	03 25 56.9	-0.2
	1.3nm,0.5s,baz=108,slow=9.0,SNR=8.3						
ILAR	Eielson Array	54.58	30	P	P	03 26 02.6	+1.2
	0.8nm,0.7s,baz=273,slow=5.8,SNR=12						
ASAR	Alice Springs	55.20	188	P	P	03 26 05.3	-1.0
	0.5nm,0.5s,baz=14,slow=9.5,SNR=8.2						
ASAR				pP	pP	03 26 32.8	-3.1
	0.5nm,0.5s,baz=359,slow=5.7,SNR=3.6						
INK	Inuvik	59.65	25	P	P	03 26 38.2	+1.2
	2.0nm,0.5s,baz=281,slow=4.5,SNR=6.5						
AKTO	Aktyubinsk	62.00	314	P	P	03 26 53.2	0.0
	0.9nm,0.5s,baz=69,slow=14,SNR=3.9						
NWAO	Narrogin (SRO)	67.76	201	P	P	03 27 30.3	-0.2
	5.1nm,0.8s,baz=92,slow=16,SNR=4.1						
YKA	Yellowknife Ar	68.96	29	P	P	03 27 39.0	+1.3
	0.5nm,0.6s,baz=298,slow=6.0,SNR=5.2						
ARCES	ARCESS Array B	68.98	340	P	P	03 27 38.5	+0.7
	2.5nm,1.0s,baz=80,slow=11,SNR=3.7						
FINES	FINESS Array B	73.45	333	P	P	03 28 05.3	+0.6
	0.9nm,0.6s,baz=79,slow=5.2,SNR=8.6						
NVAR	Mina Array Bea	78.88	52	P	P	03 28 38.5	+2.2
	0.5nm,0.5s,baz=287,slow=5.6,SNR=6.2						
HFS	Hagfors	78.89	336	P	P	03 28 36.2	+0.6
	1.1nm,0.9s,baz=72,slow=9.3,SNR=3.4						
PDAR	Pinedale Array	82.06	44	P	P	03 28 54.1	+0.9
	0.3nm,0.6s,baz=11,slow=3.0,SNR=4.7						
BRTR	Keskin Array B	82.07	312	P	P	03 28 54.1	+0.9
	0.6nm,0.8s,baz=116,slow=6.6,SNR=3.5						
TXAR	Lajitas Array	94.03	52	P	P	03 29 53.6	+2.7
	1.1nm,0.6s,baz=296,slow=2.9,SNR=17						

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*CSEM **07** 03:17:20.6, 51°.44N×16°.12E, h0^{km}*

PRU 07 03:17:19.3, 51°.48N×16°.11E, h0^{km}**, Poland**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
UPC	Upice	0.98	184	*e*PG	Pg	03 17 37.8	-0.2
UPC				*e*SG	Sg	03 17 50.6	0.0
	comp=Z,3.4nm,0.2s						
UPC	Upice	0.98	184	Pg	Pg	03 17 37.8	-0.2
UPC				Sg	Sg	03 17 50.6	0.0
	3.4nm,0.2s						
DPC	Dobruska-Polom	1.14	173	*e*PG	Pg	03 17 40.2	-0.9
DPC				*e*SG	Sg	03 17 55.6	-0.2
	comp=Z,1.2nm,0.4s						
DPC	Dobruska-Polom	1.14	173	Pg	Pg	03 17 40.2	-0.9
DPC				Sg	Sg	03 17 55.6	-0.2
	1.2nm,0.4s						
PVCC	Panska Ves	1.36	226	*e*PG	Pg	03 17 44.5	-0.9
PVCC	Panska Ves	1.36	226	Pg	Pg	03 17 44.5	-0.9
KRLC	Kraliky	1.47	163	*e*SG	Sg	03 18 05.6	-0.9
KRLC	Kraliky	1.47	163	Sg	Sg	03 18 05.6	-0.9
BRG	Berggiesshubel	1.49	247	SG	Sg	03 18 06.6	-0.6
	2.3nm,0.4s						
PRU	Pruhonice	1.80	214	*e*SG	Sg	03 18 16.5	-0.4
PRU	Pruhonice	1.80	214	Sg	Sg	03 18 16.5	-0.4
KHC	Kasperske Hory	2.86	216	*e*SG	Sg	03 18 50.2	-0.8
KHC	Kasperske Hory	2.86	216	Sg	Sg	03 18 50.2	-0.8

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*ISCJB **07** 03:27:52.5±0.3, 43°.93N±0°.02×7°.48E±0°.03, h16^{km}±3^{km}, Error ellipse: s-maj=3.1km s-min=3.0km az=1.3*

*GEN **07** 03:27:52.6, 43°.97N×7°.43E, h2^{km}, ML2.0*

*CSEM **07** 03:27:52.4±0.1, 44°.00N×7°.46E, h10^{km}, ML2.8/16, Error ellipse: s-maj=3.1km s-min=2.5km az=88.0*

*ROM **07** 03:27:52.4±0.2, 44°.00N±0°.01×7°.48E±0°.01, h6^{km}±1^{km}, ML2.2/15*

*LDG **07** 03:27:52.9±0.1, 43°.98N×7°.45E, h2^{km}, Md3.0/2, Ml2.8/17, Error ellipse: s-maj=0.9km s-min=0.8km az=46.0*

ISC 07 03:27:51.7±0.8**, 43°.96N**±0°.02×**7°.51E**±0°.02**, h14**^{km}±5^{km}**, n100, σ1^{s}.23**/144**, Near south coast of France**

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
SAOF	Saorge	0.04	56	P	Pg	03 27 54.6	+0.3
SBF	Sospel	0.11	208	*e*Pg	Pg	03 27 55.2	+0.1
SBF				*e*Sg	Sg	03 27 56.9	-0.4
	2µm,0.3s						
SBF	Sospel	0.11	208	*e*Pg	Pg	03 27 55.2	+0.1
SBF				*e*Sg	Sg	03 27 56.9	-0.4
	998nm,0.3s						
LUCF	Luceram	0.14	239	Pg	Pg	03 27 55.2	-0.2
LUCF	Luceram	0.14	239	Pg	Pg	03 27 55.2	-0.2
LUCF				Sg	Sg	03 27 56.9	-1.0
NEGI	Seborga	0.18	129	P	Pb	03 27 57.3	+0.4
NEGI	Seborga	0.18	129	P	Pb	03 27 57.4	+0.4
NEGI				AML	AML		
	comp=E,1460µm,0.2s						
NEGI				AML	AML		
	comp=N,1825µm,1.6s						
NEGI				AML	AML		
	comp=E,1460µm,0.2s						
NEGI				AML	AML		
	comp=N,1825µm,1.6s						
NEGI				AML	AML		
	comp=E,1460µm,0.2s						
NEGI				AML	AML		
	comp=N,1825µm,1.6s						
MON	Monaco	0.24	195	Pg	Pb	03 27 58.3	+0.4
MON	Monaco	0.24	195	Pg	Pb	03 27 58.3	+0.4
MON				Sg	Sb	03 28 01.7	-0.3
REVF	Revere	0.25	205	Pg	Pb	03 27 58.4	+0.4
REVF	Revere	0.25	205	Pg	Pb	03 27 58.4	+0.4
REVF				Sg	Sb	03 28 01.9	-0.3
ENR	Entracque	0.27	346	P	Pg	03 27 58.0	+0.5
ENR	Entracque	0.27	346	P	Pb	03 27 58.3	-0.2
ENR				AML	AML		
	comp=E,1755µm,0.2s						
ENR				AML	AML		
	comp=N,2115µm,0.2s						
ENR				AML	AML		
	comp=E,1755µm,0.2s						
ENR				AML	AML		
	comp=N,2115µm,0.2s						
ENR				AML	AML		
	comp=E,1755µm,0.2s						
ENR				AML	AML		
	comp=N,2115µm,0.2s						
IMI	Imperia	0.28	101	P	Pb	03 27 59.2	+0.5
IMI	Imperia	0.28	101	P	Pb	03 27 59.2	+0.5
IMI				AML	AML		
	comp=E,1300µm,0.3s						
IMI				AML	AML		
	comp=N,931µm,0.8s						
IMI				AML	AML		
	comp=E,1300µm,0.3s						
IMI				AML	AML		
	comp=N,931µm,0.8s						
IMI				AML	AML		
	comp=N,931µm,0.8s						
IMI				AML	AML		
	comp=E,1300µm,0.3s						
STV	Sant Anna di V	0.31	335	P	Pg	03 27 58.5	+0.3
STV	Sant Anna di V	0.31	335	P	Pg	03 27 58.5	+0.3
STV				AML	AML		
	comp=E,1615µm,0.1s						
STV				AML	AML		
	comp=N,1770µm,0.2s						
STV				AML	AML		
	comp=E,1615µm,0.1s						
STV				AML	AML		
	comp=N,1770µm,0.2s						
STV				AML	AML		
	comp=E,1615µm,0.1s						
STV				AML	AML		
	comp=N,1770µm,0.2s						
GBOS	Grotte di Boss	0.37	40	P	Pb	03 28 00.6	+0.5
ISO	Isola	0.40	304	Pg	Pg	03 27 59.7	0.0
ISO	Isola	0.40	304	Pg	Pg	03 27 59.7	0.0
ISO				Sg	Sg	03 28 04.2	-0.9
RORO	Rocca Rossa	0.43	70	P	Pb	03 28 01.8	+0.7
RORO	Rocca Rossa	0.43	70	P	Pb	03 28 01.9	+0.7
RORO				AML	AML		
	comp=E,328µm,1.6s						
RORO				AML	AML		
	comp=N,279µm,0.2s						
RORO				AML	AML		
	comp=E,328µm,1.6s						
RORO				AML	AML		
	comp=N,279µm,0.2s						
RORO				AML	AML		
	comp=N,279µm,0.2s						
RORO				AML	AML		
	comp=E,328µm,1.6s						
CALF	Calern	0.47	244	Pg	Pb	03 28 01.7	-0.3
CALF	Calern	0.47	244	Pg	Pb	03 28 01.7	-0.3
CALF				Sg	Sg	03 28 07.6	+0.1
PZZ	Stroppo	0.61	333	P	Pg	03 28 03.9	+0.1
PZZ	Stroppo	0.61	333	P	Pg	03 28 03.9	+0.1
PZZ				AML	AML		
	comp=E,514µm,0.4s						
PZZ				AML	AML		
	comp=N,516µm,1.4s						
PZZ				AML	AML		
	comp=E,513µm,0.4s						
PZZ				AML	AML		
	comp=N,516µm,1.4s						
PZZ				AML	AML		
	comp=E,513µm,0.4s						
PZZ				AML	AML		
	comp=N,516µm,1.4s						
FINB	Finale Ligure	0.63	70	P	Pb	03 28 05.7	+1.3
FINB				AML	AML		
	comp=E,482µm,0.5s						
FINB				AML	AML		
	comp=N,14µm,0.3s						
FINB				AML	AML		
	comp=E,482µm,0.5s						
FINB				AML	AML		
	comp=N,14µm,0.3s						
FINB				AML	AML		
	comp=N,14µm,0.3s						
FINB				AML	AML		
	comp=E,482µm,0.5s						
QLNO	Quiliano	0.70	59	P	Pb	03 28 06.9	+1.1
QLNO				S	Sb	03 28 16.3	+1.0
QLNO				AML	AML		
	comp=E,154µm,1.1s						
QLNO				AML	AML		
	comp=N,162µm,0.4s						
QLNO				AML	AML		
	comp=N,162µm,0.4s						
QLNO				AML	AML		
	comp=E,154µm,1.1s						
SURF	Saint Ours	0.72	316	Pg	Pg	03 28 06.0	+0.2

SURF	Saint Ours	0.72	316	Pg	Pg	03 28 05.0	-0.8
SURF				Sg	Sg	03 28 15.4	+0.1
FRF	La Foret Royal	0.74	237	ePg	Pg	03 28 06.3	+0.1
FRF	La Foret Royal	0.74	237	ePn	Pn	03 28 08.4	+0.6
FRF				eSg	Sg	03 28 15.7	-0.2
	comp=E,97nm,0.2s						
FRF	La Foret Royal	0.74	237	ePg	Pg	03 28 06.3	+0.1
FRF	La Foret Royal	0.74	237	ePn	Pn	03 28 08.4	+0.6
FRF				eSg	Sg	03 28 15.7	-0.2
	comp=E,48nm,0.2s						
OGAG	Argentiere	0.85	306	Pg	Pn	03 28 12.7	+3.2
OGAG				Sg	Sn	03 28 28.0	+6.1
OGDI	Digne	0.88	280	Pg	Pn	03 28 10.6	+0.8
OGDI				Sg	Sn	03 28 25.3	+2.8
MBDF	Montbardon	0.93	326	ePg	Pg	03 28 09.4	-0.3
MBDF				eSg	Sg	03 28 21.3	-0.6
	comp=E,35nm,0.2s						
MBDF	Montbardon	0.93	326	ePg	Pg	03 28 09.4	-0.3
MBDF				eSg	Sg	03 28 21.3	-0.6
	comp=E,18nm,0.2s						
PCP	Piancastagn	0.94	52	P	Pn	03 28 11.0	+0.4
PCP	Piancastagn	0.94	52	P	Pn	03 28 11.8	+1.2
PCP				AML	AML		
	comp=E,126μm,0.3s						
PCP				AML	AML		
	comp=N,74μm,1.3s						
PCP				AML	AML		
	comp=N,74μm,1.3s						
PCP				AML	AML		
	comp=E,126μm,0.3s						
LMR	La Mourre	0.96	229	ePg	Pg	03 28 10.2	-0.1
LMR				eSg	Sg	03 28 22.4	-0.4
	comp=E,230nm,0.2s						
LMR	La Mourre	0.96	229	ePg	Pg	03 28 10.2	-0.1
LMR				eSg	Sg	03 28 22.4	-0.4
	comp=E,115nm,0.2s						
RRL	Rocca Remolon	1.09	332	P	Pb	03 28 12.5	+0.1
RRL	Rocca Remolon	1.09	332	P	Pb	03 28 12.6	+0.1
RRL				S	Sg	03 28 27.2	+0.3
RRL				AML	AML		
	comp=E,135μm,1.3s						
RRL				AML	AML		
	comp=N,97μm,0.5s						
RRL				AML	AML		
	comp=N,97μm,0.5s						
RRL				AML	AML		
	comp=E,135μm,1.3s						
MONC	Moncucco Torin	1.15	15	AML	AML		
	comp=N,154μm,0.2s						
MONC				AML	AML		
	comp=E,164μm,0.4s						
MONC				AML	AML		
	comp=N,154μm,0.2s						
MONC				AML	AML		
	comp=E,164μm,0.4s						
RSP	Reno Superiore	1.20	352	AML	AML		
	comp=E,99μm,0.7s						
RSP				AML	AML		
	comp=N,89μm,0.9s						
RSP				AML	AML		
	comp=N,89μm,0.9s						
RSP				AML	AML		
	comp=E,99μm,0.7s						
BNI	Bardonecchia	1.24	332	P	Pb	03 28 15.2	+0.1
BNI				AML	AML		
	comp=E,72μm,0.6s						
BNI				AML	AML		
	comp=N,38μm,1.3s						
BNI				AML	AML		
	comp=E,72μm,0.6s						
BNI				AML	AML		
	comp=N,38μm,1.3s						
MLYF	Mely	1.26	272	Pg	Pg	03 28 16.6	+0.7
MLYF				Sg	Sg	03 28 34.1	+1.8
MLYF	Mely	1.26	272	Pg	Pg	03 28 16.6	+0.7
BSTF	la Bastide-des	1.35	267	Pg	Pg	03 28 17.7	0.0
BSTF	la Bastide-des	1.35	267	Pg	Pg	03 28 17.7	0.0
BSTF				Sg	Sn	03 28 34.0	0.0
SMRF	Simiane la Rot	1.40	271	ePg	Pg	03 28 18.5	-0.1
SMRF				eSg	Sb	03 28 35.7	+0.4
	comp=N,110nm,0.3s						
SMRF	Simiane la Rot	1.40	271	ePg	Pg	03 28 18.5	-0.1
SMRF				eSg	Sb	03 28 35.7	+0.4
	comp=N,55nm,0.3s						
MSSA	Maissana	1.49	76	P	Pg	03 28 20.6	+0.3
ORIF	Oris-en-Rattie	1.51	310	ePg	Pb	03 28 19.8	+0.2
ORIF				eSg	Sg	03 28 39.4	-0.9
	comp=N,29nm,0.2s						
ORIF	Oris-en-Rattie	1.51	310	Pg	Pb	03 28 19.9	+0.4
ORIF				Sg	Sg	03 28 41.9	+1.6
ORIF	Oris-en-Rattie	1.51	310	ePg	Pb	03 28 19.8	+0.2
ORIF				eSg	Sg	03 28 39.4	-0.9
	comp=N,14nm,0.2s						
ORIF	Oris-en-Rattie	1.51	310	P	Pb	03 28 19.8	+0.2
ORIF				AML	AML		
	comp=E,57μm,1.2s						
ORIF				AML	AML		
	comp=N,53μm,1.5s						
ORIF				AML	AML		
	comp=N,53μm,1.5s						
ORIF				AML	AML		
	comp=E,57μm,1.2s						
LPG	La Plagne	1.63	341	ePg	Pb	03 28 22.2	+0.5
LPG				eSg	Sg	03 28 43.7	-0.4
	comp=E,15nm,0.3s						
LPG	La Plagne	1.63	341	ePg	Pb	03 28 22.2	+0.5
LPG				eSg	Sg	03 28 43.7	-0.4
	comp=E,7.3nm,0.3s						
LPL	La Plagne	1.65	341	ePg	Pb	03 28 22.6	+0.6
LPL				eSg	Sg	03 28 44.0	-0.8
	comp=E,19nm,0.4s						
LPL	La Plagne	1.65	341	ePg	Pb	03 28 22.6	+0.6
LPL				eSg	Sg	03 28 44.0	-0.8
	comp=E,9.4nm,0.4s						
PGF	Pioggiola	1.79	142	ePn	Pn	03 28 22.0	-0.3
PGF				eSn	Sn	03 28 43.9	-0.9
	comp=E,13nm,0.2s						
PGF	Pioggiola	1.79	142	ePn	Pn	03 28 22.0	-0.3
PGF				eSn	Sn	03 28 43.9	-0.9
	comp=E,6.7nm,0.2s						
PGF	Pioggiola	1.79	142	AML	AML		
	comp=E,39μm,1.2s						
PGF				AML	AML		
	comp=E,39μm,1.2s						
PGF				AML	AML		
	comp=N,37μm,1.0s						
PGF				AML	AML		
	comp=N,37μm,1.0s						
RSL	Roselend	1.84	340	Pg	Pg	03 28 27.4	+0.5
RSL	Roselend	1.84	340	Pg	Pg	03 28 27.4	+0.5
VIVF	Saint-Julien-l	2.22	295	eP	Pn	03 28 29.8	+1.6
VIVF				eSn	Sn	03 28 54.4	-1.1
	comp=N,5.2nm,0.2s						
VIVF	Saint-Julien-l	2.22	295	eP	Pn	03 28 29.8	+1.6
VIVF				eSn	Sn	03 28 54.4	-1.1
	comp=N,2.6nm,0.2s						
SMPL	Sampolo	2.28	145	Pg	Pn	03 28 29.8	+0.9
SMPL				Sg	Sn	03 28 56.3	-0.5
SMPL	Sampolo	2.28	145	P	Pn	03 28 29.7	+0.7
TRBF	Trabuc cave	2.56	274	Pg	Pn	03 28 33.9	+1.1
TRBF				Sg	Sn	03 29 03.3	-0.5
LASF	Ste Croix	2.64	274	ePn	Pn	03 28 34.1	+0.2
LASF				eSn	Sn	03 29 04.4	-1.3
	comp=N,7.4nm,0.2s						
LASF	Ste Croix	2.64	274	ePn	Pn	03 28 34.1	+0.2
LASF				eSn	Sn	03 29 04.4	-1.3
	comp=N,3.7nm,0.2s						
CABF	La Chapelle	2.83	340	ePg	Pg	03 28 45.4	-0.6
CABF				eSg	Sg	03 29 20.9	-1.8
	comp=N,2.7nm,0.4s						
CABF	La Chapelle	2.83	340	ePg	Pg	03 28 45.4	-0.6
CABF				eSg	Sg	03 29 20.9	-1.8
	comp=N,1.4nm,0.4s						
LBL	Lubilhac	3.30	294	P	Pn	03 28 45.0	+1.9
LBL	Lubilhac	3.30	294	P	Pn	03 28 44.0	+1.0
CHMF	Charmoille	3.34	350	P	Pb	03 28 47.7	-3.0
SMF	Signal de Mont	3.73	317	ePn	Pn	03 28 48.7	-0.2
SMF	Signal de Mont	3.73	317	eP	Pn	03 28 51.6	+2.7
SMF				eSn	Sn	03 29 31.1	-1.5
	comp=N,1.6nm,0.2s						
SMF	Signal de Mont	3.73	317	ePn	Pn	03 28 48.7	-0.2
SMF	Signal de Mont	3.73	317	eP	Pn	03 28 51.6	+2.7
SMF				eSn	Sn	03 29 31.1	-1.5
	comp=N,0.8nm,0.2s						
HINF	Hinteralfeld	3.88	353	eSn	Sn	03 29 34.4	-2.0
	comp=N,2.4nm,0.4s						
HINF	Hinteralfeld	3.88	353	eSn	Sn	03 29 34.4	-2.0
	comp=N,1.2nm,0.4s						
MTLF	Montolieu	3.89	263	ePn	Pn	03 28 51.9	+0.8
MTLF				eSn	Sn	03 29 34.5	-2.1
	comp=N,2.4nm,0.2s						
MTLF	Montolieu	3.89	263	P	Pn	03 28 52.3	+1.2
MTLF	Montolieu	3.89	263	ePn	Pn	03 28 51.9	+0.8
MTLF				eSn	Sn	03 29 34.5	-2.1
	comp=N,1.2nm,0.2s						
CAF	Calviac	4.02	286	eP	Pn	03 28 54.0	+1.1
CAF				eSn	Sn	03 29 37.5	-2.2
	comp=N,1.5nm,0.3s						
CAF	Calviac	4.02	286	eP	Pn	03 28 54.0	+1.1
CAF				eSn	Sn	03 29 37.5	-2.2
	comp=N,0.8nm,0.3s						
FNEB	Nˆ'bias	4.07	257	P	Pn	03 28 55.3	+1.6
FNEB	Nˆ'bias	4.07	257	P	Pn	03 28 55.3	+1.6
LOR	Lormes	4.18	324	ePn	Pn	03 28 55.3	+0.2
LOR				eSn	Sn	03 29 41.5	-2.3
	comp=N,2.5nm,0.3s						
LOR	Lormes	4.18	324	ePn	Pn	03 28 55.3	+0.2
LOR				eSn	Sn	03 29 41.5	-2.3
	comp=N,1.2nm,0.3s						
BGF	Bois d'Agland	4.19	310	eP	Pn	03 28 57.5	+2.3
BGF	Bois d'Agland	4.19	310	eP	Pn	03 28 57.5	+2.3
EPF	Esparros	5.30	262	ePn	Pn	03 29 10.6	+0.1
EPF	Esparros	5.30	262	ePn	Pn	03 29 10.6	+0.1
PYLO	Lourdes	5.56	264	P	Pn	03 29 16.8	+2.7
PYLO	Lourdes	5.56	264	P	Pn	03 29 16.8	+2.7

GUC 07 03:33:48.9±0.7, 21°.34S×69°.87W, h52km±3km, ML3.7, 3C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB02	IPOC Station P	0.03	310	⇑iP	Pn	03 33 57.2	+0.3
PB02				eS	Sn	03 34 03.2	+0.5
PB07	IPOC Station P	0.38	183	⇑iP	Pn	03 33 59.7	+0.4
PB07				eS	Sn	03 34 07.2	+0.6
PB07				IAML		03 34 07.9	
	comp=E,8μm,0.4s						
PB01	IPOC Station P	0.46	50	⇓iP	Pn	03 33 59.7	-0.2
PB01				eS	Sn	03 34 07.7	-0.2
PB01				IAML		03 34 08.0	
	comp=E,13μm,0.2s						
PB03	IPOC Station P	0.71	171	⇑iP	Pn	03 34 03.6	+0.5
PB03				eS	Sn	03 34 14.5	+1.1
PB03				IAML		03 34 15.3	
	comp=E,4μm,0.2s						
PB09	IPOC Station P	0.74	128	⇓iP	Pn	03 34 04.2	+0.8
PB09				eS	Sn	03 34 14.9	+1.0
PB09				IAML		03 34 16.1	
	comp=E,5μm,0.2s						
PB04	IPOC Station P	1.02	195	eP	Pn	03 34 07.4	+0.2
PB04				eS	Sn	03 34 21.9	+1.3
PB04				IAML		03 34 25.3	
	comp=N,3μm,0.5s						
PB08	IPOC Station P	1.37	29	eP	Pn	03 34 12.0	0.0
PB08				i S	Sn	03 34 29.9	+0.6

*BJI **07** 03:35:25.4, 4°.49S×153°.77E, h31km, mb5.4/74, mB5.5/61, Ms5.3/88, Ms7 5.2/79*

*MOS **07** 03:35:27.2±0.9, 4°.62S×153°.33E, h33km, mb5.8/59, MS5.2/34, Error ellipse: s-maj=7.0km s-min=4.9km az=101.9*

*ISCJB **07** 03:35:27.7±0.7, 4°.69S±0°.02×153°.30E±0°.02, h40km±5km, mb5.5/273, MS5.2/212, Error ellipse: s-maj=3.5km s-min=3.2km az=22.1*

*NEIC **07** 03:35:28.6±0.1, 4°.65S×153°.30E, h35km, mb5.6/165, MS5.3/132, MW5.7, MW5.7, Error ellipse: s-maj=3.5km s-min=2.8km az=94.0, Moment Tensor Solution. s34 Moment tensor: Scale 10^{17}Nm; M_{rr}4.75; $M_{\theta\theta}$-0.02; $M_{\phi\phi}$-4.73; $M_{r\theta}$-1.74; $M_{\theta\phi}$0.49; $M_{\phi r}$-1.14; Best double couple: $M_0$5.20000×10^{17} NP1:ϕ_s193.00000°, δ54.00000°, λ113.00000°. NP2:ϕ_s337.00000°, δ42.00000°, λ62.00000°. Principal axes: T 5.4700, Plg71.0000°, Azm159.0000°; N -0.5800, Plg18.0000°, Azm358.0000°; P -4.8900, Plg6.0000°, Azm266.0000°;*

NEIC Felt at Arawa, Bougainville and at Rabaul, New Britain.

*IDC **07** 03:35:29.0±0.8, 4°.70S×153°.33E, h38km±5km, mb5.2/47, mb1 5.2/51, mb1mx5.1/59, mbtmp5.4/51, ML4.2/3, MS5.0/49, Ms1 5.0/49, ms1mx5.0/54 Error ellipse: s-maj=8.0km s-min=7.3km az=93.0*

*GCMT **07** 03:35:28.6±0.1, 4°.84S×153°.22E, h50km, MW5.8/134, Moment Tensor Solution. s132,c263; s134,c376; Duration: 1^{s}8 Moment tensor: Scale 10^{17}Nm; M_{rr}3.22±.05; $M_{\theta\theta}$1.98±.04; $M_{\phi\phi}$-5.19±.04; $M_{r\theta}$-2.12±.05; $M_{\theta\phi}$0.70±.04; $M_{\phi r}$-1.08±.05; Best double couple: $M_0$5.16200×10^{17} NP1:ϕ_s205.00000°, δ61.00000°, λ133.00000°. NP2:ϕ_s323.00000°, δ50.00000°, λ39.00000°. Principal axes: T 4.9710, Plg53.0000°, Azm168.0000°; N 0.3930, Plg37.0000°, Azm1.0000°; P -5.3530, Plg6.0000°, Azm266.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*NEIC **07** 03:35:29.0±0.0, 4°.88S×153°.27E, h50km, Moment Tensor Solution. s34 Moment tensor: Scale 10^{17}Nm; M_{rr}3.01; $M_{\theta\theta}$1.09; $M_{\phi\phi}$-4.10; $M_{r\theta}$-2.29; $M_{\theta\phi}$0.44; $M_{\phi r}$-1.23; Best double couple: $M_0$4.50000×10^{17} NP1:ϕ_s205.00000°, δ62.00000°, λ127.00000°. NP2:ϕ_s327.00000°, δ45.00000°, λ41.00000°. Principal axes: T 4.7100, Plg55.0000°, Azm165.0000°; N -0.4100, Plg32.0000°, Azm5.0000°; P -4.3100, Plg9.0000°, Azm269.0000°;*

*DJA **07** 03:35:33.1±0.6, 5°S±3°×15°3E±°, h80km±6km, M5.6/62, mb5.6/62, mB6.0/44, Mw(mB)5.6/44, Mwp5.7/3*

ISC 07 03:35:29.4±0.3, 4°.71S±0°.03×153°.34E±0°.03, h44km±2km, h44km:pP-P, n1198, σ1^{s}46/1293, mb5.5/279, MS5.3/216, 61C-22D, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	1.28	294	ePn	Pn	03 35 53.4	+2.4
MANU	Manus Island	6.53	294	ePn	Pn	03 37 06.5	+3.5
PMG	Port Moresby	7.71	232	Pn	Pn	03 37 20.1	+0.9
	89nm,0.3s,baz=53,slow=6.5,SNR=54						
PMG				Sn	Sn	03 38 46.1	+0.9
	76nm,0.3s,baz=338,slow=19,SNR=20						
HNR	Honiara	8.06	126	Pn	Pn	03 37 25.9	+1.9
	231nm,0.3s,baz=213,slow=4.6,SNR=23						
HNR				Sn	Sn	03 39 01.5	+7.6
	79nm,0.3s,baz=123,slow=11,SNR=5.0						
HNR	Honiara	8.06	126	eP	Pn	03 37 29.0	+5.0
HNR				eS	Sn	03 38 53.0	-0.9
HNR	Honiara	8.06	126	ePn	Pn	03 37 25.6	+1.6
HNR				eSn	Sn	03 38 53.9	0.0
HNR				Sn	Sn	03 39 01.5	+7.6
HNR	Honiara	8.06	126	eP	Pn	03 37 25.6	+1.6
HNR				e		03 38 53.9	
PATS	Pohnpei	12.50	23	P	Pn	03 38 25.7	+0.9
	baz=13,SNR=26						
PATS	Pohnpei	12.50	23	ePn	Pn	03 38 24.6	-0.2
JAY	Jayapura	12.80	279	Pn	Pn	03 38 30.0	+1.1
	0.7nm,0.3s,baz=86,slow=1.7,SNR=16						
JAY				Sn	S	03 41 11.5	-3.2
	baz=288,slow=20,SNR=2.4						
JAY				LR	LR	03 43 18.4	
	comp=Z,13μm,21.6s,baz=71,slow=37						
JAY	Jayapura	12.80	279	P	Pn	03 38 29.8	+0.9
GENI	Genyem	13.31	279	P	Pn	03 38 37.1	+1.1
COEN	Coen	13.60	227	P	Pn	03 38 42.1	+2.3
	baz=14,SNR=11						
COEN	Coen	13.60	227	ePn	Pn	03 38 43.1	+3.2
MTSU	Mount Surprise	16.00	213	P	P	03 39 14.1	-0.4
	baz=16,SNR=25						
CTA	Charters Tower	16.77	204	Pn	P	03 39 22.3	-0.7
	1.7nm,0.3s,baz=28,slow=14,SNR=37						
CTA				LR	LR	03 45 06.3	
	comp=Z,8μm,21.0s,baz=25,slow=34						
CTAO	Charters Tower	16.77	204	ePn	P	03 39 23.1	+0.1
	149nm,1.0s						
CTAO	Charters Tower	16.77	204	eP	P	03 39 23.1	+0.1
CTAO				pmax	pmax		
	comp=Z,149nm,1.0s						
SRPI	Serui, Papua	17.30	279	P	Pn	03 39 27.8	-0.2
SRPI				S	S	03 42 45.8	-1.0
BAKI	Biak	17.56	281	P	P	03 39 34.7	+2.9
RKPI	Ransiki, Papua	19.40	279	P	Pn	03 39 53.7	+0.3
RKPI				S	Sn	03 43 30.1	-0.2
GUMO	Guam	20.03	335	P	Pn	03 39 59.9	-0.9
	comp=Z,345nm,0.9s,baz=168,slow=4.4,SNR=11						
GUMO				LR	LR	03 48 12.1	
	comp=Z,2μm,18.6s,baz=146,slow=38						
GUMO	Guam	20.03	335	eP	P	03 39 58.8	0.0
GUMO	Guam	20.03	335	eP	P	03 39 58.8	0.0
TARA	Tarawa	20.47	73	PFAKE		03 40 20.0	+14
TARA				LR	LR		
	comp=Z,880nm,21.0s						
QIS	Mount Isa	20.65	219	P	P	03 40 06.2	+0.6
	baz=21,SNR=72						
EIDS	Eidsvold	20.66	186	P	Pn	03 40 07.0	-1.2
	baz=21,SNR=41						
EIDS	Eidsvold	20.66	186	eP	Pn	03 40 07.1	-1.1
	comp=Z,209nm,0.8s						
FAKI	Fak Fak	21.12	274	P	P	03 40 12.2	+1.5
FAKI	Fak Fak	21.12	274	eP	P	03 40 11.0	+0.3
	comp=Z,247nm,1.0s						
DZM	Mont Dzumac	21.42	145	P	P	03 40 14.9	+1.0
	comp=Z,331nm,0.8s,baz=271,slow=6.2,SNR=145						
DZM				LR	LR	03 47 47.8	
	comp=Z,8μm,21.4s,baz=316,slow=34						
DZM	Mont Dzumac	21.42	145	eP	P	03 40 14.8	+0.9
	comp=Z,934nm,1.0s						
DZM				eLR	LR	03 45 26.9	
	comp=Z,23μm,26.7s						
DZM	Mont Dzumac	21.42	145	eP	P	03 40 15.3	+1.4
	comp=Z,469nm,1.0s						
KDU	Kakadu	22.08	248	P	P	03 40 17.6	-3.4
	baz=22,SNR=175						
RMQ	Roma	22.09	191	P	P	03 40 22.4	+1.4
	baz=22,SNR=62						
PALU	Palau	22.31	302	P	P	03 40 24.7	+1.2
	baz=22,SNR=85						
SIJI	Sorong	22.37	279	P	P	03 40 24.8	+0.7
	comp=Z,82nm,0.5s,baz=67,slow=7.7,SNR=24						
SIJI				S	S	03 44 27.8	+0.3
	comp=Z,3.6nm,0.4s,baz=252,slow=22,SNR=7.3						
SIJI				ScP	ScP	03 47 53.1	+0.7
	comp=Z,11nm,0.8s,baz=98,slow=3.4,SNR=3.8						
SIJI				LR	LR	03 48 03.3	
	comp=Z,15μm,21.4s,baz=102,slow=34						
MTN	Manton Dam	23.37	248	P	P	03 40 34.0	-0.3
	baz=23,SNR=102						
MTN	Manton Dam	23.37	248	eP	P	03 40 34.1	-0.3
	comp=Z,256nm,0.9s						
QLP	Quilpie	23.43	201	P	P	03 40 35.1	+0.4
	baz=24,SNR=39						
WRAB	Tennant Creek	23.90	229	eP	P	03 40 39.2	0.0
	comp=Z,213nm,0.8s						
WRAB				eS	S	03 44 50.2	-2.5
WRAB				LR	LR		
	comp=Z,6μm,22.0s						
WRAB	Tennant Creek	23.90	229	c iP	P	03 40 39.1	-0.2
WRAB				i		03 44 20.1	
WRAB				pmax	pmax		
	comp=Z,787nm,2.5s						
WB2	Warramunga Arr	23.90	229	eP	P	03 40 39.2	-0.1
	comp=Z,252nm,0.8s						
WRA	Warramunga Arr	23.91	229	P	P	03 40 39.3	-0.1
	comp=Z,124nm,0.8s,baz=53,slow=9.8,SNR=324						
WRA				PcP	PcP	03 44 21.2	-0.2
	comp=Z,20nm,0.8s,baz=42,slow=1.6,SNR=6.9						
WRA				S	S	03 44 55.6	+2.7
	comp=Z,76nm,1.1s,baz=49,slow=15,SNR=12						
WRA				ScP	ScP	03 47 57.7	+1.3
	comp=Z,23nm,0.9s,baz=48,slow=2.9,SNR=8.0						
WRA				LR	LR	03 50 20.6	
	comp=Z,4μm,21.2s,baz=55,slow=37						
WRA				PKiKP	PKiKP	03 52 03.6	-1.1
	comp=Z,1.4nm,0.6s,baz=333,slow=1.1,SNR=12						
ARMA	Armidale	25.62	183	P	P	03 40 56.6	+1.6
	baz=26,SNR=61						
ARMA	Armidale	25.62	183	eP	P	03 40 56.3	+1.3
	comp=Z,228nm,0.9s						
FUNA	Funafuti	25.95	100	PFAKE		03 41 10.0	+12
FUNA				LR	LR		
	comp=Z,6μm,19.0s						
LBMI	Labuha	26.12	278	P	P	03 41 00.6	+1.0
KNRA	Kununurra	26.50	244	P	P	03 41 02.5	-0.5
	baz=26,SNR=30						
TNTI	Ternate	26.52	281	P	P	03 41 03.5	+0.4
TNTI	Ternate	26.52	281	eP	P	03 41 02.7	-0.5
	comp=Z,126nm,1.1s						
H11S3	WAKE ISLAND Hy	26.55	29	T	T	04 08 47.0	
	baz=199						
AS01	Alice Springs	26.55	223	eP	P	03 41 01.9	-1.5
H11S2	WAKE ISLAND Hy	26.55	29	T	T	04 08 48.2	
	baz=199,slow=74						
H11S1	WAKE ISLAND Hy	26.56	29	T	T	04 09 51.1	
	baz=199,slow=74						
AS31	Alice Springs	26.58	223	eP	P	03 41 03.3	-0.4
	comp=Z,25nm,0.5s						
ASAR	Alice Springs	26.58	223	P	P	03 41 03.4	-0.3
	comp=Z,44nm,0.8s,baz=55,slow=9.2,SNR=274						
ASAR				PcP	PcP	03 44 27.2	-0.1
	comp=Z,17nm,0.6s,baz=60,slow=2.7,SNR=6.3						
ASAR				S	S	03 45 35.9	+0.4
	comp=Z,6.6nm,0.9s,baz=43,slow=13,SNR=2.8						
ASAR				ScP	ScP	03 48 05.3	+1.3
	comp=Z,6.0nm,0.7s,baz=49,slow=2.6,SNR=5.2						
ASAR				LR	LR	03 51 29.8	
	comp=Z,4μm,20.7s,baz=50,slow=36						
ASAR				PKiKP	PKiKP	03 52 05.0	-1.2
	comp=Z,1.2nm,0.9s,baz=129,slow=21,SNR=4.4						
LHI	Lord Howe Isla	27.21	169	P	P	03 41 10.2	+1.2
	baz=27,SNR=5.4						
LHI	Lord Howe Isla	27.21	169	eP	P	03 41 10.3	+1.2
	comp=Z,203nm,1.1s						
WAKE	Wake Island	27.21	28	PFAKE		03 41 20.0	+11
WAKE				LR	LR		
	comp=Z,6μm,21.0s						
SANI	Sanana	27.43	275	P	P	03 41 11.2	-0.2
CMSA	Cobar Meteorol	27.64	194	P	P	03 41 13.0	0.0
	baz=28,SNR=37						
H11N1	WAKE ISLAND Hy	27.69	28	T	T	04 11 43.3	
	baz=203,slow=75						
H11N3	WAKE ISLAND Hy	27.70	28	T	T	04 10 57.0	
	baz=203						
H11N2	WAKE ISLAND Hy	27.71	28	T	T	04 11 16.6	
	baz=203,slow=75						
MGCD	Mangrove Creek	28.43	184	P	P	03 41 21.9	+1.8
	baz=28,SNR=14						
RIV	Riverview	29.04	184	P	P	03 41 27.9	+2.4
	baz=29,SNR=7.8						
STKA	Stephens Creek	29.19	201	P	P	03 41 26.5	-0.4
	baz=29,SNR=32						
STKA	Stephens Creek	29.19	201	P	P	03 41 26.4	-0.4
	comp=Z,62nm,0.9s,baz=9.4,slow=8.3,SNR=78						
STKA				PcP	PcP	03 44 34.4	+0.9
	comp=Z,37nm,1.1s,baz=204,slow=1.2,SNR=4.6						
STKA				ScP	ScP	03 48 13.5	+1.7
	comp=Z,23nm,1.1s,baz=39,slow=5.5,SNR=9.7						
STKA				PKiKP	PKiKP	03 52 06.8	-0.6
	comp=Z,1.8nm,0.6s,baz=91,slow=1.4,SNR=4.0						
STKA				LR	LR	03 52 46.8	
	comp=Z,5μm,22.0s,baz=14,slow=36						
STKA	Stephens Creek	29.19	201	eP	P	03 41 26.4	-0.4
	comp=Z,17nm,0.9s						
STKA				PcP	PcP	03 44 34.4	+0.9
STKA				ScP	ScP	03 48 13.5	+1.7
STKA				PKiKP	PKiKP	03 52 06.8	-0.6
STKA	Stephens Creek	29.19	201	eP	P	03 41 26.4	-0.4
STKA						03 44 34.4	
STKA						03 48 13.5	
STKA				i		03 52 06.9	
STKA				pmax	pmax		
	comp=Z,17nm,0.9s						
SOEI	Soe	29.27	258	P	P	03 41 28.8	+1.0
SOEI	Soe	29.27	258	eP	P	03 41 27.4	-0.5
	comp=Z,256nm,1.2s						
YNG	Young	29.80	188	P	P	03 41 33.1	+0.9
	baz=30,SNR=13						
KMSI	Cibinong	29.80	279	P	P	03 41 33.2	+0.8
BATI	Baumata	29.92	258	P	P	03 41 33.6	+0.1
	comp=Z,64nm,0.6s,baz=311,slow=0.7,SNR=7.4						
BATI				LR	LR	03 55 37.3	
	comp=Z,10μm,20.7s,baz=92,slow=40						
BATI	Baumata	29.92	258	P	P	03 41 34.5	+1.0
DAV	Davao City (W)	30.08	293	LR	LR	03 53 33.9	
	comp=Z,2μm,18.5s,baz=108,slow=36						
DAV	Davao City (W)	30.08	293	⇓eP	P	03 41 45.0	+10
DAV	Davao City (W)	30.08	293	PFAKE		03 41 50.0	+15
DAV				LR	LR		

	comp=Z,2µm,19.0s						
FITZ	Fitzroy Crossi	30.18	242	P	P	03 41 35.1	-0.6
	baz=30,SNR=187						
FITZ	Fitzroy Crossi	30.18	242	P	P	03 41 35.0	-0.6
	comp=Z,55nm,0.6s,baz=55,slow=7.9,SNR=109						
FITZ				S	S	03 46 27.5	-4.5
	comp=Z,15nm,0.9s,baz=108,slow=20,SNR=2.6						
FITZ				LR	LR	03 55 21.8	
	comp=Z,8µm,19.2s,baz=61,slow=40						
FITZ	Fitzroy Crossi	30.18	242	eP	P	03 41 35.1	-0.6
	comp=Z,101nm,0.8s						
FITZ				S	S	03 46 27.5	-4.5
CNB	Canberra Magne	30.68	186	P	P	03 41 41.3	+1.3
	baz=31,SNR=16						
CAN	Canberra	30.72	187	eP	P	03 41 41.4	+1.0
	comp=Z,117nm,1.4s						
CAN	Canberra	30.72	187	eP	P	03 41 41.4	+1.0
CAN				pmax	pmax		
	comp=Z,117nm,1.4s						
WRKA	Warakurna	31.42	227	P	P	03 41 45.6	-1.1
	baz=31,SNR=27						
HTT	Hallett	31.58	203	P	P	03 41 48.0	0.0
	baz=32,SNR=97						
APSI	Ampana	31.87	276	P	P	03 41 50.9	+0.1
BBOO	Buckleboo	32.28	208	P	P	03 41 53.6	-0.6
	baz=32,SNR=24						
BBOO	Buckleboo	32.28	208	eP	P	03 41 53.5	-0.6
	comp=Z,110nm,1.1s						
MILA	Mila	32.42	186	P	P	03 41 56.7	+1.4
	baz=32,SNR=8.1						
BKSI	Bulukumba	33.10	267	P	P	03 42 00.7	-0.8
KAPI	Kappang	33.47	268	PFAKE		03 42 20.0	+15
KAPI				LR	LR		
	comp=Z,2µm,22.0s						
SPSI	Sidrap Palu	33.48	270	P	P	03 42 03.9	-1.0
TTSI	Tana Toraja	33.48	272	P	P	03 42 05.8	+0.9
TOO	Toolangi	33.49	191	P	P	03 42 05.6	+1.0
	baz=34,SNR=11						
ARPS	Mount Arapiles	33.61	197	P	P	03 42 06.3	+0.6
	baz=34,SNR=63						
PCI	Palu	33.67	275	P	P	03 42 07.6	+1.1
	comp=Z,215nm,1.0s,comp=Z,3µm						
MPSI	Mapaga	33.78	278	P	P	03 42 06.9	-0.6
WBSI	Waikabubak, Su	34.02	260	P	P	03 42 07.4	-2.2
FORT	Forrest	35.20	220	P	P	03 42 19.3	-0.2
	baz=35,SNR=34						
FORT	Forrest	35.20	220	eP	P	03 42 19.2	-0.3
	comp=Z,331nm,0.8s						
AFI	Afiamalu	35.57	107	P	P	03 42 23.8	+0.8
	comp=Z,12nm,0.5s,baz=190,slow=17,SNR=2.9						
AFI				LR	LR	03 55 19.1	
	comp=Z,2µm,19.2s,baz=272,slow=33						
AFI	Afiamalu	35.57	107	P	P	03 42 23.8	+0.8
AFI				LR	LR		
	comp=Z,3µm,19.0s						
AFI	Afiamalu	35.57	107	P	P	03 42 23.8	+0.8
AFI				MLR	MLR		
	comp=Z,3µm,19.0s						
OUZ	Omahuta	35.67	151	eP	P	03 42 25.8	+2.4
	comp=Z,101nm,1.0s						
MBWA	Marble Bar	36.48	240	PFAKE		03 42 40.0	+9.4
MBWA				LR	LR		
	comp=Z,8µm,19.0s						
RAO	Raoul Island	36.55	135	PFAKE		03 42 40.0	+8.9
RAO				LR	LR		
	comp=Z,4µm,22.0s						
KBKI	Kotabaru	37.11	271	P	P	03 42 37.2	+1.2
TGY	Tagaytay City	37.19	301	P	P	03 42 37.4	+0.7
	comp=Z,93nm,0.3s,baz=128,slow=9.2,SNR=3.9						
TGY				LR	LR	03 55 32.2	
	comp=Z,6µm,21.8s,baz=124,slow=32						
MOO	Moorlands	37.97	187	P	P	03 42 44.7	+1.8
	baz=38,SNR=16						
TAU	Tasmania Unive	38.41	187	eP	P	03 42 48.6	+2.0
	comp=Z,141nm,1.1s						
TAU				ePcP	PcP	03 45 00.3	+0.9
TAU				LR	LR		
	comp=Z,3µm,22.0s						
TAU	Tasmania Unive	38.41	187	eP	P	03 42 48.6	+2.0
TAU				e		03 45 00.3	
TAU				pmax	pmax		
	comp=Z,141nm,1.1s						
TAU				MLR	MLR		
	comp=Z,3µm,22.0s						
MTKI	Muara Teweh, K	38.57	274	P	P	03 42 48.7	+0.3
HIZ	Hauiti	38.92	153	eP	P	03 42 53.6	+2.6
	comp=Z,430nm,1.5s						
JAGI	Jajag, Banyuwa	39.10	262	P	P	03 42 50.1	-2.7
JAGI	Jajag, Banyuwa	39.10	262	eP	P	03 42 49.5	-3.3
	comp=Z,101nm,0.9s						
JOW	Kunigami	39.64	324	P	P	03 42 57.5	+0.4
	comp=Z,80nm,0.6s,baz=147,slow=12,SNR=15						
JOW				LR	LR	03 56 20.2	
	comp=Z,2µm,21.4s,baz=130,slow=32						
JOW	Kunigami	39.64	324	eP	P	03 42 57.6	+0.4
	comp=Z,549nm,1.2s						
MEEK	Meekatharra	39.69	233	P	P	03 42 56.9	-0.7
	baz=40,SNR=166						
KMBL	Kambalda	39.69	224	P	P	03 42 56.9	-0.6
	baz=40,SNR=21						
JHJ	Hachijo jima 2	39.76	342	LR	LR	03 58 39.9	
	comp=Z,1µm,19.3s,baz=126,slow=35						
GMJI	Gumukmas	39.79	263	P	P	03 43 01.3	+2.7
	comp=Z,44nm,1.1s						
URZ	Urewera	39.79	150	P	P	03 42 58.8	+0.6
	comp=Z,29nm,0.6s,baz=265,slow=4.4,SNR=23						
URZ				ScP	ScP	03 48 48.0	-1.4
	comp=Z,7.8nm,0.7s,baz=73,slow=5.2,SNR=4.0						
URZ				LR	LR	03 57 33.1	
	comp=Z,1µm,19.8s,baz=336,slow=33						
URZ	Urewera	39.79	150	eP	P	03 43 00.1	+1.8
	comp=Z,86nm,1.0s						
URZ				ScP	ScP	03 48 48.0	-1.4
BKZ	Black Stump Fm	40.21	152	eP	P	03 43 02.4	+0.6
	comp=Z,151nm,1.6s						
THZ	Tophouse	40.82	157	eP	P	03 43 07.5	+0.6
	comp=Z,258nm,0.9s						
SNZO	South Karori	41.16	155	eP	P	03 43 10.0	+0.6
SNZO				LR	LR		
	comp=Z,6µm,22.0s						
BFZ	Birch Farm	41.31	153	eP	P	03 43 11.2	+0.5
	comp=Z,803nm,1.8s						
FOZ	Fox Glacier	41.31	162	eP	P	03 43 12.1	+1.3
	comp=Z,323nm,1.3s						
YOJ	Yonaguni jima	41.38	316	eP	P	03 43 13.0	+1.5
	comp=Z,192nm,0.8s						
YOJ	Yonaguni jima	41.38	316	eP	P	03 43 13.0	+1.5
YOJ				pmax	pmax		
	comp=Z,192nm,0.8s						
PWJI	Pagerwojo	41.40	263	P	P	03 43 10.2	-1.7
LTZ	Lake Taylor	41.47	159	eP	P	03 43 12.9	+0.8
	comp=Z,2µm,1.9s						
KHZ	Kahutara	41.63	157	eP	P	03 43 13.1	-0.2
	comp=Z,252nm,0.9s						
PBKI	Pangkalan Bun	41.63	271	P	P	03 43 15.2	+1.4
SBUM	Sibu	41.70	279	P	P	03 43 16.0	+1.7
GIRL	Giralia	41.78	241	P	P	03 43 15.4	+0.5
	baz=42,SNR=21						
OXZ	Oxford	41.87	159	eP	P	03 43 15.5	+0.2
	comp=Z,478nm,1.3s						
RPZ	Rata Peaks	41.88	161	P	P	03 43 16.1	+0.7
	comp=Z,341nm,0.8s,baz=263,slow=1.2,SNR=114						
RPZ				ScP	ScP	03 48 57.2	-0.3
	comp=Z,12nm,0.8s,baz=339,slow=17,SNR=2.1						
RPZ				LR	LR	03 58 48.3	
	comp=Z,7µm,21.6s,baz=323,slow=33						
RPZ	Rata Peaks	41.88	161	eP	P	03 43 16.0	+0.7
	comp=Z,604nm,1.1s						
RPZ				ScP	ScP	03 48 57.2	-0.3
YULB	Yu-li	41.93	313	eP	P	03 43 16.4	+0.3
	comp=Z,52nm,0.7s						
PCJI	Pacitan	42.03	263	P	P	03 43 15.5	-1.5
STKI	Sintang	42.09	275	P	P	03 43 18.1	+0.6
NACB	Ninganchiao	42.20	314	eP	P	03 43 19.2	+1.0
	comp=Z,136nm,1.0s						
LBZ	Lake Benmore	42.20	162	eP	P	03 43 18.6	+0.6
	comp=Z,162nm,0.7s						
WKZ	Wanaka	42.26	163	eP	P	03 43 19.4	+0.9
	comp=Z,560nm,1.5s						
WOJI	Wonogiri, Jawa	42.27	264	P	P	03 43 17.8	-1.2
DCZ	Deep Cove	42.35	166	eP	P	03 43 20.0	+0.9
	comp=Z,129nm,0.9s						
TPUB	Ta-pu	42.36	312	eP	P	03 43 19.4	-0.2
	comp=Z,44nm,0.7s						
MQZ	McQueen’s Vall	42.41	159	eP	P	03 43 20.1	+0.4
	comp=Z,980nm,1.7s						
SSLB	Suanglung	42.42	313	eP	P	03 43 20.6	+0.5
	comp=Z,44nm,0.8s						
MLZ	Mavora Lakes	42.51	165	eP	P	03 43 21.4	+1.0
	comp=Z,603nm,1.1s						
YHNB	Yeheng	42.66	315	eP	P	03 43 23.3	+1.2
	comp=Z,172nm,1.0s						
SMRI	Semarang	42.73	265	P	P	03 43 22.3	-0.5
KLBR	Kellerberrin	42.76	227	P	P	03 43 21.7	-1.1
	baz=43,SNR=27						
TATO	Taipei	42.77	315	eP	P	03 43 22.5	-0.4
	comp=Z,175nm,1.1s						
TATO				LR	LR		
	comp=Z,4µm,21.0s						
MORW	Morawa	42.82	231	P	P	03 43 22.8	-0.5
	baz=43,SNR=22						
ODZ	Otahua Downs	42.94	162	eP	P	03 43 24.3	+0.4
	comp=Z,206nm,1.1s						
WHZ	Wether Hill Ro	42.95	165	eP	P	03 43 24.4	+0.3
	comp=Z,208nm,1.2s						
BLDU	Ballidu	43.04	229	P	P	03 43 23.9	-1.2
	baz=43,SNR=23						
MIDW	Midway	43.22	39	PFAKE		03 43 40.0	+14
MIDW				LR	LR		
	comp=Z,3µm,22.0s						
JNU	Nakatsue	43.23	332	P	P	03 43 26.8	+0.2
	comp=Z,67nm,0.9s,baz=119,slow=3.1,SNR=22						
JNU				ScP	ScP	03 49 03.2	0.0
	comp=Z,24nm,1.1s,baz=61,slow=4.5,SNR=4.0						
JNU				LR	LR	04 00 49.3	
	comp=Z,745nm,19.1s,baz=124,slow=35						
JNU	Nakatsue	43.23	332	eP	P	03 43 27.0	+0.4
	comp=Z,103nm,1.0s						
JNU				ScP	ScP	03 49 03.2	0.0
MJAR	Matsushiro Arr	43.41	342	P	P	03 43 26.2	-1.7
	comp=Z,11nm,0.7s,baz=169,slow=8.4,SNR=19						
MJAR				PcP	PcP	03 45 15.4	-0.4
	comp=Z,2.1nm,0.4s,baz=176,slow=5.0,SNR=4.9						
MJAR				ScP	ScP	03 49 04.7	+1.0
	comp=Z,7.2nm,1.1s,baz=184,slow=5.6,SNR=6.6						
MJAR				LR	LR	03 59 30.9	
	comp=Z,2µm,21.5s,baz=180,slow=33						
MAJO	Matsushiro	43.41	342	eP	P	03 43 26.9	-1.0
	comp=Z,22nm,0.8s						
MAJO				LR	LR		
	comp=Z,2µm,21.0s						
MAJO	Matsushiro	43.41	342⇓	iP	P	03 43 27.2	-0.7
MAJO				pmax	pmax		
	comp=Z,26nm,1.3s						
MAT	Matsushiro	43.41	342	P	P	03 43 26.3	-1.6
MAT				S	S	03 49 48.8	-4.3
MJB9	Matsu-Tunnel	43.41	342	eP	P	03 43 27.1	-0.8
	comp=Z,22nm,0.8s						
NWAO	Narrogin (SRO)	43.84	226	P	P	03 43 30.2	-1.2
	baz=44,SNR=4.9						
NWAO	Narrogin (SRO)	43.84	226	P	P	03 43 29.6	-1.8
	comp=Z,18nm,0.8s,baz=316,slow=9.6,SNR=6.8						
NWAO				LR	LR	04 03 48.0	
	comp=Z,4µm,18.5s,baz=280,slow=39						
NWAO	Narrogin (SRO)	43.84	226	eP	P	03 43 31.9	+0.5
	comp=Z,257nm,1.9s						
NWAO				LR	LR		
	comp=Z,4µm,19.0s						
NWAO	Narrogin (SRO)	43.84	226	eP	P	03 43 31.9	+0.5
NWAO				pmax	pmax		
	comp=Z,257nm,1.9s						
NWAO				MLR	MLR		
	comp=Z,4µm,19.0s						
MUN	Mundaring	44.09	228	P	P	03 43 33.0	-0.4
	baz=44,SNR=14						
KPJI	Karang Pucung	44.23	264	P	P	03 43 35.0	+0.2
CMJI	Cimerak	44.72	264	P	P	03 43 37.3	-1.4
QZH	Quanzhou	44.83	313⇑	iP	P	03 43 39.8	+0.4
QZH				sP	pP	03 43 52.9	+1.2
QZH				PcP	PcP	03 45 21.3	+0.5
QZH				ScP	ScP	03 49 10.0	+0.2
QZH				S	S	03 50 12.0	-2.0
QZH				ScS	SS	03 53 36.4	-0.1
QZH				pmax	pmax		
	comp=Z,690nm,7.4s						
QZH				LR	LR		
	comp=Z,1µm,24.2s						
QZH				LR	LR		
	comp=Z,1µm,18.5s						
QZH				LR	LR		
	comp=Z,3µm,30.8s						
CISI	Cisompet, Garu	45.34	264	P	P	03 43 42.7	-1.1
CISI	Cisompet, Garu	45.34	264	eP	P	03 43 42.2	-1.5
	comp=Z,238nm,0.8s						
LEM	Lembang	45.53	265	P	P	03 43 45.3	-0.1
	comp=Z,48nm,0.8s,baz=70,slow=15,SNR=6.7						
LEM				LR	LR	04 04 12.5	
	comp=Z,1µm,20.8s,baz=90,slow=38						
DBJI	Dramaga	46.39	265	P	P	03 43 50.6	-1.4
SSE	Sheshan	47.01	321	P	P	03 43 58.0	+1.5
SSE				S	S	03 50 42.0	-3.1
SSE				pmax	pmax		
	comp=Z,34nm,1.0s						
SSE				pmax	pmax		
	comp=Z,170nm,5.5s						
SSE				LR	LR		
	comp=Z,590nm,22.2s						
SSE				LR	LR		
	comp=Z,570nm,22.2s						
ERM	Erimo	47.42	350	PFAKE		03 44 10.0	+11
ERM				LR	LR		
	comp=Z,3µm,22.0s						
ERM	Erimo	47.42	350	i P	P	03 44 00.8	+1.3
ERM				pmax	pmax		
	comp=Z,11nm,0.8s						
CGJI	Cibinong	47.44	265	P	P	03 43 58.7	-1.5
TJN	Taejon	47.55	331c	iP	P	03 44 01.6	+1.0
TJN				i		03 45 31.5	
GZH	Guangzhou	47.83	307	P	P	03 44 04.6	+1.5
GZH				PcP	PcP	03 45 31.4	0.0
GZH				PP	PP	03 45 56.4	+1.1
GZH				S	S	03 51 02.0	+4.8
GZH				ScS	ScS	03 53 51.9	-1.3
GZH				LR	LR		
	comp=Z,2µm,21.3s						
GZH				LR	LR		
	comp=Z,3µm,21.4s						
KSRS	Korea Array	48.17	333	P	P	03 44 05.9	+0.5
	comp=Z,19nm,0.7s,baz=151,slow=8.7,SNR=54						
KSRS				PcP	PcP	03 45 33.5	+1.2
	comp=Z,8.9nm,0.6s,baz=159,slow=3.6,SNR=10.0						
KSRS				ScP	ScP	03 49 25.0	+1.6
	comp=Z,12nm,1.0s,baz=140,slow=5.3,SNR=16						
KSRS				LR	LR	04 03 40.3	
	comp=Z,818nm,18.2s,baz=154,slow=35						
KS15	Wonju Array Si	48.17	333	eP	P	03 44 06.3	+0.9
KSAR	Wonju Array Be	48.17	333	P	P	03 44 05.9	+0.5
KSAR				PcP	PcP	03 45 33.5	+1.2
KSAR				ScP	ScP	03 49 25.0	+1.5
KSAR	Wonju Array Be	48.17	333	P	P	03 44 05.9	+0.5
KSAR						03 45 33.5	
KS01	Wonju Array Si	48.20	333	eP	P	03 44 05.2	-0.4
RAR	Rarotonga	48.32	114	P	P	03 44 07.3	+0.4
	comp=Z,14nm,0.5s,baz=222,slow=7.7,SNR=3.9						
RAR				LR	LR	04 02 42.4	
	comp=Z,234nm,19.2s,baz=272,slow=34						
KASI	Kota Agung	48.65	267	P	P	03 44 07.5	-2.0
SHO	Shikotan	48.71	354d	iP	P	03 44 10.0	+0.6
SHO				i S	pP	03 44 17.6	-4.2
INCN	Inchon	48.79	332	eP	P	03 44 11.3	+1.1
INCN				LR	LR		
	comp=Z,1µm,19.0s						
INCN	Inchon	48.79	332	eP	P	03 44 11.3	+1.1
INCN				MLR	MLR		
	comp=Z,1µm,19.0s						
QIZ	Qiongzhong	48.89	300	P	P	03 44 12.7	+1.4
QIZ				pP	pP	03 44 21.1	-2.6
QIZ				S	S	03 51 08.4	-3.8
QIZ				SS	SS	03 54 45.2	+1.6
QIZ				LR	LR		
	comp=Z,1µm,19.6s						
QIZ				LR	LR		
	comp=Z,3µm,23.5s						
QIZ				LR	LR		
	comp=Z,4µm,22.1s						
QIZ	Qiongzhong	48.89	300	eP	P	03 44 11.2	-0.1
QIZ				LR	LR		
	comp=Z,5µm,21.0s						
YUK	Yuzh-Kuril’sk	48.99	353c	iP	P	03 44 11.9	+0.4
YUK				e		03 45 34.8	
YUK				i		03 46 05.7	
YUK				ePPP	PPP	03 46 57.2	
YUK				i S	S	03 51 14.9	+2.2
YUK				i		03 54 04.5	
YUK				eSSS	SSS	03 56 08.2	
YUK				pmax	pmax		
	comp=Z,72nm,1.1s						
YUK				pmax	pmax		
	comp=N,63nm,0.8s						
YUK				pmax	pmax		
	comp=E,58nm,0.9s						
YUK				pmax	pmax		
	comp=Z,146nm,1.2s						
MDSI	Maura Dua	49.00	268	P	P	03 44 10.0	-2.2
LWLI	Liwa	49.10	267	P	P	03 44 12.9	-0.2
NJ2	Nanjing	49.12	321	eP	P	03 44 14.1	+1.3
NJ2				pP	pP	03 44 24.3	-0.9
NJ2				S	S	03 51 17.4	+2.4
NJ2				sS	sS	03 51 34.5	-1.2
NJ2				pmax	pmax		
	comp=Z,41nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,560nm,3.5s						
NJ2				LR	LR		
	comp=Z,2µm,20.1s						
NJ2				LR	LR		
	comp=Z,2µm,19.0s						
NJ2				LR	LR		
	comp=Z,3µm,21.5s						
ASAJ	Asahikawa	49.56	350	P	P	03 44 16.5	+0.5
	comp=Z,22nm,0.6s,baz=218,slow=11,SNR=28						
ASAJ				LR	LR	04 02 36.7	
	comp=Z,2µm,21.1s,baz=178,slow=33						
ASAJ	Asahikawa	49.56	350	eP	P	03 44 16.7	+0.8
	comp=Z,156nm,1.6s						
MCQ	Macquarie Isla	49.85	176	P	P	03 44 20.0	+2.0
	baz=50,SNR=3.9						
MCQ	Macquarie Isla	49.85	176	eP	P	03 44 20.0	+2.0
	comp=Z,481nm,1.1s						
MCQ	Macquarie Isla	49.85	176	eP	P	03 44 20.0	+2.0
MCQ				pmax	pmax		
	comp=Z,481nm,1.1s						
KUR	Kuril’sk	49.96	355c	iP	P	03 44 19.5	+0.6
KUR				eS	S	03 51 24.2	-2.1
KUR				pmax	pmax		
	comp=Z,155nm,1.2s						
KUR				pmax	pmax		
	comp=N,63nm,1.1s						
KUR				pmax	pmax		
	comp=E,67nm,1.3s						
KUR				pmax	pmax		
	comp=Z,513nm,4.3s						
KUR				pmax	pmax		
	comp=N,306nm,4.2s						
WHN	Wuhan	51.17	316	P	P	03 44 29.2	+0.9
WHN				ScP	ScP	03 49 35.9	-0.6
WHN				S	S	03 51 40.6	-3.0
WHN				pmax	pmax		
	comp=N,88nm,1.2s						
WHN				LR	LR		
	comp=N,6µm,25.0s						
WHN				LR	LR		
	comp=N,2µm,16.4s						
WHN				LR	LR		
	comp=N,9µm,28.2s						
MSHR	Mys Shultsa	51.20	339c	iP	P	03 44 29.6	+1.3
MSHR				i		03 45 44.1	
YSS	Yuzh-Sakhalins	52.29	351	eP	P	03 44 36.2	-0.2
	comp=N,21nm,0.7s						
YSS				LR	LR		
	comp=Z,899nm,21.0s						
YSS	Yuzh-Sakhalins	52.29	351α	eP	P	03 44 36.8	+0.4
YSS				e		03 44 47.5	
YSS				e*SP	sP	03 44 54.5	+0.5
YSS				e		03 45 48.4	
YSS				e		03 46 42.5	
YSS				i S	S	03 51 56.4	-2.0
YSS				ePS	SPn	03 52 08.8	+2.8
YSS				e		03 54 21.1	
YSS				eSS	SS	03 55 40.0	+3.2
YSS				eSSS	SSS	03 57 18.7	
YSS				pmax	pmax		
	comp=Z,30nm,0.7s						
YSS				pmax	pmax		
	comp=Z,300nm,8.8s						
YSS				MLR	MLR		
	comp=N,500nm,19.0s						
YSS				MLR	MLR		
	comp=E,400nm,19.0s						
YSS				MLR	MLR		
	comp=Z,700nm,19.0s						
USRK	Ussuriysk Ar.	52.34	341	P	P	03 44 37.7	+0.9
	comp=Z,26nm,0.6s,baz=179,slow=6.3						
USRK				ScP	ScP	03 49 40.0	-1.3
	baz=141,slow=42						
USRK				LR	LR	04 03 02.9	
	comp=Z,962nm,21.8s,baz=144,slow=32						
DL2	Dalian	52.38	329 ⇑	P	P	03 44 37.7	+0.5
DL2				pP	pP	03 44 49.0	-0.7
DL2				PcP	PcP	03 45 48.4	+0.7
DL2				PP	PP	03 46 41.3	+5.0
DL2				ScP	ScP	03 49 42.6	+1.1
DL2				S	S	03 52 00.0	+0.1
DL2				sS	sS	03 52 20.0	-0.7
DL2				ScS	ScS	03 54 24.0	+0.5
DL2				pmax	pmax		
	comp=Z,44nm,1.2s						
DL2				pmax	pmax		
	comp=Z,310nm,4.2s						
DL2				LR	LR		
	comp=Z,1µm,22.6s						
DL2				LR	LR		
	comp=Z,1µm,21.4s						
DL2				LR	LR		
	comp=Z,2µm,30.1s						
SKNT	Sakolnakorn	53.31	295	P	P	03 44 45.2	+0.7
	comp=Z,20nm,1.7s,comp=Z,685nm						
MDJ	Mudanjiang	53.53	339	P	P	03 44 43.5	-2.1
MDJ				pP	pP	03 44 54.6	-3.5
MDJ				sP	sP	03 44 59.4	-3.9
MDJ				S	S	03 52 11.6	-3.9
MDJ				sS	pS	03 52 30.0	+0.1
MDJ				SS	SS	03 55 53.4	-3.1
MDJ				pmax	pmax		
	comp=Z,54nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,330nm,2.9s						
MDJ				LR	LR		
	comp=Z,790nm,18.8s						
MDJ				LR	LR		
	comp=Z,500nm,19.8s						
MDJ				LR	LR		
	comp=Z,2µm,29.4s						
MDJ	Mudanjiang	53.53	339	eP	P	03 44 46.1	+0.5
	comp=Z,71nm,1.0s						
MDJ				LR	LR		
	comp=Z,940nm,21.0s						
CHBT	CHBT	53.57	290	P	P	03 44 48.7	+2.3
	comp=Z,67nm,0.9s,comp=Z,866nm						
SNY	Shenyang	53.67	333 ⇓	P	P	03 44 55.4	+8.7
SNY				S	S	03 52 16.3	-1.2
SNY	Shenyang	53.67	333	SS	SS	03 55 54.5	-4.3
SNY				pmax	pmax		
	comp=Z,460nm,9.0s						
SNY				LR	LR		
	comp=N,1µm,18.8s						
SNY				LR	LR		
	comp=E,1µm,18.4s						
SNY				LR	LR		
	comp=Z,3µm,24.5s						
MNSI	Mandailing Nat	53.99	274	P	P	03 44 50.4	+0.9
	comp=Z,52nm,0.7s						
SRAK	Srakaew	54.18	291	P	P	03 44 48.8	-2.1
	comp=Z,38nm,0.8s,comp=Z,1µm						
KIP	Kipapa	54.27	59	PFAKE		03 45 00.0	+8.5
KIP				LR	LR		
	comp=Z,3µm,22.0s						
OPA	Opana	54.38	59	eP	P	03 44 53.0	+0.8
	comp=Z,232nm,1.1s						
OPA	Opana	54.38	59	eP	P	03 44 53.0	+0.8
OPA				pmax	pmax		
	comp=Z,232nm,1.1s						
NONG	Nongkai	54.42	296	P	P	03 44 53.1	+0.5
	comp=Z,0.9nm,1.3s						
CN2	Changchun	54.44	335 ⇑	P	P	03 44 52.6	+0.3
CN2				epP	pP	03 45 03.0	-1.8
CN2				eS	S	03 52 27.6	-0.2
CN2				pmax	pmax		
	comp=Z,40nm,1.2s						

CN2				pmax	pmax		
	comp=Z,400nm,5.0s						
CN2				LR	LR		
	comp=Z,800nm,19.0s						
CN2				LR	LR		
	comp=Z,500nm,19.0s						
CN2				LR	LR		
	comp=Z,900nm,19.0s						
ENH	**Enshi**	**54.49**	**313**	*e*P	**P**	**03 44 52.8**	**-0.2**
	comp=Z,108nm,1.2s						
ENH				LR	LR		
	comp=Z,2µm,20.0s						
GYA	**Guiyang**	**54.77**	**307**⇑	*i*P	**P**	**03 44 55.8**	**+0.6**
GYA				pP	pP	03 45 08.0	+0.3
GYA				sP	sP	03 45 12.2	-0.7
GYA				PcP	**PcP**	**03 45 59.6**	**+2.3**
GYA				PP	**PP**	**03 47 01.5**	**+3.2**
GYA				ScP	**ScP**	**03 49 53.4**	**+1.0**
GYA				S	**S**	**03 52 32.0**	**-1.1**
GYA				sS	sS	03 52 52.0	-2.1
GYA				SS	**SS**	**03 56 17.7**	**+0.7**
GYA				pmax	pmax		
	comp=Z,30nm,0.8s						
GYA				pmax	pmax		
	comp=Z,350nm,8.4s						
GYA				LR	LR		
	comp=Z,1µm,22.4s						
GYA				LR	LR		
	comp=Z,2µm,21.7s						
GYA				LR	LR		
	comp=Z,3µm,21.8s						
PSI	**Prapat**	**54.88**	**277**	P	**P**	**03 44 54.6**	**-1.6**
	comp=Z,13nm,1.1s,baz=180,slow=4.7,SNR=4.7						
PSI				ScP	**ScP**	**03 49 52.6**	**-0.6**
	comp=Z,4.8nm,0.6s,baz=360,slow=3.1,SNR=4.4						
PSI				LR	LR	04 11 09.0	
	comp=Z,768nm,21.1s,baz=90,slow=39						
PSI	**Prapat**	**54.88**	**277**	*e*P	**P**	**03 44 54.8**	**-1.4**
	comp=Z,167nm,2.0s						
PSI				ScP	**ScP**	**03 49 52.6**	**-0.6**
PSI	**Prapat**	**54.88**	**277**	*e*P	**P**	**03 44 54.8**	**-1.4**
PSI				pmax	pmax		
	comp=Z,167nm,2.0s						
SKR	**Severo-Kuril's**	**55.23**	**2**	*e*P	**P**	**03 44 57.5**	**-0.3**
SKR				*e*S	**S**	**03 52 37.7**	**-0.3**
SKR				*e*SSS	SSS	03 58 28.1	
SKR				pmax	pmax		
	comp=Z,200nm,4.9s						
SKR				pmax	pmax		
	comp=Z,600nm,3.8s						
SKR				pmax	pmax		
	comp=Z,53nm,1.1s						
SKR				MLR	MLR		
	comp=Z,1µm,18.0s						
SKR				MLR	MLR		
	comp=Z,1µm,17.0s						
KRAB	**Krabi**	**55.51**	**283**	P	**P**	**03 45 02.2**	**+1.6**
	comp=Z,26nm,0.8s						
HMH	**Humu'ula Sheep**	**55.81**	**63**	*e*P	**P**	**03 45 04.0**	**+1.0**
	comp=Z,305nm,1.3s						
POHA	**Pohakuloa**	**55.82**	**62**	PFAKE		03 45 20.0	+17
POHA				LR	LR		
	comp=Z,2µm,22.0s						
PBKT	**Sadao Pong**	**55.91**	**294**	P	**P**	**03 45 04.7**	**+1.3**
	comp=Z,29nm,0.8s,comp=Z,1µm						
BJT	**Baijiatuau**	**56.11**	**326**	PFAKE		03 45 20.0	+16
BJT				LR	LR		
	comp=Z,3µm,22.0s						
TYV	**Tymovskoe**	**56.11**	**352**	*e*P	**P**	**03 45 05.0**	**+0.8**
TYV				*e*		03 52 55.9	
TYV				pmax	pmax		
	comp=Z,100nm,5.8s						
TYV				pmax	pmax		
	comp=Z,43nm,0.7s						
BJI	**Beijing**	**56.12**	**326**⇑	*e*P	**P**	**03 45 04.6**	**+0.2**
BJI				pP	**pP**	**03 45 15.0**	**-2.0**
BJI				S	**S**	**03 52 45.1**	**-5.3**
BJI				SS	**SS**	**03 56 39.2**	**+1.7**
BJI				pmax	pmax		
	comp=Z,22nm,1.2s						
BJI				LR	LR		
	comp=Z,2µm,23.6s						
BJI				LR	LR		
	comp=Z,3µm,22.4s						
BJI				LR	LR		
	comp=Z,4µm,26.5s						
KCSI	**Kotacane, Aceh**	**56.12**	**277**	P	**P**	**03 45 03.4**	**-1.6**
PHET	**Kaeng Krachan**	**56.15**	**289**	P	**P**	**03 45 07.3**	**+2.2**
	comp=Z,13nm,0.8s						
COCO	**West Island**	**56.30**	**259**	PFAKE		03 45 20.0	+14
COCO				LR	LR		
	comp=Z,2µm,20.0s						
PHIT	**Phitsanulok**	**56.61**	**294**	P	**P**	**03 45 09.9**	**+1.6**
	comp=Z,46nm,0.8s						
TIY	**Taiyuan**	**56.79**	**322**	*e*P	**P**	**03 45 09.9**	**+0.5**
TIY				S	**S**	**03 52 58.0**	**-1.6**
TIY				SS	**SS**	**03 56 52.6**	**+4.2**
TIY				LR	LR		
	comp=Z,310nm,14.0s						
TIY				LR	LR		
	comp=Z,740nm,16.4s						
TIY				LR	LR		
	comp=Z,2µm,22.2s						
NANT	**Nan**	**56.85**	**296**	P	**P**	**03 45 10.6**	**+0.5**
	comp=Z,16nm,0.6s,comp=Z,438nm						
KLR	**Kul'dur**	**56.91**	**343**	P	**P**	**03 45 10.3**	**+0.3**
	comp=Z,2.6nm,0.7s,baz=147,slow=6.6,SNR=72						
KLR				ScP	**ScP**	**03 50 01.6**	**+0.5**
	comp=Z,0.6nm,1.1s,baz=154,slow=3.4,SNR=3.8						
KLR				LR	LR	04 08 02.8	
	comp=Z,79nm,21.2s,baz=166,slow=34						
KLR				PKP2bc		04 15 00.0	
	comp=Z,0.1nm,0.8s,baz=296,slow=6.2,SNR=4.0						
KLR	**Kul'dur**	**56.91**	**343***c*	*i*P	**P**	**03 45 10.6**	**+0.7**
XAN	**Xi'an**	**56.93**	**316**	P	**P**	**03 45 10.6**	**+0.2**
XAN				pP	pP	03 45 20.8	-2.2
XAN				ScP	**ScP**	**03 50 02.3**	**+0.6**
XAN				S	S	03 52 52.1	-9.4
XAN				ScS	**ScS**	**03 54 58.0**	**+1.6**
XAN				pmax	pmax		
	comp=Z,66nm,0.8s						
XAN				LR	LR		
	comp=Z,1µm,23.0s						
XAN				LR	LR		
	comp=Z,1µm,20.0s						
XAN				LR	LR		
	comp=Z,2µm,21.6s						
SRDT	**SRDT**	**57.00**	**290**	P	**P**	**03 45 12.5**	**+1.4**
	comp=Z,64nm,0.7s,comp=Z,2µm						
UTHA	**Uthaitani**	**57.02**	**292**	P	**P**	**03 45 12.3**	**+1.0**
	comp=Z,20nm,0.7s,comp=Z,167nm						
GRNR	**Gornyy**	**57.15**	**347**	*e*P	**P**	**03 45 13.9**	**+2.3**
GRNR				pmax	pmax		
	comp=Z,42nm,1.0s						
PPT	**Papeete**	**57.24**	**108**	P	**P**	**03 45 13.2**	**+0.3**
	comp=Z,25nm,0.4s,baz=191,slow=2.6,SNR=7.7						
PPT	**Papeete**	**57.24**	**108**	*e*P	**P**	**03 45 15.0**	**+2.2**
PPT	**Papeete**	**57.24**	**108**	*e*P	**P**	**03 45 15.0**	**+2.2**
PPT2	**Papeete2**	**57.24**	**108**	*e*P	**P**	**03 45 13.5**	**+0.6**
	comp=Z,79nm,1.4s						
PPT2				*e*S	**S**	**03 53 06.3**	**+0.2**
	comp=Z,950nm,24.5s						
PPT2				*e*LQ	LQ	03 59 42.1	
	comp=Z,2µm,23.2s						
PPT2				*e*LR	LR	04 02 07.8	
	comp=Z,2µm,24.8s						
PAE	**Paea**	**57.24**	**108**	*e*P	**P**	**03 45 12.9**	**+0.1**
	comp=Z,7.8nm,0.9s						
PPTF	**Pamatai, Papee**	**57.25**	**108**	*e*P	**P**	**03 45 13.8**	**+0.8**
	comp=Z,86nm,1.1s						
KMI	**Kunming**	**57.38**	**304**	P	**P**	**03 45 15.8**	**+1.8**
KMI				pP	pP	03 45 27.2	+0.6
KMI				sP	sP	03 45 33.4	+1.6
KMI				PP	**PP**	**03 47 26.0**	**+4.2**
KMI				S	**S**	**03 53 05.9**	**-2.2**
KMI				sS	sS	03 53 28.7	-0.5
KMI				pmax	pmax		
	comp=Z,25nm,1.0s						
KMI				pmax	pmax		
	comp=Z,120nm,3.6s						
KMI				LR	LR		
	comp=Z,1µm,19.4s						
KMI				LR	LR		
	comp=Z,2µm,22.1s						
KMI				LR	LR		
	comp=Z,3µm,26.5s						
TIAR	**Tiarei**	**57.45**	**108**	*e*P	**P**	**03 45 15.0**	**+0.6**
	comp=Z,24nm,0.8s						
TVO	**Taravao**	**57.57**	**108**	*e*P	**P**	**03 45 15.8**	**+0.6**
	comp=Z,18nm,0.8s						
MLSI	**Meulaboh, Aceh**	**57.57**	**278**	P	**P**	**03 45 17.7**	**+2.4**
	comp=Z,135nm,0.9s						
PET	**Petropavlovsk**	**57.69**	**4**	*e*P	**P**	**03 45 16.2**	**+0.9**
	comp=Z,46nm,0.9s						
PET				LR	LR		
	comp=Z,995nm,22.0s						
PET	**Petropavlovsk**	**57.69**	**4**α	*i*P	**P**	**03 45 15.6**	**+0.3**
PET				*i* S	**S**	**03 53 11.4**	**+0.8**
PET				*e*SS	**SS**	**03 57 02.9**	**+1.1**
PET						03 59 23.8	
PET				pmax	pmax		
	comp=Z,48nm,0.6s						
PET				pmax	pmax		
	comp=Z,400nm,19.0s						
PEA0B	**Petropavlovsk-**	**57.72**	**3**	*e*P	**P**	**03 45 17.0**	**+1.5**
	comp=Z,125nm,1.1s						
PETK	**Petropavlovsk-**	**57.72**	**3**	P	**P**	**03 45 16.7**	**+1.1**
	comp=Z,16nm,0.6s,baz=162,slow=6.0						
PETK				LR	LR	04 06 11.5	
	comp=Z,1µm,21.8s,baz=195,slow=32						
PETK				PKP2bc		04 15 07.8	
	baz=98,slow=7.6						
PETK	**Petropavlovsk-**	**57.72**	**3**	*e*P	**P**	**03 45 16.5**	**+0.9**
UMPA	**Umpang Tak**	**57.75**	**292**	P	**P**	**03 45 18.6**	**+2.2**
	comp=Z,9.7nm,0.8s,comp=Z,1µm						
PAYA	**Payao**	**57.78**	**296**	P	**P**	**03 45 17.8**	**+1.2**
	comp=Z,15nm,0.7s						
TBI	**Tubuai**	**58.10**	**115**	*e*S	**S**	**03 53 17.2**	**+0.1**
	comp=Z,1µm,28.8s						
TBI				*e*LQ	LQ	04 00 04.8	
	comp=Z,7µm,29.2s						
TBI				*e*LR	LR	04 02 30.6	
	comp=Z,5µm,25.5s						
CM01	**Chiang Mai Arr**	**58.30**	**295**	*e*P	**P**	**03 45 21.1**	**+0.8**
CM31	**Chiang Mai Arr**	**58.33**	**295**	*e*P	**P**	**03 45 21.1**	**+0.7**
CMAR	**Chiang Mai Arr**	**58.33**	**295**	P	**P**	**03 45 21.6**	**+1.2**
	comp=Z,19nm,0.7s,baz=120,slow=5.4,SNR=38						
CMAR				LR	LR	04 09 08.4	
	comp=Z,1µm,21.1s,baz=122,slow=35						
CMMT	**Chiang Mai**	**58.43**	**295**	P	**P**	**03 45 22.5**	**+1.3**
	comp=Z,27nm,1.4s,comp=Z,626nm						
CHTO	**Chiang Mai**	**58.44**	**295**	*e*P	**P**	**03 45 21.5**	**+0.3**
	comp=Z,65nm,1.5s						
CHTO				LR	LR		
	comp=Z,1µm,20.0s						
CHTO	**Chiang Mai**	**58.44**	**295**	P	**P**	**03 45 21.9**	**+0.7**
	SNR=14						
CHTO	**Chiang Mai**	**58.44**	**295**	*e*P	**P**	**03 45 21.5**	**+0.3**
CHTO				pmax	pmax		
	comp=Z,65nm,1.5s						
CHTO				MLR	MLR		
	comp=Z,1µm,20.0s						
CHTO	**Chiang Mai**	**58.44**	**295**	P	**P**	**03 45 22.6**	**+1.4**
	comp=Z,120nm,1.4s,comp=Z,3µm						
NKL	**Nikolayevsk**	**58.63**	**351**	*e*P	**P**	**03 45 22.0**	**+0.2**
NKL				pmax	pmax		
	comp=Z,43nm,1.0s						
NKL				pmax	pmax		
	comp=Z,300nm,3.0s						
NKL				MLR	MLR		
	comp=N,500nm,18.0s						
NKL				MLR	MLR		
	comp=E,600nm,18.0s						
NKL				MLR	MLR		
	comp=Z,1µm,18.0s						
PMOR	**Pomariorio Ree**	**58.64**	**105**	*e*P	**P**	**03 45 22.8**	**+0.1**
	comp=Z,273nm,1.2s						
CMAI	**Chiengmai2**	**58.70**	**297**	P	**P**	**03 45 24.8**	**+1.6**
	comp=Z,2.5nm,1.1s						
VAH	**Vaihoa**	**58.91**	**105**	*e*P	**P**	**03 45 24.4**	**-0.2**
	comp=Z,107nm,1.1s						
CD2	**Chengdu**	**59.09**	**310**	⇑P	**P**	**03 45 26.3**	**+0.7**
CD2				pP	pP	03 45 36.8	-1.5
CD2				sP	sP	03 45 41.2	-2.2
CD2				PP	**PP**	**03 47 37.2**	**+0.5**
CD2				S	**S**	**03 53 31.8**	**+1.9**
CD2				sS	sS	03 53 49.6	-1.4
CD2				SS	**SS**	**03 57 27.6**	**+2.9**
CD2				pmax	pmax		
	comp=Z,770nm,4.9s						
CD2				LR	LR		
	comp=Z,6µm,25.0s						
CD2				LR	LR		
	comp=Z,7µm,23.5s						
CD2				LR	LR		
	comp=Z,7µm,26.0s						
HHC	**Hu-ho-hao-te**	**59.29**	**324**	*e*P	**P**	**03 45 27.5**	**+0.6**
HHC				pP	pP	03 45 39.6	0.0
HHC				PP	**PP**	**03 47 40.8**	**+2.5**
HHC				S	**S**	**03 53 34.3**	**+2.1**
HHC				sS	sS	03 53 50.4	-3.0
HHC				ScS	**ScS**	**03 55 13.5**	**-0.1**
HHC				pmax	pmax		
	comp=Z,42nm,0.9s						
HHC				pmax	pmax		
	comp=Z,310nm,7.3s						
HHC				LR	LR		
	comp=Z,1µm,17.7s						
HHC				LR	LR		
	comp=Z,960nm,17.5s						
HHC				LR	LR		
	comp=Z,2µm,16.9s						
BTO	**Baotou**	**60.05**	**323**	*e*P	**P**	**03 45 32.2**	**0.0**
HIA	**Hailar**	**61.17**	**336**	*e*P	**P**	**03 45 39.5**	**+0.1**
	comp=Z,61nm,1.3s						
HIA				LR	LR		
	comp=Z,965nm,20.0s						
HIA	**Hailar**	**61.17**	**336**	*e*P	**P**	**03 45 39.6**	**+0.1**
HIA				pmax	pmax		
	comp=Z,61nm,1.3s						
HIA				MLR	MLR		
	comp=Z,965nm,20.0s						
LZH	**Lanzhou**	**61.54**	**316**	*e*P	**P**	**03 45 43.9**	**+1.4**
LZH				pP	pP	03 45 54.9	-0.3
LZH				sP	sP	03 45 58.1	-2.2
LZH				PcP	**PcP**	**03 46 21.7**	**-2.2**
LZH				PP	**PP**	**03 48 02.3**	**+3.9**
LZH				ScP	**ScP**	**03 50 24.3**	**+2.1**
LZH				*e*S	**S**	**03 54 02.1**	**+0.7**
LZH				sS	pS	03 54 15.2	-1.3
LZH				ScS	**ScS**	**03 55 32.3**	**+1.5**
LZH				pmax	pmax		
	comp=Z,120nm,1.4s						
LZH				pmax	pmax		
	comp=Z,440nm,4.3s						
LZH				LR	LR		
	comp=Z,2µm,14.9s						
LZH				LR	LR		
	comp=Z,3µm,14.5s						
LZH				LR	LR		
	comp=Z,3µm,16.0s						
KIWB	**Kanaga Island**	**61.70**	**20**	*e*P	**P**	**03 45 43.2**	**+0.3**
ZEA	**Zeya**	**62.22**	**343**	*e*P	**P**	**03 45 46.6**	**+0.2**
ZEA				*e*S	**S**	**03 54 06.0**	**-2.8**
ZEA				pmax	pmax		
	comp=N,72nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,92nm,1.2s						
ATKA	**Atka Island**	**63.05**	**22**	*e*P	**P**	**03 45 52.2**	**+0.3**
	comp=Z,84nm,1.3s						
MA2	**Magadan**	**64.12**	**359**	P	**P**	**03 45 59.3**	**+0.4**
	comp=Z,50nm,0.6s,baz=167,slow=6.3,SNR=39						
MA2	**Magadan**	**64.12**	**359**	*e*P	**P**	**03 45 58.9**	**0.0**
	comp=Z,60nm,0.7s						
MA2				LR	LR		
	comp=Z,1µm,20.0s						
MA2	**Magadan**	**64.12**	**359**	*e*P	**P**	**03 45 58.9**	**0.0**
MA2				pmax	pmax		
	comp=Z,60nm,0.7s						
MA2				MLR	MLR		
	comp=Z,1µm,20.0s						
CLNS	**Chul'man**	**65.58**	**343**	*e*P	**P**	**03 46 08.8**	**+0.3**
CLNS				*e**PP	**sP**	**03 46 27.1**	**+0.7**
CLNS				*e*		03 46 38.1	
CLNS				*e*		03 48 34.2	
CLNS				*e*PPP	PPP	03 50 05.0	
CLNS				*e*S	**S**	**03 54 49.6**	**-0.9**
CLNS				*e*SS	**SS**	**03 59 09.5**	**+4.3**
CLNS				pmax	pmax		
	comp=Z,37nm,1.2s						
CLNS				pmax	pmax		
	comp=N,15nm,1.1s						
CLNS				pmax	pmax		
	comp=E,9.0nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,8.0nm,1.1s						
CLNS				pmax	pmax		
	comp=N,9.0nm,0.9s						
CLNS				pmax	pmax		
	comp=E,6.0nm,0.9s						
CLNS				smax	smax		
	comp=N,127nm,10.4s						
CLNS				smax	smax		
	comp=E,173nm,13.1s						
NIKH	**Nikolski High**	**65.72**	**24**	*e*P	**P**	**03 46 09.6**	**+0.2**
	comp=E,124nm,1.0s						
GTA	**Gaotai**	**65.96**	**317**	P	**P**	**03 46 12.8**	**+1.4**
GTA				pP	pP	03 46 24.0	-0.3
GTA				sP	sP	03 46 29.4	0.0
GTA				PP	**PP**	**03 48 41.1**	**+4.0**
GTA				ScP		03 50 43.3	
GTA				S	**S**	**03 54 56.5**	**+0.4**
GTA				sS	pS	03 55 12.7	+1.1
GTA				ScS	**ScS**	**03 56 04.7**	**+0.4**
GTA				SS	**SS**	**03 59 18.6**	**+6.6**
GTA				pmax	pmax		
	comp=E,65nm,1.4s						
GTA				pmax	pmax		
	comp=E,510nm,6.9s						
GTA				LR	LR		
	comp=E,450nm,20.1s						
GTA				LR	LR		
	comp=E,850nm,18.9s						
GTA				LR	LR		
	comp=E,1µm,21.5s						
BRDH	**Bariadhala**	**66.10**	**297**	LR	LR	04 13 16.4	
	comp=E,1µm,21.8s,baz=136,slow=34						
TAOE	**Nuku Hiva Isla**	**66.10**	**98**	*e*S	**S**	**03 54 57.5**	**-1.1**
	comp=E,361nm,28.5s						
TAOE				*e*SS	**SS**	**03 59 17.9**	**+2.9**
	comp=E,704nm,33.9s						
TAOE				*e*LR	LR	04 06 03.7	
	comp=E,3µm,30.7s						
SONM	**Songino Array**	**66.54**	**328**	P	**P**	**03 46 15.8**	**+0.8**
	comp=E,11nm,0.7s,baz=146,slow=5.9,SNR=60						
SONM				LR	LR	04 13 43.2	
	comp=E,1µm,21.8s,baz=138,slow=34						
SONM				PKP2bc		04 14 49.6	
	comp=E,0.6nm,0.4s,baz=326,slow=2.1,SNR=4.9						
SONA1	**Songino Array**	**66.54**	**328**	*e*P	**P**	**03 46 14.4**	**-0.6**
SHL	**Shillong**	**66.73**	**300**	*e*P	**P**	**03 46 17.0**	**+0.3**
UNV	**Unalaska Valle**	**67.31**	**24**	*e*P	**P**	**03 46 19.6**	**+0.1**
	comp=E,109nm,1.4s						
SEY	**Seymchan**	**67.46**	**360**	P	**P**	**03 46 20.7**	**+0.4**
	comp=E,12nm,0.8s,baz=159,slow=5.0,SNR=36						
CASY	**Casey**	**68.26**	**197**	*e*P	**P**	**03 46 25.6**	**+0.3**
	comp=E,73nm,1.1s						
CASY				LR	LR		
	comp=Z,312nm,21.0s						
SPIA	**Saint Paul Isl**	**68.38**	**20**	*e*P	**P**	**03 46 27.0**	**+0.8**
	comp=Z,69nm,1.0s						
LSA	**Lhasa**	**68.63**	**304**	*e*P	**P**	**03 46 29.3**	**+0.3**
	comp=Z,22nm,0.9s						
LSA				LR	LR		
	comp=Z,2µm,22.0s						
LSA	**Lhasa**	**68.63**	**304**	*e*P	**P**	**03 46 29.3**	**+0.3**
LSA				pmax	pmax		
	comp=Z,22nm,0.9s						
LSA				MLR	MLR		
	comp=Z,2µm,22.0s						
YAK	**Yakutsk**	**69.00**	**348**	P	**P**	**03 46 30.1**	**+0.1**
	comp=Z,21nm,0.4s,baz=319,slow=4.4,SNR=7.7						
YAK				LR	LR	04 16 14.2	
	comp=Z,507nm,19.6s,baz=88,slow=35						
YAK	**Yakutsk**	**69.00**	**348**	*e*P	**P**	**03 46 30.3**	**+0.4**
	comp=Z,75nm,1.0s						
YAK				LR	LR		
	comp=Z,756nm,19.0s						
YAK	**Yakutsk**	**69.00**	**348***c*	*i*P	**P**	**03 46 30.5**	**+0.6**
YAK				*e**PP	**pP**	**03 46 40.8**	**-2.0**
YAK				*e*		03 46 52.9	
YAK				*e*S	**S**	**03 55 32.7**	**+1.4**
YAK				*e*		03 56 22.8	
YAK				*e*SS	**SS**	**04 00 01.1**	**+3.3**
YAK				pmax	pmax		
	comp=Z,43nm,1.2s						
YAK				pmax	pmax		
	comp=N,15nm,1.2s						
YAK				pmax	pmax		
	comp=E,12nm,1.1s						
YAK				pmax	pmax		
	comp=Z,50nm,2.2s						
YAK				pmax	pmax		
	comp=N,36nm,2.1s						
YAK				pmax	pmax		
	comp=E,33nm,2.2s						
YAK				smax	smax		
	comp=N,124nm,2.0s						
YAK				smax	smax		
	comp=E,71nm,1.9s						
ZAK	**Zakamensk**	**69.70**	**328**	*e*P	**P**	**03 46 34.6**	**-0.1**
ZAK				*e*		03 49 09.1	
ZAK				pmax	pmax		
	comp=Z,42nm,1.4s						
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.4s						
BOD	**Bodaibo**	**69.90**	**339**⇓	*i*P	**P**	**03 46 35.4**	**-0.2**
BOD				pmax	pmax		
	comp=Z,46nm,1.4s						
TLY	**Talaya**	**70.27**	**330**	P	**P**	**03 46 38.1**	**0.0**
	comp=Z,3.6nm,0.6s,baz=176,slow=4.5,SNR=14						
TLY				LR	LR	04 15 04.3	
	comp=Z,684nm,21.9s,baz=132,slow=34						
TLY	**Talaya**	**70.27**	**330**	*e*P	**P**	**03 46 38.8**	**+0.7**
	comp=Z,14nm,0.8s						
TLY				LR	LR		
	comp=Z,736nm,21.0s						
TLY	**Talaya**	**70.27**	**330**	P	**P**	**03 46 38.8**	**+0.7**
	SNR=14						
TLY	**Talaya**	**70.27**	**330***c*	*i*P	**P**	**03 46 38.4**	**+0.3**
TLY				*e*		03 46 59.6	
TLY				*e*		03 49 18.6	
TLY				*e*S	**S**	**03 55 46.5**	**-0.3**
TLY				*e*		03 56 33.6	
TLY				pmax	pmax		
	comp=Z,32nm,1.5s						
IRK	**Irkutsk**	**70.30**	**330**	*e*P	**P**	**03 46 37.3**	**-0.9**
IRK				pmax	pmax		
	comp=Z,67nm,2.9s						
TAPN	**Taplejung**	**70.82**	**301**	*e*P	**P**	**03 46 43.0**	**+0.7**
SDPT	**Sand Point**	**70.90**	**26**	*e*P	**P**	**03 46 42.1**	**+0.3**
	comp=Z,102nm,1.1s						
ODAN	**Odare**	**70.96**	**300**	*e*P	**P**	**03 46 43.7**	**+0.6**
RKT	**Rikitea**	**71.33**	**113**	*e*S	**S**	**03 55 59.8**	**-0.3**
	comp=Z,1µm,26.5s						
RKT				*e*LQ	LQ	04 05 36.8	
	comp=Z,2µm,31.2s						
RKT				*e*LR	LR	04 08 39.2	
	comp=Z,2µm,26.2s						
MOY	**Mondy**	**71.62**	**329**	*e*P	**P**	**03 46 47.0**	**+0.6**
MOY				pmax	pmax		
	comp=Z,91nm,2.4s						
CHLP	**Challavanipeta**	**72.01**	**291**	*e*P	**P**	**03 46 49.3**	**+0.1**
CHLP				IAmb	IAmb	03 46 51.3	
	comp=Z,119nm,0.9s						
JIRN	**Jiri**	**72.21**	**301**	*e*P	**P**	**03 46 51.2**	**+0.5**
	comp=Z,73nm,0.6s						
CHGN	**Chignik**	**72.41**	**26**	*e*P	**P**	**03 46 50.7**	**-0.1**
	comp=Z,67nm,1.0s						
GUN	**Gumba**	**72.54**	**301**	*e*P	**P**	**03 46 53.2**	**+0.5**
	comp=Z,148nm,0.9s						
PKIN	**Phulchoki**	**72.86**	**301**	*e*P	**P**	**03 46 54.5**	**0.0**
	comp=Z,30nm,0.6s						
VNDA	**Vanda**	**72.90**	**178**	P	**P**	**03 46 54.3**	**+0.8**
	comp=Z,100nm,1.0s,baz=330,slow=6.7,SNR=319						
VNDA				LR	LR	04 16 06.9	
	comp=Z,382nm,18.4s,baz=2.0,slow=33						
VNDA	**Vanda**	**72.90**	**178**	*e*P	**P**	**03 46 54.6**	**+1.1**
	comp=Z,206nm,1.2s						
VNDA	**Vanda**	**72.90**	**178**	*e*P	**P**	**03 46 54.6**	**+1.1**
VNDA				pmax	pmax		
	comp=Z,206nm,1.2s						
KKN	**Kakani**	**73.02**	**301**	*e*P	**P**	**03 46 55.7**	**+0.3**
	comp=Z,48nm,0.7s						
DMN	**Daman**	**73.12**	**301**	*e*P	**P**	**03 46 56.5**	**+0.4**
	comp=Z,143nm,1.0s						
BILL	**Bilibino**	**73.15**	**5**	*e*P	**P**	**03 46 55.4**	**+0.3**
	comp=Z,54nm,0.7s						
BILL				LR	LR		

	comp=Z,1µm,20.0s						
BILL	**Bilibino**	**73.15**	**5c**	*i*P	**P**	**03 46 55.7**	**+0.7**
BILL				*i*		03 47 07.6	
BILL				*i* S	**SKiKP**	**03 56 23.5**	**0.0**
BILL				pmax	pmax		
	comp=Z,37nm,0.8s						
SBA	**Scott Base**	**73.44**	**177**	*e*P	**P**	**03 46 58.7**	**+2.1**
	comp=Z,242nm,1.1s						
SBA				LR	LR		
	comp=Z,1µm,22.0s						
SBA	**Scott Base**	**73.44**	**177**	*e*P	**P**	**03 46 58.7**	**+2.1**
SBA				pmax	pmax		
	comp=Z,241nm,1.1s						
SBA				MLR	MLR		
	comp=Z,1µm,22.0s						
PALK	**Pallekele**	**73.46**	**279**	P	**P**	**03 46 58.5**	**+0.5**
	comp=Z,26nm,0.7s,baz=115,slow=8.4,SNR=11						
PALK				LR	LR	04 21 01.1	
	comp=Z,423nm,21.7s,baz=84,slow=37						
PALK	**Pallekele**	**73.46**	**279**	*e*P	**P**	**03 46 57.8**	**-0.2**
	comp=Z,32nm,0.8s						
PALK	**Pallekele**	**73.46**	**279**	P	**P**	**03 46 58.5**	**+0.5**
PALK	**Pallekele**	**73.46**	**279**	*e*P	**P**	**03 46 57.8**	**-0.2**
PALK				pmax	pmax		
	comp=Z,32nm,0.8s						
GKN	**Gorkha**	**73.62**	**301**	*e*P	**P**	**03 46 59.1**	**+0.2**
	comp=Z,237nm,1.3s						
PVM	**Polavaram**	**74.06**	**289**	*e*P	**P**	**03 47 00.4**	**-1.0**
PVM				IAmb	IAmb	03 47 02.0	
	comp=Z,59nm,0.9s						
KOLN	**Koldanda**	**74.46**	**300**	*e*P	**P**	**03 47 04.0**	**+0.2**
DANN	**Dangsing**	**74.46**	**301**	*e*P	**P**	**03 47 03.9**	**0.0**
	comp=Z,37nm,0.5s						
PYUN	**Piuthan**	**75.06**	**301**	*e*P	**P**	**03 47 07.2**	**-0.1**
	comp=Z,125nm,1.0s						
OHAK	**Old Harbor**	**75.22**	**27**	*e*P	**P**	**03 47 06.6**	**-0.7**
HVS	**Khovu-Aksy**	**75.28**	**326⇑**	*i*P	**P**	**03 47 08.7**	**+0.8**
HVS				pmax	pmax		
	comp=Z,48nm,1.3s						
SKHT	**Srikalahasti**	**75.31**	**285**	*e*P	**P**	**03 47 07.8**	**-0.9**
SKHT				IAmb	IAmb	03 47 09.3	
	comp=Z,48nm,0.9s						
ANM	**Nome**	**75.53**	**17**	*e*P	**P**	**03 47 10.0**	**+1.1**
	comp=Z,26nm,0.7s						
ANM	**Nome**	**75.53**	**17**	*e*P	**P**	**03 47 10.0**	**+1.1**
ANM				pmax	pmax		
	comp=Z,26nm,0.7s						
KDAK	**Kodiak Island**	**75.85**	**27**	*e*P	**P**	**03 47 10.4**	**-0.5**
	comp=Z,63nm,1.1s						
KDAK				LR	LR		
	comp=Z,1µm,22.0s						
KDAK	**Kodiak Island**	**75.85**	**27**	*i* P	**P**	**03 47 11.5**	**+0.6**
WMQ	**Urumqi**	**76.04**	**317**	P	**P**	**03 47 13.4**	**+1.0**
WMQ				sP	sP	03 47 29.4	-1.1
WMQ				S	**S**	**03 56 52.1**	**-0.6**
WMQ				SKS	**SKSac**	**03 57 19.2**	**-0.6**
WMQ				SS	**SS**	**04 01 53.0**	**+6.5**
WMQ				pmax	pmax		
	comp=Z,190nm,1.9s						
WMQ				pmax	pmax		
	comp=Z,1µm,3.8s						
WMQ				LR	LR		
	comp=Z,3µm,27.1s						
WMQ				LR	LR		
	comp=Z,2µm,32.5s						
WMQ				LR	LR		
	comp=Z,3µm,29.7s						
NJS	**Nagarjunasagar**	**76.13**	**288**	*e*P	**P**	**03 47 12.4**	**-0.9**
NJS				IAmb	IAmb	03 47 13.7	
	comp=Z,52nm,0.8s						
SRLM	**Srisailam**	**76.45**	**288**	*e*P	**P**	**03 47 14.3**	**-0.9**
SRLM				IAmb	IAmb	03 47 15.5	
	comp=Z,112nm,0.7s						
RPR	**Rampur**	**76.52**	**291**	*e*P	**P**	**03 47 14.7**	**-0.8**
RPR				IAmb	IAmb	03 47 15.9	
	comp=Z,63nm,0.8s						
HYB	**Hyderabad**	**76.97**	**289**	*i* P	**P**	**03 47 18.0**	**-0.2**
HYBB	**Hyderabad (bro**	**76.98**	**289**	*e*P	**P**	**03 47 17.5**	**-0.7**
HYBB				IAmb	IAmb	03 47 18.2	
	comp=Z,61nm,0.7s						
CNPM	**China Poot**	**77.40**	**25**	*e*P	**P**	**03 47 19.9**	**+0.2**
	comp=Z,133nm,0.6s						
SRSP	**Sriramsagar**	**77.42**	**290**	*e*P	**P**	**03 47 19.9**	**-0.7**
SRSP				IAmb	IAmb	03 47 20.7	
	comp=Z,69nm,0.7s						
BRLK	**Bradley Lake**	**77.68**	**25**	*e*P	**P**	**03 47 21.5**	**+0.2**
	comp=Z,57nm,1.0s						
URV	**Uravakonda**	**77.83**	**286**	*e*P	**P**	**03 47 22.5**	**-0.5**
URV				IAmb	IAmb	03 47 23.5	
	comp=Z,74nm,0.7s						
TIXI	**Tiksi**	**77.88**	**352**	LR	LR	04 19 01.2	
	comp=Z,607nm,22.0s,baz=126,slow=34						
TIXI	**Tiksi**	**77.88**	**352**	*e*P	**P**	**03 47 21.6**	**-0.4**
	comp=Z,118nm,1.9s						
TIXI				LR	LR		
	comp=Z,931nm,22.0s						
TIXI	**Tiksi**	**77.88**	**352⇑**	*i*P	**P**	**03 47 22.3**	**+0.3**
TIXI				pmax	pmax		
	comp=Z,76nm,2.5s						
SKT	**Skwentna**	**78.63**	**23**	*e*P	**P**	**03 47 25.3**	**-1.1**
	comp=Z,11nm,0.9s						
SUA	**Susitna One**	**78.66**	**24**	*e*P	**P**	**03 47 26.3**	**-0.4**
	comp=Z,43nm,0.8s						
RDOG	**Red Dog Mine**	**78.75**	**15**	*e*P	**P**	**03 47 28.0**	**+1.0**
	comp=Z,228nm,1.5s						
RC01	**Rabbit Creek A**	**78.87**	**25**	*e*P	**P**	**03 47 27.9**	**+0.2**
	comp=Z,199nm,1.7s						
PPLA	**Purkeypile**	**78.89**	**22**	*e*P	**P**	**03 47 28.0**	**0.0**
	comp=Z,72nm,1.4s						
KLRI	**Killari**	**78.92**	**289**	*e*P	**P**	**03 47 28.0**	**-1.0**
KLRI				IAmb	IAmb	03 47 29.1	
	comp=Z,48nm,0.8s						
ZSN	**Zaisan**	**79.15**	**320⇑**	*i*P	**P**	**03 47 30.6**	**+1.0**
	comp=Z,8.3nm,1.0s						
ZSN				*e*S	**S**	**03 57 25.2**	**-0.9**
CAST	**Castle Rocks**	**79.22**	**22**	*e*P	**P**	**03 47 29.2**	**-0.4**
	comp=Z,43nm,0.8s						
PMR	**Palmer**	**79.38**	**24**	*e*P	**P**	**03 47 30.1**	**-0.4**
	comp=Z,57nm,1.3s						
PMR	**Palmer**	**79.38**	**24**	*e*P	**P**	**03 47 30.1**	**-0.4**
PMR				pmax	pmax		
	comp=Z,57nm,1.3s						
GHO	**Glory Hole Cre**	**79.56**	**24**	*e*P	**P**	**03 47 31.7**	**+0.1**
	comp=Z,36nm,0.8s						
KTH	**Kantishna Hill**	**79.73**	**22**	*e*P	**P**	**03 47 30.9**	**-1.6**
	comp=Z,33nm,1.0s						
SML	**Sawmill**	**79.82**	**24**	*e*P	**P**	**03 47 33.0**	**+0.1**
	comp=Z,171nm,1.3s						
SML	**Sawmill**	**79.82**	**24**	*e*P	**P**	**03 47 33.0**	**+0.1**
SML				pmax	pmax		
	comp=Z,171nm,1.3s						
TRF	**Thorofare Moun**	**79.91**	**22**	*e*P	**P**	**03 47 32.3**	**-1.3**
	comp=Z,23nm,0.8s						
BPAW	**Bear Paw Mtn.**	**80.00**	**22**	*e*P	**P**	**03 47 33.0**	**-0.9**
	comp=Z,20nm,1.0s						
NDI	**New Delhi**	**80.15**	**300**	*e*P	**P**	**03 47 35.0**	**-0.4**
SCM	**Sheep Creek Mo**	**80.25**	**24**	*e*P	**P**	**03 47 35.3**	**0.0**
	comp=Z,70nm,1.1s						
SCM	**Sheep Creek Mo**	**80.25**	**24**	*e*P	**P**	**03 47 35.3**	**0.0**
SCM				pmax	pmax		
	comp=Z,70nm,1.1s						
DIV	**Divide**	**80.56**	**25**	*e*P	**P**	**03 47 37.6**	**+0.6**
	comp=Z,68nm,1.3s						
MCK	**McKinley**	**80.57**	**22**	*e*P	**P**	**03 47 36.2**	**-0.8**
	comp=Z,55nm,0.8s						
MCK	**McKinley**	**80.57**	**22**	*e*P	**P**	**03 47 36.2**	**-0.8**
MCK				pmax	pmax		
	comp=Z,55nm,0.8s						
MK01	**Makanchi Array**	**80.60**	**319**	*e*P	**P**	**03 47 37.1**	**-0.4**
BWN	**Browne**	**80.61**	**22**	*e*P	**P**	**03 47 37.2**	**+0.1**
	comp=Z,119nm,1.3s						
MLY	**Manley**	**80.61**	**21**	*e*P	**P**	**03 47 37.1**	**-0.1**
	comp=Z,170nm,1.8s						
MK31	**Makanchi Array**	**80.61**	**319**	*e*P	**P**	**03 47 38.4**	**+0.8**
MK31	**Makanchi Array**	**80.61**	**319**	*e*P	**P**	**03 47 38.4**	**+0.8**
MKAR	**Makanchi Array**	**80.61**	**319**	P	**P**	**03 47 37.8**	**+0.3**
	comp=Z,37nm,0.6s,baz=99,slow=7.8,SNR=373						
MKAR				ScS	S	03 57 50.8	+9.2
	comp=Z,5.3nm,1.2s,baz=95,slow=8.8,SNR=9.3						
MKAR				PKKPbc	**PKKPbc**	**04 06 17.4**	**-2.3**
	comp=Z,0.4nm,0.7s,baz=304,slow=1.8,SNR=3.6						
MKAR				LR	LR	04 23 00.5	
	comp=Z,960nm,20.9s,baz=111,slow=35						
MKAR	**Makanchi Array**	**80.61**	**319**	*e*P	**P**	**03 47 38.4**	**+0.8**
	comp=Z,475nm,1.1s						
MKAR				ScS	S	03 57 50.8	+9.2
MKAR				PKKPbc	**PKKPbc**	**04 06 17.4**	**-2.3**
MKAR	**Makanchi Array**	**80.61**	**319**	*e*P	**P**	**03 47 38.4**	**+0.8**
MKAR						03 57 50.8	
MKAR						04 06 17.4	
MKAR				pmax	pmax		
	comp=Z,475nm,1.1s						
KLU	**Klutina**	**80.67**	**25**	*e*P	**P**	**03 47 38.0**	**+0.4**
	comp=Z,50nm,1.0s						
MAKZ	**Makanchi**	**80.82**	**319**	*e*P	**P**	**03 47 39.4**	**+0.7**
	comp=Z,97nm,0.7s						
MAKZ	**Makanchi**	**80.82**	**319**	*e*P	**P**	**03 47 39.4**	**+0.7**
MAKZ				pmax	pmax		
	comp=Z,97nm,0.7s						
BMRM	**Bremner River**	**80.99**	**26**	*e*P	**P**	**03 47 39.7**	**+0.5**
	comp=Z,73nm,1.3s						
ZAA0	**Zalesovo Array**	**81.38**	**326**	*e*P	**P**	**03 47 41.0**	**-0.4**
	comp=Z,98nm,1.4s						
ZAA0				*e*S	**S**	**03 57 47.9**	**-1.2**
ZALV	**Zalesovo Beam**	**81.38**	**326**	P	**P**	**03 47 41.0**	**-0.5**
	comp=Z,26nm,0.5s,baz=113,slow=5.9,SNR=80						
ZALV				ScS	**S**	**03 57 47.2**	**-1.9**
	comp=Z,4.6nm,0.9s,baz=107,slow=5.0,SNR=8.1						
ZALV				PKKPbc	**PKKPbc**	**04 06 15.3**	**-2.9**
	comp=Z,1.5nm,0.4s,baz=46,slow=4.3,SNR=5.3						
ZALV				LR	LR	04 25 39.3	
	comp=Z,405nm,18.8s,baz=78,slow=37						
ZALV	**Zalesovo Beam**	**81.38**	**326**	*e*P	**P**	**03 47 40.1**	**-1.3**
ZALV				*e*S	**S**	**03 57 46.8**	**-2.3**
ZALV				PKKPbc	**PKKPbc**	**04 06 15.3**	**-2.9**
ZALV	**Zalesovo Beam**	**81.38**	**326**	*e*P	**P**	**03 47 40.1**	**-1.3**
ZALV				*e*S	**S**	**03 57 46.8**	**-2.3**
HARP	**HAARP**	**81.42**	**24**	*e*P	**P**	**03 47 42.4**	**+0.9**
	comp=Z,41nm,0.9s						
CCB	**Clear Creek Bu**	**81.47**	**22**	*e*P	**P**	**03 47 40.3**	**-1.4**
	comp=Z,29nm,1.0s						
MDM	**Murphy Dome**	**81.47**	**22**	*e*P	**P**	**03 47 41.0**	**-0.8**
	comp=Z,26nm,1.0s						
SHLS	**Shalkode**	**81.55**	**315⇑**	*i*P	**P**	**03 47 42.2**	**-0.6**
	comp=Z,25nm,0.7s						
SHLS				*e*S	**S**	**03 57 47.4**	**-4.3**
POO	**Poona**	**81.57**	**289**	*e*P	**P**	**03 47 40.0**	**-3.2**
COLA	**College**	**81.57**	**22**	*e*P	**P**	**03 47 41.5**	**-0.6**
	comp=Z,52nm,0.8s						
COLA				LR	LR		
	comp=Z,1.0nm,21.0s						
COLA	**College**	**81.57**	**22**	*e*P	**P**	**03 47 41.5**	**-0.6**
COLA				pmax	pmax		
	comp=Z,53nm,0.8s						
COLA				MLR	MLR		
	comp=Z,1.0nm,21.0s						
PDGK	**Podgornoye**	**81.58**	**315**	P	**P**	**03 47 42.7**	**-0.2**
PDGK				pmax	pmax		
	comp=Z,61nm,0.7s						
HDA	**Harding Lake**	**81.67**	**22**	*e*P	**P**	**03 47 42.0**	**-0.7**
	comp=Z,49nm,1.3s						
UZB	**Uzynbulak**	**81.86**	**315⇑**	*i*P	**P**	**03 47 45.2**	**+0.8**
	comp=Z,35nm,1.4s						
UZB				*e*S	**S**	**03 57 53.5**	**-1.4**
IL1	**Eielson Array**	**81.87**	**22**	*e*P	**P**	**03 47 41.1**	**-2.7**
ILAR	**Eielson Array**	**81.87**	**22**	P	**P**	**03 47 42.4**	**-1.4**
	comp=Z,13nm,0.8s,baz=243,slow=5.3,SNR=109						
ILAR				ScS	**S**	**03 57 54.1**	**+0.2**
	comp=Z,0.8nm,0.9s,baz=237,slow=9.6,SNR=5.8						
ILAR				PKKPbc	**PKKPbc**	**04 06 14.8**	**-2.8**
	comp=Z,2.0nm,0.9s,baz=341,slow=0.6,SNR=15						
ILAR				PKPPKP	**P’P’df**	**04 14 16.7**	**-1.4**
	comp=Z,0.7nm,0.8s,baz=5.1,slow=2.9,SNR=6.5						
ILAR				LR	LR	04 22 51.0	
	comp=Z,955nm,19.1s,baz=238,slow=35						
ILB	**Eielson Array**	**81.87**	**22**	*e*P	**P**	**03 47 42.4**	**-1.4**
COLD	**Coldfoot**	**82.00**	**19**	*e*P	**P**	**03 47 44.8**	**+0.4**
	comp=Z,23nm,1.1s						
PRZ	**Przheval’sk**	**82.15**	**314**	*e*P	**P**	**03 47 48.0**	**+2.0**
	comp=Z,381nm,1.6s						
PRZ	**Przheval’sk**	**82.15**	**314**	*e*P	**P**	**03 47 48.0**	**+2.0**
PRZ				pmax	pmax		
	comp=Z,381nm,1.6s						
KPKS	**Kokpek**	**82.18**	**315⇑**	*i*P	**P**	**03 47 46.9**	**+0.9**
	comp=Z,65nm,1.7s						
KPKS				*e*S	**S**	**03 57 57.1**	**-0.9**
SATY	**Saty**	**82.28**	**314⇑**	*i*P	**P**	**03 47 47.6**	**+1.0**
	comp=Z,64nm,1.7s						
SATY				*e*S	**S**	**03 57 58.1**	**-1.1**
ZHN	**Zhinishke**	**82.28**	**315**	*e*P	**P**	**03 47 47.5**	**+0.9**
	comp=Z,12nm,0.8s						
NVS	**Novosibirsk**	**82.55**	**327**	*e*P	**P**	**03 47 47.5**	**0.0**
NVS				*e*S	**S**	**03 57 58.8**	**-2.3**
NVS				*e*PS	**PnS**	**03 58 45.3**	**-10**
NVS				pmax	pmax		
	comp=Z,192nm,1.8s						
NVS				pmax	pmax		
	comp=N,45nm,1.4s						
NVS				pmax	pmax		
	comp=E,110nm,1.7s						
NVS				smax	smax		
	comp=N,23nm,1.6s						
NVS				smax	smax		
	comp=E,145nm,2.0s						
TDK	**Taldyqorghan**	**82.75**	**316**	*i* P	**P**	**03 47 50.0**	**+1.1**
	comp=E,125nm,1.5s						
TDK				*e*S	**S**	**03 58 02.9**	**-0.8**
TDK				LR	LR	04 22 08.9	
	comp=E,846nm,21.8s						
SEM	**Semipalatinsk**	**82.95**	**322**	*e*P	**P**	**03 47 50.6**	**+0.6**
	comp=E,2.7nm,0.6s						
SEM				LR	LR	04 22 25.5	
	comp=E,216nm,18.7s						
TOLK	**Toolik Lake Re**	**82.96**	**18**	P	**P**	**03 47 50.0**	**+0.4**
	baz=238						
TOLK	**Toolik Lake Re**	**82.96**	**18**	*e*P	**P**	**03 47 49.9**	**+0.4**
	comp=E,24nm,0.8s						
MDOK	**Medeo**	**83.27**	**314**	*i* P	**P**	**03 47 53.0**	**+1.2**
	comp=E,356nm,24.6s						
MDOK				*i* S	**S**	**03 58 08.1**	**-1.3**
MDOK				LR	LR	04 22 08.9	
	comp=E,354nm,21.6s						
KSH	**Kashi**	**83.29**	**311**	P	**P**	**03 47 54.4**	**+2.5**
KSH				sP	sP	03 48 09.3	-0.8
KSH				PP	**PP**	**03 51 08.5**	**+4.5**
KSH				SKS	**S**	**03 58 10.6**	**+1.0**
KSH				S	**SKSac**	**03 58 12.1**	**+1.2**
KSH				SS	**SS**	**04 03 41.5**	**+6.1**
KSH				pmax	pmax		
	comp=E,270nm,1.7s						
KSH				pmax	pmax		
	comp=E,820nm,3.1s						
KSH				LR	LR		
	comp=E,770nm,19.3s						
KSH				LR	LR		
	comp=E,480nm,16.5s						
KSH				LR	LR		
	comp=E,650nm,20.4s						
AAA	**Alma-Ata**	**83.38**	**314**	*e*P	**P**	**03 47 53.6**	**+1.4**
	comp=E,76nm,1.6s						
AAA				*e*S	**S**	**03 58 09.2**	**-1.0**
AAA				LR	LR	04 22 20.3	
	comp=E,357nm,20.0s						
ULHL	**Ulahol**	**83.65**	**313**	P	**P**	**03 47 55.1**	**+1.2**
	SNR=51						
KUU	**Kurty**	**83.93**	**315**	*i* P	**P**	**03 47 55.8**	**+0.8**
	comp=E,191nm,1.4s						
KUU				*i* S	**S**	**03 58 12.5**	**-3.2**
KURK	**Kurchatov**	**84.03**	**322**	*e*P	**P**	**03 47 55.4**	**+0.1**
KURK				PKKPbc	**PKKPbc**	**04 06 08.9**	**-3.0**
KURK				P’P’		04 14 16.4	
KURK				LR	LR		
	comp=Z,909nm,20.0s						
KURK	**Kurchatov**	**84.03**	**322**	P	**P**	**03 47 55.6**	**+0.4**
	SNR=83						
KURK	**Kurchatov**	**84.03**	**322c**	*i*P	**P**	**03 47 55.2**	**-0.1**
KURK				pmax	pmax		
	comp=Z,227nm,1.3s						
KURBB	**Kurchatov Arra**	**84.06**	**322**	P	**P**	**03 47 55.4**	**0.0**
	comp=Z,37nm,0.9s,baz=113,slow=4.0,SNR=236						
KURBB				PKKPbc	**PKKPbc**	**04 06 08.9**	**-2.9**
	comp=Z,0.5nm,0.7s,baz=286,slow=3.0,SNR=4.4						
KURBB				PKPPKP	**P’P’df**	**04 14 16.4**	**+1.3**
	comp=Z,0.6nm,0.7s,baz=293,slow=2.5,SNR=7.6						
EGAK	**Eagle**	**84.06**	**23**	*e*P	**P**	**03 47 55.2**	**+0.1**
	comp=Z,38nm,0.9s						
EGAK				LR	LR		
	comp=Z,1µm,22.0s						
TKM2	**Tokmak 2**	**84.26**	**314**	P	**P**	**03 47 57.9**	**+1.0**
	SNR=140						
TKM2	**Tokmak 2**	**84.26**	**314**	P	**P**	**03 47 57.7**	**+0.8**
TKM2				pmax	pmax		
	comp=Z,93nm,0.7s						
KZA	**Kyzart**	**84.34**	**313**	P	**P**	**03 47 59.5**	**+1.9**
	SNR=175						
NIL	**Nilore**	**84.37**	**304**	*e*P	**P**	**03 47 58.0**	**+0.5**
NIL				LR	LR		
	comp=Z,673nm,22.0s						
NIL	**Nilore**	**84.37**	**304**	*e*P	**P**	**03 47 58.0**	**+0.5**
NIL				MLR	MLR		
	comp=Z,673nm,22.0s						
DAWY	**Dawson**	**84.48**	**24**	*e*P	**P**	**03 47 57.8**	**+0.4**
	comp=Z,74nm,1.5s						
KBK	**Karagaybulak**	**84.67**	**313**	P	**P**	**03 48 00.2**	**+1.2**
	SNR=68						
CHMS	**Chumysh**	**84.88**	**314**	P	**P**	**03 48 01.0**	**+1.2**
	SNR=6.5						
UCH	**Uchtor**	**84.91**	**313**	P	**P**	**03 48 01.9**	**+1.4**
	SNR=116						
FRU	**Bishkek**	**84.95**	**314⇑**	*i*P	**P**	**03 48 00.0**	**-0.2**
FRU				*e*		04 48 12.0	
FRU				pmax	pmax		
	comp=Z,510nm,2.0s						
FRU				smax	smax		
	comp=E,500nm,16.0s						
AAK	**Ala-Archa**	**85.00**	**313**	P	**P**	**03 48 01.9**	**+1.3**
	SNR=46						
AAK	**Ala-Archa**	**85.00**	**313**	*e*P	**P**	**03 48 01.9**	**+1.3**
	comp=E,97nm,0.7s						
AAK	**Ala-Archa**	**85.00**	**313**	*e*P	**P**	**03 48 01.9**	**+1.3**
AAK				pmax	pmax		
	comp=Z,97nm,0.7s						
USP	**Ospenovka**	**85.11**	**314**	P	**P**	**03 48 02.1**	**+1.1**
	SNR=59						
QSPA	**South Pole Qui**	**85.25**	**180**	P	**P**	**03 48 02.0**	**+0.6**
	comp=Z,210nm,0.8s,baz=314,slow=0.5,SNR=387						
QSPA				PKKPbc	**PKKPdf**	**04 06 05.4**	**+3.6**
	comp=Z,1.8nm,0.6s,baz=325,slow=8.4,SNR=9.5						
QSPA				LR	LR	04 22 47.9	
	comp=Z,560nm,21.6s,baz=2.5,slow=33						
QSPA	**South Pole Qui**	**85.25**	**180**	*e*P	**P**	**03 48 01.9**	**+0.6**
QSPA				PKKPbc	**PKKPdf**	**04 06 05.4**	**+3.6**
QSPA				LR	LR		
	comp=Z,804nm,19.0s						
SFK	**Sufi-Kurgan**	**85.25**	**311**	P	**P**	**03 48 03.2**	**+1.2**
SFK				pmax	pmax		
	comp=Z,192nm,1.0s						
WRAK	**Wrangell Islan**	**85.30**	**32**	*e*P	**P**	**03 48 02.0**	**+0.5**
	comp=Z,16nm,1.0s						
WRAK				LR	LR		
	comp=Z,1µm,20.0s						
AML	**Almayashu**	**85.49**	**313**	P	**P**	**03 48 05.1**	**+1.8**
	SNR=7.1						
EKS2	**Erkin-Say**	**85.52**	**313**	P	**P**	**03 48 04.8**	**+1.6**
	SNR=9.7						
BTLS	**Baital**	**85.77**	**316**	*i* P	**P**	**03 48 05.0**	**+0.8**
	comp=Z,99nm,1.6s						
BTLS				*i* S	**SKSac**	**03 58 23.9**	**-2.4**
BTLS				LR	LR	04 26 24.6	
	comp=Z,100nm,16.2s						
MAW	**Mawson**	**85.86**	**203**	P	**P**	**03 48 04.4**	**+0.3**
	baz=86,SNR=38						
MAW	**Mawson**	**85.86**	**203**	P	**P**	**03 48 04.3**	**+0.3**
	comp=Z,32nm,0.7s,baz=98,slow=5.6,SNR=89						
MAW				LR	LR	04 23 02.2	
	comp=Z,856nm,22.0s,baz=78,slow=33						
MAW	**Mawson**	**85.86**	**203**	*e*P	**P**	**03 48 04.4**	**+0.3**
	comp=Z,65nm,1.8s						
MAW	**Mawson**	**85.86**	**203**	*e*P	**P**	**03 48 04.4**	**+0.3**
MAW				pmax	pmax		
	comp=Z,65nm,1.8s						
MNAS	**Manas**	**86.42**	**313**	P	**P**	**03 48 08.0**	**+0.4**
MNAS				pmax	pmax		
	comp=Z,151nm,1.4s						
DLBC	**Dease Lake**	**87.03**	**31**	*e*P	**P**	**03 48 10.7**	**+0.5**
	comp=Z,103nm,1.6s						
DZA	**Taraz**	**87.34**	**313**	*e*P	**P**	**03 48 13.1**	**+1.2**
	comp=Z,12nm,0.7s						
DZA				*e*S	**SKSac**	**03 58 34.5**	**-1.7**
OTUK	**Ortayu**	**87.51**	**319**	P	**P**	**03 48 12.3**	**-0.3**
OTUK				pmax	pmax		
	comp=Z,71nm,1.0s						
BRZS	**Berezniki**	**87.59**	**320⇑**	*i*P	**P**	**03 48 12.4**	**-0.5**
	comp=Z,40nm,1.4s						
BRZS				*e*S	**SKSac**	**03 58 33.7**	**-3.7**
KBL	**Kabul**	**87.95**	**305**	*e*P	**P**	**03 48 14.9**	**-0.4**
	comp=Z,13nm,0.8s						
KK31	**Karatay Array**	**87.96**	**313**	*e*P	**P**	**03 48 15.1**	**+0.2**
KK31	**Karatay Array**	**87.96**	**313**	*i* P	**P**	**03 48 14.8**	**-0.1**
KK31				pmax	pmax		
	comp=Z,17nm,0.8s						
KKAR	**Karatay Array**	**87.96**	**313**	*e*P	**P**	**03 48 15.1**	**+0.2**
IUG	**Iuzhnay**	**88.18**	**312**	*i* P	**P**	**03 48 16.8**	**+0.7**
	comp=Z,16nm,1.2s						
IUG				*e*S	**SKSac**	**03 58 39.2**	**-2.3**
INK	**Inuvik**	**88.18**	**21**	P	**P**	**03 48 14.8**	**-0.5**
	comp=Z,9.5nm,0.7s,baz=249,slow=5.8,SNR=22						
INK				PKPPKP	**P’P’df**	**04 14 02.5**	**-3.9**
	comp=Z,2.3nm,1.0s,baz=31,slow=10,SNR=5.1						
INK	**Inuvik**	**88.18**	**21**	*e*P	**P**	**03 48 14.6**	**-0.7**
	comp=Z,33nm,1.1s						
INK				P’P’		04 14 02.5	
INK	**Inuvik**	**88.18**	**21**	*e*P	**P**	**03 48 14.6**	**-0.7**
INK				pmax	pmax		
	comp=Z,33nm,1.1s						
I03D	**Drain, OR**	**88.39**	**46**	P	**P**	**03 48 16.9**	**0.0**
	baz=262						
M02C	**Callahan**	**88.44**	**48**	P	**P**	**03 48 17.5**	**+0.2**
	baz=262,SNR=68						
BRLS	**Borolday**	**88.44**	**313**	*e*S	**SKSac**	**03 58 40.7**	**-2.1**
N02D	**Trinity Center**	**88.50**	**49**	P	**P**	**03 48 17.1**	**-0.4**
	baz=263,SNR=39						
CHM	**Chimkent**	**88.52**	**312**	*e*P	**P**	**03 48 18.6**	**+1.0**
	comp=Z,17nm,0.8s						
CHM				*e*S	**SKSac**	**03 58 41.4**	**-1.9**
HUMO	**Hull Mountain**	**88.53**	**47**	*e*P	**P**	**03 48 18.9**	**+1.2**
	comp=Z,21nm,1.4s						
NLWA	**Neilton Lookou**	**88.56**	**42**	PFAKE		03 48 30.0	+12
NLWA				LR	LR		
	comp=Z,1µm,22.0s						
YBH	**Yreka Blue Hor**	**88.59**	**48**	P	**P**	**03 48 18.3**	**+0.3**
	comp=Z,1.3nm,0.5s,baz=123,slow=1.7,SNR=5.4						
YBH				LR	LR	04 20 39.9	
	comp=Z,2µm,21.9s,baz=275,slow=31						
I04A	**Tendick Farm,**	**89.08**	**46**	P	**P**	**03 48 19.9**	**-0.2**
	baz=263						
O03D	**Paynes Creek**	**89.09**	**50**	P	**P**	**03 48 20.2**	**-0.2**
	baz=263,SNR=55						
J04D	**Umpqua Nationa**	**89.22**	**47**	P	**P**	**03 48 21.3**	**+0.2**
	baz=263						
M04C	**Macdoel**	**89.25**	**48**	P	**P**	**03 48 20.8**	**-0.4**
	baz=263,SNR=5.8						
BVA0	**Borovoye Array**	**89.49**	**323**	*i* P	**P**	**03 48 21.3**	**-0.6**
BVA0				pmax	pmax		
	comp=Z,167nm,0.9s						
BVAR	**Borovoye Array**	**89.49**	**323**	P	**P**	**03 48 21.6**	**-0.3**
	comp=Z,114nm,0.7s,baz=101,slow=5.6,SNR=519						
BVAR				LR	LR	04 30 43.4	
	comp=Z,531nm,19.0s,baz=98,slow=37						
BRVK	**Borovoye**	**89.56**	**323**	*e*P	**P**	**03 48 21.7**	**-0.5**
BRVK				LR	LR		
	comp=Z,800nm,22.0s						
BRVK	**Borovoye**	**89.56**	**323**	P	**P**	**03 48 21.7**	**-0.5**
	SNR=83						
BRVK	**Borovoye**	**89.56**	**323c**	*i*P	**P**	**03 48 21.5**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,182nm,1.3s						
B05A	**Bryant**	**89.86**	**42**	P	**P**	**03 48 24.0**	**+0.3**
	baz=263						
J05D	**Fort Rock, OR**	**89.86**	**47**	P	**P**	**03 48 23.9**	**-0.2**
	baz=264						
I05D	**Terrebonne, OR**	**89.91**	**46**	P	**P**	**03 48 24.6**	**+0.5**
	baz=263						
CMB	**Columbia Colle**	**89.94**	**52**	*e*P	**P**	**03 48 24.6**	**+0.2**
	comp=Z,224nm,1.8s						
CMB	**Columbia Colle**	**89.94**	**52**	*e*P	**P**	**03 48 24.6**	**+0.2**
CMB				pmax	pmax		
	comp=Z,224nm,1.8s						
G05D	**Wamic, OR**	**90.03**	**45**	P	**P**	**03 48 24.3**	**-0.3**
	baz=263						
K05A	**Summer Lake**	**90.05**	**47**	*e*P	**P**	**03 48 26.1**	**+1.2**
	comp=Z,114nm,1.9s						
PINE	**Pine Mountain**	**90.13**	**46**	*e*P	**P**	**03 48 26.3**	**+1.0**
	comp=Z,41nm,1.3s						
BEKR	**Beckworth**	**90.15**	**50**	*e*P	**P**	**03 48 26.1**	**+0.7**
	comp=Z,6.3nm,0.9s						
MOD	**Modoc Plateau**	**90.40**	**48**	*e*P	**P**	**03 48 25.9**	**-0.6**
	comp=Z,29nm,1.6s						
PNTR	**Pine Nut**	**90.65**	**51**	*e*P	**P**	**03 48 29.0**	**+1.1**

	comp=Z,22nm,1.2s						
VES	Vestal, Richgr	90.76	54	P	P	03 48 28.4	+0.3
	baz=265						
ARVC	Arvin	90.90	55	P	P	03 48 29.5	+0.6
	baz=265						
MDPB	Devils Postpil	90.93	52	eP	P	03 48 30.0	+0.7
	comp=Z,23nm,1.2s						
OMMB	Old Mammoth Mi	90.99	53	eP	P	03 48 30.7	+1.1
	comp=Z,18nm,1.2s						
ISA	Isabella, Lake	91.24	54	P	P	03 48 30.6	+0.2
	baz=265						
ISA	Isabella, Lake	91.24	54	eP	P	03 48 30.7	+0.2
	comp=Z,10nm,1.0s						
ISA	Isabella, Lake	91.24	54	eP	P	03 48 30.7	+0.2
ISA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HAWA	Hanford	91.39	44	eP	P	03 48 30.9	0.0
	comp=Z,23nm,1.4s						
HAWA				LR	LR		
	comp=Z,3µm,20.0s						
RYN	Ryan	91.45	52	eP	P	03 48 31.9	+0.4
	comp=Z,40nm,1.6s						
MWC	Mount Wilson	91.46	56	eP	P	03 48 32.4	+0.7
	comp=Z,42nm,1.1s						
MWC	Mount Wilson	91.46	56	eP	P	03 48 32.4	+0.7
MWC				pmax	pmax		
	comp=Z,42nm,1.1s						
EDW2	Edwards Air Fo	91.57	55	P	P	03 48 32.5	+0.5
	baz=265						
NV01	Mina Array Sit	91.61	52	eP	P	03 48 32.0	-0.4
NVAR	Mina Array Bea	91.61	52	P	P	03 48 32.0	-0.3
	comp=Z,3.2nm,0.7s,baz=256,slow=6.2,SNR=25						
NVAR				PKKPbc	PKKPbc	04 05 54.2	+1.0
	comp=Z,0.4nm,0.6s,baz=36,slow=4.7,SNR=4.0						
NVAR				LR	LR	04 22 37.4	
	comp=Z,3µm,21.3s,baz=96,slow=31						
CWC	Cottonwood Cre	91.62	54	P	P	03 48 32.5	+0.1
	baz=265						
WVOR	Wild Horse Val	91.68	48	eP	P	03 48 32.8	+0.3
	comp=Z,51nm,1.6s						
WVOR				LR	LR		
	comp=Z,3µm,22.0s						
WVOR	Wild Horse Val	91.68	48	eP	P	03 48 32.8	+0.3
WVOR				pmax	pmax		
	comp=Z,51nm,1.6s						
WVOR				MLR	MLR		
	comp=Z,3µm,22.0s						
G08A	Pilot Rock	91.69	45	eP	P	03 48 32.9	+0.4
	comp=Z,44nm,1.5s						
NV11	Mina Array Sit	91.72	52	eP	P	03 48 33.0	+0.3
	comp=Z,2.6nm,1.4s						
BFSC	Mount Baldy Ra	91.79	56	P	P	03 48 33.2	0.0
	baz=266						
KVN	Kaiserville	91.81	51	eP	P	03 48 33.4	+0.2
	comp=Z,30nm,1.5s						
KVN	Kaiserville	91.81	51	eP	P	03 48 33.4	+0.2
KVN				pmax	pmax		
	comp=Z,30nm,1.5s						
LRMC	Laurel Mtn Rad	91.87	55	P	P	03 48 34.0	+0.5
	baz=266						
J08A	Circle Bar Ran	91.88	47	eP	P	03 48 33.4	0.0
	comp=Z,12nm,0.9s						
DAC	Darwin (Calif)	92.00	54	eP	P	03 48 34.6	+0.4
	comp=Z,33nm,1.3s						
DAC	Darwin (Calif)	92.00	54	eP	P	03 48 34.6	+0.4
DAC				pmax	pmax		
	comp=Z,33nm,1.3s						
MPMC	Manual Prospec	92.07	54	P	P	03 48 34.9	+0.4
	baz=266						
MURC	Murrieta	92.13	57	P	P	03 48 35.3	+0.7
	baz=266						
109C	Camp Elliot, M	92.15	57	P	P	03 48 35.3	+0.6
	baz=266						
GRAC	Grapevine Rang	92.23	53	P	P	03 48 35.4	+0.4
	baz=266						
E09A	Wood Farm, Sta	92.36	44	eP	P	03 48 35.4	+0.1
	comp=Z,49nm,1.4s						
GSC	Goldstone, Bar	92.57	55	P	P	03 48 36.8	+0.1
	baz=266						
BMN	Battle Mountai	92.59	50	eP	P	03 48 36.2	-0.6
BMN	Battle Mountai	92.59	50	eP	P	03 48 36.2	-0.6
FURC	Furnace Creek,	92.60	54	P	P	03 48 36.9	+0.2
	baz=266						
MONP2	Monument Peak	92.72	57	P	P	03 48 38.1	+0.5
	baz=266						
PFO	Pinyon Flats O	92.74	57	P	P	03 48 38.2	+0.6
	baz=266						
PFO	Pinyon Flats O	92.74	57	eP	P	03 48 37.6	+0.1
	comp=Z,13nm,1.0s						
PFO				LR	LR		
	comp=Z,1µm,19.0s						
XPFO	Piæon Flat	92.74	57	eP	P	03 48 39.3	+1.8
	comp=Z,11nm,1.0s						
TPFO	Pinon Flats	92.75	57	P	P	03 48 38.1	+0.5
	baz=266						
BMO	Blue Mountains	92.83	45	eP	P	03 48 36.4	-1.3
	comp=Z,37nm,1.4s						
BMO				LR	LR		
	comp=Z,2µm,22.0s						
BMO	Blue Mountains	92.83	45	eP	P	03 48 36.4	-1.3
BMO				pmax	pmax		
	comp=Z,37nm,1.4s						
BMO				MLR	MLR		
	comp=Z,2µm,22.0s						
HEC	Hector,Ludlow	92.92	55	P	P	03 48 38.2	-0.2
	baz=266						
IKP	In-Ko-Pah, Jac	92.97	58	P	P	03 48 39.1	+0.5
	baz=266						
SHOC	Shoshone, Teco	93.04	54	P	P	03 48 38.9	+0.1
	baz=266						
TPNV	Topopah Spring	93.12	53	P	P	03 48 39.2	-0.1
	baz=267						
TPNV	Topopah Spring	93.12	53	eP	P	03 48 39.6	+0.3
	comp=Z,44nm,1.3s						
BELC	Belle Mtn. Jos	93.15	56	P	P	03 48 38.9	-0.6
	baz=266						
NEW	Newport	93.17	42	P	P	03 48 38.9	-0.2
	baz=267						
NEW	Newport	93.17	42	eP	P	03 48 37.1	-2.0
	comp=Z,16nm,1.2s						
NEW				LR	LR		
	comp=Z,1µm,20.0s						
NEW	Newport	93.17	42	eP	P	03 48 37.1	-2.0
NEW				pmax	pmax		
	comp=Z,15nm,1.2s						
NEW				MLR	MLR		
	comp=Z,1µm,20.0s						
SWSC	Sam W. Stewart	93.25	57	P	P	03 48 40.3	+0.6
	baz=267						
TUQ	Turquoise Moun	93.30	55	P	P	03 48 40.2	+0.1
	baz=267						
GMRC	Granite Mounta	93.47	56	P	P	03 48 41.2	+0.3
	baz=267						
BC3	Big Chuckawall	93.58	57	P	P	03 48 41.4	-0.1
	baz=267						
R11A	Troy Canyon, C	93.73	52	P	P	03 48 42.1	0.0
	baz=267						
R11A	Troy Canyon, C	93.73	52	eP	P	03 48 42.5	+0.3
	comp=Z,30nm,1.6s						
IRM	Iron Mountain	93.86	56	P	P	03 48 42.9	+0.3
	baz=267						
SYO	Syowa Base	93.93	199	⇓iP	P	03 48 41.4	-0.7
LDFC	Landfair	93.94	55	eP	P	03 48 44.4	+1.3
	comp=Z,46nm,1.1s						
SHPR	Sheep Range	93.97	54	eP	P	03 48 44.0	+0.7
	comp=Z,21nm,1.1s						
GLA	Glamis	94.07	57	P	P	03 48 43.1	-0.5
	baz=267						
Y12C	Blythe	94.36	57	P	P	03 48 45.0	+0.2
	baz=267						
PDMCI	Parker Dam,Lak	94.70	56	P	P	03 48 46.9	+0.5
	baz=268						
HLID	Hailey	94.84	47	P	P	03 48 47.1	0.0
	baz=268						
HLID	Hailey	94.84	47	eP	P	03 48 47.8	+0.7
	comp=Z,6.8nm,1.0s						
HLID				LR	LR		
	comp=Z,2µm,22.0s						
W13A	Hualapai Mount	94.95	55	eP	P	03 48 49.1	+1.3
	comp=Z,34nm,1.3s						
YKW3	Yellowknife Ar	95.09	28	eP	P	03 48 47.4	-0.1
YKW3				epP	pP	03 48 57.8	-3.0
YKA	Yellowknife Ar	95.09	28	P	P	03 48 46.9	-0.5
	comp=Z,2.9nm,0.7s,baz=268,slow=4.7,SNR=30						
YKA				PKKPbc	PKKPdf	04 05 40.9	-3.5
	comp=Z,1.3nm,0.6s,baz=86,slow=2.8,SNR=4.1						
YKA				LR	LR	04 25 53.2	
	comp=Z,210nm,21.6s,baz=278,slow=32						
YKA	Yellowknife Ar	95.09	28	P	P	03 48 47.0	-0.5
PSUT	Pine Spring	95.10	52	eP	P	03 48 49.4	+0.9
	comp=Z,8.4nm,0.8s						
MSO	Missoula	95.26	44	P	P	03 48 49.1	+0.2
	baz=269						
WALA	Waterton Lakes	95.33	41	eP	P	03 48 49.3	+0.2
	comp=Z,37nm,1.4s						
SVE	Sverdlovsk	95.39	327	d iP	P	03 48 48.0	-1.0
SVE				eS	SKSac	03 59 19.6	-1.7
SVE				e		04 06 31.5	
SVE				pmax	pmax		
	comp=Z,60nm,1.4s						
SVE				MLR	MLR		
	comp=Z,849nm,19.0s						
CCUT	Cedar City	95.45	53	eP	P	03 48 50.9	+0.8
	comp=Z,24nm,1.5s						
LCMT	Little Creek M	95.53	53	eP	P	03 48 50.8	+0.5
	comp=Z,25nm,1.5s						
214A	Organ Pipe Nat	95.73	58	P	P	03 48 50.7	-0.5
	baz=268						
AB31	Akbulak array	95.76	319	i P	P	03 48 49.2	-1.7
AB31				pmax	pmax		
	comp=Z,13nm,0.7s						
ABKAR	Akbulak array	95.76	319	eP	P	03 48 49.3	-1.5
KNB	Kanab	95.87	53	eP	P	03 48 53.3	+1.4
	comp=Z,45nm,1.5s						
DUG	Dugway, Tooele	95.95	50	P	P	03 48 51.7	-0.5
	baz=269						
DUG	Dugway, Tooele	95.95	50	PFAKE		03 49 00.0	+7.8
DUG				LR	LR		
	comp=Z,2µm,21.0s						
WSAR	Wadi Sarin	96.16	293	P	P	03 48 51.9	-1.4
	comp=Z,7.6nm,1.0s,baz=112,slow=5.4,SNR=3.7						
WSAR				LR	LR	04 32 49.4	
	comp=Z,508nm,21.9s,baz=120,slow=36						
U15A	North Rim	96.28	54	eP	P	03 48 54.8	+0.9
	comp=Z,36nm,1.5s						
PKCU	Pink Cliffs	96.29	53	eP	P	03 48 56.8	+2.8
	comp=Z,45nm,1.4s						
MTPU	Mount Pierson	96.40	52	eP	P	03 48 55.8	+1.3
	comp=Z,14nm,1.1s						
ARU	Arti	96.54	326	eP	P	03 48 52.6	-1.7
	comp=Z,73nm,1.2s						
ARU				LR	LR		
	comp=Z,1µm,21.0s						
ARU	Arti	96.54	326	c iP	P	03 48 52.5	-1.7
ARU				*PP	sP	03 49 10.5	-2.1
ARU						03 52 46.7	
ARU				PPP	PPP	03 54 53.7	
ARU				S	SKSac	03 59 23.5	-3.9
ARU				SP	SP	04 01 29.2	-2.3
ARU				PS	PS	04 01 39.5	+1.9
ARU				pmax	pmax		
	comp=Z,74nm,1.2s						
ARU				MLR	MLR		
	comp=Z,1µm,21.0s						
BOZ	Bozeman (W)	96.86	45	P	P	03 48 56.2	+0.1
	baz=270						
BOZ	Bozeman (W)	96.86	45	eP	P	03 48 56.8	+0.6
	comp=Z,19nm,1.9s						
BOZ				LR	LR		
	comp=Z,2µm,22.0s						
HWUT	Hardware Ranch	96.91	49	PFAKE		03 49 10.0	+13
HWUT				LR	LR		
	comp=Z,1µm,19.0s						
GEYT	Alibeck	96.99	307	P	P	03 48 56.3	-0.5
	comp=Z,1.7nm,0.3s,baz=45,slow=55,SNR=3.5						
GEYT				LR	LR	04 34 18.6	
	comp=Z,401nm,21.1s,baz=225,slow=36						
AKTO	Aktyubinsk	97.00	320	P	P	03 48 55.3	-1.2
	comp=Z,14nm,0.7s,baz=73,slow=9.4,SNR=34						
AKTO				LR	LR	04 31 57.2	
	comp=Z,662nm,21.9s,baz=92,slow=35						
WUAZ	Wupatki	97.01	55	P	P	03 48 56.3	-0.8
	baz=269						
WUAZ	Wupatki	97.01	55	eP	Pdif	03 48 57.4	+0.2
	comp=Z,38nm,1.6s						
WUAZ				LR	LR		
	comp=Z,1µm,22.0s						
AHID	Auburn Hatcher	97.25	48	PFAKE		03 49 10.0	+12
AHID				LR	LR		
	comp=Z,2µm,20.0s						
FXWY	Fox Creek	97.30	47	eP	Pdif	03 48 59.8	+1.4
	comp=Z,4.9nm,1.1s						
MSEY	Mahe Island	97.43	265	PFAKE		03 49 10.0	+11
MSEY				LR	LR		
	comp=Z,846nm,20.0s						
REDW	Red Top Meadow	97.43	47	eP	Pdif	03 49 00.1	+1.1
	comp=Z,6.5nm,1.3s						
TUC	Tucson	97.45	58	P	P	03 48 59.0	-0.1
	baz=269						
TUC	Tucson	97.45	58	PFAKE		03 49 10.0	+11
TUC				LR	LR		
	comp=Z,2µm,19.0s						
H17A	Grant Village	97.62	46	P	P	03 48 59.6	-0.2
	baz=271						
LPIG	La Paz	97.69	66	LR	LR	04 23 41.7	
	comp=Z,1µm,21.9s,baz=253,slow=30						
LKWY	Lake	97.74	46	PFAKE		03 49 10.0	+10
LKWY				LR	LR		
	comp=Z,2µm,22.0s						
EGMT	Eagleton	98.10	42	P	P	03 49 01.5	-0.1
	baz=272						
EGMT	Eagleton	98.10	42	PFAKE		03 49 10.0	+8.3
EGMT				LR	LR		
	comp=Z,2µm,21.0s						
BANOM	Banah	98.37	295	P	Pdif	03 49 04.4	+1.1
BW06	Boulder Array	98.39	48	P	P	03 49 02.4	-0.8
	baz=271						
BW06	Boulder Array	98.39	48	PFAKE		03 49 10.0	+6.7
BW06				LR	LR		
	comp=Z,2µm,20.0s						
PD31	Pinedale Array	98.39	48	eP	P	03 49 02.5	-0.7
PDAR	Pinedale Array	98.39	48	P	P	03 49 02.2	-1.1
	comp=Z,1.0nm,0.8s,baz=245,slow=3.1,SNR=8.8						
PDAR				PP	PP	03 53 03.6	-0.2
	comp=Z,0.9nm,1.0s,baz=249,slow=4.5,SNR=3.5						
PDAR				PKKPbc	PKKPbc	04 05 33.6	-1.7
	comp=Z,0.3nm,0.5s,baz=109,slow=4.6,SNR=5.1						
PDAR				LR	LR	04 30 21.6	
	comp=Z,2µm,18.5s,baz=276,slow=34						
PDAR	Pinedale Array	98.39	48	eP	P	03 49 01.5	-1.7
PDAR				PP	PP	03 53 03.6	-0.2
PDAR				PKKPbc	PKKPbc	04 05 33.6	-1.7
RLMT	Red Lodge	98.53	45	P	Pdif	03 49 03.9	+0.1
	baz=272						
RLMT	Red Lodge	98.53	45	PFAKE		03 49 20.0	+16
RLMT				LR	LR		
	comp=Z,2µm,22.0s						
ASHO	Ashiyiah	98.56	294	P	Pdif	03 49 05.0	+0.8
ASUD	Al Ashush, Dub	99.22	294	P	Pdif	03 49 06.9	-0.1
MVCO	Mesa Verde	99.33	53	P	Pdif	03 49 06.5	-1.1
	baz=271						
MVCO	Mesa Verde	99.33	53	eP	Pdif	03 49 08.0	+0.5
	comp=Z,7.8nm,1.2s						
MVCO				LR	LR		
	comp=Z,1µm,22.0s						
O20A	White River Ci	99.45	50	P	Pdif	03 49 08.1	+0.1
	baz=272						
RES	Resolute Bay	100.18	15	ePdif	Pdif	03 49 10.3	+0.1
RES	Resolute Bay	100.18	15	eP	Pdif	03 49 10.3	+0.1
SMCO	Snowmass	100.46	51	ePdif	Pdif	03 49 14.2	+1.4
LAO	LASA Array	100.57	44	P	Pdif	03 49 12.0	-0.7
	baz=274						
LAO	LASA Array	100.57	44	ePdif	Pdif	03 49 12.5	-0.1
	comp=Z,2.7nm,0.7s						
LAO				LR	LR		
	comp=Z,2µm,20.0s						
K22A	Casper	100.63	48	P	Pdif	03 49 12.4	-0.7
	baz=274						
S22A	4UR Ranch, Cre	100.64	53	P	Pdif	03 49 12.7	-0.8
	baz=272						
S22A	4UR Ranch, Cre	100.64	53	ePdif	Pdif	03 49 15.5	+2.1
ANMO	Albuquerque	101.04	55	PP	PP	03 53 24.7	+0.6
	comp=Z,0.7nm,0.7s,baz=273,slow=9.6,SNR=3.4						
ANMO	Albuquerque	101.04	55	P	Pdif	03 49 14.0	-1.1
	baz=272						
ANMO	Albuquerque	101.04	55	PP	PP	03 53 24.7	+0.6
ANMO				LR	LR		
	comp=Z,492nm,19.0s						
TASL	Snake Pit, Alb	101.04	55	P	Pdif	03 49 13.8	-1.4
	baz=272						
ISCO	Idaho Springs	101.48	50	P	Pdif	03 49 15.7	-1.5
	baz=274						
ISCO	Idaho Springs	101.48	50	PFAKE		03 49 30.0	+13
ISCO				LR	LR		
	comp=Z,1µm,20.0s						
SDCO	Great Sand Dun	101.69	53	P	Pdif	03 49 17.5	-0.6
	baz=273						
SDCO	Great Sand Dun	101.69	53	ePdif	Pdif	03 49 17.9	-0.2
	comp=Z,0.6nm,0.8s						
SDCO				LR	LR		
	comp=Z,2µm,21.0s						
DGMT	Dagmar	101.77	42	P	Pdif	03 49 17.2	-0.7
	baz=276						
DGMT	Dagmar	101.77	42	PFAKE		03 49 30.0	+12
DGMT				LR	LR		
	comp=Z,947nm,19.0s						
MNTX	Cornudas Mount	102.05	59	PFAKE		03 49 30.0	+10
MNTX				LR	LR		
	comp=Z,1µm,20.0s						
SNAA	Sanae	102.19	188	P	Pdif	03 49 19.1	-0.2
SNAA	Sanae	102.19	188	P	Pdif	03 49 18.5	-0.8
	comp=Z,3.4nm,0.8s,baz=179,slow=5.0,SNR=28						
SNAA				PP	PP	03 53 30.4	-0.7
	comp=Z,4.0nm,0.9s,baz=156,slow=4.1,SNR=3.9						
SNAA	Sanae	102.19	188	ePdif	Pdif	03 49 18.2	-1.2
SNAA				PP	PP	03 53 30.4	-0.7
SNAA	Sanae	102.19	188	eP	Pdif	03 49 18.2	-1.2
SNAA						03 53 30.4	
FFC	Flin Flon	102.30	35	ePdif	Pdif	03 49 19.6	-0.5
FFC				LR	LR		
	comp=Z,869nm,22.0s						
FFC	Flin Flon	102.30	35	eP	Pdif	03 49 19.6	-0.5
FFC				MLR	MLR		
	comp=Z,869nm,22.0s						
RSSD	Black Hills	102.32	46	P	Pdif	03 49 19.4	-1.3
	baz=276						
PRGR	Permogore	102.50	332	eP	Pdif	03 49 18.4	-2.4
PRGR				e		03 59 55.1	
PRGR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
VNA3	Neumayer Olymp	103.37	186	P	Pdif	03 49 24.1	-0.4
ABPO	Ambohimpanom	103.61	249	PFAKE		03 49 40.0	+13
ABPO				LR	LR		
	comp=Z,552nm,21.0s						
TXAR	Lajitas Array	103.61	61	PP	PP	03 53 41.1	-2.4
	comp=Z,1.9nm,1.2s,baz=270,slow=5.4,SNR=5.9						
TXAR				PKKPbc	PKKPbc	04 05 19.2	-0.3
	comp=Z,0.8nm,0.7s,baz=103,slow=4.0,SNR=8.5						
VNA1	Neumayer--Stat	103.79	186	P	Pdif	03 49 28.7	+2.3
OGNE	Ogallala	104.11	49	PFAKE		03 49 40.0	+11
OGNE				LR	LR		
	comp=Z,936nm,20.0s						
LVZ	Lovozero	104.87	340	PFAKE		03 49 40.0	+8.8
LVZ				LR	LR		
	comp=Z,468nm,21.0s						
PMSA	Palmer Station	105.41	164	PFAKE		03 54 00.0	
PMSA				LR	LR		
	comp=Z,805nm,19.0s						
APA	Apatity	105.44	340	⇓iP	Pdif	03 49 33.2	-0.5
APA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KLMR	Klimovskoe	105.56	332	eP	Pdif	03 49 31.7	-2.7
KLMR				e		03 53 55.3	
KLMR				pmax	pmax		
	comp=Z,34nm,1.1s						
KLMR	Klimovskoe	105.56	332	ePdif	Pdif	03 49 31.7	-2.7
KLMR				AMP		03 49 34.1	
	comp=Z,34nm,1.1s						
KLMR				ePP	PP	03 53 55.3	-1.3
KLMR				LQ	LQ	04 28 40.6	
KLMR				LQ	LQ	04 28 40.6	
KLMR				LR	LR	04 33 43.6	
CBKS	Cedar Bluff	106.11	51	PFAKE		03 54 00.0	
CBKS				LR	LR		
	comp=Z,3µm,21.0s						
KEV	Kevo	106.38	343	PFAKE		03 54 00.0	
KEV				LR	LR		
	comp=Z,1µm,22.0s						
ULM	Lac du Bonnet	106.83	39	PP	PP	03 54 12.8	+6.4
	comp=Z,2.4nm,0.5s,baz=215,slow=3.3,SNR=3.6						
JCT	Junction City	106.90	60	PFAKE		03 54 00.0	
JCT				LR	LR		
	comp=Z,2µm,20.0s						
ARCES	ARCESS Array B	106.94	343	Pdiff	Pdif	03 49 39.5	-0.9
	comp=Z,2.1nm,0.6s,baz=52,slow=7.9,SNR=8.9						
ARCES				PKiKP	PKiKP	03 53 49.3	-0.6
	comp=Z,3.5nm,0.7s,baz=102,slow=1.9,SNR=23						
ARCES				PKKPbc	PKKPbc	04 05 05.2	-5.3
	comp=Z,2.3nm,0.8s,baz=252,slow=1.8,SNR=8.5						
GNI	Garni	107.22	310	ePKP	PKiKP	03 53 52.2	+0.7
GNI				LR	LR		
	comp=Z,674nm,22.0s						
AGMN	Agassiz Nation	107.28	41	PFAKE		03 54 00.0	
AGMN				LR	LR		
	comp=Z,940nm,21.0s						
WMOK	Wichita Mounta	107.35	55	PFAKE		03 54 00.0	
WMOK				LR	LR		
	comp=Z,764nm,20.0s						
ECSD	EROS Data Cent	107.69	46	PFAKE		03 54 00.0	
ECSD				LR	LR		
	comp=Z,1µm,22.0s						
DAG	Danmarks Havn	107.86	358	i P	PKKPbc	04 05 03.7	-4.1
	comp=Z,8.5nm,1.2s						
DAG				i		04 05 17.9	
	comp=Z,460nm,23.0s						
KIV	Kislovodsk	108.08	315	PFAKE		03 54 00.0	
KIV				LR	LR		
	comp=Z,534nm,21.0s						
KIV	Kislovodsk	108.08	315	eP	Pdif	03 49 45.7	-0.4
KIV				e		03 54 15.0	
KIV				e		04 00 20.1	
KIV				ePS	PS	04 03 40.8	+0.5
KIV				eSS	SS	04 09 24.6	-1.7
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,667nm,21.0s						
RAYN	Ar Rayn	108.22	293	ePKP	PKiKP	03 53 54.1	+0.5
RAYN				LR	LR		
	comp=Z,731nm,22.0s						
KSU1	Kansas State U	108.49	50	PFAKE		03 54 10.0	
KSU1				LR	LR		
	comp=Z,2µm,20.0s						
KVTX	Kingsville	108.80	63	PFAKE		03 54 10.0	
KVTX				LR	LR		
	comp=Z,928nm,19.0s						
OBN	Obninsk	108.95	327	PFAKE		03 54 10.0	
OBN				LR	LR		
	comp=Z,512nm,20.0s						
OBN	Obninsk	108.95	327	i P	Pdif	03 49 48.8	-0.8
OBN				e		03 54 20.0	
OBN				i		04 00 24.0	
OBN				i PS	PS	04 03 45.6	-2.7
OBN				i SS	SS	04 09 37.2	+0.3
OBN				pmax	pmax		
	comp=Z,37nm,1.4s						
OBN				pmax	pmax		
	comp=Z,9.0nm,1.2s						
OBN				MLR	MLR		
	comp=Z,766nm,19.0s						
EYMN	Ely	110.20	40	PFAKE		03 54 10.0	
EYMN				LR	LR		
	comp=Z,885nm,22.0s						
SOC	Sochi	110.26	315	i PKIKP	PKiKP	03 53 55.5	-1.3
SOC				e		03 54 29.8	
SOC				ePS	PS	04 03 49.3	-13
SOC				eSSS	SSS	04 14 03.8	
SOC				MLR	MLR		
	comp=Z,434nm,21.0s						
SCIA	State Center	110.50	47	PFAKE		03 54 10.0	
SCIA				LR	LR		
	comp=Z,2µm,20.0s						
NATX	Nacogdoches	111.14	58	PFAKE		03 54 10.0	
NATX				LR	LR		
	comp=Z,2µm,21.0s						
FIA1	FINESS Array S	111.19	336	ePdif	Pdif	03 49 58.5	-0.9
FINES	FINESS Array B	111.19	336	Pdiff	Pdif	03 49 58.1	-1.3
	comp=Z,4.4nm,0.5s,baz=76,slow=5.9,SNR=45						
FINES				PKiKP	PKiKP	03 53 58.0	0.0
	comp=Z,1.6nm,0.4s,baz=86,slow=2.1,SNR=20						
FINES				PKKPbc	PKKPbc	04 04 54.5	-2.2
	comp=Z,1.1nm,0.5s,baz=214,slow=1.1,SNR=9.7						
X39A	Fountain Ranch	111.19	55	P	PKiKP	03 53 57.6	-1.3
	baz=279						
J39A	Decorah	111.26	45	P	PKiKP	03 53 57.9	-0.8
	baz=284						
S39A	Bolivar	111.28	51	P	PKiKP	03 53 58.1	-0.9
	baz=281						
L39A	Vinton	111.34	47	P	PKiKP	03 53 58.3	-0.7

	baz=284						
T39A	Clever	111.36	52	P	PKiKP	03 53 58.2	-0.9
	baz=281						
R39A	Chumby, Stover	111.38	51	P	PKiKP	03 53 58.4	-0.7
	baz=281						
U39A	Green Forest	111.39	53	P	PKiKP	03 53 57.9	-1.3
	baz=280						
ANN	Anapa	111.55	316	*e*PKIKP	PKiKP	03 53 48.1	-11
ANN				*e*SP	SP	04 04 07.2	-0.5
ANN				MLR	MLR		
	comp=N,2µm,21.0s						
ANN				MLR	MLR		
	comp=Z,782nm,21.0s						
MIAR	Mount Ida	111.63	55	PFAKE		03 54 10.0	
MIAR				LR	LR		
	comp=Z,1µm,20.0s						
F40A	Park Falls	111.67	42	P	PKiKP	03 53 58.5	-1.0
	baz=286						
SUMG	Summit	111.82	4	*i* P	PKKPbc	04 04 52.0	-3.4
	comp=Z,5.6nm,0.8s						
	comp=Z,720nm,20.0s						
U40A	Yellville	111.89	53	P	PKiKP	03 53 59.1	-1.0
	baz=281						
Q40A	Laux Farm, Aux	111.98	50	P	PKiKP	03 53 59.6	-0.7
	baz=282						
V40A	Witts Springs	112.02	53	P	PKiKP	03 53 59.6	-0.9
	baz=281						
COWI	Conover	112.27	42	PFAKE		03 54 10.0	
COWI				LR	LR		
	comp=Z,2µm,21.0s						
JFWS	Jewell Farm	112.40	45	P	PKiKP	03 54 00.2	-0.7
	baz=285						
JFWS	Jewell Farm	112.40	45	PFAKE		03 54 10.0	
JFWS				LR	LR		
	comp=Z,1µm,22.0s						
J41A	Loganville	112.44	45	P	PKiKP	03 53 59.9	-1.1
	baz=286						
341A	Kurthwood	112.47	58	P	PKiKP	03 53 59.7	-1.6
	baz=279						
Q41A	Truxton	112.63	50	P	PKiKP	03 54 00.7	-0.8
	baz=283						
HDIL	Hopedale	113.69	48	PFAKE		03 54 20.0	
HDIL				LR	LR		
	comp=Z,1µm,20.0s						
AKASG	Malin Array Be	114.74	325	Pdiff	Pdif	03 50 14.6	-0.8
	comp=Z,3.0nm,0.6s,baz=53,slow=5.3,SNR=9.3						
AKASG				PKP	PKiKP	03 54 04.6	-0.5
	comp=Z,18nm,0.6s,baz=58,slow=2.3,SNR=51						
AKASG				PP	PP	03 55 03.0	-0.1
	comp=Z,2.6nm,0.9s,baz=54,slow=6.9,SNR=6.2						
KIEV	Kiev	114.75	325	*e*PKP	PKPdf	03 54 04.2	-0.9
KIEV				LR	LR		
	comp=Z,1µm,22.0s						
KIEV	Kiev	114.75	325	P	PKPdf	03 54 04.9	-0.3
ASF	Jabal al Asfar	114.81	303	PKP	PKPdf	03 54 06.7	+0.7
	comp=Z,5.6nm,0.8s,baz=260,slow=1.0,SNR=9.8						
T46A	Princeton	115.64	51	P	PKPdf	03 54 06.5	-0.8
	baz=284						
BR131	Keskin Array S	115.64	312	*e*PKPdf	PKPdf	03 54 07.2	-0.3
BRTR	Keskin Array B	115.64	312	PKP	PKPdf	03 54 06.4	-1.0
	comp=Z,5.9nm,0.8s,baz=131,slow=3.2,SNR=21						
BRTR				PKKPbc	PKKPbc	04 04 40.0	-1.2
	comp=Z,0.6nm,0.7s,baz=298,slow=2.5,SNR=2.6						
SFJD	Kangerlussuaq	115.66	10	PFAKE		03 54 20.0	+14
SFJD				LR	LR		
	comp=Z,881nm,21.0s						
MMAI	Mount Meron Ar	115.89	304	PKP	PKPdf	03 54 08.1	+0.1
	comp=Z,4.4nm,0.8s,baz=280,slow=40,SNR=4.2						
KMBO	Kilima Mbogo	115.89	266	PFAKE		03 54 20.0	+11
KMBO				LR	LR		
	comp=Z,556nm,20.0s						
WVT	Waverly	115.91	52	P	PKPdf	03 54 06.9	-0.9
	baz=284						
ANTO	Ankara	116.23	312	⇑*i*P	PKPdf	03 54 08.4	-0.1
ANTO	Ankara	116.23	312	⇑*i*P	PKPdf	03 54 08.6	+0.1
ANTO	Ankara	116.23	312	*e*PKPdf	PKPdf	03 54 07.9	-0.6
ANTO				LR	LR		
	comp=Z,350nm,22.0s						
ANTO	Ankara	116.23	312	P	PKPdf	03 54 08.5	+0.1
	SNR=11						
BR231	Keskin MP Arra	116.25	312	*e*PKPdf	PKPdf	03 54 09.1	+0.5
T47A	Sharon Grove	116.26	51	*e*PKPdf	PKPdf	03 54 09.8	+1.3
X47A	Russelville	116.26	54	P	PKPdf	03 54 07.6	-1.0
	baz=283						
SORM	Soroca	116.32	322	⇑*i*P	PKPdf	03 54 07.7	-0.5
R47A	Wooly Knot Far	116.36	49	P	PKPdf	03 54 07.4	-1.2
	baz=286						
SUW	Suwalki	116.44	330	*e*PKP	PKPdf	03 54 08.4	+0.1
SUW	Suwalki	116.44	330	*e*PKIKP	PKPdf	03 54 08.4	+0.1
KIS	Kishinev	116.49	321	*e*PP	PP	03 55 14.0	-1.6
KIS				*e*SKS	SKSac	04 00 56.0	-0.1
KIS				LRM	MLR	04 44 24.0	
	comp=Z,1µm,20.0s						
HFS	Hagfors	116.79	339	PKP	PKPdf	03 54 08.3	-0.5
	comp=Z,3.3nm,0.5s,baz=83,slow=3.6,SNR=26						
NC303	NORSAR Array S	116.82	340	*e*PKPdf	PKPdf	03 54 09.1	+0.2
NB2	NORSAR Subarra	117.01	340	PKPdf	PKPdf	03 54 08.6	-0.7
	comp=Z,2.9nm,0.6s,baz=45,slow=1.9						
NB2	NORSAR Subarra	117.01	340	PKPdf	PKPdf	03 54 08.6	-0.7
	baz=45,slow=1.9						
NC602	NORSAR Array S	117.12	340	*e*PKPdf	PKPdf	03 54 08.8	-0.6
CSS	Mathiatis	117.13	307	*e*PKPdf	PKPdf	03 54 10.4	+0.1
NBO00	NORSAR Array S	117.16	341	*e*PKPdf	PKPdf	03 54 09.9	+0.4
TLCR		117.20	319	⇓*i*P	PKPdf	03 54 10.2	+0.2
AAM	Ann Arbor	117.22	44	PFAKE		03 54 20.0	+10
AAM				LR	LR		
	comp=Z,2µm,22.0s						
LRAL	Lakeview Retre	117.29	55	P	PKPdf	03 54 09.5	-1.1
	baz=283						
LRAL	Lakeview Retre	117.29	55	*e*PKPdf	PKPdf	03 54 10.4	-0.2
W49A	Belvidere	117.39	53	P	PKPdf	03 54 09.5	-1.3
	baz=285						
U49A	Red Boiling Sp	117.41	51	P	PKPdf	03 54 09.9	-0.8
	baz=286						
X49A	Woodville	117.49	53	P	PKPdf	03 54 09.9	-1.1
	baz=284						
V49A	McMinnville	117.51	52	P	PKPdf	03 54 09.9	-1.1
	baz=285						
Z49A	Columbiana	117.64	55	P	PKPdf	03 54 10.1	-1.2
	baz=284						
CFR	Carcaliu	117.65	319	⇓*i*P	PKPdf	03 54 10.9	0.0
BRAL	Brewton	117.65	57	PFAKE		03 54 20.0	+8.7
BRAL				LR	LR		
	comp=Z,781nm,21.0s						
EFI	East Falkland	117.77	158	PFAKE		03 54 20.0	+9.0
EFI				LR	LR		
	comp=Z,744nm,20.0s						
TLB	Topalu	117.94	319	⇑*i*P	PKPdf	03 54 11.9	+0.4
O50A	Cable	117.96	47	P	PKPdf	03 54 10.9	-0.8
	baz=289						
HARR	Harsova	117.98	319	⇓*i*P	PKPdf	03 54 12.2	+0.7
T50A	Nancy	118.00	50	P	PKPdf	03 54 10.7	-1.2
	baz=287						
TESR	Tescani	118.05	321	⇓*i*P	PKPdf	03 54 11.9	+0.2
LVV	L'vov	118.11	325	*e*PKIKP	PKPdf	03 54 11.6	-0.1
LVV				MLR	MLR		
	comp=N,500nm,22.0s						
LVV				MLR	MLR		
	comp=E,600nm,22.0s						
LVV				MLR	MLR		
	comp=Z,1µm,22.0s						
Z50A	Ashland	118.12	55	P	PKPdf	03 54 11.2	-1.0
	baz=284						
W50A	Signal Mountai	118.13	52	P	PKPdf	03 54 11.2	-1.0
	baz=285						
W50A	Signal Mountai	118.13	52	*e*PKPdf	PKPdf	03 54 13.0	+0.8
PSN	Preselentsi	118.20	318	*i* P	PKPdf	03 54 11.1	-0.9
BIZ	Bicaz	118.21	322	⇑*i*P	PKPdf	03 54 12.4	+0.4
VRI	Vrincioaia	118.28	320	⇓*i*P	PKPdf	03 54 11.2	-0.9
ACSO	Alum Creek Sta	118.40	46	P	PKPdf	03 54 11.5	-1.0
	baz=290						
ACSO	Alum Creek Sta	118.40	46	*e*PKPdf	PKPdf	03 54 11.7	-0.9
ACSO				LR	LR		
	comp=Z,921nm,20.0s						
BUR08	Bucovina Ar. S	118.45	323	*e*PKPdf	PKPdf	03 54 13.1	+0.5
BURAR	Bucovina Array	118.45	323	⇑*i*P	PKPdf	03 54 14.0	+1.5
BUR04	Bucovina Ar. S	118.45	323	*e*PKPdf	PKPdf	03 54 12.0	-0.6
ISR	Istrita	118.70	320	⇓*i*P	PKPdf	03 54 13.5	+0.5
S51A	Beattyville	118.77	49	P	PKPdf	03 54 12.6	-0.7
	baz=288						
251A	Midway	118.81	56	P	PKPdf	03 54 12.3	-1.2
	baz=284						
PRD	Provadia	118.91	317	*i* P	PKPdf	03 54 13.7	+0.3
MLR	Muntele Rosu	118.93	320	PKP	PKPdf	03 54 13.2	-0.3
	comp=Z,1.8nm,0.5s,baz=150,slow=2.4,SNR=22						
MLR				PKKPbc	PKKPbc	04 04 26.6	-3.1
	comp=Z,0.3nm,0.5s,baz=315,slow=7.1,SNR=5.8						
MLR	Muntele Rosu	118.93	320	⇑*i*P	PKPdf	03 54 13.1	-0.5
KWP	Kalwaria Pacla	118.95	326	*e*PKP	PKPdf	03 54 13.5	+0.2
KWP	Kalwaria Pacla	118.95	326	*e*PKPdf	PKPdf	03 54 13.2	-0.2
KWP	Kalwaria Pacla	118.95	326	*e*PKIKP	PKPdf	03 54 13.5	+0.2
DOPR	Dopca	119.08	321	⇑*i*P	PKPdf	03 54 15.1	+1.4
TKL	Tuckaleechee C	119.21	52	PKP	PKPdf	03 54 14.3	0.0
	comp=Z,1.8nm,0.6s,baz=180,slow=3.0,SNR=5.7						
452A	Marianna	119.28	57	P	PKPdf	03 54 13.9	-0.6
	baz=283						
V52A	Sevierville	119.30	51	P	PKPdf	03 54 13.3	-1.1
	baz=287						
V52A	Sevierville	119.30	51	*e*PKPdf	PKPdf	03 54 14.8	+0.4
SADO	Sadowa	119.31	40	*e*PKPdf	PKPdf	03 54 13.5	-0.6
Z52A	Williamson	119.36	54	P	PKPdf	03 54 13.8	-0.8
	baz=285						
X52A	Dahlonega	119.41	53	P	PKPdf	03 54 13.5	-1.2
	baz=286						
BMR	Baia Mare	119.45	323	⇓*i*P	PKPdf	03 54 14.6	+0.3
VOIR		119.52	321	⇑*i*P	PKPdf	03 54 14.6	0.0
PLCA	Paso Flores	119.52	143	PKP	PKPdf	03 54 14.6	-0.3
	comp=Z,4.5nm,0.6s,baz=262,slow=4.3,SNR=10						
PLCA				PKKPbc	PKKPbc	04 04 26.1	-1.3
	comp=Z,3.2nm,0.6s,baz=66,slow=5.4,SNR=12						
PLCA				SKKPbc	SKKPbc	04 08 11.4	0.0
	comp=Z,1.8nm,0.9s,baz=56,slow=2.9,SNR=2.9						
PLCA	Paso Flores	119.52	143	*e*PKPdf	PKPdf	03 54 15.3	+0.4
PLCA				PKKPbc	PKKPbc	04 04 26.1	-1.3
PLCA				SKKPbc	SKKPbc	04 08 11.4	0.0
BSD	Bornholm Skovb	119.68	334	*i* P	PKPdf	03 54 14.6	+0.1
BSD	Bornholm Skovb	119.68	334	*e*PKIKP	PKPdf	03 54 14.6	+0.1
UZH	Uzhgorod	119.69	325	*c* *i*PKIKP	PKPdf	03 54 14.6	-0.1
UZH				*i*		03 54 20.0	
UZH				*i*		03 54 31.0	
TRPA	Tarpa	119.79	324	⇑*i*P	PKPdf	03 54 14.7	-0.2
TRPA	Tarpa	119.79	324	⇑*e*PKPdf	PKPdf	03 54 14.7	-0.2
W53A	Cullowhee	119.83	52	P	PKPdf	03 54 14.5	-1.1
	baz=287						
CJR	Cluj-Napoca	119.84	322	⇓*i*P	PKPdf	03 54 15.9	+0.7
SZH	Strazhica	119.87	318	*i* P	PKPdf	03 54 15.2	-0.1
253A	Americus	119.88	56	P	PKPdf	03 54 14.7	-0.9
	baz=284						
X53A	Estanollee	119.91	53	P	PKPdf	03 54 14.5	-1.1
	baz=286						
U53A	Fall Branch	119.93	50	P	PKPdf	03 54 14.7	-0.9
	baz=288						
V53A	Saluda	119.96	51	P	PKPdf	03 54 14.6	-1.1
	baz=287						
BORG	Borgarnes	119.96	357	PFAKE		03 54 30.0	+15
BORG				LR	LR		
	comp=Z,187nm,22.0s						
HUMR	Humele	119.96	320	⇓*i*P	PKPdf	03 54 15.4	0.0
Z53A	Monticello	120.02	54	P	PKPdf	03 54 15.0	-0.8
	baz=286						
CRVS	Cervenica-Dubn	120.02	325	*e*P	Pdif	03 50 40.2	+1.2
CRVS				*e*		03 54 15.7	
CRVS	Cervenica-Dubn	120.02	325	*e*PDIFF	Pdif	03 50 40.2	+1.2
CRVS	Cervenica-Dubn	120.02	325	*e*PKP	PKPdf	03 54 15.7	+0.3
GOGA	Godfrey	120.07	54	P	PKPdf	03 54 15.5	-0.5
	baz=286						
GOGA	Godfrey	120.07	54	PFAKE		03 54 30.0	+14
GOGA				LR	LR		
	comp=Z,1µm,20.0s						
BOSA	Boshof	120.11	233	PKP	PKPdf	03 54 16.4	0.0
	comp=Z,4.9nm,0.5s,baz=123,slow=2.0,SNR=24						
BOSA	Boshof	120.11	233	*e*PKPdf	PKPdf	03 54 16.8	+0.4
OJC	Ojcow	120.24	327	*e*PKP	PKPdf	03 54 15.5	-0.3
OJC	Ojcow	120.24	327	*e*PKPdf	PKPdf	03 54 16.2	+0.5
OJC	Ojcow	120.24	327	*e*PKIKP	PKPdf	03 54 15.5	-0.3
N54A	Moraine State	120.27	45	P	PKPdf	03 54 15.2	-0.9
	baz=292						
M54A	Oil Creek Stat	120.28	44	P	PKPdf	03 54 15.3	-0.9
	baz=293						
M54A	Oil Creek Stat	120.28	44	*e*PKPdf	PKPdf	03 54 16.7	+0.6
LOT	Lotru	120.32	321	⇓*i*P	PKPdf	03 54 15.9	-0.3
DRGR		120.34	323	⇑*i*P	PKPdf	03 54 16.1	-0.1
COP	Copenhagen	120.35	336	*i* P	PKPdf	03 54 16.3	+0.6
COP	Copenhagen	120.35	336	*e*PKIKP	PKPdf	03 54 16.3	+0.6
SCHQ	Schefferville	120.47	26	PKP	PKPdf	03 54 16.3	+0.2
	comp=Z,3.9nm,0.8s,baz=257,slow=18,SNR=4.1						
PLVO	Plevna	120.52	39	*e*PKPdf	PKPdf	03 54 16.6	+0.1
LTVH	Lˆ'tavˆ'rtes,	120.54	324	⇑*e*PKPdf	PKPdf	03 54 18.1	+1.7
Y54A	Tignall	120.57	53	P	PKPdf	03 54 16.0	-0.9
	baz=286						
254A	Abbeville	120.59	56	P	PKPdf	03 54 16.5	-0.4
	baz=285						
HOPE	Hope Point	120.65	173	PFAKE		03 54 30.0	+14
HOPE				LR	LR		
	comp=Z,1µm,21.0s						
LLD	Lille Linde	120.68	335	*i* P	PKPdf	03 54 17.3	+0.9
LLD	Lille Linde	120.68	335	*e*PKIKP	PKPdf	03 54 17.3	+0.9
ALN	Alexandroupoli	120.73	315	*e*PKPdf	PKPdf	03 54 16.4	-0.5
ALN	Alexandroupoli	120.73	315	P	PKPdf	03 54 15.9	-1.1
KDZ	Kurdzhali	120.87	316	*i* P	PKPdf	03 54 15.9	-1.4
RDO	Rodhopi	120.99	316	P	PKPdf	03 54 16.8	-0.7
RDO	Rodhopi	120.99	316	P	PKPdf	03 54 16.8	-0.7
LANS	Liptovska Anna	121.00	326	*e*PKIKP	PKPdf	03 54 18.4	+1.1
LANS	Liptovska Anna	121.00	326	*e*PKP	PKPdf	03 54 18.4	+1.1
MUD	Monsted U'grnd	121.09	338	*i* P	PKPdf	03 54 20.4	+3.2
MUD	Monsted U'grnd	121.09	338	*e*PKIKP	PKPdf	03 54 20.4	+3.2
GADA	Gvkgeada	121.11	315	P	PKPdf	03 54 16.8	-0.9
GADA	Gvkgeada	121.11	315	P	PKPdf	03 54 16.8	-0.9
PRK	Paraskevi	121.19	314	P	PKPdf	03 54 17.4	-0.5
PRK	Paraskevi	121.19	314	P	PKPdf	03 54 17.4	-0.5
SMTH	Samothraki Isl	121.26	315	P	PKPdf	03 54 17.0	-1.0
SMTH	Samothraki Isl	121.26	315	P	PKPdf	03 54 17.0	-1.0
KMSC	Kings Mountain	121.27	51	P	PKPdf	03 54 17.4	-0.8
	baz=288						
BLA	Blacksburg	121.30	49	P	PKPdf	03 54 17.3	-0.9
	baz=290						
BLA	Blacksburg	121.30	49	PFAKE		03 54 30.0	+12
BLA				LR	LR		
	comp=Z,2µm,22.0s						
OKC	Ostrava-Krasne	121.33	328	*e*PKPdf	PKPdf	03 54 18.7	+0.8
OKC				*e*PP	PP	03 56 01.1	+12
OKC				*e*SKS	SKSdf	04 01 13.8	-13
OKC				*e*SKKS	SKKSac	04 02 44.4	-0.6
OKC				*e*PS	PS	04 05 43.6	+1.5
OKC				AMS	AMS	04 47 20.0	
	comp=Z,700nm,22.6s						
OKC	Ostrava-Krasne	121.33	328	*e*PKIKP	PKPdf	03 54 18.7	+0.8
OKC				*e*		04 01 13.8	
OKC				*e*SP	SP	04 05 43.6	+7.8
OKC				MLR	MLR		
	comp=Z,700nm,22.6s						
RZN	Rozhen	121.33	317	*i* P	PKPdf	03 54 17.4	-1.0
PSZ	Piszkesteto	121.43	325	⇑*i*P	PKPdf	03 54 18.0	-0.2
PSZ	Piszkesteto	121.43	325	*e*PKPdf	PKPdf	03 54 18.6	+0.4
HERR	Herculane	121.44	321	⇓*i*P	PKPdf	03 54 18.2	0.0
SIGR	SIGRI	121.51	314	P	PKPdf	03 54 15.9	-2.6
SIGR	SIGRI	121.51	314	P	PKPdf	03 54 15.9	-2.6
O56A	Blue Knob Stat	121.53	45	P	PKPdf	03 54 17.6	-1.0
	baz=293						
O56A	Blue Knob Stat	121.53	45	*e*PKPdf	PKPdf	03 54 19.3	+0.7
BZS	Buzias	121.58	322	⇑*i*P	PKPdf	03 54 18.4	-0.1
JSC	Jenkinsville	121.58	52	*e*PKPdf	PKPdf	03 54 19.4	+0.6
MORC	Moravsky Berou	121.69	328	⇑*i*P	PKPdf	03 54 19.0	+0.3
MORC	Moravsky Berou	121.69	328	*e*PKPdf	PKPdf	03 54 19.0	+0.3
MORC	Moravsky Berou	121.69	328	*e*PKP	PKPdf	03 54 18.9	+0.3
KSP	Ksiaz	121.71	329	*e*PKP	PKPdf	03 54 19.0	+0.4
KSP	Ksiaz	121.71	329	*e*PKIKP	PKPdf	03 54 19.0	+0.4
VYHS	Vyhne	121.71	326	*e*P	Pdif	03 50 47.2	+0.6
VYHS				*e*		03 54 18.9	
VYHS	Vyhne	121.71	326	*e*PDIFF	Pdif	03 50 47.1	+0.5
VYHS	Vyhne	121.71	326	*e*PKP	PKPdf	03 54 18.9	+0.2
LIA	Limnos Island	121.72	315	P	PKPdf	03 54 18.0	-0.9
LIA	Limnos Island	121.72	315	P	PKPdf	03 54 18.0	-0.9
THAS	Thassos island	121.77	316	P	PKPdf	03 54 17.9	-1.1
SUR	Sutherland	121.78	227	*e*PKPdf	PKPdf	03 54 21.7	+2.1
SUR				LR	LR		
	comp=Z,3µm,22.0s						
SSPA	Standing Stone	121.86	44	P	PKPdf	03 54 18.1	-1.0
	baz=294						
SSPA	Standing Stone	121.86	44	*e*PKPdf	PKPdf	03 54 19.7	+0.5
KRLC	Kraliky	121.92	329	*e*PKPdf	PKPdf	03 54 19.8	+0.7
KRLC	Kraliky	121.92	329	*e*PKIKP	PKPdf	03 54 19.8	+0.7
MDVR	Moldovita	121.92	321	⇓*i*P	PKPdf	03 54 19.0	-0.2
VTS	Vitosha	121.97	318	⇑*i*P	PKPdf	03 54 19.5	-0.1
VTS	Vitosha	121.97	318	*e*PKPdf	PKPdf	03 54 19.4	-0.1
VTS	Vitosha	121.97	318	P	PKPdf	03 54 19.4	-0.1
DPC	Dobruska-Polom	121.99	329	*e*PKPdf	PKPdf	03 54 19.6	+0.4
DPC				*e*SP	SP	04 05 44.4	+2.7
DPC				AMS	AMS	04 45 20.0	
	comp=Z,1µm,24.0s						
DPC	Dobruska-Polom	121.99	329	*e*PKIKP	PKPdf	03 54 19.6	+0.4
DPC				*e*SP	SP	04 05 44.4	+2.7
DPC				MLR	MLR		
	comp=Z,1µm,24.0s						
JTS	JuntasAbangare	122.00	81	PFAKE		03 54 30.0	+10
JTS				LR	LR		
	comp=Z,1µm,22.0s						
UPC	Upice	122.05	329	*e*PKPdf	PKPdf	03 54 20.0	+0.7
UPC				*e*PP	PP	03 55 59.3	+5.7
UPC				*e*SKS	SKSac	04 01 12.6	-3.1
UPC				*e*SP	SP	04 05 43.4	+1.2
UPC				AMS	AMS	04 45 30.0	
	comp=Z,2µm,24.5s						
UPC	Upice	122.05	329	*e*PKIKP	PKPdf	03 54 20.0	+0.7
UPC				*e*		03 55 59.3	
UPC				*e*		04 01 12.6	
UPC				*e*SP	SP	04 05 43.4	+1.2
UPC				MLR	MLR		
	comp=Z,2µm,24.5s						
NVR	Nevrokopi	122.06	317	P	PKPdf	03 54 18.8	-0.8
NVR	Nevrokopi	122.06	317	P	PKPdf	03 54 18.8	-0.8
JAVC	Velka Javorina	122.15	327	*e*PKP	PKPdf	03 54 20.9	+1.3
LSZ	Lusaka	122.17	249	*e*PKPdf	PKPdf	03 54 20.8	+0.2
LSZ				LR	LR		
	comp=Z,1µm,20.0s						
LSZ	Lusaka	122.17	249	P	PKPdf	03 54 21.1	+0.5
	SNR=7.8						
LONY	Lake Ozonia	122.28	39	P	PKPdf	03 54 18.9	-1.0
	baz=299						
LONY	Lake Ozonia	122.28	39	PFAKE		03 54 30.0	+10
LONY				LR	LR		
	comp=Z,921nm,20.0s						
SRS	Serrai	122.34	317	P	PKPdf	03 54 18.7	-1.4
SRS	Serrai	122.34	317	P	PKPdf	03 54 18.7	-1.4
OUR	Ouranopolis	122.40	316	P	PKPdf	03 54 16.6	-3.6
OUR	Ouranopolis	122.40	316	P	PKPdf	03 54 16.6	-3.6
MBAR	Mbarara	122.42	266	*e*PKPdf	PKPdf	03 54 22.1	+0.9
VRAC	Vranov	122.47	328	⇑*i*P	PKPdf	03 54 20.4	+0.4
VRAC	Vranov	122.47	328	*e*PKP	PKPdf	03 54 20.5	+0.4
SMOL	Smolenice	122.48	327	*e*PKIKP	PKPdf	03 54 20.9	+0.8
SMOL	Smolenice	122.48	327	*e*PKP	PKPdf	03 54 20.9	+0.8
BINY	Binghamton	122.50	42	P	PKPdf	03 54 19.8	-0.6
	baz=296						
BINY	Binghamton	122.50	42	PFAKE		03 54 30.0	+10
BINY				LR	LR		
	comp=Z,1µm,22.0s						
MODS	Modra-Piesok	122.64	327	*e*PKIKP	PKPdf	03 54 21.0	+0.5
MODS				MLR	MLR		
	comp=Z,1µm,21.5s						
MODS	Modra-Piesok	122.64	327	*e*PKP	PKPdf	03 54 21.0	+0.5
KRUC	Moravsky	122.72	328	*e*PKP	PKPdf	03 54 20.9	+0.3
PVCC	Panska Ves	122.77	330	*e*PKPdf	PKPdf	03 54 21.4	+0.8
PVCC				AMS	AMS	04 53 40.0	
	comp=Z,1µm,17.4s						
PVCC	Panska Ves	122.77	330	*e*PKIKP	PKPdf	03 54 21.4	+0.8
PVCC				MLR	MLR		
	comp=Z,1µm,17.4s						
PAIG	Paliouri	122.77	315	P	PKPdf	03 54 19.6	-1.3
PAIG	Paliouri	122.77	315	P	PKPdf	03 54 19.6	-1.3
NHSC	New Hope	122.80	53	PFAKE		03 54 30.0	+8.8
NHSC				LR	LR		
	comp=Z,2µm,21.0s						
NCB	Newcomb	122.82	39	*e*PKPdf	PKPdf	03 54 21.2	+0.3
IOSP	Ios island	122.83	311	P	PKPdf	03 54 19.8	-1.4
BRG	Berggiesshubel	122.86	331	*i* PKP	PKPdf	03 54 21.0	+0.3
	comp=Z,43nm,1.1s						
BRG				*i*		03 57 29.0	
	comp=Z,14nm,1.6s						
BRG				SDIFF		04 06 16.0	
	comp=N,272nm,14.8s						
	comp=E,355nm,16.5s						
	comp=Z,823nm,20.1s						
BRG	Berggiesshubel	122.86	331	*e*P	Pdif	03 50 52.2	+0.6
BRG				*i*		03 54 21.0	
BRG				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BRG				pmax	pmax		
	comp=Z,43nm,1.1s						
BRG				pmax	pmax		
	comp=Z,14nm,1.6s						
BRG				MLR	MLR		
	comp=N,272nm,14.8s						
BRG				MLR	MLR		
	comp=E,355nm,16.5s						
BRG				MLR	MLR		
	comp=Z,823nm,20.1s						
BRG	Berggiesshubel	122.86	331	*e*PDIFF	Pdif	03 50 52.2	+0.6
	comp=Z,2.1nm,0.8s						
HORT	Hortiatis	122.90	316	P	PKPdf	03 54 19.8	-1.5
HORT	Hortiatis	122.90	316	P	PKPdf	03 54 19.8	-1.5
AOS	Alonnisos	122.94	314	P	PKPdf	03 54 20.0	-1.3
AOS	Alonnisos	122.94	314	P	PKPdf	03 54 20.0	-1.3
VAY	Valandovo	122.95	317	P	PKPdf	03 54 20.1	-1.1
VAY	Valandovo	122.95	317	P	PKPdf	03 54 20.1	-1.1
VAY	Valandovo	122.95	317	*i* P	PKPdf	03 54 20.1	-1.1
CLL	Collm	123.03	331	⇑*i*PKPdf	PKPdf	03 54 21.3	+0.2
	comp=Z,28nm,0.6s						
CLL				*i*		03 54 24.9	
CLL				*i* pPKPdf	pPKPdf	03 54 31.5	-3.3
CLL				*i*		03 54 38.7	
CLL				*e*PP	PP	03 56 07.0	+6.9
CLL				*e*SP	SP	04 05 46.0	-4.7
CLL				*e*PPS	PPS	04 07 12.0	
CLL				*e*SS	SS	04 12 46.0	+5.2
CLL				L	L	04 52 00.0	
	comp=Z,1µm,20.6s						
CLL	Collm	123.03	331	*e*PKPdf	PKPdf	03 54 21.2	+0.2
CLL	Collm	123.03	331	⇑*i*PKIKP	PKPdf	03 54 21.3	+0.2
CLL				*i*		03 54 31.5	
CLL				pmax	pmax		
	comp=Z,28nm,0.6s						
CLL				MLR	MLR		
	comp=Z,1µm,20.6s						
GOPC	GO Pecny, Ondr	123.04	329	*e*PKPdf	PKPdf	03 54 21.9	+0.7
GOPC				*e*SKKS		04 02 53.9	
GOPC				AMS	AMS	04 46 20.0	
	comp=Z,1µm,23.9s						
GOPC	GO Pecny, Ondr	123.04	329	*e*PKIKP	PKPdf	03 54 21.9	+0.7
GOPC				MLR	MLR		
	comp=Z,1µm,23.9s						
STIP	Stip	123.04	318	*i* P	PKPdf	03 54 19.5	-1.9
PRU	Pruhonice	123.12	329	*e*PKPdf	PKPdf	03 54 22.0	+0.7
PRU				*e*PP	PP	03 56 03.3	+2.5
PRU				*e*SKKS		04 02 53.9	
PRU				*e*SP	SP	04 05 50.5	-1.1
PRU				AMS	AMS	04 46 30.0	
	comp=Z,1µm,23.6s						
PRU	Pruhonice	123.12	329	*e*PKIKP	PKPdf	03 54 22.0	+0.7
PRU				*e*		03 56 03.3	
PRU				*e*SP	SP	04 05 50.5	-1.1
PRU				MLR	MLR		
	comp=Z,1µm,23.6s						
PRA	Prague	123.12	330	*e*PKPdf	PKPdf	03 54 22.1	+0.8
PRA				AMS	AMS	04 46 30.0	
	comp=Z,2µm,28.8s						
PRA	Prague	123.12	330	*e*PKIKP	PKPdf	03 54 22.1	+0.8
PRA				MLR	MLR		
	comp=Z,2µm,28.8s						
CBN	Corbin Frederi	123.19	47	PFAKE		03 54 30.0	+8.2
CBN				LR	LR		
	comp=Z,1µm,20.0s						
N59A	State Game Lan	123.20	43	*e*PKPdf	PKPdf	03 54 22.9	+1.2
GRG	Griva	123.22	317	P	PKPdf	03 54 21.0	-0.8
GRG	Griva	123.22	317	P	PKPdf	03 54 21.0	-0.8
LAST	Lasithi	123.23	309	P	PKPdf	03 54 22.1	0.0
LAST	Lasithi	123.23	309	P	PKPdf	03 54 22.1	0.0
SKIA	Skiathos	123.23	314	P	PKPdf	03 54 20.8	-1.1
DIVS	Divibare	123.33	321	*e*PKPdf	PKPdf	03 54 22.0	0.0
XOR	Xorichti	123.35	315	P	PKPdf	03 54 20.9	-1.2
XOR	Xorichti	123.35	315	P	PKPdf	03 54 20.9	-1.2
NEO	Neokhori	123.35	315	P	PKPdf	03 54 21.9	-0.2
NEO	Neokhori	123.35	315	P	PKPdf	03 54 21.9	-0.2
PTL	Penteli	123.39	313	P	PKPdf	03 54 21.1	-1.1
PTL	Penteli	123.39	313	P	PKPdf	03 54 21.1	-1.1
SKO	Skopje	123.42	318	P	PKPdf	03 54 22.1	0.0
SKO	Skopje	123.42	318	P	PKPdf	03 54 22.1	0.0
SKO	Skopje	123.42	318	*i* P	PKPdf	03 54 22.1	0.0
ATHU	Athens Univers	123.48	313	P	PKPdf	03 54 20.9	-1.5
ATHU	Athens Univers	123.48	313	P	PKPdf	03 54 20.9	-1.5
VLY	Voula,Athens	123.52	313	P	PKPdf	03 54 21.1	-1.3
VLY	Voula,Athens	123.52	313	P	PKPdf	03 54 21.1	-1.3
LIT	Litokhoron	123.53	316	*e*PKPdf	PKPdf	03 54 21.5	-0.9

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LIT    Litokhoron        123.53 316   P        PKPdf    03 54 21.4 -1.0
IDI    Anoyia            123.64 310   PKP      PKPdf    03 54 22.9 +0.1
       comp=Z,20nm,0.7s,baz=6.8,slow=12,SNR=13
IDI    Anoyia            123.64 310⇓iP         PKPdf    03 54 23.4 +0.6
IDI    Anoyia            123.64 310  ePKPdf    PKPdf    03 54 23.2 +0.3
CONA   Conrad Observa    123.67 327  i PKiKP   PKPdf    03 54 22.6 +0.1
       comp=Z,30nm,0.7s,SNR=25
VILL   Villia            123.75 313   P        PKPdf    03 54 21.4 -1.5
LKR    Lokris            123.78 314   P        PKPdf    03 54 21.8 -1.1
LKR    Lokris            123.78 314   P        PKPdf    03 54 21.8 -1.1
SIVA   Sivas             123.79 309   P        PKPdf    03 54 23.1 +0.1
SIVA   Sivas             123.79 309   P        PKPdf    03 54 23.1 +0.1
KRUS   Krusevo           123.82 318  i P       PKPdf    03 54 22.4 -0.6
PSUB   Penn St. - Bra    123.85  44  ePKPdf    PKPdf    03 54 24.4 +1.4
CNNC   Cliffs of the     123.90  50   PFAKE             03 54 40.0 +17
CNNC                                  LR       LR
       comp=Z,2µm,22.0s
BIA    Bitola            123.93 317  i P       PKPdf    03 54 23.1 -0.2
KZN    Kozani            123.94 316   P        PKPdf    03 54 22.3 -1.0
KZN    Kozani            123.94 316   P        PKPdf    03 54 22.3 -1.0
FNA    Florina           124.00 317  ePKPdf    PKPdf    03 54 22.8 -0.6
FNA    Florina           124.00 317   P        PKPdf    03 54 22.7 -0.6
NKC    Novy Kostel       124.00 331  ePKPdf    PKPdf    03 54 23.9 +0.9
NKC                                  eSP       SP       04 05 55.9 -3.4
NKC                                   AMS      AMS      04 50 20.0
       comp=Z,1µm,23.1s
NKC    Novy Kostel       124.00 331  ePKIKP    PKPdf    03 54 23.9 +0.9
NKC                                  eSP       SP       04 05 55.9 -3.4
NKC                                   MLR      MLR
       comp=Z,1µm,23.1s
THL    Klokotos Trika    124.09 315   P        PKPdf    03 54 22.2 -1.3
AGG    Agios Georgios    124.10 315  ePKPdf    PKPdf    03 54 22.7 -0.8
AGG    Agios Georgios    124.10 315   P        PKPdf    03 54 22.6 -1.0
VAM    Vamos             124.12 310   P        PKPdf    03 54 23.9 +0.2
VAM    Vamos             124.12 310   P        PKPdf    03 54 23.9 +0.2
KHC    Kasperske Hory    124.14 329  ePKPdf    PKPdf    03 54 24.0 +0.6
KHC                                  ePP       PP       03 56 10.2 +2.5
KHC                                  eSKS      SKSac    04 01 22.6  0.0
KHC                                  eSKKS     SKKSac   04 03 02.5 -0.8
KHC                                  eSP       SP       04 05 55.5 -5.2
KHC                                   AMS      AMS      04 47 10.0
       comp=Z,1µm,22.6s
KHC    Kasperske Hory    124.14 329  ePKPdf    PKPdf    03 54 23.4 +0.1
KHC    Kasperske Hory    124.14 329  ePKIKP    PKPdf    03 54 24.0 +0.6
KHC                                  e                  03 56 10.2
KHC                                  e                  04 01 22.6
KHC                                  eSP       SP       04 05 55.5 -5.2
KHC                                   MLR      MLR
       comp=Z,1µm,22.6s
KRND   KRANIDI           124.17 313   P        PKPdf    03 54 22.4 -1.3
OHR    Ohrid             124.24 318  i P       PKPdf    03 54 23.6 -0.2
ARSA   Arzberg           124.25 326  i PKiKP   PKPdf    03 54 23.3 -0.3
       comp=Z,29nm,2.1s,SNR=8.0
GEC2   GERESS Array S    124.26 329  ePKPdf    PKPdf    03 54 24.2 +0.5
GERES  GERESS Array B    124.26 329   Pdiff    Pdif     03 50 57.7 -0.3
       comp=Z,0.4nm,0.6s,baz=46,slow=5.8,SNR=5.0
GERES                                 PKP      PKPdf    03 54 23.7  0.0
       comp=Z,20nm,0.7s,baz=70,slow=1.6,SNR=158
GERES                                 PKKPbc   PKKPab   04 04 06.7 -1.0
       comp=Z,0.6nm,0.7s,baz=222,slow=1.8,SNR=5.5
GEA0   GERESS Array S    124.26 329  ePKPpre   PKPpre   03 54 15.1
IMMV   Iera Moni Meta    124.27 310   P        PKPdf    03 54 24.0  0.0
KOGS   Kog               124.31 325  ePKPdf    PKPdf    03 54 23.5 -0.2
KPRO   Kipourio          124.37 316   P        PKPdf    03 54 23.5 -0.6
NEST   Nestorio          124.39 317   P        PKPdf    03 54 23.9 -0.3
GVDS   Gavdos            124.41 309   P        PKPdf    03 54 23.7 -0.5
EVR    Evrytania         124.51 315   P        PKPdf    03 54 24.2 -0.3
EVR    Evrytania         124.51 315   P        PKPdf    03 54 24.2 -0.3
TRIZ   Trizonia          124.56 314   P        PKPdf    03 54 24.1 -0.3
MOA    Molln             124.58 328  i PKiKP   PKPdf    03 54 23.9 -0.3
       comp=Z,12nm,0.7s,SNR=9.5
VLI    Veliai            124.59 312   P        PKPdf    03 54 22.6 -1.9
VLI    Veliai            124.59 312   P        PKPdf    03 54 22.6 -1.9
PDG    Podgorica         124.63 320⇑iP         PKPdf    03 54 24.2 -0.2
PDG    Podgorica         124.63 320   P        PKPdf    03 54 23.8 -0.6
TTG    Podgorica         124.63 320  ePKPdf    PKPdf    03 54 24.2 -0.2
KLV    Kalavryta, Ach    124.63 314   P        PKPdf    03 54 24.1 -0.6
KLV    Kalavryta, Ach    124.63 314   P        PKPdf    03 54 24.1 -0.6
ANKY   Antikythira Is    124.64 311   P        PKPdf    03 54 24.7 +0.1
ANKY   Antikythira Is    124.64 311   P        PKPdf    03 54 24.7 +0.1
LAKA   Lakka             124.67 314   P        PKPdf    03 54 24.6 -0.1
LAKA   Lakka             124.67 314   P        PKPdf    03 54 24.6 -0.1
BLY    Banja Luka        124.71 323⇓iP         PKPdf    03 54 24.7 +0.2
BLY    Banja Luka        124.71 323  ePKPdf    PKPdf    03 54 24.7 +0.2
TRIP   Tripoli           124.75 313   P        PKPdf    03 54 25.2 +0.3
JAN    Janina            124.86 316   P        PKPdf    03 54 25.1 +0.1
JAN    Janina            124.86 316   P        PKPdf    03 54 25.1 +0.1
SOKA   Soboth            124.86 326  i PKiKP   PKPdf    03 54 24.5 -0.4
       comp=Z,42nm,1.1s,SNR=27
GRFO   Grafenberg        124.95 331  ePKPdf    PKPdf    03 54 25.7 +0.9
LEGS   Legarje           125.13 325  i PKPdf   PKPdf    03 54 25.4 +0.1
PKME   Peaks-Kenny Pk    125.14  36   P        PKPdf    03 54 24.4 -0.9
       baz=304
PKME   Peaks-Kenny Pk    125.14  36   PFAKE             03 54 40.0 +15
PKME                                  LR       LR
       comp=Z,1µm,20.0s
ITM    Ithomi            125.15 313  ePKPdf    PKPdf    03 54 25.4 -0.2
OBKA   Obir              125.23 326  i PKiKP   PKPdf    03 54 25.1 -0.4
       comp=Z,24nm,1.4s,SNR=5.6
OZLJ   Ozalj             125.23 325   P        PKPdf    03 54 25.4  0.0
IGT    Igoumenitsa       125.27 316   P        PKPdf    03 54 24.9 -0.9
IGT    Igoumenitsa       125.27 316   P        PKPdf    03 54 24.9 -0.9
WTSB   Winterswijk       125.35 335  i PKP     PKPdf    03 54 25.8 +0.3
LKD2   Lefkada island    125.38 315   P        PKPdf    03 54 25.9 -0.1
LKD2   Lefkada island    125.38 315   P        PKPdf    03 54 25.9 -0.1
STON   Ston              125.39 321   P        PKPdf    03 54 25.2 -0.6
MOZS   Mozjanca          125.42 326  i PKPdf   PKPdf    03 54 25.7 -0.2
BOJS   Bojanci           125.42 325  i PKPdf   PKPdf    03 54 26.1 +0.2
EVGI   Lefkada island    125.45 315   P        PKPdf    03 54 25.8 -0.3
LJU    Ljubljana         125.52 326  i PKPdf   PKPdf    03 54 26.3 +0.2
KBA    Koelnbreinsper    125.54 327  i PKPdf   PKPdf    03 54 25.5 -0.8
       comp=Z,34nm,1.2s,SNR=13
KEK    Kerkira           125.56 317   P        PKPdf    03 54 25.6 -0.7
KEK    Kerkira           125.56 317   P        PKPdf    03 54 25.6 -0.7
MYKA   Terra Mystica     125.66 327  i PKPdf   PKPdf    03 54 25.7 -0.7
       comp=Z,20nm,0.8s,SNR=10
UDBI   Udbina            125.68 324   P        PKPdf    03 54 26.3 -0.2
LCO    Las Campanas      126.03 131  ePKPdf    PKPdf    03 54 27.5 -0.4
EKA    Eskdalemuir Ar    126.10 344   PKP      PKPdf    03 54 27.5 +0.7
       comp=Z,4.3nm,0.5s,baz=22,slow=3.6,SNR=31
ESK    Eskdalemuir       126.13 344  ePKPdf    PKPdf    03 54 26.9  0.0
ESK                                   LR       LR
       comp=Z,821nm,22.0s
NVLJ   Novalja           126.19 324   P        PKPdf    03 54 26.4 -0.9
ABTA   Abfaltersbach     126.20 327  i PKPdf   PKPdf    03 54 26.8 -0.6
       comp=Z,55nm,1.0s,SNR=21
TRQA   Tornquist         126.29 146  ePKPdf    PKPdf    03 54 27.4 -0.4
TRQA                                  LR       LR
       comp=Z,550nm,20.0s
WATA   Walderalm         126.32 329  i PKiKP   PKiKP    03 54 28.7 +0.5
       comp=Z,26nm,0.6s,SNR=5.3
WTTA   Wattenberg        126.33 328  i PKiKP   PKPdf    03 54 27.8  0.0
       comp=Z,41nm,0.7s,SNR=14
STU    Stuttgart         126.56 331  ePKPdf    PKPdf    03 54 28.6 +0.7
MOTA   Moosalm           126.56 329  i PKiKP   PKiKP    03 54 28.9 +0.2
       comp=Z,29nm,0.6s,SNR=32
HGN    Heimansgroeve     126.61 335  i PKP     PKPdf    03 54 28.1 +0.2
RETA   Reutte            126.64 329  i PKiKP   PKPdf    03 54 28.2 -0.1
       comp=Z,21nm,1.2s,SNR=9.0
MEM    Membach           126.69 335  ⇑P        PKPdf    03 54 28.6 +0.5
BEBN   Eben Emael        126.69 335  ⇑PKP      PKPdf    03 54 28.3 +0.2
FETA   Feichten          126.96 329  i PKiKP   PKPdf    03 54 29.1 +0.1
       comp=Z,51nm,1.0s,SNR=26
BCIP   Isla Barro Col    127.06  82   PFAKE             03 54 40.0 +10
BCIP                                  LR       LR
       comp=Z,697nm,21.0s
MATE   Matera            127.17 319⇑iP         PKPdf    03 54 29.2 -0.1
DAVA   Damuels           127.22 329  i PKiKP   PKPdf    03 54 29.4 -0.1
       comp=Z,27nm,0.8s,SNR=14
UCC    Uccle             127.23 336  ⇑PKP      PKPdf    03 54 29.3 +0.2
UCC    Uccle             127.23 336  ePKPdf    PKPdf    03 54 30.0 +0.9
BFO    Black Forest      127.28 331  ePKPdf    PKPdf    03 54 29.6 +0.2
BFO    Black Forest      127.28 331c iPKIKP    PKPdf    03 54 29.6 +0.2
WLF    Walferdange       127.32 334  ⇑PKP      PKPdf    03 54 30.6 +1.2
WLF    Walferdange       127.32 334  ePKPdf    PKPdf    03 54 30.8 +1.4
NNA    Nana              127.42 109   PFAKE             03 54 40.0 +9.4
NNA                                   LR       LR
       comp=Z,462nm,19.0s
DAVOX  Davos/Dischmat    127.56 329   PKP      PKPdf    03 54 30.2  0.0
       comp=Z,27nm,0.6s,baz=210,slow=4.2,SNR=38
DAVOX                                 SKPbc    SKPbc    03 57 42.9
       comp=Z,2.9nm,0.6s,baz=54,slow=8.7,SNR=2.6
DOU    Dourbes           127.67 335  ⇑PKP      PKPdf    03 54 30.3 +0.3
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TIP    Timpagrande       127.88 317⇑iP         PKPdf    03 54 31.1 +0.2
TIP    Timpagrande       127.88 317  ePKPdf    PKPdf    03 54 31.4 +0.6
TIP    Timpagrande       127.88 317   P        PKPdf    03 54 30.9  0.0
ECH    Echery            127.91 332  ePKPdf    PKPdf    03 54 30.0 -0.5
OTAV   Otavalo           128.08  93  ePKPdf    PKPdf    03 54 32.7 +0.3
OTAV                                  LR       LR
       comp=Z,716nm,22.0s
CUC    Castrocucco       128.10 319  ePKPdf    PKPdf    03 54 30.2 -1.0
MTDJ   Mount Denham      128.54  71   PFAKE             03 54 40.0 +7.3
MTDJ                                  LR       LR
       comp=Z,445nm,19.0s
CEL    Celeste           128.93 317  ePKPdf    PKPdf    03 54 33.9 +1.0
SENIN  Lac Senin/Sane    129.15 330  ePKPdf    PKPdf    03 54 33.7 +0.5
HORQ   Saladito          130.15  89  eP        PKPdf    03 54 35.3 -0.8
VAE    Valguarnera       130.33 317   PKP      PKPdf    03 54 35.8 +0.2
       comp=Z,2.9nm,0.3s,baz=180,slow=6.3,SNR=4.7
VAE                                   SKPbc    SKPbc    03 57 56.4 +1.0
       comp=Z,13nm,0.7s,baz=47,slow=8.3,SNR=5.2
BNI    Bardonecchia      130.37 329  ePKPpre   PKPpre   03 54 22.8
BNI    Bardonecchia      130.37 329  ePKHKP    PKPpre   03 54 22.8
TSUM   Tsumeb            130.40 240  ePKPdf    PKPdf    03 54 36.9 +0.7
TSUM                                  LR       LR
       comp=Z,1µm,20.0s
YOTC   Yotoco, Valle     130.46  89  eP        PKPdf    03 54 34.5 -2.1
GTBY   Guantanamo Bay    130.51  68   PFAKE             03 54 50.0 +14
GTBY                                  LR       LR
       comp=Z,673nm,20.0s
CLTB   Caltabellotta     131.09 317  ePKPdf    PKPdf    03 54 37.0  0.0
HELC   Santa Helena      131.34  86  ePKPdf    PKPdf    03 54 40.5 +2.0
PRAC   Prado             131.90  89  ePKPdf    PKPdf    03 54 37.6 -1.5
PRAC   Prado             131.90  89  eP        PKPdf    03 54 37.1 -2.1
ZARC   Zaragoza, Cauc    132.01  84  eP        PKPpre   03 54 23.8
PTBC   PUERTO BERRIO,    132.41  85  eP        PKPpre   03 54 30.2
ROSC   El Rosal          132.51  88   PKP      PKPdf    03 54 39.3 -1.5
       comp=Z,4.6nm,0.4s,baz=246,slow=19,SNR=3.6
ROSC                                  SKPbc    SKPab    03 58 05.6  0.0
       comp=Z,3.9nm,0.5s,baz=330,slow=20,SNR=3.1
RUSC   La Rusia          133.77  86  ePKPdf    PKPdf    03 54 41.0 -2.3
RUSC   La Rusia          133.77  86  eP        PKPpre   03 54 39.1
GRTK   Grand Turk        133.79  65   PFAKE             03 54 50.0 +7.6
GRTK                                  LR       LR
       comp=Z,902nm,22.0s
LPAZ   La Paz            133.98 118   PKhKP    PKPpre   03 54 31.7
       comp=Z,0.5nm,0.5s,baz=106,slow=20,SNR=3.5
LPAZ                                  PKP      PKiKP    03 54 44.5 -0.5
       comp=Z,5.7nm,0.6s,baz=34,slow=4.7,SNR=17
LPAZ                                  SKPbc    SKPbc    03 58 10.3 +0.8
       comp=Z,5.6nm,1.0s,baz=36,slow=14,SNR=6.0
LPAZ                                  SKKPbc   SKKPbc   04 07 18.9 -3.0
       comp=Z,1.1nm,0.3s,baz=200,slow=24,SNR=10
LPAZ   La Paz            133.98 118   PKPpre   PKPpre   03 54 31.7
LPAZ                                 ePKPpre   PKPpre   03 54 37.1
LPAZ                                  PKP      PKiKP    03 54 44.5 -0.5
LPAZ                                  SKPbc    SKPbc    03 58 10.3 +0.8
LPAZ                                  SKKPbc   SKKPbc   04 07 18.9 -3.0
TAMR   Tamra             134.10 319  ePKPdf    PKPdf    03 54 44.9 +2.3
KEST   Kesra             134.70 318   PKP      PKPdf    03 54 44.2 +0.4
       comp=Z,13nm,0.7s,baz=136,slow=3.0,SNR=21
KEST                                  SKPbc    SKPbc    03 58 11.6 +0.9
       comp=Z,35nm,1.0s,baz=263,slow=1.1,SNR=18
BBSR   BB Station        135.05  48   PFAKE             03 55 00.0 +16
BBSR                                  LR       LR
       comp=Z,1µm,19.0s
THTN   Thala             135.24 318  ePKPdf    PKPdf    03 54 43.4 -1.5
CMAH   Djebel Manchou    135.44 320   P        PKPdf    03 54 45.1 -0.1
ABSA   Djebel Ababsia    135.62 320   P        PKPdf    03 54 46.5 +0.9
CAEH   'Ain El Ouahch    135.71 321   P        PKPdf    03 54 46.9 +1.3
CKFL   Kef-Lekhel        136.03 320   P        PKPdf    03 54 47.1 +0.7
SDV    Santo Domingo     136.16  82   PKP      PKPdf    03 54 47.7 +0.4
       comp=Z,18nm,0.5s,baz=247,slow=2.3,SNR=9.1
SDV                                   SKPbc    SKPbc    03 58 13.8 -2.2
       comp=Z,5.1nm,0.3s,baz=336,slow=10.0,SNR=3.1
SDV    Santo Domingo     136.16  82  ePKPdf    PKPdf    03 54 47.3  0.0
SDV                                   SKPbc    SKPbc    03 58 13.8 -2.2
SDV                                   LR       LR
       comp=Z,649nm,21.0s
CASM   Ain Smara         136.26 320   P        PKPdf    03 54 48.1 +1.4
CTEI   Djebel Teioual    136.43 320   P        PKPdf    03 54 49.0 +1.8
DFRA   Djebel Bou Aff    136.47 321   P        PKPdf    03 54 48.5 +1.3
CKHR   Kef el Ahmar      137.03 321   P        PKPdf    03 54 51.0 +2.7
CPUP   Villa Florida     137.17 138   PKhKP    PKPpre   03 54 36.9
       comp=Z,1.5nm,0.7s,baz=210,slow=20,SNR=2.4
CPUP                                  PKP      PKPdf    03 54 49.1 +0.5
       comp=Z,4.5nm,0.8s,baz=294,slow=3.2,SNR=5.9
CPUP                                  SKPbc    SKPbc    03 58 18.1 -0.3
       comp=Z,3.8nm,1.0s,baz=0.7,slow=6.6,SNR=2.8
SJG    San Juan          139.17  68   PKP      PKPdf    03 54 53.1 +0.7
       comp=Z,13nm,0.7s,baz=328,slow=11
SJG                                   SKPbc    SKPbc    03 58 24.4 +0.1
       comp=Z,6.9nm,0.7s,baz=297,slow=14,SNR=2.2
SJG    San Juan          139.17  68   PKP      PKPdf    03 54 53.1 +0.7
SJG                                   SKPbc    SKPbc    03 58 24.4 +0.1
SJG                                   LR       LR
       comp=Z,532nm,20.0s
PGAV   Gavieira, Arco    139.44 339  ePKPdf    PKPdf    03 54 52.2 -0.3
PGAV   Gavieira, Arco    139.44 339  eLR       LR       04 43 06.9
       comp=Z,543nm,20.0s
ES19   SONSECA Array     139.55 333  ePKPpre   PKPpre   03 54 44.1
PCAB   Cabril            139.57 338  ePKPdf    PKPdf    03 54 51.8 -0.8
ESDC   Sonseca Array     139.60 333   PKhKP    PKPpre   03 54 44.4
       comp=Z,0.9nm,0.6s,baz=22,slow=3.1,SNR=9.2
ESDC                                  PKP      PKPdf    03 54 53.5 +0.7
       comp=Z,2.7nm,0.6s,baz=28,slow=1.7,SNR=7.8
ESDC                                  SKPbc    SKPbc    03 58 24.3 -0.6
       comp=Z,0.5nm,0.7s,baz=19,slow=4.1,SNR=4.2
ESDC                                  SKKPbc   SKKPbc   04 07 00.8 -0.3
       comp=Z,1.1nm,1.0s,baz=221,slow=4.6,SNR=5.1
ESLA   Sonseca Array     139.60 333  ePKPdf    PKPdf    03 54 54.6 +1.8
MVO    Moncorvo          139.66 337  ePKPdf    PKPdf    03 54 53.2 +0.3
MVO    Moncorvo          139.66 337  eLR       LR       04 44 19.8
       comp=Z,487nm,20.0s
POLO   Lamas de Olo      139.78 338  ePKPdf    PKPdf    03 54 56.0 +2.9
PVRL   Vila Real         139.83 338  ePKPdf    PKPdf    03 54 51.9 -1.2
PAB    San Pablo         139.88 333  ePKPdf    PKPdf    03 54 51.1 -2.3
PAB                                   LR       LR
       comp=Z,455nm,20.0s
SIV    San Ignacio       140.22 122   PKhKP    PKPpre   03 54 44.7
       comp=Z,1.0nm,0.4s,baz=267,slow=6.4,SNR=9.2
SIV                                   PKP      PKPdf    03 54 53.7 -0.8
       comp=Z,5.7nm,0.6s,baz=270,slow=2.2,SNR=13
SIV                                   SKPbc    SKPbc    03 58 28.4 +1.1
       comp=Z,4.5nm,0.6s,baz=274,slow=4.2,SNR=5.9
PVIS   Viseu             140.38 337  ePKPdf    PKPdf    03 54 55.1 +0.9
MTE    Manteigas         140.52 337  ePKPdf    PKPdf    03 54 50.6 -3.8
MTE    Manteigas         140.52 337  eSS       SS       04 16 40.2 +26
MTE    Manteigas         140.52 337  eLR       LR       04 45 26.1
       comp=Z,732nm,22.0s
MTE    Manteigas         140.52 337  ePKPpre   PKPpre   03 54 50.3
CDVI   St. Croix         140.54  68  ePKPdf    PKPdf    03 54 56.3 +1.4
PCBR   Castelo Branco    140.97 336  ePKPdf    PKPdf    03 54 55.3 +0.1
SAML   Samuel            141.14 110  ePKPpre   PKPpre   03 54 48.2
SAML                                 ePKPdf    PKPdf    03 54 55.4 -0.8
SAML                                 eSKPbc    SKPbc    03 58 30.2 +0.5
SAML                                  LR       LR
       comp=Z,708nm,21.0s
SAML   Samuel            141.14 110  ePKHKP    PKPpre   03 54 48.2
SAML                                 e                  03 54 55.4
SAML                                  MLR      MLR
       comp=Z,708nm,21.0s
PMRV   Marv??o           141.29 336  ePKPdf    PKPdf    03 54 50.5 -5.3
PMRV   Marv??o           141.29 336  eSS       SS       04 17 04.4 +42
PMRV   Marv??o           141.29 336  eLR       LR       04 45 49.6
       comp=Z,476nm,22.0s
PTOM   Tomar             141.53 337  ePKPdf    PKPdf    03 54 50.6 -5.6
PESTR  Estremoz          141.84 336  ePKPdf    PKPdf    03 54 52.4 -4.4
PESTR  Estremoz          141.84 336  ePP       PP       03 58 00.7 +0.1
PESTR  Estremoz          141.84 336  ePKPpre   PKPpre   03 54 51.7
PMTG   Montargil         141.93 336  ePKPdf    PKPdf    03 54 54.4 -2.5
ALMR   Almeirim          141.99 337  ePKP      PKPdf    03 54 56.4 -0.7
ALMR                                  AMS      AMS      05 01 11.1
       comp=E,808nm,20.4s
ALMR   Almeirim          141.99 337  ePKPdf    PKPdf    03 54 57.6 +0.6
ALMR   Almeirim          141.99 337  ePP       PP       03 58 02.1 +0.6
ALMR   Almeirim          141.99 337  ePKIKP    PKPdf    03 54 56.3 -0.7
EVO    Evora             142.30 336  ePKPdf    PKPdf    03 54 53.7 -3.9
LIS    Lisbon            142.60 337  ePKP      PKPdf    03 54 57.4 -0.8
LIS                                   AMS      AMS      05 01 19.5
       comp=Z,1µm,19.8s
LIS    Lisbon            142.60 337  ePKIKP    PKPdf    03 54 57.3 -0.8
PBEJ   Beja              142.67 335  ePKPdf    PKPdf    03 54 55.8 -2.5
PNCL   Nicolau / Gran    142.87 336  ePKPdf    PKPdf    03 54 55.7 -2.9
MESJ   Messejana         142.98 335  ePKP      PKPdf    03 54 57.9 -0.9
MESJ                                  AMS      AMS      05 00 32.2
       comp=Z,585nm,14.1s
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MESJ   Messejana         142.98 335  ePKPdf    PKPdf    03 54 56.1 -2.7
MESJ   Messejana         142.98 335  ePKIKP    PKPdf    03 54 57.9 -0.9
PCVE   Castro Verde      143.08 335  ePKPdf    PKPdf    03 54 57.6 -1.4
PVAQ   Vaqueiros         143.13 334  ePKPdf    PKPbc    03 54 56.3 +0.3
PVAQ   Vaqueiros         143.13 334  eSS       SS       04 16 53.1 +9.0
PVAQ   Vaqueiros         143.13 334  eLR       LR       04 46 34.4
       comp=Z,476nm,18.0s
ANWB   Willy Bob         143.30  67   PFAKE             03 55 10.0 +10
ANWB                                  LR       LR
       comp=Z,804nm,22.0s
PBDV   Barranco-do-Ve    143.36 335  ePKPdf    PKPbc    03 54 57.7 +1.0
PTEO   Sao Teotonio      143.44 336  ePKPdf    PKPbc    03 54 57.1 +0.3
MORF   Marmelete         143.61 335  ePKP      PKPdf    03 54 59.1 -0.9
MORF                                  AMS      AMS      05 01 53.8
       comp=N,628nm,20.5s
MORF   Marmelete         143.61 335  ePKPdf    PKPdf    03 54 59.4 -0.6
MORF   Marmelete         143.61 335  ePKIKP    PKPdf    03 54 59.1 -0.9
PFVI   Vila Bisbo        143.83 336  ePKPdf    PKPdf    03 55 00.0 -0.3
TAM    Tamanrasset       144.09 303  ePKPdf    PKPbc    03 54 60.0 +0.6
TAM    Tamanrasset       144.09 303  ePKIKP    PKPbc    03 55 00.0 +0.6
GRGR   Grenville         144.64  76   PFAKE             03 55 10.0 +7.7
GRGR                                  LR       LR
       comp=Z,621nm,20.0s
H07N1  FLORES T-PHASE    144.94   6  ePKP      PKPdf    03 55 02.1 -0.1
MDT    Midelt            145.28 326   PKPbc    PKPdf    03 55 03.6 +0.5
       comp=Z,64nm,0.7s,baz=60,slow=4.8,SNR=84
SPB    Sao Paulo         145.33 145  ePKPdf    PKPdf    03 55 04.0 +0.7
RTC    Rabat Centre      145.54 330  ePKPdf    PKPab    03 55 04.5 +0.7
PGRA   Graciosa          145.82   2  ePKP      PKPdf    03 55 03.4 -0.3
ROSA   Rosais            146.12   2  ePKP      PKPdf    03 55 03.4 -0.9
PSCM   Serra do Cume     146.16   1  ePKP      PKPbc    03 55 05.5 +0.2
PCED   Cedros            146.19   3  ePKP      PKPdf    03 55 03.8 -0.6
ADH    Angra Heroismo    146.21   1  ePKP      PKPab    03 55 05.9 -0.2
PMAN   Manadas           146.21   2  ePKP      PKPab    03 55 07.2 +1.1
PTGA   Pitinga           146.29  98   PKPbc    PKPdf    03 55 05.2 -0.1
       comp=Z,21nm,0.6s,baz=278,slow=23,SNR=49
PTGA                                  SKPbc    SKPbc    03 58 42.1  0.0
       comp=Z,1.5nm,0.3s,baz=270,slow=20,SNR=3.3
PICO   Pico              146.33   3  ePKP      PKPab    03 55 06.4 -0.3
PCAN   Candelaria        146.36   3  ePKP      PKPdf    03 55 03.4 -1.3
BBGH   Gun Hill          146.47  73   PFAKE             03 55 20.0 +12
BBGH                                  LR       LR
       comp=Z,1µm,20.0s
PSET   Sete Cidades      147.03 359  ePKP      PKPdf    03 55 06.4 +0.5
BART   Pico Bartolome    147.06 358  ePKP      PKPbc    03 55 07.2 -0.8
CMLA   Cha da Macela     147.09 358  ePKP      PKPdf    03 55 05.1 -0.8
CMLA   Cha da Macela     147.09 358   PFAKE             03 55 20.0 +10
CMLA                                  LR       LR
       comp=Z,652nm,20.0s
PDA    Ponta Delgada     147.10 359  ePKP      PKPdf    03 55 06.8 +0.9
PSMN   Pico do Norte,    147.83 358  ePKP      PKPdf    03 55 05.9 -1.3
PSMA   Santa Maria       147.84 358  ePKP      PKPdf    03 55 07.6 +0.4
PMPS   Porto Santo       150.20 342  ePKPbc    PKPbc    03 55 17.6 +1.4
PMOZ   Porto Moniz, M    150.67 344  ePKPbc    PKPbc    03 55 18.0 +0.5
PMAR   Madeira           150.68 343  ePKPbc    PKPbc    03 55 18.7 +1.1
FUL    Funchal           150.74 343  ePKPbc    PKPbc    03 55 18.4 +0.9
TOA0   Torodi Ar. Sit    150.79 289  ePKPdf    PKPdf    03 55 11.3 -1.2
TOA0                                 ePKPdf    PKPbc    03 55 11.7 -6.4
TORD   Torodi Ar. Bea    150.79 289   PKP      PKPdf    03 55 10.9 -1.6
       comp=Z,8.0nm,1.0s,baz=148,slow=8.5
TORD                                  PKPbc    PKPbc    03 55 17.3 -0.8
       baz=153,slow=9.7
SHEL   Horse Pasture     150.84 225   PFAKE             03 55 20.0 +1.8
SHEL                                  LR       LR
       comp=Z,763nm,22.0s
KOWA   Kowa              155.68 295   PKP      PKPdf    03 55 18.9 -0.6
       comp=Z,8.9nm,0.8s,baz=5.4,slow=2.0,SNR=16
KOWA   Kowa              155.68 295  ePKPdf    PKPdf    03 55 19.7 +0.2
KIC    Kosan Boka        158.12 275  eP        PKPdf    03 55 21.1 -1.7
       comp=Z,103nm,1.1s
DBIC   Dimbokro          158.22 276   PKP      PKPdf    03 55 21.9 -1.0
       comp=Z,7.3nm,0.8s,baz=84,slow=1.2,SNR=6.7
DBIC                                  PKPab    PKPab    03 55 56.1 -0.9
       comp=Z,12nm,0.6s,baz=78,slow=4.4,SNR=10
DBIC   Dimbokro          158.22 276  ePKPdf    PKPdf    03 55 23.1 +0.2
DBIC                                 ePKPab    PKPab    03 55 56.4 -0.6
DBIC   Dimbokro          158.22 276  ePKIKP    PKPdf    03 55 23.1 +0.2
DBIC                                 e                  03 55 56.4
TIC    Toumodi           158.38 276  eP        PKPpre   03 55 17.9
LIC    Lamto             158.42 275  eP        PKPdf    03 55 22.6 -0.5
       comp=Z,106nm,1.3s
ASCN   Ascension         162.44 224   PFAKE             03 55 40.0 +12
ASCN                                  LR       LR
       comp=Z,2µm,21.0s
SACV   Santiago Islan    169.37 344   PFAKE             03 55 40.0 +7.0
SACV                                  LR       LR
       comp=Z,560nm,21.0s
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*ISCJB **07** 03:54:03.6±0.6, 1°.57N±0°.07×128°.36E±0°.06, h100^{km}, mb3.9/8, Error ellipse: s-maj=10.4km s-min=7.3km az=28.0*

*DJA **07** 03:54:03.3±0.7, 2°N±7°×12°8E±°, h40^{km}±10^{km}, M4.3/7, mb4.6/3, MLv4.1/7*

*IDC **07** 03:54:06.9±2.3, 1°.88N×128°.91E, h116^{km}±24^{km}, mb3.6/8, mb1 3.7/9, mb1mx3.4/61, mbtmp4.0/9, Error ellipse: s-maj=64.3km s-min=13.1km az=65.0*

ISC 07 03:54:05.2±1.0**, 1°.6N**±0°.1×**128°.37E**±0°.08**, h100**^{km}**, n14, σ**$1^{s}.$**84**/16**, mb3.9**/8**, Halmahera**

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Code   Station Name        Δ°   AZ°    Phase ID            Time      Res
                                      Op       ISC       h  m  s    ISC
TNTI   Ternate             1.27 232   P        Pn       03 54 27.3 -1.4
TNTI                                  S        Sn       03 54 44.5 -1.9
LBMI   Labuha              2.35 202   P        Pn       03 54 40.7 -1.6
SIJI   Sorong              3.77 130   P        Pn       03 55 00.4 -0.9
       18nm,0.3s,baz=172,slow=23,SNR=30
SIJI                                  S        Sn       03 55 43.6 -1.1
       10nm,0.3s,baz=20,slow=24,SNR=7.4
KMSI   Cibinong            4.49 257   P        Pn       03 55 09.6 -1.4
FAKI   Fak Fak             5.90 139   P        Pn       03 55 29.4 -0.8
APSI   Ampana              7.15 250   P        Pn       03 55 48.6 +1.4
WRA    Warramunga Arr     22.16 165   P        P        03 58 54.6 +1.6
       1.3nm,0.4s,baz=334,slow=11,SNR=20
ASAR   Alice Springs      25.64 168   P        P        03 59 28.1 +2.4
       0.8nm,0.5s,baz=347,slow=7.2,SNR=9.2
ASAR                                  PcP      PcP      04 02 55.1 +1.1
       0.3nm,0.5s,baz=352,slow=2.2,SNR=6.0
ASAR                                  ScP      ScP      04 06 20.8 -3.8
       0.2nm,0.6s,baz=303,slow=1.8,SNR=4.2
STKA   Stephens Creek     35.54 160   P        P        04 00 54.9 +2.1
       0.6nm,0.3s,baz=346,slow=12,SNR=2.7
SONM   Songino Array      49.87 341   P        P        04 02 48.6 +0.2
       1.1nm,0.6s,baz=154,slow=8.0,SNR=5.2
MKAR   Makanchi Array     60.26 325   P        P        04 04 03.4 +0.2
       1.8nm,0.4s,baz=115,slow=8.0,SNR=28
KURBB  Kurchatov Arra     64.44 327   P        P        04 04 30.7 -0.1
       2.7nm,0.6s,baz=127,slow=6.0,SNR=27
BVAR   Borovoye Array     70.02 327   P        P        04 05 05.2 -0.9
       0.4nm,0.4s,baz=107,slow=7.9,SNR=4.7
GEYT   Alibeck            73.52 309   P        P        04 05 28.7 +1.2
       0.8nm,0.5s,baz=129,slow=4.6,SNR=2.5
```

IDC 07 03:56:13.4±4.5**, 4°.76S**×**151°.55E, h0**^{km}**, mb3.2**/2**, mb1 3.5**/2**, mb1mx3.1**/52**, mbtmp3.2**/2**, Error ellipse: s-maj=212.5km s-min=48.2km az=119.0, New Britain region**

```
Code   Station Name        Δ°   AZ°    Phase ID            Time      Res
                                      Op       ISC       h  m  s    ISC
WRA    Warramunga Arr     22.55 227   P        P        04 01 15.6 +0.2
       0.5nm,0.8s,baz=53,slow=11,SNR=3.3
ASAR   Alice Springs      25.36 220   P        P        04 01 42.3 -0.1
       0.8nm,0.9s,baz=50,slow=11,SNR=4.3
TORD   Torodi Ar. Bea    149.11 288   PKPbc    PKPbc    04 16 04.2 -0.6
       baz=99,slow=2.5
```

IDC 07 04:03:18.9±17.0**, 20°.72S**×**174°.72W, h0**^{km}**, mb4.2**/5**, mb1 4.3**/5**, mb1mx3.7**/50**, mbtmp4.2**/5**, Error ellipse: s-maj=326.3km s-min=154.2km az=80.0, Tonga Islands**

```
Code   Station Name        Δ°   AZ°    Phase ID            Time      Res
                                      Op       ISC       h  m  s    ISC
CTA    Charters Tower     36.52 264   P        P        04 10 27.4 +1.0
       3.9nm,0.7s,baz=86,slow=14,SNR=4.7
STKA   Stephens Creek     40.47 245   P        P        04 10 58.9 -0.6
       1.4nm,0.5s,baz=76,slow=7.8,SNR=3.3
ASAR   Alice Springs      47.45 256   P        P        04 11 55.2 -0.6
       2.0nm,0.8s,baz=91,slow=7.7,SNR=13
WRA    Warramunga Arr     47.61 262   P        P        04 11 56.4 -0.6
       0.7nm,0.3s,baz=96,slow=8.3,SNR=17
FITZ   Fitzroy Crossi     56.04 262   P        P        04 13 00.3 +0.3
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5.3nm,1.0s,baz=73,slow=11,SNR=8.4

DRS ***07*** *04:11:59.2±0.0, 41°.50N×46°.51E, h12km*
MOS ***07*** *04:11:59.4±0.0, 41°.51N×46°.77E, h14km, MPVA3.6*
CSEM ***07*** *04:12:01.1, 41°.41N×46°.74E, h14km, mb4.0*
NORS ***07*** *04:12:01.2±0.0, 41°.51N×46°.73E, h4km*
MOS ***07*** *04:12:01.1±1.5, 41°.41N×46°.74E, h14km, mb4.0/1, Error ellipse: s-maj=10.2km s-min=5.9km az=84.6*
ISC 07 04:12:01.2±1.1**, 41°.41N**±0°.03×**46°.77E**±0°.02**, h15**km±9km**,**
n60, σ1§**34**/110**, 5C-2D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DDFL	**Dedoflistskaro**	**0.49**	**274**	P	**Pn**	**04 12 13.2**	**-0.5**
DDFL				S	**Sn**	**04 12 23.8**	**+1.8**
AKT	**Akhty**	**0.73**	**84**	⇑*i*PG	**Pg**	**04 12 15.5**	**0.0**
AKT				*i*		04 12 27.3	
AKT				pmax	pmax		
	comp=Z,45nm,0.6s						
AKT				smax	smax		
	comp=N,133nm,0.4s						
AKT	**Akhty**	**0.73**	**84**	*i* Pg	**Pg**	**04 12 15.5**	**0.0**
	comp=N,45nm,0.6s						
AKT				*i* Sg	**Sn**	**04 12 27.3**	**-0.7**
	comp=N,133nm,0.4s						
AKT	**Akhty**	**0.73**	**84**	*i* Pg	**Pg**	**04 12 15.5**	**0.0**
AKT				*e*Sg	**Sb**	**04 12 26.3**	**+0.8**
KMKR	**Kumukh**	**0.76**	**19**	⇑*i*PG	**Pg**	**04 12 14.0**	**-2.1**
KMKR				*i* S	**Sg**	**04 12 24.5**	**-1.7**
KMKR				pmax	pmax		
	comp=Z,88nm,0.2s						
KMKR	**Kumukh**	**0.76**	**19**	*i* Pg	**Pg**	**04 12 14.0**	**-2.1**
	comp=Z,88nm,0.2s						
KMKR				*i* Sg	**Sg**	**04 12 24.5**	**-1.7**
KMKR	**Kumukh**	**0.76**	**19**	*i* Pg	**Pg**	**04 12 14.0**	**-2.1**
KMKR				*i* Sg	**Sg**	**04 12 24.5**	**-1.7**
GNBR	**Gunib**	**0.99**	**9**	⇓*i*PG	**Pb**	**04 12 18.7**	**-1.4**
GNBR				*i*		04 12 31.4	
GNBR				pmax	pmax		
	comp=Z,32nm,0.5s						
GNBR				smax	smax		
	comp=N,106nm,0.6s						
GNBR	**Gunib**	**0.99**	**9**	*i* Pg	**Pb**	**04 12 18.7**	**-1.4**
	comp=N,32nm,0.5s						
GNBR				*i* Sg	**Sb**	**04 12 31.4**	**-1.5**
	comp=N,106nm,0.6s						
GNBR	**Gunib**	**0.99**	**9**	*e*Pg	**Pb**	**04 12 18.3**	**-1.7**
GNBR				*e*Sg	**Sb**	**04 12 30.9**	**-2.0**
URKR	**Urkarakh**	**0.99**	**40**	⇓*i*PG	**Pb**	**04 12 20.1**	**-0.1**
URKR				*e*		04 12 33.8	
URKR	**Urkarakh**	**0.99**	**40**	*i* Pg	**Pb**	**04 12 20.1**	**-0.1**
URKR				*e*Sg	**Sg**	**04 12 33.8**	**+0.3**
URKR	**Urkarakh**	**0.99**	**40**	*i* Pg	**Pb**	**04 12 20.1**	**-0.1**
URKR				*e*Sg	**Sg**	**04 12 33.9**	**+0.4**
KSMR	**Kasumkent**	**1.04**	**79**	PG	**Pb**	**04 12 19.0**	**-2.0**
KSMR				*e*S	**Sb**	**04 12 32.0**	**-2.4**
KSMR	**Kasumkent**	**1.04**	**79**	Pg	**Pb**	**04 12 19.0**	**-2.0**
KSMR				*e*Sg	**Sb**	**04 12 32.0**	**-2.4**
DGRG	**David-gareji**	**1.05**	**273**	P	**Pb**	**04 12 20.4**	**-0.7**
DGRG				S	**Sn**	**04 12 36.4**	**+0.6**
DGRG	**David-gareji**	**1.05**	**273**	*i* PG	**Pb**	**04 12 20.3**	**-0.7**
DGRG				*e*S	**Sn**	**04 12 36.3**	**+0.6**
DGRG	**David-gareji**	**1.05**	**273**	*i* Pg	**Pb**	**04 12 20.3**	**-0.7**
DGRG				*e*Sg	**Sn**	**04 12 36.3**	**+0.6**
DGRG	**David-gareji**	**1.05**	**273**	*e*Pg	**Pb**	**04 12 20.4**	**-0.7**
DGRG				*e*Sg	**Sn**	**04 12 36.4**	**+0.6**
ARKR	**Arakani**	**1.20**	**8**	*e*PG	**Pn**	**04 12 23.0**	**-0.5**
ARKR				*e*S	**Sb**	**04 12 39.0**	**-0.1**
ARKR	**Arakani**	**1.20**	**8**	*e*Pg	**Pn**	**04 12 23.0**	**-0.5**
ARKR				*e*Sg	**Sb**	**04 12 39.0**	**-0.1**
ARKR	**Arakani**	**1.20**	**8**	*e*Pg	**Pn**	**04 12 23.0**	**-0.5**
ARKR				*e*Sg	**Sb**	**04 12 39.0**	**-0.1**
UNCR	**Uncukul**	**1.30**	**1**	*e*PG	**Pn**	**04 12 24.0**	**-0.9**
UNCR				*e*S	**Sb**	**04 12 41.0**	**-0.9**
UNCR				pmax	pmax		
	comp=Z,48nm,0.3s						
UNCR	**Uncukul**	**1.30**	**1**	*e*Pg	**Pn**	**04 12 24.0**	**-0.9**
	comp=Z,48nm,0.3s						
UNCR				*e*Sg	**Sb**	**04 12 41.0**	**-0.9**
UNCR	**Uncukul**	**1.30**	**1**	*e*Pg	**Pn**	**04 12 24.0**	**-0.9**
UNCR				*e*Sg	**Sb**	**04 12 41.0**	**-0.9**
BTLR	**Botlikh**	**1.31**	**342**	⇑*i*PG	**Pn**	**04 12 24.1**	**-1.0**
BTLR				*i*		04 12 40.7	
BTLR				pmax	pmax		
	comp=Z,17nm,0.7s						
BTLR				smax	smax		
	comp=N,67nm,0.8s						
BTLR	**Botlikh**	**1.31**	**342**	*i* Pg	**Pn**	**04 12 24.1**	**-1.0**
	comp=N,17nm,0.7s						
BTLR				*i* Sg	**Sb**	**04 12 40.7**	**-1.6**
	comp=N,67nm,0.8s						
BTLR	**Botlikh**	**1.31**	**342**	*e*Pg	**Pn**	**04 12 23.6**	**-1.5**
BTLR				*e*Sg	**Sb**	**04 12 39.9**	**-2.4**
DRN	**Derbent**	**1.32**	**62**	*e*PG	**Pg**	**04 12 28.2**	**+1.5**
DRN				*e*S	**Sg**	**04 12 46.3**	**+2.4**
DRN				pmax	pmax		
	comp=Z,61nm,0.4s						
DRN	**Derbent**	**1.32**	**62**	*e*Pg	**Pg**	**04 12 28.2**	**+1.5**
	comp=Z,61nm,0.4s						
DRN				*e*Sg	**Sg**	**04 12 46.3**	**+2.4**
DRN	**Derbent**	**1.32**	**62**	*e*Pg	**Pg**	**04 12 28.6**	**+1.9**
DRN				*e*Sg	**Sg**	**04 12 46.0**	**+2.1**
KRNR	**Karanay**	**1.42**	**4**	PG	**Pn**	**04 12 26.0**	**-0.6**
KRNR				S	**Sn**	**04 12 45.0**	**0.0**
KRNR	**Karanay**	**1.42**	**4**	Pg	**Pn**	**04 12 26.0**	**-0.6**
KRNR				Sg	**Sn**	**04 12 45.0**	**0.0**
KRNR	**Karanay**	**1.42**	**4**	*e*Pg	**Pn**	**04 12 26.0**	**-0.6**
KRNR				*e*Sg	**Sn**	**04 12 45.0**	**0.0**
BUJR	**Buynaksk**	**1.43**	**10**	PG	**Pg**	**04 12 30.0**	**+1.2**
BUJR				*e*S	**Sg**	**04 12 52.0**	**+4.5**
BUJR	**Buynaksk**	**1.43**	**10**	Pg	**Pg**	**04 12 30.0**	**+1.2**
BUJR				*e*Sg	**Sg**	**04 12 52.0**	**+4.5**
BUJR	**Buynaksk**	**1.43**	**10**	*e*Pg	**Pg**	**04 12 30.0**	**+1.2**
BUJR				*e*Sg	**Sg**	**04 12 52.0**	**+4.5**
SEAG	**Tbilisi Sea**	**1.51**	**284**	P	**Pb**	**04 12 29.2**	**+0.1**
SEAG				S	**Sg**	**04 12 49.9**	**-0.2**
TBLG	**Delisi**	**1.55**	**282**	P	**Pn**	**04 12 28.3**	**-0.1**
TBLG				S	**Sn**	**04 12 48.4**	**+0.1**
TBLG	**Delisi**	**1.55**	**282**	*e*PG	**Pb**	**04 12 28.9**	**-0.8**
TBLG				*e*S	**Sn**	**04 12 48.3**	**+0.1**
TBLG	**Delisi**	**1.55**	**282**	*e*Pg	**Pb**	**04 12 28.9**	**-0.8**
TBLG				*e*Sg	**Sn**	**04 12 48.3**	**+0.1**
TBLG	**Delisi**	**1.55**	**282**	*e*Pg	**Pn**	**04 12 28.3**	**-0.1**
TBLG				*e*Sg	**Sn**	**04 12 48.4**	**+0.1**
DBC	**Dubki**	**1.61**	**2**	⇑*i*PG	**Pn**	**04 12 29.3**	**+0.2**
DBC				*i* S	**Sb**	**04 12 50.5**	**-0.3**
DBC				pmax	pmax		
	comp=Z,16nm,0.5s						
DBC	**Dubki**	**1.61**	**2**	*i* Pg	**Pn**	**04 12 29.3**	**+0.2**
	comp=Z,16nm,0.5s						
DBC				*i* Sg	**Sb**	**04 12 50.5**	**-0.3**
DBC	**Dubki**	**1.61**	**2**	*i* Pg	**Pn**	**04 12 29.3**	**+0.2**
DBC				*i* Sg	**Sb**	**04 12 50.5**	**-0.3**
DVE	**Vedeno**	**1.61**	**343**	*e*PG	**Pn**	**04 12 29.6**	**+0.4**
DVE				*e*S	**Sb**	**04 12 51.2**	**+0.2**
DVE	**Vedeno**	**1.61**	**343**	*e*Pg	**Pn**	**04 12 29.6**	**+0.4**
DVE				*e*Sg	**Sb**	**04 12 51.2**	**+0.2**
DVE	**Vedeno**	**1.61**	**343**	*e*Pg	**Pn**	**04 12 29.6**	**+0.4**
DVE				*e*Sg	**Sb**	**04 12 51.2**	**+0.2**
MAK	**Makhachkala**	**1.64**	**19**	*i* PN	**Pb**	**04 12 31.7**	**+0.5**
MAK	**Makhachkala**	**1.64**	**19**	*i* Pn	**Pb**	**04 12 31.7**	**+0.5**
GROC	**Groznyy**	**1.93**	**338**	*e*PN	**Pb**	**04 12 36.2**	**+0.1**
GROC				*e*S	**Sg**	**04 13 02.4**	**-0.9**
GROC	**Groznyy**	**1.93**	**338**	*e*Pn	**Pb**	**04 12 36.2**	**+0.1**
GROC				*e*Sg	**Sg**	**04 13 02.4**	**-0.9**
GROC	**Groznyy**	**1.93**	**338**	*e*Pg	**Pb**	**04 12 36.2**	**+0.1**
GROC				*e*Sg	**Sg**	**04 13 02.4**	**-0.9**
GNI	**Garni**	**1.99**	**231**	*c i*PN	**Pb**	**04 12 36.8**	**-0.4**
GNI	**Garni**	**1.99**	**231**	*i* Pn	**Pb**	**04 12 36.8**	**-0.4**
LACR	**Lac**	**2.32**	**308**	*e*PN	**Pn**	**04 12 40.5**	**+1.6**
LACR				*e*S	**Sn**	**04 13 08.8**	**+1.6**
LACR	**Lac**	**2.32**	**308**	*e*Pn	**Pn**	**04 12 40.5**	**+1.6**
LACR				*e*Sn	**Sn**	**04 13 08.8**	**+1.6**
LACR	**Lac**	**2.32**	**308**	*e*Pn	**Pn**	**04 12 40.1**	**+1.2**
LACR				*e*Sn	**Sb**	**04 13 09.4**	**-1.8**
DOMR	**Dombai**	**4.25**	**298**	*i* PN	**Pn**	**04 13 05.6**	**+0.1**
DOMR	**Dombai**	**4.25**	**298**	*i* Pn	**Pn**	**04 13 05.6**	**+0.1**

IDC ***07*** *04:34:52.1±0.5, 6°.36S×104°.00E, h0km, mb4.7/31, mb1 4.7/33, mb1mx4.6/63, mbtmp4.7/33, ML4.5/2, MS3.9/16, Ms1 3.9/16, ms1mx3.6/60, Error ellipse: s-maj=17.5km s-min=10.7km az=52.0*
ISCJB ***07*** *04:34:55.6±0.2, 6°.48S±0°.03×103°.89E±0°.02, h33km, mb4.8/65, MS4.0/23, Error ellipse: s-maj=5.1km s-min=2.7km az=29.9*
NEIC ***07*** *04:34:57.9±0.6, 6°.37S×103°.97E, h40km±5km, mb4.8/22, Error ellipse: s-maj=6.3km s-min=4.1km az=221.0*
BJI ***07*** *04:34:57.0, 6°.40S×104°.00E, h42km, mb5.1/51, mB4.9/32, Ms4.5/27, Ms7 4.2/27*
DJA ***07*** *04:34:59.2±0.3, 6°S±3°×10°4E±°, h49km±4km, M4.9/25, mb5.1/25, mB5.2/8, MLv5.1/18, Mw(mB)4.5/8*
ISC 07 04:34:56.9±0.6**, 6°.38S**±0°.04×**103°.94E**±0°.04**, h32**km±3km**,**
n245, σ1§**90**/245**, mb4.8**/67**, MS4.1**/23**, 10C-7D, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KASI	**Kota Agung**	**1.01**	**33**	P	**Pb**	**04 35 16.1**	**+0.1**
LWLI	**Liwa**	**1.36**	**5**	P	**Pb**	**04 35 22.3**	**+0.4**
BLSI	**Bandar Lampung**	**1.64**	**52**	P	**Pb**	**04 35 25.1**	**-1.5**
CGJI	**Cibinong**	**1.75**	**98**	P	**Pn**	**04 35 25.5**	**+0.4**
CGJI				S	**Sb**	**04 35 48.0**	**-2.1**
KLI	**Kotabumi**	**1.76**	**31**	P	**Pb**	**04 35 28.2**	**-0.4**
MDSI	**Maura Dua**	**1.90**	**7**	P	**Pb**	**04 35 29.8**	**-1.1**
SBJI	**Serang**	**2.19**	**83**	P	**Pn**	**04 35 32.7**	**+1.6**
SBJI				S	**Sn**	**04 35 59.2**	**+2.1**
MNAI	**Manna**	**2.24**	**334**	*e*Pn	**Pn**	**04 35 34.2**	**+2.4**
SKJI	**Sukabumi**	**2.67**	**104**	P	**Pb**	**04 35 41.2**	**-2.8**
TNG	**Tangerang**	**2.69**	**86**	P	**Pn**	**04 35 39.9**	**+1.8**
TNG				P	**Pn**	**04 35 39.9**	**+1.8**
DBJI	**Dramaga**	**2.79**	**94**	P	**Pn**	**04 35 40.9**	**+1.5**
PMBI	**Palembang**	**3.53**	**14**	P	**Pn**	**04 35 51.9**	**+2.3**
LEM	**Lembang**	**3.68**	**97**	Pn	**Pn**	**04 35 54.1**	**+2.4**
	27nm,0.3s,baz=191,slow=11,SNR=53						
LEM				Sn	**Sb**	**04 36 39.6**	**-5.9**
	62nm,0.3s,baz=162,slow=20,SNR=4.6						
CISI	**Cisompet, Garu**	**4.02**	**107**	P	**Pn**	**04 35 57.6**	**+1.3**
CISI	**Cisompet, Garu**	**4.02**	**107**	*e*Pn	**Pn**	**04 35 56.4**	**+0.1**
JCJI	**Jatiwangi**	**4.30**	**92**	P	Pb	04 36 18.4	+6.6
CMJI	**Cimerak**	**4.68**	**108**	P	**Pn**	**04 36 05.6**	**+0.2**
PPBI	**Pangkal Pinang**	**4.73**	**28**	P	**Pn**	**04 36 09.4**	**+3.4**
KRJI	**Kerinci**	**4.93**	**330**	P	**Pn**	**04 36 12.3**	**+3.4**
KPJI	**Karang Pucung**	**5.04**	**101**	P	**Pn**	**04 36 14.2**	**+3.9**
PPSI	**Pulau Pagai**	**5.32**	**312**	P	**Pn**	**04 36 15.9**	**+1.7**
RGRI	**Rengat**	**6.20**	**345**	P	Pb	04 36 35.8	-8.5
UGM	**Wanagama**	**6.70**	**104**	P	**Pn**	**04 36 35.1**	**+1.9**
UGM	**Wanagama**	**6.70**	**104**	*e*Pn	**Pn**	**04 36 33.6**	**+0.3**
SISI	**Saibi**	**6.98**	**316**	P	**Pn**	**04 36 37.8**	**+0.9**
PCJI	**Pacitan**	**7.40**	**105**	P	**Pn**	**04 36 43.6**	**+0.9**
PWJI	**Pagerwojo**	**7.97**	**102**	P	**Pn**	**04 36 51.8**	**+1.2**
MNSI	**Mandailing Nat**	**8.36**	**328**	P	**Pn**	**04 36 57.2**	**+1.3**
COCO	**West Island**	**9.08**	**230**	*e*Pn	**Pn**	**04 37 04.8**	**-1.1**
GMJI	**Gumukmas**	**9.61**	**102**	P	**Pn**	**04 37 15.6**	**+2.5**
BLJI	**Banyuglugur**	**9.67**	**99**	P	**Pn**	**04 37 17.0**	**+3.0**
STKI	**Sintang**	**9.88**	**50**	P	Pn	04 37 22.6	+5.8
JAGI	**Jajag, Banyuwa**	**10.33**	**102**	P	**Pn**	**04 37 24.9**	**+1.9**
JAGI	**Jajag, Banyuwa**	**10.33**	**102**	*e*Pn	**Pn**	**04 37 24.6**	**+1.5**
PSI	**Prapat**	**10.41**	**331**	Pn	**Pn**	**04 37 21.8**	**-2.3**
	0.4nm,0.3s,baz=180,slow=13,SNR=4.3						
SRBI	**Singaraja**	**11.31**	**99**	P	**Pn**	**04 37 37.3**	**+0.9**
KCSI	**Kotacane, Aceh**	**11.61**	**328**	P	Pn	04 37 53.6	+13
TWSI	**Taliwang, Sumb**	**13.04**	**101**	P	**Pn**	**04 37 57.5**	**-2.6**
BSI	**Banda Aceh**	**14.62**	**324**	P	**P**	**04 38 25.9**	**-1.7**
KRAB	**Krabi**	**15.26**	**342**	P	**P**	**04 38 41.5**	**+6.8**
BKSI	**Bulukumba**	**16.13**	**87**	P	**Pn**	**04 38 42.6**	**+1.2**
TTSI	**Tana Toraja**	**16.16**	**79**	P	P	04 38 57.3	+13
MPSI	**Mapaga**	**17.27**	**68**	P	**P**	**04 38 57.7**	**+0.7**
APSI	**Ampana**	**18.48**	**74**	P	**Pn**	**04 39 11.0**	**+0.3**
CHBT	**CHBT**	**19.08**	**355**	P	**Pn**	**04 39 22.2**	**+4.3**
	51nm,0.5s						
PHET	**Kaeng Krachan**	**19.64**	**347**	P	**Pn**	**04 39 27.9**	**+3.3**
	8.7nm,0.8s						
BATI	**Baumata**	**19.88**	**102**	P	**P**	**04 39 26.1**	**+0.4**
	12nm,0.3s,baz=310,slow=2.0,SNR=4.2						
BATI				Sn	**S**	**04 43 06.6**	**-1.4**
	4.5nm,0.3s,baz=108,slow=19,SNR=4.3						
BATI	**Baumata**	**19.88**	**102**	P	**P**	**04 39 26.4**	**+0.6**
SRAK	**Srakaew**	**20.35**	**355**	P	Pn	04 39 35.2	+2.2
	56nm,0.7s,586nm						
SOEI	**Soe**	**20.40**	**101**	P	**P**	**04 39 30.5**	**-1.0**
PBKT	**Sadao Pong**	**22.99**	**353**	P	**P**	**04 39 59.6**	**+0.5**
	25nm,0.7s,2µm						
PHIT	**Phitsanulok**	**23.68**	**352**	P	**P**	**04 40 06.0**	**+0.1**
	24nm,0.8s						
FITZ	**Fitzroy Crossi**	**24.16**	**121**	P	**P**	**04 40 11.3**	**+0.9**
	baz=24,SNR=7.4						
FITZ	**Fitzroy Crossi**	**24.16**	**121**	P	**P**	**04 40 11.1**	**+0.7**
	4.0nm,0.7s,baz=301,slow=12,SNR=4.0						
FITZ				S	**S**	**04 44 35.4**	**+8.8**
	4.3nm,1.0s,baz=278,slow=19,SNR=2.5						
FITZ				LR	LR	04 50 48.2	
	comp=Z,274nm,20.5s,baz=319,slow=40						
FITZ	**Fitzroy Crossi**	**24.16**	**121**	*e*P	**P**	**04 40 15.3**	**+4.9**
	57nm,1.8s						
FITZ				S	**S**	**04 44 35.4**	**+8.8**
MEEK	**Meekatharra**	**24.52**	**147**	P	**P**	**04 40 15.0**	**+1.3**
	baz=25,SNR=5.9						
CM01	**Chiang Mai Arr**	**25.13**	**349**	*e*P	**P**	**04 40 18.7**	**-0.5**
CMAR	**Chiang Mai Arr**	**25.17**	**349**	P	**P**	**04 40 18.9**	**-0.7**
	8.4nm,0.6s,baz=183,slow=9.0,SNR=30						
CMAR				LR	LR	04 51 34.2	
	comp=Z,311nm,18.6s,baz=169,slow=40						
DAV	**Davao City (W)**	**25.39**	**59**	LR	LR	04 51 30.3	
	comp=Z,194nm,21.1s,baz=342,slow=39						
CMMT	**Chiang Mai**	**25.52**	**349**	P	**P**	**04 40 22.7**	**0.0**
	20nm,0.7s						
CHTO	**Chiang Mai**	**25.52**	**349**	*e*P	**P**	**04 40 21.7**	**-1.0**
	12nm,0.6s						
CHTO	**Chiang Mai**	**25.52**	**349**	P	**P**	**04 40 22.8**	**+0.1**
	88nm,0.8s						
TGY	**Tagaytay City**	**26.43**	**40**	LR	LR	04 51 32.4	
	comp=Z,251nm,19.5s,baz=306,slow=38						
MTN	**Manton Dam**	**27.55**	**106**	P	**P**	**04 40 44.1**	**+2.9**
	baz=28,SNR=11						
MTN	**Manton Dam**	**27.55**	**106**	*e*P	**P**	**04 40 44.0**	**+2.8**
	45nm,1.0s						
KDU	**Kakadu**	**28.81**	**105**	P	**P**	**04 40 52.4**	**+0.1**
	baz=29,SNR=9.0						
NWAO	**Narrogin (SRO)**	**29.16**	**157**	LR	LR	04 51 04.4	
	comp=Z,413nm,21.6s,baz=192,slow=33						
WRKA	**Warakurna**	**29.79**	**131**	P	**P**	**04 41 02.2**	**+1.1**
	baz=30,SNR=4.5						
H01W3	**Cape Leeuwin H**	**29.88**	**163**	T	T	05 12 06.8	
	baz=341,slow=76,SNR=126						
H01W2	**Cape Leeuwin H**	**29.89**	**163**	T	T	05 12 09.0	
	baz=341,slow=76,SNR=116						
H01W1	**Cape Leeuwin H**	**29.90**	**163**	T	T	05 12 06.7	
	baz=341,slow=76,SNR=103						
KMBL	**Kambalda**	**30.00**	**148**	P	**P**	**04 41 02.1**	**-0.7**
	baz=30,SNR=4.6						
H08S2	**Diego Garcia H**	**31.24**	**266**	T	T	05 13 59.3	
	baz=89,slow=74,SNR=20						
H08S3	**Diego Garcia H**	**31.25**	**266**	T	T	05 13 55.6	
	baz=89,slow=74,SNR=57						
H08S1	**Diego Carcia H**	**31.25**	**266**	T	T	05 13 56.3	
	baz=89,slow=74,SNR=7.1						
BRDH	**Bariadhala**	**31.29**	**338**	LR	LR	04 56 02.9	
	comp=Z,340nm,20.6s,baz=160,slow=41						
KMI	**Kunming**	**31.34**	**358**	P	**P**	**04 41 17.6**	**+2.7**
KMI				pP	sP	04 41 31.6	+3.5
KMI				S	**S**	**04 46 21.7**	**+1.5**
KMI				pmax	pmax		
	comp=Z,15nm,0.7s						
KMI				LR	LR		
	comp=N,670nm,18.3s						
KMI				LR	LR		
	comp=E,170nm,19.6s						
KMI				LR	LR		
	comp=Z,680nm,18.5s						
WRA	**Warramunga Arr**	**32.44**	**117**	P	**P**	**04 41 23.5**	**-1.0**
	5.1nm,0.8s,baz=290,slow=9.4,SNR=26						
WRA				PcP	**PcP**	**04 44 11.5**	**+0.1**
	1.5nm,0.7s,baz=299,slow=2.3,SNR=4.6						
WRAB	**Tennant Creek**	**32.45**	**117**	*e*P	**P**	**04 41 23.5**	**-1.1**
WB2	**Warramunga Arr**	**32.45**	**117**	*e*P	**P**	**04 41 24.0**	**-0.6**
	36nm,1.5s						
WB2				*e*pP	**sP**	**04 41 37.4**	**-0.4**
WB2				*e*PcP	**PcP**	**04 44 11.7**	**+0.2**
GYA	**Guiyang**	**32.75**	**5**	P	**P**	**04 41 26.9**	**-0.3**
GYA				pP	sP	04 41 42.8	+2.4
GYA				S	**S**	**04 46 43.2**	**+1.1**
GYA				sS	sS	04 47 04.8	+7.3
GYA				SS	**SnSn**	**04 48 44.4**	**+4.9**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,110nm,4.8s						
GYA				LR	LR		
	comp=N,450nm,17.4s						
GYA				LR	LR		
	comp=E,440nm,17.7s						
GYA				LR	LR		
	comp=Z,480nm,17.8s						
ASAR	**Alice Springs**	**33.53**	**124**	P	**P**	**04 41 33.5**	**-0.6**
	3.8nm,0.8s,baz=296,slow=8.1,SNR=25						
ASAR				PcP	**PcP**	**04 44 14.4**	**-0.1**
	2.2nm,0.8s,baz=293,slow=2.0,SNR=6.9						
ASAR				S	S	04 47 04.9	+11
	1.6nm,1.0s,baz=297,slow=17,SNR=4.4						
ASAR				LR	LR	04 56 11.3	
	comp=Z,278nm,19.8s,baz=304,slow=38						
AS31	**Alice Springs**	**33.53**	**124**	*e*P	**P**	**04 41 34.1**	**+0.1**
	4.3nm,1.1s						
AS01	**Alice Springs**	**33.57**	**124**	*e*P	**P**	**04 41 33.5**	**-0.8**
AS01				*e*PcP	**PcP**	**04 44 14.4**	**-0.1**
YULB	**Yu-li**	**34.11**	**29**	*e*P	**P**	**04 41 39.2**	**+0.3**
	9.4nm,0.8s						
ODAN	**Odare**	**36.73**	**335**	*e*P	**P**	**04 42 02.5**	**+0.8**
	56nm,0.6s						
ENH	**Enshi**	**36.83**	**8**	*e*P	**P**	**04 42 01.6**	**-0.7**
	10nm,0.6s						
TAPN	**Taplejung**	**37.03**	**336**	*e*P	**P**	**04 42 05.3**	**+1.0**
	38nm,0.7s						
CD2	**Chengdu**	**37.08**	**360**	*e*P	**P**	**04 42 06.5**	**+2.1**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,140nm,5.0s						
RAMN	**Ramite**	**37.15**	**334**	*e*P	**P**	**04 42 06.7**	**+1.4**
	47nm,0.6s						
QIS	**Mount Isa**	**37.32**	**116**	P	**P**	**04 42 06.1**	**-0.5**
	baz=38,SNR=3.3						
LSA	**Lhasa**	**37.92**	**342**	*e*P	**P**	**04 42 12.6**	**+0.5**
	12nm,0.7s						
JIRN	**Jiri**	**37.95**	**334**	*e*P	**P**	**04 42 13.4**	**+1.3**
	186nm,0.7s						
WHN	**Wuhan**	**38.05**	**15**	P	**P**	**04 42 13.5**	**+1.0**
WHN				pmax	pmax		
	comp=Z,50nm,1.0s						
WHN				LR	LR		
	comp=Z,790nm,30.7s						
PKIN	**Phulchoki**	**38.23**	**333**	*e*P	**P**	**04 42 15.6**	**+1.2**
	34nm,0.7s						
GUN	**Gumba**	**38.30**	**334**	*e*P	**P**	**04 42 16.2**	**+1.1**
	120nm,0.6s						
DMN	**Daman**	**38.39**	**333**	*e*P	**P**	**04 42 16.7**	**+1.0**
	29nm,0.8s						
KKN	**Kakani**	**38.46**	**333**	*e*P	**P**	**04 42 17.3**	**+1.0**
	63nm,0.7s						
GKN	**Gorkha**	**38.94**	**332**	*e*P	**P**	**04 42 21.3**	**+1.1**
	71nm,1.0s						
KOLN	**Koldanda**	**39.23**	**331**	*e*P	**P**	**04 42 23.8**	**+1.0**
	118nm,0.6s						
COEN	**Coen**	**39.30**	**104**	P	**P**	**04 42 24.1**	**+0.9**
	baz=40,SNR=4.3						
DANN	**Dangsing**	**39.64**	**332**	*e*P	**P**	**04 42 27.4**	**+1.1**
	184nm,0.8s						
PYUN	**Piuthan**	**39.80**	**330**	*e*P	**P**	**04 42 28.4**	**+0.9**
	113nm,0.9s						
XAN	**Xi'an**	**40.48**	**6**	P	**P**	**04 42 31.4**	**-1.4**
XAN				pP	sP	04 42 45.2	-0.9
XAN				pmax	pmax		
	comp=Z,18nm,0.8s						
XAN				LR	LR		
	comp=N,160nm,21.6s						
XAN				LR	LR		
	comp=E,220nm,21.6s						
XAN				LR	LR		
	comp=Z,270nm,16.2s						
JOW	**Kunigami**	**40.57**	**34**	LR	LR	04 58 27.3	
	comp=Z,146nm,21.5s,baz=136,slow=35						
NJ2	**Nanjing**	**40.78**	**20**	*e*P	**P**	**04 42 36.4**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,30nm,0.7s						
MTSU	**Mount Surprise**	**41.05**	**110**	P	**P**	**04 42 37.6**	**-0.2**
	baz=41,SNR=4.8						
HTT	**Hallett**	**42.14**	**134**	P	**P**	**04 42 47.2**	**+0.6**
	baz=42,SNR=3.5						
LZH	**Lanzhou**	**42.24**	**360**	*e*P	**P**	**04 42 47.8**	**+0.4**
LZH				pP	sP	04 43 00.2	-0.6
LZH				sP	pP	04 43 04.4	+7.5
LZH				pmax	pmax		
	comp=Z,23nm,1.1s						
PMG	**Port Moresby**	**42.89**	**97**	P	**P**	**04 42 51.8**	**-1.1**
	19nm,0.7s,baz=256,slow=6.7,SNR=4.6						
STKA	**Stephens Creek**	**43.32**	**131**	P	**P**	**04 42 56.4**	**+0.3**
	baz=44,SNR=5.4						
STKA	**Stephens Creek**	**43.32**	**131**	P	**P**	**04 42 56.3**	**+0.1**
	10.0nm,0.8s,baz=297,slow=8.4,SNR=19						
STKA	**Stephens Creek**	**43.32**	**131**	*e*P	**P**	**04 42 56.2**	**+0.1**
	3.1nm,0.7s						
NDI	**New Delhi**	**43.34**	**325**	*e*P	P	04 42 51.0	-5.3
GTA	**Gaotai**	**45.72**	**356**	*e*P	**P**	**04 43 16.3**	**+1.0**
GTA				pmax	pmax		
	comp=Z,15nm,0.8s						
CMSA	**Cobar Meteorol**	**46.32**	**128**	P	**P**	**04 43 20.7**	**+0.7**
	baz=46,SNR=7.6						
JNU	**Nakatsue**	**46.88**	**31**	LR	LR	05 03 48.3	
	comp=Z,58nm,18.9s,baz=305,slow=37						
HHC	**Hu-ho-hao-te**	**47.52**	**8**	*e*P	**P**	**04 43 30.1**	**+0.8**
HHC				sP	sP	04 43 45.7	+3.0
HHC				PP	**PP**	**04 45 18.7**	**-2.4**
HHC				S	**S**	**04 50 19.3**	**-2.9**
HHC				pmax	pmax		
	comp=Z,43nm,1.3s						
HHC				pmax	pmax		
	comp=Z,230nm,6.3s						
HHC				LR	LR		
	comp=N,410nm,14.0s						
HHC				LR	LR		
	comp=E,240nm,14.6s						
HHC				LR	LR		
	comp=Z,140nm,14.6s						
BJT	**Baijiatuau**	**47.53**	**13**	*e*P	**P**	**04 43 29.3**	**+0.1**
BJI	**Beijing**	**47.55**	**13**	⇓*e*P	**P**	**04 43 29.3**	**-0.1**
KS15	**Wonju Array Si**	**48.99**	**25**	*e*P	**P**	**04 43 41.1**	**+0.5**
KS15				*e*pP	**sP**	**04 43 54.2**	**+0.1**
KSAR	**Wonju Array Be**	**48.99**	**25**	P	**P**	**04 43 40.9**	**+0.3**
KSRS	**Korea Array**	**49.02**	**25**	P	**P**	**04 43 40.9**	**+0.1**
	13nm,0.7s,baz=220,slow=7.6,SNR=45						
KS01	**Wonju Array Si**	**49.02**	**25**	*e*P	**P**	**04 43 40.1**	**-0.8**
NIL	**Nilore**	**49.31**	**326**	*e*P	**P**	**04 43 43.4**	**+0.3**
WMQ	**Urumqi**	**52.09**	**345**	P	**P**	**04 44 04.7**	**+0.8**
WMQ				pP	sP	04 44 18.4	+1.0
WMQ				sP	pP	04 44 25.3	+12
WMQ				ScP	**ScP**	**04 49 08.2**	**-2.3**
WMQ				S	**S**	**04 51 22.7**	**-3.2**
WMQ				pmax	pmax		
	comp=Z,180nm,3.8s						
WMQ				LR	LR		
	comp=N,290nm,23.1s						
WMQ				LR	LR		
	comp=E,160nm,21.3s						
WMQ				LR	LR		
	comp=Z,220nm,23.1s						
KSH	**Kashi**	**52.48**	**333**	P	**P**	**04 44 06.5**	**-0.5**
KSH				pP	sP	04 44 19.6	-0.9
KSH				PcP	**PcP**	**04 45 17.1**	**-0.3**
KSH				S	**S**	**04 51 24.8**	**-6.8**
KSH				ScS	**ScS**	**04 53 45.3**	**-9.5**
KSH				SS	**SS**	**04 55 01.9**	**-8.2**
KSH				pmax	pmax		
	comp=Z,20nm,0.6s						
KSH				pmax	pmax		
	comp=Z,84nm,4.9s						
KSH				LR	LR		
	comp=N,340nm,12.9s						
KSH				LR	LR		
	comp=E,170nm,11.4s						
KSH				LR	LR		
	comp=Z,67nm,14.5s						
MJAR	**Matsushiro Arr**	**53.41**	**34**	P	**P**	**04 44 12.1**	**-1.7**
	3.8nm,0.5s,baz=212,slow=8.1,SNR=11						
CN2	**Changchun**	**53.60**	**19**	*e*P	**P**	**04 44 17.6**	**+2.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SONM	**Songino Array**	**54.03**	**2**	P	**P**	**04 44 18.8**	**+0.6**
	32nm,0.7s,baz=179,slow=9.1,SNR=174						

SONM				LR	LR	05 09 54.0	
	comp=Z,211nm,18.7s,baz=154,slow=39						
SONA1	Songino Array	54.04	2	eP	P	04 44 18.8	+0.4
ULN	Ulaanbaatar	54.08	3	eP	P	04 44 19.0	+0.3
ULHL	Ulahol	54.59	335	P	P	04 44 22.9	+0.3
	SNR=8.5						
KZA	Kyzart	54.88	334	P	P	04 44 25.7	+0.8
	SNR=13						
UCH	Uchtor	55.32	334	P	P	04 44 28.7	+0.6
	SNR=13						
TKM2	Tokmak 2	55.42	335	P	P	04 44 29.0	+0.4
	SNR=39						
KBK	Karagaybulak	55.48	334	P	P	04 44 30.0	+1.1
	SNR=15						
HNR	Honiara	55.51	97	LR	LR	05 10 27.0	
	comp=Z,29nm,19.2s,baz=301,slow=38						
AML	Almayashu	55.61	333	P	P	04 44 30.7	+0.6
	SNR=28						
AAK	Ala-Archa	55.66	334	P	P	04 44 30.9	+0.7
	4.2nm,0.5s,baz=144,slow=9.9,SNR=7.3						
AAK	Ala-Archa	55.66	334	eP	P	04 44 31.2	+1.0
	22nm,1.5s						
EKS2	Erkin-Say	55.99	333	P	P	04 44 33.3	+0.8
	SNR=31						
USP	Ospenovka	56.16	334	P	P	04 44 33.9	+0.2
	SNR=5.6						
MK01	Makanchi Array	56.30	342	eP	P	04 44 34.4	-0.2
MK31	Makanchi Array	56.33	342	eP	P	04 44 34.6	-0.2
MKAR	Makanchi Array	56.33	342	P	P	04 44 34.6	-0.1
	12nm,0.7s,baz=144,slow=7.8,SNR=114						
MKAR				S	S	04 52 20.7	-2.2
	0.4nm,0.7s,baz=134,slow=10,SNR=3.8						
USRK	Ussuriysk Ar.	56.34	24	P	P	04 44 34.7	-0.2
	17nm,0.6s,baz=214,slow=5.7						
MAKZ	Makanchi	56.44	342	eP	P	04 44 35.1	-0.4
	7.4nm,1.0s						
LHI	Lord Howe Isla	57.12	123	P	P	04 44 41.5	+0.8
	baz=57,SNR=3.1						
TLY	Talaya	57.83	360	P	P	04 44 46.4	+1.1
	7.8nm,0.7s,baz=205,slow=6.1,SNR=15						
TLY	Talaya	57.83	360	eP	P	04 44 46.3	+1.0
	11nm,0.8s						
KK31	Karatay Array	57.84	332	eP	P	04 44 45.1	-0.4
KKAR	Karatay Array	57.84	332	eP	P	04 44 45.1	-0.4
KLR	Kul'dur	60.47	21	LR	LR	05 12 26.0	
	comp=Z,10nm,18.8s,slow=37						
KURBB	Kurchatov Arra	60.88	342	P	P	04 45 06.1	-0.2
	8.1nm,0.7s,baz=158,slow=6.1,SNR=47						
KURK	Kurchatov	60.93	342	eP	P	04 45 06.7	+0.1
ASAJ	Asahikawa	61.16	31	eP	P	04 45 07.2	-1.1
	9.3nm,0.7s						
GEYT	Alibeck	61.31	320	P	P	04 45 09.6	0.0
	4.2nm,0.6s,baz=199,slow=7.8,SNR=11						
GYA0B	ALIBECK ARRAY	61.31	320	eP	P	04 45 10.9	+1.3
	13nm,1.0s						
ZALV	Zalesovo Beam	62.23	347	P	P	04 45 14.9	-0.4
	12nm,0.6s,baz=159,slow=5.0,SNR=37						
ZALV				LR	LR	05 15 04.5	
	comp=Z,152nm,19.2s,baz=68,slow=39						
ZALV	Zalesovo Beam	62.23	347	eP	P	04 45 14.8	-0.5
YSS	Yuzh-Sakhalins	63.25	29	eP	P	04 45 21.4	-0.9
RAYN	Ar Rayn	64.30	300	eP	P	04 45 30.5	+0.7
	3.5nm,0.6s						
BVAR	Borovoye Array	65.65	339	P	P	04 45 37.9	0.0
	16nm,0.6s,baz=144,slow=8.5,SNR=67						
BRVK	Borovoye	65.72	338	eP	P	04 45 38.3	0.0
BRVK				epP	sP	04 45 51.3	-0.7
MAW	Mawson	67.10	196	P	P	04 45 46.8	-0.1
	2.1nm,0.7s,baz=58,slow=7.8,SNR=8.2						
MAW				LR	LR	05 09 15.2	
	comp=Z,228nm,22.0s,baz=57,slow=31						
ABKAR	Akbulak array	67.36	330	eP	P	04 45 49.0	+0.1
AKTO	Aktyubinsk	69.07	331	P	P	04 45 59.6	0.0
	4.0nm,0.7s,baz=118,slow=12,SNR=13						
YAK	Yakutsk	71.05	13	eP	P	04 46 10.5	-1.0
GNI	Garni	71.39	316	P	P	04 46 15.1	+0.9
	4.3nm,0.5s,baz=207,slow=9.9,SNR=3.4						
GNI	Garni	71.39	316	eP	P	04 46 14.0	-0.2
ARU	Arti	72.78	336	eP	P	04 46 22.3	+0.3
	13nm,0.8s						
URZ	Urewera	72.86	128	LR	LR	05 19 56.0	
	comp=Z,100nm,19.3s,baz=294,slow=37						
KBZ	Khabaz	74.17	319	P	P	04 46 31.6	+1.2
	9.5nm,0.7s,baz=121,slow=5.1,SNR=15						
PETK	Petropavlovsk-	74.56	30	P	P	04 46 31.2	-1.4
	4.6nm,0.7s,baz=225,slow=3.1						
PETK	Petropavlovsk-	74.56	30	eP	P	04 46 31.8	-0.8
LSZ	Lusaka	74.64	256	eP	P	04 46 35.1	+1.1
	3.6nm,0.8s						
MA2	Magadan	75.46	23	eP	P	04 46 37.2	-0.4
	7.7nm,0.8s						
MMAI	Mount Meron Ar	75.78	306	P	P	04 46 41.6	+1.5
	2.0nm,0.6s,baz=120,slow=3.8,SNR=4.2						
BOSA	Boshof	77.06	242	P	P	04 46 47.8	+0.2
	1.7nm,0.5s,baz=88,slow=5.2,SNR=5.5						
BRTR	Keskin Array B	79.16	312	P	P	04 46 59.2	+0.3
	5.4nm,0.8s,baz=136,slow=6.7,SNR=23						
BR131	Keskin Array S	79.16	312	eP	P	04 46 59.6	+0.6
TIXI	Tiksi	79.59	8	eP	P	04 46 59.0	-1.4
	3.7nm,0.8s						
KLMR	Klimovskoe	83.47	334	eP	P	04 47 18.1	-3.0
KLMR				AMP		04 47 22.4	
	comp=Z,18nm,1.2s						
TLB	Topalu	84.51	316	⇓i P	P	04 47 27.6	+0.8
TSUM	Tsumeb	84.51	251	eP	P	04 47 28.4	+0.9
	comp=Z,2.3nm,0.6s						
CFR	Carcaliu	84.59	316	⇑i P	P	04 47 28.3	+1.1
SORM	Soroca	85.20	319	⇑i P	P	04 47 30.7	+0.5
AKASG	Malin Array Be	85.33	322	P	P	04 47 31.1	+0.3
	comp=Z,5.9nm,0.6s,baz=84,slow=5.1,SNR=21						
AKBB	Malin Array Si	85.33	322	eP	P	04 47 31.6	+0.7
	comp=Z,9.1nm,0.6s						
KIEV	Kiev	85.34	322	eP	P	04 47 31.1	+0.2
	comp=Z,8.8nm,0.7s						
AK11	Malin Array Si	85.36	322	eP	P	04 47 31.4	+0.4
VRI	Vrincioaia	85.72	317	⇑i P	P	04 47 34.7	+1.8
PLOR	Plostina	85.77	317	⇓i P	P	04 47 35.5	+2.3
BILL	Bilibino	85.91	20	eP	P	04 47 32.9	-0.5
	comp=Z,5.2nm,0.4s						
TESR	Tescani	85.92	318	⇓i P	P	04 47 35.6	+1.7
MLR	Muntele Rosu	86.17	316	⇑i P	P	04 47 36.8	+1.5
BIZ	Bicaz	86.39	318	⇓i P	P	04 47 37.9	+1.7
DOPR	Dopca	86.65	317	⇑i P	P	04 47 39.6	+2.1
VOIR		86.77	316	⇓i P	P	04 47 38.9	+0.7
BURAR	Bucovina Array	87.13	318	⇑i P	P	04 47 42.1	+2.2
BUR04	Bucovina Ar. S	87.13	318	eP	P	04 47 41.4	+1.4
BUR08	Bucovina Ar. S	87.14	318	eP	P	04 47 41.3	+1.3
VTS	Vitosha	87.50	313	⇑i P	P	04 47 42.7	+0.9
VTS	Vitosha	87.50	313	eP	P	04 47 42.8	+0.9
	comp=Z,6.4nm,0.8s						
IDID	Didziasalis	87.98	326	eP	P	04 47 45.0	+1.4
IDID				IAmb	IAmb	04 47 46.2	
	comp=Z,9.4nm,0.8s						
IIGN	Ignalina	88.28	326	eP	P	04 47 46.4	+1.3
IIGN				IAmb	IAmb	04 47 47.5	
	comp=Z,14nm,0.7s						
HERR	Herculane	88.48	315	⇓i P	P	04 47 47.6	+1.3
DRGR		88.63	317	⇑i P	P	04 47 48.4	+1.3
MDVR	Moldovita	88.96	315	⇑i P	P	04 47 48.3	-0.3
BZS	Buzias	89.17	316	⇑i P	P	04 47 50.8	+1.3
SNAA	Sanae	89.20	198	P	P	04 48 03.3	+14
SNAA	Sanae	89.20	198	P	P	04 47 49.8	+0.5
	comp=Z,1.8nm,0.9s,baz=122,slow=4.7,SNR=7.6						
FINES	FINESS Array B	89.80	332	P	P	04 47 52.6	+0.6
	comp=Z,4.2nm,0.8s,baz=110,slow=6.3,SNR=14						
VNA1	Neumayer--Stat	91.21	198	P	P	04 48 12.7	+14
VNA3	Neumayer Olymp	91.39	197	P	P	04 48 13.0	+14
ARCES	ARCESS Array B	91.91	340	P	P	04 48 01.7	-0.1
	comp=Z,1.8nm,0.7s,baz=94,slow=5.5,SNR=5.3						
MODS	Modra-Piesok	92.51	318	eL	L	04 48 09.8	
GEA0	GERESS Array S	94.91	318	eP	P	04 48 16.8	+0.6
GERES	GERESS Array B	94.91	318	P	P	04 48 16.5	+0.3
	comp=Z,0.7nm,0.7s,baz=104,slow=5.6,SNR=6.2						
CLL	Collm	95.52	321	eP	P	04 48 21.0	+2.3
HFS	Hagfors	95.61	330	P	P	04 48 19.0	+0.1
	comp=Z,3.3nm,0.8s,baz=134,slow=4.2,SNR=4.8						
KEST	Kesra	97.41	305	LR	LR	05 36 17.5	
	comp=Z,150nm,18.6s,baz=194,slow=38						
YKA	Yellowknife Ar	117.30	19	PKP	PKPdf	04 53 38.0	-0.8
	comp=Z,0.5nm,0.8s,baz=318,slow=2.5,SNR=5.0						
YKA	Yellowknife Ar	117.30	19	PKP	PKPdf	04 53 38.0	-0.8
FFC	Flin Flon	127.48	19	ePKPdf	PKPdf	04 53 58.3	-0.3
MFID	Camas Ranch	129.22	37	ePKPdf	PKPdf	04 54 02.9	+0.4
NVAR	Mina Array Bea	130.25	44	PKP	PKPdf	04 54 05.9	+1.3
	comp=Z,0.4nm,0.6s,baz=310,slow=2.7,SNR=6.2						
PDAR	Pinedale Array	133.24	34	PKP	PKPdf	04 54 11.1	+0.8
	comp=Z,0.5nm,0.6s,baz=349,slow=0.9,SNR=6.4						
O20A	White River Ci	135.71	36	ePKPdf	PKPdf	04 54 15.7	+0.8
MNTX	Cornudas Mount	142.78	44	ePKPdf	PKPdf	04 54 27.8	+0.1
TXAR	Lajitas Array	145.37	45	PKPbc	PKPdf	04 54 32.8	+0.3
	comp=Z,8.4nm,0.8s,baz=293,slow=1.7,SNR=97						
CCM	Cathedral Cave	145.59	21	ePKPbc	PKPbc	04 54 32.6	0.0
ACSO	Alum Creek Sta	145.73	9	ePKPbc	PKPdf	04 54 31.9	-0.8
SSPA	Standing Stone	145.85	2	ePKPbc	PKPdf	04 54 32.6	-0.2
WCI	Wyandotte Cave	146.96	15	ePKPbc	PKPbc	04 54 36.0	-0.8
JCT	Junction City	147.26	40	ePKPbc	PKPbc	04 54 37.9	+0.1
MIAR	Mount Ida	147.64	28	ePKPbc	PKPbc	04 54 38.4	-0.4
TZTN	Tazewell	149.21	12	ePKPbc	PKPbc	04 54 42.1	-0.7
OXF	Oxford	149.41	22	ePKPbc	PKPbc	04 54 42.6	-0.7
TKL	Tuckaleechee C	150.01	13	PKPbc	PKPbc	04 54 44.5	-0.2
	comp=Z,12nm,0.6s,baz=353,slow=8.1,SNR=41						
HKT	Hockley	150.06	36	ePKPbc	PKPbc	04 54 45.4	+0.4
LRAL	Lakeview Retre	151.59	20	ePKPbc	PKPbc	04 54 47.8	-0.7
GOGA	Godfrey	152.24	13	ePKPbc	PKPbc	04 54 49.4	-0.6
SAML	Samuel	160.09	220	ePKPab	PKPab	04 55 32.7	-1.1

NNC 07 05:00:10.4±3.1, 52°.82N×87°.76E, h0^{km}, mb3.6, mpv3.2, 3C-5D, Error ellipse: s-maj=29.9km s-min=8.3km az=76.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	2.10	304	⇓Pg	Pb	05 00 48.2	-1.0
	6.4nm,0.7s						
ZAA0				⇓Lg	Lg	05 01 17.6	
	7.9nm,0.8s						
MK31	Makanchi Array	6.99	213	⇑Pn	Pn	05 01 54.9	+0.9
	1.1nm,0.6s,baz=32,slow=13						
MK31				⇑Sn	Sn	05 03 14.1	-0.1
	0.8nm,0.6s,baz=35,slow=25,SNR=3.1						
MK31				⇓Lg	Lg	05 03 50.8	
	1.2nm,0.6s,baz=34,slow=31,SNR=4.6						
MAKZ	Makanchi	7.08	214	⇓Pn	Pn	05 01 56.3	+1.0
	2.0nm,0.7s						
MAKZ				⇓Sn	Sn	05 03 17.9	+1.5
	1.2nm,0.6s						
MAKZ				⇑Lg	Lg	05 03 56.8	
	2.2nm,0.8s						

MEX 07 05:08:37.9±0.4, 16°.70N×99°.97W, h3^{km}±2^{km}, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ACP2	Acapulco	0.19	25	eP	Pg	05 08 41.4	-0.2
ACP2				i S	Sg	05 08 44.0	-0.1
ACX	Acapulco	0.20	32	eP	Pg	05 08 41.8	0.0
ACX				eS	Sg	05 08 44.5	+0.1
CAIG	El Cayaco	0.45	320	eP	Pg	05 08 46.3	-0.3
CAIG				eS	Sg	05 08 52.7	+0.4
MEIG	Mezcala	1.26	15	eP	Pg	05 08 58.9	-3.3
MEIG				eS	Sg	05 09 14.7	-3.8
TLIG	Tlapa	1.59	57	eP	Pn	05 09 03.4	-3.6
TLIG				eS	Sn	05 09 23.5	-4.7
ARIG	Puente Sto Nin	1.61	347	eP	Pn	05 09 04.5	-2.7
ARIG				i S	Sn	05 09 23.8	-4.8
ZIIG	Zihuatanejo	1.69	302	i P	Pn	05 09 04.8	-3.5
ZIIG				i S	Sn	05 09 25.0	-5.4
PLIG	Platanillo	1.74	15	eP	Pn	05 09 06.1	-3.0
PLIG				i S	Sn	05 09 27.1	-4.8

ISCJB 07 05:17:06.9±0.8, 44°.63N±0°.03×6°.72E±0°.06, h11^{km}±5^{km}, Error ellipse: s-maj=7.4km s-min=4.8km az=151.4
STR 07 05:17:06.8±0.8, 45°N±3°×°±°, h12^{km}±7^{km}, MLv1.1/6
CSEM 07 05:17:07.0±0.2, 44°.64N×6°.73E, h10^{km}, ML2.2, Error ellipse: s-maj=4.2km s-min=2.5km az=66.0
LDG 07 05:17:07.7±0.1, 44°.64N×6°.69E, h2^{km}, Md2.6/2, Ml2.2/1, Error ellipse: s-maj=1.7km s-min=1.4km az=75.0

ISC 07 05:17:07.3±0.9, 44°.63N±0°.03×6°.73E±0°.04, h10^{km}±7^{km}, n19, σ0^s.58/34, France

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MBDF	Montbardon	0.10	19	ePg	Pg	05 17 10.1	0.0
MBDF				eSg	Sg	05 17 12.2	+0.1
MBDF	Montbardon	0.10	19	ePg	Pg	05 17 10.1	0.0
MBDF				eSg	Sg	05 17 12.2	+0.1
SURF	Saint Ours	0.16	158	Pg	Pg	05 17 10.8	-0.2
SURF	Saint Ours	0.16	158	Pg	Pg	05 17 10.8	-0.2
SURF				Sg	Sg	05 17 13.7	+0.1
OGAG	Argentiere	0.22	217	Pg	Pg	05 17 11.7	-0.3
OGAG				Sg	Sg	05 17 15.0	-0.1
ISO	Isola	0.51	153	Pg	Pg	05 17 17.0	-0.2
ISO	Isola	0.51	153	Pg	Pg	05 17 16.0	-1.2
ISO				Sg	Sg	05 17 23.6	-0.2
ORIF	Oris-en-Rattie	0.67	296	ePg	Pg	05 17 19.8	-0.5
ORIF				eSg	Sg	05 17 27.9	-1.1
	2.6nm,0.2s						
ORIF	Oris-en-Rattie	0.67	296	Pg	Pg	05 17 19.9	-0.3
ORIF	Oris-en-Rattie	0.67	296	ePg	Pg	05 17 19.8	-0.5
ORIF				eSg	Sg	05 17 27.9	-1.1
	1.3nm,0.2s						
CALF	Calern	0.89	171	Pg	Pb	05 17 24.7	-0.2
CALF	Calern	0.89	171	Pg	Pb	05 17 24.7	-0.2
CALF				Sg	Sb	05 17 36.6	-0.3
SMRF	Simiane la Rot	1.05	232	ePg	Pg	05 17 27.4	-0.2
SMRF				eSn	Sb	05 17 42.1	+0.5
SMRF	Simiane la Rot	1.05	232	ePg	Pg	05 17 27.4	-0.2
SMRF				eSn	Sb	05 17 42.1	+0.5
FRF	La Foret Royal	1.07	183	ePg	Pn	05 17 28.1	-0.3
FRF				eSg	Sb	05 17 42.1	+0.1
FRF	La Foret Royal	1.07	183	ePg	Pn	05 17 28.1	-0.3
FRF				eSg	Sb	05 17 42.1	+0.1
BSTF	la Bastide-des	1.08	226	Pg	Pn	05 17 29.1	+0.5
BSTF				Sg	Sn	05 17 45.6	+2.0
LMR	La Mourre	1.31	187	ePn	Pg	05 17 32.3	-0.1
LMR				eSn	Sb	05 17 48.7	-0.1
	20nm,1.2s						
LMR	La Mourre	1.31	187	ePn	Pg	05 17 32.3	-0.1
LMR				eSn	Sb	05 17 48.7	-0.1
	9.9nm,1.2s						

MEX 07 05:23:12.2±0.6, 13°.93N×93°.35W, h16^{km}±93^{km}, MD3.8, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		1.43	47	eP	Pn	05 23 34.3	-3.2
THIG				i S	Sn	05 23 50.7	-5.3
PCIG		1.77	4	eP	Pn	05 23 36.9	-5.2
PCIG				eS	Sn	05 23 58.8	-5.5
CCIG	Comitan	2.62	26	eP	Pn	05 23 51.5	-2.5
CCIG				eS	Sn	05 24 21.5	-4.0
TGIG		2.84	4	eP	Pn	05 23 54.2	-2.8
TGIG				i S	Sn	05 24 27.0	-3.9

IDC 07 05:25:46.6±1.6, 1°.02N×126°.66E, h0^{km}, mb3.8/4, mb1 4.0/5, mb1mx3.6/53, mbtmp3.8/5, ML3.2/1, MS3.7/1, Ms1 3.7/1, ms1mx2.5/54, Error ellipse: s-maj=116.0km s-min=19.7km az=69.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	19.02	183	P	P	05 30 09.8	-0.4
	0.1nm,0.3s,baz=1.4,slow=11,SNR=1.8						
WRA	Warramunga Arr	22.15	161	P	P	05 30 44.3	+0.1
	2.8nm,0.6s,baz=340,slow=11,SNR=35						
ASAR	Alice Springs	25.53	164	P	P	05 31 17.2	+0.1
	0.9nm,0.3s,baz=343,slow=11,SNR=13						
MKAR	Makanchi Array	59.74	326	P	P	05 35 52.7	-0.6
	0.3nm,0.4s,baz=125,slow=8.1,SNR=6.1						
MKAR				LR	LR	06 04 31.3	
	comp=Z,55nm,18.8s,baz=299,slow=39						
KURBB	Kurchatov Arra	63.98	328	P	P	05 36 22.1	+0.4
	0.5nm,0.6s,baz=133,slow=6.6,SNR=3.1						

IDC 07 05:47:12.0±14.0, 7°.46S×126°.36E, h100^{km}±157^{km}, mb3.0/1, mb1 3.1/4, mb1mx2.9/49, mbtmp3.3/4, ML3.0/3, Error ellipse: s-maj=158.1km s-min=56.7km az=42.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BATI	Baumata	3.82	224	S	Sn	05 48 58.2	+5.4
	8.3nm,0.3s,baz=320,slow=6.7,SNR=3.5						
FITZ	Fitzroy Crossi	10.60	184	P	Pn	05 49 40.9	0.0
	0.1nm,0.3s,baz=358,slow=12,SNR=6.7						
FITZ				S	Sn	05 51 28.6	-9.0
	0.4nm,0.3s,baz=178,slow=20,SNR=7.4						
WRA	Warramunga Arr	14.62	149	P	Pn	05 50 34.6	+0.6
	0.1nm,0.3s,baz=323,slow=14,SNR=8.4						
WRA				S	Sn	05 53 05.7	-10
	0.1nm,0.3s,baz=328,slow=21,SNR=7.1						
ASAR	Alice Springs	17.67	157	P	P	05 51 10.9	-0.4
	0.1nm,0.3s,baz=334,slow=10,SNR=4.2						
MKAR	Makanchi Array	66.68	329	P	P	05 57 52.1	0.0
	0.3nm,0.8s,baz=128,slow=9.3,SNR=4.1						

MEX 07 06:07:42.5±0.5, 16°.80N×95°.06W, h146^{km}±10^{km}, MD3.8, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	1.44	225	eP	Pn	06 08 09.3	-1.8
HUIG				i S	Sn	06 08 31.4	-1.6
VHO	Vista Hermosa	1.62	280	eP	Pn	06 08 12.3	-1.0
VHO				eS	Sn	06 08 34.7	-2.1
TGIG		1.86	90	eP	Pn	06 08 14.4	-1.4
TGIG				eS	Sn	06 08 39.0	-2.3
PCIG		2.08	121	eP	Pn	06 08 17.4	-0.9
PCIG				i S	Sn	06 08 43.5	-2.3
PNIG	Pinotepa	2.97	263	eP	Pn	06 08 27.9	-1.4
PNIG				i S	Sn	06 09 03.0	-2.5
TLIG	Tlapa	3.44	283	i P	Pn	06 08 34.1	-1.3
TLIG				eS	Sn	06 09 14.8	-1.6

IDC 07 06:08:10.9±3.1, 53°.74N×88°.02E, h0^{km}, mb1 2.9/2, mb1mx2.7/70, mbtmp2.9/2, ML2.7/2, Error ellipse: s-maj=28.5km s-min=19.1km az=84.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.91	278	i		06 20 26.0	
	baz=97,slow=335,SNR=1.1						
ZALV	Zalesovo Beam	1.91	278	Pn	Pn	06 08 44.6	-0.1
	1.6nm,0.3s,baz=92,slow=12,SNR=42						
ZALV				Sn	Sb	06 09 11.4	+0.5
	5.6nm,0.3s,baz=90,slow=24,SNR=24						
KURBB	Kurchatov Arra	6.62	246	Pn	Pn	06 09 49.5	+0.2
	0.1nm,0.3s,baz=61,slow=14,SNR=7.6						
KURBB				Sn	Sn	06 11 04.6	-0.8
	0.0nm,0.3s,baz=117,slow=24,SNR=3.4						
KURBB				Lg	Lg	06 11 41.2	
	0.1nm,0.3s,baz=64,slow=32,SNR=5.0						
MKAR	Makanchi Array	7.86	210	Pn	Pn	06 10 07.9	+1.5
	0.1nm,0.3s,baz=22,slow=16,SNR=4.6						
MKAR				Sn	Sn	06 11 35.8	-0.3
	0.1nm,0.3s,baz=31,slow=24,SNR=4.3						
MKAR				Lg	Lg	06 12 19.6	
	0.1nm,0.3s,baz=24,slow=28,SNR=3.8						

ISCJB 07 06:12:50.8±0.8, 24°.75S±0°.05×68°.3W±0°.2, h135^{km}±26^{km}, Error ellipse: s-maj=26.5km s-min=6.6km az=172.5
GUC 07 06:12:52.2±0.3, 24°.68S×68°.40W, h132^{km}±5^{km}, ML3.4
SJA 07 06:12:52.9±0.5, 25°.03S×68°.31W, h240^{km}±31^{km}, ML3.6

ISC 07 06:12:51.2±1.6, 24°.76S±0°.06×68°.3W±0°.2, h139^{km}±28^{km}, n11, σ1^s.14/19, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO02	Mina Guanaco	1.26	251	i P	Pn	06 13 18.3	+0.5
GO02				eS	Sn	06 13 38.0	0.0
GO02				IAML		06 13 39.0	
	comp=N,557nm,0.1s						
PB14	IPOC Station P	1.94	273	eP	Pn	06 13 25.4	+0.1
PB14				eS	Sn	06 13 51.0	-0.3
PB14				IAML		06 13 59.4	
	comp=E,246nm,0.6s						
PB06	IPOC Station P	2.36	330	eP	Pn	06 13 30.6	+0.3
PB06				eS	Sn	06 13 59.4	-0.9
PB06				IAML		06 14 08.1	
	comp=N,264nm,0.1s						
PB10	IPOC Station P	2.42	300	eP	Pn	06 13 31.9	+1.1
PB10				eS	Sn	06 14 02.0	+0.7
PB05	IPOC Station P	2.59	317	eP	Pn	06 13 33.3	+0.2
PB05				eS	Sn	06 14 04.3	-0.9
PB05				IAML		06 14 14.7	
	comp=E,201nm,0.2s						
PB03	IPOC Station P	3.02	333	eP	Pn	06 13 39.0	+0.5
PB03				eS	Sn	06 14 14.0	-1.1
AGUA	GUANDACOL	4.72	182	eP	Pn	06 14 02.2	+1.4
AGUA				eS	Sn	06 14 53.8	-1.1
ACLC	CERRO LA CRUZ	4.80	166	eP	Pn	06 14 03.5	+1.6
AROD	Rodeo	5.50	191	eP	Pn	06 14 12.9	+1.6
AROD				eS	Sn	06 15 11.3	-2.5
AMOG	MOGNA	6.16	182	eP	Pn	06 14 19.9	-0.1
TCA	Tanti	7.32	154	eP	Pn	06 14 35.5	-0.1
TCA				IAML		06 14 36.1	
	comp=Z,7.0nm,0.4s						

SKO 07 06:16:04.4, 40°.39N×20°.50E, h0^{km}, M2.2, ML2.5
CSEM 07 06:16:07.4±0.2, 40°.58N×20°.67E, h2^{km}, ML2.6, Error ellipse: s-maj=4.9km s-min=3.5km az=114.0
THE 07 06:16:07.8, 40°.56N×20°.68E, h0^{km}±2^{km}, ML2.5/7, Error ellipse: s-maj=2.9km s-min=0.9km az=287.0
ATH 07 06:16:07.2, 40°.58N×20°.71E, h16^{km}±2^{km}, ML2.6/3, Error ellipse: s-maj=3.4km s-min=1.2km az=134.0

ISC 07 06:16:07.4±1.2, 40°.57N±0°.02×20°.67E±0°.03, h3^{km}±10^{km}, n50, σ0^s.72/73, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEST	Nestorio	0.33	119	P	Pg	06 16 13.9	+0.2
NEST				S	Sg	06 16 18.4	+0.4
NEST				AML	AML	06 16 22.4	
	comp=N,2625µm,0.6s						
NEST				AML	AML	06 16 24.8	
	comp=E,2798µm,0.6s						
NEST	Nestorio	0.33	119	P	Pg	06 16 13.7	0.0
NEST				S	Sg	06 16 18.5	+0.5
NEST	Nestorio	0.33	119	P	Pg	06 16 13.7	0.0
NEST				S	Sg	06 16 18.4	+0.4
PENT	Pentalofos	0.52	137	P	Pg	06 16 16.9	-0.4
PENT				S	Sg	06 16 24.2	+0.1
PENT				AML	AML	06 16 28.1	
	comp=E,893µm,0.3s						
PENT				AML	AML	06 16 30.4	
	comp=N,1203µm,0.3s						
PENT	Pentalofos	0.52	137	P	Pg	06 16 16.9	-0.4
PENT				S	Sg	06 16 24.6	+0.5
PENT	Pentalofos	0.52	137	P	Pg	06 16 17.1	-0.2
PENT				S	Sg	06 16 24.3	+0.2
OHR	Ohrid	0.55	10	i Pg	Pg	06 16 18.5	+0.7
OHR				i Sg	Sb	06 16 28.0	+0.1
OHR				eLg	Lg	06 16 28.6	
	comp=E,168nm,0.4s						
OHR				eLg	Lg	06 16 31.3	
	comp=N,79nm,0.4s						
FNA	Florina	0.57	68	P	Pg	06 16 19.0	+0.6
FNA				S	Sg	06 16 26.3	+0.4
FNA				AML	AML	06 16 28.7	
	comp=N,2860µm,0.7s						
FNA				AML	AML	06 16 28.9	
	comp=E,4636µm,0.6s						
FNA	Florina	0.57	68	P	Pg	06 16 18.4	0.0
FNA				S	Sb	06 16 27.8	-0.9
FNA	Florina	0.57	68	P	Pg	06 16 18.4	0.0
FNA				S	Sg	06 16 26.1	+0.2
BIA	Bitola	0.67	48	P	Pg	06 16 20.4	+0.3
BIA				S	Sb	06 16 30.8	-0.5
BIA	Bitola	0.67	48	i Pg	Pg	06 16 20.6	+0.5
BIA				i Sg	Sn	06 16 33.1	-1.6
BIA	Bitola	0.67	48	P	Pg	06 16 20.4	+0.3
BIA				S	Sb	06 16 30.8	-0.5
KPRO	Kipourio	0.81	139	P	Pg	06 16 21.6	-1.4
KPRO	Kipourio	0.81	139	P	Pg	06 16 22.1	-0.9
KPRO				S	Sb	06 16 34.9	-0.7
KPRO	Kipourio	0.81	139	P	Pg	06 16 22.1	-0.9
KPRO				S	Sb	06 16 34.9	-0.7

KZN	**Kozani**	**0.88**	**107**	P	**Pg**	**06 16 24.1**	**-0.2**
KZN	**Kozani**	**0.88**	**107**	P	**Pg**	**06 16 23.9**	**-0.3**
KZN				S	**Sb**	**06 16 37.6**	**+0.1**
KZN	**Kozani**	**0.88**	**107**	P	**Pg**	**06 16 23.9**	**-0.3**
KZN				S	**Sb**	**06 16 37.6**	**+0.1**
KRUS	**Krusevo**	**0.91**	**29**	*i* Pg	**Pg**	**06 16 24.5**	**-0.2**
KRUS				*i* Sg	**Sn**	**06 16 40.5**	**-0.2**
JAN	**Janina**	**0.93**	**171**	P	**Pg**	**06 16 24.8**	**-0.3**
JAN	**Janina**	**0.93**	**171**	P	**Pg**	**06 16 24.8**	**-0.3**
SGD	**Sagiada**	**1.02**	**199**	P	**Pg**	**06 16 26.9**	**+0.1**
SGD	**Sagiada**	**1.02**	**199**	P	**Pg**	**06 16 26.8**	**-0.1**
IGT	**Igoumenitsa**	**1.07**	**194**	P	**Pb**	**06 16 28.4**	**-0.1**
IGT	**Igoumenitsa**	**1.07**	**194**	P	**Pg**	**06 16 28.0**	**+0.1**
IGT	**Igoumenitsa**	**1.07**	**194**	P	**Pg**	**06 16 28.0**	**+0.1**
KEK	**Kerkira**	**1.09**	**218**	P	**Pg**	**06 16 27.5**	**-0.8**
KEK	**Kerkira**	**1.09**	**218**	P	**Pg**	**06 16 28.4**	**+0.2**
KEK	**Kerkira**	**1.09**	**218**	P	**Pg**	**06 16 27.9**	**-0.3**
GRG	**Griva**	**1.37**	**73**	P	**Pn**	**06 16 31.9**	**-1.5**
GRG	**Griva**	**1.37**	**73**	P	**Pn**	**06 16 32.2**	**-1.2**
THL	**Klokotos Trika**	**1.44**	**134**	P	**Pn**	**06 16 34.1**	**-0.2**
THL	**Klokotos Trika**	**1.44**	**134**	P	**Pb**	**06 16 34.9**	**+0.1**
THL				S	**Sn**	**06 16 54.9**	**+1.2**
THL	**Klokotos Trika**	**1.44**	**134**	P	**Pn**	**06 16 34.1**	**-0.2**
THL				S	**Sn**	**06 16 54.9**	**+1.2**
LIT	**Litokhoron**	**1.47**	**108**	P	**Pn**	**06 16 35.1**	**+0.3**
LIT	**Litokhoron**	**1.47**	**108**	P	**Pn**	**06 16 34.7**	**0.0**
LIT				S	**Sn**	**06 16 56.2**	**+1.7**
LIT	**Litokhoron**	**1.47**	**108**	P	**Pn**	**06 16 34.7**	**0.0**
LIT				S	**Sn**	**06 16 56.2**	**+1.7**
STIP	**Stip**	**1.60**	**45**	*i* Pn	**Pg**	**06 16 39.1**	**+1.0**
VAY	**Valandovo**	**1.62**	**62**	*e*Pn	**Pn**	**06 16 36.7**	**-0.1**
VAY				*e*Sg	**Sg**	**06 17 01.0**	**+1.6**
VAY				*e*Lg	Lg	06 17 06.4	
	comp=N,72nm,1.0s						
VAY				*e*Lg	Lg	06 17 09.1	
	comp=E,32nm,0.6s						
LKD2	**Lefkada island**	**1.78**	**180**	P	**Pb**	**06 16 40.6**	**-0.1**
LKD2	**Lefkada island**	**1.78**	**180**	P	**Pb**	**06 16 40.1**	**-0.6**
KNT	**Kendrikon**	**1.79**	**70**	P	**Pn**	**06 16 38.1**	**-1.0**
KNT	**Kendrikon**	**1.79**	**70**	P	**Pn**	**06 16 38.7**	**-0.4**
KNT	**Kendrikon**	**1.79**	**70**	P	**Pn**	**06 16 38.7**	**-0.4**
FSK	**Fiskardo**	**2.11**	**182**	P	**Pn**	**06 16 44.6**	**+1.0**
BARS	**Barje**	**2.40**	**21**	*e*Pn	**Pn**	**06 16 48.2**	**+0.7**
IVAS	**Ivanjica**	**3.02**	**353**	*e*Pn	**Pb**	**06 16 59.9**	**-2.0**
BOVS	**Bovan**	**3.15**	**14**	*e*Pn	**Pn**	**06 16 58.2**	**+0.3**
DIVS	**Divibare**	**3.56**	**352**	*e*Pn	**Pn**	**06 17 03.8**	**+0.3**

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*IDC **07** 06:19:30.6±0.6, 15.°25S×173.°45W, h0^{km}, mb4.3/12, mb1 4.5/13, mb1mx4.2/50, mbtmp4.3/13, ML4.6/1, MS3.5/9, Ms1 3.5/9, ms1mx3.1/57, Error ellipse: s-maj=32.7km s-min=14.2km az=136.0*

*NEIC **07** 06:19:32.3±0.2, 15.°17S×173.°53W, h10^{km}, mb4.6/38, Error ellipse: s-maj=9.5km s-min=3.9km az=129.0*

*ISCJB **07** 06:19:33.7±0.3, 15.°15S±0.°07×173.°64W±0.°08, h30^{km}, mb4.5/47, MS3.7/7, Error ellipse: s-maj=13.9km s-min=5.8km az=38.2*

ISC 07 06:19:35.3±0.5**, 15.°2S**±0.°1×**173.°5W**±0.°1**, h30**^{km}**, n78, σ0.^{s}84**/70**, mb4.5**/47**, MS3.7**/7**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**2.06**	**52**	Pn	**Pn**	**06 20 05.4**	**-2.5**
	181nm,0.3s,baz=190,slow=1.1,SNR=124						
AFI				Sn	Sn	06 20 24.4	-8.1
	924nm,0.3s,baz=90,slow=13,SNR=10.0						
AFI				LR	LR	06 20 47.0	
	comp=Z,528nm,20.3s,baz=201,slow=36						
KNTN	**Kanton**	**12.44**	**8**	*e*Pn	**Pn**	**06 22 30.3**	**-0.1**
RAO	**Raoul Island**	**14.60**	**196**	LR	LR	06 26 54.6	
	comp=Z,53nm,19.3s,baz=141,slow=30						
URZ	**Urewera**	**24.46**	**198**	P	**P**	**06 24 50.7**	**-0.8**
	14nm,0.6s,baz=354,slow=3.0,SNR=17						
URZ				LR	LR	06 33 00.4	
	comp=Z,225nm,21.0s,baz=195,slow=33						
URZ	**Urewera**	**24.46**	**198**	*e*P	**P**	**06 24 51.1**	**-0.4**
	17nm,0.7s						
BKZ	**Black Stump Fm**	**25.48**	**198**	*e*P	**P**	**06 25 00.5**	**-0.3**
	55nm,1.4s						
BFZ	**Birch Farm**	**26.95**	**197**	*e*P	**P**	**06 25 13.5**	**-0.6**
	64nm,1.3s						
THZ	**Tophouse**	**29.00**	**201**	*e*P	**P**	**06 25 30.9**	**-1.6**
	12nm,1.0s						
LHI	**Lord Howe Isla**	**29.90**	**232**	*e*P	**P**	**06 25 40.2**	**-0.3**
	61nm,1.0s						
LTZ	**Lake Taylor**	**30.12**	**201**	*e*P	**P**	**06 25 43.5**	**+1.1**
	9.3nm,1.1s						
DCZ	**Deep Cove**	**34.33**	**204**	*e*P	**P**	**06 26 18.6**	**-0.6**
	59nm,1.4s						
WHZ	**Wether Hill Ro**	**34.38**	**203**	*e*P	**P**	**06 26 20.2**	**+0.6**
	42nm,1.3s						
ARMA	**Armidale**	**35.41**	**239**	*e*P	**P**	**06 26 28.2**	**-0.7**
	26nm,1.4s						
H11S2	**WAKE ISLAND Hy**	**38.75**	**329**	T	T	07 07 47.2	
	baz=146,slow=75,SNR=49						
H11S3	**WAKE ISLAND Hy**	**38.76**	**329**	T	T	07 07 38.5	
	baz=146,slow=75,SNR=9.5						
H11S1	**WAKE ISLAND Hy**	**38.76**	**329**	T	T	07 07 45.2	
	baz=146,slow=75,SNR=23						
H11N3	**WAKE ISLAND Hy**	**39.69**	**330**	T	T	07 09 46.6	
	baz=150,slow=77,SNR=12						
H11N1	**WAKE ISLAND Hy**	**39.70**	**330**	T	T	07 09 44.3	
	baz=150,slow=77,SNR=10						
H11N2	**WAKE ISLAND Hy**	**39.71**	**330**	T	T	07 09 31.9	
	baz=150,slow=77,SNR=10.0						
STKA	**Stephens Creek**	**44.10**	**240**	P	**P**	**06 27 39.8**	**-1.2**
	2.5nm,0.3s,baz=9.5,slow=6.1,SNR=5.3						
STKA	**Stephens Creek**	**44.10**	**240**	*e*P	**P**	**06 27 40.6**	**-0.4**
	1.0nm,0.9s						
BBOO	**Buckleboo**	**48.88**	**240**	*e*P	**P**	**06 28 17.6**	**-1.0**
	21nm,1.4s						
WB2	**Warramunga Arr**	**49.83**	**257**	*e*P	**P**	**06 28 25.1**	**-0.8**
WRAB	**Tennant Creek**	**49.83**	**257**	*e*P	**P**	**06 28 25.0**	**-1.0**
	3.6nm,0.7s						
WR1	**Warramunga Arr**	**49.84**	**257**	*e*P	**P**	**06 28 25.1**	**-0.9**
	5.3nm,0.7s						
WRA	**Warramunga Arr**	**49.84**	**257**	P	**P**	**06 28 25.1**	**-0.9**
	1.8nm,0.4s,baz=95,slow=6.4,SNR=65						
WRA				PcP	**PcP**	**06 29 46.6**	**+0.1**
	0.7nm,0.6s,baz=97,slow=3.3,SNR=3.7						
AS01	**Alice Springs**	**50.09**	**252**	*e*P	**P**	**06 28 26.9**	**-1.0**
AS31	**Alice Springs**	**50.13**	**252**	*e*P	**P**	**06 28 27.3**	**-0.9**
	2.3nm,0.8s						
ASAR	**Alice Springs**	**50.13**	**252**	P	**P**	**06 28 27.5**	**-0.7**
	6.4nm,0.7s,baz=88,slow=8.0,SNR=73						
FORT	**Forrest**	**55.47**	**243**	*e*P	**P**	**06 29 06.2**	**-1.4**
	17nm,1.0s						
MMRI	**Maumere**	**63.08**	**268**	*e*P	**P**	**06 30 00.9**	**+0.4**
	59nm,0.4s						
SBA	**Scott Base**	**63.47**	**185**	*e*P	**P**	**06 30 03.4**	**+1.4**
	7.3nm,1.3s						
UNV	**Unalaska Valle**	**69.00**	**4**	*e*P	**P**	**06 30 38.4**	**+0.8**
	24nm,1.4s						
CASY	**Casey**	**70.59**	**205**	*e*P	**P**	**06 30 48.5**	**+1.1**
	3.0nm,0.9s						
MLAC	**Mammoth, Mammo**	**73.40**	**42**	*e*P	**P**	**06 31 04.4**	**-0.6**
YBH	**Yreka Blue Hor**	**73.45**	**37**	P	**P**	**06 31 05.8**	**+0.8**
	3.4nm,0.8s,baz=81,slow=0.9,SNR=8.8						
YBH				LR	LR	06 56 07.7	
	comp=Z,39nm,19.0s,baz=260,slow=30						
NV01	**Mina Array Sit**	**74.20**	**42**	*e*P	**P**	**06 31 09.3**	**-0.3**
NVAR	**Mina Array Bea**	**74.20**	**42**	P	**P**	**06 31 09.9**	**+0.3**
	1.0nm,0.7s,baz=229,slow=10,SNR=11						
NVAR				LR	LR	06 55 43.2	
	comp=Z,37nm,20.2s,baz=90,slow=29						
QSPA	**South Pole Qui**	**74.87**	**180**	P	**P**	**06 31 12.8**	**-0.2**
	6.6nm,0.8s,baz=329,slow=0.9,SNR=27						
QSPA	**South Pole Qui**	**74.87**	**180**	*e*P	**P**	**06 31 12.9**	**0.0**
	8.2nm,0.8s						
MOD	**Modoc Plateau**	**74.98**	**38**	*e*P	**P**	**06 31 14.6**	**+0.6**
	2.3nm,0.8s						
K05A	**Summer Lake**	**75.13**	**37**	*e*P	**P**	**06 31 15.6**	**+0.7**
	5.8nm,0.9s						
Y14A	**Wickenburg**	**75.44**	**48**	*e*P	**P**	**06 31 17.2**	**+0.5**
	1.9nm,0.7s						
PINE	**Pine Mountain**	**75.75**	**36**	*e*P	**P**	**06 31 19.8**	**+1.3**
	8.1nm,0.9s						
TUC	**Tucson**	**76.29**	**51**	*e*P	**P**	**06 31 22.4**	**+0.8**
	2.7nm,0.8s						
WVOR	**Wild Horse Val**	**76.29**	**39**	*e*P	**P**	**06 31 22.3**	**+0.9**
	4.7nm,1.0s						
X16A	**Lo Mia Camp, P**	**76.81**	**49**	*e*P	**P**	**06 31 25.6**	**+1.0**
	3.4nm,0.8s						
J08A	**Circle Bar Ran**	**76.93**	**38**	*e*P	**P**	**06 31 25.9**	**+0.9**
	7.1nm,1.3s						
BMO	**Blue Mountains**	**78.48**	**37**	*e*P	**P**	**06 31 34.1**	**+0.5**
	1.7nm,0.9s						
HLID	**Hailey**	**79.49**	**39**	*e*P	**P**	**06 31 40.3**	**+1.0**
	4.3nm,0.9s						
BALM	**Baldy**	**79.91**	**15**	*e*P	**P**	**06 31 40.7**	**-0.4**
	6.8nm,1.0s						
TRF	**Thorofare Moun**	**80.42**	**10**	*e*P	**P**	**06 31 44.0**	**+0.2**
	3.6nm,1.1s						
TXAR	**Lajitas Array**	**80.53**	**56**	P	**P**	**06 31 45.4**	**+0.2**
	1.1nm,1.1s,baz=224,slow=5.0,SNR=6.8						
TXAR				LR	LR	07 00 28.0	
	comp=Z,21nm,18.5s,baz=0.0,slow=30						
ANMO	**Albuquerque**	**80.70**	**50**	P	**P**	**06 31 46.4**	**+0.4**
	1.1nm,0.7s,baz=210,slow=7.4,SNR=6.7						
S22A	**4UR Ranch, Cre**	**81.66**	**47**	*e*P	**P**	**06 31 52.3**	**+1.1**
	2.2nm,0.8s						
WRH	**Wood River Hil**	**81.74**	**11**	*e*P	**P**	**06 31 51.0**	**+0.4**
	9.2nm,1.5s						
CCB	**Clear Creek Bu**	**81.96**	**11**	*e*P	**P**	**06 31 52.1**	**+0.3**
	3.1nm,1.1s						
BW06	**Boulder Array**	**82.14**	**42**	*e*P	**P**	**06 31 54.5**	**+1.0**
	3.0nm,1.3s						
PD31	**Pinedale Array**	**82.14**	**42**	*e*P	**P**	**06 31 53.6**	**+0.1**
PDAR	**Pinedale Array**	**82.14**	**42**	P	**P**	**06 31 53.6**	**+0.1**
	0.8nm,0.8s,baz=241,slow=4.9,SNR=7.6						
PDAR				LR	LR	07 02 00.5	
	comp=Z,25nm,20.5s,baz=262,slow=31						
IL1	**Eielson Array**	**82.24**	**11**	*e*P	**P**	**06 31 53.6**	**+0.4**
ILAR	**Eielson Array**	**82.24**	**11**	P	**P**	**06 31 52.9**	**-0.3**
	0.5nm,0.6s,baz=230,slow=6.3,SNR=12						
ILB	**Eielson Array**	**82.24**	**11**	*e*P	**P**	**06 31 52.9**	**-0.3**
BOZ	**Bozeman (W)**	**82.25**	**39**	*e*P	**P**	**06 31 54.8**	**+0.9**
	4.6nm,1.4s						
HRY	**Holter Researc**	**82.70**	**38**	*e*P	**P**	**06 31 56.9**	**+0.6**
EGAK	**Eagle**	**83.42**	**13**	*e*P	**P**	**06 31 57.5**	**-1.8**
	3.3nm,0.6s						
CMIG	**Matias Romero**	**83.86**	**71**	LR	LR	07 01 27.0	
	comp=Z,36nm,18.3s,baz=226,slow=30						
MAW	**Mawson**	**87.99**	**199**	P	**P**	**06 32 21.8**	**-0.3**
	2.7nm,0.8s,baz=150,slow=9.5,SNR=4.2						
MAW	**Mawson**	**87.99**	**199**	*e*P	**P**	**06 32 21.8**	**-0.3**
	0.6nm,0.9s						
ULM	**Lac du Bonnet**	**93.79**	**39**	LR	LR	07 09 33.5	
	comp=Z,29nm,19.2s,baz=282,slow=32						
BVAR	**Borovoye Array**	**117.67**	**322**	PKP	**PKPdf**	**06 38 18.4**	**0.0**
	0.5nm,0.5s,baz=187,slow=2.3,SNR=2.6						
BUR04	**Bucovina Ar. S**	**144.14**	**338**	*e*PKPdf	**PKPdf**	**06 39 08.7**	**+0.4**
TSUM	**Tsumeb**	**144.15**	**198**	*e*PKPdf	**PKPdf**	**06 39 08.3**	**-1.0**
TIRR	**Tirgusor**	**145.42**	**332**	*e*PKPbc	**PKPab**	**06 39 11.7**	**+1.1**
GERES	**GERESS Array B**	**145.91**	**352**	PKPbc	**PKPab**	**06 39 13.4**	**+1.0**
	0.4nm,0.5s,baz=48,slow=2.0,SNR=4.2						
BR101	**Keskin Array S**	**145.95**	**321**	*e*PKPdf	**PKPab**	**06 39 13.2**	**+0.3**
BRTR	**Keskin Array B**	**145.95**	**321**	PKPbc	**PKPab**	**06 39 13.2**	**+0.3**
	5.6nm,0.9s,baz=116,slow=2.9,SNR=18						
AGG	**Agios Georgios**	**152.49**	**333**	*e*PKPbc	**PKPbc**	**06 39 29.2**	**+0.2**

GUC 07 06:20:08.9±0.6**, 37.°75S**×**73.°34W, h34**^{km}±3^{km}**, ML3.5, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCSP	**San Pedro de C**	**0.92**	**11**	*e*P	Pn	06 20 24.8	-0.6
CCSP				*e*S	Sn	06 20 37.0	-0.4
TMU	**Temuco**	**1.14**	**150**	*e*P	Pn	06 20 28.4	-0.1
TMU				*e*S	Sn	06 20 43.5	+0.5
TMU				IAML		06 20 46.0	
	comp=N,1μm,0.5s						
CCHI	**Chillan**	**1.52**	**42**	*e*P	Pn	06 20 34.6	+0.9
CCHI				*e*S	Sn	06 20 53.5	+1.1
CCHI				IAML		06 20 55.2	
	comp=N,1μm,0.6s						

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*IDC **07** 06:39:17.2±12.0, 15.°69N×91.°15W, h0^{km}, mb3.2/2, mb1 3.6/3, mb1mx3.3/47, mbtmp3.1/3, ML3.3/1, Error ellipse: s-maj=246.5km s-min=109.8km az=8.0*

*MEX **07** 06:39:17.2±0.6, 14.°39N×93.°27W, h13^{km}±49^{km}, MD3.8*

ISC 07 06:39:18.1±1.8**, 14.°6N**±0.°1×**93.°12W**±0.°08**, h10**^{km}**, n7, σ2.^{s}49**/11**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		**0.88**	**69**	*i* P	**Pb**	**06 39 34.8**	**-0.8**
THIG				*i* S	**Sg**	**06 39 47.7**	**+1.0**
PCIG		**1.11**	**355**	*e*P	**Pn**	**06 39 37.2**	**-2.5**
PCIG				*i* S	**Sb**	**06 39 54.1**	**+0.3**
CCIG	**Comitan**	**1.93**	**29**	*e*P	**Pn**	**06 39 51.0**	**-0.1**
CCIG				*e*S	**Sn**	**06 40 16.2**	**+0.7**
TGIG		**2.17**	**360**	*e*P	**Pn**	**06 39 53.2**	**-1.1**
TGIG				*i* S	**Sn**	**06 40 21.8**	**+0.5**
TXAR	**Lajitas Array**	**17.61**	**328**	P	**P**	**06 43 26.7**	**+1.9**
	0.0nm,0.3s,baz=142,slow=14,SNR=4.0						
NVAR	**Mina Array Bea**	**32.53**	**322**	P	**P**	**06 45 53.8**	**+4.3**
	0.1nm,0.3s,baz=125,slow=9.4,SNR=2.6						
YKA	**Yellowknife Ar**	**50.20**	**347**	P	**P**	**06 48 09.6**	**-4.2**
	0.3nm,0.6s,baz=153,slow=7.6,SNR=3.8						

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*ISCJB **07** 06:41:27.6±0.3, 44.°12N±0.°02×6.°90E±0.°02, h12^{km}±3^{km}, Error ellipse: s-maj=3.0km s-min=2.8km az=140.8*

*CSEM **07** 06:41:27.7±0.1, 44.°13N×6.°91E, h5^{km}, ML2.5/10, Error ellipse: s-maj=2.2km s-min=2.0km az=58.0*

*GEN **07** 06:41:27.6, 44.°11N×6.°91E, h0^{km}, ML1.6*

*LDG **07** 06:41:28.1±0.1, 44.°12N×6.°93E, h2^{km}, Md2.8/2, Ml2.7/7, Error ellipse: s-maj=1.0km s-min=0.9km az=44.0*

*STR **07** 06:41:28.3±0.3, 44°N±2°×°±°, h7^{km}, MLv1.9/4*

*ROM **07** 06:41:28.4±0.2, 44.°140N±0.°008×6.°98E±0.°01, h10^{km}, ML1.8/10*

ISC 07 06:41:27.2±0.9**, 44.°12N**±0.°02×**6.°94E**±0.°02**, h13**^{km}±6^{km}**, n48, σ0.^{s}38**/79**, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ISO	**Isola**	**0.10**	**50**	Pg	**Pg**	**06 41 30.4**	**0.0**
ISO	**Isola**	**0.10**	**50**	Pg	**Pg**	**06 41 30.4**	**0.0**
ISO				Sg	**Sg**	**06 41 32.4**	**-0.2**
STV	**Sant Anna di V**	**0.31**	**65**	P	**Pb**	**06 41 34.2**	**-0.5**
STV	**Sant Anna di V**	**0.31**	**65**	P	**Pb**	**06 41 34.4**	**-0.3**
STV				S	**Sb**	**06 41 38.9**	**-0.7**
STV				AML	AML		
	comp=E,101μm,1.6s						
STV				AML	AML		
	comp=N,109μm,0.7s						
STV				AML	AML		
	comp=E,101μm,1.6s						
STV				AML	AML		
	comp=N,109μm,0.7s						
STV				AML	AML		
	comp=E,101μm,1.6s						
STV				AML	AML		
	comp=N,109μm,0.7s						
CALF	**Calern**	**0.36**	**182**	Pg	**Pb**	**06 41 35.4**	**-0.2**
CALF	**Calern**	**0.36**	**182**	Pg	**Pb**	**06 41 35.4**	**-0.2**
CALF				Sg	**Sb**	**06 41 40.8**	**-0.4**
ENR	**Entracque**	**0.36**	**72**	P	**Pb**	**06 41 35.2**	**-0.4**
ENR	**Entracque**	**0.36**	**72**	P	**Pb**	**06 41 35.4**	**-0.2**
ENR				S	**Sb**	**06 41 40.8**	**-0.4**
ENR				AML	AML		
	comp=E,159μm,0.4s						
ENR				AML	AML		
	comp=N,189μm,0.2s						
ENR				AML	AML		
	comp=E,159μm,0.4s						
ENR				AML	AML		
	comp=N,189μm,0.2s						
ENR				AML	AML		
	comp=N,189μm,0.2s						
ENR				AML	AML		
	comp=E,159μm,0.4s						
SURF	**Saint Ours**	**0.38**	**346**	Pg	**Pb**	**06 41 35.6**	**-0.3**
SURF	**Saint Ours**	**0.38**	**346**	Pg	**Pb**	**06 41 35.6**	**-0.3**
SURF				Sg	**Sg**	**06 41 39.9**	**-0.1**
PZZ	**Stroppo**	**0.41**	**18**	P	**Pb**	**06 41 36.2**	**-0.3**
PZZ	**Stroppo**	**0.41**	**18**	P	**Pb**	**06 41 36.2**	**-0.3**
PZZ				S	**Sb**	**06 41 42.4**	**-0.3**
PZZ				AML	AML		
	comp=E,174μm,1.2s						
PZZ				AML	AML		
	comp=N,192μm,0.5s						
PZZ				AML	AML		
	comp=E,174μm,1.2s						
PZZ				AML	AML		
	comp=N,193μm,0.5s						
PZZ				AML	AML		
	comp=N,193μm,0.5s						
PZZ				AML	AML		
	comp=E,174μm,1.2s						
SBF	**Sospel**	**0.44**	**125**	*e*Pg	**Pb**	**06 41 36.9**	**0.0**
SBF				*e*Sg	**Sb**	**06 41 43.3**	**-0.1**
	comp=E,116nm,0.3s						
SBF	**Sospel**	**0.44**	**125**	*e*Pg	**Pb**	**06 41 36.9**	**0.0**
SBF				*e*Sg	**Sb**	**06 41 43.3**	**-0.1**
	comp=E,58nm,0.3s						
OGDI	**Digne**	**0.46**	**270**	Pg	**Pn**	**06 41 38.8**	**-0.8**
OGDI				Sg	**Sb**	**06 41 44.4**	**+0.5**
SAOF	**Saorge**	**0.46**	**106**	P	**Pb**	**06 41 37.2**	**-0.1**
SAOF				S	**Sb**	**06 41 44.2**	**+0.1**
SAOF				AML	AML		
	comp=E,122μm,0.7s						
SAOF				AML	AML		
	comp=N,184μm,0.4s						
SAOF				AML	AML		
	comp=E,122μm,0.7s						
SAOF				AML	AML		
	comp=N,184μm,0.4s						
SAOF				AML	AML		
	comp=N,184μm,0.4s						
SAOF				AML	AML		
	comp=E,122μm,0.7s						
SAOF				AML	AML		
	comp=E,122μm,0.7s						
SAOF				AML	AML		
	comp=N,184μm,0.4s						
MON	**Monaco**	**0.52**	**137**	Pg	**Pb**	**06 41 38.7**	**+0.5**
MON	**Monaco**	**0.52**	**137**	Pg	**Pb**	**06 41 38.7**	**+0.5**
MON				Sg	**Sb**	**06 41 46.4**	**+0.7**
FRF	**La Foret Royal**	**0.59**	**201**	*e*Pg	**Pb**	**06 41 39.2**	**-0.3**
FRF				*e*Sg	**Sb**	**06 41 47.3**	**-0.4**
	comp=N,54nm,0.2s						
FRF	**La Foret Royal**	**0.59**	**201**	*e*Pg	**Pb**	**06 41 39.2**	**-0.3**
FRF				*e*Sg	**Sb**	**06 41 47.3**	**-0.4**
	comp=N,27nm,0.2s						
NEGI	**Seborga**	**0.61**	**116**	P	**Pb**	**06 41 39.8**	**0.0**
NEGI	**Seborga**	**0.61**	**116**	P	**Pb**	**06 41 40.2**	**+0.4**
NEGI				S	**Sb**	**06 41 48.9**	**+0.5**
NEGI				AML	AML		
	comp=E,93μm,0.7s						
NEGI				AML	AML		
	comp=N,142μm,1.0s						
NEGI				AML	AML		
	comp=E,93μm,0.7s						
NEGI				AML	AML		
	comp=N,142μm,1.0s						
NEGI				AML	AML		
	comp=N,142μm,1.0s						
NEGI				AML	AML		
	comp=E,93μm,0.7s						
MBDF	**Montbardon**	**0.62**	**349**	*e*Pg	**Pb**	**06 41 39.9**	**-0.2**
MBDF				*e*Sg	**Sg**	**06 41 47.9**	**+0.2**
	comp=E,31nm,0.4s						
MBDF	**Montbardon**	**0.62**	**349**	*e*Pg	**Pb**	**06 41 39.9**	**-0.2**
MBDF				*e*Sg	**Sg**	**06 41 47.9**	**+0.2**
	comp=E,16nm,0.4s						
GBOS	**Grotte di Boss**	**0.66**	**79**	P	**Pb**	**06 41 40.6**	**-0.1**
IMI	**Imperia**	**0.72**	**106**	P	**Pb**	**06 41 42.1**	**+0.5**
RRL	**Rocca Remolon**	**0.81**	**353**	P	**Pb**	**06 41 43.5**	**+0.2**
RRL	**Rocca Remolon**	**0.81**	**353**	P	**Pb**	**06 41 43.5**	**+0.2**
RRL				S	**Sb**	**06 41 54.6**	**+0.3**
RRL				AML	AML		
	comp=E,65μm,1.1s						
RRL				AML	AML		
	comp=N,80μm,0.5s						
RRL				AML	AML		
	comp=E,65μm,1.1s						
RRL				AML	AML		
	comp=N,80μm,0.5s						
RRL				AML	AML		
	comp=E,65μm,1.1s						
RRL				AML	AML		
	comp=N,80μm,0.5s						
RORO	**Rocca Rossa**	**0.81**	**90**	P	**Pb**	**06 41 43.4**	**+0.2**
RORO	**Rocca Rossa**	**0.81**	**90**	P	**Pb**	**06 41 43.4**	**+0.2**
RORO				AML	AML		
	comp=E,99μm,1.0s						
RORO				AML	AML		
	comp=N,118μm,1.0s						
RORO				AML	AML		
	comp=E,99μm,1.0s						
RORO				AML	AML		
	comp=N,118μm,1.0s						
RORO				AML	AML		
	comp=N,118μm,1.0s						
RORO				AML	AML		
	comp=E,99μm,1.0s						
LMR	**La Mourre**	**0.84**	**202**	*e*Pg	**Pg**	**06 41 43.6**	**+0.1**
LMR				*e*Sg	**Sb**	**06 41 54.9**	**0.0**
	comp=E,64nm,0.2s						
LMR	**La Mourre**	**0.84**	**202**	*e*Pg	**Pg**	**06 41 43.6**	**+0.1**
LMR				*e*Sg	**Sb**	**06 41 54.9**	**0.0**
	comp=E,32nm,0.2s						
SMRF	**Simiane la Rot**	**0.99**	**262**	*e*Pg	**Pn**	**06 41 47.3**	**+0.4**
SMRF				*e*Sg	**Sb**	**06 41 59.3**	**0.0**
	comp=E,37nm,0.3s						
SMRF	**Simiane la Rot**	**0.99**	**262**	*e*Pg	**Pn**	**06 41 47.3**	**+0.4**
SMRF				*e*Sg	**Sb**	**06 41 59.3**	**0.0**
	comp=E,19nm,0.3s						
QLNO	**Quiliano**	**1.03**	**78**	P	**Pn**	**06 41 47.7**	**+0.3**
QLNO				AML	AML		
	comp=E,97μm,1.1s						
QLNO				AML	AML		
	comp=N,73μm,0.4s						
QLNO				AML	AML		
	comp=N,73μm,0.4s						
QLNO				AML	AML		
	comp=E,97μm,1.1s						
RSP	**Reno Superiore**	**1.06**	**13**	P	**Pn**	**06 41 47.8**	**-0.1**
RSP	**Reno Superiore**	**1.06**	**13**	P	**Pn**	**06 41 47.8**	**-0.1**
RSP				AML	AML		
	comp=E,89μm,0.9s						
RSP				AML	AML		
	comp=N,88μm,0.6s						
RSP				AML	AML		
	comp=N,88μm,0.6s						
RSP				AML	AML		
	comp=E,89μm,0.9s						
ORIF	**Oris-en-Rattie**	**1.10**	**317**	*e*Pg	**Pg**	**06 41 48.9**	**+0.4**
ORIF				*e*Sg	**Sb**	**06 42 02.7**	**+0.1**
	comp=E,70nm,0.7s						
ORIF	**Oris-en-Rattie**	**1.10**	**317**	*e*Pg	**Pg**	**06 41 48.9**	**+0.4**
ORIF				*e*Sg	**Sb**	**06 42 02.7**	**+0.1**
	comp=E,35nm,0.7s						
ORIF	**Oris-en-Rattie**	**1.10**	**317**	P	**Pg**	**06 41 48.8**	**+0.4**
ORIF				AML	AML		
	comp=E,75μm,0.5s						
ORIF				AML	AML		
	comp=N,44μm,0.5s						
ORIF				AML	AML		
	comp=E,75μm,0.5s						
ORIF				AML	AML		
	comp=N,44μm,0.5s						
LPG	**La Plagne**	**1.39**	**355**	*e*Pn	**Pb**	**06 41 53.4**	**+0.2**
LPG				*e*Sn	**Sb**	**06 42 11.0**	**0.0**
	comp=N,33nm,0.6s						
LPG	**La Plagne**	**1.39**	**355**	*e*Pn	**Pb**	**06 41 53.4**	**+0.2**
LPG				*e*Sn	**Sb**	**06 42 11.0**	**0.0**
	comp=N,17nm,0.6s						
LPL	**La Plagne**	**1.41**	**354**	*e*Pn	**Pb**	**06 41 53.6**	**+0.1**
LPL				*e*Sn	**Sn**	**06 42 11.3**	**0.0**
	comp=N,11nm,0.5s						
LPL	**La Plagne**	**1.41**	**354**	*e*Pn	**Pb**	**06 41 53.6**	**+0.1**
LPL				*e*Sn	**Sn**	**06 42 11.3**	**0.0**
	comp=N,5.3nm,0.5s						
VIVF	**Saint-Julien-l**	**1.78**	**295**	*e*Pn	**Pn**	**06 41 58.7**	**+0.9**
VIVF				*e*Sn	**Sn**	**06 42 19.5**	**-0.8**
	comp=N,9.9nm,0.4s						
VIVF	**Saint-Julien-l**	**1.78**	**295**	*e*Pn	**Pn**	**06 41 58.7**	**+0.9**
VIVF				*e*Sn	**Sn**	**06 42 19.5**	**-0.8**
	comp=N,4.9nm,0.4s						
LASF	**Ste Croix**	**2.22**	**270**	*e*Pn	**Pn**	**06 42 04.1**	**+0.3**
LASF				*e*Sn	**Sn**	**06 42 30.2**	**-0.9**
	comp=N,6.7nm,0.4s						
LASF	**Ste Croix**	**2.22**	**270**	*e*Pn	**Pn**	**06 42 04.1**	**+0.3**
LASF				*e*Sn	**Sn**	**06 42 30.2**	**-0.9**
	comp=N,3.3nm,0.4s						

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*NIED **07** 06:46:00, 37.°70N×141.°70E, h62^{km}, Mw3.9 Best double* *couple: $M_0$8.37000×10^{14} NP1:ϕ_s52.00000°,δ44.00000°, λ70.00000°. NP2:ϕ_s258.00000°,δ49.00000°,λ108.00000°.*

*IDC **07** 06:46:36.6±1.4,37°.77N×142°.11E,h0^{km},mb3.8/5, mb1 3.9/7,mb1mx3.5/73,mbtmp3.8/7,ML3.6/2,Error ellipse: s-maj=35.7km s-min=21.3km az=79.0*

*JMA **07** 06:46:44.4,37°.66N×141°.74E,h47^{km}±1^{km},M3.9*

ISC 07 06:46:41.0±1.9,**37°.64N**±0°.04×**141°.95E**±0°.08,**h24**^{km}±12^{km}, **n24,**σ**1^s.42**/31,**mb3.8**/5,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	0.90	253	P	Pn	06 46 58.7	+0.5
JFK				S	Sb	06 47 08.7	-0.8
JIO	Ouri	0.94	330	P	Pn	06 47 00.1	+1.3
JIO				S	Sb	06 47 11.1	+0.3
JMM	Marumori	0.94	284	P	Pn	06 46 59.1	+0.3
JMM				S	Sb	06 47 09.9	-0.9
ONAJ	Iwakimizuishiy	1.06	240	P	Pn	06 47 01.1	+0.6
ONAJ				S	Sb	06 47 13.0	-1.3
JOU	Okura	1.25	306	P	Pn	06 47 03.7	+0.7
JOU				S	Sn	06 47 18.1	-1.0
JFT	Otama	1.29	265	P	Pb	06 47 04.5	-0.1
JFT				S	Sn	06 47 19.3	-0.7
JMK	Ichinoseki	1.43	337	P	Pb	06 47 07.3	+0.3
JMK				S	Sn	06 47 23.7	+0.2
JYS	Shirataka	1.60	292	P	Pn	06 47 08.6	+0.8
JYS				S	Sn	06 47 27.6	-0.1
JYK	Kaneyama	1.79	316	P	Pn	06 47 11.7	+1.3
JYK				S	Sn	06 47 31.8	-0.6
JFY	Yanaizu	1.80	263	P	Pn	06 47 11.6	+1.0
JFY				eS	Sn	06 47 31.5	-1.2
MJAR	Matsushiro Arr	3.18	251	Pn	Pn	06 47 31.1	+1.4
	4.8nm,0.3s,baz=55,slow=17,SNR=29						
MJAR				Sn	Sn	06 48 10.2	+3.4
	2.7nm,0.3s,baz=314,slow=46,SNR=4.8						
MAT	Matsushiro	3.19	251	P	Pn	06 47 31.7	+2.1
MAT				S	Sn	06 48 10.5	+3.6
JHJ	Hachijo jima 2	4.84	202	Pn	Pn	06 47 54.1	+1.7
	9.0nm,0.3s,baz=94,slow=19,SNR=2.3						
JHJ				Sn	Sn	06 48 45.4	-2.3
	29nm,0.3s,baz=270,slow=23,SNR=5.6						
H11N2	WAKE ISLAND Hy	28.10	122	T	T	07 22 17.7	
	baz=316						
H11N1	WAKE ISLAND Hy	28.11	123	T	T	07 22 16.0	
	baz=316						
H11N3	WAKE ISLAND Hy	28.12	122	T	T	07 22 17.0	
	baz=316						
H11S1	WAKE ISLAND Hy	28.84	125	T	T	07 23 06.1	
	baz=317						
H11S3	WAKE ISLAND Hy	28.84	125	T	T	07 23 10.1	
	baz=317						
H11S2	WAKE ISLAND Hy	28.86	125	T	T	07 23 02.4	
	baz=317						
MKAR	Makanchi Array	44.16	302	P	P	06 54 46.7	-1.0
	0.3nm,0.7s,baz=95,slow=6.5,SNR=3.7						
KURBB	Kurchatov Arra	45.97	308	P	P	06 55 00.8	-1.1
	0.7nm,0.5s,baz=83,slow=8.1,SNR=5.8						
WRA	Warramunga Arr	57.72	188	P	P	06 56 29.6	-0.2
	1.2nm,0.5s,baz=5.8,slow=7.3,SNR=19						
ASAR	Alice Springs	61.45	188	P	P	06 56 56.0	+0.5
	0.2nm,0.5s,baz=10,slow=6.6,SNR=6.1						
HFS	Hagfors	73.71	336	P	P	06 58 12.3	-0.3
	1.5nm,0.8s,baz=40,slow=5.6,SNR=3.1						

MEX 07 06:50:23.6±0.4,**14°.47N**×**93°.32W**,**h20**^{km}±42^{km},**MD3.7**, **Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.10	67	eP	Pn	06 50 40.7	-3.2
THIG				i S	Sb	06 50 53.8	-4.2
PCIG		1.23	4	i P	Pn	06 50 42.1	-3.6
PCIG				i S	Sb	06 50 57.5	-4.0
CCIG	Comitan	2.13	32	eP	Pn	06 50 55.5	-2.7
CCIG				i S	Sn	06 51 21.4	-2.7
TGIG		2.30	5	i P	Pn	06 50 57.3	-3.2
TGIG				i S	Sn	06 51 24.7	-3.5

MEX 07 06:52:37.7±0.6,**13°.97N**×**93°.46W**,**h22**^{km}±25^{km},**MD3.7**, **Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.49	51	eP	Pn	06 53 01.0	-2.1
THIG				eS	Sn	06 53 17.7	-4.1
PCIG		1.74	8	i P	Pn	06 53 03.7	-2.8
PCIG				i S	Sn	06 53 24.5	-3.5
CCIG	Comitan	2.63	29	eP	Pn	06 53 17.3	-1.7
CCIG				i S	Sn	06 53 47.2	-3.1
TGIG		2.81	7	i P	Pn	06 53 18.9	-2.5
TGIG				i S	Sn	06 53 51.4	-3.2

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*CSEM **07** 06:54:58.6±0.6,51°.54N×16°.05E,h2^{km},ML2.8/7,Error ellipse: s-maj=8.3km s-min=5.4km az=5.0*

*PRU **07** 06:54:59.2,51°.54N×16°.08E,h0^{km}*

ISC 07 06:54:58.3±1.7,**51°.57N**±0°.07×**16°.08E**±0°.05,**h0**^{km},**n26**, σ**0^s.53**/51,**Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.74	170	ePg	Pg	06 55 12.9	+0.5
KSP				eSg	Sg	06 55 22.6	+0.7
KSP	Ksiaz	0.74	170	ePg	Pg	06 55 12.9	+0.5
KSP				eSg	Sg	06 55 22.6	+0.7
UPC	Upice	1.06	182	ePG	Pg	06 55 18.6	0.0
UPC				eSG	Sg	06 55 32.6	+0.2
	comp=Z,26nm,0.3s						
UPC	Upice	1.06	182	Pg	Pg	06 55 18.6	0.0
UPC				Sg	Sg	06 55 32.6	+0.2
	26nm,0.3s						
DPC	Dobruska-Polom	1.23	173	ePG	Pg	06 55 21.5	-0.3
DPC				eSG	Sg	06 55 36.9	-0.8
	comp=Z,9.5nm,0.4s						
DPC	Dobruska-Polom	1.23	173	Pg	Pg	06 55 21.5	-0.3
DPC				Sg	Sg	06 55 36.9	-0.8
	9.5nm,0.4s						
PVCC	Panska Ves	1.41	223	ePG	Pg	06 55 25.4	0.0
PVCC				eSG	Sn	06 55 44.3	-0.2
	comp=Z,25nm,0.4s						
PVCC	Panska Ves	1.41	223	Pg	Pg	06 55 25.4	0.0
PVCC				Sg	Sn	06 55 44.3	-0.2
	25nm,0.4s						
BRG	Berggiesshubel	1.51	244	PG	Pn	06 55 27.1	+0.4
BRG				SG	Sn	06 55 47.0	0.0
	15nm,0.3s						
KRLC	Kraliky	1.56	163	ePG	Pn	06 55 27.6	+0.3
KRLC				eSG	Sg	06 55 47.2	-1.1
KRLC	Kraliky	1.56	163	Pg	Pn	06 55 27.6	+0.3
KRLC				Sg	Sg	06 55 47.2	-1.1
GOPC	GO Pecny, Ondr	1.85	207	ePG	Pb	06 55 32.7	-0.3
GOPC				eSG	Sb	06 55 56.4	-0.2
	comp=Z,4.4nm,0.4s						
GOPC	GO Pecny, Ondr	1.85	207	Pg	Pb	06 55 32.7	-0.3
GOPC				Sg	Sb	06 55 56.4	-0.2
	4.4nm,0.4s						
PRU	Pruhonice	1.86	212	eSG	Sb	06 55 56.9	0.0
	comp=Z,5.8nm,0.3s						
PRU	Pruhonice	1.86	212	Sg	Sb	06 55 56.9	0.0
	5.8nm,0.3s						
CLL	Collm	1.94	264	i Pn	Pn	06 55 31.4	-1.2
	comp=Z,3.0nm,0.5s						
CLL				i Pg	Pb	06 55 35.0	+0.4
CLL				i		06 55 38.5	
CLL				i Sg	Sg	06 56 01.6	+0.8
MORC	Moravsky Berou	2.02	152	ePn	Pn	06 55 33.2	-0.5
MORC				eSg	Sb	06 56 01.8	+0.3
MORC	Moravsky Berou	2.02	152	ePN	Pn	06 55 33.2	-0.5
MORC				eSG	Sb	06 56 01.8	+0.3
VRAC	Vranov	2.28	172	ePn	Pn	06 55 37.8	+0.5
VRAC				eSg	Sg	06 56 11.4	-0.2
VRAC	Vranov	2.28	172	ePN	Pn	06 55 37.8	+0.5
VRAC				eSG	Sg	06 56 11.4	-0.2
KRUC	Moravsky	2.52	175	ePn	Pn	06 55 40.9	+0.5
KRUC				eSg	Sg	06 56 18.5	-0.6
KRUC	Moravsky	2.52	175	ePN	Pn	06 55 40.9	+0.5
KRUC				eSG	Sg	06 56 18.5	-0.6
NKC	Novy Kostel	2.66	241	eSG	Sg	06 56 23.2	-0.5
	comp=Z,6.2nm,0.3s						
NKC	Novy Kostel	2.66	241	Sg	Sg	06 56 23.2	-0.5
	comp=Z,6.2nm,0.3s						
KHC	Kasperske Hory	2.92	214	ePG	Pb	06 55 52.2	+1.0
KHC				eSN	Sn	06 56 21.4	-0.4
KHC				eSG	Sg	06 56 31.9	-0.1
	comp=Z,2.5nm,0.4s						
KHC	Kasperske Hory	2.92	214	Pg	Pb	06 55 52.2	+1.0
KHC				Sn	Sn	06 56 21.4	-0.4
KHC				Sg	Sg	06 56 31.9	-0.1
	comp=Z,2.5nm,0.4s						

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*ISK **07** 07:07:44.9,40°.82N×30°.41E,h7^{km},ML4.0/46*

*IDC **07** 07:07:44.3±1.0,40°.79N×30°.43E,h0^{km},mb3.4/4, mb1 3.4/8,mb1mx3.2/61,mbtmp3.4/8,ML3.5/4,MS3.2/4, Ms1 3.2/4,ms1mx2.5/42,Error ellipse: s-maj=22.2km s-min=10.3km az=49.0*

*ISCJB **07** 07:07:45.4±0.3,40°.82N±0°.01×30°.38E±0°.02,h11^{km}±2^{km}, mb3.5/3,MS3.7/2,Error ellipse: s-maj=2.6km s-min=2.2km az=35.9*

*DDA **07** 07:07:45.3,40°.76N×30°.41E,h7^{km},Ml4.0*

*CSEM **07** 07:07:45.8±0.1,40°.79N×30°.40E,h5^{km},ML4.0,Error ellipse: s-maj=2.1km s-min=1.7km az=31.0*

ISC 07 07:07:45.7±0.8,**40°.79N**±0°.02×**30°.41E**±0°.02,**h12**^{km}±4^{km}, **n259,**σ**1^s.06**/290,**mb3.4**/3,**20C-24D,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUV	Serdivan-Sakar	0.08	229	PG	Pg	07 07 47.7	-0.5
SAUV				SG	Sg	07 07 49.8	-0.3
SAUV	Serdivan-Sakar	0.08	229	i Pg	Pg	07 07 47.7	-0.5
SAUV				eSg	Sg	07 07 49.8	-0.3
SPNC	Sapanca-Adapaz	0.13	215	PG	Pg	07 07 48.8	-0.1
SPNC				SG	Sg	07 07 51.8	+0.6
SPNC	Sapanca-Adapaz	0.13	215	i Pg	Pg	07 07 48.8	-0.1
SPNC				eSg	Sg	07 07 51.8	+0.6
GEYV	SAKARYA_Geyve	0.32	195	⇑iP	Pg	07 07 51.9	-0.2
GEYV				i S	Sg	07 07 56.3	-0.2
GEYV	SAKARYA_Geyve	0.32	195	P	Pg	07 07 51.9	-0.2
GEYV				S	Sg	07 07 56.3	-0.2
KAND	Kocaeli-Kandir	0.34	332	⇑iP	Pb	07 07 53.3	-0.5
KAND				i S	Sb	07 07 58.2	-1.0
KAND	Kocaeli-Kandir	0.34	332	P	Pb	07 07 53.3	-0.5
KAND				S	Sb	07 07 58.2	-1.0
SAHE	Sakarya_HENDEK	0.34	80	⇓iP	Pb	07 07 52.8	-1.0
SAHE				i S	Sb	07 07 58.5	-0.8
SAHE	Sakarya_HENDEK	0.34	80	P	Pb	07 07 52.8	-1.0
SAHE				S	Sb	07 07 58.5	-0.8
GULT	Gulveren	0.37	167	PG	Pg	07 07 53.2	+0.1
GULT	Gulveren	0.37	167	ePg	Pg	07 07 53.2	+0.1
BTAS	Taskesti	0.50	116	⇓iP	Pg	07 07 55.5	0.0
BTAS				i S	Sg	07 08 02.2	0.0
BTAS	Taskesti	0.50	116	P	Pg	07 07 55.5	0.0
BTAS				S	Sg	07 08 02.2	0.0
HRT	Hereke	0.56	273	PG	Pg	07 07 56.6	-0.1
HRT	Hereke	0.56	273	ePg	Pg	07 07 56.6	-0.1
ADVT	Abdulvahap	0.62	235	PG	Pg	07 07 57.2	-0.6
ADVT	Abdulvahap	0.62	235	ePg	Pg	07 07 57.2	-0.6
SILT	Sile	0.68	302	PG	Pg	07 07 58.5	-0.4
SILT	Sile	0.68	302	ePg	Pg	07 07 58.5	-0.4
MDUB	Mudurnu	0.68	118	PG	Pg	07 07 58.9	-0.1
MDUB	Mudurnu	0.68	118	ePg	Pg	07 07 58.9	-0.1
CAVI	Cavuskoy	0.73	216	PG	Pg	07 07 59.8	0.0
CAVI	Cavuskoy	0.73	216	ePg	Pg	07 07 59.8	0.0
YLV	Yalova	0.82	254	PG	Pg	07 08 01.4	-0.1
YLV	Yalova	0.82	254	ePg	Pg	07 08 01.4	-0.1
IZI	Iznik	0.84	238	PG	Pg	07 08 01.4	-0.6
IZI	Iznik	0.84	238	ePg	Pg	07 08 01.4	-0.6
AUKUT	KUTAHYA	0.89	199	i P	Pn	07 08 11.7	+7.6
AUKUT				i S	Sn	07 08 30.8	+14
BORA	Eskisehir	0.91	178	PG	Pb	07 08 03.2	-0.4
BORA	Eskisehir	0.91	178	⇑iP	Pg	07 08 02.5	-0.8
BORA				i S	Sb	07 08 16.1	+0.3
BORA	Eskisehir	0.91	178	P	Pg	07 08 02.5	-0.8
BORA	Eskisehir	0.91	178	ePg	Pb	07 08 03.2	-0.4
BORA				S	Sb	07 08 16.0	+0.3
AUBOZ	BOZOYUK	0.93	198	PG	Pb	07 08 03.7	-0.1
AUBOZ	BOZOYUK	0.93	198	⇑iP	Pg	07 08 02.5	-1.1
AUBOZ				i S	Sg	07 08 14.6	-1.1
AUBOZ	BOZOYUK	0.93	198	P	Pg	07 08 02.5	-1.1
AUBOZ	BOZOYUK	0.93	198	ePg	Pb	07 08 03.7	-0.1
AUBOZ				S	Sg	07 08 14.6	-1.1
KDZE	Karadeniz Ereo	0.94	56	PG	Pg	07 08 03.5	-0.3
KDZE	Karadeniz Ereo	0.94	56	ePg	Pg	07 08 03.5	-0.3
KAVV	Kandilli-Istan	1.05	285	PG	Pg	07 08 05.3	-0.7
KAVV	Kandilli-Istan	1.05	285	ePg	Pg	07 08 05.3	-0.7
ISK	Istanbul-Kandi	1.06	285	PG	Pg	07 08 05.3	-0.7
ISK	Istanbul-Kandi	1.06	285	ePg	Pg	07 08 05.3	-0.7
KLYT	Kilyos	1.13	294	PN	Pg	07 08 06.8	-0.6
KLYT	Kilyos	1.13	294	ePn	Pg	07 08 06.8	-0.6
SBT5	Esenkoy-Cinarc	1.17	263	PN	Pn	07 08 08.5	+0.6
SBT5	Esenkoy-Cinarc	1.17	263	ePn	Pn	07 08 08.5	+0.6
MDNY	Mudanya-Bursa	1.23	250	PN	Pb	07 08 08.2	-0.8
MDNY	Mudanya-Bursa	1.23	250	ePn	Pb	07 08 08.2	-0.8
AUMIH	MIHALICIK	1.24	138	PN	Pg	07 08 08.8	-0.7
AUMIH	MIHALICIK	1.24	138	⇑iP	Pg	07 08 08.9	-0.7
AUMIH				i S	Sn	07 08 25.7	0.0
AUMIH	MIHALICIK	1.24	138	P	Pg	07 08 08.9	-0.7
AUMIH				S	Sn	07 08 25.7	0.0
BCAM	Yenicaga	1.26	88	⇓iP	Pg	07 08 08.9	-1.0
BCAM				i S	Sn	07 08 26.8	+0.6
BCAM	Yenicaga	1.26	88	P	Pg	07 08 08.9	-1.0
BCAM				S	Sn	07 08 26.8	+0.6
ESKT	Eskisehir	1.32	165	PN	Pn	07 08 10.2	+0.1
ESKT	Eskisehir	1.32	165	⇑iP	Pn	07 08 09.7	-0.4
ESKT				i S	Sn	07 08 28.5	+0.9
ESKT	Eskisehir	1.32	165	ePn	Pn	07 08 10.2	+0.1
SEYT	Eskypehyr	1.32	165	P	Pn	07 08 09.7	-0.4
SEYT				S	Sn	07 08 28.5	+0.9
KUTH	Kutahya	1.43	192	PN	Pg	07 08 13.0	-0.1
KUTH	Kutahya	1.43	192	ePn	Pg	07 08 13.0	-0.1
CTKS	Kestanelik-??a	1.50	288	PN	Pn	07 08 12.9	+0.4
CTKS	Kestanelik-??a	1.50	288	ePn	Pn	07 08 12.9	+0.4
TVSB	Tavsanli	1.52	209	PN	Pg	07 08 14.3	-0.7
TVSB	Tavsanli	1.52	209	ePn	Pg	07 08 14.3	-0.7
CMDR	Camlidere-ANKA	1.60	100	⇓iP	Pb	07 08 14.8	-0.5
CMDR				i S	Sg	07 08 36.4	-0.9
CMDR	Camlidere-ANKA	1.60	100	P	Pb	07 08 14.8	-0.5
CMDR				S	Sg	07 08 36.3	-0.9
AUSIV	SIVRIHISAR	1.61	147	PN	Pn	07 08 14.1	0.0
AUSIV	SIVRIHISAR	1.61	147	i P	Pn	07 08 14.0	-0.1
AUSIV				i S	Sn	07 08 34.4	-0.4
AUSIV	SIVRIHISAR	1.61	147	ePn	Pn	07 08 14.1	0.0
AUSIV				S	Sn	07 08 34.4	-0.4
BTIN	Bart˜–n	1.63	58	i P	Pn	07 08 14.1	-0.1
BTIN				i S	Sn	07 08 35.0	-0.1
BTIN	Bart˜–n	1.63	58	P	Pn	07 08 14.1	-0.1
BTIN				S	Sn	07 08 35.0	-0.1
KCTX	Karacabey (Bur	1.65	252	PN	Pn	07 08 15.3	+0.7
KCTX	Karacabey (Bur	1.65	252	ePn	Pn	07 08 15.3	+0.7
SLVT	Silivri	1.72	285	PN	Pn	07 08 16.1	+0.6
SLVT	Silivri	1.72	285	ePn	Pn	07 08 16.1	+0.6
CTYL	Yalikoy Yolu	1.74	294	PN	Pn	07 08 16.4	+0.7
CTYL	Yalikoy Yolu	1.74	294	ePn	Pn	07 08 16.4	+0.7
DST	Dursunbey	1.81	230	PN	Pn	07 08 17.8	+1.0
DST	Dursunbey	1.81	230	ePn	Pn	07 08 17.8	+1.0
GDZ	Gediz	1.84	203	i P	Pn	07 08 17.2	-0.2
GDZ				i S	Sn	07 08 39.0	-1.7
GDZ	Gediz	1.84	203	P	Pn	07 08 17.2	-0.2
GDZ				S	Sn	07 08 39.0	-1.7
SBT3	Marmara-Eregli	1.85	274	PN	Pn	07 08 17.2	+0.1
SBT3	Marmara-Eregli	1.85	274	ePn	Pn	07 08 17.2	+0.1
DURS	Dursunbey	1.90	232	⇓iP	Pn	07 08 17.5	-0.6
DURS				i S	Sn	07 08 40.8	-1.2
DURS	Dursunbey	1.90	232	P	Pn	07 08 17.5	-0.6
DURS				S	Sn	07 08 40.8	-1.2
GEDZ	Gediz	1.91	204	PN	Pn	07 08 19.1	+0.9
GEDZ	Gediz	1.91	204	ePn	Pn	07 08 19.1	+0.9
SMAA	Simav-Kutahya	2.02	213	PN	Pn	07 08 20.5	+0.9
SMAA	Simav-Kutahya	2.02	213	ePn	Pn	07 08 20.5	+0.9
LOD	Lodumlu	2.02	116	PN	Pn	07 08 19.9	+0.3
LOD	Lodumlu	2.02	116	ePn	Pn	07 08 19.9	+0.3
SIMA	Simav-Kutahya	2.03	213	PN	Pb	07 08 21.5	-1.1
SIMA	Simav-Kutahya	2.03	213	ePn	Pb	07 08 21.5	-1.1
ANTO	Ankara	2.04	116	PN	Pn	07 08 21.2	+1.1
ANTO	Ankara	2.04	116	⇑iP	Pg	07 08 24.1	-0.8
ANTO	Ankara	2.04	116	ePn	Pn	07 08 21.2	+1.1
ANTO	Ankara	2.04	116	⇑iP	Pg	07 08 24.1	-0.8
CRLT	Corlu	2.05	280	PN	Pn	07 08 21.3	+1.3
CRLT	Corlu	2.05	280	ePn	Pn	07 08 21.3	+1.3
GONE	Gonen-Balikesi	2.21	251	PN	Pn	07 08 23.1	+0.9
GONE	Gonen-Balikesi	2.21	251	ePn	Pn	07 08 23.1	+0.9
KIZT	Kizilcal	2.22	149	PN	Pn	07 08 22.6	+0.1
KIZT	Kizilcal	2.22	149	ePn	Pn	07 08 22.6	+0.1
PHSR	Pinarhisar	2.33	292	PN	Pn	07 08 24.9	+1.0
PHSR	Pinarhisar	2.33	292	ePn	Pn	07 08 24.9	+1.0
AFSR	Af¯ar-Bala (A	2.45	122	PN	Pn	07 08 26.8	+1.2
AFSR	Af¯ar-Bala (A	2.45	122	ePn	Pn	07 08 26.8	+1.2
CANT	Cankiri	2.45	93	PN	Pn	07 08 26.3	+0.7
RKY	Sarkoy-Tekirda	2.46	269	PN	Pn	07 08 25.6	-0.1
RKY	Sarkoy-Tekirda	2.46	269	ePn	Pn	07 08 25.6	-0.1
KHL	Karahalli	2.56	196	PN	Pn	07 08 28.5	+1.4
KHL	Karahalli	2.56	196	ePn	Pn	07 08 28.5	+1.4
KULA	Kula-Manisa	2.65	211	PN	Pn	07 08 30.2	+1.9
KULA	Kula-Manisa	2.65	211	ePn	Pn	07 08 30.2	+1.9
KULU	Kulu	2.65	130	PN	Pn	07 08 29.6	+1.2
KULU	Kulu	2.65	130	ePn	Pn	07 08 29.6	+1.2
BRTR	Keskin Array B	2.69	112	Pn	Pn	07 08 29.8	+0.8
	4.2nm,0.3s,baz=298,slow=11,SNR=65						
BRTR				Sn	Sg	07 09 12.7	+0.5
	7.7nm,0.3s,baz=292,slow=15,SNR=8.7						
AKS	Akhisar	2.77	227	PN	Pn	07 08 31.4	+1.5
AKS	Akhisar	2.77	227	ePn	Pn	07 08 31.4	+1.5
LPK	Lapseki	2.81	263	PN	Pn	07 08 31.2	+0.7
LPK	Lapseki	2.81	263	ePn	Pn	07 08 31.2	+0.7
CHBY	Cihanbeyli	2.92	138	PN	Pn	07 08 33.5	+1.3
CHBY	Cihanbeyli	2.92	138	ePn	Pn	07 08 33.5	+1.3
BZK	Bozkurt	2.95	66	PN	Pn	07 08 33.6	+1.2
BZK	Bozkurt	2.95	66	ePn	Pn	07 08 33.6	+1.2
EDRB	Edirne	2.95	292	PN	Pn	07 08 33.6	+1.2
EDRB	Edirne	2.95	292	ePn	Pn	07 08 33.6	+1.2
ERIK	Erikli-Kesan	2.96	269	PN	Pn	07 08 34.4	+1.9
ERIK	Erikli-Kesan	2.96	269	ePn	Pn	07 08 34.4	+1.9
ISP	Isparta	2.97	178	PN	Pn	07 08 34.2	+1.4
ISP	Isparta	2.97	178	⇓iP	Pb	07 08 38.8	+0.2
ISP	Isparta	2.97	178	P	Pb	07 08 39.4	+0.8
ISP	Isparta	2.97	178	ePn	Pn	07 08 34.2	+1.4
ISP	Isparta	2.97	178	⇓iP	Pb	07 08 38.8	+0.2
LADK	Ladik-KONYA	3.00	149	PN	Pn	07 08 35.0	+1.8
LADK	Ladik-KONYA	3.00	149	ePn	Pn	07 08 35.0	+1.8
GELI	Tayfur-Gelibol	3.02	264	PN	Pn	07 08 34.8	+1.4
GELI	Tayfur-Gelibol	3.02	264	ePn	Pn	07 08 34.8	+1.4
SERE	Sereflikochisa	3.05	126	PN	Pn	07 08 35.2	+1.3
SERE	Sereflikochisa	3.05	126	ePn	Pn	07 08 35.2	+1.3
DKL	Dikili	3.19	239	PN	Pn	07 08 37.4	+1.6
DKL	Dikili	3.19	239	ePn	Pn	07 08 37.4	+1.6
KONT	Konya--Tatoy	3.22	151	PN	Pn	07 08 36.4	+0.2
KONT	Konya--Tatoy	3.22	151	ePn	Pn	07 08 36.4	+0.2
ENEZ	Enez	3.23	270	PN	Pn	07 08 37.6	+1.3
ENEZ	Enez	3.23	270	ePn	Pn	07 08 37.6	+1.3
EZN	Ezine	3.27	254	PN	Pn	07 08 38.1	+1.4
EZN	Ezine	3.27	254	ePn	Pn	07 08 38.1	+1.4
CORM	Corum	3.28	99	PN	Pn	07 08 38.4	+1.3
CORM	Corum	3.28	99	ePn	Pn	07 08 38.4	+1.3
PRD	Provadia	3.29	318	i P	Pn	07 08 37.5	+0.5
ALN	Alexandroupoli	3.31	273	PN	Pn	07 08 39.5	+2.2
ALN	Alexandroupoli	3.31	273	P	Pn	07 08 37.3	0.0
ALN	Alexandroupoli	3.31	273	P	Pn	07 08 37.3	0.0
ALN	Alexandroupoli	3.31	273	ePn	Pn	07 08 39.5	+2.2
JMB	Yambol	3.32	302	i P	Pn	07 08 39.3	+1.8
PSN	Preselentsi	3.33	331	PN	Pn	07 08 38.5	+1.0
PSN	Preselentsi	3.33	331	i P	Pn	07 08 38.6	+1.0
PSN	Preselentsi	3.33	331	ePn	Pn	07 08 38.5	+1.0
SUTC	Sutluce-Ispart	3.34	172	PN	Pn	07 08 39.3	+1.3
SUTC	Sutluce-Ispart	3.34	172	ePn	Pn	07 08 39.3	+1.3
AYDB	Zeytinkoy-Aydi	3.45	215	PN	Pn	07 08 41.4	+2.0
AYDB	Zeytinkoy-Aydi	3.45	215	ePn	Pn	07 08 41.4	+2.0
BOZC	Bozcaada	3.46	255	PN	Pn	07 08 39.4	0.0
BOZC	Bozcaada	3.46	255	ePn	Pn	07 08 39.4	0.0
GADA	Gvkgeada	3.49	262	PN	Pn	07 08 40.4	+0.6
GADA	Gvkgeada	3.49	262	P	Pn	07 08 40.1	+0.3
GADA	Gvkgeada	3.49	262	P	Pn	07 08 40.1	+0.3
GADA	Gvkgeada	3.49	262	ePn	Pn	07 08 40.4	+0.6
BLCB	Balcova	3.54	228	PN	Pn	07 08 42.2	+1.7
BLCB	Balcova	3.54	228	ePn	Pn	07 08 42.2	+1.7
RDO	Rodhopi	3.70	277	PN	Pn	07 08 43.2	+0.4
RDO	Rodhopi	3.70	277	P	Pn	07 08 42.8	0.0
RDO	Rodhopi	3.70	277	P	Pn	07 08 42.8	0.0
RDO	Rodhopi	3.70	277	ePn	Pn	07 08 43.2	+0.4
SMTH	Samothraki Isl	3.72	267	P	Pn	07 08 42.2	-0.9
SMTH	Samothraki Isl	3.72	267	P	Pn	07 08 42.2	-0.9
KORT	Korkueli	3.79	181	PN	Pn	07 08 45.1	+1.0
KORT	Korkueli	3.79	181	ePn	Pn	07 08 45.1	+1.0
URLA	Izmir	3.82	232	PN	Pn	07 08 46.2	+1.8
URLA	Izmir	3.82	232	ePn	Pn	07 08 46.2	+1.8
SIGR	SIGRI	3.84	247	PN	Pn	07 08 46.9	+2.3
SIGR	SIGRI	3.84	247	P	Pn	07 08 42.7	-1.9
SIGR	SIGRI	3.84	247	P	Pn	07 08 42.7	-1.9
SIGR	SIGRI	3.84	247	ePn	Pn	07 08 46.9	+2.3
GULA	Gulagac	3.84	128	PN	Pn	07 08 46.3	+1.6
GULA	Gulagac	3.84	128	ePn	Pn	07 08 46.3	+1.6
YOZ	Yozgat	3.93	105	PN	Pn	07 08 47.0	+0.9
YOZ	Yozgat	3.93	105	ePn	Pn	07 08 47.0	+0.9
TIRR	Tirgusor	3.95	339	⇓iP	Pn	07 08 47.2	+1.1
TIRR	Tirgusor	3.95	339	⇓iP	Pn	07 08 47.2	+1.1
YER	Yerkesik	4.01	205	PN	Pn	07 08 49.1	+2.0
YER	Yerkesik	4.01	205	ePn	Pn	07 08 49.1	+2.0
ELL	Elmali	4.06	186	PN	Pn	07 08 49.6	+1.8
ELL	Elmali	4.06	186	ePn	Pn	07 08 49.6	+1.8
LIA	Limnos Island	4.09	259	P	Pn	07 08 48.2	+0.1
LIA	Limnos Island	4.09	259	P	Pn	07 08 48.2	+0.1
CHOS	Chios island	4.13	236	PN	Pn	07 08 51.0	+2.3
CHOS	Chios island	4.13	236	P	Pn	07 08 48.7	0.0
CHOS	Chios island	4.13	236	P	Pn	07 08 48.7	0.0
CHOS	Chios island	4.13	236	ePn	Pn	07 08 51.0	+2.3
SZH	Strazhica	4.15	308	i P	Pn	07 08 50.8	+1.9
TLB	Topalu	4.17	336	⇓iP	Pn	07 08 50.1	+0.9
TLB	Topalu	4.17	336	⇓iP	Pn	07 08 50.1	+0.9
DALY	Dalyan (Mu˜la	4.20	200	PN	Pn	07 08 52.1	+2.5
DALY	Dalyan (Mu˜la	4.20	200	ePn	Pn	07 08 52.1	+2.5
FETY	Fethiye	4.28	194	PN	Pn	07 08 52.4	+1.7
FETY	Fethiye	4.28	194	ePn	Pn	07 08 52.4	+1.7
KVT	Kavak	4.28	84	PN	Pn	07 08 52.5	+1.7
KVT	Kavak	4.28	84	ePn	Pn	07 08 52.5	+1.7
HARR	Harsova	4.30	336	⇑iP	Pn	07 08 52.6	+1.7
HARR	Harsova	4.30	336	⇑iP	Pn	07 08 52.6	+1.7
RZN	Rozhen	4.38	284	i P	Pn	07 08 52.0	-0.3
BODT	Bodrum	4.44	214	PN	Pn	07 08 55.2	+2.3
BODT	Bodrum	4.44	214	ePn	Pn	07 08 55.2	+2.3
PLD	Plovdiv	4.48	289	PN	Pn	07 08 54.4	+0.9
PLD	Plovdiv	4.48	289	ePn	Pn	07 08 54.4	+0.9
TLCR		4.54	346	⇓iP	Pn	07 08 55.5	+1.2
TLCR		4.54	346	⇓iP	Pn	07 08 55.5	+1.2
CFR	Carcaliu	4.69	340	⇓iP	Pn	07 08 56.7	+0.4
CFR	Carcaliu	4.69	340	⇓iP	Pn	07 08 56.7	+0.4
NVR	Nevrokopi	4.98	279	P	Pn	07 09 00.5	+0.2
NVR	Nevrokopi	4.98	279	P	Pn	07 09 00.5	+0.2
SRS	Serrai	5.17	276	P	Pn	07 09 02.6	-0.3
SRS	Serrai	5.17	276	P	Pn	07 09 02.6	-0.3
AOS	Alonnisos	5.27	254	P	Pn	07 09 03.7	-0.6
AOS	Alonnisos	5.27	254	P	Pn	07 09 03.7	-0.6
VTS	Vitosha	5.68	291	⇓iP	Pn	07 09 10.7	+0.6
VTS	Vitosha	5.68	291	P	Pn	07 09 10.3	+0.2
VTS	Vitosha	5.68	291	P	Pn	07 09 10.3	+0.2
KNT	Kendrikon	5.70	276	P	Pn	07 09 10.2	0.0
KNT	Kendrikon	5.70	276	P	Pn	07 09 10.2	0.0
MLR	Muntele Rosu	5.72	327	Pn	Pn	07 09 11.8	+1.3
	0.4nm,0.3s,baz=138,slow=14,SNR=8.6						
MLR				Sn	Sn	07 10 16.9	+0.7
	0.4nm,0.3s,baz=150,slow=8.9,SNR=3.5						
MLR				Lg	Lg	07 10 40.6	
	0.2nm,0.3s,baz=274,slow=19,SNR=4.0						
MLR				LR	LR	07 12 05.3	
	comp=Z,32nm,18.1s,baz=154,slow=46						
MLR	Muntele Rosu	5.72	327	⇑iP	Pn	07 09 11.6	+1.0
MLR	Muntele Rosu	5.72	327	⇑iP	Pn	07 09 11.6	+1.0
VRI	Vrincioaia	5.74	333	⇓iP	Pn	07 09 12.0	+1.3
VRI	Vrincioaia	5.74	333	⇓iP	Pn	07 09 12.0	+1.3
PLOR	Plostina	5.75	333	⇑iP	Pn	07 09 12.1	+1.2
PLOR	Plostina	5.75	333	⇑iP	Pn	07 09 12.1	+1.2
VOIR		6.07	322	⇓iP	Pn	07 09 17.2	+1.8
VOIR		6.07	322	⇓iP	Pn	07 09 17.2	+1.8
DOPR	Dopca	6.33	326	⇑iP	Pn	07 09 20.2	+1.3
DOPR	Dopca	6.33	326	⇑iP	Pn	07 09 20.2	+1.3
TESR	Tescani	6.33	336	⇓iP	Pn	07 09 20.3	+1.4
TESR	Tescani	6.33	336	⇓iP	Pn	07 09 20.3	+1.4
BIZ	Bicaz	6.88	335	⇑iP	Pn	07 09 27.8	+1.3
BIZ	Bicaz	6.88	335	⇑iP	Pn	07 09 27.8	+1.3
MDVR	Moldovita	7.53	305	⇑iP	Pn	07 09 36.0	+0.6
MDVR	Moldovita	7.53	305	⇑iP	Pn	07 09 36.0	+0.6
BURAR	Bucovina Array	7.77	333	⇓iP	Pn	07 09 40.2	+1.5

BURAR	Bucovina Array	7.77	333	⇓iP	Pn	07 09 40.2	+1.5
MMAI	Mount Meron Ar	8.73	151	Pn	Pn	07 09 51.4	-0.5
	0.5nm,0.3s,baz=334,slow=13,SNR=1.5						
MMAI				LR	LR	07 13 51.7	
	comp=Z,62nm,18.4s,baz=85,slow=42						
AKASG	Malin Array Be	9.94	356	Pn	Pn	07 10 06.6	-1.8
	2.4nm,0.3s,baz=175,slow=12,SNR=10						
FINES	FINESS Array B	20.85	354	P	P	07 12 27.7	+0.6
	1.1nm,0.7s,baz=166,slow=14,SNR=2.4						
HFS	Hagfors	21.97	337	P	P	07 12 39.7	+0.5
	2.0nm,0.9s,baz=129,slow=11,SNR=2.3						
AAK	Ala-Archa	32.69	72	LR	LR	07 29 04.8	
	comp=Z,316nm,20.9s,baz=244,slow=39						
TORD	Torodi Ar. Bea	37.27	231	P	P	07 14 57.6	0.0
	0.4nm,0.6s,baz=41,slow=9.4						
MKAR	Makanchi Array	37.36	63	P	P	07 14 58.8	+0.8
	0.4nm,0.7s,baz=265,slow=8.5,SNR=3.2						
SONM	Songino Array	52.79	55	LR	LR	07 44 35.9	
	comp=Z,40nm,18.6s,baz=53,slow=42						

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*ISK **07** 07:14:24.8, 40°.81N×30°.41E, h6^{km}, ML2.5/11*

*ISCJB **07** 07:14:25.0±0.4, 40°.78N±0°.03×30°.41E±0°.03, h11^{km}±3^{km}, Error ellipse: s-maj=4.8km s-min=3.7km az=38.2*

*CSEM **07** 07:14:25.3±0.1, 40°.78N×30°.41E, h10^{km}, ML2.5, Error ellipse: s-maj=3.3km s-min=2.3km az=38.0*

*DDA **07** 07:14:25.1, 40°.76N×30°.43E, h7^{km}, Md2.4*

ISC 07 07:14:25.4±0.9**, 40°.77N**±0°.02×**30°.41E**±0°.02**, h13**^{km}±5^{km}**, n52,** σ0^{s}.**65**/68**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUV	Serdivan-Sakar	0.07	243	PG	Pg	07 14 27.6	-0.4
SAUV				SG	Sg	07 14 29.3	-0.6
SAUV	Serdivan-Sakar	0.07	243	iPg	Pg	07 14 27.6	-0.4
SAUV				eSg	Sg	07 14 29.3	-0.6
SPNC	Sapanca-Adapaz	0.11	221	PG	Pg	07 14 28.3	-0.2
SPNC				SG	Sg	07 14 31.2	+0.5
SPNC	Sapanca-Adapaz	0.11	221	ePg	Pg	07 14 28.3	-0.2
SPNC				eSg	Sg	07 14 31.2	+0.5
GEYV	SAKARYA_Geyve	0.30	196	iP	Pg	07 14 31.6	0.0
GEYV				iS	Sg	07 14 35.6	-0.1
GEYV	SAKARYA_Geyve	0.30	196	P	Pg	07 14 31.6	0.0
GEYV				S	Sg	07 14 35.6	-0.1
GULT	Gulveren	0.35	166	PG	Pg	07 14 32.6	+0.1
GULT	Gulveren	0.35	166	ePg	Pg	07 14 32.6	+0.1
SAHE	Sakarya_HENDEK	0.35	76	iP	Pg	07 14 32.4	-0.1
SAHE				iS	Sg	07 14 36.9	-0.4
SAHE	Sakarya_HENDEK	0.35	76	P	Pg	07 14 32.4	-0.1
SAHE				S	Sg	07 14 36.9	-0.4
KAND	Kocaeli-Kandir	0.36	333	iP	Pg	07 14 32.9	+0.2
KAND				iS	Sg	07 14 37.3	-0.3
KAND	Kocaeli-Kandir	0.36	333	P	Pg	07 14 32.9	+0.2
KAND				S	Sg	07 14 37.3	-0.3
GPA	Golpazari	0.49	189	PG	Pb	07 14 35.6	-0.3
GPA	Golpazari	0.49	189	ePg	Pb	07 14 35.6	-0.3
BTAS	Taskesti	0.49	114	iP	Pg	07 14 34.3	-0.8
BTAS				iS	Sg	07 14 42.0	+0.2
BTAS	Taskesti	0.49	114	P	Pg	07 14 34.3	-0.8
BTAS				S	Sg	07 14 42.0	+0.2
HRT	Hereke	0.56	275	PG	Pg	07 14 36.1	-0.3
HRT	Hereke	0.56	275	ePg	Pg	07 14 36.1	-0.3
ADVT	Abdulvahap	0.61	237	PG	Pg	07 14 36.8	-0.5
ADVT	Abdulvahap	0.61	237	ePg	Pg	07 14 36.8	-0.5
MDUB	Mudurnu	0.67	116	PG	Pb	07 14 38.9	-0.2
MDUB	Mudurnu	0.67	116	ePg	Pb	07 14 38.9	-0.2
SILT	Sile	0.69	304	PG	Pg	07 14 38.7	-0.2
SILT				SG	Sb	07 14 48.6	-0.2
SILT	Sile	0.69	304	ePg	Pg	07 14 38.7	-0.2
SILT				eSg	Sb	07 14 48.6	-0.2
CAVI	Cavuskoy	0.71	217	PG	Pb	07 14 39.8	+0.1
CAVI	Cavuskoy	0.71	217	ePg	Pb	07 14 39.8	+0.1
YLV	Yalova	0.81	256	PG	Pb	07 14 41.4	0.0
YLV	Yalova	0.81	256	ePg	Pb	07 14 41.4	0.0
BORA	Eskisehir	0.89	178	PG	Pg	07 14 42.6	0.0
BORA	Eskisehir	0.89	178	iP	Pg	07 14 42.3	-0.3
BORA				iS	Sg	07 14 52.4	-1.9
BORA	Eskisehir	0.89	178	P	Pg	07 14 42.3	-0.3
BORA	Eskisehir	0.89	178	ePg	Pg	07 14 42.6	0.0
BORA				S	Sg	07 14 52.4	-1.9
AUBOZ	BOZOYUK	0.91	199	PG	Pg	07 14 43.0	+0.1
AUBOZ	BOZOYUK	0.91	199	ePg	Pg	07 14 43.0	+0.1
KAVV	Kandilli-Istan	1.06	286	PG	Pg	07 14 44.6	-1.3
KAVV	Kandilli-Istan	1.06	286	ePg	Pg	07 14 44.6	-1.3
ISK	Istanbul-Kandi	1.06	287	PG	Pg	07 14 44.8	-1.1
ISK	Istanbul-Kandi	1.06	287	ePg	Pg	07 14 44.8	-1.1
KLYT	Kilyos	1.14	295	PN	Pg	07 14 46.4	-0.9
KLYT	Kilyos	1.14	295	ePn	Pg	07 14 46.4	-0.9
SBT5	Esenkoy-Cinarc	1.17	264	PN	Pg	07 14 47.5	-0.4
SBT5	Esenkoy-Cinarc	1.17	264	ePn	Pg	07 14 47.5	-0.4
AUMIH	MIHALICIK	1.22	137	PN	Pg	07 14 48.3	-0.6
AUMIH	MIHALICIK	1.22	137	ePn	Pg	07 14 48.3	-0.6
TVSB	Tavsanli	1.50	209	PN	Pb	07 14 53.6	+0.3
TVSB	Tavsanli	1.50	209	ePn	Pb	07 14 53.6	+0.3
CTKS	Kestanelik-??a	1.51	289	PN	Pn	07 14 52.8	+0.7
CTKS	Kestanelik-??a	1.51	289	ePn	Pn	07 14 52.8	+0.7
SLVT	Silivri	1.72	286	PN	Pn	07 14 56.0	+0.9
SLVT	Silivri	1.72	286	ePn	Pn	07 14 56.0	+0.9
SBT3	Marmara-Eregli	1.85	274	PN	Pn	07 14 58.0	+1.4
SBT3	Marmara-Eregli	1.85	274	ePn	Pn	07 14 58.0	+1.4

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*ISK **07** 07:24:32.9, 40°.81N×30°.41E, h13^{km}, ML2.5/12*

*ISCJB **07** 07:24:33.3±0.4, 40°.79N±0°.03×30°.39E±0°.04, h14^{km}±3^{km}, Error ellipse: s-maj=5.4km s-min=4.3km az=37.7*

*CSEM **07** 07:24:33.5±0.1, 40°.80N×30°.40E, h14^{km}, ML2.5, Error ellipse: s-maj=2.5km s-min=1.6km az=23.0*

*DDA **07** 07:24:33.4, 40°.77N×30°.41E, h7^{km}, Md2.5*

ISC 07 07:24:33.5±0.9**, 40°.80N**±0°.03×**30°.41E**±0°.02**, h14**^{km}±6^{km}**, n40,** σ0^{s}.**31**/52**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUV	Serdivan-Sakar	0.09	227	PG	Pg	07 24 36.3	-0.1
SAUV				SG	Sg	07 24 38.0	-0.4
SAUV	Serdivan-Sakar	0.09	227	iPg	Pg	07 24 36.3	-0.1
SAUV				eSg	Sg	07 24 38.0	-0.4
SPNC	Sapanca-Adapaz	0.14	215	PG	Pg	07 24 37.2	+0.1
SPNC				SG	Sg	07 24 39.9	+0.4
SPNC	Sapanca-Adapaz	0.14	215	ePg	Pg	07 24 37.2	+0.1
SPNC				eSg	Sg	07 24 39.9	+0.4
GEYV	SAKARYA_Geyve	0.33	196	iP	Pg	07 24 40.2	0.0
GEYV				iS	Sg	07 24 43.6	-1.1
GEYV	SAKARYA_Geyve	0.33	196	P	Pg	07 24 40.2	0.0
KAND	Kocaeli-Kandir	0.34	330	iP	Pb	07 24 41.5	+0.2
KAND				iS	Sg	07 24 45.6	+0.6
KAND	Kocaeli-Kandir	0.34	330	P	Pb	07 24 41.5	+0.2
SAHE	Sakarya_HENDEK	0.34	81	iP	Pb	07 24 41.0	-0.3
SAHE				iS	Sg	07 24 45.4	+0.3
SAHE	Sakarya_HENDEK	0.34	81	P	Pb	07 24 41.0	-0.3
SAHE				S	Sg	07 24 45.4	+0.3
GULT	Gulveren	0.38	168	PG	Pg	07 24 41.2	+0.1
GULT				SG	Sg	07 24 46.7	+0.5
GULT	Gulveren	0.38	168	ePg	Pg	07 24 41.2	+0.1
GULT				eSg	Sg	07 24 46.7	+0.5
BTAS	Taskesti	0.50	117	iP	Pb	07 24 43.9	-0.2
BTAS				iS	Sg	07 24 50.1	0.0
BTAS	Taskesti	0.50	117	P	Pb	07 24 43.9	-0.2
BTAS				S	Sg	07 24 50.1	0.0
HRT	Hereke	0.57	272	PG	Pg	07 24 44.7	+0.1
HRT	Hereke	0.57	272	ePg	Pg	07 24 44.7	+0.1
ADVT	Abdulvahap	0.63	235	PG	Pg	07 24 45.4	-0.4
ADVT	Abdulvahap	0.63	235	ePg	Pg	07 24 45.4	-0.4
SILT	Sile	0.68	301	PG	Pg	07 24 46.3	-0.4
SILT	Sile	0.68	301	ePg	Pg	07 24 46.3	-0.4
MDUB	Mudurnu	0.68	119	PG	Pg	07 24 46.8	0.0
MDUB	Mudurnu	0.68	119	ePg	Pg	07 24 46.8	0.0
CAVI	Cavuskoy	0.74	216	PG	Pb	07 24 48.4	+0.2
CAVI	Cavuskoy	0.74	216	ePg	Pb	07 24 48.4	+0.2
YLV	Yalova	0.82	254	PG	Pg	07 24 49.3	-0.2
YLV	Yalova	0.82	254	ePg	Pg	07 24 49.3	-0.2
BORA	Eskisehir	0.92	178	PG	Pb	07 24 51.2	-0.1
BORA	Eskisehir	0.92	178	ePg	Pb	07 24 51.2	-0.1
KAVV	Kandilli-Istan	1.06	285	PG	Pb	07 24 53.2	-0.4
KAVV	Kandilli-Istan	1.06	285	ePg	Pb	07 24 53.2	-0.4
ISK	Istanbul-Kandi	1.06	285	PG	Pb	07 24 53.7	+0.1
ISK	Istanbul-Kandi	1.06	285	ePg	Pb	07 24 53.7	+0.1
KLYT	Kilyos	1.13	294	PN	Pb	07 24 54.8	0.0
KLYT	Kilyos	1.13	294	ePn	Pb	07 24 54.8	0.0
SBT5	Esenkoy-Cinarc	1.18	262	PN	Pb	07 24 55.7	+0.1
SBT5	Esenkoy-Cinarc	1.18	262	ePn	Pb	07 24 55.7	+0.1
AUMIH	MIHALICIK	1.24	138	PN	Pn	07 24 56.5	0.0
AUMIH	MIHALICIK	1.24	138	ePn	Pn	07 24 56.5	0.0
TVSB	Tavsanli	1.54	209	PN	Pn	07 25 00.7	+0.1
TVSB	Tavsanli	1.54	209	ePn	Pn	07 25 00.7	+0.1

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*WEL **07** 07:25:06.8±2.0, 26°S±19°×18°0W±3°4, h591^{km}±22^{km}*

*IDC **07** 07:25:09.4±9.4, 25°.14S×179°.22E, h543^{km}±80^{km}, mb3.8/5, mb1 3.8/6, mb1mx3.1/47, mbtmp4.7/6, Error ellipse: s-maj=96.8km s-min=59.4km az=127.0*

ISC 07 07:25:07.9±1.7**, 25°.7S**±0°.2×**179°.2E**±0°.2**, h507**^{km}**, n45,** σ1^{s}.**99**/46**, mb4.5**/5**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	Raoul Island	4.35	145	P	P	07 26 32.2	+2.7
GLKZ	Green Lake	4.37	145	P	P	07 26 32.1	+2.5
GLKZ				S	S	07 27 37.7	+1.3
OUZ	Omahuta	10.66	206	P	P	07 27 34.2	+2.1
KUZ	Kuaotunu	11.42	194	P	P	07 27 41.2	+1.2
MXZ	Matakaoa Point	11.86	184	P	P	07 27 44.1	-0.6
MKAZ	Moumakai	11.89	196	P	P	07 27 46.1	+1.0
HAZ	Te Kaha	12.09	185	P	P	07 27 46.0	-1.2
WMGZ	Waiomatatini S	12.11	183	P	P	07 27 46.9	-0.4
PKGZ	Pakihiroa	12.20	184	P	P	07 27 45.8	-2.6
DZM	Mont Dzumac	12.24	284	P	P	07 27 49.2	+0.1
	0.4nm,0.3s,baz=98,slow=15,SNR=2.8						
RUGZ	Raukumara Rang	12.31	186	P	P	07 27 48.0	-1.6
PUZ	Puketiti	12.37	184	P	P	07 27 49.7	-0.4
TOZ	Tahuroa Road	12.41	194	P	P	07 27 50.8	+0.3
TWGZ	Tauwhareparae	12.49	185	P	P	07 27 49.1	-2.4
URZ	Urewera	12.66	188	P	P	07 27 50.4	-2.8
MWZ	Matawai	12.69	186	P	P	07 27 50.7	-2.8
TKGZ	Te Karaka	12.76	185	P	P	07 27 53.4	-0.9
CNGZ	Carnagh Statio	12.78	184	P	P	07 27 54.0	-0.5
HRRZ	Handcock Road	12.90	190	P	P	07 27 54.9	-0.9
MUGZ	Murupara	12.91	189	P	P	07 27 54.2	-1.7
RIGZ	Rimuhau	13.04	185	P	P	07 27 55.9	-1.3
MTHZ	Maungataniwha	13.28	188	P	P	07 27 57.0	-2.8
HIZ	Hauiti	13.31	195	P	P	07 28 02.4	+2.3
RAHZ	Arahi	13.31	187	P	P	07 27 57.1	-2.9
MRHZ	Matea Rd	13.32	190	P	P	07 27 58.5	-1.7
NMHZ	Naumai	13.52	188	P	P	07 28 00.4	-2.0
KATZ	Kakaramea	13.57	192	P	P	07 28 02.4	-0.6
BKZ	Black Stump Fm	13.63	189	P	P	07 28 00.5	-3.0
BKZ				S	S	07 30 28.4	+0.1
TWVZ	Taurewa	13.72	193	P	P	07 28 04.2	-0.3
WTVZ	West Tongariro	13.73	192	P	P	07 28 03.2	-1.4
FWVZ	Far West T-bar	13.87	192	P	P	07 28 03.9	-2.4
MCHZ	McNeill Hill	13.88	188	P	P	07 28 03.8	-2.3
WHVZ	Whangaehu Hut	13.89	192	P	P	07 28 04.3	-2.1
MOVZ	Moawhango	13.98	191	P	P	07 28 05.8	-1.4
BHHZ	Black Hill Sta	14.01	190	P	P	07 28 03.6	-3.9
KRHZ	Kereru	14.12	189	P	P	07 28 06.0	-2.6
KAHZ	Kahuranaki	14.20	187	P	P	07 28 07.6	-1.9
PNHZ	Pukenui	14.41	189	P	P	07 28 08.2	-3.4
TSZ	Takapari Road	14.59	190	P	P	07 28 10.0	-3.4
CTA	Charters Tower	30.83	274	P	P	07 30 42.2	+0.1
	12nm,0.8s,baz=100,slow=8.0,SNR=4.2						
STKA	Stephens Creek	33.43	251	P	P	07 31 04.3	+0.1
	3.3nm,0.5s,baz=97,slow=11,SNR=15						
ASAR	Alice Springs	41.08	263	P	P	07 32 06.5	-0.7
	7.5nm,0.4s,baz=93,slow=7.5,SNR=176						
WRA	Warramunga Arr	41.62	268	P	P	07 32 10.3	-1.2
	6.2nm,0.3s,baz=100,slow=7.5,SNR=158						
FITZ	Fitzroy Crossi	50.02	267	P	P	07 33 14.7	-0.9
	4.9nm,0.5s,baz=100,slow=8.6,SNR=6.2						
HFS	Hagfors	144.15	348	PKP	PKPbc	07 43 41.4	-3.1
	0.8nm,0.5s,baz=2.9,slow=2.9,SNR=7.2						

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*NIED **07** 07:25:00, 45°.60N×151°.50E, h14^{km}, Mw4.0 Best double couple: $M_0$1.00000×10^{15} NP1:ϕ_s235.00000°, δ37.00000°, λ118.00000°. NP2:ϕ_s21.00000°, δ58.00000°, λ70.00000°.*

*ISCJB **07** 07:25:26.9±0.7, 45°.24N±0°.08×151°.56E±0°.09, h32^{km}, mb3.8/17, MS3.3/8, Error ellipse: s-maj=13.6km s-min=4.2km az=144.3*

*JMA **07** 07:25:27.6±0.5, 45°.63N×151°.48E, h30^{km}, M4.5*

*SKHL **07** 07:25:28.4±0.7, 45°.29N×151°.59E, h40^{km}±8^{km}, mb4.8/5*

*MOS **07** 07:25:28.6±1.2, 45°.32N×151°.54E, h44^{km}, mb4.2/7, Error ellipse: s-maj=10.2km s-min=9.5km az=147.4*

*IDC **07** 07:25:40.1±2.9, 46°.61N×150°.08E, h45^{km}±26^{km}, mb3.5/14, mb1 3.8/16, mb1mx3.6/71, mbtmp3.8/16, ML3.9/1, MS3.2/10, Ms1 3.2/10, ms1mx2.8/65, Error ellipse: s-maj=22.4km s-min=19.1km az=137.0*

ISC 07 07:25:27.6±1.0**, 45°.11N**±0°.10×**151°.64E**±0°.09**, h32**^{km}**, n76,** σ1^{s}.**94**/76**, mb3.8**/17**, MS3.4**/8**, 3C-5D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.67	274	iP	Pn	07 26 09.0	+0.7
KUR				AMB	AMB	07 26 13.4	
	77nm,0.4s						
KUR				AMB	AMB	07 26 13.4	
	40nm,0.4s						
KUR				AMB	AMB	07 26 13.4	
	112nm,0.4s						
KUR				iS	Sn	07 26 38.7	-0.8
KUR				A	A	07 26 46.0	
	560nm,0.4s						
KUR				A	A	07 26 46.0	
	141nm,0.4s						
KUR	Kuril'sk	2.67	274	⇓iPN	Pn	07 26 10.0	+1.7
KUR				iS	Sn	07 26 39.9	+0.4
KUR				pmax	pmax		
	comp=N,77nm,0.4s						
KUR				pmax	pmax		
	comp=E,40nm,0.4s						
KUR				pmax	pmax		
	comp=Z,112nm,0.4s						
KUR				smax	smax		
	comp=E,141nm,0.2s						
KUR				smax	smax		
	comp=N,560nm,0.5s						
SHO	Shikotan	3.66	252	iP	Pn	07 26 23.0	+1.1
SHO				AMB	AMB	07 26 34.0	
	comp=N,16nm,0.4s						
SHO				AMB	AMB	07 26 34.0	
	comp=N,29nm,0.4s						
SHO				AMB	AMB	07 26 34.0	
	comp=N,53nm,0.4s						
SHO				iS	Sn	07 27 04.0	+0.1
SHO				A	A	07 27 08.0	
	comp=N,110nm,0.4s						
SHO				A	A	07 27 08.0	
	comp=N,162nm,0.4s						
SHO	Shikotan	3.66	252c	iPN	Pn	07 26 23.7	+1.8
SHO				iS	Sn	07 27 04.4	+0.5
SHO				pmax	pmax		
	comp=N,16nm,0.3s						
SHO				pmax	pmax		
	comp=E,29nm,0.3s						
SHO				pmax	pmax		
	comp=Z,53nm,0.3s						
SHO				smax	smax		
	comp=E,162nm,0.6s						
SHO				smax	smax		
	comp=N,110nm,0.5s						
YUK	Yuzh-Kuril'sk	4.26	257	eP	Pn	07 26 32.0	+1.7
YUK				AMB	AMB	07 26 45.6	
	comp=N,37nm,0.2s						
YUK				AMB	AMB	07 26 45.6	
	comp=N,19nm,0.2s						
YUK				AMB	AMB	07 26 45.6	
	comp=N,63nm,0.2s						
YUK				eS	Sn	07 27 20.0	+1.1
YUK				A	A	07 27 28.0	
	comp=N,146nm,0.3s						
YUK				A	A	07 27 28.0	
	comp=N,48nm,0.3s						
YUK	Yuzh-Kuril'sk	4.26	257	ePN	Pn	07 26 32.6	+2.3
YUK				eS	Sn	07 27 20.3	+1.4
YUK				pmax	pmax		
	comp=Z,63nm,0.2s						
YUK				pmax	pmax		
	comp=N,37nm,0.3s						
YUK				pmax	pmax		
	comp=E,19nm,0.3s						
YUK				smax	smax		
	comp=E,48nm,0.2s						
YUK				smax	smax		
	comp=N,146nm,0.3s						
GRPR	Tuman	4.34	257	eP	Pn	07 26 34.0	+2.7
GRPR				AMB	AMB	07 26 38.0	
	comp=N,55nm,0.4s						
GRPR				AMB	AMB	07 26 38.0	
	comp=N,41nm,0.4s						
GRPR				AMB	AMB	07 26 38.0	
	comp=N,87nm,0.4s						
GRPR				eS	Sn	07 27 23.0	+2.3
GRPR				A	A	07 27 23.0	
	comp=N,136nm,0.4s						
GRPR				A	A	07 27 23.0	
	comp=N,126nm,0.4s						
GRPR	Tuman	4.34	257	PN	Pn	07 26 34.2	+2.9
GRPR				eS	Sn	07 27 23.1	+2.3
GRPR				pmax	pmax		
	comp=Z,87nm,0.4s						
GRPR				pmax	pmax		
	comp=N,55nm,0.2s						
GRPR				pmax	pmax		
	comp=E,41nm,0.3s						
GRPR				smax	smax		
	comp=N,136nm,0.3s						
GRPR				smax	smax		
	comp=E,126nm,0.4s						
NEM2	Nemuro 2	4.58	250	P	Pn	07 26 35.4	+0.8
NEM2				eS	Sn	07 27 25.9	-0.8
GLVR	Golovnino	4.59	255	iP	Pn	07 26 37.0	+2.2
GLVR				AMB	AMB	07 26 44.0	
	comp=E,82nm,0.4s						
GLVR				AMB	AMB	07 26 44.0	
	comp=E,92nm,0.4s						
GLVR				AMB	AMB	07 26 44.0	
	comp=E,100nm,0.4s						
GLVR				eS	Sn	07 27 29.0	+2.1
GLVR				A	A	07 27 31.0	
	comp=E,202nm,0.3s						
GLVR				A	A	07 27 31.0	
	comp=E,256nm,0.3s						
GLVR	Golovnino	4.59	255	⇓iPN	Pn	07 26 37.7	+2.9
GLVR				eS	Sn	07 27 29.2	+2.3
GLVR				pmax	pmax		
	comp=Z,100nm,0.4s						
GLVR				pmax	pmax		
	comp=N,82nm,0.1s						
GLVR				pmax	pmax		
	comp=E,92nm,0.2s						
GLVR				smax	smax		
	comp=E,256nm,0.2s						
GLVR				smax	smax		
	comp=N,202nm,0.3s						
JRA	Rausu	4.80	258	P	Pn	07 26 40.1	+2.4
JNK	Nakash	5.19	255	P	Pn	07 26 44.8	+1.8
JAK	Akkeshi	5.43	250	P	Pn	07 26 47.2	+0.9
JTKR	Abashiri--Toko	5.64	261	P	Pn	07 26 51.7	+2.5
JAR	Ashorobuto	5.94	255	P	Pn	07 26 55.6	+2.3
JAR				eS	Sn	07 28 01.0	+0.8
YSS	Yuzh-Sakhalins	6.45	290	eP	Pn	07 27 00.7	+0.4
YSS	Yuzh-Sakhalins	6.45	290	⇑ePN	Pn	07 27 03.2	+2.9
YSS				pmax	pmax		
	comp=Z,20nm,0.1s						
YSS				MLR	MLR		
	comp=Z,200nm,16.0s						
JKK2	Kamakawa 2	6.48	262	P	Pn	07 27 03.3	+2.6
JCH	Churui	6.48	250	P	Pn	07 27 02.2	+1.5
JCH				eS	Sn	07 28 11.6	-1.9
ASAJ	Asahikawa	6.53	264	P	Pn	07 27 04.8	+3.4
	comp=Z,2.9nm,0.3s,baz=77,slow=17,SNR=18						
ASAJ				LR	LR	07 29 47.1	
	comp=Z,185nm,19.4s,baz=165,slow=42						
ASAJ	Asahikawa	6.53	264	P	Pn	07 27 04.2	+2.8
MYR	Moyori	6.68	248	eP	Pn	07 27 04.7	+1.3
JFR	Furan	6.79	257	P	Pn	07 27 08.1	+3.1
ERM	Erimo	6.89	246	eP	Pn	07 27 09.5	+3.1
ERM	Erimo	6.89	246	dePN	Pn	07 27 09.5	+3.1
JEM	Erimo	6.89	246	P	Pn	07 27 09.1	+2.7
JEM				eS	Sn	07 28 22.7	-0.9
JNBK	Urakawa-nobuka	7.03	249	P	Pn	07 27 09.3	+1.0
JNBK				eS	Sn	07 28 25.1	-2.0
JBT2	Biratori 2	7.09	254	P	Pn	07 27 10.2	+1.2
JNB	Noboribetsu	8.11	255	P	Pn	07 27 25.4	+2.3
JNB				eS	Sn	07 28 52.2	-1.4
TYV	Tymovskoe	8.33	317	ePN	Pn	07 27 27.1	+1.1
TYV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
JKB	Kayabe	8.35	251	P	Pn	07 27 27.1	+0.7
JKB				eS	Sn	07 28 54.5	-5.1
JANG	Nango	8.82	241	eS	Sn	07 29 04.4	-6.7
JTM	Tenmabayashi	8.87	245	eS	Sn	07 29 13.2	+0.9
PETK	Petropavlovsk-	8.93	24	P	Pn	07 27 34.4	0.0
	baz=200,slow=12						
OFUJ	Ofunato	9.54	234	eS	Sn	07 29 22.3	-6.6
JRG	Rokugo	9.95	239	eS	Sn	07 29 34.9	-4.0
JIO	Ouri	10.16	233	eS	Sn	07 29 37.8	-6.0
MAJO	Matsushiro	13.28	235	⇓ePN	Pn	07 28 35.4	+1.6
KLR	Kul'dur	14.13	294	⇑eP	Pn	07 28 43.1	-2.3
MA2	Magadan	14.50	358	LR	LR	07 34 37.7	
	comp=Z,23nm,18.2s,baz=192,slow=41						
SEY	Seymchan	17.86	1	eP	Pn	07 29 32.3	-1.1
SEY	Seymchan	17.86	1	⇓eP	Pn	07 29 32.3	-1.1
KSRS	Korea Array	19.35	255	LR	LR	07 37 30.1	
	comp=Z,47nm,18.2s,baz=75,slow=38						
JNU	Nakatsue	20.00	240	LR	LR	07 38 26.1	
	comp=Z,47nm,20.5s,baz=303,slow=38						
GUMO	Guam	31.94	193	LR	LR	07 47 17.7	
	comp=Z,10nm,18.3s,baz=112,slow=39						
TLY	Talaya	32.05	299	LR	LR	07 45 35.5	
	comp=Z,56nm,19.0s,baz=92,slow=39						
ILAR	Eielson Array	38.48	37	eP	P	07 32 47.8	+1.6
ILAR	Eielson Array	38.48	37	eP	P	07 32 47.8	+1.6
ZALV	Zalesovo Beam	42.75	307	LR	LR	07 52 12.7	
	comp=Z,48nm,18.2s,baz=70,slow=39						
MKAR	Makanchi Array	46.79	298	P	P	07 33 52.8	-1.2
	comp=Z,0.3nm,0.4s,baz=56,slow=6.2,SNR=4.3						
MKAR	Makanchi Array	46.79	298	eP	P	07 33 56.6	+2.7
KURK	Kurchatov	47.42	304	P	P	07 33 57.2	-1.6
KURK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KURBB	Kurchatov Arra	47.51	304	P	P	07 33 57.1	-2.3
	comp=Z,0.3nm,0.3s,baz=73,slow=8.2,SNR=4.5						
BVAR	Borovoye Array	51.11	310	LR	LR	07 57 43.0	
	comp=Z,37nm,18.4s,baz=32,slow=39						
YKA	Yellowknife Ar	52.85	36	P	P	07 34 46.6	+6.9
	comp=Z,0.2nm,0.5s,baz=299,slow=7.3,SNR=3.9						
AAK	Ala-Archa	53.64	297	LR	LR	07 58 43.2	
	comp=Z,30nm,19.9s,baz=28,slow=38						
ARU	Arti	55.53	318	P	P	07 34 57.4	-1.9
AKTO	Aktyubinsk	59.05	312	LR	LR	08 03 15.5	
	comp=Z,56nm,18.1s,baz=66,slow=39						
NVAR	Mina Array Bea	64.12	61	P	P	07 36 12.3	+13
	comp=Z,0.4nm,0.6s,baz=305,slow=5.4,SNR=4.5						
FINES	FINESS Array B	65.08	334	P	P	07 36 02.9	-1.6
	comp=Z,1.4nm,0.6s,baz=46,slow=6.8,SNR=6.9						
WRA	Warramunga Arr	66.63	198	P	P	07 36 32.2	+17
	comp=Z,0.8nm,0.9s,baz=15,slow=6.7,SNR=3.6						
NB2	NORSAR Subarra	69.44	341	P	P	07 36 31.6	-0.6
	comp=Z,0.7nm,0.5s,baz=27,slow=6.2						
HFS	Hagfors	69.62	339	P	P	07 36 32.5	-0.7
	comp=Z,3.3nm,0.7s,baz=55,slow=5.5,SNR=14						
ASAR	Alice Springs	70.33	197	P	P	07 36 55.5	+18
	comp=Z,0.6nm,1.0s,baz=11,slow=5.3,SNR=4.4						
KIV	Kislovodsk	71.20	314	eP	P	07 36 43.3	0.0
KIV				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KIV				MLR	MLR		
	comp=Z,35nm,17.0s						
KBZ	Khabaz	71.25	314	P	P	07 36 44.0	+0.5
	comp=Z,3.8nm,0.8s,baz=53,slow=7.6,SNR=6.7						
KBZ	Khabaz	71.25	314	P	P	07 36 44.0	+0.5
KBZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
AKASG	Malin Array Be	72.33	326	P	P	07 36 49.4	-0.4
	comp=Z,1.0nm,0.4s,baz=38,slow=6.4,SNR=4.4						
CLL	Collm	77.52	335	eP	P	07 37 21.0	+1.2
CLL	Collm	77.52	335	eP	P	07 37 21.0	+1.2
EKA	Eskdalemuir Ar	77.68	346	P	P	07 37 21.1	+0.5
	comp=Z,0.3nm,0.4s,baz=34,slow=5.2,SNR=4.1						
MLR	Muntele Rosu	77.80	324	P	P	07 37 22.6	+0.9
	comp=Z,0.4nm,0.5s,baz=132,slow=7.0,SNR=3.2						
BRTR	Keskin Array B	78.86	316	eP	P	07 37 28.7	+1.0
TXAR	Lajitas Array	79.21	59	P	P	07 37 41.8	+12
	comp=Z,0.2nm,0.6s,baz=295,slow=3.4,SNR=4.1						
GERES	GERESS Array B	79.47	333	P	P	07 37 31.3	+0.6
	comp=Z,0.2nm,0.4s,baz=27,slow=6.6,SNR=3.8						

PDG ***07*** *07:51:21.2±0.3, 36°.26N×26°.06E, h10^{km}±1^{km}, ML4.4/10, Error ellipse: s-maj=23.4km s-min=35.3km az=0.0*

ATH ***07*** *07:51:22.3, 36°.44N×26°.81E, h161^{km}±2^{km}, ML3.9/35, Error ellipse: s-maj=2.9km s-min=1.0km az=138.0*

ISCJB ***07*** *07:51:22.4±0.1, 36°.39N±0°.02×26°.79E±0°.01, h156^{km}±1^{km}, mb4.0/30, Error ellipse: s-maj=3.0km s-min=1.8km az=14.2*

NEIC ***07*** *07:51:22.2±0.0, 36°.44N×26°.81E, h161^{km}, mb4.1/21, ML3.9(THE), ML3.9(ATH), After ATH.*

IDC ***07*** *07:51:23.3±0.8, 36°.53N×26°.63E, h148^{km}±9^{km}, mb3.7/14, mb1 3.7/19, mb1mx3.4/63, mbtmp4.1/19, MS2.4/1, Ms1 2.3/1, ms1mx1.8/65, Error ellipse: s-maj=15.4km s-min=10.8km az=148.0*

CSEM ***07*** *07:51:23.1±0.1, 36°.40N×26°.81E, h153^{km}, mb4.1/22, Error ellipse: s-maj=2.9km s-min=1.7km az=21.0*

MOS ***07*** *07:51:23.0±1.1, 36°.37N×26°.71E, h161^{km}, mb4.1/12, Error ellipse: s-maj=10.5km s-min=5.0km az=109.2*

THE ***07*** *07:51:26.2, 36°.41N×26°.77E, h166^{km}±2^{km}, ML3.9/15, Error ellipse: s-maj=2.9km s-min=0.7km az=42.0*

DDA ***07*** *07:51:28.0, 36°.55N×26°.79E, h46^{km}, Ml4.3*

GII ***07*** *07:51:27.2±0.1, 36°.06N×27°.12E, h32^{km}, mb4.3/4, MD4.1/5*

ISK ***07*** *07:51:28.3, 36°.50N×26°.89E, h103^{km}±9^{km}, ML4.0/7*

NIC ***07*** *07:51:30.7±0.1, 36°.39N×27°.64E, h110^{km}, mb4.3, ML3.8*

ISC 07 07:51:23.0±0.5**, 36°.39N**±0°.03×**26°.79E**±0°.03**, h153**^{km}±5^{km}**, n486, σ1^{s}46**/594**, mb4.1**/30**, 29C-17D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NISR	Nisiros	0.35	50	P	Pn	07 51 44.5	+0.5
NISR				AML	AML	07 52 00.3	
	comp=N,5065µm,0.5s						
NISR				AML	AML	07 52 08.6	
	comp=E,3869µm,0.8s						
NISR	Nisiros	0.35	50	P	Pn	07 51 44.6	+0.5
DAT	Datca	0.72	62	PG	Pn	07 51 46.4	+0.3
DAT	Datca	0.72	62	*i* Pg	Pn	07 51 46.4	+0.3
BODT	Bodrum	0.79	32	PG	Pn	07 51 46.8	+0.3
BODT	Bodrum	0.79	32	P	Pn	07 51 46.9	+0.4
BODT				S	Sn	07 52 02.6	-1.9
BODT	Bodrum	0.79	32	P	Pn	07 51 46.9	+0.4
BODT				S	Sn	07 52 02.6	-1.9
ANAF	Anafi Island	0.82	268	P	Pn	07 51 47.6	+0.9
ANAF	Anafi Island	0.82	268	P	Pn	07 51 47.6	+0.9
ANAF	Anafi Island	0.82	268	P	Pn	07 51 47.5	+0.8
AMGA	Amorgos Island	0.85	302	P	Pn	07 51 47.3	+0.4
AMGA				AML	AML	07 52 05.0	
	comp=E,5155µm,0.5s						
AMGA				AML	AML	07 52 05.2	
	comp=N,6226µm,0.7s						
AMGA	Amorgos Island	0.85	302	P	Pn	07 51 47.3	+0.4
AMGA				S	Sn	07 52 03.9	-1.3
AMGA	Amorgos Island	0.85	302	P	Pn	07 51 47.3	+0.4
AMGA				S	Sn	07 52 03.9	-1.3
KARP	Karpathos	0.89	160	PG	Pn	07 51 49.1	+1.8
KARP	Karpathos	0.89	160	P	Pn	07 51 47.7	+0.4
KARP				S	Sn	07 52 06.8	+1.0
KARP				AML	AML	07 52 08.7	
	comp=N,15150µm,0.2s						
KARP				AML	AML	07 52 08.8	
	comp=E,26649µm,0.3s						
KARP	Karpathos	0.89	160	*e*Pn	Pn	07 51 48.2	+0.9
KARP				*e*Sn	Sn	07 52 02.0	-3.8
KARP	Karpathos	0.89	160	P	Pn	07 51 48.2	+0.9
KARP				S	Sn	07 52 05.4	-0.4
KARP	Karpathos	0.89	160	P	Pn	07 51 48.0	+0.7
KARP	Karpathos	0.89	160	*e*Pg	Pn	07 51 49.1	+1.8
KARP				*e*Sn	Sn	07 52 02.0	-3.8
KARP				S		07 52 06.9	
THR8	Santorini-Mono	1.06	271	P	Pn	07 51 49.1	+0.6
THR8	Santorini-Mono	1.06	271	P	Pn	07 51 49.2	+0.6
SANT	Santorini	1.08	269	P	Pn	07 51 49.3	+0.6
SANT	Santorini	1.08	269	*e*Pn	Pn	07 51 49.4	+0.6
SANT				*e*Sn	Sn	07 52 07.2	-1.3
SANT	Santorini	1.08	269	P	Pn	07 51 49.4	+0.6
SANT				*e*Sn	Sn	07 52 07.2	-1.3
ARG	Arkhangelos	1.09	99	PG	Pn	07 51 50.3	+1.4
ARG	Arkhangelos	1.09	99	P	Pn	07 51 51.0	+2.2
ARG				S	Sn	07 52 07.8	-0.8
ARG				AML	AML	07 52 10.2	
	comp=E,15227µm,0.4s						
ARG				AML	AML	07 52 11.6	
	comp=N,6756µm,0.3s						
ARG	Arkhangelos	1.09	99	P	Pn	07 51 50.3	+1.4
ARG				S	Sn	07 52 08.7	+0.1
ARG	Arkhangelos	1.09	99	P	Pn	07 51 50.2	+1.4
ARG				S	Sn	07 52 08.7	+0.1
THT1	Athinios (Pele	1.10	270	P	Pn	07 51 49.5	+0.6
THT1				AML	AML	07 52 08.3	
	comp=N,1507µm,0.8s						
THT1				AML	AML	07 52 09.0	
	comp=E,670µm,0.4s						
THT1	Athinios (Pele	1.10	270	P	Pn	07 51 49.6	+0.7
THR7	Fira-Santorini	1.10	272	P	Pn	07 51 49.8	+0.8
THR7	Fira-Santorini	1.10	272	P	Pn	07 51 49.7	+0.8
THT2	Imerovigli	1.11	273	P	Pn	07 51 50.7	+1.7
THT2				S	Sn	07 52 09.1	+0.2
THT2				AML	AML	07 52 10.9	
	comp=N,4667µm,0.4s						
THT2				AML	AML	07 52 11.8	
	comp=E,5969µm,0.4s						
THT2	Imerovigli	1.11	273	P	Pn	07 51 50.2	+1.2
THT2				S	Sn	07 52 09.4	+0.5
CMBO	Columbo, Santo	1.12	275	P	Pn	07 51 50.2	+1.1
CMBO				AML	AML	07 52 09.6	
	comp=N,3022µm,0.5s						
CMBO				AML	AML	07 52 09.6	
	comp=E,4920µm,0.5s						
CMBO	Columbo, Santo	1.12	275	P	Pn	07 51 50.0	+0.9
THR3	Thira Island,	1.12	271	P	Pn	07 51 50.1	+1.0
THR3	Thira Island,	1.12	271	P	Pn	07 51 50.0	+0.9
THR6	Thira Island,	1.13	269	P	Pn	07 51 50.5	+1.3
THR6	Thira Island,	1.13	269	P	Pn	07 51 50.2	+1.0
MRSB	Marmaris-Mugla	1.18	73	PG	Pn	07 51 50.3	+0.7
MRSB	Marmaris-Mugla	1.18	73	*e*Pg	Pn	07 51 50.3	+0.7
MLSB	Milas	1.20	41	PG	Pn	07 51 50.8	+0.9
MLSB	Milas	1.20	41	*e*Pg	Pn	07 51 50.8	+0.9
APE	Apeiranthos	1.22	304	PN	Pn	07 51 51.5	+1.4
APE	Apeiranthos	1.22	304	P	Pn	07 51 50.6	+0.5
APE				AML	AML	07 52 10.8	
	comp=E,2213µm,0.5s						
APE				AML	AML	07 52 11.1	
	comp=N,962µm,0.4s						
APE	Apeiranthos	1.22	304	P	Pn	07 51 50.6	+0.5
APE				S	Sn	07 52 09.6	-1.2
APE	Apeiranthos	1.22	304	*de*P	Pn	07 51 50.3	+0.2
APE	Apeiranthos	1.22	304	P	Pn	07 51 50.6	+0.5
APE	Apeiranthos	1.22	304	*e*Pn	Pn	07 51 51.5	+1.4
APE				S	Sn	07 52 09.6	-1.2
IOSP	Ios island	1.26	286	P	Pn	07 51 50.8	+0.4
IOSP				AML	AML	07 52 10.9	
	comp=N,3840µm,0.6s						
IOSP				AML	AML	07 52 11.6	
	comp=E,4971µm,0.6s						
IOSP	Ios island	1.26	286	P	Pn	07 51 51.0	+0.6
IOSP				S	Sn	07 52 10.4	-0.9
IOSP	Ios island	1.26	286	P	Pn	07 51 51.0	+0.6
IOSP				S	Sn	07 52 10.4	-0.9
SMG	Samos	1.32	2	P	Pn	07 51 51.1	+0.1
SMG	Samos	1.32	2	P	Pn	07 51 51.0	0.0
SMG	Samos	1.32	2	P	Pn	07 51 51.1	+0.1
ZKR	Zakros	1.35	200	P	Pn	07 51 53.9	+2.5
ZKR				AML	AML	07 52 16.4	
	comp=N,3548µm,0.4s						
ZKR				S	Sn	07 52 16.7	+3.6
ZKR				AML	AML	07 52 16.7	
	comp=E,10706µm,0.6s						
ZKR	Zakros	1.35	200	P	Pn	07 51 53.3	+1.9
ZKR				S	Sn	07 52 11.8	-1.3
ZKR	Zakros	1.35	200	P	Pn	07 51 53.2	+1.9
ZKR				S	Sn	07 52 15.6	+2.5
YER	Yerkesik	1.41	58	PN	Pn	07 51 53.2	+1.3
YER	Yerkesik	1.41	58	P	Pn	07 51 53.1	+1.2
YER				S	Sn	07 52 12.8	-1.3
YER	Yerkesik	1.41	58	P	Pn	07 51 53.1	+1.2
YER				S	Sn	07 52 12.8	-1.3
NPS	Neapolis	1.48	221	P	Pn	07 51 52.9	+0.2
NPS				AML	AML	07 52 16.5	
	comp=N,2270µm,0.2s						
NPS				AML	AML	07 52 17.6	
	comp=E,4625µm,0.2s						
NPS	Neapolis	1.48	221	P	Pn	07 51 53.6	+1.0
NPS				S	Sn	07 52 14.8	-0.5
NPS	Neapolis	1.48	221	P	Pn	07 51 53.3	+0.7
TURN	Turunc	1.53	71	PN	Pn	07 51 50.9	-2.2
TURN				SN	Sn	07 52 05.5	-11
TURN	Turunc	1.53	71	⇑ *i*P	Pn	07 51 51.0	-2.2
TURN				*i* S	Sn	07 52 09.2	-7.0
TURN	Turunc	1.53	71	P	Pn	07 51 51.0	-2.2
AYDN	Tasoluk	1.54	34	⇓ *i*P	Pn	07 51 54.2	+0.9
AYDN				*i* S	Sn	07 52 15.6	-1.0
AYDN	Tasoluk	1.54	34	P	Pn	07 51 54.2	+0.9
AYDN				S	Sn	07 52 15.6	-1.0
DALY	Dalyan (Mu˜la	1.56	74	PN	Pn	07 51 55.1	+1.7
DALY	Dalyan (Mu˜la	1.56	74	⇑ *i*P	Pn	07 51 54.9	+1.5
DALY				*i* S	Sn	07 52 16.4	-0.2
DALY	Dalyan (Mu˜la	1.56	74	P	Pn	07 51 54.9	+1.5
DALY				S	Sn	07 52 16.4	-0.2
LAST	Lasithi	1.62	221	P	Pn	07 51 54.1	-0.2
LAST				S	Sn	07 52 16.4	-1.7
LAST				AML	AML	07 52 19.3	
	comp=N,1779µm,0.3s						
LAST				AML	AML	07 52 22.2	
	comp=E,1957µm,0.4s						
LAST	Lasithi	1.62	221	P	Pn	07 51 55.1	+0.8
LAST				S	Sn	07 52 16.6	-1.6
LAST	Lasithi	1.62	221	P	Pn	07 51 54.7	+0.4
LAST				S	Sn	07 52 17.9	-0.3
IACM	Heraklion	1.77	233	P	Pn	07 51 58.3	+2.6
IACM				S	Sn	07 52 21.0	+0.2
IACM	Heraklion	1.77	233	P	Pn	07 51 57.6	+1.9
IACM				S	Sn	07 52 21.5	+0.8
AYDB	Zeytinkoy-Aydi	1.79	29	PN	Pn	07 51 56.6	+0.6
AYDB	Zeytinkoy-Aydi	1.79	29	*e*Pn	Pn	07 51 56.6	+0.6
FETY	Fethiye	1.86	82	P	Pn	07 51 57.5	+0.7
FETY	Fethiye	1.86	82	P	Pn	07 51 57.5	+0.7
FETY				S	Sn	07 52 21.8	-0.9
IDI	Anoyia	1.90	235	P	Pn	07 51 57.8	+0.6
	comp=E,16nm,0.3s,baz=337,slow=8.0,SNR=141						
IDI				S	Sn	07 52 22.8	-0.7
	comp=E,131nm,0.3s,baz=120,slow=24,SNR=19						
IDI	Anoyia	1.90	235	*e*Pn	Pn	07 51 58.0	+0.8
IDI				*e*Sn	Sn	07 52 23.2	-0.2
IDI	Anoyia	1.90	235	*e*Pn	Pn	07 51 58.0	+0.8
IDI				*e*Sn	Sn	07 52 23.2	-0.2
MHLA	Plaka, Milos I	1.94	281	P	Pn	07 51 58.3	+0.7
MHLA				AML	AML	07 52 25.7	
	comp=N,1528µm,1.0s						
MHLA				AML	AML	07 52 32.3	
	comp=E,1014µm,0.5s						
MHLA	Plaka, Milos I	1.94	281	P	Pn	07 51 58.3	+0.7
MHLO	Agia Marina, M	1.95	280	P	Pn	07 51 59.4	+1.7
MHLO				AML	AML	07 52 30.6	
	comp=E,2432µm,0.7s						
MHLO				AML	AML	07 52 33.9	
	comp=N,2425µm,0.6s						
MHLO	Agia Marina, M	1.95	280	P	Pn	07 51 59.2	+1.5
MHLO				S	Sn	07 52 24.0	-0.4
MHLO	Agia Marina, M	1.95	280	P	Pn	07 51 59.0	+1.3
MHLO				S	Sn	07 52 24.0	-0.4
URLA	Izmir	1.97	355	⇓ *i*P	Pn	07 51 58.1	+0.1
URLA	Izmir	1.97	355	P	Pn	07 51 58.1	+0.1
SERI	Serifos	2.01	293	P	Pn	07 51 58.6	+0.2
SERI				AML	AML	07 52 25.9	
	comp=N,1094µm,0.8s						
SERI				AML	AML	07 52 28.1	
	comp=E,356µm,0.6s						
SERI	Serifos	2.01	293	P	Pn	07 51 58.8	+0.4
TAVA	DENIZLI_Tavas	2.01	57	⇑ *i*P	Pn	07 51 59.1	+0.6
TAVA				*i* S	Sn	07 52 23.9	-2.0
TAVA	DENIZLI_Tavas	2.01	57	P	Pn	07 51 59.1	+0.6
TAVA				S	Sn	07 52 23.9	-2.0
CHOS	Chios island	2.08	344	P	Pn	07 51 58.9	-0.4
CHOS	Chios island	2.08	344	P	Pn	07 51 59.5	+0.2
CHOS	Chios island	2.08	344	P	Pn	07 51 59.5	+0.2
SIVA	Sivas	2.12	230	P	Pn	07 52 01.9	+2.2
SIVA				AML	AML	07 52 32.7	
	comp=N,2349µm,0.5s						
SIVA				AML	AML	07 52 34.8	
	comp=E,3549µm,0.5s						
SIVA	Sivas	2.12	230	P	Pn	07 52 01.4	+1.7
SIVA				S	Sn	07 52 28.8	+0.9
SIVA	Sivas	2.12	230	P	Pn	07 52 01.4	+1.7
DNZL	Cakiroluk	2.22	54	⇑ *i*P	Pn	07 52 01.8	+0.7
DNZL				*i* S	Sn	07 52 29.1	-1.4
DNZL	Cakiroluk	2.22	54	P	Pn	07 52 01.8	+0.7
DNZL				S	Sn	07 52 29.1	-1.4
KSL	Kastellorizon	2.27	95	P	Pn	07 52 03.2	+1.8
KSL				S	Sn	07 52 29.0	-2.1
KSL				AML	AML	07 52 32.2	
	comp=E,3704µm,0.5s						
KSL				AML	AML	07 52 34.9	
	comp=N,2716µm,0.3s						
KSL	Kastellorizon	2.27	95	P	Pn	07 52 02.7	+1.3
KSL				S	Sn	07 52 30.8	-0.2
KSL	Kastellorizon	2.27	95	P	Pn	07 52 02.7	+1.3
KSL				S	Sn	07 52 30.8	-0.2
AKAS	Kas	2.28	93	⇑ *i*P	Pn	07 52 02.8	+1.1
AKAS				*i* S	Sn	07 52 30.9	-0.6
AKAS	Kas	2.28	93	P	Pn	07 52 02.8	+1.1
AKAS				S	Sn	07 52 30.9	-0.6
VAM	Vamos	2.32	246	P	Pn	07 52 01.9	-0.2
VAM				AML	AML	07 52 33.5	
	comp=N,5241µm,0.3s						
VAM				AML	AML	07 52 33.5	
	comp=E,4081µm,0.2s						
VAM	Vamos	2.32	246	P	Pn	07 52 02.6	+0.5
PSRA	Psara	2.36	336	P	Pn	07 52 03.6	+1.1
PSRA	Psara	2.36	336	P	Pn	07 52 03.2	+0.7
GOLH	Golhisar	2.38	68	⇑ *i*P	Pn	07 52 04.3	+1.4
GOLH				*i* S	Sn	07 52 34.2	+0.6
GOLH	Golhisar	2.38	68	P	Pn	07 52 04.3	+1.4
GOLH				S	Sn	07 52 34.2	+0.6
IMMV	Iera Moni Meta	2.46	249	P	Pn	07 52 04.2	+0.4
IMMV				AML	AML	07 52 34.2	
	comp=E,4032µm,0.4s						
IMMV				AML	AML	07 52 34.9	
	comp=N,4277µm,0.3s						
IMMV	Iera Moni Meta	2.46	249	P	Pn	07 52 04.5	+0.7
IMMV	Iera Moni Meta	2.46	249	P	Pn	07 52 04.5	+0.7
MANT	Manisa	2.52	33	*e*Pn	Pn	07 52 05.3	+0.5
MANT				*e*Sn	Sn	07 52 36.6	-0.5
MANT	Manisa	2.52	33	*e*Pn	Pn	07 52 05.3	+0.5
MANT				*e*Sn	Sn	07 52 36.6	-0.5
GVD	Gavdhos	2.69	236	P	Pn	07 52 07.8	+1.1
GVD				S	Sn	07 52 41.9	+1.6
GVD				AML	AML	07 52 43.8	
	comp=E,5749µm,0.3s						
GVD				AML	AML	07 52 48.1	
	comp=N,3496µm,0.4s						
GVD	Gavdhos	2.69	236	P	Pn	07 52 07.9	+1.2
GVD				S	Sn	07 52 41.7	+1.4
VLY	Voula,Athens	2.81	302	P	Pn	07 52 09.1	+1.1
VLY				AML	AML	07 52 44.1	
	comp=E,835µm,1.1s						
VLY				AML	AML	07 52 44.6	
	comp=N,865µm,1.0s						
VLY	Voula,Athens	2.81	302	P	Pn	07 52 09.0	+0.9
VLY				S	Sn	07 52 41.7	-1.2
VLY	Voula,Athens	2.81	302	P	Pn	07 52 08.9	+0.9
VLY				S	Sn	07 52 41.7	-1.2
DION	Dionisos Attik	2.84	307	P	Pn	07 52 09.3	+0.9
DION				AML	AML	07 52 45.4	
	comp=N,570µm,1.2s						
DION				AML	AML	07 52 45.9	
	comp=E,495µm,0.8s						
DION	Dionisos Attik	2.84	307	P	Pn	07 52 09.2	+0.7
PTL	Penteli	2.87	306	P	Pn	07 52 09.9	+1.1
PTL				AML	AML	07 52 45.6	
	comp=E,451µm,0.8s						
PTL				AML	AML	07 52 50.5	
	comp=N,285µm,1.0s						
PTL	Penteli	2.87	306	P	Pn	07 52 09.8	+0.9
PTL	Penteli	2.87	306	P	Pn	07 52 09.7	+0.9
ATHU	Athens Univers	2.87	304	P	Pn	07 52 10.3	+1.4
ATHU				S	Sn	07 52 42.5	-1.9
ATHU				AML	AML	07 52 44.4	
	comp=E,224µm,0.6s						
ATHU				AML	AML	07 52 46.2	
	comp=N,470µm,1.1s						
ATHU	Athens Univers	2.87	304	P	Pn	07 52 09.9	+1.0
ANKY	Antikythira Is	2.87	261	P	Pn	07 52 08.0	-0.9
ANKY				AML	AML	07 52 47.9	
	comp=N,2089µm,0.4s						
ANKY				AML	AML	07 52 51.1	
	comp=E,1161µm,0.6s						
ANKY	Antikythira Is	2.87	261	P	Pn	07 52 09.2	+0.3
ANKY	Antikythira Is	2.87	261	P	Pn	07 52 09.2	+0.3
PRK	Paraskevi	2.88	352	P	Pn	07 52 08.5	-0.5
PRK	Paraskevi	2.88	352	P	Pn	07 52 09.2	+0.2
PRK	Paraskevi	2.88	352	P	Pn	07 52 09.2	+0.2
ATH	Athens Observa	2.92	304	P	Pn	07 52 11.0	+1.6
ATH				S	Sn	07 52 46.2	+0.8
ATH				AML	AML	07 52 47.1	
	comp=E,683µm,0.9s						
ATH				AML	AML	07 52 47.4	
	comp=N,373µm,0.8s						
ATH	Athens Observa	2.92	304	P	Pn	07 52 10.7	+1.2
ATH	Athens Observa	2.92	304	P	Pn	07 52 10.6	+1.1
ATH				S	Sn	07 52 45.6	+0.2
BRDR	BURDUR-Merkez	2.92	62	⇑ *i*P	Pn	07 52 10.5	+0.9
BRDR				*i* S	Sn	07 52 45.4	-0.2
BRDR	BURDUR-Merkez	2.92	62	P	Pn	07 52 10.5	+0.9
BRDR				S	Sn	07 52 45.4	-0.2
KORT	Korkueli	2.92	77	⇑ *i*P	Pn	07 52 11.4	+1.8
KORT				*i* S	Sn	07 52 46.0	+0.3
KORT	Korkueli	2.92	77	P	Pn	07 52 11.4	+1.8
KORT				S	Sn	07 52 46.0	+0.3
KYTH	Kithira	3.03	269	P	Pn	07 52 10.4	-0.4
KYTH				AML	AML	07 52 47.2	
	comp=E,2120µm,0.6s						
KYTH				AML	AML	07 52 47.8	
	comp=N,2008µm,0.5s						
KYTH	Kithira	3.03	269	P	Pn	07 52 11.3	+0.4
KYTH				S	Sn	07 52 46.9	-1.0
MNVA	Monemvasia	3.04	277	P	Pn	07 52 12.9	+2.0
MNVA	Monemvasia	3.04	277	P	Pn	07 52 12.5	+1.6
DEMI	Demirci	3.06	29	⇓ *i*P	Pn	07 52 11.8	+0.6
DEMI	Demirci	3.06	29	P	Pn	07 52 11.8	+0.6
DID	Didima	3.06	292	P	Pn	07 52 11.4	+0.2
DID	Didima	3.06	292	P	Pn	07 52 11.8	+0.6
KTHR	Kythira	3.06	269	P	Pn	07 52 11.7	+0.4
KTHR				S	Sn	07 52 47.1	-1.5
KTHR	Kythira	3.06	269	P	Pn	07 52 11.7	+0.4
KTHR				S	Sn	07 52 47.1	-1.5
KRND	KRANIDI	3.08	290	P	Pn	07 52 12.2	+0.6
KRND	KRANIDI	3.08	290	P	Pn	07 52 12.6	+1.1
KRND				S	Sn	07 52 48.6	-0.5
KRND	KRANIDI	3.08	290	P	Pn	07 52 12.3	+0.8
KRND				S	Sn	07 52 48.6	-0.5
VLI	Veliai	3.12	277	P	Pn	07 52 11.2	-0.8
VLI				AML	AML	07 52 49.9	
	comp=N,1458µm,0.5s						
VLI				AML	AML	07 52 50.5	
	comp=E,1168µm,0.2s						
VLI	Veliai	3.12	277	P	Pn	07 52 12.1	+0.1
VLI	Veliai	3.12	277	P	Pn	07 52 12.1	+0.1
VILL	Villia	3.29	304	P	Pn	07 52 15.2	+1.0
VILL				S	Sn	07 52 52.9	-1.1
VILL	Villia	3.29	304	P	Pn	07 52 15.2	+1.0
VILL				S	Sn	07 52 52.9	-1.1
ISP	Isparta	3.31	63	*e*Pn	Pn	07 52 15.1	+0.6
ISP				*e*Sn	Sn	07 52 47.6	-6.8
ISP	Isparta	3.31	63	P	Pn	07 52 15.1	+0.6
ISP	Isparta	3.31	63	Pn	Pn	07 52 15.0	+0.6
ISP				Sn	Sn	07 52 50.7	-3.7
ISP	Isparta	3.31	63	*c i*P	Pn	07 52 15.0	+0.6
ISP	Isparta	3.31	63	Pn	Pn	07 52 15.0	+0.6
ISP				*e*Sn	Sn	07 52 47.6	-6.8
VIL2	Platees	3.35	304	P	Pn	07 52 15.6	+0.7
VIL2				AML	AML	07 52 57.8	
	comp=N,550µm,1.5s						
VIL2				AML	AML	07 53 00.0	
	comp=E,398µm,0.8s						
LOUT	Loutraki	3.44	299	P	Pn	07 52 17.2	+1.1
LOUT	Loutraki	3.44	299	P	Pn	07 52 17.0	+0.9
LOUT	Loutraki	3.44	299	P	Pn	07 52 17.0	+0.9
LTK	Loutraki	3.46	299	P	Pn	07 52 16.9	+0.5
LTK	Loutraki	3.46	299	P	Pn	07 52 17.0	+0.6
DYR	Agios Nikonas	3.61	277	P	Pn	07 52 20.1	+1.9
DYR				AML	AML	07 53 02.5	
	comp=N,577µm,0.5s						
DYR				AML	AML	07 53 03.6	
	comp=E,695µm,0.7s						
DYR	Agios Nikonas	3.61	277	P	Pn	07 52 19.8	+1.5
AOS	Alonnisos	3.61	321	P	Pn	07 52 19.6	+1.4
AOS	Alonnisos	3.61	321	P	Pn	07 52 19.2	+1.0
PROD	Prodromos	3.62	302	P	Pn	07 52 19.6	+1.2
PROD	Prodromos	3.62	302	P	Pn	07 52 19.4	+1.0
VLX	Vlachokerasia	3.67	287	P	Pn	07 52 19.1	-0.1
VLX				AML	AML	07 53 02.1	
	comp=E,1503µm,0.3s						
VLX				AML	AML	07 53 02.8	
	comp=N,1252µm,0.5s						
VLX	Vlachokerasia	3.67	287	P	Pn	07 52 19.6	+0.4
LIA	Limnos Island	3.73	341	P	Pn	07 52 18.6	-1.1
LIA	Limnos Island	3.73	341	P	Pn	07 52 19.4	-0.3
LKR	Lokris	3.77	308	P	Pn	07 52 21.1	+0.8
LKR	Lokris	3.77	308	P	Pn	07 52 21.1	+0.8
SMIA	Simia	3.78	312	P	Pn	07 52 22.7	+2.3
SMIA	Simia	3.78	312	P	Pn	07 52 21.9	+1.5
SKIA	Skiathos	3.83	317	P	Pn	07 52 22.6	+1.6
SKIA	Skiathos	3.83	317	P	Pn	07 52 22.2	+1.2
GUR	Goura	3.88	295	P	Pn	07 52 22.2	+0.4
GUR				AML	AML	07 53 09.5	
	comp=E,1930µm,0.3s						
GUR				AML	AML	07 53 09.8	
	comp=N,2549µm,0.4s						
GUR	Goura	3.88	295	P	Pn	07 52 22.5	+0.7
DSF	Desfina	3.95	302	P	Pn	07 52 23.6	+0.8
DSF	Desfina	3.95	302	P	Pn	07 52 23.6	+0.8
ITM	Ithomi	3.98	283	P	Pn	07 52 23.7	+0.6
ITM				AML	AML	07 53 09.8	
	comp=E,1126µm,0.3s						
ITM				AML	AML	07 53 12.1	
	comp=N,790µm,0.2s						
ITM	Ithomi	3.98	283	*e*Pn	Pn	07 52 24.0	+0.9
ITM				*e*Sn	Sn	07 53 10.1	+0.2
ITM	Ithomi	3.98	283	P	Pn	07 52 24.0	+0.9
ITM				*e*Sn	Sn	07 53 10.1	+0.2
KLV	Kalavryta, Ach	4.06	295	P	Pn	07 52 24.5	+0.4
KLV				AML	AML	07 53 13.4	
	comp=N,557µm,0.3s						
KLV				AML	AML	07 53 16.3	
	comp=E,575µm,0.7s						
KLV	Kalavryta, Ach	4.06	295	P	Pn	07 52 24.6	+0.4
KLV	Kalavryta, Ach	4.06	295	P	Pn	07 52 24.8	+0.7
PYL	PYLOS	4.09	279	P	Pn	07 52 22.7	-1.8
PYL	PYLOS	4.09	279	P	Pn	07 52 24.3	-0.2
MES2	Methoni	4.12	278	P	Pn	07 52 22.2	-2.6
MES2	Methoni	4.12	278	P	Pn	07 52 24.1	-0.7
XOR	Xorichti	4.12	317	P	Pn	07 52 25.7	+0.8
XOR	Xorichti	4.12	317	P	Pn	07 52 25.7	+0.8
MES3	Kyparissia	4.20	283	P	Pn	07 52 25.3	-0.6
MES3	Kyparissia	4.20	283	P	Pn	07 52 26.1	+0.2
AMT	Artemida-Makis	4.23	287	P	Pn	07 52 26.6	+0.3
AMT	Artemida-Makis	4.23	287	P	Pn	07 52 27.1	+0.8
FYTO	Fytoko, Volos	4.29	316	P	Pn	07 52 28.2	+1.1
FYTO	Fytoko, Volos	4.29	316	P	Pn	07 52 28.0	+1.0
AGG	Agios Georgios	4.41	308	*e*Pn	Pn	07 52 30.1	+1.4
AGG	Agios Georgios	4.41	308	*e*P	Pn	07 52 30.1	+1.4
AGG	Agios Georgios	4.41	308	*e*P	Pn	07 52 30.1	+1.4
THAS	Thassos island	4.51	340	P	Pn	07 52 29.4	-0.6
THAS	Thassos island	4.51	340	P	Pn	07 52 30.0	0.0
ALN	Alexandroupoli	4.54	353	P	Pn	07 52 30.1	-0.3
ALN	Alexandroupoli	4.54	353	*e*Pn	Pn	07 52 30.5	+0.2
ALN	Alexandroupoli	4.54	353	*e*P	Pn	07 52 30.5	+0.2
ALN	Alexandroupoli	4.54	353	P	Pn	07 52 30.5	+0.2
EVR	Evrytania	4.69	304	P	Pn	07 52 34.5	+2.1
EVR	Evrytania	4.69	304	P	Pn	07 52 34.0	+1.5
AKMC	Akamas	4.71	105	P	Pn	07 52 32.2	-0.4
	baz=290						
AKMC	Akamas	4.71	105	P	Pn	07 52 32.2	-0.4
VTN	Vitineika	4.73	290	P	Pn	07 52 33.6	+0.7
VTN	Vitineika	4.73	290	P	Pn	07 52 33.9	+1.0
PVO	Paravola	4.74	300	P	Pn	07 52 36.8	+3.8
PVO	Paravola	4.74	300	P	Pn	07 52 35.5	+2.5
PPCY	Paphos	4.76	107	P	Pn	07 52 32.8	-0.5
	baz=292						
PPCY	Paphos	4.76	107	P	Pn	07 52 32.8	-0.5
ALFC	Alefka	4.88	103	P	Pn	07 52 34.3	-0.6

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	baz=288						
ALFC				S	Sn	07 53 23.6	-7.3
ALFC	Alefka	4.88	103	P	Pn	07 52 34.3	-0.6
PDO	Prodromos	4.98	298	P	Pn	07 52 36.8	+0.6
PDO	Prodromos	4.98	298	P	Pn	07 52 37.1	+1.0
LIT	Litokhoron	5.02	319	ePn	Pn	07 52 37.5	+0.8
LIT	Litokhoron	5.02	319	eP	Pn	07 52 37.6	+0.8
LIT	Litokhoron	5.02	319	ePn	Pn	07 52 37.5	+0.8
SZAC	Souni	5.22	106	P	Pn	07 52 39.0	-0.5
	baz=292						
SZAC	Souni	5.22	106	P	Pn	07 52 39.0	-0.5
MGNA	Meganis‚„	5.28	297	P	Pn	07 52 39.9	-0.3
MGNA	Meganis‚„	5.28	297	P	Pn	07 52 40.7	+0.6
MAMC	Mammari	5.36	101	P	Pn	07 52 40.9	-0.4
	baz=286						
MAMC	Mammari	5.36	101	P	Pn	07 52 40.9	-0.4
EVGI	Lefkada island	5.36	296	P	Pn	07 52 40.2	-1.0
EVGI	Lefkada island	5.36	296	P	Pn	07 52 41.4	+0.2
LKD2	Lefkada island	5.43	298	P	Pn	07 52 41.2	-0.9
LKD2				AML	AML	07 53 44.6	
	comp=E,1056µm,0.7s						
LKD2				AML	AML	07 53 46.2	
	comp=N,1003µm,0.6s						
LKD2	Lefkada island	5.43	298	P	Pn	07 52 42.4	+0.3
CSS	Mathiatis	5.51	103	ePn	Pn	07 52 42.6	-0.6
CSS	Mathiatis	5.51	103	P	Pn	07 52 42.9	-0.3
	baz=288						
CSS	Mathiatis	5.51	103	Pn	Pn	07 52 42.1	-1.1
CSS	Mathiatis	5.51	103	ePn	Pn	07 52 42.6	-0.6
CSS	Mathiatis	5.51	103	P	Pn	07 52 42.9	-0.3
FNA	Florina	6.10	318	ePn	Pn	07 52 52.4	+1.3
FNA				eSn	Sn	07 54 03.0	+2.9
FNA	Florina	6.10	318	eP	Pn	07 52 52.4	+1.3
FNA				e		07 54 03.0	
FNA	Florina	6.10	318	eP	Pn	07 52 52.4	+1.3
FNA				eS	Sn	07 54 03.0	+2.9
BRTR	Keskin Array B	6.35	56	P	Pn	07 52 56.7	+2.2
	comp=N,0.7nm,0.3s,baz=245,slow=6.2,SNR=11						
BRTR				S	Sn	07 54 08.4	+2.4
	comp=N,0.8nm,0.3s,baz=225,slow=26,SNR=15						
HNTI	Hanita	7.65	113	Pn	Pn	07 53 11.1	-0.6
HNTI				Sn	Sn	07 54 33.1	-4.0
HNTI	Hanita	7.65	113	Pn	Pn	07 53 11.1	-0.6
OFRI	‘Ofer	7.74	117	Pn	Pn	07 53 12.5	-0.4
OFRI	‘Ofer	7.74	117	Pn	Pn	07 53 12.5	-0.4
HWQ	Hawqa	7.77	103	eP	Pn	07 53 13.1	-0.3
MMA0B	Mount Meron ar	7.85	113	Pn	Pn	07 53 13.4	-1.0
MMA0B	Mount Meron ar	7.85	113	Pn	Pn	07 53 13.4	-1.0
MMAI	Mount Meron Ar	7.85	113	P	Pn	07 53 13.9	-0.6
	comp=N,24nm,0.3s,baz=297,slow=12,SNR=74						
MMAI				S	Sn	07 54 38.5	-3.6
	comp=N,15nm,0.3s,baz=302,slow=26,SNR=9.5						
KSDI	Kefar Szold	7.96	111	Pn	Pn	07 53 15.3	-0.5
KSDI				Sn	Sn	07 54 40.8	-3.8
KSDI	Kefar Szold	7.96	111	Pn	Pn	07 53 15.3	-0.5
RCY	Rachaya	7.96	109	eP	Pn	07 53 15.6	-0.4
SLTI	Sal’it	7.98	119	Pn	Pn	07 53 15.5	-0.6
SLTI	Sal’it	7.98	119	Pn	Pn	07 53 15.5	-0.6
ULC	Ulcinj	8.08	316	⇓iPn	Pn	07 53 16.4	-1.0
ULC				eSn	Sn	07 54 42.8	-4.7
ULC	Ulcinj	8.08	316	⇓iPn	Pn	07 53 16.4	-1.0
PVY	Plav	8.14	322	⇓iPn	Pn	07 53 18.8	+0.5
PVY				eSn	Sn	07 54 45.6	-3.4
PVY	Plav	8.14	322	⇓iPn	Pn	07 53 18.8	+0.5
MMLI	Mount Malkishu	8.14	116	Pn	Pn	07 53 18.1	-0.3
MMLI	Mount Malkishu	8.14	116	Pn	Pn	07 53 18.1	-0.3
KSHT	Keshet	8.17	112	Pn	Pn	07 53 19.3	+0.6
KSHT	Keshet	8.17	112	Pn	Pn	07 53 19.3	+0.6
DRME	Dracevica, Mon	8.26	317	⇑iPn	Pn	07 53 19.4	-0.4
DRME				eSn	Sn	07 54 47.4	-4.4
DRME	Dracevica, Mon	8.26	317	⇑iPn	Pn	07 53 19.4	-0.4
AMAZ	Amatzia	8.30	123	Pn	Pn	07 53 20.1	-0.4
AMAZ	Amatzia	8.30	123	Pn	Pn	07 53 20.1	-0.4
HMDT	Nahal Hemdat	8.32	117	Pn	Pn	07 53 20.6	0.0
HMDT	Nahal Hemdat	8.32	117	Pn	Pn	07 53 20.6	0.0
KZIT	Kziot	8.37	129	Pn	Pn	07 53 21.0	-0.3
KZIT	Kziot	8.37	129	Pn	Pn	07 53 21.0	-0.3
BEY	Berane	8.38	323	ePn	Pn	07 53 21.9	+0.5
IVA	Berane	8.38	323	ePn	Pn	07 53 21.9	+0.5
IVA				eSn	Sn	07 54 51.2	-3.5
PDG	Podgorica	8.39	318	⇑iPn	Pn	07 53 20.9	-0.6
TTG	Podgorica	8.39	318	⇑iPn	Pn	07 53 20.9	-0.6
TTG				eSn	Sn	07 54 50.5	-4.3
TTG	Podgorica	8.39	318	ePn	Pn	07 53 20.6	-0.9
TTG				eSn	Sn	07 54 53.8	-1.0
TTG	Podgorica	8.39	318	eP	Pn	07 53 20.6	-0.9
TTG				e		07 54 53.8	
TTG	Podgorica	8.39	318	eP	Pn	07 53 20.6	-0.9
TTG				eS	Sn	07 54 53.8	-1.0
TIP	Timpagrande	8.42	292	ePn	Pn	07 53 19.9	-2.1
TIP				eSn	Sn	07 54 42.9	-13
TIP	Timpagrande	8.42	292	ePn	Pn	07 53 19.9	-2.1
TIP				eSn	Sn	07 54 42.9	-13
CGL1	Ceglie Messapi	8.45	303	eP	Pn	07 53 20.3	-2.0
BUM	Brajici-Budva	8.50	316	⇓iPn	Pn	07 53 22.0	-1.0
BUM				eSn	Sn	07 54 52.4	-5.2
BUM	Brajici-Budva	8.50	316	⇓iPn	Pn	07 53 22.0	-1.0
TAR1	Taranto	8.53	302	⇑iP	Pn	07 53 20.9	-2.4
TAR1				S	Sn	07 54 48.3	-10
YTIR	Yattir	8.54	124	Pn	Pn	07 53 23.5	-0.2
YTIR	Yattir	8.54	124	Pn	Pn	07 53 23.5	-0.2
KOME	Kolasin	8.55	321	⇑iPn	Pn	07 53 24.1	+0.4
KOME				eSn	Sn	07 54 55.3	-3.6
KOME	Kolasin	8.55	321	⇑iPn	Pn	07 53 24.1	+0.4
DSI	Dead Sea	8.60	122	Pn	Pn	07 53 23.8	-0.6
DSI	Dead Sea	8.60	122	Pn	Pn	07 53 23.8	-0.6
FASA	Fasano	8.61	304	eP	Pn	07 53 22.3	-2.1
FASA				S	Sn	07 54 51.1	-9.0
CEME	Cevo	8.65	318	⇑iPn	Pn	07 53 24.2	-0.9
CEME				eSn	Sn	07 54 56.9	-4.3
CEME	Cevo	8.65	318	⇑iPn	Pn	07 53 24.2	-0.9
MASS	Massafra	8.67	302	⇑iP	Pn	07 53 22.9	-2.3
MZDA	Masada	8.74	123	Pn	Pn	07 53 26.4	+0.2
MZDA	Masada	8.74	123	Pn	Pn	07 53 26.4	+0.2
NKME	Niksic	8.78	319	⇑iPn	Pn	07 53 26.6	-0.2
NKME				eSn	Sn	07 54 59.9	-4.5
NKME	Niksic	8.78	319	⇑iPn	Pn	07 53 26.6	-0.2
NKY	Niksic	8.79	319	⇑iPn	Pn	07 53 26.6	-0.4
NKY				eSn	Sn	07 55 01.1	-3.6
NKY	Niksic	8.79	319	⇑iPn	Pn	07 53 26.6	-0.4
RMNI	Mount Ramon	8.81	129	Pn	Pn	07 53 27.1	-0.2
RMNI	Mount Ramon	8.81	129	Pn	Pn	07 53 27.1	-0.2
GRUS	Gruza	8.82	330	eP	Pn	07 53 27.8	+0.6
HCY	Herceg Novi	8.82	316	⇓iPn	Pn	07 53 25.5	-1.7
HCY				eSn	Sn	07 55 00.2	-5.0
HCY	Herceg Novi	8.82	316	⇓iPn	Pn	07 53 25.5	-1.7
CEL	Celeste	8.88	285	ePn	Pn	07 53 27.1	-1.1
CEL				eSn	Sn	07 54 56.5	-10
CEL	Celeste	8.88	285	ePn	Pn	07 53 27.1	-1.1
CEL				eSn	Sn	07 54 56.5	-10
BAI	Bari	9.06	304	eP	Pn	07 53 28.2	-2.2
BAI				S	Sn	07 55 00.9	-10
SG1	Sgolgore (BA)	9.08	302	eP	Pn	07 53 28.5	-2.2
SG1				S	Sn	07 55 01.4	-10
TREB	Trebinje	9.08	317	⇓iPn	Pn	07 53 28.7	-1.9
BRY	Bratogost	9.10	318	⇓iPn	Pn	07 53 30.3	-0.7
BRY				eSn	Sn	07 55 06.9	-5.2
BRY	Bratogost	9.10	318	⇓iPn	Pn	07 53 30.3	-0.7
ZFRI	Zfri	9.10	127	Pn	Pn	07 53 30.3	-0.8
ZFRI	Zfri	9.10	127	Pn	Pn	07 53 30.3	-0.8
UPM	Unac-Piva	9.12	321	ePn	Pn	07 53 31.6	+0.3
UPM				eSn	Sn	07 55 08.8	-3.8
UPM	Unac-Piva	9.12	321	ePn	Pn	07 53 31.6	+0.3
KRMI	Paran Flat	9.12	131	Pn	Pn	07 53 30.5	-0.9
KRMI				Sn	Sn	07 55 08.4	-4.2
KRMI	Paran Flat	9.12	131	Pn	Pn	07 53 30.5	-0.9
PRNI	Paran	9.13	129	Pn	Pn	07 53 31.0	-0.5
PRNI	Paran	9.13	129	Pn	Pn	07 53 31.0	-0.5
DIVS	Divibare	9.29	328	ePn	Pn	07 53 33.8	+0.3
DIVS	Divibare	9.29	328	ePn	Pn	07 53 33.8	+0.3
DIVS	Divibare	9.29	328	eP	Pn	07 53 34.1	+0.6
ASF	Jabal al Asfar	9.36	114	P	Pn	07 53 35.8	+1.2
	comp=N,1.5nm,0.3s,baz=237,slow=8.0,SNR=10						
ASF				S	Sn	07 55 18.0	-0.4
	comp=N,1.0nm,0.3s,baz=106,slow=22,SNR=2.2						
CUC	Castrocucco	9.36	296	ePn	Pn	07 53 32.6	-1.8
CUC	Castrocucco	9.36	296	ePn	Pn	07 53 32.7	-1.8
BBLS	Lazići	9.37	325	⇑iPn	Pn	07 53 33.9	-0.6
BBLS	Lazići	9.37	325	eP	Pn	07 53 34.6	+0.1
HRFI	Mount Harif	9.37	130	Pn	Pn	07 53 34.1	-0.5
HRFI				Sn	Sn	07 55 14.5	-4.1
HRFI	Mount Harif	9.37	130	Pn	Pn	07 53 34.1	-0.5
MBRI	Mt Berech	9.46	132	Pn	Pn	07 53 35.6	-0.4
MBRI				Sn	Sn	07 55 17.4	-3.6
MBRI	Mt Berech	9.46	132	Pn	Pn	07 53 35.6	-0.4
STON	Ston	9.54	316	P	Pn	07 53 34.3	-2.5
EIL	Elat	9.58	132	P	Pn	07 53 43.9	+6.5
	comp=N,5.4nm,0.3s,baz=303,slow=2.1,SNR=47						
EIL				S	Sn	07 55 24.7	+1.1
	comp=N,10nm,0.3s,baz=2.2,slow=15,SNR=9.3						
EIL	Elat	9.58	132	Pn	Pn	07 53 37.0	-0.4
EIL				Sn	Sn	07 55 19.7	-3.9
EIL	Elat	9.58	132	Pn	Pn	07 53 37.0	-0.4
TEKS	Tekeris	9.85	328	eP	Pn	07 53 41.0	+0.1
WDD	Wied Dalam	9.94	270	ePn	Pn	07 53 41.7	-0.5
WDD				eSn	Sn	07 55 22.6	-10
WDD	Wied Dalam	9.94	270	ePn	Pn	07 53 41.7	-0.5
WDD				eSn	Sn	07 55 22.5	-10
MS1	Monte Sant’Ang	9.97	305	eP	Pn	07 53 39.8	-2.7
MS1				S	Sn	07 55 20.9	-12
VAE	Valguarnera	9.97	280	P	Pn	07 53 43.4	+0.8
	comp=N,5.1nm,0.3s,baz=156,slow=6.1,SNR=3.8						
VAE				S	Sn	07 55 25.1	-8.0
	comp=N,5.5nm,0.3s,baz=237,slow=9.2,SNR=7.0						
BLY	Banja Luka	11.09	322	ePn	Pn	07 53 57.6	+0.4
BLY	Banja Luka	11.09	322	ePn	Pn	07 53 57.6	+0.4
UDBI	Udbina	11.68	317	P	Pn	07 54 03.5	-1.4
NVLJ	Novalja	12.20	316	P	Pn	07 54 10.0	-1.6
PSZ	Piszkesteto	12.60	338	eP	P	07 54 21.7	-0.6
PSZ	Piszkesteto	12.60	338	eP	P	07 54 21.7	-0.6
PSZ	Piszkesteto	12.60	338	eP	P	07 54 21.7	-0.6
CRES	Cresnjev	12.71	321	⇑iPn	Pn	07 54 18.0	-0.3
CRVS	Cervenica-Dubn	13.10	344	eP	P	07 54 28.2	+0.4
CRVS	Cervenica-Dubn	13.10	344	eP	P	07 54 28.2	+0.4
CRVS	Cervenica-Dubn	13.10	344	eP	P	07 54 28.2	+0.4
VYHS	Vyhne	13.44	337	eP	P	07 54 31.8	+0.3
VYHS	Vyhne	13.44	337	eP	P	07 54 31.8	+0.3
VYHS	Vyhne	13.44	337	eP	P	07 54 31.8	+0.3
SOKA	Soboth	13.52	323	i P	Pn	07 54 29.1	+0.4
	comp=N,6.3nm,0.7s,SNR=6.4						
SOKA	Soboth	13.52	323	Pn	Pn	07 54 29.1	+0.4
	comp=N,6.3nm,0.7s,SNR=6.4						
OBKA	Obir	13.64	322	i P	Pn	07 54 30.7	+0.5
	comp=N,1.5nm,0.2s						
OBKA	Obir	13.64	322	Pn	Pn	07 54 30.7	+0.5
	comp=N,1.5nm,0.2s						
ARSA	Arzberg	13.71	326	i P	Pn	07 54 31.6	+0.6
	comp=N,2.1nm,0.8s						
ARSA	Arzberg	13.71	326	Pn	Pn	07 54 31.6	+0.6
	comp=N,2.1nm,0.8s						
CONA	Conrad Observa	14.08	328	eP	Pn	07 54 36.3	+0.6
	comp=N,0.7nm,0.4s						
CONA	Conrad Observa	14.08	328	Pn	Pn	07 54 36.3	+0.6
	comp=N,0.7nm,0.4s						
KEST	Kesra	14.13	273	P	Pn	07 54 35.2	-1.2
	comp=N,0.5nm,0.3s,baz=125,slow=7.0,SNR=5.0						
KEST				S	Sn	07 57 04.0	-9.3
	comp=N,0.3nm,0.3s,baz=45,slow=20,SNR=1.9						
KEST	Kesra	14.13	273	eP	P	07 54 39.8	+0.4
KEST	Kesra	14.13	273	eP	P	07 54 39.8	+0.4
KBZ	Khabaz	14.33	54	LR	LR	08 00 23.1	
	comp=N,16nm,21.7s,baz=2.5,slow=38						
KIEV	Kiev	14.41	6	eP	P	07 54 42.3	+0.1
KIEV	Kiev	14.41	6	⇓eP	P	07 54 41.7	-0.5
KIEV	Kiev	14.41	6	eP	P	07 54 42.3	+0.1
AKASG	Malin Array Be	14.41	6	P	P	07 54 42.4	+0.1
	comp=N,2.9nm,0.3s,baz=193,slow=12,SNR=13						
AKBB	Malin Array Si	14.41	6	eP	P	07 54 42.5	+0.2
AKBB	Malin Array Si	14.41	6	eP	P	07 54 42.5	+0.2
KBA	Koelnbreinsper	14.64	321	i P	Pn	07 54 43.0	+0.2
	comp=N,2.2nm,0.4s						
KBA	Koelnbreinsper	14.64	321	P	Pn	07 54 43.0	+0.2
	comp=N,2.2nm,0.4s						
OJC	Ojcow	14.72	342	eP	P	07 54 46.2	+0.5
OJC	Ojcow	14.72	342	eP	P	07 54 46.2	+0.5
OJC	Ojcow	14.72	342	eP	P	07 54 46.2	+0.5
ABTA	Abfaltersbach	14.85	319	i P	Pn	07 54 45.0	-0.4
	comp=N,2.9nm,0.3s						
ABTA	Abfaltersbach	14.85	319	Pn	Pn	07 54 45.0	-0.4
	comp=N,2.9nm,0.3s						
VRAC	Vranov	14.90	333	P	Pn	07 54 46.5	+0.6
	comp=N,0.5nm,0.3s,baz=140,slow=10,SNR=5.1						
WTTA	Wattenberg	15.64	319	i P	Pn	07 54 54.7	-0.6
	comp=N,3.5nm,0.4s						
WTTA	Wattenberg	15.64	319	P	Pn	07 54 54.7	-0.6
	comp=N,3.5nm,0.4s						
GEA0	GERESS Array S	15.71	326	ePn	P	07 54 56.8	+0.1
GEA0	GERESS Array S	15.71	326	ePn	P	07 54 56.8	+0.1
GEC2	GERESS Array S	15.71	326	ePn	Pn	07 54 56.8	+0.8
	comp=N,7.8nm,0.8s						
GEC2	GERESS Array S	15.71	326	eP	Pn	07 54 56.8	+0.8
GEC2				pmax	pmax		
	comp=Z,8.0nm,0.8s						
GEC2	GERESS Array S	15.71	326	eP	Pn	07 54 56.8	+0.8
	comp=Z,8.0nm,0.8s						
GERES	GERESS Array B	15.71	326	P	Pn	07 54 56.5	+0.5
	comp=Z,0.3nm,0.3s,baz=138,slow=13,SNR=42						
DPC	Dobruska-Polom	15.87	335	eP	P	07 54 58.9	+0.4
DPC	Dobruska-Polom	15.87	335	eP	P	07 54 58.9	+0.4
DPC	Dobruska-Polom	15.87	335	eP	P	07 54 58.9	+0.4
KHC	Kasperske Hory	15.98	327	eP	P	07 55 00.0	+0.3
KHC	Kasperske Hory	15.98	327	ePn	Pn	07 54 59.8	+0.6
	comp=Z,5.2nm,1.0s						
KHC	Kasperske Hory	15.98	327	eP	Pn	07 54 59.8	+0.6
KHC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KHC	Kasperske Hory	15.98	327	eP	Pn	07 54 59.8	+0.6
	comp=Z,5.0nm,1.0s						
MOTA	Moosalm	15.98	318	i P	P	07 55 00.7	+0.9
	comp=Z,5.5nm,0.6s,SNR=5.9						
MOTA	Moosalm	15.98	318	P	P	07 55 00.7	+0.9
	comp=Z,5.5nm,0.6s,SNR=5.9						
FETA	Feichten	15.99	317	eP	P	07 55 00.8	+0.8
	comp=Z,24nm,0.8s,SNR=32						
FETA	Feichten	15.99	317	P	P	07 55 00.8	+0.8
	comp=Z,24nm,0.8s,SNR=32						
GOPC	GO Pecny, Ondr	16.08	331	eP	P	07 55 01.1	+0.3
GOPC	GO Pecny, Ondr	16.08	331	eP	P	07 55 01.1	+0.3
GOPC	GO Pecny, Ondr	16.08	331	eP	P	07 55 01.1	+0.3
UPC	Upice	16.11	335	eP	P	07 55 02.7	+1.6
UPC	Upice	16.11	335	eP	P	07 55 02.7	+1.6
UPC	Upice	16.11	335	eP	P	07 55 02.7	+1.6
DAVOX	Davos/Dischmat	16.33	315	P	Pn	07 55 01.7	-2.1
	comp=Z,0.2nm,0.3s,baz=126,slow=14,SNR=3.6						
DAVA	Damuels	16.62	316	i Pn	P	07 55 06.5	-0.4
	comp=Z,7.6nm,0.6s						
DAVA	Damuels	16.62	316	Pn	P	07 55 06.5	-0.4
	comp=Z,7.6nm,0.6s						
BRG	Berggiesshubel	17.17	331	eP	Pn	07 55 14.9	+1.4
	comp=Z,4.4nm,0.9s						
BRG	Berggiesshubel	17.17	331	eP	Pn	07 55 14.9	+1.4
BRG	Berggiesshubel	17.17	331	eP	Pn	07 55 14.9	+1.4
BNI	Bardonecchia	17.50	306	eP	P	07 55 17.0	+0.4
	comp=Z,5.4nm,0.7s						
BNI	Bardonecchia	17.50	306	eP	P	07 55 17.0	+0.4
BNI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BNI	Bardonecchia	17.50	306	eP	P	07 55 17.0	+0.4
	comp=Z,5.4nm,0.7s						
SENIN	Lac Senin/Sane	17.66	310	eP	P	07 55 18.5	+0.1
	comp=Z,17nm,0.7s						
CLL	Collm	17.88	331	eP	P	07 55 20.0	-0.5
CLL				i Pmax		07 55 22.0	
	comp=Z,6.0nm,1.0s						
CLL	Collm	17.88	331	i P	Pn	07 55 22.0	0.0
CLL				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CLL	Collm	17.88	331	i P	Pn	07 55 22.0	0.0
	comp=Z,6.0nm,1.0s						
BFO	Black Forest	18.07	317	eP	Pn	07 55 24.5	+0.2
	comp=Z,0.9nm,0.7s						
BFO	Black Forest	18.07	317	eP	Pn	07 55 24.5	+0.2
BFO				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ECH	Echery	18.66	315	eP	P	07 55 28.7	-0.4
	comp=Z,6.0nm,1.1s						
ECH	Echery	18.66	315	eP	P	07 55 28.7	-0.4
ECH				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ECH	Echery	18.66	315	eP	P	07 55 28.7	-0.4
	comp=Z,6.0nm,1.1s						
KLNR	Kaliningrad	18.78	348	ceP	P	07 55 30.0	-0.2
KLNR	Kaliningrad	18.78	348	eP	P	07 55 30.0	-0.2
MEM	Membach	20.62	320	⇑P	P	07 55 51.1	+1.0
	comp=Z,5.9nm,0.9s						
VSU	Vasula	22.09	360	⇓eP	P	07 56 06.6	+1.1
VSU				pmax	pmax		
	comp=Z,14nm,1.0s						
ESDC	Sonseca Array	24.39	287	P	P	07 56 27.6	+0.6
	comp=Z,1.3nm,0.5s,baz=83,slow=9.7,SNR=17						
ESLA	Sonseca Array	24.39	287	eP	P	07 56 27.4	+0.3
	comp=Z,2.9nm,0.6s						
ESLA	Sonseca Array	24.39	287	eP	P	07 56 27.4	+0.3
	comp=Z,2.9nm,0.6s						
FINES	FINESS Array B	25.08	359	P	P	07 56 31.8	-1.2
	comp=Z,0.7nm,0.6s,baz=172,slow=11,SNR=4.0						
HFS	Hagfors	25.21	345	P	P	07 56 33.8	-0.4
	comp=Z,1.1nm,0.5s,baz=150,slow=12,SNR=12						
HFS	Hagfors	25.21	345	P	P	07 56 33.8	-0.4
HFS				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KONO	Kongsberg	25.80	340	⇑eP	P	07 56 41.2	+1.7
KONO				pmax	pmax		
	comp=Z,8.0nm,1.3s						
EKA	Eskdalemuir Ar	27.84	322	P	P	07 56 56.0	-1.9
	comp=Z,0.5nm,0.4s,baz=123,slow=11,SNR=3.5						
EKA	Eskdalemuir Ar	27.84	322	P	P	07 56 56.0	-1.9
EKA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
TOA0	Torodi Ar. Sit	32.29	231	eP	P	07 57 39.2	+1.7
	comp=Z,5.0nm,0.6s						
TORD	Torodi Ar. Bea	32.29	231	P	P	07 57 37.4	0.0
	comp=Z,3.4nm,0.5s,baz=36,slow=8.8						
ARCES	ARCESS Array B	33.21	359	P	P	07 57 43.5	-1.3
	comp=Z,2.4nm,1.0s,baz=186,slow=7.7,SNR=6.1						
ARCES	ARCESS Array B	33.21	359	P	P	07 57 43.6	-1.3
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.9s						
BRVK	Borovoye	34.48	47	⇑eP	P	07 57 58.0	+1.9
BRVK				i *PP	pP	07 58 29.9	+1.1
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KSH	Kashi	38.52	70	eP	P	07 58 29.3	-1.3
KSH				PP	PP	08 00 03.8	+2.0
KURBB	Kurchatov Arra	39.32	52	P	P	07 58 37.6	+0.6
	comp=Z,0.3nm,0.4s,baz=276,slow=8.6,SNR=4.2						
KURK	Kurchatov	39.38	52	P	P	07 58 37.6	+0.2
DBIC	Dimbokro	41.37	232	P	P	07 58 55.5	+1.4
	comp=Z,2.2nm,0.5s,baz=18,slow=7.7,SNR=4.4						
DBIC	Dimbokro	41.37	232	eP	P	07 58 55.7	+1.6
	comp=Z,5.7nm,1.0s						
MK31	Makanchi Array	41.99	58	eP	P	07 58 59.5	+0.6
MK31	Makanchi Array	41.99	58	eP	P	07 58 59.5	+0.6
MKAR	Makanchi Array	41.99	58	P	P	07 59 00.6	+1.6
	comp=Z,0.4nm,0.4s,baz=268,slow=9.2,SNR=8.9						
MKAR				ScP	ScP	08 04 27.0	-0.1
	comp=Z,0.4nm,0.6s,baz=260,slow=3.5,SNR=4.5						
MKAR	Makanchi Array	41.99	58	eP	P	07 58 59.7	+0.8
	comp=Z,7.1nm,0.5s						
MKAR	Makanchi Array	41.99	58	eP	P	07 58 59.7	+0.8
MKAR				pmax	pmax		
	comp=Z,7.0nm,0.5s						
ZALV	Zalesovo Beam	43.20	47	P	P	07 59 08.8	+0.3
	comp=Z,0.7nm,0.3s,baz=258,slow=8.2,SNR=3.2						
WMQ	Urumqi	46.24	61	eP	P	07 59 34.7	+1.8
WMQ				LR	LR		
	comp=N,190nm,32.9s						
WMQ				LR	LR		
	comp=E,510nm,30.7s						
WMQ				LR	LR		
	comp=Z,33nm,28.5s						
SCHQ	Schefferville	63.11	320	P	P	08 01 33.1	-0.9
	comp=Z,4.4nm,0.5s,baz=65,slow=4.4,SNR=14						
SCHQ	Schefferville	63.11	320	eP	P	08 01 33.6	-0.4
	comp=Z,4.4nm,0.5s						
HHC	Hu-ho-hao-te	63.85	57	eP	P	08 01 40.0	+0.7
HHC				pmax	pmax		
	comp=Z,21nm,1.0s						
HHC				pmax	pmax		
	comp=Z,77nm,6.8s						
BOSA	Boshof	64.67	181	P	P	08 01 46.7	+2.2
	comp=Z,4.0nm,0.8s,baz=8.7,slow=9.1,SNR=3.5						
GYA	Guiyang	67.11	73	eP	P	08 02 01.0	+0.6
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PLVO	Plevna	73.77	314	eP	P	08 02 41.7	+1.3
	comp=Z,3.5nm,0.9s						
WRH	Wood River Hil	79.39	358	eP	P	08 03 11.3	-0.2
	comp=Z,0.3nm,0.6s						
ULM	Lac du Bonnet	80.02	327	P	P	08 03 14.8	-0.4
	comp=Z,3.4nm,0.5s,baz=56,slow=4.0,SNR=5.0						
F36A	Milaca	82.07	322	eP	P	08 03 26.1	-0.1
	comp=Z,2.9nm,0.6s						
TKL	Tuckaleechee C	83.57	310	P	P	08 03 33.6	-0.5
	comp=Z,1.8nm,0.8s,baz=243,slow=2.3,SNR=3.1						
CPCT	Cooper Cave	84.17	310	eP	P	08 03 38.4	+1.2
	comp=Z,2.4nm,0.8s						
ECSD	EROS Data Cent	85.13	323	eP	P	08 03 42.3	+0.5
	comp=Z,4.2nm,0.8s						
R40A	Maddies Statio	86.78	316	eP	P	08 03 50.7	+0.7
	comp=Z,3.0nm,0.6s						
T42A	Van Buren	87.01	315	eP	P	08 03 52.1	+1.0
	comp=Z,1.4nm,0.6s						
LRAL	Lakeview Retre	87.30	310	eP	P	08 03 53.1	+0.5
	comp=Z,1.9nm,0.9s						
BOZ	Bozeman (W)	90.18	332	eP	P	08 04 07.2	+1.1
	comp=Z,0.7nm,0.6s						
BOZ	Bozeman (W)	90.18	332	eP	P	08 04 07.2	+1.1
BOZ				pmax	pmax		
	comp=Z,1.0nm,0.6s						

DJA ***07*** *07:57:30.3±0.4, 1°N±4°×12°3E±°, h66^{km}±6^{km}, M4.5/10, mb4.6/5, mB4.6/3, MLv4.5/10, Mw(mB)3.8/3*

IDC ***07*** *07:57:49.9±20.0, 0°.38S×123°.80E, h170^{km}±212^{km}, mb3.0/4, mb1 3.2/5, mb1mx3.0/55, mbtmp3.5/5, ML3.8/1, Error ellipse: s-maj=128.3km s-min=41.5km az=56.0*

ISC 07 07:57:36.8±1.1,**0°.27N**±0°.08×**123°.46E**±0°.07,**h50^{km},n17, σ3^{s}.32**/16,**mb3.6**/4,**Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	Cibinong	0.61	60	P	Pn	07 57 48.2	-1.2
KMSI				S	Sn	07 58 01.4	+3.0
LUWI	Luwuk	1.47	208	P	Pn	07 57 59.4	-1.5
LUWI				S	Sn	07 58 23.6	+4.7
APSI	Ampana	2.15	237	P	Pn	07 58 05.7	-4.5
APSI				S	Sn	07 58 35.5	-0.2
SANI	Sanana	3.42	132	P	Pn	07 58 27.9	+0.3
MPSI	Mapaga	3.56	271	P	Pn	07 58 21.0	-8.5
MPSI				S	Sn	07 59 00.4	-10
LBMI	Labuha	4.14	103	P	Pn	07 58 36.7	-0.9
LBMI				S	Sn	07 59 27.9	+3.1
KDI	Kendari	4.28	191	P	Pn	07 58 38.8	-0.6
KDI				S	Sn	07 59 34.0	+5.9
TTSI	Tana Toraja	4.90	228	P	Pn	07 58 43.8	-4.2
	153nm,0.7s,1µm						
SPSI	Sidrap Palu	5.59	221	P	Pn	07 58 53.9	-3.5
	48nm,0.7s,606nm						
BKSI	Bulukumba	6.47	211	P	Pn	07 59 07.4	-2.1
EDFI	Ende, Flores	9.13	191	P	Pn	07 59 46.0	0.0
FAKI	Fak Fak	9.34	110	P	Pn	07 59 47.6	-1.3
FITZ	Fitzroy Crossi	18.38	173	P	P	08 01 44.6	-3.0
	0.2nm,0.3s,baz=360,slow=10,SNR=2.9						
WRA	Warramunga Arr	22.74	153	P	P	08 02 30.9	-4.0
	0.8nm,0.4s,baz=330,slow=10,SNR=13						
ASAR	Alice Springs	25.86	158	P	P	08 02 59.6	-4.4
	0.2nm,0.5s,baz=334,slow=7.9,SNR=1.5						
MKAR	Makanchi Array	58.63	328	P	P	08 07 34.8	+6.0
	0.4nm,0.7s,baz=117,slow=8.4,SNR=2.9						
KURBB	Kurchatov Arra	62.96	330	P	P	08 08 02.4	+4.2
	0.6nm,0.8s,baz=134,slow=5.7,SNR=4.4						

IDC 07 08:09:29.2±15.0,**20°.26S**×**178°.06W,h561**^{km}±117^{km}, **mb3.5**/5,**mb1 3.5**/6,**mb1mx3.0**/47,**mbtmp4.5**/6,**Error ellipse: s-maj=151.0km s-min=55.4km az=86.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	14.57	260	P	P	08 12 33.5	-0.7
	0.4nm,0.3s,baz=72,slow=18,SNR=2.3						
CTA	Charters Tower	33.45	264	P	P	08 15 23.0	+0.4
	4.9nm,0.4s,baz=87,slow=10,SNR=14						
STKA	Stephens Creek	37.84	244	P	P	08 15 58.4	-0.3
	1.3nm,0.5s,baz=85,slow=12,SNR=4.9						
JAY	Jayapura	43.91	288	P	P	08 16 47.1	0.0
	15nm,0.9s,baz=111,slow=2.0,SNR=6.7						
ASAR	Alice Springs	44.52	256	P	P	08 16 51.5	-0.2
	2.9nm,0.4s,baz=93,slow=7.6,SNR=53						

ASAR				PcP	PcP	08 18 22.4	-0.3
	0.2nm,0.5s,baz=95,slow=4.6,SNR=1.3						
WRA	**Warramunga Arr**	**44.58**	**262**	P	P	08 16 51.5	-0.6
	1.3nm,0.3s,baz=96,slow=7.6,SNR=137						

MOS ***07*** *08:11:32.6±0.9, 56°.22S×27°.43W, h73^{km}, mb5.6/17, Error ellipse: s-maj=19.8km s-min=9.9km az=106.4*

ISCJB ***07*** *08:11:35.7±0.2, 56°.24S±0°.04×27°.55W±0°.07, h100^{km}, mb5.4/115, Error ellipse: s-maj=6.2km s-min=4.4km az=142.5*

BJI ***07*** *08:11:36.5, 56°.20S×27°.40W, h99^{km}, mB5.2/17*

NEIC ***07*** *08:11:37.0±0.9, 56°.20S×27°.41W, h101^{km}±7^{km}, mb5.4/89, Error ellipse: s-maj=5.2km s-min=3.7km az=60.0*

IDC ***07*** *08:11:37.6±1.0, 56°.21S×27°.41W, h108^{km}±7^{km}, mb5.0/24, mb1 5.0/26, mb1mx4.9/35, mbtmp5.3/26, MS3.9/22, Ms1 3.9/22, ms1mx3.8/30, Error ellipse: s-maj=11.9km s-min=8.9km az=54.0*

GCMT ***07*** *08:11:37.0±0.2, 56°.44S×27°.18W, h80^{km}±1^{km}, MW5.2/104, Moment Tensor Solution. s77,c110; s104,c166; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.79±.16; $M_{\theta\theta}$4.28±.19; $M_{\phi\phi}$-0.48±.19; $M_{r\theta}$-2.57±.12; $M_{\theta\phi}$2.56±.14; $M_{\phi r}$-3.52±.10; Best double couple: $M_0$6.45300×10^{16} NP1:ϕ_s44.00000°,δ69.00000°,λ-113.00000°. NP2: ϕ_s273.00000°,δ31.00000°,λ-45.00000°. Principal axes: T 6.8060, Plg20.0000°, Azm151.0000°; N -0.7060, Plg22.0000°, Azm52.0000°; P -6.0990, Plg60.0000°, Azm280.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 07 08:11:37.6±0.7**, 56°.26S**±0°.05×**27°.47W**±0°.05**, h109**^{km}±5^{km}**, n659,** σ1^{s}07/711**, mb5.4**/112**, 6C-9D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**5.52**	**287**	*e*Pn	**Pn**	**08 12 56.6**	**-0.8**
HOPE				*e*Sn	**Sn**	**08 13 58.4**	**-1.2**
VNA1	**Neumayer--Stat**	**16.66**	**158**	P	**Pn**	**08 15 22.4**	**-1.7**
VNA3	**Neumayer Olymp**	**16.85**	**160**	P	**Pn**	**08 15 24.8**	**-1.7**
EFI	**East Falkland**	**18.48**	**271**	*e*P	**P**	**08 15 45.5**	**+0.7**
	250nm,0.8s						
EFI				*e*PcP	**PcP**	**08 20 11.3**	**+1.5**
EFI	**East Falkland**	**18.48**	**271**	*d i*P	**Pn**	**08 15 46.5**	**+0.3**
EFI				pmax	pmax		
	comp=Z,236nm,0.9s						
SNAA	**Sanae**	**18.62**	**156**	P	**P**	**08 15 45.7**	**-0.4**
SNAA	**Sanae**	**18.62**	**156**	P	**P**	**08 15 45.4**	**-0.8**
	comp=Z,36nm,0.3s,baz=304,slow=9.9,SNR=3851						
SNAA				S	**Sn**	**08 19 17.9**	**+2.1**
	comp=Z,0.2nm,0.3s,baz=67,slow=22,SNR=3.2						
SNAA				LR	LR	08 22 11.4	
	comp=Z,329nm,19.0s,baz=304,slow=34						
SNAA				ScP	**ScP**	**08 23 35.7**	**+0.5**
	comp=Z,0.8nm,0.3s,baz=270,slow=2.7,SNR=18						
SNAA	**Sanae**	**18.62**	**156**	*e*P	**P**	**08 15 45.8**	**-0.4**
	comp=Z,358nm,0.6s						
SNAA				S	**Sn**	**08 19 17.9**	**+2.1**
SNAA				*e*PcP	**PcP**	**08 20 11.1**	**+1.2**
SNAA				ScP	**ScP**	**08 23 35.7**	**+0.5**
PMSA	**Palmer Station**	**19.64**	**229**	P	**Pn**	**08 15 59.2**	**-0.5**
	comp=Z,26nm,0.3s,baz=81,slow=8.1,SNR=15						
PMSA				PcP	**PcP**	**08 20 12.2**	**+0.5**
	comp=Z,1.2nm,0.3s,baz=88,slow=3.5,SNR=5.0						
PMSA				LR	LR	08 22 53.6	
	comp=Z,214nm,19.7s,baz=80,slow=34						
PMSA	**Palmer Station**	**19.64**	**229**	*e*P	**Pn**	**08 16 00.2**	**+0.5**
	comp=Z,306nm,0.7s						
PMSA				*e*PcP	**PcP**	**08 20 12.7**	**+1.0**
NVL	**N'lazarevskaya**	**22.18**	**146**	⇑*i*P	**P**	**08 16 23.0**	**-1.3**
NVL				*e*S	**S**	**08 20 21.4**	**+0.4**
NVL				pmax	pmax		
	comp=Z,80nm,1.0s						
TRQA	**Tornquist**	**29.26**	**294**	*e*P	**P**	**08 17 28.8**	**-0.4**
	comp=Z,30nm,0.6s						
TRQA				*e*PcP	**PcP**	**08 20 33.8**	**+0.5**
TRQA	**Tornquist**	**29.26**	**294**	*e*P	**P**	**08 17 28.8**	**-0.4**
TRQA				*e*		08 20 33.8	
TRQA				pmax	pmax		
	comp=Z,30nm,0.6s						
SYO	**Syowa Base**	**31.52**	**141**	⇓*i*P	**P**	**08 17 47.6**	**-1.1**
SYO	**Syowa Base**	**31.52**	**141**	⇓*i*pP	pP	08 18 05.4	-7.4
SYO	**Syowa Base**	**31.52**	**141**	⇑*e*ScP	**ScP**	**08 24 11.1**	**-0.3**
PLCA	**Paso Flores**	**31.88**	**281**	P	**P**	**08 17 50.9**	**-1.5**
	comp=Z,12nm,0.9s,baz=167,slow=9.1,SNR=13						
PLCA				PcP	**PcP**	**08 20 40.5**	**+0.3**
	comp=Z,4.7nm,0.6s,baz=88,slow=1.8,SNR=7.6						
PLCA				ScP	**ScP**	**08 24 12.0**	**-1.3**
	comp=Z,5.3nm,0.8s,baz=138,slow=3.4,SNR=7.2						
PLCA				LR	LR	08 30 51.7	
	comp=Z,254nm,19.4s,baz=150,slow=36						
PLCA	**Paso Flores**	**31.88**	**281**	*e*P	**P**	**08 17 51.5**	**-0.9**
	comp=Z,20nm,1.0s						
PLCA				*e*PcP	**PcP**	**08 20 40.6**	**+0.3**
PLCA				ScP	**ScP**	**08 24 12.0**	**-1.3**
PLCA	**Paso Flores**	**31.88**	**281**	*e*P	**P**	**08 17 51.5**	**-0.9**
PLCA				*e*		08 20 40.6	
PLCA				pmax	pmax		
	comp=Z,20nm,1.0s						
QSPA	**South Pole Qui**	**33.99**	**180**	P	**P**	**08 18 11.5**	**+0.9**
	comp=Z,23nm,0.5s,baz=24,slow=1.9,SNR=75						
QSPA				PcP	**PcP**	**08 20 45.9**	**+0.1**
	comp=Z,29nm,0.7s,baz=155,slow=2.1,SNR=4.2						
QSPA				ScP	**ScP**	**08 24 19.5**	**-0.8**
	comp=Z,8.3nm,0.9s,baz=292,slow=0.8,SNR=9.4						
QSPA				LR	LR	08 31 09.8	
	comp=Z,322nm,21.8s,baz=190,slow=34						
QSPA	**South Pole Qui**	**33.99**	**180**	*e*P	**P**	**08 18 11.5**	**+0.9**
	comp=Z,115nm,1.4s						
QSPA				*e*PcP	**PcP**	**08 20 46.4**	**+0.7**
QSPA				ScP	**ScP**	**08 24 19.5**	**-0.8**
SPB	**Sao Paulo**	**35.77**	**328**	*e*P	**P**	**08 18 27.0**	**+1.0**
	comp=Z,131nm,1.3s						
GO05	**HualaæØ**	**36.79**	**286**	*e*P	**P**	**08 18 32.9**	**-1.8**
	comp=Z,19nm,0.9s						
GO05				*e*PcP	**PcP**	**08 20 54.2**	**-0.1**
CPUP	**Villa Florida**	**36.83**	**312**	P	**P**	**08 18 34.8**	**-0.2**
	comp=Z,36nm,0.6s,baz=149,slow=7.1,SNR=121						
CPUP				PcP	**PcP**	**08 20 55.0**	**+0.4**
	comp=Z,23nm,0.5s,baz=149,slow=2.0,SNR=19						
CPUP				ScP	**ScP**	**08 24 30.6**	**-0.4**
	comp=Z,3.1nm,0.8s,baz=146,slow=4.6,SNR=3.7						
CPUP				LR	LR	08 32 25.3	
	comp=Z,177nm,21.7s,baz=162,slow=34						
CPUP	**Villa Florida**	**36.83**	**312**	*e*P	**P**	**08 18 35.0**	**0.0**
CPUP				*e*		08 20 55.1	
CPUP				pmax	pmax		
	comp=Z,36nm,0.6s						
PEL	**Peldehue**	**37.56**	**290**	*e*P	**P**	**08 18 39.9**	**-1.2**
	comp=Z,1μm,1.9s						
PEL				*e*PcP	**PcP**	**08 20 57.0**	**+0.2**
PEL	**Peldehue**	**37.56**	**290**	*e*P	**P**	**08 18 39.9**	**-1.2**
PEL				*e*		08 20 57.0	
PEL				pmax	pmax		
	comp=Z,1μm,1.9s						
ROC1	**El Roble**	**37.86**	**289**	*e*P	**P**	**08 18 43.1**	**-0.8**
	comp=Z,34nm,0.7s						
ROC1				*e*PcP	**PcP**	**08 20 58.5**	**+0.5**
GO04	**Tololo Observa**	**39.96**	**292**	*e*P	**P**	**08 19 00.8**	**-0.7**
	comp=Z,43nm,0.5s						
MAW	**Mawson**	**40.08**	**143**	P	**P**	**08 19 01.8**	**+0.2**
	comp=Z,39nm,0.6s,baz=231,slow=7.9,SNR=113						
MAW				PcP	**PcP**	**08 21 04.4**	**+0.4**
	comp=Z,4.8nm,0.6s,baz=251,slow=11,SNR=2.8						
MAW				ScP	**ScP**	**08 24 43.9**	**+1.2**
	comp=Z,28nm,0.8s,baz=241,slow=4.6,SNR=26						
MAW				LR	LR	08 33 10.7	
	comp=Z,220nm,21.9s,baz=240,slow=32						
MAW	**Mawson**	**40.08**	**143**	*e*P	**P**	**08 19 01.9**	**+0.2**
	comp=Z,8.9nm,0.7s						
MAW				*e*PcP	**PcP**	**08 21 04.8**	**+0.7**
MAW				ScP	**ScP**	**08 24 43.9**	**+1.2**
LCO	**Las Campanas**	**40.84**	**293**	*e*P	**P**	**08 19 08.0**	**-0.8**
	comp=Z,63nm,1.1s						
LCO	**Las Campanas**	**40.84**	**293**	*e*P	**P**	**08 19 08.0**	**-0.8**
LCO				pmax	pmax		
	comp=Z,63nm,1.1s						
SUR	**Sutherland**	**40.84**	**75**	P	**P**	**08 19 08.9**	**+0.2**
	comp=Z,13nm,0.9s,baz=209,slow=12,SNR=4.5						
SUR				PcP	**PcP**	**08 21 08.6**	**+1.2**
	comp=Z,2.7nm,0.6s,baz=243,slow=4.5,SNR=2.4						
SUR				LR	LR	08 33 13.8	
	comp=Z,368nm,18.7s,baz=208,slow=32						
GO03	**Copiap**	**41.76**	**295**	*e*P	**P**	**08 19 15.2**	**-0.8**
	comp=Z,55nm,0.7s						
GO03				*e*PcP	**PcP**	**08 21 06.5**	**-3.8**
GO02	**Mina Guanaco**	**43.45**	**298**	*e*P	**P**	**08 19 30.1**	**+0.1**
	comp=Z,183nm,0.6s						
GO02				*e*PcP	**PcP**	**08 21 16.9**	**+0.6**
SBA	**Scott Base**	**45.86**	**184**	*e*P	**P**	**08 19 50.1**	**+2.0**
	comp=Z,12nm,0.8s						
SBA	**Scott Base**	**45.86**	**184**	*e*P	**P**	**08 19 50.1**	**+2.0**
SBA				pmax	pmax		
	comp=Z,12nm,0.8s						
PB04	**IPOC Station P**	**46.10**	**299**	*e*P	**P**	**08 19 51.0**	**+0.1**
	comp=Z,231nm,1.2s						
BOSA	**Boshof**	**46.17**	**76**	P	**P**	**08 19 50.2**	**-1.2**
	comp=Z,5.8nm,0.8s,baz=210,slow=5.6,SNR=10						
BOSA				ScP	**ScP**	**08 25 08.1**	**-0.2**
	comp=Z,7.6nm,1.0s,baz=144,slow=4.7,SNR=5.0						
BOSA				LR	LR	08 36 18.7	
	comp=Z,412nm,18.1s,baz=208,slow=32						
VNDA	**Vanda**	**46.36**	**183**	P	**P**	**08 19 53.4**	**+1.3**
	comp=Z,20nm,0.6s,baz=187,slow=6.9,SNR=80						
VNDA				ScP	**ScP**	**08 25 08.8**	**+0.7**
	comp=Z,4.3nm,0.8s,baz=211,slow=2.5,SNR=7.4						
VNDA				LR	LR	08 37 52.2	
	comp=Z,52nm,21.6s,baz=172,slow=34						
VNDA	**Vanda**	**46.36**	**183**	*e*P	**P**	**08 19 53.4**	**+1.3**
	comp=Z,21nm,0.7s						
VNDA				ScP	**ScP**	**08 25 08.8**	**+0.7**
VNDA	**Vanda**	**46.36**	**183**	*e*P	**P**	**08 19 53.4**	**+1.3**
VNDA				pmax	pmax		
	comp=Z,21nm,0.7s						
PB01	**IPOC Station P**	**46.88**	**301**	*e*P	**P**	**08 19 57.5**	**+0.6**
	comp=Z,238nm,0.6s						
SIV	**San Ignacio**	**47.61**	**314**	P	**P**	**08 20 02.2**	**-0.3**
	comp=Z,18nm,0.6s,baz=165,slow=11,SNR=14						
SIV				PcP	**PcP**	**08 21 31.1**	**+0.7**
	comp=Z,20nm,0.8s,baz=156,slow=5.2,SNR=7.0						
SIV				ScP	**ScP**	**08 25 14.2**	**-0.1**
	comp=Z,5.2nm,0.9s,baz=151,slow=5.3,SNR=4.8						
H10S2	**ASCENSION HYDR**	**48.24**	**17**	T	T	09 12 51.7	
	baz=189,slow=74						
H10S3	**ASCENSION HYDR**	**48.25**	**17**	T	T	09 12 51.9	
	baz=189,slow=74						
H10S1	**ASCENSION HYDR**	**48.26**	**17**	T	T	09 12 52.9	
	baz=189						
MNMC	**Minye Minye**	**48.58**	**302**	*e*P	**P**	**08 20 10.9**	**+0.7**
	comp=Z,492nm,0.5s						
MNMC				*e*PcP	**PcP**	**08 21 35.5**	**+1.2**
H10N1	**ASCENSION HYDR**	**49.36**	**17**	T	T	09 14 15.6	
	baz=191,slow=74						
H10N3	**ASCENSION HYDR**	**49.37**	**17**	T	T	09 14 15.7	
	baz=191,slow=74						
H10N2	**ASCENSION HYDR**	**49.38**	**17**	T	T	09 14 16.9	
	baz=191,slow=74						
TSUM	**Tsumeb**	**49.92**	**61**	*e*P	**P**	**08 20 20.0**	**-0.3**
	comp=Z,50nm,1.5s						
LPAZ	**La Paz**	**50.37**	**306**	P	**P**	**08 20 25.0**	**+0.8**
	comp=Z,108nm,0.6s,baz=124,slow=4.9,SNR=858						
LPAZ				LR	LR	08 43 47.3	
	comp=Z,40nm,19.1s,baz=152,slow=38						
LPAZ	**La Paz**	**50.37**	**306**	*e*P	**P**	**08 20 25.0**	**+0.8**
	comp=Z,122nm,0.6s						
LPAZ	**La Paz**	**50.37**	**306**	*e*P	**P**	**08 20 25.0**	**+0.8**
LPAZ				pmax	pmax		
	comp=Z,122nm,0.6s						
RCBR	**Riachuelo**	**50.74**	**349**	ScP	**ScP**	**08 25 27.5**	**-0.1**
	comp=Z,53nm,0.9s,baz=162,slow=0.6,SNR=4.4						
RCBR	**Riachuelo**	**50.74**	**349**	*e*P	**P**	**08 20 26.4**	**+0.2**
	comp=Z,28nm,0.8s						
RCBR				ScP	**ScP**	**08 25 27.5**	**-0.1**
RCBR	**Riachuelo**	**50.74**	**349**	*e*P	**P**	**08 20 26.5**	**+0.2**
RCBR				pmax	pmax		
	comp=Z,28nm,0.8s						
CASY	**Casey**	**53.77**	**160**	*e*P	**P**	**08 20 48.7**	**+0.7**
	comp=Z,23nm,0.8s						
SAML	**Samuel**	**54.84**	**315**	*e*P	**P**	**08 20 56.3**	**-0.1**
	comp=Z,61nm,1.0s						
SAML	**Samuel**	**54.84**	**315**	*e*P	**P**	**08 20 56.3**	**-0.1**
SAML				pmax	pmax		
	comp=Z,61nm,1.0s						
NNA	**Nana**	**58.21**	**299**	P	**P**	**08 21 20.5**	**+0.1**
	comp=Z,20nm,0.4s,baz=183,slow=7.5,SNR=9.8						
NNA	**Nana**	**58.21**	**299**	*e*P	**P**	**08 21 20.9**	**+0.5**
	comp=Z,81nm,1.1s						
NNA	**Nana**	**58.21**	**299**	*i* P	**P**	**08 21 21.7**	**+1.3**
LSZ	**Lusaka**	**58.59**	**69**	*e*P	**P**	**08 21 22.9**	**-0.3**
	comp=Z,34nm,1.0s						
LSZ	**Lusaka**	**58.59**	**69**	*e*P	**P**	**08 21 22.9**	**-0.3**
LSZ				pmax	pmax		
	comp=Z,34nm,1.0s						
PTGA	**Pitinga**	**61.24**	**322**	P	**P**	**08 21 40.5**	**-0.5**
	comp=Z,10nm,0.4s,baz=159,slow=6.9,SNR=39						
PTGA				PcP	**PcP**	**08 22 21.9**	**-0.7**
	comp=Z,6.7nm,0.5s,baz=155,slow=11,SNR=4.7						
PTGA	**Pitinga**	**61.24**	**322**	*e*P	**P**	**08 21 40.3**	**-0.7**
	comp=Z,28nm,0.9s						
PTGA				PcP	**PcP**	**08 22 21.9**	**-0.7**
LIC	**Lamto**	**64.95**	**25**	*e*P	**P**	**08 22 05.7**	**+0.2**
	comp=Z,243nm,0.6s						
KIC	**Kosan Boka**	**65.15**	**25**	*e*P	**P**	**08 22 06.9**	**+0.1**
	comp=Z,129nm,0.8s						
TIC	**Toumodi**	**65.36**	**25**	*e*P	**P**	**08 22 08.1**	**-0.1**
DBIC	**Dimbokro**	**65.42**	**25**	P	**P**	**08 22 08.8**	**+0.2**
	comp=Z,54nm,0.6s,baz=167,slow=7.8,SNR=79						
DBIC				LR	LR	08 43 48.9	
	comp=Z,128nm,21.9s,baz=170,slow=30						
DBIC	**Dimbokro**	**65.42**	**25**	*e*P	**P**	**08 22 08.8**	**+0.2**
	comp=Z,51nm,0.6s						
DBIC	**Dimbokro**	**65.42**	**25**	*e*P	**P**	**08 22 08.8**	**+0.2**
DBIC				pmax	pmax		
	comp=Z,51nm,0.6s						
OPO	**Ambohidratompo**	**66.25**	**88**	LR	LR	08 46 59.0	
	comp=Z,227nm,19.0s,baz=174,slow=32						
FLOC	**Florencia**	**69.56**	**307**	*e*P	**P**	**08 22 33.3**	**-1.5**
OTAV	**Otavalo**	**69.64**	**304**	*e*P	**P**	**08 22 36.6**	**+0.9**
	comp=Z,85nm,0.7s						
OTAV	**Otavalo**	**69.64**	**304**	*e*P	**P**	**08 22 36.3**	**+0.6**
OTAV	**Otavalo**	**69.64**	**304**	*e*P	**P**	**08 22 36.6**	**+0.9**
OTAV				pmax	pmax		
	comp=Z,85nm,0.7s						
CMBC	**Cumbal**	**69.97**	**305**	*e*P	**P**	**08 22 39.6**	**+1.9**
SJAC	**San Juan de Ar**	**70.33**	**310**	*e*P	**P**	**08 22 41.4**	**+1.9**
BETC	**Betania**	**70.45**	**308**	*e*P	**P**	**08 22 40.4**	**+0.2**
SOTA	**Rioblanco**	**70.48**	**307**	*e*P	**P**	**08 22 42.0**	**+1.1**
SACV	**Santiago Islan**	**71.03**	**4**	*e*P	**P**	**08 22 42.4**	**-1.1**
	comp=Z,16nm,0.7s						
PRAC	**Prado**	**71.13**	**309**	*e*P	**P**	**08 22 44.2**	**0.0**
	comp=Z,97nm,0.7s						
PRAC	**Prado**	**71.13**	**309**	*e*P	**P**	**08 22 44.2**	**0.0**
CHIC	**Chingaza**	**71.46**	**311**	*e*P	**P**	**08 22 46.2**	**-0.5**
HORQ	**Saladito**	**71.69**	**307**	*e*P	**P**	**08 22 46.8**	**-1.1**
ROSC	**El Rosal**	**71.90**	**310**	P	**P**	**08 22 49.8**	**+0.5**
	comp=Z,28nm,0.7s,baz=146,slow=6.2,SNR=25						
ROSC				LR	LR	08 54 25.7	
	comp=Z,61nm,21.2s,baz=152,slow=36						
ROSC	**El Rosal**	**71.90**	**310**	*e*P	**P**	**08 22 49.5**	**+0.3**
	comp=Z,25nm,0.7s						
ROSC	**El Rosal**	**71.90**	**310**	*e*P	**P**	**08 22 49.1**	**-0.1**
GRGC	**Isla de Gorgon**	**71.95**	**306**	*e*P	**P**	**08 22 49.3**	**+0.1**
YOTC	**Yotoco, Valle**	**72.01**	**308**	*e*P	**P**	**08 22 48.5**	**-1.1**
RUSC	**La Rusia**	**72.32**	**312**	*e*P	**P**	**08 22 51.6**	**-0.3**
	comp=Z,15nm,0.9s						
RUSC	**La Rusia**	**72.32**	**312**	*e*P	**P**	**08 22 50.7**	**-1.2**
MBAR	**Mbarara**	**72.38**	**63**	*e*P	**P**	**08 22 54.4**	**+2.4**
	comp=Z,36nm,1.4s						
MBAR	**Mbarara**	**72.38**	**63**	*e*P	**P**	**08 22 54.4**	**+2.4**
MBAR				pmax	pmax		
	comp=Z,36nm,1.4s						
PLMC	**San Jos˜' del**	**72.80**	**308**	*e*P	**P**	**08 22 53.4**	**-0.9**
PCRV	**Puerto La Cruz**	**73.02**	**322**	P	**P**	**08 22 56.5**	**+1.1**
	comp=Z,156nm,0.6s,baz=159,slow=2.2,SNR=133						
PCRV				LR	LR	08 55 12.7	
	comp=Z,110nm,21.7s,baz=146,slow=36						
KOWA	**Kowa**	**73.18**	**24**	P	**P**	**08 22 56.9**	**+0.6**
	comp=Z,25nm,0.7s,baz=195,slow=10.0,SNR=36						
KOWA				LR	LR	08 48 38.0	
	comp=Z,70nm,18.9s,baz=219,slow=30						
KOWA	**Kowa**	**73.18**	**24**	*e*P	**P**	**08 22 57.0**	**+0.8**
	comp=Z,48nm,1.1s						
TOA0	**Torodi Ar. Sit**	**73.31**	**30**	*e*P	**P**	**08 22 57.6**	**+0.5**
	comp=Z,70nm,0.6s						
TORD	**Torodi Ar. Bea**	**73.31**	**30**	P	**P**	**08 22 55.8**	**-1.3**
	comp=Z,45nm,0.5s,baz=201,slow=6.5						
TORD				LR	LR	08 51 37.6	
	comp=Z,31nm,18.4s,baz=265,slow=33						
PTBC	**PUERTO BERRIO,**	**73.48**	**311**	*e*P	**P**	**08 22 55.4**	**-2.7**
HELC	**Santa Helena**	**73.62**	**310**	*e*P	**P**	**08 22 57.8**	**-1.6**
	comp=Z,39nm,0.6s						
GRGR	**Grenville**	**73.85**	**325**	*e*P	**P**	**08 23 01.1**	**+0.8**
	comp=Z,126nm,0.6s						
SDV	**Santo Domingo**	**74.05**	**315**	P	**P**	**08 23 01.2**	**-0.4**
	comp=Z,58nm,0.7s,baz=160,slow=4.2,SNR=19						
SDV	**Santo Domingo**	**74.05**	**315**	*e*P	**P**	**08 23 02.0**	**+0.3**
	comp=Z,84nm,1.0s						
ZARC	**Zaragoza, Cauc**	**74.51**	**311**	*e*P	**P**	**08 23 01.2**	**-3.0**
SVB	**Belmont**	**74.79**	**326**	*e*P	**P**	**08 23 06.4**	**+0.7**
	comp=Z,84nm,0.8s						
KMBO	**Kilima Mbogo**	**75.26**	**69**	LR	LR	08 54 16.5	
	comp=Z,86nm,18.9s,baz=290,slow=34						
BIM	**Bigot**	**75.91**	**326**	*e*P	**P**	**08 23 12.9**	**+0.7**
FDF	**Fort de France**	**76.14**	**326**	*e*P	**P**	**08 23 14.6**	**+1.2**
	comp=Z,77nm,0.7s						
FDF	**Fort de France**	**76.14**	**326**	*e*P	**P**	**08 23 14.2**	**+0.8**
FDF	**Fort de France**	**76.14**	**326**	*e*P	**P**	**08 23 14.6**	**+1.2**
FDF				pmax	pmax		
	comp=Z,77nm,0.7s						
SJCC	**San Jacinto, C**	**76.80**	**312**	*e*P	**P**	**08 23 17.4**	**+0.2**
WHZ	**Wether Hill Ro**	**77.40**	**191**	*e*P	**P**	**08 23 21.7**	**+1.5**
	comp=Z,70nm,1.9s						
MLZ	**Mavora Lakes**	**77.90**	**191**	*e*P	**P**	**08 23 24.0**	**+0.9**
	comp=Z,58nm,1.3s						
DCZ	**Deep Cove**	**77.90**	**190**	*e*P	**P**	**08 23 23.9**	**+0.9**
	comp=Z,60nm,1.3s						
ODZ	**Otahua Downs**	**77.92**	**193**	*e*P	**P**	**08 23 24.9**	**+1.8**
	comp=Z,24nm,1.1s						
BCIP	**Isla Barro Col**	**78.16**	**307**	*e*P	**P**	**08 23 25.2**	**+0.5**
	comp=Z,45nm,0.7s						
WKZ	**Wanaka**	**78.33**	**192**	*e*P	**P**	**08 23 26.7**	**+1.2**
	comp=Z,131nm,1.8s						
LBZ	**Lake Benmore**	**78.63**	**193**	*e*P	**P**	**08 23 28.9**	**+1.9**
	comp=Z,7.4nm,1.1s						
MQZ	**McQueen's Vall**	**78.97**	**195**	*e*P	**P**	**08 23 29.7**	**+0.8**
	comp=Z,55nm,1.5s						
ANWB	**Willy Bob**	**79.10**	**327**	*e*P	**P**	**08 23 30.4**	**+0.7**
	comp=Z,99nm,0.8s						
RPZ	**Rata Peaks**	**79.18**	**194**	P	**P**	**08 23 30.6**	**+0.6**
	comp=Z,7.1nm,0.5s,baz=210,slow=5.3,SNR=11						
RPZ	**Rata Peaks**	**79.18**	**194**	*e*P	**P**	**08 23 30.8**	**+0.7**
	comp=Z,54nm,1.4s						
SEUS	**St. Eustatius**	**79.31**	**326**	*e*P	**P**	**08 23 32.0**	**+1.1**
	comp=Z,142nm,0.6s						
SABA	**Saba**	**79.51**	**325**	*e*P	**P**	**08 23 32.9**	**+0.9**
	comp=Z,150nm,0.9s						
FOZ	**Fox Glacier**	**79.51**	**193**	*e*P	**P**	**08 23 32.2**	**+0.4**
	comp=Z,114nm,1.8s						
SMRT	**St. Maarten**	**79.86**	**326**	*e*P	**P**	**08 23 34.1**	**+0.2**
	comp=Z,69nm,0.8s						
LTZ	**Lake Taylor**	**79.93**	**195**	*e*P	**P**	**08 23 35.0**	**+0.8**
	comp=Z,53nm,1.2s						
KHZ	**Kahutara**	**80.10**	**196**	*e*P	**P**	**08 23 35.6**	**+0.6**
	comp=Z,48nm,1.5s						
CDVI	**St. Croix**	**80.12**	**324**	*e*P	**P**	**08 23 35.5**	**+0.3**
	comp=Z,52nm,0.7s						
RKT	**Rikitea**	**80.24**	**243**	*e*T	T	09 52 07.2	
	comp=Z,1.8nm,0.3s						
MTP	**Monte Pirata**	**80.70**	**324**	*e*P	**P**	**08 23 38.0**	**-0.4**
	comp=Z,44nm,0.7s						
STVI	**Saint Thomas**	**80.74**	**324**	*e*P	**P**	**08 23 38.6**	**0.0**
	comp=Z,63nm,0.8s						
ICMP	**Isla Caja de M**	**80.83**	**323**	*e*P	**P**	**08 23 39.1**	**0.0**
THZ	**Tophouse**	**80.83**	**195**	*e*P	**P**	**08 23 39.6**	**+0.5**
	comp=Z,27nm,0.8s						
HUMP	**Col San Antoni**	**80.84**	**323**	*e*P	**P**	**08 23 39.0**	**-0.1**
	comp=Z,26nm,0.5s						
HDC	**Heredia**	**80.85**	**304**	*e*P	**P**	**08 23 40.8**	**+1.3**
	comp=Z,305nm,1.6s						
ABVI	**Anegada Island**	**80.89**	**325**	*e*P	**P**	**08 23 39.8**	**+0.4**
	comp=Z,108nm,0.7s						
SJG	**San Juan**	**80.92**	**323**	P	**P**	**08 23 38.6**	**-0.9**
	comp=Z,12nm,0.6s,baz=327,slow=13,SNR=4.7						
SJG	**San Juan**	**80.92**	**323**	*e*P	**P**	**08 23 38.8**	**-0.7**
	comp=Z,107nm,1.8s						
SJG	**San Juan**	**80.92**	**323**	*e*P	**P**	**08 23 38.3**	**-1.2**
SJG	**San Juan**	**80.92**	**323**	*e*P	**P**	**08 23 38.8**	**-0.7**
SJG				pmax	pmax		
	comp=Z,107nm,1.8s						
CBYP	**Canovanas**	**80.97**	**323**	*e*P	**P**	**08 23 39.7**	**-0.2**
	comp=Z,47nm,0.6s						
SNZO	**South Karori**	**81.00**	**197**	*e*P	**P**	**08 23 40.4**	**+0.5**
	comp=Z,42nm,0.8s						
OBIP	**Obispado Ponce**	**81.00**	**323**	*e*P	**P**	**08 23 39.2**	**-0.8**
	comp=Z,16nm,0.7s						
TAU	**Tasmania Unive**	**81.10**	**176**	*e*P	**P**	**08 23 40.2**	**-0.2**
	comp=Z,60nm,1.2s						
TAU	**Tasmania Unive**	**81.10**	**176**	*e*P	**P**	**08 23 40.2**	**-0.2**
TAU				pmax	pmax		
	comp=Z,59nm,1.2s						
CRPR	**Cabo Rojo, PR**	**81.14**	**322**	*e*P	**P**	**08 23 40.1**	**-0.6**
	comp=Z,61nm,1.0s						
AOPR	**Arecibo Observ**	**81.34**	**323**	*e*P	**P**	**08 23 40.6**	**-1.2**
	comp=Z,111nm,1.8s						
MPR	**Mayaguez**	**81.34**	**322**	*e*P	**P**	**08 23 41.5**	**-0.3**
	comp=Z,25nm,1.0s						
BFZ	**Birch Farm**	**81.36**	**198**	*e*P	**P**	**08 23 42.4**	**+0.6**
	comp=Z,129nm,1.7s						
JTS	**JuntasAbangare**	**81.49**	**303**	*e*P	**P**	**08 23 43.3**	**+0.6**
	comp=Z,158nm,1.4s						
JTS	**JuntasAbangare**	**81.49**	**303**	*e*P	**P**	**08 23 43.3**	**+0.6**
JTS				pmax	pmax		
	comp=Z,158nm,1.4s						
BKZ	**Black Stump Fm**	**82.79**	**199**	*e*P	**P**	**08 23 49.8**	**+0.5**
	comp=Z,94nm,1.9s						
ESPN	**Las Esperanzas**	**82.86**	**304**	*e*P	**P**	**08 23 49.8**	**0.0**
	comp=Z,80nm,0.7s						
TAM	**Tamanrasset**	**83.55**	**30**	*e*P	**P**	**08 23 55.2**	**+1.8**
	comp=Z,24nm,1.0s						
TAM	**Tamanrasset**	**83.55**	**30**	*e*P	**P**	**08 23 55.2**	**+1.8**
TAM				pmax	pmax		
	comp=Z,24nm,1.0s						
URZ	**Urewera**	**83.56**	**199**	P	**P**	**08 23 54.1**	**+0.9**
	comp=Z,8.1nm,0.8s,baz=259,slow=9.9,SNR=5.6						
URZ	**Urewera**	**83.56**	**199**	*e*P	**P**	**08 23 54.4**	**+1.2**
	comp=Z,105nm,1.9s						
HIZ	**Hauiti**	**83.71**	**197**	*e*P	**P**	**08 23 53.0**	**-1.0**
	comp=Z,59nm,1.0s						
ESTN	**Estel**	**84.61**	**303**	*e*P	**P**	**08 23 58.6**	**-0.3**
	comp=Z,136nm,1.6s						
MTDJ	**Mount Denham**	**85.27**	**313**	*e*P	**P**	**08 24 03.2**	**+1.2**
	comp=Z,50nm,0.9s						
TBI	**Tubuai**	**86.83**	**231**	*e*LR	LR	08 51 47.2	
	comp=Z,111nm,29.0s						
CAN	**Canberra**	**88.73**	**177**	*e*P	**P**	**08 24 19.6**	**+0.8**
	comp=Z,7.1nm,0.8s						
CAN	**Canberra**	**88.73**	**177**	*e*P	**P**	**08 24 19.6**	**+0.8**
CAN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
DGAR	**Diego Garcia**	**89.37**	**102**	⇓*e*P	**P**	**08 24 19.5**	**-2.4**
CCIG	**Comitan**	**90.11**	**300**	*e*P	**P**	**08 24 25.4**	**0.0**
	comp=Z,56nm,1.7s						
BBOO	**Buckleboo**	**90.18**	**166**	*e*P	**P**	**08 24 25.4**	**-0.1**
	comp=Z,29nm,1.4s						
FORT	**Forrest**	**90.84**	**159**	*e*P	**P**	**08 24 28.5**	**-0.1**
	comp=Z,39nm,1.0s						
MDT	**Midelt**	**90.84**	**19**	P	**P**	**08 24 31.3**	**+3.0**
	comp=Z,50nm,0.7s,baz=220,slow=4.5,SNR=93						
MDT				LR	LR	09 02 24.6	
	comp=Z,71nm,18.6s,baz=202,slow=34						
TVO	**Taravao**	**91.61**	**234**	*e*P	**P**	**08 24 33.3**	**+0.9**
	comp=Z,34nm,1.3s						
STKA	**Stephens Creek**	**91.72**	**171**	P	**P**	**08 24 32.7**	**0.0**
	comp=Z,4.4nm,0.5s,baz=152,slow=5.4,SNR=19						
STKA				LR	LR	09 03 54.4	
	comp=Z,74nm,20.2s,baz=240,slow=34						
STKA	**Stephens Creek**	**91.72**	**171**	*e*P	**P**	**08 24 33.0**	**+0.4**
	comp=Z,1.2nm,0.9s						
STKA	**Stephens Creek**	**91.72**	**171**	*e*P	**P**	**08 24 33.0**	**+0.4**
TIAR	**Tiarei**	**91.85**	**234**	*e*P	**P**	**08 24 34.1**	**+0.6**
	comp=Z,18nm,1.3s						
PPT2	**Papeete2**	**91.93**	**234**	*e*LR	LR	08 54 09.4	
	comp=Z,209nm,31.2s						
PPT	**Papeete**	**91.95**	**234**	LR	LR	08 57 46.6	
	comp=Z,34nm,18.9s,baz=159,slow=30						
ARMA	**Armidale**	**93.67**	**179**	*e*P	**P**	**08 24 43.1**	**+1.3**
	comp=Z,21nm,1.5s						
TLIG	**Tlapa**	**94.38**	**295**	*e*P	**P**	**08 24 46.0**	**+1.0**
	comp=Z,9.2nm,0.6s						
PTEO	**Sao Teotonio**	**94.79**	**15**	*e*P	**P**	**08 24 48.6**	**+2.3**
	comp=Z,80nm,1.3s						
PVAQ	**Vaqueiros**	**94.80**	**16**	*e*P	**P**	**08 24 48.5**	**+2.2**
	comp=Z,34nm,1.5s						
959A	**Okeechobee**	**94.94**	**314**	P	**P**	**08 24 48.5**	**+1.3**
	baz=153						
PCVE	**Castro Verde**	**94.98**	**15**	*e*P	**P**	**08 24 49.5**	**+2.4**
	comp=Z,35nm,1.7s						
MESJ	**Messejana**	**95.15**	**15**	*e*P	**P**	**08 24 50.2**	**+2.3**

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      comp=Z,34nm,1.2s
PNCL  Nicolau / Gran     95.38  15 eP        P        08 24 51.6 +2.7
      comp=Z,25nm,1.5s
PBEJ  Beja               95.39  15 eP        P        08 24 51.0 +2.0
      comp=Z,24nm,1.1s
PBAR  Barrancos          95.66  16 eP        P        08 24 53.0 +2.8
      comp=Z,47nm,1.4s
EVO   Evora              95.86  15 eP        P        08 24 53.5 +2.4
      comp=Z,23nm,1.5s
PESTR Estremoz           96.25  15 eP        P        08 24 53.9 +1.0
      comp=Z,15nm,2.1s
PMTG  Montargil          96.36  15 eP        P        08 24 56.0 +2.6
      comp=Z,17nm,1.3s
KEST  Kesra              96.83  29 P         P        08 24 57.3 +1.6
      comp=Z,6.2nm,0.9s,baz=277,slow=4.9,SNR=6.4
KEST  Kesra              96.83  29 eP        P        08 24 58.0 +2.2
PMRV  Marv??o            96.83  16 eP        P        08 24 58.0 +2.4
      comp=Z,17nm,1.5s
656A  Willston           97.24 314 eP        Pdif     08 24 58.0 +0.3
      comp=Z,8.0nm,0.7s
ESDC  Sonseca Array      97.63  18 P         Pdif     08 25 00.4 +1.2
      comp=Z,3.6nm,0.7s,baz=189,slow=4.8,SNR=20
ESDC                               LR        LR       09 03 28.4
      comp=Z,51nm,21.9s,baz=245,slow=32
ES19  SONSECA Array      97.66  18 eP        Pdif     08 25 01.0 +1.6
MTE   Manteigas          97.76  15 eP        Pdif     08 25 02.3 +2.5
      comp=Z,26nm,1.6s
ASAR  Alice Springs      98.84 163 P         P        08 25 04.9 -0.3
      comp=Z,5.1nm,0.7s,baz=184,slow=4.2,SNR=43
ASAR                               PP        PP       08 29 03.2 -3.7
      comp=Z,1.2nm,0.4s,baz=189,slow=7.0,SNR=4.5
ASAR                               PKiKP     PKiKP    08 29 35.3 -0.3
      comp=Z,0.8nm,0.6s,baz=172,slow=2.0,SNR=7.9
ASAR                               PKKPbc    PKKPdf   08 41 31.1 -0.3
      comp=Z,1.7nm,0.5s,baz=15,slow=1.9,SNR=19
ASAR                               LR        LR       09 09 17.2
      comp=Z,72nm,18.1s,baz=211,slow=35
AS31  Alice Springs      98.84 163 eP        P        08 25 04.9 -0.3
      comp=Z,1.8nm,0.8s
AS01  Alice Springs      98.85 163 eP        P        08 25 04.8 -0.5
WRA   Warramunga Arr    102.56 162 P         Pdif     08 25 21.1 -0.7
      comp=Z,1.1nm,0.5s,baz=195,slow=4.3,SNR=20
WRA                                PP        PP       08 29 28.7 -6.3
      comp=Z,1.3nm,0.9s,baz=191,slow=5.9,SNR=5.0
WRA                                PKiKP     PKiKP    08 29 41.3 -1.1
      comp=Z,1.1nm,0.8s,baz=210,slow=1.5,SNR=10.0
WRA                                PKKPbc    PKKPbc   08 41 20.8 +2.1
      comp=Z,2.9nm,0.4s,baz=0.2,slow=4.0,SNR=68
WRAB  Tennant Creek     102.57 162⇑eP        Pdif     08 25 21.4 -0.4
V48A  Smith Brothers    104.55 314 P         Pdif     08 25 31.0 +1.0
      baz=150
S46A  Don Dixon Farm    106.58 314 P         PKiKP    08 29 49.5 +0.5
      baz=150
TXAR  Lajitas Array     106.75 298 Pdiff     Pdif     08 25 39.5 -0.6
      comp=Z,0.2nm,0.6s,baz=152,slow=7.9,SNR=3.6
TXAR                               PKiKP     PKiKP    08 29 49.8  0.0
      comp=Z,0.7nm,0.6s,baz=152,slow=3.5,SNR=12
TXAR                               PKKPbc    PKKPbc   08 41 05.9 -0.9
      comp=Z,0.1nm,0.5s,baz=325,slow=0.3,SNR=5.2
U41A  Viola             107.18 310 P         PKiKP    08 29 49.8 -0.4
      baz=148
V39A  Pettigrew         107.49 309 P         PKiKP    08 29 50.4 -0.5
      baz=148
T41A  Mountain View     107.70 311 P         PKiKP    08 29 50.2 -0.9
      baz=148
U39A  Green Forest      107.88 309 P         PKiKP    08 29 50.5 -1.0
      baz=148
P46A  Rosedale          108.05 315 P         PKiKP    08 29 51.3 -0.4
      baz=150
T40A  Mansfield         108.11 310 P         PKiKP    08 29 51.3 -0.6
      baz=148
S41A  Jillco Farms,     108.16 311 P         PKiKP    08 29 51.7 -0.3
      baz=148
CCM   Cathedral Cave    108.34 312 P         PKiKP    08 29 52.6 +0.3
      baz=148
T39A  Clever            108.38 310 P         PKiKP    08 29 51.6 -0.8
      baz=148
P44A  Sand Creek, Wi    108.48 314 P         PKiKP    08 29 51.9 -0.6
      baz=149
S40A  Lebanon           108.49 311 P         PKiKP    08 29 51.7 -0.9
      baz=148
R41A  Rosebud           108.61 312 P         PKiKP    08 29 51.9 -0.9
      baz=148
SFIN  Lafayette         108.66 316 P         PKiKP    08 29 51.8 -1.0
      baz=150
T38A  Diamond           108.78 309 P         PKiKP    08 29 52.1 -1.1
      baz=147
O45A  Potomac           108.79 315 P         PKiKP    08 29 52.6 -0.5
      baz=149
WMOK  Wichita Mounta    108.87 304 P         PKiKP    08 29 52.5 -0.9
      baz=146
S39A  Bolivar           108.91 310 P         PKiKP    08 29 52.5 -0.9
      baz=148
N46A  Monticello        108.96 316 P         PKiKP    08 29 52.4 -0.9
      baz=150
P43A  Skaggs, Pawnee    108.99 314 P         PKiKP    08 29 53.0 -0.4
      baz=149
O44A  Mansfield         109.00 315 P         PKiKP    08 29 53.2 -0.3
      baz=149
R39A  Chumby, Stover    109.32 311 P         PKiKP    08 29 53.5 -0.6
      baz=148
O43A  Sugar Creek Fa    109.45 314 P         PKiKP    08 29 53.9 -0.4
      baz=149
Q40A  Laux Farm, Aux    109.48 312 P         PKiKP    08 29 53.8 -0.6
      baz=148
MNTX  Cornudas Mount    109.53 298 P         PKiKP    08 29 54.2 -0.6
      baz=145
P40A  Paris             109.92 312 P         PKiKP    08 29 54.5 -0.7
      baz=148
O41A  Passleys Farm,    109.94 313 P         PKiKP    08 29 54.4 -0.8
      baz=148
Q38A  Cooks Store, C    110.11 311 P         PKiKP    08 29 54.8 -0.8
      baz=147
MSTX  Muleshoe          110.11 301 P         PKiKP    08 29 54.7 -1.2
      baz=145
GERES GERESS Array B    110.21  28 PKiKP     PKiKP    08 29 55.2 -0.4
      comp=Z,1.3nm,0.8s,baz=197,slow=4.2,SNR=6.6
M43A  Waltham Townsh    110.29 315 P         PKiKP    08 29 55.3 -0.6
      baz=148
AMTX  Amarillo          110.34 302 P         PKiKP    08 29 56.2 -0.1
      baz=145
VYHS  Vyhne             111.30  31 ePKIKP    PKiKP    08 29 57.6 +0.1
121A  Cookes Peak, D    111.40 297 P         PKiKP    08 29 58.9 +0.4
      baz=144
K41A  Shullsburg        111.82 315 P         PKiKP    08 29 58.4 -0.3
      baz=148
JFWS  Jewell Farm       112.05 315 P         PKiKP    08 29 58.6 -0.6
      baz=148
K40A  Colesburg         112.22 314 P         PKiKP    08 29 58.8 -0.7
      baz=147
J41A  Loganville        112.34 316 P         PKiKP    08 29 59.3 -0.3
      baz=148
L38A  Oak Wood Farm,    112.49 313 P         PKiKP    08 29 59.4 -0.6
      baz=147
K39A  Oelwein           112.53 314 P         PKiKP    08 29 59.2 -0.9
      baz=147
TASL  Snake Pit, Alb    112.68 299 P         PKiKP    08 30 00.8 -0.1
      baz=144
ANMO  Albuquerque       112.68 299 P         PKiKP    08 30 00.9  0.0
      baz=144
ANMO  Albuquerque       112.68 299d iPKIKP   PKiKP    08 30 01.2 +0.3
ANMO                                pmax     pmax
      comp=Z,1.0nm,0.8s
TUC   Tucson            112.73 294 P         PKiKP    08 30 01.0 +0.1
      baz=143
TUC   Tucson            112.73 294 ePKPdf    PKiKP    08 30 00.7 -0.2
TUC   Tucson            112.73 294 ePKIKP    PKiKP    08 30 00.7 -0.2
L37A  Phoenix Point,    112.80 312 P         PKiKP    08 30 00.1 -0.5
      baz=146
K38A  Parkersburg       112.84 313 P         PKiKP    08 30 00.1 -0.5
      baz=147
I41A  Arkdale           112.87 316 P         PKiKP    08 30 00.3 -0.4
      baz=148
J39A  Decorah           112.98 314 P         PKiKP    08 30 00.4 -0.6
      baz=147
I40A  Norwalk           113.02 316 P         PKiKP    08 30 00.7 -0.3
      baz=147
K37A  Belmond           113.29 313 P         PKiKP    08 30 01.1 -0.5
      baz=146
I39A  Houston           113.35 315 P         PKiKP    08 30 01.0 -0.5
      baz=147
F43A  Flat Rock, Esc    113.36 319 P         PKiKP    08 30 01.2 -0.3
      baz=148
T25A  Trinidad          113.46 302 P         PKiKP    08 30 01.8 -0.5
      baz=144
K36A  Gilmore City      113.52 312 P         PKiKP    08 30 01.6 -0.4
      baz=146
H40A  Chili             113.55 316 P         PKiKP    08 30 01.4 -0.5
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      baz=147
J37A  Redenius Farm,    113.71 313 P         PKiKP    08 30 01.7 -0.6
      baz=146
H39A  Augusta           113.94 316 P         PKiKP    08 30 02.3 -0.4
      baz=147
G40A  Rib Lake          114.02 317 P         PKPdf    08 30 02.3 -0.5
      baz=147
LVV   L'vov             114.03  34 eP        Pdif     08 26 04.9 -6.9
J36A  Seneca 1, Swea    114.04 313 P         PKPdf    08 30 02.4 -0.6
      baz=146
BGNE  Belgrade          114.07 309 P         PKPdf    08 30 02.5 -0.6
      baz=145
COWI  Conover           114.31 318 ePKPdf    PKPdf    08 30 02.9 -0.5
G39A  Holcombe          114.41 316 P         PKPdf    08 30 03.2 -0.4
      baz=147
SDCO  Great Sand Dun    114.46 302 P         PKPdf    08 30 04.3  0.0
      baz=143
SDCO  Great Sand Dun    114.46 302 ePKPdf    PKPdf    08 30 04.3 -0.1
F40A  Park Falls        114.53 317 P         PKPdf    08 30 03.4 -0.4
      baz=147
E41A  Kenton            114.56 318 P         PKPdf    08 30 03.1 -0.7
      baz=147
G38A  Ridgeland         114.58 315 P         PKPdf    08 30 02.8 -1.1
      baz=146
F39A  Loretta           114.83 317 P         PKPdf    08 30 03.7 -0.7
      baz=147
E40A  Wakefield         114.89 317 P         PKPdf    08 30 03.9 -0.6
      baz=147
H36A  Jessenland, He    114.91 314 P         PKPdf    08 30 04.5  0.0
      baz=146
D41A  Chassel           114.91 319 P         PKPdf    08 30 04.3 -0.2
      baz=147
SPMN  Marine on St.     114.99 315 P         PKPdf    08 30 03.7 -1.0
      baz=146
E39A  Mellen            115.08 317 P         PKPdf    08 30 04.2 -0.6
      baz=147
S22A  4UR Ranch, Cre    115.10 301 P         PKPdf    08 30 05.8 +0.2
      baz=143
F38A  Pierce - Schro    115.24 316 P         PKPdf    08 30 04.8 -0.3
      baz=146
SCHQ  Schefferville     115.29 336 PKP       PKPdf    08 30 04.3 -0.6
      comp=Z,4.0nm,0.5s,baz=247,slow=3.5,SNR=10.0
ECSD  EROS Data Cent    115.32 311 P         PKPdf    08 30 04.8 -0.6
      baz=145
ECSD  EROS Data Cent    115.32 311 ePKPdf    PKPdf    08 30 05.0 -0.4
F37A  Hinrichs Farm,    115.34 315 P         PKPdf    08 30 04.7 -0.6
      baz=146
H35A  Sunnyside Ranc    115.37 313 P         PKPdf    08 30 04.8 -0.6
      baz=145
MVCO  Mesa Verde        115.48 299 P         PKPdf    08 30 05.8 -0.4
      baz=142
MVCO  Mesa Verde        115.48 299 ePKPdf    PKPdf    08 30 06.5 +0.3
WUAZ  Wupatki           115.57 296 P         PKPdf    08 30 07.0 +0.7
      baz=142
WUAZ  Wupatki           115.57 296 ePKPdf    PKPdf    08 30 06.6 +0.2
E38A  The Farm, Brul    115.65 317 P         PKPdf    08 30 05.0 -0.9
      baz=146
IKP   In-Ko-Pah, Jac    115.75 291 P         PKPdf    08 30 06.9 +0.2
      baz=142
Y12C  Blythe            115.78 292 P         PKPdf    08 30 07.4 +0.8
      baz=142
Y12C  Blythe            115.78 292 ePKPdf    PKPdf    08 30 07.2 +0.6
F36A  Milaca            115.81 315 P         PKPdf    08 30 05.3 -1.0
      baz=146
F36A  Milaca            115.81 315 ePKPdf    PKPdf    08 30 05.2 -1.0
KBZ   Khabaz            115.83  49 PKP       PKPdf    08 30 05.5 -0.8
      comp=Z,2.3nm,0.7s,baz=78,slow=5.4,SNR=4.2
KIV   Kislovodsk        115.92  49 i PKIKP   PKPdf    08 30 06.4 -0.3
KIV                                pmax      pmax
      comp=Z,12nm,1.1s
PDMCI Parker Dam,Lak    116.02 293 P         PKPdf    08 30 07.4 +0.4
      baz=142
BAR   Barrett           116.06 290 ePKPdf    PKPdf    08 30 07.8 +0.5
MONP2 Monument Peak     116.10 290 P         PKPdf    08 30 06.6 -0.9
      baz=142
C39A  Grand Marais      116.12 318 P         PKPdf    08 30 05.6 -1.1
      baz=146
ISCO  Idaho Springs     116.15 303 P         PKPdf    08 30 07.1 -0.4
      baz=143
ISCO  Idaho Springs     116.15 303 ePKPdf    PKPdf    08 30 07.6  0.0
BC3   Big Chuckawall    116.19 292 P         PKPdf    08 30 07.7 +0.2
      baz=142
F35A  Swanville         116.22 314 P         PKPdf    08 30 06.8 -0.3
      baz=145
E36A  McGregor          116.24 315 P         PKPdf    08 30 06.3 -0.7
      baz=145
PV01  Paradox Valley    116.25 300 ePKPdf    PKPdf    08 30 07.6 -0.1
SMCO  Snowmass          116.30 302 ePKPdf    PKPdf    08 30 08.1 +0.2
PV15  Paradox Valley    116.36 300 ePKPdf    PKPdf    08 30 08.4 +0.5
PV02  Paradox Valley    116.38 300 ePKPdf    PKPdf    08 30 07.9  0.0
AK11  Malin Array Si    116.42  36 ePKPdf    PKPdf    08 30 06.6 -0.6
IRM   Iron Mountain     116.42 292 P         PKPdf    08 30 07.9 +0.1
      baz=142
G33A  Ortonville        116.44 313 P         PKPdf    08 30 06.7 -0.8
      baz=144
F34A  Alexandria        116.44 314 P         PKPdf    08 30 07.0 -0.5
      baz=145
D37A  Cotton            116.45 316 P         PKPdf    08 30 07.0 -0.5
      baz=146
KIEV  Kiev              116.45  36 ePKPdf    PKPdf    08 30 06.7 -0.6
KIEV  Kiev              116.45  36d iPKIKP   PKPdf    08 30 06.3 -1.0
CPE   Camp Elliot       116.45 290 ePdif     Pdif     08 26 23.7 +0.6
PV05  Paradox Valley    116.46 299 ePKPdf    PKPdf    08 30 08.2 +0.1
AKASG Malin Array Be    116.46  36 PKP       PKPdf    08 30 06.5 -0.8
      comp=Z,2.1nm,0.4s,baz=242,slow=1.3,SNR=14
AKBB  Malin Array Si    116.46  36 ePKPdf    PKPdf    08 30 06.0 -1.3
AKBB  Malin Array Si    116.46  36 ePKIKP    PKPdf    08 30 06.0 -1.3
C38A  Sawbill Land.     116.47 317 P         PKPdf    08 30 06.3 -1.2
      baz=146
PV03  Paradox Valley    116.47 300 ePKPdf    PKPdf    08 30 08.1  0.0
W13A  Hualapai Mount    116.51 294 ePKPdf    PKPdf    08 30 08.7 +0.4
PV07  Paradox Valley    116.52 300 ePKPdf    PKPdf    08 30 10.6 +2.4
PV04  Paradox Valley    116.61 300 ePKPdf    PKPdf    08 30 08.7 +0.4
PV10  Paradox Valley    116.66 300 ePKPdf    PKPdf    08 30 08.6 +0.1
PFO   Pinyon Flats O    116.68 291 P         PKPdf    08 30 08.4 -0.1
      baz=141
BELC  Belle Mtn. Jos    116.74 292 P         PKPdf    08 30 09.0 +0.4
      baz=141
U15A  North Rim         116.74 296 ePKPdf    PKPdf    08 30 09.0 +0.2
D36A  Goodland          116.75 316 P         PKPdf    08 30 07.8 -0.2
      baz=145
D36A  Goodland          116.75 316 ePKPdf    PKPdf    08 30 07.3 -0.8
C37A  Embarrass         116.82 317 P         PKPdf    08 30 07.6 -0.5
      baz=146
G32A  Webster           116.92 312 P         PKPdf    08 30 08.4 -0.1
      baz=144
G32A  Webster           116.92 312 ePKPdf    PKPdf    08 30 08.5  0.0
D35A  Remer             117.02 315 P         PKPdf    08 30 07.8 -0.7
      baz=145
LDFC  Landfair          117.12 293 ePKPdf    PKPdf    08 30 10.1 +0.8
GMRC  Granite Mounta    117.18 292 P         PKPdf    08 30 09.9 +0.4
      baz=141
PHWY  Pilot Hill        117.27 304 ePKPdf    PKPdf    08 30 09.1 -0.5
BBRC  Big Bear Solar    117.43 291 P         PKPdf    08 30 10.3 +0.3
      baz=141
KNB   Kanab             117.47 296 ePKPdf    PKPdf    08 30 10.2 +0.2
KNB   Kanab             117.47 296 ePKIKP    PKPdf    08 30 10.2 +0.2
C35A  Jirik Farms, M    117.49 316 P         PKPdf    08 30 08.4 -1.1
      baz=145
PKCU  Pink Cliffs       117.55 297 ePKPdf    PKPdf    08 30 10.7 +0.4
O20A  White River Ci    117.66 301 P         PKPdf    08 30 10.1 -0.2
      baz=142
O20A  White River Ci    117.66 301 ePKPdf    PKPdf    08 30 10.0 -0.3
LCMT  Little Creek M    117.68 296 ePKPdf    PKPdf    08 30 10.7 +0.3
BFSC  Mount Baldy Ra    117.79 291 P         PKPdf    08 30 10.5 -0.1
      baz=141
C34A  RKJ Ranch, Bem    117.82 315 P         PKPdf    08 30 08.8 -1.3
      baz=144
TUQ   Turquoise Moun    117.82 293 P         PKPdf    08 30 10.9 +0.2
      baz=141
B35A  Bob, Littlefor    117.93 316 P         PKPdf    08 30 09.2 -1.1
      baz=145
B35A  Bob, Littlefor    117.93 316 ePKPdf    PKPdf    08 30 09.1 -1.1
MTPU  Mount Pierson     117.95 297 ePKPdf    PKPdf    08 30 11.5 +0.4
SRU   San Rafael Swe    117.96 299 ePKPdf    PKPdf    08 30 10.5 -0.4
SRU   San Rafael Swe    117.96 299 ePKIKP    PKPdf    08 30 10.5 -0.4
SZCU  Shurtz Canyon     118.05 296 ePKPdf    PKPdf    08 30 11.8 +0.7
CCUT  Cedar City        118.15 296 ePKPdf    PKPdf    08 30 12.4 +1.0
GSC   Goldstone, Bar    118.17 292 P         PKPdf    08 30 11.5 +0.2
      baz=141
GSC   Goldstone, Bar    118.17 292 ePKPdf    PKPdf    08 30 11.8 +0.5
GSC   Goldstone, Bar    118.17 292 ePKIKP    PKPdf    08 30 11.8 +0.5
P18A  Preston Nutter    118.23 300 ePKPdf    PKPdf    08 30 11.8 +0.2
C33A  Trail             118.25 315 P         PKPdf    08 30 10.1 -0.8
      baz=144
SHPR  Sheep Range       118.25 294 ePKPdf    PKPdf    08 30 12.3 +0.8
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MSU   Marysvale         118.31 297 ePKPdf    PKPdf    08 30 12.4 +0.7
SHOC  Shoshone, Teco    118.36 293 P         PKPdf    08 30 11.9 +0.4
      baz=141
RWWY  Rawlins           118.39 303 ePKPdf    PKPdf    08 30 11.3 -0.4
B34A  Aery, Baudette    118.39 316 P         PKPdf    08 30 10.1 -1.0
      baz=144
TMUT  Trail Mountain    118.44 299 ePKPdf    PKPdf    08 30 12.1 +0.2
EDW2  Edwards Air Fo    118.46 291 P         PKPdf    08 30 12.2 +0.4
      baz=141
AGMN  Agassiz Nation    118.72 315 P         PKPdf    08 30 10.7 -1.0
      baz=144
AGMN  Agassiz Nation    118.72 315 ePKPdf    PKPdf    08 30 10.8 -0.9
LRMC  Laurel Mtn Rad    118.76 291 P         PKPdf    08 30 13.1 +0.7
      baz=140
K22A  Casper            118.82 304 P         PKPdf    08 30 12.0 -0.5
      baz=141
K22A  Casper            118.82 304 ePKPdf    PKPdf    08 30 11.9 -0.5
RSSD  Black Hills       118.84 307 P         PKPdf    08 30 11.6 -0.8
      baz=142
RSSD  Black Hills       118.84 307 ePKPdf    PKPdf    08 30 11.9 -0.5
RSSD  Black Hills       118.84 307 ePKIKP    PKPdf    08 30 11.9 -0.5
A33A  Warroad           119.05 316 P         PKPdf    08 30 11.6 -0.8
      baz=144
FURC  Furnace Creek,    119.10 293 P         PKPdf    08 30 13.9 +1.1
      baz=140
MPMC  Manual Prospec    119.11 292 P         PKPdf    08 30 13.1 -0.1
      baz=140
TPNV  Topopah Spring    119.15 293 P         PKPdf    08 30 14.0 +0.8
      baz=140
TPNV  Topopah Spring    119.15 293 ePKPdf    PKPdf    08 30 13.9 +0.7
PSUT  Pine Spring       119.16 296 ePKPdf    PKPdf    08 30 14.1 +0.8
MPU   Maple Canyon      119.20 299 ePKPdf    PKPdf    08 30 13.6 +0.4
ISA   Isabella, Lake    119.31 291 P         PKPdf    08 30 14.2 +0.8
      baz=140
ISA   Isabella, Lake    119.31 291 ePKPdf    PKPdf    08 30 14.2 +0.8
DAC   Darwin (Calif)    119.33 292 ePKPdf    PKPdf    08 30 14.1 +0.4
NLU   North Lily Min    119.37 299 ePKPdf    PKPdf    08 30 14.2 +0.6
PKM   Mcpherson Peak    119.42 289 P         PKPdf    08 30 14.9 +1.1
      baz=140
JLU   Jordanelle        119.56 299 ePKPdf    PKPdf    08 30 14.6 +0.6
CWC   Cottonwood Cre    119.71 292 P         PKPdf    08 30 14.8 +0.5
      baz=140
GRAC  Grapevine Rang    119.76 293 P         PKPdf    08 30 15.0 +0.8
      baz=140
VES   Vestal, Richgr    119.77 291 P         PKPdf    08 30 14.2  0.0
      baz=140
CTU   Camp Tracy        119.78 299 ePKPdf    PKPdf    08 30 14.8 +0.5
SMMC  Simmler           119.84 290 P         PKPdf    08 30 15.1 +0.6
      baz=140
MDND  Maddock           119.87 312 P         PKPdf    08 30 13.4 -0.6
      baz=142
MDND  Maddock           119.87 312 ePKPdf    PKPdf    08 30 13.4 -0.6
R11A  Troy Canyon, C    119.89 295 P         PKPdf    08 30 15.1 +0.5
      baz=140
R11A  Troy Canyon, C    119.89 295 ePKPdf    PKPdf    08 30 15.1 +0.5
DUG   Dugway, Tooele    119.92 298 P         PKPdf    08 30 14.8 +0.2
      baz=140
DUG   Dugway, Tooele    119.92 298 ePKPdf    PKPdf    08 30 15.0 +0.4
TCUT  Toone Canyon      119.94 300 ePKPdf    PKPdf    08 30 15.3 +0.6
ULM   Lac du Bonnet     120.29 316 PKP       PKPdf    08 30 13.6 -1.1
      comp=Z,15nm,0.5s,baz=146,slow=2.2,SNR=24
PD31  Pinedale Array    120.32 302 ePKPdf    PKPdf    08 30 14.4 -0.9
PDAR  Pinedale Array    120.32 302 PKhKP     PKPpre   08 30 03.7
      comp=Z,0.2nm,0.6s,baz=141,slow=3.0,SNR=3.8
PDAR                               PKP       PKPdf    08 30 14.3 -1.1
      comp=Z,3.5nm,0.6s,baz=138,slow=4.7,SNR=48
PDAR                               PKKPbc    PKKPab   08 40 22.2 +0.3
      comp=Z,0.2nm,0.5s,baz=356,slow=1.2,SNR=3.5
PKLM  Kerr Lake         120.38 290 ePKPdf    PKPdf    08 30 16.9 +1.5
HWUT  Hardware Ranch    120.39 300 ePKPdf    PKPdf    08 30 15.3 -0.1
RKPI  Ransiki, Papua    120.51 159 PKP       PKPdf    08 30 15.5 -0.9
RKPI                               PKP       PKiKP    08 30 17.7 +1.2
HFS   Hagfors           120.54  22 PKP       PKPdf    08 30 13.5 -1.3
      comp=Z,5.9nm,0.6s,baz=211,slow=1.7,SNR=25
BGU   Big Grassy Mou    120.58 299 ePKPdf    PKPdf    08 30 16.3 +0.5
SPUT  South Promonto    120.59 299 ePKPdf    PKPdf    08 30 16.3 +0.5
NAO01 NORSAR Array S    120.61  21 ePKPdf    PKPdf    08 30 15.4 +0.4
NB2   NORSAR Subarra    120.86  21 PKPdf     PKPdf    08 30 15.0 -0.5
      comp=Z,3.8nm,0.8s,baz=202,slow=1.9
NB201 NORSAR Array S    120.88  21 ePKPdf    PKPdf    08 30 15.5 -0.1
PMPB  Monarch Peak      120.95 290 ePKPdf    PKPdf    08 30 18.6 +2.0
NC204 NORSAR Array S    120.99  20 ePKPdf    PKPdf    08 30 16.0 +0.2
AHID  Auburn Hatcher    121.05 301 ePKPdf    PKPdf    08 30 16.9 +0.2
OMMB  Old Mammoth Mi    121.08 292 ePKPdf    PKPdf    08 30 18.2 +1.2
HVU   Hansel Valley     121.11 299 ePKPdf    PKPdf    08 30 16.9 +0.1
MDPB  Devils Postpil    121.13 292 ePKPdf    PKPdf    08 30 18.0 +0.9
NV11  Mina Array Sit    121.26 293 ePKPdf    PKPdf    08 30 18.1 +0.9
NV01  Mina Array Sit    121.33 293 ePKPdf    PKPdf    08 30 18.2 +0.8
NVAR  Mina Array Bea    121.33 293 PKP       PKPdf    08 30 18.3 +0.8
      comp=Z,8.2nm,0.6s,baz=138,slow=3.2,SNR=92
NVAR                               PKKPab    PKKPab   08 40 18.6 +0.6
      comp=Z,0.6nm,0.8s,baz=278,slow=2.5,SNR=4.7
REDW  Red Top Meadow    121.39 302 ePKPdf    PKPdf    08 30 17.2 -0.1
SNOW  Snow King Moun    121.42 302 ePKPdf    PKPdf    08 30 17.9 +0.4
LOHW  Long Hollow       121.46 302 ePKPdf    PKPdf    08 30 17.6 +0.1
TPAW  Teton Pass        121.53 302 ePKPdf    PKPdf    08 30 18.1 +0.4
RYN   Ryan              121.60 293 ePKPdf    PKPdf    08 30 18.9 +1.0
MOOW  Moose Ponds       121.63 302 ePKPdf    PKPdf    08 30 18.0 +0.2
FXWY  Fox Creek         121.68 302 ePKPdf    PKPdf    08 30 18.4 +0.4
KVN   Kaiserville       121.70 294 ePKPdf    PKPdf    08 30 19.1 +1.0
LAO   LASA Array        121.80 307 P         PKPdf    08 30 17.9  0.0
      baz=140
LAO   LASA Array        121.80 307 ePKPdf    PKPdf    08 30 17.8  0.0
IMW   Indian Meadow     121.83 302 ePKPdf    PKPdf    08 30 18.7 +0.4
FLWY  Flagg Ranch       121.86 303 ePKPdf    PKPdf    08 30 19.1 +0.8
WAKR  Walker            121.97 292 ePKPdf    PKPdf    08 30 20.2 +1.6
RLMT  Red Lodge         121.98 304 P         PKPdf    08 30 18.7 +0.3
      baz=139
RLMT  Red Lodge         121.98 304 ePKPdf    PKPdf    08 30 18.4 -0.1
H17A  Grant Village     122.04 303 P         PKPdf    08 30 19.7 +1.1
      baz=139
H17A  Grant Village     122.04 303 ePKPdf    PKPdf    08 30 19.8 +1.1
YPP   Pitchstone Pla    122.06 303 ePKPdf    PKPdf    08 30 19.6 +0.9
CMB   Columbia Colle    122.11 291 ePKPdf    PKPdf    08 30 19.7 +1.0
YFT   Old Faithful      122.21 303 ePKPdf    PKPdf    08 30 20.8 +1.8
YERR  Yerington         122.23 293 ePKPdf    PKPdf    08 30 20.4 +1.3
DGMT  Dagmar            122.28 310 P         PKPdf    08 30 18.9 +0.3
      baz=140
DGMT  Dagmar            122.28 310 ePKPdf    PKPdf    08 30 18.6  0.0
BMN   Battle Mountai    122.29 295 ePKPdf    PKPdf    08 30 19.5 +0.4
VSU   Vasula            122.30  30d iPKIKP   PKPdf    08 30 17.8 -0.5
VSU                                 pmax     pmax
      comp=Z,57nm,1.7s
YMR   Madison River     122.43 303 ePKPdf    PKPdf    08 30 20.4 +1.1
PNTR  Pine Nut          122.50 293 ePKPdf    PKPdf    08 30 21.1 +1.5
YHB   Horse Butte       122.60 303 ePKPdf    PKPdf    08 30 20.7 +1.0
OBN   Obninsk           122.61  38c iPKIKP   PKPdf    08 30 18.1 -0.8
OBN                                e                  08 31 55.2
OBN                                eSS       SS       08 48 29.9 -1.7
OBN                                 pmax     pmax
      comp=Z,23nm,0.8s
GCMT  Greycliff         122.67 305 ePKPdf    PKPdf    08 30 19.7 +0.1
VCNR  Virginia City     122.68 293 ePKPdf    PKPdf    08 30 21.3 +1.3
RUBR  Rubicon Trail     122.75 292 ePKPdf    PKPdf    08 30 21.8 +1.7
QLMT  Earthquake Lak    122.77 303 ePKPdf    PKPdf    08 30 21.0 +1.0
PAHR  Pah Rah Range     122.85 293 ePKPdf    PKPdf    08 30 21.3 +1.1
NIL   Nilore            122.97  78 ePKPdf    PKPdf    08 30 20.6 +0.1
AFDM  Forest Hills D    123.10 292 ePKPdf    PKPdf    08 30 21.3 +0.8
HLID  Hailey            123.25 300 P         PKPdf    08 30 21.8 +1.0
      baz=138
HLID  Hailey            123.25 300 ePKPdf    PKPdf    08 30 21.4 +0.6
BOZ   Bozeman (W)       123.44 303 P         PKPdf    08 30 21.7 +0.5
      baz=138
BOZ   Bozeman (W)       123.44 303 ePKPdf    PKPdf    08 30 22.0 +0.8
MCMT  McKenzie Canyo    123.44 302 ePKPdf    PKPdf    08 30 22.2 +0.9
BEKR  Beckworth         123.47 293 ePKPdf    PKPdf    08 30 22.2 +0.8
DLMT  Dillon            123.72 302 ePKPdf    PKPdf    08 30 22.5 +0.8
MFID  Camas Ranch       123.82 299 ePKPdf    PKPdf    08 30 22.4 +0.5
ORV   Oroville          123.83 292 ePKPdf    PKPdf    08 30 23.8 +1.9
LRM   Limekiln Ridge    123.99 303 ePKPdf    PKPdf    08 30 23.1 +0.8
HRY   Holter Researc    124.36 304 ePKPdf    PKPdf    08 30 23.7 +0.9
EGMT  Eagleton          124.39 306 P         PKPdf    08 30 22.9 +0.1
      baz=138
EGMT  Eagleton          124.39 306 ePKPdf    PKPdf    08 30 22.9 +0.1
WVOR  Wild Horse Val    124.49 296 ePKPdf    PKPdf    08 30 24.5 +1.2
O03D  Paynes Creek      124.53 292 P         PKPdf    08 30 23.8 +0.5
      baz=138
O03D  Paynes Creek      124.53 292 ePKPdf    PKPdf    08 30 23.4 +0.1
FINES FINESS Array B    124.64  28 PKP       PKPdf    08 30 21.9 -0.8
      comp=Z,28nm,0.5s,baz=145,slow=1.0,SNR=226
FIA1  FINESS Array S    124.64  28 ePKPdf    PKPdf    08 30 22.5 -0.2
MOD   Modoc Plateau     124.94 295 ePKPdf    PKPdf    08 30 24.9 +0.8
J08A  Circle Bar Ran    125.09 297 ePKPdf    PKPdf    08 30 25.4 +1.1
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CM01	Chiang Mai Arr	125.12	111	*e*PKPdf	PKPdf	08 30 25.7	+0.7
WDC	Whiskeytown Da	125.12	292	*e*PKPdf	PKPdf	08 30 24.7	+0.4
CMAR	Chiang Mai Arr	125.14	111	PKP	PKPdf	08 30 25.1	+0.1
	comp=Z,5.6nm,0.7s,baz=234,slow=3.8,SNR=19						
KKPM	Kettenpom Peak	125.21	291	*e*PKPpre	PKPpre	08 30 16.0	
MSO	Missoula	125.43	303	P	PKPdf	08 30 25.3	+0.4
	baz=137						
MSO	Missoula	125.43	303	*e*PKPdf	PKPdf	08 30 25.4	+0.5
KMRM	Mail Ridge	125.46	291	*e*PKPdf	PKPdf	08 30 27.1	+2.0
N02D	Trinity Center	125.49	292	P	PKPdf	08 30 26.0	+0.9
	baz=137,SNR=23						
BMO	Blue Mountains	125.60	299	*e*PKPdf	PKPdf	08 30 25.4	+0.2
M04C	Macdoel	125.64	293	P	PKPdf	08 30 26.3	+0.8
	baz=137,SNR=23						
K05A	Summer Lake	125.84	295	*e*PKPdf	PKPdf	08 30 26.9	+1.0
M02C	Callahan	125.87	292	P	PKPdf	08 30 26.9	+1.0
	baz=137,SNR=16						
YBH	Yreka Blue Hor	126.05	293	PKP	PKPdf	08 30 26.1	-0.1
	comp=Z,9.1nm,0.8s,baz=83,slow=1.8,SNR=27						
YBH	Yreka Blue Hor	126.05	293	*e*PKPdf	PKPdf	08 30 26.3	+0.1
FFC	Flin Flon	126.12	316	*e*PKPdf	PKPdf	08 30 25.7	0.0
I07A	Izee	126.13	297	*e*PKPdf	PKPdf	08 30 27.5	+1.2
K04D	Chiloquin, OR	126.20	294	P	PKPdf	08 30 27.4	+0.9
	baz=136						
JTMT	Jette	126.26	303	*e*PKPdf	PKPdf	08 30 26.4	0.0
ILULI	Ilulissat	126.34	350	*e*PKPdf	PKPdf	08 30 25.8	+0.1
FCC	Fort Churchill	126.36	324	*e*PKPdf	PKPdf	08 30 25.1	-0.9
F10A	Beach Ranch, E	126.38	300	*e*PKPdf	PKPdf	08 30 26.4	-0.2
J05D	Fort Rock, OR	126.42	295	P	PKPdf	08 30 27.8	+0.9
	baz=136,SNR=28						
PINE	Pine Mountain	126.64	296	*e*PKPdf	PKPdf	08 30 28.5	+1.2
G08A	Pilot Rock	126.73	298	*e*PKPdf	PKPdf	08 30 28.2	+0.8
HUMO	Hull Mountain	126.81	293	*e*PKPdf	PKPdf	08 30 28.7	+1.2
L02D	Cave Junction,	126.81	293	P	PKPdf	08 30 28.7	+1.1
	baz=136,SNR=6.4						
J04D	Umpqua Nationa	126.83	294	P	PKPdf	08 30 28.3	+0.5
	baz=136						
MLOA	Mauna Loa Obse	126.92	248	*e*PKPdf	PKPdf	08 30 30.9	+2.0
WALA	Waterton Lakes	127.03	305	*e*PKPdf	PKPdf	08 30 28.0	+0.1
KBO	Bosley Butte	127.17	292	*e*PKPdf	PKPdf	08 30 30.1	+1.8
E09A	Wood Farm, Sta	127.21	300	*e*PKPdf	PKPdf	08 30 28.2	+0.1
I05D	Terrebonne, OR	127.23	296	P	PKPdf	08 30 29.4	+1.1
	baz=136,SNR=20						
I04A	Tendick Farm,	127.38	295	P	PKPdf	08 30 28.8	+0.2
	baz=136,SNR=13						
G06A	Carlson Farm,	127.52	297	*e*PKPdf	PKPdf	08 30 29.5	+0.7
AKTO	Aktyubinsk	127.58	54	PKP	PKPdf	08 30 28.2	-0.4
	comp=Z,17nm,0.9s,baz=174,slow=2.6,SNR=42						
ABKAR	Akbulak array	127.62	56	*e*PKPdf	PKPdf	08 30 28.6	-0.2
E08A	Dider Farm, El	127.63	299	*e*PKPdf	PKPdf	08 30 29.7	+0.8
KEBM	Edson Butte	127.70	293	*e*PKPdf	PKPdf	08 30 31.2	+2.0
I03D	Drain, OR	127.79	294	P	PKPdf	08 30 29.8	+0.6
	baz=135						
G05D	Wamic, OR	127.86	297	P	PKPdf	08 30 30.3	+0.9
	baz=135						
H04A	Detroit Lake	127.90	296	*e*PKPdf	PKPdf	08 30 30.2	+0.7
NEW	Newport	127.96	302	P	PKPdf	08 30 29.2	-0.3
	baz=135						
NEW	Newport	127.96	302	*e*PKPdf	PKPdf	08 30 28.8	-0.7
D08A	Wollman Farm,	127.97	300	*e*PKPdf	PKPdf	08 30 30.3	+0.7
KLMR	Klimovskoe	128.08	35	*e*PKIKP	PKPdf	08 30 27.8	-1.5
KLMR				pmax	pmax		
	comp=Z,39nm,1.3s						
KLMR	Klimovskoe	128.08	35	*e*PKPdf	PKPdf	08 30 27.9	-1.4
KLMR				AMP		08 30 29.8	
	comp=Z,39nm,1.3s						
KK31	Karatay Array	128.44	68	*e*PKPdf	PKPdf	08 30 30.4	-0.2
KKAR	Karatay Array	128.44	68	*e*PKPdf	PKPdf	08 30 30.6	-0.1
SUMG	Summit	128.77	356	*e*PKPdf	PKPdf	08 30 31.8	+0.9
SUMG	Summit	128.77	356	*i* PKIKP	PKPdf	08 30 30.9	+0.1
SUMG				pmax	pmax		
	comp=Z,32nm,1.2s						
KSH	Kashi	128.77	75	*e*PKP	PKPdf	08 30 31.3	-0.2
KSH				sPKP		08 31 07.6	
KSH				PP	PP	08 32 42.1	+2.1
KSH				PKS	PKSdf	08 34 05.7	-2.4
KSH				SKS	SKSdf	08 37 31.2	-1.7
KSH				SKKS	SKKSac	08 39 22.9	-2.8
KSH				AMB	AMB		
	comp=Z,140nm,5.5s						
KSH				LR	LR		
	comp=Z,240nm,14.4s						
KSH				LR	LR		
	comp=Z,300nm,14.4s						
KSH				LR	LR		
	comp=Z,190nm,13.2s						
LTY	Liberty	128.96	299	*e*PKPdf	PKPdf	08 30 31.2	-0.3
B08A	Colville Reser	129.08	301	*e*PKPdf	PKPdf	08 30 31.9	+0.2
LON	Longmire	129.16	298	*e*PKPdf	PKPdf	08 30 32.8	+0.9
D05A	Enumclaw	129.56	298	*e*PKPdf	PKPdf	08 30 33.5	+0.9
E03A	Lebam	129.89	297	*e*PKPdf	PKPdf	08 30 34.1	+0.9
AAK	Ala-Archa	130.20	71	*e*PKPdf	PKPdf	08 30 34.7	+0.6
B05A	Bryant	130.35	299	P	PKPdf	08 30 34.7	+0.7
	baz=133						
NLWA	Neilton Lookou	130.63	297	*e*PKPdf	PKPdf	08 30 35.9	+1.3
PRGR	Permogore	130.66	37	*e*PKIKP	PKPdf	08 30 33.7	-0.4
PRGR				pmax	pmax		
	comp=Z,15nm,0.4s						
ARCES	ARCESS Array B	131.19	22	PKhKP	PKPpre	08 30 16.4	
	comp=Z,0.7nm,0.4s,baz=246,slow=1.8,SNR=11						
ARCES				PKP	PKPdf	08 30 34.7	-0.3
	comp=Z,14nm,0.6s,baz=194,slow=1.7,SNR=53						
ARCES				PP	PP	08 32 52.5	-2.6
	comp=Z,6.2nm,0.7s,baz=207,slow=5.6,SNR=8.9						
ARE0	ARCESS Array S	131.19	22	*e*PKPdf	PKPdf	08 30 34.6	-0.4
LLLB	Lillooet	131.83	302	*e*PKPdf	PKPdf	08 30 36.7	-0.1
ARU	Arti	131.95	48	PKP	PKPdf	08 30 37.0	+0.3
	comp=Z,11nm,0.5s,baz=222,slow=1.8,SNR=21						
ARU	Arti	131.95	48	*i* PKIKP	PKPdf	08 30 36.8	0.0
DAG	Danmarks Havn	132.88	3	*i* PKIKP	PKPdf	08 30 37.2	-0.8
DAG				pmax	pmax		
	comp=Z,22nm,1.2s						
SVE	Sverdlovsk	133.08	49	*e*PKIKP	PKPdf	08 30 39.3	+0.4
SVE				pmax	pmax		
	comp=Z,32nm,0.9s						
BRVK	Borovoye	135.00	58	*i* PKIKP	PKPdf	08 30 44.2	+1.6
BVAR	Borovoye Array	135.03	58	PKhKP	PKPpre	08 30 31.6	
	comp=Z,0.8nm,0.5s,baz=232,slow=3.5,SNR=3.5						
BVAR				PKP	PKPdf	08 30 42.6	-0.1
	comp=Z,7.3nm,0.6s,baz=222,slow=1.9,SNR=20						
BVAR				SKPbc	SKPbc	08 34 02.4	-0.6
	comp=Z,6.3nm,1.0s,baz=241,slow=3.1,SNR=10						
TULEG	Thule	135.12	347	*e*PKPdf	PKPdf	08 30 42.8	+0.7
GYA	Guiyang	135.73	113	*e*Pdif	Pdif	08 27 49.0	-0.1
GYA				PKP	PKiKP	08 30 46.4	-0.3
GYA				sPKP		08 31 23.2	
GYA				PP	PP	08 33 29.0	+4.6
GYA				AMB	AMB		
	comp=Z,140nm,8.0s						
BBB	Bella Bella	135.84	300	*e*PKPdf	PKPdf	08 30 45.1	+0.9
YKA	Yellowknife Ar	136.22	318	PKhKP	PKPpre	08 30 28.8	
	comp=Z,1.2nm,0.5s,baz=121,slow=3.5,SNR=24						
YKA				PKP	PKPdf	08 30 43.3	-1.2
	comp=Z,17nm,0.4s,baz=125,slow=2.4,SNR=85						
YKA				PP	PP	08 33 17.3	-10
	comp=Z,0.9nm,0.9s,baz=119,slow=6.0,SNR=3.9						
YKA				SKPbc	SKPbc	08 34 05.5	-0.9
	comp=Z,3.7nm,0.8s,baz=125,slow=2.5,SNR=9.9						
SPITS	Spitsbergen Ar	136.80	12	PKP	PKPdf	08 30 44.8	-0.5
	comp=Z,11nm,0.7s,baz=180,slow=2.3,SNR=6.6						
MK01	Makanchi Array	137.09	72	*e*PKPpre	PKPpre	08 30 34.1	
MK31	Makanchi Array	137.10	72	*e*PKPpre	PKPpre	08 30 38.0	
MKAR	Makanchi Array	137.10	72	PKhKP	PKPpre	08 30 37.6	
	comp=Z,1.3nm,0.8s,baz=230,slow=1.3,SNR=9.9						
MKAR				PKP	PKPdf	08 30 46.5	-0.3
	comp=Z,6.2nm,0.9s,baz=226,slow=2.2,SNR=18						
MKAR				SKPbc	SKPbc	08 34 08.8	-0.8
	comp=Z,10.0nm,1.1s,baz=250,slow=3.5,SNR=17						
MKAR	Makanchi Array	137.10	72	*e*PKPpre	PKPpre	08 30 38.0	
MKAR				PKP	PKPdf	08 30 46.5	-0.3
MKAR				SKPbc	SKPbc	08 34 08.8	-0.8
KURBB	Kurchatov Arra	137.53	65	PKhKP	PKPpre	08 30 35.2	
	comp=Z,1.1nm,0.6s,baz=237,slow=3.3,SNR=4.4						
KURBB				PKP	PKPdf	08 30 45.4	-2.0
	comp=Z,4.8nm,0.7s,baz=235,slow=2.9,SNR=17						
KURBB				SKPbc	SKPbc	08 34 10.1	-0.6
	comp=Z,6.2nm,0.9s,baz=233,slow=3.3,SNR=19						
KURK	Kurchatov	137.64	65	PKPpre	PKPpre	08 30 35.2	
KURK				PKP	PKPdf	08 30 45.4	-2.1
KURK				SKPbc	SKPbc	08 34 10.1	-0.9
KURK	Kurchatov	137.64	65	*ce*PKIKP	PKPdf	08 30 45.5	-2.1
CD2	Chengdu	137.75	106	PKP	PKPdf	08 30 48.5	-0.1
CD2				sPKP		08 31 26.2	
CD2				PP	PP	08 33 37.1	+0.1
CD2				SKS	SKSdf	08 37 49.8	+0.8
CD2				SKKS	SKKSac	08 40 20.7	+0.2
CD2				SS	SS	08 51 40.3	+2.6
CD2				AMB	AMB		
	comp=Z,220nm,5.6s						
CD2				LR	LR		
	comp=Z,1µm,19.6s						
CD2				LR	LR		
	comp=Z,500nm,15.2s						
CD2				LR	LR		
	comp=Z,810nm,15.2s						
RES	Resolute Bay	137.99	338	PKhKP	PKPpre	08 30 33.5	
	comp=Z,3.2nm,0.8s,baz=127,slow=1.7,SNR=3.9						
RES				PKP	PKPdf	08 30 47.6	+0.1
	comp=Z,20nm,0.8s,baz=108,slow=1.6,SNR=22						
RES				SKPbc	SKPbc	08 34 10.2	-1.0
	comp=Z,4.8nm,1.0s,baz=125,slow=6.1,SNR=4.4						
RES	Resolute Bay	137.99	338	PKPpre	PKPpre	08 30 33.5	
RES				*e*PKPdf	PKiKP	08 30 49.3	-0.3
RES				SKPbc	SKPbc	08 34 10.2	-1.0
WMQ	Urumqi	138.10	79	PKP	PKPdf	08 30 50.6	+1.8
WMQ				LR	LR		
	comp=Z,430nm,23.1s						
WMQ				LR	LR		
	comp=Z,530nm,23.1s						
WMQ				LR	LR		
	comp=Z,320nm,34.5s						
DIB	Dawson Inlet,	138.57	299	*e*PKPdf	PKPdf	08 30 50.4	+1.1
DLBC	Dease Lake	140.31	306	*e*PKPpre	PKPpre	08 30 45.5	
LZH	Lanzhou	141.72	101	*e*PKP	PKPdf	08 30 50.4	-5.4
LZH				sPKP		08 31 30.6	
LZH				SKKS		08 40 40.6	
LZH				LR	LR		
	comp=Z,470nm,17.1s						
LZH				LR	LR		
	comp=Z,480nm,15.7s						
LZH				LR	LR		
	comp=Z,720nm,19.5s						
GTA	Gaotai	141.87	93	*e*PKP	PKPdf	08 30 55.8	-0.1
GTA				sPKP		08 31 33.4	
JIS	Juneau Island	142.21	304	*e*PKPpre	PKPpre	08 30 51.9	
NVS	Novosibirsk	142.28	62	*e*PKIKP	PKPdf	08 30 52.5	-3.4
NVS				*e*		08 34 04.7	
NVS				pmax	pmax		
	comp=Z,19nm,1.0s						
NVS				pmax	pmax		
	comp=N,4.0nm,0.9s						
ZAA0	Zalesovo Array	142.60	64	*e*PKPpre	PKPpre	08 30 52.1	
ZALV	Zalesovo Beam	142.60	64	PKhKP	PKPpre	08 30 51.8	
	comp=N,6.2nm,0.6s,baz=237,slow=4.4,SNR=20						
ZALV				PKP	PKPdf	08 30 55.4	-1.1
	comp=N,8.4nm,0.6s,baz=225,slow=3.1,SNR=18						
ZALV				SKPbc	SKPbc	08 34 22.9	-1.2
	comp=N,1.6nm,0.6s,baz=270,slow=2.9,SNR=4.6						
XAN	Xi’an	142.93	108	PKP	PKPdf	08 30 54.4	-3.4
SKAG	Skagway	143.21	306	*e*PKPpre	PKPpre	08 30 55.1	
YKU2	Yakutat	145.22	304	*e*PKPbc	PKPbc	08 31 00.7	-0.1
HVS	Khovu-Aksy	145.73	73	*de*PKP2	PKPbc	08 31 03.0	+0.2
INK	Inuvik	145.86	320	PKPbc	PKPbc	08 31 02.8	+0.2
	comp=N,221nm,0.7s,baz=104,slow=3.5,SNR=520						
INK				SKPbc	SKPbc	08 34 30.8	-0.5
	comp=N,7.4nm,0.8s,baz=76,slow=3.6,SNR=5.6						
NJ2	Nanjing	146.37	122	*e*PKPbc	PKPbc	08 31 05.2	0.0
DAWY	Dawson	146.81	312	*e*PKPbc	PKPbc	08 31 05.7	+0.2
TGL	Tana Glacier	147.17	305	*e*PKPdf	PKPdf	08 31 04.7	+0.4
TGL				*e*PKPbc	PKPbc	08 31 07.1	+0.4
CRQM	Cirque	147.31	305	*e*PKPdf	PKPdf	08 31 05.7	+1.1
CRQM				*e*PKPbc	PKPbc	08 31 07.8	+0.6
EGAK	Eagle	147.76	313	*e*PKPbc	PKPbc	08 31 07.8	-0.3
RAGM	Ragged Mountai	147.88	304	*e*PKPbc	PKPbc	08 31 09.4	+0.8
BMRM	Bremner River	148.05	305	*e*PKPbc	PKPbc	08 31 10.0	+1.0
DIV	Divide	148.64	305	*e*PKPbc	PKPbc	08 31 11.3	+0.8
HARP	HAARP	148.77	307	*e*PKPbc	PKPbc	08 31 11.4	+0.6
KLU	Klutina	148.83	305	*e*PKPbc	PKPbc	08 31 11.9	+0.9
TIA	Tai’an	148.86	115	PKPbc	PKPbc	08 31 11.6	-0.2
PAX	Paxson	149.07	308	*e*PKPbc	PKPbc	08 31 12.1	+0.4
HHC	Hu-ho-hao-te	149.35	103	*e*PKPbc	PKPdf	08 31 07.8	-0.7
HHC				PP	PP	08 34 47.5	+0.8
HHC				AMB	AMB		
	comp=N,40nm,9.8s						
HHC				LR	LR		
	comp=N,230nm,17.2s						
HHC				LR	LR		
	comp=N,270nm,18.7s						
HHC				LR	LR		
	comp=N,170nm,18.1s						
FYU	Fort Yukon	149.83	315	*e*PKPbc	PKPbc	08 31 14.2	+1.0
CBIJ	Chichi jima	149.92	161	*e*PKPbc	PKPbc	08 31 14.5	-0.2
MOY	Mondy	149.93	77	*e*PKP2	PKPbc	08 31 14.3	+0.2
MOY				pmax	pmax		
	comp=Z,57nm,1.4s						
SML	Sawmill	150.02	305	*e*PKPbc	PKPbc	08 31 14.5	+0.6
IL1	Eielson Array	150.14	311	*e*PKPbc	PKPbc	08 31 14.3	+0.3
ILAR	Eielson Array	150.14	311	PKPbc	PKPbc	08 31 14.1	0.0
	comp=Z,164nm,0.8s,baz=131,slow=1.8,SNR=411						
ILB	Eielson Array	150.14	311	*e*PKPbc	PKPbc	08 31 14.3	+0.3
GHO	Glory Hole Cre	150.28	305	*e*PKPbc	PKPbc	08 31 15.1	+0.5
PMR	Palmer	150.33	305	*e*PKPbc	PKPbc	08 31 15.2	+0.7
RC01	Rabbit Creek A	150.46	304	*e*PKPbc	PKPbc	08 31 15.7	+0.8
CCB	Clear Creek Bu	150.50	311	*e*PKPbc	PKPbc	08 31 15.1	+0.2
COLA	College	150.56	311	*e*PKPbc	PKPbc	08 31 14.9	-0.1
WRH	Wood River Hil	150.58	311	*e*PKPdf	PKPdf	08 31 07.0	-2.5
WRH				*e*PKPbc	PKPbc	08 31 15.2	+0.2
BRLK	Bradley Lake	150.60	301	*e*PKPbc	PKPbc	08 31 15.8	+0.5
CNPM	China Poot	150.69	300	*e*PKPbc	PKPbc	08 31 16.2	+0.6
MDM	Murphy Dome	150.74	312	*e*PKPbc	PKPbc	08 31 15.1	-0.4
KDAK	Kodiak Island	150.77	296	PKPbc	PKPbc	08 31 16.4	+0.7
	comp=Z,204nm,0.6s,baz=161,slow=1.3,SNR=209						
KDAK	Kodiak Island	150.77	296	*e*PKPbc	PKPbc	08 31 16.3	+0.6
KDAK	Kodiak Island	150.77	296	*i* PKIKP	PKPbc	08 31 15.8	+0.1
MCK	McKinley	150.78	309	*e*PKPbc	PKPbc	08 31 16.5	+0.8
SONM	Songino Array	150.90	87	PKP	PKPdf	08 31 10.4	-0.4
	comp=Z,1.6nm,0.6s,baz=225,slow=1.6,SNR=12						
SONM				PKPbc	PKPbc	08 31 15.8	-0.7
	comp=Z,28nm,0.7s,baz=222,slow=1.9,SNR=85						
SONA1	Songino Array	150.91	87	*e*PKPbc	PKPbc	08 31 16.3	-0.3
OHAK	Old Harbor	150.92	295	*e*PKPbc	PKPbc	08 31 15.6	-0.5
HOM	Homer	150.93	300	*e*PKPbc	PKPbc	08 31 16.9	+0.8
SUA	Susitna One	151.03	304	*e*PKPbc	PKPbc	08 31 17.3	+0.9
BWN	Browne	151.10	310	*e*PKPbc	PKPbc	08 31 16.9	+0.6
BJI	Beijing	151.25	109	PKPbc	PKPbc	08 31 17.4	0.0
BJI				pPKP	pPKPdf	08 31 38.5	-2.5
BJI				LR	LR		
	comp=Z,320nm,21.3s						
BJI				LR	LR		
	comp=Z,330nm,21.5s						
ULN	Ulaanbaatar	151.28	88	*e*PKPbc	PKPbc	08 31 17.0	-0.5
ULN	Ulaanbaatar	151.28	88	*de*PKIKP	PKPdf	08 31 10.3	-1.1
TRF	Thorofare Moun	151.31	308	*e*PKPbc	PKPbc	08 31 17.4	+0.4
TLY	Talaya	151.38	78	*e*PKPbc	PKPbc	08 31 17.6	+0.2
SKT	Skwentna	151.53	305	*e*PKPbc	PKPbc	08 31 18.3	+0.9
KTH	Kantishna Hill	151.61	308	*e*PKPbc	PKPbc	08 31 17.8	+0.2
TOLK	Toolik Lake Re	151.74	319	*e*PKPbc	PKPbc	08 31 18.4	+0.7
BPAW	Bear Paw Mtn.	151.74	309	*e*PKPbc	PKPbc	08 31 18.3	+0.4
BPAW				*e*PKPab	PKPab	08 31 28.6	+1.3
MLY	Manley	151.80	311	*e*PKPbc	PKPbc	08 31 17.6	-0.3
MLY				*e*PKPab	PKPab	08 31 28.0	+0.5
COLD	Coldfoot	151.86	316	*e*PKPbc	PKPbc	08 31 19.0	+1.0
COLD				*e*PKPab	PKPab	08 31 28.8	+1.1
PPLA	Purkeypile	152.03	307	*e*PKPbc	PKPbc	08 31 19.0	+0.3
PPLA				*e*PKPab	PKPab	08 31 29.2	+0.5
CAST	Castle Rocks	152.09	308	*e*PKPbc	PKPbc	08 31 18.7	0.0
CAST				*e*PKPab	PKPab	08 31 29.2	+0.4
JNU	Nakatsue	152.44	138	PKPbc	PKPbc	08 31 19.8	-0.6
	comp=Z,16nm,0.9s,baz=270,slow=2.0,SNR=9.0						
JNU	Nakatsue	152.44	138	*e*PKPbc	PKPbc	08 31 20.2	-0.2
CHGN	Chignik	153.23	291	*e*PKPbc	PKPbc	08 31 21.0	-0.3
SDPT	Sand Point	153.97	288	*e*PKPbc	PKPbc	08 31 22.6	-0.4
KSAR	Wonju Array Be	154.97	128	PKP	PKPdf	08 31 16.1	-0.7
KSAR				PKPbc	PKiKP	08 31 25.7	+0.1
KSAR				PKPab	PKPab	08 31 42.0	+0.4
KSAR	Wonju Array Be	154.97	128	PKIKP	PKPdf	08 31 16.1	-0.7
KSAR						08 31 42.0	
KSRS	Korea Array	154.99	128	PKP	PKPdf	08 31 16.1	-0.7
	comp=Z,0.6nm,0.3s,baz=225,slow=1.5,SNR=6.6						
KSRS				PKPbc	PKPbc	08 31 25.7	0.0
	comp=Z,2.2nm,0.9s,baz=221,slow=2.4,SNR=7.0						
KSRS				PKPab	PKPab	08 31 42.0	+0.3
	comp=Z,2.0nm,0.8s,baz=226,slow=5.1,SNR=6.3						
KS01	Wonju Array Si	155.00	128	*e*PKPdf	PKPdf	08 31 16.3	-0.6
KS01				*e*PKPab	PKPab	08 31 41.3	-0.5
RDOG	Red Dog Mine	156.69	318	*e*PKPab	PKPab	08 31 49.4	+1.1
CN2	Changchun	158.76	114	*e*PKP	PKPdf	08 31 21.8	+0.3
CN2				*e*pPKP	pPKPdf	08 31 48.8	-2.4
CN2				*e*PP	PP	08 35 42.6	+3.4
CN2				*e*SS	SS	08 55 36.7	+3.7
CN2				AMB	AMB		
	comp=Z,200nm,6.0s						
CN2				LR	LR		
	comp=Z,300nm,20.0s						
CN2				LR	LR		
	comp=Z,600nm,20.0s						
CN2				LR	LR		
	comp=Z,500nm,21.0s						
BOD	Bodaibo	159.17	70	*e*PKP2	PKPab	08 31 56.1	-3.1
BOD				pmax	pmax		
	comp=Z,16nm,0.9s						
SPIA	Saint Paul Isl	159.71	288	*e*PKPab	PKPab	08 32 02.5	+0.9
ATKA	Atka Island	160.25	272	*e*PKPdf	PKPdf	08 31 23.2	+0.3
TIXI	Tiksi	161.62	24	*e*PKPab	PKPab	08 32 10.6	+1.1
USRK	Ussuriysk Ar.	162.24	124	PKPab	PKPab	08 32 11.6	-1.4
	baz=182,slow=4.2						
ZEA	Zeya	165.30	89	*e*PKIKP	PKPdf	08 31 26.2	-1.6
ZEA				pmax	pmax		
	comp=Z,14nm,1.2s						
BILL	Bilibino	166.60	337	*i* PKIKP	PKPdf	08 31 24.1	-4.3
BILL				*i*		08 32 32.2	
BILL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
YSS	Yuzh-Sakhalins	168.89	143⇑	*e*PKIKP	PKPdf	08 31 30.5	-0.1
YSS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PEA0B	Petropavlovsk-	175.65	226	*e*PKPab	PKPab	08 33 12.1	0.0
PETK	Petropavlovsk-	175.65	226	PKP	PKPdf	08 31 31.8	-1.6
	comp=Z,13nm,1.0s,baz=108,slow=4.7						
PETK				PKPab	PKPab	08 33 11.9	-0.1
	baz=108,slow=4.6						
PETK	Petropavlovsk-	175.65	226	*e*PKPdf	PKPdf	08 31 33.8	+0.4
PETK				*e*PKPab	PKPab	08 33 12.7	+0.6
PETK	Petropavlovsk-	175.65	226	*e*PKIKP	PKPdf	08 31 33.8	+0.4
PETK				*e*		08 33 12.7	

ISCJB ***07*** *08:22:57.2±0.4, 56°.10S±0°.07×27°.2W±0°.1, h63^{km}, mb4.5/19, Error ellipse: s-maj=11.2km s-min=7.5km az=23.3*

NEIC ***07*** *08:23:00.9±1.0, 56°.13S×27°.19W, h85^{km}±8^{km}, mb4.5/16, Error ellipse: s-maj=9.3km s-min=5.8km az=221.0*

IDC ***07*** *08:23:02.7±2.2, 56°.16S×27°.20W, h100^{km}±18^{km}, mb4.0/9, mb1 4.1/10, mb1mx3.8/36, mbtmp4.4/10, MS2.9/1, Ms1 2.9/1, ms1mx2.6/28, Error ellipse: s-maj=21.1km s-min=14.6km az=81.0*

ISC 07 08:22:58.6±0.5**, 56°.1S**±0°.1×**27°.10W**±0°.09**, h63^{km}, n89, σ1^{s}25**/94**, mb4.6**/19**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	5.68	285	*e*Pn	Pn	08 24 22.1	+1.9
HOPE				*e*Sn	Sn	08 25 23.8	-0.3
VNA1	Neumayer--Stat	16.72	158	ScS	P	08 26 50.9	+1.3
VNA3	Neumayer Olymp	16.92	161	ScS	P	08 26 52.1	+0.2
SNAA	Sanae	18.67	156	ScS	P	08 27 11.0	-0.1
SNAA	Sanae	18.67	156	P	P	08 27 11.0	-0.1
	2.5nm,0.3s,baz=304,slow=10,SNR=116						
SNAA	Sanae	18.67	156	*e*P	P	08 27 11.1	-0.1
	19nm,0.6s						
PMSA	Palmer Station	19.90	229	LR	LR	08 33 32.0	
	comp=Z,37nm,19.8s,baz=0.0,slow=32						
TRQA	Tornquist	29.39	293	*e*P	P	08 28 56.0	+0.4
	6.7nm,1.3s						
QSPA	South Pole Qui	34.14	180	P	P	08 29 37.1	-0.2
	2.4nm,0.5s,baz=21,slow=4.9,SNR=14						
QSPA				PcP	PcP	08 32 11.9	-0.8
	0.8nm,0.5s,baz=147,slow=1.4,SNR=2.8						
QSPA				ScP	ScP	08 35 48.3	-3.6
	1.0nm,0.6s,baz=212,slow=1.9,SNR=5.3						
QSPA	South Pole Qui	34.14	180	*e*P	P	08 29 37.0	-0.2
	3.4nm,0.9s						
QSPA				PcP	PcP	08 32 11.9	-0.8
QSPA				ScP	ScP	08 35 48.3	-3.6
CPUP	Villa Florida	36.89	311	P	P	08 30 00.3	-0.5
	1.7nm,0.8s,baz=348,slow=11,SNR=3.1						
CPUP	Villa Florida	36.89	311	*e*P	P	08 30 00.5	-0.4
	4.0nm,1.3s						
PEL	Peldehue	37.70	289	*e*P	P	08 30 07.0	-0.8
	24nm,1.5s						
MAW	Mawson	40.07	143	P	P	08 30 27.3	+0.3
	1.5nm,0.6s,baz=29,slow=16,SNR=3.6						
MAW	Mawson	40.07	143	*e*P	P	08 30 27.4	+0.3
	0.8nm,1.1s						
GO02	Mina Guanaco	43.56	297	*e*P	P	08 30 56.8	+0.3
	32nm,1.4s						
BOSA	Boshof	45.93	76	P	P	08 31 15.2	+0.2
	2.7nm,0.9s,baz=190,slow=6.1,SNR=2.7						
SBA	Scott Base	46.03	184	*e*P	P	08 31 17.5	+2.5
	3.4nm,1.3s						
VNDA	Vanda	46.52	183	P	P	08 31 19.1	+0.2
	1.1nm,0.5s,baz=189,slow=6.9,SNR=14						
VNDA	Vanda	46.52	183	*e*P	P	08 31 20.3	+1.4
	1.4nm,0.6s						
PB01	IPOC Station P	46.98	301	*e*P	P	08 31 23.1	-0.2
	30nm,1.5s						
MNMC	Minye Minye	48.67	302	*e*P	P	08 31 36.8	+0.2
	12nm,0.8s						
LPAZ	La Paz	50.45	305	P	P	08 31 50.6	+0.1
	3.3nm,0.5s,baz=156,slow=3.2,SNR=19						
LPAZ	La Paz	50.45	305	*e*P	P	08 31 50.6	+0.1
	3.6nm,0.6s						
SAML	Samuel	54.88	315	*e*P	P	08 32 22.2	-0.2
	5.5nm,1.4s						
LIC	Lamto	64.73	24	*e*P	P	08 33 31.2	+1.2
	33nm,0.7s						
KIC	Kosan Boka	64.92	25	*e*P	P	08 33 32.4	+1.1
	58nm,1.5s						
TIC	Toumodi	65.13	24	*e*P	P	08 33 33.8	+1.1
DBIC	Dimbokro	65.20	24	P	P	08 33 34.2	+1.2
	6.2nm,0.6s,baz=170,slow=7.6,SNR=7.8						
DBIC	Dimbokro	65.20	24	*e*P	P	08 33 34.4	+1.3
	15nm,1.2s						
KOWA	Kowa	72.95	23	P	P	08 34 22.3	+1.2
	1.8nm,0.5s,baz=201,slow=4.6,SNR=5.1						
KOWA	Kowa	72.95	23	*e*P	P	08 34 24.5	+3.4
	0.6nm,0.6s						
TOA0	Torodi Ar. Sit	73.08	29	*e*P	P	08 34 23.1	+1.4
	8.1nm,0.6s						
TORD	Torodi Ar. Bea	73.08	29	P	P	08 34 21.3	-0.5
	5.1nm,0.6s,baz=205,slow=6.3						
TOA1	Torodi Ar. Sit	73.08	29	*e*P	P	08 34 21.3	-0.5
KIV	Kislovodsk	115.67	49	*e*PKPdf	PKPdf	08 41 33.6	+0.9
XPFO	Piæon Flat	116.82	291	*e*PKPdf	PKPdf	08 41 35.3	-0.1
PFO	Pinyon Flats O	116.82	291	*e*PKPdf	PKPdf	08 41 35.3	-0.1
PASC	Pasadena Art C	118.16	290	*e*PKPdf	PKPdf	08 41 37.7	-0.1
P18A	Preston Nutter	118.33	299	*e*PKPdf	PKPdf	08 41 38.3	0.0
MSU	Marysvale	118.42	297	*e*PKPdf	PKPdf	08 41 37.8	-0.6
TCRU	Three Creeks R	118.63	297	*e*PKPdf	PKPdf	08 41 39.0	+0.1
DUG	Dugway, Tooele	120.03	298	*e*PKPdf	PKPdf	08 41 41.1	-0.3
NV01	Mina Array Sit	121.47	293	*e*PKPdf	PKPdf	08 41 44.2	0.0
NVAR	Mina Array Bea	121.47	293	PKP	PKPdf	08 41 44.1	-0.2
	0.3nm,0.7s,baz=214,slow=4.0,SNR=3.1						
FIA0	FINESS Array S	124.41	28	*e*PKPdf	PKPdf	08 41 47.9	-0.9
FINES	FINESS Array B	124.41	28	PKP	PKPdf	08 41 47.9	-0.9
	1.8nm,0.5s,baz=134,slow=2.0,SNR=18						
FIA1	FINESS Array S	124.41	28	*e*PKPdf	PKPdf	08 41 48.4	-0.4
ARA0	ARCESS Array S	130.98	22	*e*PKPdf	PKPdf	08 41 59.8	-1.3
ARCES	ARCESS Array B	130.98	22	PKP	PKPdf	08 41 59.8	-1.3
	2.3nm,0.8s,baz=186,slow=1.8,SNR=6.8						
YKA	Yellowknife Ar	136.25	318	PKP	PKPdf	08 42 10.3	-0.9
	0.8nm,0.5s,baz=125,slow=2.4,SNR=23						
YKA				SKPbc	SKPbc	08 45 31.0	-6.5
	0.3nm,0.6s,baz=136,slow=3.4,SNR=6.9						
MKAR	Makanchi Array	136.85	71	PKP	PKPdf	08 42 13.6	+0.6
	0.2nm,0.4s,baz=262,slow=1.0,SNR=3.2						
MK32	Makanchi Array	136.86	71	*e*PKPdf	PKPdf	08 42 13.6	+0.6
KURBB	Kurchatov Arra	137.28	65	PKP	PKPdf	08 42 15.0	+1.5
	0.2nm,0.5s,baz=248,slow=2.2,SNR=3.4						
KURK	Kurchatov	137.38	65	*e*PKPdf	PKPdf	08 42 15.0	+1.3
SKAG	Skagway	143.29	306	*e*PKPdf	PKPdf	08 42 26.4	+2.3
INK	Inuvik	145.88	321	*e*PKPdf	PKPdf	08 42 28.3	0.0
DAWY	Dawson	146.87	312	*e*PKPdf	PKPdf	08 42 31.1	+0.8
EGAK	Eagle	147.81	313	*e*PKPdf	PKPbc	08 42 33.4	-1.3
KLU	Klutina	148.91	306	*e*PKPbc	PKPbc	08 42 37.9	+0.1
PAX	Paxson	149.15	308	*e*PKPbc	PKPbc	08 42 38.2	-0.2
SCM	Sheep Creek Mo	149.66	306	*e*PKPbc	PKPbc	08 42 39.3	-0.3
FYU	Fort Yukon	149.87	315	*e*PKPbc	PKPbc	08 42 40.2	+0.4
SML	Sawmill	150.10	305	*e*PKPbc	PKPbc	08 42 39.9	-0.7
IL1	Eielson Array	150.19	312	*e*PKPbc	PKPbc	08 42 39.7	-1.0
ILAR	Eielson Array	150.19	312	PKPbc	PKPbc	08 42 39.8	-1.0

	4.9nm,0.8s,baz=139,slow=2.2,SNR=45						
ILB	**Eielson Array**	**150.19**	**312**	*e*PKPbc	**PKPbc**	**08 42 40.0**	**-0.7**
PMR	**Palmer**	**150.41**	**305**	*e*PKPbc	**PKPbc**	**08 42 40.6**	**-0.7**
CCB	**Clear Creek Bu**	**150.55**	**311**	*e*PKPbc	**PKPbc**	**08 42 40.3**	**-1.3**
WRH	**Wood River Hil**	**150.64**	**311**	*e*PKPbc	**PKPbc**	**08 42 40.8**	**-0.9**
SONA0	**Songino Array**	**150.68**	**87**	*e*PKPbc	**PKPbc**	**08 42 42.1**	**-0.5**
SONM	**Songino Array**	**150.68**	**87**	PKPbc	**PKPbc**	**08 42 42.1**	**-0.5**
	2.1nm,0.7s,baz=230,slow=2.5,SNR=8.4						
SONA1	**Songino Array**	**150.69**	**86**	*e*PKPbc	**PKPbc**	**08 42 42.0**	**-0.6**
BRLK	**Bradley Lake**	**150.71**	**301**	*e*PKPbc	**PKPbc**	**08 42 41.7**	**-0.4**
MDM	**Murphy Dome**	**150.79**	**312**	*e*PKPbc	**PKPbc**	**08 42 41.0**	**-1.2**
CNPM	**China Poot**	**150.80**	**300**	*e*PKPbc	**PKPbc**	**08 42 41.6**	**-0.8**
MCK	**McKinley**	**150.85**	**309**	*e*PKPbc	**PKPbc**	**08 42 42.1**	**-0.2**
KDAK	**Kodiak Island**	**150.89**	**296**	*e*PKPbc	**PKPbc**	**08 42 42.0**	**-0.5**
OHAK	**Old Harbor**	**151.05**	**295**	*e*PKPbc	**PKPbc**	**08 42 41.4**	**-1.5**
SUA	**Susitna One**	**151.12**	**304**	*e*PKPbc	**PKPbc**	**08 42 43.0**	**-0.2**
BWN	**Browne**	**151.17**	**310**	*e*PKPbc	**PKPbc**	**08 42 42.4**	**-0.6**
TRF	**Thorofare Moun**	**151.38**	**308**	*e*PKPbc	**PKPbc**	**08 42 43.2**	**-0.5**
SKT	**Skwentna**	**151.61**	**305**	*e*PKPbc	**PKPbc**	**08 42 43.6**	**-0.6**
KTH	**Kantishna Hill**	**151.68**	**308**	*e*PKPbc	**PKPbc**	**08 42 43.5**	**-0.8**
TOLK	**Toolik Lake Re**	**151.76**	**319**	*e*PKPbc	**PKPbc**	**08 42 43.9**	**-0.4**
BPAW	**Bear Paw Mtn.**	**151.81**	**309**	*e*PKPbc	**PKPbc**	**08 42 43.8**	**-0.8**
COLD	**Coldfoot**	**151.90**	**316**	*e*PKPbc	**PKPbc**	**08 42 44.8**	**+0.1**
PPLA	**Purkeypile**	**152.11**	**307**	*e*PKPbc	**PKPbc**	**08 42 44.6**	**-0.8**
CAST	**Castle Rocks**	**152.16**	**308**	*e*PKPbc	**PKPbc**	**08 42 44.1**	**-1.2**

IDC 07 08:27:55.7±71.0**, 18°.53S**×**177°.25W, h0^{km}, mb4.0**/3**, mb1 4.2**/3**, mb1mx3.6**/47**, mbtmp4.0**/3**, Error ellipse: s-maj=1318.0km s-min=181.1km az=80.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.31**	**242**	P	P	08 35 27.2	+0.5
	1.6nm,0.7s,baz=95,slow=12,SNR=3.2						
WRA	**Warramunga Arr**	**45.61**	**260**	P	P	08 36 17.8	-0.3
	0.8nm,0.3s,baz=100,slow=8.7,SNR=33						
ASAR	**Alice Springs**	**45.69**	**255**	P	P	08 36 18.5	-0.3
	1.8nm,0.7s,baz=91,slow=8.2,SNR=19						

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*ISCJB **07** 08:59:12.8±0.3, 16°.11N±0°.03×61°.86W±0°.06, h173^{km}±2^{km}, mb3.6/10, Error ellipse: s-maj=10.2km s-min=3.5km az=152.7*

*TRN **07** 08:59:13.0, 16°.16N×61°.77W, h169^{km}, MD3.5*

*IDC **07** 08:59:13.4±0.6, 15°.97N×62°.01W, h166^{km}±7^{km}, mb3.3/10, mb1 3.6/12, mb1mx3.3/56, mbtmp3.8/12, Error ellipse: s-maj=18.6km s-min=9.0km az=45.0*

ISC 07 08:59:13.6±0.7**, 16°.09N**±0°.04×**61°.87W**±0°.06**, h170**^{km}±5^{km}**, n59, σ0^s.96**/78**, mb3.6**/10**, 17C-7D, Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LZG	**Guadaloupe-1**	**0.10**	**62**	⇓*e*P	**Pn**	**08 59 36.5**	**+0.2**
TBG	**Guadaloupe-3**	**0.32**	**138**	⇑*i*P	**Pn**	**08 59 37.1**	**+0.4**
TBG				*e*S	**Sn**	**08 59 54.2**	**-0.1**
SEG	**Port Louis**	**0.47**	**49**	⇓*i*P	**Pn**	**08 59 37.5**	**+0.3**
MGG	**Marie-Galante**	**0.56**	**108**	⇓*i*P	**Pn**	**08 59 38.0**	**+0.4**
MGG	**Marie-Galante**	**0.56**	**108**	*e*S	**Sn**	**08 59 54.6**	**-1.3**
MDPV	**Dominica, Penn**	**0.63**	**137**	*e*P	**Pn**	**08 59 38.7**	**+0.7**
MDVC	**Dominica, Viel**	**0.65**	**137**	*e*P	**Pn**	**08 59 37.9**	**-0.2**
MDVC				*e*S	**Sn**	**08 59 56.3**	**-0.6**
MDPO	**Dominica; Chan**	**0.65**	**142**	⇑*i*P	**Pn**	**08 59 38.4**	**+0.3**
MDPO				*e*S	**Sn**	**08 59 56.2**	**-0.7**
BBL	**Barber's Block**	**0.68**	**145**	⇑*i*P	**Pn**	**08 59 38.5**	**+0.2**
BBL				*e*S	**Sn**	**08 59 56.8**	**-0.5**
MLYT	**Lee's Yard**	**0.70**	**334**	*e*P	**Pn**	**08 59 38.7**	**+0.3**
MLYT				*e*S	**Sn**	**08 59 57.0**	**-0.5**
MBWH		**0.72**	**335**	⇓*i*P	**Pn**	**08 59 38.6**	**+0.1**
MBWH				*e*S	**Sn**	**08 59 57.7**	**0.0**
DEG	**La Desirade**	**0.81**	**74**	*e*P	**Pn**	**08 59 39.3**	**+0.2**
DEG				*e*S	**Sn**	**08 59 58.3**	**-0.4**
H05N1	**Guadeloupe/Mar**	**0.81**	**74**	P	**Pn**	**08 59 39.1**	**0.0**
H05N1				S	**Sn**	**08 59 57.1**	**-1.5**
BPA	**Boggy Peak**	**0.95**	**1**	*e*P	**Pn**	**08 59 40.7**	**+0.6**
BPA				*e*S	**Sn**	**08 59 59.2**	**-1.4**
DLPL	**La Plaine**	**0.96**	**141**	*e*P	**Pn**	**08 59 40.8**	**+0.7**
DLPL				*e*S	**Sn**	**09 00 01.3**	**+0.7**
NEV	**Hard Times**	**1.24**	**327**	*e*P	**Pn**	**08 59 43.5**	**+1.1**
NEV				*e*S	**Sn**	**09 00 05.0**	**+0.4**
PCM	**Pelee Case Pet**	**1.42**	**153**	⇑*i*P	**Pn**	**08 59 44.0**	**0.0**
CXM	**Morne La Croix**	**1.44**	**152**	⇑*e*P	**Pn**	**08 59 44.5**	**0.0**
BAMF	**Morne Balai**	**1.45**	**151**	⇑*e*P	**Pn**	**08 59 44.5**	**+0.1**
GBMF	**Grand Be**	**1.46**	**152**	⇑*e*P	**Pn**	**08 59 44.5**	**-0.1**
PML	**Morne Lenard**	**1.46**	**153**	*e*P	**Pn**	**08 59 44.3**	**-0.2**
FDF	**Fort de France**	**1.52**	**153**	⇑*i*P	**Pn**	**08 59 45.0**	**0.0**
FDF				*e*S	**Sn**	**09 00 09.8**	**+0.5**
ANWB	**Willy Bob**	**1.57**	**3**	⇑*i*P	**Pn**	**08 59 45.2**	**-0.3**
ANWB				*e*S	**Sn**	**09 00 08.1**	**-2.1**
ZAM	**Aeronautique**	**1.71**	**152**	⇑*e*P	**Pn**	**08 59 47.2**	**+0.2**
TRMF	**Trois Ilets**	**1.74**	**153**	⇑*e*P	**Pn**	**08 59 47.4**	**+0.2**
LPMF	**Morne Lapointe**	**1.74**	**150**	⇓*e*P	**Pn**	**08 59 47.1**	**-0.2**
BIM	**Bigot**	**1.75**	**154**	⇑*e*P	**Pn**	**08 59 47.5**	**+0.1**
SEUS	**St. Eustatius**	**1.75**	**323**	*e*P	**Pn**	**08 59 47.3**	**-0.1**
SEUS				*e*S	**Sn**	**09 00 14.1**	**+0.6**
MVM	**Montagne Vaucl**	**1.79**	**148**	⇓*e*P	**Pn**	**08 59 48.0**	**+0.1**
H05S1	**Guadeloupe/Mar**	**1.93**	**149**	P	**Pn**	**08 59 49.3**	**-0.1**
	baz=73						
H05S1				S	**Sn**	**09 00 16.0**	**-1.0**
	baz=73						
SABA	**Saba**	**2.01**	**319**	*e*P	**Pn**	**08 59 50.6**	**+0.4**
SABA				*e*S	**Sn**	**09 00 18.6**	**+0.1**
SLW	**Petit Monier**	**2.25**	**156**	⇑*e*P	**Pn**	**08 59 52.8**	**-0.1**
SMRT	**St. Maarten**	**2.26**	**330**	*e*P	**Pn**	**08 59 52.9**	**-0.1**
SMRT				*e*S	**Sn**	**09 00 21.3**	**-2.4**
SLB	**Belfond**	**2.39**	**160**	⇓*i*P	**Pn**	**08 59 56.5**	**+1.9**
MCLT	**Moule a Chique**	**2.53**	**159**	*e*P	**Pn**	**08 59 55.8**	**-0.5**
SSV	**Crater Summit**	**2.83**	**166**	⇑*i*P	**Pn**	**09 00 02.0**	**+2.1**
SVV	**Soufriere Volc**	**2.83**	**167**	⇑*i*P	**Pn**	**09 00 02.1**	**+2.2**
SVB	**Belmont**	**2.87**	**168**	⇑*i*P	**Pn**	**09 00 00.4**	**+0.1**
SVCV	**St. Vincent, C**	**2.89**	**166**	*e*P	**Pn**	**09 00 00.6**	**+0.1**
FCV	**Fort Charlotte**	**2.98**	**168**	*e*P	**Pn**	**09 00 03.5**	**+1.8**
BBGH	**Gun Hill**	**3.69**	**142**	*e*P	**Pn**	**09 00 11.5**	**+1.0**
BBGH				*e*S	**Sn**	**09 00 52.4**	**-2.5**
BBSP	**Saint Philip**	**3.78**	**141**	*e*P	**Pn**	**09 00 12.2**	**+0.5**
GRGR	**Grenville**	**3.94**	**177**	⇑*i*P	**Pn**	**09 00 13.8**	**0.0**
SJG	**San Juan**	**4.56**	**297**	P	**Pn**	**09 00 21.2**	**-0.4**
	7.0nm,0.3s,baz=46,slow=6.4,SNR=11						
SJG				S	**Sn**	**09 01 13.1**	**-1.8**
	5.6nm,0.3s,baz=97,slow=23,SNR=8.6						
TOSP	**Speyside**	**4.94**	**165**	*e*P	**Pn**	**09 00 26.5**	**-0.2**
TOSP	**Speyside**	**4.94**	**165**	*e*S	**Sn**	**09 01 21.5**	**-2.4**
TRN	**Trinidad (W)**	**5.43**	**175**	*e*P	**Pn**	**09 00 34.7**	**+1.6**
TRN	**Trinidad (W)**	**5.43**	**175**	*e*S	**Sn**	**09 01 34.3**	**-1.2**
PTGA	**Pitinga**	**16.82**	**173**	P	**P**	**09 02 58.8**	**+0.1**
	0.8nm,0.3s,baz=356,slow=12,SNR=7.3						
LPAZ	**La Paz**	**32.76**	**191**	P	**P**	**09 05 29.1**	**-2.2**
	0.4nm,0.3s,baz=7.7,slow=7.4,SNR=8.7						
SCHQ	**Schefferville**	**38.85**	**355**	P	**P**	**09 06 23.2**	**+1.1**
	1.5nm,0.6s,baz=176,slow=6.5,SNR=3.7						
TXAR	**Lajitas Array**	**40.53**	**296**	P	**P**	**09 06 36.3**	**-0.1**
	0.2nm,0.5s,baz=115,slow=8.6,SNR=8.3						
ULM	**Lac du Bonnet**	**43.71**	**329**	P	**P**	**09 07 01.8**	**+0.1**
	3.9nm,0.7s,baz=139,slow=8.0,SNR=4.3						
PDAR	**Pinedale Array**	**48.48**	**313**	P	**P**	**09 07 39.8**	**+0.4**
	0.9nm,0.6s,baz=112,slow=9.9,SNR=11						
NVAR	**Mina Array Bea**	**53.99**	**306**	P	**P**	**09 08 20.4**	**0.0**
	0.3nm,0.5s,baz=119,slow=7.3,SNR=3.8						
YKA	**Yellowknife Ar**	**59.05**	**334**	P	**P**	**09 08 55.7**	**+0.3**
	0.6nm,0.4s,baz=106,slow=7.4,SNR=10						
TORD	**Torodi Ar. Bea**	**61.37**	**84**	P	**P**	**09 09 13.2**	**+1.2**
	0.7nm,0.8s,baz=275,slow=7.4						
INK	**Inuvik**	**68.39**	**338**	P	**P**	**09 09 56.6**	**+0.1**
	0.7nm,0.6s,baz=129,slow=6.7,SNR=2.2						
ILAR	**Eielson Array**	**73.46**	**334**	P	**P**	**09 10 27.6**	**+0.5**
	0.3nm,0.5s,baz=81,slow=5.6,SNR=4.2						

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*ISCJB **07** 09:01:50.0±0.5, 3°.00N±0°.06×86°.57E±0°.06, h10^{km}, mb4.1/26, MS4.0/48, Error ellipse: s-maj=10.6km s-min=6.3km az=35.6*

*IDC **07** 09:01:50.6±0.7, 3°.06N×86°.56E, h0^{km}, mb4.0/18, mb1 4.1/20, mb1mx3.9/76, mbtmp4.0/20, ML4.3/3, MS4.0/51, Ms1 4.0/51, ms1mx3.9/66, Error ellipse: s-maj=23.3km s-min=13.4km az=44.0*

*NEIC **07** 09:01:52.1±0.4, 3°.05N×86°.57E, h10^{km}, mb4.4/4, Error ellipse: s-maj=11.0km s-min=6.9km az=215.0*

*GCMT **07** 09:01:52.1±0.3, 3°.04N×86°.53E, h12^{km}, MW4.9/80, Moment Tensor Solution. s12,c14; s80,c113; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.24±.08; $M_{\theta\theta}$-2.09±.06; $M_{\phi\phi}$1.85±.07; $M_{r\theta}$-0.64±.19; $M_{\theta\phi}$-0.13±.07; $M_{\phi r}$-1.60±.23; Best double couple: $M_0$2.59000×10^{16} NP1:ϕ_s224.00000°, δ82.00000°, λ38.00000°. NP2: ϕ_s128.00000°, δ53.00000°, λ169.00000°. Principal axes: T 2.8470, Plg32.0000°, Azm93.0000°; N -0.5110, Plg51.0000°, Azm235.0000°; P -2.3340, Plg19.0000°, Azm351.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 07 09:01:52.4±0.7**, 3°.09N**±0°.09×**86°.54E**±0°.08**, h10**^{km}**, n98, σ1^s.16**/58**, mb4.2**/27**, MS4.1**/48**, 2C-2D, North Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	**Pallekele**	**7.14**	**306**	Pn	**Pn**	**09 03 36.1**	**-0.9**
	16nm,0.3s,baz=115,slow=12,SNR=58						
PALK				Sn	Sn	09 04 49.0	-9.3
	128nm,0.3s,baz=116,slow=3.0,SNR=9.3						
PALK				LR	LR	09 06 08.1	
	comp=Z,846nm,21.8s,baz=115,slow=36						
PALK	**Pallekele**	**7.14**	**306**	Pn	**Pn**	**09 03 36.1**	**-0.9**
	110nm,0.4s						
PALK				Sn	Sn	09 04 49.0	-9.3
CMBY	**CAMPBELL BAY**	**8.33**	**62**	*e*P	**Pn**	**09 03 50.4**	**-2.9**
BSI	**Banda Aceh**	**9.05**	**74**	P	Pn	09 03 58.1	-5.2
MLSI	**Meulaboh, Aceh**	**9.92**	**83**	P	**Pn**	**09 04 13.3**	**-1.8**
KCSI	**Kotacane, Aceh**	**11.22**	**88**	P	**Pn**	**09 04 31.1**	**-1.9**
PSI	**Prapat**	**12.38**	**91**	Pn	**Pn**	**09 04 47.0**	**-1.9**
	0.3nm,0.3s,baz=180,slow=2.6,SNR=2.0						
PSI				Sn	Sn	09 06 57.2	-10
	0.5nm,0.3s,baz=360,slow=9.1,SNR=2.1						
PSI				LR	LR	09 09 31.4	
	comp=Z,2μm,19.9s,baz=270,slow=37						
KRAB	**Krabi**	**13.59**	**67**	P	**P**	**09 05 18.1**	**+3.7**
	35nm,1.1s						
VIS	**Vishakhapatnam**	**14.87**	**348**	*i* P	**Pn**	**09 05 21.7**	**-1.2**
VIS				*i* x	x	09 07 53.1	
HYB	**Hyderabad**	**16.25**	**332**	*i* P	**P**	**09 05 44.0**	**0.0**
HYB				*e*S	**Sn**	**09 08 42.0**	**+0.6**
BWNR	**Bhubaneshwar**	**17.11**	**358**	*e*P	**Pn**	**09 05 48.2**	**-3.6**
PBKT	**Sadao Pong**	**19.51**	**46**	P	**Pn**	**09 06 20.8**	**-0.4**
	17nm,0.9s,1μm						
CMAR	**Chiang Mai Arr**	**19.51**	**38**	P	**P**	**09 06 19.8**	**-0.3**
	0.5nm,0.3s,baz=229,slow=12,SNR=12						
CMAR				LR	LR	09 13 48.0	
	comp=Z,416nm,20.2s,baz=220,slow=37						
CHTO	**Chiang Mai**	**19.79**	**37**	*e*P	**P**	**09 06 22.3**	**-0.7**
	24nm,1.7s						
CHTO	**Chiang Mai**	**19.79**	**37**	P	**Pn**	**09 06 25.0**	**+0.5**
	26nm,1.2s						
CHTO	**Chiang Mai**	**19.79**	**37**	P	**Pn**	**09 06 25.0**	**+0.5**
CMMT	**Chiang Mai**	**19.79**	**37**	P	**Pn**	**09 06 24.9**	**+0.3**
	5.8nm,1.3s						
CMMT	**Chiang Mai**	**19.79**	**37**	P	**Pn**	**09 06 24.9**	**+0.3**
BRDH	**Bariadhala**	**20.09**	**14**	LR	LR	09 15 41.9	
	comp=Z,1μm,18.5s,baz=154,slow=41						
SAIH	**SAIHA**	**20.27**	**17**	*e*P	**P**	**09 06 28.6**	**+0.2**
BOK	**Bokaro**	**20.59**	**358**	*e*P	**P**	**09 06 31.2**	**-0.5**
BOK				IAmb	IAmb	09 06 37.1	
	comp=Z,25nm,1.1s						
CMAI	**Chiengmai2**	**20.72**	**35**	P	Pn	09 06 34.8	-0.8
	comp=Z,6.0nm,1.3s						
CMAI	**Chiengmai2**	**20.72**	**35**	P	Pn	09 06 34.8	-0.8
PAYA	**Payao**	**20.77**	**38**	P	Pn	09 06 36.0	-0.1
	comp=Z,8.3nm,0.8s						
PAYA	**Payao**	**20.77**	**38**	P	Pn	09 06 36.0	-0.1
NANT	**Nan**	**20.88**	**41**	P	Pn	09 06 41.4	+4.1
AZL	**Aizawl**	**21.37**	**16**	*e*P	**P**	**09 06 41.2**	**+1.0**
BHPL	**Bhopal**	**21.89**	**337**	*e*P	**P**	**09 06 46.2**	**+0.5**
BHPL				IAmb	IAmb	09 06 47.5	
	comp=Z,40nm,1.6s						
SKNT	**Sakolnakorn**	**22.00**	**50**	P	**P**	**09 06 48.1**	**+1.2**
	comp=Z,6.8nm,1.1s						
NONG	**Nongkai**	**22.05**	**46**	P	**P**	**09 06 48.3**	**+0.8**
SHL	**Shillong**	**22.93**	**12**	*e*P	**P**	**09 06 57.9**	**+1.0**
SHL				*e*P	**P**	**09 06 58.0**	**+1.0**
LEM	**Lembang**	**23.24**	**115**	LR	LR	09 14 28.4	
	comp=Z,164nm,21.7s,baz=310,slow=33						
TEZP	**TEZPUR**	**24.15**	**14**	*e*P	**P**	**09 07 08.0**	**-0.8**
GTK	**Tadong**	**24.17**	**4**	*e*P	**P**	**09 07 08.2**	**-0.9**
MOKO	**MOKOCHONG**	**24.33**	**18**	*e*P	**P**	**09 07 11.5**	**+0.9**
LSA	**Lhasa**	**26.82**	**9**	*e*P	**P**	**09 07 35.5**	**+2.0**
	comp=Z,4.9nm,0.5s						
SMLA	**Simla**	**29.25**	**343**	*e*P	**P**	**09 07 54.0**	**-0.6**
NIL	**Nilore**	**32.84**	**339**	*e*P	**P**	**09 08 28.0**	**+1.6**
	comp=Z,15nm,0.8s						
WSAR	**Wadi Sarin**	**33.62**	**309**	LR	LR	09 20 44.6	
	comp=Z,365nm,19.3s,baz=134,slow=34						
TGY	**Tagaytay City**	**35.67**	**70**	LR	LR	09 21 56.9	
	comp=Z,150nm,20.7s,baz=227,slow=34						
DAV	**Davao City (W)**	**39.08**	**83**	LR	LR	09 28 03.7	
	comp=Z,214nm,18.9s,baz=318,slow=40						
BATI	**Baumata**	**39.26**	**110**	LR	LR	09 26 08.1	
	comp=Z,326nm,20.9s,baz=250,slow=37						
GEYT	**Alibeck**	**43.34**	**327**	LR	LR	09 29 32.9	
	comp=Z,195nm,18.4s,baz=200,slow=38						
MK31	**Makanchi Array**	**43.69**	**356**	⇓Pg	**P**	**09 09 58.3**	**+0.8**
	comp=Z,1.8nm,0.8s,baz=150,slow=17,SNR=16						
MK31				⇑Lg	Lg	09 10 47.3	
	comp=Z,2.5nm,0.6s,baz=144,slow=29,SNR=5.0						
MKAR	**Makanchi Array**	**43.69**	**356**	P	**P**	**09 09 57.8**	**+0.3**
	comp=Z,1.4nm,0.6s,baz=198,slow=8.6,SNR=20						
MKAR				LR	LR	09 29 18.9	
	comp=Z,257nm,19.6s,baz=184,slow=38						
MAKZ	**Makanchi**	**43.72**	**355**	⇓Pg	**P**	**09 09 58.1**	**+0.3**
	comp=Z,6.4nm,1.2s						
MAKZ				⇑Lg	Lg	09 10 51.2	
	comp=Z,3.2nm,0.8s						
FITZ	**Fitzroy Crossi**	**43.91**	**120**	P	**P**	**09 09 58.8**	**-0.8**
	comp=Z,4.0nm,0.5s,baz=303,slow=5.2,SNR=20						
ATD	**Arta Tunnel**	**44.08**	**283**	LR	LR	09 25 52.0	
	comp=Z,184nm,18.2s,baz=350,slow=33						
OPO	**Ambohidratompo**	**44.31**	**239**	LR	LR	09 25 22.7	
	comp=Z,303nm,19.3s,baz=50,slow=32						
NWAO	**Narrogin (SRO)**	**46.12**	**143**	LR	LR	09 26 15.0	
	comp=Z,98nm,21.0s,baz=186,slow=32						
JOW	**Kunigami**	**46.38**	**55**	LR	LR	09 31 58.4	
	comp=Z,126nm,18.2s,baz=295,slow=39						
SONM	**Songino Array**	**47.75**	**18**	P	**P**	**09 10 30.3**	**+0.6**
	comp=Z,3.2nm,0.6s,baz=200,slow=8.9,SNR=20						
SONM				LR	LR	09 33 42.9	
	comp=Z,184nm,18.1s,baz=200,slow=40						
KURBB	**Kurchatov Arra**	**47.84**	**353**	P	**P**	**09 10 30.7**	**+0.5**
	comp=Z,4.0nm,0.7s,baz=178,slow=7.2,SNR=40						
KURK	**Kurchatov**	**47.92**	**353**	P	**P**	**09 10 30.7**	**-0.2**
ULN	**Ulaanbaatar**	**47.98**	**19**	*e*P	**P**	**09 10 31.6**	**0.0**
	comp=Z,7.5nm,1.4s						
ZALV	**Zalesovo Beam**	**50.71**	**359**	P	**P**	**09 10 52.1**	**0.0**
	comp=Z,5.0nm,0.5s,baz=184,slow=6.7,SNR=23						
ZALV				LR	LR	09 33 31.1	
	comp=Z,139nm,20.1s,baz=246,slow=38						
KSAR	**Wonju Array Be**	**51.02**	**43**	P	**P**	**09 10 55.3**	**+0.6**
KSRS	**Korea Array**	**51.05**	**43**	P	**P**	**09 10 55.3**	**+0.4**
	comp=Z,0.6nm,0.5s,baz=224,slow=8.9,SNR=3.7						
KSRS				LR	LR	09 34 44.1	
	comp=Z,202nm,18.3s,baz=205,slow=39						
JNU	**Nakatsue**	**51.06**	**49**	LR	LR	09 33 46.1	
	comp=Z,175nm,19.5s,baz=301,slow=38						
BVAR	**Borovoye Array**	**51.53**	**348**	P	**P**	**09 10 57.3**	**-1.0**
	comp=Z,0.5nm,0.6s,baz=160,slow=9.0,SNR=2.9						
BVAR				LR	LR	09 33 32.3	
	comp=Z,185nm,21.6s,baz=177,slow=37						
WRA	**Warramunga Arr**	**52.21**	**118**	P	**P**	**09 11 03.3**	**-0.6**
	comp=Z,1.4nm,0.5s,baz=297,slow=7.9,SNR=29						
WRAB	**Tennant Creek**	**52.21**	**118**	*e*P	**P**	**09 11 03.6**	**-0.4**
	comp=Z,3.0nm,0.7s						
GNI	**Garni**	**52.77**	**320**	LR	LR	09 36 03.0	
	comp=Z,144nm,19.0s,baz=112,slow=39						
AKTO	**Aktyubinsk**	**52.97**	**338**	LR	LR	09 34 43.7	
	comp=Z,149nm,21.2s,baz=142,slow=37						
ASAR	**Alice Springs**	**53.22**	**123**	P	**P**	**09 11 10.8**	**-0.6**
	comp=Z,0.8nm,0.5s,baz=298,slow=8.1,SNR=23						
KBZ	**Khabaz**	**55.89**	**323**	LR	LR	09 38 35.7	
	comp=Z,79nm,20.6s,baz=119,slow=39						
MMAI	**Mount Meron Ar**	**56.25**	**308**	LR	LR	09 36 29.4	
	comp=Z,226nm,18.8s,baz=135,slow=37						
USRK	**Ussuriysk Ar.**	**57.24**	**38**	LR	LR	09 37 11.5	
	comp=Z,143nm,20.5s,baz=214,slow=37						
KLR	**Kul'dur**	**59.89**	**33**	LR	LR	09 39 09.6	
	comp=Z,15nm,21.2s,slow=37						
BRTR	**Keskin Array B**	**60.09**	**315**	P	**P**	**09 11 59.9**	**-0.3**
	comp=Z,0.7nm,0.5s,baz=146,slow=7.6,SNR=4.2						
BRTR				LR	LR	09 41 16.7	
	comp=Z,88nm,18.4s,baz=110,slow=39						
PMG	**Port Moresby**	**61.66**	**102**	LR	LR	09 40 55.5	
	comp=Z,51nm,19.9s,baz=240,slow=38						
STKA	**Stephens Creek**	**62.72**	**128**	P	**P**	**09 12 17.4**	**-0.5**
	comp=Z,1.1nm,0.6s,baz=277,slow=4.6,SNR=3.6						
STKA				LR	LR	09 38 26.1	
	comp=Z,98nm,19.2s,baz=290,slow=35						
IDI	**Anoyia**	**65.24**	**308**	LR	LR	09 42 00.8	
	comp=Z,83nm,21.4s,baz=90,slow=37						
BOSA	**Boshof**	**66.65**	**237**	LR	LR	09 37 29.6	
	comp=Z,141nm,19.5s,baz=40,slow=32						
YAK	**Yakutsk**	**67.00**	**21**	LR	LR	09 45 20.4	
	comp=Z,136nm,18.6s,baz=272,slow=39						
AKASG	**Malin Array Be**	**67.40**	**325**	P	**P**	**09 12 47.8**	**-0.2**
	comp=Z,0.2nm,0.3s,baz=96,slow=4.8,SNR=3.2						
AKASG				LR	LR	09 46 51.4	
	comp=Z,68nm,18.2s,baz=85,slow=40						
MLR	**Muntele Rosu**	**67.48**	**318**	P	**P**	**09 12 49.3**	**+0.5**
	comp=Z,0.9nm,0.6s,baz=161,slow=10,SNR=5.6						
MLR				LR	LR	09 45 46.1	
	comp=Z,18nm,21.3s,baz=104,slow=39						
MAW	**Mawson**	**72.48**	**189**	LR	LR	09 37 32.1	
	comp=Z,206nm,21.7s,baz=58,slow=30						
FINES	**FINESS Array B**	**73.53**	**334**	P	**P**	**09 13 24.7**	**-0.5**
	comp=Z,0.9nm,0.7s,baz=99,slow=8.6,SNR=3.5						
FINES				LR	LR	09 48 19.1	
	comp=Z,162nm,20.1s,baz=76,slow=38						
HNR	**Honiara**	**74.18**	**101**	LR	LR	09 48 48.1	
	comp=Z,24nm,19.3s,baz=306,slow=38						
GERES	**GERESS Array B**	**76.41**	**320**	P	**P**	**09 13 42.3**	**0.0**
	comp=Z,0.3nm,0.5s,baz=125,slow=5.1,SNR=2.3						
GERES				LR	LR	09 50 09.0	
	comp=Z,37nm,22.0s,baz=110,slow=38						
ARCES	**ARCESS Array B**	**77.28**	**342**	P	**P**	**09 13 46.6**	**0.0**
	comp=Z,3.0nm,0.9s,baz=110,slow=4.1,SNR=4.5						
KEST	**Kesra**	**77.80**	**306**	LR	LR	09 49 16.7	
	comp=Z,52nm,21.0s,baz=250,slow=37						
DAVOX	**Davos/Dischmat**	**78.62**	**317**	LR	LR	09 51 40.0	
	comp=Z,64nm,21.6s,baz=85,slow=38						
HFS	**Hagfors**	**78.82**	**331**	P	**P**	**09 13 54.5**	**-0.9**
	comp=Z,1.3nm,0.8s,baz=62,slow=3.9,SNR=2.3						
HFS				LR	LR	09 52 02.7	
	comp=Z,130nm,19.6s,baz=106,slow=38						
NOA	**NORSAR Array B**	**80.21**	**331**	LR	LR	09 52 33.4	
	comp=Z,120nm,19.5s,baz=105,slow=38						
DZM	**Mont Dzumac**	**81.82**	**113**	LR	LR	09 53 23.9	
	comp=Z,57nm,18.3s,baz=212,slow=38						
DZM	**Mont Dzumac**	**81.82**	**113**	*e*P	P	09 14 03.3	-9.1
	comp=Z,67nm,1.5s						
SPITS	**Spitsbergen Ar**	**82.97**	**349**	LR	LR	09 56 56.8	
	comp=Z,112nm,18.2s,baz=95,slow=40						
TORD	**Torodi Ar. Bea**	**84.29**	**283**	P	**P**	**09 14 26.5**	**+1.3**
	comp=Z,0.1nm,0.4s,baz=60,slow=5.5						
TORD				LR	LR	09 50 01.0	
	comp=Z,105nm,20.0s,baz=40,slow=34						
EKA	**Eskdalemuir Ar**	**87.31**	**325**	LR	LR	09 58 47.6	
	comp=Z,71nm,19.9s,baz=85,slow=39						
MDT	**Midelt**	**89.31**	**303**	LR	LR	09 55 20.6	
	comp=Z,126nm,20.0s,baz=103,slow=36						
KOWA	**Kowa**	**89.77**	**284**	LR	LR	09 53 05.2	
	comp=Z,144nm,20.6s,baz=44,slow=34						
VNDA	**Vanda**	**89.84**	**168**	LR	LR	09 49 40.6	
	comp=Z,169nm,18.6s,baz=298,slow=32						
DBIC	**Dimbokro**	**91.03**	**277**	LR	LR	09 52 59.6	
	comp=Z,116nm,20.9s,baz=65,slow=34						
SNAA	**Sanae**	**92.72**	**198**	LR	LR	09 53 02.1	
	comp=Z,62nm,18.4s,baz=174,slow=33						
TXAR	**Lajitas Array**	**146.31**	**16**	PKPbc	**PKPdf**	**09 21 33.3**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=44,slow=1.9,SNR=9.7						
LPAZ	**La Paz**	**151.85**	**241**	PKPab	**PKPab**	**09 21 58.7**	**+0.3**
	comp=Z,0.8nm,0.4s,baz=124,slow=5.1,SNR=5.7						

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*ISCJB **07** 09:07:20.3±0.5, 12°.68S±0°.06×166°.8E±0°.1, h220^{km}, mb3.8/16, Error ellipse: s-maj=16.7km s-min=8.3km az=7.2*

*IDC **07** 09:07:21.0±2.4, 12°.75S×166°.93E, h215^{km}±22^{km}, mb3.6/15, mb1 3.8/16, mb1mx3.6/53, mbtmp4.1/16, MS4.3/1, Ms1 4.3/1, ms1mx2.7/40, Error ellipse: s-maj=18.6km s-min=13.0km az=105.0*

*NEIC **07** 09:07:22.6±1.8, 12°.76S×166°.89E, h232^{km}±18^{km}, mb4.1/1, Error ellipse: s-maj=13.3km s-min=11.3km az=151.0*

ISC 07 09:07:21.5±0.6**, 12°.75S**±0°.08×**166°.9E**±0°.2**, h220**^{km}**, n22, σ0^s.73**/26**, mb3.8**/16**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**9.28**	**183**	P	**Pn**	**09 09 32.4**	**+1.1**
	0.5nm,0.3s,baz=338,slow=16,SNR=7.1						
DZM				S	**S**	**09 11 14.5**	**-1.3**
	0.2nm,0.3s,baz=313,slow=19,SNR=2.0						
CTA	**Charters Tower**	**21.12**	**247**	P	**P**	**09 11 49.9**	**+0.3**
	7.9nm,0.8s,baz=76,slow=11,SNR=6.9						
RAO	**Raoul Island**	**21.63**	**142**	LR	LR	09 19 12.5	
	comp=Z,798nm,20.1s,baz=180,slow=33						
WRAB	**Tennant Creek**	**32.03**	**253**	*e*P	**P**	**09 13 26.4**	**-1.3**
WRA	**Warramunga Arr**	**32.05**	**253**	P	**P**	**09 13 27.2**	**-0.6**
	0.5nm,0.4s,baz=86,slow=9.0,SNR=12						
WRA				PcP	**PcP**	**09 16 11.6**	**-0.5**
	0.4nm,0.8s,baz=70,slow=2.2,SNR=3.0						
ASAR	**Alice Springs**	**33.12**	**246**	P	**P**	**09 13 36.7**	**-0.5**
	0.7nm,0.3s,baz=69,slow=10.0,SNR=11						
ASAR				PcP	**PcP**	**09 16 14.6**	**-0.5**
	0.4nm,0.8s,baz=57,slow=2.0,SNR=4.0						
ASAR				ScP	**ScP**	**09 19 39.9**	**+1.5**
	0.4nm,0.8s,baz=103,slow=4.1,SNR=4.4						
ASAJ	**Asahikawa**	**60.78**	**340**	P	**P**	**09 17 10.5**	**+0.4**
	2.5nm,0.6s,baz=40,slow=1.4,SNR=6.0						
VNDA	**Vanda**	**64.82**	**181**	P	**P**	**09 17 37.0**	**+0.6**
	1.3nm,0.8s,baz=346,slow=6.2,SNR=8.3						
PETK	**Petropavlovsk-**	**66.07**	**354**	P	**P**	**09 17 45.0**	**+0.4**
	1.1nm,0.6s,baz=172,slow=3.9						
SEY	**Seymchan**	**76.29**	**353**	P	**P**	**09 18 46.0**	**+0.5**
	3.8nm,0.7s,baz=163,slow=5.5,SNR=18						
QSPA	**South Pole Qui**	**77.26**	**180**	P	**P**	**09 18 51.4**	**+0.1**
	1.5nm,0.7s,baz=15,slow=14,SNR=6.7						
SONM	**Songino Array**	**80.72**	**324**	P	**P**	**09 19 11.1**	**+0.8**
	0.6nm,0.6s,baz=106,slow=5.1,SNR=3.0						
ILAR	**Eielson Array**	**84.76**	**18**	P	**P**	**09 19 29.8**	**-0.7**
	2.7nm,0.6s,baz=244,slow=5.0,SNR=41						
NVAR	**Mina Array Bea**	**86.23**	**49**	P	**P**	**09 19 38.8**	**+0.1**
	0.6nm,0.7s,baz=235,slow=7.4,SNR=6.0						
EGAK	**Eagle**	**86.57**	**20**	*e*P	**P**	**09 19 39.0**	**-0.4**
	2.6nm,0.8s						
PDAR	**Pinedale Array**	**93.85**	**47**	P	**P**	**09 20 13.9**	**-0.3**
	0.1nm,0.5s,baz=203,slow=3.6,SNR=2.7						
MKAR	**Makanchi Array**	**95.56**	**317**	P	**P**	**09 20 21.3**	**-0.3**
	0.7nm,0.7s,baz=95,slow=7.3,SNR=7.5						
ZALV	**Zalesovo Beam**	**95.61**	**324**	P	**P**	**09 20 21.4**	**-0.2**
	0.4nm,0.3s,baz=134,slow=6.2,SNR=3.4						
YKA	**Yellowknife Ar**	**95.95**	**27**	P	**P**	**09 20 21.8**	**-1.2**
	0.3nm,0.6s,baz=257,slow=3.3,SNR=4.8						
ARCES	**ARCESS Array B**	**118.27**	**346**	PKP	**PKPdf**	**09 25 41.5**	**-0.5**
	1.1nm,0.5s,baz=82,slow=1.8,SNR=17						
FINES	**FINESS Array B**	**123.78**	**339**	PKP	**PKPdf**	**09 25 52.6**	**-0.1**
	1.6nm,1.0s,baz=72,slow=4.5,SNR=3.7						
ESDC	**Sonseca Array**	**152.00**	**345**	PKPbc	**PKPbc**	**09 26 51.3**	**+0.4**
	0.3nm,0.4s,baz=338,slow=4.6,SNR=3.4						
ESDC				PKPab	**PKPab**	**09 27 01.1**	**+0.1**
	0.7nm,0.7s,baz=24,slow=3.1,SNR=6.2						

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*IDC **07** 09:32:22.9±1.9, 36°.88N×143°.29E, h0^{km}, mb3.4/2, mb1 3.5/4, mb1mx3.2/65, mbtmp3.3/4, ML3.1/2, Error ellipse: s-maj=40.6km s-min=31.5km az=68.0*

*ISCJB **07** 09:32:25.4±0.9, 36°.90N±0°.04×143°.13E±0°.06, h25^{km}, mb3.5/2, Error ellipse: s-maj=7.6km s-min=6.0km az=26.6*

*JMA **07** 09:32:27.6±0.2, 36°.94N×143°.07E, h53^{km}, M3.2*

ISC 07 09:32:26.8±1.5**, 36°.95N**±0°.06×**143°.12E**±0°.10**, h25**^{km}**, n16, σ1^s.47**/27**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**1.84**	**284**	P	**Pn**	**09 32 57.0**	**+0.2**
JFK				*e*S	**Sn**	**09 33 18.5**	**-0.9**
ONAJ	**Iwakimizuishiy**	**1.86**	**275**	P	**Pn**	**09 32 57.2**	**0.0**
ONAJ				S	**Sn**	**09 33 19.0**	**-1.0**
JFFD	**Fukushimafurud**	**2.05**	**275**	P	**Pn**	**09 32 59.9**	**+0.2**
JFFD				*e*S	**Sn**	**09 33 23.8**	**-0.7**
JFT	**Otama**	**2.29**	**285**	P	**Pn**	**09 33 04.0**	**+1.0**
JFT				*e*S	**Sn**	**09 33 30.3**	**-0.2**
JMK	**Ichinoseki**	**2.50**	**324**	P	**Pn**	**09 33 06.7**	**+0.8**
JMK				S	**Sn**	**09 33 35.8**	**+0.2**
JOM	**Ohasama**	**2.91**	**331**	P	**Pn**	**09 33 12.2**	**+0.8**
JOM				S	**Sn**	**09 33 46.0**	**+0.5**
JYK	**Kaneyama**	**2.94**	**313**	P	**Pn**	**09 33 13.2**	**+1.3**
JYK				*e*S	**Sn**	**09 33 47.0**	**+0.6**

JAG	**Ashikaga**	2.99	261	P	Pn	09 33 14.3	+1.7
JRY	**Ryogami san**	3.52	256	P	Pn	09 33 20.4	+0.4
JRY				*e*S	Sn	09 33 59.0	-1.9
JANG	**Nango**	3.65	340	P	Pn	09 33 22.0	+0.4
JOD2	**Odawara 2**	3.67	244	P	Pn	09 33 22.5	+0.5
JOD2				*e*S	Sn	09 34 02.9	-1.6
MJAR	**Matsushiro Arr**	3.97	266	Pn	Pn	09 33 27.2	+1.2
	0.6nm,0.3s,baz=87,slow=12,SNR=8.8						
MJAR				Sn	Sn	09 34 14.2	+2.5
	0.5nm,0.3s,baz=336,slow=41,SNR=4.0						
JOT	**Ohata**	4.71	341	P	Pn	09 33 38.2	+2.0
ASAJ	**Asahikawa**	7.17	357	Pn	Pn	09 34 09.8	-0.2
	0.4nm,0.3s,baz=199,slow=14,SNR=4.3						
ASAJ				Sn	Sn	09 35 25.9	-4.8
	0.2nm,0.3s,baz=52,slow=19,SNR=1.8						
WRA	**Warramunga Arr**	57.19	190	P	P	09 42 11.0	-0.7
	0.3nm,0.7s,baz=6.9,slow=7.2,SNR=4.4						
ASAR	**Alice Springs**	60.91	190	P	P	09 42 37.4	-0.1
	0.4nm,0.7s,baz=1.9,slow=5.6,SNR=3.7						

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*SOME **07** 09:49:02.6, 45°.38N×81°.78E, h0^{km}*

*NNC **07** 09:49:04.8±1.3, 45°.52N×81°.91E, h0^{km}, mb3.6, mpv3.6, Error ellipse: s-maj=20.5km s-min=6.2km az=109.0*

ISC 07 09:49:01.4±1.4**, 45°.41N**±0°.06×**82°.18E**±0°.06**, h12^{km}**±15^{km}**, n21, σ1^{s}16**/40**, 3C-5D, Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	1.39	3	⇓P	Pg	09 49 28.6	+0.5
	21nm,0.3s,baz=197,slow=14,SNR=1366						
MK31				⇓S	Sg	09 49 47.1	+0.9
	39nm,0.4s,baz=192,slow=27,SNR=45						
MAKZ	**Makanchi**	1.41	354	⇓P	Pg	09 49 28.5	0.0
	41nm,0.5s						
MAKZ				⇑S	Sg	09 49 47.3	+0.5
	65nm,0.5s						
KAPS	**Kapalarasan**	1.99	267	*e*P	Pn	09 49 34.9	-0.1
	7.8nm,0.1s						
KAPS				*e*S	Sn	09 49 57.2	-2.7
	78nm,0.2s						
DJR	**Jarkent**	2.01	238	*e*P	Pn	09 49 35.6	+0.4
	5.6nm,0.2s						
DJR				*e*S	Sn	09 49 58.7	-1.7
	66nm,0.6s						
KTMS	**Ketmen**	2.36	214	*e*P	Pb	09 49 43.0	-0.9
	4.9nm,0.1s						
KTMS				*e*S	Sn	09 50 10.7	+1.7
	38nm,0.3s						
ZSN	**Zaisan**	2.76	41	*e*P	Pg	09 49 53.8	-0.6
	1.5nm,0.3s						
ZSN				*e*S	Sg	09 50 29.5	-0.7
	11nm,0.3s						
PDGK	**Podgornoye**	2.83	224	⇓Pn	Pb	09 49 51.9	-0.1
	7.1nm,0.4s						
PDGK				⇓Lg	Lg	09 50 33.6	
	22nm,0.5s						
SHLS	**Shalkode**	2.98	222	*e*P	Pb	09 49 52.2	-2.3
	15nm,0.5s						
SHLS				*e*S	Sn	09 50 26.2	+1.9
	111nm,0.6s						
KPKS	**Kokpek**	3.17	233	*e*P	Pb	09 49 57.0	-0.7
	11nm,0.2s						
KPKS				*e*S	Sb	09 50 34.9	-1.4
	90nm,0.2s						
UZB	**Uzynbulak**	3.20	226	*e*P	Pb	09 49 58.4	+0.1
	4.8nm,0.3s						
UZB				*e*S	Sb	09 50 37.1	-0.2
	19nm,0.2s						
ARXS	**Arharly**	3.32	250	*e*P	Pb	09 49 59.6	-0.6
	2.1nm,0.3s						
ARXS				*e*S	Sb	09 50 39.9	-0.7
	22nm,0.4s						
KURS	**Kuram**	3.45	238	*e*P	Pb	09 50 03.3	+0.8
	4.3nm,0.8s						
KURS				*e*S	Sb	09 50 46.0	+1.6
	15nm,0.4s						
ZHN	**Zhinishke**	3.50	232	*e*P	Pb	09 50 03.5	+0.1
	10nm,0.1s						
ZHN				*e*S	Sb	09 50 46.5	+0.7
	84nm,0.2s						
SATY	**Saty**	3.58	230	*e*P	Pb	09 50 05.4	+0.6
	6.1nm,0.4s						
SATY				*e*S	Sb	09 50 50.0	+1.7
	62nm,0.3s						
CHKK	**Chushkaly**	4.01	249	*e*P	Pb	09 50 11.7	-0.4
	1.1nm,0.4s						
CHKK				*e*S	Sb	09 50 59.7	-0.9
	22nm,0.3s						
KTBS	**Karatobe**	4.28	249	*e*P	Pb	09 50 17.3	+0.8
	1.5nm,0.2s						
KTBS				*e*S	Sb	09 51 09.4	+1.2
	15nm,0.4s						
MDOK	**Medeo**	4.31	240	⇑Pg	Pg	09 50 23.2	-0.8
	3.4nm,0.4s						
MDOK				⇑Lg	Lg	09 51 15.6	
	10nm,0.6s						
MDOK	**Medeo**	4.31	240	*e*P	Pb	09 50 17.8	+0.6
	3.7nm,0.4s						
MDOK				*e*S	Sb	09 51 10.6	+1.3
	15nm,0.6s						
KUU	**Kurty**	4.43	252	*e*P	Pb	09 50 19.1	-0.1
	1.4nm,0.2s						
KUU				*e*S	Sb	09 51 12.8	+0.2
	15nm,0.3s						
TNSS	**Tian-Shan**	4.44	240	*e*P	Pb	09 50 20.8	+1.1
	2.1nm,0.5s						
TNSS				*e*S	Sb	09 51 15.7	+2.4
	12nm,0.4s						
MTBS	**Maitube**	4.71	243	*e*P	Pb	09 50 23.6	-0.5
	3.9nm,0.4s						
MTBS				*e*S	Sb	09 51 20.4	-0.3
	17nm,0.2s						

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*ECX **07** 09:49:09.6±0.6, 32°.16N×115°.27W, h6^{km}, MD3.3, ML3.5*

*NEIC **07** 09:49:09.6±0.0, 32°.16N×115°.27W, h6^{km}, MD3.5(ECX), MD3.9(MEX), ML3.3(PAS), ML3.3(PAS), After ECX.*

*MEX **07** 09:49:10.5±0.5, 32°.21N×115°.15W, h13^{km}±16^{km}, MD3.9*

ISC 07 09:49:07.8±0.9**, 32°.13N**±0°.02×**115°.30W**±0°.02**, h16^{km}**±7^{km}**, n80, σ1^{s}05**/114**, 3C-4D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPBX	**Cerro Prieto**	0.29	359	*e*P	Pg	09 49 13.9	-0.1
CPBX				IAML		09 49 19.6	
	comp=N,19µm,0.2s						
MBIG	**Mexicali**	0.29	17	*e*P	Pg	09 49 14.6	+0.6
MBIG	**Mexicali**	0.29	17	*e*P	Pb	09 49 14.8	+0.1
MBIG				*i* S	Sg	09 49 17.2	-1.1
ECBX	**El Chinero**	0.68	162	*e*P	Pn	09 49 22.1	-0.7
ECBX				*i* S	Sn	09 49 31.9	-1.2
DREC	**Desert Rsrch C**	0.69	350	*e*P	Pg	09 49 21.7	+0.4
DREC	**Desert Rsrch C**	0.69	350	*e*Pg	Pg	09 49 22.0	+0.7
ERPC	**Ernies Place**	0.69	333	*e*P	Pg	09 49 21.8	+0.5
ERPC	**Ernies Place**	0.69	333	*e*Pg	Pg	09 49 22.1	+0.8
WESC	**Westside Schoo**	0.73	330	*e*Pn	Pn	09 49 23.9	+0.5
WESC				*e*Sg	Sn	09 49 34.1	-0.2
YUH	**Yuha Desert**	0.74	315	⇓*i*P	Pg	09 49 22.7	+0.4
YUH	**Yuha Desert**	0.74	315	*e*Pg	Pg	09 49 22.7	+0.4
COA	**Coachella**	0.75	11	⇓*i*P	Pb	09 49 21.9	-0.6
COA	**Coachella**	0.75	11	*e*Pg	Pb	09 49 21.9	-0.6
YMD	**Yuma Desert**	0.77	56	⇑*i*P	Pb	09 49 21.7	-1.1
RMX	**La Rumorosa**	0.81	306	*e*P	Pb	09 49 23.7	0.0
RMX				*e*S	Sb	09 49 33.9	-0.6
RMX				⇑*e*		09 49 34.5	
RMX				IAML		09 49 34.5	
	comp=N,2µm,0.2s						
RMX				IAML		09 49 34.5	
	comp=E,2µm,0.2s						
RMX				⇑*e*		09 49 34.5	
IKP	**In-Ko-Pah, Jac**	0.86	308	P	Pg	09 49 25.0	+0.4
	baz=122,SNR=72						
IKP				S	Sn	09 49 37.1	-0.7
	baz=122						
IKP	**In-Ko-Pah, Jac**	0.86	308	⇓*i*P	Pg	09 49 24.9	+0.4
SWSC	**Sam W. Stewart**	0.92	333	P	Pb	09 49 24.5	-0.8
	baz=148,SNR=37						
SWSC				S	Sg	09 49 38.4	+0.7
	baz=148						
CRR	**Carrizo Plain**	0.95	323	*e*Pg	Pb	09 49 25.1	-0.8
GLA	**Glamis**	1.01	23	P	Pb	09 49 25.3	-1.6
	baz=201,SNR=72						
GLA				S	Sb	09 49 37.4	-2.5
	baz=201						
GLA	**Glamis**	1.01	23	*e*Pg	Pb	09 49 25.3	-1.6
SPIG	**San Pedro Mart**	1.08	188	*e*P	Pg	09 49 29.2	+0.4
SPIG	**San Pedro Mart**	1.08	188	*e*P	Pg	09 49 29.2	+0.4
SPIG				*i* S	Sg	09 49 44.1	+1.1
SPIG	**San Pedro Mart**	1.08	188	*e*Pn	Pg	09 49 29.2	+0.4
SPIG				*e*Sn	Sg	09 49 44.1	+1.1
SPX	**San Pedro Mart**	1.09	188	*e*P	Pg	09 49 29.2	+0.4
SPX				IAML		09 49 46.5	
	comp=E,610nm,0.4s						
SPX				⇓*e*		09 49 46.5	
SPX	**San Pedro Mart**	1.09	188	*e*Pn	Pg	09 49 29.2	+0.4
SPX				*e*Sn	Sg	09 49 43.7	+0.6
CBX	**Cerro Bola**	1.17	280	*e*P	Pg	09 49 30.4	0.0
CBX				IAML		09 49 48.8	
	comp=E,1µm,0.5s						
CBX	**Cerro Bola**	1.17	280	*e*P	Pg	09 49 30.4	0.0
CBX				*i* S	Sn	09 49 45.2	-0.3
CBX	**Cerro Bola**	1.17	280	*e*Pn	Pg	09 49 30.4	0.0
CBX				*e*Sn	Sn	09 49 45.2	-0.3
ECNX	**Esteban Cantu**	1.20	247	*e*P	Pg	09 49 31.0	0.0
TJIG	**Tijuana**	1.21	285	*e*P	Pb	09 49 30.6	+0.3
TJIG	**Tijuana**	1.21	285	*e*P	Pb	09 49 30.6	+0.3
TJIG				*e*S	Sg	09 49 46.8	0.0
MONP2	**Monument Peak**	1.22	309	P	Pn	09 49 30.3	-0.1
	baz=125,SNR=69						
MONP2				S	Sg	09 49 47.7	+0.4
	baz=125						
PBX	**Punta Banda**	1.27	253	*e*P	Pg	09 49 31.9	-0.4
BAR	**Barrett**	1.29	296	*e*P	Pb	09 49 31.6	0.0
BAR	**Barrett**	1.29	296	*e*Pg	Pb	09 49 31.9	+0.3
BAR				*e*Sg	Sg	09 49 49.1	-0.3
BAR				*e*Sn	Sn	09 49 50.5	+2.4
113A	**Mohawk Valley,**	1.45	63	*e*Pn	Pn	09 49 32.0	-1.3
EML	**El Monte Cty P**	1.52	301	*e*Pn	Pb	09 49 35.4	-0.1
EML				*e*Pg	Pg	09 49 36.9	0.0
EML				*e*Sn	Sg	09 49 57.1	+0.5
SDRC	**San Diego Road**	1.52	294	*e*P	Pb	09 49 35.3	-0.2
BC3	**Big Chuckawall**	1.53	355	P	Pn	09 49 33.5	-1.1
	baz=172,SNR=33						
DPP	**Dos Picos Cty**	1.64	303	*e*Pn	Pg	09 49 39.1	-0.2
DPP				*e*Sn	Sg	09 50 00.2	-0.4
HWB	**Hans Werner Br**	1.67	303	*e*Pn	Pb	09 49 37.3	-0.8
HWB				*e*Pg	Pg	09 49 39.5	-0.3
HWB				*e*Sn	Sg	09 50 01.3	-0.2
109C	**Camp Elliot, M**	1.71	297	P	Pb	09 49 38.1	-0.7
	baz=114,SNR=20						
109C				S	Sb	09 49 59.7	-0.4
	baz=114						
CPE	**Camp Elliot**	1.71	297	*e*Pn	Pg	09 49 40.5	-0.1
CPE				*e*Sn	Sb	09 49 59.8	-0.2
CPE				*e*Sn	Sg	09 50 02.3	-0.4
Y12C	**Blythe**	1.75	22	P	Pn	09 49 36.4	-1.0
	baz=201,SNR=15						
Y12C	**Blythe**	1.75	22	*e*Pn	Pg	09 49 41.5	+0.2
FRD	**Ford Ranch, An**	1.75	322	*e*Pn	Pn	09 49 37.2	-0.4
FRD				*e*Sn	Sg	09 50 03.9	-0.3
XPFO	**Piæon Flat**	1.77	327	*e*Pn	Pn	09 49 37.3	-0.7
XPFO				*e*Sn	Sg	09 50 04.3	-0.7
PFO	**Pinyon Flats O**	1.78	327	P	Pn	09 49 37.3	-0.7
	baz=144,SNR=12						
PFO	**Pinyon Flats O**	1.78	327	*e*Pn	Pn	09 49 37.3	-0.7
PFO				*e*Sn	Sg	09 50 04.2	-0.8
PLM	**Palomar**	1.80	313	*e*Pn	Pn	09 49 38.4	0.0
SNDA	**J Saunders Pla**	1.80	322	*e*Pn	Pn	09 49 38.1	-0.3
SNDA				*e*Sn	Sg	09 50 06.0	+0.1
DNR	**Dunn Ranch,Anz**	1.82	322	*e*Pn	Pn	09 49 38.5	-0.1
DNR				*e*Sn	Sg	09 50 08.5	+1.9
CRY	**Cary Ranch**	1.88	320	*e*Pn	Pn	09 49 39.2	-0.2
CRY				*e*Sn	Sg	09 50 08.2	-0.2
BELC	**Belle Mtn. Jos**	1.96	343	P	Pn	09 49 40.7	+0.1
	baz=160						
IRM	**Iron Mountain**	2.03	4	P	Pn	09 49 40.6	-0.8
	baz=182,SNR=46						
214A	**Organ Pipe Nat**	2.12	94	P	Pn	09 49 41.0	-1.6
	baz=277,SNR=19						
HMTC	**Hemet**	2.13	318	*e*Pn	Pg	09 49 49.0	+0.2
Y14A	**Wickenburg**	2.64	46	*e*Pn	Pn	09 49 49.8	0.0
BREC	**Barre Substati**	2.81	307	*e*Pn	Pn	09 49 48.1	-4.0
MWC	**Mount Wilson**	3.12	313	*e*Pn	Pn	09 49 57.5	+1.0
W13A	**Hualapai Mount**	3.19	21	*e*Pn	Pn	09 49 58.0	+0.5
TUC	**Tucson**	3.83	86	*e*Pg	Pg	09 50 21.6	+0.5
X16A	**Lo Mia Camp, P**	3.96	54	*e*Pn	Pn	09 50 08.6	+0.6
SHPR	**Sheep Range**	4.37	1	*e*Pn	Pn	09 50 15.3	+1.6
SHPR				*e*Pg	Pg	09 50 32.8	+1.2
WUAZ	**Wupatki**	4.70	43	*e*Pg	Pg	09 50 39.8	+2.0
TPNV	**Topopah Spring**	4.88	351	*e*Pg	Pg	09 50 42.9	+1.7
CARC	**Carrizo Plain**	4.94	311	*e*Pn	Pn	09 50 24.8	+3.3
CARC				*e*Sn	Sn	09 51 17.8	-0.6
U15A	**North Rim**	4.96	29	*e*Pn	Pn	09 50 23.5	+1.6
X18A	**Snowflake**	5.08	60	*e*Pn	Pn	09 50 24.4	+0.9
LCMT	**Little Creek M**	5.16	19	*e*Pn	Pn	09 50 25.6	+1.1
319A	**Douglas**	5.18	97	*e*Pg	Pg	09 50 48.3	+1.4
KNB	**Kanab**	5.29	22	*e*Pn	Pn	09 50 28.0	+1.7
SRIG	**Santa Rosalia**	5.48	150	*e*Pn	Pn	09 50 29.4	+0.7
W18A	**Petrified Fore**	5.52	56	*e*Pn	Pn	09 50 31.0	+1.5
CCUT	**Cedar City**	5.64	16	*e*Pn	Pn	09 50 33.1	+1.9
CCUT				*e*Pg	Pg	09 50 58.0	+2.2
CCUT				*e*Lg	Lg	09 52 14.4	
SZCU	**Shurtz Canyon**	5.75	18	*e*Pn	Pn	09 50 34.7	+2.0
SZCU				*e*Lg	Lg	09 52 11.7	
PKCU	**Pink Cliffs**	5.85	24	*e*Pn	Pn	09 50 36.5	+2.4
PKCU				*e*Pg	Pg	09 50 59.1	-0.7
R11A	**Troy Canyon, C**	6.21	358	*e*Pg	Pg	09 51 07.5	+0.8
LENM	**Lemitar**	7.27	72	*e*Pn	Pn	09 50 54.9	+1.4

IDC 07 09:53:31.3±5.1**, 4°.60S**×**151°.15E, h100^{km}**±46^{km}**, mb3.1**/3**, mb1 3.4**/4**, mb1mx3.1**/48**, mbtmp3.5**/4**, MS2.9**/1**, Ms1 2.9**/1**, ms1mx2.4**/18**, Error ellipse: s-maj=136.7km s-min=29.9km az=127.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	6.20	219	P	Pn	09 55 01.8	+1.4
	1.0nm,0.3s,baz=53,slow=20,SNR=3.0						
PMG				S	Sn	09 56 10.0	+0.2
	0.7nm,0.3s,baz=32,slow=9.5,SNR=2.5						
WRA	**Warramunga Arr**	22.37	226	P	P	09 58 21.8	+0.3
	0.4nm,0.4s,baz=51,slow=10,SNR=7.6						
ASAR	**Alice Springs**	25.22	220	P	P	09 58 47.6	-0.4
	0.4nm,0.6s,baz=60,slow=9.4,SNR=5.9						
RPZ	**Rata Peaks**	42.73	159	LR	LR	10 18 40.1	
	comp=Z,16nm,19.9s,baz=38,slow=35						
ILAR	**Eielson Array**	82.60	22	P	P	10 05 43.0	-0.1
	0.7nm,0.7s,baz=249,slow=5.7,SNR=11						

MEX 07 09:53:34.1±0.4**, 16°.23N**×**98°.36W, h5^{km}, MD3.5, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	0.28	54	*i* P	Pg	09 53 39.0	-0.5
PNIG				*i* S	Sg	09 53 43.2	0.0
TLIG	**Tlapa**	1.34	352	*e*P	Pn	09 53 55.7	-4.0
TLIG				*e*S	Sg	09 54 13.0	-4.3
VHO	**Vista Hermosa**	1.77	61	*e*P	Pn	09 54 02.4	-3.2
VHO				*e*S	Sn	09 54 24.6	-4.0

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*ISCJB **07** 10:37:40.8±0.4, 51°.51N±0°.02×16°.15E±0°.03, h0^{km}, Error ellipse: s-maj=3.1km s-min=2.6km az=159.1*

*CSEM **07** 10:37:42.6±0.1, 51°.51N×16°.11E, h2^{km}, ML3.2/10, Error ellipse: s-maj=4.1km s-min=2.6km az=86.0*

*PRU **07** 10:37:44.4, 51°.45N×16°.13E, h0^{km}*

*VIE **07** 10:37:46.1±0.7, 51°.23N×16°.20E, h0^{km}, mb2.2/4, ml2.8/5, Error ellipse: s-maj=6.5km s-min=4.7km az=59.0 58 km WNW of Wroclaw Suspected Mining induced.*

*UPP **07** 10:37:47.4±3.1, 51°.76N×15°.62E, h0^{km}, ML1.8*

ISC 07 10:37:42.0±0.7**, 51°.55N**±0°.02×**16°.12E**±0°.02**, h0^{km}, n57, σ1^{s}16**/100**, 1D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	0.72	171	*i* Pg	Pg	10 37 55.7	0.0
KSP				*e*Sg	Sg	10 38 04.0	-1.0
KSP	**Ksiaz**	0.72	171	⇓*i*Pg	Pg	10 37 55.7	0.0
KSP				*e*Sg	Sg	10 38 04.0	-1.0
UPC	**Upice**	1.05	184	*e*PG	Pg	10 38 01.8	-0.3
UPC				*e*SG	Sg	10 38 15.8	+0.2
UPC	**Upice**	1.05	184	Pg	Pg	10 38 01.8	-0.3
UPC				Sg	Sg	10 38 15.8	+0.2
DPC	**Dobruska-Polom**	1.21	174	*e*PG	Pg	10 38 04.6	-0.6
DPC				*e*SG	Sg	10 38 20.3	-0.5
	comp=Z,27nm,0.4s						
DPC	**Dobruska-Polom**	1.21	174	Pg	Pg	10 38 04.6	-0.6
DPC				Sg	Sg	10 38 20.3	-0.5
	27nm,0.4s						
PVCC	**Panska Ves**	1.42	224	*e*PG	Pn	10 38 09.2	+0.2
PVCC				*e*SG	Sn	10 38 28.5	+0.1
	comp=Z,149nm,0.2s						
PVCC	**Panska Ves**	1.42	224	Pg	Pn	10 38 09.2	+0.2
PVCC				Sg	Sn	10 38 28.5	+0.1
	149nm,0.2s						
BRG	**Berggiesshubel**	1.53	244	PG	Pb	10 38 11.4	+0.2
BRG				SG	Sn	10 38 31.6	+0.5
	47nm,0.3s						
KRLC	**Kraliky**	1.54	164	*e*PG	Pn	10 38 10.8	+0.1
KRLC				*e*SG	Sg	10 38 30.2	-1.1
	comp=Z,11nm,0.4s						
KRLC	**Kraliky**	1.54	164	Pg	Pn	10 38 10.8	+0.1
KRLC				Sg	Sg	10 38 30.2	-1.1
	11nm,0.4s						
GOPC	**GO Pecny, Ondr**	1.85	208	*e*PN	Pb	10 38 16.2	-0.4
GOPC				*e*PG	Pg	10 38 17.6	+0.2
GOPC				*e*SG	Sb	10 38 40.0	-0.3
	comp=Z,15nm,0.5s						
GOPC	**GO Pecny, Ondr**	1.85	208	Pn	Pb	10 38 16.2	-0.4
PRU	**Pruhonice**	1.86	213	*e*PN	Pn	10 38 15.1	0.0
PRU				*e*PG	Pb	10 38 16.5	-0.3
PRU				*e*SG	Sg	10 38 42.0	+0.3
	comp=Z,23nm,0.3s						
PRU	**Pruhonice**	1.86	213	Pn	Pn	10 38 15.1	0.0
CLL	**Collm**	1.97	264	*e*Pn	Pn	10 38 17.0	+0.4
CLL				*i* Pg	Pg	10 38 20.4	+0.7
CLL				*i*		10 38 21.8	
CLL				*i* Sg	Sg	10 38 46.9	+1.7
	comp=Z,16nm,0.5s						
MORC	**Moravsky Berou**	1.99	152	*e*Pn	Pn	10 38 16.6	-0.4
MORC				*e*Sg	Sb	10 38 44.2	-0.4
MORC	**Moravsky Berou**	1.99	152	*e*PN	Pn	10 38 16.6	-0.4
MORC				*e*SG	Sb	10 38 44.2	-0.4
OKC	**Ostrava-Krasne**	2.15	142	*e*PG	Pb	10 38 22.3	+0.6
OKC				*e*SG	Sb	10 38 48.3	-0.6
	comp=Z,32nm,0.5s						
OKC	**Ostrava-Krasne**	2.15	142	Pg	Pb	10 38 22.3	+0.6
OKC				Sg	Sb	10 38 48.3	-0.6
	comp=Z,32nm,0.5s						
VRAC	**Vranov**	2.27	172	*e*Pn	Pn	10 38 21.4	+0.7
VRAC	**Vranov**	2.27	172	*e*PN	Pn	10 38 21.4	+0.7
VRAC				*e*SG	Sb	10 38 52.4	0.0
KRUC	**Moravsky**	2.50	176	*e*Pn	Pn	10 38 24.1	+0.2
KRUC				*e*Sg	Sg	10 39 01.0	-1.2
KRUC	**Moravsky**	2.50	176	*e*PN	Pn	10 38 24.1	+0.2
KRUC				*e*SG	Sg	10 39 01.0	-1.2
NKC	**Novy Kostel**	2.67	242	*e*PG	Pg	10 38 33.7	+0.4
NKC				*e*SG	Sg	10 39 09.2	+1.3
	comp=Z,19nm,0.2s						
NKC	**Novy Kostel**	2.67	242	Pg	Pg	10 38 33.7	+0.4
NKC				Sg	Sg	10 39 09.2	+1.3
	comp=Z,19nm,0.2s						
OJC	**Ojcow**	2.68	118	*e*Pg	Pg	10 38 35.2	+1.8
OJC				*e*Sg	Sg	10 39 10.0	+1.8
OJC	**Ojcow**	2.68	118	*e*Pg	Pg	10 38 35.2	+1.8
OJC				*e*Sg	Sg	10 39 10.0	+1.8
KHC	**Kasperske Hory**	2.92	215	*e*PN	Pn	10 38 29.9	+0.2
KHC				*e*PG	Pb	10 38 35.7	+0.7
KHC				*e*SN	Sn	10 39 04.6	-0.9
KHC				*e*SG	Sg	10 39 15.6	-0.2
	comp=Z,9.0nm,0.4s						
KHC	**Kasperske Hory**	2.92	215	Pn	Pn	10 38 29.9	+0.2
LANS	**Liptovska Anna**	3.22	137	*e*SG	Sg	10 39 24.6	-0.8
LANS	**Liptovska Anna**	3.22	137	*e*Sg	Sg	10 39 24.6	-0.8
MODS	**Modra-Piesok**	3.27	166	*e*PG	Pg	10 38 45.5	+0.9
MODS				*e*SG	Sb	10 39 22.9	+1.7
MODS				*e*LG	Lg	10 39 31.2	
MODS	**Modra-Piesok**	3.27	166	*e*Pg	Pg	10 38 45.5	+0.9
MODS				*e*Sg	Sb	10 39 22.9	+1.7
CONA	**Conrad Observa**	3.63	183	*i* Pn	Pn	10 38 39.9	+0.4
	comp=Z,0.3nm,0.1s						
CONA				Sg	Sb	10 39 34.4	+2.7
	comp=Z,18nm,0.4s						
CONA	**Conrad Observa**	3.63	183	Pn	Pn	10 38 39.9	+0.4
	comp=Z,0.3nm,0.1s						
CONA				Sg	Sb	10 39 34.4	+2.7
	comp=Z,18nm,0.4s						
BSD	**Bornholm Skovb**	3.64	349	*i* P	Pn	10 38 40.1	+0.5
BSD				*e*S	Sn	10 39 22.0	-1.2
BSD	**Bornholm Skovb**	3.64	349	*e*P	Pn	10 38 40.1	+0.5
BSD				*e*S	Sn	10 39 22.0	-1.2
MOA	**Molln**	3.90	199	*i* Pn	Pn	10 38 43.4	+0.3
	comp=Z,0.8nm,0.2s						
MOA				Sg	Sg	10 39 45.5	-1.6
	comp=Z,4.8nm,0.3s						
MOA	**Molln**	3.90	199	Pn	Pn	10 38 43.4	+0.3
	comp=Z,0.8nm,0.2s						
MOA				Sg	Sg	10 39 45.5	-1.6
	comp=Z,4.8nm,0.3s						
ARSA	**Arzberg**	4.32	185	*e*Sg	Sg	10 39 58.0	-2.8
	comp=Z,5.9nm,0.5s						
ARSA	**Arzberg**	4.32	185	Sg	Sg	10 39 58.0	-2.8
	comp=Z,5.9nm,0.5s						
LLD	**Lille Linde**	4.45	330	*i* P	Pb	10 38 59.0	-2.0
BLEU	**Blekinge**	4.77	358	P	Pn	10 38 56.3	+1.3
BLEU				S	Sn	10 39 48.5	-2.4
BLEU	**Blekinge**	4.77	358	P	Pn	10 38 56.3	+1.3
BLEU				S	Sn	10 39 48.5	-2.4
BJUU	**Bjuv**	4.89	339	P	Pn	10 38 56.9	+0.1
BJUU				S	Sn	10 39 51.2	-2.7
BJUU	**Bjuv**	4.89	339	P	Pn	10 38 56.8	+0.1
BJUU				S	Sn	10 39 51.2	-2.7
DEL	**Delary**	5.10	346	P	Pn	10 39 00.2	+0.6
DEL	**Delary**	5.10	346	P	Pn	10 39 00.2	+0.6
VXJU	**Vaexsjoe**	5.42	353	P	Pn	10 39 05.5	+1.4
VXJU	**Vaexsjoe**	5.42	353	P	Pn	10 39 05.4	+1.4
OSKU	**Oskarshamn**	5.66	360	P	Pn	10 39 08.5	+1.3
OSKU	**Oskarshamn**	5.66	360	P	Pn	10 39 08.5	+1.3
GNOU	**Gnosjoe**	5.91	347	P	Pn	10 39 11.8	+1.0
GNOU	**Gnosjoe**	5.91	347	P	Pn	10 39 11.8	+1.0
EKSU	**Eksjoe**	6.05	356	P	Pn	10 39 14.0	+1.3
EKSU	**Eksjoe**	6.05	356	P	Pn	10 39 14.0	+1.3

IDC 07 10:46:08.3±1.8**, 13°.35N**×**143°.97E, h115^{km}**±31^{km}**, mb3.4**/6**, mb1 3.6**/6**, mb1mx3.2**/57**, mbtmp3.8**/6**, Error ellipse: s-maj=67.7km s-min=17.2km az=87.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	0.91	75	P	Pn	10 46 29.9	+0.9
	204nm,0.3s,baz=14,slow=1.3,SNR=284						
GUMO				S	Sn	10 46 45.1	+0.4
	362nm,0.3s,baz=180,slow=20,SNR=49						
WRA	**Warramunga Arr**	34.41	196	P	P	10 52 44.2	-0.6
	0.9nm,0.5s,baz=14,slow=8.9,SNR=12						
WRA				PcP	PcP	10 55 18.0	0.0
	0.4nm,0.7s,baz=18,slow=3.8,SNR=4.1						
FITZ	**Fitzroy Crossi**	36.10	210	P	P	10 52 60.0	+0.7
	3.1nm,1.1s,baz=20,slow=8.9,SNR=5.1						
ASAR	**Alice Springs**	38.08	195	P	P	10 53 15.3	-0.7
	0.4nm,0.7s,baz=16,slow=7.0,SNR=5.1						
MKAR	**Makanchi Array**	61.05	316	P	P	10 56 10.2	+0.2
	0.4nm,0.5s,baz=88,slow=7.2,SNR=5.5						
KURBB	**Kurchatov Arra**	64.24	320	P	P	10 56 30.9	-0.1
	0.5nm,0.4s,baz=106,slow=7.2,SNR=4.9						
BVAR	**Borovoye Array**	69.57	322	P	P	10 57 04.7	-0.1
	0.5nm,0.4s,baz=115,slow=6.5,SNR=3.8						

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*IDC **07** 10:52:09.9±0.4, 32°.50S×71°.65W, h0^{km}, mb4.5/15, mb1 4.6/19, mb1mx4.5/32, mbtmp4.5/19, ML4.5/4, MS3.6/11, Ms1 3.6/11, ms1mx3.4/30, Error ellipse: s-maj=20.7km s-min=12.0km az=83.0*

*BJI **07** 10:52:13.9, 32°.50S×71°.60W, h29^{km}, mB4.9/3*

*GUC **07** 10:52:14.2±0.7, 32°.68S×71°.82W, h19^{km}±5^{km}, ML4.4*

*ISCJB **07** 10:52:15.7±0.5, 32°.40S±0°.03×71°.49W±0°.06, h50^{km}±5^{km}, mb4.7/83, MS3.7/8, Error ellipse: s-maj=8.9km s-min=4.3km az=170.9*

*NEIC **07** 10:52:15.3±1.3, 32°.50S×71°.60W, h33^{km}±9^{km}, mb4.8/72, ML4.4(GUC), Error ellipse: s-maj=7.6km s-min=3.5km az=80.0*

NEIC Felt [IV] at Zapallar, [III] at Quillota and Villa Alemana and [II] at Vina del Mar. Also felt at San Antonio.

*SJA **07** 10:52:16.7±1.1, 32°.45S×71°.38W, h8km±13km, ML4.4, MW4.3*

ISC 07 10:52:14.7±0.9, **32°.50S**±0°.04×**71°.65W**±0°.05, **h33**km±4km, **n372**, σ**1.11**/383, **mb4.8**/83, **MS3.7**/8, **2C-4D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROC1	El Roble	0.72	132	*e*Pg	Pn	10 52 28.8	0.0
ROC1				*e*Sg	Sn	10 52 38.3	-0.5
ROC1	El Roble	0.72	132	*e*P	Pn	10 52 28.5	-0.3
ROC1				*e*S	Sn	10 52 38.8	0.0
ROCH	El Roble	0.72	132	⇓*i*P	Pn	10 52 28.7	-0.1
ROCH				*e*S	Sb	10 52 39.1	+0.3
ROCH				IAML		10 52 39.8	
	comp=N,30µm,0.4s						
PEL	Peldehue	1.04	129	*e*Pn	Pb	10 52 33.8	-0.4
PEL				*e*Sg	Sb	10 52 48.4	+0.8
PEL	Peldehue	1.04	129	⇓*i*P	Pn	10 52 33.5	+0.5
PEL				*e*S	Sb	10 52 48.2	+0.6
PEL				IAML		10 52 50.2	
	comp=N,26µm,0.5s						
CLCH	Cerro Calan	1.30	134	⇓*i*P	Pn	10 52 37.6	+1.0
CLCH				*e*S	Sb	10 52 55.5	+0.5
CLCH				IAML		10 53 06.6	
	comp=N,13µm,0.8s						
ANTU	Antumapu	1.37	142	*e*P	Pb	10 52 39.0	-0.8
FCH	Farellones	1.41	126	⇓*i*P	Pn	10 52 39.5	+1.0
FCH				*e*S	Sb	10 52 58.9	+0.4
FCH				IAML		10 53 00.0	
	comp=E,7µm,0.1s						
AUSP	Uspallata	1.93	82	*e*P	Pb	10 52 49.2	-0.3
ARCO	CERRO ARCO	2.32	99	*e*P	Pb	10 52 55.2	-0.8
ARCO				IAML		10 53 39.7	
	comp=Z,3µm,0.6s						
GO04	Tololo Observa	2.43	18	*e*Pn	Pn	10 52 53.5	+1.2
GO04	Tololo Observa	2.43	18	*e*P	Pn	10 52 53.3	+0.9
TLL	Tololo Astrono	2.43	18	*e*P	Pn	10 52 53.5	+1.1
GO05	HualaæØ	2.52	185	*e*Pn	Pn	10 52 52.8	-0.5
GO05	HualaæØ	2.52	185	*e*P	Pn	10 52 53.1	-0.3
NICH	Los Niches	2.52	172	*e*P	Pn	10 52 55.5	+2.0
NICH				*e*S	Sb	10 53 26.9	-3.0
RTLL	Cerro Villicun	2.94	68	*e*P	Pb	10 53 03.5	-3.0
RTLL				*e*S	Sn	10 53 37.2	+3.8
LCO	Las Campanas	3.57	13	*e*Pn	Pn	10 53 08.8	+0.7
LCO				*e*Sn	Sn	10 53 48.5	-0.7
LCO	Las Campanas	3.57	13	*e*P	Pn	10 53 08.8	+0.7
GO03	Copiap	5.04	14	*e*Pn	Pn	10 53 28.5	+0.4
GO02	Mina Guanaco	7.53	14	*e*Pn	Pn	10 54 03.0	+0.5
PLCA	Paso Flores	8.27	174	Pn	Pn	10 54 12.2	-0.2
	comp=Z,3.1nm,0.3s,baz=357,slow=11,SNR=34						
PLCA				Lg	Lg	10 56 30.2	
	comp=Z,0.2nm,0.3s,baz=156,slow=13,SNR=2.2						
PLCA				LR	LR	10 57 21.7	
	comp=Z,251nm,21.5s,baz=18,slow=38						
TRQA	Tornquist	9.65	128	*e*Pn	Pn	10 54 32.8	+1.5
MNMC	Minye Minye	13.44	8	*e*Pn	Pn	10 55 23.6	+0.2
CPUP	Villa Florida	13.91	67	Pn	Pn	10 55 29.4	-0.1
	comp=Z,0.4nm,0.3s,baz=230,slow=6.2,SNR=8.3						
CPUP				Sn	Sn	10 58 00.1	-2.6
	comp=Z,0.3nm,0.3s,baz=212,slow=13,SNR=1.7						
CPUP				LR	LR	11 01 34.5	
	comp=Z,190nm,19.2s,baz=245,slow=41						
CPUP	Villa Florida	13.91	67	*e*Pn	Pn	10 55 30.5	+1.0
CPUP				Sn	Sn	10 58 00.1	-2.6
LPAZ	La Paz	16.45	12	Pn	Pn	10 56 04.0	+0.3
	comp=Z,0.5nm,0.3s,baz=178,slow=8.3,SNR=22						
LPAZ	La Paz	16.45	12	*e*Pn	Pn	10 56 04.0	+0.3
	comp=Z,10.0nm,1.0s						
SIV	San Ignacio	19.03	33	P	P	10 56 33.3	-0.8
	comp=Z,0.4nm,0.3s,baz=221,slow=9.9,SNR=21						
SIV				LR	LR	11 05 03.9	
	comp=Z,205nm,21.8s,baz=140,slow=41						
NNA	Nana	20.96	346	LR	LR	11 03 39.4	
	comp=Z,94nm,18.9s,baz=174,slow=33						
SPB	Sao Paulo	23.10	74	*e*P	P	10 57 18.5	+0.7
	comp=Z,103nm,1.7s						
SAML	Samuel	24.71	20	*e*P	P	10 57 33.1	+0.1
	comp=Z,9.2nm,0.6s						
PMSA	Palmer Station	32.64	174	P	P	10 58 41.4	-1.8
	comp=Z,12nm,0.7s,baz=216,slow=8.7,SNR=10						
PMSA				LR	LR	11 11 34.5	
	comp=Z,133nm,20.3s,baz=330,slow=36						
HOPE	Hope Point	33.05	142	*e*P	P	10 58 46.8	-0.1
	comp=Z,83nm,1.0s						
PTGA	Pitinga	33.46	22	*e*P	P	10 58 50.7	-0.2
	comp=Z,17nm,1.0s						
TUMC	Tumaco	34.79	348	*e*P	P	10 59 01.9	-0.4
	comp=Z,832nm,1.4s						
RUSC	La Rusia	38.20	358	*e*P	P	10 59 32.0	0.0
	comp=Z,6.5nm,1.0s						
VNA3	Neumayer Olymp	50.63	158	P	P	11 01 11.8	+1.6
VNA1	Neumayer--Stat	50.93	157	P	P	11 01 14.3	+2.0
SNAA	Sanae	52.85	158	P	P	11 01 27.9	+1.0
SNAA	Sanae	52.85	158	P	P	11 01 27.8	+1.0
	comp=Z,5.6nm,0.9s,baz=264,slow=11,SNR=58						
SNAA				LR	LR	11 22 05.9	
	comp=Z,70nm,21.2s,baz=230,slow=34						
SNAA	Sanae	52.85	158	*e*P	P	11 01 27.8	+0.9
	comp=Z,15nm,1.3s						
RKT	Rikitea	56.08	262	*e*T	T	12 02 25.5	
	comp=Z,3.9nm,0.2s						
QSPA	South Pole Qui	57.73	180	P	P	11 02 03.4	+1.2
	comp=Z,14nm,1.0s,baz=163,slow=3.6,SNR=24						
QSPA	South Pole Qui	57.73	180	*e*P	P	11 02 02.9	+0.7
	comp=Z,56nm,1.0s						
VNDA	Vanda	65.64	191	P	P	11 02 56.3	+1.3
	comp=Z,1.1nm,0.9s,baz=122,slow=6.7,SNR=5.5						
Z53A	Monticello	66.39	349	P	P	11 03 01.2	+0.9
	baz=169						
Z52A	Williamson	66.44	348	P	P	11 03 00.9	+0.2
	baz=168						
GOGA	Godfrey	66.50	349	P	P	11 03 01.5	+0.5
	baz=169						
LRAL	Lakeview Retre	66.77	346	P	P	11 03 03.3	+0.5
	baz=166						
Z50A	Ashland	66.77	347	P	P	11 03 02.7	-0.1
	baz=167						
Y54A	Tignall	66.82	350	P	P	11 03 03.2	+0.2
	baz=170						
Z49A	Columbiana	66.83	346	P	P	11 03 03.4	+0.3
	baz=166						
Y53A	Monroe	66.95	349	P	P	11 03 04.1	+0.2
	baz=169						
Y52A	Lilburn	67.04	349	P	P	11 03 04.9	+0.5
	baz=169						
Y52A	Lilburn	67.04	349	*e*P	P	11 03 04.8	+0.4
	comp=Z,6.6nm,1.0s						
SYO	Syowa Base	67.14	159	⇑*e*P	P	11 03 03.2	-1.5
SYO	Syowa Base	67.14	159	⇑*e*sP	sP	11 03 15.4	-3.4
Z47A	Carrollton	67.16	345	P	P	11 03 06.0	+0.8
	baz=165						
Y51A	Rockmart	67.24	348	P	P	11 03 05.6	-0.1
	baz=168						
Y50A	Piedmont	67.36	347	P	P	11 03 06.8	+0.3
	baz=167						
Y49A	Blount Mountai	67.45	347	P	P	11 03 07.5	+0.4
	baz=166						
143A	Socs Landing,	67.48	342	*e*P	P	11 03 07.5	+0.3
	comp=Z,29nm,1.1s						
X53A	Estanollee	67.54	350	P	P	11 03 08.3	+0.7
	baz=169						
X52A	Dahlonega	67.73	349	P	P	11 03 09.3	+0.4
	baz=169						
Y47A	UCPARC, Winfie	67.79	345	P	P	11 03 10.0	+0.8
	baz=165,SNR=7.3						
X50B	Fort Payne	67.89	348	P	P	11 03 10.1	+0.2
	baz=167						
KMSC	Kings Mountain	67.90	351	P	P	11 03 10.3	+0.5
	baz=171						
Y46A	Houston	67.99	345	P	P	11 03 10.7	+0.3
	baz=164						
TBI	Tubuai	68.00	256	*e*LR	LR	11 23 39.7	
	comp=Z,78nm,24.8s						
TBI	Tubuai	68.00	256	*e*T	T	12 17 17.6	
	comp=Z,8.6nm,0.3s						
X49A	Woodville	68.07	347	P	P	11 03 11.1	+0.2
	baz=167						
JCT	Junction City	68.08	334	P	P	11 03 12.4	+1.3
	baz=155						
JCT	Junction City	68.08	334	*e*P	P	11 03 11.6	+0.5
	comp=Z,2.8nm,0.7s						
Y45A	Yeager Farm, C	68.13	344	P	P	11 03 12.5	+1.2
	baz=164						
X48A	Hartselle	68.15	346	P	P	11 03 11.6	+0.2
	baz=166,SNR=6.0						
X48A	Hartselle	68.15	346	*e*P	P	11 03 11.8	+0.4
	comp=Z,10nm,0.9s						
W53A	Cullowhee	68.17	350	P	P	11 03 11.9	+0.2
	baz=170						
W52A	Murphy	68.22	349	P	P	11 03 12.4	+0.5
	baz=169						
X47A	Russelville	68.38	346	P	P	11 03 13.0	+0.1
	baz=165						
W50A	Signal Mountai	68.55	348	P	P	11 03 14.4	+0.4
	baz=168						
W50A	Signal Mountai	68.55	348	*e*P	P	11 03 14.0	0.0
	comp=Z,9.3nm,0.8s						
TX31	Lajitas Ar. Si	68.59	330	*e*P	P	11 03 14.9	+0.4
TXAR	Lajitas Array	68.59	330	P	P	11 03 15.3	+0.8
	comp=Z,1.1nm,0.5s,baz=154,slow=8.5,SNR=25						
TXAR				LR	LR	11 28 51.4	
	comp=Z,52nm,18.5s,baz=0.0,slow=32						
V53A	Saluda	68.61	350	P	P	11 03 14.8	+0.4
	baz=170						
X45A	UM Field Stati	68.63	344	P	P	11 03 15.0	+0.6
	baz=164,SNR=6.2						
CPCT	Cooper Cave	68.66	349	*e*P	P	11 03 15.0	+0.4
	comp=Z,6.8nm,0.8s						
SWET	Sewanee	68.68	347	*e*P	P	11 03 14.8	+0.1
	comp=Z,11nm,0.7s						
OXF	Oxford	68.72	344	P	P	11 03 15.3	+0.4
	baz=164,SNR=6.8						
OXF	Oxford	68.72	344	*e*P	P	11 03 14.3	-0.6
	comp=Z,18nm,1.0s						
TKL	Tuckaleechee C	68.75	349	P	P	11 03 15.1	-0.1
	comp=Z,5.1nm,0.6s,baz=149,slow=9.4,SNR=12						
TKL	Tuckaleechee C	68.75	349	*e*P	P	11 03 15.2	0.0
	comp=Z,6.6nm,0.7s						
W48A	Pulaski	68.79	347	P	P	11 03 15.9	+0.5
	baz=166						
PLAL	Pickwick Lake	68.88	346	*e*P	P	11 03 16.2	+0.3
	comp=Z,5.8nm,0.8s						
V52A	Sevierville	68.90	350	P	P	11 03 16.1	0.0
	baz=169						
V52A	Sevierville	68.90	350	*e*P	P	11 03 15.7	-0.4
	comp=Z,5.9nm,0.6s						
Y41A	Eaglette Beard	68.91	341	P	P	11 03 17.3	+1.1
	baz=161						
V50A	Pikevile	68.97	348	P	P	11 03 17.0	+0.4
	baz=168,SNR=8.1						
V51A	Loudon	68.98	349	P	P	11 03 16.3	-0.3
	baz=168						
W47A	Westpoint	69.03	346	P	P	11 03 17.0	+0.1
	baz=166						
V49A	McMinnville	69.21	348	P	P	11 03 18.1	0.0
	baz=167,SNR=13						
V48A	Smith Brothers	69.36	347	P	P	11 03 19.3	+0.4
	baz=166,SNR=9.5						
V48A	Smith Brothers	69.36	347	*e*P	P	11 03 19.4	+0.4
	comp=Z,16nm,1.0s						
V47A	Nunnelly	69.58	346	P	P	11 03 20.7	+0.4
	baz=166,SNR=9.7						
V46A	Holladay	69.67	346	P	P	11 03 20.9	0.0
	baz=165						
MIAR	Mount Ida	69.80	341	P	P	11 03 22.6	+0.9
	baz=160						
U49A	Red Boiling Sp	69.91	348	P	P	11 03 22.5	+0.1
	baz=167						
X39A	Fountain Ranch	69.92	340	P	P	11 03 23.1	+0.7
	baz=160						
WVT	Waverly	69.93	346	P	P	11 03 23.0	+0.6
	baz=166						
WVT	Waverly	69.93	346	*e*P	P	11 03 22.7	+0.2
	comp=Z,23nm,0.9s						
U48A	Cassie Pea, Po	70.05	347	P	P	11 03 23.8	+0.6
	baz=167						
U47A	Clarksville	70.12	347	P	P	11 03 23.9	+0.3
	baz=166,SNR=10						
IP05	Hopewell Churc	70.20	355	*e*P	P	11 03 25.0	+1.0
	comp=Z,14nm,1.1s						
U46A	Springville	70.22	346	P	P	11 03 24.8	+0.5
	baz=165,SNR=10						
W40A	Ferguson Farm,	70.27	341	P	P	11 03 25.5	+1.0
	baz=161						
IP07	Quail	70.31	355	*e*P	P	11 03 25.0	+0.3
	comp=Z,23nm,1.3s						
U45A	Rockin P Farm,	70.34	345	P	P	11 03 26.5	+1.5
	baz=165						
T49A	Edmonton	70.45	348	P	P	11 03 25.7	+0.1
	baz=168						
W39A	Magazine	70.47	341	P	P	11 03 26.7	+1.0
	baz=160,SNR=11						
W39A	Magazine	70.47	341	*e*P	P	11 03 26.3	+0.5
	comp=Z,12nm,0.8s						
IP04	Greensprings	70.48	355	*e*P	P	11 03 26.6	+0.8
	comp=Z,12nm,0.8s						
V41A	Mountainview	70.59	342	P	P	11 03 27.0	+0.5
	baz=162,SNR=5.5						
TIAR	Tiarei	70.60	261	*e*T	T	12 20 33.9	
	comp=Z,3.0nm,0.2s						
T48A	Bowling Green	70.61	348	P	P	11 03 26.8	+0.2
	baz=167						
T47A	Sharon Grove	70.62	347	P	P	11 03 26.9	+0.2
	baz=166						
T47A	Sharon Grove	70.62	347	*e*P	P	11 03 26.5	-0.2
	comp=Z,9.0nm,0.8s						
S52A	Salyersville	70.63	350	P	P	11 03 26.8	+0.1
	baz=170						
S51A	Beattyville	70.66	350	P	P	11 03 27.2	+0.3
	baz=169						
PPT2	Papeete2	70.78	261	*e*LR	LR	11 25 00.7	
	comp=Z,36nm,24.0s						
T46A	Princeton	70.83	346	P	P	11 03 28.2	+0.3
	baz=166,SNR=5.8						
U42A	Revenden	70.90	343	P	P	11 03 28.6	+0.2
	baz=163,SNR=5.7						
V39A	Pettigrew	71.04	341	P	P	11 03 29.8	+0.5
	baz=160,SNR=5.8						
U41A	Viola	71.06	343	P	P	11 03 29.9	+0.5
	baz=162						
S48A	Wiedeman Farm,	71.08	348	P	P	11 03 29.1	-0.4
	baz=167						
U40A	Yellville	71.31	342	P	P	11 03 31.5	+0.6
	baz=161,SNR=8.0						
MNTX	Cornudas Mount	71.37	330	P	P	11 03 31.2	-0.2
	baz=150,SNR=6.7						
MNTX	Cornudas Mount	71.37	330	*e*P	P	11 03 31.2	-0.2
	comp=Z,2.3nm,0.6s						
T43A	Greenville	71.38	344	P	P	11 03 31.4	+0.1
	baz=164,SNR=5.3						
S46A	Don Dixon Farm	71.41	347	P	P	11 03 31.3	-0.1
	baz=166						
U39A	Green Forest	71.50	342	P	P	11 03 32.4	+0.3
	baz=161,SNR=5.8						
T42A	Van Buren	71.52	344	P	P	11 03 32.0	-0.1
	baz=163						
HHAR	Hobbs	71.53	341	*e*P	P	11 03 32.3	0.0
	comp=Z,12nm,1.3s						
USIN	University of	71.67	347	*e*P	P	11 03 32.8	-0.2
	comp=Z,14nm,1.0s						
WCI	Wyandotte Cave	71.67	348	P	P	11 03 33.3	+0.2
	baz=167						
T41A	Mountain View	71.69	343	P	P	11 03 33.5	+0.4
	baz=162,SNR=5.8						
TUL1	Leonard	71.71	340	P	P	11 03 33.7	+0.4
	baz=159						
S44A	Carbondale	71.74	345	P	P	11 03 33.8	+0.4
	baz=164						
R48A	Northridge Ran	71.77	348	P	P	11 03 33.9	+0.3
	baz=167						
S43A	Fulton Ridge,	71.80	345	P	P	11 03 33.8	+0.1
	baz=164,SNR=8.8						
T39A	Clever	72.08	342	P	P	11 03 36.2	+0.7
	baz=161						
R45A	Skylar, Fairfi	72.11	346	P	P	11 03 35.6	0.0
	baz=165						
S42A	Caledonia	72.15	344	P	P	11 03 36.0	+0.1
	baz=163						
S41A	Jillco Farms,	72.20	343	P	P	11 03 36.5	+0.3
	baz=162,SNR=7.1						
MVL	Millersville	72.26	356	*e*P	P	11 03 37.3	+0.8
	comp=Z,16nm,1.3s						
FVM	French Village	72.27	345	*e*P	P	11 03 37.3	+0.6
	comp=Z,18nm,1.3s						
MSTX	Muleshoe	72.31	333	P	P	11 03 37.6	+0.5
	baz=153						
T38A	Diamond	72.34	341	P	P	11 03 37.5	+0.5
	baz=160						
S40A	Lebanon	72.40	343	P	P	11 03 37.7	+0.3
	baz=162,SNR=5.7						
CCM	Cathedral Cave	72.53	344	P	P	11 03 39.3	+1.2
	baz=163						
CCM	Cathedral Cave	72.53	344	*e*P	P	11 03 38.9	+0.8
	comp=Z,12nm,0.8s						
P50A	Jamestown	72.62	350	P	P	11 03 39.0	+0.3
	baz=169						
R42A	Luebbering	72.64	344	P	P	11 03 39.2	+0.5
	baz=163						
S39A	Bolivar	72.70	342	P	P	11 03 39.4	+0.2
	baz=161,SNR=6.2						
S39A	Bolivar	72.70	342	*e*P	P	11 03 39.5	+0.4
	comp=Z,15nm,1.4s						
AMTX	Amarillo	72.72	334	P	P	11 03 40.2	+0.7
	baz=154						
AMTX	Amarillo	72.72	334	*e*P	P	11 03 39.6	+0.1
	comp=Z,8.2nm,1.4s						
R41A	Rosebud	72.79	344	P	P	11 03 40.1	+0.4
	baz=163,SNR=8.3						
S38A	Stockton	72.79	342	P	P	11 03 39.9	+0.2
	baz=160,SNR=12						
SSPA	Standing Stone	73.00	355	P	P	11 03 41.8	+0.9
	baz=174						
R40A	Maddies Statio	73.00	343	P	P	11 03 41.4	+0.4
	baz=162,SNR=11						
R40A	Maddies Statio	73.00	343	*e*P	P	11 03 41.0	+0.1
	comp=Z,11nm,0.8s						
Q43A	New Douglas	73.03	345	P	P	11 03 41.4	+0.3
	baz=164						
ACSO	Alum Creek Sta	73.12	351	P	P	11 03 41.9	+0.3
	baz=170						
ACSO	Alum Creek Sta	73.12	351	*e*P	P	11 03 42.0	+0.3
	comp=Z,17nm,0.7s						
O50A	Cable	73.13	350	P	P	11 03 42.2	+0.5
	baz=169						
N59A	State Game Lan	73.15	357	P	P	11 03 43.7	+1.9
	baz=176						
N59A	State Game Lan	73.15	357	*e*P	P	11 03 42.5	+0.8
	comp=Z,11nm,1.0s						
Q42A	Golden Eagle	73.18	345	P	P	11 03 42.4	+0.4
	baz=163,SNR=5.3						
P46A	Rosedale	73.19	348	P	P	11 03 41.8	-0.2
	baz=166						
P45A	Graceland, Par	73.20	347	P	P	11 03 42.0	-0.1
	baz=166						
R39A	Chumby, Stover	73.21	343	P	P	11 03 42.4	+0.2
	baz=161,SNR=5.4						
P44A	Sand Creek, Wi	73.31	346	P	P	11 03 42.9	+0.1
	baz=165						
R38A	Fenwick Farm,	73.31	342	P	P	11 03 43.1	+0.3
	baz=160						
Q41A	Truxton	73.38	344	P	P	11 03 43.5	+0.4
	baz=163,SNR=8.4						
N54A	Moraine State	73.50	353	P	P	11 03 44.5	+0.6
	baz=173						
O47A	Sheridan	73.61	348	P	P	11 03 44.1	-0.3
	baz=167						
Q40A	Laux Farm, Aux	73.62	344	P	P	11 03 45.0	+0.4
	baz=162,SNR=8.2						
P43A	Skaggs, Pawnee	73.66	346	P	P	11 03 44.4	-0.4
	baz=164						
N50A	Nevada	73.67	351	P	P	11 03 44.9	+0.1
	baz=170						
P42A	Winchester	73.79	345	P	P	11 03 45.6	+0.1
	baz=164						
O45A	Potomac	73.90	347	P	P	11 03 45.7	-0.5
	baz=166						
SFIN	Lafayette	73.91	348	P	P	11 03 46.1	-0.1
	baz=166						
Q38A	Cooks Store, C	73.97	342	P	P	11 03 47.3	+0.6
	baz=161						
LIC	Lamto	73.99	72	*e*P	P	11 03 47.4	0.0
	comp=Z,38nm,0.8s						
M54A	Oil Creek Stat	74.01	354	P	P	11 03 46.9	+0.1
	baz=173						
P40A	Paris	74.12	344	P	P	11 03 48.0	+0.5
	baz=162,SNR=10						
P40A	Paris	74.12	344	*e*P	P	11 03 48.0	+0.5
	comp=Z,20nm,1.0s						
O43A	Sugar Creek Fa	74.24	346	P	P	11 03 47.9	-0.2
	baz=165						
TIC	Toumodi	74.25	71	*e*P	P	11 03 48.7	-0.2
P39B	Salisbury	74.25	343	P	P	11 03 48.4	+0.1
	baz=162						
KIC	Kosan Boka	74.30	72	*e*P	P	11 03 49.4	+0.2
	comp=Z,39nm,1.0s						
DBIC	Dimbokro	74.39	71	P	P	11 03 50.2	+0.5
	comp=Z,9.7nm,0.6s,baz=222,slow=6.2,SNR=12						
DBIC				LR	LR	11 35 23.8	
	comp=Z,22nm,18.1s,baz=164,slow=35						
O41A	Passleys Farm,	74.41	345	P	P	11 03 49.1	0.0
	baz=163,SNR=5.9						
HDIL	Hopedale	74.50	346	P	P	11 03 50.0	+0.4
	baz=165						
N44A	Piper City	74.50	347	P	P	11 03 49.5	-0.1
	baz=166						
MAW	Mawson	74.52	164	P	P	11 03 49.4	-0.2
	comp=Z,5.9nm,0.8s,baz=219,slow=6.5,SNR=10						
MAW				LR	LR	11 39 42.3	
	comp=Z,53nm,18.2s,baz=240,slow=38						
MAW	Mawson	74.52	164	*e*P	P	11 03 50.4	+0.8
	comp=Z,1.4nm,0.8s						
P38A	Dawn	74.57	343	P	P	11 03 50.2	+0.1
	baz=161						
P38A	Dawn	74.57	343	*e*P	P	11 03 50.5	+0.4
	comp=Z,9.6nm,0.9s						
ANMO	Albuquerque	74.63	331	P	P	11 03 51.5	+0.7
	comp=Z,1.0nm,0.5s,baz=151,slow=10,SNR=6.1						
ANMO				LR	LR	11 32 09.4	
	comp=Z,51nm,18.7s,baz=153,slow=32						
ANMO	Albuquerque	74.63	331	P	P	11 03 52.6	+1.7
	baz=150						
ANMO	Albuquerque	74.63	331	*e*P	P	11 03 52.2	+1.3
	comp=Z,3.3nm,1.3s						
TASL	Snake Pit, Alb	74.63	331	P	P	11 03 52.8	+2.0
	baz=150						
TASM	ASL Pad, Albuq	74.63	331	P	P	11 03 52.8	+2.0
	baz=150						
O40A	La Belle	74.64	344	P	P	11 03 50.9	+0.4
	baz=162						
N43A	Stutzman Famil	74.84	346	P	P	11 03 51.8	+0.1
	baz=165,SNR=6.3						
TRY	Troy	74.89	358	*e*P	P	11 03 53.0	+1.2
	comp=Z,11nm,1.0s						
N41A	Harden Midland	74.97	345	P	P	11 03 52.6	+0.2
	baz=163						
N41A	Harden Midland	74.97	345	*e*P	P	11 03 51.9	-0.5
	comp=Z,18nm,1.0s						
M44A	Midewin, Midew	75.06	347	P	P	11 03 52.8	0.0
	baz=166						
M43A	Waltham Townsh	75.28	347	P	P	11 03 54.2	0.0
	baz=165						
N40A	Mertquake, Sal	75.30	344	P	P	11 03 54.8	+0.5
	baz=163						
N39A	Derby Farms, D	75.51	344	*e*P	P	11 03 55.5	0.0
	comp=Z,18nm,0.3s						
M41A	Milan	75.54	345	P	P	11 03 55.7	+0.1
	baz=164						
T25A	Trinidad	75.73	334	P	P	11 03 58.9	+1.7
	baz=152,SNR=5.8						
T25A	Trinidad	75.73	334	*e*P	P	11 03 58.8	+1.7
	comp=Z,5.9nm,0.9s						
L43A	Garden Prairie	75.96	347	P	P	11 03 58.1	0.0
	baz=165						
L42A	Oliver, Polo	75.97	346	P	P	11 03 58.2	+0.2
	baz=164						
M38A	Pleasantville	76.19	343	P	P	11 03 59.7	+0.4
	baz=161						
L41A	Preston	76.21	346	P	P	11 03 59.7	+0.2
	baz=164,SNR=5.3						
L40A	Anamosa	76.35	345	P	P	11 04 00.3	+0.1
	baz=163,SNR=7.3						
L40A	Anamosa	76.35	345	*e*P	P	11 04 00.2	0.0
	comp=Z,16nm,0.9s						
M36A	Felix, Anita	76.62	342	P	P	11 04 02.4	+0.6
	baz=160						
K42A	Prairie Point,	76.65	347	P	P	11 04 02.3	+0.3
	baz=165						
K41A	Shullsburg	76.68	346	P	P	11 04 02.5	+0.4
	baz=164						
SDCO	Great Sand Dun	76.68	333	P	P	11 04 04.2	+1.6
	baz=151						
SDCO	Great Sand Dun	76.68	333	*e*P	P	11 04 03.2	+0.6
	comp=Z,2.7nm,0.9s						
LONY	Lake Ozonia	76.80	358	P	P	11 04 03.6	+0.8
	baz=177						
L38A	Oak Wood Farm,	76.82	344	P	P	11 04 03.2	+0.3
	baz=162						
K40A	Colesburg	76.94	345	P	P	11 04 03.7	+0.1
	baz=163						

JFWS	Jewell Farm	76.96	346	P	P	11 04 04.2	+0.5
	baz=164						
K39A	Oelwein	77.11	345	P	P	11 04 04.8	+0.3
	baz=163						
L36A	Harm Buss Farm	77.19	343	P	P	11 04 05.5	+0.5
	baz=160						
S22A	4UR Ranch, Cre	77.20	332	P	P	11 04 05.7	+0.1
	baz=150						
WUAZ	Wupatki	77.23	328	P	P	11 04 07.3	+1.6
	baz=146						
WUAZ	Wupatki	77.23	328	eP	P	11 04 07.8	+2.1
	comp=Z,5.6nm,1.2s						
J41A	Loganville	77.35	346	P	P	11 04 06.2	+0.4
	baz=164						
MVCO	Mesa Verde	77.41	331	P	P	11 04 08.2	+1.5
	baz=149						
J40A	Soldiers Grove	77.52	346	P	P	11 04 07.0	+0.1
	baz=164,SNR=9.1						
K37A	Belmond	77.57	344	P	P	11 04 08.1	+1.0
	baz=161						
Q24A	Divide	77.61	334	P	P	11 04 09.3	+1.5
	baz=152						
K36A	Gilmore City	77.64	343	P	P	11 04 08.1	+0.5
	baz=160						
BC3	Big Chuckawall	77.66	324	P	P	11 04 08.9	+0.9
	baz=143						
J39A	Decorah	77.67	345	P	P	11 04 07.8	+0.1
	baz=163						
IRM	Iron Mountain	77.91	324	P	P	11 04 10.7	+1.4
	baz=144						
I40A	Norwalk	77.97	346	P	P	11 04 09.6	+0.2
	baz=164						
W13A	Hualapai Mount	78.06	326	eP	P	11 04 12.4	+2.1
I39A	Houston	78.13	345	P	P	11 04 10.1	-0.1
	baz=163,SNR=5.9						
I39A	Houston	78.13	345	eP	P	11 04 10.4	+0.2
	comp=Z,14nm,0.6s						
CRY	Cary Ranch	78.23	323	eP	P	11 04 11.7	+0.5
J36A	Seneca 1, Swea	78.27	343	P	P	11 04 11.4	+0.4
	baz=161						
J36A	Seneca 1, Swea	78.27	343	eP	P	11 04 11.7	+0.7
	comp=Z,14nm,0.8s						
TRQ	Mont Tremblant	78.40	358	eP	P	11 04 12.4	+0.6
I38A	Scanlan Farm,	78.48	345	P	P	11 04 12.1	-0.1
	baz=162,SNR=6.4						
SMCO	Snowmass	78.49	333	eP	P	11 04 14.9	+2.1
	comp=Z,4.1nm,0.8s						
ISCO	Idaho Springs	78.52	334	P	P	11 04 14.7	+1.8
	baz=151						
ISCO	Idaho Springs	78.52	334	eP	P	11 04 14.6	+1.7
	comp=Z,1.8nm,0.7s						
H40A	Chili	78.63	346	P	P	11 04 12.8	-0.2
	baz=164						
GMRC	Granite Mounta	78.66	324	P	P	11 04 15.1	+1.5
	baz=143						
I37A	Lemond, Waseca	78.69	344	eP	P	11 04 13.7	+0.4
	comp=Z,9.3nm,0.6s						
G42A	Mountain	78.86	348	P	P	11 04 15.0	+0.8
	baz=166						
ECSD	EROS Data Cent	79.22	342	P	P	11 04 16.9	+0.6
	baz=159						
ECSD	EROS Data Cent	79.22	342	eP	P	11 04 16.8	+0.6
	comp=Z,10nm,0.8s						
TUQ	Turquoise Moun	79.31	325	P	P	11 04 18.9	+1.8
	baz=143						
H36A	Jessenland, He	79.35	344	P	P	11 04 17.3	+0.5
	baz=161						
G39A	Holcombe	79.42	346	P	P	11 04 17.7	+0.4
	baz=163						
H35A	Sunnyside Ranc	79.68	343	P	P	11 04 18.7	+0.1
	baz=160						
SPMN	Marine on St.	79.71	345	P	P	11 04 19.0	+0.2
	baz=162						
SPMN	Marine on St.	79.71	345	eP	P	11 04 18.9	+0.1
	comp=Z,7.5nm,1.0s						
KOWA	Kowa	79.72	66	P	P	11 04 20.0	+0.4
	comp=Z,8.5nm,0.6s,baz=214,slow=2.8,SNR=20						
KOWA	Kowa	79.72	66	eP	P	11 04 20.0	+0.4
	comp=Z,10nm,0.6s						
SHPR	Sheep Range	79.80	326	eP	P	11 04 21.9	+2.1
	comp=Z,4.4nm,1.2s						
CCUT	Cedar City	79.81	327	eP	P	11 04 22.3	+2.4
	comp=Z,5.3nm,1.1s						
O20A	White River Ci	79.81	332	P	P	11 04 21.1	+1.3
	baz=149						
SRU	San Rafael Swe	79.87	330	eP	P	11 04 21.4	+1.3
	comp=Z,3.4nm,0.9s						
E42A	Champion	79.92	349	P	P	11 04 20.9	+0.9
	baz=166						
F39A	Loretta	79.97	346	P	P	11 04 20.1	-0.2
	baz=164						
H32A	Carlson Farm,	80.16	342	P	P	11 04 22.0	+0.7
	baz=158						
P18A	Preston Nutter	80.19	331	eP	P	11 04 23.7	+1.7
	comp=Z,11nm,1.6s						
F38A	Pierce - Schro	80.21	346	P	P	11 04 21.8	+0.3
	baz=163,SNR=7.4						
E40A	Wakefield	80.29	347	P	P	11 04 22.8	+0.8
	baz=164						
E39A	Mellen	80.35	347	P	P	11 04 23.1	+0.8
	baz=164						
F36A	Milaca	80.47	345	P	P	11 04 22.8	-0.1
	baz=161,SNR=8.1						
F36A	Milaca	80.47	345	eP	P	11 04 22.9	-0.1
BOSA	Boshof	80.48	118	P	P	11 04 24.4	+0.6
	comp=Z,5.1nm,0.6s,baz=238,slow=3.1,SNR=10						
BOSA				LR	LR	11 37 12.6	
	comp=Z,78nm,18.9s,baz=211,slow=34						
MPMC	Manual Prospec	80.58	324	P	P	11 04 25.6	+1.6
	baz=142						
FURC	Furnace Creek,	80.59	325	P	P	11 04 24.9	+1.2
	baz=143						
D41A	Chassel	80.65	348	P	P	11 04 24.8	+0.9
	baz=166						
D41A	Chassel	80.65	348	eP	P	11 04 24.8	+0.9
	comp=Z,15nm,0.8s						
TPNV	Topopah Spring	80.68	325	P	P	11 04 25.6	+1.1
	baz=143						
TPNV	Topopah Spring	80.68	325	eP	P	11 04 26.6	+2.1
	comp=Z,18nm,2.0s						
F35A	Swanville	80.71	344	P	P	11 04 24.6	+0.4
	baz=160						
ISA	Isabella, Lake	80.77	323	P	P	11 04 27.1	+2.2
	baz=142						
ISA	Isabella, Lake	80.77	323	eP	P	11 04 27.0	+2.2
	comp=Z,3.3nm,1.0s						
DAC	Darwin (Calif)	80.80	324	eP	P	11 04 27.1	+1.9
	comp=Z,4.7nm,1.1s						
E36A	McGregor	81.04	345	P	P	11 04 26.2	+0.2
	baz=162,SNR=9.7						
MPU	Maple Canyon	81.09	330	eP	P	11 04 28.2	+1.5
	comp=Z,2.3nm,0.9s						
D37A	Cotton	81.47	346	P	P	11 04 28.5	+0.3
	baz=162						
R11A	Troy Canyon, C	81.48	327	P	P	11 04 30.2	+1.5
	baz=144						
R11A	Troy Canyon, C	81.48	327	eP	P	11 04 30.8	+2.0
CASY	Casey	81.53	181	eP	P	11 04 29.7	+1.3
	comp=Z,10.0nm,1.1s						
D36A	Goodland	81.64	345	P	P	11 04 29.2	+0.1
	baz=162						
C39A	Grand Marais	81.65	348	P	P	11 04 29.4	+0.2
	baz=164						
D35A	Remer	81.75	345	P	P	11 04 29.9	+0.2
	baz=161,SNR=8.3						
C38A	Sawbill Land.	81.77	347	P	P	11 04 29.4	-0.4
	baz=163						
RSSD	Black Hills	81.78	337	P	P	11 04 30.8	+0.5
	baz=153						
RSSD	Black Hills	81.78	337	eP	P	11 04 31.3	+1.0
	comp=Z,5.4nm,1.0s						
C37A	Embarrass	81.96	346	P	P	11 04 30.8	0.0
	baz=163						
C36A	Pine Crest Far	82.13	346	P	P	11 04 31.8	+0.1
	baz=162						
C35A	Jirik Farms, M	82.31	345	P	P	11 04 32.7	0.0
	baz=161,SNR=5.5						
HWUT	Hardware Ranch	82.39	331	eP	P	11 04 34.5	+1.0
	comp=Z,3.0nm,0.8s						
PDAR	Pinedale Array	82.58	333	P	P	11 04 34.0	-0.5
	comp=Z,0.6nm,0.7s,baz=127,slow=5.7,SNR=6.4						
PDAR	Pinedale Array	82.58	333	eP	P	11 04 34.5	0.0
NV01	Mina Array Sit	82.84	325	eP	P	11 04 37.2	+1.3
NVAR	Mina Array Bea	82.84	325	P	P	11 04 37.3	+1.3
	comp=Z,1.1nm,0.7s,baz=155,slow=5.9,SNR=14						
B35A	Bob, Littlefor	82.89	345	P	P	11 04 35.3	-0.2
	baz=161,SNR=9.4						
B35A	Bob, Littlefor	82.89	345	eP	P	11 04 35.4	-0.2
B34A	Aery, Baudette	83.20	345	P	P	11 04 37.8	+0.5
	baz=161						
KVN	Kaiserville	83.23	325	eP	P	11 04 39.3	+1.4
	comp=Z,3.1nm,1.0s						
AGMN	Agassiz Nation	83.30	344	P	P	11 04 38.1	+0.3
	baz=160,SNR=5.1						
AGMN	Agassiz Nation	83.30	344	eP	P	11 04 38.1	+0.3
	comp=Z,5.6nm,0.7s						
TORD	Torodi Ar. Bea	83.39	70	P	P	11 04 39.4	+0.3
	comp=Z,8.8nm,0.9s,baz=263,slow=4.6						
A33A	Warroad	83.80	345	P	P	11 04 40.8	+0.5
	baz=160						
MDND	Maddock	83.82	341	P	P	11 04 41.4	+0.9
	baz=157						
MDND	Maddock	83.82	341	eP	P	11 04 41.5	+1.1
PAHR	Pah Rah Range	84.36	325	eP	P	11 04 45.5	+1.9
YMR	Madison River	84.73	333	eP	P	11 04 47.2	+1.8
	comp=Z,4.7nm,0.9s						
ULM	Lac du Bonnet	85.14	345	P	P	11 04 46.8	-0.2
	comp=Z,4.4nm,0.8s,baz=153,slow=5.1,SNR=6.0						
HLID	Hailey	85.19	330	P	P	11 04 48.9	+1.2
	baz=145						
MCMT	McKenzie Canyo	85.60	332	eP	P	11 04 51.4	+1.6
DGMT	Dagmar	85.70	339	P	P	11 04 51.2	+1.3
	baz=153						
DGMT	Dagmar	85.70	339	eP	P	11 04 51.2	+1.3
	comp=Z,16nm,1.1s						
J08A	Circle Bar Ran	86.79	328	eP	P	11 04 56.8	+1.2
J05D	Fort Rock, OR	88.01	326	P	P	11 05 02.9	+1.5
	baz=140						
YKA	Yellowknife Ar	100.74	341	P	Pdif	11 05 58.8	-0.3
	comp=Z,0.2nm,0.5s,baz=140,slow=4.7,SNR=6.7						
ANGG	Ammassalik, Gr	101.28	14	ePdif	Pdif	11 06 01.7	+0.3
ASAR	Alice Springs	119.05	207	PKP	PKPdf	11 10 59.6	-1.1
	comp=Z,0.4nm,0.8s,baz=139,slow=1.5,SNR=3.6						
WRA	Warramunga Arr	122.23	209	PKP	PKPdf	11 11 05.8	-1.0
	comp=Z,1.3nm,0.8s,baz=148,slow=1.7,SNR=8.8						
H11S2	WAKE ISLAND Hy	126.11	270	T	T	13 30 14.2	
	baz=118,slow=74,SNR=758						
H11S1	WAKE ISLAND Hy	126.12	270	T	T	13 30 14.9	
	baz=118,slow=74,SNR=414						
H11S3	WAKE ISLAND Hy	126.12	270	T	T	13 30 15.6	
	baz=118,slow=74,SNR=344						
H11N3	WAKE ISLAND Hy	126.48	271	T	T	13 30 43.6	
	baz=117,slow=75,SNR=56						
H11N1	WAKE ISLAND Hy	126.50	271	T	T	13 30 43.5	
	baz=117,slow=75,SNR=35						
H11N2	WAKE ISLAND Hy	126.50	271	T	T	13 30 42.9	
	baz=117,slow=75,SNR=185						
KLMR	Klimovskoe	128.00	35	ePKPdf	PKPdf	11 11 16.5	+0.1
KLMR				AMP		11 11 17.7	
	comp=Z,7.0nm,1.2s						
BVAR	Borovoye Array	145.95	42	PKPbc	PKPab	11 11 51.4	+0.4
	comp=Z,3.2nm,0.4s,baz=297,slow=2.5,SNR=31						
YAK	Yakutsk	147.42	341	ePKPbc	PKPbc	11 11 54.6	+0.2
NIL	Nilore	150.65	78	ePKPbc	PKPbc	11 12 04.0	+0.4
ASAJ	Asahikawa	150.93	303	PKPbc	PKPbc	11 12 03.3	-0.5
	comp=Z,8.8nm,1.0s,baz=75,slow=20,SNR=7.5						
KURBB	Kurchatov Arra	151.54	42	PKPbc	PKPbc	11 12 05.5	+0.5
	comp=Z,6.1nm,0.5s,baz=303,slow=2.9,SNR=65						
KURK	Kurchatov	151.55	41	ePKPbc	PKPbc	11 12 05.6	+0.6
KURK				ePKPab	PKPab	11 12 14.3	+0.7
ZALV	Zalesovo Beam	152.78	31	PKPbc	PKPbc	11 12 08.3	+0.6
	comp=Z,8.9nm,0.5s,baz=299,slow=3.6,SNR=19						
ZALV				PKPab	pPKPbc	11 12 17.4	-1.0
	comp=Z,1.8nm,0.3s,baz=298,slow=3.4,SNR=4.4						
KSH	Kashi	152.99	66	ePKPbc	PKPdf	11 11 57.2	-4.3
KSH				pPKP	PKiKP	11 12 08.9	-0.1
KSH				sPKP		11 12 15.1	
KSH				PKS	PKSdf	11 15 30.1	-5.9
KSH				PP	PP	11 15 52.3	-1.7
KSH				SKS	SKSdf	11 18 58.6	-7.6
KSH				SKKS	SKKSac	11 22 36.0	-5.6
KSH				AMB	AMB		
	comp=Z,130nm,5.4s						
MKAR	Makanchi Array	155.52	47	PKP	PKPdf	11 12 04.8	+0.2
	comp=Z,0.4nm,0.7s,baz=284,slow=1.2,SNR=2.8						
MKAR				PKPbc	pPKPdf	11 12 13.7	-1.8
	comp=Z,0.7nm,0.8s,baz=289,slow=3.7,SNR=4.2						
MKAR				PKPab	PKPab	11 12 30.9	+0.3
	comp=Z,1.7nm,0.6s,baz=287,slow=4.5,SNR=9.8						
WMQ	Urumqi	160.27	49	PKP	PKPdf	11 12 11.3	+0.6
KSRS	Korea Array	163.22	293	PKPab	PKPab	11 13 05.8	+1.5
	comp=Z,1.0nm,0.8s,baz=76,slow=5.2,SNR=4.3						
KSAR	Wonju Array Be	163.25	293	PKPab	PKPab	11 13 05.8	+1.3
SONM	Songino Array	164.61	5	PKPab	PKPab	11 13 10.8	+0.7
	comp=Z,1.1nm,0.9s,baz=343,slow=2.4,SNR=4.8						
NJ2	Nanjing	171.09	270	ePKP	PKPdf	11 12 19.6	-0.1
HHC	Hu-ho-hao-te	171.28	344	ePKP	PKPdf	11 12 17.0	-2.7
GYA	Guiyang	173.81	166	ePKP	PKPdf	11 12 21.0	-0.3
GYA				PKPab	PKPab	11 13 53.2	+1.9
GYA				PKS	PKSdf	11 15 52.4	-1.3
GYA				PP	PP	11 17 46.8	+4.5
GYA				AMB	AMB		
	comp=Z,110nm,8.0s						
LZH	Lanzhou	174.83	45	ePKP	PKPdf	11 12 20.2	-1.2
LZH				pPKP	pPKPdf	11 12 26.8	-5.5
LZH				sPKP		11 12 31.4	
LZH				PKPab	PKPab	11 13 56.2	+0.3

CSEM ***07*** *11:08:13.7±0.3, 38°.43N×43°.03E, $h10^{km}$, MD2.5, Error ellipse: s-maj=6.7km s-min=5.0km az=2.0*
ISK ***07*** *11:08:13.9, 38°.47N×42°.96E, $h8^{km}$, ML2.5/4*
ISCJB ***07*** *11:08:14.0±0.6, 38°.44N±0°.04×43°.01E±0°.04, $h12^{km}\pm5^{km}$, Error ellipse: s-maj=7.3km s-min=5.3km az=170.2*
DDA ***07*** *11:08:14.2, 38°.47N×43°.07E, $h7^{km}$, Md2.5*
ISC 07 11:08:13.8±1.1, **38°.50N**±0°.04×**43°.02E**±0°.02, **h5**$^{km}\pm11^{km}$, **n18,** σ**0^{s}.52**/34, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GEVA	Gevas	0.19	172	i P	Pg	11 08 17.2	-0.3
GEVA				i S	Sg	11 08 20.8	+0.8
GEVA	Gevas	0.19	172	P	Pg	11 08 17.2	-0.3
GEVA				S	Sg	11 08 20.8	+0.8
TVAN	Van	0.30	84	i P	Pg	11 08 19.8	+0.1
TVAN				i S	Sg	11 08 24.2	+0.5
TVAN	Van	0.30	84	P	Pg	11 08 19.8	+0.1
TVAN				S	Sg	11 08 24.2	+0.5
VANB	Van	0.30	71	PG	Pb	11 08 21.1	-0.7
VANB				SG	Sb	11 08 27.1	0.0
VANB	Van	0.30	71	ePg	Pb	11 08 21.1	-0.7
VANB				eSg	Sb	11 08 27.1	0.0
ADCV	BITLIS_Adilcev	0.39	323	i P	Pb	11 08 23.0	-0.3
ADCV				i S	Sb	11 08 29.7	0.0
ADCV	BITLIS_Adilcev	0.39	323	P	Pb	11 08 23.0	-0.3
ADCV				S	Sb	11 08 29.7	0.0
GURO	Guroymak-BITLI	0.78	274	PG	Pg	11 08 28.4	-0.4
GURO				SG	Sg	11 08 39.1	+0.2
GURO	Guroymak-BITLI	0.78	274	ePg	Pg	11 08 28.4	-0.4
GURO				eSg	Sg	11 08 39.1	+0.2
TUTA	Tutak	0.92	350	i P	Pb	11 08 32.3	-0.1
TUTA				i S	Sb	11 08 44.7	-0.3
TUTA	Tutak	0.92	350	P	Pb	11 08 32.3	-0.1
TUTA				S	Sb	11 08 44.7	-0.3
EKAR	Karacoban	1.06	316	i P	Pn	11 08 35.3	-0.4
EKAR				i S	Sn	11 08 52.4	+1.4
EKAR	Karacoban	1.06	316	P	Pn	11 08 35.3	-0.4
EKAR				S	Sn	11 08 52.4	+1.4
AGRB	Hanur-Agry	1.07	359	PN	Pn	11 08 35.5	-0.3
AGRB				SN	Sn	11 08 51.2	0.0
AGRB	Hanur-Agry	1.07	359	ePn	Pn	11 08 35.5	-0.3
AGRB				eSn	Sn	11 08 51.2	0.0
MAZI	Mazidag	2.29	244	PN	Pn	11 08 52.2	-0.1
MAZI	Mazidag	2.29	244	ePn	Pn	11 08 52.2	-0.1

IDC 07 11:17:34.5±4.9, **27°.72S**×**75°.43E, h0**^{km}, **mb3.4**/3, **mb1 3.7**/3, **mb1mx3.3**/60, **mbtmp3.4**/3, **MS3.2**/2, **Ms1 3.4**/2, **ms1mx2.8**/29, **Error ellipse: s-maj=169.8km s-min=38.7km az=42.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S2	Diego Garcia H	20.16	352	T	T	11 44 35.4	
	baz=171,slow=74						
H08S1	Diego Carcia H	20.16	351	T	T	11 44 31.0	
	baz=171						
H08S3	Diego Garcia H	20.18	351	T	T	11 44 37.6	
	baz=171,slow=74						
CMAR	Chiang Mai Arr	51.24	29	LR	LR	11 47 33.4	
	comp=Z,30nm,18.1s,baz=140,slow=35						
ASAR	Alice Springs	52.43	100	P	P	11 26 48.8	-0.4
	0.6nm,1.0s,baz=253,slow=7.1,SNR=4.5						
WRA	Warramunga Arr	54.01	95	P	P	11 27 01.0	+0.2
	0.6nm,0.8s,baz=250,slow=7.1,SNR=3.6						
MKAR	Makanchi Array	74.42	5	P	P	11 29 14.2	+0.1
	0.3nm,0.8s,baz=188,slow=7.3,SNR=2.5						
KSRS	Korea Array	81.41	40	LR	LR	12 05 48.5	
	comp=Z,11nm,18.4s,baz=185,slow=36						
YKA	Yellowknife Ar	144.59	8	PKP	PKPbc	11 37 11.6	+0.6
	0.4nm,0.9s,baz=331,slow=3.8,SNR=4.8						

ISCJB ***07*** *11:46:58.5±0.9, 38°.84N±0°.04×142°.19E±0°.09, $h53^{km}\pm6^{km}$, mb3.9/10, Error ellipse: s-maj=11.9km s-min=6.4km az=15.7*
JMA ***07*** *11:47:00.6±0.1, 38°.86N×142°.05E, $h46^{km}\pm1^{km}$, M3.9*
JMA Felt II J1.
NIED ***07*** *11:47:00, 38°.90N×142°.10E, $h53^{km}$, Mw3.7 Best double couple: $M_0$4.24000×10^{14} NP1:ϕ_s190.00000°, δ24.00000°, λ77.00000°. NP2:ϕ_s24.00000°, δ66.00000°, λ96.00000°.*
IDC ***07*** *11:47:01.3±2.3, 38°.88N×142°.36E, $h70^{km}\pm19^{km}$, mb3.6/10, mb1 3.6/14, mb1mx3.4/73, mbtmp3.8/14, MS2.5/3, Ms1 2.5/3, ms1mx2.3/63, Error ellipse: s-maj=21.3km s-min=13.3km az=105.0*
ISC 07 11:46:59.6±1.5, **38°.81N**±0°.06×**142°.19E**±0°.10, **h47**$^{km}\pm13^{km}$, **n29,** σ**1^{s}.95**/33, **mb3.9**/10, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	0.49	303	P	Pn	11 47 10.2	-0.4
OFUJ				S	Sn	11 47 16.8	-1.6
JIO	Ouri	0.75	242	P	Pn	11 47 13.7	-0.2
JIO				S	Sn	11 47 22.6	-1.7
JMK	Ichinoseki	0.77	281	P	Pn	11 47 13.6	-0.6
JMK				S	Sn	11 47 22.8	-2.0
JOM	Ohasama	0.96	313	P	Pn	11 47 16.4	-0.4
JOM				S	Sn	11 47 27.8	-1.6
JOU	Okura	1.28	250	P	Pn	11 47 20.9	-0.2
JOU				S	Sn	11 47 36.7	-0.4
JRG	Rokugo	1.35	296	P	Pn	11 47 21.5	-0.5
JYK	Kaneyama	1.44	275	P	Pn	11 47 22.8	-0.4
JYK				eS	Sn	11 47 39.3	-1.6
JMM	Marumori	1.45	230	P	Pn	11 47 23.3	-0.1
JMM				S	Sn	11 47 40.4	-0.9
MJAR	Matsushiro Arr	3.89	236	P	Pn	11 47 59.1	+2.2
	2.6nm,0.3s,baz=35,slow=13,SNR=30						
MJAR				S	Sn	11 48 51.8	+10
	1.0nm,0.3s,baz=330,slow=17,SNR=4.1						
MJAR				LR	LR	11 49 37.9	
	comp=Z,44nm,18.3s,baz=150,slow=39						
MAT	Matsushiro	3.89	236	P	Pn	11 47 59.0	+2.1
MAT				S	Sn	11 48 47.2	+5.9
ASAJ	Asahikawa	5.31	3	P	Pn	11 48 18.4	+2.1
	1.1nm,0.3s,baz=199,slow=16,SNR=20						
ASAJ				S	Sn	11 49 16.5	+0.4
	0.9nm,0.3s,baz=240,slow=20,SNR=2.7						
ASAJ				LR	LR	11 50 35.4	
	comp=Z,36nm,21.5s,baz=168,slow=41						
USRK	Ussuriysk Ar.	9.35	308	P	Pn	11 49 14.7	+3.0
	baz=118,slow=14						
USRK				S	Sn	11 50 58.5	+3.1
	baz=164,slow=18						
KSRS	Korea Array	11.32	268	P	Pn	11 49 42.4	+3.7
	0.2nm,0.3s,baz=77,slow=14,SNR=3.7						
KSRS				LR	LR	11 53 25.1	
	comp=Z,42nm,19.1s,baz=267,slow=33						
SEY	Seymchan	24.93	11	P	P	11 52 17.6	-0.4
	0.5nm,0.4s,baz=198,slow=11,SNR=6.1						
H11N2	WAKE ISLAND Hy	28.59	125	T	T	12 23 17.4	
	baz=317,slow=75						
H11N1	WAKE ISLAND Hy	28.60	125	T	T	12 23 12.6	
	baz=317,slow=75						
H11N3	WAKE ISLAND Hy	28.61	125	T	T	12 23 18.7	
	baz=317,slow=75						
H11S1	WAKE ISLAND Hy	29.37	127	T	T	12 24 14.3	
	baz=319,slow=74						
H11S3	WAKE ISLAND Hy	29.37	127	T	T	12 24 15.1	
	baz=319,slow=74						
H11S2	WAKE ISLAND Hy	29.38	127	T	T	12 24 16.7	
	baz=319						
ZALV	Zalesovo Beam	41.20	311	P	P	11 54 38.9	-0.4
	0.7nm,0.4s,baz=86,slow=7.6,SNR=4.8						
MKAR	Makanchi Array	43.72	301	P	P	11 55 00.2	+0.2
	1.1nm,0.4s,baz=78,slow=10.0,SNR=13						
KURBB	Kurchatov Arra	45.41	307	P	P	11 55 13.5	+0.1
	3.4nm,0.4s,baz=80,slow=8.2,SNR=16						
ILAR	Eielson Array	47.67	33	P	P	11 55 28.2	-2.7
	0.5nm,0.5s,baz=262,slow=6.1,SNR=18						
BVAR	Borovoye Array	49.85	311	P	P	11 55 47.0	-0.8
	1.2nm,0.4s,baz=70,slow=8.1,SNR=8.9						
WRA	Warramunga Arr	58.91	189	P	P	11 56 53.8	-0.1
	0.6nm,0.5s,baz=6.4,slow=6.9,SNR=14						
ASAR	Alice Springs	62.63	189	P	P	11 57 19.5	+0.4
	0.3nm,0.9s,baz=1.8,slow=5.6,SNR=4.2						
FINES	FINESS Array B	67.53	332	P	P	11 57 48.1	-2.4
	1.4nm,0.7s,baz=26,slow=6.8,SNR=4.1						
HFS	Hagfors	72.72	336	P	P	11 58 22.8	+0.5
	1.0nm,0.6s,baz=28,slow=6.5,SNR=3.1						

IDC ***07*** *11:58:11.7±6.5, 30°.26S×178°.42E, $h0^{km}$, mb3.9/3, mb1 4.2/4, mb1mx3.7/44, mbtmp4.0/4, ML3.9/1, MS2.2/1, Ms1 2.2/1, ms1mx2.0/46, Error ellipse: s-maj=144.3km s-min=31.2km az=54.0*
ISCJB ***07*** *11:58:34.7±0.6, 32°.09S±0°.06×179°.2E±0°.1, $h300^{km}$, mb3.3/3, Error ellipse: s-maj=16.4km s-min=5.6km az=19.3*
WEL ***07*** *11:58:37.7±0.7, 33°S±10°×17°9W±2°3, $h299^{km}\pm11^{km}$*
ISC 07 11:58:36.9±1.8, **32°.3S**±0°.1×**179°.3E**±0°.3, **h300**^{km}, **n65,** σ**1^{s}.56**/61, **mb3.3**/3, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	3.85	40	P	Pn	11 59 40.1	-1.4
GLKZ				S	S	12 00 26.7	-6.6
MXZ	Matakaoa Point	5.36	188	P	Pn	12 00 02.0	+3.5
MXZ				S	S	12 01 04.8	+0.7
WMGZ	Waiomatatini S	5.60	187	P	Pn	12 00 02.3	+0.9
HAZ	Te Kaha	5.63	192	P	Pn	12 00 02.4	+0.8
RUGZ	Raukumara Rang	5.85	192	P	Pn	12 00 06.1	+1.7
PUZ	Puketiti	5.87	188	P	Pn	12 00 04.5	0.0
OPRZ	Ohinepanea	6.00	201	P	Pn	12 00 11.2	+5.1
TWGZ	Tauwhareparae	6.01	190	P	Pn	12 00 08.4	+2.2
MWZ	Matawai	6.23	193	P	Pn	12 00 09.1	+0.1
URZ	Urewera	6.25	196	Pn	Pn	12 00 10.5	+1.5
	1.6nm,0.3s,baz=277,slow=4.9,SNR=60						
URZ				Sn	S	12 01 23.1	-0.3
	3.4nm,0.3s,baz=78,slow=23,SNR=18						
URZ				LR	LR	12 02 42.4	
	comp=Z,15nm,19.3s,baz=256,slow=34						
URZ	Urewera	6.25	196	P	Pn	12 00 07.8	-1.2
RAGZ	Rawiri	6.41	193	P	Pn	12 00 13.2	+2.1
MUGZ	Murupara	6.54	197	P	Pn	12 00 14.5	+2.0
MUGZ				S	S	12 01 29.8	0.0
HRRZ	Handcock Road	6.59	201	P	Pn	12 00 17.1	+3.9
GRRZ	Galatos Road	6.61	202	P	Pn	12 00 18.1	+4.7
RTZ	Ruatahuna	6.62	196	P	Pn	12 00 15.0	+1.4
RTZ				S	S	12 01 29.7	-2.0
ALRZ	Allen Road	6.73	200	P	Pn	12 00 17.9	+3.0
TLZ	Tolley Road	6.78	206	P	Pn	12 00 21.2	+5.6
KUTZ	Kaahu Road	6.83	203	P	Pn	12 00 20.5	+4.5
MTHZ	Maungataniwha	6.88	196	P	Pn	12 00 18.9	+2.2
MTHZ				S	S	12 01 37.2	-0.2
RAHZ	Arahi	6.88	194	P	Pn	12 00 18.3	+1.5
RAHZ				S	S	12 01 36.2	-1.2
NMHZ	Naumai	7.12	196	P	Pn	12 00 20.8	+1.1
NMHZ				S	S	12 01 45.1	+2.4
RATZ	Rangitukua	7.18	202	P	Pn	12 00 23.6	+3.1
HIZ	Hauiti	7.21	209	P	Pn	12 00 26.7	+6.0
BKZ	Black Stump Fm	7.26	197	P	Pn	12 00 22.1	+0.8
BKZ				S	S	12 01 45.8	0.0
KATZ	Kakaramea	7.31	202	P	Pn	12 00 25.0	+2.9
WTVZ	West Tongariro	7.47	202	P	Pn	12 00 26.1	+2.1
TWVZ	Taurewa	7.48	203	P	Pn	12 00 26.6	+2.5
NGZ	Ngauruhoe	7.52	202	P	Pn	12 00 26.6	+2.0
TUVZ	Tukino	7.59	202	P	Pn	12 00 27.0	+1.5
FWVZ	Far West T-bar	7.61	202	P	Pn	12 00 27.4	+1.6
TRVZ	Turoa	7.65	202	P	Pn	12 00 27.8	+1.5
PKVZ	Pokaka	7.71	203	P	Pn	12 00 28.6	+1.7
KRHZ	Kereru	7.74	197	P	Pn	12 00 27.2	+0.1
KAHZ	Kahuranaki	7.77	194	P	Pn	12 00 27.8	+0.2
VRZ	Vera Road	7.77	207	P	Pn	12 00 31.1	+3.5

PXZ	**Pawanui**	**8.00**	**193**	P	**Pn**	**12 00 30.8**	**+0.5**
PNHZ	**Pukenui**	**8.04**	**197**	P	**Pn**	**12 00 30.2**	**-0.7**
WPHZ	**Waipukurau**	**8.12**	**195**	P	**Pn**	**12 00 32.0**	**+0.2**
PKE	**Pukeiti**	**8.14**	**210**	P	Pn	12 00 38.0	+5.8
TSZ	**Takapari Road**	**8.23**	**198**	P	**Pn**	**12 00 32.6**	**-0.6**
WAZ	**Wanganui**	**8.25**	**204**	P	**Pn**	**12 00 34.3**	**+1.0**
PRHZ	**Porangahau**	**8.28**	**194**	P	**Pn**	**12 00 34.0**	**+0.3**
DVHZ	**Dannevirke**	**8.41**	**196**	P	**Pn**	**12 00 34.8**	**-0.6**
ANWZ	**Angora Road**	**8.49**	**194**	P	**Pn**	**12 00 36.6**	**+0.2**
POWZ	**Post Office Ro**	**8.60**	**198**	P	**Pn**	**12 00 37.2**	**-0.5**
BFZ	**Birch Farm**	**8.76**	**195**	P	**Pn**	**12 00 38.9**	**-0.7**
MRZ	**Mangatainoka R**	**8.90**	**198**	P	**Pn**	**12 00 38.7**	**-2.7**
TIWZ	**Tintock**	**8.93**	**197**	P	**Pn**	**12 00 41.0**	**-0.8**
HOWZ	**Holdsworth Sta**	**9.14**	**198**	P	**Pn**	**12 00 42.6**	**-1.7**
OGWZ	**Otaki Gorge**	**9.16**	**200**	P	**Pn**	**12 00 42.9**	**-1.7**
TMWZ	**Te Maipa**	**9.24**	**196**	P	**Pn**	**12 00 44.6**	**-1.0**
KIW	**Kapiti Island**	**9.28**	**201**	P	**Pn**	**12 00 45.0**	**-1.0**
MTW	**Mount Morrison**	**9.39**	**198**	P	**Pn**	**12 00 45.5**	**-1.9**
CAW	**Cannon Point**	**9.46**	**200**	P	**Pn**	**12 00 46.3**	**-1.9**
DUWZ	**D'Urville Isla**	**9.55**	**205**	P	**Pn**	**12 00 48.2**	**-1.1**
MSWZ	**Moikau Station**	**9.69**	**198**	P	**Pn**	**12 00 49.4**	**-1.8**
TCW	**Tory Channel**	**9.79**	**203**	P	**Pn**	**12 00 50.7**	**-1.6**
PLWZ	**Palliser**	**9.84**	**198**	P	**Pn**	**12 00 51.3**	**-1.6**
TUWZ	**Tuamarina**	**10.10**	**203**	P	**Pn**	**12 00 54.9**	**-1.2**
BSWZ	**Blackbirch Sta**	**10.38**	**203**	P	**Pn**	**12 00 58.5**	**-1.0**
KHZ	**Kahutara**	**11.12**	**202**	P	**Pn**	**12 01 06.8**	**-1.7**
ASAR	**Alice Springs**	**40.71**	**270**	P	P	12 05 47.8	-1.4
	0.3nm,0.3s,baz=104,slow=8.1,SNR=8.0						
WRA	**Warramunga Arr**	**41.87**	**276**	P	P	12 05 57.2	-1.4
	1.5nm,0.3s,baz=114,slow=7.9,SNR=74						
VNDA	**Vanda**	**46.04**	**185**	P	P	12 06 51.3	+21
	0.4nm,0.3s,baz=29,slow=9.6,SNR=8.2						

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*DDA **07** 12:03:17.0, 37°.19N×28°.60E, h7^{km}, Md2.7, Suspected Mining explosion.*
*ISCJB **07** 12:03:17.1±0.5, 37°.18N±0°.03×28°.62E±0°.04, h0^{km}, Error ellipse: s-maj=4.2km s-min=3.8km az=146.1*
*CSEM **07** 12:03:17.6±0.3, 37°.21N×28°.63E, h1^{km}, ML2.4, Error ellipse: s-maj=7.0km s-min=5.7km az=63.0, Suspected Mining explosion.*
*ISK **07** 12:03:17.1, 37°.16N×28°.63E, h8^{km}, ML2.4/7*
ISC 07 12:03:18.2±1.0**, 37°.18N**±0°.02×**28°.63E**±0°.02**, h0**^{km}**, n29, σ0^{s}.89**/44**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.28**	**261**	PG	**Pg**	**12 03 23.1**	**-0.5**
YER				SG	**Sg**	**12 03 27.6**	**+0.3**
YER	**Yerkesik**	**0.28**	**261**	*e*Pg	**Pg**	**12 03 23.1**	**-0.5**
YER				*e*Sg	**Sg**	**12 03 27.6**	**+0.3**
TURN	**Turunc**	**0.31**	**184**	PG	**Pb**	**12 03 26.5**	**-0.1**
TURN				SG	**Sb**	**12 03 34.5**	**+2.3**
TURN	**Turunc**	**0.31**	**184**	*i* P	**Pb**	**12 03 26.8**	**+0.2**
TURN				*i* S	**Sb**	**12 03 33.8**	**+1.7**
TURN	**Turunc**	**0.31**	**184**	*e*Pg	**Pb**	**12 03 26.5**	**-0.1**
TURN	**Turunc**	**0.31**	**184**	P	**Pb**	**12 03 26.8**	**+0.2**
TURN				S	**Sb**	**12 03 33.8**	**+1.7**
DALY	**Dalyan (Mu˜la**	**0.36**	**177**	PG	**Pg**	**12 03 24.3**	**-0.9**
DALY				SG	**Sg**	**12 03 29.6**	**-0.3**
DALY	**Dalyan (Mu˜la**	**0.36**	**177**	*e*Pg	**Pg**	**12 03 24.3**	**-0.9**
DALY				*e*Sg	**Sg**	**12 03 29.6**	**-0.3**
TAVA	**DENIZLI_Tavas**	**0.36**	**38**	*i* P	**Pg**	**12 03 24.7**	**-0.5**
TAVA				*i* S	**Sg**	**12 03 30.2**	**+0.2**
TAVA	**DENIZLI_Tavas**	**0.36**	**38**	P	**Pg**	**12 03 24.7**	**-0.5**
TAVA				S	**Sg**	**12 03 30.2**	**+0.2**
FETY	**Fethiye**	**0.65**	**146**	PG	**Pg**	**12 03 29.4**	**-1.3**
FETY				SG	**Sg**	**12 03 39.1**	**-0.1**
FETY	**Fethiye**	**0.65**	**146**	*e*Pg	**Pg**	**12 03 29.4**	**-1.3**
FETY				*e*Sg	**Sg**	**12 03 39.1**	**-0.1**
MLSB	**Milas**	**0.69**	**280**	PG	**Pg**	**12 03 31.0**	**-0.5**
MLSB	**Milas**	**0.69**	**280**	*e*Pg	**Pg**	**12 03 31.0**	**-0.5**
AYDN	**Tasoluk**	**0.77**	**309**	*i* P	**Pg**	**12 03 32.3**	**-0.6**
AYDN				*i* S	**Sg**	**12 03 41.7**	**-1.2**
AYDN	**Tasoluk**	**0.77**	**309**	P	**Pg**	**12 03 32.3**	**-0.6**
AYDN				S	**Sg**	**12 03 41.7**	**-1.2**
DAT	**Datca**	**0.96**	**242**	PG	**Pg**	**12 03 35.7**	**-0.9**
DAT	**Datca**	**0.96**	**242**	*i* P	**Pg**	**12 03 35.5**	**-1.1**
DAT				*i* S	**Sg**	**12 03 48.3**	**-0.7**
DAT	**Datca**	**0.96**	**242**	*e*Pg	**Pg**	**12 03 35.7**	**-0.9**
DAT				S	**Sg**	**12 03 48.3**	**-0.7**
AYDB	**Zeytinkoy-Aydi**	**0.97**	**323**	PG	**Pg**	**12 03 36.3**	**-0.5**
AYDB	**Zeytinkoy-Aydi**	**0.97**	**323**	*e*Pg	**Pg**	**12 03 36.3**	**-0.5**
ARG	**Arkhangelos**	**1.04**	**203**	PG	**Pg**	**12 03 37.3**	**-0.9**
ARG	**Arkhangelos**	**1.04**	**203**	*e*Pg	**Pg**	**12 03 37.3**	**-0.9**
BODT	**Bodrum**	**1.06**	**264**	PG	**Pg**	**12 03 37.9**	**-0.7**
BODT	**Bodrum**	**1.06**	**264**	*e*Pg	**Pg**	**12 03 37.9**	**-0.7**
AKAS	**Kas**	**1.23**	**140**	PN	**Pg**	**12 03 40.9**	**-0.9**
AKAS	**Kas**	**1.23**	**140**	*e*Pn	**Pg**	**12 03 40.9**	**-0.9**
KULA	**Kula-Manisa**	**1.33**	**1**	PN	**Pg**	**12 03 42.8**	**-1.0**
KULA	**Kula-Manisa**	**1.33**	**1**	*e*Pn	**Pg**	**12 03 42.8**	**-1.0**

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*IDC **07** 12:23:48.1±0.7, 48°.88N×156°.11E, h0^{km}, mb3.5/9, mb1 3.8/12, mb1mx3.6/71, mbtmp3.5/12, ML3.4/2, MS2.9/10, Ms1 2.9/10, ms1mx2.7/61, Error ellipse: s-maj=27.2km s-min=14.6km az=133.0*
*ISCJB **07** 12:23:52.6±0.5, 49°.06N±0°.04×156°.3E±0°.1, h34^{km}, mb3.5/9, MS3.1/5, Error ellipse: s-maj=10.7km s-min=4.2km az=26.4*
*MOS **07** 12:23:52.9±0.8, 49°.02N×156°.20E, h55^{km}, mb4.0/3, Error ellipse: s-maj=20.0km s-min=4.1km az=75.3*
*KRSC **07** 12:23:52.5±1.8, 49°.12N×156°.59E, h42^{km}±23^{km}, ML4.5*
ISC 07 12:23:53.4±0.7**, 49°.01N**±0°.06×**156°.25E**±0°.08**, h34**^{km}**, n84, σ1^{s}.57**/99**, mb3.7**/9**, MS3.2**/5**, 1C-1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.68**	**357**	*e*P	**Pn**	**12 24 18.4**	**-2.0**
SKR				*e*S	**Sn**	**12 24 37.8**	**-2.9**
SKR	**Severo-Kuril's**	**1.68**	**357**	*e*PN	**Pn**	**12 24 18.7**	**-1.7**
SKR				*e*S	**Sn**	**12 24 37.6**	**-3.1**
SKR				pmax	pmax		
	comp=Z,74nm,0.4s						
SKR				smax	smax		
	comp=N,1µm,0.5s						
SKR				smax	smax		
	comp=E,809nm,0.6s						
PAU	**Pauzhetka**	**2.49**	**8**	*e*P	**Pn**	**12 24 31.0**	**-0.5**
PAU				*e*S	**Sn**	**12 25 00.2**	**-0.5**
PAU	**Pauzhetka**	**2.49**	**8**	PN	**Pn**	**12 24 31.0**	**-0.5**
PAU				S	**Sn**	**12 25 00.2**	**-0.5**
KDTR	**Khodutka, Kamc**	**3.04**	**22**	*e*P	**Pn**	**12 24 38.8**	**-0.2**
KDTR				*e*S	**Sn**	**12 25 12.4**	**-1.8**
MIPR	**Malaya Ipel'ka**	**3.29**	**5**	*e*P	**Pn**	**12 24 42.5**	**0.0**
MIPR				*e*S	**Sn**	**12 25 20.0**	**-0.4**
MIPR	**Malaya Ipel'ka**	**3.29**	**5**	PN	**Pn**	**12 24 42.5**	**0.0**
MIPR				S	**Sn**	**12 25 20.0**	**-0.4**
ASAK	**Asacha**	**3.54**	**17**	*e*P	**Pn**	**12 24 46.9**	**+0.9**
ASAK				*e*S	**Sn**	**12 25 25.6**	**-1.1**
ASAK	**Asacha**	**3.54**	**17**	PN	**Pn**	**12 24 46.9**	**+0.9**
ASAK				S	**Sn**	**12 25 25.6**	**-1.1**
MTVR	**Mutnovka**	**3.69**	**19**	*e*P	**Pn**	**12 24 49.2**	**+1.0**
MTVR				*e*S	**Sn**	**12 25 29.5**	**-1.0**
MTVR	**Mutnovka**	**3.69**	**19**	PN	**Pn**	**12 24 49.2**	**+1.0**
MTVR				S	**Sn**	**12 25 29.5**	**-1.0**
RUS	**Russkaya**	**3.72**	**22**	*e*P	**Pn**	**12 24 48.6**	**+0.2**
RUS				*e*S	**Sn**	**12 25 31.1**	**+0.1**
RUS	**Russkaya**	**3.72**	**22**	PN	**Pn**	**12 24 48.6**	**+0.2**
RUS				S	**Sn**	**12 25 31.1**	**+0.1**
APC	**Apacha**	**3.97**	**8**	*e*P	**Pn**	**12 24 52.5**	**+0.7**
APC	**Apacha**	**3.97**	**8**	PN	**Pn**	**12 24 52.5**	**+0.7**
KRMR	**Karymshinskiy**	**4.01**	**17**	*e*P	**Pn**	**12 24 53.5**	**+1.1**
KRMR				*e*S	**Sn**	**12 25 37.4**	**-0.7**
KRMR	**Karymshinskiy**	**4.01**	**17**	PN	**Pn**	**12 24 53.5**	**+1.1**
KRMR				S	**Sn**	**12 25 37.4**	**-0.7**
PETK	**Petropavlovsk-**	**4.21**	**12**	Pn	**Pn**	**12 24 56.7**	**+1.6**
	baz=180,slow=12						
PETK				Sn	**Sb**	**12 25 54.4**	**-2.6**
	baz=184,slow=17						
PETK				LR	LR	12 26 54.7	
	comp=E,119nm,18.2s,baz=160,slow=43						
PET	**Petropavlovsk**	**4.30**	**20**	*e*P	**Pn**	**12 24 57.1**	**+0.8**
PET				*e*S	**Sn**	**12 25 43.6**	**-1.7**
PET	**Petropavlovsk**	**4.30**	**20**	*e*PN	**Pn**	**12 24 57.5**	**+1.2**
PET				*e*S	**Sn**	**12 25 46.5**	**+1.2**
PET				pmax	pmax		
	comp=Z,31nm,0.5s						
PET				smax	smax		
	comp=E,156nm,0.5s						
PET				smax	smax		
	comp=N,182nm,0.5s						
DALK	**Dalny**	**4.33**	**20**	*e*P	**Pn**	**12 24 57.6**	**+0.8**
DALK				*e*S	**Sn**	**12 25 46.2**	**+0.2**
DALK	**Dalny**	**4.33**	**20**	PN	**Pn**	**12 24 57.6**	**+0.8**
DALK				S	**Sn**	**12 25 46.2**	**+0.2**
UGLR	**Uglovaya**	**4.51**	**20**	*e*P	**Pn**	**12 25 01.5**	**+2.1**
UGLR	**Uglovaya**	**4.51**	**20**	PN	**Pn**	**12 25 01.5**	**+2.1**
KOK	**Koryaka**	**4.55**	**18**	*e*P	**Pn**	**12 25 00.6**	**+0.7**
KOK	**Koryaka**	**4.55**	**18**	PN	**Pn**	**12 25 00.6**	**+0.7**
SDLR	**Sedlovina**	**4.59**	**20**	*e*P	**Pn**	**12 25 01.7**	**+1.3**
SDLR	**Sedlovina**	**4.59**	**20**	PN	**Pn**	**12 25 01.7**	**+1.3**
NLC	**Nalytchevo**	**4.61**	**24**	*e*P	**Pn**	**12 25 01.3**	**+0.8**
NLC				*e*S	**Sn**	**12 25 51.3**	**-1.5**
NLC	**Nalytchevo**	**4.61**	**24**	PN	**Pn**	**12 25 01.3**	**+0.8**
NLC				S	**Sn**	**12 25 51.3**	**-1.5**
KRX	**Arik**	**4.61**	**18**	*e*P	**Pn**	**12 25 01.8**	**+1.0**
KRX	**Arik**	**4.61**	**18**	PN	**Pn**	**12 25 01.8**	**+1.0**
SPN	**Mys Shipunski**	**4.74**	**29**	*e*P	**Pn**	**12 25 03.4**	**+1.0**
SPN				*e*S	**Sn**	**12 25 56.3**	**+0.2**
SPN	**Mys Shipunski**	**4.74**	**29**	PN	**Pn**	**12 25 03.4**	**+1.0**
SPN				S	**Sn**	**12 25 56.3**	**+0.2**
GNL	**Ganaly**	**4.81**	**12**	*e*P	**Pn**	**12 25 05.1**	**+1.6**
GNL	**Ganaly**	**4.81**	**12**	PN	**Pn**	**12 25 05.1**	**+1.6**
KII	**Karymskiy**	**5.42**	**20**	*e*P	**Pn**	**12 25 13.5**	**+1.7**
KII	**Karymskiy**	**5.42**	**20**	PN	**Pn**	**12 25 13.5**	**+1.7**
MKZ	**Mys Kozlova**	**6.52**	**29**	*e*P	**Pn**	**12 25 26.5**	**-0.2**
MKZ				*e*S	**Sn**	**12 26 37.7**	**-2.1**
MKZ	**Mys Kozlova**	**6.52**	**29**	PN	**Pn**	**12 25 26.5**	**-0.2**
TUMR	**Tumrok**	**6.73**	**19**	*e*P	**Pn**	**12 25 32.4**	**+2.6**
TUMR				*e*S	**Sn**	**12 26 44.4**	**-0.8**
TUMR	**Tumrok**	**6.73**	**19**	PN	**Pn**	**12 25 32.4**	**+2.6**
KUR	**Kuril'sk**	**6.85**	**240**	*d i*PN	**Pn**	**12 25 33.9**	**+2.5**
KUR				pmax	pmax		
	comp=Z,27nm,0.5s						
KMNR	**Kamenistaya**	**7.19**	**18**	P	**Pn**	**12 25 38.8**	**+2.7**
KMNR	**Kamenistaya**	**7.19**	**18**	PN	**Pn**	**12 25 38.8**	**+2.7**
ZLN	**Zelenaya**	**7.55**	**20**	P	**Pn**	**12 25 43.8**	**+2.7**
ZLN	**Zelenaya**	**7.55**	**20**	PN	**Pn**	**12 25 43.8**	**+2.7**
BDR	**Baidarnaya**	**8.15**	**20**	*e*P	**Pn**	**12 25 51.0**	**+1.8**
BDR	**Baidarnaya**	**8.15**	**20**	PN	**Pn**	**12 25 51.0**	**+1.8**
SRKR	**Sorokina**	**8.22**	**19**	*e*P	**Pn**	**12 25 52.0**	**+1.8**
SRKR	**Sorokina**	**8.22**	**19**	PN	**Pn**	**12 25 52.0**	**+1.8**
SMKR	**Semkarok**	**8.22**	**21**	*e*P	**Pn**	**12 25 52.9**	**+2.7**
SMKR	**Semkarok**	**8.22**	**21**	PN	**Pn**	**12 25 52.9**	**+2.7**
KBTR	**Krutoberegovo**	**8.24**	**26**	*e*P	**Pn**	**12 25 50.6**	**+0.1**
KBTR				*e*S	**Sn**	**12 27 19.5**	**-2.8**
KBTR	**Krutoberegovo**	**8.24**	**26**	PN	**Pn**	**12 25 50.6**	**+0.1**
SHO	**Shikotan**	**8.28**	**235**	*e*PN	**Pn**	**12 25 50.2**	**-0.8**
SHO				pmax	pmax		
	comp=Z,7.0nm,0.3s						
SHO				pmax	pmax		
	comp=N,4.0nm,0.2s						
SHO				pmax	pmax		
	comp=E,3.0nm,0.2s						
BKI	**Bering**	**8.62**	**40**	*e*P	**Pn**	**12 25 56.0**	**+0.5**
BKI				*e*S	**Sn**	**12 27 26.9**	**-4.5**
BKI	**Bering**	**8.62**	**40**	PN	**Pn**	**12 25 56.0**	**+0.5**
YSS	**Yuzh-Sakhalins**	**9.28**	**262**	⇑*e*PN	**Pn**	**12 26 07.2**	**+2.5**
YSS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ASAJ	**Asahikawa**	**10.59**	**248**	Pn	**Pn**	**12 26 20.4**	**-2.3**
	comp=Z,0.6nm,0.3s,baz=71,slow=12,SNR=8.9						
ASAJ				LR	LR	12 29 54.7	
	comp=Z,61nm,20.1s,baz=60,slow=35						
MA2	**Magadan**	**11.06**	**345**	LR	LR	12 31 26.9	
	comp=Z,34nm,18.0s,baz=150,slow=41						
SEY	**Seymchan**	**14.12**	**353**	Pn	**Pn**	**12 27 13.7**	**+2.9**
	comp=Z,0.0nm,0.3s,baz=165,slow=18,SNR=2.4						
KLR	**Kul'dur**	**16.03**	**280**	LR	LR	12 33 45.2	
	comp=Z,5.9nm,19.7s,baz=74,slow=37						
MJAR	**Matsushiro Arr**	**18.12**	**233**	LR	LR	12 35 43.6	
	comp=Z,34nm,19.4s,baz=70,slow=40						
KSRS	**Korea Array**	**23.50**	**251**	P	**P**	**12 28 59.3**	**-0.8**
	comp=Z,0.8nm,0.6s,baz=93,slow=26,SNR=5.5						
KSRS				LR	LR	12 37 25.5	
	comp=Z,18nm,18.5s,baz=307,slow=35						
H11N2	**WAKE ISLAND Hy**	**30.44**	**160**	T	T	13 02 40.6	
	baz=346,slow=78,SNR=16						
H11N1	**WAKE ISLAND Hy**	**30.45**	**160**	T	T	13 02 41.7	
	baz=346,slow=78,SNR=15						
H11N3	**WAKE ISLAND Hy**	**30.45**	**160**	T	T	13 02 37.7	
	baz=346,slow=78,SNR=11						
H11S1	**WAKE ISLAND Hy**	**31.57**	**161**	T	T	13 03 40.2	
	baz=346,slow=76,SNR=140						
H11S3	**WAKE ISLAND Hy**	**31.59**	**161**	T	T	13 03 55.7	
	baz=346,slow=76,SNR=202						
H11S2	**WAKE ISLAND Hy**	**31.59**	**161**	T	T	13 03 57.3	
	baz=346,slow=76,SNR=127						
SONM	**Songino Array**	**32.63**	**287**	LR	LR	12 43 50.6	
	comp=Z,41nm,18.9s,baz=100,slow=37						
ILAR	**Eielson Array**	**33.47**	**41**	P	**P**	**12 30 29.4**	**+0.6**
	comp=Z,0.8nm,0.8s,baz=257,slow=8.6,SNR=8.0						
YKA	**Yellowknife Ar**	**47.85**	**39**	P	**P**	**12 32 28.0**	**+0.6**
	comp=Z,0.1nm,0.4s,baz=292,slow=7.3,SNR=3.2						
YKA	**Yellowknife Ar**	**47.85**	**39**	P	**P**	**12 32 28.0**	**+0.6**
SPITS	**Spitsbergen Ar**	**50.76**	**350**	LR	LR	12 56 20.5	
	comp=Z,21nm,18.0s,baz=60,slow=38						
BVAR	**Borovoye Array**	**51.06**	**309**	LR	LR	12 54 37.1	
	comp=Z,27nm,18.2s,baz=257,slow=36						
CMAR	**Chiang Mai Arr**	**54.94**	**257**	P	**P**	**12 33 19.2**	**-1.7**
	comp=Z,0.5nm,0.5s,baz=40,slow=7.1,SNR=3.7						
NVAR	**Mina Array Bea**	**59.54**	**65**	P	**P**	**12 33 54.9**	**+1.3**
	comp=Z,0.3nm,0.5s,baz=294,slow=7.9,SNR=5.4						
PDAR	**Pinedale Array**	**61.73**	**57**	P	**P**	**12 34 08.2**	**-0.2**
	comp=Z,0.5nm,0.8s,baz=282,slow=2.7,SNR=5.0						
AFI	**Afiamalu**	**68.74**	**147**	LR	LR	12 57 19.3	
	comp=Z,24nm,21.6s,baz=102,slow=29						
WRA	**Warramunga Arr**	**71.36**	**202**	P	**P**	**12 35 08.5**	**-1.2**
	comp=Z,0.4nm,0.8s,baz=18,slow=6.5,SNR=3.2						
TXAR	**Lajitas Array**	**74.57**	**63**	P	**P**	**12 35 30.4**	**+1.5**
	comp=Z,0.6nm,0.5s,baz=303,slow=5.1,SNR=16						
ASAR	**Alice Springs**	**75.05**	**201**	P	**P**	**12 35 30.9**	**-0.5**
	comp=Z,0.1nm,0.4s,baz=10,slow=5.7,SNR=2.6						

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*ISCJB **07** 12:35:41.9±0.2, 23°.18N±0°.01×121°.05E±0°.01, h8^{km}±2^{km}, Error ellipse: s-maj=2.2km s-min=1.9km az=157.2*
*JMA **07** 12:35:41.0±0.1, 23°.20N×121°.06E, h0^{km}±1^{km}, M3.4*
*TAP **07** 12:35:41.4, 23°.20N×121°.01E, h7^{km}, ML3.9, B*
ISC 07 12:35:41.8±0.8**, 23°.20N**±0°.01×**121°.03E**±0°.01**, h9**^{km}±5^{km}**, n110, σ0^{s}.93**/158**, 22C-13D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELDTW	**Lidau**	**0.02**	**224**	P	**Pg**	**12 35 43.0**	**-0.5**
	baz=138						
ELDTW				S	**Sg**	**12 35 44.2**	**-0.6**
	baz=138						
FULB	**Fuli**	**0.24**	**91**	⇑*e*P	**Pg**	**12 35 47.9**	**+1.3**
	baz=80						
FULB				*e*S	**Sg**	**12 35 52.3**	**+2.3**
	baz=80						
STYT	**Tauyuan**	**0.26**	**261**	⇑*i*P	**Pg**	**12 35 46.6**	**-0.3**
	baz=261						
STYT				*i* S	**Sg**	**12 35 49.9**	**-0.6**
	baz=261						
TWF1	**Yuli**	**0.28**	**59**	⇑*i*P	**Pb**	**12 35 48.0**	**-1.1**
	baz=60						
TWF1				S	**Sg**	**12 35 51.8**	**+0.4**
	baz=60						
YUS	**Yu-Shan**	**0.29**	**346**	⇑*e*P	**Pg**	**12 35 47.5**	**-0.3**
	baz=360						
YUS				*e*S	**Sg**	**12 35 51.5**	**-0.4**
	baz=360						
YULB	**Yu-li**	**0.31**	**52**	⇑P	**Pg**	**12 35 48.1**	**+0.2**
	baz=53						
YULB				S	**Sg**	**12 35 52.0**	**-0.1**
	baz=53						
CHKT	**Chengkung**	**0.32**	**109**	⇓*i*P	**Pb**	**12 35 49.8**	**0.0**
	baz=106						
CHKT				S	**Sb**	**12 35 55.9**	**+0.9**
	baz=106						
TWG	**Pinlang**	**0.38**	**174**	⇓*i*P	**Pg**	**12 35 49.5**	**+0.2**
	baz=163						
TWG				S	**Sg**	**12 35 54.4**	**+0.1**
	baz=163						
TPUB	**Ta-pu**	**0.38**	**285**	⇓P	**Pg**	**12 35 49.5**	**+0.2**
	baz=295						
TPUB				S	**Sg**	**12 35 54.9**	**+0.5**
	baz=295						
TWGBT	**Beinan**	**0.39**	**173**	⇓P	**Pg**	**12 35 49.5**	**+0.1**
	baz=163						
TWGBT				S	**Sg**	**12 35 54.6**	**+0.1**
	baz=163						
WTP	**Ta-pu**	**0.39**	**276**	⇓*i*P	**Pg**	**12 35 49.6**	**+0.2**
	baz=273						
WTP				S	**Sg**	**12 35 54.9**	**+0.4**
	baz=273						
EHY	**Hungye**	**0.40**	**41**	⇑P	**Pg**	**12 35 49.8**	**+0.1**
	baz=43						
EHY				*e*S	**Sg**	**12 35 55.2**	**+0.2**
	baz=43						
SGST	**Jiashian**	**0.43**	**254**	⇑*i*P	**Pg**	**12 35 50.5**	**+0.3**
	baz=250						
SGST				S	**Sg**	**12 35 56.7**	**+0.8**
	baz=250						
TTN	**Taitung**	**0.46**	**167**	*e*P	**Pb**	**12 35 52.0**	**-0.1**
	baz=164						
HGSD	**Ruisui**	**0.46**	**51**	⇑P	**Pb**	**12 35 51.7**	**-0.4**
	baz=43						
HGSD				*e*S	**Sb**	**12 35 59.0**	**0.0**
	baz=43						
CHN1	**Nanshi**	**0.46**	**268**	⇑P	**Pb**	**12 35 51.4**	**-0.7**
	baz=263						
CHN1				S	**Sb**	**12 35 58.7**	**-0.4**
	baz=263						
TWK	**Hsinying**	**0.50**	**277**	⇓*i*P	**Pb**	**12 35 52.1**	**-0.7**
	baz=291						
TWK				S	**Sg**	**12 35 59.1**	**+0.9**
	baz=291						
CHN5	**Tsauling**	**0.51**	**320**	⇓*i*P	**Pb**	**12 35 52.1**	**-0.8**
	baz=324						
CHN5				S	**Sg**	**12 35 59.3**	**+0.8**
	baz=324						
SSD	**Sandimen**	**0.59**	**219**	⇑*i*P	**Pg**	**12 35 52.4**	**-0.7**
	baz=223						
SSD				*e*S	**Sg**	**12 35 59.5**	**-1.3**
	baz=223						
SSLB	**Suanglung**	**0.59**	**353**	⇑P	**Pg**	**12 35 52.4**	**-0.7**
	baz=355						
CHN2	**Minshiung**	**0.61**	**303**	⇓P	**Pb**	**12 35 54.7**	**+0.1**
	baz=304						
ECL	**Taimali**	**0.61**	**187**	⇑*i*P	**Pg**	**12 35 53.1**	**-0.4**
	baz=184						
ECL				*e*S	**Sg**	**12 36 00.8**	**-0.7**
	baz=184						
CHN3	**Shinhua**	**0.63**	**258**	*e*P	**Pb**	**12 35 55.7**	**+0.8**
	baz=259						
CHN3				*e*S	**Sn**	**12 36 06.3**	**-0.7**
	baz=259						
CHY	**Chiayi**	**0.63**	**298**	*e*P	**Pb**	**12 35 54.6**	**-0.4**
	baz=299						
TWH	**Lutao**	**0.64**	**140**	*e*P	**Pb**	**12 35 54.8**	**-0.3**
	baz=122						
TWH				*e*S	**Sb**	**12 36 05.1**	**+1.0**
	baz=122						
WGK	**Gukeng**	**0.65**	**318**	P	**Pb**	**12 35 55.3**	**+0.1**
	baz=321						
WGK				*e*S	**Sb**	**12 36 04.7**	**+0.3**
	baz=321						
WDLH	**Douliu**	**0.66**	**317**	⇓*e*P	**Pb**	**12 35 55.8**	**+0.3**
	baz=318						
WJS	**Zhushan**	**0.68**	**336**	*e*P	**Pb**	**12 35 56.1**	**+0.3**
	baz=343						
WJS				*e*S	**Sb**	**12 36 06.7**	**+1.4**
	baz=343						
SMLT	**Sun Moon Lake**	**0.69**	**350**	P	**Pg**	**12 35 54.7**	**-0.4**
	baz=353						
SGLT	**Jiouru**	**0.69**	**226**	*e*P	**Pg**	**12 35 54.5**	**-0.6**
	baz=220						
MASBT	**Mashibuluo**	**0.69**	**212**	⇑P	**Pg**	**12 35 54.4**	**-0.8**
	baz=204						
ESL	**Shilin**	**0.71**	**31**	⇑P	**Pg**	**12 35 55.1**	**-0.4**
	baz=33						
TYC	**Yuchr**	**0.72**	**347**	*e*P	**Pb**	**12 35 55.8**	**-0.7**
	baz=359						
TYC				*e*S	**Sn**	**12 36 08.4**	**-0.8**
	baz=359						
WNT	**Mingjian**	**0.74**	**335**	⇓P	**Pb**	**12 35 57.2**	**+0.3**
	baz=338						
WNT				*e*S	**Sb**	**12 36 08.7**	**+1.5**
	baz=338						
TAI1	**Yung-k'ang**	**0.76**	**258**	*e*P	**Pn**	**12 35 58.3**	**-0.3**
	baz=271						
TAI1				*e*S	**Sn**	**12 36 11.2**	**+1.1**
	baz=271						
CHN8	**Yiju**	**0.77**	**281**	P	**Pb**	**12 35 57.3**	**0.0**
	baz=283						
CHN8				*e*S	**Sb**	**12 36 09.3**	**+1.5**
	baz=283						
SCLT	**Jiali**	**0.77**	**268**	*e*P	**Pb**	**12 35 58.0**	**+0.7**
	baz=269						
SCLT				*e*S	**Sn**	**12 36 10.4**	**-0.1**
	baz=269						
DPDB	**Guoxing**	**0.83**	**353**	*e*P	**Pg**	**12 35 57.5**	**-0.3**
	baz=5.0						
EAST	**Anshuo**	**0.83**	**192**	⇑*i*P	**Pg**	**12 35 57.4**	**-0.5**
	baz=190						
WSF	**Szhu**	**0.86**	**300**	⇓P	**Pb**	**12 35 58.8**	**-0.1**
	baz=303						
WSF				*e*S	**Sb**	**12 36 11.1**	**+0.5**
	baz=303						
CHGB	**Renai**	**0.86**	**9**	⇑*e*P	**Pg**	**12 35 57.3**	**-1.1**
	baz=11						
KAU	**Kaohsiung**	**0.92**	**227**	*e*P	**Pn**	**12 36 01.9**	**+1.1**
	baz=226						
RLNB	**Erlin**	**0.92**	**318**	*e*P	**Pb**	**12 35 59.7**	**-0.2**
	baz=318						
HWA	**Hwalien**	**0.93**	**34**	*e*P	**Pb**	**12 35 59.8**	**-0.3**
	baz=48						
WTCT	**Ta-ch'eng**	**0.95**	**314**	*e*P	**Pg**	**12 35 59.7**	**-0.4**
	baz=316						
WTCT				*e*S	**Sb**	**12 36 14.0**	**+0.8**
	baz=316						
WHF	**Hehuan Shan**	**0.96**	**13**	⇑*e*P	**Pg**	**12 35 59.2**	**-1.1**
	baz=7.0						
WCHH	**Zhanghua**	**0.97**	**334**	*e*P	**Pn**	**12 36 01.9**	**+0.2**
	baz=321						
TWD	**Chiawan**	**1.01**	**31**	⇑*e*P	**Pg**	**12 36 00.7**	**-0.6**
	baz=33						
TDCB	**Techi**	**1.05**	**6**	*e*P	**Pg**	**12 36 00.7**	**-1.3**
	baz=1.0						
TWP	**Hsiaoliuchiu**	**1.05**	**216**	*e*P	**Pn**	**12 36 04.5**	**+1.8**
	baz=215						
NACB	**Ninganchiao**	**1.09**	**28**	⇑*e*P	**Pg**	**12 36 01.8**	**-1.0**
	baz=29						
NACB				*e*S	**Sb**	**12 36 17.4**	**+0.1**
	baz=29						
HEN	**Hengchun**	**1.22**	**193**	*e*P	**Pn**	**12 36 05.2**	**+0.2**
	baz=179						
NSY	**Sanyi**	**1.23**	**348**	*e*P	**Pn**	**12 36 06.2**	**+0.9**
	baz=352						
NSY				*e*S	**Sn**	**12 36 24.3**	**+2.3**
	baz=352						
LAY	**Lan-yu**	**1.25**	**157**	*e*P	**Pg**	**12 36 03.7**	**-2.2**
	baz=156						
NNSB	**Datong**	**1.26**	**15**	*e*P	**Pg**	**12 36 04.5**	**-1.5**
	baz=3.0						
NNSH	**Datong**	**1.26**	**15**	*e*P	**Pg**	**12 36 04.8**	**-1.3**
	baz=4.0						
WDGT	**Dungji**	**1.26**	**273**	⇓P	**Pg**	**12 36 04.9**	**-1.2**
	baz=275						
WDGT				*e*S	**Sg**	**12 36 21.2**	**-1.2**
	baz=275						
NNS	**Nan Shan**	**1.27**	**14**	*e*P	**Pg**	**12 36 05.0**	**-1.2**
	baz=3.0						
TWK1	**Hengchun**	**1.27**	**190**	⇑*e*P	**Pn**	**12 36 05.9**	**+0.2**
	baz=188						
TWK1				*e*S	**Sn**	**12 36 25.4**	**+2.6**
	baz=188						
TWKBT	**Hengchun**	**1.27**	**189**	⇑P	**Pn**	**12 36 05.9**	**+0.2**
	baz=188						
TWKBT				*e*S	**Sn**	**12 36 24.8**	**+1.9**
	baz=188						
PTSB	**Yuanli**	**1.27**	**346**	*e*P	**Pn**	**12 36 06.2**	**+0.5**
	baz=349						
PTSB				*e*S	**Sn**	**12 36 25.2**	**+2.2**
	baz=349						
TSEB	**Hengchuen, Pin**	**1.30**	**185**	*e*P	**Pb**	**12 36 06.3**	**-0.1**
	baz=176						
NMLH	**Miaoli**	**1.35**	**351**	*e*P	**Pb**	**12 36 07.9**	**+0.7**
	baz=350						
PHUB	**P'eng-hu**	**1.38**	**283**	*e*P	**Pn**	**12 36 06.4**	**-0.8**
	baz=285						
PHUB				*e*S	**Sg**	**12 36 23.9**	**-2.2**
	baz=285						
ENA	**Nanau**	**1.38**	**28**	*e*P	**Pn**	**12 36 07.4**	**+0.2**
	baz=42						
NANB	**Nanao**	**1.39**	**28**	*e*P	**Pn**	**12 36 07.4**	**+0.1**
	baz=42						
PNG	**Penghu**	**1.41**	**285**	⇓P	**Pn**	**12 36 06.7**	**-0.8**
	baz=284						

NSTT	Nanjuang baz=349	1.42	359	eP	Pg	12 36 09.1	0.0
NSTT	baz=349			eS	Sn	12 36 29.7	+3.1
ENAH	Nanao baz=43	1.43	30	eP	Pb	12 36 08.4	-0.2
VCHM	Qimei baz=272	1.47	271	⇑P	Pn	12 36 07.7	-0.8
VCHM	baz=272			eS	Sb	12 36 26.1	-2.1
YHNB	Yeheng baz=14	1.49	12	eP	Pn	12 36 08.9	0.0
YHNB	baz=14			eS	Sg	12 36 29.8	-0.1
NSK	Sanguang baz=15	1.50	11	eP	Pb	12 36 09.7	-0.1
ENTT	Nioudou baz=38	1.51	19	eP	Pb	12 36 09.8	-0.2
SBCB	Hsinchu baz=357	1.58	358	eP	Pg	12 36 12.5	+0.3
TWC	Suao baz=41	1.59	28	eP	Pb	12 36 11.1	-0.2
HSN	Hsinchu baz=358	1.59	358	eP	Pg	12 36 13.6	+1.2
TWE	Neicheng baz=39	1.62	21	P	Pg	12 36 12.1	-0.8
EOS1	EOS1 baz=55	1.67	37	eP	Pb	12 36 12.3	-0.4
ILA	Ilan baz=43	1.69	23	eP	Pb	12 36 12.6	-0.4
NCUH	Zhongli baz=5.0	1.76	5	eP	Pg	12 36 15.1	-0.5
NCU	National Centr baz=5.0	1.77	5	eP	Pg	12 36 16.4	+0.8
NTC	Toucheng baz=43	1.80	24	eP	Pg	12 36 15.5	-0.7
TATO	Taipei baz=27	1.81	13	eP	Pg	12 36 15.6	-1.0
EGS	baz=41	1.83	27	eP	Pg	12 36 16.2	-0.7
TAP1	Taipei baz=350	1.88	14	eP	Pg	12 36 17.8	0.0
TIPB	Shuangxi baz=41	1.90	22	eP	Pb	12 36 16.0	-0.7
TWS1	Kuangyinshan baz=13	1.92	10	eP	Pg	12 36 18.8	+0.2
NWF	Wu-fen Shan baz=41	1.98	20	eP	Pb	12 36 16.9	-1.1
WFSB	Wu-fen Shan baz=41	1.98	20	eP	Pb	12 36 17.3	-0.7
NTST	Danshui baz=14	1.99	11	eP	Pg	12 36 19.1	-0.9
YM04	YM04 baz=351	2.00	13	eP	Pb	12 36 17.4	-0.9
TWB1	Santiao Chiao baz=42	2.00	26	eP	Pg	12 36 19.4	-0.7
YM10	YM10 baz=354	2.00	14	eP	Pb	12 36 18.4	0.0
YM11	YM11 baz=354	2.02	14	eP	Pg	12 36 20.1	-0.4
YM07	YM07 baz=354	2.04	15	eP	Pb	12 36 17.8	-1.2
YM08	YM08 baz=353	2.04	14	eP	Pb	12 36 19.2	+0.2
TWY	Chenhua baz=37	2.13	14	eP	Pb	12 36 20.1	-0.3
JYNG	Yonagunijimaku	2.15	54	P	Pn	12 36 17.7	-0.1
JYNG				eS	Sn	12 36 43.4	-1.1
YOJ	Yonaguni jima baz=57	2.20	55	eP	Pn	12 36 18.4	-0.2
YOJ	Yonaguni jima	2.20	55	P	Pn	12 36 18.9	+0.4
YOJ				eS	Sn	12 36 46.0	+0.1
VWUC	VWUC baz=319	2.29	321	eP	Pn	12 36 19.9	+0.1
PCYT	Pengchaiyu baz=42	2.59	21	eP	Pn	12 36 26.2	+2.3
HATJ	Hateruma jima	2.68	71	P	Pn	12 36 25.2	+0.1
HATJ				eS	Sn	12 36 56.7	-1.0
IRIF	Iriomote-Funau	2.72	65	P	Pn	12 36 26.3	+0.7
IRIF				eS	Sn	12 36 57.7	-0.9
JKRS	Kuro-shima	2.92	69	P	Pn	12 36 30.1	+1.8
JKRS				eS	Sn	12 37 03.1	-0.4
JIJ	Ishigaki jima	3.08	67	P	Pn	12 36 30.6	+0.1
JIJ				S	Sn	12 37 05.9	-1.5
MATB	Ma-tsu baz=337	3.10	342	eP	Pn	12 36 30.6	-0.2
JISG	Ishigakijimahi	3.30	65	P	Pn	12 36 33.4	-0.2
JISG				eS	Sn	12 37 10.0	-3.0
JTJ	Tarama	3.65	66	P	Pn	12 36 38.5	+0.1
JTJ				S	Sn	12 37 21.2	-0.4
JIRB	Irabujima	4.12	66	P	Pn	12 36 45.2	+0.3

JMA ***07*** *12:38:35.4±0.2, 23°.10N×121°.38E, h0^{km}, M3.1*

ISCJB ***07*** *12:38:36.4±0.2, 23°.17N±0°.01×121°.04E±0°.01, h8^{km}±2^{km}, Error ellipse: s-maj=2.2km s-min=1.9km az=156.7*

TAP ***07*** *12:38:36.0, 23°.21N×121°.01E, h6^{km}, ML3.6, B*

ISC 07 12:38:36.0±0.8**, 23°.20N**±0°.01×**121°.07E**±0°.01**, h12**^{km}±5^{km}**, n102,** σ1^{s}.**14**/150**, 20C-17D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ELDTW	Lidau baz=148	0.05	259	⇓iP	Pg	12 38 37.6	-0.8
ELDTW	baz=148			i S	Sg	12 38 38.4	-1.8
FULB	Fuli baz=81	0.20	90	⇓eP	Pb	12 38 42.6	+1.0
FULB	baz=81			eS	Sg	12 38 46.9	+3.5
TWF1	Yuli baz=61	0.26	53	⇑iP	Pb	12 38 42.6	+0.1
TWF1	baz=61			i S	Sg	12 38 46.4	+1.5
YULB	Yu-li baz=54	0.28	47	⇑P	Pb	12 38 42.8	-0.2
YULB	baz=54			S	Sb	12 38 46.6	-1.2
CHKT	Chengkung baz=107	0.29	110	⇓iP	Pn	12 38 44.3	-1.7
CHKT	baz=107			eS	Sb	12 38 50.5	+2.7
STYT	Tauyuan baz=260	0.29	263	⇑iP	Pg	12 38 41.3	-0.8
STYT	baz=260			i S	Sg	12 38 44.4	-1.7
YUS	Yu-Shan baz=350	0.31	339	⇑iP	Pg	12 38 42.3	-0.2
YUS	baz=350			S	Sg	12 38 46.5	-0.4
TWG	Pinlang baz=163	0.38	180	⇓iP	Pb	12 38 44.0	-0.6
TWG	baz=163			eS	Sg	12 38 48.7	+0.1
TWGBT	Beinan baz=163	0.38	179	⇓P	Pb	12 38 44.0	-0.6
TWGBT	baz=163			eS	Sg	12 38 48.9	+0.3
EHY	Hungye baz=44	0.38	37	⇑iP	Pb	12 38 44.4	-0.3
EHY	baz=44			S	Sb	12 38 49.5	-1.1
TPUB	Ta-pu baz=294	0.42	284	⇓P	Pg	12 38 44.2	-0.1
TPUB	baz=294			S	Sg	12 38 49.6	-0.4
WTP	Ta-pu baz=277	0.43	276	⇓iP	Pg	12 38 44.3	-0.1
WTP	baz=277			i S	Sg	12 38 49.6	-0.5
HGSD	Ruisui baz=43	0.43	48	⇑eP	Pn	12 38 46.4	-1.7
HGSD	baz=43			eS	Sb	12 38 53.8	+1.7
TTN	Taitung baz=163	0.45	171	eP	Pn	12 38 47.0	-1.3
SGST	Jiashian baz=249	0.47	256	⇑iP	Pg	12 38 45.0	-0.2
SGST	baz=249			i S	Sg	12 38 51.2	-0.2
CHN1	Nanshi baz=262	0.50	269	⇑iP	Pg	12 38 46.0	+0.2
CHN1	baz=262			S	Sg	12 38 53.0	+0.4
CHN5	Tsauling baz=323	0.54	318	⇓iP	Pg	12 38 46.9	+0.3
CHN5	baz=323			S	Sg	12 38 54.3	+0.6
TWK	Hsinying baz=287	0.54	277	⇓iP	Pg	12 38 46.8	+0.1
TWK	baz=287			S	Sg	12 38 54.0	+0.1
SSLB	Suanglung baz=355	0.60	349	⇑P	Pg	12 38 47.1	-0.5
SSD	Sandimen baz=216	0.61	222	⇑iP	Pg	12 38 47.0	-0.8
ECL	Taimali baz=184	0.61	190	⇑iP	Pg	12 38 47.7	-0.1
ECL	baz=184			eS	Sg	12 38 54.7	-1.2
TWH	Lutao baz=122	0.61	143	i P	Pn	12 38 49.5	-1.0
TWH	baz=122			eS	Sn	12 38 60.0	-0.3
CHN2	Minshiung baz=304	0.64	301	P	Pb	12 38 49.3	+0.1
CHN3	Shinhua baz=258	0.66	260	eP	Pn	12 38 50.7	-0.5
CHN3	baz=258			eS	Sn	12 39 01.4	-0.1
CHY	Chiayi baz=299	0.67	297	eP	Pg	12 38 49.3	+0.3
WGK	Gukeng baz=321	0.68	316	⇓P	Pb	12 38 50.2	+0.4
WGK	baz=321			eS	Sb	12 38 59.5	+0.4
WDLH	Douliu baz=318	0.69	315	⇓eP	Pb	12 38 50.5	+0.5
ESL	Shilin baz=39	0.69	28	⇑P	Pb	12 38 49.9	-0.2
ESL	baz=39			eS	Sb	12 39 00.2	+0.6
WJS	Zhushan baz=342	0.70	333	eP	Pb	12 38 50.8	+0.7
WJS	baz=342			eS	Sn	12 39 01.5	-1.0
SMLT	Sun Moon Lake baz=1.0	0.70	347	⇑P	Pg	12 38 49.5	0.0
SMLT	baz=1.0			eS	Sb	12 38 59.9	0.0
MASBT	Mashibuluo baz=203	0.71	215	⇑eP	Pg	12 38 49.0	-0.8
SGLT	Jiouru baz=219	0.71	229	⇑P	Pb	12 38 50.4	+0.1
TYC	Yuchr baz=358	0.73	344	eP	Pb	12 38 50.6	-0.1
TYC	baz=358			eS	Sn	12 39 02.1	-1.1
WNT	Mingjian baz=338	0.77	332	⇓P	Pn	12 38 52.2	-0.4
WNT	baz=338			eS	Sn	12 39 03.1	-1.0
TAI1	Yung-k’ang baz=271	0.80	259	eP	Pb	12 38 52.1	+0.4
CHN8	Yiju baz=282	0.81	281	eP	Pg	12 38 51.9	+0.3
CHN8	baz=282			eS	Sb	12 39 04.1	+1.3
SCLT	Jiali baz=268	0.81	268	eP	Pg	12 38 51.9	+0.3
SCLT	baz=268			eS	Sn	12 39 05.0	-0.1
EAST	Anshuo baz=189	0.84	194	⇑iP	Pb	12 38 52.0	-0.5
DPDB	Guoxing baz=5.0	0.84	351	eP	Pg	12 38 51.9	-0.4
TAW	Tawu baz=195	0.85	191	⇑P	Pb	12 38 52.3	-0.5
CHGB	Renai baz=11	0.86	6	⇑eP	Pg	12 38 52.0	-0.7
WSF	Szhu baz=302	0.90	299	eP	Pg	12 38 53.3	0.0
WSF	baz=302			eS	Sb	12 39 05.8	+0.4
HWA	Hwalien baz=47	0.92	32	eP	Pn	12 38 54.7	0.0
RLNB	Erlin baz=319	0.95	317	eP	Pg	12 38 54.4	+0.1
WHF	Hehuan Shan baz=7.0	0.96	11	⇑eP	Pg	12 38 53.9	-0.7
WTCT	Ta-ch’eng baz=316	0.98	312	eP	Pb	12 38 54.8	-0.2
WTCT	baz=316			eS	Sb	12 39 08.6	+0.7
WCHH	Zhanghua baz=321	1.00	332	eP	Pn	12 38 55.6	-0.2
TWD	Chiawan baz=33	1.00	29	eP	Pn	12 38 55.2	-0.7
TDCB	Techi baz=1.0	1.05	4	eP	Pb	12 38 55.3	-0.9
TWT	Tachien baz=1.0	1.05	5	eP	Pb	12 38 56.0	-0.3
TWP	Hsiaoliuchiu baz=215	1.07	218	eP	Pn	12 38 59.0	+2.2
TWP	baz=215			eS	Sn	12 39 17.6	+6.0
NACB	Ninganchiao baz=47	1.08	26	eP	Pb	12 38 56.2	-0.5
HEN	Hengchun baz=177	1.23	195	eP	Pg	12 38 60.0	+0.4
LAY	Lan-yu baz=156	1.24	159	eP	Pn	12 38 57.6	-1.5
NSY	Sanyi baz=351	1.25	347	eP	Pg	12 39 00.9	+1.0
NSY	baz=351			eS	Sg	12 39 18.8	+2.7
NNSB	Datong baz=3.0	1.26	13	eP	Pb	12 38 59.3	-0.4
NNSH	Datong baz=13	1.26	13	eP	Pn	12 38 59.2	-0.3
NNS	Nan Shan baz=3.0	1.27	12	eP	Pg	12 38 59.8	-0.5
TWK1	Hengchun baz=178	1.27	191	eP	Pg	12 39 00.5	0.0
TWKBT	Hengchun baz=176	1.27	191	⇑P	Pg	12 39 00.0	-0.5
TWKBT	baz=176			eS	Sg	12 39 20.3	+3.2
PTSB	Yuanli baz=349	1.29	345	eP	Pg	12 39 01.0	+0.3
PTSB	baz=349			eS	Sg	12 39 19.6	+2.1
WDGT	Dungji baz=274	1.30	273	⇓P	Pn	12 38 59.5	-0.5
WDGT	baz=274			eS	Sb	12 39 15.7	-1.4
TSEB	Hengchuen, Pin baz=175	1.30	187	eP	Pg	12 39 00.7	-0.4
NMLH	Miaoli baz=351	1.36	349	eP	Pg	12 39 02.9	+0.8
NANB	Nanao baz=43	1.37	27	eP	Pg	12 39 02.0	-0.3
PHUB	P’eng-hu baz=285	1.42	283	⇓P	Pn	12 39 00.9	-0.7
PHUB	baz=285			S	Sn	12 39 19.1	-1.0
ENAH	Nanao baz=43	1.42	28	eP	Pg	12 39 03.2	0.0
NSTT	Nanjuang baz=349	1.43	357	eP	Pg	12 39 03.5	+0.1
NSTT	baz=349			eS	Sg	12 39 24.3	+2.3
PNG	Penghu baz=284	1.44	285	⇓P	Pn	12 39 01.4	-0.6
YHNB	Yeheng baz=15	1.49	11	eP	Pb	12 39 03.3	-0.4
NSK	Sanguang baz=15	1.49	10	P	Pg	12 39 04.7	+0.1
ENTT	Nioudou baz=22	1.50	17	eP	Pg	12 39 04.5	-0.4
VCHM	Qimei baz=272	1.51	271	⇓P	Pn	12 39 02.4	-0.5
VCHM	baz=272			eS	Sn	12 39 21.1	-1.4
TWC	Suao baz=28	1.57	27	⇓eP	Pg	12 39 06.4	+0.2
TWC	baz=28			eS	Sg	12 39 27.3	+0.6
SBCB	Hsinchu baz=358	1.59	357	eP	Pg	12 39 06.8	+0.3
TWE	Neicheng baz=36	1.61	20	eP	Pg	12 39 06.6	-0.3
TWE	baz=36			eS	Sg	12 39 29.5	+1.7
EOS1	EOS1 baz=56	1.66	35	eP	Pg	12 39 06.6	-1.2
TATO	Taipei baz=27	1.81	12	eP	Pg	12 39 10.2	-0.5
EGS	baz=41	1.82	25	eP	Pg	12 39 10.7	-0.2
TWA	Mucha baz=42	1.83	15	eP	Pg	12 39 11.4	+0.2
TIPB	Shuangxi baz=38	1.89	21	P	Pb	12 39 10.9	+0.3
TIPB	baz=38			eS	Sg	12 39 36.0	-1.0
TWS1	Kuangyinshan baz=25	1.92	9	eP	Pg	12 39 12.7	-0.1
NWF	Wu-fen Shan baz=42	1.97	19	eP	Pg	12 39 12.9	-0.9
WFSB	Wu-fen Shan baz=42	1.97	19	eP	Pb	12 39 12.4	+0.6
TWB1	Santiao Chiao baz=43	1.99	25	eP	Pg	12 39 13.1	-0.9
YM04	YM04 baz=354	1.99	12	eP	Pb	12 39 12.4	+0.3
YM10	YM10 baz=355	2.00	13	eP	Pg	12 39 13.6	-0.7
YM11	YM11 baz=355	2.01	13	eP	Pg	12 39 14.5	-0.1
YM07	YM07 baz=39	2.03	14	eP	Pb	12 39 12.4	-0.4
JYNG	Yonagunijimaku	2.12	54	P	Pb	12 39 12.2	-2.1
JYNG				S	Sb	12 39 38.3	-2.3
TWY	Chenhua baz=354	2.12	13	eP	Pg	12 39 16.4	-0.3
YOJ	Yonaguni jima baz=68	2.17	54	P	Pb	12 39 13.5	-1.8
YOJ	baz=68			eS	Sb	12 39 40.6	-1.6
YOJ	Yonaguni jima	2.17	54	P	Pb	12 39 13.4	-1.8
YOJ				eS	Sb	12 39 41.3	-0.9
VWUC	VWUC baz=319	2.32	321	eP	Pn	12 39 13.6	-0.4
PCYT	Pengchaiyu baz=43	2.58	20	eP	Pb	12 39 20.4	-1.9
HATJ	Hateruma jima	2.65	71	P	Pn	12 39 20.0	+1.5
HATJ				eS	Sn	12 39 50.8	+0.3
IRIF	Iriomote-Funau	2.68	65	P	Pb	12 39 21.4	-2.6
IRIF				eS	Sn	12 39 53.0	+1.6
JKRS	Kuro-shima	2.88	68	eS	Sn	12 39 56.5	+0.2
JIJ	Ishigaki jima	3.04	67	P	Pn	12 39 25.7	+1.8
JIJ				S	Sn	12 40 01.0	+0.7
MATB	Ma-tsu baz=338	3.11	341	eP	Pn	12 39 24.5	-0.4
JISG	Ishigakijimahi	3.27	64	P	Pn	12 39 27.9	+0.8
JISG				eS	Sn	12 40 07.0	+1.1
JTJ	Tarama	3.62	66	P	Pn	12 39 32.0	+0.2

MAN 07 12:41:34.2, 11°.79N×124°.27E, h59^{km}, mb4.4, ML3.3, MS3.1, 1C, Leyte

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OCLP	Ormoc	0.80	156	eP	Pn	12 41 50.8	+1.1
OCLP				eS	Sn	12 42 03.5	+2.4
CNP	Catarman	0.81	28	eP	Pn	12 41 50.5	+0.7
CNP				eS	Sn	12 42 03.9	+2.6
BESP	Borongan	1.16	99	eP	Pn	12 41 55.6	+1.4
BESP				eS	Sn	12 42 10.7	+1.4
RCP	Roxas	1.51	262	⇑eP	Pn	12 41 59.9	+0.8
RCP				eS	Sn	12 42 19.3	+1.6

TIR ***07*** *12:59:08.0, 41°.35N×20°.95E, h12^{km}, Md4.2/8*

IDC ***07*** *12:59:07.5±0.5, 41°.30N×20°.83E, h0^{km}, mb4.2/24, mb1 4.2/37, mb1mx4.1/70, mbtmp4.1/37, ML3.8/10, MS3.1/16, Ms1 3.1/16, ms1mx2.9/63, Error ellipse: s-maj=9.2km s-min=7.7km az=41.0*

ISCJB ***07*** *12:59:09.0±0.2, 41°.361N±0°.009×20°.88E±0°.01, h11^{km}±1^{km}, mb4.2/30, MS3.1/8, Error ellipse: s-maj=1.9km s-min=1.3km az=146.3*

SKO ***07*** *12:59:08.1, 41°.34N×20°.88E, h15^{km}, M3.9, ML4.3*

NEIC ***07*** *12:59:10.0±0.2, 41°.33N×20°.85E, h10^{km}, mb4.3/2, MW4.1, ML4.2(TIR), ML4.3(SKO), Error ellipse: s-maj=4.5km s-min=3.4km az=206.0, Moment Tensor Solution. s24 Moment tensor: Scale 10^{15}Nm; M_{rr}-1.39; $M_{\theta\theta}$0.85; $M_{\phi\phi}$0.54; $M_{r\theta}$-0.32; $M_{\theta\phi}$1.06; $M_{\phi r}$-0.59; Best double couple: $M_0$1.80000×10^{15} NP1:ϕ_s39.00000°, δ57.00000°, λ-103.00000°. NP2:ϕ_s241.00000°, δ35.00000°, λ-71.00000°. Principal axes: T 1.8900, Plg11.0000°, Azm138.0000°; N -0.3400, Plg11.0000°, Azm46.0000°; P -1.5600, Plg75.0000°, Azm273.0000°;*

NEIC Felt [III] at Ohrid.

CSEM ***07*** *12:59:09.4±0.1, 41°.35N×20°.94E, h2^{km}, mb4.4/5, ML4.5/8, Mw4.1 Error ellipse: s-maj=2.3km s-min=1.5km az=61.0*

THE ***07*** *12:59:09.4, 41°.33N×20°.96E, h1^{km}±1^{km}, ML4.1/14, Error ellipse: s-maj=1.3km s-min=0.5km az=277.0*

PDG ***07*** *12:59:09.2±0.6, 41°.35N×20°.92E, h6^{km}, MD4.3/10, ML4.4/11, Error ellipse: s-maj=0.4km s-min=0.7km az=0.0*

BEO ***07*** *12:59:09.5±0.2, 41°.35N×20°.89E, h0^{km}, ML4.1/11*

LDG ***07*** *12:59:09.1±0.1, 41°.32N×20°.91E, h2^{km}, Ml4.5/7, Error ellipse: s-maj=3.1km s-min=2.1km az=47.0*

ATH ***07*** *12:59:10.5, 41°.30N×21°.08E, h20^{km}±1^{km}, ML4.0/25, Error ellipse: s-maj=3.3km s-min=1.1km az=147.0*

MOS ***07*** *12:59:10.3±1.1, 41°.29N×20°.73E, h33^{km}, mb4.4/5, Error ellipse: s-maj=6.4km s-min=3.7km az=103.8*

PRU ***07*** *12:59:11.0, 41°.41N×20°.86E, h0^{km}, M4.3*

ISC 07 12:59:09.8±0.8**, 41°.34N**±0°.01×**20°.92E**±0°.01**, h11**^{km}±5^{km}**, n595,** σ1^{s}.**62**/739**, mb4.2**/30**, MS3.0**/8**, 35C-53D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHR	Ohrid	0.24	202	⇑iPg	Pg	12 59 14.1	-0.7
OHR				i Sg	Sg	12 59 18.2	-0.1
OHR	comp=N,55µm,0.4s			eLg	Lg	12 59 18.3	
KRUS	Krusevo	0.25	82	⇑iPg	Pg	12 59 14.9	-0.1
KRUS				i Sg	Sg	12 59 19.1	+0.6
BIA	Bitola	0.44	136	⇑iPg	Pg	12 59 18.3	-0.2
BIA				i Sg	Sb	12 59 26.5	+0.3
PHP	Peshkopia	0.50	314	i Pg	Pg	12 59 18.1	-1.6
PHP				i Sg	Sg	12 59 26.7	+0.4
PHP	Peshkopia	0.50	314	i PG	Pg	12 59 18.1	-1.6
PHP				i SG	Sg	12 59 26.7	+0.4
FNA	Florina	0.65	148	ePg	Pg	12 59 21.3	-1.1
FNA				eSg	Sg	12 59 31.3	+0.3
FNA	Florina	0.65	148	P	Pg	12 59 21.4	-1.0
FNA				S	Sg	12 59 30.4	-0.6
FNA	comp=E,68002µm,0.3s			AML	AML	12 59 35.4	
FNA	comp=N,56366µm,0.4s			AML	AML	12 59 36.4	
FNA	Florina	0.65	148	ePg	Pg	12 59 21.4	-1.0
FNA				eSg	Sg	12 59 31.6	+0.6
FNA	Florina	0.65	148	P	Pg	12 59 21.4	-1.0
FNA				S	Sg	12 59 30.9	-0.1
FNA	Florina	0.65	148	eP	Pg	12 59 21.4	-1.0
FNA				e		12 59 31.7	
FNA	Florina	0.65	148	ePg	Pg	12 59 21.3	-1.1
FNA	Florina	0.65	148	P	Pg	12 59 21.6	-0.8
FNA				S	Sg	12 59 30.9	-0.1
FNA				eSg	Sg	12 59 31.6	+0.6
KBN	Korca	0.72	188	i Pg	Pg	12 59 22.7	-1.0
KBN				i Sg	Sb	12 59 33.9	-0.3
KBN	Korca	0.72	188	i PG	Pg	12 59 22.7	-1.0
KBN				i SG	Sb	12 59 33.9	-0.3
SKO	Skopje	0.75	31	ePg	Pg	12 59 23.8	-0.5
SKO				eSg	Sg	12 59 33.7	-0.3
SKO	Skopje	0.75	31	P	Pg	12 59 23.7	-0.5
SKO				S	Sb	12 59 34.6	-0.4
SKO	Skopje	0.75	31	i Pg	Pg	12 59 24.0	-0.3
SKO				i Sg	Sg	12 59 34.3	+0.2
SKO	Skopje	0.75	31	ePg	Pg	12 59 23.8	-0.5
SKO				eSg	Sg	12 59 33.7	-0.3
SKO				S	Sb	12 59 34.6	-0.4
PRZK	Prizren	0.88	352	P	Pg	12 59 25.6	-1.3
NEST	Nestorio	0.92	174	P	Pg	12 59 25.7	-2.0
NEST	comp=N,28839µm,0.5s			AML	AML	12 59 46.8	
NEST	comp=E,33824µm,0.5s			AML	AML	12 59 46.8	
NEST	Nestorio	0.92	174	P	Pg	12 59 26.2	-1.4
NEST				S	Sg	12 59 39.6	-0.1

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NEST  Nestorio          0.92 174  P     Pg   12 59 26.5 -1.1
NEST                              S     Sg   12 59 39.6 -0.1
STIP  Stip              1.02  69⇑iPg    Pn   12 59 31.6 +1.6
STIP                             i Sg   Sn   12 59 48.7 +4.4
PUK   Puka              1.04 313 i Pg   Pg   12 59 28.1 -1.9
PUK                              i Sg   Sg   12 59 43.3 -0.3
PUK   Puka              1.04 313 i PG   Pg   12 59 28.1 -1.9
PUK                              i SG   Sg   12 59 43.3 -0.3
ZATK  Zatriq            1.14 349  P     Pg   12 59 29.7 -2.0
PENT  Pentalofos        1.15 172  P     Pb   12 59 30.9 -0.9
PENT                              AML   AML  12 59 50.8
      comp=E,29985µm,0.9s
PENT                              AML   AML  12 59 55.7
      comp=N,29059µm,0.9s
PENT  Pentalofos        1.15 172  P     Pb   12 59 30.2 -1.5
PENT                              S     Sn   12 59 48.2 +0.5
PENT  Pentalofos        1.15 172  P     Pb   12 59 31.2 -0.5
PENT                              S     Sn   12 59 48.2 +0.5
GRG   Griva             1.18 108  P     Pb   12 59 32.1 -0.1
GRG                               S     Sb   12 59 45.5 -2.0
GRG                               AML   AML  12 59 53.0
      comp=E,17343µm,0.9s
GRG                               AML   AML  12 59 56.1
      comp=N,12232µm,0.9s
GRG   Griva             1.18 108  P     Pb   12 59 31.5 -0.7
GRG                               S     Sn   12 59 48.6 +0.3
GRG   Griva             1.18 108  P     Pb   12 59 31.5 -0.7
GRG                               S     Sb   12 59 45.5 -2.0
BCI   Bajram Curri      1.21 329 i Pn   Pb   12 59 31.2 -1.6
BCI                              i Sn   Sn   12 59 49.7 +0.6
BCI   Bajram Curri      1.21 329 i PN   Pb   12 59 31.2 -1.6
BCI                              i SN   Sn   12 59 49.7 +0.6
KZN   Kozani            1.21 148  P     Pb   12 59 31.7 -1.1
KZN                               AML   AML  12 59 57.0
      comp=N,9815µm,0.5s
KZN                               AML   AML  12 59 57.4
      comp=E,20786µm,0.7s
KZN   Kozani            1.21 148  P     Pb   12 59 31.0 -1.8
KZN                               S     Sg   12 59 49.0 +0.1
KZN   Kozani            1.21 148  P     Pb   12 59 31.8 -1.0
KZN                               S     Sg   12 59 49.0 +0.1
VAY   Valandovo         1.24  90 ePg    Pn   12 59 32.5 -0.5
VAY                              eSg    Sb   12 59 49.5 +0.2
VAY   Valandovo         1.24  90  P     Pn   12 59 32.6 -0.5
VAY                               S     Sb   12 59 49.4 +0.2
VAY   Valandovo         1.24  90⇑iPg    Pn   12 59 32.6 -0.5
VAY                              i Sg   Sn   12 59 49.9 +0.1
VAY                              eLg    Lg   12 59 52.7
      comp=N,4µm,0.7s
VAY                              eLg    Lg   12 59 52.9
      comp=E,4µm,0.6s
VAY   Valandovo         1.24  90  P     Pn   12 59 32.6 -0.5
VAY                               S     Sb   12 59 49.4 +0.2
VLO   Vlora             1.38 232 i Pn   Pb   12 59 35.9 +0.2
VLO                              i Sn   Sg   12 59 55.1 +0.8
VLO   Vlora             1.38 232 i PN   Pb   12 59 35.9 +0.2
VLO                              i SN   Sg   12 59 55.1 +0.7
ULC   Ulcinj            1.40 297⇓iPg    Pn   12 59 34.2 -1.1
ULC                              eSg    Sg   12 59 56.9 +1.9
ULC   Ulcinj            1.40 297  P     Pn   12 59 34.3 -1.1
ULC                              eSg    Sg   12 59 56.9 +1.9
KPRO  Kipourio          1.42 166  P     Pb   12 59 36.5 +0.2
KPRO                              AML   AML  13 00 05.8
      comp=N,15892µm,0.9s
KPRO                              AML   AML  13 00 09.9
      comp=E,18766µm,0.8s
KPRO  Kipourio          1.42 166  P     Pn   12 59 35.5 -0.1
KPRO                              S     Sb   12 59 54.7 +0.3
KPRO  Kipourio          1.42 166  P     Pb   12 59 36.3  0.0
KPRO                              S     Sb   12 59 54.7 +0.3
PVY   Plav              1.45 331⇑iPg    Pn   12 59 35.5 -0.6
PVY                              eSg    Sg   12 59 59.0 +2.5
PVY   Plav              1.45 331⇑iPg    Pn   12 59 35.5 -0.6
PVY                              eSg    Sg   12 59 59.0 +2.5
KNT   Kendrikon         1.50  96  P     Pn   12 59 37.2 +0.5
KNT                               AML   AML  13 00 02.5
      comp=E,4812µm,1.3s
KNT                               AML   AML  13 00 03.1
      comp=N,8860µm,0.6s
KNT   Kendrikon         1.50  96  P     Pn   12 59 36.6 -0.1
KNT                               S     Sg   12 59 57.5 -0.6
KNT   Kendrikon         1.50  96  P     Pn   12 59 36.9 +0.2
KNT                               S     Sg   12 59 57.5 -0.6
SMRK  Smrekonice        1.54   0  S     Sg   13 00 00.5 +1.2
DRME  Dracevica, Mon    1.55 304⇓iPg    Pn   12 59 37.1 -0.3
DRME                             eSg    Sg   13 00 02.6 +2.8
DRME  Dracevica, Mon    1.55 304⇓iPn    Pn   12 59 37.0 -0.3
DRME                             eSg    Sg   13 00 02.6 +2.8
BARS  Barje             1.62  24 ePg    Pn   12 59 38.9 +0.5
BARS                             eSg    Sg   13 00 01.9 -0.1
BARS  Barje             1.62  24 ePg    Pn   12 59 38.9 +0.5
BARS                             eSg    Sg   13 00 01.9 -0.1
PDG   Podgorica         1.66 312 ePg    Pn   12 59 39.4 +0.6
PDG                              eSg    Sb   13 00 01.9 +0.7
PDG   Podgorica         1.66 312⇓iP     Pn   12 59 39.6 +0.8
PDG   Podgorica         1.66 312  S     Sg   13 00 02.8 -0.3
PDG   Podgorica         1.66 312  P     Pn   12 59 38.6 -0.2
PDG                               S     Sg   13 00 03.1  0.0
PDG   Podgorica         1.66 312  P     Pn   12 59 38.6 -0.2
PDG   Podgorica         1.66 312⇑iPn    Pn   12 59 39.2 +0.4
PDG   Podgorica         1.66 312 ePg    Pn   12 59 39.4 +0.6
PDG                              eSg    Sb   13 00 01.9 +0.7
PDG                               S     Sg   13 00 03.1  0.0
PDG                              eSn    Sg   13 00 04.4 +1.3
TTG   Podgorica         1.66 312⇑iPn    Pn   12 59 39.2 +0.4
TTG                              eSn    Sg   13 00 04.4 +1.3
TTG   Podgorica         1.66 312 ePn    Pb   12 59 40.2 -0.1
TTG   Podgorica         1.66 312 ePn    Pb   12 59 40.2 -0.1
JAN   Janina            1.68 182  P     Pb   12 59 41.2 +0.5
JAN                               AML   AML  13 00 13.4
      comp=E,13844µm,0.6s
JAN                               AML   AML  13 00 16.1
      comp=N,10878µm,0.8s
JAN   Janina            1.68 182  P     Pb   12 59 40.9 +0.2
THE   Thessaloniki      1.70 114  P     Pn   12 59 39.4 +0.1
THE                               AML   AML  13 00 11.5
      comp=N,2906µm,0.8s
THE                               AML   AML  13 00 15.5
      comp=E,2224µm,0.6s
THE   Thessaloniki      1.70 114  P     Pn   12 59 39.1 -0.3
THE   Thessaloniki      1.70 114  P     Pn   12 59 39.5 +0.1
LIT   Litokhoron        1.71 135  P     Pn   12 59 40.0 +0.4
LIT                               AML   AML  13 00 16.6
      comp=N,5756µm,0.5s
LIT                               AML   AML  13 00 17.6
      comp=E,7100µm,0.7s
LIT   Litokhoron        1.71 135 ePn    Pn   12 59 39.8 +0.2
LIT   Litokhoron        1.71 135  P     Pn   12 59 39.7 +0.1
LIT   Litokhoron        1.71 135 eP     Pn   12 59 39.8 +0.2
LIT   Litokhoron        1.71 135  P     Pn   12 59 40.0 +0.4
BEY   Berane            1.72 334⇓iPn    Pb   12 59 40.9 -0.5
BEY                              eSn    Sg   13 00 05.5 +0.5
IVA   Berane            1.72 334⇓iPn    Pb   12 59 40.9 -0.5
IVA                              eSn    Sg   13 00 05.5 +0.5
KASA  Kassiopi          1.76 206  P     Pg   12 59 43.7 +0.2
KASA                              AML   AML  13 00 15.6
      comp=E,5146µm,0.7s
KASA                              AML   AML  13 00 16.0
      comp=N,5838µm,0.5s
KASA  Kassiopi          1.76 206  P     Pg   12 59 43.0 -0.5
BUM   Brajici-Budva     1.80 303⇓iPn    Pn   12 59 41.6 +0.8
BUM                              eSn    Sg   13 00 07.4 -0.2
BUM   Brajici-Budva     1.80 303⇓iPn    Pn   12 59 41.6 +0.8
BUM                              eSn    Sg   13 00 07.4 -0.2
SGD   Sagiada           1.80 197  P     Pg   12 59 44.0 -0.3
SGD   Sagiada           1.80 197  P     Pb   12 59 43.4 +0.7
KEK   Kerkira           1.83 208  P     Pn   12 59 41.9 +0.7
KEK                               AML   AML  13 00 18.4
      comp=E,6276µm,0.7s
KEK                               AML   AML  13 00 24.0
      comp=N,5132µm,1.1s
KEK   Kerkira           1.83 208  P     Pb   12 59 42.5 -0.8
KEK   Kerkira           1.83 208  P     Pb   12 59 42.7 -0.6
KOME  Kolasin           1.84 326⇓iPn    Pn   12 59 41.9 +0.5
KOME                             eSn    Sg   13 00 08.7 -0.3
KOME  Kolasin           1.84 326⇓iPn    Pn   12 59 41.9 +0.5
KOME                             eSn    Sg   13 00 08.7 -0.3
IGT   Igoumenitsa       1.86 194 ePn    Pb   12 59 43.3 -0.4
IGT                              eSn    Sb   13 00 07.2 +0.3
IGT   Igoumenitsa       1.86 194  P     Pg   12 59 44.7 -0.7
IGT                               AML   AML  13 00 11.8
      comp=N,6619µm,0.7s
IGT                               AML   AML  13 00 11.8
      comp=E,7699µm,0.9s
IGT   Igoumenitsa       1.86 194  P     Pb   12 59 43.6 -0.1
IGT                               S     Sb   13 00 07.2 +0.3
IGT   Igoumenitsa       1.86 194 ePn    Pb   12 59 43.3 -0.4
IGT   Igoumenitsa       1.86 194  P     Pb   12 59 43.6 -0.1
IGT                               S     Sb   13 00 07.2 +0.3
SELS  Selova            1.89   4 ePn    Pn   12 59 41.7 -0.3
SELS                             eSn    Sn   13 00 06.9 +1.1
CEME  Cevo              1.92 310⇑iPn    Pn   12 59 42.9 +0.4
CEME                             eSn    Sg   13 00 10.4 -1.3
CEME  Cevo              1.92 310⇑iPn    Pn   12 59 42.9 +0.4
CEME                             eSn    Sg   13 00 10.4 -1.3
THL   Klokotos Trika    1.96 154  P     Pn   12 59 43.7 +0.8
THL                               AML   AML  13 00 15.6
      comp=E,5780µm,0.8s
THL                               AML   AML  13 00 17.0
      comp=N,5505µm,0.8s
THL   Klokotos Trika    1.96 154  P     Pn   12 59 43.5 +0.6
THL                               S     Sb   13 00 09.0 -0.8
THL   Klokotos Trika    1.96 154  P     Pn   12 59 43.7 +0.8
THL                               S     Sb   13 00 09.0 -0.8
LRSO  Larissa Observ    2.00 146  P     Pn   12 59 44.7 +1.1
LRSO  Larissa Observ    2.00 146  P     Pn   12 59 44.5 +0.9
SRS   Serrai            2.03  95  P     Pn   12 59 43.8  0.0
SRS                               AML   AML  13 00 19.2
      comp=N,2698µm,0.8s
SRS                               AML   AML  13 00 19.4
      comp=E,3560µm,0.9s
SRS   Serrai            2.03  95  P     Pn   12 59 43.9  0.0
SRS                               S     Sn   13 00 09.7 +0.5
SRS   Serrai            2.03  95  P     Pn   12 59 44.0 +0.1
SRS                               S     Sn   13 00 09.7 +0.5
NKME  Niksic            2.05 315⇓iPn    Pn   12 59 45.6 +1.4
NKME                             eSn    Sb   13 00 13.6 +1.1
NKME  Niksic            2.05 315⇓iPn    Pn   12 59 45.6 +1.4
NKME                             eSn    Sb   13 00 13.6 +1.1
SJES  Sjenica           2.05 340 ePn    Pn   12 59 45.6 +1.3
SJES                             eSn    Sn   13 00 11.0 +1.1
NKY   Niksic            2.06 316⇓iPn    Pb   12 59 46.2 -1.1
NKY                              eSn    Sb   13 00 13.6 +0.7
NKY   Niksic            2.06 316⇓iPn    Pb   12 59 46.2 -1.1
NKY                              eSn    Sb   13 00 13.6 +0.7
VTS   Vitosha           2.12  53 ePn    Pn   12 59 46.5 +1.2
VTS                              eSn    Sn   13 00 12.9 +1.2
VTS   Vitosha           2.12  53⇑iP     Pb   12 59 47.4 -0.9
VTS   Vitosha           2.12  53 ePn    Pn   12 59 46.8 +1.5
VTS                              eSn    Sb   13 00 13.9 -0.8
VTS   Vitosha           2.12  53  P     Pn   12 59 46.3 +1.0
VTS                               S     Sb   13 00 13.3 -1.3
VTS   Vitosha           2.12  53 eP     Pn   12 59 46.8 +1.5
VTS                              e           13 00 13.9
VTS   Vitosha           2.12  53  P     Pn   12 59 46.3 +1.0
VTS   Vitosha           2.12  53 ePn    Pn   12 59 46.8 +1.5
VTS                               S     Sb   13 00 13.3 -1.3
HCY   Herceg Novi       2.13 302⇑iPn    Pb   12 59 46.9 -1.4
HCY                              eSn    Sb   13 00 15.2 +0.5
HCY   Herceg Novi       2.13 302⇑iPn    Pb   12 59 46.9 -1.4
HCY                              eSn    Sb   13 00 15.2 +0.5
PLG   Polygyros         2.14 116  P     Pn   12 59 46.5 +1.0
PLG                               AML   AML  13 00 17.5
      comp=N,1708µm,1.2s
PLG                               AML   AML  13 00 28.4
      comp=E,1592µm,0.6s
PLG   Polygyros         2.14 116  P     Pn   12 59 45.7 +0.2
PLG                               S     Sn   13 00 13.1 +1.0
PLG   Polygyros         2.14 116  P     Pn   12 59 46.2 +0.7
PLG                               S     Sn   13 00 13.1 +1.0
NVR   Nevrokopi         2.21  89  P     Pn   12 59 47.3 +0.8
NVR                               AML   AML  13 00 26.2
      comp=N,4048µm,0.7s
NVR                               AML   AML  13 00 26.5
      comp=E,2938µm,0.7s
NVR   Nevrokopi         2.21  89  P     Pn   12 59 46.7 +0.2
NVR                               S     Sn   13 00 14.7 +0.8
NVR   Nevrokopi         2.21  89  P     Pn   12 59 46.7 +0.2
NVR                               S     Sn   13 00 14.7 +0.8
PLE   Pljevlja          2.29 331⇑iPn    Pn   12 59 49.0 +1.3
PLE                              eSn    Sb   13 00 19.5 -0.2
PLE   Pljevlja          2.29 331⇑iPn    Pn   12 59 49.0 +1.3
PLE                              eSn    Sb   13 00 19.5 -0.2
IVAS  Ivanjica          2.31 346 ePn    Pn   12 59 48.1 +0.2
IVAS  Ivanjica          2.31 346 ePn    Pn   12 59 48.1 +0.2
ZAPS  Zavoj             2.32  33 ePn    Pn   12 59 49.0 +1.1
ZAPS                             eSn    Sn   13 00 18.3 +1.9
TREB  Trebinje          2.36 307⇑iPn    Pn   12 59 50.3 +1.8
BRY   Bratogost         2.36 312⇑iPn    Pn   12 59 50.0 +1.3
BRY                              eSn    Sb   13 00 21.4 -0.3
BRY   Bratogost         2.36 312⇑iPn    Pn   12 59 50.0 +1.3
BRY                              eSn    Sb   13 00 21.4 -0.3
BOVS  Bovan             2.37  14 ePn    Pn   12 59 49.4 +0.8
BOVS                             eSn    Sn   13 00 19.7 +2.0
BOVS  Bovan             2.37  14 ePn    Pn   12 59 49.4 +0.8
BOVS                             eSn    Sn   13 00 19.7 +2.0
UPM   Unac-Piva         2.39 322⇓iPn    Pn   12 59 50.7 +1.6
UPM                              eSn    Sb   13 00 21.5 -1.1
UPM   Unac-Piva         2.39 322⇓iPn    Pn   12 59 50.7 +1.6
UPM   Unac-Piva         2.39 322  P     Pb   12 59 52.4 -0.6
UPM                              eSn    Sb   13 00 21.5 -1.1
FYTO  Fytoko, Volos     2.47 141  P     Pn   12 59 50.1 +0.2
FYTO  Fytoko, Volos     2.47 141  P     Pn   12 59 50.1 +0.2
EVR   Evrytania         2.51 164  P     Pn   12 59 52.8 +2.2
EVR                               AML   AML  13 00 39.4
      comp=E,3350µm,0.7s
EVR                               AML   AML  13 00 41.6
      comp=N,3969µm,1.2s
EVR   Evrytania         2.51 164  P     Pn   12 59 52.3 +1.7
PAIG  Paliouri          2.53 123  P     Pn   12 59 50.7  0.0
PAIG                              AML   AML  13 00 39.4
      comp=E,1203µm,0.8s
PAIG                              AML   AML  13 00 43.0
      comp=N,1847µm,0.9s
PAIG  Paliouri          2.53 123  P     Pn   12 59 50.8  0.0
PAIG  Paliouri          2.53 123  P     Pn   12 59 50.9 +0.2
AGG   Agios Georgios    2.55 154  P     Pn   12 59 51.7 +0.6
AGG                               AML   AML  13 00 30.0
      comp=N,11166µm,0.5s
AGG                               AML   AML  13 00 43.7
      comp=E,8200µm,0.8s
AGG   Agios Georgios    2.55 154 ePn    Pn   12 59 51.7 +0.6
AGG   Agios Georgios    2.55 154  P     Pn   12 59 51.7 +0.6
AGG                               S     Sn   13 00 23.9 +1.8
AGG   Agios Georgios    2.55 154 eP     Pn   12 59 51.7 +0.6
AGG   Agios Georgios    2.55 154  P     Pn   12 59 51.9 +0.8
AGG                               S     Sn   13 00 23.9 +1.8
LKD2  Lefkada island    2.55 185  P     Pn   12 59 53.2 +2.1
LKD2  Lefkada island    2.55 185  P     Pn   12 59 52.7 +1.6
LKD2  Lefkada island    2.55 185  P     Pn   12 59 52.7 +1.6
GRUS  Gruza             2.56 357 ePn    Pn   12 59 51.5 +0.3
GRUS  Gruza             2.56 357 ePn    Pn   12 59 51.5 +0.3
XOR   Xorichti          2.62 138  P     Pn   12 59 51.7 -0.4
XOR                               AML   AML  13 00 46.5
      comp=E,1360µm,0.9s
XOR                               AML   AML  13 00 53.6
      comp=N,2803µm,0.8s
XOR   Xorichti          2.62 138  P     Pn   12 59 52.0 -0.1
XOR   Xorichti          2.62 138  P     Pn   12 59 52.3 +0.2
ZAGS  Zajecar           2.66  21 ePn    Pn   12 59 53.4 +0.8
ZAGS  Zajecar           2.66  21 ePn    Pn   12 59 53.4 +0.8
MGNA  Meganis¸„         2.68 182  P     Pb   12 59 55.7 -2.0
MGNA  Meganis¸„         2.68 182  P     Pn   12 59 55.2 +2.4
NEO   Neokhori          2.68 138  P     Pn   12 59 55.0 +2.0
NEO                               AML   AML  13 00 49.4
      comp=E,3471µm,0.9s
NEO                               AML   AML  13 00 53.4
      comp=N,2697µm,0.8s
NEO   Neokhori          2.68 138  P     Pn   12 59 54.1 +1.2
NEO   Neokhori          2.68 138  P     Pn   12 59 54.1 +1.2
CGL1  Ceglie Messapi    2.69 257 i P    Pn   12 59 53.2 +0.1
CGL1  Ceglie Messapi    2.69 257⇓iP     Pn   12 59 53.2 +0.1
EVGI  Lefkada island    2.72 184  P     Pn   12 59 54.7 +1.3
EVGI  Lefkada island    2.72 184  P     Pn   12 59 55.0 +1.6
PDO   Prodromos         2.74 176  P     Pn   12 59 56.1 +2.4
PDO   Prodromos         2.74 176  P     Pn   12 59 55.7 +2.0
FASA  Fasano            2.75 260 i P    Pn   12 59 53.8  0.0
FASA  Fasano            2.75 260⇓iP     Pn   12 59 53.8  0.0
PVO   Paravola          2.75 170  P     Pb   12 59 57.6 -1.4
PVO   Paravola          2.75 170  P     Pn   12 59 56.5 +2.6
BBLS  Lazi&#263;i       2.77 337 ePn    Pn   12 59 54.9 +0.8
BBLS  Lazi&#263;i       2.77 337 ePn    Pn   12 59 54.9 +0.8
ANX   Ano Chora         2.84 164  P     Pn   12 59 57.1 +1.9
ANX   Ano Chora         2.84 164  P     Pn   12 59 56.2 +1.0
ANX                               S     Sn   13 00 31.4 +1.9
ANX   Ano Chora         2.84 164  P     Pn   12 59 56.2 +1.0
ANX                               S     Sn   13 00 31.4 +1.9
DIVS  Divibare          2.84 346 ePn    Pn   12 59 55.3 +0.1
DIVS                             eSn    Sn   13 00 30.2 +0.7
DIVS  Divibare          2.84 346 ePn    Pn   12 59 56.2 +1.0
DIVS  Divibare          2.84 346 ePn    Pn   12 59 56.2 +1.0
DIVS                             eSn    Sn   13 00 30.2 +0.7
STON  Ston              2.85 304 ePn    Pn   12 59 56.5 +1.4
STON                              Sn    Sb   13 00 32.6 -2.8
STON  Ston              2.85 304⇓iPn    Pn   12 59 56.1 +1.0
TAR1  Taranto           2.87 255 i P    Pn   12 59 55.1 -0.4
TAR1  Taranto           2.87 255⇓iP     Pn   12 59 55.1 -0.4
TAR1                              S     Sn   13 00 28.9 -1.1
FSK   Fiskardo          2.88 186  P     Pn   12 59 56.2 +0.5
FSK   Fiskardo          2.88 186  P     Pn   12 59 56.5 +0.8
TRUS  Trudelj           2.91 353 ePn    Pn   12 59 56.4 +0.3
TRUS  Trudelj           2.91 353 ePn    Pn   12 59 56.4 +0.3
SVIS  Svilajnac         2.94   4 ePn    Pn   12 59 56.3 -0.1
MASS  Massafra          2.94 257 i P    Pn   12 59 56.2 -0.3
MASS  Massafra          2.94 257⇓iP     Pn   12 59 56.2 -0.3
THAS  Thassos island    2.97 103  P     Pn   12 59 56.1 -0.7
THAS  Thassos island    2.97 103  P     Pn   12 59 56.4 -0.4
THAS  Thassos island    2.97 103  P     Pn   12 59 56.8  0.0
EFP   Efpalio           3.00 165  P     Pn   12 59 59.5 +2.2
EFP                               AML   AML  13 00 53.7
      comp=E,3178µm,1.0s
EFP                               AML   AML  13 00 54.0
      comp=N,3155µm,0.9s
EFP   Efpalio           3.00 165  P     Pn   12 59 59.1 +1.8
SERG  Sergoula          3.05 163  P     Pn   12 59 58.9 +1.0
SERG                              AML   AML  13 01 03.7
      comp=E,3256µm,0.8s
SERG                              AML   AML  13 01 08.9
      comp=N,2306µm,0.8s
SERG  Sergoula          3.05 163  P     Pn   12 59 59.0 +1.1
SERG  Sergoula          3.05 163  P     Pn   12 59 59.0 +1.1
BAI   Bari              3.06 267 i P    Pn   12 59 58.2 +0.2
BAI   Bari              3.06 267⇓iP     Pn   12 59 58.2 +0.2
LKR   Lokris            3.12 149  P     Pn   12 59 59.3 +0.3
LKR   Lokris            3.12 149  P     Pn   12 59 59.5 +0.6
LKR   Lokris            3.12 149  P     Pn   12 59 59.6 +0.6
AOS   Alonnisos         3.13 133  P     Pn   12 59 58.4 -0.7
AOS   Alonnisos         3.13 133  P     Pn   12 59 58.5 -0.6
AOS   Alonnisos         3.13 133  P     Pn   12 59 59.1  0.0
VLS   Valsamata         3.16 185  P     Pn   12 59 59.4 -0.2
VLS   Valsamata         3.16 185  P     Pn   13 00 00.5 +1.0
DSF   Desfina           3.17 157  P     Pn   12 59 59.8 +0.1
DSF   Desfina           3.17 157  P     Pn   13 00 00.3 +0.6
DSF   Desfina           3.17 157  P     Pn   13 00 00.3 +0.6
KFL   Anninata          3.22 182  P     Pn   13 00 01.1 +0.8
KFL   Anninata          3.22 182  P     Pn   13 00 01.7 +1.4
KFL   Anninata          3.22 182  P     Pn   13 00 01.7 +1.4
SG1   Sgolgore (BA)     3.24 263 i P    Pn   13 00 00.6  0.0
SG1   Sgolgore (BA)     3.24 263⇓iP     Pn   13 00 00.6  0.0
MATE  Matera            3.26 259⇓iP     Pn   13 00 00.9  0.0
MATE  Matera            3.26 259⇓iP     Pn   13 00 00.9  0.0
MATE                              S     Sn   13 00 38.3 -1.3
RLS   Riolos of Patr    3.30 172  P     Pn   13 00 03.2 +1.8
RLS   Riolos of Patr    3.30 172  P     Pn   13 00 03.1 +1.8
TEKS  Tekeris           3.37 343 ePn    Pn   13 00 02.8 +0.4
TEKS  Tekeris           3.37 343 ePn    Pn   13 00 02.8 +0.4
KLV   Kalavryta, Ach    3.42 164  P     Pn   13 00 04.5 +1.3
KLV                               AML   AML  13 00 58.8
      comp=N,975µm,0.8s
KLV                               AML   AML  13 00 59.0
      comp=E,1013µm,0.8s
KLV   Kalavryta, Ach    3.42 164  P     Pn   13 00 04.3 +1.2
KLV   Kalavryta, Ach    3.42 164  P     Pn   13 00 04.3 +1.2
RDO   Rodhopi           3.49  92  P     Pn   13 00 03.5 -0.4
RDO   Rodhopi           3.49  92  P     Pn   13 00 04.0 +0.1
RDO   Rodhopi           3.49  92  P     Pn   13 00 04.2 +0.3
BEO   Beograd           3.49 355 ePn    Pn   13 00 04.4 +0.4
MDVR  Moldovita         3.49   9⇑iP     Pn   13 00 04.1  0.0
MDVR  Moldovita         3.49   9  S     Sg   13 01 01.5 -0.5
MDVR  Moldovita         3.49   9⇑iP     Pn   13 00 04.1  0.0
LIA   Limnos Island     3.55 112  P     Pn   13 00 04.3 -0.4
LIA   Limnos Island     3.55 112  P     Pn   13 00 05.0 +0.2
LIA   Limnos Island     3.55 112  P     Pn   13 00 05.0 +0.2
GUR   Goura             3.57 162  P     Pn   13 00 06.5 +1.3
GUR   Goura             3.57 162  P     Pn   13 00 06.5 +1.3
SMTH  Samothraki Isl    3.60 102  P     Pn   13 00 04.8 -0.7
SMTH  Samothraki Isl    3.60 102  P     Pn   13 00 05.6 +0.1
LTK   Loutraki          3.67 154  P     Pn   13 00 06.3 -0.1
LTK   Loutraki          3.67 154  P     Pn   13 00 07.0 +0.6
HERR  Herculane         3.71  17⇓iP     Pn   13 00 08.0 +1.0
HERR  Herculane         3.71  17⇓iP     Pn   13 00 08.0 +1.0
MS1   Monte Sant'Ang    3.76 277 i P    Pn   13 00 07.7  0.0
MS1   Monte Sant'Ang    3.76 277⇓iP     Pn   13 00 07.7  0.0
TIP   Timpagrande       3.84 237⇓iP     Pn   13 00 08.6 -0.3
TIP   Timpagrande       3.84 237 ePn    Pn   13 00 08.8 -0.2
TIP   Timpagrande       3.84 237 ePn    Pn   13 00 08.8 -0.2
ALN   Alexandroupoli    3.90  95  P     Pn   13 00 09.5  0.0
ALN   Alexandroupoli    3.90  95 ePn    Pn   13 00 10.1 +0.5
ALN   Alexandroupoli    3.90  95  P     Pn   13 00 09.9 +0.3
ALN   Alexandroupoli    3.90  95 eP     Pn   13 00 10.1 +0.5
ALN   Alexandroupoli    3.90  95  P     Pn   13 00 09.9 +0.3
FGSL  Fruska Gora       3.91 348 ePn    Pn   13 00 09.8 +0.1
FRGS  Fruska Gora       3.91 348 ePn    Pn   13 00 09.8 +0.1
DOB   Doboj             3.98 330 ePn    Pn   13 00 11.1 +0.4
PTL   Penteli           3.99 144  P     Pn   13 00 13.1 +2.1
PTL   Penteli           3.99 144  P     Pn   13 00 12.6 +1.7
DION  Dionisos Attik    4.00 143  P     Pn   13 00 11.8 +0.8
DION  Dionisos Attik    4.00 143  P     Pn   13 00 12.0 +1.0
CUC   Castrocucco       4.11 253 ePn    Pn   13 00 13.0 +0.5
CUC   Castrocucco       4.11 253 ePn    Pn   13 00 13.0 +0.5
VLY   Voula,Athens      4.13 147  P     Pn   13 00 13.3 +0.5
VLY   Voula,Athens      4.13 147  P     Pn   13 00 13.6 +0.9
VLY   Voula,Athens      4.13 147  P     Pn   13 00 13.6 +0.9
ITM   Ithomi            4.22 169  P     Pn   13 00 14.8 +0.7
ITM   Ithomi            4.22 169 ePn    Pn   13 00 15.9 +1.8
ITM   Ithomi            4.22 169  P     Pn   13 00 15.4 +1.3
ITM   Ithomi            4.22 169 ePn    Pn   13 00 15.9 +1.8
DID   Didima            4.22 154  P     Pn   13 00 15.2 +1.1
DID   Didima            4.22 154  P     Pn   13 00 15.4 +1.3
DID   Didima            4.22 154  P     Pn   13 00 15.4 +1.3
KRND  KRANIDI           4.31 156  P     Pn   13 00 15.7 +0.5
KRND  KRANIDI           4.31 156  P     Pn   13 00 16.3 +1.1
KRND  KRANIDI           4.31 156  P     Pn   13 00 16.3 +1.1
BZS   Buzias            4.31   7 ePn    Pn   13 00 14.9 -0.4
BZS   Buzias            4.31   7⇓iP     Pn   13 00 14.6 -0.7
BZS   Buzias            4.31   7⇓iP     Pn   13 00 14.6 -0.7
BZS   Buzias            4.31   7 ePn    Pn   13 00 14.9 -0.4
BLY   Banja Luka        4.38 322⇓iP     Pn   13 00 16.0 -0.1
BLY   Banja Luka        4.38 322 ePn    Pn   13 00 17.6 +1.5
BLY   Banja Luka        4.38 322⇓iP     Pn   13 00 16.0 -0.1
BLY   Banja Luka        4.38 322 ePn    Pn   13 00 17.6 +1.5
PYL   PYLOS             4.48 172  P     Pn   13 00 17.5 -0.1
PYL   PYLOS             4.48 172  P     Pn   13 00 18.6 +1.0
PRK   Paraskevi         4.59 115  P     Pn   13 00 19.4 +0.3
PRK   Paraskevi         4.59 115  P     Pn   13 00 20.2 +1.1
PRK   Paraskevi         4.59 115  P     Pn   13 00 19.9 +0.8
LOT   Lotru             4.61  26⇓iP     Pn   13 00 20.6 +1.2
LOT   Lotru             4.61  26⇓iP     Pn   13 00 20.6 +1.2
DYR   Agios Nikonas     4.70 166  P     Pn   13 00 22.4 +1.8
DYR   Agios Nikonas     4.70 166  P     Pn   13 00 22.5 +1.9
ARR   Arges             4.86  33⇓iP     Pn   13 00 23.8 +1.0
ARR   Arges             4.86  33⇓iP     Pn   13 00 23.8 +1.0
VLI   Veliai            4.87 161  P     Pn   13 00 22.9  0.0
VLI   Veliai            4.87 161  P     Pn   13 00 23.9 +0.9
CEL   Celeste           4.94 233 ePn    Pn   13 00 24.4 +0.4
CEL   Celeste           4.94 233 ePn    Pn   13 00 24.4 +0.4
UDBI  Udbina            4.95 312 i Pn   Pn   13 00 26.9 +2.8
UDBI                              Sn    Sn   13 01 24.7 +3.3
VOIR                    5.08  35⇑iP     Pn   13 00 27.8 +1.8
VOIR                    5.08  35⇑iP     Pn   13 00 27.8 +1.8
MORH  Mˆ‡rˆ¡gy, Hung    5.15 342⇑ePn    Pn   13 00 27.0 +0.2
MORH                             eSn    Sn   13 01 22.8 -3.3
MORH  Mˆ‡rˆ¡gy, Hung    5.15 342 ePn    Pn   13 00 26.9 +0.2
KYTH  Kithira           5.33 161  P     Pn   13 00 30.6 +1.3
KYTH  Kithira           5.33 161  P     Pn   13 00 30.9 +1.6
NVLJ  Novalja           5.49 308 ePn    Pn   13 00 32.3 +0.9
NVLJ                              Sn    Sn   13 01 34.8 +0.4
MLR   Muntele Rosu      5.54  40  Pn    Pn   13 00 33.4 +1.1
      comp=E,0.6nm,0.3s,baz=215,slow=9.8,SNR=13
MLR                               Sn    Sn   13 01 32.3 -3.6
      comp=E,0.3nm,0.3s,baz=203,slow=19,SNR=3.9
MLR                               LR    LR   13 03 40.0
      comp=E,25nm,21.0s,baz=112,slow=49
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MLR   Muntele Rosu       5.54  40⇑iP      Pn     13 00 34.2 +2.0
MLR   Muntele Rosu       5.54  40 ePn     Pn     13 00 35.0 +2.8
MLR                                Sn     Sn     13 01 32.3 -3.6
MLR   Muntele Rosu       5.54  40 ePn     Pn     13 00 35.0 +2.8
MLR                                Sn     Sn     13 01 32.3 -3.6
APE   Apeiranthos        5.56 138⇓iP      Pn     13 00 33.3 +0.7
APE   Apeiranthos        5.56 138⇓eP      Pn     13 00 33.4 +0.8
APE   Apeiranthos        5.56 138 eP      Pn     13 00 33.4 +0.8
ISR   Istrita            5.58  45⇓iP      Pn     13 00 35.2 +2.4
DRGR                     5.61  13⇑iP      Pn     13 00 34.0 +0.9
ANKY  Antikythira Is     5.77 160  P      Pn     13 00 36.9 +1.6
ANKY  Antikythira Is     5.77 160  P      Pn     13 00 37.2 +1.9
OZLJ  Ozalj              5.83 319 ePn     Pn     13 00 37.8 +1.7
BEHE  Becsehely          5.94 331 ePn     Pn     13 00 39.4 +1.7
LTVH  Lˆ'tavˆ'rtes,      6.09   6 ePn     Pn     13 00 38.0 -1.7
HARR  Harsova            6.14  55⇑iP      Pn     13 00 41.1 +0.8
PLOR  Plostina           6.14  41⇓iP      Pn     13 00 42.7 +2.3
TLB   Topalu             6.15  56⇓iP      Pn     13 00 42.6 +2.1
VRI   Vrincioaia         6.19  41⇑iP      Pn     13 00 43.6 +2.5
BUD   Budapest           6.30 348 epPn    Pn     13 00 46.0 +3.5
BUD                               eSn     Sn     13 01 55.8 +1.4
CSKK  Csˆ‡kako           6.32 343 epPn    Pn     13 00 45.5 +2.6
CSKK                              eSn     Sn     13 01 56.1 +1.1
TIRR  Tirgusor           6.33  58⇓iP      Pn     13 00 44.7 +1.8
TIRR  Tirgusor           6.33  58 ePn     Pn     13 00 44.2 +1.3
TIRR  Tirgusor           6.33  58 eP      Pn     13 00 44.2 +1.3
TIRR  Tirgusor           6.33  58 eP      Pn     13 00 44.2 +1.3
VAE   Valguarnera        6.34 235  Pn     Pn     13 00 42.6 -0.6
      comp=E,0.7nm,0.3s,baz=65,slow=10,SNR=1.8
VAE                                Sn     Sn     13 01 55.5 -0.2
      comp=E,1.0nm,0.3s,baz=170,slow=9.4,SNR=3.5
CFR   Carcaliu           6.52  51⇓iP      Pn     13 00 49.3 +3.7
MANT  Manisa             6.52 113 ePn     Pn     13 00 48.5 +2.6
MANT  Manisa             6.52 113 ePn     Pn     13 00 48.5 +2.6
LJU   Ljubljana          6.60 318 i Pn    Pn     13 00 48.2 +1.4
LJU                               i Sn    Sn     13 02 05.0 +3.0
      comp=Z,954nm,2.4s
LJU   Ljubljana          6.60 318  Pn     Pn     13 00 48.2 +1.4
LJU                               i Sn    Sn     13 02 05.0 +3.0
      comp=Z,954nm,2.4s
PSZ   Piszkesteto        6.62 354⇓iP      Pn     13 00 48.1 +1.0
PSZ   Piszkesteto        6.62 354⇑ePn     Pn     13 00 48.2 +1.1
PSZ                               eSn     Sn     13 02 03.6 +1.0
PSZ   Piszkesteto        6.62 354 ePn     Pn     13 00 48.4 +1.3
PSZ   Piszkesteto        6.62 354 eP      Pn     13 00 48.4 +1.3
PSZ   Piszkesteto        6.62 354 eP      Pn     13 00 48.4 +1.3
IDI   Anoyia             6.79 151  Pn     Pn     13 00 49.7 +0.2
      comp=Z,0.7nm,0.3s,baz=328,slow=15,SNR=6.4
IDI                                Sn     Sn     13 02 05.3 -1.5
      comp=Z,3.4nm,0.3s,baz=304,slow=17,SNR=3.4
IDI                                LR     LR     13 03 45.5
      comp=Z,130nm,20.6s,baz=338,slow=41
IDI   Anoyia             6.79 151⇓iP      Pn     13 00 49.7 +0.2
SOKA  Soboth             6.82 324 i Pn    Pn     13 00 51.3 +1.5
      comp=Z,37nm,0.7s,SNR=31
SOKA  Soboth             6.82 324  Pn     Pn     13 00 51.3 +1.5
      comp=Z,37nm,0.7s,SNR=31
OBKA  Obir               6.92 320 i Pn    Pn     13 00 52.9 +1.7
      comp=Z,24nm,0.7s,SNR=12
OBKA  Obir               6.92 320  Pn     Pn     13 00 52.9 +1.7
      comp=Z,24nm,0.7s,SNR=12
TLCR                     6.93  54⇓iP      Pn     13 00 53.0 +1.8
BURAR Bucovina Array     6.99  25⇓iP      Pn     13 00 53.7 +1.6
BUR04 Bucovina Ar. S     6.99  25 ePn     Pn     13 00 53.5 +1.3
BUR04 Bucovina Ar. S     6.99  25 ePn     Pn     13 00 53.5 +1.3
BUR08 Bucovina Ar. S     7.01  24 ePn     Pn     13 00 53.6 +1.2
BUR08 Bucovina Ar. S     7.01  24 ePn     Pn     13 00 53.6 +1.2
CLTB  Caltabellotta      7.04 240 ePn     Pn     13 00 55.0 +2.1
CLTB  Caltabellotta      7.04 240 ePn     Pn     13 00 55.0 +2.1
ARSA  Arzberg            7.07 329 i Pn    Pn     13 00 54.7 +1.5
      comp=Z,24nm,0.4s,SNR=27
ARSA                              eSn     Sn     13 02 13.2 -0.2
      comp=Z,30nm,0.6s
ARSA  Arzberg            7.07 329  Pn     Pn     13 00 54.7 +1.5
      comp=Z,24nm,0.4s,SNR=27
ARSA                               Sn     Sn     13 02 13.2 -0.2
      comp=Z,30nm,0.6s
KECS  Kecovo             7.16 358 eP      Pn     13 00 55.1 +0.8
KECS  Kecovo             7.16 358 ePN     Pn     13 00 55.1 +0.8
KECS  Kecovo             7.16 358 eP      Pn     13 00 55.1 +0.8
VYHS  Vyhne              7.31 349 eP      Pn     13 00 57.6 +1.1
VYHS                              e              13 02 15.3
VYHS  Vyhne              7.31 349 ePN     Pn     13 00 57.5 +1.1
VYHS                              eSN     Sn     13 02 15.3 -4.1
VYHS  Vyhne              7.31 349 eP      Pn     13 00 57.6 +1.1
UZH   Uzhgorod           7.36   7 eP      Pn     13 00 57.6 +0.5
UZH   Uzhgorod           7.36   7 eP      Pn     13 00 57.6 +0.5
MYKA  Terra Mystica      7.45 318 i Pn    Pn     13 00 58.8 +0.3
      comp=Z,21nm,0.5s,SNR=11
MYKA  Terra Mystica      7.45 318  Pn     Pn     13 00 58.8 +0.3
      comp=Z,21nm,0.5s,SNR=11
MODS  Modra-Piesok       7.50 341 eP      Pn     13 01 00.6 +1.6
MODS                              e              13 02 21.2
MODS  Modra-Piesok       7.50 341 ePN     Pn     13 01 00.6 +1.6
MODS                              eSN     Sn     13 02 21.2 -2.8
MODS  Modra-Piesok       7.50 341 eP      Pn     13 01 00.6 +1.6
CONA  Conrad Observa     7.51 333 i Pn    Pn     13 01 00.8 +1.5
      comp=Z,7.6nm,0.4s,SNR=9.5
CONA                              eSn     Sn     13 02 27.2 +2.7
      comp=Z,18nm,0.6s
CONA  Conrad Observa     7.51 333  Pn     Pn     13 01 00.8 +1.5
      comp=Z,7.6nm,0.4s,SNR=9.5
CONA                               Sn     Sn     13 02 27.2 +2.7
      comp=Z,18nm,0.6s
KARP  Karpathos          7.57 138 ePn     Pn     13 01 04.0 +3.9
KARP  Karpathos          7.57 138 ePn     Pn     13 01 04.0 +3.9
CRVS  Cervenica-Dubn     7.58   3 eP      Pn     13 01 01.4 +1.3
CRVS  Cervenica-Dubn     7.58   3 ePN     Pn     13 01 01.4 +1.3
CRVS  Cervenica-Dubn     7.58   3 eP      Pn     13 01 01.4 +1.3
SMOL  Smolenice          7.59 342 eSN     Sn     13 02 23.6 -2.7
JAVC  Velka Javorina     7.87 344 ePn     Pn     13 01 06.5 +2.4
JAVC  Velka Javorina     7.87 344 ePN     Pn     13 01 06.5 +2.4
LANS  Liptovska Anna     7.88 353 eP      Pn     13 01 06.5 +2.2
LANS  Liptovska Anna     7.88 353 ePN     Pn     13 01 06.5 +2.2
LANS  Liptovska Anna     7.88 353 eP      Pn     13 01 06.5 +2.2
KBA   Koelnbreinsper     7.91 319 i Pn    Pn     13 01 06.2 +1.4
      comp=Z,27nm,0.6s,SNR=27
KBA   Koelnbreinsper     7.91 319  Pn     Pn     13 01 06.2 +1.4
      comp=Z,27nm,0.6s,SNR=27
KIS   Kishinev           8.02  42 eP      Pn     13 01 15.0 +8.9
KIS                                LRM    MLR    13 05 08.0
      comp=Z,600nm,10.0s
KIS   Kishinev           8.02  42 eP      Pn     13 01 15.0 +8.9
KIS                                MLR    MLR
      comp=Z,500nm,8.0s
KIS                                MLR    MLR
      comp=Z,600nm,10.0s
MOA   Molln              8.06 326 i Pn    Pn     13 01 09.4 +2.6
      comp=Z,6.2nm,0.4s
MOA                               eSn     Sn     13 02 40.0 +2.2
      comp=Z,23nm,0.7s
MOA   Molln              8.06 326  Pn     Pn     13 01 09.4 +2.6
      comp=Z,6.2nm,0.4s
MOA                                Sn     Sn     13 02 40.0 +2.2
      comp=Z,23nm,0.7s
ABTA  Abfaltersbach      8.12 315 i Pn    Pn     13 01 08.5 +0.9
      comp=Z,35nm,0.5s,SNR=38
ABTA                              eSn     Sn     13 02 38.5 -0.9
      comp=Z,26nm,0.5s
ABTA  Abfaltersbach      8.12 315  Pn     Pn     13 01 08.5 +0.9
      comp=Z,35nm,0.5s,SNR=38
VLC   Villacollemand     8.25 294 ePn     Pn     13 01 10.1 +0.7
VLC   Villacollemand     8.25 294 ePn     Pn     13 01 10.1 +0.7
KRUC  Moravsky           8.36 339 ePn     Pn     13 01 12.0 +1.2
KRUC  Moravsky           8.36 339 ePN     Pn     13 01 12.0 +1.2
VRAC  Vranov             8.53 341  Pn     Pn     13 01 13.3  0.0
      comp=Z,0.6nm,0.3s,baz=168,slow=13,SNR=21
VRAC                               Sn     Sn     13 02 47.7 -1.8
      comp=Z,0.6nm,0.3s,baz=198,slow=20,SNR=2.6
VRAC  Vranov             8.53 341⇑iP      Pn     13 01 15.1 +1.8
VRAC  Vranov             8.53 341 ePN     Pn     13 01 14.8 +1.5
OKC   Ostrava-Krasne     8.72 348 eSN     Sn     13 02 51.4 -2.6
OKC                                AMS    AMS    13 05 40.0
      comp=Z,400nm,7.9s
MORC  Moravsky Berou     8.77 345⇓iP      Pn     13 01 18.4 +1.9
MORC  Moravsky Berou     8.77 345 ePn     Pn     13 01 17.7 +1.2
MORC  Moravsky Berou     8.77 345 eP      Pn     13 01 17.7 +1.2
MORC  Moravsky Berou     8.77 345 eP      Pn     13 01 17.7 +1.2
MORC  Moravsky Berou     8.77 345 ePN     Pn     13 01 18.1 +1.6
WTTA  Wattenberg         8.91 315 i Pn    Pn     13 01 20.5 +1.9
      comp=Z,19nm,0.5s
WTTA                              eSn     Sn     13 02 59.3 +0.3
      comp=Z,28nm,0.6s
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WTTA  Wattenberg         8.91 315  Pn     Pn     13 01 20.5 +1.9
      comp=Z,19nm,0.5s
WTTA                               Sn     Sn     13 02 59.3 +0.3
      comp=Z,28nm,0.6s
OJC   Ojcow              8.92 355 ePn     Pn     13 01 20.0 +1.5
OJC   Ojcow              8.92 355 eP      Pn     13 01 20.0 +1.5
OJC   Ojcow              8.92 355 eP      Pn     13 01 20.0 +1.5
PGF   Pioggiola          8.97 282 eP      Pn     13 01 20.3 +1.0
PGF   Pioggiola          8.97 282 eP      Pn     13 01 20.3 +1.0
PGF   Pioggiola          8.97 282 eP      Pn     13 01 20.3 +1.0
PGF   Pioggiola          8.97 282 eP      Pn     13 01 20.3 +1.0
WATA  Walderalm          8.99 315 i Pn    Pn     13 01 22.6 +3.0
      comp=Z,35nm,0.5s,SNR=14
WATA                              eSn     Sn     13 03 00.9 +0.1
      comp=Z,27nm,0.6s
WATA  Walderalm          8.99 315  Pn     Pn     13 01 22.6 +3.0
      comp=Z,35nm,0.5s,SNR=14
WATA                               Sn     Sn     13 03 00.9 +0.1
      comp=Z,27nm,0.6s
GEA0  GERESS Array S     9.07 328 ePn     Pn     13 01 21.6 +1.0
GEA0  GERESS Array S     9.07 328 ePn     Pn     13 01 21.6 +1.0
GEC2  GERESS Array S     9.08 328 ePn     Pn     13 01 22.2 +1.4
GEC2  GERESS Array S     9.08 328 eP      Pn     13 01 22.2 +1.4
GEC2  GERESS Array S     9.08 328 eP      Pn     13 01 22.2 +1.4
GERES GERESS Array B     9.08 328  Pn     Pn     13 01 21.2 +0.4
      comp=Z,0.8nm,0.3s,baz=147,slow=13,SNR=25
GERES                              Sn     Sn     13 03 03.4 +0.5
      baz=150,slow=22,SNR=2.3
GERES                              LR     LR     13 05 19.4
      comp=Z,217nm,18.6s,baz=140,slow=41
KRLC  Kraliky            9.21 343 ePN     Pn     13 01 24.8 +2.3
KRLC                              eSN     Sn     13 03 03.8 -2.2
KRLC  Kraliky            9.21 343 eP      Pn     13 01 24.8 +2.3
KRLC                              e              13 03 03.8
KRLC  Kraliky            9.21 343  Pn     Pn     13 01 24.8 +2.3
MOTA  Moosalm            9.25 314 i Pn    Pn     13 01 25.7 +2.6
      comp=Z,32nm,0.6s,SNR=20
MOTA  Moosalm            9.25 314  Pn     Pn     13 01 25.7 +2.6
      comp=Z,32nm,0.6s,SNR=20
FETA  Feichten           9.27 311 i Pn    Pn     13 01 24.9 +1.5
      comp=Z,17nm,0.6s,SNR=20
FETA                              eSn     Sn     13 03 06.6 -1.1
      comp=Z,20nm,0.6s
FETA  Feichten           9.27 311  Pn     Pn     13 01 24.9 +1.5
      comp=Z,17nm,0.6s,SNR=20
KHC   Kasperske Hory     9.36 329 ePN     Pn     13 01 27.9 +3.4
KHC                               ex      x      13 01 30.5
KHC                                AMS    AMS    13 05 20.0
      comp=Z,800nm,9.3s
KHC   Kasperske Hory     9.36 329 ePn     Pn     13 01 25.9 +1.4
KHC   Kasperske Hory     9.36 329 eP      Pn     13 01 25.9 +1.4
KHC   Kasperske Hory     9.36 329 eP      Pn     13 01 25.9 +1.4
RETA  Reutte             9.52 314 i Pn    Pn     13 01 27.9 +1.1
      comp=Z,7.4nm,0.4s,SNR=10
RETA                              i Sn    Sn     13 03 15.1 +1.4
      comp=Z,21nm,0.5s
RETA  Reutte             9.52 314  Pn     Pn     13 01 27.9 +1.1
      comp=Z,7.4nm,0.4s,SNR=10
RETA                               Sn     Sn     13 03 15.1 +1.4
      comp=Z,21nm,0.5s
DPC   Dobruska-Polom     9.57 342 ePN     Pn     13 01 29.4 +2.0
DPC                               eSN     Sn     13 03 11.3 -3.6
DPC                                AMS    AMS    13 05 30.0
      comp=Z,400nm,13.9s
DPC   Dobruska-Polom     9.57 342 eP      Pn     13 01 29.4 +2.0
DPC                               e              13 03 11.3
DPC                                MLR    MLR
      comp=Z,400nm,13.9s
DPC   Dobruska-Polom     9.57 342  Pn     Pn     13 01 29.4 +2.0
GOPC  GO Pecny, Ondr     9.59 336  AMS    AMS    13 05 30.0
      comp=Z,1µm,8.3s
DAVOX Davos/Dischmat     9.63 308  Pn     Pn     13 01 28.8 +0.3
      comp=Z,4.9nm,0.3s,baz=141,slow=17,SNR=49
DAVOX                              Sn     Sn     13 03 16.4 -0.2
      comp=Z,1.6nm,0.3s,baz=316,slow=14,SNR=4.5
DAVOX                              LR     LR     13 05 36.7
      comp=Z,145nm,18.9s,baz=85,slow=41
PRU   Pruhonice          9.73 335 eSN     Sn     13 03 15.3 -3.6
PRU                                AMS    AMS    13 05 30.0
      comp=Z,900nm,8.5s
UPC   Upice              9.79 341 ePN     Pn     13 01 33.3 +2.9
UPC                                AMS    AMS    13 05 50.0
      comp=Z,500nm,10.4s
UPC   Upice              9.79 341 eP      Pn     13 01 33.3 +2.9
UPC                                MLR    MLR
      comp=Z,500nm,10.4s
UPC   Upice              9.79 341  Pn     Pn     13 01 33.3 +2.9
BRTR  Keskin Array B     9.82  95  Pn     Pn     13 01 32.0 +1.0
      comp=Z,0.1nm,0.3s,baz=287,slow=15,SNR=2.9
BRTR  Keskin Array B     9.82  95  P      Pn     13 01 32.0 +1.0
BRTR  Keskin Array B     9.82  95  P      Pn     13 01 32.0 +1.0
PRA   Prague             9.84 335  AMS    AMS    13 05 30.0
      comp=Z,900nm,9.1s
DAVA  Damuels            9.89 311 i Pn    Pn     13 01 34.3 +2.2
      comp=Z,20nm,0.6s,SNR=15
DAVA                              eSn     Sn     13 03 24.6 +1.5
      comp=Z,26nm,0.5s
DAVA  Damuels            9.89 311  Pn     Pn     13 01 34.3 +2.2
      comp=Z,20nm,0.6s,SNR=15
DAVA                               Sn     Sn     13 03 24.6 +1.5
      comp=Z,26nm,0.5s
PVCC  Panska Ves        10.20 336  AMS    AMS    13 05 50.0
      comp=Z,900nm,8.8s
SBF   Sospel            10.26 289 eP      Pn     13 01 37.5 +0.5
SBF                               eSn     Sn     13 03 23.3 -8.7
      comp=Z,64nm,1.1s
SBF   Sospel            10.26 289 eP      Pn     13 01 37.5 +0.5
SBF                               eSn     Sn     13 03 23.3 -8.7
SBF   Sospel            10.26 289 eP      Pn     13 01 37.5 +0.5
SBF                               e              13 03 23.3
SBF   Sospel            10.26 289 eP      Pn     13 01 37.5 +0.5
KEST  Kesra             10.65 242  Pn     Pn     13 01 43.9 +1.5
      comp=Z,0.4nm,0.3s,baz=203,slow=6.7,SNR=13
KEST                               LR     LR     13 06 55.7
      comp=Z,70nm,21.3s,baz=164,slow=44
KEST  Kesra             10.65 242 ePn     Pn     13 01 45.2 +2.8
KEST  Kesra             10.65 242 ePn     Pn     13 01 45.2 +2.8
NKC   Novy Kostel       10.68 329  AMS    AMS    13 06 10.0
      comp=Z,700nm,8.9s
BRG   Berggiesshubel    10.69 335 eP      Pn     13 01 46.1 +3.3
      comp=Z,14nm,1.6s
BRG   Berggiesshubel    10.69 335 eP      Pn     13 01 46.1 +3.3
BRG                                pmax   pmax
      comp=Z,14nm,1.6s
BRG   Berggiesshubel    10.69 335 eP      Pn     13 01 46.1 +3.3
      comp=Z,14nm,1.6s
GRFO  Grafenberg        10.77 324 ePn     Pn     13 01 52.4 +8.5
GRFO  Grafenberg        10.77 324 ePn     Pn     13 01 52.3 +8.5
FRF   La Foret Royal    10.78 287 eP      Pn     13 01 45.8 +1.8
FRF   La Foret Royal    10.78 287 eP      Pn     13 01 45.8 +1.8
FRF   La Foret Royal    10.78 287 eP      Pn     13 01 45.8 +1.8
LMR   La Mourre         10.86 285 ePn     Pn     13 01 41.4 -3.7
LMR   La Mourre         10.86 285 ePn     Pn     13 01 41.4 -3.7
LMR   La Mourre         10.86 285 eP      Pn     13 01 41.4 -3.7
MBDF  Montbardon        10.90 293 ePn     Pn     13 01 44.1 -1.7
MBDF                              eSn     Sn     13 03 39.0 -8.7
      comp=Z,24nm,0.7s
MBDF  Montbardon        10.90 293 ePn     Pn     13 01 44.1 -1.7
MBDF                              eSn     Sn     13 03 39.0 -8.7
MBDF  Montbardon        10.90 293 eP      Pn     13 01 44.1 -1.7
MBDF                              e              13 03 39.0
AKASG Malin Array Be    11.00  29  Pn     Pn     13 01 47.2 +0.3
      baz=216,slow=11,SNR=1.4
BNI   Bardonecchia      11.04 294 ePn     Pn     13 01 47.4 -0.3
BNI   Bardonecchia      11.04 294 ePn     Pn     13 01 47.4 -0.3
SENIN Lac Senin/Sane    11.04 302 ePn     Pn     13 01 47.9 +0.1
SENIN Lac Senin/Sane    11.04 302 ePn     Pn     13 01 47.9 +0.1
LPG   La Plagne         11.11 297 ePn     Pn     13 01 48.6 -0.2
LPG   La Plagne         11.11 297 ePn     Pn     13 01 48.6 -0.2
LPG   La Plagne         11.11 297 ePn     Pn     13 01 48.6 -0.2
STU   Stuttgart         11.13 316 ePn     Pn     13 01 49.7 +0.9
STU   Stuttgart         11.13 316 eP      Pn     13 01 49.7 +0.9
STU   Stuttgart         11.13 316 eP      Pn     13 01 49.7 +0.9
LPL   La Plagne         11.13 297 ePn     Pn     13 01 47.6 -1.4
LPL                               eSn     Sn     13 03 44.2 -9.3
      comp=Z,27nm,0.5s
LPL   La Plagne         11.13 297 ePn     Pn     13 01 47.6 -1.4
LPL                               eSn     Sn     13 03 44.2 -9.3
LPL   La Plagne         11.13 297 eP      Pn     13 01 47.6 -1.4
LPL                               e              13 03 44.2
THTN  Thala             11.19 243 ePn     Pn     13 01 53.3 +3.6
THTN  Thala             11.19 243 ePn     Pn     13 01 53.3 +3.6
BFO   Black Forest      11.34 312 ePn     Pn     13 01 51.7  0.0
BFO   Black Forest      11.34 312 eP      Pn     13 01 51.7  0.0
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BFO   Black Forest      11.34 312 eP      Pn     13 01 51.7  0.0
CLL   Collm             11.37 334 i (P)   Pn     13 01 56.2 +4.2
      comp=Z,4.0nm,0.7s
CLL   Collm             11.37 334 i P     Pn     13 01 56.2 +4.2
ORIF  Oris-en-Rattie    11.56 293 ePn     Pn     13 01 54.1 -0.7
ORIF  Oris-en-Rattie    11.56 293 ePn     Pn     13 01 54.1 -0.7
ORIF  Oris-en-Rattie    11.56 293 eP      Pn     13 01 54.1 -0.7
ORIF  Oris-en-Rattie    11.56 293 ePn     Pn     13 01 54.1 -0.7
CABF  La Chapelle       11.91 301 ePn     Pn     13 01 58.4 -1.2
CABF  La Chapelle       11.91 301 ePn     Pn     13 01 58.4 -1.2
CABF  La Chapelle       11.91 301 eP      Pn     13 01 58.4 -1.2
HINF  Hinteralfeld      11.93 308 ePn     Pn     13 01 59.2 -0.6
HINF                              eSn     Sn     13 04 04.2 -8.7
      comp=Z,29nm,0.8s
HINF  Hinteralfeld      11.93 308 ePn     Pn     13 01 59.2 -0.6
HINF                              eSn     Sn     13 04 04.2 -8.7
HINF  Hinteralfeld      11.93 308 eP      Pn     13 01 59.2 -0.6
HINF                              e              13 04 04.2
HINF  Hinteralfeld      11.93 308 ePn     Pn     13 01 59.2 -0.6
ECH   Echery            11.95 310 ePn     Pn     13 01 59.9 -0.1
ECH                               eSn     Sn     13 04 10.7 -2.5
ECH   Echery            11.95 310 ePn     Pn     13 01 59.9 -0.1
ECH                               eSn     Sn     13 04 10.7 -2.5
CDF   Champ du Feu      11.98 311 ePn     Pn     13 01 59.3 -1.2
CDF   Champ du Feu      11.98 311 ePn     Pn     13 01 59.3 -1.2
CDF   Champ du Feu      11.98 311 eP      Pn     13 01 59.3 -1.2
HAU   Haudompre         12.32 308 ePn     Pn     13 02 04.4 -0.7
HAU                               eSn     Sn     13 04 13.5 -8.9
      comp=Z,24nm,0.6s
HAU   Haudompre         12.32 308 ePn     Pn     13 02 04.4 -0.7
HAU                               eSn     Sn     13 04 13.5 -8.9
HAU   Haudompre         12.32 308 ePn     Pn     13 02 04.4 -0.7
VIVF  Saint-Julien-l    12.39 292 ePn     Pn     13 02 03.8 -2.2
VIVF  Saint-Julien-l    12.39 292 ePn     Pn     13 02 03.8 -2.2
VIVF  Saint-Julien-l    12.39 292 eP      Pn     13 02 03.8 -2.2
KLNR  Kaliningrad       13.29 358⇓eP      Pn     13 02 19.8 +1.6
SMF   Signal de Mont    13.39 299 ePn     Pn     13 02 16.5 -3.1
SMF                               eSn     Sn     13 04 37.6  -11
      comp=Z,26nm,0.8s
SMF   Signal de Mont    13.39 299 ePn     Pn     13 02 16.5 -3.1
SMF                               eSn     Sn     13 04 37.6  -11
SMF   Signal de Mont    13.39 299 eP      Pn     13 02 16.5 -3.1
SMF                               e              13 04 37.6
LOR   Lormes            13.57 302 ePn     Pn     13 02 19.2 -3.0
      baz=110
LOR                               eSn     Sn     13 04 42.6  -10
      comp=Z,14nm,0.6s,baz=124
LOR   Lormes            13.57 302 ePn     Pn     13 02 19.2 -3.0
LOR                               eSn     Sn     13 04 42.6  -10
LOR   Lormes            13.57 302 eP      Pn     13 02 19.2 -3.0
LOR                               e              13 04 42.6
MMAI  Mount Meron Ar    14.21 121  Pn     Pn     13 02 32.3 +1.3
      comp=Z,0.4nm,0.3s,baz=282,slow=10,SNR=2.8
MMAI                               LR     LR     13 08 57.2
      comp=Z,69nm,21.8s,baz=220,slow=41
DOU   Dourbes           14.36 313 ⇓P      Pn     13 02 34.6 +1.7
KVAR  Kislovodsk Arr    16.23  73  Pn     Pn     13 02 58.9 +1.1
      baz=250,slow=18,SNR=3.3
EIL   Elat              16.28 131  Pn     Pn     13 02 59.4 +1.0
      comp=Z,0.2nm,0.3s,baz=310,slow=18,SNR=2.4
KBZ   Khabaz            16.37  74  Pn     P      13 03 01.6 -0.7
      comp=Z,0.1nm,0.3s,baz=260,slow=15,SNR=2.0
OBN   Obninsk           17.23  32⇑eP      Pn     13 03 10.4 +0.3
OBN                               eS      Sn     13 06 21.7 +0.2
OBN                                pmax   pmax
      comp=Z,7.0nm,0.8s
OBN                                MLR    MLR
      comp=Z,25nm,14.0s
OBN   Obninsk           17.23  32 eP      Pn     13 03 10.4 +0.3
      comp=Z,25nm,14.0s
VSU   Vasula            17.54  10deP      P      13 03 15.4 +0.3
VSU                                pmax   pmax
      comp=Z,21nm,0.8s
GNI   Garni             18.08  86  LR     LR     13 11 32.9
      comp=Z,55nm,18.2s,baz=262,slow=41
ES19  SONSECA Array     18.93 273 eP      Pn     13 03 32.0 +0.8
ESDC  Sonseca Array     18.98 273  P      P      13 03 30.7 -0.6
      baz=74,slow=11,SNR=11
HFS   Hagfors           19.35 349  P      P      13 03 34.1 -0.9
      comp=Z,0.7nm,0.3s,baz=167,slow=14,SNR=14
HFS                                LR     LR     13 11 32.2
      comp=Z,41nm,18.2s,baz=162,slow=38
KONO  Kongsberg         19.65 343⇑eP      Pn     13 03 39.3 -0.4
KONO                               pmax   pmax
      comp=Z,4.0nm,0.6s
FINES FINESS Array B    20.38   7  P      P      13 03 45.4 -0.8
      comp=Z,2.5nm,0.6s,baz=182,slow=7.1,SNR=12
FINES                              LR     LR     13 12 30.0
      comp=Z,30nm,20.6s,baz=198,slow=39
FIA1  FINESS Array S    20.38   7 eP      P      13 03 45.6 -0.7
NB2   NORSAR Subarra    20.60 347  P      P      13 03 47.9 -0.8
      comp=Z,4.0nm,0.6s,baz=155,slow=11
NOA   NORSAR Array B    20.60 347  LR     LR     13 11 51.3
      comp=Z,24nm,20.9s,baz=165,slow=37
EKA   Eskdalemuir Ar    21.12 320  P      P      13 03 53.5 -0.8
      comp=Z,11nm,0.8s,baz=115,slow=11,SNR=29
MDT   Midelt            22.02 256  LR     LR     13 12 47.1
      comp=Z,42nm,18.3s,baz=17,slow=37
TAM   Tamanrasset       22.57 220 eP      P      13 04 11.7 +1.5
      comp=Z,7.1nm,1.0s
TAM   Tamanrasset       22.57 220 eP      P      13 04 11.7 +1.5
TAM                                pmax   pmax
      comp=Z,7.0nm,1.0s
TAM   Tamanrasset       22.57 220 eP      P      13 04 11.7 +1.5
      comp=Z,7.1nm,1.0s
KLMR  Klimovskoe        22.61  24 eP      P      13 04 08.5 -1.7
KLMR                               pmax   pmax
      comp=Z,13nm,0.9s
KLMR  Klimovskoe        22.61  24 eP      P      13 04 08.5 -1.7
KLMR                               AMP           13 04 10.3
      comp=Z,13nm,0.9s
PRGR  Permogore         25.21  28 eP      P      13 04 35.9 +0.8
PRGR                               pmax   pmax
      comp=Z,33nm,0.8s
AKTO  Aktyubinsk        27.13  58  P      P      13 04 54.3 +1.6
      comp=Z,3.0nm,0.8s,baz=262,slow=10.0,SNR=7.5
ABKAR Akbulak array     28.31  60 eP      P      13 05 03.7 +0.5
ARCES ARCESS Array B    28.37   3  P      P      13 05 03.2 -0.3
      comp=Z,1.1nm,0.5s,baz=190,slow=9.0,SNR=14
ARU   Arti              28.55  45  P      P      13 05 05.0 -0.3
      comp=Z,1.4nm,0.2s,baz=214,slow=3.6,SNR=4.3
ARU   Arti              28.55  45c iP     P      13 05 08.0 +2.7
ARU                                              13 05 54.5
ARU                                S      S      13 09 59.1 +6.1
ARU                                SS     SnSn   13 11 17.4 +5.4
ARU                                pmax   pmax
      comp=Z,6.0nm,1.2s
GEYT  Alibeck           28.71  84  P      P      13 05 07.4 +0.4
      comp=Z,8.2nm,0.3s,baz=304,slow=10,SNR=3.0
TORD  Torodi Ar. Bea    32.72 216  P      P      13 05 41.6 -0.8
      comp=Z,7.6nm,0.8s,baz=18,slow=9.2
TORD                               LR     LR     13 21 53.2
      comp=Z,35nm,18.1s,baz=330,slow=42
KOWA  Kowa              34.41 226  P      P      13 05 55.5 -1.6
      comp=Z,1.1nm,0.3s,baz=28,slow=7.8,SNR=5.2
BRVK  Borovoye          34.85  53 eP      P      13 06 02.4 +1.7
      comp=Z,5.1nm,0.9s
BRVK  Borovoye          34.85  53⇑eP      P      13 06 02.4 +1.7
BRVK                               pmax   pmax
      comp=Z,4.0nm,0.8s
BVAR  Borovoye Array    34.92  53  P      P      13 06 01.4 +0.2
      comp=Z,2.1nm,0.9s,baz=226,slow=7.2,SNR=6.1
BVAR                               LR     LR     13 21 35.3
      comp=Z,26nm,18.7s,baz=238,slow=38
KURBB Kurchatov Arra    40.17  56  P      P      13 06 45.6 -0.1
      comp=Z,1.0nm,0.7s,baz=288,slow=9.8,SNR=8.6
KURBB                              PcP    PcP    13 08 49.1 -0.7
      comp=Z,1.1nm,0.7s,baz=283,slow=3.8,SNR=7.1
KURK  Kurchatov         40.21  56  P      P      13 06 45.6 -0.4
KURK                               PcP    PcP    13 08 49.1 -0.8
KURK  Kurchatov         40.21  56  P      P      13 06 45.6 -0.4
KURK                                             13 08 49.1
KSH   Kashi             41.35  74 eP      P      13 06 54.2 -1.6
KSH                                sP     sP     13 07 01.2 +0.5
KSH                                PP     PP     13 08 31.5 +0.4
KSH                                PcS    PcS    13 12 45.1 -0.2
KSH   Kashi             41.35  74  ScS    ScS    13 16 57.1 -2.8
KSH                                pmax   pmax
      comp=Z,110nm,5.5s
DBIC  Dimbokro          41.45 221  P      P      13 06 55.9 -0.7
      comp=Z,4.8nm,0.8s,baz=28,slow=10,SNR=4.8
NVS   Novosibirsk       42.34  50 eP      P      13 07 04.1 +0.6
ZALV  Zalesovo Beam     43.40  51  P      P      13 07 12.3 +0.2
      comp=Z,6.1nm,0.8s,baz=279,slow=8.7,SNR=14
ZALV                               PP     PP     13 08 53.3 +0.5
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	comp=Z,0.7nm,0.5s,baz=285,slow=12,SNR=2.4						
MKAR	**Makanchi Array**	43.45	61	P	P	13 07 12.6	0.0
	comp=Z,2.1nm,0.6s,baz=282,slow=6.6,SNR=20						
MKAR				PcP	PcP	13 08 59.7	-1.0
	comp=Z,1.0nm,0.7s,baz=262,slow=4.2,SNR=3.7						
SFJD	**Kangerlussuaq**	45.68	329	LR	LR	13 27 12.8	
	comp=Z,40nm,18.1s,baz=92,slow=37						
DGZ	**Jazzator, Alta**	45.95	56	⇑*e*P	P	13 07 32.2	-0.5
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.9s						
WMQ	**Urumqi**	48.02	63	P	P	13 07 51.6	+2.8
SCHQ	**Schefferville**	56.38	316	P	P	13 08 49.3	-1.5
	comp=Z,3.9nm,0.8s,baz=31,slow=5.9,SNR=2.7						
SCHQ				LR	LR	13 32 31.3	
	comp=Z,36nm,18.2s,baz=348,slow=36						
SONM	**Songino Array**	58.25	52	P	P	13 09 05.6	+1.4
	comp=Z,1.3nm,0.9s,baz=292,slow=7.3,SNR=5.4						
HHC	**Hu-ho-hao-te**	65.02	57	*e*P	P	13 09 49.6	-0.4
HHC				pmax	pmax		
	comp=Z,22nm,0.9s						
HHC				pmax	pmax		
	comp=Z,82nm,7.2s						
CMAR	**Chiang Mai Arr**	69.18	83	P	P	13 10 17.2	+0.6
	comp=Z,0.7nm,0.3s,baz=302,slow=6.9,SNR=4.5						
BOSA	**Boshof**	69.71	176	P	P	13 10 19.2	-0.4
	comp=Z,1.3nm,0.6s,baz=346,slow=4.2,SNR=2.0						
GYA	**Guiyang**	70.02	72	*e*P	P	13 10 23.2	+1.4
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
YKA	**Yellowknife Ar**	70.53	340	P	P	13 10 23.3	-0.9
	comp=Z,0.7nm,0.5s,baz=38,slow=5.3,SNR=22						
KLR	**Kul’dur**	71.26	40	⇓*i*P	P	13 10 29.1	+0.2
ULM	**Lac du Bonnet**	73.35	323	P	P	13 10 40.5	-0.8
	comp=Z,2.6nm,0.7s,baz=61,slow=9.9,SNR=3.5						
ILAR	**Eielson Array**	73.80	355	P	P	13 10 43.6	-0.1
	comp=Z,0.7nm,0.6s,baz=360,slow=4.4,SNR=12						
KSAR	**Wonju Array Be**	77.09	51	P	P	13 11 02.2	-0.9
KSAR	**Wonju Array Be**	77.09	51	P	P	13 11 02.2	-0.9
KSRS	**Korea Array**	77.10	51	P	P	13 11 02.2	-1.0
	comp=Z,1.8nm,0.8s,baz=319,slow=5.4,SNR=7.9						
YSS	**Yuzh-Sakhalins**	78.04	37	*e*P	P	13 10 59.8	-8.4
YSS				*e*		13 11 07.2	
PETK	**Petropavlovsk-**	78.81	25	P	P	13 11 10.4	-2.0
	comp=Z,2.0nm,0.9s,baz=329,slow=7.0						
PDAR	**Pinedale Array**	85.11	326	P	P	13 11 45.1	-1.0
	comp=Z,0.7nm,1.0s,baz=0.0,slow=3.4,SNR=4.6						
PDAR				LR	LR	13 50 59.3	
	comp=Z,26nm,19.5s,baz=34,slow=37						
TXAR	**Lajitas Array**	93.01	314	P	P	13 12 23.5	-0.1
	comp=Z,0.5nm,0.8s,baz=74,slow=3.3,SNR=6.2						
WRA	**Warramunga Arr**	120.31	91	PKP	PKPdf	13 18 00.1	-1.2
	comp=Z,0.7nm,1.0s,baz=320,slow=1.8,SNR=2.8						
ASAR	**Alice Springs**	122.16	94	PKP	PKPdf	13 18 03.6	-1.2
	comp=Z,0.8nm,0.9s,baz=343,slow=1.9,SNR=6.5						

*SKO **07** 13:05:08.4, 41°.35N×20°.90E, h15^{km}, M2.9, ML3.1*
*TIR **07** 13:05:08.2, 41°.34N×20°.95E, h6^{km}, Md3.3/4*
*THE **07** 13:05:09.6, 41°.38N×20°.95E, h0^{km}±3^{km}, ML2.9/5, Error ellipse: s-maj=3.8km s-min=1.1km az=295.0*
*CSEM **07** 13:05:09.8±0.1, 41°.37N×21°.00E, h2^{km}, ML2.9, Error ellipse: s-maj=3.6km s-min=2.3km az=58.0*
*ATH **07** 13:05:10.8, 41°.28N×21°.03E, h20^{km}±2^{km}, ML2.8/6, Error ellipse: s-maj=4.1km s-min=1.6km az=143.0*
*PDG **07** 13:05:10.0±0.3, 41°.36N×20°.94E, h6^{km}, ML3.3/11, Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*
*BEO **07** 13:05:11.0±0.4, 41°.40N×20°.99E, h5^{km}, ML2.8/11*
ISC 07 13:05:10.5±1.0**, 41°.31N**±0°.02×**20°.98E**±0°.02**, h13**^{km}±8^{km}**, n141, σ1^s.41**/213**, 21C-17D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KRUS	**Krusevo**	0.21	74	*i* Pg	Pb	13 05 15.2	-1.1
KRUS				*i* Sg	Sg	13 05 19.2	+0.8
OHR	**Ohrid**	0.24	215	⇑*i*Pg	Pb	13 05 14.6	-2.2
OHR				*i* Sg	Sb	13 05 18.8	-2.2
OHR				*e*Lg	Lg	13 05 18.9	
	comp=N,5µm,0.3s						
OHR				*e*Lg	Lg	13 05 19.0	
	comp=E,5µm,0.3s						
BIA	**Bitola**	0.39	138	P	Pb	13 05 18.8	-0.6
BIA				S	Sn	13 05 26.0	-3.3
BIA	**Bitola**	0.39	138	*i* Pg	Pb	13 05 18.7	-0.6
BIA				*i* Sg	Sn	13 05 26.4	-2.9
BIA	**Bitola**	0.39	138	P	Pb	13 05 18.8	-0.6
PHP	**Peshkopia**	0.55	313	*i* Pg	Pb	13 05 18.5	-3.6
PHP				*i* Sg	Sb	13 05 26.3	-3.7
PHP	**Peshkopia**	0.55	313	*i* PG	Pb	13 05 18.5	-3.6
PHP				*i* SG	Sb	13 05 26.3	-3.7
FNA	**Florina**	0.60	150	P	Pb	13 05 21.6	-1.4
FNA				S	Sg	13 05 30.8	+0.5
FNA				AML	AML	13 05 33.4	
	comp=E,7238µm,0.2s						
FNA				AML	AML	13 05 35.6	
	comp=N,4766µm,0.2s						
FNA	**Florina**	0.60	150	P	Pb	13 05 21.9	-1.1
FNA				S	Sn	13 05 31.8	-2.8
FNA	**Florina**	0.60	150	P	Pb	13 05 21.9	-1.1
FNA				S	Sg	13 05 30.6	+0.3
SKO	**Skopje**	0.75	27	*e*Pg	Pb	13 05 23.7	-1.7
SKO				*e*Sg	Sb	13 05 31.9	-3.6
SKO	**Skopje**	0.75	27	P	Pb	13 05 24.3	-1.1
SKO				S	Sb	13 05 34.2	-1.3
SKO	**Skopje**	0.75	27	*i* Pg	Pb	13 05 24.3	-1.1
SKO				*i* Sg	Sb	13 05 34.6	-0.9
SKO	**Skopje**	0.75	27	*e*Pg	Pb	13 05 23.7	-1.7
SKO	**Skopje**	0.75	27	P	Pb	13 05 24.3	-1.1
SKO				*e*Sg	Sb	13 05 31.9	-3.6
SKO				S	Sb	13 05 34.2	-1.3
NEST	**Nestorio**	0.90	177	P	Pb	13 05 26.4	-1.5
NEST				AML	AML	13 05 47.1	
	comp=N,1649µm,0.7s						
NEST				AML	AML	13 05 47.2	
	comp=E,2225µm,0.6s						
NEST	**Nestorio**	0.90	177	P	Pb	13 05 26.8	-1.2
NEST				S	Sn	13 05 42.7	+0.9
NEST	**Nestorio**	0.90	177	P	Pb	13 05 27.0	-1.0
NEST				S	Sn	13 05 42.7	+0.9
PRZK	**Prizren**	0.92	350	P	Pb	13 05 26.4	-1.9
STIP	**Stip**	0.98	67	⇓*i*Pg	Pg	13 05 31.9	+2.4
STIP				*i* Sg	Sn	13 05 48.6	+4.7
PUK	**Puka**	1.09	312	*i* Pg	Pn	13 05 28.4	-3.3
PUK				*i* Sg	Sb	13 05 44.3	-1.3
PUK	**Puka**	1.09	312	*i* PG	Pn	13 05 28.4	-3.3
PUK				*i* SG	Sb	13 05 44.3	-1.3
PENT	**Pentalofos**	1.12	174	P	Pn	13 05 31.4	-0.6
PENT	**Pentalofos**	1.12	174	P	Pn	13 05 31.5	-0.5
GRG	**Griva**	1.13	108	P	Pg	13 05 32.2	-0.1
GRG				AML	AML	13 05 51.4	
	comp=E,607µm,0.3s						
GRG				AML	AML	13 05 54.7	
	comp=N,960µm,0.4s						
GRG	**Griva**	1.13	108	P	Pg	13 05 31.8	-0.5
GRG				S	Sg	13 05 48.7	+1.7
GRG	**Griva**	1.13	108	P	Pg	13 05 31.8	-0.5
GRG				S	Sg	13 05 48.7	+1.7
KZN	**Kozani**	1.17	149	P	Pb	13 05 32.0	-0.6
KZN				S	Sg	13 05 48.8	+0.6
KZN				AML	AML	13 05 53.0	
	comp=N,815µm,0.5s						
KZN				AML	AML	13 05 56.4	
	comp=E,905µm,0.4s						
KZN	**Kozani**	1.17	149	P	Pb	13 05 32.0	-0.6
KZN				S	Sg	13 05 51.6	+3.4
KZN	**Kozani**	1.17	149	P	Pb	13 05 32.2	-0.4
KZN				S	Sg	13 05 48.5	+0.3
ZATK	**Zatriq**	1.17	347	P	Pn	13 05 31.1	-1.6
VAY	**Valandovo**	1.20	89	*e*Pg	Pb	13 05 32.8	-0.3
VAY				*e*Sg	Sg	13 05 48.3	-0.9
VAY	**Valandovo**	1.20	89	*i* Pg	Pg	13 05 33.0	-0.6
VAY				*i* Sg	Sg	13 05 49.9	+0.8
VAY				*e*Lg	Lg	13 05 50.7	
	comp=N,194nm,0.5s						
VAY				*e*Lg	Lg	13 05 51.0	
	comp=E,215nm,0.4s						
VAY	**Valandovo**	1.20	89	*e*Pg	Pb	13 05 32.8	-0.3
VAY				*e*Sg	Sg	13 05 48.3	-0.9
BCI	**Bajram Curri**	1.26	327	*i* Pn	Pn	13 05 32.1	-1.8
BCI				*i* Sn	Sb	13 05 51.2	+1.0
BCI	**Bajram Curri**	1.26	327	*i* PN	Pn	13 05 32.1	-1.7
BCI				*i* SN	Sb	13 05 51.2	+1.0
KPRO	**Kipourio**	1.39	168	P	Pg	13 05 36.9	-0.2
KPRO				AML	AML	13 06 02.5	
	comp=E,858µm,0.5s						
KPRO				AML	AML	13 06 06.3	
	comp=N,510µm,1.0s						
KPRO	**Kipourio**	1.39	168	P	Pb	13 05 35.9	-0.4
KPRO				S	Sg	13 05 57.1	+2.0
KPRO	**Kipourio**	1.39	168	P	Pg	13 05 36.7	-0.4
KPRO				S	Sg	13 05 57.1	+2.0
KNT	**Kendrikon**	1.45	95	P	Pg	13 05 37.8	-0.7
KNT	**Kendrikon**	1.45	95	P	Pg	13 05 37.7	-0.7
ULC	**Ulcinj**	1.46	297	⇑*i*Pg	Pn	13 05 34.9	-1.7
ULC				*e*Sg	Sb	13 05 57.6	+1.6
ULC	**Ulcinj**	1.46	297	P	Pn	13 05 35.1	-1.5
ULC				*e*Sg	Sb	13 05 57.6	+1.6
PVY	**Plav**	1.49	330	⇑*i*Pg	Pn	13 05 36.2	-1.0
PVY				*e*Sg	Sb	13 05 58.8	+1.7
PVY	**Plav**	1.49	330	⇑*i*Pg	Pn	13 05 36.2	-1.0
PVY				*e*Sg	Sb	13 05 58.8	+1.7
DRME	**Dracevica, Mon**	1.60	304	⇓*i*Pg	Pn	13 05 37.9	-0.7
DRME				*e*Sg	Sg	13 06 02.7	+0.6
DRME	**Dracevica, Mon**	1.60	304	⇓*i*Pg	Pn	13 05 37.9	-0.7
DRME				*e*Sg	Sg	13 06 02.7	+0.6
BARS	**Barje**	1.63	22	*e*Pg	Pn	13 05 39.2	+0.2
BARS				*e*Sg	Sn	13 05 59.2	-0.6
BARS	**Barje**	1.63	22	*e*Pg	Pn	13 05 39.2	+0.2
BARS				*e*Sg	Sn	13 05 59.2	-0.6
JAN	**Janina**	1.65	183	P	Pg	13 05 41.6	-0.7
JAN	**Janina**	1.65	183	P	Pb	13 05 41.1	+0.2
LIT	**Litokhoron**	1.67	136	P	Pb	13 05 40.9	-0.2
LIT				AML	AML	13 06 12.6	
	comp=E,305µm,0.3s						
LIT				AML	AML	13 06 13.3	
	comp=N,283µm,0.3s						
LIT	**Litokhoron**	1.67	136	P	Pb	13 05 40.7	-0.4
LIT	**Litokhoron**	1.67	136	P	Pb	13 05 40.7	-0.4
PDG	**Podgorica**	1.71	312	*e*Pn	Pn	13 05 39.7	-0.3
PDG				*e*Sg	Sb	13 06 03.5	+0.4
PDG	**Podgorica**	1.71	312	⇑*i*P	Pn	13 05 40.0	0.0
PDG	**Podgorica**	1.71	312	⇓*i*Pn	Pn	13 05 40.2	+0.2
PDG				*e*Sg	Sb	13 06 03.5	+0.4
PDG				S	Sb	13 06 04.7	+1.6
TTG	**Podgorica**	1.71	312	⇓*i*Pn	Pn	13 05 40.2	+0.2
TTG				*e*Sn	Sb	13 06 04.7	+1.6
BEY	**Berane**	1.76	333	⇑*i*Pn	Pn	13 05 41.5	+0.7
BEY				*e*Sn	Sb	13 06 05.7	+1.0
IVA	**Berane**	1.76	333	⇑*i*Pn	Pn	13 05 41.5	+0.7
IVA				*e*Sn	Sb	13 06 05.7	+1.0
SGD	**Sagiada**	1.79	199	P	Pg	13 05 43.9	-0.9
SGD	**Sagiada**	1.79	199	P	Pb	13 05 43.3	+0.2
KEK	**Kerkira**	1.83	210	P	Pb	13 05 42.4	-1.5
KEK	**Kerkira**	1.83	210	P	Pb	13 05 43.0	-0.9
KEK	**Kerkira**	1.83	210	P	Pb	13 05 43.0	-0.9
IGT	**Igoumenitsa**	1.84	196	P	Pb	13 05 44.2	+0.1
IGT	**Igoumenitsa**	1.84	196	P	Pb	13 05 43.8	-0.3
BUM	**Brajici-Budva**	1.85	303	⇑*i*Pn	Pn	13 05 42.2	+0.2
BUM				*e*Sn	Sb	13 06 08.2	+0.9
BUM	**Brajici-Budva**	1.85	303	⇑*i*Pn	Pn	13 05 42.2	+0.2
BUM				*e*Sn	Sb	13 06 08.2	+0.9
KOME	**Kolasin**	1.89	325	⇑*i*Pn	Pn	13 05 43.3	+0.7
KOME				*e*Sn	Sb	13 06 08.9	+0.5
KOME	**Kolasin**	1.89	325	⇑*i*Pn	Pn	13 05 43.3	+0.7
KOME				*e*Sn	Sb	13 06 08.9	+0.5
SELS	**Selova**	1.91	3	*e*Pg	Pb	13 05 44.3	-1.0
SELS				*e*Sg	Sb	13 06 08.7	-0.4
THL	**Klokotos Trika**	1.91	155	P	Pb	13 05 43.9	-1.3
THL	**Klokotos Trika**	1.91	155	P	Pb	13 05 44.0	-1.3
CEME	**Cevo**	1.97	309	⇑*i*Pn	Pn	13 05 44.4	+0.7
CEME				*e*Sn	Sb	13 06 11.1	+0.2
CEME	**Cevo**	1.97	309	⇑*i*Pn	Pn	13 05 44.4	+0.7
CEME				*e*Sn	Sb	13 06 11.1	+0.2
SRS	**Serrai**	1.98	95	P	Pb	13 05 44.6	-1.8
SRS	**Serrai**	1.98	95	P	Pb	13 05 44.8	-1.6
SJES	**Sjenica**	2.09	339	*e*Pg	Pn	13 05 46.3	+0.9
SJES				*e*Sg	Sb	13 06 14.1	-0.2
PLG	**Polygyros**	2.09	116	P	Pb	13 05 46.3	-2.1
PLG	**Polygyros**	2.09	116	P	Pb	13 05 46.4	-1.9
NKME	**Niksic**	2.10	315	⇑*i*Pn	Pn	13 05 46.1	+0.7
NKME				*e*Sn	Sb	13 06 14.1	-0.4
NKME	**Niksic**	2.10	315	⇑*i*Pn	Pn	13 05 46.1	+0.7
NKME				*e*Sn	Sb	13 06 14.1	-0.4
VTS	**Vitosha**	2.10	52	*e*Pg	Pb	13 05 46.8	-1.7
VTS				*e*Sg	Sg	13 06 16.2	-1.8
VTS	**Vitosha**	2.10	52	⇓*i*P	Pn	13 05 45.9	+0.4
VTS	**Vitosha**	2.10	52	⇓*i*P	Pn	13 05 45.9	+0.4
VTS	**Vitosha**	2.10	52	*e*Pg	Pb	13 05 46.8	-1.7
VTS				S	Sb	13 06 14.1	-0.5
VTS				*e*Sg	Sg	13 06 16.2	-1.8
NKY	**Niksic**	2.11	316	⇓*i*Pn	Pn	13 05 46.6	+1.0
NKY				*e*Sn	Sb	13 06 14.4	-0.4
NKY	**Niksic**	2.11	316	⇓*i*Pn	Pn	13 05 46.6	+1.0
NKY				*e*Sn	Sb	13 06 14.4	-0.4
NVR	**Nevrokopi**	2.17	88	P	Pb	13 05 48.9	-0.8
NVR	**Nevrokopi**	2.17	88	P	Pb	13 05 48.3	-1.4
HCY	**Herceg Novi**	2.18	302	⇓*i*Pn	Pn	13 05 47.2	+0.7
HCY				*e*Sn	Sb	13 06 16.5	-0.2
HCY	**Herceg Novi**	2.18	302	⇓*i*Pn	Pn	13 05 47.2	+0.7
HCY				*e*Sn	Sb	13 06 16.5	-0.2
ZAPS	**Zavoj**	2.31	31	*e*Sg	Pn	13 05 50.6	+2.2
ZAPS	**Zavoj**	2.31	31	*e*Pg	Sb	13 06 22.5	+1.8
PLE	**Pljevlja**	2.34	330	⇑*i*Pn	Pn	13 05 49.4	+0.6
PLE				*e*Sn	Sn	13 06 19.6	+2.1
PLE	**Pljevlja**	2.34	330	⇑*i*Pn	Pn	13 05 49.4	+0.6
PLE				*e*Sn	Sn	13 06 19.6	+2.1
IVAS	**Ivanjica**	2.35	345	*e*Pg	Pb	13 05 51.3	-1.4
IVAS				*e*Sg	Sb	13 06 22.8	+1.2
IVAS	**Ivanjica**	2.35	345	*e*Pg	Pb	13 05 51.3	-1.4
IVAS				*e*Sg	Sb	13 06 22.8	+1.2
BOVS	**Bovan**	2.38	13	*e*Sg	Sb	13 06 24.6	+1.9
BOVS	**Bovan**	2.38	13	*e*Sg	Sb	13 06 24.6	+1.9
BRY	**Bratogost**	2.41	312	⇓*i*Pn	Pn	13 05 50.8	+0.9
BRY				*e*Sn	Sn	13 06 21.9	+2.5
BRY	**Bratogost**	2.41	312	⇓*i*Pn	Pn	13 05 50.8	+0.9
BRY				*e*Sn	Sn	13 06 21.9	+2.5
UPM	**Unac-Piva**	2.44	322	*e*Pn	Pn	13 05 51.2	+0.9
UPM				*e*Sn	Sn	13 06 21.9	+1.8
UPM	**Unac-Piva**	2.44	322	*e*Pn	Pn	13 05 51.2	+0.9
UPM	**Unac-Piva**	2.44	322	P	Pb	13 05 54.1	-0.3
UPM				*e*Sn	Sn	13 06 21.9	+1.8
PAIG	**Paliouri**	2.48	123	P	Pn	13 05 51.3	+0.7
PAIG	**Paliouri**	2.48	123	P	Pn	13 05 51.5	+0.9
LKD2	**Lefkada island**	2.53	186	P	Pb	13 05 54.0	-1.9
LKD2	**Lefkada island**	2.53	186	P	Pb	13 05 53.5	-2.3
XOR	**Xorichti**	2.57	138	P	Pn	13 05 51.6	-0.3
XOR	**Xorichti**	2.57	138	P	Pn	13 05 52.5	+0.5
GRUS	**Gruza**	2.58	356	*e*Pn	Pn	13 05 52.4	+0.3
GRUS	**Gruza**	2.58	356	*e*Pn	Pn	13 05 52.4	+0.3
NEO	**Neokhori**	2.64	139	P	Pn	13 05 52.4	-0.4
NEO	**Neokhori**	2.64	139	P	Pn	13 05 53.3	+0.5
BBLS	**Lazići**	2.81	336	*e*Pn	Pn	13 05 56.3	+1.1
BBLS	**Lazići**	2.81	336	*e*Pn	Pn	13 05 56.3	+1.1
SKIA	**Skiathos**	2.86	138	P	Pn	13 05 55.3	-0.6
SKIA	**Skiathos**	2.86	138	P	Pn	13 05 56.3	+0.4
FSK	**Fiskardo**	2.87	187	P	Pn	13 05 56.5	+0.5
DIVS	**Divibare**	2.88	346	*e*Pn	Pn	13 05 56.2	0.0
DIVS	**Divibare**	2.88	346	*e*Pn	Pn	13 05 56.2	0.0
STON	**Ston**	2.90	304	*e*Pn	Pn	13 05 58.0	+1.7
STON	**Ston**	2.90	304	*e*Pn	Pn	13 05 57.5	+1.2
STON				Sn	Sn	13 06 33.4	+2.4
STON	**Ston**	2.90	304	*e*Pn	Pn	13 05 58.0	+1.7
AOS	**Alonnisos**	3.08	133	P	Pn	13 06 00.1	+1.2
AOS	**Alonnisos**	3.08	133	P	Pn	13 06 00.3	+1.4
MATE	**Matera**	3.30	260	⇓*i*P	Pn	13 06 02.4	+0.5
MATE	**Matera**	3.30	260	⇓*i*P	Pn	13 06 02.4	+0.5
TEKS	**Tekeris**	3.41	342	*e*Pn	Pn	13 06 03.6	+0.2
TEKS	**Tekeris**	3.41	342	*e*Pn	Pn	13 06 03.6	+0.2
MDVR	**Moldovita**	3.51	9	⇑*i*P	Pn	13 06 04.2	-0.7
MDVR	**Moldovita**	3.51	9	⇑*i*P	Pn	13 06 04.2	-0.7
TIP	**Timpagrande**	3.87	238	⇓*i*P	Pn	13 06 10.1	+0.3
TIP	**Timpagrande**	3.87	238	⇓*i*P	Pn	13 06 10.1	+0.3
FGSL	**Fruska Gora**	3.94	348	*e*Pn	Pn	13 06 10.5	-0.2
FRGS	**Fruska Gora**	3.94	348	*e*Pn	Pn	13 06 10.5	-0.2
BZS	**Buzias**	4.33	6	⇑*i*P	Pn	13 06 15.2	-0.9
BZS	**Buzias**	4.33	6	⇑*i*P	Pn	13 06 15.2	-0.9
UDBI	**Udbina**	5.00	312	*e*Pn	Pn	13 06 27.4	+2.0
UDBI				Sn	Sn	13 07 24.1	+1.0

*ISCJB **07** 13:06:20.7±0.5, 6°.59N±0°.03×73°.53W±0°.03, h122^{km}±4^{km}, mb3.9/2, Error ellipse: s-maj=5.8km s-min=4.8km az=43.1*
*IDC **07** 13:06:21.7±0.8, 6°.50N×73°.38W, h131^{km}±11^{km}, mb3.7/2, mb1 3.9/4, mb1mx3.2/45, mbtmp4.2/4, Error ellipse: s-maj=44.0km s-min=7.7km az=131.0*
*RSNC **07** 13:06:23.0±1.1, 6°.54N×73°.55W, h105^{km}±5^{km}, ML3.8, Mw3.8*
ISC 07 13:06:20.8±0.8**, 6°.60N**±0°.04×**73°.50W**±0°.04**, h121**^{km}±6^{km}**, n24, σ1^s.36**/39**, 1C, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	0.31	91	*i* P	Pn	13 06 39.1	+0.9
BARC				*e*S	Sn	13 06 51.0	-0.3
BARC				*i*		13 06 53.5	
	comp=Z,8µm,0.5s						
BRRC	**Barranca, Sant**	0.55	337	*e*P	Pn	13 06 39.8	+0.6
BRRC				*e*S	Sn	13 06 52.7	-0.4
BRRC				*i*		13 07 02.5	
	comp=Z,904nm,0.1s						
RUSC	**La Rusia**	0.81	149	*e*P	Pn	13 06 42.1	+0.3
RUSC				*e*S	Sn	13 06 56.4	-1.2
RUSC				*i*		13 06 59.5	
	comp=Z,942nm,0.5s						
PTBC	**PUERTO BERRIO,**	0.95	267	⇑*i*P	Pn	13 06 41.9	-0.6
PTBC				*i*		13 06 42.2	
	comp=Z,817nm,0.2s						
PTBC				*e*S	Sn	13 06 56.8	-2.1
PAMC	**Pamplona, Colo**	1.08	47	*e*P	Pn	13 06 45.3	+1.1
ZARC	**Zaragoza, Cauc**	1.62	304	*e*P	Pn	13 06 50.6	+0.9
ZARC				*e*S	Sn	13 07 12.5	+0.8
ZARC				*i*		13 07 15.6	
	comp=Z,1µm,0.2s						
YOPC	**Yopal, Colombi**	1.64	139	*e*P	Pn	13 06 51.2	+1.2
YOPC				*e*S	Sn	13 07 12.4	+0.2
YOPC				*i*		13 07 15.1	
	comp=Z,678nm,0.4s						
OCAC	**Ocana**	1.64	6	*e*P	Pn	13 06 51.1	+0.9
OCAC				*e*S	Sn	13 07 13.6	+1.1
OCAC				*i*		13 07 24.6	
	comp=Z,1µm,0.2s						
TAMC	**Tame, Arauca**	1.70	95	*e*P	Pn	13 06 51.8	+1.1
TAMC				*i*		13 06 52.4	
	comp=Z,657nm,0.4s						
TAMC				*e*S	Sn	13 07 14.4	+0.8
NORC	**Norcasia**	1.71	233	*e*P	Pn	13 06 50.7	-0.1
NORC				*e*S	Sn	13 07 11.6	-2.0
ROSC	**El Rosal**	1.93	205	P	Pn	13 06 55.0	+1.2
	comp=Z,67nm,0.3s,baz=30,slow=15,SNR=56						
ROSC				S	Sn	13 07 20.4	+1.5
	comp=Z,55nm,0.3s,baz=280,slow=24,SNR=12						
CHIC	**Chingaza**	1.97	187	*e*P	Pn	13 06 54.7	+0.4
CHIC				*e*S	Sn	13 07 18.6	-1.3
HELC	**Santa Helena**	2.06	259	*e*P	Pn	13 06 56.3	+0.9
HELC				*e*S	Sn	13 07 20.9	-0.9
HELC				*i*		13 07 29.4	
	comp=Z,483nm,0.3s						
VILC	**Villavicencio,**	2.48	185	*e*P	Pn	13 07 00.9	+0.5
TOLC	**Tolima**	2.70	222	*e*P	Pn	13 07 04.6	+1.1
PRAC	**Prado**	3.18	206	*e*P	Pn	13 07 09.9	+0.4
PRAC				*e*S	Sn	13 07 46.4	-0.8
SDV	**Santo Domingo**	3.64	51	P	Pn	13 07 17.1	+1.3
	comp=Z,36nm,0.3s,baz=230,slow=12,SNR=19						
SDV				S	Sn	13 07 59.2	+1.0
	comp=Z,57nm,0.3s,baz=267,slow=20,SNR=32						
PCRV	**Puerto La Cruz**	9.46	67	P	Pn	13 08 33.4	-0.7
	comp=Z,2.4nm,0.3s,baz=245,slow=16,SNR=8.2						
PCRV				S	Sn	13 10 13.2	-5.5
	comp=Z,0.9nm,0.3s,baz=41,slow=19,SNR=4.0						
YKA	**Yellowknife Ar**	63.34	340	P	P	13 16 37.3	+0.5
	comp=Z,0.7nm,0.6s,baz=133,slow=6.5,SNR=16						
ARCES	**ARCESS Array B**	87.01	20	P	P	13 18 52.9	+0.7
	comp=Z,1.7nm,0.8s,baz=279,slow=3.2,SNR=5.0						
ZALV	**Zalesovo Beam**	116.98	14	PKP	PKPdf	13 24 50.5	-0.8
	comp=Z,0.3nm,0.4s,baz=327,slow=2.4,SNR=2.4						
MKAR	**Makanchi Array**	122.66	20	PKP	PKPdf	13 25 02.5	0.0
	comp=Z,0.2nm,0.4s,baz=317,slow=2.4,SNR=6.1						
ASAR	**Alice Springs**	148.68	234	PKPbc	PKPbc	13 25 54.1	-0.6
	comp=Z,0.2nm,0.5s,baz=134,slow=3.1,SNR=3.5						
WRA	**Warramunga Arr**	149.90	241	PKPbc	PKPbc	13 25 57.0	-0.8
	comp=Z,0.2nm,0.3s,baz=106,slow=3.0,SNR=8.2						

*SKO **07** 13:15:19.2, 41°.34N×19°.90E, h25^{km}, M2.4, ML2.4*
*TIR **07** 13:15:29.8, 41°.36N×20°.95E, h6^{km}, Md2.9/3*
*THE **07** 13:15:29.6, 41°.43N×20°.93E, h0^{km}±13^{km}, ML2.4/4, Error ellipse: s-maj=15.8km s-min=2.0km az=312.0*
*PDG **07** 13:15:30.9±0.4, 41°.33N×20°.89E, h2^{km}, ML2.8/9, Error ellipse: s-maj=0.6km s-min=0.7km az=0.0*
*CSEM **07** 13:15:31.5±0.2, 41°.31N×20°.99E, h5^{km}, ML2.4, Error ellipse: s-maj=7.6km s-min=3.9km az=42.0*
*BEO **07** 13:15:33.5±0.5, 41°.42N×21°.01E, h0^{km}, ML2.2/9*
ISC 07 13:15:30.9±0.9**, 41°.34N**±0°.02×**20°.91E**±0°.02**, h9**^{km}±8^{km}**, n67, σ1^s.31**/115**, 7C-8D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHR	**Ohrid**	0.24	200	⇑*i*Pg	Pg	13 15 35.8	0.0
OHR				*i* Sg	Sg	13 15 39.8	+0.8
OHR				*e*Lg	Lg	13 15 39.9	
	comp=N,1µm,0.3s						
OHR				*e*Lg	Lg	13 15 40.1	
	comp=E,2µm,0.4s						
KRUS	**Krusevo**	0.26	83	⇑*i*Pg	Pg	13 15 36.4	+0.2
KRUS				*i* Sg	Sg	13 15 40.4	+0.7
BIA	**Bitola**	0.45	135	P	Pg	13 15 39.9	+0.3
BIA				S	Sb	13 15 47.3	-0.5
BIA	**Bitola**	0.45	135	*i* Pg	Pg	13 15 39.9	+0.3
BIA				*i* Sg	Sb	13 15 47.5	-0.3
BIA	**Bitola**	0.45	135	P	Pg	13 15 39.9	+0.3
BIA				S	Sb	13 15 47.3	-0.5
PHP	**Peshkopia**	0.49	315	*i* PG	Pg	13 15 37.7	-2.8
PHP				*i* SG	Sg	13 15 47.7	+0.7
FNA	**Florina**	0.66	147	P	Pg	13 15 43.0	-0.6
FNA				S	Sb	13 15 53.4	-0.4
FNA	**Florina**	0.66	147	P	Pg	13 15 43.0	-0.6
SKO	**Skopje**	0.75	32	*e*Sg	Sg	13 15 45.4	-10
SKO	**Skopje**	0.75	32	*e*Pg	Pn	13 15 53.7	+6.0
SKO	**Skopje**	0.75	32	*e*Pg	Pb	13 15 46.2	0.0
PRZK	**Prizren**	0.88	353	P	Pg	13 15 48.0	+0.1
NEST	**Nestorio**	0.93	173	P	Pg	13 15 47.9	-0.8
NEST				S	Sn	13 16 04.5	+0.8
NEST	**Nestorio**	0.93	173	P	Pg	13 15 47.9	-0.8
STIP	**Stip**	1.03	69	*i* Pg	Pn	13 15 53.1	+1.7
STIP				*i* Sg	Sn	13 16 09.8	+3.7
GRG	**Griva**	1.19	108	P	Pb	13 15 52.9	-0.8
GRG				S	Sn	13 16 10.2	+0.1
GRG	**Griva**	1.19	108	P	Pb	13 15 52.9	-0.8
BCI	**Bajram Curri**	1.21	329	*i* Pg	Pn	13 15 52.8	-1.2
	baz=27						
BCI				*i* Sg	Sn	13 16 11.6	+1.1
BCI	**Bajram Curri**	1.21	329	*i* PG	Pn	13 15 52.8	-1.2
BCI				*i* SG	Sn	13 16 11.6	+1.1
KZN	**Kozani**	1.22	147	P	Pn	13 15 53.5	-0.7
KZN				S	Sn	13 16 13.9	+3.0
KZN	**Kozani**	1.22	147	P	Pn	13 15 53.5	-0.7
VAY	**Valandovo**	1.25	90	*e*Pg	Pn	13 15 54.2	-0.4
VAY				*e*Sg	Sn	13 16 11.0	-0.6
VAY	**Valandovo**	1.25	90	P	Pn	13 15 54.2	-0.4
VAY				S	Sb	13 16 10.7	-0.3
VAY	**Valandovo**	1.25	90	*i* Pg	Pn	13 15 54.3	-0.4
VAY				*i* Sg	Sg	13 16 11.4	+0.2
VAY				*e*Lg	Lg	13 16 12.9	
	comp=E,69nm,1.0s						
VAY	**Valandovo**	1.25	90	P	Pn	13 15 54.2	-0.4
VAY				S	Sb	13 16 10.7	-0.3
VAY				*e*Sg	Sn	13 16 11.0	-0.6
ULC	**Ulcinj**	1.39	297	⇓*i*Pg	Pn	13 15 56.0	-0.6
ULC				*e*Sg	Sg	13 16 17.9	+2.2
ULC	**Ulcinj**	1.39	297	⇓*i*Pg	Pn	13 15 56.0	-0.6
ULC				*e*Sg	Sg	13 16 17.9	+2.2
PVY	**Plav**	1.44	331	⇓*i*Pg	Pb	13 15 57.8	-0.2
PVY				*e*Sg	Sg	13 16 20.1	+2.8
PVY	**Plav**	1.44	331	⇓*i*Pg	Pb	13 15 57.8	-0.2
PVY				*e*Sg	Sg	13 16 20.1	+2.8
DRME	**Dracevica, Mon**	1.54	304	⇑*i*Pg	Pb	13 15 59.4	-0.3
DRME				*e*Sg	Sg	13 16 23.8	+3.3
DRME	**Dracevica, Mon**	1.54	304	⇑*i*Pg	Pb	13 15 59.4	-0.3
DRME				*e*Sg	Sg	13 16 23.8	+3.3
BARS	**Barje**	1.63	24	*e*Pg	Pb	13 16 00.6	-0.5
BARS				*e*Sg	Sb	13 16 21.2	-0.5
BARS	**Barje**	1.63	24	*e*Pg	Pb	13 16 00.6	-0.5
BARS				*e*Sg	Sb	13 16 21.2	-0.5
PDG	**Podgorica**	1.65	312	*e*Pn	Pg	13 16 02.6	+0.1

PDG				*e*Sg	**Sg**	**13 16 25.9**	**+2.1**
PDG	**Podgorica**	**1.65**	**312**	*e*Pn	**Pg**	**13 16 02.6**	**+0.1**
PDG				*e*Sg	**Sg**	**13 16 25.9**	**+2.1**
PDG				*e*Sn	**Sg**	**13 16 27.1**	**+3.3**
TTG	**Podgorica**	**1.65**	**312**	⇑*i*Pn	**Pb**	**13 16 01.2**	**-0.2**
TTG				*e*Sn	**Sg**	**13 16 27.1**	**+3.3**
BEY	**Berane**	**1.71**	**334**	⇑*i*Pn	**Pb**	**13 16 02.7**	**+0.1**
BEY				*e*Sn	**Sg**	**13 16 27.6**	**+1.7**
IVA	**Berane**	**1.71**	**334**	⇑*i*Pn	**Pb**	**13 16 02.7**	**+0.1**
IVA				*e*Sn	**Sg**	**13 16 27.6**	**+1.7**
BUM	**Brajici-Budva**	**1.79**	**303**	*e*Pn	**Pb**	**13 16 03.1**	**-0.7**
BUM				*e*Sn	**Sg**	**13 16 29.6**	**+1.3**
BUM	**Brajici-Budva**	**1.79**	**303**	*e*Pn	**Pb**	**13 16 03.1**	**-0.7**
BUM				*e*Sn	**Sg**	**13 16 29.6**	**+1.3**
KOME	**Kolasin**	**1.83**	**326**	*e*Pn	**Pb**	**13 16 04.2**	**-0.5**
KOME				*e*Sn	**Sg**	**13 16 30.9**	**+1.1**
KOME	**Kolasin**	**1.83**	**326**	*e*Pn	**Pb**	**13 16 04.2**	**-0.5**
KOME				*e*Sn	**Sg**	**13 16 30.9**	**+1.1**
SELS	**Selova**	**1.89**	**5**	*e*Pn	**Pb**	**13 16 05.1**	**-0.5**
SELS				*e*Sg	**Sg**	**13 16 30.6**	**-1.0**
CEME	**Cevo**	**1.91**	**310**	*e*Pn	**Pb**	**13 16 05.7**	**-0.3**
CEME				*e*Sn	**Sg**	**13 16 32.7**	**+0.3**
CEME	**Cevo**	**1.91**	**310**	*e*Pn	**Pb**	**13 16 05.7**	**-0.3**
CEME				*e*Sn	**Sg**	**13 16 32.7**	**+0.3**
NKME	**Niksic**	**2.04**	**315**	*e*Pn	**Pb**	**13 16 07.6**	**-0.5**
NKME				*e*Sn	**Sg**	**13 16 35.6**	**-0.8**
NKME	**Niksic**	**2.04**	**315**	*e*Pn	**Pb**	**13 16 07.6**	**-0.5**
NKME				*e*Sn	**Sg**	**13 16 35.6**	**-0.8**
SJES	**Sjenica**	**2.04**	**341**	*e*Pn	**Pg**	**13 16 09.4**	**-0.7**
SJES				*e*Sg	**Sg**	**13 16 36.2**	**-0.4**
NKY	**Niksic**	**2.05**	**317**	*e*Pn	**Pb**	**13 16 07.7**	**-0.7**
NKY				*e*Sn	**Sg**	**13 16 35.9**	**-0.9**
NKY	**Niksic**	**2.05**	**317**	*e*Pn	**Pb**	**13 16 07.7**	**-0.7**
NKY				*e*Sn	**Sg**	**13 16 35.9**	**-0.9**
HCY	**Herceg Novi**	**2.12**	**302**	⇓*i*Pn	**Pb**	**13 16 08.4**	**-1.0**
HCY				*e*Sn	**Sg**	**13 16 37.5**	**-1.4**
HCY	**Herceg Novi**	**2.12**	**302**	⇓*i*Pn	**Pb**	**13 16 08.4**	**-1.0**
HCY				*e*Sn	**Sg**	**13 16 37.5**	**-1.4**
VTS	**Vitosha**	**2.13**	**53**	*e*Pn	**Pn**	**13 16 08.0**	**+1.2**
VTS	**Vitosha**	**2.13**	**53**	*e*Pn	**Pn**	**13 16 08.0**	**+1.2**
IVAS	**Ivanjica**	**2.31**	**346**	*e*Sg	**Pb**	**13 16 12.0**	**-0.7**
IVAS	**Ivanjica**	**2.31**	**346**	*e*Pn	**Sg**	**13 16 44.5**	**-0.5**
ZAPS	**Zavoj**	**2.32**	**33**	*e*Sg	**Pb**	**13 16 12.2**	**-0.8**
ZAPS	**Zavoj**	**2.32**	**33**	*e*Pn	**Sg**	**13 16 43.8**	**-1.7**
BRY	**Bratogost**	**2.35**	**312**	⇓*i*Pn	**Pb**	**13 16 11.9**	**-1.7**
BRY				*e*Sn	**Sb**	**13 16 43.4**	**+0.6**
BRY	**Bratogost**	**2.35**	**312**	⇓*i*Pn	**Pb**	**13 16 11.9**	**-1.7**
BRY				*e*Sn	**Sb**	**13 16 43.4**	**+0.6**
UPM	**Unac-Piva**	**2.38**	**322**	*e*Pn	**Pb**	**13 16 12.8**	**-1.3**
UPM				*e*Sn	**Sb**	**13 16 44.0**	**+0.3**
UPM	**Unac-Piva**	**2.38**	**322**	*e*Pn	**Pb**	**13 16 12.8**	**-1.3**
UPM	**Unac-Piva**	**2.38**	**322**	P	**Pg**	**13 16 16.2**	**-0.4**
UPM				*e*Sn	**Sb**	**13 16 44.0**	**+0.3**
BBLS	**Lazići**	**2.76**	**337**	*e*Pn	**Pb**	**13 16 17.9**	**-2.5**
BBLS	**Lazići**	**2.76**	**337**	*e*Pn	**Pb**	**13 16 17.9**	**-2.5**
DIVS	**Divibare**	**2.84**	**347**	*e*Pn	**Pb**	**13 16 19.9**	**-1.9**
DIVS	**Divibare**	**2.84**	**347**	*e*Pn	**Pb**	**13 16 19.9**	**-1.9**

NSSP ***07*** *13:25:50.9, 39°.45N×44°.75E, h7^{km}, Ms3.2*

CSEM ***07*** *13:25:52.9±0.4, 39°.39N×44°.75E, h2^{km}, MD2.7, Error ellipse: s-maj=9.8km s-min=6.6km az=158.0*

DDA ***07*** *13:25:52.0, 39°.44N×44°.76E, h7^{km}, Md2.7*

TEH ***07*** *13:25:54.7, 39°.23N×44°.85E, h7^{km}, ML2.7*

ISC 07 13:25:51.8±1.4, **39°.35N**±0°.03×**44°.78E**±0°.03, **h3**^{km}±12^{km}, **n20**, σ**1^{s}.27**/34, **4C-2D, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CLDR	**Caldiran**	**0.70**	**253**	PG	**Pb**	**13 26 05.9**	**-0.9**
CLDR				SG	**Sb**	**13 26 16.9**	**0.0**
CLDR	**Caldiran**	**0.70**	**253**	*i* P	**Pb**	**13 26 06.1**	**-0.7**
CLDR				*i* S	**Sb**	**13 26 16.3**	**-0.6**
CLDR	**Caldiran**	**0.70**	**253**	P	**Pb**	**13 26 06.1**	**-0.7**
CLDR				S	**Sb**	**13 26 16.3**	**-0.6**
GNI	**Garni**	**0.80**	**358**	PG	**Pg**	**13 26 06.4**	**-0.7**
GNI	**Garni**	**0.80**	**358**	⇓*i*P	**Pg**	**13 26 06.5**	**-0.7**
GNI				⇑*i*S	**Sg**	**13 26 17.6**	**+0.1**
GNI	**Garni**	**0.80**	**358**	⇓P	**Pg**	**13 26 06.5**	**-0.7**
GNI				S	**Sg**	**13 26 17.6**	**+0.1**
DYDN	**Diyadin**	**0.86**	**283**	*i* P	**Pg**	**13 26 06.7**	**-1.8**
DYDN				*i* S	**Sn**	**13 26 23.4**	**-0.9**
GRS	**Goris**	**1.21**	**82**	⇑*i*P	**Pn**	**13 26 16.0**	**+0.2**
GRS				⇑*i*S	**Sn**	**13 26 34.0**	**+1.2**
GRS	**Goris**	**1.21**	**82**	⇑P	**Pn**	**13 26 16.0**	**+0.2**
GRS				S	**Sn**	**13 26 34.0**	**+1.2**
ISHB	**Shabestar**	**1.25**	**148**	*e*Pg	**Pg**	**13 26 14.9**	**-0.9**
ISHB				*e*		13 26 36.0	
	comp=Z,4µm,0.1s						
AGRB	**Hanur-Agry**	**1.40**	**280**	*e*PG	**Pg**	**13 26 18.5**	**-0.2**
ITBZ	**Tabriz**	**1.55**	**136**	*e*Pg	**Pn**	**13 26 19.8**	**-0.6**
ITBZ				*e*		13 26 20.8	
	comp=Z,2µm,0.1s						
EAK	**Akyaka**	**1.61**	**326**	*i* P	**Pb**	**13 26 21.7**	**-0.5**
EAK				*i* S	**Sb**	**13 26 42.4**	**-0.6**
EAK	**Akyaka**	**1.61**	**326**	P	**Pb**	**13 26 21.7**	**-0.5**
EAK				S	**Sb**	**13 26 42.4**	**-0.6**
EATA	**Eleskirt**	**1.84**	**287**	*i* P	**Pb**	**13 26 26.0**	**-0.3**
EATA				*i* S	**Sg**	**13 26 56.6**	**+5.7**
EATA	**Eleskirt**	**1.84**	**287**	P	**Pb**	**13 26 26.0**	**-0.3**
BGD	**Bogdanovka**	**2.11**	**335**	P	**Pb**	**13 26 30.2**	**-0.6**
BGD				S	**Sb**	**13 26 57.3**	**-0.3**
DGRG	**David-gareji**	**2.15**	**12**	P	**Pb**	**13 26 30.8**	**-0.5**
DGRG				S	**Sb**	**13 26 59.2**	**+0.8**
DGRG	**David-gareji**	**2.15**	**12**	P	**Pb**	**13 26 30.6**	**-0.7**
DGRG				S	**Sb**	**13 26 58.0**	**-0.4**
IBST	**Bostanabad**	**2.34**	**134**	*e*Pn	**Pn**	**13 26 32.1**	**+0.8**
IBST				*e*		13 27 08.7	
	comp=Z,209nm,0.2s						

SJA ***07*** *13:35:02.4±1.1, 33°.04S×71°.82W, h26^{km}±13^{km}, ML3.3, MW3.7*

GUC ***07*** *13:35:06.0±0.5, 32°.79S×71°.54W, h31^{km}±5^{km}, ML3.5*

ISC 07 13:35:05.6±2.1, **32°.58S**±0°.04×**71°.4W**±0°.1, **h16**^{km}±14^{km}, **n14**, σ**0^{s}.97**/20, **1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROCH	**El Roble**	**0.54**	**137**	*e*P	**Pb**	**13 35 17.0**	**+0.1**
ROCH				*e*S	**Sb**	**13 35 25.9**	**+1.4**
ROCH				IAML		13 35 27.4	
	comp=N,4µm,0.5s						
ROC1	**El Roble**	**0.54**	**138**	*e*P	**Pb**	**13 35 17.0**	**+0.1**
ROC1				*e*S	**Sb**	**13 35 26.3**	**+1.8**
PEL	**Peldehue**	**0.85**	**132**	*e*P	**Pg**	**13 35 22.0**	**-0.3**
PEL				*e*S	**Sg**	**13 35 33.5**	**0.0**
PEL				IAML		13 35 37.1	
	comp=N,3µm,0.3s						
CLCH	**Cerro Calan**	**1.12**	**137**	*e*P	**Pb**	**13 35 25.6**	**-1.1**
CLCH				*e*S	**Sb**	**13 35 40.4**	**-0.6**
CLCH				IAML		13 35 46.9	
	comp=E,2µm,0.6s						
ANTU	**Antumapu**	**1.20**	**146**	IAML		13 35 45.6	
	comp=E,2µm,0.4s						
FCH	**Farellones**	**1.23**	**128**	⇓*i*P	**Pn**	**13 35 28.2**	**-0.3**
FCH				*i* S	**Sg**	**13 35 45.6**	**+0.2**
FCH				IAML		13 35 46.9	
	comp=N,2µm,0.4s						
LMEL	**Las Melosas**	**1.64**	**141**	*e*P	**Pn**	**13 35 33.6**	**-0.4**
AUSP	**Uspallata**	**1.77**	**79**	*e*P	**Pg**	**13 35 40.7**	**+0.9**
RTLS	**Leoncito**	**1.98**	**68**	*e*P	**Pg**	**13 35 44.0**	**+0.4**
RTLS				IAML		13 36 18.5	
	comp=Z,137nm,0.5s						
GO04	**Tololo Observa**	**2.46**	**13**	*e*P	**Pb**	**13 35 48.3**	**-1.3**
GO04				*e*S	**Sg**	**13 36 24.9**	**+0.2**
GO05	**HualaæØ**	**2.46**	**189**	IAML		13 36 20.5	
	comp=E,194nm,0.7s						
TLL	**Tololo Astrono**	**2.46**	**13**	*e*P	**Pb**	**13 35 50.6**	**+0.9**
TLL				*e*S	**Sg**	**13 36 24.5**	**-0.3**
TLL				IAML		13 36 29.7	
	comp=N,790nm,0.8s						
AROD	**Rodeo**	**2.93**	**36**	*e*S	**Sg**	**13 36 40.9**	**+0.9**
AMOG	**MOGNA**	**3.00**	**58**	*e*P	**Pb**	**13 35 57.8**	**-1.0**
AMOG				*e*S	**Sg**	**13 36 40.5**	**-1.5**

ISCJB ***07*** *13:35:13.2±0.4, 24°.38N±0°.02×122°.72E±0°.02, h79^{km}±5^{km}, Error ellipse: s-maj=3.9km s-min=2.3km az=173.6*

JMA ***07*** *13:35:13.2±0.1, 24°.36N×122°.70E, h82^{km}±2^{km}, M1.7*

TAP ***07*** *13:35:13.2, 24°.38N×122°.70E, h81^{km}±1^{km}, ML3.1, C*

ISC 07 13:35:13.4±1.3, **24°.38N**±0°.04×**122°.73E**±0°.02, **h82**^{km}±8^{km}, **n73**, σ**0^{s}.69**/137, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.21**	**71**	P	**Pn**	**13 35 25.5**	**+0.1**
JYNG				*e*S	**Sn**	**13 35 34.3**	**0.0**
YOJ	**Yonaguni jima**	**0.27**	**73**	P	**Pn**	**13 35 25.9**	**+0.1**
	baz=73						
YOJ				S	**Sn**	**13 35 35.0**	**+0.2**
	baz=73						
YOJ	**Yonaguni jima**	**0.27**	**73**	P	**Pn**	**13 35 25.8**	**+0.1**
YOJ				S	**Sn**	**13 35 34.9**	**+0.2**
EOS1	**EOS1**	**0.57**	**287**	P	**Pn**	**13 35 28.2**	**+0.3**
	baz=287						
EOS1				*e*S	**Sn**	**13 35 39.2**	**+0.6**
	baz=287						
TWC	**Suao**	**0.83**	**286**	*e*P	**Pn**	**13 35 30.3**	**-0.2**
	baz=286						
TWC				*i* S	**Sn**	**13 35 42.4**	**-1.0**
	baz=286						
ENAH	**Nanao**	**0.84**	**275**	*e*P	**Pn**	**13 35 30.5**	**-0.1**
	baz=274						
ENAH				*e*S	**Sn**	**13 35 43.7**	**+0.2**
	baz=274						
NANB	**Nanao**	**0.89**	**273**	*e*P	**Pn**	**13 35 31.2**	**-0.1**
	baz=272						
NANB				*e*S	**Sn**	**13 35 44.9**	**+0.3**
	baz=272						
ENA	**Nanau**	**0.90**	**273**	P	**Pn**	**13 35 31.8**	**+0.4**
	baz=272						
ENA				*e*S	**Sn**	**13 35 44.7**	**-0.1**
	baz=272						
IRIF	**Iriomote-Funau**	**0.92**	**93**	P	**Pn**	**13 35 31.7**	**+0.2**
IRIF				S	**Sn**	**13 35 45.4**	**+0.3**
NTC	**Toucheng**	**0.94**	**300**	*e*P	**Pn**	**13 35 31.7**	**-0.1**
	baz=300						
NTC				S	**Sn**	**13 35 45.0**	**-0.6**
	baz=300						
TIPB	**Shuangxi**	**1.01**	**306**	*e*P	**Pn**	**13 35 32.3**	**-0.3**
	baz=306						
TIPB				S	**Sn**	**13 35 46.2**	**-0.9**
	baz=306						
TWE	**Neicheng**	**1.02**	**289**	*e*P	**Pn**	**13 35 32.8**	**0.0**
	baz=289						
TWE				S	**Sn**	**13 35 46.7**	**-0.5**
	baz=289						
HATJ	**Hateruma jima**	**1.04**	**108**	P	**Pn**	**13 35 34.0**	**+1.1**
HATJ				S	**Sn**	**13 35 48.8**	**+1.2**
NACB	**Ninganchiao**	**1.05**	**259**	P	**Pn**	**13 35 32.8**	**-0.3**
	baz=258						
NACB				S	**Sn**	**13 35 47.6**	**-0.4**
	baz=258						
TWD	**Chiawan**	**1.07**	**254**	*i* P	**Pn**	**13 35 33.1**	**-0.3**
	baz=253						
TWD				S	**Sn**	**13 35 48.0**	**-0.4**
	baz=253						
ENTT	**Nioudou**	**1.09**	**284**	*e*P	**Pn**	**13 35 34.1**	**+0.5**
	baz=283						
ENTT				*e*S	**Sn**	**13 35 49.1**	**+0.4**
	baz=283						
NWF	**Wu-fen Shan**	**1.10**	**309**	P	**Pn**	**13 35 33.8**	**0.0**
	baz=309						
NWF				*e*S	**Sn**	**13 35 48.2**	**-0.9**
	baz=309						
WFSB	**Wu-fen Shan**	**1.10**	**309**	P	**Pn**	**13 35 33.9**	**+0.1**
	baz=309						
WFSB				S	**Sn**	**13 35 48.2**	**-0.8**
	baz=309						
HWA	**Hwalien**	**1.10**	**249**	*e*P	**Pn**	**13 35 33.9**	**+0.2**
	baz=247						
JKRS	**Kuro-shima**	**1.18**	**97**	P	**Pn**	**13 35 35.3**	**+0.6**
JKRS				S	**Sn**	**13 35 51.5**	**+0.8**
TWA	**Mucha**	**1.20**	**300**	*e*P	**Pn**	**13 35 34.4**	**-0.6**
	baz=300						
TWA				*e*S	**Sn**	**13 35 50.0**	**-1.1**
	baz=300						
NNSB	**Datong**	**1.23**	**272**	P	**Pn**	**13 35 35.4**	**0.0**
	baz=272						
NNSB				*e*S	**Sn**	**13 35 51.6**	**-0.4**
	baz=272						
NNSH	**Datong**	**1.23**	**272**	*e*P	**Pn**	**13 35 35.3**	**0.0**
	baz=272						
NNSH				S	**Sn**	**13 35 51.2**	**-0.7**
	baz=272						
NNS	**Nan Shan**	**1.23**	**273**	P	**Pn**	**13 35 35.5**	**0.0**
	baz=272						
NNS				S	**Sn**	**13 35 51.9**	**-0.2**
	baz=272						
YHNB	**Yeheng**	**1.26**	**283**	*e*P	**Pn**	**13 35 35.9**	**+0.1**
	baz=283						
YHNB				*e*S	**Sn**	**13 35 52.3**	**-0.4**
	baz=283						
YM07	**YM07**	**1.28**	**308**	P	**Pn**	**13 35 35.8**	**-0.2**
	baz=308						
YM07				S	**Sn**	**13 35 51.8**	**-1.1**
	baz=308						
NSK	**Sanguang**	**1.28**	**283**	P	**Pn**	**13 35 36.5**	**+0.5**
	baz=283						
NSK				S	**Sn**	**13 35 52.8**	**-0.3**
	baz=283						
JIJ	**Ishigaki jima**	**1.29**	**91**	P	**Pn**	**13 35 36.1**	**0.0**
JIJ				S	**Sn**	**13 35 52.3**	**-0.9**
YM11	**YM11**	**1.30**	**307**	*e*P	**Pn**	**13 35 37.2**	**+0.9**
	baz=307						
YM11				*e*S	**Sn**	**13 35 53.1**	**-0.5**
	baz=307						
YM10	**YM10**	**1.31**	**306**	*e*P	**Pn**	**13 35 37.3**	**+0.9**
	baz=306						
YM10				*e*S	**Sn**	**13 35 53.1**	**-0.6**
	baz=306						
ESL	**Shilin**	**1.31**	**245**	P	**Pn**	**13 35 36.0**	**-0.3**
	baz=243						
ESL				*e*S	**Sn**	**13 35 52.9**	**-0.7**
	baz=243						
YM04	**YM04**	**1.33**	**306**	*e*P	**Pn**	**13 35 36.6**	**+0.1**
	baz=306						
WHF	**Hehuan Shan**	**1.35**	**260**	P	**Pn**	**13 35 37.2**	**-0.1**
	baz=259						
WHF				S	**Sn**	**13 35 55.0**	**-0.3**
	baz=259						
TWS1	**Kuangyinshan**	**1.39**	**301**	*e*P	**Pn**	**13 35 37.1**	**-0.1**
	baz=301						
TWS1				*e*S	**Sn**	**13 35 55.9**	**+0.6**
	baz=301						
NTST	**Danshui**	**1.40**	**304**	*e*P	**Pn**	**13 35 37.9**	**+0.5**
	baz=304						
TWT	**Tachien**	**1.42**	**265**	*e*P	**Pn**	**13 35 38.6**	**+0.8**
	baz=264						
TWT				*i* S	**Sn**	**13 35 56.5**	**+0.2**
	baz=264						
TDCB	**Techi**	**1.44**	**265**	P	**Pn**	**13 35 38.7**	**+0.6**
	baz=264						
TDCB				S	**Sn**	**13 35 56.3**	**-0.4**
	baz=264						
CHGB	**Renai**	**1.45**	**258**	P	**Pn**	**13 35 38.6**	**+0.3**
	baz=256						
CHGB				S	**Sn**	**13 35 56.9**	**-0.3**
	baz=256						
JISG	**Ishigakijimahi**	**1.46**	**82**	P	**Pn**	**13 35 38.0**	**-0.2**
JISG				S	**Sn**	**13 35 55.9**	**-1.1**
HGSD	**Ruisui**	**1.48**	**234**	P	**Pn**	**13 35 38.3**	**-0.2**
	baz=232						
HGSD				*e*S	**Sn**	**13 35 57.3**	**-0.3**
	baz=232						
NCU	**National Centr**	**1.52**	**293**	*e*S	**Sn**	**13 35 58.6**	**+0.3**
	baz=293						
NCUH	**Zhongli**	**1.52**	**293**	*e*S	**Sn**	**13 35 58.4**	**+0.1**
	baz=292						
EHY	**Hungye**	**1.55**	**236**	P	**Pn**	**13 35 39.3**	**-0.2**
	baz=234						
EHY				S	**Sn**	**13 35 58.5**	**-0.7**
	baz=234						
NSTT	**Nanjuang**	**1.59**	**279**	*e*P	**Pn**	**13 35 40.3**	**+0.4**
	baz=279						
NSTT				*e*S	**Sn**	**13 35 60.0**	**-0.1**
	baz=279						
YULB	**Yu-li**	**1.64**	**233**	P	**Pn**	**13 35 40.2**	**-0.3**
	baz=232						
YULB				*e*S	**Sn**	**13 36 00.5**	**-0.7**
	baz=232						
TWF1	**Yuli**	**1.66**	**232**	*i* P	**Pn**	**13 35 40.9**	**0.0**
	baz=231						
TWF1				*e*S	**Sn**	**13 36 01.5**	**-0.3**
	baz=231						
DPDB	**Guoxing**	**1.68**	**258**	*e*P	**Pn**	**13 35 41.6**	**+0.5**
	baz=257						
DPDB				*e*S	**Sn**	**13 36 02.4**	**+0.2**
	baz=257						
SSLB	**Suanglung**	**1.73**	**250**	*e*P	**Pn**	**13 35 41.9**	**+0.1**
	baz=249						
SSLB				*e*S	**Sn**	**13 36 03.0**	**-0.2**
	baz=249						
SMLT	**Sun Moon Lake**	**1.74**	**254**	P	**Pn**	**13 35 42.7**	**+0.7**
	baz=252						
SMLT				*e*S	**Sn**	**13 36 03.1**	**-0.6**
	baz=252						
FULB	**Fuli**	**1.76**	**228**	P	**Pn**	**13 35 41.8**	**-0.5**
	baz=227						
FULB				*e*S	**Sn**	**13 36 04.0**	**-0.1**
	baz=227						
NMLH	**Miaoli**	**1.77**	**275**	*e*P	**Pn**	**13 35 42.9**	**+0.6**
	baz=275						
NMLH				*e*S	**Sn**	**13 36 03.9**	**-0.4**
	baz=275						
TYC	**Yuchr**	**1.77**	**255**	*e*P	**Pn**	**13 35 43.2**	**+0.9**
	baz=254						
TYC				*e*S	**Sn**	**13 36 03.9**	**-0.4**
	baz=254						
CHKT	**Chengkung**	**1.79**	**225**	P	**Pn**	**13 35 41.8**	**-0.7**
	baz=223						
CHKT				*e*S	**Sn**	**13 36 02.9**	**-1.6**
	baz=223						
JTJ	**Tarama**	**1.82**	**81**	P	**Pn**	**13 35 43.5**	**+0.6**
JTJ				*e*S	**Sn**	**13 36 04.9**	**-0.4**
YUS	**Yu-Shan**	**1.85**	**242**	P	**Pn**	**13 35 44.3**	**+0.5**
	baz=240						
YUS				S	**Sn**	**13 36 06.2**	**-0.7**
	baz=240						
WJS	**Zhushan**	**1.91**	**253**	*e*P	**Pn**	**13 35 45.6**	**+1.5**
	baz=252						
WJS				*e*S	**Sn**	**13 36 07.6**	**+0.1**
	baz=252						
WNT	**Mingjian**	**1.93**	**255**	*e*P	**Pn**	**13 35 46.3**	**+1.9**
	baz=254						
WNT				*e*S	**Sn**	**13 36 08.4**	**+0.4**
	baz=254						
ELDTW	**Lidau**	**1.97**	**233**	P	**Pn**	**13 35 44.9**	**-0.1**
	baz=232						
ELDTW				*e*S	**Sn**	**13 36 07.8**	**-1.2**
	baz=232						
TWH	**Lutao**	**2.02**	**215**	*e*P	**Pn**	**13 35 45.5**	**-0.1**
	baz=213						
TWH				*e*S	**Sn**	**13 36 08.9**	**-1.2**
	baz=213						
CHN5	**Tsauling**	**2.03**	**248**	*e*P	**Pn**	**13 35 47.2**	**+1.4**
	baz=246						
CHN5				*e*S	**Sn**	**13 36 12.2**	**+1.6**
	baz=246						
TWGBT	**Beinan**	**2.17**	**224**	P	**Pn**	**13 35 47.5**	**-0.1**
	baz=223						
TWGBT				*e*S	**Sn**	**13 36 13.2**	**-0.5**
	baz=223						
TWG	**Pinlang**	**2.17**	**225**	*e*P	**Pn**	**13 35 47.3**	**-0.3**
	baz=223						
TWG				*e*S	**Sn**	**13 36 12.8**	**-1.0**
	baz=223						
STYT	**Tauyuan**	**2.17**	**236**	*e*P	**Pn**	**13 35 48.8**	**+1.1**
	baz=235						
STYT				*e*S	**Sn**	**13 36 15.6**	**+1.7**
	baz=235						
TPUB	**Ta-pu**	**2.20**	**241**	*e*P	**Pn**	**13 35 49.1**	**+1.1**
	baz=240						
TPUB				*e*S	**Sn**	**13 36 13.4**	**-1.1**
	baz=240						
WTP	**Ta-pu**	**2.24**	**240**	*e*P	**Pn**	**13 35 50.2**	**+1.7**
	baz=239						
WTP				*e*S	**Sn**	**13 36 15.4**	**-0.1**
	baz=239						
JIRB	**Irabujima**	**2.27**	**78**	S	**Sn**	**13 36 13.6**	**-2.5**
TWK	**Hsinying**	**2.33**	**242**	*e*P	**Pn**	**13 35 50.5**	**+0.7**
	baz=240						
TWK				*e*S	**Sn**	**13 36 17.4**	**-0.2**
	baz=240						
CHN1	**Nanshi**	**2.34**	**240**	*e*P	**Pn**	**13 35 51.4**	**+1.5**
	baz=238						
CHN1				*e*S	**Sn**	**13 36 18.1**	**+0.2**
	baz=238						
SGST	**Jiashian**	**2.35**	**237**	*e*P	**Pn**	**13 35 50.2**	**+0.2**
	baz=236						
SGST				*e*S	**Sn**	**13 36 18.1**	**0.0**
	baz=236						
JIKM	**Ikemajima**	**2.36**	**76**	S	**Sn**	**13 36 17.6**	**-0.6**
ECL	**Taimali**	**2.41**	**223**	*e*P	**Pn**	**13 35 50.7**	**-0.1**
	baz=221						
ECL				*e*S	**Sn**	**13 36 18.6**	**-0.9**
	baz=221						
JOGS	**Gusukube**	**2.47**	**81**	*e*S	**Sn**	**13 36 20.9**	**0.0**
MASBT	**Mashibuluo**	**2.61**	**228**	*e*P	**Pn**	**13 35 54.0**	**+0.6**
	baz=227						

MAN ***07*** *13:38:13.6, 9°.85N×125°.90E, h1^{km}, mb5.6, ML4.6, MS4.9*

BJI ***07*** *13:38:15.6, 9°.61N×126°.34E, h67^{km}, mb4.9/48, mB4.9/32, Ms4.1/27, Ms7 4.0/27*

DJA ***07*** *13:38:17.5±1.1, 10°N±6°×12°6E±°, h39^{km}±9^{km}, M5.0/20, mb4.8/20, mB5.2/10, MLv5.8/1, Mw(mB)4.7/10*

ISCJB ***07*** *13:38:17.0±0.5, 9°.83N±0°.02×125°.96E±0°.04, h58^{km}±4^{km}, mb4.7/91, MS3.7/40, Error ellipse: s-maj=5.9km s-min=3.0km az=166.1*

IDC ***07*** *13:38:18.4±1.4, 9°.81N×125°.71E, h54^{km}±12^{km}, mb4.4/37, mb1 4.5/41, mb1mx4.4/63, mbtmp4.7/41, MS3.7/37, Ms1 3.7/37, ms1mx3.5/62, Error ellipse: s-maj=15.0km s-min=7.7km az=76.0*

NEIC ***07*** *13:38:19.1±0.9, 9°.78N×125°.82E, h66^{km}±9^{km}, mb4.9/39, Error ellipse: s-maj=8.6km s-min=4.8km az=82.0*

NEIC Felt [IV PIVS] at Dapa and Del Carmen; [III PIVS] at Cantilan; [II PIVS] at Mainit and Surigao. Felt [II PIVS] at Loreto, Dinagat Island.

ISC 07 13:38:17.6±0.5, **9°.80N**±0°.03×**125°.92E**±0°.04, **h46**^{km}±4^{km}, **n228**, σ**2^{s}.06**/253, **mb4.7**/90, **MS3.7**/40, **8C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**0.43**	**268**	⇑*i*P	**Pn**	**13 38 24.4**	**-3.3**
SCPH				*i* S	**Sn**	**13 38 31.5**	**-3.5**
BUTP	**Butuan**	**0.88**	**200**	*e*P	**Pn**	**13 38 31.0**	**-2.6**
BUTP				*e*S	**Sn**	**13 38 44.8**	**-0.5**
MSLP	**Maasin**	**1.10**	**288**	*e*P	**Pn**	**13 38 35.4**	**-1.2**
MSLP				*e*S	**Sn**	**13 38 54.7**	**+4.1**
PLP	**Palo**	**1.64**	**326**	⇓*e*P	**Pn**	**13 38 41.6**	**-2.5**
PLP				*i* S	**Sn**	**13 39 04.4**	**+0.3**
BIPH	**Bislig**	**1.66**	**165**	⇑*i*P	Pn	13 38 50.1	+5.8
BIPH				*i* S	**Sn**	**13 39 11.9**	**+7.4**
OCLP	**Ormoc**	**1.79**	**314**	*e*P	**Pn**	**13 38 45.8**	**-0.3**
CGP	**Cagayan de Oro**	**1.80**	**222**	⇑*e*P	**Pn**	**13 38 45.9**	**-0.4**
CGP				*i* S	**Sn**	**13 39 09.1**	**+1.1**
BESP	**Borongan**	**1.85**	**345**	*e*P	**Pn**	**13 38 46.6**	**-0.4**
BESP				*e*S	**Sn**	**13 39 13.2**	**+4.1**
LLP	**Lapu-Lapu**	**1.99**	**285**	⇑*e*P	**Pn**	**13 38 49.4**	**+0.5**
LLP				*e*S	**Sn**	**13 39 15.5**	**+2.9**
TBP	**Tagbilaran**	**2.03**	**267**	*e*P	**Pn**	**13 38 51.4**	**+2.0**
TBP				*i* S	**Sn**	**13 39 17.3**	**+3.7**
BUKP	**Musuan**	**2.09**	**204**	*e*P	**Pn**	**13 38 50.5**	**+0.3**
BUKP				*e*S	**Sn**	**13 39 18.0**	**+2.9**
DMPH	**Davao City--Mi**	**2.73**	**189**	⇑*e*P	Pn	13 39 04.3	+5.4
DMPH				*e*S	Sn	13 39 39.0	+8.3
DAV	**Davao City (W)**	**2.73**	**187**	P	**Pn**	**13 39 01.3**	**+2.3**
	183nm,0.3s,baz=275,slow=3.7,SNR=15						
DAV				S	**Sn**	**13 39 37.4**	**+6.6**
	199nm,0.3s,baz=133,slow=23,SNR=6.4						
DAV				LR	LR	13 40 25.8	
	comp=Z,6µm,18.7s,baz=13,slow=47						
DCPH	**Dipolog City**	**2.81**	**245**	⇑*e*P	**Pn**	**13 39 02.4**	**+2.3**
DCPH				*e*S	**Sn**	**13 39 35.2**	**+2.5**
MATI	**Mati**	**2.85**	**173**	*e*P	**Pn**	**13 39 02.4**	**+1.7**
MATI				*e*S	**Sn**	**13 39 39.8**	**+5.9**
CNP	**Catarman**	**2.96**	**335**	*e*P	**Pn**	**13 39 02.6**	**+0.4**
CNP				*e*S	**Sn**	**13 39 40.9**	**+4.4**
CTBH	**Cotabato--PC H**	**3.05**	**213**	⇑*e*P	**Pn**	**13 39 05.2**	**+1.8**
CTBH				*i* S	**Sn**	**13 39 36.2**	**-2.5**
PAGZ	**Pagadian**	**3.17**	**233**	*e*P	**Pn**	**13 39 04.8**	**-0.3**
PAGZ				*e*S	**Sn**	**13 39 41.1**	**-0.5**
GUIM	**Jordan**	**3.38**	**284**	*e*P	**Pn**	**13 39 08.4**	**+0.5**
GUIM				*e*S	**Sn**	**13 39 43.5**	**-3.3**
RCP	**Roxas**	**3.58**	**300**	⇑*e*P	**Pn**	**13 39 11.7**	**+1.0**
GSPH	**General Santos**	**3.81**	**195**	*e*P	Pn	13 39 17.7	+3.8
PVCP	**Virac**	**4.15**	**336**	*e*P	Pn	13 39 21.0	+2.5
PVCP				*e*S	**Sn**	**13 40 12.4**	**+6.6**

OTRP	**Odiongan**	**4.60**	**304**	*e*P	**Pn**	**13 39 24.8**	**+0.2**
OTRP				*e*S	Sn	13 39 49.4	-27
BUSP	**Coron**	**6.03**	**292**	*e*P	**Pn**	**13 39 45.2**	**+0.9**
BUSP				*e*S	Sn	13 40 26.1	-26
TGY	**Tagaytay City**	**6.49**	**312**	P	Pn	13 39 55.1	+4.5
	66nm,0.3s,baz=186,slow=0.8,SNR=3.8						
LUBP	**Lubang**	**6.79**	**306**	*e*P	**Pn**	**13 39 53.5**	**-1.3**
PALU	**Palau**	**8.80**	**105**	P	Pn	13 40 15.4	-6.9
	baz=8.7,SNR=7.9						
TNTI	**Ternate**	**9.08**	**171**	P	Pn	13 40 29.6	+3.4
TNTI	**Ternate**	**9.08**	**171**	*e*Pn	**Pn**	**13 40 26.9**	**+0.8**
TNTI				*e*Sn	**Sn**	**13 42 08.2**	**+1.0**
KMSI	**Cibinong**	**9.37**	**192**	P	Pn	13 40 35.3	+5.3
LBMI	**Labuha**	**10.49**	**171**	P	**Pn**	**13 40 48.4**	**+3.0**
LUWI	**Luwuk**	**11.22**	**196**	P	Pn	13 41 01.9	+6.5
LUWI	**Luwuk**	**11.22**	**196**	*e*Pn	**Pn**	**13 40 54.7**	**-0.7**
LUWI				*e*Sn	**Sn**	**13 42 57.1**	**-2.4**
APSI	**Ampana**	**11.46**	**202**	P	Pn	13 41 05.3	+6.6
SANI	**Sanana**	**11.77**	**180**	P	**Pn**	**13 41 05.3**	**+2.3**
SIJI	**Sorong**	**11.86**	**153**	P	**Pn**	**13 41 06.0**	**+1.8**
	1.7nm,0.3s,baz=336,slow=15,SNR=7.3						
SIJI				S	**Sn**	**13 43 10.4**	**-4.8**
	1.0nm,0.3s,baz=219,slow=18,SNR=3.5						
SIJI				LR	LR	13 46 36.9	
	comp=Z,221nm,18.4s,baz=306,slow=42						
TWG	**Pinlang**	**13.76**	**341**	*e*Pn	Pn	13 41 22.7	-7.4
TWG				*e*Sn	**Sn**	**13 43 59.6**	**-1.8**
RKPI	**Ransiki, Papua**	**13.92**	**143**	P	**Pn**	**13 41 31.6**	**-0.8**
FAKI	**Fak Fak**	**14.12**	**153**	*e*Pn	Pn	13 41 29.7	-5.3
TTSI	**Tana Toraja**	**14.13**	**206**	P	**P**	**13 41 43.3**	**+1.6**
YULB	**Yu-li**	**14.22**	**342**	*e*Pn	Pn	13 41 30.1	-6.3
TPUB	**Ta-pu**	**14.35**	**340**	*e*Pn	**Pn**	**13 41 33.8**	**-4.3**
SSLB	**Suanglung**	**14.70**	**342**	*e*Pn	**Pn**	**13 41 43.9**	**+1.2**
SPSI	**Sidrap Palu**	**14.98**	**204**	P	**P**	**13 41 53.8**	**+2.7**
BKSI	**Bulukumba**	**16.09**	**201**	P	**P**	**13 42 06.2**	**+2.7**
JOW	**Kunigami**	**17.09**	**7**	P	**P**	**13 42 14.8**	**+0.4**
	2.1nm,0.3s,baz=200,slow=11,SNR=4.7						
JOW				LR	LR	13 48 03.6	
	comp=Z,212nm,18.6s,baz=308,slow=34						
QIZ	**Qiongzhong**	**18.06**	**302**	P	**P**	**13 42 30.9**	**+5.7**
QIZ				pP	**sP**	**13 42 40.0**	**-2.0**
QIZ				S	**Sn**	**13 45 47.7**	**+1.7**
QIZ				pmax	pmax		
	comp=Z,110nm,5.1s						
QIZ				LR	LR		
	comp=N,230nm,13.7s						
QIZ				LR	LR		
	comp=E,210nm,15.3s						
QIZ				LR	LR		
	comp=Z,270nm,15.7s						
EDFI	**Ende, Flores**	**18.90**	**193**	P	**Pn**	**13 42 40.3**	**+4.7**
GUMO	**Guam**	**18.93**	**77**	LR	LR	13 48 15.8	
	comp=Z,115nm,20.6s,baz=248,slow=31						
SOEI	**Soe**	**19.50**	**185**	P	**Pn**	**13 42 45.6**	**+2.9**
BATI	**Baumata**	**20.00**	**187**	P	**P**	**13 42 47.6**	**+1.1**
	4.5nm,0.3s,baz=2.3,slow=2.0,SNR=7.8						
BATI				LR	LR	13 51 37.1	
	comp=Z,175nm,19.6s,baz=325,slow=40						
BATI	**Baumata**	**20.00**	**187**	P	Pn	13 42 50.0	+1.4
TWSI	**Taliwang, Sumb**	**20.50**	**206**	P	Pn	13 42 58.8	+4.4
SKNT	**Sakolnakorn**	**22.49**	**291**	P	**P**	**13 43 16.7**	**+3.4**
	5.4nm,0.9s						
MTN	**Manton Dam**	**23.08**	**167**	P	**P**	**13 43 19.1**	**-0.3**
	baz=23,SNR=25						
MTN	**Manton Dam**	**23.08**	**167**	*e*P	**P**	**13 43 18.6**	**-0.9**
	31nm,1.0s						
NJ2	**Nanjing**	**23.09**	**345**	*e*P	**P**	**13 43 19.7**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
KDU	**Kakadu**	**23.27**	**164**	P	**P**	**13 43 20.5**	**-0.7**
	baz=23,SNR=16						
WHN	**Wuhan**	**23.29**	**334**	P	**P**	**13 43 22.1**	**+0.7**
WHN				S	**S**	**13 47 29.7**	**-0.7**
WHN				LR	LR		
	comp=Z,560nm,22.8s						
NONG	**Nongkai**	**23.56**	**293**	P	**P**	**13 43 25.9**	**+1.8**
	0.2nm,0.8s,117nm						
JNU	**Nakatsue**	**23.66**	**10**	P	**P**	**13 43 24.6**	**-0.3**
	9.2nm,0.9s,baz=148,slow=9.5,SNR=4.2						
JNU				LR	LR	13 54 24.8	
	comp=Z,65nm,18.4s,baz=122,slow=41						
LEM	**Lembang**	**24.60**	**229**	P	**P**	**13 43 31.6**	**-2.3**
	11nm,0.5s,baz=348,slow=14,SNR=2.6						
GYA	**Guiyang**	**24.63**	**315**	*e*P	**P**	**13 43 37.1**	**+3.1**
GYA				PP	**PnPn**	**13 44 15.2**	**+7.9**
GYA				S	**S**	**13 47 51.5**	**-0.9**
GYA				sS	sS	13 48 19.6	+6.8
GYA				SS	**SnSn**	**13 48 52.3**	**+11**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
GYA				pmax	pmax		
	comp=Z,110nm,4.8s						
GYA				LR	LR		
	comp=N,270nm,18.9s						
GYA				LR	LR		
	comp=E,260nm,16.5s						
GYA				LR	LR		
	comp=Z,360nm,18.9s						
PBKT	**Sadao Pong**	**25.19**	**288**	P	**P**	**13 43 44.3**	**+5.3**
	8.2nm,1.0s,652nm						
KNRA	**Kununurra**	**25.47**	**174**	P	**P**	**13 43 42.2**	**+0.7**
	baz=26,SNR=9.6						
NANT	**Nan**	**26.00**	**293**	P	**P**	**13 43 47.7**	**+1.3**
	4.8nm,0.9s						
JHJ	**Hachijo jima 2**	**26.49**	**27**	LR	LR	13 54 05.3	
	comp=Z,123nm,21.0s,baz=58,slow=36						
KMI	**Kunming**	**26.79**	**308**	P	**P**	**13 43 58.6**	**+4.9**
KMI				pmax	pmax		
	comp=Z,11nm,0.5s						
KMI				LR	LR		
	comp=N,160nm,15.8s						
KMI				LR	LR		
	comp=E,250nm,17.5s						
KMI				LR	LR		
	comp=Z,260nm,16.2s						
CM01	**Chiang Mai Arr**	**27.49**	**291**	*e*P	**P**	**13 44 01.1**	**+1.3**
CMAR	**Chiang Mai Arr**	**27.51**	**291**	P	**P**	**13 44 00.1**	**0.0**
	1.8nm,0.7s,baz=98,slow=7.2,SNR=13						
CMAR				PcP	**PcP**	**13 47 17.0**	**-0.5**
	0.8nm,0.6s,baz=94,slow=1.0,SNR=6.0						
KS15	**Wonju Array Si**	**27.58**	**3**	*e*P	**P**	**13 44 01.4**	**+1.0**
KSAR	**Wonju Array Be**	**27.58**	**3**	P	**P**	**13 44 00.9**	**+0.6**
KSAR				PcP	**PcP**	**13 47 17.2**	**0.0**
KSRS	**Korea Array**	**27.59**	**3**	P	**P**	**13 44 00.9**	**+0.5**
	7.2nm,0.8s,baz=183,slow=10,SNR=34						
KSRS				PcP	**PcP**	**13 47 17.2**	**0.0**
	1.2nm,0.7s,baz=198,slow=2.7,SNR=5.0						
KSRS				LR	LR	13 54 13.2	
	comp=Z,97nm,21.9s,baz=178,slow=35						
CMMT	**Chiang Mai**	**27.60**	**292**	P	**P**	**13 44 03.9**	**+3.1**
	3.7nm,1.5s						
CHTO	**Chiang Mai**	**27.60**	**292**	P	**P**	**13 44 04.0**	**+3.2**
	16nm,1.6s						
KS01	**Wonju Array Si**	**27.61**	**3**	*e*P	**P**	**13 44 00.6**	**-0.1**
KS01				*e*PcP	**PcP**	**13 47 16.8**	**-0.6**
PSI	**Prapat**	**27.70**	**257**	LR	LR	13 57 09.6	
	comp=Z,185nm,18.3s,baz=88,slow=41						
FITZ	**Fitzroy Crossi**	**27.72**	**181**	P	**P**	**13 44 01.9**	**+0.1**
	baz=28,SNR=15						
FITZ	**Fitzroy Crossi**	**27.72**	**181**	P	**P**	**13 44 02.1**	**+0.4**
	5.7nm,0.8s,baz=0.8,slow=9.3,SNR=14						
FITZ	**Fitzroy Crossi**	**27.72**	**181**	*e*P	**P**	**13 44 03.1**	**+1.4**
	21nm,1.4s						
CMAI	**Chiengmai2**	**27.82**	**294**	P	**P**	**13 44 05.3**	**+2.4**
	2.9nm,0.9s,188nm						
PMG	**Port Moresby**	**28.48**	**131**	P	**P**	**13 44 10.6**	**+2.1**
	8.6nm,0.6s,baz=280,slow=18,SNR=4.5						
XAN	**Xi’an**	**28.73**	**330**	P	**P**	**13 44 10.4**	**-0.4**
XAN				pmax	pmax		
	comp=Z,24nm,0.8s						
XAN				LR	LR		
	comp=N,120nm,22.2s						
XAN				LR	LR		
	comp=E,180nm,17.4s						
XAN				LR	LR		
	comp=Z,190nm,21.7s						
MJAR	**Matsushiro Arr**	**28.86**	**21**	P	**P**	**13 44 10.9**	**-1.0**
	1.9nm,0.9s,baz=200,slow=10.0,SNR=4.5						
MJAR				LR	LR	13 53 45.7	
	comp=Z,162nm,21.6s,baz=215,slow=32						
COEN	**Coen**	**29.16**	**144**	P	**P**	**13 44 13.8**	**-0.8**
	baz=29,SNR=6.7						
DL2	**Dalian**	**29.24**	**353**	P	**P**	**13 44 15.7**	**+0.6**
DL2				pmax	pmax		
	comp=Z,26nm,0.8s						
CD2	**Chengdu**	**29.43**	**319**	*e*P	**P**	**13 44 18.0**	**+1.0**
CD2				pP	sP	13 44 34.1	-0.7
CD2				sP	pP	13 44 42.2	+13
CD2				S	**S**	**13 49 09.2**	**+1.1**
CD2				sS	sS	13 49 37.4	+8.8
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,160nm,5.0s						
CD2				LR	LR		
	comp=N,570nm,17.7s						
CD2				LR	LR		
	comp=E,1µm,21.6s						
CD2				LR	LR		
	comp=Z,850nm,16.7s						
WRAB	**Tennant Creek**	**30.69**	**164**	*e*P	**P**	**13 44 25.6**	**-2.6**
	5.6nm,0.6s						
WRA	**Warramunga Arr**	**30.69**	**164**	P	**P**	**13 44 27.1**	**-1.1**
	4.4nm,0.6s,baz=343,slow=9.3,SNR=50						
WRA				PcP	**PcP**	**13 47 25.0**	**-0.5**
	2.6nm,0.7s,baz=345,slow=3.1,SNR=6.9						
WRA				S	**S**	**13 49 23.6**	**-4.3**
	1.3nm,0.8s,baz=344,slow=15,SNR=3.7						
WRA				ScP	**ScP**	**13 51 04.1**	**-0.4**
	0.9nm,0.8s,baz=346,slow=3.7,SNR=4.4						
BJI	**Beijing**	**31.34**	**346**⇓	*e*P	**P**	**13 44 33.4**	**-0.3**
BJI				pP	**sP**	**13 44 50.3**	**-1.2**
BJI				pmax	pmax		
	comp=Z,25nm,1.1s						
MBWA	**Marble Bar**	**31.36**	**191**	*e*P	**P**	**13 44 34.9**	**+0.9**
	7.7nm,0.8s						
LZH	**Lanzhou**	**32.97**	**326**	*e*P	**P**	**13 44 48.6**	**+0.3**
LZH				pmax	pmax		
	comp=Z,21nm,1.1s						
QIS	**Mount Isa**	**33.03**	**156**	P	**P**	**13 44 48.4**	**-0.3**
	baz=33,SNR=21						
MTSU	**Mount Surprise**	**33.17**	**147**	P	**P**	**13 44 49.3**	**-0.7**
	baz=33,SNR=5.4						
HHC	**Hu-ho-hao-te**	**33.44**	**340**	*e*P	**P**	**13 44 53.0**	**+0.8**
HHC				PP	**PP**	**13 46 10.7**	**+2.2**
HHC				S	**S**	**13 50 11.0**	**+0.5**
HHC				sS	sS	13 50 35.6	+4.4
HHC				pmax	pmax		
	comp=Z,35nm,1.0s						
HHC				pmax	pmax		
	comp=Z,220nm,5.5s						
HHC				LR	LR		
	comp=N,180nm,12.9s						
HHC				LR	LR		
	comp=E,110nm,12.4s						
HHC				LR	LR		
	comp=Z,97nm,13.1s						
CN2	**Changchun**	**33.88**	**359**	*e*P	P	13 45 00.0	+4.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
AS31	**Alice Springs**	**34.16**	**167**	*e*P	**P**	**13 44 57.5**	**-1.1**
	3.9nm,0.5s						
ASAR	**Alice Springs**	**34.16**	**167**	P	**P**	**13 44 58.3**	**-0.3**
	5.6nm,0.5s,baz=351,slow=6.8,SNR=223						
ASAR				PcP	**PcP**	**13 47 35.3**	**+0.3**
	2.8nm,0.7s,baz=346,slow=2.4,SNR=9.9						
ASAR				S	**S**	**13 50 20.1**	**-1.8**
	0.7nm,0.7s,baz=357,slow=19,SNR=4.2						
ASAR				ScP	**ScP**	**13 51 15.8**	**-0.5**
	0.6nm,0.8s,baz=349,slow=3.8,SNR=3.0						
ASAR				LR	LR	13 59 32.7	
	comp=Z,71nm,20.9s,baz=359,slow=37						
AS01	**Alice Springs**	**34.17**	**167**	*e*P	**P**	**13 44 57.0**	**-1.6**
AS01				*e*PcP	**PcP**	**13 47 33.3**	**-1.7**
USRK	**Ussuriysk Ar.**	**34.67**	**8**	P	**P**	**13 45 03.6**	**+0.9**
	33nm,0.7s,baz=183,slow=7.2						
WRKA	**Warakurna**	**34.70**	**176**	P	**P**	**13 45 04.6**	**+1.4**
	baz=35,SNR=22						
MDJ	**Mudanjiang**	**34.83**	**5**	P	**P**	**13 45 02.9**	**-1.2**
MDJ				pmax	pmax		
	comp=Z,40nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,90nm,5.5s						
MDJ	**Mudanjiang**	**34.83**	**5**	*e*P	**P**	**13 45 04.7**	**+0.6**
	34nm,1.0s						
CTA	**Charters Tower**	**35.81**	**146**	P	**P**	**13 45 14.7**	**+1.8**
	4.6nm,0.6s,baz=340,slow=8.9,SNR=6.6						
SHL	**Shillong**	**35.88**	**300**	*e*x	**P**	**13 45 15.0**	**+1.4**
MEEK	**Meekatharra**	**36.91**	**191**	P	**P**	**13 45 22.5**	**+0.5**
	baz=37,SNR=6.6						
ASAJ	**Asahikawa**	**37.12**	**20**	P	**P**	**13 45 25.2**	**+1.5**
	4.7nm,0.7s,baz=226,slow=9.2,SNR=12						
ASAJ				LR	LR	13 58 58.6	
	comp=Z,102nm,21.5s,baz=212,slow=33						
ASAJ	**Asahikawa**	**37.12**	**20**	*e*P	**P**	**13 45 25.7**	**+2.0**
	19nm,1.3s						
GTA	**Gaotai**	**37.58**	**326**	*e*P	**P**	**13 45 28.4**	**+0.6**
GTA				pP	sP	13 45 43.7	-2.0
GTA				sP	pP	13 45 50.6	+10
GTA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
HNR	**Honiara**	**38.88**	**118**	LR	LR	13 59 00.7	
	comp=Z,63nm,21.6s,baz=274,slow=32						
QLP	**Quilpie**	**40.30**	**154**	P	**P**	**13 45 50.7**	**+0.2**
	baz=40,SNR=3.5						
H11S3	**WAKE ISLAND Hy**	**40.38**	**73**	T	T	14 28 43.2	
	baz=263						
FORT	**Forrest**	**40.40**	**177**	P	**P**	**13 45 52.2**	**+0.9**
	baz=40,SNR=9.5						
H11S1	**WAKE ISLAND Hy**	**40.40**	**73**	T	T	14 28 41.1	
	baz=263						
H11S2	**WAKE ISLAND Hy**	**40.40**	**73**	T	T	14 28 43.0	
	baz=263						
H11N1	**WAKE ISLAND Hy**	**40.73**	**71**	T	T	14 29 13.9	
	baz=263,slow=74,SNR=327						
H11N2	**WAKE ISLAND Hy**	**40.74**	**71**	T	T	14 29 06.7	
	baz=263,slow=74,SNR=171						
H11N3	**WAKE ISLAND Hy**	**40.75**	**71**	T	T	14 29 08.0	
	baz=263,slow=74,SNR=294						
KMBL	**Kambalda**	**41.11**	**185**	P	**P**	**13 45 58.5**	**+1.3**
	baz=41,SNR=6.4						
ULN	**Ulaanbaatar**	**41.15**	**341**	*e*P	**P**	**13 45 57.5**	**0.0**
	11nm,0.6s						
SONM	**Songino Array**	**41.34**	**340**	P	**P**	**13 45 58.6**	**-0.4**
	3.8nm,0.8s,baz=159,slow=9.4,SNR=20						
SONM				PcP	**PcP**	**13 47 56.0**	**-0.7**
	1.6nm,0.8s,baz=160,slow=2.0,SNR=4.4						
SONM				ScP	**ScP**	**13 51 41.1**	**-2.1**
	0.7nm,0.8s,baz=158,slow=4.7,SNR=2.4						
SONM				LR	LR	14 04 24.0	
	comp=Z,70nm,20.1s,baz=134,slow=38						
SONA1	**Songino Array**	**41.35**	**340**	*e*P	**P**	**13 45 56.5**	**-2.6**
SONA1				*e*PcP	**PcP**	**13 47 57.0**	**+0.2**
KLBR	**Kellerberrin**	**41.89**	**190**	P	**P**	**13 46 04.6**	**+1.0**
	baz=42,SNR=6.9						
MUN	**Mundaring**	**42.57**	**192**	P	**P**	**13 46 10.6**	**+1.5**
	baz=43,SNR=4.4						
NWAO	**Narrogin (SRO)**	**43.29**	**191**	P	**P**	**13 46 14.6**	**-0.2**
	12nm,0.8s,baz=14,slow=12,SNR=7.8						
NWAO				LR	LR	14 06 26.7	
	comp=Z,61nm,19.3s,baz=204,slow=39						
BBOO	**Buckleboo**	**43.46**	**168**	P	**P**	**13 46 17.0**	**+0.8**
	baz=44,SNR=42						
BBOO	**Buckleboo**	**43.46**	**168**	*e*P	**P**	**13 46 15.9**	**-0.3**
	56nm,0.6s						
STKA	**Stephens Creek**	**44.07**	**161**	P	**P**	**13 46 21.9**	**+0.7**
	baz=44,SNR=19						
STKA	**Stephens Creek**	**44.07**	**161**	P	**P**	**13 46 21.5**	**+0.3**
	11nm,0.5s,baz=329,slow=7.6,SNR=31						
STKA				LR	LR	14 09 46.9	
	comp=Z,40nm,19.0s,baz=25,slow=43						
STKA	**Stephens Creek**	**44.07**	**161**	*e*P	**P**	**13 46 18.3**	**-2.9**
	2.6nm,0.6s						
HTT	**Hallett**	**44.73**	**164**	P	**P**	**13 46 27.8**	**+1.2**
	baz=45,SNR=39						
PALK	**Pallekele**	**44.77**	**270**	LR	LR	14 06 35.6	
	comp=Z,61nm,18.4s,baz=92,slow=38						
TLY	**Talaya**	**45.56**	**341**	*e*P	**P**	**13 46 31.5**	**-1.3**
	4.5nm,0.7s						
WMQ	**Urumqi**	**47.38**	**323**	P	**P**	**13 46 47.3**	**0.0**
WMQ				pP	sP	13 47 04.1	-1.4
WMQ				pmax	pmax		
	comp=Z,18nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,150nm,3.7s						
WMQ				LR	LR		
	comp=N,370nm,18.7s						
WMQ				LR	LR		
	comp=E,280nm,20.1s						
WMQ				LR	LR		
	comp=Z,260nm,18.7s						
ARPS	**Mount Arapiles**	**48.68**	**163**	P	**P**	**13 46 58.6**	**+1.3**
	baz=49,SNR=31						
CNB	**Canberra Magne**	**50.04**	**155**	P	**P**	**13 47 08.8**	**+1.0**
	baz=50,SNR=10						
PETK	**Petropavlovsk-**	**50.20**	**24**	P	**P**	**13 47 10.2**	**+1.5**
	7.1nm,0.7s,baz=198,slow=4.2						
PETK				PcP	**PcP**	**13 48 27.5**	**+0.1**
	baz=170,slow=2.5						
PETK				LR	LR	14 06 59.5	
	comp=Z,89nm,21.4s,baz=236,slow=34						
PETK	**Petropavlovsk-**	**50.20**	**24**	*e*P	**P**	**13 47 06.8**	**-2.0**
PETK				PcP	**PcP**	**13 48 27.5**	**+0.1**
TOO	**Toolangi**	**50.56**	**160**	P	**P**	**13 47 13.7**	**+2.0**
	baz=51,SNR=20						
DZM	**Mont Dzumac**	**50.82**	**129**	P	**P**	**13 47 14.8**	**+0.9**
	4.9nm,0.6s,baz=280,slow=11,SNR=4.1						
MK01	**Makanchi Array**	**52.18**	**323**	*e*P	**P**	**13 47 22.9**	**-0.8**
MK31	**Makanchi Array**	**52.19**	**323**	*e*P	**P**	**13 47 23.2**	**-0.6**
MKAR	**Makanchi Array**	**52.19**	**323**	P	**P**	**13 47 23.5**	**-0.3**
	6.5nm,0.7s,baz=122,slow=7.9,SNR=51						
MKAR				PcP	**PcP**	**13 48 33.9**	**-1.0**
	1.5nm,0.8s,baz=106,slow=5.1,SNR=2.5						
MKAR				ScP	**ScP**	**13 52 27.9**	**-0.5**
	0.3nm,0.8s,baz=92,slow=4.3,SNR=2.8						
MKAR	**Makanchi Array**	**52.19**	**323**	*e*P	**P**	**13 47 22.9**	**-0.9**
	37nm,0.6s						
MKAR				PcP	**PcP**	**13 48 33.9**	**-1.0**
MKAR				ScP	**ScP**	**13 52 27.9**	**-0.5**
MAKZ	**Makanchi**	**52.39**	**323**	*e*P	**P**	**13 47 24.4**	**-0.8**
	4.7nm,0.6s						
MA2	**Magadan**	**53.08**	**16**	*e*P	**P**	**13 47 27.5**	**-2.5**
	12nm,0.8s						
MA2				*e*PcP	**PcP**	**13 48 38.8**	**+0.8**
KSH	**Kashi**	**53.29**	**312**	*e*P	P	13 47 36.1	+3.9
KSH				sP	sP	13 48 00.1	+10
KSH				*e*PcP	**PcP**	**13 48 41.9**	**+2.5**
KSH				S	**S**	**13 55 01.3**	**+0.7**
KSH				ScS	**ScS**	**13 57 16.1**	**-2.1**
KSH				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KSH				pmax	pmax		
	comp=Z,94nm,4.2s						
ZAA0	**Zalesovo Array**	**54.87**	**332**	*e*P	**P**	**13 47 40.6**	**-2.6**
	5.7nm,0.8s						
ZALV	**Zalesovo Beam**	**54.87**	**332**	P	**P**	**13 47 42.0**	**-1.3**
	3.7nm,0.5s,baz=119,slow=6.7,SNR=21						
ZALV				PcP	**PcP**	**13 48 43.7**	**-1.2**
	1.2nm,0.8s,baz=151,slow=3.3,SNR=2.3						
ZALV				LR	LR	14 13 24.5	
	comp=Z,66nm,18.3s,baz=70,slow=38						
ZALV	**Zalesovo Beam**	**54.87**	**332**	*e*P	**P**	**13 47 41.0**	**-2.2**
ZALV				PcP	**PcP**	**13 48 43.7**	**-1.2**
KURK	**Kurchatov**	**56.26**	**326**	P	**P**	**13 47 52.6**	**-0.6**
KURBB	**Kurchatov Arra**	**56.27**	**326**	P	**P**	**13 47 52.6**	**-0.7**
	6.8nm,0.6s,baz=132,slow=6.7,SNR=34						
KK31	**Karatay Array**	**58.34**	**315**	*e*P	**P**	**13 48 08.5**	**+0.4**
KKAR	**Karatay Array**	**58.34**	**315**	*e*P	**P**	**13 48 08.5**	**+0.4**
TIXI	**Tiksi**	**61.83**	**1**	*e*P	**P**	**13 48 31.4**	**-0.1**
	24nm,1.0s						
BVAR	**Borovoye Array**	**61.86**	**326**	P	**P**	**13 48 31.5**	**-0.5**
	3.3nm,0.8s,baz=111,slow=8.1,SNR=18						
BVAR				PcP	**PcP**	**13 49 11.5**	**-1.1**
	1.5nm,0.7s,baz=108,slow=4.7,SNR=3.5						
BVAR				LR	LR	14 17 44.5	
	comp=Z,71nm,18.3s,baz=126,slow=38						
BRVK	**Borovoye**	**61.93**	**326**	*e*P	**P**	**13 48 31.6**	**-0.9**
	9.2nm,1.0s						
KIWB	**Kanaga Island**	**62.21**	**36**	*e*P	**P**	**13 48 32.5**	**-1.9**
BILL	**Bilibino**	**63.95**	**16**	*e*P	**P**	**13 48 44.8**	**-0.8**
	8.1nm,0.8s						
ATKA	**Atka Island**	**64.05**	**36**	*e*P	**P**	**13 48 46.2**	**-0.3**
	66nm,0.7s						
GEYT	**Alibeck**	**66.55**	**307**	P	**P**	**13 49 01.6**	**-1.6**
	2.9nm,0.9s,baz=83,slow=4.8,SNR=5.8						
GEYT				LR	LR	14 23 28.7	
	comp=Z,62nm,18.1s,baz=200,slow=41						
ABKAR	**Akbulak array**	**67.01**	**319**	*e*P	**P**	**13 49 03.9**	**-1.9**
RPZ	**Rata Peaks**	**67.19**	**146**	LR	LR	14 19 52.4	
	comp=Z,44nm,18.7s,baz=327,slow=37						
NIKH	**Nikolski High**	**67.39**	**36**	*e*P	**P**	**13 49 06.3**	**-1.8**
	40nm,0.6s						
URZ	**Urewera**	**67.54**	**138**	LR	LR	14 23 06.2	
	comp=Z,47nm,18.1s,baz=318,slow=40						
SPIA	**Saint Paul Isl**	**67.76**	**32**	*e*P	**P**	**13 49 11.9**	**+1.6**
AKTO	**Aktyubinsk**	**68.47**	**320**	P	**P**	**13 49 13.4**	**-1.5**
	3.0nm,0.8s,baz=63,slow=5.5,SNR=5.0						
AKTO				LR	LR	14 21 16.1	
	comp=Z,116nm,19.7s,baz=96,slow=38						
UNV	**Unalaska Valle**	**68.96**	**36**	*e*P	**P**	**13 49 17.9**	**-0.1**
	39nm,0.8s						
ARU	**Arti**	**69.43**	**327**	P	**P**	**13 49 19.4**	**-1.4**
	13nm,0.5s,baz=91,slow=4.8,SNR=22						
ARU	**Arti**	**69.43**	**327**	*e*P	**P**	**13 49 19.3**	**-1.4**
	14nm,0.6s						
RDOG	**Red Dog Mine**	**73.96**	**22**	*e*P	**P**	**13 49 50.0**	**+2.2**
CASY	**Casey**	**76.72**	**186**	*e*P	**P**	**13 50 03.0**	**-0.4**
	15nm,1.4s						
GNI	**Garni**	**77.03**	**309**	LR	LR	14 29 34.7	
	comp=Z,53nm,19.5s,baz=92,slow=40						
RAYN	**Ar Rayn**	**77.43**	**292**	*e*P	**P**	**13 50 07.1**	**-1.5**
	9.1nm,1.2s						
CAST	**Castle Rocks**	**77.72**	**27**	*e*P	**P**	**13 50 10.1**	**+0.7**
	14nm,0.9s						
SKT	**Skwentna**	**77.91**	**29**	*e*P	**P**	**13 50 10.7**	**+0.2**
BPAW	**Bear Paw Mtn.**	**78.23**	**26**	*e*P	**P**	**13 50 12.1**	**-0.2**
	22nm,0.9s						
KBZ	**Khabaz**	**78.27**	**313**	P	**P**	**13 50 12.4**	**-0.4**
	4.9nm,1.0s,baz=31,slow=5.9,SNR=6.6						
KBZ				LR	LR	14 28 55.7	
	comp=Z,73nm,19.4s,baz=76,slow=39						
SUA	**Susitna One**	**78.27**	**29**	*e*P	**P**	**13 50 12.8**	**+0.2**
MLY	**Manley**	**78.37**	**25**	*e*P	**P**	**13 50 13.4**	**+0.5**
	12nm,0.8s						
KVAR	**Kislovodsk Arr**	**78.41**	**313**	P	**P**	**13 50 12.9**	**-0.8**
	4.0nm,0.5s,baz=120,slow=8.1,SNR=4.6						
TRF	**Thorofare Moun**	**78.52**	**27**	*e*P	**P**	**13 50 11.1**	**-2.9**
	11nm,0.9s						
COLD	**Coldfoot**	**78.66**	**23**	*e*P	**P**	**13 50 16.3**	**+1.9**
	14nm,0.9s						
TOLK	**Toolik Lake Re**	**78.94**	**22**	*e*P	**P**	**13 50 15.9**	**-0.1**
	11nm,0.8s						
PMR	**Palmer**	**79.05**	**29**	*e*P	**P**	**13 50 15.2**	**-1.5**
	13nm,1.0s						
MCK	**McKinley**	**79.13**	**27**	*e*P	**P**	**13 50 16.7**	**-0.4**
	22nm,0.8s						
SML	**Sawmill**	**79.42**	**29**	*e*P	**P**	**13 50 19.6**	**+0.8**
MDM	**Murphy Dome**	**79.43**	**26**	*e*P	**P**	**13 50 19.7**	**+0.9**
COLA	**College**	**79.60**	**26**	*e*P	**P**	**13 50 20.0**	**+0.4**
CCB	**Clear Creek Bu**	**79.62**	**26**	*e*P	**P**	**13 50 19.4**	**-0.4**
	8.8nm,1.2s						
KLMR	**Klimovskoe**	**79.76**	**330**	*e*P	**P**	**13 50 19.1**	**-1.5**
KLMR				AMP		13 50 20.6	
	comp=Z,15nm,0.9s						
IL1	**Eielson Array**	**80.01**	**26**	*e*P	**P**	**13 50 20.1**	**-1.8**
ILAR	**Eielson Array**	**80.01**	**26**	P	**P**	**13 50 21.1**	**-0.8**
	comp=Z,3.1nm,0.8s,baz=244,slow=6.2,SNR=39						
ILB	**Eielson Array**	**80.01**	**26**	*e*P	**P**	**13 50 19.8**	**-2.1**
DAWY	**Dawson**	**83.31**	**26**	*e*P	**P**	**13 50 40.0**	**+0.6**
	comp=Z,22nm,1.3s						
SPITS	**Spitsbergen Ar**	**84.41**	**349**	P	**P**	**13 50 44.1**	**-0.6**
	comp=Z,3.0nm,0.5s,baz=54,slow=5.6,SNR=9.9						
SPITS				LR	LR	14 34 13.0	
	comp=Z,37nm,18.3s,baz=40,slow=40						
ARCES	**ARCESS Array B**	**84.51**	**340**	P	**P**	**13 50 44.8**	**-0.6**
	comp=Z,6.9nm,0.7s,baz=78,slow=5.9,SNR=24						
ARCES	**ARCESS Array B**	**84.51**	**340**	*e*P	**P**	**13 50 44.3**	**-1.1**
INK	**Inuvik**	**84.85**	**22**	*e*P	**P**	**13 50 46.4**	**-0.6**
	comp=Z,16nm,1.1s						
BRTR	**Keskin Array B**	**85.56**	**309**	P	**P**	**13 50 49.6**	**-1.8**
	comp=Z,0.9nm,0.6s,baz=146,slow=3.1,SNR=3.9						
BRTR				LR	LR	14 34 59.3	
	comp=Z,30nm,18.6s,baz=65,slow=40						
FIA1	**FINESS Array S**	**86.14**	**332**	*e*P	**P**	**13 50 52.3**	**-1.3**
	comp=Z,26nm,1.1s						
FINES	**FINESS Array B**	**86.14**	**332**	P	**P**	**13 50 52.7**	**-0.8**
	comp=Z,5.6nm,0.4s,baz=68,slow=5.1,SNR=83						
FINES				LR	LR	14 33 35.3	
	comp=Z,54nm,18.9s,baz=61,slow=39						
AKASG	**Malin Array Be**	**86.71**	**321**	P	**P**	**13 50 55.6**	**-1.0**
	comp=Z,2.5nm,0.6s,baz=63,slow=5.0,SNR=20						
AKBB	**Malin Array Si**	**86.71**	**321**	*e*P	**P**	**13 50 55.7**	**-0.9**
	comp=Z,8.7nm,0.9s						
KIEV	**Kiev**	**86.72**	**321**	*e*P	**P**	**13 50 55.5**	**-1.1**
	comp=Z,9.1nm,1.0s						
PPT	**Papeete**	**87.74**	**108**	LR	LR	14 22 23.3	
	comp=Z,29nm,19.7s,baz=348,slow=30						
VNDA	**Vanda**	**89.51**	**173**	P	**P**	**13 51 09.8**	**+0.5**
	comp=Z,5.5nm,0.7s,baz=315,slow=6.1,SNR=38						
VNDA				PP	**PP**	**13 54 42.2**	**+1.0**

	comp=Z,0.8nm,0.8s,baz=332,slow=8.6,SNR=3.6						
VNDA				LR	LR	14 32 01.7	
	comp=Z,26nm,20.1s,baz=320,slow=36						
VNDA	**Vanda**	89.51	173	*e*P	P	13 51 08.1	-1.2
	comp=Z,5.5nm,0.8s						
BUR04	**Bucovina Ar. S**	89.97	318	*e*P	P	13 51 11.4	-0.9
MLR	**Muntele Rosu**	90.00	316	LR	LR	14 35 49.3	
	comp=Z,28nm,21.3s,baz=62,slow=38						
CRVS	**Cervenica-Dubn**	92.03	320	*e*P	P	13 51 21.9	+0.2
HFS	**Hagfors**	92.31	332	P	P	13 51 21.3	-1.5
	comp=Z,5.8nm,0.8s,baz=99,slow=4.7,SNR=13						
HFS				LR	LR	14 34 47.4	
	comp=Z,54nm,21.4s,baz=76,slow=37						
NB2	**NORSAR Subarra**	93.03	334	P	P	13 51 24.5	-1.6
	comp=Z,7.2nm,1.2s,baz=62,slow=4.6						
NB2	**NORSAR Subarra**	93.03	334	P	P	13 51 24.5	-1.6
	baz=62,slow=4.6						
NOA	**NORSAR Array B**	93.03	334	LR	LR	14 36 25.0	
	comp=Z,33nm,19.2s,baz=65,slow=38						
IDI	**Anoyia**	93.27	306	LR	LR	14 38 37.2	
	comp=Z,34nm,19.3s,baz=118,slow=39						
YKA	**Yellowknife Ar**	94.32	24	P	P	13 51 32.3	+0.4
	comp=Z,4.2nm,0.8s,baz=301,slow=4.7,SNR=52						
GERES	**GERESS Array B**	96.85	322	P	P	13 51 42.8	-1.1
	comp=Z,1.1nm,0.8s,baz=74,slow=5.7,SNR=10						
GERES				LR	LR	14 39 05.5	
	comp=Z,36nm,18.6s,baz=98,slow=38						
QSPA	**South Pole Qui**	99.67	180	P	Pdif	13 51 55.6	-0.5
	comp=Z,0.7nm,0.5s,baz=320,slow=4.4,SNR=3.3						
DAVOX	**Davos/Dischmat**	100.05	321	LR	LR	14 42 28.4	
	comp=Z,43nm,19.6s,baz=85,slow=38						
NVAR	**Mina Array Bea**	103.41	47	Pdiff	Pdif	13 52 14.8	+1.2
	comp=Z,0.2nm,0.6s,baz=287,slow=5.2,SNR=4.3						
TXAR	**Lajitas Array**	118.39	49	PKP	PKPdf	13 57 01.0	+0.1
	comp=Z,0.5nm,0.6s,baz=221,slow=1.4,SNR=7.8						
TORD	**Torodi Ar. Bea**	120.12	291	PKP	PKPdf	13 57 02.4	-2.0
	comp=Z,0.7nm,0.6s,baz=86,slow=1.5						
KOWA	**Kowa**	124.80	295	PKP	PKPdf	13 57 12.4	-1.0
	comp=Z,1.7nm,0.6s,baz=77,slow=1.7,SNR=5.0						
TKL	**Tuckaleechee C**	126.81	30	PKP	PKPdf	13 57 17.2	+0.5
	comp=Z,3.2nm,0.7s,baz=135,slow=1.4,SNR=4.3						
DBIC	**Dimbokro**	128.31	287	PKP	PKPdf	13 57 19.3	-0.8
	comp=Z,4.7nm,0.9s,baz=315,slow=1.4,SNR=3.0						
PLCA	**Paso Flores**	145.91	157	PKPbc	PKPbc	13 57 52.6	+0.2
	comp=Z,5.0nm,0.5s,baz=242,slow=3.8,SNR=14						
LPAZ	**La Paz**	164.87	117	PKP	PKPdf	13 58 18.3	0.0
	comp=Z,2.1nm,0.9s,baz=140,slow=2.7,SNR=6.3						

IDC 07 13:38:38.9±2.8**, 8°.10S×147°.43E, h0^{km}, mb3.5**/2**, mb1 3.9**/4**, mb1mx3.5**/46**, mbtmp3.7**/4**, ML3.5**/2**, Error ellipse: s-maj=83.5km s-min=16.3km az=93.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	1.33	192	Pg	Pg	13 39 03.7	-0.6
	72nm,0.3s,baz=11,slow=13,SNR=97						
PMG				Lg	Lg	13 39 21.4	
	127nm,0.3s,baz=313,slow=20,SNR=15						
CTA	**Charters Tower**	11.97	185	Pn	Pn	13 41 31.5	+0.6
	0.2nm,0.3s,baz=14,slow=15,SNR=3.3						
WRA	**Warramunga Arr**	17.30	226	P	Pn	13 42 41.4	-0.7
	0.2nm,0.3s,baz=51,slow=12,SNR=10						
ASAR	**Alice Springs**	20.19	218	P	P	13 43 16.2	+0.8
	1.8nm,0.8s,baz=42,slow=11,SNR=28						
MKAR	**Makanchi Array**	79.38	321	P	P	13 50 46.8	-0.1
	0.5nm,0.9s,baz=106,slow=5.1,SNR=2.5						

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*ISK **07** 13:55:53.5, 38°.59N×39°.58E, h5^{km}, ML3.5/24*
*ISCJB **07** 13:55:54.3±0.5, 38°.59N±0°.02×39°.59E±0°.03, h0^{km}±4^{km}, Error ellipse: s-maj=3.7km s-min=2.9km az=41.8*
*DDA **07** 13:55:54.1, 38°.56N×39°.57E, h7^{km}, Ml3.7*
*CSEM **07** 13:55:54.7±0.1, 38°.58N×39°.60E, h2^{km}, ML3.5, Error ellipse: s-maj=3.6km s-min=2.8km az=31.0*
ISC 07 13:55:54.4±1.0**, 38°.58N**±0°.02×**39°.59E**±0°.02**, h6**^{km}±11^{km}**, n81, σ0^{s}96**/97**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SVRC	**Sivrice-ELAZID**	0.30	229	PG	Pg	13 56 00.8	+0.5
SVRC				SG	Sb	13 56 06.2	-1.2
SVRC	**Sivrice-ELAZID**	0.30	229	*e*Pg	Pg	13 56 00.8	+0.5
SVRC				*e*Sg	Sb	13 56 06.2	-1.2
PTK	**Pertek**	0.35	334	PG	Pg	13 56 01.7	+0.4
PTK				SG	Sg	13 56 06.9	+0.9
PTK	**Pertek**	0.35	334	*e*Pg	Pg	13 56 01.7	+0.4
PTK				*e*Sg	Sg	13 56 06.9	+0.9
ELZG	**Elazig**	0.48	261	*i* P	Pg	13 56 04.0	+0.3
ELZG				*i* S	Sg	13 56 09.2	-0.8
ELZG	**Elazig**	0.48	261	P	Pg	13 56 04.0	+0.3
ELZG				S	Sg	13 56 09.2	-0.8
TNCL	**Tunceli-Merkez**	0.54	356	*i* P	Pg	13 56 04.8	0.0
TNCL				*i* S	Sg	13 56 11.2	-0.7
TNCL	**Tunceli-Merkez**	0.54	356	P	Pg	13 56 04.8	0.0
TNCL				S	Sg	13 56 11.2	-0.7
HANI	**Diyarbakir_Han**	0.66	104	*i* P	Pg	13 56 07.0	0.0
HANI				*i* S	Sb	13 56 17.2	-0.4
HANI	**Diyarbakir_Han**	0.66	104	P	Pg	13 56 07.0	0.0
HANI				S	Sb	13 56 17.2	-0.4
DYBB	**Diyarbakir**	0.76	145	PG	Pb	13 56 10.0	0.0
DYBB				SG	Sb	13 56 21.6	+1.1
DIYA	**Diyarbakir**	0.77	147	*i* P	Pb	13 56 10.5	+0.3
DIYA				*i* S	Sb	13 56 20.2	-0.8
DIYA	**Diyarbakir**	0.77	147	P	Pb	13 56 10.5	+0.3
DIYA				S	Sb	13 56 20.2	-0.8
DIY	**Diyarbakir**	0.84	143	*e*Pg	Pg	13 56 10.0	-0.6
DIY				*e*Sg	Sg	13 56 21.6	+0.1
BNGB	**Bingˆ¶l**	0.95	64	PG	Pb	13 56 13.1	-0.1
MALT	**Malatya**	0.95	254	PG	Pg	13 56 12.2	-0.4
MALT	**Malatya**	0.95	254	*e*Pg	Pg	13 56 12.2	-0.4
ERZN	**Erzincan**	1.01	6	PG	Pg	13 56 13.2	-0.7
KEMA	**Kemaliye**	1.10	309	*i* P	Pg	13 56 14.5	-1.0
KEMA				*i* S	Sg	13 56 28.5	-1.3
KEMA	**Kemaliye**	1.10	309	P	Pg	13 56 14.5	-1.0
KEMA				S	Sg	13 56 28.5	-1.3
EUZM	**Uzumlu**	1.13	4	*i* S	Sb	13 56 31.7	+0.3
EUZM	**Uzumlu**	1.13	4	S	Sb	13 56 31.7	+0.3
YEDI	**Yedisu-Bingol**	1.14	41	PN	Pg	13 56 15.4	-0.8
YEDI	**Yedisu-Bingol**	1.14	41	*e*Pn	Pg	13 56 15.4	-0.8
BNGL	**BINGOL**	1.28	72	*i* P	Pn	13 56 18.9	0.0
URFA	**Urfa**	1.29	208	PN	Pb	13 56 19.4	+0.4
URFA	**Urfa**	1.29	208	*e*Pn	Pb	13 56 19.4	+0.4
MAZI	**Mazidag**	1.30	148	PN	Pn	13 56 19.1	-0.1
MAZI	**Mazidag**	1.30	148	*e*Pn	Pn	13 56 19.1	-0.1
HEKM	**Malatya_Hekimh**	1.31	284	*i* P	Pb	13 56 19.4	-0.1
HEKM	**Malatya_Hekimh**	1.31	284	P	Pb	13 56 19.4	-0.1
SVAN	**Silvan-Diyarba**	1.33	108	PN	Pg	13 56 19.9	0.0
SVAN	**Silvan-Diyarba**	1.33	108	*i* P	Pn	13 56 19.5	0.0
SVAN	**Silvan-Diyarba**	1.33	108	P	Pn	13 56 19.5	0.0
SVAN	**Silvan-Diyarba**	1.33	108	*e*Pn	Pg	13 56 19.9	0.0
SANL	**SANLIURFA_Merk**	1.48	199	*i* P	Pg	13 56 22.5	-0.2
SANL	**SANLIURFA_Merk**	1.48	199	P	Pg	13 56 22.5	-0.2
BTMN	**Batman**	1.49	117	*i* P	Pb	13 56 22.1	-0.3
BTMN	**Batman**	1.49	117	P	Pb	13 56 22.1	-0.3
VRTB	**Varto-Mus**	1.57	68	PN	Pb	13 56 23.8	-0.1
VRTB	**Varto-Mus**	1.57	68	*e*Pn	Pb	13 56 23.8	-0.1
MARD	**Mardin**	1.57	143	*i* P	Pn	13 56 22.7	-0.1
KELT	**Kelkit**	1.59	351	*i* P	Pb	13 56 24.1	-0.2
KELT	**Kelkit**	1.59	351	P	Pb	13 56 24.1	-0.2
DARE	**Darende-Malaty**	1.65	270	PN	Pb	13 56 24.7	-0.5
DARE	**Darende-Malaty**	1.65	270	*e*Pn	Pb	13 56 24.7	-0.5
CUKAN	**kangal_SIVAS**	1.81	295	*i* P	Pg	13 56 28.5	-0.6
CUKAN	**kangal_SIVAS**	1.81	295	P	Pg	13 56 28.5	-0.6
SURC	**SANLIURFA_SURC**	1.86	205	*i* P	Pb	13 56 27.8	-1.0
SURC	**SANLIURFA_SURC**	1.86	205	P	Pb	13 56 27.8	-1.0
BAYT	**Ayd˜–ntepe-Bay**	1.86	13	PN	Pb	13 56 27.9	-1.0
BAYT	**Ayd˜–ntepe-Bay**	1.86	13	*e*Pn	Pb	13 56 27.9	-1.0
GURO	**Guroymak-BITLI**	1.92	90	PN	Pb	13 56 28.9	-0.8
GURO	**Guroymak-BITLI**	1.92	90	*e*Pn	Pb	13 56 28.9	-0.8
CUZAR	**Zara_SIVAS**	1.93	313	*i* P	Pg	13 56 30.8	-0.5
CUZAR	**Zara_SIVAS**	1.93	313	P	Pg	13 56 30.8	-0.5
CUALT	**Altinyayla-SIV**	2.32	288	*i* P	Pg	13 56 37.5	-1.3
CUALT	**Altinyayla-SIV**	2.32	288	P	Pg	13 56 37.5	-1.3
GAZ	**Gaziantep**	2.35	234	PN	Pn	13 56 34.9	+1.4
GAZ	**Gaziantep**	2.35	234	*e*Pn	Pn	13 56 34.9	+1.4
KMRS	**Kahramanmaras**	2.38	244	PN	Pn	13 56 35.2	+1.3
KMRS	**Kahramanmaras**	2.38	244	*e*Pn	Pn	13 56 35.2	+1.3
SVSK	**Karacayir**	2.42	304	PN	Pn	13 56 35.8	+1.5
SVSK	**Karacayir**	2.42	304	*e*Pn	Pn	13 56 35.8	+1.5
ESPY	**Espiye-Giresun**	2.43	344	PN	Pn	13 56 35.6	+1.0
ESPY	**Espiye-Giresun**	2.43	344	*e*Pn	Pn	13 56 35.6	+1.0
SIRT	**Sirnak**	2.49	115	PN	Pn	13 56 37.1	+1.6
SIRT	**Sirnak**	2.49	115	*e*Pn	Pn	13 56 37.1	+1.6
SARI	**SarD1z-Kayseri**	2.50	267	PN	Pn	13 56 37.0	+1.4
RSDY	**Resadiye-TOKAT**	2.52	317	PN	Pn	13 56 37.4	+1.5
RSDY	**Resadiye-TOKAT**	2.52	317	*e*Pn	Pn	13 56 37.4	+1.5
CHOM	**Cayeli-Rize**	2.67	19	PN	Pn	13 56 39.5	+1.6
CHOM	**Cayeli-Rize**	2.67	19	*e*Pn	Pn	13 56 39.5	+1.6
BNN	**Bunyan**	2.94	277	PN	Pn	13 56 43.0	+1.3
BNN	**Bunyan**	2.94	277	*e*Pn	Pn	13 56 43.0	+1.3
VANB	**Van**	2.98	88	PN	Pn	13 56 43.9	+1.7
VANB	**Van**	2.98	88	*e*Pn	Pn	13 56 43.9	+1.7
CUKT	**Cukurca**	3.44	111	PN	Pn	13 56 50.7	+2.1
CUKT	**Cukurca**	3.44	111	*e*Pn	Pn	13 56 50.7	+2.1
YOZ	**Yozgat**	3.49	289	PN	Pn	13 56 51.1	+1.9
YOZ	**Yozgat**	3.49	289	*e*Pn	Pn	13 56 51.1	+1.9

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*IDC **07** 14:03:59.7±1.3, 24°.09N×122°.39E, h0^{km}, mb3.5/4, mb1 3.6/5, mb1mx3.2/63, mbtmp3.5/5, ML3.1/1, MS2.6/2, Ms1 2.7/2, ms1mx2.4/44, Error ellipse: s-maj=45.5km s-min=24.5km az=67.0*
*NIED **07** 14:04:00, 23°.90N×122°.40E, h17^{km}, Mw3.7 Best double couple: $M_0$4.61000×10^{14} NP1:ϕ_s231.00000°, δ80.00000°, λ3.00000°. NP2:ϕ_s141.00000°, δ87.00000°, λ170.00000°.*
*JMA **07** 14:04:01.8±0.2, 23°.92N×122°.37E, h18^{km}±4^{km}, M3.6*
*TAP **07** 14:04:02.5, 24°.00N×122°.31E, h17^{km}, ML4.1, D*
ISC 07 14:04:00.8±1.0**, 23°.94N**±0°.02×**122°.36E**±0°.02**, h11**^{km}±8^{km}**, n111, σ0^{s}77**/211**, mb3.4**/4**, 2C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EOS1	**EOS1**	0.65	341	P	Pb	14 04 14.2	0.0
	baz=342						
EOS1				S	Sb	14 04 22.9	-0.3
	baz=342						
HWA	**Hwalien**	0.69	273	P	Pb	14 04 16.1	+1.0
	baz=267						
HWA				*e*S	Sb	14 04 25.2	+0.5
	baz=267						
TWD	**Chiawan**	0.72	282	*i* P	Pb	14 04 15.8	+0.4
	baz=276						
TWD				*i* S	Sb	14 04 25.6	+0.4
	baz=276						
ENAH	**Nanao**	0.72	315	P	Pg	14 04 15.1	+0.3
	baz=314						
ENAH				S	Sg	14 04 23.9	-0.2
	baz=314						
JYNG	**Yonagunijimaku**	0.74	46	P	Pb	14 04 15.9	+0.1
JYNG				S	Sg	14 04 24.8	0.0
NACB	**Ninganchiao**	0.74	289	⇑P	Pb	14 04 16.2	+0.4
	baz=284						
NACB				S	Sb	14 04 26.0	0.0
	baz=284						
NANB	**Nanao**	0.74	311	P	Pg	14 04 15.6	+0.4
	baz=309						
NANB				S	Sg	14 04 24.3	-0.7
	baz=309						
ENA	**Nanau**	0.75	311	P	Pg	14 04 15.6	+0.2
	baz=309						
ENA				S	Sg	14 04 24.6	-0.5
	baz=309						
YOJ	**Yonaguni jima**	0.79	48	P	Pb	14 04 17.1	+0.5
	baz=53						
YOJ				*e*S	Sg	14 04 26.5	+0.1
	baz=53						
YOJ	**Yonaguni jima**	0.79	48	P	Pb	14 04 16.9	+0.3
YOJ				*e*S	Sg	14 04 26.5	+0.1
TWC	**Suao**	0.82	325	*i* P	Pg	14 04 16.7	0.0
	baz=325						
TWC				*e*S	Sg	14 04 25.6	-1.8
	baz=325						
ESL	**Shilin**	0.86	262	P	Pg	14 04 17.6	+0.2
	baz=256						
ESL				S	Sb	14 04 30.1	+0.7
	baz=256						
HGSD	**Ruisui**	0.97	243	*e*P	Pg	14 04 19.5	0.0
	baz=237						
HGSD				*e*S	Sg	14 04 30.3	-1.8
	baz=237						
EGS		0.99	337	*e*P	Pn	14 04 20.4	-0.3
	baz=338						
EGS				S	Sb	14 04 32.9	-0.2
	baz=338						
ILA	**Ilan**	1.00	326	*e*P	Pb	14 04 20.4	+0.2
	baz=326						
ILA				S	Sg	14 04 32.5	-0.5
	baz=326						
TWE	**Neicheng**	1.01	321	P	Pn	14 04 21.0	+0.1
	baz=321						
TWE				S	Sg	14 04 32.6	-0.7
	baz=321						
ENTT	**Nioudou**	1.01	314	P	Pg	14 04 20.7	+0.4
	baz=313						
ENTT				*i* S	Sg	14 04 32.4	-1.1
	baz=313						
NNSB	**Datong**	1.02	299	⇑P	Pb	14 04 20.9	+0.2
	baz=296						
NNSB				S	Sb	14 04 34.8	+0.6
	baz=296						
NNSH	**Datong**	1.02	299	P	Pb	14 04 20.9	+0.2
	baz=296						
NNSH				S	Sn	14 04 35.0	-0.7
	baz=296						
WHF	**Hehuan Shan**	1.02	282	P	Pg	14 04 20.9	+0.3
	baz=278						
WHF				S	Sg	14 04 34.4	+0.3
	baz=278						
NNS	**Nan Shan**	1.03	299	*i* P	Pg	14 04 21.1	+0.4
	baz=296						
NNS				*i* S	Sb	14 04 35.2	+0.6
	baz=296						
NTC	**Toucheng**	1.03	332	*e*P	Pb	14 04 20.8	0.0
	baz=332						
NTC				S	Sb	14 04 33.6	-0.8
	baz=332						
EHY	**Hungye**	1.05	246	*e*P	Pb	14 04 21.1	0.0
	baz=241						
EHY				S	Sb	14 04 35.0	+0.2
	baz=241						
CHGB	**Renai**	1.09	277	P	Pb	14 04 22.0	0.0
	baz=273						
CHGB				S	Sb	14 04 36.5	+0.1
	baz=273						
YULB	**Yu-li**	1.12	241	*e*P	Pb	14 04 22.1	-0.1
	baz=236						
YULB				*e*S	Sb	14 04 36.6	-0.3
	baz=236						
TWB1	**Santiao Chiao**	1.12	342	*e*P	Pg	14 04 22.4	0.0
	baz=343						
TWB1				*e*S	Sg	14 04 37.0	0.0
	baz=343						
TWT	**Tachien**	1.13	286	P	Pn	14 04 23.2	+0.4
	baz=283						
TWT				S	Sg	14 04 38.0	+0.7
	baz=283						
TWF1	**Yuli**	1.14	239	P	Pb	14 04 22.6	0.0
	baz=234						
TWF1				S	Sb	14 04 37.6	+0.2
	baz=234						
TIPB	**Shuangxi**	1.14	335	P	Pg	14 04 22.9	+0.1
	baz=335						
TIPB				S	Sb	14 04 36.7	-0.9
	baz=335						
TDCB	**Techi**	1.15	286	P	Pb	14 04 23.1	+0.3
	baz=283						
TDCB				S	Sb	14 04 37.8	0.0
	baz=283						
YHNB	**Yeheng**	1.16	309	P	Pn	14 04 23.2	+0.1
	baz=307						
YHNB				S	Sb	14 04 37.0	-1.2
	baz=307						
NSK	**Sanguang**	1.18	309	P	Pg	14 04 23.7	+0.2
	baz=307						
NSK				*i* S	Sb	14 04 37.5	-1.1
	baz=307						
FULB	**Fuli**	1.23	233	*e*P	Pn	14 04 23.1	-0.9
	baz=229						
FULB				*e*S	Sb	14 04 38.4	-1.6
	baz=229						
CHKT	**Chengkung**	1.24	228	*e*P	Pn	14 04 23.1	-1.1
	baz=223						
CHKT				*e*S	Sb	14 04 38.0	-2.3
	baz=223						
NWF	**Wu-fen Shan**	1.25	335	*e*P	Pb	14 04 24.6	0.0
	baz=335						
NWF				*e*S	Sb	14 04 40.0	-0.6
	baz=335						
WFSB	**Wu-fen Shan**	1.25	335	*e*P	Pb	14 04 24.5	+0.1
	baz=335						
WFSB				S	Sb	14 04 39.8	-0.8
	baz=335						
TWA	**Mucha**	1.26	326	*e*P	Pg	14 04 26.1	+1.0
	baz=325						
TWA				*e*S	Sb	14 04 40.3	-0.6
	baz=325						
SSLB	**Suanglung**	1.30	264	*e*P	Pn	14 04 25.0	0.0
	baz=260						
SSLB				*e*S	Sb	14 04 41.0	-1.1
	baz=260						
TATO	**Taipei**	1.31	323	*e*P	Pb	14 04 25.5	+0.1
	baz=322						
TATO				S	Sb	14 04 41.4	-0.9
	baz=322						
IRIF	**Iriomote-Funau**	1.31	72	P	Pb	14 04 25.9	+0.4
IRIF				*e*S	Sg	14 04 43.3	+0.2
DPDB	**Guoxing**	1.32	274	P	Pn	14 04 25.6	+0.2
	baz=271						
DPDB				*e*S	Sn	14 04 43.0	0.0
	baz=271						
HATJ	**Hateruma jima**	1.32	85	P	Pb	14 04 26.2	+0.5
HATJ				*e*S	Sb	14 04 41.4	-1.4
TAP1	**Taipei**	1.34	325	*e*P	Pg	14 04 27.5	+0.9
	baz=324						
TAP1				*e*S	Sn	14 04 43.1	-0.2
	baz=324						
SMLT	**Sun Moon Lake**	1.34	268	P	Pn	14 04 25.9	+0.2
	baz=264						
SMLT				S	Sb	14 04 42.8	-0.5
	baz=264						
YUS	**Yu-Shan**	1.37	251	*e*P	Pn	14 04 26.5	+0.1
	baz=247						
YUS				*e*S	Sb	14 04 43.4	-1.1
	baz=247						
TYC	**Yuchr**	1.38	269	P	Pn	14 04 26.4	+0.3
	baz=265						
TYC				*e*S	Sn	14 04 43.4	-1.0
	baz=265						
YM07	**YM07**	1.41	331	*e*P	Pn	14 04 26.4	-0.1
	baz=331						
YM07				*e*S	Sn	14 04 44.2	-1.0
	baz=331						
YM10	**YM10**	1.42	329	*e*P	Pn	14 04 26.8	+0.1
	baz=329						
YM10				*e*S	Sn	14 04 44.4	-1.0
	baz=329						
YM11	**YM11**	1.42	330	*e*P	Pg	14 04 28.9	+0.8
	baz=329						
YM11				*e*S	Sn	14 04 44.9	-0.5
	baz=329						
NSTT	**Nanjuang**	1.42	299	P	Pb	14 04 28.0	+0.6
	baz=297						
NSTT				*e*S	Sn	14 04 44.5	-1.0
	baz=297						
YM04	**YM04**	1.43	328	*e*P	Pn	14 04 27.1	+0.3
	baz=328						
YM04				*e*S	Sn	14 04 45.0	-0.6
	baz=328						
YM08	**YM08**	1.43	331	*e*P	Pb	14 04 27.3	-0.3
	baz=330						
YM08				*e*S	Sn	14 04 44.6	-1.1
	baz=330						
ELDTW	**Lidau**	1.44	239	*e*P	Pn	14 04 26.7	-0.4
	baz=235						
ELDTW				*e*S	Sn	14 04 44.2	-1.9
	baz=235						
TWS1	**Kuangyinshan**	1.44	324	*e*P	Pb	14 04 27.6	-0.2
	baz=323						
TWS1				*e*S	Sn	14 04 45.3	-0.7
	baz=323						
TWH	**Lutao**	1.47	214	*e*P	Pn	14 04 26.8	-0.5
	baz=209						
TWH				*e*S	Sn	14 04 44.4	-2.2
	baz=209						
NTST	**Danshui**	1.48	326	*e*P	Pb	14 04 28.0	-0.4
	baz=325						
NTST				*e*S	Sn	14 04 45.9	-0.9
	baz=325						
NCU	**National Centr**	1.48	314	*e*P	Pn	14 04 27.3	-0.3
	baz=313						
NCU				*e*S	Sn	14 04 46.2	-0.8
	baz=313						
NCUH	**Zhongli**	1.48	314	*e*P	Pb	14 04 28.7	+0.2
	baz=313						
NCUH				*e*S	Sn	14 04 46.0	-1.1
	baz=313						
ALS	**Alishan**	1.49	254	*e*P	Pn	14 04 28.5	+0.6
	baz=250						
ALS				*e*S	Sn	14 04 47.7	+0.2
	baz=250						
WJS	**Zhushan**	1.50	266	*e*P	Pb	14 04 29.4	+0.6
	baz=262						
WJS				*e*S	Sb	14 04 48.3	+0.4
	baz=262						
TWY	**Chenhua**	1.50	333	*e*P	Pg	14 04 30.0	+0.3
	baz=333						
TWY				*e*S	Sb	14 04 48.0	+0.1
	baz=333						
SBCB	**Hsinchu**	1.52	304	*e*P	Pb	14 04 28.9	-0.2
	baz=302						
SBCB				*e*S	Sn	14 04 47.3	-0.5
	baz=302						
JKRS	**Kuro-shima**	1.53	78	P	Pb	14 04 29.4	+0.1
JKRS				*e*S	Sb	14 04 49.5	+0.7
HSN	**Hsinchu**	1.54	304	*e*P	Pb	14 04 29.9	+0.5
	baz=304						
HSN				*e*S	Sn	14 04 46.6	-1.6
	baz=304						
WNT	**Mingjian**	1.54	268	*e*P	Pg	14 04 30.4	0.0
	baz=265						
WNT				*e*S	Sg	14 04 50.1	-0.2
	baz=265						
NSY	**Sanyi**	1.54	288	*e*P	Pg	14 04 30.3	-0.1
	baz=286						
NSY				*e*S	Sg	14 04 50.7	+0.3
	baz=286						
NMLH	**Miaoli**	1.56	293	*e*P	Pb	14 04 30.2	+0.5
	baz=290						
NMLH				*e*S	Sn	14 04 48.9	+0.2
	baz=290						
CHN5	**Tsauling**	1.58	258	P	Pb	14 04 30.2	0.0
	baz=254						
CHN5				*e*S	Sb	14 04 50.2	0.0
	baz=254						
PTSB	**Yuanli**	1.60	289	*e*P	Pb	14 04 30.5	0.0
	baz=286						
PTSB				*e*S	Sb	14 04 50.5	-0.1
	baz=286						
TWGBT	**Beinan**	1.62	227	*e*P	Pn	14 04 29.0	-0.4
	baz=223						
TWGBT				*e*S	Sn	14 04 49.7	-0.7
	baz=223						
TWG	**Pinlang**	1.63	227	*e*P	Pn	14 04 29.0	-0.5
	baz=223						
TWG				*e*S	Sn	14 04 49.7	-0.8
	baz=223						
WCHH	**Zhanghua**	1.66	275	*e*P	Pb	14 04 32.0	+0.5
	baz=272						
WCHH				*e*S	Sg	14 04 54.7	+0.5
	baz=272						
WGK	**Gukeng**	1.67	262	*e*P	Pg	14 04 33.1	+0.2
	baz=258						
WGK				*e*S	Sb	14 04 53.5	+0.8
	baz=258						
JIJ	**Ishigaki jima**	1.68	75	P	Pn	14 04 30.7	+0.5
JIJ				*e*S	Sn	14 04 52.2	+0.4
WDLH	**Douliu**	1.69	262	*e*P	Pb	14 04 32.1	+0.1
	baz=259						
WDLH				*e*S	Sb	14 04 53.8	+0.5
	baz=259						
PCYT	**Pengchaiyu**	1.71	351	*e*P	Pn	14 04 30.5	-0.1
	baz=352						
PCYT				*e*S	Sb	14 04 52.7	-1.0
	baz=352						
TPUB	**Ta-pu**	1.71	249	*e*P	Pb	14 04 32.0	-0.3
	baz=245						
TPUB				*e*S	Sb	14 04 53.9	-0.1
	baz=245						
WTP	**Ta-pu**	1.75	247	*e*P	Pn	14 04 32.4	+1.2
	baz=243						
WTP				*e*S	Sb	14 04 55.0	0.0
	baz=243						
CHN2	**Minshiung**	1.78	257	*e*P	Pb	14 04 34.3	+0.9
	baz=254						
CHN2				*e*S	Sb	14 04 57.1	+1.3

	baz=254						
CHY	Chiayi	1.83	257	eP	Pb	14 04 35.1	+0.7
	baz=253						
CHY				eS	Sb	14 04 58.0	+0.7
	baz=253						
RLNB	Erlin	1.83	269	P	Pb	14 04 34.0	-0.5
	baz=266						
RLNB				eS	Sb	14 04 58.4	+1.0
	baz=266						
CHN1	Nanshi	1.84	246	eP	Pb	14 04 35.0	+0.3
	baz=243						
CHN1				eS	Sb	14 04 58.3	+0.5
	baz=243						
SGST	Jiashian	1.84	243	eP	Pb	14 04 35.0	+0.4
	baz=239						
SGST				eS	Sb	14 04 58.7	+1.0
	baz=239						
TWK	Hsinying	1.84	249	eP	Pb	14 04 34.7	0.0
	baz=246						
TWK				eS	Sb	14 04 57.7	-0.2
	baz=246						
ECL	Taimali	1.86	224	eP	Pn	14 04 32.0	-0.7
	baz=221						
ECL				eS	Sn	14 04 54.1	-2.2
	baz=221						
JISG	Ishigakijimahi	1.89	70	P	Pn	14 04 33.4	+0.3
JISG				eS	Sn	14 04 56.7	-0.3
WTCT	Ta-ch’eng	1.91	268	eP	Pb	14 04 35.3	-0.4
	baz=265						
WTCT				eS	Sb	14 05 00.1	+0.6
	baz=265						
SSD	Sandimen	1.98	234	eP	Pn	14 04 35.9	+1.4
	baz=230						
WSF	Szhu	1.98	262	eP	Pb	14 04 36.4	-0.6
	baz=259						
WSF				eS	Sb	14 05 02.1	+0.4
	baz=259						
LAY	Lan-yu	2.03	202	eP	Pn	14 04 34.5	-0.6
	baz=199						
LAY				eS	Sn	14 04 58.2	-2.3
	baz=199						
CHN8	Yiju	2.06	254	eP	Pn	14 04 37.0	+1.5
	baz=251						
CHN8				eS	Sb	14 05 03.5	-0.4
	baz=251						
MASBT	Mashibuluo	2.07	231	eP	Pn	14 04 36.0	+0.5
	baz=228						
MASBT				eS	Sb	14 05 04.5	+0.3
	baz=228						
SCLT	Jiali	2.13	250	eP	Pn	14 04 37.7	+1.3
	baz=246						
SCLT				eS	Sb	14 05 05.4	-0.5
	baz=246						
JTJ	Tarama	2.25	71	P	Pn	14 04 38.8	+0.8
JTJ				eS	Sb	14 05 08.0	-1.3
HEN	Hengchun	2.44	218	eP	Pb	14 04 43.4	-1.3
	baz=215						
HEN				eS	Sn	14 05 11.5	+1.0
	baz=215						
TWKBT	Hengchun	2.45	216	eP	Pn	14 04 41.4	+0.5
	baz=213						
TWKBT				eS	Sn	14 05 10.4	-0.4
	baz=213						
TWK1	Hengchun	2.45	216	eP	Pn	14 04 41.5	+0.7
	baz=213						
TWK1				eS	Sn	14 05 10.9	+0.1
	baz=213						
WDGT	Dungji	2.57	255	eP	Pn	14 04 43.4	+1.0
	baz=252						
WDGT				eS	Sn	14 05 13.8	0.0
	baz=252						
PHUB	P’eng-hu	2.59	261	eP	Pn	14 04 43.4	+0.6
	baz=258						
PHUB				eS	Sn	14 05 14.2	-0.2
	baz=258						
PNG	Penghu	2.60	262	eP	Pn	14 04 43.4	+0.6
	baz=260						
PNG				eS	Sn	14 05 14.7	+0.2
	baz=260						
JIRB	Irabujima	2.71	70	eS	Sn	14 05 16.9	-0.4
VCHM	Qimei	2.79	256	eP	Pn	14 04 47.0	+1.6
	baz=253						
VCHM				eS	Sn	14 05 19.7	+0.5
	baz=253						
JIKM	Ikemajima	2.81	69	P	Pn	14 04 47.4	+1.7
JIKM				eS	Sn	14 05 18.6	-1.0
VWUC	VWUC	2.85	292	eP	Pn	14 04 46.3	-0.1
	baz=290						
VWUC				eS	Sn	14 05 18.3	-2.5
	baz=290						
JOW	Kunigami	6.07	60	Pn	Pn	14 05 29.6	-1.0
	1.0nm,0.3s,baz=102,slow=19,SNR=1.4						
KSRS	Korea Array	14.29	18	LR	LR	14 13 21.9	
	comp=Z,29nm,19.3s,baz=170,slow=40						
CMAR	Chiang Mai Arr	22.49	260	LR	LR	14 18 26.4	
	comp=Z,13nm,19.9s,baz=180,slow=38						
SONM	Songino Array	27.02	336	P	P	14 09 42.4	-0.8
	0.8nm,0.7s,baz=154,slow=9.1,SNR=3.5						
MKAR	Makanchi Array	39.27	316	P	P	14 11 29.2	-0.4
	0.2nm,0.4s,baz=107,slow=10,SNR=2.6						
WRA	Warramunga Arr	45.15	164	P	P	14 12 18.1	+0.4
	0.5nm,0.8s,baz=345,slow=8.9,SNR=2.1						
ASAR	Alice Springs	48.63	166	P	P	14 12 47.5	+2.5
	0.2nm,0.7s,baz=354,slow=13,SNR=4.5						

IDC ***07*** *14:12:43.4±2.5, 29°.34S×175°.97W, h0^{km}, mb4.0/3, mb1 4.2/4, mb1mx3.7/42, mbtmp4.0/4, ML3.3/1, Error ellipse: s-maj=56.5km s-min=38.3km az=3.0*

ISCJB ***07*** *14:12:46.0±2.0, 29°.64S±0°.10×176°.0W±0°.2, h28^{km}, mb4.0/3, Error ellipse: s-maj=21.4km s-min=12.7km az=159.5*

ISC 07 14:12:48.6±1.8**, 29°.5S**±0°.1×**176°.1W**±0°.1**, h28**^{km}**, n6, σ0^s.97**/8**, mb4.1**/3**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.59	278	Pn	Pn	14 13 14.9	0.0
	109nm,0.3s,baz=33,slow=19,SNR=7.9						
RAO				Sn	Sb	14 13 36.6	-0.4
	271nm,0.3s,baz=287,slow=22,SNR=10.0						
URZ	Urewera	10.41	211	Pn	Pn	14 15 15.2	-0.8
	0.2nm,0.3s,baz=94,slow=19,SNR=2.5						
URZ				Sn	Sn	14 17 11.9	+0.3
	1.0nm,0.3s,baz=78,slow=22,SNR=12						
STKA	Stephens Creek	36.29	255	P	P	14 19 51.4	+1.6
	2.2nm,0.8s,baz=90,slow=6.1,SNR=3.7						
ASAR	Alice Springs	44.81	265	P	P	14 21 00.6	+0.3
	0.9nm,0.5s,baz=99,slow=7.7,SNR=19						
WRA	Warramunga Arr	45.72	270	P	P	14 21 06.7	-0.8
	1.8nm,0.7s,baz=109,slow=8.1,SNR=11						
FINES	FINESS Array B	144.82	342	PKP	PKPab	14 32 20.5	-0.6
	0.9nm,0.8s,baz=27,slow=9.6,SNR=4.4						

BJI ***07*** *14:25:57.0, 4°.27S×100°.77E, h37^{km}, mb4.9/46, mB4.9/31, Ms4.8/35, Ms7 4.6/34*

IDC ***07*** *14:25:58.2±0.7, 3°.60S×100°.60E, h0^{km}, mb4.5/23, mb1 4.5/24, mb1mx4.3/58, mbtmp4.5/24, ML3.5/1, MS4.1/27, Ms1 4.1/27, ms1mx3.9/57, Error ellipse: s-maj=24.7km s-min=9.9km az=46.0*

ISCJB ***07*** *14:25:59.9±0.3, 3°.69S±0°.04×100°.44E±0°.04, h29^{km}, mb4.7/66, MS4.3/45, Error ellipse: s-maj=6.8km s-min=2.9km az=44.1*

MOS ***07*** *14:26:01.5±1.0, 3°.46S×100°.65E, h33^{km}, mb4.9/25, MS4.5/5, Error ellipse: s-maj=12.6km s-min=7.5km az=100.1*

DJA ***07*** *14:26:02.3±0.8, 4°S±3°×10°0E±°, h27^{km}±8^{km}, M4.8/22, mb5.0/22, mB5.2/11, MLv5.2/15, Mw(mB)4.6/11*

NEIC ***07*** *14:26:03.9±1.8, 3°.64S×100°.59E, h45^{km}±14^{km}, mb5.0/9, Error ellipse: s-maj=27.3km s-min=9.2km az=52.0*

GCMT ***07*** *14:26:03.8±0.5, 4°.04S×100°.43E, h40^{km}±2^{km}, MW4.9/44, Moment Tensor Solution. s36,c47; s44,c57; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.45±.15; M$_{\theta\theta}$-1.51±.10; M$_{\phi\phi}$0.05±.12; M$_{r\theta}$1.16±.13; M$_{\theta\phi}$0.93±.07; M$_{\phi r}$-1.29±.21; Best double couple: M$_0$2.45200×10^{16} NP1:φ$_s$133.00000°, δ69.00000°, λ107.00000°. NP2: φ$_s$272.00000°, δ27.00000°, λ52.00000°. Principal axes: T 2.3040, Plg62.0000°, Azm70.0000°; N 0.2920, Plg16.0000°, Azm307.0000°; P -2.5990, Plg22.0000°, Azm210.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 07 14:26:02.1±0.4**, 3°.65S**±0°.05×**100°.46E**±0°.05**, h29**^{km}**, n243, σ1^s.87**/237**, mb4.7**/66**, MS4.3**/47**, 9C-5D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPSI	Pulau Pagai	0.99	333	P	Pn	14 26 20.2	+0.2
PPSI				S	Sn	14 26 33.0	0.0
KRJI	Kerinci	1.84	33	P	Pn	14 26 32.7	+0.8
KRJI				S	Sb	14 26 55.5	-2.4
MNAI	Manna	2.59	106	P	Pn	14 26 43.2	+1.1
MNAI				S	Sn	14 27 13.3	+0.7
MNAI	Manna	2.59	106	ePn	Pn	14 26 42.3	+0.2
SISI	Saibi	2.68	329	P	Pn	14 26 43.4	+0.1
RGRI	Rengat	3.77	30	P	Pn	14 26 59.2	+0.8
MDSI	Maura Dua	3.80	103	P	Pn	14 26 58.7	-0.1
LWLI	Liwa	3.84	111	P	Pn	14 26 59.5	+0.1
BKNI	Bangkinang	3.99	8	P	Pn	14 27 01.6	+0.2
BKNI	Bangkinang	3.99	8	ePn	Pb	14 27 06.6	-5.1
PMBI	Palembang	4.36	81	P	Pn	14 27 06.2	-0.3
KASI	Kota Agung	4.43	115	P	Pn	14 27 08.6	+1.1
MNSI	Mandailing Nat	4.50	349	P	Pn	14 27 09.1	+0.7
KLI	Kotabumi	4.55	106	P	Pn	14 27 10.2	+1.2
DSRI	Dabo	5.18	53	P	Pn	14 27 18.2	+0.5
CGJI	Cibinong	5.99	120	P	Pn	14 27 29.2	+0.4
TPRI	Tanjung Pinang	6.09	42	P	Pn	14 27 30.8	+0.6
SBJI	Serang	6.16	114	P	Pn	14 27 31.1	-0.1
PSI	Prapat	6.59	347	Pn	Pn	14 27 35.2	-2.0
	0.9nm,0.3s,baz=180,slow=14,SNR=4.2						
PSI				Lg	Lg	14 29 18.4	
	1.2nm,0.3s,baz=180,slow=11,SNR=2.0						
DBJI	Dramaga	6.90	115	P	Pn	14 27 41.8	+0.4
LEM	Lembang	7.80	114	Pn	Pn	14 27 55.4	+1.6
	5.6nm,0.3s,baz=242,slow=20,SNR=8.0						
LEM				Sn	Sn	14 29 22.4	+1.1
	baz=310,slow=19,SNR=1.8						
CISI	Cisompet, Garu	8.29	118	P	Pn	14 28 00.0	-0.5
CISI	Cisompet, Garu	8.29	118	ePn	Pn	14 27 57.0	-3.5
MLSI	Meulaboh, Aceh	8.85	333	P	Pn	14 28 08.3	+0.2
CMJI	Cimerak	8.95	118	P	Pn	14 28 10.7	+1.2
KPJI	Karang Pucung	9.19	114	P	Pn	14 28 13.4	+0.6
NGJI	Ngawi	11.56	109	P	Pn	14 28 46.0	+0.8
STKI	Sintang	11.61	72	P	Pn	14 28 56.8	+11
PWJI	Pagerwojo	12.09	112	P	Pn	14 28 53.8	+1.2
MTKI	Muara Teweh, K	14.67	80	P	Pn	14 29 29.4	+1.6
SRAK	Srakaew	17.62	5	P	P	14 30 06.3	-0.1
	37nm,0.6s,510nm						
PLAI	Plampang	17.96	107	P	Pn	14 30 08.7	-1.2
SPSI	Sidrap Palu	19.27	92	P	P	14 30 23.7	-0.9
TTSI	Tana Toraja	19.34	89	P	Pn	14 30 26.9	+0.3
PCI	Palu	19.55	82	P	P	14 30 28.3	+0.6
BKSI	Bulukumba	19.67	96	P	P	14 30 29.6	+0.6
MPSI	Mapaga	19.83	79	P	P	14 30 31.5	+0.8
SKNT	Sakolnakorn	20.78	10	P	P	14 30 39.4	-1.7
	9.5nm,1.4s						
APSI	Ampana	21.34	83	P	P	14 30 51.1	+3.9
NONG	Nongkai	21.74	7	P	P	14 30 48.6	-2.7
	0.4nm,1.1s						
CM01	Chiang Mai Arr	21.98	356	eP	P	14 30 52.2	-1.7
CMAR	Chiang Mai Arr	22.02	356	P	P	14 30 52.6	-1.7
	4.1nm,0.5s,baz=184,slow=9.1,SNR=19						
CMAR				LR	LR	14 40 39.5	
	comp=Z,319nm,19.2s,baz=184,slow=40						
KDI	Kendari	22.11	92	P	P	14 31 00.8	+5.4
CMMT	Chiang Mai	22.37	356	P	P	14 30 59.0	+0.9
	16nm,1.8s,385nm						
CHTO	Chiang Mai	22.37	356	eP	P	14 30 53.1	-5.0
	40nm,1.6s						
CHTO	Chiang Mai	22.37	356	eP	P	14 30 53.1	-5.0
CHTO				pmax	pmax		
	comp=Z,39nm,1.6s						
CHTO	Chiang Mai	22.37	356	P	P	14 30 59.1	+1.0
	comp=Z,68nm,1.8s						
LUWI	Luwuk	22.44	84	P	P	14 31 13.6	+15
PALK	Pallekele	22.50	299	LR	LR	14 38 40.8	
	comp=Z,794nm,20.6s,baz=114,slow=34						
CMAI	Chiengmai2	23.47	357	P	P	14 31 10.6	+0.9
	comp=Z,1.9nm,0.9s,comp=Z,507nm						
BATI	Baumata	23.93	107	P	P	14 31 11.8	-2.1
	comp=Z,15nm,0.7s,baz=297,slow=2.3,SNR=3.1						
QIZ	Qiongzhong	24.35	22	P	P	14 31 17.4	-0.4
QIZ				sP	sP	14 31 30.0	+0.2
QIZ				S	S	14 35 37.0	+1.5
QIZ				sS	sS	14 35 53.2	+3.8
QIZ				pmax	pmax		
	comp=Z,130nm,4.9s						
QIZ				LR	LR		
	comp=Z,740nm,13.7s						
QIZ				LR	LR		
	comp=Z,890nm,13.2s						
QIZ				LR	LR		
	comp=Z,580nm,15.3s						
SOEI	Soe	24.40	106	P	P	14 31 31.3	+13
SOEI	Soe	24.40	106	eP	P	14 31 11.8	-6.6
	comp=Z,78nm,1.2s						
TGY	Tagaytay City	26.90	49	P	P	14 31 39.9	-1.0
	comp=Z,99nm,0.3s,baz=252,slow=4.6,SNR=6.9						
BRDH	Bariadhala	27.55	342	LR	LR	14 46 35.8	
	comp=Z,444nm,18.7s,baz=161,slow=45						
H08S2	Diego Garcia H	28.11	261	T	T	15 01 17.8	
	baz=83,slow=75,SNR=743						
H08S3	Diego Garcia H	28.11	261	T	T	15 01 20.3	
	baz=83,slow=75,SNR=2319						
H08S1	Diego Carcia H	28.12	261	T	T	15 01 21.0	
	baz=83,slow=75,SNR=784						
FITZ	Fitzroy Crossi	28.53	122	P	P	14 31 54.0	-1.5
	comp=Z,7.3nm,0.9s,baz=306,slow=3.3,SNR=4.1						
KMI	Kunming	28.68	4	P	P	14 31 59.6	+2.6
KMI				pmax	pmax		
	comp=Z,13nm,0.5s						
KMI				LR	LR		
	comp=Z,870nm,14.1s						
KMI				LR	LR		
	comp=Z,630nm,11.9s						
KMI				LR	LR		
	comp=Z,1μm,14.9s						
GYA	Guiyang	30.52	11	P	P	14 32 12.4	-0.8
GYA				pP	sP	14 32 26.0	+0.8
GYA				PP	PnPn	14 33 17.5	+4.7
GYA				S	S	14 37 14.4	+1.2
GYA				sS	sS	14 37 31.6	+4.4
GYA				SS	ScP	14 38 57.7	+5.1
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,110nm,4.9s						
GYA				LR	LR		
	comp=Z,370nm,18.0s						
GYA				LR	LR		
	comp=Z,360nm,17.8s						
GYA				LR	LR		
	comp=Z,340nm,18.2s						
SIJI	Sorong	30.90	86	P	P	14 32 14.2	-2.3
	comp=Z,24nm,1.2s,baz=277,slow=4.0,SNR=6.1						
ODAN	Odare	32.85	338	eP	P	14 32 35.3	+1.5
	comp=Z,23nm,0.5s						
RAMN	Ramite	33.24	337	eP	P	14 32 40.9	+3.7
QZH	Quanzhou	33.44	31	P	P	14 32 47.4	+8.8
QZH				S	S	14 38 08.3	+10
QZH				LR	LR		
	comp=N,540nm,16.8s						
QZH				LR	LR		
	comp=E,690nm,13.0s						
QZH				LR	LR		
	comp=Z,670nm,14.1s						
H01W3	Cape Leeuwin H	33.57	159	T	T	15 08 01.6	
	baz=336,slow=76,SNR=33						
H01W2	Cape Leeuwin H	33.59	159	T	T	15 08 01.9	
	baz=336,slow=76,SNR=38						
H01W1	Cape Leeuwin H	33.59	159	T	T	15 08 02.6	
	baz=336,slow=76,SNR=31						
JIRN	Jiri	34.03	337	eP	P	14 32 46.0	+1.8
	comp=Z,71nm,0.8s						
WRKA	Warakurna	34.19	131	P	P	14 32 46.3	+1.0
	baz=34,SNR=4.7						
PKIN	Phulchoki	34.27	336	eP	P	14 32 51.2	+5.0
GUN	Gumba	34.38	337	eP	P	14 32 48.8	+1.6
	comp=Z,48nm,0.5s						
DMN	Daman	34.42	335	eP	P	14 32 52.6	+5.1
CD2	Chengdu	34.51	5	eP	P	14 32 48.5	+0.6
CD2				pP	sP	14 32 58.6	-1.4
CD2				sP	pP	14 33 03.1	+6.6
CD2				PP	PP	14 34 07.5	+1.0
CD2				S	S	14 38 16.6	+1.7
CD2				sS	sS	14 38 33.9	+4.9
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,140nm,5.2s						
CD2				LR	LR		
	comp=Z,2μm,13.3s						
CD2				LR	LR		
	comp=Z,3μm,17.3s						
CD2				LR	LR		
	comp=Z,2μm,14.5s						
GKN	Gorkha	34.97	335	eP	P	14 32 57.0	+4.9
	comp=Z,18nm,0.4s						
DANN	Dangsing	35.64	334	eP	P	14 33 03.7	+5.7
	comp=Z,29nm,0.4s						
WRA	Warramunga Arr	36.78	119	P	P	14 33 06.8	-0.8
	comp=Z,7.9nm,1.0s,baz=299,slow=8.3,SNR=37						
WRA				S	S	14 38 46.4	-3.8
	comp=Z,3.8nm,1.0s,baz=295,slow=16,SNR=6.7						
WRA				LR	LR	14 50 07.5	
	comp=Z,388nm,21.0s,baz=325,slow=40						
WRAB	Tennant Creek	36.79	119⇑	eP	P	14 33 06.7	-1.0
WRAB				pmax	pmax		
	comp=Z,8.0nm,1.0s						
WB2	Warramunga Arr	36.79	119	P	P	14 33 08.0	+0.2
	baz=37						
WB2	Warramunga Arr	36.79	119	eP	P	14 33 05.5	-2.2
	comp=Z,12nm,0.9s						
ASAR	Alice Springs	37.93	125	P	P	14 33 17.7	+0.4
	comp=Z,6.6nm,0.8s,baz=300,slow=7.3,SNR=56						
ASAR				S	S	14 39 10.0	+2.4
	comp=Z,2.0nm,0.9s,baz=291,slow=16,SNR=8.7						
ASAR				LR	LR	14 50 25.7	
	comp=Z,481nm,21.7s,baz=302,slow=39						
AS01	Alice Springs	37.97	125	eP	P	14 33 08.6	-9.1
XAN	Xi’an	38.33	11	P	P	14 33 19.4	-1.1
XAN				S	S	14 39 16.6	+3.4
XAN				pmax	pmax		
	comp=Z,32nm,0.9s						
XAN				LR	LR		
	comp=Z,350nm,19.6s						
XAN				LR	LR		
	comp=Z,1μm,18.1s						
XAN				LR	LR		
	comp=Z,960nm,13.1s						
NJ2	Nanjing	39.58	25	eP	P	14 33 32.2	+1.3
NJ2				pmax	pmax		
	comp=Z,15nm,0.6s						
NJ2				LR	LR		
	comp=Z,1μm,16.3s						
NJ2				LR	LR		
	comp=Z,1μm,17.9s						
NJ2				LR	LR		
	comp=Z,2μm,16.3s						
LZH	Lanzhou	39.65	4	eP	P	14 33 32.1	+0.4
LZH				pP	pP	14 33 41.6	+1.2
LZH				sP	sP	14 33 45.3	+1.4
LZH				PP	PnPn	14 35 13.2	+6.8
LZH				eS	S	14 39 31.9	-1.5
LZH				pmax	pmax		
	comp=Z,76nm,1.3s						
LZH				pmax	pmax		
	comp=Z,210nm,4.1s						
LZH				LR	LR		
	comp=Z,1μm,14.4s						
LZH				LR	LR		
	comp=Z,1μm,14.6s						
LZH				LR	LR		
	comp=Z,2μm,15.2s						
GTA	Gaotai	42.85	359	eP	P	14 33 58.1	+0.2
GTA				pP	pP	14 34 06.8	+0.2
GTA				sP	sP	14 34 11.4	+1.3
GTA				S	S	14 40 18.4	-2.3
GTA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,87nm,5.2s						
GTA				LR	LR		
	comp=Z,370nm,16.1s						
GTA				LR	LR		
	comp=Z,630nm,17.5s						
GTA				LR	LR		
	comp=Z,350nm,13.4s						
MTSU	Mount Surprise	45.26	112	P	P	14 34 16.9	-0.6
	baz=45,SNR=5.4						
HHC	Hu-ho-hao-te	45.43	12	eP	P	14 34 19.4	+0.8
HHC				pP	pP	14 34 27.4	+0.1
HHC				S	S	14 40 56.8	-1.5
HHC				sS	sS	14 41 14.3	+1.6
HHC				pmax	pmax		
	comp=Z,36nm,1.1s						
HHC				pmax	pmax		
	comp=Z,210nm,6.0s						
HHC				LR	LR		
	comp=Z,800nm,13.7s						
HHC				LR	LR		
	comp=Z,690nm,14.2s						
HHC				LR	LR		
	comp=Z,610nm,14.2s						
BJI	Beijing	45.81	17⇑	eP	P	14 34 21.5	+0.1
BJI				S	S	14 41 07.8	+4.4
BJI				pmax	pmax		
	comp=Z,24nm,1.3s						
BJI				LR	LR		
	comp=Z,2μm,15.5s						
BJI				LR	LR		
	comp=Z,570nm,13.1s						
BJI				LR	LR		
	comp=Z,1μm,17.5s						
JNU	Nakatsue	46.54	36	P	P	14 34 27.0	-0.4
	comp=Z,26nm,1.1s,baz=227,slow=8.1,SNR=5.5						
JNU	Nakatsue	46.54	36	P	P	14 34 27.0	-0.4
	comp=Z,58nm,1.3s						
TJN	Taejon	47.09	30⇓	eP	P	14 34 30.5	-1.0
CTA	Charters Tower	47.50	114	P	P	14 34 33.7	-1.3
	comp=Z,12nm,0.9s,baz=270,slow=5.1,SNR=4.0						
QLP	Quilpie	47.67	123	P	P	14 34 37.5	+1.2
	baz=48,SNR=4.5						
STKA	Stephens Creek	47.73	131	P	P	14 34 38.1	+1.5
	baz=48,SNR=4.1						
STKA	Stephens Creek	47.73	131	P	P	14 34 37.9	+1.3
	comp=Z,4.4nm,0.8s,baz=304,slow=9.4,SNR=7.0						
STKA				LR	LR	14 56 03.6	
	comp=Z,436nm,21.4s,baz=297,slow=38						
STKA	Stephens Creek	47.73	131	eP	P	14 34 31.9	-4.7
	comp=Z,2.3nm,0.9s						
STKA	Stephens Creek	47.73	131	eP	P	14 34 31.9	-4.7
STKA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KSAR	Wonju Array Be	48.18	29	P	P	14 34 39.8	-0.1
KSAR	Wonju Array Be	48.18	29	P	P	14 34 39.8	-0.1
KSRS	Korea Array	48.21	29	P	P	14 34 39.8	-0.3
	comp=Z,18nm,1.1s,baz=217,slow=8.2,SNR=38						
KSRS				LR	LR	14 57 31.5	
	comp=Z,190nm,18.4s,baz=248,slow=39						
KS01	Wonju Array Si	48.21	29	eP	P	14 34 38.4	-1.8
KSH	Kashi	48.51	335	eP	P	14 34 42.5	-0.1
KSH				sP	sP	14 34 58.9	+4.0
KSH				ePcP	PcP	14 36 10.7	+2.3
KSH				PP	PP	14 36 36.9	+1.2
KSH				S	S	14 41 38.2	-4.1
KSH				ScS	ScS	14 44 25.6	-8.0
KSH				pmax	pmax		
	comp=Z,48nm,2.0s						
KSH				pmax	pmax		
	comp=Z,120nm,4.9s						
KSH				LR	LR		
	comp=Z,1μm,19.8s						
KSH				LR	LR		
	comp=Z,420nm,14.3s						
WMQ	Urumqi	48.63	348	P	P	14 34 44.8	+1.4
WMQ				ScP	ScP	14 40 00.8	-0.9
WMQ				S	S	14 41 41.3	-2.4
WMQ				pmax	pmax		
	comp=Z,51nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,140nm,3.7s						
WMQ				LR	LR		
	comp=Z,410nm,22.9s						
WMQ				LR	LR		
	comp=Z,510nm,22.9s						
WMQ				LR	LR		
	comp=Z,470nm,26.1s						
CMSA	Cobar Meteorol	50.73	128	P	P	14 35 01.3	+1.7
	baz=51,SNR=13						
SONM	Songino Array	51.53	5	P	P	14 35 06.3	+0.9
	comp=Z,10.0nm,0.6s,baz=188,slow=9.5,SNR=66						

SONA1	**Songino Array**	51.54	5	*e*P	P	14 35 06.0	+0.5
ULN	**Ulaanbaatar**	51.62	6	*e*P	P	14 35 04.2	-2.0
	comp=Z,71nm,1.8s						
ULN	**Ulaanbaatar**	51.62	6c	*i*P	P	14 35 06.7	+0.5
ULN				pmax	pmax		
	comp=Z,17nm,1.4s						
CN2	**Changchun**	52.31	23	*e*P	P	14 35 12.1	+1.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MK01	**Makanchi Array**	52.70	344	*e*P	P	14 35 14.2	+0.2
MK31	**Makanchi Array**	52.73	344	*e*P	P	14 35 14.8	+0.5
MKAR	**Makanchi Array**	52.73	344	P	P	14 35 14.8	+0.6
	comp=Z,3.0nm,0.3s,baz=150,slow=8.3,SNR=51						
MKAR				LR	LR	15 02 40.7	
	comp=Z,186nm,19.1s,baz=152,slow=42						
MAKZ	**Makanchi**	52.83	344	*e*P	P	14 35 13.2	-1.8
	comp=Z,15nm,1.4s						
MAKZ	**Makanchi**	52.83	344	*e*P	P	14 35 13.2	-1.8
MAKZ				pmax	pmax		
	comp=Z,15nm,1.4s						
MAJO	**Matsushiro**	53.27	38⇑	*e*P	P	14 35 16.8	-1.6
MAJO				pmax	pmax		
	comp=Z,20nm,1.3s						
MJAR	**Matsushiro Arr**	53.27	38	P	P	14 35 15.1	-3.4
	comp=Z,8.5nm,1.1s,baz=217,slow=8.3,SNR=10						
ZAK	**Zakamensk**	53.87	2	*e*P	P	14 35 22.6	-0.1
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.6s						
OPO	**Ambohidratompo**	54.12	250	LR	LR	14 54 32.8	
	comp=Z,310nm,19.3s,baz=64,slow=32						
DGZ	**Jazzator, Alta**	54.32	350	*e*P	P	14 35 26.8	+0.8
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
TLY	**Talaya**	55.18	2	*e*P	P	14 35 33.3	+1.2
	comp=Z,37nm,1.8s						
TLY	**Talaya**	55.18	2	*e*P	P	14 35 33.3	+1.2
TLY				*e*S	S	14 43 01.7	-12
TLY				pmax	pmax		
	comp=Z,19nm,1.8s						
TLY				MLR	MLR		
	comp=Z,338nm,17.0s						
USRK	**Ussuriysk Ar.**	55.39	27	P	P	14 35 33.7	0.0
	comp=Z,4.3nm,0.5s,baz=209,slow=4.7						
IRK	**Irkutsk**	55.77	3	*e*P	P	14 35 36.1	-0.2
IRK				pmax	pmax		
	comp=Z,32nm,3.6s						
GEYT	**Alibeck**	57.00	321	P	P	14 35 46.9	+1.5
	comp=Z,6.0nm,0.2s,baz=135,slow=14,SNR=2.8						
GEYT				LR	LR	15 02 20.6	
	comp=Z,142nm,20.4s,baz=50,slow=38						
KURBB	**Kurchatov Arra**	57.25	344	P	P	14 35 46.7	0.0
	comp=Z,4.1nm,0.8s,baz=166,slow=7.1,SNR=30						
KURK	**Kurchatov**	57.31	344	*e*P	P	14 35 45.6	-1.6
	comp=Z,39nm,1.6s						
KURK	**Kurchatov**	57.31	344c	*i*P	P	14 35 47.5	+0.3
KURK				pmax	pmax		
	comp=Z,20nm,1.3s						
ZAA0	**Zalesovo Array**	58.86	349	*e*P	P	14 35 58.1	+0.1
ZALV	**Zalesovo Beam**	58.86	349	P	P	14 35 58.1	+0.1
	comp=Z,9.8nm,0.8s,baz=176,slow=4.5,SNR=31						
ZALV	**Zalesovo Beam**	58.86	349	*e*P	P	14 35 57.8	-0.2
ZALV	**Zalesovo Beam**	58.86	349	*e*P	P	14 35 57.8	-0.2
ATD	**Arta Tunnel**	59.24	286	LR	LR	14 57 23.1	
	comp=Z,125nm,20.3s,baz=31,slow=32						
KLR	**Kul'dur**	59.25	23c	*i*P	P	14 36 00.2	-0.6
HNR	**Honiara**	59.32	99	LR	LR	15 04 39.0	
	comp=Z,65nm,18.6s,baz=156,slow=39						
NVS	**Novosibirsk**	60.01	349	*e*P	P	14 36 03.6	-2.3
NVS				*e*S	S	14 44 08.7	-7.9
NVS				pmax	pmax		
	comp=Z,10.0nm,1.4s						
NVS				pmax	pmax		
	comp=N,6.0nm,1.2s						
NVS				pmax	pmax		
	comp=E,6.0nm,1.2s						
NVS				smax	smax		
	comp=N,6.0nm,1.2s						
NVS				smax	smax		
	comp=E,7.0nm,1.5s						
ASAJ	**Asahikawa**	60.71	34	P	P	14 36 11.0	0.0
	comp=E,2.6nm,0.5s,baz=225,slow=7.3,SNR=9.1						
ZEA	**Zeya**	61.42	18	*e*P	P	14 36 15.8	+0.2
ZEA				pmax	pmax		
	comp=Z,37nm,1.4s						
ZEA				MLR	MLR		
	comp=N,400nm,16.0s						
ZEA				MLR	MLR		
	comp=E,300nm,16.0s						
ZEA				MLR	MLR		
	comp=Z,600nm,16.0s						
BVAR	**Borovoye Array**	61.88	340	P	P	14 36 18.4	-0.3
	comp=Z,2.3nm,0.6s,baz=148,slow=8.7,SNR=18						
BVAR				LR	LR	15 07 18.4	
	comp=Z,137nm,19.8s,baz=143,slow=40						
BRVK	**Borovoye**	61.94	340c	*e*P	P	14 36 18.8	-0.3
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.7s						
BOD	**Bodaibo**	62.23	8	*e*P	P	14 36 19.9	-1.1
BOD				pmax	pmax		
	comp=Z,14nm,1.9s						
YSS	**Yuzh-Sakhalins**	62.63	31⇑	*i*P	P	14 36 23.4	-0.5
YSS				*e*		14 36 30.6	
YSS				pmax	pmax		
	comp=Z,10.0nm,0.6s						
YSS				MLR	MLR		
	comp=Z,200nm,13.0s						
YSS				MLR	MLR		
	comp=E,200nm,15.0s						
ABKAR	**Akbulak array**	63.30	332	*e*P	P	14 36 28.4	+0.1
AKTO	**Aktyubinsk**	65.02	332	P	P	14 36 39.4	-0.1
	comp=E,0.9nm,0.6s,baz=117,slow=11,SNR=4.7						
AKTO				LR	LR	15 08 55.3	
	comp=E,72nm,20.7s,baz=136,slow=40						
DZM	**Mont Dzumac**	66.40	112	LR	LR	15 07 46.9	
	comp=E,187nm,19.2s,baz=284,slow=38						
DZM	**Mont Dzumac**	66.40	112	*e*LR	LR	14 56 44.6	
	comp=E,257nm,24.6s						
SVE	**Sverdlovsk**	68.37	338	*e*P	P	14 37 01.7	+0.9
SVE				pmax	pmax		
	comp=Z,21nm,1.6s						
MAW	**Mawson**	68.81	195	LR	LR	15 00 22.4	
	comp=Z,319nm,21.9s,baz=57,slow=30						
ARU	**Arti**	68.89	337c	*i*P	P	14 37 04.3	+0.3
ARU						14 37 24.7	
ARU						14 39 37.5	
ARU				S	S	14 46 06.8	+0.5
ARU				SS	SS	14 50 33.1	+1.0
ARU				pmax	pmax		
	comp=Z,11nm,1.7s						
ARU				MLR	MLR		
	comp=Z,198nm,21.0s						
YAK	**Yakutsk**	69.21	14	*e*P	P	14 37 04.0	-1.9
YAK				e*PP	sP	14 37 18.9	+0.5
YAK				*e*		14 37 24.3	
YAK				*e*S	S	14 46 06.2	-3.6
YAK				e*SS	sS	14 46 33.9	+9.1
YAK				*e*		14 46 58.5	
YAK				*e*SS	SS	14 50 29.6	-7.2
YAK				*e*SSS	SSS	14 53 42.7	
YAK				pmax	pmax		
	comp=Z,23nm,1.1s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,63nm,3.7s						
YAK				pmax	pmax		
	comp=N,22nm,3.4s						
YAK				pmax	pmax		
	comp=E,20nm,3.0s						
YAK				smax	smax		
	comp=N,34nm,3.0s						
YAK				smax	smax		
	comp=E,32nm,3.0s						
YAK				MLR	MLR		
	comp=Z,742nm,18.0s						
YAK				MLR	MLR		
	comp=E,285nm,16.0s						
YAK				MLR	MLR		
	comp=N,374nm,16.0s						
KBZ	**Khabaz**	69.85	319	P	P	14 37 11.1	+0.9
	comp=N,1.5nm,0.7s,baz=141,slow=5.9,SNR=2.9						
KIV	**Kislovodsk**	70.08	319	*e*P	P	14 37 13.7	+1.9
KIV				*e*S	S	14 46 23.1	+2.1
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,92nm,18.0s						
MMAI	**Mount Meron Ar**	71.38	306	LR	LR	15 08 45.2	
	comp=Z,256nm,20.1s,baz=160,slow=36						
PETK	**Petropavlovsk-**	74.03	32	LR	LR	15 12 12.1	
	comp=Z,66nm,18.6s,baz=251,slow=38						
MA2	**Magadan**	74.34	24	*e*P	P	14 37 36.5	-0.3
MA2				pmax	pmax		
	comp=Z,13nm,1.4s						
BRTR	**Keskin Array B**	74.77	313	P	P	14 37 40.1	+0.2
	comp=Z,1.2nm,0.7s,baz=128,slow=8.1,SNR=4.9						
BRTR				LR	LR	15 12 47.4	
	comp=Z,98nm,20.3s,baz=110,slow=38						
BOSA	**Boshof**	75.27	242	LR	LR	15 04 54.8	
	comp=Z,52nm,21.6s,baz=100,slow=31						
SYO	**Syowa Base**	76.47	199⇓	*e*X	P	14 37 46.0	-2.8
SEY	**Seymchan**	76.98	22⇓	*e*P	P	14 37 52.2	+0.4
PRGR	**Permogore**	77.35	336	*e*P	P	14 37 54.0	+0.1
PRGR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
TIXI	**Tiksi**	77.40	9d	*e*P	P	14 37 53.2	-0.8
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.3s						
OBN	**Obninsk**	78.43	328	*e*P	P	14 38 00.8	+0.8
OBN				pmax	pmax		
	comp=Z,6.0nm,1.4s						
KLMR	**Klimovskoe**	79.50	334	*e*P	P	14 38 04.1	-1.7
KLMR				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KLMR	**Klimovskoe**	79.50	334	*e*P	P	14 38 04.2	-1.6
KLMR				AMP		14 38 07.5	
	comp=Z,7.0nm,1.1s						
VNDA	**Vanda**	80.47	169	LR	LR	15 12 21.3	
	comp=Z,69nm,18.5s,baz=312,slow=35						
MLR	**Muntele Rosu**	81.81	317	LR	LR	15 19 46.1	
	comp=Z,21nm,18.6s,baz=77,slow=39						
BILL	**Bilibino**	84.53	20	*i* P	P	14 38 32.0	-0.1
BILL				*i*		14 41 42.8	
BILL				pmax	pmax		
	comp=Z,5.0nm,1.2s						
FINES	**FINESS Array B**	85.78	332	LR	LR	15 21 09.2	
	comp=Z,111nm,20.3s,baz=108,slow=39						
ARCES	**ARCESS Array B**	88.17	340	P	P	14 38 51.3	+1.3
	comp=Z,2.3nm,0.9s,baz=94,slow=5.0,SNR=3.5						
GERES	**GERESS Array B**	90.58	319	P	P	14 39 01.9	0.0
	comp=Z,0.3nm,0.6s,baz=125,slow=4.9,SNR=4.3						
SNAA	**Sanae**	90.73	198	LR	LR	15 12 42.5	
	comp=Z,111nm,20.6s,baz=94,slow=31						
CLL	**Collm**	91.23	321	*e*S	S	14 50 07.0	+5.8
CLL				*e*SSSS		15 03 12.0	
CLL				L	L	15 29 00.0	
	comp=Z,100nm,20.9s						
HFS	**Hagfors**	91.52	330	LR	LR	15 25 06.9	
	comp=Z,115nm,20.0s,baz=96,slow=39						
SPITS	**Spitsbergen Ar**	92.33	348	LR	LR	15 28 26.5	
	comp=Z,138nm,18.3s,baz=75,slow=41						
NOA	**NORSAR Array B**	92.80	331	LR	LR	15 23 36.1	
	comp=Z,30nm,21.8s,baz=75,slow=37						
TBI	**Tubuai**	106.86	116	*e*LR	LR	15 15 33.2	
	comp=Z,211nm,23.5s						
PPT2	**Papeete2**	107.82	110	*e*LR	LR	15 16 01.9	
	comp=Z,84nm,22.2s						
NVAR	**Mina Array Bea**	130.56	40	PKP	PKPdf	14 45 13.3	+2.3
	comp=Z,0.4nm,0.7s,baz=321,slow=2.4,SNR=3.8						
ANMO	**Albuquerque**	140.09	35⇓	*i*PKIKP	PKPdf	14 45 30.5	+1.7
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.0s						
MNTX	**Cornudas Mount**	143.00	38	P	PKPdf	14 45 31.8	-2.0
	baz=314						
R41A	**Rosebud**	143.86	16	P	PKPab	14 45 32.9	+0.8
	baz=340						
WMOK	**Wichita Mounta**	144.28	28	P	PKPab	14 45 34.0	+0.2
	baz=326						
S41A	**Jillco Farms,**	144.42	17	P	PKPab	14 45 34.2	-0.1
	baz=339						
S42A	**Caledonia**	144.51	15	P	PKPab	14 45 33.9	-0.7
	baz=340						
T40A	**Mansfield**	144.59	18	P	PKPab	14 45 34.0	-0.9
	baz=337						
T41A	**Mountain View**	144.92	17	P	PKPab	14 45 35.7	-0.4
	baz=338,SNR=11						
U39A	**Green Forest**	144.98	20	P	PKPab	14 45 35.7	-0.6
	baz=335,SNR=9.5						
WCI	**Wyandotte Cave**	145.03	9	P	PKPab	14 45 36.0	-0.5
	baz=348						
T42A	**Van Buren**	145.12	16	P	PKPbc	14 45 36.2	-0.6
	baz=339						
U40A	**Yellville**	145.21	19	P	PKPbc	14 45 36.7	-0.4
	baz=336,SNR=15						
T43A	**Greenville**	145.29	15	P	PKPbc	14 45 36.6	-0.8
	baz=341						
V39A	**Pettigrew**	145.42	20	P	PKPbc	14 45 37.0	-0.8
	baz=334,SNR=12						
U41A	**Viola**	145.52	18	P	PKPbc	14 45 37.8	-0.3
	baz=338,SNR=8.3						
ABTX	**Abilene, Hawle**	145.57	31	P	PKPdf	14 45 37.7	-0.6
	baz=323						
S48A	**Wiedeman Farm,**	145.63	9	P	PKPdf	14 45 38.1	-0.1
	baz=348,SNR=8.0						
TXAR	**Lajitas Array**	145.70	39	PKPbc	PKPab	14 45 40.1	+0.7
	comp=Z,6.6nm,0.7s,baz=293,slow=1.3,SNR=85						
U42A	**Revenden**	145.72	17	P	PKPdf	14 45 38.7	+0.3
	baz=339						
V40A	**Witts Springs**	145.73	19	P	PKPdf	14 45 38.6	+0.1
	baz=336,SNR=10						
T46A	**Princeton**	145.89	12	P	PKPdf	14 45 39.4	+0.7
	baz=345,SNR=5.5						
W39A	**Magazine**	145.94	21	P	PKPdf	14 45 39.7	+0.9
	baz=334,SNR=6.5						
V41A	**Mountainview**	145.96	18	P	PKPdf	14 45 39.4	+0.6
	baz=337,SNR=8.0						
S51A	**Beattyville**	145.97	6	P	PKPdf	14 45 39.2	+0.4
	baz=353,SNR=8.4						
S52A	**Salyersville**	145.98	5	P	PKPdf	14 45 39.6	+0.8
	baz=354,SNR=5.3						
T48A	**Bowling Green**	146.11	10	P	PKPdf	14 45 40.0	+0.9
	baz=348,SNR=7.0						
V42A	**Cord**	146.18	17	P	PKPbc	14 45 40.3	+0.2
	baz=338,SNR=5.6						
W40A	**Ferguson Farm,**	146.20	20	P	PKPbc	14 45 40.6	+0.4
	baz=335						
X39A	**Fountain Ranch**	146.44	22	P	PKPdf	14 45 40.5	+0.9
	baz=333,SNR=5.3						
W41B	**Gary Mavity, V**	146.49	19	P	PKPdf	14 45 41.0	+1.3
	baz=336						
MIAR	**Mount Ida**	146.60	21	P	PKPdf	14 45 41.0	+1.0
	baz=334						
WVT	**Waverly**	146.78	12	P	PKPdf	14 45 41.3	+1.1
	baz=345						
U49A	**Red Boiling Sp**	146.79	9	P	PKPdf	14 45 41.3	+1.0
	baz=348						
X40A	**Basin Creek Fa**	146.92	20	P	PKPdf	14 45 41.3	+0.8
	baz=335						
TZTN	**Tazewell**	147.06	6	P	PKPdf	14 45 42.1	+1.4
	baz=352						
V47A	**Nunnelly**	147.14	12	P	PKPdf	14 45 42.3	+1.4
	baz=345						
JCT	**Junction City**	147.16	33	P	PKPdf	14 45 41.3	+0.3
	baz=320						
V48A	**Smith Brothers**	147.36	11	P	PKPbc	14 45 43.2	-0.3
	baz=346						
V49A	**McMinnville**	147.50	10	P	PKPdf	14 45 43.3	+1.8
	baz=348						
W47A	**Westpoint**	147.68	12	P	PKPbc	14 45 43.9	-0.6
	baz=345						
V50A	**Pikevile**	147.72	8	P	PKPbc	14 45 44.3	-0.2
	baz=349						
V52A	**Sevierville**	147.75	6	P	PKPbc	14 45 44.1	-0.5
	baz=352						
TKL	**Tuckaleechee C**	147.91	6	PKPbc	PKPbc	14 45 45.6	+0.5
	comp=Z,1.3nm,0.4s,baz=320,slow=7.9,SNR=4.1						
W48A	**Pulaski**	147.93	11	P	PKPbc	14 45 44.9	-0.2
	baz=346						
V53A	**Saluda**	147.99	5	P	PKPbc	14 45 45.3	-0.1
	baz=354						
W49A	**Belvidere**	148.07	10	P	PKPbc	14 45 45.2	-0.3
	baz=347						
W50A	**Signal Mountai**	148.15	9	P	PKPbc	14 45 45.6	-0.2
	baz=349						
X47A	**Russelville**	148.33	13	P	PKPbc	14 45 46.0	-0.2
	baz=344						
W52A	**Murphy**	148.45	7	P	PKPbc	14 45 46.3	-0.3
	baz=351						
W53A	**Cullowhee**	148.46	6	P	PKPbc	14 45 46.4	-0.3
	baz=353						
X48A	**Hartselle**	148.57	12	P	PKPbc	14 45 46.5	-0.4
	baz=345						
X49A	**Woodville**	148.65	11	P	PKPbc	14 45 46.6	-0.4
	baz=347						
Y46A	**Houston**	148.69	15	P	PKPbc	14 45 46.6	-0.6
	baz=342						
X52A	**Dahlonega**	148.94	7	P	PKPbc	14 45 47.3	-0.5
	baz=351						
X53A	**Estanollee**	149.10	6	P	PKPbc	14 45 47.6	-0.6
	baz=352						
Y49A	**Blount Mountai**	149.27	11	P	PKPbc	14 45 47.6	-1.1
	baz=346						
146A	**Union**	149.81	16	P	PKPbc	14 45 48.7	-1.3
	baz=341						
Z50A	**Ashland**	149.95	11	P	PKPbc	14 45 49.8	-0.5
	baz=347						
Z52A	**Williamson**	150.26	8	P	PKPbc	14 45 50.8	-0.3
	baz=350						
Z53A	**Monticello**	150.28	7	P	PKPbc	14 45 50.7	-0.4
	baz=352						
Z54A	**Sparta**	150.40	6	P	PKPbc	14 45 51.0	-0.4
	baz=353						
150A	**Eclectic**	150.56	11	P	PKPbc	14 45 51.1	-0.7
	baz=347						
251A	**Midway**	151.17	10	P	PKPbc	14 45 52.7	-0.5
	baz=348						
252A	**Lumpkin**	151.38	9	P	PKPbc	14 45 53.2	-0.6
	baz=349						

JMA 07 14:49:30.2±0.3**, 25°.44N**×**122°.71E, h233**^{km}±4^{km}**, M3.6, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	1.01	168	P	Pn	14 50 03.9	+0.4
JYNG				*e*S	S	14 50 29.9	+0.4
YOJ	**Yonaguni jima**	1.01	164	P	Pn	14 50 03.8	+0.3
YOJ				*e*S	S	14 50 30.0	+0.4
IRIF	**Iriomote-Funau**	1.44	140	P	Pn	14 50 06.4	0.0
IRIF				S	S	14 50 33.9	-0.9
JKRS	**Kuro-shima**	1.68	135	P	Pn	14 50 09.0	+0.6
JKRS				S	S	14 50 37.6	-0.7
JISG	**Ishigakijimahi**	1.68	120	P	Pn	14 50 08.6	+0.2
JISG				S	S	14 50 37.3	-1.0
JIJ	**Ishigaki jima**	1.69	129	P	Pn	14 50 08.5	0.0
JIJ				S	S	14 50 36.8	-1.5
HATJ	**Hateruma jima**	1.70	144	P	Pn	14 50 09.1	+0.5
HATJ				S	S	14 50 38.0	-0.6
JTJ	**Tarama**	1.97	113	P	Pn	14 50 11.7	+0.7
JIRB	**Irabujima**	2.31	105	P	Pn	14 50 14.5	+0.2
JIKM	**Ikemajima**	2.36	102	P	Pn	14 50 15.0	+0.3
JMJ	**Miyako jima 2**	2.42	104	P	Pn	14 50 16.0	+0.6
JOGS	**Gusukube**	2.54	105	P	Pn	14 50 14.6	-2.0
JKE	**Kume jima 2**	3.78	76	P	Pn	14 50 29.3	-1.3
JAGN	**Aguni-jima**	4.24	73	P	Pn	14 50 34.1	-2.0
JJT3	**Tamagusuku3**	4.63	80	P	Pn	14 50 39.5	-1.4
JNTH	**Nagotoyohara**	4.90	76	P	Pn	14 50 41.9	-2.3
JOW	**Kunigami**	5.19	73	P	Pn	14 50 45.0	-2.8

MAN 07 14:51:54.9, 15°.51N×**121°.38E, h26**^{km}**, mb4.1, ML2.9, MS2.5, 1D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCPH	**Palayan**	0.28	281⇓	*i*P	Pn	14 52 03.9	+0.6
PCPH				*i* S	Sn	14 52 10.3	+1.6
BALP	**Baler**	0.30	40	*e*P	Pb	14 52 02.3	+0.2
BALP				*e*S	Sb	14 52 07.1	+0.2
CAUP	**Cauayan**	1.49	17	*e*P	Pn	14 52 19.6	-0.4
CAUP				*e*S	Sn	14 52 38.0	-0.6
APYP	**Conner**	2.34	357	*e*S	Sn	14 53 00.5	+0.8

ISK ***07*** *15:07:31.7, 37°.24N×28°.32E, h9*^{km}*±2*^{km}*, ML2.2/4*
ISCJB ***07*** *15:07:32.6±0.7, 37°.26N±0°.04×28°.28E±0°.06, h0*^{km}*, Error ellipse: s-maj=6.8km s-min=4.5km az=151.0*
CSEM ***07*** *15:07:32.9±0.2, 37°.24N×28°.26E, h1*^{km}*, ML2.2, Error ellipse: s-maj=4.0km s-min=3.1km az=48.0, Suspected Mining explosion.*
DDA ***07*** *15:07:32.3, 37°.22N×28°.17E, h7*^{km}*, Ml2.5, Suspected Mining explosion.*
ISC 07 15:07:32.7±1.0**, 37°.26N**±0°.03×**28°.29E**±0°.03**, h0**^{km}**, n14,** σ**0**^{s}**.51**/26**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	0.12	184	PG	Pg	15 07 34.9	-0.2
YER				SG	Sg	15 07 36.8	+0.2
YER	**Yerkesik**	0.12	184	*e*Pg	Pg	15 07 34.9	-0.2
YER				*e*Sg	Sg	15 07 36.8	+0.2
TURN	**Turunc**	0.46	147	PG	Pg	15 07 41.2	-0.3
TURN				SG	Sg	15 07 48.3	+0.9
TURN	**Turunc**	0.46	147	*i* P	Pg	15 07 41.1	-0.3
TURN				*i* S	Sg	15 07 48.0	+0.6
TURN	**Turunc**	0.46	147	P	Pg	15 07 41.2	-0.3
TURN				S	Sg	15 07 48.0	+0.6
AYDN	**Tasoluk**	0.52	321	*i* P	Pg	15 07 42.5	-0.2
AYDN				*i* S	Sg	15 07 50.0	+0.6
AYDN	**Tasoluk**	0.52	321	P	Pg	15 07 42.5	-0.2
AYDN				S	Sg	15 07 50.0	+0.6
TAVA	**DENIZLI_Tavas**	0.54	67	*i* P	Pb	15 07 44.5	-0.5
TAVA				*i* S	Sn	15 07 58.2	+0.7
TAVA	**DENIZLI_Tavas**	0.54	67	P	Pb	15 07 44.5	-0.5
DAT	**Datca**	0.78	228	PG	Pg	15 07 47.2	-0.4
DAT				SG	Sg	15 07 58.6	+0.9
DAT	**Datca**	0.78	228	*i* P	Pg	15 07 47.4	-0.2
DAT				*i* S	Sb	15 08 00.2	-0.2
DAT	**Datca**	0.78	228	P	Pg	15 07 47.4	-0.2
DAT				*e*Sg	Sg	15 07 58.6	+0.9
DAT				S	Sb	15 08 00.2	-0.2
BODT	**Bodrum**	0.81	256	PG	Pg	15 07 47.8	-0.4
BODT	**Bodrum**	0.81	256	*e*Pg	Pg	15 07 47.8	-0.4

ISK ***07*** *15:10:17.9, 37°.25N×28°.76E, h4*^{km}*, ML2.4/9*
ISCJB ***07*** *15:10:18.7±0.4, 37°.24N±0°.03×28°.77E±0°.04, h10*^{km}*±4*^{km}*, Error ellipse: s-maj=5.1km s-min=3.9km az=27.6*
CSEM ***07*** *15:10:18.5±0.1, 37°.22N×28°.76E, h10*^{km}*, ML3.0, Error ellipse: s-maj=3.1km s-min=2.6km az=96.0*
DDA ***07*** *15:10:18.3, 37°.21N×28°.78E, h7*^{km}*, Ml3.0*
ISC 07 15:10:18.7±1.0**, 37°.24N**±0°.02×**28°.76E**±0°.03**, h11**^{km}±9^{km}**, n34,** σ**1**^{s}**.13**/49**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAVA	**DENIZLI_Tavas**	0.26	28	*i* P	Pg	15 10 24.1	-0.1
TAVA				*i* S	Sg	15 10 28.4	+0.6
TAVA	**DENIZLI_Tavas**	0.26	28	P	Pg	15 10 24.1	-0.1
TAVA				S	Sg	15 10 28.4	+0.6
TURN	**Turunc**	0.38	199	PG	Pn	15 10 29.6	-0.6
TURN	**Turunc**	0.38	199	*i* P	Pn	15 10 28.7	-1.5
TURN				*i* S	Sb	15 10 39.5	+6.1
TURN	**Turunc**	0.38	199	*e*Pg	Pn	15 10 29.6	-0.6
YER	**Yerkesik**	0.39	255	PG	Pg	15 10 26.2	-0.3
YER				SG	Sb	15 10 32.6	-1.2
YER	**Yerkesik**	0.39	255	*e*Pg	Pg	15 10 26.2	-0.3
YER				*e*Sg	Sb	15 10 32.6	-1.2
DALY	**Dalyan (Mu˜la**	0.42	191	PG	Pg	15 10 26.7	-0.4
DALY	**Dalyan (Mu˜la**	0.42	191	*i* P	Pg	15 10 26.2	-0.9
DALY				*i* S	Sb	15 10 35.6	+1.0
DALY	**Dalyan (Mu˜la**	0.42	191	P	Pg	15 10 26.2	-0.9
DALY	**Dalyan (Mu˜la**	0.42	191	*e*Pg	Pg	15 10 26.7	-0.4
DNZL	**Cakiroluk**	0.51	27	*i* P	Pg	15 10 28.9	+0.2
DNZL				*i* S	Sb	15 10 36.5	-0.8
DNZL	**Cakiroluk**	0.51	27	P	Pg	15 10 28.9	+0.2
DNZL				S	Sb	15 10 36.5	-0.8
DENT	**Denizli**	0.56	23	PG	Pg	15 10 29.4	-0.3
DENT				SG	Sg	15 10 37.1	-0.1
DENT	**Denizli**	0.56	23	*e*Pg	Pg	15 10 29.4	-0.3
DENT				*e*Sg	Sg	15 10 37.1	-0.1
GOLH	**Golhisar**	0.64	90	*i* P	Pg	15 10 30.3	-0.9
GOLH				*i* S	Sb	15 10 41.7	+0.7
GOLH	**Golhisar**	0.64	90	P	Pg	15 10 30.3	-0.9
GOLH				S	Sb	15 10 41.7	+0.7
FETY	**Fethiye**	0.65	156	PG	Pg	15 10 31.2	-0.2
FETY	**Fethiye**	0.65	156	P	Pg	15 10 30.2	-1.2
FETY	**Fethiye**	0.65	156	*e*Pg	Pg	15 10 31.2	-0.2
FETY				S	Sb	15 10 40.1	-1.2
AYDN	**Tasoluk**	0.82	302	*i* P	Pb	15 10 34.8	-0.2
AYDN				*i* S	Sb	15 10 47.2	+1.1
AYDN	**Tasoluk**	0.82	302	P	Pb	15 10 34.8	-0.2

AYDN				S	Sb	15 10 47.2	+1.1
AYDB	Zeytinkoy-Aydi	0.99	316	PG	Pg	15 10 37.4	-0.4
AYDB	Zeytinkoy-Aydi	0.99	316	*e*Pg	Pg	15 10 37.4	-0.4
DAT	Datca	1.07	242	PN	Pb	15 10 39.1	-0.2
DAT	Datca	1.07	242	*e*Pn	Pb	15 10 39.1	-0.2
ARG	Arkhangelos	1.14	207	PN	Pn	15 10 40.5	0.0
ARG	Arkhangelos	1.14	207	*e*Pn	Pn	15 10 40.5	0.0
BODT	Bodrum	1.17	262	PN	Pb	15 10 40.9	0.0
BODT	Bodrum	1.17	262	*e*Pn	Pb	15 10 40.9	0.0
AKAS	Kas	1.21	145	PN	Pn	15 10 42.3	+0.6
AKAS	Kas	1.21	145	*e*Pn	Pn	15 10 42.3	+0.6
KULA	Kula-Manisa	1.28	357	PN	Pn	15 10 42.8	+0.2
KULA	Kula-Manisa	1.28	357	*e*Pn	Pn	15 10 42.8	+0.2

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*ISCJB **07** 15:11:43.9±0.7, 0°.6N±0°.2×27°.5W±0°.1, h10^{km}, mb3.9/12, MS3.8/32, Error ellipse: s-maj=31.1km s-min=11.0km az=150.0*

*IDC **07** 15:11:44.3±0.9, 0°.65N×27°.57W, h0^{km}, mb3.9/11, mb1 4.2/12, mb1mx3.8/64, mbtmp4.0/12, ML4.4/1, MS3.8/32, Ms1 3.8/32, ms1mx3.7/56, Error ellipse: s-maj=38.0km s-min=16.7km az=154.0*

*GCMT **07** 15:11:52.0±0.4, 1°.13N×27°.67W, h18^{km}±1^{km}, MW4.9/73, Moment Tensor Solution. s15,c16; s73,c91; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.46±.23; M$_{\theta\theta}$0.22±.13; M$_{\phi\phi}$2.24±.15; M$_{r\theta}$1.26±.42; M$_{\theta\phi}$-0.21±.08; M$_{\phi r}$-0.36±.26; Best double couple: M$_0$2.64500×10^{16} NP1:φ$_s$333.00000°,δ55.00000°,λ-115.00000°. NP2: φ$_s$192.00000°,δ42.00000°,λ-59.00000°. Principal axes: T 2.3190, Plg7.0000°, Azm80.0000°; N 0.6550, Plg20.0000°, Azm348.0000°; P -2.9720, Plg68.0000°, Azm188.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 07 15:11:45.8±0.8**, 0°.6N**±0°.2×**27°.5W**±0°.2**, h10**^{km}**, n45, σ0ˢ.73**/14**, mb4.0**/12**, MS3.8**/32**, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RCBR	Riachuelo	10.50	232	Pn	Pn	15 14 16.6	+0.1
	3.1nm,0.3s,baz=28,slow=1.3,SNR=13						
RCBR				Sn	Sn	15 16 02.5	-12
	3.0nm,0.3s,baz=12,slow=2.4,SNR=2.6						
H10N3	ASCENSION HYDR	15.47	123	T	T	15 31 43.7	
	baz=302,slow=74,SNR=50						
H10N2	ASCENSION HYDR	15.47	123	T	T	15 31 40.4	
	baz=302,slow=74,SNR=46						
H10N1	ASCENSION HYDR	15.49	123	T	T	15 31 33.9	
	baz=302,slow=74,SNR=56						
H10S3	ASCENSION HYDR	15.96	127	T	T	15 32 16.9	
	baz=306,slow=74,SNR=54						
H10S1	ASCENSION HYDR	15.96	127	T	T	15 32 22.7	
	baz=306,slow=74,SNR=52						
H10S2	ASCENSION HYDR	15.97	127	T	T	15 32 20.8	
	baz=306,slow=74,SNR=35						
DBIC	Dimbokro	23.42	75	P	P	15 16 55.7	+0.4
	5.1nm,1.0s,baz=208,slow=15,SNR=4.0						
DBIC				LR	LR	15 24 36.6	
	comp=Z,520nm,18.5s,baz=234,slow=33						
KOWA	Kowa	27.06	58	P	P	15 17 28.8	+0.2
	2.4nm,0.7s,baz=238,slow=9.4,SNR=4.3						
KOWA				LR	LR	15 27 00.1	
	comp=Z,609nm,19.3s,baz=218,slow=34						
TORD	Torodi Ar. Bea	31.54	65	P	P	15 18 07.4	-1.1
	2.7nm,1.1s,baz=242,slow=7.2						
TORD				LR	LR	15 28 58.5	
	comp=Z,313nm,21.5s,baz=275,slow=33						
PCRV	Puerto La Cruz	38.09	286	LR	LR	15 33 19.0	
	comp=Z,145nm,19.4s,baz=117,slow=34						
H07N1	FLORES T-PHASE	39.05	356	T	T	15 59 45.0	
CPUP	Villa Florida	39.26	225	LR	LR	15 35 07.6	
	comp=Z,364nm,19.9s,baz=70,slow=36						
LPAZ	La Paz	43.41	245	P	P	15 19 50.1	+0.3
	0.9nm,0.7s,baz=23,slow=7.7,SNR=2.8						
LPAZ				LR	LR	15 37 37.9	
	comp=Z,470nm,18.9s,baz=91,slow=36						
ESDC	Sonseca Array	44.45	26	P	P	15 19 57.8	+0.6
	0.6nm,0.6s,baz=222,slow=8.7,SNR=8.9						
ROSC	El Rosal	46.90	276	LR	LR	15 39 01.8	
	comp=Z,253nm,18.9s,baz=87,slow=35						
KEST	Kesra	48.95	40	LR	LR	15 42 54.8	
	comp=Z,72nm,18.4s,baz=252,slow=38						
NNA	Nana	50.51	254	LR	LR	15 41 53.1	
	comp=Z,126nm,19.7s,baz=90,slow=36						
VAE	Valguarnera	53.29	42	LR	LR	15 44 01.7	
	comp=Z,134nm,18.6s,baz=246,slow=36						
DAVOX	Davos/Dischmat	56.41	30	LR	LR	15 46 14.5	
	comp=Z,58nm,18.1s,baz=264,slow=37						
BOSA	Boshof	58.22	125	LR	LR	15 41 44.2	
	comp=Z,90nm,21.9s,baz=220,slow=31						
IDI	Anoyia	59.69	49	LR	LR	15 47 55.3	
	comp=Z,82nm,21.4s,baz=262,slow=36						
GERES	GERESS Array B	59.71	30	P	P	15 21 50.7	0.0
	1.8nm,1.0s,baz=232,slow=6.6,SNR=9.7						
GERES				LR	LR	15 47 06.9	
	comp=Z,27nm,18.8s,baz=272,slow=36						
BRG	Berggiesshubel	61.15	29	*e*PKP	P	15 22 00.8	+0.4
	9.2nm,1.5s						
MLR	Muntele Rosu	64.80	39	LR	LR	15 52 25.2	
	comp=Z,15nm,18.9s,baz=230,slow=38						
NOA	NORSAR Array B	67.14	19	LR	LR	15 48 39.9	
	comp=Z,27nm,20.3s,baz=220,slow=33						
MMAI	Mount Meron Ar	67.19	54	LR	LR	15 52 07.6	
	comp=Z,52nm,19.7s,baz=220,slow=36						
HFS	Hagfors	67.34	21	LR	LR	15 47 49.9	
	comp=Z,60nm,21.2s,baz=219,slow=32						
BRTR	Keskin Array B	67.77	47	LR	LR	15 54 21.7	
	comp=Z,18nm,20.4s,baz=253,slow=38						
AKASG	Malin Array Be	69.12	35	P	P	15 22 51.1	-1.1
	2.9nm,0.9s,baz=243,slow=6.6,SNR=12						
ATD	Arta Tunnel	70.67	78	LR	LR	15 51 34.1	
	comp=Z,50nm,20.9s,baz=359,slow=34						
FINES	FINESS Array B	72.90	24	LR	LR	15 51 46.0	
	comp=Z,54nm,20.9s,baz=218,slow=33						
KBZ	Khabaz	75.54	45	P	P	15 23 32.0	+1.4
	1.3nm,0.7s,baz=292,slow=5.4,SNR=2.3						
KBZ				LR	LR	15 58 46.3	
	comp=Z,22nm,18.7s,baz=224,slow=37						
GNI	Garni	76.12	49	LR	LR	15 58 37.0	
	comp=Z,31nm,20.4s,baz=294,slow=37						
TXAR	Lajitas Array	77.62	300	P	P	15 23 42.9	0.0
	0.7nm,1.0s,baz=108,slow=8.1,SNR=5.6						
ANMO	Albuquerque	80.57	305	LR	LR	15 57 50.5	
	comp=Z,119nm,18.6s,baz=53,slow=34						
SPITS	Spitsbergen Ar	80.87	8	LR	LR	15 52 43.9	
	comp=Z,31nm,20.8s,baz=85,slow=30						
RPN	Rapa Nui	82.96	243	LR	LR	15 57 55.1	
	comp=Z,76nm,18.8s,baz=118,slow=33						
PDAR	Pinedale Array	83.73	313	P	P	15 24 15.2	-0.4
	0.6nm,0.8s,baz=68,slow=9.8,SNR=5.0						
PDAR				LR	LR	15 56 58.2	
	comp=Z,66nm,21.2s,baz=62,slow=32						
GEYT	Alibeck	86.21	52	LR	LR	16 05 41.0	
	comp=Z,38nm,20.3s,baz=255,slow=38						
AKTO	Aktyubinsk	86.71	40	LR	LR	16 07 48.6	
	comp=Z,17nm,18.0s,baz=267,slow=39						
NVAR	Mina Array Bea	90.23	308	P	P	15 24 46.5	-0.8
	0.4nm,0.8s,baz=90,slow=3.6,SNR=4.3						
NVAR				LR	LR	16 02 32.0	
	comp=Z,37nm,20.1s,baz=288,slow=34						
YBH	Yreka Blue Hor	93.47	312	LR	LR	16 03 05.3	
	comp=Z,36nm,18.9s,baz=0.5,slow=33						
BVAR	Borovoye Array	94.31	37	LR	LR	16 07 36.2	
	comp=Z,36nm,20.6s,baz=267,slow=36						
ASAR	Alice Springs	150.84	143	PKPbc	PKPbc	15 31 39.7	+0.1
	0.8nm,0.9s,baz=237,slow=1.6,SNR=5.8						

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*CSEM **07** 15:29:21.5±0.1, 37°.16N×31°.68E, h2^{km}, ML2.5, Error ellipse: s-maj=3.9km s-min=2.9km az=40.0*

*DDA **07** 15:29:21.2, 37°.16N×31°.72E, h7^{km}, Ml2.5*

*ISK **07** 15:29:21.1, 37°.15N×31°.67E, h5^{km}, ML2.7/6*

ISC 07 15:29:21.1±1.2**, 37°.16N**±0°.02×**31°.67E**±0°.02**, h4**^{km}±11^{km}**, n42, σ0ˢ.62**/61**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEPZ	Antalya-Kepez	0.26	192	*i* P	Pg	15 29 26.8	+0.7
KEPZ				*i* S	Sb	15 29 31.8	-1.5
KEPZ	Antalya-Kepez	0.26	192	P	Pg	15 29 26.8	+0.7
KEPZ				S	Sb	15 29 31.8	-1.5
SUTC	Sutluce-Ispart	0.62	301	PG	Pg	15 29 33.3	+0.2
SUTC				SG	Sb	15 29 43.1	-0.8
SUTC	Sutluce-Ispart	0.62	301	*e*Pg	Pg	15 29 33.3	+0.2
SUTC				*e*Sg	Sb	15 29 43.1	-0.8
KMER	Konya-Meram	0.82	42	*i* P	Pg	15 29 37.0	0.0
KMER				*i* S	Sg	15 29 46.8	-0.9
KMER	Konya-Meram	0.82	42	P	Pg	15 29 37.0	0.0
KMER				S	Sg	15 29 46.8	-0.9
BCK	Bucak	0.92	290	PG	Pg	15 29 39.1	+0.4
BCK	Bucak	0.92	290	*e*Pg	Pg	15 29 39.1	+0.4
KONT	Konya--Tatoy	0.96	35	PG	Pb	15 29 40.3	-0.1
KONT				SG	Sb	15 29 54.2	+0.7
KONT	Konya--Tatoy	0.96	35	*i* P	Pb	15 29 40.2	-0.1
KONT				*i* S	Sg	15 29 52.5	+0.5
KONT	Konya--Tatoy	0.96	35	*e*Pg	Pb	15 29 40.3	-0.1
KONT				*e*Sg	Sb	15 29 54.2	+0.7
GAZI	Gazipasa	1.06	150	PG	Pg	15 29 41.5	+0.2
GAZI				SG	Sb	15 29 56.8	+0.6
GAZI	Gazipasa	1.06	150	*i* P	Pg	15 29 41.6	+0.2
GAZI				*i* S	Sn	15 29 57.9	-0.1
GAZI	Gazipasa	1.06	150	P	Pg	15 29 41.6	+0.2
GAZI				*e*Sg	Sb	15 29 56.8	+0.6
KORT	Korkueli	1.07	262	PG	Pb	15 29 42.6	+0.3
KORT	Korkueli	1.07	262	*e*Pg	Pb	15 29 42.6	+0.3
BAGO	Egridir - ISPA	1.09	320	*i* P	Pg	15 29 42.2	+0.1
BAGO				*i* S	Sb	15 29 58.0	+0.7
ERMK	Ermenek	1.12	117	*i* P	Pg	15 29 41.8	-0.8
ERMK				*i* S	Sg	15 29 57.0	-0.1
ERMK	Ermenek	1.12	117	P	Pg	15 29 41.8	-0.8
ERMK				S	Sg	15 29 57.0	-0.1
ISP	Isparta	1.13	306	PN	Pn	15 29 43.7	-0.2
ISP	Isparta	1.13	306	*e*Pn	Pn	15 29 43.7	-0.2
KDHN	Kadinhani	1.41	14	*i* P	Pb	15 29 48.0	0.0
KDHN				*i* S	Sb	15 30 06.3	-0.1
KDHN	Kadinhani	1.41	14	P	Pb	15 29 48.0	0.0
KDHN				S	Sb	15 30 06.3	-0.1
BERE	Bereket-Mersin	1.48	122	PN	Pn	15 29 48.8	0.0
BERE	Bereket-Mersin	1.48	122	*e*Pn	Pn	15 29 48.8	0.0
TEKE	Tekeli-Mersin	1.54	131	PN	Pn	15 29 49.1	-0.3
TEKE	Tekeli-Mersin	1.54	131	*e*Pn	Pn	15 29 49.1	-0.3
TEVE	Tevekalti-Mers	1.59	116	PN	Pb	15 29 50.9	-0.3
TEVE	Tevekalti-Mers	1.59	116	*e*Pn	Pb	15 29 50.9	-0.3
KIZT	Kizilcal	1.73	5	PN	Pb	15 29 52.8	-0.8
KIZT	Kizilcal	1.73	5	*e*Pn	Pb	15 29 52.8	-0.8
KEBE	Keben-Mersin	1.79	113	PN	Pb	15 29 54.2	-0.3
KEBE	Keben-Mersin	1.79	113	*e*Pn	Pb	15 29 54.2	-0.3
GULN	MERSIN_Gulnar	1.79	122	*i* P	Pb	15 29 54.2	-0.3
GULN				*i* S	Sb	15 30 17.9	+0.6
GULN	MERSIN_Gulnar	1.79	122	P	Pb	15 29 54.2	-0.3
GULN				S	Sb	15 30 17.9	+0.6
AKKU	Akkuyu-Mersin	1.81	123	PN	Pn	15 29 53.6	+0.5
AKKU	Akkuyu-Mersin	1.81	123	*e*Pn	Pn	15 29 53.6	+0.5
IKL	Isikli	1.86	119	PN	Pn	15 29 54.7	+0.9
IKL	Isikli	1.86	119	*e*Pn	Pn	15 29 54.7	+0.9
KIZK	Mersin	2.10	108	PN	Pb	15 29 58.9	-0.8
MERS	Mersin	2.30	96	PN	Pn	15 30 01.3	+1.4
MERS	Mersin	2.30	96	*e*Pn	Pn	15 30 01.3	+1.4

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*ISCJB **07** 15:32:23.8±0.4, 39°.12N±0°.03×29°.10E±0°.03, h10^{km}±3^{km}, Error ellipse: s-maj=5.5km s-min=3.7km az=163.1*

*CSEM **07** 15:32:23.8±0.1, 39°.12N×29°.10E, h8^{km}, ML2.5, Error ellipse: s-maj=2.8km s-min=2.1km az=150.0*

*DDA **07** 15:32:23.3, 39°.14N×29°.09E, h11^{km}, Ml2.8*

*ISK **07** 15:32:23.6, 39°.14N×29°.12E, h5^{km}, ML2.5/7*

ISC 07 15:32:23.9±0.9**, 39°.13N**±0°.03×**29°.09E**±0°.02**, h12**^{km}±5^{km}**, n32, σ0ˢ.40**/52**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMAA	Simav-Kutahya	0.09	252	PG	Pg	15 32 26.6	-0.1
SMAA				SG	Sg	15 32 28.9	+0.1
SMAA	Simav-Kutahya	0.09	252	*e*Pg	Pg	15 32 26.6	-0.1
SMAA				*e*Sg	Sg	15 32 28.9	+0.1
SIMA	Simav-Kutahya	0.10	242	PG	Pg	15 32 26.6	-0.2
SIMA				SG	Sg	15 32 28.6	-0.3
SIMA	Simav-Kutahya	0.10	242	*e*Pg	Pg	15 32 26.6	-0.2
SIMA				*e*Sg	Sg	15 32 28.6	-0.3
SHAP	Saphane-Kutahy	0.15	136	PG	Pg	15 32 27.3	-0.2
SHAP				SG	Sg	15 32 29.8	-0.2
SHAP	Saphane-Kutahy	0.15	136	*e*Pg	Pg	15 32 27.3	-0.2
SHAP				*e*Sg	Sg	15 32 29.8	-0.2
DEMI	Demirci	0.30	254	*i* P	Pg	15 32 30.1	-0.1
DEMI				*i* S	Sg	15 32 34.3	0.0
DEMI	Demirci	0.30	254	P	Pg	15 32 30.0	-0.1
DEMI				S	Sg	15 32 34.3	0.0
GDZ	Gediz	0.30	97	*i* P	Pg	15 32 30.0	-0.2
GDZ				*i* S	Sg	15 32 34.2	-0.2
GDZ	Gediz	0.30	97	P	Pg	15 32 30.0	-0.2
GDZ				S	Sg	15 32 34.2	-0.2
TVSB	Tavsanli	0.43	42	PG	Pg	15 32 32.1	-0.4
TVSB				SG	Sg	15 32 37.9	-0.3
TVSB	Tavsanli	0.43	42	*e*Pg	Pg	15 32 32.1	-0.4
TVSB				*e*Sg	Sg	15 32 37.9	-0.3
DURS	Dursunbey	0.67	315	*i* P	Pg	15 32 36.0	-1.0
DURS				*i* S	Sg	15 32 45.6	-0.3
DURS	Dursunbey	0.67	315	P	Pg	15 32 36.0	-1.0
DURS				S	Sg	15 32 45.6	-0.3
KULA	Kula-Manisa	0.70	209	PG	Pg	15 32 37.0	-0.5
KULA	Kula-Manisa	0.70	209	*e*Pg	Pg	15 32 37.0	-0.5
MANT	Manisa	0.76	213	*i* P	Pg	15 32 38.2	-0.5
MANT				*i* S	Sg	15 32 47.9	-0.8
MANT	Manisa	0.76	213	P	Pg	15 32 38.2	-0.5
MANT				S	Sg	15 32 47.9	-0.8
AKHS	Akhisar	1.03	256	*i* P	Pb	15 32 43.5	-0.1
AKHS				*i* S	Sg	15 32 57.0	-0.1
AKHS	Akhisar	1.03	256	P	Pb	15 32 43.5	-0.1
AKHS				S	Sg	15 32 57.0	-0.1
STEP	BALIKESIR_Sava	1.09	284	*i* P	Pn	15 32 45.2	+0.1
STEP				*i* S	Sn	15 33 01.2	+1.1
STEP	BALIKESIR_Sava	1.09	284	P	Pn	15 32 45.2	+0.1
STEP				S	Sn	15 33 01.2	+1.1
CAVI	Cavuskoy	1.22	28	PN	Pb	15 32 46.9	0.0
CAVI	Cavuskoy	1.22	28	*e*Pn	Pb	15 32 46.9	0.0
KCTX	Karacabey (Bur	1.27	334	PN	Pg	15 32 48.3	0.0
KCTX	Karacabey (Bur	1.27	334	*e*Pn	Pg	15 32 48.3	0.0
BORA	Eskisehir	1.29	54	PN	Pb	15 32 48.3	+0.1
BORA	Eskisehir	1.29	54	*e*Pn	Pb	15 32 48.3	+0.1
YLV	Yalova	1.45	8	PN	Pb	15 32 50.9	0.0
YLV	Yalova	1.45	8	*e*Pn	Pb	15 32 50.9	0.0
SBT5	Esenkoy-Cinarc	1.51	354	PN	Pb	15 32 51.7	-0.1
SBT5	Esenkoy-Cinarc	1.51	354	*e*Pn	Pb	15 32 51.7	-0.1

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*ISCJB **07** 15:34:01.8±0.3, 7°.13S±0°.04×124°.82E±0°.05, h500^{km}, mb3.6/14, Error ellipse: s-maj=6.4km s-min=5.2km az=17.0*

*IDC **07** 15:34:02.7±0.7, 7°.21S×124°.83E, h504^{km}±9^{km}, mb3.2/14, mb1 3.4/20, mb1mx3.2/56, mbtmp4.2/20, Error ellipse: s-maj=15.8km s-min=9.0km az=75.0*

*DJA **07** 15:34:05.7±1.1, 7°S±7°×12°4E±1°2, h513^{km}±10^{km}, M4.3/7, mb4.2/5, mB4.3/3, MLv4.4/7, Mw(mB)3.4/3*

ISC 07 15:34:02.3±0.5**, 7°.25S**±0°.06×**124°.83E**±0°.07**, h500**^{km}**, n30, σ1ˢ.67**/40**, mb3.7**/14**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMRI	Maumere	2.91	242	P	P	15 35 13.7	+1.0
MMRI				S	S	15 36 11.3	+1.4
BATI	Baumata	3.15	201	P	P	15 35 16.9	+2.5
	43nm,0.3s,baz=276,slow=0.9,SNR=32						
BATI				S	S	15 36 14.6	+1.6
	26nm,0.3s,baz=147,slow=23,SNR=8.9						
EDFI	Ende, Flores	3.44	244	P	P	15 35 17.3	+0.7
EDFI				S	S	15 36 16.9	-0.1
WSI	Waingapu	5.08	241	P	P	15 35 30.6	+0.5
WSI				S	S	15 36 40.2	-1.5
BASI	Baing, Sumba	5.13	235	P	P	15 35 31.6	+1.1
BASI				S	S	15 36 41.1	-1.4
WBSI	Waikabubak, Su	5.88	246	P	P	15 35 37.0	-0.6
	63nm,0.9s,1µm0.6nm						
WBSI				S	S	15 36 51.2	-4.2
	63nm,0.9s,1µm0.6nm						
SPSI	Sidrap Palu	6.00	303	P	P	15 35 40.8	+2.1
	27nm,0.8s,0.1nm						
TTSI	Tana Toraja	6.50	310	P	P	15 35 45.8	+2.2
	41nm,0.7s,511nm0.2nm						
APSI	Ampana	7.05	333	P	P	15 35 51.6	+2.5
	40nm,0.9s,417nm0.1nm						
PCI	Palu	8.03	321	P	P	15 36 02.8	+3.7
SIJI	Sorong	9.02	46	P	P	15 36 10.5	+1.0
	2.7nm,0.3s,baz=209,slow=22,SNR=12						
SIJI				S	S	15 37 49.0	-4.9
	0.5nm,0.3s,baz=342,slow=18,SNR=2.0						
FITZ	Fitzroy Crossi	10.81	176	P	P	15 36 29.9	+1.5
	1.9nm,0.3s,baz=359,slow=7.9,SNR=199						
FITZ				S	S	15 38 27.3	-1.2
	0.2nm,0.3s,baz=184,slow=18,SNR=12						
WRA	Warramunga Arr	15.63	145	P	P	15 37 19.1	-0.1
	1.4nm,0.3s,baz=336,slow=8.3,SNR=58						
WRA				S	S	15 40 00.6	-1.1
	0.1nm,0.3s,baz=317,slow=17,SNR=4.3						
JAY	Jayapura	16.50	74	P	P	15 37 27.2	-1.3
	0.5nm,0.3s,baz=158,slow=16,SNR=3.7						
ASAR	Alice Springs	18.51	153	P	P	15 37 48.5	+1.1
	0.8nm,0.3s,baz=346,slow=16,SNR=74						
ASAR				S	S	15 40 51.2	+0.4
	0.0nm,0.3s,baz=344,slow=22,SNR=6.3						
STKA	Stephens Creek	29.07	150	P	P	15 39 22.8	+1.2
	2.8nm,0.6s,baz=328,slow=11,SNR=9.4						
CMAR	Chiang Mai Arr	36.12	315	P	P	15 40 20.6	-1.1
	0.5nm,0.8s,baz=137,slow=6.6,SNR=6.4						
KSRS	Korea Array	44.56	4	P	P	15 41 28.9	-0.2
	1.6nm,0.8s,baz=173,slow=9.1,SNR=7.8						
MJAR	Matsushiro Arr	45.33	15	P	P	15 41 34.6	-0.5
	2.1nm,1.0s,baz=197,slow=11,SNR=3.9						
USRK	Ussuriysk Ar.	51.62	7	P	P	15 42 21.6	-0.2
	1.8nm,0.6s,baz=186,slow=6.2						
SONM	Songino Array	57.21	345	P	P	15 43 01.2	-0.1
	0.4nm,0.5s,baz=166,slow=9.1,SNR=4.1						
MKAR	Makanchi Array	65.72	329	P	P	15 43 56.8	-0.2
	1.5nm,0.5s,baz=125,slow=7.8,SNR=26						
PETK	Petropavlovsk-	66.28	21	P	P	15 44 01.2	+0.9
	3.2nm,0.8s,baz=206,slow=5.6						
ZALV	Zalesovo Beam	69.63	336	P	P	15 44 19.9	-0.9
	0.7nm,0.4s,baz=106,slow=5.3,SNR=5.1						
KURBB	Kurchatov Arra	70.12	331	P	P	15 44 23.3	-0.5
	1.0nm,0.7s,baz=136,slow=4.9,SNR=11						
SEY	Seymchan	73.09	13	P	P	15 44 41.1	+0.2
	2.6nm,0.6s,baz=205,slow=5.4,SNR=25						
BVAR	Borovoye Array	75.60	330	P	P	15 44 55.4	+0.1
	1.3nm,0.5s,baz=116,slow=6.6,SNR=11						
AKTO	Aktyubinsk	81.17	323	P	P	15 45 24.8	-0.4
	1.4nm,0.5s,baz=90,slow=8.7,SNR=5.1						
SNAA	Sanae	94.18	195	P	P	15 46 27.5	+0.5
	0.7nm,1.0s,baz=350,slow=9.4,SNR=5.1						
TORD	Torodi Ar. Bea	123.82	281	PKP	PKPdf	15 52 02.9	-1.1
	0.8nm,0.9s,baz=149,slow=3.4						

MEX 07 15:56:40.7±0.6**, 16°.90N**×**99°.92W, h39**^{km}±4^{km}**, MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACP2	Acapulco	0.04	123	*e*P	Pn	15 56 45.3	-1.7
ACP2				*e*S	Sn	15 56 49.6	-1.7
ACX	Acapulco	0.07	114	*e*P	Pn	15 56 45.7	-1.4
ACX				*e*S	Sn	15 56 49.6	-1.9
CAIG	El Cayaco	0.36	295	*i* P	Pn	15 56 48.1	-1.4
CAIG				*e*S	Sn	15 56 53.9	-2.2
MEIG	Mezcala	1.06	16	*e*P	Pn	15 56 57.1	-2.1
MEIG				*e*S	Sn	15 57 10.3	-2.5
ARIG	Puente Sto Nin	1.43	344	*e*P	Pn	15 57 02.9	-1.3
ARIG				*e*S	Sn	15 57 20.0	-1.8
TLIG	Tlapa	1.46	63	*e*P	Pn	15 57 03.8	-0.8
TLIG				*i* S	Sn	15 57 20.3	-2.2
PLIG	Platanillo	1.54	15	*e*P	Pn	15 57 03.9	-1.9
PLIG				*i* S	Sn	15 57 23.1	-1.4

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*IDC **07** 15:57:49.2±1.0, 15°.40S×173°.65W, h0^{km}, mb3.7/6, mb1 4.0/6, mb1mx3.7/47, mbtmp3.7/6, MS2.7/2, Ms1 2.7/2, ms1mx2.4/46, Error ellipse: s-maj=48.5km s-min=23.1km az=136.0*

*ISCJB **07** 15:57:53.3±0.8, 15°.4S±0°.2×173°.8W±0°.2, h35^{km}, mb3.6/6, MS3.2/1, Error ellipse: s-maj=37.8km s-min=10.0km az=142.5*

ISC 07 15:57:55.0±0.9**, 15°.4S**±0°.3×**173°.8W**±0°.2**, h35**^{km}**, n9, σ1ˢ.52**/9**, mb3.6**/6**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.50	53	Pn	Pn	15 58 36.1	+2.8
	70nm,0.3s,baz=163,slow=1.5,SNR=147						
AFI				Sn	Sn	15 59 01.1	-1.5
	56nm,0.3s,baz=233,slow=6.2,SNR=13						
AFI				LR	LR	15 59 23.5	
	comp=Z,58nm,18.2s,baz=278,slow=40						
URZ	Urewera	24.11	198	P	P	16 03 07.4	0.0
	2.8nm,0.3s,baz=18,slow=9.6,SNR=9.6						
WRA	Warramunga Arr	49.43	257	P	P	16 06 42.6	+0.6
	0.1nm,0.4s,baz=93,slow=7.4,SNR=6.8						
ASAR	Alice Springs	49.70	252	P	P	16 06 44.9	+0.8
	1.4nm,0.7s,baz=87,slow=8.3,SNR=29						
MJAR	Matsushiro Arr	68.69	320	LR	LR	16 34 56.3	
	comp=Z,16nm,19.9s,baz=100,slow=32						
TXAR	Lajitas Array	80.97	56	P	P	16 10 05.2	-1.3
	0.4nm,0.9s,baz=230,slow=7.0,SNR=3.7						
ILAR	Eielson Array	82.55	11	P	P	16 10 13.4	-0.4
	0.4nm,0.5s,baz=229,slow=6.2,SNR=9.3						
PDAR	Pinedale Array	82.56	42	P	P	16 10 14.0	-0.8
	0.2nm,0.5s,baz=225,slow=5.0,SNR=2.1						
BRTR	Keskin Array B	145.91	321	PKPbc	PKPdf	16 17 30.2	-0.5
	0.4nm,0.7s,baz=107,slow=5.0,SNR=1.9						

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*IDC **07** 16:08:02.4±1.2, 6°.86N×90°.80E, h0^{km}, mb3.7/7, mb1 3.8/9, mb1mx3.5/67, mbtmp3.7/9, ML3.8/2, MS3.3/1, Ms1 3.3/1, ms1mx2.5/61, Error ellipse: s-maj=37.6km s-min=20.6km az=55.0*

ISC 07 16:08:03.4±1.1**, 6°.9N**±0°.2×**90°.61E**±0°.09**, h10**^{km}**, n22, σ2ˢ.62**/10**, mb3.7**/7**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	Pallekele	9.84	273	Pn	Pn	16 10 28.4	+3.3
	1.4nm,0.3s,baz=115,slow=12,SNR=8.4						
PALK				Sn	Sn	16 12 10.6	-5.2
	1.1nm,0.3s,baz=114,slow=20,SNR=5.9						
CMAR	Chiang Mai Arr	14.08	34	Pn	Pn	16 11 21.1	-1.9
	0.1nm,0.3s,baz=231,slow=15,SNR=5.4						
ODAN	Odare	20.10	352	*e*P	Pn	16 12 47.4	+8.0
TAPN	Taplejung	20.54	353	*e*P	Pn	16 12 52.0	+7.3
PKIN	Phulchoki	21.17	347	*e*P	P	16 13 02.2	+13
	8.8nm,0.3s						
DMN	Daman	21.26	346	*e*P	P	16 13 03.7	+13
	7.2nm,0.3s						
GKN	Gorkha	21.75	346	*e*P	P	16 13 09.5	+14
	27nm,0.5s						
KOLN	Koldanda	21.81	343	*e*P	P	16 13 11.7	+16
H08S3	Diego Garcia H	23.12	232	T	T	16 37 12.9	
	baz=55						
H08S2	Diego Garcia H	23.13	232	T	T	16 37 20.9	
	baz=55						
H08S1	Diego Carcia H	23.14	232	T	T	16 37 20.9	
	baz=55						
MKAR	Makanchi Array	40.40	351	P	P	16 15 43.2	+1.5
	0.6nm,0.6s,baz=166,slow=8.7,SNR=6.7						
SONM	Songino Array	42.97	16	P	P	16 16 02.9	+0.1
	1.3nm,0.6s,baz=192,slow=10.0,SNR=6.2						
KURBB	Kurchatov Arra	44.75	349	P	P	16 16 17.9	+1.0
	0.4nm,0.5s,baz=167,slow=7.2,SNR=4.2						
TLY	Talaya	45.94	11	LR	LR	16 36 28.8	
	comp=Z,29nm,18.5s,baz=216,slow=37						
H01W3	Cape Leeuwin H	47.11	153	T	T	17 06 04.9	
	baz=327						
H01W2	Cape Leeuwin H	47.12	153	T	T	17 06 38.4	
	baz=327,slow=74						
H01W1	Cape Leeuwin H	47.12	153	T	T	17 06 42.6	
	baz=327,slow=74						
ZALV	Zalesovo Beam	47.16	355	P	P	16 16 37.4	+1.5
	1.1nm,0.5s,baz=186,slow=7.7,SNR=5.9						
WRA	Warramunga Arr	50.61	123	P	P	16 17 02.2	-0.8
	0.8nm,0.8s,baz=300,slow=8.4,SNR=5.0						
ASAR	Alice Springs	52.04	127	P	P	16 17 13.0	-0.7
	0.4nm,0.6s,baz=300,slow=8.0,SNR=3.3						
FINES	FINESS Array B	71.97	333	P	P	16 19 27.3	+0.3
	0.8nm,0.7s,baz=116,slow=9.6,SNR=2.9						

DJA 07 16:17:14.1±0.3**, 6°S**±2°×**13°0E**±°**, h151**^{km}±6^{km}**, M4.3**/13**, mb4.3**/7**, mB4.9**/6**, MLv4.4**/13**, Mw(mB)4.2**/6**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.52	350	P	Pn	16 17 44.6	+0.6
BNDI				S	Sn	16 18 07.0	+0.1
SAUI	Saumlaki	2.25	150	P	Pn	16 17 53.6	+1.4

SAUI				S	Sn	16 18 21.9	+0.3
MSAI	Masohi	2.94	335	P	Pn	16 18 01.5	+0.8
MSAI				S	Sn	16 18 37.2	+0.4
FAKI	Fak Fak	3.73	34	P	Pn	16 18 09.9	-1.0
KMPI	Kaimana, Papua	4.24	56	P	Pn	16 18 17.5	-0.1
KMPI				S	Sn	16 19 07.2	+0.2
LBMI	Labuha	5.98	334	P	Pn	16 18 41.0	+0.4
	26nm,0.9s,557nm0.1nm						
RKPI	Ransiki, Papua	6.02	42	P	Pn	16 18 41.3	+0.2
	100nm,0.5s,3μm0.7nm						
SOEI	Soe	6.91	237	P	Pn	16 18 53.4	+0.3
	30nm,1.1s,0.2nm						
BAKI	Biak	7.64	51	P	Pn	16 19 03.8	+1.1
	90nm,0.6s,1μm0.3nm						
BATI	Baumata	7.65	237	P	Pn	16 19 01.1	-1.9

ISCJB ***07*** *16:26:15.3±2.4, 15.°6S±0.°9×174.°2W±0.°5, h100km, mb3.7/4, Error ellipse: s-maj=144.7km s-min=11.0km az=150.8*

IDC ***07*** *16:26:16.4±4.6, 16.°18S×173.°85W, h112km±28km, mb3.5/4, mb1 3.8/5, mb1mx3.3/54, mbtmp3.9/5, Error ellipse: s-maj=167.0km s-min=21.8km az=146.0*

ISC 07 16:26:16.7±2.5**, 15.°7S**±0.°9×**174.°2W**±0.°5**, h100km, n6, σ1.ˢ24**/7**, mb3.6**/4**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.91	53	P	Pn	16 27 02.8	+1.5
	30nm,0.3s,baz=171,slow=2.0,SNR=58						
AFI				S	Sn	16 27 34.0	-1.7
	106nm,0.3s,baz=320,slow=23,SNR=16						
WRA	Warramunga Arr	49.05	257	P	P	16 34 54.1	+0.1
	1.0nm,0.8s,baz=82,slow=6.1,SNR=24						
ASAR	Alice Springs	49.31	252	P	P	16 34 55.3	-0.7
	4.1nm,0.6s,baz=90,slow=7.5,SNR=60						
ILAR	Eielson Array	82.86	11	P	P	16 38 29.9	+0.3
	0.3nm,0.6s,baz=231,slow=7.0,SNR=4.0						
PDAR	Pinedale Array	82.97	42	P	P	16 38 30.4	-0.6
	0.4nm,0.6s,baz=210,slow=3.8,SNR=5.4						
BRTR	Keskin Array B	145.89	320	PKPbc	PKPdf	16 45 44.4	+0.1
	0.8nm,0.7s,baz=57,slow=4.6,SNR=4.1						

ISCJB ***07*** *16:32:03.4±0.8, 16.°3S±0.°4×177.°8W±0.°2, h350km, mb3.4/8, Error ellipse: s-maj=57.2km s-min=9.4km az=158.2*

IDC ***07*** *16:32:04.5±1.7, 16.°57S×177.°54W, h355km±22km, mb3.2/8, mb1 3.5/9, mb1mx3.1/51, mbtmp3.9/9, Error ellipse: s-maj=84.3km s-min=12.9km az=151.0*

ISC 07 16:32:04.3±1.0**, 16.°4S**±0.°4×**177.°7W**±0.°2**, h350km, n13, σ0.ˢ66**/13**, mb3.5**/8**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	6.20	67	P	Pn	16 33 38.7	+1.1
	3.8nm,0.3s,baz=163,slow=3.7,SNR=7.9						
AFI				S	S	16 34 52.4	-0.8
	1.1nm,0.3s,baz=330,slow=20,SNR=1.1						
STKA	Stephens Creek	39.99	240	P	P	16 39 05.7	-0.8
	0.9nm,0.5s,baz=95,slow=12,SNR=3.6						
WRA	Warramunga Arr	45.62	258	P	P	16 39 51.1	-0.3
	0.2nm,0.3s,baz=95,slow=7.8,SNR=20						
ASAR	Alice Springs	45.90	253	P	P	16 39 53.9	+0.4
	3.1nm,0.5s,baz=89,slow=7.9,SNR=119						
FITZ	Fitzroy Crossi	53.99	259	P	P	16 40 54.6	+0.8
	0.8nm,0.6s,baz=85,slow=12,SNR=1.6						
NVAR	Mina Array Bea	77.86	44	P	P	16 43 23.9	-0.5
	0.5nm,0.7s,baz=222,slow=9.3,SNR=5.0						
ILAR	Eielson Array	84.28	13	P	P	16 43 56.8	-0.2
	0.7nm,0.6s,baz=228,slow=5.6,SNR=13						
TXAR	Lajitas Array	84.59	57	P	P	16 43 59.2	-0.3
	0.7nm,0.8s,baz=219,slow=6.1,SNR=7.7						
YKA	Yellowknife Ar	92.68	24	P	P	16 44 37.2	+0.5
	0.2nm,0.4s,baz=243,slow=4.7,SNR=2.0						
ARCES	ARCESS Array B	124.98	350	PKP	PKPdf	16 50 21.9	-0.7
	3.5nm,1.1s,baz=15,slow=5.0,SNR=3.9						
BRTR	Keskin Array B	144.22	317	PKP	PKPbc	16 50 59.1	+0.5
	0.5nm,0.7s,baz=105,slow=3.3,SNR=2.1						
GERES	GERESS Array B	146.35	346	PKPbc	PKPbc	16 51 04.5	-0.1
	0.2nm,0.5s,baz=354,slow=1.3,SNR=3.8						
DAVOX	Davos/Dischmat	149.08	350	PKPbc	PKPbc	16 51 12.0	+0.1
	2.0nm,0.5s,baz=240,slow=8.1,SNR=3.1						

ISCJB ***07*** *16:32:17.6±0.6, 59.°63S±0.°08×151.°0W±0.°2, h10km, mb4.2/11, MS4.2/28, Error ellipse: s-maj=14.9km s-min=11.5km az=171.0*

IDC ***07*** *16:32:18.3±0.6, 59.°66S×151.°08W, h0km, mb4.1/9, mb1 4.3/9, mb1mx4.2/35, mbtmp4.1/9, MS4.1/28, Ms1 4.1/28, ms1mx4.1/34, Error ellipse: s-maj=26.9km s-min=18.0km az=12.0*

NEIC ***07*** *16:32:19.7±0.5, 59.°67S×151.°09W, h10km, mb4.4/2, Error ellipse: s-maj=16.3km s-min=13.3km az=190.0*

GCMT ***07*** *16:32:19.7±0.3, 59.°90S×150.°65W, h12km, MW4.9/72, Moment Tensor Solution. s20,c23; s72,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.01±.13; $M_{\theta\theta}$2.32±.12; $M_{\phi\phi}$-2.31±.10; $M_{r\theta}$-1.67±.35; $M_{\theta\phi}$1.36±.09; $M_{\phi r}$0.34±.29; Best double couple: $M_0$3.15300×10^{16} NP1:ϕ_s300.00000°, δ85.00000°, λ30.00000°. NP2: ϕ_s207.00000°, δ60.00000°, λ174.00000°. Principal axes: T 3.3910, Plg25.0000°, Azm168.0000°; N -0.4800, Plg59.0000°, Azm309.0000°; P -2.9150, Plg17.0000°, Azm70.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 07 16:32:19.5±0.6**, 59.°7S**±0.°1×**151.°0W**±0.°1**, h10km, n64, σ1.ˢ04**/27**, mb4.3**/11**, MS4.1**/28**, 1C, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBA	Scott Base	22.84	202	eP	P	16 37 23.3	+1.0
	48nm,1.7s						
VNDA	Vanda	23.65	203	P	P	16 37 31.8	+1.4
	2.5nm,1.2s,baz=61,slow=11,SNR=4.4						
VNDA				LR	LR	16 44 37.4	
	comp=Z,281nm,18.2s,baz=72,slow=31						
RPZ	Rata Peaks	27.90	288	LR	LR	16 46 48.5	
	comp=Z,347nm,18.6s,baz=130,slow=31						
URZ	Urewera	29.45	302	LR	LR	16 47 35.7	
	comp=Z,237nm,21.0s,baz=148,slow=31						
QSPA	South Pole Qui	30.49	180	P	P	16 38 32.6	+0.3
	11nm,1.1s,baz=52,slow=4.0,SNR=9.2						
QSPA				LR	LR	16 49 07.8	
	comp=Z,550nm,20.1s,baz=66,slow=33						
QSPA	South Pole Qui	30.49	180	eP	P	16 38 30.8	-1.5
TBI	Tubuai	36.29	2	eS	S	16 45 02.5	-0.9
	81nm,27.2s						
TBI				eLR	LR	16 48 58.2	
	830nm,28.0s,baz=193						
TBI	Tubuai	36.29	2	eT	T	17 17 43.0	
	116nm,0.4s						
PMSA	Palmer Station	37.84	136	LR	LR	16 51 29.7	
	comp=Z,315nm,20.9s,baz=240,slow=30						
RKT	Rikitea	38.23	24	eT	T	17 20 00.2	
	6.4nm,0.2s						
RAR	Rarotonga	38.90	347	LR	LR	16 51 28.9	
	comp=Z,516nm,18.4s,baz=180,slow=30						
TVO	Taravao	41.83	3	eT	T	17 24 37.9	
	3.1nm,0.4s						
PAE	Paea	41.94	2	eT	T	17 24 45.8	
	2.4nm,0.4s						
PPT2	Papeete2	42.02	2	eS	S	16 46 28.6	-1.1
	88nm,24.2s						
PPT2				eLQ	LQ	16 50 00.7	
	696nm,28.8s						
PPT2				eLR	LR	16 51 47.0	
	842nm,25.0s,baz=183						
PPT	Papeete	42.04	2	LR	LR	16 53 16.1	
	comp=Z,269nm,21.5s,baz=185,slow=30						
RPN	Rapa Nui	43.23	60	LR	LR	16 53 51.7	
	comp=Z,487nm,21.2s,baz=210,slow=30						
VAH	Vaihoa	44.41	5	eT	T	17 27 51.0	
	126nm,0.3s						
PMOR	Pomariorio Ree	44.63	4	eT	T	17 28 07.7	
	3.7nm,0.4s						
VNA3	Neumayer Olymp	46.62	164	P	P	16 40 45.7	-1.5
SNAA	Sanae	47.10	167	P	P	16 40 50.1	-1.0
SNAA	Sanae	47.10	167	P	P	16 40 49.7	-1.3
	1.9nm,0.6s,baz=212,slow=5.4,SNR=20						
SNAA				LR	LR	17 00 07.7	
	comp=Z,183nm,18.3s,baz=175,slow=35						
VNA1	Neumayer--Stat	47.36	164	P	P	16 40 51.9	-1.0
DZM	Mont Dzumac	48.01	302	LR	LR	16 58 36.2	
	comp=Z,123nm,18.1s,baz=164,slow=33						
DZM	Mont Dzumac	48.01	302	eLR	LR	16 54 43.9	
	310nm,27.1s						
AFI	Afiamalu	48.17	333	LR	LR	16 57 51.2	
	comp=Z,284nm,19.4s,baz=168,slow=32						
MAW	Mawson	50.64	196	LR	LR	17 00 23.7	
	comp=Z,202nm,20.9s,baz=199,slow=33						
TAOE	Nuku Hiva Isla	51.35	14	eLR	LR	16 56 05.0	
	378nm,24.9s						
SYO	Syowa Base	51.41	185⇑	eP	P	16 41 23.0	-0.8
PLCA	Paso Flores	51.41	106	P	P	16 41 25.5	+1.1
	4.6nm,1.0s,baz=236,slow=13,SNR=3.1						
PLCA				LR	LR	16 58 43.3	
	comp=Z,113nm,18.2s,baz=250,slow=31						
STKA	Stephens Creek	51.76	271	P	P	16 41 27.1	+0.2
	1.9nm,0.7s,baz=117,slow=9.0,SNR=3.8						
STKA				LR	LR	16 58 58.7	
	comp=Z,255nm,21.1s,baz=167,slow=31						
HNR	Honiara	62.04	303	LR	LR	17 04 01.8	
	comp=Z,86nm,20.6s,baz=206,slow=31						
ASAR	Alice Springs	62.36	270	P	P	16 42 42.6	+0.5
	2.0nm,0.7s,baz=138,slow=6.3,SNR=36						
ASAR				LR	LR	17 06 54.3	
	comp=Z,341nm,18.1s,baz=169,slow=33						
H01W1	Cape Leeuwin H	62.90	247	T	T	17 51 44.1	
	baz=144,slow=76,SNR=40						
H01W2	Cape Leeuwin H	62.90	247	T	T	17 51 44.0	
	baz=144,slow=76,SNR=26						
H01W3	Cape Leeuwin H	62.91	247	T	T	17 51 51.5	
	baz=144,slow=76,SNR=27						
NWAO	Narrogin (SRO)	63.05	251	LR	LR	17 04 18.5	
	comp=Z,286nm,18.9s,baz=4.5,slow=30						
WRA	Warramunga Arr	65.24	273	P	P	16 43 01.1	0.0
	0.8nm,0.6s,baz=154,slow=5.6,SNR=7.9						
WRAB	Tennant Creek	65.24	273	P	P	16 43 01.3	+0.1
	0.5nm,0.5s						
CPUP	Villa Florida	69.48	107	P	P	16 43 28.4	+0.5
	3.0nm,0.9s,baz=215,slow=9.7,SNR=4.0						
CPUP				LR	LR	17 09 46.0	
	comp=Z,76nm,18.6s,baz=206,slow=32						
FITZ	Fitzroy Crossi	71.20	266	LR	LR	17 10 31.3	
	comp=Z,231nm,21.9s,baz=138,slow=32						
NNA	Nana	71.76	82	LR	LR	17 07 52.7	
	comp=Z,159nm,18.1s,baz=210,slow=30						
LPAZ	La Paz	72.52	92	P	P	16 43 46.3	-0.9
	1.5nm,0.9s,baz=253,slow=4.2,SNR=2.6						
LPAZ				LR	LR	17 07 39.1	
	comp=Z,96nm,19.7s,baz=180,slow=29						
JAY	Jayapura	76.97	288	LR	LR	17 13 48.1	
	comp=Z,59nm,21.8s,slow=32						
BATI	Baumata	78.89	269	LR	LR	17 18 27.5	
	comp=Z,359nm,18.2s,baz=180,slow=35						
ROSC	El Rosal	87.48	76	LR	LR	17 16 50.6	
	comp=Z,108nm,18.5s,baz=234,slow=30						
GUMO	Guam	89.16	299	LR	LR	17 19 17.3	
	comp=Z,28nm,21.5s,baz=149,slow=32						
LEM	Lembang	89.85	257	LR	LR	17 19 53.4	
	comp=Z,95nm,20.5s,baz=184,slow=32						
BOSA	Boshof	92.01	177	LR	LR	17 21 56.1	
	comp=Z,361nm,21.6s,baz=189,slow=32						
DAV	Davao City (W)	92.71	279	LR	LR	17 29 16.0	
	comp=Z,39nm,18.1s,baz=154,slow=37						
H10S3	ASCENSION HYDR	103.30	136	T	T	18 42 13.0	
	baz=204,slow=75,SNR=16						
H10S2	ASCENSION HYDR	103.30	136	T	T	18 42 06.0	
	baz=204,slow=75,SNR=17						
H10S1	ASCENSION HYDR	103.31	136	T	T	18 42 17.1	
	baz=204,slow=75,SNR=17						
H10N3	ASCENSION HYDR	104.39	135	T	T	18 43 27.5	
	baz=203,slow=75,SNR=27						
H10N1	ASCENSION HYDR	104.39	135	T	T	18 43 34.7	
	baz=203,slow=75,SNR=31						
H10N2	ASCENSION HYDR	104.40	135	T	T	18 43 40.9	
	baz=203,slow=75,SNR=21						
ILAR	Eielson Array	124.14	2	PKP	PKPdf	16 51 17.7	+1.2
	1.0nm,1.0s,baz=239,slow=2.5,SNR=5.6						
YKA	Yellowknife Ar	124.98	20	PKP	PKPdf	16 51 18.9	+0.7
	0.1nm,0.3s,baz=199,slow=3.3,SNR=3.2						
MDT	Midelt	145.18	125	PKPbc	PKPdf	16 51 58.0	+1.3
	5.6nm,1.1s,baz=238,slow=3.6,SNR=4.6						
MKAR	Makanchi Array	146.54	272	PKPbc	PKPdf	16 51 59.4	+0.8
	4.5nm,0.8s,baz=110,slow=2.9,SNR=31						
ZALV	Zalesovo Beam	149.69	284	PKPbc	PKPbc	16 52 07.6	-0.4
	0.9nm,0.6s,baz=131,slow=4.5,SNR=3.8						
KURBB	Kurchatov Arra	150.91	274	PKPbc	PKPbc	16 52 09.8	-1.3
	1.3nm,0.6s,baz=108,slow=1.8,SNR=10						
KURK	Kurchatov	150.92	274	PKPbc	PKPbc	16 52 09.8	-1.3
ESDC	Sonseca Array	151.26	119	PKPbc	PKPbc	16 52 13.4	+1.0
	4.2nm,0.9s,baz=244,slow=1.6,SNR=16						
AKTO	Aktyubinsk	161.11	254	PKPab	PKPab	16 53 01.8	-0.5
	1.3nm,0.9s,baz=135,slow=2.9,SNR=2.8						

IDC ***07*** *16:33:56.8±1.3, 24.°79N×127.°70E, h0km, mb3.8/5, mb1 3.9/6, mb1mx3.4/64, mbtmp3.8/6, ML3.5/1, MS3.1/2, Ms1 3.1/2, ms1mx2.4/63, Error ellipse: s-maj=51.6km s-min=22.7km az=76.0*

JMA ***07*** *16:33:59.7±0.2, 24.°80N×127.°65E, h72km, M3.2*

ISC 07 16:33:55.9±2.0**, 24.°76N**±0.°06×**127.°63E**±0.°05**, h3km**±13km**, n30, σ1.ˢ80**/41**, mb3.7**/5**, Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JJT3	Tamagusuku3	1.39	6	P	Pg	16 34 23.1	+0.5
JJT3				S	Sn	16 34 40.5	-0.6
JKE	Kume jima 2	1.74	334	P	Pb	16 34 28.4	-0.1
JKE				S	Sb	16 34 48.5	-2.2
JNTH	Nagotoyohara	1.79	11	P	Pn	16 34 28.1	+0.4
JAGN	Aguni-jima	1.86	349	P	Pb	16 34 30.1	-0.4
JAGN				S	Sn	16 34 51.9	-0.7
JOGS	Gusukube	2.02	271	P	Pb	16 34 32.9	-0.4
JOGS				S	Sb	16 34 56.8	-2.0
JMJ	Miyako jima 2	2.12	272	eS	Sb	16 34 59.2	-2.5
JOW	Kunigami	2.15	16	Pn	Pn	16 34 33.0	+0.3
	22nm,0.3s,baz=115,slow=26,SNR=99						
JOW				Sn	Sn	16 34 55.8	-4.1
	24nm,0.3s,baz=128,slow=24,SNR=6.3						
JOW	Kunigami	2.15	16	P	Pn	16 34 33.1	+0.4
JIKM	Ikemajima	2.17	275	P	Pb	16 34 34.8	-1.0
JIKM				S	Sb	16 35 00.6	-2.5
JIRB	Irabujima	2.23	272	P	Pb	16 34 35.4	-1.5
JIRB				S	Sn	16 35 00.8	-1.0
JIH	Iheya	2.29	8	P	Pn	16 34 35.4	+0.8
JYRO	Yoronjima	2.38	18	P	Pn	16 34 36.3	+0.5
JYRO				eS	Sn	16 35 02.0	-3.5
JTJ	Tarama	2.66	268	P	Pb	16 34 41.3	-2.9
JTJ				S	Sn	16 35 11.6	-0.9
JOKE	Okinoerabujima	2.73	18	P	Pn	16 34 41.4	+0.7
JISG	Ishigakijimahi	3.02	267	P	Pn	16 34 45.8	+1.1
JISG				S	Sn	16 35 19.1	-2.3
JIJ	Ishigaki jima	3.20	264	P	Pn	16 34 48.4	+1.3
JIJ				S	Sn	16 35 23.4	-2.3
JTK	Tokunoshima	3.24	21	P	Pn	16 34 48.9	+1.2
JKRS	Kuro-shima	3.34	262	P	Pn	16 34 50.4	+1.4
JKRS				S	Sn	16 35 28.1	-1.0
JMZ	Minamidaito 2	3.42	71	P	Pn	16 34 48.3	-1.9
HATJ	Hateruma jima	3.55	259	eS	Sn	16 35 31.4	-3.1
IRIF	Iriomote-Funau	3.57	264	P	Pn	16 34 54.5	+2.3
IRIF				eS	Sn	16 35 33.2	-1.8
JAMN	Amaminishikomi	3.74	21	P	Pn	16 34 55.9	+1.4
JAM	Amami Oshima	4.05	26	P	Pn	16 34 59.8	+1.0
KSRS	Korea Array	12.66	1	LR	LR	16 42 06.5	
	comp=Z,30nm,18.6s,baz=275,slow=39						
MKAR	Makanchi Array	42.12	313	P	P	16 41 50.6	+1.1
	0.5nm,0.6s,baz=103,slow=10,SNR=6.0						
ZALV	Zalesovo Beam	43.10	324	P	P	16 41 58.5	+1.3
	0.7nm,0.4s,baz=116,slow=8.6,SNR=3.1						
WRA	Warramunga Arr	44.91	171	P	P	16 42 13.4	+1.3
	1.8nm,0.6s,baz=352,slow=8.7,SNR=19						
KURBB	Kurchatov Arra	45.55	318	P	P	16 42 18.5	+1.5
	0.3nm,0.4s,baz=106,slow=9.0,SNR=3.2						
FINES	FINESS Array B	73.87	331	P	P	16 45 33.9	+2.0
	1.3nm,0.8s,baz=57,slow=5.1,SNR=4.6						
PDAR	Pinedale Array	94.65	38	LR	LR	17 26 20.9	
	comp=Z,22nm,21.9s,baz=232,slow=33						

ISCJB ***07*** *17:05:40.7±0.6, 4.°29S±0.°05×129.°11E±0.°07, h200km, mb3.1/1, Error ellipse: s-maj=9.5km s-min=6.3km az=178.2*

IDC ***07*** *17:05:41.2±6.6, 4.°34S×129.°14E, h174km±84km, mb3.0/1, mb1 2.9/4, mb1mx2.7/54, mbtmp3.4/4, Error ellipse: s-maj=119.0km s-min=19.8km az=82.0*

DJA ***07*** *17:05:44.3±0.5, 4°S±4°×12°9E±°, h145km±5km, M4.1/12, mB4.9/1, mb4.4/3, MLv3.9/12, Mw(mB)4.2/1*

ISC 07 17:05:39.9±0.9**, 4.°34S**±0.°06×**129.°04E**±0.°06**, h200km, n13, σ3.ˢ02**/19**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.88	102	P	Pn	17 06 08.3	-0.6
MSAI	Masohi	0.99	354	P	Pn	17 06 09.0	-0.7
MSAI				S	Sn	17 06 26.6	-6.2
AAI	Ambon	1.06	308	P	Pn	17 06 09.5	-0.6
AAI				S	Sn	17 06 29.0	-4.5
FAKI	Fak Fak	3.50	66	P	Pn	17 06 36.5	+0.9
FAKI				S	Sn	17 07 15.8	-3.4
SANI	Sanana	3.80	307	P	Pn	17 06 40.6	+1.3
LBMI	Labuha	3.99	337	P	Pn	17 06 44.7	+3.1
SIJI	Sorong	4.11	33	P	Pn	17 06 44.2	+1.2
	9.1nm,0.3s,baz=223,slow=22,SNR=146						
SIJI				S	Sn	17 07 30.7	-2.0
	9.4nm,0.3s,baz=69,slow=23,SNR=20						
SAUI	Saumlaki	4.26	148	P	Pn	17 06 48.5	+3.5
KMPI	Kaimana, Papua	4.70	82	P	Pn	17 06 51.3	+0.7
RKPI	Ransiki, Papua	5.85	61	P	Pn	17 07 07.3	+2.0
	68nm,0.5s,2μm0.7nm						
WRA	Warramunga Arr	16.34	162	P	Pn	17 09 19.6	+1.2
	0.1nm,0.3s,baz=342,slow=12,SNR=11						
WRA				S	S	17 12 15.0	-3.9
	0.1nm,0.3s,baz=340,slow=21,SNR=4.5						
ASAR	Alice Springs	19.78	167	P	Pn	17 09 58.2	-0.9
	0.1nm,0.3s,baz=347,slow=12,SNR=16						
ASAR				S	S	17 13 25.1	-1.9
	0.1nm,0.3s,baz=339,slow=15,SNR=4.4						
MKAR	Makanchi Array	65.49	327	P	P	17 16 05.9	+4.2
	0.2nm,0.4s,baz=116,slow=9.5,SNR=2.5						

IDC ***07*** *17:18:25.4±2.1, 35.°89N×141.°15E, h0km, mb3.6/5, mb1 3.8/8, mb1mx3.5/68, mbtmp3.8/8, ML4.2/3, Error ellipse: s-maj=61.8km s-min=18.3km az=66.0*

NEIC ***07*** *17:18:34.2±0.7, 35.°63N×140.°51E, h52km±7km, mb4.5/3, Error ellipse: s-maj=10.0km s-min=6.6km az=86.0*

ISCJB ***07*** *17:18:35.6±0.5, 35.°54N±0.°04×140.°23E±0.°06, h74km±4km, mb3.8/6, Error ellipse: s-maj=9.6km s-min=5.4km az=144.9*

JMA ***07*** *17:18:35.8±0.2, 35.°65N×140.°20E, h67km±2km, M3.1*

ISC 07 17:18:35.8±0.9**, 35.°58N**±0.°05×**140.°29E**±0.°06**, h67km**±8km**, n40, σ1.ˢ51**/44**, mb3.6**/6**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCN	Nagara	0.17	203	P	Pn	17 18 46.7	+0.8
JCN				eS	Sn	17 18 55.2	+1.9
JIHU	Itakohorinouch	0.43	27	P	Pn	17 18 48.2	+0.5
TOK	Tokyo	0.44	284	P	Pn	17 18 47.9	+0.2
BSO3	Boso 3	0.80	167	P	Pn	17 18 52.3	+1.0
JOD2	Odawara 2	1.03	252	P	Pn	17 18 53.9	-0.6
JOD2				S	Sn	17 19 06.8	-1.6
JAG	Ashikaga	1.08	322	P	Pn	17 18 54.3	-0.9
BSO1	Boso 1	1.08	148	P	Pn	17 18 55.3	+0.6
JRY	Ryogami san	1.21	292	P	Pn	17 18 56.5	-0.3
JYN	Shimob	1.42	267	P	Pn	17 18 59.2	-0.5
JYN				eS	Sn	17 19 15.6	-2.1
JIZS	Izushimoda	1.44	234	P	Pn	17 18 59.4	-0.4
MJAR	Matsushiro Arr	1.94	300	Pn	Pn	17 19 06.5	0.0
	12nm,0.3s,baz=143,slow=15,SNR=153						
MJAR				Sn	Sn	17 19 30.9	+1.0
	18nm,0.3s,baz=90,slow=27,SNR=13						
MAJO	Matsushiro	1.94	300	ePn	Pn	17 19 06.7	+0.2
MAJO				eSn	Sn	17 19 30.9	+0.9
MAJO				e		17 19 32.3	
MAT	Matsushiro	1.94	300	P	Pn	17 19 06.6	+0.1
MAT				S	Sn	17 19 29.4	-0.6
MJB9	Matsu-Tunnel	1.94	300	ePn	Pn	17 19 06.8	+0.3
MJB9				eSn	Sn	17 19 32.5	+2.4
JHJ	Hachijo jima 2	2.49	190	Pn	Pn	17 19 15.1	+1.1
	49nm,0.3s,baz=93,slow=22,SNR=24						
JHJ				Sn	Sn	17 19 43.4	+0.1
	45nm,0.3s,baz=246,slow=22,SNR=7.3						
JHJ2	Mitsune	2.49	189	ePn	Pn	17 19 15.1	+1.1
INU	Inuyama	2.68	266	ePn	Pn	17 19 16.9	+0.4
ERM	Erimo	6.80	18	ePn	Pn	17 20 11.2	-1.7
JNU	Nakatsue	8.16	255	ePn	Pn	17 20 33.6	+2.2
CBIJ	Chichi jima	8.61	169	ePn	Pn	17 20 34.7	-2.9
CBIJ				Sn	Sn	17 22 10.1	-3.2
JCJ	Chichijima	8.61	169	Pn	Pn	17 20 35.0	-2.6
	14nm,0.3s,baz=279,slow=19,SNR=9.3						
JCJ				Sn	Sn	17 22 10.1	-3.2
	2.8nm,0.3s,baz=307,slow=20,SNR=2.8						
ASAJ	Asahikawa	8.71	11	ePn	Pn	17 20 36.0	-2.9
USA0B	Ussuriysk Arra	10.71	326	ePn	Pn	17 21 03.9	-2.3
SSLB	Suanglung	20.46	240	eP	P	17 23 08.9	+1.0
	41nm,2.0s						
TPUB	Ta-pu	21.00	240	eP	P	17 23 14.9	+1.2
	18nm,1.4s						
H11N2	WAKE ISLAND Hy	28.25	117	T	T	17 54 00.1	
	baz=312						
H11N1	WAKE ISLAND Hy	28.25	117	T	T	17 53 50.2	
	baz=312						
H11N3	WAKE ISLAND Hy	28.26	117	T	T	17 54 10.2	
	baz=312						
H11S3	WAKE ISLAND Hy	28.89	119	T	T	17 54 26.8	
	baz=318						
H11S1	WAKE ISLAND Hy	28.89	119	T	T	17 54 46.4	
	baz=318						
H11S2	WAKE ISLAND Hy	28.91	119	T	T	17 54 36.2	
	baz=318						
ZAA1	Zalesovo Array	42.24	314	eP	P	17 26 23.2	+1.2
ZALV	Zalesovo Beam	42.24	314	P	P	17 26 23.2	+1.2
	0.5nm,0.4s,baz=72,slow=4.7,SNR=3.3						
MK32	Makanchi Array	44.13	303	eP	P	17 26 38.4	+0.9
MKAR	Makanchi Array	44.13	303	P	P	17 26 38.4	+0.9
	0.6nm,0.6s,baz=88,slow=11,SNR=7.4						
KURK	Kurchatov	46.13	309	eP	P	17 26 54.1	+1.0
KURBB	Kurchatov Arra	46.19	309	P	P	17 26 54.1	+0.4
	1.1nm,0.4s,baz=86,slow=7.6,SNR=6.4						
WR1	Warramunga Arr	55.50	187	eP	P	17 28 04.2	+0.3
	25nm,1.8s						
WRA	Warramunga Arr	55.50	187	P	P	17 28 04.2	+0.3
	0.3nm,0.5s,baz=2.4,slow=7.6,SNR=12						
ASAR	Alice Springs	59.23	187	P	P	17 28 31.4	+1.3
	0.2nm,0.7s,baz=19,slow=11,SNR=6.8						

ISCJB ***07*** *17:26:55.0±0.8, 40.°12N±0.°04×31.°86E±0.°05, h0km, Error ellipse: s-maj=6.4km s-min=4.3km az=145.1*

DDA ***07*** *17:26:55.1, 40.°12N×31.°87E, h7km, Ml2.4, Suspected Mining explosion.*

CSEM ***07*** *17:26:55.3±0.4, 40.°11N×31.°84E, h1km, MD2.6, Error ellipse: s-maj=7.9km s-min=5.0km az=139.0, Suspected Mining explosion.*

ISK ***07*** *17:26:56.6, 40.°10N×31.°63E, h20km, MD2.6/2*

ISC 07 17:26:55.3±0.8**, 40.°20N**±0.°03×**31.°75E**±0.°03**, h0km, n16, σ0.ˢ67**/31**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUMIH	MIHALICIK	0.39	211	PG	Pg	17 27 02.7	0.0
AUMIH				SG	Sg	17 27 07.9	+0.1
AUMIH	MIHALICIK	0.39	211	i P	Pg	17 27 02.8	0.0
AUMIH				i S	Sg	17 27 08.9	+1.1
AUMIH	MIHALICIK	0.39	211	P	Pg	17 27 02.8	0.0
AUMIH				eSg	Sg	17 27 07.9	+0.1
AUMIH				S	Sg	17 27 08.9	+1.1
MDUB	Mudurnu	0.50	303	PG	Pb	17 27 06.9	-0.1
MDUB				SG	Sb	17 27 14.9	0.0
MDUB	Mudurnu	0.50	303	ePg	Pb	17 27 06.9	-0.1
MDUB				eSg	Sb	17 27 14.9	0.0
CMDR	Camlidere-ANKA	0.63	62	i P	Pg	17 27 08.2	+0.8
CMDR				i S	Sg	17 27 14.8	-0.7
CMDR	Camlidere-ANKA	0.63	62	P	Pg	17 27 08.2	+0.8
CMDR				S	Sg	17 27 14.9	-0.7
BCAM	Yenicaga	0.66	22	i P	Pg	17 27 08.4	+0.5
BCAM				i S	Sb	17 27 18.8	-0.8
BCAM	Yenicaga	0.66	22	P	Pg	17 27 08.4	+0.5
BCAM				S	Sb	17 27 18.8	-0.8
BTAS	Taskesti	0.68	303	i P	Pb	17 27 09.7	-0.3
BTAS				i S	Sn	17 27 22.4	-1.2
BTAS	Taskesti	0.68	303	P	Pb	17 27 09.7	-0.3
BTAS				S	Sn	17 27 22.4	-1.2
ANTO	Ankara	0.87	112	PG	Pn	17 27 14.8	-0.1
ANTO				SG	Sn	17 27 28.3	0.0
SAHE	Sakarya_HENDEK	0.94	314	i P	Pn	17 27 16.1	+0.3
SAHE				i S	Sn	17 27 31.2	+1.2

SAHE	**Sakarya_HENDEK**	**0.94**	**314**	P	**Pn**	**17 27 16.1**	**+0.3**
SAHE				S	**Sn**	**17 27 31.2**	**+1.2**
BORA	**Eskisehir**	**1.04**	**252**	PG	**Pg**	**17 27 15.1**	**-0.2**
BORA	**Eskisehir**	**1.04**	**252**	*e*Pg	**Pg**	**17 27 15.1**	**-0.2**

IDC 07 17:27:10.7±2.3**, 54°.84N**×**164°.27E, h0^{km}, mb3.4**/3**, mb1 3.7**/3**, mb1mx3.1**/73**, mbtmp3.4**/3**, Error ellipse: s-maj=133.4km s-min=32.6km az=152.0, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PETK	**Petropavlovsk-**	**4.25**	**249**	Pn	Pn	17 28 16.8	+0.1
	baz=77,slow=19						
PETK				Sn	Sn	17 29 03.8	-3.2
	baz=112,slow=17						
TXAR	**Lajitas Array**	**67.70**	**71**	P	P	17 38 09.8	0.0
	0.1nm,0.6s,baz=307,slow=6.6,SNR=1.9						
WRA	**Warramunga Arr**	**78.76**	**209**	P	P	17 39 14.6	-0.3
	0.3nm,0.7s,baz=14,slow=6.0,SNR=1.8						
ASAR	**Alice Springs**	**82.42**	**208**	P	P	17 39 34.8	+0.3
	0.4nm,0.8s,baz=13,slow=4.0,SNR=5.2						

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*IDC **07** 17:58:19.3±0.6, 44°.50S×167°.79E, h0^{km}, mb3.8/7, mb1 4.0/9, mb1mx3.9/44, mbtmp3.9/9, ML4.2/2, MS3.4/2, Ms1 3.4/2, ms1mx2.7/39, Error ellipse: s-maj=21.0km s-min=18.2km az=39.0*

*NEIC **07** 17:58:21.0±0.0, 44°.51S×167°.80E, h12^{km}, MW4.0, ML4.5(WEL) Best double couple: NP1:φ$_s$209.00000°, δ41.00000°, λ87.00000°. NP2:φ$_s$34.00000°, δ50.00000°, λ93.00000°. Principal axes: T 0.9900, Plg85.0000°, Azm328.0000°; N 0.1600, Plg2.0000°, Azm212.0000°; P -1.1500, Plg5.0000°, Azm122.0000°; After WEL.*

NEIC Felt at Arrowtown, Queenstown, Te Anau and Wanaka.

*WEL **07** 17:58:21.8, 45°S±2°×16°8E±°, h12^{km}±2^{km}, ML4.5/12*

ISC 07 17:58:19.9±1.3**, 44°.45S**±0°.03×**167°.76E**±0°.04**, h3^{km}**±8^{km}**, n136, σ1^{s}69**/156**, mb3.9**/9**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSZ	**Milford Sound**	**0.26**	**153**	*e*Pg	**Pg**	**17 58 25.5**	**+0.7**
MSZ				*e*Sg	**Sg**	**17 58 28.4**	**+0.2**
MSZ	**Milford Sound**	**0.26**	**153**	P	**Pg**	**17 58 25.6**	**+0.7**
MSZ				S	**Sg**	**17 58 28.4**	**+0.2**
JCZ	**Jackson Bay**	**0.82**	**64**	*e*Pg	**Pg**	**17 58 36.4**	**+0.6**
JCZ				*e*Sg	**Sg**	**17 58 48.0**	**+1.6**
JCZ				*e*Sn	**Sn**	**17 58 55.4**	**+4.2**
JCZ	**Jackson Bay**	**0.82**	**64**	P	**Pg**	**17 58 36.6**	**+0.8**
JCZ				S	**Sb**	**17 58 48.5**	**+0.1**
MLZ	**Mavora Lakes**	**0.95**	**165**	*e*Pg	**Pg**	**17 58 37.2**	**-1.0**
MLZ				*e*Sg	**Sb**	**17 58 50.7**	**-1.4**
MLZ				*e*Sn	**Sn**	**17 58 58.8**	**+4.4**
MLZ	**Mavora Lakes**	**0.95**	**165**	P	**Pg**	**17 58 37.5**	**-0.7**
WKZ	**Wanaka**	**0.97**	**113**	*e*Pg	**Pg**	**17 58 38.7**	**+0.1**
WKZ				*e*Sg	**Sg**	**17 58 50.2**	**-1.0**
WKZ	**Wanaka**	**0.97**	**113**	P	**Pg**	**17 58 38.7**	**+0.1**
WKZ				S	**Sg**	**17 58 50.6**	**-0.6**
DCZ	**Deep Cove**	**1.11**	**203**	*e*Pg	**Pb**	**17 58 40.0**	**-1.7**
DCZ				*e*Sn	**Sb**	**17 58 54.6**	**-1.8**
DCZ	**Deep Cove**	**1.11**	**203**	P	**Pb**	**17 58 40.5**	**-1.1**
DCZ				S	**Sb**	**17 58 54.6**	**-1.8**
EAZ	**Earnscleugh**	**1.35**	**126**	*e*Pn	**Pn**	**17 58 44.5**	**-1.1**
EAZ				*e*Sn	**Sb**	**17 59 00.9**	**-2.6**
EAZ	**Earnscleugh**	**1.35**	**126**	P	**Pn**	**17 58 44.9**	**-0.7**
WHZ	**Wether Hill Ro**	**1.45**	**175**	*e*Pn	**Pn**	**17 58 45.8**	**-1.3**
WHZ				*e*Sg	**Sg**	**17 59 09.2**	**+2.7**
WHZ	**Wether Hill Ro**	**1.45**	**175**	P	**Pn**	**17 58 45.7**	**-1.3**
LBZ	**Lake Benmore**	**1.74**	**89**	*e*Pn	**Pb**	**17 58 51.7**	**-0.7**
LBZ				*e*Sn	**Sb**	**17 59 14.3**	**-0.3**
LBZ	**Lake Benmore**	**1.74**	**89**	P	**Pb**	**17 58 51.7**	**-0.7**
FOZ	**Fox Glacier**	**1.74**	**59**	*e*Pn	**Pn**	**17 58 50.1**	**-0.8**
FOZ				*e*Sn	**Sg**	**17 59 17.1**	**+1.3**
FOZ	**Fox Glacier**	**1.74**	**59**	P	**Pb**	**17 58 53.3**	**+0.9**
TUZ	**Tuapeka**	**2.00**	**139**	*e*Pn	**Pn**	**17 58 54.7**	**+0.1**
TUZ				*e*Sn	**Sg**	**17 59 23.3**	**-1.0**
TUZ				*e*Sg	**Sb**	**17 59 26.2**	**+3.9**
TUZ	**Tuapeka**	**2.00**	**139**	P	**Pb**	**17 58 55.3**	**-1.6**
ODZ	**Otahua Downs**	**2.14**	**107**	*e*Pn	**Pn**	**17 58 56.6**	**+0.2**
ODZ	**Otahua Downs**	**2.14**	**107**	P	**Pn**	**17 58 56.4**	**0.0**
APZ	**The Paps**	**2.39**	**176**	*e*Pn	**Pn**	**17 59 00.8**	**+0.9**
APZ				*e*Sn	**Sb**	**17 59 33.0**	**-0.5**
APZ	**The Paps**	**2.39**	**176**	P	**Pn**	**17 59 01.0**	**+1.0**
HHSZ	**Highcliff Hill**	**2.47**	**127**	*e*Pn	**Pn**	**17 59 01.6**	**+0.6**
HHSZ	**Highcliff Hill**	**2.47**	**127**	P	**Pn**	**17 59 01.8**	**+0.8**
RPZ	**Rata Peaks**	**2.48**	**74**	Pn	**Pn**	**17 59 01.6**	**+0.4**
	116nm,0.3s,baz=217,slow=4.1,SNR=472						
RPZ				Sn	**Sb**	**17 59 34.0**	**-2.0**
	146nm,0.3s,baz=337,slow=17,SNR=7.2						
RPZ				LR	LR	18 00 14.3	
	comp=Z,568nm,19.0s,baz=354,slow=46						
RPZ	**Rata Peaks**	**2.48**	**74**	*e*Sn	**Sb**	**17 59 34.0**	**-2.0**
RPZ				*e*Sg	**Sg**	**17 59 41.7**	**+2.0**
RPZ				*e*Lg	Lg	17 59 48.7	
RPZ	**Rata Peaks**	**2.48**	**74**	P	**Pn**	**17 59 01.6**	**+0.4**
WVZ	**Waitaha Valley**	**2.56**	**59**	P	**Pb**	**17 59 05.4**	**-0.9**
INZ	**Inchbonnie**	**3.18**	**59**	P	**Pn**	**17 59 11.1**	**+0.3**
OXZ	**Oxford**	**3.29**	**72**	*e*Pn	**Pn**	**17 59 10.8**	**-1.4**
OXZ	**Oxford**	**3.29**	**72**	P	**Pn**	**17 59 11.2**	**-1.0**
EYCZ	**Eyrewell**	**3.47**	**74**	P	**Pn**	**17 59 14.3**	**-0.5**
MQZ	**McQueen's Vall**	**3.60**	**80**	*e*Pn	**Pn**	**17 59 15.8**	**-0.8**
MQZ	**McQueen's Vall**	**3.60**	**80**	P	**Pn**	**17 59 15.7**	**-0.8**
LTZ	**Lake Taylor**	**3.67**	**65**	*e*Pn	**Pn**	**17 59 16.9**	**-0.6**
LTZ	**Lake Taylor**	**3.67**	**65**	P	**Pn**	**17 59 17.0**	**-0.6**
AKCZ	**Akaroa Harbour**	**3.75**	**83**	P	**Pn**	**17 59 18.5**	**-0.1**
OKCZ	**Okains Bay**	**3.88**	**81**	P	**Pn**	**17 59 20.7**	**+0.2**
DSZ	**Denniston Nort**	**4.01**	**49**	*e*Pn	**Pn**	**17 59 21.5**	**-0.6**
DSZ				*e*Lg	Lg	18 00 43.0	
DSZ	**Denniston Nort**	**4.01**	**49**	P	**Pn**	**17 59 21.5**	**-0.6**
THZ	**Tophouse**	**4.62**	**56**	*e*Pn	**Pn**	**17 59 30.2**	**-0.4**
THZ				*e*Sn	**Sn**	**18 00 22.9**	**-2.0**
THZ	**Tophouse**	**4.62**	**56**	P	**Pn**	**17 59 30.2**	**-0.4**
KHZ	**Kahutara**	**4.67**	**66**	*e*Pn	**Pn**	**17 59 31.6**	**+0.3**
KHZ	**Kahutara**	**4.67**	**66**	P	**Pn**	**17 59 31.7**	**+0.5**
QRZ	**Quartz Range**	**5.05**	**46**	*e*Pn	**Pn**	**17 59 35.7**	**-0.7**
QRZ				*e*Lg	Lg	18 01 11.9	
QRZ	**Quartz Range**	**5.05**	**46**	P	**Pn**	**17 59 35.9**	**-0.5**
NNZ	**Nelson**	**5.24**	**54**	*e*Pn	**Pn**	**17 59 38.9**	**-0.2**
NNZ	**Nelson**	**5.24**	**54**	P	**Pn**	**17 59 39.0**	**-0.1**
BSWZ	**Blackbirch Sta**	**5.24**	**61**	P	**Pn**	**17 59 41.7**	**+2.5**
CMWZ	**Cape Campbell**	**5.44**	**63**	P	**Pn**	**17 59 46.4**	**+4.6**
TUWZ	**Tuamarina**	**5.45**	**59**	*e*Pn	**Pn**	**17 59 43.7**	**+1.9**
TUWZ				*e*Sn	**Sb**	**18 00 54.5**	**-6.8**
TUWZ	**Tuamarina**	**5.45**	**59**	P	**Pn**	**17 59 43.8**	**+1.9**
TCW	**Tory Channel**	**5.78**	**58**	*e*Pn	**Pn**	**17 59 48.4**	**+2.0**
TCW				*e*Sn	**Sn**	**18 00 55.0**	**+1.8**
TCW	**Tory Channel**	**5.78**	**58**	P	**Pn**	**17 59 48.4**	**+2.0**
DUWZ	**D'Urville Isla**	**5.82**	**53**	*e*Pn	**Pn**	**17 59 47.2**	**+0.1**
DUWZ				*e*Sn	**Sn**	**18 01 01.1**	**+6.8**
DUWZ	**D'Urville Isla**	**5.82**	**53**	P	**Pn**	**17 59 47.3**	**+0.2**
SNZO	**South Karori**	**5.99**	**61**	*e*Pn	**Pn**	**17 59 49.8**	**+0.5**
MSWZ	**Moikau Station**	**6.28**	**64**	P	**Pn**	**17 59 54.0**	**+0.7**
CAW	**Cannon Point**	**6.33**	**61**	*e*Pn	**Pn**	**17 59 53.3**	**-0.7**
CAW				*e*Sn	**Sn**	**18 01 05.7**	**-1.0**
CAW				*e*Sg	**Sb**	**18 01 20.2**	**-6.4**
CAW	**Cannon Point**	**6.33**	**61**	P	**Pn**	**17 59 53.3**	**-0.7**
KIW	**Kapiti Island**	**6.37**	**58**	*e*Pn	**Pn**	**17 59 55.0**	**+0.4**
KIW	**Kapiti Island**	**6.37**	**58**	P	**Pn**	**17 59 55.3**	**+0.7**
OGWZ	**Otaki Gorge**	**6.56**	**59**	P	**Pn**	**17 59 57.2**	**+0.1**
MTW	**Mount Morrison**	**6.57**	**63**	P	**Pn**	**17 59 58.1**	**+0.7**
HOWZ	**Holdsworth Sta**	**6.72**	**61**	P	**Pn**	**17 59 58.8**	**-0.7**
NMEZ	**Namu Road**	**6.79**	**44**	P	**Pn**	**18 00 02.3**	**+2.0**
MRZ	**Mangatainoka R**	**6.90**	**59**	*e*Pn	**Pn**	**18 00 00.7**	**-1.1**
MRZ	**Mangatainoka R**	**6.90**	**59**	P	**Pn**	**18 00 00.8**	**-1.1**
KHEZ	**Kahui Hut**	**6.95**	**44**	Pn	**Pn**	**18 00 02.3**	**-0.3**
KHEZ	**Kahui Hut**	**6.95**	**44**	P	**Pn**	**18 00 02.4**	**-0.2**
PREZ	**Palmer Road**	**6.98**	**45**	P	**Pn**	**18 00 03.3**	**+0.3**
NEZ	**North Egmont**	**7.01**	**45**	*e*Pn	**Pn**	**18 00 03.2**	**-0.2**
PKE	**Pukeiti**	**7.01**	**44**	*e*Pn	**Pn**	**18 00 03.0**	**-0.3**
PKE	**Pukeiti**	**7.01**	**44**	P	**Pn**	**18 00 03.1**	**-0.3**
LREZ	**Lake Rotokare**	**7.02**	**47**	P	**Pn**	**18 00 05.3**	**+1.8**
WAZ	**Wanganui**	**7.13**	**51**	*e*Pn	**Pn**	**18 00 06.5**	**+1.5**
WAZ	**Wanganui**	**7.13**	**51**	P	**Pn**	**18 00 07.2**	**+2.2**
BFZ	**Birch Farm**	**7.31**	**62**	*e*Pn	**Pn**	**18 00 07.4**	**0.0**
VRZ	**Vera Road**	**7.46**	**47**	*e*Pn	**Pn**	**18 00 09.8**	**+0.3**
VRZ	**Vera Road**	**7.46**	**47**	P	**Pn**	**18 00 09.9**	**+0.4**
PKVZ	**Pokaka**	**7.65**	**50**	P	**Pn**	**18 00 13.5**	**+1.2**
WNVZ	**Wahianoa**	**7.77**	**52**	*e*Pn	**Pn**	**18 00 16.5**	**+2.6**
WHVZ	**Whangaehu Hut**	**7.79**	**51**	P	**Pn**	**18 00 15.4**	**+1.1**
HIZ	**Hauiti**	**7.97**	**44**	*e*Pn	**Pn**	**18 00 17.2**	**+0.7**
BKZ	**Black Stump Fm**	**8.39**	**54**	*e*Pn	**Pn**	**18 00 22.8**	**+0.5**
TLZ	**Tolley Road**	**8.45**	**46**	Pn	**Pn**	**18 00 22.8**	**-0.4**
TOZ	**Tahuroa Road**	**8.89**	**44**	*e*Pn	**Pn**	**18 00 30.3**	**+1.1**
URZ	**Urewera**	**9.36**	**52**	Pn	**Pn**	**18 00 36.1**	**+0.6**
	1.0nm,0.3s,baz=257,slow=5.4,SNR=7.8						
URZ				Sn	**Sn**	**18 02 12.9**	**-8.3**
	0.3nm,0.3s,baz=94,slow=19,SNR=2.5						
WCZ	**Waipu Caves**	**9.87**	**33**	*e*Pn	**Pn**	**18 00 42.5**	**-0.1**
OUZ	**Omahuta**	**10.24**	**28**	*e*Pn	**Pn**	**18 00 48.0**	**+0.2**
TAU	**Tasmania Unive**	**14.87**	**269**	*e*Pn	**Pn**	**18 01 50.3**	**-0.6**
VNDA	**Vanda**	**33.27**	**182**	P	**P**	**18 04 58.0**	**+0.1**
	0.9nm,0.9s,baz=8.1,slow=7.1,SNR=2.3						
VNDA	**Vanda**	**33.27**	**182**	*e*P	**P**	**18 04 58.3**	**+0.4**
AS31	**Alice Springs**	**34.52**	**296**	*e*P	**P**	**18 05 09.9**	**+0.5**
ASAR	**Alice Springs**	**34.52**	**296**	P	**P**	**18 05 10.2**	**+0.7**
	0.5nm,0.6s,baz=129,slow=8.0,SNR=15						
ASAR				PcP	**PcP**	**18 07 43.6**	**-0.8**
	1.2nm,0.6s,baz=129,slow=4.0,SNR=20						
HNR	**Honiara**	**35.54**	**347**	*e*P	**P**	**18 05 18.6**	**+0.5**
WB2	**Warramunga Arr**	**36.96**	**301**	*e*P	**P**	**18 05 30.5**	**+0.2**
WR1	**Warramunga Arr**	**36.96**	**300**	*e*P	**P**	**18 05 30.7**	**+0.3**
WR1				*e*PcP	**PcP**	**18 07 51.1**	**-0.5**
WRA	**Warramunga Arr**	**36.96**	**300**	P	**P**	**18 05 30.7**	**+0.3**
	1.3nm,0.6s,baz=134,slow=8.0,SNR=25						
WRA				PcP	**PcP**	**18 07 51.1**	**-0.5**
	0.7nm,0.9s,baz=134,slow=3.0,SNR=9.7						
NWAO	**Narrogin (SRO)**	**40.49**	**269**	*e*P	**P**	**18 05 59.3**	**-0.6**
H01W1	**Cape Leeuwin H**	**41.69**	**264**	T	T	18 50 27.8	
	baz=121,slow=75,SNR=21						
H01W2	**Cape Leeuwin H**	**41.70**	**264**	T	T	18 50 27.3	
	baz=121,slow=75,SNR=11						
H01W3	**Cape Leeuwin H**	**41.71**	**264**	T	T	18 50 28.8	
	baz=121,slow=75,SNR=15						
FITZ	**Fitzroy Crossi**	**43.88**	**293**	P	**P**	**18 06 28.3**	**+0.7**
	0.8nm,0.5s,baz=133,slow=6.9,SNR=5.9						
FITZ	**Fitzroy Crossi**	**43.88**	**293**	*e*P	**P**	**18 06 26.8**	**-0.8**
MTN	**Manton Dam**	**44.38**	**304**	*e*P	**P**	**18 06 31.4**	**-0.2**
QSPA	**South Pole Qui**	**45.68**	**180**	P	**P**	**18 06 42.5**	**+0.8**
	3.5nm,1.1s,baz=18,slow=2.8,SNR=6.3						
QSPA				LR	LR	18 23 50.9	
	comp=Z,50nm,19.2s,baz=232,slow=34						
WAKE	**Wake Island**	**63.42**	**359**	*e*P	**P**	**18 08 52.2**	**+1.5**
PMSA	**Palmer Station**	**63.85**	**158**	*e*P	**P**	**18 08 54.7**	**+1.6**
SNAA	**Sanae**	**64.00**	**183**	P	**P**	**18 08 53.0**	**-1.0**
	0.2nm,0.4s,baz=307,slow=19,SNR=7.1						
SNAA	**Sanae**	**64.00**	**183**	*e*P	**P**	**18 08 53.6**	**-0.5**
H08S2	**Diego Garcia H**	**88.45**	**261**	T	T	19 48 46.0	
	baz=135,slow=76,SNR=222						
H08S1	**Diego Carcia H**	**88.46**	**261**	T	T	19 48 47.1	
	baz=135,slow=76,SNR=196						
H08S3	**Diego Garcia H**	**88.47**	**261**	T	T	19 48 47.4	
	baz=135,slow=76,SNR=610						
CMAR	**Chiang Mai Arr**	**88.51**	**298**	P	**P**	**18 11 15.4**	**+1.6**
	1.1nm,0.6s,baz=154,slow=3.4,SNR=11						
GYA	**Guiyang**	**89.94**	**308**	*e*P	**P**	**18 11 22.0**	**+1.5**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
H08N1	**Diego Carcia H**	**90.40**	**261**	T	T	19 51 13.9	
	baz=126						
H08N3	**Diego Garcia H**	**90.42**	**261**	T	T	19 51 12.3	
	baz=126						
H08N2	**Diego Garcia H**	**90.43**	**261**	T	T	19 51 14.6	
	baz=126						
HHC	**Hu-ho-hao-te**	**98.77**	**320**	*e*P	Pdif	18 12 04.1	+3.5
HHC				pmax	pmax		
	comp=Z,18nm,1.1s						
HHC				pmax	pmax		
	comp=Z,96nm,5.0s						
MK32	**Makanchi Array**	**117.92**	**309**	*e*PKPdf	**PKPdf**	**18 17 06.2**	**-1.0**
MKAR	**Makanchi Array**	**117.92**	**309**	PKP	**PKPdf**	**18 17 06.2**	**-1.0**
	comp=Z,0.5nm,0.8s,baz=116,slow=3.4,SNR=3.7						
KURBB	**Kurchatov Arra**	**122.13**	**311**	PKP	**PKPdf**	**18 17 14.3**	**-0.8**
	comp=Z,0.7nm,0.8s,baz=122,slow=1.9,SNR=7.8						
KURK	**Kurchatov**	**122.13**	**311**	*e*PKPdf	**PKPdf**	**18 17 14.3**	**-0.7**
BR101	**Keskin Array S**	**145.97**	**278**	*e*PKPdf	**PKPbc**	**18 18 00.6**	**-0.2**
BRTR	**Keskin Array B**	**145.97**	**278**	PKPbc	**PKPbc**	**18 18 00.6**	**-0.2**
	comp=Z,1.7nm,0.7s,baz=130,slow=4.7,SNR=9.7						
TORD	**Torodi Ar. Bea**	**146.61**	**205**	PKPbc	**PKPdf**	**18 18 00.7**	**-0.8**
	baz=142,slow=2.4						
TOA1	**Torodi Ar. Sit**	**146.61**	**205**	*e*PKPdf	**PKPdf**	**18 18 00.8**	**-0.8**
ARA0	**ARCESS Array S**	**148.48**	**336**	*e*PKPbc	**PKPbc**	**18 18 06.5**	**-0.2**
ARCES	**ARCESS Array B**	**148.48**	**336**	PKPbc	**PKPbc**	**18 18 06.5**	**-0.2**
	comp=Z,2.9nm,0.8s,baz=52,slow=3.3,SNR=6.6						
IDI	**Anoyia**	**150.28**	**265**	PKPbc	**PKPbc**	**18 18 11.5**	**-0.7**
	comp=Z,8.9nm,0.9s,baz=60,slow=8.1,SNR=2.8						
AKASG	**Malin Array Be**	**151.63**	**298**	PKPbc	**PKPbc**	**18 18 14.2**	**-0.6**
	comp=Z,1.5nm,0.4s,baz=68,slow=2.8,SNR=8.2						
FIA0	**FINESS Array S**	**151.89**	**321**	*e*PKPbc	**PKPbc**	**18 18 14.6**	**-0.4**
FINES	**FINESS Array B**	**151.89**	**321**	PKPbc	**PKPbc**	**18 18 14.6**	**-0.4**
	comp=Z,2.5nm,0.7s,baz=73,slow=4.3,SNR=14						

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*IDC **07** 18:12:51.8±1.3, 3°.24S×142°.91E, h0^{km}, mb3.8/6, mb1 4.0/8, mb1mx3.7/49, mbtmp3.8/8, ML3.7/2, MS2.9/4, Ms1 2.9/4, ms1mx2.6/42, Error ellipse: s-maj=33.1km s-min=21.8km az=102.0*

*ISCJB **07** 18:12:53.8±0.6, 3°.24S±0°.08×142°.88E±0°.08, h23^{km}, mb4.0/9, MS3.2/2, Error ellipse: s-maj=12.7km s-min=9.7km az=35.8*

*NEIC **07** 18:12:57.3±2.2, 3°.25S×142°.96E, h35^{km}±25^{km}, mb4.3/10, Error ellipse: s-maj=23.7km s-min=10.1km az=122.0*

ISC 07 18:12:55.8±0.7**, 3°.31S**±0°.10×**142°.90E**±0°.05**, h23^{km}, n27, σ1^{s}66**/24**, mb3.9**/8**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**2.33**	**290**	Pn	**Pn**	**18 13 30.4**	**-2.4**
	5.0nm,0.3s,baz=159,slow=7.8,SNR=30						
JAY				LR	LR	18 14 03.3	
	comp=Z,82nm,21.7s,baz=8.0,slow=31						
JAY				Sn	**Sb**	**18 14 09.9**	**+4.2**
	7.9nm,0.3s,baz=282,slow=15,SNR=4.5						
MANU	**Manus Island**	**4.63**	**74**	*e*Pn	**Pn**	**18 14 04.0**	**-0.5**
MANU				*e*Sg	**Sb**	**18 15 14.0**	**+2.0**
MTN	**Manton Dam**	**15.01**	**230**	*e*Pn	**Pn**	**18 16 25.4**	**-1.2**
	42nm,1.6s						
GUMO	**Guam**	**16.91**	**7**	LR	LR	18 23 15.2	
	comp=Z,18nm,19.0s,baz=171,slow=37						
WRAB	**Tennant Creek**	**18.51**	**206**	*e*P	**P**	**18 17 08.1**	**-2.6**
	34nm,1.7s						
WB2	**Warramunga Arr**	**18.52**	**206**	*e*P	**Pn**	**18 17 11.1**	**+0.1**
	37nm,1.9s						
WR1	**Warramunga Arr**	**18.52**	**206**	*e*P	**Pn**	**18 17 11.4**	**+0.3**
	19nm,1.4s						
WRA	**Warramunga Arr**	**18.52**	**206**	P	**Pn**	**18 17 11.4**	**+0.3**
	0.4nm,0.3s,baz=27,slow=13,SNR=9.4						
SOEI	**Soe**	**19.58**	**250**	*e*P	**Pn**	**18 17 25.0**	**+1.0**
	21nm,0.7s						
BATI	**Baumata**	**20.29**	**249**	P	**P**	**18 17 30.5**	**+0.3**
	19nm,0.7s,baz=254,slow=7.4,SNR=4.5						
AS01	**Alice Springs**	**22.00**	**202**	*e*P	**P**	**18 17 51.0**	**+2.4**
AS31	**Alice Springs**	**22.02**	**202**	*e*P	**P**	**18 17 49.4**	**+0.5**
	1.6nm,1.1s						
ASAR	**Alice Springs**	**22.02**	**202**	P	**P**	**18 17 49.7**	**+0.9**
	0.7nm,0.9s,baz=26,slow=12,SNR=3.6						
ASAR				LR	LR	18 27 20.1	
	comp=Z,106nm,20.3s,baz=28,slow=39						
FITZ	**Fitzroy Crossi**	**22.40**	**228**	P	**P**	**18 17 51.9**	**-1.1**
	4.0nm,0.9s,baz=42,slow=14,SNR=7.6						
FITZ	**Fitzroy Crossi**	**22.40**	**228**	*e*P	**P**	**18 17 52.2**	**-0.7**
	9.7nm,1.3s						
STKA	**Stephens Creek**	**28.44**	**182**	P	**P**	**18 18 47.8**	**-1.2**
	2.2nm,0.9s,baz=333,slow=11,SNR=3.8						
STKA	**Stephens Creek**	**28.44**	**182**	*e*P	**P**	**18 18 48.9**	**-0.1**
	6.3nm,2.0s						
MBWA	**Marble Bar**	**28.68**	**230**	*e*P	**P**	**18 18 52.0**	**+0.7**
	65nm,1.8s						
DZM	**Mont Dzumac**	**29.49**	**131**	LR	LR	18 30 36.5	
	comp=Z,58nm,19.7s,baz=16,slow=36						
FORT	**Forrest**	**30.71**	**206**	*e*P	**P**	**18 19 11.2**	**+2.0**
	17nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**31.91**	**46**	T	T	18 52 54.3	
	baz=229,slow=76,SNR=62						
H11S2	**WAKE ISLAND Hy**	**31.92**	**46**	T	T	18 52 59.1	
	baz=229,slow=76,SNR=17						
H11S1	**WAKE ISLAND Hy**	**31.93**	**46**	T	T	18 52 59.3	
	baz=229,slow=76,SNR=28						
MK32	**Makanchi Array**	**72.85**	**321**	*e*P	**P**	**18 24 21.6**	**-1.4**
MKAR	**Makanchi Array**	**72.85**	**321**	P	**P**	**18 24 21.6**	**-1.4**
	0.5nm,0.8s,baz=134,slow=7.0,SNR=3.7						
ILAR	**Eielson Array**	**84.67**	**24**	P	**P**	**18 25 26.9**	**-0.6**
	0.4nm,0.7s,baz=270,slow=4.6,SNR=7.0						
KBZ	**Khabaz**	**99.51**	**314**	P	**Pdif**	**18 26 38.5**	**+1.3**
	1.2nm,0.6s,baz=117,slow=2.3,SNR=2.9						

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*ISCJB **07** 18:17:48.8±0.4, 45°.23N±0°.08×28°.05W±0°.06, h14^{km}, mb4.1/33, MS3.4/22, Error ellipse: s-maj=12.1km s-min=6.1km az=5.7*

*IDC **07** 18:17:48.8±0.8, 45°.22N×27°.96W, h0^{km}, mb3.9/17, mb1 4.0/19, mb1mx3.8/66, mbtmp3.8/19, ML4.0/2, MS3.4/23, Ms1 3.4/23, ms1mx3.2/58, Error ellipse: s-maj=22.4km s-min=14.4km az=24.0*

*NEIC **07** 18:17:50.0±0.3, 45°.20N×28°.04W, h10^{km}, mb4.3/16, Error ellipse: s-maj=11.1km s-min=5.0km az=185.0*

ISC 07 18:17:50.6±0.7**, 45°.2N**±0°.1×**28°.03W**±0°.08**, h14^{km}, n78, σ0^{s}89**/60**, mb4.1**/33**, MS3.4**/23**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESDC	**Sonseca Array**	**18.57**	**99**	P	**Pn**	**18 22 08.3**	**+1.0**
	0.2nm,0.3s,baz=299,slow=12,SNR=3.7						
ESDC				LR	LR	18 28 03.4	
	comp=Z,82nm,18.7s,baz=335,slow=33						
EKA	**Eskdalemuir Ar**	**18.78**	**48**	P	**Pn**	**18 22 10.0**	**+0.3**
	baz=253,slow=12,SNR=3.0						
MDT	**Midelt**	**21.90**	**116**	P	**P**	**18 22 41.8**	**-1.6**
	2.6nm,0.4s,baz=248,slow=10,SNR=5.1						
MDT				LR	LR	18 29 51.8	
	comp=Z,74nm,19.3s,baz=344,slow=33						
DAVOX	**Davos/Dischmat**	**26.23**	**73**	LR	LR	18 33 06.9	
	comp=Z,90nm,18.1s,baz=265,slow=35						
SCHQ	**Schefferville**	**26.43**	**305**	LR	LR	18 32 16.7	
	comp=Z,114nm,18.5s,baz=90,slow=33						
CLL	**Collm**	**27.73**	**62**	*e*P	**P**	**18 23 38.0**	**-0.4**
CLL				Lm	MLR	18 34 00.0	
	comp=Z,100nm,18.0s						
NOA	**NORSAR Array B**	**27.86**	**41**	LR	LR	18 33 21.5	
	comp=Z,25nm,19.1s,baz=245,slow=34						
KHC	**Kasperske Hory**	**28.31**	**67**	*e*P	**P**	**18 23 43.7**	**0.0**
	comp=Z,1.4nm,1.1s						
GEC2	**GERESS Array S**	**28.43**	**67**	*e*P	**P**	**18 23 45.1**	**+0.3**
	comp=Z,5.2nm,1.1s						
GERES	**GERESS Array B**	**28.43**	**67**	P	**P**	**18 23 44.1**	**-0.7**
	comp=Z,1.3nm,0.9s,baz=282,slow=4.9,SNR=9.8						
GERES				LR	LR	18 34 28.4	
	comp=Z,69nm,18.1s,baz=272,slow=35						
GEA0	**GERESS Array S**	**28.43**	**67**	*e*P	**P**	**18 23 44.3**	**-0.5**
HFS	**Hagfors**	**28.82**	**44**	LR	LR	18 33 52.8	
	comp=Z,37nm,19.8s,baz=245,slow=34						
FRB	**Frobisher Bay**	**29.28**	**324**	P	**P**	**18 23 52.4**	**+0.4**
	comp=Z,5.9nm,0.9s,baz=135,slow=4.3,SNR=2.9						
KEST	**Kesra**	**29.74**	**95**	LR	LR	18 34 23.3	
	comp=Z,105nm,21.1s,baz=296,slow=34						
MORC	**Moravsky Berou**	**30.77**	**65**	*e*P	**P**	**18 24 05.4**	**-0.1**
	comp=Z,2.6nm,0.9s						
OJC	**Ojcow**	**32.14**	**64**	*e*P	**P**	**18 24 17.7**	**+0.2**
	comp=Z,5.8nm,1.0s						
TRQ	**Mont Tremblant**	**32.16**	**289**	*e*P	**P**	**18 24 16.9**	**-0.8**
PSZ	**Piszkesteto**	**32.66**	**68**	*e*P	**P**	**18 24 23.5**	**+1.4**
	comp=Z,4.9nm,1.1s						
DIVS	**Divibare**	**33.79**	**74**	*e*P	**P**	**18 24 32.0**	**-0.1**
	comp=Z,6.8nm,1.2s						
KWP	**Kalwaria Pacla**	**34.10**	**64**	*e*P	**P**	**18 24 34.4**	**-0.2**
	comp=Z,224nm,0.4s						
PSUB	**Penn St. - Bra**	**34.92**	**278**	*e*P	**P**	**18 24 40.4**	**-1.3**
	comp=Z,6.9nm,1.2s						
FIA0	**FINESS Array S**	**35.00**	**43**	*e*P	**P**	**18 24 42.1**	**-0.1**
FINES	**FINESS Array B**	**35.00**	**43**	P	**P**	**18 24 42.1**	**-0.1**
	comp=Z,3.8nm,0.8s,baz=297,slow=6.1,SNR=9.2						
FINES				LR	LR	18 36 49.3	
	comp=Z,13nm,21.7s,baz=224,slow=33						
FIA1	**FINESS Array S**	**35.00**	**43**	*e*P	**P**	**18 24 42.0**	**-0.2**
BUR08	**Bucovina Ar. S**	**36.19**	**67**	*e*P	**P**	**18 24 52.8**	**+0.1**
BUR04	**Bucovina Ar. S**	**36.21**	**67**	*e*P	**P**	**18 24 53.5**	**+0.7**
VTS	**Vitosha**	**36.52**	**75**	*e*P	**P**	**18 24 54.8**	**-0.8**
	comp=Z,3.2nm,0.9s						
KOWA	**Kowa**	**36.71**	**139**	P	**P**	**18 24 57.8**	**+0.6**
	comp=Z,1.2nm,0.2s,baz=339,slow=11,SNR=3.6						
KOWA				LR	LR	18 39 03.7	
	comp=Z,60nm,19.7s,baz=203,slow=35						
MLR	**Muntele Rosu**	**37.34**	**70**	LR	LR	18 41 34.1	
	comp=Z,13nm,18.2s,baz=226,slow=38						
MLR	**Muntele Rosu**	**37.34**	**70**	*e*P	**P**	**18 25 02.2**	**-0.4**
	comp=Z,7.3nm,1.2s						
AGG	**Agios Georgios**	**37.37**	**81**	*e*P	**P**	**18 25 02.8**	**+0.1**
	comp=Z,15nm,1.1s						
KIEV	**Kiev**	**37.92**	**60**	*e*P	**P**	**18 25 05.5**	**-1.7**
	comp=Z,4.6nm,1.1s						
AKASG	**Malin Array Be**	**37.92**	**60**	P	**P**	**18 25 05.5**	**-1.8**
	comp=Z,1.4nm,0.6s,baz=288,slow=7.5,SNR=4.0						
AKASG				LR	LR	18 40 16.4	
	comp=Z,52nm,19.9s,baz=285,slow=36						
AKBB	**Malin Array Si**	**37.92**	**60**	*e*P	**P**	**18 25 05.3**	**-1.9**
	comp=Z,5.3nm,1.1s						
ALN	**Alexandroupoli**	**39.14**	**77**	*e*P	**P**	**18 25 18.9**	**+1.3**
	comp=Z,4.2nm,1.0s						
TOA1	**Torodi Ar. Sit**	**40.69**	**132**	*e*P	**P**	**18 25 31.3**	**+0.6**
TOA0	**Torodi Ar. Sit**	**40.70**	**132**	*e*P	**P**	**18 25 31.6**	**+0.8**
TORD	**Torodi Ar. Bea**	**40.70**	**132**	P	**P**	**18 25 31.3**	**+0.6**
	comp=Z,1.7nm,1.0s,baz=328,slow=6.4						
TORD				LR	LR	18 41 41.3	
	comp=Z,153nm,18.7s,baz=330,slow=35						
DBIC	**Dimbokro**	**43.32**	**145**	LR	LR	18 42 47.8	
	comp=Z,83nm,19.2s,baz=284,slow=35						
ULM	**Lac du Bonnet**	**44.51**	**302**	LR	LR	18 43 05.2	
	comp=Z,95nm,19.0s,baz=69,slow=34						
BR101	**Keskin Array S**	**44.86**	**74**	*e*P	**P**	**18 26 05.3**	**+0.8**
BRTR	**Keskin Array B**	**44.86**	**74**	P	**P**	**18 26 05.3**	**+0.8**
	comp=Z,1.3nm,0.8s,baz=287,slow=6.3,SNR=6.4						
BRTR				LR	LR	18 45 32.1	
	comp=Z,32nm,18.4s,baz=266,slow=37						
YKA	**Yellowknife Ar**	**49.79**	**323**	P	**P**	**18 26 41.9**	**-0.4**
	comp=Z,0.4nm,0.8s,baz=69,slow=7.7,SNR=4.8						
YKA				LR	LR	18 44 58.9	
	comp=Z,6.2nm,19.3s,baz=52,slow=33						
YKB5	**Yellowknife Ar**	**49.79**	**323**	*e*P	P	18 26 47.0	+4.6
H10N2	**ASCENSION HYDR**	**54.14**	**163**	T	T	19 25 25.3	
	baz=349,slow=75,SNR=8.5						
H10N3	**ASCENSION HYDR**	**54.15**	**163**	T	T	19 25 26.1	
	baz=349,slow=75,SNR=7.4						
H10N1	**ASCENSION HYDR**	**54.16**	**163**	T	T	19 25 26.7	
	baz=349,slow=75,SNR=10						
AKTO	**Aktyubinsk**	**54.93**	**51**	P	**P**	**18 27 20.7**	**0.0**
	comp=Z,1.1nm,0.6s,baz=297,slow=6.8,SNR=3.3						
AKTO				LR	LR	18 50 20.4	
	comp=Z,22nm,19.3s,baz=260,slow=36						
H10S1	**ASCENSION HYDR**	**55.19**	**164**	T	T	19 26 42.8	
	baz=349						
H10S3	**ASCENSION HYDR**	**55.20**	**164**	T	T	19 26 50.1	
	baz=349						
H10S2	**ASCENSION HYDR**	**55.21**	**164**	T	T	19 26 47.1	
	baz=349						
PD31	**Pinedale Array**	**56.29**	**299**	*e*P	**P**	**18 27 31.9**	**+1.0**
PDAR	**Pinedale Array**	**56.29**	**299**	P	**P**	**18 27 31.4**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=62,slow=9.5,SNR=2.8						
PDAR				LR	LR	18 50 45.9	
	comp=Z,84nm,18.5s,baz=74,slow=35						
REDW	**Red Top Meadow**	**56.77**	**300**	*e*P	**P**	**18 27 35.7**	**+1.4**
	comp=Z,8.2nm,1.4s						
ANMO	**Albuquerque**	**58.69**	**290**	LR	LR	18 52 49.7	
	comp=Z,86nm,19.1s,baz=54,slow=36						
DUG	**Dugway, Tooele**	**59.76**	**298**	*e*P	**P**	**18 27 56.1**	**+0.9**
	comp=Z,9.5nm,1.7s						
BVAR	**Borovoye Array**	**59.95**	**44**	P	**P**	**18 27 56.6**	**+0.5**
	comp=Z,0.6nm,0.6s,baz=345,slow=5.1,SNR=4.6						
TXAR	**Lajitas Array**	**60.15**	**283**	P	**P**	**18 27 58.9**	**+1.0**
	comp=Z,0.3nm,0.8s,baz=59,slow=3.5,SNR=3.7						
TXAR				LR	LR	18 53 51.1	
	comp=Z,92nm,19.2s,baz=0.0,slow=36						
ILAR	**Eielson Array**	**60.51**	**334**	P	**P**	**18 28 00.7**	**+1.0**
	comp=Z,0.3nm,0.9s,baz=34,slow=5.5,SNR=3.4						
KVN	**Kaiserville**	**63.72**	**300**	*e*P	**P**	**18 28 22.7**	**+0.9**
	comp=Z,2.7nm,1.0s						
YBH	**Yreka Blue Hor**	**64.82**	**304**	LR	LR	18 54 19.9	
	comp=Z,42nm,21.2s,baz=8.5,slow=34						
KURK	**Kurchatov**	**65.37**	**42**	*e*P	**P**	**18 28 32.2**	**0.0**
KURBB	**Kurchatov Arra**	**65.39**	**42**	P	**P**	**18 28 32.2**	**-0.1**
	comp=Z,1.4nm,1.0s,baz=315,slow=6.4,SNR=10						
SNDA	**J Saunders Pla**	**66.21**	**294**	*e*P	**P**	**18 28 38.2**	**+0.2**
LRRC	**Littlerock Res**	**66.50**	**296**	*e*P	**P**	**18 28 40.0**	**+0.2**
EML	**El Monte Cty P**	**66.78**	**294**	*e*P	**P**	**18 28 40.2**	**-1.3**
PT2	**Point Dume**	**67.33**	**296**	*e*P	**P**	**18 28 43.2**	**-1.8**
SBI	**Santa Barbara**	**67.80**	**296**	*e*P	**P**	**18 28 48.4**	**+0.3**
LPIG	**La Paz**	**68.05**	**282**	LR	LR	18 58 21.3	
	comp=Z,59nm,18.3s,baz=54,slow=36						
SNCC	**San Nicolas Is**	**68.27**	**296**	*e*P	**P**	**18 28 48.8**	**-2.2**
MK32	**Makanchi Array**	**69.83**	**43**	*e*P	**P**	**18 28 59.7**	**-0.8**
MKAR	**Makanchi Array**	**69.83**	**43**	P	**P**	**18 28 59.7**	**-0.8**
	comp=Z,1.3nm,0.9s,baz=308,slow=6.0,SNR=6.3						

MK01	Makanchi Array	69.85	43	*e*P	P	18 29 00.1	-0.6
SONA0	Songino Array	79.12	29	*e*P	P	18 29 54.2	-0.4
SONM	Songino Array	79.12	29	P	P	18 29 54.2	-0.4
	comp=Z,1.6nm,0.9s,baz=318,slow=5.5,SNR=7.5						
WR1	Warramunga Arr	150.91	36	*e*PKPbc	PKPbc	18 37 42.6	-0.3
WRA	Warramunga Arr	150.91	36	PKPbc	PKPbc	18 37 42.6	-0.4
	comp=Z,1.0nm,1.0s,baz=326,slow=2.3,SNR=5.4						
ASAR	Alice Springs	154.00	40	PKPbc	PKPbc	18 37 49.2	-0.6
	comp=Z,0.4nm,0.8s,baz=335,slow=2.1,SNR=5.1						

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*NNC **07** 18:17:49.9±1.4, 38°.33N×70°.29E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=10.9km s-min=9.0km az=62.0*

ISC 07 18:17:50.9±4.3**, 38°.3N**±0°.2×**70°.2E**±0°.2**, h10^{km}, n12, σ1^{s}.08**/18**, 11C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	3.09	54	⇑Pn	Pn	18 18 40.1	+0.2
	35nm,0.7s						
SFK				⇑Lg	Lg	18 19 25.4	
	32nm,0.4s						
MNAS	Manas	4.57	22	⇑Pn	Pn	18 18 59.4	-0.8
	3.8nm,0.5s						
MNAS				⇑Pg	Pb	18 19 12.1	+0.9
	8.7nm,0.5s						
MNAS				⇑Sn	Sn	18 19 53.5	+0.2
	13nm,0.8s						
MNAS				⇓Lg	Lg	18 20 14.6	
	44nm,0.8s						
AML	Almayashu	4.69	33	P	Pn	18 19 00.8	-1.3
	SNR=23						
KK31	Karatay Array	4.85	2	⇑Pn	Pn	18 19 02.2	-1.7
	1.2nm,0.3s,baz=183,slow=13,SNR=28						
KK31				⇑Pg	Pb	18 19 17.6	+1.7
	5.1nm,0.5s,baz=176,slow=13,SNR=12						
KK31				⇑Sn	Sn	18 20 00.5	+0.4
	3.9nm,0.5s						
KK31				⇑Lg	Lg	18 20 23.0	
	15nm,0.7s,baz=185,slow=28,SNR=5.2						
UCH	Uchtor	5.14	38	P	Pn	18 19 07.3	-1.0
	SNR=7.5						
EKS2	Erkin-Say	5.16	30	P	Pn	18 19 07.2	-1.2
	SNR=6.7						
AAK	Ala-Archa	5.45	35	⇓Pn	Pn	18 19 11.0	-1.2
	5.4nm,0.5s						
AAK				⇓Pg	Pb	18 19 26.6	+0.4
	10nm,0.9s						
AAK				⇑Sn	Sn	18 20 14.2	-0.9
	8.5nm,0.6s						
AAK				⇓Lg	Lg	18 20 42.0	
	12nm,0.7s						
AAK	Ala-Archa	5.45	35	P	Pn	18 19 11.7	-0.6
	SNR=6.1						
KBK	Karagaybulak	5.68	38	P	Pn	18 19 15.6	+0.2
	SNR=5.7						
CHMS	Chumysh	5.85	34	P	Pn	18 19 16.9	-0.8
	SNR=5.7						
TKM2	Tokmak 2	6.19	39	⇑Pn	Pn	18 19 20.9	-1.6
	4.1nm,0.5s						
TKM2	Tokmak 2	6.19	39	P	Pn	18 19 22.5	0.0
	SNR=14						

MEX 07 18:23:07.0±0.4**, 16°.23N×98°.23W, h9^{km}**±3^{km}**, MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.19	31	*i* P	Pg	18 23 10.7	-0.3
PNIG				*i* S	Sg	18 23 13.5	-0.3
TLIG	Tlapa	1.37	346	*e*P	Pn	18 23 28.4	-4.0
TLIG				*i* S	Sb	18 23 45.7	-4.8

MAN 07 18:25:40.7, 10°.02N×125°.88E, h29^{km}, mb4.8, ML3.7, MS3.6, Leyte

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	Surigao	0.45	238	*e*P	Pb	18 25 50.7	+0.4
SCPH				*e*S	Sn	18 26 00.4	+2.1
MSLP	Maasin	1.01	277	*e*P	Pb	18 26 00.4	+0.8
MSLP				*e*S	Sn	18 26 11.8	-0.3
BESP	Borongan	1.63	345	*e*P	Pn	18 26 08.4	+0.9
BESP				*e*S	Sn	18 26 25.6	-1.9
LLP	Lapu-Lapu	1.90	279	*e*P	Pb	18 26 15.5	+0.7
LLP				*e*S	Sn	18 26 16.4	-18
CNP	Catarman	2.75	334	*e*P	Pn	18 26 22.1	-0.8
CNP				*e*S	Sb	18 27 00.3	-2.1

NNC 07 18:46:17.6±2.6**, 37°.82N×72°.51E, h0^{km}, mb3.5, mpv3.1, 4C-3D, Error ellipse: s-maj=22.9km s-min=19.4km az=78.0, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	2.32	19	⇓Pn	Pn	18 46 57.7	+0.4
	8.1nm,0.5s						
SFK				⇑Lg	Lg	18 47 32.4	
	15nm,0.5s						
MNAS	Manas	4.66	360	⇑Pn	Pn	18 47 29.2	-0.2
	3.6nm,0.5s						
MNAS				⇑Sn	Sn	18 48 25.8	+1.5
	5.9nm,0.8s						
KK31	Karatay Array	5.50	345	⇓Pn	Pn	18 47 39.7	-1.0
	0.3nm,0.3s,baz=162,slow=13,SNR=13						
KK31				⇓Sn	Sn	18 48 45.7	+1.1
	1.3nm,0.6s,baz=160,slow=24						
KK31				⇑Lg	Lg	18 49 10.0	
	2.5nm,0.7s,baz=171,slow=26						

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*GUC **07** 19:03:00.5±0.5, 27°.96S×69°.55W, h127^{km}±5^{km}, ML3.8*
*SJA **07** 19:03:00.8±0.7, 27°.85S×69°.54W, h81^{km}±29^{km}, ML3.0, MW3.5*
*ISCJB **07** 19:03:01.8±0.7, 28°.00S±0°.04×69°.57W±0°.06, h111^{km}±8^{km}, mb3.4/1, Error ellipse: s-maj=9.0km s-min=5.9km az=3.0*
*IDC **07** 19:03:07.2±13.0, 27°.93S×69°.47W, h145^{km}±105^{km}, mb3.3/1, mb1 3.3/2, mb1mx3.0/31, mbtmp3.6/2, ML3.8/1, Error ellipse: s-maj=146.1km s-min=67.5km az=140.0*
ISC 07 19:03:02.5±0.9**, 27°.99S**±0°.04×**69°.58W**±0°.05**, h107^{km}**±8^{km}**, n17, σ1^{s}.05**/27**, 3C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO03	Copiap	0.71	304	*e*P	Pn	19 03 20.6	-0.2
GO03				*i* S	Sn	19 03 35.0	+0.6
GO03				IAML		19 03 36.0	
	comp=E,2μm,0.2s						
CPCH	Copiapo	0.94	313	⇑*i*P	Pn	19 03 22.2	-0.6
CPCH				*i* S	Sn	19 03 37.9	-0.3
LCO	Las Campanas	1.42	224	*e*P	Pn	19 03 28.4	0.0
LCO				*e*S	Sn	19 03 48.6	+0.5
LCO	Las Campanas	1.42	224	⇑*i*P	Pn	19 03 28.4	0.0
LCO				*e*S	Sn	19 03 48.5	+0.5
LCO				IAML		19 03 49.8	
	comp=E,787nm,0.5s						
VCA	Vinchina	1.42	122	*e*P	Pn	19 03 27.8	-0.5
VCA				*e*S	Sn	19 03 46.7	-1.2
VCA	Vinchina	1.42	122	*e*P	Pn	19 03 27.9	-0.5
VCA				*i* S	Sn	19 03 47.1	-0.8
VCA				IAML		19 03 48.8	
	comp=E,1μm,0.3s						
ACDV	Cuesta del Vie	2.21	170	*e*P	Pn	19 03 38.9	+0.7
ACDV				*e*S	Sn	19 04 07.9	+2.5
ACDV				IAML		19 04 11.4	
	comp=Z,78nm,0.8s						
TLL	Tololo Astrono	2.42	206	*e*P	Pn	19 03 40.6	-0.4
TLL				*e*S	Sn	19 04 10.0	-0.5
TLL				IAML		19 04 17.6	
	comp=E,436nm,0.6s						
GO04	Tololo Observa	2.42	206	⇑*i*P	Pn	19 03 40.5	-0.5
GO04				*i* S	Sn	19 04 09.6	-0.9
GO04				IAML		19 04 18.0	
	comp=E,565nm,0.4s						
GO02	Mina Guanaco	2.82	360	*e*P	Pn	19 03 46.7	+0.3
GO02				*e*S	Sn	19 04 21.0	+0.9
GO02				IAML		19 04 29.4	
	comp=E,304nm,0.6s						
AHML	Horco Molle	3.96	73	*e*P	Pn	19 03 59.9	-1.4
CPUP	Villa Florida	11.03	84	P	Pn	19 05 39.8	+2.7
	comp=E,0.2nm,0.3s,baz=263,slow=13,SNR=3.7						
TORD	Torodi Ar. Bea	80.15	69	P	P	19 15 01.0	-0.2
	comp=E,0.4nm,0.6s,baz=276,slow=5.3						
WRA	Warramunga Arr	127.03	209	PKP	PKPdf	19 21 54.5	-0.1
	comp=E,0.3nm,0.8s,baz=154,slow=1.7,SNR=5.2						
KURBB	Kurchatov Arra	146.95	38	PKPbc	PKPbc	19 22 30.4	-1.8
	comp=E,0.8nm,0.3s,baz=315,slow=2.5,SNR=4.6						
ZALV	Zalesovo Beam	148.00	29	PKPbc	PKPbc	19 22 34.5	-0.4
	comp=E,1.2nm,0.5s,baz=316,slow=4.1,SNR=5.3						
MKAR	Makanchi Array	151.05	42	PKPbc	PKPbc	19 22 43.1	+0.4
	comp=E,1.0nm,0.5s,baz=308,slow=1.4,SNR=18						

MAN 07 19:09:51.3, 9°.72N×125°.93E, h11^{km}, mb4.6, ML3.5, MS3.4, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	Surigao	0.44	278	*e*P	Pb	19 10 00.6	-0.5
SCPH				*i* S	Sb	19 10 07.7	0.0
BUTP	Butuan	0.81	202	*e*P	Pg	19 10 06.8	-0.2
BUTP				*e*S	Sn	19 10 20.6	-0.1
MSLP	Maasin	1.13	291	*e*P	Pb	19 10 12.3	-0.6
MSLP				*e*S	Sg	19 10 28.2	+0.3
BESP	Borongan	1.93	345	*e*P	Pn	19 10 24.4	+0.3
BESP				*e*S	Sn	19 10 49.2	+0.9
BUKP	Musuan	2.02	205	*e*P	Pn	19 10 24.8	-0.6
BUKP				*e*S	Sb	19 10 52.4	-0.9
CNP	Catarman	3.04	336	*e*P	Pn	19 10 39.8	+0.4
CNP				*e*S	Sb	19 11 21.9	-0.5

MAN 07 19:26:08.6, 10°.57N×126°.34E, h22^{km}, mb4.6, ML3.5, MS3.3, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	Surigao	1.14	227	*e*P	Pb	19 26 30.4	+0.7
SCPH				*e*S	Sn	19 26 44.3	0.0
BESP	Borongan	1.35	319	*e*P	Pn	19 26 31.4	-0.8
BESP				*e*S	Sb	19 26 50.2	+0.1
MSLP	Maasin	1.52	254	*e*P	Pn	19 26 33.6	-0.8
MSLP				*e*S	Sn	19 26 50.4	-3.1
OCLP	Ormoc	1.76	286	*e*P	Pn	19 26 38.1	+0.3
OCLP				*e*S	Sn	19 26 58.9	-0.7
LLP	Lapu-Lapu	2.34	264	*e*P	Pn	19 26 47.2	+1.4
LLP				*e*S	Sn	19 27 14.9	+1.0
CNP	Catarman	2.53	320	*e*P	Pn	19 26 48.4	0.0
CNP				*e*S	Sn	19 27 20.3	+1.7
BUKP	Musuan	2.95	205	*e*P	Pb	19 26 59.3	-1.4
BUKP				*e*S	Sn	19 27 32.3	+3.2

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*CSEM **07** 19:32:33.0, 37°.54N×24°.61W, h15^{km}, ML3.2*
PDA 07 19:32:33.0±0.8**, 37°.54N×24°.61W, h15^{km}, MD3.7, ML3.2, 5C, Error ellipse: s-maj=5.7km s-min=2.0km az=71.0, Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BART	Pico Bartolome	0.50	299	⇑*i*P	Pg	19 32 40.6	-2.4
BART				*e*S	Sg	19 32 46.7	-3.1
BART				A	A	19 32 48.3	
	884nm,0.2s						
BART	Pico Bartolome	0.50	299	⇑*i*P	Pg	19 32 40.6	-2.4
BART				*e*S	Sg	19 32 46.7	-3.1
PSMN	Pico do Norte,	0.64	214	⇑*i*P	Pg	19 32 43.1	-2.5
PSMN				*e*S	Sg	19 32 50.8	-3.3
PSMN				A	A	19 32 54.2	
	254nm,0.1s						
PSMN	Pico do Norte,	0.64	214	⇑*i*P	Pg	19 32 43.1	-2.5
PSMN				*e*S	Sg	19 32 50.8	-3.3
PSMA	Santa Maria	0.68	217	⇑*i*P	Pg	19 32 43.5	-2.8
PSMA				*e*S	Sg	19 32 51.9	-3.3
PSMA				A	A	19 32 52.7	
	722nm,0.1s						
CMLA	Cha da Macela	0.76	288	*e*P	Pg	19 32 44.8	-3.0
CMLA				*e*S	Sg	19 32 53.7	-4.1
CMLA				A	A	19 32 56.5	
	814nm,0.3s						
CMLA	Cha da Macela	0.76	288	*e*P	Pg	19 32 44.8	-3.0
CMLA				*e*S	Sg	19 32 53.7	-4.1
GRON	Grota Negra	0.77	288	*e*S	Sg	19 32 51.3	-6.8
GRON				A	A	19 32 54.0	
	114nm,0.1s						
PDA	Ponta Delgada	0.86	284	*e*P	Pb	19 32 46.0	-3.6
PDA				*e*S	Sb	19 32 56.2	-4.7
PDA				A	A	19 32 58.0	
	203nm,0.2s						
PDA	Ponta Delgada	0.86	284	*e*P	Pb	19 32 46.0	-3.6
PDA				*e*S	Sb	19 32 56.2	-4.7
PSET	Sete Cidades	0.93	288	*e*P	Pb	19 32 46.8	-4.0
PSET				*e*S	Sb	19 32 57.8	-5.1
PSET				A	A	19 33 02.1	
	230nm,0.2s						
PSET	Sete Cidades	0.93	288	*e*P	Pb	19 32 46.8	-4.0
PSET				*e*S	Sb	19 32 57.8	-5.1
PSCM	Serra do Cume	2.29	301	*e*P	Pn	19 33 06.3	-4.0
PSCM				*e*S	Sn	19 33 31.1	-7.1
PSCM				A	A	19 33 36.5	
	68nm,0.2s						
PSCM	Serra do Cume	2.29	301	*e*P	Pn	19 33 06.3	-4.0
PSCM				*e*S	Sn	19 33 31.1	-7.1
ADH	Angra Heroismo	2.35	299	*e*S	Sn	19 33 32.3	-7.3
ADH				A	A	19 33 36.9	
	25nm,0.3s						
ADH	Angra Heroismo	2.35	299	*e*S	Sn	19 33 32.3	-7.3
PMAN	Manadas	2.95	293	*e*S	Sn	19 33 46.9	-7.6
PMAN				A	A	19 33 47.8	
	11nm,0.1s						
PMAN	Manadas	2.95	293	*e*S	Sn	19 33 46.9	-7.6
ROSA	Rosais	3.10	294	*e*P	Pn	19 33 17.3	-4.0
ROSA				*e*S	Sn	19 33 50.5	-7.6
ROSA				A	A	19 33 53.7	
	16nm,0.3s						
ROSA	Rosais	3.10	294	*e*P	Pn	19 33 17.3	-4.0
ROSA				*e*S	Sn	19 33 50.5	-7.6
PICO	Pico	3.16	289	*e*P	Pn	19 33 18.3	-4.0
PICO				*e*S	Sn	19 33 52.2	-7.6
PICO				A	A	19 33 54.7	
	24nm,0.2s						
PICO	Pico	3.16	289	*e*P	Pn	19 33 18.3	-4.0
PICO				*e*S	Sn	19 33 52.2	-7.6
PCAN	Candelaria	3.20	288	*e*P	Pn	19 33 19.4	-3.3
PCAN				*e*S	Sn	19 33 52.9	-7.7
PCAN				A	A	19 33 56.3	
	19nm,0.2s						
PCAN	Candelaria	3.20	288	*e*P	Pn	19 33 19.4	-3.3
PCAN				*e*S	Sn	19 33 52.9	-7.7
CALA	Caldeira	3.39	289	*e*S	Sn	19 33 57.6	-7.9
CALA	Caldeira	3.39	289	*e*S	Sn	19 33 57.6	-7.9

MEX 07 19:33:28.7±0.5**, 18°.19N×103°.35W, h63^{km}**±4^{km}**, MD3.9, Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMIG	Aquila	0.10	360	*i* P	Pn	19 33 36.5	-1.6
MMIG				*e*S	Sn	19 33 43.2	-1.6
R15V		1.15	328	*e*P	Pn	19 33 47.8	-1.0
R15V				*i* S	Sn	19 34 02.2	-1.6
EZ5V		1.30	349	*e*P	Pn	19 33 49.3	-1.8
EZ5V				*i* S	Sn	19 34 05.9	-1.9
ZIIG	Zihuatanejo	1.88	108	*i* P	Pn	19 33 58.1	-0.5
ZIIG				*i* S	Sn	19 34 20.1	-1.3
CJM	Chamela	2.07	309	*e*P	Pn	19 33 59.5	-1.6
CJM				*i* S	Sn	19 34 23.9	-2.0
MOIG	Morelia	2.52	54	*i* P	Pn	19 34 06.8	-0.7
ARIG	Puente Sto Nin	2.85	88	*i* P	Pn	19 34 10.7	-1.1
ARIG				*i* S	Sn	19 34 43.6	-1.4

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*ISCJB **07** 19:54:15.2±0.9, 31°.91N±0°.06×71°.87E±0°.08, h33^{km}, mb3.3/5, MS3.1/2, Error ellipse: s-maj=12.1km s-min=5.7km az=141.0*
*IDC **07** 19:54:15.4±2.9, 31°.96N×72°.89E, h0^{km}, mb3.4/5, mb1 3.6/8, mb1mx3.3/73, mbtmp3.4/8, ML3.2/3, MS3.1/2, Ms1 3.1/2, ms1mx2.3/56, Error ellipse: s-maj=84.6km s-min=19.0km az=76.0*
*NDI **07** 19:54:19.5±2.3, 31°.82N×72°.06E, h10^{km}, ML3.2*
*NNC **07** 19:54:21.3±4.3, 32°.54N×70°.33E, h0^{km}, mb4.2, mpv3.9, Error ellipse: s-maj=74.6km s-min=33.5km az=102.0*
ISC 07 19:54:16.5±1.1**, 31°.87N**±0°.06×**71°.8E**±0°.1**, h35^{km}, n19, σ2^{s}.83**/26**, mb3.4**/5**, 2C-4D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DHRM	DHARAMSHALA	3.83	83	*e*P	Pn	19 55 15.7	+2.5
DHRM				*e*S	Sn	19 55 57.3	+0.2
DHRM				IAML		19 56 18.8	
	comp=E,151nm,0.5s						
DHRM				IAML		19 56 20.0	
	comp=N,186nm,0.6s						
SMLA	Simla	4.63	98	*e*P	Pn	19 55 26.1	+2.2
SMLA				*e*S	Sn	19 56 16.2	-0.2
SMLA				IAML		19 56 18.4	
	comp=N,115nm,0.3s						
SMLA				IAML		19 56 18.6	
	comp=E,121nm,0.2s						
KHET	Khetri	5.12	136	*e*P	Pn	19 55 34.4	+3.6
KHET				*e*S	Sn	19 56 27.9	-0.8
KHET				IAML		19 57 06.2	
	comp=N,13nm,0.6s						
KHET				IAML		19 57 06.2	
	comp=E,23nm,0.8s						
KUDL	Kundal	5.49	131	*e*P	Pn	19 55 39.2	+3.4
KUDL				*e*S	Sn	19 56 33.9	-3.9
KUDL				IAML		19 57 23.0	
	comp=N,17nm,0.2s						
KUDL				IAML		19 57 26.1	
	comp=E,16nm,0.3s						
DDI	Dehra Dun	5.57	104	*e*P	Pn	19 55 39.1	+2.2
DDI				*e*S	Sn	19 56 39.0	-0.7
DDI				IAML		19 56 44.2	
	comp=E,60nm,0.4s						
DDI				IAML		19 56 44.4	
SFK	Sufi-Kurgan	8.24	9	⇓Pn	Pn	19 56 17.3	+3.5
	comp=E,2.5nm,0.4s						
SFK				⇓Sn	Sn	19 57 49.8	+3.9
	comp=E,7.3nm,0.4s						
BHPL	Bhopal	9.93	149	*e*S	Sn	19 58 22.9	-4.0
MNAS	Manas	10.62	3	⇓Pn	Pn	19 56 46.2	0.0
	comp=E,2.7nm,0.4s						
MNAS				⇓Sn	Sn	19 58 41.7	-2.2
	comp=E,2.7nm,0.7s						
AAK	Ala-Archa	10.96	10	Pn	Pn	19 56 51.5	+0.5
	comp=E,0.4nm,0.3s,baz=185,slow=11,SNR=2.3						
AAK				Sn	Sn	19 58 49.6	-2.8
	comp=E,0.4nm,0.3s,baz=288,slow=13,SNR=3.9						
KK31	Karatay Array	11.27	355	⇑Pn	Pn	19 56 55.4	+0.4
	comp=E,2.2nm,0.5s,baz=181,slow=13,SNR=50						
KK31				⇑Sn	Sn	19 58 53.7	-5.9
	comp=E,1.5nm,0.5s,baz=175,slow=23,SNR=7.8						
MKAR	Makanchi Array	16.94	25	Pn	Pn	19 58 07.4	-3.4
	comp=E,0.1nm,0.3s,baz=203,slow=12,SNR=3.0						
KURBB	Kurchatov Arra	19.39	13	P	P	19 58 39.0	-0.3
	comp=E,0.0nm,0.3s,baz=206,slow=10,SNR=6.4						
BVAR	Borovoye Array	21.17	358	P	P	19 59 02.3	+3.7
	comp=E,0.3nm,0.4s,baz=177,slow=10.0,SNR=3.3						
ZALV	Zalesovo Beam	23.96	19	P	P	19 59 27.6	+0.3
	comp=E,0.6nm,0.4s,baz=209,slow=11,SNR=3.5						
CMAR	Chiang Mai Arr	27.86	112	P	P	19 59 59.7	-3.2
	comp=E,0.5nm,0.6s,baz=292,slow=8.4,SNR=2.9						
VRAC	Vranov	44.37	310	LR	LR	20 23 59.3	
	comp=E,12nm,18.5s,baz=240,slow=40						
JHJ	Hachijo jima 2	56.39	69	LR	LR	20 27 46.9	
	comp=E,32nm,20.3s,baz=93,slow=36						
WRA	Warramunga Arr	78.98	122	P	P	20 06 17.4	+0.4
	comp=E,0.4nm,0.7s,baz=320,slow=5.3,SNR=6.4						
ASAR	Alice Springs	81.06	125	P	P	20 06 28.9	+0.7
	comp=E,0.3nm,0.7s,baz=319,slow=5.6,SNR=4.7						

MAN 07 20:02:34.8, 16°.17N×119°.75E, h14^{km}, mb4.7, ML3.6, MS3.5, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOLP	Bolinao	0.27	37	*e*P	Pb	20 02 41.8	+0.5
BOLP				*e*S	Sb	20 02 47.8	+2.1
SCZP	Santa Cruz	0.42	158	*e*P	Pb	20 02 43.7	-0.3
SCZP				*e*S	Sb	20 02 50.4	+0.2
PCPH	Palayan	1.43	115	*e*P	Pn	20 02 59.2	-1.1
PCPH				*e*S	Sn	20 03 19.1	+0.1
ABRA	Dolores	1.74	32	*e*P	Pn	20 03 04.2	-0.3
ABRA				*e*S	Sn	20 03 27.0	+0.5
BALP	Baler	1.81	103	*e*P	Pn	20 03 05.6	+0.1
BALP				*e*S	Sb	20 03 29.9	-0.3
CAUP	Cauayan	2.13	69	*e*P	Pb	20 03 13.0	-0.2
CAUP				*e*S	Sg	20 04 05.0	+22
APYP	Conner	2.21	40	*e*P	Pn	20 03 12.3	+1.3
APYP				*e*S	Sn	20 03 39.0	+0.8

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*NIED **07** 20:03:00, 45°.60N×151°.50E, h14^{km}, Mw3.5 Best double couple: M$_0$1.97000×10^{14} NP1:φ$_s$29.00000°, δ49.00000°, λ60.00000°. NP2:φ$_s$250.00000°, δ49.00000°, λ119.00000°.*
*JMA **07** 20:03:40.3±0.6, 45°.62N×151°.51E, h30^{km}, M3.8*
*SKHL **07** 20:03:41.5±0.6, 44°.96N×151°.66E, h38^{km}±1^{km}, mb4.2/3*
ISC 07 20:03:43.6±4.0**, 44°.9N**±0°.1×**151°.6E**±0°.2**, h36^{km}, n21, σ1^{s}.27**/33**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	Kuril'sk	2.64	279	*e*P	Pn	20 04 22.5	-1.1
KUR				AMB	AMB	20 04 24.8	
	39nm,0.3s						
KUR				*e*S	Sn	20 04 52.8	-1.5
KUR				A	A	20 04 58.3	
	81nm,0.3s						
KUR				A	A	20 04 58.3	
	190nm,0.3s						
SHO	Shikotan	3.54	255	*e*P	Pn	20 04 36.0	+0.1
SHO				AMB	AMB	20 04 40.0	
	12nm,0.2s						
SHO				*e*S	Sn	20 05 17.0	+0.6
SHO				A	A	20 05 22.0	
	39nm,0.2s						
SHO				A	A	20 05 22.0	
	57nm,0.2s						
YUK	Yuzh-Kuril'sk	4.16	260	*e*P	Pn	20 04 45.0	+0.5
YUK				AMB	AMB	20 04 46.0	
	11nm,0.4s						
YUK				AMB	AMB	20 04 46.0	
	18nm,0.4s						
YUK				*e*S	Sn	20 05 33.0	+1.1
YUK				A	A	20 05 37.0	
	55nm,0.4s						
YUK				A	A	20 05 37.0	
	108nm,0.4s						
LAGR	Lagunnoye	4.21	261	*e*S	Sn	20 05 33.0	-0.1
GRPR	Tuman	4.24	260	*e*S	Sn	20 05 34.0	+0.3
NEM2	Nemuro 2	4.45	252	P	Pn	20 04 48.2	-0.2
NEM2				*e*S	Sn	20 05 38.8	-0.1
GLVR	Golovnino	4.48	257	*e*S	Sn	20 05 40.0	+0.3
JRA	Rausu	4.71	261	P	Pn	20 04 52.9	+1.0
JRA				*e*S	Sn	20 05 48.2	+3.0
JNK	Nakash	5.08	258	P	Pn	20 04 57.6	+0.5
JNK				*e*S	Sn	20 05 56.5	+2.0
JAK	Akkeshi	5.30	252	P	Pn	20 04 59.9	-0.2
JAK				*e*S	Sn	20 05 58.7	-1.1
JTKR	Abashiri--Toko	5.55	263	P	Pn	20 05 04.5	+0.9
JAR	Ashorobuto	5.83	257	P	Pn	20 05 08.5	+1.1
JAR				*e*S	Sn	20 06 14.4	+1.5
JOB	Onbets	5.92	253	P	Pn	20 05 09.0	+0.4
JOB				*e*S	Sn	20 06 14.4	-0.7
JMP	Maruseppu	5.93	264	P	Pn	20 05 10.1	+1.2
JCH	Churui	6.35	252	P	Pn	20 05 15.2	+0.6
JCH				*e*S	Sn	20 06 25.0	-0.8
MYR	Moyori	6.54	250	*e*P	Pn	20 05 18.2	+1.1
JNBK	Urakawa-nobuka	6.90	251	P	Pn	20 05 22.1	0.0
JNBK				*e*S	Sn	20 06 38.2	-1.1
JBT2	Biratori 2	6.97	256	*e*S	Sn	20 06 40.5	-0.6
JNB	Noboribetsu	8.00	256	*e*S	Sn	20 07 05.5	-0.7
JKB	Kayabe	8.23	252	P	Pn	20 05 39.9	-0.4
JKB				*e*S	Sn	20 07 07.8	-4.1
TYV	Tymovskoe	8.47	318	*e*P	Pn	20 05 43.3	-0.2

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*CSEM **07** 20:09:41.6±0.2, 38°.95N×42°.61E, h5^{km}, ML2.7, Error ellipse: s-maj=4.2km s-min=3.5km az=82.0*
*DDA **07** 20:09:41.7, 38°.99N×42°.68E, h7^{km}, Ml2.7*
*ISK **07** 20:09:41.1, 38°.96N×42°.55E, h15^{km}, ML2.3/3*
ISC 07 20:09:41.9±1.0**, 38°.97N**±0°.02×**42°.61E**±0°.02**, h7^{km}**±9^{km}**, n26, σ0^{s}.78**/46**, Turkey**

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

ADCV	**BITLIS_Adilcev**	0.18	150	*i* P	Pg	20 09 45.5	-0.2
ADCV				*i* S	Sg	20 09 49.0	+0.7
ADCV	**BITLIS_Adilcev**	0.18	150	P	Pg	20 09 45.5	-0.2
ADCV				S	Sg	20 09 49.0	+0.7
TUTA	**Tutak**	0.46	20	*i* P	Pg	20 09 50.8	-0.1
TUTA				*i* S	Sb	20 09 58.5	-1.2
TUTA	**Tutak**	0.46	20	P	Pg	20 09 50.8	-0.1
TUTA				S	Sb	20 09 58.5	-1.2
EKAR	**Karacoban**	0.51	305	*i* P	Pg	20 09 51.8	0.0
EKAR				*i* S	Sb	20 10 01.1	0.0
EKAR	**Karacoban**	0.51	305	P	Pg	20 09 51.8	0.0
GURO	**Guroymak-BITLI**	0.61	227	PG	Pg	20 09 52.8	-0.9
GURO				SG	Sg	20 10 01.6	-0.1
GURO	**Guroymak-BITLI**	0.61	227	*e*Pg	Pg	20 09 52.8	-0.9
GURO				*e*Sg	Sg	20 10 01.6	-0.1
AGRB	**Hanur-Agry**	0.68	26	PG	Pg	20 09 55.1	+0.1
AGRB				SG	Sb	20 10 05.6	-0.2
AGRB	**Hanur-Agry**	0.68	26	*e*Pg	Pg	20 09 55.1	+0.1
AGRB				*e*Sg	Sb	20 10 05.6	-0.2
GEVA	**Gevas**	0.74	151	*i* P	Pg	20 09 56.0	-0.2
GEVA				*i* S	Sn	20 10 09.0	-1.6
GEVA	**Gevas**	0.74	151	P	Pg	20 09 56.0	-0.2
TVAN	**Van**	0.76	125	*i* P	Pg	20 09 56.3	-0.3
TVAN				*i* S	Sg	20 10 05.9	-0.6
TVAN	**Van**	0.76	125	P	Pg	20 09 56.3	-0.3
TVAN				S	Sg	20 10 05.9	-0.6
EATA	**Eleskirt**	0.90	354	*i* P	Pg	20 09 58.6	-0.6
EATA				*i* S	Sb	20 10 12.6	+0.3
EATA	**Eleskirt**	0.90	354	P	Pg	20 09 58.6	-0.6
EATA				S	Sb	20 10 12.6	+0.3
VRTB	**Varto-Mus**	0.92	282	PG	Pg	20 09 58.5	-1.0
VRTB				SG	Sg	20 10 11.0	-0.4
VRTB	**Varto-Mus**	0.92	282	*e*Pg	Pg	20 09 58.5	-1.0
VRTB				*e*Sg	Sg	20 10 11.0	-0.4
CLDR	**Caldiran**	1.04	80	PN	Pb	20 10 02.2	-0.1
CLDR	**Caldiran**	1.04	80	*e*Pn	Pb	20 10 02.2	-0.1
SRTM	**Siirt_Merkez**	1.11	209	*i* P	Pg	20 10 02.7	-0.6
SRTM				*i* S	Sn	20 10 20.9	+1.2
SRTM	**Siirt_Merkez**	1.11	209	P	Pg	20 10 02.7	-0.6
ERZM	**Erzurum**	1.34	315	*i* P	Pg	20 10 07.9	+0.3
ERZM				*i* S	Sn	20 10 26.7	+1.2
ERZM	**Erzurum**	1.34	315	P	Pg	20 10 07.9	+0.3
ERZM				S	Sn	20 10 26.7	+1.2
SIRN	**S˜–rnak**	1.48	186	*i* P	Pg	20 10 10.3	+0.1
SIRN				*i* S	Sg	20 10 32.2	+2.9
SIRN	**S˜–rnak**	1.48	186	P	Pg	20 10 10.3	+0.1

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*DDA **07** 20:27:33.5, 39.°11N×29.°03E, h10^{km}, Ml2.7*

*ISK **07** 20:27:33.9, 39.°12N×29.°07E, h7^{km}, ML2.4/6*

*ISCJB **07** 20:27:34.1±0.4, 39.°08N±0.°04×29.°03E±0.°03, h10^{km}±2^{km}, Error ellipse: s-maj=6.2km s-min=3.6km az=174.8*

*CSEM **07** 20:27:34.0±0.1, 39.°10N×29.°04E, h8^{km}, ML2.4, Error ellipse: s-maj=2.3km s-min=1.7km az=168.0*

ISC 07 20:27:34.1±0.8**, 39.°10N**±0.°03×**29.°03E**±0.°02**, h11**^{km}±4^{km}**, n36, σ0.^{s}32**/56**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMAA	**Simav-Kutahya**	0.04	269	PG	Pg	20 27 36.1	-0.2
SMAA				SG	Sg	20 27 37.9	+0.1
SMAA	**Simav-Kutahya**	0.04	269	*i* Pg	Pg	20 27 36.1	-0.2
SMAA				*e*Sg	Sg	20 27 37.9	+0.1
SIMA	**Simav-Kutahya**	0.04	246	PG	Pg	20 27 36.2	-0.1
SIMA				SG	Sg	20 27 37.8	-0.1
SIMA	**Simav-Kutahya**	0.04	246	*i* Pg	Pg	20 27 36.2	-0.1
SIMA				*e*Sg	Sg	20 27 37.8	-0.1
SHAP	**Saphane-Kutahy**	0.17	118	PG	Pg	20 27 38.1	+0.3
SHAP				SG	Sg	20 27 40.7	+0.2
SHAP	**Saphane-Kutahy**	0.17	118	*e*Pg	Pg	20 27 38.1	+0.3
SHAP				*e*Sg	Sg	20 27 40.7	+0.2
DEMI	**Demirci**	0.25	257	*i* P	Pg	20 27 39.2	-0.1
DEMI				*i* S	Sg	20 27 42.9	0.0
DEMI	**Demirci**	0.25	257	P	Pg	20 27 39.2	-0.1
DEMI				S	Sg	20 27 42.9	0.0
GEDZ	**Gediz**	0.30	101	PG	Pg	20 27 39.4	-0.8
GEDZ	**Gediz**	0.30	101	*e*Pg	Pg	20 27 39.4	-0.8
GDZ	**Gediz**	0.35	92	*i* P	Pg	20 27 41.0	-0.1
GDZ				*i* S	Sg	20 27 46.4	+0.6
GDZ	**Gediz**	0.35	92	P	Pg	20 27 41.0	-0.1
GDZ				S	Sg	20 27 46.4	+0.6
TVSB	**Tavsanli**	0.48	44	PG	Pg	20 27 43.1	-0.4
TVSB	**Tavsanli**	0.48	44	*e*Pg	Pg	20 27 43.1	-0.4
KULA	**Kula-Manisa**	0.65	207	PG	Pg	20 27 46.8	0.0
KULA	**Kula-Manisa**	0.65	207	*e*Pg	Pg	20 27 46.8	0.0
DURS	**Dursunbey**	0.66	319	*i* P	Pg	20 27 46.5	-0.5
DURS				*i* S	Sg	20 27 56.0	+0.3
DURS	**Dursunbey**	0.66	319	P	Pg	20 27 46.5	-0.5
DURS				S	Sg	20 27 56.0	+0.3
MANT	**Manisa**	0.71	212	*i* P	Pg	20 27 47.9	0.0
MANT				*i* S	Sg	20 27 57.0	-0.3
MANT	**Manisa**	0.71	212	P	Pg	20 27 47.9	0.0
MANT				S	Sg	20 27 57.0	-0.3
STEP	**BALIKESIR_Sava**	1.06	285	*i* P	Pb	20 27 54.3	-0.1
STEP				*i* S	Sb	20 28 08.4	+0.1
STEP	**BALIKESIR_Sava**	1.06	285	P	Pb	20 27 54.3	-0.1
STEP				S	Sb	20 28 08.4	+0.1
KCTX	**Karacabey (Bur**	1.27	336	PN	Pg	20 27 58.8	+0.2
KCTX	**Karacabey (Bur**	1.27	336	*e*Pn	Pg	20 27 58.8	+0.2
BORA	**Eskisehir**	1.35	54	PN	Pn	20 27 58.9	0.0
BORA	**Eskisehir**	1.35	54	*i* P	Pn	20 27 58.6	-0.3
BORA				*i* S	Sn	20 28 16.9	0.0
BORA	**Eskisehir**	1.35	54	P	Pn	20 27 58.6	-0.3
BORA	**Eskisehir**	1.35	54	*e*Pn	Pn	20 27 58.9	0.0
BORA				S	Sn	20 28 16.9	0.0
ESKT	**Eskisehir**	1.47	73	*i* P	Pb	20 28 01.2	-0.3
ESKT				*i* S	Sn	20 28 20.0	+0.1
SEYT	**Eskypehyr**	1.47	73	P	Pb	20 28 01.2	-0.3
SEYT				S	Sn	20 28 20.0	+0.1
YLV	**Yalova**	1.49	10	PN	Pb	20 28 01.5	-0.3
YLV	**Yalova**	1.49	10	*e*Pn	Pb	20 28 01.5	-0.3
SBT5	**Esenkoy-Cinarc**	1.53	356	PN	Pb	20 28 02.3	-0.2
SBT5	**Esenkoy-Cinarc**	1.53	356	*e*Pn	Pb	20 28 02.3	-0.2
GULT	**Gulveren**	1.75	40	PN	Pn	20 28 05.2	+0.7
GULT	**Gulveren**	1.75	40	*e*Pn	Pn	20 28 05.2	+0.7

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*ISCJB **07** 20:32:24.2±0.6, 59.°67S±0.°09×150.°7W±0.°2, h10^{km}, mb4.5/8, MS4.5/23, Error ellipse: s-maj=18.0km s-min=11.7km az=156.4*

*IDC **07** 20:32:25.2±1.2, 59.°72S×150.°76W, h0^{km}, mb4.0/4, mb1 4.2/4, mb1mx3.9/36, mbtmp4.0/4, MS4.4/23, Ms1 4.4/23, ms1mx4.3/36, Error ellipse: s-maj=47.0km s-min=27.8km az=47.0*

*NEIC **07** 20:32:26.8±0.4, 59.°52S×150.°67W, h10^{km}, mb5.0/5, Error ellipse: s-maj=15.9km s-min=14.8km az=82.0*

*GCMT **07** 20:32:26.8±0.2, 59.°84S×150.°33W, h26^{km}±1^{km}, MW5.1/92, Moment Tensor Solution. s40,c49; s92,c137; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.31±.19; $M_{\theta\theta}$3.65±.18; $M_{\phi\phi}$-3.35±.14; $M_{r\theta}$0.77±.31; $M_{\theta\phi}$3.75±.12; $M_{\phi r}$2.43±.32; Best double couple: $M_0$5.73400×10^{16} NP1:ϕ_s202.00000°, δ87.00000°, λ-154.00000°. NP2: ϕ_s111.00000°, δ64.00000°, λ-3.00000°. Principal axes: T 5.7700, Plg16.0000°, Azm334.0000°; N -0.0800, Plg63.0000°, Azm208.0000°; P -5.6980, Plg20.0000°, Azm70.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 07 20:32:26.6±0.7**, 59.°6S**±0.°1×**150.°6W**±0.°2**, h10**^{km}**, n60, σ1.^{s}12**/32**, mb4.4**/8**, MS4.4**/23**, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBA	**Scott Base**	23.00	202	*e*P	P	20 37 33.1	+2.2
	81nm,1.9s						
VNDA	**Vanda**	23.81	203	LR	LR	20 44 35.1	
	comp=Z,328nm,18.8s,baz=71,slow=31						
VNDA	**Vanda**	23.81	203	*e*P	P	20 37 41.4	+2.4
URZ	**Urewera**	29.62	302	LR	LR	20 47 55.3	
	comp=Z,631nm,20.4s,baz=182,slow=31						
QSPA	**South Pole Qui**	30.56	180	P	P	20 38 40.0	0.0
	3.7nm,1.0s,baz=53,slow=6.8,SNR=6.1						
QSPA				LR	LR	20 48 45.4	
	comp=Z,840nm,21.0s,baz=61,slow=32						
TBI	**Tubuai**	36.21	2	*e*S	S	20 45 09.4	+0.2
	115nm,28.2s						
TBI				*e*LQ	LQ	20 47 38.3	
	465nm,27.2s						
TBI				*e*LR	LR	20 49 09.0	
	1µm,28.0s,baz=190						
TBI	**Tubuai**	36.21	2	*e*T	T	21 17 54.3	
	35nm,0.3s						
PMSA	**Palmer Station**	37.71	136	LR	LR	20 51 35.9	
	comp=Z,531nm,20.7s,baz=247,slow=30						
RKT	**Rikitea**	38.06	24	*e*LQ	LQ	20 48 23.3	
	738nm,30.8s						
RKT	**Rikitea**	38.06	24	*e*T	T	21 20 08.7	
	3.9nm,0.2s						
RAR	**Rarotonga**	38.89	346	LR	LR	20 52 14.9	
	comp=Z,588nm,18.3s,baz=186,slow=30						
TVO	**Taravao**	41.75	2	*e*T	T	21 24 49.4	
	1.0nm,0.3s						
PPT2	**Papeete2**	41.94	1	*e*S	S	20 46 35.4	-0.2
	133nm,24.5s						
PPT2				*e*LQ	LQ	20 49 54.1	
	1µm,28.8s						
PPT2				*e*LR	LR	20 51 55.9	
	1µm,25.2s,baz=191						
PPT	**Papeete**	41.96	1	LR	LR	20 53 12.7	
	comp=Z,420nm,20.7s,baz=184,slow=30						
RPN	**Rapa Nui**	42.98	59	LR	LR	20 53 58.5	
	comp=Z,867nm,21.3s,baz=237,slow=30						
VAH	**Vaihoa**	44.33	4	*e*T	T	21 28 02.2	
	102nm,0.3s						
VNA3	**Neumayer Olymp**	46.62	164	P	P	20 40 53.0	-1.2
SNAA	**Sanae**	47.12	167	P	P	20 40 56.8	-1.3
SNAA	**Sanae**	47.12	167	P	P	20 40 56.6	-1.6
	1.1nm,0.9s,baz=200,slow=9.5,SNR=7.1						
SNAA				LR	LR	21 00 14.2	
	comp=Z,283nm,18.1s,baz=224,slow=36						
SNAA	**Sanae**	47.12	167	*e*P	P	20 40 56.3	-1.8
	29nm,2.0s						
VNA1	**Neumayer--Stat**	47.36	164	P	P	20 40 57.0	-2.9
DZM	**Mont Dzumac**	48.18	302	LR	LR	20 58 45.1	
	comp=Z,246nm,18.3s,baz=176,slow=33						
DZM	**Mont Dzumac**	48.18	302	*e*S	S	20 48 06.2	+0.2
	64nm,27.2s						
DZM				*e*LR	LR	20 54 47.5	
	680nm,28.7s						
AFI	**Afiamalu**	48.22	332	LR	LR	20 57 59.4	
	comp=Z,494nm,19.4s,baz=170,slow=32						
MAW	**Mawson**	50.77	196	LR	LR	21 00 30.0	
	comp=Z,273nm,20.2s,baz=180,slow=33						
TAOE	**Nuku Hiva Isla**	51.23	13	*e*LR	LR	20 55 27.0	
	403nm,25.6s						
STKA	**Stephens Creek**	52.00	271	LR	LR	20 59 06.9	
	comp=Z,375nm,21.2s,baz=155,slow=31						
HNR	**Honiara**	62.21	302	LR	LR	21 04 09.8	
	comp=Z,156nm,21.4s,baz=169,slow=31						
AS01	**Alice Springs**	62.59	270	*e*P	P	20 42 49.8	-0.9
AS31	**Alice Springs**	62.61	270	*e*P	P	20 42 49.6	-1.3
	2.1nm,1.3s						
ASAR	**Alice Springs**	62.61	270	P	P	20 42 50.4	-0.5
	1.7nm,0.8s,baz=139,slow=6.3,SNR=16						
ASAR				LR	LR	21 06 53.5	
	comp=Z,538nm,18.4s,baz=155,slow=33						
H01W1	**Cape Leeuwin H**	63.15	247	T	T	21 51 52.0	
	baz=144						
H01W2	**Cape Leeuwin H**	63.16	247	T	T	21 51 53.8	
	baz=144						
H01W3	**Cape Leeuwin H**	63.17	247	T	T	21 51 54.4	
	baz=144						
NWAO	**Narrogin (SRO)**	63.31	250	LR	LR	21 04 18.5	
	comp=Z,474nm,21.1s,baz=9.0,slow=30						
PB10	**IPOC Station P**	65.00	94	*e*P	P	20 43 07.6	+1.0
	68nm,1.3s						
WR1	**Warramunga Arr**	65.49	272	*e*P	P	20 43 09.3	-0.4
	24nm,1.7s						
WRA	**Warramunga Arr**	65.49	272	P	P	20 43 09.3	-0.4
	2.4nm,1.1s,baz=156,slow=6.2,SNR=4.1						
FITZ	**Fitzroy Crossi**	71.46	266	LR	LR	21 10 50.4	
	comp=Z,331nm,21.5s,baz=144,slow=32						
NNA	**Nana**	71.50	82	LR	LR	21 07 32.0	
	comp=Z,302nm,19.1s,baz=214,slow=29						
BATI	**Baumata**	79.14	268	LR	LR	21 18 18.7	
	comp=Z,496nm,18.1s,baz=179,slow=35						
ROSC	**El Rosal**	87.22	76	LR	LR	21 16 37.1	
	comp=Z,186nm,20.9s,baz=179,slow=30						
LPIG	**La Paz**	89.69	36	LR	LR	21 17 52.9	
	comp=Z,84nm,18.1s,baz=229,slow=30						
LEM	**Lembang**	90.11	256	LR	LR	21 20 12.4	
	comp=Z,153nm,20.5s,baz=160,slow=32						
BOSA	**Boshof**	92.07	176	LR	LR	21 22 02.6	
	comp=Z,549nm,21.8s,baz=188,slow=32						
PCRV	**Puerto La Cruz**	96.63	81	LR	LR	21 24 12.3	
	comp=Z,342nm,18.9s,baz=200,slow=32						
EYAK	**Cordova Ski Ar**	119.86	3	*e*PKPdf	PKPdf	20 51 15.7	+0.3
IL1	**Eielson Array**	124.07	2	*e*PKPdf	PKPdf	20 51 23.8	+0.4
ILAR	**Eielson Array**	124.07	2	PKP	PKPdf	20 51 24.4	+0.9
	0.7nm,1.0s,baz=215,slow=3.0,SNR=4.8						
ILB	**Eielson Array**	124.07	2	*e*PKPdf	PKPdf	20 51 23.7	+0.3
MK01	**Makanchi Array**	146.77	271	*e*PKPdf	PKPdf	20 52 06.5	+0.6
MK31	**Makanchi Array**	146.79	271	*e*PKPdf	PKPdf	20 52 06.5	+0.6
MK32	**Makanchi Array**	146.79	271	*e*PKPdf	PKPbc	20 52 06.9	-0.9
MKAR	**Makanchi Array**	146.79	271	PKPbc	PKPbc	20 52 06.9	-0.9
	5.0nm,1.1s,baz=130,slow=2.7,SNR=14						
MKAR	**Makanchi Array**	146.79	271	*e*PKPdf	PKPdf	20 52 06.2	+0.3
MAKZ	**Makanchi**	146.96	271	*e*PKPdf	PKPbc	20 52 07.5	-0.8
ESDC	**Sonseca Array**	151.07	119	PKPbc	PKPbc	20 52 19.0	+0.1
	1.8nm,0.8s,baz=221,slow=1.4,SNR=12						
ES19	**SONSECA Array**	151.12	119	*e*PKPdf	PKPdf	20 52 13.3	0.0
ES19				*e*PKPbc	PKPbc	20 52 19.1	0.0
KURBB	**Kurchatov Arra**	151.15	274	PKPbc	PKPbc	20 52 18.5	-0.2
	2.0nm,1.1s,baz=133,slow=2.2,SNR=6.1						
KURK	**Kurchatov**	151.16	274	*e*PKPbc	PKPbc	20 52 18.5	-0.2

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*JSN **07** 20:32:28.6±2.2, 18.°68N×70.°51W, h0^{km}±999^{km}*

*ISCJB **07** 20:32:35.1±0.5, 18.°24N±0.°01×71.°12W±0.°01, h16^{km}±3^{km}, mb5.1/512, MS4.4/44, Error ellipse: s-maj=2.5km s-min=1.6km az=28.9*

*MOS **07** 20:32:37.3±0.8, 18.°24N×71.°18W, h31^{km}, mb5.3/85, MS4.6/7, Error ellipse: s-maj=5.5km s-min=4.1km az=102.9*

*GCMT **07** 20:32:38.2±0.3, 18.°28N×71.°13W, h34^{km}±1^{km}, MW5.0/94, Moment Tensor Solution. s36,c48; s94,c138; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.36±.20; $M_{\theta\theta}$-4.14±.13; $M_{\phi\phi}$1.79±.14; $M_{r\theta}$1.99±.13; $M_{\theta\phi}$1.16±.09; $M_{\phi r}$-0.24±.13; Best double couple: $M_0$3.91900×10^{16} NP1:ϕ_s94.00000°, δ61.00000°, λ81.00000°. NP2: ϕ_s291.00000°, δ30.00000°, λ105.00000°. Principal axes: T 2.9280, Plg73.0000°, Azm343.0000°; N 1.9910, Plg8.0000°, Azm98.0000°; P -4.9090, Plg15.0000°, Azm190.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **07** 20:32:38.2±0.4, 18.°24N×71.°14W, h27^{km}±3^{km}, mb5.1/299 Error ellipse: s-maj=2.2km s-min=1.4km az=201.0*

NEIC Felt [IV] at Barahona, [III] at Santiago and Santo Domingo and [II] at San Cristobal. Also felt at Azua, Constanza, Cotui, Las Matas de Farfan, La Vega, Mao, Pedernales, Peralta, San Juan de la Maguana, Sosua, Tenares and Tireo. Felt at Petionville and Port-au-Prince, Haiti.

*IDC **07** 20:32:41.0±1.8, 18.°23N×71.°17W, h51^{km}±16^{km}, mb4.6/41, mb1 4.7/45, mb1mx4.7/52, mbtmp4.9/45, ML3.3/2, MS4.2/34, Ms1 4.2/34, ms1mx4.1/49, Error ellipse: s-maj=9.7km s-min=9.1km az=32.0*

ISC 07 20:32:37.8±0.5**, 18.°21N**±0.°03×**71.°14W**±0.°03**, h25**^{km}±3^{km}**, h25**^{km}**:pP-P, n1595, σ1.^{s}17**/1634**, mb5.1**/514**, MS4.4**/46**, 46C-24D, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BANI	**BANI**	0.76	76	*e*Pg	Pb	20 32 52.5	0.0
NQWLB	**Fermate**	1.15	285	*e*Pn	Pn	20 32 57.2	-1.2
SDD	**Santo Domingo**	1.19	78	*e*Pn	Pn	20 32 58.9	+0.1
LGNH	**LØogne**	1.43	283	*e*Pn	Pn	20 33 01.8	-0.2
GRTK	**Grand Turk**	3.29	0	*e*Pn	Pn	20 33 27.4	-0.3
MPR	**Mayaguez**	3.80	89	*e*Pn	Pn	20 33 35.7	+1.0
AGP	**Aguadilla**	3.80	86	*e*Pn	Pn	20 33 37.4	+2.6
CRPR	**Cabo Rojo, PR**	3.84	92	*e*Pn	Pn	20 33 34.9	-0.3
GTBY	**Guantanamo Bay**	4.13	295	*e*Pn	Pn	20 33 38.5	-0.7
AOPR	**Arecibo Observ**	4.17	87	*e*Pn	Pn	20 33 40.8	+0.9
AOPR				*e*Sn	Sb	20 34 34.9	-5.5
OBIP	**Obispado Ponce**	4.31	91	*e*Pn	Pn	20 33 42.8	+1.0
EMPR	**Esperanza - Ma**	4.39	86	*e*Pn	Pn	20 33 44.9	+2.1
ICMP	**Isla Caja de M**	4.40	93	*e*Pn	Pn	20 33 44.1	+1.1
SJG	**San Juan**	4.74	90	P	Pn	20 33 48.9	+1.2
	156nm,0.3s,baz=272,slow=11,SNR=89						
SJG				S	Sn	20 34 45.6	+3.7
	109nm,0.3s,baz=139,slow=20,SNR=3.5						
SJG				LR	LR	20 35 53.5	
	comp=Z,4µm,20.9s,baz=276,slow=40						
SJG	**San Juan**	4.74	90	*e*Pn	Pn	20 33 48.6	+0.8
SJG				S	Sn	20 34 45.6	+3.7
SJG	**San Juan**	4.74	90	*e*P	Pn	20 33 51.5	+3.8
CBYP	**Canovanas**	5.02	88	*e*Pn	Pn	20 33 52.8	+1.2
HUMP	**Col San Antoni**	5.03	90	*e*Pn	Pn	20 33 52.9	+1.2
MTP	**Monte Pirata**	5.31	90	*e*Pn	Pn	20 33 56.6	+1.1
GWJ	**Greenwich**	5.32	269	⇓*i*P	Pn	20 33 56.0	+0.3
GWJ				*i* S	Sn	20 35 00.5	+4.2
HOJ	**Hope**	5.34	269	*i* P	Pn	20 33 56.9	+1.0
STH	**Stony Hill**	5.39	270	⇓*i*P	Pn	20 33 57.3	+0.6
CUPR	**Culebra, Puert**	5.56	88	*e*Pn	Pn	20 33 58.2	-0.8
PCJ	**Portland Cotta**	5.75	266	⇑*i*P	Pn	20 34 02.5	+0.9
BBJ	**Bamboo Saint A**	5.83	273	*i* PA		20 34 03.2	
STVI	**Saint Thomas**	5.88	88	*e*Pn	Pn	20 34 04.2	+0.9
STVI				*e*Sn	Sn	20 35 10.8	+1.0
MTDJ	**Mount Denham**	6.08	271	*e*Pn	Pn	20 34 06.0	-0.2
CDVI	**St. Croix**	6.08	93	*e*Pn	Pn	20 34 06.0	0.0
MCJ	**Malvern**	6.24	268	*i* P	Pn	20 34 08.9	+0.6
MCJ				*i* S	Sn	20 35 25.8	+7.0
ABVI	**Anegada Island**	6.48	84	*e*Pn	Pn	20 34 12.9	+1.3
SABA	**Saba**	7.54	93	*e*Pn	Pn	20 34 27.0	+0.8
SABA	**Saba**	7.54	93	*e*P	Pn	20 34 26.4	+0.2
SMRT	**St. Maarten**	7.67	90	*e*Pn	Pn	20 34 27.7	-0.3
SMRT	**St. Maarten**	7.67	90	*e*P	Pn	20 34 28.9	+1.0
SEUS	**St. Eustatius**	7.80	94	*e*Pn	Pn	20 34 29.9	+0.1
SEUS	**St. Eustatius**	7.80	94	*e*P	Pn	20 34 18.3	-11
SEUS	**St. Eustatius**	7.80	94	*e*P	Pn	20 34 29.2	-0.5
NVRH	**Round Hill, Ne**	8.20	96	*e*P	Pn	20 34 38.4	+3.1
NEV	**Hard Times**	8.24	96	*e*P	Pn	20 34 37.9	+2.2
CBCY	**The Bluff, Cay**	8.30	282	*e*Pn	Pn	20 34 35.6	-0.9
CODC	**Agustˆ›n Codaz**	8.52	196	*e*P	Pn	20 34 41.2	+1.6
LCCY	**Blossom Villag**	8.59	281	*e*Pn	Pn	20 34 41.0	+0.5
MLYT	**Lee’s Yard**	8.67	98	*e*P	Pn	20 34 42.1	+0.4
ANWB	**Willy Bob**	8.92	92	*e*Pn	Pn	20 34 44.9	-0.2
ANWB	**Willy Bob**	8.92	92	*e*P	Pn	20 34 46.2	+1.1
BPA	**Boggy Peak**	8.93	96	*e*P	Pn	20 34 47.3	+2.1
SJCC	**San Jacinto, C**	9.14	206	*e*P	Pn	20 34 50.6	+2.4
LZG	**Guadaloupe-1**	9.18	102	*e*P	Pn	20 34 49.2	+0.5
SDV	**Santo Domingo**	9.28	177	P	Pn	20 34 52.8	+2.6
	7.7nm,0.3s,baz=3.2,slow=8.6,SNR=12						
SDV				S	Sn	20 36 30.2	-3.7
	8.2nm,0.3s,baz=354,slow=19,SNR=4.9						
SDV				LR	LR	20 38 54.7	
	comp=Z,4µm,21.2s,baz=22,slow=40						
SDV	**Santo Domingo**	9.28	177	*e*Pn	Pn	20 34 51.4	+1.2
SDV				S	Sn	20 36 30.2	-3.7
SDV	**Santo Domingo**	9.28	177	*e*P	Pn	20 34 52.6	+2.5
TBG	**Guadaloupe-3**	9.38	103	*e*P	Pn	20 34 43.8	-7.6
TBG	**Guadaloupe-3**	9.38	103	*e*P	Pn	20 34 52.2	+0.8
FSCY	**Frank Sound, G**	9.58	278	*e*Pn	Pn	20 34 53.4	-0.8
BBL	**Barber’s Block**	9.63	105	*e*P	Pn	20 34 55.3	+0.4
MDPO	**Dominica; Chan**	9.63	104	*e*P	Pn	20 34 55.5	+0.6
MDPV	**Dominica, Penn**	9.65	104	*e*P	Pn	20 34 58.9	+3.8
MDVC	**Dominica, Viel**	9.66	104	*e*P	Pn	20 34 55.9	+0.6
MGG	**Marie-Galante**	9.66	102	*e*P	Pn	20 34 55.0	-0.3
WBCY	**West Bay, Gran**	9.79	278	*e*Pn	Pn	20 34 57.3	+0.3
DLPL	**La Plaine**	9.90	105	*e*P	Pn	20 35 06.7	+8.2
PCM	**Pelee Case Pet**	10.10	108	*e*P	Pn	20 35 02.1	+0.8
OCAC	**Ocana**	10.13	192	*e*P	Pn	20 35 03.5	+1.6
CXM	**Morne La Croix**	10.14	108	*e*P	Pn	20 35 07.3	+5.3
GBMF	**Grand Be**	10.15	108	*e*P	Pn	20 35 04.0	+2.0
BAMF	**Morne Balai**	10.16	108	*e*P	Pn	20 35 02.8	+0.6
PCRV	**Puerto La Cruz**	10.17	141	P	Pn	20 35 04.2	+2.0
	15nm,0.3s,baz=335,slow=4.4,SNR=62						
PCRV				S	Sn	20 36 48.9	-6.7
	9.4nm,0.3s,baz=311,slow=19,SNR=4.3						
PCRV				LR	LR	20 38 46.4	
	comp=Z,952nm,21.5s,baz=297,slow=36						
FDF	**Fort de France**	10.18	108	*e*Pn	Pn	20 35 00.7	-1.8
FDF	**Fort de France**	10.18	108	*e*P	Pn	20 35 01.7	-0.8
FDF	**Fort de France**	10.18	108	*e*S	Sn	20 36 47.9	-8.1
FDF	**Fort de France**	10.18	108	*e*P	Pn	20 35 00.7	-1.8
BIM	**Bigot**	10.34	109	*e*P	Pn	20 35 04.1	-0.4
BIM	**Bigot**	10.34	109	*e*S	Sn	20 36 49.9	-10
TRMF	**Trois Ilets**	10.35	109	*e*P	Pn	20 35 04.3	-0.3
MOTC	**Monteria, Cord**	10.35	206	*e*P	Pn	20 35 06.0	+1.3
ZAM	**Aeronautique**	10.35	109	*e*P	Pn	20 35 04.1	-0.6
LPMF	**Morne Lapointe**	10.41	109	*e*P	Pn	20 35 05.3	-0.2
MVM	**Montagne Vaucl**	10.48	109	*e*P	Pn	20 35 06.8	+0.3
SVB	**Belmont**	10.71	116	*e*Pn	Pn	20 35 08.1	-1.6
SVB	**Belmont**	10.71	116	*e*P	Pn	20 35 08.6	-1.0
SVV	**Soufriere Volc**	10.71	116	*e*P	Pn	20 35 09.9	+0.2
SSV	**Crater Summit**	10.73	115	*e*P	Pn	20 35 10.0	0.0
MCLT	**Moule a Chique**	10.78	113	*e*P	Pn	20 35 20.8	+10
SVCV	**St. Vincent, C**	10.80	116	*e*P	Pn	20 35 09.3	-1.6
GRSS	**Sisters**	10.91	121	*e*P	Pn	20 35 11.4	-0.9
PAMC	**Pamplona, Colo**	10.91	188	*e*P	Pn	20 35 11.7	-1.1
GRHS	**Sauteurs**	10.92	122	*e*P	Pn	20 35 11.6	-0.9
PRVC	**Isla de Provid**	10.95	245	*e*P	Pn	20 35 14.7	+1.8
GRGR	**Grenville**	10.96	122	*e*Pn	Pn	20 35 12.0	-1.1
GRGR	**Grenville**	10.96	122	*e*P	Pn	20 35 12.4	-0.7
ZARC	**Zaragoza, Cauc**	11.25	199	*e*P	Pn	20 35 16.4	-0.6
CAPC	**Capurgana**	11.27	213	*e*P	Pn	20 35 15.8	-1.4
BRRC	**Barranca, Sant**	11.31	193	*e*P	Pn	20 35 17.0	-0.9
BARC	**Barichara**	11.71	190	*e*P	Pn	20 35 23.6	0.0
TAMC	**Tame, Arauca**	11.72	183	*e*P	Pn	20 35 17.6	-5.9
061Z	**Ochoppi**	11.83	312	*e*Pn	Pn	20 35 23.1	-1.8
PTBC	**PUERTO BERRIO,**	12.04	196	*e*P	Pn	20 35 29.4	+1.5
TRN	**Trinidad (W)**	12.05	127	*e*P	Pn	20 35 31.2	+3.2
DBBC	**Dabeiba**	12.17	205	*e*P	Pn	20 35 32.4	+2.6
060A	**Indiantown**	12.23	318	*e*Pn	Pn	20 35 29.4	-1.0
BBGH	**Gun Hill**	12.23	113	*e*Pn	Pn	20 35 31.8	+1.3
BCIP	**Isla Barro Col**	12.33	224	*e*Pn	Pn	20 35 30.3	-1.6
BCIP	**Isla Barro Col**	12.33	224	*e*P	Pn	20 35 29.6	-2.3
TOSP	**Speyside**	12.34	122	*e*P	Pn	20 35 32.8	+0.9
RUSC	**La Rusia**	12.38	189	*e*Pn	Pn	20 35 33.3	+0.3
RUSC	**La Rusia**	12.38	189	*e*P	Pn	20 35 35.8	+2.8
TBH	**Brigand Hill**	12.41	127	*e*P	Pn	20 35 32.1	-0.9
059Z	**Ave Maria**	12.50	312	P	Pn	20 35 33.4	-0.8
	baz=128						
HELC	**Santa Helena**	12.69	200	*e*Pn	Pn	20 35 39.5	+2.5
HELC	**Santa Helena**	12.69	200	*e*P	Pn	20 35 40.5	+3.5
059A	**Moore Haven**	12.70	315	P	Pn	20 35 35.4	-1.4
	baz=131						
059A	**Moore Haven**	12.70	315	*e*Pn	Pn	20 35 34.6	-2.2
YOPC	**Yopal, Colombi**	12.84	186	*e*P	Pn	20 35 38.8	-0.1
NORC	**Norcasia**	13.08	197	*e*P	Pn	20 35 42.9	+0.7
058A	**Arcadia**	13.21	314	P	Pn	20 35 43.2	-0.5
	baz=130						
859A	**Kempfer Cattle**	13.29	319	P	Pn	20 35 43.8	-1.1
	baz=136						
SOLC	**Bahia Solano**	13.39	208	*e*P	Pn	20 35 47.0	+0.7
958A	**Wauchula**	13.51	316	P	Pn	20 35 46.4	-1.6
	baz=132						
GUYC	**Guyana, Colomb**	13.56	198	*e*P	Pn	20 35 42.8	-6.2
ROSC	**El Rosal**	13.64	194	P	Pn	20 35 52.5	+2.4
	1.7nm,0.3s,baz=18,slow=13,SNR=24						
ROSC				S	Sn	20 38 23.6	+2.4
	1.1nm,0.3s,baz=180,slow=20,SNR=3.2						
ROSC	**El Rosal**	13.64	194	*e*Pn	Pn	20 35 51.1	+1.0
ROSC				S	Sn	20 38 23.6	+2.4
ROSC	**El Rosal**	13.64	194	*e*P	Pn	20 35 52.2	+2.1
DWPF	**Disney Wildern**	13.66	318	P	Pn	20 35 49.3	-0.6
	baz=134						
DWPF	**Disney Wildern**	13.66	318	*e*Pn	Pn	20 35 48.8	-1.2
858A	**St. Cloud**	13.69	319	P	Pn	20 35 49.7	-0.5
	baz=135						
CHIC	**Chingaza**	13.73	191	*e*P	Pn	20 35 54.6	+3.3
957A	**Wimauma**	13.89	315	P	Pn	20 35 52.4	-0.7
	baz=130						
957A	**Wimauma**	13.89	315	*e*Pn	Pn	20 35 52.0	-1.1
ESPN	**Las Esperanzas**	14.03	247	*e*Pn	Pn	20 35 57.6	+2.5
758A	**Lake Helen**	14.12	321	P	Pn	20 35 55.8	-0.4
	baz=137						
TOLC	**Tolima**	14.14	197	*e*P	Pn	20 35 59.3	+2.4
PLMC	**San Josˆ' del**	14.14	201	*e*P	Pn	20 35 58.1	+1.4
VILC	**Villavicencio,**	14.23	190	*e*P	Pn	20 35 58.7	+0.8
857A	**Zephyrhills**	14.28	317	P	Pn	20 35 57.5	-0.9
	baz=132						
658A	**Bunnell**	14.49	322	P	Pn	20 36 00.5	-0.8
	baz=138						
658A	**Bunnell**	14.49	322	*e*Pn	Pn	20 35 58.5	-2.8
757A	**Oxford**	14.64	319	P	Pn	20 36 02.0	-1.3
	baz=135,SNR=8.0						
657A	**Interlachen**	14.97	321	P	Pn	20 36 06.9	-0.9
	baz=137						
HDC	**Heredia**	14.99	239	*e*Pn	Pn	20 36 07.2	-1.1
	86nm,0.6s						
YOTC	**Yotoco, Valle**	15.03	200	*e*P	Pn	20 36 10.4	+1.7
SJAC	**San Juan de Ar**	15.10	191	*e*P	Pn	20 36 11.3	+1.7
557A	**Orange Park**	15.21	323	P	Pn	20 36 10.2	-0.7

	baz=138						
656A	Willston	15.23	319	P	Pn	20 36 10.6	-0.5
	baz=134						
656A	Willston	15.23	319	ePn	Pn	20 36 08.7	-2.5
	217nm,1.4s						
BBSR	BB Station	15.25	21	ePn	Pn	20 36 10.3	-1.2
	56nm,0.8s						
ESTN	Estel	15.52	253	ePn	P	20 36 17.3	-2.0
	76nm,0.9s						
HORQ	Saladito	15.59	201	eP	Pn	20 36 17.7	+1.5
556A	Lake Butler	15.60	321	P	Pn	20 36 15.9	-0.1
	baz=136						
655A	Horseshoe Beac	15.78	318	P	Pn	20 36 17.7	-0.6
	baz=133,SNR=6.8						
456A	Hilliard	15.91	324	ePn	Pn	20 36 20.0	0.0
	112nm,1.0s						
MARP	Paez Belalcaza	15.98	198	eP	P	20 36 23.9	-0.7
BETC	Betania	15.99	196	eP	Pn	20 36 18.1	-3.2
555A	McAlpin	16.02	320	P	Pn	20 36 20.8	-0.7
	baz=135,SNR=14						
555A	McAlpin	16.02	320	ePn	Pn	20 36 20.3	-1.1
	144nm,1.1s						
TGUH	Tegucigalpa,Un	16.04	257	ePn	Pn	20 36 21.6	-0.1
	82nm,1.0s						
257A	Skidaway Islan	16.36	329	ePn	Pn	20 36 25.5	-0.2
	209nm,1.3s						
554A	Perry	16.44	318	P	Pn	20 36 27.4	+0.6
	baz=133						
POPC	Popayan, Colom	16.49	200	eP	Pn	20 36 28.6	+0.9
455A	Stateville	16.50	321	P	Pn	20 36 27.4	-0.2
	baz=136						
PCON	Cinco Dias	16.60	199	eP	P	20 36 31.0	-0.8
GRGC	Isla de Gorgon	16.61	205	eP	Pn	20 36 26.3	-2.7
RGRS	Roger Stewart	16.75	333	ePn	Pn	20 36 30.1	-0.6
	711nm,1.0s						
CSU	Charleston Sou	16.77	333	ePn	Pn	20 36 30.2	-0.7
256A	Glennville	16.80	327	P	Pn	20 36 31.9	+0.5
	baz=142						
355A	Pearson	16.84	323	P	Pn	20 36 32.6	+0.8
	baz=138						
454A	Quitman	16.84	320	P	Pn	20 36 32.6	+0.7
	baz=135						
SOTA	Rioblanco	16.85	199	eP	P	20 36 33.9	-0.6
NHSC	New Hope	16.91	333	P	Pn	20 36 32.9	+0.1
	baz=149						
NHSC	New Hope	16.91	333	ePn	Pn	20 36 32.9	+0.1
	64nm,0.9s						
NHSC				eSn	Sn	20 39 21.6	-18
553A	Crawfordville	16.99	317	P	Pn	20 36 34.0	+0.3
	baz=132						
255A	Hazlehurst	17.07	325	P	Pn	20 36 35.1	+0.4
	baz=140						
255A	Hazlehurst	17.07	325	ePn	Pn	20 36 34.7	0.0
	248nm,2.0s						
FLOC	Florencia	17.10	196	eP	P	20 36 36.9	+0.1
156A	Sylvania	17.14	329	P	P	20 36 36.6	-0.5
	baz=145,SNR=5.7						
TIGA	Tifton	17.34	322	P	P	20 36 39.4	+0.1
	baz=137,SNR=8.0						
TIGA	Tifton	17.34	322	ePn	Pn	20 36 37.1	-1.0
	125nm,0.9s						
453A	Whigham	17.37	319	P	P	20 36 39.5	-0.1
	baz=134						
453A	Whigham	17.37	319	ePn	Pn	20 36 37.2	-1.2
	74nm,1.0s						
CRUC	La Cruz	17.49	200	eP	P	20 36 42.1	+0.7
552A	Lynn Haven	17.52	315	P	Pn	20 36 40.6	+0.2
	baz=130						
254A	Abbeville	17.54	324	P	Pn	20 36 40.9	+0.3
	baz=138						
155A	Kite	17.61	327	P	P	20 36 43.0	+0.7
	baz=142,SNR=7.3						
353A	Camilla	17.65	320	P	P	20 36 42.8	+0.1
	baz=135,SNR=7.8						
MYIG	MØrida	17.74	282	ePn	Pn	20 36 41.5	-1.7
	258nm,1.4s						
TUMC	Tumaco	17.90	205	ePn	P	20 36 46.0	+0.3
	219nm,1.0s						
452A	Marianna	17.91	317	P	P	20 36 46.0	+0.3
	baz=132,SNR=8.7						
Z55A	Blythe	17.92	329	P	P	20 36 46.3	+0.6
	baz=144						
154A	Montrose	17.94	325	P	P	20 36 46.5	+0.5
	baz=140						
154A	Montrose	17.94	325	ePn	Pn	20 36 44.5	-1.0
	104nm,0.9s						
GCUF	Volcan Galeras	17.94	201	eP	P	20 36 48.0	+1.4
CNNC	Cliffs of the	18.00	342	P	P	20 36 46.4	-0.1
	baz=159						
CNNC	Cliffs of the	18.00	342	ePn	Pn	20 36 44.3	-1.8
	37nm,0.6s						
CNNC				eSn	Sn	20 39 53.0	-13
253A	Americus	18.10	322	P	P	20 36 47.9	+0.1
	baz=137						
253A	Americus	18.10	322	ePn	Pn	20 36 47.1	-0.5
	116nm,1.4s						
451A	Vernon	18.13	316	P	P	20 36 49.1	+1.1
	baz=130						
451A	Vernon	18.13	316	ePn	P	20 36 48.6	+0.6
	107nm,1.0s						
352A	Blakely	18.18	319	P	P	20 36 49.2	+0.7
	baz=134						
352A	Blakely	18.18	319	ePn	Pn	20 36 47.4	-1.0
	60nm,0.9s						
Z54A	Sparta	18.29	327	P	Pn	20 36 50.5	+0.8
	baz=142,SNR=5.8						
153A	Fort Valley	18.37	324	P	Pn	20 36 51.3	+0.6
	baz=138						
CMBC	Cumbal	18.37	202	eP	Pn	20 36 51.5	+0.2
JSC	Jenkinsville	18.39	333	eP	P	20 36 50.3	-0.5
	29nm,0.9s						
JSC	Jenkinsville	18.39	333	eP	P	20 36 50.3	-0.5
JSC				pmax	pmax		
	comp=Z,29nm,0.9s						
252A	Lumpkin	18.42	321	P	Pn	20 36 51.7	+0.3
	baz=135,SNR=16						
351A	Pinckard	18.46	318	P	Pn	20 36 53.1	+1.1
	baz=132						
Z53A	Monticello	18.70	326	P	Pn	20 36 55.2	+0.4
	baz=140,SNR=5.9						
Y54A	Tignall	18.70	329	P	Pn	20 36 54.8	-0.1
	baz=144,SNR=12						
GOGA	Godfrey	18.75	326	P	Pn	20 36 55.7	+0.3
	baz=141						
GOGA	Godfrey	18.75	326	eP	P	20 36 54.6	-0.2
	comp=Z,28nm,1.2s						
GOGA	Godfrey	18.75	326	eP	P	20 36 54.6	-0.2
GOGA				pmax	pmax		
	comp=Z,28nm,1.2s						
HODGE	Hodges	18.80	330	eP	P	20 36 55.4	0.0
	comp=Z,31nm,1.4s						
450A	Crestview	18.81	315	P	P	20 36 55.8	+0.3
	baz=128						
152A	Waverly Hall	18.89	322	P	Pn	20 36 57.5	+0.4
	baz=136,SNR=12						
152A	Waverly Hall	18.89	322	eP	P	20 36 56.6	+0.2
	comp=Z,64nm,1.1s						
251A	Midway	18.89	320	P	Pn	20 36 57.2	+0.1
	baz=134,SNR=27						
350A	Dozier	19.03	317	P	Pn	20 36 59.2	+0.4
	baz=130						
PAULI	Pauline	19.08	332	eP	P	20 36 58.8	+0.2
	comp=Z,9.9nm,0.7s						
Z52A	Williamson	19.10	324	P	Pn	20 36 59.7	+0.1
	baz=138,SNR=10						
151A	Opelika	19.14	321	P	P	20 36 59.7	+0.5
	baz=135,SNR=7.9						
KMSC	Kings Mountain	19.15	334	P	P	20 36 59.4	+0.1
	baz=149,SNR=9.5						
KMSC	Kings Mountain	19.15	334	eP	P	20 36 58.2	-1.0
	comp=Z,26nm,0.9s						
Y53A	Monroe	19.15	327	P	P	20 36 59.5	+0.2
	baz=141						
449A	Pace	19.21	314	P	Pn	20 37 00.8	-0.2
	baz=127						
OTAV	Otavalo	19.25	203	eP	Pn	20 37 03.3	+1.3
	comp=Z,92nm,0.9s						
OTAV	Otavalo	19.25	203	eP	Pn	20 37 03.3	+1.3
OTAV	Otavalo	19.25	203	eP	Pn	20 37 03.3	+1.3
OTAV				pmax	pmax		
	comp=Z,92nm,0.9s						
BRAL	Brewton	19.35	315	P	Pn	20 37 02.4	-0.2
	baz=128,SNR=8.7						
BRAL	Brewton	19.35	315	eP	Pn	20 37 02.5	-0.1
	comp=Z,275nm,1.3s						
250A	Grady	19.35	318	P	Pn	20 37 02.4	-0.3
	baz=132,SNR=7.7						
250A	Grady	19.35	318	eP	P	20 37 01.6	+0.2
	comp=Z,148nm,1.3s						
NCAT	North Carolina	19.37	338	eP	P	20 37 01.7	0.0
	comp=Z,43nm,1.1s						
Y52A	Lilburn	19.41	326	P	Pn	20 37 03.3	-0.1
	baz=140,SNR=6.0						
Y52A	Lilburn	19.41	326	eP	P	20 37 02.6	+0.5
	comp=Z,30nm,0.8s						
X53A	Estanollee	19.52	329	P	P	20 37 03.9	+0.6
	baz=143,SNR=14						
349A	Repton	19.56	315	P	Pn	20 37 04.8	-0.3
	baz=128,SNR=5.4						
Z51A	Franklin	19.62	323	P	Pn	20 37 05.5	-0.4
	baz=137,SNR=6.9						
150A	Eclectic	19.62	320	P	P	20 37 05.0	+0.6
	baz=133,SNR=14						
BG3	Lake Jocassee	19.74	330	eP	P	20 37 06.2	+0.5
	comp=Z,63nm,0.9s						
448A	Bay Minette	19.76	313	P	Pn	20 37 07.0	-0.5
	baz=126						
X52A	Dahlonega	19.90	328	P	P	20 37 07.9	+0.4
	baz=142,SNR=8.2						
249A	Camden	19.90	317	P	Pn	20 37 08.4	-0.8
	baz=130,SNR=17						
Y51A	Rockmart	19.98	324	P	P	20 37 09.2	+0.8
	baz=138,SNR=21						
W53A	Cullowhee	19.99	330	P	P	20 37 09.4	+0.9
	baz=145,SNR=37						
Z50A	Ashland	20.01	321	P	P	20 37 09.4	+0.7
	baz=135,SNR=39						
Z50A	Ashland	20.01	321	eP	P	20 37 08.9	+0.2
	comp=Z,97nm,1.1s						
348A	Jackson	20.08	314	P	Pn	20 37 10.5	-0.8
	baz=127						
348A	Jackson	20.08	314	eP	P	20 37 10.1	+0.7
	comp=Z,218nm,1.4s						
URVA	University of	20.09	345	eP	P	20 37 10.1	+0.6
149A	Jones	20.10	318	P	P	20 37 09.8	+0.2
	baz=132,SNR=6.4						
CCIG	Comitan	20.15	268	eP	Pn	20 37 11.8	-0.6
	comp=Z,159nm,1.0s						
V53A	Saluda	20.24	332	P	P	20 37 11.7	+0.5
	baz=146,SNR=26						
V53A	Saluda	20.24	332	eP	P	20 37 11.5	+0.3
	comp=Z,53nm,1.0s						
447A	Lucedale	20.24	312	P	Pn	20 37 12.4	-0.9
	baz=124						
447A	Lucedale	20.24	312	eP	P	20 37 12.0	+0.8
	comp=Z,82nm,0.9s						
W52A	Murphy	20.30	328	P	P	20 37 12.7	+0.9
	baz=143,SNR=14						
W52A	Murphy	20.30	328	eP	P	20 37 11.9	0.0
	comp=Z,47nm,1.1s						
Z49A	Columbiana	20.34	320	P	Pn	20 37 13.4	-1.0
	baz=134,SNR=60						
Y50A	Piedmont	20.36	323	P	P	20 37 13.4	+1.0
	baz=136,SNR=31						
X51A	Calhoun	20.37	326	P	P	20 37 13.2	+0.6
	baz=140,SNR=12						
X51A	Calhoun	20.37	326	eP	P	20 37 12.1	-0.5
	comp=Z,32nm,0.8s						
248A	Dixon Mills	20.38	316	P	Pn	20 37 13.8	-1.1
	baz=129,SNR=6.3						
IP05	Hopewell Churc	20.39	345	eP	P	20 37 11.8	-1.0
	comp=Z,31nm,0.8s						
VWCC	Virginia Weste	20.50	340	eP	P	20 37 13.3	-0.6
347A	Saraland	20.51	313	P	P	20 37 15.0	+0.9
	baz=126,SNR=10						
LRAL	Lakeview Retre	20.52	319	P	P	20 37 15.1	+1.0
	baz=132,SNR=55						
LRAL	Lakeview Retre	20.52	319	eP	P	20 37 14.6	+0.4
	comp=Z,84nm,1.0s						
IP07	Quail	20.55	344	eP	P	20 37 14.2	-0.2
	comp=Z,45nm,0.8s						
IP01	Cuckoo	20.55	345	eP	P	20 37 14.0	-0.5
	comp=Z,48nm,0.8s						
BLA	Blacksburg	20.62	339	P	P	20 37 15.8	+0.5
	baz=154,SNR=29						
BLA	Blacksburg	20.62	339	eP	P	20 37 15.4	+0.1
	comp=Z,196nm,1.3s						
BLA	Blacksburg	20.62	339	eP	P	20 37 15.4	+0.1
BLA				pmax	pmax		
	comp=Z,196nm,1.3s						
148A	Greensboro	20.62	317	P	Pn	20 37 16.6	-1.1
	baz=130,SNR=15						
CVRD	Centerville Ro	20.63	345	eP	P	20 37 15.2	-0.2
	comp=Z,37nm,1.0s						
PTRD	Partlow Road	20.64	345	eP	P	20 37 15.7	+0.4
	comp=Z,190nm,0.3s						
CBN	Corbin Frederi	20.66	346	P	P	20 37 16.6	+1.0
	baz=163						
CBN	Corbin Frederi	20.66	346	eP	P	20 37 16.2	+0.6
	comp=Z,66nm,0.8s						
TKL	Tuckaleechee C	20.68	330	P	P	20 37 16.6	+0.7
	comp=Z,19nm,0.8s,baz=154,slow=13,SNR=15						
TKL				S	S	20 40 55.0	-11
	comp=Z,22nm,0.9s,baz=95,slow=16,SNR=3.8						
TKL				LR	LR	20 44 57.8	
	comp=Z,913nm,20.9s,baz=136,slow=36						
TKL	Tuckaleechee C	20.68	330	eP	P	20 37 16.0	+0.1
	comp=Z,74nm,1.1s						
TKL				S	S	20 40 55.0	-11
TKL	Tuckaleechee C	20.68	330	eP	P	20 37 16.0	+0.1
TKL				S	S	20 40 55.0	-11
TKL				pmax	pmax		
	comp=Z,74nm,1.1s						
546A	Slidell	20.71	309	P	Pn	20 37 17.6	-1.2
	baz=121						
U53A	Fall Branch	20.72	333	P	P	20 37 17.0	+0.7
	baz=148,SNR=15						
X50B	Fort Payne	20.73	324	P	P	20 37 16.6	+0.2
	baz=138,SNR=27						
Y49A	Blount Mountai	20.73	322	P	P	20 37 17.2	+0.8
	baz=135,SNR=26						
Y49A	Blount Mountai	20.73	322	eP	P	20 37 16.9	+0.4
	comp=Z,55nm,0.9s						
V52A	Sevierville	20.74	330	P	P	20 37 17.0	+0.4
	baz=145,SNR=14						
V52A	Sevierville	20.74	330	eP	P	20 37 16.8	+0.2
	comp=Z,48nm,0.9s						
446A	Poplarville	20.75	311	P	P	20 37 17.4	+0.7
	baz=123						
W51A	Cleveland	20.78	327	P	P	20 37 18.0	+1.0
	baz=141						
CPCT	Cooper Cave	20.88	328	eP	P	20 37 18.3	+0.2
	comp=Z,107nm,1.4s						
247A	Quitman	20.94	314	P	P	20 37 19.9	+1.1
	baz=127,SNR=15						
645A	Chauvin	21.00	306	P	Pn	20 37 21.9	-0.2
	baz=118						
V51A	Loudon	21.07	329	P	P	20 37 21.2	+1.0
	baz=143,SNR=30						
V51A	Loudon	21.07	329	eP	P	20 37 20.8	+0.6
	comp=Z,61nm,0.8s						
U52A	Thorn Hill	21.09	332	P	P	20 37 20.8	+0.5
	baz=146						
Z48A	Northport	21.09	319	P	P	20 37 20.7	+0.4
	baz=132,SNR=42						
147A	Livingston	21.10	316	P	P	20 37 21.5	+1.1
	baz=129,SNR=15						
147A	Livingston	21.10	316	eP	P	20 37 21.1	+0.7
	comp=Z,252nm,1.4s						
W50A	Signal Mountai	21.10	326	P	P	20 37 21.0	+0.5
	baz=140,SNR=28						
W50A	Signal Mountai	21.10	326	eP	P	20 37 20.6	+0.1
	comp=Z,72nm,1.1s						
X49A	Woodville	21.14	323	P	P	20 37 21.3	+0.4
	baz=136,SNR=22						
346A	Big Creek Wild	21.15	312	P	P	20 37 21.2	+0.2
	baz=124						
346A	Big Creek Wild	21.15	312	eP	P	20 37 22.1	+1.1
	comp=Z,140nm,0.9s						
545A	Edgard	21.20	307	eP	P	20 37 23.6	+2.1
	comp=Z,1µm,0.7s						
Y48A	Jasper	21.22	321	P	P	20 37 22.2	+0.5
	baz=134,SNR=33						
246A	Jackson Lee, B	21.27	314	P	P	20 37 22.5	+0.2
	baz=126						
TZTN	Tazewell	21.30	332	P	P	20 37 23.1	+0.5
	baz=146,SNR=17						
TZTN	Tazewell	21.30	332	eP	P	20 37 22.9	+0.4
	comp=Z,40nm,0.8s						
Z47A	Carrollton	21.30	318	P	P	20 37 23.3	+0.7
	baz=130,SNR=34						
V50A	Pikevile	21.35	327	P	P	20 37 23.7	+0.6
	baz=141,SNR=49						
U51A	La Follette	21.38	330	P	P	20 37 24.0	+0.6
	baz=144						
445A	Amite	21.43	309	P	P	20 37 24.5	+0.5
	baz=121						
SWET	Sewanee	21.44	325	eP	P	20 37 24.1	-0.1
	comp=Z,30nm,1.0s						
345A	Thompson Farm,	21.51	311	P	P	20 37 26.1	+1.3
	baz=123						
X48A	Hartselle	21.52	322	P	P	20 37 25.1	+0.2
	baz=135,SNR=25						
X48A	Hartselle	21.52	322	eP	P	20 37 24.6	-0.4
	comp=Z,52nm,1.0s						
T52A	Hallie	21.52	333	P	P	20 37 25.3	+0.3
	baz=148,SNR=14						
W49A	Belvidere	21.55	324	P	P	20 37 25.6	+0.3
	baz=138,SNR=22						
146A	Union	21.59	315	P	P	20 37 26.6	+0.8
	baz=127,SNR=15						
146A	Union	21.59	315	eP	P	20 37 26.5	+0.7
	comp=Z,188nm,1.0s						
Y47A	UCPARC, Winfie	21.62	320	P	P	20 37 26.7	+0.7
	baz=132,SNR=42						
PTGA	Pitinga	21.79	149	P	P	20 37 30.1	+2.1
	comp=Z,17nm,0.7s,baz=340,slow=12,SNR=24						
PTGA	Pitinga	21.79	149	eP	P	20 37 29.5	+1.5
	comp=Z,43nm,1.0s						
U50A	Jamestown	21.80	329	P	P	20 37 28.0	0.0
	baz=143						
245A	Little AP, Sta	21.82	313	P	P	20 37 28.9	+0.8
	baz=125,SNR=8.3						
T51A	Gray	21.82	331	P	P	20 37 28.6	+0.4
	baz=146						
V49A	McMinnville	21.84	326	P	P	20 37 29.0	+0.6
	baz=139,SNR=43						
Z46A	Louisville	21.86	316	P	P	20 37 29.7	+1.0
	baz=129,SNR=13						
W48A	Pulaski	21.94	323	P	P	20 37 29.9	+0.4
	baz=136,SNR=23						
PSUB	Penn St. - Bra	21.96	351	eP	P	20 37 29.2	-0.5
	comp=Z,49nm,1.2s						
S52A	Salyersville	22.04	334	P	P	20 37 31.1	+0.6
	baz=148,SNR=11						
X47A	Russelville	22.05	321	P	P	20 37 30.8	+0.2
	baz=133,SNR=79						
344A	Westbrook Farm	22.09	310	P	P	20 37 32.5	+1.4
	baz=122,SNR=7.3						
344A	Westbrook Farm	22.09	310	eP	P	20 37 32.6	+1.4
	comp=Z,213nm,1.1s						
145A	Houston Renfro	22.17	314	P	P	20 37 32.4	+0.4
	baz=126,SNR=10.0						
MVL	Millersville	22.18	349	eP	P	20 37 30.9	-1.1
	comp=Z,55nm,1.0s						
S51A	Beattyville	22.23	333	P	P	20 37 32.9	+0.4
	baz=147,SNR=9.1						
S51A	Beattyville	22.23	333	eP	P	20 37 32.1	-0.4
	comp=Z,46nm,0.9s						
Y46A	Houston	22.24	318	P	P	20 37 33.6	+0.9
	baz=130,SNR=54						
543A	St. Martinvill	22.26	306	eP	P	20 37 33.5	+0.6
	comp=Z,201nm,0.8s						
T50A	Nancy	22.28	330	P	P	20 37 34.1	+1.0
	baz=144,SNR=44						
V48A	Smith Brothers	22.32	325	P	P	20 37 34.5	+1.0
	baz=138,SNR=38						
V48A	Smith Brothers	22.32	325	eP	P	20 37 33.7	+0.2
	comp=Z,93nm,1.0s						
U49A	Red Boiling Sp	22.35	328	P	P	20 37 34.4	+0.6
	baz=141,SNR=28						
VBMS	Vicksburg	22.36	312	P	P	20 37 34.7	+0.7
	baz=124,SNR=5.5						
VBMS	Vicksburg	22.36	312	eP	P	20 37 34.3	+0.4
	comp=Z,148nm,1.0s						
244A	Avery, Jackson	22.38	312	P	P	20 37 34.7	+0.6
	baz=123,SNR=9.9						
W47A	Westpoint	22.40	323	P	P	20 37 34.9	+0.4
	baz=135,SNR=11						
Z45A	Winona	22.46	316	P	P	20 37 35.8	+0.6
	baz=128						
Z45A	Winona	22.46	316	eP	P	20 37 35.7	+0.6
	comp=Z,105nm,0.9s						
PAGS	Pennsylvania G	22.47	349	eP	P	20 37 34.9	-0.2
	comp=Z,58nm,0.8s						
PLAL	Pickwick Lake	22.49	321	eP	P	20 37 35.1	-0.3
	comp=Z,185nm,1.5s						
X46A	Booneville	22.51	320	P	P	20 37 36.1	+0.5
	baz=132,SNR=18						
443A	Delano Plantat	22.52	308	P	P	20 37 36.8	+1.1
	baz=119						
144A	Alexander Plac	22.52	313	P	P	20 37 36.6	+0.9
	baz=125						
BRNJ	Basking Ridge	22.59	353	eP	P	20 37 36.2	-0.2
	comp=Z,234nm,1.4s						
LUPA	Lehigh Univers	22.61	352	eP	P	20 37 37.5	+0.8
S50A	Richmond	22.62	332	P	P	20 37 36.9	+0.2
	baz=146						
CPNY	Central Park	22.64	354	eP	P	20 37 38.1	+1.3
	comp=Z,189nm,1.6s						
MCWV	Mont Chateau	22.67	342	P	P	20 37 37.8	+0.6
	baz=158						
MCWV	Mont Chateau	22.67	342	eP	P	20 37 37.4	+0.2
	comp=Z,49nm,0.9s						
Y45A	Yeager Farm, C	22.67	317	P	P	20 37 37.4	+0.1
	baz=129,SNR=45						
T49A	Edmonton	22.69	329	P	P	20 37 38.0	+0.5
	baz=142,SNR=19						
T49A	Edmonton	22.69	329	eP	P	20 37 37.4	-0.1
	comp=Z,23nm,0.8s						
U48A	Cassie Pea, Po	22.74	326	P	P	20 37 38.5	+0.5
	baz=139,SNR=31						
V47A	Nunnelly	22.77	324	P	P	20 37 38.5	+0.2
	baz=136,SNR=49						
W46A	Michie	22.78	321	P	P	20 37 38.6	+0.2
	baz=133,SNR=22						
542A	Morse	22.81	305	P	P	20 37 38.6	-0.2
	baz=116						
PAL	Palisades	22.85	355	P	P	20 37 39.8	+0.7
	baz=173						
PAL	Palisades	22.85	355	eP	P	20 37 38.4	-0.6
	comp=Z,44nm,0.9s						
PAL	Palisades	22.85	355	eP	P	20 37 38.4	-0.6
PAL				pmax	pmax		
	comp=Z,44nm,0.9s						
243A	Waterproof	22.86	310	P	P	20 37 39.7	+0.4
	baz=122,SNR=5.4						
O56A	Blue Knob Stat	22.90	345	P	P	20 37 40.5	+0.8
	baz=162,SNR=6.1						
O56A	Blue Knob Stat	22.90	345	eP	P	20 37 40.3	+0.5
	comp=Z,67nm,1.1s						
Z44A	Pea Ridge, Bel	22.90	315	P	P	20 37 40.3	+0.6
	baz=126,SNR=8.6						
X45A	UM Field Stati	22.93	318	P	P	20 37 40.2	+0.1
	baz=130,SNR=21						
N59A	State Game Lan	22.98	351	P	P	20 37 41.4	+0.9
	baz=169,SNR=6.3						
N59A	State Game Lan	22.98	351	eP	P	20 37 40.8	+0.3
	comp=Z,57nm,1.0s						
ODNJ	Ogdensburg	22.99	353	eP	P	20 37 40.5	-0.1
	comp=Z,64nm,1.0s						
OXF	Oxford	23.00	318	P	P	20 37 40.9	+0.2
	baz=130,SNR=22						
OXF	Oxford	23.00	318	eP	P	20 37 40.6	-0.1
	comp=Z,255nm,1.1s						
OXF	Oxford	23.00	318	eP	P	20 37 40.6	-0.1
OXF				pmax	pmax		
	comp=Z,255nm,1.1s						
R50A	Paris	23.08	333	P	P	20 37 41.8	+0.3
	baz=146						
YLE	Yale	23.08	357	eP	P	20 37 45.3	+3.8
	comp=Z,77nm,0.9s						
YLE				eS	S	20 41 48.1	-2.9
U47A	Clarksville	23.09	325	P	P	20 37 41.8	+0.2
	baz=138,SNR=33						
V46A	Holladay	23.09	323	P	P	20 37 41.5	-0.1
	baz=135,SNR=47						
SSPA	Standing Stone	23.10	347	P	P	20 37 42.5	+0.9
	baz=164						
SSPA	Standing Stone	23.10	347	eP	P	20 37 41.9	+0.3
	comp=Z,93nm,1.3s						
SSPA				eS	S	20 41 50.0	-1.3
S49A	Springfield	23.11	330	P	P	20 37 42.1	+0.2
	baz=144						
T48A	Bowling Green	23.12	328	P	P	20 37 42.4	+0.5
	baz=140,SNR=40						
WVT	Waverly	23.16	324	P	P	20 37 42.4	+0.1
	baz=136						
WVT	Waverly	23.16	324	eP	P	20 37 41.6	-0.7
	comp=Z,73nm,0.8s						
WVT	Waverly	23.16	324	eP	P	20 37 41.6	-0.7
WVT				pmax	pmax		
	comp=Z,73nm,0.8s						

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Y44A  Strider, Charl    23.17 316  P      P       20 37 42.9 +0.5
      baz=128,SNR=5.8
342A  Flagon Creek P    23.22 308  P      P       20 37 44.0 +1.0
      baz=119,SNR=6.9
342A  Flagon Creek P    23.22 308 eP      P       20 37 44.4 +1.4
      comp=Z,368nm,1.6s
143A  Socs Landing,     23.25 312  P      P       20 37 44.0 +0.7
      baz=124
143A  Socs Landing,     23.25 312 eP      P       20 37 43.4 +0.2
      comp=Z,172nm,1.1s
541A  Lake Charles      23.28 305 eP      P       20 37 44.6 +1.0
      comp=Z,216nm,1.3s
W45A  Hickory Valley    23.28 320  P      P       20 37 43.8 +0.2
      baz=132,SNR=14
S48A  Wiedeman Farm,    23.38 329  P      P       20 37 44.6 +0.1
      baz=142,SNR=16
T47A  Sharon Grove      23.40 326  P      P       20 37 44.7  0.0
      baz=139,SNR=22
T47A  Sharon Grove      23.40 326 eP      P       20 37 44.4 -0.3
      comp=Z,62nm,1.0s
Z43A  Armstrong Fami    23.42 314  P      P       20 37 45.7 +0.7
      baz=125
242A  Grayson           23.44 310  P      P       20 37 46.2 +1.0
      baz=121
X44A  Crenshaw          23.46 317  P      P       20 37 45.7 +0.4
      baz=129,SNR=10
U46A  Springville       23.52 324  P      P       20 37 46.4 +0.4
      baz=136,SNR=11
V45A  Humboldt          23.54 321  P      P       20 37 46.3 +0.2
      baz=133,SNR=15
142A  Monroe            23.55 311  P      P       20 37 47.2 +1.0
      baz=122
441A  DeRidder          23.58 306  P      P       20 37 48.0 +1.4
      baz=117
KSPA  Keystone Colle    23.61 351 eP      P       20 37 47.7 +0.9
      comp=Z,57nm,1.2s
Y43A  Makayla and Ka    23.61 315  P      P       20 37 48.0 +1.2
      baz=127
BRYW  Bryant College    23.64 359 eP      P       20 37 46.8 -0.2
      comp=Z,56nm,1.1s
W44A  Shelby Farms P    23.66 319  P      P       20 37 48.4 +1.1
      baz=131
MET   Memphis--Engin    23.72 319 eP      P       20 37 49.0 +1.1
      comp=Z,717nm,1.8s
S47A  Hartford          23.74 328  P      P       20 37 48.5 +0.5
      baz=140
341A  Kurthwood         23.84 307  P      P       20 37 49.2 +0.2
      baz=118,SNR=9.6
341A  Kurthwood         23.84 307 eP      P       20 37 49.7 +0.7
      comp=Z,212nm,1.3s
U45A  Rockin P Farm,    23.84 323  P      P       20 37 49.4 +0.4
      baz=135,SNR=9.5
T46A  Princeton         23.86 325  P      P       20 37 49.5 +0.3
      baz=137,SNR=35
R48A  Northridge Ran    23.88 330  P      P       20 37 49.9 +0.6
      baz=143,SNR=7.3
HALT  Halls             23.88 321 eP      P       20 37 50.0 +0.6
      comp=Z,393nm,1.4s
UTMT  University of     23.90 323 eP      P       20 37 49.9 +0.4
      comp=Z,925nm,2.0s
N54A  Moraine State     23.92 343  P      P       20 37 50.3 +0.6
      baz=159,SNR=9.7
N54A  Moraine State     23.92 343 eP      P       20 37 49.0 -0.7
      comp=Z,34nm,0.8s
WCI   Wyandotte Cave    23.94 330  P      P       20 37 50.6 +0.6
      baz=142
WCI   Wyandotte Cave    23.94 330 eP      P       20 37 50.2 +0.3
      comp=Z,193nm,2.0s
WCI   Wyandotte Cave    23.94 330 eP      P       20 37 50.3 +0.3
WCI                                pmax   pmax
      comp=Z,193nm,2.0s
Z42A  Norrel Spur, H    23.94 313  P      P       20 37 50.7 +0.7
      baz=124
X43A  Marvell           23.95 317  P      P       20 37 51.0 +1.0
      baz=128
X43A  Marvell           23.95 317 eP      P       20 37 50.4 +0.4
      comp=Z,106nm,1.2s
LVIG  Laguna Verde      23.95 278 eP      P       20 37 50.4 +0.2
      comp=Z,83nm,1.6s
241A  Mo Tay, Goldon    23.98 309  P      P       20 37 50.5 +0.1
      baz=120
241A  Mo Tay, Goldon    23.98 309 eP      P       20 37 51.0 +0.6
      comp=Z,68nm,1.1s
P50A  Jamestown         23.98 335  P      P       20 37 50.9 +0.6
      baz=149,SNR=26
QUA2  Belchertown       24.02 358 eP      P       20 37 51.6 +1.1
      comp=Z,104nm,1.6s
QUA2                              eS      S       20 42 07.9 +1.8
GLAT  Glass             24.09 322 eP      P       20 37 51.4 +0.1
      comp=Z,207nm,1.0s
WES   Weston            24.10 360 eP      P       20 37 51.9 +0.5
      comp=Z,85nm,1.3s
WES                               eS      S       20 42 09.2 +1.7
R47A  Wooly Knot Far    24.11 329  P      P       20 37 51.9 +0.4
      baz=142,SNR=7.0
Y42A  Garnett, Star     24.15 314  P      P       20 37 52.0 +0.2
      baz=125
V44A  Blytheville       24.16 320  P      P       20 37 52.8 +0.8
      baz=132
U44B  Burton Farm, H    24.18 322  P      P       20 37 52.5 +0.4
      baz=134
CCAR  Cane Creek        24.18 314 eP      P       20 37 53.9 +1.7
      comp=Z,398nm,1.7s
W43A  Forest City       24.18 318  P      P       20 37 52.9 +0.7
      baz=129
ACSO  Alum Creek Sta    24.21 337  P      P       20 37 52.8 +0.4
      baz=152
ACSO  Alum Creek Sta    24.21 337 eP      P       20 37 53.0 +0.5
      comp=Z,37nm,0.8s
HRV   Adam Dziewonsk    24.23 359  P      P       20 37 53.3 +0.8
      baz=179
HRV   Adam Dziewonsk    24.23 359 eP      P       20 37 51.1 -1.4
      comp=Z,47nm,0.9s
HRV                               eS      S       20 42 11.2 +1.8
HRV   Adam Dziewonsk    24.23 359 eP      P       20 37 51.1 -1.4
HRV                               eS      S       20 42 11.3 +1.8
HRV                                pmax   pmax
      comp=Z,47nm,0.9s
S46A  Don Dixon Farm    24.24 327  P      P       20 37 52.9 +0.2
      baz=139,SNR=11
T45A  Paducah           24.25 324  P      P       20 37 53.2 +0.4
      baz=136
T45A  Paducah           24.25 324 eP      P       20 37 52.6 -0.2
      comp=Z,60nm,0.8s
141A  Papa Simpson,     24.27 310  P      P       20 37 54.1 +1.2
      baz=121
BINY  Binghamton        24.27 351  P      P       20 37 53.6 +0.7
      baz=169,SNR=6.0
BINY  Binghamton        24.27 351 eP      P       20 37 53.4 +0.5
      comp=Z,64nm,1.1s
BINY                              eSn     S       20 42 24.2  +14
GNAR  Gosnell           24.32 320 eP      P       20 37 53.9 +0.5
      comp=Z,166nm,1.0s
M54A  Oil Creek Stat    24.35 344  P      P       20 37 54.3 +0.6
      baz=160,SNR=5.9
M54A  Oil Creek Stat    24.35 344 eP      P       20 37 54.0 +0.3
      comp=Z,60nm,1.1s
O50A  Cable             24.38 336  P      P       20 37 55.1 +1.2
      baz=150
USIN  University of     24.42 327 eP      P       20 37 54.9 +0.6
      comp=Z,106nm,1.0s
PVMO  Portageville      24.44 322 eP      P       20 37 55.2 +0.7
      comp=Z,215nm,0.8s
HBAR  Harrisburg        24.45 319 eP      P       20 37 55.4 +0.7
      comp=Z,195nm,1.2s
X42A  Stuttgart         24.46 316  P      P       20 37 55.7 +0.9
      baz=127,SNR=6.2
U44A  Portageville      24.49 322  P      P       20 37 55.8 +0.8
      baz=133
V43A  Jonesboro         24.53 319  P      P       20 37 56.2 +0.8
      baz=130
R46A  Gibon Southern    24.53 328  P      P       20 37 56.0 +0.6
      baz=140,SNR=16
Z41A  Richland Creek    24.53 312  P      P       20 37 56.6 +1.2
      baz=122,SNR=8.1
Z41A  Richland Creek    24.53 312 eP      P       20 37 56.7 +1.3
      comp=Z,66nm,0.8s
TRY   Troy              24.54 356 eP      P       20 37 56.6 +1.2
      comp=Z,47nm,0.9s
Q47A  Bedord North L    24.57 330  P      P       20 37 56.1 +0.4
      baz=143,SNR=9.0
ALLY  Alegheny Colle    24.60 344 eP      P       20 37 56.2 +0.2
      comp=Z,69nm,1.0s
240A  Hunter Patters    24.62 308  P      P       20 37 57.0 +0.8
      baz=119
240A  Hunter Patters    24.62 308 eP      P       20 37 57.5 +1.3
      comp=Z,58nm,0.8s
PARMO Parma             24.64 322 eP      P       20 37 57.0 +0.7
      comp=Z,120nm,0.8s
S45A  Carrier Mills     24.69 325  P      P       20 37 57.8 +1.0
      baz=137,SNR=19
Y41A  Eaglette Beard    24.74 313  P      P       20 37 58.4 +1.1
      baz=124,SNR=5.2
N50A  Nevada            24.75 338  P      P       20 37 57.9 +0.6
      baz=152
140A  Cam and Jess,     24.77 310  P      P       20 37 58.6 +1.0
      baz=120,SNR=6.5
140A  Cam and Jess,     24.77 310 eP      P       20 37 58.9 +1.3
      comp=Z,105nm,1.0s
BLO   Bloomington       24.80 331 eP      P       20 37 56.0 -1.8
      comp=Z,28nm,0.8s
BLO   Bloomington       24.80 331 eP      P       20 37 56.0 -1.8
BLO                                pmax   pmax
      comp=Z,28nm,0.8s
W42A  Bald Knob         24.82 317  P      P       20 37 58.4 +0.3
      baz=128
U43A  Rector            24.83 321  P      P       20 37 58.5 +0.5
      baz=132,SNR=18
T44A  Benton            24.84 323  P      P       20 37 58.6 +0.5
      baz=134
P47A  Martinsville      24.93 331  P      P       20 37 59.7 +0.7
      baz=144
Z40A  Long Farm, Mag    24.96 311  P      P       20 38 00.3 +1.1
      baz=122,SNR=7.7
R45A  Skylar, Fairfi    24.99 327  P      P       20 38 00.1 +0.6
      baz=138,SNR=27
ERPA  Erie              25.00 344 eP      P       20 37 57.7 -1.9
      comp=Z,146nm,1.5s
X41A  Kaden, Bauxite    25.02 315  P      P       20 38 00.0 +0.2
      baz=125
UALR  University of     25.07 315 eP      P       20 38 00.2 -0.1
      comp=Z,52nm,1.4s
SIUC  Southern Illin    25.07 324 eP      P       20 38 01.0 +0.8
      comp=Z,138nm,0.8s
V42A  Cord              25.07 318  P      P       20 38 01.1 +0.8
      baz=129,SNR=55
S44A  Carbondale        25.07 324  P      P       20 38 01.2 +1.0
      baz=136,SNR=40
Q46A  CEJHS Indians,    25.08 329  P      P       20 38 01.3 +1.0
      baz=141
MMNY  Mt. Morris Dam    25.11 348 eP      P       20 38 00.6  0.0
      comp=Z,74nm,1.1s
PBMO  Poplar Bluff      25.11 321 eP      P       20 38 00.7 +0.1
      comp=Z,156nm,1.4s
NATX  Nacogdoches       25.16 307  P      P       20 38 02.1 +0.9
      baz=117
NATX  Nacogdoches       25.16 307 eP      P       20 38 02.5 +1.3
      comp=Z,161nm,1.3s
FFD   Franklin Falls    25.19 359 eP      P       20 38 02.0 +0.8
      comp=Z,46nm,0.6s
ACCN  Adirondack Com    25.19 356 eP      P       20 38 01.9 +0.7
      comp=Z,88nm,1.4s
OLIL  Olney             25.23 328 eP      P       20 38 02.0 +0.3
      comp=Z,86nm,0.9s
X40A  Basin Creek Fa    25.23 314  P      P       20 38 02.7 +1.0
      baz=124,SNR=50
X40A  Basin Creek Fa    25.23 314 eP      P       20 38 02.2 +0.5
      comp=Z,80nm,1.2s
T43A  Greenville        25.24 322  P      P       20 38 02.2 +0.4
      baz=133,SNR=69
W41B  Gary Mavity, V    25.24 316  P      P       20 38 02.6 +0.8
      baz=127,SNR=48
W41B  Gary Mavity, V    25.24 316 eP      P       20 38 02.5 +0.8
      comp=Z,49nm,0.9s
U42A  Revenden          25.32 320  P      P       20 38 02.9 +0.4
      baz=130,SNR=63
WHAR  Wooly Hollow      25.33 316 eP      P       20 38 03.3 +0.6
      comp=Z,129nm,1.4s
HKT   Hockley           25.34 302 eP      P       20 38 03.2 +0.5
      comp=Z,69nm,1.4s
HKT   Hockley           25.34 302 eP      P       20 38 03.2 +0.5
HKT                                pmax   pmax
      comp=Z,69nm,1.4s
Q45A  Warren Harvey,    25.38 328  P      P       20 38 03.6 +0.6
      baz=140,SNR=29
R44A  Waltonville       25.38 326  P      P       20 38 03.6 +0.5
      baz=137,SNR=30
S43A  Fulton Ridge,     25.45 323  P      P       20 38 04.0 +0.3
      baz=134,SNR=44
P46A  Rosedale          25.48 330  P      P       20 38 04.6 +0.7
      baz=142,SNR=22
O47A  Sheridan          25.50 333  P      P       20 38 04.6 +0.5
      baz=145
V41A  Mountainview      25.55 317  P      P       20 38 05.0 +0.4
      baz=128,SNR=53
P45A  Graceland, Par    25.66 329  P      P       20 38 06.2 +0.6
      baz=141,SNR=15
P45A  Graceland, Par    25.66 329 eP      P       20 38 05.9 +0.3
      comp=Z,66nm,1.0s
T42A  Van Buren         25.68 321  P      P       20 38 06.1 +0.4
      baz=132,SNR=38
T42A  Van Buren         25.68 321 eP      P       20 38 05.8 +0.1
      comp=Z,56nm,1.0s
U41A  Viola             25.74 319  P      P       20 38 06.9 +0.5
      baz=129,SNR=62
MIAR  Mount Ida         25.77 314  P      P       20 38 07.2 +0.6
      baz=124,SNR=17
MIAR  Mount Ida         25.77 314 eP      P       20 38 07.3 +0.6
      comp=Z,137nm,1.8s
MIAR  Mount Ida         25.77 314 eP      P       20 38 07.3 +0.6
MIAR                               pmax   pmax
      comp=Z,137nm,1.8s
W40A  Ferguson Farm,    25.79 315  P      P       20 38 07.6 +0.8
      baz=125,SNR=20
W40A  Ferguson Farm,    25.79 315 eP      P       20 38 08.1 +1.3
      comp=Z,90nm,0.9s
NCB   Newcomb           25.82 355 eP      P       20 38 07.6 +0.7
      comp=Z,28nm,1.0s
Q44A  Meyer Farm, Va    25.83 327  P      P       20 38 07.6 +0.5
      baz=138,SNR=18
R43A  Red Bud           25.86 324  P      P       20 38 07.8 +0.4
      baz=136,SNR=20
FVM   French Village    25.94 323 eP      P       20 38 09.4 +1.3
      comp=Z,90nm,1.3s
FVM   French Village    25.94 323 eP      P       20 38 09.4 +1.3
FVM                                pmax   pmax
      comp=Z,90nm,1.3s
LBNH  Lisbon            25.96 359 eP      P       20 38 09.8 +1.5
      comp=Z,27nm,0.9s
LBNH  Lisbon            25.96 359 eP      P       20 38 09.8 +1.5
LBNH                               pmax   pmax
      comp=Z,27nm,0.9s
V40A  Witts Springs     25.99 317  P      P       20 38 09.0 +0.3
      baz=127,SNR=70
V40A  Witts Springs     25.99 317 eP      P       20 38 09.0 +0.3
      comp=Z,109nm,0.9s
S42A  Caledonia         26.00 323  P      P       20 38 09.1 +0.4
      baz=133,SNR=52
SFIN  Lafayette         26.03 331  P      P       20 38 09.4 +0.5
      baz=144,SNR=5.9
SFIN  Lafayette         26.03 331 eP      P       20 38 08.6 -0.3
      comp=Z,47nm,0.9s
P44A  Sand Creek, Wi    26.05 328  P      P       20 38 09.5 +0.4
      baz=140,SNR=19
VT1   Waterbury         26.08 357 eP      P       20 38 10.5 +1.1
      comp=Z,21nm,1.1s
T41A  Mountain View     26.09 320  P      P       20 38 10.2 +0.6
      baz=130,SNR=47
TLIG  Tlapa             26.10 273 eP      P       20 38 11.3 +1.3
      comp=Z,68nm,1.1s
X39A  Fountain Ranch    26.12 313  P      P       20 38 10.3 +0.4
      baz=123,SNR=7.8
O45A  Potomac           26.22 330  P      P       20 38 11.1 +0.5
      baz=142
Q43A  New Douglas       26.22 326  P      P       20 38 10.9 +0.3
      baz=137,SNR=8.0
W39A  Magazine          26.27 315  P      P       20 38 12.3 +1.2
      baz=124,SNR=61
W39A  Magazine          26.27 315 eP      P       20 38 12.4 +1.2
      comp=Z,119nm,1.3s
AAM   Ann Arbor         26.28 339  P      P       20 38 11.9 +0.7
      baz=152
AAM   Ann Arbor         26.28 339 eP      P       20 38 11.2 +0.1
      comp=Z,88nm,1.4s
AAM   Ann Arbor         26.28 339 eP      P       20 38 11.2 +0.1
AAM                                pmax   pmax
      comp=Z,88nm,1.4s
N46A  Monticello        26.29 333  P      P       20 38 11.9 +0.7
      baz=145,SNR=15
SLM   Saint Louis       26.29 325 eP      P       20 38 11.2 -0.1
      comp=Z,73nm,1.4s
SLM   Saint Louis       26.29 325 eP      P       20 38 11.2 -0.1
SLM                                pmax   pmax
      comp=Z,73nm,1.4s
KVTX  Kingsville        26.30 296 eP      P       20 38 12.6 +1.1
      comp=Z,66nm,0.6s
WVL   Waterville        26.31   2 eP      P       20 38 14.5 +3.2
      comp=Z,41nm,1.0s
U40A  Yellville         26.34 318  P      P       20 38 12.2 +0.4
      baz=128,SNR=33
R42A  Luebbering        26.35 323  P      P       20 38 12.5 +0.6
      baz=134,SNR=35
ELFO  Elginfield        26.36 343  P      P       20 38 13.9 +2.0
      baz=158
DRCO  St. Marys Ceme    26.37 348  P      P       20 38 12.1 +0.1
      baz=164
ACTO  Acton             26.42 345  P      P       20 38 13.1 +0.6
      baz=161,SNR=8.3
S41A  Jillco Farms,     26.44 321  P      P       20 38 13.1 +0.5
      baz=131,SNR=104
CCM   Cathedral Cave    26.45 322  P      P       20 38 13.9 +1.2
      baz=133
CCM   Cathedral Cave    26.45 322 eP      P       20 38 13.7 +0.9
      comp=Z,92nm,0.9s
CCM   Cathedral Cave    26.45 322 eP      P       20 38 13.7 +0.9
CCM                                pmax   pmax
      comp=Z,92nm,0.9s
LONY  Lake Ozonia       26.49 354  P      P       20 38 14.4 +1.3
      baz=173
LONY  Lake Ozonia       26.49 354 eP      P       20 38 13.2 +0.1
      comp=Z,17nm,0.8s
O44A  Mansfield         26.50 329  P      P       20 38 13.6 +0.4
      baz=141,SNR=5.2
PKRO  Pickering         26.54 347  P      P       20 38 14.1 +0.7
      baz=163
M46A  Old House Fiel    26.54 334  P      P       20 38 14.7 +1.1
      baz=146
M46A  Old House Fiel    26.54 334 eP      P       20 38 13.9 +0.3
      comp=Z,59nm,1.0s
V39A  Pettigrew         26.55 316  P      P       20 38 14.7 +0.9
      baz=126,SNR=28
N45A  Kentland          26.59 331  P      P       20 38 14.7 +0.7
      baz=143,SNR=6.9
EMMW  East Machias      26.61   6 eP      P       20 38 15.7 +1.6
      comp=Z,22nm,0.9s
T40A  Mansfield         26.62 319  P      P       20 38 15.2 +0.8
      baz=129,SNR=47
P43A  Skaggs, Pawnee    26.64 327  P      P       20 38 14.8 +0.4
      baz=138,SNR=18
Q42A  Golden Eagle      26.65 325  P      P       20 38 15.3 +0.8
      baz=135,SNR=12
R41A  Rosebud           26.70 323  P      P       20 38 15.4 +0.4
      baz=133,SNR=69
U39A  Green Forest      26.76 317  P      P       20 38 16.2 +0.6
      baz=127,SNR=25
DELO  Deloro Mine       26.79 350  P      P       20 38 14.9 -0.9
      baz=166
N44A  Piper City        26.84 331  P      P       20 38 16.6 +0.4
      baz=142,SNR=6.9
S40A  Lebanon           26.90 320  P      P       20 38 17.2 +0.4
      baz=130,SNR=35
M45A  Boilermakers S    26.91 333  P      P       20 38 17.6 +0.8
      baz=144
HHAR  Hobbs             27.00 316 eP      P       20 38 18.4 +0.6
      comp=Z,44nm,1.0s
O43A  Sugar Creek Fa    27.02 328  P      P       20 38 18.2 +0.4
      baz=139
PKME  Peaks-Kenny Pk    27.02   3  P      P       20 38 18.5 +0.7
      baz=184
PKME  Peaks-Kenny Pk    27.02   3 eP      P       20 38 17.8  0.0
      comp=Z,15nm,0.8s
P42A  Winchester        27.03 326  P      P       20 38 18.1 +0.1
      baz=137,SNR=20
P42A  Winchester        27.03 326 eP      P       20 38 17.6 -0.3
      comp=Z,63nm,1.0s
435B  Jarrell           27.05 303  P      P       20 38 18.2 -0.1
      baz=112
435B  Jarrell           27.05 303 eP      P       20 38 18.5 +0.2
      comp=Z,85nm,1.3s
Q41A  Truxton           27.06 324  P      P       20 38 18.5 +0.2
      baz=134,SNR=28
T39A  Clever            27.08 318  P      P       20 38 18.8 +0.3
      baz=128,SNR=29
LNIG  Linares           27.14 289 eP      P       20 38 18.1 -1.1
      comp=Z,14nm,1.0s
HDIL  Hopedale          27.21 329  P      P       20 38 19.9 +0.4
      baz=140
HDIL  Hopedale          27.21 329 eP      P       20 38 19.5 -0.1
PLVO  Plevna            27.21 351  P      P       20 38 19.8 +0.3
      baz=168
PLVO  Plevna            27.21 351 eP      P       20 38 19.6  0.0
      comp=Z,27nm,0.9s
BASO  Ashfield          27.21 343  P      P       20 38 19.3 -0.2
      baz=158
M44A  Midewin, Midew    27.27 331  P      P       20 38 20.6 +0.5
      baz=143
M44A  Midewin, Midew    27.27 331 eP      P       20 38 20.1 +0.1
      comp=Z,68nm,1.0s
CLWO  Collingwood       27.27 346  P      P       20 38 20.0 -0.1
      baz=161
SADO  Sadowa            27.32 348  P      P       20 38 20.3 -0.2
      comp=Z,8.4nm,0.9s,baz=143,slow=11,SNR=5.0
SADO  Sadowa            27.32 348 eP      P       20 38 20.0 -0.5
      comp=Z,15nm,1.0s
BANO  Bancroft          27.33 349  P      P       20 38 20.4 -0.2
      baz=166
O42A  Bath              27.34 327  P      P       20 38 20.3 -0.4
      baz=138
WHTX  Lake Whitney,     27.41 305  P      P       20 38 21.5  0.0
      baz=114
WHTX  Lake Whitney,     27.41 305 eP      P       20 38 22.1 +0.7
      comp=Z,44nm,1.0s
N43A  Stutzman Famil    27.45 329  P      P       20 38 21.9 +0.2
      baz=140
S39A  Bolivar           27.46 319  P      P       20 38 22.3 +0.4
      baz=129,SNR=21
S39A  Bolivar           27.46 319 eP      P       20 38 22.1 +0.2
      comp=Z,74nm,1.2s
P41A  Barry, Barry      27.48 325  P      P       20 38 21.8 -0.2
      baz=136,SNR=14
Q40A  Laux Farm, Aux    27.57 323  P      P       20 38 22.9 +0.1
      baz=133,SNR=31
T38A  Diamond           27.67 317  P      P       20 38 24.0 +0.2
      baz=126,SNR=15
R39A  Chumby, Stover    27.68 321  P      P       20 38 24.0 +0.2
      baz=130,SNR=12
O41A  Passleys Farm,    27.70 326  P      P       20 38 23.6 -0.3
      baz=136,SNR=12
M43A  Waltham Townsh    27.73 330  P      P       20 38 24.4 +0.2
      baz=141,SNR=5.8
833A  Chaparral WMA,    27.78 296  P      P       20 38 24.6 -0.2
      baz=105
833A  Chaparral WMA,    27.78 296 eP      P       20 38 25.2 +0.4
      comp=Z,76nm,1.4s
N42A  Yates City        27.79 328  P      P       20 38 25.0 +0.3
      baz=139
S38A  Stockton          27.79 319  P      P       20 38 25.1 +0.3
      baz=128
P40A  Paris             27.92 324  P      P       20 38 26.1 +0.1
      baz=134,SNR=33
P40A  Paris             27.92 324 eP      P       20 38 25.8 -0.2
      comp=Z,86nm,1.0s
TUL1  Leonard           28.04 314  P      P       20 38 27.0  0.0
      baz=122,SNR=15
TUL1  Leonard           28.04 314 eP      P       20 38 27.2 +0.2
      comp=Z,95nm,1.3s
TRQ   Mont Tremblant    28.08 355 eP      P       20 38 25.6 -1.7
SAML  Samuel            28.10 163 eP      P       20 38 27.7  0.0
      comp=Z,36nm,0.9s
SAML  Samuel            28.10 163 eP      P       20 38 27.7  0.0
SAML                               pmax   pmax
      comp=Z,36nm,0.9s
N41A  Harden Midland    28.11 327  P      P       20 38 27.2 -0.5
      baz=137,SNR=8.5
N41A  Harden Midland    28.11 327 eP      P       20 38 26.9 -0.7
      comp=Z,29nm,1.1s
M42A  Sheffield         28.12 329  P      P       20 38 28.0 +0.3
      baz=140
Q39A  Willow Grove F    28.12 322  P      P       20 38 27.5 -0.3
      baz=132,SNR=6.7
R38A  Fenwick Farm,     28.13 320  P      P       20 38 28.2 +0.3
      baz=129,SNR=22
L43A  Garden Prairie    28.22 332  P      P       20 38 28.5  0.0
      baz=143
O40A  La Belle          28.23 325  P      P       20 38 28.6 -0.1
      baz=135,SNR=16
P39B  Salisbury         28.29 323  P      P       20 38 29.2  0.0
      baz=132,SNR=14
Q38A  Cooks Store, C    28.45 321  P      P       20 38 30.9 +0.3
      baz=130,SNR=18
M41A  Milan             28.45 328  P      P       20 38 30.2 -0.4
      baz=138
K43A  Burlington        28.45 333  P      P       20 38 30.5 -0.1
      baz=144
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K43A	Burlington	28.45	333	eP	P	20 38 30.2	-0.5
	comp=Z,85nm,1.2s						
L42A	Oliver, Polo	28.50	330	P	P	20 38 30.6	-0.5
	baz=141,SNR=6.1						
L42A	Oliver, Polo	28.50	330	eP	P	20 38 30.6	-0.5
	comp=Z,33nm,1.0s						
N40A	Mertquake, Sal	28.62	326	P	P	20 38 31.8	-0.4
	baz=136						
O39A	Kirksville	28.70	324	P	P	20 38 33.0	+0.1
	baz=134,SNR=5.5						
JCT	Junction City	28.74	301	P	P	20 38 33.2	-0.3
	baz=108,SNR=5.5						
JCT	Junction City	28.74	301	eP	P	20 38 33.9	+0.5
	comp=Z,18nm,1.0s						
JCT	Junction City	28.74	301	eP	P	20 38 33.9	+0.5
JCT				pmax	pmax		
	comp=Z,18nm,1.0s						
P38A	Dawn	28.83	322	P	P	20 38 34.1	0.0
	baz=131,SNR=15						
P38A	Dawn	28.83	322	eP	P	20 38 33.7	-0.3
	comp=Z,31nm,0.8s						
Q37A	Longview Farm,	28.90	320	P	P	20 38 34.8	+0.1
	baz=129,SNR=5.4						
L41A	Preston	28.95	329	P	P	20 38 34.9	-0.2
	baz=139,SNR=5.2						
M40A	Post Highland	28.96	327	P	P	20 38 34.9	-0.3
	baz=137						
N39A	Derby Farms, D	29.11	325	P	P	20 38 36.0	-0.5
	baz=135,SNR=6.0						
N39A	Derby Farms, D	29.11	325	eP	P	20 38 35.6	-0.9
	comp=Z,24nm,1.1s						
O38A	Galt	29.13	323	P	P	20 38 36.7	+0.1
	baz=132,SNR=7.0						
K41A	Shullsburg	29.27	330	P	P	20 38 37.7	-0.2
	baz=140						
P37A	Lathrop	29.29	321	P	P	20 38 38.0	-0.1
	baz=130,SNR=27						
J42A	Columbus	29.29	333	P	P	20 38 37.7	-0.4
	baz=143						
L40A	Anamosa	29.30	328	P	P	20 38 37.8	-0.4
	baz=138,SNR=5.8						
L40A	Anamosa	29.30	328	eP	P	20 38 37.7	-0.4
	comp=Z,21nm,0.9s						
I43A	Langenfeld Bro	29.34	334	P	P	20 38 38.6	+0.1
	baz=146						
M39A	Webster	29.36	327	P	P	20 38 38.0	-0.8
	baz=136						
ABTX	Abilene, Hawle	29.36	305	P	P	20 38 39.0	0.0
	baz=112,SNR=6.3						
ABTX	Abilene, Hawle	29.36	305	eP	P	20 38 39.2	+0.3
	comp=Z,24nm,1.1s						
N38A	Joes South For	29.45	324	P	P	20 38 39.7	+0.2
	baz=133,SNR=9.6						
JFWS	Jewell Farm	29.48	331	P	P	20 38 40.0	+0.3
	baz=141,SNR=9.6						
JFWS	Jewell Farm	29.48	331	eP	P	20 38 39.6	-0.2
	comp=Z,65nm,1.2s						
JFWS	Jewell Farm	29.48	331	eP	P	20 38 39.6	-0.2
JFWS				pmax	pmax		
	comp=Z,65nm,1.2s						
O37A	Wolven Farm, M	29.54	323	P	P	20 38 40.4	0.0
	baz=131,SNR=5.7						
WMOK	Wichita Mounta	29.58	309	P	P	20 38 40.7	-0.1
	baz=117						
WMOK	Wichita Mounta	29.58	309	eP	P	20 38 40.5	-0.3
	comp=Z,9.1nm,0.8s						
WMOK	Wichita Mounta	29.58	309	eP	P	20 38 40.5	-0.3
WMOK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
I42A	Draeger Farm,	29.66	334	P	P	20 38 41.4	+0.1
	baz=144,SNR=6.1						
I42A	Draeger Farm,	29.66	334	eP	P	20 38 41.0	-0.3
	comp=Z,42nm,1.0s						
H43A	Windswept, Lux	29.67	336	P	P	20 38 42.1	+0.7
	baz=147						
H43A	Windswept, Lux	29.67	336	eP	P	20 38 41.4	-0.1
	comp=Z,37nm,1.2s						
J41A	Loganville	29.72	332	P	P	20 38 42.2	+0.3
	baz=142						
F46A	Macinaw City C	29.73	341	P	P	20 38 43.1	+1.2
	baz=153						
L39A	Vinton	29.74	328	P	P	20 38 41.8	-0.2
	baz=137,SNR=6.4						
K40A	Colesburg	29.74	329	P	P	20 38 42.1	0.0
	baz=139						
ZAIG	Zacatecas	29.76	284	eP	P	20 38 43.3	+0.5
	comp=Z,11nm,1.2s						
M38A	Pleasantville	29.86	325	P	P	20 38 43.4	+0.2
	baz=134,SNR=7.5						
F45A	CMU Biological	29.89	340	P	P	20 38 43.7	+0.3
	baz=152						
N37A	Lee Faris, Mou	29.97	323	P	P	20 38 44.5	+0.3
	baz=132,SNR=15						
N37A	Lee Faris, Mou	29.97	323	eP	P	20 38 44.2	+0.1
	comp=Z,108nm,0.8s						
H42A	Shiocton	30.01	335	eP	P	20 38 43.4	-1.0
	comp=Z,13nm,0.8s						
J40A	Soldiers Grove	30.08	331	P	P	20 38 45.1	0.0
	baz=141,SNR=5.8						
K39A	Oelwein	30.11	329	P	P	20 38 44.9	-0.4
	baz=138,SNR=7.4						
I41A	Arkdale	30.21	333	P	P	20 38 45.9	-0.3
	baz=143						
I41A	Arkdale	30.21	333	eP	P	20 38 45.6	-0.6
	comp=Z,11nm,0.8s						
SCIA	State Center	30.21	326	P	P	20 38 46.4	+0.1
	baz=135						
SCIA	State Center	30.21	326	eP	P	20 38 45.3	-1.0
	comp=Z,18nm,0.9s						
L38A	Oak Wood Farm,	30.24	327	P	P	20 38 46.3	-0.2
	baz=136,SNR=5.3						
G43A	Wallace	30.30	336	P	P	20 38 47.0	0.0
	baz=148						
G43A	Wallace	30.30	336	eP	P	20 38 46.9	0.0
	comp=Z,26nm,1.1s						
M37A	Trindle Farm,	30.32	325	P	P	20 38 47.5	+0.3
	baz=133,SNR=6.4						
KSU1	Kansas State U	30.37	319	P	P	20 38 47.6	-0.1
	baz=126,SNR=7.3						
KSU1	Kansas State U	30.37	319	eP	P	20 38 47.1	-0.6
	comp=Z,58nm,1.1s						
E45A	Wooded Hills,	30.38	341	P	P	20 38 48.1	+0.4
	baz=153						
I40A	Norwalk	30.41	332	P	P	20 38 47.9	-0.1
	baz=141						
N36A	Muff Farm, Cla	30.44	323	P	P	20 38 48.5	+0.3
	baz=131,SNR=6.0						
F44A	Big Bay de Noc	30.45	339	P	P	20 38 48.5	+0.2
	baz=150,SNR=5.6						
J39A	Decorah	30.49	330	P	P	20 38 48.3	-0.4
	baz=139,SNR=8.4						
K38A	Parkersburg	30.51	328	P	P	20 38 48.5	-0.4
	baz=136,SNR=7.1						
K38A	Parkersburg	30.51	328	eP	P	20 38 48.0	-0.9
	comp=Z,64nm,1.1s						
NNA	Nana	30.52	191	P	P	20 38 50.4	+1.1
	comp=Z,15nm,0.7s,baz=101,slow=3.5,SNR=4.4						
NNA	Nana	30.52	191	eP	P	20 38 49.8	+0.5
	comp=Z,54nm,1.3s						
NNA	Nana	30.52	191	eP	P	20 38 49.8	+0.5
NNA				pmax	pmax		
	comp=Z,54nm,1.3s						
H41A	Junction City	30.56	334	P	P	20 38 49.0	-0.3
	baz=144,SNR=5.6						
H41A	Junction City	30.56	334	eP	P	20 38 48.4	-0.9
	comp=Z,23nm,1.1s						
G42A	Mountain	30.57	336	P	P	20 38 49.4	0.0
	baz=146,SNR=8.6						
G42A	Mountain	30.57	336	eP	P	20 38 48.9	-0.5
	comp=Z,35nm,1.0s						
F43A	Flat Rock, Esc	30.59	338	P	P	20 38 50.1	+0.5
	baz=149						
L37A	Phoenix Point,	30.65	326	P	P	20 38 50.3	+0.2
	baz=134						
M36A	Felix, Anita	30.77	324	P	P	20 38 51.3	+0.1
	baz=132						
I39A	Houston	30.80	331	P	P	20 38 51.4	0.0
	baz=140						
I39A	Houston	30.80	331	eP	P	20 38 50.8	-0.6
	comp=Z,11nm,0.7s						
G41A	Antigo	30.85	335	P	P	20 38 51.3	-0.5
	baz=145						
E44A	Grand Marais A	30.85	340	P	P	20 38 52.1	+0.3
	baz=152						
E44A	Grand Marais A	30.85	340	eP	P	20 38 52.2	+0.3
	comp=Z,52nm,1.0s						
J38A	Wedel Dairy, R	30.85	329	P	P	20 38 51.8	-0.1
	baz=138						
H40A	Chili	30.88	333	P	P	20 38 52.1	-0.1
	baz=142,SNR=5.9						
F42A	Maple Grove Fa	30.89	337	P	P	20 38 52.5	+0.3
	baz=147						
E43A	Lone Tree Farm	31.00	338	P	P	20 38 53.2	0.0
	baz=150						
E43A	Lone Tree Farm	31.00	338	eP	P	20 38 53.5	+0.4
	comp=Z,18nm,0.9s						
K37A	Belmond	31.04	327	P	P	20 38 53.1	-0.4
	baz=135,SNR=5.8						
L36A	Harm Buss Farm	31.13	325	P	P	20 38 54.6	+0.2
	baz=133,SNR=17						
LSQQ	Lebel-sur-Quev	31.14	353	P	P	20 38 54.7	+0.4
	baz=169						
F41A	Three Lakes	31.25	335	P	P	20 38 55.4	0.0
	baz=146						
F41A	Three Lakes	31.25	335	eP	P	20 38 55.2	-0.2
	comp=Z,23nm,1.3s						
I38A	Scanlan Farm,	31.32	330	P	P	20 38 55.8	-0.3
	baz=139,SNR=9.8						
H39A	Augusta	31.32	332	P	P	20 38 55.9	-0.1
	baz=141,SNR=11						
E42A	Champion	31.38	337	P	P	20 38 56.6	+0.1
	baz=148						
K36A	Gilmore City	31.38	326	P	P	20 38 56.8	+0.3
	baz=134						
J37A	Redenius Farm,	31.38	328	P	P	20 38 56.8	+0.2
	baz=136						
COWI	Conover	31.56	336	eP	P	20 38 58.3	+0.2
	comp=Z,81nm,1.9s						
TXAR	Lajitas Array	31.66	297	P	P	20 38 59.8	+0.4
	comp=Z,5.9nm,0.9s,baz=125,slow=7.8,SNR=51						
TXAR				PcP	PcP	20 41 50.9	-0.2
	comp=Z,3.1nm,0.8s,baz=133,slow=5.2,SNR=6.0						
TXAR				LR	LR	20 55 33.9	
	comp=Z,99nm,18.1s,baz=0.0,slow=43						
TX31	Lajitas Ar. Si	31.66	297	eP	P	20 38 59.5	+0.1
CHGQ	Chibougamau	31.73	356	P	P	20 38 59.7	+0.1
	baz=174						
G39A	Holcombe	31.75	333	P	P	20 38 59.7	0.0
	baz=142,SNR=7.0						
H38A	Maiden Rock	31.77	331	P	P	20 38 60.0	0.0
	baz=139						
E41A	Kenton	31.80	336	P	P	20 39 00.5	+0.3
	baz=146						
J36A	Seneca 1, Swea	31.80	327	P	P	20 39 00.4	+0.2
	baz=135						
J36A	Seneca 1, Swea	31.80	327	eP	P	20 38 59.8	-0.5
	comp=Z,28nm,0.8s						
AMTX	Amarillo	31.81	308	P	P	20 39 00.3	-0.3
	baz=114						
AMTX	Amarillo	31.81	308	eP	P	20 39 00.2	-0.3
	comp=Z,26nm,0.9s						
F40A	Park Falls	31.81	334	P	P	20 39 00.2	-0.1
	baz=144						
I37A	Lemond, Waseca	31.82	329	P	P	20 39 00.4	0.0
	baz=137						
I37A	Lemond, Waseca	31.82	329	eP	P	20 38 59.5	-0.9
	comp=Z,20nm,1.0s						
MATQ	Matagami	31.91	352	P	P	20 39 01.2	+0.1
	baz=168						
G38A	Ridgeland	31.96	332	P	P	20 39 01.6	0.0
	baz=141,SNR=6.9						
H37A	Dierke Farm, C	32.00	330	P	P	20 39 02.1	+0.1
	baz=138						
F39A	Loretta	32.13	334	P	P	20 39 03.3	+0.2
	baz=143,SNR=7.3						
E40A	Wakefield	32.14	335	P	P	20 39 03.6	+0.3
	baz=145,SNR=15						
D41A	Chassel	32.15	337	P	P	20 39 03.8	+0.5
	baz=148,SNR=10						
D41A	Chassel	32.15	337	eP	P	20 39 03.8	+0.5
	comp=Z,59nm,0.9s						
CBKS	Cedar Bluff	32.24	315	P	P	20 39 04.8	+0.5
	baz=122,SNR=7.7						
CBKS	Cedar Bluff	32.24	315	eP	P	20 39 04.7	+0.5
	comp=Z,105nm,1.0s						
CBKS	Cedar Bluff	32.24	315	eP	P	20 39 04.7	+0.5
CBKS				pmax	pmax		
	comp=Z,105nm,1.0s						
MSTX	Muleshoe	32.29	305	P	P	20 39 04.6	-0.3
	baz=111						
MSTX	Muleshoe	32.29	305	eP	P	20 39 04.5	-0.3
	comp=Z,34nm,0.9s						
E39A	Mellen	32.35	335	P	P	20 39 05.4	+0.3
	baz=144						
SPMN	Marine on St.	32.43	331	P	P	20 39 05.9	+0.1
	baz=139						
SPMN	Marine on St.	32.43	331	eP	P	20 39 05.5	-0.3
	comp=Z,26nm,1.1s						
H36A	Jessenland, He	32.49	329	P	P	20 39 06.4	+0.1
	baz=137,SNR=7.1						
F38A	Pierce - Schro	32.58	333	P	P	20 39 07.3	+0.3
	baz=141,SNR=11						
BGNE	Belgrade	32.69	321	P	P	20 39 07.6	-0.5
	baz=127						
BGNE	Belgrade	32.69	321	eP	P	20 39 07.3	-0.8
	comp=Z,54nm,0.9s						
F37A	Hinrichs Farm,	32.73	332	P	P	20 39 08.4	0.0
	baz=140						
CPRX	Cap Rock	32.84	303	eP	P	20 39 08.3	-1.4
G36A	St. Michael	32.88	330	P	P	20 39 09.8	0.0
	baz=138						
E38A	The Farm, Brul	32.95	334	P	P	20 39 10.4	+0.1
	baz=142,SNR=6.0						
E38A	The Farm, Brul	32.95	334	eP	P	20 39 09.7	-0.6
	comp=Z,29nm,1.3s						
HPIG		32.96	292	eP	P	20 39 11.0	+0.1
	comp=Z,38nm,1.4s						
GDL2	Guadalupe Moun	32.98	301	eP	P	20 39 11.1	+0.2
H35A	Sunnyside Ranc	33.02	328	P	P	20 39 11.0	0.0
	baz=136,SNR=8.3						
C40A	Isle Royale Na	33.08	338	P	P	20 39 11.8	+0.4
	baz=148,SNR=11						
C40A	Isle Royale Na	33.08	338	eP	P	20 39 11.9	+0.5
	comp=Z,67nm,1.3s						
G35A	Watkins	33.23	329	eP	P	20 39 12.8	0.0
	comp=Z,33nm,1.0s						
F36A	Milaca	33.24	331	P	P	20 39 12.8	-0.1
	baz=139,SNR=6.5						
F36A	Milaca	33.24	331	eP	P	20 39 12.2	-0.7
	comp=Z,23nm,1.4s						
ECSD	EROS Data Cent	33.28	325	P	P	20 39 13.0	-0.3
	baz=132,SNR=22						
ECSD	EROS Data Cent	33.28	325	eP	P	20 39 12.7	-0.6
	comp=Z,30nm,1.0s						
C39A	Grand Marais	33.36	336	P	P	20 39 13.7	-0.2
	baz=146,SNR=6.6						
E36A	McGregor	33.62	332	P	P	20 39 16.4	+0.2
	baz=140,SNR=7.3						
MNTX	Cornudas Mount	33.68	300	P	P	20 39 17.2	+0.3
	baz=105,SNR=47						
MNTX	Cornudas Mount	33.68	300	eP	P	20 39 17.1	+0.2
	comp=Z,62nm,1.3s						
C38A	Sawbill Land.	33.73	335	P	P	20 39 16.7	-0.4
	baz=144						
F35A	Swanville	33.73	330	P	P	20 39 16.9	-0.2
	baz=137						
D37A	Cotton	33.76	334	P	P	20 39 17.6	+0.2
	baz=142,SNR=22						
G34A	Benson	33.81	328	P	P	20 39 17.8	0.0
	baz=135,SNR=5.4						
EYMN	Ely	34.00	335	P	P	20 39 19.3	-0.1
	baz=144,SNR=6.1						
EYMN	Ely	34.00	335	eP	P	20 39 19.0	-0.4
	comp=Z,16nm,1.0s						
F34A	Alexandria	34.02	329	P	P	20 39 19.7	+0.1
	baz=136						
D36A	Goodland	34.09	333	P	P	20 39 20.1	-0.1
	baz=141,SNR=8.2						
D36A	Goodland	34.09	333	eP	P	20 39 20.0	-0.1
	comp=Z,33nm,1.1s						
C37A	Embarrass	34.10	334	P	P	20 39 20.4	+0.1
	baz=143						
E35A	Pequot Lakes	34.17	331	P	P	20 39 21.3	+0.4
	baz=138						
G33A	Ortonville	34.18	327	P	P	20 39 21.3	+0.2
	baz=134						
H32A	Carlson Farm,	34.24	326	P	P	20 39 21.1	-0.5
	baz=132,SNR=8.1						
KSCO	Kaye Shedlock’	34.29	314	P	P	20 39 22.5	+0.3
	baz=118						
KSCO	Kaye Shedlock’	34.29	314	eP	P	20 39 22.6	+0.3
	comp=Z,59nm,1.4s						
C36A	Pine Crest Far	34.40	334	P	P	20 39 22.8	-0.1
	baz=142,SNR=20						
D35A	Remer	34.40	332	P	P	20 39 22.7	-0.3
	baz=139						
LPAZ	La Paz	34.41	175	P	P	20 39 24.8	+0.9
	comp=Z,5.1nm,0.8s,baz=349,slow=12,SNR=14						
LPAZ				LR	LR	20 54 37.9	
	comp=Z,1µm,18.7s,baz=346,slow=38						
LPAZ	La Paz	34.41	175	eP	P	20 39 24.8	+0.9
	comp=Z,8.5nm,1.0s						
LPAZ	La Paz	34.41	175	eP	P	20 39 24.8	+0.9
LPAZ				pmax	pmax		
	comp=Z,9.0nm,1.0s						
E34A	Wadena	34.50	330	P	P	20 39 24.0	+0.2
	baz=137						
EPT	El Paso	34.62	300	eP	P	20 39 24.7	-0.5
	comp=Z,18nm,0.6s						
T25A	Trinidad	34.74	310	P	P	20 39 26.8	+0.5
	baz=114,SNR=11						
T25A	Trinidad	34.74	310	eP	P	20 39 26.8	+0.5
	comp=Z,27nm,1.1s						
G32A	Webster	34.77	327	P	P	20 39 26.3	+0.1
	baz=132,SNR=7.4						
G32A	Webster	34.77	327	eP	P	20 39 26.3	+0.1
	comp=Z,139nm,0.9s						
C35A	Jirik Farms, M	34.84	333	P	P	20 39 26.4	-0.4
	baz=140,SNR=17						
OGNE	Ogallala	34.85	317	P	P	20 39 26.3	-0.8
	baz=121						
OGNE	Ogallala	34.85	317	eP	P	20 39 25.8	-1.2
	comp=Z,101nm,1.4s						
F32A	Veblen	35.00	328	P	P	20 39 27.5	-0.6
	baz=134						
SUSD	Miller	35.02	324	P	P	20 39 28.0	-0.4
	baz=129						
C34A	RKJ Ranch, Bem	35.22	332	P	P	20 39 29.5	-0.4
	baz=138,SNR=6.2						
B35A	Bob, Littlefor	35.24	334	P	P	20 39 29.8	-0.3
	baz=141,SNR=14						
B35A	Bob, Littlefor	35.24	334	eP	P	20 39 29.5	-0.7
	comp=Z,44nm,1.3s						
BNM	Barren Site	35.37	304	eP	P	20 39 32.7	+0.9
LPM	Los Pinos Moun	35.43	304	eP	P	20 39 33.1	+1.0
ANMO	Albuquerque	35.49	305	P	P	20 39 33.6	+0.9
	comp=Z,9.9nm,1.0s,baz=121,slow=11,SNR=23						
ANMO				LR	LR	20 56 30.0	
	comp=Z,609nm,19.0s,baz=109,slow=40						
ANMO	Albuquerque	35.49	305	P	P	20 39 33.0	+0.3
	baz=109						
ANMO	Albuquerque	35.49	305	eP	P	20 39 33.2	+0.5
	comp=Z,14nm,0.9s						
ANMO	Albuquerque	35.49	305	ceP	P	20 39 33.6	+0.9
ANMO				pmax	pmax		
	comp=Z,27nm,1.7s						
TASL	Snake Pit, Alb	35.49	305	P	P	20 39 33.2	+0.5
	baz=109,SNR=17						
TASM	ASL Pad, Albuq	35.49	305	P	P	20 39 32.9	+0.2
	baz=109,SNR=16						
Y22E	IRIS PASSCAL I	35.58	303	P	P	20 39 34.1	+0.6
	baz=107						
Y22D	IRIS PASSCAL I	35.58	303	P	P	20 39 33.2	-0.3
	baz=107						
Y22D	IRIS PASSCAL I	35.58	303	eP	P	20 39 33.1	-0.3
	comp=Z,36nm,0.6s						
LENM	Lemitar	35.65	304	eP	P	20 39 33.6	-0.5
C33A	Trail	35.69	331	P	P	20 39 33.8	-0.3
	baz=137						
B34A	Aery, Baudette	35.73	333	P	P	20 39 34.2	-0.2
	baz=140,SNR=7.8						
SDCO	Great Sand Dun	35.77	310	P	P	20 39 35.5	+0.3
	baz=113,SNR=16						
SDCO	Great Sand Dun	35.77	310	eP	P	20 39 35.3	0.0
	comp=Z,16nm,1.0s						
LAZ	Ladron	35.85	304	eP	P	20 39 36.6	+0.8
121A	Cookes Peak, D	35.86	301	P	P	20 39 36.0	+0.1
	baz=104						
Q24A	Divide	36.02	312	P	P	20 39 37.0	-0.4
	baz=115						
Q24A	Divide	36.02	312	eP	P	20 39 37.4	0.0
	comp=Z,27nm,1.3s						
AGMN	Agassiz Nation	36.13	332	P	P	20 39 37.5	-0.3
	baz=138,SNR=9.1						
AGMN	Agassiz Nation	36.13	332	eP	P	20 39 37.2	-0.6
	comp=Z,20nm,1.0s						
A33A	Warroad	36.40	333	P	P	20 39 40.2	+0.2
	baz=139						
SLBS	Sierra La Lagu	36.57	285	eP	P	20 39 43.7	+1.8
	comp=Z,36nm,1.0s						
SCHQ	Schefferville	36.71	4	P	P	20 39 43.6	+1.0
	comp=Z,7.3nm,0.7s,baz=198,slow=9.6,SNR=2.4						
SCHQ				LR	LR	20 54 04.9	
	comp=Z,394nm,20.7s,baz=238,slow=35						
SCHQ	Schefferville	36.71	4	eP	P	20 39 43.4	+0.8
	comp=Z,24nm,0.9s						
ISCO	Idaho Springs	36.71	313	P	P	20 39 43.6	+0.4
	baz=116,SNR=17						
ISCO	Idaho Springs	36.71	313	eP	P	20 39 43.6	+0.4
	comp=Z,76nm,1.8s						
ISCO	Idaho Springs	36.71	313	eP	P	20 39 43.6	+0.4
ISCO				pmax	pmax		
	comp=Z,76nm,1.8s						
S22A	4UR Ranch, Cre	36.75	309	P	P	20 39 43.8	+0.3
	baz=112,SNR=12						
S22A	4UR Ranch, Cre	36.75	309	eP	P	20 39 44.1	+0.6
	comp=Z,7.6nm,1.0s						
319A	Douglas	36.84	298	eP	P	20 39 45.8	+1.6
	comp=Z,46nm,0.9s						
LPIG	La Paz	36.91	286	LR	LR	20 56 09.8	
	comp=Z,205nm,21.0s,baz=58,slow=38						
MNMC	Minye Minye	37.13	178	eP	P	20 39 45.2	-1.7
	comp=Z,40nm,1.1s						
PHWY	Pilot Hill	37.28	315	eP	P	20 39 48.3	+0.3
	comp=Z,39nm,1.1s						
SMCO	Snowmass	37.41	311	eP	P	20 39 49.2	-0.1
	comp=Z,16nm,1.1s						
MDND	Maddock	37.59	328	P	P	20 39 50.2	-0.1
	baz=132						
MDND	Maddock	37.59	328	eP	P	20 39 50.5	+0.3
	comp=Z,124nm,1.1s						
ULM	Lac du Bonnet	37.59	334	P	P	20 39 49.4	-0.8
	comp=Z,22nm,0.9s,baz=140,slow=8.4,SNR=19						
ULM				LR	LR	20 55 11.7	
	comp=Z,257nm,20.6s,baz=96,slow=36						
ULM	Lac du Bonnet	37.59	334	eP	P	20 39 48.9	-1.3
	comp=Z,30nm,0.9s						
ULM	Lac du Bonnet	37.59	334	eP	P	20 39 48.9	-1.3
ULM				pmax	pmax		
	comp=Z,30nm,0.9s						
RSSD	Black Hills	37.79	320	P	P	20 39 52.1	-0.2
	baz=123						
RSSD	Black Hills	37.79	320	eP	P	20 39 51.2	-1.1
	comp=Z,9.7nm,1.0s						
RSSD	Black Hills	37.79	320	eP	P	20 39 51.2	-1.1
RSSD				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MVCO	Mesa Verde	37.80	308	P	P	20 39 52.6	+0.2
	baz=110						
MVCO	Mesa Verde	37.80	308	eP	P	20 39 52.5	+0.2
MVCO				ePP	PP	20 41 13.7	-5.2
HSIG		37.87	294	eP	P	20 39 53.5	+0.7
	comp=Z,46nm,0.9s						
W18A	Petrified Fore	38.11	304	P	P	20 39 55.3	+0.3
	baz=106						
W18A	Petrified Fore	38.11	304	eP	P	20 39 56.0	+1.0
	comp=Z,21nm,1.1s						
X18A	Snowflake	38.12	303	eP	P	20 39 56.2	+1.1
	comp=Z,34nm,1.3s						
PV01	Paradox Valley	38.17	309	eP	P	20 39 56.2	+0.6
PV15	Paradox Valley	38.18	309	eP	P	20 39 56.9	+1.3
TUC	Tucson	38.28	299	P	P	20 39 56.8	+0.4
	baz=102						
TUC	Tucson	38.28	299	eP	P	20 39 57.3	+0.9
	comp=Z,8.7nm,1.0s						
TUC	Tucson	38.28	299	eP	P	20 39 57.3	+0.9
TUC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
PV02	Paradox Valley	38.32	309	eP	P	20 39 57.7	+0.9
	comp=Z,15nm,1.2s						
PV03	Paradox Valley	38.42	309	eP	P	20 39 56.1	-1.5
PV04	Paradox Valley	38.51	309	eP	P	20 39 59.4	+1.1
PV05	Paradox Valley	38.54	309	eP	P	20 39 58.5	-0.2
PV10	Paradox Valley	38.60	309	eP	P	20 39 59.5	+0.4
K22A	Casper	38.61	317	P	P	20 39 59.5	+0.4
	baz=118,SNR=8.5						
K22A	Casper	38.61	317	eP	P	20 39 59.3	+0.2
	comp=Z,33nm,1.0s						
RWWY	Rawlins	38.63	315	eP	P	20 39 59.9	+0.5
	comp=Z,79nm,1.3s						
O20A	White River Ci	38.68	312	P	P	20 40 00.2	+0.4
	baz=114,SNR=11						
O20A	White River Ci	38.68	312	eP	P	20 40 00.2	+0.4

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           comp=Z,29nm,1.1s
PV09  Paradox Valley    38.71 309 eP     P      20 40 00.9 +0.7
SRIG  Santa Rosalia     38.83 291 eP     P      20 40 01.6 +0.7
           comp=Z,86nm,1.6s
PB01  IPOC Station P    39.04 178 eP     P      20 40 02.0 -0.8
           comp=Z,27nm,1.0s
X16A  Lo Mia Camp, P    39.28 302 eP     P      20 40 06.0 +1.1
           comp=Z,21nm,1.3s
WUAZ  Wupatki           39.50 304  P     P      20 40 06.9 +0.2
           baz=105,SNR=9.8
WUAZ  Wupatki           39.50 304 eP     P      20 40 07.7 +1.0
           comp=Z,74nm,1.8s
214A  Organ Pipe Nat    39.90 298  P     P      20 40 09.9  0.0
           baz=100,SNR=7.8
P18A  Preston Nutter    39.92 311 eP     P      20 40 11.0 +0.7
           comp=Z,20nm,1.2s
SRU   San Rafael Swe    39.94 310 eP     P      20 40 10.8 +0.5
           comp=Z,8.6nm,0.9s
SRU   San Rafael Swe    39.94 310 eP     P      20 40 10.8 +0.5
SRU                                pmax  pmax
           comp=Z,9.0nm,0.9s
P17A  Butcher Ranch,    40.23 310 eP     P      20 40 13.1 +0.5
           comp=Z,13nm,1.1s
DGMT  Dagmar            40.36 326  P     P      20 40 14.3 +0.8
           baz=127,SNR=9.4
DGMT  Dagmar            40.36 326 eP     P      20 40 13.8 +0.4
           comp=Z,94nm,1.0s
Y14A  Wickenburg        40.44 301 eP     P      20 40 15.6 +1.3
           comp=Z,28nm,1.4s
U15A  North Rim         40.46 305 eP     P      20 40 15.5 +0.7
           comp=Z,40nm,1.6s
LAO   LASA Array        40.47 322  P     P      20 40 14.2 -0.2
           baz=123,SNR=11
LAO   LASA Array        40.47 322 eP     P      20 40 14.5 +0.1
           comp=Z,44nm,1.1s
TMUT  Trail Mountain    40.51 310 eP     P      20 40 15.6 +0.4
           comp=Z,14nm,1.1s
PD31  Pinedale Array    40.66 315 eP     P      20 40 15.8 -0.6
PDAR  Pinedale Array    40.66 315  P     P      20 40 16.2 -0.1
           comp=Z,7.2nm,1.0s,baz=110,slow=7.1,SNR=43
PDAR                               PcP   PcP    20 42 16.6 -1.2
           comp=Z,3.5nm,0.8s,baz=107,slow=3.5,SNR=5.6
PDAR                               LR    LR     20 58 52.6
           comp=Z,436nm,18.3s,baz=118,slow=39
PDAR  Pinedale Array    40.66 315 eP     P      20 40 15.8 -0.6
PDAR                               PcP   PcP    20 42 16.6 -1.2
BW06  Boulder Array     40.67 315  P     P      20 40 16.0 -0.3
           baz=115,SNR=20
BW06  Boulder Array     40.67 315 eP     P      20 40 15.5 -0.8
           comp=Z,42nm,1.4s
PKCU  Pink Cliffs       40.76 307 eP     P      20 40 18.1 +0.8
           comp=Z,62nm,2.0s
MTPU  Mount Pierson     40.83 308 eP     P      20 40 18.6 +0.6
           comp=Z,8.2nm,0.8s
113A  Mohawk Valley,    40.84 299 eP     P      20 40 18.0 +0.4
           comp=Z,8.4nm,1.0s
MSU   Marysvale         40.97 308 eP     P      20 40 19.8 +0.9
MSU                               ePcP   PcP    20 42 19.8 +0.9
MSU   Marysvale         40.97 308 eP     P      20 40 19.8 +0.9
MSU                               e             20 42 19.8
MPU   Maple Canyon      41.06 311 eP     P      20 40 19.7 +0.2
           comp=Z,16nm,1.1s
JLU   Jordanelle        41.13 312 eP     P      20 40 20.7 +0.5
           comp=Z,15nm,0.7s
TCRU  Three Creeks R    41.20 308 eP     P      20 40 21.4 +0.6
           comp=Z,17nm,1.4s
TCUT  Toone Canyon      41.29 312 eP     P      20 40 21.4  0.0
           comp=Z,32nm,1.2s
LCMT  Little Creek M    41.35 306 eP     P      20 40 22.9 +0.9
           comp=Z,4.2nm,0.8s
NLU   North Lily Min    41.36 310 eP     P      20 40 22.8 +0.8
           comp=Z,29nm,1.5s
CTU   Camp Tracy        41.38 312 eP     P      20 40 22.7 +0.6
           comp=Z,61nm,1.6s
SZCU  Shurtz Canyon     41.39 307 eP     P      20 40 22.9 +0.5
           comp=Z,4.7nm,1.0s
W13A  Hualapai Mount    41.40 303 eP     P      20 40 23.8 +1.3
           comp=Z,44nm,1.4s
PDMCI Parker Dam,Lak    41.44 301  P     P      20 40 23.4 +0.9
           baz=102
RLMT  Red Lodge         41.52 319  P     P      20 40 23.4 +0.1
           baz=118,SNR=18
RLMT  Red Lodge         41.52 319 eP     P      20 40 23.2 -0.1
           comp=Z,24nm,0.9s
HWUT  Hardware Ranch    41.58 313 eP     P      20 40 23.5 -0.3
           comp=Z,56nm,1.4s
CCUT  Cedar City        41.59 306 eP     P      20 40 24.8 +0.8
           comp=Z,9.8nm,1.3s
CCUT                              ePcP   PcP    20 42 21.8 +0.8
Y12C  Blythe            41.64 301  P     P      20 40 25.5 +1.3
           baz=101
Y12C  Blythe            41.64 301 eP     P      20 40 25.2 +1.1
           comp=Z,16nm,1.0s
AHID  Auburn Hatcher    41.70 315 eP     P      20 40 24.2 -0.6
           comp=Z,48nm,1.4s
LOHW  Long Hollow       41.72 316 eP     P      20 40 24.4 -0.5
           comp=Z,41nm,1.1s
SNOW  Snow King Moun    41.75 316 eP     P      20 40 25.3  0.0
           comp=Z,53nm,1.3s
GLA   Glamis            41.77 299  P     P      20 40 25.7 +0.4
           baz=100
GLA   Glamis            41.77 299 eP     P      20 40 25.8 +0.5
           comp=Z,18nm,1.0s
GLA   Glamis            41.77 299 eP     P      20 40 25.8 +0.5
GLA                                pmax  pmax
           comp=Z,18nm,1.0s
REDW  Red Top Meadow    41.78 316 eP     P      20 40 25.3 -0.1
           comp=Z,80nm,1.2s
MOOW  Moose Ponds       41.87 316 eP     P      20 40 25.2 -1.0
           comp=Z,19nm,0.9s
TPAW  Teton Pass        41.89 316 eP     P      20 40 26.4 -0.1
           comp=Z,22nm,0.8s
NEE2  Needles Airpor    41.92 302  P     P      20 40 27.6 +1.2
           baz=102
DUG   Dugway, Tooele    41.97 310  P     P      20 40 27.6 +0.7
           baz=109,SNR=12
DUG   Dugway, Tooele    41.97 310 eP     P      20 40 27.3 +0.3
           comp=Z,15nm,0.9s
DUG                               ePcP   PcP    20 42 21.4 -0.7
DUG   Dugway, Tooele    41.97 310 eP     P      20 40 27.3 +0.3
DUG                               e             20 42 21.4
DUG                                pmax  pmax
           comp=Z,15nm,0.9s
FLWY  Flagg Ranch       41.98 317 eP     P      20 40 27.7 +0.7
           comp=Z,20nm,1.0s
FXWY  Fox Creek         42.01 316 eP     P      20 40 26.7 -0.6
           comp=Z,34nm,1.3s
H17A  Grant Village     42.03 317  P     P      20 40 28.0 +0.4
           baz=116
H17A  Grant Village     42.03 317 eP     P      20 40 27.6 +0.1
           comp=Z,27nm,1.5s
IMW   Indian Meadow     42.05 316 eP     P      20 40 27.9 +0.2
           comp=Z,8.2nm,0.6s
GCMT  Greycliff         42.08 319 eP     P      20 40 26.4 -1.4
BTCC  Brunts Corner     42.09 299 eP     P      20 40 28.6 +0.8
SPUT  South Promonto    42.09 312 eP     P      20 40 28.0  0.0
           comp=Z,28nm,1.0s
YPP   Pitchstone Pla    42.12 317 eP     P      20 40 29.2 +0.9
           comp=Z,7.4nm,1.0s
YFT   Old Faithful      42.22 317 eP     P      20 40 29.4 +0.4
           comp=Z,21nm,1.3s
IRM   Iron Mountain     42.23 301  P     P      20 40 29.7 +0.7
           baz=101,SNR=32
PSUT  Pine Spring       42.23 308 eP     P      20 40 30.3 +1.0
           comp=Z,20nm,1.0s
BGU   Big Grassy Mou    42.37 311 eP     P      20 40 30.4 +0.2
           comp=Z,28nm,0.8s
LDFC  Landfair          42.38 302 eP     P      20 40 31.9 +1.6
           comp=Z,47nm,1.1s
BC3   Big Chuckawall    42.39 300  P     P      20 40 30.9 +0.5
           baz=100,SNR=8.4
YMR   Madison River     42.40 317 eP     P      20 40 30.5  0.0
           comp=Z,14nm,0.5s
ROSA  Rosais            42.42  52 eP     P      20 40 31.9 +1.5
           comp=Z,80nm,1.2s
HVU   Hansel Valley     42.48 313 eP     P      20 40 30.6 -0.5
           comp=Z,70nm,1.7s
HVU   Hansel Valley     42.48 313 eP     P      20 40 30.6 -0.5
HVU                                pmax  pmax
           comp=Z,70nm,1.7s
SWSC  Sam W. Stewart    42.56 299  P     P      20 40 32.2 +0.5
           baz=99
YHB   Horse Butte       42.58 317 eP     P      20 40 31.6 -0.4
           comp=Z,15nm,0.8s
SHPR  Sheep Range       42.72 304 eP     P      20 40 34.5 +1.3
           comp=Z,26nm,1.4s
GMRC  Granite Mounta    42.76 302  P     P      20 40 34.0 +0.5
           baz=101,SNR=12
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QLMT  Earthquake Lak    42.77 317 eP     P      20 40 33.2 -0.3
IKP   In-Ko-Pah, Jac    42.77 299  P     P      20 40 34.0 +0.5
           baz=98
BELC  Belle Mtn. Jos    42.89 301  P     P      20 40 35.0 +0.4
           baz=100,SNR=5.7
MONP2 Monument Peak     43.07 299  P     P      20 40 36.2 +0.2
           baz=98,SNR=11
TUQ   Turquoise Moun    43.10 303  P     P      20 40 36.8 +0.6
           baz=102,SNR=9.1
GO02  Mina Guanaco      43.13 178 eP     P      20 40 36.6  0.0
           comp=Z,19nm,1.2s
XPFO  Piæon Flat        43.20 300 eP     P      20 40 37.5 +0.4
XPFO                              ePcP   PcP    20 42 26.3  0.0
PFO   Pinyon Flats O    43.21 300  P     P      20 40 37.3 +0.2
           baz=99
PFO   Pinyon Flats O    43.21 300 eP     P      20 40 37.9 +0.8
           comp=Z,9.9nm,1.1s
PFO                               ePcP   PcP    20 42 26.2 -0.1
EGMT  Eagleton          43.22 322  P     P      20 40 37.4 +0.5
           baz=120,SNR=19
EGMT  Eagleton          43.22 322 eP     P      20 40 37.0 +0.1
           comp=Z,54nm,1.1s
BOZ   Bozeman (W)       43.22 318  P     P      20 40 37.4 +0.3
           baz=116,SNR=17
BOZ   Bozeman (W)       43.22 318 eP     P      20 40 37.3 +0.3
           comp=Z,22nm,1.1s
BAR   Barrett           43.25 299 eP     P      20 40 36.4 -0.9
           comp=Z,6.0nm,0.9s
HEC   Hector,Ludlow     43.31 302  P     P      20 40 38.6 +0.7
           baz=100,SNR=10
FFC   Flin Flon         43.41 334 eP     P      20 40 36.9 -1.4
           comp=Z,20nm,1.1s
FFC   Flin Flon         43.41 334 eP     P      20 40 36.9 -1.4
FFC                                pmax  pmax
           comp=Z,20nm,1.1s
SHOC  Shoshone, Teco    43.47 303  P     P      20 40 39.6 +0.5
           baz=102,SNR=8.4
R11A  Troy Canyon, C    43.49 307  P     P      20 40 39.8 +0.4
           baz=105,SNR=11
R11A  Troy Canyon, C    43.49 307 eP     P      20 40 39.8 +0.4
           comp=Z,8.2nm,1.1s
R11A                              ePP    PcP    20 42 26.6 -0.7
109C  Camp Elliot, M    43.64 299  P     P      20 40 40.8 +0.4
           baz=98
CPE   Camp Elliot       43.64 299 eP     P      20 40 40.0 -0.3
           comp=Z,27nm,1.0s
TPNV  Topopah Spring    43.67 305  P     P      20 40 41.2 +0.3
           baz=103,SNR=15
TPNV  Topopah Spring    43.67 305 eP     P      20 40 42.2 +1.4
           comp=Z,20nm,1.1s
TPNV                              ePP    PcP    20 42 27.6 -0.2
MCMT  McKenzie Canyo    43.69 317 eP     P      20 40 41.6 +0.6
MCMT                              ePP    PcP    20 42 26.6 -1.3
DLMT  Dillon            43.74 318 eP     P      20 40 41.7 +0.5
           comp=Z,24nm,1.1s
DLMT                              ePP    PP     20 42 24.5 +1.3
GSC   Goldstone, Bar    43.78 302  P     P      20 40 42.3 +0.6
           baz=101,SNR=17
GSC   Goldstone, Bar    43.78 302 eP     P      20 40 42.7 +1.0
           comp=Z,31nm,1.3s
MURC  Murrieta          43.81 300  P     P      20 40 42.7 +0.8
           baz=99
HRY   Holter Researc    43.84 320 eP     P      20 40 41.9 -0.1
LRM   Limekiln Ridge    43.84 318 eP     P      20 40 42.8 +0.7
LRM                               ePcP   PcP    20 42 28.1 -0.2
FCC   Fort Churchill    43.84 343 eP     P      20 40 40.3 -1.3
           comp=Z,21nm,1.0s
FCC   Fort Churchill    43.84 343 eP     P      20 40 40.3 -1.3
FCC                                pmax  pmax
           comp=Z,21nm,1.0s
FURC  Furnace Creek,    44.05 304  P     P      20 40 44.5 +0.9
           baz=102,SNR=9.7
HLID  Hailey            44.25 314  P     P      20 40 45.9 +0.6
           baz=111,SNR=16
HLID  Hailey            44.25 314 eP     P      20 40 45.5 +0.2
           comp=Z,51nm,1.9s
BFSC  Mount Baldy Ra    44.29 301  P     P      20 40 46.5 +0.7
           baz=99
MPMC  Manual Prospec    44.47 303  P     P      20 40 48.0 +0.7
           baz=101,SNR=15
LRMC  Laurel Mtn Rad    44.52 302  P     P      20 40 48.0 +0.4
           baz=100,SNR=11
GRAC  Grapevine Rang    44.56 305  P     P      20 40 48.6 +0.8
           baz=102,SNR=6.0
DAC   Darwin (Calif)    44.59 303 eP     P      20 40 49.2 +0.9
           comp=Z,34nm,1.4s
DAC                               ePcP   PcP    20 42 31.3 +0.3
MWC   Mount Wilson      44.62 300 eP     P      20 40 49.0 +0.5
           comp=Z,22nm,1.4s
MWC   Mount Wilson      44.62 300 eP     P      20 40 49.0 +0.5
MWC                                pmax  pmax
           comp=Z,22nm,1.4s
EDW2  Edwards Air Fo    44.67 301  P     P      20 40 49.2 +0.5
           baz=99,SNR=20
PASC  Pasadena Art C    44.71 300 eP     P      20 40 49.2 +0.2
           comp=Z,16nm,0.4s
CIS   Catalina Islan    44.79 299  P     P      20 40 50.2 +0.4
           baz=98
DECC  Green Verdugo     44.85 300  P     P      20 40 50.8 +0.6
           baz=98
WORM  Onyx Ranch        45.00 303 eP     P      20 40 48.9 -2.5
CWC   Cottonwood Cre    45.01 304  P     P      20 40 51.8 +0.3
           baz=101
MFID  Camas Ranch       45.16 314 eP     P      20 40 52.4 -0.2
           comp=Z,34nm,1.5s
ISA   Isabella, Lake    45.19 302  P     P      20 40 53.4 +0.6
           baz=100
ISA   Isabella, Lake    45.19 302 eP     P      20 40 53.2 +0.4
           comp=Z,26nm,1.6s
ISA   Isabella, Lake    45.19 302 eP     P      20 40 53.2 +0.4
ISA                                pmax  pmax
           comp=Z,26nm,1.6s
MSO   Missoula          45.20 319  P     P      20 40 52.9 +0.1
           baz=114,SNR=10.0
MSO   Missoula          45.20 319 eP     P      20 40 52.7 -0.1
           comp=Z,16nm,1.1s
OSI   Osito Audit: C    45.22 301  P     P      20 40 54.3 +1.1
           baz=99
OSI   Osito Audit: C    45.22 301 eP     P      20 40 53.2 +0.1
           comp=Z,17nm,0.8s
TIN   Tinemaha, Big     45.25 304  P     P      20 40 54.3 +0.9
           baz=101
BMN   Battle Mountai    45.26 309 eP     P      20 40 53.5  0.0
           comp=Z,29nm,1.5s
BMN   Battle Mountai    45.26 309 eP     P      20 40 53.5  0.0
BMN                                pmax  pmax
           comp=Z,29nm,1.5s
ARVC  Arvin             45.38 302  P     P      20 40 54.7 +0.4
           baz=99
NV11  Mina Array Sit    45.48 306 eP     P      20 40 55.9 +0.7
           comp=Z,1.6nm,1.3s
KVN   Kaiserville       45.57 307 eP     P      20 40 56.3 +0.3
           comp=Z,39nm,1.2s
KVN                               ePcP   PcP    20 42 34.3  0.0
KVN                               ePP    PP     20 42 44.9 +2.1
KVN   Kaiserville       45.57 307 eP     P      20 40 56.3 +0.3
KVN                               e             20 42 34.3
KVN                               e             20 42 44.9
KVN                                pmax  pmax
           comp=Z,39nm,1.2s
NV01  Mina Array Sit    45.59 306 eP     P      20 40 56.4 +0.2
NV01                              ePcP   PcP    20 42 34.6 +0.1
NV01                              ePP    PP     20 42 44.2 +1.2
NVAR  Mina Array Bea    45.59 306  P     P      20 40 57.1 +0.9
           comp=Z,5.9nm,0.9s,baz=83,slow=6.1,SNR=17
NVAR                               PcP   PcP    20 42 34.7 +0.3
           comp=Z,4.0nm,0.7s,baz=137,slow=3.8,SNR=4.6
NVAR                               LR    LR     21 02 45.7
           comp=Z,1µm,18.2s,baz=264,slow=40
SNCC  San Nicolas Is    45.70 299 eP     P      20 40 55.9 -0.9
           comp=Z,42nm,1.2s
VES   Vestal, Richgr    45.70 303  P     P      20 40 57.3 +0.5
           baz=100,SNR=11
JTMT  Jette             45.80 320 eP     P      20 40 58.4 +0.8
           comp=Z,28nm,1.0s
JTMT                              ePcP   PcP    20 42 34.0 -0.9
RYN   Ryan              45.80 306 eP     P      20 40 58.5 +0.7
           comp=Z,43nm,1.6s
SCZ2  Santa Cruz Isl    45.88 300  P     P      20 40 58.9 +0.6
           baz=97
IVI   Ivigtut           45.94  15 eP     P      20 40 59.6 +1.4
           comp=Z,43nm,1.2s
OMMB  Old Mammoth Mi    45.96 305 eP     P      20 41 00.4 +1.2
           comp=Z,16nm,1.1s
OMMB                              ePcP   PcP    20 42 36.3 +0.4
MDPB  Devils Postpil    46.02 305 eP     P      20 41 00.5 +0.8
           comp=Z,17nm,1.2s
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WALA  Waterton Lakes    46.14 322 eP     P      20 41 00.1 -0.1
           comp=Z,20nm,1.3s
PKM   Mcpherson Peak    46.15 301  P     P      20 41 00.5 -0.1
           baz=98,SNR=6.1
CPUP  Villa Florida     46.26 163  P     P      20 41 00.5 -0.7
           comp=Z,12nm,1.1s,baz=354,slow=7.7,SNR=8.4
CPUP                               LR    LR     21 01 51.2
           comp=Z,321nm,18.4s,baz=338,slow=38
CPUP  Villa Florida     46.26 163 eP     P      20 41 00.0 -1.2
           comp=Z,30nm,1.3s
CPUP  Villa Florida     46.26 163 eP     P      20 41 00.0 -1.2
CPUP                               pmax  pmax
           comp=Z,31nm,1.3s
SMMC  Simmler           46.36 302  P     P      20 41 02.5 +0.5
           baz=98
YERR  Yerington         46.42 307 eP     P      20 41 03.5 +0.8
           comp=Z,48nm,1.1s
WAKR  Walker            46.47 306 eP     P      20 41 04.5 +1.3
           comp=Z,12nm,1.1s
NRS   Narsarsuaq        46.62  17 eP     P      20 41 03.9 +0.3
           comp=Z,36nm,1.0s
PAGB  Antelope Grade    46.62 302 eP     P      20 41 05.0 +0.9
           comp=Z,31nm,1.4s
BMO   Blue Mountains    46.64 315 eP     P      20 41 03.3 -0.9
           comp=Z,37nm,1.6s
BMO   Blue Mountains    46.64 315 eP     P      20 41 03.3 -0.9
BMO                                pmax  pmax
           comp=Z,37nm,1.6s
PAHR  Pah Rah Range     46.69 308 eP     P      20 41 04.4 -0.4
PAHR                              ePcP   PcP    20 42 38.2  0.0
PNTR  Pine Nut          46.72 307 eP     P      20 41 05.3 +0.2
           comp=Z,14nm,0.9s
VCNR  Virginia City     46.80 307 eP     P      20 41 05.4 -0.3
           comp=Z,5.8nm,1.0s
WVOR  Wild Horse Val    46.83 312 eP     P      20 41 05.8 +0.1
           comp=Z,51nm,1.3s
WVOR  Wild Horse Val    46.83 312 eP     P      20 41 05.8 +0.1
WVOR                               pmax  pmax
           comp=Z,51nm,1.3s
LCO   Las Campanas      46.94 179 eP     P      20 41 06.7 -0.1
           comp=Z,56nm,1.3s
LCO   Las Campanas      46.94 179 eP     P      20 41 06.7 -0.1
LCO                                pmax  pmax
           comp=Z,56nm,1.3s
F10A  Beach Ranch, E    46.98 317 eP     P      20 41 05.6 -1.2
           comp=Z,10.0nm,0.9s
J08A  Circle Bar Ran    46.98 313 eP     P      20 41 06.6 -0.3
           comp=Z,54nm,1.4s
CMB   Columbia Colle    47.12 305 eP     P      20 41 08.5 +0.5
           comp=Z,9.9nm,1.1s
CMB   Columbia Colle    47.12 305 eP     P      20 41 08.5 +0.5
CMB                                pmax  pmax
           comp=Z,10.0nm,1.1s
BEKR  Beckworth         47.46 308 eP     P      20 41 10.8  0.0
           comp=Z,15nm,1.5s
SAO   San Andreas Ge    47.73 303 eP     P      20 41 13.2 +0.5
           comp=Z,21nm,1.0s
SAO   San Andreas Ge    47.73 303 eP     P      20 41 13.2 +0.5
SAO                                pmax  pmax
           comp=Z,21nm,1.0s
AFDM  Forest Hills D    47.74 306 eP     P      20 41 13.2 +0.4
           comp=Z,30nm,1.6s
NEW   Newport           47.75 320  P     P      20 41 12.6 -0.1
           baz=113,SNR=35
NEW   Newport           47.75 320 eP     P      20 41 12.4 -0.4
           comp=Z,53nm,1.1s
NEW   Newport           47.75 320 eP     P      20 41 12.4 -0.4
NEW                                pmax  pmax
           comp=Z,53nm,1.1s
E09A  Wood Farm, Sta    47.76 317 eP     P      20 41 12.3 -0.5
           comp=Z,34nm,1.4s
MOD   Modoc Plateau     47.88 310 eP     P      20 41 13.4 -0.6
           comp=Z,22nm,1.1s
MOD                               ePcP   PcP    20 42 42.6 +0.2
G08A  Pilot Rock        47.89 315 eP     P      20 41 13.9 -0.1
           comp=Z,26nm,1.4s
I07A  Izee              47.90 313 eP     P      20 41 14.4 +0.3
           comp=Z,11nm,1.2s
GO04  Tololo Observa    48.10 180 eP     P      20 41 16.3 +0.5
           comp=Z,27nm,0.8s
ORV   Oroville          48.26 307 eP     P      20 41 16.8  0.0
           comp=Z,14nm,1.0s
ORV   Oroville          48.26 307 eP     P      20 41 16.8  0.0
ORV                                pmax  pmax
           comp=Z,14nm,1.0s
C09A  Chrisman Ranch    48.29 319 eP     P      20 41 16.9 -0.1
           comp=Z,35nm,1.3s
C09A                              ePcP   PcP    20 42 42.0 -1.6
E08A  Dider Farm, El    48.35 317 eP     P      20 41 16.9 -0.4
           comp=Z,18nm,1.2s
E08A                              ePcP   PcP    20 42 41.0 -2.7
D08A  Wollman Farm,     48.45 317 eP     P      20 41 17.8 -0.3
           comp=Z,21nm,1.3s
K05A  Summer Lake       48.51 311 eP     P      20 41 19.1 +0.2
           comp=Z,34nm,1.3s
K05A                              ePcP   PcP    20 42 44.6 -0.1
HAWA  Hanford           48.62 316 eP     P      20 41 19.7 +0.2
           comp=Z,34nm,1.4s
O03D  Paynes Creek      48.63 308  P     P      20 41 19.9 +0.1
           baz=102,SNR=7.4
F07A  Phinny Hill Vi    48.73 316 eP     P      20 41 20.2  0.0
           comp=Z,10nm,0.6s
PINE  Pine Mountain     48.82 313 eP     P      20 41 21.5 +0.2
           comp=Z,31nm,1.6s
PINE                              ePcP   PcP    20 42 46.3 +0.5
E07A  Sunnyside         48.89 317 eP     P      20 41 22.8 +1.3
           comp=Z,22nm,0.7s
J05D  Fort Rock, OR     48.89 312  P     P      20 41 21.5 -0.3
           baz=105,SNR=5.8
M04C  Macdoel           48.97 310  P     P      20 41 22.1 -0.3
           baz=103,SNR=7.1
G06A  Carlson Farm,     49.01 315 eP     P      20 41 23.0 +0.5
           comp=Z,61nm,1.8s
MCCM  Marconi Confer    49.07 305 eP     P      20 41 23.9 +0.9
           comp=Z,160nm,1.6s
K04D  Chiloquin, OR     49.10 311  P     P      20 41 23.7 +0.4
           baz=104
B08A  Colville Reser    49.16 319 eP     P      20 41 22.8 -0.8
           comp=Z,47nm,1.2s
I05D  Terrebonne, OR    49.24 313  P     P      20 41 24.6 +0.3
           baz=105
WDC   Whiskeytown Da    49.24 308 eP     P      20 41 22.5 -1.8
           comp=Z,13nm,1.1s
WDC   Whiskeytown Da    49.24 308 eP     P      20 41 22.5 -1.8
WDC                                pmax  pmax
           comp=Z,13nm,1.1s
HOPS  Hopland Field     49.36 306 eP     P      20 41 26.4 +1.2
           comp=Z,183nm,2.0s
N02D  Trinity Center    49.44 309  P     P      20 41 25.1 -0.8
           baz=102
G05D  Wamic, OR         49.47 314  P     P      20 41 26.5 +0.5
           baz=106
J04D  Umpqua Nationa    49.50 312  P     P      20 41 26.0 -0.5
           baz=104,SNR=10
YBH   Yreka Blue Hor    49.60 310  P     P      20 41 26.4 -0.8
           comp=Z,7.5nm,0.8s,baz=80,slow=6.8,SNR=24
YBH                                LR    LR     21 03 48.3
           comp=Z,485nm,21.8s,baz=96,slow=38
YBH   Yreka Blue Hor    49.60 310 eP     P      20 41 26.2 -0.9
           comp=Z,9.7nm,0.8s
YBH   Yreka Blue Hor    49.60 310 eP     P      20 41 26.2 -0.9
YBH                                pmax  pmax
           comp=Z,10.0nm,0.8s
M02C  Callahan          49.63 309  P     P      20 41 26.5 -0.9
           baz=102
LTY   Liberty           49.64 317 eP     P      20 41 27.0 -0.3
           comp=Z,38nm,1.4s
KFPM  Farley Peak       49.73 307 eP     P      20 41 28.1  0.0
H04A  Detroit Lake      49.91 314 eP     P      20 41 29.7 +0.3
           comp=Z,71nm,1.5s
HUMO  Hull Mountain     49.96 311 eP     P      20 41 28.9 -1.0
           comp=Z,14nm,0.8s
KMRM  Mail Ridge        50.05 308 eP     P      20 41 30.9 +0.3
           comp=Z,26nm,0.9s
KHMM  Horse Mountain    50.18 308 eP     P      20 41 31.1 -0.6
           comp=Z,14nm,1.0s
LON   Longmire          50.23 316 eP     P      20 41 31.8  0.0
           comp=Z,13nm,1.2s
LON   Longmire          50.23 316 eP     P      20 41 31.8  0.0
LON                                pmax  pmax
           comp=Z,13nm,1.2s
L02D  Cave Junction,    50.34 310  P     P      20 41 31.9 -0.7
           baz=102
JCC   Jacoby Creek,     50.40 308 eP     P      20 41 33.4 +0.3
           comp=Z,34nm,1.0s
D05A  Enumclaw          50.47 317 eP     P      20 41 33.1 -0.4
           comp=Z,20nm,1.1s
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I03D	Drain, OR	50.49	312	P	P	20 41 33.3	-0.4
	baz=103						
PMAR	Madeira	50.54	62	eP	P	20 41 37.8	+3.3
SFJD	Kangerlussuaq	50.55	10	P	P	20 41 33.3	-0.5
	comp=Z,27nm,0.8s,baz=207,slow=10,SNR=4.5						
SFJD				LR	LR	21 00 48.2	
	comp=Z,431nm,21.8s,baz=188,slow=33						
SFJD	Kangerlussuaq	50.55	10	eP	P	20 41 34.0	+0.2
	comp=Z,50nm,1.1s						
SFJD	Kangerlussuaq	50.55	10	eP	P	20 41 34.0	+0.2
SFJD				pmax	pmax		
	comp=Z,50nm,1.1s						
B06A	Marblemount	50.56	318	eP	P	20 41 33.0	-1.2
	comp=Z,9.3nm,0.6s						
COR	Corvallis	50.66	313	eP	P	20 41 35.0	0.0
	comp=Z,60nm,1.4s						
COR	Corvallis	50.66	313	eP	P	20 41 35.0	0.0
COR				pmax	pmax		
	comp=Z,60nm,1.4s						
KBO	Bosley Butte	50.80	310	eP	P	20 41 36.2	-0.1
	comp=Z,210nm,1.9s						
MACI	Morro de la Ar	50.83	68	eP	P	20 41 37.5	+0.8
	comp=Z,92nm,0.9s						
KEBM	Edson Butte	51.01	311	eP	P	20 41 38.7	+0.9
	comp=Z,188nm,1.6s						
E03A	Lebam	51.33	316	eP	P	20 41 39.7	-0.3
	comp=Z,68nm,1.4s						
LLLB	Lillooet	51.49	321	eP	P	20 41 40.9	-0.3
	comp=Z,22nm,1.3s						
NLWA	Neilton Lookou	51.76	316	eP	P	20 41 43.3	0.0
	comp=Z,37nm,1.4s						
PGC	Sidney	51.84	318	eP	P	20 41 43.0	-0.8
	comp=Z,27nm,1.1s						
ANGG	Ammassalik, Gr	52.30	17	eP	P	20 41 46.5	-0.3
	comp=Z,53nm,0.7s						
ILULI	Ilulissat	52.49	9	eP	P	20 41 47.9	-0.3
	comp=Z,58nm,1.1s						
ILULI	Ilulissat	52.49	9	eP	P	20 41 47.9	-0.3
ILULI				pmax	pmax		
	comp=Z,58nm,1.1s						
YKA	Yellowknife Ar	53.46	337	P	P	20 41 54.8	-0.7
	comp=Z,21nm,0.9s,baz=120,slow=7.2,SNR=102						
YKA				LR	LR	21 04 47.7	
	comp=Z,58nm,19.9s,baz=119,slow=36						
YKB5	Yellowknife Ar	53.46	337	eP	P	20 41 55.0	-0.6
YKB5				ePcP	PcP	20 43 01.3	-1.1
YKW3	Yellowknife Ar	53.51	337	eP	P	20 41 54.6	-1.3
	comp=Z,35nm,1.0s						
BBB	Bella Bella	55.69	321	eP	P	20 42 12.5	+0.7
	comp=Z,38nm,1.2s						
PFVI	Vila Bisbo	57.34	57	eP	P	20 42 24.7	+0.8
	comp=Z,74nm,1.4s						
SUMG	Summit	57.51	11	eP	P	20 42 24.6	-0.4
	comp=Z,93nm,1.0s						
SUMG	Summit	57.51	11	eP	P	20 42 24.6	-0.4
SUMG				pmax	pmax		
	comp=Z,93nm,1.0s						
PNCL	Nicolau / Gran	57.60	56	eP	P	20 42 29.8	+4.1
PNCL				eS	S	20 50 27.8	+5.4
PCAS	Casmilo, Conde	57.70	54	eP	P	20 42 27.4	+1.0
	comp=Z,44nm,1.6s						
MESJ	Messejana	57.84	56	eP	P	20 42 27.1	-0.4
MESJ				AMb	AMB	20 42 29.4	
	comp=Z,44nm,2.1s						
MESJ	Messejana	57.84	56	eP	P	20 42 28.6	+1.2
	comp=Z,43nm,1.3s						
MESJ	Messejana	57.84	56	eP	P	20 42 27.0	-0.4
PMTG	Montargil	57.87	55	eP	P	20 42 28.3	+0.7
	comp=Z,38nm,1.6s						
RES	Resolute Bay	57.95	353	eP	P	20 42 27.2	-0.4
	comp=Z,11nm,0.9s						
RES	Resolute Bay	57.95	353	eP	P	20 42 27.2	-0.4
RES				pmax	pmax		
	comp=Z,11nm,0.9s						
PGAV	Gavieira, Arco	57.98	52	eP	P	20 42 28.9	+0.4
	comp=Z,86nm,1.5s						
PGAV	Gavieira, Arco	57.98	52	eLR	LR	21 00 01.0	
	comp=Z,171nm,18.0s						
EVO	Evora	58.02	56	eP	P	20 42 29.5	+0.8
	comp=Z,38nm,1.5s						
PBDV	Barranco-do-Ve	58.06	57	eP	P	20 42 30.4	+1.4
	comp=Z,79nm,1.3s						
PBDV	Barranco-do-Ve	58.06	57	eSS	SS	20 54 24.7	+4.8
PBEJ	Beja	58.12	56	eP	P	20 42 31.6	+2.2
	comp=Z,39nm,1.5s						
PVIS	Viseu	58.19	53	eP	P	20 42 30.4	+0.5
	comp=Z,34nm,2.1s						
PVAQ	Vaqueiros	58.23	57	eP	P	20 42 31.8	+1.6
	comp=Z,55nm,1.3s						
PVAQ	Vaqueiros	58.23	57	eLR	LR	20 59 49.9	
	comp=Z,228nm,20.0s						
POLO	Lamas de Olo	58.30	52	eP	P	20 42 31.2	+0.5
	comp=Z,20nm,1.8s						
RPN	Rapa Nui	58.34	220	P	P	20 42 32.5	+1.6
	comp=Z,76nm,0.9s,baz=172,slow=5.0,SNR=3.9						
PVRL	Vila Real	58.36	52	eP	P	20 42 32.0	+0.9
	comp=Z,45nm,1.9s						
PESTR	Estremoz	58.36	55	eP	P	20 42 30.5	-0.6
PESTR				eS	S	20 50 30.2	-2.2
PESTR	Estremoz	58.36	55	eP	P	20 42 31.2	+0.1
	comp=Z,19nm,1.3s						
MTE	Manteigas	58.44	53	eP	P	20 42 32.3	+0.6
	comp=Z,43nm,2.0s						
MTE				eS	S	20 50 45.5	+12
MTE				eLR	LR	20 59 54.8	
	comp=Z,315nm,18.0s						
MTE	Manteigas	58.44	53	eP	P	20 42 31.9	+0.2
	comp=Z,19nm,1.0s						
PCBR	Castelo Branco	58.47	54	eP	P	20 42 32.7	+0.9
	comp=Z,48nm,1.6s						
DLBC	Dease Lake	58.50	328	eP	P	20 42 32.4	+0.6
	comp=Z,51nm,1.2s						
DIB	Dawson Inlet,	58.51	322	eP	P	20 42 32.2	+0.4
	comp=Z,27nm,1.0s						
PMRV	Marv??o	58.53	55	eP	P	20 42 32.6	+0.4
	comp=Z,45nm,1.4s						
PMRV				eS	S	20 50 41.4	+6.8
PMRV				eLR	LR	20 59 46.0	
	comp=Z,221nm,22.0s						
PLCA	Paso Flores	58.64	179	P	P	20 42 32.6	-0.2
	comp=Z,10nm,0.7s,baz=18,slow=8.3,SNR=17						
PLCA	Paso Flores	58.64	179	eP	P	20 42 32.8	-0.1
	comp=Z,22nm,0.8s						
PLCA	Paso Flores	58.64	179	eP	P	20 42 32.8	-0.1
PLCA				pmax	pmax		
	comp=Z,22nm,0.8s						
MVO	Moncorvo	58.87	53	eP	P	20 42 35.4	+0.7
	comp=Z,35nm,1.8s						
MVO	Moncorvo	58.87	53	eLR	LR	21 00 51.3	
	comp=Z,182nm,20.0s						
PBRG	Braganca	59.11	52	eP	P	20 42 37.3	+1.0
	comp=Z,33nm,1.6s						
WRAK	Wrangell Islan	59.16	325	eP	P	20 42 36.2	-0.1
	comp=Z,55nm,0.3s						
DSB	Dublin	60.54	39	eP	P	20 42 46.1	+0.3
	comp=Z,73nm,1.5s						
JIS	Juneau Island	60.67	327	eP	P	20 42 47.4	+0.8
	comp=Z,18nm,1.3s						
PAB	San Pablo	60.88	54	eP	P	20 42 49.1	+0.5
	comp=Z,27nm,1.1s						
PAB	San Pablo	60.88	54	eP	P	20 42 49.1	+0.5
PAB				pmax	pmax		
	comp=Z,27nm,1.1s						
MDT	Midelt	60.90	62	P	P	20 42 49.7	+0.9
	comp=Z,13nm,0.9s,baz=291,slow=7.4,SNR=16						
MDT				LR	LR	21 07 14.5	
	comp=Z,61nm,18.2s,baz=297,slow=34						
ESDC	Sonseca Array	61.18	54	P	P	20 42 51.0	+0.5
	comp=Z,11nm,0.9s,baz=273,slow=7.1,SNR=48						
ESDC				LR	LR	21 03 50.7	
	comp=Z,175nm,21.4s,baz=265,slow=31						
ESLA	Sonseca Array	61.18	54	eP	P	20 42 50.9	+0.3
	comp=Z,31nm,1.1s						
ES19	SONSECA Array	61.23	54	eP	P	20 42 50.6	-0.2
SKAG	Skagway	61.42	328	eP	P	20 42 52.0	+0.3
	comp=Z,41nm,1.4s						
H10N3	ASCENSION HYDR	61.59	110	T	T	21 49 38.5	
	baz=295,slow=75,SNR=9.6						
H10N2	ASCENSION HYDR	61.59	110	T	T	21 49 43.0	
	baz=295,slow=75,SNR=11						
H10N1	ASCENSION HYDR	61.61	110	T	T	21 49 38.3	
	baz=295,slow=75,SNR=11						
H10S3	ASCENSION HYDR	61.92	111	T	T	21 50 07.6	
	baz=296						
H10S1	ASCENSION HYDR	61.93	111	T	T	21 50 08.6	
	baz=296						
H10S2	ASCENSION HYDR	61.94	111	T	T	21 50 10.4	
	baz=296						
ESK	Eskdalemuir	62.68	37	eP	P	20 43 00.1	-0.2
	comp=Z,24nm,0.9s						
ESK	Eskdalemuir	62.68	37	eP	P	20 43 00.1	-0.2
ESK				pmax	pmax		
	comp=Z,24nm,0.9s						
EKA	Eskdalemuir Ar	62.71	37	P	P	20 43 00.1	-0.3
	comp=Z,17nm,0.8s,baz=275,slow=6.0,SNR=36						
EKA				LR	LR	21 05 45.2	
	comp=Z,190nm,20.1s,baz=280,slow=32						
INK	Inuvik	63.12	338	P	P	20 43 01.8	-1.2
	comp=Z,15nm,1.1s,baz=97,slow=7.5,SNR=12						
INK				LR	LR	21 10 18.0	
	comp=Z,546nm,20.4s,baz=110,slow=36						
INK	Inuvik	63.12	338	eP	P	20 43 02.0	-0.8
	comp=Z,32nm,1.3s						
INK	Inuvik	63.12	338	eP	P	20 43 02.1	-0.8
INK				pmax	pmax		
	comp=Z,32nm,1.3s						
YKU2	Yakutat	63.61	328	eP	P	20 43 05.9	-0.3
KOWA	Kowa	64.20	82	P	P	20 43 10.5	-0.5
	comp=Z,8.6nm,0.8s,baz=290,slow=9.1,SNR=16						
KOWA				LR	LR	21 08 34.8	
	comp=Z,176nm,20.0s,baz=224,slow=34						
KOWA	Kowa	64.20	82	eP	P	20 43 10.2	-0.8
	comp=Z,13nm,0.9s						
DAWY	Dawson	64.29	333	eP	P	20 43 10.3	-0.5
	comp=Z,36nm,1.4s						
BALM	Baldy	65.14	329	eP	P	20 43 17.4	+0.9
	comp=Z,43nm,1.3s						
BALM	Baldy	65.14	329	eP	P	20 43 17.4	+0.9
BALM				pmax	pmax		
	comp=Z,43nm,1.3s						
EGAK	Eagle	65.18	334	eP	P	20 43 16.5	0.0
	comp=Z,15nm,0.9s						
TIC	Toumodi	65.29	91	eP	P	20 43 16.8	-1.3
TGL	Tana Glacier	65.34	329	eP	P	20 43 18.8	+1.0
	comp=Z,50nm,1.0s						
LIC	Lamto	65.41	91	eP	P	20 43 17.6	-1.3
	comp=Z,67nm,1.2s						
DBIC	Dimbokro	65.44	91	P	P	20 43 18.8	-0.3
	comp=Z,7.4nm,0.7s,baz=278,slow=8.0,SNR=6.5						
DBIC				LR	LR	21 06 58.2	
	comp=Z,118nm,21.7s,baz=252,slow=31						
DBIC	Dimbokro	65.44	91	eP	P	20 43 19.0	-0.1
	comp=Z,17nm,1.0s						
DBIC	Dimbokro	65.44	91	eP	P	20 43 19.0	-0.1
DBIC				pmax	pmax		
	comp=Z,17nm,1.0s						
CRQM	Cirque	65.50	329	eP	P	20 43 19.3	+0.5
	comp=Z,62nm,1.2s						
KIC	Kosan Boka	65.64	91	eP	P	20 43 19.0	-1.4
	comp=Z,34nm,0.9s						
RAGM	Ragged Mountai	66.21	329	eP	P	20 43 24.5	+1.2
	comp=Z,46nm,1.0s						
BMRM	Bremner River	66.23	329	eP	P	20 43 24.1	+0.6
	comp=Z,113nm,1.3s						
HARP	HAARP	66.63	331	eP	P	20 43 26.6	+0.7
	comp=Z,48nm,1.1s						
DIV	Divide	66.81	329	eP	P	20 43 27.4	+0.2
	comp=Z,53nm,1.1s						
PAX	Paxson	66.83	331	eP	P	20 43 27.3	+0.1
	comp=Z,26nm,1.0s						
PAX	Paxson	66.83	331	eP	P	20 43 27.3	+0.1
PAX				pmax	pmax		
	comp=Z,26nm,1.0s						
KLU	Klutina	66.91	330	eP	P	20 43 28.3	+0.5
	comp=Z,50nm,1.2s						
UCC	Uccle	66.98	42	eP	P	20 43 28.4	+0.1
	comp=Z,50nm,1.3s						
UCC	Uccle	66.98	42	eP	P	20 43 28.4	+0.1
UCC				pmax	pmax		
	comp=Z,50nm,1.3s						
FYU	Fort Yukon	67.12	335	eP	P	20 43 29.2	+0.3
	comp=Z,130nm,1.4s						
DOU	Dourbes	67.14	43	⇑P	P	20 43 29.5	+0.1
	comp=Z,10nm,1.3s						
SCM	Sheep Creek Mo	67.60	330	eP	P	20 43 32.3	+0.1
	comp=Z,64nm,1.2s						
IL1	Eielson Array	67.61	333	eP	P	20 43 31.1	-1.0
ILAR	Eielson Array	67.61	333	P	P	20 43 31.6	-0.5
	comp=Z,13nm,0.9s,baz=105,slow=4.4,SNR=86						
ILB	Eielson Array	67.61	333	eP	P	20 43 31.1	-1.0
DHY	Denali Highway	67.70	331	eP	P	20 43 32.5	-0.4
	comp=Z,12nm,1.0s						
BEBN	Eben Emael	67.81	42	⇓P	P	20 43 34.3	+0.7
HGN	Heimansgroeve	67.98	42	eP	P	20 43 35.1	+0.4
	comp=Z,74nm,1.4s						
CCB	Clear Creek Bu	68.00	333	eP	P	20 43 33.2	-1.2
	comp=Z,13nm,1.1s						
MEM	Membach	68.03	42	⇑P	P	20 43 35.3	+0.3
	comp=Z,19nm,1.4s						
COLA	College	68.03	333	eP	P	20 43 34.2	-0.5
	comp=Z,36nm,1.1s						
COLA	College	68.03	333	eP	P	20 43 34.2	-0.5
COLA				pmax	pmax		
	comp=Z,36nm,1.1s						
WRH	Wood River Hil	68.11	333	eP	P	20 43 34.6	-0.6
	comp=Z,16nm,1.0s						
WLF	Walferdange	68.17	43	⇓P	P	20 43 36.3	+0.4
	comp=Z,22nm,1.5s						
WLF	Walferdange	68.17	43	eP	P	20 43 35.9	+0.1
	comp=Z,33nm,1.2s						
WLF	Walferdange	68.17	43	eP	P	20 43 35.9	+0.1
WLF				pmax	pmax		
	comp=Z,33nm,1.2s						
MDM	Murphy Dome	68.20	333	eP	P	20 43 33.7	-2.1
	comp=Z,38nm,1.1s						
GHO	Glory Hole Cre	68.36	330	eP	P	20 43 37.0	+0.1
	comp=Z,61nm,1.1s						
MCK	McKinley	68.44	332	eP	P	20 43 37.1	-0.2
	comp=Z,32nm,1.1s						
MCK	McKinley	68.44	332	eP	P	20 43 37.1	-0.2
MCK				pmax	pmax		
	comp=Z,32nm,1.1s						
PMR	Palmer	68.45	330	eP	P	20 43 37.2	-0.2
	comp=Z,38nm,1.3s						
PMR	Palmer	68.45	330	eP	P	20 43 37.2	-0.2
PMR				pmax	pmax		
	comp=Z,38nm,1.3s						
WTSB	Winterswijk	68.48	41	i P	P	20 43 37.9	+0.2
	comp=Z,82nm,1.0s						
BWN	Browne	68.69	333	eP	P	20 43 38.4	-0.5
	comp=Z,75nm,1.2s						
RC01	Rabbit Creek A	68.73	329	eP	P	20 43 39.5	+0.3
	comp=Z,34nm,1.2s						
BNI	Bardonecchia	68.82	48	eP	P	20 43 41.0	+0.8
	comp=Z,25nm,1.3s						
ECH	Echery	68.91	45	eP	P	20 43 40.3	-0.3
	comp=Z,30nm,1.2s						
ECH	Echery	68.91	45	eP	P	20 43 40.3	-0.3
ECH				pmax	pmax		
	comp=Z,30nm,1.2s						
TOLK	Toolik Lake Re	68.97	337	P	P	20 43 40.3	-0.4
	baz=94,SNR=5.7						
TOLK	Toolik Lake Re	68.97	337	eP	P	20 43 40.0	-0.6
	comp=Z,36nm,1.4s						
TRF	Thorofare Moun	69.03	332	eP	P	20 43 41.0	-0.3
	comp=Z,65nm,1.3s						
COLD	Coldfoot	69.13	336	eP	P	20 43 41.7	+0.1
	comp=Z,38nm,1.1s						
SENIN	Lac Senin/Sane	69.15	47	eP	P	20 43 43.0	+0.7
	comp=Z,48nm,1.4s						
SUA	Susitna One	69.22	330	eP	P	20 43 42.7	+0.3
	comp=Z,91nm,1.8s						
MLY	Manley	69.27	333	eP	P	20 43 41.7	-0.8
	comp=Z,19nm,1.1s						
BRLK	Bradley Lake	69.30	328	eP	P	20 43 43.2	+0.5
	comp=Z,107nm,1.5s						
KTH	Kantishna Hill	69.32	332	eP	P	20 43 42.6	-0.3
	comp=Z,76nm,1.2s						
BPAW	Bear Paw Mtn.	69.35	332	eP	P	20 43 42.3	-0.8
	comp=Z,31nm,0.9s						
CNPM	China Poot	69.48	328	eP	P	20 43 44.2	+0.3
	comp=Z,97nm,1.3s						
SKT	Skwentna	69.59	330	eP	P	20 43 43.8	-0.8
	comp=Z,24nm,1.2s						
BFO	Black Forest	69.68	44	eP	P	20 43 45.9	+0.5
	comp=Z,1.8nm,1.2s						
BFO	Black Forest	69.68	44	i P	P	20 43 46.7	+1.3
KONO	Kongsberg	69.80	32	eP	P	20 43 46.2	+0.4
	comp=Z,18nm,0.9s						
KONO	Kongsberg	69.80	32	ceP	P	20 43 46.5	+0.7
KONO				pmax	pmax		
	comp=Z,40nm,2.5s						
CAST	Castle Rocks	69.84	332	eP	P	20 43 44.9	-1.2
	comp=Z,26nm,1.2s						
SPU	Mount Spurr	69.86	329	eP	P	20 43 47.0	+0.8
PPLA	Purkeypile	69.89	331	eP	P	20 43 45.7	-0.8
	comp=Z,30nm,1.2s						
TOA0	Torodi Ar. Sit	69.91	82	eP	P	20 43 44.7	-2.6
TORD	Torodi Ar. Bea	69.91	82	P	P	20 43 45.2	-2.1
	comp=Z,7.1nm,0.9s,baz=296,slow=6.5						
TORD				LR	LR	21 11 49.1	
	comp=Z,203nm,19.9s,baz=295,slow=34						
STU	Stuttgart	70.22	44	eP	P	20 43 47.5	-1.0
	comp=Z,35nm,1.5s						
STU	Stuttgart	70.22	44	eP	P	20 43 47.6	-1.0
STU				pmax	pmax		
	comp=Z,35nm,1.5s						
KDAK	Kodiak Island	70.25	326	eP	P	20 43 48.6	0.0
	comp=Z,39nm,1.0s						
KDAK	Kodiak Island	70.25	326	i P	P	20 43 48.8	+0.2
NC204	NORSAR Array S	70.33	31	eP	P	20 43 49.7	+0.6
NBO00	NORSAR Array S	70.35	31	eP	P	20 43 49.4	+0.2
NAO01	NORSAR Array S	70.41	31	eP	P	20 43 49.8	+0.2
NB2	NORSAR Subarra	70.56	31	P	P	20 43 51.2	+0.7
	comp=Z,49nm,1.2s,baz=274,slow=6.5						
NB2	NORSAR Subarra	70.56	31	P	P	20 43 51.2	+0.7
	baz=274,slow=6.5						
NOA	NORSAR Array B	70.56	31	LR	LR	21 11 57.3	
	comp=Z,140nm,19.3s,baz=265,slow=33						
NB201	NORSAR Array S	70.60	31	eP	P	20 43 51.6	+0.9
NC303	NORSAR Array S	70.62	31	eP	P	20 43 51.6	+0.8
OHAK	Old Harbor	70.66	325	eP	P	20 43 50.3	-0.8
NC602	NORSAR Array S	70.73	31	eP	P	20 43 52.4	+0.9
NC405	NORSAR Array S	70.80	31	eP	P	20 43 52.8	+0.9
DAVA	Damuels	70.82	45	i P	P	20 43 53.0	+0.5
	comp=Z,19nm,1.4s,SNR=7.0						
DAVOX	Davos/Dischmat	70.88	46	P	P	20 43 53.2	+0.2
	comp=Z,5.3nm,0.8s,baz=241,slow=7.5,SNR=12						
DAVOX				LR	LR	21 13 20.3	
	comp=Z,152nm,18.1s,baz=278,slow=34						
TAM	Tamanrasset	71.22	72	eP	P	20 43 55.8	+0.4
	comp=Z,9.5nm,1.2s						
TAM	Tamanrasset	71.22	72	eP	P	20 43 55.8	+0.4
TAM				pmax	pmax		
	comp=Z,10.0nm,1.2s						
RETA	Reutte	71.39	45	i P	P	20 43 56.3	+0.4
	comp=Z,27nm,1.4s,SNR=8.5						
FETA	Feichten	71.43	46	i P	P	20 43 56.8	+0.6
	comp=Z,27nm,1.2s,SNR=13						
GRFO	Grafenberg	71.44	43	eP	P	20 43 56.4	+0.3
	comp=Z,8.9nm,1.0s						
GRFO	Grafenberg	71.44	43	eP	P	20 43 56.4	+0.3
GRFO				pmax	pmax		
	comp=Z,9.0nm,1.0s						
THTN	Thala	71.54	58	eP	P	20 43 57.4	+0.4
	comp=Z,36nm,1.0s						
VLC	Villacollemand	71.55	49	eP	P	20 43 55.8	-1.0
	comp=Z,21nm,1.1s						
MOTA	Moosalm	71.64	45	i P	P	20 43 58.6	+1.1
	comp=Z,12nm,1.1s,SNR=7.1						
SPITS	Spitsbergen Ar	71.80	13	P	P	20 43 57.5	-0.2
	comp=Z,11nm,0.9s,baz=282,slow=6.6,SNR=5.0						
SPITS				LR	LR	21 16 14.5	
	comp=Z,264nm,18.7s,baz=285,slow=36						
HFS	Hagfors	71.84	32	P	P	20 43 58.1	-0.1
	comp=Z,5.3nm,0.8s,baz=252,slow=2.9,SNR=9.0						
HFS				LR	LR	21 10 16.4	
	comp=Z,102nm,21.6s,baz=262,slow=31						
WATA	Walderalm	71.96	45	eP	P	20 44 00.1	+0.7
	comp=Z,2.4nm,0.5s						
KEST	Kesra	72.04	58	P	P	20 44 00.5	+0.5
	comp=Z,24nm,0.9s,baz=272,slow=2.6,SNR=23						
KEST				LR	LR	21 10 12.0	
	comp=Z,91nm,21.6s,baz=268,slow=31						
KEST	Kesra	72.04	58	eP	P	20 44 00.2	+0.3
	comp=Z,52nm,0.8s						
RGN	Rugen	72.19	38	eP	P	20 44 01.2	+0.9
	comp=Z,16nm,0.9s						
CLL	Collm	72.38	41	⇑iP	P	20 44 01.7	+0.1
	comp=Z,23nm,1.4s						
CLL				i pP	pP	20 44 11.2	+1.5
	comp=Z,20nm,1.4s						
CLL				i (sP)	sP	20 44 15.9	+3.2
CLL				L	L	21 13 00.0	
	comp=Z,300nm,18.7s						
CLL	Collm	72.38	41	eP	P	20 44 01.6	0.0
	comp=Z,19nm,1.3s						
CLL	Collm	72.38	41	⇑iP	P	20 44 01.7	+0.1
ABTA	Abfaltersbach	72.68	46	i P	P	20 44 03.6	0.0
	comp=Z,23nm,1.4s,SNR=12						
BRG	Berggiesshubel	73.03	41	i P	P	20 44 06.0	+0.5
	comp=Z,19nm,1.2s						
BRG				SS	SS	20 58 01.0	-11
	comp=N,150nm,18.6s						
	comp=E,225nm,18.0s						
	comp=Z,318nm,18.1s						
BRG	Berggiesshubel	73.03	41	i P	P	20 44 06.0	+0.5
BRG				pmax	pmax		
	comp=Z,19nm,1.2s						
BRG				MLR	MLR		
	comp=N,150nm,18.6s						
BRG				MLR	MLR		
	comp=E,225nm,18.0s						
BRG				MLR	MLR		
	comp=Z,318nm,18.1s						
KHC	Kasperske Hory	73.04	43	eP	P	20 44 06.1	+0.4
KHC				epP	pP	20 44 14.7	+0.9
KHC				AMS	AMS	21 12 20.0	
	comp=Z,300nm,18.3s						
KHC	Kasperske Hory	73.04	43	eP	P	20 44 05.9	+0.3
	comp=Z,12nm,1.2s						
KHC	Kasperske Hory	73.04	43	eP	P	20 44 06.1	+0.4
KHC				e		20 44 14.7	
KHC				MLR	MLR		
	comp=Z,300nm,18.3s						
GEC2	GERESS Array S	73.17	43	eP	P	20 44 06.5	+0.1
	comp=Z,20nm,1.1s						
GEC2	GERESS Array S	73.17	43	eP	P	20 44 06.5	+0.1
GEC2				pmax	pmax		
	comp=Z,20nm,1.1s						
GERES	GERESS Array B	73.17	43	P	P	20 44 06.6	+0.1
	comp=Z,7.8nm,0.8s,baz=270,slow=4.0,SNR=48						
GERES				LR	LR	21 11 42.9	
	comp=Z,215nm,20.6s,baz=274,slow=32						
GEA0	GERESS Array S	73.17	43	eP	P	20 44 06.2	-0.2
KBA	Koelnbreinsper	73.19	45	i P	P	20 44 06.7	-0.1
	comp=Z,24nm,1.4s,SNR=10						
ROBS	Robic	73.43	46	eP	P	20 44 07.8	-0.1
MYKA	Terra Mystica	73.46	46	i P	P	20 44 08.1	-0.1
	comp=Z,15nm,1.2s,SNR=7.0						
PVCC	Panska Ves	73.47	42	eP	P	20 44 08.7	+0.6
PVCC				epP	pP	20 44 12.3	-3.9
PVCC	Panska Ves	73.47	42	eP	P	20 44 08.7	+0.6
PRU	Pruhonice	73.54	42	eP	P	20 44 08.9	+0.4
PRU				epP	pP	20 44 12.6	-4.0
PRU				AMS	AMS	21 12 00.0	
	comp=Z,400nm,17.8s						
PRU	Pruhonice	73.54	42	eP	P	20 44 08.9	+0.4
PRU				MLR	MLR		
	comp=Z,400nm,17.8s						
CHGN	Chignik	73.56	325	eP	P	20 44 08.3	-0.1
	comp=Z,72nm,1.0s						
CADS	Cadrg	73.59	46	i P	P	20 44 09.1	+0.1
CADS				i pP	pP	20 44 18.5	+1.4
MOA	Molln	73.69	44	i P	P	20 44 09.4	-0.1
	comp=Z,20nm,1.3s,SNR=10						
GOPC	GO Pecny, Ondr	73.70	42	AMS	AMS	21 13 00.0	
	comp=Z,500nm,21.6s						
JAVS	Javornik	73.87	46	i P	P	20 44 10.9	+0.2
JAVS				i pP	pP	20 44 20.3	+1.4
RDOG	Red Dog Mine	73.93	337	eP	P	20 44 09.7	-0.8
	comp=Z,54nm,1.2s						
MOZS	Mozjanca	74.06	46	eP	P	20 44 11.8	+0.1
OBKA	Obir	74.10	46	i P	P	20 44 11.9	-0.2
	comp=Z,21nm,1.6s,SNR=6.9						
LJU	Ljubljana	74.17	46	i P	P	20 44 12.5	+0.2
LJU				i pP	sP	20 44 22.4	-1.0
UPC	Upice	74.39	41	eP	P	20 44 13.9	+0.4
UPC				AMS	AMS	21 14 00.0	
	comp=Z,400nm,19.1s						
UPC	Upice	74.39	41	eP	P	20 44 13.9	+0.4
UPC				MLR	MLR		
	comp=Z,400nm,19.1s						
SOKA	Soboth	74.40	46	i P	P	20 44 13.2	-0.5
	comp=Z,11nm,1.4s,SNR=8.4						
PDKS	Podkum	74.48	46	eP	P	20 44 14.2	0.0
PDKS				i pP	pP	20 44 24.1	+1.8
KSP	Ksiaz	74.50	41	eP	P	20 44 14.7	+0.6
KSP	Ksiaz	74.50	41	eP	P	20 44 14.7	+0.6
DPC	Dobruska-Polom	74.61	42	eP	P	20 44 15.5	+0.7

DPC				AMS	AMS	21 12 40.0	
	comp=Z,500nm,22.1s						
DPC	Dobruska-Polom	74.61	42	eP	P	20 44 15.5	+0.7
DPC				MLR	MLR		
	comp=Z,500nm,22.1s						
ARSA	Arzberg	74.63	45	iP	P	20 44 14.8	-0.2
	comp=Z,15nm,1.4s,SNR=9.7						
GKP	Gorka Klasztor	74.66	39	eP	P	20 44 16.6	+1.6
GKP	Gorka Klasztor	74.66	39	eP	P	20 44 16.6	+1.6
CONA	Conrad Observa	74.73	44	iP	P	20 44 15.9	+0.3
	comp=Z,16nm,1.6s,SNR=8.7						
CLTB	Caltabellotta	74.76	55	eP	P	20 44 16.3	+0.3
	comp=Z,32nm,1.1s						
KRUC	Moravsky	74.88	43	eP	P	20 44 16.6	+0.2
VRAC	Vranov	74.97	43	⇑iP	P	20 44 16.3	-0.6
VRAC	Vranov	74.97	43	⇑P	P	20 44 16.3	-0.6
VRAC	Vranov	74.97	43	eP	P	20 44 17.2	+0.3
ARCES	ARCESS Array B	75.40	21	P	P	20 44 18.6	-0.4
	comp=Z,10nm,0.8s,baz=279,slow=4.3,SNR=28						
ARE0	ARCESS Array S	75.40	21	eP	P	20 44 18.8	-0.2
	comp=Z,24nm,1.0s						
MORC	Moravsky Berou	75.48	42	⇑iP	P	20 44 20.5	+0.6
MORC	Moravsky Berou	75.48	42	eP	P	20 44 20.4	+0.6
	comp=Z,161nm,1.5s						
MORC	Moravsky Berou	75.48	42	⇑P	P	20 44 20.6	+0.6
MORC	Moravsky Berou	75.48	42	eP	P	20 44 20.6	+0.6
MODS	Modra-Piesok	75.58	43	eP	P	20 44 21.3	+0.8
MODS				pmax	pmax		
	comp=Z,51nm,1.5s						
MODS	Modra-Piesok	75.58	43	eP	P	20 44 21.3	+0.8
BEHE	Becsehely	75.62	45	⇑eP	P	20 44 21.3	+0.6
VAE	Valguarnera	75.71	55	P	P	20 44 22.8	+1.3
	comp=Z,7.4nm,0.8s,baz=353,slow=8.1,SNR=2.7						
VAE				LR	LR	21 13 27.3	
	comp=Z,253nm,20.2s,baz=312,slow=32						
JAVC	Velka Javorina	75.75	43	eP	P	20 44 22.9	+1.5
OKC	Ostrava-Krasne	75.86	42	eP	P	20 44 22.8	+0.8
OKC				AMS	AMS	21 13 30.0	
	comp=Z,400nm,18.9s						
OKC	Ostrava-Krasne	75.86	42	eP	P	20 44 22.8	+0.8
OKC				MLR	MLR		
	comp=Z,400nm,18.9s						
WDD	Wied Dalam	76.15	57	eP	P	20 44 23.9	+0.1
	comp=Z,76nm,1.0s						
BLY	Banja Luka	76.25	47	eP	P	20 44 24.2	-0.1
	comp=Z,24nm,1.3s						
CUC	Castrocucco	76.25	52	eP	P	20 44 23.9	-0.6
	comp=Z,23nm,1.0s						
CSKK	Csˆ‡kako	76.44	44	⇑eP	P	20 44 25.5	+0.2
VYHS	Vyhne	76.58	43	eP	P	20 44 26.8	+0.7
VYHS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VYHS	Vyhne	76.58	43	eP	P	20 44 26.8	+0.7
CEL	Celeste	76.69	54	eP	P	20 44 25.9	-1.1
	comp=Z,34nm,0.7s						
OJC	Ojcow	76.82	41	eP	P	20 44 28.3	+0.9
OJC	Ojcow	76.82	41	eP	P	20 44 28.0	+0.5
	comp=Z,30nm,1.2s						
OJC	Ojcow	76.82	41	eP	P	20 44 28.3	+0.9
LANS	Liptovska Anna	76.84	42	eP	P	20 44 29.4	+1.8
LANS	Liptovska Anna	76.84	42	eP	P	20 44 29.4	+1.8
BUD	Budapest	76.92	44	⇑eP	P	20 44 28.9	+0.9
MORH	Mˆ‡rˆ¡gy, Hung	76.94	45	⇑eP	P	20 44 29.1	+1.0
BEL	Belsk	77.07	40	eP	P	20 44 30.0	+1.2
BEL	Belsk	77.07	40	eP	P	20 44 30.0	+1.2
TIP	Timpagrande	77.14	53	⇓iP	P	20 44 28.1	-1.5
TIP	Timpagrande	77.14	53	eP	P	20 44 28.1	-1.5
	comp=Z,20nm,1.3s						
PSZ	Piszkesteto	77.39	44	⇓iP	P	20 44 31.0	+0.2
PSZ	Piszkesteto	77.39	44	⇑eP	P	20 44 31.6	+0.8
PSZ	Piszkesteto	77.39	44	eP	P	20 44 32.0	+1.2
	comp=Z,37nm,1.3s						
PSZ	Piszkesteto	77.39	44	⇓P	P	20 44 31.0	+0.2
FIA1	FINESS Array S	77.59	29	eP	P	20 44 31.2	-0.3
FINES	FINESS Array B	77.59	29	P	P	20 44 31.6	+0.1
	comp=Z,12nm,0.9s,baz=272,slow=3.5,SNR=41						
FINES				LR	LR	21 14 16.6	
	comp=Z,139nm,21.9s,baz=268,slow=32						
KECS	Kecovo	77.65	43	eP	P	20 44 33.6	+1.5
KECS				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KECS	Kecovo	77.65	43	eP	P	20 44 33.6	+1.5
SUW	Suwalki	77.97	37	eP	P	20 44 34.1	+0.4
SUW	Suwalki	77.97	37	eP	P	20 44 33.6	-0.2
	comp=Z,33nm,1.0s						
SUW	Suwalki	77.97	37	eP	P	20 44 34.2	+0.4
CRVS	Cervenica-Dubn	78.18	42	eP	P	20 44 36.5	+1.4
CRVS				pmax	pmax		
	comp=Z,38nm,1.6s						
CRVS	Cervenica-Dubn	78.18	42	eP	P	20 44 36.5	+1.4
PDG	Podgorica	78.23	49	⇑iP	P	20 44 36.4	+1.0
TTG	Podgorica	78.23	49	eP	P	20 44 35.6	+0.2
	comp=Z,41nm,1.1s						
TTG	Podgorica	78.23	49	eP	P	20 44 35.7	+0.2
TTG				pmax	pmax		
	comp=Z,41nm,1.1s						
DIVS	Divibare	78.36	47	eP	P	20 44 36.6	+0.3
	comp=Z,27nm,1.1s						
UNV	Unalaska Valle	78.61	323	eP	P	20 44 36.9	-0.3
	comp=Z,39nm,0.8s						
VSU	Vasula	78.71	32	ceP	P	20 44 37.5	-0.2
VSU				pmax	pmax		
	comp=Z,85nm,1.3s						
UZH	Uzhgorod	78.78	42	d iP	P	20 44 38.6	+0.3
UZH				i		20 44 46.8	
KWP	Kalwaria Pacla	78.79	41	eP	P	20 44 40.0	+1.6
KWP	Kalwaria Pacla	78.79	41	eP	P	20 44 39.6	+1.2
	comp=Z,341nm,1.1s						
KWP	Kalwaria Pacla	78.79	41	eP	P	20 44 40.0	+1.6
UWE	Uwekahuna	78.81	287	eP	P	20 44 40.2	+0.9
	comp=Z,748nm,1.5s						
LTVH	Lˆ'tavˆ'rtes,	78.84	44	⇑eP	P	20 44 40.8	+2.1
TRPA	Tarpa	79.06	43	⇑iP	P	20 44 40.9	+1.0
TRPA	Tarpa	79.06	43	⇑eP	P	20 44 41.3	+1.4
BZS	Buzias	79.10	46	⇑iP	P	20 44 40.9	+0.7
BZS	Buzias	79.10	46	⇑P	P	20 44 40.9	+0.7
IIGN	Ignalina	79.32	35	eP	P	20 44 40.7	-0.4
IIGN				IAmb	IAmb	20 44 47.1	
	comp=Z,12nm,0.7s						
DRGR		79.53	44	⇑iP	P	20 44 43.3	+0.7
DRGR		79.53	44	⇑P	P	20 44 43.3	+0.7
LVV	L'vov	79.56	41	eP	P	20 44 43.2	+0.6
LVV				MLR	MLR		
	comp=N,100nm,19.0s						
LVV				MLR	MLR		
	comp=Z,200nm,19.0s						
LVV				MLR	MLR		
	comp=E,200nm,18.0s						
IDID	Didziasalis	79.61	35	eP	P	20 44 42.1	-0.7
IDID				IAmb	IAmb	20 44 54.9	
	comp=Z,11nm,1.0s						
NACGM	Naroch	79.75	36	e	P	20 44 43.0	-0.5
BMR	Baia Mare	79.81	43	⇓iP	P	20 44 45.6	+1.6
BMR	Baia Mare	79.81	43	⇓P	P	20 44 45.6	+1.6
HERR	Herculane	79.83	46	⇓iP	P	20 44 45.1	+0.9
CJR	Cluj-Napoca	80.14	44	⇑iP	P	20 44 46.9	+1.0
CJR	Cluj-Napoca	80.14	44	⇑P	P	20 44 46.9	+1.0
FNA	Florina	80.19	50	eP	P	20 44 46.8	+0.5
FNA	Florina	80.19	50	P	P	20 44 46.8	+0.5
FNA	Florina	80.19	50	eP	P	20 44 46.8	+0.5
NIKH	Nikolski High	80.20	323	eP	P	20 44 45.5	-0.5
	comp=Z,34nm,0.8s						
KPRO	Kipourio	80.40	51	P	P	20 44 48.5	+1.0
KZN	Kozani	80.61	51	eP	P	20 44 49.0	+0.4
KZN	Kozani	80.61	51	P	P	20 44 49.0	+0.4
KZN	Kozani	80.61	51	eP	P	20 44 49.0	+0.4
GRG	Griva	80.89	50	eP	P	20 44 50.7	+0.7
GRG	Griva	80.89	50	P	P	20 44 50.7	+0.7
GRG	Griva	80.89	50	eP	P	20 44 50.7	+0.7
BUR08	Bucovina Ar. S	80.92	43	eP	P	20 44 51.0	+0.9
BUR04	Bucovina Ar. S	80.94	43	eP	P	20 44 50.6	+0.4
BURAR	Bucovina Array	80.94	43	⇑iP	P	20 44 51.4	+1.2
BURAR	Bucovina Array	80.94	43	⇑P	P	20 44 51.4	+1.2
THL	Klokotos Trika	80.99	51	P	P	20 44 50.8	+0.3
VTS	Vitosha	81.01	48	⇑iP	P	20 44 51.3	+0.5
VTS	Vitosha	81.01	48	eP	P	20 44 50.9	+0.1
	comp=Z,30nm,1.1s						
VTS	Vitosha	81.01	48	iP	P	20 44 51.3	+0.5
VTS	Vitosha	81.01	48	P	P	20 44 51.3	+0.5
VTS	Vitosha	81.01	48	⇑P	P	20 44 51.4	+0.6
KKB	Krupnik	81.13	49	iP	P	20 44 52.3	+1.1
MPEP	Malo Peshtene	81.17	47	iP	P	20 44 51.5	+0.1
ANX	Ano Chora	81.19	52	P	P	20 44 52.9	+1.2
KNT	Kendrikon	81.19	50	eP	P	20 44 52.4	+0.8
KNT	Kendrikon	81.19	50	P	P	20 44 52.4	+0.8
KNT	Kendrikon	81.19	50	eP	P	20 44 52.4	+0.8
LIT	Litokhoron	81.19	51	eP	P	20 44 51.7	+0.1
	comp=Z,13nm,1.0s						
LIT	Litokhoron	81.19	51	eP	P	20 44 51.7	+0.1
LIT				pmax	pmax		
	comp=Z,13nm,1.0s						
ARR	Arges	81.21	45	⇑iP	P	20 44 52.8	+1.1
DRO	Drossia	81.21	53	P	P	20 44 52.9	+1.2
LAKA	Lakka	81.33	53	eP	P	20 44 53.6	+1.2
LAKA	Lakka	81.33	53	P	P	20 44 53.6	+1.2
SERG	Sergoula	81.34	53	P	P	20 44 53.7	+1.2
TRIZ	Trizonia	81.37	53	P	P	20 44 53.8	+1.3
AGG	Agios Georgios	81.38	52	eP	P	20 44 53.0	+0.4
AGG	Agios Georgios	81.38	52	P	P	20 44 53.0	+0.4
AGG	Agios Georgios	81.38	52	eP	P	20 44 53.0	+0.4
VOIR		81.47	45	⇓iP	P	20 44 53.3	+0.3
VOIR		81.47	45	⇓P	P	20 44 53.3	+0.3
DOPR	Dopca	81.54	44	⇓iP	P	20 44 54.5	+1.2
ITM	Ithomi	81.59	54	eP	P	20 44 54.5	+0.7
	comp=Z,45nm,0.9s						
MMB	Musomiste	81.67	49	iP	P	20 44 55.3	+1.2
GUR	Goura	81.69	53	eP	P	20 44 54.0	-0.4
GUR	Goura	81.69	53	P	P	20 44 54.0	-0.4
DSF	Desfina	81.70	52	eP	P	20 44 54.5	+0.1
DSF	Desfina	81.70	52	P	P	20 44 54.5	+0.1
SRS	Serrai	81.71	50	eP	P	20 44 54.7	+0.4
SRS	Serrai	81.71	50	P	P	20 44 54.7	+0.4
SRS	Serrai	81.71	50	eP	P	20 44 54.7	+0.4
BIZ	Bicaz	81.72	43	⇑iP	P	20 44 55.8	+1.6
PLG	Polygyros	81.82	50	eP	P	20 44 55.6	+0.7
PLG	Polygyros	81.82	50	P	P	20 44 55.6	+0.7
NVR	Nevrokopi	81.84	49	eP	P	20 44 55.5	+0.5
NVR	Nevrokopi	81.84	49	P	P	20 44 55.5	+0.5
VLX	Vlachokerasia	81.88	53	eP	P	20 44 56.8	+1.4
VLX	Vlachokerasia	81.88	53	P	P	20 44 56.8	+1.4
XOR	Xorichti	81.92	51	eP	P	20 44 55.5	0.0
XOR	Xorichti	81.92	51	P	P	20 44 55.5	0.0
MLR	Muntele Rosu	82.05	45	P	P	20 44 57.4	+1.2
	comp=Z,14nm,0.8s,baz=305,slow=4.7,SNR=118						
MLR				LR	LR	21 18 50.7	
	comp=Z,36nm,20.1s,baz=302,slow=34						
MLR	Muntele Rosu	82.05	45	⇓iP	P	20 44 57.4	+1.2
MLR	Muntele Rosu	82.05	45	eP	P	20 44 57.3	+1.1
	comp=Z,74nm,0.9s						
PAIG	Paliouri	82.12	51	eP	P	20 44 57.1	+0.6
PAIG	Paliouri	82.12	51	P	P	20 44 57.1	+0.6
SKIA	Skiathos	82.18	51	P	P	20 44 57.0	+0.2
OUR	Ouranopolis	82.22	50	eP	P	20 44 55.1	-1.9
OUR	Ouranopolis	82.22	50	P	P	20 44 55.1	-1.9
OUR	Ouranopolis	82.22	50	eP	P	20 44 55.1	-1.9
RZN	Rozhen	82.35	49	iP	P	20 44 58.7	+0.8
PLOR	Plostina	82.41	44	⇓iP	P	20 44 59.1	+1.1
PLOR	Plostina	82.41	44	⇓P	P	20 44 59.1	+1.1
AK11	Malin Array Si	82.45	39	eP	P	20 44 57.3	-0.6
VRI	Vrincioaia	82.46	44	⇓iP	P	20 44 58.6	+0.4
VRI	Vrincioaia	82.46	44	⇓P	P	20 44 58.6	+0.4
KRND	KRANIDI	82.47	53	P	P	20 44 58.4	+0.1
KIEV	Kiev	82.47	39	eP	P	20 44 57.6	-0.5
	comp=Z,13nm,1.3s						
KIEV	Kiev	82.47	39	ceP	P	20 44 57.8	-0.3
KIEV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
AKASG	Malin Array Be	82.48	39	P	P	20 44 57.6	-0.5
	comp=Z,5.0nm,0.9s,baz=280,slow=4.3,SNR=18						
AKASG				LR	LR	21 20 28.6	
	comp=Z,244nm,18.7s,baz=295,slow=35						
AKBB	Malin Array Si	82.48	39	eP	P	20 44 57.3	-0.8
	comp=Z,39nm,1.9s						
AKBB	Malin Array Si	82.48	39	eP	P	20 44 57.3	-0.8
AKBB				pmax	pmax		
	comp=Z,39nm,1.9s						
AOS	Alonnisos	82.49	51	eP	P	20 44 58.1	-0.3
AOS	Alonnisos	82.49	51	P	P	20 44 58.1	-0.3
DID	Didima	82.50	53	eP	P	20 44 58.0	-0.6
DID	Didima	82.50	53	P	P	20 44 58.0	-0.6
SULR		82.51	46	⇓iP	P	20 44 56.4	-2.0
THAS	Thassos island	82.68	50	P	P	20 44 59.5	+0.1
SZH	Strazhica	82.73	47	iP	P	20 45 00.3	+0.7
SORM	Soroca	82.78	42	⇑iP	P	20 44 59.9	+0.1
SORM	Soroca	82.78	42	⇑P	P	20 44 59.9	+0.1
PTL	Penteli	82.81	52	eP	P	20 45 00.4	+0.2
PTL	Penteli	82.81	52	P	P	20 45 00.4	+0.2
VLY	Voula,Athens	82.81	53	eP	P	20 45 00.0	-0.2
VLY	Voula,Athens	82.81	53	P	P	20 45 00.0	-0.2
RDO	Rodhopi	83.10	49	eP	P	20 45 02.0	+0.4
RDO	Rodhopi	83.10	49	P	P	20 45 02.0	+0.4
KIS	Kishinev	83.46	43	eP	P	20 45 04.0	+0.7
KIS	Kishinev	83.46	43	ePcP	PcP	20 45 13.0	+5.4
KIS	Kishinev	83.46	43	eP	P	20 45 04.0	+0.7
KIS				e		20 45 13.0	
KIS				e		20 48 15.0	
ATKA	Atka Island	83.53	323	eP	P	20 45 02.6	-0.9
	comp=Z,13nm,0.9s						
ALN	Alexandroupoli	83.55	49	eP	P	20 45 04.0	+0.2
ALN	Alexandroupoli	83.55	49	P	P	20 45 04.0	+0.2
ALN	Alexandroupoli	83.55	49	eP	P	20 45 04.0	+0.2
CFR	Carcaliu	83.62	45	⇓iP	P	20 45 03.6	-0.5
CFR	Carcaliu	83.62	45	⇓P	P	20 45 03.6	-0.5
TLB	Topalu	83.75	45	⇓iP	P	20 45 04.6	-0.2
TLB	Topalu	83.75	45	⇓P	P	20 45 04.6	-0.2
PRD	Provadia	83.76	47	iP	P	20 45 05.6	+0.7
KLMR	Klimovskoe	83.88	27	eP	P	20 45 02.6	-2.5
KLMR				pmax	pmax		
	comp=Z,32nm,1.4s						
KLMR	Klimovskoe	83.88	27	eP	P	20 45 02.7	-2.4
KLMR				AMP		20 45 16.5	
	comp=Z,32nm,1.4s						
TIRR	Tirgusor	84.04	45	⇑iP	P	20 45 06.5	+0.2
TIRR	Tirgusor	84.04	45	eP	P	20 45 06.5	+0.2
	comp=Z,13nm,0.9s						
TIRR	Tirgusor	84.04	45	⇑P	P	20 45 06.5	+0.2
IDI	Anoyia	84.44	55	P	P	20 45 09.0	+0.4
	comp=Z,19nm,0.7s,baz=304,slow=7.2,SNR=16						
IDI	Anoyia	84.44	55	⇑iP	P	20 45 09.3	+0.6
IDI	Anoyia	84.44	55	eP	P	20 45 09.2	+0.6
	comp=Z,60nm,1.1s						
BILL	Bilibino	84.54	341	eP	P	20 45 08.0	-0.3
	comp=Z,53nm,1.2s						
BILL	Bilibino	84.54	341	c iP	P	20 45 08.5	+0.1
BILL				pmax	pmax		
	comp=Z,37nm,1.1s						
GSTR	Great Sitkin T	84.64	323	eP	P	20 45 07.2	-2.1
OBN	Obninsk	84.95	33	eP	P	20 45 10.1	-0.5
	comp=Z,289nm,1.7s						
OBN	Obninsk	84.95	33	c iP	P	20 45 09.9	-0.7
OBN				i		20 45 20.0	
OBN				e		20 48 27.4	
OBN				eS	S	20 55 41.9	+4.1
OBN				eSS	SS	21 01 15.1	+5.1
OBN				pmax	pmax		
	comp=Z,42nm,1.2s						
OBN				MLR	MLR		
	comp=Z,65nm,17.0s						
MOS	Moscow	85.23	33	eP	P	20 45 12.3	+0.2
MOS				e		20 45 22.8	
MOS				pmax	pmax		
	comp=Z,43nm,0.9s						
KIWB	Kanaga Island	85.36	323	eP	P	20 45 11.7	-1.1
PRGR	Permogore	86.08	25	eP	P	20 45 16.0	-0.1
PRGR				pmax	pmax		
	comp=Z,29nm,0.8s						
KARP	Karpathos	86.11	54	eP	P	20 45 16.6	-0.3
	comp=Z,28nm,0.9s						
SIM	Simferopol'	87.65	43	eP	P	20 45 10.6	-14
SIM				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SIM				MLR	MLR		
	comp=N,200nm,20.0s						
VSR	Storozhevoye	88.05	36	eP	P	20 45 25.0	-1.0
VSR				e*SP	pP	20 45 34.6	+0.3
VSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
VORD	Divnogorie	88.24	36	eP	P	20 45 25.1	-1.7
VORD				pmax	pmax		
	comp=Z,170nm,1.4s						
BR231	Keskin MP Arra	88.73	48	eP	P	20 45 29.8	+0.2
ANTO	Ankara	88.73	48	eP	P	20 45 29.5	0.0
	comp=Z,28nm,0.8s						
ANTO	Ankara	88.73	48	eP	P	20 45 29.5	0.0
ANTO				pmax	pmax		
	comp=Z,28nm,0.8s						
TIXI	Tiksi	89.33	354	P	P	20 45 31.4	-0.2
	comp=Z,11nm,0.9s,baz=15,slow=4.3,SNR=16						
TIXI	Tiksi	89.33	354	eP	P	20 45 30.7	-0.9
	comp=Z,16nm,1.0s						
TIXI	Tiksi	89.33	354	c iP	P	20 45 31.0	-0.6
TIXI				pmax	pmax		
	comp=Z,22nm,1.3s						
BR131	Keskin Array S	89.39	48	eP	P	20 45 32.3	-0.4
BRTR	Keskin Array B	89.39	48	P	P	20 45 32.5	-0.2
	comp=Z,9.7nm,0.8s,baz=279,slow=3.8,SNR=53						
SMY	Shemya	89.75	326	eP	P	20 45 32.6	-1.3
	comp=Z,89nm,1.3s						
SMY	Shemya	89.75	326	eP	P	20 45 32.6	-1.3
SMY				pmax	pmax		
	comp=Z,89nm,1.3s						
ANN	Anapa	89.85	42	eP	P	20 45 38.8	+4.2
ANN				pmax	pmax		
	comp=Z,51nm,1.5s						
SOC	Sochi	91.87	43	eP	P	20 45 52.9	+8.9
SOC				ePPP	PPP	20 51 27.5	
SOC				eSSS	SSS	21 06 28.9	
SOC				pmax	pmax		
	comp=Z,20nm,0.9s						
SEY	Seymchan	92.25	342	P	P	20 45 45.6	+0.3
	comp=Z,12nm,0.9s,baz=86,slow=2.3,SNR=41						
KIV	Kislovodsk	93.58	41	eP	P	20 45 52.5	+0.4
	comp=Z,8.2nm,0.8s						
KIV	Kislovodsk	93.58	41	eP	P	20 45 52.5	+0.4
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KBZ	Khabaz	93.83	42	P	P	20 45 53.3	+0.3
	comp=Z,6.5nm,0.9s,baz=280,slow=1.9,SNR=7.9						
NEY	Neytrino	93.95	42	⇑eP	P	20 45 54.4	+0.5
NEY				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NCK	Nalchik	94.38	42	⇑eP	P	20 45 55.6	0.0
NCK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ARU	Arti	94.54	25	eP	P	20 45 55.0	-1.0
	comp=Z,46nm,2.0s						
ARU	Arti	94.54	25	P	P	20 45 56.2	+0.2
ARU						20 49 46.5	
ARU				S	SKSac	20 56 30.7	+1.1
ARU				SP	SP	20 58 31.2	+10
ASF	Jabal al Asfar	94.88	54	P	P	20 45 58.6	+0.4
	comp=Z,2.3nm,1.0s,baz=234,slow=8.7,SNR=2.9						
MA2	Magadan	95.32	340	⇑eP	P	20 45 59.5	0.0
MA2				pmax	pmax		
	comp=Z,3.0nm,1.0s						
YAK	Yakutsk	98.34	350	⇑eP	Pdif	20 46 13.1	0.0
AKTO	Aktyubinsk	98.34	30	P	P	20 46 12.7	-0.8
	comp=Z,0.6nm,0.5s,baz=319,slow=10,SNR=2.9						
AKTO				LR	LR	21 27 32.7	
	comp=Z,102nm,20.4s,baz=325,slow=34						
VNA3	Neumayer Olymp	98.45	163	P	P	20 46 12.7	-0.6
VNA1	Neumayer--Stat	98.53	163	P	Pdif	20 46 13.6	0.0
SNAA	Sanae	100.57	163	P	Pdif	20 46 21.9	-0.9
SNAA	Sanae	100.57	163	P	Pdif	20 46 22.2	-0.6
	comp=Z,1.9nm,1.1s,baz=305,slow=7.8,SNR=4.3						
KSH	Kashi	114.87	28	ePKP	PKPdf	20 51 15.4	-1.4
KSH				sPKP		20 51 28.4	
KSH				PP	PP	20 52 16.3	+1.9
KSH				PKS	PKSdf	20 54 50.1	-3.6
KSH				SKS	SKSdf	20 58 22.3	-5.4
KSH				AMB	AMB		
	comp=Z,82nm,4.4s						
WMQ	Urumqi	115.30	17	PKP	PKPdf	20 51 18.4	+0.9
WMQ				AMB	AMB		
	comp=Z,160nm,5.1s						
WMQ				LR	LR		
	comp=Z,250nm,25.7s						
WMQ				LR	LR		
	comp=Z,190nm,25.7s						
WMQ				LR	LR		
	comp=Z,190nm,22.9s						
CN2	Changchun	116.45	347	ePKP	PKPdf	20 51 24.0	+4.4
HHC	Hu-ho-hao-te	121.19	358	ePKP	PKPdf	20 51 27.5	-1.4
HHC				SKKS		20 59 56.6	
HHC				AMB	AMB		
	comp=Z,29nm,7.1s						
HHC				LR	LR		
	comp=Z,170nm,21.0s						
HHC				LR	LR		
	comp=Z,120nm,18.2s						
HHC				LR	LR		
	comp=Z,160nm,18.4s						
KSRS	Korea Array	121.80	342	PKP	PKPdf	20 51 28.1	-1.9
	comp=Z,1.3nm,0.7s,baz=1.5,slow=2.2,SNR=5.8						
KSAR	Wonju Array Be	121.82	342	PKP	PKPdf	20 51 28.1	-1.9
KSAR	Wonju Array Be	121.82	342	PKIKP	PKPdf	20 51 28.2	-1.9
LZH	Lanzhou	125.80	5	ePKP	PKPdf	20 51 42.7	+4.7
LZH				SS	SS	21 10 31.2	+4.0
LZH				LR	LR		
	comp=Z,390nm,14.1s						
LZH				LR	LR		
	comp=Z,180nm,11.1s						
LZH				LR	LR		
	comp=Z,360nm,17.3s						
NJ2	Nanjing	129.12	349	ePKP	PKPdf	20 51 44.7	+0.5
LSA	Lhasa	129.40	20	ePKPdf	PKPdf	20 51 44.0	-1.5
LSA	Lhasa	129.40	20	ePKIKP	PKPdf	20 51 44.0	-1.5
CD2	Chengdu	130.92	6	PKP	PKPdf	20 51 46.4	-1.3
CD2				sPKP		20 51 58.3	
CD2				SKS	SKSdf	20 58 56.0	-2.0
CD2				SKKS	SKKSac	21 00 55.1	-4.1
CD2				SS	SS	21 11 30.1	-0.4
CD2				AMB	AMB		
	comp=Z,120nm,5.6s						
CD2				LR	LR		
	comp=Z,440nm,18.6s						
CD2				LR	LR		
	comp=Z,540nm,16.7s						
GYA	Guiyang	135.55	3	ePdif	Pdif	20 48 57.5	-2.1
GYA				PKP	PKPdf	20 51 55.0	-1.7
GYA				PP	PP	20 54 35.4	+3.3
GYA				AMB	AMB		
	comp=Z,120nm,8.2s						
CMAR	Chiang Mai Arr	142.28	16	PKhKP	PKPpre	20 52 02.8	
	comp=Z,2.4nm,0.8s,baz=326,slow=4.1,SNR=12						
CM01	Chiang Mai Arr	142.32	15	ePKPpre	PKPpre	20 52 01.8	
CTA	Charters Tower	144.67	261	PKP	PKPab	20 52 11.1	-0.8
	comp=Z,12nm,0.8s,baz=93,slow=6.3,SNR=9.6						
JAY	Jayapura	145.11	293	PKPbc	PKPbc	20 52 12.3	-1.3
	comp=Z,12nm,0.9s,baz=218,slow=3.3,SNR=4.7						
STKA	Stephens Creek	147.51	239	PKPbc	PKPbc	20 52 19.0	-1.2
	comp=Z,8.1nm,0.7s,baz=110,slow=4.5,SNR=26						
STKA	Stephens Creek	147.51	239	ePKPdf	PKPdf	20 52 18.3	+0.7
STKA	Stephens Creek	147.51	239	ePKP2	PKPdf	20 52 18.3	+0.7
SIJI	Sorong	152.05	306	PKPbc	PKPbc	20 52 30.3	-1.6
	comp=Z,11nm,0.9s,baz=70,slow=4.4,SNR=8.0						
WRA	Warramunga Arr	155.87	262	PKP	PKPdf	20 52 29.0	-1.5
	comp=Z,1.1nm,0.9s,baz=66,slow=0.5,SNR=6.4						
WRA				PKPbc	pPKPdf	20 52 38.1	-1.0
	comp=Z,2.3nm,0.6s,baz=88,slow=3.1,SNR=26						
ASAR	Alice Springs	156.00	253	PKP	PKPdf	20 52 29.3	-1.3
	comp=Z,0.5nm,0.9s,baz=72,slow=1.5,SNR=3.5						
ASAR				PKPbc	pPKPdf	20 52 38.6	-0.6
	comp=Z,2.0nm,0.8s,baz=102,slow=3.0,SNR=18						
FITZ	Fitzroy Crossi	164.05	268	PKPab	PKPab	20 53 33.0	-0.1
	comp=Z,1.4nm,0.8s,baz=303,slow=2.1,SNR=3.6						

NIED **07** *20:37:00, 45°.50N×151°.50E, h11km, Mw4.1 Best double couple: M_0 1.41000×10^{15} NP1:ϕ_s228.00000°, δ21.00000°, λ90.00000°. NP2:ϕ_s49.00000°, δ69.00000°, λ90.00000°.*

BJI **07** *20:37:00.2, 45°.31N×151°.83E, h26km, mb4.4/29, mB4.6/13, Ms3.8/5, Ms7 3.7/3*

ISCJB **07** *20:37:03.5±0.4, 45°.19N±0°.05×151°.51E±0°.05, h36km, mb4.3/48, MS3.8/7, Error ellipse: s-maj=8.6km s-min=2.7km az=148.7*

SKHL **07** *20:37:03.7±0.5, 45°.06N×151°.72E, h53km±7km, mb5.1/6*

JMA **07** *20:37:03.4±0.5, 45°.55N×151°.49E, h30km, M4.7*

MOS **07** *20:37:05.0±0.9, 45°.33N×151°.41E, h44km, mb4.4/16, Error ellipse: s-maj=7.9km s-min=7.1km az=126.9*

NEIC **07** *20:37:05.2±1.0, 45°.17N×151°.54E, h40km±8km, mb4.6/17, Error ellipse: s-maj=14.0km s-min=6.6km az=151.0*

IDC **07** *20:37:13.0±2.5, 45°.46N×150°.92E, h87km±22km, mb3.5/17, mb1 3.7/22, mb1mx3.5/72, mbtmp3.8/22, MS3.1/7, Ms1 3.1/7, ms1mx2.8/70, Error ellipse: s-maj=17.4km s-min=14.4km az=130.0*

ISC 07 20:37:05.6±0.5, **45°.18N**±0°.07×**151°.52E**±0°.05, **h36km, n186,** σ**1^s.52**/207, **mb4.4**/48, **MS4.0**/8, **11C-11D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.58	273	eP	Pn	20 37 45.0	+0.3
KUR				AMB	AMB	20 37 46.0	
	101nm,0.4s						
KUR				AMB	AMB	20 37 46.0	
	37nm,0.4s						
KUR				AMB	AMB	20 37 46.0	
	264nm,0.4s						
KUR				eS	Sn	20 38 16.0	+1.2
KUR				A	A	20 38 22.0	
	436nm,0.4s						
KUR				A	A	20 38 22.0	
	366nm,0.4s						
KUR	Kuril'sk	2.58	273	dePN	Pn	20 37 44.7	0.0
KUR				eS	Sn	20 38 15.5	+0.7
KUR				pmax	pmax		
	comp=N,102nm,0.3s						
KUR				pmax	pmax		
	comp=Z,265nm,0.3s						
KUR				pmax	pmax		
	comp=E,38nm,0.1s						
KUR				smax	smax		
	comp=N,530nm,0.5s						
KUR				smax	smax		
	comp=E,250nm,0.5s						
KUR				smax	smax		
	comp=N,842nm,1.2s						
KUR				smax	smax		
	comp=E,442nm,1.4s						
SHO	Shikotan	3.60	250	i P	Pn	20 37 58.7	0.0
SHO				AMB	AMB	20 38 03.8	
	comp=E,39nm,0.3s						
SHO				AMB	AMB	20 38 03.8	
	comp=E,33nm,0.3s						
SHO				AMB	AMB	20 38 03.8	
	comp=E,100nm,0.3s						
SHO				eS	Sn	20 38 39.5	-0.4
SHO				A	A	20 38 43.9	
	comp=E,222nm,0.3s						
SHO				A	A	20 38 43.9	
	comp=E,332nm,0.3s						
SHO	Shikotan	3.60	250	⇑iPN	Pn	20 37 59.2	+0.5
SHO				eS	Sn	20 38 38.8	-1.1
SHO				pmax	pmax		
	comp=Z,100nm,0.3s						
SHO				pmax	pmax		
	comp=E,33nm,0.2s						
SHO				pmax	pmax		
	comp=N,39nm,0.3s						
SHO				smax	smax		
	comp=N,222nm,0.5s						
SHO				smax	smax		
	comp=E,332nm,0.2s						
YUK	Yuzh-Kuril'sk	4.20	256	eP	Pn	20 38 07.0	0.0
YUK				AMB	AMB	20 38 10.5	
	comp=E,78nm,0.3s						
YUK				AMB	AMB	20 38 10.5	
	comp=E,321nm,0.3s						
YUK				eS	Sn	20 38 54.8	+0.1
YUK				A	A	20 38 59.0	
	comp=E,195nm,0.3s						
YUK				A	A	20 38 59.0	
	comp=E,375nm,0.3s						
YUK	Yuzh-Kuril'sk	4.20	256	ePN	Pn	20 38 07.3	+0.3
YUK				eS	Sn	20 38 54.8	+0.1
YUK				pmax	pmax		
	comp=E,78nm,0.3s						
YUK				pmax	pmax		
	comp=Z,321nm,0.3s						
YUK				pmax	pmax		
	comp=N,73nm,0.2s						
YUK				smax	smax		
	comp=N,195nm,0.3s						
YUK				smax	smax		
	comp=E,375nm,0.2s						
LAGR	Lagunnoye	4.24	257	eP	Pn	20 38 08.5	+0.9
LAGR				AMB	AMB	20 38 08.9	
	comp=E,15nm,0.2s						
LAGR				AMB	AMB	20 38 08.9	
	comp=E,66nm,0.2s						
LAGR				eS	Sn	20 38 55.9	+0.1
LAGR				A	A	20 39 03.0	
	comp=E,469nm,0.3s						
LAGR				A	A	20 39 03.0	
	comp=E,490nm,0.3s						
LAGR	Lagunnoye	4.24	257	ePN	Pn	20 38 08.5	+0.9
LAGR				eS	Sn	20 38 55.9	+0.1
LAGR				pmax	pmax		
	comp=E,15nm,0.2s						
LAGR				pmax	pmax		
	comp=Z,66nm,0.2s						
LAGR				smax	smax		
	comp=E,490nm,0.3s						
LAGR				smax	smax		
	comp=N,469nm,0.4s						
GRPR	Tuman	4.27	256	eP	Pn	20 38 08.7	+0.7
GRPR				AMB	AMB	20 38 13.6	
	comp=N,110nm,0.4s						
GRPR				AMB	AMB	20 38 13.6	
	comp=N,61nm,0.4s						
GRPR				AMB	AMB	20 38 13.6	
	comp=N,182nm,0.4s						
GRPR				eS	Sn	20 38 56.3	-0.2
GRPR				A	A	20 39 00.9	
	comp=N,254nm,0.4s						
GRPR				A	A	20 39 00.9	
	comp=N,318nm,0.4s						
GRPR	Tuman	4.27	256	ePN	Pn	20 38 08.7	+0.7
GRPR				eS	Sn	20 38 56.3	-0.2
GRPR				pmax	pmax		
	comp=Z,182nm,0.4s						
GRPR				pmax	pmax		
	comp=N,110nm,0.2s						
GRPR				pmax	pmax		
	comp=E,61nm,0.2s						
GRPR				smax	smax		
	comp=N,254nm,0.3s						
GRPR				smax	smax		
	comp=E,318nm,0.4s						
NEM2	Nemuro 2	4.52	248	P	Pn	20 38 10.9	-0.6
NEM2				eS	Sn	20 39 01.2	-1.5
GLVR	Golovnino	4.53	254	eP	Pn	20 38 12.5	+1.0
GLVR				eS	Sn	20 39 03.3	+0.5
GLVR				A	A	20 39 09.4	
	comp=E,363nm,0.3s						
GLVR				A	A	20 39 09.4	
	comp=E,478nm,0.3s						
GLVR	Golovnino	4.53	254	ePN	Pn	20 38 12.5	+1.0
GLVR				eS	Sn	20 39 03.3	+0.5
GLVR				pmax	pmax		
	comp=Z,240nm,0.4s						
GLVR				pmax	pmax		
	comp=N,95nm,0.2s						
GLVR				pmax	pmax		
	comp=E,97nm,0.2s						
GLVR				smax	smax		
	comp=E,478nm,0.3s						
GLVR				smax	smax		
	comp=N,363nm,0.2s						
JRA	Rausu	4.73	257	P	Pn	20 38 15.5	+1.2
JRA				eS	Sn	20 39 09.5	+1.6
JNK	Nakash	5.12	254	P	Pn	20 38 20.2	+0.5
JNK				eS	Sn	20 39 17.9	+0.3
JAK	Akkeshi	5.37	248	P	Pn	20 38 22.5	-0.6
JAK				eS	Sn	20 39 20.4	-3.3
JTKR	Abashiri--Toko	5.57	260	P	Pn	20 38 26.7	+0.9
JAR	Ashorobuto	5.87	254	P	Pn	20 38 30.9	+0.9
JAR				eS	Sn	20 39 36.4	+0.4
JMP	Maruseppu	5.94	262	P	Pn	20 38 32.4	+1.4
JOB	Onbets	5.98	250	P	Pn	20 38 31.1	-0.4
JOB				eS	Sn	20 39 36.9	-1.8
HRK	Horoka	6.25	257	eP	Pn	20 38 36.9	+1.6
SKR	Severo-Kuril's	6.32	28	eP	Pn	20 38 35.6	-0.5
SKR				eS	Sn	20 39 43.2	-3.7
SKR	Severo-Kuril's	6.32	28	ePN	Pn	20 38 35.6	-0.5
SKR				pmax	pmax		
	comp=Z,59nm,0.5s						
SKR				MLR	MLR		
	comp=Z,200nm,10.0s						
JSE	Soyaes	6.33	271	P	Pn	20 38 38.1	+1.8
YSS	Yuzh-Sakhalins	6.35	289	eP	Pn	20 38 37.4	+0.9
YSS				AMB	AMB	20 38 41.8	
	comp=Z,45nm,0.4s						
YSS	Yuzh-Sakhalins	6.35	289	ePn	Pn	20 38 37.1	+0.5
YSS	Yuzh-Sakhalins	6.35	289	⇑ePN	Pn	20 38 37.6	+1.1
YSS				pmax	pmax		
	comp=Z,10.0nm,0.6s						
YSS				pmax	pmax		
	comp=N,10.0nm,0.7s						
YSS				pmax	pmax		
	comp=E,10.0nm,0.6s						
YSS				MLR	MLR		
	comp=Z,300nm,18.0s						
YSS				MLR	MLR		
	comp=E,200nm,14.0s						
JKK2	Kamakawa 2	6.40	261	P	Pn	20 38 39.1	+1.8
JCH	Churui	6.42	249	P	Pn	20 38 37.0	-0.5
JCH				eS	Sn	20 39 48.2	-1.3
ASAJ	Asahikawa	6.45	264	P	Pn	20 38 40.2	+2.2
	comp=E,6.5nm,0.3s,baz=78,slow=14,SNR=121						
ASAJ				LR	LR	20 41 22.9	
	comp=E,221nm,18.7s,baz=41,slow=41						
ASAJ	Asahikawa	6.45	264	ePn	Pn	20 38 39.9	+1.9
ASAJ	Asahikawa	6.45	264	P	Pn	20 38 40.0	+2.1
MYR	Moyori	6.62	247	eP	Pn	20 38 40.3	0.0
JEM	Erimo	6.84	245	P	Pn	20 38 44.4	+1.1
JEM				eS	Sn	20 39 58.6	-1.2
ERM	Erimo	6.84	245	eP	Pn	20 38 44.0	+0.7
ERM	Erimo	6.84	245	ePn	Pn	20 38 44.7	+1.4
ERM				eSn	Sn	20 40 02.6	+2.8
ERM	Erimo	6.84	245	dePN	Pn	20 38 44.0	+0.7
JNBK	Urakawa-nobuka	6.97	249	P	Pn	20 38 44.6	-0.5
JNBK				eS	Sn	20 39 59.6	-3.6
JBT2	Biratori 2	7.02	253	P	Pn	20 38 45.8	0.0
JNB	Noboribetsu	8.04	254	P	Pn	20 39 00.0	+0.2
JNB				eS	Sn	20 40 27.8	-1.6
TYV	Tymovskoe	8.22	317	ePN	Pn	20 39 03.0	+0.8
TYV				pmax	pmax		
	comp=Z,5.0nm,0.7s						
TYV				MLR	MLR		
	comp=E,600nm,16.0s						
TYV				MLR	MLR		
	comp=Z,500nm,16.0s						
JKB	Kayabe	8.29	250	P	Pn	20 39 02.5	-0.7
JKB				eS	Sn	20 40 30.8	-4.8
JYM2	Yakumo 2	8.64	253	P	Pn	20 39 07.8	-0.2
JSH	Shimam	8.66	257	P	Pn	20 39 09.4	+1.2
JTM	Tenmabayashi	8.82	244	eS	Sn	20 40 42.4	-6.2
PEA0B	Petropavlovsk-	8.91	25	ePn	Pn	20 39 10.4	-1.3
PETK	Petropavlovsk-	8.91	25	P	Pn	20 39 17.5	+5.8
	baz=185,slow=12						
PETK				LR	LR	20 42 58.8	
	comp=Z,51nm,20.8s,baz=180,slow=39						
PETK	Petropavlovsk-	8.91	25	ePn	Pn	20 39 12.5	+0.9
PETK	Petropavlovsk-	8.91	25	ePN	Pn	20 39 12.5	+0.9
MJAR	Matsushiro Arr	13.24	234	LR	LR	20 46 07.4	
	comp=Z,38nm,18.8s,baz=115,slow=41						
MJB9	Matsu-Tunnel	13.24	234	ePn	Pn	20 40 08.8	-2.3
USRK	Ussuriysk Ar.	13.93	273	P	Pn	20 40 21.2	+0.9
	baz=84,slow=15						
USA0B	Ussuriysk Arra	13.93	273	ePn	Pn	20 40 21.1	+0.8
KLR	Kul'dur	14.03	294	P	Pn	20 40 21.9	+0.3
	comp=Z,0.0nm,0.3s,baz=103,slow=16,SNR=2.5						
KLR	Kul'dur	14.03	294	eP	Pn	20 40 22.3	+0.7
KLR	Kul'dur	14.03	294	⇓eP	Pn	20 40 22.3	+0.7
MA2	Magadan	14.43	358	P	Pn	20 40 25.3	-1.7
	comp=Z,0.6nm,0.3s,baz=174,slow=14,SNR=5.4						
MA2	Magadan	14.43	358	eP	Pn	20 40 25.6	-1.4
MA2	Magadan	14.43	358	eP	Pn	20 40 25.4	-1.6
MSHR	Mys Shultsa	14.91	267	⇑eP	Pn	20 40 33.3	-0.2
MDJ	Mudanjiang	15.54	276	P	Pn	20 40 42.0	+0.1
MDJ				pmax	pmax		
	comp=Z,13nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,100nm,3.9s						
MDJ	Mudanjiang	15.54	276	ePn	Pn	20 40 39.1	-2.8
	comp=Z,9.3nm,0.8s						
SEY	Seymchan	17.80	1	P	P	20 41 12.4	+1.8
	comp=Z,0.3nm,0.3s,baz=187,slow=16,SNR=5.5						
CN2	Changchun	18.63	275	eP	Pn	20 41 20.2	-0.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KSRS	Korea Array	19.28	255	P	P	20 41 27.3	+0.2
	comp=Z,0.1nm,0.3s,baz=61,slow=11,SNR=8.6						
KSRS				LR	LR	20 48 30.1	
	comp=Z,29nm,18.7s,baz=45,slow=36						
KSRS	Korea Array	19.28	255	eP	Pn	20 41 28.8	+0.5
JNU	Nakatsue	19.96	240	eP	P	20 41 33.7	-0.9
	comp=Z,35nm,1.4s						
YAK	Yakutsk	21.10	331	eP	P	20 41 45.5	-1.1
	comp=Z,10.0nm,0.6s						
YAK	Yakutsk	21.10	331	⇓eP	P	20 41 45.7	-0.9
YAK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HIA	Hailar	21.87	292	eP	P	20 41 54.0	-1.1
HIA	Hailar	21.87	292	⇑eP	P	20 41 54.0	-1.1
HIA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GSTR	Great Sitkin T	22.38	60	eP	P	20 41 57.5	-3.0
BJI	Beijing	26.37	271	⇓eP	P	20 42 37.7	-0.6
BJI				pmax	pmax		
	comp=Z,9.0nm,0.6s						
H11N2	WAKE ISLAND Hy	28.40	148	T	T	21 13 44.8	
	baz=338,slow=75,SNR=54						
H11N1	WAKE ISLAND Hy	28.41	148	T	T	21 13 40.1	
	baz=338,slow=75,SNR=40						
H11N3	WAKE ISLAND Hy	28.41	148	T	T	21 13 44.0	
	baz=338,slow=75,SNR=50						
NJ2	Nanjing	28.48	254	eP	P	20 42 58.5	+1.3
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
HHC	Hu-ho-hao-te	29.32	276	eP	P	20 43 02.5	-2.2
HHC				PP	PnPn	20 43 59.2	+0.4
HHC				S	S	20 47 50.4	-5.2
HHC				pmax	pmax		
	comp=Z,15nm,0.9s						
HHC				pmax	pmax		
	comp=Z,99nm,4.5s						
HHC				LR	LR		
	comp=Z,140nm,11.2s						
HHC				LR	LR		
	comp=Z,130nm,13.3s						
HHC				LR	LR		
	comp=Z,130nm,12.8s						
H11S1	WAKE ISLAND Hy	29.45	150	T	T	21 15 00.1	
	baz=339,slow=76,SNR=41						
H11S3	WAKE ISLAND Hy	29.46	150	T	T	21 15 05.8	
	baz=339,slow=76,SNR=39						
H11S2	WAKE ISLAND Hy	29.47	150	T	T	21 14 59.7	
	baz=339,slow=76,SNR=46						
ULN	Ulaanbaatar	30.40	291	eP	P	20 43 14.9	+0.6
ULN	Ulaanbaatar	30.40	291	⇑eP	P	20 43 14.9	+0.6
ULN				pmax	pmax		
	comp=Z,1.0nm,1.1s						
SONA1	Songino Array	30.83	291	eP	P	20 43 18.2	+0.1
SONM	Songino Array	30.84	291	P	P	20 43 16.2	-1.9
	comp=Z,0.4nm,0.3s,baz=73,slow=11,SNR=5.1						
SONM				LR	LR	20 56 04.3	
	comp=Z,53nm,18.9s,baz=92,slow=37						
SONM	Songino Array	30.84	291	eP	P	20 43 18.0	-0.1
GUMO	Guam	31.98	192	LR	LR	20 54 30.0	
	comp=Z,22nm,22.0s,baz=1.0,slow=32						
LZH	Lanzhou	36.84	273	eP	P	20 44 05.2	-5.2
LZH				sP	pP	20 44 06.2	-15
LZH				pP	sP	20 44 14.7	-10
LZH				sP	sP	20 44 17.3	-7.8
LZH				pmax	pmax		
	comp=Z,21nm,1.0s						
LZH				pmax	pmax		
	comp=Z,18nm,1.0s						
TRF	Thorofare Moun	36.97	39	eP	P	20 44 09.8	-1.3
	comp=Z,21nm,1.2s						
RC01	Rabbit Creek A	37.24	43	eP	P	20 44 13.1	-0.2
	comp=Z,18nm,1.2s						
COLD	Coldfoot	37.26	33	eP	P	20 44 12.2	-1.2
	comp=Z,7.1nm,1.0s						
BWN	Browne	37.35	38	eP	P	20 44 14.8	+0.6
	comp=Z,75nm,1.2s						
GTA	Gaotai	38.13	280	eP	P	20 44 21.4	+0.2
GTA				pP	pP	20 44 25.6	-6.1
GTA				sP	sP	20 44 28.6	-7.4
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KLU	Klutina	39.05	43	eP	P	20 44 28.9	+0.3
	comp=Z,16nm,1.2s						
DIV	Divide	39.16	43	eP	P	20 44 30.6	+1.1
	comp=Z,13nm,1.0s						
CD2	Chengdu	39.64	266	eP	P	20 44 33.0	-0.9
GYA	Guiyang	40.29	258	eP	P	20 44 40.0	+0.6
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
WMQ	Urumqi	44.47	292	P	P	20 45 15.4	+2.3
WMQ				pP	pP	20 45 24.2	+0.5
MK31	Makanchi Array	46.69	298	eP	P	20 45 29.2	-1.4
MK31	Makanchi Array	46.69	298	eP	P	20 45 29.2	-1.4
MKAR	Makanchi Array	46.69	298	P	P	20 45 29.3	-1.3
	comp=Z,0.6nm,0.5s,baz=64,slow=6.9,SNR=15						
MKAR				PcP	PcP	20 47 03.6	-0.1
	comp=Z,0.3nm,0.5s,baz=109,slow=3.5,SNR=3.6						
MKAR	Makanchi Array	46.69	298	eP	P	20 45 30.3	-0.3
MKAR	Makanchi Array	46.69	298	eP	P	20 45 29.4	-1.1
	comp=Z,6.9nm,0.5s						
MK01	Makanchi Array	46.69	298	eP	P	20 45 28.5	-2.1
MAKZ	Makanchi	46.88	298	eP	P	20 45 31.3	-0.7
	comp=Z,3.9nm,1.5s						
MAKZ	Makanchi	46.88	298	eP	P	20 45 31.3	-0.7
MAKZ				pmax	pmax		
	comp=Z,4.0nm,1.5s						
KURK	Kurchatov	47.32	304	eP	P	20 45 33.3	-2.1
	comp=Z,2.2nm,1.0s						
KURK	Kurchatov	47.32	304	⇓eP	P	20 45 32.9	-2.5
KURK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
KURBB	Kurchatov Arra	47.41	304	P	P	20 45 34.2	-1.8
	comp=Z,0.7nm,0.5s,baz=72,slow=8.8,SNR=9.7						
KIP	Kipapa	47.46	103	eP	P	20 45 34.8	-2.0
	comp=Z,325nm,1.5s						
KIP	Kipapa	47.46	103	eP	P	20 45 34.8	-2.0
KIP				pmax	pmax		
	comp=Z,325nm,1.5s						
CMAR	Chiang Mai Arr	50.91	256	P	P	20 46 04.2	+0.9
	comp=Z,0.4nm,0.6s,baz=56,slow=5.5,SNR=4.2						
CM01	Chiang Mai Arr	50.93	256	eP	P	20 46 03.5	+0.1
BVAR	Borovoye Array	51.00	310	P	P	20 46 01.5	-2.0
	comp=Z,0.3nm,0.4s,baz=64,slow=6.6,SNR=3.8						
BRVK	Borovoye	51.05	310	eP	P	20 46 04.9	+1.0
BRVK	Borovoye	51.05	310	⇑eP	P	20 46 04.9	+1.0
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
JIRN	Jiri	53.96	275	eP	P	20 46 27.6	+1.4
SPITS	Spitsbergen Ar	53.96	350	P	P	20 46 23.4	-1.8
	comp=Z,2.8nm,0.7s,baz=15,slow=12,SNR=4.6						
GUN	Gumba	54.03	275	eP	P	20 46 27.7	+1.0
RAMN	Ramite	54.10	274	eP	P	20 46 27.7	+0.6
KSH	Kashi	54.23	293	P	P	20 46 31.1	+3.4
KSH				pP	sP	20 46 42.1	-0.7
KSH				PP	PP	20 48 34.6	+5.2
KSH				S	S	20 54 05.6	+3.1
KSH				ScS	ScS	20 56 13.8	-0.4
KSH				SS	SS	20 57 48.5	+4.3
KSH				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KSH				pmax	pmax		
	comp=Z,77nm,4.3s						
KSH				LR	LR		
	comp=Z,55nm,8.2s						
KSH				LR	LR		
	comp=Z,110nm,10.2s						
KKN	Kakani	54.52	275	eP	P	20 46 30.9	+0.8
PKIN	Phulchoki	54.57	275	eP	P	20 46 31.5	+1.0
DMN	Daman	54.76	275	eP	P	20 46 32.8	+0.9
	comp=Z,8.8nm,0.7s						
GKN	Gorkha	54.85	276	eP	P	20 46 33.2	+0.8
	comp=Z,8.3nm,0.4s						
KK31	Karatay Array	55.78	299	eP	P	20 46 37.6	-1.2
KK31	Karatay Array	55.78	299	eP	P	20 46 37.6	-1.2
KKAR	Karatay Array	55.78	299	eP	P	20 46 36.9	-1.9
KKAR	Karatay Array	55.78	299	eP	P	20 46 36.9	-1.9
PYUN	Piuthan	55.95	277	eP	P	20 46 41.3	+0.9
ABKAR	Akbulak array	58.58	310	eP	P	20 46 57.0	-1.4
AKTO	Aktyubinsk	58.95	312	P	P	20 46 59.1	-1.8
	comp=Z,0.9nm,0.5s,baz=66,slow=10.0,SNR=3.1						
ARCES	ARCESS Array B	58.97	341	LR	LR	21 16 42.2	
	comp=Z,66nm,18.7s,baz=254,slow=40						
ARCES	ARCESS Array B	58.97	341	eP	P	20 47 01.3	+0.5
ARCES	ARCESS Array B	58.97	341	eP	P	20 47 01.3	+0.5
NIL	Nilore	59.34	288	eP	P	20 47 04.3	+0.3
	comp=Z,11nm,0.9s						
NIL	Nilore	59.34	288	eP	P	20 47 04.3	+0.3
NIL				pmax	pmax		
	comp=Z,11nm,0.9s						
NVAR	Mina Array Bea	64.16	61	P	P	20 47 40.5	+3.8
	comp=Z,0.2nm,0.3s,baz=281,slow=6.9,SNR=2.5						
FINES	FINESS Array B	64.98	334	P	P	20 47 39.1	-2.2
	comp=Z,1.7nm,0.6s,baz=49,slow=6.3,SNR=7.5						
FINES	FINESS Array B	64.98	334	eP	P	20 47 39.7	-1.6
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
WRA	Warramunga Arr	66.67	198	P	P	20 47 53.7	+1.1
	comp=Z,0.5nm,0.7s,baz=14,slow=6.5,SNR=3.9						
VSU	Vasula	67.09	332	⇑eP	P	20 47 54.7	-0.1
VSU				pmax	pmax		
	comp=Z,21nm,1.0s						
NB2	NORSAR Subarra	69.35	341	P	P	20 48 07.6	-1.4
	comp=Z,0.7nm,0.5s,baz=28,slow=6.2						
HFS	Hagfors	69.53	339	P	P	20 48 08.6	-1.5
	comp=Z,3.2nm,0.5s,baz=46,slow=4.4,SNR=29						
ASAR	Alice Springs	70.37	197	P	P	20 48 18.6	+2.9
	comp=Z,0.4nm,0.8s,baz=18,slow=6.2,SNR=3.7						
NCK	Nalchik	70.95	313	⇓eP	P	20 48 19.3	+0.2
NCK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KIV	Kislovodsk	71.09	314	eP	P	20 48 21.1	+1.1
	comp=Z,8.2nm,0.8s						
KIV	Kislovodsk	71.09	314	eP	P	20 48 20.1	0.0
KIV				pmax	pmax		
	comp=Z,12nm,1.1s						
KIV				MLR	MLR		
	comp=Z,123nm,17.0s						
KBZ	Khabaz	71.14	313	P	P	20 48 19.5	-0.7
	comp=Z,6.1nm,0.8s,baz=171,slow=6.5,SNR=7.0						
KBZ				LR	LR	21 24 49.9	
	comp=Z,199nm,20.6s,baz=300,slow=40						
AKASG	Malin Array Be	72.23	326	P	P	20 48 25.3	-1.3
	comp=Z,1.4nm,0.3s,baz=38,slow=6.4,SNR=7.3						
KIEV	Kiev	72.24	326	eP	P	20 48 25.1	-1.6
KIEV	Kiev	72.24	326	⇓eP	P	20 48 25.1	-1.6
KIEV				pmax	pmax		
	comp=Z,3.0nm,0.9s						
LAZ	Ladron	73.59	58	eP	P	20 48 34.5	-0.7
SORM	Soroca	74.59	324	⇓iP	P	20 48 39.5	-1.1
KWP	Kalwaria Pacla	75.59	328	eP	P	20 48 45.9	-0.4
	comp=Z,91nm,1.0s						
KWP	Kalwaria Pacla	75.59	328	eP	P	20 48 45.9	-0.4
KWP				pmax	pmax		
	comp=Z,91nm,1.0s						
BUR08	Bucovina Ar. S	76.26	326	eP	P	20 48 49.8	-0.6
BUR04	Bucovina Ar. S	76.28	326	eP	P	20 48 49.6	-0.8
BURAR	Bucovina Array	76.28	326	⇓iP	P	20 48 50.0	-0.4
TESR	Tescani	76.59	324	⇑iP	P	20 48 50.8	-1.3
TRPA	Tarpa	76.89	328	⇑iP	P	20 48 53.8	+0.1
MORC	Moravsky Berou	77.30	331	⇑iP	P	20 48 55.8	-0.3
MORC	Moravsky Berou	77.30	331	eP	P	20 48 55.5	-0.6
	comp=Z,41nm,1.4s						
MORC	Moravsky Berou	77.30	331	eP	P	20 48 55.5	-0.6
MORC				pmax	pmax		
	comp=Z,41nm,1.4s						
MORC	Moravsky Berou	77.30	331	eP	P	20 48 56.1	0.0
CLL	Collm	77.43	335	i P	P	20 48 55.6	-1.1
	comp=Z,3.0nm,0.9s						
CLL	Collm	77.43	335	i P	P	20 48 55.6	-1.1
CLL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
EKA	Eskdalemuir Ar	77.59	346	P	P	20 48 56.9	-0.6
	comp=Z,0.6nm,0.4s,baz=22,slow=4.9,SNR=9.0						
MLR	Muntele Rosu	77.70	324	P	P	20 48 59.0	+0.5
	comp=Z,0.7nm,0.8s,baz=120,slow=8.1,SNR=5.5						
MLR	Muntele Rosu	77.70	324	P	P	20 48 59.0	+0.5
MLR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
VRAC	Vranov	78.02	332	eP	P	20 49 00.2	+0.1
JAVC	Velka Javorina	78.04	331	eP	P	20 49 01.2	+1.0
GOPC	GO Pecny, Ondr	78.09	333	eP	P	20 48 59.5	-0.9
GOPC	GO Pecny, Ondr	78.09	333	eP	P	20 48 59.5	-0.9
GOPC				MLR	MLR		
	comp=Z,100nm,16.3s						
PRU	Pruhonice	78.10	333	eP	P	20 49 00.7	+0.2
PRU	Pruhonice	78.10	333	eP	P	20 49 00.7	+0.2
VOIR		78.11	325	⇑iP	P	20 49 00.6	-0.1
KRUC	Moravsky	78.30	332	eP	P	20 49 01.7	+0.1
KHC	Kasperske Hory	79.16	333	eP	P	20 49 06.0	-0.4
KHC	Kasperske Hory	79.16	333	eP	P	20 49 06.0	-0.4
	comp=Z,1.4nm,1.0s						
KHC	Kasperske Hory	79.16	333	eP	P	20 49 06.0	-0.4
TXAR	Lajitas Array	79.25	59	P	P	20 49 11.2	+3.9

	comp=Z,0.2nm,0.7s,baz=317,slow=4.9,SNR=3.1						
GERES	GERESS Array B	79.37	333	P	P	20 49 07.0	-0.5
	comp=Z,0.5nm,0.6s,baz=35,slow=5.2,SNR=6.7						
VTS	Vitosha	81.21	324	⇓*i*P	P	20 49 17.0	-0.6
VTS	Vitosha	81.21	324	*e*P	P	20 49 17.0	-0.6
	comp=Z,4.9nm,1.2s						
VTS	Vitosha	81.21	324	*e*P	P	20 49 17.0	-0.6
VTS				pmax	pmax		
	comp=Z,5.0nm,1.2s						

CSEM 07 20:47:10.7, 27°.64N×18°.11W, h18km, ML3.5, Canary Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CORC	Orchilla, El H	0.07	332	P	Pg	20 47 14.0	-0.1
	3µm,0.1s,SNR=18						
CORC				S	Sg	20 47 17.2	+0.7
	8µm,0.2s,SNR=7.9						
CJUL	El Julon, El H	0.09	15	P	Pg	20 47 14.3	-0.2
	181nm,0.1s,SNR=7.9						
CJUL				S	Sg	20 47 17.3	+0.3
	18µm,0.1s,SNR=7.9						
CMCL	Mercadel, El H	0.10	48	P	Pg	20 47 14.5	-0.1
	623nm,0.1s,SNR=7.9						
CMCL				S	Sg	20 47 16.7	-0.5
	5µm,0.1s,SNR=7.9						
CTAD	Las Tabladas,	0.11	11	P	Pg	20 47 14.2	-0.3
	73nm,0.1s,SNR=7.9						
CTAD				S	Sg	20 47 17.0	-0.1
	10µm,0.1s,SNR=7.9						
CRST	La Restinga, E	0.11	90	P	Pg	20 47 14.3	-0.2
	328nm,0.3s,SNR=18						
CRST				S	Sg	20 47 17.3	+0.3
	9µm,0.1s,SNR=7.9						
CTAN	El Hierro	0.12	23	P	Pg	20 47 14.3	-0.3
	54nm,0.0s,SNR=7.9						
CTAN				S	Sg	20 47 17.1	-0.2
	2µm,0.1s,SNR=7.9						
CCUM	Cumbre, El Hie	0.12	34	P	Pg	20 47 14.5	-0.2
	216nm,0.1s,SNR=7.9						
CCUM				S	Sg	20 47 17.4	0.0
	7µm,0.2s,SNR=7.9						
CHIE	El Hierro	0.16	57	P	Pg	20 47 14.9	-0.1
	48nm,0.1s,SNR=18						
CTIG	El Hierro	0.22	49	P	Pb	20 47 15.6	-0.3
	527nm,0.1s,SNR=7.9						
CTIG				S	Sg	20 47 19.7	+0.2
	2µm,0.2s,SNR=7.9						
PMAR	Madeira	5.17	11	*e*S	Sn	20 49 17.4	-9.2
PMAR				A	A	20 49 18.6	
	18nm,0.5s						
PMPS	Porto Santo	5.61	15	*e*S	Sn	20 49 27.5	-10

CSEM 07 20:52:13.3, 27°.66N×18°.12W, h21km, ML3.6, Canary Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CORC	Orchilla, El H	0.05	339	P	Pb	20 52 16.9	-0.3
	4µm,0.1s,SNR=18						
CORC				S	Sb	20 52 19.9	+0.1
	13µm,0.2s,SNR=7.9						
CJUL	El Julon, El H	0.08	26	S	Sb	20 52 20.2	-0.2
	19µm,0.1s,SNR=4.0						
CTAD	Las Tabladas,	0.10	20	P	Pb	20 52 17.2	-2.6
	420nm,0.1s,SNR=18						
CTAD				S	Sb	20 52 19.2	-5.3
	12µm,0.1s,SNR=7.9						
CMCL	Mercadel, El H	0.11	58	P	Pb	20 52 17.5	-2.3
	514nm,0.2s,SNR=18						
CMCL				S	Sb	20 52 21.0	-3.4
	8µm,0.1s,SNR=7.9						
CTAN	El Hierro	0.12	32	P	Pb	20 52 17.3	-2.3
	40nm,0.1s,SNR=7.9						
CTAN				S	Sb	20 52 20.0	-4.0
	2µm,0.1s,SNR=7.9						
CCUM	Cumbre, El Hie	0.12	42	P	Pb	20 52 17.3	-2.2
	213nm,0.1s,SNR=7.9						
CCUM				S	Sb	20 52 20.3	-3.7
	8µm,0.2s,SNR=7.9						
CRST	La Restinga, E	0.12	96	P	Pb	20 52 17.3	-2.1
	939nm,0.2s,SNR=18						
CRST				S	Sb	20 52 20.7	-3.1
	12µm,0.1s,SNR=7.9						
CHIE	El Hierro	0.16	63	P	Pb	20 52 17.8	-1.4
	58nm,0.1s,SNR=18						
CTIG	El Hierro	0.22	53	P	Pb	20 52 18.5	-0.8
	858nm,0.1s,SNR=18						
CTIG				S	Sb	20 52 22.5	-0.9
	2µm,0.2s,SNR=7.9						

*KRSC **07** 20:54:45.5±0.9, 53°.31N×160°.65E, h48km±12km, ML4.4*

*MOS **07** 20:54:47.5±0.7, 53°.31N×160°.58E, h51km, mb4.0/6, Error ellipse: s-maj=8.2km s-min=4.3km az=77.7*

*IDC **07** 20:54:51.9±1.8, 53°.55N×160°.18E, h82km±15km, mb3.4/11, mb1 3.6/13, mb1mx3.3/78, mbtmp3.8/13, MS3.4/4, Ms1 3.4/4, ms1mx2.8/48, Error ellipse: s-maj=19.7km s-min=15.4km az=147.0*

ISC 07 20:54:43.5±1.2, 53°.37N±0°.03×160°.77E±0°.03, h16km±8km, n110, σ1s.49/144, mb3.9/13, 1C-1D, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.52	239	*i* P	Pn	20 54 57.5	+1.2
SPN				*i* S	Sn	20 55 04.3	-0.5
SPN	Mys Shipunski	0.52	239	PN	Pn	20 54 57.5	+1.2
SPN				S	Sn	20 55 04.3	-0.5
NLC	Nalytchevo	0.88	258	*e*P	Pn	20 55 01.9	+0.8
NLC				*e*S	Sb	20 55 12.0	+0.3
NLC	Nalytchevo	0.88	258	PN	Pn	20 55 01.9	+0.8
NLC				S	Sb	20 55 12.0	+0.3
KII	Karymskiy	1.03	311	*e*P	Pn	20 55 04.6	+1.2
KII	Karymskiy	1.03	311	PN	Pn	20 55 04.6	+1.2
SDLR	Sedlovina	1.13	266	*e*P	Pg	20 55 05.8	+0.4
SDLR	Sedlovina	1.13	266	PN	Pg	20 55 05.8	+0.4
UGLR	Uglovaya	1.18	263	*e*P	Pg	20 55 06.7	+0.5
UGLR				*e*S	Sb	20 55 19.9	-0.6
UGLR	Uglovaya	1.18	263	PN	Pg	20 55 06.7	+0.5
UGLR				S	Sb	20 55 19.9	-0.6
SMAR	Somma	1.18	266	*e*P	Pg	20 55 06.4	0.0
SMAR				*e*S	Sb	20 55 19.9	-0.9
SMAR	Somma	1.18	266	PN	Pg	20 55 06.4	0.0
SMAR				S	Sb	20 55 19.9	-0.9
DALK	Dalny	1.26	255	*e*P	Pg	20 55 07.2	-0.5
DALK				*e*S	Sb	20 55 21.5	-1.2
DALK	Dalny	1.26	255	PN	Pg	20 55 07.2	-0.5
DALK				S	Sb	20 55 21.5	-1.2
KRX	Arik	1.27	270	*e*P	Pg	20 55 07.6	-0.4
KRX				*e*S	Sb	20 55 21.8	-1.4
KRX	Arik	1.27	270	PN	Pg	20 55 07.6	-0.4
KRX				S	Sb	20 55 21.8	-1.4
KOK	Koryaka	1.28	267	*e*P	Pg	20 55 07.9	-0.3
KOK	Koryaka	1.28	267	PN	Pg	20 55 07.9	-0.3
PET	Petropavlovsk	1.32	256	*i* P	Pb	20 55 08.2	+0.4
PET	Petropavlovsk	1.32	256	⇓*i*PN	Pb	20 55 08.1	+0.3
PET				*e*S	Sb	20 55 22.9	-1.5
PET				pmax	pmax		
	comp=Z,190nm,0.4s						
PET				smax	smax		
	comp=E,3µm,0.4s						
PET				smax	smax		
	comp=N,2µm,0.5s						
MKZ	Mys Kozlova	1.32	25	*e*P	Pg	20 55 09.5	+0.6
MKZ				*e*S	Sg	20 55 26.9	+0.8
MKZ	Mys Kozlova	1.32	25	PN	Pg	20 55 09.5	+0.6
MKZ				S	Sg	20 55 26.9	+0.8
RUS	Russkaya	1.66	236	*e*P	Pn	20 55 12.3	+0.5
RUS				*i* P		20 55 12.7	
RUS				*e*S	Sn	20 55 30.7	-2.0
RUS	Russkaya	1.66	236	PN	Pn	20 55 12.3	+0.5
RUS				S	Sn	20 55 30.7	-2.0
KRMR	Karymshinskiy	1.68	252	*e*P	Pb	20 55 13.5	-0.5
KRMR				*e*S	Sn	20 55 32.5	-0.8
KRMR	Karymshinskiy	1.68	252	PN	Pb	20 55 13.5	-0.5
KRMR				S	Sn	20 55 32.5	-0.8
GNL	Ganaly	1.72	282	*e*P	Pb	20 55 14.6	-0.1
GNL				*e*S	Sn	20 55 34.4	-0.1
GNL	Ganaly	1.72	282	PN	Pb	20 55 14.6	-0.1
GNL				S	Sn	20 55 34.4	-0.1
MTVR	Mutnovka	1.80	242	*e*P	Pb	20 55 15.3	-0.8
MTVR				*e*S	Sn	20 55 35.4	-1.1
MTVR	Mutnovka	1.80	242	PN	Pb	20 55 15.3	-0.8
MTVR				S	Sn	20 55 35.4	-1.1
GRL	Gorelyy	1.82	244	*e*P	Pb	20 55 15.9	-0.6
GRL	Gorelyy	1.82	244	PN	Pb	20 55 15.9	-0.6
TUMD	Tumrok D	1.85	353	*e*P	Pb	20 55 17.7	+0.7
TUMD				*e*S	Sb	20 55 39.1	-0.8
PETK	Petropavlovsk-	1.86	263	P	Pb	20 55 16.9	-0.2
	baz=76,slow=18						
PETK				S	Sn	20 55 37.8	-0.1
	baz=50,slow=17						
PETK				LR	LR	20 56 11.6	
	comp=N,217nm,19.3s,baz=98,slow=51						
TUMR	Tumrok	1.95	350	*i* P	Pb	20 55 19.9	+1.2
TUMR				*e*S	Sb	20 55 43.4	+0.5
TUMR	Tumrok	1.95	350	PN	Pb	20 55 19.9	+1.2
TUMR				S	Sb	20 55 43.4	+0.5
ASAK	Asacha	2.00	242	*e*P	Pb	20 55 18.6	-0.9
ASAK	Asacha	2.00	242	PN	Pb	20 55 18.6	-0.9
APC	Apacha	2.22	260	*e*P	Pb	20 55 21.9	-1.3
APC				*e*S	Sn	20 55 47.3	+0.7
APC	Apacha	2.22	260	PN	Pb	20 55 21.9	-1.3
APC				S	Sn	20 55 47.3	+0.7
KDTR	Khodutka, Kamc	2.27	228	*e*P	Pn	20 55 21.8	+1.6
KDTR				*e*S	Sn	20 55 46.7	-1.1
KMNR	Kamenistaya	2.41	353	*e*P	Pb	20 55 26.9	+0.3
KMNR	Kamenistaya	2.41	353	PN	Pb	20 55 26.9	+0.3
BZMR	Bezymyannaya	2.58	357	*e*P	Pb	20 55 29.2	-0.2
BZMR	Bezymyannaya	2.58	357	PN	Pb	20 55 29.2	-0.2
KIRR	Kirishev	2.60	355	*e*P	Pb	20 55 29.9	+0.1
KIRR	Kirishev	2.60	355	PN	Pb	20 55 29.9	+0.1
BZWR	Bezymyannyi-We	2.61	357	*e*P	Pb	20 55 29.9	0.0
BZWR	Bezymyannyi-We	2.61	357	PN	Pb	20 55 29.9	0.0
KPT	Kopyto	2.62	353	*e*P	Pb	20 55 29.3	-0.8
KPT	Kopyto	2.62	353	PN	Pb	20 55 29.3	-0.8
ZLN	Zelenaya	2.66	0	*e*P	Pb	20 55 30.8	+0.1
ZLN				*e*S	Sb	20 56 02.5	-0.6
ZLN	Zelenaya	2.66	0	PN	Pb	20 55 30.8	+0.1
ZLN				S	Sb	20 56 02.5	-0.6
MIPR	Malaya Ipel’ka	2.67	247	*e*P	Pn	20 55 28.4	+2.6
MIPR	Malaya Ipel’ka	2.67	247	PN	Pn	20 55 28.4	+2.6
LGNR	Loginova	2.72	359	*e*P	Pb	20 55 32.3	+0.4
LGNR	Loginova	2.72	359	PN	Pb	20 55 32.3	+0.4
KOZ	Kozyrevsk	2.75	349	*e*P	Pb	20 55 30.7	-1.5
KOZ	Kozyrevsk	2.75	349	PN	Pb	20 55 30.7	-1.5
CIRR	Tsirk	2.75	360	*e*P	Pb	20 55 32.2	-0.2
CIRR	Tsirk	2.75	360	PN	Pb	20 55 32.2	-0.2
ESO	Esso	2.83	336	*e*P	Pb	20 55 31.1	-2.5
ESO	Esso	2.83	336	PN	Pb	20 55 31.1	-2.5
KRSR	Krestovskiy	2.86	358	*e*P	Pb	20 55 32.2	-1.9
KRSR	Krestovskiy	2.86	358	PN	Pb	20 55 32.2	-1.9
KLY	Klyuchi	2.95	359	*e*P	Pb	20 55 34.4	-1.3
KLY				*e*S	Sb	20 56 08.7	-2.8
KLY	Klyuchi	2.95	359	PN	Pb	20 55 34.4	-1.3
KLY				S	Sb	20 56 08.7	-2.8
PAU	Pauzhetka	3.08	233	*e*P	Pn	20 55 34.5	+3.1
PAU				*e*S	Sn	20 56 08.8	+0.9
PAU	Pauzhetka	3.08	233	PN	Pn	20 55 34.5	+3.1
PAU				S	Sn	20 56 08.8	+0.9
KBTR	Krutoberegovo	3.08	22	*e*P	Pb	20 55 36.2	-1.7
KBTR				*e*S	Sb	20 56 13.5	-1.8
KBTR	Krutoberegovo	3.08	22	PN	Pb	20 55 36.2	-1.7
KBTR				S	Sb	20 56 13.5	-1.8
BDR	Baidarnaya	3.22	4	*e*P	Pb	20 55 37.6	-2.6
BDR	Baidarnaya	3.22	4	PN	Pb	20 55 37.6	-2.6
SMKR	Semkarok	3.25	7	*e*P	Pb	20 55 39.2	-1.5
SMKR				*e*S	Sb	20 56 16.7	-3.3
SMKR	Semkarok	3.25	7	PN	Pb	20 55 39.2	-1.5
SMKR				S	Sb	20 56 16.7	-3.3
SRKR	Sorokina	3.30	4	*e*P	Pb	20 55 40.0	-1.7
SRKR	Sorokina	3.30	4	PN	Pb	20 55 40.0	-1.7
BKI	Bering	3.56	57	*e*P	Pb	20 55 43.3	-2.7
BKI				*e*S	Sn	20 56 21.9	+2.2
BKI	Bering	3.56	57	PN	Pb	20 55 43.3	-2.7
SKR	Severo-Kuril’s	3.93	229	*e*P	Pn	20 55 44.1	+1.0
SKR	Severo-Kuril’s	3.93	229	*e*PN	Pb	20 55 48.4	-4.0
SKR				*e*S	Sn	20 56 28.4	-0.5
SKR				pmax	pmax		
	comp=Z,24nm,0.5s						
SKR				smax	smax		
	comp=N,104nm,0.5s						
SKR				smax	smax		
	comp=E,244nm,0.8s						
MA2	Magadan	8.32	322	LR	LR	21 00 29.1	
	comp=E,56nm,18.1s,baz=182,slow=42						
ASAJ	Asahikawa	15.11	240	P	Pn	20 58 17.2	+1.1
	comp=E,0.9nm,0.3s,baz=59,slow=10,SNR=13						
ERM	Erimo	16.37	233	*i* P	Pn	20 58 33.5	+1.1
KLR	Kul’dur	18.55	269	P	P	20 58 58.9	-0.4
	comp=E,0.0nm,0.3s,baz=68,slow=11,SNR=5.0						
KLR				LR	LR	21 07 27.5	
	comp=E,4.0nm,18.1s,baz=0.0,slow=42						
YAK	Yakutsk	18.57	310	P	P	20 58 58.1	-1.2
	comp=E,0.0nm,0.3s,baz=19,slow=1.7,SNR=4.8						
YAK				LR	LR	21 05 43.7	
	comp=E,54nm,20.1s,baz=62,slow=36						
TIXI	Tiksi	23.00	335	⇑*e*P	P	20 59 43.4	-3.7
TIXI				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MJA0	Matsu Arr-Jizo	23.02	232	*e*P	P	20 59 51.4	+3.8
MJA0				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MJAR	Matsushiro Arr	23.04	232	P	P	20 59 48.2	+0.4
	comp=Z,2.7nm,0.6s,baz=17,slow=9.6,SNR=15						
MJAR	Matsushiro Arr	23.04	232	P	P	20 59 48.2	+0.4
MJAR				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ILAR	Eielson Array	28.33	46	P	P	21 00 38.4	+2.2
	comp=Z,0.7nm,0.7s,baz=265,slow=7.4,SNR=8.3						
H11N2	WAKE ISLAND Hy	33.91	170	T	T	21 37 53.0	
	baz=353,slow=76,SNR=37						
H11N3	WAKE ISLAND Hy	33.92	170	T	T	21 37 54.9	
	baz=353,slow=76,SNR=41						
H11N1	WAKE ISLAND Hy	33.92	170	T	T	21 37 54.2	
	baz=353,slow=76,SNR=46						
H11S1	WAKE ISLAND Hy	35.09	170	T	T	21 39 19.3	
	baz=352,slow=76,SNR=10						
H11S3	WAKE ISLAND Hy	35.11	170	T	T	21 39 22.3	
	baz=352,slow=76,SNR=19						
H11S2	WAKE ISLAND Hy	35.11	170	T	T	21 39 20.7	
	baz=352,slow=76,SNR=5.5						
KURK	Kurchatov	47.93	302	P	P	21 03 18.7	-2.0
KURBB	Kurchatov Arra	48.03	302	P	P	21 03 18.7	-2.8
	comp=Z,0.4nm,0.4s,baz=59,slow=7.5,SNR=8.1						
MKAR	Makanchi Array	48.40	296	P	P	21 03 22.4	-2.1
	comp=Z,0.5nm,0.4s,baz=57,slow=8.4,SNR=10						
BVAR	Borovoye Array	50.53	309	P	P	21 03 38.2	-2.5
	comp=Z,0.2nm,0.3s,baz=49,slow=9.7,SNR=3.3						
BVAR				LR	LR	21 28 23.6	
	comp=Z,137nm,21.7s,baz=304,slow=40						
YBH	Yreka Blue Hor	50.55	70	LR	LR	21 22 47.2	
	comp=Z,99nm,20.8s,baz=193,slow=33						
PDAR	Pinedale Array	57.03	61	P	P	21 04 30.7	+2.1
	comp=Z,0.5nm,0.6s,baz=305,slow=2.1,SNR=6.6						
CMAR	Chiang Mai Arr	58.63	259	P	P	21 04 41.3	+1.5
	comp=Z,0.5nm,0.5s,baz=40,slow=8.7,SNR=4.2						
FINES	FINESS Array B	60.03	337	P	P	21 04 47.3	-1.6
	comp=Z,0.8nm,0.7s,baz=40,slow=9.0,SNR=4.6						
FINES	FINESS Array B	60.03	337	*e*P	P	21 04 46.9	-2.0
FINES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
HFS	Hagfors	63.81	342	P	P	21 05 13.1	-1.2
	comp=Z,2.2nm,1.0s,baz=15,slow=6.9,SNR=4.9						
TXAR	Lajitas Array	70.16	68	P	P	21 05 57.6	+2.3
	comp=Z,0.7nm,0.6s,baz=302,slow=5.2,SNR=14						
WRA	Warramunga Arr	76.50	206	P	P	21 06 32.6	+0.1
	comp=Z,0.4nm,0.7s,baz=24,slow=6.3,SNR=3.8						
ASAR	Alice Springs	80.18	205	P	P	21 06 53.3	+0.6
	comp=Z,0.2nm,0.4s,baz=26,slow=5.8,SNR=3.8						

*ISCJB **07** 20:56:07.0±0.9, 27°.82N±0°.05×18°.16W±0°.09, h31km±3km, Error ellipse: s-maj=14.2km s-min=6.9km az=158.2*

*CSEM **07** 20:56:07.5±0.5, 27°.73N×18°.09W, h28km±2km, ML3.7, Error ellipse: s-maj=16.4km s-min=15.0km az=103.0*

*INMG **07** 20:56:09.5±1.0, 27°.62N×18°.14W, h21km±4km, ML3.0, Error ellipse: s-maj=6.6km s-min=5.0km az=26.0*

ISC 07 20:56:06.7±1.4, 27°.79N±0°.07×18°.2W±0°.1, h33km±4km, n14, σ1s.40/25, Canary Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CORC	Orchilla, El H	0.09	164	P	Pb	20 56 12.3	0.0
	2µm,0.1s,SNR=7.9						
CORC				S	Sb	20 56 15.3	-0.9
	17µm,0.1s,SNR=7.9						
CTAD	Las Tabladas,	0.09	116	P	Pb	20 56 12.7	+0.4
	1µm,0.1s,SNR=7.9						
CTAD				S	Sb	20 56 15.3	-0.9
	21µm,0.1s,SNR=7.9						
CJUL	El Julon, El H	0.10	126	P	Pb	20 56 12.6	0.0
	812nm,0.1s,SNR=7.9						
CJUL				S	Sb	20 56 15.6	-1.0
	24µm,0.1s,SNR=7.9						
CTAN	El Hierro	0.11	107	P	Pb	20 56 13.6	+1.1
	691nm,0.1s,SNR=7.9						
CTAN				S	Sb	20 56 16.0	-0.4
	3µm,0.1s,SNR=7.9						
CCUM	Cumbre, El Hie	0.13	108	P	Pb	20 56 13.3	+0.6
	212nm,0.1s,SNR=7.9						
CCUM				S	Sb	20 56 15.8	-1.0
	12µm,0.2s,SNR=7.9						
CMCL	Mercadel, El H	0.15	119	P	Pb	20 56 13.5	+0.6
	509nm,0.1s,SNR=7.9						
CMCL				S	Sb	20 56 16.5	-0.7
	SNR=7.9						
CRST	La Restinga, E	0.22	131	P	Pb	20 56 13.2	-0.2
	2µm,0.1s,SNR=18						
CRST				S	Sn	20 56 15.9	-1.2
	2µm,0.2s,SNR=7.9						
CTIG	El Hierro	0.22	89	P	Pb	20 56 13.9	+0.5
	1µm,0.1s,SNR=7.9						
CTIG				S	Sb	20 56 18.1	+0.1
	2µm,0.1s,SNR=7.9						
PMAR	Madeira	5.04	12	*e*P	Pn	20 57 21.8	+1.7
PMAR				*e*S	Sn	20 58 15.1	-2.2
PMAR				A	A	20 58 24.4	
	23nm,0.5s						
PMAR	Madeira	5.04	12	*e*P	Pn	20 57 21.8	+1.7
PMAR				*e*S	Sn	20 58 15.1	-2.2
PMOZ	Porto Moniz, M	5.09	9	*e*P	Pn	20 57 22.3	+1.5
PMOZ	Porto Moniz, M	5.09	9	*e*P	Pn	20 57 22.3	+1.5
PMPS	Porto Santo	5.49	16	*e*P	Pn	20 57 28.0	+1.9
PMPS				*e*S	Sn	20 58 25.7	-2.4
PMPS				A	A	20 58 26.8	
	18nm,0.6s						
PMPS	Porto Santo	5.49	16	*e*P	Pn	20 57 28.0	+1.9

*ISK **07** 20:56:09.6, 36°.98N×27°.62E, h22km, ML2.5/8*

*ISCJB **07** 20:56:10.4±0.8, 36°.97N±0°.03×27°.59E±0°.07, h22km±9km, Error ellipse: s-maj=9.4km s-min=5.4km az=166.2*

*CSEM **07** 20:56:10.1±0.1, 36°.97N×27°.58E, h20km, ML2.5, Error ellipse: s-maj=4.1km s-min=3.2km az=91.0*

*DDA **07** 20:56:10.9, 36°.98N×27°.65E, h7km, Ml2.5*

ISC 07 20:56:09.9±0.9, 36°.97N±0°.03×27°.69E±0°.03, h15km±9km, n29, σ1s.46/43, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DATC	Datca-Mugla	0.21	187	PG	Pb	20 56 15.7	+0.3
DATC				SG	Sb	20 56 19.6	+0.5
DATC	Datca-Mugla	0.21	187	*e*Pg	Pb	20 56 15.7	+0.3
DATC				*e*Sg	Sb	20 56 19.6	+0.5
BDRM	Kayabasi	0.22	297	*e*P	Pg	20 56 15.2	+0.3
BDRM				*i* S	Sg	20 56 18.3	0.0
BDRM	Kayabasi	0.22	297	P	Pg	20 56 15.2	+0.3
BDRM				S	Sg	20 56 18.3	0.0
DAT	Datca	0.25	201	PG	Pg	20 56 15.9	+0.4
DAT				SG	Sb	20 56 20.7	+0.1
DAT	Datca	0.25	201	*i* P	Pb	20 56 16.2	-0.1
DAT				*i* S	Sb	20 56 20.7	+0.1
DAT	Datca	0.25	201	*e*Pg	Pg	20 56 15.9	+0.4
DAT	Datca	0.25	201	P	Pb	20 56 16.2	-0.1
DAT				S	Sb	20 56 20.7	+0.1
BODT	Bodrum	0.32	288	PG	Pg	20 56 16.2	-0.4
BODT				SG	Sg	20 56 21.0	-0.1
BODT	Bodrum	0.32	288	*e*Pg	Pg	20 56 16.2	-0.4
BODT				*e*Sg	Sg	20 56 21.0	-0.1
MLSB	Milas	0.34	12	PG	Pg	20 56 17.3	+0.4
MLSB	Milas	0.34	12	*e*Pg	Pg	20 56 17.3	+0.4
YER	Yerkesik	0.50	70	PG	Pb	20 56 21.2	+0.7
YER	Yerkesik	0.50	70	*e*Pg	Pb	20 56 21.2	+0.7
AYDN	Tasoluk	0.71	12	*i* P	Pg	20 56 24.5	+0.7
AYDN				*i* S	Sb	20 56 33.6	-0.1
AYDN	Tasoluk	0.71	12	P	Pg	20 56 24.5	+0.7
AYDN				S	Sb	20 56 33.6	-0.1
TURN	Turunc	0.74	97	PG	Pb	20 56 20.9	-3.6
TURN	Turunc	0.74	97	*i* P	Pb	20 56 21.2	-3.3
TURN				*i* S	Sb	20 56 29.0	-5.3
TURN	Turunc	0.74	97	*e*Pg	Pb	20 56 20.9	-3.6
DALY	Dalyan (Mu˜la	0.79	101	PG	Pn	20 56 26.5	0.0
DALY	Dalyan (Mu˜la	0.79	101	*e*Pg	Pn	20 56 26.5	0.0
ARG	Arkhangelos	0.83	155	PG	Pn	20 56 26.9	-0.2
ARG	Arkhangelos	0.83	155	*e*Pg	Pn	20 56 26.9	-0.2
AYDB	Zeytinkoy-Aydi	0.99	9	PG	Pb	20 56 28.5	-0.4
AYDB	Zeytinkoy-Aydi	0.99	9	*e*Pg	Pb	20 56 28.5	-0.4
TAVA	DENIZLI_Tavas	1.09	63	*i* P	Pg	20 56 32.6	+1.5
TAVA				*i* S	Sg	20 56 47.6	+2.2
TAVA	DENIZLI_Tavas	1.09	63	P	Pg	20 56 32.6	+1.5
TAVA				S	Sg	20 56 47.6	+2.2
FETY	Fethiye	1.17	106	PN	Pb	20 56 32.1	+0.3
FETY	Fethiye	1.17	106	*e*Pn	Pb	20 56 32.1	+0.3

CSEM 07 21:00:16.8, 27°.65N×18°.12W, h18km, ML3.8, Canary Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CORC	Orchilla, El H	0.06	341	P	Pg	21 00 20.3	+0.1
	374nm,0.1s,SNR=7.9						
CORC				S	Sg	21 00 22.3	-0.2
	9µm,0.2s,SNR=7.9						
CTAD	Las Tabladas,	0.10	19	P	Pg	21 00 20.4	-0.2
	SNR=18						
CTAD				S	Sg	21 00 23.2	0.0
	3µm,0.1s,SNR=7.9						
CMCL	Mercadel, El H	0.11	56	P	Pg	21 00 19.9	-0.9
	SNR=7.9						
CTAN	El Hierro	0.12	31	P	Pg	21 00 20.6	-0.2
	1µm,0.1s,SNR=18						
CTAN				S	Sg	21 00 23.4	-0.1
	3µm,0.1s,SNR=7.9						
CRST	La Restinga, E	0.12	93	P	Pg	21 00 20.6	-0.2
	2µm,0.1s,SNR=18						
CRST				S	Sg	21 00 23.4	-0.1
	13µm,0.2s,SNR=7.9						
CCUM	Cumbre, El Hie	0.13	41	P	Pg	21 00 20.7	-0.2
	574nm,0.1s,SNR=7.9						
CCUM				S	Sg	21 00 23.7	+0.1
	8µm,0.2s,SNR=7.9						
CHIE	El Hierro	0.16	62	P	Pg	21 00 21.2	-0.1
	63nm,0.1s,SNR=18						
CTIG	El Hierro	0.23	52	P	Pb	21 00 21.8	-0.2
	954nm,0.1s,SNR=18						
CTIG				S	Sg	21 00 25.8	-0.1
	3µm,0.2s,SNR=7.9						
PMAR	Madeira	5.16	11	*e*P	Pn	21 01 29.2	-4.1
PMAR				*e*S	Sn	21 02 23.5	-9.0
PMAR				A	A	21 02 24.8	
	13nm,0.2s						
PMOZ	Porto Moniz, M	5.22	9	*e*P	Pn	21 01 30.3	-3.7
PMPS	Porto Santo	5.61	16	*e*S	Sn	21 02 35.3	-7.8
PMPS				A	A	21 02 38.1	
	7.6nm,0.3s						

IDC 07 21:00:57.5±1.6, 10°.00N×92°.65E, h0km, mb3.5/4, mb1 3.7/5, mb1mx3.2/70, mbtmp3.4/5, ML3.3/1, Error ellipse: s-maj=51.8km s-min=26.3km az=62.0, Nicobar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	10.39	35	Pn	Pn	21 03 28.9	+1.0
	0.1nm,0.3s,baz=226,slow=15,SNR=3.1						
H08S3	Diego Garcia H	26.64	230	T	T	21 34 52.6	
	baz=47						
H08S2	Diego Garcia H	26.64	230	T	T	21 34 50.5	
	baz=47						
H08S1	Diego Carcia H	26.66	230	T	T	21 34 51.5	
	baz=47						
SONM	Songino Array	39.46	15	P	P	21 08 28.4	-1.2
	0.3nm,0.4s,baz=183,slow=10,SNR=2.5						
WRA	Warramunga Arr	50.69	126	P	P	21 09 59.0	-0.2

	0.4nm,0.5s,baz=300,slow=10.0,SNR=8.9						
ASAR	**Alice Springs**	**52.41**	**130**	P	P	21 10 12.2	+0.2
	0.4nm,0.4s,baz=305,slow=6.9,SNR=10						
GERES	**GERESS Array B**	**75.27**	**318**	P	P	21 12 43.0	+0.4
	0.3nm,0.5s,baz=92,slow=5.0,SNR=3.0						

MAN 07 21:08:11.3, 13°.61N×120°.07E, h1^{km}, mb4.8, ML3.7, MS3.6, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.22**	**54**	*e*P	Pg	21 08 14.2	-1.3
LUBP				*e*S	Sg	21 08 20.4	+2.0
TGY	**Tagaytay City**	**0.98**	**60**⇑	*e*P	Pb	21 08 31.2	0.0
SCZP	**Santa Cruz**	**2.16**	**356**	*e*P	Pn	21 08 48.8	+0.3
SCZP				*e*S	Sb	21 09 19.1	+0.4
PCPH	**Palayan**	**2.19**	**27**	*e*P	Pg	21 08 56.2	+2.9
PCPH				*e*S	Sn	21 09 16.9	+0.3
BALP	**Baler**	**2.58**	**34**	*e*P	Pb	21 08 57.3	-1.1
BALP				*e*S	Sn	21 09 24.1	-2.2
BOLP	**Bolinao**	**2.76**	**357**	*e*P	Pn	21 08 58.9	+2.1
BOLP				*e*S	Sb	21 09 37.5	+1.5

IDC 07 21:08:56.4±3.5, 6°.16S×150°.15E, h0^{km}, mb3.6/3, mb1 3.9/3, mb1mx3.4/47, mbtmp3.7/3, Error ellipse: s-maj=109.9km s-min=46.8km az=119.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**20.59**	**227**	P	P	21 13 37.2	0.0
	2.1nm,0.5s,baz=52,slow=11,SNR=39						
ASAR	**Alice Springs**	**23.39**	**220**	P	P	21 14 06.0	-1.1
	0.2nm,0.5s,baz=39,slow=10,SNR=4.3						
FITZ	**Fitzroy Crossi**	**26.70**	**241**	P	P	21 14 38.6	+1.1
	4.2nm,1.0s,baz=53,slow=10,SNR=5.2						
TORD	**Torodi Ar. Bea**	**148.16**	**285**	PKPbc	PKPbc	21 28 44.5	-0.9
	baz=53,slow=3.2						

IDC 07 21:38:39.8±1.7, 3°.45S×149°.23E, h0^{km}, mb3.8/5, mb1 4.1/5, mb1mx3.6/45, mbtmp3.9/5, MS3.9/12, Ms1 3.9/12, ms1mx3.6/32, Error ellipse: s-maj=81.8km s-min=24.1km az=121.0

ISCJB 07 21:38:41.0±1.7, 3°.5S±0°.3×149°.3E±0°.5, h20^{km}, mb3.7/5, MS3.9/11, Error ellipse: s-maj=78.4km s-min=19.9km az=29.5

GCMT 07 21:38:40.0±0.4, 3°.41S×149°.26E, h23^{km}±2^{km}, MW4.8/74, Moment Tensor Solution. s10,c11; s74,c99; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.21±.15; M$_{\theta\theta}$0.92±.11; M$_{\phi\phi}$-0.70±.12; M$_{r\theta}$0.29±.18; M$_{\theta\phi}$1.89±.09; M$_{\phi r}$-0.21±.16; Best double couple: M$_0$2.09200×10^{16} NP1:φ$_s$281.00000°, δ85.00000°, λ-10.00000°. NP2: φ$_s$12.00000°, δ80.00000°, λ-175.00000°. Principal axes: T 2.1690, Plg3.0000°, Azm327.0000°; N -0.1530, Plg79.0000°, Azm73.0000°; P -2.0160, Plg11.0000°, Azm236.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.

ISC 07 21:38:42.5±2.1, 3°.5S±0°.4×149°.3E±0°.6, h20^{km}, n16, σ0^{s}.77/6, mb3.8/5, MS4.0/11, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**12.10**	**120**	LR	LR	21 46 18.2	
	comp=Z,329nm,18.1s,baz=324,slow=38						
WRA	**Warramunga Arr**	**21.91**	**221**	P	**P**	**21 43 33.7**	**-1.0**
	5.0nm,0.8s,baz=43,slow=10,SNR=13						
DZM	**Mont Dzumac**	**24.85**	**139**	LR	LR	21 52 22.7	
	comp=Z,489nm,20.4s,baz=269,slow=33						
ASAR	**Alice Springs**	**24.97**	**215**	P	**P**	**21 44 05.2**	**+0.3**
	0.8nm,0.7s,baz=52,slow=8.0,SNR=7.0						
ASAR				LR	LR	21 54 50.3	
	comp=Z,372nm,18.9s,baz=47,slow=39						
BATI	**Baumata**	**26.30**	**254**	LR	LR	21 56 58.1	
	comp=Z,508nm,18.4s,baz=75,slow=42						
FITZ	**Fitzroy Crossi**	**27.34**	**236**	P	**P**	**21 44 26.9**	**+0.5**
	7.1nm,0.9s,baz=63,slow=9.0,SNR=10						
FITZ				LR	LR	21 56 02.2	
	comp=Z,424nm,19.0s,baz=50,slow=38						
STKA	**Stephens Creek**	**29.14**	**194**	LR	LR	21 55 41.0	
	comp=Z,174nm,20.1s,baz=22,slow=35						
JCJ	**Chichijima**	**31.18**	**348**	LR	LR	21 55 54.5	
	comp=Z,176nm,21.6s,baz=128,slow=33						
JHJ	**Hachijo jima 2**	**37.52**	**347**	LR	LR	22 00 25.3	
	comp=Z,68nm,20.1s,baz=254,slow=35						
NWAO	**Narrogin (SRO)**	**41.91**	**222**	LR	LR	22 04 27.5	
	comp=Z,335nm,20.0s,baz=284,slow=37						
ILAR	**Eielson Array**	**82.30**	**23**	P	**P**	**21 51 02.4**	**0.0**
	0.2nm,0.6s,baz=240,slow=7.0,SNR=2.9						
MAW	**Mawson**	**85.42**	**203**	LR	LR	22 26 39.5	
	comp=Z,56nm,21.6s,baz=58,slow=34						
BVAR	**Borovoye Array**	**86.12**	**324**	P	**P**	**21 51 21.6**	**-0.5**
	0.5nm,0.7s,baz=109,slow=6.6,SNR=3.8						
YBH	**Yreka Blue Hor**	**90.80**	**48**	LR	LR	22 24 26.4	
	comp=Z,81nm,21.8s,baz=322,slow=30						
NVAR	**Mina Array Bea**	**94.03**	**52**	LR	LR	22 26 56.7	
	comp=Z,49nm,20.0s,baz=96,slow=31						
TORD	**Torodi Ar. Bea**	**146.59**	**289**	PKPbc	**PKPab**	**21 58 25.2**	**+0.4**
	baz=26,slow=3.7						

IDC 07 21:49:43.7±0.8, 20°.31N×45°.51W, h0^{km}, mb3.7/10, mb1 3.9/10, mb1mx3.6/59, mbtmp3.7/10, MS3.0/2, Ms1 3.0/2, ms1mx2.7/58, Error ellipse: s-maj=24.7km s-min=21.4km az=127.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SJG	**San Juan**	**19.61**	**267**	LR	LR	22 00 18.3	
	comp=Z,47nm,22.0s,baz=119,slow=32						
PTGA	**Pitinga**	**25.25**	**216**	LR	LR	22 02 50.6	
	comp=Z,40nm,20.9s,baz=42,slow=31						
SIV	**San Ignacio**	**39.18**	**204**	P	P	21 57 14.2	+0.5
	0.3nm,0.3s,baz=331,slow=11,SNR=3.5						
H10N3	**ASCENSION HYDR**	**41.38**	**129**	T	T	22 41 39.0	
	baz=313,slow=75,SNR=30						
H10N2	**ASCENSION HYDR**	**41.38**	**129**	T	T	22 41 39.2	
	baz=313,slow=75,SNR=24						
H10N1	**ASCENSION HYDR**	**41.40**	**129**	T	T	22 41 40.5	
	baz=313,slow=75,SNR=32						
H10S3	**ASCENSION HYDR**	**42.03**	**131**	T	T	22 42 30.3	
	baz=314,slow=75,SNR=86						
H10S1	**ASCENSION HYDR**	**42.03**	**131**	T	T	22 42 27.9	
	baz=314,slow=75,SNR=76						
H10S2	**ASCENSION HYDR**	**42.05**	**131**	T	T	22 42 29.9	
	baz=314,slow=75,SNR=76						
TORD	**Torodi Ar. Bea**	**45.64**	**91**	P	P	21 58 06.6	+0.2
	1.1nm,1.0s,baz=258,slow=5.7						
CPUP	**Villa Florida**	**47.76**	**194**	P	P	21 58 21.7	-1.0
	1.9nm,0.7s,baz=16,slow=4.8,SNR=4.2						
HFS	**Hagfors**	**57.37**	**31**	P	P	21 59 32.3	-1.3
	1.8nm,0.8s,baz=227,slow=5.7,SNR=6.9						
PDAR	**Pinedale Array**	**57.60**	**308**	P	P	21 59 35.9	0.0
	0.2nm,0.6s,baz=104,slow=3.8,SNR=3.2						
YKA	**Yellowknife Ar**	**62.55**	**331**	P	P	22 00 09.9	+0.8
	0.5nm,0.7s,baz=82,slow=6.2,SNR=2.6						
MLR	**Muntele Rosu**	**62.92**	**49**	P	P	22 00 13.9	+1.8
	0.5nm,0.8s,baz=327,slow=17,SNR=6.6						
FINES	**FINESS Array B**	**63.58**	**31**	P	P	22 00 15.8	-0.1
	0.6nm,0.7s,baz=259,slow=14,SNR=2.1						
BRTR	**Keskin Array B**	**69.15**	**54**	P	P	22 00 51.1	-1.3
	0.3nm,0.6s,baz=282,slow=6.2,SNR=4.0						
ILAR	**Eielson Array**	**76.56**	**334**	P	P	22 01 35.2	-0.5
	0.4nm,0.8s,baz=62,slow=6.2,SNR=4.1						

ISCJB 07 22:08:34.6±0.5, 5°.93S±0°.04×128°.93E±0°.07, h264^{km}, mb3.5/4, Error ellipse: s-maj=9.5km s-min=5.6km az=4.1

DJA 07 22:08:35.6±0.5, 6°S±3°×12°9E±°, h264^{km}±7^{km}, M4.5/8, mb4.7/7, mB4.9/5, MLv4.6/8, Mw(mB)4.2/5

IDC 07 22:08:35.2±1.5, 5°.83S×128°.88E, h287^{km}±17^{km}, mb3.5/3, mb1 4.1/9, mb1mx3.4/52, mbtmp4.7/9, Error ellipse: s-maj=22.3km s-min=9.9km az=74.0

ISC 07 22:08:34.0±0.7, 5°.92S±0°.06×128°.94E±0°.08, h264^{km}, n17, σ1^{s}.53/23, mb3.5/4, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	**Ambon**	**2.34**	**341**	P	**Pn**	**22 09 21.7**	**+1.0**
AAI				S	**S**	**22 09 58.5**	**+0.7**
MSAI	**Masohi**	**2.55**	**360**	P	**Pn**	**22 09 24.0**	**+1.2**
MSAI				S	**S**	**22 10 02.3**	**+0.7**
SANI	**Sanana**	**4.84**	**322**	P	**Pn**	**22 09 50.0**	**+1.6**
LBMI	**Labuha**	**5.44**	**345**	P	**Pn**	**22 09 56.6**	**+1.0**
	426nm,0.6s,4µm1.3nm						
SIJI	**Sorong**	**5.52**	**25**	P	**Pn**	**22 09 56.8**	**+0.2**
	24nm,0.3s,baz=33,slow=22,SNR=67						
SIJI				S	S	22 10 52.6	-10
	15nm,0.3s,baz=307,slow=9.7,SNR=4.9						
BATI	**Baumata**	**6.74**	**230**	P	**Pn**	**22 10 14.0**	**+2.3**
	35nm,0.3s,baz=342,slow=20,SNR=34						
BATI				S	**S**	**22 11 28.2**	**-2.0**
	6.7nm,0.3s,baz=281,slow=21,SNR=9.7						
BATI	**Baumata**	**6.74**	**230**	P	**Pn**	**22 10 13.8**	**+2.1**
	63nm,0.5s,825nm0.3nm						
TNTI	**Ternate**	**6.83**	**347**	P	**Pn**	**22 10 15.6**	**+2.9**
EDFI	**Ende, Flores**	**7.72**	**248**	P	**Pn**	**22 10 25.4**	**+1.4**
	35nm,0.8s,0.1nm						
JAY	**Jayapura**	**12.21**	**74**	P	**P**	**22 11 21.8**	**-0.5**
	1.0nm,0.3s,baz=212,slow=6.9,SNR=6.7						
FITZ	**Fitzroy Crossi**	**12.53**	**195**	P	**Pn**	**22 11 24.0**	**+0.2**
	1.7nm,0.3s,baz=19,slow=10,SNR=29						
FITZ				S	**S**	**22 13 43.9**	**+0.6**
	2.1nm,0.3s,baz=264,slow=21,SNR=7.2						
WRA	**Warramunga Arr**	**14.90**	**160**	P	**Pn**	**22 11 53.9**	**+1.3**
	9.4nm,0.3s,baz=341,slow=11,SNR=348						
WRA				S	**S**	**22 14 36.6**	**+0.2**
	0.4nm,0.3s,baz=331,slow=21,SNR=3.5						
ASAR	**Alice Springs**	**18.28**	**165**	P	**Pn**	**22 12 31.1**	**-1.2**
	9.1nm,0.3s,baz=348,slow=12,SNR=566						
ASAR				S	**S**	**22 15 44.4**	**+0.4**
	0.1nm,0.3s,baz=348,slow=20,SNR=10						
STKA	**Stephens Creek**	**28.41**	**157**	P	**P**	**22 14 05.3**	**+0.9**
	3.5nm,0.7s,baz=331,slow=10,SNR=6.3						
CMAR	**Chiang Mai Arr**	**38.23**	**310**	P	**P**	**22 15 26.9**	**-2.3**
	0.5nm,0.4s,baz=128,slow=7.0,SNR=4.3						
MKAR	**Makanchi Array**	**66.75**	**327**	P	**P**	**22 18 55.5**	**-1.6**
	0.6nm,0.5s,baz=126,slow=7.4,SNR=15						
KURBB	**Kurchatov Arra**	**71.04**	**329**	P	**P**	**22 19 21.7**	**-1.6**
	0.3nm,0.5s,baz=132,slow=4.8,SNR=4.4						

IDC 07 22:46:38.8±2.9, 30°.71S×177°.61W, h0^{km}, mb3.6/2, mb1 3.9/3, mb1mx3.5/42, mbtmp3.7/3, ML3.1/1, Error ellipse: s-maj=67.3km s-min=27.5km az=109.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**1.48**	**349**	Pn	Pn	22 47 06.0	-0.6
	65nm,0.3s,baz=24,slow=20,SNR=4.4						
RAO				Sn	Sg	22 47 24.3	-2.0
	583nm,0.3s,baz=72,slow=20,SNR=14						
URZ	**Urewera**	**8.70**	**209**	Pn	Pn	22 48 44.4	-1.5
	0.2nm,0.3s,baz=285,slow=5.7,SNR=3.1						
URZ				Sn	Sn	22 50 23.1	-1.6
	0.8nm,0.3s,baz=54,slow=23,SNR=9.4						
ASAR	**Alice Springs**	**43.43**	**267**	P	P	22 54 43.9	+0.2
	0.3nm,0.5s,baz=103,slow=7.3,SNR=6.2						
WRA	**Warramunga Arr**	**44.45**	**272**	P	P	22 54 51.8	-0.1
	0.4nm,0.4s,baz=110,slow=8.0,SNR=21						
FINES	**FINESS Array B**	**145.55**	**340**	PKPbc	PKPdf	23 06 17.9	-0.3
	1.2nm,0.6s,baz=47,slow=3.5,SNR=13						

IDC 07 22:47:23.9±7.3, 14°.28N×92°.75W, h0^{km}, mb3.7/2, mb1 4.0/4, mb1mx3.6/45, mbtmp3.6/4, ML3.3/2, Error ellipse: s-maj=155.4km s-min=82.8km az=25.0

MEX 07 22:47:28.4±0.5, 14°.16N×93°.10W, h14^{km}±86^{km}, MD3.9

ISC 07 22:47:29.5±2.1, 14°.2N±0°.2×93°.04W±0°.08, h37^{km}, n8, σ1^{s}.07/12, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
THIG		**1.00**	**48**	*e*P	**Pn**	**22 47 45.9**	**-1.1**
THIG				*i* S	**Sn**	**22 47 59.1**	**-0.7**
PCIG		**1.47**	**353**	*e*P	**Pn**	**22 47 51.4**	**-2.0**
CCIG	**Comitan**	**2.21**	**23**	*e*P	**Pn**	**22 48 03.8**	**0.0**
CCIG				*i* S	**Sn**	**22 48 30.6**	**+0.6**
TGIG		**2.52**	**358**	*e*P	**Pn**	**22 48 08.0**	**0.0**
TGIG				*e*S	**Sn**	**22 48 38.3**	**+0.7**
CMIG	**Matias Romero**	**3.34**	**328**	Pn	**Pn**	**22 48 18.4**	**-0.8**
	3.1nm,0.3s,baz=151,slow=10,SNR=30						
CMIG				Sn	**Sn**	**22 48 56.8**	**-0.9**
	8.7nm,0.3s,baz=100,slow=15,SNR=6.0						
TXAR	**Lajitas Array**	**17.95**	**328**	P	**P**	**22 51 37.6**	**+0.9**
	0.0nm,0.3s,baz=157,slow=12,SNR=5.8						
NVAR	**Mina Array Bea**	**32.86**	**322**	P	**P**	**22 54 01.2**	**+1.0**
	0.4nm,0.5s,baz=138,slow=10,SNR=3.2						
YKA	**Yellowknife Ar**	**50.56**	**347**	P	**P**	**22 56 23.9**	**-0.3**
	1.1nm,0.7s,baz=150,slow=7.8,SNR=5.4						

BJI 07 22:49:15.5, 17°.49S×66°.57E, h10^{km}, mb4.8/43, mB5.1/35, Ms4.8/29, Ms7 4.5/30

IDC 07 22:49:18.0±0.4, 17°.01S×66°.87E, h0^{km}, mb4.5/30, mb1 4.6/31, mb1mx4.5/64, mbtmp4.5/31, ML4.2/1, MS4.4/52, Ms1 4.4/52, ms1mx4.3/65, Error ellipse: s-maj=12.6km s-min=11.2km az=60.0

ISCJB 07 22:49:19.0±0.2, 17°.08S±0°.04×66°.92E±0°.04, h13^{km}, mb4.8/135, MS4.5/64, Error ellipse: s-maj=5.5km s-min=4.8km az=19.8

MOS 07 22:49:19.3±1.0, 17°.03S×66°.93E, h17^{km}, mb5.1/36, Error ellipse: s-maj=10.4km s-min=6.0km az=101.1

NEIC 07 22:49:20.1±0.2, 17°.08S×66°.88E, h10^{km}, mb5.0/55, Error ellipse: s-maj=7.5km s-min=5.9km az=203.0

GCMT 07 22:49:20.1±0.1, 17°.02S×66°.78E, h14^{km}, MW5.3/111, Moment Tensor Solution. s77,c111; s111,c203; Duration: 1^{s}.1 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.09±.01; M$_{\theta\theta}$-0.90±.02; M$_{\phi\phi}$0.98±.02; M$_{r\theta}$-0.20±.03; M$_{\theta\phi}$0.37±.01; M$_{\phi r}$-0.20±.03; Best double couple: M$_0$1.05000×10^{17} NP1:φ$_s$236.00000°, δ89.00000°, λ15.00000°. NP2:φ$_s$146.00000°, δ75.00000°, λ179.00000°. Principal axes: T 1.1020, Plg11.0000°, Azm102.0000°; N -0.1020, Plg75.0000°, Azm238.0000°; P -0.9990, Plg10.0000°, Azm10.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.

ISC 07 22:49:20.3±0.3, 17°.16S±0°.05×66°.77E±0°.05, h13^{km}, n542, σ1^{s}.50/540, mb4.9/135, MS4.4/65, 30C-20D, Mauritius-Reunion region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRIV	**Mauritius Mete**	**9.32**	**249**	*e*Pn	**Pn**	**22 51 31.7**	**-2.9**
H08S1	**Diego Carcia H**	**10.98**	**31**	T	T	23 02 55.6	
	baz=209,slow=76,SNR=1437						
H08S2	**Diego Garcia H**	**10.99**	**31**	T	T	23 03 01.3	
	baz=209,slow=76,SNR=1423						
H08S3	**Diego Garcia H**	**11.00**	**31**	T	T	23 02 57.2	
	baz=209,slow=76						
H08N3	**Diego Garcia H**	**11.52**	**21**	T	T	23 03 36.2	
	baz=199,slow=76,SNR=1549						
H08N1	**Diego Carcia H**	**11.53**	**22**	T	T	23 03 38.4	
	baz=199,slow=76,SNR=1713						
H08N2	**Diego Garcia H**	**11.54**	**21**	T	T	23 03 37.8	
	baz=199,slow=76,SNR=2275						
ABPO	**Ambohimpanom**	**18.67**	**261**	*e*P	**Pn**	**22 53 41.3**	**+2.5**
	56nm,1.3s						
ABPO	**Ambohimpanom**	**18.67**	**261**	*e*P	**Pn**	**22 53 41.3**	**+2.5**
ABPO				pmax	pmax		
	comp=Z,56nm,1.3s						
OPO	**Ambohidratompo**	**18.69**	**263**	P	**Pn**	**22 53 40.4**	**+1.3**
	comp=Z,0.8nm,0.3s,baz=75,slow=13,SNR=17						
OPO				S	**Sn**	**22 57 01.2**	**-7.1**
	comp=Z,0.3nm,0.3s,baz=92,slow=14,SNR=2.4						
OPO				LR	LR	22 58 55.0	
	comp=Z,3µm,22.0s,baz=76,slow=31						
HMDM	**Hanimaadhoo**	**24.61**	**15**	*e*P	**P**	**22 54 40.8**	**+0.2**
	comp=Z,532nm,1.6s						
PALK	**Pallekele**	**27.91**	**31**	LR	LR	23 03 44.2	
	comp=Z,508nm,19.0s,baz=290,slow=31						
KMBO	**Kilima Mbogo**	**33.12**	**296**	LR	LR	23 06 45.7	
	comp=Z,2µm,20.5s,baz=116,slow=32						
GSI	**Gunungsitoli**	**35.48**	**62**	*e*P	**P**	**22 56 16.3**	**-0.6**
	comp=Z,56nm,1.3s						
ATD	**Arta Tunnel**	**37.04**	**319**	LR	LR	23 10 04.2	
	comp=Z,887nm,19.1s,baz=134,slow=34						
LSZ	**Lusaka**	**37.06**	**267**	P	**P**	**22 56 31.1**	**+0.5**
	comp=Z,5.3nm,0.8s,baz=96,slow=7.9,SNR=6.6						
LSZ	**Lusaka**	**37.06**	**267**	*e*P	**P**	**22 56 33.6**	**+3.0**
	comp=Z,70nm,1.9s						
PSI	**Prapat**	**37.42**	**61**	LR	LR	23 08 35.9	
	comp=Z,1µm,20.9s,baz=266,slow=31						
PSI	**Prapat**	**37.42**	**61**	*e*P	**P**	**22 56 32.1**	**-1.6**
	comp=Z,22nm,1.2s						
PSI	**Prapat**	**37.42**	**61**	*e*P	**P**	**22 56 32.1**	**-1.6**
PSI				pmax	pmax		
	comp=Z,22nm,1.2s						
BOSA	**Boshof**	**39.73**	**246**	P	**P**	**22 56 52.7**	**-0.2**
	comp=Z,11nm,1.1s,baz=113,slow=3.4,SNR=4.9						
BOSA				LR	LR	23 09 51.8	
	comp=Z,292nm,21.8s,baz=84,slow=31						
WSAR	**Wadi Sarin**	**40.94**	**349**	P	**P**	**22 56 59.6**	**-3.1**
	comp=Z,6.1nm,0.7s,baz=201,slow=8.6,SNR=4.6						
WSAR				LR	LR	23 10 31.1	
	comp=Z,598nm,20.4s,baz=186,slow=31						
LEM	**Lembang**	**41.17**	**81**	LR	LR	23 10 27.3	
	comp=Z,1µm,21.8s,baz=224,slow=31						
SMRI	**Semarang**	**43.77**	**82**	*e*P	**P**	**22 57 25.6**	**-0.4**
	comp=Z,165nm,1.3s						
RAYN	**Ar Rayn**	**45.47**	**332**	*e*P	**P**	**22 57 38.7**	**-0.7**
	comp=Z,6.6nm,1.0s						
RAYN	**Ar Rayn**	**45.47**	**332**	*e*P	**P**	**22 57 38.7**	**-0.7**
RAYN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
H01W3	**Cape Leeuwin H**	**45.63**	**122**	T	T	23 46 18.6	
	baz=280,slow=75,SNR=1940						
H01W2	**Cape Leeuwin H**	**45.63**	**122**	T	T	23 46 18.8	
	baz=280,slow=75,SNR=2027						
H01W1	**Cape Leeuwin H**	**45.64**	**122**	T	T	23 46 35.4	
	baz=280,slow=75,SNR=2224						
UMPA	**Umpang Tak**	**45.83**	**45**	P	**P**	**22 57 43.2**	**+0.8**
	comp=Z,6.0nm,1.3s,comp=Z,520nm						
BRDH	**Bariadhala**	**46.48**	**32**	LR	LR	23 15 03.6	
	comp=Z,266nm,21.9s,baz=237,slow=33						
TSUM	**Tsumeb**	**46.65**	**260**	*e*P	**P**	**22 57 51.5**	**+2.4**
	comp=Z,29nm,1.6s						
JAGI	**Jajag, Banyuwa**	**46.90**	**86**	*e*P	**P**	**22 57 49.6**	**-1.3**
	comp=Z,47nm,1.1s						
CM01	**Chiang Mai Arr**	**47.47**	**43**	*e*P	**P**	**22 57 55.1**	**-0.1**
CMAR	**Chiang Mai Arr**	**47.48**	**43**	P	**P**	**22 57 55.3**	**0.0**
	comp=Z,5.0nm,0.8s,baz=234,slow=8.0,SNR=25						
PBKT	**Sadao Pong**	**47.53**	**47**	P	**P**	**22 57 56.1**	**+0.4**
	comp=Z,15nm,1.1s,comp=Z,1µm						
PHIT	**Phitsanulok**	**47.58**	**46**	P	**P**	**22 57 56.7**	**+0.7**
	comp=Z,24nm,0.9s						
PYUN	**Piuthan**	**47.66**	**20**	*e*P	**P**	**22 57 57.0**	**+0.2**
	comp=Z,34nm,1.0s						
CHTO	**Chiang Mai**	**47.74**	**43**	*e*P	**P**	**22 57 57.1**	**-0.2**
	comp=Z,11nm,1.1s						
CHTO	**Chiang Mai**	**47.74**	**43**	*e*P	**P**	**22 57 57.1**	**-0.2**
CHTO				pmax	pmax		
	comp=Z,11nm,1.1s						
CHTO	**Chiang Mai**	**47.74**	**43**	P	**P**	**22 57 58.1**	**+0.8**
	comp=Z,49nm,2.1s,comp=Z,1µm						
CMMT	**Chiang Mai**	**47.74**	**43**	P	**P**	**22 57 58.0**	**+0.6**
	comp=Z,11nm,2.1s,comp=Z,646nm						
RAMN	**Ramite**	**47.89**	**24**	*e*P	**P**	**22 57 58.5**	**-0.1**
	comp=Z,38nm,1.0s						
NWAO	**Narrogin (SRO)**	**47.89**	**119**	LR	LR	23 13 39.3	
	comp=Z,914nm,20.2s,baz=162,slow=30						
DMN	**Daman**	**47.93**	**22**	*e*P	**P**	**22 57 58.5**	**-0.4**
	comp=Z,34nm,1.2s						
PKIN	**Phulchoki**	**48.00**	**22**	*e*P	**P**	**22 57 58.4**	**-1.1**
	comp=Z,41nm,1.6s						
GKN	**Gorkha**	**48.12**	**21**	*e*P	**P**	**22 57 59.7**	**-0.6**
	comp=Z,44nm,1.2s						
KKN	**Kakani**	**48.15**	**22**	*e*P	**P**	**22 58 00.0**	**-0.6**
	comp=Z,18nm,0.9s						
JIRN	**Jiri**	**48.37**	**23**	*e*P	**P**	**22 58 01.5**	**-1.0**
	comp=Z,48nm,1.0s						
CMAI	**Chiengmai2**	**48.62**	**42**	P	**P**	**22 58 05.4**	**+1.1**
	comp=Z,1.3nm,0.9s,comp=Z,3µm						
SHL	**Shillong**	**49.01**	**31**	*e*x	**P**	**22 58 08.5**	**+1.3**
SKNT	**Sakolnakorn**	**49.94**	**49**	P	**P**	**22 58 14.4**	**+0.1**
	comp=Z,3.3nm,1.5s,comp=Z,1µm						
MBWA	**Marble Bar**	**50.00**	**103**	*e*P	**P**	**22 58 14.7**	**-0.1**
	comp=Z,124nm,1.0s						
NONG	**Nongkai**	**50.07**	**47**	P	**P**	**22 58 14.9**	**-0.3**
	comp=Z,0.4nm,1.0s						
MAW	**Mawson**	**50.48**	**182**	P	**P**	**22 58 18.6**	**+1.0**
	comp=Z,12nm,0.9s,baz=16,slow=9.0,SNR=16						
MAW				LR	LR	23 14 18.8	
	comp=Z,888nm,21.7s,baz=40,slow=30						
MAW	**Mawson**	**50.48**	**182**	*e*P	**P**	**22 58 19.5**	**+1.9**
	comp=Z,2.5nm,0.9s						
MAW	**Mawson**	**50.48**	**182**	*e*P	**P**	**22 58 19.5**	**+1.9**
MAW				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NIL	**Nilore**	**50.91**	**7**	*e*P	**P**	**22 58 21.4**	**+0.1**
	comp=Z,15nm,0.8s						
NIL	**Nilore**	**50.91**	**7**	*e*P	**P**	**22 58 21.4**	**+0.1**
NIL				pmax	pmax		
	comp=Z,15nm,0.8s						
KBL	**Kabul**	**51.46**	**2**	*e*P	**P**	**22 58 25.4**	**-0.3**
	comp=Z,15nm,1.1s						
KBL	**Kabul**	**51.46**	**2**	*e*P	**P**	**22 58 25.4**	**-0.3**
KBL				pmax	pmax		
	comp=Z,15nm,1.1s						
SYO	**Syowa Base**	**54.55**	**192**⇑	*e*P	**P**	**22 58 48.8**	**+1.1**
SYO	**Syowa Base**	**54.55**	**192**⇓	*e*sP	sP	22 58 56.8	+3.3
MMRI	**Maumere**	**54.57**	**88**	*e*P	**P**	**22 58 48.7**	**-0.2**
	comp=Z,121nm,0.9s						
KMI	**Kunming**	**54.72**	**41**	P	**P**	**22 58 51.8**	**+1.9**
KMI				S	**S**	**23 06 31.4**	**+1.0**
KMI				pmax	pmax		
	comp=Z,120nm,4.9s						
KMI				LR	LR		
	comp=Z,230nm,15.2s						
KMI				LR	LR		
	comp=Z,360nm,21.8s						
KMI				LR	LR		
	comp=Z,330nm,24.2s						
GEYT	**Alibeck**	**55.40**	**352**	P	**P**	**22 58 57.0**	**+2.6**
	comp=Z,1.6nm,0.9s,baz=230,slow=9.2,SNR=4.9						
GEYT				LR	LR	23 19 50.8	
	comp=Z,231nm,21.4s,baz=70,slow=33						
GYA0B	**ALIBECK ARRAY**	**55.40**	**352**	*e*P	**P**	**22 58 54.9**	**+0.6**
	comp=Z,5.2nm,0.9s						
BATI	**Baumata**	**55.55**	**91**	P	**P**	**22 58 56.0**	**0.0**
	comp=Z,62nm,0.8s,baz=117,slow=2.3,SNR=10						
BATI				LR	LR	23 18 44.7	
	comp=Z,574nm,21.7s,baz=250,slow=32						
QIZ	**Qiongzhong**	**55.55**	**52**	P	**P**	**22 58 56.0**	**+0.2**
QIZ				pP	**pP**	**22 59 00.2**	**+0.3**
QIZ				PP	**PP**	**23 00 58.0**	**-2.1**
QIZ				S	**S**	**23 06 44.0**	**+2.7**
QIZ				SS	**SS**	**23 10 27.9**	**+1.2**
QIZ				LR	LR		
	comp=Z,400nm,10.8s						
QIZ				LR	LR		
	comp=Z,340nm,10.4s						
QIZ				LR	LR		
	comp=Z,230nm,15.2s						
FITZ	**Fitzroy Crossi**	**55.90**	**101**	P	**P**	**22 58 58.4**	**0.0**
	comp=Z,28nm,0.8s,baz=253,slow=7.5,SNR=42						
FITZ				LR	LR	23 19 20.5	
	comp=Z,1µm,21.0s,baz=268,slow=32						
FITZ	**Fitzroy Crossi**	**55.90**	**101**	*e*P	**P**	**22 58 58.0**	**-0.3**
	comp=Z,40nm,0.9s						
SOEI	**Soe**	**56.24**	**90**	*e*P	**P**	**22 59 01.5**	**+0.5**
	comp=Z,116nm,1.0s						
CASY	**Casey**	**56.80**	**160**	*e*P	**P**	**22 59 05.7**	**+1.7**
	comp=Z,11nm,1.0s						
FORT	**Forrest**	**57.00**	**116**	*e*P	**P**	**22 59 06.2**	**+0.2**
	comp=Z,69nm,0.9s						
KSH	**Kashi**	**57.04**	**8**	*e*P	**P**	**22 59 02.0**	**-4.1**
KSH				sP	pP	22 59 09.3	-1.0
KSH				*e*PcP	**PcP**	**22 59 58.1**	**-3.0**
KSH				PP	**PP**	**23 01 10.4**	**-2.7**
KSH				S	S	23 06 48.2	-12
KSH				pmax	pmax		
	comp=Z,39nm,1.4s						
KSH				pmax	pmax		
	comp=Z,120nm,4.5s						
KSH				LR	LR		
	comp=Z,250nm,15.5s						
KSH				LR	LR		
	comp=Z,370nm,13.9s						
KSH				LR	LR		
	comp=Z,260nm,13.3s						
LUWI	**Luwuk**	**57.33**	**80**	*e*P	**P**	**22 59 08.3**	**-0.3**
	comp=Z,160nm,1.3s						
GYA	**Guiyang**	**58.16**	**43**⇑	*i*P	**P**	**22 59 13.4**	**-0.9**
GYA				PP	**PP**	**23 01 28.3**	**+5.0**
GYA				S	**S**	**23 07 16.8**	**+1.0**
GYA				SS	**SS**	**23 11 09.2**	**+1.4**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,5.6s						

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GYA                                 LR      LR
       comp=Z,470nm,18.0s
GYA                                 LR      LR
       comp=Z,460nm,18.4s
GYA                                 LR      LR
       comp=Z,440nm,18.2s
MMAI   Mount Meron Ar   58.21 329   P       P        22 59 17.1 +2.7
       comp=Z,1.1nm,0.6s,baz=231,slow=37,SNR=2.7
MMAI                                LR      LR       23 21 19.4
       comp=Z,234nm,19.7s,baz=175,slow=33
CD2    Chengdu          59.58  37  eP       P        22 59 24.0  0.0
CD2                                 pmax    pmax
       comp=Z,10.0nm,0.5s
CD2                                 pmax    pmax
       comp=Z,120nm,5.2s
AAK    Ala-Archa        59.93   7  eP       P        22 59 26.5 +0.2
       comp=Z,9.9nm,1.0s
AAK    Ala-Archa        59.93   7  eP       P        22 59 26.5 +0.2
AAK                                 pmax    pmax
       comp=Z,10.0nm,1.0s
KK31   Karatay Array    60.07   3  eP       P        22 59 27.8 +0.7
KK31   Karatay Array    60.07   3  eP       P        22 59 27.8 +0.7
KKAR   Karatay Array    60.07   3  eP       P        22 59 27.8 +0.7
KKAR   Karatay Array    60.07   3  eP       P        22 59 27.8 +0.7
GNI    Garni            60.60 341   P       P        22 59 31.7 +0.7
       comp=Z,11nm,0.9s,baz=161,slow=8.9,SNR=5.9
GNI                                 LR      LR       23 24 29.1
       comp=Z,201nm,19.8s,baz=160,slow=35
AKT    Akhty            60.95 344  eP       P        22 59 31.9 -1.4
AKT                                e                 23 00 16.7
AKT                                e                 23 01 47.4
AKT                                ePPP     PPP      23 03 14.3
AKT                                eS       S        23 07 52.5 +1.2
AKT                                e                 23 09 22.7
AKT                                 pmax    pmax
       comp=Z,22nm,1.0s
TGY    Tagaytay City    61.83  63   LR      LR       23 22 31.2
       comp=Z,347nm,21.9s,baz=256,slow=32
MTN    Manton Dam       62.08  96  eP       P        22 59 41.4 +0.1
       comp=Z,42nm,1.0s
NVL    N’lazarevskaya   62.69 198  eP       P        22 59 46.0 +1.5
NVL                                 pmax    pmax
       comp=Z,19nm,0.9s
ASAR   Alice Springs    62.76 108   P       P        22 59 44.6 -1.2
       comp=Z,31nm,0.8s,baz=267,slow=6.4,SNR=221
ASAR                                LR      LR       23 24 08.4
       comp=Z,2µm,19.0s,baz=272,slow=33
AS31   Alice Springs    62.76 108  eP       P        22 59 44.8 -1.1
       comp=Z,9.6nm,0.8s
AS01   Alice Springs    62.80 108  eP       P        22 59 44.8 -1.3
DAV    Davao City (W)   62.90  73   LR      LR       23 24 59.9
       comp=Z,554nm,20.9s,baz=234,slow=34
GROC   Groznyy          63.09 343  eP       P        22 59 46.6 -0.8
GROC                               e                 23 02 08.2
GROC                               eS       S        23 08 14.6 -3.3
GROC                                pmax    pmax
       comp=Z,40nm,1.5s
LZH    Lanzhou          63.52  33  eP       P        22 59 54.7 +4.0
LZH                                 pP      sP       22 59 58.0 +1.5
LZH                                 sP      pP       22 59 59.4 +4.5
LZH                                eS       S        23 08 23.1 -0.9
LZH                                 sS      sS       23 08 36.1 +5.1
LZH                                 SS      SS       23 12 39.8 +8.1
LZH                                 pmax    pmax
       comp=Z,23nm,1.0s
LZH                                 pmax    pmax
       comp=Z,160nm,4.0s
LZH                                 LR      LR
       comp=Z,300nm,16.8s
LZH                                 LR      LR
       comp=Z,380nm,17.9s
LZH                                 LR      LR
       comp=Z,440nm,18.4s
WMQ    Urumqi           63.64  17   P       P        22 59 50.4 -0.8
WMQ                                 sP      sP       23 00 00.0 +3.0
WMQ                                 S       S        23 08 25.4 +0.4
WMQ                                 sS      sS       23 08 35.0 +3.0
WMQ                                 SS      SS       23 12 38.0 +4.9
WMQ                                 pmax    pmax
       comp=Z,21nm,0.9s
WMQ                                 pmax    pmax
       comp=Z,160nm,3.9s
WMQ                                 LR      LR
       comp=Z,690nm,25.7s
WMQ                                 LR      LR
       comp=Z,1µm,32.1s
WMQ                                 LR      LR
       comp=Z,590nm,28.9s
BBOO   Buckleboo        63.71 119  eP       P        22 59 52.1 +0.2
       comp=Z,124nm,1.6s
WRA    Warramunga Arr   63.73 104   P       P        22 59 51.4 -0.9
       comp=Z,58nm,0.9s,baz=266,slow=6.2,SNR=213
WRA                                 LR      LR       23 23 48.3
       comp=Z,492nm,21.6s,baz=240,slow=32
WB2    Warramunga Arr   63.74 104  eP       P        22 59 52.0 -0.4
WRAB   Tennant Creek    63.74 104  eP       P        22 59 52.0 -0.3
       comp=Z,82nm,0.8s
WRAB   Tennant Creek    63.74 104d iP       P        22 59 51.9 -0.5
WRAB                                pmax    pmax
       comp=Z,106nm,1.0s
NEY    Neytrino         64.05 341⇓eP       P        22 59 54.9 +0.9
NEY                                 pmax    pmax
       comp=Z,2.0nm,1.8s
GTA    Gaotai           64.19  28  eP       P        22 59 55.0  0.0
GTA                                 pP      pP       22 59 59.4 +0.2
GTA                                 sP      sP       23 00 02.2 +1.4
GTA                                 pmax    pmax
       comp=Z,7.0nm,1.2s
KBZ    Khabaz           64.42 341   LR      LR       23 28 25.8
       comp=Z,232nm,18.9s,baz=165,slow=36
BR131  Keskin Array S   64.49 332  eP       P        22 59 58.4 +1.5
BRTR   Keskin Array B   64.49 332   P       P        22 59 56.4 -0.6
       comp=Z,1.7nm,0.9s,baz=152,slow=11,SNR=9.5
BRTR                                LR      LR       23 26 11.3
       comp=Z,237nm,20.1s,baz=136,slow=34
KIV    Kislovodsk       64.69 341  eP       P        22 59 58.7 +0.6
       comp=Z,13nm,1.2s
KIV    Kislovodsk       64.69 341  eP       P        22 59 58.8 +0.7
KIV                                eS       S        23 08 39.6 +1.5
KIV                                eSS      SS       23 12 51.2 +1.6
KIV                                 pmax    pmax
       comp=Z,11nm,1.1s
KIV                                 MLR     MLR
       comp=Z,206nm,17.0s
XAN    Xi’an            64.84  38   P       P        22 59 57.9 -1.3
XAN                                 S       S        23 08 35.8 -4.4
XAN                                 pmax    pmax
       comp=Z,9.0nm,1.0s
XAN                                 LR      LR
       comp=Z,180nm,25.5s
XAN                                 LR      LR
       comp=Z,170nm,20.6s
XAN                                 LR      LR
       comp=Z,120nm,21.7s
MAKZ   Makanchi         65.13  11  eP       P        23 00 01.8 +1.0
       comp=Z,5.5nm,1.0s
MK01   Makanchi Array   65.16  12  eP       P        22 59 58.8 -2.2
MK31   Makanchi Array   65.18  12  eP       P        22 59 59.6 -1.5
MK31   Makanchi Array   65.18  12  eP       P        22 59 59.6 -1.5
MKAR   Makanchi Array   65.18  12   P       P        22 59 59.4 -1.7
       comp=Z,1.7nm,0.7s,baz=219,slow=8.8,SNR=13
MKAR                                LR      LR       23 27 51.7
       comp=Z,273nm,20.4s,baz=198,slow=36
MKAR   Makanchi Array   65.18  12  eP       P        22 59 59.6 -1.5
       comp=Z,86nm,1.8s
MKAR   Makanchi Array   65.18  12  eP       P        22 59 59.6 -1.5
MKAR                                pmax    pmax
       comp=Z,87nm,1.8s
SOC    Sochi            65.34 339  eP       P        23 00 01.4 -0.8
SOC                                e*PP     pP       23 00 04.4 -2.0
SOC                                eS       S        23 08 43.2 -2.7
SOC                                eSS      SS       23 13 00.2 +0.7
SOC                                 pmax    pmax
       comp=Z,19nm,1.2s
SOC                                 MLR     MLR
       comp=Z,156nm,15.0s
WHN    Wuhan            65.92  44   P       P        23 00 06.0 -0.2
WHN                                 S       S        23 08 51.5 -1.9
WHN                                 LR      LR
       comp=Z,550nm,23.5s
ABKAR  Akbulak array    66.40 355  eP       P        23 00 07.1 -1.8
SNAA   Sanae            67.44 199   P       P        23 00 17.0 +1.6
SNAA   Sanae            67.44 199   P       P        23 00 16.4 +0.9
       comp=Z,6.2nm,1.0s,baz=73,slow=9.2,SNR=21
SNAA                                LR      LR       23 23 01.9
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       comp=Z,492nm,21.8s,baz=85,slow=30
SNAA   Sanae            67.44 199  eP       P        23 00 17.2 +1.7
       comp=Z,33nm,1.6s
SNAA   Sanae            67.44 199⇑eP       P        23 00 16.6 +1.1
SNAA                                pmax    pmax
       comp=Z,554nm,1.1s
AKTO   Aktyubinsk       67.74 354   P       P        23 00 15.6 -1.9
       comp=Z,3.5nm,0.9s,baz=176,slow=7.8,SNR=8.9
AKTO                                LR      LR       23 29 05.7
       comp=Z,273nm,19.8s,baz=173,slow=35
KURBB  Kurchatov Arra   68.28   8   P       P        23 00 19.9 -0.9
       comp=Z,7.6nm,0.9s,baz=204,slow=6.5,SNR=9.3
KURK   Kurchatov        68.38   8  eP       P        23 00 20.5 -0.9
       comp=Z,15nm,1.0s
KURK   Kurchatov        68.38   8⇑eP       P        23 00 20.3 -1.1
KURK                                pmax    pmax
       comp=Z,29nm,1.7s
STKA   Stephens Creek   68.47 118   P       P        23 00 21.2 -1.3
       comp=Z,9.3nm,0.8s,baz=278,slow=6.9,SNR=15
STKA                                LR      LR       23 26 57.5
       comp=Z,574nm,19.3s,baz=247,slow=33
STKA   Stephens Creek   68.47 118  eP       P        23 00 22.6 +0.1
       comp=Z,13nm,1.7s
STKA   Stephens Creek   68.47 118  eP       P        23 00 22.7 +0.1
STKA                                pmax    pmax
       comp=Z,13nm,1.7s
VNA1   Neumayer--Stat   68.97 200   P       P        23 00 27.7 +2.7
DGZ    Jazzator, Alta   69.04  14⇓eP       P        23 00 25.3 -0.5
DGZ                                 pmax    pmax
       comp=Z,1.0nm,1.3s
VNA3   Neumayer Olymp   69.51 200   P       P        23 00 30.1 +1.7
AGG    Agios Georgios   69.65 324  eP       P        23 00 28.8 -0.8
       comp=Z,54nm,1.3s
AGG    Agios Georgios   69.65 324  eP       P        23 00 28.8 -0.8
AGG                                 pmax    pmax
       comp=Z,55nm,1.3s
NJ2    Nanjing          69.88  46  eP       P        23 00 32.0 +0.9
NJ2                                 pmax    pmax
       comp=Z,10.0nm,0.5s
BVAR   Borovoye Array   69.97   2   P       P        23 00 29.6 -1.6
       comp=Z,4.0nm,0.9s,baz=168,slow=7.4,SNR=16
BVAR                                LR      LR       23 30 00.5
       comp=Z,144nm,20.3s,baz=184,slow=35
BRVK   Borovoye         70.00   2⇓eP       P        23 00 29.5 -1.9
BRVK                                pmax    pmax
       comp=Z,14nm,1.7s
BTO    Baotou           70.12  34  eP       P        23 00 36.9 +4.3
LIT    Litokhoron       70.32 325  eP       P        23 00 34.1 +0.5
       comp=Z,29nm,1.4s
LIT    Litokhoron       70.32 325  eP       P        23 00 34.2 +0.5
LIT                                 pmax    pmax
       comp=Z,29nm,1.4s
TIRR   Tirgusor         70.60 332⇓iP       P        23 00 36.8 +1.5
TIRR   Tirgusor         70.60 332  eP       P        23 00 36.0 +0.8
       comp=Z,10nm,1.1s
TIRR   Tirgusor         70.60 332 ⇓P       P        23 00 36.8 +1.5
TOA0   Torodi Ar. Sit   70.96 291  eP       P        23 00 39.5 +1.4
TORD   Torodi Ar. Bea   70.96 291   P       P        23 00 38.1 -0.1
       comp=Z,2.4nm,1.1s,baz=144,slow=5.2
TORD                                LR      LR       23 30 02.1
       comp=Z,546nm,19.1s,baz=90,slow=34
HHC    Hu-ho-hao-te     71.12  34  eP       P        23 00 39.1 +0.4
HHC                                 S       S        23 09 56.9 +1.7
HHC                                 SKS     SKSac    23 10 36.0 -5.3
HHC                                 SS      SS       23 14 30.4 +1.1
HHC                                 pmax    pmax
       comp=Z,17nm,1.1s
HHC                                 pmax    pmax
       comp=Z,170nm,5.4s
HHC                                 LR      LR
       comp=Z,200nm,15.1s
HHC                                 LR      LR
       comp=Z,180nm,17.2s
HHC                                 LR      LR
       comp=Z,110nm,14.5s
CFR    Carcaliu         71.29 332⇑iP       P        23 00 38.5 -0.9
CFR    Carcaliu         71.29 332 ⇑P       P        23 00 38.5 -0.9
FNA    Florina          71.40 325  eP       P        23 00 40.8 +0.5
       comp=Z,14nm,1.4s
FNA    Florina          71.40 325  eP       P        23 00 40.8 +0.5
FNA                                 pmax    pmax
       comp=Z,14nm,1.4s
VTS    Vitosha          71.71 328⇑iP       P        23 00 43.3 +1.0
VTS    Vitosha          71.71 328  eP       P        23 00 42.5 +0.2
       comp=Z,15nm,1.3s
VTS    Vitosha          71.71 328 ⇑P       P        23 00 43.3 +1.0
VSR    Storozhevoye     72.25 342  eP       P        23 00 45.1  0.0
VSR                                 pmax    pmax
       comp=Z,20nm,1.8s
VRI    Vrincioaia       72.45 332⇓iP       P        23 00 46.6 +0.2
VRI    Vrincioaia       72.45 332 ⇓P       P        23 00 46.6 +0.2
PLOR   Plostina         72.47 332⇓iP       P        23 00 46.1 -0.5
PLOR   Plostina         72.47 332 ⇓P       P        23 00 46.1 -0.5
ZAA0   Zalesovo Array   72.50  11  eP       P        23 00 46.9 +0.4
ZALV   Zalesovo Beam    72.50  11   P       P        23 00 44.9 -1.6
       comp=Z,6.4nm,0.6s,baz=197,slow=7.1,SNR=11
ZALV                                LR      LR       23 31 01.3
       comp=Z,288nm,21.8s,baz=248,slow=35
ZALV   Zalesovo Beam    72.50  11  eP       P        23 00 44.8 -1.7
ZALV   Zalesovo Beam    72.50  11  eP       P        23 00 44.8 -1.7
MLR    Muntele Rosu     72.52 331   P       P        23 00 48.0 +1.0
       comp=Z,2.0nm,1.2s,baz=139,slow=1.9,SNR=6.5
MLR    Muntele Rosu     72.52 331⇑iP       P        23 00 48.2 +1.2
MLR    Muntele Rosu     72.52 331  eP       P        23 00 48.4 +1.4
       comp=Z,31nm,1.6s
MLR    Muntele Rosu     72.52 331 ⇑P       P        23 00 48.2 +1.2
VOIR                    72.89 331⇑iP       P        23 00 48.6 -0.6
VOIR                    72.89 331 ⇑P       P        23 00 48.6 -0.6
QSPA   South Pole Qui   72.93 180   P       P        23 00 50.4 +1.1
       comp=Z,35nm,1.0s,baz=269,slow=4.4,SNR=38
QSPA                                LR      LR       23 27 56.3
       comp=Z,390nm,21.6s,baz=255,slow=32
QSPA   South Pole Qui   72.93 180  eP       P        23 00 50.9 +1.6
       comp=Z,193nm,1.1s
TIP    Timpagrande      72.97 321  eP       P        23 00 50.8 +1.1
       comp=Z,18nm,1.6s
ARR    Arges            73.04 330⇑iP       P        23 00 49.4 -0.6
NVS    Novosibirsk      73.08  10  eP       P        23 00 48.6 -1.3
NVS                                 pmax    pmax
       comp=Z,30nm,2.3s
NVS                                 pmax    pmax
       comp=N,13nm,1.5s
BJI    Beijing          73.16  38   P       P        23 00 51.5 +0.7
BJI                                 pmax    pmax
       comp=N,7.0nm,0.5s
SORM   Soroca           73.50 334⇑iP       P        23 00 44.4 -8.2
SORM   Soroca           73.50 334 ⇑P       P        23 00 44.4 -8.2
LOT    Lotru            73.51 330⇓iP       P        23 00 53.5 +0.6
BIZ    Bicaz            73.55 332⇑iP       P        23 00 52.3 -0.6
ARU    Arti             73.63 355  eP       P        23 00 51.6 -1.6
       comp=N,13nm,1.2s
ARU    Arti             73.63 355c iP       P        23 00 51.3 -1.9
ARU                                 S       S        23 10 20.7 -2.4
ARU                                 SS      SS       23 15 05.6 -1.3
ARU                                 pmax    pmax
       comp=Z,12nm,1.2s
PDG    Podgorica        73.69 325⇓iP       P        23 00 55.7 +1.9
TTG    Podgorica        73.69 325  eP       P        23 00 55.5 +1.7
       comp=Z,14nm,1.2s
TTG    Podgorica        73.69 325  eP       P        23 00 55.5 +1.7
TTG                                 pmax    pmax
       comp=Z,14nm,1.2s
HERR   Herculane        73.76 329⇑iP       P        23 00 55.5 +1.3
SONM   Songino Array    73.78  27   P       P        23 00 54.5 +0.1
       comp=Z,2.7nm,0.8s,baz=205,slow=5.1,SNR=10
SONM                                LR      LR       23 32 36.5
       comp=Z,116nm,19.8s,baz=215,slow=35
SONA1  Songino Array    73.79  27  eP       P        23 00 54.7 +0.2
SVE    Sverdlovsk       73.89 356  eP       P        23 00 54.4 -0.3
SVE                                 pmax    pmax
       comp=Z,16nm,1.5s
JOW    Kunigami         73.98  55   LR      LR       23 30 11.5
       comp=Z,134nm,21.7s,baz=316,slow=33
MDVR   Moldovita        74.04 328⇑iP       P        23 00 55.7 -0.2
CAN    Canberra         74.06 123  eP       P        23 00 57.3 +0.8
       comp=Z,36nm,1.4s
CAN    Canberra         74.06 123  eP       P        23 00 57.3 +0.8
CAN                                 pmax    pmax
       comp=Z,36nm,1.4s
ULN    Ulaanbaatar      74.08  27⇑eP       P        23 00 55.0 -1.2
ULN                                 pmax    pmax
       comp=Z,8.0nm,1.7s
DIVS   Divibare         74.44 327  eP       P        23 00 58.5 +0.2
       comp=Z,30nm,1.3s
BURAR  Bucovina Array   74.45 332⇓iP       P        23 01 02.7 +4.4
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BURAR  Bucovina Array   74.45 332 ⇓P       P        23 01 02.7 +4.4
BUR04  Bucovina Ar. S   74.46 332  eP       P        23 00 59.3 +0.9
VNDA   Vanda            74.46 167   P       P        23 00 59.0 +1.0
       comp=Z,6.0nm,1.1s,baz=274,slow=6.6,SNR=17
VNDA                                LR      LR       23 29 35.0
       comp=Z,383nm,21.5s,baz=262,slow=32
VNDA   Vanda            74.46 167  eP       P        23 00 59.3 +1.4
       comp=Z,28nm,1.5s
BUR08  Bucovina Ar. S   74.48 332  eP       P        23 01 00.1 +1.6
CJR    Cluj-Napoca      74.52 331⇑iP       P        23 01 00.7 +2.0
CJR    Cluj-Napoca      74.52 331 ⇑P       P        23 01 00.7 +2.0
ZAK    Zakamensk        74.54  23  eP       P        23 00 57.7 -1.1
ZAK                                 pmax    pmax
       comp=Z,3.0nm,1.3s
DBIC   Dimbokro         74.61 282   P       P        23 00 59.5 -0.3
       comp=Z,13nm,1.2s,baz=76,slow=13,SNR=3.4
DBIC                                LR      LR       23 32 09.0
       comp=Z,539nm,20.6s,baz=93,slow=34
BZS    Buzias           74.68 329⇓iP       P        23 00 59.7 +0.2
BZS    Buzias           74.68 329 ⇓P       P        23 00 59.7 +0.2
CTAO   Charters Tower   74.68 107  eP       P        23 00 58.9 -1.4
       comp=Z,328nm,1.3s
CTAO   Charters Tower   74.68 107  eP       P        23 00 58.9 -1.4
CTAO                                pmax    pmax
       comp=Z,329nm,1.3s
DRGR                    74.99 330⇑iP       P        23 01 04.5 +3.1
DRGR                    74.99 330 ⇑P       P        23 01 04.5 +3.1
AKASG  Malin Array Be   75.19 336   P       P        23 01 00.9 -1.4
       comp=Z,1.6nm,0.7s,baz=133,slow=4.7,SNR=12
AKASG                               LR      LR       23 33 53.6
       comp=Z,117nm,20.4s,baz=140,slow=36
AKASG  Malin Array Be   75.19 336   P       P        23 01 01.0 -1.4
AKBB   Malin Array Si   75.19 336  eP       P        23 01 01.6 -0.7
       comp=Z,11nm,1.0s
AKBB   Malin Array Si   75.19 336  eP       P        23 01 01.6 -0.7
AKBB                                pmax    pmax
       comp=Z,11nm,1.0s
KIEV   Kiev             75.19 336  eP       P        23 01 01.2 -1.1
       comp=Z,11nm,1.0s
KIEV   Kiev             75.19 336⇓eP       P        23 01 00.9 -1.4
KIEV                                pmax    pmax
       comp=Z,4.0nm,1.1s
SBA    Scott Base       75.43 168  eP       P        23 01 05.5 +2.0
       comp=Z,36nm,1.7s
SBA    Scott Base       75.43 168  eP       P        23 01 05.5 +2.0
SBA                                 pmax    pmax
       comp=Z,36nm,1.7s
KEST   Kesra            75.63 315   LR      LR       23 34 32.0
       comp=Z,446nm,19.8s,baz=50,slow=36
TLY    Talaya           75.72  23  eP       P        23 01 04.8 -0.7
TLY                                eS       S        23 10 44.1 -2.6
TLY                                 pmax    pmax
       comp=Z,4.0nm,1.0s
THTN   Thala            75.98 314  eP       P        23 01 08.8 +1.4
       comp=Z,18nm,1.1s
TRPA   Tarpa            76.05 331⇑iP       P        23 01 07.4 +0.1
OBN    Obninsk          76.43 343⇑eP       P        23 01 09.8 +0.5
OBN                                i                 23 01 16.5
OBN                                e                 23 04 02.6
OBN                                i S      S        23 10 54.8 +0.6
OBN                                i SS     SS       23 15 56.6 +7.2
OBN                                 pmax    pmax
       comp=Z,23nm,1.4s
UZH    Uzhgorod         76.52 331  eP       P        23 01 11.0 +1.0
UZH                                i                 23 01 17.8
KOWA   Kowa             76.60 290   P       P        23 01 12.9 +1.7
       comp=Z,6.2nm,1.0s,baz=146,slow=4.2,SNR=6.1
KOWA                                LR      LR       23 32 56.2
       comp=Z,502nm,19.8s,baz=92,slow=34
KOWA   Kowa             76.60 290  eP       P        23 01 11.8 +0.6
       comp=Z,11nm,0.9s
LVV    L’vov            76.62 333  eP       P        23 01 11.5 +0.9
MOS    Moscow           76.68 344  eP       P        23 01 15.3 +4.5
MOS                                 pmax    pmax
       comp=Z,52nm,1.2s
KWP    Kalwaria Pacla   77.06 332  eP       P        23 01 14.3 +1.2
       comp=Z,147nm,1.3s
KWP    Kalwaria Pacla   77.06 332  eP       P        23 01 14.3 +1.2
KWP                                 pmax    pmax
       comp=Z,147nm,1.3s
CRVS   Cervenica-Dubn   77.10 331  eP       P        23 01 14.6 +1.3
CRVS                                pmax    pmax
       comp=Z,14nm,1.5s
CRVS   Cervenica-Dubn   77.10 331  eP       P        23 01 14.6 +1.3
ARMA   Armidale         77.19 118  eP       P        23 01 15.1 +0.6
       comp=Z,38nm,1.4s
BOJS   Bojanci          77.89 326  eP       P        23 01 19.5 +1.7
KOGS   Kog              77.97 327  eP       P        23 01 20.1 +1.9
VYHS   Vyhne            78.05 330  eP       P        23 01 17.5 -1.2
VYHS                                pmax    pmax
       comp=Z,8.0nm,1.5s
VYHS   Vyhne            78.05 330  eP       P        23 01 17.5 -1.2
LANS   Liptovska Anna   78.20 330  eP       P        23 01 19.7 +0.2
LANS   Liptovska Anna   78.20 330  eP       P        23 01 19.7 +0.2
MODS   Modra-Piesok     78.73 329  eP       P        23 01 24.5 +2.1
MODS   Modra-Piesok     78.73 329  e        P        23 01 24.5 +2.1
SOKA   Soboth           78.76 327  i P      P        23 01 25.0 +2.3
       comp=Z,4.1nm,0.8s
OJC    Ojcow            78.80 331  eP       P        23 01 24.6 +1.8
       comp=Z,7.6nm,1.1s
ARSA   Arzberg          78.88 327  eP       P        23 01 25.8 +2.5
       comp=Z,14nm,1.0s
OBKA   Obir             78.91 326  eP       P        23 01 25.1 +1.5
       comp=Z,8.7nm,1.4s
JNU    Nakatsue         79.00  50   LR      LR       23 33 46.8
       comp=Z,125nm,21.9s,baz=128,slow=34
KSAR   Wonju Array Be   79.05  45   P       P        23 01 22.8 -1.6
KSAR   Wonju Array Be   79.05  45   P       P        23 01 22.8 -1.6
KS01   Wonju Array Si   79.07  45  eP       P        23 01 23.1 -1.4
KSRS   Korea Array      79.08  45   P       P        23 01 22.8 -1.7
       comp=Z,1.9nm,0.8s,baz=243,slow=5.1,SNR=10
KSRS                                LR      LR       23 34 17.8
       comp=Z,134nm,20.3s,baz=235,slow=34
CONA   Conrad Observa   79.14 328  eP       P        23 01 24.7 -0.1
       comp=Z,18nm,1.4s
OKC    Ostrava-Krasne   79.30 330  eS       S        23 11 24.7 -0.8
OKC                                 AMS     AMS      23 37 40.0
       comp=Z,100nm,19.0s
MYKA   Terra Mystica    79.47 326  i P      P        23 01 27.5 +0.9
       comp=Z,5.1nm,1.0s
MORC   Moravsky Berou   79.55 330⇑iP       P        23 01 25.5 -1.3
MORC   Moravsky Berou   79.55 330  eP       P        23 01 26.2 -0.7
       comp=Z,7.1nm,1.1s
MORC   Moravsky Berou   79.55 330 ⇑P       P        23 01 25.6 -1.3
MORC   Moravsky Berou   79.55 330  eP       P        23 01 26.6 -0.3
KRUC   Moravsky         79.62 329  eP       P        23 01 26.9 -0.4
VRAC   Vranov           79.69 329  eP       P        23 01 28.7 +1.1
KBA    Koelnbreinsper   79.91 326  i P      P        23 01 29.7 +0.6
       comp=Z,2.2nm,0.6s
MOA    Molln            79.91 327  i P      P        23 01 29.6 +0.7
       comp=Z,20nm,1.6s
ABTA   Abfaltersbach    80.15 325  i P      P        23 01 30.3  0.0
       comp=Z,11nm,1.0s
PRGR   Permogore        80.32 350  eP       P        23 01 29.3 -1.4
PRGR                                pmax    pmax
       comp=Z,14nm,1.4s
DPC    Dobruska-Polom   80.52 330  eP       P        23 01 32.5 +0.4
DPC                                eS       S        23 11 37.7 -0.7
DPC    Dobruska-Polom   80.52 330  eP       P        23 01 32.5 +0.4
DPC                                e                 23 11 37.7
UPC    Upice            80.77 330  eS       S        23 11 43.5 +2.5
KLMR   Klimovskoe       80.78 347  eP       P        23 01 31.5 -1.7
KLMR                                pmax    pmax
       comp=Z,23nm,1.2s
KLMR   Klimovskoe       80.78 347  eP       P        23 01 31.5 -1.7
KLMR                                AMP              23 01 41.4
       comp=Z,23nm,1.2s
KLMR                                LQ      LQ       23 31 48.2
GEA0   GERESS Array S   80.83 328  eP       P        23 01 34.8 +0.9
GERES  GERESS Array B   80.84 328   P       P        23 01 32.5 -1.4
       comp=Z,1.1nm,1.0s,baz=112,slow=6.0,SNR=8.0
GERES                               LR      LR       23 37 58.1
       comp=Z,36nm,20.0s,baz=137,slow=36
KSP    Ksiaz            80.86 330  eP       P        23 01 36.8 +2.9
KSP    Ksiaz            80.86 330  eP       P        23 01 36.8 +2.9
CN2    Changchun        80.94  39  eP       P        23 01 35.9 +1.5
CN2                                 pmax    pmax
       comp=Z,10.0nm,0.7s
GOPC   GO Pecny, Ondr   80.98 329  eS       S        23 11 46.2 +3.0
GOPC                                AMS     AMS      23 39 30.0
       comp=Z,100nm,16.3s
HIA    Hailar           81.05  32⇑eP       P        23 01 34.1 -0.9
HIA                                 pmax    pmax
       comp=Z,4.0nm,0.9s
KHC    Kasperske Hory   81.08 328  eP       P        23 01 36.0 +0.8
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KHC				*e*pP	PcP	23 01 42.5	+1.0
KHC				*e*S	S	23 11 43.4	-1.0
KHC	Kasperske Hory	81.08	328	*e*P	P	23 01 36.6	+1.5
	comp=Z,3.8nm,1.4s						
KHC	Kasperske Hory	81.08	328	*e*P	P	23 01 36.0	+0.8
KHC				*e*		23 01 42.5	
KHC				*e*		23 11 43.4	
PRU	Pruhonice	81.14	329	*e*P	P	23 01 35.6	+0.2
PRU				*e*S	S	23 11 44.2	-0.7
PRU				AMS	AMS	23 39 40.0	
	comp=Z,100nm,20.7s						
PRU	Pruhonice	81.14	329	*e*P	P	23 01 35.6	+0.2
PRU				*e*		23 11 44.2	
PRU				MLR	MLR		
	comp=Z,100nm,20.7s						
PRA	Prague	81.25	329	*e*S	S	23 11 46.0	0.0
MOTA	Moosalm	81.28	325	*i* P	P	23 01 37.2	+0.8
	comp=Z,8.0nm,1.1s						
FETA	Feichten	81.29	325	*e*P	P	23 01 36.1	-0.4
	comp=Z,8.8nm,1.2s						
BRG	Berggiesshubel	82.01	329	*e*P	P	23 01 42.6	+2.6
	comp=Z,9.7nm,1.4s						
BRG	Berggiesshubel	82.01	329	S	S	23 11 57.0	+3.2
BRG				SS	SS	23 17 14.0	+0.7
BRG	Berggiesshubel	82.01	329	*e*P	P	23 01 42.6	+2.6
BRG				S	S	23 11 57.0	+3.2
BRG				SS	SS	23 17 14.0	+0.7
BRG				pmax	pmax		
	comp=Z,10.0nm,1.4s						
VSU	Vasula	82.23	340⇑	*e*P	P	23 01 41.7	+0.8
VSU				pmax	pmax		
	comp=Z,32nm,1.6s						
GRFO	Grafenberg	82.64	327	*e*P	P	23 01 45.0	+1.7
	comp=Z,17nm,1.2s						
GRFO	Grafenberg	82.64	327	*e*P	P	23 01 45.0	+1.7
GRFO				pmax	pmax		
	comp=Z,17nm,1.2s						
CLL	Collm	82.74	329	*i* P	P	23 01 46.5	+2.7
	comp=Z,8.0nm,1.2s						
CLL				*e*S	S	23 12 10.0	+8.7
CLL	Collm	82.74	329	*e*P	P	23 01 46.0	+2.2
	comp=Z,14nm,1.5s						
CLL	Collm	82.74	329	*i* P	P	23 01 46.5	+2.7
CLL				pmax	pmax		
	comp=Z,8.0nm,1.2s						
GUMO	Guam	82.92	73	LR	LR	23 33 32.6	
	comp=Z,60nm,21.4s,baz=226,slow=32						
BOD	Bodaibo	84.28	23	*e*P	P	23 01 49.4	-2.1
BOD				pmax	pmax		
	comp=Z,7.0nm,1.6s						
MDT	Midelt	84.33	307	LR	LR	23 40 44.9	
	comp=Z,252nm,18.1s,baz=123,slow=37						
FIA1	FINESS Array S	84.78	342	*e*P	P	23 01 55.9	+2.0
FINES	FINESS Array B	84.78	342	P	P	23 01 53.0	-1.0
	comp=Z,2.5nm,0.9s,baz=158,slow=16,SNR=4.9						
FINES				LR	LR	23 40 37.6	
	comp=Z,128nm,21.1s,baz=134,slow=36						
FINES	FINESS Array B	84.78	342	P	P	23 01 53.0	-1.0
USRK	Ussuriysk Ar.	85.16	41	LR	LR	23 40 36.7	
	comp=Z,59nm,18.6s,baz=225,slow=36						
JHJ	Hachijo jima 2	85.70	54	LR	LR	23 38 20.3	
	comp=Z,82nm,20.0s,baz=258,slow=34						
MJAR	Matsushiro Arr	85.92	50	P	P	23 01 59.5	-0.8
	comp=Z,4.2nm,1.0s,baz=239,slow=5.5,SNR=8.4						
MJAR				LR	LR	23 41 57.2	
	comp=Z,80nm,19.6s,baz=220,slow=37						
ES19	SONSECA Array	86.70	313	*e*P	P	23 02 04.3	+0.2
ESDC	Sonseca Array	86.74	313	P	P	23 02 04.4	+0.1
	comp=Z,4.6nm,1.2s,baz=100,slow=4.4,SNR=11						
ESDC				LR	LR	23 40 46.6	
	comp=Z,146nm,19.1s,baz=130,slow=36						
ESLA	Sonseca Array	86.74	313	*e*P	P	23 02 06.9	+2.5
	comp=Z,33nm,1.9s						
PAB	San Pablo	86.95	313	*e*P	P	23 02 06.7	+1.3
	comp=Z,13nm,1.2s						
ZEA	Zeya	87.48	31	*e*P	P	23 02 11.8	+4.3
KLR	Kul'dur	87.50	36	P	P	23 02 05.7	-2.0
	comp=Z,0.1nm,0.3s,baz=276,slow=9.2,SNR=3.2						
KLR	Kul'dur	87.50	36⇓	*e*P	P	23 02 06.0	-1.7
NOA	NORSAR Array B	89.60	336	LR	LR	23 43 48.5	
	comp=Z,104nm,19.2s,baz=85,slow=36						
HNR	Honiara	90.26	100	LR	LR	23 41 36.5	
	comp=Z,488nm,19.7s,baz=188,slow=35						
ARCES	ARCESS Array B	91.25	347	P	P	23 02 23.2	-1.8
	comp=Z,5.3nm,1.1s,baz=8.5,slow=12,SNR=2.9						
ARCES				LR	LR	23 43 33.6	
	comp=Z,153nm,19.3s,baz=142,slow=36						
ASAJ	Asahikawa	92.00	44	LR	LR	23 41 44.9	
	comp=Z,92nm,21.5s,baz=216,slow=34						
DZM	Mont Dzumac	92.26	114	*e*SS	SS	23 19 47.2	+3.0
	comp=Z,258nm,27.6s						
DZM	Mont Dzumac	92.26	114	*e*LR	LR	23 31 59.3	
	comp=Z,840nm,20.9s						
YAK	Yakutsk	93.06	25⇓	*e*P	P	23 02 31.9	-1.5
YAK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
SPITS	Spitsbergen Ar	99.28	351	LR	LR	23 49 23.7	
	comp=Z,165nm,18.6s,baz=185,slow=36						
LPAZ	La Paz	124.50	236	PKP	PKPdf	23 08 20.5	-0.6
	comp=Z,0.8nm,0.7s,baz=76,slow=5.4,SNR=4.6						
TBI	Tubuai	126.38	138	*e*SS	SS	23 27 26.5	+4.9
	comp=Z,143nm,29.0s						
TBI	Tubuai	126.38	138	*e*LR	LR	23 47 56.6	
	comp=Z,137nm,25.0s						
ILAR	Eielson Array	127.30	17	PKP	PKPdf	23 08 23.0	-1.2
	comp=Z,0.7nm,0.9s,baz=316,slow=2.9,SNR=5.3						
PPT2	Papeete2	130.27	132	*e*SS	SS	23 28 17.8	+7.4
	comp=Z,82nm,33.5s						
PPT2	Papeete2	130.27	132	*e*LR	LR	23 49 35.0	
	comp=Z,190nm,26.5s						
RKT	Rikitea	134.67	151	*e*T	T	01 38 13.9	
	comp=Z,5.0nm,0.2s						
YKA	Yellowknife Ar	134.71	1	PKP	PKPdf	23 08 36.1	-2.2
	comp=Z,0.4nm,0.6s,baz=174,slow=5.5,SNR=3.1						
TAOE	Nuku Hiva Isla	142.90	132	*e*LR	LR	23 55 35.8	
	comp=Z,285nm,22.8s						
ULM	Lac du Bonnet	144.16	341	PKP	PKPbc	23 08 53.8	-0.1
	comp=Z,6.6nm,1.0s,baz=347,slow=6.3,SNR=3.4						
EYMN	Ely	144.51	335	P	PKPbc	23 08 55.6	+0.4
	baz=37						
EYMN	Ely	144.51	335	*e*PKPdf	PKPdf	23 08 56.4	-0.1
E41A	Kenton	144.53	331	P	PKPdf	23 08 56.2	-0.5
	baz=42						
C38A	Sawbill Land.	144.59	334	P	PKPdf	23 08 56.6	-0.1
	baz=38						
G43A	Wallace	144.77	328	P	PKPab	23 08 55.1	-0.8
	baz=45						
COWI	Conover	144.88	330	*e*PKPdf	PKPab	23 08 55.8	-0.6
C37A	Embarrass	144.96	335	P	PKPab	23 08 55.3	-1.3
	baz=36						
E40A	Wakefield	144.97	332	P	PKPab	23 08 55.4	-1.3
	baz=41						
N50A	Nevada	145.00	318	P	PKPab	23 08 55.6	-1.4
	baz=56						
B35A	Bob, Littlefor	145.04	337	P	PKPbc	23 08 55.3	-1.5
	baz=34						
A33A	Warroad	145.14	339	P	PKPbc	23 08 55.8	-1.4
	baz=30						
G42A	Mountain	145.16	329	P	PKPbc	23 08 56.7	-0.6
	baz=44						
ACSO	Alum Creek Sta	145.18	318	P	PKPbc	23 08 56.9	-0.6
	baz=57						
ACSO	Alum Creek Sta	145.18	318	*e*PKPbc	PKPab	23 08 57.5	-0.1
C36A	Pine Crest Far	145.20	336	P	PKPbc	23 08 56.2	-1.2
	baz=35						
B34A	Aery, Baudette	145.27	338	P	PKPbc	23 08 56.1	-1.5
	baz=32						
E39A	Mellen	145.32	332	P	PKPbc	23 08 56.8	-1.0
	baz=40						
H43A	Windswept, Lux	145.36	327	P	PKPab	23 08 58.0	-0.2
	baz=46						
F40A	Park Falls	145.47	331	P	PKPbc	23 08 57.5	-0.8
	baz=41						
D37A	Cotton	145.51	335	P	PKPdf	23 08 57.3	-1.0
	baz=36						
E38A	The Farm, Brul	145.59	333	P	PKPdf	23 08 57.4	-1.1
	baz=38						
O50A	Cable	145.64	318	P	PKPdf	23 08 57.9	-0.9
	baz=56						
C35A	Jirik Farms, M	145.68	337	P	PKPdf	23 08 57.8	-0.8
	baz=34						
H42A	Shiocton	145.73	328	P	PKPdf	23 08 58.0	-0.8
	baz=45						
D36A	Goodland	145.80	335	P	PKPdf	23 08 58.3	-0.5
	baz=35						
F39A	Loretta	145.84	332	P	PKPdf	23 08 58.3	-0.7
	baz=40						
AGMN	Agassiz Nation	145.85	339	P	PKPdf	23 08 58.5	-0.4
	baz=30						
AGMN	Agassiz Nation	145.85	339	*e*PKPbc	PKPbc	23 08 59.3	-0.1
G40A	Rib Lake	146.00	330	P	PKPdf	23 08 58.8	-0.5
	baz=42						
H41A	Junction City	146.21	329	P	PKPdf	23 08 59.5	-0.1
	baz=43						
D35A	Remer	146.22	336	P	PKPdf	23 08 59.0	-0.5
	baz=34						
F38A	Pierce - Schro	146.23	333	P	PKPdf	23 08 59.5	-0.1
	baz=38						
E36A	McGregor	146.37	335	P	PKPdf	23 08 59.5	-0.3
	baz=36						
G39A	Holcombe	146.43	331	P	PKPbc	23 09 01.1	-0.2
	baz=40						
KMSC	Kings Mountain	146.44	308	P	PKPdf	23 09 00.3	+0.1
	baz=66						
S52A	Salyersville	146.56	314	P	PKPdf	23 08 59.1	-1.4
	baz=60						
H40A	Chili	146.56	330	P	PKPdf	23 09 00.1	-0.1
	baz=42						
T52A	Hallie	146.77	313	P	PKPdf	23 09 00.9	+0.1
	baz=61						
U53A	Fall Branch	146.82	311	P	PKPdf	23 09 00.1	-0.9
	baz=63						
G38A	Ridgeland	146.83	332	P	PKPdf	23 09 00.5	-0.1
	baz=39						
J42A	Columbus	146.87	327	P	PKPdf	23 08 59.8	-0.9
	baz=45						
S51A	Beattyville	146.93	314	P	PKPdf	23 09 00.1	-0.9
	baz=60						
H39A	Augusta	146.94	331	P	PKPdf	23 09 00.1	-0.7
	baz=41						
F36A	Milaca	147.01	334	P	PKPdf	23 08 59.4	-1.5
	baz=36						
R50A	Paris	147.10	316	P	PKPdf	23 09 00.5	-0.8
	baz=58						
N46A	Monticello	147.13	321	P	PKPdf	23 09 01.3	0.0
	baz=51						
O47A	Sheridan	147.19	320	P	PKPdf	23 09 01.1	-0.3
	baz=53						
SPMN	Marine on St.	147.21	333	P	PKPdf	23 09 00.1	-1.1
	baz=38						
J41A	Loganville	147.29	328	P	PKPdf	23 09 00.5	-1.0
	baz=44						
V53A	Saluda	147.31	310	P	PKPdf	23 09 01.7	-0.1
	baz=63						
K42A	Prairie Point,	147.36	326	P	PKPdf	23 09 01.0	-0.6
	baz=46						
U52A	Thorn Hill	147.38	312	P	PKPdf	23 09 01.5	-0.3
	baz=62						
TZTN	Tazewell	147.43	312	P	PKPdf	23 09 02.1	+0.2
	baz=61						
TZTN	Tazewell	147.43	312	*e*PKPbc	PKPab	23 09 06.3	0.0
T51A	Gray	147.51	313	P	PKPdf	23 09 01.8	-0.3
	baz=60						
J40A	Soldiers Grove	147.64	329	P	PKPdf	23 09 01.2	-0.8
	baz=43						
R49A	Shelbyville	147.66	316	P	PKPdf	23 09 03.3	+1.1
	baz=57						
I39A	Houston	147.68	330	P	PKPdf	23 09 02.1	0.0
	baz=41						
JFWS	Jewell Farm	147.74	328	P	PKPbc	23 09 04.0	-1.0
	baz=44						
W53A	Cullowhee	147.78	310	P	PKPbc	23 09 04.8	-0.8
	baz=64						
V52A	Sevierville	147.80	311	P	PKPbc	23 09 04.8	-0.6
	baz=62						
U51A	La Follette	147.84	312	P	PKPab	23 09 07.0	-1.0
	baz=61						
I38A	Scanlan Farm,	147.92	331	P	PKPbc	23 09 05.9	+0.4
	baz=40						
Y54A	Tignall	147.97	307	P	PKPbc	23 09 04.8	-1.2
	baz=66						
K41A	Shullsburg	147.98	327	P	PKPbc	23 09 05.7	0.0
	baz=44						
TKL	Tuckaleechee C	148.01	311	PKPbc	PKPbc	23 09 05.3	-0.7
	comp=Z,2.5nm,1.1s,baz=253,slow=14,SNR=2.3						
R48A	Northridge Ran	148.06	317	P	PKPbc	23 09 04.5	-1.5
	baz=56						
T50A	Nancy	148.10	314	P	PKPbc	23 09 05.9	-0.3
	baz=59						
O45A	Potomac	148.12	321	P	PKPbc	23 09 05.5	-0.7
	baz=51						
B05A	Bryant	148.15	11	P	PKPbc	23 09 06.3	+0.4
	baz=344						
J39A	Decorah	148.16	330	P	PKPdf	23 09 04.2	+1.4
	baz=41						
155A	Kite	148.28	305	P	PKPdf	23 09 02.2	-1.2
	baz=68						
V51A	Loudon	148.36	312	P	PKPdf	23 09 02.9	-0.5
	baz=61						
U50A	Jamestown	148.41	313	P	PKPdf	23 09 01.9	-1.7
	baz=60						
WCI	Wyandotte Cave	148.43	317	P	PKPdf	23 09 02.4	-1.0
	baz=55						
WCI	Wyandotte Cave	148.43	317	*e*PKPbc	PKPbc	23 09 08.3	+1.3
WCI	Wyandotte Cave	148.43	317	*e*PKP2	PKPbc	23 09 08.3	+1.3
L41A	Preston	148.46	327	P	PKPdf	23 09 02.1	-1.3
	baz=45						
N43A	Stutzman Famil	148.52	324	P	PKPbc	23 09 05.4	-1.7
	baz=48						
T49A	Edmonton	148.53	315	P	PKPbc	23 09 06.5	-0.8
	baz=58						
255A	Hazlehurst	148.54	304	P	PKPbc	23 09 06.8	-0.6
	baz=69						
R47A	Wooly Knot Far	148.54	317	P	PKPdf	23 09 05.2	+1.5
	baz=55						
X52A	Dahlonega	148.57	309	P	PKPdf	23 09 05.1	+1.2
	baz=64						
P45A	Graceland, Par	148.58	320	P	PKPbc	23 09 05.6	-1.8
	baz=52						
S48A	Wiedeman Farm,	148.59	316	P	PKPdf	23 09 03.6	-0.2
	baz=56						
O44A	Mansfield	148.62	322	P	PKPdf	23 09 05.4	+1.6
	baz=50						
Y53A	Monroe	148.66	308	P	PKPbc	23 09 06.4	-1.3
	baz=65						
K39A	Oelwein	148.71	329	P	PKPbc	23 09 06.6	-1.0
	baz=42						
GOGA	Godfrey	148.75	307	P	PKPdf	23 09 03.9	-0.2
	baz=66						
NEW	Newport	148.82	5	P	PKPbc	23 09 07.6	-0.2
	baz=353						
HDIL	Hopedale	148.84	323	P	PKPbc	23 09 07.8	-0.1
	baz=48						
L40A	Anamosa	148.85	327	P	PKPbc	23 09 07.6	-0.3
	baz=44						
Z53A	Monticello	148.88	307	P	PKPdf	23 09 03.4	-1.0
	baz=66						
V50A	Pikevile	148.95	312	P	PKPdf	23 09 03.1	-1.3
	baz=61						
U49A	Red Boiling Sp	149.01	314	P	PKPdf	23 09 02.5	-2.0
	baz=58						
Y52A	Lilburn	149.02	308	P	PKPdf	23 09 04.8	+0.2
	baz=64						
N42A	Yates City	149.08	324	P	PKPdf	23 09 03.4	-1.0
	baz=47						
EGMT	Eagleton	149.09	355	P	PKPdf	23 09 03.5	-0.9
	baz=6.2						
EGMT	Eagleton	149.09	355	*e*PKPbc	PKPbc	23 09 08.6	+0.1
556A	Lake Butler	149.10	300	P	PKPdf	23 09 05.4	+0.6
	baz=72						
T48A	Bowling Green	149.11	315	P	PKPdf	23 09 04.6	-0.1
	baz=57						
P44A	Sand Creek, Wi	149.15	321	P	PKPdf	23 09 04.5	-0.2
	baz=50						
L39A	Vinton	149.20	328	P	PKPdf	23 09 03.4	-1.2
	baz=42						
Q45A	Warren Harvey,	149.22	320	P	PKPdf	23 09 03.7	-1.0
	baz=52						
W50A	Signal Mountai	149.33	311	P	PKPdf	23 09 03.5	-1.6
	baz=61						
455A	Stateville	149.38	302	P	PKPbc	23 09 08.6	-1.0
	baz=70						
J36A	Seneca 1, Swea	149.38	332	P	PKPbc	23 09 07.3	-2.0
	baz=37						
V49A	McMinnville	149.47	313	P	PKPbc	23 09 09.0	-0.7
	baz=59						
K37A	Belmond	149.51	331	P	PKPdf	23 09 04.3	-0.8
	baz=39						
Z52A	Williamson	149.57	307	P	PKPbc	23 09 08.8	-1.3
	baz=65						
P43A	Skaggs, Pawnee	149.57	322	P	PKPbc	23 09 08.3	-1.5
	baz=49						
T47A	Sharon Grove	149.66	316	P	PKPbc	23 09 09.5	-0.6
	baz=56						
R45A	Skylar, Fairfi	149.66	319	P	PKPbc	23 09 09.5	-0.6
	baz=53						
H32A	Carlson Farm,	149.67	337	P	PKPbc	23 09 08.4	-1.6
	baz=31						
Q44A	Meyer Farm, Va	149.74	321	P	PKPbc	23 09 10.4	+0.1
	baz=51						
Y51A	Rockmart	149.75	309	P	PKPbc	23 09 09.9	-0.6
	baz=63						
M39A	Webster	149.76	328	P	PKPbc	23 09 09.9	-0.3
	baz=43						
SCIA	State Center	149.96	329	P	PKPbc	23 09 10.4	-0.4
	baz=40						
LAO	LASA Array	149.99	350	P	PKPbc	23 09 10.3	-0.5
	baz=13						
LAO	LASA Array	149.99	350	*e*PKPbc	PKPbc	23 09 12.1	+1.4
ECSD	EROS Data Cent	150.01	336	P	PKPbc	23 09 10.2	-0.7
	baz=33						
ECSD	EROS Data Cent	150.01	336	*e*PKPbc	PKPbc	23 09 10.8	0.0
152A	Waverly Hall	150.01	306	P	PKPbc	23 09 10.9	-0.2
	baz=66						
O41A	Passleys Farm,	150.03	324	P	PKPbc	23 09 10.5	-0.5
	baz=46						
W49A	Belvidere	150.05	312	P	PKPbc	23 09 10.4	-0.8
	baz=60						
L37A	Phoenix Point,	150.06	330	P	PKPbc	23 09 10.3	-0.7
	baz=39						
U47A	Clarksville	150.08	315	P	PKPbc	23 09 10.1	-1.1
	baz=57						
P42A	Winchester	150.09	323	P	PKPbc	23 09 10.5	-0.6
	baz=48						
Z51A	Franklin	150.09	308	P	PKPbc	23 09 10.9	-0.4
	baz=64						
353A	Camilla	150.13	304	P	PKPbc	23 09 11.1	-0.3
	baz=68						
Q43A	New Douglas	150.13	321	P	PKPbc	23 09 11.3	+0.1
	baz=50						
V48A	Smith Brothers	150.13	313	P	PKPbc	23 09 10.6	-0.7
	baz=58						
T46A	Princeton	150.15	317	P	PKPbc	23 09 11.1	-0.3
	baz=55						
R44A	Waltonville	150.19	320	P	PKPbc	23 09 10.7	-0.7
	baz=52						
S45A	Carrier Mills	150.22	318	P	PKPbc	23 09 12.1	+0.6
	baz=53						
Y50A	Piedmont	150.25	309	P	PKPbc	23 09 13.1	+1.4
	baz=62						
SUSD	Miller	150.26	339	P	PKPbc	23 09 11.1	-0.3
	baz=28						
252A	Lumpkin	150.29	305	P	PKPbc	23 09 11.8	0.0
	baz=67						
M38A	Pleasantville	150.32	329	P	PKPbc	23 09 10.3	-1.4
	baz=41						
N39A	Derby Farms, D	150.37	327	P	PKPbc	23 09 10.2	-1.5
	baz=43						
453A	Whigham	150.39	303	P	PKPbc	23 09 12.1	0.0
	baz=69						
X49A	Woodville	150.39	311	P	PKPbc	23 09 11.5	-0.5
	baz=61						
MSO	Missoula	150.41	1	P	PKPbc	23 09 10.1	-1.7
	baz=358						
P41A	Barry, Barry	150.44	324	P	PKPbc	23 09 11.1	-0.8
	baz=47						
W48A	Pulaski	150.52	312	P	PKPbc	23 09 11.4	-0.8
	baz=59						
O40A	La Belle	150.58	325	P	PKPbc	23 09 11.7	-0.6
	baz=45						
WVT	Waverly	150.61	315	P	PKPdf	23 09 05.9	-1.1
	baz=56						
352A	Blakely	150.64	304	P	PKPbc	23 09 12.7	0.0
	baz=67						
Z50A	Ashland	150.68	308	P	PKPbc	23 09 12.5	-0.3
	baz=63						
R43A	Red Bud	150.69	321	P	PKPbc	23 09 11.9	-0.7
	baz=50						
Y49A	Blount Mountai	150.77	310	P	PKPdf	23 09 06.2	-1.2
	baz=62						
251A	Midway	150.78	306	P	PKPbc	23 09 12.6	-0.4
	baz=66						
W47A	Westpoint	150.92	313	P	PKPbc	23 09 12.2	-1.1
	baz=58						
X48A	Hartselle	150.94	311	P	PKPbc	23 09 12.3	-1.0
	baz=60						
V46A	Holladay	150.99	315	P	PKPbc	23 09 11.8	-1.5
	baz=56						
Q41A	Truxton	151.02	323	P	PKPbc	23 09 11.5	-1.9
	baz=47						
150A	Eclectic	151.04	307	P	PKPbc	23 09 13.2	-0.4
	baz=64						
M36A	Felix, Anita	151.07	331	P	PKPbc	23 09 14.1	+0.7
	baz=38						
P40A	Paris	151.09	325	P	PKPbc	23 09 13.0	-0.5
	baz=45						
G05D	Wamic, OR	151.20	12	P	PKPbc	23 09 13.0	-0.6
	baz=344						
R42A	Luebbering	151.21	321	P	PKPbc	23 09 14.1	+0.3
	baz=49						
S43A	Fulton Ridge,	151.23	320	P	PKPbc	23 09 13.4	-0.5
	baz=51						
Y48A	Jasper	151.29	310	P	PKPbc	23 09 13.2	-0.9
	baz=61						
Q40A	Laux Farm, Aux	151.47	324	P	PKPbc	23 09 14.3	-0.1
	baz=46						
X47A	Russelville	151.49	312	P	PKPbc	23 09 13.6	-1.0
	baz=59						
P39B	Salisbury	151.50	325	P	PKPbc	23 09 13.9	-0.6
	baz=44						
S42A	Caledonia	151.54	321	P	PKPbc	23 09 14.2	-0.4
	baz=50						
R41A	Rosebud	151.55	322	P	PKPbc	23 09 14.4	-0.2
	baz=48						
LRAL	Lakeview Retre	151.58	309	P	PKPbc	23 09 15.2	+0.4
	baz=62						
BOZ	Bozeman (W)	151.62	358	P	PKPbc	23 09 13.5	-1.3
	baz=3.0						
BOZ	Bozeman (W)	151.62	358	*e*PKPbc	PKPbc	23 09 15.5	+0.8
BOZ	Bozeman (W)	151.62	358	*e*PKIKP	PKPbc	23 09 15.5	+0.8
CCM	Cathedral Cave	151.63	322	P	PKPbc	23 09 14.7	0.0
	baz=48						
T43A	Greenville	151.66	319	P	PKPbc	23 09 13.7	-1.2
	baz=51						
Y47A	UCPARC, Winfie	151.79	311	P	PKPbc	23 09 14.6	-0.7
	baz=60						
P38A	Dawn	151.82	327	P	PKPbc	23 09 15.9	+0.7
	baz=43						
RLMT	Red Lodge	151.93	354	P	PKPbc	23 09 15.8	+0.3
	baz=7.8						
Q39A	Willow Grove F	151.94	325	P	PKPbc	23 09 16.2	+0.7
	baz=44						
X46A	Booneville	151.98	313	P	PKPbc	23 09 14.8	-0.9
	baz=58						
RSSD	Black Hills	152.03	346	P	PKPbc	23 09 15.8	0.0
	baz=19						
RSSD	Black Hills	152.03	346	*e*PKPbc	PKPbc	23 09 16.1	+0.3
RSSD	Black Hills	152.03	346	*e*PKIKP	PKPbc	23 09 16.1	+0.3
I05D	Terrebonne, OR	152.06	12	P	PKPbc	23 09 16.0	+0.3
	baz=343						
R40A	Maddies Statio	152.07	323	P	PKPbc	23 09 15.7	0.0
	baz=46						
249A	Camden	152.15	307	P	PKPbc	23 09 15.5	-0.6
	baz=64						
I03D	Drain, OR	152.20	16	P	PKPbc	23 09 16.9	+1.1
	baz=339						
T42A	Van Buren	152.20	320	P	PKPbc	23 09 15.5	-0.6
	baz=50						
S41A	Jillco Farms,	152.23	321	P	PKPbc	23 09 15.3	-0.9
	baz=48						
Z47A	Carrollton	152.30	310	P	PKPbc	23 09 16.3	-0.2
	baz=61						
I04A	Tendick Farm,	152.34	14	P	PKPbc	23 09 15.8	-0.5
	baz=341						
Q38A	Cooks Store, C	152.35	326	P	PKPbc	23 09 16.7	+0.3
	baz=43						
R39A	Chumby, Stover	152.49	324	P	PKPbc	23 09 16.7	0.0
	baz=45						
Y46A	Houston	152.53	312	P	PKPbc	23 09 16.7	-0.2
	baz=58						
248A	Dixon Mills	152.57	308	P	PKPbc	23 09 17.8	+0.7
	baz=63						
T41A	Mountain View	152.60	320	P	PKPbc	23 09 17.4	+0.4
	baz=49						
S40A	Lebanon	152.67	322	P	PKPbc	23 09 16.5	-0.7
	baz=47						
147A	Livingston	152.70	309	P	PKPbc	23 09 16.4	-0.9
	baz=61						
U42A	Revenden	152.71	319	P	PKPbc	23 09 17.6	+0.3
	baz=51						
449A	Pace	152.73	305	P	PKPbc	23 09 17.4	-0.1
	baz=66						
T40A	Mansfield	152.98	322	P	PKPbc	23 09 17.9	0.0

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	baz=48						
R38A	**Fenwick Farm,**	**153.06**	**325**	P	**PKPbc**	**23 09 17.9**	**-0.1**
	baz=44						
S39A	**Bolivar**	**153.08**	**323**	P	**PKPbc**	**23 09 19.1**	**+1.0**
	baz=46						
J05D	**Fort Rock, OR**	**153.09**	**13**	P	**PKPbc**	**23 09 17.4**	**-0.7**
	baz=343						
HLID	**Hailey**	**153.67**	**2**	P	**PKPbc**	**23 09 18.6**	**-0.8**
	baz=357						
U40A	**Yellville**	**153.71**	**321**	P	**PKPbc**	**23 09 20.0**	**+0.5**
	baz=48						
KSU1	**Kansas State U**	**153.77**	**330**	P	**PKPbc**	**23 09 19.3**	**-0.2**
	baz=38						
V40A	**Witts Springs**	**154.05**	**320**	P	**PKPbc**	**23 09 19.9**	**-0.4**
	baz=49						
U39A	**Green Forest**	**154.07**	**321**	P	**PKPbc**	**23 09 20.2**	**-0.1**
	baz=47						
W41B	**Gary Mavity, V**	**154.09**	**318**	P	**PKPbc**	**23 09 20.8**	**+0.5**
	baz=51						
T38A	**Diamond**	**154.09**	**324**	P	**PKPbc**	**23 09 20.0**	**-0.3**
	baz=45						
BW06	**Boulder Array**	**154.29**	**354**	P	**PKPbc**	**23 09 20.7**	**-0.2**
	baz=7.8						
PDAR	**Pinedale Array**	**154.29**	**354**	PKPbc	**PKPbc**	**23 09 19.0**	**-1.8**
	comp=Z,0.9nm,0.8s,baz=90,slow=3.0,SNR=6.9						
W39A	**Magazine**	**155.04**	**320**	P	PKPbc	23 09 21.6	
	baz=48						
NVAR	**Mina Array Bea**	**158.35**	**11**	PKP	**PKPdf**	**23 09 17.5**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=45,slow=13,SNR=2.7						
NVAR				PKPab	**PKPab**	**23 09 51.1**	**-1.1**
	comp=Z,1.0nm,0.8s,baz=333,slow=1.2,SNR=4.0						
TXAR	**Lajitas Array**	**165.05**	**326**	PKP	**PKPdf**	**23 09 23.3**	**-1.7**
	comp=Z,0.3nm,0.9s,baz=79,slow=4.7,SNR=2.8						
TXAR				PKPab	**PKPab**	**23 10 20.9**	**-0.7**
	comp=Z,0.8nm,0.9s,baz=100,slow=4.7,SNR=3.6						

IDC 07 22:54:56.2±0.9**, 20°.33N**×**45°.59W, h0^{km}, mb3.8**/9**, mb1 4.0**/9**, mb1mx3.6**/64**, mbtmp3.8**/9**, Error ellipse: s-maj=27.9km s-min=21.8km az=129.0, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N3	**ASCENSION HYDR**	**41.45**	**129**	T	T	23 46 52.4	
	baz=313,slow=75,SNR=23						
H10N2	**ASCENSION HYDR**	**41.46**	**129**	T	T	23 46 50.0	
	baz=313,slow=75,SNR=24						
H10N1	**ASCENSION HYDR**	**41.47**	**129**	T	T	23 46 56.1	
	baz=313,slow=75,SNR=29						
H10S3	**ASCENSION HYDR**	**42.10**	**131**	T	T	23 47 38.4	
	baz=314,slow=75,SNR=48						
H10S1	**ASCENSION HYDR**	**42.10**	**131**	T	T	23 47 41.8	
	baz=314,slow=75,SNR=52						
H10S2	**ASCENSION HYDR**	**42.12**	**131**	T	T	23 47 40.3	
	baz=314,slow=75,SNR=43						
LPAZ	**La Paz**	**42.60**	**213**	P	P	23 02 55.1	+0.1
	1.1nm,0.8s,baz=33,slow=8.0,SNR=3.7						
TORD	**Torodi Ar. Bea**	**45.71**	**91**	P	P	23 03 18.9	-0.5
	0.9nm,1.0s,baz=280,slow=8.6						
CPUP	**Villa Florida**	**47.77**	**194**	P	P	23 03 34.9	-0.4
	3.1nm,0.8s,baz=9.2,slow=8.0,SNR=4.9						
HFS	**Hagfors**	**57.39**	**31**	P	P	23 04 46.7	+0.5
	0.9nm,0.7s,baz=218,slow=11,SNR=3.6						
PDAR	**Pinedale Array**	**57.52**	**308**	P	P	23 04 48.4	+0.6
	0.2nm,0.6s,baz=81,slow=8.3,SNR=2.9						
MLR	**Muntele Rosu**	**62.96**	**49**	P	P	23 05 25.6	+0.8
	0.5nm,0.8s,baz=166,slow=11,SNR=5.2						
ARCES	**ARCESS Array B**	**64.51**	**22**	P	P	23 05 33.1	-1.4
	3.4nm,0.9s,baz=286,slow=8.7,SNR=5.8						
BRTR	**Keskin Array B**	**69.19**	**54**	P	P	23 06 05.9	+0.8
	0.5nm,0.7s,baz=249,slow=4.0,SNR=3.4						
ILAR	**Eielson Array**	**76.51**	**334**	P	P	23 06 47.4	-0.5
	0.8nm,0.9s,baz=72,slow=4.9,SNR=7.5						

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*ISCJB **07** 23:01:28.9±0.8, 20°.3N±0°.1×45°.7W±0°.1, h10^{km}, mb4.2/18, MS3.4/11, Error ellipse: s-maj=22.2km s-min=17.4km az=152.1*

*IDC **07** 23:01:29.2±1.0, 20°.37N×45°.71W, h0^{km}, mb3.9/12, mb1 4.1/12, mb1mx3.8/61, mbtmp3.9/12, MS3.4/12, Ms1 3.4/12, ms1mx3.2/55, Error ellipse: s-maj=27.3km s-min=22.2km az=176.0*

ISC 07 23:01:30.8±0.9**, 20°.3N**±0°.2×**45°.7W**±0°.2**, h10^{km}, n35, σ1^{s}01**/18**, mb4.3**/18**, MS3.5**/11**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SJG	**San Juan**	**19.41**	**267**	LR	LR	23 12 13.8	
	comp=Z,81nm,20.5s,baz=87,slow=33						
PTGA	**Pitinga**	**25.16**	**215**	LR	LR	23 16 09.2	
	comp=Z,73nm,19.6s,baz=26,slow=35						
ROSC	**El Rosal**	**31.79**	**245**	LR	LR	23 21 06.6	
	comp=Z,41nm,19.5s,baz=69,slow=37						
TKL	**Tuckaleechee C**	**36.64**	**303**	LR	LR	23 20 26.5	
	comp=Z,43nm,21.7s,baz=64,slow=31						
SCHQ	**Schefferville**	**37.97**	**340**	LR	LR	23 22 45.1	
	comp=Z,41nm,18.8s,baz=94,slow=34						
H10N3	**ASCENSION HYDR**	**41.56**	**129**	T	T	23 53 23.5	
	baz=313,slow=75,SNR=36						
H10N2	**ASCENSION HYDR**	**41.57**	**129**	T	T	23 53 23.0	
	baz=313,slow=75,SNR=36						
H10N1	**ASCENSION HYDR**	**41.58**	**129**	T	T	23 53 23.7	
	baz=313,slow=75,SNR=36						
H10S3	**ASCENSION HYDR**	**42.21**	**131**	T	T	23 54 15.6	
	baz=314,slow=75,SNR=62						
H10S1	**ASCENSION HYDR**	**42.21**	**131**	T	T	23 54 07.9	
	baz=314,slow=75,SNR=56						
H10S2	**ASCENSION HYDR**	**42.23**	**131**	T	T	23 54 12.5	
	baz=314,slow=75,SNR=56						
LPAZ	**La Paz**	**42.53**	**213**	LR	LR	23 26 49.7	
	comp=Z,42nm,18.3s,baz=24,slow=36						
TORD	**Torodi Ar. Bea**	**45.85**	**91**	P	**P**	**23 09 52.7**	**-0.8**
	1.4nm,1.0s,baz=251,slow=9.0						
CPUP	**Villa Florida**	**47.74**	**194**	P	**P**	**23 10 08.2**	**+0.2**
	4.6nm,1.0s,baz=31,slow=7.5,SNR=5.5						
ULM	**Lac du Bonnet**	**49.38**	**320**	LR	LR	23 28 35.8	
	comp=Z,57nm,22.0s,baz=325,slow=33						
KEST	**Kesra**	**50.36**	**60**	P	**P**	**23 10 28.2**	**-0.1**
	6.8nm,1.1s,baz=144,slow=2.9,SNR=4.0						
FETA	**Feichten**	**52.64**	**46**	*e*P	**P**	**23 10 46.4**	**+1.0**
	6.4nm,1.0s						
TXAR	**Lajitas Array**	**52.89**	**292**	LR	LR	23 33 01.8	
	comp=Z,38nm,19.7s,baz=0.0,slow=36						
MOTA	**Moosalm**	**52.95**	**45**	*e*P	**P**	**23 10 48.7**	**+1.1**
	6.1nm,1.1s						
WATA	**Walderalm**	**53.27**	**46**	*i* P	**P**	**23 10 50.9**	**+0.9**
	8.5nm,1.0s						
WTTA	**Wattenberg**	**53.30**	**46**	*e*P	**P**	**23 10 50.9**	**+0.8**
	3.4nm,0.6s						
MYKA	**Terra Mystica**	**54.56**	**47**	*e*P	**P**	**23 11 00.0**	**+0.7**
	4.3nm,1.0s						
GERES	**GERESS Array B**	**54.92**	**44**	P	**P**	**23 11 00.5**	**-1.4**
	0.7nm,0.9s,baz=258,slow=6.7,SNR=5.7						
ANMO	**Albuquerque**	**54.97**	**299**	LR	LR	23 32 16.1	
	comp=Z,55nm,21.2s,baz=110,slow=34						
MOA	**Molln**	**55.15**	**45**	*e*P	**P**	**23 11 03.4**	**0.0**
	5.5nm,1.5s						
VRAC	**Vranov**	**56.87**	**44**	LR	LR	23 32 29.8	
	comp=Z,59nm,19.1s,baz=135,slow=33						
PDAR	**Pinedale Array**	**57.41**	**308**	P	**P**	**23 11 21.2**	**+1.2**
	0.7nm,1.0s,baz=88,slow=7.3,SNR=2.1						
PDAR				LR	LR	23 35 00.8	
	comp=Z,39nm,18.6s,baz=104,slow=35						
HFS	**Hagfors**	**57.45**	**31**	P	**P**	**23 11 20.4**	**+0.8**
	1.4nm,0.6s,baz=238,slow=8.3,SNR=5.7						
YKA	**Yellowknife Ar**	**62.41**	**331**	P	**P**	**23 11 51.7**	**-2.0**
	0.6nm,0.8s,baz=96,slow=6.5,SNR=2.8						
MLR	**Muntele Rosu**	**63.05**	**49**	P	**P**	**23 11 59.5**	**+1.0**
	1.2nm,0.9s,baz=150,slow=15,SNR=12						
ARCES	**ARCESS Array B**	**64.56**	**22**	P	**P**	**23 12 07.8**	**0.0**
	2.6nm,0.8s,baz=263,slow=6.0,SNR=6.1						
AKASG	**Malin Array Be**	**65.06**	**43**	P	**P**	**23 12 10.3**	**-1.1**
	0.8nm,0.5s,baz=272,slow=5.9,SNR=3.3						
YBH	**Yreka Blue Hor**	**67.21**	**308**	LR	LR	23 40 52.7	
	comp=Z,42nm,18.9s,baz=110,slow=35						
BRTR	**Keskin Array B**	**69.30**	**54**	P	**P**	**23 12 38.5**	**-0.2**
	1.1nm,0.9s,baz=256,slow=5.0,SNR=6.3						
ILAR	**Eielson Array**	**76.44**	**334**	P	**P**	**23 13 20.6**	**+0.1**
	0.5nm,0.7s,baz=74,slow=4.6,SNR=5.4						

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*ISCJB **07** 23:31:40.3±0.4, 55°.67S±0°.06×27°.3W±0°.1, h10^{km}, mb4.8/24, MS4.0/12, Error ellipse: s-maj=10.7km s-min=7.3km az=43.6*

*NEIC **07** 23:31:46.3±1.5, 55°.70S×27°.32W, h43^{km}±12^{km}, mb4.7/14, Error ellipse: s-maj=10.2km s-min=6.8km az=47.0*

*IDC **07** 23:31:47.6±2.3, 55°.74S×27°.28W, h52^{km}±20^{km}, mb4.6/15, mb1 4.6/16, mb1mx4.3/31, mbtmp4.8/16, ML4.5/1, MS4.0/13, Ms1 3.9/13, ms1mx3.8/30, Error ellipse: s-maj=16.1km s-min=12.9km az=66.0*

ISC 07 23:31:41.7±0.4**, 55°.71S**±0°.09×**27°.30W**±0°.09**, h10^{km}, n95, σ1^{s}54**/89**, mb4.8**/23**, MS4.0**/12**, 1C, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	**Hope Point**	**5.48**	**281**	*e*Pn	**Pn**	**23 33 04.3**	**+1.0**
VNA1	**Neumayer--Stat**	**17.14**	**158**	P	**P**	**23 35 47.3**	**+4.8**
VNA3	**Neumayer Olymp**	**17.34**	**161**	P	**P**	**23 35 46.3**	**+1.5**
EFI	**East Falkland**	**18.57**	**270**	*e*P	**P**	**23 35 58.4**	**-0.1**
	125nm,1.4s						
SNAA	**Sanae**	**19.08**	**156**	P	**Pn**	**23 36 05.4**	**+0.6**
SNAA	**Sanae**	**19.08**	**156**	P	**Pn**	**23 36 05.1**	**+0.3**
	1.6nm,0.3s,baz=304,slow=9.9,SNR=117						
SNAA				PcP	**PcP**	**23 40 27.7**	**-0.2**
	0.3nm,0.3s,baz=288,slow=6.4,SNR=7.1						
SNAA				LR	LR	23 42 05.8	
	comp=Z,212nm,20.6s,baz=308,slow=32						
SNAA				ScP	**ScP**	**23 43 58.3**	**-5.1**
	0.1nm,0.3s,baz=286,slow=0.3,SNR=11						
SNAA	**Sanae**	**19.08**	**156**	*e*P	**Pn**	**23 36 05.2**	**+0.3**
	26nm,1.0s						
SNAA				PcP	**PcP**	**23 40 27.7**	**-0.2**
SNAA				ScP	**ScP**	**23 43 58.3**	**-5.1**
PMSA	**Palmer Station**	**20.08**	**228**	P	Pn	23 36 17.2	+0.6
	68nm,1.1s,baz=79,slow=6.2,SNR=8.8						
PMSA				LR	LR	23 42 41.0	
	comp=Z,394nm,21.1s,baz=81,slow=33						
TRQA	**Tornquist**	**29.13**	**293**	*e*P	**P**	**23 37 43.2**	**+0.6**
	15nm,0.8s						
SYO	**Syowa Base**	**31.89**	**141**	⇑*e*P	**P**	**23 38 07.0**	**+0.4**
QSPA	**South Pole Qui**	**34.54**	**180**	P	**P**	**23 38 30.2**	**+0.2**
	13nm,0.6s,baz=194,slow=3.1,SNR=69						
QSPA				PcP	**PcP**	**23 41 03.4**	**-1.0**
	3.4nm,0.6s,baz=75,slow=4.6,SNR=3.8						
QSPA				ScP	**ScP**	**23 44 44.4**	**-5.0**
	0.9nm,0.6s,baz=219,slow=1.7,SNR=3.9						
QSPA	**South Pole Qui**	**34.54**	**180**	*e*P	**P**	**23 38 30.8**	**+0.7**
	196nm,1.2s						
QSPA				PcP	**PcP**	**23 41 03.4**	**-1.0**
QSPA				ScP	**ScP**	**23 44 44.4**	**-5.0**
CPUP	**Villa Florida**	**36.54**	**311**	P	**P**	**23 38 48.1**	**+0.8**
	28nm,0.9s,baz=144,slow=7.9,SNR=35						
CPUP				LR	LR	23 51 52.2	
	comp=Z,195nm,20.2s,baz=142,slow=33						
CPUP	**Villa Florida**	**36.54**	**311**	*e*P	**P**	**23 38 47.8**	**+0.5**
	32nm,1.0s						
ROC1	**El Roble**	**37.77**	**288**	*e*P	**P**	**23 38 57.1**	**-0.9**
	20nm,0.8s						
MAW	**Mawson**	**40.46**	**144**	P	**P**	**23 39 20.7**	**+0.9**
	4.8nm,0.5s,baz=231,slow=6.4,SNR=23						
MAW				PcP	**PcP**	**23 41 22.5**	**+0.3**
	2.3nm,0.8s,baz=90,slow=3.0,SNR=2.8						
MAW				LR	LR	23 53 54.8	
	comp=Z,74nm,20.0s,baz=240,slow=33						
MAW	**Mawson**	**40.46**	**144**	*e*P	**P**	**23 39 21.1**	**+1.3**
	2.2nm,1.1s						
MAW				PcP	**PcP**	**23 41 22.5**	**+0.3**
SUR	**Sutherland**	**40.61**	**75**	P	**P**	**23 39 21.3**	**-0.4**
	13nm,0.9s,baz=22,slow=19,SNR=2.3						
GO03	**Copiap**	**41.61**	**294**	*e*P	**P**	**23 39 29.9**	**0.0**
	28nm,1.1s						
GO02	**Mina Guanaco**	**43.28**	**297**	*e*P	**P**	**23 39 44.2**	**+0.6**
	52nm,0.6s						
BOSA	**Boshof**	**45.95**	**76**	P	**P**	**23 40 05.1**	**+0.3**
	6.7nm,1.0s,baz=218,slow=7.1,SNR=8.1						
BOSA				LR	LR	23 56 08.5	
	comp=Z,235nm,19.0s,baz=207,slow=32						
SBA	**Scott Base**	**46.42**	**184**	*e*P	**P**	**23 40 09.1**	**+1.4**
	5.1nm,0.9s						
VNDA	**Vanda**	**46.91**	**183**	P	**P**	**23 40 11.8**	**+0.2**
	4.9nm,0.6s,baz=183,slow=6.7,SNR=64						
VNDA	**Vanda**	**46.91**	**183**	*e*P	**P**	**23 40 12.7**	**+1.0**
	5.5nm,0.7s						
H10S2	**ASCENSION HYDR**	**47.69**	**17**	T	T	00 32 15.6	
	baz=190,slow=75,SNR=598						
H10S3	**ASCENSION HYDR**	**47.69**	**17**	T	T	00 32 36.5	
	baz=190,slow=75,SNR=410						
H10S1	**ASCENSION HYDR**	**47.71**	**17**	T	T	00 32 41.5	
	baz=190,slow=75,SNR=430						
H10N1	**ASCENSION HYDR**	**48.81**	**17**	T	T	00 34 07.5	
	baz=188,SNR=130						
H10N3	**ASCENSION HYDR**	**48.81**	**17**	T	T	00 34 04.5	
	baz=188,SNR=306						
H10N2	**ASCENSION HYDR**	**48.82**	**17**	T	T	00 34 07.2	
	baz=188,SNR=225						
LPAZ	**La Paz**	**50.13**	**305**	P	**P**	**23 40 38.7**	**+1.0**
	17nm,0.5s,baz=127,slow=5.1,SNR=63						
LPAZ				LR	LR	00 03 30.2	
	comp=Z,139nm,19.5s,baz=125,slow=38						
LPAZ	**La Paz**	**50.13**	**305**	*e*P	**P**	**23 40 38.8**	**+1.0**
	22nm,0.6s						
CASY	**Casey**	**54.25**	**160**	*e*P	**P**	**23 41 07.7**	**+0.6**
	6.0nm,1.1s						
SAML	**Samuel**	**54.52**	**315**	*e*P	**P**	**23 41 09.8**	**+0.1**
	28nm,1.0s						
NNA	**Nana**	**58.03**	**299**	P	**P**	**23 41 34.2**	**-0.6**
	8.3nm,0.5s,baz=214,slow=15,SNR=3.3						
DBIC	**Dimbokro**	**64.88**	**25**	P	**P**	**23 42 21.5**	**+0.6**
	1.5nm,0.6s,baz=162,slow=3.2,SNR=2.9						
DBIC				LR	LR	00 03 46.7	
	comp=Z,91nm,21.4s,baz=118,slow=30						
OTAV	**Otavalo**	**69.41**	**304**	*e*P	**P**	**23 42 50.1**	**-0.3**
	14nm,1.4s						
RUSC	**La Rusia**	**72.03**	**311**	*e*P	**P**	**23 43 05.1**	**-1.2**
	6.2nm,1.2s						
KOWA	**Kowa**	**72.63**	**24**	P	**P**	**23 43 10.9**	**+1.7**
	4.9nm,0.8s,baz=187,slow=7.5,SNR=8.6						
KOWA				LR	LR	00 09 08.4	
	comp=Z,70nm,20.1s,baz=176,slow=31						
PCRV	**Puerto La Cruz**	**72.64**	**321**	P	**P**	**23 43 09.8**	**+0.4**
	27nm,0.6s,baz=148,slow=4.2,SNR=18						
TOA0	**Torodi Ar. Sit**	**72.79**	**30**	*e*P	**P**	**23 43 10.8**	**+0.7**
TORD	**Torodi Ar. Bea**	**72.79**	**30**	P	**P**	**23 43 10.5**	**+0.3**
	11nm,0.5s,baz=200,slow=5.8						
KMBO	**Kilima Mbogo**	**74.97**	**69**	LR	LR	00 13 32.8	
	comp=Z,124nm,21.0s,baz=198,slow=33						
RKT	**Rikitea**	**80.58**	**243**	*e*T	T	01 12 25.2	
	1.7nm,0.2s						
TBI	**Tubuai**	**87.25**	**231**	*e*LR	LR	00 12 13.5	
	138nm,25.2s						
ATD	**Arta Tunnel**	**88.59**	**67**	LR	LR	00 20 50.3	
	comp=Z,73nm,21.9s,baz=280,slow=33						
MDT	**Midelt**	**90.28**	**19**	P	**P**	**23 44 46.4**	**+4.0**
	2.6nm,0.8s,baz=224,slow=2.9,SNR=4.4						
RAO	**Raoul Island**	**91.73**	**205**	LR	LR	00 16 21.0	
	comp=Z,238nm,21.8s,baz=168,slow=29						
STKA	**Stephens Creek**	**92.25**	**171**	P	**P**	**23 44 50.0**	**-1.7**
	1.6nm,0.5s,baz=119,slow=3.9,SNR=5.3						
PPT2	**Papeete2**	**92.33**	**234**	*e*LR	LR	00 14 26.9	
	154nm,27.5s						
KEST	**Kesra**	**96.31**	**29**	LR	LR	00 24 30.0	
	comp=Z,58nm,20.0s,baz=302,slow=33						
ASAR	**Alice Springs**	**99.34**	**163**	P	**Pdif**	**23 45 23.1**	**-1.0**
	1.8nm,0.8s,baz=182,slow=4.2,SNR=23						
AS01	**Alice Springs**	**99.34**	**163**	*e*P	**Pdif**	**23 45 22.7**	**-1.4**
VAE	**Valguarnera**	**99.40**	**32**	LR	LR	00 25 01.5	
	comp=Z,59nm,19.0s,baz=125,slow=32						
DZM	**Mont Dzumac**	**101.65**	**193**	*e*LR	LR	00 18 47.5	
	624nm,23.7s						
WRA	**Warramunga Arr**	**103.05**	**162**	Pdiff	**Pdif**	**23 45 39.4**	**-1.2**
	0.5nm,0.6s,baz=194,slow=4.4,SNR=6.8						
WRA				PKKPbc	**PKKPbc**	**00 01 35.9**	**+1.4**
	0.1nm,0.4s,baz=1.0,slow=2.9,SNR=6.7						
HFS	**Hagfors**	**119.99**	**22**	PKP	**PKPdf**	**23 50 29.2**	**-1.8**
	1.1nm,0.9s,baz=251,slow=14,SNR=3.3						
PDAR	**Pinedale Array**	**120.11**	**302**	PKP	**PKPdf**	**23 50 31.3**	**-0.8**
	0.2nm,0.3s,baz=98,slow=5.1,SNR=5.0						
NV01	**Mina Array Sit**	**121.20**	**293**	*e*PKPdf	**PKPdf**	**23 50 34.5**	**+0.2**
NVAR	**Mina Array Bea**	**121.20**	**293**	PKP	**PKPdf**	**23 50 34.5**	**+0.2**
	0.7nm,0.5s,baz=129,slow=3.0,SNR=8.2						
FINES	**FINESS Array B**	**124.11**	**28**	PKP	**PKPdf**	**23 50 37.5**	**-1.3**
	1.1nm,0.5s,baz=139,slow=1.9,SNR=13						
CMAR	**Chiang Mai Arr**	**125.24**	**110**	PKP	**PKPdf**	**23 50 42.2**	**-0.2**
	0.9nm,0.3s,baz=228,slow=4.2,SNR=4.3						
BMO	**Blue Mountains**	**125.42**	**299**	*e*PKPdf	**PKPdf**	**23 50 41.7**	**-0.4**
KSH	**Kashi**	**128.53**	**74**	*e*PKP	**PKPdf**	**23 50 45.0**	**-3.2**
KSH				AMB	AMB		
	comp=Z,37nm,4.5s						
ARCES	**ARCESS Array B**	**130.65**	**22**	PKP	**PKPdf**	**23 50 50.6**	**-0.6**
	2.7nm,0.8s,baz=279,slow=2.3,SNR=8.3						
BVAR	**Borovoye Array**	**134.65**	**57**	PKP	**PKPdf**	**23 50 59.4**	**+0.3**
	0.7nm,0.6s,baz=158,slow=1.6,SNR=5.2						
BVAR	**Borovoye Array**	**134.65**	**57**	P	**PKPdf**	**23 50 59.4**	**+0.3**
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
YKA	**Yellowknife Ar**	**135.87**	**318**	PKP	**PKPdf**	**23 51 00.4**	**-0.7**
	comp=Z,2.4nm,0.5s,baz=127,slow=2.3,SNR=19						
KURBB	**Kurchatov Arra**	**137.21**	**64**	PKP	**PKPdf**	**23 51 03.6**	**-0.4**
	comp=Z,0.4nm,0.7s,baz=250,slow=2.7,SNR=3.4						
KURK	**Kurchatov**	**137.31**	**64**	PKP	**PKPdf**	**23 51 03.6**	**-0.5**
RES	**Resolute Bay**	**137.51**	**339**	PKP	**PKPdf**	**23 51 03.0**	**-0.8**
	comp=Z,2.4nm,0.8s,baz=108,slow=6.4,SNR=2.7						
WMQ	**Urumqi**	**137.90**	**78**	PKP	**PKPdf**	**23 51 07.2**	**+1.6**
LZH	**Lanzhou**	**141.73**	**100**	*e*PKP	**PKPdf**	**23 51 10.2**	**-2.8**
LZH				AMB	AMB		
	comp=Z,230nm,6.0s						
ZALV	**Zalesovo Beam**	**142.27**	**63**	PKhKP	PKPpre	23 51 09.4	
	comp=Z,0.7nm,0.4s,baz=231,slow=1.3,SNR=3.3						
INK	**Inuvik**	**145.50**	**321**	*e*PKPdf	**PKPdf**	**23 51 18.1**	**-0.2**
DAWY	**Dawson**	**146.51**	**312**	*e*PKPdf	**PKPbc**	**23 51 21.2**	**-0.5**
NJ2	**Nanjing**	**146.57**	**121**	*e*PKPbc	**PKPdf**	**23 51 21.6**	**+0.3**
EGAK	**Eagle**	**147.46**	**313**	*e*PKPdf	**PKPbc**	**23 51 23.9**	**-0.5**
DIV	**Divide**	**148.40**	**305**	*e*PKPbc	**PKPbc**	**23 51 27.3**	**+0.3**
KLU	**Klutina**	**148.58**	**306**	*e*PKPbc	**PKPbc**	**23 51 28.0**	**+0.5**
HHC	**Hu-ho-hao-te**	**149.38**	**102**	*e*PKPbc	**PKPdf**	**23 51 26.2**	**+0.4**
ILAR	**Eielson Array**	**149.84**	**312**	PKPbc	**PKPbc**	**23 51 29.8**	**-0.7**
	comp=Z,17nm,0.9s,baz=150,slow=0.9,SNR=122						
ILAR	**Eielson Array**	**149.84**	**312**	P	**PKPbc**	**23 51 29.8**	**-0.7**
ILAR				pmax	pmax		
	comp=Z,17nm,0.9s						
ILB	**Eielson Array**	**149.84**	**312**	*e*PKPbc	**PKPbc**	**23 51 29.9**	**-0.7**
ILB	**Eielson Array**	**149.84**	**312**	*e*P	**PKPbc**	**23 51 29.7**	**-0.7**
KDAK	**Kodiak Island**	**150.61**	**297**	*e*PKPbc	**PKPbc**	**23 51 32.4**	**-0.1**
SONM	**Songino Array**	**150.77**	**86**	PKPbc	**PKPbc**	**23 51 33.2**	**-0.1**
	comp=Z,5.5nm,0.6s,baz=218,slow=3.4,SNR=26						
OHAK	**Old Harbor**	**150.77**	**296**	*e*PKPbc	**PKPbc**	**23 51 31.8**	**-1.0**
SONA1	**Songino Array**	**150.78**	**86**	*e*PKPbc	**PKPbc**	**23 51 33.1**	**-0.3**
TRF	**Thorofare Moun**	**151.04**	**309**	*e*PKPbc	**PKPbc**	**23 51 33.5**	**0.0**
TLY	**Talaya**	**151.17**	**77**	PKPbc	**PKPbc**	**23 51 33.4**	**-0.6**
	comp=Z,1.4nm,0.4s,baz=243,slow=6.7,SNR=3.5						
SKT	**Skwentna**	**151.29**	**306**	*e*PKPbc	**PKPbc**	**23 51 33.8**	**-0.2**
TOLK	**Toolik Lake Re**	**151.38**	**320**	*e*PKPbc	**PKPbc**	**23 51 33.4**	**-0.7**
BPAW	**Bear Paw Mtn.**	**151.46**	**310**	*e*PKPbc	**PKPbc**	**23 51 34.0**	**-0.3**
PPLA	**Purkeypile**	**151.78**	**307**	*e*PKPbc	**PKPbc**	**23 51 35.2**	**0.0**

JMA 07 23:34:33.2, 35°.24N×**135°.24E, h12^{km}**±1^{km}**, M2.5, Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWT	**Wachi**	**0.14**	**72**	P	Pg	23 34 36.6	0.0
JWT				S	Sg	23 34 38.8	-0.2
JKY	**Yasaka**	**0.40**	**344**	P	Pg	23 34 41.3	+0.1
JKY				S	Sg	23 34 47.0	+0.4
JKS	**Kasai**	**0.41**	**232**	P	Pg	23 34 41.4	0.0
JKS				S	Sg	23 34 47.0	+0.1
JKSM	**Kasumi**	**0.58**	**307**	P	Pg	23 34 44.5	-0.1
JKSM				S	Sg	23 34 52.3	-0.1
JHE	**Heguri**	**0.69**	**148**	P	Pg	23 34 46.3	-0.3
JHE				S	Sg	23 34 55.5	-0.2
JAJ2	**Tsuna**	**0.87**	**200**	P	Pg	23 34 49.6	-0.4
JAJ2				S	Sg	23 35 01.0	-0.3
JAD	**Aida**	**0.93**	**252**	P	Pg	23 34 50.3	-0.8
JAD				S	Sg	23 35 02.5	-0.7
MAT	**Matsushiro**	**2.74**	**61**	P	Pg	23 35 24.7	-1.0
MAT				S	Sg	23 36 00.3	-0.9

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*NIED **07** 23:42:00, 33°.70N×136°.10E, h400^{km}, Mw4.6 Best double couple: $M_0$9.13000×10^{15} NP1:ϕ_s55.00000°, δ40.00000°, λ163.00000°. NP2:ϕ_s158.00000°, δ79.00000°, λ51.00000°.*

*JMA **07** 23:42:41.7±0.1, 33°.70N×136°.12E, h411^{km}±1^{km}, M3.6*

*IDC **07** 23:42:42.5±0.8, 33°.72N×136°.03E, h409^{km}±8^{km}, mb3.5/28, mb1 3.6/35, mb1mx3.5/77, mbtmp4.3/35, Error ellipse: s-maj=9.9km s-min=8.9km az=108.0*

*MOS **07** 23:42:42.1±0.8, 33°.85N×136°.01E, h408^{km}, mb4.3/44, Error ellipse: s-maj=8.4km s-min=5.9km az=89.7*

*ISCJB **07** 23:42:42.2±0.2, 33°.80N±0°.04×136°.03E±0°.03, h410^{km}±1^{km}, mb4.2/136, Error ellipse: s-maj=6.3km s-min=3.7km az=157.3*

*NEIC **07** 23:42:42.9±0.3, 33°.75N×136°.03E, h405^{km}±2^{km}, mb4.4/99, Error ellipse: s-maj=5.1km s-min=3.0km az=159.0*

ISC 07 23:42:42.6±0.5**, 33°.78N**±0°.05×**136°.02E**±0°.04**, h405^{km}**±4^{km}**, n261, σ1^{s}09**/290**, mb4.3**/136**, 9C-11D, Near south coast of western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWZ	**Kozaga**	**0.36**	**225**	P	**P**	**23 43 32.6**	**-0.3**
JWZ				S	**S**	**23 44 12.5**	**-0.7**
JWY	**Kouya**	**0.56**	**321**	P	**P**	**23 43 33.7**	**+0.6**
JWY				S	**S**	**23 44 13.9**	**0.0**
JIE	**Ise**	**0.83**	**43**	P	**P**	**23 43 34.1**	**+0.5**
JIE				S	**S**	**23 44 15.2**	**+0.4**
JAI	**Aioi**	**1.30**	**271**	P	**P**	**23 43 35.9**	**+0.6**
JAI				S	**S**	**23 44 18.8**	**+0.9**
JWT	**Wachi**	**1.58**	**341**	P	**P**	**23 43 37.0**	**+0.5**
JWT				S	**S**	**23 44 20.6**	**+0.4**
INU	**Inuyama**	**1.77**	**28**	*e*P	**P**	**23 43 38.1**	**+0.6**
JMN	**Monobe**	**1.78**	**269**	P	**P**	**23 43 38.6**	**+0.9**
JMN				S	**S**	**23 44 23.3**	**+1.0**
JKG	**Kaga**	**2.50**	**6**	P	**P**	**23 43 42.7**	**+0.6**
JKG				S	**S**	**23 44 30.7**	**+0.2**
JHS	**Saijyo**	**2.69**	**298**	P	**P**	**23 43 44.5**	**+0.9**
JHS				S	**S**	**23 44 34.4**	**+1.2**
JTO	**Tosashimizu**	**2.85**	**252**	P	**P**	**23 43 45.3**	**+0.5**
JTO				S	**S**	**23 44 35.2**	**-0.2**
JOD2	**Odawara 2**	**2.93**	**59**	P	**P**	**23 43 45.3**	**-0.1**
JOD2				S	**S**	**23 44 36.0**	**-0.6**
JNA	**Nagahama**	**2.96**	**267**	P	**P**	**23 43 46.8**	**+1.1**
JNA				S	**S**	**23 44 37.7**	**+0.7**
JHJ	**Hachijo jima 2**	**3.22**	**101**	P	**P**	**23 43 47.8**	**0.0**
	95nm,0.3s,baz=60,slow=20,SNR=35						
JHJ				S	**S**	**23 44 45.2**	**+4.3**
	76nm,0.3s,baz=301,slow=24,SNR=7.4						
JHJ2	**Mitsune**	**3.25**	**101**	*e*P	**P**	**23 43 48.0**	**0.0**
MAJO	**Matsushiro**	**3.29**	**32**	*e*P	**P**	**23 43 48.5**	**+0.2**
MAJO	**Matsushiro**	**3.29**	**32**	*d i*P	**P**	**23 43 48.1**	**-0.2**
MAT	**Matsushiro**	**3.29**	**32**	P	**P**	**23 43 48.3**	**0.0**
MAT				S	**S**	**23 44 41.4**	**-0.5**
MJAR	**Matsushiro Arr**	**3.29**	**33**	P	**P**	**23 43 48.3**	**0.0**
	12nm,0.3s,baz=207,slow=8.5,SNR=160						
MJAR				S	**S**	**23 44 41.1**	**-0.8**
	4.6nm,0.3s,baz=211,slow=17,SNR=9.8						
MJB9	**Matsu-Tunnel**	**3.29**	**32**	*e*P	**P**	**23 43 48.5**	**+0.2**
JNU	**Nakatsue**	**4.35**	**263**	P	**P**	**23 43 58.9**	**+0.8**
	3.7nm,0.3s,baz=65,slow=4.2,SNR=46						
JNU				S	**S**	**23 45 00.4**	**+0.6**
	baz=236,slow=16,SNR=3.2						
JNU	**Nakatsue**	**4.35**	**263**	*e*P	**P**	**23 43 59.1**	**+1.0**
KSRS	**Korea Array**	**7.54**	**301**	P	**P**	**23 44 33.3**	**+0.6**
	0.8nm,0.3s,baz=121,slow=11,SNR=38						
TJN	**Taejon**	**7.55**	**292**	*d i*P	**P**	**23 44 33.6**	**+0.8**
KS15	**Wonju Array Si**	**7.56**	**301**	*e*P	**P**	**23 44 33.7**	**+0.8**
KS01	**Wonju Array Si**	**7.57**	**301**	*e*P	**P**	**23 44 33.3**	**+0.2**
INCN	**Inchon**	**8.48**	**298**	*e*P	**P**	**23 44 43.9**	**+0.8**
INCN	**Inchon**	**8.48**	**298**	*e*P	**P**	**23 44 43.9**	**+0.8**
JCJ	**Chichijima**	**8.53**	**140**	P	**P**	**23 44 40.1**	**-3.7**
	baz=263,slow=19						
JCJ				S	S	23 46 12.5	-11
	62nm,0.3s,baz=288,slow=19,SNR=27						
JOW	**Kunigami**	**9.63**	**226**	P	**P**	**23 44 56.2**	**+0.2**
	4.2nm,0.3s,baz=34,slow=9.0,SNR=5.7						
JOW	**Kunigami**	**9.63**	**226**	*e*P	**P**	**23 44 56.0**	**0.0**
ERM	**Erimo**	**9.96**	**32**	*e*P	**P**	**23 44 58.7**	**-0.7**
ERM	**Erimo**	**9.96**	**32**	*d i*P	**P**	**23 44 58.6**	**-0.8**
ERM				pmax	pmax		
	comp=Z,136nm,1.7s						
USRK	**Ussuriysk Ar.**	**10.86**	**344**	P	**P**	**23 45 09.7**	**+0.4**
	baz=160,slow=11						
ASAJ	**Asahikawa**	**11.51**	**24**	P	**P**	**23 45 16.2**	**-0.3**
	comp=Z,3.1nm,0.3s,baz=228,slow=14,SNR=35						
ASAJ				S	**S**	**23 47 20.0**	**-3.8**
	comp=Z,1.3nm,0.3s,baz=344,slow=33,SNR=18						
ASAJ	**Asahikawa**	**11.51**	**24**	*e*P	**P**	**23 45 16.4**	**-0.1**
YSS	**Yuzh-Sakhalins**	**14.11**	**19**	*e*P	**P**	**23 45 46.0**	**+1.0**
YSS	**Yuzh-Sakhalins**	**14.11**	**19**	⇓*i*P	**P**	**23 45 46.2**	**+1.2**
YSS				*e*S	**S**	**23 48 16.5**	**+0.6**
YSS				pmax	pmax		

```
      comp=Z,50nm,0.9s
YSS                                pmax    pmax
      comp=N,40nm,1.0s
YSS                                smax    smax
      comp=N,30nm,0.8s
YSS                                smax    smax
      comp=E,20nm,1.1s
KUR   Kuril'sk          14.62  35  eP      P         23 45 51.6 +1.1
KUR                                S       S         23 48 32.6 +6.5
KUR                                pmax    pmax
      comp=Z,43nm,0.9s
KUR                                pmax    pmax
      comp=Z,356nm,5.2s
KUR                                smax    smax
      comp=E,584nm,3.2s
KUR                                smax    smax
      comp=N,372nm,3.1s
KLR   Kul'dur           15.76 350  P       P         23 46 01.9 -0.9
      comp=N,0.0nm,0.3s,baz=165,slow=9.2,SNR=13
KLR   Kul'dur           15.76 350deP       P         23 46 02.2 -0.5
GRNR  Gornyy            16.98   1  eP      P         23 46 19.1 +3.3
GRNR                               pmax    pmax
      comp=Z,84nm,1.0s
BJT   Baijiatuau        17.04 297  eP      P         23 46 16.8 +0.2
      comp=Z,116nm,1.3s
BJT   Baijiatuau        17.04 297  eP      P         23 46 16.8 +0.2
BJT                                pmax    pmax
      comp=Z,116nm,1.3s
TPUB  Ta-pu             17.06 236  eP      P         23 46 18.3 +1.2
      comp=Z,15nm,0.8s
TYV   Tymovskoe         17.75  14  eP      P         23 46 24.2 +0.3
TYV                                eS      S         23 49 19.2 -7.9
TYV                                pmax    pmax
      comp=Z,18nm,1.0s
TYV                                smax    smax
      comp=N,400nm,8.1s
HIA   Hailar            19.62 327⇑eP      P         23 46 44.7 +1.7
HIA                                pmax    pmax
      comp=Z,13nm,0.9s
HHC   Hu-ho-hao-te      20.65 297  eP      P         23 46 52.9 +0.3
HHC                                sP      sP        23 48 46.2 +2.2
HHC                                S       S         23 50 16.5 -0.1
HHC                                pmax    pmax
      comp=Z,27nm,1.0s
HHC                                pmax    pmax
      comp=Z,110nm,4.6s
ZEA   Zeya              20.90 345  eP      P         23 46 55.4 +0.9
ZEA                                pmax    pmax
      comp=Z,41nm,1.0s
SKR   Severo-Kuril's    22.39  35⇑eP      P         23 47 06.9 -1.2
XAN   Xi'an             22.47 278  P       P         23 47 09.0 -0.2
XAN                                pmax    pmax
      comp=Z,16nm,0.9s
ENH   Enshi             22.74 268  eP      P         23 47 11.5 -0.2
      comp=Z,17nm,0.7s
PEA0B Petropavlovsk-    24.74  32  eP      P         23 47 29.9 +0.6
      comp=Z,30nm,1.0s
PETK  Petropavlovsk-    24.74  32  P       P         23 47 29.9 +0.6
      comp=Z,18nm,0.9s,baz=212,slow=4.6
PETK  Petropavlovsk-    24.74  32  eP      P         23 47 29.3  0.0
PET   Petropavlovsk     25.12  33  eP      P         23 47 33.1 +0.5
PET                                pmax    pmax
      comp=Z,20nm,0.9s
ULN   Ulaanbaatar       25.86 312  eP      P         23 47 40.9 +1.4
      comp=Z,16nm,1.4s
ULN   Ulaanbaatar       25.86 312d iP      P         23 47 40.8 +1.4
ULN                                pmax    pmax
      comp=Z,12nm,1.4s
SONA1 Songino Array     26.26 311  eP      P         23 47 44.3 +1.3
SONM  Songino Array     26.26 311  P       P         23 47 44.7 +1.7
      comp=Z,3.8nm,0.6s,baz=114,slow=8.8,SNR=17
GYA   Guiyang           26.36 262  P       P         23 47 43.6 -0.5
GYA                                pP      PP        23 48 59.0 +4.9
GYA                                sP      sP        23 49 45.9 +2.0
GYA                                S       S         23 51 48.2 +0.9
GYA                                sS      ScP       23 53 51.8 -6.4
GYA                                ScP     SS        23 53 57.8 -1.7
GYA                                pmax    pmax
      comp=Z,10.0nm,0.8s
MA2   Magadan           27.58  16  P       P         23 47 54.7 +0.4
      comp=Z,24nm,0.8s,baz=198,slow=7.9,SNR=29
MA2   Magadan           27.58  16  eP      P         23 47 54.9 +0.5
      comp=Z,28nm,0.9s
MA2   Magadan           27.58  16  eP      P         23 47 54.9 +0.5
MA2                                pmax    pmax
      comp=Z,28nm,0.9s
YAK   Yakutsk           28.55 354  eP      P         23 48 00.6 -2.2
YAK                                e*PP    pP        23 49 14.0 -1.9
YAK                                e                 23 50 58.1
YAK                                eS      S         23 52 19.8 -0.7
YAK                                e*SS    sS        23 54 33.4 -2.3
YAK                                e                 23 57 52.8
YAK                                pmax    pmax
      comp=Z,16nm,0.9s
YAK                                pmax    pmax
      comp=N,5.0nm,1.1s
YAK                                smax    smax
      comp=N,15nm,1.8s
YAK                                smax    smax
      comp=E,12nm,1.5s
TLY   Talaya            29.42 317  P       P         23 48 12.2 +1.6
      comp=E,1.2nm,0.5s,baz=153,slow=7.5,SNR=3.5
TLY   Talaya            29.42 317  eP      P         23 48 11.6 +1.0
      comp=E,1.8nm,0.8s
TLY   Talaya            29.42 317  eP      P         23 48 11.6 +1.0
TLY                                pmax    pmax
      comp=Z,2.0nm,0.8s
SEY   Seymchan          30.94  15  P       P         23 48 23.9 +0.3
      comp=Z,5.9nm,0.9s,baz=208,slow=7.5,SNR=22
SEY   Seymchan          30.94  15⇓eP      P         23 48 24.3 +0.7
NONG  Nongkai           33.28 250  P       P         23 48 45.4 +1.0
      comp=Z,0.3nm,1.1s
PBKT  Sadao Pong        35.83 250  P       P         23 49 06.9 +0.9
      comp=Z,10nm,1.5s,comp=Z,761nm
CHTO  Chiang Mai        36.21 255  eP      P         23 49 09.4 +0.2
      comp=Z,5.2nm,0.9s
CHTO  Chiang Mai        36.21 255  eP      P         23 49 09.4 +0.2
CHTO                               pmax    pmax
      comp=Z,5.0nm,0.9s
CMAR  Chiang Mai Arr    36.40 255  P       P         23 49 09.8 -0.9
      comp=Z,1.3nm,0.4s,baz=57,slow=7.7,SNR=9.4
CMAR  Chiang Mai Arr    36.40 255  P       P         23 49 09.9 -0.9
CMAR                               pmax    pmax
      comp=Z,2.0nm,0.6s
CM01  Chiang Mai Arr    36.41 255  eP      P         23 49 11.2 +0.4
LUWI  Luwuk             36.82 202  eP      P         23 49 14.7 +0.6
      comp=Z,74nm,1.1s
KIWB  Kanaga Island     38.04  47  eP      P         23 49 22.7 -1.2
TIXI  Tiksi             38.12 356  eP      P         23 49 23.8 -0.5
      comp=Z,9.8nm,0.9s
TIXI  Tiksi             38.12 356d iP      P         23 49 24.1 -0.1
TIXI                               pmax    pmax
      comp=Z,11nm,0.9s
BILL  Bilibino          38.42  18  eP      P         23 49 27.0 +0.2
      comp=Z,40nm,0.9s
BILL  Bilibino          38.42  18c iP      P         23 49 26.9 +0.1
BILL                               pmax    pmax
      comp=Z,55nm,1.0s
WMQ   Urumqi            38.49 300  P       P         23 49 29.5 +1.7
WMQ                                pmax    pmax
      comp=Z,11nm,1.5s
WMQ                                pmax    pmax
      comp=Z,83nm,3.7s
GSTR  Great Sitkin T    38.75  47  eP      P         23 49 28.6 -1.1
DGZ   Jazzator, Alta    38.86 309  eP      P         23 49 32.5 +1.6
DGZ                                pmax    pmax
      comp=Z,4.0nm,1.2s
ATKA  Atka Island       39.90  47  eP      P         23 49 38.5 -0.5
      comp=Z,22nm,0.9s
ZAA0  Zalesovo Array    40.98 315  eP      P         23 49 48.5 +0.8
      comp=Z,5.0nm,1.4s
ZALV  Zalesovo Beam     40.98 315  P       P         23 49 47.0 -0.7
      comp=Z,0.7nm,0.3s,baz=79,slow=9.2,SNR=3.6
ZALV                               ScP     ScP       23 54 48.1 -1.0
      comp=Z,1.4nm,0.6s,baz=142,slow=1.1,SNR=5.2
ZALV  Zalesovo Beam     40.98 315  eP      P         23 49 47.8 +0.1
SAUI  Saumlaki          41.78 187  eP      P         23 49 54.0 -0.6
      comp=Z,617nm,1.1s
MK01  Makanchi Array    42.20 304  eP      P         23 49 57.6 -0.1
MK31  Makanchi Array    42.21 304  eP      P         23 49 58.3 +0.5
MK31  Makanchi Array    42.21 304  eP      P         23 49 58.3 +0.5
MKAR  Makanchi Array    42.21 304  P       P         23 49 58.0 +0.2
      comp=Z,1.3nm,0.6s,baz=89,slow=9.9,SNR=19
MKAR                               ScP     ScP       23 54 53.7 -0.6
      comp=Z,0.5nm,0.5s,baz=90,slow=3.8,SNR=5.0
MKAR  Makanchi Array    42.21 304  eP      P         23 49 58.3 +0.5
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      comp=Z,10nm,0.6s
MKAR  Makanchi Array    42.21 304  eP      P         23 49 58.3 +0.5
MKAR                               pmax    pmax
      comp=Z,10.0nm,0.6s
MAKZ  Makanchi          42.42 304  eP      P         23 49 59.8 +0.4
      comp=Z,12nm,1.8s
MAKZ  Makanchi          42.42 304  eP      P         23 49 59.8 +0.4
MAKZ                               pmax    pmax
      comp=Z,12nm,1.8s
NIKH  Nikolski High     43.22  46  eP      P         23 50 04.4 -1.1
      comp=Z,15nm,1.0s
KURK  Kurchatov         44.56 310  eP      P         23 50 16.6 +0.4
      comp=Z,10nm,1.5s
KURK  Kurchatov         44.56 310ceP       P         23 50 16.4 +0.3
KURK                               pmax    pmax
      comp=Z,9.0nm,1.6s
KURBB Kurchatov Arra    44.62 310  P       P         23 50 15.7 -0.9
      comp=Z,0.5nm,0.3s,baz=90,slow=7.6,SNR=9.8
ANM   Nome              46.64  30  eP      P         23 50 31.9 -0.1
      comp=Z,20nm,1.1s
ANM   Nome              46.64  30  eP      P         23 50 31.9 -0.1
ANM                                pmax    pmax
      comp=Z,21nm,1.1s
GSI   Gunungsitoli      48.34 236  eP      P         23 50 44.3 -1.3
      comp=Z,34nm,0.9s
BVAR  Borovoye Array    49.56 314  P       P         23 50 54.2 +0.1
      comp=Z,0.7nm,0.4s,baz=79,slow=7.5,SNR=8.4
BRVK  Borovoye          49.62 314⇑eP      P         23 50 55.5 +0.9
BRVK                               pmax    pmax
      comp=Z,4.0nm,1.7s
KK31  Karatay Array     50.97 301  eP      P         23 51 05.0 +0.2
KK31  Karatay Array     50.97 301  eP      P         23 51 05.0 +0.2
KKAR  Karatay Array     50.97 301  eP      P         23 51 05.0 +0.2
KKAR  Karatay Array     50.97 301  eP      P         23 51 05.0 +0.2
PPLA  Purkeypile        52.32  33  eP      P         23 51 16.2 +1.7
      comp=Z,44nm,1.6s
CAST  Castle Rocks      52.36  33  eP      P         23 51 16.0 +1.4
      comp=Z,15nm,1.2s
KDAK  Kodiak Island     52.43  40  eP      P         23 51 15.1 -0.1
      comp=Z,33nm,0.8s
KDAK  Kodiak Island     52.43  40ceP       P         23 51 15.0 -0.1
FITZ  Fitzroy Crossi    52.53 192  P       P         23 51 14.8 -1.6
      comp=Z,0.7nm,0.4s,baz=22,slow=7.5,SNR=3.3
SKT   Skwentna          52.66  34  eP      P         23 51 17.8 +1.0
      comp=Z,18nm,0.8s
KTH   Kantishna Hill    52.88  32  eP      P         23 51 19.2 +0.8
      comp=Z,16nm,0.9s
MLY   Manley            52.91  31  eP      P         23 51 19.3 +0.7
      comp=Z,17nm,0.9s
CNPM  China Poot        52.98  38  eP      P         23 51 19.7 +0.5
      comp=Z,18nm,0.6s
SUA   Susitna One       53.07  35  eP      P         23 51 21.4 +1.5
      comp=Z,20nm,0.9s
COLD  Coldfoot          53.10  28  eP      P         23 51 21.2 +1.3
      comp=Z,8.2nm,0.7s
COLD                               eS      S         23 58 21.0 +3.0
TRF   Thorofare Moun    53.16  33  eP      P         23 51 21.1 +0.5
      comp=Z,10nm,0.9s
TOLK  Toolik Lake Re    53.34  26  eP      P         23 51 23.0 +1.3
      comp=Z,33nm,0.6s
WRA   Warramunga Arr    53.45 182  P       P         23 51 21.0 -1.9
      comp=Z,2.2nm,0.8s,baz=0.4,slow=7.7,SNR=36
BWN   Browne            53.49  32  eP      P         23 51 23.4 +0.7
      comp=Z,233nm,0.9s
RC01  Rabbit Creek A    53.59  36  eP      P         23 51 23.4  0.0
      comp=Z,30nm,1.2s
MCK   McKinley          53.75  32  eP      P         23 51 25.2 +0.6
      comp=Z,22nm,0.9s
MCK   McKinley          53.75  32  eP      P         23 51 25.2 +0.6
MCK                                pmax    pmax
      comp=Z,22nm,0.9s
PMR   Palmer            53.83  35  eP      P         23 51 25.4 +0.3
      comp=Z,22nm,1.1s
PMR   Palmer            53.83  35  eP      P         23 51 25.4 +0.3
PMR                                pmax    pmax
      comp=Z,22nm,1.1s
GHO   Glory Hole Cre    53.91  35  eP      P         23 51 26.5 +0.6
      comp=Z,80nm,2.0s
MDM   Murphy Dome       53.98  31  eP      P         23 51 27.0 +0.8
      comp=Z,36nm,0.8s
WRH   Wood River Hil    54.07  31  eP      P         23 51 27.4 +0.5
      comp=Z,14nm,1.0s
CCB   Clear Creek Bu    54.18  31  eP      P         23 51 28.2 +0.6
      comp=Z,12nm,1.1s
IL1   Eielson Array     54.56  31  eP      P         23 51 29.6 -0.7
HDA   Harding Lake      54.57  31  eP      P         23 51 30.5 +0.2
      comp=Z,109nm,1.4s
DIV   Divide            55.49  35  eP      P         23 51 36.3 -0.7
      comp=Z,51nm,1.5s
HARP  HAARP             55.60  34  eP      P         23 51 38.5 +0.8
      comp=Z,24nm,0.9s
ARU   Arti              55.90 319  eP      P         23 51 39.6 -0.2
      comp=Z,4.4nm,0.9s
ARU   Arti              55.90 319d iP      P         23 51 40.0 +0.2
ARU                                *PP     pP        23 53 05.0 +1.7
ARU                                                  23 53 49.2
ARU                                S       S         23 58 56.3 +1.1
ARU                                pmax    pmax
      comp=Z,10.0nm,1.7s
BMRM  Bremner River     56.08  35  eP      P         23 51 42.6 +1.5
      comp=Z,27nm,0.8s
RAGM  Ragged Mountai    56.14  36  epP     pP        23 53 07.7 +2.5
ABKAR Akbulak array     56.67 310  eP      P         23 51 45.5 +0.1
CRQM  Cirque            56.82  35  eP      P         23 51 47.4 +0.9
      comp=Z,34nm,1.2s
TGL   Tana Glacier      56.97  35  eP      P         23 51 48.0 +0.6
      comp=Z,21nm,0.9s
BALM  Baldy             57.15  35  eP      P         23 51 48.9 +0.3
      comp=Z,12nm,1.0s
BALM  Baldy             57.15  35  eP      P         23 51 48.9 +0.3
BALM                               pmax    pmax
      comp=Z,13nm,1.0s
AS01  Alice Springs     57.16 182  eP      P         23 51 47.9 -1.2
ASAR  Alice Springs     57.17 182  P       P         23 51 49.5 +0.4
      comp=Z,0.7nm,0.6s,baz=11,slow=12,SNR=15
AKTO  Aktyubinsk        57.57 312  P       P         23 51 52.1 +0.5
      comp=Z,1.6nm,0.6s,baz=62,slow=15,SNR=5.4
SKAG  Skagway           60.93  36  eP      P         23 52 15.4 +1.3
      comp=Z,26nm,1.1s
JIS   Juneau Island     61.77  37  eP      P         23 52 21.3 +1.7
      comp=Z,19nm,1.0s
DLBC  Dease Lake        63.86  36  eP      P         23 52 34.2 +0.8
      comp=Z,16nm,1.0s
ARCES ARCESS Array B    65.45 339  P       P         23 52 42.6 -0.6
      comp=Z,1.4nm,0.6s,baz=61,slow=9.9,SNR=8.0
RES   Resolute Bay      66.79  13  P       P         23 52 52.1 +0.6
      comp=Z,12nm,1.0s,baz=301,slow=6.2,SNR=9.2
RES   Resolute Bay      66.79  13  eP      P         23 52 52.1 +0.6
      comp=Z,11nm,0.9s
RES   Resolute Bay      66.79  13  eP      P         23 52 52.1 +0.6
RES                                pmax    pmax
      comp=Z,11nm,0.9s
OBN   Obninsk           68.01 322⇓eP      P         23 52 59.9 +0.5
OBN                                pmax    pmax
      comp=Z,4.0nm,0.9s
VSR   Storozhevoye      68.42 318⇑eP      P         23 53 02.1 +0.1
VSR                                pmax    pmax
      comp=Z,8.0nm,0.8s
DAG   Danmarks Havn     68.58 354  i P     P         23 53 02.6 +0.1
      comp=Z,8.2nm,0.9s
DAG   Danmarks Havn     68.58 354  i P     P         23 53 02.6 +0.1
DAG                                pmax    pmax
      comp=Z,8.0nm,0.9s
YKW3  Yellowknife Ar    68.74  28  eP      P         23 53 04.2 +0.4
      comp=Z,8.7nm,1.1s
YKA   Yellowknife Ar    68.78  28  P       P         23 53 03.9 -0.1
      comp=Z,3.3nm,0.8s,baz=298,slow=5.7,SNR=13
FINES FINESS Array B    69.58 331  P       P         23 53 07.8 -1.1
      comp=Z,1.7nm,0.6s,baz=80,slow=5.2,SNR=9.9
KBZ   Khabaz            69.61 309  P       P         23 53 09.1 -0.3
      comp=Z,2.0nm,0.8s,baz=70,slow=4.6,SNR=4.2
VSU   Vasula            70.96 328⇓eP      P         23 53 16.9 -0.2
VSU                                pmax    pmax
      comp=Z,37nm,1.1s
LLLB  Lillooet          71.62  41  eP      P         23 53 22.1 +0.8
      comp=Z,10nm,1.0s
NLWA  Neilton Lookou    72.14  45  eP      P         23 53 25.1 +0.8
      comp=Z,15nm,1.0s
SUMG  Summit            73.86 358  eP      P         23 53 34.9 +0.6
      comp=Z,16nm,1.0s
SUMG  Summit            73.86 358  i P     P         23 53 35.3 +1.0
      comp=Z,16nm,1.0s
SUMG  Summit            73.86 358  i P     P         23 53 35.3 +1.0
SUMG                               pmax    pmax
      comp=Z,16nm,1.0s
AKASG Malin Array Be    74.09 321  P       P         23 53 34.2 -1.3
      comp=Z,0.4nm,0.4s,baz=44,slow=8.3,SNR=4.8
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KIEV  Kiev              74.10 321⇑eP      P         23 53 35.6  0.0
KIEV                               pmax    pmax
      comp=Z,4.0nm,1.1s
B08A  Colville Reser    74.22  42  eP      P         23 53 37.0 +0.6
      comp=Z,9.2nm,1.0s
HFS   Hagfors           75.15 334  P       P         23 53 40.4 -1.0
      comp=Z,1.8nm,0.5s,baz=35,slow=3.5,SNR=15
NB2   NORSAR Subarra    75.39 336  P       P         23 53 42.3 -0.5
      comp=Z,1.8nm,0.7s,baz=45,slow=5.9
NEW   Newport           75.50  41  P       P         23 53 43.1 -0.5
      comp=Z,2.0nm,0.6s,baz=177,slow=2.1,SNR=5.4
NEW   Newport           75.50  41  eP      P         23 53 44.3 +0.6
      comp=Z,12nm,1.3s
NEW   Newport           75.50  41  eP      P         23 53 44.3 +0.6
NEW                                pmax    pmax
      comp=Z,12nm,1.3s
PINE  Pine Mountain     75.78  47  eP      P         23 53 46.8 +1.3
      comp=Z,21nm,0.9s
YBH   Yreka Blue Hor    75.81  49  P       P         23 53 45.9 +0.3
      comp=Z,5.8nm,1.1s,baz=291,slow=3.3,SNR=7.8
YBH   Yreka Blue Hor    75.81  49  eP      P         23 53 46.7 +1.1
      comp=Z,7.4nm,1.0s
YBH   Yreka Blue Hor    75.81  49  eP      P         23 53 46.7 +1.1
YBH                                pmax    pmax
      comp=Z,7.0nm,1.0s
E09A  Wood Farm, Sta    75.92  43  eP      P         23 53 47.0 +1.0
      comp=Z,12nm,1.1s
K05A  Summer Lake       76.40  48  eP      P         23 53 50.1 +1.1
      comp=Z,12nm,0.9s
WALA  Waterton Lakes    76.77  39  eP      P         23 53 51.5 +0.7
MOD   Modoc Plateau     77.22  48  eP      P         23 53 53.9 +0.4
      comp=Z,5.1nm,0.9s
BMO   Blue Mountains    77.35  44  eP      P         23 53 54.6 +0.6
      comp=Z,5.1nm,0.8s
BMO   Blue Mountains    77.35  44  eP      P         23 53 54.6 +0.6
BMO                                pmax    pmax
      comp=Z,5.0nm,0.8s
J08A  Circle Bar Ran    77.51  46  eP      P         23 53 54.3 -0.7
      comp=Z,10nm,1.1s
BR131 Keskin Array S    77.61 310  eP      P         23 53 56.2 +0.6
BRTR  Keskin Array B    77.61 310  P       P         23 53 55.7 +0.1
      comp=Z,2.1nm,1.0s,baz=124,slow=3.8,SNR=9.9
WVOR  Wild Horse Val    77.94  47  eP      P         23 53 57.4  0.0
      comp=Z,4.7nm,0.9s
WVOR  Wild Horse Val    77.94  47  eP      P         23 53 57.4  0.0
WVOR                               pmax    pmax
      comp=Z,5.0nm,0.9s
KWP   Kalwaria Pacla    78.10 322  eP      P         23 53 58.4 +0.5
      comp=Z,39nm,0.9s
KWP   Kalwaria Pacla    78.10 322  eP      P         23 53 58.4 +0.5
KWP                                pmax    pmax
      comp=Z,39nm,0.9s
FFC   Flin Flon         78.77  30  eP      P         23 54 00.9 -0.5
      comp=Z,7.1nm,0.8s
FFC   Flin Flon         78.77  30  eP      P         23 54 00.9 -0.5
FFC                                pmax    pmax
      comp=Z,7.0nm,0.8s
PAHR  Pah Rah Range     79.03  50  eP      P         23 54 03.1 -0.2
      comp=Z,7.5nm,1.0s
HRY   Holter Researc    79.31  40  eP      P         23 54 05.8 +1.1
LRM   Limekiln Ridge    79.52  41  eP      P         23 54 06.5 +0.6
YERR  Yerington         79.53  50  eP      P         23 54 06.8 +0.7
      comp=Z,11nm,1.1s
EGMT  Eagleton          79.58  38  eP      P         23 54 06.4 +0.4
      comp=Z,7.6nm,1.0s
HLID  Hailey            79.79  44  eP      P         23 54 08.3 +0.9
      comp=Z,5.3nm,0.9s
BMN   Battle Mountai    79.97  48  eP      P         23 54 09.3 +1.0
      comp=Z,6.7nm,1.1s
BMN   Battle Mountai    79.97  48  eP      P         23 54 09.3 +1.0
BMN                                pmax    pmax
      comp=Z,7.0nm,1.1s
BOZ   Bozeman (W)       80.11  41  eP      P         23 54 09.4 +0.4
      comp=Z,4.8nm,1.0s
BOZ   Bozeman (W)       80.11  41  eP      P         23 54 09.4 +0.4
BOZ                                pmax    pmax
      comp=Z,5.0nm,1.0s
RYN   Ryan              80.20  50  eP      P         23 54 10.2 +0.6
      comp=Z,4.9nm,1.0s
KVN   Kaiserville       80.22  49  eP      P         23 54 10.4 +0.7
      comp=Z,8.4nm,1.1s
KVN   Kaiserville       80.22  49  eP      P         23 54 10.4 +0.7
KVN                                pmax    pmax
      comp=Z,8.0nm,1.1s
NV01  Mina Array Sit    80.45  50  eP      P         23 54 11.2 +0.2
NVAR  Mina Array Bea    80.45  50  P       P         23 54 11.3 +0.3
      comp=Z,1.7nm,0.7s,baz=281,slow=5.2,SNR=13
IMW   Indian Meadow     81.56  42  eP      P         23 54 18.0 +1.3
      comp=Z,6.0nm,0.9s
CLL   Collm             81.60 328  i P     P         23 54 16.3 -0.1
FXWY  Fox Creek         81.67  43  eP      P         23 54 18.3 +1.0
      comp=Z,4.7nm,1.1s
RLMT  Red Lodge         81.70  41  eP      P         23 54 18.0 +0.7
      comp=Z,4.3nm,1.0s
HVU   Hansel Valley     81.83  45  eP      P         23 54 18.6 +0.6
      comp=Z,7.4nm,0.8s
HVU   Hansel Valley     81.83  45  eP      P         23 54 18.6 +0.6
HVU                                pmax    pmax
      comp=Z,7.0nm,0.8s
REDW  Red Top Meadow    81.95  43  eP      P         23 54 19.7 +1.0
      comp=Z,5.7nm,1.2s
DAC   Darwin (Calif)    82.17  51  eP      P         23 54 19.9  0.0
      comp=Z,4.5nm,1.1s
DAC   Darwin (Calif)    82.17  51  eP      P         23 54 19.9  0.0
DAC                                pmax    pmax
      comp=Z,5.0nm,1.1s
BGU   Big Grassy Mou    82.21  46  eP      P         23 54 20.9 +0.9
      comp=Z,4.1nm,1.0s
R11A  Troy Canyon, C    82.22  49  eP      P         23 54 20.7 +0.6
      comp=Z,7.0nm,1.2s
SPUT  South Promonto    82.32  45  eP      P         23 54 21.5 +0.9
      comp=Z,6.9nm,1.2s
TPNV  Topopah Spring    82.64  50  eP      P         23 54 22.2 -0.1
      comp=Z,9.5nm,1.0s
TPNV  Topopah Spring    82.64  50  eP      P         23 54 22.2 -0.1
TPNV                               pmax    pmax
      comp=Z,10.0nm,1.0s
HWUT  Hardware Ranch    82.65  44  eP      P         23 54 22.9 +0.7
      comp=Z,12nm,1.0s
DUG   Dugway, Tooele    82.79  46  eP      P         23 54 23.8 +0.9
      comp=Z,10nm,1.1s
KHC   Kasperske Hory    82.88 326  eP      P         23 54 23.1  0.0
      comp=Z,5.2nm,1.9s
KHC   Kasperske Hory    82.88 326  eP      P         23 54 23.1  0.0
KHC                                pmax    pmax
      comp=Z,5.0nm,1.9s
GERES GERESS Array B    83.03 326  P       P         23 54 23.9  0.0
      comp=Z,0.7nm,0.7s,baz=55,slow=5.1,SNR=7.3
TCUT  Toone Canyon      83.05  45  eP      P         23 54 25.2 +0.9
      comp=Z,36nm,1.6s
BW06  Boulder Array     83.06  42  eP      P         23 54 24.4  0.0
      comp=Z,3.7nm,0.9s
PD31  Pinedale Array    83.06  42  eP      P         23 54 24.3 -0.1
PDAR  Pinedale Array    83.06  42  P       P         23 54 24.2 -0.1
      comp=Z,2.7nm,0.8s,baz=281,slow=1.6,SNR=23
PDAR  Pinedale Array    83.06  42  eP      P         23 54 23.7 -0.7
PSUT  Pine Spring       83.19  48  eP      P         23 54 25.6 +0.5
      comp=Z,4.1nm,0.8s
GSC   Goldstone, Bar    83.27  52  eP      P         23 54 25.5 +0.2
      comp=Z,5.0nm,0.9s
GSC   Goldstone, Bar    83.27  52  eP      P         23 54 25.5 +0.2
GSC                                pmax    pmax
      comp=Z,5.0nm,0.9s
SHPR  Sheep Range       83.61  50  eP      P         23 54 27.9 +0.7
      comp=Z,2.6nm,0.9s
MSU   Marysvale         84.23  47  eP      P         23 54 31.6 +1.3
MSU   Marysvale         84.23  47  eP      P         23 54 31.6 +1.3
P17A  Butcher Ranch,    84.49  46  eP      P         23 54 32.5 +1.0
      comp=Z,14nm,1.2s
LCMT  Little Creek M    84.51  49  eP      P         23 54 32.4 +0.8
      comp=Z,4.7nm,1.1s
PFO   Pinyon Flats O    84.51  53  eP      P         23 54 31.6  0.0
      comp=Z,5.2nm,0.8s
PFO   Pinyon Flats O    84.51  53  eP      P         23 54 31.6  0.0
PFO                                pmax    pmax
      comp=Z,5.0nm,0.8s
XPFO  Piæon Flat        84.51  53  eP      P         23 54 31.6 -0.1
      comp=Z,5.5nm,0.8s
MTPU  Mount Pierson     84.52  47  eP      P         23 54 33.1 +1.2
      comp=Z,4.0nm,0.9s
P18A  Preston Nutter    84.68  45  eP      P         23 54 33.4 +0.8
      comp=Z,9.3nm,1.0s
SRU   San Rafael Swe    84.85  46  eP      P         23 54 33.9 +0.6
      comp=Z,6.7nm,0.9s
SRU   San Rafael Swe    84.85  46  eP      P         23 54 33.9 +0.6
SRU                                pmax    pmax
      comp=Z,7.0nm,0.9s
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O20A	White River Ci	85.52	44	eP	P	23 54 37.0	+0.4
PV09	Paradox Valley	86.07	46	eP	P	23 54 40.4	+1.0
SMCO	Snowmass	86.89	44	eP	P	23 54 44.2	+0.8
	comp=Z,4.7nm,0.8s						
ANMO	Albuquerque	90.03	47	⇑eP	P	23 54 58.6	+0.7
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.2s						
TXAR	Lajitas Array	95.58	49	P	P	23 55 23.1	-0.3
	comp=Z,0.9nm,0.8s,baz=281,slow=2.8,SNR=8.7						
LPAZ	La Paz	152.14	57	PKPbc	PKPbc	00 01 51.2	-1.0
	comp=Z,2.0nm,0.9s,baz=19,slow=2.1,SNR=7.3						
LPAZ	La Paz	152.14	57	ePKPbc	PKPbc	00 01 52.5	+0.3
LPAZ	La Paz	152.14	57	ePKIKP	PKPbc	00 01 52.5	+0.3

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*ISCJB **07** 23:48:06.5±0.6, 32°.99S±0°.04×178°.4W±0°.1, h35^{km}, mb4.8/26, MS4.0/22, Error ellipse: s-maj=12.7km s-min=4.4km az=12.3*

*IDC **07** 23:48:09.7±3.6, 32°.64S×178°.51W, h40^{km}±30^{km}, mb4.2/13, mb1 4.3/14, mb1mx4.1/42, mbtmp4.4/14, ML4.7/1, MS3.9/22, Ms1 3.9/22, ms1mx3.8/44, Error ellipse: s-maj=21.6km s-min=15.9km az=90.0*

*BJI **07** 23:48:20.2, 33°.71S×179°.54W, h88^{km}, mb5.1/9, Ms4.7/2*

*WEL **07** 23:48:21.0, 33°.46S×179°.64W, h83^{km}*

*NEIC **07** 23:48:21.3±1.3, 33°.46S×179°.64W, h83^{km}±10^{km}, mb4.7/13, Error ellipse: s-maj=12.6km s-min=9.2km az=49.0*

ISC 07 23:48:09.4±0.5, **32°.80S**±0°.05×**178°.46W**±0°.09, **h35**^{km}, **n137,** σ**2^{s}.29**/104, **mb4.8**/26, **MS4.0**/23, **1C, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	3.56	8	P	Pn	23 48 57.6	-4.5
GLKZ				S	Sn	23 49 40.0	-3.0
RAO	Raoul Island	3.57	8	Pn	Pn	23 48 58.8	-3.5
	70nm,0.3s,baz=99,slow=19,SNR=3.9						
RAO				Sn	Sn	23 49 39.7	-3.5
	64nm,0.3s,baz=206,slow=23,SNR=3.7						
RIZ	Raoul Island	3.58	7	P	Pn	23 48 59.4	-2.9
MXZ	Matakaoa Point	5.44	208	ePn	Pn	23 49 27.1	-0.8
MXZ	Matakaoa Point	5.44	208	P	Pn	23 49 24.1	-3.9
WMGZ	Waiomatatini S	5.62	206	P	Pn	23 49 26.6	-3.9
WMGZ				S	Sn	23 50 34.5	+0.7
PKGZ	Pakihiroa	5.81	208	P	Pn	23 49 28.4	-4.8
PKGZ				S	Sn	23 50 35.4	-3.2
HAZ	Te Kaha	5.82	211	P	Pn	23 49 30.0	-3.2
HAZ				S	Sn	23 50 39.3	+0.6
PUZ	Puketiti	5.90	206	P	Pn	23 49 29.3	-5.1
PUZ				S	Sn	23 50 39.5	-1.3
RUGZ	Raukumara Rang	6.04	210	P	Pn	23 49 32.5	-3.9
RUGZ				S	Sn	23 50 43.3	-1.0
GRZ	Great Barrier	6.09	234	P	Pn	23 49 43.1	+6.2
TWGZ	Tauwhareparae	6.10	207	P	Pn	23 49 32.6	-4.5
TWGZ				S	Sn	23 50 43.9	-1.7
KUZ	Kuaotunu	6.20	229	P	Pn	23 49 39.1	+0.7
WHRZ	Whale Island	6.27	215	P	Pn	23 49 39.5	0.0
CNGZ	Carnagh Statio	6.29	205	P	Pn	23 49 35.1	-4.5
TKGZ	Te Karaka	6.38	207	P	Pn	23 49 37.6	-3.2
TKGZ				S	Sn	23 50 48.7	-3.7
MWZ	Matawai	6.42	210	P	Pn	23 49 36.9	-4.5
MWZ				S	Sn	23 50 51.9	-1.6
OPRZ	Ohinepanea	6.47	218	P	Pn	23 49 40.7	-1.5
MARZ	Manawahe	6.52	216	P	Pn	23 49 41.5	-1.4
URZ	Urewera	6.54	212	Pn	Pn	23 49 38.7	-4.3
	9.5nm,0.3s,baz=315,slow=1.6,SNR=46						
URZ				Sn	Sn	23 50 53.2	-3.0
	12nm,0.3s,baz=128,slow=14,SNR=8.9						
URZ	Urewera	6.54	212	ePn	Pn	23 49 40.2	-2.8
URZ				Sn	Sn	23 50 53.2	-3.0
URZ	Urewera	6.54	212	P	Pn	23 49 38.8	-4.2
RAGZ	Rawiri	6.60	209	P	Pn	23 49 41.5	-2.5
RIGZ	Rimuhau	6.64	206	P	Pn	23 49 40.6	-4.0
RIGZ				S	Sn	23 50 56.7	-2.4
OMRZ	Omania	6.77	217	P	Pn	23 49 46.7	+0.4
MKAZ	Moumakai	6.77	229	P	Pn	23 49 48.6	+2.4
PRGZ	Paritu Road	6.79	205	P	Pn	23 49 42.3	-4.3
MUGZ	Murupara	6.87	213	P	Pn	23 49 44.3	-3.3
RTZ	Ruatahuna	6.89	211	P	Pn	23 49 45.4	-2.5
KNZ	Kokohu	6.96	206	P	Pn	23 49 42.8	-5.9
TOZ	Tahuroa Road	6.97	223	P	Pn	23 49 47.9	-1.1
MHGZ	Mahia Peninsul	6.99	204	P	Pn	23 49 44.0	-5.2
OUZ	Omahuta	7.03	248	ePn	Pn	23 49 47.3	-2.5
RAHZ	Arahi	7.09	209	P	Pn	23 49 48.5	-2.2
WHHZ	Waihua	7.17	208	P	Pn	23 49 47.9	-3.8
BKZ	Black Stump Fm	7.55	211	ePn	Pn	23 49 53.9	-3.2
HIZ	Hauiti	7.88	222	ePn	Pn	23 49 56.8	-4.6
BFZ	Birch Farm	8.94	207	ePn	Pn	23 50 14.1	-1.9
THZ	Tophouse	11.28	215	ePn	Pn	23 50 45.1	-2.9
THZ				eSn	Sn	23 52 44.4	-8.5
KHZ	Kahutara	11.50	211	ePn	Pn	23 50 47.9	-3.1
KHZ				eSn	Sn	23 52 48.7	-9.5
LTZ	Lake Taylor	12.36	214	ePn	Pn	23 50 59.0	-3.9
OXZ	Oxford	12.89	213	ePn	Pn	23 51 05.2	-4.8
OXZ				eSn	Sn	23 53 17.1	-15
RPZ	Rata Peaks	13.65	214	ePn	Pn	23 51 15.4	-5.0
DZM	Mont Dzumac	17.12	305	Pn	P	23 52 07.9	+0.3
	0.2nm,0.3s,baz=127,slow=11,SNR=4.6						
DZM				LR	LR	23 57 41.1	
	comp=Z,2µm,18.3s,baz=146,slow=34						
DZM	Mont Dzumac	17.12	305	eP	P	23 52 13.2	+5.6
	82nm,1.0s						
DZM				eLR	LR	23 56 06.7	
	1µm,22.8s						
DZM	Mont Dzumac	17.12	305	ePn	P	23 52 10.2	+2.6
	31nm,0.8s						
RAR	Rarotonga	20.22	60	LR	LR	00 01 10.2	
	comp=Z,128nm,18.2s,baz=232,slow=39						
TBI	Tubuai	27.19	77	eLR	LR	00 00 32.8	
	392nm,29.8s						
TBI	Tubuai	27.19	77	eT	T	00 22 03.4	
	9.9nm,0.3s						
PAE	Paea	30.03	67	eT	T	00 25 46.1	
	2.1nm,0.3s						
PPT2	Papeete2	30.08	67	eLR	LR	00 01 49.2	
	393nm,27.0s						
PPT2	Papeete2	30.08	67	eT	T	00 25 50.0	
	5.0nm,0.3s						
PPT	Papeete	30.09	67	LR	LR	00 03 39.9	
	comp=Z,139nm,19.3s,baz=202,slow=31						
HNR	Honiara	30.64	315	LR	LR	00 05 45.8	
	comp=Z,193nm,18.4s,baz=157,slow=35						
VAH	Vaihoa	32.97	65	eT	T	00 29 27.8	
	5.8nm,0.3s						
STKA	Stephens Creek	33.63	261	P	P	23 54 47.0	+0.3
	3.3nm,0.9s,baz=89,slow=9.5,SNR=3.3						
STKA				LR	LR	00 07 55.7	
	comp=Z,589nm,18.1s,baz=81,slow=35						
CTA	Charters Tower	33.88	283	P	P	23 54 49.9	+0.9
	7.3nm,0.5s,baz=110,slow=11,SNR=7.9						
CTAO	Charters Tower	33.88	283	eP	P	23 54 48.6	-0.3
	22nm,0.8s						
AS01	Alice Springs	42.61	270	eP	P	23 56 00.7	-1.8
AS31	Alice Springs	42.65	270	eP	P	23 56 02.3	-0.5
	3.7nm,0.6s						
ASAR	Alice Springs	42.65	270	P	P	23 56 02.0	-0.7
	12nm,0.7s,baz=109,slow=7.6,SNR=86						
ASAR				S	S	00 02 21.8	-2.0
	1.0nm,0.8s,baz=111,slow=15,SNR=6.4						
ASAR				LR	LR	00 12 04.8	
	comp=Z,111nm,20.5s,baz=140,slow=34						
WB2	Warramunga Arr	43.85	275	eP	P	23 56 11.9	-0.6
WRAB	Tennant Creek	43.85	275	eP	P	23 56 11.9	-0.6
	18nm,1.0s						
WRA	Warramunga Arr	43.86	275	P	P	23 56 11.5	-1.0
	16nm,0.6s,baz=114,slow=7.9,SNR=135						
WRA				S	S	00 02 37.4	-4.0
	1.2nm,1.1s,baz=121,slow=15,SNR=3.9						
FORT	Forrest	45.10	258	eP	P	23 56 19.9	-2.4
	30nm,0.9s						
VNDA	Vanda	45.67	186	P	P	23 56 26.7	+0.5
	0.5nm,0.8s,baz=49,slow=8.6,SNR=3.8						
VNDA				LR	LR	00 12 19.9	
	comp=Z,108nm,18.9s,baz=24,slow=32						
VNDA	Vanda	45.67	186	eP	P	23 56 28.1	+1.9
	3.6nm,1.1s						
MTN	Manton Dam	50.02	281	eP	P	23 57 00.6	-0.1
	59nm,1.7s						
FITZ	Fitzroy Crossi	52.01	272	P	P	23 57 14.4	-1.2
	8.8nm,0.8s,baz=166,slow=6.9,SNR=14						
FITZ				LR	LR	00 19 05.9	
	comp=Z,357nm,18.4s,baz=116,slow=36						
SAUI	Saumlaki	52.57	286	eP	P	23 57 20.1	+0.3
	669nm,1.1s						
CASY	Casey	52.85	209	eP	P	23 57 20.1	-1.0
	1.7nm,0.6s						
NWAO	Narrogin (SRO)	53.22	251	LR	LR	00 19 04.4	
	comp=Z,121nm,19.0s,baz=4.5,slow=35						
HLP	Hilina Pali	56.34	26	eP	P	23 58 00.4	+13
	179nm,1.0s						
QSPA	South Pole Qui	57.31	180	P	P	23 57 54.7	+1.1
	8.5nm,0.9s,baz=28,slow=2.9,SNR=16						
QSPA				LR	LR	00 19 41.1	
	comp=Z,179nm,20.2s,baz=66,slow=33						
QSPA	South Pole Qui	57.31	180	eP	P	23 57 54.5	+0.9
	96nm,0.9s						
RPN	Rapa Nui	59.20	104	LR	LR	00 19 39.6	
	comp=Z,80nm,18.6s,baz=251,slow=32						
DAV	Davao City (W)	66.30	296	LR	LR	00 27 21.4	
	comp=Z,52nm,20.2s,baz=166,slow=36						
MAW	Mawson	69.93	201	P	P	23 59 16.4	-0.1
	4.5nm,0.8s,baz=104,slow=11,SNR=4.0						
MAW				LR	LR	00 28 37.4	
	comp=Z,162nm,20.4s,baz=68,slow=35						
MAW	Mawson	69.93	201	eP	P	23 59 16.4	-0.1
	2.9nm,1.3s						
PMSA	Palmer Station	70.24	156	LR	LR	00 26 00.2	
	comp=Z,77nm,18.6s,baz=40,slow=32						
LEM	Lembang	72.83	273	LR	LR	00 32 44.4	
	comp=Z,145nm,19.8s,baz=172,slow=37						
SYO	Syowa Base	74.69	193	⇑eP	P	23 59 43.6	-1.3
SNAA	Sanae	75.77	179	P	P	23 59 52.4	+1.2
	0.6nm,0.5s,baz=90,slow=2.0,SNR=4.4						
SNAA	Sanae	75.77	179	eP	P	23 59 54.7	+3.5
	12nm,1.0s						
MJAR	Matsushiro Arr	80.00	326	P	P	00 00 13.7	-1.3
	0.5nm,0.5s,baz=237,slow=14,SNR=3.5						
MJAR				LR	LR	00 32 00.5	
	comp=Z,41nm,20.6s,baz=110,slow=33						
JNU	Nakatsue	81.10	319	LR	LR	00 29 27.4	
	comp=Z,31nm,21.7s,baz=124,slow=31						
PSI	Prapat	85.31	276	LR	LR	00 39 28.5	
	comp=Z,139nm,20.1s,baz=89,slow=36						
KSRS	Korea Array	85.93	320	P	P	00 00 45.2	-0.4
	1.7nm,0.9s,baz=140,slow=6.0,SNR=8.4						
KSRS				LR	LR	00 37 40.7	
	comp=Z,28nm,18.4s,baz=220,slow=35						
NJ2	Nanjing	87.52	311	eP	P	00 00 58.9	+5.4
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PETK	Petropavlovsk-	88.04	346	P	P	00 00 55.5	0.0
	3.9nm,0.9s,baz=101,slow=7.5						
BEKR	Beckworth	90.09	41	eP	P	00 01 17.0	+11
	9.3nm,0.8s						
NV01	Mina Array Sit	90.26	43	eP	P	00 01 18.4	+12
NVAR	Mina Array Bea	90.26	43	P	P	00 01 07.7	+1.0
	0.2nm,0.5s,baz=237,slow=9.5,SNR=4.1						
X16A	Lo Mia Camp, P	91.80	50	eP	P	00 01 25.9	+12
	4.1nm,1.2s						
GYA	Guiyang	92.41	300	eP	P	00 01 21.8	+5.0
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NNA	Nana	93.13	106	LR	LR	00 37 02.5	
	comp=Z,79nm,18.1s,baz=291,slow=32						
CMAR	Chiang Mai Arr	93.83	289	LR	LR	00 47 53.7	
	comp=Z,19nm,18.1s,baz=115,slow=38						
KMI	Kunming	94.56	297	P	P	00 01 31.6	+4.8
KMI				pmax	pmax		
	comp=Z,13nm,0.5s						
HHC	Hu-ho-hao-te	97.62	314	eP	Pdif	00 01 46.0	+5.7
HHC				S	S	00 13 03.5	+0.6
HHC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
HHC				LR	LR		
	comp=N,110nm,18.2s						
HHC				LR	LR		
	comp=E,93nm,15.3s						
CPUP	Villa Florida	98.79	129	LR	LR	00 41 14.8	
	comp=Z,70nm,18.4s,baz=237,slow=32						
LZH	Lanzhou	99.84	307	eP	Pdif	00 01 56.7	+6.3
LZH				pP	sP	00 02 16.4	+11
LZH				sP	pP	00 02 24.7	+23
LZH				PP	PP	00 05 57.0	+1.2
LZH				eS	S	00 13 23.6	+1.6
LZH				sS	sS	00 14 02.4	+22
LZH				SS	SS	00 20 17.1	+1.7
WMQ	Urumqi	114.39	308	PKP	PKPdf	00 06 50.4	+5.1
WMQ				LR	LR		
	comp=N,83nm,23.7s						
WMQ				LR	LR		
	comp=E,130nm,34.1s						
MKAR	Makanchi Array	119.00	309	PKP	PKPdf	00 06 53.3	-0.7
	0.6nm,0.8s,baz=206,slow=2.4,SNR=4.7						
ZALV	Zalesovo Beam	119.55	318	PKP	PKPdf	00 06 53.8	-1.0
	0.7nm,0.5s,baz=173,slow=1.0,SNR=3.8						
KSH	Kashi	121.10	300	ePKP	PKPdf	00 07 01.9	+3.4
KSH				sPKP		00 07 37.9	
KSH				PP	PP	00 08 35.6	+6.5
KURBB	Kurchatov Arra	122.44	313	PKP	PKPdf	00 06 58.2	-2.3
	1.2nm,0.8s,baz=111,slow=1.8,SNR=7.9						
KK31	Karatay Array	126.05	302	ePKPdf	PKPdf	00 07 12.4	+4.7
KKAR	Karatay Array	126.05	302	ePKPdf	PKPdf	00 07 11.9	+4.2
BVAR	Borovoye Array	127.83	315	PKP	PKPdf	00 07 10.1	-0.7
	1.1nm,0.6s,baz=149,slow=3.0,SNR=10						
BRVK	Borovoye	127.90	315	ePKPdf	PKPdf	00 07 16.1	+5.2
ABKAR	Akbulak array	134.15	309	ePKPdf	PKPdf	00 07 28.4	+5.6
ARCES	ARCESS Array B	140.84	347	PKhKP	PKPpre	00 07 30.2	
	2.4nm,0.8s,baz=101,slow=1.2,SNR=6.1						
KBZ	Khabaz	146.07	301	PKPbc	PKPdf	00 07 42.5	-2.0
	4.4nm,0.9s,baz=75,slow=4.9,SNR=7.5						
FINES	FINESS Array B	147.25	338	PKPbc	PKPbc	00 07 47.2	-1.0
	55nm,1.1s,baz=35,slow=4.7,SNR=100						
FINES				PP	PP	00 11 13.3	-0.5
	1.7nm,0.8s,baz=36,slow=5.1,SNR=5.3						
NC303	NORSAR Array S	150.85	350	ePKPdf	PKPbc	00 07 57.0	-0.4
NB201	NORSAR Array S	151.03	350	ePKPbc	PKPab	00 08 03.9	-1.6
NB2	NORSAR Subarra	151.05	350	PKP	PKPbc	00 07 57.0	-1.0
	comp=Z,15nm,1.2s,baz=16,slow=4.1						
NC602	NORSAR Array S	151.30	350	ePKPdf	PKPbc	00 07 57.9	-0.6
HFS	Hagfors	151.50	347	PKPbc	PKPbc	00 07 58.0	-1.0
	comp=Z,9.8nm,0.8s,baz=66,slow=3.5,SNR=18						
MMAI	Mount Meron Ar	151.64	280	PKPbc	PKPbc	00 07 58.6	-1.6
	comp=Z,9.4nm,0.8s,baz=166,slow=0.8,SNR=11						
AKASG	Malin Array Be	152.92	320	PKPbc	PKPbc	00 08 00.5	-1.9
	comp=Z,0.9nm,0.5s,baz=38,slow=1.7,SNR=4.0						
AKBB	Malin Array Si	152.92	320	ePKPdf	PKPbc	00 08 02.7	+0.2
KIEV	Kiev	152.93	320	ePKPdf	PKPbc	00 08 02.5	0.0
AK11	Malin Array Si	152.96	320	ePKPdf	PKPbc	00 08 03.1	+0.6
BR131	Keskin Array S	153.31	294	ePKPdf	PKPbc	00 08 03.0	-0.9
BRTR	Keskin Array B	153.31	294	PKPbc	PKPbc	00 08 02.9	-1.0
	comp=Z,2.7nm,0.7s,baz=144,slow=3.4,SNR=21						
BUR04	Bucovina Ar. S	156.77	316	ePKPab	PKPab	00 08 35.6	+5.2
DPC	Dobruska-Polom	159.34	332	ePKPAB	PKPab	00 08 41.4	+0.1
DPC				ex	x	00 08 46.3	
CLL	Collm	159.69	339	ePKP	PKPab	00 08 41.7	-1.0
	comp=Z,9.0nm,1.4s						
CLL				i		00 08 47.7	
CLL				i		00 08 52.7	
BRG	Berggiesshubel	159.77	337	ePKP	PKPab	00 08 42.1	-1.0
	comp=Z,6.0nm,1.2s						
TORD	Torodi Ar. Bea	160.44	180	PKPab	PKPab	00 08 47.4	+0.6
	baz=163,slow=1.5						
KHC	Kasperske Hory	161.37	335	ePKPAB	PKPab	00 08 49.7	-0.5
CONA	Conrad Observa	161.41	329	ePKPab	PKPab	00 08 50.5	0.0
	comp=Z,2.7nm,0.9s						
GERES	GERESS Array B	161.56	334	PKPab	PKPab	00 08 50.5	-0.7
	comp=Z,1.4nm,0.9s,baz=25,slow=3.5,SNR=9.0						
ARSA	Arzberg	162.07	328	ePKPab	PKPab	00 08 52.9	-0.4
	comp=Z,1.9nm,0.9s						
ABTA	Abfaltersbach	163.74	332	ePKPab	PKPab	00 08 59.2	-1.5
	comp=Z,3.4nm,0.9s						
MOTA	Moosalm	163.76	336	ePKPab	PKPab	00 09 01.3	+0.5
	comp=Z,4.6nm,1.0s						

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*DDA **07** 23:54:15.5, 36°.45N×28°.96E, h32^{km}, Ml3.4*

*ATH **07** 23:54:15.3, 36°.39N×28°.99E, h42^{km}±2^{km}, ML2.8/2, Error ellipse: s-maj=3.5km s-min=1.3km az=159.0*

*ISK **07** 23:54:15.5, 36°.40N×28°.95E, h22^{km}, ML3.2/15*

*ISCJB **07** 23:54:16.4±0.4, 36°.39N±0°.03×28°.94E±0°.02, h27^{km}±3^{km}, Error ellipse: s-maj=4.4km s-min=3.3km az=179.0*

*THE **07** 23:54:16.6, 36°.40N×28°.96E, h13^{km}±1^{km}, ML2.8/3, Error ellipse: s-maj=1.4km s-min=0.5km az=81.0*

*CSEM **07** 23:54:16.2±0.1, 36°.40N×28°.95E, h20^{km}, ML3.4, Error ellipse: s-maj=3.5km s-min=2.5km az=1.0*

ISC 07 23:54:15.2±1.2, **36°.41N**±0°.02×**28°.93E**±0°.02, **h10**^{km}±10^{km}, **n82,** σ**0^{s}.75**/127, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FETY	Fethiye	0.26	28	PG	Pb	23 54 22.1	+0.1
FETY				SG	Sb	23 54 27.3	+0.7
FETY	Fethiye	0.26	28	P	Pb	23 54 22.0	+0.1
FETY				S	Sb	23 54 27.2	+0.7
FETY	Fethiye	0.26	28	P	Pb	23 54 22.1	+0.1
FETY				S	Sb	23 54 27.2	+0.7
DALY	Dalyan (Mu˜la	0.47	331	PG	Pb	23 54 25.7	+0.1
DALY				SG	Sb	23 54 33.2	+0.6
DALY	Dalyan (Mu˜la	0.47	331	i P	Pb	23 54 25.6	+0.1
DALY				i S	Sb	23 54 33.0	+0.4
DALY	Dalyan (Mu˜la	0.47	331	ePg	Pb	23 54 25.7	+0.1
DALY				S	Sb	23 54 33.0	+0.4
TURN	Turunc	0.54	330	PG	Pn	23 54 29.4	+0.5
TURN	Turunc	0.54	330	i P	Pn	23 54 29.2	+0.3
TURN				i S	Sn	23 54 39.3	+1.3
TURN	Turunc	0.54	330	P	Pn	23 54 29.2	+0.3
AKAS	Kas	0.57	107	PG	Pb	23 54 27.1	-0.2
AKAS				SG	Sb	23 54 35.7	+0.2
AKAS	Kas	0.57	107	i P	Pb	23 54 26.9	-0.4
AKAS				i S	Sb	23 54 36.5	+1.0
AKAS	Kas	0.57	107	ePg	Pb	23 54 27.1	-0.2
AKAS				eSg	Sb	23 54 35.7	+0.2
AKAS				S	Sb	23 54 36.5	+1.0
KSL	Kastellorizon	0.58	116	P	Pb	23 54 27.0	-0.5
KSL				S	Sb	23 54 36.1	+0.3
KSL				AML	AML	23 54 37.4	
	comp=N,794µm,0.4s						
KSL				AML	AML	23 54 37.6	
	comp=E,3026µm,0.4s						
KSL	Kastellorizon	0.58	116	P	Pb	23 54 27.2	-0.3
KSL				S	Sb	23 54 36.5	+0.7
MRSB	Marmaris-Mugla	0.67	298	PG	Pb	23 54 29.8	+0.8
ARG	Arkhangelos	0.68	254	PG	Pn	23 54 30.1	-0.8
ARG	Arkhangelos	0.68	254	P	Pb	23 54 29.7	+0.5
ARG				AML	AML	23 54 41.3	
	comp=N,1188µm,0.3s						
ARG				AML	AML	23 54 41.5	
	comp=E,1850µm,0.3s						
ARG				S	Sn	23 54 41.6	+0.1
ARG	Arkhangelos	0.68	254	P	Pb	23 54 29.8	+0.7
ARG				S	Sn	23 54 40.7	-0.8
ARG	Arkhangelos	0.68	254	P	Pb	23 54 29.8	+0.7
ARG				S	Sn	23 54 40.7	-0.8
ELL	Elmali	0.86	66	PG	Pb	23 54 32.4	+0.2
ELL	Elmali	0.86	66	ePg	Pb	23 54 32.4	+0.2
YER	Yerkesik	0.90	325	PG	Pb	23 54 33.3	+0.4
YER	Yerkesik	0.90	325	P	Pb	23 54 33.2	+0.4
YER				S	Sb	23 54 46.1	+1.2
YER	Yerkesik	0.90	325	ePg	Pb	23 54 33.3	+0.4
YER				S	Sb	23 54 46.1	+1.2
GOLH	Golhisar	0.97	31	i P	Pg	23 54 33.5	-0.4
GOLH				i S	Sb	23 54 47.9	+0.8
GOLH	Golhisar	0.97	31	P	Pg	23 54 33.5	-0.4
GOLH				S	Sb	23 54 47.9	+0.8
TAVA	DENIZLI_Tavas	1.06	359	i P	Pg	23 54 35.3	-0.3
TAVA				i S	Sg	23 54 49.6	+0.3
TAVA	DENIZLI_Tavas	1.06	359	P	Pg	23 54 35.3	-0.3
TAVA				S	Sg	23 54 49.6	+0.3
DAT	Datca	1.14	287	PN	Pg	23 54 36.8	-0.3
DAT	Datca	1.14	287	i P	Pb	23 54 37.1	+0.1
DAT				i S	Sn	23 54 52.9	-0.2
DAT	Datca	1.14	287	ePn	Pg	23 54 36.8	-0.3
DAT	Datca	1.14	287	P	Pb	23 54 37.1	+0.1
DAT				S	Sn	23 54 52.9	-0.2
KORT	Korkueli	1.28	62	PN	Pn	23 54 38.7	-0.6
KORT	Korkueli	1.28	62	i P	Pn	23 54 39.1	-0.2
KORT				i S	Sn	23 54 57.6	+0.9
KORT	Korkueli	1.28	62	ePn	Pn	23 54 38.7	-0.6
KORT	Korkueli	1.28	62	P	Pn	23 54 39.2	-0.2
KORT				S	Sn	23 54 57.6	+0.9
DNZL	Cakiroluk	1.28	4	i P	Pn	23 54 38.7	-0.7
DNZL				i S	Sb	23 54 55.9	-0.4
DNZL	Cakiroluk	1.28	4	P	Pn	23 54 38.7	-0.7
DNZL				S	Sb	23 54 55.9	-0.4
MLSB	Milas	1.28	314	PN	Pb	23 54 39.6	+0.1
MLSB	Milas	1.28	314	ePn	Pb	23 54 39.6	+0.1
DENT	Denizli	1.35	3	PN	Pn	23 54 38.8	-1.4
DENT	Denizli	1.35	3	ePn	Pn	23 54 38.8	-1.4
BODT	Bodrum	1.46	297	PN	Pn	23 54 41.3	-0.3
BODT	Bodrum	1.46	297	P	Pn	23 54 41.3	-0.3
BODT				S	Sn	23 55 00.6	-0.3
BODT	Bodrum	1.46	297	P	Pn	23 54 41.3	-0.3
BODT				S	Sn	23 55 00.6	-0.3
ANTB	Antalya	1.47	70	PN	Pn	23 54 41.4	-0.3
ANTB	Antalya	1.47	70	ePn	Pn	23 54 41.4	-0.3
AYDN	Tasoluk	1.51	326	i P	Pb	23 54 43.2	-0.2
AYDN				i S	Sb	23 55 03.4	+0.8
AYDN	Tasoluk	1.51	326	P	Pb	23 54 43.2	-0.2
AYDN				S	Sb	23 55 03.4	+0.8
BRDR	BURDUR-Merkez	1.57	35	i P	Pn	23 54 42.8	-0.5
BRDR				i S	Sn	23 55 03.4	-0.3
BRDR	BURDUR-Merkez	1.57	35	P	Pn	23 54 42.8	-0.5
BRDR				S	Sn	23 55 03.4	-0.3
KARP	Karpathos	1.67	240	PN	Pn	23 54 44.5	-0.1
KARP	Karpathos	1.67	240	P	Pn	23 54 45.0	+0.4
KARP				S	Sn	23 55 03.4	-2.7
KARP	Karpathos	1.67	240	P	Pn	23 54 44.5	-0.1
KARP				S	Sn	23 55 05.9	-0.2
KARP	Karpathos	1.67	240	P	Pn	23 54 44.5	-0.1
KARP				S	Sn	23 55 05.9	-0.2
AYDB	Zeytinkoy-Aydi	1.75	332	PN	Pn	23 54 45.8	+0.1
AYDB	Zeytinkoy-Aydi	1.75	332	ePn	Pn	23 54 45.8	+0.1
SUTC	Sutluce-Ispart	1.97	57	PN	Pn	23 54 48.8	0.0
SUTC	Sutluce-Ispart	1.97	57	ePn	Pn	23 54 48.8	0.0
KZIL	AFYON_Kizioren	2.08	27	i P	Pn	23 54 50.1	-0.2
KZIL				i S	Sn	23 55 17.1	+0.7
KZIL	AFYON_Kizioren	2.08	27	P	Pn	23 54 50.1	-0.2
KZIL				S	Sn	23 55 17.1	+0.7
MANT	Manisa	2.10	352	i P	Pn	23 54 49.1	-1.6
MANT				i S	Sn	23 55 13.6	-3.5
MANT	Manisa	2.10	352	P	Pn	23 54 49.1	-1.6
KULA	Kula-Manisa	2.12	354	PN	Pn	23 54 49.5	-1.2
KULA	Kula-Manisa	2.12	354	ePn	Pn	23 54 49.5	-1.2
SMG	Samos	2.12	308	P	Pn	23 54 50.9	+0.2
SMG				S	Sn	23 55 14.6	-2.6
SMG	Samos	2.12	308	P	Pn	23 54 50.6	-0.2
SMG				S	Sn	23 55 16.5	-0.7
SMG	Samos	2.12	308	P	Pn	23 54 50.7	-0.1
SMG				S	Sn	23 55 16.5	-0.7
KEPZ	Antalya-Kepez	2.20	76	i P	Pn	23 54 51.9	0.0
KEPZ				i S	Sn	23 55 20.2	+1.0
KEPZ	Antalya-Kepez	2.20	76	P	Pn	23 54 51.9	0.0
KEPZ				S	Sn	23 55 20.2	+1.0
BLCB	Balcova	2.48	323	PN	Pn	23 54 55.8	+0.1
BLCB	Balcova	2.48	323	ePn	Pn	23 54 55.8	+0.1
URLA	Izmir	2.70	317	PN	Pn	23 54 58.8	+0.1
URLA	Izmir	2.70	317	ePn	Pn	23 54 58.8	+0.1
NPS	Neapolis	2.93	248	P	Pn	23 55 00.9	-0.9
NPS	Neapolis	2.93	248	P	Pn	23 55 01.4	-0.5
CHOS	Chios island	3.03	312	P	Pn	23 55 03.6	+0.3
CHOS	Chios island	3.03	312	P	Pn	23 55 03.5	+0.3
LAST	Lasithi	3.07	247	P	Pn	23 55 03.2	-0.7
LAST	Lasithi	3.07	247	P	Pn	23 55 03.5	-0.4
IMMV	Iera Moni Meta	4.13	258	P	Pn	23 55 19.7	+1.4
IMMV	Iera Moni Meta	4.13	258	P	Pn	23 55 19.2	+0.9

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*NEIC **08** 00:11:14.6±0.6, 30°.37S×177°.22W, h10^{km}, mb4.7/12, Error ellipse: s-maj=13.1km s-min=7.0km az=99.0*

*IDC **08** 00:11:14.5±0.5, 30°.56S×177°.54W, h0^{km}, mb4.3/12, mb1 4.5/13, mb1mx4.2/42, mbtmp4.3/13, ML4.5/1, MS3.7/21, Ms1 3.7/21, ms1mx3.5/47, Error ellipse: s-maj=19.5km s-min=14.1km az=81.0*

*BJI **08** 00:11:16.3, 30°.35S×176°.58W, h48^{km}, mb5.2/7, mB5.3/4, Ms4.9/2, Ms7 4.8/2*

*ISCJB **08** 00:11:18.3±0.5, 30°.54S±0°.04×177°.52W±0°.10, h33^{km}, mb4.8/21, MS3.8/19, Error ellipse: s-maj=11.9km s-min=5.8km az=1.4*

ISC 08 00:11:18.7±0.5, **30°.47S**±0°.06×**177°.30W**±0°.10, **h33**^{km}, **n103,** σ**1^{s}.76**/80, **mb4.7**/21, **MS3.9**/19, **2C, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.33	336	Pn	Pn	00 11 41.4	+0.5
	531nm,0.3s,baz=195,slow=20,SNR=35						
RAO				Sn	Sb	00 11 59.7	-0.1

	5μm,0.3s,baz=49,slow=20,SNR=21						
MXZ	**Matakaoa Point**	**7.96**	**206**	*e*Pn	**Pn**	**00 13 12.2**	**+0.3**
OUZ	**Omahuta**	**9.00**	**236**	*e*Pn	**Pn**	**00 13 27.9**	**+1.5**
URZ	**Urewera**	**9.04**	**209**	Pn	Pn	00 13 18.7	-8.0
	1.4nm,0.3s,baz=280,slow=5.7,SNR=10						
URZ				Sn	Sn	00 14 56.8	-11
	6.3nm,0.3s,baz=162,slow=22,SNR=12						
URZ	**Urewera**	**9.04**	**209**	*e*Pn	**Pn**	**00 13 26.9**	**+0.1**
URZ				Sn	Sn	00 14 56.8	-11
BKZ	**Black Stump Fm**	**10.06**	**209**	*e*Pn	**Pn**	**00 13 41.9**	**+1.0**
HIZ	**Hauiti**	**10.30**	**217**	*e*Pn	**Pn**	**00 13 44.0**	**-0.1**
THZ	**Tophouse**	**13.76**	**212**	*e*Pn	**Pn**	**00 14 31.8**	**+0.3**
THZ				*e*Sn	Sn	00 16 48.5	-15
KHZ	**Kahutara**	**14.00**	**209**	*e*Pn	**Pn**	**00 14 34.9**	**+0.2**
KHZ				*e*Sn	Sn	00 16 50.3	-19
OXZ	**Oxford**	**15.39**	**211**	*e*Pn	**Pn**	**00 14 53.6**	**+0.3**
	22nm,0.5s						
MQZ	**McQueen's Vall**	**15.43**	**208**	*e*Pn	**Pn**	**00 14 54.7**	**+0.8**
	154nm,1.8s						
RPZ	**Rata Peaks**	**16.13**	**212**	Pn	**Pn**	**00 14 58.4**	**-4.5**
	1.7nm,0.3s,baz=45,slow=4.3,SNR=4.8						
RPZ				Sn	Sn	00 17 38.8	-22
	0.7nm,0.3s,baz=338,slow=19,SNR=4.4						
RPZ	**Rata Peaks**	**16.13**	**212**	*e*Pn	**Pn**	**00 15 01.9**	**-1.1**
	23nm,1.1s						
RPZ				Sn	Sn	00 17 38.8	-22
FOZ	**Fox Glacier**	**16.58**	**215**	*e*Pn	**Pn**	**00 15 09.0**	**+0.5**
	90nm,1.5s						
DZM	**Mont Dzumac**	**16.80**	**296**	LR	LR	00 20 15.2	
	comp=Z,481nm,19.8s,baz=178,slow=32						
DZM	**Mont Dzumac**	**16.80**	**296**	*e*LR	LR	00 19 21.3	
	624nm,23.7s						
DZM	**Mont Dzumac**	**16.80**	**296**	*e*Pn	**Pn**	**00 15 12.0**	**+0.4**
	18nm,0.9s						
WKZ	**Wanaka**	**17.93**	**213**	*e*Pn	**P**	**00 15 25.6**	**-0.2**
	74nm,1.3s						
RAR	**Rarotonga**	**18.25**	**64**	LR	LR	00 22 33.3	
	comp=Z,123nm,18.8s,baz=231,slow=37						
TBI	**Tubuai**	**25.77**	**81**	*e*T	T	00 43 24.6	
	6.1nm,0.3s						
PAE	**Paea**	**28.25**	**70**	*e*T	T	00 46 27.1	
	2.3nm,0.3s						
PPT2	**Papeete2**	**28.30**	**69**	*e*LR	LR	00 24 27.0	
	236nm,25.8s						
PPT	**Papeete**	**28.31**	**69**	LR	LR	00 25 55.7	
	comp=Z,49nm,19.5s,baz=212,slow=31						
TVO	**Taravao**	**28.46**	**70**	*e*T	T	00 46 41.4	
	1.9nm,0.4s						
VAH	**Vaihoa**	**31.14**	**68**	*e*T	T	00 50 03.9	
	12nm,0.2s						
CTA	**Charters Tower**	**34.41**	**279**	P	**P**	**00 18 03.4**	**+0.3**
	5.8nm,0.5s,baz=110,slow=13,SNR=8.2						
CTAO	**Charters Tower**	**34.41**	**279**	*e*P	**P**	**00 18 01.8**	**-1.3**
	83nm,1.7s						
STKA	**Stephens Creek**	**35.05**	**257**	P	**P**	**00 18 08.3**	**-0.2**
	7.9nm,0.6s,baz=93,slow=9.6,SNR=17						
STKA				LR	LR	00 30 15.8	
	comp=Z,196nm,19.4s,baz=54,slow=33						
STKA	**Stephens Creek**	**35.05**	**257**	*e*P	**P**	**00 18 08.7**	**+0.2**
	3.5nm,0.8s						
RKT	**Rikitea**	**38.31**	**89**	*e*LR	LR	00 28 49.5	
	241nm,27.5s						
TAOE	**Nuku Hiva Isla**	**40.78**	**66**	*e*LR	LR	00 30 01.8	
	152nm,27.0s						
AS01	**Alice Springs**	**43.67**	**267**	*e*P	**P**	**00 19 19.0**	**-1.6**
ASAR	**Alice Springs**	**43.71**	**267**	P	**P**	**00 19 19.3**	**-1.6**
	3.6nm,0.6s,baz=107,slow=7.7,SNR=34						
ASAR				LR	LR	00 36 20.9	
	comp=Z,178nm,18.6s,baz=134,slow=35						
WC3	**Warramunga Arr**	**44.67**	**272**	*e*P	**P**	**00 19 28.1**	**-0.5**
	8.8nm,0.8s						
WB2	**Warramunga Arr**	**44.69**	**272**	*e*P	**P**	**00 19 28.3**	**-0.5**
WRAB	**Tennant Creek**	**44.70**	**272**	*e*P	**P**	**00 19 28.2**	**-0.6**
	17nm,1.4s						
WRA	**Warramunga Arr**	**44.70**	**272**	P	**P**	**00 19 26.6**	**-2.3**
	3.2nm,0.4s,baz=110,slow=8.0,SNR=67						
WRA				LR	LR	00 37 48.3	
	comp=Z,237nm,18.1s,baz=110,slow=36						
FORT	**Forrest**	**46.61**	**255**	*e*P	**P**	**00 19 43.5**	**-0.3**
	146nm,1.8s						
VNDA	**Vanda**	**48.09**	**186**	P	**P**	**00 19 56.2**	**+1.6**
	0.3nm,0.3s,baz=26,slow=6.7,SNR=3.8						
FITZ	**Fitzroy Crossi**	**52.96**	**270**	P	**P**	**00 20 30.3**	**-2.0**
	2.7nm,0.8s,baz=120,slow=14,SNR=5.0						
FITZ				LR	LR	00 41 11.5	
	comp=Z,134nm,20.2s,baz=129,slow=34						
FITZ	**Fitzroy Crossi**	**52.96**	**270**	*e*P	**P**	**00 20 30.4**	**-1.9**
	18nm,1.5s						
KHLH	**Kahului Airpor**	**54.88**	**24**	*e*P	**P**	**00 20 41.8**	**-4.3**
	150nm,0.5s						
NWAO	**Narrogin (SRO)**	**54.94**	**249**	LR	LR	00 42 13.5	
	comp=Z,114nm,18.4s,baz=347,slow=34						
CASY	**Casey**	**55.36**	**208**	*e*P	**P**	**00 20 47.8**	**-1.2**
	12nm,0.8s						
GUMO	**Guam**	**56.96**	**315**	LR	LR	00 43 35.2	
	comp=Z,29nm,19.2s,baz=124,slow=34						
BATI	**Baumata**	**58.26**	**277**	LR	LR	00 46 38.6	
	comp=Z,316nm,18.2s,baz=128,slow=37						
RPN	**Rapa Nui**	**58.83**	**105**	LR	LR	00 42 49.5	
	comp=Z,43nm,18.8s,baz=96,slow=32						
QSPA	**South Pole Qui**	**59.64**	**180**	P	**P**	**00 21 20.4**	**+1.1**
	2.2nm,0.7s,baz=58,slow=4.6,SNR=6.8						
QSPA	**South Pole Qui**	**59.64**	**180**	*e*P	**P**	**00 21 20.0**	**+0.7**
	34nm,0.8s						
MAW	**Mawson**	**72.45**	**200**	P	**P**	**00 22 41.7**	**+0.3**
	2.7nm,0.8s,baz=123,slow=2.2,SNR=5.8						
LEM	**Lembang**	**73.72**	**272**	LR	LR	00 55 10.6	
	comp=Z,74nm,19.8s,baz=173,slow=36						
SYO	**Syowa Base**	**77.18**	**193**	⇑*e*X	**P**	**00 23 08.2**	**-0.5**
SYO	**Syowa Base**	**77.18**	**193**	⇑*e*PcP	**PcP**	**00 23 14.3**	**-5.1**
SNAA	**Sanae**	**78.07**	**178**	P	**P**	**00 23 14.5**	**+0.8**
SNAA	**Sanae**	**78.07**	**178**	P	**P**	**00 23 14.1**	**+0.3**
	1.4nm,0.9s,baz=190,slow=5.9,SNR=6.0						
VNA3	**Neumayer Olymp**	**78.19**	**176**	P	**P**	**00 23 16.2**	**+1.8**
VNA1	**Neumayer--Stat**	**78.86**	**176**	P	**P**	**00 23 18.6**	**+0.6**
JNU	**Nakatsue**	**80.01**	**318**	LR	LR	00 53 16.0	
	comp=Z,29nm,21.1s,baz=125,slow=32						
PLCA	**Paso Flores**	**82.02**	**133**	P	**P**	**00 23 36.7**	**+1.1**
	1.5nm,0.8s,baz=235,slow=18,SNR=2.6						
PLCA				LR	LR	00 51 47.3	
	comp=Z,48nm,18.7s,baz=270,slow=30						
LPIG	**La Paz**	**84.06**	**58**	LR	LR	00 56 34.8	
	comp=Z,48nm,18.0s,baz=210,slow=32						
SWSC	**Sam W. Stewart**	**85.80**	**48**	*e*P	P	00 23 47.3	-7.5
PETK	**Petropavlovsk-**	**86.03**	**345**	P	**P**	**00 23 57.6**	**+2.2**
	4.3nm,0.7s,baz=130,slow=7.8						
PETK				LR	LR	00 56 13.8	
	comp=Z,52nm,21.8s,baz=118,slow=31						
NJ2	**Nanjing**	**86.75**	**310**	*e*P	**P**	**00 23 58.9**	**-0.6**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
USRK	**Ussuriysk Ar.**	**87.56**	**326**	LR	LR	00 58 02.6	
	comp=Z,24nm,20.4s,baz=145,slow=32						
NVAR	**Mina Array Bea**	**87.88**	**42**	P	**P**	**00 24 06.8**	**+1.7**
	0.3nm,0.5s,baz=210,slow=5.2,SNR=3.6						
NVAR				LR	LR	00 56 59.4	
	comp=Z,38nm,19.2s,baz=108,slow=31						
WHN	**Wuhan**	**88.87**	**307**	P	**P**	**00 24 11.5**	**+1.9**
TXAR	**Lajitas Array**	**91.92**	**57**	LR	LR	01 01 32.0	
	comp=Z,25nm,18.0s,baz=0.0,slow=33						
GYA	**Guiyang**	**92.11**	**299**	*e*P	**P**	**00 24 24.4**	**-0.6**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NNA	**Nana**	**92.82**	**106**	LR	LR	00 56 47.6	
	comp=Z,26nm,21.3s,baz=298,slow=29						
SKT	**Skwentna**	**94.45**	**12**	*e*P	P	00 24 27.6	-7.2
	22nm,0.6s						
HHC	**Hu-ho-hao-te**	**96.72**	**314**	*e*P	**P**	**00 24 44.2**	**-1.6**
HHC				pmax	pmax		
	comp=Z,15nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,8.6s						
CPUP	**Villa Florida**	**99.47**	**128**	LR	LR	01 01 25.7	
	comp=Z,24nm,21.0s,baz=326,slow=30						
WMQ	**Urumqi**	**113.75**	**308**	PKP	**PKiKP**	**00 29 51.4**	**-2.3**
MKAR	**Makanchi Array**	**118.28**	**310**	PKP	**PKPdf**	**00 30 00.9**	**-1.5**
	0.6nm,0.6s,baz=90,slow=1.5,SNR=6.0						
KSH	**Kashi**	**120.80**	**300**	*e*PKP	**PKPdf**	**00 30 04.7**	**-2.8**
KSH				PP	**PP**	**00 31 41.1**	**+4.5**
KURK	**Kurchatov**	**121.53**	**314**	PKP	**PKPdf**	**00 30 08.8**	**+0.4**
KURBB	**Kurchatov Arra**	**121.57**	**314**	PKP	**PKPdf**	**00 30 08.8**	**+0.3**
	1.4nm,0.9s,baz=108,slow=2.1,SNR=8.4						
BVAR	**Borovoye Array**	**126.88**	**316**	PKP	**PKPdf**	**00 30 18.9**	**+0.3**
	1.7nm,0.8s,baz=132,slow=2.1,SNR=10						
KBS	**Kingsbay**	**131.29**	**358**	*e*Pdif	**Pdif**	**00 27 12.3**	**-6.4**
AKTO	**Aktyubinsk**	**134.60**	**312**	PKP	**PKPdf**	**00 30 33.4**	**+0.1**
	1.2nm,0.6s,baz=30,slow=5.7,SNR=3.9						
ARCES	**ARCESS Array B**	**138.79**	**348**	PKP	**PKPdf**	**00 30 42.7**	**+2.2**
	2.4nm,0.9s,baz=42,slow=2.0,SNR=4.9						
GNI	**Garni**	**144.64**	**298**	PKP	**PKPdf**	**00 30 52.9**	**+0.8**
	3.2nm,0.7s,baz=31,slow=12,SNR=2.4						
FIA1	**FINESS Array S**	**145.42**	**340**	*e*PKPdf	**PKPab**	**00 30 52.6**	**-0.1**
FINES	**FINESS Array B**	**145.42**	**340**	PKPbc	**PKPab**	**00 30 53.1**	**+0.4**
	21nm,0.7s,baz=60,slow=3.7,SNR=93						
KBZ	**Khabaz**	**145.65**	**304**	PKPbc	**PKPab**	**00 30 54.3**	**+0.1**
	2.4nm,0.7s,baz=161,slow=3.1,SNR=4.3						
NB2	**NORSAR Subarra**	**148.91**	**352**	PKP	**PKPbc**	**00 31 03.1**	**+0.7**
	comp=Z,2.9nm,0.8s,baz=16,slow=4.3						
HFS	**Hagfors**	**149.43**	**349**	PKPbc	**PKPbc**	**00 31 04.5**	**+0.8**
	comp=Z,3.0nm,0.8s,baz=100,slow=1.8,SNR=7.1						
ASF	**Jabal al Asfar**	**150.81**	**282**	PKPbc	**PKPbc**	**00 31 09.4**	**+1.4**
	comp=Z,1.8nm,0.6s,baz=209,slow=2.0,SNR=6.3						
AKASG	**Malin Array Be**	**151.72**	**323**	PKPbc	**PKPbc**	**00 31 10.3**	**+0.9**
	comp=Z,3.1nm,0.6s,baz=48,slow=3.0,SNR=12						
MMAI	**Mount Meron Ar**	**152.13**	**284**	PKPbc	**PKPbc**	**00 31 12.1**	**+1.1**
	comp=Z,5.5nm,0.5s,baz=86,slow=6.2,SNR=13						
BR131	**Keskin Array S**	**153.16**	**299**	*e*PKPbc	**PKPbc**	**00 31 11.8**	**-1.5**
BRTR	**Keskin Array B**	**153.16**	**299**	PKPbc	**PKPbc**	**00 31 13.3**	**+0.1**
	comp=Z,1.8nm,0.6s,baz=139,slow=4.8,SNR=14						
EKA	**Eskdalemuir Ar**	**154.80**	**8**	PKPab	**PKPab**	**00 31 32.9**	**+1.8**
	comp=Z,1.4nm,0.8s,baz=43,slow=1.3,SNR=2.8						
KWP	**Kalwaria Pacla**	**155.62**	**327**	*e*PKP	**PKPab**	**00 31 36.0**	**+1.1**
CRVS	**Cervenica-Dubn**	**156.72**	**328**	*e*PKP	**PKPab**	**00 31 39.9**	**+0.3**
KSP	**Ksiaz**	**157.26**	**337**	*e*PKP	**PKPab**	**00 31 43.5**	**+1.6**
UPC	**Upice**	**157.64**	**337**	*e*PKPAB	**PKPab**	**00 31 45.3**	**+1.8**
DPC	**Dobruska-Polom**	**157.67**	**337**	*e*PKPAB	**PKPab**	**00 31 45.6**	**+1.9**
DPC				*e*x	x	00 31 48.7	
BRG	**Berggiesshubel**	**157.96**	**341**	*e*PKP	**PKPab**	**00 31 41.2**	**-3.7**
	comp=Z,3.1nm,0.9s						
VYHS	**Vyhne**	**158.19**	**330**	*e*PKP	**PKPab**	**00 31 46.8**	**+0.8**
KHC	**Kasperske Hory**	**159.62**	**339**	*e*PKPAB	**PKPab**	**00 31 54.0**	**+1.9**
GERES	**GERESS Array B**	**159.83**	**339**	PKPab	**PKPab**	**00 31 54.1**	**+1.0**
	comp=Z,0.5nm,0.7s,baz=32,slow=3.3,SNR=5.9						
TORD	**Torodi Ar. Bea**	**162.73**	**177**	PKPab	**PKPab**	**00 32 05.6**	**-0.9**
	baz=166,slow=3.8						

IDC 08 00:21:25.8±3.3**,17.°14S×175.°90W,h424**^{km}±51^{km}**, mb3.0**/3**,mb1 3.3**/4**,mb1mx2.9**/49**,mbtmp3.9**/4**,Error ellipse: s-maj=265.7km s-min=24.8km az=143.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**5.11**	**52**	P	P	00 22 50.1	+0.1
	3.7nm,0.3s,baz=210,slow=18,SNR=4.6						
WRA	**Warramunga Arr**	**47.13**	**258**	P	P	00 29 17.5	-0.7
	0.4nm,0.5s,baz=96,slow=8.2,SNR=17						
ASAR	**Alice Springs**	**47.30**	**253**	P	P	00 29 20.0	+0.5
	2.5nm,0.6s,baz=86,slow=8.0,SNR=28						
ILAR	**Eielson Array**	**84.62**	**12**	P	P	00 33 12.6	0.0
	0.2nm,0.6s,baz=218,slow=5.7,SNR=3.6						

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*NNC **08** 00:22:02.1±1.4,38.°54N×70.°40E,h0^{km},mb3.9,mpv3.5, Error ellipse: s-maj=11.5km s-min=8.3km az=26.0*

ISC 08 00:21:59.9±3.0**,38.°3N**±0.°2×**70.°3E**±0.°1**,h10**^{km}**,n12, σ1.**^{s}**48**/17**,8C-8D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**3.04**	**54**	⇑Pn	**Pn**	**00 22 48.5**	**+0.2**
	1.7nm,0.3s						
SFK				⇑Pg	**Pb**	**00 22 52.7**	**-1.5**
	14nm,0.4s						
SFK				⇑Lg	Lg	00 23 31.4	
	37nm,0.4s						
MNAS	**Manas**	**4.53**	**21**	⇓Pn	**Pn**	**00 23 09.1**	**+0.5**
	2.7nm,0.3s						
MNAS				⇑Pg	**Pb**	**00 23 20.6**	**+1.0**
	6.0nm,0.5s						
MNAS				⇓Sn	**Sn**	**00 24 00.5**	**-1.0**
	11nm,0.7s						
AML	**Almayashu**	**4.65**	**33**	P	**Pn**	**00 23 12.9**	**+2.4**
	SNR=15						
KK31	**Karatay Array**	**4.82**	**2**	⇓Pn	**Pn**	**00 23 12.0**	**-0.5**
	1.6nm,0.3s,baz=274,slow=11,SNR=62						
KK31				⇑Pg	**Pb**	**00 23 24.5**	**0.0**
	1.3nm,0.3s,baz=172,slow=14,SNR=6.7						
KK31				⇓Sn	**Sn**	**00 24 07.0**	**-1.5**
	3.2nm,0.6s,baz=187,slow=40,SNR=8.9						
KK31				⇑Lg	Lg	00 24 25.2	
	15nm,0.7s,baz=181,slow=27,SNR=4.7						
UCH	**Uchtor**	**5.10**	**38**	P	**Pn**	**00 23 15.9**	**-0.8**
	SNR=7.8						
EKS2	**Erkin-Say**	**5.12**	**30**	P	**Pn**	**00 23 18.6**	**+1.9**
	SNR=6.6						
AAK	**Ala-Archa**	**5.41**	**35**	⇓Pn	**Pn**	**00 23 22.0**	**+1.3**
	4.7nm,0.5s						
AAK				⇓Lg	Lg	00 24 45.4	
	16nm,1.1s						
KBK	**Karagaybulak**	**5.63**	**38**	P	Pn	00 23 28.9	+5.1
	SNR=19						
USP	**Ospenovka**	**5.92**	**31**	P	**Pn**	**00 23 29.1**	**+1.5**
	SNR=10						
TKM2	**Tokmak 2**	**6.15**	**39**	⇑Pn	**Pn**	**00 23 31.5**	**+0.5**
	9.4nm,0.5s						
TKM2				⇓Lg	Lg	00 25 09.9	
	7.8nm,1.1s						
TKM2	**Tokmak 2**	**6.15**	**39**	P	**Pn**	**00 23 34.0**	**+3.1**
	SNR=19						
AB31	**Akbulak array**	**13.26**	**329**	⇓Pn	**Pn**	**00 25 08.0**	**-0.1**
	0.9nm,0.5s,baz=150,slow=12,SNR=4.3						
AB31				⇑Sn	**Sn**	**00 27 35.4**	**-0.1**
	0.9nm,0.6s,baz=149,slow=23,SNR=3.8						

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*DJA **08** 00:29:52.7±3.6,4°N±7°×9°3E±3°1,h10^{km},M4.6/6,mb4.6/6, mB5.1/3,MLv4.6/6,Mw(mB)4.5/3*

*IDC **08** 00:29:53.7±1.1,3.°44N×92.°69E,h0^{km},mb3.7/10, mb1 3.9/13,mb1mx3.7/65,mbtmp3.8/13,ML4.1/2,Error ellipse: s-maj=36.2km s-min=18.8km az=41.0*

*ISCJB **08** 00:29:55.3±0.6,3.°52N±0.°09×92.°75E±0.°06,h24^{km}, mb3.7/10,Error ellipse: s-maj=13.9km s-min=6.8km az=27.4*

ISC 08 00:29:56.6±0.8**,3.°54N**±0.°10×**92.°68E**±0.°07**,h24**^{km}**,n25, σ2.**^{s}**38**/24**,mb3.7**/10**,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSI	**Banda Aceh**	**3.25**	**53**	P	**Pn**	**00 30 44.6**	**-1.6**
MLSI	**Meulaboh, Aceh**	**3.78**	**79**	P	**Pn**	**00 30 52.7**	**-0.8**
SNSI	**Sinabang, Aceh**	**3.81**	**107**	P	**Pn**	**00 30 51.3**	**-2.5**
TPTI		**4.50**	**93**	P	**Pn**	**00 31 02.4**	**-0.9**
LHMI	**Lhok Sumawe**	**4.57**	**68**	P	**Pn**	**00 31 04.6**	**+0.3**
KCSI	**Kotacane, Aceh**	**5.08**	**90**	P	**Pn**	**00 31 12.6**	**+1.3**
GSI	**Gunungsitoli**	**5.37**	**114**	P	**Pn**	**00 31 15.6**	**+0.3**
PSI	**Prapat**	**6.28**	**97**	Pn	**Pn**	**00 31 28.3**	**+0.4**
	6.8nm,0.3s,baz=360,slow=4.7,SNR=21						
PSI				Sn	**Sn**	**00 32 33.8**	**-5.2**
	2.7nm,0.3s,baz=180,slow=17,SNR=4.1						
PBSI	**Pulau Batu**	**6.64**	**122**	P	**Pn**	**00 31 33.2**	**+0.5**
MNSI	**Mandailing Nat**	**7.41**	**111**	P	**Pn**	**00 31 44.0**	**+0.6**
PALK	**Pallekele**	**12.49**	**288**	Pn	**Pn**	**00 32 54.0**	**+1.0**
	0.6nm,0.3s,baz=115,slow=13,SNR=5.7						
PALK				Sn	**Sn**	**00 35 03.9**	**-7.6**
	3.3nm,0.3s,baz=123,slow=0.5,SNR=7.8						
CMAR	**Chiang Mai Arr**	**16.04**	**22**	Pn	**Pn**	**00 33 40.0**	**-0.8**
	baz=217,slow=14,SNR=5.8						
H08S2	**Diego Garcia H**	**23.00**	**241**	T	T	01 00 21.3	
	baz=244,slow=74,SNR=9.8						
H08S3	**Diego Garcia H**	**23.00**	**241**	T	T	01 00 22.4	
	baz=60,slow=74,SNR=44						
H08S1	**Diego Carcia H**	**23.02**	**241**	T	T	01 00 26.4	
MKAR	**Makanchi Array**	**44.02**	**350**	P	**P**	**00 38 03.8**	**+1.5**
	3.9nm,0.8s,baz=168,slow=8.9,SNR=31						
SONM	**Songino Array**	**45.68**	**13**	P	**P**	**00 38 17.4**	**+1.7**
	0.3nm,0.4s,baz=190,slow=7.3,SNR=3.3						
WRA	**Warramunga Arr**	**47.10**	**121**	P	**P**	**00 38 27.9**	**+0.8**
	0.2nm,0.6s,baz=298,slow=8.9,SNR=2.8						
ASAR	**Alice Springs**	**48.40**	**126**	P	**P**	**00 38 36.6**	**-0.6**
	0.1nm,0.3s,baz=290,slow=7.7,SNR=4.6						
KURBB	**Kurchatov Arra**	**48.41**	**348**	P	**P**	**00 38 38.2**	**+1.4**
	1.5nm,0.7s,baz=172,slow=7.3,SNR=14						
ZALV	**Zalesovo Beam**	**50.66**	**354**	P	**P**	**00 38 55.9**	**+2.0**
	0.9nm,0.3s,baz=184,slow=8.3,SNR=6.8						
BVAR	**Borovoye Array**	**52.65**	**343**	P	**P**	**00 39 09.6**	**+0.9**
	1.2nm,0.8s,baz=142,slow=7.3,SNR=8.5						
BRTR	**Keskin Array B**	**64.21**	**313**	P	**P**	**00 40 31.1**	**+1.1**
	0.7nm,0.9s,baz=139,slow=6.8,SNR=4.5						
MLR	**Muntele Rosu**	**71.28**	**317**	P	**P**	**00 41 16.0**	**+1.6**
	0.3nm,0.8s,baz=127,slow=10,SNR=4.5						
GERES	**GERESS Array B**	**80.09**	**319**	P	**P**	**00 42 06.0**	**+1.2**
	0.4nm,0.7s,baz=100,slow=5.5,SNR=6.4						

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*JMA **08** 00:43:27.9±0.3,35.°75N×129.°25E,h11^{km},M2.7*

*ISCJB **08** 00:43:28.6±1.1,35.°73N±0.°05×129.°38E±0.°09,h6^{km}±12^{km}, Error ellipse: s-maj=12.1km s-min=8.2km az=10.5*

*KMA **08** 00:43:28.8±0.3,35.°72N×129.°36E,h12^{km}±5^{km},Error ellipse: s-maj=3.1km s-min=2.1km az=86.0*

ISC 08 00:43:27.5±1.2**,35.°71N**±0.°04×**129.°43E**±0.°06**,h13**^{km}±15^{km}**, n10,**σ**0.**^{s}**62**/15**,4C-1D,South Korea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSUSN	**Ulsan**	**0.25**	**268**	P	**Pg**	**00 43 33.2**	**+0.4**
	SNR=635						
KSUSN				⇑S	**Sg**	**00 43 36.0**	**-0.5**
KSDAG	**Daegu**	**0.44**	**278**	P	**Pg**	**00 43 36.5**	**+0.3**
	SNR=226						
KSDAG				⇓S	**Sg**	**00 43 41.7**	**-0.4**
KSYOC	**YEONGCHEON**	**0.47**	**304**	P	**Pb**	**00 43 37.2**	**-0.4**
	SNR=54						
KSPHA	**Pohang**	**0.48**	**354**	P	**Pb**	**00 43 38.2**	**+0.3**
	SNR=51						
KSBUS	**Busan**	**0.53**	**209**	⇑P	**Pb**	**00 43 38.7**	**+0.1**
	SNR=31						
KSBUS	**Busan**	**0.53**	**209**	⇑P	**Pb**	**00 43 38.7**	**+0.1**
	SNR=29						
KSADO	**Andong**	**0.80**	**331**	⇑P	**Pg**	**00 43 43.4**	**+0.3**
	SNR=115						
JTU	**Tsushima**	**1.18**	**181**	P	**Pg**	**00 43 50.7**	**+0.4**
JTU				S	**Sg**	**00 44 06.3**	**+0.6**
JII	**Iki**	**1.93**	**172**	P	**Pb**	**00 44 02.6**	**+0.1**
JII				S	**Sg**	**00 44 28.5**	**-1.0**
JTY	**Toyota**	**1.97**	**137**	P	**Pb**	**00 44 03.5**	**+0.3**
JTY				*e*S	**Sg**	**00 44 29.6**	**-1.3**

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*IDC **08** 00:45:01.2±1.7,8.°67S×124.°55E,h0^{km},mb3.4/1, mb1 4.0/4,mb1mx3.5/48,mbtmp3.8/4,ML4.0/3,MS3.4/2, Ms1 3.4/2,ms1mx2.7/26,Error ellipse: s-maj=48.1km s-min=23.9km az=79.0*

*DJA **08** 00:45:12.7±2.6,9°S±9°×12°4E±1°5,h58^{km}±61^{km},M3.4/4, MLv3.4/4*

ISC 08 00:45:03.4±1.3**,8.°76S**±0.°09×**124.°3E**±0.°1**,h10**^{km}**,n11, σ2.**^{s}**12**/10**,Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	**Soe**	**0.99**	**184**	P	**Pn**	**00 45 27.6**	**+4.2**
BATI	**Baumata**	**1.58**	**205**	Pn	**Pb**	**00 45 33.1**	**+0.4**
	51nm,0.3s,baz=79,slow=2.2,SNR=25						
BATI				Sn	**Sn**	**00 45 49.8**	**-2.2**
	107nm,0.3s,baz=44,slow=20,SNR=22						
BATI	**Baumata**	**1.58**	**205**	P	**Pb**	**00 45 32.9**	**+0.2**
MMRI	**Maumere**	**2.08**	**273**	P	**Pb**	**00 45 42.4**	**+1.2**
EDFI	**Ende, Flores**	**2.61**	**270**	P	**Pb**	**00 45 49.4**	**-1.0**
FITZ	**Fitzroy Crossi**	**9.37**	**172**	Pn	**Pn**	**00 47 17.2**	**-1.3**
	0.8nm,0.3s,baz=353,slow=8.7,SNR=20						
FITZ				Sn	Sn	00 48 49.9	-14
	6.9nm,0.3s,baz=201,slow=8.3,SNR=21						
WRA	**Warramunga Arr**	**14.74**	**140**	Pn	**Pn**	**00 48 30.9**	**-1.1**
	0.8nm,0.3s,baz=318,slow=13,SNR=31						
WRA				Sn	Sn	00 51 01.4	-14
	0.8nm,0.3s,baz=315,slow=26,SNR=11						
ASAR	**Alice Springs**	**17.42**	**149**	P	**P**	**00 49 06.2**	**-1.8**
	0.5nm,0.3s,baz=319,slow=11,SNR=33						
ASAR				S	Sn	00 52 05.5	-15
	0.3nm,0.3s,baz=331,slow=26,SNR=5.3						
PSI	**Prapat**	**27.82**	**293**	LR	LR	01 03 23.0	
	comp=Z,85nm,20.0s,baz=92,slow=40						
BRDH	**Bariadhala**	**44.74**	**315**	LR	LR	01 14 12.3	
	comp=Z,38nm,18.9s,baz=136,slow=39						
MKAR	**Makanchi Array**	**66.77**	**330**	P	**P**	**00 55 54.7**	**-0.4**
	0.2nm,0.5s,baz=130,slow=7.5,SNR=3.5						

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*IDC **08** 01:04:11.8±0.7,7.°03N×121.°52E,h0^{km},mb3.9/11, mb1 4.0/13,mb1mx3.7/67,mbtmp4.0/13,ML4.3/2,MS3.2/6, Ms1 3.3/6,ms1mx2.8/59,Error ellipse: s-maj=26.4km s-min=13.3km az=62.0*

*MAN **08** 01:04:12.0,7.°09N×121.°34E,h48^{km},mb4.7,ML3.6,MS3.6*

*ISCJB **08** 01:04:14.4±0.4,7.°07N±0.°04×121.°55E±0.°03,h33^{km}, mb3.8/12,MS3.2/4,Error ellipse: s-maj=6.2km s-min=4.9km az=14.7*

*NEIC **08** 01:04:16.1±5.5,7.°04N×121.°56E,h29^{km}±42^{km},mb4.0/2, Error ellipse: s-maj=15.7km s-min=7.1km az=73.0*

NEIC Felt [III PIVS] at Zamboanga City.

ISC 08 01:04:16.2±0.7**,7.°05N**±0.°06×**121.°46E**±0.°06**,h35**^{km}**,n35, σ2.**^{s}**26**/39**,mb3.9**/12**,MS3.2**/4**,2C-3D,Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZCP	**Zamboanga City**	**0.62**	**101**	⇓*i*P	**Pn**	**01 04 24.1**	**-4.4**
ZCP				*i* S	**Sn**	**01 04 32.0**	**-5.3**
PAGZ	**Pagadian**	**2.07**	**67**	*e*P	**Pn**	**01 04 47.3**	**-1.1**
PAGZ				*e*S	**Sn**	**01 05 12.4**	**-0.6**
CTBH	**Cotabato--PC H**	**2.77**	**86**	⇑*i*P	**Pn**	**01 04 56.1**	**-2.1**
CTBH				*i* S	**Sn**	**01 05 25.9**	**-4.5**
SKMP	**Bagumbayan, Su**	**3.11**	**100**	*e*P	**Pn**	**01 05 01.1**	**-1.7**
CGP	**Cagayan de Oro**	**3.50**	**66**	⇓*e*P	**Pn**	**01 05 09.3**	**+1.2**
CGP				*e*S	**Sn**	**01 05 46.1**	**-2.2**
BUKP	**Musuan**	**3.67**	**77**	*e*P	**Pn**	**01 05 09.8**	**-0.7**
BUKP				*e*S	**Sn**	**01 05 55.2**	**+2.6**
JAP	**San Jose, Anti**	**3.71**	**7**	⇓*e*P	**Pn**	**01 05 11.8**	**+0.8**
GUIM	**Jordan**	**3.73**	**17**	*e*P	**Pn**	**01 05 08.9**	**-2.4**
CUYO	**Cuyo Island**	**3.80**	**353**	*e*P	**Pn**	**01 05 09.6**	**-2.7**
CUYO				*e*S	**Sn**	**01 05 51.4**	**-4.4**
DAV	**Davao City (W)**	**4.09**	**89**	Pn	**Pn**	**01 05 15.0**	**-1.2**
	46nm,0.3s,baz=348,slow=3.7,SNR=5.5						
DAV				Sn	**Sn**	**01 06 04.2**	**+1.2**
	55nm,0.3s,baz=69,slow=8.6,SNR=2.0						
DAV				LR	LR	01 06 49.9	
	comp=Z,254nm,20.4s,baz=337,slow=39						
MSLP	**Maasin**	**4.55**	**47**	*e*P	**Pn**	**01 05 20.6**	**-2.0**
MSLP				*e*S	**Sn**	**01 06 13.5**	**-0.8**
ENPP	**El Nido**	**4.59**	**334**	*e*P	**Pn**	**01 05 18.9**	**-4.3**
RCP	**Roxas**	**4.66**	**16**	⇑*e*P	**Pn**	**01 05 22.8**	**-1.3**
OTRP	**Odiongan**	**5.31**	**6**	*e*P	**Pn**	**01 05 30.6**	**-2.5**
SJMP	**San Jose**	**5.39**	**356**	*e*P	**Pn**	**01 05 31.5**	**-2.6**
SIJI	**Sorong**	**12.56**	**128**	Pn	**Pn**	**01 07 11.3**	**-1.2**
	0.8nm,0.3s,baz=333,slow=16,SNR=1.9						
BATI	**Baumata**	**17.28**	**173**	LR	LR	01 15 32.4	
	comp=Z,83nm,18.4s,baz=67,slow=39						
JOW	**Kunigami**	**20.71**	**17**	P	Pn	01 08 54.4	-1.8
	14nm,0.8s,baz=162,slow=20,SNR=3.1						
CMAR	**Chiang Mai Arr**	**24.68**	**299**	P	**P**	**01 09 36.3**	**+2.2**
	1.5nm,0.6s,baz=121,slow=8.1,SNR=7.6						
CMAR				LR	LR	01 19 18.3	
	comp=Z,48nm,19.7s,baz=176,slow=37						
CHTO	**Chiang Mai**	**24.83**	**300**	*e*P	**P**	**01 09 36.8**	**+1.3**
	1.9nm,0.4s						
FITZ	**Fitzroy Crossi**	**25.33**	**171**	P	**P**	**01 09 40.3**	**+0.5**
	2.9nm,1.0s,baz=4.2,slow=14,SNR=3.3						
MBWA	**Marble Bar**	**28.08**	**183**	*e*P	**P**	**01 10 05.2**	**+0.5**
WRA	**Warramunga Arr**	**29.67**	**155**	P	**P**	**01 10 18.3**	**-0.5**
	0.9nm,0.7s,baz=338,slow=9.4,SNR=7.0						
WRA				PcP	**PcP**	**01 13 22.9**	**0.0**
	0.4nm,0.7s,baz=321,slow=3.2,SNR=4.1						
KSRS	**Korea Array**	**30.83**	**10**	LR	LR	01 24 03.4	
	comp=Z,20nm,18.1s,baz=75,slow=39						
ASAR	**Alice Springs**	**32.86**	**159**	P	**P**	**01 10 47.7**	**+0.7**
	0.5nm,0.8s,baz=338,slow=6.8,SNR=4.3						
ULN	**Ulaanbaatar**	**42.48**	**346**	*e*P	**P**	**01 12 08.9**	**+0.8**
	2.7nm,0.9s						
SONM	**Songino Array**	**42.62**	**345**	P	**P**	**01 12 10.3**	**+1.1**
	2.1nm,0.8s,baz=169,slow=8.8,SNR=9.8						
STKA	**Stephens Creek**	**43.22**	**155**	P	**P**	**01 12 15.2**	**+1.1**
	3.4nm,0.8s,baz=298,slow=9.7,SNR=6.0						
MKAR	**Makanchi Array**	**51.88**	**327**	P	**P**	**01 13 22.6**	**+1.4**
	1.1nm,0.8s,baz=134,slow=8.4,SNR=12						
KURBB	**Kurchatov Arra**	**56.16**	**329**	P	**P**	**01 13 53.6**	**+1.3**
	1.6nm,0.8s,baz=117,slow=9.7,SNR=15						
KURK	**Kurchatov**	**56.16**	**329**	P	**P**	**01 13 53.6**	**+1.2**
SEY	**Seymchan**	**60.14**	**16**	P	**P**	**01 14 20.9**	**+0.9**
	0.8nm,0.8s,baz=223,slow=19,SNR=3.8						
BVAR	**Borovoye Array**	**61.71**	**328**	P	**P**	**01 14 30.9**	**0.0**
	0.5nm,0.9s,baz=87,slow=7.5,SNR=4.2						
AKTO	**Aktyubinsk**	**67.82**	**322**	LR	LR	01 47 04.1	
	comp=Z,26nm,18.9s,baz=57,slow=38						
NOA	**NORSAR Array B**	**93.48**	**333**	LR	LR	02 01 49.2	
	comp=Z,16nm,19.7s,baz=290,slow=37						

*NIED **08** 01:13:00, 40°.60N×144°.70E, h5km, Mw3.6 Best double couple: M₀2.48000×10^14 NP1:φs12.00000°, δ29.00000°, λ-108.00000°. NP2:φs213.00000°, δ63.00000°, λ-80.00000°.*

*IDC **08** 01:13:02.9±1.2, 40°.60N×144°.55E, h0km, mb3.6/9, mb1 3.7/12, mb1mx3.5/66, mbtmp3.6/12, ML3.5/2, Error ellipse: s-maj=26.8km s-min=20.7km az=97.0*

*JMA **08** 01:13:03.8±0.1, 40°.64N×144°.65E, h68km±3km, M3.5*

*ISCJB **08** 01:13:04.5±0.6, 40°.69N±0°.03×144°.49E±0°.06, h25km, mb3.5/9, Error ellipse: s-maj=7.2km s-min=3.6km az=22.8*

ISC 08 01:13:05.6±1.0**, 40°.69N**±0°.05×**144°.56E**±0°.07**, h25km, n37, σ1s.56**/44**, mb3.5**/9**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JEM	**Erimo**	**1.70**	**322**	P	**Pb**	**01 13 32.9**	**-3.2**
JEM				*e*S	**Sn**	**01 13 53.8**	**-0.8**
JNBK	**Urakawa-nobuka**	**2.09**	**320**	P	**Pb**	**01 13 39.2**	**-3.7**
JCH	**Churui**	**2.13**	**335**	P	**Pn**	**01 13 38.6**	**-0.9**
JCH				*e*S	**Sn**	**01 14 03.4**	**-1.7**
JTH	**Tanohata**	**2.20**	**251**	P	**Pn**	**01 13 39.3**	**-1.2**
JAK	**Akkeshi**	**2.31**	**2**	P	**Pn**	**01 13 41.4**	**-0.6**
JAK				*e*S	**Sn**	**01 14 07.8**	**-1.8**
JANG	**Nango**	**2.34**	**263**	P	**Pn**	**01 13 41.6**	**-1.0**
JANG				*e*S	**Sn**	**01 14 09.2**	**-1.4**
JAR	**Ashorobuto**	**2.67**	**347**	P	**Pn**	**01 13 46.0**	**-1.1**
JAR				*e*S	**Sn**	**01 14 17.0**	**-1.7**
JOT	**Ohata**	**2.75**	**286**	P	**Pn**	**01 13 47.8**	**-0.3**
JOM	**Ohasama**	**2.79**	**245**	P	**Pn**	**01 13 48.5**	**-0.1**
JOM				*e*S	**Sn**	**01 14 19.4**	**-2.1**
NEM2	**Nemuro 2**	**2.82**	**18**	P	**Pn**	**01 13 47.3**	**-1.7**
NEM2				*e*S	**Sn**	**01 14 18.6**	**-3.5**
JFR	**Furan**	**2.88**	**330**	P	**Pn**	**01 13 49.6**	**-0.3**
JFR				*e*S	**Sn**	**01 14 22.7**	**-1.0**
JKB	**Kayabe**	**2.92**	**295**	P	**Pn**	**01 13 50.2**	**-0.2**
JMK	**Ichinoseki**	**3.10**	**237**	P	**Pn**	**01 13 52.8**	**-0.2**
JMK				*e*S	**Sn**	**01 14 26.8**	**-2.5**
JEW	**Eniwo**	**3.17**	**314**	P	**Pn**	**01 13 54.7**	**+0.8**
JEW				*e*S	**Sn**	**01 14 31.3**	**+0.4**
JRA	**Rausu**	**3.27**	**7**	P	**Pn**	**01 13 55.0**	**-0.3**
JTKR	**Abashiri--Toko**	**3.32**	**352**	P	**Pn**	**01 13 55.6**	**-0.3**
JTKR				*e*S	**Sn**	**01 14 33.4**	**-1.1**
JKK2	**Kamakawa 2**	**3.46**	**338**	P	**Pn**	**01 13 57.4**	**-0.4**
JKK2				*e*S	**Sn**	**01 14 39.9**	**+1.9**
JYK	**Kaneyama**	**3.69**	**243**	P	**Pn**	**01 14 01.2**	**+0.2**
JYK				*e*S	**Sn**	**01 14 41.5**	**-2.2**
ASAJ	**Asahikawa**	**3.72**	**338**	Pn	**Pn**	**01 14 01.4**	**-0.1**
	4.2nm,0.3s,baz=203,slow=12,SNR=24						
ASAJ				Sn	**Sn**	**01 14 45.9**	**+1.4**
	1.5nm,0.3s,baz=148,slow=31,SNR=3.5						
JOSM	**Okushiri--Mats**	**4.08**	**292**	P	**Pn**	**01 14 05.7**	**-0.6**
MJAR	**Matsushiro Arr**	**6.47**	**232**	Pn	**Pn**	**01 14 40.0**	**+0.7**
	0.3nm,0.3s,baz=85,slow=21,SNR=3.2						
MJAR				Sn	Sn	01 15 59.2	+6.8
	0.4nm,0.3s,baz=20,slow=3.7,SNR=3.3						
USRK	**Ussuriysk Ar.**	**9.94**	**295**	Pn	**Pn**	**01 15 27.9**	**+1.1**
	baz=99,slow=14						
SEY	**Seymchan**	**22.76**	**9**	P	**P**	**01 18 08.3**	**+2.5**
	0.4nm,0.3s,baz=210,slow=8.1,SNR=3.2						
SONM	**Songino Array**	**28.03**	**298**	P	**P**	**01 18 56.1**	**+1.4**
	0.4nm,0.5s,baz=101,slow=7.6,SNR=3.3						
H11N2	**WAKE ISLAND Hy**	**28.29**	**131**	T	T	01 48 51.6	
	baz=324						
H11N1	**WAKE ISLAND Hy**	**28.30**	**131**	T	T	01 48 48.9	
	baz=324						
H11N3	**WAKE ISLAND Hy**	**28.31**	**131**	T	T	01 48 49.1	
	baz=324						
H11S1	**WAKE ISLAND Hy**	**29.15**	**133**	T	T	01 49 51.2	
	baz=324						
H11S3	**WAKE ISLAND Hy**	**29.16**	**133**	T	T	01 50 02.3	
	baz=324						
H11S2	**WAKE ISLAND Hy**	**29.17**	**133**	T	T	01 49 52.7	
	baz=324						
ZALV	**Zalesovo Beam**	**41.38**	**309**	P	**P**	**01 20 50.4**	**+0.9**
	0.3nm,0.3s,baz=86,slow=7.6,SNR=2.3						
MKAR	**Makanchi Array**	**44.36**	**300**	P	**P**	**01 21 15.6**	**+1.8**
	0.2nm,0.6s,baz=79,slow=12,SNR=3.1						
ILAR	**Eielson Array**	**45.09**	**34**	P	P	01 21 21.3	+2.0
	0.3nm,0.8s,baz=275,slow=5.6,SNR=4.6						
KURBB	**Kurchatov Arra**	**45.78**	**306**	P	**P**	**01 21 25.9**	**+1.0**
	0.3nm,0.5s,baz=78,slow=8.7,SNR=4.3						
BVAR	**Borovoye Array**	**50.00**	**311**	P	**P**	**01 21 59.2**	**+1.7**
	0.3nm,0.4s,baz=61,slow=7.4,SNR=2.3						
WRA	**Warramunga Arr**	**61.06**	**191**	P	**P**	**01 23 17.6**	**+0.3**
	1.0nm,0.7s,baz=8.0,slow=6.8,SNR=12						
FINES	**FINESS Array B**	**66.72**	**333**	P	**P**	**01 23 55.3**	**+1.2**
	1.6nm,0.9s,baz=46,slow=8.0,SNR=3.3						

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*ISCJB **08** 01:17:15.8±0.6, 37°.62N±0°.04×36°.25E±0°.05, h4km±6km, Error ellipse: s-maj=7.6km s-min=3.8km az=136.0*

*CSEM **08** 01:17:15.8±0.1, 37°.62N×36°.25E, h5km, ML2.9, Error ellipse: s-maj=4.6km s-min=2.7km az=37.0*

*DDA **08** 01:17:15.8, 37°.63N×36°.26E, h2km, Ml2.9*

*ISK **08** 01:17:15.3, 37°.63N×36°.26E, h5km, ML2.1/6*

ISC 08 01:17:15.8±0.9**, 37°.63N**±0°.03×**36°.25E**±0°.03**, h7km**±7km**, n23, σ0s.48**/36**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANDN	**Andirin**	**0.09**	**122**	*i* P	**Pg**	**01 17 17.9**	**-0.1**
ANDN				*i* S	**Sg**	**01 17 19.3**	**-0.1**
ANDN	**Andirin**	**0.09**	**122**	P	**Pg**	**01 17 17.9**	**-0.1**
ANDN				S	**Sg**	**01 17 19.3**	**-0.1**
SAIM	**ADANA**	**0.38**	**339**	*i* P	**Pg**	**01 17 23.4**	**+0.2**
SAIM				*i* S	**Sb**	**01 17 29.6**	**-1.4**
SAIM	**ADANA**	**0.38**	**339**	P	**Pg**	**01 17 23.4**	**+0.2**
SAIM				S	**Sb**	**01 17 29.6**	**-1.4**
KMRS	**Kahramanmaras**	**0.53**	**103**	PG	**Pg**	**01 17 25.8**	**-0.2**
KMRS				SG	**Sg**	**01 17 33.7**	**+0.8**
KMRS	**Kahramanmaras**	**0.53**	**103**	*e*Pg	**Pg**	**01 17 25.8**	**-0.2**
KMRS				*e*Sg	**Sg**	**01 17 33.7**	**+0.8**
SARI	**SarD1z-Kayseri**	**0.79**	**9**	PG	**Pg**	**01 17 31.0**	**-0.1**
SARI				SG	**Sg**	**01 17 42.0**	**+0.6**
YAHY	**KAYSERI_Yahyal**	**0.85**	**304**	*i* P	**Pg**	**01 17 32.5**	**+0.4**
YAHY				*i* S	**Sb**	**01 17 44.8**	**+0.2**
YAHY	**KAYSERI_Yahyal**	**0.85**	**304**	P	**Pg**	**01 17 32.5**	**+0.4**
YAHY				S	**Sb**	**01 17 44.8**	**+0.2**
GAZ	**Gaziantep**	**0.89**	**120**	PG	**Pg**	**01 17 32.8**	**-0.1**
GAZ				SG	**Sb**	**01 17 45.9**	**+0.2**
GAZ	**Gaziantep**	**0.89**	**120**	*e*Pg	**Pg**	**01 17 32.8**	**-0.1**
GAZ				*e*Sg	**Sb**	**01 17 45.9**	**+0.2**
KARA	**Karaisali**	**1.02**	**249**	PG	**Pg**	**01 17 35.3**	**-0.1**
KARA	**Karaisali**	**1.02**	**249**	*e*Pg	**Pg**	**01 17 35.3**	**-0.1**
KUZU	**Kuzuini**	**1.07**	**142**	*i* P	**Pb**	**01 17 36.8**	**0.0**
KUZU				*i* S	**Sn**	**01 17 52.2**	**-0.4**
KUZU	**Kuzuini**	**1.07**	**142**	P	**Pb**	**01 17 36.8**	**0.0**
KUZU				S	**Sn**	**01 17 52.2**	**-0.4**
TAHT	**Tahtakopru-Hat**	**1.25**	**183**	PN	**Pg**	**01 17 39.6**	**-0.2**
TAHT	**Tahtakopru-Hat**	**1.25**	**183**	*e*Pn	**Pg**	**01 17 39.6**	**-0.2**
BNN	**Bunyan**	**1.27**	**345**	PN	**Pg**	**01 17 39.8**	**-0.3**
BNN	**Bunyan**	**1.27**	**345**	*e*Pn	**Pg**	**01 17 39.8**	**-0.3**
DARE	**Darende-Malaty**	**1.35**	**45**	PN	**Pb**	**01 17 41.6**	**0.0**
DARE	**Darende-Malaty**	**1.35**	**45**	*e*Pn	**Pb**	**01 17 41.6**	**0.0**
MALT	**Malatya**	**1.85**	**68**	PN	**Pn**	**01 17 48.5**	**+0.4**
MALT	**Malatya**	**1.85**	**68**	*e*Pn	**Pn**	**01 17 48.5**	**+0.4**

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*ISCJB **08** 01:40:20.5±0.6, 56°.02S±0°.10×27°.6W±0°.3, h112km, mb4.2/10, Error ellipse: s-maj=21.6km s-min=11.7km az=157.2*

*NEIC **08** 01:40:21.9±2.6, 56°.04S×27°.65W, h108km±23km, mb4.1/1, Error ellipse: s-maj=14.7km s-min=8.3km az=61.0*

*IDC **08** 01:40:21.0±5.5, 56°.01S×27°.51W, h99km±49km, mb4.1/9, mb1 4.1/10, mb1mx3.9/31, mbtmp4.4/10, Error ellipse: s-maj=26.0km s-min=15.0km az=64.0*

ISC 08 01:40:22.4±0.5**, 56°.0S**±0°.1×**27°.6W**±0°.2**, h112km, n21, σ0s.57**/24**, mb4.3**/9**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNAA	**Sanae**	**18.86**	**156**	P	**P**	**01 44 33.0**	**-0.3**
	3.1nm,0.3s,baz=320,slow=15,SNR=178						
SNAA				PcP	**PcP**	**01 48 55.0**	**+0.3**
	0.1nm,0.3s,baz=260,slow=3.4,SNR=8.0						
TRQA	**Tornquist**	**29.09**	**294**	*e*P	**P**	**01 46 11.8**	**-0.3**
	4.8nm,1.1s						
QSPA	**South Pole Qui**	**34.22**	**180**	P	**P**	**01 46 56.8**	**-0.1**
	7.5nm,0.6s,baz=195,slow=3.2,SNR=46						
CPUP	**Villa Florida**	**36.61**	**312**	P	**P**	**01 47 16.9**	**-0.7**
	1.4nm,0.9s,baz=154,slow=10,SNR=3.1						
CPUP				PcP	**PcP**	**01 49 38.4**	**+0.1**
	1.0nm,0.7s,baz=180,slow=7.5,SNR=3.2						
MAW	**Mawson**	**40.31**	**144**	P	**P**	**01 47 47.8**	**-0.2**
	1.0nm,0.7s,baz=232,slow=12,SNR=3.2						
VNDA	**Vanda**	**46.58**	**183**	P	**P**	**01 48 38.5**	**+0.3**
	3.9nm,0.6s,baz=187,slow=6.4,SNR=36						
ASCN	**Ascension**	**49.11**	**18**	*e*P	**P**	**01 48 58.4**	**0.0**
LPAZ	**La Paz**	**50.16**	**306**	P	**P**	**01 49 07.6**	**+0.5**
	2.1nm,0.3s,baz=113,slow=6.1,SNR=20						
LPAZ				PcP	**PcP**	**01 50 25.6**	**+0.7**
	0.7nm,0.4s,baz=109,slow=3.8,SNR=3.7						
DBIC	**Dimbokro**	**65.25**	**25**	P	**P**	**01 50 51.9**	**+0.1**
	5.0nm,1.0s,baz=198,slow=9.6,SNR=2.7						
PCRV	**Puerto La Cruz**	**72.78**	**322**	P	**P**	**01 51 38.9**	**+0.4**
	15nm,1.1s,baz=166,slow=4.2,SNR=4.0						
TORD	**Torodi Ar. Bea**	**73.16**	**30**	P	**P**	**01 51 40.1**	**-0.5**
	1.6nm,0.5s,baz=202,slow=6.6						
ASAR	**Alice Springs**	**99.08**	**163**	P	**Pdif**	**01 53 49.5**	**-1.2**
	0.6nm,0.8s,baz=189,slow=4.2,SNR=5.0						
PDAR	**Pinedale Array**	**120.12**	**303**	PKP	**PKPdf**	**01 58 59.0**	**-0.3**
	0.2nm,0.4s,baz=205,slow=1.7,SNR=2.8						
FINES	**FINESS Array B**	**124.48**	**28**	PKP	**PKPdf**	**01 59 06.1**	**-0.6**
	0.7nm,0.6s,baz=135,slow=0.8,SNR=12						
BVAR	**Borovoye Array**	**134.98**	**58**	PKP	**PKPdf**	**01 59 27.3**	**+0.3**
	0.2nm,0.4s,baz=112,slow=1.6,SNR=3.1						
YKA	**Yellowknife Ar**	**135.99**	**318**	PKP	**PKPdf**	**01 59 28.4**	**-0.1**
	0.4nm,0.4s,baz=126,slow=1.9,SNR=4.9						
MKAR	**Makanchi Array**	**137.12**	**72**	PKP	**PKPdf**	**01 59 32.6**	**+1.4**
	0.2nm,0.6s,baz=217,slow=2.6,SNR=2.8						
KURK	**Kurchatov**	**137.62**	**65**	*e*PKPdf	**PKPdf**	**01 59 32.6**	**+0.6**
INK	**Inuvik**	**145.63**	**321**	*e*PKPbc	**PKPdf**	**01 59 45.7**	**0.0**
ILAR	**Eielson Array**	**149.92**	**312**	PKPbc	**PKPbc**	**01 59 57.4**	**-0.5**
	3.0nm,0.8s,baz=121,slow=2.0,SNR=26						
SONM	**Songino Array**	**150.97**	**87**	PKPbc	**PKPbc**	**02 00 00.9**	**-0.2**
	2.2nm,0.5s,baz=220,slow=3.4,SNR=11						

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*SKO **08** 01:41:34.6, 41°.34N×20°.95E, h10km, M2.2, ML2.5*

*ATH **08** 01:41:34.6, 41°.36N×20°.97E, h16km±2km, ML2.5/9, Error ellipse: s-maj=3.8km s-min=1.4km az=141.0*

*BEO **08** 01:41:35.9±0.6, 41°.33N×20°.97E, h11km±4km, ML2.3/9*

*THE **08** 01:41:35.1, 41°.35N×20°.97E, h0km±1km, ML2.4/11, Error ellipse: s-maj=1.9km s-min=0.8km az=9.0*

*PDG **08** 01:41:35.2±0.5, 41°.33N×20°.87E, h3km±1km, ML2.9/11, Error ellipse: s-maj=0.7km s-min=1.0km az=0.0*

*CSEM **08** 01:41:35.1±0.1, 41°.36N×20°.98E, h2km, ML2.4, Error ellipse: s-maj=3.1km s-min=1.9km az=61.0*

*TIR **08** 01:41:41.4, 41°.35N×20°.94E, h6km, Md2.9/4*

ISC 08 01:41:35.0±1.0**, 41°.34N**±0°.01×**20°.95E**±0°.01**, h6km**±8km**, n170, σ0s.96**/270**, 12C-24D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KRUS	**Krusevo**	**0.22**	**83**	*i* Pg	**Pg**	**01 41 39.7**	**+0.3**
KRUS				*i* Sg	**Sg**	**01 41 44.4**	**+2.0**
OHR	**Ohrid**	**0.26**	**207**	⇑ *i*Pg	**Pg**	**01 41 39.5**	**-0.5**
OHR				*i* Sg	**Sg**	**01 41 43.4**	**-0.1**
OHR				*e*Lg	Lg	01 41 43.5	
	comp=N,1µm,0.3s						
OHR				*e*Lg	Lg	01 41 43.8	
	comp=E,1µm,0.4s						
BIA	**Bitola**	**0.43**	**139**	P	**Pg**	**01 41 43.8**	**+0.5**
BIA				S	**Sb**	**01 41 50.7**	**-1.0**
BIA	**Bitola**	**0.43**	**139**	⇑ *i*Pg	**Pg**	**01 41 43.8**	**+0.5**
BIA				*i* Sg	**Sb**	**01 41 51.6**	**-0.1**
BIA	**Bitola**	**0.43**	**139**	P	**Pg**	**01 41 43.8**	**+0.5**
BIA				S	**Sb**	**01 41 50.7**	**-1.0**
PHP	**Peshkopia**	**0.52**	**312**	*i* Pg	**Pg**	**01 41 43.9**	**-1.0**
PHP				*i* Sg	**Sg**	**01 41 51.2**	**-0.5**
PHP	**Peshkopia**	**0.52**	**312**	*i* PG	**Pg**	**01 41 43.9**	**-1.0**
PHP				*i* SG	**Sg**	**01 41 51.2**	**-0.5**
FNA	**Florina**	**0.64**	**150**	P	**Pg**	**01 41 46.6**	**-0.8**
FNA				S	**Sg**	**01 41 55.7**	**0.0**
FNA				AML	AML	01 41 58.5	
	comp=N,1880µm,0.2s						
FNA				AML	AML	01 42 00.1	
	comp=E,2602µm,0.3s						
FNA	**Florina**	**0.64**	**150**	P	**Pg**	**01 41 46.8**	**-0.5**
FNA				S	**Sg**	**01 41 56.7**	**+1.0**
FNA	**Florina**	**0.64**	**150**	P	**Pg**	**01 41 46.9**	**-0.4**
FNA				S	**Sg**	**01 41 56.7**	**+1.0**
KBN	**Korca**	**0.73**	**190**	*i* Pg	**Pg**	**01 41 48.7**	**-0.3**
KBN				*i* Sg	**Sb**	**01 42 00.2**	**-0.2**
KBN	**Korca**	**0.73**	**190**	*i* PG	**Pg**	**01 41 48.7**	**-0.3**
KBN				*i* SG	**Sb**	**01 42 00.2**	**-0.2**
SKO	**Skopje**	**0.73**	**30**	*e*Pg	**Pg**	**01 41 49.4**	**+0.4**
SKO				*e*Sg	**Sb**	**01 41 59.7**	**-0.6**
SKO	**Skopje**	**0.73**	**30**	P	**Pg**	**01 41 49.3**	**+0.3**
SKO				S	**Sb**	**01 41 59.8**	**-0.6**
SKO	**Skopje**	**0.73**	**30**	*i* Pg	**Pg**	**01 41 49.4**	**+0.4**
SKO				*i* Sg	**Sb**	**01 41 59.9**	**-0.5**
SKO	**Skopje**	**0.73**	**30**	P	**Pg**	**01 41 49.3**	**+0.3**
SKO				*e*Sg	**Sb**	**01 41 59.7**	**-0.6**
PRZK	**Prizren**	**0.88**	**351**	P	**Pg**	**01 41 51.7**	**-0.2**
NEST	**Nestorio**	**0.93**	**175**	P	**Pg**	**01 41 51.5**	**-1.3**
NEST				S	**Sb**	**01 42 06.5**	**+0.4**
NEST				AML	AML	01 42 10.6	
	comp=E,852µm,0.6s						
NEST				AML	AML	01 42 11.3	
	comp=N,689µm,0.4s						
NEST	**Nestorio**	**0.93**	**175**	P	**Pg**	**01 41 51.6**	**-1.2**
NEST				S	**Sb**	**01 42 05.9**	**-0.3**
NEST	**Nestorio**	**0.93**	**175**	P	**Pg**	**01 41 52.0**	**-0.8**
NEST				S	**Sb**	**01 42 06.1**	**-0.1**
STIP	**Stip**	**0.99**	**69**	*i* Pg	**Pn**	**01 41 57.1**	**+1.6**
STIP				*i* Sg	**Sn**	**01 42 14.5**	**+4.7**
PUK	**Puka**	**1.06**	**312**	*i* Pg	**Pg**	**01 41 54.6**	**-0.7**
PUK				*i* Sg	**Sg**	**01 42 08.2**	**-0.9**
PUK	**Puka**	**1.06**	**312**	*i* PG	**Pg**	**01 41 54.6**	**-0.7**
PUK				*i* SG	**Sg**	**01 42 08.2**	**-0.9**
ZATK	**Zatriq**	**1.13**	**348**	P	**Pg**	**01 41 56.6**	**-0.2**
PENT	**Pentalofos**	**1.15**	**173**	P	**Pb**	**01 41 57.4**	**0.0**
PENT				S	**Sn**	**01 42 13.4**	**-0.5**
PENT				AML	AML	01 42 18.2	
	comp=E,321µm,0.3s						
PENT				AML	AML	01 42 19.1	
	comp=N,315µm,0.3s						
PENT	**Pentalofos**	**1.15**	**173**	P	**Pg**	**01 41 57.0**	**-0.1**
PENT				S	**Sb**	**01 42 13.1**	**+0.5**
GRG	**Griva**	**1.16**	**109**	P	**Pn**	**01 41 57.7**	**-0.1**
GRG				S	**Sn**	**01 42 13.5**	**-0.4**
GRG				AML	AML	01 42 16.1	
	comp=E,242µm,0.2s						
GRG				AML	AML	01 42 19.4	
	comp=N,322µm,0.5s						
GRG	**Griva**	**1.16**	**109**	P	**Pg**	**01 41 57.1**	**-0.1**
GRG				S	**Sn**	**01 42 13.6**	**-0.4**
GRG	**Griva**	**1.16**	**109**	P	**Pg**	**01 41 57.1**	**-0.1**
GRG				S	**Sb**	**01 42 12.9**	**+0.1**
KZN	**Kozani**	**1.21**	**149**	P	**Pg**	**01 41 56.9**	**-1.2**
KZN				S	**Sn**	**01 42 15.0**	**-0.2**
KZN				AML	AML	01 42 19.7	
	comp=E,428µm,0.3s						
KZN				AML	AML	01 42 19.8	
	comp=N,286µm,0.3s						
KZN	**Kozani**	**1.21**	**149**	P	**Pg**	**01 41 57.1**	**-1.0**
KZN				S	**Sn**	**01 42 16.5**	**+1.3**
KZN	**Kozani**	**1.21**	**149**	P	**Pg**	**01 41 57.3**	**-0.8**
KZN				S	**Sn**	**01 42 14.7**	**-0.5**
VAY	**Valandovo**	**1.22**	**90**	*e*Pg	**Pb**	**01 41 58.3**	**-0.1**
VAY				*e*Sg	**Sb**	**01 42 14.1**	**-0.3**
VAY	**Valandovo**	**1.22**	**90**	P	**Pb**	**01 41 58.3**	**-0.1**
VAY				S	**Sn**	**01 42 15.0**	**-0.4**
VAY	**Valandovo**	**1.22**	**90**	*i* Pg	**Pn**	**01 41 58.5**	**-0.1**
VAY				*i* Sg	**Sn**	**01 42 15.8**	**+0.4**
VAY				*e*Lg	Lg	01 42 16.0	
	comp=N,53nm,0.7s						
VAY				*e*Lg	Lg	01 42 16.9	
	comp=E,63nm,0.5s						
VAY	**Valandovo**	**1.22**	**90**	P	**Pb**	**01 41 58.3**	**-0.1**
VAY				*e*Sg	**Sb**	**01 42 14.1**	**-0.3**
VAY				S	**Sn**	**01 42 15.0**	**-0.4**
BCI	**Bajram Curri**	**1.22**	**327**	*i* Pn	**Pg**	**01 41 58.1**	**-0.3**
BCI				*i* Sn	**Sn**	**01 42 16.4**	**+0.9**
BCI	**Bajram Curri**	**1.22**	**327**	*i* PN	**Pg**	**01 41 58.1**	**-0.3**
BCI				*i* SN	**Sn**	**01 42 16.4**	**+0.9**
KPRO	**Kipourio**	**1.42**	**167**	P	**Pn**	**01 42 00.4**	**-1.0**
KPRO				S	**Sg**	**01 42 21.8**	**+1.2**
KPRO				AML	AML	01 42 28.4	
	comp=N,244µm,0.6s						
KPRO				AML	AML	01 42 29.6	
	comp=E,306µm,0.4s						
KPRO	**Kipourio**	**1.42**	**167**	P	**Pn**	**01 42 00.6**	**-0.8**
KPRO				S	**Sg**	**01 42 22.8**	**+2.2**
KPRO	**Kipourio**	**1.42**	**167**	P	**Pn**	**01 42 01.0**	**-0.4**
KPRO				S	**Sg**	**01 42 21.5**	**+0.9**
ULC	**Ulcinj**	**1.42**	**296**	⇓ *i*Pg	**Pn**	**01 41 59.9**	**-1.5**
ULC				*e*Sg	**Sg**	**01 42 21.9**	**+1.1**
ULC	**Ulcinj**	**1.42**	**296**	⇓ *i*Pg	**Pn**	**01 41 59.9**	**-1.5**
ULC	**Ulcinj**	**1.42**	**296**	P	**Pg**	**01 42 03.3**	**+1.0**
ULC				*e*Sg	**Sg**	**01 42 21.9**	**+1.1**
PVY	**Plav**	**1.46**	**330**	⇓ *i*Pg	**Pn**	**01 42 01.7**	**-0.3**
PVY				*e*Sg	**Sg**	**01 42 23.9**	**+2.1**
PVY	**Plav**	**1.46**	**330**	⇓ *i*Pg	**Pn**	**01 42 01.7**	**-0.3**
PVY				*e*Sg	**Sg**	**01 42 23.9**	**+2.1**
KNT	**Kendrikon**	**1.48**	**96**	P	**Pg**	**01 42 03.4**	**+0.1**
KNT				S	**Sn**	**01 42 21.4**	**-0.4**
KNT				AML	AML	01 42 27.3	
	comp=N,131µm,0.5s						
KNT				AML	AML	01 42 28.9	
	comp=E,102µm,0.4s						
KNT	**Kendrikon**	**1.48**	**96**	P	**Pb**	**01 42 02.5**	**-0.4**
KNT				S	**Sg**	**01 42 22.8**	**+0.3**
KNT	**Kendrikon**	**1.48**	**96**	P	**Pb**	**01 42 02.8**	**-0.1**
KNT				S	**Sb**	**01 42 21.9**	**0.0**
DRME	**Dracevica, Mon**	**1.57**	**303**	⇓ *i*Pg	**Pn**	**01 42 03.1**	**-0.3**
DRME				*e*Sg	**Sg**	**01 42 27.0**	**+1.5**
DRME	**Dracevica, Mon**	**1.57**	**303**	*e*Pn	**Pn**	**01 42 02.7**	**-0.7**
DRME	**Dracevica, Mon**	**1.57**	**303**	⇓ *i*Pg	**Pn**	**01 42 03.1**	**-0.3**
DRME				*e*Sg	**Sg**	**01 42 27.0**	**+1.5**
BARS	**Barje**	**1.61**	**23**	*e*Pg	**Pb**	**01 42 05.3**	**+0.2**
BARS				*e*Sg	**Sg**	**01 42 26.9**	**+0.2**
BARS	**Barje**	**1.61**	**23**	*e*Pg	**Pb**	**01 42 05.3**	**+0.2**
BARS				*e*Sg	**Sg**	**01 42 26.9**	**+0.2**
PDG	**Podgorica**	**1.67**	**311**	*e*Pg	**Pb**	**01 42 05.9**	**-0.3**
PDG				*e*Sg	**Sg**	**01 42 29.4**	**+0.7**
PDG	**Podgorica**	**1.67**	**311**	⇓ *i*P	**Pb**	**01 42 06.2**	**0.0**
PDG	**Podgorica**	**1.67**	**311**	S	**Sg**	**01 42 29.8**	**+1.1**
PDG	**Podgorica**	**1.67**	**311**	P	**Pn**	**01 42 04.5**	**-0.3**
PDG				S	**Sg**	**01 42 28.8**	**+0.1**
PDG	**Podgorica**	**1.67**	**311**	P	**Pn**	**01 42 04.5**	**-0.3**
PDG	**Podgorica**	**1.67**	**311**	⇓ *i*Pn	**Pn**	**01 42 05.4**	**+0.6**
PDG	**Podgorica**	**1.67**	**311**	*e*Pg	**Pb**	**01 42 05.9**	**-0.3**
PDG				S	**Sg**	**01 42 28.8**	**+0.1**
PDG				*e*Sg	**Sg**	**01 42 29.4**	**+0.7**
PDG				*e*Sn	**Sg**	**01 42 30.3**	**+1.6**
TTG	**Podgorica**	**1.67**	**311**	⇓ *i*Pn	**Pn**	**01 42 05.4**	**+0.6**
TTG				*e*Sn	**Sg**	**01 42 30.3**	**+1.6**
JAN	**Janina**	**1.68**	**183**	P	**Pg**	**01 42 07.2**	**0.0**
JAN				AML	AML	01 42 36.5	
	comp=E,172µm,0.6s						
JAN				AML	AML	01 42 37.9	
	comp=N,175µm,0.3s						
JAN	**Janina**	**1.68**	**183**	P	**Pb**	**01 42 06.3**	**-0.1**
JAN				S	**Sg**	**01 42 29.2**	**+0.1**
JAN	**Janina**	**1.68**	**183**	P	**Pb**	**01 42 06.5**	**+0.1**
JAN				S	**Sg**	**01 42 29.2**	**+0.1**
LIT	**Litokhoron**	**1.70**	**136**	P	**Pn**	**01 42 04.6**	**-0.7**
LIT	**Litokhoron**	**1.70**	**136**	P	**Pn**	**01 42 05.4**	**+0.1**
LIT				S	**Sg**	**01 42 29.5**	**-0.2**
LIT	**Litokhoron**	**1.70**	**136**	P	**Pn**	**01 42 05.4**	**+0.1**
LIT				S	**Sg**	**01 42 29.5**	**-0.2**
BEY	**Berane**	**1.72**	**333**	⇓ *i*Pn	**Pb**	**01 42 06.4**	**-0.7**
BEY	**Berane**	**1.72**	**333**	P	**Pg**	**01 42 07.8**	**-0.2**
BEY				*e*Sn	**Sg**	**01 42 32.1**	**+1.8**
IVA	**Berane**	**1.72**	**333**	⇓ *i*Pn	**Pb**	**01 42 06.4**	**-0.7**
IVA				*e*Sn	**Sg**	**01 42 32.1**	**+1.8**
SGD	**Sagiada**	**1.81**	**198**	P	**Pb**	**01 42 08.9**	**+0.3**
SGD	**Sagiada**	**1.81**	**198**	P	**Pb**	**01 42 08.3**	**-0.3**
BUM	**Brajici-Budva**	**1.81**	**303**	⇑ *i*Pn	**Pn**	**01 42 07.4**	**+0.6**
BUM				*e*Sn	**Sg**	**01 42 33.6**	**+0.3**
BUM	**Brajici-Budva**	**1.81**	**303**	⇑ *i*Pn	**Pn**	**01 42 07.4**	**+0.6**
BUM				*e*Sn	**Sg**	**01 42 33.6**	**+0.3**
KOME	**Kolasin**	**1.85**	**325**	⇑ *i*Pn	**Pn**	**01 42 08.2**	**+0.8**
KOME				*e*Sn	**Sg**	**01 42 35.2**	**+0.8**
KOME	**Kolasin**	**1.85**	**325**	⇑ *i*Pn	**Pn**	**01 42 08.2**	**+0.8**
KOME				*e*Sn	**Sg**	**01 42 35.2**	**+0.8**
IGT	**Igoumenitsa**	**1.87**	**195**	P	**Pb**	**01 42 09.5**	**0.0**
IGT				S	**Sb**	**01 42 33.6**	**+0.5**
IGT				AML	AML	01 42 42.1	
	comp=N,106µm,0.4s						
IGT				AML	AML	01 42 42.4	
	comp=E,202µm,0.7s						
IGT	**Igoumenitsa**	**1.87**	**195**	P	**Pn**	**01 42 07.0**	**-0.5**
IGT				S	**Sb**	**01 42 33.6**	**+0.5**
IGT	**Igoumenitsa**	**1.87**	**195**	P	**Pb**	**01 42 09.0**	**-0.5**
IGT				S	**Sb**	**01 42 33.6**	**+0.5**
SELS	**Selova**	**1.88**	**4**	*e*Pg	**Pb**	**01 42 09.3**	**-0.5**
SELS				*e*Sg	**Sg**	**01 42 36.2**	**+0.7**
CEME	**Cevo**	**1.94**	**309**	⇑ *i*Pn	**Pb**	**01 42 10.1**	**-0.7**
CEME				*e*Sn	**Sg**	**01 42 36.7**	**-0.6**
CEME	**Cevo**	**1.94**	**309**	⇑ *i*Pn	**Pb**	**01 42 10.1**	**-0.7**
CEME				*e*Sn	**Sg**	**01 42 36.7**	**-0.6**
THL	**Klokotos Trika**	**1.95**	**155**	P	**Pn**	**01 42 08.4**	**-0.2**
THL	**Klokotos Trika**	**1.95**	**155**	P	**Pn**	**01 42 09.3**	**+0.7**
THL				S	**Sb**	**01 42 34.4**	**-1.1**
THL	**Klokotos Trika**	**1.95**	**155**	P	**Pn**	**01 42 09.3**	**+0.7**
THL				S	**Sb**	**01 42 34.4**	**-1.1**
SRS	**Serrai**	**2.00**	**96**	P	**Pn**	**01 42 10.3**	**+0.9**
SRS	**Serrai**	**2.00**	**96**	P	**Pn**	**01 42 09.9**	**+0.5**
SRS	**Serrai**	**2.00**	**96**	P	**Pn**	**01 42 10.1**	**+0.7**
SJES	**Sjenica**	**2.05**	**340**	*e*Pg	**Pb**	**01 42 12.6**	**-0.1**
SJES				*e*Sg	**Sg**	**01 42 42.1**	**+1.2**
NKME	**Niksic**	**2.06**	**314**	⇑ *i*Pn	**Pb**	**01 42 11.5**	**-1.4**
NKME				*e*Sn	**Sg**	**01 42 40.0**	**-1.2**
NKME	**Niksic**	**2.06**	**314**	⇑ *i*Pn	**Pb**	**01 42 11.5**	**-1.4**
NKME				*e*Sn	**Sg**	**01 42 40.0**	**-1.2**
NKY	**Niksic**	**2.07**	**316**	⇓ *i*Pn	**Pb**	**01 42 11.8**	**-1.3**
NKY				*e*Sn	**Sg**	**01 42 40.4**	**-1.2**
NKY	**Niksic**	**2.07**	**316**	⇓ *i*Pn	**Pb**	**01 42 11.8**	**-1.3**
NKY				*e*Sn	**Sg**	**01 42 40.4**	**-1.2**
VTS	**Vitosha**	**2.10**	**53**	*e*Pg	**Pb**	**01 42 12.9**	**-0.6**
VTS				*e*Sg	**Sg**	**01 42 41.8**	**-0.5**
VTS	**Vitosha**	**2.10**	**53**	⇓ *i*P	**Pb**	**01 42 12.7**	**-0.8**
VTS	**Vitosha**	**2.10**	**53**	S	**Sn**	**01 42 38.0**	**+0.7**
VTS	**Vitosha**	**2.10**	**53**	P	**Pb**	**01 42 12.1**	**-1.4**
VTS				S	**Sb**	**01 42 38.6**	**-1.2**
VTS	**Vitosha**	**2.10**	**53**	P	**Pb**	**01 42 12.1**	**-1.4**
VTS	**Vitosha**	**2.10**	**53**	*e*Pg	**Pb**	**01 42 12.9**	**-0.6**
VTS				S	**Sb**	**01 42 38.6**	**-1.2**
VTS				*e*Sg	**Sg**	**01 42 41.8**	**-0.5**
HCY	**Herceg Novi**	**2.14**	**302**	*e*Pn	**Pn**	**01 42 12.5**	**+1.2**
HCY				*e*Sn	**Sb**	**01 42 41.6**	**+0.5**
HCY	**Herceg Novi**	**2.14**	**302**	*e*Pn	**Pn**	**01 42 12.5**	**+1.2**
HCY				*e*Sn	**Sb**	**01 42 41.6**	**+0.5**
NVR	**Nevrokopi**	**2.19**	**89**	P	**Pn**	**01 42 12.6**	**+0.6**
NVR	**Nevrokopi**	**2.19**	**89**	P	**Pn**	**01 42 12.6**	**+0.6**
SCTE	**Santa Cesarea**	**2.27**	**237**	P	**Pn**	**01 42 12.6**	**-0.5**
SCTE	**Santa Cesarea**	**2.27**	**237**	P	**Pn**	**01 42 13.4**	**+0.3**
ZAPS	**Zavoj**	**2.30**	**32**	*e*Pg	**Pg**	**01 42 17.9**	**-1.1**
ZAPS				*e*Sg	**Sg**	**01 42 49.1**	**+0.3**
ZAPS	**Zavoj**	**2.30**	**32**	*e*Pg	**Pg**	**01 42 17.9**	**-1.1**
ZAPS				*e*Sg	**Sg**	**01 42 49.1**	**+0.3**
PLE	**Pljevlja**	**2.30**	**330**	⇑ *i*Pn	**Pn**	**01 42 15.0**	**+1.4**
PLE				*e*Sn	**Sb**	**01 42 45.4**	**-0.3**
PLE	**Pljevlja**	**2.30**	**330**	⇑ *i*Pn	**Pn**	**01 42 15.0**	**+1.4**
PLE				*e*Sn	**Sb**	**01 42 45.4**	**-0.3**
IVAS	**Ivanjica**	**2.31**	**345**	*e*Pg	**Pb**	**01 42 16.9**	**-0.2**
IVAS				*e*Sg	**Sg**	**01 42 49.7**	**+0.5**
IVAS	**Ivanjica**	**2.31**	**345**	*e*Pg	**Pb**	**01 42 16.9**	**-0.2**
IVAS				*e*Sg	**Sg**	**01 42 49.7**	**+0.5**
TREB	**Trebinje**	**2.38**	**306**	*e*Pn	**Pn**	**01 42 15.7**	**+1.2**
BRY	**Bratogost**	**2.38**	**312**	*e*Pn	**Pn**	**01 42 15.7**	**+1.0**
BRY				*e*Sn	**Sb**	**01 42 47.6**	**-0.4**
BRY	**Bratogost**	**2.38**	**312**	*e*Pn	**Pn**	**01 42 15.7**	**+1.0**
BRY				*e*Sn	**Sb**	**01 42 47.6**	**-0.4**
UPM	**Unac-Piva**	**2.40**	**321**	⇓ *i*Pn	**Pn**	**01 42 16.5**	**+1.4**
UPM				*e*Sn	**Sb**	**01 42 48.6**	**-0.1**
UPM	**Unac-Piva**	**2.40**	**321**	⇓ *i*Pn	**Pn**	**01 42 16.5**	**+1.4**
UPM	**Unac-Piva**	**2.40**	**321**	P	**Pb**	**01 42 19.5**	**+0.7**
UPM				*e*Sn	**Sb**	**01 42 48.6**	**-0.1**
EVR	**Evrytania**	**2.51**	**165**	P	**Pb**	**01 42 18.8**	**-1.7**
EVR	**Evrytania**	**2.51**	**165**	P	**Pn**	**01 42 18.1**	**+1.7**
PAIG	**Paliouri**	**2.51**	**123**	P	**Pn**	**01 42 16.1**	**-0.3**
PAIG	**Paliouri**	**2.51**	**123**	P	**Pn**	**01 42 16.6**	**+0.3**
AGG	**Agios Georgios**	**2.54**	**155**	P	**Pn**	**01 42 16.9**	**0.0**
AGG	**Agios Georgios**	**2.54**	**155**	P	**Pn**	**01 42 17.4**	**+0.5**
AGG				S	**Sn**	**01 42 49.4**	**+1.2**
AGG	**Agios Georgios**	**2.54**	**155**	P	**Pn**	**01 42 17.4**	**+0.5**
AGG				S	**Sn**	**01 42 49.4**	**+1.2**
GRUS	**Gruza**	**2.55**	**356**	*e*Pn	**Pn**	**01 42 17.2**	**+0.3**

GRUS				eSg	Sg	01 42 57.5	+0.5
GRUS	Gruza	2.55	356	ePn	Pn	01 42 17.2	+0.3
GRUS				eSg	Sg	01 42 57.5	+0.5
LKD2	Lefkada island	2.56	185	P	Pn	01 42 18.3	+1.2
LKD2	Lefkada island	2.56	185	P	Pn	01 42 18.2	+1.2
XOR	Xorichti	2.61	138	P	Pn	01 42 16.6	-1.2
XOR	Xorichti	2.61	138	P	Pn	01 42 17.6	-0.2
XOR	Xorichti	2.61	138	P	Pn	01 42 17.7	-0.1
PDO	Prodromos	2.75	176	P	Pn	01 42 21.1	+1.6
PDO	Prodromos	2.75	176	P	Pn	01 42 20.0	+0.4
PDO	Prodromos	2.75	176	P	Pn	01 42 20.9	+1.3
PVO	Paravola	2.76	171	P	Pn	01 42 22.1	+2.4
PVO	Paravola	2.76	171	P	Pn	01 42 21.5	+1.8
BBLS	Lazići	2.77	336	ePn	Pn	01 42 20.9	+0.9
BBLS	Lazići	2.77	336	ePn	Pn	01 42 20.9	+0.9
ANX	Ano Chora	2.84	165	P	Pn	01 42 23.2	+2.2
ANX	Ano Chora	2.84	165	P	Pn	01 42 22.6	+1.6
DIVS	Divibare	2.84	346	ePn	Pn	01 42 21.1	0.0
DIVS	Divibare	2.84	346	ePn	Pn	01 42 21.1	0.0
STON	Ston	2.86	303	ePn	Pn	01 42 21.5	+0.3
STON	Ston	2.86	303	ePn	Pn	01 42 21.3	+0.1
THAS	Thassos island	2.94	103	P	Pn	01 42 20.9	-1.4
THAS	Thassos island	2.94	103	P	Pn	01 42 22.1	-0.2
EFP	Efpalio	3.00	166	P	Pb	01 42 26.1	-2.8
EFP	Efpalio	3.00	166	P	Pn	01 42 25.2	+2.1
SERG	Sergoula	3.04	163	P	Pn	01 42 25.2	+1.4
SERG	Sergoula	3.04	163	P	Pn	01 42 25.1	+1.4
DSF	Desfina	3.17	157	P	Pn	01 42 24.7	-0.7
DSF	Desfina	3.17	157	P	Pn	01 42 25.7	+0.3
TEKS	Tekeris	3.37	342	ePn	Pn	01 42 28.8	+0.6
TEKS	Tekeris	3.37	342	ePn	Pn	01 42 28.8	+0.6
KLV	Kalavryta, Ach	3.42	164	P	Pn	01 42 31.4	+2.5
KLV	Kalavryta, Ach	3.42	164	P	Pn	01 42 30.8	+1.9
MDVR	Moldovita	3.48	9	⇓iP	Pn	01 42 31.0	+1.2
MDVR	Moldovita	3.48	9	S	Sg	01 43 23.8	-3.1
MDVR	Moldovita	3.48	9	⇓iP	Pn	01 42 31.0	+1.2
HERR	Herculane	3.70	16	⇓iP	Pn	01 42 33.2	+0.5
HERR	Herculane	3.70	16	⇓iP	Pn	01 42 33.2	+0.5
BZS	Buzias	4.30	6	⇓iP	Pn	01 42 40.6	-0.4
BZS	Buzias	4.30	6	⇓iP	Pn	01 42 40.6	-0.4
BLY	Banja Luka	4.38	322	ePn	Pn	01 42 41.8	-0.3
LOT	Lotru	4.59	26	⇓iP	Pn	01 42 45.2	+0.2
LOT	Lotru	4.59	26	⇓iP	Pn	01 42 45.2	+0.2
UDBI	Udbina	4.96	312	i Pn	Pn	01 42 52.1	+2.0
MORH	Mˆ‡rˆ¡gy, Hung	5.15	342	ePn	Pn	01 42 52.2	-0.4
NVLJ	Novalja	5.50	308	i Pn	Pn	01 42 57.6	+0.2

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*ISCJB **08** 02:06:55.6±0.6, 18.°6S±0.°1×65.°6E±0.°1, h15^{km}, mb3.9/9, MS3.4/7, Error ellipse: s-maj=18.8km s-min=16.6km az=28.9*

*IDC **08** 02:06:55.2±0.9, 18.°68S×65.°53E, h0^{km}, mb3.8/7, mb1 3.9/8, mb1mx3.6/67, mbtmp3.8/8, ML3.3/1, MS3.4/8, Ms1 3.4/8, ms1mx3.0/58, Error ellipse: s-maj=33.7km s-min=22.3km az=81.0*

*NEIC **08** 02:06:56.6±0.4, 18.°66S×65.°53E, h10^{km}, mb4.3/2, Error ellipse: s-maj=13.2km s-min=11.0km az=204.0*

ISC 08 02:06:57.5±0.8**, 18.°7S**±0.°2×**65.°5E**±0.°2**, h15^{km}, n19, σ0.^{s}30**/12**, mb4.0**/9**, MS3.4**/7**, Mauritius-Reunion region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OPO	Ambohidratompo	17.38	267	P	Pn	02 10 59.7	0.0
	0.1nm,0.3s,baz=111,slow=8.6,SNR=3.0						
OPO				LR	LR	02 15 53.1	
	comp=Z,204nm,19.9s,baz=30,slow=31						
PALK	Pallekele	29.81	32	LR	LR	02 22 38.6	
	comp=Z,66nm,19.5s,baz=302,slow=32						
BOSA	Boshof	38.04	247	LR	LR	02 27 54.0	
	comp=Z,79nm,18.0s,baz=182,slow=33						
LEM	Lembang	42.60	80	LR	LR	02 28 46.0	
	comp=Z,65nm,18.5s,baz=88,slow=31						
CMAR	Chiang Mai Arr	49.39	44	LR	LR	02 32 55.6	
	comp=Z,24nm,21.3s,baz=195,slow=32						
ASAR	Alice Springs	63.44	108	P	P	02 17 27.1	0.0
	0.6nm,0.8s,baz=257,slow=6.4,SNR=4.5						
WRA	Warramunga Arr	64.53	104	P	P	02 17 34.5	+0.2
	0.4nm,0.6s,baz=261,slow=5.4,SNR=6.0						
WRAB	Tennant Creek	64.54	104	eP	P	02 17 34.1	-0.3
	0.7nm,0.3s						
MKAR	Makanchi Array	66.89	12	LR	LR	02 44 31.9	
	comp=Z,26nm,18.8s,baz=280,slow=34						
KURBB	Kurchatov Arra	69.93	9	P	P	02 18 08.3	+0.5
	0.3nm,0.5s,baz=210,slow=6.9,SNR=4.1						
KURK	Kurchatov	70.03	9	P	P	02 18 08.3	-0.1
QSPA	South Pole Qui	71.44	180	P	P	02 18 17.4	+0.3
	4.4nm,1.0s,baz=288,slow=3.2,SNR=8.6						
BVAR	Borovoye Array	71.51	3	P	P	02 18 17.6	+0.2
	1.0nm,0.7s,baz=187,slow=10,SNR=5.4						
VNDA	Vanda	73.28	167	P	P	02 18 27.6	-0.2
	0.9nm,0.8s,baz=288,slow=9.6,SNR=6.4						
DBIC	Dimbokro	73.76	283	LR	LR	02 48 44.6	
	comp=Z,18nm,19.0s,baz=87,slow=34						
ZALV	Zalesovo Beam	74.20	12	P	P	02 18 33.4	+0.1
	0.5nm,0.3s,baz=207,slow=7.4,SNR=4.6						
ARU	Arti	75.03	356	eP	P	02 18 38.0	-0.1
	1.2nm,0.4s						
KSRS	Korea Array	80.97	46	LR	LR	02 55 49.1	
	comp=Z,16nm,18.0s,baz=130,slow=36						
COWI	Conover	145.55	328	ePKPbc	PKPbc	02 26 34.9	-0.5

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*SOME **08** 02:53:02.4, 43.°55N×82.°50E, h20^{km}*

*NNC **08** 02:53:04.2±2.8, 43.°55N×82.°25E, h0^{km}, mb2.7, mpv2.3, Error ellipse: s-maj=27.3km s-min=7.1km az=130.0*

ISC 08 02:53:01.6±2.6**, 43.°49N**±0.°10×**82.°4E**±0.°1**, h4^{km}**±14^{km}**, n10, σ1.^{s}60**/17**, 5C-1D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	1.47	269	eP	Pg	02 53 30.3	+0.4
	13nm,0.1s						
KTMS				eS	Sb	02 53 49.9	+1.2
	34nm,0.4s						
PDGK	Podgornoye	2.11	267	⇓Pg	Pb	02 53 41.1	+0.7
	2.1nm,0.3s						
PDGK				⇑Lg	Lg	02 54 08.6	
	11nm,0.6s						
SHLS	Shalkode	2.15	262	eP	Pn	02 53 37.6	-0.7
	31nm,0.2s						
SHLS				eS	Sn	02 54 03.2	-2.3
	174nm,0.4s						
UZB	Uzynbulak	2.47	263	eP	Pb	02 53 47.7	+1.1
	1.8nm,0.1s						
UZB				eS	Sg	02 54 20.8	-0.2
	14nm,0.2s						
KPKS	Kokpek	2.69	271	eP	Pb	02 53 50.2	0.0
	4.2nm,0.1s						
KPKS				eS	Sb	02 54 24.4	+0.8
	22nm,0.6s						
KAPS	Kapalarasan	2.81	311	eP	Pb	02 53 53.0	+0.7
	1.1nm,0.1s						
KAPS				eS	Sb	02 54 29.0	+1.9
	2.2nm,0.3s						
MK31	Makanchi Array	3.30	359	⇑Pg	Pb	02 54 02.1	+1.3
	0.1nm,0.2s,baz=172,slow=15,SNR=8.0						
MK31				⇑Lg	Lg	02 54 47.2	
	3.1nm,0.6s,baz=177,slow=30,SNR=4.1						
MAKZ	Makanchi	3.33	355	⇑Pg	Pg	02 54 04.5	-0.9
	0.5nm,0.4s						
MAKZ				⇑Lg	Lg	02 54 47.2	
	3.3nm,0.6s						
ARXS	Arharly	3.37	284	eP	Pb	02 54 01.8	0.0
	2.0nm,0.5s						
ARXS				eS	Sb	02 54 44.3	+1.1
	6.2nm,0.7s						
KTBS	Karatobe	4.14	275	eP	Pb	02 54 18.3	+3.3
KTBS				eS	Sg	02 55 12.3	-2.3

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*ISCJB **08** 02:56:60.0±0.6, 7.°80S±0.°06×127.°68E±0.°08, h162^{km}, mb3.7/8, Error ellipse: s-maj=10.6km s-min=8.2km az=3.6*

*IDC **08** 02:57:02.4±2.0, 7.°61S×127.°46E, h164^{km}±17^{km}, mb3.6/8, mb1 3.7/11, mb1mx3.4/52, mbtmp4.1/11, Error ellipse: s-maj=21.2km s-min=13.5km az=80.0*

ISC 08 02:57:02.1±0.7**, 7.°72S**±0.°10×**127.°6E**±0.°1**, h162^{km}, n16, σ1.^{s}48**/16**, mb3.7**/8**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	4.60	237	P	Pn	02 58 11.3	+0.8
	10nm,0.3s,baz=134,slow=1.5,SNR=6.8						
BATI				S	Sn	02 59 03.4	-0.7
	18nm,0.3s,baz=127,slow=3.7,SNR=6.4						
SIJI	Sorong	7.73	28	P	Pn	02 58 51.8	-0.2
	2.0nm,0.3s,baz=234,slow=23,SNR=5.1						
FITZ	Fitzroy Crossi	10.49	190	P	Pn	02 59 24.9	-3.5
	0.7nm,0.3s,baz=12,slow=11,SNR=32						
FITZ				S	Sn	03 01 17.1	-7.5
	1.2nm,0.3s,baz=121,slow=23,SNR=6.8						
WRA	Warramunga Arr	13.79	152	P	Pn	03 00 07.7	-3.4
	2.3nm,0.3s,baz=321,slow=13,SNR=68						
WRA				S	Sn	03 02 32.3	-12
	0.9nm,0.3s,baz=329,slow=23,SNR=4.6						
ASAR	Alice Springs	16.97	160	P	P	03 00 51.4	+2.1
	2.7nm,0.3s,baz=338,slow=11,SNR=109						
ASAR				S	S	03 03 47.6	-10
	0.1nm,0.3s,baz=337,slow=16,SNR=2.7						
STKA	Stephens Creek	27.34	153	P	P	03 02 33.1	+1.1
	2.0nm,0.4s,baz=331,slow=9.4,SNR=8.8						
MKAR	Makanchi Array	67.55	328	P	P	03 07 40.1	-0.9
	0.6nm,0.7s,baz=128,slow=8.0,SNR=6.7						
ZALV	Zalesovo Beam	71.20	335	P	P	03 08 01.4	-1.8
	0.7nm,0.4s,baz=240,slow=5.0,SNR=3.9						
KURBB	Kurchatov Arra	71.90	330	P	P	03 08 06.6	-0.8
	0.7nm,0.5s,baz=134,slow=4.9,SNR=11						
VNDA	Vanda	72.03	173	P	P	03 08 08.6	+0.7
	0.4nm,0.4s,baz=324,slow=6.9,SNR=9.3						
BVAR	Borovoye Array	77.42	329	P	P	03 08 38.7	-0.6
	0.2nm,0.4s,baz=123,slow=10,SNR=3.1						
QSPA	South Pole Qui	82.26	180	P	P	03 09 05.4	+0.2
	1.8nm,0.6s,baz=354,slow=2.2,SNR=8.9						
SNAA	Sanae	94.40	194	P	P	03 10 04.5	+1.2
	1.9nm,1.2s,baz=68,slow=11,SNR=3.6						
TORD	Torodi Ar. Bea	126.60	281	PKP	PKPdf	03 15 45.7	-1.4
	0.3nm,0.7s,baz=60,slow=4.1						
CPUP	Villa Florida	145.81	172	PKPbc	PKPbc	03 16 23.6	+0.6
	1.2nm,0.5s,baz=268,slow=1.5,SNR=4.6						
LPAZ	La Paz	151.51	147	PKPbc	PKPbc	03 16 39.6	+0.8
	0.8nm,0.4s,baz=276,slow=2.2,SNR=11						

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*ISCJB **08** 02:57:48.7±0.7, 7.°06S±0.°06×129.°55E±0.°08, h139^{km}, mb3.6/3, Error ellipse: s-maj=11.4km s-min=8.4km az=178.7*

*IDC **08** 02:57:50.3±2.2, 7.°05S×129.°49E, h137^{km}±22^{km}, mb3.5/3, mb1 3.6/8, mb1mx3.2/56, mbtmp4.0/8, Error ellipse: s-maj=25.7km s-min=19.3km az=112.0*

ISC 08 02:57:49.2±1.0**, 7.°22S**±0.°07×**129.°7E**±0.°1**, h139^{km}, n8, σ2.^{s}70**/11**, mb3.7**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	6.50	14	P	Pn	02 59 21.2	-1.5
	0.9nm,0.3s,baz=108,slow=20,SNR=8.7						
SIJI				S	Sn	03 00 14.1	-22
	1.2nm,0.3s,baz=180,slow=20,SNR=2.6						
BATI	Baumata	6.63	243	P	Pn	02 59 25.6	+1.2
	baz=294,slow=20,SNR=2.0						
BATI				S	Sn	03 00 37.9	-0.9
	7.7nm,0.3s,baz=68,slow=19,SNR=4.6						
FITZ	Fitzroy Crossi	11.51	200	P	Pn	03 00 31.8	+2.4
	0.8nm,0.3s,baz=22,slow=12,SNR=2.5						
FITZ				S	Sn	03 02 32.1	-4.3
	1.8nm,0.3s,baz=105,slow=20,SNR=2.2						
WRA	Warramunga Arr	13.44	161	P	Pn	03 00 56.8	+2.2
	0.9nm,0.3s,baz=334,slow=11,SNR=2.9						
WRA				S	Sn	03 03 17.9	-5.3
	2.9nm,0.3s,baz=332,slow=23,SNR=7.0						
ASAR	Alice Springs	16.86	166	P	Pn	03 01 40.9	+3.8
	0.6nm,0.3s,baz=344,slow=10.0,SNR=5.1						
ASAR				S	S	03 04 42.3	-3.1
	0.6nm,0.3s,baz=0.2,slow=31,SNR=4.8						
CMAR	Chiang Mai Arr	39.61	310	P	P	03 05 07.4	-0.1
	0.5nm,0.3s,baz=134,slow=7.3,SNR=4.3						
MKAR	Makanchi Array	68.22	327	P	P	03 08 35.0	+0.2
	0.7nm,0.5s,baz=116,slow=8.2,SNR=7.9						
KURBB	Kurchatov Arra	72.52	329	P	P	03 09 00.5	-0.3
	0.7nm,0.6s,baz=130,slow=5.0,SNR=5.4						

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*NIED **08** 03:01:00, 32.°50N×141.°80E, h5^{km}, Mw3.8 Best double couple: M$_0$6.16000×10^{14} NP1:φ$_s$172.00000°, δ37.00000°, λ31.00000°. NP2:φ$_s$57.00000°, δ72.00000°, λ123.00000°.*

*ISCJB **08** 03:01:07.2±0.5, 32.°40N±0.°04×141.°97E±0.°06, h10^{km}, mb4.0/17, Error ellipse: s-maj=8.0km s-min=4.8km az=155.9*

*IDC **08** 03:01:07.7±0.9, 32.°38N×141.°87E, h0^{km}, mb3.8/12, mb1 3.9/15, mb1mx3.7/65, mbtmp3.9/15, ML3.9/3, MS2.8/5, Ms1 2.8/5, ms1mx2.5/64, Error ellipse: s-maj=26.5km s-min=15.4km az=67.0*

*JMA **08** 03:01:09.9±0.1, 32.°47N×141.°82E, h13^{km}, M3.6*

*NEIC **08** 03:01:09.9±3.3, 32.°40N×142.°05E, h17^{km}±21^{km}, mb4.3/5, Error ellipse: s-maj=16.0km s-min=8.1km az=79.0*

ISC 08 03:01:08.5±0.6**, 32.°37N**±0.°05×**141.°99E**±0.°08**, h10^{km}, n42, σ1.^{s}67**/49**, mb4.0**/17**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	1.89	273	P	Pn	03 01 40.3	-0.6
JHJ2	Mitsune	1.98	292	P	Pn	03 01 41.5	-0.6
JHCJ	Hachijojimakas	1.98	291	P	Pn	03 01 41.3	-0.8
JHCJ				S	Sn	03 02 04.1	-2.9
JHJ	Hachijo jima 2	2.01	292	Pn	Pn	03 01 41.4	-1.1
	73nm,0.3s,baz=8.4,slow=14,SNR=40						
JHJ				LR	LR	03 01 59.3	
	comp=Z,82nm,20.5s,baz=162,slow=27						
JHJ				Sn	Sn	03 02 05.2	-2.4
	62nm,0.3s,baz=92,slow=22,SNR=5.2						
BSO1	Boso 1	2.43	340	P	Pn	03 01 48.4	+0.6
BSO1				S	Sn	03 02 16.7	-0.6
BSO3	Boso 3	2.72	333	P	Pn	03 01 52.8	+0.7
BSO3				S	Sn	03 02 23.8	-1.1
JOD2	Odawara 2	3.76	321	P	Pn	03 02 06.9	+0.2
JOD2				S	Sn	03 02 49.1	-2.0
JRY	Ryogami san	4.45	326	P	Pn	03 02 17.1	+1.0
JAG	Ashikaga	4.56	333	P	Pn	03 02 18.1	+0.6
MJAR	Matsushiro Arr	5.20	324	Pn	Pn	03 02 26.9	+0.5
	1.8nm,0.3s,baz=152,slow=11,SNR=22						
MJAR				Sn	Sn	03 03 26.1	-0.5
	baz=208,slow=11,SNR=2.2						
MJAR				LR	LR	03 04 40.1	
	comp=Z,101nm,18.9s,baz=195,slow=42						
MAJO	Matsushiro	5.21	324	ePn	Pn	03 02 27.5	+1.0
	7.4nm,0.5s						
MAT	Matsushiro	5.21	324	P	Pn	03 02 27.2	+0.7
CBIJ	Chichi jima	5.26	178	Pn	Pn	03 02 27.2	0.0
CBIJ				Sn	Sn	03 03 24.5	-3.4
JCJ	Chichijima	5.26	178	Pn	Pn	03 02 27.2	0.0
	15nm,0.3s,baz=346,slow=19,SNR=12						
JCJ				Sn	Sn	03 03 24.5	-3.4
	17nm,0.3s,baz=311,slow=20,SNR=4.6						
JFT	Otama	5.31	346	P	Pn	03 02 28.4	+0.5
JMK	Ichinoseki	6.60	355	P	Pn	03 02 46.1	+0.6
JNU	Nakatsue	9.39	278	LR	LR	03 07 10.8	
	comp=Z,46nm,19.6s,baz=190,slow=39						
ERM	Erimo	9.67	5	ePn	Pn	03 03 28.2	+0.6
ASAJ	Asahikawa	11.74	2	Pn	Pn	03 03 56.0	0.0
	0.7nm,0.3s,baz=257,slow=6.4,SNR=6.3						
ASAJ				Sn	Sn	03 06 00.3	-6.7
	0.1nm,0.3s,baz=292,slow=19,SNR=2.5						
ASAJ				LR	LR	03 09 26.3	
	comp=Z,46nm,19.0s,baz=170,slow=42						
KSRS	Korea Array	12.61	298	Pn	Pn	03 04 10.6	+2.6
	0.1nm,0.3s,baz=109,slow=14,SNR=4.7						
KSRS				LR	LR	03 09 31.8	
	comp=Z,69nm,18.1s,baz=124,slow=40						
KSAR	Wonju Array Be	12.63	297	Pn	Pn	03 04 10.6	+2.3
KLR	Kul'dur	18.51	338	P	Pn	03 05 22.5	-2.5
	0.0nm,0.3s,baz=143,slow=15,SNR=3.7						
GUMO	Guam	18.88	171	LR	LR	03 12 35.5	
	comp=Z,17nm,20.6s,baz=104,slow=36						
ULN	Ulaanbaatar	30.57	311	eP	P	03 07 23.1	+0.6
	4.2nm,0.8s						
SONM	Songino Array	30.98	310	P	P	03 07 28.0	+1.9
	1.9nm,0.8s,baz=116,slow=8.3,SNR=9.9						
ZALV	Zalesovo Beam	45.50	316	P	P	03 09 26.7	-1.2
	0.4nm,0.4s,baz=82,slow=12,SNR=3.4						
MKAR	Makanchi Array	47.12	306	P	P	03 09 40.9	+0.1
	1.9nm,0.8s,baz=89,slow=8.9,SNR=10						
KURK	Kurchatov	49.28	311	P	P	03 09 57.9	+0.5
KURBB	Kurchatov Arra	49.34	311	P	P	03 09 57.9	+0.1
	1.8nm,0.7s,baz=90,slow=8.2,SNR=14						
WRAB	Tennant Creek	52.52	189	eP	P	03 10 23.3	+1.3
	1.2nm,0.6s						
WRA	Warramunga Arr	52.53	189	P	P	03 10 22.3	+0.2
	1.3nm,0.8s,baz=5.5,slow=7.6,SNR=8.1						
ILAR	Eielson Array	53.22	30	P	P	03 10 27.9	+1.2
	0.6nm,0.8s,baz=255,slow=5.6,SNR=9.5						
BVAR	Borovoye Array	54.13	315	P	P	03 10 33.5	-0.1
	1.0nm,0.6s,baz=74,slow=7.8,SNR=4.5						
BRVK	Borovoye	54.19	315	eP	P	03 10 34.5	+0.4
	1.4nm,0.3s						
ASAR	Alice Springs	56.26	189	P	P	03 10 50.4	+1.2
	0.2nm,0.3s,baz=8.9,slow=6.6,SNR=2.5						
ARU	Arti	60.21	321	eP	P	03 11 16.6	+0.1
	1.2nm,0.5s						
AKTO	Aktyubinsk	62.20	314	P	P	03 11 28.9	-1.2
	1.3nm,1.0s,baz=59,slow=11,SNR=2.4						
FINES	FINESS Array B	73.17	333	P	P	03 12 39.6	+0.5
	1.0nm,0.9s,baz=72,slow=6.2,SNR=4.5						
AKASG	Malin Array Be	78.29	323	P	P	03 13 09.1	+0.5
	0.7nm,0.5s,baz=52,slow=5.5,SNR=3.0						
BRTR	Keskin Array B	82.32	312	P	P	03 13 32.0	+1.2
	0.7nm,0.8s,baz=111,slow=6.8,SNR=5.0						
RAYN	Ar Rayn	82.90	293	eP	P	03 13 34.0	+0.1
	1.0nm,0.4s						
CLL	Collm	85.38	331	eP	P	03 13 46.0	+0.1

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*KRNET **08** 03:04:24.4±0.1, 41.°27N×71.°04E, h14^{km}, mb2.5*

*ISCJB **08** 03:04:25.7±0.5, 41.°28N±0.°03×70.°97E±0.°04, h10^{km}, Error ellipse: s-maj=4.6km s-min=4.1km az=14.8*

*SOME **08** 03:04:25.1, 41.°25N×70.°95E, h15^{km}*

*NNC **08** 03:04:26.0±1.7, 41.°27N×71.°05E, h0^{km}, mb2.9, mpv2.6, Error ellipse: s-maj=16.1km s-min=10.4km az=53.0*

ISC 08 03:04:24.7±1.0**, 41.°26N**±0.°04×**70.°98E**±0.°04**, h10^{km}, n21, σ1.^{s}46**/37**, 33C-2D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARK	Arkit	0.91	54	⇑iP	Pg	03 04 40.9	-1.4
	baz=54						
ARK				⇑iS	Sg	03 04 53.5	-0.8
	baz=54						
IUG	Iuzhnay	1.14	322	eP	Pb	03 04 46.1	-0.4
	13nm,0.4s						
IUG				eS	Sb	03 05 01.8	+0.4
	26nm,0.6s						
BTK	Batken	1.21	186	⇑iP	Pn	03 04 47.4	-0.3
	baz=88						
BTK				⇑iS	Sb	03 05 04.5	+1.1
	baz=88						
ARSB	Arslanbob	1.51	87	⇑eP	Pn	03 04 51.9	-0.1
	baz=87						
ARSB				⇑iS	Sn	03 05 11.4	-0.4
	baz=87						
MNAS	Manas	1.67	42	⇑Pn	Pb	03 04 55.2	-0.5
	1.3nm,0.3s						
MNAS				⇓Lg	Lg	03 05 19.2	
	7.5nm,0.4s						
MNAS	Manas	1.67	42	⇑iP	Pb	03 04 55.0	-0.7
	baz=42						
MNAS				⇑iS	Sb	03 05 16.7	-0.2
	baz=42						
KK31	Karatay Array	1.88	349	⇑Pn	Pb	03 04 58.9	-0.2
	7.2nm,0.5s,baz=166,slow=18,SNR=126						
KK31				Lg	Lg	03 05 26.6	
	16nm,0.5s,baz=166,slow=30,SNR=18						
BRLS	Borolday	1.96	335	eP	Pn	03 04 58.6	+0.5
BRLS				eS	Sn	03 05 23.2	+0.4
AML	Almayashu	2.21	66	⇑iP	Pb	03 05 03.8	-1.2
	baz=66						
AML				⇑iS	Sb	03 05 32.1	-0.5
	baz=66						
MRKS	Merke	2.24	48	eP	Pb	03 05 05.5	+0.2
	5.1nm,0.3s						
MRKS				eS	Sg	03 05 34.9	-1.8
	12nm,0.3s						
SFK	Sufi-Kurgan	2.29	122	⇑Pn	Pb	03 05 05.8	-0.4
	0.5nm,0.3s						
SFK				⇑Lg	Lg	03 05 36.5	
	6.2nm,0.5s						
SFK	Sufi-Kurgan	2.29	122	⇑iP	Pn	03 05 04.6	+1.8
	baz=23						
SFK				⇑iS	Sb	03 05 33.8	-0.9
	baz=23						
EKS2	Erkin-Say	2.51	55	⇑iP	Pn	03 05 07.5	+1.7
	baz=55						
EKS2				⇑iS	Sb	03 05 38.9	-2.2
	baz=55						
UCH	Uchtor	2.82	69	⇑eP	Pn	03 05 11.9	+1.7
	baz=69						
UCH				⇑iS	Sn	03 05 46.4	+2.0
	baz=69						
AAK	Ala-Archa	2.96	61	⇑Pg	Pg	03 05 20.5	-1.0
	1.5nm,0.5s						
AAK				⇑Lg	Lg	03 05 55.7	
	2.6nm,0.4s						
AAK	Ala-Archa	2.96	61	⇑iP	Pn	03 05 13.6	+1.7
	baz=61						
AAK				⇑iS	Sn	03 05 49.6	+2.0
	baz=61						
KBK	Karagaybulak	3.27	63	⇑iP	Pn	03 05 18.0	+1.8
	baz=63						
KBK				⇑iS	Sn	03 05 57.0	+1.7
	baz=63						
USP	Ospenovka	3.29	51	⇑iP	Pn	03 05 18.4	+2.0
	baz=51						
USP				⇑iS	Sn	03 05 58.0	+2.3
	baz=51						
KZA	Kyzart	3.30	74	⇑iP	Pn	03 05 18.7	+1.8
	baz=74						
KZA				⇑iS	Sn	03 05 58.5	+2.1
	baz=74						
TKM2	Tokmak 2	3.82	63	⇑Pg	Pg	03 05 36.2	-1.7
	0.8nm,0.4s						
TKM2				⇓Lg	Lg	03 06 22.9	
	1.5nm,0.3s						
ULHL	Ulahol	4.06	74	⇑iP	Pn	03 05 29.5	+2.4
	baz=74						
ULHL				⇑iS	Sn	03 06 16.7	+1.9
	baz=74						

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*CSEM **08** 03:12:14.2±0.4, 37.°29N×42.°62E, h2^{km}, ML2.9, Error ellipse: s-maj=17.5km s-min=5.0km az=54.0*

*ISN **08** 03:12:18.3±0.3, 36.°63N×42.°28E, h0^{km}, ML2.2*

ISK 08 03:12:13.8, 37.°31N×42.°61E, h5^{km}, ML2.9/4**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIRT	Sirnak	0.23	325	PG	Pg	03 12 19.1	+0.6
SIRT				SG	Sg	03 12 22.8	+1.2
SIRT	Sirnak	0.23	325	ePg	Pg	03 12 19.1	+0.6
SIRT				eSg	Sg	03 12 22.8	+1.2
SVAN	Silvan-Diyarba	1.40	307	PN	Pb	03 12 40.5	+0.1
SVAN				SN	Sn	03 13 00.2	+1.3
SVAN	Silvan-Diyarba	1.40	307	ePn	Pb	03 12 40.5	+0.1
SVAN				eSn	Sn	03 13 00.2	+1.3
MAZI	Mazidag	1.73	276	PN	Pn	03 12 45.2	+0.6
MAZI				SN	Sb	03 13 08.2	+0.1
MAZI	Mazidag	1.73	276	ePn	Pn	03 12 45.2	+0.6
MAZI				eSn	Sb	03 13 08.2	+0.1
DIY	Diyarbakir	1.98	288	ePn	Pb	03 12 50.1	-0.3
DYBB	Diyarbakir	2.06	289	PN	Pn	03 12 50.1	+0.9
SVRC	Sivrice-ELAZID	2.82	293	PN	Pn	03 13 00.9	+1.2
SVRC	Sivrice-ELAZID	2.82	293	ePn	Pn	03 13 00.9	+1.2

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*NIED **08** 03:15:00, 41.°10N×145.°20E, h5^{km}, Mw3.6 Best double couple: M$_0$2.40000×10^{14} NP1:φ$_s$182.00000°, δ35.00000°, λ-83.00000°. NP2:φ$_s$354.00000°, δ55.00000°, λ-95.00000°.*

*JMA **08** 03:15:54.6±0.3, 41.°14N×145.°18E, h60^{km}±2^{km}, M3.5*

*ISCJB **08** 03:15:55.5±1.8, 41.°32N±0.°08×145.°09E±0.°08, h12^{km}±15^{km}, mb3.4/6, Error ellipse: s-maj=14.7km s-min=9.4km az=157.0*

*IDC **08** 03:16:18.5±2.2, 45.°25N×144.°39E, h0^{km}, mb3.5/6, mb1 3.7/6, mb1mx3.4/68, mbtmp3.5/6, MS2.4/1, Ms1 2.4/1, ms1mx2.0/60, Error ellipse: s-maj=49.6km s-min=25.1km az=145.0*

ISC 08 03:15:52.4±3.5**, 41.°18N**±0.°07×**145.°02E**±0.°07**, h2^{km}**±22^{km}**, n18, σ1.^{s}58**/22**, mb3.5**/6**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JEM	Erimo	1.62	301	P	Pb	03 16 23.4	+0.3
JEM				S	Sb	03 16 43.5	-0.6
JAK	Akkeshi	1.83	353	P	Pb	03 16 25.3	-1.3
JAK				eS	Sn	03 16 47.9	-0.7

JCH	Churui	1.89	320	P	Pb	03 16 27.1	-0.6
JCH				eS	Sn	03 16 49.7	-0.5
JOB	Onbets	1.93	333	eS	Sb	03 16 51.2	-1.8
JNBK	Urakawa-nobuka	2.02	304	P	Pb	03 16 29.8	-0.1
JNBK				S	Sb	03 16 54.5	-0.9
NEM2	Nemuro 2	2.25	14	P	Pn	03 16 30.7	+0.1
NEM2				S	Sn	03 16 57.5	-1.4
JAR	Ashorobuto	2.31	337	P	Pn	03 16 32.0	+0.5
JAR				eS	Sn	03 16 59.1	-1.4
JNK	Nakash	2.41	355	P	Pn	03 16 32.9	0.0
JNK				eS	Sn	03 17 00.1	-2.9
JFR	Furan	2.68	319	P	Pn	03 16 38.0	+1.4
JANG	Nango	2.78	254	P	Pn	03 16 37.6	-0.4
JANG				eS	Sn	03 17 09.2	-2.9
ASAJ	Asahikawa	3.43	329	Pn	Pn	03 16 49.7	+2.8
	0.9nm,0.3s,baz=171,slow=7.4,SNR=5.9						
ASAJ				Sn	Sn	03 17 30.1	+1.8
	2.3nm,0.3s,baz=51,slow=26,SNR=5.8						
MJAR	Matsushiro Arr	7.05	231	LR	LR	03 22 42.8	
	comp=Z,22nm,19.5s,baz=50,slow=39						
SONM	Songino Array	28.11	297	P	P	03 21 53.3	+7.6
	0.4nm,0.4s,baz=89,slow=10.0,SNR=3.5						
ZALV	Zalesovo Beam	41.34	309	P	P	03 23 44.1	+4.7
	0.4nm,0.4s,baz=98,slow=7.4,SNR=2.8						
MKAR	Makanchi Array	44.42	299	P	P	03 24 12.2	+7.7
	0.1nm,0.4s,baz=72,slow=7.1,SNR=2.9						
ILAR	Eielson Array	44.49	35	P	P	03 24 06.7	+1.9
	0.5nm,0.7s,baz=260,slow=5.8,SNR=7.0						
KURBB	Kurchatov Arra	45.78	305	P	P	03 24 19.4	+4.2
	0.2nm,0.5s,baz=74,slow=8.8,SNR=3.1						
FINES	FINESS Array B	66.44	333	P	P	03 26 43.2	+0.4
	2.1nm,1.0s,baz=36,slow=7.5,SNR=3.4						

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*MOS **08** 03:17:00.5±0.7, 53°.60N×161°.04E, h28^{km}, mb4.2/1, Error ellipse: s-maj=9.3km s-min=4.8km az=80.7*

KRSC 08 03:16:59.0±1.0**, 53°.61N×161°.08E, h41**^{km}±19^{km}**, ML4.0, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	Mys Shipunski	0.81	232	i P	Pn	03 17 15.4	+1.4
SPN				i S	Sn	03 17 25.9	+1.0
SPN	Mys Shipunski	0.81	232	PN	Pn	03 17 15.4	+1.4
SPN				S	Sn	03 17 25.9	+1.0
MKZ	Mys Kozlova	1.02	22	eP	Pn	03 17 18.1	+1.2
MKZ				eS	Sn	03 17 30.8	+0.8
MKZ	Mys Kozlova	1.02	22	PN	Pn	03 17 18.1	+1.2
MKZ				S	Sn	03 17 30.8	+0.8
KII	Karymskiy	1.06	295	eP	Pn	03 17 18.4	+1.0
KII				eS	Sn	03 17 31.0	0.0
KII	Karymskiy	1.06	295	PN	Pn	03 17 18.4	+1.0
KII				S	Sn	03 17 31.0	0.0
NLC	Nalytchevo	1.13	248	eP	Pn	03 17 19.7	+1.4
NLC				eS	Sn	03 17 33.9	+1.4
NLC	Nalytchevo	1.13	248	PN	Pn	03 17 19.7	+1.4
NLC				S	Sn	03 17 33.9	+1.4
SDLR	Sedlovina	1.35	257	eP	Pn	03 17 23.3	+1.8
SDLR	Sedlovina	1.35	257	PN	Pn	03 17 23.3	+1.8
SMAR	Somma	1.41	257	eP	Pn	03 17 24.1	+1.8
SMAR	Somma	1.41	257	PN	Pn	03 17 24.1	+1.8
UGLR	Uglovaya	1.41	254	eP	Pn	03 17 24.2	+1.9
UGLR	Uglovaya	1.41	254	PN	Pn	03 17 24.2	+1.9
KRX	Arik	1.47	261	eP	Pn	03 17 25.0	+1.8
KRX				eS	Sn	03 17 42.5	+1.2
KRX	Arik	1.47	261	PN	Pn	03 17 25.0	+1.8
KRX				S	Sn	03 17 42.5	+1.2
KOK	Koryaka	1.50	259	eP	Pn	03 17 25.2	+1.7
KOK	Koryaka	1.50	259	PN	Pn	03 17 25.2	+1.7
DALK	Dalny	1.51	248	eP	Pn	03 17 25.5	+2.0
DALK				eS	Sn	03 17 43.9	+1.9
DALK	Dalny	1.51	248	PN	Pn	03 17 25.5	+2.0
DALK				S	Sn	03 17 43.9	+1.9
PET	Petropavlovsk	1.57	249	eS	Sn	03 17 45.3	+1.9
PET	Petropavlovsk	1.57	249	ePN	Pn	03 17 26.5	+2.1
PET				eS	Sn	03 17 45.0	+1.6
PET				pmax	pmax		
	comp=Z,69nm,0.7s						
PET				smax	smax		
	comp=N,271nm,0.3s						
PET				smax	smax		
	comp=E,426nm,0.4s						
TUMR	Tumrok	1.77	342	eP	Pn	03 17 29.7	+2.5
TUMR				eS	Sn	03 17 50.5	+2.0
TUMR	Tumrok	1.77	342	PN	Pn	03 17 29.7	+2.5
TUMR				S	Sn	03 17 50.5	+2.0
GNL	Ganaly	1.87	274	i P	Pn	03 17 31.1	+2.5
GNL	Ganaly	1.87	274	PN	Pn	03 17 31.1	+2.5
KRMR	Karymshinskiy	1.94	247	eP	Pn	03 17 31.7	+2.3
KRMR				eS	Sn	03 17 54.6	+2.1
KRMR	Karymshinskiy	1.94	247	PN	Pn	03 17 31.7	+2.3
KRMR				S	Sn	03 17 54.6	+2.1
RUS	Russkaya	1.95	234	eP	Pn	03 17 31.4	+1.9
RUS				eS	Sn	03 17 53.7	+1.0
RUS	Russkaya	1.95	234	PN	Pn	03 17 31.4	+1.9
RUS				S	Sn	03 17 53.7	+1.0
MTVR	Mutnovka	2.08	238	eP	Pn	03 17 33.9	+2.4
MTVR				eS	Sn	03 17 58.1	+1.8
MTVR	Mutnovka	2.08	238	PN	Pn	03 17 33.9	+2.4
MTVR				S	Sn	03 17 58.1	+1.8
KMNR	Kamenistaya	2.21	348	i P	Pn	03 17 37.1	+3.9
KMNR	Kamenistaya	2.21	348	PN	Pn	03 17 37.1	+3.9
ASAK	Asacha	2.28	239	eP	Pn	03 17 37.8	+3.6
ASAK				eS	Sn	03 18 05.9	+4.8
ASAK	Asacha	2.28	239	PN	Pn	03 17 37.8	+3.6
ASAK				S	Sn	03 18 05.9	+4.8
BZMR	Bezymyannaya	2.36	352	eP	Pn	03 17 39.0	+3.7
BZMR	Bezymyannaya	2.36	352	PN	Pn	03 17 39.0	+3.7
BZWR	Bezymyannyi-We	2.38	352	eP	Pn	03 17 39.4	+3.7
BZWR	Bezymyannyi-We	2.38	352	PN	Pn	03 17 39.4	+3.7
KIRR	Kirishev	2.39	350	eP	Pn	03 17 39.3	+3.5
KIRR				eS	Sn	03 18 07.0	+3.1
KIRR	Kirishev	2.39	350	PN	Pn	03 17 39.3	+3.5
KIRR				S	Sn	03 18 07.0	+3.1
KPT	Kopyto	2.42	348	eP	Pn	03 17 39.0	+2.9
KPT	Kopyto	2.42	348	PN	Pn	03 17 39.0	+2.9
ZLN	Zelenaya	2.42	356	eP	Pn	03 17 40.2	+4.0
ZLN				eS	Sn	03 18 09.3	+4.7
ZLN	Zelenaya	2.42	356	PN	Pn	03 17 40.2	+4.0
ZLN				S	Sn	03 18 09.3	+4.7
APC	Apacha	2.45	255	eP	Pn	03 17 40.2	+3.7
APC				eS	Sn	03 18 09.4	+4.2
APC	Apacha	2.45	255	PN	Pn	03 17 40.2	+3.7
APC				S	Sn	03 18 09.4	+4.2
LGNR	Loginova	2.49	355	eP	Pn	03 17 41.5	+4.2
LGNR	Loginova	2.49	355	PN	Pn	03 17 41.5	+4.2
CIRR	Tsirk	2.52	356	eP	Pn	03 17 41.2	+3.6
CIRR	Tsirk	2.52	356	PN	Pn	03 17 41.2	+3.6
KOZ	Kozyrevsk	2.55	345	eP	Pn	03 17 39.8	+1.9
KOZ	Kozyrevsk	2.55	345	PN	Pn	03 17 39.8	+1.9
KRSR	Krestovskiy	2.63	354	eP	Pn	03 17 41.7	+2.6
KRSR	Krestovskiy	2.63	354	PN	Pn	03 17 41.7	+2.6
ESO	Esso	2.70	330	eP	Pn	03 17 42.2	+2.3
ESO				eS	Sn	03 18 12.1	+0.7
ESO	Esso	2.70	330	PN	Pn	03 17 42.2	+2.3
KBTR	Krutoberegovo	2.79	20	eP	Pn	03 17 44.6	+3.4
KBTR				eS	Sn	03 18 16.7	+3.1
KBTR	Krutoberegovo	2.79	20	PN	Pn	03 17 44.6	+3.4
KBTR				S	Sn	03 18 16.7	+3.1
BDR	Baidarnaya	2.97	1	eP	Pn	03 17 46.0	+2.3
BDR	Baidarnaya	2.97	1	PN	Pn	03 17 46.0	+2.3
SMKR	Semkarok	2.99	4	eP	Pn	03 17 47.8	+3.9
SMKR				eS	Sn	03 18 22.2	+3.7
SMKR	Semkarok	2.99	4	PN	Pn	03 17 47.8	+3.9
SMKR				S	Sn	03 18 22.2	+3.7
SRKR	Sorokina	3.05	1	eP	Pn	03 17 48.5	+3.7
SRKR	Sorokina	3.05	1	PN	Pn	03 17 48.5	+3.7
BKI	Bering	3.28	59	eP	Pn	03 17 51.6	+3.8
BKI				eS	Sn	03 18 26.4	+1.0
BKI	Bering	3.28	59	PN	Pn	03 17 51.6	+3.8
SKR	Severo-Kuril's	4.23	228	ePN	Pn	03 18 05.8	+4.9
SKR				eS	Sn	03 18 54.7	+5.7
SKR				smax	smax		
	comp=E,26nm,0.2s						
SKR				smax	smax		
	comp=N,31nm,0.2s						

IDC 08 03:22:58.5±14.0**, 18°.89S×177°.22W, h0**^{km}**, mb3.8**/4**, mb1 4.0**/4**, mb1mx3.6**/44**, mbtmp3.8**/4**, Error ellipse: s-maj=347.4km s-min=41.3km az=38.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	45.57	260	P	P	03 31 20.6	0.0
	0.2nm,0.5s,baz=96,slow=7.5,SNR=12						
ASAR	Alice Springs	45.62	255	P	P	03 31 20.9	-0.2
	0.5nm,0.5s,baz=97,slow=8.1,SNR=7.4						
FITZ	Fitzroy Crossi	53.99	261	P	P	03 32 24.6	-0.1
	3.6nm,1.1s,baz=111,slow=14,SNR=3.1						
VNDA	Vanda	59.57	185	P	P	03 33 03.5	0.0
	0.4nm,0.3s,baz=31,slow=4.8,SNR=7.4						

IDC 08 03:58:35.5±18.0**, 23°.98S×175°.42W, h0**^{km}**, mb4.2**/5**, mb1 4.3**/5**, mb1mx3.7**/45**, mbtmp4.2**/5**, MS2.7**/1**, Ms1 2.7**/1**, ms1mx2.3**/47**, Error ellipse: s-maj=336.0km s-min=146.9km az=83.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	10.60	20	LR	LR	04 04 08.2	
	comp=Z,38nm,19.2s,baz=140,slow=31						
CTA	Charters Tower	35.67	269	P	P	04 05 36.0	+0.3
	6.3nm,0.9s,baz=98,slow=7.1,SNR=3.2						
STKA	Stephens Creek	38.59	248	P	P	04 06 00.1	-0.3
	1.2nm,0.5s,baz=95,slow=12,SNR=4.4						
ASAR	Alice Springs	46.15	260	P	P	04 07 01.6	-0.6
	1.2nm,0.4s,baz=91,slow=6.7,SNR=37						
WRA	Warramunga Arr	46.58	265	P	P	04 07 05.0	-0.5
	1.6nm,0.6s,baz=103,slow=8.2,SNR=32						
FITZ	Fitzroy Crossi	55.00	264	P	P	04 08 09.8	+0.7
	1.6nm,0.5s,baz=117,slow=8.5,SNR=8.6						

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*ISCJB **08** 04:12:35.7±0.5, 42°.80N±0°.04×143°.76E±0°.04, h92^{km}±3^{km}, mb3.7/5, Error ellipse: s-maj=7.1km s-min=4.9km az=158.1*

*NEIC **08** 04:12:36.1±2.5, 42°.88N×144°.07E, h92^{km}±11^{km}, mb4.2/1, Error ellipse: s-maj=53.5km s-min=13.2km az=79.0*

*JMA **08** 04:12:36.8±0.1, 42°.82N×143°.71E, h85^{km}±1^{km}, M3.3 Broadband fault plane solution: P waves. NP1: ϕ_s221.00000°, δ87.00000°, λ121.00000°. NP2: ϕ_s316.00000°, δ31.00000°, λ6.00000°. Principal axes: T Plg40.0000°, Azm159.0000°; N Plg31.0000°, Azm39.0000°; P Plg35.0000°, Azm285.0000°;*

*IDC **08** 04:12:40.1±3.7, 45°.24N×143°.20E, h0^{km}, mb3.8/5, mb1 3.8/5, mb1mx3.4/68, mbtmp3.8/5, MS3.5/1, Ms1 3.5/1, ms1mx2.2/67 Error ellipse: s-maj=86.1km s-min=18.7km az=92.0*

ISC 08 04:12:36.7±0.8**, 42°.83N**±0°.04×**143°.76E**±0°.04**, h87**^{km}±6^{km}**, n30, σ1^{s}03**/46**, mb3.8**/5**, 9C-3D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOB	Onbets	0.09	38	⇑P	Pn	04 12 49.3	+0.4
JOB				S	Sn	04 12 58.3	+0.3
JCH	Churui	0.37	233	⇑P	Pn	04 12 49.8	-0.3
JCH				S	Sn	04 12 59.0	-1.0
JAR	Ashorobuto	0.46	1	⇑P	Pn	04 12 51.0	+0.2
JAR				S	Sn	04 13 01.3	0.0
JAK	Akkeshi	0.71	76	⇓P	Pn	04 12 53.1	+0.2
JAK				S	Sn	04 13 05.5	+0.5
JFR	Furan	0.92	291	⇑P	Pn	04 12 54.8	-0.4
JFR				S	Sn	04 13 08.4	-0.7
JNBK	Urakawa-nobuka	0.93	234	⇑P	Pn	04 12 55.0	-0.3
JNBK				S	Sn	04 13 08.3	-0.9
ERM	Erimo	0.93	209	ePn	Pn	04 12 56.9	+1.5
ERM				eSn	Sn	04 13 13.6	+4.4
JNK	Nakash	1.03	43	⇓P	Pn	04 12 56.7	+0.2
JNK				eS	Sn	04 13 11.1	-0.2
JBT2	Biratori 2	1.03	267	⇑P	Pn	04 12 56.2	-0.3
JBT2				eS	Sn	04 13 11.3	0.0
JTKR	Abashiri--Toko	1.14	5	⇑P	Pn	04 12 58.3	+0.5
JTKR				S	Sn	04 13 14.1	+0.4
JMP	Maruseppu	1.21	346	⇑P	Pn	04 12 58.8	+0.1
JMP				S	Sn	04 13 15.1	-0.1
JKK2	Kamakawa 2	1.27	325	⇑P	Pn	04 12 59.8	+0.3
JKK2				eS	Sn	04 13 16.9	+0.3
JAB	Ashibetsu	1.31	301	P	Pn	04 13 00.8	+0.9
JAB				eS	Sn	04 13 18.8	+1.5
JRA	Rausu	1.48	42	P	Pn	04 13 03.3	+1.3
JRA				S	Sn	04 13 23.7	+2.5
ASAJ	Asahikawa	1.54	327	LR	LR	04 13 03.6	
	comp=Z,16nm,20.4s,baz=347,slow=20						
ASAJ				Pn	Pn	04 13 03.8	+1.0
	5.5nm,0.3s,baz=186,slow=14,SNR=102						
ASAJ				Sn	Sn	04 13 23.4	+0.9
	11nm,0.3s,baz=287,slow=29,SNR=13						
ASAJ	Asahikawa	1.54	327	Pn	Pn	04 13 03.8	+1.0
ASAJ				Sn	Sn	04 13 23.4	+0.9
NEM2	Nemuro 2	1.55	69	⇓P	Pn	04 13 02.6	-0.2
NEM2				S	Sn	04 13 21.7	-0.9
JEW	Eniwo	1.70	271	eS	Sn	04 13 26.6	+0.4
ZALV	Zalesovo Beam	39.58	307	P	P	04 19 59.6	+0.4
	0.8nm,0.4s,baz=70,slow=8.7,SNR=3.4						
ZALV	Zalesovo Beam	39.58	307	P	P	04 19 59.6	+0.4
MKAR	Makanchi Array	42.81	297	P	P	04 20 25.9	+0.1
	0.4nm,0.5s,baz=87,slow=6.1,SNR=7.2						
MKAR	Makanchi Array	42.81	297	P	P	04 20 25.9	+0.1
KURK	Kurchatov	43.99	304	eP	P	04 20 34.9	-0.2
KURBB	Kurchatov Arra	44.07	304	P	P	04 20 35.7	-0.1
	0.8nm,0.5s,baz=72,slow=8.9,SNR=7.4						
BVAR	Borovoye Array	48.16	309	P	P	04 21 08.4	+0.5
	0.6nm,0.3s,baz=85,slow=8.7,SNR=4.2						
BVAR	Borovoye Array	48.16	309	P	P	04 21 08.4	+0.5
HNR	Honiara	54.07	160	LR	LR	04 42 28.4	
	comp=Z,47nm,21.9s,baz=92,slow=32						
WRAB	Tennant Creek	63.05	190	eP	P	04 22 54.2	-0.5
	1.8nm,0.6s						
FINES	FINESS Array B	64.54	332	P	P	04 23 02.9	-1.1
	0.6nm,0.6s,baz=54,slow=9.7,SNR=7.3						
FINES	FINESS Array B	64.54	332	P	P	04 23 02.9	-1.1

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*IDC **08** 04:14:21.2±11.0, 2°.35N×127°.98E, h0^{km}, mb4.0/4, mb1 4.2/4, mb1mx3.7/62, mbtmp4.1/4, Error ellipse: s-maj=187.2km s-min=110.5km az=147.0*

*DJA **08** 04:14:36.8±0.9, 1°N±5°×12°8E±°, h110^{km}±8^{km}, M4.6/5, mB6.4/1, mb6.3/1, MLv3.8/5, Mw(mB)6.2/1*

ISC 08 04:14:38.4±4.6**, 1°.6N**±0°.5×**127°.6E**±0°.2**, h112**^{km}**, n7, σ1^{s}65**/7**, mb4.1**/3**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	0.83	193	P	Pn	04 14 55.6	-2.5
LBMI	Labuha	2.21	181	P	Pn	04 15 10.6	-3.5
KMSI	Cibinong	3.71	254	P	Pn	04 15 32.8	-1.1
KMSI				S	Sn	04 16 17.3	+0.4
FITZ	Fitzroy Crossi	19.65	185	P	P	04 19 00.1	+1.6
	1.4nm,0.7s,baz=12,slow=9.9,SNR=5.0						
WRA	Warramunga Arr	22.41	163	P	P	04 19 28.3	+0.5
	5.8nm,0.5s,baz=349,slow=11,SNR=140						
ASAR	Alice Springs	25.85	167	P	P	04 20 00.0	+0.4
	2.0nm,0.5s,baz=348,slow=7.3,SNR=40						
STKA	Stephens Creek	35.84	159	P	P	04 21 28.0	+0.6
	1.0nm,0.4s,baz=326,slow=7.7,SNR=6.5						

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*MAN **08** 04:15:17.8, 9°.79N×125°.89E, h7^{km}, mb5.1, ML4.0, MS4.1*

*ISCJB **08** 04:15:19.9±0.6, 9°.75N±0°.03×125°.92E±0°.06, h64^{km}±5^{km}, mb4.5/51, Error ellipse: s-maj=9.4km s-min=4.2km az=168.5*

*IDC **08** 04:15:20.2±2.5, 9°.78N×125°.72E, h51^{km}±23^{km}, mb4.2/30, mb1 4.3/33, mb1mx4.2/66, mbtmp4.5/33, ML4.6/3, MS3.4/4, Ms1 3.4/4, ms1mx3.0/48, Error ellipse: s-maj=19.1km s-min=9.8km az=80.0*

*NEIC **08** 04:15:21.2±1.2, 9°.74N×125°.73E, h60^{km}±11^{km}, mb4.6/20, Error ellipse: s-maj=8.9km s-min=5.1km az=77.0*

NEIC Felt [III PIVS] at Dapa and General Luna; [II PIVS] at Del Carmen and San Benito. Felt [I PIVS] at Loreto, Dinagat Island.

ISC 08 04:15:19.8±0.9**, 9°.80N**±0°.03×**125°.79E**±0°.06**, h43**^{km}±8^{km}**, n106, σ1^{s}91**/112**, mb4.6**/51**, 5C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	Surigao	0.30	266	⇑eP	Pn	04 15 26.9	-1.4
SCPH				eS	Sn	04 15 34.0	-0.3
BUTP	Butuan	0.85	191	eP	Pn	04 15 33.5	-1.8
BUTP				eS	Sn	04 15 46.3	-0.3
MSLP	Maasin	0.97	290	eP	Pn	04 15 37.8	+0.7
MSLP				eS	Sn	04 16 02.4	+13
PLP	Palo	1.57	329	⇑eP	Pn	04 15 44.2	-1.0
PLP				i S	Sn	04 16 08.8	+4.3
OCLP	Ormoc	1.70	317	eP	Pn	04 15 48.3	+1.3
BIPH	Bislig	1.71	161	⇓iP	Pn	04 15 51.6	+4.5
BIPH				i S	Sn	04 16 14.1	+6.4
CGP	Cagayan de Oro	1.72	219	⇑eP	Pn	04 15 48.5	+1.1
CGP				i S	Sn	04 16 12.0	+3.8
BESP	Borongan	1.82	349	eP	Pn	04 15 49.8	+1.1
BESP				eS	Sn	04 16 15.8	+5.2
LLP	Lapu-Lapu	1.87	286	⇓eP	Pn	04 15 51.6	+2.3
LLP				eS	Sn	04 16 16.7	+5.0
TBP	Tagbilaran	1.91	267	eP	Pn	04 15 53.8	+4.0
BUKP	Musuan	2.04	201	eP	Pn	04 15 52.7	+0.9
BUKP				eS	Sn	04 16 20.8	+4.7
DMPH	Davao City--Mi	2.72	186	⇑iP	Pn	04 16 06.7	+5.7
DMPH				i S	Sn	04 16 41.8	+9.1
DAV	Davao City (W)	2.73	184	P	Pn	04 16 02.2	+1.1
	119nm,0.3s,baz=262,slow=4.1,SNR=11						
DAV				S	Sn	04 16 38.0	+5.2
	73nm,0.3s,baz=107,slow=19,SNR=3.7						
MATI	Mati	2.88	171	eP	Pn	04 16 04.5	+1.2
MATI				eS	Sn	04 16 41.8	+5.2
CNP	Catarman	2.91	338	eP	Pn	04 16 06.1	+2.5
CNP				eS	Sn	04 16 42.6	+5.3
PAGZ	Pagadian	3.07	231	eP	Pn	04 16 09.1	+3.2
GUIM	Jordan	3.26	285	eP	Pn	04 16 13.3	+4.9
RCP	Roxas	3.46	301	⇑eP	Pn	04 16 14.1	+2.8
SKMP	Bagumbayan, Su	3.49	201	eP	Pn	04 16 14.6	+2.9
PVCP	Virac	4.09	337	eP	Pn	04 16 21.9	+2.0
PVCP				eS	Sn	04 17 17.9	+11
TGY	Tagaytay City	6.39	312	P	Pn	04 16 56.5	+5.1
	7.4nm,0.3s,baz=177,slow=0.3,SNR=16						
SIJI	Sorong	11.92	152	P	Pn	04 18 06.5	-0.8
	1.4nm,0.3s,baz=325,slow=7.6,SNR=5.0						
SIJI				LR	LR	04 23 29.8	
	comp=Z,108nm,19.0s,baz=56,slow=41						
BATI	Baumata	19.99	186	P	P	04 19 49.0	+0.1
	3.1nm,0.3s,baz=86,slow=1.0,SNR=4.5						
MTN	Manton Dam	23.12	167	eP	P	04 20 22.7	+0.4
	20nm,0.9s						
JCJ	Chichijima	23.14	40	LR	LR	04 28 53.0	
	comp=Z,107nm,20.5s,baz=122,slow=35						
CMAR	Chiang Mai Arr	27.39	291	P	P	04 20 59.4	-2.0
	1.3nm,0.3s,baz=83,slow=7.3,SNR=3.4						
FITZ	Fitzroy Crossi	27.73	180	P	P	04 21 03.8	-0.6
	5.2nm,0.8s,baz=320,slow=15,SNR=6.5						
WRA	Warramunga Arr	30.73	164	P	P	04 21 29.2	-1.9
	2.8nm,0.6s,baz=343,slow=9.4,SNR=18						
WB2	Warramunga Arr	30.74	164	eP	P	04 21 29.5	-1.6
AS31	Alice Springs	34.20	167	eP	P	04 22 00.4	-1.0
	1.7nm,0.5s						
ASAR	Alice Springs	34.20	167	P	P	04 22 00.1	-1.3
	3.2nm,0.6s,baz=352,slow=7.2,SNR=46						
ASAR				PcP	PcP	04 24 37.5	-0.2
	1.1nm,0.6s,baz=339,slow=2.4,SNR=5.5						
AS01	Alice Springs	34.21	167	eP	P	04 22 00.1	-1.3
AS01				ePcP	PcP	04 24 37.4	-0.3
USRK	Ussuriysk Ar.	34.69	8	P	P	04 22 06.0	+0.7
	19nm,0.7s,baz=188,slow=7.5						
MDJ	Mudanjiang	34.84	5	eP	P	04 22 06.9	+0.2
	7.4nm,0.7s						
CTA	Charters Tower	35.89	146	P	P	04 22 16.2	+0.2
	3.5nm,0.7s,baz=268,slow=13,SNR=2.6						
CTA				LR	LR	04 38 59.3	
	comp=Z,150nm,19.3s,baz=67,slow=40						
ASAJ	Asahikawa	37.16	20	P	P	04 22 25.9	-0.6
	2.5nm,0.5s,baz=191,slow=14,SNR=4.4						
KLR	Kul'dur	39.61	6	P	P	04 22 47.3	+0.2
	0.8nm,0.6s,baz=196,slow=5.5,SNR=41						
H11N1	WAKE ISLAND Hy	40.85	71	T	T	05 06 09.9	
	baz=265,slow=74,SNR=168						
H11N2	WAKE ISLAND Hy	40.86	71	T	T	05 06 11.0	
	baz=265,slow=74,SNR=119						
H11N3	WAKE ISLAND Hy	40.87	71	T	T	05 06 12.1	
	baz=265,slow=74,SNR=161						
ULN	Ulaanbaatar	41.10	341	eP	P	04 23 00.1	+0.5
	4.9nm,0.5s						
SONM	Songino Array	41.29	340	P	P	04 23 01.6	+0.5
	9.4nm,0.8s,baz=155,slow=9.3,SNR=13						
SONM				PcP	PcP	04 24 58.7	-0.5
	0.9nm,0.7s,baz=131,slow=4.2,SNR=2.9						
SONA1	Songino Array	41.30	340	eP	P	04 23 03.3	+2.1
STKA	Stephens Creek	44.12	161	P	P	04 23 23.4	-0.6
	6.6nm,0.6s,baz=336,slow=8.4,SNR=21						
STKA	Stephens Creek	44.12	161	eP	P	04 23 23.2	-0.9
	1.4nm,0.7s						
TLY	Talaya	45.51	341	eP	P	04 23 36.4	+1.4
	7.4nm,0.7s						
PETK	Petropavlovsk-	50.25	24	P	P	04 24 12.7	+1.0
	3.6nm,0.6s,baz=208,slow=7.6						
PETK	Petropavlovsk-	50.25	24	eP	P	04 24 12.3	+0.7
MA2	Magadan	53.11	16	P	P	04 24 32.1	-0.7
	2.6nm,0.3s,baz=191,slow=5.9,SNR=4.9						
NIL	Nilore	53.61	305	eP	P	04 24 37.7	+0.7
KURK	Kurchatov	56.18	326	P	P	04 24 55.0	-0.2
KURBB	Kurchatov Arra	56.19	326	P	P	04 24 55.0	-0.3
	3.9nm,0.6s,baz=122,slow=7.1,SNR=36						
SEY	Seymchan	56.38	14	P	P	04 24 57.2	+0.7
	4.3nm,0.7s,baz=174,slow=7.6,SNR=22						
BVAR	Borovoye Array	61.78	326	P	P	04 25 33.8	-0.3
	2.5nm,0.8s,baz=142,slow=7.5,SNR=13						
TIXI	Tiksi	61.82	1	P	P	04 25 33.2	-0.8
	11nm,0.8s,baz=170,slow=5.0,SNR=7.2						
TIXI	Tiksi	61.82	1	eP	P	04 25 33.7	-0.3
BRVK	Borovoye	61.85	326	eP	P	04 25 34.1	-0.4
BILL	Bilibino	63.98	16	eP	P	04 25 48.3	0.0
ABKAR	Akbulak array	66.92	319	eP	P	04 26 07.4	-0.4
NIKH	Nikolski High	67.46	37	eP	P	04 26 11.1	0.0
	15nm,0.6s						
AKTO	Aktyubinsk	68.38	320	P	P	04 26 16.3	-0.7
	0.5nm,0.4s,baz=71,slow=6.6,SNR=3.8						
ARU	Arti	69.35	327	eP	P	04 26 21.3	-1.5
	7.6nm,0.5s						
KDAK	Kodiak Island	77.31	33	P	P	04 27 08.5	-1.2
	8.8nm,0.7s,baz=278,slow=6.6,SNR=5.7						
RAYN	Ar Rayn	77.31	292	eP	P	04 27 09.5	-0.9
	2.5nm,0.7s						
CAST	Castle Rocks	77.77	27	eP	P	04 27 12.9	+0.6
	15nm,0.9s						
KBZ	Khabaz	78.17	313	P	P	04 27 14.8	0.0
	3.3nm,0.9s,baz=138,slow=8.0,SNR=4.3						
BPAW	Bear Paw Mtn.	78.28	26	eP	P	04 27 15.4	+0.4
	23nm,1.2s						
KIV	Kislovodsk	78.32	313	eP	P	04 27 15.8	0.0
	5.8nm,0.6s						
MLY	Manley	78.42	25	eP	P	04 27 16.7	+0.8
	23nm,1.3s						
TOLK	Toolik Lake Re	78.98	22	eP	P	04 27 20.1	+1.2
	16nm,1.2s						
MCK	McKinley	79.19	27	eP	P	04 27 20.0	-0.1
	27nm,1.2s						
CCB	Clear Creek Bu	79.67	26	eP	P	04 27 22.1	-0.5
	5.5nm,1.0s						
IL1	Eielson Array	80.06	26	eP	P	04 27 22.9	-1.8
ILAR	Eielson Array	80.06	26	P	P	04 27 23.3	-1.5
	1.6nm,0.8s,baz=244,slow=6.2,SNR=20						
ILB	Eielson Array	80.06	26	eP	P	04 27 24.4	-0.3
EGAK	Eagle	82.51	26	eP	P	04 27 37.4	-0.3
	2.4nm,0.8s						
DAWY	Dawson	83.36	26	eP	P	04 27 42.8	+0.6
	5.6nm,0.9s						
SPITS	Spitsbergen Ar	84.38	349	P	P	04 27 46.3	-0.8
	9.0nm,0.7s,baz=70,slow=9.8,SNR=5.0						
ARCES	ARCESS Array B	84.46	340	P	P	04 27 46.8	-0.8
	4.4nm,0.8s,baz=89,slow=5.7,SNR=12						
INK	Inuvik	84.89	22	P	P	04 27 48.6	-1.2
	3.4nm,0.9s,baz=212,slow=4.5,SNR=3.6						
INK	Inuvik	84.89	22	eP	P	04 27 49.3	-0.5
	3.1nm,0.9s						
BRTR	Keskin Array B	85.46	309	P	P	04 27 52.8	-0.7
	1.2nm,0.9s,baz=83,slow=3.1,SNR=4.9						
FIA1	FINESS Array S	86.07	332	eP	P	04 27 54.8	-1.0
FINES	FINESS Array B	86.07	332	P	P	04 27 55.2	-0.7
	3.9nm,0.5s,baz=67,slow=4.8,SNR=48						
AKASG	Malin Array Be	86.62	321	P	P	04 27 57.6	-1.1
	1.6nm,0.5s,baz=63,slow=4.4,SNR=10						
AKBB	Malin Array Si	86.62	321	eP	P	04 27 57.9	-0.9
	6.0nm,0.8s						
KIEV	Kiev	86.64	321	eP	P	04 27 57.6	-1.2
	2.8nm,0.6s						
AK11	Malin Array Si	86.66	321	eP	P	04 27 58.1	-0.8
VNDA	Vanda	89.53	173	P	P	04 28 12.5	+0.5
	2.2nm,0.7s,baz=314,slow=6.0,SNR=19						

VNDA	Vanda	89.53	173	eP	P	04 28 12.4	+0.4
	2.2nm,0.8s						
BUR04	Bucovina Ar. S	89.88	318	eP	P	04 28 14.2	-0.2
BUR08	Bucovina Ar. S	89.88	318	eP	P	04 28 14.7	+0.2
MLR	Muntele Rosu	89.90	316	LR	LR	05 13 36.0	
	comp=Z,13nm,18.3s,baz=88,slow=39						
DAG	Danmarks Havn	91.15	352	i P	P	04 28 18.5	-1.1
	6.4nm,0.9s						
HFS	Hagfors	92.24	332	P	P	04 28 23.6	-1.4
	3.1nm,0.8s,baz=81,slow=4.5,SNR=9.2						
NB2	NORSAR Subarra	92.96	334	P	P	04 28 26.3	-2.1
	comp=Z,2.9nm,0.9s,baz=64,slow=4.6						
NB2	NORSAR Subarra	92.96	334	P	P	04 28 26.3	-2.1
	baz=64,slow=4.6						
YKA	Yellowknife Ar	94.37	24	P	P	04 28 34.8	+0.1
	comp=Z,2.0nm,0.8s,baz=299,slow=5.0,SNR=10.0						
GERES	GERESS Array B	96.77	322	P	P	04 28 45.0	-1.2
	comp=Z,0.8nm,0.9s,baz=61,slow=6.4,SNR=8.6						
GEA0	GERESS Array S	96.77	322	eP	P	04 28 45.9	-0.3
TXAR	Lajitas Array	118.48	49	PKP	PKPdf	04 34 03.9	+0.2
	comp=Z,0.3nm,0.6s,baz=96,slow=0.9,SNR=4.7						
TORD	Torodi Ar. Bea	120.00	291	PKP	PKPdf	04 34 05.2	-1.6
	comp=Z,0.7nm,0.7s,baz=67,slow=1.8						
V40A	Witts Springs	121.83	37	ePKPdf	PKPdf	04 34 09.5	-0.3
KOWA	Kowa	124.69	295	PKP	PKPdf	04 34 15.2	-0.5
	comp=Z,1.1nm,0.5s,baz=16,slow=3.4,SNR=4.4						
PLCA	Paso Flores	145.96	158	PKPbc	PKPab	04 34 55.9	+0.2
	comp=Z,3.0nm,0.7s,baz=18,slow=4.6,SNR=6.7						
PB01	IPOC Station P	161.53	129	ePKPdf	PKPdf	04 35 18.3	+1.3

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*IDC **08** 04:16:31.9±0.5, 18°.96N×121°.02E, h0^{km}, mb4.4/24, mb1 4.6/27, mb1mx4.3/71, mbtmp4.5/27, ML3.9/3, MS3.6/23, Ms1 3.6/23, ms1mx3.4/58, Error ellipse: s-maj=16.8km s-min=11.7km az=73.0*

*MAN **08** 04:16:36.4, 18°.99N×121°.07E, h19^{km}, mb5.3, ML4.2, MS4.4*

*ISCJB **08** 04:16:36.1±0.9, 19°.04N±0°.02×121°.02E±0°.03, h29^{km}±7^{km}, mb4.7/71, MS3.7/27, Error ellipse: s-maj=5.0km s-min=3.6km az=173.7*

*NEIC **08** 04:16:38.5±0.7, 19°.04N×121°.00E, h36^{km}±5^{km}, mb4.8/41, Error ellipse: s-maj=8.1km s-min=5.6km az=145.0*

NEIC Felt [IV PIVS] at Claveria, Luzon.

*GCMT **08** 04:16:38.5±0.5, 19°.06N×120°.90E, h23^{km}±1^{km}, MW4.8/59, Moment Tensor Solution. s18,c20; s59,c84; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.45±.20; $M_{\theta\theta}$1.36±.11; $M_{\phi\phi}$1.10±.12; $M_{r\theta}$-0.23±.14; $M_{\theta\phi}$-0.84±.05; $M_{\phi r}$0.38±.17; Best double couple: $M_0$2.31000×10^{16} NP1:ϕ_s134.00000°,δ50.00000°,λ-86.00000°. NP2: ϕ_s308.00000°,δ40.00000°,λ-94.00000°. Principal axes: T 2.1240, Plg5.0000°, Azm221.0000°; N 0.3820, Plg3.0000°, Azm311.0000°; P -2.4960, Plg84.0000°, Azm69.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*BJI **08** 04:16:41.3, 19°.34N×120°.87E, h46^{km}, mb4.5/50, mB4.8/37, ML4.3/1, Ms4.2/48, Ms7 4.0/43*

ISC 08 04:16:38.5±0.5, **19°.05N**±0°.03×**121°.02E**±0°.04, **h37**^{km}±1^{km}, **n242**, σ1ˢ**77**/245, **mb4.7**/76, **MS3.7**/28, **10C-5D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APYP	Conner	1.20	170	eP	Pn	04 16 55.5	-3.2
APYP				eS	Sn	04 17 10.5	-3.2
SGCP	Mt. Cagua	1.26	129	eP	Pn	04 16 57.2	-2.4
SGCP				eS	Sn	04 17 14.3	-0.9
ABRA	Dolores	1.42	192	eP	Pn	04 16 57.4	-4.4
ABRA				eS	Sn	04 17 15.1	-4.1
BBP	Basco	1.65	33	eP	Pn	04 17 04.8	-0.1
BBP				eS	Sn	04 17 26.1	+1.2
CAUP	Cauayan	2.23	160	eP	Pn	04 17 13.3	+0.4
BOLP	Bolinao	2.85	202	eP	Pn	04 17 16.9	-4.5
BOLP				eS	Sn	04 18 03.2	+8.6
BALP	Baler	3.33	171	eP	Pn	04 17 27.6	-0.4
BALP				eS	Sn	04 18 11.3	+4.9
SCZP	Santa Cruz	3.42	198	eP	Pn	04 17 28.9	-0.3
PCPH	Palayan	3.47	179⇑	eP	Pn	04 17 30.0	+0.1
PCPH				eS	Sn	04 18 10.3	+0.6
TWG	Pinlang	3.76	1	ePn	Pn	04 17 32.8	-1.1
TPUB	Ta-pu	4.25	355	ePn	Pn	04 17 39.6	-1.1
YULB	Yu-li	4.33	3	ePn	Pn	04 17 43.0	+1.1
SSLB	Suanglung	4.72	359	ePn	Pn	04 17 48.4	+1.3
TGY	Tagaytay City	4.92	181	Pn	Pn	04 17 50.3	+0.4
	12nm,0.3s,baz=188,slow=9.5,SNR=4.9						
TGY				Lg	Lg	04 19 09.0	
	24nm,0.3s,baz=286,slow=15,SNR=2.1						
TGY	Tagaytay City	4.92	181	Pn	Pn	04 17 50.3	+0.4
TGY				Lg	Lg	04 19 09.0	
NACB	Ninganchiao	5.13	6	ePn	Pn	04 17 54.2	+1.4
LUBP	Lubang	5.33	188	eP	Pn	04 17 56.6	+1.0
YHNB	Yeheng	5.61	3	ePn	Pn	04 18 00.9	+1.5
YOJ	Yonaguni jima	5.70	19	ePn	Pn	04 18 00.8	+0.2
TATO	Taipei	5.92	4	ePn	Pn	04 18 03.8	+0.2
QZH	Quanzhou	6.28	339	eP	Pn	04 18 09.1	+0.5
QZH				S	Sn	04 19 16.2	-3.0
QZH				LR	LR		
	comp=N,590nm,10.7s						
QZH				LR	LR		
	comp=E,960nm,12.6s						
QZH				LR	LR		
	comp=Z,1μm,11.1s						
MCO	Taipa Grande	7.63	295	P	Pn	04 18 37.0	+10
JOW	Kunigami	10.23	39	Pn	Pn	04 19 01.8	-1.1
	3.3nm,0.3s,baz=146,slow=16,SNR=13						
JOW	Kunigami	10.23	39	ePn	Pn	04 19 02.7	-0.1
QIZ	Qiongzhong	10.57	272	P	Pn	04 19 08.7	+1.2
QIZ				S	Sn	04 21 05.9	+1.3
QIZ				pmax	pmax		
	comp=Z,14nm,0.7s						
QIZ				LR	LR		
	comp=N,570nm,12.3s						
QIZ				LR	LR		
	comp=E,730nm,15.7s						
QIZ				LR	LR		
	comp=Z,880nm,15.1s						
QIZ	Qiongzhong	10.57	272	ePn	Pn	04 19 04.7	-2.8
	28nm,0.9s						
WHN	Wuhan	12.94	333	eP	Pn	04 19 40.3	+0.4
WHN				S	Sn	04 22 02.6	0.0
WHN				LR	LR		
	comp=N,700nm,11.6s						
WHN				LR	LR		
	comp=E,2μm,15.6s						
WHN				LR	LR		
	comp=Z,1μm,16.7s						
NJ2	Nanjing	13.10	352	eP	Pn	04 19 40.3	-1.6
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2				LR	LR		
	comp=N,470nm,10.0s						
NJ2				LR	LR		
	comp=E,460nm,11.9s						
NJ2				LR	LR		
	comp=Z,540nm,11.4s						
GYA	Guiyang	15.15	302	eP	Pn	04 20 10.5	+0.6
GYA				pP	P	04 20 18.2	+3.6
GYA				S	Sn	04 22 54.0	-2.6
GYA				sS	S	04 23 07.4	-5.3
GYA				SS	SnSn	04 23 12.6	+3.1
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GYA				pmax	pmax		
	comp=Z,110nm,4.8s						
GYA				LR	LR		
	comp=N,390nm,14.9s						
GYA				LR	LR		
	comp=E,410nm,11.8s						
GYA				LR	LR		
	comp=Z,470nm,14.3s						
JNU	Nakatsue	16.57	30	Pn	Pn	04 20 26.5	-1.5
	0.2nm,0.3s,baz=142,slow=3.9,SNR=6.2						
JNU				LR	LR	04 26 33.9	
	comp=Z,452nm,22.0s,baz=123,slow=36						
JNU	Nakatsue	16.57	30	ePn	Pn	04 20 27.5	-0.5
	54nm,1.3s						
NONG	Nongkai	16.98	270	P	P	04 20 40.4	+5.6
TIA	Tai’an	17.44	349	P	P	04 20 40.9	+1.1
TIA				pmax	pmax		
	comp=Z,200nm,5.0s						
TIA				LR	LR		
	comp=N,260nm,13.0s						
TIA				LR	LR		
	comp=E,350nm,10.7s						
TIA				LR	LR		
	comp=Z,440nm,12.2s						
KMI	Kunming	17.98	293	P	P	04 20 48.5	+2.4
KMI				pP	pP	04 20 56.8	+1.2
KMI				sP	sP	04 21 02.0	+1.6
KMI				S	Sn	04 24 01.7	-3.8
KMI				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KMI				pmax	pmax		
	comp=Z,120nm,5.3s						
KMI				LR	LR		
	comp=N,730nm,12.3s						
KMI				LR	LR		
	comp=E,730nm,14.3s						
KMI				LR	LR		
	comp=Z,660nm,13.7s						
XAN	Xi’an	18.42	327	P	Pn	04 20 52.0	+1.1
XAN				pP	pP	04 21 02.4	+2.2
XAN				pmax	pmax		
	comp=Z,14nm,1.1s						
XAN				pmax	pmax		
	comp=Z,220nm,4.9s						
XAN				LR	LR		
	comp=N,430nm,12.0s						
XAN				LR	LR		
	comp=E,190nm,7.1s						
XAN				LR	LR		
	comp=Z,330nm,10.0s						
SRAK	Srakaew	18.86	257	P	P	04 20 54.0	-1.6
	34nm,1.1s,438nm						
KS15	Wonju Array Si	19.29	17	eP	Pn	04 21 00.8	-0.5
KSAR	Wonju Array Be	19.29	17	P	P	04 20 59.6	-0.5
KSRS	Korea Array	19.31	17	P	P	04 20 59.6	-0.7
	0.4nm,0.3s,baz=200,slow=11,SNR=19						
KSRS				LR	LR	04 29 51.5	
	comp=Z,228nm,18.4s,baz=206,slow=41						
KS01	Wonju Array Si	19.32	17	eP	P	04 21 00.3	-0.2
CD2	Chengdu	19.57	310	P	P	04 21 03.0	-0.3
CD2				pP	sP	04 21 16.5	-1.2
CD2				sP	pP	04 21 24.9	+12
CD2				S	S	04 24 37.4	-5.0
CD2				pmax	pmax		
	comp=Z,50nm,0.7s						
CD2				pmax	pmax		
	comp=Z,410nm,5.7s						
CD2				LR	LR		
	comp=N,2μm,11.4s						
CD2				LR	LR		
	comp=E,2μm,11.2s						
CD2				LR	LR		
	comp=Z,2μm,11.8s						
PHIT	Phitsanulok	19.67	268	P	Pn	04 21 15.4	+9.4
LUWI	Luwuk	20.04	175	P	Pn	04 21 10.2	-0.2
	75nm,1.0s,917nm						
LUWI	Luwuk	20.04	175	eP	Pn	04 21 16.9	+6.5
	87nm,1.0s						
TIY	Taiyuan	20.05	340	eP	Pn	04 21 13.8	+3.3
TIY				S	S	04 24 38.4	-14
TIY				sS	sS	04 25 03.5	-3.8
TIY				pmax	pmax		
	comp=Z,23nm,0.9s						
TIY				LR	LR		
	comp=N,550nm,13.5s						
TIY				LR	LR		
	comp=E,410nm,14.1s						
TIY				LR	LR		
	comp=Z,440nm,17.3s						
CMAI	Chiengmai2	20.73	276	P	Pn	04 21 21.4	+2.7
	2.6nm,1.2s,294nm						
CMMT	Chiang Mai	20.88	273	P	Pn	04 21 20.7	+0.5
	30nm,1.1s,453nm						
CHTO	Chiang Mai	20.88	273	eP	Pn	04 21 19.5	-0.7
	29nm,1.0s						
CHTO	Chiang Mai	20.88	273	P	Pn	04 21 20.7	+0.4
	136nm,1.6s,1μm						
CM01	Chiang Mai Arr	20.90	272	eP	Pn	04 21 20.6	+0.1
CMAR	Chiang Mai Arr	20.91	272	P	P	04 21 16.8	-1.2
	6.5nm,0.9s,baz=82,slow=9.1,SNR=13						
CMAR				LR	LR	04 29 32.5	
	comp=Z,116nm,18.0s,baz=95,slow=37						
CMAR	Chiang Mai Arr	20.91	272	P	P	04 21 16.8	-1.2
UMPA	Umpang Tak	21.30	266	P	P	04 21 33.5	+11
BJT	Baijiatuau	21.31	350	eP	P	04 21 23.3	+1.2
	79nm,1.0s						
BJI	Beijing	21.34	350	P	P	04 21 23.5	+1.3
BJI				pmax	pmax		
	comp=Z,33nm,1.4s						
BJI				pmax	pmax		
	comp=Z,300nm,3.0s						
BJI				LR	LR		
	comp=N,380nm,17.7s						
BJI				LR	LR		
	comp=E,380nm,18.6s						
PHET	Kaeng Krachan	21.44	257	P	P	04 21 28.4	+4.8
	6.2nm,0.9s						
SRDT	SRDT	21.48	261	P	P	04 21 28.9	+4.9
	21nm,1.2s						
INU	Inuyama	21.54	38	eP	P	04 21 26.2	+1.7
	31nm,0.7s						
JHJ	Hachijo jima 2	21.87	46	LR	LR	04 28 10.1	
	comp=Z,144nm,21.0s,baz=246,slow=32						
SIJI	Sorong	22.20	152	P	P	04 21 28.2	-3.6
	3.9nm,0.4s,baz=324,slow=12,SNR=5.0						
LZH	Lanzhou	22.74	322	eP	P	04 21 39.6	+2.0
LZH				pP	pP	04 21 49.4	+2.1
LZH				sP	sP	04 21 53.9	+1.9
LZH				pmax	pmax		
	comp=Z,51nm,1.2s						
LZH				pmax	pmax		
	comp=Z,190nm,4.7s						
LZH				LR	LR		
	comp=N,970nm,12.1s						
LZH				LR	LR		
	comp=E,520nm,12.2s						
LZH				LR	LR		
	comp=Z,940nm,14.8s						
MJAR	Matsushiro Arr	23.07	37	P	P	04 21 40.0	-0.8
	6.6nm,1.0s,baz=233,slow=11,SNR=8.6						
MJAR	Matsushiro Arr	23.07	37	P	P	04 21 40.0	-0.8
HHC	Hu-ho-hao-te	23.19	342	eP	P	04 21 42.7	+0.6
HHC				pP	pP	04 21 52.7	+0.7
HHC				sP	sP	04 22 03.0	+6.3
HHC				S	S	04 25 47.1	-4.2
HHC				sS	sS	04 26 05.7	-3.0
HHC				pmax	pmax		
	comp=Z,40nm,1.1s						
HHC				pmax	pmax		
	comp=Z,200nm,5.7s						
HHC				LR	LR		
	comp=N,390nm,11.5s						
HHC				LR	LR		
	comp=E,170nm,9.4s						
HHC				LR	LR		
	comp=Z,520nm,12.2s						
BTO	Baotou	23.47	339	eP	P	04 21 46.5	+1.7
GUMO	Guam	23.51	100	LR	LR	04 30 50.6	
	comp=Z,143nm,19.4s,baz=271,slow=36						
AAI	Ambon	23.67	162	P	P	04 21 51.1	+4.4
	71nm,1.5s						
CN2	Changchun	24.96	8	eP	P	04 21 58.2	-0.2
CN2				eS	S	04 26 15.9	-3.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=N,200nm,11.0s						
CN2				LR	LR		
	comp=E,200nm,11.0s						
CN2				LR	LR		
	comp=Z,320nm,14.0s						
MDJ	Mudanjiang	26.48	14	eP	P	04 22 13.9	+1.7
	22nm,1.0s						
USRK	Ussuriysk Ar.	26.71	18	LR	LR	04 33 08.9	
	comp=Z,152nm,19.7s,baz=177,slow=37						
GTA	Gaotai	27.34	322	eP	P	04 22 21.8	+1.7
GTA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
LEM	Lembang	28.90	208	LR	LR	04 34 22.0	
	comp=Z,192nm,18.9s,baz=84,slow=37						
HIA	Hailar	30.17	358	eP	P	04 22 44.5	-0.5
	8.4nm,0.4s						
ULN	Ulaanbaatar	30.91	342	eP	P	04 22 53.4	+1.6
	28nm,1.3s						
SONM	Songino Array	31.09	341	P	P	04 22 52.3	-1.0
	15nm,0.9s,baz=161,slow=9.1,SNR=56						
SONM				LR	LR	04 37 29.2	
	comp=Z,250nm,18.2s,baz=134,slow=40						
SONM	Songino Array	31.09	341	P	P	04 22 52.3	-1.0
SONA1	Songino Array	31.10	341	eP	P	04 22 54.0	+0.6
KLR	Kul’dur	31.33	14	LR	LR	04 36 11.4	
	comp=Z,13nm,21.1s,baz=204,slow=38						
YSS	Yuzh-Sakhalins	33.05	28	eP	P	04 23 10.4	+0.2
	18nm,0.9s						
TLY	Talaya	35.32	341	P	P	04 23 31.6	+1.6
	8.3nm,0.7s,baz=25,slow=7.8,SNR=24						
TLY	Talaya	35.32	341	eP	P	04 23 31.7	+1.7
	13nm,0.8s						
WMQ	Urumqi	37.26	319	P	P	04 23 46.8	+0.1
WMQ				sP	sP	04 24 02.2	+0.3
WMQ				pmax	pmax		
	comp=Z,17nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,170nm,4.9s						
WMQ				LR	LR		
	comp=N,450nm,12.7s						
WMQ				LR	LR		
	comp=E,410nm,12.7s						
WMQ				LR	LR		
	comp=Z,130nm,15.5s						
PALK	Pallekele	40.86	259	LR	LR	04 40 43.4	
	comp=Z,99nm,19.9s,baz=109,slow=36						
WRA	Warramunga Arr	40.89	161	P	P	04 24 13.5	-3.7
	2.4nm,0.5s,baz=341,slow=9.0,SNR=9.2						
WRA				PcP	PcP	04 26 17.1	-0.3
	4.2nm,0.8s,baz=343,slow=3.4,SNR=11						
WRA	Warramunga Arr	40.89	161	P	P	04 24 13.5	-3.7
WRA				PcP	PcP	04 26 17.1	-0.3
WB2	Warramunga Arr	40.89	161	eP	P	04 24 22.6	+5.3
MK01	Makanchi Array	42.02	320	eP	P	04 24 25.3	-0.9
MK31	Makanchi Array	42.04	320	eP	P	04 24 25.9	-0.5
MK31				ePcP	PcP	04 26 21.4	+0.5
MKAR	Makanchi Array	42.04	320	P	P	04 24 24.5	-1.9
	6.2nm,0.8s,baz=120,slow=8.2,SNR=32						
MKAR				PcP	PcP	04 26 21.4	+0.5
	5.3nm,0.8s,baz=101,slow=5.1,SNR=7.0						
MKAR	Makanchi Array	42.04	320	ePcP	PcP	04 26 21.4	+0.5
MAKZ	Makanchi	42.23	320	eP	P	04 24 27.3	-0.7
	6.6nm,0.9s						
H11S3	WAKE ISLAND Hy	43.15	83	T	T	05 10 24.4	
	baz=278						
H11S1	WAKE ISLAND Hy	43.16	83	T	T	05 10 25.5	
	baz=278						
H11S2	WAKE ISLAND Hy	43.17	83	T	T	05 10 32.8	
	baz=278						
H11N1	WAKE ISLAND Hy	43.18	81	T	T	05 10 11.8	
	baz=277,slow=75,SNR=6.9						
H11N2	WAKE ISLAND Hy	43.18	81	T	T	05 10 19.1	
	baz=277,slow=75,SNR=6.3						
H11N3	WAKE ISLAND Hy	43.20	81	T	T	05 10 22.7	
	baz=277,slow=75,SNR=5.1						
KSH	Kashi	43.73	308	P	P	04 24 44.7	+4.3
KSH				sP	sP	04 24 58.4	+2.7
KSH				ePcP	PcP	04 26 31.1	+4.2
KSH				S	S	04 31 11.7	+3.4
KSH				SS	SS	04 34 19.5	-5.1
KSH				ScS	ScS	04 34 39.7	+2.7
KSH				pmax	pmax		
	comp=Z,14nm,0.9s						
KSH				pmax	pmax		
	comp=Z,87nm,4.1s						
ASAR	Alice Springs	44.28	163	P	P	04 24 42.1	-2.6
	1.8nm,0.5s,baz=343,slow=6.8,SNR=12						
ASAR				PcP	PP	04 26 28.2	-0.3
	1.0nm,0.7s,baz=336,slow=2.6,SNR=4.6						
ASAR	Alice Springs	44.28	163	P	P	04 24 42.1	-2.6
ASAR				PcP	PP	04 26 28.2	-0.3
ULHL	Ulahol	44.29	311	P	P	04 24 47.6	+2.7
	SNR=8.2						
ZALV	Zalesovo Beam	44.53	330	P	P	04 24 44.6	-1.7
	5.4nm,0.7s,baz=116,slow=7.1,SNR=9.6						
ZALV				PcP	PcP	04 26 28.2	-0.9
	0.7nm,0.3s,baz=116,slow=3.4,SNR=2.1						
ZALV				LR	LR	04 43 03.2	
	comp=Z,55nm,21.7s,baz=66,slow=36						
ZALV	Zalesovo Beam	44.53	330	eP	P	04 24 44.6	-1.7
ZALV				PcP	PcP	04 26 28.2	-0.9
NIL	Nilore	44.82	299	eP	P	04 24 49.8	+0.7
TKM2	Tokmak 2	44.94	312	P	P	04 24 52.2	+2.1
	SNR=5.7						
KZA	Kyzart	44.94	311	P	P	04 24 53.6	+3.2
	SNR=9.3						
UCH	Uchtor	45.51	311	P	P	04 24 57.9	+2.9
	SNR=15						
CHMS	Chumysh	45.56	312	P	P	04 24 57.1	+2.3
	SNR=6.2						
AAK	Ala-Archa	45.64	311	P	P	04 24 54.2	-1.4
	1.7nm,0.4s,baz=194,slow=5.9,SNR=3.6						
AAK	Ala-Archa	45.64	311	P	P	04 24 54.2	-1.4
MA2	Magadan	45.80	21	P	P	04 24 56.0	-0.3
	4.5nm,0.4s,baz=182,slow=10,SNR=4.1						
MA2	Magadan	45.80	21	P	P	04 24 56.0	-0.3
KURK	Kurchatov	46.01	323	eP	P	04 24 54.5	-3.7
KURK				PcP	PcP	04 26 33.6	-0.6
KURBB	Kurchatov Arra	46.02	323	PcP	PcP	04 26 33.6	-0.7
	1.2nm,0.8s,baz=111,slow=3.1,SNR=4.5						
AML	Almayashu	46.07	311	P	P	04 25 02.2	+2.9
	SNR=17						
KBL	Kabul	48.39	300	eP	P	04 25 19.2	+2.0
	15nm,1.0s						
KK31	Karatay Array	48.59	311	eP	P	04 25 20.2	+1.8
KKAR	Karatay Array	48.59	311	eP	P	04 25 20.2	+1.8
KKAR				ePcP	PcP	04 26 44.5	+0.8
SEY	Seymchan	48.86	18	P	P	04 25 18.7	-1.4
	2.4nm,0.6s,baz=23,slow=1.8,SNR=4.9						
SEY				PcP	PcP	04 26 44.0	-0.2
	2.1nm,0.8s,baz=207,slow=3.7,SNR=5.8						
SEY	Seymchan	48.86	18	P	P	04 25 18.7	-1.4
SEY				PcP	PcP	04 26 44.0	-0.2
BVAR	Borovoye Array	51.61	323	P	P	04 25 41.6	+0.5
	3.2nm,0.8s,baz=105,slow=9.7,SNR=13						
BVAR				PcP	PcP	04 26 54.7	+0.1
	8.7nm,0.8s,baz=114,slow=3.6,SNR=13						
BVAR				LR	LR	04 47 36.7	
	comp=Z,50nm,18.4s,baz=110,slow=36						
BVAR	Borovoye Array	51.61	323	P	P	04 25 41.6	+0.5
BVAR				PcP	PcP	04 26 54.7	+0.1
NWAO	Narrogin (SRO)	51.81	184	LR	LR	04 48 25.0	
	comp=Z,46nm,20.9s,baz=138,slow=37						
TIXI	Tiksi	52.81	3	P	P	04 25 49.5	-0.2
	25nm,0.9s,baz=167,slow=4.5,SNR=13						
TIXI	Tiksi	52.81	3	eP	P	04 25 49.8	+0.1
STKA	Stephens Creek	54.34	158	P	P	04 26 01.2	-0.2
	1.1nm,0.5s,baz=337,slow=13,SNR=2.3						
STKA				PcP	PcP	04 27 03.6	-1.4
	2.1nm,0.8s,baz=19,slow=9.7,SNR=3.0						
STKA	Stephens Creek	54.34	158	P	P	04 26 01.2	-0.2
STKA				PcP	PcP	04 27 03.6	-1.4
BILL	Bilibino	56.56	19	eP	P	04 26 17.3	+0.3
BILL				e		04 26 27.2	
ABKAR	Akbulak array	56.99	317	eP	P	04 26 18.8	-1.5
GEYT	Alibeck	57.36	303	LR	LR	04 54 59.2	
	comp=Z,82nm,18.5s,baz=275,slow=40						
WSAR	Wadi Sarin	57.96	286	LR	LR	04 54 43.1	
	comp=Z,36nm,18.0s,baz=84,slow=40						
AKTO	Aktyubinsk	58.40	318	P	P	04 26 30.8	+0.6
	5.6nm,1.0s,baz=62,slow=6.9,SNR=9.3						
AKTO	Aktyubinsk	58.40	318	P	P	04 26 30.8	+0.6
ARU	Arti	59.15	325	eP	P	04 26 35.3	0.0
KBZ	Khabaz	68.62	310	P	P	04 27 37.7	-0.1
	6.2nm,0.9s,baz=144,slow=3.6,SNR=8.6						
KBZ	Khabaz	68.62	310	P	P	04 27 37.7	-0.1
KIV	Kislovodsk	68.74	311	eP	P	04 27 39.9	+1.2
	12nm,0.8s						
KLMR	Klimovskoe	69.43	329	eP	P	04 27 40.3	-2.2
KLMR				AMP		04 27 43.0	
	comp=Z,15nm,1.0s						
KLMR				ePcP	PcP	04 28 04.7	-1.0
RAYN	Ar Rayn	69.76	289	eP	P	04 27 45.5	+0.2
	comp=Z,8.4nm,1.0s						
CAST	Castle Rocks	71.78	28	eP	P	04 27 57.6	+0.8
	comp=Z,15nm,0.9s						
COLD	Coldfoot	72.14	24	eP	P	04 28 00.2	+1.2
	comp=Z,8.7nm,1.2s						
MLY	Manley	72.18	26	eP	P	04 28 00.2	+1.0
	comp=Z,23nm,1.3s						
BPAW	Bear Paw Mtn.	72.19	27	eP	P	04 28 00.0	+0.8
	comp=Z,23nm,1.2s						
TOLK	Toolik Lake Re	72.22	23	eP	P	04 28 00.4	+1.0
	comp=Z,16nm,1.2s						

TRF	Thorofare Moun	72.58	28	eP	P	04 28 04.3	+2.5
	comp=Z,28nm,1.5s						
MCK	McKinley	73.13	28	eP	P	04 28 05.4	+0.5
	comp=Z,27nm,1.2s						
MDM	Murphy Dome	73.25	26	eP	P	04 28 06.2	+0.6
	comp=Z,21nm,1.1s						
WRH	Wood River Hil	73.38	27	eP	P	04 28 06.6	+0.3
	comp=Z,26nm,1.6s						
CCB	Clear Creek Bu	73.48	27	eP	P	04 28 06.9	0.0
	comp=Z,5.5nm,1.0s						
IL1	Eielson Array	73.84	26	eP	P	04 28 07.4	-1.7
ILAR	Eielson Array	73.84	26	P	P	04 28 08.3	-0.7
	comp=Z,1.6nm,0.8s,baz=274,slow=6.2,SNR=10.0						
ILAR	Eielson Array	73.84	26	P	P	04 28 08.3	-0.7
SPITS	Spitsbergen Ar	74.45	348	LR	LR	05 04 09.3	
	comp=Z,42nm,20.4s,baz=40,slow=38						
PAX	Paxson	74.81	28	eP	P	04 28 13.5	-1.3
	comp=Z,8.9nm,1.1s						
FIA1	FINESS Array S	75.80	330	eP	P	04 28 20.8	+0.4
FINES	FINESS Array B	75.80	330	LR	LR	05 04 29.5	
	comp=Z,80nm,19.4s,baz=47,slow=38						
EGAK	Eagle	76.24	26	eP	P	04 28 23.0	+0.2
	comp=Z,7.7nm,0.8s						
AKASG	Malin Array Be	76.61	319	P	P	04 28 24.9	-0.3
	comp=Z,7.4nm,0.8s,baz=62,slow=5.7,SNR=11						
AKASG	Malin Array Be	76.61	319	P	P	04 28 24.9	-0.3
AKBB	Malin Array Si	76.61	319	eP	P	04 28 24.9	-0.3
	comp=Z,6.0nm,0.8s						
KIEV	Kiev	76.62	319	eP	P	04 28 24.9	-0.4
	comp=Z,6.3nm,0.9s						
AK11	Malin Array Si	76.65	319	eP	P	04 28 25.1	-0.3
NACGM	Naroch	77.03	324	e	P	04 28 27.0	-0.5
DAWY	Dawson	77.17	26	eP	P	04 28 28.8	+0.5
	comp=Z,13nm,1.0s						
SORM	Soroca	77.80	317	⇑iP	P	04 28 31.9	0.0
INK	Inuvik	78.03	21	P	P	04 28 32.3	-0.5
	comp=Z,9.8nm,1.1s,baz=283,slow=7.5,SNR=6.1						
INK	Inuvik	78.03	21	eP	P	04 28 32.9	+0.1
	comp=Z,10nm,1.0s						
CFR	Carcaliu	78.72	314	⇑iP	P	04 28 37.1	+0.1
SUW	Suwalki	79.30	323	eP	P	04 28 40.2	+0.2
TESR	Tescani	79.35	316	⇓iP	P	04 28 40.9	+0.4
VRI	Vrincioaia	79.48	315	⇑iP	P	04 28 41.2	-0.1
PLOR	Plostina	79.53	315	⇑iP	P	04 28 42.0	+0.4
BIZ	Bicaz	79.59	316	⇑iP	P	04 28 41.8	0.0
BURAR	Bucovina Array	79.97	317	⇓iP	P	04 28 44.6	+0.6
BUR04	Bucovina Ar. S	79.97	317	eP	P	04 28 44.1	+0.1
BUR08	Bucovina Ar. S	79.97	317	eP	P	04 28 44.6	+0.5
MLR	Muntele Rosu	80.11	315	P	P	04 28 43.8	-1.0
	comp=Z,1.5nm,0.8s,baz=207,slow=8.1,SNR=16						
MLR	Muntele Rosu	80.11	315	⇑iP	P	04 28 44.8	0.0
MLR	Muntele Rosu	80.11	315	eP	P	04 28 44.8	0.0
	comp=Z,37nm,1.9s						
KWP	Kalwaria Pacla	80.94	319	eP	P	04 28 49.9	+0.8
ARR	Arges	81.03	315	⇓iP	P	04 28 49.5	-0.2
CJR	Cluj-Napoca	81.30	316	⇓iP	P	04 28 50.8	-0.3
OPO	Ambohidratompo	81.53	247	P	P	04 28 52.4	-0.5
	comp=Z,6.7nm,0.8s,baz=84,slow=7.9,SNR=5.9						
OPO	Ambohidratompo	81.53	247	P	P	04 28 52.4	-0.5
DRGR		81.85	317	⇑iP	P	04 28 54.5	+0.5
HFS	Hagfors	81.96	331	P	P	04 28 53.5	-0.7
	comp=Z,4.0nm,0.9s,baz=99,slow=6.4,SNR=5.5						
HFS	Hagfors	81.96	331	P	P	04 28 53.5	-0.7
OJC	Ojcow	82.51	321	eP	P	04 28 58.0	+0.7
OJC	Ojcow	82.51	321	eP	P	04 28 58.0	+0.7
	comp=Z,11nm,0.8s						
NOA	NORSAR Array B	82.68	333	LR	LR	05 10 03.7	
	comp=Z,124nm,18.1s,baz=75,slow=39						
VTS	Vitosha	82.89	312	⇑iP	P	04 28 58.7	-0.9
VTS	Vitosha	82.89	312	eP	P	04 29 00.3	+0.7
	comp=Z,11nm,1.1s						
BSD	Bornholm Skovb	83.41	326	iP	P	04 29 01.7	-0.1
	comp=Z,14nm,1.1s						
DLBC	Dease Lake	83.44	30	eP	P	04 29 02.6	+0.6
VYHS	Vyhne	83.72	319	eP	P	04 29 04.3	+0.7
MORC	Moravsky Berou	84.03	321	⇑iP	P	04 29 06.1	+0.9
MORC	Moravsky Berou	84.03	321	eP	P	04 29 05.5	+0.3
	comp=Z,3.7nm,0.8s						
MORC	Moravsky Berou	84.03	321	eP	P	04 29 05.7	+0.5
JAVC	Velka Javorina	84.30	320	eP	P	04 29 08.3	+1.7
KSP	Ksiaz	84.35	322	eP	P	04 29 07.7	+0.9
DPC	Dobruska-Polom	84.53	322	eP	P	04 29 08.6	+0.9
DPC				ex	x	04 29 18.0	
DIVS	Divibare	84.57	315	eP	P	04 29 08.3	+0.1
	comp=Z,5.0nm,0.9s						
UPC	Upice	84.65	322	eP	P	04 29 09.4	+1.1
VRAC	Vranov	84.78	320	⇓iP	P	04 29 10.0	+1.0
VRAC	Vranov	84.78	320	eP	P	04 29 09.7	+0.7
KRUC	Moravsky	84.99	320	eP	P	04 29 10.8	+0.8
PVCC	Panska Ves	85.48	322	eP	P	04 29 13.1	+0.7
PVCC				ex	x	04 29 23.0	
GOPC	GO Pecny, Ondr	85.61	321	eP	P	04 29 14.4	+1.3
BRG	Berggiesshubel	85.70	323	eP	P	04 29 14.1	+0.6
	comp=Z,7.9nm,1.0s						
PRU	Pruhonice	85.72	322	eP	P	04 29 14.4	+0.7
CONA	Conrad Observa	85.77	319	ePcP	P	04 29 14.9	+0.8
	comp=Z,5.5nm,1.1s						
CLL	Collm	86.05	323	iP	P	04 29 14.3	-0.9
	comp=Z,4.0nm,0.8s						
CLL				i pP	pP	04 29 24.3	-2.6
	comp=Z,4.0nm,0.7s						
CLL				L	L	05 14 00.0	
	comp=Z,100nm,19.5s						
CLL	Collm	86.05	323	eP	P	04 29 14.8	-0.4
	comp=Z,3.3nm,0.7s						
BLY	Banja Luka	86.19	316	eP	P	04 29 16.6	+0.6
	comp=Z,6.2nm,0.9s						
ARSA	Arzberg	86.25	319	ePcP	P	04 29 17.0	+0.6
	comp=Z,3.5nm,0.9s						
KHC	Kasperske Hory	86.65	321	eP	P	04 29 19.5	+1.2
KHC				ex	x	04 29 29.5	
GEC2	GERESS Array S	86.70	321	eP	P	04 29 19.6	+1.0
	comp=Z,3.4nm,0.9s						
GERES	GERESS Array B	86.70	321	P	P	04 29 17.2	-1.4
	comp=Z,2.3nm,0.8s,baz=72,slow=4.3,SNR=17						
GERES				LR	LR	05 09 36.7	
	comp=Z,27nm,19.6s,baz=66,slow=37						
GERES	GERESS Array B	86.70	321	P	P	04 29 17.2	-1.4
GEA0	GERESS Array S	86.70	321	eP	P	04 29 18.4	-0.2
MOA	Molln	86.78	320	ePcP	P	04 29 19.7	+0.7
	comp=Z,8.2nm,1.3s						
SUMG	Summit	87.57	354	eP	P	04 29 23.0	+0.3
	comp=Z,7.3nm,1.1s						
SUMG	Summit	87.57	354	iP	P	04 29 22.7	0.0
	comp=Z,6.8nm,1.1s						
YKW3	Yellowknife Ar	87.70	23	eP	P	04 29 23.3	+0.3
YKA	Yellowknife Ar	87.75	23	P	P	04 29 23.3	+0.1
	comp=Z,9.1nm,0.8s,baz=313,slow=4.6,SNR=37						
YKA	Yellowknife Ar	87.75	23	P	P	04 29 23.3	+0.1
ABTA	Abfaltersbach	88.33	319	eP	P	04 29 25.6	-1.0
	comp=Z,3.8nm,1.0s						
MOTA	Moosalm	88.93	320	ePcP	P	04 29 29.9	+0.6
	comp=Z,1.9nm,0.8s						
FETA	Feichten	89.30	320	iPcP	P	04 29 31.4	+0.2
	comp=Z,3.7nm,1.1s						
DAVA	Damuels	89.69	321	ePcP	P	04 29 33.2	+0.3
	comp=Z,3.7nm,0.9s						
DAVOX	Davos/Dischmat	89.93	320	LR	LR	05 11 43.2	
	comp=Z,35nm,18.7s,slow=37						
EKA	Eskdalemuir Ar	92.14	332	LR	LR	05 16 16.5	
	comp=Z,63nm,18.2s,baz=75,slow=39						
NEW	Newport	95.30	35	eP	P	04 29 59.5	+0.8
	comp=Z,4.8nm,1.0s						
MAW	Mawson	96.22	199	LR	LR	05 12 01.4	
	comp=Z,24nm,19.4s,baz=58,slow=35						
WALA	Waterton Lakes	96.50	33	eP	P	04 30 06.0	+1.7
HJGM	San Juan Grade	98.98	46	eP	Pdif	04 30 19.4	+3.9
VNDA	Vanda	99.26	172	LR	LR	05 20 56.2	
	comp=Z,7.3nm,18.0s,baz=271,slow=39						
DLMT	Dillon	99.53	35	eP	Pdif	04 30 18.7	+0.7
	comp=Z,4.4nm,1.3s						
TXAR	Lajitas Array	115.41	43	PKP	PKPdf	04 35 17.2	+0.1
	comp=Z,0.4nm,0.7s,baz=298,slow=1.9,SNR=4.7						
TXAR	Lajitas Array	115.41	43	PKP	PKPdf	04 35 17.2	+0.1
ROSC	El Rosal	151.87	34	PKPbc	PKPbc	04 36 30.4	-0.5
	comp=Z,3.5nm,0.4s,baz=273,slow=2.8,SNR=4.9						
ROSC	El Rosal	151.87	34	PKPbc	PKPbc	04 36 30.4	-0.5

MAN 08 04:21:31.4, 9°.70N × 125°.88E, h11km, mb4.2, ML3.0, MS2.7, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	Surigao	0.39	281	⇓eP	Pb	04 21 39.8	-0.6
SCPH				eS	Sb	04 21 47.0	+0.7
BUTP	Butuan	0.77	199	eP	Pg	04 21 46.2	-0.1
BUTP				eS	Sb	04 21 58.6	+1.2
MSLP	Maasin	1.09	293	eP	Pn	04 21 53.0	+0.4
MSLP				eS	Sn	04 22 07.3	-0.4
BESP	Borongan	1.93	347	eP	Pn	04 22 04.4	+0.2
BESP				eS	Sn	04 22 28.8	+0.3
BUKP	Musuan	1.98	204	eP	Pn	04 22 05.4	+0.4
BUKP				eS	Sb	04 22 33.5	+1.2

IDC 08 04:48:39.8±6.7, 5°.42S × 145°.73E, h110km±59km, mb3.5/3, mb1 3.7/5, mb1mx3.2/44, mbtmp3.8/5, MS2.6/1, Ms1 2.6/1, ms1mx2.2/33, Error ellipse: s-maj=53.7km s-min=21.8km az=101.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	Jayapura	5.79	300	P	Pn	04 50 01.8	-1.6
	0.9nm,0.3s,baz=316,slow=21,SNR=1.2						
JAY				S	Sn	04 51 10.3	+1.7
	baz=167,slow=16,SNR=1.3						
WRA	Warramunga Arr	18.20	217	P	P	04 52 44.1	-0.2
	0.4nm,0.3s,baz=40,slow=10,SNR=20						
GUMO	Guam	18.91	357	LR	LR	04 59 02.6	
	comp=Z,16nm,18.5s,baz=210,slow=33						
ASAR	Alice Springs	21.42	211	P	P	04 53 19.8	+0.6
	0.9nm,0.6s,baz=41,slow=7.7,SNR=30						
FITZ	Fitzroy Crossi	23.32	236	P	P	04 53 38.0	-0.4
	5.2nm,0.7s,baz=54,slow=9.1,SNR=19						
ILAR	Eielson Array	85.45	23	P	P	05 01 05.0	+0.1
	0.9nm,0.8s,baz=259,slow=5.2,SNR=11						
TORD	Torodi Ar. Bea	143.73	285	PKP	PKPdf	05 08 02.0	-1.0
	0.6nm,1.0s,baz=87,slow=3.2						

MEX 08 04:50:45.5±0.7, 16°.08N × 98°.89W, h16km±94km, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.80	67	iP	Pb	04 50 57.9	-3.1
PNIG				eS	Sb	04 51 08.1	-3.5
TLIG	Tlapa	1.51	12	eP	Pn	04 51 08.2	-3.8
TLIG				eS	Sn	04 51 26.4	-5.0
VHO	Vista Hermosa	2.29	64	iP	Pn	04 51 20.7	-2.2
VHO				eS	Sn	04 51 46.6	-4.2

*ISCJB **08** 04:57:48.6±0.6, 23°.88N±0°.02 × 122°.87E±0°.02, h6km±4km, Error ellipse: s-maj=3.1km s-min=2.7km az=150.7*

*TAP **08** 04:57:49.3, 23°.95N × 122°.88E, h13km, ML3.1, D*

*JMA **08** 04:57:50.4±0.2, 23°.99N × 122°.84E, h21km±3km, M2.7*

ISC 08 04:57:49.2±1.1, 23°.93N±0°.03 × 122°.86E±0°.02, h14km±9km, n73, σ0s.82/129, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	Yonagunijimaku	0.53	9	P	Pb	04 57 59.9	-0.4
JYNG				eS	Sg	04 58 06.1	-0.7
YOJ	Yonaguni jima	0.55	15	P	Pb	04 58 00.3	-0.3
	baz=12						
YOJ				S	Sg	04 58 07.0	-0.4
	baz=12						
YOJ	Yonaguni jima	0.55	15	P	Pb	04 58 00.4	-0.3
YOJ				eS	Sb	04 58 07.2	-1.2
HATJ	Hateruma jima	0.88	81	P	Pb	04 58 06.5	+0.4
HATJ				eS	Sg	04 58 18.4	+0.7
IRIF	Iriomote-Funau	0.90	63	P	Pg	04 58 06.9	+0.4
IRIF				eS	Sg	04 58 18.9	+0.6
EOS1	EOS1	0.91	313	P	Pg	04 58 06.9	0.0
	baz=311						
EOS1				S	Sn	04 58 20.2	-0.2
	baz=311						
ENAH	Nanao	1.09	299	eP	Pb	04 58 09.4	-0.4
	baz=308						
ENAH				S	Sg	04 58 25.9	+1.4
	baz=308						
JKRS	Kuro-shima	1.10	73	P	Pn	04 58 10.5	+0.4
NANB	Nanao	1.13	296	iP	Pb	04 58 10.1	-0.4
	baz=304						
ENA	Nanau	1.14	296	iP	Pb	04 58 10.2	-0.4
	baz=304						
TWC	Suao	1.15	307	P	Pn	04 58 10.3	-0.5
	baz=305						
TWD	Chiawan	1.17	278	eP	Pn	04 58 11.0	-0.1
	baz=276						
TWD				eS	Sg	04 58 27.1	+0.2
	baz=276						
NACB	Ninganchiao	1.18	282	iP	Pn	04 58 11.3	0.0
	baz=261						
NACB				eS	Sg	04 58 27.7	+0.3
	baz=261						
EGS		1.25	317	eP	Pg	04 58 13.5	+0.2
	baz=329						
EGS				eS	Sg	04 58 29.2	-0.2
	baz=329						
JIJ	Ishigaki jima	1.25	69	P	Pb	04 58 12.8	+0.2
JIJ				eS	Sn	04 58 29.2	+0.3
ILA	Ilan	1.31	310	eP	Pg	04 58 14.1	-0.4
	baz=308						
ILA				eS	Sg	04 58 32.4	+0.8
	baz=308						
NTC	Toucheng	1.32	315	eP	Pb	04 58 13.9	+0.3
	baz=313						
NTC				S	Sg	04 58 31.5	-0.2
	baz=313						
TWB1	Santiao Chiao	1.34	324	eP	Pg	04 58 14.5	-0.5
	baz=335						
TWB1				S	Sb	04 58 30.9	-0.1
	baz=335						
TWE	Neicheng	1.34	306	P	Pb	04 58 14.4	+0.2
	baz=305						
TWE				eS	Sg	04 58 32.4	-0.3
	baz=305						
ENTT	Nioudou	1.38	301	iP	Pb	04 58 14.8	0.0
	baz=300						
ENTT				S	Sg	04 58 33.7	0.0
	baz=300						
HGSD	Ruisui	1.38	252	eP	Pn	04 58 13.6	-0.4
	baz=250						
HGSD				eS	Sn	04 58 31.3	-0.8
	baz=250						
TIPB	Shuangxi	1.40	318	P	Pb	04 58 15.0	-0.2
	baz=317						
TIPB				iS	Sg	04 58 33.3	-1.2
	baz=317						
NNSB	Datong	1.44	291	P	Pb	04 58 15.5	-0.3
	baz=272						
NNSB				eS	Sg	04 58 35.3	-0.3
	baz=272						
NNSH	Datong	1.44	291	P	Pn	04 58 15.4	+0.5
	baz=273						
NNSH				eS	Sg	04 58 35.4	-0.2
	baz=273						
NNS	Nan Shan	1.45	291	P	Pb	04 58 16.2	+0.2
	baz=273						
NNS				eS	Sb	04 58 35.2	+0.8
	baz=273						
EHY	Hungye	1.47	254	P	Pn	04 58 15.2	-0.1
	baz=252						
EHY				eS	Sn	04 58 34.1	-0.1
	baz=252						
WHF	Hehuan Shan	1.47	279	P	Pn	04 58 16.0	+0.3
	baz=277						
WHF				eS	Sb	04 58 35.8	+0.5
	baz=277						
JISG	Ishigakijimahi	1.48	63	P	Pn	04 58 15.7	+0.3
JISG				S	Sn	04 58 33.7	-0.8
NWF	Wu-fen Shan	1.50	320	P	Pb	04 58 16.6	-0.3
	baz=318						
NWF				S	Sg	04 58 36.7	-1.1
	baz=318						
WFSB	Wu-fen Shan	1.50	320	eP	Pb	04 58 16.6	-0.3
	baz=318						
WFSB				eS	Sb	04 58 35.1	-0.8
	baz=318						
YULB	Yu-li	1.53	250	P	Pn	04 58 16.1	0.0
	baz=233						
YULB				S	Sn	04 58 35.6	-0.1
	baz=233						
TWF1	Yuli	1.54	249	eP	Pn	04 58 16.2	0.0
	baz=231						
TWF1				S	Sn	04 58 35.9	-0.2
	baz=231						
YHNB	Yeheng	1.54	299	iP	Pb	04 58 17.6	+0.1
	baz=297						
YHNB				eS	Sg	04 58 38.1	-0.9
	baz=297						
CHGB	Renai	1.55	275	P	Pn	04 58 17.0	+0.5
	baz=274						
CHGB				eS	Sb	04 58 37.3	+0.1
	baz=274						
NSK	Sanguang	1.56	299	P	Pb	04 58 18.0	+0.1
	baz=298						
NSK				S	Sb	04 58 37.8	+0.3
	baz=298						
TWA	Mucha	1.57	312	P	Pb	04 58 18.1	+0.2
	baz=328						
TWA				eS	Sb	04 58 38.1	+0.5
	baz=328						
TDCB	Techi	1.59	282	eP	Pb	04 58 18.4	0.0
	baz=280						
CHKT	Chengkung	1.60	239	eP	Pn	04 58 15.9	-1.1
	baz=237						
CHKT				eS	Sn	04 58 35.1	-2.3
	baz=237						
FULB	Fuli	1.61	244	iP	Pn	04 58 16.6	-0.5
	baz=225						
FULB				eS	Sn	04 58 36.1	-1.6
	baz=225						
TATO	Taipei	1.63	310	P	Pb	04 58 19.5	+0.5
	baz=328						
TATO				eS	Sb	04 58 39.5	+0.1
	baz=328						
YM07	YM07	1.68	318	P	Pb	04 58 19.5	-0.4
	baz=317						
YM07				S	Sb	04 58 40.8	-0.1
	baz=317						
YM11	YM11	1.70	317	eS	Sb	04 58 41.6	0.0
	baz=316						
YM04	YM04	1.72	316	eP	Pb	04 58 20.0	-0.5
	baz=329						
YM04				eS	Sb	04 58 41.2	-0.8
	baz=329						
YM03	YM03	1.73	316	eP	Pb	04 58 20.5	-0.4
	baz=315						
SSLB	Suanglung	1.75	266	P	Pn	04 58 19.5	+0.4
	baz=264						
SSLB				eS	Sn	04 58 42.1	+0.9
	baz=264						
TWH	Lutao	1.75	227	P	Pn	04 58 19.0	-0.2
	baz=223						
TWH				iS	Sn	04 58 39.6	-1.6
	baz=223						
TWY	Chenhua	1.77	320	eP	Pb	04 58 20.6	-0.7
	baz=319						
TWY				eS	Sb	04 58 43.2	-0.1
	baz=319						
DPDB	Guoxing	1.77	274	eP	Pn	04 58 20.5	+1.0
	baz=261						
DPDB				eS	Sb	04 58 43.7	+0.1
	baz=261						
SMLT	Sun Moon Lake	1.79	269	eP	Pn	04 58 21.0	+1.2
	baz=267						
SMLT				eS	Sn	04 58 43.4	+1.0
	baz=267						
YUS	Yu-Shan	1.80	256	P	Pn	04 58 20.9	+0.7
	baz=254						
YUS				eS	Sn	04 58 43.3	+0.1
	baz=254						
JTJ	Tarama	1.83	67	P	Pb	04 58 22.0	-0.4
TYC	Yuchr	1.83	270	P	Pb	04 58 21.7	-0.7
	baz=267						
PCYT	Pengchaiyu	1.84	337	eP	Pn	04 58 20.5	+0.1
	baz=336						
ELDTW	Lidau	1.84	247	eS	Sn	04 58 42.5	-1.1
	baz=229						
ALS	Alishan	1.93	258	P	Pn	04 58 23.1	+1.2
	baz=256						
ALS				S	Sn	04 58 47.1	+1.2
	baz=256						
WJS	Zhushan	1.95	267	eP	Pb	04 58 24.4	-0.2
	baz=266						
WJS				eS	Sb	04 58 50.1	+1.3
	baz=266						
TWGBT	Beinan	1.97	236	eP	Pn	04 58 20.2	-2.0
	baz=234						
TWGBT				eS	Sn	04 58 45.8	-0.9
	baz=234						
TWG	Pinlang	1.98	237	eP	Pn	04 58 22.6	+0.4
	baz=234						
TWG				eS	Sn	04 58 45.5	-1.3
	baz=234						
WNT	Mingjian	1.99	269	eP	Pb	04 58 25.5	+0.3
	baz=267						
WNT				eS	Sb	04 58 50.5	+0.7
	baz=267						
CHN5	Tsauling	2.02	261	P	Pn	04 58 24.5	+1.6
	baz=259						
CHN5				eS	Sb	04 58 50.4	-0.5
	baz=259						
STYT	Tauyuan	2.07	249	P	Pn	04 58 25.1	+1.5
	baz=247						
STYT				S	Sn	04 58 50.0	+0.7
	baz=247						
TPUB	Ta-pu	2.14	254	P	Pn	04 58 25.6	+1.2
	baz=252						
TPUB				S	Sn	04 58 52.9	+2.1
	baz=252						
WDLH	Douliu	2.14	264	eP	Pb	04 58 27.5	-0.2
	baz=262						
WDLH				eS	Sb	04 58 53.8	-0.3
	baz=262						
WTP	Ta-pu	2.17	252	P	Pn	04 58 26.6	+1.7
	baz=250						
WTP				S	Sb	04 58 54.1	-0.9
	baz=250						
SGST	Jiashian	2.25	249	eS	Sb	04 58 56.5	-0.9
	baz=234						
CHN1	Nanshi	2.26	251	iP	Pn	04 58 28.4	+2.3
	baz=249						
CHN1				eS	Sb	04 58 57.1	-0.6
	baz=249						
TWK	Hsinying	2.27	254	P	Pn	04 58 28.4	+2.0
	baz=251						
TWK				S	Sb	04 58 57.1	-0.9
	baz=251						
RLNB	Erlin	2.29	270	eS	Sb	04 58 58.4	0.0
	baz=268						
EAST	Anshuo	2.40	231	eP	Pn	04 58 27.7	-0.4
	baz=239						
EAST				eS	Sn	04 58 56.5	-0.9
	baz=239						
MASBT	Mashibuluo	2.43	238	eP	Pn	04 58 29.3	+0.9
	baz=225						
TWKBT	Hengchun	2.73	224	eS	Sn	04 59 06.0	+0.6
	baz=221						
WDGT	Dungji	3.01	258	eP	Pn	04 58 38.3	+1.9
	baz=255						
PHUB	P’eng-hu	3.04	263	eS	Sn	04 59 14.6	+1.6
	baz=247						

IDC 08 05:08:29.3±3.0, 32°.93S × 178°.25W, h0km, mb3.6/2, mb1 3.8/3, mb1mx3.5/43, mbtmp3.6/3, ML3.5/1, Error ellipse: s-maj=70.9km s-min=36.0km az=119.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	6.52	214	Pn	Pn	05 10 06.9	+0.5
	0.9nm,0.3s,baz=192,slow=20,SNR=5.7						
URZ				Sn	Sn	05 11 19.9	-1.6
	2.1nm,0.3s,baz=242,slow=18,SNR=6.7						
ASAR	Alice Springs	42.82	270	P	P	05 16 29.5	+0.3
	0.5nm,0.8s,baz=108,slow=7.3,SNR=6.4						
WRA	Warramunga Arr	44.04	275	P	P	05 16 38.6	-0.4
	0.6nm,0.5s,baz=115,slow=7.5,SNR=14						
FINES	FINESS Array B	147.43	338	PKPbc	PKPbc	05 28 13.5	-0.8
	0.8nm,0.8s,baz=28,slow=6.3,SNR=8.3						

*SOME **08** 05:38:52.6, 44°.67N × 82°.30E, h20km*

*NNC **08** 05:38:54.7±2.0, 44°.67N × 82°.28E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=28.6km s-min=4.8km az=115.0*

ISC 08 05:38:52.9±1.5, 44°.68N±0°.05 × 82°.25E±0°.08, h10km, n12, σ1s.07/24, 2C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DJR	Jarkent	1.79	260	eP	Pb	05 39 25.9	0.0
	5.1nm,0.3s						
DJR				eS	Sg	05 39 49.8	-0.7
	20nm,0.5s						

KTMS	Ketmen	1.84	229	eP	Pg	05 39 27.0	-1.2
	3.9nm,0.3s						
KTMS				eS	Sg	05 39 51.7	-0.4
	51nm,0.5s						
MK31	Makanchi Array	2.12	1	Pn	Pb	05 39 31.9	+0.5
	6.5nm,0.3s,baz=184,slow=16,SNR=316						
MK31				⇓Sn	Sg	05 39 59.9	-1.0
	10nm,0.3s,baz=189,slow=28,SNR=23						
KAPS	Kapalarasan	2.14	287	eP	Pb	05 39 31.8	0.0
	3.1nm,0.7s						
KAPS				eS	Sg	05 40 00.0	-1.6
	22nm,0.5s						
MAKZ	Makanchi	2.14	355	⇓Pn	Pb	05 39 31.7	0.0
	8.5nm,0.5s						
MAKZ				⇑Sn	Sg	05 40 00.0	-1.6
	25nm,0.4s						
PDGK	Podgornoye	2.40	237	⇓Pn	Pb	05 39 35.2	-1.1
	5.3nm,0.9s						
PDGK				⇑Sn	Sb	05 40 07.4	+1.3
	44nm,0.8s						
SHLS	Shalkode	2.52	234	eP	Pn	05 39 35.1	+1.0
	4.7nm,0.1s						
SHLS				eS	Sn	05 40 05.6	+0.7
	80nm,0.3s						
UZB	Uzynbulak	2.79	238	eP	Pb	05 39 42.2	-0.7
	3.0nm,0.3s						
UZB				eS	Sb	05 40 18.0	+0.9
	12nm,0.5s						
KPKS	Kokpek	2.84	246	eP	Pb	05 39 43.5	-0.2
	6.4nm,0.2s						
KPKS				eS	Sb	05 40 19.9	+1.4
	45nm,0.4s						
ARXS	Arharly	3.20	263	eP	Pb	05 39 49.5	-0.3
	1.8nm,0.2s						
ARXS				eS	Sb	05 40 30.5	+1.6
	22nm,0.5s						
KTBS	Karatobe	4.12	258	eP	Pb	05 40 04.9	-0.6
	0.2nm,0.5s						
KTBS				eS	Sb	05 40 56.8	+1.5
	6.9nm,1.0s						
KUU	Kurty	4.31	262	eP	Pb	05 40 07.7	-1.1
	1.9nm,0.9s						
KUU				eS	Sb	05 41 02.1	+1.2
	10nm,0.7s						

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*JMA **08** 05:46:37.7±0.5, 45°.61N×151°.53E, h30^{km}, M4.0*
*SKHL **08** 05:46:39.3±0.3, 45°.12N×151°.64E, h40^{km}±6^{km}, mb4.3/3*
ISC 08 05:46:37.6±3.8**, 44°.9N**±0°.1×**151°.8E**±0°.2**, h41**^{km}**, n21,**
σ**2^{s}.18**/30**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	Kuril'sk	2.82	279	eP	Pn	05 47 20.0	-0.1
KUR				AMB	AMB	05 47 21.0	
	7.0nm,0.3s						
KUR				AMB	AMB	05 47 21.0	
	13nm,0.3s						
KUR				AMB	AMB	05 47 21.0	
	41nm,0.3s						
KUR				eS	Sn	05 47 50.7	-2.1
KUR				A	A	05 47 57.3	
	160nm,0.3s						
KUR				A	A	05 47 57.3	
	69nm,0.3s						
SHO	Shikotan	3.70	256	eP	Pn	05 47 34.0	+1.8
SHO				AMB	AMB	05 47 38.0	
	14nm,0.3s						
SHO				eS	Sn	05 48 15.1	+0.6
SHO				A	A	05 48 19.0	
	56nm,0.3s						
SHO				A	A	05 48 19.0	
	89nm,0.3s						
YUK	Yuzh-Kuril'sk	4.33	261	eP	Pn	05 47 43.0	+2.1
YUK				AMB	AMB	05 47 45.0	
	50nm,0.4s						
YUK				eS	Sn	05 48 30.5	+0.4
YUK				A	A	05 48 34.0	
	110nm,0.4s						
YUK				A	A	05 48 34.0	
	123nm,0.4s						
NEM2	Nemuro 2	4.61	253	P	Pn	05 47 45.8	+1.1
NEM2				eS	Sn	05 48 36.0	-1.0
GLVR	Golovnino	4.65	258	eS	Sn	05 48 38.0	+0.1
JRA	Rausu	4.88	262	P	Pn	05 47 50.9	+2.6
JNK	Nakash	5.25	259	P	Pn	05 47 55.6	+2.1
JNK				eS	Sn	05 48 53.0	+0.3
JAK	Akkeshi	5.46	253	P	Pn	05 47 57.6	+1.2
JAK				eS	Sn	05 48 56.6	-1.2
JTKR	Abashiri--Toko	5.72	264	P	Pn	05 48 02.3	+2.3
JAR	Ashorobuto	5.99	258	P	Pn	05 48 06.3	+2.6
JAR				eS	Sn	05 49 12.0	+1.0
JOB	Onbets	6.08	254	P	Pn	05 48 06.8	+1.9
JMP	Maruseppu	6.11	265	P	Pn	05 48 08.0	+2.7
JCH	Churui	6.51	253	P	Pn	05 48 12.2	+1.4
JCH				eS	Sn	05 49 22.4	-1.4
JKK2	Kamakawa 2	6.56	265	P	Pn	05 48 14.5	+2.9
MYR	Moyori	6.70	251	eS	Sn	05 49 27.5	-0.8
JNBK	Urakawa-nobuka	7.06	252	P	Pn	05 48 19.6	+1.3
JNBK				eS	Sn	05 49 35.7	-1.5
JKB	Kayabe	8.39	253	eS	Sn	05 50 05.9	-4.0
TYV	Tymovskoe	8.60	318	eP	Pn	05 48 39.1	-0.3
JANG	Nango	8.81	243	eS	Sn	05 50 15.6	-4.6
JTM	Tenmabayashi	8.87	246	eS	Sn	05 50 18.6	-3.2
OFUJ	Ofunato	9.49	236	eS	Sn	05 50 33.6	-3.5

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*IDC **08** 05:53:49.9±0.6, 9°.78N×125°.77E, h0^{km}, mb3.9/15,*
mb1 4.0/16, mb1mx3.8/60, mbtmp3.9/16, ML3.9/1, MS2.9/2,
Ms1 2.9/2, ms1mx2.3/57, Error ellipse: s-maj=42.0km
s-min=12.4km az=80.0
*ISCJB **08** 05:53:50.8±1.2, 9°.84N±0°.03×126°.16E±0°.04, h8^{km}±7^{km},*
mb4.2/22, MS2.6/1, Error ellipse: s-maj=6.2km
s-min=5.1km az=174.4
*MAN **08** 05:53:55.2, 9°.78N×125°.88E, h5^{km}, mb4.7, ML3.6, MS3.5*
*NEIC **08** 05:53:56.0±1.7, 9°.86N×126°.11E, h40^{km}±17^{km}, mb4.5/5,*
Error ellipse: s-maj=24.1km s-min=8.2km az=78.0
NEIC Felt [II PIVS] at Dapa, General Luna and San Benito and [I PIVS] at Del Carmen.
ISC 08 05:53:52.8±1.3**, 9°.88N**±0°.03×**126°.05E**±0°.05**, h9**^{km}±8^{km}**,**
n50,σ**1^{s}.92**/54**, mb4.1**/22**, 3C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	Surigao	0.56	260	⇑eP	Pb	05 54 04.1	-0.6
SCPH				eS	Sg	05 54 11.5	+0.5
BUTP	Butuan	1.00	205	eP	Pg	05 54 10.9	-1.1
BUTP				eS	Sg	05 54 23.5	-1.5
MSLP	Maasin	1.20	282	eP	Pg	05 54 15.0	-0.9
MSLP				eS	Sg	05 54 31.3	-0.1
PLP	Palo	1.65	321	⇓eP	Pn	05 54 21.1	-0.8
PLP				i S	Sb	05 54 44.6	+0.2
BIPH	Bislig	1.71	170	⇑eP	Pg	05 54 28.8	+3.2
BIPH				eS	Sg	05 54 49.8	+1.8
BESP	Borongan	1.81	341	eP	Pg	05 54 26.7	-0.9
BESP				eS	Sg	05 54 53.5	+2.3
OCLP	Ormoc	1.83	310	eP	Pg	05 54 30.2	+2.2
CGP	Cagayan de Oro	1.95	223	⇑eP	Pb	05 54 27.0	-1.4
CGP				i S	Sn	05 54 49.3	-1.3
LLP	Lapu-Lapu	2.10	282	eP	Pn	05 54 28.7	+0.7
LLP				eS	Sn	05 54 55.9	+1.6
TBP	Tagbilaran	2.16	265	eP	Pb	05 54 30.9	-1.2
BUKP	Musuan	2.21	206	eP	Pn	05 54 30.4	+0.7
BUKP				eS	Sn	05 54 57.8	+0.6
DAV	Davao City (W)	2.83	189	Pn	Pn	05 54 35.2	-2.9
	20nm,0.3s,baz=79,slow=1.9,SNR=2.3						
DAV				Lg	Lg	05 55 23.4	
	27nm,0.3s,baz=58,slow=19,SNR=3.4						
DAV				LR	LR	05 56 05.1	
	comp=Z,386nm,18.9s,baz=346,slow=50						
DAV	Davao City (W)	2.83	189	ePn	Pn	05 54 38.0	-0.1
DAV				Lg	Lg	05 55 23.4	
MATI	Mati	2.92	176	eP	Sb	05 55 19.4	-1.5
CNP	Catarman	2.95	333	eP	Pb	05 54 44.0	-1.4
CNP				eS	Sb	05 55 19.7	-1.9
RCP	Roxas	3.65	298	⇓eP	Pn	05 54 51.4	+1.9
PVCP	Virac	4.13	334	eP	Pb	05 55 01.1	-4.7
YHNB	Yeheng	15.37	344	ePn	Pn	05 57 30.9	+1.0
	130nm,2.0s						
KSAR	Wonju Array Be	27.49	3	P	P	05 59 39.8	+0.4
KSRS	Korea Array	27.51	3	P	P	05 59 39.8	+0.3
	0.8nm,0.6s,baz=185,slow=9.7,SNR=6.2						
CM31	Chiang Mai Arr	27.60	291	eP	P	05 59 45.8	+5.1
FITZ	Fitzroy Crossi	27.80	181	P	P	05 59 40.4	-1.9
	0.6nm,0.5s,baz=345,slow=16,SNR=2.0						
FITZ	Fitzroy Crossi	27.80	181	eP	P	05 59 41.9	-0.5
	12nm,1.5s						
PSI	Prapat	27.84	257	eP	P	05 59 46.2	+3.2
	11nm,1.0s						
MAJO	Matsushiro	28.74	21	eP	P	05 59 56.0	+5.3
	15nm,1.4s						
MJAR	Matsushiro Arr	28.74	21	LR	LR	06 09 36.3	
	comp=Z,14nm,20.7s,baz=210,slow=33						
LHMI	Lhok Sumawe	29.20	263	eP	P	05 59 56.9	+1.9
	255nm,1.1s						
CD2	Chengdu	29.45	318	eP	P	06 00 02.0	+4.9
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.0s						
WRAB	Tennant Creek	30.73	165	eP	P	06 00 08.5	+0.2
	comp=Z,15nm,1.3s						
WRA	Warramunga Arr	30.74	165	P	P	06 00 06.6	-1.9
	comp=Z,0.2nm,0.3s,baz=327,slow=10,SNR=9.8						
PATS	Pohnpei	32.06	93	eP	P	06 00 21.8	+1.7
	comp=Z,94nm,1.2s						
ASAR	Alice Springs	34.21	167	P	P	06 00 36.5	-2.4
	comp=Z,0.6nm,0.5s,baz=352,slow=6.9,SNR=10						
AS01	Alice Springs	34.22	167	eP	P	06 00 38.9	-0.1
USRK	Ussuriysk Ar.	34.58	8	P	P	06 00 41.3	-0.5
	comp=Z,3.5nm,0.7s,baz=201,slow=7.7						
KLR	Kul'dur	39.51	6	P	P	06 01 24.1	+0.3
	comp=Z,0.2nm,0.6s,baz=183,slow=9.0,SNR=11						
H11N1	WAKE ISLAND Hy	40.59	71	T	T	06 44 46.5	
	baz=263,slow=74,SNR=12						
H11N2	WAKE ISLAND Hy	40.59	71	T	T	06 44 47.4	
	baz=263,slow=74,SNR=6.9						
H11N3	WAKE ISLAND Hy	40.60	71	T	T	06 44 47.9	
	baz=263,slow=74,SNR=13						
STKA	Stephens Creek	44.10	161	P	P	06 01 60.0	-1.5
	comp=Z,1.4nm,0.5s,baz=340,slow=8.8,SNR=3.7						
MKAR	Makanchi Array	52.20	323	P	P	06 03 02.9	-1.1
	comp=Z,0.4nm,0.6s,baz=119,slow=7.5,SNR=4.5						
ZALV	Zalesovo Beam	54.86	332	P	P	06 03 21.1	-2.3
	comp=Z,0.6nm,0.3s,baz=128,slow=7.3,SNR=2.7						
KURK	Kurchatov	56.26	326	P	P	06 03 31.8	-1.7
KURBB	Kurchatov Arra	56.27	326	P	P	06 03 31.7	-1.8
	comp=Z,0.9nm,0.5s,baz=124,slow=6.9,SNR=11						
KKH	Kailua Kona	75.46	72	eP	P	06 05 41.1	+3.3
ILAR	Eielson Array	79.89	26	P	P	06 06 01.0	-0.6
	comp=Z,0.3nm,0.9s,baz=238,slow=6.4,SNR=4.1						
ATD	Arta Tunnel	81.48	280	eP	P	06 06 13.2	+1.9
	comp=Z,26nm,1.1s						
ARCES	ARCESS Array B	84.48	340	P	P	06 06 24.1	-1.5
	comp=Z,0.5nm,0.4s,baz=84,slow=6.3,SNR=12						
FINES	FINESS Array B	86.13	332	P	P	06 06 32.2	-1.8
	comp=Z,1.8nm,0.6s,baz=68,slow=4.8,SNR=21						
VNDA	Vanda	89.57	173	P	P	06 06 49.0	-1.1
	comp=Z,0.7nm,0.6s,baz=318,slow=5.7,SNR=9.0						
HFS	Hagfors	92.29	332	P	P	06 07 00.2	-3.0
	comp=Z,1.1nm,0.8s,baz=131,slow=4.0,SNR=3.3						

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*JMA **08** 06:05:09.7±0.1, 23°.97N×121°.72E, h35^{km}±1^{km}, M2.4*
*ISCJB **08** 06:05:10.5±0.2, 23°.99N±0°.01×121°.72E±0°.02, h38^{km}±5^{km},*
Error ellipse: s-maj=2.8km s-min=1.9km az=138.6
*TAP **08** 06:05:10.1, 23°.99N×121°.65E, h43^{km}, ML3.1, C*
ISC 08 06:05:10.7±1.0**, 23°.99N**±0°.02×**121°.68E**±0°.02**, h34**^{km}±2^{km}**,**
n81,σ**0^{s}.76**/142**, 3C-2D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HWA	Hwalien	0.07	257	eP	Pb	06 05 17.2	+0.7
	baz=252						
HWA				S	Sb	06 05 23.5	+3.0
	baz=252						
TWD	Chiawan	0.12	317	⇑iP	Pb	06 05 16.7	0.0
	baz=323						
TWD				S	Sb	06 05 21.9	+1.0
	baz=323						
NACB	Ninganchiao	0.20	336	⇑iP	Pb	06 05 17.2	-0.2
	baz=334						
NACB				S	Sb	06 05 22.6	+0.5
	baz=334						
ESL	Shilin	0.29	232	eP	Pb	06 05 17.9	-0.6
	baz=236						
ESL				eS	Sn	06 05 23.5	+0.7
	baz=236						
WHF	Hehuan Shan	0.41	292	⇑iP	Pb	06 05 19.8	-0.7
	baz=290						
WHF				eS	Sb	06 05 26.6	-0.5
	baz=290						
ENA	Nanau	0.44	7	eP	Pb	06 05 19.9	-0.5
	baz=3.0						
ENA				eS	Sn	06 05 27.4	+0.2
	baz=3.0						
NANB	Nanao	0.44	8	P	Pb	06 05 19.9	-0.6
	baz=3.0						
NANB				eS	Sn	06 05 27.3	0.0
	baz=3.0						
ENAH	Nanao	0.47	14	eP	Pb	06 05 20.8	-0.1
	baz=23						
ENAH				eS	Sn	06 05 28.8	+0.7
	baz=23						
CHGB	Renai	0.47	278	eP	Pb	06 05 20.7	-0.4
	baz=276						
CHGB				eS	Sb	06 05 28.1	-0.2
	baz=276						
NNSB	Datong	0.51	328	eP	Pb	06 05 21.1	-0.6
	baz=331						
NNSB				eS	Sb	06 05 28.7	-0.5
	baz=331						
NNSH	Datong	0.51	328	⇓iP	Pb	06 05 21.0	-0.7
	baz=333						
NNSH				S	Sb	06 05 28.6	-0.6
	baz=333						
NNS	Nan Shan	0.53	327	P	Pb	06 05 21.3	-0.7
	baz=337						
NNS				eS	Sb	06 05 29.0	-0.6
	baz=337						
TWT	Tachien	0.53	299	P	Pb	06 05 21.9	-0.1
	baz=300						
TWT				S	Sb	06 05 29.5	-0.3
	baz=300						
TDCB	Techi	0.55	298	P	Pb	06 05 21.8	-0.4
	baz=301						
TDCB				S	Sb	06 05 29.4	-0.7
	baz=301						
HGSD	Ruisui	0.55	206	eP	Pb	06 05 22.1	-0.1
	baz=215						
HGSD				eS	Sn	06 05 31.5	+1.4
	baz=215						
EHY	Hungye	0.59	214	eP	Pn	06 05 21.5	-1.0
	baz=211						
EHY				eS	Sb	06 05 29.4	-1.7
	baz=211						
TWC	Suao	0.63	14	eP	Pn	06 05 23.2	0.0
	baz=8.0						
TWC				eS	Sn	06 05 32.4	+0.4
	baz=8.0						
ENTT	Nioudou	0.65	351	eP	Pn	06 05 23.0	-0.5
	baz=353						
ENTT				eS	Sb	06 05 31.8	-1.1
	baz=353						
EOS1	EOS1	0.69	36	eP	Pb	06 05 24.5	+0.1
	baz=50						
EOS1				eS	Sb	06 05 35.6	+2.0
	baz=50						
DPDB	Guoxing	0.69	273	eP	Pn	06 05 22.9	-1.2
	baz=272						
DPDB				eS	Sn	06 05 33.9	+0.2
	baz=272						
YULB	Yu-li	0.69	211	eP	Pn	06 05 22.4	-1.7
	baz=209						
SSLB	Suanglung	0.70	253	eP	Pn	06 05 23.5	-0.6
	baz=255						
SSLB				eS	Sn	06 05 33.5	-0.3
	baz=255						
TWE	Neicheng	0.72	359	eP	Pn	06 05 23.9	-0.6
	baz=353						
TWE				eS	Sn	06 05 34.2	-0.2
	baz=353						
SMLT	Sun Moon Lake	0.73	261	eP	Pn	06 05 24.2	-0.4
	baz=259						
SMLT				eS	Sn	06 05 34.5	0.0
	baz=259						
TWF1	Yuli	0.73	209	eP	Pn	06 05 23.0	-1.6
	baz=216						
YHNB	Yeheng	0.73	337	⇓iP	Pn	06 05 24.2	-0.5
	baz=338						
YHNB				S	Sn	06 05 33.9	-0.7
	baz=338						
NSK	Sanguang	0.74	336	P	Pn	06 05 24.3	-0.5
	baz=338						
NSK				eS	Sn	06 05 34.0	-1.0
	baz=338						
TYC	Yuchr	0.76	263	eP	Pn	06 05 24.7	-0.3
	baz=263						
TYC				eS	Sn	06 05 35.1	-0.1
	baz=263						
YUS	Yu-Shan	0.84	233	eP	Pn	06 05 26.7	+0.2
	baz=226						
YUS				eS	Sn	06 05 37.0	-0.8
	baz=226						
NTC	Toucheng	0.87	9	eP	Pb	06 05 27.3	-0.1
	baz=359						
NTC				eS	Sb	06 05 39.2	+0.5
	baz=359						
FULB	Fuli	0.87	204	eP	Pn	06 05 26.9	+0.4
	baz=211						
EGS		0.88	15	P	Pb	06 05 27.6	+0.1
	baz=16						
EGS				eS	Sb	06 05 40.1	+1.0
	baz=16						
NSTT	Nanjuang	0.89	316	eP	Pb	06 05 27.5	-0.3
	baz=321						
NSTT				eS	Sn	06 05 38.9	+0.4
	baz=321						
WJS	Zhushan	0.89	259	eP	Pn	06 05 27.5	+0.7
	baz=259						
WJS				eS	Sb	06 05 39.8	+0.4
	baz=259						
WNT	Mingjian	0.92	263	eP	Pb	06 05 28.0	-0.2
	baz=263						
WNT				eS	Sb	06 05 40.7	+0.4
	baz=263						
TCU	Taichung	0.93	280	eP	Pb	06 05 28.2	-0.3
	baz=279						
TCU				eS	Sb	06 05 41.7	+1.1
	baz=279						
CHKT	Chengkung	0.94	198	eP	Pb	06 05 28.5	0.0
	baz=187						
ALS	Alishan	0.94	239	eP	Pn	06 05 28.2	+0.5
	baz=231						
ALS				eS	Sn	06 05 40.1	+0.1
	baz=231						
NSY	Sanyi	0.94	297	eP	Pn	06 05 28.2	+0.7
	baz=297						
NSY				eS	Sb	06 05 41.5	+0.7
	baz=297						
NMLH	Miaoli	0.98	304	eP	Pn	06 05 28.4	+0.4
	baz=304						
NMLH				eS	Sb	06 05 42.5	+0.6
	baz=304						
TIPB	Shuangxi	0.98	8	P	Pn	06 05 28.1	0.0
	baz=359						
TIPB				eS	Sn	06 05 41.4	+0.5
	baz=359						
TWA	Mucha	0.99	355	eS	Sb	06 05 42.0	-0.2
	baz=347						
TATO	Taipei	0.99	350	eP	Pn	06 05 28.1	-0.1
	baz=350						
TATO				eS	Sn	06 05 41.0	0.0
	baz=350						
CHN5	Tsauling	1.00	247	eP	Pn	06 05 28.8	+0.4
	baz=238						
CHN5				eS	Sb	06 05 42.6	0.0
	baz=238						
PTSB	Yuanli	1.00	297	eP	Pn	06 05 28.6	+0.2
	baz=297						
ELDTW	Lidau	1.01	218	eP	Pn	06 05 29.1	+0.6
	baz=212						
ELDTW				eS	Sn	06 05 41.4	-0.2
	baz=212						
WCHH	Zhanghua	1.03	275	eP	Pn	06 05 29.6	+0.9
	baz=274						
WCHH				eS	Sb	06 05 44.0	+0.6
	baz=274						
TWB1	Santiao Chiao	1.05	15	eS	Sb	06 05 44.2	+0.3
	baz=26						
NCUH	Zhongli	1.07	335	eP	Pn	06 05 29.5	+0.3
	baz=335						
WGK	Gukeng	1.07	254	eP	Pn	06 05 30.2	+0.9
	baz=253						
NWF	Wu-fen Shan	1.08	5	eS	Sb	06 05 45.6	+0.9
	baz=349						
WFSB	Wu-fen Shan	1.08	5	eP	Pn	06 05 29.4	+0.1
	baz=354						
WFSB				eS	Sb	06 05 45.6	+0.9
	baz=354						
WDLH	Douliu	1.09	254	eP	Pn	06 05 30.4	+0.8
	baz=253						
TWS1	Kuangyinshan	1.13	348	eP	Pn	06 05 30.2	+0.1
	baz=347						
TWS1				eS	Sn	06 05 45.2	+0.8
	baz=347						
YM07	YM07	1.18	357	eP	Pn	06 05 30.2	-0.6
	baz=358						
CHN4	Tsaushan	1.19	238	eP	Pb	06 05 32.1	-0.7
	baz=229						
CHN4				eS	Sb	06 05 48.0	+0.2
	baz=229						
TPUB	Ta-pu	1.19	235	eP	Pn	06 05 31.9	+1.0
	baz=226						
TPUB				eS	Sb	06 05 47.5	-0.3
	baz=226						
CHN2	Minshiung	1.20	248	eS	Sb	06 05 49.5	+1.4
	baz=247						
RLNB	Erlin	1.22	265	eP	Pn	06 05 32.2	+1.0
	baz=275						
RLNB				eS	Sb	06 05 49.0	+0.4
	baz=275						
WTP	Ta-pu	1.23	233	eP	Pn	06 05 32.2	+0.6
	baz=224						
WTP				eS	Sb	06 05 48.5	-0.6
	baz=224						
JYNG	Yonagunijimaku	1.24	68	P	Pn	06 05 31.1	-0.5
JYNG				eS	Sn	06 05 47.0	-0.1
CHY	Chiayi	1.26	247	eP	Pb	06 05 33.9	0.0
	baz=246						
TWH	Lutao	1.29	189	eP	Pn	06 05 30.8	-1.5
	baz=179						
TWGBT	Beinan	1.29	205	eP	Pn	06 05 31.1	-1.3
	baz=196						
TWG	Pinlang	1.30	206	eP	Pn	06 05 33.0	+0.6
	baz=196						
YOJ	Yonaguni jima	1.30	69	eP	Pn	06 05 31.7	-0.7
	baz=67						
YOJ				eS	Sn	06 05 48.8	+0.2
	baz=67						
YOJ	Yonaguni jima	1.30	69	P	Pn	06 05 32.0	-0.4
YOJ				eS	Sn	06 05 48.7	+0.2
TWK	Hsinying	1.31	237	eP	Pn	06 05 33.5	+0.8
	baz=237						
TWK				eS	Sb	06 05 50.7	-0.8
	baz=237						
CHN1	Nanshi	1.33	233	eP	Pb	06 05 34.6	-0.6
	baz=233						
CHN1				eS	Sb	06 05 51.3	-0.6
	baz=233						
MASBT	Mashibuluo	1.68	215	eP	Pn	06 05 39.2	+1.5
	baz=218						
MASBT				eS	Sn	06 06 00.2	+2.2
	baz=218						
EAST	Anshuo	1.78	206	eP	Pn	06 05 40.3	+1.2
	baz=200						
IRIF	Iriomote-Funau	1.90	79	P	Pn	06 05 40.7	+0.1
IRIF				eS	Sn	06 06 02.9	-0.5
HATJ	Hateruma jima	1.94	88	P	Pn	06 05 41.2	0.0
HATJ				eS	Sn	06 06 04.1	-0.3
PHUB	P'eng-hu	1.99	257	eP	Pn	06 05 41.9	-0.1
	baz=269						
PHUB				eS	Sn	06 06 05.8	+0.1
	baz=269						
WDGT	Dungji	2.00	249	eP	Pn	06 05 42.5	+0.5
	baz=247						
WDGT				eS	Sn	06 06 04.8	-1.0
	baz=247						
JKRS	Kuro-shima	2.14	83	P	Pn	06 05 44.3	+0.4
JKRS				S	Sn	06 06 09.5	+0.2
VWUC	VWUC	2.27	296	eP	Pn	06 05 44.7	-1.0
	baz=296						
JIJ	Ishigaki jima	2.28	80	P	Pn	06 05 45.4	-0.4
JIJ				S	Sn	06 06 11.4	-1.3
JISG	Ishigakijimahi	2.47	76	P	Pn	06 05 48.2	-0.3
JISG				S	Sn	06 06 16.0	-1.4
JTJ	Tarama	2.83	76	P	Pn	06 05 53.6	+0.2
JTJ				eS	Sn	06 06 25.5	-0.8
JIRB	Irabujima	3.29	75	eS	Sn	06 06 37.4	-0.3

IDC ***08*** *06:08:03.6±6.5, 6°.19N×72°.33W, h158^{km}±45^{km}, mb3.0/1, mb1 2.9/2, mb1mx2.6/41, mbtmp3.4/2, Error ellipse: s-maj=317.8km s-min=31.6km az=159.0*
ISCJB ***08*** *06:08:05.4±1.0, 6°.83N±0°.04×73°.17W±0°.05, h145^{km}±8^{km}, mb3.1/1, Error ellipse: s-maj=8.8km s-min=6.4km az=3.1*
RSNC ***08*** *06:08:06.5±0.8, 6°.80N×73°.17W, h140^{km}±5^{km}, ML2.9*
ISC 08 06:08:04.3±1.2**, 6°.83N**±0°.04×**73°.13W**±0°.06**, h153**^{km}±8^{km}**, n18, σ0^{s}.91**/27**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.24	192	*e*P	Pn	06 08 25.7	+0.2
BARC				*e*S	Sn	06 08 40.0	-1.5
BARC				*i*		06 08 41.6	
	comp=Z,368nm,0.3s						
BRRC	Barranca, Sant	0.64	296	*e*P	Pn	06 08 27.6	+0.8
BRRC				*i*		06 08 27.9	
	comp=Z,362nm,0.2s						
PAMC	Pamplona, Colo	0.67	40	*e*P	Pn	06 08 28.6	+1.0
PAMC				*e*S	Sn	06 08 45.5	+0.2
RUSC	La Rusia	0.93	177	*e*P	Pn	06 08 29.6	+0.1
RUSC				*e*S	Sn	06 08 47.5	-1.1
RUSC				*i*		06 08 49.0	
	comp=Z,114nm,0.3s						
OCAC	Ocana	1.42	352	*e*P	Pn	06 08 33.9	+0.5
OCAC				*e*S	Sn	06 08 55.5	-0.3
YOPC	Yopal, Colombi	1.62	154	*e*P	Pn	06 08 36.5	+0.8
YOPC				*e*S	Sn	06 08 59.9	+0.3
YOPC				*i*		06 09 03.4	
	comp=Z,62nm,0.3s						
ZARC	Zaragoza, Cauc	1.84	291	*e*P	Pn	06 08 38.6	+0.8
ZARC				*e*S	Sn	06 09 03.4	-0.1
ZARC				*i*		06 09 10.8	
	comp=Z,153nm,0.3s						
NORC	Norcasia	2.13	234	*e*P	Pn	06 08 41.7	+0.3
NORC				*e*S	Sn	06 09 09.2	-0.6
CHIC	Chingaza	2.26	195	*e*P	Pn	06 08 44.1	+0.9
CHIC				*e*S	Sn	06 09 12.4	-0.7
CHIC				*i*		06 09 20.0	
	comp=Z,35nm,0.5s						
ROSC	El Rosal	2.30	211	P	Pn	06 08 45.0	+1.4
	comp=Z,3.8nm,0.3s,baz=232,slow=22,SNR=9.4						
ROSC				S	Sn	06 09 15.8	+2.0
	comp=Z,13nm,0.3s,baz=194,slow=22,SNR=15						
ROSC	El Rosal	2.30	211	*e*P	Pn	06 08 44.9	+1.2
ROSC				*i*		06 09 23.4	
	comp=Z,89nm,0.4s						
HELC	Santa Helena	2.46	255	*e*P	Pn	06 08 46.3	+0.8
HELC				*e*S	Sn	06 09 16.5	-0.7
HELC				*i*		06 09 27.1	
	comp=Z,42nm,0.3s						
VILC	Villavicencio,	2.75	192	*e*P	Pn	06 08 49.1	+0.2
VILC				*i*		06 09 29.5	
	comp=Z,28nm,0.4s						
CODC	Agust̂ın Codaz	3.10	354	*e*P	Pn	06 08 53.9	+0.8
CODC				*i*		06 09 43.4	
	comp=Z,19nm,0.4s						
YOTC	Yotoco, Valle	4.27	229	*e*P	Pn	06 09 08.5	+0.1
YOTC				*i*		06 09 14.3	
	comp=Z,5.0nm,0.5s						
TORD	Torodi Ar. Bea	73.75	78	P	P	06 19 17.1	-5.2
	comp=Z,0.3nm,0.8s,baz=270,slow=5.8						
ASAR	Alice Springs	149.10	234	PKPbc	PKPbc	06 27 34.7	-0.8
	comp=Z,0.1nm,0.3s,baz=107,slow=3.7,SNR=4.7						
WRA	Warramunga Arr	150.33	241	PKPbc	PKPbc	06 27 37.6	-0.8
	comp=Z,0.2nm,0.5s,baz=107,slow=2.7,SNR=8.6						

ISCJB ***08*** *06:08:19.7±0.3, 9°.69N±0°.04×125°.78E±0°.08, h10^{km}, mb4.2/24, Error ellipse: s-maj=11.7km s-min=5.7km az=165.1*
IDC ***08*** *06:08:19.6±0.6, 9°.71N×125°.70E, h0^{km}, mb4.0/16, mb1 4.1/17, mb1mx3.9/57, mbtmp4.0/17, ML4.2/1, MS2.8/6, Ms1 2.8/6, ms1mx2.5/56, Error ellipse: s-maj=35.8km s-min=12.3km az=81.0*
BJI ***08*** *06:08:22.4, 9°.70N×125°.70E, h36^{km}, mb4.7/5, mB5.0/4*
MAN ***08*** *06:08:25.2, 9°.77N×125°.83E, h8^{km}, mb4.7, ML3.6, MS3.5*
NEIC ***08*** *06:08:25.7±0.8, 9°.67N×125°.68E, h43^{km}±8^{km}, mb4.6/5, Error ellipse: s-maj=9.1km s-min=4.7km az=82.0*
NEIC Felt [II PIVS] at Dapa, General Luna and San Benito.
ISC 08 06:08:22.6±0.4**, 9°.80N**±0°.03×**125°.85E**±0°.05**, h10**^{km}**, n60, σ2^{s}.08**/52**, mb4.2**/24**, 3C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	0.36	268⇓	*e*P	Pg	06 08 22.2	-7.5
SCPH				*e*S	Sg	06 08 29.5	-5.0
BUTP	Butuan	0.85	196	*e*P	Pg	06 08 28.7	-10
BUTP				*e*S	Sb	06 08 53.7	+2.6
MSLP	Maasin	1.03	289	*e*P	Pg	06 08 35.3	-7.3
PLP	Palo	1.61	328⇑	*e*P	Pn	06 08 51.2	+0.1
PLP				*i* S	Sn	06 09 15.0	+3.0
BIPH	Bislig	1.68	163⇑	*e*P	Pg	06 08 58.1	+3.3
BIPH				*e*S	Sg	06 09 20.4	+3.8
OCLP	Ormoc	1.75	316	*e*P	Pg	06 08 58.8	+2.6
CGP	Cagayan de Oro	1.75	221⇑	*e*P	Pn	06 08 55.4	+2.2
CGP				*e*S	Sb	06 09 18.2	+1.1
BESP	Borongan	1.84	347	*e*P	Pn	06 08 46.2	-8.1
BESP				*e*S	Sb	06 09 22.5	+3.0
LLP	Lapu-Lapu	1.93	286	*e*P	Pb	06 08 59.5	+1.6
LLP				*e*S	Sn	06 09 23.0	+3.1
TBP	Tagbilaran	1.96	267	*e*P	Pb	06 09 01.5	+3.0
BUKP	Musuan	2.06	202	*e*P	Pn	06 08 47.6	-10
BUKP				*e*S	Sb	06 09 27.3	+1.5
DAV	Davao City (W)	2.72	186	Pn	Pn	06 09 03.4	-3.0
	40nm,0.3s,baz=47,slow=3.4,SNR=2.3						
DAV				Lg	Lg	06 09 46.7	
	38nm,0.3s,baz=108,slow=22,SNR=1.9						
DAV				LR	LR	06 10 25.3	
	comp=Z,207nm,19.6s,baz=347,slow=48						
DAV	Davao City (W)	2.72	186	*e*Pn	Pn	06 09 05.5	-1.0
DAV				Lg	Lg	06 09 46.7	
MATI	Mati	2.86	172	*e*P	Pn	06 09 11.0	+2.6
CNP	Catarman	2.94	337	*e*P	Pn	06 09 12.3	+2.8
PAGZ	Pagadian	3.12	232	*e*P	Pn	06 09 14.8	+3.0
RCP	Roxas	3.52	300⇓	*e*P	Pn	06 09 20.8	+3.4
PVCP	Virac	4.13	336	*e*P	Pn	06 09 21.4	-4.4
FAKI	Fak Fak	14.15	153	*e*Pn	Pn	06 11 42.1	-1.1
TPUB	Ta-pu	14.33	340	*e*Pn	P	06 11 52.9	0.0
SSLB	Suanglung	14.68	342	*e*Pn	Pn	06 11 51.9	+1.3
YOJ	Yonaguni jima	14.84	350	*e*Pn	Pn	06 11 53.8	+1.2
GUMO	Guam	19.00	77	*e*P	P	06 12 45.9	+1.3
	94nm,1.1s						
JAGI	Jajag, Banyuwa	21.56	213	*e*P	P	06 13 10.4	-2.1
	45nm,1.0s						
MTN	Manton Dam	23.09	167	*e*P	P	06 13 27.5	-1.3
	22nm,1.4s						
CBIJ	Chichi jima	23.11	40	*e*P	P	06 13 31.3	+2.4
	141nm,1.0s						
JNU	Nakatsue	23.67	11	LR	LR	06 23 20.7	
	comp=Z,18nm,18.2s,baz=303,slow=38						
KSAR	Wonju Array Be	27.59	3	P	P	06 14 09.6	-0.5
KSRS	Korea Array	27.60	4	P	P	06 14 09.6	-0.6
	1.0nm,0.6s,baz=184,slow=9.4,SNR=6.2						
KSRS				LR	LR	06 26 21.1	
	comp=Z,10nm,18.0s,baz=225,slow=39						
KS01	Wonju Array Si	27.62	4	*e*P	P	06 14 10.4	+0.1
PSI	Prapat	27.64	257	*e*P	P	06 14 07.9	-3.0
	63nm,2.0s						
FITZ	Fitzroy Crossi	27.72	180	P	P	06 14 10.2	-1.2
	1.8nm,0.8s,baz=151,slow=3.9,SNR=3.2						
FITZ	Fitzroy Crossi	27.72	180	*e*P	P	06 14 09.5	-1.9
	21nm,1.8s						
XAN	Xi’an	28.70	330	P	P	06 14 18.4	-1.7
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MJAR	Matsushiro Arr	28.89	21	LR	LR	06 25 11.2	
	comp=Z,9.2nm,20.6s,baz=315,slow=35						
COEN	Coen	29.19	144	*e*P	P	06 14 23.6	-1.0
	63nm,1.7s						
CD2	Chengdu	29.39	319	*e*P	P	06 14 25.5	-0.8
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.0s						
WRA	Warramunga Arr	30.71	164	P	P	06 14 35.3	-2.6
	1.2nm,0.8s,baz=327,slow=10,SNR=18						
ASAR	Alice Springs	34.18	167	P	P	06 15 06.8	-1.5
	0.7nm,0.3s,baz=353,slow=7.3,SNR=18						
AS01	Alice Springs	34.19	167	*e*P	P	06 15 05.9	-2.5
USRK	Ussuriysk Ar.	34.69	8	P	P	06 15 13.0	+0.5
	4.1nm,0.7s,baz=193,slow=5.9						
ASAJ	Asahikawa	37.15	20	LR	LR	06 32 26.2	
	comp=Z,12nm,18.1s,baz=17,slow=39						
KLR	Kul’dur	39.62	6	P	P	06 15 53.4	-0.9
	0.2nm,0.5s,baz=183,slow=5.3,SNR=10						
H11N1	WAKE ISLAND Hy	40.80	71	T	T	06 59 16.2	
	baz=263,slow=74,SNR=31						
H11N2	WAKE ISLAND Hy	40.80	71	T	T	06 59 16.6	
	baz=263,slow=74,SNR=23						
H11N3	WAKE ISLAND Hy	40.81	71	T	T	06 59 18.4	
	baz=263,slow=74,SNR=29						
SONM	Songino Array	41.32	340	P	P	06 16 08.0	-0.7
	0.5nm,0.5s,baz=165,slow=9.0,SNR=2.2						
STKA	Stephens Creek	44.09	161	P	P	06 16 29.6	-1.5
	2.2nm,0.6s,baz=330,slow=11,SNR=8.2						
PETK	Petropavlovsk-	50.24	24	P	P	06 17 19.2	+0.4
	1.1nm,0.7s,baz=217,slow=3.6						
MK31	Makanchi Array	52.16	323	*e*P	P	06 17 32.4	-1.1
MKAR	Makanchi Array	52.16	323	P	P	06 17 32.6	-0.8
	0.7nm,0.4s,baz=122,slow=8.2,SNR=9.3						
MKAR	Makanchi Array	52.16	323	*e*P	P	06 17 32.4	-1.1
	33nm,0.4s						
ZALV	Zalesovo Beam	54.84	332	P	P	06 17 51.2	-1.8
	0.8nm,0.4s,baz=123,slow=4.4,SNR=4.3						
ZALV				LR	LR	06 44 23.8	
	comp=Z,19nm,18.3s,baz=76,slow=40						
KURK	Kurchatov	56.23	326	*e*P	P	06 18 01.7	-1.2
	3.8nm,1.3s						
KURBB	Kurchatov Arra	56.23	326	P	P	06 18 01.4	-1.6
	0.6nm,0.5s,baz=124,slow=7.1,SNR=6.7						
ILAR	Eielson Array	80.04	26	P	P	06 20 30.8	-1.5
	0.6nm,1.0s,baz=249,slow=4.1,SNR=4.6						
ARCES	ARCESS Array B	84.49	340	P	P	06 20 53.5	-1.9
	2.2nm,0.8s,baz=81,slow=6.3,SNR=13						
FINES	FINESS Array B	86.11	332	P	P	06 21 01.1	-2.6
	1.7nm,0.6s,baz=86,slow=4.9,SNR=12						
YKA	Yellowknife Ar	94.36	24	P	P	06 21 40.8	-1.5
	0.7nm,0.8s,baz=315,slow=3.8,SNR=3.9						
TBM	Table Mountain	98.34	39	*e*P	P	06 22 02.1	+1.1

MAN 08 06:28:50.0, 9°.70N×125°.69E, h25^{km}, mb3.6, ML2.3, MS1.8, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	0.22	293⇓	*e*P	Pn	06 28 57.3	-0.5
SCPH				*e*S	Sb	06 29 04.6	+4.6
BUTP	Butuan	0.72	186	*e*P	Pb	06 29 04.2	+0.1
BUTP				*e*S	Sn	06 29 15.8	+0.8
BESP	Borongan	1.91	352	*e*P	Pn	06 29 21.3	+0.3

GII ***08*** *06:32:59.2±0.0, 33°.26N×35°.37E, h1^{km}*
CSEM ***08*** *06:33:00.6, 33°.29N×35°.39E, h3^{km}, ML2.6*
GRAL ***08*** *06:33:00.6±0.2, 33°.29N×35°.39E, h4^{km}±3^{km}, MD2.6*
ISC 08 06:32:59.6±1.6**, 33°.30N**±0°.03×**35°.38E**±0°.05**, h20**^{km}±5^{km}**, n17, σ0^{s}.62**/29**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSDI	Kefar Szold	0.25	114	Pg	Pb	06 33 05.3	-0.1
KSDI				Sg	Sb	06 33 09.6	+0.3
HNTI	Hanita	0.28	220	Pg	Pb	06 33 05.2	-0.7
HNTI				Sg	Sb	06 33 09.4	-0.6
MMA0B	Mount Meron ar	0.28	176	Pg	Pb	06 33 05.6	-0.4
MMA0B				Sg	Sb	06 33 10.6	+0.4
QRWL	Qaraoun	0.35	45	*e*P	Pb	06 33 07.1	-0.2
QRWL				*e*S	Sb	06 33 11.9	-0.7
QRWL	Qaraoun	0.35	45	*e*P	Pb	06 33 07.1	-0.2
QRWL				*e*S	Sb	06 33 11.9	-0.7
DQRL	Deir Qamar	0.44	21	*e*P	Pb	06 33 08.6	-0.2
DQRL				*e*S	Sb	06 33 14.5	-0.5
DQRL	Deir Qamar	0.44	21	*e*P	Pb	06 33 08.6	-0.2
DQRL				*e*S	Sb	06 33 14.5	-0.5
KSHT	Keshet	0.48	131	Pg	Pn	06 33 10.2	-1.2
BLGI	Bet Lehem HaGe	0.58	196	Pg	Pb	06 33 11.1	0.0
BLGI				Sg	Sb	06 33 19.9	+1.0
BHL	Bhannes	0.65	20	*e*P	Pb	06 33 12.4	+0.1
BHL				*e*S	Sb	06 33 21.2	+0.2
BHL	Bhannes	0.65	20	*e*P	Pb	06 33 12.4	+0.1
BHL				*e*S	Sb	06 33 21.2	+0.2
OFRI	‘Ofer	0.75	207	Pg	Pb	06 33 14.0	0.0
MMLI	Mount Malkishu	0.85	178	Pg	Pn	06 33 15.9	-0.7
HMDT	Nahal Hemdat	1.05	173	Pg	Pn	06 33 19.2	0.0
HMDT				Sg	Sn	06 33 34.9	+1.7
HWQ	Hawqa	1.09	25	*e*P	Pn	06 33 20.2	+0.3
HWQ	Hawqa	1.09	25	*e*P	Pn	06 33 20.2	+0.3
DSI	Dead Sea	1.72	180	Pn	Pb	06 33 30.4	-0.1
DSI				Sn	Sg	06 33 54.2	-1.0

ISCJB ***08*** *06:39:28.4±0.6, 33°.31N±0°.03×35°.35E±0°.05, h9^{km}±6^{km}, Error ellipse: s-maj=7.6km s-min=3.4km az=28.2*
GII ***08*** *06:39:28.0±0.0, 33°.27N×35°.36E, h1^{km}, MD1.8/3*
CSEM ***08*** *06:39:29.4, 33°.28N×35°.38E, h0^{km}, ML2.9*
GRAL ***08*** *06:39:29.4±0.2, 33°.28N×35°.38E, h0^{km}±67^{km}, MD2.9*
ISC 08 06:39:28.5±1.0**, 33°.28N**±0°.03×**35°.38E**±0°.04**, h12**^{km}±8^{km}**, n23, σ0^{s}.61**/35**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSDI	Kefar Szold	0.25	110	Pg	Pb	06 39 34.3	-0.7
KSDI				Sg	Sb	06 39 39.0	-0.4
HNTI	Hanita	0.26	221	Pg	Pg	06 39 34.0	+0.2
HNTI				Sg	Sg	06 39 38.1	+0.6
MMA0B	Mount Meron ar	0.27	175	Pg	Pb	06 39 34.4	-0.9
MMA0B				Sg	Sb	06 39 39.4	-0.4
SHBL	Chebaa	0.32	78	*e*P	Pg	06 39 35.0	+0.1
SHBL				*e*S	Sg	06 39 39.1	-0.1
SHBL	Chebaa	0.32	78	*e*P	Pg	06 39 35.0	+0.1
SHBL				*e*S	Sg	06 39 39.1	-0.1
QRWL	Qaraoun	0.37	44	*e*P	Pg	06 39 36.0	+0.1
QRWL				*e*S	Sg	06 39 40.9	0.0
QRWL	Qaraoun	0.37	44	*e*P	Pg	06 39 36.0	+0.1
QRWL				*e*S	Sg	06 39 40.9	0.0
DQRL	Deir Qamar	0.45	21	*e*P	Pg	06 39 37.5	+0.1
DQRL				*e*S	Sg	06 39 43.5	0.0
DQRL	Deir Qamar	0.45	21	*e*P	Pg	06 39 37.5	+0.1
DQRL				*e*S	Sg	06 39 43.5	0.0
KSHT	Keshet	0.47	129	Pg	Pb	06 39 39.2	+0.4
BLGI	Bet Lehem HaGe	0.57	196	Pg	Pb	06 39 40.0	-0.3
BHL	Bhannes	0.66	20	*e*P	Pg	06 39 41.2	-0.2
BHL	Bhannes	0.66	20	*e*P	Pg	06 39 41.2	-0.2
OFRI	‘Ofer	0.73	207	Pg	Pb	06 39 42.9	-0.3
OFRI				Sg	Sn	06 39 54.8	-1.1
MMLI	Mount Malkishu	0.84	177	Pg	Pb	06 39 44.6	-0.5
HMDT	Nahal Hemdat	1.03	173	Pg	Pg	06 39 48.1	-0.2
HMDT				Sg	Sn	06 40 04.1	+0.9
SLTI	Sal’it	1.07	195	Pg	Pn	06 39 49.2	-0.2
SLTI				Sg	Sn	06 40 05.5	+1.3
HWQ	Hawqa	1.10	25	*e*P	Pb	06 39 49.2	-0.4
HWQ	Hawqa	1.10	25	*e*P	Pb	06 39 49.2	-0.4
DSI	Dead Sea	1.71	180	Pn	Pb	06 39 59.4	-0.4
YTIR	Yattir	1.93	187	Pn	Pb	06 40 02.9	-0.7
MZDA	Masada	1.97	180	Pn	Pb	06 40 02.6	-1.6
PRNI	Paran	2.94	186	Pn	Pn	06 40 16.4	+1.4

ISCJB ***08*** *06:56:21.5±0.7, 54°.21N±0°.07×161°.18W±0°.06, h23^{km}, mb3.7/9, Error ellipse: s-maj=10.5km s-min=4.0km az=158.2*
IDC ***08*** *06:56:21.0±2.6, 54°.53N×161°.75W, h0^{km}, mb3.8/9, mb1 3.8/11, mb1mx3.5/82, mbtmp3.7/11, ML3.1/2, Error ellipse: s-maj=67.3km s-min=18.3km az=155.0*
NEIC ***08*** *06:56:26.5±0.0, 54°.52N×161°.49W, h33^{km}, ML3.3(AEIC), After AEIC.*
ISC 08 06:56:23.3±1.0**, 54°.3N**±0°.1×**161°.35W**±0°.05**, h23**^{km}**, n39, σ1^{s}.48**/38**, mb4.0**/9**, Alaska Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDPT	Sand Point	1.14	26	P	Pb	06 56 44.8	+0.5
SDPT				S	Sn	06 56 59.8	+1.0
BALA	Baldy Mountain	1.21	317	P	Pb	06 56 45.4	0.0
FALS	False Pass	1.32	295	P	Pn	06 56 46.2	-0.1
FALS				S	Sb	06 57 04.7	+1.0
SSLN	Shishaldin Nor	1.62	289	P	Pb	06 56 52.1	-0.4
SSBA	Shishaldin	1.68	287	P	Pn	06 56 52.4	+1.0
SSBA				S	Sb	06 57 13.6	-0.6
WESN	West Dahl Nort	1.91	279	P	Pn	06 56 55.9	+1.5
WECS	Westdahl Cape	2.02	277	P	Pn	06 56 57.6	+1.7
VNHG	Veniaminof 1	2.27	32	P	Pn	06 57 00.5	+1.0
AKSA	Akutan Strait	2.56	268	P	Pn	06 57 04.8	+1.4
CHGN	Chignik	2.59	39	P	Pn	06 57 05.8	+2.0
UNV	Unalaska Valle	3.08	263	P	Pn	06 57 11.2	+0.8
UNV				S	Sn	06 57 50.5	+4.1
ANNW	Aniakchak Nort	3.19	33	P	Pn	06 57 13.2	+1.2
MREP	Makushin Rep’t	3.22	263	P	Pn	06 57 13.5	+1.0
MCIR	Makushin Cirqu	3.28	266	P	Pn	06 57 15.0	+1.6
NIKH	Nikolski High	4.67	256	P	Pn	06 57 33.7	+1.4
CAHL	Cahill	5.03	40	P	Pn	06 57 39.4	+2.1
OHAK	Old Harbor	5.40	54	P	Pn	06 57 42.7	+0.5
SPIA	Saint Paul Isl	5.78	303	P	Pn	06 57 48.7	+1.2
KDAK	Kodiak Island	6.01	51	Pn	Pn	06 57 51.7	+1.0
	0.6nm,0.3s,baz=189,slow=5.2,SNR=10						
KDAK				Sn	Sn	06 58 57.5	-1.1
	0.8nm,0.3s,baz=176,slow=19,SNR=2.8						
KDAK	Kodiak Island	6.01	51	P	Pn	06 57 52.2	+1.6
CNPM	China Poot	7.60	43	P	Pn	06 58 13.6	+1.1
TT01	Tatalina	9.04	16	P	Pn	06 58 33.2	+1.0
ILAR	Eielson Array	12.74	29	Pn	Pn	06 59 18.8	-4.1
	0.1nm,0.3s,baz=219,slow=14,SNR=3.5						
YKA	Yellowknife Ar	25.28	52	P	P	07 01 49.6	+2.1
	0.3nm,0.5s,baz=266,slow=8.0,SNR=2.8						
H11N2	WAKE ISLAND Hy	42.17	228	T	T	07 49 03.3	
	baz=26,slow=76,SNR=6.5						
H11N3	WAKE ISLAND Hy	42.17	228	T	T	07 49 03.8	
	baz=26,slow=76,SNR=8.8						
H11N1	WAKE ISLAND Hy	42.19	228	T	T	07 49 04.7	
	baz=26,slow=76,SNR=8.6						
H11S1	WAKE ISLAND Hy	43.34	227	T	T	07 50 31.6	
	baz=26,slow=76,SNR=12						
H11S2	WAKE ISLAND Hy	43.35	227	T	T	07 50 27.0	
	baz=26,slow=76,SNR=8.4						
H11S3	WAKE ISLAND Hy	43.35	227	T	T	07 50 33.6	
	baz=26,slow=76,SNR=7.2						
KSRS	Korea Array	49.86	281	P	P	07 05 14.4	0.0
	0.9nm,0.5s,baz=48,slow=7.4,SNR=7.6						
KSAR	Wonju Array Be	49.89	281	P	P	07 05 14.4	-0.2
SONM	Songino Array	54.31	304	P	P	07 05 46.8	-0.8
	0.8nm,0.6s,baz=49,slow=8.3,SNR=4.1						
FINES	FINESS Array B	64.43	356	P	P	07 06 56.2	-0.8
	0.9nm,0.8s,baz=2.9,slow=7.6,SNR=4.9						
BVAR	Borovoye Array	64.74	328	P	P	07 06 58.7	-0.5
	0.9nm,0.7s,baz=72,slow=4.7,SNR=5.2						
HFS	Hagfors	65.82	3	P	P	07 07 06.7	+0.5
	0.8nm,0.7s,baz=41,slow=4.6,SNR=5.4						
AKASG	Malin Array Be	74.97	353	P	P	07 08 01.5	-0.6
	0.5nm,0.4s,baz=14,slow=6.1,SNR=4.5						
GERES	GERESS Array B	77.12	3	P	P	07 08 14.3	-0.3
	0.2nm,0.5s,baz=20,slow=4.3,SNR=4.1						
CMAR	Chiang Mai Arr	80.72	289	P	P	07 08 34.5	-0.2
	0.5nm,0.3s,baz=357,slow=5.8,SNR=4.5						

IDC 08 06:59:21.3±3.4**, 18°.82S**×**168°.92E, h0**^{km}**, mb4.2**/4**, mb1 4.3**/5**, mb1mx3.8**/46**, mbtmp4.1**/5**, ML3.2**/1**, MS3.3**/6**, Ms1 3.2**/6**, ms1mx2.9**/38**, Error ellipse: s-maj=82.2km s-min=38.3km az=123.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.98	215	Pn	Pn	07 00 22.4	-1.3
	1.6nm,0.3s,baz=41,slow=11,SNR=57						
DZM				Sn	Sn	07 01 05.2	-6.0
	14nm,0.3s,baz=107,slow=23,SNR=10.0						
DZM				LR	LR	07 01 54.8	
	comp=Z,224nm,19.7s,baz=31,slow=39						
DZM	Mont Dzumac	3.98	215	*e*Pn	Pn	07 00 22.3	-1.4
	24nm,0.3s						
DZM				*e*Sn	Sn	07 01 00.5	-11
	32nm,0.2s						
HNR	Honiara	12.76	316	LR	LR	07 06 40.9	
	comp=Z,116nm,18.2s,baz=162,slow=34						
URZ	Urewera	20.64	161	LR	LR	07 10 42.9	
	comp=Z,115nm,18.1s,baz=346,slow=33						
WRA	Warramunga Arr	32.61	262	P	P	07 05 54.2	-0.7
	1.6nm,1.0s,baz=88,slow=8.5,SNR=10.0						
ASAR	Alice Springs	32.94	255	P	P	07 05 57.7	-0.1
	4.0nm,0.8s,baz=83,slow=8.9,SNR=34						
PPT2	Papeete2	39.38	95	*e*LR	LR	07 18 04.3	
	63nm,26.8s						
FITZ	Fitzroy Crossi	40.98	264	P	P	07 07 07.0	+0.8
	2.9nm,0.6s,baz=116,slow=7.7,SNR=8.5						
TAOE	Nuku Hiva Isla	50.28	86	*e*LR	LR	07 22 56.0	
	345nm,29.3s						
ASAJ	Asahikawa	67.11	340	LR	LR	07 35 01.2	
	comp=Z,26nm,21.9s,baz=173,slow=32						
KSRS	Korea Array	67.99	326	LR	LR	07 38 56.7	
	comp=Z,9.4nm,19.1s,baz=190,slow=35						
MAW	Mawson	78.70	202	LR	LR	07 40 54.2	
	comp=Z,25nm,21.7s,baz=248,slow=32						
SONM	Songino Array	86.71	323	P	P	07 12 08.0	+0.8
	1.1nm,0.8s,baz=140,slow=4.7,SNR=5.8						
GERES	GERESS Array B	143.98	332	PKP	PKPab	07 18 56.4	+0.2
	0.4nm,0.6s,baz=56,slow=3.4,SNR=4.1						

ISCJB ***08*** *07:06:45.0±0.3, 9°.87S±0°.05×119°.01E±0°.03, h33^{km}, mb4.5/29, MS3.6/5, Error ellipse: s-maj=7.5km s-min=3.9km az=23.0*
IDC ***08*** *07:06:48.8±2.5, 9°.78S×118°.97E, h48^{km}±27^{km}, mb4.1/14, mb1 4.2/19, mb1mx4.0/55, mbtmp4.4/19, ML4.4/5, MS3.1/6, Ms1 3.1/6, ms1mx2.7/52, Error ellipse: s-maj=23.9km s-min=15.2km az=68.0*
NEIC ***08*** *07:06:50.7±0.7, 9°.83S×119°.10E, h70^{km}±7^{km}, mb4.4/10, Error ellipse: s-maj=9.6km s-min=5.7km az=211.0*
DJA ***08*** *07:06:51.8±0.4, 10°S±4°×11°9E±°, h39^{km}±6^{km}, M4.7/15, mb4.7/7, mB5.0/3, MLv4.7/15, Mw(mB)4.3/3*
ISC 08 07:06:46.7±0.4**, 9°.99S**±0°.05×**118°.97E**±0°.03**, h33**^{km}**, n92, σ2^{s}.22**/93**, mb4.5**/29**, MS3.6**/5**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	0.54	50	P	Pn	07 07 02.3	+4.2
WBSI				S	Sn	07 07 10.3	+4.3
WSI	Waingapu	1.34	76	P	Pb	07 07 12.2	+0.9
BASI	Baing, Sumba	1.60	98	P	Pb	07 07 16.9	+1.3
PLAI	Plampang	1.65	314	P	Pb	07 07 18.3	+1.8
TWSI	Taliwang, Sumb	2.41	301	P	Pb	07 07 29.9	+0.5
EDFI	Ende, Flores	2.95	66	P	Pn	07 07 33.5	+2.1
MMRI	Maumere	3.49	68	P	Pn	07 07 41.2	+2.5
MMRI	Maumere	3.49	68	*e*Pn	Pn	07 07 41.4	+2.7
MMRI				*e*Sn	Sn	07 08 19.1	+0.1
IGBI	Denpasar	3.95	287	P	Pb	07 07 51.7	-4.0
SRBI	Singaraja	4.17	297	P	Pb	07 07 53.2	-6.2
BATI	Baumata	4.62	93	P	Pn	07 07 58.0	+3.7
	51nm,0.3s,baz=71,slow=2.6,SNR=25						
BATI				S	Sn	07 08 46.4	-0.5
	63nm,0.3s,baz=215,slow=23,SNR=14						
BATI	Baumata	4.62	93	P	Pn	07 07 58.2	+3.9
BKSI	Bulukumba	4.78	14	P	Pn	07 08 00.1	+3.7
JAGI	Jajag, Banyuwa	4.99	287	*e*Pn	Pn	07 08 03.2	+3.8
JAGI				*e*Sn	Sn	07 08 59.7	+3.7
SOEI	Soe	5.22	88	P	Pn	07 08 06.5	+3.9
	130nm,0.9s,3µm1.3nm						
SOEI	Soe	5.22	88	*e*Pn	Pn	07 08 06.8	+4.2
SPSI	Sidrap Palu	6.04	8	P	Pn	07 08 18.1	+4.4
TTSI	Tana Toraja	6.95	7	P	Pn	07 08 31.4	+5.1
	48nm,0.5s,2µm0.4nm						
UGM	Wanagama	8.60	283	*e*Pn	Pn	07 08 55.4	+6.5
UGM				*e*Sn	Sn	07 10 28.6	+3.8
FITZ	Fitzroy Crossi	10.33	142	P	Pn	07 09 15.9	+3.3
	5.4nm,0.3s,baz=339,slow=7.8,SNR=87						
FITZ				S	Sn	07 11 02.5	-4.9
	8.6nm,0.3s,baz=189,slow=19,SNR=8.7						
FITZ				LR	LR	07 13 47.1	
	comp=Z,64nm,18.1s,baz=316,slow=40						
FITZ	Fitzroy Crossi	10.33	142	*e*Pn	Pn	07 09 16.0	+3.3
FITZ				*e*Sn	Sn	07 11 03.6	-3.8
MBWA	Marble Bar	11.13	176	*e*Pn	Pn	07 09 27.9	+4.3
	40nm,0.5s						
MBWA				*e*Sn	Sn	07 11 20.1	-6.8
CISI	Cisompet, Garu	11.29	281	*e*Pn	Pn	07 09 30.4	+4.6
CISI				*e*Sn	Sn	07 11 30.5	-0.5
MTN	Manton Dam	12.25	105	*e*Pn	Pn	07 09 39.0	0.0
SAUI	Saumlaki	12.34	82	*e*Pn	Pn	07 09 39.2	-0.9
SIJI	Sorong	15.22	54	P	Pn	07 10 17.3	-2.0
	1.1nm,0.3s,baz=261,slow=5.9,SNR=7.2						
SIJI				LR	LR	07 16 10.1	
	comp=Z,47nm,21.3s,baz=30,slow=37						
WRA	Warramunga Arr	17.82	125	P	Pn	07 10 53.2	+0.9
	0.8nm,0.3s,baz=296,slow=13,SNR=57						
WRA				S	Sn	07 13 58.5	-12
	0.9nm,0.3s,baz=302,slow=26,SNR=5.6						

WRAB	Tennant Creek	17.83	125	eP	Pn	07 10 53.3	+0.9
	7.7nm,0.6s						
WB2	Warramunga Arr	17.83	125	eP	Pn	07 10 53.1	+0.7
WB2				eSn	Sn	07 14 00.6	-10
DAV	Davao City (W)	18.18	21	LR	LR	07 19 00.1	
	comp=Z,28nm,18.9s,baz=169,slow=41						
AS31	Alice Springs	19.70	136	eP	Pn	07 11 17.4	+2.4
	3.6nm,0.5s						
ASAR	Alice Springs	19.70	136	P	Pn	07 11 16.7	+1.7
	0.3nm,0.3s,baz=324,slow=13,SNR=24						
ASAR				S	S	07 14 46.4	-7.5
	0.6nm,0.3s,baz=315,slow=25,SNR=6.3						
AS01	Alice Springs	19.73	135	eP	P	07 11 14.8	+1.0
BKNI	Bangkinang	20.58	299	eP	Pn	07 11 24.6	-0.7
	122nm,1.3s						
NWAO	Narrogin (SRO)	22.88	184	P	P	07 11 50.4	+2.9
	12nm,0.7s,baz=216,slow=12,SNR=7.0						
NWAO				S	S	07 15 56.9	+1.8
	9.9nm,0.4s,baz=266,slow=8.1,SNR=8.2						
PSI	Prapat	23.67	301	P	P	07 11 55.5	-0.2
	6.0nm,0.4s,baz=180,slow=3.3,SNR=8.2						
PSI	Prapat	23.67	301	eP	P	07 11 56.5	+0.9
	19nm,1.1s						
TGY	Tagaytay City	24.02	5	P	P	07 11 58.0	-0.7
	147nm,0.3s,baz=183,slow=4.1,SNR=9.7						
SRAK	Srakaew	29.17	325	P	P	07 12 43.1	-2.0
	34nm,0.7s						
MANU	Manus Island	29.30	76	eP	P	07 12 44.8	-1.6
	28nm,1.3s						
STKA	Stephens Creek	30.21	139	P	P	07 12 56.0	+1.6
	1.5nm,0.6s,baz=316,slow=7.8,SNR=3.2						
STKA				LR	LR	07 26 56.2	
	comp=Z,39nm,18.2s,baz=209,slow=40						
STKA	Stephens Creek	30.21	139	eP	P	07 12 53.9	-0.4
	1.6nm,1.2s						
SKNT	Sakolnakorn	30.62	331	P	P	07 12 59.7	+1.7
	4.1nm,0.8s						
PBKT	Sadao Pong	31.84	326	P	P	07 13 09.4	+0.7
	11nm,0.7s,1µm						
NONG	Nongkai	31.96	331	P	P	07 13 10.8	+1.1
CM01	Chiang Mai Arr	34.45	325	eP	P	07 13 32.2	+0.6
CMAR	Chiang Mai Arr	34.49	325	P	P	07 13 31.9	-0.1
	3.8nm,0.6s,baz=151,slow=6.9,SNR=16						
CMAR				LR	LR	07 28 36.5	
	comp=Z,24nm,19.2s,baz=225,slow=38						
CHTO	Chiang Mai	34.78	325	eP	P	07 13 34.6	+0.2
	5.3nm,1.0s						
GYA	Guiyang	38.15	342	eP	P	07 14 03.6	+0.4
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ENH	Enshi	41.06	347	eP	P	07 14 28.0	+0.8
H08S2	Diego Garcia H	45.96	269	T	T	08 04 46.2	
	baz=95,slow=75,SNR=17						
H08S3	Diego Garcia H	45.97	269	T	T	08 04 46.1	
	baz=95,slow=75,SNR=31						
H08S1	Diego Carcia H	45.98	269	T	T	08 04 37.8	
	baz=95,slow=75,SNR=4.6						
ODAN	Odare	47.77	321	eP	P	07 15 20.9	-0.3
	comp=Z,10nm,0.4s						
KSAR	Wonju Array Be	47.92	10	P	P	07 15 21.1	-0.8
KSRS	Korea Array	47.93	10	P	P	07 15 21.1	-0.9
	comp=Z,2.7nm,0.8s,baz=186,slow=8.3,SNR=14						
RAMN	Ramite	48.32	320	eP	P	07 15 25.5	0.0
	comp=Z,16nm,0.5s						
JIRN	Jiri	49.08	321	eP	P	07 15 31.0	-0.5
GUN	Gumba	49.45	321	eP	P	07 15 33.8	-0.5
	comp=Z,24nm,0.6s						
PKIN	Phulchoki	49.52	320	eP	P	07 15 33.9	-0.9
	comp=Z,9.9nm,0.5s						
MJAR	Matsushiro Arr	49.70	20	P	P	07 15 31.8	-3.8
	comp=Z,1.1nm,0.6s,baz=196,slow=9.0,SNR=4.3						
KOLN	Koldanda	50.81	319	eP	P	07 15 43.4	-1.1
	comp=Z,16nm,0.6s						
HHC	Hu-ho-hao-te	51.05	353	eP	P	07 15 47.5	+1.7
HHC				pP	sP	07 16 10.8	+11
HHC				S	S	07 22 59.8	-1.4
HHC				pmax	pmax		
	comp=Z,18nm,1.0s						
HHC				pmax	pmax		
	comp=Z,56nm,5.7s						
DANN	Dangsing	51.10	319	eP	P	07 15 45.8	-0.9
	comp=Z,34nm,0.6s						
PYUN	Piuthan	51.43	318	eP	P	07 15 48.5	-0.6
	comp=Z,14nm,0.5s						
GTA	Gaotai	52.28	341	eP	P	07 15 55.3	+0.2
GTA				pP	pP	07 15 59.6	-5.5
GTA				sP	sP	07 16 02.6	-6.4
GTA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
USRK	Ussuriysk Ar.	55.21	11	P	P	07 16 14.3	-2.0
	comp=Z,4.1nm,0.8s,baz=188,slow=6.0						
SONM	Songino Array	58.64	350	P	P	07 16 39.7	-1.0
	comp=Z,2.0nm,0.6s,baz=168,slow=7.9,SNR=11						
SONA1	Songino Array	58.65	350	eP	P	07 16 39.2	-1.6
WMQ	Urumqi	60.63	334	P	P	07 16 56.2	+1.7
WMQ				LR	LR		
	comp=Z,54nm,19.7s						
KSH	Kashi	63.38	324	P	P	07 17 12.6	-0.5
KSH				sP	PcP	07 17 41.1	-8.8
KSH				ePcP	sP	07 17 48.5	+21
KSH				S	S	07 25 33.8	-10
KSH				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,79nm,4.3s						
KSH				LR	LR		
	comp=N,430nm,13.8s						
KSH				LR	LR		
	comp=E,400nm,16.3s						
KBL	Kabul	64.78	316	eP	P	07 17 21.2	-1.2
	comp=E,6.6nm,0.6s						
MK01	Makanchi Array	65.30	333	eP	P	07 17 24.3	-1.1
MK31	Makanchi Array	65.32	333	eP	P	07 17 24.5	-1.0
MKAR	Makanchi Array	65.32	333	P	P	07 17 24.6	-0.9
	comp=E,4.4nm,0.5s,baz=154,slow=7.4,SNR=48						
MKAR	Makanchi Array	65.32	333	eP	P	07 17 24.5	-1.0
	comp=E,29nm,0.6s						
MAKZ	Makanchi	65.47	333	eP	P	07 17 25.2	-1.3
	comp=E,10.0nm,1.7s						
KK31	Karatay Array	68.83	324	eP	P	07 17 46.7	-1.2
KKAR	Karatay Array	68.83	324	eP	P	07 17 46.6	-1.4
KURBB	Kurchatov Arra	69.84	334	P	P	07 17 52.6	-1.3
	comp=E,2.1nm,0.7s,baz=144,slow=5.4,SNR=11						
KURK	Kurchatov	69.87	334	eP	P	07 17 52.9	-1.2
	comp=E,3.6nm,0.7s						
ZAA0	Zalesovo Array	69.95	339	eP	P	07 17 52.8	-1.8
	comp=E,4.0nm,0.6s						
ZALV	Zalesovo Beam	69.95	339	P	P	07 17 52.9	-1.7
	comp=E,5.8nm,0.5s,baz=147,slow=4.3,SNR=15						
ZALV	Zalesovo Beam	69.95	339	eP	P	07 17 52.8	-1.8
PETK	Petropavlovsk-	70.99	24	P	P	07 18 00.2	-0.7
	comp=E,1.3nm,0.5s,baz=205,slow=6.4						
BVAR	Borovoye Array	75.15	332	P	P	07 18 25.1	-0.5
	comp=E,1.6nm,0.7s,baz=107,slow=5.0,SNR=10.0						
ABKAR	Akbulak array	78.35	325	eP	P	07 18 42.3	-1.3
AKTO	Aktyubinsk	80.02	325	P	P	07 18 52.0	-0.8
	comp=E,2.5nm,0.8s,baz=98,slow=4.2,SNR=5.7						
BRTR	Keskin Array B	92.75	310	P	P	07 19 55.3	-0.8
	comp=E,0.8nm,0.8s,baz=92,slow=3.5,SNR=3.1						
BRTR				LR	LR	08 05 52.8	
	comp=E,22nm,19.1s,baz=228,slow=38						
TORD	Torodi Ar. Bea	118.60	280	PKP	PKPdf	07 25 32.0	-0.2
	comp=E,0.3nm,0.5s,baz=103,slow=1.4						
NVAR	Mina Array Bea	121.66	51	PKP	PKPdf	07 25 39.2	+1.4
	comp=E,0.3nm,0.6s,baz=314,slow=3.1,SNR=3.2						
TXAR	Lajitas Array	135.78	58	PKP	PKPdf	07 26 06.2	+1.5
	comp=E,0.2nm,0.5s,baz=267,slow=1.5,SNR=3.5						

IDC 08 07:16:54.0±1.1**, 9°.73N×57°.10E, h0^{km}, mb3.8**/11**, mb1 4.0**/11**, mb1mx3.7**/66**, mbtmp3.8**/11**, MS3.2**/7**, Ms1 3.2**/7**, ms1mx2.8**/60**, Error ellipse: s-maj=29.8km s-min=20.9km az=21.0, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08N2	Diego Garcia H	21.12	138	T	T	07 43 20.6	
	baz=319,slow=76,SNR=45						
H08N3	Diego Garcia H	21.13	139	T	T	07 43 21.3	
	baz=319,slow=76,SNR=59						
H08N1	Diego Carcia H	21.14	138	T	T	07 43 19.8	
	baz=319,slow=76,SNR=52						
KMBO	Kilima Mbogo	22.51	242	LR	LR	07 30 10.0	
	comp=Z,41nm,21.9s,baz=123,slow=35						
MMAI	Mount Meron Ar	30.61	322	LR	LR	07 35 16.4	
	comp=Z,40nm,18.3s,baz=190,slow=36						
GNI	Garni	32.23	342	LR	LR	07 37 34.5	
	comp=Z,38nm,18.5s,baz=198,slow=38						
KBZ	Khabaz	36.06	342	P	P	07 23 58.5	+1.3
	2.3nm,0.8s,baz=100,slow=3.4,SNR=3.6						
KBZ				LR	LR	07 40 06.7	
	comp=Z,27nm,21.1s,baz=144,slow=39						
KVAR	Kislovodsk Arr	36.32	342	LR	LR	07 40 24.2	
	comp=Z,30nm,19.7s,baz=281,slow=39						
CMAR	Chiang Mai Arr	41.42	73	P	P	07 24 44.0	+1.4
	0.6nm,0.3s,baz=257,slow=7.5,SNR=5.9						
CMAR				LR	LR	07 41 33.2	
	comp=Z,24nm,18.1s,baz=203,slow=36						
MKAR	Makanchi Array	42.70	26	P	P	07 24 52.9	+0.1
	1.3nm,0.8s,baz=205,slow=7.7,SNR=12						
BOSA	Boshof	48.98	218	LR	LR	07 44 08.5	
	comp=Z,57nm,20.1s,baz=36,slow=33						
ZALV	Zalesovo Beam	49.36	21	P	P	07 25 43.6	-1.5
	1.2nm,0.5s,baz=225,slow=8.6,SNR=5.6						
TORD	Torodi Ar. Bea	54.33	279	P	P	07 26 24.1	+1.2
	0.4nm,0.7s,baz=84,slow=7.4						
SONM	Songino Array	56.14	38	P	P	07 26 36.1	+0.6
	0.3nm,0.6s,baz=230,slow=11,SNR=2.8						
FINES	FINESS Array B	56.42	343	P	P	07 26 36.5	-0.6
	1.3nm,0.8s,baz=161,slow=14,SNR=3.9						
ESDC	Sonseca Array	61.65	310	P	P	07 27 13.2	-0.8
	2.4nm,1.0s,baz=85,slow=5.7,SNR=7.7						
ARCES	ARCESS Array B	63.10	348	P	P	07 27 21.8	-1.3
	1.4nm,0.7s,baz=126,slow=6.2,SNR=4.5						
WRA	Warramunga Arr	81.49	112	P	P	07 29 13.4	-0.5
	0.9nm,1.0s,baz=295,slow=4.4,SNR=5.8						
ASAR	Alice Springs	81.99	116	P	P	07 29 15.8	-0.7
	0.4nm,0.6s,baz=295,slow=5.2,SNR=5.9						

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*ISK **08** 07:17:25.3, 38°.68N×43°.18E, h20^{km}, ML2.5/4*
*CSEM **08** 07:17:26.4±0.3, 38°.70N×43°.18E, h10^{km}, ML2.5, Error ellipse: s-maj=5.5km s-min=5.2km az=3.0*
*DDA **08** 07:17:26.9, 38°.69N×43°.20E, h7^{km}, Md2.8*
ISC 08 07:17:26.5±0.9**, 38°.71N**±0°.03×**43°.20E**±0°.02**, h15**^{km}±8^{km}**, n22, σ0^{s}.70**/38**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	Van	0.19	127	PG	Pb	07 17 31.5	-0.2
VANB				SG	Sb	07 17 36.1	+1.0
VANB	Van	0.19	127	ePg	Pb	07 17 31.5	-0.2
VANB				eSg	Sb	07 17 36.1	+1.0
TVAN	Van	0.24	138	i P	Pg	07 17 31.7	-0.3
TVAN				i S	Sg	07 17 36.0	+0.3
TVAN	Van	0.24	138	P	Pg	07 17 31.7	-0.3
TVAN				S	Sg	07 17 36.0	+0.3
ADCV	BITLIS_Adilcev	0.39	285	i P	Pg	07 17 34.6	+0.2
ADCV				i S	Sb	07 17 41.7	+0.7
ADCV	BITLIS_Adilcev	0.39	285	P	Pg	07 17 34.7	+0.2
ADCV				S	Sb	07 17 41.7	+0.7
VMUR	Van-Muradiye	0.40	46	i P	Pb	07 17 35.6	+0.2
VMUR				i S	Sb	07 17 42.6	+1.1
VMUR	Van-Muradiye	0.40	46	P	Pb	07 17 35.7	+0.2
VMUR				S	Sb	07 17 42.6	+1.1
GEVA	Gevas	0.41	196	i P	Pg	07 17 34.3	-0.6
GEVA	Gevas	0.41	196	P	Pg	07 17 34.3	-0.6
CLDR	Caldiran	0.71	52	PG	Pg	07 17 40.0	-0.4
CLDR				SG	Sb	07 17 51.1	+0.8
CLDR	Caldiran	0.71	52	i P	Pg	07 17 38.9	-1.5
CLDR				i S	Sb	07 17 50.5	+0.2
CLDR	Caldiran	0.71	52	P	Pg	07 17 38.9	-1.5
CLDR	Caldiran	0.71	52	ePg	Pg	07 17 40.0	-0.4
CLDR				S	Sb	07 17 50.5	+0.2
CLDR				eSg	Sb	07 17 51.1	+0.8
TUTA	Tutak	0.76	337	i P	Pg	07 17 41.2	-0.1
TUTA	Tutak	0.76	337	P	Pg	07 17 41.2	-0.1
AGRB	Hanur-Agry	0.88	349	PG	Pb	07 17 42.9	-0.7
AGRB				SG	Sn	07 17 56.6	-0.5
AGRB	Hanur-Agry	0.88	349	ePg	Pb	07 17 42.9	-0.7
AGRB				eSg	Sn	07 17 56.6	-0.5
GURO	Guroymak-BITLI	0.93	261	PG	Pb	07 17 43.5	-0.9
GURO	Guroymak-BITLI	0.93	261	ePg	Pb	07 17 43.5	-0.9
EATA	Eleskirt	1.28	335	i P	Pn	07 17 50.4	+0.3
EATA				i S	Sg	07 18 08.1	+0.2
EATA	Eleskirt	1.28	335	P	Pn	07 17 50.4	+0.3
EATA				S	Sg	07 18 08.1	+0.2

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*ISCJB **08** 07:18:21.9±0.8, 37°.20N±0°.04×42°.45E±0°.03, h1^{km}±5^{km}, Error ellipse: s-maj=6.1km s-min=3.8km az=6.5*
*ISK **08** 07:18:21.9, 37°.24N×42°.44E, h8^{km}, ML3.1/9*
*CSEM **08** 07:18:22.3±0.2, 37°.21N×42°.44E, h2^{km}, MD2.8, Error ellipse: s-maj=4.6km s-min=2.8km az=20.0*
*DDA **08** 07:18:22.8, 37°.25N×42°.47E, h7^{km}, Md2.8*
*ISN **08** 07:18:27.7±0.3, 36°.62N×42°.34E, h0^{km}, ML2.5*
ISC 08 07:18:22.9±1.2**, 37°.25N**±0°.04×**42°.47E**±0°.02**, h9**^{km}±8^{km}**, n44, σ0^{s}.54**/68**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIRN	S˜–rnak	0.25	350	i P	Pg	07 18 27.6	-0.4
SIRN				i S	Sg	07 18 31.7	+0.3
SIRN	S˜–rnak	0.25	350	P	Pg	07 18 27.6	-0.4
SIRN				S	Sg	07 18 31.7	+0.3
SIRT	Sirnak	0.25	355	PG	Pg	07 18 27.6	-0.5
SIRT				SG	Sg	07 18 31.9	+0.4
SIRT	Sirnak	0.25	355	ePg	Pg	07 18 27.6	-0.5
SIRT				eSg	Sg	07 18 31.9	+0.4
SRTM	Siirt_Merkez	0.85	330	i P	Pb	07 18 40.2	+0.2
SRTM				i S	Sb	07 18 51.9	+0.3
SRTM	Siirt_Merkez	0.85	330	P	Pb	07 18 40.2	+0.2
SRTM				S	Sb	07 18 51.9	+0.3
CUKT	Cukurca	0.91	90	PG	Pg	07 18 39.9	-0.6
CUKT				SG	Sb	07 18 53.7	+0.5
CUKT	Cukurca	0.91	90	i P	Pg	07 18 40.8	+0.3
CUKT				i S	Sb	07 18 53.2	0.0
CUKT	Cukurca	0.91	90	ePg	Pg	07 18 39.9	-0.6
CUKT	Cukurca	0.91	90	P	Pg	07 18 40.8	+0.3
CUKT				S	Sb	07 18 53.2	0.0
HAKT	HAKKARI	1.03	72	i P	Pg	07 18 42.5	-0.4
HAKT				i S	Sg	07 18 56.7	+0.3
HAKT	HAKKARI	1.03	72	P	Pg	07 18 42.5	-0.4
HAKT				S	Sg	07 18 56.7	+0.3
BTMN	Batman	1.14	304	i P	Pb	07 18 45.0	+0.1
BTMN				i S	Sn	07 19 01.3	+0.3
BTMN	Batman	1.14	304	P	Pb	07 18 45.0	+0.1
GEVA	Gevas	1.16	24	i P	Pb	07 18 45.4	+0.2
GEVA				i S	Sg	07 19 00.2	-0.1
GEVA	Gevas	1.16	24	P	Pb	07 18 45.4	+0.2
GEVA				S	Sg	07 19 00.2	-0.1
GURO	Guroymak-BITLI	1.34	345	PN	Pn	07 18 47.6	-0.3
GURO				SN	Sn	07 19 06.2	+0.2
GURO	Guroymak-BITLI	1.34	345	ePn	Pn	07 18 47.6	-0.3
GURO				eSn	Sn	07 19 06.2	+0.2
MARD	Mardin	1.35	273	i P	Pn	07 18 47.9	-0.1
MARD				i S	Sb	07 19 05.8	0.0
SVAN	Silvan-Diyarba	1.35	312	PN	Pn	07 18 47.9	0.0
SVAN	Silvan-Diyarba	1.35	312	i P	Pb	07 18 48.5	+0.1
SVAN				i S	Sg	07 19 07.1	+0.8
SVAN	Silvan-Diyarba	1.35	312	ePn	Pn	07 18 47.9	0.0
SVAN	Silvan-Diyarba	1.35	312	P	Pb	07 18 48.5	+0.1
SVAN				S	Sg	07 19 07.1	+0.8
YOVA	Hakkari_Yˆ…kse	1.49	76	i P	Pn	07 18 50.7	+0.6
YOVA				i S	Sg	07 19 11.0	+0.1
YOVA	Hakkari_Yˆ…kse	1.49	76	P	Pn	07 18 50.7	+0.6
YOVA				S	Sg	07 19 11.0	+0.1
ADCV	BITLIS_Adilcev	1.57	7	i P	Pg	07 18 53.3	+0.3
ADCV				i S	Sg	07 19 14.3	+0.9
ADCV	BITLIS_Adilcev	1.57	7	P	Pg	07 18 53.3	+0.3
ADCV				S	Sg	07 19 14.3	+0.9
DIY	Diyarbakir	1.89	291	ePn	Pn	07 18 56.3	+0.9
DYBB	Diyarbakir	1.98	291	PN	Pn	07 18 56.3	-0.3
BNGL	BINGOL	1.99	329	i P	Pb	07 18 59.6	+0.2
BNGL				i S	Sb	07 19 24.9	+0.6
HANI	Diyarbakir_Han	2.01	306	i S	Sn	07 19 20.4	-1.9
HANI	Diyarbakir_Han	2.01	306	S	Sn	07 19 20.4	-1.9
TUTA	Tutak	2.17	7	i P	Pb	07 19 01.4	-1.0
TUTA	Tutak	2.17	7	P	Pb	07 19 01.4	-1.0
BNGB	Bingˆ¶l	2.24	322	PN	Pn	07 19 00.3	+0.1
BINT	Bingol	2.25	317	ePn	Pn	07 19 00.3	-0.1
SVRC	Sivrice-ELAZID	2.74	295	PN	Pn	07 19 07.3	+0.1
SVRC	Sivrice-ELAZID	2.74	295	ePn	Pn	07 19 07.3	+0.1
URFA	Urfa	2.91	275	PN	Pn	07 19 09.4	0.0
URFA	Urfa	2.91	275	ePn	Pn	07 19 09.4	0.0
PTK	Pertek	2.93	305	PN	Pn	07 19 09.6	-0.2
PTK	Pertek	2.93	305	ePn	Pn	07 19 09.6	-0.2
MALT	Malatya	3.37	290	PN	Pn	07 19 16.2	+0.4
MALT	Malatya	3.37	290	ePn	Pn	07 19 16.2	+0.4

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*ISCJB **08** 07:24:05.7±0.5, 20°.4N±0°.1×45°.6W±0°.1, h10^{km}, mb3.9/14, MS3.6/26, Error ellipse: s-maj=19.5km s-min=11.2km az=44.6*
*IDC **08** 07:24:06.0±0.6, 20°.34N×45°.61W, h0^{km}, mb3.9/15, mb1 4.1/15, mb1mx3.8/66, mbtmp3.9/15, MS3.6/26, Ms1 3.6/26, ms1mx3.4/53, Error ellipse: s-maj=23.5km s-min=14.4km az=132.0*
ISC 08 07:24:07.5±0.7**, 20°.3N**±0°.1×**45°.6W**±0°.1**, h10**^{km}**, n40, σ0^{s}.96**/15**, mb4.0**/14**, MS3.6**/26**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCRV	Puerto La Cruz	20.94	244	P	P	07 28 51.6	+0.9
	10nm,1.0s,baz=34,slow=15,SNR=3.2						
ROSC	El Rosal	31.90	245	LR	LR	07 44 48.6	
	comp=Z,54nm,18.6s,baz=352,slow=39						
TKL	Tuckaleechee C	36.76	303	LR	LR	07 43 12.0	
	comp=Z,69nm,21.6s,baz=58,slow=31						
SCHQ	Schefferville	38.03	340	LR	LR	07 46 00.1	
	comp=Z,62nm,19.9s,baz=334,slow=35						
MDT	Midelt	38.47	63	LR	LR	07 45 34.4	
	comp=Z,69nm,18.4s,baz=229,slow=34						
SIV	San Ignacio	39.16	204	P	P	07 31 36.1	+0.4
	1.8nm,1.0s,baz=22,slow=4.9,SNR=7.7						
KOWA	Kowa	40.01	91	LR	LR	07 45 37.1	
	comp=Z,159nm,19.4s,baz=230,slow=32						
H10N3	ASCENSION HYDR	41.45	129	T	T	08 16 02.8	
	baz=313,slow=75,SNR=22						
H10N2	ASCENSION HYDR	41.45	129	T	T	08 16 10.8	
	baz=313,slow=75,SNR=18						
H10N1	ASCENSION HYDR	41.47	129	T	T	08 16 03.6	
	baz=313,slow=75,SNR=20						
DBIC	Dimbokro	41.73	103	LR	LR	07 46 32.2	
	comp=Z,125nm,18.1s,baz=269,slow=32						
H10S3	ASCENSION HYDR	42.10	131	T	T	08 16 48.6	
	baz=314,slow=75,SNR=29						
H10S1	ASCENSION HYDR	42.10	131	T	T	08 16 51.8	
	baz=314,slow=75,SNR=42						
H10S2	ASCENSION HYDR	42.12	131	T	T	08 16 51.7	
	baz=314,slow=75,SNR=40						
LPAZ	La Paz	42.59	213	P	P	07 32 03.6	-1.1
	1.6nm,0.9s,baz=50,slow=7.4,SNR=6.0						
LPAZ				LR	LR	07 49 07.2	
	comp=Z,56nm,21.3s,baz=22,slow=35						
NNA	Nana	44.46	226	LR	LR	07 50 15.0	
	comp=Z,37nm,21.1s,baz=14,slow=35						
TORD	Torodi Ar. Bea	45.72	91	P	P	07 32 29.1	-0.1
	0.7nm,0.9s,baz=280,slow=5.6						
EKA	Eskdalemuir Ar	47.22	32	P	P	07 32 41.0	+0.6
	2.1nm,0.9s,baz=263,slow=5.7,SNR=4.1						
CPUP	Villa Florida	47.76	194	P	P	07 32 44.8	-0.1
	7.4nm,1.0s,baz=26,slow=8.9,SNR=9.2						
CPUP				LR	LR	07 51 49.8	
	comp=Z,27nm,20.0s,baz=42,slow=35						
ULM	Lac du Bonnet	49.48	319	LR	LR	07 51 51.7	
	comp=Z,79nm,19.5s,baz=162,slow=34						
KEST	Kesra	50.25	60	LR	LR	07 52 41.7	
	comp=Z,68nm,20.1s,baz=251,slow=34						
TXAR	Lajitas Array	53.01	292	P	P	07 33 24.5	-0.5
	0.5nm,1.0s,baz=84,slow=3.9,SNR=3.9						
TXAR				LR	LR	07 55 48.1	
	comp=Z,50nm,19.7s,baz=0.0,slow=36						
GERES	GERESS Array B	54.84	44	P	P	07 33 38.0	0.0
	1.9nm,1.2s,baz=216,slow=4.3,SNR=3.8						
ANMO	Albuquerque	55.09	299	LR	LR	07 55 23.4	
	comp=Z,66nm,20.9s,baz=98,slow=34						
HFS	Hagfors	57.39	31	P	P	07 33 55.8	-0.2
	5.8nm,1.0s,baz=237,slow=5.0,SNR=5.7						
HFS				LR	LR	07 54 31.5	
	comp=Z,27nm,19.4s,baz=212,slow=32						
PDAR	Pinedale Array	57.53	308	P	P	07 33 58.6	+1.1
	0.2nm,0.4s,baz=69,slow=13,SNR=3.5						
PDAR				LR	LR	07 56 49.6	
	comp=Z,53nm,19.6s,baz=102,slow=34						
LPIG	La Paz	59.57	287	LR	LR	07 59 22.9	
	comp=Z,29nm,21.4s,baz=60,slow=36						
ELK	Elko	61.80	306	LR	LR	08 00 59.1	
	comp=Z,90nm,18.1s,baz=83,slow=36						
NEW	Newport	62.90	315	LR	LR	07 59 20.2	
	comp=Z,88nm,18.6s,baz=84,slow=34						
MLR	Muntele Rosu	62.97	49	P	P	07 34 36.1	+1.5
	1.0nm,0.8s,baz=162,slow=13,SNR=6.1						
MLR				LR	LR	07 59 07.6	
	comp=Z,9.2nm,21.4s,baz=174,slow=33						
FINES	FINESS Array B	63.60	31	LR	LR	07 57 10.8	
	comp=Z,34nm,19.5s,baz=36,slow=31						
NVAR	Mina Array Bea	64.36	304	LR	LR	08 03 05.4	
	comp=Z,46nm,18.2s,baz=280,slow=36						
ARCES	ARCESS Array B	64.52	22	P	P	07 34 42.4	-1.9
	4.0nm,0.8s,baz=248,slow=6.4,SNR=6.4						
AKASG	Malin Array Be	64.99	43	P	P	07 34 48.3	+0.7
	0.2nm,0.3s,baz=268,slow=8.0,SNR=4.4						
YBH	Yreka Blue Hor	67.32	308	LR	LR	08 01 58.9	
	comp=Z,67nm,22.0s,baz=83,slow=34						
BRTR	Keskin Array B	69.20	54	P	P	07 35 15.4	+0.6
	1.3nm,0.8s,baz=298,slow=7.8,SNR=4.2						
ILAR	Eielson Array	76.52	334	P	P	07 35 56.9	-0.7
	1.4nm,1.0s,baz=72,slow=4.5,SNR=12						
ILAR				LR	LR	08 08 54.0	
	comp=Z,47nm,19.9s,baz=112,slow=35						
BOSA	Boshof	83.90	123	LR	LR	08 07 23.3	
	comp=Z,72nm,19.4s,baz=312,slow=31						
ZALV	Zalesovo Beam	94.65	27	LR	LR	08 17 45.8	
	comp=Z,16nm,19.1s,baz=68,slow=34						
MKAR	Makanchi Array	98.34	33	LR	LR	08 19 39.8	
	comp=Z,28nm,19.7s,baz=271,slow=34						

MEX 08 07:29:59.3±0.3**, 16°.19N×98°.08W, h3**^{km}±3^{km}**, MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.20	346	eP	Pg	07 30 03.1	-0.2
PNIG				i S	Sg	07 30 06.2	+0.2
TLIG	Tlapa	1.44	341	eP	Pn	07 30 22.9	-3.5
TLIG				eS	Sg	07 30 40.7	-5.0
VHO	Vista Hermosa	1.56	56	eP	Pn	07 30 24.4	-3.6
VHO				eS	Sn	07 30 44.1	-4.8

IDC 08 07:42:28.2±6.6**, 31°.62S×179°.37W, h0**^{km}**, mb3.4**/2**, mb1 3.7**/2**, mb1mx3.4**/43**, mbtmp3.4**/2**, Error ellipse: s-maj=267.7km s-min=60.0km az=158.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	41.89	269	P	P	07 50 19.5	-1.1
	0.4nm,0.8s,baz=101,slow=7.8,SNR=4.6						
WRA	Warramunga Arr	42.99	274	P	P	07 50 30.2	+0.7
	0.2nm,0.4s,baz=114,slow=7.7,SNR=13						
FINES	FINESS Array B	145.86	338	PKPbc	PKPdf	08 02 07.9	-0.3
	1.4nm,0.9s,baz=56,slow=5.9,SNR=4.4						

MEX 08 07:46:11.3±0.3**, 13°.82N×92°.02W, h10**^{km}**, MD3.7, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.11	348	eP	Pb	07 46 29.1	-3.5
THIG				eS	Sg	07 46 43.0	-4.2
PCIG		2.21	329	eP	Pn	07 46 44.6	-3.4
PCIG				i S	Sn	07 47 11.4	-3.9
CCIG	Comitan	2.46	357	i P	Pn	07 46 49.0	-2.7
CCIG				i S	Sn	07 47 17.9	-3.9
TGIG		3.13	340	i P	Pn	07 46 58.7	-2.1
TGIG				i S	Sn	07 47 34.4	-3.9

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*IDC **08** 08:05:51.6±0.9, 10°.75N×125°.68E, h0^{km}, mb3.5/6, mb1 3.7/6, mb1mx3.5/56, mbtmp3.5/6, MS2.8/2, Ms1 2.8/2, ms1mx2.3/47, Error ellipse: s-maj=60.3km s-min=19.0km az=71.0*
*MAN **08** 08:05:56.3, 10°.75N×125°.57E, h10^{km}, mb4.5, ML3.3, MS3.2*
ISC 08 08:05:54.0±1.9**, 10°.88N**±0°.03×**125°.72E**±0°.07**, h16**^{km}±13^{km}**, n27, σ1^{s}.39**/26**, mb3.5**/6**, 2C-2D, Leyte**

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

BESP	Borongan	0.77	339	eP	Pn	08 06 12.2	+2.0
PLP	Palo	0.78	291	⇓eP	Pb	08 06 09.7	+0.3
PLP				i S	Sn	08 06 21.6	-0.3
OCLP	Ormoc	1.11	279	eP	Pn	08 06 15.3	+0.3
SCPH	Surigao	1.11	192	⇓eP	Pb	08 06 13.7	-1.3
MSLP	Maasin	1.13	229	eP	Pb	08 06 14.4	-0.8
MSLP				eS	Sb	08 06 28.6	-1.1
LLP	Lapu-Lapu	1.81	252	eP	Pn	08 06 24.9	+0.2
LLP				eS	Sn	08 06 46.2	-1.2
BUTP	Butuan	1.90	183	eP	Pn	08 06 26.7	+0.9
BUTP				eS	Sg	08 06 56.4	+1.0
CNP	Catarman	1.92	327	eP	Pb	08 06 29.5	+0.7
CNP				eS	Sg	08 06 54.9	-1.1
CGP	Cagayan de Oro	2.61	203	⇑eP	Pn	08 06 37.0	+1.4
CGP				eS	Sn	08 07 07.6	+0.5
RCP	Roxas	3.00	283	⇑eP	Pn	08 06 43.9	+3.0
BUKP	Musuan	3.05	192	eP	Pn	08 06 42.8	+1.1
BUKP				eS	Sb	08 07 25.0	-0.2
PVCP	Virac	3.10	331	eP	Pn	08 06 39.8	-2.6
DAV	Davao City (W)	3.79	182	LR	LR	08 08 42.2	
	comp=Z,150nm,19.9s,baz=352,slow=47						
PAGZ	Pagadian	3.80	218	eP	Pn	08 06 54.0	+2.1
KSRS	Korea Array	26.53	4	LR	LR	08 21 25.1	
	comp=Z,24nm,21.7s,baz=206,slow=35						
WRA	Warramunga Arr	31.78	164	P	P	08 12 15.9	-2.0
	0.3nm,0.6s,baz=346,slow=8.1,SNR=8.0						
ASAR	Alice Springs	35.26	167	P	P	08 12 47.2	-1.0
	0.4nm,0.4s,baz=348,slow=7.1,SNR=12						
H11S3	WAKE ISLAND Hy	40.27	74	T	T	08 56 52.9	
	baz=265						
H11S1	WAKE ISLAND Hy	40.28	74	T	T	08 56 37.6	
	baz=265,slow=74						
H11S2	WAKE ISLAND Hy	40.29	74	T	T	08 56 52.6	
	baz=265,slow=74						
H11N1	WAKE ISLAND Hy	40.58	72	T	T	08 56 52.8	
	baz=265,slow=75,SNR=21						
H11N2	WAKE ISLAND Hy	40.59	72	T	T	08 56 46.7	
	baz=265,slow=75,SNR=16						
H11N3	WAKE ISLAND Hy	40.60	72	T	T	08 56 54.2	
	baz=265,slow=75,SNR=19						
STKA	Stephens Creek	45.15	161	P	P	08 14 10.1	+0.1
	0.8nm,0.6s,baz=328,slow=13,SNR=3.7						
MKAR	Makanchi Array	51.22	323	P	P	08 14 57.3	+0.4
	0.2nm,0.3s,baz=118,slow=8.5,SNR=6.3						
KURBB	Kurchatov Arra	55.27	325	P	P	08 15 27.1	+0.6
	0.3nm,0.5s,baz=126,slow=7.1,SNR=3.3						
ILAR	Eielson Array	79.13	26	P	P	08 17 58.7	+1.0
	0.3nm,0.7s,baz=255,slow=5.2,SNR=3.9						

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*SOME **08** 08:45:18.9, 40°.47N×77°.25E, h10^{km}*
*KRNET **08** 08:45:20.7±0.1, 40°.60N×77°.34E, mb3.6*
*NNC **08** 08:45:23.0±1.2, 40°.60N×77°.19E, h0^{km}, mb3.8, mpv3.5, Error ellipse: s-maj=10.4km s-min=5.6km az=147.0*
*ISCJB **08** 08:45:24.9±1.0, 40°.47N±0°.06×77°.08E±0°.05, h10^{km}, Error ellipse: s-maj=8.5km s-min=5.9km az=179.5*

ISC 08 08:45:20.2±1.2**, 40°.55N**±0°.05×**77°.15E**±0°.03**, h10^{km}, n43, σ1^{s}46**/69**, 34C-14D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	Taragay, Kyrgy	1.27	23	⇑iP	Pn	08 45 43.6	-0.9
	baz=17						
TARG				⇑iS	Sg	08 46 00.9	-0.4
	baz=17						
ULHL	Ulahol	1.82	338	P	Pg	08 45 55.3	+0.1
	SNR=16						
ULHL	Ulahol	1.82	338	⇑iP	Pg	08 45 54.8	-0.4
	baz=34						
ULHL				⇑iS	Sg	08 46 20.2	+1.4
	baz=34						
KZA	Kyzart	2.09	317	P	Pg	08 46 00.3	0.0
	SNR=52						
KZA	Kyzart	2.09	317	⇑iP	Pg	08 46 00.1	-0.2
	baz=14						
KZA				⇑iS	Sg	08 46 29.2	+1.8
	baz=14						
BOOM	Boomskoye usch	2.14	335	⇑iP	Pg	08 46 00.1	-1.1
	baz=31						
BOOM				⇑iS	Sg	08 46 29.0	+0.1
	baz=31						
PRZ	Przheval'sk	2.15	26	⇑iP	Pb	08 45 58.2	-1.0
	baz=23						
PRZ				⇑iS	Sb	08 46 25.5	-0.5
	baz=23						
IZV	Izvestkoviy	2.51	351	eP	Pg	08 46 07.3	-1.0
	86nm,0.5s						
IZV				eS	Sg	08 46 42.1	+1.2
	163nm,0.5s						
UCH	Uchtor	2.59	311	P	Pb	08 46 08.0	+0.9
	SNR=9.2						
UCH	Uchtor	2.59	311	⇑iP	Pb	08 46 06.9	-0.2
	baz=8.0						
UCH				⇑iS	Sg	08 46 41.5	-2.1
	baz=8.0						
MDOK	Medeo	2.61	358	eP	Pg	08 46 09.0	-1.2
	79nm,0.4s						
MDOK				eS	Sg	08 46 44.4	+0.4
	179nm,0.5s						
MTBS	Maitube	2.63	348	eP	Pg	08 46 09.6	-1.0
	35nm,0.4s						
MTBS				eS	Sg	08 46 45.6	+1.0
	162nm,0.4s						
TKM2	Tokmak 2	2.64	334	⇑Pn	Pb	08 46 07.4	-0.3
	3.7nm,0.3s						
TKM2				⇑Pg	Pg	08 46 11.2	+0.5
	21nm,0.5s						
TKM2				⇑Lg	Lg	08 46 46.6	
	104nm,0.7s						
TKM2	Tokmak 2	2.64	334	P	Pb	08 46 07.3	-0.3
	SNR=24						
TKM2	Tokmak 2	2.64	334	⇑eP	Pb	08 46 07.2	-0.4
	baz=31						
TKM2				⇑iS	Sb	08 46 41.2	+1.1
	baz=31						
KNDC	Almaty	2.67	357	⇑Pg	Pg	08 46 10.2	-1.1
	71nm,0.6s						
KNDC				⇑Lg	Lg	08 46 47.0	
	304nm,0.5s						
KBK	Karagaybulak	2.67	323	P	Pg	08 46 11.0	-0.4
	SNR=21						
KBK	Karagaybulak	2.67	323	⇑eP	Pb	08 46 07.9	-0.3
	baz=20						
KBK				⇑iS	Sb	08 46 42.2	+1.1
	baz=20						
SATY	Saty	2.67	20	eP	Pb	08 46 09.1	+0.9
	57nm,0.4s						
SATY				eS	Sg	08 46 44.4	-1.7
	169nm,0.4s						
KOTS	Kotyrbulak	2.68	359	eP	Pg	08 46 10.5	-1.0
	92nm,0.3s						
KOTS				eS	Sg	08 46 47.8	+1.6
	382nm,0.5s						
SFK	Sufi-Kurgan	2.84	260	⇑Pg	Pg	08 46 15.4	+0.8
	7.3nm,0.6s						
SFK				⇓Lg	Lg	08 46 54.4	
	24nm,0.4s						
SFK	Sufi-Kurgan	2.84	260	⇓eP	Pb	08 46 11.9	+0.8
	baz=60						
SFK				⇓iS	Sg	08 46 49.7	-1.8
	baz=60						
AAK	Ala-Archa	2.88	317	⇑Pg	Pg	08 46 14.9	-0.5
	31nm,0.7s						
AAK				⇑Lg	Lg	08 46 54.2	
	148nm,1.4s						
AAK	Ala-Archa	2.88	317	P	Pg	08 46 14.8	-0.6
	SNR=15						
AAK	Ala-Archa	2.88	317	⇓iP	Pb	08 46 10.7	-1.1
	baz=15						
AAK				⇓iS	Sb	08 46 47.3	+0.2
	baz=15						
UZB	Uzynbulak	2.94	28	eP	Pb	08 46 13.7	+0.8
	18nm,0.6s						
UZB				eS	Sg	08 46 53.1	-1.7
	59nm,0.5s						
KURS	Kuram	3.03	14	eP	Pb	08 46 15.4	+1.2
KURS				eS	Sg	08 46 56.2	-1.3
CHMS	Chumysh	3.03	325	P	Pg	08 46 17.0	-1.3
	SNR=8.6						
CHMS	Chumysh	3.03	325	⇑eP	Pb	08 46 12.8	-1.4
	baz=22						
CHMS				⇑iS	Sb	08 46 50.8	-0.5
	baz=22						
AML	Almayashu	3.04	302	P	Pg	08 46 18.5	0.0
	SNR=7.1						
AML	Almayashu	3.04	302	⇓iP	Pb	08 46 13.5	-1.1
	baz=0.0						
AML				⇓iS	Sb	08 46 52.2	+0.2
	baz=0.0						
SHLS	Shalkode	3.12	33	eP	Pg	08 46 19.6	-0.4
	28nm,0.4s						
SHLS				eS	Sg	08 47 03.1	+2.6
	145nm,0.5s						
PDGK	Podgornoye	3.28	31	⇑Pg	Pg	08 46 22.8	-0.2
	13nm,0.5s						
PDGK				⇓Lg	Lg	08 47 02.5	
	157nm,0.7s						
PDGK	Podgornoye	3.28	31	⇓iP	Pn	08 46 14.1	+2.4
	baz=30						
PDGK				⇓iS	Sn	08 46 52.9	+2.1
	baz=30						
EKS2	Erkin-Say	3.29	311	P	Pb	08 46 18.5	-0.2
	SNR=8.0						
CHKK	Chushkaly	3.30	358	eP	Pb	08 46 20.3	+1.5
	73nm,0.6s						
CHKK				eS	Sg	08 47 05.1	-1.1
	250nm,0.5s						
USP	Ospenovka	3.36	325	P	Pb	08 46 19.4	-0.4
	SNR=15						
USP	Ospenovka	3.36	325	⇑iP	Pb	08 46 17.2	-2.6
	baz=22						
USP				⇑iS	Sb	08 46 58.8	-1.9
	baz=22						
KTMS	Ketmen	3.75	38	eP	Pb	08 46 26.8	+0.3
	7.4nm,0.3s						
KTMS				eS	Sg	08 47 16.1	-4.4
	35nm,0.8s						
MNAS	Manas	3.99	301	⇑Pg	Pg	08 46 34.4	-2.1
	5.0nm,0.5s						
MNAS				⇓Lg	Lg	08 47 28.5	
	17nm,0.6s						
KK31	Karatay Array	5.58	299	⇓Pg	Pg	08 47 04.1	-2.9
	0.9nm,0.3s,baz=126,slow=17,SNR=8.2						
KK31				⇑Lg	Lg	08 48 20.1	
	5.0nm,0.7s,baz=111,slow=28,SNR=5.8						
MAKZ	Makanchi	7.16	28	⇓Pg	Pg	08 47 34.1	-3.2
	4.0nm,1.4s						
MAKZ				⇑Lg	Lg	08 49 09.0	
	4.8nm,1.1s						
MK31	Makanchi Array	7.26	29	⇑Pn	Pn	08 47 08.2	+1.8
	0.5nm,0.5s						
MK31				⇓Pg	Pg	08 47 35.4	-3.8
	0.8nm,0.5s						
MK31				⇑Lg	Lg	08 49 07.2	
	1.4nm,0.6s,baz=106,slow=47,SNR=3.5						

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*IDC **08** 09:11:54.8±1.6, 19°.10S×168°.94E, h0^{km}, mb4.1/7, mb1 4.2/8, mb1mx3.9/49, mbtmp4.1/8, ML3.2/1, MS3.2/2, Ms1 3.3/2, ms1mx2.6/41, Error ellipse: s-maj=39.8km s-min=31.2km az=141.0*
*ISCJB **08** 09:11:56.8±0.6, 19°.04S±0°.07×168°.58E±0°.08, h10^{km}, mb4.4/16, MS3.5/1, Error ellipse: s-maj=11.8km s-min=9.3km az=23.3*
*NEIC **08** 09:11:58.8±0.6, 19°.05S×168°.57E, h10^{km}, mb4.6/11, Error ellipse: s-maj=12.6km s-min=12.1km az=197.0*

ISC 08 09:11:58.6±0.7**, 19°.08S**±0°.09×**168°.7E**±0°.1**, h10^{km}, n31, σ1^{s}57**/32**, mb4.5**/16**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.64	215	Pn	Pn	09 12 54.4	-0.6
	1.9nm,0.3s,baz=35,slow=19,SNR=28						
DZM				Sn	Sn	09 13 38.0	-0.1
	17nm,0.3s,baz=308,slow=23,SNR=15						
DZM	Mont Dzumac	3.64	215	ePn	Pn	09 12 55.4	+0.4
DZM				eSn	Sn	09 13 38.0	-0.1
HNR	Honiara	12.78	317	LR	LR	09 19 03.5	
	comp=Z,63nm,18.1s,baz=186,slow=33						
LHI	Lord Howe Isla	15.12	213	ePn	Pn	09 15 32.8	+0.5
HIZ	Hauiti	20.10	166	eP	P	09 16 33.6	+1.2
	32nm,0.9s						
MXZ	Matakaoa Point	20.25	157	eP	P	09 16 34.9	+0.9
	49nm,1.1s						
CTA	Charters Tower	21.15	264	P	P	09 16 46.0	+2.0
	4.2nm,0.8s,baz=84,slow=9.9,SNR=3.6						
COEN	Coen	24.96	278	eP	P	09 17 28.0	+5.5
	17nm,1.1s						
STKA	Stephens Creek	27.48	237	P	P	09 17 45.4	+0.3
	0.7nm,0.4s,baz=45,slow=8.6,SNR=3.8						
WB2	Warramunga Arr	32.33	263	eP	P	09 18 27.1	-1.2
	13nm,1.5s						
WRAB	Tennant Creek	32.33	263	eP	P	09 18 26.9	-1.4
	15nm,1.5s						
WR1	Warramunga Arr	32.34	263	eP	P	09 18 26.8	-1.6
	1.7nm,0.9s						
WRA	Warramunga Arr	32.34	263	P	P	09 18 26.8	-1.6
	1.3nm,0.8s,baz=91,slow=8.6,SNR=25						
AS01	Alice Springs	32.60	256	eP	P	09 18 30.0	-0.6
AS31	Alice Springs	32.65	256	eP	P	09 18 30.6	-0.4
	2.2nm,0.6s						
ASAR	Alice Springs	32.65	256	P	P	09 18 30.3	-0.7
	5.4nm,0.7s,baz=84,slow=8.7,SNR=92						
MTN	Manton Dam	36.57	274	eP	P	09 19 05.0	+0.1
	6.2nm,0.8s						
FITZ	Fitzroy Crossi	40.73	264	P	P	09 19 39.9	0.0
	6.9nm,0.7s,baz=123,slow=9.2,SNR=19						
FITZ	Fitzroy Crossi	40.73	264	eP	P	09 19 40.1	+0.2
	5.9nm,0.6s						
VNDA	Vanda	58.57	182	LR	LR	09 43 54.3	
	comp=Z,34nm,18.3s,baz=240,slow=33						
NACB	Ninganchiao	62.88	311	eP	P	09 22 23.7	-1.4
	15nm,0.9s						
QSPA	South Pole Qui	70.97	180	eP	P	09 23 14.8	-1.4
	4.9nm,1.4s						
SONA0	Songino Array	86.77	323	eP	P	09 24 41.8	-1.2
SONM	Songino Array	86.77	323	P	P	09 24 41.8	-1.2
	1.1nm,0.8s,baz=116,slow=3.4,SNR=4.7						
PMSA	Palmer Station	87.24	160	eP	P	09 24 46.0	+0.9
	110nm,1.5s						
ISA	Isabella, Lake	87.80	51	eP	P	09 24 49.3	+1.0
BORC	Borrego Spring	88.34	54	eP	P	09 24 52.7	+1.8
SNAA	Sanae	89.30	183	P	P	09 24 52.4	-2.3
	1.1nm,1.0s,baz=196,slow=13,SNR=5.6						
DAVOX	Davos/Dischmat	147.35	333	PKPbc	PKPdf	09 31 40.9	+0.5
	2.4nm,0.5s,baz=12,slow=19,SNR=7.3						
TIP	Timpagrande	148.53	315	ePKPdf	PKPdf	09 31 44.1	+1.7
TIP				ePKPbc	PKPab	09 31 48.9	-0.5
SENIN	Lac Senin/Sane	148.76	335	ePKPdf	PKPbc	09 31 44.9	-1.7

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*NEIC **08** 09:12:20.0±0.0, 20°.51S×70°.47W, h36^{km}, mb4.4/3, ML4.0(GUC), After GUC.*
NEIC Felt [III] at Alto Hospicio and Iquique.
*GUC **08** 09:12:20.6±0.5, 20°.51S×70°.47W, h36^{km}±1^{km}, ML4.0*
*IDC **08** 09:12:27.5±3.0, 20°.34S×70°.14W, h82^{km}±25^{km}, mb3.5/6, mb1 3.7/9, mb1mx3.5/40, mbtmp3.9/9, MS3.2/4, Ms1 3.2/4, ms1mx2.9/28, Error ellipse: s-maj=29.0km s-min=18.6km az=86.0*

ISC 08 09:12:18.1±1.6**, 20°.50S**±0°.03×**70°.56W**±0°.07**, h10^{km}**±10^{km}**, n41, σ1^{s}56**/44**, mb4.2**/5**, 1C-6D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.99	25	⇓iP	Pn	09 12 37.9	-0.3
PSGC				eS	Sb	09 12 50.9	+0.3
PSGC				IAML		09 12 52.5	
	comp=N,7μm,0.3s						
PB02	IPOC Station P	1.02	143	⇓iP	Pn	09 12 38.6	-0.1
PB02				eS	Sb	09 12 51.9	+0.2
PB01	IPOC Station P	1.14	118	ePn	Pn	09 12 40.0	-0.3
PB01				eSn	Sb	09 12 54.4	-0.5
PB01	IPOC Station P	1.14	118	⇓iP	Pn	09 12 40.0	-0.3
PB01				eS	Sb	09 12 54.5	-0.5
PB01				IAML		09 12 55.0	
	comp=N,11μm,0.3s						
PB08	IPOC Station P	1.37	75	⇓iP	Pg	09 12 44.0	-0.4
PB08				eS	Sb	09 13 01.3	-0.5
PB07	IPOC Station P	1.37	153	⇓eP	Pg	09 12 44.1	-0.4
PB07				eS	Sg	09 13 01.9	-0.5
PB07				IAML		09 13 10.7	
	comp=E,4μm,0.6s						
MNMC	Minye Minye	1.64	34	ePn	Pb	09 12 48.3	-0.3
MNMC				eSn	Sg	09 13 10.2	-0.6
MNMC	Minye Minye	1.64	34	⇓iP	Pb	09 12 48.3	-0.3
MNMC				eS	Sb	09 13 09.4	0.0
MNMC				IAML		09 13 11.3	
	comp=E,7μm,0.3s						
PB03	IPOC Station P	1.71	154	⇑iP	Pb	09 12 48.9	-0.9
PB03				eS	Sb	09 13 10.7	-0.9
PB03				IAML		09 13 19.9	
	comp=E,2μm,0.3s						
PB04	IPOC Station P	1.86	168	ePn	Pb	09 12 51.5	-0.9
PB04				eSn	Sg	09 13 17.8	-0.3
PB04	IPOC Station P	1.86	168	eP	Pn	09 12 50.4	+0.1
PB04				eS	Sn	09 13 13.7	-0.4
PB04				IAML		09 13 26.1	
	comp=E,3μm,0.2s						
PB12	IPOC Station P	1.89	7	eP	Pn	09 12 51.2	+0.6
PB12				eS	Sn	09 13 15.0	+0.5
PB12				IAML		09 13 22.4	
	comp=N,2μm,0.4s						
PB16	IPOC Station P	2.37	25	eP	Pn	09 12 59.2	+1.5
PB16				eS	Sn	09 13 28.9	+1.8
PB16				IAML		09 13 36.0	
	comp=E,902nm,0.5s						
GO02	Mina Guanaco	4.72	169	ePn	Pn	09 13 29.7	-0.1
LPAZ	La Paz	4.78	29	P	Pn	09 13 35.0	+4.1
	comp=E,2.6nm,0.3s,baz=283,slow=2.8,SNR=107						
LPAZ				LR	LR	09 14 59.0	
	comp=E,60nm,20.5s,baz=290,slow=34						
LPAZ	La Paz	4.78	29	ePn	Pn	09 13 36.3	+5.4
GO03	Copiap	7.07	178	ePn	Pn	09 14 05.9	+4.2
LCO	Las Campanas	8.47	181	ePn	Pn	09 14 25.5	+4.3
SIV	San Ignacio	10.07	65	P	Pn	09 14 41.8	-1.2
	comp=E,3.3nm,0.3s,baz=267,slow=9.6,SNR=67						
SIV				LR	LR	09 19 22.2	
	comp=E,116nm,18.1s,baz=28,slow=43						
CPUP	Villa Florida	13.46	118	P	Pn	09 15 32.8	+3.5
	comp=E,0.1nm,0.3s,baz=312,slow=14,SNR=2.8						
CPUP				LR	LR	09 21 22.1	
	comp=E,100nm,18.9s,baz=294,slow=41						
TRQA	Tornquist	19.01	159	eP	Pn	09 16 40.6	-0.2
	comp=E,40nm,1.7s						
PLCA	Paso Flores	20.17	180	P	Pn	09 16 57.3	+2.6
	comp=E,2.0nm,0.8s,baz=24,slow=11,SNR=5.1						
PLCA	Paso Flores	20.17	180	eP	Pn	09 16 58.4	+3.7
	comp=E,31nm,1.6s						
PTGA	Pitinga	22.21	29	P	P	09 17 13.6	-1.3
	comp=E,7.8nm,0.5s,baz=208,slow=11,SNR=17						
PTGA	Pitinga	22.21	29	eP	P	09 17 13.9	-1.1
	comp=E,7.4nm,0.6s						
SDV	Santo Domingo	29.20	360	LR	LR	09 32 07.7	
	comp=E,356nm,20.8s,baz=60,slow=41						
TXAR	Lajitas Array	58.94	326	P	P	09 22 17.8	-0.1
	comp=E,0.1nm,0.8s,baz=138,slow=9.6,SNR=2.7						
SNAA	Sanae	63.72	161	P	P	09 22 49.9	+0.1
	comp=E,1.0nm,0.6s,baz=262,slow=9.0,SNR=7.5						
KOWA	Kowa	74.05	68	P	P	09 23 52.8	-2.0
	comp=E,0.8nm,0.5s,baz=243,slow=4.5,SNR=2.8						
TORD	Torodi Ar. Bea	78.48	71	P	P	09 24 16.5	-3.6
	comp=E,1.4nm,0.6s,baz=251,slow=5.5						
H11S2	WAKE ISLAND Hy	126.22	278	T	T	11 50 37.8	
	baz=102,slow=75,SNR=185						
H11S1	WAKE ISLAND Hy	126.22	278	T	T	11 50 25.3	
	baz=102,slow=75,SNR=116						
H11S3	WAKE ISLAND Hy	126.23	278	T	T	11 50 37.0	
	baz=102,slow=75,SNR=126						
H11N3	WAKE ISLAND Hy	126.28	280	T	T	11 50 34.1	
	baz=102,slow=75,SNR=89						
H11N2	WAKE ISLAND Hy	126.29	280	T	T	11 50 35.2	
	baz=102,slow=75,SNR=67						
H11N1	WAKE ISLAND Hy	126.29	280	T	T	11 50 39.9	
	baz=102,slow=75,SNR=49						
WRA	Warramunga Arr	132.99	213	PKP	PKPdf	09 31 34.3	-0.4
	comp=E,0.3nm,0.6s,baz=143,slow=1.7,SNR=6.1						
ZALV	Zalesovo Beam	141.68	23	PKP	PKPdf	09 31 49.8	+0.2
	comp=E,1.1nm,0.3s,baz=316,slow=4.0,SNR=4.7						
MKAR	Makanchi Array	145.70	34	PKPbc	PKPdf	09 31 56.6	-0.4
	comp=E,1.9nm,0.7s,baz=317,slow=3.4,SNR=18						
MJAR	Matsushiro Arr	150.25	309	PKPbc	PKPbc	09 32 10.1	+0.2
	comp=E,0.8nm,0.5s,baz=103,slow=1.6,SNR=4.4						
SONM	Songino Array	152.62	4	PKPbc	PKPbc	09 32 14.9	-0.2
	comp=E,0.6nm,0.4s,baz=309,slow=2.6,SNR=3.8						

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*ISCJB **08** 09:14:37.9±1.2, 23°.6S±0°.2×179°.9E±0°.2, h526^{km}, mb3.5/5, Error ellipse: s-maj=28.0km s-min=23.5km az=7.0*
*IDC **08** 09:14:43.0±5.8, 23°.99S×179°.97E, h585^{km}±71^{km}, mb3.0/5, mb1 3.2/6, mb1mx2.8/47, mbtmp4.0/6, Error ellipse: s-maj=78.0km s-min=27.6km az=3.0*

ISC 08 09:14:38.3±1.0**, 23°.7S**±0°.2×**180°.0W**±0°.2**, h526^{km}, n12, σ0^{s}74**/11**, mb3.5**/5**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	14.77	189	P	P	09 17 45.5	-0.1
	1.6nm,0.3s,baz=42,slow=19,SNR=10						
CTA	Charters Tower	31.50	270	P	P	09 20 17.9	+0.6
	2.4nm,0.4s,baz=112,slow=9.9,SNR=10.0						
ASAR	Alice Springs	42.10	260	P	P	09 21 44.3	-0.1
	0.7nm,0.5s,baz=97,slow=7.2,SNR=14						
WRA	Warramunga Arr	42.45	266	P	P	09 21 46.5	-0.6
	1.4nm,0.5s,baz=103,slow=8.5,SNR=90						
FITZ	Fitzroy Crossi	50.88	265	P	P	09 22 51.2	+0.3
	0.9nm,0.5s,baz=93,slow=7.7,SNR=6.6						
TXAR	Lajitas Array	90.28	58	P	P	09 26 43.9	+0.7
	0.2nm,0.7s,baz=213,slow=3.1,SNR=2.9						
FINES	FINESS Array B	138.22	342	PKhKP	PKPpre	09 32 54.0	
	0.9nm,0.8s,baz=93,slow=2.8,SNR=2.3						
FINES				PKP	PKPdf	09 33 02.9	-0.1
	1.1nm,0.7s,baz=59,slow=2.0,SNR=3.9						
HFS	Hagfors	142.31	349	PKhKP	PKPpre	09 33 05.7	
	1.9nm,0.3s,baz=60,slow=3.5,SNR=31						
AKASG	Malin Array Be	144.78	327	PKPbc	PKPdf	09 33 14.1	-0.9
	1.2nm,0.5s,baz=43,slow=3.9,SNR=6.3						
BRTR	Keskin Array B	147.45	307	PKPbc	PKPdf	09 33 20.9	+0.9
	0.3nm,0.5s,baz=106,slow=5.1,SNR=2.1						
MMAI	Mount Meron Ar	147.62	295	PKPbc	PKPbc	09 33 23.8	-0.2
	1.0nm,0.3s,baz=74,slow=6.2,SNR=2.6						
EKA	Eskdalemuir Ar	148.27	3	PKPbc	PKPbc	09 33 23.5	-1.2
	1.4nm,0.9s,baz=336,slow=2.3,SNR=3.7						

IDC 08 09:16:08.2±1.8**, 3°.85S**×**148°.81E, h0^{km}, mb3.8**/4**, mb1 4.1**/4**, mb1mx3.6**/45**, mbtmp3.8**/4**, MS3.2**/7**, Ms1 3.2**/7**, ms1mx2.8**/47**, Error ellipse: s-maj=113.4km s-min=26.6km az=126.0, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	17.77	347	LR	LR	09 25 48.5	
	comp=Z,24nm,19.1s,baz=164,slow=33						
WRA	Warramunga Arr	21.33	220	P	P	09 20 56.4	-0.7
	1.7nm,0.9s,baz=44,slow=12,SNR=7.5						
WRA				LR	LR	09 30 10.9	
	comp=Z,56nm,21.8s,baz=165,slow=40						
ASAR	Alice Springs	24.40	215	P	P	09 21 28.4	-0.2
	2.8nm,1.0s,baz=48,slow=8.2,SNR=14						
ASAR				LR	LR	09 32 13.7	
	comp=Z,87nm,19.4s,baz=58,slow=40						
DZM	Mont Dzumac	24.91	138	LR	LR	09 30 17.3	
	comp=Z,83nm,18.6s,baz=226,slow=34						
BATI	Baumata	25.73	254	LR	LR	09 35 02.2	
	comp=Z,151nm,18.2s,baz=208,slow=44						
FITZ	Fitzroy Crossi	26.74	236	P	P	09 21 50.6	+0.8
	5.2nm,1.0s,baz=77,slow=10,SNR=7.6						
FITZ				LR	LR	09 32 00.5	
	comp=Z,56nm,18.8s,baz=38,slow=36						
H11S3	WAKE ISLAND Hy	28.34	38	T	T	09 51 08.2	
	baz=220,slow=76,SNR=114						
H11S2	WAKE ISLAND Hy	28.35	38	T	T	09 51 07.8	
	baz=220,slow=76,SNR=75						
H11S1	WAKE ISLAND Hy	28.36	38	T	T	09 51 08.2	
	baz=220,slow=76,SNR=51						
H11N1	WAKE ISLAND Hy	29.40	37	T	T	09 52 24.7	
	baz=219,slow=76,SNR=101						
H11N3	WAKE ISLAND Hy	29.41	37	T	T	09 52 25.4	
	baz=219,slow=76,SNR=78						
H11N2	WAKE ISLAND Hy	29.42	37	T	T	09 52 26.0	
	baz=219,slow=76,SNR=149						
KSRS	Korea Array	45.46	337	LR	LR	09 43 03.8	
	comp=Z,6.3nm,18.1s,baz=220,slow=36						
ILAR	Eielson Array	82.81	23	P	P	09 28 34.1	-0.1
	0.4nm,1.0s,baz=262,slow=5.0,SNR=3.0						

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*SOME **08** 09:16:45.4, 43°.50N×85°.27E, h15^{km}*
*NNC **08** 09:17:01.8±2.1, 43°.53N×84°.55E, h0^{km}, mb3.5, mpv3.0, Error ellipse: s-maj=19.4km s-min=9.9km az=121.0*

ISC 08 09:16:57.1±2.4**, 43°.3N**±0°.1×**84°.78E**±0°.10**, h10^{km}, n13, σ2^{s}62**/23**, 5C-4D, Northern Xinjiang**

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

DJR	Jarkent	3.76	288	eP	Pn	09 17 59.2	+4.0
	9.0nm,0.2s						
DJR				eS	Sg	09 18 54.2	-3.8
	49nm,0.3s						
PDGK	Podgornoye	3.86	273	⇓Pn	Pn	09 18 01.1	+4.5
	2.6nm,0.3s						
PDGK				⇑Pg	Pb	09 18 08.7	+3.4
	7.1nm,0.4s						
PDGK				⇑Lg	Lg	09 18 58.0	
	32nm,0.5s						
SHLS	Shalkode	3.89	270	eP	Pn	09 17 57.6	+0.6
	37nm,0.4s						
SHLS				eS	Sb	09 18 50.9	-2.0
	115nm,0.3s						
MK31	Makanchi Array	3.95	334	⇓Pn	Pn	09 17 59.4	+1.7
	0.1nm,0.1s,baz=150,slow=15,SNR=93						
MK31				⇑Pg	Pb	09 18 07.9	+1.2
	0.7nm,0.2s,baz=144,slow=16,SNR=30						
MK31				Lg	Lg	09 18 58.2	
	11nm,0.3s,baz=144,slow=29,SNR=12						
MAKZ	Makanchi	4.06	332	⇓Pn	Pn	09 18 00.8	+1.5
	0.5nm,0.3s						
MAKZ				⇓Pg	Pb	09 18 10.6	+1.9
	4.2nm,0.6s						
MAKZ				⇑Lg	Lg	09 19 01.2	
	24nm,0.5s						
ZSN	Zaisan	4.19	1	eP	Pn	09 17 57.6	-3.4
	1.1nm,0.3s						
ZSN				eS	Sn	09 18 50.7	+0.7
	8.4nm,0.6s						
UZB	Uzynbulak	4.21	270	eP	Pb	09 18 09.9	-1.4
	10nm,0.3s						
UZB				eS	Sg	09 19 10.3	-1.9
	22nm,0.3s						
KAPS	Kapalarasan	4.38	299	eP	Pn	09 18 08.9	+5.1
	3.7nm,0.1s						
KAPS				eS	Sb	09 19 09.0	+1.8
	32nm,0.5s						
KPKS	Kokpek	4.45	275	eP	Pb	09 18 12.9	-2.4
	11nm,0.1s						
KPKS				eS	Sg	09 19 15.3	-4.5
	79nm,0.3s						
ZHN	Zhinishke	4.63	271	eP	Pb	09 18 17.8	-0.8
ZHN				eS	Sg	09 19 25.2	-0.7
ARXS	Arharly	5.12	283	eP	Pb	09 18 27.1	+0.3
	8.9nm,0.4s						
ARXS				eS	Sg	09 19 41.6	+0.1
	39nm,0.5s						
CHKK	Chushkaly	5.69	279	eP	Pb	09 18 36.1	-0.3
CHKK				eS	Sg	09 19 56.0	-3.7
TKM2	Tokmak 2	6.73	270	⇑Lg	Lg	09 20 29.9	
	7.1nm,0.7s						

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*ISCJB **08** 09:40:12.3±0.4, 19°.07S±0°.07×168°.96E±0°.07, h10^{km}, mb4.4/22, MS3.2/11, Error ellipse: s-maj=12.5km s-min=7.5km az=140.1*

*IDC **08** 09:40:12.5±0.8, 19°.04S×169°.00E, h0^{km}, mb4.1/14, mb1 4.3/15, mb1mx4.0/48, mbtmp4.1/15, ML3.3/1, MS3.2/12, Ms1 3.2/12, ms1mx3.0/37, Error ellipse: s-maj=25.8km s-min=18.5km az=134.0*

*NEIC **08** 09:40:13.5±0.4, 19°.02S×169°.03E, h10^{km}, mb4.7/12, Error ellipse: s-maj=13.5km s-min=7.9km az=157.0*

ISC 08 09:40:13.8±0.6, 19°.08S±0°.10×169°.0E±0°.1, h10^{km}, n71, σ0^s.94/61, mb4.4/22, MS3.2/11, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.83	219	Pn	Pn	09 41 12.5	-0.5
	2.1nm,0.3s,baz=18,slow=10,SNR=31						
DZM				Sn	Sn	09 41 55.8	-2.4
	57nm,0.3s,baz=133,slow=22,SNR=16						
DZM	Mont Dzumac	3.83	219	ePn	Pn	09 41 14.1	+1.1
DZM				eSn	Sn	09 41 57.8	-0.4
HNR	Honiara	13.01	316	LR	LR	09 47 22.7	
	comp=Z,127nm,19.5s,baz=180,slow=33						
CTA	Charters Tower	21.48	264	P	P	09 45 04.0	+1.3
	6.5nm,0.9s,baz=90,slow=9.1,SNR=3.0						
CTAO	Charters Tower	21.48	264	eP	P	09 45 04.1	+1.3
	21nm,1.3s						
COEN	Coen	25.29	278	eP	P	09 45 42.5	+1.7
	20nm,1.1s						
STKA	Stephens Creek	27.76	237	P	P	09 46 03.6	+0.7
	1.1nm,0.6s,baz=78,slow=12,SNR=3.5						
STKA	Stephens Creek	27.76	237	eP	P	09 46 03.1	+0.3
	1.9nm,1.4s						
RAR	Rarotonga	29.34	99	LR	LR	09 58 31.5	
	comp=Z,19nm,18.1s,baz=278,slow=37						
JAY	Jayapura	32.23	297	LR	LR	09 57 14.9	
	comp=Z,50nm,20.9s,baz=309,slow=32						
WB2	Warramunga Arr	32.66	263	eP	P	09 46 44.8	-1.7
	15nm,1.5s						
WRAB	Tennant Creek	32.66	263	eP	P	09 46 44.8	-1.6
	8.4nm,1.3s						
WR1	Warramunga Arr	32.67	263	eP	P	09 46 44.9	-1.6
	14nm,1.4s						
WRA	Warramunga Arr	32.67	263	P	P	09 46 44.9	-1.6
	1.2nm,0.5s,baz=88,slow=8.4,SNR=32						
AS01	Alice Springs	32.93	256	eP	P	09 46 48.1	-0.6
AS31	Alice Springs	32.97	256	eP	P	09 46 48.4	-0.7
	3.0nm,0.8s						
ASAR	Alice Springs	32.97	256	P	P	09 46 48.5	-0.7
	6.5nm,0.7s,baz=84,slow=8.7,SNR=103						
FORT	Forrest	38.73	244	eP	P	09 47 38.6	+0.2
	62nm,1.4s						
PPT	Papeete	39.26	95	eP	P	09 47 42.5	-0.5
PPTF	Pamatai, Papee	39.27	95	eP	P	09 47 42.8	-0.3
	37nm,1.1s						
GUMO	Guam	40.26	322	LR	LR	10 01 48.6	
	comp=Z,46nm,21.9s,baz=149,slow=32						
FITZ	Fitzroy Crossi	41.06	264	P	P	09 47 57.9	+0.1
	11nm,0.7s,baz=118,slow=8.8,SNR=22						
SIJI	Sorong	41.20	292	P	P	09 47 59.3	+0.2
	4.7nm,0.8s,baz=153,slow=11,SNR=3.7						
MBWA	Marble Bar	46.19	259	eP	P	09 48 39.3	+0.1
	22nm,1.4s						
VNDA	Vanda	58.58	182	LR	LR	10 11 53.5	
	comp=Z,56nm,19.0s,baz=281,slow=32						
JHJ	Hachijo jima 2	58.95	331	LR	LR	10 15 23.3	
	comp=Z,12nm,19.1s,baz=114,slow=36						
MJAR	Matsushiro Arr	62.52	332	P	P	09 50 36.0	-1.8
	1.4nm,0.9s,baz=162,slow=7.6,SNR=4.7						
MJAR				LR	LR	10 17 13.4	
	comp=Z,7.0nm,19.4s,baz=165,slow=36						
MAJO	Matsushiro	62.52	332	eP	P	09 50 36.0	-1.8
JNU	Nakatsue	63.42	325	LR	LR	10 14 53.0	
	comp=Z,16nm,21.9s,baz=122,slow=33						
ASAJ	Asahikawa	67.39	340	P	P	09 51 10.2	+0.9
	2.8nm,0.8s,baz=112,slow=11,SNR=4.4						
ASAJ				LR	LR	10 15 41.0	
	comp=Z,37nm,22.0s,baz=172,slow=32						
ASAJ	Asahikawa	67.39	340	eP	P	09 51 10.2	+0.9
	5.5nm,0.9s						
KSRS	Korea Array	68.27	326	LR	LR	10 19 48.0	
	comp=Z,7.5nm,19.5s,baz=120,slow=35						
QSPA	South Pole Qui	70.97	180	P	P	09 51 32.9	+1.4
	3.2nm,1.0s,baz=39,slow=4.4,SNR=3.1						
PETK	Petropavlovsk-	72.56	353	LR	LR	10 18 29.6	
	comp=Z,22nm,21.3s,baz=123,slow=32						
CM01	Chiang Mai Arr	78.23	294	eP	P	09 52 14.1	-0.2
CMAR	Chiang Mai Arr	78.26	294	P	P	09 52 15.7	+1.3
	1.2nm,0.7s,baz=139,slow=4.1,SNR=6.9						
SONA0	Songino Array	86.98	323	eP	P	09 52 59.7	+0.3
SONM	Songino Array	86.98	323	P	P	09 52 59.7	+0.3
	2.1nm,0.8s,baz=138,slow=4.5,SNR=12						
SONM				LR	LR	10 29 27.6	
	comp=Z,14nm,21.7s,baz=81,slow=34						
SONA1	Songino Array	86.98	323	eP	P	09 52 59.4	0.0
WESC	Westside Schoo	88.40	55	eP	P	09 53 06.2	-0.2
NV01	Mina Array Sit	88.85	49	eP	P	09 53 09.2	+0.5
NVAR	Mina Array Bea	88.85	49	P	P	09 53 09.2	+0.5
	0.1nm,0.3s,baz=227,slow=8.5,SNR=3.6						
SNAA	Sanae	89.31	183	P	P	09 53 10.4	+0.3
	1.1nm,0.7s,baz=197,slow=11,SNR=3.7						
SNAA	Sanae	89.31	183	eP	P	09 53 10.4	+0.3
	3.0nm,0.8s						
ILAR	Eielson Array	90.14	17	P	P	09 53 13.0	-0.8
	0.2nm,0.8s,baz=239,slow=5.1,SNR=3.5						
MK32	Makanchi Array	101.49	316	ePdif	Pdif	09 54 07.4	+1.5
MKAR	Makanchi Array	101.49	316	P	Pdif	09 54 07.4	+1.5
	0.4nm,0.7s,baz=100,slow=6.3,SNR=3.9						
ARA0	ARCESS Array S	124.87	345	ePKPdf	PKPdf	09 59 13.2	-0.2
ARCES	ARCESS Array B	124.87	345	PKP	PKPdf	09 59 13.2	-0.2
	1.2nm,0.6s,baz=14,slow=1.9,SNR=3.6						
EKA	Eskdalemuir Ar	143.33	353	PKP	PKPbc	09 59 45.9	+0.6
	0.5nm,0.6s,baz=3.9,slow=3.1,SNR=2.6						
CONA	Conrad Observa	143.91	329	ePKPdf	PKPdf	09 59 49.2	-0.4
	2.0nm,0.6s						
GERES	GERESS Array B	144.26	332	PKP	PKPdf	09 59 48.9	-1.3
	0.8nm,0.7s,baz=66,slow=3.2,SNR=6.6						
GEA0	GERESS Array S	144.27	332	ePKPdf	PKPbc	09 59 48.6	+0.2
LIT	Litokhoron	144.46	313	ePKPdf	PKPbc	09 59 48.7	-0.5
IDI	Anoyia	144.48	304	PKP	PKPdf	09 59 50.0	-0.9
	2.6nm,0.5s,baz=124,slow=3.6,SNR=5.5						
ARSA	Arzberg	144.54	328	ePKPdf	PKPdf	09 59 50.1	-0.5
	4.8nm,1.2s						
MOA	Molln	144.73	330	ePKPdf	PKPdf	09 59 50.0	-1.0
	4.8nm,0.7s						
FNA	Florina	144.90	315	ePKPdf	PKPab	09 59 49.8	-0.8
AGG	Agios Georgios	145.03	312	ePKPbc	PKPab	09 59 49.9	-1.2
SOKA	Soboth	145.18	328	ePKPdf	PKPdf	09 59 51.5	-0.3
	4.7nm,0.6s						
OBKA	Obir	145.53	328	ePKPab	PKPab	09 59 52.7	-0.2
	5.1nm,0.8s						
KBA	Koelnbreinsper	145.72	330	ePKPab	PKPab	09 59 53.1	-0.5
	7.9nm,1.0s						
MYKA	Terra Mystica	145.90	329	ePKPab	PKPbc	09 59 53.4	-0.3
	2.5nm,0.5s						
WATA	Walderalm	146.34	332	epPKPdf	PKPab	09 59 56.1	+0.3
	0.8nm,0.5s						
ABTA	Abfaltersbach	146.35	330	ePKPab	PKPdf	09 59 53.9	+0.1
	1.8nm,0.5s						
MOTA	Moosalm	146.54	332	i pPKPdf	PKPab	09 59 56.5	-0.1
	3.4nm,0.8s						
RETA	Reutte	146.58	333	ePKPab	PKPbc	09 59 55.6	-0.1
	1.9nm,0.5s						
FETA	Feichten	146.95	332	epPKPdf	PKPbc	09 59 56.8	-0.1
	2.3nm,0.6s						
DAVA	Damuels	147.11	333	ePKPab	PKPbc	09 59 57.4	+0.1
	9.4nm,1.2s						
DAVOX	Davos/Dischmat	147.51	333	PKPbc	PKPbc	09 59 58.9	+0.4
	baz=308,slow=2.4						
TIP	Timpagrande	148.77	316	ePKPbc	PKPbc	10 00 02.2	+0.3

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*IDC **08** 09:40:15.1±0.9, 31°.40S×177°.65W, h0^{km}, mb4.3/5, mb1 4.5/6, mb1mx3.9/44, mbtmp4.3/6, ML4.1/1, Error ellipse: s-maj=30.4km s-min=25.3km az=95.0*

*ISCJB **08** 09:40:17.1±0.7, 31°.44S±0°.08×177°.7W±0°.1, h26^{km}, mb4.4/9, Error ellipse: s-maj=17.1km s-min=10.1km az=26.9*

*NEIC **08** 09:40:19.7±2.4, 31°.36S×177°.67W, h29^{km}±16^{km}, mb4.7/7, Error ellipse: s-maj=12.1km s-min=8.5km az=112.0*

ISC 08 09:40:18.5±0.7, 31°.40S±0°.06×177°.6W±0°.1, h26^{km}, n40, σ1^s.73/46, mb4.4/9, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.16	353	Pn	Pn	09 40 50.9	-1.9
	52nm,0.3s,baz=165,slow=20,SNR=5.0						
RAO				Sn	Sn	09 41 14.2	-4.6
	142nm,0.3s,baz=127,slow=20,SNR=5.7						
RAO	Raoul Island	2.16	353	ePn	Pn	09 40 52.8	0.0
RAO				eSn	Sn	09 41 14.2	-4.6
URZ	Urewera	8.10	211	Pn	Pn	09 42 10.3	-4.1
	0.7nm,0.3s,baz=29,slow=13,SNR=6.3						
URZ				Sn	Sn	09 43 39.6	-5.6
	2.4nm,0.3s,baz=336,slow=20,SNR=6.1						
OUZ	Omahuta	8.29	240	ePn	Pn	09 42 19.6	+2.6
BKZ	Black Stump Fm	9.12	210	ePn	Pn	09 42 29.4	+0.9
THZ	Tophouse	12.84	214	ePn	Pn	09 43 18.9	-0.4
DZM	Mont Dzumac	17.00	299	Pn	P	09 44 17.9	+1.6
	4.7nm,0.3s,baz=127,slow=20,SNR=6.0						
DZM	Mont Dzumac	17.00	299	ePn	P	09 44 19.1	+2.8
	27nm,1.1s						
CTA	Charters Tower	34.31	280	P	P	09 47 04.0	+1.0
	13nm,0.9s,baz=115,slow=11,SNR=5.4						
CTAO	Charters Tower	34.31	280	eP	P	09 47 04.2	+1.3
	22nm,1.0s						
AS01	Alice Springs	43.37	268	eP	P	09 48 18.9	0.0
AS31	Alice Springs	43.41	268	eP	P	09 48 19.1	-0.1
	1.5nm,0.7s						
ASAR	Alice Springs	43.41	268	P	P	09 48 19.1	-0.2
	3.2nm,0.7s,baz=107,slow=7.5,SNR=10						
WB2	Warramunga Arr	44.48	273	eP	P	09 48 27.4	-0.4
	11nm,0.6s						
WRAB	Tennant Creek	44.48	273	eP	P	09 48 27.2	-0.6
	8.2nm,0.6s						
WR1	Warramunga Arr	44.49	273	eP	P	09 48 27.4	-0.5
	12nm,0.6s						
WRA	Warramunga Arr	44.49	273	P	P	09 48 27.4	-0.5
	2.1nm,0.3s,baz=111,slow=8.1,SNR=45						
QSPA	South Pole Qui	58.71	180	P	P	09 50 13.8	+0.1
	0.7nm,0.5s,baz=99,slow=2.7,SNR=5.0						
QSPA	South Pole Qui	58.71	180	eP	P	09 50 14.8	+1.0
	3.2nm,0.9s						
BCW	Bitter Crk WRg	85.72	44	eP	P	09 52 55.2	0.0
PASC	Pasadena Art C	85.94	46	eP	P	09 52 57.3	+1.1
PETK	Petropavlovsk-	86.87	345	P	P	09 53 01.0	+0.7
	1.6nm,0.8s,baz=144,slow=10.0						
PEA1	Petropavlovsk-	86.87	345	eP	P	09 53 01.0	+0.7
MK32	Makanchi Array	118.68	310	ePKPdf	PKPdf	09 59 03.6	-0.3
MKAR	Makanchi Array	118.68	310	PKP	PKPdf	09 59 03.6	-0.3
	0.3nm,0.8s,baz=54,slow=2.1,SNR=3.7						
KURK	Kurchatov	121.99	313	ePKPdf	PKPdf	09 59 10.7	+0.6
KURBB	Kurchatov Arra	122.03	313	PKP	PKPdf	09 59 10.7	+0.5
	0.7nm,0.2s,baz=87,slow=1.7,SNR=5.9						
FIA1	FINESS Array S	146.20	340	ePKPdf	PKPab	09 59 56.3	-0.1
FIA0	FINESS Array S	146.20	340	ePKPdf	PKPab	09 59 56.1	-0.4
FINES	FINESS Array B	146.20	340	PKPbc	PKPab	09 59 56.1	-0.4
	9.6nm,0.8s,baz=42,slow=4.3,SNR=44						
HFS	Hagfors	150.29	349	PKPbc	PKPbc	10 00 07.2	+0.6
	1.5nm,0.7s,baz=64,slow=3.4,SNR=4.5						
HFS				PKPab	sPKPdf	10 00 13.3	+0.2
	1.5nm,0.7s,baz=80,slow=1.8,SNR=4.8						
MMAI	Mount Meron Ar	152.09	282	PKPbc	PKPbc	10 00 13.4	+1.6
	1.6nm,0.3s,baz=111,slow=6.3,SNR=3.6						
AKASG	Malin Array Be	152.30	322	PKPbc	PKPbc	10 00 11.9	+0.4
	2.3nm,0.7s,baz=46,slow=3.4,SNR=6.6						
AKASG				PKPab	sPKPbc	10 00 22.9	-0.3
	1.0nm,0.6s,baz=51,slow=2.8,SNR=4.4						
AKBB	Malin Array Si	152.30	322	ePKPdf	PKPdf	10 00 04.9	+0.2
AKBB				ePKPbc	PKiKP	10 00 12.3	+0.4
KIEV	Kiev	152.31	322	ePKPdf	PKPdf	10 00 04.9	+0.2
BR101	Keskin Array S	153.37	297	ePKPbc	PKPbc	10 00 14.7	+0.2
BRTR	Keskin Array B	153.37	297	PKPbc	PKPbc	10 00 14.7	+0.2
	0.5nm,0.6s,baz=142,slow=4.3,SNR=4.5						
CLL	Collm	158.62	342	ePKPab	PKPab	10 00 48.0	-0.5
TORD	Torodi Ar. Bea	161.82	178	PKP	PKPdf	10 00 19.5	+1.6
	0.7nm,0.9s,baz=132,slow=2.1						
TOA1	Torodi Ar. Sit	161.82	178	ePKPdf	PKPdf	10 00 19.5	+1.6

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*IDC **08** 09:41:13.1±0.9, 9°.69N×125°.89E, h0^{km}, mb3.7/7, mb1 3.8/7, mb1mx3.5/61, mbtmp3.7/7, MS2.8/1, Ms1 2.8/1, ms1mx2.1/48, Error ellipse: s-maj=72.2km s-min=17.2km az=72.0*

*MAN **08** 09:41:17.9, 9°.76N×125°.97E, h1^{km}, mb4.6, ML3.5, MS3.3*

ISC 08 09:41:15.3±1.9, 9°.73N±0°.04×126°.00E±0°.07, h11^{km}±12^{km}, n24, σ1^s.41/25, mb3.5/8, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	0.51	276	⇑eP	Pn	09 41 27.7	-0.8
SCPH				eS	Sb	09 41 35.2	+1.4
BUTP	Butuan	0.84	207	eP	Pn	09 41 34.4	+1.3
BUTP				eS	Sn	09 41 47.4	+1.9
MSLP	Maasin	1.20	290	eP	Pn	09 41 39.4	+1.3
MSLP				eS	Sn	09 41 55.8	+1.4
PLP	Palo	1.75	325	⇓eP	Pn	09 41 45.3	-0.4
PLP				i S	Sn	09 42 09.2	+1.2
BESP	Borongan	1.94	343	eP	Pb	09 41 51.7	+0.9
BESP				eS	Sb	09 42 16.2	+1.1
BUKP	Musuan	2.06	207	eP	Pb	09 41 53.6	+0.9
BUKP				eS	Sg	09 42 21.6	+0.1
LLP	Lapu-Lapu	2.09	287	eP	Pb	09 41 53.1	-0.2
LLP				eS	Sb	09 42 19.2	-0.1
TBP	Tagbilaran	2.11	269	eP	Pg	09 41 55.1	-0.7
CNP	Catarman	3.06	335	eP	Pn	09 42 07.3	+3.6
CNP				eS	Sb	09 42 45.6	-1.7
WRA	Warramunga Arr	30.60	164	P	P	09 47 30.3	+0.7
	0.2nm,0.5s,baz=343,slow=8.8,SNR=6.8						
ASAR	Alice Springs	34.08	167	P	P	09 48 00.5	+0.4
	0.2nm,0.3s,baz=347,slow=7.1,SNR=5.4						
KLR	Kul'dur	39.67	6	P	P	09 48 47.5	+0.2
	0.1nm,0.7s,baz=170,slow=6.1,SNR=3.3						
H11S3	WAKE ISLAND Hy	40.33	73	T	T	10 31 44.9	
	baz=266,slow=74						
H11S1	WAKE ISLAND Hy	40.34	73	T	T	10 31 46.5	
	baz=266						
H11S2	WAKE ISLAND Hy	40.35	73	T	T	10 31 45.3	
	baz=266,slow=74						
H11N1	WAKE ISLAND Hy	40.68	71	T	T	10 32 11.9	
	baz=264,slow=75,SNR=9.4						
H11N2	WAKE ISLAND Hy	40.69	71	T	T	10 32 11.1	
	baz=264,slow=75,SNR=6.0						
H11N3	WAKE ISLAND Hy	40.70	71	T	T	10 32 12.0	
	baz=264,slow=75,SNR=7.2						
STKA	Stephens Creek	43.98	161	P	P	09 49 20.3	-2.5
	1.0nm,0.6s,baz=0.0,slow=11,SNR=3.1						
MKAR	Makanchi Array	52.30	323	P	P	09 50 26.4	-0.7
	0.2nm,0.3s,baz=111,slow=7.1,SNR=5.8						
MA2	Magadan	53.13	15	LR	LR	10 15 26.7	
	comp=Z,7.5nm,18.4s,baz=346,slow=39						
KURBB	Kurchatov Arra	56.37	326	P	P	09 50 55.8	-0.8
	0.2nm,0.5s,baz=128,slow=6.8,SNR=4.0						
ARCES	ARCESS Array B	84.61	340	P	P	09 53 48.2	-0.4
	1.4nm,0.8s,baz=72,slow=5.8,SNR=4.0						
FINES	FINESS Array B	86.24	332	P	P	09 53 55.7	-1.2
	0.7nm,0.5s,baz=98,slow=2.9,SNR=7.0						

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*ISCJB **08** 09:47:48.0±0.6, 36°.30N±0°.04×71°.35E±0°.08, h150^{km}, mb3.4/5, Error ellipse: s-maj=10.2km s-min=3.9km az=157.0*

*IDC **08** 09:47:48.4±7.8, 36°.26N×71°.14E, h130^{km}±66^{km}, mb3.3/6, mb1 3.3/10, mb1mx3.0/65, mbtmp3.7/10, MS2.9/1, Ms1 2.9/1, ms1mx2.1/43, Error ellipse: s-maj=66.4km s-min=19.6km az=38.0*

*NNC **08** 09:47:52.7±1.9, 36°.78N×70°.69E, h136^{km}±39^{km}, mb3.3, mpv4.0, Error ellipse: s-maj=20.0km s-min=15.2km az=75.0*

ISC 08 09:47:48.0±0.8, 36°.31N±0°.06×71°.29E±0°.09, h150^{km}, n31, σ2^s.66/38, mb3.4/5, 4C-8D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	4.09	25	⇓P	Pn	09 48 51.2	+1.6
	13nm,0.3s						
SFK				⇓S	Sn	09 49 38.5	+1.0
	37nm,0.4s						
DHRM	DHARAMSHALA	5.80	133	eP	Pn	09 49 09.8	-2.4
DHRM				eS	Sn	09 50 18.1	+0.1
DHRM				IAML		09 50 21.5	
	comp=N,190nm,0.4s						
DHRM				IAML		09 50 21.6	
	comp=E,160nm,0.3s						
MNAS	Manas	6.24	8	⇓P	Pn	09 49 17.1	-0.9
	comp=E,4.4nm,0.5s						
MNAS				⇓S	Sn	09 50 24.1	-4.3
	comp=E,28nm,0.7s						
AAK	Ala-Archa	6.79	20	P	Pn	09 49 26.9	+1.6
	comp=E,3.4nm,0.3s,baz=185,slow=5.1,SNR=10						
AAK				S	Sn	09 50 39.2	-2.3
	comp=E,2.1nm,0.3s,baz=173,slow=17,SNR=6.7						
AAK	Ala-Archa	6.79	20	⇑Pn	Pn	09 49 27.5	+2.2
	comp=E,5.0nm,0.5s						
AAK				⇑Sn	Sn	09 50 39.7	-1.8
	comp=E,13nm,0.7s						
KK31	Karatay Array	6.81	355	⇓P	Pn	09 49 23.4	-2.1
	comp=E,6.0nm,0.3s,baz=173,slow=12,SNR=152						
KK31				⇑S	Sn	09 50 35.5	-6.4
	comp=E,3.3nm,0.3s,baz=190,slow=21,SNR=8.0						
SMLA	Simla	7.12	135	eP	Pn	09 49 30.4	+0.7
SMLA				eS	Sn	09 50 48.2	-1.2
SMLA				IAML		09 50 51.6	
	comp=N,58nm,0.2s						
SMLA				IAML		09 50 52.9	
	comp=E,59nm,0.7s						
TKM2	Tokmak 2	7.39	25	⇑S	Sn	09 50 56.0	-0.1
	comp=E,12nm,0.9s						
KKR	Kurukshetra	7.85	142	eS	Sn	09 51 05.7	-1.2
BHGR	Bahadurgarh	8.97	146	eS	Sn	09 51 30.5	-3.5
JOSI	Joshimath	8.98	127	eS	Sn	09 51 31.7	-2.8
JOSI				IAML		09 51 35.1	
	comp=N,65nm,0.4s						
JOSI				IAML		09 51 36.8	
	comp=E,58nm,0.2s						
KHET	Khetri	9.06	154	eS	Sn	09 51 30.7	-5.4
MKAR	Makanchi Array	13.31	35	P	P	09 50 53.5	-1.9
	comp=E,0.0nm,0.3s,baz=211,slow=11,SNR=3.2						
KOLN	Koldanda	13.46	126	eP	Pn	09 50 53.2	-0.2
GKN	Gorkha	14.01	122	eP	Pn	09 51 00.6	+0.4
	comp=E,25nm,0.5s						
DMN	Daman	14.58	123	eP	Pn	09 51 08.4	+1.0
	comp=E,14nm,0.5s						
PKIN	Phulchoki	14.79	122	eP	Pn	09 51 11.5	+1.3
	comp=E,11nm,0.4s						
PKIN				eS	Sn	09 53 47.6	-7.0
GUN	Gumba	14.92	120	eP	P	09 51 13.7	0.0
	comp=E,11nm,0.4s						
KURBB	Kurchatov Arra	15.23	18	P	P	09 51 18.4	+1.8
	comp=E,0.0nm,0.3s,baz=206,slow=10,SNR=3.8						
JIRN	Jiri	15.29	120	eP	P	09 51 18.5	+0.6
	comp=E,66nm,0.6s						
AB31	Akbulak array	15.36	331	P	Pn	09 51 14.4	-2.3
	comp=E,1.4nm,0.3s,baz=154,slow=12,SNR=70						
AB31				⇓S	Sn	09 53 57.0	-10
	comp=E,0.7nm,0.5s,baz=151,slow=23,SNR=3.8						
RAMN	Ramite	16.02	121	eP	P	09 51 27.0	+1.2
	comp=E,10nm,0.4s						
WSAR	Wadi Sarin	17.02	224	LR	LR	09 59 30.0	
	comp=E,38nm,20.2s,baz=224,slow=42						
AKTO	Aktyubinsk	17.06	330	P	P	09 51 38.2	+1.4
	comp=E,0.5nm,0.3s,baz=150,slow=8.5,SNR=16						
AKTO	Aktyubinsk	17.06	330	⇓P	P	09 51 35.8	-1.0
	comp=E,5.7nm,0.8s						
AKTO				⇓S	S	09 54 37.7	-9.1
	comp=E,2.3nm,0.8s						
ZALV	Zalesovo Beam	19.99	24	P	P	09 52 10.7	+2.1
	comp=E,1.4nm,0.4s,baz=209,slow=12,SNR=4.0						
FINES	FINESS Array B	37.77	326	P	P	09 54 50.9	+1.7
	comp=E,0.8nm,0.7s,baz=122,slow=10,SNR=2.4						
ARCES	ARCESS Array B	41.41	338	P	P	09 55 21.9	+2.8
	comp=E,2.2nm,1.0s,baz=114,slow=9.0,SNR=2.5						
HFS	Hagfors	43.36	322	P	P	09 55 36.7	+1.7
	comp=E,0.4nm,0.4s,baz=94,slow=13,SNR=4.8						
WRA	Warramunga Arr	81.69	122	P	P	09 59 52.8	+2.9
	comp=E,0.3nm,0.4s,baz=326,slow=4.9,SNR=9.1						
ASAR	Alice Springs	83.96	125	P	P	10 00 04.4	+2.9
	comp=E,0.3nm,0.9s,baz=308,slow=5.4,SNR=6.8						

MEX 08 09:48:23.4±0.3, 16°.01N×99°.32W, h5^{km}±9^{km}, MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACP2	Acapulco	1.02	328	i P	Pg	09 48 40.3	-2.7
ACP2				i S	Sg	09 48 53.6	-2.6
PNIG	Pinotepa	1.21	71	eP	Pg	09 48 43.0	-3.6
PNIG				eS	Sg	09 48 58.6	-3.7
TLIG	Tlapa	1.71	25	eP	Pn	09 48 50.5	-3.4
TLIG				i S	Sn	09 49 11.2	-5.0
HMTT	Tlapaneco	1.92	22	i P	Pn	09 48 53.1	-3.8
HMTT				i S	Sn	09 49 17.3	-4.3
VHO	Vista Hermosa	2.70	67	eP	Pn	09 49 05.2	-2.4
VHO				i S	Sn	09 49 36.8	-4.0

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*IDC **08** 10:28:05.0±0.7, 12°.68N×91°.29E, h0^{km}, mb3.8/9, mb1 3.9/11, mb1mx3.6/65, mbtmp3.8/11, ML3.7/2, MS2.8/3, Ms1 2.9/3, ms1mx2.4/66, Error ellipse: s-maj=26.3km s-min=16.9km az=56.0*

*ISCJB **08** 10:28:07.6±3.1, 12°.69N±0°.06×91°.32E±0°.07, h32^{km}±22^{km}, mb4.0/15, MS3.2/2, Error ellipse: s-maj=12.8km s-min=7.8km az=137.6*

*NEIC **08** 10:28:10.2±0.8, 12°.69N×91°.31E, h36^{km}±7^{km}, mb4.7/6, Error ellipse: s-maj=6.4km s-min=5.2km az=46.0*

ISC 08 10:28:10.4±0.7, 12°.7N±0°.1×91°.32E±0°.10, h39^{km}±5^{km}, n38, σ0^s.74/38, mb3.9/15, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBA	Port Blair	1.73	126	eP	Pn	10 28 37.9	-0.1
PBA				eS	Sn	10 28 56.8	-2.0
PBA				AML	AML	10 29 04.6	
	comp=N,17µm,0.2s						
PBA				AML	AML	10 29 05.3	
	comp=E,24µm,0.3s						
CM31	Chiang Mai Arr	9.32	51	ePn	Pn	10 30 22.1	-0.2
CMAR	Chiang Mai Arr	9.32	51	Pn	Pn	10 30 22.1	-0.2
	comp=E,0.1nm,0.3s,baz=241,slow=16,SNR=2.4						

CMAR				Sn	Sn	10 31 57.9	-8.1
	comp=E,0.1nm,0.3s,baz=235,slow=28,SNR=3.3						
CMAR				LR	LR	10 33 33.5	
	comp=E,13nm,19.1s,baz=220,slow=35						
PALK	**Pallekele**	**11.75**	**244**	Pn	**Pn**	**10 30 56.0**	**+0.3**
	comp=E,0.6nm,0.3s,baz=116,slow=10,SNR=2.5						
PALK				Sn	Sn	10 32 56.1	-10
	comp=E,2.0nm,0.3s,baz=119,slow=19,SNR=9.9						
H08S3	**Diego Garcia H**	**27.52**	**224**	T	T	11 03 07.5	
	baz=43						
H08S2	**Diego Garcia H**	**27.53**	**224**	T	T	11 03 20.0	
	baz=43						
H08S1	**Diego Carcia H**	**27.54**	**224**	T	T	11 03 10.0	
	baz=43						
MK01	**Makanchi Array**	**34.82**	**349**	*e*P	**P**	**10 34 57.3**	**-0.2**
MK31	**Makanchi Array**	**34.84**	**349**	*e*P	**P**	**10 34 58.0**	**+0.3**
MK32	**Makanchi Array**	**34.84**	**349**	*e*P	**P**	**10 34 58.0**	**+0.2**
MKAR	**Makanchi Array**	**34.84**	**349**	P	**P**	**10 34 58.0**	**+0.2**
	comp=E,2.1nm,0.7s,baz=163,slow=8.4,SNR=19						
MKAR	**Makanchi Array**	**34.84**	**349**	*e*P	**P**	**10 34 58.0**	**+0.2**
	comp=E,12nm,0.8s						
SONA0	**Songino Array**	**37.24**	**17**	*e*P	**P**	**10 35 18.4**	**0.0**
SONM	**Songino Array**	**37.24**	**17**	P	**P**	**10 35 18.4**	**0.0**
	comp=E,0.6nm,0.4s,baz=195,slow=9.0,SNR=3.0						
JOW	**Kunigami**	**37.37**	**62**	*e*P	**P**	**10 35 20.8**	**+1.2**
	comp=E,29nm,1.3s						
KURBB	**Kurchatov Arra**	**39.25**	**347**	P	**P**	**10 35 35.2**	**+0.2**
	comp=E,1.2nm,0.7s,baz=166,slow=8.1,SNR=11						
KURBB				PcP	**PcP**	**10 37 44.4**	**+0.9**
	comp=E,0.2nm,0.3s,baz=172,slow=2.7,SNR=4.2						
KURK	**Kurchatov**	**39.32**	**347**	*e*P	**P**	**10 35 35.2**	**-0.4**
KURK				*e*PcP	**PcP**	**10 37 44.4**	**+0.7**
SOEI	**Soe**	**39.60**	**123**	*e*P	**P**	**10 35 37.8**	**-0.8**
	comp=E,28nm,0.5s						
BVAR	**Borovoye Array**	**43.57**	**342**	P	**P**	**10 36 10.4**	**-0.1**
	comp=E,0.3nm,0.4s,baz=153,slow=7.7,SNR=2.9						
ARU	**Arti**	**50.40**	**337**	LR	LR	11 00 29.6	
	comp=E,16nm,18.1s,baz=170,slow=39						
WR1	**Warramunga Arr**	**53.33**	**127**	*e*P	**P**	**10 37 26.1**	**-0.1**
	comp=E,14nm,1.4s						
WR1				*e*PcP	**PcP**	**10 38 33.8**	**+0.4**
WRA	**Warramunga Arr**	**53.33**	**127**	P	**P**	**10 37 26.1**	**-0.1**
	comp=E,1.3nm,0.9s,baz=308,slow=8.0,SNR=7.8						
WRA				PcP	**PcP**	**10 38 33.8**	**+0.4**
	comp=E,0.7nm,0.7s,baz=322,slow=3.5,SNR=4.6						
WRAB	**Tennant Creek**	**53.33**	**127**	*e*P	**P**	**10 37 26.6**	**+0.4**
	comp=E,1.9nm,0.8s						
WB2	**Warramunga Arr**	**53.34**	**127**	*e*P	**P**	**10 37 25.9**	**-0.3**
	comp=E,0.2nm,0.4s						
AS31	**Alice Springs**	**55.13**	**131**	*e*P	**P**	**10 37 39.2**	**0.0**
	comp=E,1.9nm,1.4s						
AS31				*e*PcP	**PcP**	**10 38 41.1**	**+0.9**
ASAR	**Alice Springs**	**55.13**	**131**	P	**P**	**10 37 39.2**	**0.0**
	comp=E,0.8nm,0.8s,baz=308,slow=6.6,SNR=9.6						
ASAR				PcP	**PcP**	**10 38 41.1**	**+0.9**
	comp=E,0.7nm,0.7s,baz=311,slow=4.0,SNR=5.6						
AS01	**Alice Springs**	**55.17**	**131**	*e*P	**P**	**10 37 40.3**	**+0.8**
YAK	**Yakutsk**	**56.42**	**21**	LR	LR	11 04 14.8	
	comp=E,26nm,18.8s,baz=68,slow=38						
BR101	**Keskin Array S**	**57.23**	**309**	*e*P	**P**	**10 37 54.0**	**-0.2**
BRTR	**Keskin Array B**	**57.23**	**309**	P	**P**	**10 37 54.0**	**-0.2**
	comp=E,0.7nm,0.7s,baz=115,slow=9.7,SNR=3.1						
FIA0	**FINESS Array S**	**67.19**	**332**	*e*P	**P**	**10 39 00.1**	**-0.2**
FINES	**FINESS Array B**	**67.19**	**332**	P	**P**	**10 39 00.1**	**-0.2**
	comp=E,0.4nm,0.6s,baz=90,slow=8.5,SNR=3.6						
TORD	**Torodi Ar. Bea**	**86.81**	**283**	P	**P**	**10 40 51.4**	**-0.1**
	comp=E,0.8nm,1.0s,baz=85,slow=4.5						
TOA1	**Torodi Ar. Sit**	**86.81**	**283**	*e*P	**P**	**10 40 51.4**	**-0.1**
YPP	**Pitchstone Pla**	**119.85**	**18**	*e*PKPdf	**PKPdf**	**10 46 55.0**	**-2.3**
NVAR	**Mina Array Bea**	**122.09**	**27**	PKP	**PKPdf**	**10 47 03.0**	**+1.4**
	comp=E,0.4nm,0.7s,baz=286,slow=1.7,SNR=4.6						
TAOE	**Nuku Hiva Isla**	**129.36**	**91**	*e*PKPdf	**PKPdf**	**10 47 14.0**	**-2.0**
TXAR	**Lajitas Array**	**135.79**	**19**	PKP	**PKPdf**	**10 47 28.4**	**+0.6**
	comp=E,0.1nm,0.5s,baz=333,slow=0.8,SNR=3.2						

MEX 08 10:46:26.6±0.5,27°.21N×111°.36W,h15^{km}±10^{km},MD3.9, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRIG	**Santa Rosalia**	**0.80**	**278**	*i* P	Pg	10 46 39.3	-2.8
	baz=97,slow=5.1						
SRIG				*e*S	Sg	10 46 49.5	-3.0
GUYB	**Guaymas**	**0.81**	**32**	*e*P	Pg	10 46 39.5	-2.8
GUYB				*e*S	Sg	10 46 49.4	-3.5
HSIG		**1.84**	**11**	*i* P	Pn	10 46 55.2	-2.5
HSIG				*i* S	Sn	10 47 16.7	-4.0

IDC 08 10:56:26.9±1.5,18°.20N×95°.49E,h0^{km},mb3.3/3, mb1 3.4/4,mb1mx3.2/67,mbtmp3.2/4,ML3.1/1,Error ellipse: s-maj=27.9km s-min=21.5km az=33.0,Myanmar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**3.29**	**85**	Pn	Pn	10 57 21.4	+1.7
	0.5nm,0.3s,baz=265,slow=14,SNR=9.7						
CMAR				Lg	Lg	10 58 09.7	
	1.3nm,0.3s,baz=265,slow=30,SNR=9.5						
MKAR	**Makanchi Array**	**30.52**	**342**	P	P	11 02 41.2	-0.7
	0.1nm,0.5s,baz=152,slow=11,SNR=2.3						
WRA	**Warramunga Arr**	**53.75**	**133**	P	P	11 05 51.1	-0.2
	0.5nm,0.7s,baz=318,slow=7.1,SNR=10						
ASAR	**Alice Springs**	**56.01**	**137**	P	P	11 06 08.2	+0.5
	0.1nm,0.5s,baz=315,slow=6.9,SNR=4.2						

CSEM 08 11:13:21.4,27°.72N×18°.10W,h24^{km},ML3.6,Canary Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CJUL	**El Julon, El H**	**0.02**	**55**	P	Pb	11 13 25.7	-0.1
	1µm,0.1s,SNR=7.9						
CJUL				S	Sb	11 13 28.6	-0.2
	23µm,0.1s,SNR=7.9						
CTAD	**Las Tabladas,**	**0.04**	**25**	P	Pb	11 13 25.7	+0.1
	972nm,0.4s,SNR=7.9						
CTAD				S	Sb	11 13 28.3	-0.2
	8µm,0.1s,SNR=7.9						
CORC	**Orchilla, El H**	**0.04**	**252**	P	Pb	11 13 25.5	-0.1
	3µm,0.2s,SNR=7.9						
CORC				S	Sb	11 13 28.6	+0.1
	9µm,0.1s,SNR=7.9						
CTAN	**El Hierro**	**0.06**	**49**	P	Pb	11 13 24.7	-1.0
	1µm,0.1s,SNR=7.9						
CTAN				S	Sb	11 13 28.4	-0.3
	8µm,0.2s,SNR=7.9						
CCUM	**Cumbre, El Hie**	**0.07**	**66**	P	Pb	11 13 25.8	-0.1
	289nm,0.1s,SNR=7.9						
CCUM				S	Sb	11 13 28.8	0.0
	6µm,0.2s,SNR=7.9						
CMCL	**Mercadel, El H**	**0.07**	**93**	P	Pb	11 13 25.9	-0.1
	1µm,0.1s,SNR=7.9						
CMCL				S	Sb	11 13 29.4	+0.4
	18µm,0.2s,SNR=7.9						
CRST	**La Restinga, E**	**0.13**	**125**	P	Pb	11 13 25.8	-0.4
	2µm,0.3s,SNR=7.9						
CRST				S	Sb	11 13 29.1	-0.4
	10µm,0.1s,SNR=7.9						
CTIG	**El Hierro**	**0.17**	**66**	P	Pb	11 13 26.5	-0.2
	3µm,0.2s,SNR=7.9						
CTIG				S	Sb	11 13 30.5	+0.2
	3µm,0.2s,SNR=7.9						
PMAR	**Madeira**	**5.09**	**11**	*e*S	Sn	11 15 26.3	-8.2
PMAR				A	A	11 15 31.3	
	30nm,0.2s						
PMOZ	**Porto Moniz, M**	**5.15**	**9**	*e*P	Pn	11 14 35.4	-1.6
PMOZ				*e*S	Sn	11 15 31.1	-4.6
PMOZ				A	A	11 15 35.6	
	36nm,0.5s						
PMPS	**Porto Santo**	**5.54**	**16**	*e*S	Sn	11 15 39.8	-5.3
PMPS				A	A	11 15 46.6	
	20nm,0.7s						

*ISCJB **08** 11:13:34.3±0.2,51°.94N±0°.02×60°.94W±0°.04,h10^{km}, mb4.1/34,Error ellipse: s-maj=4.0km s-min=2.7km az=138.7*

*IDC **08** 11:13:34.6±0.4,51°.94N×60°.71W,h0^{km},mb3.9/21, mb1 4.0/25,mb1mx3.9/66,mbtmp3.9/25,ML3.3/4,MS2.9/1, Ms1 2.8/1,ms1mx2.4/69,Error ellipse: s-maj=11.4km s-min=9.5km az=1.0*

*OTT **08** 11:13:36.9±0.2,52°.04N×60°.86W,h11^{km},MN4.4/19, Mw3.9/1*

OTT 147km south from Happy Valley-Goose Bay, Nl. Felt. Felt in Happy Valley-Goose Bay, and Labrador City. Eastern Background Seismic Zone.

*NEIC **08** 11:13:36.9±0.0,52°.04N×60°.86W,h11^{km},mb4.1/20, MW3.8,MW3.9(OTT),Moment Tensor Solution. s9 Moment tensor: Scale 10^{14}Nm; M_{rr}4.93; $M_{\theta\theta}$-2.59; $M_{\phi\phi}$-2.34; $M_{r\theta}$1.98; $M_{\theta\phi}$-2.67; $M_{\phi r}$3.66; Best double couple: $M_0$6.50000×10^{14} NP1:ϕ_s238.00000°,δ27.00000°, λ110.00000°. NP2:ϕ_s35.00000°,δ65.00000°,λ80.00000°. Principal axes: T 6.5300, Plg68.0000°, Azm286.0000°; N 0.0000, Plg9.0000°, Azm39.0000°; P -6.5300, Plg19.0000°, Azm133.0000°; After OTT.*

NEIC Felt at Goose Bay, Happy Valley and Labrador City.

ISC 08 11:13:35.6±0.3,52°.01N±0°.03×60°.98W±0°.04,h10^{km},n209, σ2^{s}.53/270,mb4.1/34,Labrador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NWRL	**North West Riv**	**1.60**	**18**	PN	**Pn**	**11 14 04.0**	**0.0**
NWRL				SN	**Sn**	**11 14 25.2**	**+0.5**
NWRL				Trac		11 14 31.3	
	comp=Z,4µm,0.3s						
NATG	**Natashquan Que**	**2.07**	**214**	PN	**Pb**	**11 14 12.6**	**-0.7**
NATG				SN	**Sb**	**11 14 39.5**	**+0.5**
NATG				SG	**Sg**	**11 14 43.2**	**+1.1**
NATG				Trac		11 14 47.2	
	comp=Z,490nm,0.2s						
MKVL	**Makkovik**	**3.27**	**18**	PN	**Pn**	**11 14 27.0**	**+0.1**
MKVL				LG	Lg	11 15 14.2	
MKVL				Trac		11 15 17.3	
	comp=Z,932nm,0.3s						
DRLN	**Deer Lake**	**3.53**	**140**	PN	**Pn**	**11 14 30.7**	**+0.2**
DRLN				SN	**Sn**	**11 15 11.3**	**-1.0**
DRLN				LG	Lg	11 15 21.9	
DRLN				Trac		11 15 25.8	
	comp=Z,864nm,0.2s						
DRLN	**Deer Lake**	**3.53**	**140**	*e*Pn	**Pn**	**11 14 30.7**	**+0.2**
DRLN				*e*Sn	**Sn**	**11 15 11.3**	**-1.0**
DRLN				*e*Lg	Lg	11 15 21.9	
WBHL	**Wabush**	**3.71**	**286**	PN	**Pn**	**11 14 35.1**	**+2.2**
WBHL				PG	**Pb**	**11 14 41.2**	**0.0**
WBHL				SN	**Sn**	**11 15 20.0**	**+3.2**
WBHL				LG	Lg	11 15 33.0	
WBHL				Trac		11 15 35.9	
	comp=Z,889nm,0.5s						
SMQ	**Clarke City**	**4.02**	**246**	PN	**Pn**	**11 14 37.9**	**+0.6**
SMQ				SN	**Sn**	**11 15 26.5**	**+2.1**
SMQ				LG	Lg	11 15 43.7	
SMQ				Trac		11 15 48.6	
	comp=Z,264nm,0.1s						
SCHQ	**Schefferville**	**4.50**	**311**	Pn	**Pn**	**11 14 44.6**	**+0.8**
	3.2nm,0.3s,baz=128,slow=14,SNR=7.5						
SCHQ				Pg	**Pb**	**11 14 56.3**	**+1.6**
	30nm,0.3s,baz=137,slow=15,SNR=67						
SCHQ				Sn	**Sn**	**11 15 38.0**	**+1.8**
	16nm,0.3s,baz=158,slow=19,SNR=4.7						
SCHQ				Lg	Lg	11 15 54.5	
	31nm,0.3s,baz=230,slow=16,SNR=5.5						
SCHQ				LR	LR	11 16 46.4	
	comp=Z,129nm,20.6s,baz=360,slow=41						
SCHQ	**Schefferville**	**4.50**	**311**	PN	**Pn**	**11 14 44.9**	**+1.0**
SCHQ				PG	**Pb**	**11 14 56.4**	**+1.7**
SCHQ				SN	**Sn**	**11 15 37.1**	**+0.9**
SCHQ				LG	Lg	11 15 54.3	
SCHQ				Trac		11 16 00.6	
	comp=Z,450nm,0.4s						
NANL	**Nain**	**4.56**	**355**	PN	**Pn**	**11 14 43.9**	**-0.7**
NANL				SN	**Sn**	**11 15 35.0**	**-2.5**
NANL				LG	Lg	11 15 55.4	
NANL				Trac		11 16 00.2	
	comp=Z,225nm,0.2s						
GSQ	**Grosses Roches**	**4.99**	**234**	PN	**Pn**	**11 14 51.0**	**+0.4**
GSQ				SN	**Sn**	**11 15 48.6**	**+0.2**
GSQ				LG	Lg	11 16 11.4	
GSQ				Trac		11 16 18.2	
	comp=Z,272nm,0.3s						
GSQ	**Grosses Roches**	**4.99**	**234**	*e*Pn	**Pn**	**11 14 51.0**	**+0.4**
GSQ				*e*Sn	**Sn**	**11 15 48.6**	**+0.2**
GSQ				*e*Lg	Lg	11 16 11.4	
MNQ	**Manicouagan**	**5.11**	**256**	PN	**Pn**	**11 14 52.2**	**0.0**
MNQ				SN	**Sn**	**11 15 50.2**	**-1.1**
MNQ				LG	Lg	11 16 17.6	
MNQ				Trac		11 16 21.8	
	comp=Z,192nm,0.2s						
CNQ	**Baie Comeau**	**5.26**	**242**	PN	**Pn**	**11 14 55.7**	**+1.5**
CNQ				SN	**Sn**	**11 15 53.5**	**-1.4**
CNQ				LG	Lg	11 16 18.7	
CNQ				Trac		11 16 31.0	
	comp=Z,240nm,0.3s						
CNQ	**Baie Comeau**	**5.26**	**242**	*e*Pn	**Pn**	**11 14 55.7**	**+1.5**
CNQ				*e*Sn	**Sn**	**11 15 53.5**	**-1.4**
CNQ				*e*Lg	Lg	11 16 18.7	
BATG	**Bathurst New B**	**5.77**	**217**	PN	**Pn**	**11 15 00.2**	**-1.0**
BATG				SN	**Sn**	**11 16 04.1**	**-3.4**
BATG				Trac		11 16 09.1	
	comp=Z,26nm,0.1s						
BATG	**Bathurst New B**	**5.77**	**217**	*e*Pn	**Pn**	**11 15 00.2**	**-1.0**
BATG				*e*Sn	**Sn**	**11 16 04.1**	**-3.4**
GBN	**Guysborough**	**6.62**	**183**	PN	**Pn**	**11 15 12.2**	**-0.6**
GBN				SN	**Sn**	**11 16 24.8**	**-3.4**
GBN				Trac		11 16 29.7	
	comp=Z,51nm,0.2s						
GBN	**Guysborough**	**6.62**	**183**	*e*Pn	**Pn**	**11 15 12.2**	**-0.6**
GBN				*e*Sn	**Sn**	**11 16 24.8**	**-3.4**
LMN	**Caledonia Moun**	**6.66**	**204**	PN	**Pn**	**11 15 13.3**	**-0.1**
LMN				SN	**Sn**	**11 16 25.5**	**-3.8**
LMN				Trac		11 16 31.1	
	comp=Z,28nm,0.1s						
LMN	**Caledonia Moun**	**6.66**	**204**	*e*Pn	**Pn**	**11 15 13.3**	**-0.1**
LMN				*e*Sn	**Sn**	**11 16 25.5**	**-3.8**
SJNN	**Saint John’s**	**6.95**	**126**	PN	**Pn**	**11 15 17.2**	**-0.3**
SJNN				SN	**Sn**	**11 16 33.5**	**-3.1**
SJNN				LG	Lg	11 17 07.9	
SJNN				Trac		11 17 17.4	
	comp=Z,460nm,0.8s						
PQI	**Presque Isle**	**7.04**	**223**	*e*Pn	**Pn**	**11 15 18.4**	**-0.3**
A21	**Saint Andre**	**7.09**	**236**	PN	**Pn**	**11 15 18.6**	**-0.7**
A21				SN	**Sn**	**11 16 36.8**	**-3.1**
A21				LG	Lg	11 17 13.3	
A21				Trac		11 17 24.9	
	comp=Z,100nm,0.3s						
A21	**Saint Andre**	**7.09**	**236**	*e*Pn	**Pn**	**11 15 18.6**	**-0.7**
A21				*e*Sn	**Sn**	**11 16 36.8**	**-3.1**
A21				*e*Lg	Lg	11 17 13.3	
KAJQ	**Kangiqsualujju**	**7.27**	**339**	PN	**Pn**	**11 15 20.4**	**-1.3**
KAJQ				SN	**Sn**	**11 16 38.4**	**-5.9**
KAJQ				LG	Lg	11 17 20.7	
KAJQ				Trac		11 17 27.8	
	comp=Z,324nm,0.5s						
KUQ	**Kuujjuuaa**	**7.45**	**328**	PN	**Pn**	**11 15 22.7**	**-1.6**
KUQ				SN	**Sn**	**11 16 42.3**	**-6.5**
KUQ				LG	Lg	11 17 25.8	
KUQ				Trac		11 17 39.7	
	comp=Z,302nm,0.5s						
LMQ	**La Malbaie**	**7.52**	**237**	PN	**Pn**	**11 15 25.4**	**+0.1**
LMQ				SN	**Sn**	**11 16 47.0**	**-3.4**
LMQ				LG	Lg	11 17 30.2	
LMQ				Trac		11 17 45.1	
	comp=Z,59nm,0.3s						
LMQ	**La Malbaie**	**7.52**	**237**	*e*Pn	**Pn**	**11 15 25.4**	**+0.1**
LMQ				*e*Sn	**Sn**	**11 16 47.0**	**-3.4**
LMQ				*e*Lg	Lg	11 17 30.2	
HAL	**Halifax**	**7.58**	**194**	PN	**Pn**	**11 15 26.8**	**+0.8**
HAL				SN	**Sn**	**11 16 47.5**	**-4.4**
HAL				Trac		11 16 53.5	
	comp=Z,45nm,0.1s						
DMCQ	**Dolbeau-Mistas**	**7.70**	**251**	PN	**Pn**	**11 15 27.0**	**-0.7**
DMCQ				SN	**Sn**	**11 16 50.4**	**-4.6**
DMCQ				LG	Lg	11 17 33.7	
DMCQ				Trac		11 17 43.8	
	comp=Z,154nm,0.4s						
DMCQ	**Dolbeau-Mistas**	**7.70**	**251**	*e*Pn	**Pn**	**11 15 27.0**	**-0.7**
DMCQ				*e*Sn	**Sn**	**11 16 50.4**	**-4.6**
DMCQ				*e*Lg	Lg	11 17 33.7	
DAQ	**Lac Daran**	**7.75**	**243**	PN	**Pn**	**11 15 27.9**	**-0.7**
DAQ				SN	**Sn**	**11 16 53.9**	**-2.4**
DAQ				LG	Lg	11 17 38.3	
DAQ				Trac		11 17 49.9	
	comp=Z,136nm,0.4s						
DAQ	**Lac Daran**	**7.75**	**243**	*e*Pn	**Pn**	**11 15 27.9**	**-0.7**
DAQ				*e*Sn	**Sn**	**11 16 53.9**	**-2.4**
DAQ				*e*Lg	Lg	11 17 38.3	
GGN	**Saint George**	**7.91**	**212**	PN	**Pn**	**11 15 30.5**	**-0.1**
GGN				SN	**Sn**	**11 16 55.6**	**-4.5**
GGN				Trac		11 17 03.2	
	comp=Z,18nm,0.2s						
GGN	**Saint George**	**7.91**	**212**	*e*Pn	**Pn**	**11 15 30.5**	**-0.1**
GGN				*e*Sn	**Sn**	**11 16 55.6**	**-4.5**
EMMW	**East Machias**	**8.48**	**213**	*e*Pn	**Pn**	**11 15 38.6**	**+0.2**
QCQ	**Quebec**	**8.51**	**236**	SN	**Sn**	**11 17 11.9**	**-2.9**
QCQ				LG	Lg	11 18 02.0	
QCQ				Trac		11 18 12.7	
	comp=Z,111nm,0.5s						
QCQ	**Quebec**	**8.51**	**236**	*e*Sn	**Sn**	**11 17 11.9**	**-2.9**
QCQ				*e*Lg	Lg	11 18 02.0	
PKME	**Peaks-Kenny Pk**	**8.70**	**222**	P	**Pn**	**11 15 40.8**	**-0.7**
	baz=36						
PKME	**Peaks-Kenny Pk**	**8.70**	**222**	PN	**Pn**	**11 15 40.5**	**-0.9**
PKME				SN	**Sn**	**11 17 14.9**	**-4.7**
PKME				Trac		11 17 20.6	
	comp=Z,18nm,0.2s						
PKME	**Peaks-Kenny Pk**	**8.70**	**222**	*e*Pn	**Pn**	**11 15 40.8**	**-0.7**
PKME				*e*Sn	**Sn**	**11 17 14.2**	**-5.4**
CHGQ	**Chibougamau**	**8.71**	**261**	P	**Pn**	**11 15 42.6**	**+1.0**
	baz=71						
CHGQ	**Chibougamau**	**8.71**	**261**	PN	**Pn**	**11 15 42.5**	**+0.9**
CHGQ				SN	**Sn**	**11 17 15.4**	**-4.4**
CHGQ				LG	Lg	11 18 06.1	
CHGQ				Trac		11 18 15.9	
	comp=Z,181nm,0.5s						
NMSQ	**Nemaska Statio**	**9.32**	**274**	PN	**Pn**	**11 15 50.0**	**+0.2**
NMSQ				SN	**Sn**	**11 17 29.8**	**-4.8**
NMSQ				LG	Lg	11 18 23.0	
NMSQ				Trac		11 18 34.1	
	comp=Z,280nm,0.5s						
DPQ	**Saint Jean**	**9.36**	**240**	PN	**Pn**	**11 15 50.6**	**+0.2**
DPQ				SN	**Sn**	**11 17 30.6**	**-5.1**
DPQ				LG	Lg	11 18 23.6	
DPQ				Trac		11 18 37.2	
	comp=Z,36nm,0.3s						
DPQ	**Saint Jean**	**9.36**	**240**	*e*Pn	**Pn**	**11 15 50.6**	**+0.2**
DPQ				*e*Sn	**Sn**	**11 17 30.6**	**-5.1**
DPQ				*e*Lg	Lg	11 18 23.6	
MOQ	**Mont Orford**	**10.02**	**232**	PN	**Pn**	**11 15 59.5**	**-0.1**
MOQ				SN	**Sn**	**11 17 46.7**	**-5.2**
MOQ				Trac		11 19 06.7	
	comp=Z,17nm,0.3s						
MOQ	**Mont Orford**	**10.02**	**232**	*e*Pn	**Pn**	**11 15 59.5**	**-0.1**
MOQ				*e*Sn	**Sn**	**11 17 46.7**	**-5.2**
LSQQ	**Lebel-sur-Quev**	**10.60**	**260**	P	**Pn**	**11 16 07.0**	**-0.5**
	baz=68						
TRQ	**Mont Tremblant**	**10.61**	**242**	PN	**Pn**	**11 16 06.7**	**-0.9**
TRQ				SN	**Sn**	**11 18 02.3**	**-4.2**
TRQ				LG	Lg	11 19 03.5	
TRQ				Trac		11 19 11.3	
	comp=Z,58nm,0.6s						
TRQ	**Mont Tremblant**	**10.61**	**242**	*e*Pn	**Pn**	**11 16 06.2**	**-1.4**
TRQ				*e*Sn	**Sn**	**11 18 02.8**	**-3.7**
TRQ				*e*Lg	Lg	11 19 03.5	
LBNH	**Lisbon**	**10.66**	**228**	P	**Pn**	**11 16 07.8**	**-0.6**
	baz=39						
LBNH	**Lisbon**	**10.66**	**228**	PN	**Pn**	**11 16 07.7**	**-0.7**
LBNH				SN	**Sn**	**11 18 03.9**	**-3.9**
LBNH	**Lisbon**	**10.66**	**228**	*e*Pn	**Pn**	**11 16 08.3**	**-0.1**
LBNH				*e*Sn	**Sn**	**11 18 09.0**	**+1.2**
MATQ	**Matagami**	**10.76**	**265**	P	**Pn**	**11 16 09.0**	**-0.7**
	baz=71						
MATQ	**Matagami**	**10.76**	**265**	PN	**Pn**	**11 16 08.4**	**-1.3**
MATQ				SN	**Sn**	**11 18 05.0**	**-5.1**
MATQ				LG	Lg	11 19 05.8	
MATQ				Trac		11 19 23.3	
	comp=Z,282nm,1.1s						
VT1	**Waterbury**	**10.98**	**230**	*e*Sn	**Sn**	**11 18 16.5**	**+1.0**
GRQ	**Grand Remous**	**11.11**	**247**	PN	**Pn**	**11 16 13.3**	**-1.1**
GRQ				SN	**Sn**	**11 18 10.7**	**-7.9**
GRQ				LG	Lg	11 19 18.7	
GRQ				Trac		11 19 40.8	
	comp=Z,57nm,0.4s						
GRQ	**Grand Remous**	**11.11**	**247**	*e*Pn	**Pn**	**11 16 13.3**	**-1.1**
GRQ				*e*Sn	**Sn**	**11 18 10.7**	**-7.9**
GRQ				*e*Lg	Lg	11 19 18.7	
ALFO	**Alfred**	**11.16**	**241**	P	**Pn**	**11 16 14.8**	**-0.3**
	baz=50						
VLDQ	**Val d’Or**	**11.28**	**256**	Trac		11 19 50.0	
	comp=Z,105nm,0.7s						
VABQ	**Val Des Bois**	**11.38**	**243**	PN	**Pn**	**11 16 15.3**	**-2.8**
VABQ				Trac		11 19 53.1	
	comp=Z,81nm,0.8s						
GAC	**Glen Almond**	**11.44**	**242**	PN	**Pn**	**11 16 19.1**	**+0.3**
GAC				SN	Sn	11 18 17.5	-9.0
GAC				LG	Lg	11 19 29.4	
GAC				Trac		11 19 36.7	
	comp=Z,86nm,0.8s						
GAC	**Glen Almond**	**11.44**	**242**	*e*Pn	**Pn**	**11 16 19.1**	**+0.3**
GAC				*e*Sn	Sn	11 18 17.5	-9.0
GAC				*e*Lg	Lg	11 19 29.4	
ORIO	**Orleans, Innes**	**11.61**	**241**	P	**Pn**	**11 16 21.9**	**+0.6**
	baz=50						
LONY	**Lake Ozonia**	**11.68**	**236**	P	**Pn**	**11 16 21.5**	**-0.7**
	baz=46						
LONY	**Lake Ozonia**	**11.68**	**236**	*e*Pn	**Pn**	**11 16 21.4**	**-0.7**
NCB	**Newcomb**	**11.96**	**233**	*e*Pn	**Pn**	**11 16 27.0**	**+0.9**
CRLO	**Chalk River**	**12.30**	**247**	PN	**Pn**	**11 16 27.6**	**-3.1**
CRLO				SN	**Sn**	**11 18 42.5**	**-5.3**
CRLO				LG	Lg	11 19 58.1	
CRLO				Trac		11 20 05.1	
	comp=Z,95nm,0.8s						
CRLO	**Chalk River**	**12.30**	**247**	*e*Pn	**Pn**	**11 16 27.6**	**-3.1**
CRLO				*e*Sn	**Sn**	**11 18 42.5**	**-5.3**
BELQ	**Belleterre**	**12.35**	**255**	P	**Pn**	**11 16 31.1**	**-0.3**
	baz=61						
FRB	**Frobisher Bay**	**12.43**	**344**	Pn	**Pn**	**11 16 30.6**	**-1.7**
	0.8nm,0.3s,baz=168,slow=14,SNR=6.4						
FRB				Sn	Sn	11 18 39.8	-11
	2.6nm,0.3s,baz=70,slow=18,SNR=4.6						
FRB				Lg	Lg	11 19 58.9	
	8.2nm,0.3s,baz=59,slow=21,SNR=21						
FRB	**Frobisher Bay**	**12.43**	**344**	Trac		11 20 17.1	
	comp=Z,216nm,1.1s						
PEMO	**Pembroke**	**12.43**	**246**	P	**Pn**	**11 16 33.0**	**+0.5**
	baz=53						
TRY	**Troy**	**12.63**	**228**	*e*Pn	**Pn**	**11 16 37.5**	**+2.2**
PLVO	**Plevna**	**12.73**	**243**	P	**Pn**	**11 16 37.4**	**+0.8**
	baz=51						
PLVO	**Plevna**	**12.73**	**243**	*e*Pn	**Pn**	**11 16 37.2**	**+0.7**
EEO	**Eldee**	**12.95**	**253**	PN	**Pn**	**11 16 38.0**	**-1.6**
EEO				SN	**Sn**	**11 18 58.3**	**-5.5**
EEO				LG	Lg	11 20 14.9	
EEO				Trac		11 20 50.1	
	comp=Z,120nm,0.8s						
EEO	**Eldee**	**12.95**	**253**	*e*Pn	**Pn**	**11 16 38.0**	**-1.6**
EEO				*e*Sn	**Sn**	**11 18 58.3**	**-5.5**
BUKO	**Buck Lake**	**13.80**	**249**	P	**Pn**	**11 16 51.5**	**+0.4**
	baz=55						
VIMO	**Victor Mine**	**13.91**	**282**	PN	**Pn**	**11 16 49.0**	**-3.6**
VIMO				SN	Sn	11 19 16.0	-11
VIMO				LG	Lg	11 20 42.6	
VIMO				Trac		11 20 58.5	
	comp=Z,95nm,0.6s						
SADO	**Sadowa**	**14.05**	**246**	Pn	**Pn**	**11 16 50.8**	**-3.8**
	0.2nm,0.3s,baz=47,slow=16,SNR=2.5						
SADO				Sn	**Sn**	**11 19 22.6**	**-7.9**
	0.8nm,0.3s,baz=66,slow=20,SNR=2.5						
SADO				Lg	Lg	11 20 49.5	
	2.5nm,0.3s,baz=135,slow=21,SNR=3.6						
SADO	**Sadowa**	**14.05**	**246**	PN	**Pn**	**11 16 55.3**	**+0.7**
SADO				SN	**Sn**	**11 19 26.3**	**-4.2**
SADO				LG	Lg	11 20 51.3	
SADO				Trac		11 21 14.9	
	comp=Z,228nm,1.4s						
SFJD	**Kangerlussuaq**	**15.89**	**15**	Pn	**Pn**	**11 17 19.0**	**0.0**
	1.2nm,0.3s,baz=214,slow=3.6,SNR=2.4						
M54A	**Oil Creek Stat**	**16.51**	**238**	P	**P**	**11 17 31.7**	**+1.9**
	baz=44						
O56A	**Blue Knob Stat**	**16.87**	**233**	P	**P**	**11 17 35.3**	**+1.5**
	baz=40						
N54A	**Moraine State**	**17.07**	**237**	P	**P**	**11 17 37.7**	**+1.6**
	baz=43						
E43A	**Lone Tree Farm**	**17.86**	**262**	*e*P	**P**	**11 17 45.1**	**+0.4**
	5.5nm,0.6s						
TBO	**Thunder Bay**	**18.41**	**271**	PN	**Pn**	**11 17 51.7**	**+1.0**
TBO				LG	Lg	11 23 06.5	
TBO				Trac		11 23 26.2	
	comp=Z,43nm,0.7s						
D41A	**Chassel**	**18.52**	**265**	*e*P	**P**	**11 17 51.9**	**0.0**

	19nm,1.4s						
C40A	**Isle Royale Na**	**18.52**	**268**	P	**Pn**	**11 17 54.0**	**+1.9**
	baz=66						
C40A	**Isle Royale Na**	**18.52**	**268**	*e*P	**Pn**	**11 17 52.9**	**+0.7**
	16nm,1.1s						
G43A	**Wallace**	**18.83**	**260**	P	**Pn**	**11 17 58.3**	**+2.4**
	baz=59						
G43A	**Wallace**	**18.83**	**260**	*e*P	**Pn**	**11 17 56.6**	**+0.7**
	6.1nm,0.8s						
G42A	**Mountain**	**19.29**	**260**	P	**Pn**	**11 18 05.5**	**+4.1**
	baz=60						
E40A	**Wakefield**	**19.61**	**265**	P	**Pn**	**11 18 06.6**	**+1.3**
	baz=63						
FCC	**Fort Churchill**	**19.82**	**303**	PN	**P**	**11 18 04.7**	**-1.4**
FCC				SN	S	11 21 37.3	-12
FCC				LG	Lg	11 23 45.4	
FCC				Trac		11 24 01.9	
	comp=Z,89nm,1.4s						
FCC	**Fort Churchill**	**19.82**	**303**	*e*P	**P**	**11 18 07.1**	**+1.0**
	16nm,1.5s						
C38A	**Sawbill Land.**	**19.91**	**270**	P	**Pn**	**11 18 09.7**	**+0.8**
	baz=66						
EYMN	**Ely**	**19.96**	**270**	P	**P**	**11 18 08.9**	**+1.1**
	baz=67						
EYMN	**Ely**	**19.96**	**270**	*e*P	**P**	**11 18 08.9**	**+1.1**
	4.0nm,0.6s						
E39A	**Mellen**	**20.05**	**265**	P	Pn	11 18 09.9	-0.6
	baz=63						
E38A	**The Farm, Brul**	**20.56**	**267**	P	**P**	**11 18 15.6**	**+1.4**
	baz=63						
MRYN	**Mary River**	**21.08**	**344**	SN	**S**	**11 22 04.4**	**-9.5**
MRYN				LG	Lg	11 24 20.9	
MRYN				Trac		11 24 31.5	
	comp=Z,278nm,2.2s						
S52A	**Salyersville**	**21.11**	**236**	P	**P**	**11 18 22.0**	**+1.7**
	baz=40						
S51A	**Beattyville**	**21.41**	**237**	P	**P**	**11 18 25.3**	**+1.8**
	baz=40						
S51A	**Beattyville**	**21.41**	**237**	*e*P	**P**	**11 18 25.6**	**+2.1**
	9.9nm,0.9s						
T52A	**Hallie**	**21.50**	**235**	P	**P**	**11 18 26.2**	**+1.6**
	baz=39						
P47A	**Martinsville**	**21.51**	**244**	P	**P**	**11 18 26.2**	**+1.7**
	baz=46						
E36A	**McGregor**	**21.65**	**268**	P	**P**	**11 18 27.1**	**+1.1**
	baz=63						
J40A	**Soldiers Grove**	**21.68**	**258**	P	**P**	**11 18 27.5**	**+1.2**
	baz=56						
B34A	**Aery, Baudette**	**21.70**	**274**	P	**P**	**11 18 27.3**	**+0.7**
	baz=68						
ULM	**Lac du Bonnet**	**21.85**	**279**	P	**P**	**11 18 28.8**	**+0.7**
	3.3nm,0.8s,baz=74,slow=8.6,SNR=3.5						
ULM				S	**S**	**11 22 22.0**	**-7.3**
	6.9nm,0.7s,baz=344,slow=18,SNR=6.0						
ULM				Lg	Lg	11 24 47.8	
	21nm,0.7s,baz=144,slow=19,SNR=5.2						
D35A	**Remer**	**21.90**	**270**	P	**P**	**11 18 31.8**	**+3.2**
	baz=65						
H38A	**Maiden Rock**	**21.93**	**263**	P	**P**	**11 18 30.3**	**+1.3**
	baz=59						
SPMN	**Marine on St.**	**21.98**	**265**	P	**P**	**11 18 33.1**	**+3.6**
	baz=60						
SPMN	**Marine on St.**	**21.98**	**265**	*e*P	**P**	**11 18 32.7**	**+3.2**
	7.4nm,0.4s						
Q47A	**Bedord North L**	**21.98**	**244**	P	**P**	**11 18 31.3**	**+1.7**
	baz=45						
F36A	**Milaca**	**22.12**	**267**	*e*P	**P**	**11 18 31.8**	**+0.8**
	5.8nm,1.1s						
I38A	**Scanlan Farm,**	**22.29**	**262**	P	**P**	**11 18 35.7**	**+2.8**
	baz=58						
P45A	**Graceland, Par**	**22.31**	**247**	P	**P**	**11 18 34.6**	**+1.5**
	baz=47						
R47A	**Wooly Knot Far**	**22.49**	**243**	P	**P**	**11 18 36.8**	**+1.8**
	baz=44						
AGMN	**Agassiz Nation**	**22.52**	**274**	P	**P**	**11 18 36.3**	**+1.0**
	baz=67						
AGMN	**Agassiz Nation**	**22.52**	**274**	*e*P	**P**	**11 18 35.9**	**+0.6**
	4.3nm,1.0s						
T50A	**Nancy**	**22.52**	**238**	P	**P**	**11 18 37.1**	**+1.7**
	baz=41						
T49A	**Edmonton**	**22.82**	**239**	P	**P**	**11 18 40.2**	**+1.6**
	baz=41						
SUMG	**Summit**	**22.84**	**17**	*e*P	**P**	**11 18 38.7**	**-0.2**
	19nm,1.0s						
SUMG	**Summit**	**22.84**	**17**	*i* P	**P**	**11 18 38.4**	**-0.5**
	22nm,1.1s						
P44A	**Sand Creek, Wi**	**22.85**	**248**	P	**P**	**11 18 40.9**	**+2.0**
	baz=48						
TKL	**Tuckaleechee C**	**23.03**	**234**	P	**P**	**11 18 42.6**	**+1.9**
	2.7nm,1.0s,baz=45,slow=5.7,SNR=2.5						
TKL				Lg	Lg	11 25 40.4	
	2.4nm,0.8s,baz=127,slow=20,SNR=3.6						
TKL	**Tuckaleechee C**	**23.03**	**234**	*e*P	**P**	**11 18 42.6**	**+1.9**
	4.4nm,1.1s						
T48A	**Bowling Green**	**23.28**	**240**	P	**P**	**11 18 45.0**	**+1.7**
	baz=42						
Y54A	**Tignall**	**23.96**	**229**	P	**P**	**11 18 52.8**	**+2.8**
	baz=34						
V49A	**McMinnville**	**24.03**	**237**	P	**P**	**11 18 52.4**	**+1.7**
	baz=40						
S45A	**Carrier Mills**	**24.07**	**244**	P	**P**	**11 18 52.4**	**+1.5**
	baz=44						
T46A	**Princeton**	**24.14**	**242**	P	**P**	**11 18 53.4**	**+1.7**
	baz=43						
FFC	**Flin Flon**	**24.37**	**293**	*e*P	**P**	**11 18 57.0**	**+3.5**
	5.9nm,0.8s						
W49A	**Belvidere**	**24.72**	**237**	P	**P**	**11 18 58.9**	**+2.0**
	baz=39						
WVT	**Waverly**	**24.78**	**241**	P	**P**	**11 18 59.4**	**+1.9**
	baz=42						
S43A	**Fulton Ridge,**	**24.98**	**246**	P	**P**	**11 19 01.2**	**+1.9**
	baz=45						
W48A	**Pulaski**	**25.05**	**238**	P	**P**	**11 19 03.3**	**+3.3**
	baz=40						
ECSD	**EROS Data Cent**	**25.08**	**265**	P	**P**	**11 19 02.3**	**+2.2**
	baz=58						
ECSD	**EROS Data Cent**	**25.08**	**265**	*e*P	**P**	**11 19 02.5**	**+2.4**
	2.6nm,0.6s						
Q40A	**Laux Farm, Aux**	**25.16**	**251**	P	**P**	**11 19 02.9**	**+2.0**
	baz=48						
P39B	**Salisbury**	**25.24**	**253**	P	**P**	**11 19 03.5**	**+1.9**
	baz=50						
S42A	**Caledonia**	**25.25**	**247**	P	**P**	**11 19 04.9**	**+3.2**
	baz=46						
T43A	**Greenville**	**25.44**	**246**	P	**P**	**11 19 05.6**	**+2.2**
	baz=45						
P38A	**Dawn**	**25.61**	**254**	P	**P**	**11 19 07.1**	**+2.1**
	baz=50						
R40A	**Maddies Statio**	**25.74**	**250**	P	**P**	**11 19 08.1**	**+2.0**
	baz=48						
356A	**Blackshear**	**25.84**	**225**	P	**P**	**11 19 09.2**	**+2.2**
	baz=31						
152A	**Waverly Hall**	**25.90**	**231**	P	**P**	**11 19 09.6**	**+2.0**
	baz=35						
S41A	**Jillco Farms,**	**25.92**	**248**	P	**P**	**11 19 09.3**	**+1.5**
	baz=46						
T42A	**Van Buren**	**25.94**	**247**	P	**P**	**11 19 09.8**	**+1.9**
	baz=45						
R39A	**Chumby, Stover**	**26.18**	**251**	P	**P**	**11 19 12.0**	**+1.9**
	baz=48						
T41A	**Mountain View**	**26.31**	**248**	P	**P**	**11 19 13.2**	**+1.9**
	baz=45						
S40A	**Lebanon**	**26.35**	**249**	P	**P**	**11 19 13.5**	**+1.9**
	baz=47						
U42A	**Revenden**	**26.50**	**246**	P	**P**	**11 19 17.8**	**+4.8**
	baz=44						
RES	**Resolute Bay**	**26.60**	**341**	P	**P**	**11 19 17.7**	**+4.1**
	2.7nm,0.9s,baz=113,slow=9.8,SNR=3.2						
RES				Lg	Lg	11 27 14.0	
	15nm,1.1s,baz=241,slow=22,SNR=8.6						
RES	**Resolute Bay**	**26.60**	**341**	*e*P	**P**	**11 19 17.7**	**+4.1**
	8.3nm,1.3s						
T40A	**Mansfield**	**26.67**	**249**	P	**P**	**11 19 16.3**	**+1.8**
	baz=46						
S39A	**Bolivar**	**26.76**	**250**	P	**P**	**11 19 16.7**	**+1.3**
	baz=47						
R38A	**Fenwick Farm,**	**26.77**	**252**	P	**P**	**11 19 20.7**	**+5.2**
	baz=48						
Y46A	**Houston**	**27.03**	**239**	P	**P**	**11 19 23.2**	**+5.4**
	baz=39						
S38A	**Stockton**	**27.14**	**251**	P	**P**	**11 19 24.1**	**+5.3**
	baz=47						
V40A	**Witts Springs**	**27.79**	**247**	P	**P**	**11 19 29.7**	**+5.1**
	baz=44						
ISCO	**Idaho Springs**	**32.85**	**266**	P	**P**	**11 20 10.4**	**+0.7**
	baz=53						
EKA	**Eskdalemuir Ar**	**33.57**	**61**	P	**P**	**11 20 13.7**	**-1.7**
	0.6nm,0.5s,baz=292,slow=7.9,SNR=7.5						
PD31	**Pinedale Array**	**33.59**	**274**	*e*P	**P**	**11 20 16.6**	**+0.5**
PDAR	**Pinedale Array**	**33.59**	**274**	P	**P**	**11 20 16.6**	**+0.5**
	0.4nm,0.6s,baz=57,slow=12,SNR=3.3						
SJG	**San Juan**	**34.07**	**189**	P	**P**	**11 20 20.1**	**+0.1**
	9.4nm,0.8s,baz=11,slow=16,SNR=3.4						
TXAR	**Lajitas Array**	**38.75**	**251**	P	**P**	**11 21 01.7**	**+1.6**
	0.2nm,0.5s,baz=58,slow=6.7,SNR=5.2						
TXAR				PcP	**PcP**	**11 23 10.2**	**-1.4**
	0.3nm,0.7s,baz=72,slow=3.9,SNR=3.4						
ESDC	**Sonseca Array**	**40.58**	**84**	P	**P**	**11 21 15.1**	**-0.1**
	0.2nm,0.4s,baz=308,slow=9.8,SNR=3.6						
NV01	**Mina Array Sit**	**41.52**	**274**	*e*P	**P**	**11 21 25.3**	**+2.2**
NV01				*e*PcP	**PcP**	**11 23 22.4**	**+1.8**
NVAR	**Mina Array Bea**	**41.52**	**274**	P	**P**	**11 21 25.3**	**+2.2**
	0.3nm,0.6s,baz=55,slow=7.1,SNR=3.3						
NVAR				PcP	**PcP**	**11 23 22.4**	**+1.8**
	0.3nm,0.6s,baz=50,slow=4.9,SNR=3.5						
ILAR	**Eielson Array**	**43.19**	**321**	P	**P**	**11 21 37.6**	**+1.5**
	1.5nm,0.7s,baz=59,slow=6.6,SNR=13						
ILB	**Eielson Array**	**43.19**	**321**	*e*P	**P**	**11 21 37.6**	**+1.5**
COLD	**Coldfoot**	**43.34**	**325**	*e*P	**P**	**11 21 40.2**	**+2.9**
	4.3nm,0.8s						
TRF	**Thorofare Moun**	**45.12**	**321**	*e*P	**P**	**11 21 53.8**	**+2.0**
	7.4nm,0.7s						
FIA0	**FINESS Array S**	**45.20**	**43**	*e*P	**P**	**11 21 51.5**	**-0.8**
FINES	**FINESS Array B**	**45.20**	**43**	P	**P**	**11 21 51.5**	**-0.8**
	0.7nm,0.4s,baz=295,slow=7.5,SNR=12						
GEC2	**GERESS Array S**	**45.73**	**63**	*e*P	**P**	**11 21 56.8**	**0.0**
	1.6nm,1.0s						
GERES	**GERESS Array B**	**45.73**	**63**	P	**P**	**11 21 56.8**	**0.0**
	0.8nm,0.8s,baz=306,slow=8.4,SNR=3.5						
KEST	**Kesra**	**51.22**	**79**	P	**P**	**11 22 39.6**	**+0.4**
	1.7nm,0.5s,baz=328,slow=1.1,SNR=2.8						
KEST	**Kesra**	**51.22**	**79**	*e*P	**P**	**11 22 39.6**	**+0.4**
	4.4nm,0.8s						
AKASG	**Malin Array Be**	**52.75**	**53**	P	**P**	**11 22 49.3**	**-1.0**
	1.2nm,0.5s,baz=313,slow=8.2,SNR=2.2						
AKBB	**Malin Array Si**	**52.75**	**53**	*e*P	**P**	**11 22 49.3**	**-1.0**
	2.9nm,0.6s						
TOA1	**Torodi Ar. Sit**	**62.99**	**104**	*e*P	**P**	**11 24 01.1**	**-1.6**
TORD	**Torodi Ar. Bea**	**62.99**	**104**	P	**P**	**11 24 01.1**	**-1.6**
	1.0nm,0.6s,baz=318,slow=8.7						
KBZ	**Khabaz**	**64.28**	**51**	P	**P**	**11 24 11.8**	**+1.0**
	0.8nm,0.3s,baz=346,slow=2.0,SNR=3.4						
AKTO	**Aktyubinsk**	**65.62**	**38**	P	**P**	**11 24 19.5**	**0.0**
	1.0nm,0.4s,baz=2.2,slow=5.6,SNR=2.6						
BVAR	**Borovoye Array**	**67.69**	**29**	P	**P**	**11 24 32.9**	**+0.4**
	2.4nm,0.6s,baz=328,slow=7.7,SNR=18						
SIV	**San Ignacio**	**67.71**	**180**	P	**P**	**11 24 33.9**	**+0.8**
	1.0nm,0.7s,baz=26,slow=9.0,SNR=5.0						
LPAZ	**La Paz**	**68.29**	**187**	P	**P**	**11 24 37.8**	**+0.5**
	1.3nm,0.8s,baz=36,slow=8.3,SNR=3.4						
KURK	**Kurchatov**	**72.09**	**26**	*e*P	**P**	**11 24 59.8**	**+0.1**
KURBB	**Kurchatov Arra**	**72.15**	**26**	P	**P**	**11 24 59.8**	**-0.2**
	1.8nm,0.7s,baz=335,slow=6.8,SNR=9.5						
MK32	**Makanchi Array**	**76.66**	**25**	*e*P	**P**	**11 25 26.0**	**-0.4**
MKAR	**Makanchi Array**	**76.66**	**25**	P	**P**	**11 25 26.0**	**-0.4**
	0.3nm,0.4s,baz=338,slow=6.7,SNR=4.1						
WMQ	**Urumqi**	**80.78**	**22**	P	**P**	**11 25 51.3**	**+2.1**
WMQ				pP	sP	11 25 54.9	+1.2
WMQ				sP	PcP	11 25 57.8	+2.0
WMQ				pmax	pmax		
	comp=Z,25nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,280nm,4.5s						
KSH	**Kashi**	**81.44**	**32**	*e*P	**P**	**11 25 51.3**	**-1.6**
KSH				sP	PcP	11 26 01.0	+2.1
KSH				PP	**PP**	**11 28 59.4**	**+1.3**
HHC	**Hu-ho-hao-te**	**87.29**	**6**	*e*P	**P**	**11 26 23.1**	**+0.6**
HHC				pmax	pmax		
	comp=Z,29nm,1.1s						
HHC				pmax	pmax		
	comp=Z,49nm,5.2s						
QSPA	**South Pole Qui**	**141.89**	**180**	PKP	**PKPdf**	**11 33 06.4**	**+0.2**
	comp=Z,2.4nm,1.0s,baz=132,slow=5.0,SNR=3.9						
FITZ	**Fitzroy Crossi**	**145.76**	**349**	PKPbc	**PKPab**	**11 33 15.5**	**+0.4**
	comp=Z,1.9nm,0.7s,baz=0.0,slow=5.1,SNR=5.1						
WR1	**Warramunga Arr**	**145.83**	**334**	*e*PKPdf	**PKPab**	**11 33 15.6**	**+0.2**
WRA	**Warramunga Arr**	**145.83**	**334**	PKPbc	**PKPab**	**11 33 15.6**	**+0.2**
	comp=Z,2.7nm,0.8s,baz=7.9,slow=3.0,SNR=13						
MAW	**Mawson**	**149.09**	**142**	PKPbc	**PKPbc**	**11 33 23.3**	**+0.8**
	comp=Z,2.4nm,0.7s,baz=315,slow=2.9,SNR=6.7						
AS31	**Alice Springs**	**149.48**	**332**	*e*PKPbc	**PKPbc**	**11 33 25.2**	**+0.3**
ASAR	**Alice Springs**	**149.49**	**332**	PKPbc	**PKPbc**	**11 33 25.2**	**+0.3**
	comp=Z,1.0nm,0.6s,baz=34,slow=2.1,SNR=16						
VNDA	**Vanda**	**149.98**	**197**	PKPbc	**PKPbc**	**11 33 25.9**	**+1.3**
	comp=Z,1.1nm,0.7s,baz=136,slow=3.4,SNR=7.1						

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*ISCJB **08** 11:15:00.4±0.4, 6°.83N±0°.03×73°.11W±0°.04, h162^{km}±3^{km}, mb3.6/9, Error ellipse: s-maj=6.7km s-min=4.6km az=30.3*

*IDC **08** 11:15:01.9±1.3, 6°.76N×72°.92W, h171^{km}±12^{km}, mb3.4/9, mb1 3.7/13, mb1mx3.5/46, mbtmp4.0/13, Error ellipse: s-maj=18.9km s-min=15.9km az=170.0*

*RSNC **08** 11:15:02.4±0.8, 6°.80N×73°.15W, h153^{km}±4^{km}, ML4.1, Mw4.3*

ISC 08 11:15:00.9±0.7, **6°.84N**±0°.04×**73°.08W**±0°.04, **h157**^{km}±5^{km}, **n38,** σ1^{s}**07**/52, **mb3.6**/11, **Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BARC	**Barichara**	**0.27**	**201**	*i* P	**Pn**	**11 15 23.0**	**+0.4**
BARC				*e*S	**Sn**	**11 15 38.4**	**-0.7**
BARC				*i*		11 15 40.1	
	comp=Z,4μm,0.3s						
PAMC	**Pamplona, Colo**	**0.62**	**38**	*e*P	**Pn**	**11 15 25.8**	**+1.4**
PAMC				*e*S	**Sn**	**11 15 43.0**	**+0.8**
BRRC	**Barranca, Sant**	**0.68**	**293**	*e*P	**Pn**	**11 15 24.9**	**+0.8**
BRRC				*e*S	**Sn**	**11 15 42.2**	**+0.4**
BRRC				*i*		11 15 45.5	
	comp=Z,2μm,0.3s						
RUSC	**La Rusia**	**0.94**	**180**	*e*P	**Pn**	**11 15 26.8**	**+0.2**
RUSC				*e*S	**Sn**	**11 15 45.5**	**-0.6**
RUSC				*i*		11 15 47.4	
	comp=Z,2μm,0.4s						
OCAC	**Ocana**	**1.41**	**350**	*e*P	**Pn**	**11 15 31.0**	**+0.7**
OCAC				*e*S	**Sn**	**11 15 53.6**	**+0.7**
YOPC	**Yopal, Colombi**	**1.62**	**156**	*e*P	**Pn**	**11 15 33.4**	**+1.0**
YOPC				*e*S	**Sn**	**11 15 56.0**	**-0.6**
YOPC				*i*		11 16 00.7	
	comp=Z,629nm,0.4s						
ZARC	**Zaragoza, Cauc**	**1.88**	**290**	*e*P	**Pn**	**11 15 35.3**	**+0.2**
ZARC				*e*S	**Sn**	**11 16 00.6**	**-0.8**
ZARC				*i*		11 16 06.7	
	comp=Z,2μm,0.6s						
NORC	**Norcasia**	**2.18**	**234**	*e*P	**Pn**	**11 15 38.6**	**-0.1**
NORC				*e*S	**Sn**	**11 16 06.0**	**-1.8**
CHIC	**Chingaza**	**2.29**	**196**	*e*P	**Pn**	**11 15 40.9**	**+0.6**
CHIC				*e*S	**Sn**	**11 16 10.3**	**-0.4**
CHIC				*i*		11 16 16.3	
	comp=Z,821nm,0.4s						
ROSC	**El Rosal**	**2.34**	**212**	P	**Pn**	**11 15 42.7**	**+1.8**
	comp=Z,153nm,0.3s,baz=5.4,slow=5.4,SNR=135						
ROSC				S	**Sn**	**11 16 12.1**	**+0.5**
	comp=Z,112nm,0.3s,baz=252,slow=20,SNR=10.0						
ROSC	**El Rosal**	**2.34**	**212**	*e*S	**Sn**	**11 16 11.1**	**-0.6**
ROSC				*i*		11 16 16.3	
	comp=Z,2μm,0.5s						
HELC	**Santa Helena**	**2.51**	**255**	*e*P	**Pn**	**11 15 42.8**	**-0.1**
HELC				*e*S	**Sn**	**11 16 14.6**	**-0.7**
HELC				*i*		11 16 22.0	
	comp=Z,1μm,0.4s						
UREC	**San Jos˜' de U**	**2.59**	**291**	*e*P	**Pn**	**11 15 43.6**	**0.0**
VILC	**Villavicencio,**	**2.78**	**193**	*e*P	**Pn**	**11 15 45.8**	**-0.1**
VILC				*i*		11 16 27.3	
	comp=Z,448nm,0.4s						
GUYC	**Guyana, Colomb**	**2.80**	**235**	*e*P	**Pn**	**11 15 47.1**	**+0.6**
GUYC				*i*		11 16 28.2	
	comp=Z,1μm,0.4s						
CODC	**Agust˜›n Codaz**	**3.09**	**353**	*e*P	**Pn**	**11 15 50.4**	**+0.6**
CODC				*e*S	**Sn**	**11 16 28.5**	**+0.8**
CODC				*i*		11 16 36.0	
	comp=Z,311nm,0.4s						
TOLC	**Tolima**	**3.16**	**225**	*e*P	**Pn**	**11 15 50.7**	**-0.2**
SDV	**Santo Domingo**	**3.17**	**50**	P	**Pn**	**11 15 52.2**	**+1.4**
	comp=Z,64nm,0.3s,baz=228,slow=3.1,SNR=76						
SDV				S	**Sn**	**11 16 29.7**	**+0.1**
	comp=Z,109nm,0.3s,baz=220,slow=20,SNR=31						
SDV	**Santo Domingo**	**3.17**	**50**	*e*P	**Pn**	**11 15 52.2**	**+1.4**
SJCC	**San Jacinto, C**	**3.67**	**326**	*e*P	**Pn**	**11 15 57.2**	**-0.1**
SJCC				*i*		11 16 42.6	
	comp=Z,306nm,0.6s						
PLMC	**San Jos˜' del**	**3.72**	**239**	*e*P	**Pn**	**11 15 58.4**	**+0.6**
PLMC				*e*S	**Sn**	**11 16 41.1**	**-0.9**
YOTC	**Yotoco, Valle**	**4.31**	**229**	*e*P	**Pn**	**11 16 05.4**	**-0.2**
YOTC				*i*		11 16 08.8	
	comp=Z,122nm,0.6s						
PCRV	**Puerto La Cruz**	**8.99**	**68**	P	**Pn**	**11 17 07.2**	**-0.3**
	comp=Z,0.8nm,0.3s,baz=193,slow=4.0,SNR=6.7						
PCRV				S	**Sn**	**11 18 43.6**	**-3.9**
	comp=Z,1.3nm,0.3s,baz=280,slow=19,SNR=2.4						
SJG	**San Juan**	**13.08**	**30**	P	**Pn**	**11 18 00.8**	**-0.1**
	comp=Z,2.3nm,0.3s,baz=210,slow=20,SNR=5.6						
LPAZ	**La Paz**	**23.50**	**168**	pP	pP	11 20 30.1	+2.5
	comp=Z,2.3nm,0.7s,baz=338,slow=16,SNR=6.3						
SIV	**San Ignacio**	**25.61**	**152**	pP	pP	11 20 48.3	-0.3
	comp=Z,1.2nm,0.7s,baz=7.5,slow=13,SNR=3.6						
TXAR	**Lajitas Array**	**36.48**	**312**	P	**P**	**11 21 52.4**	**+1.3**
	comp=Z,1.5nm,0.6s,baz=127,slow=9.0,SNR=24						
ANMO	**Albuquerque**	**41.52**	**317**	P	**P**	**11 22 34.8**	**+1.7**
	comp=Z,0.5nm,0.5s,baz=127,slow=15,SNR=4.0						
PDAR	**Pinedale Array**	**48.08**	**324**	P	**P**	**11 23 25.3**	**+0.4**
	comp=Z,0.6nm,0.5s,baz=123,slow=8.6,SNR=6.6						
NVAR	**Mina Array Bea**	**51.49**	**315**	P	**P**	**11 23 52.1**	**+1.4**
	comp=Z,0.5nm,0.5s,baz=126,slow=7.3,SNR=6.1						
YBH	**Yreka Blue Hor**	**55.95**	**317**	P	**P**	**11 24 22.4**	**-0.5**
	comp=Z,1.1nm,0.6s,baz=125,slow=16,SNR=7.4						
YKA	**Yellowknife Ar**	**63.26**	**340**	P	**P**	**11 25 12.9**	**+0.6**
	comp=Z,1.3nm,0.6s,baz=132,slow=6.6,SNR=11						
TORD	**Torodi Ar. Bea**	**73.70**	**78**	P	**P**	**11 26 16.4**	**-1.7**
	comp=Z,0.3nm,0.3s,baz=274,slow=5.9						
ILAR	**Eielson Array**	**76.96**	**335**	P	**P**	**11 26 36.2**	**+0.4**
	comp=Z,0.3nm,0.7s,baz=109,slow=5.0,SNR=3.3						
ARCES	**ARCESS Array B**	**86.64**	**20**	P	**P**	**11 27 26.4**	**0.0**
	comp=Z,2.2nm,0.8s,baz=298,slow=3.8,SNR=3.5						
ASAR	**Alice Springs**	**149.15**	**234**	PKPbc	**PKPbc**	**11 34 31.1**	**-0.6**
	comp=Z,0.6nm,0.5s,baz=120,slow=3.3,SNR=9.8						
WRA	**Warramunga Arr**	**150.38**	**241**	PKPbc	**PKPbc**	**11 34 33.9**	**-0.8**
	comp=Z,0.8nm,0.6s,baz=107,slow=2.7,SNR=11						
WRA				pPKP	**pPKPbc**	**11 35 13.6**	**-2.4**
	comp=Z,0.4nm,0.4s,baz=106,slow=2.8,SNR=2.6						
CMAR	**Chiang Mai Arr**	**153.66**	**17**	PKPbc	**PKPbc**	**11 34 42.6**	**+0.6**
	comp=Z,0.7nm,0.5s,baz=319,slow=3.8,SNR=3.3						

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*NNC **08** 11:25:12.8±5.2, 42°.41N×82°.41E, h0^{km}, mb3.0, mpv2.5, Error ellipse: s-maj=41.0km s-min=18.9km az=145.0*

SOME 08 11:25:06.7, 42°.53N×82°.80E, h10^{km}**, 2C-3D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**2.53**	**285**	*e*P	Pn	11 25 48.6	+0.6
	2.8nm,0.1s						
SHLS				*e*S	Sn	11 26 19.2	+0.2
	22nm,0.4s						
PDGK	**Podgornoye**	**2.56**	**289**	⇑Pg	Pg	11 25 55.1	-0.6
	1.6nm,0.3s						
PDGK				⇑Lg	Lg	11 26 28.3	
	40nm,1.1s						
DJR	**Jarkent**	**2.83**	**310**	*e*P	Pb	11 25 59.2	+1.7
	1.3nm,0.4s						
DJR				*e*S	Sg	11 26 37.8	0.0
	8.0nm,0.5s						
UZB	**Uzynbulak**	**2.85**	**284**	*e*P	Pb	11 25 58.7	+1.0
	1.9nm,0.2s						
UZB				*e*S	Sg	11 26 36.0	-2.1
	10nm,0.6s						
KPKS	**Kokpek**	**3.16**	**289**	*e*P	Pb	11 26 03.7	+0.7
	4.4nm,0.2s						
KPKS				*e*S	Sg	11 26 45.0	-3.2
	22nm,0.4s						
KAPS	**Kapalarasan**	**3.71**	**319**	*e*P	Pb	11 26 13.5	+1.2
	1.6nm,0.4s						
KAPS				*e*S	Sb	11 27 01.2	+3.9
	3.7nm,0.3s						
MK31	**Makanchi Array**	**4.28**	**355**	⇓Pg	Pg	11 26 34.0	+5.4
	0.3nm,0.4s,baz=183,slow=15,SNR=5.7						
MK31				⇓Lg	Lg	11 27 30.5	
	0.8nm,0.5s,baz=188,slow=27,SNR=4.9						
MAKZ	**Makanchi**	**4.32**	**352**	⇓Lg	Lg	11 27 31.9	
	1.7nm,0.9s						

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*ISCJB **08** 11:32:59.9±0.6, 45°.42N±0°.02×151°.42E±0°.01, h12^{km}±3^{km}, mb5.6/644, MS5.7/454, Error ellipse: s-maj=3.1km s-min=1.4km az=160.6*

*IDC **08** 11:32:59.4±0.3, 45°.49N×151°.38E, h0^{km}, mb5.3/55, mb1 5.3/61, mb1mx5.2/71, mbtmp5.3/61, ML4.7/4, MS5.8/75, Ms1 5.8/75, ms1mx5.7/85, Error ellipse: s-maj=9.9km s-min=8.2km az=117.0*

*JMA **08** 11:33:00.9±0.6, 45°.42N×151°.74E, h30^{km}, M6.2*

JMA Felt I J1.

*NIED **08** 11:33:00, 45°.40N×151°.70E, h20^{km}, Mw6.0 Best double couple: M$_0$1.10000×10^{18} NP1:ϕ_s243.00000°, δ38.00000°, λ110.00000°. NP2:ϕ_s39.00000°, δ55.00000°, λ75.00000°.*

*BJI **08** 11:33:01.2, 45°.49N×151°.28E, h24^{km}, mb5.9/88, mB6.0/76, Ms6.2/98, Ms7 6.1/88*

*NEIC **08** 11:33:02.9±0.1, 45°.50N×151°.29E, h20^{km}, mb5.7/298, ME5.7, MS5.6/297, MW5.8, MW6.0, Error ellipse: s-maj=3.0km s-min=1.7km az=157.0, Moment Tensor Solution. s98 Moment tensor: Scale 10^{17}Nm; M$_{rr}$4.63; M$_{\theta\theta}$-1.19; M$_{\phi\phi}$-3.44; M$_{r\theta}$2.48; M$_{\theta\phi}$-1.72; M$_{\phi r}$3.96; Best double couple: M$_0$6.50000×10^{17} NP1:ϕ_s206.00000°, δ22.00000°, λ86.00000°. NP2:ϕ_s31.00000°, δ68.00000°, λ92.00000°. Principal axes: T 6.6200, Plg67.0000°, Azm304.0000°; N -0.2700, Plg2.0000°, Azm210.0000°; P -6.3500, Plg23.0000°, Azm120.0000°; Broadband fault plane solution: P waves. NP1:ϕ_s249.00000°, δ18.00000°, λ123.00000°. NP2:ϕ_s35.00000°, δ75.00000°, λ80.00000°. Principal axes: T Plg59.0000°, Azm291.0000°; N Plg0.0000°, Azm0.0000°; P Plg29.0000°, Azm133.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Recorded [1 JMA] in eastern Hokkaido.

*GCMT **08** 11:33:02.9±0.1, 45°.46N×151°.50E, h23^{km}, MW6.0/139, Moment Tensor Solution. s128,c279; s139,c463; Duration: 2^{s}3 Moment tensor: Scale 10^{18}Nm; M$_{rr}$0.91±.01; M$_{\theta\theta}$-0.36±.01; M$_{\phi\phi}$-0.54±.01; M$_{r\theta}$0.22±.01; M$_{\theta\phi}$-0.50±.00; M$_{\phi r}$0.53±.01; Best double couple: M$_0$1.10000×10^{18} NP1:ϕ_s31.00000°, δ61.00000°, λ80.00000°. NP2:ϕ_s230.00000°, δ31.00000°, λ106.00000°. Principal axes: T 1.0830, Plg73.0000°, Azm278.0000°; N 0.0320, Plg8.0000°, Azm35.0000°; P -1.1160, Plg15.0000°, Azm128.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*SKHL **08** 11:33:02.5±0.8, 45°.20N×151°.72E, h43^{km}±7^{km}, mb6.0/13, Ms5.9/6, msh5.8/1*

*NEIC **08** 11:33:03.0±0.0, 45°.54N×151°.29E, h30^{km}, Moment Tensor Solution. s42 Moment tensor: Scale 10^{18}Nm; M$_{rr}$0.54; M$_{\theta\theta}$-0.26; M$_{\phi\phi}$-0.29; M$_{r\theta}$0.57; M$_{\theta\phi}$-0.25; M$_{\phi r}$1.01; Best double couple: M$_0$1.30000×10^{18} NP1:ϕ_s31.00000°, δ78.00000°, λ85.00000°. NP2:ϕ_s233.00000°, δ13.00000°, λ112.00000°. Principal axes: T 1.3000, Plg56.0000°, Azm294.0000°; N -0.0400, Plg4.0000°, Azm31.0000°; P -1.2500, Plg32.0000°, Azm124.0000°;*

*MOS **08** 11:33:04.0±1.1, 45°.48N×151°.33E, h43^{km}, mb5.8/117, MS5.9/89 Error ellipse: s-maj=4.9km s-min=3.8km az=101.4 Broadband fault plane solution: P waves. M$_0$1.20000×10^{19} NP1:ϕ_s12.00000°, δ58.00000°, λ78.00000°. NP2:ϕ_s215.00000°, δ34.00000°, λ109.00000°. Principal axes: T Plg73.0000°, Azm250.0000°; N Plg11.0000°, Azm18.0000°; P Plg13.0000°, Azm111.0000°;*

ISC 08 11:33:05.3±0.3, **45°.42N**±0°.03×**151°.39E**±0°.03, **h38**^{km}±1^{km}, **h38**^{km}**:pP-P, n2274,** σ1^{s}**52**/2356, **mb5.7**/705, **MS5.7**/507, **198C-28D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.49**	**267**	*i* P	**Pn**	**11 33 44.2**	**+1.0**
KUR				AMB	AMB	11 33 47.0	
	4μm,0.4s						
KUR				*i* S	**Sn**	**11 34 14.8**	**+2.4**
KUR				A	A	11 34 20.0	
	48μm,0.5s						
KUR				A	A	11 34 20.0	
	16μm,0.5s						
KUR				AMS	AMS	11 34 55.0	
	246μm,15.0s						
KUR				AMS	AMS	11 34 55.0	

Sta	Name	Dist	Azi	Phase	ISC phase	Time	Res
	352µm,15.0s						
KUR	**Kuril’sk**	**2.49**	**267**	*d i*PN	**Pn**	**11 33 43.2**	**0.0**
KUR				*e*S	**Sn**	**11 34 15.1**	**+2.7**
KUR				pmax	pmax		
	comp=Z,13µm,2.0s						
KUR				pmax	pmax		
	comp=N,2µm,0.5s						
KUR				pmax	pmax		
	comp=Z,4µm,0.5s						
KUR				pmax	pmax		
	comp=E,972nm,0.2s						
KUR				smax	smax		
	comp=N,5µm,0.6s						
KUR				smax	smax		
	comp=E,20µm,0.6s						
SHO	**Shikotan**	**3.60**	**246**	*i* P	**Pn**	**11 33 58.0**	**-0.5**
SHO				AMB	AMB	11 34 02.0	
	comp=E,1µm,0.4s						
SHO				*i* S	**Sn**	**11 34 40.0**	**+0.2**
SHO				A	A	11 34 43.0	
	comp=E,7µm,0.4s						
SHO				A	A	11 34 43.0	
	comp=E,8µm,0.4s						
SHO				AMS	AMS	11 35 18.0	
	comp=E,157µm,20.0s						
SHO				AMS	AMS	11 35 18.0	
	comp=E,204µm,20.0s						
SHO				AMS	AMS	11 35 18.0	
	comp=E,189µm,20.0s						
SHO	**Shikotan**	**3.60**	**246**	*i* PN	**Pn**	**11 33 58.6**	**+0.1**
SHO				*i* S	**Sn**	**11 34 40.4**	**+0.6**
SHO				pmax	pmax		
	comp=Z,1µm,0.4s						
SHO				pmax	pmax		
	comp=N,448nm,0.2s						
SHO				pmax	pmax		
	comp=E,467nm,0.3s						
SHO				smax	smax		
	comp=N,7µm,0.3s						
SHO				smax	smax		
	comp=E,8µm,0.4s						
SHO				MLR	MLR		
	comp=E,204µm,22.0s						
SHO				MLR	MLR		
	comp=Z,189µm,22.0s						
SHO				MLR	MLR		
	comp=N,157µm,18.0s						
YUK	**Yuzh-Kuril’sk**	**4.18**	**253**	*i* P	**Pn**	**11 34 06.0**	**-0.4**
YUK				AMB	AMB	11 34 09.0	
	comp=N,3µm,0.3s						
YUK				*i* S	**Sn**	**11 34 54.0**	**+0.1**
YUK				A	A	11 35 17.0	
	comp=N,20µm,0.6s						
YUK				A	A	11 35 17.0	
	comp=N,21µm,0.6s						
YUK				AMS	AMS	11 35 36.0	
	comp=N,70µm,14.0s						
YUK				AMS	AMS	11 35 36.0	
	comp=N,67µm,14.0s						
YUK	**Yuzh-Kuril’sk**	**4.18**	**253**	*i* PN	**Pn**	**11 34 06.4**	**0.0**
YUK				*i* S	**Sn**	**11 34 54.4**	**+0.5**
YUK				pmax	pmax		
	comp=Z,3µm,0.3s						
YUK				pmax	pmax		
	comp=E,701nm,0.2s						
YUK				pmax	pmax		
	comp=N,255nm,0.3s						
YUK				smax	smax		
	comp=E,21nm,0.7s						
YUK				smax	smax		
	comp=N,20nm,0.5s						
YUK				MLR	MLR		
	comp=Z,67µm,16.0s						
YUK				MLR	MLR		
	comp=N,70µm,10.0s						
LAGR	**Lagunnoye**	**4.22**	**253**	*e*P	**Pn**	**11 34 08.0**	**+1.0**
LAGR				AMB	AMB	11 34 09.0	
	comp=N,3µm,0.5s						
LAGR				*e*S	**Sn**	**11 34 55.0**	**+0.1**
LAGR				A	A	11 35 16.0	
	comp=N,15µm,0.6s						
LAGR				A	A	11 35 16.0	
	comp=N,54µm,0.6s						
LAGR	**Lagunnoye**	**4.22**	**253**	*e*PN	**Pn**	**11 34 08.4**	**+1.4**
LAGR				*e*S	**Sn**	**11 34 55.3**	**+0.4**
LAGR				pmax	pmax		
	comp=Z,3µm,0.5s						
LAGR				pmax	pmax		
	comp=N,445nm,0.4s						
LAGR				pmax	pmax		
	comp=E,1µm,0.4s						
LAGR				smax	smax		
	comp=N,15µm,0.5s						
LAGR				smax	smax		
	comp=E,54µm,0.7s						
GRPR	**Tuman**	**4.25**	**252**	*i* P	**Pn**	**11 34 08.0**	**+0.6**
GRPR				AMB	AMB	11 34 17.0	
	comp=E,1µm,0.4s						
GRPR				AMB	AMB	11 34 17.0	
	comp=E,3µm,0.4s						
GRPR				*i* S	**Sn**	**11 34 56.0**	**+0.2**
GRPR				A	A	11 35 16.0	
	comp=E,6µm,0.4s						
GRPR				A	A	11 35 16.0	
	comp=E,13µm,0.4s						
GRPR	**Tuman**	**4.25**	**252**	*i* PN	**Pn**	**11 34 08.5**	**+1.1**
GRPR				*i* S	**Sn**	**11 34 56.4**	**+0.6**
GRPR				pmax	pmax		
	comp=E,1µm,0.4s						
GRPR				pmax	pmax		
	comp=Z,3µm,0.4s						
GRPR				smax	smax		
	comp=E,13µm,0.6s						
GRPR				smax	smax		
	comp=N,6µm,0.3s						
GLVR	**Golovnino**	**4.52**	**250**	*i* P	**Pn**	**11 34 11.0**	**-0.1**
GLVR				AMB	AMB	11 34 12.0	
	comp=N,3µm,0.3s						
GLVR				*i* S	**Sn**	**11 35 02.0**	**-0.3**
GLVR				A	A	11 35 28.0	
	comp=N,18µm,0.5s						
GLVR				A	A	11 35 28.0	
	comp=N,6µm,0.5s						
GLVR	**Golovnino**	**4.52**	**250**	*i* PN	**Pn**	**11 34 11.9**	**+0.8**
GLVR				*i* S	**Sn**	**11 35 02.7**	**+0.4**
GLVR				pmax	pmax		
	comp=Z,3µm,0.3s						
GLVR				pmax	pmax		
	comp=N,438nm,0.2s						
GLVR				pmax	pmax		
	comp=E,557nm,0.2s						
GLVR				smax	smax		
	comp=E,6µm,0.5s						
GLVR				smax	smax		
	comp=N,18µm,0.4s						
NEM2	**Nemuro 2**	**4.54**	**245**	⇑P	**Pn**	**11 34 09.9**	**-1.5**
NEM2				*e*S	**Sn**	**11 35 02.0**	**-0.8**
JRA	**Rausu**	**4.71**	**254**	⇑P	**Pn**	**11 34 14.7**	**+1.0**
JRA				*e*S	**Sn**	**11 35 09.9**	**+2.9**
JNK	**Nakash**	**5.11**	**251**	⇑P	**Pn**	**11 34 19.5**	**+0.2**
JNK				*e*S	**Sn**	**11 35 17.2**	**+0.2**
JAK	**Akkeshi**	**5.39**	**246**	⇑P	**Pn**	**11 34 21.7**	**-1.3**
JAK				*e*S	**Sn**	**11 35 20.5**	**-3.2**
JTKR	**Abashiri--Toko**	**5.53**	**257**	⇑P	**Pn**	**11 34 26.3**	**+1.4**
JAR	**Ashorobuto**	**5.86**	**251**	⇑P	**Pn**	**11 34 30.2**	**+0.7**
JAR				*e*S	**Sn**	**11 35 36.7**	**+1.3**
JMP	**Maruseppu**	**5.89**	**259**	⇑P	**Pn**	**11 34 31.7**	**+1.7**
JOB	**Onbets**	**5.99**	**248**	⇑P	**Pn**	**11 34 30.7**	**-0.6**
JOB				*e*S	**Sn**	**11 35 38.9**	**+0.4**
SKR	**Severo-Kuril’s**	**6.14**	**29**	*e*P	**Pn**	**11 34 32.9**	**-0.5**
SKR				AMB	AMB	11 34 37.5	
	comp=N,2µm,0.6s						
SKR				*e*S	**Sn**	**11 35 37.1**	**-5.2**
SKR				A	A	11 36 22.0	
	comp=N,6µm,0.9s						
SKR				A	A	11 36 22.0	
	comp=N,5µm,0.9s						
SKR	**Severo-Kuril’s**	**6.14**	**29**	*e*PN	**Pn**	**11 34 32.9**	**-0.5**
SKR				pmax	pmax		
	comp=Z,2µm,0.6s						
SKR				pmax	pmax		
	comp=Z,5µm,1.3s						
SKR				MLR	MLR		
	comp=Z,87µm,15.0s						
SKR				MLR	MLR		
	comp=Z,93µm,14.0s						
YSS	**Yuzh-Sakhalins**	**6.19**	**287**	*e*P	**Pn**	**11 34 36.4**	**+2.4**
YSS				AMB	AMB	11 34 44.7	
	comp=Z,760nm,0.8s						
YSS				*i* S	**Sn**	**11 35 50.8**	**+7.4**
YSS				A	A	11 35 51.6	
	comp=Z,618nm,0.9s						
YSS				AMS	AMS	11 36 52.0	
	comp=Z,59µm,16.0s						
YSS	**Yuzh-Sakhalins**	**6.19**	**287**	*e*Pn	**Pn**	**11 34 36.1**	**+2.1**
YSS	**Yuzh-Sakhalins**	**6.19**	**287**	κ*e*PN	**Pn**	**11 34 36.3**	**+2.3**
YSS				*e*S	**Sn**	**11 35 45.7**	**+2.3**
YSS				pmax	pmax		
	comp=Z,530nm,1.0s						
YSS				pmax	pmax		
	comp=Z,5µm,8.9s						
YSS				smax	smax		
	comp=N,610nm,1.6s						
YSS				MLR	MLR		
	comp=N,74µm,16.0s						
YSS				MLR	MLR		
	comp=E,127µm,16.0s						
HRK	**Horoka**	**6.23**	**255**	*e*P	**Pn**	**11 34 35.9**	**+1.3**
JSE	**Soyaes**	**6.24**	**269**	P	**Pn**	**11 34 37.2**	**+2.5**
JKK2	**Kamakawa 2**	**6.36**	**259**	⇑P	**Pn**	**11 34 38.2**	**+1.8**
ASAJ	**Asahikawa**	**6.39**	**261**	Pn	**Pn**	**11 34 39.0**	**+2.1**
	comp=E,79nm,0.3s,baz=63,slow=20,SNR=1019						
ASAJ				Sn	**Sn**	**11 35 52.5**	**+3.9**
	comp=E,11nm,0.3s,baz=37,slow=20,SNR=1.8						
ASAJ				LR	LR	11 37 21.5	
	comp=E,154µm,18.4s,baz=80,slow=41						
ASAJ	**Asahikawa**	**6.39**	**261**	⇑P	**Pn**	**11 34 39.2**	**+2.3**
JCH	**Churui**	**6.43**	**247**	P	**Pn**	**11 34 36.0**	**-1.4**
JCH				*e*S	**Sn**	**11 35 47.3**	**-2.1**
MYR	**Moyori**	**6.64**	**245**	*e*P	**Pn**	**11 34 39.5**	**-0.7**
JWK2	**Keihoku**	**6.69**	**272**	P	**Pn**	**11 34 45.2**	**+4.3**
JFR	**Furan**	**6.70**	**253**	⇑P	**Pn**	**11 34 42.1**	**+1.0**
JAB	**Ashibetsu**	**6.83**	**257**	P	**Pn**	**11 34 45.1**	**+2.2**
JSS	**Shosan**	**6.85**	**265**	P	**Pn**	**11 34 46.5**	**+3.4**
ERM	**Erimo**	**6.87**	**243**	*e*P	**Pn**	**11 34 44.6**	**+1.3**
ERM	**Erimo**	**6.87**	**243**	*e*Pn	**Pn**	**11 34 43.8**	**+0.4**
ERM				*e*Sg	Sn	11 36 22.3	+22
ERM	**Erimo**	**6.87**	**243**	*d i*PN	**Pn**	**11 34 44.6**	**+1.3**
ERM				pmax	pmax		
	comp=Z,1µm,1.0s						
JNBK	**Urakawa-nobuka**	**6.99**	**246**	P	**Pn**	**11 34 43.2**	**-1.8**
JBT2	**Biratori 2**	**7.01**	**251**	⇑P	**Pn**	**11 34 45.0**	**-0.4**
PAU	**Pauzhetka**	**7.04**	**29**	*i* P	**Pn**	**11 34 45.9**	**+0.2**
PAU				AMB	AMB	11 34 48.8	
	comp=Z,585nm,0.5s						
PAU				*i* S	**Sn**	**11 36 01.7**	**-2.6**
PAU				A	A	11 36 07.3	
	comp=Z,2µm,0.4s						
PAU				A	A	11 36 16.1	
	comp=Z,11µm,5.0s						
JHR	**Hokuryu**	**7.10**	**260**	P	**Pn**	**11 34 49.3**	**+2.7**
UGL	**Uglegorsk**	**7.32**	**303**	*i* P	**Pn**	**11 34 53.5**	**+4.0**
UGL				AMB	AMB	11 34 55.1	
	comp=Z,970nm,1.0s						
UGL				*i* S	**Sn**	**11 36 15.5**	**+4.2**
UGL				A	A	11 36 21.0	
	comp=Z,2µm,0.9s						
JEW	**Eniwo**	**7.60**	**254**	P	**Pn**	**11 34 54.3**	**+0.9**
TYV	**Tymovskoe**	**7.98**	**316**	*e*P	**Pn**	**11 35 01.9**	**+3.3**
TYV				AMB	AMB	11 35 05.2	
	comp=Z,453nm,1.0s						
TYV				*e*S	**Sn**	**11 36 31.2**	**+3.7**
TYV				A	A	11 36 31.9	
	comp=Z,400nm,1.0s						
TYV				A	A	11 36 32.7	
	comp=Z,3µm,2.8s						
TYV	**Tymovskoe**	**7.98**	**316**	*e*PN	**Pn**	**11 35 01.9**	**+3.3**
TYV				*e*S	**Sn**	**11 36 31.2**	**+3.7**
TYV				pmax	pmax		
	comp=Z,6µm,2.6s						
TYV				pmax	pmax		
	comp=Z,453nm,1.0s						
TYV				smax	smax		
	comp=E,356nm,1.0s						
TYV				smax	smax		
	comp=E,3µm,2.8s						
TYV				MLR	MLR		
	comp=E,130µm,15.0s						
TYV				MLR	MLR		
	comp=Z,129µm,15.0s						
JNB	**Noboribetsu**	**8.03**	**252**	P	**Pn**	**11 34 58.8**	**-0.5**
JNB				*e*S	**Sn**	**11 36 26.7**	**-2.1**
JSK	**Shakotan**	**8.09**	**259**	P	**Pn**	**11 35 01.1**	**+1.1**
JKB	**Kayabe**	**8.30**	**248**	P	**Pn**	**11 35 01.6**	**-1.3**
JKB				*e*S	**Sn**	**11 36 29.3**	**-6.0**
JOT	**Ohata**	**8.54**	**245**	⇑P	**Pn**	**11 35 04.3**	**-2.0**
JYM2	**Yakumo 2**	**8.63**	**251**	P	**Pn**	**11 35 07.0**	**-0.5**
JSH	**Shimam**	**8.63**	**255**	P	**Pn**	**11 35 07.8**	**+0.3**
PEA0B	**Petropavlovsk-**	**8.73**	**26**	*e*Pn	**Pn**	**11 35 08.9**	**+0.2**
PEA0B				*e*Sn	Sn	11 37 02.2	+16
PETK	**Petropavlovsk-**	**8.73**	**26**	Pn	**Pn**	**11 35 08.8**	**0.0**
	baz=191,slow=12						
PETK				Sn	**Sn**	**11 36 46.9**	**+1.1**
	baz=193,slow=26						
PETK				LR	LR	11 38 47.5	
	comp=Z,47µm,19.1s,baz=216,slow=40						
PETK	**Petropavlovsk-**	**8.73**	**26**	*e*Pn	**Pn**	**11 35 08.0**	**-0.8**
PETK				Sn	**Sn**	**11 36 46.9**	**+1.1**
PETK	**Petropavlovsk-**	**8.73**	**26**	*e*PN	**Pn**	**11 35 08.0**	**-0.8**
JANG	**Nango**	**8.83**	**239**	P	**Pn**	**11 35 06.3**	**-3.9**
JANG				*e*S	Sn	11 36 38.0	-10
JTM	**Tenmabayashi**	**8.86**	**242**	P	**Pn**	**11 35 08.4**	**-2.2**
JTM				*e*S	**Sn**	**11 36 41.0**	**-8.0**
JSR	**Shiriuchi**	**8.87**	**248**	P	**Pn**	**11 35 09.3**	**-1.6**
JSR				*e*S	**Sn**	**11 36 44.1**	**-5.4**
JTH	**Tanohata**	**8.90**	**235**	P	**Pn**	**11 35 07.0**	**-4.2**
JTH				*e*S	Sn	11 36 39.4	-11
PET	**Petropavlovsk**	**8.97**	**29**	*e*P	**Pn**	**11 35 11.4**	**-0.7**
PET				AMB	AMB	11 35 21.8	
	comp=Z,104nm,0.8s						
PET				*i* S	**Sn**	**11 36 50.4**	**-1.2**
PET				A	A	11 36 56.8	
	comp=Z,530nm,1.0s						
PET				AMS	AMS	11 38 55.0	
	comp=Z,36µm,15.0s						
PET				AMS	AMS	11 38 55.0	
	comp=Z,75µm,15.0s						
PET				AMS	AMS	11 38 55.0	
	comp=Z,38µm,15.0s						
PET	**Petropavlovsk**	**8.97**	**29**	*e*Pn	**Pn**	**11 35 10.9**	**-1.2**
PET				*e*Sn	**Sn**	**11 36 55.2**	**+3.5**
PET	**Petropavlovsk**	**8.97**	**29**	*de*PN	**Pn**	**11 35 12.0**	**-0.1**
PET				pmax	pmax		
	comp=Z,500nm,5.8s						
PET				pmax	pmax		
	comp=Z,2µm,9.0s						
PET				pmax	pmax		
	comp=Z,209nm,0.7s						
PET				MLR	MLR		
	comp=Z,46µm,17.0s						
PET				MLR	MLR		
	comp=Z,43µm,15.0s						
JOSM	**Okushiri--Mats**	**9.25**	**253**	P	**Pn**	**11 35 15.1**	**-0.8**
OFUJ	**Ofunato**	**9.59**	**232**	P	**Pn**	**11 35 16.7**	**-4.0**
OFUJ				*e*S	Sn	11 36 57.7	-9.4
OKH	**Okha**	**9.82**	**329**	*e*P	**Pn**	**11 35 28.3**	**+4.6**
OKH				*i* S	**Sn**	**11 37 15.7**	**+3.3**
OKH				A	A	11 37 25.2	
	comp=Z,16µm,6.0s						
OKH				AMS	AMS	11 40 18.6	
	comp=Z,73µm,14.0s						
OKH	**Okha**	**9.82**	**329**	⇑*i*PN	**Pn**	**11 35 28.3**	**+4.6**
OKH				pmax	pmax		
	comp=Z,19µm,1.5s						
OKH				MLR	MLR		
	comp=Z,73µm,14.4s						
JRG	**Rokugo**	**9.97**	**237**	P	**Pn**	**11 35 22.6**	**-3.3**
JRG				*e*S	**Sn**	**11 37 10.0**	**-6.4**
JIO	**Ouri**	**10.21**	**231**	P	**Pn**	**11 35 25.0**	**-4.2**
JIO				*e*S	Sn	11 37 12.7	-10
NKL	**Nikolayevsk**	**10.42**	**322**	*i* PN	**Pn**	**11 35 35.0**	**+3.1**
NKL				*e*S	**Sn**	**11 37 34.0**	**+6.7**
NKL				pmax	pmax		
	comp=N,3µm,2.0s						
NKL				pmax	pmax		
	comp=E,7µm,2.0s						
NKL				pmax	pmax		
	comp=Z,5µm,2.0s						
NKL				pmax	pmax		
	comp=N,4µm,4.0s						
NKL				pmax	pmax		
	comp=E,6µm,4.0s						
NKL				pmax	pmax		
	comp=Z,7µm,4.0s						
NKL				smax	smax		
	comp=N,11µm,10.0s						
NKL				smax	smax		
	comp=E,10µm,10.0s						
NKL				MLR	MLR		
	comp=E,57µm,15.0s						
NKL				MLR	MLR		
	comp=Z,120µm,15.0s						
TEY	**Ternei**	**10.44**	**273**	⇑*e*PN	**Pn**	**11 35 35.4**	**+3.1**
TEY				*e*S	**Sn**	**11 37 34.6**	**+6.7**
TEY				pmax	pmax		
	comp=N,60nm,1.9s						
TEY				pmax	pmax		
	comp=Z,380nm,1.7s						
TEY				pmax	pmax		
	comp=Z,5µm,4.8s						
TEY				pmax	pmax		
	comp=E,9µm,8.2s						
TEY				pmax	pmax		
	comp=N,1µm,5.3s						
TEY				MLR	MLR		
	comp=Z,28µm,14.0s						
TEY				MLR	MLR		
	comp=E,27µm,13.0s						
TEY				MLR	MLR		
	comp=N,14µm,11.0s						
JYA	**Atsumi**	**11.04**	**236**	P	**Pn**	**11 35 37.7**	**-2.8**
JFK	**Kawauchi**	**11.27**	**228**	P	**Pn**	**11 35 39.3**	**-4.4**
JFK				*e*S	Sn	11 37 36.6	-12
GRNR	**Gornyy**	**11.34**	**304**	⇑*i*PN	Pn	11 35 50.1	+5.5
GRNR				pmax	pmax		
	comp=E,480nm,1.8s						
JAW	**Awa shima**	**11.40**	**237**	P	**Pn**	**11 35 42.3**	**-3.2**
JFY	**Yanaizu**	**11.87**	**232**	P	**Pn**	**11 35 48.5**	**-3.4**
JSD	**Sado**	**12.26**	**238**	P	**Pn**	**11 35 53.9**	**-3.3**
JHK	**Hiroka**	**12.36**	**233**	P	**Pn**	**11 35 56.0**	**-2.6**
JAG	**Ashikaga**	**12.72**	**229**	P	**Pn**	**11 35 59.7**	**-3.9**
JSZ	**Suzu**	**13.19**	**238**	P	**Pn**	**11 36 07.2**	**-2.6**
MAJO	**Matsushiro**	**13.32**	**233**	*e*Pn	**Pn**	**11 36 08.9**	**-2.8**
MAJO	**Matsushiro**	**13.32**	**233**	*c i*PN	**Pn**	**11 36 08.8**	**-2.9**
MAT	**Matsushiro**	**13.32**	**233**	P	**Pn**	**11 36 08.8**	**-2.9**
MAT	**Matsushiro**	**13.32**	**233**	P	**Pn**	**11 36 08.9**	**-2.8**
MAT				S	**Sn**	**11 38 40.4**	**+2.0**
MJAR	**Matsushiro Arr**	**13.32**	**233**	Pn	**Pn**	**11 36 09.1**	**-2.7**
	comp=E,3.4nm,0.3s,baz=22,slow=13,SNR=65						
MJAR				Sn	**Sn**	**11 38 36.1**	**-2.3**
	comp=E,2.1nm,0.3s,baz=29,slow=15,SNR=3.2						
MJAR				LR	LR	11 41 48.0	
	comp=E,24µm,21.6s,baz=50,slow=40						
MJB9	**Matsu-Tunnel**	**13.32**	**233**	*e*Pn	**Pn**	**11 36 09.0**	**-2.8**
JRY	**Ryogami san**	**13.32**	**230**	P	**Pn**	**11 36 07.7**	**-4.1**
JNG	**Nsakai**	**13.48**	**233**	P	**Pn**	**11 36 11.2**	**-2.7**
USRK	**Ussuriysk Ar.**	**13.83**	**272**	Pn	**Pn**	**11 36 18.6**	**0.0**
	baz=82,slow=10						
USRK				LR	LR	11 41 41.5	
	comp=E,57µm,18.8s,baz=72,slow=38						
KLR	**Kul’dur**	**13.85**	**293**	Pn	**Pn**	**11 36 21.1**	**+2.3**
	comp=E,0.1nm,0.3s,baz=96,slow=13,SNR=74						
KLR				LR	LR	11 41 58.1	
	comp=E,7µm,19.0s,baz=97,slow=39						
KLR	**Kul’dur**	**13.85**	**293**	*c i*P	**Pn**	**11 36 20.9**	**+2.1**
JGN	**Niukaw**	**14.05**	**234**	P	**Pn**	**11 36 19.9**	**-1.9**
MA2	**Magadan**	**14.18**	**359**	Pn	**Pn**	**11 36 23.3**	**0.0**
	comp=E,12nm,0.3s,baz=184,slow=10,SNR=151						
MA2				LR	LR	11 42 20.6	
	comp=E,45µm,18.0s,baz=180,slow=40						
MA2	**Magadan**	**14.18**	**359**	*e*P	**Pn**	**11 36 21.6**	**-1.7**
MA2	**Magadan**	**14.18**	**359**	*e*Pn	**Pn**	**11 36 22.4**	**-0.9**
MA2	**Magadan**	**14.18**	**359**	*e*P	**Pn**	**11 36 22.4**	**-0.9**
JNY	**Yasuok**	**14.38**	**230**	P	**Pn**	**11 36 23.7**	**-2.5**
JAO	**Obara**	**14.78**	**232**	P	**Pn**	**11 36 29.0**	**-2.5**
MSHR	**Mys Shultsa**	**14.83**	**266**	*c i*P	**Pn**	**11 36 30.7**	**-1.5**
INU	**Inuyama**	**14.85**	**232**	*e*Pn	**Pn**	**11 36 29.9**	**-2.6**
JHJ	**Hachijo jima 2**	**15.20**	**220**	Pn	**Pn**	**11 36 32.8**	**-4.3**
	comp=E,8.5nm,0.3s,baz=66,slow=20,SNR=3.3						
JHJ				Sn	Sn	11 39 08.7	-16
	comp=E,32nm,0.3s,baz=61,slow=19,SNR=4.3						
JHJ				LR	LR	11 45 45.8	
	comp=E,11µm,18.0s,baz=46,slow=50						
MDJ	**Mudanjiang**	**15.43**	**275**	P	**Pn**	**11 36 37.4**	**-2.7**
MDJ				pP	P	11 36 41.5	-2.7
MDJ				sP	pP	11 36 44.0	-10
MDJ				PP	**PnPn**	**11 36 45.6**	**-2.8**
MDJ				S	**Sn**	**11 39 30.8**	**+1.0**
MDJ				sS	S	11 39 37.2	-7.5
MDJ				pmax	pmax		
	comp=E,430nm,0.9s						
MDJ				pmax	pmax		
	comp=E,6µm,5.9s						
MDJ				LR	LR		
	comp=E,46µm,16.7s						
MDJ				LR	LR		
	comp=E,53µm,18.3s						
MDJ				LR	LR		
	comp=E,101µm,17.5s						
MDJ	**Mudanjiang**	**15.43**	**275**	*e*Pn	**Pn**	**11 36 39.9**	**-0.1**
	comp=E,310nm,0.9s						
JKN2	**Miekihoku**	**16.08**	**231**	P	**Pn**	**11 36 45.2**	**-3.2**
SMY	**Shemya**	**16.53**	**56**	*e*Pn	**Pn**	**11 36 53.5**	**-0.5**
	comp=E,2µm,2.0s						
SMY	**Shemya**	**16.53**	**56**	*e*P	**Pn**	**11 36 53.5**	**-0.5**
SMY				pmax	pmax		
	comp=Z,2µm,2.0s						
SEY	**Seymchan**	**17.56**	**2**	P	**Pn**	**11 37 04.5**	**-2.3**
	comp=Z,0.9nm,0.3s,baz=165,slow=8.8,SNR=30						
SEY				LR	LR	11 44 19.8	
	comp=Z,38µm,18.6s,baz=180,slow=39						
SEY	**Seymchan**	**17.56**	**2**	*e*P	**Pn**	**11 37 05.5**	**-1.2**
SEY	**Seymchan**	**17.56**	**2**	*c i*P	**Pn**	**11 37 05.5**	**-1.2**
ZEA	**Zeya**	**17.66**	**307**	*ce*P	**Pn**	**11 37 08.4**	**+0.3**
ZEA				*e*S	**S**	**11 40 27.0**	**-2.9**
ZEA				pmax	pmax		
	comp=E,630nm,1.6s						
ZEA				pmax	pmax		
	comp=N,290nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,700nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,8µm,7.0s						
ZEA				pmax	pmax		
	comp=N,3µm,6.0s						
ZEA				pmax	pmax		
	comp=E,7µm,6.0s						
ZEA				smax	smax		
	comp=E,3µm,7.0s						
ZEA				smax	smax		
	comp=N,6µm,10.0s						
ZEA				MLR	MLR		
	comp=Z,96µm,15.0s						
ZEA				MLR	MLR		
	comp=E,65µm,16.0s						
ZEA				MLR	MLR		
	comp=N,26µm,14.0s						
CN2	**Changchun**	**18.52**	**274**	⇓P	**P**	**11 37 16.9**	**-1.4**
CN2				*e*pP	Pn	11 37 20.5	+1.8
CN2				*e*S	**Sn**	**11 40 39.3**	**-5.2**
CN2				pmax	pmax		
	comp=N,3µm,5.0s						
CN2				LR	LR		
	comp=N,46µm,16.0s						
CN2				LR	LR		
	comp=N,63µm,16.0s						
CN2				LR	LR		
	comp=N,74µm,17.0s						
KSRS	**Korea Array**	**19.27**	**254**	P	**P**	**11 37 25.1**	**-1.4**
	comp=N,3.1nm,0.3s,baz=63,slow=11,SNR=124						
KSRS				PcP	**PcP**	**11 41 49.0**	**+1.0**
	baz=17,slow=1.2,SNR=5.2						
KSRS				LR	LR	11 45 04.8	
	comp=N,30µm,18.5s,baz=60,slow=38						
KSRS				ScP	**ScP**	**11 45 24.1**	**+3.2**
	comp=N,0.1nm,0.3s,baz=50,slow=1.9,SNR=3.9						
KS01	**Wonju Array Si**	**19.27**	**254**	*e*P	**P**	**11 37 24.7**	**-1.8**
KS15	**Wonju Array Si**	**19.30**	**254**	*e*P	**P**	**11 37 25.8**	**-1.1**
KSAR	**Wonju Array Be**	**19.30**	**254**	P	**P**	**11 37 25.1**	**-1.7**
KSAR				PcP	**PcP**	**11 41 49.0**	**+0.9**
KSAR				ScP	**ScP**	**11 45 24.1**	**+3.1**
KSAR	**Wonju Array Be**	**19.30**	**254**	P	**P**	**11 37 25.1**	**-1.7**
CBIJ	**Chichi jima**	**19.71**	**205**	*e*P	**P**	**11 37 32.1**	**+0.7**
	comp=N,342nm,0.9s						
CBIJ				S	S	11 40 55.9	-16

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JCJ   Chichijima        19.71 205   P      P         11 37 31.7 +0.3
      comp=N,4.1nm,0.3s,baz=296,slow=17,SNR=4.2
JCJ                                 S      S         11 40 55.9  -16
      baz=294,slow=20
JNU   Nakatsue          20.01 239   P      P         11 37 35.2 +0.6
      comp=N,126nm,0.9s,baz=50,slow=9.0,SNR=24
JNU                                 LR     LR        11 46 43.2
      comp=N,26µm,19.0s,baz=28,slow=41
JNU   Nakatsue          20.01 239  eP      P         11 37 35.6 +0.9
      comp=N,961nm,1.7s
CLNS  Chul'man          20.03 314  eP      P         11 37 35.0 +0.3
CLNS                               eS      S         11 41 15.4 -2.3
CLNS                                pmax   pmax
      comp=E,41nm,0.9s
CLNS                                pmax   pmax
      comp=Z,109nm,1.1s
CLNS                                pmax   pmax
      comp=N,62nm,0.9s
CLNS                                smax   smax
      comp=E,131nm,1.1s
CLNS                                smax   smax
      comp=N,298nm,1.2s
CLNS                                MLR    MLR
      comp=E,22µm,14.0s
CLNS                                MLR    MLR
      comp=Z,32µm,13.0s
CLNS                                MLR    MLR
      comp=N,23µm,13.0s
INCN  Inchon            20.13 256  eP      P         11 37 35.9  0.0
      comp=N,218nm,0.9s
INCN                                LR     LR
      comp=Z,26µm,18.0s
INCN  Inchon            20.13 256  eP      P         11 37 35.9  0.0
INCN                                pmax   pmax
      comp=Z,218nm,0.9s
INCN                                MLR    MLR
      comp=Z,26µm,18.0s
TJN   Taejon            20.22 252c iP      P         11 37 37.1 +0.2
SNY   Shenyang          20.41 270 ⇑P      P         11 37 38.8 -0.1
SNY                                 S      S         11 41 27.2 +1.9
SNY                                 pmax   pmax
      comp=Z,370nm,1.2s
SNY                                 pmax   pmax
      comp=Z,7µm,3.9s
SNY                                 LR     LR
      comp=Z,32µm,15.4s
SNY                                 LR     LR
      comp=Z,58µm,15.3s
SNY                                 LR     LR
      comp=Z,84µm,15.5s
YAK   Yakutsk           20.84 331   P      P         11 37 42.5 -0.9
      comp=Z,290nm,0.7s,baz=198,slow=1.3,SNR=71
YAK                                 S      S         11 41 33.2 -0.3
      comp=Z,66nm,0.9s,baz=54,slow=19,SNR=5.3
YAK                                 LR     LR        11 45 53.4
      comp=Z,26µm,18.7s,baz=86,slow=37
YAK   Yakutsk           20.84 331  eP      P         11 37 42.9 -0.5
      comp=Z,1µm,0.8s
YAK                                 S      S         11 41 33.2 -0.3
YAK   Yakutsk           20.84 331c iP      P         11 37 40.9 -2.5
YAK                                e                 11 38 01.8
YAK                                eS      S         11 41 31.2 -2.3
YAK                                eSS     SnSn      11 41 51.9 -3.1
YAK                                eSSS    SSS       11 42 07.3
YAK                                e                 11 49 03.0
YAK                                 pmax   pmax
      comp=Z,212nm,0.8s
YAK                                 pmax   pmax
      comp=N,45nm,0.9s
YAK                                 pmax   pmax
      comp=E,55nm,1.0s
YAK                                 pmax   pmax
      comp=Z,2µm,1.5s
YAK                                 pmax   pmax
      comp=N,2µm,1.7s
YAK                                 pmax   pmax
      comp=E,2µm,1.8s
YAK                                 smax   smax
      comp=N,1µm,2.6s
YAK                                 smax   smax
      comp=E,2µm,2.5s
YAK                                 MLR    MLR
      comp=Z,14µm,13.0s
YAK                                 MLR    MLR
      comp=N,19µm,14.0s
YAK                                 MLR    MLR
      comp=E,6µm,14.0s
KIWB  Kanaga Island     21.64  61  eP      P         11 37 50.0 -2.1
HIA   Hailar            21.70 292  eP      P         11 37 49.6 -3.2
      comp=E,429nm,1.4s
HIA                                 LR     LR
      comp=Z,58µm,18.0s
HIA   Hailar            21.70 292c iP      P         11 37 45.1 -7.7
HIA                                 pmax   pmax
      comp=Z,53nm,1.0s
HIA                                 MLR    MLR
      comp=Z,56µm,16.0s
GSTR  Great Sitkin T    22.34  61  eP      P         11 37 58.9 -0.7
DL2   Dalian            22.92 264⇑iP      P         11 38 04.8 -1.0
DL2                                 S      S         11 42 13.6 +0.6
DL2                                 pmax   pmax
      comp=Z,130nm,1.2s
DL2                                 pmax   pmax
      comp=Z,4µm,6.4s
DL2                                 LR     LR
      comp=Z,11µm,15.1s
DL2                                 LR     LR
      comp=Z,12µm,17.3s
ATKA  Atka Island       23.49  61  eP      P         11 38 10.7 -0.7
      comp=Z,194nm,1.1s
ATKA                                LR     LR
      comp=Z,25µm,22.0s
BILL  Bilibino          23.96  14  eP      P         11 38 14.0 -1.7
BILL  Bilibino          23.96  14  eP      P         11 38 14.6 -1.0
      comp=Z,56nm,1.0s
BILL                                LR     LR
      comp=Z,50µm,18.0s
BILL  Bilibino          23.96  14ceP      P         11 38 12.4 -3.3
BILL                                *PP    pP        11 38 24.0 -2.1
BILL                               e*SP    sP        11 38 26.5 -4.2
BILL                               i S     S         11 42 30.1 +0.6
BILL                                pmax   pmax
      comp=Z,26nm,0.9s
BILL                                MLR    MLR
      comp=Z,47µm,17.0s
BOD   Bodaibo           25.95 312  eP      P         11 38 30.7 -3.1
BOD                                 pmax   pmax
      comp=Z,46nm,0.9s
JOW   Kunigami          26.17 233   P      P         11 38 36.3 +0.2
      comp=Z,123nm,0.9s,baz=46,slow=10,SNR=15
JOW   Kunigami          26.17 233  eP      P         11 38 36.1 +0.1
      comp=Z,392nm,1.2s
BJI   Beijing           26.28 271   P      P         11 38 36.8 -0.1
BJI                                 S      S         11 43 09.7 +2.8
BJI                                 pmax   pmax
      comp=Z,490nm,0.9s
BJI                                 pmax   pmax
      comp=Z,8µm,5.9s
BJT   Baijiatuau        26.29 271  eP      P         11 38 37.6 +0.5
BJT   Baijiatuau        26.29 271  eP      P         11 38 37.6 +0.5
      comp=Z,413nm,1.0s
BJT                                 LR     LR
      comp=Z,33µm,20.0s
BJT   Baijiatuau        26.29 271  eP      P         11 38 37.6 +0.5
BJT                                 pmax   pmax
      comp=Z,413nm,1.0s
BJT                                 MLR    MLR
      comp=Z,33µm,20.0s
SPIA  Saint Paul Isl    26.34  50  eP      P         11 38 37.6 +0.2
      comp=Z,386nm,1.4s
NIKH  Nikolski High     26.77  59  eP      P         11 38 42.1 +0.9
      comp=Z,43nm,1.1s
NIKH                                LR     LR
      comp=Z,26µm,22.0s
TIA   Tai'an            27.34 262   P      P         11 38 46.5 -0.1
TIA                                 S      S         11 43 24.2 +0.4
TIA                                 pmax   pmax
      comp=Z,74nm,1.5s
TIA                                 pmax   pmax
      comp=Z,3µm,5.7s
TIA                                 LR     LR
      comp=Z,10µm,17.8s
TIA                                 LR     LR
      comp=Z,9µm,18.7s
TIA                                 LR     LR
      comp=Z,14µm,18.8s
SSE   Sheshan           27.50 249   P      P         11 38 49.4 +1.4
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SSE                                 S      S         11 43 29.1 +2.8
SSE                                 pmax   pmax
      comp=Z,86nm,1.4s
SSE                                 pmax   pmax
      comp=Z,2µm,8.4s
SSE                                 LR     LR
      comp=Z,7µm,15.4s
SSE                                 LR     LR
      comp=Z,9µm,16.0s
TIXI  Tiksi             28.43 345   P      P         11 38 53.3 -2.5
      comp=Z,11nm,0.5s,baz=138,slow=9.7,SNR=12
TIXI                                PcP    PcP       11 42 06.9 -0.1
      comp=Z,20nm,1.0s,baz=90,slow=5.1,SNR=4.0
TIXI                                LR     LR        11 50 38.7
      comp=Z,17µm,18.7s,baz=142,slow=37
TIXI  Tiksi             28.43 345  eP      P         11 38 54.0 -1.8
      comp=Z,43nm,1.0s
TIXI                                PcP    PcP       11 42 06.9 -0.1
TIXI  Tiksi             28.43 345ceP      P         11 38 53.1 -2.8
TIXI                                pmax   pmax
      comp=Z,79nm,1.7s
TIXI                                MLR    MLR
      comp=Z,20µm,16.0s
NJ2   Nanjing           28.46 253  eP      P         11 38 56.3 -0.3
NJ2                                 pP     pP        11 39 00.7 -6.5
NJ2                                 S      S         11 43 43.6 +2.2
NJ2                                 pmax   pmax
      comp=Z,66nm,1.0s
NJ2                                 pmax   pmax
      comp=Z,3µm,10.4s
NJ2                                 LR     LR
      comp=Z,32µm,20.8s
NJ2                                 LR     LR
      comp=Z,37µm,17.4s
NJ2                                 LR     LR
      comp=Z,40µm,16.8s
H11N2 WAKE ISLAND Hy    28.65 148   T      T         12 09 37.1
      baz=338,slow=74
H11N1 WAKE ISLAND Hy    28.67 148   T      T         12 09 44.1
      baz=338,slow=74
H11N3 WAKE ISLAND Hy    28.67 148   T      T         12 09 44.0
      baz=338
HHC   Hu-ho-hao-te      29.21 275  eP      P         11 39 04.0 +0.7
HHC                                 sP     pP        11 39 13.9  0.0
HHC                                 PP     PnPn      11 39 57.5 +0.6
HHC                                 S      S         11 43 52.5 -0.7
HHC                                 sS     sS        11 44 03.7 -7.1
HHC                                 pmax   pmax
      comp=Z,320nm,0.9s
HHC                                 pmax   pmax
      comp=Z,4µm,5.2s
HHC                                 LR     LR
      comp=Z,18µm,13.9s
HHC                                 LR     LR
      comp=Z,66µm,14.7s
HHC                                 LR     LR
      comp=Z,75µm,14.7s
H11S1 WAKE ISLAND Hy    29.70 150   T      T         12 10 58.7
      baz=338,slow=76,SNR=2725
H11S3 WAKE ISLAND Hy    29.71 150   T      T         12 11 07.2
      baz=338,slow=76,SNR=1948
H11S2 WAKE ISLAND Hy    29.72 150   T      T         12 11 14.1
      baz=338,slow=76,SNR=2785
TIY   Taiyuan           29.91 269  eP      P         11 39 10.2 +0.7
TIY                                 PP     PnPn      11 40 07.4 +0.9
TIY                                 S      S         11 44 05.0 +0.7
TIY                                 SS     SnSn      11 45 34.7 -2.5
TIY                                 pmax   pmax
      comp=Z,130nm,0.9s
TIY                                 pmax   pmax
      comp=Z,2µm,5.0s
TIY                                 LR     LR
      comp=Z,15µm,16.5s
TIY                                 LR     LR
      comp=Z,16µm,15.0s
TIY                                 LR     LR
      comp=Z,18µm,16.0s
FALS  False Pass        29.98  55   PFAKE            11 39 20.0  +10
FALS                                LR     LR
      comp=Z,16µm,21.0s
MIDW  Midway            30.08 114   PFAKE            11 39 20.0 +9.0
MIDW                                LR     LR
      comp=Z,12µm,18.0s
ULN   Ulaanbaatar       30.23 291  eP      P         11 39 12.9 +0.6
      comp=Z,114nm,1.5s
ULN                                 LR     LR
      comp=Z,39µm,18.0s
ULN   Ulaanbaatar       30.23 291   P      P         11 39 11.4 -0.8
      SNR=49
ULN   Ulaanbaatar       30.23 291c iP      P         11 39 10.6 -1.7
ULN                                 pmax   pmax
      comp=Z,91nm,1.7s
ULN                                 MLR    MLR
      comp=Z,39µm,16.0s
BTO   Baotou            30.38 276  eP      P         11 39 13.6 -0.1
BTO                                 LR     LR
      comp=Z,13µm,12.3s
BTO                                 LR     LR
      comp=Z,11µm,15.2s
ANM   Nome              30.47  36   PFAKE            11 39 30.0  +16
ANM                                 LR     LR
      comp=Z,18µm,18.0s
SONA1 Songino Array     30.66 291  eP      P         11 39 16.5 +0.5
SONM  Songino Array     30.67 291   P      P         11 39 15.3 -0.9
      comp=Z,24nm,0.9s,baz=76,slow=7.8,SNR=63
SONM                                LR     LR        11 52 42.1
      comp=Z,42µm,18.6s,baz=84,slow=39
YOJ   Yonaguni jima     31.02 237   PFAKE            11 39 30.0  +11
YOJ                                 LR     LR
      comp=Z,15µm,20.0s
IRK   Irkutsk           31.29 300  eP      P         11 39 18.9 -2.6
IRK                                e                 11 40 18.1
IRK                                 pmax   pmax
      comp=Z,60nm,2.3s
TATO  Taipei            31.55 240   PFAKE            11 39 40.0  +16
TATO                                LR     LR
      comp=Z,36µm,20.0s
SDPT  Sand Point        31.66  54   PFAKE            11 39 40.0  +15
SDPT                                LR     LR
      comp=Z,10µm,20.0s
TLY   Talaya            31.75 299   LR     LR        11 53 18.4
      comp=Z,49µm,18.1s,baz=78,slow=38
TLY   Talaya            31.75 299  eP      P         11 39 24.4 -1.1
      comp=Z,25nm,0.9s
TLY   Talaya            31.75 299c iP      P         11 39 23.0 -2.5
TLY                                e                 11 40 32.7
TLY                                ePPP    PPP       11 40 43.2
TLY                                 pmax   pmax
      comp=Z,30nm,0.9s
TLY                                 MLR    MLR
      comp=Z,45µm,16.0s
YHNB  Yeheng            31.84 240   PFAKE            11 39 40.0  +13
YHNB                                LR     LR
      comp=Z,48µm,21.0s
NACB  Ninganchiao       32.08 239  eP      P         11 39 28.5 -0.1
      comp=Z,32nm,0.9s
NACB                                LR     LR
      comp=Z,25µm,20.0s
ZAK   Zakamensk         32.18 296  eP      P         11 39 27.8 -1.6
ZAK                                 pmax   pmax
      comp=Z,43nm,1.4s
GUMO  Guam              32.21 192   LR     LR        11 55 13.6
      comp=Z,8µm,18.3s,baz=22,slow=41
WHN   Wuhan             32.44 256⇑iP      P         11 39 32.0 +0.3
WHN                                 S      S         11 44 42.9 -0.8
WHN                                 pmax   pmax
      comp=Z,170nm,0.8s
WHN                                 pmax   pmax
      comp=Z,3µm,4.2s
WHN                                 LR     LR
      comp=Z,84µm,20.1s
WHN                                 LR     LR
      comp=Z,23µm,19.1s
WHN                                 LR     LR
      comp=Z,61µm,17.6s
RDOG  Red Dog Mine      32.57  30  eP      P         11 39 32.5 +0.1
      comp=Z,38nm,0.9s
RDOG                                LR     LR
      comp=Z,7µm,20.0s
SSLB  Suanglung         32.76 239  eP      P         11 39 35.0 +0.4
      comp=Z,58nm,1.1s
SSLB                                LR     LR
      comp=Z,35µm,20.0s
YULB  Yu-li             32.85 238  eP      P         11 39 36.4 +1.0
      comp=Z,43nm,0.8s
YULB                                LR     LR
      comp=Z,14µm,20.0s
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TPUB  Ta-pu             33.32 239  eP      P         11 39 39.8 +0.3
      comp=Z,167nm,1.0s
TPUB                                LR     LR
      comp=Z,30µm,21.0s
QZH   Quanzhou          33.37 243⇑iP      P         11 39 41.1 +1.2
QZH                                 S      S         11 44 59.2 +1.0
QZH                                 pmax   pmax
      comp=Z,140nm,2.4s
QZH                                 pmax   pmax
      comp=Z,3µm,3.1s
QZH                                 LR     LR
      comp=Z,12µm,19.4s
QZH                                 LR     LR
      comp=Z,4µm,18.9s
QZH                                 LR     LR
      comp=Z,9µm,18.9s
MOY   Mondy             33.38 299  eP      P         11 39 38.7 -1.2
MOY                                e                 11 40 59.4
MOY                                 pmax   pmax
      comp=Z,49nm,2.7s
TWG   Pinlang           33.41 238  eP      P         11 39 40.1 -0.2
      comp=Z,719nm,1.0s
TWG                                 LR     LR
      comp=Z,44µm,20.0s
XAN   Xi'an             34.21 266   P      P         11 39 46.9 -0.3
XAN                                 PP     PP        11 41 04.1 -0.9
XAN                                 PcP    PcP       11 42 18.8 -4.5
XAN                                 S      S         11 45 08.2 -3.1
XAN                                 ScP    ScP       11 46 00.8 -4.4
XAN                                 pmax   pmax
      comp=Z,130nm,0.9s
XAN                                 pmax   pmax
      comp=Z,2µm,4.1s
XAN                                 LR     LR
      comp=Z,20µm,15.7s
XAN                                 LR     LR
      comp=Z,14µm,13.7s
XAN                                 LR     LR
      comp=Z,18µm,16.4s
KNGR  Kungurtug, Tuv    35.74 298  i P     P         11 40 00.5 +0.2
KDAK  Kodiak Island     35.88  49  eP      P         11 40 00.2 -1.0
KDAK  Kodiak Island     35.88  49  eP      P         11 40 00.4 -0.8
      comp=Z,88nm,0.8s
KDAK                                LR     LR
      comp=Z,13µm,21.0s
KDAK  Kodiak Island     35.88  49  i P     P         11 40 00.2 -1.0
ENH   Enshi             35.95 260  eP      P         11 40 01.7 -0.5
      comp=Z,141nm,1.1s
ENH                                 LR     LR
      comp=Z,10µm,18.0s
PPLA  Purkeypile        35.95  41  eP      P         11 40 03.1 +1.0
      comp=Z,281nm,1.6s
PPLA                                LR     LR
      comp=Z,10µm,18.0s
CAST  Castle Rocks      36.02  40   PFAKE            11 40 10.0 +7.5
CAST                                LR     LR
      comp=Z,12µm,20.0s
HOM   Homer             36.24  46   PFAKE            11 40 20.0  +16
HOM                                 LR     LR
      comp=Z,6µm,22.0s
SKT   Skwentna          36.24  42  eP      P         11 40 05.0 +0.7
      comp=Z,34nm,1.1s
SKT                                 LR     LR
      comp=Z,7µm,21.0s
CNPM  China Poot        36.45  46  eP      P         11 40 06.5 +0.3
      comp=Z,309nm,2.0s
CNPM                                LR     LR
      comp=Z,9µm,19.0s
BPAW  Bear Paw Mtn.     36.54  39  eP      P         11 40 06.5 -0.4
      comp=Z,46nm,1.0s
BPAW                                LR     LR
      comp=Z,17µm,18.0s
KTH   Kantishna Hill    36.55  39   PFAKE            11 40 20.0  +13
KTH                                 LR     LR
      comp=Z,12µm,20.0s
BRLK  Bradley Lake      36.62  46  eP      P         11 40 07.0 -0.6
      comp=Z,146nm,1.6s
BRLK                                LR     LR
      comp=Z,12µm,19.0s
SUA   Susitna One       36.62  43   PFAKE            11 40 20.0  +12
SUA                                 LR     LR
      comp=Z,7µm,20.0s
MLY   Manley            36.70  37  eP      P         11 40 08.9 +0.7
      comp=Z,30nm,0.9s
MLY                                 LR     LR
      comp=Z,12µm,19.0s
LZH   Lanzhou           36.74 272 ⇑P      P         11 40 10.1 +1.1
LZH                                 pP     pP        11 40 16.2 -3.6
LZH                                 sP     sP        11 40 20.7 -3.6
LZH                                 PP     PnPn      11 41 34.4 +1.3
LZH                                 S      S         11 45 51.4 +1.1
LZH                                 sS     sS        11 46 03.6 -4.4
LZH                                 SS     SnSn      11 48 17.4 -5.5
LZH                                 pmax   pmax
      comp=Z,630nm,1.2s
LZH                                 pmax   pmax
      comp=Z,3µm,5.4s
LZH                                 LR     LR
      comp=Z,22µm,10.8s
LZH                                 LR     LR
      comp=Z,31µm,11.4s
LZH                                 LR     LR
      comp=Z,29µm,11.8s
TRF   Thorofare Moun    36.83  40  eP      P         11 40 09.9 +0.4
      comp=Z,42nm,1.0s
TRF                                 LR     LR
      comp=Z,11µm,20.0s
COLD  Coldfoot          37.10  33  eP      P         11 40 11.7 +0.1
      comp=Z,39nm,0.9s
COLD                                LR     LR
      comp=Z,8µm,20.0s
RC01  Rabbit Creek A    37.12  44  eP      P         11 40 11.8  0.0
      comp=Z,44nm,0.8s
RC01                                LR     LR
      comp=Z,8µm,20.0s
BWN   Browne            37.21  38  eP      P         11 40 13.5 +1.0
      comp=Z,298nm,1.1s
BWN                                 LR     LR
      comp=Z,20µm,18.0s
PMR   Palmer            37.39  43  eP      P         11 40 14.2 +0.2
      comp=Z,37nm,1.0s
PMR                                 LR     LR
      comp=Z,8µm,21.0s
PMR   Palmer            37.39  43  eP      P         11 40 14.2 +0.2
PMR                                 pmax   pmax
      comp=Z,37nm,1.0s
PMR                                 MLR    MLR
      comp=Z,8µm,21.0s
MCK   McKinley          37.44  39  eP      P         11 40 14.6 +0.1
MCK   McKinley          37.44  39  eP      P         11 40 14.6 +0.1
      comp=Z,54nm,1.1s
MCK                                 LR     LR
      comp=Z,17µm,20.0s
MCK   McKinley          37.44  39  eP      P         11 40 14.6 +0.1
MCK                                 pmax   pmax
      comp=Z,54nm,1.1s
MCK                                 MLR    MLR
      comp=Z,17µm,20.0s
KRAR  Krasnoyarsk       37.44 308  i P     P         11 40 12.0 -2.6
GHO   Glory Hole Cre    37.48  42  eP      P         11 40 15.3 +0.3
      comp=Z,55nm,0.8s
GHO                                 LR     LR
      comp=Z,10µm,21.0s
TOLK  Toolik Lake Re    37.50  31   P      P         11 40 15.4 +0.3
      baz=263
TOLK  Toolik Lake Re    37.50  31  eP      P         11 40 15.1 +0.1
      comp=Z,68nm,1.0s
TOLK                                LR     LR
      comp=Z,6µm,18.0s
SML   Sawmill           37.76  42  eP      P         11 40 17.3 +0.1
SML   Sawmill           37.76  42  eP      P         11 40 17.3 +0.1
      comp=Z,146nm,1.0s
SML                                 LR     LR
      comp=Z,8µm,21.0s
SML   Sawmill           37.76  42  eP      P         11 40 17.3 +0.1
SML                                 pmax   pmax
      comp=Z,146nm,1.0s
SML                                 MLR    MLR
      comp=Z,8µm,21.0s
MDM   Murphy Dome       37.76  37  eP      P         11 40 17.5 +0.3
      comp=Z,63nm,1.0s
MDM                                 LR     LR
      comp=Z,9µm,18.0s
WRH   Wood River Hil    37.81  38   PFAKE            11 40 30.0  +12
WRH                                 LR     LR
      comp=Z,16µm,19.0s
COLA  College           37.92  37  eP      P         11 40 19.0 +0.5
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	comp=Z,102nm,0.9s						
COLA				LR	LR		
	comp=Z,8µm,20.0s						
COLA	**College**	**37.92**	**37**	*e*P	**P**	**11 40 19.0**	**+0.5**
COLA				pmax	pmax		
	comp=Z,103nm,0.9s						
COLA				MLR	MLR		
	comp=Z,8µm,20.0s						
CCB	**Clear Creek Bu**	**37.94**	**38**	*e*P	**P**	**11 40 18.5**	**-0.1**
	comp=Z,29nm,0.9s						
CCB				LR	LR		
	comp=Z,11µm,18.0s						
HVS	**Khovu-Aksy**	**37.96**	**300**	*i* P	**P**	**11 40 17.6**	**-1.5**
HVS				pmax	pmax		
	comp=Z,37nm,1.1s						
HVS				MLR	MLR		
	comp=Z,21µm,14.0s						
GTA	**Gaotai**	**38.00**	**280**	⇑P	**P**	**11 40 20.2**	**+0.5**
GTA				pP	pP	11 40 24.7	-5.7
GTA				sP	sP	11 40 27.5	-7.4
GTA				PcP	**PcP**	**11 42 36.6**	**+2.0**
GTA				S	**S**	**11 46 09.0**	**-0.3**
GTA				sS	ScP	11 46 18.6	-0.5
GTA				SS	**SnSn**	**11 48 41.7**	**-12**
GTA				ScS	**ScS**	**11 50 30.7**	**+2.2**
GTA				pmax	pmax		
	comp=Z,150nm,1.4s						
GTA				pmax	pmax		
	comp=Z,3µm,4.1s						
GTA				LR	LR		
	comp=Z,11µm,14.3s						
GTA				LR	LR		
	comp=Z,20µm,15.8s						
GTA				LR	LR		
	comp=Z,28µm,14.6s						
GZH	**Guangzhou**	**38.04**	**247**	P	**P**	**11 40 15.5**	**-4.5**
GZH				PcP	**PcP**	**11 42 34.9**	**+0.1**
GZH				S	**S**	**11 46 02.5**	**-7.4**
GZH				pmax	pmax		
	comp=Z,2µm,7.6s						
GZH				LR	LR		
	comp=Z,23µm,17.7s						
GZH				LR	LR		
	comp=Z,15µm,17.1s						
DHY	**Denali Highway**	**38.15**	**40**	*e*P	**P**	**11 40 20.4**	**-0.3**
	comp=Z,49nm,0.9s						
DHY				LR	LR		
	comp=Z,13µm,20.0s						
SCM	**Sheep Creek Mo**	**38.23**	**42**	*e*P	**P**	**11 40 21.7**	**+0.4**
	comp=Z,65nm,0.9s						
SCM				LR	LR		
	comp=Z,8µm,20.0s						
HDA	**Harding Lake**	**38.31**	**38**	*e*P	**P**	**11 40 21.7**	**-0.1**
	comp=Z,32nm,0.7s						
HDA				LR	LR		
	comp=Z,16µm,19.0s						
IL1	**Eielson Array**	**38.33**	**37**	*e*P	**P**	**11 40 21.7**	**-0.3**
ILAR	**Eielson Array**	**38.33**	**37**	P	**P**	**11 40 21.2**	**-0.7**
	comp=Z,14nm,0.9s,baz=256,slow=7.1,SNR=71						
ILAR				LR	LR	11 58 05.7	
	comp=Z,8µm,19.6s,baz=276,slow=39						
ILB	**Eielson Array**	**38.33**	**37**	*e*P	**P**	**11 40 21.3**	**-0.7**
PATS	**Pohnpei**	**38.91**	**169**	PFAKE		11 40 40.0	+13
PATS				LR	LR		
	comp=Z,10µm,19.0s						
KLU	**Klutina**	**38.93**	**43**	*e*P	**P**	**11 40 27.4**	**+0.3**
	comp=Z,65nm,1.0s						
MID	**Middleton Isla**	**38.95**	**46**	PFAKE		11 40 40.0	+13
MID				LR	LR		
	comp=Z,10µm,19.0s						
PAX	**Paxson**	**39.02**	**40**	PFAKE		11 40 40.0	+12
PAX				LR	LR		
	comp=Z,12µm,21.0s						
DIV	**Divide**	**39.04**	**43**	*e*P	**P**	**11 40 28.4**	**+0.4**
	comp=Z,44nm,0.8s						
DIV				LR	LR		
	comp=Z,8µm,20.0s						
HARP	**HAARP**	**39.21**	**41**	*e*P	**P**	**11 40 30.2**	**+0.8**
	comp=Z,87nm,1.1s						
HARP				LR	LR		
	comp=Z,10µm,21.0s						
CD2	**Chengdu**	**39.58**	**265**	⇑*i*P	**P**	**11 40 33.0**	**+0.2**
CD2				pP	pP	11 40 39.2	-4.4
CD2				sP	sP	11 40 41.8	-6.3
CD2				PP	**PP**	**11 42 03.7**	**-0.3**
CD2				S	**S**	**11 46 29.1**	**-3.9**
CD2				sS	sS	11 46 45.2	-5.7
CD2				pmax	pmax		
	comp=Z,1µm,0.7s						
CD2				pmax	pmax		
	comp=Z,7µm,5.5s						
CD2				LR	LR		
	comp=Z,37µm,16.2s						
CD2				LR	LR		
	comp=Z,27µm,18.1s						
CD2				LR	LR		
	comp=Z,40µm,17.7s						
BMRM	**Bremner River**	**39.62**	**43**	*e*P	**P**	**11 40 33.5**	**+0.6**
	comp=Z,69nm,0.8s						
BMRM				LR	LR		
	comp=Z,10µm,22.0s						
RAGM	**Ragged Mountai**	**39.66**	**44**	*e*P	**P**	**11 40 33.1**	**0.0**
	comp=Z,75nm,0.9s						
RAGM				LR	LR		
	comp=Z,12µm,21.0s						
GYA	**Guiyang**	**40.26**	**257**	⇑*i*P	**P**	**11 40 38.7**	**+0.1**
GYA				sP	pP	11 40 47.0	-2.4
GYA				PP	**PnPn**	**11 42 16.0**	**+0.6**
GYA				PcP	**PcP**	**11 42 44.7**	**+2.8**
GYA				SS	SS	11 49 34.0	-8.4
GYA				ScS	**ScS**	**11 50 43.4**	**+1.4**
GYA				pmax	pmax		
	comp=Z,100nm,0.9s						
GYA				pmax	pmax		
	comp=Z,2µm,11.5s						
GYA				LR	LR		
	comp=Z,12µm,17.7s						
GYA				LR	LR		
	comp=Z,13µm,16.2s						
GYA				LR	LR		
	comp=Z,20µm,16.9s						
TGY	**Tagaytay City**	**40.45**	**229**	P	**P**	**11 40 38.6**	**-1.6**
	comp=Z,80nm,0.3s,baz=32,slow=9.5,SNR=6.3						
TGL	**Tana Glacier**	**40.51**	**44**	*e*P	**P**	**11 40 40.6**	**+0.3**
	comp=Z,87nm,1.0s						
TGL				LR	LR		
	comp=Z,6µm,20.0s						
BALM	**Baldy**	**40.70**	**43**	PFAKE		11 40 50.0	+8.1
BALM				LR	LR		
	comp=Z,6µm,20.0s						
EGAK	**Eagle**	**40.78**	**37**	*e*P	**P**	**11 40 42.4**	**0.0**
	comp=Z,57nm,1.0s						
EGAK				LR	LR		
	comp=Z,8µm,20.0s						
DAWY	**Dawson**	**41.63**	**38**	*e*P	**P**	**11 40 49.7**	**+0.3**
	comp=Z,70nm,1.6s						
DAWY				LR	LR		
	comp=Z,11µm,20.0s						
DGZ	**Jazzator, Alta**	**42.21**	**300**	*i* P	P	11 40 45.6	-8.9
ZAA0	**Zalesovo Array**	**42.43**	**306**	*e*P	**P**	**11 40 54.0**	**-2.0**
	comp=Z,19nm,1.0s						
ZAA0				LR	LR		
	comp=Z,30µm,20.0s						
ZALV	**Zalesovo Beam**	**42.43**	**306**	P	**P**	**11 40 53.8**	**-2.1**
	comp=Z,5.0nm,0.4s,baz=64,slow=6.8,SNR=18						
ZALV				PcP	**PcP**	**11 42 48.9**	**+0.5**
	comp=Z,36nm,0.8s,baz=78,slow=2.8,SNR=13						
ZALV				ScP	**ScP**	**11 46 38.3**	**+2.3**
	comp=Z,2.7nm,0.8s,baz=80,slow=3.2,SNR=2.2						
ZALV				LR	LR	11 59 37.6	
	comp=Z,25µm,20.2s,baz=59,slow=38						
ZALV	**Zalesovo Beam**	**42.43**	**306**	*e*P	**P**	**11 40 53.5**	**-2.4**
ZALV				PcP	**PcP**	**11 42 48.9**	**+0.5**
ZALV				ScP	**ScP**	**11 46 38.2**	**+2.3**
ZALV	**Zalesovo Beam**	**42.43**	**306**	*e*P	**P**	**11 40 53.5**	**-2.4**
ZALV						11 42 48.9	
NVS	**Novosibirsk**	**43.06**	**308**	⇓*i*P	**P**	**11 41 00.5**	**-0.5**
NVS				*e*		11 41 21.6	
NVS				*i*		11 42 50.4	
NVS				*i* S	**S**	**11 47 24.0**	**0.0**
NVS				*i* SS	**ScS**	**11 50 58.6**	**+0.7**
NVS				*i*		11 51 21.8	
NVS				pmax	pmax		
	comp=Z,55nm,1.9s						
NVS				pmax	pmax		
	comp=N,18nm,1.6s						
NVS				pmax	pmax		
	comp=E,36nm,1.6s						
NVS				smax	smax		
	comp=N,46nm,2.0s						
NVS				smax	smax		
	comp=E,50nm,1.8s						
QIZ	**Qiongzhong**	**43.22**	**246**	P	**P**	**11 41 03.9**	**+1.1**
QIZ				PP	**PP**	**11 42 44.4**	**+0.8**
QIZ				S	**S**	**11 47 33.5**	**+6.4**
QIZ				pmax	pmax		
	comp=E,32nm,1.1s						
QIZ				pmax	pmax		
	comp=E,2µm,6.5s						
QIZ				LR	LR		
	comp=E,11µm,20.6s						
QIZ				LR	LR		
	comp=E,12µm,20.1s						
QIZ				LR	LR		
	comp=E,15µm,15.7s						
QIZ	**Qiongzhong**	**43.22**	**246**	*e*P	**P**	**11 41 05.0**	**+2.3**
	comp=E,47nm,1.2s						
INK	**Inuvik**	**43.41**	**32**	LR	LR	12 02 29.3	
	comp=E,8µm,18.4s,baz=284,slow=41						
INK	**Inuvik**	**43.41**	**32**	*e*P	**P**	**11 41 04.4**	**+0.7**
	comp=E,73nm,1.1s						
INK	**Inuvik**	**43.41**	**32**	*e*P	**P**	**11 41 04.4**	**+0.7**
INK				pmax	pmax		
	comp=Z,73nm,1.1s						
KMI	**Kunming**	**43.82**	**259**	P	**P**	**11 41 08.1**	**+0.3**
KMI				pP	pP	11 41 13.7	-5.0
KMI				sP	sP	11 41 16.4	-6.8
KMI				PP	**PP**	**11 42 50.5**	**+0.4**
KMI				S	**S**	**11 47 38.8**	**+2.6**
KMI				sS	sS	11 47 49.0	-5.3
KMI				pmax	pmax		
	comp=Z,91nm,1.4s						
KMI				pmax	pmax		
	comp=Z,3µm,4.5s						
KMI				LR	LR		
	comp=Z,12µm,16.8s						
KMI				LR	LR		
	comp=Z,8µm,16.8s						
KMI				LR	LR		
	comp=Z,14µm,16.2s						
DAV	**Davao City (W)**	**44.27**	**218**	⇑*i*P	**P**	**11 41 11.1**	**-0.1**
WMQ	**Urumqi**	**44.30**	**292**	P	**P**	**11 41 12.9**	**+1.6**
WMQ				PP	**PP**	**11 42 54.3**	**-0.4**
WMQ				S	**S**	**11 47 46.3**	**+3.8**
WMQ				sS	sS	11 47 58.0	-2.6
WMQ				pmax	pmax		
	comp=Z,280nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,6µm,5.3s						
WMQ				LR	LR		
	comp=Z,60µm,16.9s						
WMQ				LR	LR		
	comp=Z,34µm,15.9s						
WMQ				LR	LR		
	comp=Z,33µm,23.1s						
SKAG	**Skagway**	**44.45**	**44**	*e*P	**P**	**11 41 12.9**	**+0.7**
	comp=Z,74nm,1.2s						
SKAG				LR	LR		
	comp=Z,10µm,19.0s						
ZSN	**Zaisan**	**44.62**	**298**	*e*P	**P**	**11 41 12.7**	**-1.1**
	comp=Z,3.9nm,1.1s						
ZSN				*e*S	**S**	**11 47 47.3**	**+0.2**
ZSN				LR	LR	12 00 39.4	
	comp=Z,6µm,15.3s						
BESE	**Bessie Mountai**	**44.93**	**45**	*e*P	**P**	**11 41 16.6**	**+0.5**
	comp=Z,112nm,1.2s						
BESE				LR	LR		
	comp=Z,8µm,19.0s						
JIS	**Juneau Island**	**45.26**	**46**	*e*P	**P**	**11 41 20.2**	**+1.6**
	comp=Z,138nm,1.3s						
JIS				LR	LR		
	comp=Z,9µm,20.0s						
KEKH	**Kekaha**	**46.06**	**104**	PFAKE		11 41 40.0	+15
KEKH				LR	LR		
	comp=Z,6µm,19.0s						
MK31	**Makanchi Array**	**46.49**	**298**	*e*P	**P**	**11 41 27.7**	**-0.9**
MK31	**Makanchi Array**	**46.49**	**298**	*i* P	**P**	**11 41 27.4**	**-1.2**
MK31				pmax	pmax		
	comp=Z,55nm,0.9s						
MKAR	**Makanchi Array**	**46.49**	**298**	P	**P**	**11 41 27.2**	**-1.4**
	comp=Z,19nm,0.6s,baz=70,slow=8.2,SNR=91						
MKAR				PcP	**PcP**	**11 43 02.6**	**+0.1**
	comp=Z,18nm,0.7s,baz=75,slow=1.7,SNR=5.2						
MKAR				LR	LR	12 02 04.8	
	comp=Z,48µm,18.3s,baz=68,slow=38						
MKAR				PKPPKP	**P'P'df**	**12 12 54.0**	**-3.2**
	comp=Z,0.7nm,0.9s,baz=238,slow=1.1,SNR=5.0						
MKAR	**Makanchi Array**	**46.49**	**298**	*e*P	**P**	**11 41 27.9**	**-0.7**
	comp=Z,248nm,0.7s						
MKAR				PcP	**PcP**	**11 43 02.6**	**+0.1**
MKAR				P'P'		12 12 54.0	
MK01	**Makanchi Array**	**46.50**	**298**	*e*P	**P**	**11 41 28.1**	**-0.5**
MAKZ	**Makanchi**	**46.68**	**298**	*e*P	**P**	**11 41 29.2**	**-0.8**
	comp=Z,41nm,0.8s						
MAKZ				LR	LR		
	comp=Z,52µm,18.0s						
MAKZ	**Makanchi**	**46.68**	**298**	P	**P**	**11 41 28.2**	**-1.8**
MAKZ				pmax	pmax		
	comp=Z,74nm,1.3s						
CRAG	**Craig**	**46.84**	**49**	*e*P	**P**	**11 41 32.4**	**+1.3**
	comp=Z,137nm,1.4s						
WRAK	**Wrangell Islan**	**46.91**	**48**	*e*P	**P**	**11 41 33.4**	**+1.8**
	comp=Z,45nm,1.1s						
WRAK				LR	LR		
	comp=Z,8µm,19.0s						
KURK	**Kurchatov**	**47.11**	**304**	*e*P	**P**	**11 41 31.0**	**-2.2**
	comp=Z,562nm,0.8s						
KURK				ScP	**ScP**	**11 47 01.9**	**+6.6**
KURK				S	**S**	**11 48 27.1**	**+4.5**
KURK	**Kurchatov**	**47.11**	**304**	*e*P	**P**	**11 41 31.0**	**-2.2**
KURK				S	**S**	**11 48 27.1**	**+4.5**
KURK				pmax	pmax		
	comp=Z,563nm,0.8s						
KURBB	**Kurchatov Arra**	**47.20**	**304**	P	**P**	**11 41 31.7**	**-2.2**
	comp=Z,31nm,0.8s,baz=69,slow=8.2,SNR=73						
KURBB				ScP	**ScP**	**11 47 01.9**	**+6.2**
	comp=Z,3.2nm,0.9s,baz=74,slow=3.4,SNR=2.2						
KURBB				S	**S**	**11 48 27.1**	**+3.2**
	comp=Z,13nm,1.1s,baz=71,slow=13,SNR=7.4						
DLBC	**Dease Lake**	**47.38**	**44**	LR	LR	12 04 30.5	
	comp=Z,6µm,18.6s,baz=298,slow=40						
DLBC	**Dease Lake**	**47.38**	**44**	*e*P	**P**	**11 41 37.2**	**+1.8**
	comp=Z,65nm,1.0s						
MANU	**Manus Island**	**47.39**	**185**	*e*P	**P**	**11 41 36.3**	**+0.5**
	comp=Z,134nm,1.5s						
MANU				LR	LR		
	comp=Z,7µm,22.0s						
OPA	**Opana**	**47.42**	**103**	PFAKE		11 41 50.0	+14
OPA				LR	LR		
	comp=Z,6µm,22.0s						
KIP	**Kipapa**	**47.60**	**103**	PFAKE		11 41 50.0	+13
KIP				LR	LR		
	comp=Z,6µm,22.0s						
HON	**Honolulu**	**47.67**	**103**	PFAKE		11 41 50.0	+12
HON				LR	LR		
	comp=Z,6µm,22.0s						
DIB	**Dawson Inlet,**	**48.04**	**52**	*e*P	**P**	**11 41 41.1**	**+0.7**
	comp=Z,55nm,1.1s						
DIB				LR	LR		
	comp=Z,6µm,22.0s						
NONG	**Nongkai**	**48.32**	**252**	P	**P**	**11 41 43.6**	**+0.6**
	comp=Z,2.8nm,1.0s						
SKNT	**Sakolnakorn**	**48.54**	**250**	P	**P**	**11 41 45.6**	**+0.9**
	comp=Z,43nm,1.2s,comp=Z,4µm						
KHLH	**Kahului Airpor**	**49.04**	**102**	PFAKE		11 42 00.0	+11
KHLH				LR	LR		
	comp=Z,5µm,21.0s						
LSA	**Lhasa**	**49.15**	**273**	*e*P	**P**	**11 41 51.0**	**+1.2**
	comp=Z,132nm,0.9s						
LSA	**Lhasa**	**49.15**	**273**	P	**P**	**11 41 51.1**	**+1.2**
LSA	**Lhasa**	**49.15**	**273**	*e*P	**P**	**11 41 51.0**	**+1.2**
LSA				pmax	pmax		
	comp=Z,132nm,0.9s						
HLK	**Haleakala**	**49.26**	**102**	PFAKE		11 42 00.0	+9.5
HLK				LR	LR		
	comp=Z,6µm,22.0s						
RABL	**Rabaul**	**49.40**	**179**	*e*P	**P**	**11 41 52.8**	**+1.6**
	comp=Z,321nm,1.5s						
RABL				LR	LR		
	comp=Z,10µm,19.0s						
KKM	**Kota Kinabalu**	**49.70**	**229**	P	**P**	**11 41 57.0**	**+3.3**
TDK	**Taldyqorghan**	**49.72**	**297**	*e*P	**P**	**11 41 53.2**	**-0.2**
	comp=Z,154nm,0.9s						
TDK				*e*S	**S**	**11 49 00.8**	**+1.1**
TDK				LR	LR	12 03 38.4	
	comp=Z,41µm,15.0s						
CMAI	**Chiengmai2**	**49.81**	**257**	P	**P**	**11 41 55.9**	**+1.3**
	comp=Z,20nm,1.8s						
PDGK	**Podgornoye**	**49.83**	**295**	P	**P**	**11 41 53.2**	**-1.3**
PDGK				pmax	pmax		
	comp=Z,118nm,1.2s						
SHLS	**Shalkode**	**49.93**	**295**	*e*P	**P**	**11 41 53.0**	**-2.3**
	comp=Z,28nm,0.8s						
SHLS				*e*S	**S**	**11 49 00.2**	**-2.7**
SHLS				LR	LR	12 03 59.2	
	comp=Z,3µm,12.3s						
HPAH	**Hawaii Prepara**	**50.13**	**102**	PFAKE		11 42 10.0	+13
HPAH				LR	LR		
	comp=Z,6µm,22.0s						
UZB	**Uzynbulak**	**50.22**	**295**	*e*P	**P**	**11 41 57.1**	**-0.4**
	comp=Z,55nm,1.1s						
UZB				*e*S	**S**	**11 49 07.8**	**+0.8**
UZB				LR	LR	12 04 13.0	
	comp=Z,4µm,14.1s						
HUH	**Hualalai**	**50.27**	**103**	PFAKE		11 42 10.0	+12
HUH				LR	LR		
	comp=Z,7µm,19.0s						
KPKS	**Kokpek**	**50.28**	**295**	*e*P	**P**	**11 41 58.0**	**+0.2**
	comp=Z,89nm,1.0s						
KPKS				*e*S	**S**	**11 49 09.2**	**+1.5**
KPKS				LR	LR	12 04 18.5	
	comp=Z,10µm,13.2s						
KHLU	**Kahalu‘u**	**50.29**	**103**	PFAKE		11 42 10.0	+12
KHLU				LR	LR		
	comp=Z,6µm,19.0s						
POHA	**Pohakuloa**	**50.43**	**102**	PFAKE		11 42 10.0	+11
POHA				LR	LR		
	comp=Z,6µm,22.0s						
LBMI	**Labuha**	**50.50**	**212**	P	**P**	**11 42 00.5**	**+0.9**
MLOA	**Mauna Loa Obse**	**50.55**	**103**	PFAKE		11 42 10.0	+9.5
MLOA				LR	LR		
	comp=Z,7µm,19.0s						
HMH	**Humu‘ula Sheep**	**50.57**	**102**	PFAKE		11 42 10.0	+9.5
HMH				LR	LR		
	comp=Z,7µm,19.0s						
MWH	**Moku‘aweowe**	**50.57**	**103**	PFAKE		11 42 10.0	+9.2
MWH				LR	LR		
	comp=Z,8µm,19.0s						
ZHN	**Zhinishke**	**50.58**	**295**	*e*P	**P**	**11 42 00.3**	**+0.2**
	comp=Z,50nm,1.2s						
ZHN				LR	LR	12 04 28.4	
	comp=Z,4µm,11.8s						
CMMT	**Chiang Mai**	**50.64**	**256**	P	**P**	**11 42 01.3**	**+0.6**
	comp=Z,166nm,1.1s,comp=Z,3µm						
CHTO	**Chiang Mai**	**50.64**	**256**	*e*P	**P**	**11 42 01.3**	**+0.6**
	comp=Z,148nm,1.0s						
CHTO				LR	LR		
	comp=Z,12µm,18.0s						
CHTO	**Chiang Mai**	**50.64**	**256**	P	**P**	**11 42 01.7**	**+1.0**
	SNR=45						
CHTO	**Chiang Mai**	**50.64**	**256**	P	**P**	**11 42 01.4**	**+0.6**
	comp=Z,744nm,1.1s,comp=Z,12µm						
SATY	**Saty**	**50.65**	**295**	*e*P	**P**	**11 42 00.7**	**0.0**
	comp=Z,90nm,1.2s						
SATY				LR	LR	12 04 30.6	
	comp=Z,7µm,13.7s						
MLH	**Mauna Loa**	**50.71**	**102**	PFAKE		11 42 10.0	+8.5
MLH				LR	LR		
	comp=Z,6µm,19.0s						
AIN	**Ainahou**	**50.74**	**103**	PFAKE		11 42 10.0	+8.3
AIN				LR	LR		
	comp=Z,7µm,18.0s						
PHIT	**Phitsanulok**	**50.77**	**253**	P	**P**	**11 42 03.7**	**+2.0**
	comp=Z,55nm,0.9s,comp=Z,681nm						
BVA0	**Borovoye Array**	**50.78**	**310**	*i* P	**P**	**11 41 58.5**	**-2.9**
BVA0				pmax	pmax		
	comp=Z,17nm,0.7s						
BVAR	**Borovoye Array**	**50.78**	**310**	P	**P**	**11 41 59.8**	**-1.6**
	comp=Z,19nm,0.9s,baz=64,slow=8.3,SNR=58						
BVAR				PcP	**PcP**	**11 43 18.3**	**+0.5**
	comp=Z,32nm,0.8s,baz=90,slow=4.3,SNR=5.9						
BVAR				LR	LR	12 05 07.3	
	comp=Z,24µm,20.0s,baz=55,slow=38						
BVAR				PKPPKP	**P'P'df**	**12 12 46.8**	**-5.2**
	comp=Z,0.7nm,0.8s,baz=243,slow=0.7,SNR=4.6						
BRVK	**Borovoye**	**50.82**	**310**	*e*P	**P**	**11 42 00.5**	**-1.2**
	comp=Z,44nm,0.9s						
BRVK				LR	LR		
	comp=Z,24µm,20.0s						
BRVK	**Borovoye**	**50.82**	**310***c*	*i*P	**P**	**11 42 00.5**	**-1.2**
BRVK				pmax	pmax		
	comp=Z,22nm,0.8s						
BRVK				MLR	MLR		
	comp=Z,29µm,17.0s						
UWE	**Uwekahuna**	**50.82**	**102**	PFAKE		11 42 10.0	+7.8
UWE				LR	LR		
	comp=Z,7µm,19.0s						
WRMHI	**West Rim**	**50.83**	**102**	PFAKE		11 42 10.0	+7.7
WRMHI				LR	LR		
	comp=Z,8µm,22.0s						
OBL	**Observatory Le**	**50.83**	**102**	PFAKE		11 42 10.0	+7.7
OBL				LR	LR		
	comp=Z,7µm,19.0s						
SBLHI	**Steaming Bluff**	**50.84**	**102**	PFAKE		11 42 10.0	+7.7
SBLHI				LR	LR		
	comp=Z,7µm,22.0s						
NPH	**North Pit**	**50.84**	**102**	PFAKE		11 42 10.0	+7.7
NPH				LR	LR		
	comp=Z,7µm,19.0s						
PBKT	**Sadao Pong**	**50.84**	**252**	P	**P**	**11 42 03.1**	**+0.9**
	comp=Z,44nm,1.6s,comp=Z,2µm						
HATHI	**Halema‘uma‘u T**	**50.84**	**102**	PFAKE		11 42 20.0	+18
HATHI				LR	LR		
	comp=Z,7µm,20.0s						
SDHHI	**Sand Hill**	**50.84**	**103**	PFAKE		11 42 20.0	+18
SDHHI				LR	LR		
	comp=Z,7µm,19.0s						
RIM	**Rim**	**50.85**	**102**	PFAKE		11 42 20.0	+18
RIM				LR	LR		
	comp=Z,8µm,22.0s						
KKO	**Keanakako‘i**	**50.86**	**102**	PFAKE		11 42 20.0	+18
KKO				LR	LR		
	comp=Z,7µm,21.0s						
BBB	**Bella Bella**	**50.88**	**52**	LR	LR	12 01 53.3	
	comp=Z,2µm,19.9s,baz=305,slow=34						
BBB	**Bella Bella**	**50.88**	**52**	*e*P	**P**	**11 42 02.8**	**+0.7**
	comp=Z,194nm,1.8s						
CM31	**Chiang Mai Arr**	**50.89**	**256**	*e*P	**P**	**11 42 03.3**	**+0.7**
CM31	**Chiang Mai Arr**	**50.89**	**256**	P	**P**	**11 42 03.9**	**+1.3**
CMAR	**Chiang Mai Arr**	**50.89**	**256**	P	**P**	**11 42 03.1**	**+0.5**
	comp=Z,23nm,0.9s,baz=37,slow=7.5,SNR=53						
CMAR				LR	LR	12 05 33.6	
	comp=Z,10µm,18.1s,baz=48,slow=38						
HLP	**Hilina Pali**	**50.90**	**103**	PFAKE		11 42 20.0	+17
HLP				LR	LR		
	comp=Z,8µm,18.0s						
CM01	**Chiang Mai Arr**	**50.90**	**256**	*e*P	**P**	**11 42 03.6**	**+0.9**
PUH	**Pauahi**	**50.91**	**102**	PFAKE		11 42 20.0	+17
PUH				LR	LR		
	comp=Z,7µm,22.0s						
PRZ	**Przheval'sk**	**50.94**	**294**	*e*P	**P**	**11 42 04.3**	**+1.3**
PRZ				*e*pP	pP	11 42 04.7	-9.3
PRZ				LR	LR		
	comp=Z,20µm,20.0s						
PRZ	**Przheval'sk**	**50.94**	**294**	*e*P	**P**	**11 42 04.3**	**+1.3**
PRZ				MLR	MLR		
	comp=Z,20µm,20.0s						
STCH	**Steam Cracks**	**50.96**	**102**	PFAKE		11 42 20.0	+17
STCH				LR	LR		
	comp=Z,6µm,20.0s						
HULD	**Heiheiahulu Di**	**51.04**	**102**	PFAKE		11 42 20.0	+16
HULD				LR	LR		
	comp=Z,6µm,22.0s						
FAKI	**Fak Fak**	**51.05**	**205**	*e*P	**P**	**11 42 04.5**	**+0.7**
	comp=Z,70nm,1.0s						
FAKI				LR	LR		
	comp=Z,6µm,20.0s						
SHL	**Shillong**	**51.13**	**268**	⇑*i*P	**P**	**11 42 06.0**	**+1.4**
SHL				*e*S	**S**	**11 49 24.0**	**+3.9**
MDOK	**Medeo**	**51.47**	**296**	*e*P	**P**	**11 42 06.8**	**-0.1**
	comp=Z,717nm,1.2s						
MDOK				LR	LR	12 04 47.6	
	comp=Z,13µm,14.9s						
AAA	**Alma-Ata**	**51.53**	**296**	*e*P	**P**	**11 42 07.7**	**+0.5**
	comp=Z,89nm,1.1s						
AAA				*e*S	**S**	**11 49 26.7**	**+1.8**
AAA				LR	LR	12 04 54.7	
	comp=Z,14µm,15.8s						

AAA	Alma-Ata	51.53	296	*e*P	P	11 42 07.7	+0.5
AAA				pmax	pmax		
	comp=Z,1µm,6.6s						
TARG	Taragay, Kyrgy	51.70	294	*e*P	P	11 42 09.6	+0.6
	comp=Z,62nm,1.0s						
TARG				LR	LR		
	comp=Z,32µm,18.0s						
SRAK	Srakaew	51.97	249	P	P	11 42 08.6	-2.0
	comp=Z,206nm,0.9s,comp=Z,2µm						
SANI	Sanana	52.37	213	P	P	11 42 13.2	-0.4
ULHL	Ulahol	52.44	295	P	P	11 42 15.1	+0.9
	SNR=29						
RES	Resolute Bay	52.47	18	LR	LR	12 07 57.6	
	comp=Z,9µm,19.2s,baz=308,slow=40						
RES	Resolute Bay	52.47	18	*e*P	P	11 42 13.6	-0.1
RES	Resolute Bay	52.47	18	*e*P	P	11 42 13.6	-0.1
	comp=Z,57nm,1.0s						
RES	Resolute Bay	52.47	18	*e*P	P	11 42 13.6	-0.1
RES				pmax	pmax		
	comp=Z,57nm,1.0s						
TKM2	Tokmak 2	52.51	296	P	P	11 42 15.7	+1.0
	SNR=64						
TKM2	Tokmak 2	52.51	296	P	P	11 42 13.9	-0.8
TKM2				pmax	pmax		
	comp=Z,84nm,1.2s						
UMPA	Umpang Tak	52.52	254	P	P	11 42 17.8	+3.0
	comp=Z,44nm,1.0s,comp=Z,2µm						
UTHA	Uthaitani	52.58	253	P	P	11 42 16.6	+1.4
	comp=Z,27nm,0.8s,comp=Z,263nm						
YKW3	Yellowknife Ar	52.67	36	*e*P	P	11 42 15.7	+0.4
	comp=Z,46nm,0.9s						
YKW3				LR	LR		
	comp=Z,5µm,21.0s						
YKA	Yellowknife Ar	52.70	36	P	P	11 42 15.6	+0.1
	comp=Z,19nm,0.9s,baz=299,slow=7.2,SNR=60						
YKA				LR	LR	12 06 24.4	
	comp=Z,536nm,20.7s,baz=299,slow=38						
YKA				PKPPKP	P’P’df	12 12 46.9	-3.0
	comp=Z,0.5nm,0.8s,baz=149,slow=1.5,SNR=3.7						
YKA	Yellowknife Ar	52.70	36	P	P	11 42 15.6	+0.1
YKA				pmax	pmax		
	comp=Z,17nm,1.0s						
LUWI	Luwuk	52.75	217	P	P	11 42 19.1	+2.7
LUWI	Luwuk	52.75	217	*e*P	P	11 42 17.0	+0.6
	comp=Z,62nm,0.8s						
LUWI				LR	LR		
	comp=Z,3µm,21.0s						
MPSI	Mapaga	52.79	221	P	P	11 42 20.5	+3.8
TAPN	Taplejung	52.97	273	*e*P	P	11 42 20.0	+1.6
	comp=Z,391nm,0.8s						
CHMS	Chumysh	53.00	297	P	P	11 42 18.6	+0.5
	SNR=18						
USP	Ospenovka	53.02	297	P	P	11 42 19.2	+1.0
	SNR=53						
KBK	Karagaybulak	53.05	296	P	P	11 42 19.7	+1.1
	SNR=17						
APSI	Ampana	53.11	218	P	P	11 42 21.5	+2.4
BRDH	Bariadhala	53.14	266	P	P	11 42 20.6	+1.3
	comp=Z,260nm,0.5s,baz=67,slow=4.4,SNR=7.9						
BRDH				LR	LR	12 05 13.4	
	comp=Z,3µm,21.8s,baz=83,slow=36						
KZA	Kyzart	53.16	295	P	P	11 42 21.1	+1.3
	SNR=103						
FRU	Bishkek	53.17	297	*e*P	P	11 42 19.0	-0.4
FRU				*e*		11 43 28.0	
FRU				*e*		11 44 24.0	
FRU				*e*PPP	PPP	11 45 34.0	
FRU				*e*S	S	11 49 48.0	+0.6
FRU				*e*		11 52 05.0	
FRU				pmax	pmax		
	comp=Z,850nm,2.5s						
AAK	Ala-Archa	53.35	296	P	P	11 42 21.3	+0.5
	comp=Z,60nm,0.8s,baz=66,slow=7.9,SNR=83						
AAK	Ala-Archa	53.35	296	P	P	11 42 21.7	+0.9
	SNR=30						
AAK	Ala-Archa	53.35	296	*e*P	P	11 42 19.9	-0.9
AAK	Ala-Archa	53.35	296	*e*P	P	11 42 21.1	+0.3
	comp=Z,82nm,0.9s						
AAK				LR	LR		
	comp=Z,25µm,18.0s						
AAK	Ala-Archa	53.35	296	P	P	11 42 19.9	-0.9
AAK				pmax	pmax		
	comp=Z,93nm,1.0s						
ODAN	Odare	53.50	273	*e*P	P	11 42 23.5	+1.3
	comp=Z,320nm,1.0s						
UCH	Uchtor	53.55	296	P	P	11 42 24.4	+1.8
	SNR=15						
KBS	Kingsbay	53.62	351	*e*P	P	11 42 21.5	-0.6
KBS	Kingsbay	53.62	351	*e*P	P	11 42 21.9	-0.2
	comp=Z,108nm,0.9s						
KBS				LR	LR		
	comp=Z,8µm,18.0s						
KBS	Kingsbay	53.62	351	*e*P	P	11 42 21.6	-0.6
KBS				IAmb	IAmb	11 42 23.4	
	comp=Z,107nm,0.9s						
KBS				IAMs_20	IAMs_20	12 06 57.7	
	comp=Z,9µm,18.1s						
SRDT	SRDT	53.66	252	P	P	11 42 35.4	+12
SPA0	Spitsbergen Ar	53.70	350	*e*P	P	11 42 21.5	-1.3
SPA0	Spitsbergen Ar	53.70	350	*e*P	P	11 42 21.1	-1.7
SPA0				IAmb	IAmb	11 42 23.5	
	comp=Z,110nm,1.2s						
SPA0				IAMs_20	IAMs_20	12 07 12.0	
	comp=Z,10µm,18.9s						
SPITS	Spitsbergen Ar	53.70	350	P	P	11 42 20.7	-2.1
	comp=Z,8.3nm,0.4s,baz=33,slow=8.6,SNR=44						
SPITS				LR	LR	12 07 34.4	
	comp=Z,9µm,18.1s,baz=15,slow=39						
EKS2	Erkin-Say	53.79	297	P	P	11 42 24.5	+0.5
	SNR=84						
JIRN	Jiri	53.85	274	*e*P	P	11 42 25.9	+0.9
	comp=Z,481nm,0.6s						
GUN	Gumba	53.92	275	*e*P	P	11 42 26.9	+1.5
PCI	Palu	53.92	220	P	P	11 42 24.2	-0.8
	comp=Z,105nm,1.0s,comp=Z,2µm						
SVE	Sverdlovsk	53.99	317	*de*P	P	11 42 24.0	-1.1
SVE				*e*S	S	11 49 53.0	-5.0
SVE				*e*		11 52 09.3	
SVE				*e*		11 53 34.1	
SVE				pmax	pmax		
	comp=Z,90nm,0.7s						
SVE				MLR	MLR		
	comp=E,11µm,15.0s						
SVE				MLR	MLR		
	comp=Z,16µm,15.0s						
RAMN	Ramite	54.00	273	*e*P	P	11 42 26.5	+0.6
	comp=Z,598nm,0.7s						
KSH	Kashi	54.05	292	P	P	11 42 30.2	+4.2
KSH				sP	pP	11 42 37.1	0.0
KSH				PcP	PcP	11 43 34.0	+3.4
KSH				PP	PP	11 44 33.4	+6.0
KSH				S	S	11 50 05.1	+5.6
KSH				SS	SS	11 53 45.9	+5.1
KSH				pmax	pmax		
	comp=Z,260nm,1.3s						
KSH				pmax	pmax		
	comp=Z,2µm,3.1s						
KSH				LR	LR		
	comp=Z,22µm,17.2s						
KSH				LR	LR		
	comp=Z,9µm,15.9s						
KSH				LR	LR		
	comp=Z,29µm,18.7s						
PHET	Kaeng Krachan	54.36	250	P	P	11 42 30.1	+1.8
	comp=Z,35nm,1.0s,comp=Z,298nm						
KKN	Kakani	54.41	275	*e*P	P	11 42 30.5	+1.6
	comp=Z,364nm,0.8s						
PKIN	Phulchoki	54.46	275	*e*P	P	11 42 29.7	+0.4
	comp=Z,250nm,0.9s						
SGKI	Sangatta, Kali	54.63	223	P	P	11 42 41.2	+11
DMN	Daman	54.65	275	*e*P	P	11 42 31.5	+0.9
	comp=Z,715nm,1.1s						
MNAS	Manas	54.68	297	P	P	11 42 30.2	-0.3
MNAS				pmax	pmax		
	comp=Z,119nm,1.1s						
GKN	Gorkha	54.73	276	*e*P	P	11 42 31.9	+0.8
	comp=Z,478nm,0.8s						
HSPB	Hornsund (broa	54.75	349	*e*P	P	11 42 30.3	0.0
HSPB				IAmb	IAmb	11 42 31.4	
	comp=Z,66nm,1.1s						
HSPB				IAMs_20	IAMs_20	12 08 24.0	
	comp=Z,9µm,18.5s						
SBUM	Sibu	54.85	231	P	P	11 42 35.0	+3.2
LLLB	Lillooet	55.06	51	*e*P	P	11 42 33.1	+0.2
	comp=Z,135nm,1.4s						
LLLB				LR	LR		
	comp=Z,6µm,18.0s						
DANN	Dangsing	55.14	277	*e*P	P	11 42 35.4	+1.2
	comp=Z,788nm,0.9s						
HNR	Honiara	55.14	170	LR	LR	12 09 00.1	
	comp=Z,8µm,18.0s,baz=334,slow=39						
ARU	Arti	55.18	317	P	P	11 42 32.1	-1.6
	comp=Z,42nm,0.5s,baz=74,slow=4.8,SNR=59						
ARU				S	S	11 50 10.6	-3.4
	comp=Z,2.0nm,0.5s,baz=99,slow=18,SNR=3.5						
ARU				LR	LR	12 09 26.6	
	comp=Z,19µm,18.4s,baz=44,slow=40						
ARU	Arti	55.18	317	*e*P	P	11 42 32.2	-1.5
	comp=Z,61nm,0.7s						
ARU				S	S	11 50 10.6	-3.4
ARU	Arti	55.18	317	*c i*P	P	11 42 31.3	-2.4
ARU				*e*		11 43 33.5	
ARU				S	S	11 50 12.3	-1.7
ARU						11 52 17.4	
ARU				SS	SS	11 54 01.2	+3.5
ARU				pmax	pmax		
	comp=Z,66nm,1.0s						
ARU				MLR	MLR		
	comp=Z,21µm,17.0s						
DZA	Taraz	55.20	298	*e*P	P	11 42 35.2	+1.1
	comp=Z,54nm,1.1s						
DZA				*e*S	S	11 50 17.1	+2.4
PGC	Sidney	55.20	54	PFAKE		11 42 50.0	+16
PGC				LR	LR		
	comp=Z,6µm,22.0s						
SFK	Sufi-Kurgan	55.38	294	P	P	11 42 35.3	-0.4
SFK				pmax	pmax		
	comp=Z,221nm,1.1s						
KDI	Kendari	55.44	216	P	P	11 42 37.7	+1.6
	comp=Z,61nm,1.1s,comp=Z,2µm						
A04D	Lummi Island	55.58	53	P	P	11 42 36.5	-0.2
	baz=302						
KK31	Karatay Array	55.59	299	*e*P	P	11 42 36.7	-0.2
KK31	Karatay Array	55.59	299	*i* P	P	11 42 35.7	-1.2
KK31				pmax	pmax		
	comp=Z,89nm,1.0s						
KKAR	Karatay Array	55.59	299	*e*P	P	11 42 36.7	-0.2
KKAR	Karatay Array	55.59	299	*e*P	P	11 42 36.7	-0.2
KOLN	Koldanda	55.60	276	*e*P	P	11 42 38.3	+0.9
	comp=Z,338nm,0.8s						
NLWA	Neilton Lookou	55.62	55	*e*P	P	11 42 37.4	+0.4
	comp=Z,52nm,1.0s						
NLWA				LR	LR		
	comp=Z,6µm,22.0s						
TULEG	Thule	55.66	11	*e*P	P	11 42 36.3	-0.6
	comp=Z,308nm,1.5s						
TULEG				LR	LR		
	comp=Z,8µm,18.0s						
PYUN	Piuthan	55.83	277	*e*P	P	11 42 39.9	+0.8
	comp=Z,1µm,1.2s						
B05A	Bryant	56.16	53	P	P	11 42 41.5	+0.6
	baz=302,SNR=5.5						
E03A	Lebam	56.24	56	PFAKE		11 42 50.0	+8.5
E03A				LR	LR		
	comp=Z,5µm,22.0s						
MTKI	Muara Teweh, K	56.32	226	P	P	11 42 42.2	-0.2
B06A	Marblemount	56.37	53	*e*P	P	11 42 42.3	-0.1
	comp=Z,92nm,1.3s						
B06A				LR	LR		
	comp=Z,4µm,20.0s						
IUG	Iuzhnay	56.41	298	*e*P	P	11 42 43.5	+0.7
	comp=Z,89nm,0.8s						
IUG				LR	LR	12 07 42.2	
	comp=Z,7µm,15.0s						
SP2	Seward Park 2	56.46	54	*e*P	P	11 42 43.4	+0.4
CHM	Chimkent	56.58	298	*e*P	P	11 42 44.7	+0.7
	comp=Z,53nm,0.8s						
CHM				LR	LR	12 07 45.5	
	comp=Z,9µm,13.7s						
SPSI	Sidrap Palu	56.66	219	P	P	11 42 44.9	+0.1
KSM	Kuching	56.71	232	P	P	11 42 49.0	+3.8
D05A	Enumclaw	56.80	54	*e*P	P	11 42 46.2	+0.7
	comp=Z,53nm,0.9s						
D05A				LR	LR		
	comp=Z,2µm,20.0s						
G03D	McMinnville, O	57.14	57	P	P	11 42 48.9	+1.0
	baz=304						
LON	Longmire	57.15	55	PFAKE		11 43 00.0	+12
LON				LR	LR		
	comp=Z,4µm,22.0s						
STKI	Sintang	57.25	230	P	P	11 42 50.5	+1.5
	comp=Z,118nm,0.9s						
COR	Corvallis	57.46	58	*e*P	P	11 42 50.9	+0.7
	comp=Z,294nm,1.5s						
COR				LR	LR		
	comp=Z,5µm,21.0s						
COR	Corvallis	57.46	58	*e*P	P	11 42 50.9	+0.7
COR				pmax	pmax		
	comp=Z,293nm,1.5s						
COR				MLR	MLR		
	comp=Z,5µm,21.0s						
LVZ	Lovozero	57.51	336	*e*P	P	11 42 49.4	-0.8
	comp=Z,40nm,1.1s						
LVZ	Lovozero	57.51	336	*e*P	P	11 42 49.4	-0.8
LVZ				pmax	pmax		
	comp=Z,40nm,1.1s						
LTY	Liberty	57.52	54	*e*P	P	11 42 50.3	-0.3
	comp=Z,114nm,1.5s						
LTY				LR	LR		
	comp=Z,5µm,22.0s						
KAPI	Kappang	57.61	218	PFAKE		11 43 00.0	+8.6
KAPI				LR	LR		
	comp=Z,4µm,20.0s						
B08A	Colville Reser	57.66	52	*e*P	P	11 42 51.5	-0.1
	comp=Z,97nm,1.3s						
B08A				LR	LR		
	comp=Z,6µm,18.0s						
BKSI	Bulukumba	57.72	218	P	P	11 42 53.2	+1.0
	comp=Z,39nm,1.2s,comp=Z,808nm						
KEBM	Edson Butte	57.80	60	PFAKE		11 43 10.0	+17
KEBM				LR	LR		
	comp=Z,3µm,22.0s						
PRGR	Permogore	57.83	327	⇓*i*P	P	11 42 51.4	-1.1
PRGR				*e*S	S	11 50 47.7	-1.2
PRGR				pmax	pmax		
	comp=Z,87nm,0.8s						
DAG	Danmarks Havn	57.92	357	⇑*i*P	P	11 42 52.2	-0.7
	comp=Z,90nm,1.1s						
	comp=Z,5µm,17.0s						
DAG	Danmarks Havn	57.92	357	⇑*i*P	P	11 42 52.2	-0.7
DAG				pmax	pmax		
	comp=Z,90nm,1.1s						
DAG				MLR	MLR		
	comp=Z,5µm,17.0s						
I03D	Drain, OR	57.93	59	P	P	11 42 54.3	+0.8
	baz=304						
SKLT	Songkhla	57.99	245	P	P	11 42 56.5	+2.3
	comp=Z,107nm,1.1s,comp=Z,3µm						
H04A	Detroit Lake	58.07	57	*e*P	P	11 42 55.1	+0.6
	comp=Z,66nm,0.9s						
APA	Apatity	58.08	336	⇑*i*P	P	11 42 40.1	-14
APA				*i*		11 43 42.8	
APA				*i* PS	S	11 50 40.0	-12
APA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
TRTT	Trang	58.09	246	P	P	11 42 56.9	+2.0
	comp=Z,26nm,2.4s,comp=Z,778nm						
KNTN	Kanton	58.10	135	PFAKE		11 43 10.0	+15
KNTN				LR	LR		
	comp=Z,7µm,22.0s						
KRAB	Krabi	58.12	247	P	P	11 42 56.2	+1.1
	comp=Z,157nm,0.9s						
KEV	Kevo	58.19	340	*e*P	P	11 42 53.4	-1.5
	comp=Z,43nm,1.1s						
KEV				LR	LR		
	comp=Z,8µm,21.0s						
KEV	Kevo	58.19	340	*e*P	P	11 42 53.4	-1.5
KEV				pmax	pmax		
	comp=Z,43nm,1.1s						
KEV				MLR	MLR		
	comp=Z,8µm,21.0s						
KBO	Bosley Butte	58.23	60	PFAKE		11 43 10.0	+14
KBO				LR	LR		
	comp=Z,3µm,22.0s						
G05D	Wamic, OR	58.27	56	P	P	11 42 56.4	+0.5
	baz=304						
AB31	Akbulak array	58.35	310	P	P	11 42 55.2	-1.1
AB31				pmax	pmax		
	comp=Z,25nm,0.5s						
ABKAR	Akbulak array	58.35	310	*e*P	P	11 42 55.7	-0.7
E07A	Sunnyside	58.37	54	PFAKE		11 43 10.0	+13
E07A				LR	LR		
	comp=Z,4µm,22.0s						
I04A	Tendick Farm,	58.44	58	P	P	11 42 56.6	-0.5
	baz=305						
C09A	Chrisman Ranch	58.56	52	*e*P	P	11 42 56.9	-1.0
	comp=Z,109nm,1.4s						
C09A				LR	LR		
	comp=Z,7µm,18.0s						
HAWA	Hanford	58.65	54	*e*P	P	11 43 00.2	+1.8
	comp=Z,136nm,1.5s						
HAWA				LR	LR		
	comp=Z,4µm,22.0s						
G06A	Carlson Farm,	58.67	56	*e*P	P	11 42 59.4	+0.7
	comp=Z,256nm,1.6s						
G06A				LR	LR		
	comp=Z,5µm,22.0s						
F07A	Phinny Hill Vi	58.71	55	*e*P	P	11 42 59.4	+0.6
	comp=Z,62nm,0.9s						
F07A				LR	LR		
	comp=Z,4µm,21.0s						
ARCES	ARCESS Array B	58.71	341	P	P	11 42 57.6	-0.9
	comp=Z,38nm,1.0s,baz=36,slow=8.1,SNR=33						
ARCES				LR	LR	12 11 56.9	
	comp=Z,6µm,19.3s,baz=27,slow=40						
ARCES	ARCESS Array B	58.71	341	*e*P	P	11 42 58.1	-0.4
ARCES	ARCESS Array B	58.71	341	P	P	11 42 57.7	-0.9
ARCES				pmax	pmax		
	comp=Z,39nm,1.0s						
ARCES				MLR	MLR		
	comp=Z,6µm,19.3s						
ARE0	ARCESS Array S	58.71	341	*e*P	P	11 42 58.1	-0.4
	comp=Z,55nm,1.0s						
ARE0				LR	LR		
	comp=Z,6µm,20.0s						
ARE0	ARCESS Array S	58.71	341	*e*P	P	11 42 58.0	-0.6
ARE0				IAmb	IAmb	11 43 00.1	
	comp=Z,46nm,0.9s						
ARE0				IAMs_20	IAMs_20	12 14 23.0	
	comp=Z,6µm,19.2s						
AKTO	Aktyubinsk	58.72	312	P	P	11 42 58.1	-0.7
	comp=Z,10nm,0.6s,baz=60,slow=12,SNR=29						
AKTO				S	S	11 51 07.0	+6.2
	comp=Z,6.2nm,1.1s,baz=188,slow=20,SNR=7.2						
AKTO				LR	LR	12 10 48.6	
	comp=Z,45µm,18.6s,baz=50,slow=39						
AKTO	Aktyubinsk	58.72	312	P	P	11 42 56.9	-2.0
AKTO				pmax	pmax		
	comp=Z,25nm,0.7s						
KULLO	Kullorsuaq	58.76	9	⇑*i*P	P	11 42 57.7	-1.1
	comp=Z,118nm,0.8s						
	comp=Z,16µm,20.0s						
KULLO	Kullorsuaq	58.76	9	⇑*i*P	P	11 42 57.7	-1.1
KULLO				pmax	pmax		
	comp=Z,120nm,0.8s						
KULLO				MLR	MLR		
	comp=Z,16µm,20.0s						
I05D	Terrebonne, OR	58.77	57	P	P	11 42 59.6	+0.3
	baz=305						
HUMO	Hull Mountain	58.78	59	*e*P	P	11 43 00.4	+0.9
	comp=Z,91nm,1.6s						
HUMO				LR	LR		
	comp=Z,4µm,21.0s						
E08A	Dider Farm, El	58.87	54	*e*P	P	11 43 00.4	+0.5
	comp=Z,126nm,1.6s						
E08A				LR	LR		
	comp=Z,3µm,21.0s						
PKDT	Phuket	58.92	248	P	P	11 43 12.3	+12
J04D	Umpqua Nationa	58.93	58	P	P	11 43 00.5	-0.3
	baz=305						
NEW	Newport	58.94	51	LR	LR	12 05 10.4	
	comp=Z,3µm,21.0s,baz=314,slow=33						
NEW	Newport	58.94	51	P	P	11 42 59.7	-0.8
	baz=305,SNR=7.0						
NEW	Newport	58.94	51	*e*P	P	11 43 00.8	+0.3
	comp=Z,124nm,1.5s						
NEW	Newport	58.94	51	*e*P	P	11 43 00.8	+0.3
NEW				pmax	pmax		
	comp=Z,124nm,1.5s						
JCC	Jacoby Creek,	59.15	62	PFAKE		11 43 10.0	+8.0
JCC				LR	LR		
	comp=Z,3µm,18.0s						
NIL	Nilore	59.18	288	*e*P	P	11 43 03.5	+1.1
	comp=Z,603nm,0.9s						
NIL				LR	LR		
	comp=Z,9µm,22.0s						
NIL	Nilore	59.18	288	*e*P	P	11 43 03.5	+1.1
NIL				pmax	pmax		
	comp=Z,603nm,0.9s						
NIL				MLR	MLR		
	comp=Z,9µm,22.0s						
KHMM	Horse Mountain	59.30	61	*e*P	P	11 43 04.8	+1.5
	comp=Z,87nm,1.1s						
KHMM				LR	LR		
	comp=Z,3µm,19.0s						
PINE	Pine Mountain	59.31	57	*e*P	P	11 43 04.3	+0.9
	comp=Z,60nm,0.8s						
E09A	Wood Farm, Sta	59.37	53	*e*P	P	11 43 03.7	+0.3
	comp=Z,188nm,1.6s						
E09A				LR	LR		
	comp=Z,5µm,18.0s						
J05D	Fort Rock, OR	59.43	58	P	P	11 43 04.7	+0.6
	baz=305,SNR=14						
YBH	Yreka Blue Hor	59.44	60	P	P	11 43 05.0	+0.9
	comp=Z,11nm,1.1s,baz=348,slow=4.5,SNR=13						
YBH				LR	LR	12 03 37.0	
	comp=Z,4µm,21.9s,baz=304,slow=31						
YBH	Yreka Blue Hor	59.44	60	*e*P	P	11 43 05.5	+1.4
	comp=Z,35nm,1.1s						
YBH	Yreka Blue Hor	59.44	60	P	P	11 43 05.0	+0.9
YBH				pmax	pmax		
	comp=Z,11nm,1.1s						
NDI	New Delhi	59.49	281	*e*P	P	11 43 03.5	-1.0
NDI				*e*S	S	11 51 21.0	+10
K04D	Chiloquin, OR	59.50	59	P	P	11 43 03.5	-1.1
	baz=306						
M02C	Callahan	59.55	61	P	P	11 43 04.5	-0.3
	baz=306,SNR=5.9						
COEN	Coen	59.56	189	*e*P	P	11 43 05.3	+0.3
	comp=Z,43nm,1.0s						
G08A	Pilot Rock	59.61	55	*e*P	P	11 43 06.1	+0.8
	comp=Z,62nm,1.6s						
KTK1	Kautokeino	59.64	341	*e*P	P	11 43 04.7	-0.2
KMRM	Mail Ridge	59.70	62	PFAKE		11 43 20.0	+14
KMRM				LR	LR		
	comp=Z,5µm,20.0s						
N02D	Trinity Center	59.88	61	P	P	11 43 08.0	+0.8
	baz=306						
M04C	Macdoel	59.94	60	P	P	11 43 07.8	+0.1
	baz=306,SNR=8.5						
K05A	Summer Lake	59.96	58	*e*P	P	11 43 08.9	+1.1
	comp=Z,76nm,1.0s						
K05A				LR	LR		
	comp=Z,5µm,20.0s						
I07A	Izee	59.99	56	*e*P	P	11 43 09.0	+1.0
	comp=Z,116nm,2.0s						
KCPM	Cahto Peak	60.09	62	*e*P	P	11 43 09.5	+0.8
	comp=Z,361nm,1.8s						
KCPM				LR	LR		
	comp=Z,4µm,19.0s						
TRO	Tromso	60.10	343	*e*P	P	11 43 07.7	-0.4
TRO				IAmb	IAmb	11 43 09.1	
	comp=Z,161nm,1.1s						
TRO				IAMs_20	IAMs_20	12 13 13.2	
	comp=Z,7µm,19.6s						
SOEI	Soe	60.11	211	P	P	11 43 14.1	+5.2
	comp=Z,89nm,0.9s,comp=Z,2µm						
SOEI	Soe	60.11	211	*e*P	P	11 43 08.7	-0.3
	comp=Z,137nm,1.1s						
EDFI	Ende, Flores	60.17	214	P	P	11 43 15.5	+6.2
	comp=Z,39nm,1.2s,comp=Z,2µm						
MYKOM	Kota Tinggi	60.18	238	P	P	11 43 12.0	+2.6
F10A	Beach Ranch, E	60.20	53	*e*P	P	11 43 09.8	+0.5
	comp=Z,75nm,1.4s						
F10A				LR	LR		
	comp=Z,4µm,18.0s						
WDC	Whiskeytown Da	60.21	61	*e*P	P	11 43 10.0	+0.7
	comp=Z,102nm,1.5s						
WDC				LR	LR		
	comp=Z,3µm,21.0s						
WDC	Whiskeytown Da	60.21	61	*e*P	P	11 43 10.0	+0.7
WDC				pmax	pmax		
	comp=Z,102nm,1.5s						
WDC				MLR	MLR		
	comp=Z,3µm,21.0s						
WALA	Waterton Lakes	60.21	49	*e*P	P	11 43 09.8	+0.5
	comp=Z,90nm,1.4s						
WALA				LR	LR		
	comp=Z,5µm,18.0s						
KLMR	Klimovskoe	60.62	329	*e*P	P	11 43 09.5	-2.2

KLMR				*e*S	**S**	**11 51 24.1**	**-0.8**
KLMR				*e*SS	**SS**	**11 55 25.8**	**+3.0**
KLMR				pmax	pmax		
	comp=Z,36nm,1.0s						
KLMR	**Klimovskoe**	**60.62**	**329**	*e*P	**P**	**11 43 09.6**	**-2.2**
KLMR				AMP		11 43 27.7	
	comp=Z,36nm,1.0s						
KLMR				*e*S	**S**	**11 51 24.2**	**-0.7**
KLMR				*e*S	**S**	**11 51 24.2**	**-0.7**
KLMR				*e*SS	**SS**	**11 55 25.9**	**+3.1**
KLMR				*e*SS	**SS**	**11 55 25.9**	**+3.1**
KLMR				LQ	LQ	12 05 06.6	
KLMR				LQ	LQ	12 05 06.6	
KLMR				LR	LR	12 08 14.2	
KLMR				AMP		12 15 00.9	
	comp=Z,6µm,15.2s						
BATI	**Baumata**	**60.74**	**212**	P	**P**	**11 43 15.6**	**+2.4**
	comp=Z,27nm,0.9s,baz=33,slow=9.7,SNR=3.3						
JTMT	**Jette**	**60.79**	**50**	*e*P	**P**	**11 43 14.0**	**+0.7**
	comp=Z,54nm,1.4s						
JTMT				LR	LR		
	comp=Z,4µm,21.0s						
MOD	**Modoc Plateau**	**60.80**	**59**	*e*P	**P**	**11 43 14.1**	**+0.6**
	comp=Z,110nm,1.5s						
MOD				LR	LR		
	comp=Z,4µm,21.0s						
BMO	**Blue Mountains**	**60.82**	**55**	*e*P	**P**	**11 43 13.9**	**+0.4**
	comp=Z,117nm,1.7s						
BMO				LR	LR		
	comp=Z,5µm,22.0s						
BMO	**Blue Mountains**	**60.82**	**55**	*e*P	**P**	**11 43 13.9**	**+0.4**
BMO				pmax	pmax		
	comp=Z,117nm,1.7s						
BMO				MLR	MLR		
	comp=Z,5µm,22.0s						
HOPS	**Hopland Field**	**60.82**	**63**	PFAKE		11 43 30.0	+17
HOPS				LR	LR		
	comp=Z,4µm,18.0s						
MTN	**Manton Dam**	**60.82**	**203**	*e*P	**P**	**11 43 14.1**	**+0.5**
	comp=Z,142nm,1.1s						
O03D	**Paynes Creek**	**60.84**	**61**	P	**P**	**11 43 14.6**	**+0.9**
	baz=307						
J08A	**Circle Bar Ran**	**61.02**	**56**	*e*P	**P**	**11 43 16.0**	**+1.0**
	comp=Z,25nm,0.8s						
J08A				LR	LR		
	comp=Z,3µm,22.0s						
GDXM	**Geysers**	**61.10**	**63**	PFAKE		11 43 30.0	+14
GDXM				LR	LR		
	comp=Z,6µm,19.0s						
CHLP	**Challavanipeta**	**61.22**	**268**	*e*P	**P**	**11 43 16.7**	**+0.3**
CHLP				IAmb	IAmb	11 43 18.2	
	comp=Z,138nm,1.1s						
CHLP				IVMs_BB	IVMs_BB	12 16 25.8	
	comp=Z,1µm,20.5s						
KBL	**Kabul**	**61.44**	**291**	*e*P	**P**	**11 43 17.4**	**-0.5**
	comp=Z,264nm,0.9s						
KBL				LR	LR		
	comp=Z,25µm,19.0s						
KBL	**Kabul**	**61.44**	**291**	*e*P	**P**	**11 43 17.5**	**-0.5**
KBL				pmax	pmax		
	comp=Z,265nm,0.9s						
KBL				MLR	MLR		
	comp=Z,25µm,19.0s						
MCCM	**Marconi Confer**	**61.44**	**64**	PFAKE		11 43 30.0	+12
MCCM				LR	LR		
	comp=Z,3µm,18.0s						
ORV	**Oroville**	**61.46**	**62**	*e*P	**P**	**11 43 17.4**	**-0.4**
	comp=Z,41nm,1.0s						
ORV				LR	LR		
	comp=Z,3µm,19.0s						
ORV	**Oroville**	**61.46**	**62**	*e*P	**P**	**11 43 17.5**	**-0.4**
ORV				pmax	pmax		
	comp=Z,41nm,1.0s						
ORV				MLR	MLR		
	comp=Z,3µm,19.0s						
WVOR	**Wild Horse Val**	**61.48**	**57**	*e*P	**P**	**11 43 18.6**	**+0.5**
	comp=Z,46nm,0.9s						
WVOR				LR	LR		
	comp=Z,4µm,21.0s						
WVOR	**Wild Horse Val**	**61.48**	**57**	*e*P	**P**	**11 43 18.6**	**+0.5**
WVOR				pmax	pmax		
	comp=Z,46nm,0.9s						
WVOR				MLR	MLR		
	comp=Z,4µm,21.0s						
MSO	**Missoula**	**61.53**	**51**	P	**P**	**11 43 18.0**	**-0.3**
	baz=307,SNR=7.4						
MSO	**Missoula**	**61.53**	**51**	*e*P	**P**	**11 43 18.4**	**+0.1**
	comp=Z,191nm,1.5s						
MSO				LR	LR		
	comp=Z,3µm,22.0s						
LHMI	**Lhok Sumawe**	**61.83**	**247**	PFAKE		11 43 30.0	+9.5
LHMI				LR	LR		
	comp=Z,8µm,20.0s						
BEKR	**Beckworth**	**61.98**	**61**	*e*P	**P**	**11 43 21.7**	**+0.2**
	comp=Z,48nm,1.0s						
BEKR				LR	LR		
	comp=Z,3µm,20.0s						
PPBI	**Pangkal Pinang**	**62.04**	**233**	P	**P**	**11 43 24.1**	**+2.1**
	comp=Z,0.8nm,0.7s,comp=Z,184nm						
SUMG	**Summit**	**62.10**	**3**	*e*P	**P**	**11 43 22.4**	**+0.2**
	comp=Z,337nm,1.0s						
SUMG				LR	LR		
	comp=Z,10µm,20.0s						
SUMG	**Summit**	**62.10**	**3**	*i* P	**P**	**11 43 22.3**	**+0.2**
	comp=Z,241nm,0.9s						
SUMG	**Summit**	**62.10**	**3**	*i* P	**P**	**11 43 22.3**	**+0.2**
SUMG				pmax	pmax		
	comp=Z,240nm,0.9s						
TSI	**Tuntungan**	**62.11**	**244**	P	**P**	**11 43 26.2**	**+3.8**
	comp=Z,55nm,0.9s						
AFDM	**Forest Hills D**	**62.15**	**62**	*e*P	**P**	**11 43 22.7**	**+0.1**
	comp=Z,80nm,1.5s						
AFDM				LR	LR		
	comp=Z,3µm,19.0s						
STEI	**Steigen**	**62.27**	**343**	*e*P	**P**	**11 43 21.3**	**-1.4**
STEI				IAmb	IAmb	11 43 24.2	
	comp=Z,100nm,1.4s						
STEI				IAMs_20	IAMs_20	12 12 29.7	
	comp=Z,8µm,20.0s						
SRBI	**Singaraja**	**62.37**	**221**	P	**P**	**11 43 26.9**	**+2.8**
PSI	**Prapat**	**62.42**	**243**	P	**P**	**11 43 25.2**	**+0.5**
	comp=Z,35nm,1.0s,baz=0.2,slow=3.7,SNR=14						
PSI				LR	LR	12 13 13.2	
	comp=Z,4µm,18.0s,baz=89,slow=39						
PSI	**Prapat**	**62.42**	**243**	*e*P	**P**	**11 43 24.9**	**+0.3**
	comp=Z,59nm,1.1s						
LOF	**Lofoten**	**62.45**	**344**	*e*P	**P**	**11 43 22.6**	**-1.4**
LOF				IAmb	IAmb	11 43 24.9	
	comp=Z,141nm,0.9s						
LOF				IAMs_20	IAMs_20	12 13 11.4	
	comp=Z,6µm,20.4s						
FFC	**Flin Flon**	**62.53**	**39**	*e*P	**P**	**11 43 24.5**	**-0.2**
FFC	**Flin Flon**	**62.53**	**39**	*e*P	**P**	**11 43 24.5**	**-0.2**
	comp=Z,64nm,1.1s						
FFC				LR	LR		
	comp=Z,4µm,20.0s						
FFC	**Flin Flon**	**62.53**	**39**	*e*P	**P**	**11 43 24.5**	**-0.2**
FFC				pmax	pmax		
	comp=Z,64nm,1.1s						
FFC				MLR	MLR		
	comp=Z,4µm,20.0s						
MFID	**Camas Ranch**	**62.53**	**55**	*e*P	**P**	**11 43 25.1**	**0.0**
	comp=Z,139nm,1.8s						
MFID				LR	LR		
	comp=Z,3µm,19.0s						
RUBR	**Rubicon Trail**	**62.60**	**61**	*e*P	**P**	**11 43 26.6**	**+0.9**
	comp=Z,51nm,1.0s						
PAHR	**Pah Rah Range**	**62.67**	**60**	*e*P	**P**	**11 43 26.5**	**+0.4**
	comp=Z,183nm,1.7s						
PAHR				LR	LR		
	comp=Z,3µm,22.0s						
HRY	**Holter Researc**	**62.75**	**50**	*e*P	**P**	**11 43 26.6**	**+0.1**
VCNR	**Virginia City**	**62.76**	**61**	*e*P	**P**	**11 43 27.1**	**+0.3**
	comp=Z,43nm,1.0s						
VCNR				LR	LR		
	comp=Z,2µm,20.0s						
PNTR	**Pine Nut**	**62.92**	**61**	*e*P	**P**	**11 43 28.3**	**+0.4**
	comp=Z,68nm,1.0s						
LRM	**Limekiln Ridge**	**62.96**	**51**	*e*P	**P**	**11 43 28.6**	**+0.5**
FCC	**Fort Churchill**	**63.03**	**32**	*e*P	**P**	**11 43 27.7**	**-0.2**
	comp=Z,176nm,1.5s						
FCC				LR	LR		
	comp=Z,5µm,20.0s						
FCC	**Fort Churchill**	**63.03**	**32**	*e*P	**P**	**11 43 27.7**	**-0.2**
FCC				pmax	pmax		
	comp=Z,176nm,1.5s						
FCC				MLR	MLR		
	comp=Z,5µm,20.0s						
EGMT	**Eagleton**	**63.04**	**48**	P	**P**	**11 43 27.5**	**-0.9**
	baz=309,SNR=24						
EGMT	**Eagleton**	**63.04**	**48**	*e*P	**P**	**11 43 28.7**	**+0.4**
	comp=Z,132nm,1.4s						
EGMT				LR	LR		
	comp=Z,4µm,21.0s						
BKNI	**Bangkinang**	**63.04**	**240**	P	**P**	**11 43 31.0**	**+2.4**
	comp=Z,371nm,1.0s,comp=Z,6µm						
BKNI	**Bangkinang**	**63.04**	**240**	*e*P	**P**	**11 43 29.7**	**+1.0**
	comp=Z,328nm,1.0s						
BKNI				LR	LR		
	comp=Z,4µm,21.0s						
CMB	**Columbia Colle**	**63.08**	**62**	*e*P	**P**	**11 43 29.6**	**+0.9**
	comp=Z,132nm,1.5s						
CMB				LR	LR		
	comp=Z,3µm,18.0s						
CMB	**Columbia Colle**	**63.08**	**62**	*e*P	**P**	**11 43 29.6**	**+0.9**
CMB				pmax	pmax		
	comp=Z,132nm,1.5s						
CMB				MLR	MLR		
	comp=Z,3µm,18.0s						
DLMT	**Dillon**	**63.16**	**52**	*e*P	**P**	**11 43 30.0**	**+0.7**
	comp=Z,158nm,1.8s						
DLMT				LR	LR		
	comp=Z,3µm,18.0s						
SAO	**San Andreas Ge**	**63.19**	**64**	PFAKE		11 43 40.0	+11
SAO				LR	LR		
	comp=Z,2µm,21.0s						
YERR	**Yerington**	**63.20**	**61**	*e*P	**P**	**11 43 29.9**	**+0.2**
	comp=Z,97nm,1.2s						
YERR				LR	LR		
	comp=Z,2µm,20.0s						
JAGI	**Jajag, Banyuwa**	**63.21**	**222**	PFAKE		11 43 40.0	+10
JAGI				LR	LR		
	comp=Z,3µm,20.0s						
HLID	**Hailey**	**63.25**	**54**	P	**P**	**11 43 29.4**	**-0.6**
	baz=308,SNR=17						
HLID	**Hailey**	**63.25**	**54**	*e*P	**P**	**11 43 30.3**	**+0.4**
	comp=Z,83nm,1.6s						
HLID				LR	LR		
	comp=Z,3µm,18.0s						
MCMT	**McKenzie Canyo**	**63.35**	**52**	*e*P	**P**	**11 43 26.4**	**-4.3**
WAKR	**Walker**	**63.38**	**61**	*e*P	**P**	**11 43 31.5**	**+0.6**
	comp=Z,198nm,1.8s						
WAKR				LR	LR		
	comp=Z,3µm,19.0s						
BMN	**Battle Mountai**	**63.54**	**58**	*e*P	**P**	**11 43 32.5**	**+0.6**
	comp=Z,192nm,1.8s						
BMN				LR	LR		
	comp=Z,4µm,21.0s						
BMN	**Battle Mountai**	**63.54**	**58**	*e*P	**P**	**11 43 32.5**	**+0.6**
BMN				pmax	pmax		
	comp=Z,192nm,1.8s						
BMN				MLR	MLR		
	comp=Z,4µm,21.0s						
BOZ	**Bozeman (W)**	**63.55**	**51**	P	**P**	**11 43 31.8**	**-0.1**
	baz=309,SNR=46						
BOZ	**Bozeman (W)**	**63.55**	**51**	*e*P	**P**	**11 43 32.0**	**+0.1**
	comp=Z,252nm,1.8s						
BOZ				LR	LR		
	comp=Z,4µm,19.0s						
BOZ	**Bozeman (W)**	**63.55**	**51**	*e*P	**P**	**11 43 32.0**	**+0.1**
BOZ				pmax	pmax		
	comp=Z,252nm,1.8s						
BOZ				MLR	MLR		
	comp=Z,4µm,19.0s						
PVM	**Polavaram**	**63.77**	**268**	*e*P	**P**	**11 43 33.5**	**+0.1**
PVM				IAmb	IAmb	11 43 35.1	
	comp=Z,172nm,1.0s						
PVM				IVMs_BB	IVMs_BB	12 13 49.9	
	comp=Z,1µm,16.8s						
KVN	**Kaiserville**	**63.86**	**60**	*e*P	**P**	**11 43 34.6**	**+0.5**
	comp=Z,165nm,1.6s						
KVN				LR	LR		
	comp=Z,3µm,22.0s						
KVN	**Kaiserville**	**63.86**	**60**	*e*P	**P**	**11 43 34.6**	**+0.5**
KVN				pmax	pmax		
	comp=Z,165nm,1.6s						
KVN				MLR	MLR		
	comp=Z,3µm,22.0s						
RYN	**Ryan**	**63.86**	**61**	*e*P	**P**	**11 43 34.4**	**+0.3**
	comp=Z,202nm,1.9s						
RYN				LR	LR		
	comp=Z,3µm,19.0s						
MOR8	**Moi Rana**	**63.92**	**342**	*e*P	**P**	**11 43 31.5**	**-2.3**
MOR8				IAmb	IAmb	11 43 33.5	
	comp=Z,191nm,1.0s						
MOR8				IAMs_20	IAMs_20	12 09 23.5	
	comp=Z,8µm,22.0s						
KONS	**Konsvik**	**63.92**	**343**	*e*P	**P**	**11 43 34.0**	**+0.2**
KONS				IAmb	IAmb	11 43 34.5	
	comp=Z,37nm,0.8s						
PMPB	**Monarch Peak**	**63.94**	**64**	PFAKE		11 43 50.0	+16
PMPB				LR	LR		
	comp=Z,2µm,20.0s						
PWJI	**Pagerwojo**	**63.95**	**225**	P	**P**	**11 43 34.5**	**-0.1**
	comp=Z,296nm,1.0s,comp=Z,3µm						
NV01	**Mina Array Sit**	**64.12**	**61**	*e*P	**P**	**11 43 36.0**	**+0.2**
NVAR	**Mina Array Bea**	**64.12**	**61**	P	**P**	**11 43 36.1**	**+0.2**
	comp=Z,7.5nm,0.9s,baz=290,slow=6.7,SNR=31						
NVAR				LR	LR	12 08 53.3	
	comp=Z,3µm,20.3s,baz=58,slow=34						
MDPB	**Devils Postpil**	**64.14**	**62**	*e*P	**P**	**11 43 36.6**	**+0.6**
	comp=Z,44nm,1.1s						
MDPB				LR	LR		
	comp=Z,3µm,20.0s						
QLMT	**Earthquake Lak**	**64.14**	**52**	*e*P	**P**	**11 43 36.3**	**+0.4**
OMMB	**Old Mammoth Mi**	**64.20**	**62**	*e*P	**P**	**11 43 36.5**	**0.0**
	comp=Z,61nm,1.6s						
OMMB				LR	LR		
	comp=Z,4µm,21.0s						
NV11	**Mina Array Sit**	**64.21**	**61**	*e*P	**P**	**11 43 36.5**	**+0.1**
	comp=Z,11nm,1.8s						
NV11				LR	LR		
	comp=Z,400nm,20.0s						
MLAC	**Mammoth, Mammo**	**64.29**	**62**	P	**P**	**11 43 38.6**	**+1.6**
	baz=309,SNR=6.5						
SCO	**Scoresbysund**	**64.31**	**358**	*e*P	**P**	**11 43 36.9**	**+0.7**
	comp=Z,43nm,0.8s						
SCO				LR	LR		
	comp=Z,100nm,21.0s						
SCO	**Scoresbysund**	**64.31**	**358**	*e*P	**P**	**11 43 36.9**	**+0.7**
SCO				pmax	pmax		
	comp=Z,43nm,0.8s						
YHB	**Horse Butte**	**64.32**	**52**	*e*P	**P**	**11 43 38.3**	**+1.3**
	comp=Z,102nm,1.4s						
YHB				LR	LR		
	comp=Z,4µm,18.0s						
RPR	**Rampur**	**64.33**	**271**	*e*P	**P**	**11 43 36.8**	**-0.3**
RPR				IAmb	IAmb	11 43 38.3	
	comp=Z,116nm,1.1s						
RPR				IVMs_BB	IVMs_BB	12 13 48.0	
	comp=Z,3µm,14.2s						
GSI	**Gunungsitoli**	**64.42**	**243**	PFAKE		11 43 50.0	+12
GSI				LR	LR		
	comp=Z,6µm,18.0s						
ILULI	**Ilulissat**	**64.48**	**9**	PFAKE		11 43 50.0	+13
ILULI				LR	LR		
	comp=Z,9µm,20.0s						
ILULI	**Ilulissat**	**64.48**	**9**⇑	*i*P	**P**	**11 43 36.5**	**-0.8**
	comp=Z,51nm,0.8s						
	comp=Z,9µm,20.0s						
ILULI	**Ilulissat**	**64.48**	**9**⇑	*i*P	**P**	**11 43 36.5**	**-0.8**
ILULI				pmax	pmax		
	comp=Z,51nm,0.8s						
ILULI				MLR	MLR		
	comp=Z,9µm,20.0s						
GCMT	**Greycliff**	**64.49**	**50**	*e*P	**P**	**11 43 37.1**	**-1.0**
YMR	**Madison River**	**64.50**	**52**	PFAKE		11 43 50.0	+12
YMR				LR	LR		
	comp=Z,6µm,19.0s						
UGM	**Wanagama**	**64.50**	**226**	P	P	11 43 52.5	+14
UGM	**Wanagama**	**64.50**	**226**	*e*P	**P**	**11 43 38.0**	**-0.2**
	comp=Z,194nm,1.1s						
ELK	**Elko**	**64.53**	**57**	LR	LR	12 11 49.9	
	comp=Z,3µm,18.5s,baz=358,slow=36						
PAGB	**Antelope Grade**	**64.59**	**64**	*e*P	**P**	**11 43 39.5**	**+0.8**
	comp=Z,166nm,1.6s						
PAGB				LR	LR		
	comp=Z,2µm,19.0s						
PUL	**Pulkovo**	**64.64**	**331**	*ce*P	**P**	**11 43 36.4**	**-2.1**
KRJI	**Kerinci**	**64.70**	**238**	P	**P**	**11 43 41.3**	**+1.6**
	comp=Z,325nm,1.7s,comp=Z,6µm						
YFT	**Old Faithful**	**64.71**	**52**	PFAKE		11 43 50.0	+10
YFT				LR	LR		
	comp=Z,11µm,18.0s						
FIA1	**FINESS Array S**	**64.72**	**334**	*e*P	**P**	**11 43 37.9**	**-1.1**
	comp=Z,118nm,1.0s						
FINES	**FINESS Array B**	**64.72**	**334**	P	**P**	**11 43 37.6**	**-1.5**
	comp=Z,69nm,0.8s,baz=31,slow=9.3,SNR=124						
FINES				PKP2bc		12 12 30.9	
	comp=Z,2.5nm,0.9s,baz=150,slow=4.2,SNR=4.9						
FINES				LR	LR	12 14 31.0	
	comp=Z,11µm,19.4s,baz=32,slow=38						
KPJI	**Karang Pucung**	**64.83**	**228**	P	**P**	**11 43 40.9**	**+0.6**
YPP	**Pitchstone Pla**	**64.84**	**52**	*e*P	**P**	**11 43 43.6**	**+3.0**
	comp=Z,69nm,1.6s						
YPP				LR	LR		
	comp=Z,3µm,22.0s						
MOS	**Moscow**	**64.85**	**325**	*e*P	**P**	**11 43 39.4**	**-0.6**
MOS	**Moscow**	**64.85**	**325**α	*i*P	**P**	**11 43 38.8**	**-1.2**
MOS				*e*		11 44 09.6	
MOS				*e*		11 46 00.3	
MOS				*i* S	**S**	**11 52 18.4**	**+0.3**
MOS				*e*		11 53 27.7	
MOS				*i* SS	**SS**	**11 56 25.1**	**-3.9**
MOS				*e*SSS	SSS	11 59 20.3	
MOS				pmax	pmax		
	comp=Z,1µm,5.1s						
MOS				pmax	pmax		
	comp=Z,46nm,1.0s						
MOS				smax	smax		
	comp=E,500nm,3.8s						
MOS				smax	smax		
	comp=N,600nm,3.5s						
MOS				MLR	MLR		
	comp=Z,9µm,17.0s						
MOS				MLR	MLR		
	comp=E,4µm,19.0s						
MOS				MLR	MLR		
	comp=N,8µm,16.0s						
H17A	**Grant Village**	**64.89**	**52**	P	**P**	**11 43 41.9**	**+1.1**
	baz=310,SNR=9.3						
H17A	**Grant Village**	**64.89**	**52**	*e*P	**P**	**11 43 42.8**	**+2.0**
	comp=N,71nm,1.3s						
H17A				LR	LR		
	comp=Z,6µm,20.0s						
SRSP	**Sriramsagar**	**64.96**	**272**	*e*P	**P**	**11 43 40.4**	**-0.8**
SRSP				IAmb	IAmb	11 43 42.0	
	comp=Z,141nm,1.0s						
SRSP				IVMs_BB	IVMs_BB	12 14 14.1	
	comp=Z,2µm,13.4s						
IMW	**Indian Meadow**	**65.00**	**52**	*e*P	**P**	**11 43 42.8**	**+1.2**
	comp=Z,73nm,1.4s						
IMW				LR	LR		
	comp=Z,2µm,19.0s						
SMMC	**Simmler**	**65.01**	**64**	P	**P**	**11 43 41.6**	**+0.1**
	baz=309						
FLWY	**Flagg Ranch**	**65.02**	**52**	*e*P	**P**	**11 43 43.3**	**+1.7**
	comp=Z,97nm,1.4s						
FLWY				LR	LR		
	comp=Z,2µm,19.0s						
MDSI	**Maura Dua**	**65.05**	**234**	P	P	11 43 47.3	+5.5
	comp=Z,49nm,1.4s						
LEM	**Lembang**	**65.09**	**229**	P	**P**	**11 43 41.3**	**-0.9**
	comp=Z,32nm,0.7s,baz=37,slow=10,SNR=7.7						
FXWY	**Fox Creek**	**65.12**	**52**	*e*P	**P**	**11 43 43.1**	**+0.8**
	comp=Z,146nm,1.8s						
RLMT	**Red Lodge**	**65.14**	**50**	P	**P**	**11 43 43.5**	**+1.2**
	baz=310,SNR=7.4						
RLMT	**Red Lodge**	**65.14**	**50**	*e*P	**P**	**11 43 44.0**	**+1.7**
	comp=Z,77nm,1.4s						
RLMT				LR	LR		
	comp=Z,4µm,22.0s						
MOOW	**Moose Ponds**	**65.21**	**52**	*e*P	**P**	**11 43 43.8**	**+1.0**
	comp=Z,128nm,1.6s						
MOOW				LR	LR		
	comp=Z,3µm,18.0s						
VES	**Vestal, Richgr**	**65.25**	**63**	P	**P**	**11 43 44.1**	**+1.1**
	baz=309,SNR=7.1						
TPAW	**Teton Pass**	**65.26**	**53**	*e*P	**P**	**11 43 44.5**	**+1.3**
	comp=Z,97nm,1.2s						
TPAW				LR	LR		
	comp=Z,3µm,22.0s						
HVU	**Hansel Valley**	**65.31**	**55**	*e*P	**P**	**11 43 44.1**	**+0.6**
	comp=Z,22nm,0.9s						
HVU				LR	LR		
	comp=Z,4µm,19.0s						
DBJI	**Dramaga**	**65.33**	**230**	P	**P**	**11 43 44.2**	**+0.6**
	comp=Z,131nm,1.1s						
CTA	**Charters Tower**	**65.36**	**185**	P	**P**	**11 43 43.8**	**+0.2**
	comp=Z,7.4nm,0.8s,baz=346,slow=11,SNR=3.8						
CTA				LR	LR	12 11 53.7	
	comp=Z,2µm,19.3s,baz=354,slow=36						
CTAO	**Charters Tower**	**65.36**	**185**	PFAKE		11 44 00.0	+16
CTAO				LR	LR		
	comp=Z,2µm,20.0s						
LOHW	**Long Hollow**	**65.37**	**52**	*e*P	**P**	**11 43 44.8**	**+0.8**
	comp=Z,166nm,1.7s						
LOHW				LR	LR		
	comp=Z,3µm,18.0s						
SNOW	**Snow King Moun**	**65.38**	**53**	*e*P	**P**	**11 43 46.6**	**+2.6**
	comp=Z,101nm,1.4s						
SNOW				LR	LR		
	comp=Z,3µm,22.0s						
PKM	**Mcpherson Peak**	**65.39**	**65**	P	**P**	**11 43 43.2**	**-0.9**
	baz=310,SNR=6.1						
REDW	**Red Top Meadow**	**65.39**	**53**	*e*P	**P**	**11 43 44.6**	**+0.6**
	comp=Z,79nm,1.2s						
REDW				LR	LR		
	comp=Z,3µm,20.0s						
CWC	**Cottonwood Cre**	**65.51**	**62**	P	**P**	**11 43 44.5**	**-0.4**
	baz=310						
SISI	**Saibi**	**65.53**	**240**	P	**P**	**11 43 48.2**	**+3.3**
	comp=Z,59nm,1.0s						
LWLI	**Liwa**	**65.55**	**234**	P	**P**	**11 43 46.3**	**+1.1**
	comp=Z,68nm,0.6s						
DGMT	**Dagmar**	**65.59**	**45**	P	**P**	**11 43 45.4**	**+0.4**
	baz=312,SNR=7.8						
DGMT	**Dagmar**	**65.59**	**45**	*e*P	**P**	**11 43 45.3**	**+0.4**
	comp=Z,101nm,1.2s						
DGMT				LR	LR		
	comp=Z,8µm,20.0s						
GRAC	**Grapevine Rang**	**65.60**	**62**	P	**P**	**11 43 46.2**	**+1.0**
	baz=310,SNR=7.1						
CISI	**Cisompet, Garu**	**65.60**	**229**	PFAKE		11 44 00.0	+15
CISI				LR	LR		
	comp=Z,3µm,20.0s						
AHID	**Auburn Hatcher**	**65.64**	**53**	*e*P	**P**	**11 43 45.5**	**-0.1**
	comp=Z,74nm,1.4s						
AHID				LR	LR		
	comp=Z,4µm,22.0s						
BGU	**Big Grassy Mou**	**65.71**	**56**	PFAKE		11 44 00.0	+14
BGU				LR	LR		
	comp=Z,3µm,22.0s						
OBN	**Obninsk**	**65.72**	**325**	P	**P**	**11 43 44.6**	**-1.0**
	comp=Z,106nm,0.6s,baz=36,slow=19,SNR=14						
OBN	**Obninsk**	**65.72**	**325**	*e*P	**P**	**11 43 43.5**	**-2.1**
OBN	**Obninsk**	**65.72**	**325**	*e*P	**P**	**11 43 44.9**	**-0.8**
	comp=Z,80nm,1.2s						
OBN				LR	LR		
	comp=Z,11µm,18.0s						
OBN	**Obninsk**	**65.72**	**325***c*	*i*P	**P**	**11 43 43.6**	**-2.1**
OBN				*i* *PP	**pP**	**11 43 55.8**	**-1.2**
OBN				*i* *SP	**sP**	**11 43 57.8**	**-3.6**
OBN				*i*		11 44 16.7	
OBN				*e*S	**S**	**11 52 29.8**	**+1.1**
OBN				*e*		11 53 39.6	
OBN				*e*SS	**SS**	**11 56 40.3**	**-2.2**
OBN				pmax	pmax		
	comp=Z,69nm,1.2s						
OBN				MLR	MLR		
	comp=Z,10µm,16.0s						
LAO	**LASA Array**	**65.74**	**48**	P	**P**	**11 43 46.6**	**+0.6**
	baz=311,SNR=15						
LAO	**LASA Array**	**65.74**	**48**	*e*P	**P**	**11 43 46.3**	**+0.3**
	comp=Z,256nm,1.8s						
LAO				LR	LR		
	comp=Z,5µm,18.0s						
ISA	**Isabella, Lake**	**65.75**	**63**	P	**P**	**11 43 45.7**	**-0.6**
	baz=310,SNR=6.0						
ISA	**Isabella, Lake**	**65.75**	**63**	*e*P	**P**	**11 43 46.6**	**+0.3**
	comp=Z,43nm,1.5s						
ISA				LR	LR		
	comp=Z,2µm,20.0s						
ISA	**Isabella, Lake**	**65.75**	**63**	*e*P	**P**	**11 43 46.6**	**+0.3**
ISA				pmax	pmax		
	comp=Z,43nm,1.5s						
ISA				MLR	MLR		
	comp=Z,2µm,20.0s						
SPUT	**South Promonto**	**65.80**	**55**	PFAKE		11 44 00.0	+13
SPUT				LR	LR		
	comp=Z,3µm,20.0s						

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HYBB  Hyderabad (bro   65.82 271 eP       P        11 43 46.3 -0.6
HYBB                             IAmb     IAmb     11 43 47.6
      comp=Z,107nm,1.0s
HYBB                             IVMs_BB  IVMs_BB  12 14 35.0
      comp=Z,2µm,14.4s
HYB   Hyderabad        65.82 271 i P      P        11 43 46.0 -0.9
R11A  Troy Canyon, C   65.83  59 P        P        11 43 46.7 -0.2
      baz=310,SNR=19
R11A  Troy Canyon, C   65.83  59 eP       P        11 43 47.0  0.0
      comp=Z,169nm,1.8s
R11A                             LR       LR
      comp=Z,3µm,21.0s
ARVC  Arvin            65.87  64 P        P        11 43 48.3 +1.3
      baz=310
NSS   Namsos           65.87 342 eP       P        11 43 45.3 -1.1
NSS                              IAmb     IAmb     11 43 46.7
      comp=Z,66nm,1.0s
NSS                              IAMs_20  IAMs_20  12 16 03.7
      comp=Z,10µm,19.8s
NJS   Nagarjunasagar   65.87 269 eP       P        11 43 46.6 -0.5
NJS                              IAmb     IAmb     11 43 48.1
      comp=Z,115nm,1.0s
NJS                              IVMs_BB  IVMs_BB  12 17 33.0
      comp=Z,2µm,18.6s
DAC   Darwin (Calif)   65.91  62 eP       P        11 43 47.7 +0.2
      comp=Z,64nm,1.6s
DAC                              LR       LR
      comp=Z,3µm,20.0s
DAC   Darwin (Calif)   65.91  62 eP       P        11 43 47.7 +0.2
DAC                              pmax     pmax
      comp=Z,64nm,1.6s
DAC                              MLR      MLR
      comp=Z,3µm,20.0s
MPMC  Manual Prospec   66.12  62 P        P        11 43 48.8  0.0
      baz=310,SNR=18
HWUT  Hardware Ranch   66.12  54 eP       P        11 43 48.8 +0.1
      comp=Z,177nm,1.8s
HWUT                             LR       LR
      comp=Z,4µm,18.0s
FURC  Furnace Creek,   66.25  62 P        P        11 43 49.4 +0.1
      baz=310,SNR=16
GEYT  Alibeck          66.25 300 P        P        11 43 49.2 -0.2
      comp=Z,49nm,0.8s,baz=65,slow=4.1,SNR=9.7
GEYT                             LR       LR       12 15 57.5
      comp=Z,9µm,20.0s,baz=305,slow=39
GYA0B ALIBECK ARRAY    66.25 300 eP       P        11 43 49.7 +0.3
      comp=Z,127nm,0.8s
GYA0B                            LR       LR
      comp=Z,16µm,18.0s
OSI   Osito Audit: C   66.26  64 PFAKE             11 44 00.0  +10
OSI                              LR       LR
      comp=Z,3µm,19.0s
DUG   Dugway, Tooele   66.30  56 P        P        11 43 51.4 +1.6
      baz=310,SNR=8.3
DUG   Dugway, Tooele   66.30  56 eP       P        11 43 51.3 +1.4
DUG   Dugway, Tooele   66.30  56 eP       P        11 43 51.3 +1.4
      comp=Z,39nm,1.0s
DUG                              LR       LR
      comp=Z,4µm,20.0s
TPNV  Topopah Spring   66.32  61 P        P        11 43 52.2 +2.1
      baz=310,SNR=6.8
TPNV  Topopah Spring   66.32  61 PFAKE             11 44 00.0  +10
TPNV                             LR       LR
      comp=Z,3µm,20.0s
LRMC  Laurel Mtn Rad   66.36  63 P        P        11 43 51.7 +1.4
      baz=310
SRLM  Srisailam        66.47 269 eP       P        11 43 50.3 -0.8
SRLM                             IAmb     IAmb     11 43 51.8
      comp=Z,106nm,1.0s
SRLM                             IVMs_BB  IVMs_BB  12 18 07.7
      comp=Z,2µm,16.9s
BW06  Boulder Array    66.50  52 P        P        11 43 51.6 +0.4
      baz=311,SNR=7.3
BW06  Boulder Array    66.50  52 eP       P        11 43 51.2  0.0
      comp=Z,79nm,1.4s
BW06                             LR       LR
      comp=Z,5µm,18.0s
PD31  Pinedale Array   66.50  52 eP       P        11 43 51.2  0.0
PDAR  Pinedale Array   66.50  52 P        P        11 43 50.9 -0.3
      comp=Z,9.8nm,1.1s,baz=254,slow=1.7,SNR=14
PDAR                             LR       LR       12 10 50.9
      comp=Z,2µm,21.9s,baz=340,slow=34
PDAR                             PKP2bc            12 12 29.4
      comp=Z,0.2nm,0.4s,baz=124,slow=2.7,SNR=5.0
TCUT  Toone Canyon     66.52  55 eP       P        11 43 52.8 +1.4
      comp=Z,199nm,1.7s
TCUT                             LR       LR
      comp=Z,6µm,19.0s
EDW2  Edwards Air Fo   66.55  64 P        P        11 43 52.1 +0.7
      baz=310,SNR=14
CTU   Camp Tracy       66.60  55 eP       P        11 43 53.1 +1.3
      comp=Z,86nm,1.7s
CTU                              LR       LR
      comp=Z,3µm,20.0s
SNCC  San Nicolas Is   66.62  66 PFAKE             11 44 00.0 +8.2
SNCC                             LR       LR
      comp=Z,4µm,20.0s
SFJD  Kangerlussuaq    66.66   9 P        P        11 43 50.5 -1.0
      comp=Z,29nm,0.8s,baz=338,slow=5.9,SNR=7.4
SFJD                             LR       LR       12 17 11.1
      comp=Z,9µm,18.0s,baz=342,slow=40
SFJD  Kangerlussuaq    66.66   9 eP       P        11 43 50.1 -1.3
      comp=Z,245nm,1.9s
SFJD  Kangerlussuaq    66.66   9⇑iP       P        11 43 51.8 +0.3
      comp=Z,10µm,18.0s
SFJD  Kangerlussuaq    66.66   9⇑iP       P        11 43 51.8 +0.3
SFJD                             MLR      MLR
      comp=Z,10µm,18.0s
WB0   Warramunga Arr   66.69 197 PFAKE             11 44 00.0 +7.8
WB0                              LR       LR
      comp=Z,3µm,21.0s
WB9   Warramunga Arr   66.72 197 PFAKE             11 44 00.0 +7.6
WB9                              LR       LR
      comp=Z,6µm,21.0s
DECC  Green Verdugo    66.74  64 P        P        11 43 54.1 +1.5
      baz=310
WB8   Warramunga Arr   66.74 197 PFAKE             11 44 10.0  +17
WB8                              LR       LR
      comp=Z,3µm,22.0s
PSUT  Pine Spring      66.75  58 eP       P        11 43 52.8 -0.1
      comp=Z,64nm,1.5s
PSUT                             LR       LR
      comp=Z,3µm,19.0s
KLRI  Killari          66.76 272 eP       P        11 43 52.0 -0.9
KLRI                             IAmb     IAmb     11 43 53.4
      comp=Z,158nm,1.1s
KLRI                             IVMs_BB  IVMs_BB  12 16 11.9
      comp=Z,3µm,15.6s
WB6   Warramunga Arr   66.78 197 PFAKE             11 44 10.0  +17
WB6                              LR       LR
      comp=Z,3µm,22.0s
WB5   Warramunga Arr   66.81 197 PFAKE             11 44 10.0  +17
WB5                              LR       LR
      comp=Z,2µm,19.0s
VSU   Vasula           66.83 332c iP      P        11 43 51.8 -0.9
VSU                              pmax     pmax
      comp=Z,191nm,1.0s
VSU                              MLR      MLR
      comp=Z,11µm,16.0s
JLU   Jordanelle       66.83  55 eP       P        11 43 54.9 +1.5
      comp=Z,119nm,1.7s
JLU                              LR       LR
      comp=Z,4µm,18.0s
WR0   Warramunga Arr   66.85 197 PFAKE             11 44 10.0  +17
WR0                              LR       LR
      comp=Z,2µm,21.0s
WB3   Warramunga Arr   66.85 197 PFAKE             11 44 10.0  +17
WB3                              LR       LR
      comp=Z,3µm,22.0s
WR9   Warramunga Arr   66.85 197 PFAKE             11 44 10.0  +17
WR9                              LR       LR
      comp=Z,2µm,20.0s
WR8   Warramunga Arr   66.85 197 PFAKE             11 44 10.0  +17
WR8                              LR       LR
      comp=Z,3µm,21.0s
WC1   Warramunga Arr   66.86 197 PFAKE             11 44 10.0  +17
WC1                              LR       LR
      comp=Z,2µm,22.0s
WR7   Warramunga Arr   66.86 197 PFAKE             11 44 10.0  +17
WR7                              LR       LR
      comp=Z,2µm,20.0s
WR6   Warramunga Arr   66.86 197 PFAKE             11 44 10.0  +17
WR6                              LR       LR
      comp=Z,2µm,20.0s
WRAB  Tennant Creek    66.86 197 eP       P        11 43 52.9 -0.4
      comp=Z,82nm,0.9s
WRAB                             LR       LR
      comp=Z,2µm,20.0s
WRAB  Tennant Creek    66.86 197ceP       P        11 43 52.6 -0.7
WRAB                             pmax     pmax
      comp=Z,69nm,1.7s
WR5   Warramunga Arr   66.86 197 PFAKE             11 44 10.0  +17
WR5                              LR       LR
      comp=Z,2µm,20.0s
WR4   Warramunga Arr   66.87 197 PFAKE             11 44 10.0  +17
WR4                              LR       LR
      comp=Z,2µm,21.0s
WR3   Warramunga Arr   66.87 197 PFAKE             11 44 10.0  +17
WR3                              LR       LR
      comp=Z,2µm,20.0s
WB2   Warramunga Arr   66.87 197 eP       P        11 43 53.0 -0.4
      comp=Z,80nm,0.9s
WB2                              LR       LR
      comp=Z,2µm,20.0s
WR2   Warramunga Arr   66.88 197 PFAKE             11 44 10.0  +17
WR2                              LR       LR
      comp=Z,2µm,20.0s
WRA   Warramunga Arr   66.88 197 P        P        11 43 52.5 -0.9
      comp=Z,15nm,0.8s,baz=14,slow=6.7,SNR=110
WRA                              LR       LR       12 11 54.3
      comp=Z,2µm,21.3s,baz=5.0,slow=35
WRA                              PKP2bc            12 12 24.4
      comp=Z,2.9nm,0.9s,baz=199,slow=2.7,SNR=9.2
PASC  Pasadena Art C   66.88  64 PFAKE             11 44 10.0  +17
PASC                             LR       LR
      comp=Z,4µm,20.0s
WC3   Warramunga Arr   66.88 197 eP       P        11 43 53.1 -0.3
      comp=Z,73nm,0.9s
NLU   North Lily Min   66.89  56 PFAKE             11 44 10.0  +16
NLU                              LR       LR
      comp=Z,5µm,19.0s
WC4   Warramunga Arr   66.89 197 PFAKE             11 44 10.0  +17
WC4                              LR       LR
      comp=Z,2µm,20.0s
MWC   Mount Wilson     66.93  64 eP       P        11 43 54.2 +0.2
      comp=Z,87nm,1.4s
MWC                              LR       LR
      comp=Z,4µm,20.0s
MWC   Mount Wilson     66.93  64 eP       P        11 43 54.2 +0.2
MWC                              pmax     pmax
      comp=Z,87nm,1.4s
MWC                              MLR      MLR
      comp=Z,4µm,20.0s
SHOC  Shoshone, Teco   66.97  62 P        P        11 43 53.9 -0.1
      baz=310
GSC   Goldstone, Bar   67.03  63 P        P        11 43 55.9 +1.4
      baz=310
GSC   Goldstone, Bar   67.03  63 eP       P        11 43 54.5 +0.1
      comp=Z,85nm,1.6s
GSC   Goldstone, Bar   67.03  63 eP       P        11 43 54.6 +0.1
GSC                              pmax     pmax
      comp=Z,85nm,1.6s
MPU   Maple Canyon     67.11  56 PFAKE             11 44 10.0  +15
MPU                              LR       LR
      comp=Z,3µm,22.0s
BFSC  Mount Baldy Ra   67.17  64 P        P        11 43 55.8 +0.3
      baz=310
CIS   Catalina Islan   67.23  65 P        P        11 43 55.9 +0.1
      baz=310
SHPR  Sheep Range      67.27  61 eP       P        11 43 58.1 +2.0
      comp=Z,89nm,1.4s
SHPR                             LR       LR
      comp=Z,2µm,20.0s
TBLU  Trondheim        67.36 342 eP       P        11 43 54.6 -1.3
TBLU                             IAmb     IAmb     11 43 55.5
      comp=Z,92nm,1.0s
TBLU                             IAMs_20  IAMs_20  12 17 13.9
      comp=Z,11µm,19.9s
VSR   Storozhevoye     67.39 321 eP       P        11 43 55.8 -0.6
VSR                              eS       S        11 52 48.7 -0.5
VSR                              pmax     pmax
      comp=Z,100nm,1.2s
VSR                              smax     smax
      comp=N,840nm,8.3s
VSR                              MLR      MLR
      comp=Z,29µm,17.0s
FITZ  Fitzroy Crossi   67.41 207 P        P        11 43 56.8 +0.1
      comp=Z,14nm,0.9s,baz=51,slow=5.5,SNR=27
FITZ  Fitzroy Crossi   67.41 207 eP       P        11 43 57.2 +0.4
      comp=Z,47nm,0.9s
TUQ   Turquoise Moun   67.49  62 P        P        11 43 57.7 +0.3
      baz=311,SNR=6.3
SKHT  Srikalahasti     67.50 267 eP       P        11 43 57.6  0.0
SKHT                             IAmb     IAmb     11 43 59.3
      comp=Z,159nm,1.0s
SKHT                             IVMs_BB  IVMs_BB  12 18 10.6
      comp=Z,2µm,17.1s
VORD  Divnogorie       67.52 321 eP       P        11 43 56.6 -0.5
VORD                             pmax     pmax
      comp=Z,50nm,0.9s
TCRU  Three Creeks R   67.55  57 PFAKE             11 44 10.0  +12
TCRU                             LR       LR
      comp=Z,4µm,22.0s
BBRC  Big Bear Solar   67.63  64 P        P        11 43 59.4 +0.9
      baz=311
HEC   Hector,Ludlow    67.63  63 P        P        11 43 59.6 +1.3
      baz=311
CCUT  Cedar City       67.69  59 eP       P        11 43 58.7 -0.1
      comp=Z,91nm,1.6s
CCUT                             LR       LR
      comp=Z,3µm,21.0s
MSU   Marysvale        67.77  57 eP       P        11 44 00.1 +0.8
MSU   Marysvale        67.77  57 eP       P        11 44 00.1 +0.8
AFI   Afiamalu         67.80 141 LR       LR       12 15 04.6
      comp=Z,4µm,18.1s,baz=322,slow=37
SZCU  Shurtz Canyon    67.82  59 eP       P        11 43 59.7  0.0
      comp=Z,127nm,1.9s
SZCU                             LR       LR
      comp=Z,3µm,21.0s
TMUT  Trail Mountain   67.83  56 eP       P        11 44 02.5 +2.8
      comp=Z,139nm,1.9s
TMUT                             LR       LR
      comp=Z,3µm,20.0s
MURC  Murrieta         67.88  64 P        P        11 44 00.5 +0.6
      baz=311
P17A  Butcher Ranch,   67.98  56 eP       P        11 44 01.7 +1.1
      comp=Z,214nm,1.9s
P17A                             LR       LR
      comp=Z,3µm,20.0s
MTPU  Mount Pierson    68.07  58 eP       P        11 44 01.6 +0.2
      comp=Z,17nm,1.0s
MTPU                             LR       LR
      comp=Z,3µm,20.0s
GMRC  Granite Mounta   68.08  62 P        P        11 44 01.4 +0.2
      baz=311,SNR=5.2
LCMT  Little Creek M   68.11  59 eP       P        11 44 01.9 +0.5
      comp=Z,189nm,1.9s
LCMT                             LR       LR
      comp=Z,3µm,19.0s
P18A  Preston Nutter   68.17  55 eP       P        11 44 03.9 +2.0
      comp=Z,44nm,1.0s
P18A                             LR       LR
      comp=Z,4µm,19.0s
LDFC  Landfair         68.23  62 eP       P        11 44 01.9 -0.2
      comp=Z,120nm,1.0s
K22A  Casper           68.26  51 P        P        11 44 02.8 +0.6
      baz=312
K22A  Casper           68.26  51 eP       P        11 44 03.0 +0.7
      comp=Z,316nm,2.0s
K22A                             LR       LR
      comp=Z,3µm,21.0s
MDND  Maddock          68.27  43 P        P        11 44 01.9 -0.1
      baz=314
MDND  Maddock          68.27  43 eP       P        11 44 02.5 +0.5
      comp=Z,120nm,1.1s
MDND                             LR       LR
      comp=Z,4µm,21.0s
ULM   Lac du Bonnet    68.31  40 P        P        11 44 01.5 -0.7
      comp=Z,9.2nm,0.7s,baz=316,slow=5.7,SNR=7.5
ULM                              LR       LR       12 16 49.8
      comp=Z,4µm,18.6s,baz=332,slow=38
ULM   Lac du Bonnet    68.31  40 eP       P        11 44 01.6 -0.7
      comp=Z,21nm,0.9s
PFO   Pinyon Flats O   68.34  64 P        P        11 44 02.2 -0.7
      baz=311,SNR=6.3
PFO   Pinyon Flats O   68.34  64 eP       P        11 44 03.0 +0.2
      comp=Z,75nm,1.7s
PFO                              LR       LR
      comp=Z,4µm,19.0s
PFO   Pinyon Flats O   68.34  64 eP       P        11 44 03.0 +0.2
PFO                              pmax     pmax
      comp=Z,75nm,1.7s
PFO                              MLR      MLR
      comp=Z,4µm,19.0s
XPFO  Piæon Flat       68.34  64 eP       P        11 44 05.7 +2.8
      comp=Z,69nm,1.6s
XPFO                             LR       LR
      comp=Z,4µm,20.0s
SRU   San Rafael Swe   68.35  56 eP       P        11 44 03.2 +0.3
      comp=Z,39nm,0.9s
SRU                              LR       LR
      comp=Z,3µm,21.0s
BELC  Belle Mtn. Jos   68.38  63 P        P        11 44 02.8 -0.3
      baz=311
PKCU  Pink Cliffs      68.39  58 eP       P        11 44 06.8 +3.4
      comp=Z,96nm,1.6s
PKCU                             LR       LR
      comp=Z,3µm,19.0s
109C  Camp Elliot, M   68.40  65 P        P        11 44 03.3 +0.2
      baz=311
CPE   Camp Elliot      68.40  65 eP       P        11 44 05.5 +2.5
      comp=Z,28nm,0.9s
URV   Uravakonda       68.40 270 eP       P        11 44 02.6 -0.7
URV                              IAmb     IAmb     11 44 04.0
      comp=Z,91nm,1.0s
URV                              IVMs_BB  IVMs_BB  12 20 11.7
      comp=Z,2µm,14.1s
RWWY  Rawlins          68.52  52 eP       P        11 44 08.1 +4.1
      comp=Z,61nm,1.1s
RWWY                             LR       LR
      comp=Z,4µm,20.0s
MOL   Molde            68.54 343 eP       P        11 44 03.5 +0.1
MOL                              IAmb     IAmb     11 44 04.9
      comp=Z,154nm,1.4s
DZM   Mont Dzumac      68.55 165 P        P        11 44 05.3 +1.3
      comp=Z,16nm,0.9s,baz=272,slow=4.9,SNR=3.4
DZM                              LR       LR       12 13 53.3
      comp=Z,7µm,18.1s,baz=3.0,slow=36
DZM   Mont Dzumac      68.55 165 eP       P        11 44 06.4 +2.4
      comp=Z,166nm,1.1s
DZM                              eS       S        11 53 01.3 -2.3
      comp=Z,3µm,28.4s
DZM                              eSS      SS       11 57 27.2 -1.6
      comp=Z,2µm,32.0s
DZM                              eLQ      LQ       12 01 35.2
      comp=Z,9µm,31.9s
DZM                              eLR      LR       12 04 36.0
      comp=Z,9µm,23.4s
DZM   Mont Dzumac      68.55 165 eP       P        11 44 08.9 +5.0
      comp=Z,63nm,1.0s
RSSD  Black Hills      68.60  48 P        P        11 44 03.8 -0.6
      baz=313
RSSD  Black Hills      68.60  48 eP       P        11 44 04.5 +0.1
      comp=Z,192nm,1.8s
RSSD                             LR       LR
      comp=Z,5µm,20.0s
RSSD  Black Hills      68.60  48 eP       P        11 44 04.5 +0.1
RSSD                             pmax     pmax
      comp=Z,192nm,1.8s
RSSD                             MLR      MLR
      comp=Z,5µm,20.0s
DOMB  Dombas           68.69 342 eP       P        11 44 04.1 -0.3
DOMB                             IAmb     IAmb     11 44 05.0
      comp=Z,97nm,1.0s
DOMB                             IAMs_20  IAMs_20  12 17 19.4
      comp=Z,8µm,18.4s
IRM   Iron Mountain    68.81  63 P        P        11 44 05.3 -0.3
      baz=311,SNR=11
BAR   Barrett          68.81  65 eP       P        11 44 05.6 -0.1
      comp=Z,64nm,1.5s
MONP2 Monument Peak    68.83  64 P        P        11 44 05.1 -0.9
      baz=311
NC303 NORSAR Array S   68.89 341 eP       P        11 44 05.2 -0.5
NC405 NORSAR Array S   68.91 340 eP       P        11 44 05.4 -0.4
BC3   Big Chuckawall   68.94  63 P        P        11 44 07.3 +0.7
      baz=311,SNR=7.4
W13A  Hualapai Mount   68.97  61 eP       P        11 44 07.2 +0.3
      comp=Z,47nm,1.4s
O20A  White River Ci   68.98  54 P        P        11 44 06.8 -0.1
      baz=312
O20A  White River Ci   68.98  54 eP       P        11 44 07.8 +1.0
      comp=Z,38nm,1.0s
O20A                             LR       LR
      comp=Z,2µm,20.0s
NC204 NORSAR Array S   68.99 341 eP       P        11 44 06.3  0.0
AKN   Aaknes           69.00 343 eP       P        11 44 06.0 -0.3
AKN                              IAmb     IAmb     11 44 08.9
      comp=Z,161nm,1.2s
AKN                              IAMs_20  IAMs_20  12 18 41.9
      comp=Z,8µm,19.6s
MAK   Makhachkala      69.02 310 eP       P        11 44 07.8 +1.1
MAK                              e                 11 46 37.9
MAK                              ePPP     PPP      11 48 16.7
MAK                              eS       S        11 53 11.2 +2.4
MAK                              pmax     pmax
      comp=Z,190nm,0.7s
MAK                              MLR      MLR
      comp=Z,10µm,17.0s
NB201 NORSAR Array S   69.06 340 eP       P        11 44 06.3 -0.4
U15A  North Rim        69.07  59 eP       P        11 44 08.3 +0.8
      comp=Z,104nm,1.4s
U15A                             LR       LR
      comp=Z,3µm,19.0s
ANGG  Ammassalik, Gr   69.08   4 eP       P        11 44 06.1 -0.5
      comp=Z,60nm,1.2s
ANGG                             LR       LR
      comp=Z,6µm,18.0s
NB2   NORSAR Subarra   69.09 341 P        P        11 44 06.1 -0.8
      comp=Z,202nm,1.0s,baz=28,slow=6.2
NB2   NORSAR Subarra   69.09 341 P        P        11 44 06.1 -0.8
      baz=28,slow=6.2
NOA   NORSAR Array B   69.09 341 LR       LR       12 18 27.3
      comp=Z,4µm,18.8s,baz=30,slow=40
IKP   In-Ko-Pah, Jac   69.19  64 P        P        11 44 08.3 +0.2
      baz=311
NBO00 NORSAR Array S   69.20 341 eP       P        11 44 07.0 -0.6
HFS   Hagfors          69.27 339 P        P        11 44 07.5 -0.5
      comp=Z,100nm,0.8s,baz=47,slow=6.5,SNR=268
HFS                              PKPPKP   P'P'df   12 12 24.5 +1.0
      comp=Z,6.7nm,1.0s,baz=225,slow=4.0,SNR=6.6
HFS                              LR       LR       12 17 09.0
      comp=Z,9µm,21.0s,baz=22,slow=38
NC602 NORSAR Array S   69.28 340 eP       P        11 44 07.3 -0.8
IDID  Didziasalis      69.29 330 eP       P        11 44 08.2  0.0
IDID                             IAmb     IAmb     11 44 10.0
      comp=Z,58nm,0.9s
NAO01 NORSAR Array S   69.34 341 eP       P        11 44 07.9 -0.6
NAO01 NORSAR Array S   69.34 341 eP       P        11 44 08.0 -0.4
NAO01                            IAmb     IAmb     11 44 08.9
      comp=Z,259nm,1.1s
NAO01                            IAMs_20  IAMs_20  12 15 56.5
      comp=Z,77µm,20.2s
PDMCI Parker Dam,Lak   69.34  62 P        P        11 44 09.4 +0.5
      baz=312,SNR=6.4
IIGN  Ignalina         69.45 330 eP       P        11 44 09.1  0.0
IIGN                             IAmb     IAmb     11 44 11.0
      comp=Z,60nm,0.8s
Y12C  Blythe           69.47  63 P        P        11 44 09.5 -0.2
      baz=312
Y12C  Blythe           69.47  63 eP       P        11 44 10.7 +1.1
      comp=Z,71nm,1.4s
A33A  Warroad          69.47  40 P        P        11 44 08.3 -1.1
      baz=316,SNR=23
MICGM Minsk            69.52 329⇑eP       P        11 44 09.0 -0.6
MICGM                            PM                11 44 10.0
      comp=Z,0.5nm,1.0s
MICGM                            ePcP     sP       11 44 26.0 +0.6
MICGM                            ePP      PP       11 46 36.0 -6.9
MICGM                            ePPP     PPP      11 48 20.0
MICGM                            ePsP              11 53 02.0
MICGM                            eS       S        11 53 16.0 +1.7
MICGM                            ePS      PnS      11 53 24.0  -19
MICGM                            eScS     ScS      11 54 08.0 +0.2
MICGM                            eSS      SS       11 58 12.0  +31
MICGM                            eSSS     SSS      12 01 08.0
MICGM                            eLQ      LQ       12 38 14.0
MICGM                            eLR      LR       12 42 06.0
MICGM                            LRM      MLR      12 47 29.0
      comp=E,9.1nm,16.0s
MICGM                            LRM      MLR      12 47 51.0
      comp=Z,22nm,16.0s
MNK   Minsk            69.52 329⇑eP       P        11 44 09.0 -0.6
MNK                              e                 11 44 26.0
MNK                              ePPP     PPP      11 48 20.0
MNK                              eS       S        11 53 16.0 +1.7
MNK                              e                 11 54 08.0
MNK                              pmax     pmax
      comp=Z,530nm,1.0s
PV09  Paradox Valley   69.57  56 eP       P        11 44 12.0 +1.4
NACGM Naroch           69.60 330 eP       P        11 44 09.0 -1.1
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NACGM				PM		11 44 11.0	
	comp=Z,0.6nm,1.0s						
NACGM				*e*PPP	PPP	11 48 23.0	
NACGM				*e*S	**S**	**11 53 10.0**	**-5.3**
NACGM				*e*PS	PnS	11 54 05.0	+21
NACGM				*e*SS	**SS**	**11 57 43.0**	**+0.6**
NACGM				*e*SSS	SSS	12 00 48.0	
NACGM				*e*LQ	LQ	12 07 50.0	
NACGM				*e*LR	LR	12 11 40.0	
NACGM				LRM	MLR	12 17 27.0	
	comp=Z,6.5nm,19.0s						
PV10	**Paradox Valley**	**69.70**	**56**	*e*P	**P**	**11 44 14.3**	**+3.0**
AGMN	**Agassiz Nation**	**69.72**	**41**	P	**P**	**11 44 10.3**	**-0.7**
	baz=316,SNR=12						
AGMN	**Agassiz Nation**	**69.72**	**41**	*e*P	**P**	**11 44 10.2**	**-0.8**
	comp=Z,67nm,1.2s						
AGMN				LR	LR		
	comp=Z,4µm,21.0s						
GLA	**Glamis**	**69.74**	**63**	P	**P**	**11 44 11.7**	**+0.3**
	baz=312						
GLA	**Glamis**	**69.74**	**63**	*e*P	**P**	**11 44 11.4**	**0.0**
	comp=Z,98nm,1.6s						
GLA				LR	LR		
	comp=Z,3µm,20.0s						
GLA	**Glamis**	**69.74**	**63**	*e*P	**P**	**11 44 11.4**	**0.0**
GLA				pmax	pmax		
	comp=Z,98nm,1.6s						
GLA				MLR	MLR		
	comp=Z,3µm,20.0s						
GROC	**Groznyy**	**69.77**	**311**	*e*P	**P**	**11 44 09.0**	**-2.4**
GROC				*e*		11 44 32.0	
GROC				*e*S	**S**	**11 53 17.9**	**+0.3**
GROC				pmax	pmax		
	comp=Z,97nm,0.7s						
PV03	**Paradox Valley**	**69.90**	**56**	*e*P	**P**	**11 44 13.4**	**+0.9**
AKT	**Akhty**	**69.91**	**309**⇑	*i*P	**P**	**11 44 13.0**	**+0.6**
AKT				*e*		11 44 26.3	
AKT				*e*		11 46 42.1	
AKT				*e*S	**S**	**11 53 22.3**	**+2.7**
AKT				pmax	pmax		
	comp=Z,339nm,0.9s						
PV02	**Paradox Valley**	**69.99**	**56**	*e*P	**P**	**11 44 14.5**	**+1.3**
	comp=Z,180nm,1.8s						
BORG	**Borgarnes**	**70.02**	**357**	*e*P	**P**	**11 44 13.2**	**+0.7**
	comp=Z,71nm,0.8s						
BORG				LR	LR		
	comp=Z,3µm,18.0s						
BORG	**Borgarnes**	**70.02**	**357**	*e*P	**P**	**11 44 13.2**	**+0.7**
BORG				pmax	pmax		
	comp=Z,71nm,0.8s						
BORG				MLR	MLR		
	comp=Z,3µm,18.0s						
HYA	**Hoyanger**	**70.09**	**343**	*e*P	**P**	**11 44 13.0**	**+0.1**
HYA				IAmb	IAmb	11 44 13.8	
	comp=Z,149nm,1.0s						
HYA				IAMs_20	IAMs_20	12 18 00.3	
	comp=Z,9µm,20.6s						
B34A	**Aery, Baudette**	**70.14**	**40**	P	**P**	**11 44 12.1**	**-1.4**
	baz=317,SNR=14						
C33A	**Trail**	**70.15**	**41**	P	**P**	**11 44 13.0**	**-0.6**
	baz=317						
OSL	**Oslo**	**70.18**	**340**	*e*P	**P**	**11 44 13.7**	**+0.2**
OSL				IAmb	IAmb	11 44 14.8	
	comp=Z,188nm,1.3s						
OSL				IAMs_20	IAMs_20	12 22 52.9	
	comp=Z,8µm,19.6s						
WUAZ	**Wupatki**	**70.23**	**59**	P	**P**	**11 44 14.8**	**+0.3**
	baz=312,SNR=7.4						
WUAZ	**Wupatki**	**70.23**	**59**	*e*P	**P**	**11 44 14.9**	**+0.3**
	comp=Z,41nm,1.0s						
WUAZ				LR	LR		
	comp=Z,2µm,20.0s						
Y14A	**Wickenburg**	**70.28**	**62**	*e*P	**P**	**11 44 14.7**	**-0.1**
	comp=Z,33nm,1.0s						
SMCO	**Snowmass**	**70.35**	**54**	*e*P	**P**	**11 44 15.1**	**-0.4**
	comp=Z,29nm,1.0s						
SMCO				LR	LR		
	comp=Z,4µm,22.0s						
EIDS	**Eidsvold**	**70.45**	**180**	*e*P	**P**	**11 44 17.3**	**+1.8**
	comp=Z,84nm,1.3s						
EIDS				LR	LR		
	comp=Z,4µm,22.0s						
SUE	**Sulen**	**70.48**	**344**	*e*P	**P**	**11 44 15.5**	**+0.2**
SUE				IAmb	IAmb	11 44 16.5	
	comp=Z,150nm,1.0s						
SUE				IAMs_20	IAMs_20	12 17 43.9	
	comp=Z,7µm,20.0s						
AS01	**Alice Springs**	**70.57**	**197**	*e*P	**P**	**11 44 16.6**	**+0.3**
AS31	**Alice Springs**	**70.58**	**197**	*e*P	**P**	**11 44 16.7**	**+0.3**
	comp=Z,16nm,0.9s						
ASAR	**Alice Springs**	**70.58**	**197**	P	**P**	**11 44 16.6**	**+0.2**
	comp=Z,13nm,0.8s,baz=12,slow=5.2,SNR=87						
ASAR				PKPPKP	**P'P'df**	**12 12 17.7**	**+7.7**
	comp=Z,1.2nm,0.9s,baz=174,slow=2.4,SNR=6.8						
ASAR				LR	LR	12 14 20.0	
	comp=Z,1µm,20.4s,baz=22,slow=35						
C34A	**RKJ Ranch, Bem**	**70.63**	**41**	P	**P**	**11 44 16.4**	**-0.2**
	baz=317						
B35A	**Bob, Littlefor**	**70.65**	**40**	P	**P**	**11 44 16.1**	**-0.6**
	baz=318,SNR=15						
B35A	**Bob, Littlefor**	**70.65**	**40**	*e*P	**P**	**11 44 15.9**	**-0.8**
	comp=Z,52nm,1.1s						
B35A				LR	LR		
	comp=Z,4µm,21.0s						
ISCO	**Idaho Springs**	**70.69**	**53**	P	**P**	**11 44 17.3**	**-0.2**
	baz=314,SNR=20						
ISCO	**Idaho Springs**	**70.69**	**53**	*e*P	**P**	**11 44 17.3**	**-0.2**
	comp=Z,38nm,1.1s						
ISCO				LR	LR		
	comp=Z,4µm,20.0s						
ISCO	**Idaho Springs**	**70.69**	**53**	*e*P	**P**	**11 44 17.3**	**-0.2**
ISCO				pmax	pmax		
	comp=Z,38nm,1.1s						
ISCO				MLR	MLR		
	comp=Z,4µm,20.0s						
KONO	**Kongsberg**	**70.70**	**341**	*e*P	**P**	**11 44 16.6**	**-0.1**
	comp=Z,112nm,1.3s						
KONO				LR	LR		
	comp=Z,5µm,20.0s						
KONO	**Kongsberg**	**70.70**	**341***c*	*i*P	**P**	**11 44 16.3**	**-0.4**
KONO				pmax	pmax		
	comp=Z,135nm,1.7s						
KONO				MLR	MLR		
	comp=Z,5µm,20.0s						
KONO	**Kongsberg**	**70.70**	**341**	*e*P	**P**	**11 44 17.2**	**+0.5**
KONO				IAmb	IAmb	11 44 17.5	
	comp=Z,102nm,1.2s						
KONO				IAMs_20	IAMs_20	12 15 19.7	
	comp=Z,5µm,21.4s						
NCK	**Nalchik**	**70.72**	**313**	*i* P	**P**	**11 44 17.5**	**+0.3**
NCK				pmax	pmax		
	comp=Z,245nm,1.0s						
NCK				MLR	MLR		
	comp=Z,17µm,16.0s						
MVCO	**Mesa Verde**	**70.81**	**56**	P	**P**	**11 44 18.0**	**-0.1**
	baz=313,SNR=7.1						
MVCO	**Mesa Verde**	**70.81**	**56**	*e*P	**P**	**11 44 18.9**	**+0.7**
	comp=Z,37nm,0.9s						
MVCO				LR	LR		
	comp=Z,4µm,20.0s						
KVAR	**Kislovodsk Arr**	**70.85**	**314**	LR	LR	12 20 03.2	
	comp=Z,20µm,18.5s,slow=40						
KIV	**Kislovodsk**	**70.86**	**314**	*e*P	**P**	**11 44 19.0**	**+0.8**
	comp=Z,269nm,0.8s						
KIV				LR	LR		
	comp=Z,20µm,19.0s						
KIV	**Kislovodsk**	**70.86**	**314**	P	**P**	**11 44 19.2**	**+1.0**
	SNR=107						
KIV	**Kislovodsk**	**70.86**	**314**	*i* P	**P**	**11 44 18.5**	**+0.4**
	SNR=76						
KIV	**Kislovodsk**	**70.86**	**314**	*e*P	**P**	**11 44 18.9**	**+0.8**
KIV				*e*		11 46 56.4	
KIV				*e*S	**S**	**11 53 32.2**	**+1.7**
KIV				*e*SS	**SS**	**11 58 06.2**	**+3.7**
KIV				pmax	pmax		
	comp=Z,362nm,1.0s						
KIV				MLR	MLR		
	comp=Z,19µm,18.0s						
F32A	**Veblen**	**70.87**	**43**	P	**P**	**11 44 17.5**	**-0.6**
	baz=316						
KBZ	**Khabaz**	**70.91**	**313**	P	**P**	**11 44 19.2**	**+1.0**
	comp=Z,285nm,0.9s,baz=49,slow=4.3,SNR=234						
KBZ				S	**S**	**11 53 36.0**	**+5.2**
	comp=Z,2.0nm,0.8s,baz=255,slow=19,SNR=3.0						
KBZ				LR	LR	12 19 47.0	
	comp=Z,31µm,19.6s,baz=44,slow=40						
ASK	**Askoy**	**70.92**	**343**	*e*P	**P**	**11 44 18.1**	**+0.1**
ASK				IAmb	IAmb	11 44 19.6	
	comp=Z,273nm,1.4s						
ASK				IAMs_20	IAMs_20	12 21 15.0	
	comp=Z,17µm,20.7s						
X16A	**Lo Mia Camp, P**	**70.93**	**60**	*e*P	**P**	**11 44 19.2**	**+0.3**
	comp=Z,53nm,1.3s						
X16A				LR	LR		
	comp=Z,3µm,21.0s						
BER	**Bergen**	**70.98**	**343**	*e*P	**P**	**11 44 17.7**	**-0.7**
BER				IAMs_20	IAMs_20	12 19 59.7	
	comp=Z,5µm,19.4s						
SUSD	**Miller**	**70.99**	**46**	P	**P**	**11 44 18.1**	**-0.7**
	baz=316						
C35A	**Jirik Farms, M**	**71.02**	**40**	P	**P**	**11 44 17.9**	**-1.1**
	baz=318,SNR=14						
ZEI	**Tsey**	**71.05**	**312**	*e*P	**P**	**11 44 19.3**	**-0.2**
G32A	**Webster**	**71.13**	**44**	P	**P**	**11 44 18.8**	**-0.9**
	baz=316,SNR=21						
G32A	**Webster**	**71.13**	**44**	*e*P	**P**	**11 44 19.3**	**-0.4**
	comp=Z,102nm,0.8s						
G32A				LR	LR		
	comp=Z,7µm,20.0s						
PALK	**Pallekele**	**71.32**	**261**	P	**P**	**11 44 21.1**	**-0.2**
	comp=Z,42nm,0.9s,baz=119,slow=2.0,SNR=9.8						
PALK				LR	LR	12 18 34.2	
	comp=Z,5µm,19.2s,baz=204,slow=38						
PALK	**Pallekele**	**71.32**	**261**	*e*P	**P**	**11 44 21.6**	**+0.3**
	comp=Z,81nm,1.0s						
PALK	**Pallekele**	**71.32**	**261**	P	**P**	**11 44 22.0**	**+0.8**
NEY	**Neytrino**	**71.34**	**313***c*	*i*P	**P**	**11 44 22.5**	**+1.3**
NEY				pmax	pmax		
	comp=Z,21nm,1.0s						
NEY				MLR	MLR		
	comp=Z,14µm,18.0s						
E34A	**Wadena**	**71.34**	**42**	P	**P**	**11 44 19.1**	**-1.8**
	baz=317						
TBLG	**Delisi**	**71.35**	**311**	*e*P	**P**	**11 44 22.3**	**+1.2**
	comp=Z,434nm,0.9s						
S22A	**4UR Ranch, Cre**	**71.41**	**55**	P	**P**	**11 44 21.7**	**-0.2**
	baz=314,SNR=21						
S22A	**4UR Ranch, Cre**	**71.41**	**55**	*e*P	**P**	**11 44 22.3**	**+0.5**
	comp=Z,127nm,1.8s						
S22A				LR	LR		
	comp=Z,3µm,19.0s						
D35A	**Remer**	**71.44**	**41**	P	**P**	**11 44 20.6**	**-1.0**
	baz=318,SNR=8.3						
W18A	**Petrified Fore**	**71.49**	**59**	PFAKE		11 44 30.0	+7.8
W18A				LR	LR		
	comp=Z,3µm,20.0s						
C36A	**Pine Crest Far**	**71.50**	**40**	P	**P**	**11 44 20.9**	**-1.0**
	baz=318,SNR=16						
Q24A	**Divide**	**71.53**	**53**	P	**P**	**11 44 22.0**	**-0.6**
	baz=314						
Q24A	**Divide**	**71.53**	**53**	PFAKE		11 44 30.0	+7.4
Q24A				LR	LR		
	comp=Z,3µm,21.0s						
SUW	**Suwalki**	**71.58**	**331**	*e*P	**P**	**11 44 21.2**	**-0.9**
SUW				*e*S	**S**	**11 53 40.7**	**+2.4**
SUW				LMZ	LR	12 12 37.1	
	comp=Z,5µm,32.4s						
SUW	**Suwalki**	**71.58**	**331**	*e*P	**P**	**11 44 21.1**	**-1.1**
	comp=Z,197nm,1.0s						
SUW				LR	LR		
	comp=Z,6µm,18.0s						
SUW	**Suwalki**	**71.58**	**331**⇑	*e*P	**P**	**11 44 21.2**	**-0.9**
SUW				*e*S	**S**	**11 53 40.7**	**+2.4**
BLS5	**Blasjo**	**71.61**	**342**	*e*P	**P**	**11 44 22.3**	**-0.1**
BLS5				IAmb	IAmb	11 44 24.1	
	comp=Z,98nm,1.2s						
BLS5				IAMs_20	IAMs_20	12 20 11.7	
	comp=Z,8µm,19.5s						
E35A	**Pequot Lakes**	**71.67**	**42**	P	**P**	**11 44 22.3**	**-0.6**
	baz=318						
G33A	**Ortonville**	**71.69**	**44**	P	**P**	**11 44 22.4**	**-0.6**
	baz=317,SNR=29						
H32A	**Carlson Farm,**	**71.70**	**45**	P	**P**	**11 44 22.8**	**-0.4**
	baz=316						
214A	**Organ Pipe Nat**	**71.73**	**63**	P	**P**	**11 44 23.1**	**-0.5**
	baz=313						
X18A	**Snowflake**	**71.76**	**59**	*e*P	**P**	**11 44 24.9**	**+1.0**
	comp=Z,82nm,1.5s						
X18A				LR	LR		
	comp=Z,2µm,20.0s						
D36A	**Goodland**	**71.78**	**40**	P	**P**	**11 44 22.8**	**-0.8**
	baz=318						
D36A	**Goodland**	**71.78**	**40**	*e*P	**P**	**11 44 22.8**	**-0.8**
	comp=Z,70nm,1.3s						
D36A				LR	LR		
	comp=Z,4µm,21.0s						
C37A	**Embarrass**	**71.81**	**40**	P	**P**	**11 44 22.8**	**-1.0**
	baz=319,SNR=14						
F34A	**Alexandria**	**71.82**	**43**	P	**P**	**11 44 22.5**	**-1.3**
	baz=317						
OGNE	**Ogallala**	**71.87**	**50**	P	**P**	**11 44 23.7**	**-0.5**
	baz=315						
OGNE	**Ogallala**	**71.87**	**50**	*e*P	**P**	**11 44 25.0**	**+0.7**
	comp=Z,144nm,1.1s						
OGNE				LR	LR		
	comp=Z,5µm,20.0s						
EYMN	**Ely**	**71.96**	**39**	P	**P**	**11 44 23.9**	**-0.7**
	baz=319,SNR=17						
EYMN	**Ely**	**71.96**	**39**	*e*P	**P**	**11 44 23.6**	**-1.0**
	comp=Z,84nm,1.0s						
EYMN				LR	LR		
	comp=Z,4µm,20.0s						
AKASG	**Malin Array Be**	**71.97**	**326**	P	**P**	**11 44 23.8**	**-0.8**
	comp=Z,22nm,0.4s,baz=36,slow=6.4,SNR=78						
AKASG				S	**S**	**11 53 48.4**	**+5.5**
	comp=Z,1.4nm,0.6s,baz=39,slow=11,SNR=3.6						
AKASG				LR	LR	12 18 42.8	
	comp=Z,15µm,18.9s,baz=30,slow=38						
AKBB	**Malin Array Si**	**71.97**	**326**	*e*P	**P**	**11 44 23.7**	**-0.9**
	comp=Z,125nm,0.9s						
AKBB				LR	LR		
	comp=Z,16µm,19.0s						
AKBB	**Malin Array Si**	**71.97**	**326**	*e*P	**P**	**11 44 23.7**	**-0.9**
AKBB				pmax	pmax		
	comp=Z,125nm,0.9s						
AKBB				MLR	MLR		
	comp=Z,16µm,19.0s						
KIEV	**Kiev**	**71.98**	**326**	*e*P	**P**	**11 44 23.8**	**-0.8**
	comp=Z,114nm,0.9s						
KIEV				LR	LR		
	comp=Z,16µm,19.0s						
KIEV	**Kiev**	**71.98**	**326**	*i* P	**P**	**11 44 23.8**	**-0.8**
	SNR=26						
KIEV	**Kiev**	**71.98**	**326***c*	*i*P	**P**	**11 44 23.3**	**-1.4**
KIEV				pmax	pmax		
	comp=Z,115nm,1.0s						
KIEV				MLR	MLR		
	comp=Z,14µm,17.0s						
AK11	**Malin Array Si**	**72.01**	**326**	*e*P	**P**	**11 44 23.9**	**-0.9**
G34A	**Benson**	**72.05**	**43**	P	**P**	**11 44 24.6**	**-0.6**
	baz=317,SNR=13						
KLNR	**Kaliningrad**	**72.08**	**333***c*	*i*P	**P**	**11 44 24.6**	**-0.6**
KLNR				pmax	pmax		
	comp=Z,242nm,1.0s						
KLNR				MLR	MLR		
	comp=Z,8µm,17.0s						
F35A	**Swanville**	**72.10**	**42**	P	**P**	**11 44 25.1**	**-0.4**
	baz=318						
D37A	**Cotton**	**72.13**	**40**	P	**P**	**11 44 25.2**	**-0.4**
	baz=319,SNR=12						
SDCO	**Great Sand Dun**	**72.17**	**54**	P	**P**	**11 44 25.7**	**-0.7**
	baz=314,SNR=14						
SDCO	**Great Sand Dun**	**72.17**	**54**	*e*P	**P**	**11 44 26.1**	**-0.4**
	comp=Z,76nm,1.8s						
SDCO				LR	LR		
	comp=Z,3µm,18.0s						
HOMB	**Homborsund**	**72.19**	**340**	*e*P	**P**	**11 44 25.2**	**-0.5**
HOMB				IAmb	IAmb	11 44 27.3	
	comp=Z,104nm,1.1s						
HOMB				IAMs_20	IAMs_20	12 15 47.9	
	comp=Z,6µm,21.2s						
STAV	**Stavanger**	**72.22**	**342**	*e*P	**P**	**11 44 26.7**	**+0.8**
STAV				IAmb	IAmb	11 44 27.6	
	comp=Z,140nm,1.0s						
STAV				IAMs_20	IAMs_20	12 18 47.5	
	comp=Z,7µm,20.1s						
C38A	**Sawbill Land.**	**72.23**	**39**	P	**P**	**11 44 25.3**	**-0.9**
	baz=319,SNR=18						
E36A	**McGregor**	**72.23**	**41**	P	**P**	**11 44 25.5**	**-0.7**
	baz=318,SNR=21						
AKH	**Akhalkalaki**	**72.24**	**311**⇑	*i*P	**P**	**11 44 28.2**	**+1.6**
AKH	**Akhalkalaki**	**72.24**	**311**	*e*P	**P**	**11 44 27.9**	**+1.3**
	comp=Z,170nm,1.0s						
AKH				LR	LR		
	comp=Z,16µm,20.0s						
AKH	**Akhalkalaki**	**72.24**	**311**	*e*P	**P**	**11 44 27.9**	**+1.3**
AKH				pmax	pmax		
	comp=Z,170nm,1.0s						
AKH				MLR	MLR		
	comp=Z,16µm,20.0s						
MBWA	**Marble Bar**	**72.25**	**211**	*e*P	**P**	**11 44 26.0**	**-0.5**
	comp=Z,188nm,1.0s						
SNART	**Snartemo**	**72.43**	**341**	*e*P	**P**	**11 44 27.3**	**+0.2**
SNART				IAmb	IAmb	11 44 28.2	
	comp=Z,96nm,1.1s						
SNART				IAMs_20	IAMs_20	12 21 11.5	
	comp=Z,7µm,19.3s						
GNI	**Garni**	**72.47**	**310**	P	**P**	**11 44 29.6**	**+1.6**
	comp=Z,95nm,0.8s,baz=358,slow=5.9,SNR=76						
GNI				LR	LR	12 20 44.0	
	comp=Z,8µm,18.8s,baz=48,slow=40						
IVI	**Ivigtut**	**72.55**	**10**	*e*P	**P**	**11 44 27.0**	**-0.8**
	comp=Z,72nm,1.0s						
IVI				LR	LR		
	comp=Z,8µm,19.0s						
F36A	**Milaca**	**72.59**	**42**	P	**P**	**11 44 27.1**	**-1.3**
	baz=318,SNR=8.2						
F36A	**Milaca**	**72.59**	**42**	*e*P	**P**	**11 44 27.3**	**-1.1**
	comp=Z,22nm,1.0s						
F36A				LR	LR		
	comp=Z,4µm,19.0s						
G35A	**Watkins**	**72.61**	**43**	P	**P**	**11 44 28.3**	**-0.3**
	baz=318						
G35A	**Watkins**	**72.61**	**43**	*e*P	**P**	**11 44 28.3**	**-0.3**
	comp=Z,76nm,1.1s						
G35A				LR	LR		
	comp=Z,5µm,22.0s						
SOC	**Sochi**	**72.62**	**315**	*e*P	**P**	**11 44 28.6**	**0.0**
SOC				*e*S	**S**	**11 53 51.7**	**+1.1**
SOC				pmax	pmax		
	comp=Z,170nm,0.8s						
ECSD	**EROS Data Cent**	**72.67**	**45**	P	**P**	**11 44 28.3**	**-0.7**
	baz=317,SNR=30						
ECSD	**EROS Data Cent**	**72.67**	**45**	*e*P	**P**	**11 44 28.2**	**-0.7**
	comp=Z,55nm,1.0s						
ECSD				LR	LR		
	comp=Z,6µm,21.0s						
TUC	**Tucson**	**72.76**	**61**	P	**P**	**11 44 29.6**	**-0.1**
	baz=313						
TUC	**Tucson**	**72.76**	**61**	*e*P	**P**	**11 44 30.1**	**+0.4**
	comp=Z,32nm,1.3s						
TUC	**Tucson**	**72.76**	**61**	*e*P	**P**	**11 44 30.1**	**+0.4**
TUC				pmax	pmax		
	comp=Z,32nm,1.3s						
H35A	**Sunnyside Ranc**	**72.83**	**43**	P	**P**	**11 44 29.6**	**-0.3**
	baz=318,SNR=27						
ANN	**Anapa**	**72.85**	**317***d*	*i*P	**P**	**11 44 28.9**	**-1.0**
ANN				*e**PP	**pP**	**11 44 36.5**	**-4.9**
ANN				*e*		11 44 42.2	
ANN				*e*		11 47 11.2	
ANN				*e*PPP	PPP	11 48 54.0	
ANN				*e*S	**S**	**11 53 52.9**	**-0.2**
ANN				pmax	pmax		
	comp=Z,228nm,1.0s						
ANN				smax	smax		
	comp=N,1µm,9.8s						
NRS	**Narsarsuaq**	**72.90**	**8**	PFAKE		11 44 40.0	+10
NRS				LR	LR		
	comp=Z,8µm,19.0s						
NRS	**Narsarsuaq**	**72.90**	**8**	*i* P	**P**	**11 44 29.4**	**-0.5**
	comp=Z,42nm,1.0s						
	comp=Z,8µm,19.0s						
NRS	**Narsarsuaq**	**72.90**	**8**	*i* P	**P**	**11 44 29.4**	**-0.5**
NRS				pmax	pmax		
	comp=Z,43nm,1.0s						
NRS				MLR	MLR		
	comp=Z,8µm,19.0s						
KSCO	**Kaye Shedlock'**	**72.90**	**52**	P	**P**	**11 44 30.2**	**-0.3**
	baz=315						
KSCO	**Kaye Shedlock'**	**72.90**	**52**	*e*P	**P**	**11 44 30.6**	**+0.1**
	comp=Z,117nm,1.4s						
KSCO				LR	LR		
	comp=Z,4µm,18.0s						
E38A	**The Farm, Brul**	**72.94**	**40**	P	**P**	**11 44 29.5**	**-0.9**
	baz=319,SNR=18						
E38A	**The Farm, Brul**	**72.94**	**40**	*e*P	**P**	**11 44 29.6**	**-0.9**
	comp=Z,115nm,1.1s						
E38A				LR	LR		
	comp=Z,4µm,18.0s						
G36A	**St. Michael**	**72.95**	**42**	P	**P**	**11 44 29.6**	**-1.0**
	baz=318						
C40A	**Isle Royale Na**	**73.00**	**38**	P	**P**	**11 44 30.2**	**-0.6**
	baz=320						
C40A	**Isle Royale Na**	**73.00**	**38**	PFAKE		11 44 40.0	+9.2
C40A				LR	LR		
	comp=Z,4µm,18.0s						
KARS	**Kars**	**73.02**	**311**	*e*P	**P**	**11 44 32.7**	**+1.5**
F37A	**Hinrichs Farm,**	**73.11**	**41**	P	**P**	**11 44 30.9**	**-0.6**
	baz=319						
BCA	**Borcka**	**73.20**	**312**	*e*P	**P**	**11 44 32.8**	**+0.7**
T25A	**Trinidad**	**73.22**	**54**	P	**P**	**11 44 32.4**	**-0.1**
	baz=315,SNR=17						
T25A	**Trinidad**	**73.22**	**54**	*e*P	**P**	**11 44 32.4**	**-0.1**
	comp=Z,94nm,1.5s						
T25A				LR	LR		
	comp=Z,4µm,21.0s						
BSD	**Bornholm Skovb**	**73.28**	**336**⇑	*i*P	**P**	**11 44 31.5**	**-0.8**
	comp=Z,101nm,1.0s						
	comp=Z,14µm,20.0s						
BSD	**Bornholm Skovb**	**73.28**	**336**⇑	*i*P	**P**	**11 44 31.5**	**-0.8**
BSD				pmax	pmax		
	comp=Z,100nm,1.0s						
BSD				MLR	MLR		
	comp=Z,15µm,20.0s						
F38A	**Pierce - Schro**	**73.28**	**41**	P	**P**	**11 44 32.1**	**-0.4**
	baz=319,SNR=24						
H36A	**Jessenland, He**	**73.36**	**43**	P	**P**	**11 44 32.7**	**-0.3**
	baz=318,SNR=29						
SPMN	**Marine on St.**	**73.41**	**42**	P	**P**	**11 44 32.2**	**-1.0**
	baz=319,SNR=8.7						
SPMN	**Marine on St.**	**73.41**	**42**	*e*P	**P**	**11 44 32.5**	**-0.8**
	comp=Z,47nm,1.0s						
SPMN				LR	LR		
	comp=Z,4µm,21.0s						
COP	**Copenhagen**	**73.48**	**337**⇑	*i*P	**P**	**11 44 33.3**	**-0.1**
	comp=Z,99nm,1.0s						
	comp=Z,5µm,19.0s						
COP	**Copenhagen**	**73.48**	**337**⇑	*i*P	**P**	**11 44 33.3**	**-0.1**
COP				pmax	pmax		
	comp=Z,99nm,1.0s						
COP				MLR	MLR		
	comp=Z,5µm,19.0s						
LAZ	**Ladron**	**73.53**	**58**	*e*P	**P**	**11 44 35.9**	**+1.5**
TASM	**ASL Pad, Albuq**	**73.56**	**57**	P	**P**	**11 44 33.6**	**-1.0**
	baz=314,SNR=7.1						
ANMO	**Albuquerque**	**73.56**	**57**	P	**P**	**11 44 34.3**	**-0.2**
	comp=Z,2.7nm,0.8s,baz=294,slow=8.2,SNR=7.9						
ANMO				LR	LR	12 13 29.4	
	comp=Z,3µm,21.7s,baz=334,slow=33						
ANMO	**Albuquerque**	**73.56**	**57**	P	**P**	**11 44 34.4**	**-0.2**
	baz=314						
ANMO	**Albuquerque**	**73.56**	**57**	*e*P	**P**	**11 44 34.8**	**+0.2**
	comp=Z,65nm,1.6s						
ANMO	**Albuquerque**	**73.56**	**57***c*	*e*P	**P**	**11 44 33.7**	**-0.9**
ANMO				pmax	pmax		
	comp=Z,14nm,1.3s						
TASL	**Snake Pit, Alb**	**73.56**	**57**	P	**P**	**11 44 34.1**	**-0.4**
	baz=314,SNR=7.2						
E39A	**Mellen**	**73.56**	**40**	P	**P**	**11 44 32.9**	**-1.2**
	baz=320,SNR=24						
BGNE	**Belgrade**	**73.58**	**47**	P	**P**	**11 44 33.9**	**-0.5**
	baz=317						
BGNE	**Belgrade**	**73.58**	**47**	*e*P	**P**	**11 44 34.5**	**+0.1**
	comp=Z,86nm,0.9s						
BGNE				LR	LR		
	comp=Z,5µm,20.0s						
CLDR	**Caldiran**	**73.63**	**309**	*e*P	**P**	**11 44 37.7**	**+2.8**
MUD	**Monsted U'grnd**	**73.65**	**339**⇑	*i*P	**P**	**11 44 34.5**	**+0.1**
	comp=Z,89nm,1.1s						
	comp=Z,8µm,21.0s						
MUD	**Monsted U'grnd**	**73.65**	**339**⇑	*i*P	**P**	**11 44 34.5**	**+0.1**
MUD				pmax	pmax		
	comp=Z,89nm,1.1s						
MUD				MLR	MLR		
	comp=Z,8µm,21.0s						
I36A	**Fitzsimmons Fa**	**73.73**	**43**	P	**P**	**11 44 34.8**	**-0.4**
	baz=318						
F39A	**Loretta**	**73.75**	**40**	P	**P**	**11 44 34.5**	**-0.7**
	baz=320,SNR=15						
LENM	**Lemitar**	**73.80**	**58**	*e*P	**P**	**11 44 36.5**	**+0.6**
E40A	**Wakefield**	**73.81**	**39**	P	**P**	**11 44 35.4**	**-0.2**

	baz=320,SNR=35						
H37A	**Dierke Farm, C**	73.83	42	P	P	11 44 35.2	-0.6
	baz=319,SNR=11						
LLD	**Lille Linde**	73.85	337	iP	P	11 44 35.7	+0.1
	comp=Z,154nm,1.0s						
LLD	**Lille Linde**	73.85	337	iP	P	11 44 35.7	+0.1
LLD				pmax	pmax		
	comp=Z,150nm,1.0s						
G38A	**Ridgeland**	73.89	41	P	P	11 44 34.8	-1.2
	baz=319						
LPM	**Los Pinos Moun**	73.90	57	eP	P	11 44 36.5	0.0
CHOM	**Cayeli-Rize**	73.90	313	eP	P	11 44 36.9	+0.7
D41A	**Chassel**	73.92	38	P	P	11 44 35.9	-0.3
	baz=321,SNR=12						
D41A	**Chassel**	73.92	38	eP	P	11 44 36.0	-0.2
	comp=Z,92nm,1.0s						
D41A				LR	LR		
	comp=Z,4µm,19.0s						
BNM	**Barren Site**	74.01	58	eP	P	11 44 36.9	-0.4
I37A	**Lemond, Waseca**	74.03	43	P	P	11 44 36.6	-0.3
	baz=319,SNR=48						
I37A	**Lemond, Waseca**	74.03	43	eP	P	11 44 36.9	-0.1
	comp=Z,212nm,1.0s						
I37A				LR	LR		
	comp=Z,5µm,20.0s						
H38A	**Maiden Rock**	74.06	42	P	P	11 44 36.4	-0.7
	baz=319						
J36A	**Seneca 1, Swea**	74.09	44	PFAKE		11 44 50.0	+13
J36A				LR	LR		
	comp=Z,5µm,20.0s						
F40A	**Park Falls**	74.11	40	P	P	11 44 36.4	-0.9
	baz=320,SNR=9.7						
G39A	**Holcombe**	74.11	41	P	P	11 44 36.3	-1.1
	baz=320						
GKP	**Gorka Klasztor**	74.16	333	eP	P	11 44 37.3	-0.2
GKP				eS	S	11 54 09.6	+1.9
GKP				LMZ	LR	12 20 15.3	
	comp=Z,16µm,19.7s						
GKP	**Gorka Klasztor**	74.16	333⇑	eP	P	11 44 37.3	-0.2
GKP				eS	S	11 54 09.6	+1.9
GKP				MLR	MLR		
	comp=Z,16µm,19.7s						
BEL	**Belsk**	74.20	331	eP	P	11 44 38.0	+0.3
BEL				eS	S	11 54 07.0	-1.1
BEL				LMZ	LR	12 14 24.6	
	comp=Z,5µm,27.4s						
BEL	**Belsk**	74.20	331⇑	eP	P	11 44 38.0	+0.3
BEL				eS	S	11 54 07.0	-1.1
E41A	**Kenton**	74.20	39	P	P	11 44 37.0	-0.9
	baz=321,SNR=19						
RGN	**Rugen**	74.23	336	eP	P	11 44 38.1	+0.3
	comp=Z,92nm,0.8s						
SIM	**Simferopol'**	74.30	319c	iP	P	11 44 38.6	+0.2
SIM				e		11 44 53.0	
SIM						11 47 28.0	
SIM				ePPP	PPP	11 49 15.0	
SIM				eS	S	11 54 09.0	-0.5
SIM				ePS	PnS	11 54 49.0	+2.6
SIM				pmax	pmax		
	comp=Z,164nm,0.9s						
SIM				MLR	MLR		
	comp=Z,17µm,15.4s						
VANB	**Van**	74.31	309	eP	P	11 44 41.0	+2.2
319A	**Douglas**	74.33	61	eP	P	11 44 39.0	0.0
	comp=Z,62nm,0.9s						
SORM	**Soroca**	74.34	324⇑	iP	P	11 44 38.7	+0.1
COWI	**Conover**	74.41	39	eP	P	11 44 38.4	-0.8
	comp=Z,163nm,1.9s						
COWI				LR	LR		
	comp=Z,4µm,20.0s						
121A	**Cookes Peak, D**	74.44	59	P	P	11 44 39.9	+0.2
	baz=314,SNR=11						
BIGH	**Upper Bighouse**	74.45	347⇑	eP	P	11 44 38.9	-0.1
BIGH				IAmb	IAmb	11 44 42.9	
	comp=Z,259nm,1.0s						
BIGH				IAMs_20	IAMs_20	12 20 49.3	
	comp=Z,9µm,18.9s						
J37A	**Redenius Farm,**	74.48	43	P	P	11 44 38.9	-0.7
	baz=319,SNR=10						
I38A	**Scanlan Farm,**	74.52	42	P	P	11 44 39.1	-0.6
	baz=319,SNR=19						
H39A	**Augusta**	74.52	41	P	P	11 44 39.4	-0.4
	baz=320						
K36A	**Gilmore City**	74.55	44	P	P	11 44 39.4	-0.6
	baz=318						
G40A	**Rib Lake**	74.57	40	P	P	11 44 39.4	-0.7
	baz=320,SNR=10						
G40A	**Rib Lake**	74.57	40	eP	P	11 44 39.4	-0.7
	comp=Z,31nm,1.0s						
G40A				LR	LR		
	comp=Z,4µm,19.0s						
CBKS	**Cedar Bluff**	74.62	50	P	P	11 44 40.4	-0.1
	baz=316						
CBKS	**Cedar Bluff**	74.62	50	eP	P	11 44 40.9	+0.4
	comp=Z,47nm,1.0s						
CBKS				LR	LR		
	comp=Z,5µm,20.0s						
CBKS	**Cedar Bluff**	74.62	50	eP	P	11 44 40.9	+0.4
CBKS				pmax	pmax		
	comp=Z,47nm,1.0s						
CBKS				MLR	MLR		
	comp=Z,5µm,20.0s						
E42A	**Champion**	74.69	38	P	P	11 44 40.0	-0.7
	baz=321,SNR=11						
LVV	**L'vov**	74.69	328	iP	P	11 44 40.8	+0.2
LVV				e		11 44 58.5	
LVV				iS	SKiKP	11 54 07.0	+4.4
LVV				e		11 54 46.7	
LVV				e		11 59 05.7	
LVV				pmax	pmax		
	comp=N,370nm,2.4s						
LVV				pmax	pmax		
	comp=E,290nm,2.4s						
LVV				pmax	pmax		
	comp=Z,1µm,2.4s						
LVV				MLR	MLR		
	comp=Z,5µm,18.0s						
LVV				MLR	MLR		
	comp=N,14µm,20.0s						
LVV				MLR	MLR		
	comp=E,12µm,20.0s						
F41A	**Three Lakes**	74.70	39	P	P	11 44 40.1	-0.7
	baz=321,SNR=16						
F41A	**Three Lakes**	74.70	39	eP	P	11 44 40.2	-0.7
	comp=E,76nm,1.0s						
F41A				LR	LR		
	comp=Z,5µm,19.0s						
BAYT	**Ayd˜–ntepe-Bay**	74.73	312	eP	P	11 44 43.0	+1.7
L36A	**Harm Buss Farm**	74.84	45	P	P	11 44 41.0	-0.7
	baz=318						
K37A	**Belmond**	74.85	44	P	P	11 44 40.5	-1.3
	baz=319,SNR=14						
HSIG		74.91	64	eP	P	11 44 42.6	+0.3
	comp=Z,34nm,1.5s						
HSIG				LR	LR		
	comp=Z,2µm,20.0s						
VRTB	**Varto-Mus**	74.94	311	eP	P	11 44 44.7	+2.2
H40A	**Chili**	74.98	41	P	P	11 44 41.1	-1.3
	baz=320,SNR=11						
SCHQ	**Schefferville**	74.99	22	P	P	11 44 42.0	-0.3
	comp=Z,34nm,0.8s,baz=318,slow=7.6,SNR=7.6						
SCHQ				LR	LR	12 20 22.3	
	comp=Z,5µm,20.7s,baz=346,slow=38						
SCHQ	**Schefferville**	74.99	22	eP	P	11 44 42.0	-0.3
	comp=Z,102nm,1.4s						
J38A	**Wedel Dairy, R**	75.00	43	P	P	11 44 41.5	-1.0
	baz=319						
I39A	**Houston**	75.04	42	P	P	11 44 41.6	-1.1
	baz=320,SNR=8.1						
I39A	**Houston**	75.04	42	eP	P	11 44 41.7	-1.1
	comp=Z,63nm,0.9s						
I39A				LR	LR		
	comp=Z,6µm,22.0s						
KIS	**Kishinev**	75.05	323⇑	iP	P	11 44 42.0	-0.7
	comp=Z,800nm,2.0s						
KIS	**Kishinev**	75.05	323	iPcP	PcP	11 44 56.0	-0.3
KIS	**Kishinev**	75.05	323	ePP	PP	11 47 32.0	+1.7
KIS	**Kishinev**	75.05	323⇑	iP	P	11 44 42.5	-0.2
KIS	**Kishinev**	75.05	323α	iP	P	11 44 42.0	-0.7
KIS				i		11 44 56.0	
KIS				e		11 47 32.0	
KIS				iS	S	11 54 12.0	-5.8
KIS				ePS	PnS	11 55 00.0	+4.0
KIS				pmax	pmax		
	comp=Z,800nm,2.0s						
KIS				pmax	pmax		
	comp=Z,2µm,10.0s						
KIS				pmax	pmax		
	comp=N,1µm,4.0s						
KIS				pmax	pmax		
	comp=E,900nm,4.0s						
KIS				pmax	pmax		
	comp=Z,2µm,20.0s						
KIS				smax	smax		
	comp=N,800nm,10.0s						
KIS				MLR	MLR		
	comp=N,17µm,16.0s						
KIS				MLR	MLR		
	comp=E,10µm,16.0s						
KIS				MLR	MLR		
	comp=Z,22µm,16.0s						
KIS				MLR	MLR		
	comp=Z,25µm,18.0s						
GURO	**Guroymak-BITLI**	75.07	310	eP	P	11 44 44.5	+1.2
G41A	**Antigo**	75.08	40	P	P	11 44 41.4	-1.6
	baz=321						
ESPY	**Espiye-Giresun**	75.08	314	eP	P	11 44 42.7	-0.4
F42A	**Maple Grove Fa**	75.12	39	P	P	11 44 42.8	-0.4
	baz=321						
E43A	**Lone Tree Farm**	75.13	38	P	P	11 44 42.3	-0.9
	baz=322						
E43A	**Lone Tree Farm**	75.13	38	eP	P	11 44 42.3	-0.9
	comp=Z,54nm,1.1s						
E43A				LR	LR		
	comp=Z,3µm,22.0s						
CUKT	**Cukurca**	75.16	308	eP	P	11 44 46.0	+2.3
MCD	**Coleburn Disti**	75.21	346⇑	eP	P	11 44 43.2	-0.2
YEDI	**Yedisu-Bingol**	75.22	312	eP	P	11 44 45.5	+1.4
SRIG	**Santa Rosalia**	75.25	66	PFAKE		11 45 00.0	+16
SRIG				LR	LR		
	comp=Z,4µm,20.0s						
M36A	**Felix, Anita**	75.26	45	P	P	11 44 43.8	-0.3
	baz=318						
L37A	**Phoenix Point,**	75.27	44	P	P	11 44 43.9	-0.3
	baz=319						
H41A	**Junction City**	75.32	40	P	P	11 44 43.4	-1.0
	baz=321,SNR=9.8						
H41A	**Junction City**	75.32	40	eP	P	11 44 43.3	-1.0
	comp=Z,68nm,1.1s						
H41A				LR	LR		
	comp=Z,4µm,22.0s						
KWP	**Kalwaria Pacla**	75.34	328	eP	P	11 44 44.9	+0.5
KWP				eS	S	11 54 15.4	-5.6
KWP				LMZ	LR	12 18 59.2	
	comp=Z,13µm,22.0s						
KWP	**Kalwaria Pacla**	75.34	328	eP	P	11 44 44.9	+0.5
	comp=Z,5µm,1.1s						
KWP				LR	LR		
	comp=Z,115µm,18.0s						
KWP	**Kalwaria Pacla**	75.34	328⇑	eP	P	11 44 44.9	+0.5
KWP				eS	S	11 54 15.4	-5.6
KWP				MLR	MLR		
	comp=Z,13µm,22.0s						
J39A	**Decorah**	75.35	42	P	P	11 44 43.6	-0.9
	baz=320,SNR=17						
K38A	**Parkersburg**	75.36	43	P	P	11 44 43.6	-1.0
	baz=319						
K38A	**Parkersburg**	75.36	43	eP	P	11 44 43.7	-0.9
	comp=Z,48nm,1.1s						
K38A				LR	LR		
	comp=Z,4µm,20.0s						
BANOM	**Banah**	75.38	292	iP	P	11 44 45.5	+0.4
	SNR=10						
G42A	**Mountain**	75.39	39	P	P	11 44 44.2	-0.6
	baz=321						
G42A	**Mountain**	75.39	39	eP	P	11 44 44.2	-0.6
	comp=Z,49nm,1.0s						
G42A				LR	LR		
	comp=Z,5µm,19.0s						
E44A	**Grand Marais A**	75.39	37	P	P	11 44 44.4	-0.4
	baz=322						
E44A	**Grand Marais A**	75.39	37	eP	P	11 44 44.9	+0.2
	comp=Z,138nm,1.1s						
E44A				LR	LR		
	comp=Z,4µm,19.0s						
SHME	**Shamm**	75.40	292	iP	P	11 44 45.6	+0.4
	SNR=12						
MME1	**Meikle Cairn**	75.41	346	eP	P	11 44 43.7	-1.0
IAS	**Iasi**	75.42	324⇓	iP	P	11 44 44.7	-0.1
I40A	**Norwalk**	75.43	41	P	P	11 44 44.4	-0.7
	baz=320						
BNGB	**Bingˆ¶l**	75.48	311	eP	P	11 44 47.2	+1.7
ARMA	**Armidale**	75.48	180	eP	P	11 44 47.1	+1.8
	comp=Z,143nm,1.4s						
ARMA				LR	LR		
	comp=Z,4µm,22.0s						
F43A	**Flat Rock, Esc**	75.48	38	P	P	11 44 44.7	-0.6
	baz=322,SNR=11						
MDO	**Dochfour**	75.53	347⇑	eP	P	11 44 45.0	-0.3
SIRT	**Sirnak**	75.61	309	eP	P	11 44 47.6	+1.3
I41A	**Arkdale**	75.65	41	P	P	11 44 45.7	-0.6
	baz=321						
I41A	**Arkdale**	75.65	41	eP	P	11 44 46.0	-0.3
	comp=Z,57nm,1.2s						
I41A				LR	LR		
	comp=Z,3µm,19.0s						
L38A	**Oak Wood Farm,**	75.65	44	P	P	11 44 45.8	-0.5
	baz=319						
N36A	**Muff Farm, Cla**	75.65	46	P	P	11 44 46.2	-0.1
	baz=318						
M37A	**Trindle Farm,**	75.67	45	P	P	11 44 45.9	-0.5
	baz=319						
WSAR	**Wadi Sarin**	75.68	289	P	P	11 44 47.4	+0.6
	comp=Z,31nm,1.1s,baz=84,slow=8.6,SNR=7.9						
WSAR				LR	LR	12 22 07.6	
	comp=Z,6µm,20.1s,baz=54,slow=39						
WSAR	**Wadi Sarin**	75.68	289	P	P	11 44 48.2	+1.4
F44A	**Big Bay de Noc**	75.69	38	P	P	11 44 46.1	-0.3
	baz=322						
LEOM	**Leova**	75.70	323⇑	iP	P	11 44 46.7	+0.2
SCIA	**State Center**	75.70	44	P	P	11 44 46.6	0.0
	baz=319						
SCIA	**State Center**	75.70	44	eP	P	11 44 46.2	-0.4
	comp=Z,76nm,0.9s						
SCIA				LR	LR		
	comp=Z,6µm,21.0s						
G43A	**Wallace**	75.70	39	P	P	11 44 46.2	-0.3
	baz=322,SNR=14						
G43A	**Wallace**	75.70	39	eP	P	11 44 45.6	-0.9
	comp=Z,107nm,1.0s						
G43A				LR	LR		
	comp=Z,4µm,20.0s						
DRUM	**Mains of Drumt**	75.71	346⇑	eP	P	11 44 46.1	-0.3
DRUM				IAmb	IAmb	11 44 47.9	
	comp=Z,138nm,1.3s						
DRUM				IAMs_20	IAMs_20	12 21 40.5	
	comp=Z,5µm,18.8s						
K39A	**Oelwein**	75.74	43	P	P	11 44 46.1	-0.7
	baz=320						
J40A	**Soldiers Grove**	75.76	42	P	P	11 44 46.4	-0.5
	baz=320						
MDH	**Madha**	75.81	292	iP	P	11 44 47.3	-0.2
	SNR=5.5						
SVAN	**Silvan-Diyarba**	75.81	310	eP	P	11 44 49.1	+1.7
BIDO	**Bidbid**	75.82	289	P	P	11 44 49.0	+1.4
	SNR=9.6						
PRAR	**RASCA**	75.82	325⇓	iP	P	11 44 47.3	+0.1
KPL	**Plockton**	75.83	347⇑	eP	P	11 44 46.9	-0.1
KPL				IAmb	IAmb	11 44 51.5	
	comp=Z,174nm,1.1s						
KPL				IAMs_20	IAMs_20	12 21 49.6	
	comp=Z,3µm,20.7s						
MSFE	**Esma-Masafi**	75.86	292	iP	P	11 44 48.1	+0.3
	SNR=6.3						
OJC	**Ojcow**	75.89	330	eP	P	11 44 47.8	+0.2
OJC				eS	SKiKP	11 53 59.4	-5.0
OJC				LMZ	LR	12 21 40.5	
	comp=Z,11µm,19.1s						
OJC	**Ojcow**	75.89	330	eP	P	11 44 47.8	+0.2
	comp=Z,318nm,1.2s						
OJC	**Ojcow**	75.89	330⇑	eP	P	11 44 47.8	+0.2
OJC				MLR	MLR		
	comp=Z,11µm,19.1s						
H42A	**Shiocton**	75.91	40	P	P	11 44 47.1	-0.7
	baz=321						
H42A	**Shiocton**	75.91	40	eP	P	11 44 47.3	-0.4
	comp=Z,83nm,1.4s						
H42A				LR	LR		
	comp=Z,5µm,19.0s						
E45A	**Wooded Hills,**	75.92	37	P	P	11 44 47.1	-0.6
	baz=323						
BUR08	**Bucovina Ar. S**	76.01	326	eP	P	11 44 48.6	+0.2
BUR04	**Bucovina Ar. S**	76.02	326	eP	P	11 44 48.6	+0.1
BURAR	**Bucovina Array**	76.02	326⇑	iP	P	11 44 48.7	+0.2
MATQ	**Matagami**	76.06	30	P	P	11 44 47.3	-1.2
	baz=327						
UMQ	**Umm Al-Quwin**	76.07	292	P	P	11 44 49.9	+1.0
N37A	**Lee Faris, Mou**	76.07	45	P	P	11 44 48.5	-0.3
	baz=319						
N37A	**Lee Faris, Mou**	76.07	45	eP	P	11 44 48.5	-0.3
	comp=Z,65nm,0.9s						
N37A				LR	LR		
	comp=Z,4µm,21.0s						
KSU1	**Kansas State U**	76.08	48	P	P	11 44 47.8	-1.0
	baz=318						
KSU1	**Kansas State U**	76.08	48	eP	P	11 44 48.6	-0.2
	comp=Z,31nm,0.9s						
KSU1				LR	LR		
	comp=Z,7µm,20.0s						
M38A	**Pleasantville**	76.08	44	P	P	11 44 47.8	-0.9
	baz=319						
K40A	**Colesburg**	76.10	42	P	P	11 44 48.1	-0.8
	baz=320						
UOSS	**Minazif**	76.11	291	eP	P	11 44 49.3	0.0
	comp=Z,80nm,0.8s						
UOSS				LR	LR		
	comp=Z,5µm,20.0s						
UOSS	**Minazif**	76.11	291	iP	P	11 44 49.0	-0.2
	SNR=12						
J41A	**Loganville**	76.12	41	P	P	11 44 48.1	-0.9
	baz=321						
L39A	**Vinton**	76.13	43	P	P	11 44 48.2	-0.8
	baz=320,SNR=16						
RSDY	**Resadiye-TOKAT**	76.17	314	eP	P	11 44 50.7	+1.3
BIZ	**Bicaz**	76.21	325⇑	iP	P	11 44 49.9	+0.4
I42A	**Draeger Farm,**	76.22	40	P	P	11 44 48.5	-1.0
	baz=321,SNR=9.3						
I42A	**Draeger Farm,**	76.22	40	eP	P	11 44 48.5	-1.0
	comp=Z,57nm,1.0s						
I42A				LR	LR		
	comp=Z,4µm,22.0s						
PTK	**Pertek**	76.23	312	eP	P	11 44 51.5	+1.6
HATD	**Hatta, Dubai**	76.25	291	P	P	11 44 50.9	+0.9
	SNR=8.2						
HATD	**Hatta, Dubai**	76.25	291	iP	P	11 44 50.4	+0.4
	SNR=14						
DIKM	**Dikmen**	76.26	316	eP	P	11 44 51.1	+1.3
H43A	**Windswept, Lux**	76.28	39	P	P	11 44 49.2	-0.7
	baz=322,SNR=7.3						
H43A	**Windswept, Lux**	76.28	39	eP	P	11 44 49.2	-0.7
	comp=Z,96nm,1.0s						
H43A				LR	LR		
	comp=Z,6µm,20.0s						
KVT	**Kavak**	76.30	315	eP	P	11 44 51.6	+1.5
F45A	**CMU Biological**	76.31	37	P	P	11 44 49.0	-1.0
	baz=323						
UZH	**Uzhgorod**	76.32	328d	iP	P	11 44 49.5	-0.5
UZH				e		11 47 46.9	
UZH				ePPP	PPP	11 49 24.5	
UZH				eS	S	11 54 32.6	+0.8
TESR	**Tescani**	76.34	324⇑	iP	P	11 44 50.4	+0.3
JFWS	**Jewell Farm**	76.36	42	P	P	11 44 48.8	-1.6
	baz=321						
JFWS	**Jewell Farm**	76.36	42	PFAKE		11 45 00.0	+10
JFWS				LR	LR		
	comp=Z,6µm,22.0s						
AMTX	**Amarillo**	76.37	54	P	P	11 44 50.2	-0.5
	baz=316						
AMTX	**Amarillo**	76.37	54	eP	P	11 44 50.5	-0.2
	comp=Z,46nm,0.9s						
AMTX				LR	LR		
	comp=Z,2µm,20.0s						
ASHO	**Ashiyiah**	76.39	291	P	P	11 44 51.4	+0.5
	SNR=11						
ASHO	**Ashiyiah**	76.39	291	iP	P	11 44 51.2	+0.3
	SNR=10						
CRVS	**Cervenica-Dubn**	76.40	329	eP	P	11 44 50.8	+0.3
CRVS				pmax	pmax		
	comp=Z,96nm,1.0s						
CRVS	**Cervenica-Dubn**	76.40	329	eP	P	11 44 50.8	+0.3
CRVS				eS	S	11 54 30.1	-2.6
CRVS				eL	L	12 19 38.3	
MSTX	**Muleshoe**	76.40	55	P	P	11 44 50.3	-0.5
	baz=316,SNR=9.9						
MSTX	**Muleshoe**	76.40	55	eP	P	11 44 50.4	-0.5
	comp=Z,92nm,1.4s						
MSTX				LR	LR		
	comp=Z,3µm,19.0s						
CPRX	**Cap Rock**	76.43	57	eP	P	11 44 55.2	+4.1
NAZ	**Nazwa, Dubai**	76.44	292	P	P	11 44 51.8	+0.7
	SNR=8.3						
NAZ	**Nazwa, Dubai**	76.44	292	iP	P	11 44 52.0	+0.9
	SNR=11						
INVG	**Invergeldie, C**	76.44	346⇑	eP	P	11 44 49.9	-0.7
INVG				IAmb	IAmb	11 44 52.1	
	comp=Z,159nm,1.5s						
INVG				IAMs_20	IAMs_20	12 22 28.5	
	comp=Z,5µm,18.3s						
SOHO	**SOHO**	76.46	291	iP	P	11 44 51.5	+0.3
	SNR=11						
MNTX	**Cornudas Mount**	76.48	59	P	P	11 44 50.9	-0.3
	baz=315,SNR=14						
MNTX	**Cornudas Mount**	76.48	59	eP	P	11 44 51.0	-0.3
	comp=Z,49nm,1.4s						
MNTX				LR	LR		
	comp=Z,3µm,21.0s						
TLCR		76.48	322⇓	iP	P	11 44 51.4	+0.5
N38A	**Joes South For**	76.53	45	P	P	11 44 50.5	-0.9
	baz=319,SNR=5.3						
M39A	**Webster**	76.54	44	P	P	11 44 50.5	-0.8
	baz=320,SNR=16						
KSP	**Ksiaz**	76.54	333	eP	P	11 44 51.4	+0.2
KSP				eS	S	11 54 29.7	-4.5
KSP				LMZ	LR	12 22 41.6	
	comp=Z,11µm,19.1s						
KSP	**Ksiaz**	76.54	333⇑	eP	P	11 44 51.4	+0.2
KSP				eS	S	11 54 29.7	-4.5
KSP				MLR	MLR		
	comp=Z,11µm,19.1s						
O37A	**Wolven Farm, M**	76.55	46	P	P	11 44 50.3	-1.1
	baz=319						
L40A	**Anamosa**	76.55	43	P	P	11 44 50.6	-0.8
	baz=320						
L40A	**Anamosa**	76.55	43	eP	P	11 44 50.1	-1.3
	comp=Z,66nm,1.3s						
L40A				LR	LR		
	comp=Z,5µm,22.0s						
F46A	**Macinaw City C**	76.56	37	P	P	11 44 50.7	-0.7
	baz=323						
RAC	**Raciborz**	76.56	331	eP	P	11 44 51.9	+0.6
RAC				eS	S	11 54 24.4	-10
RAC				MLR	MLR		
	comp=Z,10µm,18.4s						
K41A	**Shullsburg**	76.57	42	P	P	11 44 50.1	-1.4
	baz=321						
J42A	**Columbus**	76.57	41	P	P	11 44 50.4	-1.1
	baz=321,SNR=7.3						
I43A	**Langenfeld Bro**	76.57	40	P	P	11 44 50.4	-1.1
	baz=322						
TOKT	**Tokat**	76.63	315	eP	P	11 44 53.2	+1.2
BZK	**Bozkurt**	76.63	317	eP	P	11 44 53.4	+1.6
TRPA	**Tarpa**	76.64	328⇑	iP	P	11 44 52.5	+0.7
TRPA	**Tarpa**	76.64	328⇑	eP	P	11 44 52.5	+0.7
BMR	**Baia Mare**	76.65	327⇓	iP	P	11 44 52.5	+0.6
SVRC	**Sivrice-ELAZID**	76.65	312	eP	P	11 44 54.6	+2.3
ESY	**Stoneypath**	76.68	345⇑	eP	P	11 44 51.7	-0.2
EAB	**Aberfoyle**	76.72	346⇑	eP	P	11 44 52.0	-0.1
PETR	**Petresti**	76.73	323⇑	iP	P	11 44 53.8	+1.5
CFR	**Carcaliu**	76.78	323⇑	iP	P	11 44 52.6	0.0
OKC	**Ostrava-Krasne**	76.78	331	eP	P	11 44 53.0	+0.4
OKC				epP	PcP	11 44 57.9	-5.9
OKC				ePP	PP	11 47 46.2	+1.4
OKC				AMS	AMS	12 26 50.0	
	comp=Z,6µm,14.8s						
OKC	**Ostrava-Krasne**	76.78	331	eP	P	11 44 53.0	+0.4
OKC				e		11 44 57.9	
OKC				e		11 47 46.2	
OKC				MLR	MLR		
	comp=Z,6µm,14.8s						
ARCR	**ARCALIA**	76.80	326⇑	iP	P	11 44 54.0	+1.3
VRI	**Vrincioaia**	76.82	324	eP	P	11 44 54.3	+1.4
VRI	**Vrincioaia**	76.82	324⇓	iP	P	11 44 53.3	+0.4
N39A	**Derby Farms, D**	76.83	44	P	P	11 44 52.3	-0.7
	baz=320						
N39A	**Derby Farms, D**	76.83	44	PFAKE		11 45 00.0	+7.0
N39A				LR	LR		
	comp=Z,7µm,21.0s						
J43A	**Natural Harves**	76.84	40	P	P	11 44 51.8	-1.2
	baz=322						

PLOR	Plostina	76.87	324	⇑iP	P	11 44 53.5	+0.3
P37A	Lathrop	76.88	46	P	P	11 44 52.5	-0.8
	baz=319,SNR=5.9						
K42A	Prairie Point,	76.88	41	P	P	11 44 52.0	-1.3
	baz=321						
LSQQ	Lebel-sur-Quev	76.88	30	P	P	11 44 52.0	-1.1
	baz=328						
L41A	Preston	76.89	42	P	P	11 44 51.8	-1.5
	baz=321						
ASUD	Al Ashush, Dub	76.91	292	P	P	11 44 54.7	+1.0
	SNR=8.2						
ASUD	Al Ashush, Dub	76.91	292	i P	P	11 44 54.2	+0.5
	SNR=15						
LANS	Liptovska Anna	76.91	330	eP	P	11 44 54.5	+1.1
LANS	Liptovska Anna	76.91	330	eP	P	11 44 54.5	+1.1
M40A	Post Highland	76.91	43	P	P	11 44 52.3	-1.1
	baz=320,SNR=15						
O38A	Galt	76.92	45	P	P	11 44 52.2	-1.3
	baz=319						
UPC	Upice	76.92	333	eP	P	11 44 53.6	+0.2
UPC				ex	x	11 45 04.6	
UPC				eS	S	11 54 32.6	-5.8
UPC				eSS	SS	11 59 36.1	+2.0
UPC				AMS	AMS	12 22 50.0	
	comp=Z,12µm,18.4s						
UPC	Upice	76.92	333	eP	P	11 44 53.6	+0.2
UPC				e		11 45 04.6	
UPC				eS	S	11 54 32.6	-5.8
UPC				eSS	SS	11 59 36.1	+2.0
UPC				MLR	MLR		
	comp=Z,12µm,18.4s						
DPC	Dobruska-Polom	76.96	332	eP	P	11 44 54.3	+0.7
DPC				epP	PcP	11 44 59.0	-5.6
DPC				ex	x	11 45 20.7	
DPC				ePP	PP	11 47 47.6	+1.3
DPC				eS	S	11 54 36.6	-2.3
DPC				eSS	SS	11 59 50.3	+16
DPC				AMS	AMS	12 22 40.0	
	comp=Z,11µm,18.3s						
DPC	Dobruska-Polom	76.96	332	eP	P	11 44 54.3	+0.7
DPC				e		11 44 59.0	
DPC				e		11 47 47.6	
DPC				eS	S	11 54 36.6	-2.3
DPC				MLR	MLR		
	comp=Z,11µm,18.3s						
ALNE	Al Ain	77.03	291	i P	P	11 44 54.8	+0.3
	SNR=6.7						
KRLC	Kraliky	77.04	332	eP	P	11 44 54.6	+0.5
KRLC				epP	PcP	11 45 00.0	-5.0
KRLC	Kraliky	77.04	332	eP	P	11 44 54.6	+0.5
KRLC				e		11 45 00.0	
MORC	Moravsky Berou	77.04	331	⇑iP	P	11 44 54.6	+0.5
MORC	Moravsky Berou	77.04	331	eP	P	11 44 54.3	+0.2
	comp=Z,267nm,1.1s						
MORC				LR	LR		
	comp=Z,8µm,19.0s						
MORC	Moravsky Berou	77.04	331	eP	P	11 44 54.3	+0.2
MORC				pmax	pmax		
	comp=Z,267nm,1.1s						
MORC				MLR	MLR		
	comp=Z,8µm,19.0s						
MORC	Moravsky Berou	77.04	331	⇑iP	P	11 44 54.3	+0.2
MORC				eS	S	11 54 36.6	-3.2
CHGQ	Chibougamau	77.06	28	P	P	11 44 53.1	-1.1
	baz=329						
KECS	Kecovo	77.11	329	eP	P	11 44 54.6	+0.2
KECS				pmax	pmax		
	comp=Z,51nm,0.9s						
KECS	Kecovo	77.11	329	eP	P	11 44 54.6	+0.2
PGBU	Glenifferbraes	77.11	346	⇑eP	P	11 44 54.4	+0.1
PGBU				IAmb	IAmb	11 44 56.3	
	comp=Z,231nm,1.2s						
PGBU				IAMs_20	IAMs_20	12 22 58.0	
	comp=Z,5µm,18.9s						
GRER		77.11	323	⇑iP	P	11 44 56.4	+1.9
MALT	Malatya	77.16	312	eP	P	11 44 56.7	+1.6
CLL	Collm	77.17	335	⇑iP	P	11 44 54.5	-0.2
	comp=Z,361nm,1.4s						
CLL				ePmax		11 44 55.0	
CLL				i		11 44 58.0	
	comp=Z,211nm,1.2s						
CLL				i		11 45 14.7	
CLL				ePP	PP	11 47 51.0	+3.0
CLL				eS	S	11 54 38.0	-3.0
	comp=N,900nm,12.9s						
CLL				eS	S	11 54 38.0	-3.0
	comp=E,1µm,19.8s						
CLL				ePS	PnS	11 55 22.0	-1.0
CLL				eSS	SS	11 59 35.0	-2.7
CLL				eSSS	SSS	12 03 18.0	
CLL				Lmax		12 21 00.0	
CLL				Lm	MLR	12 22 00.0	
	comp=N,10µm,19.0s						
CLL				Lm	MLR	12 22 00.0	
	comp=E,5µm,18.4s						
CLL				Lm	MLR	12 22 00.0	
	comp=Z,14µm,19.4s						
CLL	Collm	77.17	335	eP	P	11 44 54.4	-0.2
CLL	Collm	77.17	335	eP	P	11 44 54.4	-0.4
	comp=Z,205nm,1.0s						
CLL	Collm	77.17	335	⇑iP	P	11 44 54.5	-0.2
CLL				eS	S	11 54 38.0	-3.0
CLL				pmax	pmax		
	comp=Z,361nm,1.4s						
AJN	Ajban	77.18	292	i P	P	11 44 55.2	0.0
	SNR=5.9						
TIRR	Tirgusor	77.23	322	⇓iP	P	11 44 55.4	+0.2
TIRR	Tirgusor	77.23	322	eP	P	11 44 55.3	+0.1
	comp=Z,170nm,1.2s						
TIRR				LR	LR		
	comp=Z,25µm,18.0s						
TIRR	Tirgusor	77.23	322	eP	P	11 44 55.3	+0.1
TIRR				pmax	pmax		
	comp=Z,170nm,1.2s						
TIRR				MLR	MLR		
	comp=Z,25µm,18.0s						
HARR	Harsova	77.26	322	⇑iP	P	11 44 55.7	+0.4
BRG	Berggiesshubel	77.26	334	⇑iP	P	11 44 55.1	-0.1
	comp=Z,117nm,1.2s						
BRG				i		11 44 58.5	
	comp=Z,88nm,1.2s						
BRG				S	S	11 54 41.0	-1.0
BRG				SS	SS	11 59 30.0	-9.1
	comp=N,6µm,17.4s						
	comp=E,4µm,14.7s						
	comp=Z,9µm,15.7s						
BRG	Berggiesshubel	77.26	334	⇑iP	P	11 44 55.2	-0.1
BRG				S	S	11 54 41.0	-1.0
BRG				pmax	pmax		
	comp=Z,117nm,1.2s						
BRG				MLR	MLR		
	comp=N,6µm,17.4s						
BRG				MLR	MLR		
	comp=E,4µm,14.7s						
BRG				MLR	MLR		
	comp=Z,9µm,15.7s						
P38A	Dawn	77.27	46	P	P	11 44 54.9	-0.6
	baz=319,SNR=20						
P38A	Dawn	77.27	46	eP	P	11 44 54.9	-0.6
	comp=Z,299nm,1.9s						
N40A	Mertquake, Sal	77.28	44	P	P	11 44 54.9	-0.6
	baz=320,SNR=14						
O39A	Kirksville	77.28	45	P	P	11 44 54.9	-0.7
	baz=320,SNR=5.0						
TLB	Topalu	77.29	322	⇓iP	P	11 44 55.8	+0.3
L42A	Oliver, Polo	77.33	42	P	P	11 44 54.3	-1.5
	baz=321						
L42A	Oliver, Polo	77.33	42	eP	P	11 44 54.4	-1.5
	comp=Z,33nm,0.9s						
L42A				LR	LR		
	comp=Z,6µm,22.0s						
EKA	Eskdalemuir Ar	77.33	345	P	P	11 44 55.6	0.0
	comp=Z,9.7nm,0.4s,baz=22,slow=4.9,SNR=228						
EKA				LR	LR	12 26 00.9	
	comp=Z,988nm,18.2s,baz=15,slow=41						
ESK	Eskdalemuir	77.36	345	eP	P	11 44 55.3	-0.4
	comp=Z,54nm,0.9s						
ESK				LR	LR		
	comp=Z,4µm,20.0s						
ESK	Eskdalemuir	77.36	345	⇑eP	P	11 44 55.6	-0.1
ESK				IAmb	IAmb	11 44 57.6	
	comp=Z,528nm,2.2s						
ESK				IAMs_20	IAMs_20	12 19 54.1	
	comp=Z,4µm,21.0s						
ESK	Eskdalemuir	77.36	345	eP	P	11 44 55.3	-0.4
ESK				pmax	pmax		
	comp=Z,54nm,0.9s						
ESK				MLR	MLR		
	comp=Z,4µm,20.0s						
Q37A	Longview Farm,	77.36	47	P	P	11 44 55.2	-0.8
	baz=319						
PVCC	Panska Ves	77.36	333	eP	P	11 44 56.2	+0.3
PVCC				AMS	AMS	12 22 40.0	
	comp=Z,15µm,18.6s						
PVCC	Panska Ves	77.36	333	eP	P	11 44 56.2	+0.3
PVCC				MLR	MLR		
	comp=Z,15µm,18.6s						
CJR	Cluj-Napoca	77.40	326	⇓iP	P	11 44 57.0	+0.8
M41A	Milan	77.40	43	P	P	11 44 55.5	-0.8
	baz=321						
K43A	Burlington	77.41	41	P	P	11 44 55.5	-0.7
	baz=322						
STKA	Stephens Creek	77.45	189	P	P	11 44 56.7	+0.3
	comp=Z,5.2nm,0.8s,baz=340,slow=7.6,SNR=11						
STKA				LR	LR	12 18 46.3	
	comp=Z,3µm,21.1s,baz=8.2,slow=35						
STKA	Stephens Creek	77.45	189	eP	P	11 44 56.6	+0.3
	comp=Z,9.4nm,1.1s						
STKA	Stephens Creek	77.45	189	eP	P	11 44 56.6	+0.3
STKA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
MLR	Muntele Rosu	77.45	324	P	P	11 44 56.6	+0.1
	comp=Z,24nm,0.8s,baz=2.7,slow=5.3,SNR=96						
MLR				LR	LR	12 22 20.8	
	comp=Z,2µm,18.0s,baz=34,slow=38						
MLR	Muntele Rosu	77.45	324	⇑iP	P	11 44 56.9	+0.3
MLR	Muntele Rosu	77.45	324	eP	P	11 44 56.7	+0.1
	comp=Z,146nm,0.9s						
DARE	Darende-Malaty	77.46	313	eP	P	11 44 59.3	+2.5
ILGA	Ilgaz	77.46	317	eP	P	11 44 58.4	+1.6
	comp=Z,731nm,1.5s						
ILGA				LR	LR		
	comp=Z,7µm,20.0s						
PGOR	Pogoanele	77.48	323	⇓iP	P	11 44 58.1	+1.5
LTVH	L˜'tav˜'rtes,	77.50	328	⇑ePKKPdf	P	11 44 58.4	+1.8
ISR	Istrita	77.50	323	⇓iP	P	11 44 57.6	+0.8
BHH	Howats Hill	77.57	345	⇑eP	P	11 44 57.2	+0.3
AMRR	Amara	77.58	323	⇑iP	P	11 44 58.0	+0.9
EDMD	Edmundbyers	77.59	345	⇑eP	P	11 44 57.3	+0.2
EDMD				IAMs_20	IAMs_20	12 26 06.2	
	comp=Z,4µm,16.9s						
URFA	Urfa	77.61	311	eP	P	11 44 59.4	+1.8
BELQ	Belleterre	77.65	32	P	P	11 44 56.4	-1.1
	baz=327						
DRGR		77.68	327	⇑iP	P	11 44 58.0	+0.2
CORM	Corum	77.69	316	eP	P	11 44 59.5	+1.5
VYHS	Vyhne	77.69	330	eP	P	11 44 58.3	+0.6
VYHS				pmax	pmax		
	comp=Z,84nm,1.1s						
VYHS	Vyhne	77.69	330	eP	P	11 44 58.3	+0.6
VYHS				eS	S	11 54 42.1	-4.7
M42A	Sheffield	77.72	42	P	P	11 44 57.7	-0.3
	baz=321						
O40A	La Belle	77.72	44	P	P	11 44 57.4	-0.6
	baz=320,SNR=18						
Q38A	Cooks Store, C	77.72	46	P	P	11 44 57.0	-1.1
	baz=319,SNR=31						
YOZ	Yozgat	77.75	315	eP	P	11 44 58.5	+0.1
P39B	Salisbury	77.76	45	P	P	11 44 57.8	-0.4
	baz=320,SNR=5.9						
VRAC	Vranov	77.76	332	LR	LR	12 23 34.1	
	comp=Z,9µm,19.6s,baz=22,slow=39						
VRAC	Vranov	77.76	332	⇑iP	P	11 44 58.8	+0.7
VRAC	Vranov	77.76	332	⇑iP	P	11 44 58.6	+0.5
VRAC				eS	S	11 54 44.9	-2.7
N41A	Harden Midland	77.77	44	P	P	11 44 58.0	-0.3
	baz=321						
N41A	Harden Midland	77.77	44	eP	P	11 44 57.4	-0.8
	comp=Z,117nm,1.0s						
N41A				LR	LR		
	comp=Z,6µm,22.0s						
ICOR	Ion Corvin	77.77	322	⇓iP	P	11 44 59.1	+0.9
JAVC	Velka Javorina	77.78	331	⇑iP	P	11 44 59.6	+1.3
JAVC				eS	S	11 54 46.0	-1.9
PSZ	Piszkesteto	77.80	329	⇑iP	P	11 44 59.0	+0.6
PSZ	Piszkesteto	77.80	329	⇑eP	P	11 44 58.8	+0.4
PSZ	Piszkesteto	77.80	329	eP	P	11 44 58.8	+0.4
	comp=Z,163nm,1.1s						
PSZ				LR	LR		
	comp=Z,10µm,20.0s						
PSZ	Piszkesteto	77.80	329	eP	P	11 44 58.8	+0.4
PSZ				pmax	pmax		
	comp=Z,163nm,1.1s						
PSZ				MLR	MLR		
	comp=Z,10µm,20.0s						
PRA	Prague	77.81	333	eP	P	11 44 58.7	+0.4
PRA				eS	S	11 54 45.8	-2.1
PRA				eSS	SS	12 00 01.9	+15
PRA				AMS	AMS	12 23 00.0	
	comp=Z,19µm,18.0s						
PRA	Prague	77.81	333	eP	P	11 44 58.7	+0.4
PRA				eS	S	11 54 45.8	-2.1
PRA				MLR	MLR		
	comp=Z,19µm,18.0s						
GOPC	GO Pecny, Ondr	77.83	333	eP	P	11 44 59.0	+0.5
GOPC				eS	S	11 54 44.2	-4.1
GOPC				eSS	SS	12 00 03.9	+16
GOPC				AMS	AMS	12 22 50.0	
	comp=Z,13µm,18.7s						
GOPC	GO Pecny, Ondr	77.83	333	eP	P	11 44 59.0	+0.5
GOPC				eS	S	11 54 44.2	-4.1
GOPC				MLR	MLR		
	comp=Z,13µm,18.7s						
PRU	Pruhonice	77.84	333	eP	P	11 44 58.9	+0.4
PRU				epP	PcP	11 45 04.3	-4.1
PRU				eS	S	11 54 46.9	-1.5
PRU				eSS	SS	12 00 02.7	+15
PRU				AMS	AMS	12 23 10.0	
	comp=Z,17µm,18.1s						
PRU	Pruhonice	77.84	333	eP	P	11 44 58.9	+0.4
PRU				e		11 45 04.3	
PRU				eS	S	11 54 46.9	-1.5
PRU				MLR	MLR		
	comp=Z,17µm,18.1s						
VOIR		77.86	325	⇑iP	P	11 44 59.5	+0.7
BBO1	Bothel	77.92	345	⇑eP	P	11 44 59.0	+0.1
SULR		77.98	323	⇑iP	P	11 44 59.5	+0.2
Q39A	Willow Grove F	77.99	46	P	P	11 44 58.8	-0.8
	baz=320,SNR=18						
MTUR	Matau	78.03	324	⇓iP	P	11 45 00.8	+1.0
KESW	Keswick, Cumbr	78.03	345	eP	P	11 44 59.5	0.0
KESW				IAmb	IAmb	11 45 05.0	
	comp=Z,238nm,1.1s						
KESW				IAMs_20	IAMs_20	12 26 29.5	
	comp=Z,4µm,14.6s						
KRUC	Moravsky	78.04	332	⇑iP	P	11 45 00.0	+0.3
KRUC				eS	S	11 54 48.7	-1.8
N42A	Yates City	78.07	43	P	P	11 44 59.2	-0.7
	baz=321,SNR=19						
P40A	Paris	78.08	45	P	P	11 44 59.5	-0.6
	baz=320,SNR=16						
P40A	Paris	78.08	45	eP	P	11 44 59.3	-0.8
	comp=Z,59nm,1.0s						
ARR	Arges	78.09	325	⇑iP	P	11 45 01.3	+1.2
BNN	Bunyan	78.09	314	eP	P	11 45 02.1	+1.8
M43A	Waltham Townsh	78.11	42	P	P	11 44 59.0	-1.1
	baz=322						
WMOK	Wichita Mounta	78.11	52	P	P	11 44 59.4	-0.9
	baz=318,SNR=17						
WMOK	Wichita Mounta	78.11	52	eP	P	11 45 00.1	-0.2
	comp=Z,18nm,0.8s						
WMOK				LR	LR		
	comp=Z,3µm,20.0s						
WMOK	Wichita Mounta	78.11	52	eP	P	11 45 00.1	-0.2
WMOK				pmax	pmax		
	comp=Z,18nm,0.8s						
WMOK				MLR	MLR		
	comp=Z,3µm,20.0s						
SMOL	Smolenice	78.16	331	eP	P	11 45 01.5	+1.2
SMOL	Smolenice	78.16	331	eP	P	11 45 01.5	+1.2
R38A	Fenwick Farm,	78.16	47	P	P	11 44 59.0	-1.5
	baz=319,SNR=17						
O41A	Passleys Farm,	78.21	44	P	P	11 44 59.7	-1.1
	baz=321,SNR=22						
NKC	Novy Kostel	78.28	334	eP	P	11 45 01.4	+0.4
NKC				eSS	SS	12 00 09.9	+15
NKC				AMS	AMS	12 22 30.0	
	comp=Z,12µm,18.1s						
NKC	Novy Kostel	78.28	334	eP	P	11 45 01.4	+0.4
NKC				MLR	MLR		
	comp=Z,12µm,18.1s						
IDGL	Inch Island, C	78.30	348	⇑eP	P	11 45 00.5	-0.4
WTSB	Winterswijk	78.31	339	i P	P	11 45 01.0	0.0
	comp=Z,391nm,1.2s						
MODS	Modra-Piesok	78.33	331	eP	P	11 45 02.1	+0.8
MODS				pmax	pmax		
	comp=Z,257nm,1.3s						
MODS	Modra-Piesok	78.33	331	eP	P	11 45 02.1	+0.8
MODS				eS	S	11 54 51.2	-2.5
MODS				eL	L	12 27 51.6	
DEV	Deva	78.36	326	⇓iP	P	11 45 01.9	+0.5
HPK	Haverah Park	78.36	344	⇑eP	P	11 45 01.6	+0.3
HPK				IAmb	IAmb	11 45 06.2	
	comp=Z,456nm,1.3s						
HPK				IAMs_20	IAMs_20	12 30 10.2	
	comp=Z,4µm,16.0s						
LOT	Lotru	78.37	325	eP	P	11 45 02.2	+0.5
LOT	Lotru	78.37	325	⇑iP	P	11 45 01.9	+0.2
GOLR		78.38	324	⇑iP	P	11 45 02.2	+0.6
N43A	Stutzman Famil	78.39	42	P	P	11 45 00.6	-1.1
	baz=321,SNR=11						
P41A	Barry, Barry	78.46	44	P	P	11 45 01.4	-0.7
	baz=321,SNR=18						
SGRR	Singureni	78.46	323	⇑iP	P	11 45 02.2	+0.2
BUD	Budapest	78.48	329	⇑ePKKPdf	P	11 45 02.7	+0.6
Q40A	Laux Farm, Aux	78.48	45	P	P	11 45 01.6	-0.6
	baz=320,SNR=12						
R39A	Chumby, Stover	78.51	46	P	P	11 45 01.2	-1.3
	baz=320,SNR=18						
BR131	Keskin Array S	78.52	316	eP	P	11 45 03.0	+0.3
BR131	Keskin Array S	78.52	316	P	P	11 45 03.2	+0.6
BRTR	Keskin Array B	78.52	316	P	P	11 45 03.0	+0.3
	comp=Z,52nm,1.0s,baz=69,slow=4.1,SNR=104						
BRTR				LR	LR	12 25 00.9	
	comp=Z,9µm,18.9s,baz=45,slow=40						
O42A	Bath	78.54	43	P	P	11 45 01.4	-1.1
	baz=321						
KMRS	Kahramanmaras	78.57	312	eP	P	11 45 04.2	+1.4
LMK	Market Rasen	78.57	343	⇑eP	P	11 45 03.0	+0.6
LMK				IAmb	IAmb	11 45 04.5	
	comp=Z,590nm,1.9s						
LMK				IAMs_20	IAMs_20	12 27 44.6	
	comp=Z,4µm,17.1s						
M44A	Midewin, Midew	78.57	41	P	P	11 45 01.5	-1.2
	baz=322						
S38A	Stockton	78.58	47	P	P	11 45 01.9	-0.9
	baz=320,SNR=23						
IOMK	Kirk Michael	78.61	346	⇑eP	P	11 45 02.5	-0.1
IOMK				IAmb	IAmb	11 45 04.6	
	comp=Z,408nm,1.8s						
IOMK				IAMs_20	IAMs_20	12 24 32.8	
	comp=Z,4µm,18.6s						
HUMR	Humele	78.63	324	⇑iP	P	11 45 02.5	-0.5
HDIL	Hopedale	78.64	43	P	P	11 45 02.3	-0.8
	baz=321,SNR=16						
HDIL	Hopedale	78.64	43	eP	P	11 45 02.4	-0.8
	comp=Z,98nm,0.8s						
PRD	Provadia	78.68	322	i P	P	11 45 03.6	+0.4
WIM	Isle of Man	78.73	346	⇑eP	P	11 45 03.0	-0.4
LPIG	La Paz	78.73	67	LR	LR	12 13 18.8	
	comp=Z,1µm,21.8s,baz=316,slow=31						
FORT	Forrest	78.75	200	eP	P	11 45 04.2	+0.6
	comp=Z,86nm,0.9s						
ANTO	Ankara	78.82	316	eP	P	11 45 05.6	+1.4
ANTO	Ankara	78.82	316	⇑iP	P	11 45 05.1	+0.9
ANTO	Ankara	78.82	316	eP	P	11 45 05.1	+0.9
	comp=Z,407nm,1.5s						
ANTO	Ankara	78.82	316	P	P	11 45 05.3	+1.1
	SNR=32						
T38A	Diamond	78.83	48	P	P	11 45 03.3	-0.9
	baz=319,SNR=51						
O43A	Sugar Creek Fa	78.84	43	P	P	11 45 03.3	-0.9
	baz=322						
S39A	Bolivar	78.84	47	P	P	11 45 03.1	-1.2
	baz=320,SNR=25						
S39A	Bolivar	78.84	47	eP	P	11 45 03.0	-1.2
	comp=Z,45nm,1.2s						
BR231	Keskin MP Arra	78.85	316	eP	P	11 45 04.9	+0.4
CSKK	Csˆ‡kako	78.85	330	⇑ePKKPdf	P	11 45 04.6	+0.4
P42A	Winchester	78.88	44	P	P	11 45 03.9	-0.5
	baz=321,SNR=13						
P42A	Winchester	78.88	44	eP	P	11 45 03.4	-1.0
	comp=Z,53nm,0.9s						
TUL1	Leonard	78.88	50	P	P	11 45 04.2	-0.3
	baz=319,SNR=6.5						
TUL1	Leonard	78.88	50	eP	P	11 45 04.2	-0.3
	comp=Z,78nm,1.4s						
KHC	Kasperske Hory	78.90	333	eP	P	11 45 05.0	+0.6
KHC				epP	PcP	11 45 10.7	-2.3
KHC				esP	pP	11 45 13.2	-2.9
KHC				ex	x	11 45 31.7	
KHC				ePP	PP	11 47 58.9	-3.7
KHC				eS	S	11 54 56.2	-3.6
KHC				eSS	SS	12 00 19.8	+16
KHC				AMS	AMS	12 24 00.0	
	comp=Z,18µm,17.4s						
KHC	Kasperske Hory	78.90	333	eP	P	11 45 04.5	+0.1
KHC	Kasperske Hory	78.90	333	eP	P	11 45 04.5	+0.1
	comp=Z,121nm,1.3s						
KHC	Kasperske Hory	78.90	333	eP	P	11 45 05.0	+0.6
KHC				e		11 45 13.2	
KHC				e		11 47 58.9	
KHC				eS	S	11 54 56.2	-3.6
KHC				MLR	MLR		
	comp=Z,18µm,17.4s						
LBWR	Ladybower, Pea	78.90	344	⇑eP	P	11 45 04.5	+0.2
LBWR				IAmb	IAmb	11 45 06.4	
	comp=Z,520nm,1.4s						
R40A	Maddies Statio	78.92	46	P	P	11 45 03.5	-1.1
	baz=320						
Q41A	Truxton	78.93	45	P	P	11 45 04.0	-0.8
	baz=321,SNR=30						
N44A	Piper City	79.00	42	P	P	11 45 04.2	-0.9
	baz=322						
BUKO	Buck Lake	79.00	34	P	P	11 45 04.4	-0.7
	baz=326						
AFSR	Af¯ar-Bala (A	79.02	316	eP	P	11 45 06.9	+1.6
WACR	West Acre	79.06	342	⇑eP	P	11 45 05.6	+0.4
WACR				IAmb	IAmb	11 45 07.2	
	comp=Z,387nm,1.2s						
WACR				IAMs_20	IAMs_20	12 28 41.1	
	comp=Z,4µm,15.4s						
BZS	Buzias	79.08	327	⇓iP	P	11 45 05.2	-0.2
BBOO	Buckleboo	79.10	193	eP	P	11 45 05.5	0.0
	comp=Z,44nm,1.2s						
GEC2	GERESS Array S	79.11	333	eP	P	11 45 05.3	-0.4
	comp=Z,65nm,1.0s						
GEC2	GERESS Array S	79.11	333	eP	P	11 45 05.3	-0.4
GEC2				pmax	pmax		
	comp=Z,65nm,1.0s						
GERES	GERESS Array B	79.11	333	P	P	11 45 05.6	-0.1
	comp=Z,25nm,0.6s,baz=35,slow=4.9,SNR=159						
GERES				PKKPbc	PKKPbc	12 04 01.6	+6.1
	comp=Z,0.2nm,0.5s,baz=203,slow=4.3,SNR=2.1						
GERES				LR	LR	12 24 13.4	
	comp=Z,14µm,18.2s,baz=28,slow=39						
GEA0	GERESS Array S	79.12	333	eP	P	11 45 05.3	-0.4
MDUB	Mudurnu	79.12	318	eP	P	11 45 06.7	+0.8
GRFO	Grafenberg	79.13	335	eP	P	11 45 06.3	+0.7
	comp=Z,276nm,1.2s						
TIM	Timisoara	79.13	327	⇓iP	P	11 45 06.7	+1.0
ABTX	Abilene, Hawle	79.18	54	P	P	11 45 05.5	-0.8
	baz=318,SNR=6.8						
ABTX	Abilene, Hawle	79.18	54	eP	P	11 45 06.8	+0.5
	comp=Z,48nm,1.1s						
TX31	Lajitas Ar. Si	79.19	59	eP	P	11 45 06.2	-0.3
TXAR	Lajitas Array	79.20	59	P	P	11 45 06.0	-0.4
	comp=Z,8.5nm,0.8s,baz=301,slow=3.9,SNR=55						
TXAR				PKKPbc	PKKPbc	12 03 56.3	+1.3
	comp=Z,0.9nm,0.8s,baz=150,slow=5.2,SNR=8.1						
CONA	Conrad Observa	79.20	331	eP	P	11 45 06.8	+0.6
	comp=Z,133nm,1.4s,SNR=92						
P43A	Skaggs, Pawnee	79.24	43	P	P	11 45 05.9	-0.5
	baz=321						
SRE	Strehaia	79.24	325	⇑iP	P	11 45 07.2	+0.8
N45A	Kentland	79.25	41	P	P	11 45 05.5	-1.0
	baz=322						
MZR	Muzera	79.25	292	i P	P	11 45 07.0	+0.3
	SNR=11						
SZH	Strazhica	79.26	323	i P	P	11 45 06.2	-0.2
GULA	Gulagac	79.29	315	eP	P	11 45 07.9	+1.0
STNC	Stoke	79.29	344	⇑eP	P	11 45 07.3	+0.9
STNC				IAmb	IAmb	11 45 08.9	
	comp=Z,831nm,2.0s						
STNC				IAMs_20	IAMs_20	12 22 31.6	
	comp=Z,4µm,19.0s						

Q42A	Golden Eagle	79.31	44	P	P	11 45 06.4	-0.4
	baz=321,SNR=16						
SAUV	Serdivan-Sakar	79.32	319	eP	P	11 45 06.6	-0.2
T39A	Clever	79.32	47	P	P	11 45 06.6	-0.3
	baz=320,SNR=11						
S40A	Lebanon	79.33	47	P	P	11 45 05.7	-1.3
	baz=320,SNR=28						
KULU	Kulu	79.36	316	eP	P	11 45 07.9	+0.7
R41A	Rosebud	79.36	45	P	P	11 45 06.0	-1.2
	baz=321,SNR=18						
HERR	Herculane	79.38	326	⇑iP	P	11 45 06.7	-0.4
WPS	Cemaes, Angles	79.42	346	IAmb	IAmb	11 45 08.8	
	comp=Z,325nm,2.1s						
WPS				IAMs_20	IAMs_20	12 27 07.6	
	comp=Z,4µm,17.1s						
WPM1	Penmaenmawr	79.45	345	⇑eP	P	11 45 07.0	-0.3
CWF	Charnwood Fore	79.45	344	⇑eP	P	11 45 07.2	-0.1
CWF				IAmb	IAmb	11 45 09.3	
	comp=Z,638nm,2.0s						
CWF				IAMs_20	IAMs_20	12 19 55.4	
	comp=Z,3µm,22.7s						
BANR	Banloc	79.46	327	⇑iP	P	11 45 08.2	+0.7
CLWO	Collingwood	79.47	35	P	P	11 45 06.5	-1.1
	baz=326						
GULT	Gulveren	79.47	318	eP	P	11 45 08.9	+1.1
WLF1	Llynfaes	79.51	345	⇑eP	P	11 45 06.6	-0.9
WLF1				IAmb	IAmb	11 45 12.2	
	comp=Z,382nm,1.7s						
WLF1				IAMs_20	IAMs_20	12 27 18.4	
	comp=Z,9µm,15.9s						
PVL	Pavlikeni	79.55	323	i P	P	11 45 07.8	-0.2
YRC	Rhoscolyn	79.58	346	⇑eP	P	11 45 07.9	0.0
HHAR	Hobbs	79.59	48	eP	P	11 45 08.1	-0.3
	comp=Z,33nm,1.0s						
YLL	Llanberis	79.61	345	eP	P	11 45 08.9	+0.8
CCM	Cathedral Cave	79.62	45	P	P	11 45 08.3	-0.2
	baz=321						
CCM	Cathedral Cave	79.62	45	eP	P	11 45 08.3	-0.2
	comp=Z,48nm,0.9s						
O45A	Potomac	79.62	42	P	P	11 45 08.1	-0.4
	baz=322,SNR=20						
JMB	Yambol	79.62	322	i P	P	11 45 09.1	+0.6
HGN	Heimansgroeve	79.63	339	i P	P	11 45 08.4	+0.1
	comp=Z,520nm,1.4s						
HGN				ePP	PP	11 48 15.0	+6.5
HGN				eS	S	11 55 13.8	+6.5
HGN				eSS	SS	12 01 11.2	+57
PEMO	Pembroke	79.64	32	P	P	11 45 07.1	-1.3
	baz=328						
ISK	Istanbul-Kandi	79.64	319	eP	P	11 45 08.6	0.0
KAVV	Kandilli-Istan	79.64	319	eP	P	11 45 08.3	-0.3
T40A	Mansfield	79.66	47	P	P	11 45 07.6	-1.2
	baz=320,SNR=21						
CTYL	Yalikoy Yolu	79.67	320	eP	P	11 45 09.7	+1.0
BEBN	Eben Emael	79.67	339	⇑P	P	11 45 08.7	+0.2
R42A	Luebbering	79.67	45	P	P	11 45 08.3	-0.4
	baz=321,SNR=17						
SLM	Saint Louis	79.67	44	eP	P	11 45 07.8	-1.0
	comp=Z,64nm,1.0s						
SLM	Saint Louis	79.67	44	eP	P	11 45 07.8	-1.0
SLM				pmax	pmax		
	comp=Z,64nm,1.0s						
FOEL	Foel Wylfa	79.67	345	⇑eP	P	11 45 08.0	-0.6
FOEL				IAmb	IAmb	11 45 10.9	
	comp=Z,626nm,1.7s						
FOEL				IAMs_20	IAMs_20	12 22 21.9	
	comp=Z,4µm,18.5s						
BGKT	Bogazkoy	79.68	320	eP	P	11 45 09.7	+0.9
HPIG		79.69	62	eP	P	11 45 09.4	+0.1
	comp=Z,38nm,1.3s						
Q43A	New Douglas	79.70	44	P	P	11 45 08.5	-0.4
	baz=321						
KARA	Karaisali	79.71	313	eP	P	11 45 10.9	+1.9
S41A	Jillco Farms,	79.72	46	P	P	11 45 08.2	-0.9
	baz=320,SNR=25						
MDVR	Moldovita	79.74	326	⇓iP	P	11 45 09.1	0.0
U39A	Green Forest	79.75	48	P	P	11 45 08.2	-1.1
	baz=320,SNR=48						
MEM	Membach	79.75	338	⇑P	P	11 45 08.9	-0.1
	comp=Z,108nm,1.1s						
CTKS	Kestanelik-??a	79.76	320	eP	P	11 45 09.9	+0.7
AUSIV	SIVRIHISAR	79.76	317	eP	P	11 45 09.4	0.0
RAR	Rarotonga	79.80	134	LR	LR	12 13 39.6	
	comp=Z,3µm,21.8s,baz=324,slow=31						
LLW	Llanuwychllyn	79.80	345	⇑eP	P	11 45 09.4	+0.2
TAHT	Tahtakopru-Hat	79.80	312	eP	P	11 45 10.9	+1.4
MOA	Molln	79.80	332	eP	P	11 45 09.3	0.0
	comp=Z,50nm,1.0s,SNR=53						
P44A	Sand Creek, Wi	79.81	43	P	P	11 45 09.0	-0.5
	baz=322,SNR=11						
SFIN	Lafayette	79.81	41	P	P	11 45 08.6	-0.8
	baz=323						
SFIN	Lafayette	79.81	41	eP	P	11 45 08.7	-0.8
	comp=Z,44nm,1.0s						
AAM	Ann Arbor	79.82	38	P	P	11 45 08.9	-0.7
	baz=324						
AAM	Ann Arbor	79.82	38	eP	P	11 45 09.6	+0.1
	comp=Z,48nm,1.0s						
AAM	Ann Arbor	79.82	38	eP	P	11 45 09.6	+0.1
AAM				pmax	pmax		
	comp=Z,48nm,1.0s						
DSB	Dublin	79.88	347	eP	P	11 45 09.7	0.0
	comp=Z,131nm,1.3s						
YLV	Yalova	79.90	319	eP	P	11 45 11.2	+1.1
SLVT	Silivri	79.90	320	eP	P	11 45 10.9	+0.9
ARSA	Arzberg	79.90	331	eP	P	11 45 09.8	-0.1
	comp=Z,106nm,1.7s,SNR=55						
BANO	Bancroft	79.93	33	P	P	11 45 09.3	-0.7
	baz=327						
BORA	Eskisehir	79.93	318	eP	P	11 45 10.9	+0.6
HLM1	Long Mynd	79.97	344	⇑eP	P	11 45 10.3	+0.1
HLM1				IAmb	IAmb	11 45 15.1	
	comp=Z,151nm,1.3s						
HLM1				IAMs_20	IAMs_20	12 22 49.8	
	comp=Z,3µm,19.0s						
CAVI	Cavuskoy	79.97	318	eP	P	11 45 11.1	+0.7
UCC	Uccle	80.00	339	⇑P	P	11 45 10.2	-0.1
UCC	Uccle	80.00	339	eP	P	11 45 10.4	+0.1
	comp=Z,193nm,1.5s						
UCC	Uccle	80.00	339	eP	P	11 45 10.4	+0.1
UCC				pmax	pmax		
	comp=Z,193nm,1.5s						
EDRB	Edirne	80.06	321	eP	P	11 45 11.3	+0.5
Q44A	Meyer Farm, Va	80.06	44	P	P	11 45 10.3	-0.6
	baz=322,SNR=12						
S42A	Caledonia	80.06	45	P	P	11 45 10.2	-0.7
	baz=321,SNR=40						
SBT5	Esenkoy-Cinarc	80.07	319	eP	P	11 45 11.1	+0.3
V39A	Pettigrew	80.08	48	P	P	11 45 10.3	-0.9
	baz=320,SNR=28						
FVM	French Village	80.08	45	eP	P	11 45 10.7	-0.3
	comp=Z,34nm,0.8s						
FVM	French Village	80.08	45	eP	P	11 45 10.7	-0.3
FVM				pmax	pmax		
	comp=Z,34nm,0.8s						
ELFO	Elginfield	80.09	36	P	P	11 45 09.7	-1.3
	baz=326						
YAYL	Yayladag	80.10	312	eP	P	11 45 13.5	+2.2
U40A	Yellville	80.10	48	P	P	11 45 10.3	-0.8
	baz=320,SNR=38						
R43A	Red Bud	80.10	45	P	P	11 45 10.1	-1.0
	baz=321						
T41A	Mountain View	80.13	46	P	P	11 45 10.4	-0.9
	baz=321,SNR=31						
BEHE	Becsehely	80.14	330	⇑ePKKPdf	P	11 45 11.3	+0.1
TRQ	Mont Tremblant	80.16	30	eP	P	11 45 10.5	-0.9
P45A	Graceland, Par	80.18	42	P	P	11 45 10.9	-0.6
	baz=322,SNR=10						
P45A	Graceland, Par	80.18	42	eP	P	11 45 10.4	-1.1
	comp=Z,44nm,0.9s						
PLVO	Plevna	80.24	33	P	P	11 45 10.5	-1.2
	baz=328						
PLVO	Plevna	80.24	33	eP	P	11 45 10.7	-1.0
	comp=Z,33nm,1.0s						
ACTO	Acton	80.26	35	P	P	11 45 11.4	-0.5
	baz=326						
MERS	Mersin	80.28	313	eP	P	11 45 13.4	+1.2
SBT3	Marmara-Eregli	80.28	320	eP	P	11 45 12.6	+0.8
SNF	Seneffe	80.28	339	⇑P	P	11 45 12.8	+0.9
	comp=Z,133nm,1.9s						
SSW	Stow on the Wo	80.29	344	⇑eP	P	11 45 12.8	+0.9
LADK	Ladik-KONYA	80.33	316	eP	P	11 45 12.8	+0.3
KOGS	Kog	80.35	330	⇑eP	P	11 45 12.0	-0.3
KOGS				eS	S	11 55 12.0	-3.1
O47A	Sheridan	80.35	41	P	P	11 45 11.5	-0.9
	baz=323						
P46A	Rosedale	80.36	42	P	P	11 45 11.9	-0.6
	baz=323,SNR=23						
PKRO	Pickering	80.36	34	P	P	11 45 11.7	-0.7
	baz=327						
CAN	Canberra	80.40	182	eP	P	11 45 13.3	+0.8
	comp=Z,32nm,1.1s						
CAN	Canberra	80.40	182	eP	P	11 45 13.3	+0.8
CAN				pmax	pmax		
	comp=Z,32nm,1.1s						
ELSH	Elham, Standar	80.43	342	⇑eP	P	11 45 13.0	+0.4
ELSH				IAmb	IAmb	11 45 14.8	
	comp=Z,534nm,1.4s						
ELSH				IAMs_20	IAMs_20	12 24 29.9	
	comp=Z,7µm,19.3s						
DELO	Deloro Mine	80.47	33	P	P	11 45 11.7	-1.3
	baz=328						
ORIO	Orleans, Innes	80.47	31	P	P	11 45 12.1	-0.8
	baz=329						
Q45A	Warren Harvey,	80.48	43	P	P	11 45 12.6	-0.5
	baz=322,SNR=10						
MCH1	Michaelchurch	80.48	344	⇑eP	P	11 45 12.9	0.0
MCH1				IAmb	IAmb	11 45 14.9	
	comp=Z,1µm,2.5s						
MCH1				IAMs_20	IAMs_20	12 23 05.8	
	comp=Z,4µm,19.1s						
T42A	Van Buren	80.48	46	P	P	11 45 12.5	-0.7
	baz=321,SNR=22						
T42A	Van Buren	80.48	46	eP	P	11 45 12.1	-1.1
	comp=Z,35nm,1.0s						
W39A	Magazine	80.49	49	P	P	11 45 12.9	-0.4
	baz=320,SNR=7.6						
W39A	Magazine	80.49	49	eP	P	11 45 12.6	-0.7
	comp=Z,68nm,1.4s						
KUTH	Kutahya	80.52	318	eP	P	11 45 13.7	+0.2
KONT	Konya--Tatoy	80.53	316	eP	P	11 45 14.3	+0.8
STRD	Stroud	80.53	344	⇑eP	P	11 45 13.2	+0.1
STRD				IAmb	IAmb	11 45 18.1	
	comp=Z,332nm,1.2s						
STRD				IAMs_20	IAMs_20	12 26 47.0	
	comp=Z,4µm,17.8s						
V40A	Witts Springs	80.53	48	P	P	11 45 12.5	-1.0
	baz=320,SNR=17						
V40A	Witts Springs	80.53	48	eP	P	11 45 12.5	-1.0
	comp=Z,30nm,0.8s						
R44A	Waltonville	80.54	44	P	P	11 45 12.7	-0.8
	baz=322,SNR=12						
STU	Stuttgart	80.55	336	eP	P	11 45 13.6	+0.2
	comp=Z,120nm,1.0s						
ALFO	Alfred	80.55	31	P	P	11 45 13.5	+0.1
	baz=329,SNR=12						
SOKA	Soboth	80.57	331	eP	P	11 45 13.6	0.0
	comp=Z,122nm,1.3s,SNR=71						
PERS	Pernice	80.57	331	eP	P	11 45 13.6	0.0
S43A	Fulton Ridge,	80.58	45	P	P	11 45 12.9	-0.8
	baz=321,SNR=15						
WLF	Walferdange	80.58	338	⇑P	P	11 45 13.4	-0.1
	comp=Z,152nm,2.1s						
WLF	Walferdange	80.58	338	eP	P	11 45 13.6	+0.1
	comp=Z,588nm,2.0s						
WLF	Walferdange	80.58	338	eP	P	11 45 13.6	+0.1
WLF				pmax	pmax		
	comp=Z,588nm,2.0s						
DRCO	St. Marys Ceme	80.58	34	P	P	11 45 13.1	-0.4
	baz=327						
DOU	Dourbes	80.59	339	⇑P	P	11 45 13.3	-0.1
	comp=Z,84nm,2.0s						
PGB	Panagyurishte	80.59	323	i P	P	11 45 13.8	0.0
U41A	Viola	80.59	47	P	P	11 45 13.1	-0.7
	baz=321,SNR=14						
MONM	Monmouth	80.60	344	⇑eP	P	11 45 13.7	+0.2
MONM				IAmb	IAmb	11 45 15.7	
	comp=Z,1µm,2.1s						
MONM				IAMs_20	IAMs_20	12 23 20.1	
	comp=Z,4µm,18.8s						
KCTX	Karacabey (Bur	80.60	319	eP	P	11 45 15.2	+1.4
OLIL	Olney	80.63	43	eP	P	11 45 13.7	-0.2
	comp=Z,114nm,1.4s						
JCT	Junction City	80.66	56	P	P	11 45 14.5	+0.2
	baz=318,SNR=13						
JCT	Junction City	80.66	56	eP	P	11 45 14.8	+0.5
	comp=Z,176nm,1.5s						
JCT	Junction City	80.66	56	eP	P	11 45 14.8	+0.5
JCT				pmax	pmax		
	comp=Z,176nm,1.5s						
WLVO	Wesleyville	80.67	34	P	P	11 45 13.5	-0.5
	baz=327						
BUW	Bucklebury Wes	80.69	343	eP	P	11 45 13.6	-0.4
SWN1	Swindon	80.71	343	⇑eP	P	11 45 14.7	+0.6
SWN1				IAmb	IAmb	11 45 20.0	
	comp=Z,283nm,1.0s						
SWN1				IAMs_20	IAMs_20	12 26 52.6	
	comp=Z,5µm,18.2s						
OLDB	Oldbury-Upon-S	80.72	344	⇑eP	P	11 45 14.2	+0.1
OLDB				IAmb	IAmb	11 45 16.3	
	comp=Z,638nm,2.0s						
OLDB				IAMs_20	IAMs_20	12 23 35.0	
	comp=Z,4µm,19.7s						
PLD	Plovdiv	80.73	323	eP	P	11 45 14.6	+0.2
PLD	Plovdiv	80.73	323	i P	P	11 45 13.8	-0.6
TYNO	Tyneside	80.77	35	P	P	11 45 13.6	-1.0
	baz=326						
KIZK	Mersin	80.77	313	eP	P	11 45 14.6	-0.1
KBA	Koelnbreinsper	80.78	332	eP	P	11 45 15.3	+0.5
	comp=Z,311nm,1.1s,SNR=118						
HGH	Gray Hill	80.79	344	⇑eP	P	11 45 14.6	0.0
IWEX	Carrickbyrne,	80.79	347	⇑eP	P	11 45 14.7	+0.1
IWEX				IAmb	IAmb	11 45 16.7	
	comp=Z,299nm,1.8s						
KDZ	Kurdzhali	80.79	322	i P	P	11 45 15.5	+0.7
RKY	Sarkoy-Tekirda	80.80	320	eP	P	11 45 15.4	+0.5
X39A	Fountain Ranch	80.84	50	P	P	11 45 14.7	-0.5
	baz=320,SNR=14						
T43A	Greenville	80.85	45	P	P	11 45 14.3	-0.9
	baz=321,SNR=24						
HMNX	Herstmonceux	80.87	342	⇑eP	P	11 45 15.9	+0.9
HMNX				IAmb	IAmb	11 45 17.6	
	comp=Z,507nm,1.3s						
HMNX				IAMs_20	IAMs_20	12 25 06.3	
	comp=Z,7µm,18.7s						
W40A	Ferguson Farm,	80.87	48	P	P	11 45 15.0	-0.3
	baz=320,SNR=20						
W40A	Ferguson Farm,	80.87	48	eP	P	11 45 15.2	-0.1
	comp=Z,62nm,0.8s						
OBKA	Obir	80.88	331	eP	P	11 45 15.0	-0.2
	comp=Z,67nm,1.4s,SNR=30						
BATH	Bath	80.88	344	eP	P	11 45 15.0	0.0
S44A	Carbondale	80.89	44	P	P	11 45 15.0	-0.4
	baz=322,SNR=17						
SIUC	Southern Illin	80.89	44	eP	P	11 45 15.1	-0.3
	comp=Z,82nm,0.9s						
WHTX	Lake Whitney,	80.89	53	P	P	11 45 15.5	+0.1
	baz=318,SNR=9.3						
WHTX	Lake Whitney,	80.89	53	eP	P	11 45 15.2	-0.2
	comp=Z,69nm,1.1s						
R45A	Skylar, Fairfi	80.89	43	P	P	11 45 15.3	0.0
	baz=322						
V41A	Mountainview	80.90	47	P	P	11 45 14.6	-0.9
	baz=320,SNR=26						
P47A	Martinsville	80.91	41	P	P	11 45 14.5	-0.9
	baz=323,SNR=14						
U42A	Revenden	80.93	47	P	P	11 45 15.0	-0.6
	baz=321						
VTS	Vitosha	80.95	324	⇑iP	P	11 45 16.1	+0.2
VTS	Vitosha	80.95	324	eP	P	11 45 16.0	+0.2
	comp=Z,273nm,1.1s						
VTS	Vitosha	80.95	324	i P	P	11 45 16.4	+0.6
VTS	Vitosha	80.95	324	P	P	11 45 15.9	+0.1
DIVS	Divibare	80.98	327	eP	P	11 45 15.5	-0.3
	comp=Z,141nm,1.4s						
PBMO	Poplar Bluff	81.01	46	eP	P	11 45 15.3	-0.7
	comp=Z,60nm,0.9s						
BLO	Bloomington	81.04	42	eP	P	11 45 15.5	-0.6
	comp=Z,31nm,0.9s						
BLO	Bloomington	81.04	42	eP	P	11 45 15.5	-0.6
BLO				pmax	pmax		
	comp=Z,31nm,0.9s						
MYKA	Terra Mystica	81.07	332	eP	P	11 45 15.9	-0.3
	comp=Z,90nm,1.7s,SNR=46						
MIAR	Mount Ida	81.10	49	P	P	11 45 15.8	-0.7
	baz=320,SNR=37						
MIAR	Mount Ida	81.10	49	eP	P	11 45 15.8	-0.7
	comp=Z,50nm,0.8s						
MIAR	Mount Ida	81.10	49	eP	P	11 45 15.8	-0.7
MIAR				pmax	pmax		
	comp=Z,50nm,0.8s						
ERIK	Erikli-Kesan	81.11	321	eP	P	11 45 17.1	+0.7
WATA	Walderalm	81.11	334	ePcP	P	11 45 18.0	+1.4
	comp=Z,32nm,0.5s,SNR=105						
ALN	Alexandroupoli	81.13	321	eP	P	11 45 16.6	0.0
ALN	Alexandroupoli	81.13	321	eP	P	11 45 16.4	-0.2
	comp=Z,81nm,1.0s						
ALN	Alexandroupoli	81.13	321	P	P	11 45 16.6	0.0
RDO	Rodhopi	81.15	322	eP	P	11 45 16.8	+0.1
RDO	Rodhopi	81.15	322	P	P	11 45 17.0	+0.3
RDO	Rodhopi	81.15	322	P	P	11 45 17.0	+0.3
WTTA	Wattenberg	81.16	334	eP	P	11 45 17.5	+0.6
	comp=Z,92nm,1.0s,SNR=50						
IKL	Isikli	81.19	314	eP	P	11 45 17.1	+0.1
BFO	Black Forest	81.19	336	eP	P	11 45 16.5	-0.3
	comp=Z,83nm,1.1s						
BFO	Black Forest	81.19	336	i P	P	11 45 17.0	+0.2
T44A	Benton	81.20	45	P	P	11 45 16.8	-0.1
	baz=322,SNR=5.6						
WHAR	Wooly Hollow	81.21	48	eP	P	11 45 16.3	-0.8
	comp=Z,162nm,1.4s						
ENEZ	Enez	81.22	321	eP	P	11 45 17.8	+0.8
RETA	Reutte	81.23	334	eP	P	11 45 17.2	+0.1
	comp=Z,188nm,1.5s,SNR=60						
S45A	Carrier Mills	81.23	44	P	P	11 45 16.7	-0.5
	baz=322,SNR=22						
LPK	Lapseki	81.24	321	eP	P	11 45 17.9	+0.7
MOTA	Moosalm	81.25	334	ePcP	P	11 45 18.8	+1.5
	comp=Z,178nm,1.3s,SNR=72						
SIMA	Simav-Kutahya	81.26	318	eP	P	11 45 18.0	+0.6
Q47A	Bedord North L	81.27	42	P	P	11 45 16.8	-0.5
	baz=323,SNR=16						
V42A	Cord	81.28	47	P	P	11 45 16.3	-1.1
	baz=321,SNR=15						
N50A	Nevada	81.29	39	P	P	11 45 16.8	-0.7
	baz=325						
LJU	Ljubljana	81.29	331	⇑eP	P	11 45 16.8	-0.5
W41B	Gary Mavity, V	81.32	48	P	P	11 45 17.2	-0.5
	baz=321,SNR=24						
W41B	Gary Mavity, V	81.32	48	eP	P	11 45 17.1	-0.5
	comp=Z,45nm,0.9s						
AKKU	Akkuyu-Mersin	81.32	314	eP	P	11 45 18.0	+0.3
R46A	Gibon Southern	81.33	43	P	P	11 45 17.6	-0.1
	baz=323						
ABTA	Abfaltersbach	81.34	333	eP	P	11 45 17.0	-0.7
	comp=Z,62nm,1.4s,SNR=44						
OZLJ	Ozalj	81.34	330	P	P	11 45 17.4	-0.2
BERE	Bereket-Mersin	81.34	314	eP	P	11 45 17.5	-0.5
U43A	Rector	81.34	46	P	P	11 45 17.2	-0.6
	baz=321						
GELI	Tayfur-Gelibol	81.35	321	eP	P	11 45 18.0	+0.3
PMOR	Pomariorio Ree	81.36	122	eP	P	11 45 20.6	+2.7
	comp=Z,124nm,1.2s						
PMOR	Pomariorio Ree	81.36	122	eT	T	13 14 57.9	
	comp=Z,28nm,0.2s						
PARMO	Parma	81.44	45	eP	P	11 45 18.4	+0.1
	comp=Z,210nm,0.8s						
USIN	University of	81.45	43	eP	P	11 45 18.0	-0.3
	comp=Z,90nm,1.0s						
BLY	Banja Luka	81.48	329	⇑iP	P	11 45 18.0	-0.4
BLY	Banja Luka	81.48	329	eP	P	11 45 17.5	-0.8
	comp=Z,28nm,0.9s						
EREN	Erenkoy	81.49	313	eP	P	11 45 17.7	-0.9
BOJS	Bojanci	81.51	330	⇑iP	P	11 45 18.1	-0.4
BOJS				ePP	PP	11 48 21.8	-2.4
BOJS				eS	S	11 55 22.4	-4.8
LONY	Lake Ozonia	81.52	31	P	P	11 45 17.4	-1.2
	baz=329						
LONY	Lake Ozonia	81.52	31	eP	P	11 45 17.5	-1.1
	comp=Z,87nm,1.8s						
ERPA	Erie	81.53	36	P	P	11 45 17.8	-0.8
	baz=326						
ERPA	Erie	81.53	36	eP	P	11 45 18.1	-0.6
	comp=Z,57nm,0.9s						
X40A	Basin Creek Fa	81.54	49	P	P	11 45 17.8	-1.0
	baz=320,SNR=22						
X40A	Basin Creek Fa	81.54	49	eP	P	11 45 18.6	-0.3
	comp=Z,135nm,1.8s						
TAOE	Nuku Hiva Isla	81.55	112	eS	S	11 55 26.4	-2.1
	comp=Z,1µm,24.0s						
TAOE	Nuku Hiva Isla	81.55	112	eLR	LR	12 10 46.5	
	comp=Z,11µm,25.5s,baz=322						
MMB	Musomiste	81.57	323	i P	P	11 45 19.4	+0.5
UALR	University of	81.58	48	eP	P	11 45 18.5	-0.5
	comp=Z,147nm,1.9s						
O50A	Cable	81.58	39	P	P	11 45 18.2	-0.9
	baz=324						
U44A	Portageville	81.60	45	P	P	11 45 18.3	-0.8
	baz=322						
KKB	Krupnik	81.61	324	i P	P	11 45 19.4	+0.3
W42A	Bald Knob	81.62	47	P	P	11 45 18.9	-0.3
	baz=321						
ECH	Echery	81.63	337	eP	P	11 45 19.0	-0.1
	comp=Z,204nm,1.4s						
ECH	Echery	81.63	337	eP	P	11 45 19.0	-0.1
ECH				pmax	pmax		
	comp=Z,204nm,1.4s						
S46A	Don Dixon Farm	81.65	43	P	P	11 45 18.7	-0.7
	baz=323,SNR=9.2						
FETA	Feichten	81.66	334	eP	P	11 45 19.6	+0.1
	comp=Z,55nm,1.2s,SNR=53						
Y40A	Okolona	81.66	49	P	P	11 45 19.2	-0.3
	baz=320						
DAVA	Damuels	81.68	335	eP	P	11 45 19.7	+0.1
	comp=Z,58nm,0.8s,SNR=54						
X41A	Kaden, Bauxite	81.70	49	P	P	11 45 19.6	-0.1
	baz=320,SNR=11						
SMTH	Samothraki Isl	81.71	321	P	P	11 45 19.0	-0.7
SMTH	Samothraki Isl	81.71	321	P	P	11 45 19.0	-0.7
NVR	Nevrokopi	81.71	323	P	P	11 45 19.8	+0.1
NVR	Nevrokopi	81.71	323	P	P	11 45 19.8	+0.1
435B	Jarrell	81.72	54	P	P	11 45 20.4	+0.5
	baz=319						
T45A	Paducah	81.72	44	P	P	11 45 19.3	-0.5
	baz=322						
HTL	Hartland	81.72	345	⇑eP	P	11 45 19.4	-0.1
HTL				IAmb	IAmb	11 45 22.0	
	comp=Z,72nm,1.1s						
HTL				IAMs_20	IAMs_20	12 28 48.6	
	comp=Z,2µm,17.5s						
V43A	Jonesboro	81.73	46	P	P	11 45 20.0	+0.2
	baz=321						
R47A	Wooly Knot Far	81.73	42	P	P	11 45 19.2	-0.6
	baz=323,SNR=19						
VAL	Valentia	81.73	349	⇓iP	P	11 45 18.7	-0.8
VAL	Valentia	81.73	349	i S	S	11 55 29.2	-0.1
GADA	Gvkgeada	81.77	321	eP	P	11 45 20.6	+0.6
GADA	Gvkgeada	81.77	321	P	P	11 45 19.6	-0.4
GADA	Gvkgeada	81.77	321	P	P	11 45 19.6	-0.4
BCK	Bucak	81.78	316	eP	P	11 45 19.8	-0.4
ACSO	Alum Creek Sta	81.80	39	P	P	11 45 20.1	-0.1
	baz=325						
ACSO	Alum Creek Sta	81.80	39	eP	P	11 45 19.6	-0.5
	comp=Z,39nm,0.8s						
ALLY	Alegheny Colle	81.85	36	eP	P	11 45 19.8	-0.6
	comp=Z,99nm,1.0s						
GNAR	Gosnell	81.86	46	eP	P	11 45 21.3	+0.8
	comp=Z,144nm,1.0s						
MMNY	Mt. Morris Dam	81.86	34	eP	P	11 45 19.4	-1.1
	comp=Z,61nm,1.1s						
KULA	Kula-Manisa	81.86	318	eP	P	11 45 21.0	+0.4
PLE	Pljevlja	81.86	327	⇑iP	P	11 45 21.0	+0.4
EZN	Ezine	81.88	320	P	P	11 45 20.5	0.0
EZN	Ezine	81.88	320	P	P	11 45 20.5	0.0
GAZI	Gazipasa	81.89	314	eP	P	11 45 19.8	-0.9
WCI	Wyandotte Cave	81.90	42	P	P	11 45 20.3	-0.3
	baz=323						
WCI	Wyandotte Cave	81.90	42	eP	P	11 45 20.2	-0.5
	comp=Z,50nm,0.9s						
WCI	Wyandotte Cave	81.90	42	eP	P	11 45 20.2	-0.5
WCI				pmax	pmax		
	comp=Z,50nm,0.9s						
U44B	Burton Farm, H	81.90	45	P	P	11 45 20.5	-0.3
	baz=322						
MANT	Manisa	81.93	318	eP	P	11 45 21.2	0.0
	comp=Z,260nm,0.9s						
P50A	Jamestown	81.94	40	P	P	11 45 20.0	-0.9
	baz=324,SNR=14						
PQI	Presque Isle	81.95	26	eP	P	11 45 20.4	-0.4
	comp=Z,49nm,1.1s						
THAS	Thassos island	81.95	322	P	P	11 45 20.7	-0.2
R48A	Northridge Ran	81.96	42	P	P	11 45 20.9	-0.1
	baz=324,SNR=8.1						
GLAT	Glass	81.99	45	eP	P	11 45 25.4	+4.2
	comp=Z,506nm,0.8s						
BOZC	Bozcaada	81.99	321	eP	P	11 45 20.9	-0.2
SRS	Serrai	82.01	323	P	P	11 45 21.0	-0.3
V44A	Blytheville	82.02	46	P	P	11 45 21.2	-0.2
	baz=322						

IVA	Berane	82.06	326	⇑*i*P	P	11 45 21.4	-0.2
T46A	Princeton	82.07	44	P	P	11 45 21.2	-0.4
	baz=322,SNR=39						
Y41A	Eaglette Beard	82.12	49	P	P	11 45 21.9	0.0
	baz=320						
S47A	Hartford	82.12	43	P	P	11 45 21.0	-0.8
	baz=323						
STIP	Stip	82.12	324	⇑*i*P	P	11 45 20.4	-1.5
DAVOX	Davos/Dischmat	82.13	334	P	P	11 45 22.3	+0.2
	baz=19,slow=7.0						
DAVOX				LR	LR	12 25 30.4	
	comp=Z,9µm,19.6s,baz=16,slow=38						
UTMT	University of	82.14	45	*e*P	P	11 45 21.5	-0.5
	comp=Z,136nm,1.0s						
DYA	Yadsworthy	82.15	344	⇑*e*P	P	11 45 21.9	+0.1
DYA				IAmb	IAmb	11 45 23.6	
	comp=Z,207nm,1.1s						
DYA				IAMs_20	IAMs_20	12 30 40.9	
	comp=Z,4µm,15.2s						
UPM	Unac-Piva	82.16	327	*e*P	P	11 45 21.6	-0.6
M54A	Oil Creek Stat	82.17	36	P	P	11 45 22.0	-0.1
	baz=327						
M54A	Oil Creek Stat	82.17	36	*e*P	P	11 45 22.7	+0.6
	comp=Z,65nm,1.0s						
Z40A	Long Farm, Mag	82.17	50	P	P	11 45 21.7	-0.5
	baz=320,SNR=8.4						
UDBI	Udbina	82.18	330	P	P	11 45 21.4	-0.7
U45A	Rockin P Farm,	82.19	45	P	P	11 45 22.3	+0.1
	baz=322						
SKO	Skopje	82.20	325	P	P	11 45 22.6	+0.4
SKO	Skopje	82.20	325	⇑*i*P	P	11 45 22.5	+0.4
NCB	Newcomb	82.21	31	*e*P	P	11 45 21.8	-0.5
	comp=Z,26nm,1.3s						
KOME	Kolasin	82.22	326	⇑*i*P	P	11 45 22.0	-0.4
DKL	Dikili	82.23	320	*e*P	P	11 45 22.1	-0.3
KORT	Korkueli	82.26	316	*e*P	P	11 45 22.3	-0.5
MAMC	Mammari	82.26	313	P	P	11 45 23.9	+1.3
PVY	Plav	82.27	326	⇑*i*P	P	11 45 22.3	-0.4
KNT	Kendrikon	82.27	323	P	P	11 45 22.6	0.0
KNT	Kendrikon	82.27	323	P	P	11 45 22.6	0.0
VAY	Valandovo	82.28	324	P	P	11 45 22.8	+0.2
VAY	Valandovo	82.28	324	⇑*i*P	P	11 45 22.6	+0.1
LIA	Limnos Island	82.33	321	P	P	11 45 22.8	-0.1
LIA	Limnos Island	82.33	321	P	P	11 45 22.8	-0.1
CSS	Mathiatis	82.36	313	*e*P	P	11 45 23.4	+0.2
CSS	Mathiatis	82.36	313	*e*P	P	11 45 23.4	+0.2
	comp=Z,86nm,1.0s						
CSS	Mathiatis	82.36	313	P	P	11 45 23.1	-0.1
CSS	Mathiatis	82.36	313	P	P	11 45 23.9	+0.7
PPT	Papeete	82.37	124	LR	LR	12 14 36.1	
	comp=Z,6µm,21.8s,baz=290,slow=30						
PRK	Paraskevi	82.37	320	P	P	11 45 22.9	-0.2
PRK	Paraskevi	82.37	320	P	P	11 45 22.9	-0.2
R49A	Shelbyville	82.37	41	P	P	11 45 22.3	-0.9
	baz=324						
PPT2	Papeete2	82.39	124	*e*P	P	11 45 26.2	+2.8
	comp=Z,54nm,1.2s						
PPT2	Papeete2	82.39	124	*e*S	S	11 55 37.2	+0.3
	comp=Z,5µm,29.0s						
PPT2	Papeete2	82.39	124	*e*LR	LR	12 11 10.8	
	comp=Z,14µm,23.0s,baz=324						
PPT2	Papeete2	82.39	124	*e*T	T	13 16 15.9	
	comp=Z,6.2nm,0.2s						
VT1	Waterbury	82.43	30	*e*P	P	11 45 23.1	-0.3
	comp=Z,40nm,1.2s						
NKY	Niksic	82.46	327	⇑*i*P	P	11 45 22.8	-0.9
NVLJ	Novalja	82.46	330	P	P	11 45 22.1	-1.4
S48A	Wiedeman Farm,	82.47	42	P	P	11 45 23.3	-0.4
	baz=323,SNR=14						
LEF	Lefka	82.47	313	*e*P	P	11 45 24.4	+0.7
U46A	Springville	82.47	45	P	P	11 45 23.7	0.0
	baz=322						
833A	Chaparral WMA,	82.49	57	P	P	11 45 24.2	+0.2
	baz=318						
N54A	Moraine State	82.49	37	P	P	11 45 23.3	-0.5
	baz=326						
N54A	Moraine State	82.49	37	*e*P	P	11 45 23.6	-0.1
	comp=Z,109nm,1.2s						
OUR	Ouranopolis	82.49	322	*e*P	P	11 45 21.8	-1.9
OUR	Ouranopolis	82.49	322	P	P	11 45 21.0	-2.7
OUR	Ouranopolis	82.49	322	P	P	11 45 21.0	-2.7
OUR	Ouranopolis	82.49	322	P	P	11 45 21.0	-2.7
T47A	Sharon Grove	82.50	44	P	P	11 45 23.5	-0.3
	baz=323,SNR=18						
T47A	Sharon Grove	82.50	44	*e*P	P	11 45 23.3	-0.5
	comp=Z,73nm,1.1s						
Z41A	Richland Creek	82.50	50	P	P	11 45 24.2	+0.3
	baz=320						
Z41A	Richland Creek	82.50	50	*e*P	P	11 45 24.3	+0.5
	comp=Z,146nm,1.5s						
TIAR	Tiarei	82.50	124	*e*T	T	13 16 23.5	
	comp=Z,3.7nm,0.3s						
NKME	Niksic	82.51	327	⇑*i*P	P	11 45 23.5	-0.4
CCAR	Cane Creek	82.54	48	*e*P	P	11 45 25.2	+1.2
	comp=Z,103nm,0.6s						
X43A	Marvell	82.54	47	P	P	11 45 23.4	-0.6
	baz=321						
X43A	Marvell	82.54	47	*e*P	P	11 45 24.0	-0.1
	comp=Z,160nm,1.4s						
140A	Cam and Jess,	82.55	50	P	P	11 45 23.7	-0.5
	baz=320						
140A	Cam and Jess,	82.55	50	*e*P	P	11 45 25.5	+1.3
	comp=Z,76nm,0.8s						
BRY	Bratogost	82.56	327	*e*P	P	11 45 23.1	-1.1
V45A	Humboldt	82.56	45	P	P	11 45 23.5	-0.7
	baz=322						
ALFC	Alefka	82.59	314	P	P	11 45 25.5	+1.1
SIGR	SIGRI	82.59	320	*e*P	P	11 45 22.4	-1.9
SIGR	SIGRI	82.59	320	P	P	11 45 21.8	-2.5
SIGR	SIGRI	82.59	320	P	P	11 45 21.8	-2.5
ASF	Jabal al Asfar	82.61	309	P	P	11 45 24.9	+0.3
	comp=Z,12nm,0.7s,baz=6.3,slow=3.3,SNR=29						
ASF				LR	LR	12 27 35.1	
	comp=Z,5µm,18.2s,baz=350,slow=40						
NATX	Nacogdoches	82.63	52	P	P	11 45 24.5	-0.1
	baz=320,SNR=5.8						
NATX	Nacogdoches	82.63	52	*e*P	P	11 45 25.8	+1.2
	comp=Z,91nm,0.9s						
GRG	Griva	82.65	324	*e*P	P	11 45 25.3	+0.7
GRG	Griva	82.65	324	P	P	11 45 24.3	-0.3
GRG	Griva	82.65	324	P	P	11 45 24.3	-0.3
AYDB	Zeytinkoy-Aydi	82.68	318	*e*P	P	11 45 25.2	+0.3
PDG	Podgorica	82.68	326	⇑*i*P	P	11 45 24.1	-0.6
PDG	Podgorica	82.68	326	P	P	11 45 23.7	-1.0
TTG	Podgorica	82.68	326	⇑*i*P	P	11 45 24.1	-0.6
TTG	Podgorica	82.68	326	*e*P	P	11 45 24.1	-0.6
	comp=Z,157nm,1.1s						
TTG	Podgorica	82.68	326	*e*P	P	11 45 24.1	-0.6
TTG				pmax	pmax		
	comp=Z,157nm,1.1s						
THE	Thessaloniki	82.68	323	P	P	11 45 23.9	-0.8
THE	Thessaloniki	82.68	323	P	P	11 45 23.9	-0.8
THE	Thessaloniki	82.68	323	P	P	11 45 23.9	-0.8
PLG	Polygyros	82.69	323	P	P	11 45 24.3	-0.5
CEME	Cevo	82.71	327	⇑*i*P	P	11 45 24.0	-1.0
BLCB	Balcova	82.72	319	*e*P	P	11 45 25.6	+0.6
S49A	Springfield	82.73	42	P	P	11 45 24.3	-0.7
	baz=324						
T48A	Bowling Green	82.74	43	P	P	11 45 24.8	-0.3
	baz=323,SNR=10						
SZAC	Souni	82.76	313	P	P	11 45 27.2	+1.9
R50A	Paris	82.77	41	P	P	11 45 24.9	-0.4
	baz=324						
MMAI	Mount Meron Ar	82.78	310	P	P	11 45 26.4	+0.9
	comp=Z,31nm,0.7s,baz=44,slow=6.6,SNR=24						
MMAI				LR	LR	12 26 50.6	
	comp=Z,15µm,20.1s,baz=355,slow=39						
KRUS	Krusevo	82.78	325	⇑*i*P	P	11 45 25.1	-0.2
PKME	Peaks-Kenny Pk	82.79	28	P	P	11 45 24.9	-0.3
	baz=333,SNR=5.4						
PKME	Peaks-Kenny Pk	82.79	28	*e*P	P	11 45 25.2	0.0
	comp=Z,32nm,1.0s						
LBNH	Lisbon	82.80	30	P	P	11 45 23.8	-1.5
	baz=331						
LBNH	Lisbon	82.80	30	*e*P	P	11 45 25.8	+0.5
	comp=Z,26nm,1.1s						
WVT	Waverly	82.82	45	P	P	11 45 25.1	-0.4
	baz=323						
WVT	Waverly	82.82	45	*e*P	P	11 45 25.0	-0.5
	comp=Z,32nm,0.9s						
WVT	Waverly	82.82	45	*e*P	P	11 45 25.0	-0.5
WVT				pmax	pmax		
	comp=Z,33nm,0.9s						
AKMC	Akamas	82.83	314	P	P	11 45 25.2	-0.4
U47A	Clarksville	82.84	44	P	P	11 45 24.8	-0.8
	baz=323,SNR=19						
STON	Ston	82.90	328	P	P	11 45 24.4	-1.4
240A	Hunter Patters	82.91	51	P	P	11 45 26.1	0.0
	baz=320						
W45A	Hickory Valley	82.91	46	P	P	11 45 26.2	+0.2
	baz=322						
DRME	Dracevica, Mon	82.92	326	⇑*i*P	P	11 45 25.5	-0.4
ACCN	Adirondack Com	82.92	31	*e*P	P	11 45 26.1	+0.1
	comp=Z,148nm,1.9s						
PPCY	Paphos	82.93	314	P	P	11 45 26.1	0.0
BUM	Brajici-Budva	82.93	327	⇑*i*P	P	11 45 25.8	-0.3
X44A	Crenshaw	82.93	47	P	P	11 45 25.9	-0.2
	baz=322						
V46A	Holladay	82.94	45	P	P	11 45 25.4	-0.8
	baz=322,SNR=23						
Z42A	Norrel Spur, H	82.94	49	P	P	11 45 26.4	+0.2
	baz=321						
141A	Papa Simpson,	82.94	50	P	P	11 45 26.2	0.0
	baz=320						
URLA	Izmir	82.95	319	*e*P	P	11 45 25.8	-0.4
HCY	Herceg Novi	82.96	327	⇑*i*P	P	11 45 25.6	-0.6
PAIG	Paliouri	82.96	322	P	P	11 45 25.7	-0.5
PAIG	Paliouri	82.96	322	P	P	11 45 25.7	-0.5
PAIG	Paliouri	82.96	322	P	P	11 45 25.7	-0.5
JSA	Saint Aubin	82.99	343	⇑*e*P	P	11 45 26.2	0.0
JSA				IAmb	IAmb	11 45 32.4	
	comp=Z,142nm,1.1s						
JSA				IAMs_20	IAMs_20	12 27 18.1	
	comp=Z,5µm,20.2s						
BIA	Bitola	83.04	324	*e*P	P	11 45 26.8	+0.1
BINY	Binghamton	83.07	33	P	P	11 45 25.8	-0.9
	baz=329						
BINY	Binghamton	83.07	33	*e*P	P	11 45 26.4	-0.4
	comp=Z,74nm,1.5s						
ULC	Ulcinj	83.08	326	⇑*i*P	P	11 45 26.1	-0.7
YER	Yerkesik	83.15	318	*e*P	P	11 45 28.8	+1.5
YER	Yerkesik	83.15	318	P	P	11 45 27.8	+0.5
YER	Yerkesik	83.15	318	P	P	11 45 27.8	+0.5
U48A	Cassie Pea, Po	83.15	43	P	P	11 45 26.8	-0.4
	baz=323,SNR=21						
T49A	Edmonton	83.16	42	P	P	11 45 26.9	-0.3
	baz=324,SNR=14						
T49A	Edmonton	83.16	42	*e*P	P	11 45 26.8	-0.5
	comp=Z,146nm,1.8s						
FETY	Fethiye	83.16	317	*e*P	P	11 45 27.2	-0.1
FETY	Fethiye	83.16	317	P	P	11 45 27.1	-0.2
FETY	Fethiye	83.16	317	P	P	11 45 27.1	-0.2
CHOS	Chios island	83.17	320	P	P	11 45 27.2	-0.2
CHOS	Chios island	83.17	320	P	P	11 45 27.2	-0.2
OHR	Ohrid	83.18	325	*i* P	P	11 45 26.8	-0.6
MMLI	Mount Malkishu	83.21	310	*e*P	P	11 45 29.9	+2.2
V47A	Nunnelly	83.21	44	P	P	11 45 27.1	-0.5
	baz=323,SNR=15						
FNA	Florina	83.22	324	*e*P	P	11 45 27.6	0.0
FNA	Florina	83.22	324	*e*P	P	11 45 27.2	-0.4
	comp=Z,70nm,1.0s						
FNA	Florina	83.22	324	P	P	11 45 26.9	-0.7
DALY	Dalyan (Mu˜la	83.22	317	*e*P	P	11 45 28.2	+0.6
S50A	Richmond	83.23	41	P	P	11 45 27.2	-0.5
	baz=324						
AKAS	Kas	83.23	316	*e*P	P	11 45 28.1	+0.3
MLSB	Milas	83.26	318	*e*P	P	11 45 29.0	+1.2
SENIN	Lac Senin/Sane	83.27	336	*e*P	P	11 45 28.1	+0.1
	comp=Z,67nm,0.9s						
WVL	Waterville	83.29	28	*e*P	P	11 45 28.3	+0.5
	comp=Z,96nm,1.6s						
OXF	Oxford	83.30	47	P	P	11 45 28.3	+0.3
	baz=322						
OXF	Oxford	83.30	47	*e*P	P	11 45 28.4	+0.3
	comp=Z,74nm,0.9s						
KSL	Kastellorizon	83.31	316	P	P	11 45 27.4	-0.6
KSL	Kastellorizon	83.31	316	P	P	11 45 27.4	-0.6
LIT	Litokhoron	83.32	323	*e*P	P	11 45 26.9	-1.2
	comp=Z,55nm,1.0s						
LIT	Litokhoron	83.32	323	P	P	11 45 27.1	-1.0
LIT	Litokhoron	83.32	323	*e*P	P	11 45 26.9	-1.2
LIT				pmax	pmax		
	comp=Z,55nm,1.0s						
HKT	Hockley	83.34	54	*e*P	P	11 45 28.9	+0.7
	comp=Z,41nm,1.5s						
HKT	Hockley	83.34	54	*e*P	P	11 45 28.9	+0.7
HKT				pmax	pmax		
	comp=Z,41nm,1.5s						
Z43A	Armstrong Fami	83.36	49	P	P	11 45 28.5	+0.1
	baz=321						
241A	Mo Tay, Goldon	83.38	50	P	P	11 45 28.5	0.0
	baz=320						
241A	Mo Tay, Goldon	83.38	50	*e*P	P	11 45 29.6	+1.1
	comp=Z,49nm,0.8s						
SKY	Skiros Island	83.44	321	P	P	11 45 28.5	-0.2
SKY	Skiros Island	83.44	321	P	P	11 45 28.5	-0.2
KZN	Kozani	83.45	324	P	P	11 45 27.5	-1.4
KZN	Kozani	83.45	324	P	P	11 45 27.5	-1.4
KZN	Kozani	83.45	324	P	P	11 45 27.5	-1.4
AOS	Alonnisos	83.50	322	*e*P	P	11 45 28.6	-0.4
AOS	Alonnisos	83.50	322	P	P	11 45 28.4	-0.6
AOS	Alonnisos	83.50	322	P	P	11 45 28.4	-0.6
142A	Monroe	83.50	49	P	P	11 45 29.3	+0.2
	baz=321						
U49A	Red Boiling Sp	83.51	43	P	P	11 45 28.2	-0.9
	baz=324,SNR=32						
T50A	Nancy	83.55	42	P	P	11 45 29.0	-0.3
	baz=324,SNR=22						
FFD	Franklin Falls	83.57	30	*e*P	P	11 45 29.3	0.0
	comp=Z,177nm,2.0s						
PLAL	Pickwick Lake	83.61	45	*e*P	P	11 45 28.6	-1.0
	comp=Z,69nm,1.5s						
V48A	Smith Brothers	83.63	44	P	P	11 45 29.2	-0.6
	baz=323,SNR=15						
V48A	Smith Brothers	83.63	44	*e*P	P	11 45 29.1	-0.6
	comp=Z,204nm,1.9s						
S51A	Beattyville	83.63	41	P	P	11 45 29.0	-0.7
	baz=325,SNR=11						
S51A	Beattyville	83.63	41	*e*P	P	11 45 29.4	-0.4
	comp=Z,30nm,0.9s						
W47A	Westpoint	83.63	45	P	P	11 45 29.5	-0.2
	baz=323						
SSPA	Standing Stone	83.63	35	P	P	11 45 29.4	-0.3
	baz=328						
SSPA	Standing Stone	83.63	35	*e*P	P	11 45 29.4	-0.3
	comp=Z,126nm,1.5s						
MCWV	Mont Chateau	83.64	37	P	P	11 45 29.6	-0.2
	baz=327						
MCWV	Mont Chateau	83.64	37	*e*P	P	11 45 29.5	-0.2
	comp=Z,88nm,1.3s						
XOR	Xorichti	83.64	322	P	P	11 45 28.8	-0.9
XOR	Xorichti	83.64	322	P	P	11 45 28.8	-0.9
O56A	Blue Knob Stat	83.66	36	P	P	11 45 29.4	-0.5
	baz=327,SNR=16						
O56A	Blue Knob Stat	83.66	36	*e*P	P	11 45 29.9	0.0
	comp=Z,66nm,1.1s						
NEST	Nestorio	83.66	324	P	P	11 45 29.6	-0.3
BODT	Bodrum	83.67	318	*e*P	P	11 45 30.1	+0.2
BODT	Bodrum	83.67	318	P	P	11 45 29.6	-0.3
BODT	Bodrum	83.67	318	P	P	11 45 29.6	-0.3
143A	Socs Landing,	83.67	49	P	P	11 45 29.7	-0.2
	baz=321						
NEO	Neokhori	83.67	322	P	P	11 45 30.1	+0.2
NEO	Neokhori	83.67	322	P	P	11 45 30.1	+0.2
SKIA	Skiathos	83.68	322	P	P	11 45 29.1	-0.8
X46A	Booneville	83.69	46	P	P	11 45 29.3	-0.7
	baz=322						
KSPA	Keystone Colle	83.70	34	*e*P	P	11 45 29.4	-0.6
	comp=Z,35nm,1.1s						
FYTO	Fytoko, Volos	83.71	322	P	P	11 45 29.2	-0.9
FYTO	Fytoko, Volos	83.71	322	P	P	11 45 29.2	-0.9
Z44A	Pea Ridge, Bel	83.74	48	P	P	11 45 30.1	-0.1
	baz=322						
Y45A	Yeager Farm, C	83.74	47	P	P	11 45 29.5	-0.8
	baz=322,SNR=6.8						
242A	Grayson	83.77	50	P	P	11 45 30.4	0.0
	baz=321						
341A	Kurthwood	83.77	51	P	P	11 45 30.3	-0.2
	baz=320						
341A	Kurthwood	83.77	51	*e*P	P	11 45 30.2	-0.3
	comp=Z,104nm,1.4s						
DAT	Datca	83.81	318	*e*P	P	11 45 30.8	0.0
PENT	Pentalofos	83.81	324	P	P	11 45 30.7	0.0
S52A	Salyersville	83.84	40	P	P	11 45 30.5	-0.2
	baz=325,SNR=16						
EMMW	East Machias	83.88	27	*e*P	P	11 45 30.0	-0.8
	comp=Z,49nm,1.1s						
NWAO	Narrogin (SRO)	83.91	208	P	P	11 45 30.6	-0.2
	comp=Z,15nm,0.8s,baz=346,slow=12,SNR=4.8						
KPRO	Kipourio	83.92	324	P	P	11 45 30.1	-1.1
ARG	Arkhangelos	83.96	317	*e*P	P	11 45 32.1	+0.7
ARG	Arkhangelos	83.96	317	P	P	11 45 31.4	0.0
ARG	Arkhangelos	83.96	317	P	P	11 45 31.4	0.0
THL	Klokotos Trika	83.97	323	P	P	11 45 29.6	-1.8
RAYN	Ar Rayn	83.99	297	*e*P	P	11 45 32.3	+0.5
	comp=Z,85nm,1.0s						
RAYN	Ar Rayn	83.99	297	*i* P	P	11 45 32.5	+0.7
	SNR=22						
T51A	Gray	84.02	41	P	P	11 45 31.0	-0.7
	baz=325						
SMIA	Simia	84.03	322	P	P	11 45 31.1	-0.7
U50A	Jamestown	84.04	42	P	P	11 45 31.0	-0.9
	baz=324						
Z45A	Winona	84.05	47	P	P	11 45 31.9	0.0
	baz=322						
Z45A	Winona	84.05	47	*e*P	P	11 45 31.7	-0.2
W48A	Pulaski	84.05	45	P	P	11 45 31.6	-0.3
	baz=323,SNR=18						
V49A	McMinnville	84.05	43	P	P	11 45 31.5	-0.4
	baz=324,SNR=14						
Y46A	Houston	84.08	47	P	P	11 45 31.8	-0.2
	baz=322,SNR=18						
X47A	Russelville	84.08	46	P	P	11 45 31.9	-0.1
	baz=323						
KARY	Karystos	84.19	321	P	P	11 45 31.4	-1.1
342A	Flagon Creek P	84.20	50	P	P	11 45 32.4	-0.3
	baz=321						
N59A	State Game Lan	84.25	34	P	P	11 45 32.3	-0.6
	baz=329,SNR=10						
N59A	State Game Lan	84.25	34	*e*P	P	11 45 32.2	-0.6
	comp=Z,76nm,1.2s						
AGG	Agios Georgios	84.29	323	*e*P	P	11 45 31.4	-1.7
AGG	Agios Georgios	84.29	323	*e*P	P	11 45 31.8	-1.3
	comp=Z,128nm,1.0s						
AGG	Agios Georgios	84.29	323	P	P	11 45 31.4	-1.7
AGG	Agios Georgios	84.29	323	*e*P	P	11 45 31.8	-1.3
AGG				pmax	pmax		
	comp=Z,128nm,1.0s						
LKR	Lokris	84.31	322	P	P	11 45 31.8	-1.3
LKR	Lokris	84.31	322	P	P	11 45 31.8	-1.3
VLC	Villacollemand	84.32	333	*e*P	P	11 45 32.8	-0.4
	comp=Z,444nm,1.8s						
T52A	Hallie	84.35	41	P	P	11 45 32.9	-0.5
	baz=325,SNR=6.3						
JAN	Janina	84.38	324	P	P	11 45 33.5	0.0
JAN	Janina	84.38	324	P	P	11 45 33.5	0.0
W49A	Belvidere	84.39	44	P	P	11 45 32.8	-0.9
	baz=324,SNR=19						
PTL	Penteli	84.43	321	P	P	11 45 32.4	-1.4
PTL	Penteli	84.43	321	P	P	11 45 32.4	-1.4
HRV	Adam Dziewonsk	84.45	30	P	P	11 45 33.3	-0.5
	baz=331						
HRV	Adam Dziewonsk	84.45	30	*e*P	P	11 45 33.4	-0.3
	comp=Z,50nm,1.1s						
HRV	Adam Dziewonsk	84.45	30	*e*P	P	11 45 33.4	-0.3
HRV				pmax	pmax		
	comp=Z,50nm,1.1s						
PAGS	Pennsylvania G	84.45	35	*e*P	P	11 45 33.3	-0.5
	comp=Z,89nm,1.3s						
U51A	La Follette	84.46	42	P	P	11 45 33.4	-0.6
	baz=325						
SWET	Sewanee	84.48	44	*e*P	P	11 45 33.2	-0.9
	comp=Z,54nm,0.9s						
APE	Apeiranthos	84.49	319	P	P	11 45 32.9	-1.2
APE	Apeiranthos	84.49	319	P	P	11 45 32.9	-1.2
APE	Apeiranthos	84.49	319	P	P	11 45 32.9	-1.2
AMGA	Amorgos Island	84.51	319	P	P	11 45 32.6	-1.6
V50A	Pikevile	84.52	43	P	P	11 45 34.3	+0.1
	baz=324,SNR=16						
VBMS	Vicksburg	84.52	49	P	P	11 45 34.5	+0.2
	baz=322						
145A	Houston Renfro	84.53	48	P	P	11 45 34.3	0.0
	baz=322						
ATHU	Athens Univers	84.53	321	P	P	11 45 32.7	-1.6
ATHU	Athens Univers	84.53	321	P	P	11 45 32.7	-1.6
X48A	Hartselle	84.54	45	P	P	11 45 34.1	-0.3
	baz=323,SNR=17						
X48A	Hartselle	84.54	45	*e*P	P	11 45 33.6	-0.8
	comp=Z,20nm,0.8s						
TZTN	Tazewell	84.54	41	P	P	11 45 33.8	-0.6
	baz=325,SNR=7.0						
TZTN	Tazewell	84.54	41	*e*P	P	11 45 33.7	-0.6
	comp=Z,38nm,1.1s						
ODNJ	Ogdensburg	84.56	33	*e*P	P	11 45 34.1	-0.2
	comp=Z,26nm,1.1s						
ATH	Athens Observa	84.56	321	P	P	11 45 32.9	-1.5
244A	Avery, Jackson	84.56	49	P	P	11 45 34.4	-0.1
	baz=322						
MS1	Monte Sant’Ang	84.56	328	*e*P	P	11 45 33.9	-0.6
Y47A	UCPARC, Winfie	84.57	46	P	P	11 45 34.6	0.0
	baz=323,SNR=16						
Z46A	Louisville	84.58	47	P	P	11 45 34.6	+0.1
	baz=322						
VILL	Villia	84.58	321	P	P	11 45 32.9	-1.7
EVR	Evrytania	84.60	323	P	P	11 45 33.6	-1.1
EVR	Evrytania	84.60	323	P	P	11 45 33.6	-1.1
VLY	Voula,Athens	84.62	321	P	P	11 45 33.7	-1.1
VLY	Voula,Athens	84.62	321	P	P	11 45 33.7	-1.1
ZAIG	Zacatecas	84.63	63	*e*P	P	11 45 35.7	+0.3
	comp=Z,35nm,1.1s						
WES	Weston	84.64	30	*e*P	P	11 45 34.8	+0.1
	comp=Z,108nm,1.4s						
WES	Weston	84.64	30	*e*P	P	11 45 34.8	+0.1
WES				pmax	pmax		
	comp=Z,108nm,1.4s						
BNI	Bardonecchia	84.65	336	*e*P	P	11 45 35.1	+0.2
	comp=Z,49nm,0.9s						
343A	Vidalia	84.65	50	P	P	11 45 35.3	+0.3
	baz=321						
SGD	Sagiada	84.68	324	P	P	11 45 34.1	-0.9
PROD	Prodromos	84.68	322	P	P	11 45 33.4	-1.6
IGT	Igoumenitsa	84.70	324	P	P	11 45 34.3	-0.8
IGT	Igoumenitsa	84.70	324	P	P	11 45 34.3	-0.8
IGT	Igoumenitsa	84.70	324	P	P	11 45 34.3	-0.8
DSF	Desfina	84.72	322	P	P	11 45 33.2	-2.1
DSF	Desfina	84.72	322	P	P	11 45 33.2	-2.1
BAI	Bari	84.73	327	*e*P	P	11 45 35.4	+0.2
BCX	Boston College	84.74	30	*e*P	P	11 45 35.3	+0.1
	comp=Z,47nm,1.2s						
U52A	Thorn Hill	84.75	41	P	P	11 45 34.7	-0.7
	baz=325						
V51A	Loudon	84.77	42	P	P	11 45 35.1	-0.4
	baz=324,SNR=13						
V51A	Loudon	84.77	42	*e*P	P	11 45 35.1	-0.4
	comp=Z,40nm,1.0s						
KEK	Kerkira	84.77	325	P	P	11 45 34.6	-0.8
KEK	Kerkira	84.77	325	P	P	11 45 34.6	-0.8
W50A	Signal Mountai	84.79	43	P	P	11 45 34.8	-0.9
	baz=324						
MVL	Millersville	84.80	35	*e*P	P	11 45 36.0	+0.5
	comp=Z,110nm,1.6s						
FASA	Fasano	84.80	327	*e*P	P	11 45 35.9	+0.4
ANX	Ano Chora	84.83	323	P	P	11 45 34.8	-1.1
LTK	Loutraki	84.85	322	P	P	11 45 33.7	-2.2
LTK	Loutraki	84.85	322	P	P	11 45 33.7	-2.2
X49A	Woodville	84.85	45	P	P	11 45 35.1	-0.8
	baz=324,SNR=21						
LOUT	Loutraki	84.87	322	P	P	11 45 33.7	-2.3
SERI	Serifos	84.89	320	P	P	11 45 34.0	-2.1
CGL1	Ceglie Messapi	84.89	327	*e*P	P	11 45 36.1	+0.1
PAL	Palisades	84.89	33	P	P	11 45 34.6	-1.4
	baz=330						
PAL	Palisades	84.89	33	*e*P	P	11 45 35.8	-0.2
	comp=Z,226nm,2.0s						
PAL	Palisades	84.89	33	*e*P	P	11 45 35.8	-0.2
PAL				pmax	pmax		
	comp=Z,226nm,2.0s						
Y48A	Jasper	84.91	45	P	P	11 45 35.7	-0.5
	baz=323,SNR=7.2						
BRNJ	Basking Ridge	84.92	33	*e*P	P	11 45 36.3	+0.2
	comp=Z,51nm,1.1s						
SERG	Sergoula	84.92	322	P	P	11 45 34.9	-1.4
TRIZ	Trizonia	84.95	322	P	P	11 45 35.0	-1.3
146A	Union	84.95	47	P	P	11 45 36.7	+0.3
	baz=322,SNR=10						
146A	Union	84.95	47	*e*P	P	11 45 36.8	+0.3
	comp=Z,167nm,0.8s						
ANAF	Anafi Island	84.96	319	P	P	11 45 33.2	-3.3
KARP	Karpathos	84.96	317	*e*P	P	11 45 34.8	-1.7
KARP	Karpathos	84.96	317	*e*P	P	11 45 36.3	-0.2
	comp=Z,155nm,0.9s						
KARP	Karpathos	84.96	317	P	P	11 45 35.0	-1.5
THAL	Thalero	84.97	322	P	P	11 45 34.5	-2.0
EFP	Efpalio	84.97	323	P	P	11 45 35.4	-1.1
BRYW	Bryant College	84.97	31	*e*P	P	11 45 36.6	+0.1

	comp=Z,24nm,0.8s						
CPCT	**Cooper Cave**	**84.97**	**43**	*e*P	**P**	**11 45 35.6**	**-0.9**
	comp=Z,80nm,1.3s						
PVO	**Paravola**	**84.97**	**323**	P	**P**	**11 45 35.6**	**-0.9**
LNIG	**Linares**	**84.98**	**59**	*e*P	**P**	**11 45 36.8**	**0.0**
	comp=Z,20nm,1.0s						
245A	**Little AP, Sta**	**84.99**	**48**	P	**P**	**11 45 36.5**	**-0.1**
	baz=322						
344A	**Westbrook Farm**	**85.00**	**49**	P	**P**	**11 45 36.7**	**0.0**
	baz=322						
344A	**Westbrook Farm**	**85.00**	**49**	*e*P	**P**	**11 45 38.7**	**+2.0**
	comp=Z,145nm,1.4s						
Z47A	**Carrollton**	**85.02**	**46**	P	**P**	**11 45 36.3**	**-0.5**
	baz=323,SNR=11						
MASS	**Massafra**	**85.04**	**327**	*e*P	**P**	**11 45 36.1**	**-0.7**
SG1	**Sgolgore (BA)**	**85.04**	**327**	*e*P	**P**	**11 45 36.4**	**-0.4**
CPNY	**Central Park**	**85.05**	**33**	*e*P	**P**	**11 45 35.9**	**-0.9**
	comp=Z,192nm,1.7s						
SANT	**Santorini**	**85.09**	**319**	⇑*i*P	**P**	**11 45 35.4**	**-1.8**
W51A	**Cleveland**	**85.09**	**43**	P	**P**	**11 45 36.2**	**-1.0**
	baz=324						
V52A	**Sevierville**	**85.09**	**42**	P	**P**	**11 45 36.5**	**-0.7**
	baz=325,SNR=14						
V52A	**Sevierville**	**85.09**	**42**	*e*P	**P**	**11 45 36.7**	**-0.4**
	comp=Z,61nm,1.1s						
LAKA	**Lakka**	**85.10**	**322**	P	**P**	**11 45 36.3**	**-0.9**
LAKA	**Lakka**	**85.10**	**322**	P	**P**	**11 45 36.3**	**-0.9**
PDO	**Prodromos**	**85.13**	**323**	P	**P**	**11 45 36.4**	**-0.9**
Z48A	**Northport**	**85.14**	**46**	P	**P**	**11 45 36.9**	**-0.5**
	baz=323						
U53A	**Fall Branch**	**85.14**	**41**	P	**P**	**11 45 36.8**	**-0.6**
	baz=325,SNR=14						
DID	**Didima**	**85.16**	**321**	P	**P**	**11 45 34.7**	**-2.8**
DID	**Didima**	**85.16**	**321**	P	**P**	**11 45 34.7**	**-2.8**
TKL	**Tuckaleechee C**	**85.16**	**42**	P	**P**	**11 45 36.7**	**-0.8**
	comp=Z,33nm,1.1s,baz=343,slow=6.6,SNR=16						
TKL				LR	LR	12 23 01.0	
	comp=Z,6µm,21.7s,baz=336,slow=35						
TKL	**Tuckaleechee C**	**85.16**	**42**	*e*P	**P**	**11 45 36.9**	**-0.6**
	comp=Z,52nm,1.1s						
TKL	**Tuckaleechee C**	**85.16**	**42**	*e*P	**P**	**11 45 36.9**	**-0.6**
TKL				pmax	pmax		
	comp=Z,52nm,1.1s						
KLV	**Kalavryta, Ach**	**85.19**	**322**	P	**P**	**11 45 36.4**	**-1.2**
KLV	**Kalavryta, Ach**	**85.19**	**322**	P	**P**	**11 45 36.4**	**-1.2**
MATE	**Matera**	**85.19**	**327**	⇑*i*P	**P**	**11 45 37.1**	**-0.4**
GUR	**Goura**	**85.19**	**322**	P	**P**	**11 45 36.2**	**-1.5**
GUR	**Goura**	**85.19**	**322**	P	**P**	**11 45 36.2**	**-1.5**
LKD2	**Lefkada island**	**85.19**	**324**	P	**P**	**11 45 36.2**	**-1.4**
LKD2	**Lefkada island**	**85.19**	**324**	P	**P**	**11 45 36.2**	**-1.4**
PSUB	**Penn St. - Bra**	**85.22**	**34**	*e*P	**P**	**11 45 37.0**	**-0.6**
	comp=Z,26nm,1.0s						
X50B	**Fort Payne**	**85.22**	**44**	P	**P**	**11 45 37.1**	**-0.8**
	baz=324,SNR=8.4						
HRFI	**Mount Harif**	**85.27**	**309**	*e*P	**P**	**11 45 38.7**	**+0.5**
KRND	**KRANIDI**	**85.30**	**321**	P	**P**	**11 45 35.5**	**-2.6**
Y49A	**Blount Mountai**	**85.33**	**45**	P	**P**	**11 45 37.5**	**-0.9**
	baz=324,SNR=8.9						
Y49A	**Blount Mountai**	**85.33**	**45**	*e*P	**P**	**11 45 37.5**	**-0.9**
	comp=Z,27nm,0.9s						
147A	**Livingston**	**85.33**	**47**	P	**P**	**11 45 38.1**	**-0.3**
	baz=323,SNR=6.6						
147A	**Livingston**	**85.33**	**47**	*e*P	**P**	**11 45 38.3**	**-0.1**
	comp=Z,141nm,1.1s						
EVGI	**Lefkada island**	**85.34**	**323**	P	**P**	**11 45 37.4**	**-0.9**
BLA	**Blacksburg**	**85.42**	**39**	P	**P**	**11 45 38.3**	**-0.6**
	baz=326,SNR=9.3						
BLA	**Blacksburg**	**85.42**	**39**	*e*P	**P**	**11 45 38.0**	**-0.8**
	comp=Z,71nm,1.0s						
BLA	**Blacksburg**	**85.42**	**39**	*e*P	**P**	**11 45 38.0**	**-0.8**
BLA				pmax	pmax		
	comp=Z,71nm,1.0s						
DRO	**Drossia**	**85.45**	**322**	P	**P**	**11 45 38.4**	**-0.5**
RLS	**Riolos of Patr**	**85.47**	**323**	P	**P**	**11 45 38.4**	**-0.5**
RLS	**Riolos of Patr**	**85.47**	**323**	P	**P**	**11 45 38.4**	**-0.5**
FSK	**Fiskardo**	**85.51**	**323**	P	**P**	**11 45 37.5**	**-1.7**
X51A	**Calhoun**	**85.53**	**43**	P	**P**	**11 45 38.7**	**-0.7**
	baz=324						
X51A	**Calhoun**	**85.53**	**43**	*e*P	**P**	**11 45 38.9**	**-0.5**
	comp=Z,65nm,1.4s						
W52A	**Murphy**	**85.55**	**43**	P	**P**	**11 45 39.3**	**-0.1**
	baz=325						
W52A	**Murphy**	**85.55**	**43**	*e*P	**P**	**11 45 39.5**	**+0.1**
	comp=Z,32nm,1.1s						
TRIP	**Tripoli**	**85.56**	**322**	P	**P**	**11 45 38.4**	**-1.2**
EIL	**Elat**	**85.60**	**309**	LR	LR	12 30 20.0	
	comp=Z,7µm,18.9s,baz=34,slow=40						
V53A	**Saluda**	**85.60**	**41**	P	**P**	**11 45 39.6**	**-0.2**
	baz=325,SNR=5.3						
V53A	**Saluda**	**85.60**	**41**	*e*P	**P**	**11 45 39.5**	**-0.2**
	comp=Z,38nm,1.3s						
Y50A	**Piedmont**	**85.64**	**44**	P	**P**	**11 45 39.5**	**-0.4**
	baz=324						
247A	**Quitman**	**85.65**	**48**	P	**P**	**11 45 39.9**	**-0.1**
	baz=322						
VLX	**Vlachokerasia**	**85.65**	**322**	P	**P**	**11 45 38.4**	**-1.6**
LRAL	**Lakeview Retre**	**85.69**	**46**	P	**P**	**11 45 40.1**	**0.0**
	baz=323,SNR=8.2						
LRAL	**Lakeview Retre**	**85.69**	**46**	*e*P	**P**	**11 45 40.2**	**0.0**
	comp=Z,25nm,1.0s						
148A	**Greensboro**	**85.71**	**46**	P	**P**	**11 45 40.3**	**+0.1**
	baz=323						
KFL	**Anninata**	**85.71**	**323**	P	**P**	**11 45 39.2**	**-1.0**
346A	**Big Creek Wild**	**85.72**	**49**	P	**P**	**11 45 40.6**	**+0.3**
	baz=322						
346A	**Big Creek Wild**	**85.72**	**49**	*e*P	**P**	**11 45 41.6**	**+1.3**
	comp=Z,54nm,0.9s						
VLS	**Valsamata**	**85.74**	**323**	P	**P**	**11 45 39.5**	**-0.8**
VLS	**Valsamata**	**85.74**	**323**	P	**P**	**11 45 39.5**	**-0.8**
VLS	**Valsamata**	**85.74**	**323**	P	**P**	**11 45 39.5**	**-0.8**
ZKR	**Zakros**	**85.76**	**318**	P	**P**	**11 45 40.7**	**+0.2**
ZKR	**Zakros**	**85.76**	**318**	P	**P**	**11 45 40.7**	**+0.2**
Z49A	**Columbiana**	**85.80**	**45**	P	**P**	**11 45 39.8**	**-0.9**
	baz=324,SNR=14						
AMT	**Artemida-Makis**	**85.80**	**322**	P	**P**	**11 45 40.4**	**-0.3**
CVRD	**Centerville Ro**	**85.83**	**37**	*e*P	**P**	**11 45 40.2**	**-0.5**
	comp=Z,54nm,0.9s						
W53A	**Cullowhee**	**85.84**	**42**	P	**P**	**11 45 40.6**	**-0.5**
	baz=325,SNR=18						
IP07	**Quail**	**85.86**	**37**	*e*P	**P**	**11 45 40.7**	**-0.3**
	comp=Z,59nm,1.2s						
CBN	**Corbin Frederi**	**85.90**	**36**	P	**P**	**11 45 40.8**	**-0.3**
	baz=328						
CBN	**Corbin Frederi**	**85.90**	**36**	*e*P	**P**	**11 45 40.6**	**-0.5**
	comp=Z,91nm,1.2s						
VLI	**Veliai**	**85.95**	**321**	P	**P**	**11 45 38.4**	**-3.0**
VLI	**Veliai**	**85.95**	**321**	P	**P**	**11 45 38.4**	**-3.0**
X52A	**Dahlonega**	**85.96**	**43**	P	**P**	**11 45 41.3**	**-0.2**
	baz=325,SNR=10						
Y51A	**Rockmart**	**85.96**	**44**	P	**P**	**11 45 40.8**	**-0.8**
	baz=324,SNR=20						
ITM	**Ithomi**	**86.00**	**322**	*e*P	**P**	**11 45 40.7**	**-1.0**
	comp=Z,137nm,0.9s						
ITM	**Ithomi**	**86.00**	**322**	P	**P**	**11 45 40.4**	**-1.3**
IP05	**Hopewell Churc**	**86.06**	**37**	*e*P	**P**	**11 45 41.8**	**-0.1**
	comp=Z,44nm,1.1s						
Z50A	**Ashland**	**86.06**	**45**	P	**P**	**11 45 41.2**	**-0.8**
	baz=324,SNR=36						
Z50A	**Ashland**	**86.06**	**45**	*e*P	**P**	**11 45 41.3**	**-0.8**
	comp=Z,65nm,0.8s						
248A	**Dixon Mills**	**86.06**	**47**	P	**P**	**11 45 41.7**	**-0.3**
	baz=323						
LAST	**Lasithi**	**86.07**	**318**	P	**P**	**11 45 41.2**	**-0.9**
LAST	**Lasithi**	**86.07**	**318**	P	**P**	**11 45 41.2**	**-0.9**
BG3	**Lake Jocassee**	**86.10**	**42**	*e*P	**P**	**11 45 42.1**	**-0.1**
	comp=Z,58nm,1.0s						
CUC	**Castrocucco**	**86.10**	**327**	*e*P	**P**	**11 45 41.0**	**-1.1**
	comp=Z,36nm,1.1s						
149A	**Jones**	**86.15**	**46**	P	**P**	**11 45 41.9**	**-0.5**
	baz=323,SNR=17						
DYR	**Agios Nikonas**	**86.18**	**321**	P	**P**	**11 45 41.2**	**-1.3**
347A	**Saraland**	**86.19**	**48**	P	**P**	**11 45 42.7**	**0.0**
	baz=323,SNR=9.5						
IDI	**Anoyia**	**86.24**	**319**	P	**P**	**11 45 41.3**	**-1.6**
	comp=Z,40nm,0.7s,baz=23,slow=10,SNR=16						
IDI				LR	LR	12 28 50.5	
	comp=Z,4µm,18.0s,baz=25,slow=39						
IDI	**Anoyia**	**86.24**	**319**	*e*P	**P**	**11 45 41.8**	**-1.1**
IDI	**Anoyia**	**86.24**	**319**	⇑*i*P	**P**	**11 45 41.6**	**-1.3**
IDI	**Anoyia**	**86.24**	**319**	*e*P	**P**	**11 45 41.6**	**-1.3**
	comp=Z,103nm,1.0s						
446A	**Poplarville**	**86.24**	**49**	P	**P**	**11 45 43.2**	**+0.3**
	baz=322						
KYTH	**Kithira**	**86.27**	**321**	P	**P**	**11 45 41.4**	**-1.6**
KYTH	**Kithira**	**86.27**	**321**	P	**P**	**11 45 41.4**	**-1.6**
KTHR	**Kythira**	**86.30**	**321**	P	**P**	**11 45 42.0**	**-1.1**
X53A	**Estanollee**	**86.32**	**42**	P	**P**	**11 45 43.3**	**0.0**
	baz=325,SNR=18						
PYL	**PYLOS**	**86.32**	**322**	P	**P**	**11 45 41.7**	**-1.5**
PYL	**PYLOS**	**86.32**	**322**	P	**P**	**11 45 41.7**	**-1.5**
URVA	**University of**	**86.37**	**37**	*e*P	**P**	**11 45 42.9**	**-0.5**
Z51A	**Franklin**	**86.38**	**44**	P	**P**	**11 45 42.3**	**-1.3**
	baz=324						
TIP	**Timpagrande**	**86.44**	**326**	⇑*i*P	**P**	**11 45 43.6**	**-0.3**
TIP	**Timpagrande**	**86.44**	**326**	*e*P	**P**	**11 45 43.6**	**-0.3**
	comp=Z,142nm,1.3s						
TIP	**Timpagrande**	**86.44**	**326**	P	**P**	**11 45 43.4**	**-0.5**
CHAN	**Chania**	**86.44**	**319**	P	**P**	**11 45 42.3**	**-1.5**
VAM	**Vamos**	**86.46**	**319**	P	**P**	**11 45 42.8**	**-1.1**
VAM	**Vamos**	**86.46**	**319**	P	**P**	**11 45 42.8**	**-1.1**
VAM	**Vamos**	**86.46**	**319**	P	**P**	**11 45 42.8**	**-1.1**
249A	**Camden**	**86.47**	**47**	P	**P**	**11 45 43.8**	**-0.2**
	baz=323,SNR=18						
Y52A	**Lilburn**	**86.48**	**43**	P	**P**	**11 45 44.0**	**-0.1**
	baz=325						
Y52A	**Lilburn**	**86.48**	**43**	*e*P	**P**	**11 45 43.6**	**-0.5**
	comp=Z,28nm,0.9s						
ANKY	**Antikythira Is**	**86.49**	**320**	P	**P**	**11 45 42.6**	**-1.4**
ANKY	**Antikythira Is**	**86.49**	**320**	P	**P**	**11 45 42.6**	**-1.4**
SIVA	**Sivas**	**86.50**	**319**	P	**P**	**11 45 43.3**	**-0.8**
SIVA	**Sivas**	**86.50**	**319**	P	**P**	**11 45 43.3**	**-0.8**
IMMV	**Iera Moni Meta**	**86.52**	**319**	P	**P**	**11 45 43.1**	**-1.1**
348A	**Jackson**	**86.52**	**47**	P	**P**	**11 45 43.9**	**-0.4**
	baz=323						
348A	**Jackson**	**86.52**	**47**	*e*P	**P**	**11 45 44.9**	**+0.7**
	comp=Z,210nm,1.4s						
150A	**Eclectic**	**86.53**	**45**	P	**P**	**11 45 43.6**	**-0.7**
	baz=324,SNR=15						
NCAT	**North Carolina**	**86.65**	**39**	*e*P	**P**	**11 45 45.1**	**+0.3**
	comp=Z,63nm,1.2s						
Y53A	**Monroe**	**86.72**	**43**	P	**P**	**11 45 44.9**	**-0.3**
	baz=325						
KMSC	**Kings Mountain**	**86.72**	**41**	P	**P**	**11 45 44.8**	**-0.4**
	baz=326,SNR=10						
KMSC	**Kings Mountain**	**86.72**	**41**	*e*P	**P**	**11 45 44.9**	**-0.4**
	comp=Z,56nm,1.3s						
PAULI	**Pauline**	**86.76**	**41**	*e*P	**P**	**11 45 46.0**	**+0.6**
	comp=Z,17nm,0.8s						
Z52A	**Williamson**	**86.85**	**44**	P	**P**	**11 45 45.8**	**-0.1**
	baz=324,SNR=14						
250A	**Grady**	**86.91**	**46**	P	**P**	**11 45 45.9**	**-0.2**
	baz=324,SNR=12						
250A	**Grady**	**86.91**	**46**	*e*P	**P**	**11 45 46.7**	**+0.6**
	comp=Z,189nm,1.2s						
349A	**Repton**	**86.94**	**47**	P	**P**	**11 45 46.5**	**+0.2**
	baz=323						
151A	**Opelika**	**86.94**	**45**	P	**P**	**11 45 45.7**	**-0.6**
	baz=324						
GVD	**Gavdhos**	**86.98**	**319**	P	**P**	**11 45 46.1**	**-0.4**
GVD	**Gavdhos**	**86.98**	**319**	P	**P**	**11 45 46.1**	**-0.4**
TBI	**Tubuai**	**87.01**	**128**	*e*S	**S**	**11 56 20.3**	**-2.2**
	comp=Z,3µm,30.8s						
TBI	**Tubuai**	**87.01**	**128**	*e*LR	LR	12 13 08.9	
	comp=Z,9µm,32.0s,baz=320						
TBI	**Tubuai**	**87.01**	**128**	*e*T	T	13 22 01.9	
	comp=Z,21nm,0.3s						
HODGE	**Hodges**	**87.04**	**42**	*e*P	**P**	**11 45 46.6**	**-0.2**
	comp=Z,51nm,1.4s						
152A	**Waverly Hall**	**87.13**	**45**	P	**P**	**11 45 46.7**	**-0.5**
	baz=324,SNR=11						
152A	**Waverly Hall**	**87.13**	**45**	*e*P	**P**	**11 45 46.6**	**-0.5**
	comp=Z,134nm,1.9s						
GOGA	**Godfrey**	**87.13**	**43**	P	**P**	**11 45 46.8**	**-0.4**
	baz=325						
GOGA	**Godfrey**	**87.13**	**43**	*e*P	**P**	**11 45 47.1**	**-0.1**
	comp=Z,171nm,1.9s						
GOGA	**Godfrey**	**87.13**	**43**	*e*P	**P**	**11 45 47.1**	**-0.1**
GOGA				pmax	pmax		
	comp=Z,171nm,1.9s						
Y54A	**Tignall**	**87.14**	**42**	P	**P**	**11 45 47.2**	**-0.1**
	baz=325,SNR=35						
Z53A	**Monticello**	**87.19**	**43**	P	**P**	**11 45 47.3**	**-0.2**
	baz=325,SNR=9.6						
251A	**Midway**	**87.25**	**45**	P	**P**	**11 45 48.0**	**+0.2**
	baz=324,SNR=5.4						
350A	**Dozier**	**87.32**	**46**	P	**P**	**11 45 48.7**	**+0.5**
	baz=324						
449A	**Pace**	**87.39**	**47**	P	**P**	**11 45 48.7**	**+0.2**
	baz=323						
JSC	**Jenkinsville**	**87.46**	**41**	*e*P	**P**	**11 45 48.4**	**-0.4**
	comp=Z,28nm,1.0s						
JSC	**Jenkinsville**	**87.46**	**41**	*e*P	**P**	**11 45 48.4**	**-0.4**
JSC				pmax	pmax		
	comp=Z,28nm,1.0s						
DGAR	**Diego Garcia**	**87.53**	**257**	*i* P	**P**	**11 45 47.9**	**-1.4**
CEL	**Celeste**	**87.57**	**326**	*e*P	**P**	**11 45 47.9**	**-1.5**
	comp=Z,78nm,1.3s						
153A	**Fort Valley**	**87.58**	**44**	P	**P**	**11 45 49.7**	**+0.3**
	baz=325						
Z54A	**Sparta**	**87.58**	**43**	P	**P**	**11 45 49.6**	**+0.2**
	baz=325						
252A	**Lumpkin**	**87.66**	**45**	P	**P**	**11 45 49.8**	**0.0**
	baz=324,SNR=5.1						
450A	**Crestview**	**87.68**	**47**	P	**P**	**11 45 50.1**	**+0.2**
	baz=324						
351A	**Pinckard**	**87.81**	**46**	P	**P**	**11 45 51.0**	**+0.5**
	baz=324						
253A	**Americus**	**87.91**	**44**	P	**P**	**11 45 51.4**	**+0.4**
	baz=325,SNR=6.7						
253A	**Americus**	**87.91**	**44**	*e*P	**P**	**11 45 50.9**	**-0.1**
	comp=Z,131nm,1.1s						
Z55A	**Blythe**	**87.93**	**42**	P	**P**	**11 45 51.3**	**+0.2**
	baz=326						
154A	**Montrose**	**87.96**	**43**	P	**P**	**11 45 51.2**	**0.0**
	baz=325,SNR=6.2						
154A	**Montrose**	**87.96**	**43**	*e*P	**P**	**11 45 50.9**	**-0.3**
	comp=Z,151nm,1.0s						
352A	**Blakely**	**87.98**	**45**	P	**P**	**11 45 51.5**	**+0.2**
	baz=324,SNR=7.3						
352A	**Blakely**	**87.98**	**45**	*e*P	**P**	**11 45 50.8**	**-0.5**
	comp=Z,112nm,0.9s						
CNNC	**Cliffs of the**	**88.18**	**38**	P	**P**	**11 45 52.7**	**+0.5**
	baz=328						
155A	**Kite**	**88.26**	**43**	P	**P**	**11 45 52.6**	**-0.1**
	baz=326,SNR=7.2						
451A	**Vernon**	**88.26**	**46**	P	**P**	**11 45 53.9**	**+1.2**
	baz=324						
452A	**Marianna**	**88.36**	**46**	P	**P**	**11 45 52.9**	**-0.3**
	baz=324						
254A	**Abbeville**	**88.42**	**44**	P	**P**	**11 45 52.7**	**-0.7**
	baz=325,SNR=18						
353A	**Camilla**	**88.44**	**45**	P	**P**	**11 45 53.7**	**+0.2**
	baz=325,SNR=16						
TIGA	**Tifton**	**88.68**	**44**	P	**P**	**11 45 54.6**	**-0.1**
	baz=325						
TIGA	**Tifton**	**88.68**	**44**	*e*P	**P**	**11 45 54.2**	**-0.4**
	comp=Z,312nm,1.6s						
156A	**Sylvania**	**88.70**	**42**	P	**P**	**11 45 54.5**	**-0.2**
	baz=326						
453A	**Whigham**	**88.79**	**45**	P	**P**	**11 45 54.5**	**-0.6**
	baz=325						
VAE	**Valguarnera**	**88.83**	**327**	LR	LR	12 29 35.9	
	comp=Z,6µm,19.3s,baz=1.0,slow=38						
255A	**Hazlehurst**	**88.83**	**43**	P	**P**	**11 45 54.8**	**-0.5**
	baz=326						
NHSC	**New Hope**	**88.94**	**41**	P	**P**	**11 45 55.2**	**-0.6**
	baz=327						
256A	**Glennville**	**89.07**	**43**	P	**P**	**11 45 56.0**	**-0.4**
	baz=326						
355A	**Pearson**	**89.12**	**44**	P	**P**	**11 45 56.4**	**-0.3**
	baz=325						
CLTB	**Caltabellotta**	**89.19**	**328**	*e*P	**P**	**11 45 56.7**	**-0.3**
	comp=Z,57nm,1.7s						
454A	**Quitman**	**89.25**	**45**	P	**P**	**11 45 57.1**	**-0.2**
	baz=325						
553A	**Crawfordville**	**89.28**	**46**	P	**P**	**11 45 57.2**	**-0.2**
	baz=325						
455A	**Stateville**	**89.53**	**44**	P	**P**	**11 45 58.5**	**-0.1**
	baz=325						
554A	**Perry**	**89.74**	**45**	P	**P**	**11 45 58.8**	**-0.8**
	baz=325						
456A	**Hilliard**	**90.03**	**44**	P	**P**	**11 46 00.2**	**-0.7**
	baz=326						
555A	**McAlpin**	**90.06**	**45**	P	**P**	**11 46 00.7**	**-0.4**
	baz=325						
OXZ	**Oxford**	**90.25**	**165**	*e*P	**P**	**11 46 01.7**	**+0.3**
	comp=Z,132nm,0.8s						
556A	**Lake Butler**	**90.44**	**44**	P	**P**	**11 46 02.6**	**-0.2**
	baz=326,SNR=6.2						
RPZ	**Rata Peaks**	**90.46**	**166**	P	**P**	**11 46 05.5**	**+3.1**
	comp=Z,20nm,0.8s,baz=67,slow=7.9						
RPZ	**Rata Peaks**	**90.46**	**166**	*e*P	**P**	**11 46 02.9**	**+0.5**
	comp=Z,50nm,0.9s						
557A	**Orange Park**	**90.76**	**44**	P	**P**	**11 46 04.7**	**+0.4**
	baz=326						
656A	**Willston**	**90.89**	**45**	P	**P**	**11 46 05.2**	**+0.2**
	baz=326						
LBZ	**Lake Benmore**	**90.96**	**167**	*e*P	**P**	**11 46 06.3**	**+1.6**
	comp=Z,85nm,1.0s						
PBRG	**Braganca**	**90.98**	**344**	*e*P	**P**	**11 46 04.5**	**-0.8**
	comp=Z,36nm,1.7s						
657A	**Interlachen**	**91.05**	**44**	P	**P**	**11 46 04.8**	**-0.9**
	baz=326						
PGAV	**Gavieira, Arco**	**91.12**	**345**	*e*P	**P**	**11 46 03.6**	**-2.4**
	comp=Z,58nm,1.6s						
PGAV	**Gavieira, Arco**	**91.12**	**345**	*e*PP	PP	11 49 44.6	+2.7
PGAV				*e*S	**S**	**11 56 53.9**	**-7.2**
PGAV	**Gavieira, Arco**	**91.12**	**345**	*e*LR	LR	12 22 36.3	
	comp=Z,4µm,18.0s						
DAMY	**Dhamar**	**91.25**	**292**	*e*P	**P**	**11 46 09.5**	**+2.3**
	comp=Z,110nm,1.6s						
PCAB	**Cabril**	**91.32**	**345**	*e*P	**P**	**11 46 06.2**	**-0.6**
	comp=Z,50nm,1.7s						
POLO	**Lamas de Olo**	**91.60**	**344**	*e*P	**P**	**11 46 07.6**	**-0.6**
	comp=Z,26nm,1.4s						
POLO	**Lamas de Olo**	**91.60**	**344**	*e*S	**S**	**11 57 08.1**	**+2.6**
MVO	**Moncorvo**	**91.66**	**344**	*e*P	**P**	**11 46 07.5**	**-1.0**
	comp=Z,43nm,1.4s						
MVO	**Moncorvo**	**91.66**	**344**	*e*PP	PP	11 49 49.3	+3.2
MVO				*e*S	**S**	**11 57 06.6**	**+0.6**
MVO	**Moncorvo**	**91.66**	**344**	*e*LR	LR	12 19 04.3	
	comp=Z,4µm,20.0s						
PVRL	**Vila Real**	**91.68**	**344**	*e*P	**P**	**11 46 07.6**	**-0.9**
	comp=Z,61nm,1.4s						
KEST	**Kesra**	**92.24**	**330**	P	**P**	**11 46 11.2**	**0.0**
	comp=Z,46nm,0.9s,baz=312,slow=2.7,SNR=41						
KEST				LR	LR	12 31 58.3	
	comp=Z,6µm,19.9s,baz=332,slow=38						
KEST	**Kesra**	**92.24**	**330**	*e*P	**P**	**11 46 11.3**	**0.0**
	comp=Z,66nm,1.0s						
PVIS	**Viseu**	**92.26**	**344**	*e*P	**P**	**11 46 10.6**	**-0.6**
	comp=Z,48nm,1.5s						
ES19	**SONSECA Array**	**92.40**	**341**	*e*P	**P**	**11 46 10.8**	**-1.1**
ESDC	**Sonseca Array**	**92.44**	**341**	P	**P**	**11 46 10.8**	**-1.3**
	comp=Z,15nm,1.1s,baz=10,slow=4.2,SNR=38						
ESDC				PKKPbc	**PKKPbc**	**12 03 29.8**	**+5.8**
	comp=Z,0.1nm,0.2s,baz=193,slow=2.8,SNR=2.4						
ESDC				LR	LR	12 33 49.5	
	comp=Z,4µm,18.9s,baz=25,slow=40						
ESLA	**Sonseca Array**	**92.44**	**341**	*e*P	**P**	**11 46 11.8**	**-0.3**
	comp=Z,17nm,1.1s						
MTE	**Manteigas**	**92.50**	**344**	*e*P	**P**	**11 46 11.9**	**-0.5**
	comp=Z,59nm,1.1s						
MTE	**Manteigas**	**92.50**	**344**	*e*PP	PP	11 49 57.1	+4.4
MTE				*e*S	S	11 57 03.4	-10
MTE	**Manteigas**	**92.50**	**344**	*e*LR	LR	12 19 27.0	
	comp=Z,4µm,18.0s						
MTE	**Manteigas**	**92.50**	**344**	*e*P	**P**	**11 46 11.4**	**-0.9**
	comp=Z,36nm,1.0s						
THTN	**Thala**	**92.62**	**330**	*e*P	**P**	**11 46 13.3**	**+0.2**
	comp=Z,95nm,1.4s						
PAB	**San Pablo**	**92.65**	**341**	*e*P	**P**	**11 46 12.7**	**-0.4**
	comp=Z,15nm,1.1s						
PAB	**San Pablo**	**92.65**	**341**	*e*P	**P**	**11 46 12.7**	**-0.4**
PAB				pmax	pmax		
	comp=Z,15nm,1.1s						
COI	**Coimbra**	**92.85**	**345**	*e*P	**P**	**11 46 13.5**	**-0.4**
	comp=Z,75nm,1.6s						
PCAS	**Casmilo, Conde**	**93.02**	**345**	*e*P	**P**	**11 46 13.9**	**-0.8**
	comp=Z,68nm,1.7s						
PCAS	**Casmilo, Conde**	**93.02**	**345**	*e*S	**S**	**11 57 20.6**	**+2.6**
PCBR	**Castelo Branco**	**93.03**	**344**	*e*P	**P**	**11 46 13.3**	**-1.4**
	comp=Z,33nm,1.8s						
PMRV	**Marv??o**	**93.41**	**344**	*e*P	**P**	**11 46 16.5**	**0.0**
	comp=Z,30nm,1.7s						
PMRV	**Marv??o**	**93.41**	**344**	*e*PP	PP	11 50 05.9	+6.1
PMRV				*e*S	S	11 57 06.5	-15
PMRV	**Marv??o**	**93.41**	**344**	*e*LR	LR	12 25 29.8	
	comp=Z,4µm,20.0s						
PTOM	**Tomar**	**93.42**	**345**	*e*P	**P**	**11 46 16.2**	**-0.3**
	comp=Z,42nm,1.6s						
EMHD	**Djebel Mahouad**	**93.89**	**335**	P	**P**	**11 46 19.0**	**+0.1**
ALMR	**Almeirim**	**93.90**	**345**	*e*P	**P**	**11 46 17.6**	**-1.1**
ALMR				AMS	AMS	12 32 49.5	
	comp=Z,5µm,15.8s						
ALMR	**Almeirim**	**93.90**	**345**	*e*P	**P**	**11 46 17.6**	**-1.1**
	comp=Z,67nm,1.1s						
ALMR	**Almeirim**	**93.90**	**345**	*e*P	**P**	**11 46 17.6**	**-1.1**
PMTG	**Montargil**	**93.92**	**344**	*e*P	**P**	**11 46 17.7**	**-1.1**
	comp=Z,27nm,1.3s						
PMTG	**Montargil**	**93.92**	**344**	*e*S	**S**	**11 57 31.3**	**+5.4**
PESTR	**Estremoz**	**93.99**	**344**	*e*P	**P**	**11 46 18.0**	**-1.2**
	comp=Z,25nm,1.7s						
PESTR	**Estremoz**	**93.99**	**344**	*e*S	**S**	**11 57 29.0**	**+2.4**
PESTR	**Estremoz**	**93.99**	**344**	*e*P	**P**	**11 46 17.8**	**-1.4**
	comp=Z,10nm,1.1s						
PMAFR	**Mafra**	**94.22**	**345**	*e*P	**P**	**11 46 23.9**	**+3.7**
PMAFR	**Mafra**	**94.22**	**345**	*e*S	**S**	**11 57 33.0**	**+4.4**
EVO	**Evora**	**94.39**	**344**	*e*P	**P**	**11 46 20.3**	**-0.7**
	comp=Z,24nm,1.5s						
LIS	**Lisbon**	**94.43**	**345**	*e*P	**P**	**11 46 20.1**	**-1.1**
LIS				AMS	AMS	12 34 15.4	
	comp=N,6µm,17.8s						
LIS	**Lisbon**	**94.43**	**345**	*e*P	**P**	**11 46 20.1**	**-1.1**
ATD	**Arta Tunnel**	**94.50**	**291**	P	**P**	**11 46 23.2**	**+1.3**
	comp=N,17nm,0.8s,baz=51,slow=13,SNR=5.8						
ATD				LR	LR	12 34 35.9	
	comp=N,3µm,18.4s,baz=29,slow=39						
PBAR	**Barrancos**	**94.55**	**343**	*e*P	**P**	**11 46 20.8**	**-0.9**
	comp=N,43nm,1.4s						
EANR	**’Ain N’Sour**	**94.67**	**336**	P	**P**	**11 46 22.0**	**-0.4**
PBEJ	**Beja**	**94.86**	**344**	*e*P	**P**	**11 46 23.5**	**+0.4**
	comp=N,29nm,1.3s						
PNCL	**Nicolau / Gran**	**94.90**	**344**	*e*P	**P**	**11 46 22.5**	**-0.8**
	comp=N,23nm,1.2s						
PNCL	**Nicolau / Gran**	**94.90**	**344**	*e*S	**S**	**11 57 36.0**	**+1.5**
MESJ	**Messejana**	**95.11**	**344**	*e*P	**P**	**11 46 23.2**	**-1.0**
MESJ				*e*SKS	**SKSac**	**11 56 58.0**	**+1.0**
MESJ				AMS	AMS	12 34 27.4	
	comp=N,4µm,23.4s						
MESJ	**Messejana**	**95.11**	**344**	*e*P	**P**	**11 46 23.6**	**-0.7**
	comp=N,38nm,1.5s						
MESJ	**Messejana**	**95.11**	**344**	*e*P	**P**	**11 46 23.2**	**-1.0**
MESJ				*e*		11 56 58.0	
ETRT	**Tiaret**	**95.13**	**336**	P	**P**	**11 46 25.0**	**+0.4**
PCVE	**Castro Verde**	**95.27**	**344**	*e*P	**P**	**11 46 24.5**	**-0.5**
	comp=N,40nm,1.3s						
PCVE	**Castro Verde**	**95.27**	**344**	*e*S	**S**	**11 57 37.5**	**-0.3**
RKT	**Rikitea**	**95.42**	**117**	*e*SKSac	**SKSac**	**11 57 00.0**	**+1.3**
	comp=N,1µm,30.5s						
RKT				*e*SP	**SP**	**11 59 10.2**	**+13**
	comp=N,1µm,30.2s						
RKT				*e*SS	**SS**	**12 04 08.7**	**+0.7**
	comp=N,1µm,25.5s						
RKT	**Rikitea**	**95.42**	**117**	*e*LR	LR	12 17 12.8	
	comp=N,4µm,31.5s,baz=318						
PVAQ	**Vaqueiros**	**95.43**	**343**	*e*P	**P**	**11 46 25.0**	**-0.8**
	comp=N,26nm,1.5s						
PVAQ	**Vaqueiros**	**95.43**	**343**	*e*PP	PP	11 50 19.6	+4.1
PVAQ				*e*S	S	11 57 15.8	-23
PVAQ	**Vaqueiros**	**95.43**	**343**	*e*LR	LR	12 25 39.7	
	comp=N,4µm,20.0s						
PBDV	**Barranco-do-Ve**	**95.62**	**344**	*e*P	**P**	**11 46 26.4**	**-0.3**
	comp=N,35nm,2.0s						
PBDV	**Barranco-do-Ve**	**95.62**	**344**	*e*S	S	11 57 16.2	-25
MORF	**Marmelete**	**95.70**	**344**	*e*P	**P**	**11 46 26.0**	**-1.2**
MORF				*e*SKS	**SKSac**	**11 57 01.4**	**+1.1**
MORF				AMS	AMS	12 34 58.5	
	comp=E,4µm,16.9s						
MORF	**Marmelete**	**95.70**	**344**	*e*P	**P**	**11 46 26.5**	**-0.6**
	comp=E,51nm,2.0s						
MORF	**Marmelete**	**95.70**	**344**	*e*S	**SKSac**	**11 57 07.4**	**+7.0**
MORF	**Marmelete**	**95.70**	**344**	*e*P	**P**	**11 46 25.9**	**-1.2**
MORF				*e*		11 57 01.4	
PFVI	**Vila Bisbo**	**95.91**	**344**	*e*S	S	11 57 21.6	-22
PGRA	**Graciosa**	**95.93**	**360**	*e*P	**P**	**11 46 27.3**	**-0.7**
	comp=E,40nm,0.8s						
ROSA	**Rosais**	**96.24**	**360**	*e*P	**P**	**11 46 28.9**	**-0.5**
	comp=E,53nm,1.1s						
PCED	**Cedros**	**96.33**	**0**	*e*P	**P**	**11 46 29.6**	**-0.2**
	comp=E,48nm,0.9s						
PSET	**Sete Cidades**	**97.09**	**358**	*e*P	**P**	**11 46 32.6**	**-0.8**
	comp=E,92nm,1.0s						
CMLA	**Cha da Macela**	**97.15**	**358**	*e*P	**P**	**11 46 33.6**	**0.0**
	comp=E,27nm,0.4s						
PSMN	**Pico do Norte,**	**97.89**	**357**	*e*P	**P**	**11 46 36.4**	**-0.5**
	comp=E,67nm,0.9s						
MDT	**Midelt**	**99.14**	**340**	P	**Pdif**	**11 46 41.4**	**-1.4**
	comp=E,2.0nm,0.8s,baz=316,slow=6.7,SNR=3.9						

MDT				LR	LR	12 37 46.6	
	comp=E,3µm,20.2s,baz=35,slow=39						
PMOZ	Porto Moniz, M	101.44	350	eP	Pdif	11 46 53.4	+0.4
PMOZ	Porto Moniz, M	101.44	350	ePP	PP	11 51 03.8	+2.2
PMOZ				eS	SKSac	11 57 24.5	-5.0
PMOZ	Porto Moniz, M	101.44	350	eLR	LR	12 23 55.3	
	comp=E,2µm,20.0s						
SDV	Santo Domingo	114.08	46	PKP	PKPdf	11 51 42.1	+1.2
	comp=E,1.6nm,0.4s,baz=12,slow=9.3,SNR=2.3						
TOA0	Torodi Ar. Sit	115.59	327	ePKPdf	PKPdf	11 51 42.3	-1.3
TORD	Torodi Ar. Bea	115.59	327	PKP	PKPdf	11 51 41.7	-1.9
	comp=E,0.8nm,0.4s,baz=12,slow=2.4						
KOWA	Kowa	116.34	333	PKP	PKPdf	11 51 44.2	-0.8
	comp=E,4.9nm,0.8s,baz=357,slow=5.3,SNR=6.6						
KOWA	Kowa	116.34	333	ePKPdf	PKPdf	11 51 44.6	-0.4
VNDA	Vanda	122.84	177	PKP	PKPdf	11 51 54.5	-1.1
	comp=E,1.2nm,0.7s,baz=320,slow=4.8,SNR=11						
VNDA				PKKPbc	PKKPbc	12 01 49.6	+0.4
	comp=E,1.9nm,0.8s,baz=236,slow=3.6,SNR=12						
VNDA	Vanda	122.84	177	ePKPdf	PKPdf	11 51 55.3	-0.3
VNDA				PKKPbc	PKKPbc	12 01 49.6	+0.4
SBA	Scott Base	123.36	176	ePKPdf	PKPdf	11 51 56.5	-0.1
SBA	Scott Base	123.36	176	ePKIKP	PKPdf	11 51 56.5	-0.1
DBIC	Dimbokro	123.94	331	PKP	PKPdf	11 51 59.2	-0.5
	comp=E,7.6nm,0.7s,baz=65,slow=3.4,SNR=6.9						
DBIC	Dimbokro	123.94	331	ePKPdf	PKPdf	11 51 59.4	-0.3
TIC	Toumodi	124.02	331	ePKIKP	PKPdf	11 51 59.4	-0.5
KIC	Kosan Boka	124.19	331	ePKIKP	PKPdf	11 51 59.2	-1.0
	comp=E,39nm,1.0s						
LIC	Lamto	124.42	331	ePKIKP	PKPdf	11 51 59.3	-1.3
	comp=E,65nm,1.1s						
PTGA	Pitinga	127.62	41	PKP	PKPdf	11 52 06.5	-0.2
	comp=E,6.3nm,0.7s,baz=320,slow=0.6,SNR=9.0						
PTGA	Pitinga	127.62	41	ePKPdf	PKPdf	11 52 06.7	0.0
MAW	Mawson	130.45	210	PKP	PKPdf	11 52 11.0	+0.7
	comp=E,3.1nm,0.9s,baz=44,slow=7.0,SNR=4.5						
MAW	Mawson	130.45	210	ePKPdf	PKPdf	11 52 11.5	+1.2
MAW	Mawson	130.45	210	PKIKP	PKPdf	11 52 11.0	+0.7
MAW				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BOSA	Boshof	134.70	273	PKP	PKPdf	11 52 20.1	+0.3
	comp=Z,2.5nm,0.7s,baz=323,slow=0.8,SNR=3.9						
BOSA				PP	PP	11 54 52.5	-1.4
	comp=Z,4.0nm,0.8s,baz=50,slow=5.6,SNR=3.2						
QSPA	South Pole Qui	135.16	180	PKhKP	PKPpre	11 52 10.8	
	comp=Z,1.8nm,0.8s,baz=277,slow=1.9,SNR=4.2						
QSPA				PKP	PKPdf	11 52 20.0	+0.6
	comp=Z,3.2nm,0.6s,baz=312,slow=1.6,SNR=8.1						
QSPA	South Pole Qui	135.16	180	PKPpre	PKPpre	11 52 10.8	
QSPA				ePKPdf	PKiKP	11 52 20.4	-0.4
LPAZ	La Paz	136.02	62	PKP	PKPdf	11 52 24.4	+1.1
	comp=Z,3.6nm,0.8s,baz=353,slow=2.2,SNR=14						
LPAZ	La Paz	136.02	62	ePKPdf	PKPdf	11 52 24.5	+1.3
MNMC	Minye Minye	137.22	66	ePKPdf	PKPdf	11 52 24.8	-0.1
PB01	IPOC Station P	138.66	68	ePKPdf	PKPdf	11 52 28.0	+0.7
SIV	San Ignacio	139.99	53	PKhKP	PKPpre	11 52 21.5	
	comp=Z,1.9nm,0.8s,baz=292,slow=5.4,SNR=6.4						
SIV				PKP	PKPdf	11 52 29.9	+0.1
	comp=Z,3.6nm,0.7s,baz=3.5,slow=1.3,SNR=9.5						
SIV				PP	PP	11 55 29.7	+3.4
	comp=Z,1.8nm,0.7s,baz=358,slow=7.4,SNR=3.0						
ROC1	El Roble	145.25	84	ePKPbc	PKPbc	11 52 38.5	-0.3
PEL	Peldehue	145.58	84	ePKPdf	PKPdf	11 52 38.5	-0.7
PEL	Peldehue	145.58	84	ePKIKP	PKPdf	11 52 38.5	-0.7
GO05	HualaæØ	145.70	88	ePKPdf	PKPdf	11 52 38.5	-0.9
NVL	N'lazarevskaya	147.93	204	⇑iPKP2	PKPbc	11 52 45.5	+0.5
PLCA	Paso Flores	149.27	96	PKPbc	PKPbc	11 52 49.0	-0.5
	comp=Z,13nm,0.8s,baz=307,slow=2.3,SNR=25						
PLCA	Paso Flores	149.27	96	ePKPbc	PKPbc	11 52 48.8	-0.6
CPUP	Villa Florida	150.17	60	PKPbc	PKPbc	11 52 51.1	-0.9
	comp=Z,16nm,0.8s,baz=309,slow=3.3,SNR=25						
CPUP	Villa Florida	150.17	60	ePKPbc	PKPbc	11 52 51.5	-0.5
SNAA	Sanae	150.94	196	PKiKP	PKPbc	11 52 52.0	-0.6
SNAA	Sanae	150.94	196	PKP	PKPdf	11 52 47.6	+0.8
SNAA	Sanae	150.94	196	PKP	PKPdf	11 52 47.1	+0.3
	comp=Z,6.4nm,0.8s,baz=164,slow=2.7,SNR=4.0						
SNAA				PKPbc	PKPbc	11 52 51.4	-1.1
	comp=Z,14nm,0.8s,baz=132,slow=1.6,SNR=27						
SNAA	Sanae	150.94	196	ePKPbc	PKPbc	11 52 51.6	-1.0
VNA3	Neumayer Olymp	152.53	193	PKiKP	PKiKP	11 52 56.5	+0.2
VNA3	Neumayer Olymp	152.53	193	PKP	PKPdf	11 52 49.9	+0.8
VNA1	Neumayer--Stat	152.80	195	PKiKP	PKPbc	11 52 56.4	-0.2
VNA1	Neumayer--Stat	152.80	195	PKP	PKPdf	11 52 50.3	+0.8

*CSEM **08** 11:42:39.7±0.2, 36°68N×29°24E, h2^{km}, ML2.4, Error ellipse: s-maj=4.9km s-min=3.6km az=26.0, Suspected Mining explosion.*

*DDA **08** 11:42:39.1, 36°70N×29°24E, h7^{km}, Md2.6, Suspected Mining explosion.*

*ISK **08** 11:42:39.0, 36°67N×29°24E, h5^{km}, ML2.4/4*

*ISCJB **08** 11:42:40.0±0.6, 36°69N±0°03×29°23E±0°03, h0^{km}, Error ellipse: s-maj=4.7km s-min=3.6km az=176.1*

ISC 08 11:42:39.2±0.9, **36°69N**±0°03×**29°25E**±0°02, **h0**^{km}**, n20,** σ**0**^{s}**90**/32**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FETY	Fethiye	0.14	249	PG	Pg	11 42 42.3	+0.3
FETY				SG	Sg	11 42 44.8	+0.9
FETY	Fethiye	0.14	249	P	Pg	11 42 42.2	+0.3
FETY				S	Sg	11 42 44.9	+1.0
DALY	Dalyan (Mu˜la	0.50	285	PG	Pg	11 42 49.5	+0.7
DALY				SG	Sb	11 42 57.4	-1.3
DALY	Dalyan (Mu˜la	0.50	285	i P	Pg	11 42 48.8	+0.1
DALY				i S	Sb	11 42 57.2	-1.5
DALY	Dalyan (Mu˜la	0.50	285	P	Pg	11 42 48.8	+0.1
DALY	Dalyan (Mu˜la	0.50	285	ePg	Pg	11 42 49.5	+0.7
DALY				S	Sb	11 42 57.2	-1.5
ELL	Elmali	0.53	83	PG	Pg	11 42 50.0	+0.6
ELL				SG	Sb	11 42 58.9	-0.8
ELL	Elmali	0.53	83	ePg	Pg	11 42 50.0	+0.6
ELL				eSg	Sb	11 42 58.9	-0.8
AKAS	Kas	0.54	148	PG	Pg	11 42 50.3	+0.8
AKAS				SG	Sb	11 42 58.4	-1.4
AKAS	Kas	0.54	148	i P	Pg	11 42 49.7	+0.3
AKAS				i S	Sb	11 42 58.5	-1.4
AKAS	Kas	0.54	148	P	Pg	11 42 49.7	+0.3
AKAS	Kas	0.54	148	ePg	Pg	11 42 50.3	+0.8
AKAS				S	Sb	11 42 58.5	-1.4
GOLH	Golhisar	0.60	24	i P	Pg	11 42 50.8	+0.1
GOLH				i S	Sb	11 43 00.9	-0.9
GOLH	Golhisar	0.60	24	P	Pg	11 42 50.8	+0.1
GOLH				S	Sb	11 43 00.9	-0.9
TAVA	DENIZLI_Tavas	0.82	341	i P	Pg	11 42 49.4	-5.6
TAVA				i S	Sg	11 43 06.8	+1.1
TAVA	DENIZLI_Tavas	0.82	341	P	Pg	11 42 49.3	-5.7
TAVA				S	Sg	11 43 06.8	+1.1
KORT	Korkueli	0.94	70	i S	Sn	11 43 13.4	-0.5
KORT	Korkueli	0.94	70	S	Sn	11 43 13.4	-0.5
DAT	Datca	1.35	272	PN	Pn	11 43 05.6	+0.2
DAT	Datca	1.35	272	ePn	Pn	11 43 05.6	+0.2

*IDC **08** 11:47:12.9±0.6, 45°40N×151°38E, h0^{km}, mb4.1/26, mb1 4.2/30, mb1mx4.0/78, mbtmp4.1/30, ML5.4/1, MS4.8/1, Ms1 4.8/1, ms1mx3.7/81, Error ellipse: s-maj=15.6km s-min=14.2km az=138.0*

*NEIC **08** 11:47:15.6±0.4, 45°41N×151°10E, h10^{km}, mb4.9/14, Error ellipse: s-maj=10.6km s-min=6.6km az=139.0*

*SKHL **08** 11:47:16.7±0.3, 45°18N×151°60E, h43^{km}±7^{km}, mb5.2/8*

*JMA **08** 11:47:16.8±0.6, 45°49N×151°47E, h30^{km}, M4.7*

*ISCJB **08** 11:47:17.4±0.6, 45°41N±0°04×151°28E±0°05, h35^{km}±4^{km}, mb4.4/65, MS5.8/2, Error ellipse: s-maj=9.0km s-min=3.5km az=140.5*

*MOS **08** 11:47:18.4±0.9, 45°45N×151°22E, h44^{km}, mb4.8/18, Error ellipse: s-maj=7.3km s-min=5.6km az=100.0*

*BJI **08** 11:47:19.3, 45°70N×150°80E, h10^{km}, mb4.7/33, mB4.9/7, Ms5.1/5, Ms7 5.0/5*

ISC 08 11:47:15.7±0.7, **45°29N**±0°06×**151°45E**±0°05, **h18**^{km}±3^{km}, **n264,** σ**1**^{s}**79**/302, **mb4.5**/70, **20C-14D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.53	270	eP	Pn	11 47 57.0	+1.2
KUR				AMB	AMB	11 47 59.3	
	311nm,0.4s						
KUR				eS	Sn	11 48 27.0	+0.9
KUR				A	A	11 48 33.0	
	2µm,0.4s						
KUR				A	A	11 48 33.0	
	1µm,0.4s						
KUR	Kuril'sk	2.53	270	ePN	Pn	11 47 57.5	+1.7
KUR				eS	Sn	11 48 27.9	+1.8
KUR				pmax	pmax		
	comp=Z,311nm,0.3s						
KUR				pmax	pmax		
	comp=E,57nm,0.2s						
KUR				pmax	pmax		
	comp=N,108nm,0.3s						
KUR				smax	smax		
	comp=N,2µm,0.6s						
KUR				smax	smax		
	comp=E,1µm,0.3s						
SHO	Shikotan	3.59	248	eP	Pn	11 48 11.0	+0.6
SHO				AMB	AMB	11 48 14.4	
	comp=E,83nm,0.3s						
SHO				eS	Sn	11 48 52.0	-0.3
SHO				A	A	11 49 14.0	
	comp=E,222nm,0.4s						
SHO				A	A	11 49 14.0	
	comp=E,594nm,0.4s						
SHO	Shikotan	3.59	248	ePN	Pn	11 48 11.8	+1.4
SHO				eS	Sn	11 48 52.4	+0.1
SHO				pmax	pmax		
	comp=Z,83nm,0.4s						
SHO				pmax	pmax		
	comp=N,29nm,0.2s						
SHO				pmax	pmax		
	comp=E,61nm,0.5s						
SHO				smax	smax		
	comp=E,594nm,0.5s						
SHO				smax	smax		
	comp=N,222nm,0.3s						
YUK	Yuzh-Kuril'sk	4.18	255	eP	Pn	11 48 20.0	+1.5
YUK				AMB	AMB	11 48 22.0	
	comp=N,195nm,0.4s						
YUK				eS	Sn	11 49 08.0	+1.3
YUK				A	A	11 49 23.0	
	comp=N,260nm,0.4s						
YUK				A	A	11 49 23.0	
	comp=N,1µm,0.4s						
YUK	Yuzh-Kuril'sk	4.18	255	ePN	Pn	11 48 20.8	+2.3
YUK				eS	Sn	11 49 08.1	+1.3
YUK				pmax	pmax		
	comp=Z,195nm,0.2s						
YUK				pmax	pmax		
	comp=N,20nm,0.1s						
YUK				pmax	pmax		
	comp=E,67nm,0.3s						
YUK				smax	smax		
	comp=E,1µm,0.5s						
YUK				smax	smax		
	comp=N,260nm,0.3s						
LAGR	Lagunnoye	4.22	255	eP	Pn	11 48 20.0	+0.9
LAGR				AMB	AMB	11 48 28.0	
	comp=N,298nm,0.4s						
LAGR				AMB	AMB	11 48 28.0	
	comp=N,189nm,0.4s						
LAGR				eS	Sn	11 49 09.0	+1.2
LAGR				A	A	11 49 35.0	
	comp=N,2µm,0.5s						
LAGR				A	A	11 49 35.0	
	comp=N,527nm,0.5s						
LAGR	Lagunnoye	4.22	255	ePN	Pn	11 48 20.8	+1.7
LAGR				eS	Sn	11 49 09.1	+1.2
LAGR				pmax	pmax		
	comp=E,298nm,0.3s						
LAGR				pmax	pmax		
	comp=Z,189nm,0.3s						
LAGR				pmax	pmax		
	comp=N,93nm,0.2s						
LAGR				smax	smax		
	comp=N,2µm,0.6s						
LAGR				smax	smax		
	comp=E,527nm,0.5s						
GRPR	Tuman	4.25	254	eP	Pn	11 48 22.0	+2.5
GRPR				AMB	AMB	11 48 30.0	
	comp=E,221nm,0.4s						
GRPR				AMB	AMB	11 48 30.0	
	comp=E,226nm,0.4s						
GRPR				eS	Sn	11 49 10.0	+1.4
GRPR				A	A	11 49 28.0	
	comp=E,1µm,0.5s						
GRPR				A	A	11 49 28.0	
	comp=E,688nm,0.5s						
GRPR	Tuman	4.25	254	ePN	Pn	11 48 22.6	+3.1
GRPR				eS	Sn	11 49 10.4	+1.8
GRPR				pmax	pmax		
	comp=N,221nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,226nm,0.3s						
GRPR				pmax	pmax		
	comp=E,88nm,0.4s						
GRPR				smax	smax		
	comp=E,688nm,0.5s						
GRPR				smax	smax		
	comp=N,1µm,0.6s						
GLVR	Golovnino	4.51	252	eP	Pn	11 48 24.0	+0.9
GLVR				AMB	AMB	11 48 26.0	
	comp=N,313nm,0.5s						
GLVR				eS	Sn	11 49 16.0	+0.9
GLVR				A	A	11 49 41.0	
	comp=N,1µm,0.4s						
GLVR				A	A	11 49 41.0	
	comp=N,177nm,0.4s						
GLVR	Golovnino	4.51	252	ePN	Pn	11 48 24.8	+1.7
GLVR				eS	Sn	11 49 16.0	+0.9
GLVR				pmax	pmax		
	comp=Z,313nm,0.5s						
GLVR				pmax	pmax		
	comp=E,43nm,0.2s						
GLVR				pmax	pmax		
	comp=N,130nm,0.5s						
GLVR				smax	smax		
	comp=N,1µm,0.4s						
GLVR				smax	smax		
	comp=E,177nm,0.3s						
NEM2	Nemuro 2	4.52	247	P	Pn	11 48 23.6	+0.4
NEM2				eS	Sn	11 49 13.8	-1.5
JRA	Rausu	4.71	256	P	Pn	11 48 28.4	+2.6
JRA				eS	Sn	11 49 22.1	+2.1
JNK	Nakash	5.11	253	P	Pn	11 48 32.9	+1.6
JNK				eS	Sn	11 49 29.6	-0.2
JAK	Akkeshi	5.37	247	P	Pn	11 48 35.3	+0.4
JTKR	Abashiri--Toko	5.54	259	P	Pn	11 48 39.7	+2.5
JAR	Ashorobuto	5.86	253	P	Pn	11 48 43.6	+2.0
JAR				eS	Sn	11 49 49.1	+0.9
JMP	Maruseppu	5.91	260	P	Pn	11 48 45.2	+2.9
JOB	Onbets	5.98	249	P	Pn	11 48 44.8	+1.6
JOB				eS	Sn	11 49 51.3	+0.2
HRK	Horoka	6.23	256	eP	Pn	11 48 49.5	+2.7
SKR	Severo-Kuril's	6.24	28	eP	Pn	11 48 49.0	+2.2
SKR				AMB	AMB	11 48 50.5	
	comp=E,89nm,0.5s						
SKR				eS	Sn	11 49 57.3	-0.3
SKR				A	A	11 50 30.6	
	comp=E,298nm,0.6s						
SKR				A	A	11 50 30.6	
	comp=E,183nm,0.6s						
SKR	Severo-Kuril's	6.24	28	ePN	Pn	11 48 49.0	+2.2
SKR				pmax	pmax		
	comp=Z,89nm,0.5s						
SKR				MLR	MLR		
	comp=Z,9µm,10.0s						
SKR				MLR	MLR		
	comp=Z,7µm,11.0s						
YSS	Yuzh-Sakhalins	6.27	289	eP	Pn	11 48 49.6	+2.4
YSS				AMB	AMB	11 48 51.8	
	comp=Z,17nm,0.5s						
YSS	Yuzh-Sakhalins	6.27	289	ePn	Pn	11 48 43.1	-4.1
YSS	Yuzh-Sakhalins	6.27	289	ePN	Pn	11 48 45.1	-2.1
JKK2	Kamakawa 2	6.37	260	P	Pn	11 48 51.7	+3.0
ASAJ	Asahikawa	6.41	263	Pn	Pn	11 48 52.3	+3.1
	comp=Z,4.4nm,0.3s,baz=69,slow=21,SNR=50						
ASAJ				Sn	Sn	11 50 07.3	+5.3
	comp=Z,0.6nm,0.3s,baz=84,slow=19,SNR=1.1						
ASAJ	Asahikawa	6.41	263	P	Pn	11 48 52.5	+3.3
JCH	Churui	6.42	248	P	Pn	11 48 50.1	+0.8
JCH				eS	Sn	11 50 00.7	-1.3
MYR	Moyori	6.62	246	eP	Pn	11 48 53.5	+1.4
JFR	Furan	6.70	255	P	Pn	11 48 56.3	+3.1
JFR				eS	Sn	11 50 10.8	+1.7
JWK2	Keihoku	6.73	274	P	Pn	11 48 58.8	+5.2
JAB	Ashibetsu	6.84	258	P	Pn	11 48 58.9	+3.8
JEM	Erimo	6.84	244	P	Pn	11 48 57.6	+2.5
JEM				eS	Sn	11 50 13.0	+0.5
ERM	Erimo	6.84	244	eP	Pn	11 48 57.3	+2.2
ERM	Erimo	6.84	244	ePn	Pn	11 48 57.8	+2.7
ERM	Erimo	6.84	244	i PN	Pn	11 48 57.3	+2.2
JNBK	Urakawa-nobuka	6.97	248	P	Pn	11 48 57.4	+0.5
JNBK				eS	Sn	11 50 14.7	-1.0
JBT2	Biratori 2	7.01	252	P	Pn	11 48 58.6	+1.2
PAU	Pauzhetka	7.14	28	eP	Pn	11 49 02.0	+2.8
PAU				AMB	AMB	11 49 05.3	
	comp=Z,160nm,0.7s						
PAU				eS	Sn	11 50 17.7	-2.0
PAU				A	A	11 50 19.3	
	comp=Z,283nm,0.8s						
JNB	Noboribetsu	8.03	253	P	Pn	11 49 13.2	+1.8
JNB				eS	Sn	11 50 40.9	-0.8
TYV	Tymovskoe	8.11	317	eP	Pn	11 49 15.1	+2.7
TYV				AMB	AMB	11 49 17.1	
	comp=Z,16nm,1.3s						
TYV				eS	Sn	11 50 41.7	-1.8
TYV				A	A	11 50 42.7	
	comp=Z,18nm,1.7s						
TYV	Tymovskoe	8.11	317	ePN	Pn	11 49 15.1	+2.7
TYV				pmax	pmax		
	comp=Z,16nm,1.3s						
JKB	Kayabe	8.29	249	P	Pn	11 49 15.6	+0.7
JKB				eS	Sn	11 50 42.5	-5.5
JYM2	Yakumo 2	8.62	252	P	Pn	11 49 20.3	+0.7
JYM2				eS	Sn	11 50 52.8	-3.5
JSH	Shimam	8.64	256	P	Pn	11 49 22.0	+2.3
JANG	Nango	8.79	240	P	Pn	11 49 20.5	-1.4
JANG				eS	Sn	11 50 52.4	-8.1
JTM	Tenmabayashi	8.83	243	P	Pn	11 49 22.3	-0.1
JTM				eS	Sn	11 50 53.8	-7.5
PEA0B	Petropavlovsk-	8.83	25	ePn	Pn	11 49 25.1	+2.7
PETK	Petropavlovsk-	8.83	25	Pn	Pn	11 49 24.1	+1.7
	baz=188,slow=8.7						
JTH	Tanohata	8.86	236	eS	Sn	11 50 53.2	-8.8
JSR	Shiriuchi	8.86	249	P	Pn	11 49 23.3	+0.5
JSR				eS	Sn	11 50 56.5	-5.6
PET	Petropavlovsk	9.06	29	i P	Pn	11 49 27.3	+1.8
PET				i S	Sn	11 51 04.7	-2.3
PET				A	A	11 51 06.5	
	comp=Z,23nm,0.7s						
PET	Petropavlovsk	9.06	29	ePN	Pn	11 49 25.1	-0.4
PET				pmax	pmax		
	comp=Z,18nm,1.0s						
JOSM	Okushiri--Mats	9.24	254	P	Pn	11 49 28.5	+0.4
JOSM				eS	Sn	11 51 08.2	-3.3
OFUJ	Ofunato	9.54	233	P	Pn	11 49 30.9	-1.2
JRG	Rokugo	9.93	237	eS	Sn	11 51 22.4	-6.0
JIO	Ouri	10.16	231	P	Pn	11 49 40.2	-0.4
JIO				eS	Sn	11 51 25.7	-8.3
MJAR	Matsushiro Arr	13.27	233	Pn	Pn	11 50 21.8	-1.4
	comp=Z,0.2nm,0.3s,baz=31,slow=15,SNR=4.8						
MJAR				Sn	Sn	11 52 49.5	-0.7
	comp=Z,0.1nm,0.3s,baz=67,slow=19,SNR=3.0						
MAJO	Matsushiro	13.27	233	eP	Pn	11 50 26.1	+2.9
MAJO	Matsushiro	13.27	233	i PN	Pn	11 50 26.1	+2.9
USRK	Ussuriysk Ar.	13.87	272	Pn	Pn	11 50 32.2	+0.8
	baz=72,slow=12						
KLR	Kul'dur	13.94	293	eP	Pn	11 50 31.5	-0.7
KLR	Kul'dur	13.94	293	i P	Pn	11 50 31.5	-0.7
MA2	Magadan	14.32	359	Pn	Pn	11 50 38.3	+1.0
	comp=Z,1.8nm,0.3s,baz=181,slow=11,SNR=22						
MA2	Magadan	14.32	359	eP	Pn	11 50 37.8	+0.5
MA2	Magadan	14.32	359	ePn	Pn	11 50 37.4	+0.1
MA2	Magadan	14.32	359	eP	Pn	11 50 37.4	+0.1
MDJ	Mudanjiang	15.48	275	P	Pn	11 50 51.4	-1.7
MDJ				pmax	pmax		
	comp=Z,20nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,6µm,13.1s						
SEY	Seymchan	17.69	1	P	P	11 51 21.8	+0.1
	comp=Z,0.3nm,0.3s,baz=171,slow=12,SNR=9.4						
SEY	Seymchan	17.69	1	eP	Pn	11 51 20.8	-0.1
SEY	Seymchan	17.69	1	i P	Pn	11 51 20.8	-0.1
KSRS	Korea Array	19.26	254	P	P	11 51 38.8	-0.4
	comp=Z,0.3nm,0.3s,baz=59,slow=11,SNR=11						
KSRS	Korea Array	19.26	254	eP	Pn	11 51 41.2	+1.0
KSAR	Wonju Array Be	19.30	254	P	P	11 51 38.8	-0.8
KSAR	Wonju Array Be	19.30	254	P	P	11 51 38.8	-0.8
JCJ	Chichijima	19.61	205	LR	LR	11 59 16.3	
	comp=Z,3µm,19.8s,baz=126,slow=37						
JNU	Nakatsue	19.97	240	P	Pn	11 51 49.4	+0.6
	comp=Z,0.2nm,0.3s,baz=30,slow=5.3,SNR=3.6						
TJN	Taejon	20.22	252	i P	Pn	11 51 50.8	-0.8
YAK	Yakutsk	20.98	331	P	P	11 51 57.8	+0.2
	comp=Z,13nm,0.3s,baz=182,slow=1.1,SNR=4.4						
YAK	Yakutsk	20.98	331	eP	P	11 51 57.3	-0.3
YAK				pmax	pmax		
	comp=Z,15nm,0.9s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,3.0nm,1.1s						
BILL	Bilibino	24.08	14	eP	P	11 52 29.7	0.0
BILL	Bilibino	24.08	14	i P	P	11 52 29.8	0.0
BILL				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BJI	Beijing	26.32	271	P	P	11 52 52.2	+1.9
BJI				pmax	pmax		
	comp=Z,17nm,0.9s						
NJ2	Nanjing	28.46	254	eP	P	11 53 12.3	+2.7
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
H11N2	WAKE ISLAND Hy	28.52	148	T	T	12 23 56.5	
	baz=338						
H11N1	WAKE ISLAND Hy	28.53	148	T	T	12 24 00.8	
	baz=338						
H11N3	WAKE ISLAND Hy	28.54	148	T	T	12 24 01.1	
	baz=338						
TIXI	Tiksi	28.57	345	eP	P	11 53 09.8	-0.3
TIXI	Tiksi	28.57	345	i P	P	11 53 09.8	-0.3
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
HHC	Hu-ho-hao-te	29.26	276	eP	P	11 53 17.7	+1.0
HHC				pmax	pmax		
	comp=Z,21nm,1.0s						
H11S1	WAKE ISLAND Hy	29.57	150	T	T	12 25 19.2	
	baz=338,slow=76,SNR=27						
H11S3	WAKE ISLAND Hy	29.58	150	T	T	12 25 25.8	
	baz=338,slow=76,SNR=26						
H11S2	WAKE ISLAND Hy	29.59	150	T	T	12 25 23.1	
	baz=338,slow=76,SNR=36						
ULN	Ulaanbaatar	30.31	291	i P	P	11 53 24.6	-1.4
ULN				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SONM	Songino Array	30.75	291	P	P	11 53 29.1	-0.8
	comp=Z,0.8nm,0.8s,baz=90,slow=8.6,SNR=3.3						
TLY	Talaya	31.84	299	eP	P	11 53 38.6	-0.8
TLY	Talaya	31.84	299	i P	P	11 53 38.6	-0.8
TLY				pmax	pmax		
	comp=Z,2.0nm,1.1s						
LZH	Lanzhou	36.78	273	eP	P	11 54 24.0	+1.6
LZH				pP	sP	11 54 34.9	+4.6
LZH				sP	pP	11 54 38.1	+10
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
LZH				pmax	pmax		
	comp=Z,110nm,5.4s						
LZH				LR	LR		
	comp=Z,850nm,12.8s						
LZH				LR	LR		
	comp=Z,1µm,11.9s						
LZH				LR	LR		
	comp=Z,1µm,14.7s						
ILAR	Eielson Array	38.42	37	P	P	11 54 35.3	-0.5
	comp=Z,0.8nm,0.8s,baz=270,slow=9.6,SNR=7.2						
CD2	Chengdu	39.60	266	eP	P	11 54 46.0	-0.1
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,220nm,5.4s						
GYA	Guiyang	40.27	258	eP	P	11 54 53.8	+2.1
GYA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ZALV	Zalesovo Beam	42.54	307	PcP	PcP	11 57 01.6	-0.6
	comp=Z,2.0nm,0.7s,baz=88,slow=4.2,SNR=6.2						
INK	Inuvik	43.51	31	P	P	11 55 15.5	-2.1
	comp=Z,2.4nm,0.8s,baz=265,slow=11,SNR=4.0						
KMI	Kunming	43.83	260	P	P	11 55 23.2	+2.2
KMI				pmax	pmax		
	comp=Z,9.0nm,0.6s						
WMQ	Urumqi	44.38	292	P	P	11 55 25.2	+0.2

WMQ				pmax	pmax		
	comp=Z,27nm,0.7s						
WMQ				LR	LR		
	comp=Z,8µm,13.7s						
WMQ				LR	LR		
	comp=Z,9µm,14.5s						
WMQ				LR	LR		
	comp=Z,4µm,15.3s						
MK31	Makanchi Array	46.59	298	eP	P	11 55 41.4	-1.0
MK31				ePcP	PcP	11 57 16.3	+0.1
MK31	Makanchi Array	46.59	298	eP	P	11 55 41.4	-1.0
MK31				e		11 57 16.3	
MKAR	Makanchi Array	46.59	298	P	P	11 55 42.0	-0.5
	comp=Z,0.9nm,0.5s,baz=77,slow=7.9,SNR=11						
MKAR				PcP	PcP	11 57 15.4	-0.8
	comp=Z,1.2nm,0.6s,baz=69,slow=5.0,SNR=5.8						
MKAR	Makanchi Array	46.59	298	eP	P	11 55 42.7	+0.3
MKAR	Makanchi Array	46.59	298	eP	P	11 55 41.8	-0.6
	comp=Z,13nm,0.6s						
MKAR				ePcP	PcP	11 57 16.4	+0.2
MKAR	Makanchi Array	46.59	298	eP	P	11 55 41.8	-0.6
MKAR				e		11 57 16.5	
MKAR				pmax	pmax		
	comp=Z,13nm,0.6s						
MK01	Makanchi Array	46.59	298	eP	P	11 55 40.0	-2.4
MK01				ePcP	PcP	11 57 16.6	+0.4
KURK	Kurchatov	47.21	304	P	P	11 55 45.8	-1.4
KURK				PcP	PcP	11 57 18.5	+0.2
KURK	Kurchatov	47.21	304	P	P	11 55 45.8	-1.4
KURK						11 57 18.5	
KURBB	Kurchatov Arra	47.30	304	P	P	11 55 45.8	-2.1
	comp=Z,1.3nm,0.5s,baz=70,slow=8.6,SNR=5.6						
KURBB				PcP	PcP	11 57 18.5	-0.1
	comp=Z,0.3nm,0.3s,baz=59,slow=4.1,SNR=4.9						
DLBC	Dease Lake	47.45	44	P	P	11 55 51.9	+2.9
	comp=Z,1.4nm,0.8s,baz=341,slow=5.6,SNR=3.3						
HUH	Hualalai	50.20	103	eP	P	11 56 19.9	+9.1
	comp=Z,88nm,1.2s						
BVAR	Borovoye Array	50.89	310	P	P	11 56 13.8	-1.5
	comp=Z,0.4nm,0.4s,baz=71,slow=9.8,SNR=3.1						
BVAR				PcP	PcP	11 57 31.7	0.0
	comp=Z,1.8nm,0.7s,baz=77,slow=4.3,SNR=5.9						
BRVK	Borovoye	50.94	310	eP	P	11 56 14.7	-1.0
BRVK	Borovoye	50.94	310	i P	P	11 56 14.7	-1.0
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
RES	Resolute Bay	52.59	18	P	P	11 56 27.7	+0.1
	comp=Z,1.0nm,0.5s,baz=324,slow=8.7,SNR=3.6						
YKA	Yellowknife Ar	52.79	36	P	P	11 56 29.7	+0.4
	comp=Z,1.5nm,0.9s,baz=294,slow=6.8,SNR=4.9						
SPITS	Spitsbergen Ar	53.84	350	P	P	11 56 35.2	-1.7
	comp=Z,3.0nm,0.7s,baz=17,slow=10,SNR=4.2						
JIRN	Jiri	53.90	274	eP	P	11 56 39.4	+0.9
	comp=Z,34nm,0.8s						
RAMN	Ramite	54.05	274	eP	P	11 56 40.0	+0.6
	comp=Z,21nm,0.6s						
KSH	Kashi	54.14	292	P	P	11 56 43.9	+4.2
KSH				ePcP	PcP	11 57 48.5	+4.2
KSH				PP	PP	11 58 45.7	+4.6
KSH				pmax	pmax		
	comp=Z,5.0nm,0.5s						
PKIN	Phulchoki	54.51	275	eP	P	11 56 43.1	+0.3
	comp=Z,10nm,0.7s						
DMN	Daman	54.70	275	eP	P	11 56 45.1	+1.0
	comp=Z,22nm,0.9s						
GKN	Gorkha	54.79	276	eP	P	11 56 46.2	+1.6
	comp=Z,16nm,0.5s						
DANN	Dangsing	55.19	277	eP	P	11 56 48.8	+1.1
	comp=Z,25nm,0.6s						
ARU	Arti	55.31	318	P	P	11 56 46.1	-1.7
	comp=Z,2.4nm,0.4s,baz=68,slow=2.8,SNR=4.2						
ARU	Arti	55.31	318	c iP	P	11 56 46.0	-1.8
ARU						11 57 44.1	
ARU				S	S	12 04 27.7	-2.9
ARU				SS	SS	12 08 08.2	-6.1
ARU				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KOLN	Koldanda	55.66	276	eP	P	11 56 51.9	+0.9
	comp=Z,12nm,0.7s						
KK31	Karatay Array	55.69	299	eP	P	11 56 50.0	-0.8
KK31	Karatay Array	55.69	299	eP	P	11 56 50.0	-0.8
KKAR	Karatay Array	55.69	299	eP	P	11 56 50.1	-0.7
KKAR	Karatay Array	55.69	299	eP	P	11 56 50.1	-0.7
ABKAR	Akbulak array	58.47	310	eP	P	11 57 09.9	-0.4
AKTO	Aktyubinsk	58.83	312	P	P	11 57 12.1	-0.8
	comp=Z,1.3nm,0.5s,baz=50,slow=5.6,SNR=5.1						
KBL	Kabul	61.52	291	eP	P	11 57 30.9	-0.9
	comp=Z,11nm,0.7s						
KBL	Kabul	61.52	291	eP	P	11 57 30.9	-0.9
KBL				pmax	pmax		
	comp=Z,11nm,0.7s						
SUMG	Summit	62.23	3	eP	P	11 57 36.0	-0.2
	comp=Z,9.5nm,0.8s						
SUMG	Summit	62.23	3	eP	P	11 57 36.0	-0.2
SUMG				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NVAR	Mina Array Bea	64.15	61	P	P	11 57 50.6	+1.4
	comp=Z,0.1nm,0.5s,baz=272,slow=7.0,SNR=2.8						
FINES	FINESS Array B	64.86	334	P	P	11 57 52.1	-1.1
	comp=Z,4.4nm,0.7s,baz=41,slow=6.1,SNR=18						
GEYT	Alibeck	66.35	300	P	P	11 58 02.9	-0.4
	comp=Z,2.1nm,0.6s,baz=52,slow=9.6,SNR=5.8						
WRA	Warramunga Arr	66.76	198	P	P	11 58 06.7	+0.8
	comp=Z,0.6nm,0.7s,baz=13,slow=6.6,SNR=6.4						
ERRC	Elmore Ranch	69.09	64	eP	P	11 58 24.6	+4.0
NB2	NORSAR Subarra	69.23	341	P	P	11 58 20.2	-0.8
	comp=Z,4.0nm,0.6s,baz=29,slow=6.5						
HFS	Hagfors	69.41	339	P	P	11 58 21.2	-0.9
	comp=Z,5.4nm,0.6s,baz=57,slow=5.3,SNR=24						
ASAR	Alice Springs	70.46	197	P	P	11 58 30.9	+2.0
	comp=Z,0.7nm,0.8s,baz=6.7,slow=6.2,SNR=5.9						
NCK	Nalchik	70.83	313	i P	P	11 58 30.8	-0.3
NCK				pmax	pmax		
	comp=Z,12nm,0.9s						
KONO	Kongsberg	70.84	341	i P	P	11 58 30.8	0.0
KONO				pmax	pmax		
	comp=Z,12nm,1.4s						
KIV	Kislovodsk	70.98	314	eP	P	11 58 30.8	-1.3
KIV	Kislovodsk	70.98	314	eP	P	11 58 32.3	+0.2
	comp=Z,13nm,0.8s						
KIV	Kislovodsk	70.98	314	eP	P	11 58 30.8	-1.3
KIV				pmax	pmax		
	comp=Z,19nm,1.1s						
KBZ	Khabaz	71.03	313	P	P	11 58 32.8	+0.6
	comp=Z,12nm,0.8s,baz=69,slow=4.2,SNR=19						
NEY	Neytrino	71.46	313	i P	P	11 58 33.8	-1.3
NEY				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TBLG	Delisi	71.47	311	eP	P	11 58 35.7	+0.7
	comp=Z,22nm,0.9s						
TBLG	Delisi	71.47	311	eP	P	11 58 35.7	+0.7
TBLG				pmax	pmax		
	comp=Z,22nm,0.9s						
AKASG	Malin Array Be	72.11	326	P	P	11 58 37.6	-1.0
	comp=Z,1.9nm,0.4s,baz=34,slow=6.0,SNR=4.0						
AKBB	Malin Array Si	72.11	326	eP	P	11 58 37.8	-0.9
	comp=Z,5.2nm,0.8s						
AKBB	Malin Array Si	72.11	326	eP	P	11 58 37.8	-0.9
AKBB				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KIEV	Kiev	72.12	326	eP	P	11 58 37.8	-0.9
	comp=Z,4.7nm,0.8s						
KIEV	Kiev	72.12	326	i P	P	11 58 37.6	-1.1
KIEV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
AK11	Malin Array Si	72.14	326	eP	P	11 58 38.1	-0.8
SORM	Soroca	74.47	324	⇑iP	P	11 58 51.8	-0.8
SORM	Soroca	74.47	324	⇑P	P	11 58 51.8	-0.8
KWP	Kalwaria Pacla	75.47	328	eP	P	11 58 58.7	+0.3
	comp=Z,157nm,1.0s						
KWP	Kalwaria Pacla	75.47	328	eP	P	11 58 58.7	+0.3
KWP				pmax	pmax		
	comp=Z,157nm,1.0s						
OJC	Ojcow	76.03	330	eP	P	11 59 01.6	0.0
	comp=Z,8.5nm,0.9s						
OJC	Ojcow	76.03	330	eP	P	11 59 01.6	0.0
OJC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BUR08	Bucovina Ar. S	76.14	326	eP	P	11 59 02.4	0.0
BUR04	Bucovina Ar. S	76.16	326	eP	P	11 59 02.3	-0.2
BURAR	Bucovina Array	76.16	326	⇓iP	P	11 59 02.6	+0.1
BURAR	Bucovina Array	76.16	326	⇓P	P	11 59 02.6	+0.1
BIZ	Bicaz	76.34	325	⇑iP	P	11 59 03.6	+0.1
TESR	Tescani	76.47	324	⇓iP	P	11 59 04.0	-0.2
CRVS	Cervenica-Dubn	76.53	329	eP	P	11 59 04.4	-0.1
CRVS				pmax	pmax		
	comp=Z,5.0nm,1.1s						
CRVS	Cervenica-Dubn	76.53	329	eP	P	11 59 04.4	-0.1
TRPA	Tarpa	76.77	328	⇑iP	P	11 59 06.2	+0.4
CFR	Carcaliu	76.91	323	⇓iP	P	11 59 07.9	+1.3
CFR	Carcaliu	76.91	323	⇓P	P	11 59 07.9	+1.3
ARCR	ARCALIA	76.93	326	⇓iP	P	11 59 07.4	+0.7
LANS	Liptovska Anna	77.04	330	eP	P	11 59 08.2	+0.8
LANS	Liptovska Anna	77.04	330	eP	P	11 59 08.2	+0.8
UPC	Upice	77.06	333	eP	P	11 59 07.6	+0.2
UPC	Upice	77.06	333	eP	P	11 59 07.6	+0.2
DPC	Dobruska-Polom	77.09	332	eP	P	11 59 08.1	+0.4
DPC				epP	pP	11 59 10.7	-2.9
DPC	Dobruska-Polom	77.09	332	eP	P	11 59 08.1	+0.4
MORC	Moravsky Berou	77.18	331	⇑iP	P	11 59 08.2	0.0
MORC	Moravsky Berou	77.18	331	eP	P	11 59 08.5	+0.3
	comp=Z,7.6nm,0.8s						
MORC	Moravsky Berou	77.18	331	⇑P	P	11 59 08.2	0.0
KECS	Kecovo	77.24	329	eP	P	11 59 08.8	+0.3
KECS				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KECS	Kecovo	77.24	329	eP	P	11 59 08.8	+0.3
CLL	Collm	77.30	335	⇑iP	P	11 59 08.1	-0.6
	comp=Z,11nm,1.1s						
CLL				i (PcP)	sP	11 59 17.8	+0.9
CLL	Collm	77.30	335	eP	P	11 59 07.9	-0.9
CLL	Collm	77.30	335	eP	P	11 59 07.9	-0.9
	comp=Z,11nm,1.0s						
CLL	Collm	77.30	335	⇑iP	P	11 59 08.1	-0.6
CLL				pmax	pmax		
	comp=Z,11nm,1.1s						
BRG	Berggiesshubel	77.40	334	eP	P	11 59 09.1	-0.2
	comp=Z,9.3nm,1.5s						
BRG	Berggiesshubel	77.40	334	eP	P	11 59 09.1	-0.2
BRG				pmax	pmax		
	comp=Z,9.0nm,1.5s						
TLB	Topalu	77.42	322	⇓iP	P	11 59 09.8	+0.3
TLB	Topalu	77.42	322	⇓P	P	11 59 09.8	+0.3
EKA	Eskdalemuir Ar	77.47	345	P	P	11 59 09.2	-0.4
	comp=Z,0.8nm,0.4s,baz=21,slow=4.8,SNR=15						
MLR	Muntele Rosu	77.58	324	P	P	11 59 10.7	+0.1
	comp=Z,1.3nm,0.8s,baz=55,slow=6.0,SNR=7.2						
MLR	Muntele Rosu	77.58	324	⇑iP	P	11 59 11.1	+0.5
MLR	Muntele Rosu	77.58	324	eP	P	11 59 10.9	+0.3
	comp=Z,7.4nm,0.9s						
MLR	Muntele Rosu	77.58	324	⇑P	P	11 59 11.1	+0.5
ISR	Istrita	77.63	324	⇑iP	P	11 59 11.5	+0.7
ISR	Istrita	77.63	324	⇑P	P	11 59 11.5	+0.7
DRGR		77.81	327	⇓iP	P	11 59 11.8	0.0
DRGR		77.81	327	⇓P	P	11 59 11.8	0.0
VYHS	Vyhne	77.82	330	eP	P	11 59 11.8	+0.1
VYHS				pmax	pmax		
	comp=Z,5.0nm,1.4s						
VYHS	Vyhne	77.82	330	eP	P	11 59 11.8	+0.1
VRAC	Vranov	77.90	332	⇑iP	P	11 59 12.6	+0.4
VRAC	Vranov	77.90	332	⇑P	P	11 59 12.6	+0.4
GOPC	GO Pecny, Ondr	77.97	333	eP	P	11 59 12.4	-0.1
GOPC	GO Pecny, Ondr	77.97	333	eP	P	11 59 12.4	-0.1
VOIR		77.99	325	⇓iP	P	11 59 13.3	+0.5
VOIR		77.99	325	⇓P	P	11 59 13.3	+0.5
NKC	Novy Kostel	78.42	335	eP	P	11 59 17.1	+2.1
NKC	Novy Kostel	78.42	335	eP	P	11 59 17.1	+2.1
MODS	Modra-Piesok	78.47	331	eP	P	11 59 16.0	+0.7
MODS				pmax	pmax		
	comp=Z,162nm,3.4s						
MODS	Modra-Piesok	78.47	331	eP	P	11 59 16.0	+0.7
LOT	Lotru	78.50	325	⇑iP	P	11 59 23.8	+8.1
BRTR	Keskin Array B	78.64	316	P	P	11 59 16.9	+0.3
	comp=Z,2.2nm,1.0s,baz=96,slow=5.0,SNR=6.5						
BRTR	Keskin Array B	78.64	316	eP	P	11 59 17.0	+0.3
BRTR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KHC	Kasperske Hory	79.04	333	eP	P	11 59 18.7	+0.2
KHC				epP	pP	11 59 20.6	-3.8
KHC	Kasperske Hory	79.04	333	eP	P	11 59 18.6	+0.2
	comp=Z,2.6nm,0.9s						
KHC	Kasperske Hory	79.04	333	eP	P	11 59 18.7	+0.2
KHC				e		11 59 20.6	
BZS	Buzias	79.21	327	⇓iP	P	11 59 19.5	+0.1
BZS	Buzias	79.21	327	⇓P	P	11 59 19.5	+0.1
TXAR	Lajitas Array	79.23	59	P	P	11 59 20.3	+0.3
	comp=Z,0.3nm,0.6s,baz=286,slow=3.8,SNR=4.4						
TXAR	Lajitas Array	79.23	59	eP	P	11 59 20.9	+0.9
GERES	GERESS Array B	79.25	333	P	P	11 59 18.9	-0.8
	comp=Z,1.4nm,0.7s,baz=46,slow=5.8,SNR=8.6						
GERES	GERESS Array B	79.25	333	eP	P	11 59 19.3	-0.4
GERES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
GEA0	GERESS Array S	79.25	333	eP	P	11 59 19.5	-0.2
CONA	Conrad Observa	79.33	331	epP	P	11 59 20.6	+0.4
	comp=Z,6.2nm,1.1s						
HERR	Herculane	79.51	326	⇑iP	P	11 59 20.4	-0.7
MEM	Membach	79.89	338	⇑P	P	11 59 22.7	-0.4
	comp=Z,9.4nm,1.2s						
SOKA	Soboth	80.70	331	epP	P	11 59 28.5	+0.9
	comp=Z,7.7nm,1.2s						
VTS	Vitosha	81.09	324	⇑iP	P	11 59 29.9	+0.1
VTS	Vitosha	81.09	324	eP	P	11 59 29.8	0.0
	comp=Z,12nm,1.1s						
VTS	Vitosha	81.09	324	⇑P	P	11 59 29.9	+0.1
WATA	Walderalm	81.25	334	epP	P	11 59 31.5	+0.9
	comp=Z,1.7nm,0.4s						
WTTA	Wattenberg	81.30	334	epP	P	11 59 31.2	+0.4
	comp=Z,2.9nm,0.5s						
BFO	Black Forest	81.33	336	i P	P	11 59 31.4	+0.6
RETA	Reutte	81.37	334	eP	P	11 59 30.9	-0.2
	comp=Z,4.6nm,1.0s						
MOTA	Moosalm	81.39	334	eP	P	11 59 31.2	-0.2
	comp=Z,2.3nm,0.6s						
DAVA	Damuels	81.82	335	epP	P	11 59 35.4	+1.8
	comp=Z,6.6nm,1.1s						
DAVOX	Davos/Dischmat	82.27	334	P	P	11 59 36.2	+0.2
	baz=30,slow=20,SNR=4.5						
MMAI	Mount Meron Ar	82.89	310	P	P	11 59 40.6	+1.2
	comp=Z,1.5nm,0.5s,baz=17,slow=6.0,SNR=2.5						
ESDC	Sonseca Array	92.58	341	P	P	12 00 24.9	-1.2
	comp=Z,0.1nm,0.3s,baz=4.8,slow=6.3,SNR=2.8						
CASY	Casey	115.59	197	ePKPdf	PKPdf	12 05 58.5	+3.2
NVL	N’lazarevskaya	147.83	204	ePKIKP	PKPdf	12 06 54.4	-0.8
NVL				MLR	MLR		
	comp=Z,1µm,17.0s						
PLCA	Paso Flores	149.21	97	PKPbc	PKPbc	12 07 01.4	-1.3
	comp=Z,2.3nm,1.0s,baz=294,slow=4.2,SNR=3.3						
SNAA	Sanae	150.82	196	PKP	PKPbc	12 07 05.1	-0.6
SNAA	Sanae	150.82	196	PKiKP	PKPab	12 07 12.4	-0.6
SNAA				x	x	12 07 19.3	
SNAA	Sanae	150.82	196	PKPbc	PKPbc	12 07 05.1	-0.6
	comp=Z,0.9nm,0.7s,baz=188,slow=7.1,SNR=8.4						
SNAA	Sanae	150.82	196	ePKPdf	PKPbc	12 07 05.7	0.0
SNAA				ePKPab	pPKPab	12 07 19.2	+0.1
PMSA	Palmer Station	152.41	148	PKPbc	PKPbc	12 07 07.8	-1.6
	comp=Z,24nm,0.5s,baz=209,slow=10,SNR=19						
PMSA	Palmer Station	152.41	148	ePKPdf	PKPbc	12 07 07.9	-1.5

ISCJB ***08*** *12:05:47.4±0.5, 39°46N±0°02×123°86W±0°05, h8km±2km, mb4.0/10, Error ellipse: s-maj=6.5km s-min=2.5km az=164.8*

IDC ***08*** *12:05:47.8±2.5, 39°48N×123°22W, h0km, mb3.5/4, mb1 3.7/5, mb1mx3.5/60, mbtmp3.6/5, ML3.5/1, Error ellipse: s-maj=38.8km s-min=12.7km az=40.0*

NEIC ***08*** *12:05:48.5±0.0, 39°48N×123°80W, h8km, mb4.3/10, MW4.4(BRK), After NCEDC.*

NEIC Felt [IV] at Fort Bragg; [III] at Albion, Caspar, Comptche, Littleriver, Mendocino and Westport; [II] at Laytonville and Willits. Also felt at Branscomb, Calistoga, Clearlake Oaks, Kelseyville, Leggett, Manchester, McKinleyville, Petrolia, Philo, Point Arena, Potter Valley and Whitethorn.

ISC 08 12:05:49.8±1.0**, 39°51N**±0°02×**123°67W**±0°04**, h10**km±6km**, n163, σ1^{s}64**/156**, mb4.2**/10**, Near coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTC	Three Chop Rid	0.15	141	ePg	Pg	12 05 52.6	-0.6
KCPM	Cahto Peak	0.19	22	ePg	Pg	12 05 54.1	+0.2
KCPM				eSg	Sg	12 05 58.6	+1.9
KFPM	Farley Peak	0.23	57	ePg	Pg	12 05 55.4	+0.7
GNAM	Navarro Ridge	0.32	174	ePg	Pg	12 05 55.2	-1.0
KIPM	Iron Peak	0.33	27	ePg	Pb	12 05 57.1	-0.8
KRKM	Rackout Spring	0.38	83	ePg	Pb	12 05 58.5	-0.3
GHOM	Hamilton Openi	0.48	167	ePg	Pg	12 05 58.5	-0.7
KBNM	Bluenose Ridge	0.53	44	ePg	Pn	12 06 01.6	-1.9
GGUM	Gualala	0.67	168	ePg	Pg	12 06 01.9	-0.9
KKPM	Kettenpom Peak	0.68	22	ePg	Pb	12 06 03.4	-0.5
GSNM	Snow Mountain	0.68	147	ePg	Pg	12 06 02.9	-0.2
HOPS	Hopland Field	0.70	138	ePg	Pg	12 06 03.0	-0.4
KMRM	Mail Ridge	0.71	358	ePg	Pg	12 06 03.7	+0.1
GASB	Alder Springs	0.75	79	ePg	Pn	12 06 05.3	-1.3
KSMM	Slide Mountain	0.77	330	ePg	Pg	12 06 03.2	-1.6
GPMM	Pine Mountain	0.87	139	ePg	Pg	12 06 05.8	-0.9
GMKM	Mount Konoctai	0.88	128	ePg	Pb	12 06 06.3	-0.9
GACM	Adobe Creek	0.90	135	ePg	Pg	12 06 06.0	-1.1
KCRM	Chalk Rock	0.92	353	ePg	Pg	12 06 07.0	-0.6
SKG	Skaggs Springs	0.96	147	ePg	Pg	12 06 06.6	-1.7
GRTM	Round Top Moun	0.97	126	ePg	Pn	12 06 08.4	-1.1
GHCM	House Creek	0.98	158	ePg	Pg	12 06 06.9	-1.7
GDXM	Geysers	0.98	136	ePg	Pg	12 06 07.8	-1.0
GSGM	Seigler Mounta	0.99	130	ePg	Pb	12 06 08.3	-0.8
KCSM	Cold Springs	1.03	7	ePg	Pb	12 06 09.5	-0.3
GBGM	Boggs Mountain	1.04	132	ePn	Pn	12 06 10.4	-0.1
GCRM	Castle Rock Sp	1.05	134	ePg	Pb	12 06 09.8	-0.3
FTR	Fort Ross	1.07	158	ePg	Pg	12 06 10.0	-0.3
KCTM	Capetown	1.09	332	ePg	Pg	12 06 08.7	-2.0
NMCNC	Mill Creek, So	1.10	147	ePg	Pg	12 06 08.3	-2.6
NMTM	Middletown	1.19	126	ePg	Pg	12 06 10.3	-2.4
MAC	Mark West Spri	1.21	142	ePg	Pg	12 06 11.6	-1.6
GARM	Arbuckle	1.24	116	ePn	Pn	12 06 15.7	+2.5
WDC	Whiskeytown Da	1.37	39	ePn	Pn	12 06 14.3	-0.8
NBPM	Berryessa Peak	1.43	126	ePn	Pg	12 06 18.3	+1.1
OSUM	Sutter Buttes	1.43	99	ePn	Pn	12 06 14.1	-1.7
MCCM	Marconi Confer	1.50	155	ePn	Pn	12 06 14.5	-2.2
CVS	Carmenet Viney	1.50	141	ePn	Pg	12 06 18.3	-0.4
OGOM	Van Goodin Ran	1.60	84	ePn	Pn	12 06 16.3	-1.9
N02D	Trinity Center	1.64	27	P	Pn	12 06 17.8	-0.9
	baz=210,SNR=329						
SNT	Sears Point	1.64	144	ePn	Pg	12 06 21.4	+0.2
O03D	Paynes Creek	1.64	61	P	Pn	12 06 17.6	-1.1
	baz=243,SNR=70						
O03D	Paynes Creek	1.64	61	ePn	Pn	12 06 17.6	-1.1
ORV	Oroville	1.68	88	ePn	Pb	12 06 18.9	-2.0
KOMM	Orleans Mounta	1.77	5	ePn	Pn	12 06 19.2	-1.4
KOMM				ePg	Pg	12 06 24.1	+0.3
LRDM	Redding Peak	1.95	60	ePn	Pb	12 06 22.9	-2.5
M02C	Callahan	1.98	18	P	Pn	12 06 22.6	-0.9
	baz=201,SNR=174						
LGBM	Gray Butte	2.15	31	ePn	Pn	12 06 25.8	-0.2
AFDM	Forest Hills D	2.17	104	ePn	Pn	12 06 25.4	-0.7
LBCM	Butte Creek Ri	2.22	53	ePn	Pn	12 06 26.8	0.0
LBFM	Black Fox Moun	2.28	36	ePn	Pn	12 06 28.0	+0.3
LMPM	Military Pass	2.28	30	ePn	Pn	12 06 28.2	+0.5
YBH	Yreka Blue Hor	2.33	18	Pn	Pn	12 06 27.9	-0.5
	12nm,0.3s,baz=220,slow=6.5,SNR=388						
YBH				Sn	Sb	12 06 58.3	-2.6
	16nm,0.3s,baz=48,slow=20,SNR=3.3						
YBH	Yreka Blue Hor	2.33	18	ePn	Pn	12 06 28.4	+0.1
YBH				Sn	Sb	12 06 58.3	-2.6
JFP	Foothills Park	2.45	151	ePn	Pn	12 06 27.4	-2.4
B040	Montague	2.50	22	ePn	Pn	12 06 30.7	+0.1
LGMM	Garner Mountai	2.51	33	ePn	Pn	12 06 31.0	+0.2
BEKR	Beckworth	2.58	81	ePn	Pn	12 06 32.1	+0.3
DONR	Donner Summit	2.60	93	ePn	Pn	12 06 32.4	+0.2
IND	Independence	2.62	91	ePn	Pb	12 06 33.5	-3.5
L02D	Cave Junction,	2.64	1	P	Pn	12 06 31.9	-0.6
	baz=183,SNR=76						
M04C	Macdoel	2.66	31	P	Pn	12 06 32.8	-0.1
	baz=214,SNR=34						
KBO	Bosley Butte	2.73	351	ePn	Pn	12 06 32.3	-1.4
KBO				eSn	Sn	12 07 05.3	-1.5
RUBR	Rubicon Trail	2.77	98	ePn	Pn	12 06 35.6	+1.1
CMB	Columbia Colle	2.96	119	ePn	Pn	12 06 37.0	0.0
JELB	Ellicott, Sant	2.96	150	ePn	Pn	12 06 34.5	-2.3
VCNR	Virginia City	3.12	93	ePn	Pn	12 06 41.0	+1.7
HUMO	Hull Mountain	3.14	10	ePn	Pn	12 06 39.3	0.0
PNTR	Pine Nut	3.19	96	ePn	Pn	12 06 41.8	+1.6
SAO	San Andreas Ge	3.26	147	ePn	Pn	12 06 39.8	-1.1
PAHR	Pah Rah Range	3.32	85	ePn	Pn	12 06 41.9	0.0
KEBM	Edson Butte	3.39	352	ePn	Pn	12 06 42.8	-0.1
K04D	Chiloquin, OR	3.43	24	P	Pn	12 06 43.5	+0.1
	baz=207,SNR=14						
WAKR	Walker	3.45	106	ePn	Pn	12 06 45.9	+2.1
JHC	Johnson Canyon	3.47	148	ePn	Pn	12 06 40.7	-3.1
YERR	Yerington	3.48	97	ePn	Pn	12 06 44.7	+0.5
MOD	Modoc Plateau	3.50	46	ePn	Pn	12 06 46.1	+1.7
K05A	Summer Lake	3.83	32	ePn	Pn	12 06 49.3	+0.3
J04D	Umpqua Nationa	3.91	17	P	Pn	12 06 50.3	+0.3
	baz=199						
PMPB	Monarch Peak	4.00	144	ePn	Pn	12 06 49.8	-1.4
MDPB	Devils Postpil	4.06	116	ePn	Pn	12 06 53.7	+1.5
MDYM	Dry Creek	4.10	115	ePn	Pn	12 06 54.7	+1.9
RYN	Ryan	4.11	101	ePn	Pn	12 06 53.2	+0.4
OMMB	Old Mammoth Mi	4.12	116	ePn	Pn	12 06 54.7	+1.6
MLCM	Laurel Creek C	4.18	115	eSg	Sg	12 08 00.8	-3.5
I03D	Drain, OR	4.19	3	P	Pn	12 06 53.7	0.0
	baz=185,SNR=9.6						
J05D	Fort Rock, OR	4.19	25	P	Pn	12 06 53.2	-0.7
	baz=208						
MLAC	Mammoth, Mammo	4.23	115	P	Pn	12 06 55.9	+1.3
	baz=297						
NV01	Mina Array Sit	4.32	103	ePn	Pn	12 06 56.5	+0.7
NVAR	Mina Array Bea	4.32	103	Pg	Pn	12 06 55.4	-0.4
	0.6nm,0.3s,baz=279,slow=12,SNR=26						
NVAR				Lg	Lg	12 08 00.5	
	1.2nm,0.3s,baz=351,slow=15,SNR=4.8						
KVN	Kaiserville	4.35	94	ePn	Pn	12 06 56.5	+0.4
I04A	Tendick Farm,	4.38	12	P	Pn	12 06 56.7	+0.3
	baz=194						
NV11	Mina Array Sit	4.43	102	ePn	Pn	12 06 57.5	+0.2
PAGB	Antelope Grade	4.65	143	ePn	Pn	12 06 58.4	-1.8
PINE	Pine Mountain	4.74	25	ePn	Pn	12 07 02.9	+1.4
WVOR	Wild Horse Val	4.80	51	ePn	Pn	12 07 02.9	+0.7
WVOR				ePg	Pg	12 07 19.1	-2.6
TIN	Tinemaha, Big	4.94	118	P	Pb	12 07 09.4	-7.0
	baz=301						
BMN	Battle Mountai	5.04	77	ePn	Pn	12 07 04.8	-0.8
	23nm,0.9s						
COR	Corvallis	5.08	3	ePn	Pn	12 07 10.5	+4.6
SMMC	Simmler	5.11	144	P	Pn	12 07 08.8	+2.4
	baz=325						
I05D	Terrebonne, OR	5.12	19	P	Pn	12 07 06.9	+0.2
	baz=202						
VES	Vestal, Richgr	5.17	134	P	Pn	12 07 08.5	+1.3
	baz=316						
CWC	Cottonwood Cre	5.38	123	P	Pn	12 07 11.7	+1.5
	baz=306						
J08A	Circle Bar Ran	5.48	44	ePn	Pn	12 07 11.8	+0.2
PKM	Mcpherson Peak	5.55	145	P	Pn	12 07 13.4	+0.7
	baz=326						
ISA	Isabella, Lake	5.64	131	P	Pn	12 07 14.8	+1.0
	baz=314						
ISA	Isabella, Lake	5.64	131	ePn	Pn	12 07 14.3	+0.5
DAC	Darwin (Calif)	5.79	122	ePn	Pn	12 07 16.8	+0.9
ARVC	Arvin	5.84	137	P	Pn	12 07 17.6	+1.2
	baz=319						
RYS	Reyes Peak	5.96	143	eSn	Sn	12 08 29.8	+3.0
G05D	Wamic, OR	5.98	16	P	Pn	12 07 19.7	+1.3
	baz=198						
MPMC	Manual Prospec	5.99	123	P	Pn	12 07 19.8	+1.1
	baz=306						
G06A	Carlson Farm,	6.14	20	ePn	Pn	12 07 22.6	+1.9
TPNV	Topopah Spring	6.38	111	ePn	Pn	12 07 26.2	+2.1
ALPC	Antelope	6.45	137	ePn	Pn	12 07 25.2	+0.3
ELK	Elko	6.58	77	Pg	Pb	12 07 35.0	-10
	0.1nm,0.3s,baz=292,slow=19,SNR=3.2						
ELK				Lg	Lg	12 09 16.0	
	0.1nm,0.3s,baz=231,slow=19,SNR=3.3						
GSC	Goldstone, Bar	6.89	125	ePn	Pn	12 07 31.7	+0.7
MFID	Camas Ranch	7.06	54	ePn	Pn	12 07 35.2	+1.8
BMO	Blue Mountains	7.13	39	ePn	Pn	12 07 36.2	+2.0
SHPR	Sheep Range	7.36	111	ePn	Pn	12 07 39.6	+2.1
CIAC	Catalina I. Ai	7.43	144	eSn	Sn	12 09 05.8	+3.3
CIAC				eSg	Sb	12 09 32.5	+5.1
CLTC	Calectric	7.43	135	ePg	Pb	12 08 03.4	+4.5
HAWA	Hanford	7.51	22	ePn	Pn	12 07 42.0	+2.7
FMW	Mount Fremont	7.56	10	ePg	Pb	12 08 05.1	+4.1
HLID	Hailey	8.04	57	ePn	Pn	12 07 49.5	+2.8
	7.1nm,1.0s						
PFO	Pinyon Flats O	8.27	133	ePn	Pn	12 07 50.3	+0.4
XPFO	Piæon Flat	8.27	133	ePn	Pn	12 07 50.2	+0.3
W13A	Hualapai Mount	8.96	116	ePn	Pn	12 08 00.7	+1.3
PDAR	Pinedale Array	11.13	68	Pn	Pn	12 08 34.6	+5.4
	0.1nm,0.3s,baz=246,slow=11,SNR=5.3						
PV03	Paradox Valley	11.63	92	ePn	Pn	12 08 40.4	+4.5
PV02	Paradox Valley	11.72	92	ePn	Pn	12 08 42.6	+5.3

WALA	Waterton Lakes	11.82	33	*e*Pn	Pn	12 08 40.2	+1.8
PV01	Paradox Valley	11.86	92	*e*Pn	Pn	12 08 44.3	+5.1
ISCO	Idaho Springs	13.92	83	*e*Pn	P	12 09 13.2	-2.5
LAZ	Ladron	14.17	106	*e*P	P	12 09 19.4	+1.1
SDCO	Great Sand Dun	14.32	91	*e*P	P	12 09 18.0	-2.0
ANMO	Albuquerque	14.45	103	Pn	P	12 09 18.8	-2.6
	0.1nm,0.3s,baz=313,slow=9.6,SNR=3.4						
ANMO	Albuquerque	14.45	103	*e*P	P	12 09 20.7	-0.7
OGNE	Ogallala	16.59	78	*e*Pn	P	12 09 44.5	-0.5
	32nm,1.3s						
DGMT	Dagmar	16.59	51	*e*Pn	P	12 09 44.2	-0.7
	8.0nm,0.8s						
GDL2	Guadalupe Moun	17.25	109	*e*Pn	P	12 09 51.8	-0.6
TXAR	Lajitas Array	19.34	116	P	Pn	12 10 15.9	-0.6
	0.0nm,0.3s,baz=303,slow=8.1,SNR=18						
G32A	Webster	20.12	65	*e*P	Pn	12 10 24.6	-1.0
	19nm,1.0s						
ABTX	Abilene, Hawle	20.57	102	*e*P	Pn	12 10 30.7	-0.3
	27nm,1.4s						
ECSD	EROS Data Cent	20.62	69	*e*P	P	12 10 28.0	-1.2
	3.9nm,0.9s						
FFC	Flin Flon	21.07	37	*e*P	P	12 10 32.3	-1.6
	7.6nm,0.7s						
JCT	Junction City	21.48	107	*e*P	P	12 10 41.0	+2.4
	10nm,1.1s						
ULM	Lac du Bonnet	22.30	52	P	P	12 10 44.9	-2.3
	2.1nm,0.5s,baz=269,slow=9.1,SNR=3.2						
WHTX	Lake Whitney,	22.51	101	*e*P	P	12 10 52.3	+2.7
	8.5nm,0.9s						
435B	Jarrell	22.98	104	*e*P	P	12 10 57.4	+2.8
	18nm,1.3s						
YKA	Yellowknife Ar	23.66	11	P	P	12 11 00.5	-0.5
	0.2nm,0.5s,baz=192,slow=11,SNR=2.3						
OHAK	Old Harbor	26.16	322	*e*P	P	12 11 28.0	+4.1
FCC	Fort Churchill	26.95	35	*e*P	P	12 11 32.8	+1.8
	11nm,1.1s						
ILAR	Eielson Array	28.69	339	P	P	12 11 46.3	-0.3
	0.4nm,0.8s,baz=148,slow=7.5,SNR=4.1						
H11N3	WAKE ISLAND Hy	62.05	273	T	T	13 23 24.8	
	baz=55,slow=75,SNR=2498						
H11N2	WAKE ISLAND Hy	62.05	273	T	T	13 23 24.9	
	baz=55,slow=75,SNR=1472						
H11N1	WAKE ISLAND Hy	62.06	273	T	T	13 23 26.1	
	baz=55,slow=75,SNR=1821						
H11S1	WAKE ISLAND Hy	62.90	272	T	T	13 24 28.9	
	baz=54,slow=75						
H11S2	WAKE ISLAND Hy	62.91	272	T	T	13 24 29.3	
	baz=54,slow=75,SNR=7558						
H11S3	WAKE ISLAND Hy	62.92	272	T	T	13 24 30.2	
	baz=54,slow=75,SNR=3635						
HHC	Hu-ho-hao-te	85.51	321	*e*P	P	12 18 26.5	-1.6
HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC				pmax	pmax		
	comp=Z,540nm,6.3s						
BVAR	Borovoye Array	87.03	352	P	P	12 18 36.1	+0.9
	comp=Z,0.9nm,0.8s,baz=356,slow=4.3,SNR=4.3						
WMQ	Urumqi	92.34	338	P	P	12 19 00.9	+0.5

*IDC **08** 12:07:15.2±2.0, 43°.03N×147°.41E, h0^{km}, mb3.8/4, mb1 3.8/5, mb1mx3.4/72, mbtmp3.8/5, ML3.6/1, Error ellipse: s-maj=61.1km s-min=28.7km az=64.0*
*MOS **08** 12:07:22.5±0.8, 42°.90N×146°.83E, h57^{km}, mb4.1/3, Error ellipse: s-maj=27.6km s-min=11.3km az=113.5*
*SKHL **08** 12:07:23.8±0.7, 42°.91N×146°.80E, h45^{km}±5^{km}, mb4.6/6*
*JMA **08** 12:07:23.9±0.1, 42°.96N×146°.74E, h60^{km}±2^{km}, M3.9*
ISC 08 12:07:18.9±1.8**, 42°.90N**±0°.05×**146°.87E**±0°.05**, h11**^{km}±10^{km}**, n38, σ1^{s}.56**/54**, mb4.1**/5**, 1C-5D, Off southeast coast of Hokkaido**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	Nemuro 2	0.95	300	P	Pn	12 07 40.1	+2.0
NEM2				*e*S	Sn	12 07 51.8	+0.2
SHO	Shikotan	0.97	358	*i* P	Pn	12 07 41.0	+2.6
SHO				AMB	AMB	12 07 42.0	
	176nm,0.3s						
SHO				AMB	AMB	12 07 42.0	
	367nm,0.3s						
SHO				*i* S	Sn	12 07 53.0	+0.8
SHO				A	A	12 07 54.0	
	2μm,0.2s						
SHO				A	A	12 07 54.0	
	568nm,0.2s						
SHO	Shikotan	0.97	358	*d* *i*PN	Pn	12 07 41.6	+3.2
SHO				*i* S	Sn	12 07 53.2	+1.0
SHO				pmax	pmax		
	comp=N,176nm,0.3s						
SHO				pmax	pmax		
	comp=Z,367nm,0.3s						
SHO				pmax	pmax		
	comp=E,96nm,0.2s						
SHO				smax	smax		
	comp=E,568nm,0.2s						
SHO				smax	smax		
	comp=N,2μm,0.3s						
GLVR	Golovnino	1.29	311	*i* P	Pg	12 07 44.0	+0.2
GLVR				AMB	AMB	12 07 45.0	
	comp=N,167nm,0.2s						
GLVR				AMB	AMB	12 07 45.0	
	comp=N,243nm,0.2s						
GLVR				AMB	AMB	12 07 45.0	
	comp=N,140nm,0.2s						
GLVR				*i* S	Sb	12 07 59.0	-0.8
GLVR				A	A	12 08 03.0	
	comp=N,3μm,0.3s						
GLVR				A	A	12 08 03.0	
	comp=N,3μm,0.3s						
GLVR	Golovnino	1.29	311	⇓*i*PN	Pg	12 07 44.6	+0.8
GLVR				*i* S	Sg	12 07 59.7	-0.9
GLVR				pmax	pmax		
	comp=N,167nm,0.1s						
GLVR				pmax	pmax		
	comp=E,243nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,1μm,0.1s						
GLVR				smax	smax		
	comp=N,3μm,0.2s						
GLVR				smax	smax		
	comp=E,3μm,0.2s						
YUK	Yuzh-Kuril'sk	1.35	327	*i* P	Pg	12 07 45.0	+0.2
YUK				AMB	AMB	12 07 46.0	
	comp=E,110nm,0.2s						
YUK				*i* S	Sb	12 08 00.0	-1.5
YUK				A	A	12 08 02.0	
	comp=E,1μm,0.4s						
YUK				A	A	12 08 02.0	
	comp=E,970nm,0.4s						
YUK	Yuzh-Kuril'sk	1.35	327	*d* *i*PN	Pg	12 07 45.1	+0.2
YUK				*i* S	Sn	12 08 00.7	-0.9
YUK				pmax	pmax		
	comp=Z,1μm,0.2s						
YUK				pmax	pmax		
	comp=E,282nm,0.1s						
YUK				pmax	pmax		
	comp=N,325nm,0.2s						
YUK				smax	smax		
	comp=N,1μm,0.4s						
YUK				smax	smax		
	comp=E,970nm,0.3s						
GRPR	Tuman	1.35	324	*i* P	Pg	12 07 45.0	+0.2
GRPR				AMB	AMB	12 07 45.0	
	comp=E,459nm,0.2s						
GRPR				AMB	AMB	12 07 45.0	
	comp=E,508nm,0.2s						
GRPR				AMB	AMB	12 07 45.0	
	comp=E,162nm,0.2s						
GRPR				*i* S	Sb	12 07 59.0	-2.6
GRPR				A	A	12 08 02.0	
	comp=E,3μm,0.3s						
GRPR				A	A	12 08 02.0	
	comp=E,1μm,0.3s						
GRPR	Tuman	1.35	324	*d* *i*PN	Pg	12 07 45.1	+0.2
GRPR				*i* S	Sb	12 07 59.9	-1.7
GRPR				pmax	pmax		
	comp=Z,2μm,0.2s						
GRPR				pmax	pmax		
	comp=N,459nm,0.1s						
GRPR				pmax	pmax		
	comp=E,508nm,0.1s						
GRPR				smax	smax		
	comp=N,3μm,0.2s						
GRPR				smax	smax		
	comp=E,1μm,0.2s						
LAGR	Lagunnoye	1.40	326	*i* P	Pb	12 07 45.0	0.0
LAGR				AMB	AMB	12 07 46.0	
	comp=E,180nm,0.2s						
LAGR				AMB	AMB	12 07 46.0	
	comp=E,154nm,0.2s						
LAGR				AMB	AMB	12 07 46.0	
	comp=E,197nm,0.2s						
LAGR				*e*S	Sn	12 08 01.0	-1.8
LAGR				A	A	12 08 02.0	
	comp=E,2μm,0.3s						
LAGR				A	A	12 08 02.0	
	comp=E,3μm,0.3s						
LAGR	Lagunnoye	1.40	326	*c* *i*PN	Pg	12 07 45.9	+0.1
LAGR				*e*S	Sb	12 08 01.7	-1.2
LAGR				pmax	pmax		
	comp=N,180nm,0.1s						
LAGR				pmax	pmax		
	comp=E,154nm,0.1s						
LAGR				pmax	pmax		
	comp=Z,2μm,0.1s						
LAGR				smax	smax		
	comp=E,3μm,0.3s						
LAGR				smax	smax		
	comp=N,2μm,0.2s						
JAK	Akkeshi	1.60	274	P	Pb	12 07 49.0	+0.6
JAK				*e*S	Sn	12 08 07.6	-0.1
JRA	Rausu	1.64	310	P	Pb	12 07 49.6	+0.4
JRA				*e*S	Sb	12 08 08.5	-1.4
JNK	Nakash	1.72	294	P	Pb	12 07 50.1	-0.3
JNK				*e*S	Sn	12 08 09.2	-1.4
JOB	Onbets	2.23	271	P	Pn	12 07 57.8	+2.1
JOB				*e*S	Sn	12 08 23.3	0.0
JAR	Ashorobuto	2.31	281	P	Pb	12 07 59.2	-1.3
JAR				*e*S	Sn	12 08 25.0	-0.1
JTKR	Abashiri--Toko	2.41	297	P	Pb	12 08 00.8	-1.4
JTKR				*e*S	Sn	12 08 28.2	+0.5
KUR	Kuril'sk	2.44	17	*i* P	Pb	12 08 01.0	-1.8
KUR				AMB	AMB	12 08 06.0	
	comp=N,7.0nm,0.1s						
KUR				AMB	AMB	12 08 06.0	
	comp=N,12nm,0.1s						
KUR				*i* S	Sn	12 08 28.4	0.0
KUR				A	A	12 08 31.0	
	comp=N,130nm,0.2s						
KUR				A	A	12 08 31.0	
	comp=N,102nm,0.2s						
KUR	Kuril'sk	2.44	17	*d* *i*PN	Pb	12 08 01.7	-1.1
KUR				*i* S	Sn	12 08 29.1	+0.7
KUR				pmax	pmax		
	comp=N,7.0nm,0.1s						
KUR				pmax	pmax		
	comp=Z,12nm,0.1s						
KUR				smax	smax		
	comp=N,81nm,0.2s						
KUR				smax	smax		
	comp=E,102nm,0.2s						
JCH	Churui	2.60	265	P	Pn	12 08 02.8	+2.0
JCH				*e*S	Sn	12 08 32.3	-0.1
JMP	Maruseppu	2.79	295	P	Pn	12 08 06.1	+2.7
HRK	Horoka	2.79	283	*e*P	Pn	12 08 06.4	+2.8
JEM	Erimo	2.89	253	P	Pb	12 08 08.6	-1.7
JNBK	Urakawa-nobuka	3.10	260	P	Pn	12 08 09.9	+2.2
JNBK				*e*S	Sn	12 08 44.5	-0.3
JFR	Furan	3.15	276	P	Pn	12 08 11.0	+2.6
JKK2	Kamakawa 2	3.16	289	P	Pn	12 08 11.5	+3.0
ASAJ	Asahikawa	3.34	293	Pn	Pn	12 08 14.5	+3.5
	comp=E,3.5nm,0.3s,baz=107,slow=12,SNR=60						
ASAJ				Sn	Sn	12 08 53.0	+2.4
	comp=E,2.4nm,0.3s,baz=197,slow=19,SNR=3.7						
H11N2	WAKE ISLAND Hy	28.60	138	T	T	12 44 01.0	
	baz=330						
H11N1	WAKE ISLAND Hy	28.61	138	T	T	12 44 06.5	
	baz=330						
H11N3	WAKE ISLAND Hy	28.62	138	T	T	12 44 13.9	
	baz=330						
SONM	Songino Array	28.62	294	P	P	12 13 15.6	+0.3
	comp=E,0.5nm,0.4s,baz=86,slow=10,SNR=3.4						
H11S1	WAKE ISLAND Hy	29.55	139	T	T	12 45 18.8	
	baz=329						
H11S3	WAKE ISLAND Hy	29.55	139	T	T	12 45 24.9	
	baz=329						
H11S2	WAKE ISLAND Hy	29.56	139	T	T	12 45 25.0	
	baz=329						
KURK	Kurchatov	45.84	305	P	P	12 15 40.9	+0.2
KURK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KURBB	Kurchatov Arra	45.92	305	P	P	12 15 40.9	-0.5
	comp=Z,0.6nm,0.3s,baz=72,slow=8.1,SNR=3.0						
WRA	Warramunga Arr	63.59	193	P	P	12 17 49.2	-0.4
	comp=Z,0.2nm,0.7s,baz=12,slow=6.9,SNR=3.0						
FINES	FINESS Array B	65.54	333	P	P	12 18 00.7	-1.2
	comp=Z,0.7nm,0.6s,baz=36,slow=10,SNR=5.8						

MEX 08 12:29:13.5±0.6**, 16°.94N**×**96°.97W, h58**^{km}±8^{km}**, MD3.7, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VHO	Vista Hermosa	0.27	60	*e*P	Pn	12 29 21.8	-1.6
VHO				*e*S	Sn	12 29 29.0	-1.5
PNIG	Pinotepa	1.23	244	*i* P	Pn	12 29 33.2	-1.3
PNIG				*i* S	Sn	12 29 49.3	-1.0
TPIG	Tehuac#an	1.52	346	*i* P	Pn	12 29 36.5	-2.0
TPIG				*i* S	Sn	12 29 55.1	-2.3
TLIG	Tlapa	1.64	292	*e*P	Pn	12 29 37.9	-2.3
TLIG				*e*S	Sn	12 29 58.2	-2.2

*ISCJB **08** 12:52:42.2±1.0, 45°.0N±0°.1×151°.6E±0°.1, h32^{km}, Error ellipse: s-maj=19.6km s-min=7.1km az=155.7*
*SKHL **08** 12:52:42.3±0.3, 45°.03N×151°.77E, h40^{km}±5^{km}, mb4.3/4*
*JMA **08** 12:52:42.3±0.7, 45°.58N×151°.57E, h30^{km}, M4.1*
ISC 08 12:52:41.1±2.2**, 45°.0N**±0°.2×**151°.9E**±0°.2**, h32**^{km}**, n24, σ1^{s}.83**/36**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	Kuril'sk	2.86	277	*i* P	Pn	12 53 24.0	-0.5
KUR				AMB	AMB	12 53 25.0	
	37nm,0.3s						
KUR				AMB	AMB	12 53 25.0	
	13nm,0.3s						
KUR				AMB	AMB	12 53 25.0	
	46nm,0.3s						
KUR				*i* S	Sn	12 53 55.0	-2.8
KUR				A	A	12 54 01.0	
	208nm,0.3s						
KUR				A	A	12 54 01.0	
	54nm,0.3s						
SHO	Shikotan	3.79	255	*i* P	Pn	12 53 38.0	+0.8
SHO				AMB	AMB	12 53 41.0	
	7.0nm,0.3s						
SHO				AMB	AMB	12 53 41.0	
	16nm,0.3s						
SHO				*i* S	Sn	12 54 20.0	-0.6
SHO				A	A	12 54 24.0	
	48nm,0.3s						
SHO				A	A	12 54 24.0	
	52nm,0.3s						
YUK	Yuzh-Kuril'sk	4.41	260	*i* P	Pn	12 53 47.0	+1.2
YUK				AMB	AMB	12 53 48.0	
	47nm,0.5s						
YUK				*i* S	Sn	12 54 36.0	0.0
YUK				A	A	12 54 46.0	
	70nm,0.5s						
YUK				A	A	12 54 46.0	
	104nm,0.5s						
LAGR	Lagunnoye	4.46	260	*e*P	Pn	12 53 48.0	+1.5
LAGR				*i* S	Sn	12 54 38.0	+0.8
GRPR	Tuman	4.49	260	*i* P	Pn	12 53 49.0	+2.2
GRPR				*e*S	Sn	12 54 37.0	-0.9
GRPR				A	A	12 54 44.0	
	81nm,0.4s						
GRPR				A	A	12 54 44.0	
	91nm,0.4s						
NEM2	Nemuro 2	4.70	252	P	Pn	12 53 50.4	+0.6
NEM2				*e*S	Sn	12 54 41.7	-1.5
GLVR	Golovnino	4.73	257	*e*P	Pn	12 53 51.0	+0.8
GLVR				*e*S	Sn	12 54 43.0	-0.9
JRA	Rausu	4.95	260	P	Pn	12 53 55.4	+2.2
JNK	Nakash	5.33	258	P	Pn	12 54 00.0	+1.6
JAK	Akkeshi	5.55	252	P	Pn	12 54 02.2	+0.8
JAK				*e*S	Sn	12 55 00.6	-3.5
JTKR	Abashiri--Toko	5.80	263	P	Pn	12 54 06.9	+2.1
JAR	Ashorobuto	6.08	257	P	Pn	12 54 11.1	+2.4
JAR				*e*S	Sn	12 55 16.9	-0.2
JOB	Onbets	6.17	253	P	Pn	12 54 11.6	+1.6
JOB				*e*S	Sn	12 55 17.8	-1.6
JMP	Maruseppu	6.18	264	P	Pn	12 54 12.5	+2.4
SKR	Severo-Kuril's	6.39	25	*e*P	Pn	12 54 15.5	+2.5
SKR				AMB	AMB	12 54 17.8	
	15nm,0.5s						
SKR				*e*S	Sn	12 55 21.6	-3.2
SKR				A	A	12 55 23.4	
	25nm,0.9s						
JCH	Churui	6.60	252	P	Pn	12 54 17.8	+1.9
JCH				*e*S	Sn	12 55 27.0	-3.0
JKK2	Kamakawa 2	6.64	264	P	Pn	12 54 18.6	+2.2
MYR	Moyori	6.79	250	*e*P	Pn	12 54 20.3	+1.8
JNBK	Urakawa-nobuka	7.15	251	P	Pn	12 54 24.4	+1.0
JBT2	Biratori 2	7.22	256	P	Pn	12 54 25.6	+1.2
JNB	Noboribetsu	8.25	256	P	Pn	12 54 40.2	+1.7
JKB	Kayabe	8.48	253	P	Pn	12 54 42.3	+0.7
JYM2	Yakumo 2	8.84	255	P	Pn	12 54 47.9	+1.3
JOSM	Okushiri--Mats	9.47	257	P	Pn	12 54 56.3	+1.1

*ISCJB **08** 12:52:43.4±0.6, 22°.77N±0°.04×93°.38E±0°.05, h59^{km}, mb3.6/2, Error ellipse: s-maj=7.0km s-min=6.0km az=172.3*
*NDI **08** 12:52:43.6±2.6, 22°.74N×93°.32E, h24^{km}±12^{km}, ML3.3*
*IDC **08** 12:52:46.0±4.0, 22°.79N×93°.31E, h73^{km}±30^{km}, mb3.2/2, mb1 3.4/3, mb1mx2.8/71, mbtmp3.4/3, Error ellipse: s-maj=100.7km s-min=22.8km az=10.0*
ISC 08 12:52:43.8±1.1**, 22°.72N**±0°.05×**93°.33E**±0°.06**, h59**^{km}**, n15, σ2^{s}.94**/25**, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAIH	SAIHA	0.39	234	*e*P	Pn	12 52 52.4	-2.4
SAIH				*e*S	Sn	12 52 58.7	-4.0
SAIH				IAML		12 52 59.1	
	comp=E,3μm,0.1s						
SAIH				IAML		12 52 59.4	
AZL	Aizawl	1.17	330	*e*P	Pn	12 53 04.6	+0.4
AZL				*e*S	Sn	12 53 20.6	+1.2
AZL				IAML		12 53 22.1	
	comp=N,889nm,0.5s						
AZL				IAML		12 53 23.4	
	comp=E,816nm,0.8s						
BRDH	Bariadhala	1.56	269	P	Pn	12 53 10.3	+1.0
	comp=E,119nm,0.3s,baz=73,slow=19,SNR=13						
BRDH				S	Sn	12 53 31.2	+2.6
	comp=E,524nm,0.3s,baz=73,slow=20,SNR=18						
IMP	Imphal	2.17	15	*e*P	Pn	12 53 16.9	-0.9
AGT	Agartala	2.24	302	*e*x	Sn	12 53 39.9	-5.1
AGT				IAML		12 54 58.8	
	comp=N,96nm,0.1s						
AGT				IAML		12 54 58.8	
	comp=E,65nm,0.2s						
KOHI	KOHIMA	3.07	13	*e*P	Pn	12 53 30.9	+0.9
KOHI				*e*x	Sn	12 53 57.5	-8.1
KOHI				IAML		12 54 12.9	
	comp=E,60nm,0.3s						
KOHI				IAML		12 54 14.0	
	comp=N,47nm,0.2s						
SHL	Shillong	3.13	335	*e*P	Pn	12 53 31.1	+0.3
SHL				*e*P	Pn	12 53 34.0	+3.1
SHL				*e*S	Sn	12 54 05.1	-2.0
SHL				*e*S	Sn	12 54 08.0	+0.9
SHL				IAML		12 54 12.2	
	comp=E,83nm,0.3s						
SHL				IAML		12 54 12.2	
	comp=N,96nm,0.1s						
MOKO	MOKOCHONG	3.74	16	*e*P	Pn	12 53 40.2	+1.0
MOKO				*e*S	Sn	12 54 22.7	+0.6
MOKO				IAML		12 54 32.5	
	comp=E,51nm,0.1s						
TURI	Tura	3.93	316	*e*P	Pn	12 53 42.5	+0.8
TURI				*e*S	Sn	12 54 27.3	+0.8
TURI				IAML		12 54 29.4	
	comp=E,377nm,0.3s						
TURI				IAML		12 54 29.5	
	comp=N,190nm,0.3s						
ITAN	ITANAGAR	4.42	4	*e*S	Sn	12 54 37.8	-0.8
ZIRO	ZIRO	4.81	5	*e*S	Sn	12 54 46.1	-2.3
ZIRO				IAML		12 54 52.8	
	comp=E,177nm,0.2s						
ZIRO				IAML		12 54 53.6	
	comp=N,159nm,0.4s						
GTK	Tadong	6.28	318	*e*P	Pn	12 54 14.8	+0.9
GTK				*e*S	Sn	12 55 19.2	-5.1
GTK				IAML		12 55 43.2	
	comp=E,25nm,0.4s						
GTK				IAML		12 55 43.7	
	comp=N,27nm,0.7s						
CMAR	Chiang Mai Arr	6.75	128	P	Pn	12 54 23.9	+3.5
	comp=N,0.3nm,0.3s,baz=302,slow=14,SNR=4.1						
WRA	Warramunga Arr	58.31	133	P	P	13 02 33.5	+0.6
	comp=N,0.6nm,1.0s,baz=321,slow=7.6,SNR=6.5						
ASAR	Alice Springs	60.67	137	P	P	13 02 50.9	+1.7
	comp=N,0.6nm,1.0s,baz=319,slow=6.7,SNR=6.4						

MEX 08 12:58:59.0±0.5**, 15°.17N**×**92°.81W, h107**^{km}±6^{km}**, MD3.8, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		0.58	116	*i* P	Pn	12 59 15.2	-1.0
THIG				*e*S	Sn	12 59 27.4	-1.6
PCIG		0.67	324	*e*P	Pn	12 59 15.7	-1.1
PCIG				*e*S	Sn	12 59 28.3	-1.9
CCIG	Comitan	1.29	30	*e*P	Pn	12 59 22.6	-0.7
CCIG				*e*S	Sn	12 59 40.2	-1.5
TGIG		1.63	349	*e*P	Pn	12 59 26.0	-1.3
TGIG				*e*S	Sn	12 59 46.4	-2.5

*SKHL **08** 13:01:49.2±0.5, 45°.06N×151°.80E, h38^{km}±3^{km}, mb4.4/5*
*JMA **08** 13:01:49.9±0.7, 45°.63N×151°.54E, h30^{km}, M4.1*
ISC 08 13:01:47.9±2.3**, 44°.8N**±0°.2×**152°.0E**±0°.1**, h32**^{km}**, n24, σ2^{s}.25**/37**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	Kuril'sk	2.94	280	*e*P	Pn	13 02 31.0	-1.3
KUR				AMB	AMB	13 02 35.0	
	9.0nm,0.4s						
KUR				AMB	AMB	13 02 35.0	
	12nm,0.4s						
KUR				AMB	AMB	13 02 35.0	
	31nm,0.4s						
KUR				*e*S	Sn	13 03 02.0	-4.5
KUR				A	A	13 03 08.0	
	139nm,0.4s						
KUR				A	A	13 03 08.0	
	56nm,0.4s						
SHO	Shikotan	3.81	258	*i* P	Pn	13 02 46.0	+1.8
SHO				AMB	AMB	13 02 49.0	
	10.0nm,0.3s						
SHO				AMB	AMB	13 02 49.0	
	16nm,0.3s						
SHO				AMB	AMB	13 02 49.0	
	24nm,0.3s						
SHO				*i* S	Sn	13 03 29.0	+1.2
SHO				A	A	13 03 39.0	
	60nm,0.3s						
SHO				A	A	13 03 39.0	
	39nm,0.3s						
YUK	Yuzh-Kuril'sk	4.44	262	*e*P	Pn	13 02 54.0	+1.0
YUK				AMB	AMB	13 02 59.0	
	26nm,0.3s						
YUK				*e*S	Sn	13 03 45.0	+1.4
YUK				A	A	13 03 50.0	
	50nm,0.3s						
YUK				A	A	13 03 50.0	
	145nm,0.3s						
LAGR	Lagunnoye	4.49	263	*e*P	Pn	13 02 55.0	+1.3
LAGR				*e*S	Sn	13 03 46.0	+1.2
LAGR				A	A	13 04 02.0	
	80nm,0.4s						
LAGR				A	A	13 04 02.0	
	236nm,0.4s						
GRPR	Tuman	4.52	262	*e*P	Pn	13 02 55.0	+1.0
GRPR				AMB	AMB	13 03 03.0	
	34nm,0.3s						
GRPR				*e*S	Sn	13 03 46.0	+0.6
GRPR				A	A	13 03 52.0	

	115nm,0.5s						
GRPR				A	A	13 03 52.0	
	91nm,0.5s						
NEM2	**Nemuro 2**	**4.71**	**254**	P	**Pn**	**13 02 58.2**	**+1.5**
NEM2				*e*S	**Sn**	**13 03 48.9**	**-1.3**
GLVR	**Golovnino**	**4.75**	**259**	*e*P	**Pn**	**13 03 00.0**	**+2.8**
GLVR				*e*S	**Sn**	**13 03 51.0**	**-0.2**
JRA	**Rausu**	**4.99**	**262**	P	**Pn**	**13 03 03.2**	**+2.8**
JNK	**Nakash**	**5.36**	**259**	P	**Pn**	**13 03 07.8**	**+2.3**
JNK				*e*S	**Sn**	**13 04 05.5**	**-0.6**
JAK	**Akkeshi**	**5.56**	**254**	P	**Pn**	**13 03 09.7**	**+1.4**
JAK				*e*S	**Sn**	**13 04 09.6**	**-1.4**
JTKR	**Abashiri--Toko**	**5.84**	**265**	P	**Pn**	**13 03 14.4**	**+2.3**
JAR	**Ashorobuto**	**6.10**	**259**	P	**Pn**	**13 03 18.3**	**+2.5**
JAR				*e*S	**Sn**	**13 04 23.8**	**-0.6**
JOB	**Onbets**	**6.18**	**255**	P	**Pn**	**13 03 19.1**	**+2.2**
JOB				*e*S	**Sn**	**13 04 25.4**	**-1.0**
JMP	**Maruseppu**	**6.22**	**266**	P	**Pn**	**13 03 19.8**	**+2.4**
SKR	**Severo-Kuril's**	**6.51**	**24**	*e*P	**Pn**	**13 03 21.6**	**+0.3**
SKR				AMB	AMB	13 03 24.7	
	29nm,0.6s						
JCH	**Churui**	**6.61**	**254**	P	**Pn**	**13 03 25.2**	**+2.4**
JKK2	**Kamakawa 2**	**6.68**	**265**	P	**Pn**	**13 03 26.3**	**+2.6**
MYR	**Moyori**	**6.79**	**251**	*e*P	**Pn**	**13 03 28.0**	**+2.7**
JNBK	**Urakawa-nobuka**	**7.16**	**253**	P	**Pn**	**13 03 31.7**	**+1.4**
JBT2	**Biratori 2**	**7.24**	**257**	P	**Pn**	**13 03 32.8**	**+1.4**
JKB	**Kayabe**	**8.49**	**254**	P	**Pn**	**13 03 50.0**	**+1.5**
JKB				*e*S	**Sn**	**13 05 18.3**	**-4.8**
JYM2	**Yakumo 2**	**8.86**	**256**	P	**Pn**	**13 03 55.5**	**+2.0**
JANG	**Nango**	**8.89**	**244**	P	**Pn**	**13 03 55.2**	**+1.1**
JANG				*e*S	**Sn**	**13 05 27.9**	**-5.2**
JOSM	**Okushiri--Mats**	**9.49**	**258**	P	**Pn**	**13 04 04.0**	**+1.8**

NEIC ***08*** *13:03:54.0±0.8, 3°.51S×146°.54E, h35km, mb4.3/4, Error ellipse: s-maj=24.7km s-min=8.4km az=110.0*

IDC ***08*** *13:03:53.1±1.8, 3°.24S×145°.77E, h0km, mb4.0/9, mb1 4.2/11, mb1mx3.9/57, mbtmp4.0/11, ML4.0/2, MS3.6/1, Ms1 3.6/1, ms1mx3.0/43, Error ellipse: s-maj=59.5km s-min=17.1km az=92.0*

ISCJB ***08*** *13:03:54.2±1.1, 3°.38S±0°.07×145°.9E±0°.2, h25km, mb3.9/10, MS3.6/1, Error ellipse: s-maj=31.6km s-min=9.5km az=6.6*

ISC 08 13:03:56.6±1.4, **3°.3S**±0°.1×**145°.9E**±0°.3, **h25**km, **n20**, σ1**§33**/19, **mb3.9**/10, **Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	**Manus Island**	**1.98**	**50**	*e*Pn	Pn	13 04 19.4	-9.1
CTA	**Charters Tower**	**16.66**	**179**	Pn	**P**	**13 07 49.4**	**-1.4**
	0.2nm,0.3s,baz=346,slow=8.3,SNR=3.6						
MTN	**Manton Dam**	**17.36**	**236**	*e*Pn	**Pn**	**13 07 57.2**	**0.0**
	12nm,0.8s						
WRAB	**Tennant Creek**	**19.96**	**213**	*e*P	**P**	**13 08 25.4**	**-1.7**
	24nm,0.7s						
WB2	**Warramunga Arr**	**19.97**	**213**	*e*P	**P**	**13 08 26.8**	**-0.4**
	24nm,0.8s						
WRA	**Warramunga Arr**	**19.97**	**213**	P	**P**	**13 08 27.0**	**-0.2**
	0.7nm,0.3s,baz=37,slow=12,SNR=84						
AS01	**Alice Springs**	**23.26**	**209**	*e*P	**P**	**13 09 00.7**	**-1.7**
AS31	**Alice Springs**	**23.28**	**209**	*e*P	**P**	**13 09 00.0**	**-2.6**
	2.4nm,0.8s						
ASAR	**Alice Springs**	**23.29**	**209**	P	**P**	**13 09 01.8**	**-0.8**
	9.2nm,0.8s,baz=44,slow=7.6,SNR=104						
FITZ	**Fitzroy Crossi**	**24.65**	**232**	P	**P**	**13 09 15.3**	**-0.2**
	11nm,0.7s,baz=42,slow=8.1,SNR=33						
STKA	**Stephens Creek**	**28.68**	**188**	P	**P**	**13 09 54.4**	**+2.8**
	2.7nm,0.9s,baz=352,slow=10.0,SNR=4.7						
KSRS	**Korea Array**	**43.86**	**339**	P	**P**	**13 12 00.5**	**-0.5**
	0.8nm,0.9s,baz=148,slow=9.3,SNR=4.3						
KSRS				LR	LR	13 29 43.2	
	comp=Z,65nm,18.2s,baz=340,slow=35						
KSAR	**Wonju Array Be**	**43.87**	**339**	P	**P**	**13 12 00.5**	**-0.5**
CM01	**Chiang Mai Arr**	**50.98**	**297**	*e*P	**P**	**13 12 58.0**	**+1.3**
CMAR	**Chiang Mai Arr**	**51.01**	**297**	P	**P**	**13 12 58.3**	**+1.4**
	1.1nm,0.3s,baz=104,slow=5.8,SNR=3.8						
SONM	**Songino Array**	**61.53**	**331**	P	**P**	**13 14 11.4**	**-0.3**
	0.5nm,0.7s,baz=142,slow=7.3,SNR=3.3						
MKAR	**Makanchi Array**	**74.72**	**320**	P	**P**	**13 15 33.7**	**-0.6**
	0.2nm,0.4s,baz=105,slow=8.9,SNR=4.9						
KURK	**Kurchatov**	**78.40**	**323**	P	**P**	**13 15 55.0**	**0.0**
KURBB	**Kurchatov Arra**	**78.42**	**323**	P	**P**	**13 15 55.0**	**-0.2**
	0.4nm,0.9s,baz=114,slow=6.5,SNR=2.8						
BVAR	**Borovoye Array**	**83.95**	**324**	P	**P**	**13 16 23.9**	**-0.7**
	0.5nm,0.4s,baz=90,slow=6.3,SNR=3.8						

NEIC ***08*** *13:08:34.0±0.3, 45°.39N×151°.38E, h10km, mb4.9/19, Error ellipse: s-maj=8.6km s-min=4.6km az=137.0*

JMA ***08*** *13:08:34.4±0.7, 45°.46N×151°.68E, h30km, M4.8*

ISCJB ***08*** *13:08:34.5±0.8, 45°.24N±0°.04×151°.49E±0°.04, h30km±6km, mb4.4/75, MS4.7/10, Error ellipse: s-maj=7.4km s-min=2.9km az=145.8*

BJI ***08*** *13:08:35.1, 45°.47N×151°.65E, h42km, mb4.8/41, mB5.0/20, Ms4.4/9, Ms7 4.2/10*

SKHL ***08*** *13:08:35.6±0.7, 45°.13N×151°.68E, h42km±7km, mb5.3/10*

MOS ***08*** *13:08:36.6±0.9, 45°.37N×151°.39E, h40km, mb4.7/17, MS4.7/5, Error ellipse: s-maj=6.9km s-min=5.8km az=100.1*

IDC ***08*** *13:08:39.7±2.2, 45°.47N×151°.35E, h52km±19km, mb3.9/28, mb1 4.0/35, mb1mx3.9/78, mbtmp4.1/35, ML3.5/6, Error ellipse: s-maj=16.0km s-min=10.8km az=141.0*

ISC 08 13:08:35.9±0.8, **45°.12N**±0°.05×**151°.56E**±0°.05, **h30**km±4km, **n282**, σ1**§70**/329, **mb4.5**/79, **MS4.7**/10, **23C-18D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.62**	**274**	*i* P	**Pn**	**13 09 16.0**	**0.0**
KUR				AMB	AMB	13 09 18.0	
	161nm,0.3s						
KUR				AMB	AMB	13 09 18.0	
	97nm,0.3s						
KUR				AMB	AMB	13 09 18.0	
	483nm,0.3s						
KUR				*e*S	**Sn**	**13 09 46.0**	**-0.8**
KUR				A	A	13 09 54.0	
	2μm,0.3s						
KUR				A	A	13 09 54.0	
	1μm,0.3s						
KUR	**Kuril'sk**	**2.62**	**274**	*d i*PN	**Pn**	**13 09 16.9**	**+0.9**
KUR				*e*S	**Sn**	**13 09 46.6**	**-0.2**
KUR				pmax	pmax		
	comp=N,161nm,0.3s						
KUR				pmax	pmax		
	comp=E,97nm,0.3s						
KUR				pmax	pmax		
	comp=Z,483nm,0.3s						
KUR				smax	smax		
	comp=N,2μm,0.3s						
KUR				smax	smax		
	comp=E,1μm,0.4s						
SHO	**Shikotan**	**3.61**	**251**	*i* P	**Pn**	**13 09 31.0**	**+1.3**
SHO				AMB	AMB	13 09 33.0	
	comp=E,87nm,0.4s						
SHO				AMB	AMB	13 09 33.0	
	comp=E,266nm,0.4s						
SHO				*i* S	**Sn**	**13 10 12.0**	**+0.8**
SHO				A	A	13 10 15.0	
	comp=E,644nm,0.3s						
SHO				A	A	13 10 15.0	
	comp=E,552nm,0.3s						
SHO	**Shikotan**	**3.61**	**251**	*c i*PN	**Pn**	**13 09 31.4**	**+1.7**
SHO				*i* S	**Sn**	**13 10 12.1**	**+0.8**
SHO				pmax	pmax		
	comp=N,87nm,0.4s						
SHO				pmax	pmax		
	comp=Z,266nm,0.4s						
SHO				pmax	pmax		
	comp=E,133nm,0.3s						
SHO				smax	smax		
	comp=E,552nm,0.3s						
SHO				smax	smax		
	comp=N,644nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**4.21**	**257**	*i* P	**Pn**	**13 09 39.0**	**+1.0**
YUK				AMB	AMB	13 09 44.0	
	comp=N,161nm,0.4s						
YUK				AMB	AMB	13 09 44.0	
	comp=N,146nm,0.4s						
YUK				AMB	AMB	13 09 44.0	
	comp=N,580nm,0.4s						
YUK				*e*S	**Sn**	**13 10 27.0**	**+0.8**
YUK				A	A	13 10 38.0	
	comp=N,770nm,0.4s						
YUK				A	A	13 10 38.0	
	comp=N,219nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**4.21**	**257**	*c i*PN	**Pn**	**13 09 39.5**	**+1.5**
YUK				*e*S	**Sn**	**13 10 27.0**	**+0.8**
YUK				pmax	pmax		
	comp=Z,580nm,0.2s						
YUK				pmax	pmax		
	comp=N,161nm,0.3s						
YUK				pmax	pmax		
	comp=E,146nm,0.1s						
YUK				smax	smax		
	comp=E,219nm,0.4s						
YUK				smax	smax		
	comp=N,770nm,0.3s						
LAGR	**Lagunnoye**	**4.26**	**258**	*e*P	**Pn**	**13 09 40.0**	**+1.4**
LAGR				AMB	AMB	13 09 55.0	
	comp=N,302nm,0.5s						
LAGR				AMB	AMB	13 09 55.0	
	comp=N,502nm,0.5s						
LAGR				*e*S	**Sn**	**13 10 28.0**	**+0.7**
LAGR				A	A	13 10 38.0	
	comp=N,1μm,0.4s						
LAGR	**Lagunnoye**	**4.26**	**258**	*e*PN	**Pn**	**13 09 40.1**	**+1.4**
LAGR				*e*S	**Sn**	**13 10 28.5**	**+1.1**
LAGR				pmax	pmax		
	comp=E,302nm,0.5s						
LAGR				pmax	pmax		
	comp=Z,502nm,0.5s						
LAGR				pmax	pmax		
	comp=N,296nm,0.3s						
LAGR				smax	smax		
	comp=N,770nm,0.2s						
LAGR				smax	smax		
	comp=E,1μm,0.4s						
GRPR	**Tuman**	**4.29**	**257**	*i* P	**Pn**	**13 09 40.0**	**+0.9**
GRPR				AMB	AMB	13 09 46.0	
	comp=E,459nm,0.4s						
GRPR				*i* S	**Sn**	**13 10 29.0**	**+0.9**
GRPR				A	A	13 10 34.0	
	comp=E,668nm,0.4s						
GRPR				A	A	13 10 34.0	
	comp=E,586nm,0.4s						
GRPR	**Tuman**	**4.29**	**257**	*d i*PN	**Pn**	**13 09 40.6**	**+1.5**
GRPR				*i* S	**Sn**	**13 10 29.2**	**+1.1**
GRPR				pmax	pmax		
	comp=Z,459nm,0.4s						
GRPR				pmax	pmax		
	comp=N,224nm,0.3s						
GRPR				pmax	pmax		
	comp=E,229nm,0.3s						
GRPR				smax	smax		
	comp=E,586nm,0.3s						
GRPR				smax	smax		
	comp=N,668nm,0.4s						
NEM2	**Nemuro 2**	**4.53**	**249**	P	**Pn**	**13 09 42.9**	**+0.5**
NEM2				*e*S	**Sn**	**13 10 33.8**	**-0.3**
GLVR	**Golovnino**	**4.54**	**254**	*e*P	**Pn**	**13 09 43.0**	**+0.5**
GLVR				AMB	AMB	13 09 45.0	
	comp=N,70nm,0.4s						
GLVR				AMB	AMB	13 09 45.0	
	comp=N,582nm,0.4s						
GLVR				*e*S	**Sn**	**13 10 35.0**	**+0.7**
GLVR				A	A	13 10 41.0	
	comp=N,928nm,0.4s						
GLVR				A	A	13 10 41.0	
	comp=N,567nm,0.4s						
GLVR	**Golovnino**	**4.54**	**254**	*e*PN	**Pn**	**13 09 43.9**	**+1.4**
GLVR				*e*S	**Sn**	**13 10 35.4**	**+1.1**
GLVR				pmax	pmax		
	comp=N,70nm,0.3s						
GLVR				pmax	pmax		
	comp=Z,582nm,0.3s						
GLVR				pmax	pmax		
	comp=E,50nm,0.1s						
GLVR				smax	smax		
	comp=E,567nm,0.4s						
GLVR				smax	smax		
	comp=N,928nm,0.3s						
JRA	**Rausu**	**4.75**	**258**	P	**Pn**	**13 09 47.5**	**+2.1**
JNK	**Nakash**	**5.14**	**255**	P	**Pn**	**13 09 52.4**	**+1.6**
JNK				*e*S	**Sn**	**13 10 49.9**	**+0.8**
JAK	**Akkeshi**	**5.38**	**249**	P	**Pn**	**13 09 54.7**	**+0.6**
JAK				*e*S	**Sn**	**13 10 54.6**	**-0.4**
JTKR	**Abashiri--Toko**	**5.59**	**261**	P	**Pn**	**13 09 59.3**	**+2.4**
JAR	**Ashorobuto**	**5.89**	**255**	P	**Pn**	**13 10 03.1**	**+2.0**
JAR				*e*S	**Sn**	**13 11 08.7**	**+1.2**
JMP	**Maruseppu**	**5.96**	**262**	P	**Pn**	**13 10 04.5**	**+2.4**
JOB	**Onbets**	**6.00**	**251**	P	**Pn**	**13 10 03.8**	**+1.3**
JOB				*e*S	**Sn**	**13 11 10.5**	**+0.4**
HRK	**Horoka**	**6.28**	**258**	*e*P	**Pn**	**13 10 09.0**	**+2.6**
SKR	**Severo-Kuril's**	**6.35**	**27**	*e*P	**Pn**	**13 10 07.6**	**+0.3**
SKR				AMB	AMB	13 10 09.3	
	comp=N,138nm,0.5s						
SKR				*e*S	**Sn**	**13 11 15.5**	**-3.3**
SKR				A	A	13 11 42.0	
	comp=N,180nm,0.5s						
SKR				A	A	13 11 42.0	
	comp=N,210nm,0.5s						
SKR	**Severo-Kuril's**	**6.35**	**27**	*e*PN	**Pn**	**13 10 07.6**	**+0.3**
SKR				pmax	pmax		
	comp=Z,138nm,0.5s						
SKR				MLR	MLR		
	comp=Z,1μm,14.0s						
SKR				MLR	MLR		
	comp=Z,2μm,12.0s						
JSE	**Soyaes**	**6.36**	**272**	P	**Pn**	**13 10 10.1**	**+2.6**
YSS	**Yuzh-Sakhalins**	**6.40**	**290**	*e*P	**Pn**	**13 10 09.6**	**+1.6**
YSS				AMB	AMB	13 10 11.7	
	comp=Z,35nm,0.6s						
YSS				*e*S	**Sn**	**13 11 21.1**	**+1.1**
YSS				A	A	13 11 23.0	
	comp=Z,13nm,0.7s						
YSS	**Yuzh-Sakhalins**	**6.40**	**290**	*e*Pn	**Pn**	**13 10 07.0**	**-1.0**
YSS	**Yuzh-Sakhalins**	**6.40**	**290**	*e*PN	**Pn**	**13 10 07.3**	**-0.7**
JKK2	**Kamakawa 2**	**6.43**	**262**	P	**Pn**	**13 10 11.1**	**+2.7**
JCH	**Churui**	**6.43**	**250**	P	**Pn**	**13 10 08.8**	**+0.3**
JCH				*e*S	**Sn**	**13 11 19.8**	**-1.1**
ASAJ	**Asahikawa**	**6.48**	**264**	P	**Pn**	**13 10 11.8**	**+2.7**
	comp=Z,7.2nm,0.3s,baz=71,slow=22,SNR=119						
ASAJ				S	**Sn**	**13 11 24.8**	**+2.8**
	baz=332,slow=15,SNR=2.2						
ASAJ	**Asahikawa**	**6.48**	**264**	P	**Pn**	**13 10 12.0**	**+2.9**
MYR	**Moyori**	**6.63**	**248**	*e*P	**Pn**	**13 10 12.7**	**+1.5**
JFR	**Furan**	**6.74**	**256**	P	**Pn**	**13 10 14.9**	**+2.1**
JWK2	**Keihoku**	**6.83**	**275**	P	**Pn**	**13 10 18.3**	**+4.4**
JEM	**Erimo**	**6.85**	**246**	P	**Pn**	**13 10 16.2**	**+2.0**
JEM				*e*S	**Sn**	**13 11 30.6**	**-0.5**
ERM	**Erimo**	**6.85**	**246**	*e*P	**Pn**	**13 10 17.0**	**+2.8**
ERM	**Erimo**	**6.85**	**246**	*e*Pn	**Pn**	**13 10 17.1**	**+2.9**
ERM	**Erimo**	**6.85**	**246**	*ce*PN	**Pn**	**13 10 17.0**	**+2.8**
ERM				pmax	pmax		
	comp=Z,51nm,0.6s						
JAB	**Ashibetsu**	**6.89**	**260**	P	**Pn**	**13 10 18.1**	**+3.3**
JNBK	**Urakawa-nobuka**	**6.99**	**249**	P	**Pn**	**13 10 16.7**	**+0.6**
JNBK				*e*S	**Sn**	**13 11 36.0**	**+1.5**
JBT2	**Biratori 2**	**7.04**	**254**	P	**Pn**	**13 10 18.0**	**+1.2**
PAU	**Pauzhetka**	**7.25**	**27**	*e*P	**Pn**	**13 10 19.9**	**+0.2**
PAU				AMB	AMB	13 10 23.3	
	comp=Z,109nm,0.7s						
PAU				*e*S	**Sn**	**13 11 38.8**	**-2.1**
PAU				A	A	13 11 42.3	
	comp=Z,224nm,0.8s						
JNB	**Noboribetsu**	**8.06**	**255**	P	**Pn**	**13 10 31.7**	**+0.9**
JNB				*e*S	**Sn**	**13 11 59.6**	**-1.3**
TYV	**Tymovskoe**	**8.28**	**317**	*e*P	**Pn**	**13 10 34.8**	**+0.9**
TYV				AMB	AMB	13 10 35.3	
	comp=Z,29nm,1.7s						
TYV				*e*S	**Sn**	**13 12 04.0**	**-2.3**
TYV				A	A	13 12 06.5	
	comp=Z,14nm,1.8s						
TYV	**Tymovskoe**	**8.28**	**317**	*e*PN	**Pn**	**13 10 34.8**	**+0.9**
TYV				pmax	pmax		
	comp=Z,29nm,1.7s						
JKB	**Kayabe**	**8.31**	**251**	P	**Pn**	**13 10 34.4**	**+0.2**
JKB				*e*S	**Sn**	**13 12 02.2**	**-4.8**
JYM2	**Yakumo 2**	**8.66**	**254**	P	**Pn**	**13 10 39.8**	**+0.8**
JSH	**Shimam**	**8.68**	**257**	P	**Pn**	**13 10 41.4**	**+2.1**
JANG	**Nango**	**8.78**	**241**	P	**Pn**	**13 10 39.5**	**-1.2**
JANG				*e*S	**Sn**	**13 12 12.5**	**-6.2**
JTM	**Tenmabayashi**	**8.83**	**244**	P	**Pn**	**13 10 41.6**	**+0.2**
JTM				*e*S	**Sn**	**13 12 14.8**	**-5.0**
JTH	**Tanohata**	**8.83**	**238**	P	**Pn**	**13 10 40.2**	**-1.3**
JTH				*e*S	**Sn**	**13 12 13.1**	**-6.8**
JSR	**Shiriuchi**	**8.88**	**250**	P	**Pn**	**13 10 42.5**	**+0.4**
JSR				*e*S	**Sn**	**13 12 15.9**	**-5.1**
PEA0B	**Petropavlovsk-**	**8.95**	**24**	*e*Pn	**Pn**	**13 10 42.8**	**-0.1**
PETK	**Petropavlovsk-**	**8.95**	**24**	P	**Pn**	**13 10 41.2**	**-1.7**
	comp=Z,0.6nm,0.3s,baz=205,slow=12,SNR=21						
PETK	**Petropavlovsk-**	**8.95**	**24**	*e*Pn	**Pn**	**13 10 42.3**	**-0.6**
PETK	**Petropavlovsk-**	**8.95**	**24**	*e*PN	**Pn**	**13 10 42.3**	**-0.6**
PET	**Petropavlovsk**	**9.17**	**28**	*e*P	**Pn**	**13 10 46.7**	**+0.7**
PET				*e*S	**Sn**	**13 12 24.1**	**-4.0**
PET				A	A	13 12 30.0	
	comp=Z,19nm,0.7s						
PET	**Petropavlovsk**	**9.17**	**28**	*e*Pn	**Pn**	**13 10 45.8**	**-0.2**
PET	**Petropavlovsk**	**9.17**	**28**	*e*PN	**Pn**	**13 10 43.3**	**-2.7**
PET				pmax	pmax		
	comp=Z,19nm,1.1s						
JOSM	**Okushiri--Mats**	**9.28**	**255**	P	**Pn**	**13 10 48.0**	**+0.5**
OFUJ	**Ofunato**	**9.51**	**234**	P	**Pn**	**13 10 50.4**	**-0.3**
OFUJ				*e*S	**Sn**	**13 12 30.4**	**-6.1**
JRG	**Rokugo**	**9.91**	**239**	P	**Pn**	**13 10 55.8**	**-0.4**
JRG				*e*S	**Sn**	**13 12 44.0**	**-2.4**
JIO	**Ouri**	**10.12**	**232**	P	**Pn**	**13 10 58.5**	**-0.6**
JIO				*e*S	**Sn**	**13 12 45.4**	**-6.1**
JYA	**Atsumi**	**10.98**	**238**	P	**Pn**	**13 11 11.2**	**+0.4**
JFY	**Yanaizu**	**11.78**	**233**	P	**Pn**	**13 11 23.1**	**+1.3**
MAJO	**Matsushiro**	**13.24**	**234**	*e*Pn	**Pn**	**13 11 42.6**	**+0.9**
MAJO	**Matsushiro**	**13.24**	**234**	*i* PN	**Pn**	**13 11 42.6**	**+0.9**
MJAR	**Matsushiro Arr**	**13.24**	**234**	P	**Pn**	**13 11 42.3**	**+0.5**
	comp=Z,0.5nm,0.3s,baz=23,slow=15,SNR=12						
MJAR				S	**Sn**	**13 14 10.5**	**+2.6**
	comp=Z,0.3nm,0.3s,baz=179,slow=16,SNR=3.5						
MJB9	**Matsu-Tunnel**	**13.24**	**234**	*e*Pn	**Pn**	**13 11 42.2**	**+0.5**
USRK	**Ussuriysk Ar.**	**13.96**	**273**	P	**Pn**	**13 11 52.0**	**+0.5**
	comp=Z,0.8nm,0.3s,baz=81,slow=13,SNR=9.8						
KLR	**Kul'dur**	**14.08**	**294**	P	**Pn**	**13 11 54.0**	**+0.8**
	comp=Z,0.0nm,0.3s,baz=103,slow=14,SNR=14						
KLR	**Kul'dur**	**14.08**	**294**	*e*P	**Pn**	**13 11 52.7**	**-0.4**
MA2	**Magadan**	**14.49**	**358**	P	**Pn**	**13 11 56.8**	**-1.8**
	comp=Z,2.6nm,0.3s,baz=190,slow=9.5,SNR=21						
MA2	**Magadan**	**14.49**	**358**	*e*Pn	**Pn**	**13 11 56.1**	**-2.5**
MA2	**Magadan**	**14.49**	**358**	*e*P	**Pn**	**13 11 56.1**	**-2.5**
MSHR	**Mys Shultsa**	**14.94**	**267**	*i* P	**Pn**	**13 12 06.9**	**+2.1**
MDJ	**Mudanjiang**	**15.58**	**276**	*e*Pn	**Pn**	**13 12 12.0**	**-1.2**
	comp=Z,17nm,0.8s						
SEY	**Seymchan**	**17.86**	**1**	P	**Pn**	**13 12 39.8**	**-1.9**
	comp=Z,0.1nm,0.3s,baz=180,slow=15,SNR=4.3						
ZEA	**Zeya**	**17.94**	**307**	*e*P	P	13 12 50.4	+7.2
ZEA				pmax	pmax		
	comp=Z,23nm,1.0s						
CN2	**Changchun**	**18.66**	**275**	*e*P	**P**	**13 12 49.3**	**-2.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KSRS	**Korea Array**	**19.30**	**255**	P	**P**	**13 12 59.1**	**+0.8**
	comp=Z,0.4nm,0.3s,baz=59,slow=11,SNR=25						
KS01	**Wonju Array Si**	**19.31**	**255**	*e*P	**Pn**	**13 13 00.3**	**+0.8**
KSAR	**Wonju Array Be**	**19.33**	**255**	P	**P**	**13 12 59.1**	**+0.4**
KSAR	**Wonju Array Be**	**19.33**	**255**	P	**P**	**13 12 59.1**	**+0.4**
JNU	**Nakatsue**	**19.96**	**240**	P	**Pn**	**13 13 08.5**	**+1.1**
	comp=Z,8.7nm,0.9s,baz=74,slow=11,SNR=5.0						
TJN	**Taejon**	**20.25**	**253**	*ce*P	Pn	13 13 10.5	-0.2
YAK	**Yakutsk**	**21.16**	**331**	P	**P**	**13 13 16.6**	**-1.7**
	comp=Z,18nm,0.4s,baz=6.8,slow=1.1,SNR=4.2						
YAK	**Yakutsk**	**21.16**	**331**	*e*P	**P**	**13 13 18.1**	**-0.2**
YAK				*e**PP	**sP**	**13 13 28.3**	**-1.8**
YAK				*e*		13 13 37.4	
YAK				*e*S	**S**	**13 17 09.9**	**-2.0**
YAK				*e*		13 17 24.1	
YAK				*e*SS	**SnSn**	**13 17 42.9**	**+8.6**
YAK				*e*		13 24 42.9	
YAK				pmax	pmax		
	comp=Z,21nm,0.8s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,70nm,3.7s						
YAK				pmax	pmax		
	comp=N,23nm,3.1s						
YAK				pmax	pmax		
	comp=E,21nm,2.3s						
YAK				smax	smax		
	comp=N,179nm,10.0s						
YAK				smax	smax		
	comp=E,103nm,8.4s						
BILL	**Bilibino**	**24.23**	**13⇑**	*e*P	**P**	**13 13 51.5**	**+1.9**
BILL				*e**SP	**sP**	**13 14 03.2**	**+1.3**
BILL						13 14 20.0	
BILL				*e*PPP	PPP	13 14 29.6	
BILL				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BJI	**Beijing**	**26.41**	**272**	P	**P**	**13 14 11.5**	**+1.9**
BJI				pmax	pmax		
	comp=Z,20nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**28.33**	**148**	T	T	13 45 13.3	
	SNR=124						
NJ2	**Nanjing**	**28.50**	**254**	*e*P	**P**	**13 14 28.6**	**+0.2**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
HHC	**Hu-ho-hao-te**	**29.36**	**276**	*e*P	**P**	**13 14 36.5**	**+0.3**
HHC				PP	**PnPn**	**13 15 29.4**	**-0.8**
HHC				S	**S**	**13 19 26.7**	**-1.1**
HHC				pmax	pmax		
	comp=Z,28nm,0.9s						
HHC				pmax	pmax		
	comp=Z,73nm,4.6s						
HHC				LR	LR		
	comp=Z,240nm,13.2s						
HHC				LR	LR		
	comp=Z,450nm,14.2s						
HHC				LR	LR		
	comp=Z,360nm,14.7s						
H11S1	**WAKE ISLAND Hy**	**29.39**	**150**	T	T	13 47 01.2	
	baz=337,slow=76,SNR=96						
H11S3	**WAKE ISLAND Hy**	**29.39**	**150**	T	T	13 46 51.4	
	baz=337,slow=76,SNR=114						
H11S2	**WAKE ISLAND Hy**	**29.40**	**150**	T	T	13 46 44.7	
	baz=337,slow=76,SNR=83						
ULN	**Ulaanbaatar**	**30.45**	**291**	*e*P	**P**	**13 14 46.0**	**+0.2**
ULN	**Ulaanbaatar**	**30.45**	**291**	*ce*P	**P**	**13 14 46.0**	**+0.2**
ULN				pmax	pmax		
	comp=Z,4.0nm,1.3s						
SONM	**Songino Array**	**30.89**	**291**	P	**P**	**13 14 49.2**	**-0.4**
	comp=Z,0.8nm,0.5s,baz=66,slow=9.1,SNR=4.4						
SONM	**Songino Array**	**30.89**	**291**	*e*P	**P**	**13 14 50.1**	**+0.5**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
TLY	**Talaya**	**32.00**	**299**	*e*P	**P**	**13 15 00.4**	**+1.2**
TLY	**Talaya**	**32.00**	**299**	*i* P	**P**	**13 15 00.5**	**+1.2**
TLY				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WHN	**Wuhan**	**32.48**	**256**	P	P	13 15 08.9	+5.3
XAN	**Xi'an**	**34.31**	**266**	P	**P**	**13 15 19.6**	**-0.1**
XAN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KDAK	**Kodiak Island**	**35.98**	**49**	P	**P**	**13 15 34.1**	**+0.5**
	comp=Z,9.1nm,1.0s,baz=313,slow=4.7,SNR=4.7						
LZH	**Lanzhou**	**36.87**	**273**	*e*P	**P**	**13 15 43.4**	**+1.7**
LZH				pP	sP	13 15 55.9	+1.8
LZH				sP	pP	13 15 59.8	+9.3
LZH				pmax	pmax		
	comp=Z,29nm,1.2s						
LZH				pmax	pmax		
	comp=Z,96nm,4.4s						
LZH				LR	LR		
	comp=Z,440nm,9.2s						
LZH				LR	LR		
	comp=Z,530nm,9.5s						
LZH				LR	LR		
	comp=Z,530nm,10.8s						
GTA	**Gaotai**	**38.17**	**280**	*e*P	**P**	**13 15 53.0**	**+0.3**
GTA				pP	sP	13 16 05.4	+0.4
GTA				sP	pP	13 16 10.4	+8.9
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ILAR	**Eielson Array**	**38.50**	**37**	P	**P**	**13 15 54.6**	**-0.3**
	comp=Z,0.5nm,0.6s,baz=262,slow=7.7,SNR=6.6						
ILAR	**Eielson Array**	**38.50**	**37**	*e*P	**P**	**13 15 56.6**	**+1.6**
ILAR	**Eielson Array**	**38.50**	**37**	*e*P	**P**	**13 15 56.6**	**+1.6**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CD2	**Chengdu**	**39.67**	**266**	*e*P	**P**	**13 16 04.8**	**-0.4**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		

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           comp=Z,140nm,5.0s
GYA   Guiyang           40.31 258⇑iP       P       13 16 10.7 +0.1
GYA                                pP      sP      13 16 23.2 +0.2
GYA                                PP      PnPn    13 17 48.0 +0.6
GYA                                S       S       13 22 15.5 -1.0
GYA                                sS      sS      13 22 36.6 +5.6
GYA                                SS      SS      13 25 07.9 -7.6
GYA                                pmax    pmax
           comp=Z,10.0nm,0.7s
GYA                                pmax    pmax
           comp=Z,110nm,4.9s
GYA                                LR      LR
           comp=Z,390nm,14.9s
GYA                                LR      LR
           comp=Z,410nm,15.8s
GYA                                LR      LR
           comp=Z,470nm,15.3s
DGZ   Jazzator, Alta    42.47 300 i P      P       13 16 26.8 -1.3
DGZ                                pmax    pmax
           comp=Z,2.0nm,1.9s
ZALV  Zalesovo Beam     42.70 307  P       P       13 16 28.3 -1.4
           comp=Z,0.7nm,0.3s,baz=81,slow=9.1,SNR=2.4
ZALV                               PcP     PcP     13 18 20.9 -0.1
           comp=Z,2.0nm,0.7s,baz=48,slow=2.1,SNR=5.6
INK   Inuvik            43.61  31  P       P       13 16 37.1 +0.3
           comp=Z,2.9nm,0.9s,baz=238,slow=10,SNR=3.9
KMI   Kunming           43.88 260  P       P       13 16 39.6 -0.3
KMI                                pmax    pmax
           comp=Z,15nm,0.5s
WMQ   Urumqi            44.52 292  P       P       13 16 43.1 -1.5
WMQ                                pP      pP      13 16 51.8 -1.7
WMQ                                pmax    pmax
           comp=Z,22nm,0.6s
WMQ                                pmax    pmax
           comp=Z,710nm,7.9s
MK31  Makanchi Array    46.74 298  eP      P       13 17 01.2 -0.9
MK31  Makanchi Array    46.74 298  eP      P       13 17 01.2 -0.9
MKAR  Makanchi Array    46.74 298  P       P       13 17 00.8 -1.3
           comp=Z,1.2nm,0.5s,baz=71,slow=7.2,SNR=11
MKAR                               PcP     PcP     13 18 35.5 +0.4
           comp=Z,1.5nm,0.7s,baz=69,slow=3.7,SNR=5.9
MKAR  Makanchi Array    46.74 298  eP      P       13 17 01.1 -1.0
           comp=Z,13nm,0.6s
MKAR                               PcP     PcP     13 18 35.5 +0.4
MKAR  Makanchi Array    46.74 298  eP      P       13 17 01.1 -1.0
MKAR                                               13 18 35.5
MKAR                               pmax    pmax
           comp=Z,13nm,0.6s
MK01  Makanchi Array    46.74 298  eP      P       13 17 01.2 -0.9
MK01                               ePcP    PcP     13 18 35.1  0.0
KURK  Kurchatov         47.38 304  P       P       13 17 05.1 -1.8
KURK  Kurchatov         47.38 304  P       P       13 17 05.1 -1.8
KURBB Kurchatov Arra    47.47 304  P       P       13 17 05.1 -2.5
           comp=Z,1.0nm,0.4s,baz=71,slow=8.4,SNR=12
LSA   Lhasa             49.29 273  eP      P       13 17 23.1 +0.6
           comp=Z,6.0nm,0.8s
LSA   Lhasa             49.29 273  eP      P       13 17 23.1 +0.6
LSA                                pmax    pmax
           comp=Z,6.0nm,0.8s
CMAR  Chiang Mai Arr    50.93 256  P       P       13 17 35.2 +0.7
           comp=Z,0.9nm,0.5s,baz=40,slow=7.6,SNR=6.2
CMAR                               PcP     PcP     13 18 52.2 +1.6
           comp=Z,0.9nm,0.5s,baz=23,slow=2.9,SNR=4.1
BVAR  Borovoye Array    51.06 310  P       P       13 17 33.6 -1.5
           comp=Z,0.7nm,0.7s,baz=90,slow=7.2,SNR=3.4
BVAR                               PcP     PcP     13 18 50.9 +0.3
           comp=Z,1.4nm,0.5s,baz=57,slow=3.0,SNR=5.8
RES   Resolute Bay      52.72  18  P       P       13 17 46.6 -0.5
           comp=Z,2.9nm,0.8s,baz=346,slow=12,SNR=4.1
YKA   Yellowknife Ar    52.88  36  P       P       13 17 47.9 -0.5
           comp=Z,0.7nm,0.8s,baz=300,slow=6.4,SNR=4.7
YKA   Yellowknife Ar    52.88  36  eP      P       13 17 50.3 +1.9
YKA   Yellowknife Ar    52.88  36  eP      P       13 17 50.3 +1.9
YKA                                pmax    pmax
           comp=Z,1.0nm,0.8s
JIRN  Jiri              54.00 275  eP      P       13 17 57.7 +0.1
           comp=Z,26nm,0.5s
GUN   Gumba             54.07 275  eP      P       13 17 59.3 +1.2
RAMN  Ramite            54.14 274  eP      P       13 17 59.1 +0.6
           comp=Z,23nm,0.6s
KSH   Kashi             54.28 293  P       P       13 18 03.1 +3.9
KSH                                sP      sP      13 18 21.3 +9.5
KSH                                ePcP    PcP     13 19 06.3 +3.2
KSH                                ePP     PP      13 20 05.8 +4.8
KSH                                S       S       13 25 35.7 +0.8
KSH                                SS      SS      13 29 18.4 +1.8
KSH                                pmax    pmax
           comp=Z,5.0nm,0.5s
KSH                                pmax    pmax
           comp=Z,170nm,5.0s
KKN   Kakani            54.56 275  eP      P       13 18 02.9 +1.4
           comp=Z,14nm,0.5s
PKIN  Phulchoki         54.61 275  eP      P       13 18 02.4 +0.5
DMN   Daman             54.79 275  eP      P       13 18 04.2 +0.9
           comp=Z,33nm,0.9s
GKN   Gorkha            54.89 276  eP      P       13 18 04.5 +0.7
           comp=Z,18nm,0.5s
ARU   Arti              55.48 318  eP      P       13 18 08.3 +0.8
ARU   Arti              55.48 318d iP      P       13 18 08.4 +0.9
ARU                                                13 19 04.0
ARU                                                13 20 10.2
ARU                                S       S       13 25 52.1 +1.7
ARU                                SS      SS      13 29 33.9 -0.8
ARU                                pmax    pmax
           comp=Z,5.0nm,1.7s
KOLN  Koldanda          55.76 276  eP      P       13 18 11.0 +0.8
           comp=Z,12nm,0.6s
KK31  Karatay Array     55.84 299  eP      P       13 18 09.5 -0.8
KK31  Karatay Array     55.84 299  eP      P       13 18 09.5 -0.8
KKAR  Karatay Array     55.84 299  eP      P       13 18 09.4 -0.9
KKAR  Karatay Array     55.84 299  eP      P       13 18 09.5 -0.9
ABKAR Akbulak array     58.64 310  eP      P       13 18 28.9 -1.0
AKTO  Aktyubinsk        59.01 312  P       P       13 18 31.9 -0.6
           comp=Z,1.5nm,0.5s,baz=60,slow=11,SNR=7.0
ARCES ARCESS Array B    59.03 341  P       P       13 18 29.9 -2.6
           comp=Z,2.3nm,0.9s,baz=24,slow=8.9,SNR=3.1
NIL   Nilore            59.39 288  eP      P       13 18 35.7 +0.2
           comp=Z,22nm,0.8s
NIL   Nilore            59.39 288  eP      P       13 18 35.7 +0.2
NIL                                pmax    pmax
           comp=Z,22nm,0.8s
KBL   Kabul             61.66 292  eP      P       13 18 50.2 -1.0
           comp=Z,10.0nm,0.8s
KBL   Kabul             61.66 292  eP      P       13 18 50.2 -1.0
KBL                                pmax    pmax
           comp=Z,10.0nm,0.8s
SUMG  Summit            62.40   3  eP      P       13 18 54.6 -1.1
           comp=Z,6.8nm,0.7s
SUMG  Summit            62.40   3  eP      P       13 18 54.6 -1.1
SUMG                               pmax    pmax
           comp=Z,7.0nm,0.7s
PNTR  Pine Nut          62.96  61  eP      P       13 19 00.3 +0.5
           comp=Z,3.2nm,0.7s
FIA1  FINESS Array S    65.05 334  eP      P       13 19 10.3 -2.5
FINES FINESS Array B    65.05 334  P       P       13 19 10.9 -1.9
           comp=Z,4.1nm,0.7s,baz=37,slow=7.5,SNR=18
TJR   Tejon Ranch       66.01  64  eP      P       13 19 20.4 +0.8
GEYT  Alibeck           66.51 301  P       P       13 19 21.8 -0.9
           comp=Z,4.7nm,0.3s,baz=76,slow=8.6,SNR=9.2
GYA0B ALIBECK ARRAY     66.51 301  eP      P       13 19 21.6 -1.1
           comp=Z,6.9nm,0.8s
PDAR  Pinedale Array    66.59  52  P       P       13 19 25.5 +2.1
           comp=Z,0.2nm,0.6s,baz=305,slow=3.2,SNR=2.0
WRA   Warramunga Arr    66.62 198  P       P       13 19 25.6 +2.2
           comp=Z,1.8nm,0.8s,baz=17,slow=6.6,SNR=11
NB2   NORSAR Subarra    69.41 341  P       P       13 19 38.7 -1.9
           comp=Z,2.0nm,0.6s,baz=28,slow=6.2
HFS   Hagfors           69.60 339  P       P       13 19 40.1 -1.5
           comp=Z,5.7nm,0.5s,baz=38,slow=5.4,SNR=30
AKT   Akhty             70.19 309  eP      P       13 19 46.0 +0.2
AKT                                e               13 20 03.9
AKT                                eS      S       13 28 55.1 -0.2
AKT                                pmax    pmax
           comp=Z,10.0nm,1.0s
AS01  Alice Springs     70.31 197  eP      P       13 19 49.2 +2.8
ASAR  Alice Springs     70.33 197  P       P       13 19 49.7 +3.2
           comp=Z,1.1nm,0.8s,baz=12,slow=5.2,SNR=11
ASAR  Alice Springs     70.33 197  eP      P       13 19 49.9 +3.4
ASAR                               pmax    pmax
           comp=Z,1.0nm,0.8s
KIV   Kislovodsk        71.15 314  eP      P       13 19 53.0 +1.4
KIV   Kislovodsk        71.15 314  eP      P       13 19 51.1 -0.5
           comp=Z,15nm,0.8s
KIV   Kislovodsk        71.15 314  eP      P       13 19 53.0 +1.4
KIV                                pmax    pmax
```

```
           comp=Z,20nm,1.0s
KBZ   Khabaz            71.20 313  P       P       13 19 51.7  0.0
           comp=Z,14nm,0.8s,baz=61,slow=4.2,SNR=22
TBLG  Delisi            71.64 311  eP      P       13 19 54.2 -0.3
           comp=Z,22nm,0.7s
TBLG  Delisi            71.64 311  eP      P       13 19 54.2 -0.3
TBLG                               pmax    pmax
           comp=Z,22nm,0.7s
AKASG Malin Array Be    72.29 326  P       P       13 19 56.6 -1.5
           comp=Z,2.0nm,0.4s,baz=38,slow=6.4,SNR=2.2
AKBB  Malin Array Si    72.29 326  eP      P       13 19 56.1 -2.1
           comp=Z,6.1nm,0.8s
KIEV  Kiev              72.30 326  eP      P       13 19 56.0 -2.2
           comp=Z,5.6nm,0.7s
KIEV  Kiev              72.30 326  eP      P       13 19 56.0 -2.2
KIEV                               pmax    pmax
           comp=Z,6.0nm,0.7s
BEL   Belsk             74.52 331  eP      P       13 20 11.1 -0.1
BEL   Belsk             74.52 331  eP      P       13 20 11.1 -0.1
SORM  Soroca            74.66 324⇓iP       P       13 20 10.6 -1.5
SORM  Soroca            74.66 324 ⇓P       P       13 20 10.7 -1.4
KWP   Kalwaria Pacla    75.66 328  eP      P       13 20 17.6 -0.3
KWP   Kalwaria Pacla    75.66 328  eP      P       13 20 16.9 -1.0
           comp=Z,181nm,1.0s
KWP   Kalwaria Pacla    75.66 328  eP      P       13 20 17.6 -0.3
OJC   Ojcow             76.21 330  eP      P       13 20 20.6 -0.4
OJC   Ojcow             76.21 330  eP      P       13 20 19.6 -1.4
           comp=Z,16nm,1.2s
OJC   Ojcow             76.21 330  eP      P       13 20 20.6 -0.4
BUR08 Bucovina Ar. S    76.32 326  eP      P       13 20 20.6 -1.2
BUR04 Bucovina Ar. S    76.34 326  eP      P       13 20 20.8 -1.1
BURAR Bucovina Array    76.34 326⇓iP       P       13 20 21.6 -0.3
BURAR Bucovina Array    76.34 326 ⇓P       P       13 20 21.6 -0.3
TESR  Tescani           76.65 324⇑iP       P       13 20 22.9 -0.7
CRVS  Cervenica-Dubn    76.72 329  eP      P       13 20 23.6 -0.4
CRVS                               pmax    pmax
           comp=Z,4.0nm,0.6s
CRVS  Cervenica-Dubn    76.72 329  eP      P       13 20 23.6 -0.4
KSP   Ksiaz             76.86 333  eP      P       13 20 24.1 -0.6
KSP   Ksiaz             76.86 333  eP      P       13 20 24.1 -0.6
TRPA  Tarpa             76.96 328⇑iP       P       13 20 25.2  0.0
VRI   Vrincioaia        77.14 324⇓iP       P       13 20 27.6 +1.2
VRI   Vrincioaia        77.14 324 ⇓P       P       13 20 27.6 +1.2
LANS  Liptovska Anna    77.23 330  eP      P       13 20 27.4 +0.5
LANS  Liptovska Anna    77.23 330  eP      P       13 20 27.3 +0.4
UPC   Upice             77.24 333  eP      P       13 20 26.8 -0.1
UPC                                AMS     AMS     13 54 20.0
           comp=Z,400nm,22.4s
UPC   Upice             77.24 333  eP      P       13 20 26.8 -0.1
UPC                                MLR     MLR
           comp=Z,400nm,22.4s
DPC   Dobruska-Polom    77.28 332  eP      P       13 20 26.8 -0.3
DPC                                AMS     AMS     14 04 10.0
           comp=Z,300nm,15.0s
DPC   Dobruska-Polom    77.28 332  eP      P       13 20 26.8 -0.3
DPC                                MLR     MLR
           comp=Z,300nm,15.0s
MORC  Moravsky Berou    77.36 331⇓iP       P       13 20 27.4 -0.2
MORC  Moravsky Berou    77.36 331  eP      P       13 20 26.8 -0.8
           comp=Z,9.3nm,0.9s
MORC  Moravsky Berou    77.36 331 ⇓P       P       13 20 27.4 -0.2
MORC  Moravsky Berou    77.36 331  eP      P       13 20 27.1 -0.5
CLL   Collm             77.49 335⇑iP       P       13 20 27.1 -1.1
           comp=Z,14nm,1.1s
CLL   Collm             77.49 335  eP      P       13 20 26.5 -1.7
           comp=Z,9.5nm,0.9s
CLL   Collm             77.49 335⇑iP       P       13 20 27.1 -1.1
CLL                                pmax    pmax
           comp=Z,14nm,1.1s
BRG   Berggiesshubel    77.58 334  eP      P       13 20 27.8 -0.9
           comp=Z,5.2nm,1.1s
BRG   Berggiesshubel    77.58 334  eP      P       13 20 27.8 -0.9
BRG                                pmax    pmax
           comp=Z,5.0nm,1.1s
TLB   Topalu            77.60 322⇑iP       P       13 20 28.6 -0.3
TLB   Topalu            77.60 322 ⇑P       P       13 20 28.6 -0.3
EKA   Eskdalemuir Ar    77.66 346  P       P       13 20 28.2 -0.8
           comp=Z,1.1nm,0.4s,baz=18,slow=4.9,SNR=19
PVCC  Panska Ves        77.69 334  AMS     AMS     13 53 00.0
           comp=Z,300nm,16.3s
MLR   Muntele Rosu      77.76 324  P       P       13 20 29.6 -0.5
           comp=Z,1.3nm,0.7s,baz=346,slow=8.3,SNR=8.9
MLR   Muntele Rosu      77.76 324⇑iP       P       13 20 29.7 -0.3
MLR   Muntele Rosu      77.76 324  eP      P       13 20 29.4 -0.6
           comp=Z,4.9nm,0.8s
MLR   Muntele Rosu      77.76 324 ⇑P       P       13 20 29.7 -0.3
CVDA  Cernavoda         77.81 322⇑iP       P       13 20 28.8 -1.3
DRGR                    78.00 327⇑iP       P       13 20 30.8 -0.4
DRGR                    78.00 327 ⇑P       P       13 20 30.8 -0.4
VYHS  Vyhne             78.01 330  eP      P       13 20 30.4 -0.8
VYHS                               pmax    pmax
           comp=Z,5.0nm,1.3s
VYHS  Vyhne             78.01 330  eP      P       13 20 30.4 -0.8
VRAC  Vranov            78.08 332⇓iP       P       13 20 31.7 +0.1
VRAC  Vranov            78.08 332 ⇓P       P       13 20 31.7 +0.1
VRAC  Vranov            78.08 332  eP      P       13 20 31.4 -0.2
JAVC  Velka Javorina    78.10 331  eP      P       13 20 32.4 +0.6
GOPC  GO Pecny, Ondr    78.15 333  eP      P       13 20 31.6 -0.4
GOPC                               AMS     AMS     13 58 40.0
           comp=Z,400nm,17.1s
GOPC  GO Pecny, Ondr    78.15 333  eP      P       13 20 31.6 -0.4
GOPC                               MLR     MLR
           comp=Z,400nm,17.1s
PRU   Pruhonice         78.17 333  eP      P       13 20 31.4 -0.6
PRU                                AMS     AMS     13 58 50.0
           comp=Z,400nm,20.2s
PRU   Pruhonice         78.17 333  eP      P       13 20 31.4 -0.6
PRU                                MLR     MLR
           comp=Z,400nm,20.2s
VOIR                    78.18 325⇑iP       P       13 20 32.4 +0.2
VOIR                    78.18 325 ⇑P       P       13 20 32.4 +0.2
KRUC  Moravsky          78.36 332  eP      P       13 20 32.7 -0.4
NKC   Novy Kostel       78.60 335  AMS     AMS     14 02 10.0
           comp=Z,400nm,18.3s
MODS  Modra-Piesok      78.66 331  eP      P       13 20 35.3 +0.5
MODS                               pmax    pmax
           comp=Z,10.0nm,1.1s
MODS  Modra-Piesok      78.66 331  eP      P       13 20 35.3 +0.5
BRTR  Keskin Array B    78.82 316  P       P       13 20 36.0  0.0
           comp=Z,1.9nm,0.9s,baz=57,slow=4.6,SNR=7.2
KHC   Kasperske Hory    79.22 333  eP      P       13 20 37.5 -0.4
KHC                                ex      x       13 20 41.3
KHC                                AMS     AMS     13 59 50.0
           comp=Z,400nm,18.3s
KHC   Kasperske Hory    79.22 333  eP      P       13 20 36.8 -1.1
           comp=Z,3.2nm,0.9s
KHC   Kasperske Hory    79.22 333  eP      P       13 20 37.5 -0.4
KHC                                e               13 20 41.3
KHC                                MLR     MLR
           comp=Z,400nm,18.3s
TXAR  Lajitas Array     79.25  59  P       P       13 20 39.6 +1.1
           comp=Z,0.3nm,0.6s,baz=295,slow=3.2,SNR=7.5
TXAR  Lajitas Array     79.25  59  eP      P       13 20 39.7 +1.3
TXAR  Lajitas Array     79.25  59  eP      P       13 20 39.7 +1.3
BZS   Buzias            79.40 327⇓iP       P       13 20 38.6 -0.2
BZS   Buzias            79.40 327 ⇓P       P       13 20 38.6 -0.2
GEC2  GERESS Array S    79.43 333  eP      P       13 20 38.0 -1.1
           comp=Z,3.6nm,1.0s
GEC2  GERESS Array S    79.43 333  eP      P       13 20 38.0 -1.1
GEC2                               pmax    pmax
           comp=Z,4.0nm,1.0s
GERES GERESS Array B    79.43 333  P       P       13 20 38.0 -1.1
           comp=Z,1.7nm,0.8s,baz=45,slow=5.8,SNR=7.8
GEA0  GERESS Array S    79.44 333  eP      P       13 20 37.8 -1.3
CONA  Conrad Observa    79.52 331  epP     P       13 20 39.6  0.0
           comp=Z,5.7nm,1.1s
MDVR  Moldovita         80.06 326⇓iP       P       13 20 41.6 -0.9
MEM   Membach           80.08 339 ⇑P       P       13 20 41.5 -0.9
           comp=Z,6.5nm,1.2s
MEM   Membach           80.08 339 ⇑AP      pP      13 20 53.4 +1.6
MEM   Membach           80.08 339 ⇑XP      sP      13 20 58.6 +3.3
MOA   Molln             80.12 332  eP      P       13 20 42.3 -0.5
           comp=Z,4.0nm,1.1s
ARSA  Arzberg           80.22 331  eP      P       13 20 42.8 -0.5
           comp=Z,1.3nm,0.5s
SOKA  Soboth            80.89 331  eP      P       13 20 46.0 -1.0
           comp=Z,3.1nm,0.8s
KBA   Koelnbreinsper    81.10 333  eP      P       13 20 47.6 -0.6
           comp=Z,3.6nm,0.6s
VTS   Vitosha           81.27 324⇓iP       P       13 20 49.2  0.0
VTS   Vitosha           81.27 324  eP      P       13 20 48.0 -1.2
           comp=Z,12nm,1.1s
VTS   Vitosha           81.27 324 ⇓P       P       13 20 49.2  0.0
MYKA  Terra Mystica     81.40 332  eP      P       13 20 48.6 -1.1
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           comp=Z,0.9nm,0.3s
WATA  Walderalm         81.44 334  epP     P       13 20 50.8 +0.8
           comp=Z,2.4nm,0.4s
WTTA  Wattenberg        81.48 334  epP     P       13 20 50.2 -0.1
           comp=Z,3.0nm,0.5s
BFO   Black Forest      81.52 336  i P     P       13 20 50.6 +0.4
RETA  Reutte            81.56 334  epP     P       13 20 50.2 -0.3
           comp=Z,3.0nm,0.9s
MOTA  Moosalm           81.58 334  eP      P       13 20 50.1 -0.6
           comp=Z,3.6nm,0.7s
FETA  Feichten          81.98 334  eP      P       13 20 52.0 -0.8
           comp=Z,3.6nm,1.2s
DAVA  Damuels           82.00 335  eP      P       13 20 51.1 -1.9
           comp=Z,4.8nm,0.9s
DAVOX Davos/Dischmat    82.46 335  P       P       13 20 54.8 -0.6
           comp=Z,1.9nm,0.6s,baz=182,slow=16,SNR=5.1
NVL   N'lazarevskaya   147.71 204  ePKIKP  PKPdf   13 28 13.9 +0.6
NVL                                pmax    pmax
           comp=Z,5.0nm,0.7s
SNAA  Sanae            150.69 196  PKPbc   PKPbc   13 28 24.5 +0.9
           comp=Z,0.8nm,0.8s,baz=167,slow=5.0,SNR=3.8
```

ISCJB ***08*** *13:18:11.5±0.9, 57°.8S±0°.2×25°.5W±0°.5, h49km, mb3.9/6, Error ellipse: s-maj=36.3km s-min=19.7km az=162.3*

IDC ***08*** *13:18:22.7±7.3, 57°.84S×25°.71W, h138km±65km, mb3.7/6, mb1 3.7/7, mb1mx3.5/30, mbtmp4.0/7, Error ellipse: s-maj=32.7km s-min=20.8km az=66.0*

ISC 08 13:18:13.0±0.8**, 57°.9S**±0°.1×**25°.4W**±0°.2**, h49km, n15, σ3s.30**/18**, mb4.0**/6**, South Sandwich Islands region**

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Code  Station Name       Δ°   AZ°   Phase ID          Time     Res
                                    Op      ISC     h  m  s    ISC
VNA1  Neumayer--Stat    14.72 157  P       P       13 21 45.3 +2.4
VNA3  Neumayer Olymp    14.93 160  P       P       13 21 47.8 +2.6
VNA3                               S       Sn      13 24 20.2 -4.3
SNAA  Sanae             16.66 155  P       P       13 22 11.1 +6.6
SNAA                               S       Sn      13 25 00.8 -5.7
SNAA  Sanae             16.66 155  P       P       13 22 08.9 +4.5
           0.1nm,0.3s,baz=312,slow=13,SNR=7.5
SNAA                               S       Sn      13 25 02.5 -4.0
           0.0nm,0.3s,baz=317,slow=19,SNR=2.2
QSPA  South Pole Qui    32.37 180  P       P       13 24 39.1 +1.6
           3.6nm,0.5s,baz=21,slow=3.6,SNR=30
MAW   Mawson            38.09 142  P       P       13 25 27.6 +1.3
           0.3nm,0.4s,baz=198,slow=6.4,SNR=4.8
VNDA  Vanda             44.79 182  P       P       13 26 22.6 +1.5
           1.9nm,0.6s,baz=187,slow=8.4,SNR=17
LPAZ  La Paz            52.25 304  P       P       13 27 18.9 -0.9
           0.3nm,0.3s,baz=180,slow=4.0,SNR=4.0
TORD  Torodi Ar. Bea    74.18  27  P       P       13 29 44.6 +0.4
           1.4nm,0.6s,baz=198,slow=6.6
ASAR  Alice Springs     96.94 161  P       P       13 31 38.0 -1.0
           0.3nm,0.6s,baz=187,slow=4.6,SNR=5.7
FINES FINESS Array B   125.54  27  PKP     PKPdf   13 37 05.5 -1.5
           0.8nm,0.7s,baz=224,slow=3.8,SNR=3.9
MKAR  Makanchi Array   136.50  72  PKP     PKPdf   13 37 28.5 +0.1
           0.1nm,0.5s,baz=202,slow=3.1,SNR=2.4
YKA   Yellowknife Ar   138.19 316  PKP     PKPdf   13 37 28.8 -2.0
           1.0nm,0.6s,baz=130,slow=2.4,SNR=6.2
SONM  Songino Array    149.81  88  PKPbc   PKPbc   13 37 56.2 -0.4
           1.5nm,0.5s,baz=206,slow=3.7,SNR=8.6
ILAR  Eielson Array    152.06 309  PKPbc   PKPbc   13 37 58.8 -2.4
           2.0nm,0.9s,baz=147,slow=2.3,SNR=15
```

NNC ***08*** *13:25:48.6±8.0, 40°.64N×83°.47E, h0km, mb3.1, mpv2.8, Error ellipse: s-maj=51.0km s-min=32.7km az=0.0*

SOME ***08*** *13:26:11.8, 41°.42N×83°.20E, h10km*

ISC 08 13:26:11.3±3.5**, 41°.5N**±0°.1×**83°.3E**±0°.1**, h10km, n12, σ3s.31**/20**, 3C-2D, Southern Xinjiang**

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Code  Station Name       Δ°   AZ°   Phase ID          Time     Res
                                    Op      ISC     h  m  s    ISC
KTMS  Ketmen             2.90 313  eP      Pb      13 27 04.6 +1.4
           4.9nm,0.3s
KTMS                               eS      Sb      13 27 42.4 +3.6
           12nm,0.2s
SHLS  Shalkode           3.27 302  eP      Pb      13 27 06.9 -2.6
           12nm,0.3s
SHLS                               eS      Sb      13 27 47.1 -2.3
           44nm,0.4s
PDGK  Podgornoye         3.34 305 ⇓Lg      Lg      13 27 55.8
           12nm,0.6s
UZB   Uzynbulak          3.55 299  eP      Pb      13 27 16.6 +2.4
           2.0nm,0.4s
UZB                                eS      Sg      13 28 02.7 -2.5
           9.3nm,0.6s
DJR   Jarkent            3.81 319  eP      Pb      13 27 22.2 +3.5
           2.2nm,0.5s
DJR                                eS      Sg      13 28 12.8 -0.8
           3.0nm,0.4s
KPKS  Kokpek             3.92 302  eP      Pb      13 27 21.8 +1.4
           4.5nm,0.3s
KPKS                               eS      Sb      13 28 12.8 +4.9
           23nm,0.3s
SATY  Saty               3.92 295  eP      Pb      13 27 23.8 +3.2
           4.2nm,0.1s
SATY                               eS      Sg      13 28 15.4 -1.9
           12nm,0.4s
KAPS  Kapalarasan        4.74 324  eP      Pb      13 27 39.1 +4.7
           2.1nm,0.4s
KAPS                               eS      Sg      13 28 41.3 -2.0
           2.5nm,0.3s
ARXS  Arharly            4.83 306  eP      Pg      13 27 41.1 -2.6
           1.1nm,0.4s
ARXS                               eS      Sg      13 28 44.8 -1.5
           5.5nm,0.6s
KTBS  Karatobe           5.33 297  eP      Pb      13 27 47.5 +2.9
           1.2nm,0.3s
KTBS                               eS      Sg      13 28 56.2 -6.3
           4.9nm,0.2s
MK31  Makanchi Array     5.34 353 ⇑Pg      Pb      13 27 42.4 -2.3
           0.3nm,0.4s
MK31                              ⇑Sn      Sn      13 28 35.0 +2.3
           1.0nm,0.6s,baz=169,slow=27,SNR=4.4
MK31                               Lg      Lg      13 29 06.3
           2.3nm,0.5s,baz=158,slow=28,SNR=6.3
MAKZ  Makanchi           5.39 351 ⇓Pg      Pb      13 27 42.0 -3.5
           0.3nm,0.3s
MAKZ                              ⇑Lg      Lg      13 29 06.1
           2.5nm,0.7s
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NIED ***08*** *13:52:00, 45°.50N×151°.60E, h41km, Mw4.3 Best double couple: M0 3.00000×10^15 NP1:φs196.00000°, δ18.00000°, λ53.00000°. NP2:φs54.00000°, δ76.00000°, λ101.00000°.*

JMA ***08*** *13:52:08.1±0.7, 45°.49N×151°.61E, h30km, M4.7*

ISCJB ***08*** *13:52:08.3±0.4, 45°.26N±0°.04×151°.50E±0°.05, h32km, mb3.9/25, Error ellipse: s-maj=7.3km s-min=3.1km az=144.7*

SKHL ***08*** *13:52:08.3±0.3, 45°.10N×151°.75E, h40km±5km, mb5.0/9*

MOS ***08*** *13:52:10.8±0.9, 45°.39N×151°.35E, h47km, mb4.0/12, Error ellipse: s-maj=8.8km s-min=7.4km az=57.3*

IDC ***08*** *13:52:14.4±2.6, 45°.45N×151°.30E, h61km±22km, mb3.4/15, mb1 3.6/21, mb1mx3.5/70, mbtmp3.7/21, ML3.3/5, Error ellipse: s-maj=20.9km s-min=13.4km az=145.0*

ISC 08 13:52:09.7±0.6**, 45°.20N**±0°.06×**151°.42E**±0°.05**, h32km, n102, σ2s.56**/122**, mb3.8**/25**, 6C-3D, Kuril Islands**

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Code  Station Name       Δ°   AZ°   Phase ID          Time     Res
                                    Op      ISC     h  m  s    ISC
KUR   Kuril'sk           2.51 272 i P      Pn      13 52 50.0 +1.8
KUR                                AMB     AMB     13 52 51.0
           88nm,0.1s
KUR                                AMB     AMB     13 52 51.0
           29nm,0.1s
KUR                                AMB     AMB     13 52 51.0
           245nm,0.1s
KUR                               i S      Sb      13 53 21.0 -3.4
KUR                                A       A       13 53 26.0
           1μm,0.4s
KUR                                A       A       13 53 26.0
           476nm,0.4s
KUR   Kuril'sk           2.51 272c iPN     Pn      13 52 50.0 +1.8
KUR                               i S      Sb      13 53 21.2 -3.2
KUR                                pmax    pmax
           comp=N,88nm,0.1s
KUR                                pmax    pmax
           comp=E,29nm,0.1s
KUR                                pmax    pmax
           comp=Z,245nm,0.1s
KUR                                smax    smax
           comp=N,1μm,0.4s
KUR                                smax    smax
```

	comp=E,476nm,0.4s						
SHO	**Shikotan**	**3.54**	**249**	*i* P	**Pn**	**13 53 04.0**	**+1.6**
SHO				AMB	AMB	13 53 06.0	
	comp=E,20nm,0.4s						
SHO				AMB	AMB	13 53 06.0	
	comp=E,27nm,0.4s						
SHO				AMB	AMB	13 53 06.0	
	comp=E,58nm,0.4s						
SHO				*i* S	**Sn**	**13 53 46.0**	**+2.9**
SHO				A	A	13 53 50.0	
	comp=E,85nm,0.3s						
SHO				A	A	13 53 50.0	
	comp=E,216nm,0.3s						
SHO	**Shikotan**	**3.54**	**249**	*c* *i*PN	**Pn**	**13 53 04.4**	**+2.0**
SHO				*i* S	**Sn**	**13 53 46.5**	**+3.4**
SHO				pmax	pmax		
	comp=Z,58nm,0.4s						
SHO				pmax	pmax		
	comp=N,20nm,0.2s						
SHO				pmax	pmax		
	comp=E,27nm,0.2s						
SHO				smax	smax		
	comp=E,85nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**4.13**	**256**	*i* P	**Pn**	**13 53 12.0**	**+1.4**
YUK				AMB	AMB	13 53 15.0	
	comp=E,211nm,0.2s						
YUK				*i* S	**Sn**	**13 54 01.0**	**+3.2**
YUK				A	A	13 54 15.0	
	comp=E,428nm,0.5s						
YUK				A	A	13 54 15.0	
	comp=E,476nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**4.13**	**256**	*d* *i*PN	**Pn**	**13 53 12.8**	**+2.2**
YUK				*i* S	**Sn**	**13 54 01.0**	**+3.2**
YUK				pmax	pmax		
	comp=Z,211nm,0.1s						
YUK				pmax	pmax		
	comp=E,82nm,0.3s						
YUK				pmax	pmax		
	comp=N,15nm,0.1s						
YUK				smax	smax		
	comp=N,428nm,0.6s						
YUK				smax	smax		
	comp=E,476nm,0.5s						
LAGR	**Lagunnoye**	**4.18**	**256**	*i* P	**Pn**	**13 53 14.0**	**+2.8**
LAGR				AMB	AMB	13 53 23.0	
	comp=E,150nm,0.5s						
LAGR				*i* S	**Sn**	**13 54 03.0**	**+4.1**
LAGR				A	A	13 54 19.0	
	comp=E,393nm,0.5s						
LAGR				A	A	13 54 19.0	
	comp=E,623nm,0.5s						
LAGR	**Lagunnoye**	**4.18**	**256**	⇓ *i*PN	**Pn**	**13 53 14.0**	**+2.8**
LAGR				*i* S	**Sn**	**13 54 03.3**	**+4.4**
LAGR				pmax	pmax		
	comp=Z,150nm,0.5s						
LAGR				pmax	pmax		
	comp=E,169nm,0.4s						
LAGR				pmax	pmax		
	comp=N,85nm,0.2s						
LAGR				smax	smax		
	comp=E,623nm,0.5s						
LAGR				smax	smax		
	comp=N,393nm,0.6s						
GRPR	**Tuman**	**4.21**	**255**	*i* P	**Pn**	**13 53 13.0**	**+1.4**
GRPR				AMB	AMB	13 53 23.0	
	comp=N,87nm,0.3s						
GRPR				AMB	AMB	13 53 23.0	
	comp=N,57nm,0.3s						
GRPR				AMB	AMB	13 53 23.0	
	comp=N,127nm,0.3s						
GRPR				*i* S	**Sn**	**13 54 03.0**	**+3.4**
GRPR				A	A	13 54 12.0	
	comp=N,324nm,0.4s						
GRPR				A	A	13 54 12.0	
	comp=N,158nm,0.4s						
GRPR	**Tuman**	**4.21**	**255**	⇑ *i*PN	**Pn**	**13 53 13.4**	**+1.8**
GRPR				*i* S	**Sn**	**13 54 03.8**	**+4.2**
GRPR				pmax	pmax		
	comp=Z,127nm,0.3s						
GRPR				pmax	pmax		
	comp=N,87nm,0.1s						
GRPR				pmax	pmax		
	comp=E,57nm,0.2s						
GRPR				smax	smax		
	comp=N,324nm,0.5s						
GRPR				smax	smax		
	comp=E,158nm,0.4s						
GLVR	**Golovnino**	**4.47**	**253**	*i* P	**Pn**	**13 53 17.0**	**+1.9**
GLVR				AMB	AMB	13 53 20.0	
	comp=E,135nm,0.5s						
GLVR				AMB	AMB	13 53 20.0	
	comp=E,83nm,0.5s						
GLVR				AMB	AMB	13 53 20.0	
	comp=E,242nm,0.5s						
GLVR				*i* S	**Sn**	**13 54 08.0**	**+2.0**
GLVR				A	A	13 54 24.0	
	comp=E,436nm,0.5s						
GLVR				A	A	13 54 24.0	
	comp=E,395nm,0.5s						
GLVR	**Golovnino**	**4.47**	**253**	*c* *i*PN	**Pn**	**13 53 17.9**	**+2.8**
GLVR				*i* S	**Sn**	**13 54 08.8**	**+2.8**
GLVR				pmax	pmax		
	comp=Z,242nm,0.6s						
GLVR				pmax	pmax		
	comp=N,135nm,0.3s						
GLVR				pmax	pmax		
	comp=E,83nm,0.3s						
GLVR				smax	smax		
	comp=E,395nm,0.7s						
GLVR				smax	smax		
	comp=N,436nm,0.4s						
NEM2	**Nemuro 2**	**4.47**	**248**	P	**Pn**	**13 53 16.1**	**+0.9**
NEM2				*e*S	**Sn**	**13 54 06.4**	**+0.4**
JRA	**Rausu**	**4.67**	**256**	P	**Pn**	**13 53 21.2**	**+3.3**
JNK	**Nakash**	**5.06**	**254**	P	**Pn**	**13 53 25.7**	**+2.3**
JAK	**Akkeshi**	**5.32**	**248**	P	**Pn**	**13 53 27.8**	**+1.0**
JAK				*e*S	**Sn**	**13 54 27.8**	**+0.9**
JTKR	**Abashiri--Toko**	**5.50**	**260**	P	**Pn**	**13 53 32.6**	**+3.3**
JAR	**Ashorobuto**	**5.81**	**254**	P	**Pn**	**13 53 36.2**	**+2.6**
JAR				*e*S	**Sn**	**13 54 42.6**	**+3.4**
JMP	**Maruseppu**	**5.87**	**261**	P	**Pn**	**13 53 37.8**	**+3.3**
JOB	**Onbets**	**5.93**	**250**	P	**Pn**	**13 53 37.0**	**+1.8**
JOB				*e*S	**Sn**	**13 54 43.0**	**+1.1**
YSS	**Yuzh-Sakhalins**	**6.27**	**289**	*e*P	**Pn**	**13 53 43.6**	**+3.7**
YSS				AMB	AMB	13 53 44.9	
	comp=N,10.0nm,0.7s						
YSS				*e*S	**Sn**	**13 54 53.9**	**+3.5**
YSS				A	A	13 54 54.5	
	comp=N,8.0nm,0.4s						
YSS	**Yuzh-Sakhalins**	**6.27**	**289**	*e*PN	**Pn**	**13 53 43.0**	**+3.1**
YSS				*e*S	**Sn**	**13 54 54.4**	**+4.0**
YSS				MLR	MLR		
	comp=Z,400nm,14.0s						
SKR	**Severo-Kuril's**	**6.33**	**28**	*e*P	**Pn**	**13 53 41.8**	**+1.2**
SKR				AMB	AMB	13 53 44.8	
	comp=Z,56nm,0.6s						
SKR				*e*S	**Sn**	**13 54 50.0**	**-1.7**
SKR				A	A	13 55 17.1	
	comp=Z,110nm,0.8s						
SKR	**Severo-Kuril's**	**6.33**	**28**	*e*PN	**Pn**	**13 53 41.8**	**+1.2**
SKR				pmax	pmax		
	comp=Z,56nm,0.6s						
SKR				MLR	MLR		
	comp=Z,700nm,12.0s						
SKR				MLR	MLR		
	comp=Z,600nm,12.0s						
JKK2	**Kamakawa 2**	**6.34**	**261**	P	**Pn**	**13 53 44.4**	**+3.6**
JCH	**Churui**	**6.37**	**249**	P	**Pn**	**13 53 42.6**	**+1.4**
JCH				*e*S	**Sn**	**13 54 53.5**	**+0.7**
ASAJ	**Asahikawa**	**6.38**	**263**	P	**Pn**	**13 53 45.4**	**+3.9**
	comp=Z,3.3nm,0.3s,baz=66,slow=20,SNR=58						
ASAJ				S	**Sn**	**13 54 57.9**	**+4.7**
	comp=Z,0.6nm,0.3s,baz=18,slow=19,SNR=2.3						
ASAJ	**Asahikawa**	**6.38**	**263**	P	**Pn**	**13 53 45.3**	**+3.8**
MYR	**Moyori**	**6.57**	**247**	*e*P	**Pn**	**13 53 46.0**	**+2.0**
JEM	**Erimo**	**6.79**	**245**	P	**Pn**	**13 53 49.6**	**+2.6**
JEM				*e*S	**Sn**	**13 55 05.8**	**+2.7**
ERM	**Erimo**	**6.79**	**245**	*e*P	Pn	13 53 52.5	+5.5
ERM	**Erimo**	**6.79**	**245**	*i* PN	Pn	13 53 52.5	+5.5
JNBK	**Urakawa-nobuka**	**6.92**	**248**	P	**Pn**	**13 53 49.6**	**+0.8**
JBT2	**Biratori 2**	**6.96**	**253**	P	**Pn**	**13 53 51.2**	**+1.8**
PAU	**Pauzhetka**	**7.22**	**28**	*e*P	**Pn**	**13 53 52.1**	**-0.9**
PAU				AMB	AMB	13 53 54.3	
	comp=Z,120nm,0.8s						
JNB	**Noboribetsu**	**7.98**	**254**	P	**Pn**	**13 54 05.7**	**+2.3**
JNB				*e*S	**Sn**	**13 55 32.6**	**0.0**
TYV	**Tymovskoe**	**8.15**	**317**	*e*P	**Pn**	**13 54 08.7**	**+3.0**
TYV				*e*S	**Sn**	**13 55 39.6**	**+3.0**
JKB	**Kayabe**	**8.24**	**250**	P	**Pn**	**13 54 08.0**	**+1.1**
JKB				*e*S	**Sn**	**13 55 35.3**	**-3.5**
JYM2	**Yakumo 2**	**8.58**	**253**	P	**Pn**	**13 54 13.2**	**+1.6**
JANG	**Nango**	**8.73**	**240**	P	**Pn**	**13 54 12.5**	**-1.2**
JANG				*e*S	**Sn**	**13 55 44.9**	**-6.1**
JTM	**Tenmabayashi**	**8.77**	**243**	*e*S	**Sn**	**13 55 48.3**	**-3.6**
JSR	**Shiriuchi**	**8.81**	**249**	P	**Pn**	**13 54 15.8**	**+1.0**
PETK	**Petropavlovsk-**	**8.91**	**25**	P	**Pn**	**13 54 17.6**	**+1.4**
	comp=Z,0.2nm,0.3s,baz=198,slow=13,SNR=8.1						
JOSM	**Okushiri--Mats**	**9.20**	**254**	P	**Pn**	**13 54 22.1**	**+2.0**
OFUJ	**Ofunato**	**9.47**	**233**	*e*S	**Sn**	**13 56 04.2**	**-5.0**
JIO	**Ouri**	**10.09**	**232**	*e*S	**Sn**	**13 56 18.1**	**-6.2**
MJA0	**Matsu Arr-Jizo**	**13.18**	**234**	*e*PN	**P**	**13 55 23.9**	**-0.4**
MAJO	**Matsushiro**	**13.21**	**234**	*i* PN	**P**	**13 55 24.3**	**-0.2**
MJAR	**Matsushiro Arr**	**13.21**	**234**	P	**Pn**	**13 55 16.7**	**+1.8**
	comp=Z,0.2nm,0.3s,baz=36,slow=10,SNR=5.9						
USRK	**Ussuriysk Ar.**	**13.86**	**273**	P	**Pn**	**13 55 26.5**	**+2.7**
	comp=Z,0.4nm,0.3s,baz=81,slow=12,SNR=4.5						
KLR	**Kul'dur**	**13.95**	**294**	P	**P**	**13 55 31.2**	**-1.5**
	comp=Z,0.0nm,0.3s,baz=102,slow=13,SNR=6.3						
MA2	**Magadan**	**14.40**	**359**	P	**Pn**	**13 55 31.4**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=176,slow=13,SNR=7.5						
MA2	**Magadan**	**14.40**	**359**	*e*P	**Pn**	**13 55 27.0**	**-4.1**
SEY	**Seymchan**	**17.77**	**1**	P	**Pn**	**13 56 13.6**	**-0.7**
	comp=Z,0.0nm,0.3s,baz=83,slow=8.6,SNR=2.7						
SEY	**Seymchan**	**17.77**	**1**	*e*P	**Pn**	**13 56 10.0**	**-4.3**
ZEA	**Zeya**	**17.80**	**307**	*e*P	**Pn**	**13 56 13.8**	**-1.0**
ZEA				pmax	pmax		
	comp=Z,12nm,1.0s						
CN2	**Changchun**	**18.55**	**275**	*e*P	**P**	**13 56 23.5**	**-0.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KSRS	**Korea Array**	**19.22**	**254**	P	**Pn**	**13 56 34.0**	**+1.9**
	comp=Z,0.2nm,0.3s,baz=59,slow=11,SNR=8.7						
TJN	**Taejon**	**20.17**	**252**	*i* P	Pn	13 56 46.0	+2.6
YAK	**Yakutsk**	**21.04**	**331**	*e*P	**P**	**13 56 49.8**	**-0.7**
YAK				*e*		13 57 05.4	
YAK				*e*S	**S**	**14 00 33.5**	**-9.3**
YAK				*e*		14 00 56.8	
YAK				*e*SSS	SSS	14 01 07.5	
YAK				*e*		14 08 17.6	
YAK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
YAK				pmax	pmax		
	comp=Z,21nm,1.9s						
YAK				pmax	pmax		
	comp=N,16nm,1.8s						
YAK				pmax	pmax		
	comp=E,16nm,1.9s						
YAK				smax	smax		
	comp=N,11nm,1.9s						
YAK				smax	smax		
	comp=E,11nm,2.2s						
H11N2	**WAKE ISLAND Hy**	**28.46**	**148**	T	T	14 28 46.6	
	baz=335						
H11N1	**WAKE ISLAND Hy**	**28.47**	**148**	T	T	14 28 47.8	
	baz=335						
H11N3	**WAKE ISLAND Hy**	**28.48**	**148**	T	T	14 28 49.4	
	baz=335						
H11S1	**WAKE ISLAND Hy**	**29.51**	**149**	T	T	14 30 05.9	
	baz=338						
H11S3	**WAKE ISLAND Hy**	**29.52**	**150**	T	T	14 30 10.3	
	baz=338						
H11S2	**WAKE ISLAND Hy**	**29.53**	**149**	T	T	14 30 11.3	
	baz=338						
ULN	**Ulaanbaatar**	**30.32**	**291**	*e*P	**P**	**13 58 17.8**	**-0.4**
ULN	**Ulaanbaatar**	**30.32**	**291**	*i* P	**P**	**13 58 17.8**	**-0.4**
ULN				pmax	pmax		
	comp=Z,1.0nm,1.1s						
SONM	**Songino Array**	**30.76**	**291**	P	**P**	**13 58 22.2**	**+0.1**
	comp=Z,0.8nm,0.9s,baz=91,slow=8.8,SNR=3.7						
ILAR	**Eielson Array**	**38.50**	**37**	P	**P**	**13 59 28.2**	**-0.3**
	comp=Z,1.1nm,1.1s,baz=263,slow=7.0,SNR=6.7						
MKAR	**Makanchi Array**	**46.61**	**298**	P	**P**	**14 00 34.1**	**-0.5**
	comp=Z,0.8nm,0.7s,baz=71,slow=9.4,SNR=5.1						
MKAR				PcP	**PcP**	**14 02 07.8**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=68,slow=9.5,SNR=3.2						
MKAR	**Makanchi Array**	**46.61**	**298**	*e*P	**P**	**14 00 35.6**	**+1.0**
MKAR	**Makanchi Array**	**46.61**	**298**	*e*P	**P**	**14 00 35.7**	**+1.1**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURK	**Kurchatov**	**47.24**	**304**	P	**P**	**14 00 39.1**	**-0.3**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURBB	**Kurchatov Arra**	**47.33**	**304**	P	**P**	**14 00 39.1**	**-1.1**
	comp=Z,0.7nm,0.6s,baz=70,slow=8.5,SNR=4.7						
CMAR	**Chiang Mai Arr**	**50.85**	**256**	P	**P**	**14 01 09.6**	**+2.1**
	comp=Z,0.4nm,0.7s,baz=30,slow=7.8,SNR=4.1						
BVAR	**Borovoye Array**	**50.93**	**310**	P	**P**	**14 01 07.7**	**0.0**
	comp=Z,0.2nm,0.3s,baz=40,slow=7.6,SNR=2.6						
KSH	**Kashi**	**54.15**	**293**	*e*P	**P**	**14 01 31.5**	**-0.3**
ARU	**Arti**	**55.35**	**318**	*e*P	**P**	**14 01 38.3**	**-1.8**
ARU	**Arti**	**55.35**	**318**	*d* *i*P	**P**	**14 01 38.5**	**-1.6**
ARU						14 02 41.3	
ARU				S	**S**	**14 09 16.2**	**-5.7**
ARU				pmax	pmax		
	comp=Z,5.0nm,1.7s						
FINES	**FINESS Array B**	**64.93**	**334**	P	**P**	**14 02 45.1**	**-0.4**
	comp=Z,1.4nm,0.6s,baz=43,slow=6.3,SNR=6.0						
PDAR	**Pinedale Array**	**66.62**	**52**	P	**P**	**14 02 59.5**	**+2.3**
	comp=Z,0.1nm,0.4s,baz=331,slow=3.5,SNR=2.4						
WRA	**Warramunga Arr**	**66.67**	**198**	P	**P**	**14 02 58.8**	**+1.5**
	comp=Z,0.7nm,0.8s,baz=15,slow=6.7,SNR=3.9						
NB2	**NORSAR Subarra**	**69.30**	**341**	P	**P**	**14 03 13.1**	**-0.3**
	comp=Z,0.9nm,0.6s,baz=28,slow=6.2						
HFS	**Hagfors**	**69.48**	**339**	P	**P**	**14 03 14.0**	**-0.5**
	comp=Z,2.9nm,0.6s,baz=43,slow=6.5,SNR=14						
HFS	**Hagfors**	**69.48**	**339**	P	**P**	**14 03 14.0**	**-0.5**
HFS				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ASAR	**Alice Springs**	**70.38**	**197**	P	**P**	**14 03 23.1**	**+2.8**
	comp=Z,0.5nm,0.9s,baz=23,slow=5.9,SNR=4.1						
KIV	**Kislovodsk**	**71.02**	**314**	*e*P	**P**	**14 03 25.2**	**+0.9**
KIV	**Kislovodsk**	**71.02**	**314**	*e*P	**P**	**14 03 25.2**	**+0.9**
KIV				pmax	pmax		
	comp=Z,11nm,1.0s						
KBZ	**Khabaz**	**71.07**	**313**	P	**P**	**14 03 25.6**	**+1.1**
	comp=Z,6.6nm,0.8s,baz=92,slow=3.7,SNR=11						
NEY	**Neytrino**	**71.50**	**313**	*i* P	**P**	**14 03 28.4**	**+1.1**
NEY				pmax	pmax		
	comp=Z,1.0nm,1.1s						
AKASG	**Malin Array Be**	**72.16**	**326**	P	**P**	**14 03 30.6**	**-0.3**
	comp=Z,0.9nm,0.3s,baz=35,slow=6.1,SNR=2.3						
KIEV	**Kiev**	**72.17**	**326**	*i* P	**P**	**14 03 30.4**	**-0.6**
KIEV				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CLL	**Collm**	**77.37**	**335**	⇑ *i*P	**P**	**14 04 01.0**	**0.0**
	comp=Z,6.0nm,1.2s						
CLL	**Collm**	**77.37**	**335**	⇑ *i*P	**P**	**14 04 01.0**	**0.0**
CLL				pmax	pmax		
	comp=Z,6.0nm,1.2s						
EKA	**Eskdalemuir Ar**	**77.55**	**345**	P	**P**	**14 04 02.3**	**+0.3**
	comp=Z,0.5nm,0.5s,baz=20,slow=4.5,SNR=5.1						
KHC	**Kasperske Hory**	**79.10**	**333**	*e*P	**P**	**14 04 12.1**	**+1.4**
KHC	**Kasperske Hory**	**79.10**	**333**	*e*P	**P**	**14 04 12.1**	**+1.4**
TXAR	**Lajitas Array**	**79.29**	**59**	P	**P**	**14 04 13.2**	**+1.0**
	comp=Z,0.3nm,0.9s,baz=21,slow=7.7,SNR=2.8						
GERES	**GERESS Array B**	**79.31**	**333**	P	**P**	**14 04 12.2**	**+0.3**
	comp=Z,0.5nm,0.6s,baz=44,slow=5.8,SNR=3.7						
GERES	**GERESS Array B**	**79.31**	**333**	*e*P	**P**	**14 04 13.5**	**+1.5**
GERES	**GERESS Array B**	**79.31**	**333**	*e*P	**P**	**14 04 13.5**	**+1.5**
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						

JMA 08 14:05:25.7±0.6**, 45°.63N×151°.62E, h30^{km}, M3.6, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**4.78**	**244**	P	Pn	14 06 34.6	-0.9
NEM2				*e*S	Sn	14 07 25.5	-4.3
JRA	**Rausu**	**4.92**	**252**	P	Pn	14 06 39.7	+2.1
JNK	**Nakash**	**5.33**	**250**	P	Pn	14 06 44.2	+1.0
JAK	**Akkeshi**	**5.62**	**245**	P	Pn	14 06 46.3	-0.9
JAK				*e*S	Sn	14 07 46.9	-3.8
JTKR	**Abashiri--Toko**	**5.73**	**256**	P	Pn	14 06 51.0	+2.3
JAR	**Ashorobuto**	**6.08**	**250**	P	Pn	14 06 55.2	+1.7
JAR				*e*S	Sn	14 08 00.5	-1.6
JMP	**Maruseppu**	**6.10**	**257**	P	Pn	14 06 56.6	+2.9
JOB	**Onbets**	**6.22**	**247**	P	Pn	14 06 55.6	+0.2
JKK2	**Kamakawa 2**	**6.56**	**258**	P	Pn	14 07 02.9	+2.9
JCH	**Churui**	**6.66**	**246**	P	Pn	14 07 01.0	-0.5
JCH				*e*S	Sn	14 08 12.1	-4.2
JFR	**Furan**	**6.92**	**252**	P	Pn	14 07 07.4	+2.4
JNBK	**Urakawa-nobuka**	**7.22**	**246**	P	Pn	14 07 08.9	-0.2
JKB	**Kayabe**	**8.53**	**248**	*e*S	Sn	14 08 54.5	-7.6

JMA ***08*** *14:09:15.3±0.7, 45°.62N×151°.54E, h30^{km}, M3.9*

SKHL ***08*** *14:09:15.3±0.2, 44°.98N×151°.79E, h45^{km}±2^{km}, mb4.3/5*

ISC 08 14:09:15.6±2.4**, 44°.9N**±0°.2**×151°.8E**±0°.2**, h32^{km}, n21, σ1^{s}.68**/35**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.78**	**278**	*i* P	**Pn**	**14 09 57.1**	**-0.7**
KUR				AMB	AMB	14 10 00.2	
	35nm,0.3s						
KUR				*e*S	**Sn**	**14 10 28.3**	**-1.9**
KUR				A	A	14 10 33.0	
	76nm,0.3s						
KUR				A	A	14 10 33.0	
	110nm,0.3s						
SHO	**Shikotan**	**3.68**	**255**	*i* P	**Pn**	**14 10 11.0**	**+0.7**
SHO				AMB	AMB	14 10 16.0	
	12nm,0.2s						
SHO				*e*S	**Sn**	**14 10 53.0**	**+0.5**
SHO				A	A	14 10 56.0	
	49nm,0.2s						
SHO				A	A	14 10 56.0	
	91nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**4.31**	**260**	*e*P	**Pn**	**14 10 20.0**	**+1.1**
YUK				AMB	AMB	14 10 22.0	
	24nm,0.3s						
YUK				*i* S	**Sn**	**14 11 08.0**	**0.0**
YUK				A	A	14 11 14.0	
	70nm,0.3s						
YUK				A	A	14 11 14.0	
	80nm,0.3s						
LAGR	**Lagunnoye**	**4.36**	**261**	*e*P	**Pn**	**14 10 21.0**	**+1.4**
LAGR				AMB	AMB	14 10 23.0	
	28nm,0.4s						
LAGR				*e*S	**Sn**	**14 11 10.0**	**+0.8**
LAGR				A	A	14 11 14.0	
	100nm,0.3s						
LAGR				A	A	14 11 14.0	
	59nm,0.3s						
GRPR	**Tuman**	**4.38**	**260**	*e*P	**Pn**	**14 10 21.0**	**+1.1**
GRPR				*e*S	**Sn**	**14 11 10.0**	**+0.2**
GRPR				A	A	14 11 13.0	
	24nm,0.2s						
GRPR				A	A	14 11 13.0	
	62nm,0.2s						
NEM2	**Nemuro 2**	**4.60**	**253**	P	**Pn**	**14 10 23.3**	**+0.5**
NEM2				*e*S	**Sn**	**14 11 14.1**	**-1.0**
GLVR	**Golovnino**	**4.63**	**258**	*e*P	**Pn**	**14 10 24.0**	**+0.8**
GLVR				*e*S	**Sn**	**14 11 16.0**	**+0.2**
JRA	**Rausu**	**4.85**	**261**	P	**Pn**	**14 10 28.5**	**+2.2**
JNK	**Nakash**	**5.23**	**258**	P	**Pn**	**14 10 32.9**	**+1.4**
JNK				*e*S	**Sn**	**14 11 30.1**	**-0.6**
JAK	**Akkeshi**	**5.44**	**252**	P	**Pn**	**14 10 34.9**	**+0.4**
JAK				*e*S	**Sn**	**14 11 35.0**	**-1.0**
JTKR	**Abashiri--Toko**	**5.70**	**263**	P	**Pn**	**14 10 39.8**	**+1.8**
JAR	**Ashorobuto**	**5.97**	**257**	P	**Pn**	**14 10 43.3**	**+1.5**
JAR				*e*S	**Sn**	**14 11 49.3**	**+0.3**
JOB	**Onbets**	**6.07**	**253**	P	**Pn**	**14 10 44.3**	**+1.3**
JOB				*e*S	**Sn**	**14 11 50.1**	**-1.2**
JMP	**Maruseppu**	**6.08**	**264**	P	**Pn**	**14 10 45.7**	**+2.5**
SKR	**Severo-Kuril's**	**6.48**	**25**	*e*P	**Pn**	**14 10 48.4**	**-0.3**
SKR				AMB	AMB	14 10 50.2	
	12nm,0.7s						
JCH	**Churui**	**6.50**	**252**	P	**Pn**	**14 10 50.5**	**+1.6**
JCH				*e*S	**Sn**	**14 12 00.8**	**-1.1**
JKK2	**Kamakawa 2**	**6.54**	**264**	P	**Pn**	**14 10 51.6**	**+2.1**
MYR	**Moyori**	**6.69**	**250**	*e*P	**Pn**	**14 10 53.5**	**+2.0**
JEM	**Erimo**	**6.89**	**248**	P	**Pn**	**14 10 57.3**	**+2.9**
JEM				*e*S	**Sn**	**14 12 11.1**	**-0.6**
JNBK	**Urakawa-nobuka**	**7.05**	**251**	P	**Pn**	**14 10 57.0**	**+0.5**
JNBK				*e*S	**Sn**	**14 12 13.3**	**-2.1**
JKB	**Kayabe**	**8.37**	**253**	*e*S	**Sn**	**14 12 42.5**	**-5.5**

MAN 08 14:24:27.5, 11°.26N×126°.10E, h5^{km}, mb4.7, ML3.6, MS3.5, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.73**	**297**	*e*P	Pg	14 24 41.6	-0.1
BESP				*e*S	Sn	14 24 57.0	+0.9
PLP	**Palo**	**1.11**	**265**	⇓ *i*P	Pg	14 24 47.5	-1.3
PLP				*i* S	Sn	14 25 04.8	-0.6
OCLP	**Ormoc**	**1.48**	**262**	*e*P	Pn	14 24 54.8	0.0
MSLP	**Maasin**	**1.66**	**228**	*e*P	Pn	14 24 56.8	-0.4
MSLP				*e*S	Sb	14 25 20.2	+0.5
CNP	**Catarman**	**1.88**	**312**	*e*P	Pn	14 24 59.9	-0.4
CNP				*e*S	Sg	14 25 30.5	+2.6
LLP	**Lapu-Lapu**	**2.30**	**246**	*e*P	Pb	14 25 07.8	-1.7
LLP				*e*S	Sg	14 25 40.8	-0.6
PVCP	**Virac**	**3.00**	**321**	*e*P	Pn	14 25 12.5	-3.2
PVCP				*e*S	Sg	14 26 04.8	+0.8
GUIM	**Jordan**	**3.51**	**260**	*e*P	Pn	14 25 25.4	+2.6

IDC ***08*** *14:28:48.5±1.4, 5°.81N×91°.81E, h0^{km}, mb3.4/5, mb1 3.7/7, mb1mx3.4/70, mbtmp3.5/7, ML4.0/2, MS3.6/1, Ms1 3.6/1, ms1mx2.7/50, Error ellipse: s-maj=42.5km s-min=22.0km az=57.0*

ISCJB ***08*** *14:28:51.1±0.9, 5°.8N±0°.1×91°.72E±0°.07, h33^{km}, mb3.6/6, MS3.6/1, Error ellipse: s-maj=18.7km s-min=10.1km az=1.2*

ISC 08 14:28:53.6±1.2**, 5°.8N**±0°.2**×91°.78E**±0°.09**, h35^{km}, n9, σ1^{s}.48**/9**, mb3.5**/6**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	**Pallekele**	**11.11**	**278**	Pn	**Pn**	**14 31 29.6**	**-0.6**
	1.0nm,0.3s,baz=116,slow=14,SNR=7.4						
PALK				Sn	**Sn**	**14 33 33.4**	**+0.2**
	0.9nm,0.3s,baz=116,slow=9.2,SNR=5.2						
CMAR	**Chiang Mai Arr**	**14.41**	**28**	Pn	**Pn**	**14 32 15.1**	**-0.1**
	0.2nm,0.3s,baz=221,slow=14,SNR=4.7						
MKAR	**Makanchi Array**	**41.67**	**350**	P	**P**	**14 36 38.1**	**-0.7**
	0.1nm,0.4s,baz=165,slow=6.0,SNR=3.6						
SONM	**Songino Array**	**43.73**	**14**	P	**P**	**14 36 55.3**	**-0.3**
	0.2nm,0.3s,baz=194,slow=9.4,SNR=2.4						
KURBB	**Kurchatov Arra**	**46.05**	**348**	P	**P**	**14 37 16.6**	**+2.8**
	2.6nm,0.2s,baz=164,slow=6.7,SNR=3.6						
ZALV	**Zalesovo Beam**	**48.36**	**354**	P	**P**	**14 37 31.4**	**-0.3**
	0.6nm,0.4s,baz=173,slow=7.0,SNR=2.6						
WRA	**Warramunga Arr**	**49.03**	**123**	P	**P**	**14 37 36.1**	**-1.5**
	0.6nm,0.8s,baz=301,slow=9.6,SNR=4.1						
ASAR	**Alice Springs**	**50.45**	**127**	P	**P**	**14 37 49.8**	**+1.5**
	0.3nm,0.8s,baz=301,slow=8.0,SNR=4.8						
ARU	**Arti**	**56.94**	**339**	LR	LR	15 06 35.7	
	comp=Z,52nm,19.6s,baz=306,slow=40						

MEX 08 14:31:06.0±0.6**, 16°.02N×98°.56W, h5^{km}, MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.56**	**48**	*i* P	Pg	14 31 15.9	-0.8
PNIG				*e*S	Sg	14 31 24.5	+0.5
ACX	**Acapulco**	**1.51**	**304**	*i* P	Pn	14 31 31.3	-2.4
ACX				*i* S	Sn	14 31 49.5	-4.3
TLIG	**Tlapa**	**1.54**	**360**	*e*P	Pn	14 31 30.3	-3.9
TLIG				*e*S	Sn	14 31 50.0	-4.6
VHO	**Vista Hermosa**	**2.04**	**59**	*e*P	Pn	14 31 38.5	-2.7
VHO				*i* S	Sn	14 32 03.2	-4.0

ISCJB ***08*** *14:41:21.6±0.3, 56°.45S±0°.05×24°.31W±0°.09, h10^{km}, mb5.0/40, MS4.2/27, Error ellipse: s-maj=8.2km s-min=6.0km az=135.6*

IDC ***08*** *14:41:22.0±0.4, 56°.46S×24°.20W, h0^{km}, mb4.8/20, mb1 4.8/21, mb1mx4.7/35, mbtmp4.8/21, ML5.1/1, MS4.1/23, Ms1 4.1/23, ms1mx4.1/29, Error ellipse: s-maj=14.4km s-min=13.7km az=55.0*

NEIC ***08*** *14:41:23.1±0.1, 56°.46S×24°.19W, h10^{km}, mb5.2/24, Error ellipse: s-maj=6.5km s-min=4.9km az=206.0*

GCMT ***08*** *14:41:23.1±0.3, 56°.59S×23°.78W, h18^{km}±1^{km}, MW5.1/79, Moment Tensor Solution. s28,c31; s79,c101; Duration:*

0 Moment tensor: Scale 10^{16}Nm; M_{rr}-4.69±.28; $M_{\theta\theta}$1.91±.21; $M_{\phi\phi}$2.78±.17; $M_{r\theta}$-1.10±.48; $M_{\theta\phi}$-1.63±.10; $M_{\phi r}$-2.07±.38; Best double couple: $M_0$4.84100×10^{16} NP1:ϕ_s343.00000°,δ55.00000°,λ-67.00000°. NP2: ϕ_s127.00000°,δ41.00000°,λ-119.00000°. Principal axes: T 4.1570, Plg7.0000°, Azm57.0000°; N 1.3680, Plg18.0000°, Azm149.0000°; P -5.5250, Plg70.0000°, Azm306.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.

*MOS **08** 14:41:25.9±1.4, 56.°54S×24.°41W, h33km, mb5.3/18 Error ellipse: s-maj=21.6km s-min=11.7km az=108.1*

ISC 08 14:41:23.1±0.3**, 56.°64S**±0.°06×**24.°17W**±0.°07**, h10km, n231, σ1.§67**/238**, mb5.1**/39**, MS4.2**/27**, 7C, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	7.39	283	ePn	Pn	14 43 10.2	-0.7
VNA1	Neumayer--Stat	15.64	160	P	Pn	14 45 05.9	+2.7
VNA1				S	Sn	14 47 49.7	-6.6
VNA3	Neumayer Olymp	15.90	163	P	Pn	14 45 07.8	+1.2
VNA3				S	Sn	14 47 54.4	-8.3
SNAA	Sanae	17.54	158	P	P	14 45 29.7	+1.2
SNAA				S	Sn	14 48 37.5	-4.8
SNAA	Sanae	17.54	158	P	P	14 45 29.3	+0.9
	5.9nm,0.3s,baz=320,slow=14,SNR=55						
SNAA				S	Sn	14 48 34.2	-8.2
	0.2nm,0.3s,baz=342,slow=20,SNR=3.2						
SNAA	Sanae	17.54	158	ePn	P	14 45 29.3	+0.9
	36nm,0.8s						
SNAA				S	Sn	14 48 34.2	-8.2
SNAA	Sanae	17.54	158	eP	P	14 45 29.3	+0.9
SNAA				S	Sn	14 48 34.2	-8.2
SNAA				pmax	pmax		
	comp=Z,36nm,0.8s						
EFI	East Falkland	20.32	270	eP	P	14 45 58.3	-0.7
	comp=Z,200nm,0.8s						
EFI	East Falkland	20.32	270c	eP	P	14 45 58.5	-0.4
EFI				pmax	pmax		
	comp=Z,346nm,1.3s						
PMSA	Palmer Station	20.80	231	P	P	14 46 05.7	+1.6
	comp=Z,44nm,0.6s,baz=106,slow=5.2,SNR=9.3						
PMSA				LR	LR	14 53 16.4	
	comp=Z,1µm,18.7s,baz=77,slow=34						
PMSA	Palmer Station	20.80	231	eP	Pn	14 46 05.9	-0.6
	comp=Z,125nm,0.8s						
NVL	N'lazarevskaya	20.85	147⇑	iP	Pn	14 46 07.2	+0.2
NVL				eSSS	SSS	14 50 28.8	
NVL				pmax	pmax		
	comp=Z,42nm,1.0s						
NVL				MLR	MLR		
	comp=Z,532nm,14.0s						
SYO	Syowa Base	30.06	140⇑	isP	P	14 47 34.0	+2.2
TRQA	Tornquist	31.10	290	eP	P	14 47 40.4	-1.0
	comp=Z,31nm,1.1s						
TRQA	Tornquist	31.10	290	eP	P	14 47 40.4	-1.0
TRQA				pmax	pmax		
	comp=Z,31nm,1.1s						
QSPA	South Pole Qui	33.61	180	P	P	14 48 05.7	+2.4
	comp=Z,28nm,0.7s,baz=203,slow=4.4,SNR=49						
QSPA				LR	LR	15 01 56.5	
	comp=Z,171nm,18.1s,baz=198,slow=36						
QSPA	South Pole Qui	33.61	180	eP	P	14 48 05.6	+2.3
	comp=Z,146nm,1.5s						
PLCA	Paso Flores	33.75	278	P	P	14 48 02.9	-1.8
	comp=Z,2.7nm,0.7s,baz=189,slow=6.4,SNR=7.6						
PLCA				LR	LR	15 01 15.5	
	comp=Z,318nm,19.8s,baz=152,slow=35						
CPUP	Villa Florida	38.48	308	P	P	14 48 44.5	-0.6
	comp=Z,15nm,0.9s,baz=150,slow=8.5,SNR=19						
CPUP				LR	LR	15 04 43.4	
	comp=Z,173nm,19.6s,baz=156,slow=36						
CPUP	Villa Florida	38.48	308	eP	P	14 48 44.2	-0.8
	comp=Z,28nm,1.1s						
CPUP	Villa Florida	38.48	308	eP	P	14 48 44.3	-0.8
CPUP				pmax	pmax		
	comp=Z,28nm,1.1s						
MAW	Mawson	38.66	142	P	P	14 48 48.1	+1.9
	comp=Z,9.7nm,1.1s,baz=246,slow=5.8,SNR=8.0						
MAW				LR	LR	15 03 13.2	
	comp=Z,245nm,18.1s,baz=242,slow=34						
MAW	Mawson	38.66	142	eP	P	14 48 47.4	+1.2
	comp=Z,3.4nm,1.3s						
MAW	Mawson	38.66	142	eP	P	14 48 47.4	+1.2
MAW				pmax	pmax		
	comp=Z,3.0nm,1.3s						
SUR	Sutherland	39.20	71	P	P	14 48 53.2	+1.8
	comp=Z,15nm,0.9s,baz=199,slow=11,SNR=3.9						
PEL	Peldehue	39.41	287	eP	P	14 48 51.2	-1.8
	comp=Z,28nm,0.9s						
PEL	Peldehue	39.41	287	eP	P	14 48 51.2	-1.8
PEL				pmax	pmax		
	comp=Z,28nm,0.9s						
ROC1	El Roble	39.72	286	eP	P	14 48 55.1	-0.7
	comp=Z,24nm,0.8s						
LCO	Las Campanas	42.68	290	eP	P	14 49 17.9	-2.3
	comp=Z,72nm,1.3s						
LCO	Las Campanas	42.68	290	eP	P	14 49 17.9	-2.3
LCO				pmax	pmax		
	comp=Z,71nm,1.3s						
GO03	Copiap	43.59	292	eP	P	14 49 24.9	-2.3
	comp=Z,41nm,0.8s						
BOSA	Boshof	44.52	72	P	P	14 49 35.6	+0.9
	comp=Z,8.6nm,0.9s,baz=217,slow=8.2,SNR=7.9						
BOSA				LR	LR	15 04 12.3	
	comp=Z,836nm,19.8s,baz=214,slow=31						
GO02	Mina Guanaco	45.26	295	eP	P	14 49 40.6	-0.3
	comp=Z,90nm,0.8s						
SBA	Scott Base	45.60	183	eP	P	14 49 45.5	+2.9
	comp=Z,59nm,1.4s						
SBA	Scott Base	45.60	183	eP	P	14 49 45.5	+2.9
SBA				pmax	pmax		
	comp=Z,59nm,1.4s						
VNDA	Vanda	46.05	182	P	P	14 49 48.9	+2.7
	comp=Z,12nm,0.8s,baz=187,slow=7.0,SNR=56						
VNDA				LR	LR	15 07 35.2	
	comp=Z,75nm,21.6s,baz=174,slow=34						
VNDA	Vanda	46.05	182	eP	P	14 49 48.5	+2.3
	comp=Z,54nm,1.5s						
VNDA	Vanda	46.05	182	eP	P	14 49 48.5	+2.3
VNDA				pmax	pmax		
	comp=Z,54nm,1.5s						
LBTB	Lobatse	47.60	70	P	P	14 49 58.5	-0.6
	comp=Z,17nm,1.0s,baz=225,slow=10,SNR=9.7						
LBTB	Lobatse	47.60	70	eP	P	14 49 58.3	-0.8
	comp=Z,22nm,1.0s						
LBTB	Lobatse	47.60	70	eP	P	14 49 58.3	-0.8
LBTB				pmax	pmax		
	comp=Z,23nm,1.0s						
PB04	IPOC Station P	47.90	296	eP	P	14 50 01.4	-0.1
	comp=Z,103nm,1.0s						
TSUM	Tsumeb	48.55	57	P	P	14 50 06.6	+0.1
	comp=Z,5.7nm,0.8s,baz=204,slow=9.7,SNR=5.2						
PB01	IPOC Station P	48.66	298	eP	P	14 50 08.2	+0.9
	comp=Z,93nm,0.8s						
MNMC	Minye Minye	50.34	299	eP	P	14 50 21.1	+0.7
	comp=Z,90nm,0.8s						
RCBR	Riachuelo	51.52	345⇑	eP	P	14 50 34.8	+5.9
RCBR				pmax	pmax		
	comp=Z,175nm,1.7s						
LPAZ	La Paz	52.10	302	P	P	14 50 34.5	+0.6
	comp=Z,18nm,0.6s,baz=141,slow=5.3,SNR=80						
LPAZ				LR	LR	15 14 05.4	
	comp=Z,45nm,19.8s,baz=138,slow=38						
LPAZ	La Paz	52.10	302	eP	P	14 50 34.4	+0.4
	comp=Z,30nm,0.6s						
CASY	Casey	52.77	159	eP	P	14 50 39.5	+1.9
	comp=Z,16nm,1.0s						
LSZ	Lusaka	57.05	66	LR	LR	15 11 30.0	
	comp=Z,245nm,20.5s,baz=224,slow=32						
NNA	Nana	60.01	296	P	P	14 51 30.1	+0.2
	comp=Z,34nm,1.0s,baz=179,slow=5.2,SNR=7.3						
NNA				LR	LR	15 18 46.2	
	comp=Z,64nm,18.9s,baz=149,slow=38						
NNA	Nana	60.01	296	eP	P	14 51 29.1	-0.8
	comp=Z,47nm,1.0s						
NNA	Nana	60.01	296c	eP	P	14 51 30.7	+0.8
PTGA	Pitinga	62.70	319	eP	P	14 51 46.7	-1.3
	comp=Z,6.5nm,1.0s						
OPO	Ambohidratompo	64.45	85	LR	LR	15 14 12.1	
	comp=Z,370nm,21.6s,baz=188,slow=31						
LIC	Lamto	64.59	21	ePKP1	P	14 52 01.8	+1.4
	comp=Z,45nm,1.1s						
KIC	Kosan Boka	64.78	21	ePKP1	P	14 52 01.0	-0.6
	comp=Z,62nm,1.2s						
TIC	Toumodi	65.00	21	ePKP1	P	14 52 01.1	-2.0
DBIC	Dimbokro	65.06	21	P	P	14 52 02.3	-1.1
	comp=Z,5.5nm,0.8s,baz=180,slow=4.5,SNR=5.1						
DBIC				LR	LR	15 12 28.7	
	comp=Z,130nm,21.8s,baz=118,slow=29						
RPN	Rapa Nui	65.19	258	LR	LR	15 15 32.7	
	comp=Z,93nm,21.1s,baz=118,slow=31						
FLOC	Florencia	71.27	304	eP	P	14 52 42.2	-0.4
OTAV	Otavalo	71.39	301	eP	P	14 52 44.6	+0.8
	comp=Z,37nm,1.4s						
OTAV	Otavalo	71.39	301	eP	P	14 52 45.1	+1.3
OTAV	Otavalo	71.39	301	eP	P	14 52 44.6	+0.8
OTAV				pmax	pmax		
	comp=Z,37nm,1.4s						
MARP	Paez Belalcaza	72.52	305	eP	P	14 52 50.2	-0.1
TOA0	Torodi Ar. Sit	72.79	26	eP	P	14 52 50.6	-0.9
TORD	Torodi Ar. Bea	72.79	26	P	P	14 52 49.8	-1.7
	comp=Z,4.4nm,0.6s,baz=200,slow=6.8						
TORD				LR	LR	15 17 52.6	
	comp=Z,130nm,21.5s,baz=170,slow=30						
KOWA	Kowa	72.84	20	P	P	14 52 51.3	-0.5
	comp=Z,7.0nm,0.9s,baz=177,slow=6.6,SNR=7.1						
KOWA				LR	LR	15 18 34.1	
	comp=Z,182nm,21.7s,baz=194,slow=31						
CHIC	Chingaza	73.12	308	eP	P	14 52 53.1	-1.0
HORQ	Saladito	73.39	304	eP	P	14 52 52.6	-2.9
ROSC	El Rosal	73.56	307	LR	LR	15 26 50.2	
	comp=Z,61nm,19.6s,baz=213,slow=37						
YOTC	Yotoco, Valle	73.71	305	eP	P	14 52 55.8	-1.4
RUSC	La Rusia	73.97	309	eP	P	14 52 57.9	-1.2
	comp=Z,24nm,1.5s						
RUSC	La Rusia	73.97	309	eP	P	14 52 58.0	-1.2
NORC	Norcasia	74.45	307	eP	P	14 52 59.4	-2.1
PCRV	Puerto La Cruz	74.48	318	P	P	14 53 02.4	+0.9
	comp=Z,18nm,1.0s,baz=164,slow=6.8,SNR=5.9						
BARC	Barichara	74.63	309	eP	P	14 52 59.4	-3.4
HELC	Santa Helena	75.30	307	eP	P	14 53 04.8	-1.9
	comp=Z,26nm,1.1s						
ZARC	Zaragoza, Cauc	76.17	308	eP	P	14 53 09.4	-1.8
THZ	Tophouse	80.91	193	eP	P	14 53 38.2	+1.0
	comp=Z,22nm,0.7s						
TAM	Tamanrasset	83.00	27	eP	P	14 53 47.1	-1.2
	comp=Z,24nm,1.9s						
TAM	Tamanrasset	83.00	27	eP	P	14 53 47.1	-1.2
TAM				pmax	pmax		
	comp=Z,24nm,1.9s						
URZ	Urewera	83.76	197	P	P	14 53 53.3	+1.2
	comp=Z,16nm,1.0s,baz=120,slow=3.3,SNR=3.9						
NWAO	Narrogin (SRO)	84.97	148	LR	LR	15 28 25.3	
	comp=Z,30nm,20.0s,baz=113,slow=33						
ATD	Arta Tunnel	87.37	65	LR	LR	15 32 48.8	
	comp=Z,191nm,18.1s,baz=338,slow=35						
MDT	Midelt	90.64	16	P	P	14 54 26.5	+1.1
	comp=Z,5.9nm,0.9s,baz=201,slow=3.6,SNR=9.2						
MDT				LR	LR	15 32 06.2	
	comp=Z,127nm,18.3s,baz=180,slow=34						
STKA	Stephens Creek	91.01	168	P	P	14 54 30.0	+2.7
	comp=Z,0.9nm,0.6s,baz=283,slow=7.7,SNR=3.1						
STKA				LR	LR	15 34 07.7	
	comp=Z,253nm,18.2s,baz=203,slow=35						
PPT	Papeete	93.17	231	LR	LR	15 27 27.4	
	comp=Z,149nm,21.1s,baz=168,slow=30						
RAR	Rarotonga	93.93	221	LR	LR	15 33 13.8	
	comp=Z,80nm,18.1s,baz=220,slow=33						
KEST	Kesra	96.31	27	LR	LR	15 33 26.3	
	comp=Z,115nm,19.8s,baz=284,slow=32						
ASAR	Alice Springs	97.89	160	P	P	14 54 58.7	-0.3
	comp=Z,0.9nm,0.8s,baz=186,slow=4.5,SNR=11						
ASAR				PKKP	PKKPdf	15 11 31.4	+0.1
	comp=Z,0.5nm,0.9s,baz=33,slow=2.1,SNR=4.5						
WRA	Warramunga Arr	101.60	159	P	Pdif	14 55 15.7	+0.2
	comp=Z,0.4nm,0.8s,baz=196,slow=4.4,SNR=5.0						
WRA				PKKPbc	PKKPdf	15 11 27.1	+2.4
	comp=Z,0.6nm,0.9s,baz=5.3,slow=3.0,SNR=5.7						
ANMO	Albuquerque	114.48	297	i PKIKP	PKPdf	15 00 03.3	+0.5
KIV	Kislovodsk	114.82	47	ePKIKP	PKPdf	15 00 05.3	+2.3
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
X16A	Lo Mia Camp, P	116.56	293	ePKPdf	PKPdf	15 00 06.3	-0.6
FRD	Ford Ranch, An	118.52	288	ePKPdf	PKPdf	15 00 10.8	+0.3
O20A	White River Ci	119.43	299	ePKPdf	PKPdf	15 00 11.6	-0.6
SZCU	Shurtz Canyon	119.87	294	ePKPdf	PKPdf	15 00 13.6	+0.5
CCUT	Cedar City	119.98	293	ePKPdf	PKPdf	15 00 13.8	+0.4
SHPR	Sheep Range	120.09	291	ePKPdf	PKPdf	15 00 13.7	+0.2
MSU	Marysvale	120.12	295	ePKPdf	PKPdf	15 00 13.8	+0.3
MSU	Marysvale	120.12	295	ePKIKP	PKPdf	15 00 13.9	+0.3
TMUT	Trail Mountain	120.24	296	ePKPdf	PKPdf	15 00 13.4	-0.5
NB2	NORSAR Subarra	120.59	19	PKPdf	PKPdf	15 00 24.0	+10
	comp=Z,4.6nm,1.4s,baz=202,slow=1.9						
PSUT	Pine Spring	120.98	294	ePKPdf	PKPdf	15 00 15.4	+0.2
TPNV	Topopah Spring	120.99	291	ePKPdf	PKPdf	15 00 15.4	+0.2
TPNV	Topopah Spring	120.99	291	ePKIKP	PKPdf	15 00 15.4	+0.2
ISA	Isabella, Lake	121.17	288	ePKPdf	PKPdf	15 00 16.0	+0.5
ISA	Isabella, Lake	121.17	288	ePKIKP	PKPdf	15 00 16.0	+0.5
DUG	Dugway, Tooele	121.72	296	ePKPdf	PKPdf	15 00 16.4	-0.1
DUG	Dugway, Tooele	121.72	296	ePKIKP	PKPdf	15 00 16.5	-0.1
PDAR	Pinedale Array	122.08	300	PKP	PKPdf	15 00 16.1	-1.1
	comp=Z,0.6nm,0.6s,baz=137,slow=4.5,SNR=6.5						
HWUT	Hardware Ranch	122.18	298	ePKPdf	PKPdf	15 00 17.0	-0.5
OMMB	Old Mammoth Mi	122.92	289	ePKPdf	PKPdf	15 00 19.6	+0.4
NV11	Mina Array Sit	123.10	291	ePKPdf	PKPdf	15 00 19.6	+0.4
NV01	Mina Array Sit	123.17	291	ePKPdf	PKPdf	15 00 19.8	+0.3
NVAR	Mina Array Bea	123.17	291	PKP	PKPdf	15 00 20.4	+1.0
	comp=Z,2.2nm,0.9s,baz=131,slow=3.2,SNR=9.8						
LOHW	Long Hollow	123.22	300	ePKPdf	PKPdf	15 00 19.1	-0.3
CM01	Chiang Mai Arr	123.26	108	ePKPdf	PKPdf	15 00 19.5	-0.4
CMAR	Chiang Mai Arr	123.28	108	PKP	PKPdf	15 00 19.9	-0.1
	comp=Z,3.1nm,0.9s,baz=234,slow=3.6,SNR=15						
TPAW	Teton Pass	123.30	300	ePKPdf	PKPdf	15 00 19.5	-0.1
MOOW	Moose Ponds	123.39	300	ePKPdf	PKPdf	15 00 18.6	-1.1
FXWY	Fox Creek	123.45	300	ePKPdf	PKPdf	15 00 19.6	-0.2
KVN	Kaiserville	123.54	291	ePKPdf	PKPdf	15 00 20.6	+0.4
IMW	Indian Meadow	123.60	300	ePKPdf	PKPdf	15 00 19.9	-0.3
YERR	Yerington	124.08	290	ePKPdf	PKPdf	15 00 21.9	+0.7
FINES	FINESS Array B	124.14	27	PKP	PKPdf	15 00 19.8	-0.5
	comp=Z,3.6nm,0.8s,baz=207,slow=1.6,SNR=11						
FIA1	FINESS Array S	124.14	27	ePKPdf	PKPdf	15 00 19.4	-0.8
GCMT	Greycliff	124.41	302	ePKPdf	PKPdf	15 00 20.9	-0.6
AFDM	Forest Hills D	124.95	289	ePKPdf	PKPdf	15 00 23.0	+0.4
BEKR	Beckworth	125.31	290	ePKPdf	PKPdf	15 00 23.8	+0.3
DLMT	Dillon	125.48	300	ePKPdf	PKPdf	15 00 24.1	+0.5
HRY	Holter Researc	126.11	302	ePKPdf	PKPdf	15 00 25.0	+0.3
WVOR	Wild Horse Val	126.31	294	ePKPdf	PKPdf	15 00 25.7	+0.5
WVOR	Wild Horse Val	126.31	294	ePKIKP	PKPdf	15 00 25.7	+0.5
ABKAR	Akbulak array	126.34	54	ePKPdf	PKPdf	15 00 24.2	-0.7
MOD	Modoc Plateau	126.77	292	ePKPdf	PKPdf	15 00 26.5	+0.3
J08A	Circle Bar Ran	126.90	295	ePKPdf	PKPdf	15 00 26.7	+0.4
KSH	Kashi	127.12	73	ePKP	PKPdf	15 00 26.6	-0.3
KSH				PP	PP	15 02 27.9	+1.5
KSH				PKS	PKSdf	15 04 01.3	-2.2
KSH				SKS	SKSdf	15 07 36.7	-1.7
KSH				SKKS	SKKSac	15 09 19.4	-3.9
KSH				AMB	AMB		
	comp=Z,90nm,4.4s						
MSO	Missoula	127.19	300	ePKPdf	PKPdf	15 00 26.5	-0.2
KLMR	Klimovskoe	127.37	34	ePKIKP	PKPdf	15 00 24.5	-1.9
KLMR				pmax	pmax		
	comp=Z,13nm,1.2s						
KLMR	Klimovskoe	127.37	34	ePKPdf	PKPdf	15 00 24.5	-1.9
KLMR				AMP		15 00 26.7	
	comp=Z,13nm,1.2s						
BMO	Blue Mountains	127.40	297	ePKPdf	PKPdf	15 00 27.1	-0.1
BMO	Blue Mountains	127.40	297	ePKIKP	PKPdf	15 00 27.1	-0.1
K05A	Summer Lake	127.67	292	ePKPdf	PKPdf	15 00 28.6	+0.7
PINE	Pine Mountain	128.46	293	ePKPdf	PKPdf	15 00 30.3	+0.9
G08A	Pilot Rock	128.53	296	ePKPdf	PKPdf	15 00 30.0	+0.6
WALA	Waterton Lakes	128.77	302	ePKPdf	PKPdf	15 00 29.2	-0.4
PRGR	Permogore	129.88	36	ePKIKP	PKPdf	15 00 31.0	-0.2
PRGR				pmax	pmax		
	comp=Z,23nm,1.2s						
KMI	Kunming	130.75	107	PKP	PKPdf	15 00 35.1	+0.7
ARU	Arti	130.86	47	ePKPdf	PKPdf	15 00 32.8	-0.5
ARU	Arti	130.86	47	i PKIKP	PKPdf	15 00 33.2	0.0
ARU						15 02 48.1	
ARU				SS	SS	15 20 13.4	-6.9
ARCES	ARCESS Array B	130.88	21	PKP	PKPdf	15 00 33.3	+0.4
	comp=Z,2.9nm,0.8s,baz=232,slow=3.0,SNR=5.2						
ARCES	ARCESS Array B	130.88	21	PKIKP	PKPdf	15 00 33.3	+0.4
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SVE	Sverdlovsk	131.97	47	ePKIKP	PKPdf	15 00 35.1	-0.2
SVE				pmax	pmax		
	comp=Z,16nm,1.8s						
BRVK	Borovoye	133.67	56	ePKPdf	PKPdf	15 00 38.3	-0.4
BRVK	Borovoye	133.67	56c	iPKIKP	PKPdf	15 00 39.5	+0.9
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BVAR	Borovoye Array	133.69	56	PKP	PKPdf	15 00 38.9	+0.2
	comp=Z,2.3nm,0.9s,baz=243,slow=2.9,SNR=12						
GYA	Guiyang	133.89	110	ePdif	Pdif	14 57 39.0	+0.1
GYA				PKP	PKiKP	15 00 41.4	0.0
GYA				PP	PP	15 03 14.8	+4.7
GYA				AMB	AMB		
	comp=Z,120nm,7.9s						
MK01	Makanchi Array	135.49	70	ePKPdf	PKPdf	15 00 41.2	-1.1
MK31	Makanchi Array	135.50	70	ePKPdf	PKPdf	15 00 40.9	-1.4
MKAR	Makanchi Array	135.50	70	PKP	PKPdf	15 00 43.4	+1.1
	comp=Z,0.4nm,0.6s,baz=248,slow=1.6,SNR=4.3						
MKAR	Makanchi Array	135.50	70	ePKPdf	PKPdf	15 00 41.0	-1.4
CD2	Chengdu	135.89	103	PKP	PKPdf	15 00 44.0	+0.4
KURBB	Kurchatov Arra	136.05	64	PKP	PKPdf	15 00 42.6	-0.6
	comp=Z,0.7nm,0.8s,baz=240,slow=2.5,SNR=4.8						
KURK	Kurchatov	136.15	63	PKP	PKPdf	15 00 42.6	-0.8
KURK	Kurchatov	136.15	63	PKIKP	PKPdf	15 00 42.6	-0.8
KURK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WMQ	Urumqi	136.39	77	PKP	PKPdf	15 00 45.4	+1.2
WMQ				LR	LR		
	comp=Z,110nm,29.9s						
WMQ				LR	LR		
	comp=Z,79nm,26.5s						
SPITS	Spitsbergen Ar	136.81	11	PKP	PKPdf	15 00 44.3	+0.4
	comp=Z,8.5nm,0.9s,baz=76,slow=7.0,SNR=3.2						
YKA	Yellowknife Ar	137.75	316	PKhKP	PKPpre	15 00 39.3	
	comp=Z,0.6nm,0.6s,baz=132,slow=1.9,SNR=3.3						
YKA				PKP	PKPdf	15 00 45.7	-0.2
	comp=Z,3.9nm,0.9s,baz=121,slow=2.0,SNR=11						
YKW3	Yellowknife Ar	137.79	316	ePKPdf	PKPdf	15 00 45.2	-0.8
LZH	Lanzhou	139.85	98	ePKP	PKPdf	15 00 48.9	-2.0
LZH				LR	LR		
	comp=Z,190nm,14.1s						
LZH				LR	LR		
	comp=Z,180nm,16.1s						
LZH				LR	LR		
	comp=Z,260nm,17.3s						
ZALV	Zalesovo Beam	141.13	63	PKhKP	PKPpre	15 00 44.1	
	comp=Z,0.7nm,0.5s,baz=300,slow=3.2,SNR=3.9						
BESE	Bessie Mountai	144.31	303	ePKPdf	PKPbc	15 00 56.8	+0.4
NJ2	Nanjing	144.59	118	ePKP	PKPdf	15 00 59.7	+0.5
SKAG	Skagway	144.93	304	ePKPdf	PKPbc	15 00 58.4	+0.1
BTO	Baotou	146.47	99	ePKPbc	PKPdf	15 01 02.0	-0.3
TIA	Tai'an	147.03	112	PKPbc	PKPbc	15 01 05.3	-0.1
INK	Inuvik	147.33	319	ePKPdf	PKPbc	15 01 04.0	-1.2
INK	Inuvik	147.33	319	ePKP2	PKPbc	15 01 04.0	-1.2
HHC	Hu-ho-hao-te	147.48	100	ePKPbc	PKPdf	15 01 00.9	-3.1
HHC				SKS	SKSdf	15 08 15.1	+2.7
HHC				AMB	AMB		
	comp=Z,120nm,9.4s						
HHC				LR	LR		
	comp=Z,93nm,18.1s						
HHC				LR	LR		
	comp=Z,77nm,16.7s						
MOY	Mondy	148.25	75	ePKIKP	PKPdf	15 01 05.1	+0.2
MOY				pmax	pmax		
	comp=Z,29nm,2.0s						
DAWY	Dawson	148.44	311	ePKPbc	PKPbc	15 01 07.6	-0.8
ZAK	Zakamensk	148.80	79	ePKHKP	PKPpre	15 01 04.6	
ZAK				pmax	pmax		
	comp=Z,14nm,1.4s						
SONM	Songino Array	149.09	85	PKPbc	PKPbc	15 01 10.0	-0.6
	comp=Z,4.4nm,0.8s,baz=224,slow=2.0,SNR=17						
SONA1	Songino Array	149.11	85	ePKPbc	PKPbc	15 01 09.7	-1.0
EGAK	Eagle	149.38	311	ePKPbc	PKPbc	15 01 09.8	-0.8
ULN	Ulaanbaatar	149.47	86	ePKPbc	PKPbc	15 01 10.1	-1.6
TLY	Talaya	149.67	77	ePKPdf	PKPdf	15 01 06.0	-1.1
TLY				ePKPbc	PKPbc	15 01 11.8	0.0
BMRM	Bremner River	149.78	303	ePKPbc	PKPbc	15 01 11.7	-0.1
DIV	Divide	150.37	303	ePKPbc	PKPbc	15 01 13.3	+0.1
KLU	Klutina	150.55	304	ePKPbc	PKPbc	15 01 14.0	+0.3
JNU	Nakatsue	150.89	133	ePKPbc	PKPbc	15 01 14.9	-0.5
SCM	Sheep Creek Mo	151.29	304	ePKPbc	PKPbc	15 01 15.4	0.0
SCM	Sheep Creek Mo	151.29	304	ePKIKP	PKPbc	15 01 15.4	0.0
DHY	Denali Highway	151.62	307	ePKPbc	PKPbc	15 01 16.1	-0.1
HDA	Harding Lake	151.73	310	ePKPbc	PKPbc	15 01 15.4	-0.8
SML	Sawmill	151.75	304	ePKPbc	PKPbc	15 01 16.5	+0.1
IL1	Eielson Array	151.77	310	ePKPbc	PKPbc	15 01 15.5	-0.8
ILAR	Eielson Array	151.77	310	PKPbc	PKPbc	15 01 15.8	-0.5
	comp=Z,17nm,0.9s,baz=123,slow=1.1,SNR=41						
ILB	Eielson Array	151.77	310	ePKPbc	PKPbc	15 01 15.4	-0.9
GHO	Glory Hole Cre	152.01	304	ePKPbc	PKPbc	15 01 16.5	-0.5
PMR	Palmer	152.06	303	ePKPbc	PKPbc	15 01 17.1	0.0
CCB	Clear Creek Bu	152.13	310	ePKPbc	PKPbc	15 01 16.3	-0.8
CCB				ePKPab	PKPab	15 01 26.9	-0.1
COLA	College	152.19	310	ePKPbc	PKPbc	15 01 16.4	-0.8
COLA				ePKPab	PKPab	15 01 27.5	+0.3
COLA	College	152.19	310	ePKIKP	PKPbc	15 01 16.4	-0.8
COLA				e		15 01 27.5	
MDM	Murphy Dome	152.37	311	ePKPbc	PKPbc	15 01 16.7	-1.0
MDM				ePKPab	PKPab	15 01 27.8	-0.2
BRLK	Bradley Lake	152.38	299	ePKPbc	PKPbc	15 01 17.3	-0.6
BRLK				ePKPab	PKPab	15 01 29.3	+1.1
MCK	McKinley	152.45	308	ePKPbc	PKPbc	15 01 17.9	0.0
MCK				ePKPab	PKPab	15 01 29.6	+1.2
MCK	McKinley	152.45	308	ePKIKP	PKPbc	15 01 17.9	0.0
MCK				e		15 01 29.6	
CNPM	China Poot	152.48	298	ePKPbc	PKPbc	15 01 18.1	0.0
KDAK	Kodiak Island	152.59	294	ePKPbc	PKPbc	15 01 18.2	-0.1
KDAK	Kodiak Island	152.59	294	ePKIKP	PKPbc	15 01 18.2	-0.1
BWN	Browne	152.76	309	ePKPbc	PKPbc	15 01 18.1	-0.5
TRF	Thorofare Moun	152.99	307	ePKPbc	PKPbc	15 01 18.7	-0.6
TRF				ePKPab	PKPab	15 01 30.7	-0.2
TOLK	Toolik Lake Re	153.23	318	ePKPbc	PKPbc	15 01 19.1	-0.5
TOLK				ePKPab	PKPab	15 01 31.0	-0.5
SKT	Skwentna	153.26	303	ePKPbc	PKPbc	15 01 19.3	-0.4
SKT				ePKPab	PKPab	15 01 30.8	-1.0
KSAR	Wonju Array Be	153.26	124	PKPbc	PKPbc	15 01 20.1	-0.4
KSAR	Wonju Array Be	153.26	124	PKIKP	PKPbc	15 01 20.1	-0.4
KSRS	Korea Array	153.29	124	PKPbc	PKPbc	15 01 20.1	-0.4
	comp=Z,2.1nm,0.9s,baz=215,slow=1.9,SNR=9.8						
KS01	Wonju Array Si	153.29	124	ePKPbc	PKPbc	15 01 20.1	-0.4
KS01				ePKPab	PKPab	15 01 31.7	-0.9
BPAW	Bear Paw Mtn.	153.41	308	ePKPbc	PKPbc	15 01 19.7	-0.3
BPAW				ePKPab	PKPab	15 01 31.4	-0.9
COLD	Coldfoot	153.41	315	ePKPbc	PKPbc	15 01 19.9	0.0
COLD				ePKPab	PKPab	15 01 31.6	-0.7
PPLA	Purkeypile	153.74	305	ePKPbc	PKPbc	15 01 20.3	-0.6
MJAR	Matsushiro Arr	156.66	142	PKPab	PKPab	15 01 47.1	+0.1
	comp=Z,2.3nm,1.1s,baz=182,slow=4.9,SNR=4.9						
BOD	Bodaibo	157.59	69	ePKIKP	PKPpre	15 01 13.3	
BOD				pmax	pmax		
	comp=Z,5.0nm,1.3s						
UNV	Unalaska Valle	158.52	279	ePKPab	PKPab	15 01 55.4	+0.9
MDJ	Mudanjiang	159.61	115	PKP	PKPdf	15 01 22.0	+1.0
BILL	Bilibino	167.60	341⇑	ePKP2	PKPab	15 02 34.0	0.0
BILL				pmax	pmax		
	comp=Z,11nm,1.8s						
PETK	Petropavlovsk-	176.30	198	ePKPab	PKPab	15 03 12.9	0.0
PETK	Petropavlovsk-	176.30	198	ePKP2	PKPab	15 03 12.9	0.0

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*ISCJB **08** 15:03:23.1±0.5, 27.°97N±0.°04×52.°51E±0.°07, h15km, mb3.6/12, MS2.9/1, Error ellipse: s-maj=9.2km s-min=3.7km az=152.5*

*TEH **08** 15:03:25.4, 28.°12N×52.°51E, h21km, ML3.2*

*IDC **08** 15:03:28.0±2.7, 27.°93N×52.°65E, h47km±28km, mb3.4/12, mb1 3.5/14, mb1mx3.3/60, mbtmp3.6/14, ML3.4/2, MS3.0/1, Ms1 3.0/1, ms1mx2.4/47, Error ellipse: s-maj=22.5km s-min=14.6km az=39.0*

*OMAN **08** 15:03:29.3±1.1, 28.°06N×52.°88E, h150km±41km, Error ellipse: s-maj=29.9km s-min=14.4km az=63.0*

ISC 08 15:03:24.7±0.7**, 28.°01N**±0.°05×**52.°63E**±0.°08**, h15km, n37, σ1.§59**/37**, mb3.6**/12**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GHIR	Ghir-Karzin	0.42	48	ePg	Pg	15 03 32.2	-0.9
JHRM	Jahrom	0.97	59	ePg	Pn	15 03 46.3	+2.4
JHRM				e		15 04 04.8	
	comp=Z,99nm,0.1s						
JHRM				e		15 04 07.7	
	comp=E,99nm,0.3s						
JHRM				e		15 04 12.6	
	comp=N,99nm,0.3s						
SHI	Shiraz	1.63	356	ePn	Pb	15 03 54.1	-0.5
SHI				eSg	Sg	15 04 17.2	-0.1
SHI				e		15 04 34.8	

	comp=Z,4µm,0.4s						
IPAR	**Pars**	**1.86**	**11**	*e*		15 04 29.4	
	comp=E,3µm,0.3s						
IPAR				*e*		15 04 31.4	
	comp=N,4µm,0.3s						
IPAR				*e*		15 04 36.9	
	comp=Z,3µm,0.4s						
BNDS	**Bandar-Abbas**	**3.20**	**100**	*e*Pn	**Pn**	**15 04 15.2**	**+0.7**
GENO	**Geno**	**3.20**	**100**	*e*		15 05 34.8	
	comp=N,99nm,0.3s						
GENO				*e*		15 05 46.5	
	comp=E,99nm,0.4s						
GENO				*e*		15 05 50.3	
	comp=Z,99nm,0.4s						
IMEH	**Mehriz**	**3.79**	**27**	*e*Pn	**Pn**	**15 04 25.5**	**+2.8**
IMEH				*e*		15 04 32.6	
	comp=Z,395nm,0.1s						
IMEH				*e*		15 05 17.4	
	comp=N,438nm,0.3s						
IRAM	**Ramesheh**	**3.79**	**357**	*e*Pn	**Pn**	**15 04 22.5**	**-0.3**
IRAM				*e*		15 04 38.0	
	comp=Z,382nm,0.4s						
IRAM				*e*		15 04 40.5	
	comp=E,290nm,0.2s						
IRAM				*e*		15 05 35.1	
	comp=N,324nm,0.3s						
BANOM	**Banah**	**3.88**	**122**	P	**Pn**	**15 04 25.9**	**+2.1**
NGRK	**Negar Kerman**	**3.95**	**65**	*e*Pn	**Pn**	**15 04 26.9**	**+1.8**
NGRK				*e*		15 05 25.6	
	comp=N,99nm,0.0s						
NGRK				*e*		15 05 26.0	
	comp=E,99nm,0.0s						
NGRK				*e*		15 05 26.2	
	comp=Z,99nm,0.0s						
ISAD	**Sadrabad**	**4.00**	**13**	*e*		15 05 00.9	
	comp=Z,260nm,0.2s						
ISAD				*e*		15 05 53.0	
	comp=N,316nm,0.3s						
NAZ	**Nazwa, Dubai**	**4.05**	**137**	P	**Pn**	**15 04 29.0**	**+2.9**
NAZ				S	**Sn**	**15 05 16.3**	**+3.0**
KHGB	**Koh Gabri**	**4.11**	**54**	*e*		15 05 49.2	
	comp=N,99nm,0.5s						
KHGB				*e*		15 06 36.7	
	comp=E,99nm,0.8s						
ZNGN	**Zangian**	**4.38**	**340**	*e*		15 05 32.9	
	comp=N,99nm,0.3s						
ZNGN				*e*		15 05 58.3	
	comp=E,99nm,0.3s						
ZNGN				*e*		15 06 05.3	
	comp=Z,99nm,0.3s						
IGAR	**Gharneh**	**4.41**	**353**	*e*	Pg	15 04 54.5	+5.3
	comp=Z,162nm,0.2s						
UOSS	**Minazif**	**4.42**	**133**	P	**Pn**	**15 04 32.9**	**+1.6**
UOSS				S	**Sn**	**15 05 23.0**	**+0.5**
HATD	**Hatta, Dubai**	**4.46**	**134**	P	**Pn**	**15 04 34.0**	**+2.2**
HATD				S	**Sn**	**15 05 25.0**	**+1.6**
ICHK	**Chekchek**	**4.49**	**20**	*e*Pn	**Pn**	**15 04 34.4**	**+2.0**
ASHO	**Ashiyiah**	**4.52**	**136**	P	**Pn**	**15 04 34.7**	**+2.1**
ASHO				S	**Sn**	**15 05 26.1**	**+1.2**
NASN	**Na'in**	**4.78**	**2**	*e*Pn	**Pn**	**15 04 37.8**	**+1.4**
IZEF	**Zefreh**	**4.88**	**357**	*e*	**Pg**	**15 04 60.0**	**+1.8**
	comp=Z,94nm,0.2s						
IZEF				*e*		15 05 07.7	
	comp=N,81nm,0.1s						
IZEF				*e*		15 05 33.5	
	comp=E,103nm,0.1s						
HOQ	**Hoqain**	**6.10**	**135**	P	**Pn**	**15 04 56.5**	**+2.2**
HOQ				S	**Sn**	**15 06 03.5**	**-0.4**
WSAR	**Wadi Sarin**	**7.20**	**130**	P	**Pn**	**15 05 10.4**	**+0.9**
	comp=E,1.0nm,0.3s,baz=308,slow=7.2,SNR=13						
WSAR				S	**Sn**	**15 06 29.5**	**-1.5**
	comp=E,0.4nm,0.3s,baz=52,slow=14,SNR=5.7						
BRTR	**Keskin Array B**	**19.59**	**312**	P	**Pn**	**15 07 54.6**	**+0.9**
	comp=E,0.1nm,0.3s,baz=131,slow=11,SNR=3.6						
AKTO	**Aktyubinsk**	**22.77**	**9**	P	**P**	**15 08 28.1**	**+1.7**
	comp=E,0.8nm,0.4s,baz=204,slow=12,SNR=2.9						
IDI	**Anoyia**	**24.66**	**294**	LR	LR	15 21 41.8	
	comp=E,37nm,19.5s,baz=70,slow=44						
BVAR	**Borovoye Array**	**28.25**	**23**	P	**P**	**15 09 17.2**	**+0.2**
	comp=E,0.2nm,0.3s,baz=210,slow=13,SNR=3.6						
AKASG	**Malin Array Be**	**28.78**	**328**	P	**P**	**15 09 20.6**	**-1.1**
	comp=E,0.2nm,0.4s,baz=137,slow=6.9,SNR=3.2						
MKAR	**Makanchi Array**	**29.85**	**43**	P	**P**	**15 09 31.7**	**+0.3**
	comp=E,0.3nm,0.6s,baz=232,slow=6.0,SNR=4.0						
ZALV	**Zalesovo Beam**	**35.00**	**33**	P	**P**	**15 10 15.3**	**-1.0**
	comp=E,0.7nm,0.5s,baz=231,slow=9.1,SNR=2.8						
FINES	**FINESS Array B**	**37.84**	**340**	P	**P**	**15 10 39.3**	**-1.2**
	comp=E,1.1nm,0.7s,baz=123,slow=7.0,SNR=5.5						
CMAR	**Chiang Mai Arr**	**43.39**	**92**	P	**P**	**15 11 26.0**	**-0.8**
	comp=E,0.3nm,0.4s,baz=299,slow=6.9,SNR=3.2						
ARCES	**ARCESS Array B**	**44.43**	**347**	P	**P**	**15 11 34.9**	**+0.3**
	comp=E,3.5nm,1.0s,baz=134,slow=7.7,SNR=4.2						
TORD	**Torodi Ar. Bea**	**49.58**	**263**	P	**P**	**15 12 14.6**	**-1.0**
	comp=E,0.4nm,0.6s,baz=60,slow=6.8						
KSRS	**Korea Array**	**62.51**	**60**	P	**P**	**15 13 46.7**	**-1.1**
	comp=E,0.6nm,0.6s,baz=282,slow=6.4,SNR=4.2						
WRA	**Warramunga Arr**	**92.20**	**111**	P	**P**	**15 16 33.4**	**-0.9**
	comp=E,0.5nm,0.9s,baz=315,slow=4.1,SNR=2.6						
ASAR	**Alice Springs**	**93.64**	**115**	P	**P**	**15 16 39.8**	**-1.0**
	comp=E,0.1nm,0.5s,baz=301,slow=5.2,SNR=5.2						

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*ISCJB **08** 15:20:26.1±1.3, 9°.21N±0°.04×123°.07E±0°.04, h5^{km}±8^{km}, mb3.6/5, Error ellipse: s-maj=7.5km s-min=7.1km az=28.9*
*IDC **08** 15:20:26.6±2.0, 9°.13N×123°.12E, h0^{km}, mb3.6/5, mb1 3.7/5, mb1mx3.4/56, mbtmp3.6/5, MS2.3/1, Ms1 2.3/1, ms1mx2.1/50, Error ellipse: s-maj=241.8km s-min=20.2km az=64.0*
*MAN **08** 15:20:29.1, 9°.28N×123°.12E, h25^{km}, mb4.7, ML3.6, MS3.5*
ISC 08 15:20:28.5±1.1, **9°.31N**±0°.05×**123°.15E**±0°.04, **h9**^{km}±7^{km}, **n18,** σ**2**^{s}.**17**/24, **mb3.6**/5, **1C-2D, Negros**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNPH	**Sibulan**	**0.09**	**70**	⇓*i*P	**Pg**	**15 20 29.9**	**-1.0**
SNPH				*i* S	**Sg**	**15 20 32.2**	**-0.4**
TBP	**Tagbilaran**	**0.80**	**62**	*e*P	**Pb**	**15 20 45.0**	**+0.3**
TBP				*e*S	**Sn**	**15 20 57.6**	**-0.5**
LLP	**Lapu-Lapu**	**1.28**	**39**	*e*P	**Pn**	**15 20 51.1**	**-1.6**
LLP				*e*S	**Sb**	**15 21 09.1**	**-0.6**
GUIM	**Jordan**	**1.42**	**337**	*e*P	**Pn**	**15 20 52.3**	**-2.3**
GUIM				*e*S	**Sn**	**15 21 12.8**	**-0.7**
PAGZ	**Pagadian**	**1.47**	**171**	*e*P	**Pn**	**15 20 53.8**	**-1.5**
JAP	**San Jose, Anti**	**1.85**	**320**	⇑*e*P	**Pg**	**15 21 05.1**	**+1.0**
MSLP	**Maasin**	**1.88**	**64**	*e*P	**Pn**	**15 21 00.9**	**0.0**
MSLP				*e*S	**Sb**	**15 21 28.1**	**+1.4**
OCLP	**Ormoc**	**2.25**	**40**	*e*P	**Pn**	**15 21 05.4**	**-0.7**
RCP	**Roxas**	**2.27**	**350**	⇓*e*P	**Pn**	**15 21 08.0**	**+1.7**
RCP				*e*S	**Sb**	**15 21 39.4**	**+1.4**
BUKP	**Musuan**	**2.37**	**127**	*e*P	**Pn**	**15 21 06.5**	**-1.2**
BUKP				*e*S	**Sg**	**15 21 52.5**	**+7.8**
CUYO	**Cuyo Island**	**2.59**	**306**	*e*P	**Pn**	**15 21 10.3**	**-0.5**
DAV	**Davao City (W)**	**3.28**	**133**	LR	LR	15 22 08.6	
	comp=Z,48nm,20.6s,baz=318,slow=32						
BUSP	**Coron**	**3.94**	**313**	*e*P	**Pn**	**15 21 29.6**	**+0.3**
WRA	**Warramunga Arr**	**31.09**	**159**	P	**P**	**15 26 44.8**	**-2.6**
	0.3nm,0.7s,baz=339,slow=8.8,SNR=4.9						
ASAR	**Alice Springs**	**34.42**	**162**	P	**P**	**15 27 14.8**	**-1.8**
	1.0nm,0.6s,baz=341,slow=7.0,SNR=26						
MKAR	**Makanchi Array**	**50.97**	**325**	P	**P**	**15 29 30.9**	**+0.2**
	0.8nm,0.9s,baz=122,slow=8.3,SNR=5.5						
KURBB	**Kurchatov Arra**	**55.15**	**327**	P	**P**	**15 30 02.1**	**+0.8**
	0.4nm,0.6s,baz=121,slow=8.8,SNR=7.8						
BVAR	**Borovoye Array**	**60.73**	**327**	P	**P**	**15 30 40.6**	**+0.1**
	0.2nm,0.4s,baz=134,slow=6.2,SNR=3.6						

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*ISCJB **08** 15:27:02.2±1.8, 1°.7N±0°.2×89°.5E±0°.3, h10^{km}, mb3.4/5, Error ellipse: s-maj=50.5km s-min=19.7km az=156.8*
*IDC **08** 15:27:02.7±2.3, 1°.65N×89°.46E, h0^{km}, mb3.4/5, mb1 3.5/6, mb1mx3.3/62, mbtmp3.3/6, Error ellipse: s-maj=78.0km s-min=23.6km az=62.0*
ISC 08 15:27:04.2±2.1, **1°.7N**±0°.2×**89°.5E**±0°.4, **h10**^{km}, **n7,** σ**0**^{s}.**32**/7, **mb3.4**/5, **North Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**19.07**	**28**	P	**Pn**	**15 31 27.8**	**0.0**
	baz=210,slow=12,SNR=4.0						
MKAR	**Makanchi Array**	**45.37**	**353**	P	**P**	**15 35 23.1**	**+0.3**
	0.2nm,0.6s,baz=155,slow=7.8,SNR=3.6						
SONM	**Songino Array**	**48.25**	**15**	P	**P**	**15 35 45.5**	**+0.1**
	1.2nm,0.8s,baz=190,slow=7.1,SNR=6.0						
WRA	**Warramunga Arr**	**48.94**	**118**	P	**P**	**15 35 50.8**	**-0.3**
	0.2nm,0.5s,baz=296,slow=8.6,SNR=5.2						
KURBB	**Kurchatov Arra**	**49.65**	**351**	P	**P**	**15 35 55.5**	**-0.4**
	0.4nm,0.7s,baz=173,slow=7.8,SNR=6.4						
ASAR	**Alice Springs**	**49.98**	**123**	P	**P**	**15 35 59.2**	**+0.3**
	0.1nm,0.5s,baz=298,slow=7.4,SNR=5.4						
TXAR	**Lajitas Array**	**146.69**	**21**	PKPbc	**PKPbc**	**15 46 47.2**	**0.0**
	0.1nm,0.6s,baz=316,slow=2.5,SNR=2.3						

NDI 08 15:39:42.8±2.2, **24°.40N**×**94°.13E, h16**^{km}±13^{km}**, ML3.3, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SILR	**SILCHAR**	**1.26**	**288**	*e*S	Sg	15 40 26.8	+3.1
KOHI	**KOHIMA**	**1.32**	**359**	*e*P	Pg	15 40 07.9	-0.3
KOHI				*e*S	Sg	15 40 26.6	+1.2
AZL	**Aizawl**	**1.47**	**244**	*e*P	Pn	15 40 09.2	+0.5
AZL				*e*S	Sg	15 40 29.6	-0.6
AZL				IAML		15 40 30.8	
	comp=N,385nm,0.6s						
AZL				IAML		15 40 31.6	
	comp=E,500nm,0.4s						
SAIH	**SAIHA**	**2.17**	**209**	*e*P	Pn	15 40 18.1	-0.2
SAIH				*e*S	Sn	15 40 43.5	-1.5
SAIH				IAML		15 40 48.9	
	comp=N,142nm,0.4s						
SAIH				IAML		15 40 49.0	
	comp=E,342nm,0.2s						
JORH	**JORHAT**	**2.34**	**3**	*e*S	Sn	15 40 49.7	+0.8
TEZP	**TEZPUR**	**2.51**	**332**	*e*S	Sn	15 40 51.4	-1.8
AGT	**Agartala**	**2.68**	**260**	*e*S	Sn	15 40 57.3	0.0
AGT				IAML		15 40 59.8	
	comp=N,122nm,0.7s						
AGT				IAML		15 41 00.1	
	comp=E,116nm,0.0s						
BELO	**BELONIA**	**2.71**	**246**	*e*S	Sn	15 40 57.6	-0.4
ITAN	**ITANAGAR**	**2.76**	**353**	*e*S	Sn	15 40 58.7	-0.6
GUWA	**GUWAHATI**	**2.84**	**310**	*e*P	Pn	15 40 27.2	-0.2
GUWA				*e*S	Sn	15 40 59.1	-2.1
GUWA				IAML		15 40 59.7	
	comp=E,106nm,0.1s						
GUWA				IAML		15 41 00.4	
	comp=N,286nm,0.8s						
ZIRO	**ZIRO**	**3.12**	**356**	*e*P	Pn	15 40 32.4	+0.9
ZIRO				*e*S	Sn	15 41 06.3	-2.3
ZIRO				IAML		15 41 08.8	
	comp=N,199nm,0.3s						
ZIRO				IAML		15 41 10.7	
	comp=E,231nm,1.2s						
LKP	**Lekhapani**	**3.31**	**28**	*e*S	Sn	15 41 11.3	-1.5
TURI	**Tura**	**3.63**	**289**	*e*P	Pn	15 40 39.4	+1.1
TURI				*e*S	Sn	15 41 20.4	-0.4
TURI				IAML		15 41 24.7	
	comp=E,203nm,0.3s						

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*ISCJB **08** 15:54:19.5±1.4, 36°.09N±0°.04×141°.28E±0°.08, h12^{km}±8^{km}, mb3.6/2, Error ellipse: s-maj=11.0km s-min=6.9km az=172.9*
*IDC **08** 15:54:19.5±3.1, 36°.11N×141°.22E, h0^{km}, mb3.5/2, mb1 3.6/4, mb1mx3.2/64, mbtmp3.4/4, ML2.8/2, Error ellipse: s-maj=56.6km s-min=35.1km az=50.0*
*JMA **08** 15:54:20.7±0.2, 36°.05N×141°.19E, h29^{km}±2^{km}, M3.2*
ISC 08 15:54:17.2±2.0, **35°.98N**±0°.05×**141°.27E**±0°.08, **h3**^{km}±14^{km}, **n18,** σ**1**^{s}.**46**/17, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.43**	**231**	P	**Pn**	**15 54 30.0**	**-0.4**
CHOJ				S	**Sb**	**15 54 36.9**	**+2.5**
JIHU	**Itakohorinouch**	**0.60**	**269**	P	**Pn**	**15 54 32.0**	**-0.7**
JHYU	**Hitachinakayam**	**0.66**	**303**	P	**Pb**	**15 54 32.0**	**+0.6**
JHYU				S	**Sb**	**15 54 40.7**	**-0.3**
JHO	**Hitachi**	**0.85**	**318**	P	**Pb**	**15 54 35.0**	**+0.4**
JYT	**Yasato**	**0.91**	**286**	P	**Pb**	**15 54 36.1**	**+0.5**
JYT				S	**Sb**	**15 54 47.5**	**-0.6**
ONAJ	**Iwakimizuishiy**	**1.18**	**341**	P	**Pg**	**15 54 39.9**	**0.0**
JFK	**Kawauchi**	**1.42**	**347**	P	**Pn**	**15 54 43.1**	**-0.9**
MJAR	**Matsushiro Arr**	**2.54**	**284**	Pn	**Pn**	**15 55 00.7**	**+1.4**
	1.6nm,0.3s,baz=115,slow=7.5,SNR=24						
MJAR				Sn	**Sg**	**15 55 38.1**	**-0.6**
	4.6nm,0.3s,baz=115,slow=23,SNR=7.7						
MAT	**Matsushiro**	**2.54**	**284**	P	**Pn**	**15 55 00.6**	**+1.2**
MAT				S	**Sn**	**15 55 27.9**	**-2.9**
JHJ	**Hachijo jima 2**	**3.11**	**204**	Pn	**Pb**	**15 55 12.5**	**-0.6**
	4.3nm,0.3s,baz=75,slow=18,SNR=3.3						
JHJ				Sn	**Sb**	**15 55 49.5**	**-1.9**
	8.6nm,0.3s,baz=221,slow=19,SNR=4.6						
H11N2	**WAKE ISLAND Hy**	**27.72**	**119**	T	T	16 29 11.7	
	baz=311						
H11N1	**WAKE ISLAND Hy**	**27.73**	**119**	T	T	16 29 14.0	
	baz=311						
H11N3	**WAKE ISLAND Hy**	**27.74**	**119**	T	T	16 29 14.9	
	baz=311						
H11S1	**WAKE ISLAND Hy**	**28.40**	**121**	T	T	16 30 04.0	
	baz=314,slow=75,SNR=87						
H11S3	**WAKE ISLAND Hy**	**28.40**	**121**	T	T	16 30 03.2	
	baz=314,slow=75,SNR=70						
H11S2	**WAKE ISLAND Hy**	**28.41**	**121**	T	T	16 30 04.3	
	baz=314,slow=75,SNR=49						
WRA	**Warramunga Arr**	**56.00**	**188**	P	**P**	**16 03 58.8**	**+1.7**
	0.8nm,1.0s,baz=3.8,slow=7.4,SNR=5.6						
ASAR	**Alice Springs**	**59.73**	**188**	P	P	16 04 28.2	+4.9
	0.4nm,0.9s,baz=2.9,slow=6.1,SNR=4.2						

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*SOME **08** 15:58:39.6, 43°.80N×84°.30E, h5^{km}*
*NNC **08** 15:58:44.6±3.1, 43°.77N×84°.01E, h30^{km}±14^{km}, mb3.1, mpv2.5, Error ellipse: s-maj=26.8km s-min=12.3km az=117.0*
ISC 08 15:58:35.9±2.1, **43°.63N**±0°.08×**84°.54E**±0°.09, **h10**^{km}**, n17,** σ**2**^{s}.**30**/30, **4C-8D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**3.05**	**268**	*e*P	**Pb**	**15 59 31.2**	**+0.8**
	9.0nm,0.3s						
KTMS				*e*S	**Sb**	**16 00 08.9**	**+1.2**
	40nm,0.3s						
DJR	**Jarkent**	**3.50**	**283**	*e*P	**Pb**	**15 59 38.6**	**+0.6**
	2.0nm,0.3s						
DJR				*e*S	**Sg**	**16 00 22.3**	**-6.1**
	8.8nm,0.3s						
MK31	**Makanchi Array**	**3.54**	**334**	⇓Pn	**Pn**	**15 59 34.1**	**+3.1**
	0.1nm,0.1s,baz=302,slow=12,SNR=39						
MK31				Pg	**Pg**	**15 59 44.1**	**+0.4**
	2.9nm,0.6s,baz=149,slow=18,SNR=22						
MK31				Sn	**Sn**	**16 00 10.8**	**-2.1**
	1.3nm,0.3s,baz=141,slow=16,SNR=4.3						
MK31				⇓Lg	Lg	16 00 31.4	
	19nm,0.7s,baz=147,slow=28,SNR=11						
MAKZ	**Makanchi**	**3.66**	**331**	⇓Pn	**Pn**	**15 59 36.0**	**+3.4**
	0.2nm,0.2s						
MAKZ				⇓Pg	**Pg**	**15 59 45.9**	**-0.1**
	1.3nm,0.4s						
MAKZ				⇓Lg	Lg	16 00 41.4	
	10nm,0.7s						
PDGK	**Podgornoye**	**3.69**	**267**	⇑Pn	**Pn**	**15 59 34.7**	**+1.7**
	0.5nm,0.3s						
PDGK				⇓Pg	**Pb**	**15 59 43.3**	**+2.0**
PDGK				⇑Lg	Lg	16 00 32.5	
	48nm,1.2s						
SHLS	**Shalkode**	**3.73**	**264**	*e*P	**Pn**	**15 59 36.6**	**+2.9**
	4.2nm,0.2s						
SHLS				*e*S	**Sn**	**16 00 17.4**	**-0.3**
ZSN	**Zaisan**	**3.83**	**3**	*e*P	**Pb**	**15 59 42.1**	**-1.5**
	0.6nm,0.2s						
ZSN				*e*S	**Sb**	**16 00 27.2**	**-2.7**
	3.6nm,0.2s						
UZB	**Uzynbulak**	**4.05**	**265**	*e*P	**Pg**	**15 59 52.4**	**-1.1**
	1.6nm,0.2s						
UZB				*e*S	**Sg**	**16 00 44.1**	**-1.9**
	13nm,0.3s						
KAPS	**Kapalarasan**	**4.07**	**296**	*e*P	**Pg**	**15 59 53.9**	**+0.1**
	1.4nm,0.4s						
KAPS				*e*S	**Sg**	**16 00 47.2**	**+0.8**
	10nm,0.5s						
SATY	**Saty**	**4.51**	**265**	*e*P	**Pg**	**15 59 59.9**	**-2.4**
	6.5nm,0.3s						
SATY				*e*S	**Sg**	**16 00 57.7**	**-3.0**
	9.2nm,0.1s						
ARXS	**Arharly**	**4.89**	**279**	*e*P	**Pg**	**16 00 10.2**	**+0.7**
	3.5nm,0.4s						
ARXS				*e*S	**Sg**	**16 01 15.0**	**+2.3**
	14nm,0.6s						
KOTS	**Kotyrbulak**	**5.42**	**268**	*e*P	**Pg**	**16 00 17.8**	**-2.0**
	1.4nm,0.2s						
KOTS				*e*S	**Sg**	**16 01 28.2**	**-1.8**
	12nm,0.6s						
CHKK	**Chushkaly**	**5.48**	**275**	*e*P	**Pg**	**16 00 20.0**	**-0.8**
	1.7nm,0.2s						
CHKK				*e*S	**Sg**	**16 01 32.3**	**+0.6**
	10nm,0.3s						
MDOK	**Medeo**	**5.48**	**268**	⇓Lg	Lg	16 01 27.7	
	6.1nm,0.7s						
KTBS	**Karatobe**	**5.70**	**274**	*e*P	**Pg**	**16 00 22.2**	**-2.8**
	0.6nm,0.2s						
KTBS				*e*S	**Sg**	**16 01 35.7**	**-3.2**
	3.8nm,0.5s						
TKM2	**Tokmak 2**	**6.57**	**267**	⇑Lg	Lg	16 02 03.9	
	3.9nm,0.7s						
KURBB	**Kurchatov Arra**	**8.11**	**332**	⇑Sn	**Sn**	**16 02 05.8**	**+0.6**
	2.8nm,0.6s						
KURBB				⇓Lg	Lg	16 02 54.8	
	7.3nm,0.6s						

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*KRNET **08** 16:04:25.8±0.1, 41°.70N×79°.18E, h22^{km}, mb2.3*
*SOME **08** 16:04:26.7, 41°.78N×79°.08E, h5^{km}*
*NNC **08** 16:04:26.4±4.2, 44°.83N×78°.69E, h0^{km}, mb2.9, mpv2.6, Error ellipse: s-maj=33.7km s-min=15.3km az=20.0*
ISC 08 16:04:26.1±2.0, **41°.78N**±0°.07×**79°.08E**±0°.05, **h1**^{km}±12^{km}, **n24,** σ**1**^{s}.**11**/46, **7C-10D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	**0.87**	**325**	⇑*e*P	**Pb**	**16 04 44.4**	**+0.3**
	baz=24						
PRZ				⇑*i*S	**Sn**	**16 04 57.4**	**-1.7**
	baz=24						
TARG	**Taragay, Kyrgy**	**0.96**	**268**	⇓*i*P	**Pg**	**16 04 45.1**	**+0.6**
	baz=72						
TARG				⇓*i*S	**Sb**	**16 04 59.0**	**0.0**
	baz=72						
UZB	**Uzynbulak**	**1.37**	**358**	*e*P	**Pg**	**16 04 52.9**	**+0.4**
	2.0nm,0.2s						
UZB				*e*S	**Sn**	**16 05 11.9**	**+0.5**
	7.4nm,0.2s						
SATY	**Saty**	**1.38**	**339**	*e*P	**Pg**	**16 04 53.6**	**+1.1**
	9.2nm,0.2s						
SATY				*e*S	**Sn**	**16 05 13.1**	**+1.5**
	27nm,0.1s						
PDGK	**Podgornoye**	**1.58**	**11**	⇑P	**Pb**	**16 04 55.9**	**-0.4**
	3.9nm,0.3s						
PDGK				⇓S	**Sg**	**16 05 17.4**	**+0.5**
	12nm,0.4s						
PDGK	**Podgornoye**	**1.58**	**11**	⇑*i*P	**Pb**	**16 04 55.9**	**-0.4**
	baz=8.0						
PDGK				⇑*i*S	**Sg**	**16 05 17.4**	**+0.5**
	baz=8.0						
KURS	**Kuram**	**1.84**	**339**	*e*P	**Pg**	**16 05 01.8**	**+0.4**
	1.6nm,0.2s						
KURS				*e*S	**Sg**	**16 05 27.0**	**+1.8**
	5.2nm,0.4s						
KTMS	**Ketmen**	**1.92**	**29**	*e*P	**Pb**	**16 05 01.0**	**-0.9**
	3.5nm,0.2s						
KTMS				*e*S	**Sb**	**16 05 26.3**	**-0.1**
	14nm,0.3s						
TNSS	**Tian-Shan**	**2.02**	**309**	*e*P	**Pg**	**16 05 04.9**	**0.0**
	2.8nm,0.2s						
TNSS				*e*S	**Sg**	**16 05 32.3**	**+1.3**
	8.1nm,0.2s						
MDOK	**Medeo**	**2.04**	**313**	Pg	**Pb**	**16 05 04.4**	**+0.2**
	1.8nm,0.4s						
MDOK				⇓Lg	Lg	16 05 32.7	
	13nm,0.7s						
MDOK	**Medeo**	**2.04**	**313**	*e*P	**Pg**	**16 05 05.3**	**0.0**
	2.6nm,0.3s						
MDOK				*e*S	**Sg**	**16 05 33.1**	**+1.3**
	13nm,0.5s						
KOTS	**Kotyrbulak**	**2.06**	**316**	*e*P	**Pg**	**16 05 05.3**	**-0.3**
	2.7nm,0.1s						
KOTS				*e*S	**Sg**	**16 05 32.9**	**+0.6**
	35nm,0.3s						
ULHL	**Ulahol**	**2.17**	**283**	⇓*i*P	**Pb**	**16 05 06.3**	**0.0**
	baz=85						
ULHL				⇓*i*S	**Sg**	**16 05 35.2**	**-0.5**
	baz=85						
IZV	**Izvestkoviy**	**2.22**	**305**	*e*P	**Pg**	**16 05 08.1**	**-0.5**
	5.5nm,0.4s						
IZV				*e*S	**Sg**	**16 05 38.2**	**+0.8**
	19nm,0.4s						
BOOM	**Boomskoye usch**	**2.44**	**288**	⇓*e*P	**Pn**	**16 05 08.4**	**+1.1**
	baz=89						
BOOM				⇓*i*S	**Sb**	**16 05 40.4**	**-1.2**
	baz=89						
CHKK	**Chushkaly**	**2.58**	**324**	*e*P	**Pg**	**16 05 14.6**	**-1.1**
	5.3nm,0.3s						
CHKK				*e*S	**Sg**	**16 05 49.2**	**+0.1**
	32nm,0.4s						
ARXS	**Arharly**	**2.60**	**340**	*e*P	**Pb**	**16 05 14.8**	**+1.1**
	1.3nm,0.3s						
ARXS				*e*S	**Sg**	**16 05 49.1**	**-0.7**
	4.5nm,0.2s						
DJR	**Jarkent**	**2.61**	**11**	*e*P	**Pb**	**16 05 14.5**	**+0.8**
	1.3nm,0.2s						
DJR				*e*S	**Sg**	**16 05 48.6**	**-1.3**
	10.0nm,0.3s						
KTBS	**Karatobe**	**2.62**	**318**	*e*P	**Pg**	**16 05 15.6**	**-0.8**
	1.0nm,0.2s						
KTBS				*e*S	**Sg**	**16 05 50.4**	**+0.1**
	7.5nm,0.3s						
KST	**Kastek**	**2.63**	**300**	*e*P	**Pg**	**16 05 15.5**	**-1.1**
	1.5nm,0.2s						
KST				*e*S	**Sg**	**16 05 50.4**	**-0.3**
	10nm,0.7s						
TKM2	**Tokmak 2**	**2.82**	**295**	⇑Pg	**Pb**	**16 05 18.6**	**+1.1**
	1.1nm,0.7s						
TKM2				⇑Lg	Lg	16 05 58.8	
	5.1nm,0.5s						
TKM2	**Tokmak 2**	**2.82**	**295**	⇓*i*P	**Pb**	**16 05 15.4**	**-2.1**
	baz=96						
TKM2				⇓*i*S	**Sb**	**16 05 50.6**	**-2.0**
	baz=96						
KUU	**Kurty**	**2.92**	**317**	*e*P	**Pg**	**16 05 20.8**	**-1.4**
	1.3nm,0.1s						
KUU				*e*S	**Sg**	**16 05 59.5**	**-0.5**
	5.1nm,0.2s						
KAPS	**Kapalarasan**	**3.51**	**3**	*e*P	**Pb**	**16 05 30.1**	**+1.0**
	1.3nm,0.4s						
KAPS				*e*S	**Sg**	**16 06 15.5**	**-3.5**
	2.7nm,0.5s						

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*GUC **08** 16:33:40.6±0.5, 24°.06S×67°.70W, h212^{km}±8^{km}, ML3.9*
*IDC **08** 16:33:42.8±3.1, 23°.86S×66°.90W, h196^{km}±31^{km}, mb3.3/1, mb1 3.3/4, mb1mx3.0/35, mbtmp3.8/4, Error ellipse: s-maj=40.3km s-min=26.2km az=111.0*
ISC 08 16:33:39.6±1.3, **24°.12S**±0°.07×**67°.3W**±0°.2, **h188**^{km}±19^{km}, **n17,** σ**1**^{s}.**53**/30, **8C-2D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB15	**IPOC Station P**	**2.15**	**294**	⇑*i*P	**Pn**	**16 34 19.8**	**+0.7**
PB15				*i* S	**S**	**16 34 49.7**	**0.0**
GO02	**Mina Guanaco**	**2.30**	**243**	⇑*i*P	**Pn**	**16 34 19.8**	**-1.0**
GO02				*i* S	**S**	**16 34 51.2**	**-1.5**
GO02				IAML		16 34 53.0	
	comp=E,416nm,0.3s						
PB06	**IPOC Station P**	**2.48**	**304**	⇑*i*P	**Pn**	**16 34 23.6**	**+0.8**
PB06				*i* S	**S**	**16 34 56.6**	**+0.4**
PB06				IAML		16 34 58.4	
	comp=N,537nm,0.3s						
PB14	**IPOC Station P**	**2.84**	**259**	*e*P	**Pn**	**16 34 26.1**	**-1.0**
PB14				*i* S	**S**	**16 35 01.8**	**-2.1**
PB14				IAML		16 35 03.0	
	comp=E,207nm,0.4s						
PB09	**IPOC Station P**	**2.90**	**322**	⇓*i*P	**Pn**	**16 34 29.3**	**+1.6**
PB09				*i* S	**S**	**16 35 05.6**	**+0.6**
PB09				IAML		16 35 08.6	
	comp=E,177nm,0.3s						
PB05	**IPOC Station P**	**2.91**	**295**	⇑*i*P	**Pn**	**16 34 28.1**	**+0.3**
PB05				*i* S	**S**	**16 35 04.0**	**-1.1**
PB05				IAML		16 35 07.7	
	comp=N,185nm,0.5s						
PB10	**IPOC Station P**	**3.00**	**281**	⇑*i*P	**Pn**	**16 34 28.8**	**+0.1**
PB10				*i* S	**S**	**16 35 05.3**	**-1.5**
PB10				IAML		16 35 11.4	
	comp=N,128nm,0.1s						
PB03	**IPOC Station P**	**3.03**	**312**	⇑*i*P	**Pn**	**16 34 29.9**	**+0.7**

PB03				*i* S	**S**	**16 35 07.7**	**0.0**
PB03				IAML		16 35 08.7	
	comp=E,298nm,0.2s						
PB04	**IPOC Station P**	**3.13**	**304**	⇓*i*P	**Pn**	**16 34 31.0**	**+0.6**
PB04				*i* S	**S**	**16 35 09.1**	**-0.9**
PB04				IAML		16 35 15.2	
	comp=N,299nm,0.4s						
PB07	**IPOC Station P**	**3.34**	**315**	⇑*i*P	**Pn**	**16 34 33.5**	**+0.6**
PB07				*i* S	**S**	**16 35 14.0**	**-0.6**
PB01	**IPOC Station P**	**3.65**	**327**	⇑*i*P	**Pn**	**16 34 37.2**	**+0.5**
PB01				*i* S	**S**	**16 35 21.0**	**-0.2**
PB02	**IPOC Station P**	**3.65**	**319**	*e*P	**Pn**	**16 34 37.0**	**+0.2**
PB02				*i* S	**S**	**16 35 20.4**	**-1.0**
LPAZ	**La Paz**	**7.82**	**354**	P	**Pn**	**16 35 32.3**	**+1.1**
	comp=N,1.1nm,0.3s,baz=164,slow=9.5,SNR=37						
LPAZ				S	**S**	**16 36 57.5**	**-2.1**
	comp=N,0.1nm,0.3s,baz=174,slow=18,SNR=1.8						
SIV	**San Ignacio**	**10.00**	**37**	P	**Pn**	**16 35 56.2**	**-2.9**
	comp=N,0.4nm,0.3s,baz=230,slow=14,SNR=11						
SIV				S	Sn	16 37 44.3	-6.4
	comp=N,0.1nm,0.3s,baz=193,slow=18,SNR=2.1						
PLCA	**Paso Flores**	**16.79**	**188**	P	**Pn**	**16 37 28.9**	**+5.0**
	comp=N,0.2nm,0.3s,baz=18,slow=11,SNR=6.9						
TORD	**Torodi Ar. Bea**	**76.90**	**69**	P	**P**	**16 45 11.0**	**-0.6**
	comp=N,0.7nm,0.8s,baz=254,slow=5.3						
MKAR	**Makanchi Array**	**146.81**	**39**	PKPbc	**PKPab**	**16 53 00.1**	**-1.2**
	comp=N,0.3nm,0.5s,baz=328,slow=3.6,SNR=5.1						

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*ISCJB **08** 16:34:23.4±0.7, 2°.0N±0°.1×89°.5E±0°.1, h10^{km}, mb4.0/17, MS3.3/1, Error ellipse: s-maj=18.6km s-min=13.7km az=28.7*

*IDC **08** 16:34:23.8±1.0, 1°.94N×89°.52E, h0^{km}, mb3.9/14, mb1 3.9/16, mb1mx3.7/62, mbtmp3.8/16, ML3.6/2, MS3.1/3, Ms1 3.1/3, ms1mx2.6/63, Error ellipse: s-maj=28.4km s-min=22.6km az=17.0*

*NEIC **08** 16:34:25.1±0.6, 1°.91N×89°.49E, h10^{km}, mb4.5/2, Error ellipse: s-maj=16.0km s-min=10.9km az=28.0*

ISC 08 16:34:25.4±0.9**, 2°.0N**±0°.2×**89°.3E**±0°.1**, h10**^{km}**, n29, σ1^{s}80**/23**, mb4.0**/17**, North Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PSI	**Prapat**	**9.62**	**85**	LR	LR	16 40 23.7	
	comp=Z,108nm,18.5s,baz=117,slow=38						
PALK	**Pallekele**	**10.06**	**302**	Pn	**Pn**	**16 36 52.2**	**+2.0**
	0.6nm,0.3s,baz=115,slow=11,SNR=6.6						
PALK				Sn	**Sn**	**16 38 39.2**	**-4.0**
	3.2nm,0.3s,baz=294,slow=0.9,SNR=9.1						
PALK	**Pallekele**	**10.06**	**302**	*e*Pn	**Pn**	**16 36 51.3**	**+1.2**
PALK				Sn	**Sn**	**16 38 39.2**	**-4.0**
CMAR	**Chiang Mai Arr**	**18.88**	**29**	P	**Pn**	**16 38 46.1**	**-0.6**
	0.1nm,0.3s,baz=226,slow=11,SNR=5.8						
CMAR				LR	LR	16 45 04.9	
	comp=Z,18nm,19.5s,baz=205,slow=34						
H08S3	**Diego Garcia H**	**19.34**	**240**	T	T	16 58 58.4	
	baz=62,slow=74						
H08S2	**Diego Garcia H**	**19.34**	**240**	T	T	16 59 03.6	
	baz=62,slow=74						
H08S1	**Diego Carcia H**	**19.35**	**240**	T	T	16 59 06.3	
	baz=62						
BRDH	**Bariadhala**	**20.67**	**6**	LR	LR	16 48 41.7	
	comp=Z,117nm,19.6s,baz=26,slow=41						
H01W3	**Cape Leeuwin H**	**43.45**	**150**	T	T	17 28 25.4	
	baz=324,slow=76,SNR=5.0						
H01W2	**Cape Leeuwin H**	**43.46**	**150**	T	T	17 28 26.5	
	baz=324,slow=76,SNR=5.8						
H01W1	**Cape Leeuwin H**	**43.46**	**150**	T	T	17 28 24.1	
	baz=324,slow=76,SNR=5.5						
MKAR	**Makanchi Array**	**45.03**	**353**	P	**P**	**16 42 40.7**	**-0.6**
	0.5nm,0.9s,baz=160,slow=7.6,SNR=4.1						
SONM	**Songino Array**	**47.98**	**15**	P	**P**	**16 43 03.8**	**-0.8**
	1.8nm,0.7s,baz=199,slow=8.1,SNR=9.9						
WRAB	**Tennant Creek**	**49.24**	**119**	*e*P	**P**	**16 43 11.9**	**-2.7**
	2.3nm,0.8s						
KURBB	**Kurchatov Arra**	**49.30**	**351**	P	**P**	**16 43 15.1**	**+0.6**
	0.9nm,0.9s,baz=174,slow=7.5,SNR=7.9						
KURK	**Kurchatov**	**49.38**	**351**	*e*P	**P**	**16 43 15.1**	**0.0**
	7.8nm,0.9s						
ASAR	**Alice Springs**	**50.29**	**123**	P	**P**	**16 43 21.1**	**-1.5**
	0.3nm,0.7s,baz=296,slow=8.1,SNR=5.3						
BVAR	**Borovoye Array**	**53.23**	**346**	P	**P**	**16 43 44.2**	**+0.2**
	0.6nm,0.7s,baz=170,slow=8.8,SNR=3.5						
AKTO	**Aktyubinsk**	**55.06**	**336**	P	**P**	**16 43 58.3**	**+0.9**
	0.3nm,0.3s,baz=198,slow=18,SNR=2.3						
BRTR	**Keskin Array B**	**62.83**	**314**	P	**P**	**16 44 53.3**	**+1.5**
	0.5nm,0.7s,baz=131,slow=8.1,SNR=3.0						
ASAJ	**Asahikawa**	**62.96**	**40**	P	**P**	**16 44 51.8**	**-0.5**
	2.3nm,0.9s,baz=255,slow=20,SNR=2.3						
MLR	**Muntele Rosu**	**70.14**	**318**	P	**P**	**16 45 40.9**	**+2.4**
	0.7nm,0.8s,baz=153,slow=6.9,SNR=8.1						
FINES	**FINESS Array B**	**75.72**	**334**	P	**P**	**16 46 12.5**	**+1.4**
	1.2nm,0.8s,baz=12,slow=10,SNR=2.6						
GERES	**GERESS Array B**	**79.05**	**319**	P	**P**	**16 46 31.5**	**+1.4**
	1.1nm,0.7s,baz=104,slow=5.6,SNR=10						
DAVOX	**Davos/Dischmat**	**81.31**	**317**	P	**P**	**16 46 42.4**	**0.0**
	0.9nm,0.5s,baz=180,slow=14,SNR=3.1						
SPITS	**Spitsbergen Ar**	**84.58**	**349**	P	**P**	**16 46 59.8**	**+1.2**
	1.3nm,0.6s,baz=116,slow=6.6,SNR=3.0						
KOWA	**Kowa**	**92.74**	**285**	P	**P**	**16 47 39.2**	**+0.4**
	1.3nm,0.6s,baz=117,slow=4.5,SNR=2.8						
DBIC	**Dimbokro**	**93.92**	**277**	P	**P**	**16 47 43.9**	**-0.3**
	13nm,1.2s,baz=112,slow=5.4,SNR=2.9						
TXAR	**Lajitas Array**	**146.45**	**21**	PKPbc	**PKPbc**	**16 54 07.2**	**-0.5**
	0.7nm,0.8s,baz=198,slow=2.5,SNR=7.0						

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*IDC **08** 16:56:17.7±0.6, 9°.76N×122°.68E, h0^{km}, mb3.8/14, mb1 3.9/14, mb1mx3.7/65, mbtmp3.8/14, MS3.2/4, Ms1 3.2/4, ms1mx2.7/54, Error ellipse: s-maj=29.3km s-min=12.8km az=68.0*

*MAN **08** 16:56:18.3, 10°.25N×123°.35E, h1^{km}, mb4.9, ML3.8, MS3.8*

*ISCJB **08** 16:56:20.0±1.5, 10°.22N±0°.02×123°.34E±0°.03, h15^{km}±10^{km}, mb3.8/18, MS3.2/2, Error ellipse: s-maj=4.7km s-min=3.9km az=144.4*

*NEIC **08** 16:56:27.2±1.3, 9°.83N×122°.80E, h74^{km}±13^{km}, mb4.2/1, Error ellipse: s-maj=25.2km s-min=7.7km az=66.0*

ISC 08 16:56:18.2±1.3**, 10°.24N**±0°.03×**123°.36E**±0°.03**, h3**^{km}±9^{km}**, n47, σ1^{s}95**/55**, mb3.7**/18**, 4C-3D, Cebu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	**Lapu-Lapu**	**0.60**	**82**	⇓*i*P	**Pg**	**16 56 30.3**	**+0.5**
LLP				*i* S	**Sb**	**16 56 39.0**	**-1.4**
GUIM	**Jordan**	**0.85**	**297**	*e*P	**Pg**	**16 56 34.5**	**0.0**
GUIM				*e*S	**Sb**	**16 56 47.4**	**-0.1**
SNPH	**Sibulan**	**0.90**	**188**	⇑*i*P	**Pb**	**16 56 36.6**	**+0.1**
SNPH				*i* S	**Sn**	**16 56 49.3**	**-2.1**
RCP	**Roxas**	**1.45**	**336**	⇑*e*P	**Pn**	**16 56 44.8**	**-0.6**
RCP				*e*S	**Sb**	**16 57 05.5**	**+0.8**
OCLP	**Ormoc**	**1.47**	**57**	*e*P	**Pn**	**16 56 45.1**	**-0.6**
OCLP				*e*S	**Sg**	**16 57 07.1**	**+1.5**
MSLP	**Maasin**	**1.48**	**94**	*e*P	**Pn**	**16 56 45.6**	**-0.2**
MSLP				*e*S	**Sg**	**16 57 06.3**	**+0.3**
DCPH	**Dipolog City**	**1.64**	**180**	⇑*e*P	**Pb**	**16 56 48.8**	**-0.4**
PLP	**Palo**	**1.84**	**60**	⇓*e*P	**Pn**	**16 56 50.1**	**-0.8**
PLP				*i* S	**Sn**	**16 57 13.2**	**-1.5**
MMPH	**Masbate**	**2.12**	**7**	⇑*i*P	**Pn**	**16 56 55.5**	**+0.8**
MMPH				*i* S	**Sb**	**16 57 24.1**	**-0.2**
PAGZ	**Pagadian**	**2.37**	**179**	*e*P	**Pb**	**16 56 59.4**	**-2.3**
CUYO	**Cuyo Island**	**2.38**	**285**	*e*P	**Pn**	**16 56 58.2**	**0.0**
OTRP	**Odiongan**	**2.49**	**328**	*e*P	**Pb**	**16 57 02.5**	**-1.1**
BUTP	**Butuan**	**2.56**	**119**	*e*P	**Pn**	**16 57 01.2**	**+0.5**
CNP	**Catarman**	**2.60**	**29**	*e*P	**Pn**	**16 57 02.1**	**+0.9**
BUKP	**Musuan**	**2.88**	**144**	*e*P	**Pn**	**16 57 06.3**	**+1.1**
BUKP				*e*S	**Sn**	**16 57 39.8**	**-0.7**
SJMP	**San Jose**	**3.12**	**315**	*e*P	**Pn**	**16 57 09.9**	**+1.6**
CTBH	**Cotabato--PC H**	**3.12**	**164**	⇓*e*P	**Pn**	**16 57 09.7**	**+1.2**
CTBH				*i* S	**Sn**	**16 57 47.4**	**+1.1**
PVCP	**Virac**	**3.43**	**13**	*e*P	**Pn**	**16 57 11.7**	**-1.0**
BUSP	**Coron**	**3.56**	**300**	*e*P	**Pn**	**16 57 15.3**	**+0.9**
DAV	**Davao City (W)**	**3.84**	**145**	Pn	**Pb**	**16 57 24.3**	**-2.3**
	19nm,0.3s,baz=319,slow=19,SNR=2.6						
DAV				Sn	**Sg**	**16 58 21.0**	**-0.7**
	37nm,0.3s,baz=162,slow=20,SNR=2.7						
DAV				LR	LR	16 59 26.9	
	comp=Z,233nm,18.9s,baz=322,slow=48						
SKMP	**Bagumbayan, Su**	**3.88**	**162**	*e*P	**Pn**	**16 57 21.0**	**+2.2**
ENPP	**El Nido**	**3.98**	**284**	*e*P	**Pn**	**16 57 20.1**	**-0.1**
TGY	**Tagaytay City**	**4.51**	**329**	Pn	**Pb**	**16 57 34.0**	**-4.2**
	16nm,0.3s,baz=354,slow=10,SNR=2.2						
JOW	**Kunigami**	**17.15**	**15**	LR	LR	17 06 21.9	
	comp=Z,38nm,18.9s,baz=307,slow=34						
BATI	**Baumata**	**20.31**	**179**	P	**P**	**17 00 55.9**	**+0.3**
	2.4nm,0.3s,baz=241,slow=6.0,SNR=4.5						
CMAR	**Chiang Mai Arr**	**25.00**	**292**	P	**P**	**17 01 41.2**	**-2.4**
	0.6nm,0.3s,baz=99,slow=9.2,SNR=3.0						
CMAR				LR	LR	17 10 36.9	
	comp=Z,61nm,18.1s,baz=141,slow=35						
JHJ	**Hachijo jima 2**	**27.34**	**31**	P	**P**	**17 02 10.9**	**+6.3**
	64nm,0.8s,baz=105,slow=20,SNR=2.6						
KSAR	**Wonju Array Be**	**27.39**	**8**	P	**P**	**17 02 09.4**	**+4.4**
KSRS	**Korea Array**	**27.41**	**8**	P	**P**	**17 02 09.4**	**+4.3**
	1.3nm,0.9s,baz=180,slow=9.0,SNR=6.3						
WRAB	**Tennant Creek**	**31.87**	**160**	*e*P	**P**	**17 02 43.2**	**-1.8**
WRA	**Warramunga Arr**	**31.88**	**160**	P	**P**	**17 02 42.3**	**-2.7**
	0.4nm,0.6s,baz=341,slow=9.1,SNR=6.0						
BRDH	**Bariadhala**	**32.75**	**296**	LR	LR	17 16 34.5	
	comp=Z,59nm,18.5s,baz=179,slow=38						
ASAR	**Alice Springs**	**35.24**	**163**	P	**P**	**17 03 12.8**	**-1.5**
	0.7nm,0.6s,baz=343,slow=6.9,SNR=28						
CTA	**Charters Tower**	**37.63**	**143**	P	**P**	**17 03 35.2**	**+0.5**
	6.0nm,0.9s,baz=346,slow=2.6,SNR=2.3						
KLR	**Kul'dur**	**39.50**	**9**	P	P	17 03 56.4	+6.3
	0.1nm,0.4s,baz=140,slow=7.9,SNR=2.3						
ULN	**Ulaanbaatar**	**39.95**	**343**	*e*P	**P**	**17 03 57.7**	**+3.6**
	1.3nm,0.4s						
SONM	**Songino Array**	**40.11**	**342**	P	**P**	**17 03 59.2**	**+3.8**
	0.3nm,0.4s,baz=157,slow=6.8,SNR=5.4						
STKA	**Stephens Creek**	**45.37**	**158**	P	**P**	**17 04 36.2**	**-1.8**
	2.6nm,0.8s,baz=0.0,slow=5.1,SNR=5.5						
MKAR	**Makanchi Array**	**50.34**	**324**	P	**P**	**17 05 16.5**	**-0.1**
	0.3nm,0.7s,baz=129,slow=8.6,SNR=4.5						
ZALV	**Zalesovo Beam**	**53.31**	**333**	P	**P**	**17 05 37.8**	**-0.8**
	0.8nm,0.5s,baz=119,slow=5.4,SNR=3.1						
KURBB	**Kurchatov Arra**	**54.49**	**327**	P	**P**	**17 05 47.4**	**+0.1**
	0.6nm,0.8s,baz=125,slow=6.9,SNR=6.8						
KURK	**Kurchatov**	**54.49**	**327**	P	**P**	**17 05 47.4**	**+0.1**
BVAR	**Borovoye Array**	**60.08**	**326**	P	**P**	**17 06 26.7**	**-0.1**
	0.5nm,0.8s,baz=104,slow=12,SNR=3.5						
BRVK	**Borovoye**	**60.15**	**326**	*e*P	**P**	**17 06 27.4**	**+0.2**
	16nm,1.1s						
FINES	**FINESS Array B**	**84.55**	**331**	P	**P**	**17 08 51.6**	**-1.1**
	0.3nm,0.4s,baz=28,slow=6.3,SNR=4.9						
AKASG	**Malin Array Be**	**84.77**	**320**	P	**P**	**17 08 52.5**	**-1.5**
	0.1nm,0.4s,baz=66,slow=5.2,SNR=2.5						
VNDA	**Vanda**	**90.27**	**172**	P	**P**	**17 09 18.1**	**-1.9**
	1.0nm,1.0s,baz=316,slow=8.2,SNR=3.0						

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*NIED **08** 16:58:00, 45°.50N×151°.60E, h14^{km}, Mw4.2 Best double couple: M$_0$2.46000×10^{15} NP1:φ$_s$242.00000°, δ29.00000°, λ102.00000°. NP2:φ$_s$48.00000°, δ62.00000°, λ83.00000°.*

*NEIC **08** 16:58:22.8±0.2, 45°.39N×151°.32E, h10^{km}, mb4.8/21, Error ellipse: s-maj=7.0km s-min=4.4km az=150.0*

*JMA **08** 16:58:23.4±0.6, 45°.45N×151°.61E, h30^{km}, M4.7*

*ISCJB **08** 16:58:23.1±0.9, 45°.28N±0°.04×151°.45E±0°.04, h26^{km}±6^{km}, mb4.4/73, MS3.6/14, Error ellipse: s-maj=7.9km s-min=3.2km az=147.1*

*SKHL **08** 16:58:23.3±0.3, 45°.10N×151°.76E, h45^{km}±5^{km}, mb5.3/7*

*MOS **08** 16:58:25.0±0.9, 45°.34N×151°.41E, h39^{km}, mb4.7/18, Error ellipse: s-maj=7.2km s-min=5.8km az=82.0*

*BJI **08** 16:58:25.9, 45°.49N×151°.39E, h47^{km}, mb4.7/45, mB4.8/30, Ms4.2/15, Ms7 3.9/12*

*IDC **08** 16:58:28.4±0.5, 45°.43N×151°.30E, h48^{km}±5^{km}, mb3.9/35, mb1 4.0/42, mb1mx4.0/72, mbtmp4.2/42, MS3.4/16, Ms1 3.4/16, ms1mx3.1/64, Error ellipse: s-maj=11.7km s-min=9.3km az=133.0*

ISC 08 16:58:27.6±0.6**, 45°.33N**±0°.05×**151°.38E**±0°.04**, h46**^{km}±4^{km}**, h46**^{km}**:pP-P, n284, σ1^{s}40**/303**, mb4.5**/79**, MS3.6**/15**, 20C-10D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.48**	**269**	*i* P	**Pn**	**16 59 05.0**	**-0.4**
KUR				AMB	AMB	16 59 06.0	
	148nm,0.3s						
KUR				AMB	AMB	16 59 06.0	
	44nm,0.3s						
KUR				AMB	AMB	16 59 06.0	
	301nm,0.3s						
KUR				*i* S	**Sn**	**16 59 36.0**	**+1.5**
KUR				A	A	16 59 42.0	
	2μm,0.5s						
KUR				A	A	16 59 42.0	
	585nm,0.5s						
KUR	**Kuril'sk**	**2.48**	**269**	*d i*PN	**Pn**	**16 59 05.3**	**-0.1**
KUR				*i* S	**Sn**	**16 59 36.4**	**+1.9**
KUR				pmax	pmax		
	comp=N,148nm,0.3s						
KUR				pmax	pmax		
	comp=E,44nm,0.3s						
KUR				pmax	pmax		
	comp=Z,301nm,0.3s						
KUR				smax	smax		
	comp=E,585nm,0.6s						
KUR				smax	smax		
	comp=N,2μm,0.5s						
SHO	**Shikotan**	**3.56**	**247**	*i* P	**Pn**	**16 59 19.0**	**-1.3**
SHO				AMB	AMB	16 59 22.0	
	comp=N,30nm,0.4s						
SHO				AMB	AMB	16 59 22.0	
	comp=N,84nm,0.4s						
SHO				AMB	AMB	16 59 22.0	
	comp=N,149nm,0.4s						
SHO				*i* S	**Sn**	**17 00 01.0**	**-0.1**
SHO				A	A	17 00 06.0	
	comp=N,315nm,0.3s						
SHO				A	A	17 00 06.0	
	comp=N,128nm,0.3s						
SHO	**Shikotan**	**3.56**	**247**	*c i*PN	**Pn**	**16 59 19.3**	**-1.0**
SHO				*i* S	**Sn**	**17 00 01.3**	**+0.2**
SHO				pmax	pmax		
	comp=Z,149nm,0.4s						
SHO				pmax	pmax		
	comp=N,30nm,0.5s						
SHO				pmax	pmax		
	comp=E,84nm,0.3s						
SHO				smax	smax		
	comp=N,315nm,0.3s						
SHO				smax	smax		
	comp=E,128nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**4.14**	**254**	*i* P	**Pn**	**16 59 27.0**	**-1.2**
YUK				AMB	AMB	16 59 32.0	
	comp=E,61nm,0.3s						
YUK				AMB	AMB	16 59 32.0	
	comp=E,190nm,0.3s						
YUK				AMB	AMB	16 59 32.0	
	comp=E,147nm,0.3s						
YUK				*i* S	**Sn**	**17 00 16.0**	**+0.6**
YUK				A	A	17 00 28.0	
	comp=E,511nm,0.5s						
YUK				A	A	17 00 28.0	
	comp=E,311nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**4.14**	**254**	*d i*PN	**Pn**	**16 59 27.9**	**-0.3**
YUK				*i* S	**Sn**	**17 00 16.3**	**+0.9**
YUK				pmax	pmax		
	comp=Z,147nm,0.3s						
YUK				pmax	pmax		
	comp=N,61nm,0.1s						
YUK				pmax	pmax		
	comp=E,190nm,0.6s						
YUK				smax	smax		
	comp=N,511nm,0.5s						
YUK				smax	smax		
	comp=E,311nm,0.5s						
LAGR	**Lagunnoye**	**4.18**	**254**	*e*P	**Pn**	**16 59 29.0**	**+0.2**
LAGR				AMB	AMB	16 59 34.0	
	comp=E,83nm,0.4s						
LAGR				AMB	AMB	16 59 34.0	
	comp=E,119nm,0.4s						
LAGR				AMB	AMB	16 59 34.0	
	comp=E,209nm,0.4s						
LAGR				*i* S	**Sn**	**17 00 19.0**	**+2.6**
LAGR				A	A	17 00 31.0	
	comp=E,1μm,0.6s						
LAGR				A	A	17 00 31.0	
	comp=E,476nm,0.6s						
LAGR	**Lagunnoye**	**4.18**	**254**	*e*PN	**Pn**	**16 59 29.2**	**+0.4**
LAGR				*i* S	**Sn**	**17 00 19.1**	**+2.6**
LAGR				pmax	pmax		
	comp=Z,209nm,0.4s						
LAGR				pmax	pmax		
	comp=E,119nm,0.5s						
LAGR				pmax	pmax		
	comp=N,83nm,0.2s						
LAGR				smax	smax		
	comp=N,1μm,0.6s						
LAGR				smax	smax		
	comp=E,476nm,0.7s						
GRPR	**Tuman**	**4.22**	**254**	*i* P	**Pn**	**16 59 28.0**	**-1.3**
GRPR				AMB	AMB	16 59 41.0	
	comp=E,121nm,0.3s						
GRPR				AMB	AMB	16 59 41.0	
	comp=E,90nm,0.3s						
GRPR				AMB	AMB	16 59 41.0	
	comp=E,239nm,0.3s						
GRPR				*i* S	**Sn**	**17 00 17.0**	**-0.2**
GRPR				A	A	17 00 34.0	
	comp=E,363nm,0.4s						
GRPR				A	A	17 00 34.0	
	comp=E,518nm,0.4s						
GRPR	**Tuman**	**4.22**	**254**	*c i*PN	**Pn**	**16 59 28.4**	**-0.9**
GRPR				*i* S	**Sn**	**17 00 17.4**	**+0.2**
GRPR				pmax	pmax		
	comp=Z,239nm,0.4s						
GRPR				pmax	pmax		
	comp=N,121nm,0.3s						
GRPR				pmax	pmax		
	comp=E,90nm,0.3s						
GRPR				smax	smax		
	comp=N,363nm,0.4s						
GRPR				smax	smax		
	comp=E,518nm,0.5s						
GLVR	**Golovnino**	**4.48**	**251**	*i* P	**Pn**	**16 59 32.0**	**-0.9**
GLVR				AMB	AMB	16 59 38.0	
	comp=E,155nm,0.3s						
GLVR				AMB	AMB	16 59 38.0	
	comp=E,151nm,0.3s						
GLVR				AMB	AMB	16 59 38.0	
	comp=E,262nm,0.3s						
GLVR				*e*S	**Sn**	**17 00 24.0**	**+0.3**
GLVR				A	A	17 00 37.0	
	comp=E,645nm,0.3s						
GLVR				A	A	17 00 37.0	
	comp=E,420nm,0.3s						
GLVR	**Golovnino**	**4.48**	**251**	*c i*PN	**Pn**	**16 59 32.5**	**-0.4**
GLVR				*e*S	**Sn**	**17 00 24.6**	**+0.9**
GLVR				pmax	pmax		
	comp=Z,262nm,0.6s						
GLVR				pmax	pmax		
	comp=N,155nm,0.3s						
GLVR				pmax	pmax		
	comp=E,151nm,0.3s						
GLVR				smax	smax		
	comp=N,645nm,0.3s						
GLVR				smax	smax		
	comp=E,420nm,0.3s						
NEM2	**Nemuro 2**	**4.49**	**246**	P	**Pn**	**16 59 31.5**	**-1.6**
NEM2				*e*S	**Sn**	**17 00 21.5**	**-2.5**
JRA	**Rausu**	**4.68**	**255**	P	**Pn**	**16 59 36.3**	**+0.7**
JNK	**Nakash**	**5.08**	**252**	P	**Pn**	**16 59 41.0**	**-0.1**
JAK	**Akkeshi**	**5.34**	**246**	P	**Pn**	**16 59 42.6**	**-2.1**
JTKR	**Abashiri--Toko**	**5.50**	**258**	P	**Pn**	**16 59 47.8**	**+0.9**
JAR	**Ashorobuto**	**5.82**	**252**	P	**Pn**	**16 59 51.3**	**-0.1**
JAR				*e*S	**Sn**	**17 00 57.4**	**+0.6**
JMP	**Maruseppu**	**5.87**	**260**	P	**Pn**	**16 59 52.9**	**+0.9**
JOB	**Onbets**	**5.95**	**249**	P	**Pn**	**16 59 52.1**	**-0.9**
JOB				*e*S	**Sn**	**17 00 58.8**	**-1.0**
HRK	**Horoka**	**6.20**	**255**	*e*P	**Pn**	**16 59 57.3**	**+0.8**
YSS	**Yuzh-Sakhalins**	**6.21**	**288**	*e*P	**Pn**	**16 59 58.1**	**+1.5**
YSS				AMB	AMB	17 00 00.0	
	comp=E,19nm,0.8s						
YSS	**Yuzh-Sakhalins**	**6.21**	**288**	*e*Pn	**Pn**	**16 59 55.3**	**-1.3**
YSS	**Yuzh-Sakhalins**	**6.21**	**288**	⇓*i*PN	**Pn**	**16 59 58.3**	**+1.7**
YSS				pmax	pmax		
	comp=Z,20nm,0.7s						
YSS				MLR	MLR		
	comp=Z,400nm,15.0s						
YSS				MLR	MLR		
	comp=N,200nm,17.0s						
YSS				MLR	MLR		
	comp=E,300nm,16.0s						
SKR	**Severo-Kuril's**	**6.23**	**29**	*e*P	**Pn**	**16 59 55.7**	**-1.1**
SKR				AMB	AMB	16 59 58.7	
	comp=E,153nm,0.5s						
SKR				*e*S	**Sn**	**17 01 03.9**	**-2.7**
SKR				A	A	17 01 31.2	
	comp=E,121nm,0.7s						
SKR				A	A	17 01 31.2	
	comp=E,144nm,0.7s						
SKR	**Severo-Kuril's**	**6.23**	**29**	*e*PN	**Pn**	**16 59 55.7**	**-1.1**
SKR				pmax	pmax		
	comp=Z,100nm,0.6s						
SKR				pmax	pmax		
	comp=Z,153nm,0.5s						
SKR				MLR	MLR		
	comp=Z,200nm,15.0s						
SKR				MLR	MLR		
	comp=Z,400nm,15.0s						
JSE	**Soyaes**	**6.23**	**270**	P	**Pn**	**16 59 57.9**	**+1.0**
JKK2	**Kamakawa 2**	**6.33**	**260**	P	**Pn**	**16 59 59.5**	**+1.2**
ASAJ	**Asahikawa**	**6.37**	**262**	P	**Pn**	**17 00 00.5**	**+1.7**
	comp=Z,7.9nm,0.3s,baz=67,slow=20,SNR=146						
ASAJ				LR	LR	17 02 42.0	
	comp=Z,374nm,18.5s,baz=75,slow=40						
ASAJ	**Asahikawa**	**6.37**	**262**	*e*Pn	**Pn**	**17 00 00.0**	**+1.1**
ASAJ	**Asahikawa**	**6.37**	**262**	P	**Pn**	**17 00 00.4**	**+1.5**
JCH	**Churui**	**6.39**	**248**	P	**Pn**	**16 59 57.7**	**-1.4**
JCH				*e*S	**Sn**	**17 01 08.9**	**-1.7**
MYR	**Moyori**	**6.59**	**245**	*e*P	**Pn**	**17 00 00.6**	**-1.3**
JFR	**Furan**	**6.67**	**254**	P	**Pn**	**17 00 03.6**	**+0.6**
JFR				*e*S	**Sn**	**17 01 19.5**	**+1.9**
JWK2	**Keihoku**	**6.68**	**273**	P	**Pn**	**17 00 06.5**	**+3.4**
JAB	**Ashibetsu**	**6.80**	**258**	P	**Pn**	**17 00 06.6**	**+1.8**
ERM	**Erimo**	**6.82**	**244**	*e*P	**Pn**	**17 00 05.5**	**+0.5**
ERM	**Erimo**	**6.82**	**244**	*e*Pn	**Pn**	**17 00 04.9**	**-0.1**
ERM	**Erimo**	**6.82**	**244**	*c e*PN	**Pn**	**17 00 05.5**	**+0.5**
ERM				pmax	pmax		
	comp=Z,45nm,1.0s						
JEM	**Erimo**	**6.82**	**244**	P	**Pn**	**17 00 04.4**	**-0.6**
JNBK	**Urakawa-nobuka**	**6.94**	**247**	P	**Pn**	**17 00 04.8**	**-1.9**
JNBK				*e*S	**Sn**	**17 01 17.9**	**-6.4**
JBT2	**Biratori 2**	**6.98**	**252**	P	**Pn**	**17 00 06.3**	**-0.8**
JHR	**Hokuryu**	**7.08**	**260**	P	**Pn**	**17 00 10.4**	**+1.9**
JNB	**Noboribetsu**	**8.00**	**253**	P	**Pn**	**17 00 20.5**	**-0.6**
JNB				*e*S	**Sn**	**17 01 48.0**	**-2.1**
TYV	**Tymovskoe**	**8.04**	**317**	*e*P	**Pn**	**17 00 23.5**	**+1.8**
TYV				AMB	AMB	17 00 24.0	
	comp=Z,11nm,0.8s						
JKB	**Kayabe**	**8.26**	**249**	P	**Pn**	**17 00 22.9**	**-1.8**
JKB				*e*S	**Sn**	**17 01 50.1**	**-6.4**
JYM2	**Yakumo 2**	**8.59**	**252**	P	**Pn**	**17 00 28.1**	**-1.2**
JANG	**Nango**	**8.77**	**239**	P	**Pn**	**17 00 27.8**	**-4.0**
JANG				*e*S	Sn	17 01 59.7	-10
JTM	**Tenmabayashi**	**8.80**	**243**	*e*S	Sn	17 02 01.6	-8.4
PEA0B	**Petropavlovsk-**	**8.81**	**26**	*e*Pn	**Pn**	**17 00 32.0**	**-0.3**
PETK	**Petropavlovsk-**	**8.81**	**26**	P	**Pn**	**17 00 32.3**	**0.0**
	comp=Z,0.6nm,0.3s,baz=185,slow=12,SNR=17						
PETK	**Petropavlovsk-**	**8.81**	**26**	*e*Pn	**Pn**	**17 00 31.4**	**-0.9**
PET	**Petropavlovsk**	**9.05**	**29**	*e*P	**Pn**	**17 00 33.0**	**-2.5**
PET				AMB	AMB	17 00 34.0	
	comp=Z,11nm,1.0s						
PET				*e*S	**Sn**	**17 02 13.7**	**-2.2**
PET				A	A	17 02 18.2	
	comp=Z,17nm,1.0s						
PET	**Petropavlovsk**	**9.05**	**29**	*e*Pn	**Pn**	**17 00 33.9**	**-1.6**
PET	**Petropavlovsk**	**9.05**	**29**	*e*PN	**Pn**	**17 00 34.3**	**-1.2**
PET				pmax	pmax		
	comp=Z,9.0nm,0.7s						
PET				MLR	MLR		
	comp=Z,200nm,12.0s						
JOSM	**Okushiri--Mats**	**9.21**	**254**	P	**Pn**	**17 00 37.3**	**-0.4**
OFUJ	**Ofunato**	**9.53**	**232**	P	Pn	17 00 38.2	-3.9
GRNR	**Gornyy**	**11.39**	**304**	*e*PN	Pn	17 01 12.5	+5.0
MJAR	**Matsushiro Arr**	**13.26**	**233**	P	**Pn**	**17 01 31.6**	**-1.5**
	comp=Z,0.4nm,0.3s,baz=62,slow=11,SNR=14						
MJB9	**Matsu-Tunnel**	**13.26**	**233**	*e*Pn	**Pn**	**17 01 29.9**	**-3.2**
MAJO	**Matsushiro**	**13.26**	**233**	*e*Pn	**Pn**	**17 01 30.2**	**-2.9**
MAJO	**Matsushiro**	**13.26**	**233**	*e*PN	**Pn**	**17 01 30.2**	**-2.9**
MAT	**Matsushiro**	**13.26**	**233**	P	**Pn**	**17 01 32.2**	**-0.9**
MAT				S	**Sn**	**17 03 59.2**	**+0.2**
USRK	**Ussuriysk Ar.**	**13.82**	**272**	P	**Pn**	**17 01 39.6**	**-1.2**
	comp=Z,0.5nm,0.3s,baz=81,slow=13,SNR=6.5						
USRK				LR	LR	17 07 02.2	
	comp=Z,147nm,18.6s,baz=64,slow=37						
KLR	**Kul'dur**	**13.88**	**293**	P	**Pn**	**17 01 40.1**	**-1.3**
	comp=Z,0.0nm,0.3s,baz=93,slow=19,SNR=2.4						
KLR				LR	LR	17 07 18.8	
	comp=Z,17nm,18.9s,baz=97,slow=38						
KLR	**Kul'dur**	**13.88**	**293**	⇑*e*P	**P**	**17 01 45.1**	**-3.5**

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MA2   Magadan          14.28 359  P      Pn      17 01 45.0 -1.7
      comp=Z,0.9nm,0.3s,baz=182,slow=10,SNR=14
MA2                               LR     LR      17 07 32.7
      comp=Z,108nm,18.4s,baz=188,slow=38
MA2   Magadan          14.28 359 ePn     Pn      17 01 41.4 -5.3
INU   Inuyama          14.79 233 ePn     Pn      17 01 50.4 -3.3
JHJ   Hachijo jima 2   15.12 220  LR     LR      17 11 50.7
      comp=Z,48nm,18.1s,baz=310,slow=53
MDJ   Mudanjiang       15.43 275 eP      Pn      17 02 00.9 -1.1
MDJ   Mudanjiang       15.43 275 ePn     Pn      17 02 00.9 -1.1
      comp=Z,16nm,0.9s
SEY   Seymchan         17.65   2  P      Pn      17 02 29.3 -0.5
      comp=Z,0.1nm,0.3s,baz=174,slow=13,SNR=4.2
ZEA   Zeya             17.71 307 eP      P       17 02 30.8 -0.2
ZEA                               pmax   pmax
      comp=Z,14nm,1.2s
KSRS  Korea Array      19.23 254  P      P       17 02 47.4 -0.4
      comp=Z,0.4nm,0.3s,baz=59,slow=11,SNR=17
KSRS                              LR     LR      17 10 24.9
      comp=Z,84nm,18.4s,baz=65,slow=37
KS01  Wonju Array Si   19.24 254 eP      P       17 02 47.1 -0.7
KSAR  Wonju Array Be   19.26 254  P      P       17 02 47.4 -0.7
KSAR  Wonju Array Be   19.26 254  P      P       17 02 47.4 -0.7
JNU   Nakatsue         19.95 239  P      P       17 02 57.1 +1.4
      comp=Z,0.3nm,0.3s,baz=53,slow=10,SNR=5.5
JNU   Nakatsue         19.95 239 eP      P       17 02 56.2 +0.4
JNU   Nakatsue         19.95 239 eP      P       17 02 56.2 +0.4
      comp=Z,26nm,1.3s
TJN   Taejon           20.19 252ceP      Pn      17 03 02.2 +1.8
YAK   Yakutsk          20.92 331  P      P       17 03 05.8 -0.1
      comp=Z,15nm,0.6s,baz=148,slow=1.0,SNR=6.0
YAK                               LR     LR      17 11 05.1
      comp=Z,73nm,19.5s,baz=100,slow=36
YAK   Yakutsk          20.92 331 eP      P       17 03 05.3 -0.6
YAK                              e*PP    pP      17 03 15.6 -1.2
YAK                              e               17 03 23.9
YAK                              eS      S       17 06 57.5 +1.3
YAK                              e               17 07 11.9
YAK                              eSS     SnSn    17 07 22.8 +3.7
YAK                              e               17 14 25.6
YAK                               pmax   pmax
      comp=Z,11nm,0.8s
YAK                               pmax   pmax
      comp=Z,21nm,1.5s
YAK                               pmax   pmax
      comp=N,13nm,1.5s
YAK                               pmax   pmax
      comp=E,14nm,1.5s
YAK                               smax   smax
      comp=N,17nm,1.9s
YAK                               smax   smax
      comp=E,13nm,1.5s
KIWB  Kanaga Island    21.70  61 eP      P       17 03 15.7 +1.4
BILL  Bilibino         24.05  14 eP      P       17 03 37.9 -0.2
BILL  Bilibino         24.05  14⇑eP      P       17 03 37.9 -0.2
BILL                              pmax   pmax
      comp=Z,2.0nm,1.3s
BILL                              MLR    MLR
      comp=Z,162nm,18.0s
NJ2   Nanjing          28.43 254 eP      P       17 04 17.8  0.0
NJ2                               pmax   pmax
      comp=Z,9.0nm,0.5s
H11N2 WAKE ISLAND Hy   28.58 148  T      T       17 35 08.4
      baz=338,slow=75,SNR=44
H11N1 WAKE ISLAND Hy   28.59 148  T      T       17 35 07.7
      baz=338,slow=75,SNR=37
H11N3 WAKE ISLAND Hy   28.60 148  T      T       17 35 06.3
      baz=338,slow=75,SNR=54
HHC   Hu-ho-hao-te     29.21 275 eP      P       17 04 25.3 +0.5
HHC                               S      S       17 09 09.8 -4.3
HHC                               sS     sS      17 09 32.6 -1.9
HHC                               pmax   pmax
      comp=Z,24nm,1.0s
HHC                               pmax   pmax
      comp=Z,110nm,5.3s
HHC                               LR     LR
      comp=Z,190nm,14.7s
HHC                               LR     LR
      comp=Z,220nm,13.7s
HHC                               LR     LR
      comp=Z,140nm,13.7s
H11S1 WAKE ISLAND Hy   29.63 150  T      T       17 36 25.7
      baz=338,slow=76,SNR=43
H11S3 WAKE ISLAND Hy   29.64 150  T      T       17 36 32.3
      baz=338,slow=76,SNR=37
H11S2 WAKE ISLAND Hy   29.65 150  T      T       17 36 40.2
      baz=338,slow=76,SNR=39
ULN   Ulaanbaatar      30.25 291 eP      P       17 04 35.1 +1.1
ULN   Ulaanbaatar      30.25 291ceP      P       17 04 35.1 +1.1
ULN                               pmax   pmax
      comp=Z,7.0nm,2.5s
SONM  Songino Array    30.69 291  P      P       17 04 37.7 -0.2
      comp=Z,1.0nm,0.7s,baz=94,slow=7.3,SNR=4.4
SONM                              LR     LR      17 18 02.8
      comp=Z,110nm,18.4s,baz=98,slow=38
GUMO  Guam             32.11 192  LR     LR      17 16 12.0
      comp=Z,26nm,21.4s,baz=2.0,slow=33
WHN   Wuhan            32.41 256  P      P       17 04 57.5 +4.6
KDAK  Kodiak Island    35.94  49  P      P       17 05 23.0 -0.3
      comp=Z,3.2nm,0.7s,baz=264,slow=15,SNR=3.8
KDAK                              pP     pP      17 05 36.8 +1.3
      comp=Z,5.9nm,0.8s,baz=280,slow=5.1,SNR=2.7
LZH   Lanzhou          36.73 272 eP      P       17 05 31.4 +0.9
LZH                               pP     pP      17 05 46.0 +3.2
LZH                               sP     sP      17 05 51.8 +3.5
LZH                               pmax   pmax
      comp=Z,49nm,1.3s
LZH                               pmax   pmax
      comp=Z,92nm,4.3s
LZH                               LR     LR
      comp=Z,320nm,11.2s
LZH                               LR     LR
      comp=Z,400nm,11.5s
LZH                               LR     LR
      comp=Z,530nm,12.8s
GTA   Gaotai           38.01 280 eP      P       17 05 42.0 +0.8
GTA                               pP     pP      17 05 54.0 +0.4
GTA                               sP     sP      17 05 59.1 +0.1
GTA                               pmax   pmax
      comp=Z,6.0nm,1.0s
ILAR  Eielson Array    38.41  37  P      P       17 05 43.8 -0.4
      comp=Z,2.4nm,1.2s,baz=275,slow=8.1,SNR=11
CD2   Chengdu          39.56 265  P      P       17 05 53.5 -0.7
CD2                               pmax   pmax
      comp=Z,10.0nm,0.5s
CD2                               pmax   pmax
      comp=Z,140nm,5.0s
GYA   Guiyang          40.23 258  P      P       17 05 59.8 -0.1
GYA                               pmax   pmax
      comp=Z,10.0nm,1.0s
DGZ   Jazzator, Alta   42.25 300 i P     P       17 06 16.9 +0.6
DGZ                               pmax   pmax
      comp=Z,2.0nm,1.9s
ZALV  Zalesovo Beam    42.47 307  PcP    PcP     17 08 10.1 +0.3
      comp=Z,2.0nm,0.6s,baz=64,slow=3.4,SNR=4.4
ZALV                              LR     LR      17 24 59.2
      comp=Z,53nm,20.2s,baz=66,slow=38
INK   Inuvik           43.50  31  P      P       17 06 26.1 +0.2
      comp=Z,2.8nm,0.8s,baz=288,slow=10,SNR=5.4
KMI   Kunming          43.79 259  P      P       17 06 29.7 +0.6
KMI                               pmax   pmax
      comp=Z,5.0nm,0.5s
WMQ   Urumqi           44.32 292  P      P       17 06 33.9 +1.0
WMQ                               pmax   pmax
      comp=Z,26nm,0.7s
WMQ                               pmax   pmax
      comp=Z,120nm,4.1s
WMQ                               LR     LR
      comp=Z,130nm,19.5s
WMQ                               LR     LR
      comp=Z,84nm,26.3s
MK31  Makanchi Array   46.53 298 eP      P       17 06 48.3 -2.0
MK31  Makanchi Array   46.53 298 eP      P       17 06 48.3 -2.0
MKAR  Makanchi Array   46.53 298  P      P       17 06 50.0 -0.3
      comp=Z,1.1nm,0.6s,baz=76,slow=7.4,SNR=10
MKAR                              PcP    PcP     17 08 24.5 +0.6
      comp=Z,1.3nm,0.6s,baz=64,slow=4.2,SNR=7.3
MKAR  Makanchi Array   46.53 298 eP      P       17 06 48.3 -2.0
MKAR  Makanchi Array   46.53 298 eP      P       17 06 48.3 -2.0
      comp=Z,11nm,0.6s
MKAR                              PcP    PcP     17 08 24.5 +0.6
MK01  Makanchi Array   46.53 298 eP      P       17 06 48.9 -1.5
KURK  Kurchatov        47.15 304  P      P       17 06 53.9 -1.1
KURK                              PcP    PcP     17 08 26.9 +0.8
KURK  Kurchatov        47.15 304  P      P       17 06 53.9 -1.1
KURK                                             17 08 26.9
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KURBB Kurchatov Arra   47.24 304  P      P       17 06 53.9 -1.8
      comp=Z,1.5nm,0.7s,baz=73,slow=8.8,SNR=11
KURBB                             PcP    PcP     17 08 26.9 +0.5
      comp=Z,1.3nm,0.8s,baz=70,slow=3.3,SNR=6.8
DLBC  Dease Lake       47.45  44  P      P       17 06 58.9 +1.5
      comp=Z,2.1nm,1.0s,baz=305,slow=12,SNR=2.7
LSA   Lhasa            49.14 273 eP      P       17 07 11.2  0.0
LSA   Lhasa            49.14 273 eP      P       17 07 11.2  0.0
      comp=Z,6.0nm,0.7s
LSA   Lhasa            49.14 273 eP      P       17 07 11.3  0.0
LSA                               pmax   pmax
      comp=Z,6.0nm,0.7s
BVAR  Borovoye Array   50.83 310  P      P       17 07 23.3 +0.1
      comp=Z,0.5nm,0.5s,baz=64,slow=9.8,SNR=3.5
BVAR                              PcP    PcP     17 08 39.7 +0.4
      comp=Z,1.5nm,0.7s,baz=54,slow=3.7,SNR=6.6
BVAR                              LR     LR      17 30 29.0
      comp=Z,61nm,20.3s,baz=65,slow=38
CMAR  Chiang Mai Arr   50.86 256  P      P       17 07 24.6 +0.7
      comp=Z,0.5nm,0.4s,baz=50,slow=29,SNR=4.8
CMAR                              LR     LR      17 30 18.5
      comp=Z,18nm,18.3s,baz=320,slow=38
YKA   Yellowknife Ar   52.78  36  P      P       17 07 37.8 +0.2
      comp=Z,1.3nm,0.9s,baz=275,slow=6.8,SNR=3.6
JIRN  Jiri             53.85 274 eP      P       17 07 47.4 +1.0
      comp=Z,22nm,0.5s
GUN   Gumba            53.92 275 eP      P       17 07 48.0 +1.2
      comp=Z,10nm,0.4s
RAMN  Ramite           54.00 273 eP      P       17 07 47.3  0.0
KSH   Kashi            54.08 292 eP      P       17 07 50.8 +3.2
KSH                               sP     sP      17 08 08.3 +2.5
KSH                              ePcP    PcP     17 08 54.5 +2.5
KSH                               PP     PP      17 09 54.4 +5.2
KSH                               S      S       17 15 22.3 +1.6
KSH                               ScS    ScS     17 17 31.7 -1.3
KSH                               pmax   pmax
      comp=Z,5.0nm,0.9s
KSH                               pmax   pmax
      comp=Z,64nm,4.5s
KKN   Kakani           54.41 275 eP      P       17 07 51.4 +1.1
      comp=Z,25nm,0.8s
PKIN  Phulchoki        54.46 275 eP      P       17 07 51.1 +0.4
      comp=Z,12nm,0.8s
DMN   Daman            54.65 275 eP      P       17 07 52.9 +0.9
      comp=Z,18nm,0.8s
GKN   Gorkha           54.73 276 eP      P       17 07 53.4 +0.8
      comp=Z,22nm,0.8s
DANN  Dangsing         55.14 277 eP      P       17 07 56.9 +1.3
      comp=Z,18nm,0.5s
ARU   Arti             55.24 318d iP     P       17 07 54.4 -1.2
ARU                                              17 08 54.5
ARU                                              17 09 57.6
ARU                               S      S       17 15 38.1 +2.5
ARU                               SS     SS      17 19 17.6 -1.9
ARU                               pmax   pmax
      comp=Z,11nm,2.5s
KOLN  Koldanda         55.60 276 eP      P       17 07 59.9 +1.0
      comp=Z,10nm,0.7s
KK31  Karatay Array    55.62 299 eP      P       17 07 57.7 -0.9
KK31  Karatay Array    55.62 299 eP      P       17 07 57.7 -0.9
KKAR  Karatay Array    55.62 299 eP      P       17 07 57.7 -0.9
KKAR  Karatay Array    55.62 299 eP      P       17 07 57.7 -0.9
DAG   Danmarks Havn    58.01 357 i P     P       17 08 14.1 -0.9
      comp=Z,4.7nm,1.1s
DAG   Danmarks Havn    58.01 357 i P     P       17 08 14.1 -0.9
DAG                               pmax   pmax
      comp=Z,5.0nm,1.1s
ABKAR Akbulak array    58.41 310 eP      P       17 08 17.2 -1.0
DPW   Davenport        58.63  52 eP      P       17 08 20.1 +0.3
AKTO  Aktyubinsk       58.77 312  P      P       17 08 20.0 -0.7
      comp=Z,2.0nm,0.6s,baz=67,slow=9.8,SNR=6.9
AKTO                              LR     LR      17 36 09.9
      comp=Z,107nm,18.1s,baz=66,slow=39
AKTO  Aktyubinsk       58.77 312  P      P       17 08 20.0 -0.7
AKTO                              pmax   pmax
      comp=Z,2.0nm,0.6s
AKTO                              MLR    MLR
      comp=Z,107nm,18.2s
ARCES ARCESS Array B   58.79 341  P      P       17 08 20.0 -0.6
      comp=Z,3.1nm,1.0s,baz=51,slow=7.1,SNR=4.0
ARCES ARCESS Array B   58.79 341  P      P       17 08 20.0 -0.6
NIL   Nilore           59.20 288 eP      P       17 08 23.1 -0.9
      comp=Z,20nm,0.8s
NIL   Nilore           59.20 288 eP      P       17 08 23.1 -0.9
NIL                               pmax   pmax
      comp=Z,20nm,0.8s
YBH   Yreka Blue Hor   59.49  60  pP     pP      17 08 40.1 +1.2
      comp=Z,2.5nm,0.8s,baz=0.0,slow=16,SNR=4.4
KBL   Kabul            61.46 291 eP      P       17 08 38.4 -1.2
      comp=Z,9.9nm,0.6s
KBL   Kabul            61.46 291 eP      P       17 08 38.4 -1.2
KBL                               pmax   pmax
      comp=Z,10.0nm,0.6s
WVOR  Wild Horse Val   61.53  57  P      P       17 08 40.2 +0.4
      comp=Z,2.7nm,1.1s
WVOR  Wild Horse Val   61.53  57  P      P       17 08 40.3 +0.4
WVOR                              pmax   pmax
      comp=Z,3.0nm,1.1s
BEKR  Beckworth        62.03  61 epP     pP      17 08 57.3 +0.9
SUMG  Summit           62.20   3 eP      P       17 08 43.5 -0.7
      comp=Z,6.6nm,0.7s
SUMG  Summit           62.20   3 i P     P       17 08 44.3 +0.1
      comp=Z,6.2nm,0.7s
SUMG  Summit           62.20   3 i P     P       17 08 44.3 +0.1
SUMG                              pmax   pmax
      comp=Z,6.0nm,0.7s
PSI   Prapat           62.37 243  P      P       17 08 46.9 +1.2
      comp=Z,8.8nm,1.1s,baz=360,slow=6.6,SNR=3.2
PAHR  Pah Rah Range    62.73  60 epP     pP      17 09 01.9 +0.9
VCNR  Virginia City    62.81  61 epP     pP      17 09 02.9 +1.2
PNTR  Pine Nut         62.97  61 epP     pP      17 09 03.7 +0.9
YERR  Yerington        63.25  61 epP     pP      17 09 05.5 +0.9
BOZ   Bozeman (W)      63.61  51 epP     pP      17 09 07.5 +0.7
NV01  Mina Array Sit   64.17  61 eP      P       17 08 55.4 -2.2
NVAR  Mina Array Bea   64.17  61  P      P       17 08 58.7 +1.1
      comp=Z,0.3nm,0.6s,baz=267,slow=3.6,SNR=3.2
NVAR                              pP     pP      17 09 12.0 +1.2
      comp=Z,2.2nm,0.7s,baz=289,slow=7.2,SNR=16
FIA1  FINESS Array S   64.80 334 eP      P       17 08 59.8 -1.2
FINES FINESS Array B   64.80 334  P      P       17 09 00.4 -0.6
      comp=Z,3.8nm,0.6s,baz=48,slow=6.0,SNR=22
CTA   Charters Tower   65.27 185  P      P       17 09 04.9 +0.5
      comp=Z,4.1nm,0.9s,baz=8.1,slow=7.1,SNR=2.3
GEYT  Alibeck          66.29 300  P      P       17 09 11.2 +0.2
      comp=Z,3.0nm,0.8s,baz=76,slow=12,SNR=9.6
TPNV  Topopah Spring   66.37  61 eP      P       17 09 11.0 -0.8
      comp=Z,4.9nm,1.1s
TPNV  Topopah Spring   66.37  61 eP      P       17 09 11.0 -0.8
TPNV                              pmax   pmax
      comp=Z,5.0nm,1.1s
PDAR  Pinedale Array   66.57  52  P      P       17 09 13.4 +0.4
      comp=Z,0.3nm,0.7s,baz=102,slow=2.1,SNR=3.6
PDAR                              pP     pP      17 09 25.9 -0.3
      comp=Z,0.7nm,0.8s,baz=252,slow=0.5,SNR=4.8
WB2   Warramunga Arr   66.78 197 epP     pP      17 09 28.4 +0.9
WRA   Warramunga Arr   66.78 197  P      P       17 09 14.6 +0.4
      comp=Z,1.3nm,0.6s,baz=14,slow=6.7,SNR=18
WRA                               pP     pP      17 09 28.5 +1.1
      comp=Z,2.2nm,0.9s,baz=14,slow=6.7,SNR=8.4
FITZ  Fitzroy Crossi   67.32 207  P      P       17 09 18.6 +1.0
      comp=Z,1.8nm,1.0s,baz=45,slow=2.9,SNR=2.8
ULM   Lac du Bonnet    68.39  40  P      P       17 09 24.0 -0.1
      comp=Z,1.0nm,0.4s,baz=330,slow=8.1,SNR=2.3
DZM   Mont Dzumac      68.47 165  P      P       17 09 26.7 +1.8
      comp=Z,4.5nm,0.9s,baz=288,slow=20,SNR=2.4
NC405 NORSAR Array S   68.99 340 eP      P       17 09 26.6 -1.0
U15A  North Rim        69.13  59 epP     pP      17 09 43.3 +0.8
NB201 NORSAR Array S   69.15 340 eP      P       17 09 27.6 -1.0
NB2   NORSAR Subarra   69.17 341  P      P       17 09 28.3 -0.5
      comp=Z,4.4nm,0.6s,baz=29,slow=6.5
HFS   Hagfors          69.36 339  P      P       17 09 29.1 -0.9
      comp=Z,6.2nm,0.5s,baz=63,slow=6.6,SNR=36
AKT   Akhty            69.96 309 eP      P       17 09 34.9 +0.8
AKT                              e               17 09 53.4
AKT                              e               17 12 12.6
AKT                               pmax   pmax
      comp=Z,12nm,0.6s
ASAR  Alice Springs    70.49 197  P      P       17 09 38.3 +1.1
      comp=Z,1.0nm,0.7s,baz=12,slow=5.1,SNR=15
ASAR                              pP     pP      17 09 53.0 +2.4
      comp=Z,0.9nm,0.6s,baz=9.8,slow=5.6,SNR=7.6
KIV   Kislovodsk       70.91 314 eP      P       17 09 41.5 +1.6
KIV   Kislovodsk       70.91 314 eP      P       17 09 38.2 -1.7
      comp=Z,15nm,0.7s
KIV   Kislovodsk       70.91 314 eP      P       17 09 41.5 +1.6
KIV                               pmax   pmax
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      comp=Z,19nm,0.9s
KIV                               MLR    MLR
      comp=Z,59nm,18.0s
KBZ   Khabaz           70.97 313  P      P       17 09 40.9 +0.9
      comp=Z,12nm,0.8s,baz=68,slow=4.8,SNR=19
TBLG  Delisi           71.41 311 eP      P       17 09 43.1 +0.3
      comp=Z,19nm,0.6s
TBLG  Delisi           71.41 311 eP      P       17 09 43.1 +0.3
TBLG                              pmax   pmax
      comp=Z,19nm,0.6s
AKASG Malin Array Be   72.04 326  P      P       17 09 45.8 -0.6
      comp=Z,2.2nm,0.4s,baz=34,slow=6.2,SNR=20
AKBB  Malin Array Si   72.04 326 eP      P       17 09 45.3 -1.1
      comp=Z,5.8nm,0.8s
KIEV  Kiev             72.06 326 eP      P       17 09 45.8 -0.7
KIEV  Kiev             72.06 326 eP      P       17 09 45.1 -1.3
      comp=Z,5.6nm,0.7s
KIEV  Kiev             72.06 326c iP     P       17 09 45.8 -0.7
KIEV                              pmax   pmax
      comp=Z,5.0nm,0.9s
AKH   Akhalkalaki      72.30 311 eP      P       17 09 47.2 -1.1
      comp=Z,5.5nm,0.6s
AKH   Akhalkalaki      72.30 311 eP      P       17 09 47.2 -1.1
AKH                               pmax   pmax
      comp=Z,6.0nm,0.6s
SORM  Soroca           74.41 324⇓iP      P       17 10 00.2 -0.2
KWP   Kalwaria Pacla   75.41 328 eP      P       17 10 06.8 +0.6
KWP   Kalwaria Pacla   75.41 328 eP      P       17 10 06.0 -0.2
      comp=Z,338nm,1.3s
KWP   Kalwaria Pacla   75.41 328 eP      P       17 10 06.8 +0.6
OJC   Ojcow            75.97 330 eP      P       17 10 09.6 +0.2
OJC   Ojcow            75.97 330 eP      P       17 10 08.9 -0.5
OJC   Ojcow            75.97 330 eP      P       17 10 08.9 -0.5
      comp=Z,8.3nm,0.8s
OJC   Ojcow            75.97 330 eP      P       17 10 09.6 +0.2
BUR08 Bucovina Ar. S   76.08 326 eP      P       17 10 09.8 -0.4
BUR04 Bucovina Ar. S   76.09 326 eP      P       17 10 09.9 -0.3
BURAR Bucovina Array   76.09 326⇓iP      P       17 10 10.7 +0.4
TESR  Tescani          76.41 324⇑iP      P       17 10 12.1 +0.2
TLCR                   76.55 322⇑iP      P       17 10 13.1 +0.4
KSP   Ksiaz            76.62 333 eP      P       17 10 13.4 +0.4
KSP   Ksiaz            76.62 333 eP      P       17 10 13.4 +0.4
TRPA  Tarpa            76.71 328⇓iP      P       17 10 14.2 +0.6
CFR   Carcaliu         76.85 323⇑iP      P       17 10 14.7 +0.3
LANS  Liptovska Anna   76.98 330 eP      P       17 10 16.0 +0.8
LANS  Liptovska Anna   76.98 330 eP      P       17 10 16.0 +0.8
DPC   Dobruska-Polom   77.03 332 eP      P       17 10 16.0 +0.6
DPC   Dobruska-Polom   77.03 332 eP      P       17 10 16.0 +0.6
KRLC  Kraliky          77.12 332 eP      P       17 10 16.7 +0.8
KRLC  Kraliky          77.12 332 eP      P       17 10 16.7 +0.8
MORC  Moravsky Berou   77.12 331⇑iP      P       17 10 16.4 +0.5
MORC  Moravsky Berou   77.12 331 eP      P       17 10 15.7 -0.2
      comp=Z,6.9nm,0.8s
MORC  Moravsky Berou   77.12 331 eP      P       17 10 15.7 -0.2
MORC                              pmax   pmax
      comp=Z,7.0nm,0.8s
MORC  Moravsky Berou   77.12 331 eP      P       17 10 16.3 +0.4
CLL   Collm            77.25 335⇑iP      P       17 10 16.3 -0.2
      comp=Z,11nm,1.0s
CLL   Collm            77.25 335 eP      P       17 10 15.9 -0.6
      comp=Z,10nm,1.0s
CLL   Collm            77.25 335⇑iP      P       17 10 16.3 -0.2
CLL                               pmax   pmax
      comp=Z,11nm,1.0s
BRG   Berggiesshubel   77.34 334 eP      P       17 10 17.1  0.0
      comp=Z,3.2nm,1.0s
BRG   Berggiesshubel   77.34 334 eP      P       17 10 17.1  0.0
BRG                               pmax   pmax
      comp=Z,3.0nm,1.0s
TLB   Topalu           77.36 322⇑iP      P       17 10 17.7 +0.4
MLR   Muntele Rosu     77.52 324  P      P       17 10 19.0 +0.7
      comp=Z,0.9nm,0.7s,baz=102,slow=9.3,SNR=8.2
MLR   Muntele Rosu     77.52 324⇑iP      P       17 10 19.0 +0.7
MLR   Muntele Rosu     77.52 324 eP      P       17 10 18.2 -0.2
      comp=Z,5.4nm,0.9s
DRGR                   77.75 327⇓iP      P       17 10 19.8 +0.2
VYHS  Vyhne            77.76 330 eP      P       17 10 20.0 +0.5
VYHS                              pmax   pmax
      comp=Z,5.0nm,1.3s
VYHS  Vyhne            77.76 330 eP      P       17 10 20.0 +0.5
VRAC  Vranov           77.84 332⇓iP      P       17 10 20.9 +1.0
VRAC  Vranov           77.84 332 eP      P       17 10 20.5 +0.6
JAVC  Velka Javorina   77.86 331 eP      P       17 10 21.4 +1.3
GOPC  GO Pecny, Ondr   77.91 333 eP      P       17 10 20.7 +0.4
GOPC  GO Pecny, Ondr   77.91 333 eP      P       17 10 20.7 +0.4
PRU   Pruhonice        77.92 333 eP      P       17 10 21.2 +0.9
PRU   Pruhonice        77.92 333 eP      P       17 10 21.2 +0.9
VOIR                   77.93 325⇓iP      P       17 10 21.4 +0.8
KRUC  Moravsky         78.12 332 eP      P       17 10 22.0 +0.5
ARR   Arges            78.16 325⇑iP      P       17 10 22.8 +1.0
BRTR  Keskin Array B   78.58 316  P      P       17 10 24.5 +0.1
      comp=Z,1.2nm,0.8s,baz=65,slow=5.9,SNR=5.9
KHC   Kasperske Hory   78.98 333 eP      P       17 10 26.8 +0.6
KHC                              epP     PcP     17 10 29.7 -5.0
KHC                              ex      x       17 10 41.1
KHC   Kasperske Hory   78.98 333 eP      P       17 10 26.1 -0.2
      comp=Z,2.4nm,0.9s
KHC   Kasperske Hory   78.98 333 eP      P       17 10 26.8 +0.6
KHC                              e               17 10 29.7
KHC                              e               17 10 41.1
GERES GERESS Array B   79.19 333  P      P       17 10 27.3 -0.2
      comp=Z,1.6nm,0.8s,baz=35,slow=4.9,SNR=12
GERES                             LR     LR      17 49 17.5
      comp=Z,42nm,18.1s,baz=246,slow=39
GEA0  GERESS Array S   79.20 333 eP      P       17 10 26.1 -1.4
TXAR  Lajitas Array    79.25  59  P      P       17 10 28.4 +0.3
      comp=Z,0.4nm,0.7s,baz=310,slow=3.4,SNR=4.9
CONA  Conrad Observa   79.28 331 i pP    P       17 10 28.8 +0.8
      comp=Z,5.4nm,1.3s
RAR   Rarotonga        79.74 134  LR     LR      17 37 52.8
      comp=Z,27nm,21.9s,baz=256,slow=30
MEM   Membach          79.84 338 ⇑P      P       17 10 31.5 +0.7
MOA   Molln            79.88 332 epP     P       17 10 31.5 +0.4
      comp=Z,0.4nm,0.4s
KBA   Koelnbreinsper   80.85 332 epP     P       17 10 37.3 +0.7
      comp=Z,2.1nm,0.5s
VTS   Vitosha          81.03 324⇑iP      P       17 10 37.9 +0.3
VTS   Vitosha          81.03 324 eP      P       17 10 37.1 -0.4
      comp=Z,6.9nm,0.9s
VTS   Vitosha          81.03 324 eP      P       17 10 37.1 -0.4
VTS                               pmax   pmax
      comp=Z,7.0nm,0.9s
WATA  Walderalm        81.19 334 epP     P       17 10 39.9 +1.6
      comp=Z,3.1nm,0.5s
BFO   Black Forest     81.28 336 i P     P       17 10 40.0 +1.4
MOTA  Moosalm          81.33 334 epP     P       17 10 40.3 +1.2
      comp=Z,1.1nm,0.5s
DAVOX Davos/Dischmat   82.21 334  P      P       17 10 43.7 -0.1
      comp=Z,3.1nm,0.7s,baz=60,slow=8.1,SNR=4.3
PPT   Papeete          82.33 124  LR     LR      17 39 23.2
      comp=Z,43nm,20.5s,baz=353,slow=30
MMAI  Mount Meron Ar   82.83 310  P      P       17 10 47.9 +0.8
      comp=Z,2.1nm,0.5s,baz=64,slow=6.6,SNR=3.9
V51A  Loudon           84.84  42 eP      P       17 10 57.1 -0.1
      comp=Z,26nm,1.0s
TKL   Tuckaleechee C   85.23  42  P      P       17 11 00.3 +1.1
      comp=Z,5.1nm,0.4s,baz=308,slow=17,SNR=14
TKL   Tuckaleechee C   85.23  42 eP      P       17 10 59.9 +0.7
      comp=Z,10.0nm,0.8s
IDI   Anoyia           86.30 319  P      P       17 11 05.7 +1.1
      comp=Z,6.7nm,1.1s,baz=24,slow=19,SNR=2.7
NCAT  North Carolina   86.73  39 eP      P       17 11 07.3 +0.8
      comp=Z,44nm,1.9s
ESDC  Sonseca Array    92.53 341  P      P       17 11 33.6 -0.2
      comp=Z,0.3nm,0.4s,baz=1.6,slow=4.8,SNR=2.9
ATD   Arta Tunnel      94.53 291  P      P       17 11 42.5 -0.9
      comp=Z,14nm,0.9s,baz=108,slow=20,SNR=3.1
TORD  Torodi Ar. Bea  115.66 327  PKP    PKPdf   17 17 03.4 -1.7
      comp=Z,0.2nm,0.4s,baz=33,slow=1.3,SNR=2.8
NNA   Nana            127.31  67 i PKIKP PKPdf   17 17 24.7 -2.7
NVL   N'lazarevskaya  147.84 204 ePKP2   PKPab   17 18 22.7  +14
NVL                               pmax   pmax
      comp=Z,6.0nm,0.7s
PLCA  Paso Flores     149.26  96  PKPbc  PKPbc   17 18 11.1 +0.3
      comp=Z,1.9nm,0.7s,baz=273,slow=3.4,SNR=4.8
CPUP  Villa Florida   150.22  60  PKPbc  PKPbc   17 18 13.4  0.0
      comp=Z,1.6nm,0.9s,baz=353,slow=16,SNR=2.5
SNAA  Sanae           150.85 196  PKPbc  PKPbc   17 18 13.5 -0.1
      comp=Z,1.7nm,0.7s,baz=153,slow=14,SNR=14
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ISCJB ***08*** *17:02:16.4±0.9, 51.°8N±0.°2×176.°32E±0.°09, h40*^{km}*, mb3.5/5, Error ellipse: s-maj=24.6km s-min=5.0km az=14.7*

*NEIC **08** 17:02:16.6±0.0, 51°.89N×176°.33E, h67^{km}, ML3.4(AEIC), After AEIC.*
*IDC **08** 17:02:18.7±5.0, 51°.65N×176°.48E, h54^{km}±41^{km}, mb3.2/5, mb1 3.4/7, mb1mx3.1/80, mbtmp3.5/7, ML3.6/1, Error ellipse: s-maj=64.9km s-min=21.2km az=2.0*
ISC 08 17:02:18.5±1.1, 51°.9N±0°.2×176°.39E±0°.06, h40^{km}, n22, σ0^s.86/19, mb3.6/5, Rat Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSSA	Little Sitkin	1.31	88	P	Pn	17 02 40.1	-0.4
LSNW	Little Sitkin	1.32	87	P	Pn	17 02 40.1	-0.3
LSNW				S	Sn	17 02 57.5	+0.7
SMY	Shemya	1.62	301	P	Pn	17 02 43.3	-1.2
SMY				S	Sn	17 03 04.3	+0.1
AMKA	Amchitka	1.89	106	P	Pn	17 02 47.8	-0.6
AMKA				S	Sn	17 03 11.2	+0.3
CESW	Semis' Southwe	1.97	89	P	Pn	17 02 48.9	-0.5
GAEA	Gareloi East	3.02	91	P	Pn	17 03 02.8	-1.0
TAFP	Tanaga Falls P	3.48	88	P	Pn	17 03 09.2	-1.0
KICM	Kanaga Island	3.97	88	P	Pn	17 03 16.7	-0.1
ATKA	Atka Island	5.81	84	P	Pn	17 03 41.6	-0.5
PETK	Petropavlovsk-	11.45	283	P	Pn	17 05 01.0	+1.7
	baz=104,slow=17						
KDAK	Kodiak Island	18.69	60	P	Pn	17 06 33.3	-0.4
	0.2nm,0.3s,baz=264,slow=10,SNR=3.9						
ILAR	Eielson Array	22.76	41	P	P	17 07 17.9	+1.0
	0.6nm,0.8s,baz=238,slow=8.9,SNR=4.5						
H11N2	WAKE ISLAND Hy	32.98	197	T	T	17 43 47.8	
	baz=11,slow=76,SNR=202						
H11N3	WAKE ISLAND Hy	32.99	197	T	T	17 43 46.5	
	baz=11,slow=76,SNR=269						
H11N1	WAKE ISLAND Hy	32.99	197	T	T	17 43 48.0	
	baz=11,slow=76,SNR=277						
H11S1	WAKE ISLAND Hy	34.21	197	T	T	17 45 17.9	
	baz=10,slow=76,SNR=66						
H11S3	WAKE ISLAND Hy	34.22	197	T	T	17 45 19.1	
	baz=10,slow=76,SNR=33						
H11S2	WAKE ISLAND Hy	34.22	196	T	T	17 45 29.3	
	baz=10,slow=76,SNR=17						
MKAR	Makanchi Array	57.31	305	P	P	17 12 01.6	-0.4
	0.3nm,0.5s,baz=60,slow=9.0,SNR=3.5						
BVAR	Borovoye Array	58.49	317	P	P	17 12 10.3	+0.1
	0.5nm,0.4s,baz=58,slow=5.4,SNR=4.0						
TXAR	Lajitas Array	61.50	78	P	P	17 12 29.8	-1.5
	0.1nm,0.5s,baz=309,slow=5.7,SNR=3.2						
AKASG	Malin Array Be	74.03	339	P	P	17 13 50.2	+0.5
	0.2nm,0.3s,baz=22,slow=6.8,SNR=3.9						

*ISCJB **08** 17:03:27.5±1.2, 37°.52N±0°.04×141°.99E±0°.05, h1^{km}±7^{km}, mb3.4/4, Error ellipse: s-maj=7.2km s-min=5.4km az=41.0*
*IDC **08** 17:03:28.5±1.3, 37°.40N×142°.16E, h0^{km}, mb3.4/4, mb1 3.6/7, mb1mx3.3/70, mbtmp3.4/7, ML3.2/3, Error ellipse: s-maj=30.0km s-min=20.3km az=134.0*
*JMA **08** 17:03:29.4±0.1, 37°.51N×141°.97E, h25^{km}±2^{km}, M3.8*
ISC 08 17:03:30.2±2.1, 37°.48N±0°.04×141°.79E±0°.07, h13^{km}±11^{km}, n18, σ1^s.22/30, mb3.4/4, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	0.74	261	P	Pn	17 03 45.6	-0.8
JFK				*e*S	Sn	17 03 57.5	-0.1
ONAJ	Iwakimizuishiy	0.88	245	P	Pn	17 03 47.9	-0.5
ONAJ				S	Sn	17 04 00.8	-0.2
JMM	Marumori	0.88	296	P	Pb	17 03 47.4	0.0
JMM				*e*S	Sn	17 04 00.5	-0.5
JIO	Ouri	1.03	340	P	Pb	17 03 48.3	-1.6
JIO				S	Sb	17 04 01.5	-1.9
JFT	Otama	1.16	272	P	Pg	17 03 52.6	+0.1
JFT				S	Sg	17 04 09.8	+2.2
JOU	Okura	1.25	315	P	Pb	17 03 53.5	-0.2
JOU				S	Sg	17 04 10.7	0.0
JMK	Ichinoseki	1.53	343	P	Pn	17 03 56.6	-0.7
JYS	Shirataka	1.55	299	P	Pb	17 03 58.7	-0.1
JYS				S	Sg	17 04 20.6	+0.4
JFY	Yanaizu	1.66	268	P	Pb	17 04 00.7	0.0
JFY				S	Sg	17 04 23.9	+0.2
JYK	Kaneyama	1.82	322	P	Pn	17 04 01.6	+0.3
JYK				S	Sb	17 04 26.2	0.0
MJAR	Matsushiro Arr	3.02	253	Pn	Pn	17 04 19.5	+1.8
	2.5nm,0.3s,baz=79,slow=15,SNR=25						
MJAR				Sn	Sb	17 05 00.1	-0.5
	3.4nm,0.3s,baz=7.6,slow=17,SNR=5.6						
MAT	Matsushiro	3.02	253	P	Pb	17 04 20.9	-2.9
MAT				S	Sb	17 04 58.6	-2.0
JHJ	Hachijo jima 2	4.65	201	Pn	Pn	17 04 40.9	+0.7
	8.7nm,0.3s,baz=40,slow=18,SNR=4.8						
JHJ				Sn	Sn	17 05 34.6	+0.6
	5.0nm,0.3s,baz=50,slow=17,SNR=2.8						
ASAJ	Asahikawa	6.66	5	Pn	Pn	17 05 07.1	-0.6
	0.3nm,0.3s,baz=198,slow=16,SNR=7.1						
ASAJ				Sn	Sn	17 06 25.5	+2.2
	0.1nm,0.3s,baz=240,slow=20,SNR=2.8						
MKAR	Makanchi Array	44.14	302	P	P	17 11 42.8	+4.5
	0.2nm,0.7s,baz=91,slow=8.6,SNR=2.6						
KURBB	Kurchatov Arra	45.97	308	P	P	17 11 54.5	+1.7
	0.6nm,0.8s,baz=82,slow=7.6,SNR=5.0						
PDAR	Pinedale Array	77.14	46	P	P	17 15 23.2	-0.6
	0.2nm,0.6s,baz=297,slow=4.0,SNR=3.5						
TXAR	Lajitas Array	89.61	53	P	P	17 16 27.7	-0.3
	0.2nm,0.7s,baz=347,slow=2.8,SNR=2.7						

*ISCJB **08** 17:07:38.6±0.6, 6°.30S±0°.05×133°.12E±0°.07, h10^{km}, mb3.2/2, MS3.1/1, Error ellipse: s-maj=9.9km s-min=7.0km az=22.4*
*IDC **08** 17:07:39.1±1.3, 6°.27S×133°.17E, h0^{km}, mb3.5/2, mb1 3.8/8, mb1mx3.5/49, mbtmp3.7/8, ML3.6/6, MS3.3/1, Ms1 3.2/1, ms1mx2.4/32, Error ellipse: s-maj=28.9km s-min=20.9km az=86.0*
*DJA **08** 17:07:46.1±0.7, 6°S±5°×13°3E±°, h10^{km}, M4.2/6, mb4.2/3, mB4.9/3, MLv4.2/6, Mw(mB)4.2/3*
ISC 08 17:07:37.9±0.7, 6°.27S±0°.04×133°.25E±0°.06, h10^{km}, n16, σ3^s.98/22, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.58	229	P	Pg	17 08 29.5	+2.1
KMPI	Kaimana, Papua	2.63	10	P	Pn	17 08 22.5	+2.0
FAKI	Fak Fak	3.48	343	P	Pn	17 08 34.3	+2.1
FAKI				S	Sn	17 09 10.1	-3.3
BNDI	Bandanaira	3.76	297	P	Pb	17 08 40.8	-3.6
RKPI	Ransiki, Papua	4.82	11	P	Pn	17 08 54.4	+3.8
MSAI	Masohi	5.20	304	P	Pg	17 09 20.4	+2.8
SIJI	Sorong	5.72	340	Pn	Pn	17 09 05.4	+2.4
	2.5nm,0.3s,baz=180,slow=3.0,SNR=60						
SIJI				Sn	Sn	17 10 01.9	-7.0
	7.0nm,0.3s,baz=134,slow=23,SNR=16						
NLAI	Namlea	6.83	296	P	Pn	17 09 26.4	+8.1
	12nm,1.2s,751nm0.1nm						
JAY	Jayapura	8.31	64	Pn	Pn	17 09 42.0	+3.4
	0.6nm,0.3s,baz=239,slow=5.9,SNR=5.4						
JAY				Sn	Sn	17 11 07.3	-5.5
	0.2nm,0.3s,baz=252,slow=20,SNR=1.9						
SANI	Sanana	8.37	300	P	Pn	17 09 41.4	+2.0
BATI	Baumata	10.26	247	Pn	Pn	17 10 07.7	+2.3
	3.2nm,0.3s,baz=53,slow=15,SNR=2.2						
BATI				Sn	Sn	17 12 01.0	+0.4
	2.4nm,0.3s,baz=90,slow=20,SNR=3.7						
WRA	Warramunga Arr	13.63	176	Pn	Pn	17 10 54.2	+2.7
	0.1nm,0.3s,baz=357,slow=13,SNR=13						
WRA				Sn	Sn	17 13 18.4	-4.7
	0.3nm,0.3s,baz=354,slow=24,SNR=6.6						
FITZ	Fitzroy Crossi	13.90	212	Pn	Pn	17 10 57.0	+1.8
	0.4nm,0.3s,baz=22,slow=10,SNR=16						
FITZ				Sn	Sn	17 13 23.3	-6.5
	0.3nm,0.3s,baz=321,slow=14,SNR=4.3						
ASAR	Alice Springs	17.31	178	P	P	17 11 43.3	+2.0
	0.1nm,0.3s,baz=358,slow=13,SNR=7.1						
ASAR				S	Sn	17 14 45.9	-6.7
	0.1nm,0.3s,baz=356,slow=25,SNR=3.8						
STKA	Stephens Creek	26.64	164	P	P	17 13 19.6	+2.7
	1.4nm,0.8s,baz=333,slow=4.5,SNR=2.6						
STKA				LR	LR	17 23 54.5	
	comp=Z,57nm,18.6s,baz=205,slow=37						
MKAR	Makanchi Array	69.43	325	P	P	17 18 48.8	+2.5
	0.1nm,0.6s,baz=126,slow=7.3,SNR=2.4						

MAN 08 17:11:14.3, 10°.26N×123°.26E, h23^{km}, mb4.1, ML2.9, MS2.6, 2D, Cebu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LLP	Lapu-Lapu	0.69	85	⇓*i*P	Pb	17 11 24.9	-2.9
LLP				*i* S	Sb	17 11 33.6	-3.4
GUIM	Jordan	0.76	299	*e*P	Pb	17 11 29.1	+0.3
GUIM				*e*S	Sn	17 11 41.0	+0.7
TBP	Tagbilaran	0.82	134	*e*P	Pb	17 11 29.7	-0.2
SNPH	Sibulan	0.91	182	*i* P	Pb	17 11 31.5	0.0
SNPH				*i* S	Sn	17 11 44.6	+0.4
RCP	Roxas	1.39	339	⇓*e*P	Pb	17 11 39.5	-0.1
OCLP	Ormoc	1.54	59	*e*P	Pn	17 11 39.5	-0.8
OCLP				*e*S	Sb	17 12 01.0	-0.2
MSLP	Maasin	1.58	94	*e*P	Pn	17 11 40.2	-0.6
MSLP				*e*S	Sb	17 12 01.5	-0.8

MAN 08 17:25:48.9, 10°.31N×123°.45E, h31^{km}, mb3.6, ML2.3, MS1.8, 1D, Cebu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LLP	Lapu-Lapu	0.51	90	⇓*e*P	Pn	17 26 00.0	+0.1
LLP				*e*S	Sn	17 26 08.6	+1.0
GUIM	Jordan	0.91	290	*e*P	Pn	17 26 05.0	-0.4
GUIM				*e*S	Sn	17 26 15.8	-1.6
SNPH	Sibulan	0.99	193	*i* P	Pn	17 26 06.7	0.0
SNPH				*i* S	Sn	17 26 18.5	-1.1
MSLP	Maasin	1.40	97	*e*P	Pb	17 26 15.8	+1.5
CNP	Catarman	2.48	28	*e*P	Pb	17 26 46.1	+13
CNP				*e*S	Sn	17 26 52.1	-4.3

*IDC **08** 17:25:58.6±1.8, 0°.20N×97°.49E, h0^{km}, mb3.4/6, mb1 3.5/8, mb1mx3.3/61, mbtmp3.3/8, ML2.4/1, Error ellipse: s-maj=57.6km s-min=19.7km az=61.0*
*ISCJB **08** 17:26:01.5±0.9, 0°.25N±0°.07×97°.53E±0°.08, h29^{km}, mb3.4/6, Error ellipse: s-maj=14.9km s-min=5.3km az=139.9*
*DJA **08** 17:26:03.2±1.0, 0°N±6°×9°8E±°, h25^{km}±9^{km}, M3.6/6, MLv3.6/6*
ISC 08 17:26:03.6±1.1, 0°.33N±0°.09×97°.6E±0°.1, h29^{km}, n21, σ0^s.56/18, mb3.4/6, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBSI	Pulau Batu	0.74	121	P	Pb	17 26 17.8	-0.2
PBSI				S	Sn	17 26 28.7	+0.3
GSI	Gunungsitoli	0.97	356	P	Pn	17 26 21.3	0.0
GSI				S	Sn	17 26 33.8	-0.4
MNSI	Mandailing Nat	1.99	76	P	Pn	17 26 35.9	+0.6
SNSI	Sinabang, Aceh	2.45	328	P	Pn	17 26 42.1	+0.4
SNSI				S	Sn	17 27 11.4	+0.7
PSI	Prapat	2.77	28	Pn	Pn	17 26 46.1	-0.1
	0.6nm,0.3s,baz=180,slow=16,SNR=2.8						
TPTI		2.95	351	P	Pn	17 26 47.2	-1.3
KCSI	Kotacane, Aceh	3.18	2	P	Pn	17 26 51.3	-0.4
KRJI	Kerinci	4.51	122	P	Pn	17 27 09.7	-0.4
CMAR	Chiang Mai Arr	18.06	4	P	Pn	17 30 13.2	+0.6
	baz=196,slow=11,SNR=5.0						
H08S2	Diego Garcia H	26.30	252	T	T	17 58 49.0	
	baz=73,slow=75,SNR=109						
H08S3	Diego Garcia H	26.30	252	T	T	17 58 51.1	
	baz=73,slow=75,SNR=400						
H08S1	Diego Carcia H	26.32	252	T	T	17 58 50.2	
	baz=73,slow=75,SNR=28						
H01W3	Cape Leeuwin H	38.27	158	T	T	18 13 52.9	
	baz=333,slow=76,SNR=3.5						
H01W2	Cape Leeuwin H	38.29	158	T	T	18 13 56.2	
	baz=333,slow=76,SNR=4.1						
H01W1	Cape Leeuwin H	38.29	158	T	T	18 13 53.9	
	baz=333,slow=76,SNR=3.8						
WRA	Warramunga Arr	41.20	121	P	P	17 33 45.5	-0.7
	0.7nm,1.2s,baz=314,slow=9.4,SNR=3.3						
ASAR	Alice Springs	42.52	127	P	P	17 33 57.0	+0.2
	0.2nm,0.5s,baz=297,slow=7.9,SNR=7.0						
SONM	Songino Array	47.93	8	P	P	17 34 39.4	-0.1
	0.3nm,0.5s,baz=189,slow=8.3,SNR=2.6						
MKAR	Makanchi Array	48.19	346	P	P	17 34 41.4	-0.1
	0.3nm,0.8s,baz=142,slow=7.3,SNR=3.5						
KURBB	Kurchatov Arra	52.68	345	P	P	17 35 15.1	-0.1
	0.3nm,0.7s,baz=165,slow=7.5,SNR=3.2						
ZALV	Zalesovo Beam	54.48	351	P	P	17 35 29.2	+0.7
	0.6nm,0.4s,baz=175,slow=6.5,SNR=3.2						

IDC 08 17:34:49.1±1.6, 1°.81N×126°.15E, h0^{km}, mb3.3/4, mb1 3.5/4, mb1mx3.3/55, mbtmp3.3/4, Error ellipse: s-maj=162.5km s-min=21.3km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.07	160	P	P	17 39 56.7	+0.3
	0.8nm,0.4s,baz=340,slow=11,SNR=16						
ASAR	Alice Springs	26.43	164	P	P	17 40 27.4	-0.4
	0.1nm,0.4s,baz=341,slow=6.6,SNR=6.3						
MKAR	Makanchi Array	58.80	326	P	P	17 44 49.3	0.0
	0.2nm,0.5s,baz=127,slow=7.5,SNR=4.6						
KURBB	Kurchatov Arra	63.04	328	P	P	17 45 18.1	+0.1
	0.2nm,0.4s,baz=131,slow=6.7,SNR=3.1						

IDC 08 17:45:10.5±1.9, 0°.36N×126°.27E, h0^{km}, mb3.3/3, mb1 3.6/3, mb1mx3.3/52, mbtmp3.4/3, Error ellipse: s-maj=172.8km s-min=24.7km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.67	159	P	P	17 50 02.2	-0.7
	0.9nm,0.5s,baz=337,slow=11,SNR=19						
ASAR	Alice Springs	25.00	163	P	P	17 50 36.8	+0.5
	0.6nm,0.8s,baz=351,slow=16,SNR=13						
MKAR	Makanchi Array	60.08	327	P	P	17 55 19.4	-0.1
	0.1nm,0.4s,baz=122,slow=8.8,SNR=3.1						

*SOME **08** 17:47:26.7, 41°.82N×80°.75E, h5^{km}*
*NNC **08** 17:47:27.4±1.3, 41°.91N×81°.00E, h20^{km}±5^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=11.4km s-min=4.5km az=149.0*
ISC 08 17:47:27.7±2.2, 41°.97N±0°.08×80°.89E±0°.06, h3^{km}±10^{km}, n31, σ2^s.18/56, 13C-7D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	1.53	345	*e*P	Pn	17 47 55.7	-0.4
	85nm,0.1s						
KTMS				*e*S	Sb	17 48 17.2	+0.5
	772nm,0.3s						
SHLS	Shalkode	1.59	319	*e*P	Pn	17 47 54.3	-2.7
	186nm,0.1s						
SHLS				*e*S	Sn	17 48 15.3	-2.8
	1µm,0.3s						
PDGK	Podgornoye	1.71	323	⇑Pn	Pn	17 47 58.2	-0.4
	16nm,0.3s						
PDGK				⇓Sn	Sb	17 48 22.2	+0.3
	471nm,0.5s						
UZB	Uzynbulak	1.82	311	*e*P	Pn	17 47 59.5	-0.6
	11nm,0.1s						
UZB				*e*S	Sn	17 48 24.0	+0.3
	120nm,0.2s						
SATY	Saty	2.14	301	*e*P	Pn	17 48 04.4	-0.1
	15nm,0.1s						
SATY				*e*S	Sn	17 48 32.3	+0.7
	122nm,0.1s						
ZHN	Zhinishke	2.18	304	*e*P	Pn	17 48 05.2	+0.2
	20nm,0.1s						
ZHN				*e*S	Sn	17 48 33.2	+0.7
	196nm,0.2s						
KPKS	Kokpek	2.21	313	*e*P	Pb	17 48 08.4	0.0
	47nm,0.2s						
KPKS				*e*S	Sb	17 48 38.2	+1.9
	144nm,0.3s						
DJR	Jarkent	2.50	342	*e*P	Pg	17 48 16.9	+1.4
	14nm,0.3s						
DJR				*e*S	Sg	17 48 52.8	+4.9
	26nm,0.4s						
KURS	Kuram	2.52	308	*e*P	Pb	17 48 13.0	-0.6
	4.1nm,0.3s						
KURS				*e*S	Sb	17 48 46.4	+1.4
	25nm,0.7s						
KOTS	Kotyrbulak	3.06	296	*e*P	Pg	17 48 28.5	+2.0
	11nm,0.3s						
KOTS				*e*S	Sg	17 49 12.6	+6.4
	56nm,0.4s						
MDOK	Medeo	3.08	294	⇑Pn	Pn	17 48 16.4	-1.1
	1.2nm,0.3s						
MDOK				⇑Pg	Pb	17 48 25.2	+1.9
	5.0nm,0.4s						
MDOK				⇑Lg	Lg	17 49 09.0	
MDOK	Medeo	3.08	294	*e*P	Pb	17 48 25.0	+1.7
	12nm,0.3s						
MDOK				*e*S	Sg	17 49 06.7	0.0
	18nm,0.3s						
TNSS	Tian-Shan	3.11	291	*e*P	Pb	17 48 25.5	+1.6
	12nm,0.4s						
TNSS				*e*S	Sg	17 49 07.6	+0.1
	26nm,0.2s						
ARXS	Arharly	3.17	316	*e*P	Pb	17 48 26.1	+1.3
	8.0nm,0.3s						
ARXS				*e*S	Sg	17 49 08.6	-1.1
	27nm,0.3s						
IZV	Izvestkoviy	3.34	290	*e*P	Pb	17 48 28.0	+0.3
	5.6nm,0.1s						
IZV				*e*S	Sb	17 49 12.4	+3.6
	41nm,0.4s						
CHKK	Chushkaly	3.43	305	*e*P	Pb	17 48 30.1	+0.9
	7.3nm,0.3s						
CHKK				*e*S	Sg	17 49 15.8	-2.1
	37nm,0.3s						
MTBS	Maitube	3.50	291	*e*P	Pg	17 48 33.4	-1.3
	10nm,0.2s						
MTBS				*e*S	Sg	17 49 21.8	+1.8
	16nm,0.3s						
KAPS	Kapalarasan	3.50	342	*e*P	Pg	17 48 34.1	-0.6
	9.8nm,0.3s						
KAPS				*e*S	Sg	17 49 22.7	+2.6
	39nm,0.4s						
TDK	Taldyqorghan	3.53	330	*e*P	Pg	17 48 34.1	-1.2
	20nm,0.3s						
TDK				*e*S	Sg	17 49 22.5	+1.3
	108nm,0.5s						
KTBS	Karatobe	3.55	301	*e*P	Pb	17 48 31.5	+0.3
	2.0nm,0.2s						
KTBS				*e*S	Sb	17 49 17.8	+2.9
	19nm,0.3s						
KST	Kastek	3.80	288	*e*P	Pb	17 48 37.4	+1.9
	9.7nm,0.3s						
KST				*e*S	Sg	17 49 27.9	-1.9
	26nm,0.5s						
KUU	Kurty	3.86	301	*e*P	Pb	17 48 37.9	+1.5
	5.0nm,0.4s						
KUU				*e*S	Sg	17 49 28.8	-2.8
	40nm,0.5s						
TKM2	Tokmak 2	4.03	285	⇑Pn	Pn	17 48 28.9	-1.7
	1.8nm,0.3s						
TKM2				⇑Pg	Pg	17 48 43.0	-2.0
	2.7nm,0.3s						
TKM2				⇑Sn	Sn	17 49 17.4	-1.1
	7.3nm,0.4s						
TKM2				⇑Lg	Lg	17 49 36.8	
	11nm,0.5s						
AAK	Ala-Archa	4.79	280	⇑Lg	Lg	17 50 03.2	
	9.4nm,0.8s						
MAKZ	Makanchi	4.90	9	⇓Pn	Pn	17 48 41.3	-1.1
	1.6nm,0.5s						
MAKZ				⇑Pg	Pb	17 48 57.3	+3.1
	2.9nm,0.5s						
MAKZ				⇑Sn	Sn	17 49 37.4	-2.1
	1.9nm,0.3s						
MAKZ				⇓Lg	Lg	17 50 04.2	
	8.1nm,0.7s						
MK31	Makanchi Array	4.93	11	Pn	Pn	17 48 41.4	-1.3
	0.6nm,0.2s,baz=230,slow=4.3,SNR=60						
MK31				Pg	Pb	17 48 57.6	+3.0
	0.4nm,0.2s,baz=187,slow=14,SNR=6.6						
MK31				⇓Sn	Sn	17 49 37.7	-2.5
	4.3nm,0.6s,baz=191,slow=23,SNR=4.3						
MK31				⇑Lg	Lg	17 50 04.2	
	3.9nm,0.5s,baz=189,slow=27,SNR=4.7						
MRKS	Merke	5.73	280	*e*P	Pb	17 49 11.7	+3.2
	2.9nm,0.3s						
MRKS				*e*S	Sg	17 50 26.8	-5.0
	4.8nm,0.4s						
SFK	Sufi-Kurgan	5.92	253	⇓Lg	Lg	17 50 37.3	
	1.8nm,0.4s						
ZSN	Zaisan	6.17	26	*e*P	Pg	17 49 21.6	-4.3
	1.7nm,0.7s						
ZSN				*e*S	Sg	17 50 43.5	-2.2
	2.9nm,0.4s						
MNAS	Manas	6.25	278	⇓Pg	Pg	17 49 23.3	-4.2
	1.0nm,0.5s						
MNAS				⇑Lg	Lg	17 50 48.5	
	4.2nm,1.0s						
KK31	Karatay Array	7.75	282	⇓Lg	Lg	17 51 36.9	
	1.2nm,0.5s						

*SOME **08** 18:08:15.1, 42°.27N×81°.73E, h15^{km}*
*NNC **08** 18:08:18.4±2.6, 42°.35N×81°.73E, h0^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=23.2km s-min=11.2km az=165.0*
ISC 08 18:08:13.4±2.2, 42°.38N±0°.08×81°.95E±0°.06, h10^{km}±12^{km}, n26, σ2^s.14/46, 7C-6D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	1.59	313	*e*P	Pg	18 08 44.8	+1.0
	25nm,0.3s						
KTMS				*e*S	Sg	18 09 06.0	+1.6
	56nm,0.3s						
SHLS	Shalkode	1.99	294	*e*P	Pn	18 08 46.4	-0.7
	73nm,0.3s						
SHLS				*e*S	Sn	18 09 09.1	-3.1
	118nm,0.2s						
PDGK	Podgornoye	2.04	299	⇑Pn	Pb	18 08 51.5	+0.9
	12nm,0.4s						
PDGK				⇓Sn	Sg	18 09 18.9	-0.1
	65nm,0.6s						
UZB	Uzynbulak	2.29	291	*e*P	Pb	18 08 55.4	+0.6
	27nm,0.3s						
UZB				*e*S	Sb	18 09 25.0	+1.8
	42nm,0.3s						
DJR	Jarkent	2.51	322	*e*P	Pg	18 09 01.0	-0.4
	5.4nm,0.3s						
DJR				*e*S	Sg	18 09 33.7	-0.3
	44nm,0.4s						
KPKS	Kokpek	2.63	296	*e*P	Pb	18 09 01.3	+0.6
	51nm,0.3s						
KPKS				*e*S	Sb	18 09 35.5	+2.4
	204nm,0.5s						
SATY	Saty	2.70	286	*e*P	Pb	18 09 02.6	+0.9
	14nm,0.3s						
SATY				*e*S	Sg	18 09 37.5	-2.5
	101nm,0.3s						
ZHN	Zhinishke	2.70	288	*e*P	Pg	18 09 04.3	-0.9
	11nm,0.3s						
ZHN				*e*S	Sg	18 09 38.6	-1.5
	62nm,0.3s						
KURS	Kuram	2.99	293	*e*P	Pb	18 09 07.9	+1.3
	4.1nm,0.6s						
KURS				*e*S	Sb	18 09 45.6	+2.4
	21nm,0.6s						
KAPS	Kapalarasan	3.46	328	*e*P	Pb	18 09 15.1	+0.4
	6.9nm,0.2s						
KAPS				*e*S	Sb	18 09 57.9	+1.1
	26nm,0.3s						
ARXS	Arharly	3.52	303	*e*P	Pb	18 09 15.9	+0.1
	1.9nm,0.3s						
ARXS				*e*S	Sb	18 09 59.5	+0.9
	24nm,0.5s						
TDK	Taldyqorghan	3.67	317	*e*P	Pb	18 09 17.0	-1.3
	26nm,0.2s						
TDK				*e*S	Sb	18 10 02.7	-0.2
	26nm,0.4s						
MDOK	Medeo	3.69	284	⇓Pn	Pb	18 09 15.6	-3.1
	4.6nm,0.5s						
MDOK				Lg	Lg	18 10 06.6	
	17nm,0.6s						
MDOK	Medeo	3.69	284	*e*P	Pb	18 09 20.3	+1.6
	5.0nm,0.3s						
MDOK				*e*S	Sb	18 10 07.0	+3.4
	20nm,0.5s						
TNSS	Tian-Shan	3.74	282	*e*P	Pb	18 09 19.0	-0.8
	6.7nm,0.4s						
TNSS				*e*S	Sb	18 10 05.8	+0.5
	19nm,0.5s						
CHKK	Chushkaly	3.92	294	*e*P	Pb	18 09 24.2	+1.7
	10.0nm,0.5s						
CHKK				*e*S	Sb	18 10 13.2	+3.2
	26nm,0.4s						
IZV	Izvestkoviy	3.98	281	*e*P	Pb	18 09 25.0	+1.3
	5.4nm,0.3s						

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
IZV				*e*S	**Sb**	**18 10 14.7**	**+2.7**
	18nm,0.4s						
KTBS	**Karatobe**	**4.08**	**291**	*e*P	**Pb**	**18 09 27.2**	**+1.9**
	1.9nm,0.2s						
KTBS				*e*S	**Sb**	**18 10 18.4**	**+3.6**
	17nm,0.6s						
KUU	**Kurty**	**4.37**	**292**	*e*P	**Pb**	**18 09 31.9**	**+1.6**
	1.9nm,0.1s						
KUU				*e*S	**Sb**	**18 10 26.8**	**+3.7**
	9.4nm,0.4s						
MK31	**Makanchi Array**	**4.42**	**3**	⇓Pn	**Pb**	**18 09 28.6**	**-2.6**
	0.2nm,0.2s						
MK31				⇓Pg	**Pg**	**18 09 37.5**	**-0.6**
	1.3nm,0.5s						
MK31				⇑Lg	Lg	18 10 38.4	
	30nm,0.6s						
MAKZ	**Makanchi**	**4.43**	**0**	⇑Pn	**Pb**	**18 09 28.5**	**-2.8**
	1.8nm,0.3s						
MAKZ				⇑Pg	**Pg**	**18 09 38.7**	**+0.5**
	1.3nm,0.3s						
MAKZ				⇓Lg	Lg	18 10 40.8	
	22nm,0.6s						
KST	**Kastek**	**4.46**	**281**	*e*P	**Pb**	**18 09 34.4**	**+2.6**
	6.1nm,0.3s						
KST				*e*S	**Sg**	**18 10 31.0**	**-5.5**
	14nm,0.6s						
TKM2	**Tokmak 2**	**4.71**	**279**	⇑Pg	**Pg**	**18 09 43.1**	**-0.5**
	1.3nm,0.3s						
TKM2				⇑Lg	Lg	18 10 42.0	
	8.0nm,0.7s						
ZSN	**Zaisan**	**5.48**	**21**	*e*P	**Pg**	**18 09 59.0**	**+0.8**
	1.2nm,0.2s						
ZSN				*e*S	**Sg**	**18 11 12.9**	**+3.7**
	11nm,0.7s						
MNAS	**Manas**	**6.99**	**274**	⇓Lg	Lg	18 11 53.9	
	2.1nm,0.7s						
KK31	**Karatay Array**	**8.45**	**279**	⇑Lg	Lg	18 12 40.5	
	1.0nm,0.6s						

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*ISCJB **08** 18:08:57.1±0.6, 27°.05S±0°.03×178°.4W±0°.1, h350^{km}, mb4.0/16, Error ellipse: s-maj=12.4km s-min=4.6km az=176.8*

*IDC **08** 18:08:57.9±0.8, 26°.71S×178°.62W, h324^{km}±9^{km}, mb3.7/16, mb1 3.8/16, mb1mx3.6/42, mbtmp4.4/16, Error ellipse: s-maj=14.9km s-min=12.5km az=151.0*

*WEL **08** 18:08:59.5±0.9, 28°S±11°×17°7W±2°7, h372^{km}±5^{km}*

ISC 08 18:08:58.8±0.6**, 27°.11S**±0°.06×**178°.30W**±0°.10**, h350**^{km}**, n86,** σ1^{s}.**62**/99**, mb4.1**/16**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	**Raoul Island**	**2.15**	**171**	P	**Pn**	**18 09 52.6**	**+1.5**
RIZ				S	**S**	**18 10 35.5**	**+2.4**
RAO	**Raoul Island**	**2.16**	**171**	P	**Pn**	**18 09 52.6**	**+1.5**
	992nm,0.3s,baz=83,slow=7.1,SNR=124						
RAO				S	**S**	**18 10 34.2**	**+1.0**
	301nm,0.3s,baz=90,slow=20,SNR=3.6						
GLKZ	**Green Lake**	**2.17**	**171**	P	**Pn**	**18 09 52.6**	**+1.4**
GLKZ				S	**S**	**18 10 35.9**	**+2.6**
OUZ	**Omahuta**	**10.65**	**219**	P	**P**	**18 11 29.1**	**+3.8**
WCZ	**Waipu Caves**	**10.80**	**214**	P	**P**	**18 11 31.0**	**+4.0**
MXZ	**Matakaoa Point**	**10.81**	**195**	P	**P**	**18 11 27.0**	**-0.1**
MXZ				S	**S**	**18 13 23.8**	**-3.6**
WMGZ	**Waiomatatini S**	**11.03**	**194**	P	**Pn**	**18 11 27.4**	**-1.4**
WMGZ				S	**S**	**18 13 30.9**	**-1.4**
HAZ	**Te Kaha**	**11.12**	**196**	P	**Pn**	**18 11 28.5**	**-1.4**
HAZ				S	**S**	**18 13 32.9**	**-1.3**
PKGZ	**Pakihiroa**	**11.17**	**195**	P	**Pn**	**18 11 30.0**	**-0.6**
PKGZ				S	**S**	**18 13 33.1**	**-2.5**
PUZ	**Puketiti**	**11.31**	**194**	P	**P**	**18 11 33.1**	**+0.5**
PUZ				S	**S**	**18 13 35.6**	**-3.0**
RUGZ	**Raukumara Rang**	**11.34**	**196**	P	**Pn**	**18 11 32.0**	**-0.7**
TWGZ	**Tauwhareparae**	**11.47**	**195**	P	**Pn**	**18 11 33.4**	**-0.8**
TWGZ				S	**S**	**18 13 43.3**	**+1.1**
CNGZ	**Carnagh Statio**	**11.71**	**194**	P	**Pn**	**18 11 35.3**	**-1.7**
MWZ	**Matawai**	**11.73**	**196**	P	**Pn**	**18 11 33.8**	**-3.4**
TKGZ	**Te Karaka**	**11.75**	**195**	P	**Pn**	**18 11 33.5**	**-3.9**
TKGZ				S	**S**	**18 13 47.7**	**-0.6**
URZ	**Urewera**	**11.77**	**198**	P	**Pn**	**18 11 37.4**	**-0.1**
	5.7nm,0.3s,baz=275,slow=4.1,SNR=45						
URZ				S	**S**	**18 13 45.9**	**-2.8**
	3.2nm,0.3s,baz=287,slow=19,SNR=8.6						
URZ	**Urewera**	**11.77**	**198**	P	**Pn**	**18 11 37.5**	**-0.1**
KARZ	**Kaharoa**	**11.81**	**202**	P	**P**	**18 11 42.6**	**+4.5**
RIGZ	**Rimuhau**	**12.03**	**195**	P	**Pn**	**18 11 41.8**	**+1.1**
MUGZ	**Murupara**	**12.07**	**199**	P	**P**	**18 11 40.0**	**-1.0**
RTZ	**Ruatahuna**	**12.14**	**198**	P	**Pn**	**18 11 42.2**	**+0.2**
PRRZ	**Plateau Road**	**12.20**	**200**	P	**Pn**	**18 11 44.4**	**+1.7**
RATZ	**Rangitukua**	**12.73**	**201**	P	**Pn**	**18 11 49.8**	**+0.7**
HIZ	**Hauiti**	**12.74**	**205**	P	**Pn**	**18 11 52.6**	**+3.5**
BKZ	**Black Stump Fm**	**12.79**	**199**	P	**P**	**18 11 46.0**	**-3.0**
WTVZ	**West Tongariro**	**13.02**	**202**	P	**Pn**	**18 11 53.2**	**+0.7**
TWVZ	**Taurewa**	**13.03**	**202**	P	**Pn**	**18 11 53.8**	**+1.2**
COVZ	**Chateau Observ**	**13.11**	**202**	P	**Pn**	**18 11 54.3**	**+0.7**
TUVZ	**Tukino**	**13.13**	**201**	P	**Pn**	**18 11 54.2**	**+0.3**
FWVZ	**Far West T-bar**	**13.15**	**201**	P	**Pn**	**18 11 53.7**	**-0.5**
WHVZ	**Whangaehu Hut**	**13.17**	**201**	P	**P**	**18 11 53.7**	**+0.3**
BHHZ	**Black Hill Sta**	**13.21**	**199**	P	**P**	**18 11 53.1**	**-0.6**
MOVZ	**Moawhango**	**13.23**	**201**	P	**P**	**18 11 54.3**	**+0.4**
PKVZ	**Pokaka**	**13.25**	**202**	P	**Pn**	**18 11 54.9**	**-0.4**
KRHZ	**Kereru**	**13.27**	**198**	P	**P**	**18 11 51.5**	**-2.8**
VRZ	**Vera Road**	**13.31**	**204**	P	**Pn**	**18 11 57.4**	**+1.6**
PXZ	**Pawanui**	**13.50**	**196**	P	**P**	**18 11 55.7**	**-1.1**
PNHZ	**Pukenui**	**13.56**	**198**	P	**P**	**18 11 56.8**	**-0.7**
WPHZ	**Waipukurau**	**13.64**	**197**	P	**P**	**18 11 57.8**	**-0.5**
PKE	**Pukeiti**	**13.66**	**206**	P	**Pn**	**18 12 04.1**	**+4.1**
TSZ	**Takapari Road**	**13.77**	**199**	P	**P**	**18 11 58.9**	**-0.9**
PRHZ	**Porangahau**	**13.78**	**196**	P	**Pn**	**18 12 00.7**	**-0.7**
DVHZ	**Dannevirke**	**13.93**	**198**	P	**P**	**18 12 01.6**	**+0.1**
ANWZ	**Angora Road**	**14.00**	**197**	P	**P**	**18 12 03.0**	**+0.7**
POWZ	**Post Office Ro**	**14.13**	**199**	P	**P**	**18 12 03.7**	**0.0**
PRWZ	**Pori Road**	**14.22**	**198**	P	**Pn**	**18 12 05.7**	**-0.8**
BFZ	**Birch Farm**	**14.27**	**197**	P	**P**	**18 12 04.6**	**-0.7**
MRZ	**Mangatainoka R**	**14.43**	**199**	P	**P**	**18 12 05.4**	**-1.7**
AFI	**Afiamalu**	**14.48**	**26**	P	P	18 12 02.9	-5.0
	9.3nm,0.3s,baz=251,slow=0.6,SNR=11						
AFI				S	S	18 14 28.5	-16
	1.7nm,0.3s,baz=217,slow=20,SNR=2.9						
HOWZ	**Holdsworth Sta**	**14.67**	**199**	P	**P**	**18 12 09.1**	**-0.5**
OGWZ	**Otaki Gorge**	**14.70**	**200**	P	**P**	**18 12 09.4**	**-0.5**
DZM	**Mont Dzumac**	**14.76**	**287**	P	**Pn**	**18 12 11.9**	**-1.1**
	3.1nm,0.3s,baz=84,slow=16,SNR=29						
TMWZ	**Te Maipa**	**14.76**	**197**	P	**Pn**	**18 12 12.1**	**-0.6**
KIW	**Kapiti Island**	**14.82**	**201**	P	**P**	**18 12 11.0**	**-0.3**
MTW	**Mount Morrison**	**14.92**	**198**	P	**P**	**18 12 12.8**	**+0.5**
MSWZ	**Moikau Station**	**15.23**	**199**	P	**P**	**18 12 16.3**	**+0.6**
TCW	**Tory Channel**	**15.34**	**202**	P	**P**	**18 12 18.0**	**+1.1**
PLWZ	**Palliser**	**15.37**	**199**	P	**P**	**18 12 17.3**	**0.0**
CTA	**Charters Tower**	**33.15**	**274**	P	**P**	**18 15 03.9**	**+0.2**
	9.6nm,0.4s,baz=98,slow=12,SNR=23						
STKA	**Stephens Creek**	**35.09**	**252**	P	**P**	**18 15 20.8**	**+0.7**
	0.7nm,0.5s,baz=93,slow=13,SNR=3.2						
ASAR	**Alice Springs**	**43.12**	**264**	P	**P**	**18 16 25.2**	**-0.9**
	1.6nm,0.4s,baz=96,slow=7.0,SNR=63						
ASAR				PcP	**PcP**	**18 18 09.5**	**+0.7**
	0.5nm,0.8s,baz=101,slow=4.8,SNR=2.9						
ASAR				S	**S**	**18 22 24.5**	**-1.2**
	0.4nm,0.9s,baz=95,slow=16,SNR=3.9						
WRA	**Warramunga Arr**	**43.80**	**269**	P	**P**	**18 16 30.1**	**-1.5**
	4.6nm,0.7s,baz=104,slow=8.8,SNR=39						
WRA				PcP	**PcP**	**18 18 12.1**	**+1.0**
	1.2nm,0.9s,baz=101,slow=4.1,SNR=3.8						
WRA				S	**S**	**18 22 34.2**	**-1.4**
	0.6nm,1.1s,baz=107,slow=12,SNR=2.9						
JAY	**Jayapura**	**46.22**	**295**	P	**P**	**18 16 49.7**	**-0.8**
	7.0nm,0.6s,baz=150,slow=20,SNR=6.7						
VNDA	**Vanda**	**51.33**	**185**	P	P	18 17 33.6	+5.6
	0.5nm,0.6s,baz=1.0,slow=7.5,SNR=3.8						
FITZ	**Fitzroy Crossi**	**52.17**	**267**	P	**P**	**18 17 34.0**	**-1.0**
	3.0nm,0.6s,baz=96,slow=10,SNR=12						
SIJI	**Sorong**	**54.94**	**290**	P	**P**	**18 17 53.1**	**-1.8**
	28nm,0.6s,baz=125,slow=3.9,SNR=30						
MAW	**Mawson**	**75.29**	**200**	P	**P**	**18 20 07.0**	**+3.3**
	1.8nm,0.5s,baz=136,slow=4.7,SNR=12						
MJAR	**Matsushiro Arr**	**75.40**	**325**	P	**P**	**18 20 03.3**	**-1.5**
	8.4nm,0.7s,baz=168,slow=6.0,SNR=45						
JNU	**Nakatsue**	**76.94**	**318**	P	**P**	**18 20 11.6**	**-1.8**
	3.2nm,0.6s,baz=164,slow=1.0,SNR=6.5						
ASAJ	**Asahikawa**	**79.41**	**332**	P	**P**	**18 20 26.2**	**-0.4**
	5.8nm,0.8s,baz=309,slow=5.5,SNR=6.6						
KSRS	**Korea Array**	**81.68**	**320**	P	**P**	**18 20 39.0**	**+0.4**
	2.2nm,0.7s,baz=137,slow=6.0,SNR=13						
PETK	**Petropavlovsk-**	**82.57**	**346**	P	**P**	**18 20 42.4**	**-0.6**
	3.2nm,0.8s,baz=121,slow=6.0						
USRK	**Ussuriysk Ar.**	**84.28**	**327**	P	**P**	**18 20 52.3**	**+0.6**
	2.5nm,0.6s,baz=138,slow=5.7						
NVAR	**Mina Array Bea**	**86.01**	**43**	P	**P**	**18 21 01.5**	**+0.7**
	0.3nm,0.4s,baz=217,slow=10,SNR=2.7						
MKAR	**Makanchi Array**	**115.44**	**311**	PKP	**PKPdf**	**18 26 58.4**	**-0.7**
	0.4nm,0.7s,baz=72,slow=3.4,SNR=3.8						
KURBB	**Kurchatov Arra**	**118.61**	**315**	PKP	**PKPdf**	**18 27 04.6**	**-0.5**
	0.5nm,0.7s,baz=105,slow=1.9,SNR=5.6						
BVAR	**Borovoye Array**	**123.84**	**317**	PKP	**PKPdf**	**18 27 15.4**	**+0.3**
	0.8nm,0.4s,baz=171,slow=0.8,SNR=9.0						
ARU	**Arti**	**130.36**	**322**	PKP	**PKPdf**	**18 27 28.4**	**+1.0**
	1.7nm,0.4s,baz=283,slow=7.2,SNR=4.2						
AKTO	**Aktyubinsk**	**131.66**	**315**	PKP	**PKPdf**	**18 27 30.6**	**+0.5**
	1.0nm,0.6s,baz=94,slow=4.4,SNR=5.0						
ARCES	**ARCESS Array B**	**135.33**	**348**	PKP	**PKPdf**	**18 27 37.7**	**+1.3**
	2.1nm,0.8s,baz=96,slow=3.6,SNR=3.7						
FINES	**FINESS Array B**	**141.97**	**341**	PKhKP	PKPpre	18 27 44.6	
	0.7nm,0.5s,baz=75,slow=3.9,SNR=9.8						
NB2	**NORSAR Subarra**	**145.47**	**352**	PKP	**PKPdf**	**18 27 54.8**	**-0.1**
	comp=Z,4.9nm,1.1s,baz=10,slow=3.2						
HFS	**Hagfors**	**145.98**	**349**	PKPbc	**PKPbc**	**18 27 56.7**	**-0.5**
	comp=Z,3.0nm,0.4s,baz=57,slow=3.1,SNR=31						
AKASG	**Malin Array Be**	**148.49**	**326**	PKPbc	**PKPbc**	**18 28 04.0**	**-0.2**
	comp=Z,2.2nm,0.5s,baz=43,slow=4.0,SNR=12						
MMAI	**Mount Meron Ar**	**150.33**	**290**	PKPbc	**PKPbc**	**18 28 10.2**	**+0.8**
	comp=Z,2.4nm,0.5s,baz=77,slow=6.5,SNR=5.5						
BRTR	**Keskin Array B**	**150.68**	**304**	PKPbc	**PKPbc**	**18 28 10.6**	**+0.4**
	comp=Z,1.0nm,0.6s,baz=134,slow=4.2,SNR=6.0						
BRTR				PKPab	**PKPab**	**18 28 18.1**	**-0.5**
	comp=Z,1.9nm,0.6s,baz=110,slow=3.2,SNR=9.2						

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*SOME **08** 18:13:28.0, 42°.22N×81°.73E, h15^{km}*

*NNC **08** 18:13:30.4±2.3, 42°.29N×81°.75E, h0^{km}, mb3.0, mpv2.5, Error ellipse: s-maj=21.6km s-min=9.2km az=171.0*

ISC 08 18:13:34.2±2.5**, 42°.4N**±0°.1×**81°.52E**±0°.08**, h10**^{km}**, n16,** σ**2**^{s}.**63**/32**, 6C-2D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**1.68**	**297**	*e*P	**Pn**	**18 13 59.2**	**-4.6**
	13nm,0.3s						
SHLS				*e*S	**Sn**	**18 14 21.7**	**-3.8**
	30nm,0.2s						
PDGK	**Podgornoye**	**1.75**	**302**	⇑Pn	**Pn**	**18 14 04.4**	**-0.2**
	5.3nm,0.7s						
PDGK				⇑Sn	**Sb**	**18 14 31.8**	**+3.4**
	17nm,0.7s						
UZB	**Uzynbulak**	**1.98**	**292**	*e*P	**Pn**	**18 14 08.3**	**+0.4**
	9.8nm,0.2s						
UZB				*e*S	**Sb**	**18 14 37.9**	**+2.8**
	8.9nm,0.3s						
DJR	**Jarkent**	**2.29**	**327**	*e*P	**Pb**	**18 14 14.2**	**-1.4**
	2.5nm,0.4s						
DJR				*e*S	**Sb**	**18 14 47.3**	**+3.3**
	15nm,0.5s						
KPKS	**Kokpek**	**2.33**	**298**	*e*P	**Pb**	**18 14 14.1**	**-2.2**
	9.6nm,0.3s						
KPKS				*e*S	**Sb**	**18 14 48.2**	**+3.0**
	45nm,0.5s						
SATY	**Saty**	**2.38**	**287**	*e*P	**Pb**	**18 14 16.6**	**-0.6**
	3.0nm,0.1s						
SATY				*e*S	**Sg**	**18 14 51.5**	**+0.8**
	21nm,0.3s						
ZHN	**Zhinishke**	**2.39**	**289**	*e*P	**Pb**	**18 14 16.8**	**-0.5**
	3.5nm,0.2s						
ZHN				*e*S	**Sg**	**18 14 51.8**	**+0.8**
	14nm,0.3s						
KURS	**Kuram**	**2.68**	**295**	*e*P	**Pb**	**18 14 20.7**	**-1.6**
KURS				*e*S	**Sb**	**18 14 58.8**	**+3.6**
ARXS	**Arharly**	**3.24**	**305**	*e*P	**Pb**	**18 14 30.4**	**-1.3**
	1.3nm,0.3s						
ARXS				*e*S	**Sb**	**18 15 15.1**	**+3.8**
	6.9nm,0.4s						
KAPS	**Kapalarasan**	**3.26**	**332**	*e*P	**Pb**	**18 14 28.4**	**-3.8**
	3.3nm,0.2s						
KAPS				*e*S	**Sb**	**18 15 12.4**	**+0.5**
	11nm,0.4s						
CHKK	**Chushkaly**	**3.61**	**295**	*e*P	**Pb**	**18 14 36.4**	**-1.7**
	1.7nm,0.4s						
CHKK				*e*S	**Sb**	**18 15 25.6**	**+3.6**
	3.5nm,0.4s						
KTBS	**Karatobe**	**3.77**	**292**	*e*P	**Pb**	**18 14 39.6**	**-1.2**
	0.3nm,0.1s						
KTBS				*e*S	**Sb**	**18 15 30.8**	**+4.2**
	3.9nm,0.4s						
KUU	**Kurty**	**4.07**	**293**	*e*P	**Pb**	**18 14 45.2**	**-0.6**
	1.1nm,0.4s						
KUU				*e*S	**Sb**	**18 15 40.6**	**+5.5**
	2.4nm,0.3s						
KST	**Kastek**	**4.14**	**280**	*e*P	**Pb**	**18 14 48.2**	**+1.0**
	3.3nm,0.9s						
KST				*e*S	**Sg**	**18 15 45.5**	**-1.6**
	3.9nm,0.8s						
MAKZ	**Makanchi**	**4.40**	**4**	⇓Pn	**Pn**	**18 14 40.9**	**-0.1**
	1.1nm,0.6s						
MAKZ				⇑Pg	**Pb**	**18 14 52.6**	**+1.1**
	0.4nm,0.4s						
MAKZ				⇑Lg	Lg	18 15 53.0	
	6.2nm,0.6s						
MK31	**Makanchi Array**	**4.41**	**7**	⇓Pn	**Pn**	**18 14 40.5**	**-0.6**
	0.1nm,0.3s,baz=186,slow=12						
MK31				⇑Pg	**Pb**	**18 14 52.2**	**+0.6**
	0.4nm,0.5s,baz=189,slow=16						
MK31				⇑Lg	Lg	18 15 51.7	
	10.0nm,0.6s,baz=186,slow=25						

IDC 08 18:16:53.0±1.9**, 28°.94S**×**74°.80E, h0**^{km}**, mb3.7**/4**, mb1 3.9**/4**, mb1mx3.4**/62**, mbtmp3.7**/4**, MS3.4**/2**, Ms1 3.4**/2**, ms1mx2.7**/57**, Error ellipse: s-maj=55.7km s-min=37.0km az=81.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOSA	**Boshof**	**43.16**	**258**	LR	LR	18 39 02.3	
	comp=Z,50nm,19.4s,baz=258,slow=31						
FITZ	**Fitzroy Crossi**	**47.54**	**89**	LR	LR	18 42 28.4	
	comp=Z,43nm,20.3s,baz=47,slow=32						
ASAR	**Alice Springs**	**52.79**	**99**	P	P	18 26 10.2	-0.2
	0.3nm,0.9s,baz=251,slow=6.7,SNR=3.2						
WRA	**Warramunga Arr**	**54.46**	**95**	P	P	18 26 22.7	0.0
	1.4nm,0.9s,baz=249,slow=7.2,SNR=6.8						
VNDA	**Vanda**	**61.34**	**166**	P	P	18 27 09.9	-0.1
	1.5nm,1.0s,baz=272,slow=5.0,SNR=6.8						
MKAR	**Makanchi Array**	**75.68**	**5**	P	P	18 28 40.0	+0.1
	0.6nm,0.8s,baz=181,slow=5.8,SNR=4.2						

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*ISCJB **08** 18:17:53.6±0.8, 13°.96N±0°.10×145°.7E±0°.1, h100^{km}, mb3.5/9, Error ellipse: s-maj=19.3km s-min=12.7km az=23.5*

*IDC **08** 18:17:54.5±2.1, 13°.96N×145°.64E, h90^{km}±14^{km}, mb3.3/9, mb1 3.5/9, mb1mx3.3/59, mbtmp3.6/9, Error ellipse: s-maj=39.4km s-min=15.7km az=83.0*

ISC 08 18:17:55.4±1.0**, 13°.9N**±0°.1×**145°.6E**±0°.2**, h100**^{km}**, n10,** σ**0**^{s}.**98**/11**, mb3.4**/9**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	**0.81**	**245**	P	**Pn**	**18 18 14.4**	**+0.5**
	159nm,0.3s,baz=103,slow=1.1,SNR=208						
GUMO				S	**Sn**	**18 18 26.4**	**-1.4**
	636nm,0.3s,baz=319,slow=19,SNR=213						
GUMO				LR	LR	18 18 32.2	
	comp=Z,30nm,21.4s,baz=259,slow=45						
KSRS	**Korea Array**	**28.23**	**329**	P	**P**	**18 23 40.0**	**+1.1**
	0.3nm,0.3s,baz=145,slow=9.5,SNR=3.8						
CTA	**Charters Tower**	**33.82**	**179**	P	**P**	**18 24 28.4**	**+0.2**
	5.0nm,1.0s,baz=31,slow=12,SNR=2.0						
WRA	**Warramunga Arr**	**35.45**	**199**	P	**P**	**18 24 42.5**	**+0.2**
	0.3nm,0.6s,baz=22,slow=8.7,SNR=7.0						
ASAR	**Alice Springs**	**39.09**	**197**	P	**P**	**18 25 13.5**	**+0.4**
	0.2nm,0.7s,baz=16,slow=12,SNR=3.8						
MKAR	**Makanchi Array**	**61.75**	**316**	P	**P**	**18 28 04.2**	**+0.8**
	0.1nm,0.3s,baz=84,slow=6.8,SNR=4.2						
KURBB	**Kurchatov Arra**	**64.83**	**320**	P	**P**	**18 28 23.1**	**-0.5**
	0.2nm,0.4s,baz=103,slow=6.9,SNR=4.7						
ILAR	**Eielson Array**	**67.94**	**25**	P	**P**	**18 28 42.6**	**-0.6**
	0.4nm,0.5s,baz=254,slow=5.7,SNR=6.1						
BVAR	**Borovoye Array**	**70.11**	**322**	P	**P**	**18 28 57.8**	**+1.0**
	0.2nm,0.4s,baz=86,slow=9.4,SNR=2.9						
FINES	**FINESS Array B**	**91.15**	**335**	P	**P**	**18 30 47.5**	**-1.4**
	1.5nm,0.9s,baz=87,slow=7.4,SNR=4.3						

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*IDC **08** 18:33:13.1±0.8, 5°.52S×130°.99E, h0^{km}, mb4.2/10, mb1 4.5/14, mb1mx4.1/59, mbtmp4.4/14, ML4.8/4, MS2.9/4, Ms1 2.9/4, ms1mx2.5/50, Error ellipse: s-maj=30.9km s-min=16.8km az=72.0*

*ISCJB **08** 18:33:19.1±0.4, 5°.57S±0°.04×131°.24E±0°.03, h68^{km}, mb4.0/12, Error ellipse: s-maj=5.8km s-min=4.2km az=151.1*

*NEIC **08** 18:33:19.6±1.6, 5°.67S×131°.22E, h55^{km}±18^{km}, mb4.6/2, Error ellipse: s-maj=16.2km s-min=12.9km az=111.0*

*DJA **08** 18:33:22.2±0.3, 5°S±2°×13°1E±°, h79^{km}±12^{km}, M4.9/13, mB5.4/6, mb4.6/6, MLv5.0/13, Mw(mB)4.8/6*

ISC 08 18:33:21.9±0.6**, 5°.42S**±0°.05×**131°.18E**±0°.05**, h68**^{km}**, n56,** σ**1**^{s}.**46**/54**, mb4.1**/12**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	**Bandanaira**	**1.56**	**305**	P	**Pn**	**18 33 49.1**	**+1.5**
BNDI				S	**Sn**	**18 34 09.3**	**+2.4**
SAUI	**Saumlaki**	**2.55**	**177**	P	**Pn**	**18 34 01.1**	**+0.1**
SAUI				S	**Sn**	**18 34 32.4**	**+1.5**
FAKI	**Fak Fak**	**2.71**	**23**	P	**Pn**	**18 34 03.6**	**+0.5**
FAKI				S	**Sn**	**18 34 34.4**	**-0.4**
MSAI	**Masohi**	**3.05**	**312**	P	**Pn**	**18 34 09.1**	**+1.3**
MSAI				S	**Sn**	**18 34 43.3**	**+0.1**
KMPI	**Kaimana, Papua**	**3.06**	**55**	P	**Pn**	**18 34 09.2**	**+1.2**
KMPI				S	**Sn**	**18 34 42.5**	**-1.0**
AAI	**Ambon**	**3.44**	**300**	P	**Pn**	**18 34 14.4**	**+1.2**
SIJI	**Sorong**	**4.52**	**1**	Pn	**Pn**	**18 34 27.1**	**-0.9**
	107nm,0.3s,baz=210,slow=20,SNR=668						
SIJI				Sn	**Sn**	**18 35 14.6**	**-4.7**
	56nm,0.3s,baz=270,slow=20,SNR=10						
NLAI	**Namlea**	**4.61**	**298**	P	**Pn**	**18 34 30.7**	**+1.5**
RKPI	**Ransiki, Papua**	**4.90**	**38**	P	**Pn**	**18 34 34.1**	**+1.0**
RKPI				S	**Sn**	**18 35 28.5**	**-0.1**
LBMI	**Labuha**	**6.01**	**322**	P	**Pn**	**18 34 48.4**	**+0.1**
SANI	**Sanana**	**6.17**	**303**	P	**Pn**	**18 34 51.2**	**+0.7**
	41nm,0.4s,2µm0.4nm						
TNTI	**Ternate**	**7.24**	**328**	P	**Pn**	**18 35 04.6**	**-0.5**
	11nm,0.7s,0.1nm						
SOEI	**Soe**	**8.09**	**237**	P	**Pn**	**18 35 18.1**	**+1.2**
BATI	**Baumata**	**8.84**	**237**	Pn	**Pn**	**18 35 26.1**	**-0.9**
	6.4nm,0.3s,baz=96,slow=4.7,SNR=7.4						
BATI				Sn	**Sn**	**18 37 02.8**	**-2.3**
	10nm,0.3s,baz=23,slow=21,SNR=5.9						
GENI	**Genyem**	**9.39**	**73**	P	**Pn**	**18 35 38.0**	**+3.4**
JAY	**Jayapura**	**9.93**	**73**	Pn	**Pn**	**18 35 41.3**	**-0.6**
	1.6nm,0.3s,baz=220,slow=11,SNR=13						
JAY				Sn	**Sn**	**18 37 32.5**	**+0.6**
	0.5nm,0.3s,baz=128,slow=19,SNR=3.3						
JAY	**Jayapura**	**9.93**	**73**	P	**Pn**	**18 35 45.6**	**+3.7**
APSI	**Ampana**	**10.52**	**295**	P	Pn	18 35 57.1	+7.1
BKSI	**Bulukumba**	**11.01**	**270**	P	Pn	18 36 02.2	+5.5
SPSI	**Sidrap Palu**	**11.47**	**277**	P	Pn	18 36 09.5	+6.6
DAV	**Davao City (W)**	**13.61**	**336**	LR	LR	18 42 20.9	
	comp=Z,36nm,20.7s,baz=85,slow=40						
FITZ	**Fitzroy Crossi**	**13.71**	**203**	Pn	Pn	18 36 26.4	-6.9
	5.6nm,0.3s,baz=28,slow=9.2,SNR=107						
FITZ				Sn	Sn	18 38 49.7	-14
	4.6nm,0.3s,baz=184,slow=19,SNR=5.7						
WRAB	**Tennant Creek**	**14.75**	**168**	*e*Pn	Pn	18 36 40.0	-6.9
	7.4nm,0.3s						
WRAB				*e*Sn	Sn	18 39 13.8	-15
WRA	**Warramunga Arr**	**14.76**	**168**	Pn	Pn	18 36 41.0	-6.0
	6.3nm,0.3s,baz=348,slow=14,SNR=149						
WRA				Sn	Sn	18 39 14.6	-15
	5.9nm,0.3s,baz=343,slow=22,SNR=8.4						
ASAR	**Alice Springs**	**18.33**	**172**	P	**P**	**18 37 26.9**	**-4.0**
	4.0nm,0.3s,baz=343,slow=8.5,SNR=144						
ASAR				S	Sn	18 40 41.4	-14
	1.0nm,0.3s,baz=356,slow=26,SNR=5.8						
MBWA	**Marble Bar**	**19.18**	**214**	*e*P	**P**	**18 37 37.4**	**-2.9**
	12nm,0.3s						
CTA	**Charters Tower**	**20.67**	**136**	P	Pn	18 37 58.2	-1.1
	5.3nm,0.8s,baz=305,slow=10,SNR=2.2						
TGY	**Tagaytay City**	**21.90**	**332**	LR	LR	18 48 31.0	
	comp=Z,25nm,21.5s,baz=170,slow=42						
STKA	**Stephens Creek**	**28.07**	**161**	P	**P**	**18 39 06.9**	**-0.2**
	2.1nm,0.3s,baz=336,slow=9.1,SNR=22						
CMAR	**Chiang Mai Arr**	**39.67**	**308**	P	**P**	**18 40 47.1**	**-0.5**
	1.8nm,0.8s,baz=137,slow=7.2,SNR=16						
MJAR	**Matsushiro Arr**	**42.26**	**8**	P	**P**	**18 41 09.1**	**+0.4**
	0.9nm,0.7s,baz=186,slow=10.0,SNR=4.8						
KSRS	**Korea Array**	**42.76**	**356**	LR	LR	18 57 55.4	
	comp=Z,8.5nm,20.5s,baz=130,slow=35						
LSA	**Lhasa**	**51.91**	**315**	*e*P	**P**	**18 42 25.2**	**+0.7**
	2.7nm,0.4s						
URZ	**Urewera**	**52.91**	**135**	LR	LR	19 06 14.2	
	comp=Z,31nm,18.1s,baz=186,slow=37						
ODAN	**Odare**	**53.14**	**309**	*e*P	**P**	**18 42 33.4**	**0.0**
	9.5nm,0.5s						
TAPN	**Taplejung**	**53.15**	**310**	*e*P	**P**	**18 42 33.5**	**0.0**
	3.1nm,0.2s						
GTA	**Gaotai**	**53.19**	**330**	*e*P	**P**	**18 42 35.0**	**+1.6**
GTA				pP	pP	18 42 39.4	-11
GTA				sP	sP	18 42 42.5	-16
GTA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
RAMN	**Ramite**	**53.80**	**309**	*e*P	**P**	**18 42 38.4**	**+0.2**
	comp=Z,47nm,0.6s						
JIRN	**Jiri**	**54.47**	**310**	*e*P	**P**	**18 42 42.9**	**-0.4**
	comp=Z,17nm,0.5s						
GUN	**Gumba**	**54.83**	**310**	*e*P	**P**	**18 42 45.9**	**0.0**
	comp=Z,25nm,0.5s						
PKIN	**Phulchoki**	**55.04**	**309**	*e*P	**P**	**18 42 46.8**	**-0.5**
	comp=Z,4.4nm,0.4s						
KKN	**Kakani**	**55.23**	**309**	*e*P	**P**	**18 42 48.4**	**-0.2**
	comp=Z,10.0nm,0.5s						
DMN	**Daman**	**55.28**	**309**	*e*P	**P**	**18 42 48.9**	**-0.1**
	comp=Z,9.4nm,0.5s						
GKN	**Gorkha**	**55.83**	**309**	*e*P	**P**	**18 42 52.7**	**-0.1**
	comp=Z,26nm,0.6s						
KOLN	**Koldanda**	**56.53**	**308**	*e*P	**P**	**18 42 58.0**	**+0.2**
	comp=Z,20nm,0.5s						
DANN	**Dangsing**	**56.68**	**309**	*e*P	**P**	**18 42 58.9**	**-0.1**
	comp=Z,16nm,0.6s						
PYUN	**Piuthan**	**57.16**	**308**	*e*P	**P**	**18 43 02.3**	**0.0**
SONM	**Songino Array**	**57.34**	**340**	P	**P**	**18 43 03.2**	**+0.1**
	comp=Z,0.8nm,0.5s,baz=151,slow=6.8,SNR=6.9						
MKAR	**Makanchi Array**	**67.57**	**326**	P	**P**	**18 44 12.2**	**+0.9**
	comp=Z,5.2nm,0.7s,baz=118,slow=8.4,SNR=57						
SEY	**Seymchan**	**70.05**	**10**	P	**P**	**18 44 27.1**	**+0.8**
	comp=Z,0.5nm,0.6s,baz=225,slow=5.4,SNR=4.3						
ZALV	**Zalesovo Beam**	**70.71**	**333**	P	**P**	**18 44 29.7**	**-0.8**
	comp=Z,1.8nm,0.5s,baz=131,slow=4.1,SNR=4.9						
KURBB	**Kurchatov Arra**	**71.80**	**328**	P	**P**	**18 44 37.4**	**+0.2**
	comp=Z,1.6nm,0.6s,baz=76,slow=8.6,SNR=21						
KURK	**Kurchatov**	**71.80**	**328**	P	**P**	**18 44 37.4**	**+0.2**
BVAR	**Borovoye Array**	**77.37**	**327**	P	**P**	**18 45 09.4**	**-0.1**
	comp=Z,1.3nm,0.7s,baz=131,slow=6.6,SNR=9.0						
AKTO	**Aktyubinsk**	**83.56**	**322**	P	**P**	**18 45 42.5**	**-0.2**
	comp=Z,1.0nm,0.4s,baz=106,slow=7.4,SNR=5.2						
TORD	**Torodi Ar. Bea**	**129.64**	**283**	PKP	**PKPdf**	**18 52 25.2**	**+0.9**
	comp=Z,0.5nm,0.7s,baz=130,slow=2.3,SNR=3.1						

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*NIED **08** 18:36:00, 45°.40N×151°.80E, h14^{km}, Mw4.0 Best double couple: M$_0$1.19000×10^{15} NP1:φ$_s$219.00000°, δ29.00000°, λ83.00000°. NP2:φ$_s$46.00000°, δ61.00000°, λ94.00000°.*

*SKHL **08** 18:36:01.0±0.3, 45°.03N×151°.92E, h42^{km}±7^{km}, mb4.9/9*

*JMA **08** 18:36:01.0±0.7, 45°.41N×151°.79E, h30^{km}, M4.5*

*ISCJB **08** 18:36:02.0±0.5, 45°.27N±0°.05×151°.58E±0°.05, h32^{km}, mb3.9/21, MS3.3/12, Error ellipse: s-maj=7.9km s-min=3.5km az=143.1*

*MOS **08** 18:36:02.5±0.8, 45°.30N×151°.63E, h33^{km}, mb4.5/9, Error ellipse: s-maj=8.9km s-min=7.4km az=52.6*

*IDC **08** 18:36:06.7±2.8, 45°.41N×151°.55E, h52^{km}±23^{km}, mb3.6/14, mb1 3.7/19, mb1mx3.5/74, mbtmp3.8/19, ML3.8/3, MS3.2/14, Ms1 3.2/14, ms1mx2.9/78, Error ellipse: s-maj=21.6km s-min=14.7km az=121.0*

ISC 08 18:36:04.1±0.7**, 45°.24N**±0°.07×**151°.57E**±0°.07**, h32**^{km}**, n100,** σ**1**^{s}.**93**/112**, mb4.1**/21**, MS3.2**/12**, 4C-3D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.62**	**271**	*i* P	**Pn**	**18 36 44.0**	**-0.1**
KUR				AMB	AMB	18 36 45.0	
	136nm,0.5s						
KUR				AMB	AMB	18 36 45.0	
	56nm,0.5s						
KUR				AMB	AMB	18 36 45.0	
	308nm,0.5s						
KUR				*i* S	**Sn**	**18 37 16.0**	**+1.2**
KUR				A	A	18 37 22.0	

	244nm,0.6s						
KUR				A	A	18 37 22.0	
	323nm,0.6s						
KUR	**Kuril'sk**	**2.62**	**271** *c*	*i*PN	**Pn**	**18 36 44.3**	**+0.2**
KUR				*i* S	**Sn**	**18 37 16.4**	**+1.6**
KUR				pmax	pmax		
	comp=Z,308nm,0.3s						
KUR				pmax	pmax		
	comp=N,136nm,0.1s						
KUR				pmax	pmax		
	comp=E,56nm,0.1s						
KUR				smax	smax		
	comp=E,323nm,0.7s						
KUR				smax	smax		
	comp=N,244nm,0.6s						
SHO	**Shikotan**	**3.66**	**250**	*i* P	**Pn**	**18 36 58.0**	**-0.4**
SHO				AMB	AMB	18 37 04.0	
	comp=N,33nm,0.4s						
SHO				AMB	AMB	18 37 04.0	
	comp=N,20nm,0.4s						
SHO				AMB	AMB	18 37 04.0	
	comp=N,64nm,0.4s						
SHO				*i* S	**Sn**	**18 37 41.0**	**+0.6**
SHO				A	A	18 37 50.0	
	comp=N,65nm,0.4s						
SHO				A	A	18 37 50.0	
	comp=N,158nm,0.4s						
SHO	**Shikotan**	**3.66**	**250** *c*	*i*PN	**Pn**	**18 36 58.3**	**-0.1**
SHO				*i* S	**Sn**	**18 37 41.4**	**+1.0**
SHO				pmax	pmax		
	comp=Z,64nm,0.4s						
SHO				pmax	pmax		
	comp=N,33nm,0.2s						
SHO				pmax	pmax		
	comp=E,20nm,0.4s						
SHO				smax	smax		
	comp=N,65nm,0.4s						
SHO				smax	smax		
	comp=E,158nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**4.25**	**256**	*i* P	**Pn**	**18 37 06.0**	**-0.6**
YUK				AMB	AMB	18 37 14.0	
	comp=E,114nm,0.3s						
YUK				AMB	AMB	18 37 14.0	
	comp=E,70nm,0.3s						
YUK				AMB	AMB	18 37 14.0	
	comp=E,106nm,0.3s						
YUK				*i* S	**Sn**	**18 37 56.0**	**+0.9**
YUK				A	A	18 38 07.0	
	comp=E,182nm,0.5s						
YUK				A	A	18 38 07.0	
	comp=E,243nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**4.25**	**256** *d*	*i*PN	**Pn**	**18 37 06.9**	**+0.3**
YUK				*i* S	**Sn**	**18 37 56.7**	**+1.6**
YUK				pmax	pmax		
	comp=Z,106nm,0.3s						
YUK				pmax	pmax		
	comp=N,114nm,0.2s						
YUK				pmax	pmax		
	comp=E,70nm,0.2s						
YUK				smax	smax		
	comp=N,182nm,0.5s						
YUK				smax	smax		
	comp=E,243nm,0.5s						
LAGR	**Lagunnoye**	**4.30**	**256**	*e*P	**Pn**	**18 37 07.0**	**-0.2**
LAGR				AMB	AMB	18 37 14.0	
	comp=E,60nm,0.3s						
LAGR				AMB	AMB	18 37 14.0	
	comp=E,59nm,0.3s						
LAGR				AMB	AMB	18 37 14.0	
	comp=E,108nm,0.3s						
LAGR				*e*S	**Sn**	**18 37 58.0**	**+1.8**
LAGR				A	A	18 38 14.0	
	comp=E,483nm,0.4s						
LAGR				A	A	18 38 14.0	
	comp=E,138nm,0.4s						
LAGR	**Lagunnoye**	**4.30**	**256**	*e*PN	**Pn**	**18 37 07.9**	**+0.7**
LAGR				*e*S	**Sn**	**18 37 58.5**	**+2.3**
LAGR				pmax	pmax		
	comp=N,60nm,0.3s						
LAGR				pmax	pmax		
	comp=Z,108nm,0.3s						
LAGR				pmax	pmax		
	comp=E,59nm,0.2s						
LAGR				smax	smax		
	comp=N,483nm,0.4s						
LAGR				smax	smax		
	comp=E,138nm,0.3s						
GRPR	**Tuman**	**4.33**	**255**	*e*P	**Pn**	**18 37 08.0**	**+0.4**
GRPR				AMB	AMB	18 37 14.0	
	comp=E,75nm,0.3s						
GRPR				AMB	AMB	18 37 14.0	
	comp=E,35nm,0.3s						
GRPR				AMB	AMB	18 37 14.0	
	comp=E,123nm,0.3s						
GRPR				*e*S	**Sn**	**18 37 58.0**	**+1.1**
GRPR				A	A	18 38 09.0	
	comp=E,132nm,0.3s						
GRPR				A	A	18 38 09.0	
	comp=E,150nm,0.3s						
GRPR	**Tuman**	**4.33**	**255**	*e*PN	**Pn**	**18 37 08.0**	**+0.4**
GRPR				pmax	pmax		
	comp=Z,123nm,0.4s						
GRPR				pmax	pmax		
	comp=N,75nm,0.2s						
GRPR				pmax	pmax		
	comp=E,35nm,0.2s						
GLVR	**Golovnino**	**4.58**	**253**	*i* P	**Pn**	**18 37 12.0**	**+0.9**
GLVR				AMB	AMB	18 37 17.0	
	comp=E,113nm,0.3s						
GLVR				AMB	AMB	18 37 17.0	
	comp=E,79nm,0.3s						
GLVR				AMB	AMB	18 37 17.0	
	comp=E,146nm,0.3s						
GLVR				*e*S	**Sn**	**18 38 05.0**	**+1.7**
GLVR				A	A	18 38 19.0	
	comp=E,360nm,0.3s						
GLVR				A	A	18 38 19.0	
	comp=E,103nm,0.3s						
GLVR	**Golovnino**	**4.58**	**253** *c*	*i*PN	**Pn**	**18 37 12.0**	**+0.9**
GLVR				*e*S	**Sn**	**18 38 05.5**	**+2.2**
GLVR				pmax	pmax		
	comp=Z,146nm,0.3s						
GLVR				pmax	pmax		
	comp=E,79nm,0.2s						
GLVR				pmax	pmax		
	comp=N,113nm,0.3s						
GLVR				smax	smax		
	comp=E,360nm,0.3s						
GLVR				smax	smax		
	comp=E,103nm,0.2s						
NEM2	**Nemuro 2**	**4.58**	**248**	P	**Pn**	**18 37 10.3**	**-0.9**
NEM2				*e*S	**Sn**	**18 38 01.4**	**-1.9**
JRA	**Rausu**	**4.79**	**257**	P	**Pn**	**18 37 15.4**	**+1.4**
JNK	**Nakash**	**5.18**	**254**	P	**Pn**	**18 37 20.1**	**+0.7**
JNK				*e*S	**Sn**	**18 38 18.3**	**+0.3**
JAK	**Akkeshi**	**5.43**	**248**	P	**Pn**	**18 37 22.0**	**-0.8**
JAK				*e*S	**Sn**	**18 38 22.1**	**-2.1**
JTKR	**Abashiri--Toko**	**5.62**	**260**	P	**Pn**	**18 37 26.8**	**+1.4**
JAR	**Ashorobuto**	**5.93**	**254**	P	**Pn**	**18 37 30.4**	**+0.7**
JAR				*e*S	**Sn**	**18 38 37.1**	**+0.6**
JMP	**Maruseppu**	**5.99**	**261**	P	**Pn**	**18 37 32.0**	**+1.5**
JOB	**Onbets**	**6.04**	**250**	P	**Pn**	**18 37 31.2**	**0.0**
JOB				*e*S	**Sn**	**18 38 38.5**	**-0.7**
SKR	**Severo-Kuril's**	**6.24**	**28**	*e*P	**Pn**	**18 37 32.8**	**-1.1**
SKR				AMB	AMB	18 37 36.7	
	comp=E,40nm,0.6s						
SKR				*e*S	**Sn**	**18 38 39.8**	**-4.3**
SKR				A	A	18 38 43.8	
	comp=E,25nm,0.2s						
SKR				A	A	18 38 43.8	
	comp=E,22nm,0.2s						
SKR	**Severo-Kuril's**	**6.24**	**28**	*e*PN	**Pn**	**18 37 32.8**	**-1.1**
SKR				pmax	pmax		
	comp=Z,40nm,0.6s						
YSS	**Yuzh-Sakhalins**	**6.37**	**289**	*e*P	**Pn**	**18 37 37.5**	**+1.9**
YSS				AMB	AMB	18 37 38.8	
	comp=Z,11nm,0.3s						
YSS	**Yuzh-Sakhalins**	**6.37**	**289**⇓	*e*PN	**Pn**	**18 37 37.6**	**+1.9**
YSS				MLR	MLR		
	comp=Z,300nm,13.0s						
YSS				MLR	MLR		
	comp=E,200nm,12.0s						
JKK2	**Kamakawa 2**	**6.45**	**261**	P	**Pn**	**18 37 38.8**	**+2.0**
JCH	**Churui**	**6.48**	**249**	P	**Pn**	**18 37 36.8**	**-0.4**
ASAJ	**Asahikawa**	**6.50**	**263**	P	**Pn**	**18 37 39.4**	**+2.0**
	comp=E,3.7nm,0.3s,baz=62,slow=19,SNR=48						
ASAJ				LR	LR	18 40 23.6	
	comp=E,198nm,19.6s,baz=78,slow=40						
ASAJ	**Asahikawa**	**6.50**	**263**	P	**Pn**	**18 37 39.6**	**+2.1**
MYR	**Moyori**	**6.69**	**247**	*e*P	**Pn**	**18 37 40.0**	**0.0**
JFR	**Furan**	**6.78**	**255**	P	**Pn**	**18 37 42.7**	**+1.4**
ERM	**Erimo**	**6.90**	**245**	*i* PN	**Pn**	**18 37 43.9**	**+0.9**
JNBK	**Urakawa-nobuka**	**7.04**	**248**	P	**Pn**	**18 37 44.1**	**-0.8**
JBT2	**Biratori 2**	**7.08**	**253**	P	**Pn**	**18 37 45.5**	**0.0**
JNB	**Noboribetsu**	**8.10**	**254**	P	**Pn**	**18 37 59.9**	**+0.5**
JNB				*e*S	**Sn**	**18 39 27.7**	**-2.2**
TYV	**Tymovskoe**	**8.20**	**316**	*e*P	**Pn**	**18 38 02.9**	**+2.1**
TYV				AMB	AMB	18 38 03.5	
	comp=E,80nm,0.9s						
TYV				AMB	AMB	18 38 03.9	
	comp=E,100nm,2.2s						
TYV				*e*S	**Sn**	**18 39 33.0**	**+0.7**
TYV				A	A	18 39 38.8	
	comp=E,110nm,1.8s						
TYV	**Tymovskoe**	**8.20**	**316**	*e*PN	**Pn**	**18 38 02.9**	**+2.1**
TYV				pmax	pmax		
	comp=Z,9.0nm,0.9s						
TYV				pmax	pmax		
	comp=Z,100nm,2.2s						
JKB	**Kayabe**	**8.35**	**250**	P	**Pn**	**18 38 02.0**	**-0.9**
JKB				*e*S	**Sn**	**18 39 30.8**	**-5.3**
JYM2	**Yakumo 2**	**8.70**	**253**	P	**Pn**	**18 38 07.3**	**-0.3**
JSH	**Shimam**	**8.71**	**257**	P	**Pn**	**18 38 09.7**	**+1.9**
PETK	**Petropavlovsk-**	**8.84**	**25**	P	**Pn**	**18 38 10.0**	**+0.5**
	baz=183,slow=12						
JANG	**Nango**	**8.85**	**240**	P	**Pn**	**18 38 06.9**	**-2.8**
JTM	**Tenmabayashi**	**8.89**	**244**	*e*S	**Sn**	**18 39 42.2**	**-7.0**
JTH	**Tanohata**	**8.90**	**237**	*e*S	Sn	18 39 39.8	-10
JSR	**Shiriuchi**	**8.93**	**249**	P	**Pn**	**18 38 10.1**	**-0.7**
JOSM	**Okushiri--Mats**	**9.32**	**254**	P	**Pn**	**18 38 16.5**	**+0.4**
MJA0	**Matsu Arr-Jizo**	**13.29**	**234**	*e*PN	**Pn**	**18 39 13.1**	**+2.5**
MJAR	**Matsushiro Arr**	**13.31**	**234**	P	**Pn**	**18 39 10.2**	**-0.7**
	comp=Z,0.2nm,0.3s,baz=26,slow=12,SNR=4.2						
MJAR				LR	LR	18 45 07.4	
	comp=Z,21nm,21.6s,baz=95,slow=40						
MAJO	**Matsushiro**	**13.32**	**234**	*i* PN	**Pn**	**18 39 13.5**	**+2.6**
USRK	**Ussuriysk Ar.**	**13.97**	**273**	P	**Pn**	**18 39 16.2**	**-3.4**
	baz=75,slow=13						
KLR	**Kul'dur**	**14.04**	**294**	P	**Pn**	**18 39 22.2**	**+1.6**
	comp=Z,0.0nm,0.3s,baz=111,slow=13,SNR=2.2						
KLR	**Kul'dur**	**14.04**	**294**	*e*P	**Pn**	**18 39 20.5**	**-0.1**
KLR	**Kul'dur**	**14.04**	**294**	*i* P	**Pn**	**18 39 20.5**	**-0.1**
MA2	**Magadan**	**14.37**	**358**	P	**Pn**	**18 39 24.9**	**-0.1**
	comp=Z,0.5nm,0.3s,baz=173,slow=17,SNR=5.4						
SEY	**Seymchan**	**17.74**	**1**	P	**Pn**	**18 40 06.6**	**-1.7**
	comp=Z,0.1nm,0.3s,baz=165,slow=12,SNR=5.1						
ZEA	**Zeya**	**17.87**	**307**	*e*P	**Pn**	**18 40 09.8**	**-0.3**
ZEA				pmax	pmax		
	comp=Z,12nm,1.0s						
KSRS	**Korea Array**	**19.34**	**255**	P	**Pn**	**18 40 28.1**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=63,slow=10,SNR=6.8						
KSRS				LR	LR	18 48 05.9	
	comp=Z,41nm,18.1s,baz=55,slow=37						
JNU	**Nakatsue**	**20.03**	**240**	LR	LR	18 50 29.7	
	comp=Z,56nm,18.1s,baz=305,slow=43						
YAK	**Yakutsk**	**21.07**	**331**	*e*P	**P**	**18 40 48.9**	**+3.7**
YAK				pmax	pmax		
	comp=E,3.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,13nm,0.9s						
BILL	**Bilibino**	**24.11**	**14**⇑	*e*P	**P**	**18 41 18.9**	**+2.4**
BILL				*e*		18 41 26.0	
BILL				*PP	**sP**	**18 41 30.0**	**+0.4**
BILL				*e*		18 41 46.2	
BILL				pmax	pmax		
	comp=Z,2.0nm,1.2s						
BILL				MLR	MLR		
	comp=Z,70nm,16.0s						
H11N2	**WAKE ISLAND Hy**	**28.43**	**148**	T	T	19 12 36.6	
	baz=338,slow=76,SNR=42						
H11N1	**WAKE ISLAND Hy**	**28.44**	**148**	T	T	19 12 52.0	
	baz=338,slow=76,SNR=22						
H11N3	**WAKE ISLAND Hy**	**28.45**	**148**	T	T	19 12 46.0	
	baz=338,slow=76,SNR=35						
TIXI	**Tiksi**	**28.64**	**345**	LR	LR	18 53 50.0	
	comp=Z,22nm,18.6s,baz=262,slow=37						
H11S1	**WAKE ISLAND Hy**	**29.48**	**150**	T	T	19 14 04.4	
	baz=339,slow=76,SNR=21						
H11S3	**WAKE ISLAND Hy**	**29.49**	**150**	T	T	19 14 08.3	
	baz=339,slow=76,SNR=15						
H11S2	**WAKE ISLAND Hy**	**29.50**	**150**	T	T	19 14 02.8	
	baz=339,slow=76,SNR=23						
ULN	**Ulaanbaatar**	**30.41**	**291**	*i* P	**P**	**18 42 12.0**	**-1.5**
ULN				pmax	pmax		
	comp=Z,1.0nm,1.1s						
SONM	**Songino Array**	**30.85**	**291**	P	**P**	**18 42 17.8**	**+0.5**
	comp=Z,0.7nm,0.9s,baz=102,slow=9.4,SNR=3.8						
SONM				LR	LR	18 55 45.1	
	comp=Z,51nm,18.7s,baz=76,slow=38						
SONM	**Songino Array**	**30.85**	**291**	*e*P	**P**	**18 42 18.6**	**+1.3**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ILAR	**Eielson Array**	**38.40**	**37**	P	**P**	**18 43 21.7**	**-0.4**
	comp=Z,0.4nm,0.6s,baz=268,slow=7.7,SNR=5.8						
ILAR	**Eielson Array**	**38.40**	**37**	*e*P	**P**	**18 43 24.4**	**+2.3**
TGY	**Tagaytay City**	**40.43**	**230**	LR	LR	19 02 38.8	
	comp=Z,10nm,19.0s,baz=197,slow=39						
ZALV	**Zalesovo Beam**	**42.64**	**307**	LR	LR	19 02 48.6	
	comp=Z,64nm,18.6s,baz=70,slow=38						
MKAR	**Makanchi Array**	**46.69**	**298**	PcP	**PcP**	**18 46 02.8**	**-0.1**
	comp=Z,0.4nm,0.5s,baz=70,slow=3.1,SNR=3.2						
MKAR				LR	LR	19 05 07.2	
	comp=Z,69nm,19.4s,baz=82,slow=37						
KURBB	**Kurchatov Arra**	**47.41**	**304**	PcP	**PcP**	**18 46 05.3**	**+0.1**
	comp=Z,0.5nm,0.9s,baz=116,slow=4.2,SNR=2.1						
CMAR	**Chiang Mai Arr**	**50.97**	**256**	P	**P**	**18 45 02.8**	**+0.1**
	comp=Z,0.4nm,0.8s,baz=41,slow=8.4,SNR=4.0						
CMAR				LR	LR	19 07 12.0	
	comp=Z,11nm,18.7s,baz=235,slow=37						
SPITS	**Spitsbergen Ar**	**53.91**	**350**	P	**P**	**18 45 22.6**	**-1.2**
	comp=Z,1.9nm,0.5s,baz=46,slow=12,SNR=7.5						
KSH	**Kashi**	**54.24**	**293**	*e*P	**P**	**18 45 30.2**	**+3.3**
KSH				*e*PcP	**PcP**	**18 46 38.4**	**+7.5**
KSH				S	S	18 52 35.6	-27
ARU	**Arti**	**55.40**	**318** *d*	*i*P	**P**	**18 45 32.2**	**-2.7**
ARU						18 46 32.3	
ARU				S	**S**	**18 53 13.2**	**-3.8**
ARU				SS	**SS**	**18 56 54.5**	**-6.6**
ARU				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARCES	**ARCESS Array B**	**58.92**	**341**	P	**P**	**18 45 58.9**	**-0.7**
	comp=Z,1.5nm,0.8s,baz=22,slow=7.8,SNR=5.6						
ARCES	**ARCESS Array B**	**58.92**	**341**	*e*P	**P**	**18 45 59.1**	**-0.5**
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
AKTO	**Aktyubinsk**	**58.94**	**312**	LR	LR	19 13 33.0	
	comp=Z,64nm,19.1s,baz=63,slow=38						
FINES	**FINESS Array B**	**64.94**	**334**	P	**P**	**18 46 38.6**	**-1.5**
	comp=Z,1.7nm,0.4s,baz=42,slow=6.0,SNR=26						
FINES				LR	LR	19 16 53.9	
	comp=Z,15nm,18.4s,baz=194,slow=38						
FINES	**FINESS Array B**	**64.94**	**334**	*e*P	**P**	**18 46 39.0**	**-1.1**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.4s						
GEYT	**Alibeck**	**66.45**	**301**	P	**P**	**18 46 50.3**	**-0.1**
	comp=Z,1.8nm,0.9s,baz=354,slow=4.3,SNR=5.2						
WRA	**Warramunga Arr**	**66.74**	**198**	P	**P**	**18 46 53.1**	**+1.0**
	comp=Z,0.3nm,0.6s,baz=19,slow=4.5,SNR=2.9						
NB2	**NORSAR Subarra**	**69.31**	**341**	P	**P**	**18 47 06.6**	**-1.2**
	comp=Z,0.9nm,0.5s,baz=28,slow=6.2						
HFS	**Hagfors**	**69.49**	**339**	P	**P**	**18 47 07.9**	**-1.1**
	comp=Z,4.1nm,0.5s,baz=52,slow=5.7,SNR=34						
ASAR	**Alice Springs**	**70.44**	**197**	P	**P**	**18 47 16.7**	**+1.5**
	comp=Z,0.4nm,0.9s,baz=10,slow=5.8,SNR=3.0						
KBZ	**Khabaz**	**71.13**	**313**	P	**P**	**18 47 19.8**	**+0.6**
	comp=Z,6.1nm,0.8s,baz=29,slow=5.0,SNR=9.0						
AKASG	**Malin Array Be**	**72.20**	**326**	P	**P**	**18 47 24.6**	**-0.9**
	comp=Z,2.1nm,0.3s,baz=38,slow=6.3,SNR=8.6						
CLL	**Collm**	**77.39**	**335**	*i* P	**P**	**18 47 55.2**	**-0.3**
	comp=Z,5.0nm,1.0s						
CLL				*i* (PcP)	**sP**	**18 48 07.8**	**-1.5**
CLL	**Collm**	**77.39**	**335**	*i* P	**P**	**18 47 55.2**	**-0.3**
CLL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
VRAC	**Vranov**	**77.99**	**332**	LR	LR	19 26 20.2	
	comp=Z,28nm,19.0s,baz=224,slow=39						
BRTR	**Keskin Array B**	**78.74**	**316**	P	**P**	**18 48 03.0**	**-0.5**
	comp=Z,1.2nm,1.0s,baz=129,slow=3.3,SNR=4.6						
BRTR	**Keskin Array B**	**78.74**	**316**	*e*P	**P**	**18 48 04.1**	**+0.6**
BRTR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
KHC	**Kasperske Hory**	**79.12**	**333**	*e*P	**P**	**18 48 05.8**	**+0.5**
KHC				*e*x	x	18 48 18.8	
KHC	**Kasperske Hory**	**79.12**	**333**	*e*P	**P**	**18 48 05.8**	**+0.5**
KHC				*e*		18 48 18.8	
TXAR	**Lajitas Array**	**79.18**	**59**	P	**P**	**18 48 05.9**	**-0.1**
	comp=Z,0.1nm,0.4s,baz=303,slow=3.9,SNR=2.3						
GERES	**GERESS Array B**	**79.33**	**333**	P	**P**	**18 48 06.3**	**-0.2**
	comp=Z,0.6nm,0.5s,baz=38,slow=6.5,SNR=8.3						
GERES				LR	LR	19 28 21.3	
	comp=Z,27nm,18.7s,baz=206,slow=40						

NIED ***08*** *19:13:00, 45°.60N×151°.70E, h20^{km}, Mw4.0 Best double couple: M$_0$1.03000×10^{15} NP1:ϕ$_s$242.00000°, δ24.00000°, λ112.00000°. NP2:ϕ$_s$39.00000°, δ68.00000°, λ81.00000°.*
IDC ***08*** *19:13:07.6±0.8, 45°.40N×151°.56E, h0^{km}, mb3.9/20, mb1 4.0/26, mb1mx3.9/83, mbtmp3.9/26, ML3.7/4, MS3.1/8, Ms1 3.1/8, ms1mx2.7/65, Error ellipse: s-maj=19.3km s-min=14.0km az=119.0*
JMA ***08*** *19:13:09.4±0.6, 45°.55N×151°.67E, h30^{km}, M4.4*
ISCJB ***08*** *19:13:09.8±0.5, 45°.19N±0°.06×151°.56E±0°.07, h32^{km}, mb3.9/23, MS3.1/4, Error ellipse: s-maj=10.5km s-min=3.4km az=145.2*
SKHL ***08*** *19:13:10.4±0.8, 45°.04N×151°.71E, h43^{km}±7^{km}, mb5.1/5*
MOS ***08*** *19:13:11.3±0.8, 45°.32N×151°.48E, h37^{km}, mb4.2/11, Error ellipse: s-maj=9.2km s-min=8.0km az=68.8*
ISC 08 19:13:11.6±0.7**, 45°.14N**±0°.08×**151°.54E**±0°.07**, h32**^{km}**, n86, σ1^s.79**/102**, mb4.0**/23**, MS3.1**/4**, 1C-2D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.60**	**273**	*i* P	**Pn**	**19 13 52.0**	**+0.6**
KUR				AMB	AMB	19 13 55.0	
	84nm,0.2s						
KUR				AMB	AMB	19 13 55.0	
	78nm,0.2s						
KUR				*e*S	**Sn**	**19 14 23.0**	**+1.2**
KUR				A	A	19 14 28.0	
	620nm,0.3s						
KUR				A	A	19 14 28.0	
	275nm,0.3s						
KUR	**Kuril'sk**	**2.60**	**273**	*e*PN	**Pn**	**19 13 51.7**	**+0.3**
KUR				*e*S	**Sb**	**19 14 23.6**	**-5.4**
KUR				pmax	pmax		
	comp=Z,151nm,0.2s						
KUR				pmax	pmax		
	comp=N,74nm,0.3s						
KUR				pmax	pmax		
	comp=E,48nm,0.2s						
KUR				smax	smax		
	comp=N,620nm,0.3s						
KUR				smax	smax		
	comp=E,275nm,0.3s						
SHO	**Shikotan**	**3.60**	**251** *d*	*i*PN	**Pn**	**19 14 05.5**	**+0.4**
SHO				pmax	pmax		
	comp=Z,70nm,0.4s						
SHO				pmax	pmax		
	comp=N,11nm,0.2s						
SHO				pmax	pmax		
	comp=E,46nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**4.20**	**257**	*i* P	**Pn**	**19 14 14.0**	**+0.6**
YUK				AMB	AMB	19 14 22.0	
	comp=E,73nm,0.2s						
YUK				AMB	AMB	19 14 22.0	
	comp=E,60nm,0.2s						
YUK				AMB	AMB	19 14 22.0	
	comp=E,121nm,0.2s						
YUK				*i* S	**Sn**	**19 15 04.0**	**+2.6**
YUK				A	A	19 15 17.0	
	comp=E,254nm,0.5s						
YUK				A	A	19 15 17.0	
	comp=E,243nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**4.20**	**257** *c*	*i*PN	**Pn**	**19 14 14.8**	**+1.4**
YUK				*i* S	**Sn**	**19 15 04.0**	**+2.6**
YUK				pmax	pmax		
	comp=Z,121nm,0.2s						
YUK				pmax	pmax		
	comp=E,60nm,0.3s						
YUK				pmax	pmax		
	comp=N,73nm,0.2s						
YUK				smax	smax		
	comp=N,254nm,0.6s						
YUK				smax	smax		
	comp=E,243nm,0.5s						
LAGR	**Lagunnoye**	**4.25**	**257**	*e*P	**Pn**	**19 14 14.0**	**0.0**
LAGR				AMB	AMB	19 14 17.0	
	comp=E,66nm,0.2s						
LAGR				AMB	AMB	19 14 17.0	
	comp=E,84nm,0.2s						
LAGR				AMB	AMB	19 14 17.0	
	comp=E,110nm,0.2s						
LAGR				*e*S	**Sn**	**19 15 04.0**	**+1.5**
LAGR				A	A	19 15 13.0	
	comp=E,482nm,0.5s						
LAGR				A	A	19 15 13.0	
	comp=E,295nm,0.5s						
LAGR	**Lagunnoye**	**4.25**	**257**	*e*PN	**Pn**	**19 14 14.9**	**+0.9**
LAGR				*e*S	**Sn**	**19 15 04.7**	**+2.2**
LAGR				pmax	pmax		
	comp=N,66nm,0.1s						
LAGR				pmax	pmax		
	comp=Z,110nm,0.1s						
LAGR				pmax	pmax		
	comp=E,84nm,0.2s						
LAGR				smax	smax		
	comp=E,295nm,0.6s						
LAGR				smax	smax		
	comp=N,482nm,0.5s						
GRPR	**Tuman**	**4.28**	**257**	*e*P	**Pn**	**19 14 15.0**	**+0.6**
GRPR				AMB	AMB	19 14 23.0	
	comp=N,89nm,0.3s						
GRPR				AMB	AMB	19 14 23.0	
	comp=N,59nm,0.3s						
GRPR				AMB	AMB	19 14 23.0	
	comp=N,120nm,0.3s						
GRPR				*e*S	**Sn**	**19 15 05.0**	**+1.8**
GRPR				A	A	19 15 09.0	
	comp=N,48nm,0.2s						
GRPR				A	A	19 15 09.0	
	comp=N,117nm,0.2s						
GRPR	**Tuman**	**4.28**	**257**	*e*PN	**Pn**	**19 14 15.6**	**+1.2**
GRPR				*e*S	**Sn**	**19 15 05.4**	**+2.2**
GRPR				pmax	pmax		
	comp=Z,120nm,0.3s						
GRPR				pmax	pmax		
	comp=N,89nm,0.2s						
GRPR				pmax	pmax		
	comp=E,59nm,0.2s						
GRPR				smax	smax		
	comp=N,48nm,0.2s						
GRPR				smax	smax		
	comp=E,117nm,0.2s						
NEM2	**Nemuro 2**	**4.53**	**249**	P	**Pn**	**19 14 18.4**	**+0.6**
NEM2				*e*S	**Sn**	**19 15 09.7**	**+0.4**
GLVR	**Golovnino**	**4.53**	**254**	*e*P	**Pn**	**19 14 19.0**	**+1.1**
GLVR				*e*S	**Sn**	**19 15 10.0**	**+0.5**
GLVR				A	A	19 15 18.0	
	comp=E,267nm,0.3s						
GLVR				A	A	19 15 18.0	
	comp=E,316nm,0.3s						
GLVR	**Golovnino**	**4.53**	**254**	*e*PN	**Pn**	**19 14 19.3**	**+1.4**
JRA	**Rausu**	**4.74**	**258**	P	**Pn**	**19 14 23.3**	**+2.5**
JNK	**Nakash**	**5.13**	**255**	P	**Pn**	**19 14 27.9**	**+1.7**
JAK	**Akkeshi**	**5.38**	**249**	P	**Pn**	**19 14 29.9**	**+0.4**
JAK				*e*S	**Sn**	**19 15 29.9**	**-0.3**
JTKR	**Abashiri--Toko**	**5.58**	**261**	P	**Pn**	**19 14 34.8**	**+2.5**
JAR	**Ashorobuto**	**5.88**	**255**	P	**Pn**	**19 14 38.3**	**+1.9**
JAR				*e*S	**Sn**	**19 15 44.4**	**+1.7**
JMP	**Maruseppu**	**5.95**	**262**	P	**Pn**	**19 14 40.3**	**+2.8**
JOB	**Onbets**	**5.99**	**251**	P	**Pn**	**19 14 39.1**	**+1.2**
JOB				*e*S	**Sn**	**19 15 45.3**	**0.0**
HRK	**Horoka**	**6.26**	**258**	*e*P	**Pn**	**19 14 44.4**	**+2.6**
SKR	**Severo-Kuril's**	**6.34**	**27**	*e*P	**Pn**	**19 14 43.0**	**+0.2**
SKR				AMB	AMB	19 14 44.8	
	comp=E,50nm,0.3s						
SKR				*e*S	**Sn**	**19 15 51.3**	**-2.8**
SKR				A	A	19 15 54.2	
	comp=E,22nm,0.3s						
SKR	**Severo-Kuril's**	**6.34**	**27**	*e*PN	**Pn**	**19 14 43.6**	**+0.8**
SKR				pmax	pmax		
	comp=Z,57nm,0.4s						
SKR				MLR	MLR		
	comp=Z,100nm,19.0s						

YSS	Yuzh-Sakhalins	6.38	290	⇓*i*PN	Pn	19 14 45.5	+2.2
YSS				MLR	MLR		
	comp=Z,200nm,14.0s						
YSS				MLR	MLR		
	comp=E,200nm,18.0s						
JKK2	Kamakawa 2	6.41	262	P	Pn	19 14 46.6	+2.8
JCH	Churui	6.42	250	P	Pn	19 14 44.6	+0.7
JCH				*e*S	Sn	19 15 56.3	+0.2
ASAJ	Asahikawa	6.46	264	Pn	Pn	19 14 46.5	+2.1
	comp=E,3.8nm,0.3s,baz=65,slow=20,SNR=45						
ASAJ				LR	LR	19 17 29.3	
	comp=E,161nm,19.4s,baz=88,slow=40						
ASAJ	Asahikawa	6.46	264	P	Pn	19 14 47.3	+2.8
MYR	Moyori	6.62	247	*e*P	Pn	19 14 47.9	+1.3
MYR				*e*S	Sn	19 15 59.1	-1.9
JFR	Furan	6.73	256	P	Pn	19 14 50.6	+2.4
JEM	Erimo	6.84	246	P	Pn	19 14 52.0	+2.4
JAB	Ashibetsu	6.88	260	P	Pn	19 14 53.8	+3.6
JNBK	Urakawa-nobuka	6.98	249	P	Pn	19 14 51.7	+0.2
JNBK				*e*S	Sn	19 16 07.0	-2.7
JBT2	Biratori 2	7.03	254	P	Pn	19 14 53.3	+1.1
JNB	Noboribetsu	8.05	254	P	Pn	19 15 07.7	+1.5
JNB				*e*S	Sn	19 16 35.1	-1.0
JKB	Kayabe	8.30	251	P	Pn	19 15 10.0	+0.4
JKB				*e*S	Sn	19 16 37.6	-4.6
JSH	Shimam	8.67	257	P	Pn	19 15 17.7	+3.0
JANG	Nango	8.78	241	P	Pn	19 15 14.9	-1.3
JANG				*e*S	Sn	19 16 47.4	-6.5
JTM	Tenmabayashi	8.82	244	P	Pn	19 15 17.1	+0.3
PETK	Petropavlovsk-	8.94	25	Pn	Pn	19 15 17.1	-1.3
	baz=199,slow=12						
JOSM	Okushiri--Mats	9.27	255	P	Pn	19 15 23.3	+0.4
JRG	Rokugo	9.91	238	P	Pn	19 15 31.6	-0.1
JRG				*e*S	Sn	19 17 18.0	-3.7
MJAR	Matsushiro Arr	13.24	234	Pn	Pn	19 16 16.9	-0.4
	comp=E,0.3nm,0.3s,baz=22,slow=15,SNR=8.6						
MJAR				LR	LR	19 22 26.2	
	comp=E,35nm,20.8s,baz=50,slow=42						
USRK	Ussuriysk Ar.	13.95	273	Pn	Pn	19 16 26.2	-0.7
	baz=73,slow=12						
KLR	Kul'dur	14.06	294	Pn	Pn	19 16 28.0	-0.4
	comp=E,0.0nm,0.3s,baz=93,slow=14,SNR=2.5						
MA2	Magadan	14.47	358	Pn	Pn	19 16 33.3	-0.6
	comp=E,0.7nm,0.3s,baz=187,slow=11,SNR=8.0						
SEY	Seymchan	17.84	1	P	Pn	19 17 14.9	-2.1
	comp=E,0.1nm,0.3s,baz=176,slow=17,SNR=2.4						
KSRS	Korea Array	19.29	255	P	P	19 17 34.5	+0.9
	comp=E,0.2nm,0.3s,baz=60,slow=11,SNR=12						
KSRS				LR	LR	19 25 22.2	
	comp=E,38nm,18.2s,baz=54,slow=38						
JNU	Nakatsue	19.96	240	P	P	19 17 43.3	+2.3
	comp=E,5.2nm,0.9s,baz=63,slow=9.0,SNR=1.9						
JNU				LR	LR	19 26 18.7	
	comp=E,55nm,19.6s,baz=301,slow=39						
H11N2	WAKE ISLAND Hy	28.35	148	T	T	19 49 53.2	
	baz=337,slow=75,SNR=80						
H11N1	WAKE ISLAND Hy	28.37	148	T	T	19 50 09.6	
	baz=337,slow=75,SNR=42						
H11N3	WAKE ISLAND Hy	28.37	148	T	T	19 49 54.7	
	baz=337,slow=75,SNR=63						
H11S1	WAKE ISLAND Hy	29.41	150	T	T	19 51 17.3	
	baz=338,slow=76,SNR=33						
H11S3	WAKE ISLAND Hy	29.41	150	T	T	19 51 17.3	
	baz=338,slow=76,SNR=23						
H11S2	WAKE ISLAND Hy	29.42	150	T	T	19 51 18.7	
	baz=338,slow=76,SNR=34						
SONM	Songino Array	30.87	291	P	P	19 19 25.3	+0.4
	comp=E,0.4nm,0.4s,baz=79,slow=7.9,SNR=4.5						
SONM				LR	LR	19 32 50.1	
	comp=E,43nm,18.9s,baz=84,slow=38						
ILAR	Eielson Array	38.50	37	P	P	19 20 29.9	-0.5
	comp=E,0.6nm,0.8s,baz=258,slow=7.2,SNR=6.1						
ZALV	Zalesovo Beam	42.68	307	LR	LR	19 42 10.3	
	comp=E,19nm,18.1s,baz=70,slow=41						
MKAR	Makanchi Array	46.72	298	P	P	19 21 37.2	-0.2
	comp=E,0.7nm,0.6s,baz=70,slow=6.5,SNR=10						
MKAR				PcP	PcP	19 23 11.6	+1.1
	comp=E,0.6nm,0.5s,baz=62,slow=3.8,SNR=6.2						
MKAR				LR	LR	19 42 12.9	
	comp=E,57nm,18.7s,baz=41,slow=37						
KURK	Kurchatov	47.36	304	P	P	19 21 41.1	-1.1
KURK						19 23 13.4	
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURBB	Kurchatov Arra	47.45	304	P	P	19 21 41.1	-1.8
	comp=Z,0.6nm,0.5s,baz=72,slow=8.5,SNR=8.5						
KURBB				PcP	PcP	19 23 13.4	+0.5
	comp=Z,0.6nm,0.7s,baz=66,slow=3.9,SNR=5.8						
CMAR	Chiang Mai Arr	50.92	256	P	P	19 22 11.5	+1.7
	comp=Z,0.4nm,0.3s,baz=36,slow=8.2,SNR=4.4						
BVAR	Borovoye Array	51.04	310	P	P	19 22 10.8	+0.4
	comp=Z,0.4nm,0.5s,baz=53,slow=8.1,SNR=3.8						
BVAR				PcP	PcP	19 23 26.3	+0.4
	comp=Z,0.6nm,0.6s,baz=29,slow=3.3,SNR=4.7						
SPITS	Spitsbergen Ar	54.01	350	P	P	19 22 31.4	-0.6
	comp=Z,5.6nm,0.8s,baz=9.6,slow=9.5,SNR=5.7						
AKTO	Aktyubinsk	58.99	312	P	P	19 23 06.8	-1.0
	comp=Z,0.8nm,0.5s,baz=54,slow=7.9,SNR=4.4						
ARCES	ARCESS Array B	59.02	341	P	P	19 23 06.6	-1.1
	comp=Z,2.4nm,0.8s,baz=37,slow=6.1,SNR=4.5						
ARCES	ARCESS Array B	59.02	341	P	P	19 23 06.6	-1.1
ARCES				pmax	pmax		
	comp=Z,3.0nm,0.9s						
FINES	FINESS Array B	65.03	334	P	P	19 23 46.9	-1.2
	comp=Z,2.0nm,0.6s,baz=41,slow=5.8,SNR=20						
GEYT	Alibeck	66.49	301	P	P	19 23 58.6	+0.6
	comp=Z,1.2nm,0.7s,baz=60,slow=3.8,SNR=4.5						
WRA	Warramunga Arr	66.64	198	P	P	19 24 00.5	+1.6
	comp=Z,0.8nm,0.7s,baz=15,slow=6.8,SNR=13						
NB2	NORSAR Subarra	69.39	341	P	P	19 24 15.3	-0.6
	comp=Z,1.1nm,0.5s,baz=28,slow=6.2						
NOA	NORSAR Array B	69.39	341	LR	LR	20 00 32.5	
	comp=Z,6.3nm,18.1s,baz=335,slow=41						
HFS	Hagfors	69.58	339	P	P	19 24 16.3	-0.7
	comp=Z,3.2nm,0.5s,baz=48,slow=4.4,SNR=27						
ASAR	Alice Springs	70.33	197	P	P	19 24 25.4	+3.5
	comp=Z,0.6nm,0.7s,baz=5.9,slow=5.4,SNR=7.2						
KBZ	Khabaz	71.18	313	P	P	19 24 27.1	+0.1
	comp=Z,6.4nm,0.9s,baz=62,slow=4.1,SNR=9.5						
AKASG	Malin Array Be	72.27	326	P	P	19 24 32.6	-0.8
	comp=Z,1.5nm,0.3s,baz=37,slow=6.2,SNR=10						
DPC	Dobruska-Polom	77.26	332	*e*P	P	19 25 03.0	+0.6
DPC	Dobruska-Polom	77.26	332	*e*P	P	19 25 03.0	+0.6
CLL	Collm	77.47	335	*i* P	P	19 25 03.6	+0.1
CLL				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MLR	Muntele Rosu	77.74	324	P	P	19 25 05.2	-0.1
	comp=Z,0.6nm,0.8s,baz=338,slow=5.4						
PRU	Pruhonice	78.15	333	*e*P	P	19 25 07.6	+0.3
PRU	Pruhonice	78.15	333	*e*P	P	19 25 07.6	+0.3
BRTR	Keskin Array B	78.80	316	P	P	19 25 11.8	+0.5
	comp=Z,0.3nm,0.4s,baz=45,slow=4.3,SNR=4.4						
KHC	Kasperske Hory	79.20	333	*e*P	P	19 25 13.7	+0.5
KHC				*e*x	x	19 25 17.8	
KHC	Kasperske Hory	79.20	333	*e*P	P	19 25 13.7	+0.5
KHC				*e*		19 25 17.8	
TXAR	Lajitas Array	79.25	59	P	P	19 25 13.9	+0.1
	comp=Z,0.2nm,0.7s,baz=342,slow=5.7,SNR=3.1						
GERES	GERESS Array B	79.41	333	P	P	19 25 14.2	-0.2
	comp=Z,0.6nm,0.6s,baz=38,slow=6.8,SNR=5.6						

IDC ***08*** *19:14:22.3±2.5, 43°.19N×105°.13W, h0^{km}, mb4.2/2, mb1 4.1/4, mb1mx3.5/64, mbtmp4.0/4, ML3.5/2, MS2.6/2, Ms1 2.6/2, ms1mx2.3/64, Error ellipse: s-maj=58.3km s-min=9.0km az=157.0*

ISCJB ***08*** *19:14:25.0±0.5, 43°.70N±0°.03×105°.30W±0°.05, h0^{km}, mb4.4/2, Error ellipse: s-maj=5.2km s-min=4.4km az=23.0*

NEIC ***08*** *19:14:25.4±0.8, 43°.63N×105°.29W, h0^{km}, ML3.1, Error ellipse: s-maj=12.5km s-min=11.1km az=136.0, Suspected Mining explosion.*

NEIC 76 km [47 miles] SSE of Gillette.

ISC 08 19:14:25.5±0.8**, 43°.66N**±0°.04×**105°.33W**±0°.04**, h0^{km}, n25, σ1^{s}.44**/30**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	1.05	63	P	Pg	19 14 45.4	-0.1
	baz=242						
RSSD	Black Hills	1.05	63	*e*Pg	Pg	19 14 45.4	-0.1
K22A	Casper	1.33	221	P	Pg	19 14 49.5	-1.5
	baz=42						
K22A				S	Sg	19 15 08.4	+0.1
	baz=42						
LAO	LASA Array	3.10	349	P	Pn	19 15 16.3	+0.6
	baz=168						
LAO				S	Sn	19 15 54.8	+1.4
	baz=168						
LAO	LASA Array	3.10	349	*e*Pn	Pn	19 15 17.9	+2.2
RLMT	Red Lodge	3.18	299	P	Pn	19 15 17.3	+0.4
	baz=116						
RLMT				S	Sn	19 15 56.9	+1.3
	baz=116						
RLMT	Red Lodge	3.18	299	*e*Pn	Pn	19 15 17.4	+0.4
RLMT				*e*Sn	Sb	19 16 00.8	-1.5
PDAR	Pinedale Array	3.21	255	Pn	Pn	19 15 17.9	+0.5
	3.4nm,0.3s,baz=72,slow=14,SNR=45						
PDAR				Lg	Lg	19 16 04.8	
	17nm,0.3s,baz=72,slow=35,SNR=10						
BW06	Boulder Array	3.21	255	P	Pn	19 15 17.4	-0.1
	baz=73						
BW06				Sb	Sb	19 16 05.4	+2.0
	baz=73						
BW06	Boulder Array	3.21	255	Pn	Pn	19 15 17.9	+0.5
BW06				*e*Sg	Sb	19 16 04.6	+1.2
OGNE	Ogallala	3.65	137	P	Pn	19 15 23.4	0.0
	baz=319						
OGNE				Sb	Sb	19 16 17.6	+1.8
	baz=319						
OGNE	Ogallala	3.65	137	Pn	Pn	19 15 23.9	+0.6
ISCO	Idaho Springs	3.86	183	P	Pn	19 15 26.3	-0.1
	baz=3.5						
ISCO				Sb	Sb	19 16 24.3	+2.2
	baz=3.5						
ISCO	Idaho Springs	3.86	183	*e*Pn	Pn	19 15 26.1	-0.3
O20A	White River Ci	4.14	213	P	Pn	19 15 30.1	0.0
	baz=31						
O20A				Sb	Sb	19 16 32.0	+2.2
	baz=31						
O20A	White River Ci	4.14	213	*e*Pn	Pn	19 15 27.1	-3.0
DGMT	Dagmar	4.88	9	P	Pn	19 15 37.3	-2.8
BOZ	Bozeman (W)	4.89	296	*e*Pn	Pn	19 15 41.7	+1.2
DUG	Dugway, Tooele	6.56	241	Pn	Pn	19 15 58.0	-5.4
	1.6nm,0.5s						
ANMO	Albuquerque	8.74	186	LR	LR	19 19 11.3	
	comp=Z,19nm,21.2s,baz=32,slow=35						
ULM	Lac du Bonnet	9.23	41	Pn	Pn	19 16 37.8	-2.0
	1.4nm,0.3s,baz=222,slow=13,SNR=7.9						
ULM				Lg	Lg	19 19 13.9	
	0.6nm,0.3s,baz=131,slow=19,SNR=2.3						
I56US	NEWPORT INFRAS	9.41	303	*i*		20 09 40.0	
	baz=118,slow=312,SNR=1.7						
TXAR	Lajitas Array	14.36	174	LR	LR	19 23 41.8	
	comp=Z,58nm,20.4s,baz=0.0,slow=40						
ARCES	ARCESS Array B	61.51	18	P	P	19 24 42.6	-1.0
	5.1nm,1.1s,baz=337,slow=8.1,SNR=4.5						
FINES	FINESS Array B	68.12	23	P	P	19 25 26.8	+0.1
	1.5nm,0.8s,baz=339,slow=7.4,SNR=3.7						

MEX 08 19:15:55.9±0.6**, 14°.74N×92°.82W, h141^{km}**±10^{km}**, MD3.8, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.56	73	*e*P	Pn	19 16 14.6	-1.9
THIG				*e*S	Sn	19 16 30.5	-1.7
PCIG		1.03	338	*e*P	Pn	19 16 19.4	-0.7
PCIG				*i* S	Sn	19 16 36.7	-1.9
CCIG	Comitan	1.67	23	*i* P	Pn	19 16 26.1	-0.7
CCIG				*e*S	Sn	19 16 48.3	-2.2
TGIG		2.05	352	*i* P	Pn	19 16 30.1	-1.0
TGIG				*i* S	Sn	19 16 55.7	-2.5

MEX 08 19:17:31.1±1.0**, 14°.13N×92°.99W, h16^{km}**±112^{km}**, MD3.8, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.04	42	*i* P	Pb	19 17 47.9	-2.9
THIG				*e*S	Sb	19 17 59.2	-5.0
PCIG		1.58	352	*e*P	Pn	19 17 54.0	-4.5
PCIG				*i* S	Sn	19 18 12.6	-6.0
CCIG	Comitan	2.29	21	*i* P	Pn	19 18 04.8	-3.6
CCIG				*i* S	Sn	19 18 32.8	-3.6
TGIG		2.63	357	*e*P	Pn	19 18 10.6	-2.5
TGIG				*e*S	Sn	19 18 41.4	-3.4

GUC 08 19:21:06.3±0.8**, 28°.10S×70°.28W, h65^{km}**±40^{km}**, ML3.6, 1C-4D, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO03	Copiap	0.50	4	⇓*i*P	Pn	19 21 22.5	+3.7
GO03				*i* S	Sn	19 21 32.6	+4.7
CPCH	Copiapo	0.74	355	⇓*i*P	Pn	19 21 21.4	0.0
LCO	Las Campanas	0.98	202	⇓*i*P	Pn	19 21 25.6	+0.9
LCO				*i* S	Sn	19 21 40.5	+2.3
LCO				IAML		19 21 43.4	
	comp=E,2µm,0.4s						
VCA	Vinchina	1.93	110	IAML		19 22 41.7	
	comp=E,232nm,0.2s						
TLL	Tololo Astrono	2.11	193	*e*P	Pn	19 21 41.5	+1.9
TLL				*e*S	Sn	19 22 07.3	+2.3
TLL				IAML		19 22 19.0	
	comp=N,1µm,0.4s						
GO04	Tololo Observa	2.12	192	⇓*i*P	Pn	19 21 41.5	+1.8
GO04				*i* S	Sn	19 22 07.5	+2.4
GO02	Mina Guanaco	2.99	12	⇑*i*P	Pn	19 21 53.2	+1.6
GO02				IAML		19 22 51.5	
	comp=E,313nm,0.7s						

IDC ***08*** *19:33:51.4±1.7, 35°.37N×141°.45E, h0^{km}, mb3.5/2, mb1 3.4/5, mb1mx3.2/64, mbtmp3.3/5, ML2.8/3, MS2.7/4, Ms1 2.8/4, ms1mx2.4/44, Error ellipse: s-maj=35.5km s-min=23.3km az=77.0*

ISCJB ***08*** *19:33:52.6±0.9, 35°.41N±0°.05×141°.49E±0°.08, h25^{km}, mb3.5/2, MS2.9/1, Error ellipse: s-maj=10.3km s-min=6.0km az=162.4*

JMA ***08*** *19:33:55.5±0.1, 35°.38N×141°.24E, h31^{km}±2^{km}, M2.6*

ISC 08 19:33:55.2±1.4**, 35°.39N**±0°.05×**141°.32E**±0°.10**, h25^{km}, n17, σ1^{s}.16**/18**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.49	310	P	Pb	19 34 04.9	-0.4
CHOJ				S	Sb	19 34 11.8	-0.3
BSO1	Boso 1	0.79	201	P	Pn	19 34 09.7	-0.4
BSO3	Boso 3	0.89	229	P	Pb	19 34 10.9	-0.8
BSO4	Boso 4	0.90	244	P	Pn	19 34 11.0	-1.1
JCN	Nagara	0.92	272	P	Pn	19 34 11.6	-0.8
JYT	Yasato	1.24	313	P	Pn	19 34 16.3	-0.6
JHO	Hitachi	1.36	334	P	Pn	19 34 18.7	+0.1
JIM2	Oshima 3	1.69	247	P	Pn	19 34 21.5	-1.6
JHJ	Hachijo jima 2	2.60	210	Pn	Pn	19 34 35.5	0.0
	2.9nm,0.3s,baz=306,slow=18,SNR=5.5						
JHJ				Sn	Sn	19 35 07.8	+1.4
	8.4nm,0.3s,baz=66,slow=20,SNR=5.1						
MJAR	Matsushiro Arr	2.78	295	Pn	Pn	19 34 38.9	+0.9
	0.8nm,0.3s,baz=118,slow=7.7,SNR=16						
MJAR				Sn	Sn	19 35 13.1	+2.3
	0.6nm,0.3s,baz=148,slow=16,SNR=7.9						
MJAR				LR	LR	19 35 59.2	
	comp=Z,72nm,19.6s,baz=125,slow=45						
MAT	Matsushiro	2.78	295	P	Pn	19 34 39.6	+1.5
MAT				*e*S	Sn	19 35 11.6	+0.8
ASAJ	Asahikawa	8.77	6	Pn	Pn	19 35 59.0	-1.4
	0.2nm,0.3s,baz=163,slow=19,SNR=3.0						
JNU	Nakatsue	8.94	258	LR	LR	19 39 58.5	
	comp=Z,37nm,18.2s,baz=124,slow=41						
KSRS	Korea Array	10.99	285	LR	LR	19 40 54.3	
	comp=Z,44nm,18.9s,baz=46,slow=38						
CMAR	Chiang Mai Arr	41.03	257	LR	LR	20 01 34.6	
	comp=Z,14nm,19.2s,baz=285,slow=40						
WRA	Warramunga Arr	55.42	188	P	P	19 43 26.8	-0.8
	0.7nm,0.7s,baz=4.5,slow=7.7,SNR=14						
ASAR	Alice Springs	59.15	188	P	P	19 43 54.6	+0.8
	0.2nm,0.8s,baz=355,slow=5.6,SNR=3.6						

TIR ***08*** *19:50:55.0, 40°.75N×19°.56E, h2^{km}, Md3.2/5*

THE ***08*** *19:50:56.6, 40°.82N×19°.60E, h2^{km}±2^{km}, ML2.3/3, Error ellipse: s-maj=4.4km s-min=1.4km az=295.0*

ATH ***08*** *19:50:56.2, 40°.85N×19°.65E, h15^{km}±2^{km}, ML2.4/6, Error ellipse: s-maj=4.3km s-min=2.1km az=152.0*

CSEM ***08*** *19:50:57.9±0.2, 40°.75N×19°.63E, h2^{km}, ML3.2, Error ellipse: s-maj=6.1km s-min=4.2km az=80.0*

BEO ***08*** *19:51:00.9±0.8, 40°.88N×19°.64E, h0^{km}, ML2.1/5*

ISC 08 19:50:57.1±0.9**, 40°.78N**±0°.02×**19°.67E**±0°.02**, h15^{km}**±8^{km}**, n76, σ1^{s}.59**/102**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLO	Vlora	0.34	203	*i* Pg	Pg	19 51 03.8	-0.3
VLO				*i* Sg	Sg	19 51 08.3	-0.5
VLO	Vlora	0.34	203	*i* PG	Pg	19 51 03.8	-0.3
VLO				*i* SG	Sg	19 51 08.3	-0.5
KBN	Korca	0.86	100	*i* Pg	Pg	19 51 13.1	-0.8
KBN				*i* Sg	Sn	19 51 27.1	-0.1
KBN	Korca	0.86	100	*i* PG	Pg	19 51 13.1	-0.8
KBN				*i* SG	Sn	19 51 27.1	-0.1
KASA	Kassiopi	1.05	169	P	Pn	19 51 19.5	+2.1
KASA	Kassiopi	1.05	169	P	Pn	19 51 18.5	+1.2
KEK	Kerkira	1.07	175	P	Pn	19 51 17.9	+0.3
KEK				S	Sn	19 51 34.2	+2.0
KEK				AML	AML	19 51 40.9	
	comp=E,271µm,0.5s						
KEK				AML	AML	19 51 42.5	
	comp=N,158µm,0.4s						
KEK	Kerkira	1.07	175	P	Pb	19 51 17.4	+0.1
KEK				S	Sn	19 51 33.8	+1.6
KEK	Kerkira	1.07	175	P	Pn	19 51 17.8	+0.3
KEK				S	Sn	19 51 33.8	+1.6
PHP	Peshkopia	1.08	32	*i* Pg	Pn	19 51 18.5	+0.8
PHP	Peshkopia	1.08	32	*i* PG	Pn	19 51 18.5	+0.8
PHP				*i* SG	Sn	19 51 36.3	+3.8
NEST	Nestorio	1.11	109	P	Pb	19 51 17.4	-0.7
NEST	Nestorio	1.11	109	P	Pb	19 51 18.1	0.0
NEST	Nestorio	1.11	109	P	Pb	19 51 18.1	0.0
SCTE	Santa Cesarea	1.16	233	P	Pb	19 51 18.5	-0.4
SCTE	Santa Cesarea	1.16	233	P	Pb	19 51 18.6	-0.2
SGD	Sagiada	1.24	159	P	Pg	19 51 21.6	+0.5
SGD	Sagiada	1.24	159	P	Pg	19 51 21.1	0.0
SGD	Sagiada	1.24	159	P	Pg	19 51 21.1	0.0
PUK	Puka	1.27	7	*i* Pn	Pg	19 51 23.6	+1.9
PUK				*i* Sn	Sg	19 51 42.5	+4.2
PUK	Puka	1.27	7	*i* PN	Pg	19 51 23.6	+1.9
PUK				*i* SN	Sg	19 51 42.5	+4.2
BIA	Bitola	1.28	79	*i* Pn	Pg	19 51 22.8	+1.1
FNA	Florina	1.29	89	P	Pn	19 51 19.7	-1.1
FNA				AML	AML	19 51 47.4	
	comp=E,423µm,0.5s						
FNA				AML	AML	19 51 47.8	
	comp=N,401µm,0.8s						
FNA	Florina	1.29	89	P	Pn	19 51 20.7	-0.1
FNA				S	Sg	19 51 41.3	+2.3
FNA	Florina	1.29	89	P	Pn	19 51 20.7	-0.1
FNA				S	Sg	19 51 41.3	+2.3
IGT	Igoumenitsa	1.34	158	P	Pg	19 51 22.4	-0.6
IGT				S	Sg	19 51 42.4	+1.9
IGT				AML	AML	19 51 53.0	
	comp=N,195µm,0.8s						
IGT				AML	AML	19 51 57.2	
	comp=E,149µm,1.5s						
IGT	Igoumenitsa	1.34	158	P	Pb	19 51 21.9	-0.1
IGT				S	Sg	19 51 41.8	+1.3
IGT	Igoumenitsa	1.34	158	P	Pg	19 51 22.6	-0.4
IGT				S	Sg	19 51 41.8	+1.3
JAN	Janina	1.44	141	P	Pb	19 51 23.8	+0.1
JAN				AML	AML	19 51 51.2	
	comp=E,277µm,0.7s						
JAN				AML	AML	19 51 53.8	
	comp=N,148µm,0.5s						
JAN	Janina	1.44	141	P	Pb	19 51 24.1	+0.4
DRME	Dracevica, Mon	1.45	346	*e*Pn	Pg	19 51 24.6	-0.5
KPRO	Kipourio	1.53	122	P	Pb	19 51 25.3	0.0
KPRO				AML	AML	19 51 58.4	
	comp=N,195µm,0.7s						
KPRO				AML	AML	19 51 59.6	
	comp=E,174µm,0.8s						
KPRO	Kipourio	1.53	122	P	Pg	19 51 25.8	-0.8
KPRO	Kipourio	1.53	122	P	Pg	19 51 25.8	-0.8
KZN	Kozani	1.67	106	P	Pg	19 51 28.8	-0.4
KZN				AML	AML	19 51 59.8	
	comp=E,235µm,0.4s						
KZN				AML	AML	19 52 04.9	
	comp=N,184µm,0.7s						
KZN	Kozani	1.67	106	P	Pg	19 51 28.3	-0.9
PDG	Podgorica	1.68	349	*e*Pn	Pg	19 51 30.4	+1.0
PDG				*e*Sg	Sg	19 51 50.2	-1.0
PDG	Podgorica	1.68	349	*e*Pn	Pb	19 51 27.3	-0.4
PDG				*e*Sg	Sg	19 51 50.2	-1.0
SKO	Skopje	1.79	48	*e*Pg	Pg	19 51 31.7	+0.2
SKO				*e*Sg	Sg	19 51 56.7	+2.0
SKO	Skopje	1.79	48	*i* Pn	Pg	19 51 32.9	+1.4
SKO	Skopje	1.79	48	*e*Pg	Pg	19 51 31.7	+0.2
SKO				*e*Sg	Sg	19 51 56.7	+2.0
HCY	Herceg Novi	1.89	332	*e*Pn	Pb	19 51 30.7	-0.6
GRG	Griva	2.08	84	P	Pb	19 51 35.2	+0.7
GRG	Griva	2.08	84	P	Pb	19 51 33.2	-1.4
GRG	Griva	2.08	84	P	Pb	19 51 34.1	-0.5
STIP	Stip	2.11	63	*i* Pn	Pg	19 51 37.8	+0.3
THL	Klokotos Trika	2.17	123	P	Pb	19 51 37.0	+1.0
THL	Klokotos Trika	2.17	123	P	Pb	19 51 35.9	-0.1
TREB	Trebinje	2.17	333	*e*Pn	Pn	19 51 33.4	+0.6
VAY	Valandovo	2.26	75	*e*Pn	Pg	19 51 38.9	-1.6
VAY				*e*Sg	Sg	19 52 12.2	+2.5
VAY	Valandovo	2.26	75	*e*Pn	Pg	19 51 38.9	-1.6
VAY				*e*Sg	Sg	19 52 12.2	+2.5
BRY	Bratogost	2.28	339	*e*Pn	Pg	19 51 39.2	-1.7
FSK	Fiskardo	2.42	163	P	Pn	19 51 36.7	+0.6
PDO	Prodromos	2.47	151	P	Pn	19 51 37.0	+0.1
PDO	Prodromos	2.47	151	P	Pn	19 51 38.2	+1.3
EVR	Evrytania	2.48	138	P	Pb	19 51 40.0	-1.5
EVR	Evrytania	2.48	138	P	Pb	19 51 39.8	-1.7
UPM	Unac-Piva	2.49	347	*e*Pn	Pb	19 51 41.7	0.0
SJES	Sjenica	2.49	5	*e*Pn	Pb	19 51 41.6	-0.1
SJES	Sjenica	2.49	5	*e*Pn	Pb	19 51 41.6	-0.1
STON	Ston	2.56	325	*e*Pn	Pn	19 51 39.0	+1.0
STON				Sn	Sn	19 52 10.0	+1.1
STON	Ston	2.56	325	*e*Pn	Pn	19 51 38.6	+0.6
SELS	Selova	2.67	23	*e*Pn	Pb	19 51 43.4	-1.2
AGG	Agios Georgios	2.69	130	P	Pb	19 51 44.5	-0.6
AGG	Agios Georgios	2.69	130	P	Pb	19 51 43.5	-1.6
VTS	Vitosha	3.21	54	*e*Pn	Pb	19 51 52.2	-1.7
VTS				*e*Sn	Sb	19 52 30.4	-2.5
VTS	Vitosha	3.21	54	*e*Pn	Pb	19 51 52.2	-1.7
VTS				*e*Sn	Sb	19 52 30.4	-2.5
BOVS	Bovan	3.23	27	*e*Pn	Pb	19 51 52.4	-1.8
BOVS	Bovan	3.23	27	*e*Pn	Pb	19 51 52.4	-1.8
DIVS	Divibare	3.33	4	*e*Pn	Pb	19 51 52.4	-3.5
DIVS	Divibare	3.33	4	*e*Pn	Pb	19 51 52.4	-3.5
ZAPS	Zavoj	3.33	41	*e*Pn	Pb	19 51 53.6	-2.3
ZAPS				*e*Sn	Sb	19 52 32.3	-3.9
ZAPS	Zavoj	3.33	41	*e*Pn	Pb	19 51 53.6	-2.3
ZAPS				*e*Sn	Sb	19 52 32.3	-3.9
KLV	Kalavryta, Ach	3.34	144	P	Pn	19 51 49.9	+1.0
KLV	Kalavryta, Ach	3.34	144	P	Pn	19 51 50.7	+1.8
CRES	Cresnjev	5.91	330	*e*Pn	Pn	19 52 25.4	+1.3

MAN 08 19:52:01.5, 11°.71N×125°.64E, h9^{km}, mb4.1, ML2.9, MS2.6, 1D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	Borongan	0.23	242	*e*P	Pg	19 52 07.9	+1.8
BESP				*e*S	Sg	19 52 13.3	+4.0
PLP	Palo	0.85	230	⇓*i*P	Pg	19 52 16.8	-1.0
PLP				*e*S	Sg	19 52 26.3	-2.5
CNP	Catarman	1.25	310	*e*P	Pn	19 52 23.9	-1.1
CNP				*e*S	Sn	19 52 42.1	+0.1
MSLP	Maasin	1.75	206	*e*P	Pn	19 52 31.4	-0.6
MSLP				*e*S	Sb	19 52 56.5	+0.7
PVCP	Virac	2.37	322	*e*P	Pn	19 52 41.6	+1.0
GUIM	Jordan	3.19	251	*e*P	Pn	19 52 52.2	+0.4

ISCJB ***08*** *19:52:57.7±0.3, 24°.23S±0°.03×67°.28W±0°.04, h181^{km}±3^{km}, mb4.0/14, Error ellipse: s-maj=6.2km s-min=4.1km az=136.3*

NEIC ***08*** *19:52:57.2±0.8, 24°.24S×67°.15W, h163^{km}±8^{km}, mb4.0/4, Error ellipse: s-maj=11.1km s-min=7.7km az=93.0*

SJA ***08*** *19:52:58.3±0.7, 24°.22S×67°.27W, h177^{km}±8^{km}, ML3.4,*

MW4.2
*IDC **08** 19:52:58.5±2.3, 24°.18S×67°.02W, h169km±20km, mb3.9/12, mb1 4.0/16, mb1mx3.9/38, mbtmp4.4/16, MS2.8/1, Ms1 2.9/1, ms1mx2.5/32, Error ellipse: s-maj=19.1km s-min=14.0km az=63.0*
*GUC **08** 19:52:59.9±0.4, 24°.16S×67°.78W, h215km±7km, ML5.2*
ISC 08 19:52:58.2±0.7**, 24°.19S**±0°.04×**67°.26W**±0°.04**, h173**km±6km**, n48, σ1ˢ60**/65**, mb4.1**/14**, 5C-2D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.69	109	eP	Pn	19 53 33.3	+1.7
SLA				eS	Sn	19 53 58.2	+0.8
PB15	IPOC Station P	2.25	295	eP	Pn	19 53 39.5	+1.7
PB15				eS	Sn	19 54 09.4	+1.0
GO02	Mina Guanaco	2.33	245	eP	Pn	19 53 40.1	+1.3
GO02				iS	Sn	19 54 11.7	+1.3
GO02				IAML		19 54 12.1	
	comp=N,12µm,0.3s						
YJA	Yavi	2.56	39	eP	Pn	19 53 43.6	+1.8
YJA				IAML		19 53 45.3	
	comp=Z,149nm,0.3s						
YJA				eS	Sn	19 54 17.4	+2.0
PB06	IPOC Station P	2.58	304	⇑iP	Pn	19 53 43.5	+1.8
PB06				eS	Sn	19 54 16.0	+0.6
PB06				IAML		19 54 18.2	
	comp=N,12µm,0.5s						
PB14	IPOC Station P	2.90	261	eP	Pn	19 53 46.6	+1.0
PB14				eS	Sn	19 54 21.9	-0.5
PB14	IPOC Station P	2.90	261	⇑iP	Pn	19 53 46.3	+0.7
PB14				eS	Sn	19 54 21.4	-1.0
PB14				IAML		19 54 24.2	
	comp=E,3µm,0.6s						
PB09	IPOC Station P	3.00	322	eP	Pn	19 53 48.8	+2.1
PB09				iS	Sn	19 54 25.6	+1.2
PB09				IAML		19 54 26.4	
	comp=N,7µm,0.5s						
PB05	IPOC Station P	3.01	296	eP	Pn	19 53 47.7	+0.9
PB05				eS	Sn	19 54 23.5	-1.0
PB05				IAML		19 54 25.6	
	comp=E,4µm,0.4s						
PB10	IPOC Station P	3.09	282	⇓eP	Pn	19 53 48.9	+1.2
PB10	IPOC Station P	3.09	282	⇑iP	Pn	19 53 48.8	+1.2
PB10				iS	Sn	19 54 25.1	-1.0
PB10				IAML		19 54 30.3	
	comp=E,2µm,0.7s						
AHML	Horco Molle	3.12	146	eP	Pn	19 53 48.5	+0.5
AHML				IAML		19 53 49.1	
	comp=Z,70nm,0.4s						
AHML				eS	Sn	19 54 26.4	-0.5
PB03	IPOC Station P	3.13	312	⇑iP	Pn	19 53 49.6	+1.3
PB03				iS	Sn	19 54 27.2	-0.1
PB03				IAML		19 54 29.6	
	comp=E,4µm,0.3s						
PB07	IPOC Station P	3.44	315	eP	Pn	19 53 53.4	+1.1
PB07				iS	Sn	19 54 33.4	-0.9
PB01	IPOC Station P	3.74	326	eP	Pn	19 53 56.6	+0.6
PB01				iS	Sn	19 54 40.4	-0.6
PB02	IPOC Station P	3.75	319	⇑iP	Pn	19 53 56.7	+0.7
PB02				eS	Sn	19 54 39.5	-1.6
CYA	Choya	4.44	163	eP	Pn	19 54 05.0	+0.3
CYA				IAML		19 54 07.3	
	comp=Z,23nm,0.4s						
CYA				eS	Sn	19 54 55.2	-1.6
LCO	Las Campanas	5.71	212	ePn	Pn	19 54 19.3	-2.3
	comp=Z,405nm,0.8s						
LCO				eSn	Sn	19 55 11.7	-15
LPAZ	La Paz	7.90	354	P	Pn	19 54 51.9	+1.0
	comp=Z,15nm,0.3s,baz=146,slow=4.9,SNR=570						
LPAZ				S	Sn	19 56 12.9	-6.8
	comp=Z,1.2nm,0.3s,baz=133,slow=18,SNR=1.9						
LPAZ				LR	LR	19 58 39.9	
	comp=Z,62nm,19.5s,baz=230,slow=43						
CPUP	Villa Florida	9.24	105	P	Pn	19 55 06.2	-1.6
	comp=Z,0.4nm,0.3s,baz=283,slow=12,SNR=8.1						
SIV	San Ignacio	10.01	37	P	Pn	19 55 16.4	-1.7
	comp=Z,9.1nm,0.3s,baz=227,slow=13,SNR=59						
SIV				S	Sn	19 56 55.5	-14
	comp=Z,0.1nm,0.3s,baz=232,slow=16,SNR=8.6						
TRQA	Tornquist	14.54	163	ePn	Pn	19 56 14.5	-1.4
	comp=Z,27nm,0.8s						
SAML	Samuel	15.64	15	ePn	Pn	19 56 25.1	-4.5
	comp=Z,5.9nm,0.6s						
PLCA	Paso Flores	16.73	189	P	P	19 56 41.2	-0.7
	comp=Z,0.7nm,0.3s,baz=25,slow=11,SNR=26						
PTGA	Pitinga	24.36	18	P	P	19 57 59.5	-1.0
	comp=Z,3.4nm,0.6s,baz=203,slow=12,SNR=7.6						
TKL	Tuckaleechee C	61.54	345	P	P	20 02 57.4	+0.4
	comp=Z,2.6nm,0.6s,baz=159,slow=14,SNR=3.6						
QSPA	South Pole Qui	66.02	180	P	P	20 03 27.0	+0.9
	comp=Z,3.6nm,0.6s,baz=166,slow=3.3,SNR=26						
QSPA	South Pole Qui	66.02	180	eP	P	20 03 26.9	+0.8
MNTX	Cornudas Mount	66.46	325	P	P	20 03 29.2	+0.1
	comp=Z,1.9nm,0.8s						
DBIC	Dimbokro	68.09	72	P	P	20 03 39.6	-0.1
	comp=Z,5.3nm,1.0s,baz=292,slow=11,SNR=5.6						
ANMO	Albuquerque	69.57	326	P	P	20 03 51.1	+2.4
	comp=Z,2.5nm,0.8s,baz=142,slow=9.6,SNR=8.7						
SDCO	Great Sand Dun	71.32	329	P	P	20 03 59.4	0.0
	comp=Z,0.9nm,0.6s						
KOWA	Kowa	72.73	65	P	P	20 04 08.1	+0.2
	comp=Z,3.7nm,0.5s,baz=248,slow=7.2,SNR=15						
SYO	Syowa Base	73.46	159	⇓eP	P	20 04 11.6	+0.3
TORD	Torodi Ar. Bea	76.86	69	P	P	20 04 29.8	-1.8
	comp=Z,2.9nm,0.5s,baz=259,slow=5.4						
ULM	Lac du Bonnet	78.33	342	P	P	20 04 39.5	+0.6
	comp=Z,3.3nm,0.6s,baz=156,slow=4.8,SNR=3.2						
NVAR	Mina Array Bea	78.53	321	P	P	20 04 42.1	+1.5
	comp=Z,0.4nm,0.3s,baz=146,slow=8.3,SNR=3.7						
BOSA	Boshof	80.86	117	P	P	20 04 53.6	+0.1
	comp=Z,1.9nm,0.5s,baz=235,slow=2.1,SNR=6.7						
ESDC	Sonseca Array	86.69	44	P	P	20 05 23.4	+0.8
	comp=Z,0.6nm,0.7s,baz=232,slow=6.2,SNR=5.1						
YKA	Yellowknife Ar	94.22	340	P	P	20 05 57.8	+0.8
	comp=Z,0.7nm,0.6s,baz=142,slow=6.2,SNR=4.3						
ASAR	Alice Springs	128.19	205	PKP	PKPdf	20 11 44.9	+0.2
	comp=Z,0.9nm,0.6s,baz=133,slow=1.7,SNR=17						
WRA	Warramunga Arr	131.35	207	PKP	PKPdf	20 11 51.0	+0.3
	comp=Z,0.7nm,0.5s,baz=160,slow=1.6,SNR=18						
KURK	Kurchatov	142.67	36	PKP	PKPdf	20 12 08.6	-2.0
KURBB	Kurchatov Arra	142.67	36	PKP	PKPdf	20 12 08.5	-2.0
	comp=Z,0.4nm,0.8s,baz=303,slow=3.4,SNR=4.5						
ZALV	Zalesovo Beam	143.67	28	PKP	PKPdf	20 12 11.6	-0.6
	comp=Z,1.8nm,0.5s,baz=314,slow=3.3,SNR=7.5						
MKAR	Makanchi Array	146.82	40	PKPbc	PKPbc	20 12 19.2	-0.7
	comp=Z,3.9nm,0.6s,baz=332,slow=1.5,SNR=44						
MJAR	Matsushiro Arr	154.89	305	PKPab	PKPab	20 12 56.9	+1.5
	comp=Z,1.5nm,0.8s,baz=86,slow=2.6,SNR=7.8						
SONM	Songino Array	155.87	10	PKPab	PKPab	20 13 00.2	+0.9
	comp=Z,0.6nm,0.6s,baz=306,slow=2.3,SNR=4.8						

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*JMA **08** 19:58:37.9±0.6, 45°.58N×151°.55E, h30km, M3.9*
*SKHL **08** 19:58:38.8±0.7, 45°.01N×151°.75E, h43km±6km, mb4.6/2*
ISC 08 19:58:37.0±2.5**, 44°.7N**±0°.1×**151°.9E**±0°.1**, h37**km**, n22, σ1ˢ93**/32**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.93	281	iP	Pn	19 59 20.5	-0.4
KUR				AMB	AMB	19 59 21.0	
	21nm,0.3s						
KUR				AMB	AMB	19 59 21.0	
	10.0nm,0.3s						
KUR				AMB	AMB	19 59 21.0	
	44nm,0.3s						
KUR				iS	Sn	19 59 51.0	-3.9
KUR				A	A	19 59 56.0	
	262nm,0.4s						
KUR				A	A	19 59 56.0	
	120nm,0.4s						
YUK	Yuzh-Kuril'sk	4.41	263	iP	Pn	19 59 43.0	+1.7
YUK				AMB	AMB	19 59 46.0	
	16nm,0.3s						
YUK				AMB	AMB	19 59 46.0	
	14nm,0.3s						
YUK				AMB	AMB	19 59 46.0	
	61nm,0.3s						
YUK				iS	Sn	20 00 31.2	-0.1
YUK				A	A	20 00 45.0	
	78nm,0.4s						
YUK				A	A	20 00 45.0	
	94nm,0.4s						
LAGR	Lagunnoye	4.46	263	eP	Pn	19 59 44.0	+2.0
LAGR				eS	Sn	20 00 33.0	+0.4
GRPR	Tuman	4.48	263	eP	Pn	19 59 44.0	+1.7
GRPR				eS	Sn	20 00 33.0	-0.1
GRPR				A	A	20 00 48.0	
	87nm,0.3s						
GRPR				A	A	20 00 48.0	
	93nm,0.3s						
NEM2	Nemuro 2	4.67	255	P	Pn	19 59 46.0	+1.2
NEM2				eS	Sn	20 00 36.2	-1.5
GLVR	Golovnino	4.72	260	eP	Pn	19 59 47.0	+1.5
GLVR				eS	Sn	20 00 38.0	-0.9
JRA	Rausu	4.95	263	P	Pn	19 59 50.9	+2.2
JNK	Nakash	5.32	260	P	Pn	19 59 55.5	+1.7
JNK				eS	Sn	20 00 54.2	+0.5
JAK	Akkeshi	5.52	254	P	Pn	19 59 57.7	+1.3
JAK				eS	Sn	20 00 57.7	-0.9
JTKR	Abashiri--Toko	5.81	265	P	Pn	20 00 02.5	+2.0
JAR	Ashorobuto	6.06	259	P	Pn	20 00 06.3	+2.3
JAR				eS	Sn	20 01 12.3	+0.2
JOB	Onbets	6.14	256	P	Pn	20 00 07.1	+2.1
JMP	Maruseppu	6.19	266	P	Pn	20 00 08.2	+2.4
JCH	Churui	6.57	254	P	Pn	20 00 12.5	+1.6
SKR	Severo-Kuril's	6.59	24	eP	Pn	20 00 11.2	+0.1
JKK2	Kamakawa 2	6.65	266	P	Pn	20 00 14.5	+2.4
MYR	Moyori	6.75	252	eP	Pn	20 00 15.7	+2.3
JNBK	Urakawa-nobuka	7.12	253	P	Pn	20 00 19.4	+1.0
JNBK				eS	Sn	20 01 35.4	-2.5
JNB	Noboribetsu	8.23	258	P	Pn	20 00 35.5	+1.8
JKB	Kayabe	8.45	254	P	Pn	20 00 37.9	+1.3
TYV	Tymovskoe	8.75	318	eP	Pn	20 00 41.0	+0.2
JANG	Nango	8.84	244	eS	Sn	20 02 15.9	-4.4

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*ISCJB **08** 20:02:35.5±0.7, 32°.75N±0°.04×32°.51E±0°.04, h33km, Error ellipse: s-maj=6.1km s-min=3.8km az=136.5*
*CSEM **08** 20:02:35.6±0.2, 32°.78N×32°.55E, h20km, MD2.3, Error ellipse: s-maj=4.7km s-min=3.0km az=127.0*
*HLW **08** 20:02:35.6, 32°.89N×32°.44E, h18km±22km, Md3.5, Ml3.5*
*GII **08** 20:02:38.0±0.0, 32°.79N×32°.53E, h31km, MD2.3/7*
ISC 08 20:02:36.1±1.4**, 32°.80N**±0°.04×**32°.47E**±0°.05**, h35**km**, n61, σ0ˢ83**/91**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSH		2.12	150	P	Pn	20 03 09.1	+0.1
	baz=150						
RSH		2.12	150	P	Pn	20 03 09.1	+0.1
OFRI	'Ofer	2.12	94	Pn	Pn	20 03 08.6	-0.5
OFRI				Sn	Sn	20 03 32.0	-2.3
OFRI	'Ofer	2.12	94	Pn	Pn	20 03 08.6	-0.5
OFRI				Sn	Sn	20 03 32.0	-2.3
SLTI	Sal'it	2.24	104	Pn	Pn	20 03 10.4	-0.3
SLTI	Sal'it	2.24	104	Pn	Pn	20 03 10.4	-0.3
CSS	Mathiatis	2.27	18	Pn	Pn	20 03 12.0	+0.8
CSS	Mathiatis	2.27	18	Pn	Pn	20 03 12.0	+0.8
HNTI	Hanita	2.29	82	Pn	Pn	20 03 11.2	-0.2
HNTI				Sn	Sn	20 03 38.6	+0.2
HNTI	Hanita	2.29	82	Pn	Pn	20 03 11.2	-0.2
HNTI				Sn	Sn	20 03 38.6	+0.2
AMAZ	Amatzia	2.43	121	Pn	Pn	20 03 13.1	-0.2
AMAZ				Sn	Sn	20 03 41.5	-0.2
AMAZ	Amatzia	2.43	121	Pn	Pn	20 03 13.1	-0.2
AMAZ				Sn	Sn	20 03 41.5	-0.2
MMA0B	Mount Meron ar	2.47	84	Pn	Pn	20 03 13.9	-0.1
MMA0B				Sn	Sn	20 03 42.4	-0.6
MMA0B	Mount Meron ar	2.47	84	Pn	Pn	20 03 13.9	-0.1
MMA0B				Sn	Sn	20 03 42.4	-0.6
KZIT	Kziot	2.50	139	Pn	Pn	20 03 14.6	+0.4
KZIT				Sn	Sn	20 03 43.4	-0.1
KZIT	Kziot	2.50	139	Pn	Pn	20 03 14.6	+0.4
KZIT				Sn	Sn	20 03 43.4	-0.1
MMLI	Mount Malkishu	2.51	97	Pn	Pn	20 03 13.7	-0.8
MMLI				Sn	Sn	20 03 42.3	-1.6
MMLI	Mount Malkishu	2.51	97	Pn	Pn	20 03 13.7	-0.8
MMLI				Sn	Sn	20 03 42.3	-1.6
HMDT	Nahal Hemdat	2.64	101	Pn	Pn	20 03 16.4	+0.3
HMDT				Sn	Sn	20 03 47.0	+0.1
HMDT	Nahal Hemdat	2.64	101	Pn	Pn	20 03 16.4	+0.3
HMDT				Sn	Sn	20 03 47.0	+0.1
YTIR	Yattir	2.66	122	Pn	Pn	20 03 17.2	+0.6
YTIR	Yattir	2.66	122	Pn	Pn	20 03 17.2	+0.6
KSDI	Kefar Szold	2.71	81	Pn	Pn	20 03 17.4	+0.3
KSDI				Sn	Sn	20 03 48.7	+0.1
KSDI	Kefar Szold	2.71	81	Pn	Pn	20 03 17.4	+0.3
KSDI				Sn	Sn	20 03 48.7	+0.1
DSI	Dead Sea	2.75	116	Pn	Pn	20 03 18.5	+0.8
DSI	Dead Sea	2.75	116	Pn	Pn	20 03 18.5	+0.8
KSHT	Keshet	2.81	85	Pn	Pn	20 03 19.6	+0.9
KSHT	Keshet	2.81	85	Pn	Pn	20 03 19.6	+0.9
HHAG	Hagoal	2.85	187	P	Pn	20 03 19.8	+0.6
	baz=186						
HHAG				AMP		20 03 00.0	
	baz=186						
HHAG				S	Sn	20 03 50.1	-2.3
	baz=186						
HHAG	Hagoal	2.85	187	P	Pn	20 03 19.8	+0.6
MZDA	Masada	2.87	120	Pn	Pn	20 03 19.9	+0.6
MZDA				Sn	Sn	20 03 53.1	+0.6
MZDA	Masada	2.87	120	Pn	Pn	20 03 19.9	+0.6
MZDA				Sn	Sn	20 03 53.1	+0.6
KOT	Kottamia	2.91	191	P	Pn	20 03 20.6	+0.6
	baz=191						
KOT				AMP		20 03 00.0	
	baz=191						
KOT				S	Sn	20 03 52.4	-1.4
	baz=191						
KOT	Kottamia	2.91	191	P	Pn	20 03 20.6	+0.6
HNKL	Nakhl	3.14	155	P	Pn	20 03 23.7	+0.6
	baz=155						
HNKL				S	Sn	20 03 58.3	-1.0
	baz=155						
HNKL	Nakhl	3.14	155	P	Pn	20 03 23.7	+0.6
HNKL				S	Sn	20 03 58.3	-1.0
ZFRI	Zfri	3.21	133	Pn	Pn	20 03 24.1	0.0
ZFRI	Zfri	3.21	133	Pn	Pn	20 03 24.1	0.0
PRNI	Paran	3.26	138	Pn	Pn	20 03 25.0	+0.3
PRNI				Sn	Sn	20 04 02.5	+0.2
PRNI	Paran	3.26	138	Pn	Pn	20 03 25.0	+0.3
PRNI				Sn	Sn	20 04 02.5	+0.2
ZNM	Zenema	3.43	174	P	Pn	20 03 28.0	+0.9
	baz=173						
ZNM	Zenema	3.43	174	P	Pn	20 03 28.0	+0.9
HRFI	Mount Harif	3.52	141	Pn	Pn	20 03 29.0	+0.7
HRFI				Sn	Sn	20 04 08.6	-0.1
HRFI	Mount Harif	3.52	141	Pn	Pn	20 03 29.0	+0.7
HRFI				Sn	Sn	20 04 08.6	-0.1
MBRI	Mt Berech	3.65	144	Pn	Pn	20 03 30.6	+0.4
MBRI				Sn	Sn	20 04 12.4	+0.3
MBRI	Mt Berech	3.65	144	Pn	Pn	20 03 30.6	+0.4
MBRI				Sn	Sn	20 04 12.4	+0.3
EIL	Elat	3.77	145	Pn	Pn	20 03 32.4	+0.6
EIL				Sn	Sn	20 04 14.4	-0.5
EIL	Elat	3.77	145	Pn	Pn	20 03 32.4	+0.6
EIL				Sn	Sn	20 04 14.4	-0.5
HBST	Basata	4.06	151	P	Pn	20 03 36.3	+0.5
	baz=151						
HBST	Basata	4.06	151	P	Pn	20 03 36.3	+0.5
NUB		4.20	153	P	Pn	20 03 38.8	+1.2
	baz=153						
NBNS	Bani Suef	4.28	194	P	Pn	20 03 39.6	+0.7
	baz=194						
HKAT	Jabal Katrina	4.46	163	P	Pn	20 03 41.4	0.0
	baz=162						
HKAT	Jabal Katrina	4.46	163	P	Pn	20 03 41.4	0.0
TR2	Tor 2	4.53	166	P	Pn	20 03 42.3	+0.1
	baz=165						
TR2	Tor 2	4.53	166	P	Pn	20 03 42.3	+0.1
TAMRE	El Minia	5.27	195	P	Pn	20 03 52.3	-0.1
	baz=195						
TAMRE	El Minia	5.27	195	P	Pn	20 03 52.3	-0.1
HHRG	Al Ghardaqah	5.64	170	P	Pn	20 04 00.2	+2.7
	baz=169						
HHRG	Al Ghardaqah	5.64	170	P	Pn	20 04 00.2	+2.7
HFRF	Wahat Farafira	6.69	214	P	Pn	20 04 11.5	-0.4
	baz=214						

IDC 08 20:19:49.3±4.0**, 14°.01S**×**171°.32E, h595**km±36km**, mb3.1**/4**, mb1 3.3**/4**, mb1mx2.8**/48**, mbtmp4.1**/4**, Error ellipse: s-maj=85.7km s-min=26.1km az=137.0, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	32.49	232	P	P	20 25 32.1	-0.4
	1.2nm,0.3s,baz=54,slow=8.5,SNR=11						
WRA	Warramunga Arr	35.81	255	P	P	20 26 00.5	+0.1
	1.1nm,0.5s,baz=86,slow=8.8,SNR=20						
ASAR	Alice Springs	36.60	249	P	P	20 26 06.7	-0.2
	2.4nm,0.4s,baz=78,slow=9.1,SNR=67						
ASAR				ScP	ScP	20 31 03.6	-0.9
	0.4nm,0.8s,baz=89,slow=4.1,SNR=4.3						
ILAR	Eielson Array	84.67	17	P	P	20 31 20.7	-0.3
	0.6nm,0.6s,baz=233,slow=5.2,SNR=10						
ARCES	ARCESS Array B	120.50	347	PKP	PKPdf	20 37 33.0	-0.6
	3.1nm,0.9s,baz=55,slow=2.7,SNR=6.9						
DAVOX	Davos/Dischmat	143.81	338	PKP	PKPdf	20 38 18.6	+0.6
	1.7nm,0.5s,baz=135,slow=1.4,SNR=5.5						

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*DJA **08** 20:26:34.3±0.3, 4°S±3°×12°1E±°, h10km, M4.5/12, mB5.2/1, mb4.6/4, MLv4.4/12, Mw(mB)4.6/1*
*ISCJB **08** 20:26:35.8±0.3, 3°.65S±0°.04×120°.97E±0°.04, h33km, mb4.1/25, MS3.2/8, Error ellipse: s-maj=6.1km s-min=5.2km az=152.1*
*IDC **08** 20:26:39.4±2.8, 3°.63S×121°.04E, h51km±26km, mb3.8/20, mb1 4.0/23, mb1mx3.8/58, mbtmp4.1/23, ML3.8/3, MS3.3/11, Ms1 3.3/11, ms1mx2.9/52, Error ellipse: s-maj=21.2km s-min=12.0km az=69.0*
ISC 08 20:26:38.0±0.5**, 3°.65S**±0°.06×**120°.91E**±0°.05**, h35**km**, n56, σ1ˢ21**/57**, mb4.1**/25**, MS3.2**/8**, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPSI	Sidrap Palu	1.18	255	P	Pn	20 26 55.6	-2.4
SPSI				S	Sn	20 27 13.2	+0.3
TTSI	Tana Toraja	1.25	299	P	Pn	20 26 55.8	-3.1
KDI	Kendari	1.73	100	P	Pn	20 27 04.5	-1.0
BKSI	Bulukumba	1.84	205	P	Pn	20 27 05.4	-1.6
APSI	Ampana	2.82	15	P	Pn	20 27 20.3	-0.3
PCI	Palu	2.93	338	P	Pn	20 27 22.4	+0.3
LUWI	Luwuk	3.19	36	P	Pn	20 27 24.3	-1.3
MPSI	Mapaga	4.09	346	P	Pn	20 27 37.9	-0.2
EDFI	Ende, Flores	5.12	171	P	Pn	20 27 51.2	-1.2
KMSI	Cibinong	5.20	36	P	Pn	20 27 53.8	+0.5
SOEI	Soe	6.92	151	P	Pn	20 28 16.7	-0.3
BATI	Baumata	7.06	157	P	Pn	20 28 21.7	+2.8
	3.4nm,0.3s,baz=163,slow=2.0,SNR=5.1						
BATI				LR	LR	20 31 09.2	
	comp=Z,226nm,18.3s,baz=90,slow=38						
SIJI	Sorong	10.71	75	P	Pn	20 29 07.8	-1.1
	0.5nm,0.3s,baz=268,slow=4.4,SNR=4.8						
DAV	Davao City (W)	11.62	24	LR	LR	20 34 25.7	
	comp=Z,52nm,20.5s,baz=168,slow=40						
LEM	Lembang	13.61	256	LR	LR	20 35 33.0	
	comp=Z,94nm,19.1s,baz=64,slow=39						
FITZ	Fitzroy Crossi	15.09	162	P	Pn	20 30 09.6	+1.0
	0.3nm,0.3s,baz=352,slow=7.1,SNR=7.6						
WRA	Warramunga Arr	20.82	142	P	P	20 31 14.9	-1.7
	9.7nm,0.9s,baz=319,slow=11,SNR=35						
WRA				PcP	PcP	20 35 23.9	-1.0
	1.1nm,1.2s,baz=336,slow=1.8,SNR=3.2						
PSI	Prapat	22.89	286	P	P	20 31 39.9	+0.8
	2.9nm,0.5s,baz=178,slow=3.5,SNR=4.2						
PSI				LR	LR	20 40 50.4	
	comp=Z,85nm,18.4s,baz=262,slow=37						
ASAR	Alice Springs	23.52	149	P	P	20 31 44.3	-0.8
	7.9nm,1.0s,baz=325,slow=7.8,SNR=32						
ASAR				PcP	PcP	20 35 29.2	-1.0
	0.5nm,0.6s,baz=325,slow=1.5,SNR=6.5						
ASAR				LR	LR	20 41 51.7	
	comp=Z,84nm,18.1s,baz=357,slow=39						
SKNT	Sakolnakorn	26.45	321	P	P	20 32 14.5	+2.6
	3.9nm,0.8s						
NWAO	Narrogin (SRO)	29.33	186	LR	LR	20 43 43.3	
	comp=Z,37nm,20.0s,baz=203,slow=35						
CMAR	Chiang Mai Arr	30.84	316	P	P	20 32 51.8	+0.8
	3.2nm,0.8s,baz=142,slow=7.0,SNR=20						
CMAR				LR	LR	20 46 49.5	
	comp=Z,36nm,19.9s,baz=130,slow=39						
CMMT	Chiang Mai	31.08	317	P	P	20 32 54.8	+1.6
	6.2nm,0.9s						
CHTO	Chiang Mai	31.09	317	P	P	20 32 54.9	+1.7
	28nm,0.9s						
CMAI	Chiengmai2	31.80	318	P	P	20 33 00.2	+0.6
	2.3nm,1.1s						
STKA	Stephens Creek	34.15	148	P	P	20 33 19.3	-0.5
	2.6nm,0.8s,baz=312,slow=8.6,SNR=5.7						
STKA				LR	LR	20 48 18.9	
	comp=Z,36nm,18.8s,baz=212,slow=38						
KSRS	Korea Array	41.41	8	P	P	20 34 21.1	0.0
	0.5nm,0.5s,baz=192,slow=11,SNR=4.0						
PALK	Pallekele	41.57	285	LR	LR	20 51 03.4	
	comp=Z,36nm,20.0s,baz=120,slow=35						
MJAR	Matsushiro Arr	43.12	21	P	P	20 34 33.7	-1.4
	1.7nm,0.9s,baz=200,slow=8.8,SNR=7.1						
ODAN	Odare	44.37	315	eP	P	20 34 45.6	+0.1
	25nm,1.0s						
JIRN	Jiri	45.70	315	eP	P	20 34 56.3	0.0
	36nm,0.7s						
GUN	Gumba	46.08	315	eP	P	20 34 59.2	0.0
	40nm,0.8s						
PKIN	Phulchoki	46.22	314	eP	P	20 34 59.6	-0.6
	11nm,0.6s						
KKN	Kakani	46.43	315	eP	P	20 35 01.6	-0.2
	19nm,0.9s						
DMN	Daman	46.44	314	eP	P	20 35 01.6	-0.4
	15nm,0.7s						
GKN	Gorkha	47.01	314	eP	P	20 35 06.0	-0.3
	18nm,0.7s						
GTA	Gaotai	47.05	338	eP	P	20 35 07.7	+1.3
GTA				pP	pP	20 35 12.4	-4.4
GTA				sP	sP	20 35 15.4	-5.6
GTA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KOLN	Koldanda	47.62	313	eP	P	20 35 10.8	-0.3
	comp=Z,15nm,0.7s						
DANN	Dangsing	47.84	314	eP	P	20 35 12.7	-0.2
	comp=Z,58nm,0.7s						
PYUN	Piuthan	48.25	313	eP	P	20 35 15.8	-0.2
	comp=Z,32nm,0.7s						
USRK	Ussuriysk Ar.	48.66	11	P	P	20 35 18.5	-0.1
	comp=Z,2.4nm,0.6s,baz=189,slow=4.3						
ASAJ	Asahikawa	51.39	20	P	P	20 35 38.0	-1.3
	comp=Z,6.6nm,0.7s,baz=207,slow=5.1,SNR=8.5						
SONM	Songino Array	52.83	348	P	P	20 35 49.8	-0.3
	comp=Z,0.9nm,0.8s,baz=176,slow=9.8,SNR=3.7						
KSH	Kashi	59.58	321	P	P	20 36 39.0	+0.5
KSH				ePcP	PcP	20 37 25.4	-0.2
KSH				PP	PP	20 38 54.2	+3.8
KSH				pmax	pmax		
	comp=Z,5.0nm,1.2s						
MKAR	Makanchi Array	60.68	331	P	P	20 36 45.5	-0.2
	comp=Z,2.7nm,1.0s,baz=133,slow=7.6,SNR=17						
MKAR				PcP	PcP	20 37 29.4	-0.3
	comp=Z,1.0nm,0.8s,baz=125,slow=4.7,SNR=4.7						
PETK	Petropavlovsk-	64.44	24	P	P	20 37 10.1	-0.6
	comp=Z,3.0nm,0.8s,baz=231,slow=0.9						
ZALV	Zalesovo Beam	64.81	337	P	P	20 37 12.4	-0.7
	comp=Z,1.3nm,0.7s,baz=144,slow=10,SNR=4.2						
KURBB	Kurchatov Arra	65.12	332	P	P	20 37 14.6	-0.5
	comp=Z,1.9nm,1.1s,baz=137,slow=6.0,SNR=7.5						
BVAR	Borovoye Array	70.56	330	P	P	20 37 49.1	-0.3
	comp=Z,1.1nm,0.9s,baz=120,slow=10,SNR=6.4						
GEYT	Alibeck	71.21	312	P	P	20 37 53.7	-0.1
	comp=Z,1.1nm,0.8s,baz=52,slow=5.7,SNR=3.3						
AKTO	Aktyubinsk	75.99	324	P	P	20 38 20.8	-0.7
	comp=Z,1.8nm,0.8s,baz=101,slow=4.7,SNR=4.4						
AKTO				LR	LR	21 17 08.9	
	comp=Z,30nm,18.1s,baz=331,slow=40						
VNDA	Vanda	76.95	172	P	P	20 38 26.1	-0.4
	comp=Z,0.6nm,0.7s,baz=286,slow=6.3,SNR=4.6						
GNI	Garni	81.83	311	LR	LR	21 22 47.6	
	comp=Z,19nm,18.6s,baz=343,slow=41						
QSPA	South Pole Qui	86.31	180	P	P	20 39 15.3	-0.9
	comp=Z,2.3nm,1.0s,baz=360,slow=2.1,SNR=4.3						
MMAI	Mount Meron Ar	88.20	303	P	P	20 39 27.0	+1.0
	comp=Z,1.7nm,0.6s,baz=116,slow=3.4,SNR=2.7						
TXAR	Lajitas Array	130.66	54	PKP	PKPdf	20 45 46.9	+0.7
	comp=Z,0.3nm,0.7s,baz=297,slow=0.4,SNR=3.6						

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*ISK **08** 20:56:25.9, 37°.06N×28°.60E, h4km, ML2.6/5*
*ISCJB **08** 20:56:26.3±0.4, 37°.09N±0°.03×28°.61E±0°.03, h0km, Error ellipse: s-maj=4.5km s-min=3.5km az=20.4*
*CSEM **08** 20:56:26.4±0.2, 37°.08N×28°.61E, h1km, ML2.6, Error ellipse: s-maj=4.0km s-min=3.3km az=15.0, Suspected*

Mining explosion.

*DDA **08** 20:56:26.4, 37.°08N×28.°57E, h7^{km}, Ml2.5, Suspected Mining explosion.*

ISC 08 20:56:27.0±0.9**, 37.°12N**±0.°02×**28.°60E**±0.°02**, h0^{km}, n40, σ1.^{s}66**/53**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TURN	**Turunc**	**0.25**	**179**	PG	**Pg**	**20 56 34.3**	**+2.6**
TURN				SG	**Sg**	**20 56 40.7**	**+5.7**
TURN	**Turunc**	**0.25**	**179**	*i* P	**Pg**	**20 56 34.4**	**+2.6**
TURN				*i* S	**Sg**	**20 56 41.1**	**+6.1**
TURN	**Turunc**	**0.25**	**179**	P	**Pg**	**20 56 34.4**	**+2.6**
YER	**Yerkesik**	**0.25**	**273**	PG	**Pg**	**20 56 32.0**	**+0.1**
YER				SG	**Sg**	**20 56 36.3**	**+1.2**
YER	**Yerkesik**	**0.25**	**273**	*e*Pg	**Pg**	**20 56 32.0**	**+0.1**
YER				*e*Sg	**Sg**	**20 56 36.3**	**+1.2**
DALY	**Dalyan (Mu˜la**	**0.31**	**172**	PG	**Pg**	**20 56 31.6**	**-1.4**
DALY				SG	**Sg**	**20 56 35.9**	**-1.0**
DALY	**Dalyan (Mu˜la**	**0.31**	**172**	*i* P	**Pg**	**20 56 31.5**	**-1.4**
DALY	**Dalyan (Mu˜la**	**0.31**	**172**	*e*Pg	**Pg**	**20 56 31.6**	**-1.4**
DALY				*e*Sg	**Sg**	**20 56 35.9**	**-1.0**
TAVA	**DENIZLI_Tavas**	**0.42**	**36**	*i* P	**Pg**	**20 56 35.4**	**+0.2**
TAVA	**DENIZLI_Tavas**	**0.42**	**36**	P	**Pg**	**20 56 35.4**	**+0.2**
MRSB	**Marmaris-Mugla**	**0.52**	**218**	PG	**Pg**	**20 56 35.9**	**-1.0**
MRSB	**Marmaris-Mugla**	**0.52**	**218**	*e*Pg	**Pg**	**20 56 35.9**	**-1.0**
FETY	**Fethiye**	**0.62**	**141**	PG	**Pg**	**20 56 37.7**	**-1.3**
FETY	**Fethiye**	**0.62**	**141**	*e*Pg	**Pg**	**20 56 37.7**	**-1.3**
DNZL	**Cakiroluk**	**0.67**	**32**	*i* P	**Pg**	**20 56 39.7**	**-0.2**
DNZL	**Cakiroluk**	**0.67**	**32**	P	**Pg**	**20 56 39.7**	**-0.2**
MLSB	**Milas**	**0.68**	**285**	PG	**Pg**	**20 56 40.1**	**+0.1**
MLSB	**Milas**	**0.68**	**285**	*e*Pg	**Pg**	**20 56 40.1**	**+0.1**
GOLH	**Golhisar**	**0.78**	**81**	*i* P	**Pg**	**20 56 41.7**	**-0.3**
GOLH				*i* S	**Sb**	**20 56 54.0**	**-0.7**
GOLH	**Golhisar**	**0.78**	**81**	P	**Pg**	**20 56 41.7**	**-0.3**
GOLH				S	**Sb**	**20 56 54.0**	**-0.7**
AYDN	**Tasoluk**	**0.79**	**313**	*i* P	**Pg**	**20 56 42.1**	**0.0**
AYDN				*i* S	**Sg**	**20 56 53.3**	**+1.0**
AYDN	**Tasoluk**	**0.79**	**313**	P	**Pg**	**20 56 42.1**	**0.0**
AYDN				S	**Sg**	**20 56 53.3**	**+1.0**
DAT	**Datca**	**0.91**	**245**	PG	**Pg**	**20 56 43.7**	**-0.7**
DAT	**Datca**	**0.91**	**245**	*i* P	**Pg**	**20 56 42.8**	**-1.6**
DAT				*i* S	**Sn**	**20 56 59.4**	**-1.6**
DAT	**Datca**	**0.91**	**245**	P	**Pg**	**20 56 42.8**	**-1.6**
DAT	**Datca**	**0.91**	**245**	*e*Pg	**Pg**	**20 56 43.7**	**-0.7**
DAT				S	**Sn**	**20 56 59.4**	**-1.6**
ARG	**Arkhangelos**	**0.98**	**203**	PG	**Pg**	**20 56 44.5**	**-1.3**
ARG	**Arkhangelos**	**0.98**	**203**	*e*Pg	**Pg**	**20 56 44.5**	**-1.3**
AYDB	**Zeytinkoy-Aydi**	**1.00**	**326**	PG	**Pg**	**20 56 46.4**	**+0.3**
AYDB	**Zeytinkoy-Aydi**	**1.00**	**326**	*e*Pg	**Pg**	**20 56 46.4**	**+0.3**
BODT	**Bodrum**	**1.03**	**267**	PG	**Pg**	**20 56 46.4**	**-0.4**
BODT	**Bodrum**	**1.03**	**267**	*e*Pg	**Pg**	**20 56 46.4**	**-0.4**
ELL	**Elmali**	**1.11**	**109**	PN	**Pg**	**20 56 47.6**	**-0.8**
ELL	**Elmali**	**1.11**	**109**	*e*Pn	**Pg**	**20 56 47.6**	**-0.8**
AKAS	**Kas**	**1.20**	**137**	PN	**Pg**	**20 56 48.7**	**-1.4**
AKAS	**Kas**	**1.20**	**137**	*i* P	**Pn**	**20 56 50.6**	**-0.6**
AKAS				*i* S	**Sn**	**20 57 10.9**	**+2.6**
AKAS	**Kas**	**1.20**	**137**	*e*Pn	**Pg**	**20 56 48.7**	**-1.4**
AKAS	**Kas**	**1.20**	**137**	P	**Pn**	**20 56 50.6**	**-0.6**
KORT	**Korkueli**	**1.41**	**94**	PN	**Pg**	**20 56 53.1**	**-0.9**
KORT	**Korkueli**	**1.41**	**94**	*e*Pn	**Pg**	**20 56 53.1**	**-0.9**

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*ISCJB **08** 21:05:01.3±0.3, 43.°75N±0.°02×105.°28W±0.°03, h0^{km}, mb4.2/2, Error ellipse: s-maj=2.8km s-min=2.6km az=28.3*

*NEIC **08** 21:05:02.9±0.2, 43.°76N×105.°25W, h0^{km}, ML3.7, Error ellipse: s-maj=3.5km s-min=2.9km az=143.0, Suspected Mining explosion.*

NEIC 64 km [40 miles] SSE of Gillette.

*IDC **08** 21:05:03.1±0.9, 44.°08N×105.°73W, h0^{km}, mb4.0/2, mb1 3.9/6, mb1mx3.5/62, mbtmp3.7/6, ML3.1/3, MS2.9/1, Ms1 2.9/1, ms1mx2.4/56, Error ellipse: s-maj=24.6km s-min=8.7km az=146.0*

ISC 08 21:05:02.2±0.6**, 43.°73N**±0.°03×**105.°31W**±0.°03**, h0^{km}, n102, σ1.^{s}50**/127**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSSD	**Black Hills**	**1.00**	**66**	P	**Pg**	**21 05 21.4**	**0.0**
	baz=248						
RSSD	**Black Hills**	**1.00**	**66**	*e*Sg	**Sg**	**21 05 34.0**	**-0.4**
K22A	**Casper**	**1.40**	**220**	P	**Pg**	**21 05 27.8**	**-1.1**
	baz=40						
K22A				S	**Sg**	**21 05 47.5**	**+0.4**
	baz=40						
K22A	**Casper**	**1.40**	**220**	*e*Pn	**Pg**	**21 05 27.6**	**-1.3**
K22A				*e*Sg	**Sb**	**21 05 48.8**	**+1.1**
PHWY	**Pilot Hill**	**2.43**	**183**	*e*Pn	**Pn**	**21 05 43.9**	**+0.5**
PHWY				*e*Sn	**Sb**	**21 06 16.5**	**-1.0**
RWWY	**Rawlins**	**2.47**	**215**	*e*Pn	**Pn**	**21 05 45.6**	**+1.6**
RWWY				*e*Sn	**Sn**	**21 06 15.9**	**+0.8**
LAO	**LASA Array**	**3.03**	**348**	P	**Pn**	**21 05 51.7**	**+0.2**
	baz=166						
LAO				S	**Sn**	**21 06 30.3**	**+1.8**
	baz=166						
LAO	**LASA Array**	**3.03**	**348**	*e*Pn	**Pn**	**21 05 50.9**	**-0.6**
LAO				*e*Sn	**Sn**	**21 06 30.2**	**+1.7**
RLMT	**Red Lodge**	**3.16**	**298**	P	**Pn**	**21 05 54.2**	**+0.7**
	baz=114						
RLMT				Sb	**Sb**	**21 06 41.4**	**+2.8**
	baz=114						
RLMT	**Red Lodge**	**3.16**	**298**	*e*Pn	**Pn**	**21 05 54.0**	**+0.6**
RLMT				*e*Sn	**Sn**	**21 06 32.8**	**+0.8**
PD31	**Pinedale Array**	**3.25**	**254**	*e*Pn	**Pn**	**21 05 55.5**	**+0.8**
PD31				*e*Sn	**Sn**	**21 06 34.4**	**+0.2**
PDAR	**Pinedale Array**	**3.25**	**254**	Pn	**Pn**	**21 05 55.2**	**+0.6**
	9.5nm,0.3s,baz=75,slow=15,SNR=131						
PDAR				Lg	Lg	21 06 39.5	
	24nm,0.3s,baz=83,slow=32,SNR=7.8						
PDAR	**Pinedale Array**	**3.25**	**254**	*e*Pn	**Pn**	**21 05 55.1**	**+0.5**
PDAR				*e*Sn	**Sn**	**21 06 35.3**	**+1.1**
BW06	**Boulder Array**	**3.25**	**254**	P	**Pn**	**21 05 54.3**	**-0.4**
	baz=71						
BW06	**Boulder Array**	**3.25**	**254**	*e*Pn	**Pn**	**21 05 55.4**	**+0.8**
BW06				*e*Sn	**Sn**	**21 06 34.7**	**+0.5**
OGNE	**Ogallala**	**3.69**	**138**	P	**Pn**	**21 06 01.0**	**+0.4**
	baz=321						
OGNE	**Ogallala**	**3.69**	**138**	*e*Pn	**Pn**	**21 06 02.0**	**+1.4**
GCMT	**Greycliff**	**3.73**	**305**	*e*Pn	**Pn**	**21 06 02.1**	**+0.9**
GCMT				*e*Sn	**Sn**	**21 06 45.4**	**-0.4**
LOHW	**Long Hollow**	**3.84**	**270**	*e*Pn	**Pn**	**21 06 04.3**	**+1.5**
H17A	**Grant Village**	**3.85**	**282**	P	**Pn**	**21 06 04.9**	**+1.9**
	baz=98						
H17A	**Grant Village**	**3.85**	**282**	*e*Pn	**Pn**	**21 06 05.5**	**+2.5**
H17A				*e*Sn	**Sn**	**21 06 49.7**	**+0.5**
FLWY	**Flagg Ranch**	**3.91**	**277**	*e*Pn	**Pn**	**21 06 05.1**	**+1.4**
FLWY				*e*Sn	**Sn**	**21 06 51.1**	**+0.6**
ISCO	**Idaho Springs**	**3.93**	**183**	P	**Pn**	**21 06 04.9**	**+0.8**
	baz=3.8						
ISCO				Sb	**Sb**	**21 07 02.5**	**+1.7**
	baz=3.8						
MOOW	**Moose Ponds**	**3.94**	**272**	*e*Pn	**Pn**	**21 06 06.0**	**+1.8**
SNOW	**Snow King Moun**	**3.96**	**268**	*e*Pn	**Pn**	**21 06 01.8**	**-2.8**
SNOW				*e*Sn	**Sn**	**21 06 53.5**	**+1.7**
YPP	**Pitchstone Pla**	**4.00**	**280**	*e*Pn	**Pn**	**21 06 05.8**	**+0.7**
REDW	**Red Top Meadow**	**4.05**	**267**	*e*Pn	**Pn**	**21 06 06.7**	**+1.1**
REDW				*e*Sn	**Sn**	**21 06 53.0**	**-0.8**
YFT	**Old Faithful**	**4.05**	**282**	*e*Pn	**Pn**	**21 06 06.4**	**+0.8**
IMW	**Indian Meadow**	**4.08**	**274**	*e*Pn	**Pn**	**21 06 08.8**	**+2.6**
IMW				*e*Sn	**Sn**	**21 06 55.5**	**+0.8**
TPAW	**Teton Pass**	**4.10**	**269**	*e*Pn	**Pn**	**21 06 07.8**	**+1.3**
TPAW				*e*Sn	**Sn**	**21 06 55.2**	**-0.1**
FXWY	**Fox Creek**	**4.15**	**271**	*e*Pn	**Pn**	**21 06 08.3**	**+1.2**
O20A	**White River Ci**	**4.20**	**212**	P	**Pn**	**21 06 08.5**	**+0.8**
	baz=31						
O20A	**White River Ci**	**4.20**	**212**	*e*Pn	**Pn**	**21 06 08.8**	**+1.0**
O20A				*e*Sn	**Sn**	**21 07 01.0**	**+3.3**
AHID	**Auburn Hatcher**	**4.34**	**259**	*e*Pn	**Pn**	**21 06 08.3**	**-1.3**
AHID				*e*Sn	**Sn**	**21 07 01.5**	**+0.5**
YHB	**Horse Butte**	**4.35**	**286**	*e*Pn	**Pn**	**21 06 11.2**	**+1.4**
SMCO	**Snowmass**	**4.71**	**196**	*e*Pn	**Pn**	**21 06 17.3**	**+2.4**
SMCO				*e*Sn	**Sn**	**21 07 12.7**	**+2.2**
DGMT	**Dagmar**	**4.81**	**9**	*e*Pn	**Pn**	**21 06 17.4**	**+1.5**
BOZ	**Bozeman (W)**	**4.88**	**295**	*e*Pn	**Pn**	**21 06 18.2**	**+1.2**
BOZ				*e*Sn	**Sn**	**21 07 15.2**	**+0.9**
HWUT	**Hardware Ranch**	**5.08**	**247**	*e*Pn	**Pn**	**21 06 20.9**	**+1.2**
KSCO	**Kaye Shedlock’**	**5.12**	**156**	*e*Pn	**Pn**	**21 06 20.6**	**+0.3**
TCUT	**Toone Canyon**	**5.21**	**242**	*e*Pn	**Pn**	**21 06 22.6**	**+0.9**
EGMT	**Eagleton**	**5.30**	**326**	*e*Pn	**Pn**	**21 06 24.1**	**+1.4**
HRY	**Holter Researc**	**5.49**	**305**	*e*Pn	**Pn**	**21 06 26.8**	**+1.5**
LRM	**Limekiln Ridge**	**5.50**	**295**	*e*Pn	**Pn**	**21 06 27.2**	**+1.6**
P18A	**Preston Nutter**	**5.52**	**224**	*e*Pn	**Pn**	**21 06 26.8**	**+0.9**
MCMT	**McKenzie Canyo**	**5.53**	**284**	*e*Pn	**Pn**	**21 06 28.4**	**+2.5**
JLU	**Jordanelle**	**5.53**	**238**	*e*Pn	**Pn**	**21 06 26.5**	**+0.5**
CTU	**Camp Tracy**	**5.66**	**240**	*e*Pn	**Pn**	**21 06 29.2**	**+1.4**
MDND	**Maddock**	**5.74**	**42**	*e*Pg	**Pg**	**21 06 48.9**	**-3.2**
BGNE	**Belgrade**	**5.77**	**111**	*e*Pn	**Pn**	**21 06 30.8**	**+1.7**
BGNE				*e*Sn	**Sn**	**21 07 36.7**	**+0.7**
SPUT	**South Promonto**	**5.80**	**248**	*e*Pn	**Pn**	**21 06 31.6**	**+1.9**
SPUT				*e*Sn	**Sn**	**21 07 35.2**	**-1.8**
PV22	**Blue Mesa, Par**	**5.81**	**208**	*e*Pn	**Pn**	**21 06 31.4**	**+1.5**
PV22				*e*Sn	**Sn**	**21 07 37.1**	**-0.2**
HVU	**Hansel Valley**	**5.83**	**253**	*e*Pn	**Pn**	**21 06 31.3**	**+1.2**
HVU				*e*Sn	**Sn**	**21 07 33.8**	**-3.9**
PV21	**Cone Mtn., Par**	**5.86**	**209**	*e*Pn	**Pn**	**21 06 32.5**	**+2.0**
P17A	**Butcher Ranch,**	**5.88**	**226**	*e*Pn	**Pn**	**21 06 33.0**	**+2.2**
PV23	**Carpenter Ridg**	**5.96**	**209**	*e*Pn	**Pn**	**21 06 34.3**	**+2.3**
PV09	**Paradox Valley**	**5.97**	**210**	*e*Pn	**Pn**	**21 06 33.8**	**+1.7**
SDCO	**Great Sand Dun**	**5.98**	**181**	*e*Pn	**Pn**	**21 06 33.9**	**+1.7**
PV12	**Saucer Basin,**	**6.01**	**207**	*e*Pn	**Pn**	**21 06 34.0**	**+1.3**
PV14	**Lion Creek, Pa**	**6.04**	**209**	*e*Pn	**Pn**	**21 06 34.1**	**+1.1**
PV10	**Paradox Valley**	**6.04**	**209**	*e*Pn	**Pn**	**21 06 35.8**	**+2.8**
PV20	**West Nyswonger**	**6.05**	**208**	*e*Pn	**Pn**	**21 06 35.5**	**+2.4**
SRU	**San Rafael Swe**	**6.05**	**222**	*e*Pn	**Pn**	**21 06 33.7**	**+0.5**
PV11	**David Mesa, Pa**	**6.05**	**208**	*e*Pn	**Pn**	**21 06 34.4**	**+1.2**
PV16	**Nyswonger Mesa**	**6.06**	**208**	*e*Pn	**Pn**	**21 06 34.9**	**+1.7**
PV19	**Morning Glory**	**6.08**	**208**	*e*Pn	**Pn**	**21 06 34.7**	**+1.1**
S22A	**4UR Ranch, Cre**	**6.08**	**191**	*e*Pn	**Pn**	**21 06 33.5**	**-0.1**
PV03	**Paradox Valley**	**6.09**	**207**	*e*Pn	**Pn**	**21 06 34.6**	**+1.0**
PV02	**Paradox Valley**	**6.09**	**206**	*e*Pn	**Pn**	**21 06 35.0**	**+1.3**
PV17	**East Wray Mesa**	**6.10**	**208**	*e*Pn	**Pn**	**21 06 35.3**	**+1.4**
PV18	**Skein Mesa, Pa**	**6.12**	**208**	*e*Pn	**Pn**	**21 06 35.5**	**+1.4**
PV13	**Radium Mtn., P**	**6.16**	**207**	*e*Pn	**Pn**	**21 06 36.0**	**+1.3**
TMUT	**Trail Mountain**	**6.26**	**227**	*e*Pn	**Pn**	**21 06 37.4**	**+1.3**
ECSD	**EROS Data Cent**	**6.30**	**87**	*e*Pn	**Pn**	**21 06 37.0**	**+0.6**
BGU	**Big Grassy Mou**	**6.37**	**247**	*e*Pn	**Pn**	**21 06 36.6**	**-0.8**
CBKS	**Cedar Bluff**	**6.46**	**138**	*e*Pn	**Pn**	**21 06 38.2**	**-0.3**
HLID	**Hailey**	**6.61**	**272**	*e*Pn	**Pn**	**21 06 43.7**	**+2.9**
DUG	**Dugway, Tooele**	**6.61**	**240**	*e*Pn	**Pn**	**21 06 41.0**	**+0.2**
T25A	**Trinidad**	**6.62**	**174**	*e*Pn	**Pn**	**21 06 41.6**	**+0.7**
MSU	**Marysvale**	**7.35**	**227**	*e*Pn	**Pn**	**21 06 52.1**	**+1.1**
MTPU	**Mount Pierson**	**7.70**	**225**	*e*Pn	**Pn**	**21 06 57.1**	**+1.1**
PSUT	**Pine Spring**	**8.27**	**234**	*e*Pn	**Pn**	**21 07 05.5**	**+1.8**
CCUT	**Cedar City**	**8.69**	**227**	*e*Pn	**Pn**	**21 07 11.1**	**+1.8**
ANMO	**Albuquerque**	**8.81**	**186**	LR	LR	21 10 48.7	
	comp=Z,73nm,19.5s,baz=31,slow=38						
U15A	**North Rim**	**9.04**	**219**	*e*Pn	**Pn**	**21 07 15.3**	**+1.1**
ULM	**Lac du Bonnet**	**9.17**	**41**	Pn	**Pn**	**21 07 13.3**	**-2.3**
	0.8nm,0.3s,baz=223,slow=10,SNR=4.4						
ULM				Lg	Lg	21 09 49.7	
	0.1nm,0.3s,baz=138,slow=22,SNR=2.9						
I56US	**NEWPORT INFRAS**	**9.39**	**303**	*i*		22 01 50.0	
	baz=116,slow=308,SNR=3.9						
WUAZ	**Wupatki**	**9.44**	**212**	*e*Pn	**Pn**	**21 07 21.1**	**+1.6**
I39A	**Houston**	**9.97**	**85**	*e*Pn	**Pn**	**21 07 27.0**	**+0.3**
NV01	**Mina Array Sit**	**11.14**	**246**	*e*Pn	**Pn**	**21 07 45.3**	**+2.4**
NVAR	**Mina Array Bea**	**11.14**	**246**	Pn	**Pn**	**21 07 45.3**	**+2.3**
	0.4nm,0.3s,baz=44,slow=12,SNR=2.9						
NVAR				Lg	Lg	21 10 52.0	
	0.3nm,0.3s,baz=49,slow=44,SNR=2.2						
FRIS	**Frissel Point**	**12.11**	**278**	*e*Pn	**Pn**	**21 07 55.6**	**-0.5**
ISA	**Isabella, Lake**	**12.94**	**236**	*e*Pn	Pn	21 08 02.8	-4.5
CHFC	**Chilao Flat St**	**13.61**	**231**	*e*Pn	Pn	21 08 22.1	+5.5
DPP	**Dos Picos Cty**	**14.05**	**224**	*e*Pn	**Pn**	**21 08 20.8**	**-1.8**
LTX	**Lajitas**	**14.43**	**174**	*e*Pn	**P**	**21 08 35.3**	**+0.4**
TXAR	**Lajitas Array**	**14.43**	**174**	Pn	**P**	**21 08 35.3**	**+0.4**
	0.1nm,0.3s,baz=348,slow=10,SNR=3.5						
TXAR				Lg	Lg	21 12 42.4	
	0.1nm,0.3s,baz=359,slow=31,SNR=3.7						
SBI	**Santa Barbara**	**14.80**	**231**	*e*Pn	**Pn**	**21 08 32.2**	**-0.5**
SBI				*e*Sn	**Sn**	**21 11 13.5**	**-3.9**
SBI				*e*S	S	21 11 23.9	-12
SBI				*e*PcP	**PcP**	**21 13 44.9**	**+0.8**
ARA0	**ARCESS Array S**	**61.44**	**18**	*e*P	**P**	**21 15 19.2**	**-0.6**
ARCES	**ARCESS Array B**	**61.44**	**18**	P	**P**	**21 15 19.2**	**-0.6**
	1.3nm,0.5s,baz=331,slow=7.3,SNR=8.5						
FIA0	**FINESS Array S**	**68.05**	**23**	*e*P	**P**	**21 16 03.5**	**+0.5**
FINES	**FINESS Array B**	**68.05**	**23**	P	**P**	**21 16 03.5**	**+0.5**
	1.0nm,0.9s,baz=297,slow=6.1,SNR=4.5						

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*NNC **08** 21:09:09.6±1.4, 36.°78N×70.°59E, h174^{km}±32^{km}, mb2.8, mpv3.8, Error ellipse: s-maj=19.9km s-min=10.9km az=66.0*

ISC 08 21:09:06.7±3.2**, 36.°6N**±0.°2×**70.°5E**±0.°1**, h150^{km}, n10, σ0.^{s}64**/14**, 5C-3D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**4.14**	**34**	⇑P	**Pn**	**21 10 10.0**	**+1.0**
	10nm,0.3s						
SFK				⇑S	**Sn**	**21 10 58.1**	**+0.8**
	16nm,0.4s						
AML	**Almayashu**	**6.04**	**23**	P	**Pn**	**21 10 34.4**	**+0.1**
	SNR=54						
MNAS	**Manas**	**6.07**	**14**	⇓P	**Pn**	**21 10 35.2**	**+0.8**
	4.1nm,0.5s						
MNAS				⇑S	**Sn**	**21 11 43.1**	**+0.1**
	15nm,0.5s						
UCH	**Uchtor**	**6.41**	**28**	P	**Pn**	**21 10 39.2**	**-0.1**
	SNR=17						
KK31	**Karatay Array**	**6.48**	**0**	P	**Pn**	**21 10 40.6**	**+0.8**
	5.6nm,0.5s,baz=173,slow=11,SNR=40						
KK31				⇑S	**Sn**	**21 11 52.3**	**-0.4**
	1.4nm,0.3s,baz=182,slow=20,SNR=10						
EKS2	**Erkin-Say**	**6.55**	**22**	P	**Pn**	**21 10 41.1**	**+0.3**
	SNR=8.4						
AAK	**Ala-Archa**	**6.76**	**26**	⇓P	**Pn**	**21 10 43.5**	**-0.1**
	3.2nm,0.5s						
AAK				⇓S	**Sn**	**21 11 58.8**	**-0.8**
	6.4nm,0.8s						
CHMS	**Chumysh**	**7.17**	**26**	P	**Pn**	**21 10 48.8**	**-0.2**
	SNR=6.2						
TKM2	**Tokmak 2**	**7.42**	**30**	P	**Pn**	**21 10 52.0**	**-0.6**
	SNR=22						
AB31	**Akbulak array**	**14.79**	**332**	⇑P	**P**	**21 12 30.0**	**-0.4**
	0.5nm,0.5s,baz=149,slow=12,SNR=6.2						

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*IDC **08** 21:09:57.9±0.9, 24.°40N×127.°47E, h0^{km}, mb3.7/10, mb1 3.8/13, mb1mx3.6/66, mbtmp3.8/13, ML3.7/3, MS2.5/2, Ms1 2.5/2, ms1mx2.2/53, Error ellipse: s-maj=31.0km s-min=16.3km az=79.0*

*JMA **08** 21:10:01.1±0.3, 24.°56N×127.°32E, h74^{km}, M3.4*

ISC 08 21:09:58.9±3.4**, 24.°44N**±0.°07×**127.°40E**±0.°05**, h11^{km}**±22^{km}**, n37, σ2.^{s}62**/51**, mb3.7**/10**, Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJT3	**Tamagusuku3**	**1.73**	**11**	P	**Pb**	**21 10 28.6**	**-2.1**
JJT3				*e*S	**Sn**	**21 10 48.7**	**-2.3**
JOGS	**Gusukube**	**1.84**	**280**	P	**Pn**	**21 10 30.1**	**-0.4**
JOGS				S	**Sn**	**21 10 51.4**	**-2.4**
JMJ	**Miyako jima 2**	**1.95**	**281**	P	**Pn**	**21 10 32.0**	**0.0**
JMJ				*e*S	**Sn**	**21 10 53.3**	**-3.2**
JKE	**Kume jima 2**	**1.96**	**344**	P	**Pn**	**21 10 31.6**	**-0.5**
JIKM	**Ikemajima**	**2.02**	**284**	P	**Pn**	**21 10 32.4**	**-0.5**
JIKM				*e*S	**Sn**	**21 10 55.5**	**-2.6**
JIRB	**Irabujima**	**2.06**	**281**	P	**Pn**	**21 10 32.7**	**-0.8**
JIRB				S	**Sn**	**21 10 55.9**	**-3.3**
JAGN	**Aguni-jima**	**2.15**	**356**	P	**Pn**	**21 10 34.2**	**-0.4**
JNTH	**Nagotoyohara**	**2.15**	**15**	P	**Pn**	**21 10 33.6**	**-1.0**
JNTH				S	**Sn**	**21 10 57.3**	**-3.9**
JTJ	**Tarama**	**2.47**	**275**	P	**Pn**	**21 10 38.3**	**-0.7**
JOW	**Kunigami**	**2.51**	**18**	Pn	**Pn**	**21 10 39.1**	**-0.5**
	16nm,0.3s,baz=167,slow=11,SNR=49						
JOW				Sn	**Sn**	**21 11 06.3**	**-4.0**
	43nm,0.3s,baz=132,slow=26,SNR=16						
JOW	**Kunigami**	**2.51**	**18**	P	**Pn**	**21 10 38.9**	**-0.8**
JOW				S	**Sn**	**21 11 07.3**	**-3.0**
JIH	**Iheya**	**2.63**	**11**	S	**Sn**	**21 11 10.0**	**-3.3**
JYRO	**Yoronjima**	**2.74**	**20**	P	**Pn**	**21 10 42.2**	**-0.6**
JISG	**Ishigakijimahi**	**2.82**	**274**	P	**Pn**	**21 10 43.0**	**-0.9**
JISG				*e*S	**Sn**	**21 11 13.1**	**-4.7**
JIJ	**Ishigaki jima**	**2.97**	**269**	P	**Pn**	**21 10 45.2**	**-0.8**
JIJ				S	**Sn**	**21 11 16.0**	**-5.6**
JOKE	**Okinoerabujima**	**3.09**	**20**	P	**Pn**	**21 10 48.0**	**+0.3**
JOKE				S	**Sn**	**21 11 21.0**	**-3.7**
JKRS	**Kuro-shima**	**3.10**	**267**	P	**Pn**	**21 10 47.2**	**-0.6**
JKRS				*e*S	**Sn**	**21 11 20.0**	**-4.8**
HATJ	**Hateruma jima**	**3.30**	**264**	*e*S	**Sn**	**21 11 23.7**	**-6.1**
IRIF	**Iriomote-Funau**	**3.35**	**269**	P	**Pn**	**21 10 50.4**	**-0.8**
JTK	**Tokunoshima**	**3.61**	**22**	P	**Pn**	**21 10 54.6**	**-0.2**
JTK				*e*S	**Sn**	**21 11 32.5**	**-5.0**
JMZ	**Minamidaito 2**	**3.73**	**68**	P	**Pn**	**21 10 53.7**	**-2.6**
JAMN	**Amaminishikomi**	**4.11**	**22**	P	**Pn**	**21 11 01.9**	**+0.3**
JAM	**Amami Oshima**	**4.42**	**26**	P	**Pn**	**21 11 05.6**	**-0.3**
JAM				*e*S	**Sn**	**21 11 51.8**	**-5.6**
JZK	**Kikaishima**	**4.50**	**30**	P	**Pn**	**21 11 07.2**	**+0.2**
JZK				*e*S	**Sn**	**21 11 56.3**	**-2.9**
JNU	**Nakatsue**	**9.17**	**19**	Pn	**Pn**	**21 12 11.1**	**-0.1**
	1.8nm,0.3s,baz=310,slow=6.8,SNR=16						
KSRS	**Korea Array**	**12.98**	**2**	Pn	**Pn**	**21 13 04.1**	**+0.9**
	0.1nm,0.3s,baz=173,slow=13,SNR=5.3						
KSRS				LR	LR	21 18 37.4	
	comp=Z,16nm,18.9s,baz=190,slow=40						
GUMO	**Guam**	**19.70**	**120**	LR	LR	21 22 23.7	
	comp=Z,15nm,18.7s,baz=44,slow=38						
SONM	**Songino Array**	**28.68**	**330**	P	**P**	**21 15 58.8**	**+2.8**
	0.4nm,0.5s,baz=145,slow=3.5,SNR=2.8						
SEY	**Seymchan**	**41.94**	**17**	P	**P**	**21 17 51.0**	**+1.6**
	0.4nm,0.4s,baz=45,slow=8.0,SNR=2.7						
MKAR	**Makanchi Array**	**42.19**	**314**	P	**P**	**21 17 51.7**	**0.0**
	0.6nm,0.5s,baz=103,slow=9.3,SNR=7.9						
ZALV	**Zalesovo Beam**	**43.23**	**324**	P	**P**	**21 18 01.3**	**+1.2**
	0.5nm,0.4s,baz=117,slow=8.7,SNR=3.0						
WRA	**Warramunga Arr**	**44.63**	**171**	P	**P**	**21 18 11.4**	**-0.2**
	2.0nm,0.7s,baz=352,slow=8.6,SNR=22						
KURBB	**Kurchatov Arra**	**45.65**	**318**	P	**P**	**21 18 19.9**	**+0.5**
	0.5nm,0.5s,baz=108,slow=8.3,SNR=5.2						
ASAR	**Alice Springs**	**48.23**	**172**	P	**P**	**21 18 40.4**	**+0.6**
	0.4nm,0.5s,baz=358,slow=13,SNR=7.8						
BVAR	**Borovoye Array**	**51.12**	**319**	P	**P**	**21 19 03.1**	**+1.5**
	0.3nm,0.5s,baz=95,slow=7.2,SNR=3.9						
GEYT	**Alibeck**	**59.55**	**301**	P	**P**	**21 20 04.5**	**+1.9**
	0.8nm,0.7s,baz=84,slow=13,SNR=2.4						
FINES	**FINESS Array B**	**74.05**	**331**	P	**P**	**21 21 35.6**	**+1.1**
	1.4nm,1.0s,baz=64,slow=10.0,SNR=3.4						

JMA 08 21:10:18.6, 37.°77N×139.°98E, h6^{km}±1^{km}**, M0.5, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYAR	**Yonezawaarcadi**	**0.19**	**42**	S	Sg	21 10 25.2	+0.2
JFT	**Otama**	**0.38**	**131**	S	Sg	21 10 31.0	+0.1
JMM	**Marumori**	**0.65**	**81**	*e*S	Sg	21 10 39.4	-0.2

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*NIED **08** 21:11:00, 46.°90N×153.°10E, h35^{km}, Mw4.1 Best double couple: $M_0$1.45000×10^{15} NP1:φ$_s$217.00000°, δ61.00000°, λ-179.00000°. NP2:φ$_s$126.00000°, δ89.00000°, λ-29.00000°.*

*ISCJB **08** 21:11:16.3±0.6, 46.°79N±0.°05×152.°81E±0.°06, h54^{km}±5^{km}, mb4.2/46, MS3.4/7, Error ellipse: s-maj=10.2km s-min=3.5km az=137.5*

*MOS **08** 21:11:17.9±1.0, 46.°82N×152.°77E, h67^{km}, mb4.5/19, Error ellipse: s-maj=8.9km s-min=6.4km az=69.4*

*SKHL **08** 21:11:19.2±0.0, 46.°89N×152.°67E, h75^{km}±8^{km}, mb4.9/3*

*NEIC **08** 21:11:20.2±2.1, 46.°95N×152.°65E, h72^{km}±9^{km}, mb4.3/19, Error ellipse: s-maj=17.2km s-min=11.9km az=85.0*

*IDC **08** 21:11:20.8±2.1, 46.°91N×152.°74E, h76^{km}±18^{km}, mb3.6/22, mb1 3.8/28, mb1mx3.7/75, mbtmp4.0/28, MS3.2/8, Ms1 3.2/8, ms1mx2.8/63, Error ellipse: s-maj=15.4km s-min=10.4km az=139.0*

ISC 08 21:11:18.0±1.0**, 46.°72N**±0.°07×**152.°92E**±0.°06**, h55^{km}**±8^{km}**, n169, σ1.^{s}50**/191**, mb4.2**/46**, MS3.5**/7**, 10C-7D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril’sk**	**3.83**	**249**	*e*P	**Pn**	**21 12 15.2**	**+0.9**
KUR				AMB	AMB	21 12 17.2	
	116nm,0.4s						
KUR				*i* S	**Sn**	**21 12 57.2**	**-0.8**
KUR				A	A	21 13 14.6	
	287nm,0.4s						
KUR				A	A	21 13 14.6	
	156nm,0.4s						
KUR	**Kuril’sk**	**3.83**	**249***c*	*i*PN	**Pn**	**21 12 15.5**	**+1.2**
KUR				*i* S	**Sn**	**21 12 59.4**	**+1.4**
KUR				pmax	pmax		
	comp=Z,117nm,0.4s						
KUR				pmax	pmax		
	comp=N,69nm,0.3s						
KUR				pmax	pmax		
	comp=E,23nm,0.3s						
KUR				smax	smax		
	comp=N,436nm,0.4s						
KUR				smax	smax		
	comp=E,73nm,0.4s						
SKR	**Severo-Kuril’s**	**4.49**	**27**	*e*P	**Pn**	**21 12 23.4**	**0.0**
SKR				AMB	AMB	21 12 26.7	
	comp=E,63nm,0.5s						
SKR				*e*S	**Sn**	**21 13 11.6**	**-2.8**
SKR				A	A	21 13 14.5	
	comp=E,210nm,0.2s						
SKR				A	A	21 13 14.5	
	comp=E,145nm,0.2s						
SKR	**Severo-Kuril’s**	**4.49**	**27**	*e*PN	**Pn**	**21 12 23.4**	**0.0**
SKR				*e*S	**Sn**	**21 13 11.1**	**-3.3**
SKR				pmax	pmax		
	comp=Z,63nm,0.5s						
SKR				smax	smax		
	comp=E,207nm,0.2s						
SKR				smax	smax		
	comp=N,143nm,0.3s						
SHO	**Shikotan**	**5.16**	**239**	*e*PN	**Pn**	**21 12 32.2**	**-0.4**
SHO				*e*S	**Sn**	**21 13 28.6**	**-2.1**
SHO				pmax	pmax		
	comp=Z,38nm,0.4s						
SHO				pmax	pmax		
	comp=E,40nm,0.3s						
SHO				smax	smax		
	comp=E,89nm,0.5s						
SHO				smax	smax		
	comp=N,33nm,0.2s						
YUK	**Yuzh-Kuril’sk**	**5.65**	**244**	*e*P	**Pn**	**21 12 40.2**	**+0.9**
YUK				*e*S	**Sn**	**21 13 42.5**	**-0.4**
YUK				A	A	21 13 48.8	
	comp=N,150nm,0.4s						
YUK				A	A	21 13 48.8	
	comp=N,40nm,0.4s						
YUK	**Yuzh-Kuril’sk**	**5.65**	**244**	PN	**Pn**	**21 12 40.2**	**+0.9**
YUK				S	**Sn**	**21 13 42.5**	**-0.4**
YUK				smax	smax		
	comp=N,40nm,0.4s						
YUK				smax	smax		
	comp=E,149nm,0.4s						
LAGR	**Lagunnoye**	**5.69**	**245**	*e*P	**Pn**	**21 12 40.5**	**+0.7**
LAGR				*e*S	**Sn**	**21 13 43.6**	**-0.2**
LAGR				A	A	21 14 03.4	
	comp=E,165nm,0.5s						
LAGR				A	A	21 14 03.4	
	comp=E,483nm,0.5s						
LAGR	**Lagunnoye**	**5.69**	**245**	*e*PN	**Pn**	**21 12 40.5**	**+0.7**
LAGR				S	**Sn**	**21 13 43.6**	**-0.2**
LAGR				smax	smax		
	comp=N,165nm,0.6s						
LAGR				smax	smax		
	comp=E,483nm,0.6s						
GRPR	**Tuman**	**5.73**	**244**	*e*P	**Pn**	**21 12 41.2**	**+0.8**
GRPR				AMB	AMB	21 12 50.3	
	comp=E,82nm,0.3s						
GRPR				*e*S	**Sn**	**21 13 43.5**	**-1.3**
GRPR				A	A	21 13 53.5	
	comp=E,110nm,0.5s						
GRPR				A	A	21 13 53.5	
	comp=E,55nm,0.5s						
GRPR	**Tuman**	**5.73**	**244**	*e*PN	**Pn**	**21 12 41.2**	**+0.8**
GRPR				*e*S	**Sn**	**21 13 43.5**	**-1.3**
GRPR				pmax	pmax		
	comp=Z,82nm,0.3s						
GRPR				smax	smax		
	comp=E,107nm,0.5s						
GRPR				smax	smax		
	comp=N,55nm,0.2s						
GLVR	**Golovnino**	**6.02**	**243**	*e*P	**Pn**	**21 12 44.6**	**+0.3**
GLVR				*e*S	**Sn**	**21 13 51.1**	**-0.7**
GLVR				A	A	21 14 02.9	
	comp=N,166nm,0.6s						
GLVR				A	A	21 14 02.9	
	comp=N,156nm,0.6s						
GLVR	**Golovnino**	**6.02**	**243**	*e*PN	**Pn**	**21 12 44.6**	**+0.3**
GLVR				S	**Sn**	**21 13 51.1**	**-0.7**
GLVR				smax	smax		

	comp=N,166nm,0.7s						
GLVR				smax	smax		
	comp=E,156nm,0.7s						
NEM2	Nemuro 2	6.09	239	P	Pn	21 12 43.9	-1.5
NEM2				eS	Sn	21 13 50.7	-3.0
JRA	Rausu	6.16	246	P	Pn	21 12 48.4	+2.1
JNK	Nakash	6.59	245	P	Pn	21 12 53.0	+0.8
JNK				eS	Sn	21 14 06.2	+0.2
JTKR	Abashiri--Toko	6.92	250	P	Pn	21 12 58.3	+1.6
JAK	Akkeshi	6.93	240	P	Pn	21 12 55.1	-1.7
JAK				eS	Sn	21 14 10.9	-3.3
YSS	Yuzh-Sakhalins	6.98	276	ePn	Pn	21 12 54.5	-3.0
YSS	Yuzh-Sakhalins	6.98	276	ePN	Pn	21 13 01.0	+3.5
YSS				MLR	MLR		
	comp=Z,110nm,19.0s						
PEA0B	Petropavlovsk-	7.10	24	ePn	Pn	21 12 59.4	+0.3
PEA0B				eSn	Sn	21 14 18.8	+0.5
PETK	Petropavlovsk-	7.10	24	P	Pn	21 12 59.0	-0.1
	baz=217,slow=15						
PETK				S	Sn	21 14 19.7	+1.4
	baz=190,slow=16						
PETK				LR	LR	21 16 18.2	
	comp=Z,48nm,20.8s,baz=246,slow=43						
PETK	Petropavlovsk-	7.10	24	ePn	Pn	21 12 59.8	+0.7
PETK				eSn	Sn	21 14 17.3	-1.0
PETK	Petropavlovsk-	7.10	24	ePN	Pn	21 12 59.8	+0.7
JMP	Maruseppu	7.26	252	P	Pn	21 13 03.5	+2.1
JAR	Ashorobuto	7.33	245	P	Pn	21 13 03.2	+0.8
JAR				eS	Sn	21 14 23.8	-0.4
JOB	Onbets	7.50	243	P	Pn	21 13 04.7	0.0
JOB				eS	Sn	21 14 25.9	-2.4
HRK	Horoka	7.66	248	eP	Pn	21 13 08.3	+1.4
ASAJ	Asahikawa	7.72	254	P	Pn	21 13 10.1	+2.5
	comp=Z,2.2nm,0.3s,baz=71,slow=12,SNR=24						
ASAJ				S	Sn	21 14 44.0	+10
	baz=90,slow=19,SNR=1.3						
ASAJ				LR	LR	21 15 57.2	
	comp=Z,103nm,19.2s,baz=39,slow=36						
ASAJ	Asahikawa	7.72	254	ePn	Pn	21 13 10.4	+2.8
ASAJ				eSn	Sn	21 14 37.6	+4.0
ASAJ	Asahikawa	7.72	254	P	Pn	21 13 10.3	+2.7
JKK2	Kamakawa 2	7.72	252	P	Pn	21 13 09.7	+2.0
TYV	Tymovskoe	7.95	305	ePN	Pn	21 13 11.8	+1.1
TYV				pmax	pmax		
	comp=Z,13nm,1.0s						
JCH	Churui	7.95	242	P	Pn	21 13 10.4	-0.5
JCH				eS	Sn	21 14 35.3	-4.1
MYR	Moyori	8.19	241	eP	Pn	21 13 13.3	-0.8
ERM	Erimo	8.43	240	eP	Pn	21 13 18.0	+0.7
ERM	Erimo	8.43	240	ePn	Pn	21 13 18.1	+0.8
ERM				eSn	Sn	21 14 46.7	-4.2
ERM	Erimo	8.43	240	ePN	Pn	21 13 18.1	+0.8
JNBK	Urakawa-nobuka	8.52	242	P	Pn	21 13 17.1	-1.4
JNB	Noboribetsu	9.48	248	P	Pn	21 13 31.4	-0.4
JKB	Kayabe	9.79	245	P	Pn	21 13 34.8	-1.2
JYM2	Yakumo 2	10.09	247	P	Pn	21 13 39.1	-1.0
JANG	Nango	10.43	237	P	Pn	21 13 40.7	-4.0
JANG				eS	Sn	21 15 29.6	-10
MA2	Magadan	12.94	355	P	Pn	21 14 18.6	-0.3
	comp=Z,2.4nm,0.3s,baz=166,slow=15,SNR=4.5						
MA2				LR	LR	21 19 14.1	
	comp=Z,52nm,18.3s,baz=55,slow=37						
KLR	Kul'dur	14.40	288	LR	LR	21 20 10.2	
	comp=Z,8.6nm,19.7s,baz=88,slow=37						
KLR	Kul'dur	14.40	288	i P	Pn	21 14 40.8	+2.2
USA0B	Ussuriysk Arra	14.90	268	ePn	Pn	21 14 45.1	-0.1
USRK	Ussuriysk Ar.	14.90	268	P	Pn	21 14 45.8	+0.6
	baz=68,slow=11						
MAT	Matsushiro	14.96	232	P	P	21 14 51.7	+1.3
MAT				S	Sn	21 17 37.2	+6.8
MJAR	Matsushiro Arr	14.96	232	P	Pn	21 14 47.6	+1.6
	comp=Z,0.1nm,0.3s,baz=44,slow=8.0,SNR=4.4						
SEY	Seymchan	16.25	359	P	P	21 15 03.1	-1.4
	comp=Z,0.4nm,0.3s,baz=182,slow=12,SNR=6.5						
INU	Inuyama	16.49	232	ePn	Pn	21 15 03.9	-1.6
	comp=Z,4.1nm,0.8s						
YAK	Yakutsk	20.28	328	P	P	21 15 48.9	+0.3
	comp=Z,5.1nm,0.4s,baz=22,slow=1.0,SNR=3.9						
YAK	Yakutsk	20.28	328	eP	P	21 15 48.5	-0.1
YAK				pmax	pmax		
	comp=Z,13nm,1.2s						
YAK				pmax	pmax		
	comp=N,2.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.2s						
KSRS	Korea Array	20.66	252	P	P	21 15 53.9	+0.9
	comp=E,2.2nm,0.7s,baz=56,slow=11,SNR=13						
KSRS	Korea Array	20.66	252	eP	Pn	21 15 54.8	-1.0
JNU	Nakatsue	21.59	239	P	P	21 16 04.1	+1.0
	comp=E,3.9nm,0.8s,baz=16,slow=3.5,SNR=3.9						
JNU	Nakatsue	21.59	239	eP	P	21 16 04.2	+1.1
	comp=E,12nm,1.3s						
BILL	Bilibino	22.45	13	eP	P	21 16 12.6	+0.6
BILL	Bilibino	22.45	13	eP	P	21 16 12.8	+0.8
	comp=E,11nm,0.6s						
BILL	Bilibino	22.45	13	⇓eP	P	21 16 12.6	+0.6
BILL				e		21 16 34.5	
BILL						21 16 37.0	
BILL				pmax	pmax		
	comp=Z,7.0nm,0.5s						
BILL				MLR	MLR		
	comp=Z,61nm,20.0s						
H11N2	WAKE ISLAND Hy	29.25	152	T	T	21 48 23.9	
	baz=342,slow=74						
H11N1	WAKE ISLAND Hy	29.27	152	T	T	21 48 35.3	
	baz=342,slow=74						
H11N3	WAKE ISLAND Hy	29.27	152	T	T	21 48 38.0	
	baz=342						
HHC	Hu-ho-hao-te	30.16	274	eP	P	21 17 23.5	+0.7
HHC				pmax	pmax		
	comp=Z,20nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,4.7s						
H11S1	WAKE ISLAND Hy	30.34	153	T	T	21 49 59.8	
	baz=341,slow=76,SNR=568						
H11S3	WAKE ISLAND Hy	30.35	153	T	T	21 50 07.1	
	baz=341,slow=76,SNR=809						
H11S2	WAKE ISLAND Hy	30.36	153	T	T	21 50 03.9	
	baz=341,slow=76,SNR=589						
ULN	Ulaanbaatar	30.78	289	eP	P	21 17 28.3	0.0
ULN	Ulaanbaatar	30.78	289	⇑eP	P	21 17 28.3	0.0
ULN				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SONM	Songino Array	31.22	289	P	P	21 17 33.0	+1.0
	comp=Z,1.1nm,1.1s,baz=84,slow=4.5,SNR=2.5						
PPLA	Purkeypile	34.27	42	eP	P	21 17 58.6	0.0
	comp=Z,11nm,1.3s						
BPAW	Bear Paw Mtn.	34.86	40	eP	P	21 18 04.0	+0.5
	comp=Z,3.6nm,1.0s						
XAN	Xi'an	35.38	265	P	P	21 18 08.3	0.0
XAN				pmax	pmax		
	comp=Z,4.0nm,0.6s						
COLD	Coldfoot	35.43	34	eP	P	21 18 07.8	-0.5
	comp=Z,2.2nm,0.7s						
TOLK	Toolik Lake Re	35.84	32	eP	P	21 18 12.3	+0.4
	comp=Z,2.9nm,0.7s						
WRH	Wood River Hil	36.13	39	eP	P	21 18 13.3	-1.0
	comp=Z,4.8nm,1.3s						
CCB	Clear Creek Bu	36.26	39	eP	P	21 18 14.1	-1.3
	comp=Z,4.4nm,1.4s						
IL1	Eielson Array	36.65	39	eP	P	21 18 18.5	-0.3
ILAR	Eielson Array	36.65	39	P	P	21 18 18.2	-0.6
	comp=Z,0.8nm,0.9s,baz=268,slow=6.8,SNR=11						
ILAR				PcP	PcP	21 20 39.3	-1.2
	comp=Z,0.2nm,0.7s,baz=258,slow=4.5,SNR=2.5						
ILAR	Eielson Array	36.65	39	eP	P	21 18 20.5	+1.8
ILAR	Eielson Array	36.65	39	eP	P	21 18 20.6	+1.8
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
EGAK	Eagle	39.10	38	eP	P	21 18 38.4	-1.0
	comp=Z,2.3nm,0.7s						
GYA	Guiyang	41.58	257	eP	P	21 19 01.0	+0.5
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
INK	Inuvik	41.75	32	P	P	21 19 01.3	+0.2
	comp=Z,3.0nm,0.7s,baz=274,slow=8.5,SNR=8.1						
ZALV	Zalesovo Beam	42.52	306	P	P	21 19 05.0	-2.7
	comp=Z,0.6nm,0.4s,baz=68,slow=5.8,SNR=2.9						
ZALV	Zalesovo Beam	42.52	306	P	P	21 19 05.0	-2.7
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.4s						
WMQ	Urumqi	44.81	291	P	P	21 19 27.4	+1.1
WMQ				LR	LR		
	comp=N,40nm,21.7s						
WMQ				LR	LR		
	comp=E,50nm,16.5s						
WMQ				LR	LR		
	comp=Z,67nm,19.1s						
KMI	Kunming	45.11	259	P	P	21 19 29.1	+0.1
KMI				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MK31	Makanchi Array	46.84	297	eP	P	21 19 40.8	-1.4
MK31	Makanchi Array	46.84	297	eP	P	21 19 40.8	-1.4
MKAR	Makanchi Array	46.84	297	P	P	21 19 40.1	-2.1
	comp=Z,0.6nm,0.6s,baz=68,slow=6.7,SNR=6.4						
MKAR				PcP	PcP	21 21 14.3	0.0
	comp=Z,0.5nm,0.6s,baz=58,slow=4.1,SNR=5.2						
MKAR				LR	LR	21 40 38.6	
	comp=Z,66nm,18.4s,baz=53,slow=38						
MKAR	Makanchi Array	46.84	297	eP	P	21 19 40.4	-1.8
MKAR	Makanchi Array	46.84	297	eP	P	21 19 40.8	-1.4
	comp=Z,6.3nm,0.7s						
MKAR	Makanchi Array	46.84	297	eP	P	21 19 40.8	-1.4
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KURK	Kurchatov	47.27	304	P	P	21 19 44.0	-1.4
KURK						21 21 15.8	
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KURK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KURBB	Kurchatov Arra	47.36	303	P	P	21 19 44.0	-2.1
	comp=Z,0.8nm,0.5s,baz=70,slow=8.5,SNR=9.1						
KURBB				PcP	PcP	21 21 15.8	-0.2
	comp=Z,0.5nm,0.9s,baz=67,slow=4.1,SNR=3.4						
BVAR	Borovoye Array	50.78	309	P	P	21 20 11.0	-1.2
	comp=Z,0.5nm,0.6s,baz=59,slow=8.6,SNR=4.4						
BVAR				PcP	PcP	21 21 28.4	-0.1
	comp=Z,0.6nm,0.5s,baz=56,slow=0.7,SNR=5.3						
BRVK	Borovoye	50.82	309	eP	P	21 20 10.8	-1.7
BRVK	Borovoye	50.82	309	i P	P	21 20 10.8	-1.7
BRVK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
CHTO	Chiang Mai	51.98	257	eP	P	21 20 22.7	+1.0
	comp=Z,3.1nm,0.8s						
CHTO	Chiang Mai	51.98	257	eP	P	21 20 22.7	+1.0
CHTO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CMAR	Chiang Mai Arr	52.24	256	P	P	21 20 24.6	+1.1
	comp=Z,1.7nm,0.7s,baz=36,slow=7.5,SNR=14						
BRDH	Bariadhala	54.30	266	LR	LR	21 44 29.9	
	comp=Z,40nm,18.4s,baz=156,slow=37						
KSH	Kashi	54.54	292	eP	P	21 20 42.7	+2.3
KSH				sP	sP	21 21 10.4	+8.9
KSH				ePcP	PcP	21 21 44.4	+1.3
ARU	Arti	54.95	317	eP	P	21 20 43.5	+0.6
ARU	Arti	54.95	317	c iP	P	21 20 43.4	+0.6
ARU						21 21 41.4	
ARU						21 22 42.7	
ARU				S	S	21 28 20.4	+0.2
ARU				SS	SS	21 32 00.5	-3.1
ARU				pmax	pmax		
	comp=Z,6.0nm,1.7s						
SUMG	Summit	60.74	4	eP	P	21 21 23.0	-0.7
	comp=Z,9.9nm,0.8s						
SUMG	Summit	60.74	4	i P	P	21 21 22.8	-0.9
	comp=Z,9.5nm,0.8s						
SUMG	Summit	60.74	4	eP	P	21 21 23.0	-0.7
SUMG				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NVAR	Mina Array Bea	62.56	62	P	P	21 21 38.1	+1.7
	comp=Z,0.3nm,0.4s,baz=310,slow=5.8,SNR=2.1						
TIN	Tinemaha, Big	63.48	63	eP	P	21 21 44.5	+2.2
TIN	Tinemaha, Big	63.48	63	eP	P	21 21 44.5	+2.2
FINES	FINESS Array B	64.01	335	P	P	21 21 43.7	-1.5
	comp=Z,2.5nm,0.4s,baz=38,slow=6.9,SNR=29						
FINES				LR	LR	21 52 07.7	
	comp=Z,28nm,18.4s,baz=266,slow=38						
MWC	Mount Wilson	65.42	66	eP	P	21 21 56.5	+1.4
MWC	Mount Wilson	65.42	66	eP	P	21 21 56.5	+1.4
SRU	San Rafael Swe	66.74	57	eP	P	21 22 04.1	+0.6
	comp=Z,4.4nm,0.9s						
SRU	San Rafael Swe	66.74	57	eP	P	21 22 04.1	+0.6
SRU				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NB2	NORSAR Subarra	68.21	341	P	P	21 22 10.9	-1.3
	comp=Z,1.8nm,0.6s,baz=28,slow=6.5						
HFS	Hagfors	68.44	339	P	P	21 22 12.3	-1.3
	comp=Z,5.7nm,0.5s,baz=42,slow=5.1,SNR=52						
WRA	Warramunga Arr	68.44	199	P	P	21 22 14.3	+0.3
	comp=Z,0.5nm,0.9s,baz=18,slow=6.9,SNR=5.6						
WRA	Warramunga Arr	68.44	199	eP	P	21 22 15.1	+1.1
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
AKASG	Malin Array Be	71.50	326	P	P	21 22 31.0	-1.5
	comp=Z,3.8nm,0.5s,baz=36,slow=6.2,SNR=6.3						
AKBB	Malin Array Si	71.50	326	eP	P	21 22 31.1	-1.4
	comp=Z,4.4nm,0.6s						
AKBB	Malin Array Si	71.50	326	eP	P	21 22 31.1	-1.4
AKBB				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KIEV	Kiev	71.51	326	eP	P	21 22 30.3	-2.2
	comp=Z,4.3nm,0.7s						
KIEV	Kiev	71.51	326	eP	P	21 22 30.3	-2.2
KIEV				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ANMO	Albuquerque	71.96	58	LR	LR	21 52 29.5	
	comp=Z,19nm,21.4s,baz=67,slow=34						
ASAR	Alice Springs	72.14	198	P	P	21 22 37.8	+1.2
	comp=Z,1.1nm,0.7s,baz=10,slow=5.3,SNR=15						
GNI	Garni	72.45	310	LR	LR	21 56 20.5	
	comp=Z,25nm,20.6s,baz=260,slow=37						
SORM	Soroca	73.90	325	⇑iP	P	21 22 45.1	-1.7
BUR08	Bucovina Ar. S	75.52	326	eP	P	21 22 55.8	-0.6
BUR04	Bucovina Ar. S	75.54	326	eP	P	21 22 55.3	-1.1
BURAR	Bucovina Array	75.54	326	⇓iP	P	21 22 55.7	-0.7
BIZ	Bicaz	75.76	326	⇓iP	P	21 22 57.0	-0.6
TESR	Tescani	75.89	325	⇑iP	P	21 22 57.5	-0.8
CFR	Carcaliu	76.39	323	⇑iP	P	21 23 00.0	-1.1
MORC	Moravsky Berou	76.40	332	⇓iP	P	21 23 00.7	-0.5
CLL	Collm	76.44	335	i P	P	21 22 59.9	-1.4
	comp=Z,4.0nm,1.0s						
CLL	Collm	76.44	335	i P	P	21 22 59.9	-1.4
CLL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
WMOK	Wichita Mounta	76.48	54	eP	P	21 23 01.2	-0.7
	comp=Z,3.9nm,1.1s						
WMOK	Wichita Mounta	76.48	54	eP	P	21 23 01.2	-0.7
WMOK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
TLB	Topalu	76.91	323	⇑iP	P	21 23 03.8	-0.3
MLR	Muntele Rosu	77.01	325	P	P	21 23 04.1	-0.8
	comp=Z,0.8nm,0.7s						
MLR	Muntele Rosu	77.01	325	⇑iP	P	21 23 05.2	+0.3
MLR	Muntele Rosu	77.01	325	eP	P	21 23 05.2	+0.3
	comp=Z,3.1nm,0.7s						
MLR	Muntele Rosu	77.01	325	eP	P	21 23 05.2	+0.3
MLR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ISR	Istrita	77.08	324	⇑iP	P	21 23 04.9	-0.2
VYHS	Vyhne	77.09	331	eP	P	21 23 04.4	-0.7
VYHS				pmax	pmax		
	comp=Z,1.0nm,0.9s						
VYHS	Vyhne	77.09	331	eP	P	21 23 04.4	-0.7
DRGR		77.17	327	⇓iP	P	21 23 04.8	-0.8
TX31	Lajitas Ar. Si	77.62	60	eP	P	21 23 09.0	+0.5
TX31				ePcP	PcP	21 23 19.5	+1.0
TXAR	Lajitas Array	77.62	60	P	P	21 23 08.9	+0.4
	comp=Z,0.5nm,0.6s,baz=295,slow=4.3,SNR=15						
KHC	Kasperske Hory	78.21	334	eP	P	21 23 10.9	-0.4
KHC	Kasperske Hory	78.21	334	eP	P	21 23 10.9	-0.4
BRTR	Keskin Array B	78.32	317	P	P	21 23 11.7	-0.6
	comp=Z,0.8nm,0.8s,baz=102,slow=5.2,SNR=4.7						
BRTR	Keskin Array B	78.32	317	eP	P	21 23 12.3	0.0
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
GERES	GERESS Array B	78.42	334	P	P	21 23 11.5	-1.1
	comp=Z,0.5nm,0.6s,baz=23,slow=7.2,SNR=5.2						
GERES	GERESS Array B	78.42	334	eP	P	21 23 13.0	+0.4
GERES	GERESS Array B	78.42	334	eP	P	21 23 13.0	+0.4
BZS	Buzias	78.57	327	⇑iP	P	21 23 12.1	-1.2
MDVR	Moldovita	79.24	327	⇓iP	P	21 23 15.7	-1.4
VTS	Vitosha	80.52	325	⇓iP	P	21 23 24.0	-0.2
VTS	Vitosha	80.52	325	eP	P	21 23 22.6	-1.6
	comp=Z,3.3nm,0.8s						
VTS	Vitosha	80.52	325	eP	P	21 23 22.6	-1.6
VTS				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MMAI	Mount Meron Ar	82.73	311	P	P	21 23 36.1	+0.1
	comp=Z,1.5nm,0.5s,baz=45,slow=6.9,SNR=4.2						
PLCA	Paso Flores	148.34	95	PKPbc	PKPbc	21 30 58.5	+0.8
	comp=Z,2.4nm,0.8s,baz=243,slow=2.1,SNR=3.8						
CPUP	Villa Florida	148.59	60	PKPbc	PKPbc	21 30 58.8	+0.2
	comp=Z,1.4nm,0.7s,baz=349,slow=4.4,SNR=3.9						
SNAA	Sanae	152.49	196	PKPbc	PKPbc	21 31 06.4	-0.2
	comp=Z,0.7nm,0.7s,baz=206,slow=4.7,SNR=3.4						

ISCJB ***08*** *21:15:45.6±0.6, 8°.70S±0°.04×107°.25E±0°.05, h33km, mb3.8/10, Error ellipse: s-maj=8.0km s-min=5.8km az=154.0*
DJA ***08*** *21:15:46.9±0.5, 8°S±4°×10°7E±°, h10km, M4.3/13, MLv4.3/13*
IDC ***08*** *21:15:52.4±1.9, 8°.36S×107°.37E, h101km±15km, mb3.5/12, mb1 3.6/13, mb1mx3.4/65, mbtmp3.9/13, Error ellipse: s-maj=29.8km s-min=11.4km az=62.0*
ISC 08 21:15:45.6±0.7, **8°.65S**±0°.07×**107°.25E**±0°.06, **h35km, n27,** σ**2s.69**/31, **mb4.0**/10, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CISI	Cisompet, Garu	1.23	27	P	Pn	21 16 07.3	+1.0
CISI				S	Sn	21 16 21.0	-0.7
CMJI	Cimerak	1.47	54	P	Pn	21 16 10.7	+1.2
CMJI				S	Sn	21 16 27.2	-0.3
SKJI	Sukabumi	1.78	337	P	Pn	21 16 15.5	+1.7
SKJI				S	Sn	21 16 35.3	+0.1
LEM	Lembang	1.85	11	P	Pn	21 16 17.5	+2.5
	122nm,0.3s,baz=137,slow=1.9,SNR=45						
LEM				S	Sn	21 16 40.2	+3.0
	381nm,0.3s,baz=152,slow=20,SNR=25						
LEM				LR	LR	21 17 10.9	
	comp=Z,131nm,20.1s,baz=145,slow=51						
LEM	Lembang	1.85	11	S	Sn	21 16 39.0	+1.7
KPJI	Karang Pucung	2.12	52	P	Pn	21 16 20.6	+2.1
DBJI	Dramaga	2.15	347	P	Pn	21 16 20.5	+1.6
TNG	Tangerang	2.54	346	P	Pn	21 16 27.8	+3.5
CGJI	Cibinong	2.55	323	P	Pn	21 16 26.3	+1.9
UGM	Wanagama	3.32	77	P	Pn	21 16 37.0	+1.9
SMRI	Semarang	3.54	63	P	Pn	21 16 40.9	+2.8
WOJI	Wonogiri, Jawa	3.72	78	P	Pn	21 16 42.1	+1.5
NGJI	Ngawi	4.36	73	P	Pn	21 16 53.6	+4.2
PWJI	Pagerwojo	4.55	82	P	Pn	21 16 54.3	+2.3
BATI	Baumata	16.26	97	P	Pn	21 19 33.8	+2.3
	2.9nm,0.3s,baz=270,slow=5.1,SNR=4.0						
FITZ	Fitzroy Crossi	20.18	120	P	Pn	21 20 19.9	+0.5
	3.7nm,0.8s,baz=292,slow=7.1,SNR=10						
FITZ				S	S	21 23 53.5	-8.7
	0.7nm,0.6s,baz=310,slow=17,SNR=3.9						
WRA	Warramunga Arr	28.50	116	P	P	21 21 38.3	+0.4
	0.3nm,0.6s,baz=289,slow=11,SNR=6.9						
ASAR	Alice Springs	29.55	123	P	P	21 21 49.0	+1.7
	0.2nm,0.5s,baz=299,slow=8.4,SNR=3.5						
STKA	Stephens Creek	39.37	131	P	P	21 23 13.2	+1.3
	1.7nm,0.6s,baz=313,slow=8.3,SNR=5.9						
SONM	Songino Array	56.24	359	P	P	21 25 20.8	-1.7
	2.0nm,0.6s,baz=175,slow=8.6,SNR=13						
MKAR	Makanchi Array	59.52	340	P	P	21 25 43.5	-1.9
	1.4nm,0.5s,baz=143,slow=7.8,SNR=19						
KLR	Kul'dur	61.52	18	P	P	21 25 55.7	-3.2
	0.0nm,0.4s,baz=234,slow=8.7,SNR=5.6						
KURBB	Kurchatov Arra	64.08	340	P	P	21 26 14.3	-1.7
	1.6nm,0.7s,baz=154,slow=6.3,SNR=12						
ZALV	Zalesovo Beam	65.19	346	P	P	21 26 20.5	-2.6
	0.8nm,0.3s,baz=150,slow=7.6,SNR=4.6						
MAW	Mawson	65.87	197	P	P	21 26 29.2	+1.9
	0.9nm,0.5s,baz=73,slow=11,SNR=6.3						
BVAR	Borovoye Array	68.98	337	P	P	21 26 45.4	-1.8
	0.2nm,0.3s,baz=135,slow=9.1,SNR=2.9						
VNDA	Vanda	74.31	169	P	P	21 27 20.0	+1.1
	0.6nm,0.7s,baz=297,slow=9.0,SNR=4.4						

LJU 08 21:20:41.1, 46°.39N×15°.07E, h0km Rockburst, Northwestern Balkan Peninsula

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NNC 08 21:30:33.9±5.1, **37°.19N×70°.62E, h0km, mb3.7, mpv3.4, 1C-7D, Error ellipse: s-maj=39.5km s-min=35.5km az=165.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.62	38	⇓P	Pn	21 31 30.7	-0.7
	2.2nm,0.3s						
SFK				⇓S	Sn	21 32 17.0	+2.0
	12nm,0.5s						
MNAS	Manas	5.49	15	⇓P	Pn	21 31 57.9	+0.8
	1.1nm,0.4s						
MNAS				⇓S	Sn	21 32 59.6	-1.3
	4.8nm,0.5s						
KK31	Karatay Array	5.91	359	⇑P	Pn	21 32 04.8	+2.1
	1.2nm,0.4s,baz=232,slow=40,SNR=30						
KK31				⇓S	Sn	21 33 13.2	+2.0
	2.2nm,0.3s,baz=182,slow=22,SNR=7.0						
AAK	Ala-Archa	6.21	27	⇓P	Pn	21 32 06.2	-0.7
	1.5nm,0.3s						
TKM2	Tokmak 2	6.88	32	⇓P	Pn	21 32 14.6	-1.6
	1.9nm,0.5s						

MAN ***08*** *21:50:48.1, 5°.36N×125°.48E, h33km, mb4.5, ML3.4, MS3.2*
IDC ***08*** *21:50:50.0±3.2, 5°.36N×124°.92E, h59km±33km, mb3.4/6, mb1 3.5/6, mb1mx3.2/54, mbtmp3.7/6, MS2.4/1, Ms1 2.6/1, ms1mx2.1/33, Error ellipse: s-maj=44.0km s-min=14.0km az=84.0*
ISC 08 21:50:49.8±1.7, **5°.3N**±0°.1×**125°.36E**±0°.09, **h54km**±18km, **n14,** σ**2s.14**/18, **mb3.5**/6, **1C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	General Santos	0.85	331	eP	Pn	21 51 05.3	-0.5
GSPH				eS	Sn	21 51 16.1	-1.4
SKMP	Bagumbayan, Su	1.43	325	eP	Pn	21 51 13.2	-0.2
DAV	Davao City (W)	1.73	7	P	Pn	21 51 18.0	+0.4
	200nm,0.3s,baz=246,slow=9.6,SNR=16						
DAV				S	Sn	21 51 41.5	+3.0
	107nm,0.3s,baz=319,slow=23,SNR=8.6						
DMPH	Davao City--Mi	1.74	5	⇑eP	Pn	21 51 19.5	+1.9
DMPH				eS	Sn	21 51 43.0	+4.3
MATI	Mati	1.83	29	eP	Pn	21 51 16.8	-2.0
MATI				eS	Sn	21 51 37.7	-3.2
BUKP	Musuan	2.54	353	eP	Pn	21 51 28.6	0.0
BUKP				eS	Sn	21 51 58.0	-0.5
PAGZ	Pagadian	3.18	322	eP	Pn	21 51 37.1	-0.2
FITZ	Fitzroy Crossi	23.29	179	P	P	21 55 54.6	+1.6
	0.9nm,0.5s,baz=357,slow=11,SNR=5.9						
WRA	Warramunga Arr	26.63	161	P	P	21 56 24.1	+0.6
	0.3nm,0.4s,baz=340,slow=10,SNR=14						
CMAR	Chiang Mai Arr	28.90	299	LR	LR	22 07 52.5	
	comp=Z,8.2nm,21.4s,baz=205,slow=36						
ASAR	Alice Springs	30.01	164	P	P	21 56 54.5	+0.8
	0.4nm,0.4s,baz=340,slow=7.2,SNR=12						
PETK	Petropavlovsk-	54.48	23	P	P	22 00 13.0	+1.2
	0.6nm,0.5s,baz=199,slow=3.1						
MKAR	Makanchi Array	55.47	325	P	P	22 00 17.0	-2.1
	0.2nm,0.4s,baz=122,slow=7.1,SNR=4.6						
KURBB	Kurchatov Arra	59.66	327	P	P	22 00 45.8	-2.6
	0.5nm,0.2s,baz=121,slow=5.5,SNR=4.2						

TAP ***08*** *21:51:43.3, 23°.90N×122°.67E, h11km±1km, ML2.6, D*
ISCJB ***08*** *21:51:44.6±0.5, 23°.88N±0°.03×122°.69E±0°.02, h23km±4km, Error ellipse: s-maj=4.3km s-min=2.7km az=169.9*
JMA ***08*** *21:51:45.5±0.2, 24°.03N×122°.63E, h30km±5km, M1.8*
ISC 08 21:51:44.4±1.2, **23°.92N**±0°.03×**122°.67E**±0°.02, **h20km**±4km, **n43,** σ**0s.52**/84, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.59	25	P	Pb	21 51 55.8	-0.2
JYNG				S	Sb	21 52 02.6	-1.3
YOJ	Yonaguni jima	0.62	30	P	Pb	21 51 56.6	-0.1
	baz=27						
YOJ				S	Sb	21 52 04.4	-0.5
	baz=27						
YOJ	Yonaguni jima	0.62	30	P	Pb	21 51 56.5	-0.1
YOJ				S	Sb	21 52 04.3	-0.6
EOS1	EOS1	0.80	322	eP	Pb	21 52 00.0	+0.4
	baz=322						
EOS1				eS	Sg	21 52 11.4	+0.6
	baz=322						
ENLB	Shoufeng	0.98	269	eP	Pb	21 52 02.6	-0.1
	baz=270						

ENLB				eS	Sg	21 52 17.1	+0.7
	baz=270						
NANB	**Nanao**	0.98	301	P	Pb	21 52 02.5	-0.3
	baz=302						
NANB				S	Sn	21 52 16.2	-0.2
	baz=302						
ENA	**Nanau**	0.99	301	eP	Pb	21 52 03.2	+0.3
	baz=301						
ENA				eS	Sn	21 52 16.6	0.0
	baz=301						
NACB	**Ninganchiao**	1.02	285	eP	Pb	21 52 02.7	-0.7
	baz=285						
NACB				eS	Sb	21 52 16.2	-0.1
	baz=285						
TWC	**Suao**	1.02	313	P	Pb	21 52 03.0	-0.4
	baz=313						
TWC				S	Sb	21 52 15.4	-1.0
	baz=313						
HATJ	**Hateruma jima**	1.05	82	P	Pg	21 52 04.8	0.0
IRIF	**Iriomote-Funau**	1.05	67	P	Pb	21 52 04.2	+0.2
IRIF				eS	Sg	21 52 19.3	+0.5
EGS		1.14	324	eP	Pn	21 52 05.7	+0.3
	baz=324						
EGS				eS	Sg	21 52 22.7	+1.0
	baz=324						
NTC	**Toucheng**	1.21	321	eP	Pb	21 52 06.8	+0.1
	baz=321						
NTC				eS	Sg	21 52 23.8	+0.2
	baz=321						
TWE	**Neicheng**	1.22	311	P	Pg	21 52 07.9	-0.1
	baz=312						
TWE				S	Sg	21 52 23.6	-0.3
	baz=312						
HGSD	**Ruisui**	1.22	250	eP	Pn	21 52 06.3	-0.1
	baz=250						
HGSD				eS	Sn	21 52 22.7	+0.4
	baz=250						
ENTT	**Nioudou**	1.24	306	P	Pb	21 52 07.5	+0.3
	baz=306						
ENTT				eS	Sg	21 52 24.5	-0.2
	baz=306						
TWB1	**Santiao Chiao**	1.25	330	eP	Pn	21 52 07.0	+0.2
	baz=330						
TWB1				eS	Sg	21 52 24.6	-0.5
	baz=330						
JKRS	**Kuro-shima**	1.26	75	P	Pb	21 52 07.9	+0.3
JKRS				eS	Sg	21 52 25.0	-0.5
NNSB	**Datong**	1.28	294	eP	Pn	21 52 07.2	-0.2
	baz=294						
NNSB				eS	Sg	21 52 25.3	-0.8
	baz=294						
NNSH	**Datong**	1.28	294	eP	Pn	21 52 07.3	-0.1
	baz=294						
NNSH				eS	Sg	21 52 25.3	-0.8
	baz=294						
NNS	**Nan Shan**	1.29	294	eP	Pn	21 52 07.5	0.0
	baz=294						
NNS				eS	Sb	21 52 25.4	+0.9
	baz=294						
TIPB	**Shuangxi**	1.30	324	eP	Pn	21 52 07.0	-0.5
	baz=324						
TIPB				eS	Sb	21 52 25.4	+0.7
	baz=324						
WHF	**Hehuan Shan**	1.31	280	P	Pn	21 52 07.4	-0.6
	baz=280						
WHF				S	Sb	21 52 25.1	0.0
	baz=280						
YULB	**Yu-li**	1.36	248	eP	Pn	21 52 08.4	0.0
	baz=248						
YULB				eS	Sn	21 52 26.0	+0.1
	baz=248						
NWLT	**Wulai**	1.37	309	eP	Pg	21 52 11.0	+0.2
	baz=309						
NWLT				eS	Sb	21 52 27.2	+0.8
	baz=309						
CHGB	**Renai**	1.38	276	eP	Pn	21 52 08.4	-0.3
	baz=276						
CHGB				eS	Sn	21 52 26.1	-0.5
	baz=276						
TWF1	**Yuli**	1.38	246	eP	Pn	21 52 08.1	-0.5
	baz=246						
TWF1				eS	Sn	21 52 25.9	-0.5
	baz=246						
YHNB	**Yeheng**	1.40	303	eP	Pn	21 52 08.8	-0.2
	baz=302						
YHNB				eS	Sb	21 52 27.5	0.0
	baz=302						
NWF	**Wu-fen Shan**	1.41	325	eP	Pn	21 52 08.8	-0.2
	baz=325						
NWF				eS	Sg	21 52 29.4	-0.6
	baz=325						
WFSB	**Wu-fen Shan**	1.41	325	eP	Pn	21 52 09.5	+0.5
	baz=325						
WFSB				eS	Sb	21 52 28.9	+1.3
	baz=325						
JIJ	**Ishigaki jima**	1.42	71	P	Pn	21 52 09.3	+0.2
JIJ				S	Sn	21 52 27.1	-0.1
NSK	**Sanguang**	1.42	302	eP	Pn	21 52 09.3	+0.1
	baz=302						
NSK				eS	Sb	21 52 28.6	+0.6
	baz=302						
TDCB	**Techi**	1.42	284	eP	Pn	21 52 09.5	+0.2
	baz=284						
TDCB				eS	Sb	21 52 28.5	+0.3
	baz=284						
CHKT	**Chengkung**	1.45	236	eP	Pn	21 52 09.7	+0.1
	baz=236						
CHKT				eS	Sb	21 52 28.7	-0.1
	baz=236						
FULB	**Fuli**	1.45	241	eP	Pn	21 52 09.9	+0.3
	baz=241						
FULB				eS	Sn	21 52 28.3	+0.2
	baz=241						
SMLT	**Sun Moon Lake**	1.62	269	eP	Pb	21 52 13.0	-0.7
	baz=269						
SMLT				eS	Sb	21 52 33.6	-0.2
	baz=269						
YUS	**Yu-Shan**	1.63	255	eP	Pn	21 52 12.7	+0.1
	baz=255						
YUS				eS	Sn	21 52 32.2	-1.0
	baz=255						
JISG	**Ishigakijimahi**	1.64	66	P	Pn	21 52 12.5	+0.4
JISG				eS	Sn	21 52 32.3	-0.4
TYC	**Yuchr**	1.66	270	eP	Pn	21 52 13.4	+0.9
	baz=270						
TYC				eS	Sn	21 52 33.6	+0.4
	baz=270						
ALS	**Alishan**	1.76	257	eP	Pn	21 52 13.7	-0.4
	baz=257						
ALS				eS	Sn	21 52 36.1	0.0
	baz=257						
CHN5	**Tsauling**	1.85	260	eS	Sb	21 52 39.8	-0.8
	baz=260						
TPUB	**Ta-pu**	1.97	252	eP	Pn	21 52 17.4	+0.7
	baz=252						
TPUB				eS	Sn	21 52 41.9	+1.0
	baz=252						
CHN4	**Tsaushan**	1.99	254	eP	Pn	21 52 17.9	+1.0
	baz=254						
CHN4				eS	Sn	21 52 41.7	+0.4
	baz=254						

MAN 08 22:12:30.1, 16°.41N×121°.09E, h12^{km}, mb4.5, ML3.4, MS3.2, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALP	**Baler**	0.81	145	eP	Pg	22 12 45.8	0.0
BALP				eS	Sn	22 12 59.2	-0.1
CAUP	**Cauayan**	0.88	53	eP	Pg	22 12 46.2	-0.9
BOLP	**Bolinao**	1.13	269	eP	Pb	22 12 51.2	-0.4
BOLP				eS	Sn	22 13 09.2	+2.0
ABRA	**Dolores**	1.28	344	eP	Pn	22 12 51.6	-2.3
ABRA				eS	Sg	22 13 11.5	0.0
APYP	**Conner**	1.45	6	eP	Pb	22 12 56.9	-0.2
APYP				eS	Sg	22 13 19.3	+2.5

RSNC 08 22:21:01.9±0.9, 6°.81N×73°.15W, h149^{km}±4^{km}, ML3.0, Mw3.7, 1C-2D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	**Barichara**	0.22	190	i P	Pn	22 21 22.1	-0.4
BARC				eS	Sn	22 21 37.1	-0.9
BARC				i		22 21 38.6	
	comp=Z,289nm,0.3s						
BRRC	**Barranca, Sant**	0.64	298	⇑ iP	Pn	22 21 23.9	0.0
BRRC				eS	Sn	22 21 40.8	+0.2
BRRC				i		22 21 43.2	
	comp=Z,243nm,0.1s						
PAMC	**Pamplona, Colo**	0.69	40	i P	Pn	22 21 24.9	0.0
PAMC				eS	Sn	22 21 42.0	-0.2
PAMC				i		22 21 44.1	
	comp=Z,143nm,0.2s						
RUSC	**La Rusia**	0.91	176	⇓ iP	Pn	22 21 25.9	-0.5
RUSC				eS	Sn	22 21 44.2	-0.9
RUSC				i		22 21 45.9	
	comp=Z,99nm,0.2s						
PTBC	**PUERTO BERRIO,**	1.33	259	eP	Pn	22 21 28.7	-1.0
PTBC				eS	Sn	22 21 49.6	-1.3
PTBC				i		22 21 55.9	
	comp=Z,154nm,0.4s						
TAMC	**Tame, Arauca**	1.40	105	⇓ iP	Pn	22 21 30.2	-0.1
TAMC				i		22 21 30.3	
	comp=Z,150nm,0.3s						
TAMC				eS	Sn	22 21 51.8	-0.3
OCAC	**Ocana**	1.43	353	eP	Pn	22 21 30.1	-0.7
OCAC				eS	Sn	22 21 52.0	-1.0
OCAC				i		22 21 57.1	
	comp=Z,288nm,0.3s						
YOPC	**Yopal, Colombi**	1.61	153	i P	Pn	22 21 32.5	-0.2
YOPC				i		22 21 33.3	
	comp=Z,66nm,0.5s						
ZARC	**Zaragoza, Cauc**	1.83	292	eP	Pn	22 21 34.5	-0.5
ZARC				eS	Sn	22 22 00.4	0.0
ZARC				i		22 22 06.2	
	comp=Z,178nm,0.4s						
NORC	**Norcasia**	2.11	234	eP	Pn	22 21 38.0	-0.4
NORC				eS	Sn	22 22 05.5	-0.9
CHIC	**Chingaza**	2.24	195	eP	Pn	22 21 39.9	-0.4
CHIC				eS	Sn	22 22 09.1	-0.7
CHIC				i		22 22 13.2	
	comp=Z,55nm,0.4s						
ROSC	**El Rosal**	2.28	211	eP	Pn	22 21 41.7	+1.0
ROSC				i		22 22 19.9	
	comp=Z,148nm,0.5s						
HELC	**Santa Helena**	2.45	256	eP	Pn	22 21 42.8	+0.1
HELC				eS	Sn	22 22 14.3	+0.3
HELC				i		22 22 20.7	
	comp=Z,62nm,0.3s						
VILC	**Villavicencio,**	2.73	192	eP	Pn	22 21 45.0	-1.0
VILC				eS	Sn	22 22 19.2	-0.9
VILC				i		22 22 30.2	
	comp=Z,40nm,0.7s						
DBBC	**Dabeiba**	3.05	274	eP	Pn	22 21 49.9	-0.1
TOLC	**Tolima**	3.09	225	eP	Pn	22 21 50.8	0.0
CODC	**Agustˆ›n Codaz**	3.12	355	eP	Pn	22 21 49.8	-1.0
CODC				eS	Sn	22 22 26.7	-1.9
CODC				i		22 22 32.6	
	comp=Z,46nm,0.3s						
MOTC	**Monteria, Cord**	3.17	308	eP	Pn	22 21 49.1	-2.3
MOTC				i		22 22 43.8	
	comp=Z,52nm,0.4s						
SDV	**Santo Domingo**	3.23	50	eP	Pn	22 21 51.2	-1.2
SDV				i		22 21 53.1	
	comp=Z,5.5nm,0.3s						
PRAC	**Prado**	3.53	210	eP	Pn	22 21 55.4	-0.7
PRAC				i		22 22 43.6	
	comp=Z,90nm,0.4s						
SJCC	**San Jacinto, C**	3.67	327	eP	Pn	22 21 55.8	-2.1
SJCC				i		22 22 56.3	
	comp=Z,21nm,0.6s						

IDC 08 22:25:37.2±17.0, 5°.97S×144°.54E, h252^{km}±167^{km}, mb2.8/4, mb1 2.9/5, mb1mx2.7/42, mbtmp3.4/5, Error ellipse: s-maj=84.3km s-min=37.9km az=50.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	17.06	215	P	P	22 29 19.9	+0.2
	0.1nm,0.3s,baz=34,slow=11,SNR=7.8						
ASAR	**Alice Springs**	20.35	209	P	P	22 29 55.0	-0.1
	0.3nm,0.6s,baz=38,slow=9.4,SNR=3.5						
FITZ	**Fitzroy Crossi**	22.03	235	P	P	22 30 12.0	+0.5
	1.0nm,0.6s,baz=32,slow=9.5,SNR=2.9						
STKA	**Stephens Creek**	25.92	186	P	P	22 30 46.0	-0.6
	0.3nm,0.3s,baz=344,slow=7.4,SNR=2.7						
MKAR	**Makanchi Array**	75.93	321	P	P	22 36 56.5	+0.1
	0.1nm,0.4s,baz=123,slow=6.6,SNR=3.0						

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*IDC **08** 22:32:42.0±1.0, 5°.41S×151°.83E, h0^{km}, mb4.0/11, mb1 4.2/11, mb1mx3.9/47, mbtmp4.0/11, MS3.0/1, Ms1 3.0/1, ms1mx2.4/47, Error ellipse: s-maj=36.1km s-min=17.5km az=118.0*

*NEIC **08** 22:32:50.8±1.3, 5°.49S×151°.90E, h70^{km}±11^{km}, mb4.3/7, Error ellipse: s-maj=16.2km s-min=7.9km az=124.0*

ISC 08 22:32:47.7±0.7, 5°.75S±0°.08×152°.1E±0°.1, h45^{km}, n41, σ1^{s}.71/40, mb4.2/20, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	1.55	4	ePn	Pn	22 33 13.1	+0.3
RABL				eSn	Sn	22 33 33.0	+1.2
MANU	**Manus Island**	5.96	308	ePn	Pn	22 34 13.1	-0.3
MTN	**Manton Dam**	21.81	250	eP	P	22 37 36.5	+0.3
	6.9nm,0.5s						
WRAB	**Tennant Creek**	22.26	229	eP	P	22 37 41.3	+0.3
	9.3nm,1.1s						
WB2	**Warramunga Arr**	22.26	229	eP	P	22 37 45.6	+4.5
WR1	**Warramunga Arr**	22.27	229	eP	P	22 37 41.6	+0.4
WRA	**Warramunga Arr**	22.27	229	P	P	22 37 41.6	+0.4
	2.5nm,0.6s,baz=52,slow=9.9,SNR=20						
AS01	**Alice Springs**	24.93	223	eP	P	22 38 10.0	+3.1
AS31	**Alice Springs**	24.96	223	eP	P	22 38 10.2	+3.0
	2.4nm,0.8s						
ASAR	**Alice Springs**	24.96	223	P	P	22 38 08.3	+1.1
	2.0nm,0.8s,baz=58,slow=8.7,SNR=21						
STKA	**Stephens Creek**	27.78	199	P	P	22 38 34.9	+2.5
	0.5nm,0.4s,baz=8.1,slow=14,SNR=3.2						
BATI	**Baumata**	28.46	259	P	P	22 38 38.5	-0.3
	14nm,0.6s,baz=106,slow=18,SNR=2.8						
FITZ	**Fitzroy Crossi**	28.57	242	P	P	22 38 39.3	-0.3
	10.0nm,0.8s,baz=59,slow=12,SNR=21						
FITZ	**Fitzroy Crossi**	28.57	242	eP	P	22 38 39.4	-0.2
	9.3nm,1.0s						
MBWA	**Marble Bar**	34.87	241	eP	P	22 39 34.9	0.0
	8.2nm,1.0s						
OXZ	**Oxford**	41.37	158	eP	P	22 40 27.4	-2.0
	25nm,0.4s						
YULB	**Yu-li**	41.73	315	eP	P	22 40 30.5	-2.1
	6.7nm,1.0s						
MJAR	**Matsushiro Arr**	44.02	344	LR	LR	22 56 20.7	
	comp=Z,21nm,21.8s,baz=185,slow=32						
ERM	**Erimo**	48.22	351	eP	P	22 41 27.6	+3.7
	30nm,0.5s						
SONA0	**Songino Array**	66.74	328	eP	P	22 43 33.7	-0.7
SONM	**Songino Array**	66.74	328	P	P	22 43 33.7	-0.7
	1.5nm,0.7s,baz=139,slow=5.1,SNR=7.4						
MK32	**Makanchi Array**	80.56	319	eP	P	22 44 54.4	-1.1
MKAR	**Makanchi Array**	80.56	319	P	P	22 44 54.4	-1.1
	0.6nm,0.8s,baz=94,slow=7.4,SNR=5.9						
ZALV	**Zalesovo Beam**	81.53	327	P	P	22 44 58.5	-1.9
	0.8nm,0.4s,baz=112,slow=5.0,SNR=3.5						
ZAA1	**Zalesovo Array**	81.53	327	eP	P	22 44 58.5	-1.9
ILAR	**Eielson Array**	83.31	22	P	P	22 45 08.8	-0.7
	0.6nm,0.6s,baz=250,slow=4.9,SNR=7.8						
ILB	**Eielson Array**	83.31	22	eP	P	22 45 08.8	-0.7
KURK	**Kurchatov**	84.06	322	eP	P	22 45 12.0	-1.6
	2.7nm,1.0s						
KURBB	**Kurchatov Arra**	84.09	322	P	P	22 45 13.2	-0.6
	0.2nm,0.3s,baz=112,slow=4.2,SNR=5.5						
BVAR	**Borovoye Array**	89.56	323	P	P	22 45 38.7	-1.7
	1.0nm,0.7s,baz=106,slow=5.2,SNR=7.8						
BAKC	**Calstate**	92.33	55	eP	P	22 45 55.2	+1.6
PASC	**Pasadena Art C**	92.98	56	eP	P	22 45 54.6	-2.0
PNT	**Penticton**	93.22	41	eP	P	22 46 01.3	+3.9
NVAR	**Mina Array Bea**	93.24	52	P	P	22 46 00.3	+2.3
	0.6nm,0.6s,baz=257,slow=8.2,SNR=2.8						
DGR	**Domenigoni Val**	93.92	57	eP	P	22 45 59.5	-1.5
FLSC	**Flash Two Peak**	93.99	55	eP	P	22 46 01.6	+0.1
BELC	**Belle Mtn. Jos**	94.78	56	eP	P	22 46 06.0	+0.9
GERES	**GERESS Array B**	124.47	328	PKP	PKPdf	22 51 42.9	+0.7
	0.6nm,0.6s,baz=72,slow=1.7,SNR=7.2						
MDT	**Midelt**	145.39	324	PKP	PKPab	22 52 22.0	+0.3
	0.4nm,0.4s,baz=22,slow=6.2,SNR=3.4						
TORD	**Torodi Ar. Bea**	149.88	286	PKPbc	PKPbc	22 52 32.5	-1.6
	baz=75,slow=2.2						
TOA1	**Torodi Ar. Sit**	149.89	286	ePKPbc	PKPbc	22 52 32.5	-1.6

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*SKHL **08** 22:39:10.2±1.0, 44°.78N×148°.15E, h93^{km}±6^{km}, mb4.7/3*

*JMA **08** 22:39:11.0±0.6, 44°.54N×148°.03E, h98^{km}, M3.6*

ISC 08 22:39:04.6±3.2, 44°.7N±0°.1×148°.4E±0°.2, h126^{km}±16^{km}, n17, σ2^{s}.70/30, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	0.63	326	eP	Pn	22 39 24.7	+0.7
KUR				AMB	AMB	22 39 25.4	
	122nm,0.2s						
KUR				eS	Sn	22 39 36.0	-2.8
KUR				A	A	22 39 36.2	
	1µm,0.4s						
SHO	**Shikotan**	1.38	233	eP	Pn	22 39 33.5	+2.4
SHO				AMB	AMB	22 39 33.8	
	140nm,0.4s						
SHO				eS	Sn	22 39 50.2	-1.1
SHO				A	A	22 39 50.8	
	322nm,0.4s						
SHO				A	A	22 39 50.8	
	262nm,0.4s						
YUK	**Yuzh-Kuril'sk**	1.92	250	eP	Pn	22 39 39.0	+1.7
YUK				AMB	AMB	22 39 41.0	
	70nm,0.3s						
YUK				AMB	AMB	22 39 41.0	
	142nm,0.3s						
YUK				AMB	AMB	22 39 41.0	
	290nm,0.3s						
YUK				i S	Sn	22 40 01.0	-1.3
YUK				A	A	22 40 07.0	
	251nm,0.3s						
YUK				A	A	22 40 07.0	
	528nm,0.3s						
LAGR	**Lagunnoye**	1.96	251	eP	Pn	22 39 40.0	+2.2
LAGR				i S	Sn	22 40 03.0	-0.2
LAGR				A	A	22 40 05.0	
	756nm,0.3s						
LAGR				A	A	22 40 05.0	
	253nm,0.3s						
GRPR	**Tuman**	1.99	250	eP	Pn	22 39 40.0	+1.8
GRPR				i S	Sn	22 40 03.0	-0.9
GRPR				A	A	22 40 06.0	
	581nm,0.2s						
GRPR				A	A	22 40 06.0	
	202nm,0.2s						
GLVR	**Golovnino**	2.26	246	eP	Pn	22 39 45.0	+3.4
GLVR				i S	Sn	22 40 10.0	+0.1
GLVR				A	A	22 40 11.0	
	424nm,0.2s						
GLVR				A	A	22 40 11.0	
	271nm,0.2s						
NEM2	**Nemuro 2**	2.32	235	P	Pn	22 39 44.0	+1.7
NEM2				eS	Sn	22 40 09.1	-2.1
JNK	**Nakash**	2.85	248	P	Pn	22 39 51.6	+2.4
JAK	**Akkeshi**	3.16	238	P	Pn	22 39 55.4	+2.3
JAK				eS	Sn	22 40 29.5	-1.0
JTKR	**Abashiri--Toko**	3.28	258	P	Pn	22 39 56.9	+2.2
JAR	**Ashorobuto**	3.60	248	P	Pn	22 40 01.9	+2.9
JKK2	**Kamakawa 2**	4.12	260	P	Pn	22 40 08.6	+2.8
JCH	**Churui**	4.19	242	P	Pn	22 40 09.6	+2.9
JCH				eS	Sn	22 40 53.7	-1.2
JNBK	**Urakawa-nobuka**	4.75	241	P	Pn	22 40 16.5	+2.3
JNBK				eS	Sn	22 41 06.3	-2.0
JKB	**Kayabe**	6.04	245	P	Pn	22 40 33.3	+1.7
JKB				eS	Sn	22 41 35.9	-3.6
JOT	**Ohata**	6.30	241	P	Pn	22 40 36.7	+1.5
JOT				eS	Sn	22 41 40.7	-5.1
JANG	**Nango**	6.66	232	P	Pn	22 40 41.9	+2.0
JANG				eS	Sn	22 41 48.0	-6.4

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*BJI **08** 22:39:06.0, 6°.87S×155°.03E, h103^{km}, mb4.7/24, mB4.8/14*

*IDC **08** 22:39:08.0±2.2, 6°.49S×154°.89E, h92^{km}±20^{km}, mb4.1/24, mb1 4.2/27, mb1mx4.1/50, mbtmp4.4/27, MS3.4/13, Ms1 3.5/13, ms1mx3.2/40, Error ellipse: s-maj=13.5km s-min=10.6km az=79.0*

*ISCJB **08** 22:39:08.1±0.8, 6°.54S±0°.04×154°.94E±0°.04, h110^{km}±7^{km}, mb4.4/51, Error ellipse: s-maj=8.0km s-min=5.7km az=140.6*

*NEIC **08** 22:39:09.1±0.8, 6°.55S×154°.97E, h107^{km}±7^{km}, mb4.6/23, Error ellipse: s-maj=6.1km s-min=5.0km az=80.0*

ISC 08 22:39:08.8±0.9, 6°.46S±0°.06×155°.03E±0°.07, h102^{km}±8^{km}, n113, σ1^{s}.33/120, mb4.5/51, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	**Rabaul**	3.63	308	ePn	Pn	22 40 04.2	+1.0
RABL				eSn	Sn	22 40 45.5	+0.3
HNR	**Honiara**	5.70	122	P	Pn	22 40 31.8	+0.7
	8.5nm,0.3s,baz=224,slow=12,SNR=1.9						
HNR				S	Sn	22 41 38.3	+3.1
	26nm,0.3s,baz=271,slow=10.0,SNR=3.3						
HNR				LR	LR	22 42 41.2	
	comp=Z,594nm,18.3s,baz=318,slow=37						
MANU	**Manus Island**	8.81	300	ePn	Pn	22 41 21.1	+7.7
PATS	**Pohnpei**	13.61	14	ePn	Pn	22 42 14.0	-3.8
CTA	**Charters Tower**	16.00	211	P	Pn	22 42 46.6	-1.6
	baz=34,slow=10,SNR=3.3						
DZM	**Mont Dzumac**	19.04	146	P	P	22 43 23.6	+0.4
	1.1nm,0.3s,baz=277,slow=18,SNR=8.2						
DZM				LR	LR	22 49 28.3	
	comp=Z,122nm,21.9s,baz=293,slow=32						
DZM	**Mont Dzumac**	19.04	146	eP	P	22 43 23.1	0.0
	21nm,1.1s						
GUMO	**Guam**	22.33	333	LR	LR	22 51 43.9	
	comp=Z,35nm,21.9s,baz=129,slow=34						
FAKI	**Fak Fak**	22.97	278	eP	P	22 44 03.0	-1.9
	13nm,0.9s						
ARMA	**Armidale**	24.05	187	eP	P	22 44 14.2	-0.5
	20nm,1.4s						
WRAB	**Tennant Creek**	24.13	234	eP	P	22 44 14.8	-0.7
	10nm,0.9s						
WB2	**Warramunga Arr**	24.14	234	eP	P	22 44 15.0	-0.5
	17nm,1.2s						
WR1	**Warramunga Arr**	24.15	234	eP	P	22 44 14.8	-0.8
WR1				ePcP	PcP	22 47 55.0	+0.7
WRA	**Warramunga Arr**	24.15	234	P	P	22 44 14.8	-0.8
	4.9nm,0.6s,baz=56,slow=9.7,SNR=36						
WRA				PcP	PcP	22 47 55.0	+0.7
	3.0nm,0.6s,baz=57,slow=2.4,SNR=17						
WRA				S	S	22 48 33.0	+6.5
	1.4nm,1.1s,baz=54,slow=16,SNR=3.5						
SIJI	**Sorong**	24.34	282	P	P	22 44 16.5	-1.0
	35nm,1.2s,baz=78,slow=11,SNR=7.5						
AS01	**Alice Springs**	26.52	228	eP	P	22 44 35.7	-1.4
AS01				ePcP	PcP	22 48 00.3	+0.7
AS31	**Alice Springs**	26.55	228	eP	P	22 44 36.0	-1.5
	2.7nm,0.3s						
AS31				ePcP	PcP	22 48 00.5	+0.8
ASAR	**Alice Springs**	26.55	228	P	P	22 44 36.0	-1.5
	1.5nm,0.7s,baz=59,slow=8.7,SNR=16						
ASAR				PcP	PcP	22 48 00.5	+0.8
	2.7nm,0.7s,baz=56,slow=2.5,SNR=14						
H11S3	**WAKE ISLAND Hy**	27.34	25	T	T	23 13 15.3	
	baz=203,slow=76,SNR=26						
H11S2	**WAKE ISLAND Hy**	27.34	25	T	T	23 13 12.4	
	baz=203,slow=76,SNR=29						
H11S1	**WAKE ISLAND Hy**	27.35	25	T	T	23 13 16.4	
	baz=203,slow=76,SNR=24						
STKA	**Stephens Creek**	28.23	205	P	P	22 44 51.1	-1.2
	1.5nm,0.5s,baz=28,slow=8.4,SNR=6.8						
STKA				PcP	PcP	22 48 04.3	+0.8
	1.6nm,0.7s,baz=65,slow=8.1,SNR=3.6						
STKA				LR	LR	22 56 04.5	
	comp=Z,136nm,18.3s,baz=26,slow=36						
STKA	**Stephens Creek**	28.23	205	eP	P	22 44 51.8	-0.4
	0.6nm,0.8s						
STKA				ePcP	PcP	22 48 04.3	+0.8
FITZ	**Fitzroy Crossi**	30.90	245	P	P	22 45 14.4	-1.6
	2.1nm,0.5s,baz=73,slow=6.8,SNR=9.4						
FITZ				PcP	PcP	22 48 11.5	+0.9
	2.5nm,0.8s,baz=1.8,slow=4.9,SNR=4.1						
FITZ				LR	LR	22 57 29.0	
	comp=Z,109nm,20.3s,baz=66,slow=36						
FITZ	**Fitzroy Crossi**	30.90	245	eP	P	22 45 14.8	-1.3
	6.7nm,0.8s						
FITZ				ePcP	PcP	22 48 11.5	+0.9
BBOO	**Buckleboo**	31.60	211	eP	P	22 45 20.1	-2.0
	14nm,1.1s						
DAV	**Davao City (W)**	32.31	294	LR	LR	22 57 23.9	
	comp=Z,25nm,21.9s,baz=107,slow=34						
FORT	**Forrest**	35.00	223	eP	P	22 45 49.5	-2.1

	79nm,1.4s						
BKZ	Black Stump Fm	37.88	152	eP	P	22 46 12.7	-3.4
	10nm,0.6s						
THZ	Tophouse	38.58	158	eP	P	22 46 20.8	-1.1
	34nm,1.2s						
KHZ	Kahutara	39.38	158	eP	P	22 46 27.1	-1.3
	29nm,1.2s						
RPZ	Rata Peaks	39.69	162	P	P	22 46 30.6	-0.5
	4.9nm,0.5s,baz=166,slow=2.6,SNR=5.1						
JOW	Kunigami	42.04	323	P	P	22 46 50.0	-0.5
	17nm,0.9s,baz=142,slow=19,SNR=2.8						
JOW	Kunigami	42.04	323	eP	P	22 46 50.5	0.0
	48nm,1.2s						
NWAO	Narrogin (SRO)	43.87	228	LR	LR	23 04 45.5	
	comp=Z,80nm,20.9s,baz=340,slow=35						
NACB	Ninganchiao	44.61	314	eP	P	22 47 10.6	-0.6
	15nm,0.9s						
SSLB	Suanglung	44.83	313	eP	P	22 47 12.2	-0.9
	18nm,1.4s						
JNU	Nakatsue	45.56	331	P	P	22 47 17.7	-1.0
	8.5nm,0.8s,baz=359,slow=6.4,SNR=7.1						
JNU	Nakatsue	45.56	331	eP	P	22 47 17.7	-1.0
	15nm,1.1s						
MJAR	Matsushiro Arr	45.59	341	P	P	22 47 18.2	-0.6
	0.4nm,0.4s,baz=168,slow=6.4,SNR=3.2						
MAJO	Matsushiro	45.59	341	eP	P	22 47 18.2	-0.7
KSRS	Korea Array	50.48	332	P	P	22 47 55.9	-0.6
	2.8nm,0.8s,baz=149,slow=8.0,SNR=12						
KS15	Wonju Array Si	50.49	332	eP	P	22 47 55.9	-0.7
KSAR	Wonju Array Be	50.49	332	P	P	22 47 55.9	-0.7
NJ2	Nanjing	51.53	320	eP	P	22 48 06.2	+1.8
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
ASAJ	Asahikawa	51.58	349	P	P	22 48 05.7	+1.1
	4.2nm,0.7s,baz=309,slow=30,SNR=4.1						
ASAJ				LR	LR	23 07 34.9	
	comp=Z,32nm,20.8s,baz=162,slow=33						
ASAJ	Asahikawa	51.58	349	eP	P	22 48 05.7	+1.1
	23nm,1.4s						
USRK	Ussuriysk Ar.	54.54	340	P	P	22 48 26.8	+0.5
	0.9nm,0.5s,baz=141,slow=9.3						
SKNT	Sakolnakorn	55.57	296	P	P	22 48 35.1	+0.9
NONG	Nongkai	56.69	296	P	P	22 48 42.5	+0.3
	0.5nm,0.8s,115nm0.0nm						
GYA	Guiyang	57.16	307	eP	P	22 48 47.0	+1.5
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PHIT	Phitsanulok	58.85	294	P	P	22 48 58.7	+1.4
PETK	Petropavlovsk-	59.38	2	P	P	22 49 01.2	+0.8
	4.2nm,0.7s,baz=166,slow=6.7						
PETK				LR	LR	23 11 03.0	
	comp=Z,26nm,21.6s,baz=187,slow=32						
PEA1	Petropavlovsk-	59.39	2	eP	P	22 49 01.2	+0.8
KMI	Kunming	59.75	304	P	P	22 49 04.9	+1.2
KMI				pmax	pmax		
	comp=Z,5.0nm,0.5s						
CM01	Chiang Mai Arr	60.56	295	eP	P	22 49 09.2	+0.1
CM31	Chiang Mai Arr	60.59	295	eP	P	22 49 10.4	+1.2
CMAR	Chiang Mai Arr	60.59	295	P	P	22 49 10.1	+0.8
	13nm,0.8s,baz=121,slow=5.3,SNR=69						
CMAR				LR	LR	23 14 15.6	
	comp=Z,12nm,20.8s,baz=245,slow=35						
CMMT	Chiang Mai	60.70	296	P	P	22 49 10.5	+0.5
	13nm,1.1s						
CHTO	Chiang Mai	60.70	296	eP	P	22 49 10.4	+0.4
	17nm,1.3s						
CHTO	Chiang Mai	60.70	296	P	P	22 49 10.6	+0.6
	59nm,1.1s						
CMAI	Chiengmai2	60.98	297	P	P	22 49 12.8	+0.7
CD2	Chengdu	61.49	310	eP	P	22 49 16.0	+0.8
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,160nm,5.4s						
HHC	Hu-ho-hao-te	61.69	324	eP	P	22 49 18.5	+2.1
HHC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,65nm,4.8s						
LZH	Lanzhou	63.96	315	eP	P	22 49 37.3	+5.6
LZH				pP	sP	22 50 00.7	-7.4
LZH				sP	PcP	22 50 12.9	+6.5
LZH				pmax	pmax		
	comp=Z,13nm,1.3s						
GTA	Gaotai	68.37	317	eP	P	22 50 00.2	+0.4
GTA				pP	PcP	22 50 24.9	+0.3
GTA				sP	sP	22 50 35.7	-0.8
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
SONA0	Songino Array	68.91	327	eP	P	22 50 03.2	+0.3
SONM	Songino Array	68.91	327	P	P	22 50 03.2	+0.3
	2.0nm,0.5s,baz=133,slow=6.5,SNR=12						
SONA1	Songino Array	68.91	327	eP	P	22 50 02.8	-0.1
VNDA	Vanda	71.11	178	P	P	22 50 15.9	+0.1
	1.0nm,0.7s,baz=336,slow=5.9,SNR=7.1						
WMQ	Urumqi	78.46	317	P	P	22 50 59.7	+0.9
CCB	Clear Creek Bu	82.47	21	eP	P	22 51 19.4	-0.3
	2.1nm,1.0s						
ILAR	Eielson Array	82.87	22	P	P	22 51 21.9	+0.1
	0.8nm,0.6s,baz=239,slow=5.1,SNR=13						
ILAR				LR	LR	23 22 45.2	
	comp=Z,64nm,21.6s,baz=233,slow=32						
ILB	Eielson Array	82.87	22	eP	P	22 51 21.9	+0.1
MK01	Makanchi Array	83.01	319	eP	P	22 51 22.8	-0.1
MK31	Makanchi Array	83.03	319	eP	P	22 51 23.2	+0.2
MK32	Makanchi Array	83.03	319	eP	P	22 51 22.8	-0.2
MKAR	Makanchi Array	83.03	319	P	P	22 51 22.8	-0.2
	3.3nm,0.8s,baz=101,slow=5.8,SNR=29						
MKAR	Makanchi Array	83.03	319	eP	P	22 51 23.2	+0.2
	20nm,0.8s						
MAKZ	Makanchi	83.24	319	eP	P	22 51 24.3	+0.2
	4.5nm,0.8s						
QSPA	South Pole Qui	83.51	180	P	P	22 51 25.5	+0.2
	baz=9.3,slow=1.9						
ZALV	Zalesovo Beam	83.76	326	P	P	22 51 25.3	-1.2
	2.3nm,0.7s,baz=128,slow=9.7,SNR=7.9						
ZAA1	Zalesovo Array	83.76	326	eP	P	22 51 25.3	-1.3
MAW	Mawson	84.90	203	P	P	22 51 31.9	-0.2
	3.2nm,0.5s,baz=105,slow=8.5,SNR=12						
MAW	Mawson	84.90	203	eP	P	22 51 31.9	-0.2
	1.9nm,1.3s						
KSH	Kashi	85.69	310	eP	P	22 51 38.4	+1.6
KSH				epP	pP	22 52 03.6	+0.2
KSH				PP	PP	22 55 00.7	+3.4
KSH				SKS	SKSac	23 01 50.1	-3.3
KSH				S	SKKSac	23 01 59.7	-0.9
KSH				pmax	pmax		
	comp=Z,4.0nm,1.2s						
KSH				pmax	pmax		
	comp=Z,59nm,4.6s						
YBH	Yreka Blue Hor	88.51	48	LR	LR	23 24 27.4	
	comp=Z,55nm,21.7s,baz=322,slow=31						
HJGM	San Juan Grade	88.57	53	eP	P	22 51 49.7	-0.8
NV01	Mina Array Sit	91.37	52	eP	P	22 52 05.5	+1.6
NVAR	Mina Array Bea	91.37	52	P	P	22 52 05.1	+1.2
	1.1nm,0.6s,baz=257,slow=7.2,SNR=6.9						
NV11	Mina Array Sit	91.48	52	eP	P	22 52 06.7	+2.4
	0.2nm,0.9s						
RVR	Riverside	91.58	56	eP	P	22 52 05.9	+1.2
DAC	Darwin (Calif)	91.67	54	eP	P	22 52 03.8	-1.5
	5.1nm,1.1s						
BVAR	Borovoye Array	91.89	323	P	P	22 52 04.6	-1.1
	0.4nm,0.5s,baz=104,slow=4.6,SNR=4.5						
WESC	Westside Schoo	92.82	58	eP	P	22 52 08.1	-2.3
YKA	Yellowknife Ar	95.85	28	P	P	22 52 24.3	+0.7
	1.7nm,0.7s,baz=269,slow=4.5,SNR=7.3						
YKB5	Yellowknife Ar	95.85	28	eP	P	22 52 24.3	+0.7
LPIG	La Paz	96.85	67	LR	LR	23 30 14.3	
	comp=Z,26nm,19.3s,baz=229,slow=32						
PD31	Pinedale Array	98.32	48	eP	P	22 52 35.5	0.0
PDAR	Pinedale Array	98.32	48	P	P	22 52 35.5	0.0
	0.5nm,0.8s,baz=240,slow=1.2,SNR=4.1						
BR101	Keskin Array S	118.06	312	ePKPdf	PKPdf	22 57 43.8	-0.6
BRTR	Keskin Array B	118.06	312	PKP	PKPdf	22 57 43.8	-0.6
	0.2nm,0.4s,baz=269,slow=2.3,SNR=3.2						
TKL	Tuckaleechee C	118.95	53	PKP	PKPdf	22 57 45.9	-0.1
	2.4nm,0.5s,baz=157,slow=7.1,SNR=7.7						
HFS	Hagfors	119.02	339	PKP	PKPdf	22 57 45.1	-0.3
	1.8nm,0.9s,baz=242,slow=15,SNR=3.6						
BOSA	Boshof	120.38	232	PKP	PKPdf	22 57 49.3	+0.1
	1.9nm,0.7s,baz=143,slow=1.7,SNR=5.4						
MLR	Muntele Rosu	121.34	320	PKP	PKPdf	22 57 48.9	-1.6
	0.1nm,0.3s,baz=125,slow=22,SNR=4.5						
GEC2	GERESS Array S	126.61	329	ePKPdf	PKPdf	22 58 00.5	0.0
GERES	GERESS Array B	126.61	329	PKP	PKPdf	22 58 00.5	0.0
	0.5nm,0.7s,baz=48,slow=2.0,SNR=5.0						
MDT	Midelt	147.65	327	PKPbc	PKPbc	22 58 43.6	+1.3
	1.8nm,0.9s,baz=76,slow=8.3,SNR=2.9						
TORD	Torodi Ar. Bea	152.91	286	PKPbc	PKPbc	22 58 54.6	-0.7
	baz=77,slow=2.7						
TORD				PKPab	PKPab	22 59 06.1	-0.6
	baz=87,slow=3.6						
TOA1	Torodi Ar. Sit	152.91	286	ePKPbc	PKPbc	22 58 54.6	-0.7
TOA1				ePKPab	PKPab	22 59 06.1	-0.6
KOWA	Kowa	157.92	293	PKPab	PKPab	22 59 28.1	-0.1
	1.9nm,0.5s,baz=71,slow=6.6,SNR=7.3						
DBIC	Dimbokro	160.01	272	PKPab	PKPab	22 59 37.1	-0.3
	11nm,1.1s,baz=348,slow=4.0,SNR=4.5						

NNC 08 23:05:28.6±3.4**, 37°.23N×70°.87E, h0^{km}, mb3.9, mpv3.5, 4C-3D, Error ellipse: s-maj=26.9km s-min=23.7km az=143.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	3.46	36	⇑P	Pn	23 06 24.2	+0.3
	3.1nm,0.3s						
SFK				⇑S	Sn	23 07 07.8	+2.1
	15nm,0.3s						
MNAS	Manas	5.40	13	⇓P	Pn	23 06 50.4	-0.1
	3.7nm,0.4s						
MNAS				⇑S	Sn	23 07 55.0	+1.6
	6.2nm,0.5s						
KK31	Karatay Array	5.87	357	P	Pn	23 06 57.4	+0.5
	1.3nm,0.3s,baz=336,slow=40,SNR=29						
KK31				S	Sn	23 08 06.5	+1.6
	4.1nm,0.6s,baz=186,slow=24,SNR=12						
AAK	Ala-Archa	6.08	26	⇓P	Pn	23 06 58.5	-1.3
	2.5nm,0.4s						
AAK				⇑S	Sn	23 08 08.8	-1.3
	3.5nm,0.5s						
TKM2	Tokmak 2	6.74	31	⇓S	Sn	23 08 27.0	+0.5
	3.8nm,0.7s						

MAN 08 23:08:48.6, 9°.65N×125°.55E, h19^{km}, mb4.0, ML2.8, MS2.4, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	Surigao	0.14	334	⇓eP	Pg	23 08 54.5	+1.6
SCPH				eS	Sg	23 09 01.4	+5.6
BUTP	Butuan	0.68	174	eP	Pb	23 09 01.5	-0.4
BUTP				eS	Sn	23 09 14.4	+1.0
BUKP	Musuan	1.83	195	eP	Pg	23 09 24.0	+0.2
BUKP				eS	Sg	23 09 48.0	+0.4
BESP	Borongan	1.94	357	eP	Pn	23 09 20.8	+0.2

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*NIED **08** 23:18:00, 38°.00N×144°.00E, h5^{km}, Mw3.4 Best double couple: M$_0$1.48000×10^{14} NP1:φ$_s$20.00000°, δ26.00000°, λ-120.00000°. NP2:φ$_s$234.00000°, δ68.00000°, λ-76.00000°.*

JMA 08 23:18:08.9±0.1**, 37°.96N×144°.01E, h27^{km}, M3.6, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	2.15	302	P	Pn	23 18 44.2	+1.2
OFUJ				eS	Sn	23 19 10.5	+1.8
JIO	Ouri	2.15	284	P	Pn	23 18 44.2	+1.2
JIO				S	Sn	23 19 10.1	+1.3
MIYJ	Miyakonagasawa	2.35	314	P	Pn	23 18 46.7	+0.9
MIYJ				eS	Sn	23 19 15.4	+1.6
JMK	Ichinoseki	2.40	295	P	Pn	23 18 48.1	+1.7
JMK				S	Sn	23 19 17.2	+2.2
JOM	Ohasama	2.61	306	P	Pn	23 18 51.2	+1.9
JOM				eS	Sn	23 19 22.7	+2.6
JFT	Otama	2.94	263	S	Sn	23 19 29.5	+1.1
JYK	Kaneyama	3.02	290	P	Pn	23 18 57.2	+2.2
JYK				S	Sn	23 19 33.4	+3.1
JANG	Nango	3.09	322	P	Pn	23 18 57.0	+1.1
JANG				eS	Sn	23 19 33.0	+1.0
BSO1	Boso 1	4.11	217	P	Pn	23 19 07.3	-2.1
BSO1				eS	Sn	23 19 54.5	-1.8
JOT	Ohata	4.11	327	P	Pn	23 19 12.5	+2.6
JOT				eS	Sn	23 19 56.8	-0.3
JRY	Ryogami san	4.53	246	P	Pn	23 19 15.4	-0.3
JRY				S	Sn	23 20 05.0	-2.4
JKB	Kayabe	4.54	331	eS	Sn	23 20 07.5	-0.2
NEM2	Nemuro 2	5.56	13	P	Pn	23 19 27.9	-1.9
NEM2				eS	Sn	23 20 27.2	-5.5
JTKR	Abashiri--Toko	6.00	359	P	Pn	23 19 36.4	+0.5
JTKR				eS	Sn	23 20 41.2	-2.5

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*ATH **08** 23:30:39.0, 37°.10N×26°.40E, h36^{km}±4^{km}, ML2.3/2, Error ellipse: s-maj=6.7km s-min=1.1km az=146.0*

*DDA **08** 23:30:40.0, 37°.17N×26°.28E, h7^{km}, Ml2.4*

*THE **08** 23:30:40.0, 37°.17N×26°.34E, h0^{km}, ML2.1/3, Error ellipse: s-maj=0.8km s-min=0.3km az=342.0*

*CSEM **08** 23:30:40.5±0.2, 37°.15N×26°.35E, h12^{km}, ML2.3, Error ellipse: s-maj=5.9km s-min=3.8km az=168.0*

*ISCJB **08** 23:30:40.6±0.6, 37°.17N±0°.03×26°.33E±0°.03, h5^{km}±6^{km}, Error ellipse: s-maj=5.0km s-min=4.5km az=0.3*

*ISK **08** 23:30:40.4, 37°.17N×26°.34E, h6^{km}, ML2.6/7*

ISC 08 23:30:40.1±1.4**, 37°.17N**±0°.03×**26°.33E**±0°.02**, h7^{km}**±12^{km}**, n36, σ0^{s}.86**/59**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AMGA	Amorgos Island	0.48	226	P	Pg	23 30 49.7	+0.3
AMGA				S	Sb	23 30 57.9	-0.3
AMGA				AML	AML	23 31 00.7	
	comp=N,483μm,0.2s						
AMGA				AML	AML	23 31 01.3	
	comp=E,608μm,0.1s						
AMGA	Amorgos Island	0.48	226	P	Pg	23 30 50.0	+0.6
AMGA				S	Sb	23 30 57.6	-0.6
AMGA	Amorgos Island	0.48	226	P	Pg	23 30 50.0	+0.6
AMGA				S	Sb	23 30 57.6	-0.6
APE	Apeiranthos	0.65	262	PG	Pb	23 30 53.6	-0.1
APE				SG	Sb	23 31 02.7	-0.3
APE	Apeiranthos	0.65	262	P	Pg	23 30 52.4	-0.1
APE				S	Sb	23 31 03.9	+0.9
APE	Apeiranthos	0.65	262	P	Pg	23 30 52.9	+0.4
APE				S	Sb	23 31 03.4	+0.4
APE	Apeiranthos	0.65	262	P	Pg	23 30 52.9	+0.4
APE	Apeiranthos	0.65	262	ePg	Pb	23 30 53.6	-0.1
APE				eSg	Sb	23 31 02.7	-0.3
APE				S	Sb	23 31 03.4	+0.4
SMG	Samos	0.68	37	P	Pg	23 30 53.2	+0.1
SMG				S	Sb	23 31 03.4	-0.4
SMG				AML	AML	23 31 08.5	
	comp=N,751μm,0.3s						
SMG				AML	AML	23 31 08.9	
	comp=E,631μm,0.4s						
SMG	Samos	0.68	37	P	Pg	23 30 53.2	+0.1
SMG				S	Sb	23 31 03.3	-0.6
SMG	Samos	0.68	37	P	Pg	23 30 53.2	+0.1
SMG				S	Sb	23 31 03.3	-0.6
BODT	Bodrum	0.79	97	PG	Pb	23 30 55.8	-0.4
BODT				SG	Sb	23 31 07.3	+0.2
BODT	Bodrum	0.79	97	P	Pg	23 30 55.4	+0.1
BODT				S	Sb	23 31 07.3	+0.2
BODT	Bodrum	0.79	97	P	Pg	23 30 55.4	+0.1
BODT	Bodrum	0.79	97	ePg	Pb	23 30 55.8	-0.4
BODT				eSg	Sb	23 31 07.3	+0.2
DGB	˜zmir	0.99	26	i P	Pg	23 30 58.8	-0.3
DGB				i S	Sb	23 31 12.8	0.0
DAT	Datca	1.09	113	PN	Pn	23 31 01.5	-0.4
DAT				SN	Sn	23 31 17.1	-0.2
DAT	Datca	1.09	113	i P	Pb	23 31 01.3	-0.1
DAT				i S	Sn	23 31 17.8	+0.4
DAT	Datca	1.09	113	ePn	Pn	23 31 01.5	-0.4
DAT				eSn	Sn	23 31 17.1	-0.2
MLSB	Milas	1.16	83	PN	Pn	23 31 03.0	+0.2
MLSB	Milas	1.16	83	ePn	Pn	23 31 03.0	+0.2
URLA	Izmir	1.21	10	PN	Pn	23 31 03.3	-0.2
URLA	Izmir	1.21	10	i P	Pn	23 31 03.5	0.0
URLA				i S	Sn	23 31 20.1	-0.1
URLA	Izmir	1.21	10	P	Pn	23 31 03.5	0.0
CHOS	Chios island	1.24	350	PN	Pn	23 31 04.7	+0.8
CHOS	Chios island	1.24	350	P	Pg	23 31 03.0	-0.8
CHOS				S	Sb	23 31 20.1	0.0
CHOS	Chios island	1.24	350	P	Pg	23 31 02.9	-0.9
CHOS	Chios island	1.24	350	ePn	Pn	23 31 04.7	+0.8
CHOS				S	Sb	23 31 20.1	0.0
AYDN	Tasoluk	1.33	68	i P	Pg	23 31 08.0	+2.4
AYDN				i S	Sn	23 31 25.1	+1.9
AYDN	Tasoluk	1.33	68	P	Pg	23 31 08.0	+2.4
AYDN				S	Sn	23 31 25.1	+1.9
BLCB	Balcova	1.34	25	PN	Pg	23 31 05.9	+0.1
BLCB	Balcova	1.34	25	ePn	Pg	23 31 05.9	+0.1
AYDB	Zeytinkoy-Aydi	1.47	57	PN	Pg	23 31 07.9	-0.3
AYDB	Zeytinkoy-Aydi	1.47	57	ePn	Pg	23 31 07.9	-0.3
TURN	Turunc	1.84	98	PN	Pn	23 31 09.6	-2.5
TURN	Turunc	1.84	98	ePn	Pn	23 31 09.6	-2.5

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*NIED **08** 23:47:00, 45°.50N×151°.50E, h14^{km}, Mw4.0 Best double couple: M$_0$1.12000×10^{15} NP1:φ$_s$224.00000°, δ28.00000°, λ93.00000°. NP2:φ$_s$40.00000°, δ62.00000°, λ88.00000°.*

*IDC **08** 23:47:14.9±0.8, 45°.44N×151°.62E, h0^{km}, mb3.9/14, mb1 4.0/16, mb1mx3.8/69, mbtmp3.9/16, ML3.9/2, MS3.3/13, Ms1 3.3/13, ms1mx2.9/66, Error ellipse: s-maj=25.3km s-min=20.1km az=83.0*

*NEIC **08** 23:47:16.5±0.6, 45°.43N×151°.68E, h10^{km}, mb4.4/1, Error ellipse: s-maj=15.4km s-min=12.7km az=128.0*

*JMA **08** 23:47:17.7±0.4, 45°.53N×151°.55E, h30^{km}, M4.3*

*ISCJB **08** 23:47:18.0±0.6, 45°.24N±0°.08×151°.46E±0°.08, h32^{km}, mb3.9/16, MS3.4/8, Error ellipse: s-maj=14.2km s-min=4.4km az=146.8*

*SKHL **08** 23:47:18.7±1.0, 45°.02N×151°.64E, h51^{km}±9^{km}, mb4.4/3*

*MOS **08** 23:47:19.8±1.2, 45°.42N×151°.30E, h40^{km}, mb4.4/2, Error ellipse: s-maj=13.5km s-min=12.8km az=141.5*

ISC 08 23:47:20.2±0.8**, 45°.33N**±0°.09×**151°.30E**±0°.07**, h32^{km}, n67, σ1^{s}.85**/64**, mb4.0**/16**, MS3.4**/8**, 1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	Kuril'sk	2.43	269	eP	Pn	23 47 59.6	+2.0
KUR				AMB	AMB	23 48 02.1	
	97nm,0.4s						
KUR				i S	Sb	23 48 31.0	-1.6
KUR				A	A	23 48 37.4	
	360nm,0.5s						
KUR				A	A	23 48 37.4	
	158nm,0.5s						
KUR	Kuril'sk	2.43	269	ePN	Pn	23 47 59.6	+2.0
KUR				i S	Sb	23 48 31.0	-1.6
KUR				pmax	pmax		
	comp=Z,97nm,0.4s						
KUR				pmax	pmax		
	comp=N,48nm,0.2s						
KUR				pmax	pmax		
	comp=E,33nm,0.2s						
KUR				smax	smax		
	comp=N,298nm,0.5s						
KUR				smax	smax		
	comp=E,107nm,0.5s						
SHO	Shikotan	3.51	247	eP	Pn	23 48 13.5	+1.0
SHO				AMB	AMB	23 48 16.1	
	comp=E,44nm,0.4s						
SHO				eS	Sn	23 48 53.6	+0.7
SHO				A	A	23 49 17.0	
	comp=E,203nm,0.6s						
SHO				A	A	23 49 17.0	
	comp=E,228nm,0.6s						
SHO	Shikotan	3.51	247	⇓iPN	Pn	23 48 13.5	+1.0
SHO				eS	Sn	23 48 55.7	+2.8
SHO				pmax	pmax		
	comp=N,10.0nm,0.4s						
SHO				pmax	pmax		
	comp=Z,44nm,0.4s						
SHO				pmax	pmax		
	comp=E,23nm,0.5s						
SHO				smax	smax		
	comp=E,117nm,0.5s						
SHO				smax	smax		
	comp=N,60nm,0.4s						
YUK	Yuzh-Kuril'sk	4.09	253	eP	Pn	23 48 21.5	+1.0
YUK				AMB	AMB	23 48 22.5	
	comp=N,20nm,0.4s						
YUK				eS	Sn	23 49 09.0	+1.8
YUK				A	A	23 49 27.0	
	comp=N,340nm,0.6s						
YUK				A	A	23 49 27.0	
	comp=N,505nm,0.6s						
NEM2	Nemuro 2	4.45	246	P	Pn	23 48 25.4	+0.1
NEM2				eS	Sn	23 49 15.7	-0.2
JNK	Nakash	5.03	252	P	Pn	23 48 35.0	+1.7
JNK				eS	Sn	23 49 31.4	+1.1
JAK	Akkeshi	5.29	246	P	Pn	23 48 37.2	+0.2
JAK				eS	Sn	23 49 37.4	+0.5
JTKR	Abashiri--Toko	5.45	258	P	Pn	23 48 41.9	+2.8
JAR	Ashorobuto	5.77	252	P	Pn	23 48 45.8	+2.2
JAR				eS	Sn	23 49 51.4	+2.7
JMP	Maruseppu	5.82	260	P	Pn	23 48 47.5	+3.3
YSS	Yuzh-Sakhalins	6.16	288	ePN	Pn	23 48 46.9	-1.9
YSS				MLR	MLR		
	comp=Z,300nm,18.0s						
SKR	Severo-Kuril's	6.25	29	eP	Pn	23 48 50.9	+0.8
SKR				AMB	AMB	23 48 54.2	
	comp=Z,46nm,0.6s						
SKR				eS	Sn	23 49 59.3	-1.1
SKR				A	A	23 50 14.8	
	comp=Z,64nm,0.2s						
SKR				A	A	23 50 14.8	
	comp=Z,59nm,0.2s						
SKR	Severo-Kuril's	6.25	29	ePN	Pn	23 48 50.9	+0.8
SKR				pmax	pmax		
	comp=Z,46nm,0.6s						
SKR				MLR	MLR		
	comp=Z,100nm,19.0s						
JKK2	Kamakawa 2	6.28	260	P	Pn	23 48 53.9	+3.3
ASAJ	Asahikawa	6.32	262	Pn	Pn	23 48 54.6	+3.5
	comp=Z,2.7nm,0.3s,baz=93,slow=21,SNR=9.2						
ASAJ				Sn	Sb	23 50 15.4	-9.1
	baz=255,slow=33,SNR=2.2						
ASAJ				LR	LR	23 51 37.4	
	comp=Z,210nm,19.2s,baz=88,slow=40						
ASAJ	Asahikawa	6.32	262	P	Pn	23 48 54.6	+3.5
JCH	Churui	6.34	247	eS	Sn	23 50 01.4	-1.2
MYR	Moyori	6.55	245	eP	Pn	23 48 55.3	+1.1
MYR				eS	Sn	23 50 06.0	-1.8
JNBK	Urakawa-nobuka	6.89	247	P	Pn	23 48 59.4	+0.4
TYV	Tymovskoe	8.00	317	eP	Pn	23 49 19.9	+5.7
JKB	Kayabe	8.21	249	eS	Sn	23 50 44.9	-3.7
JANG	Nango	8.73	239	eS	Sn	23 50 55.0	-6.4
JTM	Tenmabayashi	8.76	242	eS	Sn	23 50 57.9	-4.2
MJAR	Matsushiro Arr	13.22	233	LR	LR	23 56 34.2	
	comp=Z,36nm,20.6s,baz=50,slow=42						
USRK	Ussuriysk Ar.	13.77	272	LR	LR	23 56 06.4	
	comp=Z,96nm,18.2s,baz=44,slow=38						
KSRS	Korea Array	19.18	254	P	Pn	23 51 43.0	+0.9
	comp=Z,0.2nm,0.3s,baz=65,slow=11,SNR=5.2						
KSRS				LR	LR	23 58 36.8	
	comp=Z,40nm,19.7s,baz=50,slow=35						
KSRS	Korea Array	19.18	254	P	Pn	23 51 43.0	+0.9
KSRS				MLR	MLR		
	comp=Z,40nm,19.7s						
KSAR	Wonju Array Be	19.21	254	P	Pn	23 51 43.0	+0.5
KSAR	Wonju Array Be	19.21	254	P	Pn	23 51 43.0	+0.5
JNU	Nakatsue	19.91	239	LR	LR	00 01 07.0	
	comp=Z,55nm,18.7s,baz=302,slow=41						
H11N2	WAKE ISLAND Hy	28.61	148	T	T	00 23 58.3	
	baz=334						
H11N1	WAKE ISLAND Hy	28.62	148	T	T	00 24 00.0	
	baz=334						
H11N3	WAKE ISLAND Hy	28.63	148	T	T	00 23 57.1	
	baz=334						
H11S1	WAKE ISLAND Hy	29.66	149	T	T	00 25 20.3	
	baz=332						
H11S3	WAKE ISLAND Hy	29.67	149	T	T	00 25 20.3	
	baz=332						
H11S2	WAKE ISLAND Hy	29.68	149	T	T	00 25 23.6	
	baz=332						
ZALV	Zalesovo Beam	42.43	307	LR	LR	00 12 54.6	
	comp=Z,34nm,18.3s,baz=74,slow=36						
MKAR	Makanchi Array	46.48	298	P	P	23 55 44.5	+0.4
	comp=Z,0.3nm,0.5s,baz=66,slow=6.7,SNR=7.2						
MKAR				PcP	PcP	23 57 18.6	+0.4
	comp=Z,0.6nm,0.7s,baz=75,slow=2.8,SNR=4.1						
MKAR				LR	LR	00 16 11.8	
	comp=Z,54nm,20.9s,baz=62,slow=37						
KURK	Kurchatov	47.11	304	P	P	23 55 49.0	+0.1
KURK	Kurchatov	47.11	304	P	P	23 55 49.0	+0.1
KURBB	Kurchatov Arra	47.20	304	P	P	23 55 49.0	-0.6
	comp=Z,0.7nm,0.6s,baz=68,slow=7.9,SNR=6.2						

DLBC	Dease Lake	47.49	44	LR	LR	00 14 51.5	
	comp=Z,29nm,21.6s,baz=194,slow=35						
CMAR	Chiang Mai Arr	50.80	256	LR	LR	00 20 15.3	
	comp=Z,16nm,18.1s,baz=340,slow=39						
KEV	Kevo	58.25	340	P	P	23 57 10.9	-0.1
	comp=Z,2.0nm,0.6s						
KEV	Kevo	58.25	340	P	P	23 57 10.9	-0.1
KEV				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKTO	Aktyubinsk	58.73	312	LR	LR	00 25 13.6	
	comp=Z,65nm,18.2s,baz=39,slow=39						
FINES	FINESS Array B	64.78	334	P	P	23 57 53.3	-1.8
	comp=Z,1.9nm,0.7s,baz=34,slow=7.0,SNR=9.4						
GEYT	Alibeck	66.24	300	P	P	23 58 05.1	0.0
	comp=Z,0.8nm,0.6s,baz=51,slow=9.4,SNR=4.0						
WRA	Warramunga Arr	66.77	197	P	P	23 58 08.2	-0.2
	comp=Z,0.6nm,0.9s,baz=14,slow=6.8,SNR=4.2						
NB2	NORSAR Subarra	69.15	340	P	P	23 58 22.2	-0.8
	comp=Z,1.6nm,0.6s,baz=30,slow=6.5						
NOA	NORSAR Array B	69.15	340	LR	LR	00 32 52.0	
	comp=Z,6.8nm,18.2s,baz=25,slow=40						
HFS	Hagfors	69.33	339	P	P	23 58 23.7	-0.4
	comp=Z,2.9nm,0.5s,baz=46,slow=4.2,SNR=20						
ASAR	Alice Springs	70.47	197	P	P	23 58 33.0	+1.5
	comp=Z,0.4nm,0.8s,baz=17,slow=6.8,SNR=4.7						
ASAR	Alice Springs	70.47	197	P	P	23 58 33.0	+1.5
KBZ	Khabaz	70.92	313	P	P	23 58 35.4	+1.3
	comp=Z,5.2nm,0.8s,baz=45,slow=2.9,SNR=6.2						
KBZ				LR	LR	00 34 21.6	
	comp=Z,48nm,18.6s,baz=104,slow=40						
AKASG	Malin Array Be	72.01	325	P	P	23 58 40.0	-0.5
	comp=Z,1.2nm,0.4s,baz=35,slow=7.0,SNR=6.3						
GNI	Garni	72.47	310	LR	LR	00 33 03.9	
	comp=Z,37nm,19.9s,baz=310,slow=38						
CLL	Collm	77.22	335	eP	P	23 59 10.0	-0.7
MLR	Muntele Rosu	77.48	324	P	P	23 59 13.6	+1.1
	comp=Z,0.4nm,0.8s						
BRTR	Keskin Array B	78.54	316	P	P	23 59 19.4	+0.9
	comp=Z,0.9nm,0.8s,baz=35,slow=4.5,SNR=4.4						
KHC	Kasperske Hory	78.95	333	eP	P	23 59 21.0	+0.6
KHC				epP	PcP	23 59 25.9	-3.1
KHC	Kasperske Hory	78.95	333	eP	P	23 59 21.0	+0.6
KHC				e		23 59 25.9	
GERES	GERESS Array B	79.16	333	P	P	23 59 21.9	+0.3
	comp=Z,0.2nm,0.3s,baz=38,slow=5.0,SNR=4.8						
TXAR	Lajitas Array	79.30	59	P	P	23 59 21.5	-1.2
	comp=Z,0.2nm,0.7s,baz=300,slow=7.2,SNR=3.1						
DAVOX	Davos/Dischmat	82.19	334	P	P	23 59 38.1	+0.1
	comp=Z,1.1nm,0.6s,baz=160,slow=23,SNR=3.5						
SNAA	Sanae	150.84	196	PKPbc	PKPbc	00 07 07.8	-0.3
	comp=Z,0.5nm,0.8s,baz=200,slow=3.4,SNR=3.1						

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*IDC **08** 23:48:28.6±1.0, 7°.03S×109°.53E, h0^{km}, mb3.5/5, mb1 3.7/5, mb1mx3.4/56, mbtmp3.5/5, MS2.6/1, Ms1 2.8/1, ms1mx2.3/44, Error ellipse: s-maj=38.8km s-min=16.7km az=34.0*

*ISCJB **08** 23:48:31.6±1.0, 8°.33S±0°.09×108°.56E±0°.06, h55^{km}, mb3.4/5, MS2.5/1, Error ellipse: s-maj=14.7km s-min=5.5km az=25.8*

*DJA **08** 23:48:32.8±1.0, 8°S±9°×10°9E±°, h32^{km}±7^{km}, M3.9/9, MLv3.9/9*

ISC 08 23:48:34.0±1.1**, 8°.3S**±0°.1×**108°.58E**±0°.06**, h55**^{km}**, n17, σ2^{s}.29**/20**, mb3.5**/5**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMJI	Cimerak	0.51	345	P	Pn	23 48 43.6	-2.1
CMJI				S	Sn	23 48 52.4	-1.7
KPJI	Karang Pucung	1.00	20	P	Pn	23 48 51.8	-0.1
CISI	Cisompet, Garu	1.05	313	P	Pn	23 48 50.1	-2.4
CISI				S	Sn	23 49 03.8	-2.4
LEM	Lembang	1.73	326	Pn	Pn	23 49 02.4	+0.5
	31nm,0.3s,baz=323,slow=22,SNR=13						
LEM				Sn	Sn	23 49 28.4	+5.4
	40nm,0.3s,baz=329,slow=23,SNR=7.7						
LEM	Lembang	1.73	326	P	Pn	23 49 01.6	-0.3
UGM	Wanagama	1.96	79	P	Pn	23 49 02.9	-1.9
UGM				S	Sn	23 49 26.5	-1.8
SMRI	Semarang	2.21	57	P	Pn	23 49 09.1	+0.8
WOJI	Wonogiri, Jawa	2.36	79	P	Pn	23 49 11.2	+0.9
PCJI	Pacitan	2.57	88	P	Pn	23 49 12.0	-1.2
PCJI				S	Sn	23 49 41.5	-1.8
PWJI	Pagerwojo	3.20	86	P	Pn	23 49 20.4	-1.4
GRJI	Gresik	4.10	71	P	Pn	23 49 34.3	+0.2
WRA	Warramunga Arr	27.49	118	P	P	23 54 14.1	-1.4
	0.3nm,0.8s,baz=294,slow=11,SNR=8.1						
CMAR	Chiang Mai Arr	28.22	340	LR	LR	00 06 27.5	
	comp=Z,14nm,20.9s,baz=218,slow=39						
ASAR	Alice Springs	28.67	125	P	P	23 54 27.4	+1.4
	0.1nm,0.3s,baz=302,slow=8.7,SNR=3.6						
STKA	Stephens Creek	38.62	132	P	P	23 55 55.9	+3.8
	1.2nm,0.7s,baz=315,slow=17,SNR=2.4						
MKAR	Makanchi Array	59.62	339	P	P	23 58 28.2	-4.1
	0.3nm,0.3s,baz=144,slow=8.5,SNR=6.2						
KURBB	Kurchatov Arra	64.19	339	P	P	23 59 00.2	-2.6
	0.2nm,0.4s,baz=155,slow=6.7,SNR=4.9						

NNC 08 23:56:09.4±4.6**, 37°.45N**×**71°.27E, h20**^{km}±19^{km}**, mb3.5, mpv3.0, 1C-6D, Error ellipse: s-maj=34.1km s-min=28.2km az=3.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.10	34	⇓Pn	Pn	23 56 57.5	+0.1
	0.2nm,0.1s						
SFK				⇓Pg	Pb	23 57 05.9	+1.9
	3.9nm,0.4s						
SFK				⇓Lg	Lg	23 57 48.9	
	28nm,0.4s						
MNAS	Manas	5.12	10	⇓Pg	Pg	23 57 43.1	-4.4
	3.5nm,1.1s						
MNAS				⇓Lg	Lg	23 58 53.9	
KK31	Karatay Array	5.68	354	⇑Pg	Pb	23 57 54.1	+6.3
	0.5nm,0.3s,baz=173,slow=11,SNR=7.8						
KK31				⇓Lg	Lg	23 59 06.5	
	3.3nm,0.5s,baz=183,slow=26,SNR=7.7						

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*NEIC **09** 00:01:16.9±0.0, 38°.83N×122°.79W, h0^{km}, mb3.9/1, MW3.9(BRK), After NCEDC.*

NEIC Felt [IV] at Middletown and [II] at Calistoga and Sonoma. Also felt at Carmichael, Clearlake Oaks, Cloverdale, Cotati, Geyserville, Healdsburg, Kelseyville, Martinez, Mendocino, Napa, Petaluma, Pope Valley, Redding, Sacramento, Saint Helena, San Francisco and Santa Rosa.

*ISCJB **09** 00:01:18.4±0.3, 38°.79N±0°.02×122°.79W±0°.03, h8^{km}, mb4.2/2, MS3.2/1, Error ellipse: s-maj=3.7km s-min=2.8km az=155.1*

*IDC **09** 00:01:19.3±1.9, 38°.73N×122°.88W, h0^{km}, mb3.5/1, mb1 3.9/6, mb1mx3.6/58, mbtmp3.5/6, ML3.2/5, MS3.2/5, Ms1 3.2/5, ms1mx2.8/36, Error ellipse: s-maj=21.9km s-min=11.3km az=42.0*

ISC 09 00:01:19.0±0.7**, 38°.81N**±0°.02×**122°.81W**±0°.03**, h8**^{km}**, n100, σ1^{s}.88**/97**, Northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPS	Hopland Field	0.28	312	ePg	Pg	00 01 24.5	-0.1
GHGM	Hogback Ridge	0.32	357	ePg	Pg	00 01 24.8	-0.6
GHCM	House Creek	0.36	237	ePg	Pg	00 01 26.1	-0.1
FTR	Fort Ross	0.40	225	ePg	Pb	00 01 26.8	-1.4
CVS	Carmenet Viney	0.54	149	ePg	Pg	00 01 28.8	-0.5
GGUM	Gualala	0.54	276	ePg	Pg	00 01 29.4	-0.1
NBRB	Beebe Ranch Br	0.58	160	ePg	Pg	00 01 30.2	0.0
GHOM	Hamilton Openi	0.62	293	ePg	Pg	00 01 31.0	0.0
MCCM	Marconi Confer	0.66	185	ePg	Pg	00 01 31.7	-0.1
GHMM	Hull Mountain	0.70	352	ePg	Pb	00 01 33.8	+0.3
GNAM	Navarro Ridge	0.75	302	ePg	Pb	00 01 34.1	-0.3
GTC	Three Chop Rid	0.83	316	ePg	Pb	00 01 36.0	+0.3
GASB	Alder Springs	0.85	5	ePg	Pb	00 01 36.2	+0.1
OSUM	Sutter Buttes	0.88	58	ePg	Pg	00 01 35.2	-0.6
CPMM	Point Molate	0.91	160	ePg	Pg	00 01 35.9	-0.6
CVPM	Vollmer Peak	1.03	153	ePg	Pg	00 01 38.2	-0.5
BKS	Berkeley--Byer	1.03	154	ePg	Pb	00 01 38.7	-0.4
JPRM	Presidio of Sa	1.04	165	ePg	Pg	00 01 38.6	-0.4
CYBM	Yerba Buena Is	1.05	160	ePg	Pg	00 01 38.6	-0.6
KCPM	Cahto Peak	1.07	326	ePg	Pb	00 01 39.7	-0.1
OSTM	Stimpson Lane	1.10	59	ePg	Pg	00 01 38.0	-2.0
KBNM	Bluenose Ridge	1.13	345	ePg	Pn	00 01 41.8	+0.6
BDM	Black Diamond	1.13	139	ePg	Pg	00 01 38.8	-1.8
JSBM	San Bruno Moun	1.17	164	ePg	Pg	00 01 40.6	-0.9
CLCB	Lake Chabot	1.22	151	ePg	Pb	00 01 41.9	-0.4
SAC	San Andreas	1.26	166	ePn	Pg	00 01 43.3	+0.1
ORV	Oroville	1.26	53	ePg	Pn	00 01 41.0	-1.9
CVLM	Vallecito	1.40	147	ePn	Pn	00 01 43.7	-1.2
AFDM	Forest Hills D	1.44	84	ePn	Pn	00 01 43.3	-2.1
KMRM	Mail Ridge	1.58	334	ePn	Pb	00 01 48.2	-0.3
O03D	Paynes Creek	1.68	27	eSn	Sn	00 02 06.8	-3.6
MNHB	New Hogan Dam	1.70	112	ePn	Pn	00 01 46.9	-2.0
MHC	Mount Hamilton	1.73	147	ePn	Pn	00 01 49.2	-0.3
WDC	Whiskeytown Da	1.78	7	ePn	Pn	00 01 50.9	+0.8
HSPM	Sheep	1.97	148	ePn	Pn	00 01 51.6	-1.2
DONR	Donner Summit	2.01	73	ePn	Pn	00 01 53.4	-0.1
CMB	Columbia Colle	2.05	111	ePn	Pn	00 01 52.7	-1.1
IND	Independence	2.05	71	ePn	Pn	00 01 54.4	+0.3
RUBR	Rubicon Trail	2.08	82	ePn	Pn	00 01 54.3	-0.1
TAHR	Tahoe	2.09	80	ePn	Pn	00 01 55.0	+0.4
EMB	Emerald Bay	2.12	85	ePn	Pn	00 01 55.2	+0.3
SLD	San Luis Dam	2.13	144	ePn	Pn	00 01 54.3	-0.7
BEKR	Beckworth	2.17	60	ePn	Pn	00 01 55.0	-0.7
HSLM	San Luis Dam	2.19	141	ePn	Pn	00 01 55.6	-0.1
JCC	Jacoby Creek,	2.22	335	ePn	Pb	00 02 00.5	+1.2
SAO	San Andreas Ge	2.31	152	ePn	Pn	00 01 55.9	-1.4
EBP	Ebbets Pass	2.36	94	ePn	Pn	00 01 59.1	+0.8
VCNR	Virginia City	2.51	78	ePn	Pn	00 02 01.1	+0.8
YERR	Yerington	2.79	85	ePn	Pn	00 02 04.8	+0.7
PAHR	Pah Rah Range	2.81	70	ePn	Pn	00 02 04.2	-0.1
YBH	Yreka Blue Hor	2.92	1	Pn	Pb	00 02 10.0	-1.4
	0.7nm,0.3s,baz=172,slow=11,SNR=8.6						
YBH				Lg	Lg	00 02 54.2	
	baz=128,slow=21,SNR=3.4						
YBH				LR	LR	00 03 10.1	
	comp=Z,18nm,19.2s,baz=208,slow=37						
YBH	Yreka Blue Hor	2.92	1	Pn	Pb	00 02 10.0	-1.4
PMPB	Monarch Peak	3.04	148	ePn	Pn	00 02 06.9	-0.5
MDPB	Devils Postpil	3.16	111	ePn	Pn	00 02 10.4	+1.2
OMMB	Old Mammoth Mi	3.23	110	ePn	Pn	00 02 11.7	+1.4
RYN	Ryan	3.36	92	ePn	Pn	00 02 12.4	+0.5
NVAR	Mina Array Bea	3.55	95	Pn	Pn	00 02 15.8	+1.3
	2.1nm,0.3s,baz=269,slow=15,SNR=11						
NVAR				Lg	Lg	00 03 14.1	
	3.1nm,0.3s,baz=263,slow=33,SNR=5.0						
NVAR				LR	LR	00 03 59.8	
	comp=Z,212nm,19.9s,baz=106,slow=43						
KVN	Kaiserville	3.68	85	ePn	Pn	00 02 15.9	-0.5
PAGB	Antelope Grade	3.69	146	ePn	Pn	00 02 16.3	0.0
HUMO	Hull Mountain	3.80	358	ePg	Pb	00 02 29.1	+2.8
BMN	Battle Mountai	4.61	68	ePn	Pn	00 02 33.2	+4.1
ISA	Isabella, Lake	4.67	131	ePn	Pn	00 02 30.3	+0.5
WVOR	Wild Horse Val	4.82	40	ePg	Pb	00 02 45.0	+1.3
DAC	Darwin (Calif)	4.85	120	ePn	Pn	00 02 36.6	+4.2
J08A	Circle Bar Ran	5.60	34	eSn	Sn	00 03 47.8	+0.5
J08A				eSg	Sg	00 04 17.4	-1.5
GSC	Goldstone, Bar	5.94	124	ePn	Pn	00 02 48.7	+1.4
VTV	Victorville	6.11	132	ePg	Pg	00 03 13.7	-2.3
VTV				eSn	Sn	00 03 53.7	-6.1
ELK	Elko	6.14	69	Pn	Pn	00 02 54.3	+4.0
	0.2nm,0.3s,baz=301,slow=11,SNR=16						
ELK				Lg	Lg	00 04 31.1	
	0.1nm,0.3s,baz=343,slow=15,SNR=2.1						
ELK				LR	LR	00 05 20.1	
	comp=Z,187nm,21.9s,baz=254,slow=39						
BFSC	Mount Baldy Ra	6.16	136	ePn	Pn	00 02 51.3	+0.9
SHPR	Sheep Range	6.49	108	ePn	Pn	00 02 58.0	+3.1
SHPR				ePg	Pb	00 03 16.4	+4.2
HDB	Hidalgo Marine	6.84	128	ePn	Pn	00 03 02.1	+2.4
HDB				ePg	Pg	00 03 30.1	+0.1
HDB				eSg	Sb	00 04 41.3	+1.2
DGR	Domenigoni Val	6.96	136	eSn	Sn	00 04 19.9	-0.7
PSUT	Pine Spring	7.01	89	ePg	Pg	00 03 30.1	-3.2
DNR	Dunn Ranch,Anz	7.23	134	ePg	Pb	00 03 30.7	+5.9
DNR				eSn	Sb	00 04 40.4	-11
F07A	Phinny Hill Vi	7.40	16	ePn	Pn	00 03 06.4	-0.8
HWB	Hans Werner Br	7.47	139	ePg	Pg	00 03 41.0	-1.0
HWB				eSg	Sb	00 05 02.4	+4.4
CCUT	Cedar City	7.54	97	ePg	Pg	00 03 44.4	+0.9
SZCU	Shurtz Canyon	7.75	96	ePg	Pg	00 03 47.5	+0.1
LCMT	Little Creek M	7.77	100	ePg	Pg	00 03 48.9	+1.1
BGU	Big Grassy Mou	7.81	71	ePn	Pn	00 03 16.1	+3.1
DUG	Dugway, Tooele	7.85	77	ePn	Pn	00 03 16.0	+2.4
KNB	Kanab	8.09	100	ePg	Pb	00 03 46.6	+7.1
MSU	Marysvale	8.32	89	ePn	Pn	00 03 23.2	+3.1
MTPU	Mount Pierson	8.37	92	ePg	Pg	00 03 56.8	-2.5
PKCU	Pink Cliffs	8.38	96	ePg	Pg	00 04 02.9	+3.3
PDAR	Pinedale Array	10.79	64	Pn	Pn	00 03 59.7	+5.7
	0.1nm,0.3s,baz=246,slow=14,SNR=16						
O20A	White River Ci	11.34	79	ePn	Pn	00 04 01.2	-0.2
SDCO	Great Sand Dun	13.64	89	ePn	Pn	00 04 35.8	+2.8
ANMO	Albuquerque	13.64	101	LR	LR	00 10 03.9	
	comp=Z,81nm,20.7s,baz=301,slow=38						
LAO	LASA Array	14.49	52	eSn	Sn	00 07 20.7	-4.5
LPIG	La Paz	18.10	140	LR	LR	00 13 06.2	
	comp=Z,128nm,18.8s,baz=232,slow=39						
TX31	Lajitas Ar. Si	18.43	115	ePn	Pn	00 05 38.1	+3.2
TXAR	Lajitas Array	18.43	115	P	Pn	00 05 38.2	+3.3
	0.0nm,0.3s,baz=299,slow=10,SNR=15						
ECSD	EROS Data Cent	20.26	68	eP	P	00 05 53.3	-1.4
	6.5nm,1.0s						
ILAR	Eielson Array	29.59	339	P	P	00 07 24.7	+0.6
	0.6nm,1.1s,baz=149,slow=8.0,SNR=5.0						
TKL	Tuckaleechee C	31.08	83	LR	LR	00 20 36.4	
	comp=Z,52nm,20.1s,baz=3.0,slow=37						
H11S1	WAKE ISLAND Hy	63.61	273	T	T	01 20 18.8	
	baz=54,slow=74,SNR=9.7						
H11S2	WAKE ISLAND Hy	63.62	273	T	T	01 20 19.3	
	baz=54,slow=74,SNR=6.3						
H11S3	WAKE ISLAND Hy	63.63	273	T	T	01 20 20.6	
	baz=54,slow=74,SNR=5.2						
HHC	Hu-ho-hao-te	86.48	322	eP	P	00 14 00.5	-2.0
HHC				pmax	pmax		
	comp=Z,14nm,1.0s						
HHC				pmax	pmax		
	comp=Z,53nm,5.3s						

MEX 09 00:08:41.8±0.3**, 16°.46N**×**98°.56W, h15**^{km}**, MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.42	99	i P	Pg	00 08 49.3	-1.0
PNIG				eS	Sg	00 08 54.9	-1.1
TLIG	Tlapa	1.10	360	eP	Pb	00 08 59.1	-3.6
TLIG				i S	Sb	00 09 12.1	-4.7
VHO	Vista Hermosa	1.85	70	i P	Pn	00 09 10.8	-2.4
VHO				eS	Sn	00 09 32.5	-4.0

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*ISCJB **09** 00:14:43.1±0.7, 4°.0N±0°.1×126°.3E±0°.4, h45^{km}, mb3.7/9, MS2.8/2, Error ellipse: s-maj=57.3km s-min=12.0km az=163.7*

*IDC **09** 00:14:49.2±9.9, 3°.95N×126°.36E, h85^{km}±98^{km}, mb3.4/9, mb1 3.5/9, mb1mx3.3/55, mbtmp3.7/9, MS2.9/3, Ms1 2.9/3, ms1mx2.4/34, Error ellipse: s-maj=61.8km s-min=17.5km az=75.0*

ISC 09 00:14:45.2±0.9**, 4°.0N**±0°.2×**126°.4E**±0°.4**, h45**^{km}**, n11, σ0^{s}.83**/10**, mb3.8**/9**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	3.17	345	S	Sn	00 16 24.8	+16
	39nm,0.3s,baz=236,slow=18,SNR=3.0						
DAV				LR	LR	00 17 02.7	
	comp=Z,144nm,18.9s,baz=155,slow=42						
GUMO	Guam	20.57	61	LR	LR	00 26 15.4	
	comp=Z,17nm,20.9s,baz=96,slow=33						
FITZ	Fitzroy Crossi	21.96	182	P	P	00 19 36.6	+1.3
	1.2nm,0.6s,baz=7.1,slow=8.1,SNR=4.7						
WRA	Warramunga Arr	25.03	162	P	P	00 20 05.1	-0.2
	1.7nm,0.8s,baz=341,slow=10,SNR=3.3						
ASAR	Alice Springs	28.45	165	P	P	00 20 35.8	-0.3
	0.4nm,0.5s,baz=347,slow=7.5,SNR=5.6						
KSRS	Korea Array	33.33	2	P	P	00 21 19.8	+0.9
	0.6nm,0.3s,baz=184,slow=10.0,SNR=3.6						
STKA	Stephens Creek	38.49	159	P	P	00 22 02.5	-0.7
	0.4nm,0.3s,baz=347,slow=14,SNR=2.0						
SONM	Songino Array	46.95	342	P	P	00 23 11.4	-0.2
	0.7nm,0.6s,baz=157,slow=7.6,SNR=5.5						
SONM				LR	LR	00 46 00.4	
	comp=Z,29nm,18.4s,baz=44,slow=40						
MKAR	Makanchi Array	57.16	325	P	P	00 24 27.2	-0.2
	0.5nm,0.4s,baz=113,slow=8.6,SNR=10						
MKAR				PcP	PcP	00 25 22.4	+0.7
	0.4nm,0.5s,baz=123,slow=4.1,SNR=3.6						
KURBB	Kurchatov Arra	61.34	327	P	P	00 24 55.5	-0.8
	1.0nm,0.7s,baz=126,slow=6.7,SNR=6.7						
BVAR	Borovoye Array	66.92	327	P	P	00 25 32.2	-0.7
	0.4nm,0.5s,baz=129,slow=5.7,SNR=3.3						

MEX 09 00:29:19.1±0.5**, 19°.27N**×**98°.82W, h15**^{km}±2^{km}**, MD3.8, Central Mexico**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VCVM	Valle de Chalc	0.13	282	eS	Sg	00 29 25.1	-0.5
AMVM	AMECAMECA	0.14	168	i P	Pg	00 29 22.0	-1.1
AMVM				eS	Sg	00 29 25.3	-0.4
PPM	Popocatepetl	0.27	138	eP	Pg	00 29 24.9	-0.3
PPM				eS	Sg	00 29 28.9	-0.4
YAIG	Yautepec	0.47	210	eP	Pg	00 29 27.1	-1.4
YAIG				eS	Sg	00 29 33.3	-1.6
PLIG	Platanillo	1.09	217	eP	Pb	00 29 36.4	-3.3
PLIG				eS	Sb	00 29 50.0	-3.7
TPIG	Tehuac#an	1.62	121	i P	Pn	00 29 43.6	-3.7
TPIG				eS	Sn	00 30 03.4	-4.6

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*NIED **09** 00:34:00, 36°.10N×137°.50E, h270^{km}, Mw4.0 Best double couple: $M_0$1.00000×10^{15} NP1:ϕ_s310.00000°, δ69.00000°, λ3.00000°. NP2:ϕ_s219.00000°, δ87.00000°, λ159.00000°.*

*ISCJB **09** 00:34:07.6±0.3, 36°.08N±0°.04×137°.50E±0°.05, h260^{km}±2^{km}, mb3.6/12, Error ellipse: s-maj=6.7km s-min=5.7km az=8.1*

*JMA **09** 00:34:08.4±0.1, 36°.06N×137°.51E, h258^{km}±1^{km}, M3.6*

*IDC **09** 00:34:08.4±0.4, 36°.03N×137°.45E, h252^{km}±5^{km}, mb3.3/10, mb1 3.4/14, mb1mx3.2/64, mbtmp3.9/14, Error ellipse: s-maj=17.3km s-min=8.7km az=64.0*

ISC 09 00:34:08.5±0.7**, 36°.07N**±0°.05×**137°.49E**±0°.05**, h255**^{km}±5^{km}**, n39, σ0^{s}.71**/53**, mb3.6**/12**, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JGN	Niukaw	0.21	318	P	Pn	00 34 41.7	+0.3
JGN				S	S	00 35 07.3	-0.1
MAT	Matsushiro	0.75	51	P	Pn	00 34 43.2	+0.4
MAT				S	S	00 35 10.1	+0.2
MAT	Matsushiro	0.75	51	P	Pn	00 34 43.2	+0.4
MAT				S	S	00 35 09.7	-0.2
MJAR	Matsushiro Arr	0.75	51	P	Pn	00 34 43.4	+0.6
	30nm,0.3s,baz=238,slow=7.3,SNR=143						
MJAR				S	S	00 35 10.1	+0.1
	4.6nm,0.3s,baz=238,slow=11,SNR=17						
JKG	Kaga	0.96	283	P	Pn	00 34 44.4	+0.6
JKG				S	S	00 35 12.0	+0.4
JYN	Shimob	1.03	123	P	Pn	00 34 44.4	0.0
JRY	Ryogami san	1.15	92	P	Pn	00 34 45.3	+0.4
JRY				S	S	00 35 13.5	-0.1
JSZ	Suzu	1.38	356	P	Pn	00 34 46.6	+0.3
JSZ				S	S	00 35 15.9	-0.4
JOD2	Odawara 2	1.53	121	P	Pn	00 34 47.9	+0.3
JOD2				S	S	00 35 18.4	0.0
JAG	Ashikaga	1.63	77	P	Pn	00 34 48.1	-0.1
JIE	Ise	1.79	201	P	Pn	00 34 50.1	+0.5
JIE				S	S	00 35 22.2	+0.1
JHG	Hegura jima	1.83	346	P	Pn	00 34 50.4	+0.6
JWT	Wachi	1.87	246	P	Pn	00 34 50.4	+0.1
JWT				S	S	00 35 21.9	-1.3
JSD	Sado	2.06	17	P	Pn	00 34 52.2	+0.4
JSD				S	S	00 35 25.4	-0.8
TK02	Tokai 2	2.13	174	P	Pn	00 34 53.1	+0.7
JNS	Sasagawa	2.28	39	P	Pn	00 34 54.2	+0.3
JNS				S	S	00 35 29.0	-0.8
JWY	Kouya	2.41	221	P	Pn	00 34 55.7	+0.3
JFT	Otama	2.71	57	P	Pn	00 34 58.8	+0.7
JWZ	Kozaga	2.92	210	P	Pn	00 35 00.4	-0.1
JWZ				S	S	00 35 40.3	-1.4
BSO1	Boso 1	3.18	115	P	Pn	00 35 02.2	-0.5
BSO1				S	S	00 35 44.9	-0.9
JHJ	Hachijo jima 2	3.50	147	P	Pn	00 35 07.1	+0.3
	6.4nm,0.3s,baz=288,slow=20,SNR=2.7						
JHJ				S	S	00 35 52.3	-0.8
	18nm,0.3s,baz=65,slow=23,SNR=3.7						
JNU	Nakatsue	6.19	244	P	Pn	00 35 39.1	-0.1
	1.1nm,0.3s,baz=70,slow=8.8,SNR=18						
KSRS	Korea Array	7.80	283	P	Pn	00 36 00.2	+1.0
	0.4nm,0.3s,baz=103,slow=13,SNR=17						
ASAJ	Asahikawa	8.94	24	P	Pn	00 36 11.3	-2.2
	3.2nm,0.3s,baz=234,slow=13,SNR=7.9						
ASAJ				S	S	00 37 46.5	-8.1
	0.8nm,0.3s,baz=162,slow=20,SNR=4.4						
USRK	Ussuriysk Ar.	9.14	334	P	Pn	00 36 16.9	+0.8
	baz=151,slow=13						
JCJ	Chichijima	9.80	155	P	Pn	00 36 19.1	-5.4
	8.5nm,0.3s,baz=259,slow=14,SNR=4.4						
JCJ				S	S	00 38 02.6	-12
	12nm,0.3s,baz=279,slow=19,SNR=4.3						
KLR	Kul'dur	13.81	344	P	Pn	00 37 12.3	-1.6
	0.1nm,0.3s,baz=146,slow=10,SNR=62						
GUMO	Guam	23.35	162	P	P	00 38 55.9	+1.6
	24nm,0.3s,baz=339,slow=8.6,SNR=4.4						
SONM	Songino Array	25.76	307	P	P	00 39 15.3	-0.7
	0.6nm,0.6s,baz=106,slow=11,SNR=3.5						
CMAR	Chiang Mai Arr	38.19	253	P	P	00 41 03.6	-0.3
	0.5nm,0.3s,baz=58,slow=8.6,SNR=3.0						
ZALV	Zalesovo Beam	40.25	313	P	P	00 41 20.7	+0.2
	0.8nm,0.4s,baz=113,slow=8.5,SNR=3.5						
MKAR	Makanchi Array	41.96	302	P	P	00 41 34.4	0.0
	1.1nm,0.6s,baz=87,slow=11,SNR=12						
KURBB	Kurchatov Arra	44.11	308	P	P	00 41 52.0	+0.5
	1.3nm,0.2s,baz=86,slow=8.0,SNR=13						
BVAR	Borovoye Array	48.88	312	P	P	00 42 28.7	+0.2
	0.9nm,0.5s,baz=82,slow=6.6,SNR=8.3						
ILAR	Eielson Array	51.99	32	P	P	00 42 52.3	+0.9
	0.2nm,0.7s,baz=273,slow=6.1,SNR=4.3						
WRA	Warramunga Arr	55.79	184	P	P	00 43 18.9	-0.4
	6.4nm,0.3s,baz=360,slow=7.6,SNR=229						
AKTO	Aktyubinsk	56.95	311	P	P	00 43 27.8	+0.6
	1.0nm,0.6s,baz=72,slow=12,SNR=4.5						
ASAR	Alice Springs	59.51	184	P	P	00 43 44.9	-0.2
	2.0nm,0.6s,baz=13,slow=13,SNR=34						
FINES	FINESS Array B	68.16	331	P	P	00 44 41.1	+0.3
	3.4nm,1.1s,baz=95,slow=8.5,SNR=3.0						

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*IDC **09** 00:49:21.0±1.4, 36°.06N×141°.21E, h0^{km}, mb3.5/6, mb1 3.6/7, mb1mx3.4/60, mbtmp3.5/7, ML3.3/1, MS3.3/3, Ms1 3.3/3, ms1mx2.5/47, Error ellipse: s-maj=32.2km s-min=27.7km az=40.0*

*ISCJB **09** 00:49:21.2±1.5, 36°.42N±0°.07×141°.04E±0°.08, h0^{km}±7^{km}, mb3.5/6, MS3.4/3, Error ellipse: s-maj=13.9km s-min=7.4km az=142.9*

*JMA **09** 00:49:21.5, 36°.39N×141°.02E, h20^{km}±1^{km}, M3.4*

ISC 09 00:49:21.6±2.1**, 36°.41N**±0°.07×**141°.01E**±0°.08**, h3**^{km}±11^{km}**, n24, σ1^{s}.78**/20**, mb3.4**/6**, MS3.4**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHYU	Hitachinakayam	0.35	259	P	Pg	00 49 28.9	+0.6
JHYU				S	Sg	00 49 34.0	+1.2
JHO	Hitachi	0.41	300	P	Pg	00 49 29.9	+0.4
JHO				S	Sg	00 49 36.1	+1.2
JYT	Yasato	0.68	255	P	Pg	00 49 34.6	-0.1
JYT				S	Sg	00 49 44.0	+0.4
ONAJ	Iwakimizuishiy	0.71	346	P	Pg	00 49 35.5	+0.1
JFK	Kawauchi	0.96	354	P	Pg	00 49 39.1	-1.1
JSB	Shiboa	1.04	303	P	Pg	00 49 41.0	-0.6
JFT	Otama	1.23	334	P	Pg	00 49 43.9	-1.4
MJAR	Matsushiro Arr	2.26	274	Pn	Pb	00 50 01.9	-1.3
	6.3nm,0.3s,baz=91,slow=15,SNR=29						
MJAR				Sn	Sb	00 50 30.8	-0.8
	7.3nm,0.3s,baz=67,slow=29,SNR=6.3						
MAT	Matsushiro	2.26	274	P	Pn	00 49 58.3	-1.7
MAT				eS	Sn	00 50 26.6	-1.9
SONM	Songino Array	27.87	305	P	P	00 55 14.7	+2.0
	0.3nm,0.5s,baz=118,slow=12,SNR=2.6						
H11N2	WAKE ISLAND Hy	28.11	119	T	T	01 24 42.4	
	baz=312,slow=75,SNR=24						
H11N1	WAKE ISLAND Hy	28.12	119	T	T	01 24 36.6	
	baz=312,slow=75,SNR=25						
H11N3	WAKE ISLAND Hy	28.13	119	T	T	01 24 38.0	

	baz=312,slow=75,SNR=20						
H11S1	WAKE ISLAND Hy	28.80	121	T	T	01 25 25.4	
	baz=314,slow=76,SNR=109						
H11S3	WAKE ISLAND Hy	28.80	121	T	T	01 25 25.4	
	baz=314,slow=76,SNR=94						
H11S2	WAKE ISLAND Hy	28.82	121	T	T	01 25 31.4	
	baz=314,slow=76,SNR=68						
ZALV	Zalesovo Beam	42.10	313	P	P	00 57 18.0	+3.2
	1.3nm,0.6s,baz=25,slow=3.2,SNR=3.9						
MKAR	Makanchi Array	44.18	303	P	P	00 57 34.8	+3.0
	0.2nm,0.5s,baz=98,slow=10,SNR=2.8						
KURBB	Kurchatov Arra	46.13	308	P	P	00 57 49.0	+1.8
	0.6nm,0.2s,baz=83,slow=7.8,SNR=5.2						
ILAR	Eielson Array	50.20	32	P	P	00 58 19.6	+1.2
	0.2nm,0.6s,baz=265,slow=5.3,SNR=3.2						
LEM	Lembang	53.20	223	LR	LR	01 21 32.4	
	comp=Z,25nm,18.5s,baz=242,slow=36						
WRA	Warramunga Arr	56.40	188	P	P	00 59 01.8	-2.7
	0.2nm,0.6s,baz=6.1,slow=7.4,SNR=5.3						
PDAR	Pinedale Array	78.34	45	LR	LR	01 35 27.6	
	comp=Z,16nm,18.8s,baz=38,slow=35						
TXAR	Lajitas Array	90.76	52	LR	LR	01 38 17.9	
	comp=Z,19nm,21.2s,baz=0.0,slow=32						

MAN 09 00:55:32.8, 10°.27N×123°.33E, h1^{km}, mb4.7, ML3.6, MS3.5, 1C-3D, Cebu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LLP	Lapu-Lapu	0.62	85	⇓iP	Pg	00 55 45.4	+0.7
LLP				i S	Sg	00 55 54.1	+1.2
TBP	Tagbilaran	0.77	138	eP	Pn	00 55 50.5	-0.3
TBP				i S	Sb	00 56 01.4	+1.3
GUIM	Jordan	0.81	296	eP	Pg	00 55 47.6	-0.8
GUIM				eS	Sg	00 55 58.9	0.0
SNPH	Sibulan	0.92	186	⇓iP	Pb	00 55 51.7	+0.1
SNPH				i S	Sb	00 56 05.0	+0.5
RCP	Roxas	1.41	336	⇑eP	Pb	00 56 00.5	+0.7
RCP				eS	Sn	00 56 19.4	+0.6
JAP	San Jose, Anti	1.45	289	⇓eP	Pg	00 56 05.1	+4.7
OCLP	Ormoc	1.48	58	eP	Pn	00 56 00.3	-0.2
OCLP				eS	Sg	00 56 20.1	-0.1
MSLP	Maasin	1.51	95	eP	Pn	00 56 01.1	+0.2
MSLP				eS	Sg	00 56 21.7	+0.5
PAGZ	Pagadian	2.41	179	eP	Pn	00 56 13.2	-0.1
PAGZ				eS	Sn	00 56 44.5	+1.1
OTRP	Odiongan	2.45	328	eP	Pb	00 56 16.7	-0.9
OTRP				eS	Sg	00 56 53.8	+2.3
BUKP	Musuan	2.92	144	eP	Pn	00 56 21.3	+0.8
BUKP				eS	Sg	00 57 05.7	-1.1

NNC 09 00:59:59.1±4.2, 37°.85N×71°.43E, h0^{km}, mb3.8, mpv3.4, 3C-3D, Error ellipse: s-maj=32.2km s-min=26.7km az=176.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	2.70	36	⇓P	Pn	01 00 44.1	+0.1
	5.2nm,0.3s						
SFK				⇓S	Sn	01 01 18.5	+1.0
	3.5nm,0.2s						
MNAS	Manas	4.70	10	⇓P	Pn	01 01 12.0	+0.6
	2.5nm,0.3s						
MNAS				⇑S	Sn	01 02 07.6	+0.8
	3.8nm,0.5s						
KK31	Karatay Array	5.29	353	P	Pn	01 01 20.9	+1.4
	1.6nm,0.5s,baz=180,slow=14,SNR=15						
KK31				⇑S	Sn	01 02 23.0	+1.8
	1.1nm,0.3s,baz=173,slow=20,SNR=15						
AAK	Ala-Archa	5.33	25	P	Pn	01 01 19.1	-1.0
	2.0nm,0.3s						
AAK				⇑S	Sn	01 02 23.3	+1.2
	3.3nm,0.7s						

DJA 09 01:04:18.4±1.9, 3°S±4°×12°3E±°, h34^{km}±39^{km}, M3.6/4, MLv3.6/4, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDI	Kendari	0.94	214	P	Pn	01 04 34.9	-0.3
KDI				S	Sb	01 04 48.8	+0.3
LUWI	Luwuk	2.15	350	P	Pn	01 04 51.6	-0.2
LUWI				S	Sn	01 05 17.8	+0.5
APSI	Ampana	2.69	326	P	Pn	01 04 59.3	-0.1
SANI	Sanana	3.06	69	P	Pn	01 05 04.4	+0.1
BNSI	Bone	3.26	248	P	Pn	01 05 07.4	+0.2
TTSI	Tana Toraja	3.32	272	P	Pn	01 05 08.2	+0.3
SPSI	Sidrap Palu	3.46	257	P	Pn	01 05 10.0	+0.2
MPSI	Mapaga	4.76	317	P	Pn	01 05 28.0	+0.2

DJA 09 01:21:00.8±0.5, 4°S±5°×13°3E±°, h53^{km}±10^{km}, M3.6/7, MLv3.6/7, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	0.69	330	P	Pn	01 21 15.0	+0.4
FAKI				S	Sn	01 21 26.9	+2.3
KMPI	Kaimana, Papua	1.11	97	P	Pn	01 21 20.3	+0.2
KMPI				S	Sn	01 21 35.0	+0.6
RKPI	Ransiki, Papua	2.54	38	P	Pn	01 21 39.4	-0.2
BNDI	Bandanaira	2.87	250	P	Pn	01 21 44.0	-0.1
MSAI	Masohi	3.67	273	P	Pn	01 21 55.2	+0.1

IDC 09 01:24:23.6±7.7, 17°.65S×176°.51W, h0^{km}, mb3.7/2, mb1 4.0/2, mb1mx3.4/51, mbtmp3.7/2, Error ellipse: s-maj=324.1km s-min=66.8km az=142.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	46.46	259	P	P	01 32 53.1	+0.3
	1.4nm,0.9s,baz=95,slow=7.9,SNR=16						
ASAR	Alice Springs	46.60	254	P	P	01 32 53.2	-0.6
	0.7nm,0.7s,baz=92,slow=8.5,SNR=8.0						
BRTR	Keskin Array B	145.87	316	PKPbc	PKPdf	01 44 04.4	-0.5
	0.6nm,0.8s,baz=48,slow=2.1,SNR=3.8						

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*NIED **09** 01:25:00, 45°.60N×151°.30E, h8^{km}, Mw4.5 Best double couple: $M_0$7.19000×10^{15} NP1:ϕ_s255.00000°, δ25.00000°, λ116.00000°. NP2:ϕ_s46.00000°, δ67.00000°, λ78.00000°.*

*NEIC **09** 01:25:43.1±0.4, 45°.39N×151°.27E, h10^{km}, mb4.6/21, Error ellipse: s-maj=10.2km s-min=5.9km az=137.0*

*ISCJB **09** 01:25:44.0±0.3, 45°.29N±0°.04×151°.39E±0°.05, h32^{km}, mb4.2/42, MS3.5/3, Error ellipse: s-maj=7.5km s-min=2.6km az=146.2*

*SKHL **09** 01:25:44.4±0.6, 45°.12N×151°.62E, h50^{km}±5^{km}, mb5.1/7, Ms4.0/4*

*JMA **09** 01:25:44.5±0.4, 45°.62N×151°.33E, h30^{km}, M4.5*

*MOS **09** 01:25:46.1±0.9, 45°.29N×151°.33E, h51^{km}, mb4.8/15, Error ellipse: s-maj=7.5km s-min=6.3km az=83.2*

*IDC **09** 01:25:48.9±2.3, 45°.43N×151°.25E, h58^{km}±20^{km}, mb3.7/20, mb1 3.8/29, mb1mx3.7/75, mbtmp3.9/29, ML3.8/5, MS3.3/7, Ms1 3.3/7, ms1mx2.9/72, Error ellipse: s-maj=17.9km s-min=12.5km az=128.0*

ISC 09 01:25:45.6±0.5, 45°.21N±0°.07×151°.40E±0°.06, h32^{km}, n201, σ1^s.39/210, mb4.4/53, MS3.3/3, 17C-9D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.50	272	eP	Pn	01 26 25.0	+1.0
KUR				AMB	AMB	01 26 27.0	
	82nm,0.3s						
KUR				AMB	AMB	01 26 27.0	
	118nm,0.3s						
KUR				AMB	AMB	01 26 27.0	
	377nm,0.3s						
KUR				eS	Sn	01 26 55.0	+1.7
KUR				A	A	01 27 01.4	
	390nm,0.4s						
KUR				A	A	01 27 01.4	
	1µm,0.4s						
KUR				AMS	AMS	01 27 38.0	
	2µm,10.0s						
KUR				AMS	AMS	01 27 38.0	
	2µm,10.0s						
KUR				AMS	AMS	01 27 38.0	
	2µm,10.0s						
KUR	Kuril'sk	2.50	272	ePN	Pn	01 26 25.5	+1.5
KUR				eS	Sn	01 26 55.8	+2.5
KUR				pmax	pmax		
	comp=Z,377nm,0.3s						
KUR				pmax	pmax		
	comp=N,167nm,0.2s						
KUR				pmax	pmax		
	comp=E,118nm,0.2s						
KUR				smax	smax		
	comp=N,611nm,0.9s						
KUR				smax	smax		
	comp=E,590nm,0.8s						
KUR				smax	smax		
	comp=N,1µm,0.4s						
KUR				smax	smax		
	comp=E,223nm,0.4s						
SHO	Shikotan	3.53	249	i P	Pn	01 26 38.7	+0.5
SHO				AMB	AMB	01 26 42.0	
	comp=E,46nm,0.3s						
SHO				AMB	AMB	01 26 42.0	
	comp=E,29nm,0.3s						
SHO				eS	Sn	01 27 19.9	+1.1
SHO				A	A	01 27 32.0	
	comp=E,296nm,0.3s						
SHO				A	A	01 27 32.0	
	comp=E,217nm,0.3s						
SHO				AMS	AMS	01 28 15.0	
	comp=E,1µm,11.0s						
SHO				AMS	AMS	01 28 15.0	
	comp=E,850nm,11.0s						
SHO				AMS	AMS	01 28 15.0	
	comp=E,890nm,11.0s						
SHO	Shikotan	3.53	249c	iPN	Pn	01 26 39.1	+0.9
SHO				eS	Sn	01 27 20.6	+1.8
SHO				pmax	pmax		
	comp=Z,68nm,0.4s						
SHO				pmax	pmax		
	comp=E,46nm,0.5s						
SHO				pmax	pmax		
	comp=N,29nm,0.3s						
SHO				smax	smax		
	comp=N,194nm,0.3s						
SHO				smax	smax		
	comp=E,184nm,0.4s						
YUK	Yuzh-Kuril'sk	4.12	255	eP	Pn	01 26 47.0	+0.7
YUK				AMB	AMB	01 26 49.0	
	comp=E,60nm,0.3s						
YUK				AMB	AMB	01 26 49.0	
	comp=E,70nm,0.3s						
YUK				AMB	AMB	01 26 49.0	
	comp=E,136nm,0.3s						
YUK				i S	Sn	01 27 34.5	+1.1
YUK				A	A	01 27 42.0	
	comp=E,264nm,0.3s						
YUK				A	A	01 27 42.0	
	comp=E,228nm,0.3s						
YUK				AMS	AMS	01 28 52.0	
	comp=E,1µm,14.0s						
YUK				AMS	AMS	01 28 52.0	
	comp=E,990nm,14.0s						
YUK				AMS	AMS	01 28 52.0	
	comp=E,780nm,14.0s						
YUK	Yuzh-Kuril'sk	4.12	255	ePN	Pn	01 26 47.8	+1.5
YUK				i S	Sn	01 27 36.0	+2.6
YUK				pmax	pmax		
	comp=Z,236nm,0.2s						
YUK				pmax	pmax		
	comp=N,60nm,0.1s						
YUK				pmax	pmax		
	comp=E,70nm,0.1s						
YUK				smax	smax		
	comp=E,228nm,0.3s						
YUK				smax	smax		
	comp=N,264nm,0.6s						
LAGR	Lagunnoye	4.17	256	eP	Pn	01 26 48.0	+1.0
LAGR				AMB	AMB	01 26 58.0	
	comp=N,199nm,0.5s						
LAGR				eS	Sn	01 27 35.0	+0.5
LAGR				A	A	01 27 51.0	
	comp=N,429nm,0.4s						
LAGR				A	A	01 27 51.0	
	comp=N,379nm,0.4s						
LAGR	Lagunnoye	4.17	256	ePN	Pn	01 26 48.2	+1.2
LAGR				eS	Sn	01 27 35.9	+1.4
LAGR				pmax	pmax		
	comp=Z,199nm,0.5s						
LAGR				smax	smax		
	comp=N,429nm,0.4s						
LAGR				smax	smax		
	comp=E,379nm,0.4s						
GRPR	Tuman	4.20	255	eP	Pn	01 26 48.0	+0.6
GRPR				AMB	AMB	01 26 59.0	
	comp=E,140nm,0.3s						
GRPR				AMB	AMB	01 26 59.0	
	comp=E,52nm,0.3s						
GRPR				AMB	AMB	01 26 59.0	
	comp=E,201nm,0.3s						
GRPR				eS	Sn	01 27 37.0	+1.7
GRPR				A	A	01 27 41.0	
	comp=E,215nm,0.4s						
GRPR				A	A	01 27 41.0	
	comp=E,261nm,0.4s						
GRPR	Tuman	4.20	255	ePN	Pn	01 26 48.4	+1.0
GRPR				eS	Sn	01 27 37.4	+2.1
GRPR				pmax	pmax		
	comp=E,52nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,201nm,0.3s						
GRPR				pmax	pmax		
	comp=N,140nm,0.2s						
GRPR				smax	smax		
	comp=E,261nm,0.4s						
GRPR				smax	smax		
	comp=N,215nm,0.2s						
GLVR	Golovnino	4.46	253	eP	Pn	01 26 52.0	+1.1
GLVR				AMB	AMB	01 26 54.0	
	comp=N,253nm,0.4s						
GLVR				eS	Sn	01 27 43.0	+1.4
GLVR				A	A	01 27 46.0	
	comp=N,297nm,0.3s						
GLVR				A	A	01 27 46.0	
	comp=N,117nm,0.3s						
GLVR	Golovnino	4.46	253	ePN	Pn	01 26 52.5	+1.6
GLVR				eS	Sn	01 27 43.2	+1.6
GLVR				pmax	pmax		
	comp=Z,253nm,0.4s						
GLVR				smax	smax		
	comp=E,117nm,0.2s						
GLVR				smax	smax		
	comp=N,297nm,0.3s						
NEM2	Nemuro 2	4.46	248	P	Pn	01 26 51.0	+0.1
NEM2				eS	Sn	01 27 40.9	-0.8
JNK	Nakash	5.05	254	P	Pn	01 27 00.6	+1.5
JNK				eS	Sn	01 27 56.6	+0.2
JAK	Akkeshi	5.31	248	P	Pn	01 27 02.5	-0.1
JAK				eS	Sn	01 28 00.2	-2.4
JTKR	Abashiri--Toko	5.49	260	P	Pn	01 27 07.1	+2.0
JAR	Ashorobuto	5.80	253	P	Pn	01 27 11.0	+1.6
JAR				eS	Sn	01 28 16.2	+1.4
JMP	Maruseppu	5.86	261	P	Pn	01 27 12.6	+2.3
JOB	Onbets	5.92	250	P	Pn	01 27 11.5	+0.5
HRK	Horoka	6.18	257	eP	Pn	01 27 17.0	+2.3
YSS	Yuzh-Sakhalins	6.26	289	ePN	Pn	01 27 18.9	+3.2
YSS				eS	Sn	01 28 28.6	+2.5
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YSS				MLR	MLR		
	comp=Z,700nm,17.0s						
YSS				MLR	MLR		
	comp=E,600nm,16.0s						
JKK2	Kamakawa 2	6.33	261	P	Pn	01 27 19.1	+2.5
SKR	Severo-Kuril's	6.33	28	eP	Pn	01 27 16.0	-0.6
SKR				AMB	AMB	01 27 24.0	
	comp=E,82nm,0.5s						
SKR				eS	Sn	01 28 26.2	-1.6
SKR				A	A	01 28 44.0	
	comp=E,104nm,0.7s						
SKR				A	A	01 28 44.0	
	comp=E,88nm,0.7s						
SKR				AMS	AMS	01 29 47.4	
	comp=E,500nm,16.0s						
SKR				AMS	AMS	01 29 47.4	
	comp=E,800nm,16.0s						
SKR				AMS	AMS	01 29 47.4	
	comp=E,600nm,16.0s						
SKR	Severo-Kuril's	6.33	28	ePN	Pn	01 27 16.9	+0.3
SKR				pmax	pmax		
	comp=Z,82nm,0.5s						
SKR				MLR	MLR		
	comp=Z,600nm,17.0s						
SKR				MLR	MLR		
	comp=E,800nm,11.0s						
SKR				MLR	MLR		
	comp=N,500nm,12.0s						
ASAJ	Asahikawa	6.37	263	P	Pn	01 27 20.3	+3.0
	comp=N,4.5nm,0.3s,baz=73,slow=12,SNR=11						
ASAJ				LR	LR	01 30 00.7	
	comp=N,685nm,18.5s,baz=78,slow=40						
ASAJ	Asahikawa	6.37	263	ePn	Pn	01 27 20.5	+3.3
MYR	Moyori	6.56	246	eP	Pn	01 27 20.5	+0.7
ERM	Erimo	6.78	245	ePn	Pn	01 27 25.4	+2.6
ERM				eSn	Sn	01 28 40.4	+1.6
ERM	Erimo	6.78	245	ePN	Pn	01 27 25.4	+2.6
JNBK	Urakawa-nobuka	6.91	248	P	Pn	01 27 24.4	-0.2
JNBK				eS	Sn	01 28 38.1	-4.0
JBT2	Biratori 2	6.95	253	P	Pn	01 27 25.9	+0.7
JNB	Noboribetsu	7.97	254	eS	Sn	01 29 07.4	-0.9
JKB	Kayabe	8.23	250	eS	Sn	01 29 08.7	-5.8
JYM2	Yakumo 2	8.57	253	P	Pn	01 27 47.9	+0.5
JANG	Nango	8.72	240	eS	Sn	01 29 19.6	-7.1
JTM	Tenmabayashi	8.76	243	eS	Sn	01 29 22.4	-5.2
PEA0B	Petropavlovsk-	8.92	25	ePn	Pn	01 27 53.5	+1.3
PETK	Petropavlovsk-	8.92	25	P	Pn	01 27 52.8	+0.6
	baz=195,slow=10						
PETK	Petropavlovsk-	8.92	25	ePn	Pn	01 27 56.3	+4.1
PETK	Petropavlovsk-	8.92	25	ePN	Pn	01 27 56.3	+4.1
PEA1	Petropavlovsk-	8.92	25	ePn	Pn	01 27 52.8	+0.5
JRG	Rokugo	9.86	238	eS	Sn	01 29 51.2	-3.4
JIO	Ouri	10.08	232	eS	Sn	01 29 52.6	-7.4
MAJO	Matsushiro	13.20	234	ePn	Pn	01 28 52.3	+1.6
MAJO	Matsushiro	13.20	234	ePN	Pn	01 28 52.3	+1.6
MJAR	Matsushiro Arr	13.20	234	P	Pn	01 28 52.3	+1.6
	comp=N,0.4nm,0.3s,baz=24,slow=9.6,SNR=6.4						
MJAR				LR	LR	01 34 37.1	
	comp=N,110nm,21.3s,baz=40,slow=40						
USRK	Ussuriysk Ar.	13.85	273	P	Pn	01 28 59.7	+0.2
	baz=71,slow=11						
USRK				LR	LR	01 34 29.6	
	comp=N,258nm,18.1s,baz=86,slow=38						
KLR	Kul'dur	13.94	294	P	Pn	01 29 02.3	+1.5
	comp=N,0.0nm,0.3s,baz=101,slow=15,SNR=8.3						
KLR				LR	LR	01 34 37.7	
	comp=N,35nm,19.0s,baz=90,slow=38						
MA2	Magadan	14.40	359	P	Pn	01 29 05.5	-1.5
	comp=N,1.6nm,0.3s,baz=178,slow=16,SNR=4.8						
MA2	Magadan	14.40	359	ePn	Pn	01 29 05.8	-1.2
MA2	Magadan	14.40	359	eP	Pn	01 29 05.8	-1.2
JHJ	Hachijo jima 2	15.04	221	LR	LR	01 38 15.5	
	comp=N,45nm,18.1s,baz=242,slow=49						
SEY	Seymchan	17.77	1	P	P	01 29 49.5	-1.3
	comp=N,0.2nm,0.3s,baz=183,slow=18,SNR=2.6						
ZEA	Zeya	17.80	307	eP	P	01 29 50.0	-1.2
KSRS	Korea Array	19.21	254	P	P	01 30 07.2	+0.4
	comp=N,0.3nm,0.3s,baz=59,slow=12,SNR=8.4						
KS15	Wonju Array Si	19.24	254	eP	P	01 30 07.2	+0.1
KSAR	Wonju Array Be	19.24	254	P	P	01 30 07.2	+0.1
KSAR	Wonju Array Be	19.24	254	P	P	01 30 07.3	+0.1
JNU	Nakatsue	19.90	240	P	P	01 30 16.2	+1.7
	comp=N,0.2nm,0.3s,baz=16,slow=18,SNR=2.6						
JNU	Nakatsue	19.90	240	eP	P	01 30 16.2	+1.7
	comp=N,25nm,1.4s						
YAK	Yakutsk	21.03	331	eP	P	01 30 25.6	-0.8
	comp=N,41nm,1.2s						
YAK	Yakutsk	21.03	331	eP	P	01 30 25.6	-0.8
YAK				pmax	pmax		
	comp=Z,41nm,1.2s						
BJT	Baijiatuau	26.30	271	eP	P	01 31 17.6	-0.6
	comp=Z,8.8nm,0.9s						
BJT	Baijiatuau	26.30	271	eP	P	01 31 17.6	-0.6
BJT				pmax	pmax		
	comp=Z,9.0nm,0.9s						
H11N2	WAKE ISLAND Hy	28.47	148	T	T	02 02 27.7	
	baz=338,slow=75,SNR=60						
H11N1	WAKE ISLAND Hy	28.48	148	T	T	02 02 29.2	
	baz=338,slow=75,SNR=45						
H11N3	WAKE ISLAND Hy	28.48	148	T	T	02 02 20.4	
	baz=338,slow=75,SNR=57						
H11S1	WAKE ISLAND Hy	29.52	149	T	T	02 04 23.7	
	baz=338						
H11S3	WAKE ISLAND Hy	29.52	149	T	T	02 03 47.2	
	baz=338,slow=74						
H11S2	WAKE ISLAND Hy	29.53	149	T	T	02 03 49.1	
	baz=338,slow=74						
SONA1	Songino Array	30.74	291	eP	P	01 31 57.5	-0.3
SONA0	Songino Array	30.75	291	eP	P	01 31 57.9	0.0
SONM	Songino Array	30.75	291	P	P	01 31 57.9	0.0
	comp=Z,0.4nm,0.3s,baz=74,slow=8.2,SNR=4.8						
SDPT	Sand Point	31.78	54	eP	P	01 32 07.7	+1.0
	comp=Z,60nm,1.1s						
ILAR	Eielson Array	38.50	37	P	P	01 33 03.6	-0.8
	comp=Z,1.3nm,1.0s,baz=263,slow=7.2,SNR=6.1						
ILB	Eielson Array	38.50	37	eP	P	01 33 03.6	-0.8
EGAK	Eagle	40.95	37	eP	P	01 33 24.5	-0.3
	comp=Z,8.2nm,1.3s						
INK	Inuvik	43.59	31	P	P	01 33 45.2	-1.0
	comp=Z,2.8nm,0.9s,baz=292,slow=11,SNR=3.2						
INK				LR	LR	01 54 31.2	
	comp=Z,33nm,18.6s,baz=84,slow=40						
MK31	Makanchi Array	46.60	298	eP	P	01 34 09.7	-0.8
MK31	Makanchi Array	46.60	298	eP	P	01 34 09.7	-0.8
MK32	Makanchi Array	46.60	298	eP	P	01 34 09.7	-0.8
MKAR	Makanchi Array	46.60	298	P	P	01 34 09.7	-0.8
	comp=Z,0.5nm,0.5s,baz=73,slow=9.0,SNR=6.7						
MKAR	Makanchi Array	46.60	298	eP	P	01 34 09.7	-0.8
	comp=Z,8.9nm,0.9s						
MKAR	Makanchi Array	46.60	298	eP	P	01 34 09.7	-0.8
MKAR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MK01	Makanchi Array	46.60	298	eP	P	01 34 08.9	-1.5
KURK	Kurchatov	47.23	304	P	P	01 34 13.6	-1.7
KURK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURBB	Kurchatov Arra	47.32	304	P	P	01 34 13.6	-2.4
	comp=Z,1.0nm,0.7s,baz=72,slow=8.4,SNR=7.2						
BVAR	Borovoye Array	50.92	310	P	P	01 34 42.2	-1.3
	comp=Z,0.4nm,0.4s,baz=63,slow=10.0,SNR=4.0						
RES	Resolute Bay	52.68	18	P	P	01 34 56.1	-0.2
	comp=Z,2.5nm,0.8s,baz=306,slow=6.2,SNR=4.5						
RES	Resolute Bay	52.68	18	eP	P	01 34 56.1	-0.2
	comp=Z,4.3nm,0.9s						
RES	Resolute Bay	52.68	18	eP	P	01 34 56.1	-0.2
RES				pmax	pmax		
	comp=Z,4.0nm,0.9s						
YKA	Yellowknife Ar	52.88	36	P	P	01 34 58.2	+0.3
	comp=Z,0.6nm,0.7s,baz=305,slow=8.0,SNR=4.3						
ABKAR	Akbulak array	58.50	310	eP	P	01 35 36.9	-1.5
ARA0	ARCESS Array S	58.91	341	eP	P	01 35 39.7	-1.4
ARCES	ARCESS Array B	58.91	341	P	P	01 35 39.7	-1.4
	comp=Z,1.5nm,0.8s,baz=40,slow=8.6,SNR=3.5						
NEW	Newport	59.07	51	LR	LR	02 01 46.0	
	comp=Z,21nm,19.1s,baz=346,slow=37						
NIL	Nilore	59.26	288	eP	P	01 35 45.0	+1.0
	comp=Z,23nm,1.0s						
NIL	Nilore	59.26	288	eP	P	01 35 45.0	+1.0
NIL				pmax	pmax		
	comp=Z,23nm,1.0s						
SUMG	Summit	62.32	3	eP	P	01 36 04.4	-0.3
	comp=Z,12nm,1.1s						
SUMG	Summit	62.32	3	eP	P	01 36 04.4	-0.3
SUMG				pmax	pmax		
	comp=Z,12nm,1.1s						
NV01	Mina Array Sit	64.22	61	eP	P	01 36 20.4	+2.8
FIA0	FINESS Array S	64.92	334	eP	P	01 36 19.4	-2.1
FIA0	FINESS Array S	64.92	334	eP	P	01 36 19.4	-2.1
FINES	FINESS Array B	64.92	334	P	P	01 36 19.4	-2.1
	comp=Z,1.1nm,0.3s,baz=48,slow=6.4,SNR=17						
OBN	Obninsk	65.90	325	eP	P	01 36 29.8	+1.9
OBN				e		01 36 57.4	
OBN				e		01 38 57.1	
OBN				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GEYT	Alibeck	66.36	300	P	P	01 36 31.2	-0.1
	comp=Z,1.9nm,0.8s,baz=342,slow=1.8,SNR=5.2						
WR1	Warramunga Arr	66.67	197	eP	P	01 36 33.8	+0.6
WRA	Warramunga Arr	66.67	197	P	P	01 36 33.8	+0.6
	comp=Z,1.0nm,0.7s,baz=15,slow=6.7,SNR=6.8						
CHFC	Chilao Flat St	66.97	64	eP	P	01 36 35.4	0.0
HWB	Hans Werner Br	68.49	65	eP	P	01 36 48.0	+3.2
NB2	NORSAR Subarra	69.30	341	P	P	01 36 47.9	-1.4
	comp=Z,0.7nm,0.6s,baz=28,slow=6.2						
HFS	Hagfors	69.48	339	P	P	01 36 49.0	-1.4
	comp=Z,2.1nm,0.6s,baz=46,slow=6.2,SNR=14						

HFS	Hagfors	69.48	339	P	P	01 36 49.0	-1.4
AS31	Alice Springs	70.37	197	eP	P	01 36 58.2	+1.9
	comp=Z,0.9nm,0.8s						
ASAR	Alice Springs	70.37	197	P	P	01 36 58.2	+1.9
	comp=Z,1.1nm,0.8s,baz=5.0,slow=5.3,SNR=10.0						
KIV	Kislovodsk	71.01	314	eP	P	01 37 00.5	+0.3
KIV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,76nm,17.0s						
KBZ	Khabaz	71.06	313	P	P	01 36 59.6	-0.7
	comp=Z,7.7nm,0.9s,baz=99,slow=0.8,SNR=10						
TBLG	Delisi	71.50	311	eP	P	01 37 04.0	+0.9
	comp=Z,25nm,1.3s						
TBLG	Delisi	71.50	311	eP	P	01 37 04.0	+0.9
TBLG				pmax	pmax		
	comp=Z,25nm,1.3s						
AKASG	Malin Array Be	72.16	326	P	P	01 37 04.1	-2.7
	comp=Z,0.8nm,0.3s,baz=36,slow=6.2,SNR=9.8						
AKBB	Malin Array Si	72.16	326	eP	P	01 37 05.8	-1.0
	comp=Z,7.2nm,1.2s						
KIEV	Kiev	72.17	326	eP	P	01 37 05.8	-1.1
	comp=Z,6.9nm,1.2s						
KIEV	Kiev	72.17	326	eP	P	01 37 05.8	-1.1
KIEV				pmax	pmax		
	comp=Z,7.0nm,1.2s						
SORM	Soroca	74.52	324	⇑iP	P	01 37 19.2	-1.6
SORM	Soroca	74.52	324	⇑P	P	01 37 19.2	-1.6
LVV	L'vov	74.88	328	eP	P	01 37 22.0	-0.8
OJC	Ojcow	76.08	330	eP	P	01 37 28.9	-0.9
	comp=Z,11nm,1.2s						
OJC	Ojcow	76.08	330	eP	P	01 37 28.9	-0.9
OJC				pmax	pmax		
	comp=Z,11nm,1.2s						
BUR08	Bucovina Ar. S	76.19	326	eP	P	01 37 30.0	-0.6
BUR04	Bucovina Ar. S	76.20	326	eP	P	01 37 29.9	-0.7
BURAR	Bucovina Array	76.21	326	⇓iP	P	01 37 30.2	-0.4
BURAR	Bucovina Array	76.21	326	⇓P	P	01 37 30.2	-0.4
TESR	Tescani	76.52	324	⇓iP	P	01 37 31.6	-0.7
CFR	Carcaliu	76.95	323	⇑iP	P	01 37 33.8	-0.9
CFR	Carcaliu	76.95	323	⇑P	P	01 37 33.9	-0.8
VRI	Vrincioaia	77.00	324	⇑iP	P	01 37 34.9	-0.1
VRI	Vrincioaia	77.00	324	⇑P	P	01 37 34.9	-0.1
DPC	Dobruska-Polom	77.15	332	eP	P	01 37 35.6	-0.3
MORC	Moravsky Berou	77.23	331	⇑iP	P	01 37 36.2	-0.1
MORC	Moravsky Berou	77.23	331	eP	P	01 37 36.3	-0.1
	comp=Z,8.0nm,1.1s						
MORC	Moravsky Berou	77.23	331	⇑P	P	01 37 36.2	-0.1
MORC	Moravsky Berou	77.23	331	eP	P	01 37 35.9	-0.4
CLL	Collm	77.36	335	eP	P	01 37 36.0	-0.9
	comp=Z,15nm,1.4s						
CLL	Collm	77.36	335	eP	P	01 37 35.9	-1.1
	comp=Z,13nm,1.2s						
CLL	Collm	77.36	335	eP	P	01 37 36.0	-0.9
CLL				pmax	pmax		
	comp=Z,15nm,1.4s						
BRG	Berggiesshubel	77.46	334	eP	P	01 37 37.3	-0.2
	comp=Z,5.4nm,1.1s						
BRG	Berggiesshubel	77.46	334	eP	P	01 37 37.3	-0.2
BRG				pmax	pmax		
	comp=Z,5.0nm,1.1s						
CJR	Cluj-Napoca	77.58	326	⇑iP	P	01 37 39.3	+1.0
CJR	Cluj-Napoca	77.58	326	⇑P	P	01 37 39.3	+1.0
MLR	Muntele Rosu	77.63	324	P	P	01 37 39.2	+0.5
	comp=Z,0.7nm,0.8s,baz=77,slow=7.7,SNR=6.1						
MLR	Muntele Rosu	77.63	324	⇓iP	P	01 37 39.4	+0.7
MLR	Muntele Rosu	77.63	324	eP	P	01 37 39.3	+0.7
	comp=Z,12nm,1.4s						
MLR	Muntele Rosu	77.63	324	⇓P	P	01 37 39.4	+0.7
DRGR		77.86	327	⇑iP	P	01 37 39.3	-0.6
DRGR		77.86	327	⇑P	P	01 37 39.3	-0.6
ICOR	Ion Corvin	77.94	322	⇑iP	P	01 37 40.6	+0.3
VRAC	Vranov	77.96	332	eP	P	01 37 40.5	+0.2
JAVC	Velka Javorina	77.97	331	eP	P	01 37 41.0	+0.5
PRU	Pruhonice	78.04	333	eP	P	01 37 40.5	-0.2
PRU	Pruhonice	78.04	333	eP	P	01 37 40.5	-0.2
VOIR		78.04	325	⇓iP	P	01 37 40.8	-0.2
VOIR		78.04	325	⇓P	P	01 37 40.8	-0.2
KRUC	Moravsky	78.23	332	eP	P	01 37 41.2	-0.7
ARR	Arges	78.27	325	⇑iP	P	01 37 44.6	+2.4
LOT	Lotru	78.55	325	⇓iP	P	01 37 44.7	+0.9
BR101	Keskin Array S	78.68	316	eP	P	01 37 42.7	-2.0
BR131	Keskin Array S	78.68	316	eP	P	01 37 44.8	+0.1
BRTR	Keskin Array B	78.68	316	P	P	01 37 42.7	-2.0
	comp=Z,2.1nm,1.1s,baz=57,slow=4.6,SNR=8.5						
KHC	Kasperske Hory	79.09	333	eP	P	01 37 46.3	-0.3
KHC				ePCP	PcP	01 37 55.5	+0.5
KHC	Kasperske Hory	79.09	333	eP	P	01 37 46.5	-0.2
	comp=Z,3.8nm,1.2s						
KHC	Kasperske Hory	79.09	333	eP	P	01 37 46.3	-0.3
KHC				e		01 37 55.5	
BZS	Buzias	79.26	327	⇓iP	P	01 37 47.1	-0.5
BZS	Buzias	79.26	327	P	P	01 37 47.1	-0.5
LTX	Lajitas	79.30	59	eP	P	01 37 48.0	-0.1
LTX	Lajitas	79.30	59	eP	P	01 37 48.1	-0.1
TXAR	Lajitas Array	79.30	59	P	P	01 37 48.1	-0.1
	comp=Z,0.2nm,0.5s,baz=310,slow=4.6,SNR=4.4						
GEC2	GERESS Array S	79.31	333	eP	P	01 37 47.0	-0.8
	comp=Z,5.9nm,1.5s						
GEC2	GERESS Array S	79.31	333	eP	P	01 37 47.0	-0.8
GEC2				pmax	pmax		
	comp=Z,6.0nm,1.5s						
GERES	GERESS Array B	79.31	333	P	P	01 37 47.0	-0.8
	comp=Z,0.6nm,0.6s,baz=22,slow=4.3,SNR=5.6						
GEA0	GERESS Array S	79.31	333	eP	P	01 37 47.0	-0.9
CONA	Conrad Observa	79.39	331	epP	P	01 37 48.6	+0.2
	comp=Z,7.0nm,1.5s						
MOA	Molln	79.99	332	pP	P	01 37 51.8	+0.3
	comp=Z,5.1nm,1.4s						
SOKA	Soboth	80.76	331	epP	P	01 37 56.1	+0.4
	comp=Z,4.4nm,1.0s						
KBA	Koelnbreinsper	80.97	332	epP	P	01 37 57.2	+0.2
	comp=Z,3.4nm,0.6s						
OBKA	Obir	81.07	331	epP	P	01 37 57.3	-0.1
	comp=Z,3.4nm,1.1s						
VTS	Vitosha	81.13	324	⇑iP	P	01 37 57.6	-0.3
VTS	Vitosha	81.13	324	eP	P	01 37 56.3	-1.6
	comp=Z,9.6nm,1.1s						
VTS	Vitosha	81.13	324	⇑P	P	01 37 57.6	-0.3
MYKA	Terra Mystica	81.27	332	epP	P	01 37 58.2	-0.2
	comp=Z,3.6nm,0.8s						
WATA	Walderalm	81.31	334	epP	P	01 37 59.6	+0.8
	comp=Z,2.0nm,0.5s						
WTTA	Wattenberg	81.36	334	epP	P	01 37 59.1	+0.1
	comp=Z,2.5nm,0.5s						
RETA	Reutte	81.43	334	epP	P	01 37 59.9	+0.6
	comp=Z,3.6nm,1.3s						
MOTA	Moosalm	81.45	334	eP	P	01 37 58.6	-0.9
	comp=Z,6.6nm,1.2s						
ABTA	Abfaltersbach	81.53	333	pP	P	01 38 00.1	+0.2
	comp=Z,2.9nm,1.1s						
FETA	Feichten	81.85	334	eP	P	01 38 00.2	-1.4
	comp=Z,3.1nm,1.2s						
DAVA	Damuels	81.88	335	eP	P	01 37 59.6	-2.1
	comp=Z,5.6nm,1.1s						
TOA1	Torodi Ar. Sit	115.77	327	ePKPdf	PKPdf	01 44 24.7	-0.4
TORD	Torodi Ar. Bea	115.77	327	PKP	PKPdf	01 44 24.7	-0.4
	comp=Z,0.8nm,1.1s,baz=360,slow=3.0						
SNAA	Sanae	150.74	196	PKPbc	PKPbc	01 45 33.7	+0.4
	comp=Z,1.0nm,0.8s,baz=114,slow=5.6,SNR=5.7						
SNAA	Sanae	150.74	196	ePKPdf	PKPdf	01 45 28.8	+1.1
SNAA	Sanae	150.74	196	ePKIKP	PKPdf	01 45 28.8	+1.1

NIED **09** *01:34:00, 45°.60N×151°.50E, h26^{km}, Mw4.5 Best double couple: $M_0$5.50000×10^{15} NP1:ϕ_s230.00000°, δ42.00000°, λ100.00000°. NP2:ϕ_s36.00000°, δ49.00000°, λ81.00000°.*
IDC **09** *01:34:24.4±0.5, 45°.44N×151°.28E, h0^{km}, mb4.3/33, mb1 4.4/36, mb1mx4.3/72, mbtmp4.3/36, ML4.2/3, MS3.7/31, Ms1 3.7/31, ms1mx3.5/68, Error ellipse: s-maj=14.5km s-min=11.8km az=149.0*
SKHL **09** *01:34:26.4±0.4, 45°.07N×151°.74E, h54^{km}±6^{km}, mb5.6/4*
JMA **09** *01:34:26.5±0.5, 45°.55N×151°.50E, h30^{km}, M5.0*
ISCJB **09** *01:34:27.5±0.6, 45°.23N±0°.04×151°.39E±0°.06, h36^{km}±4^{km}, mb4.5/150, MS3.9/29, Error ellipse: s-maj=8.9km s-min=4.1km az=140.0*
MOS **09** *01:34:28.0±1.0, 45°.34N×151°.38E, h38^{km}, mb4.8/34, Error ellipse: s-maj=6.6km s-min=5.0km az=109.5*
NEIC **09** *01:34:36.9±0.3, 46°.50N×149°.27E, h10^{km}, mb4.7/83, Error ellipse: s-maj=11.4km s-min=5.6km az=170.0*
ISC 09 01:34:27.5±1.0, **45°.10N**±0°.05×**151°.45E**±0°.05, **h28**^{km}±6^{km}, **n433**, σ**1^s.91**/395, **mb4.7**/151, **MS3.9**/29, **27C-32D, Kuril**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.54	274	iP	Pn	01 35 08.2	+1.4
KUR				AMB	AMB	01 35 10.0	
	238nm,0.4s						
KUR				AMB	AMB	01 35 10.0	
	199nm,0.4s						
KUR				AMB	AMB	01 35 10.0	
	851nm,0.4s						
KUR				eS	Sn	01 35 39.3	+2.5
KUR				A	A	01 35 49.0	
	1µm,0.4s						
KUR				A	A	01 35 49.0	
	2µm,0.4s						
KUR	Kuril'sk	2.54	274	cePN	Pn	01 35 08.3	+1.4
KUR				iS	Sn	01 35 38.6	+1.8
KUR				pmax	pmax		
	comp=E,199nm,0.3s						
KUR				pmax	pmax		
	comp=Z,852nm,0.3s						
KUR				pmax	pmax		
	comp=N,351nm,0.2s						
KUR				smax	smax		
	comp=N,4µm,0.4s						
KUR				smax	smax		
	comp=E,1µm,0.5s						
SHO	Shikotan	3.53	251	iP	Pn	01 35 22.0	+1.6
SHO				AMB	AMB	01 35 24.0	
	comp=E,69nm,0.4s						
SHO				AMB	AMB	01 35 24.0	
	comp=E,123nm,0.4s						
SHO				AMB	AMB	01 35 24.0	
	comp=E,217nm,0.4s						
SHO				eS	Sn	01 36 04.0	+2.8
SHO				A	A	01 36 13.0	
	comp=E,462nm,0.5s						
SHO				A	A	01 36 13.0	
	comp=E,292nm,0.5s						
SHO	Shikotan	3.53	251	c iPN	Pn	01 35 22.4	+2.0
SHO				eS	Sn	01 36 04.5	+3.3
SHO				pmax	pmax		
	comp=Z,217nm,0.4s						
SHO				pmax	pmax		
	comp=E,123nm,0.3s						
SHO				pmax	pmax		
	comp=N,69nm,0.2s						
SHO				smax	smax		
	comp=N,462nm,0.5s						
SHO				smax	smax		
	comp=E,292nm,0.5s						
YUK	Yuzh-Kuril'sk	4.13	257	iP	Pn	01 35 30.0	+1.2
YUK				AMB	AMB	01 35 41.0	
	comp=E,652nm,0.3s						
YUK				eS	Sn	01 36 19.0	+2.9
YUK				A	A	01 36 25.0	
	comp=E,720nm,0.3s						
YUK				A	A	01 36 25.0	
	comp=E,292nm,0.3s						
YUK	Yuzh-Kuril'sk	4.13	257	c iPN	Pn	01 35 30.6	+1.8
YUK				eS	Sn	01 36 19.1	+2.9
YUK				pmax	pmax		
	comp=Z,652nm,0.2s						
YUK				smax	smax		
	comp=N,720nm,0.3s						
YUK				smax	smax		
	comp=E,292nm,0.2s						
LAGR	Lagunnoye	4.18	258	eP	Pn	01 35 30.2	+0.8
LAGR				eS	Sn	01 36 23.1	+5.8
LAGR	Lagunnoye	4.18	258	ePN	Pn	01 35 30.2	+0.8
LAGR				iS	Sn	01 36 23.1	+5.8
GRPR	Tuman	4.21	257	iP	Pn	01 35 31.0	+1.2
GRPR				AMB	AMB	01 35 42.0	
	comp=E,250nm,0.4s						
GRPR				AMB	AMB	01 35 42.0	
	comp=E,112nm,0.4s						
GRPR				AMB	AMB	01 35 42.0	
	comp=E,525nm,0.4s						
GRPR				iS	Sn	01 36 24.0	+6.0
GRPR				A	A	01 36 30.0	
	comp=E,443nm,0.4s						
GRPR				A	A	01 36 30.0	
	comp=E,672nm,0.4s						
GRPR	Tuman	4.21	257	c iPN	Pn	01 35 31.4	+1.6
GRPR				iS	Sn	01 36 24.4	+6.4
GRPR				pmax	pmax		
	comp=Z,525nm,0.3s						
GRPR				pmax	pmax		
	comp=N,250nm,0.2s						
GRPR				pmax	pmax		
	comp=E,112nm,0.2s						
GRPR				smax	smax		
	comp=N,443nm,0.4s						
GRPR				smax	smax		
	comp=E,672nm,0.4s						
NEM2	Nemuro 2	4.45	249	P	Pn	01 35 34.2	+1.1
NEM2				eS	Sn	01 36 23.3	-0.7
GLVR	Golovnino	4.46	254	eP	Pn	01 35 35.0	+1.7
GLVR	Golovnino	4.46	254	ePN	Pn	01 35 35.7	+2.4
JRA	Rausu	4.67	258	P	Pn	01 35 39.0	+2.8
JNK	Nakash	5.06	255	P	Pn	01 35 43.6	+2.1
JAK	Akkeshi	5.30	249	P	Pn	01 35 45.7	+0.9
JAK				eS	Sn	01 36 45.1	+0.1
JTKR	Abashiri--Toko	5.51	261	P	Pn	01 35 50.3	+2.7
JAR	Ashorobuto	5.81	255	P	Pn	01 35 54.3	+2.5
JAR				eS	Sn	01 37 00.4	+2.9
JMP	Maruseppu	5.88	262	P	Pn	01 35 55.7	+2.9
JOB	Onbets	5.92	251	P	Pn	01 35 54.8	+1.6
JOB				eS	Sn	01 37 00.8	+0.7
HRK	Horoka	6.19	258	eP	Pn	01 36 00.0	+2.9
HRK				eS	Sn	01 37 10.5	+3.5
YSS	Yuzh-Sakhalins	6.33	290	eP	Pn	01 36 00.5	+1.6
YSS	Yuzh-Sakhalins	6.33	290	ePn	Pn	01 35 48.6	-10
YSS	Yuzh-Sakhalins	6.33	290	⇓ePN	Pn	01 36 01.0	+2.1
YSS				eS	Sn	01 37 12.0	+1.7
YSS				pmax	pmax		
	comp=Z,40nm,0.6s						
YSS				MLR	MLR		
	comp=Z,900nm,15.0s						
YSS				MLR	MLR		
	comp=E,700nm,16.0s						
JKK2	Kamakawa 2	6.35	262	P	Pn	01 36 01.6	+2.4
JCH	Churui	6.35	250	P	Pn	01 36 00.8	+1.5
JCH				eS	Sn	01 37 10.3	-0.5
ASAJ	Asahikawa	6.40	264	Pn	Pn	01 36 03.3	+3.5
	comp=E,11nm,0.3s,baz=76,slow=17,SNR=22						
ASAJ				Sn	Sb	01 37 28.5	-5.6
	baz=90,slow=20,SNR=1.8						
ASAJ				LR	LR	01 38 43.9	
	comp=E,925nm,18.2s,baz=78,slow=41						
ASAJ	Asahikawa	6.40	264	P	Pn	01 36 03.3	+3.5
SKR	Severo-Kuril's	6.41	28	eP	Pn	01 35 59.2	-0.7
SKR	Severo-Kuril's	6.41	28	⇑ePN	Pn	01 35 59.5	-0.4
MYR	Moyori	6.55	247	eP	Pn	01 36 03.5	+1.5
JFR	Furan	6.66	256	P	Pn	01 36 06.7	+3.2
JFR				eS	Sn	01 37 23.1	+4.6
JWK2	Keihoku	6.75	275	P	Pn	01 36 09.9	+5.2
JEM	Erimo	6.77	246	P	Pn	01 36 07.9	+3.0
JEM				eS	Sn	01 37 23.5	+2.5
ERM	Erimo	6.77	246	eP	Pn	01 36 07.6	+2.7
ERM	Erimo	6.77	246	ePn	Pn	01 36 08.2	+3.3
ERM				eSn	Sn	01 37 23.9	+2.8
ERM	Erimo	6.77	246	cePN	Pn	01 36 07.6	+2.7
ERM				pmax	pmax		
	comp=Z,99nm,1.0s						
JAB	Ashibetsu	6.81	260	P	Pn	01 36 09.7	+4.2
JNBK	Urakawa-nobuka	6.91	249	P	Pn	01 36 07.9	+1.1
JBT2	Biratori 2	6.96	254	P	Pn	01 36 09.0	+1.4
PAU	Pauzhetka	7.30	27	eP	Pn	01 36 11.4	-0.8
JEW	Eniwo	7.56	256	P	Pn	01 36 19.7	+3.9
JNB	Noboribetsu	7.98	254	P	Pn	01 36 23.1	+1.5
JNB				eS	Sn	01 37 46.1	-4.8
JKB	Kayabe	8.23	251	P	Pn	01 36 26.0	+1.1
JKB				eS	Sn	01 37 52.8	-4.1
TYV	Tymovskoe	8.24	317	eP	Pn	01 36 25.7	+0.5
TYV	Tymovskoe	8.24	317	ePN	Pn	01 36 26.7	+1.5
TYV				pmax	pmax		
	comp=Z,16nm,1.5s						
TYV				MLR	MLR		
	comp=Z,600nm,15.0s						
TYV				MLR	MLR		
	comp=N,600nm,17.0s						
JYM2	Yakumo 2	8.57	254	P	Pn	01 36 30.8	+1.1
JSH	Shimam	8.60	257	P	Pn	01 36 32.3	+2.3
JANG	Nango	8.70	241	P	Pn	01 36 30.6	-0.9
JANG				eS	Sn	01 38 02.5	-6.2
JTM	Tenmabayashi	8.75	244	P	Pn	01 36 32.6	+0.5
JTM				eS	Sn	01 38 04.5	-5.3
JTH	Tanohata	8.76	237	eS	Sn	01 38 03.7	-6.3
JSR	Shiriuchi	8.80	250	P	Pn	01 36 33.9	+1.1
JSR				eS	Sn	01 38 06.9	-4.1
PEA0B	Petropavlovsk-	9.00	25	ePn	Pn	01 36 40.7	+5.2
PETK	Petropavlovsk-	9.00	25	Pn	Pn	01 36 35.0	-0.4
	baz=191,slow=11						
PETK				Sn	Sn	01 38 15.2	-0.6
	baz=174,slow=16						
PETK				LR	LR	01 40 11.9	
	comp=N,321nm,19.4s,baz=216,slow=40						
JOSM	Okushiri--Mats	9.20	255	P	Pn	01 36 40.0	+1.7
PET	Petropavlovsk	9.23	28	eP	Pn	01 36 37.3	-1.3
PET	Petropavlovsk	9.23	28	ePN	Pn	01 36 50.2	+12
PET				eS	Sn	01 38 26.6	+5.2
PET				pmax	pmax		
	comp=Z,200nm,9.2s						
PET				pmax	pmax		
	comp=Z,100nm,9.8s						
PET				smax	smax		
	comp=N,300nm,13.0s						
PET				smax	smax		
	comp=E,600nm,18.7s						
PET				MLR	MLR		
	comp=Z,400nm,18.0s						
PET				MLR	MLR		
	comp=Z,300nm,20.0s						
OFUJ	Ofunato	9.43	234	P	Pn	01 36 41.5	0.0
OFUJ				eS	Sn	01 38 20.1	-6.5
JRG	Rokugo	9.84	238	P	Pn	01 36 47.7	+0.7
JRG				eS	Sn	01 38 34.6	-1.9
JIO	Ouri	10.05	232	P	Pn	01 36 49.5	-0.4
JIO				eS	Sn	01 38 36.7	-4.9
MJA0	Matsu Arr-Jizo	13.14	234	ePN	Pn	01 37 35.9	+3.6
MJA0				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MAJO	Matsushiro	13.16	234	iPN	Pn	01 37 32.4	-0.2
MJAR	Matsushiro Arr	13.16	234	Pn	Pn	01 37 32.9	+0.4
	comp=Z,0.8nm,0.3s,baz=25,slow=12,SNR=12						
MJAR				LR	LR	01 43 09.3	
	comp=Z,175nm,21.6s,baz=40,slow=40						
USA0B	Ussuriysk Arra	13.89	273	ePn	Pn	01 37 35.0	-7.4
USRK	Ussuriysk Ar.	13.89	273	Pn	Pn	01 37 42.9	+0.6
	baz=82,slow=12						
USRK				LR	LR	01 43 03.9	
	comp=Z,341nm,18.8s,baz=71,slow=38						
KLR	Kul'dur	14.02	294	Pn	Pn	01 37 45.7	+1.6
	comp=Z,0.0nm,0.3s,baz=103,slow=13,SNR=6.0						
KLR				LR	LR	01 43 20.9	
	comp=Z,43nm,18.9s,baz=96,slow=39						
KLR	Kul'dur	14.02	294	eP	Pn	01 37 43.5	-0.6
KLR	Kul'dur	14.02	294	iP	Pn	01 37 43.5	-0.6
MA2	Magadan	14.50	359	Pn	Pn	01 37 47.9	-2.7
	comp=Z,2.5nm,0.3s,baz=194,slow=8.4,SNR=9.2						
MA2				LR	LR	01 43 44.6	
	comp=Z,267nm,18.6s,baz=164,slow=40						
MA2	Magadan	14.50	359	ePn	Pn	01 37 47.3	-3.4
MA2	Magadan	14.50	359	eP	Pn	01 37 47.3	-3.4
MSHR	Mys Shultsa	14.86	267	iP	Pn	01 37 56.7	+1.1
MDJ	Mudanjiang	15.51	276	P	Pn	01 38 01.9	-2.2
MDJ				pmax	pmax		
	comp=Z,40nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,170nm,5.7s						
MDJ				LR	LR		
	comp=Z,330nm,16.0s						
MDJ				LR	LR		
	comp=Z,400nm,17.6s						
MDJ				LR	LR		
	comp=Z,620nm,14.9s						
SEY	Seymchan	17.88	1	P	Pn	01 38 32.4	-1.5
	comp=Z,0.2nm,0.3s,baz=135,slow=6.6,SNR=3.2						
ZEA	Zeya	17.89	308	eP	Pn	01 38 33.9	-0.2
ZEA				pmax	pmax		
	comp=Z,26nm,1.0s						
ZEA				MLR	MLR		
	comp=Z,500nm,17.0s						
ZEA				MLR	MLR		
	comp=E,400nm,15.0s						
ZEA				MLR	MLR		
	comp=N,200nm,14.0s						
CN2	Changchun	18.59	275	eP	P	01 38 36.8	-5.5
CN2				pmax	pmax		
	comp=N,10.0nm,1.0s						
CN2				pmax	pmax		
	comp=N,200nm,4.0s						
CN2				LR	LR		
	comp=N,340nm,18.0s						
CN2				LR	LR		
	comp=N,390nm,18.0s						
CN2				LR	LR		
	comp=N,490nm,18.0s						
KSRS	Korea Array	19.22	255	P	P	01 38 49.2	-0.1
	comp=N,0.5nm,0.3s,baz=64,slow=11,SNR=17						
KSRS				LR	LR	01 46 27.3	
	comp=N,230nm,18.2s,baz=58,slow=38						
KS01	Wonju Array Si	19.23	255	eP	Pn	01 38 52.0	+1.6
KS15	Wonju Array Si	19.25	255	eP	P	01 38 49.2	-0.4
KSAR	Wonju Array Be	19.25	255	P	P	01 38 49.2	-0.4
KSAR	Wonju Array Be	19.25	255	P	P	01 38 49.2	-0.4
JNU	Nakatsue	19.89	240	P	Pn	01 38 59.4	+1.0
	comp=N,0.6nm,0.3s,baz=31,slow=12,SNR=9.1						
JNU				LR	LR	01 48 05.4	
	comp=N,152nm,18.7s,baz=304,slow=41						
JNU	Nakatsue	19.89	240	eP	Pn	01 38 59.7	+1.4
	comp=N,21nm,1.0s						
TJN	Taejon	20.17	253	ceP	P	01 39 00.2	+0.6
YAK	Yakutsk	21.14	331	P	P	01 39 06.2	-3.8
	comp=N,18nm,0.4s,baz=6.7,slow=1.3,SNR=4.7						
YAK	Yakutsk	21.14	331	eP	P	01 39 02.2	-7.7
	comp=N,58nm,0.9s						
YAK	Yakutsk	21.14	331	eP	P	01 39 07.7	-2.3
YAK				e		01 39 18.7	
YAK				eSS	S	01 43 04.3	+0.8
YAK				e*SS	sS	01 43 17.5	+2.0
YAK				pmax	pmax		
	comp=Z,25nm,0.9s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.2s						
YAK				pmax	pmax		
	comp=N,11nm,1.4s						
YAK				pmax	pmax		
	comp=Z,42nm,0.9s						
YAK				pmax	pmax		
	comp=N,25nm,1.3s						
YAK				pmax	pmax		
	comp=E,19nm,1.0s						
YAK				MLR	MLR		
	comp=Z,197nm,18.0s						
YAK				MLR	MLR		
	comp=N,339nm,19.0s						
YAK				MLR	MLR		
	comp=E,132nm,17.0s						
BJI	Beijing	26.33	271	P	P	01 40 02.7	+1.9
BJI				pmax	pmax		
	comp=E,30nm,1.1s						
BJI				LR	LR		
	comp=E,290nm,12.3s						
BJI				LR	LR		
	comp=E,460nm,12.3s						
BJT	Baijiatuau	26.34	271	eP	P	01 40 02.8	+1.8
	comp=E,23nm,1.0s						
BJT	Baijiatuau	26.34	271	eP	P	01 40 02.8	+1.8
BJT				pmax	pmax		
	comp=Z,23nm,1.0s						
H11N2	WAKE ISLAND Hy	28.36	148	T	T	02 11 15.8	
	baz=337,slow=76,SNR=230						
H11N1	WAKE ISLAND Hy	28.37	148	T	T	02 11 17.7	
	baz=337,slow=76,SNR=150						
H11N3	WAKE ISLAND Hy	28.38	148	T	T	02 11 17.9	
	baz=337,slow=76,SNR=188						
NJ2	Nanjing	28.42	254	eP	P	01 40 23.9	+4.3
NJ2				pmax	pmax		
	comp=Z,13nm,0.6s						
HHC	Hu-ho-hao-te	29.28	276	eP	P	01 40 25.7	-1.7
HHC				S	S	01 44 59.9	-19
HHC				pmax	pmax		
	comp=Z,22nm,1.1s						
HHC				pmax	pmax		
	comp=Z,140nm,6.3s						
H11S1	WAKE ISLAND Hy	29.41	149	T	T	02 12 23.7	
	baz=323,slow=76						
H11S3	WAKE ISLAND Hy	29.41	149	T	T	02 12 31.4	

	baz=323,slow=76						
H11S2	WAKE ISLAND Hy	29.43	149	T	T	02 12 30.9	
	baz=323,slow=76						
ULN	Ulaanbaatar	30.38	291	*e*P	P	01 40 37.2	+0.1
ULN	Ulaanbaatar	30.38	291	*i* P	P	01 40 37.2	+0.1
ULN				pmax	pmax		
	comp=Z,3.0nm,1.1s						
SONA1	Songino Array	30.81	291	*e*P	P	01 40 37.2	-3.7
SONA0	Songino Array	30.82	291	*e*P	P	01 40 39.9	-1.1
SONM	Songino Array	30.82	291	P	P	01 40 39.9	-1.1
	comp=Z,1.1nm,0.4s,baz=79,slow=7.5,SNR=9.9						
SONM				PcP	PcP	01 43 38.2	+0.6
	comp=Z,0.7nm,0.6s,baz=86,slow=2.2,SNR=3.7						
SONM				LR	LR	01 54 04.6	
	comp=Z,222nm,18.5s,baz=77,slow=39						
GUMO	Guam	31.90	192	LR	LR	01 51 53.7	
	comp=Z,62nm,19.9s,baz=48,slow=33						
TLY	Talaya	31.94	299	*e*P	P	01 40 49.4	-1.2
TLY	Talaya	31.94	299	*i* P	P	01 40 49.5	-1.2
TLY				pmax	pmax		
	comp=Z,3.0nm,0.8s						
XAN	Xi’an	34.23	266	P	P	01 41 11.4	+0.5
XAN				pP	sP	01 41 35.2	+13
XAN				S	S	01 46 28.0	-7.9
XAN				sS	ScP	01 47 12.3	-18
XAN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
XAN				LR	LR		
	comp=Z,150nm,15.1s						
XAN				LR	LR		
	comp=Z,110nm,15.8s						
XAN				LR	LR		
	comp=Z,140nm,18.7s						
KDAK	Kodiak Island	36.05	49	P	P	01 41 26.0	-0.1
	comp=Z,7.3nm,0.9s,baz=295,slow=9.6,SNR=3.1						
LZH	Lanzhou	36.80	273	*e*P	P	01 41 34.2	+1.2
LZH				pP	sP	01 42 03.2	+19
LZH				sP	pP	01 42 17.1	+36
LZH				S	S	01 46 59.2	-16
LZH				sS	ScP	01 47 42.7	+3.3
LZH				SS	SnSn	01 49 17.2	-30
LZH				pmax	pmax		
	comp=Z,62nm,1.2s						
LZH				pmax	pmax		
	comp=Z,220nm,4.3s						
MLY	Manley	36.93	37	*e*P	P	01 41 45.5	+12
	comp=Z,3.3nm,0.9s						
GTA	Gaotai	38.10	280	*e*P	P	01 41 44.9	+0.9
GTA				pP	sP	01 42 10.1	+14
GTA				sP	pP	01 42 23.0	+31
GTA				pmax	pmax		
	comp=Z,13nm,0.9s						
ILAR	Eielson Array	38.56	37	P	P	01 41 47.0	-0.3
	comp=Z,2.1nm,1.0s,baz=266,slow=7.2,SNR=17						
ILAR	Eielson Array	38.56	37	*e*P	P	01 41 47.2	-0.2
ILAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CD2	Chengdu	39.59	266	*e*P	P	01 41 56.5	0.0
DGZ	Jazzator, Alta	42.41	300	*i* P	P	01 42 19.6	0.0
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.1s						
ZAA1	Zalesovo Array	42.65	307	*e*P	P	01 42 18.6	-2.6
ZALV	Zalesovo Beam	42.65	307	P	P	01 42 18.6	-2.6
	comp=Z,0.7nm,0.3s,baz=81,slow=6.3,SNR=2.9						
ZALV				PcP	PcP	01 44 13.0	+0.2
	comp=Z,3.6nm,0.7s,baz=61,slow=2.1,SNR=8.2						
ZALV				LR	LR	02 01 00.8	
	comp=Z,146nm,19.4s,baz=70,slow=38						
INK	Inuvik	43.66	31	P	P	01 42 27.5	-1.8
	comp=Z,3.8nm,0.7s,baz=273,slow=8.5,SNR=6.6						
KMI	Kunming	43.80	260	P	P	01 42 34.5	+3.3
KMI				pmax	pmax		
	comp=Z,12nm,0.5s						
KMI				pmax	pmax		
	comp=Z,95nm,5.3s						
WMQ	Urumqi	44.45	292	P	P	01 42 34.9	-1.1
WMQ				LR	LR		
	comp=Z,170nm,17.9s						
WMQ				LR	LR		
	comp=Z,77nm,17.3s						
WMQ				LR	LR		
	comp=Z,170nm,21.5s						
MK31	Makanchi Array	46.68	298	*e*P	P	01 42 52.8	-0.7
MK31	Makanchi Array	46.68	298	*e*P	P	01 42 52.8	-0.7
MK32	Makanchi Array	46.68	298	*e*P	P	01 42 52.4	-1.2
MKAR	Makanchi Array	46.68	298	P	P	01 42 52.4	-1.2
	comp=Z,2.2nm,0.6s,baz=73,slow=6.6,SNR=25						
MKAR				PcP	PcP	01 44 27.6	+0.7
	comp=Z,1.9nm,0.7s,baz=71,slow=2.8,SNR=4.9						
MKAR				LR	LR	02 03 27.7	
	comp=Z,251nm,18.9s,baz=68,slow=38						
MKAR	Makanchi Array	46.68	298	*e*P	P	01 42 53.7	+0.2
MKAR	Makanchi Array	46.68	298	*e*P	P	01 42 52.8	-0.7
	comp=Z,26nm,0.8s						
MK01	Makanchi Array	46.68	298	*e*P	P	01 42 52.5	-1.1
MAKZ	Makanchi	46.87	298	*e*P	P	01 42 55.7	+0.7
	comp=Z,3.0nm,0.9s						
KURK	Kurchatov	47.32	304	*e*P	P	01 42 55.1	-3.3
	comp=Z,4.0nm,0.9s						
KURK	Kurchatov	47.32	304	*e*P	P	01 42 55.2	-3.3
KURK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KURBB	Kurchatov Arra	47.41	304	P	P	01 42 56.5	-2.6
	comp=Z,1.6nm,0.3s,baz=73,slow=8.3,SNR=18						
CMMT	Chiang Mai	50.60	257	P	P	01 43 27.8	+3.8
	comp=Z,6.7nm,1.2s						
CHTO	Chiang Mai	50.61	257	*e*P	P	01 43 27.7	+3.7
	comp=Z,4.9nm,0.6s						
CHTO	Chiang Mai	50.61	257	P	P	01 43 27.8	+3.8
	comp=Z,30nm,1.2s						
CM31	Chiang Mai Arr	50.85	256	*e*P	P	01 43 27.0	+1.1
CMAR	Chiang Mai Arr	50.85	256	P	P	01 43 27.0	+1.1
	comp=Z,1.2nm,0.3s,baz=38,slow=6.5,SNR=6.0						
CMAR				LR	LR	02 06 47.5	
	comp=Z,67nm,18.6s,baz=45,slow=38						
BVAR	Borovoye Array	51.02	310	P	P	01 43 25.5	-1.2
	comp=Z,0.8nm,0.3s,baz=57,slow=10,SNR=10.0						
BVAR				PcP	PcP	01 44 43.0	+0.6
	comp=Z,1.5nm,0.4s,baz=71,slow=3.2,SNR=7.7						
BVAR				LR	LR	02 06 30.5	
	comp=Z,130nm,19.9s,baz=63,slow=38						
BRVK	Borovoye	51.06	310	*e*P	P	01 43 25.6	-1.4
BRVK	Borovoye	51.06	310	*i* P	P	01 43 25.6	-1.4
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
SHL	Shillong	51.17	269	⇑*i*P	P	01 43 29.0	+0.6
TARG	Taragay, Kyrgy	51.87	294	*e*P	P	01 43 35.0	+1.2
	comp=Z,13nm,1.3s						
TARG				*e*PcP	PcP	01 44 50.1	+3.8
ULHL	Ulahol	52.62	295	P	P	01 43 39.8	+0.7
	SNR=5.6						
TKM2	Tokmak 2	52.69	296	P	P	01 43 40.2	+0.7
	SNR=6.8						
RES	Resolute Bay	52.76	18	P	P	01 43 38.4	-0.9
	comp=Z,3.2nm,0.8s,baz=310,slow=7.9,SNR=8.3						
YKA	Yellowknife Ar	52.94	35	P	P	01 43 41.3	+0.5
	comp=Z,1.8nm,0.9s,baz=300,slow=6.9,SNR=5.7						
TAPN	Taplejung	53.03	273	*e*P	P	01 43 43.9	+1.5
	comp=Z,9.3nm,0.4s						
USP	Ospenovka	53.20	297	P	P	01 43 43.9	+0.8
	SNR=7.9						
KBK	Karagaybulak	53.23	296	P	P	01 43 43.9	+0.3
	SNR=5.1						
KZA	Kyzart	53.34	296	P	P	01 43 46.1	+1.5
	SNR=8.8						
JIRN	Jiri	53.92	275	*e*P	P	01 43 50.3	+1.3
	comp=Z,32nm,0.5s						
EKS2	Erkin-Say	53.97	297	P	P	01 43 49.6	+0.7
	SNR=7.6						
GUN	Gumba	53.99	275	*e*P	P	01 43 50.5	+1.0
	comp=Z,16nm,0.3s						
SPA0	Spitsbergen Ar	54.03	350	*e*P	P	01 43 47.3	-1.3
SPITS	Spitsbergen Ar	54.03	350	P	P	01 43 47.3	-1.3
	comp=Z,1.1nm,0.4s,baz=23,slow=11,SNR=6.1						
SPITS				LR	LR	02 08 58.4	
	comp=Z,62nm,18.2s,baz=305,slow=39						
RAMN	Ramite	54.06	274	*e*P	P	01 43 49.9	0.0
	comp=Z,44nm,0.6s						
KSH	Kashi	54.21	293	*e*P	P	01 43 50.0	-0.7
KSH				*e*PcP	PcP	01 45 02.6	+7.8
KSH				PP	PP	01 45 51.4	-0.9
KSH				pmax	pmax		
	comp=Z,26nm,1.5s						
KKN	Kakani	54.48	275	*e*P	P	01 43 54.1	+1.2
	comp=Z,28nm,0.6s						
PKIN	Phulchoki	54.53	275	*e*P	P	01 43 54.2	+0.9
	comp=Z,14nm,0.7s						
DMN	Daman	54.72	275	*e*P	P	01 43 55.7	+1.0
	comp=Z,37nm,0.8s						
GKN	Gorkha	54.81	276	*e*P	P	01 43 56.3	+1.1
	comp=Z,33nm,0.8s						
DANN	Dangsing	55.22	277	*e*P	P	01 43 59.8	+1.5
	comp=Z,34nm,0.5s						
ARU	Arti	55.45	318	*e*P	P	01 43 56.6	-2.6
	comp=Z,4.6nm,0.9s						
ARU	Arti	55.45	318	*d i*P	P	01 43 56.4	-2.8
ARU						01 44 57.4	
ARU						01 45 59.1	
ARU				S	S	01 51 38.6	-3.3
ARU				SS	SS	01 55 19.6	-6.5
ARU				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KOLN	Koldanda	55.68	276	*e*P	P	01 44 01.9	+0.4
	comp=Z,12nm,0.3s						
KK31	Karatay Array	55.78	299	*e*P	P	01 44 01.8	0.0
KK31	Karatay Array	55.78	299	*e*P	P	01 44 01.8	0.0
KKAR	Karatay Array	55.78	299	*e*P	P	01 44 01.8	0.0
KKAR	Karatay Array	55.78	299	*e*P	P	01 44 01.8	0.0
PYUN	Piuthan	55.91	277	*e*P	P	01 44 03.3	+0.1
	comp=Z,46nm,0.9s						
ABKAR	Akbulak array	58.59	310	*e*P	P	01 44 19.6	-1.9
AKTO	Aktyubinsk	58.96	312	P	P	01 44 23.4	-0.7
	comp=Z,1.6nm,0.5s,baz=60,slow=8.6,SNR=7.8						
AKTO				LR	LR	02 12 21.6	
	comp=Z,244nm,18.9s,baz=52,slow=39						
ARA0	ARCESS Array S	59.03	341	*e*P	P	01 44 22.8	-1.5
ARCES	ARCESS Array B	59.03	341	P	P	01 44 22.8	-1.5
	comp=Z,1.3nm,0.7s,baz=45,slow=7.4,SNR=8.9						
ARCES				PcP	PcP	01 45 13.6	+0.7
	comp=Z,3.7nm,0.9s,baz=44,slow=2.7,SNR=5.3						
ARCES	ARCESS Array B	59.03	341	*e*P	P	01 44 22.9	-1.4
NIL	Nilore	59.32	288	*e*P	P	01 44 26.7	-0.2
	comp=Z,40nm,0.8s						
NIL	Nilore	59.32	288	*e*P	P	01 44 26.7	-0.2
NIL				pmax	pmax		
	comp=Z,40nm,0.8s						
PINE	Pine Mountain	59.45	57	*e*P	P	01 44 44.0	+16
	comp=Z,12nm,0.8s						
G08A	Pilot Rock	59.76	55	*e*P	P	01 44 44.1	+14
	comp=Z,3.7nm,0.8s						
K05A	Summer Lake	60.09	58	*e*P	P	01 44 48.6	+16
	comp=Z,11nm,0.8s						
F10A	Beach Ranch, E	60.36	53	*e*P	P	01 44 50.5	+17
MOD	Modoc Plateau	60.93	59	*e*P	P	01 44 53.6	+16
	comp=Z,4.9nm,0.7s						
J08A	Circle Bar Ran	61.16	56	*e*P	P	01 44 53.8	+14
	comp=Z,4.9nm,0.8s						
KBL	Kabul	61.59	292	*e*P	P	01 44 42.3	-0.3
	comp=Z,17nm,0.7s						
KBL	Kabul	61.59	292	*e*P	P	01 44 42.3	-0.3
KBL				pmax	pmax		
	comp=Z,17nm,0.7s						
WVOR	Wild Horse Val	61.61	57	*e*P	P	01 44 57.7	+15
	comp=Z,7.1nm,0.8s						
AFDM	Forest Hills D	62.27	62	*e*P	P	01 45 02.2	+15
	comp=Z,6.9nm,1.2s						
PSI	Prapat	62.31	244	LR	LR	02 14 35.2	
	comp=Z,97nm,18.4s,baz=268,slow=39						
SUMG	Summit	62.42	3	*e*P	P	01 44 46.9	-0.9
	comp=Z,21nm,1.1s						
SUMG	Summit	62.42	3	*e*P	P	01 44 46.9	-0.9
SUMG				pmax	pmax		
	comp=Z,21nm,1.1s						
PAHR	Pah Rah Range	62.79	60	*e*P	P	01 45 06.0	+16
	comp=Z,6.1nm,0.9s						
PNTR	Pine Nut	63.03	61	*e*P	P	01 45 08.4	+16
	comp=Z,9.9nm,0.7s						
CMB	Columbia Colle	63.19	62	*e*P	P	01 45 08.7	+16
	comp=Z,5.2nm,0.9s						
HLID	Hailey	63.41	54	*e*P	P	01 45 09.0	+14
	comp=Z,1.5nm,0.8s						
BMN	Battle Mountai	63.67	58	*e*P	P	01 45 12.0	+16
	comp=Z,5.8nm,0.6s						
BOZ	Bozeman (W)	63.72	51	*e*P	P	01 45 10.1	+14
	comp=Z,3.0nm,0.7s						
NVAR	Mina Array Bea	64.24	61	P	P	01 45 01.4	+1.2
	comp=Z,0.4nm,0.5s,baz=316,slow=2.5,SNR=3.5						
LEM	Lembang	64.92	229	LR	LR	02 17 02.3	
	comp=Z,32nm,18.1s,baz=131,slow=39						
FIA0	FINESS Array S	65.03	334	*e*P	P	01 45 02.1	-2.5
FIA0	FINESS Array S	65.03	334	*e*P	P	01 45 02.1	-2.5
FINES	FINESS Array B	65.03	334	P	P	01 45 02.1	-2.5
	comp=Z,3.0nm,0.4s,baz=48,slow=5.7,SNR=35						
FINES	FINESS Array B	65.03	334	*e*P	P	01 45 03.1	-1.5
FXWY	Fox Creek	65.28	52	*e*P	P	01 45 23.1	+16
	comp=Z,1.6nm,0.8s						
TPAW	Teton Pass	65.42	52	*e*P	P	01 45 24.4	+17
	comp=Z,4.9nm,0.9s						
REDW	Red Top Meadow	65.55	53	*e*P	P	01 45 24.9	+16
	comp=Z,6.3nm,1.1s						
OBN	Obninsk	66.01	325	*e*P	P	01 45 09.1	-1.9
OBN				pmax	pmax		
	comp=Z,5.0nm,1.2s						
HWUT	Hardware Ranch	66.27	54	*e*P	P	01 45 29.1	+16
	comp=Z,7.4nm,1.4s						
TPNV	Topopah Spring	66.44	61	*e*P	P	01 45 29.6	+15
	comp=Z,8.1nm,1.1s						
DUG	Dugway, Tooele	66.44	56	*e*P	P	01 45 29.9	+16
	comp=Z,5.6nm,1.0s						
GEYT	Alibeck	66.45	301	P	P	01 45 13.8	-0.4
	comp=Z,5.5nm,0.9s,baz=64,slow=6.8,SNR=12						
GYA0B	ALIBECK ARRAY	66.45	301	*e*P	P	01 45 14.9	+0.6
	comp=Z,10.0nm,0.8s						
WRAB	Tennant Creek	66.57	198	*i* P	P	01 45 15.6	+0.6
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.9s						
WB2	Warramunga Arr	66.58	198	*e*P	P	01 45 32.2	+17
	comp=Z,6.1nm,0.8s						
WRA	Warramunga Arr	66.58	198	P	P	01 45 17.6	+2.6
	comp=Z,3.6nm,0.8s,baz=14,slow=6.7,SNR=22						
BW06	Boulder Array	66.66	52	*e*P	P	01 45 29.8	+14
	comp=Z,4.6nm,1.3s						
PD31	Pinedale Array	66.66	52	*e*P	P	01 45 30.4	+15
PDAR	Pinedale Array	66.66	52	P	P	01 45 16.9	+1.0
	comp=Z,0.4nm,0.7s,baz=302,slow=3.3,SNR=4.6						
PDAR	Pinedale Array	66.66	52	*e*P	P	01 45 30.0	+14
FRB	Frobisher Bay	66.98	18	P	P	01 45 16.1	-1.0
	comp=Z,15nm,1.0s,baz=319,slow=6.8,SNR=3.0						
CHFC	Chilao Flat St	66.98	64	*e*P	P	01 45 32.0	+14
PASC	Pasadena Art C	66.98	64	*e*P	P	01 45 33.4	+16
SHPR	Sheep Range	67.39	61	*e*P	P	01 45 36.0	+16
	comp=Z,9.5nm,1.2s						
AFI	Afiamalu	67.53	141	LR	LR	02 17 50.6	
	comp=Z,34nm,18.3s,baz=344,slow=38						
VSR	Storozhevoye	67.67	321	*i* P	P	01 45 20.2	-1.5
VSR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CCUT	Cedar City	67.82	59	*e*P	P	01 45 38.8	+16
	comp=Z,3.4nm,1.0s						
SZCU	Shurtz Canyon	67.95	59	*e*P	P	01 45 39.8	+16
	comp=Z,3.6nm,0.9s						
MTPU	Mount Pierson	68.21	58	*e*P	P	01 45 41.6	+16
	comp=Z,2.5nm,0.9s						
DZM	Mont Dzumac	68.23	165	LR	LR	02 17 21.2	
	comp=Z,39nm,18.1s,baz=38,slow=38						
P18A	Preston Nutter	68.32	55	*e*P	P	01 45 42.2	+16
	comp=Z,6.3nm,1.4s						
KNB	Kanab	68.49	59	*e*P	P	01 45 43.6	+16
	comp=Z,6.1nm,1.0s						
SRU	San Rafael Swe	68.49	56	*e*P	P	01 45 43.0	+16
	comp=Z,4.4nm,0.9s						
W13A	Hualapai Mount	69.09	61	*e*P	P	01 45 46.8	+16
	comp=Z,2.7nm,0.9s						
U15A	North Rim	69.20	59	*e*P	P	01 45 47.5	+16
	comp=Z,5.1nm,0.9s						
NC405	NORSAR Array S	69.22	340	*e*P	P	01 45 30.6	-0.7
NB2	NORSAR Subarra	69.41	341	P	P	01 45 31.3	-1.2
	comp=Z,3.4nm,0.8s,baz=27,slow=6.5						
NOA	NORSAR Array B	69.41	341	LR	LR	02 20 49.2	
	comp=Z,28nm,18.3s,baz=15,slow=40						
HFS	Hagfors	69.59	339	P	P	01 45 32.3	-1.2
	comp=Z,9.3nm,0.7s,baz=53,slow=7.4,SNR=32						
HFS				LR	LR	02 20 39.9	
	comp=Z,57nm,18.9s,baz=26,slow=40						
PV17	East Wray Mesa	69.96	56	*e*P	P	01 45 51.6	+15
	comp=Z,5.0nm,0.9s						
PV03	Paradox Valley	70.04	56	*e*P	P	01 45 52.0	+15
PV13	Radium Mtn., P	70.12	56	*e*P	P	01 45 53.0	+15
	comp=Z,6.8nm,1.2s						
AS01	Alice Springs	70.27	197	*e*P	P	01 45 55.0	+17
AS31	Alice Springs	70.28	197	*e*P	P	01 45 56.6	+18
	comp=Z,1.6nm,0.8s						
ASAR	Alice Springs	70.28	197	P	P	01 45 41.5	+3.4
	comp=Z,2.6nm,0.8s,baz=13,slow=5.9,SNR=21						
Y14A	Wickenburg	70.40	61	*e*P	P	01 45 54.8	+16
	comp=Z,4.3nm,1.0s						
NCK	Nalchik	70.96	313	*i* P	P	01 45 41.5	-0.8
NCK				pmax	pmax		
	comp=Z,15nm,0.9s						
X16A	Lo Mia Camp, P	71.05	60	*e*P	P	01 45 59.2	+16
	comp=Z,4.3nm,0.9s						
KIV	Kislovodsk	71.11	314	*e*P	P	01 45 42.2	-1.1
KIV	Kislovodsk	71.11	314	*e*P	P	01 45 43.7	+0.4
	comp=Z,26nm,0.8s						
KIV	Kislovodsk	71.11	314	*e*P	P	01 45 42.2	-1.1
KIV				pmax	pmax		
	comp=Z,37nm,1.1s						
KIV				MLR	MLR		
	comp=Z,104nm,17.0s						
KBZ	Khabaz	71.16	313	P	P	01 45 43.5	+0.1
	comp=Z,19nm,0.8s,baz=58,slow=4.4,SNR=29						
KBZ				LR	LR	02 21 10.4	
	comp=Z,186nm,19.2s,baz=45,slow=40						
S22A	4UR Ranch, Cre	71.56	55	*e*P	P	01 46 02.4	+16
	comp=Z,5.2nm,1.4s						
NEY	Neytrino	71.59	313	*i* P	P	01 45 44.8	-1.5
NEY				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TBLG	Delisi	71.60	311	*e*P	P	01 45 47.0	+0.9
	comp=Z,31nm,0.8s						
TBLG	Delisi	71.60	311	*e*P	P	01 45 47.0	+0.9
TBLG				pmax	pmax		
	comp=Z,31nm,0.8s						
OGNE	Ogallala	72.04	50	*e*P	P	01 46 04.0	+15
	comp=Z,12nm,0.9s						
AKASG	Malin Array Be	72.26	326	P	P	01 45 48.8	-1.1
	comp=Z,3.4nm,0.5s,baz=35,slow=6.4,SNR=21						
AKASG				LR	LR	02 20 15.2	
	comp=Z,90nm,18.4s,baz=25,slow=38						
AKBB	Malin Array Si	72.26	326	*e*P	P	01 45 48.8	-1.1
	comp=Z,7.8nm,0.8s						
KIEV	Kiev	72.27	326	*e*P	P	01 45 48.1	-1.9
KIEV	Kiev	72.27	326	*e*P	P	01 45 48.8	-1.2
	comp=Z,8.2nm,0.9s						
KIEV	Kiev	72.27	326	*i* P	P	01 45 48.1	-1.9
KIEV				pmax	pmax		
	comp=Z,7.0nm,0.9s						
AK11	Malin Array Si	72.30	326	*e*P	P	01 45 49.1	-1.0
SDCO	Great Sand Dun	72.33	54	*e*P	P	01 46 05.6	+15
	comp=Z,2.6nm,1.4s						
AKH	Akhalkalaki	72.49	311	⇓*i*P	P	01 45 53.1	+1.4
AKH	Akhalkalaki	72.49	311	*e*P	P	01 45 53.1	+1.4
	comp=Z,12nm,0.9s						
AKH	Akhalkalaki	72.49	311	*e*P	P	01 45 53.1	+1.4
AKH				pmax	pmax		
	comp=Z,12nm,0.9s						
GNI	Garni	72.70	310	P	P	01 45 53.5	+0.5
	comp=Z,10nm,0.9s,baz=342,slow=9.6,SNR=7.5						
ECSD	EROS Data Cent	72.87	45	*e*P	P	01 46 07.7	+14
	comp=Z,7.7nm,1.4s						
ANN	Anapa	73.11	317	*e*P	P	01 45 53.7	-1.3
ANN				pmax	pmax		
	comp=Z,16nm,0.5s						
ANMO	Albuquerque	73.70	57	LR	LR	02 14 44.6	
	comp=Z,34nm,21.2s,baz=8.5,slow=33						
319A	Douglas	74.44	61	*e*P	P	01 46 19.2	+16
	comp=Z,11nm,1.0s						
SORM	Soroca	74.63	324	⇓*i*P	P	01 46 03.0	-0.9
SORM	Soroca	74.63	324	⇓P	P	01 46 03.0	-0.9
LVV	L’vov	74.98	328	*e*P	P	01 46 05.4	-0.5
KIS	Kishinev	75.33	323	*e*P	P	01 46 07.0	-1.0
KIS				LRM	MLR	02 21 48.0	
	comp=Z,500nm,18.0s						
KIS	Kishinev	75.33	323	*e*P	P	01 46 07.0	-1.0
KIS				*e*		01 46 16.0	
KIS				MLR	MLR		
	comp=Z,400nm,17.0s						
KIS				MLR	MLR		
	comp=Z,500nm,18.0s						
KWP	Kalwaria Pacla	75.63	328	*e*P	P	01 46 09.0	-0.7
	comp=Z,291nm,1.0s						
KWP	Kalwaria Pacla	75.63	328	*e*P	P	01 46 09.0	-0.7
KWP				pmax	pmax		
	comp=Z,291nm,1.0s						
LEOM	Leova	75.98	323	⇓*i*P	P	01 46 11.1	-0.6
LEOM	Leova	75.98	323	⇓P	P	01 46 11.1	-0.6
OJC	Ojcow	76.19	330	*e*P	P	01 46 11.9	-1.0
	comp=Z,17nm,1.0s						
OJC	Ojcow	76.19	330	*e*P	P	01 46 11.9	-1.0
OJC				pmax	pmax		
	comp=Z,17nm,1.0s						
BUR08	Bucovina Ar. S	76.30	326	*e*P	P	01 46 13.1	-0.6
BUR04	Bucovina Ar. S	76.31	326	*e*P	P	01 46 12.8	-0.9
BURAR	Bucovina Array	76.31	326	⇓*i*P	P	01 46 13.7	0.0
BURAR	Bucovina Array	76.31	326	⇓P	P	01 46 13.7	0.0
BIZ	Bicaz	76.50	325	⇑*i*P	P	01 46 14.8	+0.1
MNTX	Cornudas Mount	76.61	59	*e*P	P	01 46 30.5	+15
TESR	Tescani	76.62	324	⇑*i*P	P	01 46 15.3	-0.1
CRVS	Cervenica-Dubn	76.69	329	*e*P	P	01 46 15.4	-0.3
CRVS				pmax	pmax		
	comp=Z,24nm,2.1s						
CRVS	Cervenica-Dubn	76.69	329	*e*P	P	01 46 15.4	-0.3
TLCR		76.76	322	⇓*i*P	P	01 46 15.8	-0.3
TLCR		76.76	322	⇓P	P	01 46 15.8	-0.3
CFR	Carcaliu	77.06	323	⇓*i*P	P	01 46 17.7	-0.1
CFR	Carcaliu	77.06	323	⇓P	P	01 46 17.7	-0.1
ARCR	ARCALIA	77.08	326	⇓*i*P	P	01 46 18.6	+0.6
OKC	Ostrava-Krasne	77.09	331	*e*P	P	01 46 17.9	0.0
OKC	Ostrava-Krasne	77.09	331	*e*P	P	01 46 17.9	0.0
VRI	Vrincioaia	77.11	324	⇑*i*P	P	01 46 18.1	0.0
VRI	Vrincioaia	77.11	324	⇑P	P	01 46 18.1	0.0
STKA	Stephens Creek	77.14	189	LR	LR	02 19 37.4	
	comp=Z,21nm,21.1s,baz=22,slow=35						
PLOR	Plostina	77.15	324	⇑*i*P	P	01 46 17.5	-0.9
PLOR	Plostina	77.15	324	⇑P	P	01 46 17.5	-0.9
LANS	Liptovska Anna	77.21	330	*e*P	P	01 46 18.9	+0.2
LANS	Liptovska Anna	77.21	330	*e*P	P	01 46 18.9	+0.2
UPC	Upice	77.23	333	*e*P	P	01 46 18.8	+0.1
UPC	Upice	77.23	333	*e*P	P	01 46 18.8	+0.1
DPC	Dobruska-Polom	77.26	332	*e*P	P	01 46 19.1	+0.2
DPC	Dobruska-Polom	77.26	332	*e*P	P	01 46 19.1	+0.2
KRLC	Kraliky	77.34	332	*e*P	P	01 46 19.5	+0.1
KRLC				*e*x	x	01 46 28.0	
KRLC	Kraliky	77.34	332	*e*P	P	01 46 19.5	+0.1
KRLC				*e*		01 46 28.0	
MORC	Moravsky Berou	77.34	331	⇓*i*P	P	01 46 19.6	+0.2
MORC	Moravsky Berou	77.34	331	*e*P	P	01 46 19.2	-0.2
	comp=Z,13nm,0.9s						
MORC	Moravsky Berou	77.34	331	⇓P	P	01 46 19.6	+0.2
MORC	Moravsky Berou	77.34	331	*e*P	P	01 46 19.1	-0.3
CLL	Collm	77.47	335	⇑*i*P	P	01 46 19.2	-0.8
	comp=Z,16nm,1.1s						
CLL				*i* (pP)	pP	01 46 27.6	-1.3
CLL				LmV		02 23 00.0	
	comp=Z,100nm,19.5s						
CLL	Collm	77.47	335	*e*P	P	01 46 18.1	-1.9
	comp=Z,15nm,1.0s						
CLL	Collm	77.47	335	*e*P	P	01 46 18.1	-1.9
CLL				pmax	pmax		
	comp=Z,15nm,1.0s						
TIRR	Tirgusor	77.51	322	⇑*i*P	P	01 46 20.2	-0.2
TIRR	Tirgusor	77.51	322	⇑P	P	01 46 20.2	-0.2
HARR	Harsova	77.54	322	⇑*i*P	P	01 46 20.6	+0.1
HARR	Harsova	77.54	322	P	P	01 46 20.7	+0.2
BRG	Berggiesshubel	77.57	334	*e*PKP	P	01 46 19.9	-0.7
	comp=Z,11nm,1.4s						
BRG	Berggiesshubel	77.57	334	*e*P	P	01 46 19.9	-0.7
BRG				pmax	pmax		
	comp=Z,11nm,1.4s						
TLB	Topalu	77.57	322	⇑*i*P	P	01 46 20.6	-0.1
TLB	Topalu	77.57	322	⇑P	P	01 46 20.7	0.0
DOPR	Dopca	77.58	325	⇑*i*P	P	01 46 21.6	+0.8
PVCC	Panska Ves	77.67	333	*e*P	P	01 46 21.1	-0.1
PVCC	Panska Ves	77.67	333	*e*P	P	01 46 21.1	-0.1
CJR	Cluj-Napoca	77.69	326	⇓*i*P	P	01 46 21.5	+0.1
CJR	Cluj-Napoca	77.69	326	⇓P	P	01 46 21.5	+0.1
MLR	Muntele Rosu	77.73	324	P	P	01 46 21.7	-0.1
	comp=Z,1.3nm,0.6s,baz=46,slow=3.4,SNR=15						
MLR	Muntele Rosu	77.73	324	⇓*i*P	P	01 46 22.0	+0.2
MLR	Muntele Rosu	77.73	324	*e*P	P	01 46 21.8	-0.1
	comp=Z,12nm,1.0s						
ISR	Istrita	77.78	324	⇓*i*P	P	01 46 22.6	+0.6
ISR	Istrita	77.78	324	⇓P	P	01 46 22.6	+0.6
DRGR		77.97	327	⇑*i*P	P	01 46 22.8	-0.2
DRGR		77.97	327	⇑P	P	01 46 22.8	-0.2
VYHS	Vyhne	77.99	330	*e*P	P	01 46 23.0	0.0
VYHS				pmax	pmax		

	comp=Z,5.0nm,1.1s						
VYHS	Vyhne	77.99	330	eP	P	01 46 23.0	0.0
ICOR	Ion Corvin	78.05	322	⇑iP	P	01 46 24.1	+0.7
VRAC	Vranov	78.06	332	⇑iP	P	01 46 23.6	+0.2
VRAC	Vranov	78.06	332	⇑P	P	01 46 23.6	+0.2
VRAC	Vranov	78.06	332	eP	P	01 46 23.2	-0.2
JAVC	Velka Javorina	78.08	331	eP	P	01 46 24.4	+0.8
PSZ	Piszkesteto	78.09	329	⇓iP	P	01 46 24.4	+0.7
PSZ	Piszkesteto	78.09	329	eP	P	01 46 24.1	+0.4
	comp=Z,11nm,1.1s						
PSZ	Piszkesteto	78.09	329	⇓P	P	01 46 24.4	+0.7
GOPC	GO Pecny, Ondr	78.14	333	eP	P	01 46 23.5	-0.3
GOPC	GO Pecny, Ondr	78.14	333	eP	P	01 46 23.5	-0.3
VOIR		78.15	325	⇓iP	P	01 46 24.6	+0.6
VOIR		78.15	325	⇓P	P	01 46 24.6	+0.6
PRU	Pruhonice	78.15	333	eP	P	01 46 23.4	-0.4
PRU	Pruhonice	78.15	333	eP	P	01 46 23.4	-0.4
KRUC	Moravsky	78.34	332	eP	P	01 46 24.7	-0.2
ARR	Arges	78.37	325	⇓iP	P	01 46 26.3	+1.0
NKC	Novy Kostel	78.59	335	eP	P	01 46 26.4	+0.1
NKC	Novy Kostel	78.59	335	eP	P	01 46 26.4	+0.1
MODS	Modra-Piesok	78.63	331	eP	P	01 46 26.8	+0.2
MODS				pmax	pmax		
	comp=Z,14nm,1.1s						
MODS	Modra-Piesok	78.63	331	eP	P	01 46 26.8	+0.2
BR101	Keskin Array S	78.78	316	eP	P	01 46 27.9	+0.2
BR131	Keskin Array S	78.78	316	eP	P	01 46 28.1	+0.4
BRTR	Keskin Array B	78.78	316	P	P	01 46 27.9	+0.2
	comp=Z,2.8nm,0.9s,baz=72,slow=4.0,SNR=14						
BRTR				LR	LR	02 26 23.9	
	comp=Z,63nm,18.4s,baz=76,slow=40						
ANTO	Ankara	79.08	317	⇓iP	P	01 46 30.2	+0.9
ANTO	Ankara	79.08	317	eP	P	01 46 30.2	+0.9
	comp=Z,8.7nm,0.6s						
ANTO	Ankara	79.08	317	⇓P	P	01 46 30.2	+0.9
R40A	Maddies Statio	79.11	46	eP	P	01 46 43.1	+14
	comp=Z,5.7nm,0.8s						
KHC	Kasperske Hory	79.20	333	eP	P	01 46 29.9	+0.2
KHC				ex	x	01 46 34.1	
KHC	Kasperske Hory	79.20	333	eP	P	01 46 29.3	-0.4
	comp=Z,5.1nm,1.0s						
KHC	Kasperske Hory	79.20	333	eP	P	01 46 29.3	-0.4
KHC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TXAR	Lajitas Array	79.32	59	P	P	01 46 31.6	+0.9
	comp=Z,0.6nm,0.6s,baz=307,slow=4.3,SNR=9.3						
BZS	Buzias	79.37	327	⇓iP	P	01 46 30.3	-0.3
BZS	Buzias	79.37	327	⇓P	P	01 46 30.3	-0.3
GEC2	GERESS Array S	79.42	333	eP	P	01 46 30.8	-0.2
	comp=Z,3.2nm,0.8s						
GEC2	GERESS Array S	79.42	333	eP	P	01 46 30.8	-0.2
GEC2				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GERES	GERESS Array B	79.42	333	P	P	01 46 30.4	-0.5
	comp=Z,2.3nm,0.7s,baz=23,slow=4.8,SNR=12						
GERES				LR	LR	02 25 28.2	
	comp=Z,84nm,18.3s,baz=62,slow=39						
GEA0	GERESS Array S	79.42	333	eP	P	01 46 30.3	-0.7
CONA	Conrad Observa	79.50	331	eP	P	01 46 31.8	+0.4
	comp=Z,15nm,1.7s,SNR=7.1						
CCM	Cathedral Cave	79.81	45	eP	P	01 46 45.5	+12
	comp=Z,7.9nm,1.0s						
MDVR	Moldovita	80.03	326	⇓iP	P	01 46 33.9	-0.4
MEM	Membach	80.07	338	⇓P	P	01 46 34.1	-0.2
	comp=Z,10nm,1.0s						
MOA	Molln	80.10	332	eP	P	01 46 34.5	-0.1
	comp=Z,3.4nm,1.0s						
ARSA	Arzberg	80.20	331	eP	P	01 46 35.0	-0.2
	comp=Z,7.7nm,1.2s						
SOKA	Soboth	80.87	331	eP	P	01 46 39.2	+0.4
	comp=Z,8.0nm,0.9s						
KBA	Koelnbreinsper	81.08	332	eP	P	01 46 39.0	-1.1
	comp=Z,5.0nm,0.6s						
PMOR	Pomariorio Ree	81.15	122	eT	T	03 16 24.2	
	comp=Z,3.2nm,0.2s						
OBKA	Obir	81.18	331	eP	P	01 46 40.2	-0.2
	comp=Z,3.6nm,1.0s						
PBMO	Poplar Bluff	81.21	46	eP	P	01 46 54.9	+14
	comp=Z,22nm,1.5s						
VTS	Vitosha	81.24	324	⇑iP	P	01 46 41.2	+0.3
VTS	Vitosha	81.24	324	eP	P	01 46 40.8	-0.1
	comp=Z,16nm,1.0s						
VTS	Vitosha	81.24	324	eP	P	01 46 40.8	-0.1
VTS				pmax	pmax		
	comp=Z,17nm,1.0s						
DIVS	Divibare	81.27	327	eP	P	01 46 40.2	-0.8
	comp=Z,2.7nm,0.8s						
MIAR	Mount Ida	81.28	49	eP	P	01 46 54.1	+13
	comp=Z,6.7nm,0.9s						
MIAR	Mount Ida	81.28	49	eP	P	01 46 54.1	+13
MIAR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MYKA	Terra Mystica	81.38	332	eP	P	01 46 38.8	-2.7
	comp=Z,1.7nm,0.5s						
ALN	Alexandroupoli	81.41	321	eP	P	01 46 41.9	+0.2
	comp=Z,6.1nm,1.0s						
ALN	Alexandroupoli	81.41	321	eP	P	01 46 41.9	+0.2
ALN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
WATA	Walderalm	81.42	334	eP	P	01 46 42.9	+1.1
	comp=Z,5.3nm,0.4s						
WTTA	Wattenberg	81.47	334	eP	P	01 46 42.1	0.0
	comp=Z,4.0nm,0.4s						
W41B	Gary Mavity, V	81.50	48	eP	P	01 46 56.7	+14
	comp=Z,4.9nm,0.8s						
RETA	Reutte	81.54	334	eP	P	01 46 42.5	+0.1
	comp=Z,3.5nm,1.0s						
MOTA	Moosalm	81.56	334	eP	P	01 46 43.6	+1.0
	comp=Z,5.9nm,0.9s,SNR=6.0						
ABTA	Abfaltersbach	81.64	333	pP	P	01 46 46.3	+3.4
	comp=Z,2.6nm,0.9s						
ECH	Echery	81.94	337	eP	P	01 46 43.9	-0.5
	comp=Z,8.1nm,1.1s						
ECH	Echery	81.94	337	eP	P	01 46 43.9	-0.5
ECH				pmax	pmax		
	comp=Z,8.0nm,1.1s						
FETA	Feichten	81.96	334	eP	P	01 46 45.6	+0.9
	comp=Z,6.0nm,1.0s						
DAVA	Damuels	81.99	335	eP	P	01 46 44.9	0.0
	comp=Z,7.8nm,1.2s						
PPT	Papeete	82.16	124	LR	LR	02 16 53.4	
	comp=Z,39nm,20.7s,baz=348,slow=31						
PPT2	Papeete2	82.17	124	eLR	LR	02 12 58.5	
	comp=Z,102nm,22.5s						
DAVOX	Davos/Dischmat	82.44	334	P	P	01 46 46.7	-0.6
	comp=Z,1.9nm,0.6s,baz=14,slow=4.2,SNR=4.6						
DAVOX				LR	LR	02 26 44.5	
	comp=Z,67nm,19.7s,baz=82,slow=38						
T47A	Sharon Grove	82.70	44	eP	P	01 47 03.1	+15
	comp=Z,7.5nm,0.8s						
MMAI	Mount Meron Ar	83.02	310	P	P	01 46 50.4	0.0
	comp=Z,2.5nm,0.6s,baz=48,slow=6.4,SNR=2.6						
SENIN	Lac Senin/Sane	83.58	336	eP	P	01 46 53.3	+0.1
	comp=Z,6.3nm,0.9s						
V48A	Smith Brothers	83.83	44	eP	P	01 47 08.5	+14
	comp=Z,4.5nm,0.8s						
RAYN	Ar Rayn	84.17	297	eP	P	01 46 57.0	+0.6
	comp=Z,5.4nm,1.0s						
RAYN	Ar Rayn	84.17	297	eP	P	01 46 57.0	+0.6
RAYN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TKL	Tuckaleechee C	85.37	42	P	P	01 47 02.0	-0.2
	comp=Z,2.3nm,0.8s,baz=299,slow=2.5,SNR=3.5						
TKL				LR	LR	02 24 26.1	
	comp=Z,48nm,21.8s,baz=344,slow=35						
Z50A	Ashland	86.25	45	eP	P	01 47 20.9	+14
	comp=Z,7.6nm,0.7s						
ITM	Ithomi	86.28	322	eP	P	01 47 06.1	-0.6
	comp=Z,9.5nm,1.0s						
KEST	Kesra	92.54	330	P	P	01 47 36.7	+0.4
	comp=Z,2.9nm,0.8s,baz=14,slow=4.2,SNR=3.7						
KEST	Kesra	92.54	330	eP	P	01 47 36.7	+0.4
	comp=Z,5.8nm,1.0s						
TORD	Torodi Ar. Bea	115.88	327	PKP	PKPdf	01 53 06.6	-1.3
	comp=Z,0.2nm,0.4s,baz=11,slow=2.8						
QSPA	South Pole Qui	134.84	180	PKP	PKPdf	01 53 43.3	+0.9
	comp=Z,0.7nm,0.7s,baz=337,slow=2.2,SNR=2.0						
LPAZ	La Paz	136.14	62	PKP	PKPdf	01 53 47.0	-0.1
	comp=Z,0.7nm,0.9s,baz=0.0,slow=5.1,SNR=2.9						
SIV	San Ignacio	140.14	54	PKhKP	PKPpre	01 53 47.0	
	comp=Z,0.5nm,0.7s,baz=270,slow=11,SNR=2.4						
PLCA	Paso Flores	149.19	97	PKPbc	PKPbc	01 54 13.7	+0.7
	comp=Z,1.4nm,0.7s,baz=225,slow=5.3,SNR=4.4						
CPUP	Villa Florida	150.29	61	PKPbc	PKPbc	01 54 17.4	+1.4
	comp=Z,1.3nm,0.7s,baz=26,slow=3.0,SNR=3.7						
SNAA	Sanae	150.65	196	PKP	PKPbc	01 54 16.8	+1.2
SNAA	Sanae	150.65	196	PKiKP	PKPab	01 54 21.1	-1.5
SNAA				x	x	01 54 30.1	
SNAA	Sanae	150.65	196	PKPbc	PKPbc	01 54 17.0	+1.4
	comp=Z,2.5nm,0.7s,baz=188,slow=4.8,SNR=11						
SNAA	Sanae	150.65	196	PKIKP	PKPbc	01 54 17.0	+1.4
VNA3	Neumayer Olymp	152.23	193	PKP	PKPbc	01 54 18.3	-0.9
VNA3	Neumayer Olymp	152.23	193	PKiKP	PKPbc	01 54 24.5	+5.3
VNA3				x	x	01 54 33.5	
VNA1	Neumayer--Stat	152.50	194	PKP	PKPbc	01 54 21.9	+2.2
VNA1	Neumayer--Stat	152.50	194	PKiKP	PKPab	01 54 27.5	-2.7
VNA1				x	x	01 54 33.4	

SJA ***09*** *01:44:21.4±0.7, 35°.42S×72°.43W, h63^{km}±15^{km}, ML4.0, MW4.1*

ISCJB ***09*** *01:44:26.6±0.6, 35°.25S±0°.04×72°.05W±0°.07, h56^{km}±4^{km}, mb4.5/27, Error ellipse: s-maj=9.8km s-min=6.5km az=18.0*

NEIC ***09*** *01:44:27.0±0.0, 35°.21S×72°.07W, h50^{km}, mb4.5/22, ML4.1(GUC), After GUC.*

NEIC Felt [IV] at Talca; [III] at Constitucion, Iloca, Longavi, Pelarco and Pencahue; [II] at Curico, Parral, Rio Claro and Villa Alegre.

GUC ***09*** *01:44:27.4±0.6, 35°.21S×72°.07W, h50^{km}±2^{km}, ML4.1*

IDC ***09*** *01:44:28.9±3.3, 35°.25S×71°.90W, h63^{km}±28^{km}, mb3.7/8, mb1 3.8/11, mb1mx3.6/35, mbtmp3.9/11, ML4.0/3, MS2.8/2, Ms1 2.8/2, ms1mx2.6/30, Error ellipse: s-maj=30.3km s-min=18.1km az=89.0*

BJI ***09*** *01:44:28.0, 35°.20S×72°.10W, h50^{km}*

ISC 09 01:44:27.1±0.6, 35°.19S±0°.04×72°.00W±0°.06, h45^{km}±5^{km}, n77, σ1s95/96, mb4.5/27, 1C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO05	HualaæØ	0.19	18	ePn	Pn	01 44 35.5	+0.6
GO05				eSn	Sn	01 44 41.3	+0.9
GO05	HualaæØ	0.19	18	⇑iP	Pn	01 44 35.8	+0.9
GO05				eS	Sn	01 44 42.2	+1.8
GO05				IAML		01 44 43.0	
	comp=E,21µm,0.4s						
NICH	Los Niches	0.66	74	⇓iP	Pn	01 44 41.0	+0.9
NICH				eS	Sn	01 44 51.6	+2.0
CCHI	Chillan	1.41	182	eP	Pn	01 44 50.5	+0.1
CCHI				IAML		01 45 12.7	
	comp=N,4µm,0.5s						
CCSP	San Pedro de C	1.88	208	IAML		01 45 27.4	
	comp=N,3µm,0.5s						
ANTU	Antumapu	1.97	35	eP	Pn	01 45 00.2	+2.1
ANTU				eS	Sn	01 45 24.4	+2.7
LMEL	Las Melosas	2.00	48	⇓iP	Pn	01 44 60.0	+1.4
LMEL				eS	Sn	01 45 24.9	+2.4
LMEL				IAML		01 45 29.4	
	comp=N,3µm,0.2s						
CLCH	Cerro Calan	2.16	35	eP	Pn	01 45 01.9	+1.2
CLCH				eS	Sn	01 45 28.8	+2.5
PEL	Peldehue	2.31	29	ePn	Pn	01 45 03.8	+1.0
PEL				eSn	Sn	01 45 25.7	-4.4
PEL	Peldehue	2.31	29	eP	Pn	01 45 03.8	+1.0
PEL				eS	Sn	01 45 32.1	+2.0
FCH	Farellones	2.34	38	eP	Pn	01 45 04.6	+1.3
FCH				eS	Sn	01 45 33.2	+2.2
FCH				IAML		01 45 40.3	
	comp=N,2µm,0.3s						
ROC1	El Roble	2.35	21	ePn	Pn	01 45 04.5	+1.0
ROC1				eSn	Sn	01 45 29.3	-2.0
ROC1	El Roble	2.35	21	eP	Pn	01 45 04.9	+1.3
ROC1				eS	Sn	01 45 37.0	+5.7
ROCH	El Roble	2.36	21	eP	Pn	01 45 04.5	+1.0
RFA	San Rafael	2.93	83	eP	Pn	01 45 13.2	+1.9
RFA				IAML		01 45 33.1	
	comp=Z,291nm,0.5s						
AAGR	Agrelo	3.37	52	eP	Pn	01 45 20.0	+2.7
RTLS	Leoncito	4.07	35	eP	Pn	01 45 29.8	+2.7
RTLS				IAML		01 46 38.4	
	comp=Z,185nm,0.5s						
RTLL	Cerro Villicun	4.85	38	eP	Pn	01 45 38.9	+1.2
GO04	Tololo Observa	5.10	12	ePn	Pn	01 45 41.9	+0.6
GO04				eSn	Sn	01 46 37.8	-1.3
PLCA	Paso Flores	5.65	169	P	Pn	01 45 49.4	+0.8
	comp=Z,1.3nm,0.3s,baz=355,slow=11,SNR=14						
PLCA				S	Sn	01 47 10.1	+18
	baz=283,slow=12,SNR=1.5						
PLCA				LR	LR	01 48 29.5	
	comp=Z,57nm,20.8s,baz=26,slow=43						
PLCA	Paso Flores	5.65	169	ePn	Pn	01 45 46.0	-2.6
PLCA				eSn	Sn	01 46 57.1	+4.9
LCO	Las Campanas	6.26	11	ePn	Pn	01 45 56.5	-0.6
LCO				eSn	Sn	01 47 05.3	-2.2
GO03	Copiap	7.72	12	ePn	Pn	01 46 15.2	-1.9
GO03				eSn	Sn	01 47 41.0	-2.2
TRQA	Tornquist	8.55	112	ePn	Pn	01 46 29.4	+1.0
TRQA				eSn	Sn	01 47 56.5	-7.0
GO02	Mina Guanaco	10.21	12	ePn	Pn	01 46 45.9	-5.4
GO02				eSn	Sn	01 48 36.8	-7.7
CPUP	Villa Florida	15.38	59	P	Pn	01 48 02.8	+1.7
	comp=Z,0.1nm,0.3s,baz=193,slow=18,SNR=2.8						
CPUP				LR	LR	01 54 35.5	
	comp=Z,70nm,19.7s,baz=214,slow=40						
CPUP	Villa Florida	15.38	59	ePn	Pn	01 48 02.8	+1.7
	comp=Z,13nm,1.5s						
MNMC	Minye Minye	16.14	8	ePn	P	01 48 15.6	+1.8
	comp=Z,14nm,0.6s						
LPAZ	La Paz	19.14	11	P	Pn	01 48 48.8	+0.4
	comp=Z,0.2nm,0.3s,baz=203,slow=6.6,SNR=13						
LPAZ	La Paz	19.14	11	eP	Pn	01 48 49.1	+0.7
	comp=Z,3.7nm,0.9s						
SIV	San Ignacio	21.48	30	P	P	01 49 11.0	-0.9
	comp=Z,1.7nm,0.6s,baz=217,slow=9.7,SNR=12						
PRAC	Prado	38.79	355	eP	P	01 51 48.7	+1.1
	comp=Z,6.4nm,1.1s						
RUSC	La Rusia	40.87	358	eP	P	01 52 04.4	-0.9
	comp=Z,2.2nm,0.6s						
HELC	Santa Helena	41.29	355	eP	P	01 52 08.9	+0.3
	comp=Z,9.7nm,0.7s						
SNAA	Sanae	50.48	157	P	P	01 53 19.2	-0.9
	comp=Z,0.6nm,0.7s,baz=290,slow=12,SNR=3.5						
SNAA	Sanae	50.48	157	eP	P	01 53 19.2	-0.9
	comp=Z,2.5nm,1.1s						
CRPR	Cabo Rojo, PR	53.11	6	eP	P	01 53 38.1	-2.0
	comp=Z,39nm,1.0s						
KVTX	Kingsville	67.02	335	eP	P	01 55 16.9	+1.5
	comp=Z,37nm,0.6s						
348A	Jackson	67.92	345	eP	P	01 55 22.4	+1.5
	comp=Z,39nm,0.5s						
Y52A	Lilburn	69.62	349	eP	P	01 55 30.9	-0.6
	comp=Z,5.0nm,1.0s						
LTX	Lajitas	70.78	331	eP	P	01 55 39.2	+0.4
TXAR	Lajitas Array	70.78	331	P	P	01 55 39.2	+0.4
	comp=Z,1.0nm,0.6s,baz=152,slow=8.4,SNR=18						
TX31	Lajitas Ar. Si	70.79	331	eP	P	01 55 39.5	+0.6
PLAL	Pickwick Lake	71.41	346	eP	P	01 55 41.9	-0.4
	comp=Z,4.4nm,0.5s						
V48A	Smith Brothers	71.91	347	eP	P	01 55 45.1	-0.2
	comp=Z,12nm,0.6s						
MAW	Mawson	72.03	163	P	P	01 55 45.5	-0.3
	comp=Z,1.3nm,0.9s,baz=213,slow=7.3,SNR=4.2						
WVT	Waverly	72.47	347	eP	P	01 55 48.1	-0.6
	comp=Z,7.6nm,0.6s						
W39A	Magazine	72.92	341	eP	P	01 55 51.6	+0.2
	comp=Z,6.8nm,1.0s						
319A	Douglas	74.92	328	eP	P	01 56 05.2	+1.9
	comp=Z,25nm,0.8s						
CCM	Cathedral Cave	75.03	344	eP	P	01 56 04.3	+0.7
	comp=Z,5.7nm,0.8s						
DBIC	Dimbokro	75.53	71	P	P	01 56 06.7	-0.5
	comp=Z,4.6nm,1.0s,baz=194,slow=8.3,SNR=2.4						
DBIC	Dimbokro	75.53	71	eP	P	01 56 06.7	-0.5
	comp=Z,36nm,1.5s						
X16A	Lo Mia Camp, P	78.45	328	eP	P	01 56 25.1	+1.7
	comp=Z,2.5nm,1.1s						
KOWA	Kowa	81.10	65	P	P	01 56 37.7	-0.2
	comp=Z,1.5nm,0.5s,baz=246,slow=6.6,SNR=8.1						
KNB	Kanab	81.25	328	eP	P	01 56 39.7	+1.4
	comp=Z,7.4nm,1.4s						
ECSD	EROS Data Cent	81.69	342	eP	P	01 56 39.9	-0.4
	comp=Z,5.5nm,1.1s						
P18A	Preston Nutter	82.39	331	eP	P	01 56 45.5	+1.0
	comp=Z,3.4nm,1.1s						
TORD	Torodi Ar. Bea	84.59	70	P	P	01 56 54.4	-1.5
	comp=Z,0.3nm,0.4s,baz=274,slow=5.5						
TOA1	Torodi Ar. Sit	84.59	70	eP	P	01 56 54.4	-1.5
MDPB	Devils Postpil	84.60	324	eP	P	01 56 56.2	+0.4
	comp=Z,4.0nm,1.3s						
PD31	Pinedale Array	84.83	333	eP	P	01 56 57.3	+0.5
PDAR	Pinedale Array	84.83	333	P	P	01 56 57.3	+0.5
	comp=Z,0.2nm,0.5s,baz=134,slow=5.2,SNR=3.3						
HJGM	San Juan Grade	85.17	322	eP	P	01 57 00.8	+2.4
F07A	Phinny Hill Vi	91.56	329	eP	P	01 57 28.6	-0.1
	comp=Z,6.6nm,0.6s						
WR1	Warramunga Arr	119.74	209	ePKPdf	PKPdf	02 03 11.2	-1.5
WRA	Warramunga Arr	119.74	209	PKP	PKPdf	02 03 11.2	-1.5
	comp=Z,0.4nm,0.9s,baz=160,slow=1.6,SNR=5.9						
BVAR	Borovoye Array	148.12	44	PKPbc	PKPbc	02 04 06.5	-0.8
	comp=Z,0.7nm,0.6s,baz=287,slow=7.4,SNR=4.5						
KURBB	Kurchatov Arra	153.70	45	PKPbc	PKPbc	02 04 19.4	-1.1
	comp=Z,0.4nm,0.6s,baz=288,slow=2.6,SNR=5.2						
KURBB				PKPab	sPKPdf	02 04 33.1	+1.5
	comp=Z,0.6nm,0.6s,baz=302,slow=3.2,SNR=5.5						
KURK	Kurchatov	153.71	45	ePKPbc	PKPbc	02 04 19.4	-1.1
KURK				ePKPab	sPKPdf	02 04 33.1	+1.5
KSH	Kashi	154.26	71	ePKPbc	PKPdf	02 04 14.4	+0.4
KSH				pPKP	pPKPdf	02 04 26.1	-1.9
KSH				PKS	PKSdf	02 07 47.2	-1.1
KSH				PP	PP	02 08 13.8	+1.7
ZAA1	Zalesovo Array	155.20	34	ePKPab	PKPab	02 04 39.6	-0.1
ZALV	Zalesovo Beam	155.21	34	PKPab	PKPab	02 04 39.6	-0.2
	comp=Z,0.9nm,0.3s,baz=264,slow=6.8,SNR=3.5						
MK32	Makanchi Array	157.50	51	ePKPab	PKPab	02 04 49.8	-0.2
MKAR	Makanchi Array	157.50	51	PKPab	PKPab	02 04 49.8	-0.2
	comp=Z,0.5nm,0.7s,baz=265,slow=6.1,SNR=4.3						
WMQ	Urumqi	162.15	55	ePKP	PKPdf	02 04 22.6	-0.8
NJ2	Nanjing	170.42	254	ePKP	PKPdf	02 04 30.3	+0.2
HHC	Hu-ho-hao-te	173.69	335	ePKP	PKPdf	02 04 32.9	+1.4

IDC 09 02:15:34.8±1.9, 2°.77N×126°.11E, h0^{km}, mb3.5/4, mb1 3.6/4, mb1mx3.3/56, mbtmp3.5/4, Error ellipse: s-maj=191.0km s-min=22.3km az=66.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.98	161	P	P	02 20 50.7	-0.5
	0.7nm,0.4s,baz=339,slow=10,SNR=16						
ASAR	Alice Springs	27.36	164	P	P	02 21 22.8	+0.9
	0.1nm,0.3s,baz=348,slow=7.9,SNR=1.6						
MKAR	Makanchi Array	57.99	326	P	P	02 25 29.5	+0.1
	0.2nm,0.3s,baz=124,slow=7.0,SNR=5.0						
KURBB	Kurchatov Arra	62.21	328	P	P	02 25 57.9	-0.3
	0.5nm,0.6s,baz=126,slow=6.3,SNR=4.9						

IDC 09 02:19:10.5±7.9, 11°.07S×166°.19E, h200^{km}±79^{km}, mb3.4/7, mb1 3.7/8, mb1mx3.3/51, mbtmp3.9/8, Error ellipse: s-maj=57.8km s-min=22.1km az=167.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	10.94	179	P	Pn	02 21 42.1	+0.1
	0.6nm,0.3s,baz=130,slow=21,SNR=7.1						
DZM				S	Sn	02 23 39.9	-4.2
	0.3nm,0.3s,baz=287,slow=19,SNR=5.3						
H11S2	WAKE ISLAND Hy	29.38	1	T	T	02 55 46.0	
	baz=181,slow=75,SNR=4.0						
H11S3	WAKE ISLAND Hy	29.38	1	T	T	02 55 43.6	
	baz=181,slow=75,SNR=3.3						
H11S1	WAKE ISLAND Hy	29.40	1	T	T	02 56 00.4	
	baz=181,slow=75,SNR=2.9						
H11N1	WAKE ISLAND Hy	30.60	1	T	T	02 57 28.1	
	baz=181						
H11N3	WAKE ISLAND Hy	30.61	1	T	T	02 57 27.9	
	baz=181						
H11N2	WAKE ISLAND Hy	30.62	1	T	T	02 57 41.6	
	baz=181						
WRA	Warramunga Arr	31.89	250	P	P	02 25 17.1	-0.2
	1.0nm,0.5s,baz=84,slow=9.4,SNR=20						
ASAR	Alice Springs	33.17	244	P	P	02 25 28.2	-0.2
	0.6nm,0.8s,baz=73,slow=9.6,SNR=5.0						
SONM	Songino Array	78.95	324	P	P	02 30 52.3	+0.2
	0.2nm,0.3s,baz=159,slow=7.6,SNR=3.1						
ILAR	Eielson Array	83.40	18	P	P	02 31 14.2	-0.8
	1.0nm,0.5s,baz=242,slow=4.9,SNR=26						
NVAR	Mina Array Bea	85.70	50	P	P	02 31 27.9	+0.5
	0.7nm,0.8s,baz=234,slow=7.3,SNR=3.1						
MKAR	Makanchi Array	93.84	317	P	P	02 32 05.2	0.0
	0.7nm,0.6s,baz=96,slow=5.9,SNR=8.6						
TXAR	Lajitas Array	95.46	61	P	P	02 32 12.9	-0.2
	0.1nm,0.6s,baz=249,slow=7.5,SNR=2.2						
ARCES	ARCESS Array B	116.47	346	PKP	PKPdf	02 37 28.6	-1.4
	1.4nm,0.8s,baz=45,slow=5.2,SNR=4.8						
KEST	Kesra	147.70	323	PKPbc	PKPbc	02 38 32.6	+0.5
	1.0nm,0.6s,baz=202,slow=3.7,SNR=4.8						

MAN 09 03:23:57.8, 16°.11N×119°.73E, h12^{km}, mb4.9, ML3.8, MS3.7, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOLP	Bolinao	0.32	33	eP	Pb	03 24 05.1	-0.3
BOLP				eS	Sb	03 24 11.2	+0.6
SCZP	Santa Cruz	0.38	152	eP	Pb	03 24 06.4	0.0
SCZP				eS	Sb	03 24 13.9	+1.8
ABRA	Dolores	1.80	31	eP	Pn	03 24 27.6	-1.0
ABRA				eS	Sb	03 24 53.2	+0.2
BALP	Baler	1.81	101	eP	Pn	03 24 28.8	0.0
BALP				eS	Sn	03 24 52.4	+0.7
APYP	Conner	2.27	40	eP	Pn	03 24 35.6	+0.6
APYP				eS	Sn	03 25 00.5	-2.5

IDC 09 03:25:12.6±8.2, 2°.74S×93°.18E, h0^{km}, mb3.7/4, mb1 3.8/4, mb1mx3.4/61, mbtmp3.8/4, Error ellipse: s-maj=218.5km s-min=72.6km az=135.0, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	21.82	15	P	P	03 30 05.8	-0.9
	0.9nm,0.3s,baz=216,slow=12,SNR=5.1						
MKAR	Makanchi Array	50.25	350	P	P	03 34 11.4	+0.7
	0.3nm,0.6s,baz=155,slow=7.9,SNR=2.6						
SONM	Songino Array	51.68	11	P	P	03 34 21.5	0.0
	0.5nm,0.4s,baz=193,slow=5.9,SNR=3.3						
HFS	Hagfors	87.13	330	P	P	03 37 59.7	-0.7
	1.5nm,0.8s,baz=54,slow=7.3,SNR=2.0						

JMA 09 03:26:53.1±0.7, 45°.67N×151°.54E, h30^{km}, M3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	4.74	243	P	Pn	03 28 01.7	-0.8
NEM2				eS	Sn	03 28 52.0	-4.4
JRA	Rausu	4.88	252	P	Pn	03 28 06.6	+2.2
JNK	Nakash	5.30	249	P	Pn	03 28 11.5	+1.4
JAK	Akkeshi	5.59	244	P	Pn	03 28 13.6	-0.5
JAK				eS	Sn	03 29 13.3	-4.0
JTKR	Abashiri--Toko	5.69	255	P	Pn	03 28 17.9	+2.4
JAR	Ashorobuto	6.04	250	P	Pn	03 28 21.9	+1.5
JAR				eS	Sn	03 29 27.8	-0.7
JMP	Maruseppu	6.05	257	P	Pn	03 28 23.8	+3.3
JOB	Onbets	6.18	246	eS	Sn	03 29 27.9	-4.0
JNBK	Urakawa-nobuka	7.19	245	P	Pn	03 28 36.0	-0.1
JKB	Kayabe	8.49	247	eS	Sn	03 30 22.1	-6.5

JMA 09 03:38:04.1±0.5, 46°.46N×152°.34E, h30^{km}, M3.9, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	5.61	239	P	Pn	03 39 24.7	-0.8
NEM2				eS	Sn	03 40 24.2	-4.7
JRA	Rausu	5.69	246	P	Pn	03 39 28.6	+2.1
JNK	Nakash	6.12	245	P	Pn	03 39 33.3	+0.9
JAK	Akkeshi	6.45	240	P	Pn	03 39 36.3	-0.7
JAK				eS	Sn	03 40 45.7	-3.8
JTKR	Abashiri--Toko	6.46	250	P	Pn	03 39 40.1	+3.1
JMP	Maruseppu	6.80	252	P	Pn	03 39 44.8	+3.0
JAR	Ashorobuto	6.86	246	P	Pn	03 39 43.5	+0.9
JAR				eS	Sn	03 40 59.4	-0.2
JNBK	Urakawa-nobuka	8.04	242	P	Pn	03 39 57.8	-0.9
JNBK				eS	Sn	03 41 21.4	-7.2
JKB	Kayabe	9.32	245	P	Pn	03 40 15.3	-1.0
JANG	Nango	9.95	236	eS	Sn	03 42 05.7	-10

MEX 09 03:49:23.4±0.5**,19˚30N**×**98˚95W,h1**km±8km**,MD3.5, Central Mexico**

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Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                    Op      ISC      h  m  s      ISC
AMVM  AMECAMECA          0.23 137   eP      Pg       03 49 27.2  -0.6
AMVM                                eS      Sg       03 49 30.7  -0.1
PPM   Popocatepetl       0.38 127   eP      Pg       03 49 30.8  +0.1
PPM                                 eS      Sg       03 49 36.6  +0.8
YAIG  Yautepec           0.45 195   eP      Pg       03 49 31.7  -0.3
YAIG                                eS      Sg       03 49 38.5  +0.6
TLIG  Tlapa              1.77 168   i P     Pn       03 49 52.2  -3.1
TLIG                                eS      Sn       03 50 13.8  -4.6
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*NIED **09** 04:01:00,38˚70N×142˚20E,h41km,Mw4.5 Best double couple: M0 6.56000×10^15 NP1:φs200.00000°,δ21.00000°, λ83.00000°. NP2:φs28.00000°,δ69.00000°,λ93.00000°.*

*BJI **09** 04:01:48.6,38˚32N×142˚47E,h39km,mb4.7/29,mB4.8/13, Ms4.1/12,Ms7 3.9/11*

*ISCJB **09** 04:01:53.4±0.5,38˚66N±0˚02×142˚11E±0˚04,h51km±3km, mb4.6/103,MS3.8/36,Error ellipse: s-maj=6.0km s-min=3.4km az=28.0*

*JMA **09** 04:01:53.4±0.1,38˚66N×142˚15E,h42km±1km,M4.5 Broadband fault plane solution: P waves. NP1: φs46.00000°,δ72.00000°,λ102.00000°. NP2: φs192.00000°,δ21.00000°,λ57.00000°. Principal axes: T Plg61.0000°, Azm334.0000°; N Plg11.0000°, Azm223.0000°; P Plg26.0000°, Azm127.0000°;*

JMA Felt II J1.

*MOS **09** 04:01:54.2±1.0,38˚76N×142˚02E,h53km,mb5.0/41, MS4.0/6 Error ellipse: s-maj=7.6km s-min=4.8km az=118.0*

*NEIC **09** 04:01:54.9±0.5,38˚66N×142˚14E,h51km±4km,mb4.7/41, Error ellipse: s-maj=5.5km s-min=4.1km az=132.0*

NEIC Recorded [2 JMA] in Iwate and Miyagi.

*IDC **09** 04:01:55.9±1.7,38˚65N×142˚03E,h60km±14km,mb4.1/30, mb1 4.2/35,mb1mx4.1/70,mbtmp4.4/35,MS3.6/37, Ms1 3.6/37,ms1mx3.4/62,Error ellipse: s-maj=13.4km s-min=9.7km az=113.0*

ISC 09 04:01:54.2±0.6**,38˚64N**±0˚04×**142˚19E**±0˚05**,h47**km±5km**, n329,**σ**1˚43**/320**,mb4.6**/106**,MS3.8**/36**,25C-28D,Near east coast of eastern Honshu**

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Code  Station Name        Δ°   AZ°    Phase ID          Time      Res
                                    Op      ISC      h  m  s      ISC
OFUJ  Ofunato            0.60 317  ⇓P       Pn       04 02 05.2  -1.3
OFUJ                                 S      Sn       04 02 13.4  -2.0
JIO   Ouri               0.69 254  ⇓P       Pn       04 02 06.2  -1.5
JIO                                  S      Sn       04 02 14.9  -2.5
JMK   Ichinoseki         0.82 292  ⇓P       Pn       04 02 08.2  -1.2
JMK                                  S      Sn       04 02 18.6  -1.9
JOM   Ohasama            1.08 320  ⇓P       Pn       04 02 12.2  -0.8
JOU   Okura              1.23 257  ⇓P       Pn       04 02 14.1  -0.9
JOU                                  S      Sn       04 02 29.6  -0.9
JTH   Tanohata           1.32 349  ⇓P       Pn       04 02 15.1  -1.1
JTH                                  S      Sn       04 02 31.5  -1.1
JMM   Marumori           1.35 235  ⇓P       Pn       04 02 15.3  -1.3
JMM                                 eS      Sn       04 02 31.5  -1.8
JRG   Rokugo             1.43 302  ⇓P       Pn       04 02 17.0  -0.7
JYK   Kaneyama           1.46 281  ⇓P       Pn       04 02 17.4  -0.7
JYK                                  S      Sn       04 02 35.9  -0.2
JFK   Kawauchi           1.65 220  ⇓P       Pn       04 02 19.4  -1.3
JFK                                  S      Sn       04 02 40.4  -0.3
ERM   Erimo              3.45  12   ePn     Pn       04 02 44.7  -0.6
ERM                                 eSn     Sn       04 03 26.1  +1.3
ERM   Erimo              3.45  12 ceP       Pn       04 02 44.9  -0.4
ERM                                  pmax   pmax
      comp=Z,42nm,1.0s
MJAR  Matsushiro Arr     3.80 238    P      Pn       04 02 51.1  +0.9
      comp=Z,29nm,0.3s,baz=41,slow=11,SNR=118
MJAR                                 S      Sn       04 03 39.6  +6.0
      comp=Z,13nm,0.3s,baz=145,slow=9.4,SNR=5.6
MJAR                                 LR     LR       04 04 38.5
      comp=Z,884nm,18.6s,baz=45,slow=44
MAJO  Matsushiro         3.80 238   ePn     Pn       04 02 51.2  +1.0
MAJO                                eSn     Sn       04 03 35.6  +2.0
MAJO  Matsushiro         3.80 238d iP       Pn       04 02 51.2  +1.0
MAT   Matsushiro         3.80 238    P      Pn       04 02 51.5  +1.3
MAT                                 eS      Sn       04 03 38.8  +5.2
MJB9  Matsu-Tunnel       3.80 238   ePn     Pn       04 02 51.6  +1.4
MJB9                                eSn     Sn       04 03 31.9  -1.8
INU   Inuyama            5.29 233   ePn     Pn       04 03 11.5  +0.9
INU                                 eSn     Sn       04 04 09.7  -0.6
ASAJ  Asahikawa          5.48   3    P      Pn       04 03 14.0  +0.8
      comp=Z,2.3nm,0.3s,baz=196,slow=16,SNR=10
ASAJ                                 S      Sn       04 04 17.2  +2.4
      comp=Z,4.3nm,0.3s,baz=192,slow=16,SNR=4.1
ASAJ  Asahikawa          5.48   3   ePn     Pn       04 03 12.2  -1.0
JHJ2  Mitsune            5.85 200   ePn     Pn       04 03 18.8  +0.5
JHJ2                                eSn     Sn       04 04 21.7  -2.4
JHJ   Hachijo jima 2     5.85 200    P      Pn       04 03 19.4  +1.1
      comp=Z,22nm,0.3s,baz=130,slow=24,SNR=8.5
JHJ                                  S      Sn       04 04 20.4  -3.7
      comp=Z,25nm,0.3s,baz=323,slow=20,SNR=4.5
JHJ                                  LR     LR       04 05 07.6
      comp=Z,66nm,21.1s,baz=60,slow=33
YUK   Yuzh-Kuril'sk      6.05  26   eP      Pn       04 03 16.3  -4.8
YUK                                 eS      Sn       04 04 24.7  -4.2
YUK                                  pmax   pmax
      comp=Z,199nm,0.2s
YUK                                  smax   smax
      comp=E,706nm,0.5s
YUK                                  smax   smax
      comp=N,399nm,0.6s
SHO   Shikotan           6.28  32   eP      Pn       04 03 19.0  -5.2
SHO                                 eS      Sn       04 04 27.8  -6.8
SHO                                  pmax   pmax
      comp=E,21nm,0.4s
SHO                                  pmax   pmax
      comp=Z,20nm,0.4s
SHO                                  pmax   pmax
      comp=N,11nm,0.2s
SHO                                  smax   smax
      comp=E,102nm,0.3s
SHO                                  smax   smax
      comp=N,190nm,0.4s
KUR   Kuril'sk           7.82  31    P      Pn       04 03 40.5  -4.8
KUR                                 i S     Sn       04 05 08.0  -4.5
KUR                                  pmax   pmax
      comp=Z,22nm,0.3s
YSS   Yuzh-Sakhalins     8.31   3   eP      Pn       04 03 53.7  +1.6
YSS                                  pmax   pmax
      comp=Z,20nm,0.5s
YSS                                  MLR    MLR
      comp=Z,200nm,14.0s
MSHR  Mys Shultsa        9.27 299 ceP       Pn       04 04 06.3  +1.2
USA0B Ussuriysk Arra     9.46 309   ePn     Pn       04 04 08.1  +0.3
USRK  Ussuriysk Ar.      9.46 309    P      Pn       04 04 08.7  +0.9
      baz=114,slow=14
USRK                                 LR     LR       04 07 36.1
      comp=Z,502nm,19.1s,baz=114,slow=36
JNU   Nakatsue          10.70 242    P      Pn       04 04 25.4  +0.6
      comp=Z,0.6nm,0.3s,baz=30,slow=4.8,SNR=12
JNU                                  LR     LR       04 08 49.8
      comp=Z,484nm,20.8s,baz=123,slow=39
JNU   Nakatsue          10.70 242   ePn     Pn       04 04 26.1  +1.2
MDJ   Mudanjiang        11.15 306    P      Pn       04 04 33.7  +2.8
MDJ                                  LR     LR
      comp=Z,230nm,15.1s
MDJ                                  LR     LR
      comp=Z,360nm,17.6s
MDJ                                  LR     LR
      comp=Z,510nm,19.6s
MDJ   Mudanjiang        11.15 306   ePn     Pn       04 04 37.3  +6.4
KSRS  Korea Array       11.32 268    P      Pn       04 04 36.2  +3.0
      comp=Z,0.6nm,0.3s,baz=81,slow=14,SNR=26
KSRS                                 LR     LR       04 08 31.7
      comp=Z,339nm,20.4s,baz=80,slow=35
KS01  Wonju Array Si    11.34 269   ePn     Pn       04 04 37.3  +3.9
KS15  Wonju Array Si    11.35 268   ePn     Pn       04 04 37.8  +4.2
KSAR  Wonju Array Be    11.35 268    P      Pn       04 04 36.2  +2.6
KSAR  Wonju Array Be    11.35 268    P      Pn       04 04 36.2  +2.6
JCJ   Chichijima        11.52 180    S      Sn       04 06 38.1  -5.1
      baz=90,slow=20
TJN   Taejon            11.99 264 ceP       Pn       04 04 44.6  +2.2
KLR   Kul'dur           12.97 328    P      Pn       04 04 54.8  -0.9
      comp=Z,0.0nm,0.3s,baz=125,slow=13,SNR=11
KLR                                  LR     LR       04 09 50.2
      comp=Z,44nm,19.3s,baz=139,slow=37
KLR   Kul'dur           12.97 328⇓eP        Pn       04 04 54.4  -1.3
JOW   Kunigami          16.59 229    LR     LR       04 12 21.4
      comp=Z,110nm,18.0s,baz=280,slow=38
PETK  Petropavlovsk-    17.99  31    LR     LR       04 13 29.2
      comp=Z,42nm,21.7s,baz=216,slow=38
ZEA   Zeya              18.24 331   eP      P        04 06 00.5  -2.9
ZEA                                  pmax   pmax
      comp=Z,58nm,1.0s
TIA   Tai'an            20.04 271    P      P        04 06 22.1  -1.1
TIA                                  pmax   pmax
      comp=Z,13nm,0.8s
BJI   Beijing           20.15 282⇑iP        Pn       04 06 26.0  -0.6
BJI                                  pmax   pmax
      comp=Z,18nm,0.9s
BJI                                  LR     LR
      comp=Z,160nm,11.4s
BJI                                  LR     LR
      comp=Z,440nm,15.1s
BJT   Baijiatuau        20.16 282   eP      Pn       04 06 26.1  -0.5
      comp=Z,11nm,0.8s
BJT   Baijiatuau        20.16 282   eP      Pn       04 06 26.1  -0.6
BJT                                  pmax   pmax
      comp=Z,11nm,0.8s
MA2   Magadan           21.65  12    P      P        04 06 40.9  +0.5
      comp=Z,5.6nm,0.4s,baz=181,slow=12,SNR=6.3
MA2                                  LR     LR       04 15 04.8
      comp=Z,71nm,18.0s,baz=218,slow=36
MA2   Magadan           21.65  12   eP      P        04 06 43.1  +2.7
      comp=Z,18nm,0.9s
MA2   Magadan           21.65  12   eP      P        04 06 43.1  +2.7
MA2                                  pmax   pmax
      comp=Z,18nm,0.9s
YULB  Yu-li             23.41 236   eP      P        04 06 58.1  -0.9
      comp=Z,8.8nm,0.8s
YAK   Yakutsk           24.65 346    P      P        04 07 09.0  -1.0
      comp=Z,13nm,0.4s,baz=194,slow=2.5,SNR=4.5
YAK   Yakutsk           24.65 346   eP      P        04 07 09.0  -1.0
      comp=Z,30nm,0.8s
YAK   Yakutsk           24.65 346   eP      P        04 07 07.4  -2.6
YAK                                  pmax   pmax
      comp=Z,35nm,1.4s
YAK                                  pmax   pmax
      comp=N,12nm,1.6s
YAK                                  pmax   pmax
      comp=E,8.0nm,1.2s
GUMO  Guam              25.07 174    LR     LR       04 17 02.5
      comp=E,51nm,21.9s,baz=344,slow=36
SEY   Seymchan          25.09  11    P      P        04 07 15.6  +1.6
      comp=E,14nm,0.8s,baz=201,slow=6.5,SNR=38
BOD   Bodaibo           26.52 326   eP      P        04 07 25.4  -1.7
BOD                                  pmax   pmax
      comp=Z,11nm,1.2s
ULN   Ulaanbaatar       27.00 301   eP      P        04 07 30.4  -1.3
      comp=Z,3.3nm,0.6s
ULN   Ulaanbaatar       27.00 301   i P     P        04 07 31.5  -0.2
ULN                                  pmax   pmax
      comp=Z,3.0nm,0.7s
XAN   Xi'an             27.10 271    P      P        04 07 31.8  -0.8
XAN                                  pP     pP       04 07 40.7  -4.2
XAN                                  sP     sP       04 07 44.9  -5.7
XAN                                  S      S        04 12 02.3  -5.2
XAN                                  pmax   pmax
      comp=Z,5.0nm,0.5s
XAN                                  pmax   pmax
      comp=Z,39nm,3.0s
XAN                                  LR     LR
      comp=Z,120nm,15.1s
XAN                                  LR     LR
      comp=Z,130nm,15.8s
XAN                                  LR     LR
      comp=Z,130nm,16.9s
SONA1 Songino Array     27.43 301   eP      P        04 07 35.3  -0.3
SONA0 Songino Array     27.44 301   eP      P        04 07 35.0  -0.6
SONM  Songino Array     27.44 301    P      P        04 07 35.0  -0.6
      comp=Z,1.4nm,0.5s,baz=105,slow=9.7,SNR=9.2
SONM                                 LR     LR       04 18 45.3
      comp=Z,132nm,19.1s,baz=81,slow=37
ENH   Enshi             28.12 263   eP      P        04 07 40.8  -0.9
      comp=Z,30nm,0.6s
H11N2 WAKE ISLAND Hy    28.49 124    T      T        04 38 01.9
      baz=317,slow=75,SNR=1984
H11N1 WAKE ISLAND Hy    28.50 124    T      T        04 38 02.4
      baz=317,slow=75,SNR=2672
H11N3 WAKE ISLAND Hy    28.51 124    T      T        04 38 03.2
      baz=317,slow=75,SNR=1399
H11S1 WAKE ISLAND Hy    29.27 126    T      T        04 38 58.4
      baz=318,slow=76,SNR=220
H11S3 WAKE ISLAND Hy    29.27 126    T      T        04 38 58.5
      baz=318,slow=76,SNR=390
H11S2 WAKE ISLAND Hy    29.28 126    T      T        04 39 19.6
      baz=318,slow=76,SNR=279
TLY   Talaya            29.77 309    LR     LR       04 20 31.5
      comp=Z,218nm,18.1s,baz=112,slow=38
TLY   Talaya            29.77 309   eP      P        04 07 55.8  -0.4
TLY                                  pmax   pmax
      comp=Z,7.0nm,1.0s
TLY                                  MLR    MLR
      comp=Z,165nm,16.0s
ZAK   Zakamensk         29.79 306   eP      P        04 07 55.7  -0.7
ZAK                                  pmax   pmax
      comp=Z,10.0nm,1.0s
LZH   Lanzhou           30.44 277   eP      P        04 07 58.4  -4.0
LZH                                  pmax   pmax
      comp=Z,10.0nm,1.3s
MOY   Mondy             31.40 308   eP      P        04 08 10.6   0.0
GYA   Guiyang           32.12 258⇑iP        P        04 08 15.8  -1.4
GYA                                  pmax   pmax
      comp=Z,20nm,0.8s
BILL  Bilibino          32.31  17   eP      P        04 08 20.0  +1.7
BILL                                e                04 09 25.4
BILL                                ePPP    PPP      04 09 36.8
GTA   Gaotai            32.71 285   eP      P        04 08 21.8  -0.5
GTA                                  pmax   pmax
      comp=Z,6.0nm,1.0s
KNGR  Kungurtug, Tuv    33.47 306   i P     P        04 08 28.5  -0.3
NONG  Nongkai           39.62 250    P      P        04 09 28.8  +7.5
      comp=Z,0.3nm,0.9s,comp=Z,104nm
DGZ   Jazzator, Alta    39.97 304   i P     P        04 09 25.0  +0.9
DGZ                                  pmax   pmax
      comp=Z,17nm,0.7s
ZAA0  Zalesovo Array    41.30 311   eP      P        04 09 34.8   0.0
      comp=Z,8.3nm,0.7s
ZAA1  Zalesovo Array    41.30 311   eP      P        04 09 34.8  -0.1
ZAA1                                ePcP    PcP      04 11 32.5   0.0
ZALV  Zalesovo Beam     41.30 311    P      P        04 09 34.8  -0.1
      comp=Z,6.9nm,0.5s,baz=89,slow=8.0,SNR=20
ZALV                                 PcP    PcP      04 11 32.5   0.0
      comp=Z,2.3nm,0.5s,baz=80,slow=2.7,SNR=3.7
ZALV                                 LR     LR       04 27 26.8
      comp=Z,164nm,18.4s,baz=76,slow=37
ZALV  Zalesovo Beam     41.30 311   eP      P        04 09 34.2  -0.6
ZALV                                 PcP    PcP      04 11 32.5   0.0
CMAI  Chiengmai2        41.56 256    P      P        04 09 40.8  +3.3
      comp=Z,1.6nm,0.5s,comp=Z,99nm
PBKT  Sadao Pong        42.17 250    P      P        04 09 43.4  +1.1
      comp=Z,6.8nm,0.4s,comp=Z,4μm
NVS   Novosibirsk       42.19 312   eP      P        04 09 41.9  -0.2
NVS                                  pmax   pmax
      comp=N,2.0nm,0.9s
NVS                                  pmax   pmax
      comp=E,7.0nm,0.9s
NVS                                  pmax   pmax
      comp=Z,9.0nm,0.9s
CMMT  Chiang Mai        42.30 255    P      P        04 09 51.0  +7.6
      comp=Z,9.0nm,0.7s
CHTO  Chiang Mai        42.30 255   eP      P        04 09 43.5  +0.1
      comp=Z,4.6nm,0.6s
CHTO  Chiang Mai        42.30 255   eP      P        04 09 43.5  +0.1
CHTO                                 pmax   pmax
      comp=Z,5.0nm,0.6s
CHTO  Chiang Mai        42.30 255    P      P        04 09 51.1  +7.7
      comp=Z,39nm,0.9s
CM31  Chiang Mai Arr    42.51 254   eP      P        04 09 45.3  +0.1
CMAR  Chiang Mai Arr    42.51 254    P      P        04 09 45.3  +0.1
      comp=Z,1.2nm,0.3s,baz=49,slow=9.0,SNR=4.6
CMAR                                 LR     LR       04 28 53.5
      comp=Z,25nm,18.4s,baz=60,slow=38
CHBT  CHBT              43.71 245    P      P        04 09 54.9  +0.1
      comp=Z,3μm,1.1s
MK01  Makanchi Array    43.80 301   eP      P        04 09 55.0  -0.3
MK31  Makanchi Array    43.80 301   eP      P        04 09 55.0  -0.2
MK31  Makanchi Array    43.80 301   eP      P        04 09 55.1  -0.2
MK32  Makanchi Array    43.80 301   eP      P        04 09 55.0  -0.2
MKAR  Makanchi Array    43.80 301    P      P        04 09 55.0  -0.2
      comp=Z,8.2nm,0.7s,baz=85,slow=9.0,SNR=60
MKAR                                 LR     LR       04 28 53.0
      comp=Z,67nm,18.4s,baz=50,slow=37
MKAR  Makanchi Array    43.80 301   eP      P        04 09 55.0  -0.2
      comp=Z,66nm,0.8s
MKAR  Makanchi Array    43.80 301   eP      P        04 09 55.1  -0.2
MKAR                                 pmax   pmax
      comp=Z,66nm,0.8s
MAKZ  Makanchi          44.01 301   eP      P        04 09 56.9  -0.1
      comp=Z,9.5nm,0.8s
MAKZ  Makanchi          44.01 301   eP      P        04 09 56.9  -0.1
MAKZ                                 pmax   pmax
      comp=Z,10.0nm,0.8s
KURK  Kurchatov         45.44 307   eP      P        04 10 07.7  -0.5
      comp=Z,31nm,0.7s
KURK  Kurchatov         45.44 307   eP      P        04 10 07.7  -0.5
KURK                                 pmax   pmax
      comp=Z,31nm,0.7s
KDAK  Kodiak Island     45.50  43    P      P        04 10 09.2  +0.7
      comp=Z,8.2nm,1.0s,baz=246,slow=10.0,SNR=2.5
KDAK  Kodiak Island     45.50  43   eP      P        04 10 09.2  +0.7
      comp=Z,25nm,1.3s
KDAK  Kodiak Island     45.50  43   eP      P        04 10 09.2  +0.7
KDAK                                 pmax   pmax
      comp=Z,25nm,1.3s
KURBB Kurchatov Arra    45.51 307    P      P        04 10 08.5  -0.3
      comp=Z,26nm,0.6s,baz=82,slow=8.2,SNR=208
PDGK  Podgornoye        46.58 297    P      P        04 10 16.5  -1.0
PDGK                                 pmax   pmax
      comp=Z,11nm,1.0s
CCB   Clear Creek Bu    47.42  33   eP      P        04 10 23.2  -0.3
      comp=Z,3.4nm,1.3s
JIRN  Jiri              47.50 274   eP      P        04 10 25.4  +0.3
      comp=Z,18nm,0.4s
RAMN  Ramite            47.52 273   eP      P        04 10 24.0  -1.1
      comp=Z,46nm,0.7s
GUN   Gumba             47.63 275   eP      P        04 10 26.1   0.0
      comp=Z,24nm,0.4s
ILAR  Eielson Array     47.81  33    P      P        04 10 27.4  +0.9
      comp=Z,1.5nm,0.6s,baz=265,slow=6.3,SNR=27
ILB   Eielson Array     47.81  33   eP      P        04 10 27.8  +1.2
IL1   Eielson Array     47.81  33   eP      P        04 10 27.0  +0.5
KKN   Kakani            48.15 275   eP      P        04 10 30.1  +0.1
      comp=Z,40nm,0.9s
PKIN  Phulchoki         48.16 274   eP      P        04 10 29.8  -0.3
      comp=Z,12nm,0.5s
TARG  Taragay, Kyrgy    48.26 295   eP      P        04 10 31.5  +0.7
      comp=Z,8.7nm,0.7s
DMN   Daman             48.37 275   eP      P        04 10 31.7   0.0
      comp=Z,7.5nm,0.4s
GKN   Gorkha            48.55 275   eP      P        04 10 32.8  -0.2
      comp=Z,24nm,0.7s
DANN  Dangsing          49.07 276   eP      P        04 10 37.2  +0.1
      comp=Z,73nm,0.5s
TKM2  Tokmak 2          49.42 297    P      P        04 10 39.6  +0.1
TKM2                                 pmax   pmax
      comp=Z,9.0nm,0.9s
PYUN  Piuthan           49.79 276   eP      P        04 10 42.2  -0.3
      comp=Z,93nm,1.2s
BVA0  Borovoye Array    49.96 311   i P     P        04 10 42.3  -0.9
BVA0                                 pmax   pmax
      comp=Z,5.0nm,0.6s
BVAR  Borovoye Array    49.96 311    P      P        04 10 43.0  -0.2
      comp=Z,4.4nm,0.5s,baz=77,slow=8.4,SNR=18
BVAR                                 PcP    PcP      04 12 03.2  +0.5
      comp=Z,3.1nm,0.5s,baz=85,slow=2.8,SNR=5.5
BVAR                                 LR     LR       04 32 54.9
      comp=Z,121nm,18.1s,baz=82,slow=37
BRVK  Borovoye          50.01 312   eP      P        04 10 43.8  +0.2
      comp=Z,6.3nm,0.6s
BRVK  Borovoye          50.01 312 ceP       P        04 10 43.6   0.0
BRVK                                 pmax   pmax
      comp=Z,6.0nm,0.7s
AAK   Ala-Archa         50.28 297   eP      P        04 10 46.6  +0.6
      comp=Z,4.6nm,0.8s
AAK   Ala-Archa         50.28 297   eP      P        04 10 46.6  +0.6
AAK                                  pmax   pmax
      comp=Z,5.0nm,0.8s
KSH   Kashi             50.33 293    P      P        04 10 50.1  +3.8
KSH                                 ePcP    PcP      04 12 08.2  +3.7
KSH                                  PP     PP       04 12 47.2  +5.3
KSH                                  S      S        04 17 53.1  -2.8
KSH                                  pmax   pmax
      comp=Z,10.0nm,1.2s
KSH                                  pmax   pmax
      comp=Z,70nm,4.2s
IPM   Ipoh              50.51 238   eP      P        04 10 47.6  -0.2
      comp=Z,22nm,1.2s
HNR   Honiara           50.61 157    LR     LR       04 30 56.2
      comp=Z,72nm,20.6s,baz=127,slow=34
MNAS  Manas             51.71 298    P      P        04 10 56.6  -0.1
MNAS                                 pmax   pmax
      comp=Z,8.0nm,0.7s
SFK   Sufi-Kurgan       51.91 295    P      P        04 10 58.1  -0.3
SFK                                  pmax   pmax
      comp=Z,8.0nm,0.7s
INK   Inuvik            52.68  28    P      P        04 11 04.3  +1.1
      comp=Z,1.5nm,0.5s,baz=311,slow=3.8,SNR=4.1
INK   Inuvik            52.68  28   eP      P        04 11 04.3  +1.1
      comp=Z,5.2nm,1.3s
INK   Inuvik            52.68  28   eP      P        04 11 04.3  +1.1
INK                                  pmax   pmax
      comp=Z,5.0nm,1.3s
KK31  Karatay Array     52.86 299   eP      P        04 11 04.8  -0.3
KK31  Karatay Array     52.86 299   eP      P        04 11 04.8  -0.3
KKAR  Karatay Array     52.86 299   eP      P        04 11 04.8  -0.3
KKAR  Karatay Array     52.86 299   eP      P        04 11 04.8  -0.3
PSI   Prapat            53.15 239    P      P        04 11 07.0  -0.5
      comp=Z,4.4nm,0.8s,baz=0.0,slow=10,SNR=3.7
PSI                                  LR     LR       04 33 43.0
      comp=Z,57nm,21.0s,baz=89,slow=36
PSI   Prapat            53.15 239   eP      P        04 11 07.0  -0.5
      comp=Z,4.9nm,0.6s
PSI   Prapat            53.15 239   eP      P        04 11 07.1  -0.5
PSI                                  pmax   pmax
      comp=Z,5.0nm,0.6s
SVE   Sverdlovsk        54.36 318   eP      P        04 11 15.4  -0.4
SVE                                  pmax   pmax
      comp=Z,21nm,0.9s
SVE                                  MLR    MLR
      comp=Z,200nm,17.0s
NIL   Nilore            54.71 288   eP      P        04 11 19.7  +1.0
      comp=Z,17nm,0.9s
NIL   Nilore            54.71 288   eP      P        04 11 19.7  +1.0
NIL                                  pmax   pmax
      comp=Z,17nm,0.9s
ARU   Arti              55.57 318   eP      P        04 11 24.3  -0.2
      comp=Z,14nm,1.0s
ARU   Arti              55.57 318d iP       P        04 11 24.2  -0.3
ARU                                 *PP     pP       04 11 37.3  -0.4
ARU                                                  04 12 22.7
ARU                                                  04 13 24.9
ARU                                  S      S        04 19 07.2  +0.7
ARU                                  SS     SS       04 22 47.7  -3.7
ARU                                  pmax   pmax
      comp=Z,10.0nm,0.7s
ARU                                  MLR    MLR
      comp=Z,171nm,17.0s
AB31  Akbulak array     57.38 310    P      P        04 11 36.6  -0.9
AB31                                 pmax   pmax
      comp=Z,3.0nm,0.5s
ABKAR Akbulak array     57.38 310   eP      P        04 11 37.1  -0.4
AKTO  Aktyubinsk        58.07 311    P      P        04 11 41.6  -0.7
      comp=Z,3.4nm,0.5s,baz=60,slow=9.6,SNR=12
AKTO                                 LR     LR       04 38 02.0
      comp=Z,85nm,18.1s,baz=60,slow=37
WB2   Warramunga Arr    58.74 189   eP      P        04 11 45.6  -1.6
WR1   Warramunga Arr    58.74 189   eP      P        04 11 47.0  -0.3
      comp=Z,8.1nm,1.0s
WRA   Warramunga Arr    58.74 189    P      P        04 11 47.0  -0.3
      comp=Z,2.6nm,0.6s,baz=7.2,slow=7.1,SNR=34
SPITS Spitsbergen Ar    59.07 349    LR     LR       04 38 03.9
      comp=Z,31nm,20.4s,baz=250,slow=37
PRGR  Permogore         59.76 327   eP      P        04 11 53.1  -0.7
PRGR                                 pmax   pmax
      comp=Z,5.0nm,0.5s
YKA   Yellowknife Ar    62.11  31    P      P        04 12 10.8  +1.0
      comp=Z,0.6nm,0.6s,baz=300,slow=6.6,SNR=3.9
YKB5  Yellowknife Ar    62.11  31   eP      P        04 12 10.8  +1.0
AS01  Alice Springs     62.46 189   eP      P        04 12 12.7  +0.2
AS31  Alice Springs     62.47 189   eP      P        04 12 12.7   0.0
      comp=Z,1.1nm,0.7s
ASAR  Alice Springs     62.47 189    P      P        04 12 12.7   0.0
      comp=Z,0.8nm,0.8s,baz=2.8,slow=6.0,SNR=9.1
ARA0  ARCESS Array S    62.71 339   eP      P        04 12 13.6  -0.1
ARCES ARCESS Array B    62.71 339    P      P        04 12 13.6  -0.1
      comp=Z,1.5nm,0.7s,baz=54,slow=9.1,SNR=8.3
KLMR  Klimovskoe        62.73 327   eP      P        04 12 12.3  -1.6
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KLMR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KLMR	Klimovskoe	62.73	327	eP	P	04 12 12.3	-1.6
KLMR				AMP		04 12 13.6	
	comp=Z,6.0nm,0.9s						
PALK	Pallekele	63.32	257	LR	LR	04 44 28.0	
	comp=Z,26nm,18.1s,baz=241,slow=40						
GEYT	Alibeck	63.60	299	LR	LR	04 40 29.8	
	comp=Z,45nm,22.0s,baz=145,slow=36						
DZM	Mont Dzumac	64.54	155	LR	LR	04 37 25.7	
	comp=Z,62nm,21.9s,baz=24,slow=33						
DZM	Mont Dzumac	64.54	155	eLR	LR	04 31 58.7	
	comp=Z,125nm,22.6s						
OBN	Obninsk	67.18	323	eP	P	04 12 41.3	-1.6
OBN				e		04 13 00.0	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,61nm,16.0s						
FIA1	FINESS Array S	67.68	332	eP	P	04 12 46.1	+0.1
FIA0	FINESS Array S	67.68	332	eP	P	04 12 45.2	-0.8
FIA0	FINESS Array S	67.68	332	eP	P	04 12 45.2	-0.8
FINES	FINESS Array B	67.68	332	P	P	04 12 45.2	-0.8
	comp=Z,8.4nm,0.7s,baz=56,slow=7.4,SNR=24						
FINES				LR	LR	04 44 29.5	
	comp=Z,60nm,19.1s,baz=60,slow=38						
VSR	Storozhevoye	68.13	319	eP	P	04 12 47.9	-1.1
VSR				pmax	pmax		
	comp=Z,9.0nm,0.5s						
SUMG	Summit	69.08	0	eP	P	04 12 56.1	+1.0
	comp=Z,6.9nm,0.8s						
SUMG	Summit	69.08	0	i P	P	04 12 55.7	+0.6
	comp=Z,8.1nm,0.9s						
SUMG	Summit	69.08	0	eP	P	04 12 56.1	+1.0
SUMG				pmax	pmax		
	comp=Z,7.0nm,0.8s						
STKA	Stephens Creek	70.16	181	P	P	04 13 02.3	+0.6
	comp=Z,0.8nm,0.6s,baz=31,slow=7.9,SNR=3.0						
STKA				LR	LR	04 43 50.1	
	comp=Z,22nm,20.5s,baz=19,slow=36						
KIV	Kislovodsk	70.32	311	eP	P	04 13 04.1	+1.3
	comp=Z,21nm,0.9s						
KIV	Kislovodsk	70.32	311	eP	P	04 13 03.4	+0.6
KIV				pmax	pmax		
	comp=Z,27nm,1.1s						
KBZ	Khabaz	70.32	311	P	P	04 13 03.1	+0.5
	comp=Z,9.4nm,0.9s,baz=46,slow=3.8,SNR=12						
KBZ				LR	LR	04 48 58.4	
	comp=Z,58nm,18.1s,baz=50,slow=40						
GNI	Garni	71.24	307	LR	LR	04 47 47.1	
	comp=Z,45nm,19.1s,baz=79,slow=39						
BEKR	Beckworth	71.40	54	epP	pP	04 13 22.6	-0.7
HFS	Hagfors	72.88	336	P	P	04 13 17.9	+0.1
	comp=Z,4.7nm,0.6s,baz=46,slow=6.2,SNR=21						
HFS				LR	LR	04 48 13.8	
	comp=Z,105nm,19.0s,baz=42,slow=38						
NC204	NORSAR Array S	72.89	338	eP	P	04 13 18.3	+0.4
NB2	NORSAR Subarra	72.94	337	P	P	04 13 17.7	-0.5
	comp=Z,5.2nm,0.8s,baz=36,slow=6.2						
NOA	NORSAR Array B	72.94	337	LR	LR	04 47 56.7	
	comp=Z,76nm,21.5s,baz=40,slow=38						
BOZ	Bozeman (W)	73.16	45	eP	P	04 13 20.8	+0.8
	comp=Z,1.6nm,0.8s						
AKASG	Malin Array Be	73.40	322	P	P	04 13 20.7	-0.4
	comp=Z,4.3nm,0.5s,baz=46,slow=6.0,SNR=28						
AKASG				LR	LR	04 48 30.7	
	comp=Z,102nm,18.4s,baz=40,slow=38						
AKBB	Malin Array Si	73.40	322	eP	P	04 13 20.6	-0.4
	comp=Z,12nm,0.9s						
KIEV	Kiev	73.41	322	eP	P	04 13 20.5	-0.6
	comp=Z,13nm,1.0s						
KIEV	Kiev	73.41	322c	iP	P	04 13 20.6	-0.6
KIEV				pmax	pmax		
	comp=Z,13nm,1.0s						
AK11	Malin Array Si	73.44	322	eP	P	04 13 21.1	-0.2
NV01	Mina Array Sit	73.54	54	eP	P	04 13 23.6	+1.2
NV01				epP	pP	04 13 35.6	-0.5
NVAR	Mina Array Bea	73.54	54	P	P	04 13 23.6	+1.2
	comp=Z,0.4nm,0.6s,baz=299,slow=4.0,SNR=3.7						
SORM	Soroca	75.54	321	⇓iP	P	04 13 33.2	-0.3
SORM	Soroca	75.54	321	⇓P	P	04 13 33.2	-0.3
PD31	Pinedale Array	76.10	46	eP	P	04 13 38.4	+1.2
PDAR	Pinedale Array	76.10	46	P	P	04 13 38.1	+0.9
	comp=Z,1.3nm,0.6s,baz=262,slow=1.6,SNR=19						
PDAR	Pinedale Array	76.10	46	eP	P	04 13 37.9	+0.8
VTV	Victorville	76.49	57	eP	P	04 13 41.8	+2.5
VTV	Victorville	76.49	57	eP	P	04 13 41.8	+2.5
KWP	Kalwaria Pacla	77.18	325	eP	P	04 13 43.5	+0.7
KWP	Kalwaria Pacla	77.18	325	eP	P	04 13 43.5	+0.7
TLCR		77.29	318	⇓iP	P	04 13 43.1	-0.4
TLCR		77.29	318	⇓P	P	04 13 43.1	-0.4
BUR08	Bucovina Ar. S	77.42	322	eP	P	04 13 44.5	+0.2
BUR04	Bucovina Ar. S	77.43	322	eP	P	04 13 44.6	+0.2
BURAR	Bucovina Array	77.43	322	⇓iP	P	04 13 44.5	+0.2
BURAR	Bucovina Array	77.43	322	⇓P	P	04 13 44.6	+0.2
GMRC	Granite Mounta	77.43	56	eP	P	04 13 42.2	-2.5
BIZ	Bicaz	77.47	321	⇑iP	P	04 13 45.0	+0.5
TESR	Tescani	77.49	320	⇓iP	P	04 13 45.0	+0.4
P17A	Butcher Ranch,	77.53	49	eP	P	04 13 47.5	+2.3
	comp=Z,5.8nm,1.1s						
CFR	Carcaliu	77.65	319	⇓iP	P	04 13 45.6	+0.1
CFR	Carcaliu	77.65	319	⇓P	P	04 13 45.6	+0.1
SRU	San Rafael Swe	77.89	49	eP	P	04 13 48.9	+1.7
	comp=Z,2.6nm,0.7s						
VRI	Vrincioaia	77.90	320	⇑iP	P	04 13 46.7	-0.2
VRI	Vrincioaia	77.90	320	⇑P	P	04 13 46.7	-0.2
TIRR	Tirgusor	78.00	318	⇓iP	P	04 13 48.0	+0.6
TIRR	Tirgusor	78.00	318	⇓P	P	04 13 48.0	+0.6
OJC	Ojcow	78.05	326	eP	P	04 13 48.1	+0.5
OJC	Ojcow	78.05	326	eP	P	04 13 48.2	+0.5
	comp=Z,15nm,1.1s						
OJC	Ojcow	78.05	326	eP	P	04 13 48.2	+0.5
OJC				pmax	pmax		
	comp=Z,15nm,1.1s						
HARR	Harsova	78.09	318	⇑iP	P	04 13 48.7	+0.8
HARR	Harsova	78.09	318	⇑P	P	04 13 48.7	+0.8
TLB	Topalu	78.10	318	⇑iP	P	04 13 48.8	+0.8
TLB	Topalu	78.10	318	⇑P	P	04 13 48.8	+0.8
BR101	Keskin Array S	78.25	312	eP	P	04 13 49.3	+0.2
BR131	Keskin Array S	78.25	312	eP	P	04 13 49.3	+0.2
BRTR	Keskin Array B	78.25	312	P	P	04 13 49.3	+0.2
	comp=Z,1.8nm,0.4s,baz=116,slow=3.0,SNR=26						
BRTR				LR	LR	04 52 08.8	
	comp=Z,20nm,18.6s,baz=155,slow=39						
CRVS	Cervenica-Dubn	78.27	325	eP	P	04 13 49.3	+0.4
CRVS				pmax	pmax		
	comp=Z,32nm,2.8s						
CRVS	Cervenica-Dubn	78.27	325	eP	P	04 13 49.3	+0.4
DOPR	Dopca	78.50	321	⇑iP	P	04 13 51.6	+1.4
ICOR	Ion Corvin	78.55	318	⇓iP	P	04 13 51.3	+0.8
MLR	Muntele Rosu	78.55	320	LR	LR	04 51 31.7	
	comp=Z,21nm,19.0s,baz=53,slow=38						
LANS	Liptovska Anna	78.98	326	eP	P	04 13 53.8	+0.9
LANS	Liptovska Anna	78.98	326	eP	P	04 13 53.8	+0.9
VOIR		79.04	320	⇑iP	P	04 13 54.7	+1.4
VOIR		79.04	320	⇑P	P	04 13 54.7	+1.4
KSP	Ksiaz	79.06	328	eP	P	04 13 53.7	+0.5
KSP	Ksiaz	79.06	328	eP	P	04 13 53.7	+0.5
DRGR		79.22	322	⇑iP	P	04 13 54.3	+0.1
DRGR		79.22	322	⇑P	P	04 13 54.3	+0.1
PV10	Paradox Valley	79.25	49	eP	P	04 13 57.2	+2.4
PV10				epP	pP	04 14 10.2	+1.6
ARR	Arges	79.30	321	⇓iP	P	04 13 56.0	+1.3
MORC	Moravsky Berou	79.34	327	⇑iP	P	04 13 55.5	+0.7
MORC	Moravsky Berou	79.34	327	eP	P	04 13 55.3	+0.5
	comp=Z,7.6nm,1.0s						
MORC	Moravsky Berou	79.34	327	⇑P	P	04 13 55.5	+0.7
MORC	Moravsky Berou	79.34	327	eP	P	04 13 55.2	+0.4
DPC	Dobruska-Polom	79.42	328	eP	P	04 13 56.1	+0.9
DPC				AMS	AMS	04 50 40.0	
	comp=Z,100nm,16.8s						
DPC	Dobruska-Polom	79.42	328	eP	P	04 13 56.1	+0.9
DPC				MLR	MLR		
	comp=Z,100nm,16.8s						
VYHS	Vyhne	79.75	326	eP	P	04 13 57.4	+0.4
VYHS				pmax	pmax		
	comp=Z,2.0nm,0.8s						
VYHS	Vyhne	79.75	326	eP	P	04 13 57.4	+0.4
BRG	Berggiesshubel	79.98	330	eP	P	04 13 58.3	+0.1
	comp=Z,5.5nm,0.8s						
BRG	Berggiesshubel	79.98	330	eP	P	04 13 58.3	+0.1
BRG				pmax	pmax		
	comp=Z,6.0nm,0.8s						
JAVC	Velka Javorina	79.98	326	eP	P	04 13 59.5	+1.2
CLL	Collm	80.01	330	⇑iP	P	04 13 58.3	0.0
	comp=Z,10.0nm,0.7s						
CLL				i		04 14 00.9	
CLL	Collm	80.01	330	eP	P	04 13 58.3	0.0
	comp=Z,9.8nm,0.8s						
CLL	Collm	80.01	330	⇑iP	P	04 13 58.3	0.0
CLL				pmax	pmax		
	comp=Z,10.0nm,0.7s						
VRAC	Vranov	80.10	327	⇑iP	P	04 14 00.3	+1.4
VRAC	Vranov	80.10	327	P	P	04 14 00.3	+1.4
VRAC	Vranov	80.10	327	eP	P	04 13 59.6	+0.7
KRUC	Moravsky	80.38	327	eP	P	04 14 00.6	+0.2
GOPC	GO Pecny, Ondr	80.39	329	eP	P	04 14 01.3	+0.9
GOPC	GO Pecny, Ondr	80.39	329	eP	P	04 14 01.3	+0.9
PRU	Pruhonice	80.43	329	AMS	AMS	04 52 00.0	
	comp=Z,100nm,20.4s						
MODS	Modra-Piesok	80.52	326	eP	P	04 14 02.6	+1.4
MODS				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MODS	Modra-Piesok	80.52	326	eP	P	04 14 02.6	+1.4
BZS	Buzias	80.59	322	⇓iP	P	04 14 02.1	+0.5
BZS	Buzias	80.59	322	⇓P	P	04 14 02.1	+0.5
CONA	Conrad Observa	81.47	327	eP	P	04 14 06.5	+0.1
	comp=Z,4.9nm,0.9s						
KHC	Kasperske Hory	81.49	329	eP	P	04 14 07.1	+0.7
KHC	Kasperske Hory	81.49	329	eP	P	04 14 06.5	+0.1
	comp=Z,2.3nm,0.8s						
KHC	Kasperske Hory	81.49	329	eP	P	04 14 07.1	+0.7
MMAI	Mount Meron Ar	81.53	306	P	P	04 14 06.1	-0.8
	comp=Z,4.0nm,0.6s,baz=12,slow=7.4,SNR=3.4						
MMAI				LR	LR	04 53 06.7	
	comp=Z,48nm,19.8s,baz=235,slow=38						
GEC2	GERESS Array S	81.67	328	eP	P	04 14 07.3	0.0
	comp=Z,2.6nm,0.8s						
GEC2	GERESS Array S	81.67	328	eP	P	04 14 07.3	0.0
GEC2				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GERES	GERESS Array B	81.67	328	P	P	04 14 07.3	0.0
	comp=Z,2.2nm,0.7s,baz=35,slow=4.9,SNR=14						
GERES				LR	LR	04 53 13.1	
	comp=Z,81nm,20.1s,baz=36,slow=38						
GEA0	GERESS Array S	81.67	328	eP	P	04 14 07.1	-0.3
VTS	Vitosha	82.00	319	⇑iP	P	04 14 09.1	-0.2
VTS	Vitosha	82.00	319	eP	P	04 14 09.8	+0.5
	comp=Z,8.1nm,0.8s						
VTS	Vitosha	82.00	319	eP	P	04 14 09.8	+0.5
VTS				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ARSA	Arzberg	82.14	327	eP	P	04 14 09.2	-0.6
	comp=Z,2.7nm,0.5s						
MOA	Molln	82.21	328	P	P	04 14 09.7	-0.4
	comp=Z,4.1nm,1.2s						
DIVS	Divibare	82.49	322	eP	P	04 14 11.3	-0.5
	comp=Z,3.1nm,0.8s						
SOKA	Soboth	82.80	326	i P	P	04 14 13.6	+0.3
	comp=Z,7.0nm,0.8s						
ANMO	Albuquerque	83.08	50	LR	LR	04 51 22.4	
	comp=Z,21nm,18.9s,baz=55,slow=36						
OBKA	Obir	83.14	327	eP	P	04 14 11.4	-3.7
	comp=Z,4.5nm,0.8s						
KBA	Koelnbreinsper	83.21	328	eP	P	04 14 15.5	-0.1
	comp=Z,4.7nm,0.6s						
LENM	Lemitar	83.30	51	eP	P	04 14 14.7	-1.5
MYKA	Terra Mystica	83.43	327	eP	P	04 14 16.0	-0.5
	comp=Z,4.4nm,0.7s						
WTTA	Wattenberg	83.77	329	i P	P	04 14 13.2	-5.1
	comp=Z,8.4nm,1.0s						
ABTA	Abfaltersbach	83.82	328	eP	P	04 14 17.5	-1.1
	comp=Z,6.0nm,1.1s						
MOTA	Moosalm	83.92	329	ePcP	P	04 14 20.3	+1.2
	comp=Z,5.6nm,1.0s						
RETA	Reutte	83.94	329	eP	P	04 14 19.0	-0.2
	comp=Z,7.9nm,0.8s						
TTG	Podgorica	84.10	321	eP	P	04 14 20.1	+0.2
	comp=Z,16nm,1.0s						
TTG	Podgorica	84.10	321	eP	P	04 14 20.1	+0.2
TTG				pmax	pmax		
	comp=Z,16nm,1.0s						
LIT	Litokhoron	84.18	318	eP	P	04 14 20.4	-0.1
	comp=Z,13nm,0.8s						
LIT	Litokhoron	84.18	318	eP	P	04 14 20.4	-0.1
LIT				pmax	pmax		
	comp=Z,13nm,0.8s						
BFO	Black Forest	84.20	331	eP	P	04 14 20.9	+0.5
	comp=Z,6.3nm,0.9s						
BFO	Black Forest	84.20	331	i P	P	04 14 21.3	+0.9
PMOR	Pomariorio Ree	84.27	114	eT	T	05 47 44.0	
	comp=Z,16nm,0.2s						
FETA	Feichten	84.33	329	i PcP	P	04 14 21.5	+0.2
	comp=Z,5.0nm,0.8s						
DAVA	Damuels	84.45	330	ePcP	P	04 14 22.0	+0.2
	comp=Z,9.8nm,0.9s						
PPT2	Papeete2	84.83	117	eLR	LR	04 41 07.6	
	comp=Z,76nm,23.8s						
PPT2	Papeete2	84.83	117	eT	T	05 48 22.5	
	comp=Z,2.2nm,0.2s						
DAVOX	Davos/Dischmat	84.86	329	LR	LR	04 55 39.8	
	comp=Z,80nm,18.0s,baz=82,slow=38						
TIAR	Tiarei	84.96	117	eT	T	05 48 32.7	
	comp=Z,1.5nm,0.3s						
IDI	Anoyia	86.34	313	P	P	04 14 30.4	-1.0
	comp=Z,12nm,1.0s,baz=10,slow=11,SNR=4.4						
IDI	Anoyia	86.34	313	eP	P	04 14 30.4	-1.0
	comp=Z,51nm,1.4s						
TX31	Lajitas Ar. Si	88.65	53	eP	P	04 14 43.1	+0.5
LTX	Lajitas	88.66	53	eP	P	04 14 43.5	+0.8
LTX	Lajitas	88.66	53	eP	P	04 14 43.5	+0.8
TXAR	Lajitas Array	88.66	53	P	P	04 14 43.4	+0.8
	comp=Z,0.7nm,0.6s,baz=301,slow=3.2,SNR=15						
TBI	Tubuai	88.83	121	eT	T	05 53 16.5	
	comp=Z,30nm,0.3s						
ESDC	Sonseca Array	96.11	334	LR	LR	05 03 43.2	
	comp=Z,45nm,19.0s,baz=75,slow=39						
TOA1	Torodi Ar. Sit	116.61	316	ePKPdf	PKPdf	04 20 31.7	-1.8
TORD	Torodi Ar. Bea	116.62	316	PKP	PKPdf	04 20 31.7	-1.9
	comp=Z,0.6nm,1.1s,baz=349,slow=2.3						
KOWA	Kowa	118.40	322	PKP	PKPdf	04 20 36.6	-0.4
	comp=Z,0.7nm,0.5s,baz=90,slow=1.0,SNR=4.1						
SNAA	Sanae	142.47	197	PKhKP	PKPpre	04 21 15.4	
	comp=Z,0.8nm,0.6s,baz=197,slow=5.4,SNR=8.8						
LPAZ	La Paz	145.34	58	PKPbc	PKPab	04 21 27.9	-0.1
	comp=Z,1.2nm,0.5s,baz=341,slow=2.9,SNR=12						

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*IDC **09** 04:26:23.4±1.1, 12°.57N×143°.85E, h0^{km}, mb3.9/5, mb1 4.0/5, mb1mx3.5/62, mbtmp3.9/5, Error ellipse: s-maj=37.6km s-min=20.2km az=108.0*

ISC 09 04:26:27.1±0.9**, 12°.6N**±0°.1×**144°.0E**±0°.2**, h27^{km}, n6, σ1^{s}.69**/7**, mb4.0**/5**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.36	41	Pn	Pn	04 26 50.8	+0.4
	43nm,0.3s,baz=170,slow=1.6,SNR=17						
GUMO				Sn	Sn	04 27 07.3	-0.3
	94nm,0.3s,baz=58,slow=23,SNR=7.1						
GUMO				LR	LR	04 27 14.7	
	comp=Z,18nm,21.4s,baz=106,slow=36						
WRA	Warramunga Arr	33.65	196	P	P	04 33 06.8	+1.1
	1.4nm,0.6s,baz=19,slow=9.4,SNR=22						
ASAR	Alice Springs	37.31	195	P	P	04 33 37.9	+0.7
	0.3nm,0.5s,baz=19,slow=12,SNR=4.7						
STKA	Stephens Creek	44.23	183	P	P	04 34 32.8	-1.4
	1.2nm,0.4s,baz=356,slow=11,SNR=5.7						
MKAR	Makanchi Array	61.62	317	P	P	04 36 40.5	-2.0
	0.2nm,0.7s,baz=88,slow=9.4,SNR=2.4						
GEYT	Alibeck	79.15	307	P	P	04 38 31.7	+1.9
	2.7nm,0.3s,baz=96,slow=8.9,SNR=1.4						

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*MDD **09** 05:22:54.4±3.0, 35°.15N×3°.94E, h0^{km}, mb3.9/2, Error ellipse: s-maj=30.3km s-min=15.4km az=113.0, PRXIMO*

*CSEM **09** 05:22:57.6±1.0, 35°.16N×3°.76E, h30^{km}, mb3.9, Error ellipse: s-maj=23.5km s-min=11.6km az=108.0*

*CNRM **09** 05:22:58.4, 35°.12N×3°.78E, h130^{km}*

ISC 09 05:22:53.2±3.1**, 35°.2N**±0°.1×**3°.9E**±0°.2**, h10^{km}, n22, σ1^{s}.74**/33**, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EMHD	Djebel Mahouad	1.30	323	P	Pg	05 23 18.7	+0.6
EMHD	Djebel Mahouad	1.30	323	P	Pg	05 23 18.7	+0.6
EMHD	Djebel Mahouad	1.30	323	P	Pg	05 23 18.7	+0.6
EANR	’Ain N’Sour	2.43	289	P	Pn	05 23 34.0	+0.9
EANR	’Ain N’Sour	2.43	289	P	Pn	05 23 34.0	+0.9
EANR	’Ain N’Sour	2.43	289	P	Pn	05 23 34.0	+0.9
EIBI	Ibiza	4.37	333	P	Pn	05 24 01.4	+1.8
	3.0nm,0.3s,SNR=7.9						
EIBI				S	Sn	05 24 49.2	-1.3
	3.5nm,0.3s,SNR=7.9						
EIBI	Ibiza	4.37	333	P	Pn	05 24 01.4	+1.8
	3.0nm,0.3s,SNR=7.9						
EIBI				S	Sn	05 24 49.2	-1.3
	3.5nm,0.3s,SNR=7.9						
ETOS	Mallorca	4.67	349	P	Pn	05 24 04.9	+1.1
	0.5nm,0.2s,SNR=7.9						
ETOS				S	Sn	05 24 55.6	-2.5
	2.5nm,0.4s,SNR=7.9						
ETOS	Mallorca	4.67	349	P	Pn	05 24 04.9	+1.1
	0.5nm,0.2s,SNR=7.9						
ETOS				S	Sn	05 24 55.6	-2.5
	2.5nm,0.4s,SNR=7.9						
EBEN2	Beniarda presa	4.81	318	P	Pn	05 24 08.0	+2.3
	0.4nm,0.2s,SNR=7.9						
EBEN2				S	Sn	05 25 00.7	-0.7
	4.6nm,0.3s,SNR=7.9						
EBEN2	Beniarda presa	4.81	318	P	Pn	05 24 08.0	+2.3
	0.4nm,0.2s,SNR=7.9						
EBEN2				S	Sn	05 25 00.7	-0.7
	4.6nm,0.3s,SNR=7.9						
ETOB	Tobarra	5.59	310	P	Pn	05 24 18.2	+1.7
	1.3nm,0.3s,SNR=7.9						
ETOB				S	Sn	05 25 19.3	-1.5
	0.6nm,0.2s,SNR=4.0						
ETOB	Tobarra	5.59	310	P	Pn	05 24 18.2	+1.7
	1.3nm,0.3s,SNR=7.9						
ETOB				S	Sn	05 25 19.3	-1.5
	0.6nm,0.2s,SNR=4.0						
EBER	Berja	5.79	289	P	Pn	05 24 21.6	+2.3
	0.7nm,0.3s,SNR=4.0						
EBER	Berja	5.79	289	P	Pn	05 24 21.6	+2.3
	0.7nm,0.3s,SNR=4.0						
SESP	Santiago Espad	5.98	301	P	Pn	05 24 22.4	+0.5
SESP				S	Sn	05 25 28.9	-1.6
	2.6nm,0.4s,SNR=7.9						
EMOS	Mosqueruela	6.24	327	P	Pn	05 24 28.1	+2.5
	0.8nm,0.3s,SNR=7.9						
EMOS				S	Sn	05 25 34.8	-2.3
	1.2nm,0.3s,SNR=7.9						
EMOS	Mosqueruela	6.24	327	P	Pn	05 24 28.1	+2.5
	0.8nm,0.3s,SNR=7.9						
EMOS				S	Sn	05 25 34.8	-2.3
	1.2nm,0.3s,SNR=7.9						
MDT	Midelt	7.47	254	P	Pn	05 24 43.5	+1.1
CHEFC	Chefchaouen	7.59	272	P	Pn	05 24 42.5	-1.5
OUK	Oukaimeden	10.64	252	P	Pn	05 25 25.6	-0.4

MAN 09 06:16:03.0, 19°.32N×121°.14E, h49^{km}, mb4.6, ML3.4, MS3.3, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBP	Basco	1.36	35	eP	Pn	06 16 26.4	+0.8
BBP				eS	Sn	06 16 43.7	+1.2
SGCP	Mt. Cagua	1.37	141	eP	Pn	06 16 26.6	+0.9
SGCP				eS	Sn	06 16 44.3	+1.6
APYP	Conner	1.45	176	eP	Pn	06 16 27.4	+0.7
APYP				eS	Sn	06 16 45.9	+1.3
ABRA	Dolores	1.71	194	eP	Pn	06 16 30.9	+0.5
ABRA				eS	Sn	06 17 00.5	+9.5
CVP	Callao Caves	1.73	158	⇓eP	Pn	06 16 32.2	+1.6
CVP				i S	Sn	06 16 53.2	+1.7

NNC 09 06:19:12.9±5.8**, 36°.38N×70°.86E, h238^{km}**±104^{km}**, mb2.5, mpv3.6, 3C-3D, Error ellipse: s-maj=87.2km s-min=55.2km az=67.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	4.18	29	⇓P	Pn	06 20 17.7	-0.9
	10.0nm,0.4s						
SFK				⇑S	S	06 21 12.4	+1.9
	3.4nm,0.2s						
MNAS	Manas	6.23	11	⇑P	Pn	06 20 43.8	0.0
	1.7nm,0.4s						
MNAS				⇑S	S	06 21 56.4	+0.1
	1.7nm,0.3s						
KK31	Karatay Array	6.72	358	⇓P	Pn	06 20 49.0	-0.8
	1.0nm,0.3s,baz=182,slow=12,SNR=36						
KK31				⇓S	S	06 22 05.5	-1.9
	0.9nm,0.3s,baz=176,slow=23,SNR=5.2						
AB31	Akbulak array	15.14	332	P	Pn	06 22 38.5	+3.4
	0.9nm,0.5s,baz=153,slow=12,SNR=16						

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*NIED **09** 06:23:00, 37°.80N×143°.40E, h8^{km}, Mw3.8 Best double couple: M$_0$5.36000×10^{14} NP1:φ$_s$77.00000°, δ48.00000°, λ-31.00000°. NP2:φ$_s$189.00000°, δ68.00000°, λ-134.00000°.*

*IDC **09** 06:23:48.5±0.8, 37°.70N×143°.50E, h0^{km}, mb3.8/8, mb1 4.0/14, mb1mx3.8/72, mbtmp3.9/14, ML4.0/3, MS2.6/5, Ms1 2.6/5, ms1mx2.4/60, Error ellipse: s-maj=19.9km s-min=17.3km az=134.0*

*ISCJB **09** 06:23:51.2±0.4, 37°.77N±0°.03×143°.47E±0°.04, h33^{km}, mb4.3/17, Error ellipse: s-maj=4.9km s-min=3.4km az=24.3*

*JMA **09** 06:23:52.4±0.2, 37°.80N×143°.39E, h43^{km}, M4.1*

*NEIC **09** 06:23:53.1±0.4, 37°.70N×143°.57E, h35^{km}, mb4.4/7, Error ellipse: s-maj=10.6km s-min=7.2km az=121.0*

ISC 09 06:23:52.6±0.6**, 37°.77N**±0°.04×**143°.48E**±0°.07**, h35^{km}, n61, σ1^{s}.67**/74**, mb4.1**/17**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIO	Ouri	1.81	293	P	Pn	06 24 21.2	-0.1
OFUJ	Ofunato	1.93	313	P	Pn	06 24 22.6	-0.4
OFUJ				eS	Sn	06 24 45.0	-1.1
JMK	Ichinoseki	2.13	304	P	Pn	06 24 25.8	+0.1
JOM	Ohasama	2.42	315	P	Pn	06 24 29.6	0.0
JOM				eS	Sn	06 24 57.7	-0.3
JFT	Otama	2.51	265	P	Pn	06 24 31.7	+0.8
JYK	Kaneyama	2.71	296	P	Pn	06 24 34.6	+1.0
JYK				eS	Sn	06 25 03.6	-1.6
JANG	Nango	3.02	330	P	Pn	06 24 38.7	+0.8
JANG				eS	Sn	06 25 13.0	+0.2
JAW	Awa shima	3.41	283	P	Pn	06 24 44.9	+1.7
JAG	Ashikaga	3.49	249	P	Pn	06 24 45.0	+0.7
JAG				eS	Sn	06 25 23.6	-0.8
BSO1	Boso 1	3.71	214	P	Pn	06 24 46.7	-0.2
BSO1				eS	Sn	06 25 30.1	+1.0
JRY	Ryogami san	4.06	246	P	Pn	06 24 52.9	+0.6
JRY				S	Sn	06 25 36.8	-1.9
JOT	Ohata	4.07	333	P	Pn	06 24 54.0	+1.7
JOT				eS	Sn	06 25 37.0	-1.7
ERM	Erimo	4.25	357	ePn	Pn	06 24 54.1	-0.7
ERM				eSn	Sn	06 25 42.5	-0.7
JOD2	Odawara 2	4.33	236	P	Pn	06 24 56.2	+0.2
JOD2				S	Sn	06 25 43.2	-2.0
MJAR	Matsushiro Arr	4.38	255	Pn	Pn	06 24 58.2	+1.5
	7.7nm,0.3s,baz=91,slow=14,SNR=32						
MJAR				Sn	Sn	06 25 48.3	+1.7
	2.1nm,0.3s,baz=80,slow=28,SNR=2.8						
MAJO	Matsushiro	4.39	255	ePn	Pn	06 24 57.6	+0.8
MAJO				eSn	Sn	06 25 48.3	+1.7
MAT	Matsushiro	4.39	255	P	Pn	06 24 59.1	+2.4
MAT				eS	Sn	06 25 47.3	+0.7
MJB9	Matsu-Tunnel	4.39	255	ePn	Pn	06 24 58.9	+2.1
JKB	Kayabe	4.53	336	P	Pn	06 24 59.7	+1.1
JKB				eS	Sn	06 25 47.8	-2.1
JCH	Churui	4.84	359	P	Pn	06 25 02.2	-0.7
JCH				S	Sn	06 25 53.6	-4.1
JHJ2	Mitsune	5.52	214	ePn	Pn	06 25 12.2	-0.2
JHJ	Hachijo jima 2	5.53	214	Pn	Pn	06 25 12.2	-0.3
	32nm,0.3s,baz=122,slow=23,SNR=12						
JHJ				Sn	Sn	06 26 09.9	-4.9
	38nm,0.3s,baz=69,slow=22,SNR=7.6						
JHJ				LR	LR	06 27 34.6	
	comp=Z,59nm,18.1s,baz=339,slow=41						
INU	Inuyama	5.74	247	ePn	Pn	06 25 16.6	+1.3
ASAJ	Asahikawa	6.38	354	Pn	Pn	06 25 25.2	+1.2
	2.2nm,0.3s,baz=230,slow=15,SNR=4.9						
ASAJ				Sn	Sn	06 26 32.9	-2.7
	1.4nm,0.3s,baz=55,slow=18,SNR=2.4						
ASAJ				LR	LR	06 28 20.9	
	comp=Z,73nm,19.7s,baz=56,slow=42						
ASAJ	Asahikawa	6.38	354	ePn	Pn	06 25 25.2	+1.2
ASAJ				eSn	Sn	06 26 36.1	+0.6

CBIJ	Chichi jima	10.70	186	ePn	Pn	06 26 20.7	-2.6
CBIJ				Sn	Sn	06 28 11.0	-11
JCJ	Chichijima	10.70	186	Pn	Pn	06 26 20.0	-3.4
	11nm,0.3s,baz=330,slow=14,SNR=10						
JCJ				Sn	Sn	06 28 11.0	-11
	7.3nm,0.3s,baz=288,slow=19,SNR=3.7						
USRK	Ussuriysk Ar.	10.80	310	Pn	Pn	06 26 25.4	+0.8
	baz=113,slow=13						
JNU	Nakatsue	11.27	249	LR	LR	06 31 20.2	
	comp=Z,47nm,18.9s,baz=121,slow=40						
KSRS	Korea Array	12.34	273	Pn	Pn	06 26 44.1	-1.7
	baz=83,slow=13,SNR=3.2						
KSRS				LR	LR	06 30 52.0	
	comp=Z,24nm,21.4s,baz=35,slow=34						
KSAR	Wonju Array Be	12.38	273	Pn	Pn	06 26 44.1	-2.1
KLR	Kul’dur	14.25	327	Pn	Pn	06 27 11.0	-0.7
	0.0nm,0.3s,baz=145,slow=12,SNR=3.3						
PETK	Petropavlovsk-	18.25	28	LR	LR	06 35 56.0	
	comp=Z,12nm,20.1s,baz=197,slow=40						
YULB	Yu-li	23.79	239	eP	P	06 29 04.5	+2.3
	8.2nm,1.0s						
H11N2	WAKE ISLAND Hy	27.16	125	T	T	06 57 59.2	
	baz=308,slow=75						
H11N1	WAKE ISLAND Hy	27.17	125	T	T	06 58 03.9	
	baz=308						
H11N3	WAKE ISLAND Hy	27.18	125	T	T	06 57 58.9	
	baz=308,slow=75						
MANU	Manus Island	39.77	174	eP	P	06 31 21.6	-0.6
	111nm,0.1s						
ZAA1	Zalesovo Array	42.64	312	eP	P	06 31 47.2	+1.8
ZALV	Zalesovo Beam	42.65	312	P	P	06 31 47.2	+1.8
	1.5nm,0.6s,baz=94,slow=8.7,SNR=3.5						
ZALV	Zalesovo Beam	42.65	312	eP	P	06 31 47.5	+2.1
MK32	Makanchi Array	45.13	302	eP	P	06 32 07.9	+2.4
MKAR	Makanchi Array	45.13	302	P	P	06 32 07.9	+2.4
	0.4nm,0.6s,baz=76,slow=12,SNR=4.3						
CAST	Castle Rocks	45.69	35	eP	P	06 32 10.0	+0.3
	2.2nm,1.0s						
KURK	Kurchatov	46.78	308	eP	P	06 32 20.7	+2.3
KURBB	Kurchatov Arra	46.85	308	P	P	06 32 20.7	+1.7
	1.4nm,0.6s,baz=82,slow=8.2,SNR=9.9						
TOLK	Toolik Lake Re	47.06	27	eP	P	06 32 20.3	-0.1
	3.4nm,0.6s						
HDA	Harding Lake	47.97	33	eP	P	06 32 27.2	-0.3
	11nm,1.0s						
IL1	Eielson Array	47.99	33	eP	P	06 32 29.8	+2.1
ILAR	Eielson Array	47.99	33	P	P	06 32 29.5	+1.8
	1.0nm,0.8s,baz=264,slow=6.5,SNR=11						
ILB	Eielson Array	47.99	33	eP	P	06 32 29.5	+1.8
PRZ	Przheval’sk	48.90	297	eP	P	06 32 32.5	-2.7
	32nm,0.3s						
SOEI	Soe	50.58	205	eP	P	06 32 47.4	-0.7
	13nm,1.1s						
WR1	Warramunga Arr	58.04	190	eP	P	06 33 43.0	+0.8
	3.5nm,1.0s						
WRA	Warramunga Arr	58.04	190	P	P	06 33 43.0	+0.8
	1.0nm,0.6s,baz=9.7,slow=7.3,SNR=3.9						
NVAR	Mina Array Bea	73.23	54	P	P	06 35 23.4	+3.0
	0.4nm,0.7s,baz=270,slow=5.9,SNR=5.0						
AKASG	Malin Array Be	74.71	323	P	P	06 35 28.5	0.0
	0.1nm,0.3s,baz=47,slow=6.2,SNR=2.5						
AKBB	Malin Array Si	74.71	323	eP	P	06 35 28.8	+0.3
	2.0nm,1.0s						
PD31	Pinedale Array	75.97	47	eP	P	06 35 36.0	-0.3
PDAR	Pinedale Array	75.97	47	P	P	06 35 36.8	+0.5
	0.6nm,0.5s,baz=276,slow=1.3,SNR=8.8						
GO03	Copiap	150.00	80	ePKPdf	PKPdf	06 43 33.4	-1.2

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*SOME **09** 06:24:03.1, 45°.42N×79°.22E, h25^{km}*

*NNC **09** 06:24:04.6±8.4, 45°.60N×79°.32E, h0^{km}, mb2.6, mpv2.1, Error ellipse: s-maj=62.7km s-min=53.5km az=33.0*

ISC 09 06:23:59.9±1.4**, 45°.54N**±0°.05×**78°.98E**±0°.04**, h4**^{km}±11^{km}**, n17, σ1^{s}.06**/29**, 4C-3D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KAPS	Kapalarasan	0.37	133	eP	Pg	06 24 08.5	+1.5
	93nm,0.1s						
KAPS				eS	Sg	06 24 13.0	+1.1
	904nm,0.1s						
TDK	Taldyqorghan	0.67	217	eP	Pn	06 24 16.0	-0.2
	77nm,0.1s						
TDK				eS	Sb	06 24 25.4	+1.5
	571nm,0.2s						
DJR	Jarkent	1.34	154	eP	Pn	06 24 23.9	-1.5
	10nm,0.2s						
DJR				eS	Sg	06 24 39.6	-3.3
	68nm,0.4s						
ARXS	Arharly	1.56	212	eP	Pg	06 24 30.0	+0.3
	4.4nm,0.1s						
ARXS				eS	Sg	06 24 49.9	0.0
	90nm,0.4s						
KPKS	Kokpek	2.09	186	eP	Pb	06 24 37.5	-0.8
	13nm,0.1s						
KPKS				eS	Sn	06 25 02.6	+0.5
	56nm,0.4s						
CHKK	Chushkaly	2.20	221	eP	Pg	06 24 41.4	-0.7
	2.4nm,0.1s						
CHKK				⇑iS	Sb	06 25 08.2	+0.3
	30nm,0.3s						
UZB	Uzynbulak	2.39	179	eP	Pb	06 24 42.9	-0.7
	1.8nm,0.2s						
UZB				eS	Sn	06 25 11.7	+1.9
	6.8nm,0.1s						
MAKZ	Makanchi	2.44	58	⇓Pg	Pg	06 24 47.3	+0.7
	1.7nm,0.6s						
MAKZ				⇓Lg	Lg	06 25 11.9	
	2.0nm,0.2s						
KTBS	Karatobe	2.46	223	eP	Pg	06 24 46.7	-0.2
	0.9nm,0.1s						
KTBS				eS	Sg	06 25 18.3	-0.4
	14nm,0.3s						
KUU	Kurty	2.50	230	eP	Pg	06 24 47.7	0.0
	2.8nm,0.3s						
KUU				eS	Sg	06 25 19.4	-0.8
	33nm,0.2s						
SATY	Saty	2.52	190	eP	Pb	06 24 45.7	+0.1
	5.0nm,0.1s						
SATY				eS	Sb	06 25 16.9	-0.1
	24nm,0.1s						
MK31	Makanchi Array	2.62	60	Pn	Pn	06 24 42.5	-0.6
	0.1nm,0.2s,baz=228,slow=12,SNR=73						
MK31				Pg	Pg	06 24 50.0	-0.1
	0.4nm,0.2s,baz=230,slow=13,SNR=18						
MK31				Lg	Lg	06 25 21.2	
	3.5nm,0.3s,baz=239,slow=28,SNR=7.3						
TNSS	Tian-Shan	2.90	211	eP	Pg	06 24 55.8	+0.4
	4.4nm,0.3s						
TNSS				eS	Sg	06 25 33.9	+1.0
	14nm,0.5s						
MTBS	Maitube	3.02	218	eP	Pg	06 24 58.0	+0.2
	6.6nm,0.4s						
MTBS				⇑iS	Sg	06 25 37.0	0.0
	18nm,0.5s						
KST	Kastek	3.30	222	eP	Pg	06 25 03.4	+0.2
	5.0nm,0.8s						
KST				⇑iS	Sg	06 25 47.0	+1.1
	12nm,0.6s						
KURBB	Kurchatov Arra	5.09	357	⇑Lg	Lg	06 26 44.5	
KURK	Kurchatov	5.18	358	⇓Lg	Lg	06 26 46.2	

IDC 09 06:25:34.3±2.3**, 6°.38S×129°.99E, h0**^{km}**, mb3.7**/1**, mb1 3.8**/3**, mb1mx3.3**/56**, mbtmp3.6**/3**, ML3.7**/2**, Error ellipse: s-maj=143.1km s-min=32.4km az=69.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.13	163	Pn	Pn	06 28 55.7	-0.2
	0.4nm,0.3s,baz=346,slow=13,SNR=21						
WRA				Sn	Sn	06 31 19.9	-14
	0.6nm,0.3s,baz=330,slow=22,SNR=7.6						
ASAR	Alice Springs	17.59	168	Pn	Pn	06 29 41.4	+0.2
	0.2nm,0.3s,baz=344,slow=9.2,SNR=10						
ASAR				Sn	Sn	06 32 41.4	-17
	0.1nm,0.3s,baz=347,slow=27,SNR=3.7						
MKAR	Makanchi Array	67.71	327	P	P	06 36 33.6	0.0
	0.3nm,0.4s,baz=122,slow=6.8,SNR=6.9						

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*BJI **09** 06:29:21.3, 14°.49S×167°.66E, h190^{km}, mb4.7/14, mB4.4/6*

*ISCJB **09** 06:29:25.6±1.3, 14°.37S±0°.06×167°.23E±0°.05, h216^{km}±13^{km}, mb4.2/62, Error ellipse: s-maj=10.0km s-min=7.1km az=144.4*

*IDC **09** 06:29:25.6±0.8, 14°.35S×167°.31E, h205^{km}±6^{km}, mb3.9/22, mb1 4.0/23, mb1mx3.9/50, mbtmp4.4/23, Error ellipse: s-maj=14.8km s-min=9.3km az=104.0*

*NEIC **09** 06:29:26.4±1.1, 14°.35S×167°.28E, h210^{km}±10^{km}, mb4.2/46, Error ellipse: s-maj=7.6km s-min=5.1km az=145.0*

ISC 09 06:29:25.6±0.6**, 14°.41S**±0°.05×**167°.39E**±0°.08**, h203**^{km}±5^{km}**, h204**^{km}**:pP-P, n126, σ1^{s}.05**/141**, mb4.3**/62**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.67	187	P	Pn	06 31 16.3	+1.7
	1.8nm,0.3s,baz=108,slow=12,SNR=22						
DZM				S	S	06 32 44.5	+3.0
	2.1nm,0.3s,baz=285,slow=23,SNR=3.3						
DZM	Mont Dzumac	7.67	187	ePn	Pn	06 31 15.6	+0.9
DZM				eSn	S	06 32 40.6	-0.8
FUNA	Funafuti	12.96	64	ePn	P	06 32 24.7	-1.0
LHI	Lord Howe Isla	18.66	203	eP	Pn	06 33 31.1	-0.1
	22nm,0.8s						
EIDS	Eidsvold	18.80	232	eP	Pn	06 33 31.4	-1.5
	28nm,1.0s						
CTA	Charters Tower	20.95	251	P	P	06 33 53.8	+0.8
	6.6nm,0.8s,baz=66,slow=11,SNR=3.0						
COEN	Coen	23.48	268	eP	P	06 34 18.0	+0.8
	11nm,1.0s						
BKZ	Black Stump Fm	25.93	164	eP	P	06 34 38.4	-0.7
	9.4nm,1.2s						
JAY	Jayapura	28.88	292	P	P	06 35 03.9	-1.8
	8.5nm,0.9s,baz=129,slow=14,SNR=3.2						
STKA	Stephens Creek	29.29	229	P	P	06 35 09.8	+0.7
	29nm,0.4s,baz=53,slow=8.8,SNR=214						
STKA				PcP	PcP	06 38 10.4	-0.2
	2.6nm,0.6s,baz=91,slow=1.8,SNR=4.9						
STKA	Stephens Creek	29.29	229	eP	P	06 35 09.7	+0.7
	6.3nm,0.4s						
STKA				PcP	PcP	06 38 10.4	-0.2
WC3	Warramunga Arr	31.99	255	eP	P	06 35 31.1	-1.8
	3.0nm,0.8s						
WB2	Warramunga Arr	32.01	255	eP	P	06 35 31.3	-1.8
	6.7nm,0.8s						
WRAB	Tennant Creek	32.01	255	eP	P	06 35 31.6	-1.6
	6.3nm,0.8s						
WR1	Warramunga Arr	32.02	255	eP	P	06 35 31.4	-1.8
	6.0nm,0.6s						
WR1				ePcP	PcP	06 38 17.4	-0.7
WRA	Warramunga Arr	32.02	255	P	P	06 35 31.4	-1.8
	6.7nm,0.4s,baz=86,slow=9.2,SNR=57						
WRA				PcP	PcP	06 38 17.4	-0.7
	0.6nm,0.4s,baz=85,slow=3.3,SNR=4.1						
AS01	Alice Springs	32.85	249	eP	P	06 35 39.2	-1.3
AS31	Alice Springs	32.90	249	eP	P	06 35 39.4	-1.5
	4.4nm,0.5s						
ASAR	Alice Springs	32.90	249	P	P	06 35 39.3	-1.6
	9.9nm,0.4s,baz=77,slow=9.3,SNR=114						
ASAR				PcP	PcP	06 38 19.9	-0.6
	0.7nm,0.6s,baz=81,slow=2.3,SNR=5.1						
BBOO	Buckleboo	33.87	232	eP	P	06 35 49.0	0.0
	20nm,0.3s						
MTN	Manton Dam	35.25	268	eP	P	06 36 00.8	-0.4
	6.0nm,0.6s						
FAKI	Fak Fak	36.51	285	eP	P	06 36 11.5	-0.3
	15nm,1.1s						
FORT	Forrest	39.56	239	eP	P	06 36 36.5	-0.6
	22nm,0.6s						
FITZ	Fitzroy Crossi	40.19	259	eP	P	06 36 41.8	-0.6
	7.2nm,0.6s						
MBWA	Marble Bar	45.74	254	eP	P	06 37 26.6	-0.4
	9.1nm,0.8s						
NWAO	Narrogin (SRO)	49.01	239	P	P	06 37 50.4	-1.6
	5.1nm,0.3s,baz=312,slow=7.1,SNR=17						
NWAO	Narrogin (SRO)	49.01	239	eP	P	06 37 51.0	-1.0
	23nm,1.1s						
HON	Honolulu	49.15	44	eP	P	06 37 52.8	-0.2
	195nm,1.2s						
BYL	Byron’s Ledge	49.81	49	eP	P	06 37 58.6	+0.3
	340nm,0.7s						
UGM	Wanagama	56.05	270	eP	P	06 38 43.7	-0.2
MJAR	Matsushiro Arr	57.68	332	P	P	06 38 52.5	-2.5
	1.4nm,0.4s,baz=292,slow=6.2,SNR=7.2						
MAJO	Matsushiro	57.68	332	eP	P	06 38 54.0	-0.9
	7.8nm,0.4s						
MAT	Matsushiro	57.68	332	P	P	06 38 53.7	-1.2
MJB9	Matsu-Tunnel	57.69	332	eP	P	06 38 54.0	-0.9
	7.6nm,0.4s						
JNU	Nakatsue	58.74	324	P	P	06 39 01.2	-1.1
	3.1nm,0.6s,baz=207,slow=2.3,SNR=3.4						
JNU	Nakatsue	58.74	324	eP	P	06 39 01.6	-0.8
	4.1nm,0.5s						
ERM	Erimo	60.43	339	eP	P	06 39 15.2	+1.5
	20nm,1.1s						
ASAJ	Asahikawa	62.49	340	P	P	06 39 26.9	-0.5
	4.1nm,0.5s,baz=204,slow=10.0,SNR=4.7						
VNDA	Vanda	63.18	181	P	P	06 39 31.5	0.0
	1.0nm,0.6s,baz=354,slow=7.0,SNR=6.1						
SBA	Scott Base	63.45	180	eP	P	06 39 35.2	+1.9
KSRS	Korea Array	63.55	326	P	P	06 39 33.4	-1.0
	0.6nm,0.4s,baz=127,slow=8.0,SNR=3.4						
KSAR	Wonju Array Be	63.56	326	P	P	06 39 33.4	-1.1
CASY	Casey	63.86	202	eP	P	06 39 36.3	+0.2
	6.0nm,0.7s						
NJ2	Nanjing	65.53	316	eP	P	06 39 48.1	+0.6
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
USRK	Ussuriysk Ar.	66.66	333	P	P	06 39 54.1	-0.2
	1.8nm,0.6s,baz=123,slow=4.3						
PETK	Petropavlovsk-	67.76	354	P	P	06 40 01.0	-0.1
	2.9nm,0.6s,baz=131,slow=6.5						
PETK	Petropavlovsk-	67.76	354	eP	P	06 40 01.2	+0.1
PEA1	Petropavlovsk-	67.77	354	eP	P	06 40 01.0	-0.2
GYA	Guiyang	71.63	305	eP	P	06 40 26.2	+0.7
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CMAR	Chiang Mai Arr	74.93	294	P	P	06 40 45.5	+0.7
	1.1nm,0.3s,baz=109,slow=3.5,SNR=7.5						
CMAR				pP	pP	06 41 32.2	-1.0
	1.0nm,0.4s,baz=121,slow=4.5,SNR=1.8						
HHC	Hu-ho-hao-te	75.42	320	eP	P	06 40 50.1	+2.8
HHC				PP	PP	06 43 42.6	+3.2
HHC				S	S	06 50 12.5	+2.0
HHC				pmax	pmax		
	comp=Z,24nm,1.1s						
HHC				pmax	pmax		
	comp=Z,57nm,5.2s						
QSPA	South Pole Qui	75.61	180	P	P	06 40 47.6	-0.4
	2.0nm,0.6s,baz=14,slow=3.8,SNR=7.1						
QSPA	South Pole Qui	75.61	180	eP	P	06 40 47.5	-0.5
	3.2nm,0.8s						
SEY	Seymchan	77.98	353	P	P	06 41 00.1	-0.8
	1.2nm,0.4s,baz=181,slow=6.5,SNR=6.5						
ULN	Ulaanbaatar	81.95	324	eP	P	06 41 22.6	-0.1
	2.9nm,0.9s						
MAW	Mawson	82.22	202	P	P	06 41 23.6	0.0
	4.0nm,0.5s,baz=141,slow=7.6,SNR=16						
MAW	Mawson	82.22	202	eP	P	06 41 24.2	+0.5
	1.1nm,0.7s						
SONA0	Songino Array	82.31	324	eP	P	06 41 24.6	0.0
SONA0				epP	pP	06 42 13.5	-0.5
SONM	Songino Array	82.31	324	P	P	06 41 24.6	0.0
	2.0nm,0.5s,baz=137,slow=6.0,SNR=14						
SONM				pP	pP	06 42 13.5	-0.5
	0.5nm,0.6s,baz=134,slow=4.2,SNR=2.6						
SONA1	Songino Array	82.32	324	eP	P	06 41 24.4	-0.2
CAST	Castle Rocks	83.66	17	eP	P	06 41 30.3	-0.7
	1.9nm,0.6s						
KHMM	Horse Mountain	84.06	45	eP	P	06 41 34.3	+0.6
	6.5nm,0.9s						
TRF	Thorofare Moun	84.20	18	eP	P	06 41 32.7	-1.3
	1.8nm,1.0s						
BPAW	Bear Paw Mtn.	84.50	17	eP	P	06 41 35.5	+0.3
	1.4nm,1.1s						
CRQM	Cirque	84.62	22	eP	P	06 41 37.3	+1.2
	4.1nm,1.0s						
DIB	Dawson Inlet,	84.68	32	eP	P	06 41 36.5	+0.2
	3.2nm,1.1s						
YBH	Yreka Blue Hor	85.11	45	P	P	06 41 38.5	-0.4
	0.6nm,0.5s,baz=191,slow=5.1,SNR=6.1						
YBH	Yreka Blue Hor	85.11	45	eP	P	06 41 39.1	+0.2
	0.3nm,0.5s						
AFDM	Forest Hills D	85.23	48	eP	P	06 41 39.9	+0.5
	0.7nm,0.6s						
MLY	Manley	85.28	17	eP	P	06 41 39.3	+0.2
	0.8nm,0.6s						
HUMO	Hull Mountain	85.30	44	eP	P	06 41 40.3	+0.6
	3.1nm,1.1s						
CRAG	Craig	85.59	29	eP	P	06 41 39.6	-1.1
	3.0nm,1.1s						
WRH	Wood River Hil	85.61	18	eP	P	06 41 39.6	-1.1
	1.0nm,0.6s						
CCB	Clear Creek Bu	85.83	18	eP	P	06 41 41.6	-0.1
	2.2nm,1.2s						
WAKR	Walker	86.17	49	eP	P	06 41 43.7	-0.6
	1.3nm,1.1s						
ILAR	Eielson Array	86.19	18	P	P	06 41 41.8	-1.8
	0.9nm,0.5s,baz=240,slow=4.8,SNR=15						
ILAR				pP	pP	06 42 34.1	+0.7
	0.6nm,0.7s,baz=241,slow=5.0,SNR=3.2						
ILB	Eielson Array	86.19	18	eP	P	06 41 43.1	-0.4
IL1	Eielson Array	86.19	18	eP	P	06 41 42.1	-1.4
H04A	Detroit Lake	86.66	42	eP	P	06 41 46.3	0.0
	4.1nm,0.8s						
NLWA	Neilton Lookou	86.72	39	eP	P	06 41 47.4	+0.9
	8.3nm,1.1s						
K05A	Summer Lake	86.74	44	eP	P	06 41 47.7	+0.7
NV01	Mina Array Sit	86.97	49	eP	P	06 41 49.3	+1.0
NVAR	Mina Array Bea	86.97	49	P	P	06 41 47.8	-0.5
	0.2nm,0.5s,baz=218,slow=4.0,SNR=3.3						
NVAR				pP	pP	06 42 38.4	+0.3
	0.4nm,0.7s,baz=250,slow=6.3,SNR=2.7						
TPNV	Topopah Spring	87.99	51	eP	P	06 41 53.4	+0.3
	0.4nm,0.8s						
TIXI	Tiksi	89.69	349	eP	P	06 42 00.3	+0.4
	3.5nm,1.1s						
WMQ	Urumqi	92.59	315	P	P	06 42 14.7	+0.5
SNAA	Sanae	93.87	183	P	P	06 42 18.6	-1.0
SNAA	Sanae	93.87	183	P	P	06 42 18.4	-1.2
	1.1nm,0.5s,baz=184,slow=9.6,SNR=15						
SNAA	Sanae	93.87	183	eP	P	06 42 18.4	-1.2
	2.2nm,1.1s						
PV14	Lion Creek, Pa	93.89	52	eP	P	06 42 21.6	+1.1
VNA3	Neumayer Olymp	94.53	181	P	P	06 42 21.3	-1.3
MK01	Makanchi Array	97.05	316	eP	P	06 42 33.9	-0.5
MK31	Makanchi Array	97.06	316	eP	P	06 42 34.2	-0.2
MK32	Makanchi Array	97.06	316	eP	P	06 42 33.5	-0.9
MKAR	Makanchi Array	97.06	316	P	P	06 42 33.5	-0.9
	1.5nm,0.5s,baz=89,slow=6.2,SNR=20						
MKAR	Makanchi Array	97.06	316	eP	P	06 42 34.2	-0.2
	14nm,0.8s						
KSH	Kashi	100.10	308	eP	Pdif	06 42 49.6	+1.3
KSH				PP	PP	06 46 59.4	+2.7
KURK	Kurchatov	100.24	320	ePdif	Pdif	06 42 47.3	-1.1
KURBB	Kurchatov Arra	100.28	320	P	Pdif	06 42 47.3	-1.3
	0.2nm,0.5s,baz=100,slow=4.0,SNR=4.4						
LPAZ	La Paz	117.25	117	PKP	PKPdf	06 47 48.0	-0.4
	0.3nm,0.5s,baz=236,slow=3.6,SNR=3.1						
LPAZ	La Paz	117.25	117	ePKPdf	PKPdf	06 47 49.2	+0.8
KEV	Kevo	119.45	345	ePKPdf	PKPdf	06 47 49.7	-0.6
ARA0	ARCESS Array S	119.98	345	ePKPdf	PKPdf	06 47 50.8	-0.5
ARCES	ARCESS Array B	119.98	345	PKP	PKPdf	06 47 50.8	-0.5
	4.6nm,0.5s,baz=73,slow=1.7,SNR=52						
ARE0	ARCESS Array S	119.98	345	ePKPdf	PKPdf	06 47 51.0	-0.3
FIA1	FINESS Array S	125.47	338	ePKPdf	PKPdf	06 48 01.9	-0.1
FIA0	FINESS Array S	125.47	338	ePKPdf	PKPdf	06 48 01.9	-0.1
FINES	FINESS Array B	125.47	338	PKP	PKPdf	06 48 01.9	-0.1
	1.3nm,0.4s,baz=36,slow=3.5,SNR=18						
NB2	NORSAR Subarra	130.35	345	PKP	PKPdf	06 48 11.7	+0.3
	comp=Z,1.0nm,0.6s,baz=40,slow=3.2						
HFS	Hagfors	130.46	343	PKP	PKPdf	06 48 10.9	-0.7
	comp=Z,0.8nm,0.4s,baz=173,slow=2.5,SNR=7.3						
AKASG	Malin Array Be	130.54	326	PKP	PKPdf	06 48 11.8	-0.3
	comp=Z,0.3nm,0.3s,baz=33,slow=2.2,SNR=4.7						
BR101	Keskin Array S	132.39	311	ePKPdf	PKPdf	06 48 15.9	-0.2
BRTR	Keskin Array B	132.39	311	PKP	PKPdf	06 48 15.9	-0.2
	comp=Z,0.3nm,0.3s,baz=354,slow=1.4,SNR=3.1						
BUR04	Bucovina Ar. S	134.42	324	ePKPdf	PKPdf	06 48 20.6	+1.0
KHC	Kasperske Hory	139.25	334	ePKPdf	PKPdf	06 48 31.1	+2.7
GERES	GERESS Array B	139.42	333	PKP	PKPdf	06 48 29.7	+1.0
	comp=Z,0.5nm,0.4s,baz=48,slow=2.9,SNR=3.9						
FNA	Florina	140.45	318	ePKPdf	PKPdf	06 48 32.3	+1.5
SENIN	Lac Senin/Sane	144.03	336	ePKPdf	PKPbc	06 48 35.9	+0.2
TIP	Timpagrande	144.29	319	ePKPdf	PKPdf	06 48 36.9	-0.8
CUC	Castrocucco	144.39	321	ePKPdf	PKPab	06 48 35.5	-1.0
BNI	Bardonecchia	145.36	336	ePKPdf	PKPab	06 48 40.4	+0.3
KEST	Kesra	151.04	321	PKPbc	PKPbc	06 48 55.5	+0.6
	comp=Z,7.5nm,0.6s,baz=101,slow=0.3,SNR=13						
THTN	Thala	151.55	322	ePKPbc	PKPbc	06 48 56.6	+0.5
ESDC	Sonseca Array	153.71	345	PKPbc	PKPbc	06 49 00.2	-0.6
	comp=Z,0.2nm,0.3s,baz=358,slow=5.0,SNR=2.6						
ESDC				PKPab	PKPab	06 49 14.3	+0.1
	comp=Z,0.6nm,0.5s,baz=12,slow=4.5,SNR=4.4						
TORD	Torodi Ar. Bea	166.05	267	PKPab	PKPab	06 50 08.3	-0.5
	baz=128,slow=6.5						
TOA1	Torodi Ar. Sit	166.05	267	ePKPab	PKPab	06 50 08.3	-0.5

MEX 09 06:51:41.8±0.5**, 16°.23N×98°.06W, h5**^{km}**, MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.17	339	i P	Pg	06 51 44.7	-0.6
PNIG				eS	Sg	06 51 47.6	+0.1
TLIG	Tlapa	1.41	340	eP	Pn	06 52 05.0	-3.3
TLIG				i S	Sb	06 52 22.4	-4.7
VHO	Vista Hermosa	1.52	57	eP	Pn	06 52 06.3	-3.6
VHO				eS	Sn	06 52 25.4	-4.8

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*NIED **09** 07:02:00, 45°.60N×151°.50E, h20^{km}, Mw3.9 Best double couple: $M_0$8.10000×10^{14} NP1:ϕ_s193.00000°, δ24.00000°, λ56.00000°. NP2:ϕ_s50.00000°, δ71.00000°, λ104.00000°.*

*JMA **09** 07:02:43.8±0.8, 45°.60N×151°.46E, h30^{km}, M4.5*

*SKHL **09** 07:02:44.0±0.3, 44°.93N×151°.74E, h43^{km}±8^{km}, mb4.3/4*

*MOS **09** 07:02:46.7±0.8, 45°.75N×151°.08E, h40^{km}, mb4.4/4, Error ellipse: s-maj=14.5km s-min=10.1km az=154.7*

*IDC **09** 07:02:47.5±0.8, 46°.67N×150°.79E, h0^{km}, mb3.9/12, mb1 4.0/13, mb1mx3.8/64, mbtmp3.9/13, ML3.7/1, MS2.8/2, Ms1 2.8/2, ms1mx2.4/74, Error ellipse: s-maj=22.9km s-min=21.0km az=120.0*

*NEIC **09** 07:02:49.3±0.4, 46°.58N×150°.76E, h10^{km}, mb4.6/9, Error ellipse: s-maj=11.4km s-min=8.5km az=147.0*

ISC 09 07:02:48.0±0.7**, 45°.44N**±0°.09×**151°.21E**±0°.08**, h42**^{km}**, n93, σ1^{s}.94**/97**, mb4.2**/21**, 2C-4D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril’sk	2.37	266	i P	Pn	07 03 25.0	+0.7
KUR				AMB	AMB	07 03 29.0	
	47nm,0.2s						
KUR				AMB	AMB	07 03 29.0	
	27nm,0.2s						
KUR				eS	Sn	07 03 56.0	+3.9
KUR				A	A	07 04 04.0	
	370nm,0.3s						
KUR				A	A	07 04 04.0	
	310nm,0.3s						
KUR	Kuril’sk	2.37	266	d iPN	Pn	07 03 25.9	+1.6
KUR				eS	Sn	07 03 56.6	+4.5
KUR				pmax	pmax		
	comp=Z,126nm,0.3s						
KUR				pmax	pmax		
	comp=N,47nm,0.1s						
KUR				smax	smax		
	comp=N,311nm,0.3s						
KUR				smax	smax		
	comp=E,135nm,0.2s						
SHO	Shikotan	3.50	245	i P	Pn	07 03 39.0	-0.8
SHO				AMB	AMB	07 03 50.0	
	comp=E,9.0nm,0.2s						
SHO				AMB	AMB	07 03 50.0	
	comp=E,47nm,0.2s						
SHO				AMB	AMB	07 03 50.0	
	comp=E,35nm,0.2s						
SHO				eS	Sn	07 04 20.0	0.0
SHO				A	A	07 04 26.0	
	comp=E,85nm,0.2s						
SHO				A	A	07 04 26.0	
	comp=E,24nm,0.2s						
SHO	Shikotan	3.50	245	c iPN	Pn	07 03 39.5	-0.3
SHO				eS	Sn	07 04 20.9	+0.9
SHO				pmax	pmax		
	comp=E,35nm,0.2s						
SHO				pmax	pmax		
	comp=Z,47nm,0.2s						
SHO				pmax	pmax		
	comp=N,9.0nm,0.1s						
SHO				smax	smax		
	comp=N,85nm,0.3s						
SHO				smax	smax		
	comp=E,24nm,0.2s						

YUK	**Yuzh-Kuril’sk**	**4.06**	**252**	*i* P	**Pn**	**07 03 48.0**	**+0.4**
YUK				AMB	AMB	07 03 49.0	
	comp=E,43nm,0.3s						
YUK				AMB	AMB	07 03 49.0	
	comp=E,16nm,0.3s						
YUK				*e*S	**Sn**	**07 04 36.0**	**+2.2**
YUK				A	A	07 04 53.0	
	comp=E,63nm,0.3s						
YUK				A	A	07 04 53.0	
	comp=E,57nm,0.3s						
YUK	**Yuzh-Kuril’sk**	**4.06**	**252**	⇑*i*PN	**Pn**	**07 03 48.3**	**+0.7**
YUK				*e*S	**Sn**	**07 04 36.8**	**+3.0**
YUK				pmax	pmax		
	comp=Z,158nm,0.2s						
YUK				pmax	pmax		
	comp=E,43nm,0.3s						
LAGR	**Lagunnoye**	**4.11**	**252**	*e*P	**Pn**	**07 03 49.1**	**+1.0**
LAGR				*e*S	**Sn**	**07 04 39.0**	**+4.2**
LAGR	**Lagunnoye**	**4.11**	**252**	*e*PN	**Pn**	**07 03 49.1**	**+1.0**
LAGR				S	**Sn**	**07 04 39.1**	**+4.2**
GRPR	**Tuman**	**4.14**	**251**	*e*P	**Pn**	**07 03 49.0**	**+0.4**
GRPR				AMB	AMB	07 03 57.0	
	comp=E,11nm,0.3s						
GRPR				*e*S	**Sn**	**07 04 39.0**	**+3.3**
GRPR	**Tuman**	**4.14**	**251**	*e*PN	**Pn**	**07 03 49.5**	**+0.9**
GRPR				*e*S	**Sn**	**07 04 39.6**	**+3.9**
GRPR				pmax	pmax		
	comp=Z,108nm,0.3s						
GLVR	**Golovnino**	**4.41**	**249**	*e*P	**Pn**	**07 03 52.0**	**-0.3**
GLVR				*e*S	**Sn**	**07 04 45.0**	**+2.7**
GLVR	**Golovnino**	**4.41**	**249**	*e*PN	**Pn**	**07 03 52.6**	**+0.3**
GLVR				S	**Sn**	**07 04 45.0**	**+2.7**
NEM2	**Nemuro 2**	**4.43**	**244**	P	**Pn**	**07 03 51.3**	**-1.4**
NEM2				*e*S	**Sn**	**07 04 38.8**	**-4.2**
JRA	**Rausu**	**4.60**	**253**	P	**Pn**	**07 03 56.2**	**+1.3**
JNK	**Nakash**	**5.00**	**250**	P	**Pn**	**07 04 00.5**	**+0.1**
JAK	**Akkeshi**	**5.28**	**245**	P	**Pn**	**07 04 02.7**	**-1.6**
JAK				*e*S	**Sn**	**07 05 03.5**	**-0.4**
JTKR	**Abashiri--Toko**	**5.41**	**257**	P	**Pn**	**07 04 07.6**	**+1.6**
JAR	**Ashorobuto**	**5.75**	**251**	P	**Pn**	**07 04 11.4**	**+0.7**
JAR				*e*S	**Sn**	**07 05 17.7**	**+2.3**
JMP	**Maruseppu**	**5.78**	**258**	P	**Pn**	**07 04 13.1**	**+2.0**
JOB	**Onbets**	**5.88**	**247**	P	**Pn**	**07 04 12.1**	**-0.4**
JOB				*e*S	**Sn**	**07 05 18.3**	**-0.3**
YSS	**Yuzh-Sakhalins**	**6.06**	**287**	*e*Pn	**Pn**	**07 04 11.9**	**-3.1**
YSS	**Yuzh-Sakhalins**	**6.06**	**287**	*e*PN	**Pn**	**07 04 11.9**	**-3.1**
SKR	**Severo-Kuril’s**	**6.19**	**30**	*i* P	**Pn**	**07 04 18.0**	**+1.3**
JKK2	**Kamakawa 2**	**6.24**	**258**	P	**Pn**	**07 04 19.5**	**+2.1**
ASAJ	**Asahikawa**	**6.27**	**261**	Pn	**Pn**	**07 04 20.0**	**+2.1**
	comp=Z,1.7nm,0.3s,baz=45,slow=16,SNR=6.0						
ASAJ				LR	LR	07 07 04.2	
	comp=Z,127nm,19.7s,baz=156,slow=41						
ASAJ	**Asahikawa**	**6.27**	**261**	PN	**Pn**	**07 04 20.0**	**+2.1**
ASAJ				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,127nm,19.7s						
JCH	**Churui**	**6.33**	**246**	P	**Pn**	**07 04 18.3**	**-0.3**
JCH				*e*S	**Sn**	**07 05 28.9**	**-0.6**
MYR	**Moyori**	**6.54**	**244**	*e*P	**Pn**	**07 04 21.0**	**-0.5**
MYR				*e*S	**Sn**	**07 05 32.3**	**-2.5**
ERM	**Erimo**	**6.77**	**242**	*e*Pn	Pn	07 04 30.5	+5.9
ERM	**Erimo**	**6.77**	**242**	*de*PN	**Pn**	**07 04 25.8**	**+1.2**
JNBK	**Urakawa-nobuka**	**6.88**	**246**	P	**Pn**	**07 04 25.7**	**-0.6**
JNBK				*e*S	**Sn**	**07 05 40.5**	**-2.7**
JBT2	**Biratori 2**	**6.90**	**250**	P	**Pn**	**07 04 26.2**	**-0.3**
JNB	**Noboribetsu**	**7.92**	**252**	P	**Pn**	**07 04 40.3**	**-0.2**
JKB	**Kayabe**	**8.19**	**248**	P	**Pn**	**07 04 42.7**	**-1.5**
JKB				*e*S	**Sn**	**07 06 10.7**	**-4.6**
MAJO	**Matsushiro**	**13.23**	**232**	*e*P	Pn	07 05 49.1	-4.1
MAJO	**Matsushiro**	**13.23**	**232**	⇓*e*PN	**P**	**07 05 59.9**	**-2.3**
MAJO				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KSRS	**Korea Array**	**19.15**	**254**	LR	LR	07 14 55.1	
	comp=Z,20nm,18.4s,baz=30,slow=38						
INCN	**Inchon**	**20.01**	**255**	*e*P	**Pn**	**07 07 21.4**	**+2.4**
	comp=Z,15nm,0.5s						
INCN	**Inchon**	**20.01**	**255**	*e*P	**Pn**	**07 07 21.4**	**+2.4**
INCN				pmax	pmax		
	comp=Z,15nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**28.74**	**148**	T	T	07 39 20.4	
	baz=338,slow=75,SNR=10.0						
H11N1	**WAKE ISLAND Hy**	**28.75**	**148**	T	T	07 39 20.9	
	baz=338,slow=75,SNR=16						
H11N3	**WAKE ISLAND Hy**	**28.75**	**148**	T	T	07 39 28.7	
	baz=338,slow=75,SNR=8.7						
H11S1	**WAKE ISLAND Hy**	**29.79**	**149**	T	T	07 40 45.7	
	baz=338,slow=76,SNR=12						
H11S3	**WAKE ISLAND Hy**	**29.80**	**149**	T	T	07 40 41.7	
	baz=338,slow=76,SNR=13						
H11S2	**WAKE ISLAND Hy**	**29.81**	**149**	T	T	07 40 44.6	
	baz=338,slow=76,SNR=12						
ULN	**Ulaanbaatar**	**30.10**	**291**	⇓*e*P	P	07 08 48.3	-5.2
ULN				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ILAR	**Eielson Array**	**38.39**	**37**	P	**P**	**07 10 01.9**	**-2.9**
	comp=Z,0.3nm,0.8s,baz=279,slow=9.0,SNR=5.1						
ILAR	**Eielson Array**	**38.39**	**37**	*e*P	**P**	**07 10 04.8**	**0.0**
MK31	**Makanchi Array**	**46.37**	**298**	*e*P	**P**	**07 11 09.3**	**-0.6**
MK31	**Makanchi Array**	**46.37**	**298**	*e*P	**P**	**07 11 09.3**	**-0.6**
MK32	**Makanchi Array**	**46.37**	**298**	*e*P	**P**	**07 11 10.1**	**+0.3**
MKAR	**Makanchi Array**	**46.37**	**298**	P	**P**	**07 11 10.1**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=69,slow=7.1,SNR=7.4						
MKAR	**Makanchi Array**	**46.37**	**298**	*e*P	**P**	**07 11 09.5**	**-0.4**
	comp=Z,6.1nm,0.4s						
MK01	**Makanchi Array**	**46.38**	**298**	*e*P	**P**	**07 11 10.3**	**+0.4**
WRAK	**Wrangell Islan**	**46.99**	**48**	*e*P	**P**	**07 11 15.9**	**+1.5**
	comp=Z,7.9nm,1.4s						
KURK	**Kurchatov**	**46.99**	**304**	*e*P	**P**	**07 11 14.0**	**-0.6**
KURK	**Kurchatov**	**46.99**	**304**	*e*P	**P**	**07 11 14.0**	**-0.6**
KURBB	**Kurchatov Arra**	**47.08**	**304**	P	**P**	**07 11 14.0**	**-1.3**
	comp=Z,0.4nm,0.5s,baz=73,slow=8.5,SNR=4.2						
KK31	**Karatay Array**	**55.47**	**299**	*e*P	**P**	**07 12 17.8**	**-0.5**
KK31	**Karatay Array**	**55.47**	**299**	*e*P	**P**	**07 12 17.8**	**-0.5**
KKAR	**Karatay Array**	**55.47**	**299**	*e*P	**P**	**07 12 17.9**	**-0.4**
KKAR	**Karatay Array**	**55.47**	**299**	*e*P	**P**	**07 12 17.9**	**-0.4**
ABKAR	**Akbulak array**	**58.24**	**310**	*e*P	**P**	**07 12 36.6**	**-1.2**
KCPM	**Cahto Peak**	**60.19**	**62**	*e*P	**P**	**07 12 54.9**	**+3.3**
	comp=Z,31nm,1.3s						
HJGM	**San Juan Grade**	**63.19**	**64**	*e*P	P	07 13 16.7	+5.0
NVAR	**Mina Array Bea**	**64.22**	**61**	P	P	07 13 23.1	+4.4
	comp=Z,0.2nm,0.6s,baz=297,slow=6.0,SNR=2.6						
FIA1	**FINESS Array S**	**64.65**	**334**	*e*P	**P**	**07 13 19.4**	**-1.5**
FIA0	**FINESS Array S**	**64.65**	**334**	*e*P	**P**	**07 13 18.7**	**-2.1**
FIA0	**FINESS Array S**	**64.65**	**334**	*e*P	**P**	**07 13 18.7**	**-2.1**
FINES	**FINESS Array B**	**64.65**	**334**	P	**P**	**07 13 18.7**	**-2.1**
	comp=Z,2.2nm,0.6s,baz=50,slow=6.0,SNR=8.0						
FINES	**FINESS Array B**	**64.65**	**334**	*e*P	**P**	**07 13 19.3**	**-1.5**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
GEYT	**Alibeck**	**66.13**	**300**	P	**P**	**07 13 29.8**	**-1.1**
	comp=Z,0.6nm,0.4s,baz=47,slow=6.3,SNR=2.8						
WB2	**Warramunga Arr**	**66.86**	**197**	*e*P	P	07 13 48.3	+13
	comp=Z,8.6nm,1.4s						
WR1	**Warramunga Arr**	**66.86**	**197**	*e*P	P	07 13 47.3	+12
	comp=Z,2.5nm,1.0s						
WRA	**Warramunga Arr**	**66.86**	**197**	P	P	07 13 47.3	+12
	comp=Z,0.7nm,0.7s,baz=16,slow=6.7,SNR=5.6						
NC405	**NORSAR Array S**	**68.84**	**340**	*e*P	**P**	**07 13 47.0**	**-0.6**
NB201	**NORSAR Array S**	**69.00**	**340**	*e*P	**P**	**07 13 47.3**	**-1.3**
NB2	**NORSAR Subarra**	**69.03**	**340**	P	**P**	**07 13 47.3**	**-1.5**
	comp=Z,0.9nm,0.6s,baz=28,slow=6.2						
HFS	**Hagfors**	**69.21**	**339**	P	**P**	**07 13 47.5**	**-2.4**
	comp=Z,3.2nm,0.5s,baz=42,slow=4.5,SNR=18						
ASAR	**Alice Springs**	**70.56**	**197**	P	P	07 14 11.8	+13
	comp=Z,0.4nm,0.7s,baz=7.2,slow=5.3,SNR=6.2						
KBZ	**Khabaz**	**70.80**	**313**	P	**P**	**07 13 59.7**	**-0.2**
	comp=Z,4.6nm,0.8s,baz=79,slow=7.8,SNR=6.5						
AKASG	**Malin Array Be**	**71.88**	**325**	P	**P**	**07 14 05.0**	**-1.3**
	comp=Z,1.0nm,0.3s,baz=38,slow=6.9,SNR=5.4						
AKASG	**Malin Array Be**	**71.88**	**325**	P	**P**	**07 14 05.0**	**-1.3**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKBB	**Malin Array Si**	**71.88**	**325**	*e*P	**P**	**07 14 05.0**	**-1.3**
	comp=Z,3.3nm,0.8s						
KIEV	**Kiev**	**71.90**	**325**	*e*P	**P**	**07 14 04.6**	**-1.7**
	comp=Z,3.3nm,0.8s						
KIEV	**Kiev**	**71.90**	**325**	*e*P	**P**	**07 14 04.6**	**-1.7**
KIEV				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BUR08	**Bucovina Ar. S**	**75.92**	**326**	*e*P	**P**	**07 14 29.5**	**-0.6**
BUR04	**Bucovina Ar. S**	**75.93**	**326**	*e*P	**P**	**07 14 29.5**	**-0.7**
MORC	**Moravsky Berou**	**76.96**	**331**	*e*P	**P**	**07 14 35.4**	**-0.5**
	comp=Z,2.7nm,0.8s						
MORC	**Moravsky Berou**	**76.96**	**331**	*e*P	**P**	**07 14 35.4**	**-0.5**
MORC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GERES	**GERESS Array B**	**79.03**	**333**	P	**P**	**07 14 46.3**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=39,slow=5.0,SNR=2.3						
SNAA	**Sanae**	**150.93**	**197**	*e*PKPbc	**PKPab**	**07 22 45.8**	**+3.5**
SNAA	**Sanae**	**150.93**	**197**	*e*PKIKP	**PKPab**	**07 22 45.8**	**+3.5**

JMA 09 07:15:40.8±0.1**, 35°.87N**×**140°.26E, h36**^{km}±1^{km}**, M2.4,**
Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIHU	**Itakohorinouch**	**0.24**	**66**	P	Pn	07 15 48.3	-0.8
JIHU				*e*S	Sn	07 15 53.3	-3.2
JYT	**Yasato**	**0.36**	**351**	P	Pn	07 15 49.4	+0.1
JYT				S	Sn	07 15 55.3	-0.6
JHU	**Hanno**	**0.80**	**269**	P	Pn	07 15 55.7	+0.2
JHU				S	Sn	07 16 06.7	+0.6
JAG	**Ashikaga**	**0.86**	**311**	P	Pn	07 15 56.2	-0.1
MAT	**Matsushiro**	**1.79**	**293**	P	Pn	07 16 10.4	+1.2

BJI ***09*** *07:20:52.6, 49°.11N×147°.42E, h545^{km}, mb5.5/57, mB5.1/43*

ISCJB ***09*** *07:20:53.7±0.1, 49°.21N±0°.02×147°.32E±0°.02, h553^{km}±1^{km}, mb5.0/667, Error ellipse: s-maj=2.5km s-min=1.5km az=159.4*

SKHL ***09*** *07:20:53.7±0.8, 48°.88N×147°.62E, h568^{km}±37^{km}, mb5.9/5, msh5.8/4*

MOS ***09*** *07:20:53.5±0.9, 49°.12N×147°.38E, h556^{km}, mb5.6/56, Error ellipse: s-maj=5.6km s-min=3.8km az=71.3*

IDC ***09*** *07:20:54.9±0.5, 49°.18N×147°.33E, h560^{km}±5^{km}, mb4.7/59, mb1 4.8/68, mb1mx4.7/74, mbtmp5.6/68, Error ellipse: s-maj=5.7km s-min=4.5km az=122.0*

KRSC ***09*** *07:20:54.2±1.4, 49°.00N×147°.86E, h544^{km}±20^{km}, ML5.7*

NEIC ***09*** *07:20:55.0±0.2, 49°.21N×147°.26E, h558^{km}±2^{km}, mb4.9/289, Error ellipse: s-maj=2.4km s-min=1.6km az=161.0*

GCMT ***09*** *07:20:55.0±0.3, 49°.12N×147°.25E, h556^{km}±2^{km}, MW5.4/67, Moment Tensor Solution. s67,c92; Duration: 1^{s}2 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.34±.03; M$_{\theta\theta}$-0.10±.05; M$_{\phi\phi}$-0.24±.05; M$_{r\theta}$-1.02±.05; M$_{\theta\phi}$-0.28±.05; M$_{\phi r}$-1.07±.05; Best double couple: M$_0$1.53200×10^{17} NP1:φ$_s$224.00000°, δ82.00000°, λ92.00000°. NP2: φ$_s$28.00000°, δ8.00000°, λ75.00000°. Principal axes: T 1.4780, Plg53.0000°, Azm136.0000°; N 0.1090, Plg2.0000°, Azm43.0000°; P -1.5870, Plg37.0000°, Azm312.0000°; nsta1 refers to body waves, cutoff=40s.*

ISC 09 07:20:54.7±0.3**, 49°.13N**±0°.03×**147°.42E**±0°.03**, h560**^{km}±2^{km}**,**
h559^{km}**:pP-P, n2037,** σ1^s**40**/2329**, mb5.0**/714**, 59C-194D,**
Sea of Okhotsk

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UGL	**Uglegorsk**	**3.52**	**271**	*i* P	**P**	**07 22 14.9**	**+1.2**
UGL				AMB	AMB	07 22 15.5	
	190nm,1.0s						
UGL				AMB	AMB	07 22 15.5	
	14μm,0.9s						
UGL				*i* S	**S**	**07 23 18.7**	**+0.4**
UGL				A	A	07 23 20.0	
	18μm,2.3s						
UGL				A	A	07 23 20.0	
	11μm,2.3s						
UGL				A	A	07 23 21.0	
	3μm,1.4s						
UGL				A	A	07 23 21.0	
	4μm,1.4s						
TYV	**Tymovskoe**	**3.53**	**301**	*e*P	**P**	**07 22 14.8**	**+1.1**
TYV				AMB	AMB	07 22 15.3	
	12μm,2.0s						
TYV				AMB	AMB	07 22 15.4	
	8μm,0.8s						
TYV				*e*S	**S**	**07 23 17.7**	**-0.8**
TYV				A	A	07 23 21.0	
	1μm,1.0s						
TYV				A	A	07 23 21.0	
	7μm,4.0s						
TYV	**Tymovskoe**	**3.53**	**301**	⇑*i*P	**P**	**07 22 14.9**	**+1.2**
TYV				*e*S	**S**	**07 23 18.7**	**+0.2**
TYV				pmax	pmax		
	comp=Z,12μm,2.2s						
TYV				pmax	pmax		
	comp=Z,8μm,0.8s						
TYV				smax	smax		
	comp=N,4μm,4.2s						
TYV				smax	smax		
	comp=E,7μm,4.2s						
TYV				smax	smax		
	comp=E,1μm,1.2s						
YSS	**Yuzh-Sakhalins**	**3.81**	**237**	*e*P	**P**	**07 22 16.9**	**+1.0**
YSS				AMB	AMB	07 22 17.3	
	comp=E,3μm,2.0s						
YSS				AMB	AMB	07 22 17.4	
	comp=E,2μm,0.7s						
YSS				*e*S	**S**	**07 23 21.2**	**-0.9**
YSS				A	A	07 23 23.5	
	comp=E,2μm,1.0s						
YSS				A	A	07 23 24.5	
	comp=E,11μm,3.0s						
YSS	**Yuzh-Sakhalins**	**3.81**	**237**	*e*P	**P**	**07 22 16.8**	**+1.0**
YSS	**Yuzh-Sakhalins**	**3.81**	**237**	α*i*P	**P**	**07 22 16.9**	**+1.0**
YSS				*i* S	**S**	**07 23 21.9**	**-0.2**
YSS				pmax	pmax		
	comp=Z,2μm,0.7s						
YSS				pmax	pmax		
	comp=N,740nm,0.5s						
YSS				pmax	pmax		
	comp=E,1μm,0.8s						
YSS				pmax	pmax		
	comp=Z,1μm,3.2s						
YSS				pmax	pmax		
	comp=N,800nm,3.1s						
YSS				smax	smax		
	comp=N,2μm,1.6s						
YSS				smax	smax		
	comp=E,2μm,1.0s						
YSS				MLR	MLR		
	comp=Z,1μm,9.0s						
KUR	**Kuril’sk**	**3.91**	**175**	*i* P	**P**	**07 22 15.0**	**-1.6**
KUR				AMB	AMB	07 22 16.0	
	comp=Z,563nm,0.4s						
KUR				AMB	AMB	07 22 16.0	
	comp=Z,297nm,0.4s						
KUR				AMB	AMB	07 22 16.0	
	comp=Z,3μm,0.4s						
KUR				*i* S	**S**	**07 23 20.0**	**-3.4**
KUR				A	A	07 23 27.0	
	comp=Z,563nm,0.8s						
KUR				A	A	07 23 27.0	
	comp=Z,239nm,0.8s						
KUR	**Kuril’sk**	**3.91**	**175**	*d i*P	**P**	**07 22 15.2**	**-1.4**
KUR				*i* S	**S**	**07 23 20.6**	**-2.8**
KUR				pmax	pmax		
	comp=Z,3μm,0.4s						
KUR				pmax	pmax		
	comp=E,244nm,0.5s						
KUR				pmax	pmax		
	comp=N,502nm,0.3s						
KUR				pmax	pmax		
	comp=Z,7μm,1.1s						
KUR				smax	smax		
	comp=E,14μm,2.8s						
KUR				smax	smax		
	comp=N,7μm,3.2s						
KUR				smax	smax		
	comp=N,586nm,0.8s						
KUR				smax	smax		
	comp=E,280nm,0.9s						
LAGR	**Lagunnoye**	**5.20**	**193**	*i* P	**P**	**07 22 23.0**	**-3.8**
LAGR				AMB	AMB	07 22 36.0	
	comp=E,1μm,0.7s						
LAGR				AMB	AMB	07 22 36.0	
	comp=E,574nm,0.7s						
LAGR				AMB	AMB	07 22 36.0	
	comp=E,1μm,0.7s						
LAGR				*i* S	**S**	**07 23 36.9**	**-5.1**
LAGR	**Lagunnoye**	**5.20**	**193**	*c i*P	**P**	**07 22 23.5**	**-3.3**
LAGR				*i* S	**S**	**07 23 36.9**	**-5.1**
LAGR				pmax	pmax		
	comp=Z,1μm,0.5s						
LAGR				pmax	pmax		
	comp=N,1μm,0.7s						
LAGR				pmax	pmax		
	comp=E,574nm,0.7s						
YUK	**Yuzh-Kuril’sk**	**5.21**	**192**	*i* P	**P**	**07 22 24.0**	**-2.9**
YUK				AMB	AMB	07 22 29.0	
	comp=E,426nm,0.4s						
YUK				AMB	AMB	07 22 29.0	
	comp=E,533nm,0.4s						
YUK				AMB	AMB	07 22 29.0	
	comp=E,830nm,0.4s						
YUK				*i* S	**S**	**07 23 36.0**	**-6.2**
YUK	**Yuzh-Kuril’sk**	**5.21**	**192**	*d i*P	**P**	**07 22 24.2**	**-2.7**
YUK				*i* S	**S**	**07 23 36.4**	**-5.8**
YUK				pmax	pmax		
	comp=Z,830nm,0.6s						
YUK				pmax	pmax		
	comp=E,533nm,0.3s						
YUK				pmax	pmax		
	comp=N,426nm,0.4s						
GRPR	**Tuman**	**5.27**	**193**	*i* P	**P**	**07 22 24.0**	**-3.4**
GRPR				AMB	AMB	07 22 25.0	
	comp=N,200nm,0.5s						
GRPR				AMB	AMB	07 22 25.0	
	comp=N,209nm,0.5s						
GRPR				AMB	AMB	07 22 25.0	
	comp=N,944nm,0.5s						
GRPR				*i* S	**S**	**07 23 37.7**	**-5.4**
GRPR	**Tuman**	**5.27**	**193**	*c i*P	**P**	**07 22 24.2**	**-3.2**
GRPR				*i* S	**S**	**07 23 37.7**	**-5.4**
GRPR				pmax	pmax		
	comp=N,200nm,0.5s						
GRPR				pmax	pmax		
	comp=E,209nm,0.5s						
GRPR				pmax	pmax		
	comp=Z,944nm,0.5s						
SHO	**Shikotan**	**5.28**	**185**	*i* P	**P**	**07 22 24.0**	**-3.4**
SHO				AMB	AMB	07 22 25.0	
	comp=Z,590nm,0.4s						
SHO				AMB	AMB	07 22 25.0	
	comp=Z,355nm,0.4s						
SHO				AMB	AMB	07 22 25.0	
	comp=Z,1μm,0.4s						
SHO				*i* S	S	07 23 34.0	-9.3
SHO	**Shikotan**	**5.28**	**185**	*d i*P	**P**	**07 22 24.1**	**-3.4**
SHO				*i* S	**S**	**07 23 34.9**	**-8.4**
SHO				pmax	pmax		
	comp=Z,1μm,0.4s						
SHO				pmax	pmax		
	comp=E,355nm,0.2s						
SHO				pmax	pmax		
	comp=N,590nm,0.5s						
JWK2	**Keihoku**	**5.36**	**227**	P	**P**	**07 22 28.9**	**+0.8**
GLVR	**Golovnino**	**5.55**	**194**	*i* P	**P**	**07 22 27.0**	**-2.8**
GLVR				AMB	AMB	07 22 28.0	
	comp=N,521nm,0.5s						
GLVR				AMB	AMB	07 22 28.0	
	comp=N,372nm,0.5s						
GLVR				AMB	AMB	07 22 28.0	
	comp=N,3μm,0.5s						
GLVR				*i* S	**S**	**07 23 42.3**	**-5.3**
GLVR	**Golovnino**	**5.55**	**194**	*d i*P	**P**	**07 22 27.3**	**-2.5**
GLVR				*i* S	**S**	**07 23 42.3**	**-5.3**
GLVR				pmax	pmax		
	comp=E,372nm,0.5s						
GLVR				pmax	pmax		
	comp=Z,3μm,0.5s						
GLVR				pmax	pmax		
	comp=N,521nm,0.4s						
SKR	**Severo-Kuril’s**	**5.83**	**71**	*i* P	**P**	**07 22 31.0**	**-1.0**
SKR				AMB	AMB	07 22 32.0	
	comp=N,4μm,2.0s						
SKR				AMB	AMB	07 22 32.0	
	comp=N,935nm,0.9s						
SKR				*e*S	**S**	**07 23 47.0**	**-4.9**
SKR				A	A	07 23 52.0	
	comp=N,1μm,1.0s						
SKR				A	A	07 23 52.0	
	comp=N,2μm,1.0s						
SKR	**Severo-Kuril’s**	**5.83**	**71**	*e*P	**P**	**07 22 31.0**	**-1.0**
SKR				*e*S	**S**	**07 23 44.9**	**-7.0**
SKR	**Severo-Kuril’s**	**5.83**	**71**	⇓*i*P	**P**	**07 22 31.1**	**-1.0**
SKR				*e*S	**S**	**07 23 47.6**	**-4.3**
SKR				pmax	pmax		
	comp=Z,4μm,1.8s						
SKR				pmax	pmax		
	comp=Z,935nm,0.9s						
SKR				pmax	pmax		
	comp=Z,700nm,2.6s						
SKR				smax	smax		
	comp=E,2μm,1.5s						
SKR				smax	smax		
	comp=N,1μm,1.2s						
JMP	**Maruseppu**	**5.84**	**210**	P	**P**	**07 22 30.8**	**-1.6**
NKL	**Nikolayevsk**	**5.84**	**316**	*i* P	**P**	**07 22 33.0**	**+0.9**
NKL				*e*S	**S**	**07 23 46.0**	**-6.0**
NKL				pmax	pmax		
	comp=E,820nm,0.5s						
NKL				pmax	pmax		
	comp=N,2μm,2.0s						
NKL				pmax	pmax		
	comp=E,2μm,2.0s						
NKL				pmax	pmax		
	comp=Z,8μm,2.0s						
NKL				smax	smax		
	comp=N,8μm,6.0s						
NKL				smax	smax		
	comp=E,12μm,6.0s						
NKL				MLR	MLR		
	comp=N,3μm,6.0s						
NKL				MLR	MLR		
	comp=E,6μm,6.0s						
NKL				MLR	MLR		
	comp=Z,2μm,11.0s						
ASAJ	**Asahikawa**	**6.02**	**215**	P	**P**	**07 22 32.7**	**-1.2**
	comp=Z,22nm,0.3s,baz=32,slow=8.3,SNR=146						
ASAJ				S	**S**	**07 23 53.0**	**-2.1**
	comp=Z,4.1nm,0.3s,baz=130,slow=33,SNR=17						
ASAJ				ScP	**ScP**	**07 30 59.5**	**-0.9**
	comp=Z,0.9nm,0.3s,baz=225,slow=2.9,SNR=6.0						
ASAJ	**Asahikawa**	**6.02**	**215**	*e*P	**P**	**07 22 33.0**	**-1.0**
ASAJ				S	**S**	**07 23 53.0**	**-2.1**
ASAJ				ScP	**ScP**	**07 30 59.5**	**-0.9**
ASAJ	**Asahikawa**	**6.02**	**215**	P	**P**	**07 22 33.0**	**-1.0**
PAU	**Pauzhetka**	**6.45**	**65**	*e*P	**P**	**07 22 36.6**	**-1.1**
PAU				*e*S	**S**	**07 23 55.7**	**-6.5**
PAU	**Pauzhetka**	**6.45**	**65**	P	**P**	**07 22 36.6**	**-1.1**
PAU				S	**S**	**07 23 55.7**	**-6.5**
MIPR	**Malaya Ipel’ka**	**6.71**	**59**	*e*P	**P**	**07 22 39.6**	**-0.5**
MIPR				*e*S	**S**	**07 24 01.0**	**-5.7**
MIPR	**Malaya Ipel’ka**	**6.71**	**59**	P	**P**	**07 22 39.6**	**-0.5**
MIPR				S	**S**	**07 24 01.0**	**-5.7**
GRNR	**Gornyy**	**7.28**	**287**	⇓*i*P	**P**	**07 22 49.5**	**+3.9**
GRNR				*e*S	**S**	**07 24 20.3**	**+3.7**
GRNR				pmax	pmax		
	comp=E,510nm,0.6s						
GRNR				pmax	pmax		
	comp=Z,930nm,0.6s						
GRNR				smax	smax		
	comp=N,600nm,1.0s						
GRNR				smax	smax		
	comp=E,720nm,1.0s						
GRNR				smax	smax		
	comp=Z,420nm,1.0s						
KDTR	**Khodutka, Kamc**	**7.31**	**64**	*e*P	**P**	**07 22 44.0**	**-1.7**
KDTR				*e*S	**S**	**07 24 09.2**	**-7.7**
ASAK	**Asacha**	**7.40**	**60**	*e*P	**P**	**07 22 45.5**	**-1.2**
ASAK	**Asacha**	**7.40**	**60**	P	**P**	**07 22 45.5**	**-1.2**
JEW	**Eniwo**	**7.54**	**216**	P	**P**	**07 22 48.1**	**-0.1**
PEA0B	**Petropavlovsk-**	**7.59**	**55**	*e*P	**P**	**07 22 47.9**	**-0.6**
PETK	**Petropavlovsk-**	**7.59**	**55**	P	**P**	**07 22 47.8**	**-0.7**
	baz=240,slow=10						
PETK				S	**S**	**07 24 19.6**	**-2.4**
	baz=222,slow=11						
PETK				ScP	**ScP**	**07 31 01.5**	**-0.1**
	baz=136,slow=3.3						
PETK	**Petropavlovsk-**	**7.59**	**55**	*e*P	**P**	**07 22 47.6**	**-0.8**
PETK				S	**S**	**07 24 19.6**	**-2.4**
PETK				ScP	**ScP**	**07 31 01.5**	**-0.1**
PEA1	**Petropavlovsk-**	**7.59**	**54**	*e*P	**P**	**07 22 47.8**	**-0.7**
PEA1				*e*S	**S**	**07 24 19.6**	**-2.5**
PEA1				*e*ScP	**ScP**	**07 31 01.5**	**-0.1**
MTVR	**Mutnovka**	**7.60**	**60**	*e*P	**P**	**07 22 47.4**	**-1.3**
MTVR				*e*S	**S**	**07 24 18.6**	**-3.7**

MTVR	**Mutnovka**	7.60	60	P	P	07 22 47.4	-1.3
MTVR				S	S	07 24 18.6	-3.7
KRMR	**Karymshinskiy**	7.71	57	eP	P	07 22 48.7	-0.8
KRMR				eS	S	07 24 18.6	-5.3
KRMR	**Karymshinskiy**	7.71	57	P	P	07 22 48.7	-0.8
KRMR				S	S	07 24 18.6	-5.3
JEM	**Erimo**	7.72	204	P	P	07 22 47.8	-2.1
ERM	**Erimo**	7.72	204	eP	P	07 22 47.8	-2.1
ERM	**Erimo**	7.72	204	eP	P	07 22 48.1	-1.9
ERM	**Erimo**	7.72	204	c iP	P	07 22 47.8	-2.1
ERM				pmax	pmax		
	comp=Z,656nm,1.0s						
RUS	**Russkaya**	7.77	61	eP	P	07 22 48.5	-1.7
RUS				eS	S	07 24 19.0	-6.0
RUS	**Russkaya**	7.77	61	P	P	07 22 48.5	-1.7
RUS				S	S	07 24 19.0	-6.0
GNL	**Ganaly**	8.01	51	eP	P	07 22 52.1	-0.5
GNL	**Ganaly**	8.01	51	P	P	07 22 52.1	-0.5
PET	**Petropavlovsk**	8.07	57	eP	P	07 22 52.0	-1.1
PET	**Petropavlovsk**	8.07	57	eP	P	07 22 52.7	-0.5
PET	**Petropavlovsk**	8.07	57	⇑iP	P	07 22 53.1	0.0
PET				i S	S	07 24 22.7	-7.8
PET				pmax	pmax		
	comp=Z,230nm,0.6s						
PET				smax	smax		
	comp=N,1µm,6.5s						
PET				smax	smax		
	comp=N,1µm,12.2s						
PET				MLR	MLR		
	comp=Z,200nm,12.0s						
PET				MLR	MLR		
	comp=Z,500nm,12.0s						
DALK	**Dalny**	8.13	57	eP	P	07 22 53.0	-0.7
DALK				eS	S	07 24 26.0	-5.5
DALK	**Dalny**	8.13	57	P	P	07 22 53.0	-0.7
DALK				S	S	07 24 26.0	-5.5
KOK	**Koryaka**	8.18	55	eP	P	07 22 53.1	-1.2
KOK	**Koryaka**	8.18	55	P	P	07 22 53.1	-1.2
KRX	**Arik**	8.22	55	eP	P	07 22 54.4	-0.3
KRX	**Arik**	8.22	55	P	P	07 22 54.4	-0.3
UGLR	**Uglovaya**	8.24	56	eP	P	07 22 54.9	-0.1
UGLR				eS	S	07 24 29.6	-4.2
UGLR	**Uglovaya**	8.24	56	P	P	07 22 54.9	-0.1
UGLR				S	S	07 24 29.6	-4.2
SMAR	**Somma**	8.26	56	eP	P	07 22 54.9	-0.3
SMAR				eS	S	07 24 29.6	-4.6
SMAR	**Somma**	8.26	56	P	P	07 22 54.9	-0.3
SMAR				S	S	07 24 29.6	-4.6
JSH	**Shimam**	8.28	221	P	P	07 22 53.7	-1.7
SDLR	**Sedlovina**	8.31	56	eP	P	07 22 55.1	-0.5
SDLR				eS	S	07 24 29.2	-5.8
SDLR	**Sedlovina**	8.31	56	P	P	07 22 55.1	-0.5
SDLR				S	S	07 24 29.2	-5.8
NLC	**Nalytchevo**	8.52	57	eP	P	07 22 56.9	-0.6
NLC				eS	S	07 24 33.2	-5.2
NLC	**Nalytchevo**	8.52	57	P	P	07 22 56.9	-0.6
NLC				S	S	07 24 33.2	-5.2
SPN	**Mys Shipunski**	8.86	59	eP	P	07 22 59.0	-2.0
SPN				eS	S	07 24 37.1	-7.8
SPN	**Mys Shipunski**	8.86	59	P	P	07 22 59.0	-2.0
SPN				S	S	07 24 37.1	-7.8
KII	**Karymskiy**	8.95	52	eP	P	07 22 59.7	-2.2
KII	**Karymskiy**	8.95	52	P	P	07 22 59.7	-2.2
JOT	**Ohata**	8.96	212	P	P	07 23 01.1	-1.1
JTM	**Tenmabayashi**	9.48	211	P	P	07 23 05.8	-1.6
ESO	**Esso**	9.66	41	eP	P	07 23 10.5	+1.5
ESO	**Esso**	9.66	41	P	P	07 23 10.5	+1.5
TUMR	**Tumrok**	9.94	47	eP	P	07 23 12.6	+0.7
TUMR				eS	S	07 25 02.6	-2.2
TUMR	**Tumrok**	9.94	47	P	P	07 23 12.6	+0.7
TUMR				S	S	07 25 02.6	-2.2
KMNR	**Kamenistaya**	10.25	45	eP	P	07 23 16.1	+1.1
KMNR	**Kamenistaya**	10.25	45	P	P	07 23 16.1	+1.1
KOZ	**Kozyrevsk**	10.26	43	eP	P	07 23 16.5	+1.4
KOZ	**Kozyrevsk**	10.26	43	P	P	07 23 16.5	+1.4
KLR	**Kul'dur**	10.26	276	P	P	07 23 15.2	0.0
	comp=Z,1.4nm,0.3s,baz=79,slow=10,SNR=600						
KLR				S	S	07 25 10.6	-0.3
	comp=Z,0.4nm,0.3s,baz=242,slow=15,SNR=9.0						
KLR	**Kul'dur**	10.26	276	eP	P	07 23 15.8	+0.6
KLR	**Kul'dur**	10.26	276	eP	P	07 23 15.2	0.0
KLR				eS	S	07 25 10.6	-0.3
KLR	**Kul'dur**	10.26	276	d iP	P	07 23 15.8	+0.6
KPT	**Kopyto**	10.36	44	eP	P	07 23 17.0	+0.8
KPT	**Kopyto**	10.36	44	P	P	07 23 17.0	+0.8
MKZ	**Mys Kozlova**	10.38	53	eP	P	07 23 14.0	-2.3
MKZ				eS	S	07 25 05.2	-7.6
MKZ	**Mys Kozlova**	10.38	53	P	P	07 23 14.0	-2.3
MKZ				S	S	07 25 05.2	-7.6
KIRR	**Kirishev**	10.41	44	eP	P	07 23 17.3	+0.6
KIRR	**Kirishev**	10.41	44	P	P	07 23 17.3	+0.6
BZMR	**Bezymyannaya**	10.47	44	eP	P	07 23 18.4	+1.1
BZMR	**Bezymyannaya**	10.47	44	P	P	07 23 18.4	+1.1
BZWR	**Bezymyannyi-We**	10.49	44	eP	P	07 23 18.5	+0.9
BZWR	**Bezymyannyi-We**	10.49	44	P	P	07 23 18.5	+0.9
JOM	**Ohasama**	10.60	207	P	P	07 23 18.7	-0.2
LGNR	**Loginova**	10.64	44	eP	P	07 23 20.3	+1.0
LGNR	**Loginova**	10.64	44	P	P	07 23 20.3	+1.0
MA2	**Magadan**	10.64	9	P	P	07 23 19.2	+0.3
	comp=Z,12nm,0.3s,baz=194,slow=9.1,SNR=38						
MA2				S	S	07 25 17.6	0.0
	comp=Z,2.6nm,0.3s,baz=273,slow=22,SNR=21						
MA2	**Magadan**	10.64	9	eP	P	07 23 19.2	+0.3
MA2				eS	S	07 25 17.6	0.0
ZLN	**Zelenaya**	10.66	45	eP	P	07 23 20.5	+1.3
ZLN	**Zelenaya**	10.66	45	P	P	07 23 20.5	+1.3
KRSR	**Krestovskiy**	10.66	43	eP	P	07 23 19.5	+0.2
KRSR	**Krestovskiy**	10.66	43	P	P	07 23 19.5	+0.2
CIRR	**Tsirk**	10.69	44	eP	P	07 23 20.4	+0.8
CIRR	**Tsirk**	10.69	44	P	P	07 23 20.4	+0.8
KLY	**Klyuchi**	10.76	43	eP	P	07 23 21.3	+1.2
KLY	**Klyuchi**	10.76	43	P	P	07 23 21.3	+1.2
BDR	**Baidarnaya**	11.16	43	eP	P	07 23 24.8	+0.4
BDR	**Baidarnaya**	11.16	43	P	P	07 23 24.8	+0.4
SRKR	**Sorokina**	11.20	43	eP	P	07 23 25.6	+0.9
SRKR	**Sorokina**	11.20	43	P	P	07 23 25.6	+0.9
SMKR	**Semkarok**	11.29	43	eP	P	07 23 25.6	0.0
SMKR				eS	S	07 25 26.3	-3.6
SMKR	**Semkarok**	11.29	43	P	P	07 23 25.6	0.0
SMKR				S	S	07 25 26.3	-3.6
USRK	**Ussuriysk Ar.**	11.69	251	P	P	07 23 28.1	-1.8
	baz=62,slow=11						
USRK				S	S	07 25 34.2	-3.4
	baz=64,slow=17						
USRK				ScP	ScP	07 31 05.5	-1.2
	baz=106,slow=0.9						
KBTR	**Krutoberegovo**	11.71	47	eP	P	07 23 27.3	-2.6
JYA	**Atsumi**	11.91	211	P	P	07 23 32.5	+0.2
JMM	**Marumori**	12.24	206	P	P	07 23 35.8	+0.1
PALN	**Palana**	12.37	32	eP	P	07 23 36.5	-0.1
PALN	**Palana**	12.37	32	P	P	07 23 36.5	-0.1
BKI	**Bering**	12.89	55	eP	P	07 23 43.0	+1.0
BKI				eS	S	07 25 55.3	-4.6
BKI	**Bering**	12.89	55	P	P	07 23 43.0	+1.0
BKI				S	S	07 25 55.3	-4.6
JSD	**Sado**	12.91	214	P	P	07 23 42.6	0.0
MDJ	**Mudanjiang**	13.00	256	P	P	07 23 39.3	-4.1
MDJ				sP		07 25 28.8	
MDJ				S	S	07 25 54.2	-8.2
MDJ				pmax	pmax		
	comp=Z,170nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,2µm,6.1s						
MDJ	**Mudanjiang**	13.00	256	eP	P	07 23 41.4	-2.0
ZEA	**Zeya**	13.38	298	deP	P	07 23 46.1	-1.1
ZEA				eS	S	07 26 03.0	-6.2
ZEA				pmax	pmax		
	comp=N,170nm,0.8s						
ZEA				pmax	pmax		
	comp=E,110nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,290nm,1.0s						
ZEA				pmax	pmax		
	comp=N,200nm,3.0s						
ZEA				pmax	pmax		
	comp=Z,600nm,3.0s						
ZEA				pmax	pmax		
	comp=E,400nm,4.0s						
ZEA				smax	smax		
	comp=E,4µm,5.0s						
ZEA				smax	smax		
	comp=N,4µm,4.0s						
ZEA				MLR	MLR		
	comp=Z,2µm,10.0s						
ZEA				MLR	MLR		
	comp=E,2µm,7.0s						
ZEA				MLR	MLR		
	comp=N,2µm,8.0s						
JYT	**Yasato**	13.94	205	P	P	07 23 52.5	-0.7
SEY	**Seymchan**	14.10	9	P	P	07 23 53.9	-0.5
	comp=N,14nm,0.3s,baz=182,slow=7.6,SNR=581						
SEY				S	S	07 26 22.6	+0.4
	comp=N,0.4nm,0.3s,baz=6.9,slow=21,SNR=11						
SEY	**Seymchan**	14.10	9	eP	P	07 23 54.6	+0.2
SEY	**Seymchan**	14.10	9	eP	P	07 23 53.9	-0.5
SEY	**Seymchan**	14.10	9	d iP	P	07 23 54.6	+0.2
MJB9	**Matsu-Tunnel**	14.27	212	eP	P	07 23 56.2	-0.4
MAJO	**Matsushiro**	14.27	212	eP	P	07 23 56.2	-0.4
MAJO	**Matsushiro**	14.27	212	eP	P	07 23 56.2	-0.4
MAJO				eS	S	07 26 27.1	+0.9
MAJO	**Matsushiro**	14.27	212	c iP	P	07 23 56.2	-0.4
MAT	**Matsushiro**	14.27	212	P	P	07 23 56.4	-0.2
MAT	**Matsushiro**	14.27	212	P	P	07 23 56.1	-0.5
MAT				S	S	07 26 28.6	+2.4
MJAR	**Matsushiro Arr**	14.27	212	P	P	07 23 56.4	-0.2
	comp=N,15nm,0.3s,baz=11,slow=9.2,SNR=123						
MJAR				S	S	07 26 27.1	+0.9
	baz=55,slow=15,SNR=1.8						
MJAR				ScP	ScP	07 31 10.8	-0.3
	comp=N,1.6nm,0.3s,baz=86,slow=0.6,SNR=32						
MJAR	**Matsushiro Arr**	14.27	212	P	P	07 23 56.4	-0.2
MJAR				S	S	07 26 27.1	+0.9
MJAR				ScP	ScP	07 31 10.8	-0.3
JRY	**Ryogami san**	14.52	209	P	P	07 23 58.7	-0.4
JGN	**Niukaw**	14.87	214	P	P	07 24 00.8	-1.9
JOD2	**Odawara 2**	15.16	207	P	P	07 24 06.5	+1.0
JGF	**Kuroka**	15.41	212	P	P	07 24 07.7	-0.4
CLNS	**Chul'man**	15.55	308	eP	P	07 24 08.2	-0.9
CLNS				eS	S	07 26 49.4	+1.1
CLNS				pmax	pmax		
	comp=Z,671nm,1.2s						
CLNS				pmax	pmax		
	comp=E,384nm,1.1s						
CLNS				pmax	pmax		
	comp=N,401nm,1.4s						
CLNS				smax	smax		
	comp=N,936nm,12.1s						
CLNS				smax	smax		
	comp=E,1µm,13.4s						
INU	**Inuyama**	15.76	213	eP	P	07 24 11.1	-0.4
	comp=E,143nm,0.8s						
JSG	**Sagara**	15.98	209	P	P	07 24 13.8	+0.2
CN2	**Changchun**	16.03	259	⇓P	P	07 24 10.9	-3.0
CN2				esP	sP	07 26 14.2	-15
CN2				eS	S	07 26 52.0	-4.5
CN2				pmax	pmax		
	comp=E,30nm,0.7s						
CN2				pmax	pmax		
	comp=E,200nm,4.0s						
YAK	**Yakutsk**	16.27	329	P	P	07 24 14.6	-1.4
	comp=E,0.9nm,0.3s,baz=162,slow=0.6,SNR=353						
YAK				S	S	07 26 58.1	-1.9
	baz=210,slow=20,SNR=6.2						
YAK	**Yakutsk**	16.27	329	eP	P	07 24 14.6	-1.4
	comp=E,3µm,0.8s						
YAK				S	S	07 26 58.1	-1.9
YAK	**Yakutsk**	16.27	329	d iP	P	07 24 14.5	-1.4
YAK				eS	S	07 26 58.1	-1.9
YAK				pmax	pmax		
	comp=Z,3µm,0.9s						
YAK				pmax	pmax		
	comp=N,265nm,0.8s						
YAK				pmax	pmax		
	comp=E,650nm,1.1s						
YAK				pmax	pmax		
	comp=Z,841nm,0.8s						
YAK				pmax	pmax		
	comp=N,392nm,2.0s						
YAK				pmax	pmax		
	comp=E,499nm,1.6s						
YAK				smax	smax		
	comp=N,4µm,3.1s						
YAK				smax	smax		
	comp=E,4µm,3.3s						
JWT	**Wachi**	16.43	217	P	P	07 24 17.3	-0.4
JIE	**Ise**	16.73	212	P	P	07 24 21.0	+0.5
KMSK	**Kamenskaya**	16.93	31	eP	P	07 24 22.1	+0.3
KMSK	**Kamenskaya**	16.93	31	P	P	07 24 22.1	+0.3
JHJ2	**Mitsune**	16.98	202	eP	P	07 24 23.4	+0.6
	comp=E,293nm,0.7s						
JHJ2	**Mitsune**	16.98	202	P	P	07 24 23.7	+0.9
JHJ	**Hachijo jima 2**	16.99	202	P	P	07 24 23.2	+0.4
	comp=E,40nm,0.3s,baz=200,slow=5.7,SNR=14						
JHJ				S	S	07 27 11.8	-0.6
	baz=325,slow=9.9,SNR=2.6						
SMY	**Shemya**	17.16	68	eP	P	07 24 24.9	+0.9
	comp=E,213nm,1.0s						
SMY	**Shemya**	17.16	68	eP	P	07 24 24.9	+0.9
SMY				pmax	pmax		
	comp=Z,213nm,1.0s						
JAD	**Aida**	17.23	219	P	P	07 24 24.2	-0.7
JHS	**Saijyo**	17.63	222	P	P	07 24 29.4	+0.8
JWZ	**Kozaga**	17.86	214	P	P	07 24 31.5	+0.7
HIA	**Hailar**	18.05	281	eP	P	07 24 31.0	-1.3
	comp=Z,250nm,0.6s						
HIA	**Hailar**	18.05	281	eP	P	07 24 31.0	-1.3
HIA				pmax	pmax		
	comp=Z,250nm,0.6s						
KS01	**Wonju Array Si**	18.32	238	eP	P	07 24 35.5	+0.6
KSRS	**Korea Array**	18.32	238	P	P	07 24 36.2	+1.4
	comp=Z,1.7nm,0.3s,baz=43,slow=9.5,SNR=77						
KSRS				S	S	07 27 35.5	+1.7
	comp=Z,0.5nm,0.3s,baz=43,slow=16,SNR=4.4						
KSRS				PcP	PcP	07 28 37.5	+1.0
	comp=Z,0.1nm,0.3s,baz=46,slow=1.6,SNR=4.3						
KSRS				ScP	ScP	07 31 19.6	+0.6
	comp=Z,2.2nm,0.3s,baz=15,slow=1.6,SNR=58						
KS15	**Wonju Array Si**	18.34	238	eP	P	07 24 35.9	+0.8
KSAR	**Wonju Array Be**	18.34	238	P	P	07 24 36.2	+1.1
KSAR				S	S	07 27 35.5	+1.1
KSAR				PcP	PcP	07 28 37.5	+1.0
KSAR				ScP	ScP	07 31 19.6	+0.5
KSAR	**Wonju Array Be**	18.34	238	P	P	07 24 36.2	+1.1
KSAR				S	S	07 27 35.5	+1.1
INCN	**Inchon**	19.02	240	eP	P	07 24 42.2	+0.9
	comp=Z,39nm,0.8s						
INCN	**Inchon**	19.02	240	eP	P	07 24 42.2	+0.9
INCN				pmax	pmax		
	comp=Z,39nm,0.8s						
TJN	**Taejon**	19.40	236	⇓eP	P	07 24 45.6	+0.9
JNU	**Nakatsue**	20.20	224	P	P	07 24 52.1	0.0
	comp=Z,10nm,0.6s,baz=25,slow=5.6,SNR=13						
JNU				S	S	07 28 05.1	+0.7
	comp=Z,15nm,0.9s,baz=105,slow=20,SNR=4.3						
JNU				ScP	ScP	07 31 22.6	-1.0
	comp=Z,26nm,0.9s,baz=33,slow=6.7,SNR=12						
JNU	**Nakatsue**	20.20	224	eP	P	07 24 52.6	+0.5
	comp=Z,25nm,1.0s						
JNU				S	S	07 28 05.1	+0.7
JNU				ScP	ScP	07 31 22.6	-1.0
JNU	**Nakatsue**	20.20	224	P	P	07 24 53.0	+0.9
DL2	**Dalian**	21.08	251	P	P	07 24 59.9	0.0
DL2				sP	sP	07 27 18.8	-6.2
DL2				S	S	07 28 16.9	-1.0
DL2				ScP	ScP	07 31 25.3	-0.3
DL2				pmax	pmax		
	comp=Z,86nm,5.0s						
BOD	**Bodaibo**	21.50	306	eP	P	07 25 02.4	-1.0
BOD				eS	ScS	07 35 07.0	-3.9
BOD				pmax	pmax		
	comp=Z,182nm,1.1s						
CIT	**Chita**	21.59	291	eP	P	07 25 03.2	-1.1
CBIJ	**Chichi jima**	22.37	192	eP	P	07 25 10.9	-0.6
	comp=Z,330nm,0.7s						
CBIJ	**Chichi jima**	22.37	192	P	P	07 25 11.2	-0.4
JCJ	**Chichijima**	22.37	192	P	P	07 25 11.0	-0.6
	comp=Z,318nm,0.7s,baz=342,slow=10.0,SNR=14						
KIWB	**Kanaga Island**	22.57	70	eP	P	07 25 11.4	-1.5
GSTR	**Great Sitkin T**	23.21	69	eP	P	07 25 18.4	-0.3
BJI	**Beijing**	23.89	259	⇓iP	P	07 25 25.3	+0.4
BJI				S	S	07 29 01.6	-0.6
BJI				ScP	ScP	07 31 33.3	+0.3
BJI				ScS	ScS	07 35 20.0	-0.8
BJI				pmax	pmax		
	comp=Z,120nm,0.9s						
BJT	**Baijiatuau**	23.91	259	eP	P	07 25 25.2	+0.1
	comp=Z,111nm,1.1s						
BJT	**Baijiatuau**	23.91	259	eP	P	07 25 25.2	+0.1
BJT				pmax	pmax		
	comp=Z,111nm,1.1s						
TIXI	**Tiksi**	24.15	346	P	P	07 25 25.9	-0.9
	comp=Z,72nm,0.5s,baz=142,slow=8.8,SNR=58						
TIXI				S	S	07 29 03.3	-2.2
	comp=Z,23nm,0.8s,baz=307,slow=20,SNR=9.2						
TIXI				ScP	ScP	07 31 31.6	-1.6
	comp=Z,47nm,0.8s,baz=88,slow=2.9,SNR=15						
TIXI	**Tiksi**	24.15	346	eP	P	07 25 26.2	-0.5
	comp=Z,98nm,0.6s						
TIXI	**Tiksi**	24.15	346	d iP	P	07 25 26.1	-0.6
TIXI				pmax	pmax		
	comp=Z,77nm,0.6s						
ATKA	**Atka Island**	24.33	68	eP	P	07 25 28.4	-0.1
	comp=Z,48nm,1.4s						
JAM	**Amami Oshima**	24.80	220	P	P	07 25 34.1	+1.0
TIA	**Tai'an**	25.56	251	P	P	07 25 40.0	+0.3
TIA				S	S	07 29 28.1	-0.3
TIA				pmax	pmax		
	comp=Z,80nm,0.7s						
SPIA	**Saint Paul Isl**	26.25	56	eP	P	07 25 46.6	+1.1
	comp=Z,129nm,1.4s						
HHC	**Hu-ho-hao-te**	26.47	265	eP	P	07 25 48.2	+0.4
HHC				S	S	07 29 42.7	-0.1
HHC				pmax	pmax		
	comp=Z,170nm,0.9s						
HHC				pmax	pmax		
	comp=Z,190nm,4.3s						
ULN	**Ulaanbaatar**	26.56	283	eP	P	07 25 48.8	+0.3
ULN	**Ulaanbaatar**	26.56	283	eP	P	07 25 48.8	+0.3
	comp=Z,225nm,1.4s						
ULN	**Ulaanbaatar**	26.56	283	P	P	07 25 48.9	+0.3
	SNR=52						
ULN	**Ulaanbaatar**	26.56	283	d iP	P	07 25 48.8	+0.3
ULN				pmax	pmax		
	comp=Z,138nm,1.3s						
JOW	**Kunigami**	26.75	221	P	P	07 25 50.3	0.0
	comp=Z,58nm,0.5s,baz=12,slow=5.9,SNR=18						
JOW				S	S	07 29 45.9	-1.4
	comp=Z,13nm,0.6s,baz=186,slow=28,SNR=6.3						
JOW				ScP	ScP	07 31 41.5	-0.1
	comp=Z,62nm,0.8s,baz=295,slow=5.8,SNR=7.6						
JOW	**Kunigami**	26.75	221	eP	P	07 25 50.7	+0.4
	comp=Z,70nm,0.6s						
JOW				S	S	07 29 45.9	-1.4
JOW				ScP	ScP	07 31 41.5	-0.1
SONA1	**Songino Array**	26.98	283	eP	P	07 25 51.7	-0.5
SONA0	**Songino Array**	26.99	283	eP	P	07 25 52.5	+0.2
SONM	**Songino Array**	26.99	283	P	P	07 25 52.5	+0.2
	comp=Z,53nm,0.8s,baz=71,slow=8.8,SNR=266						
SONM	**Songino Array**	26.99	283	P	P	07 25 52.5	+0.2
IRK	**Irkutsk**	27.21	293	eP	P	07 25 53.2	-0.8
IRK				pmax	pmax		
	comp=Z,123nm,1.9s						
NJ2	**Nanjing**	27.37	242	eP	P	07 25 55.9	+0.3
NJ2				S	S	07 29 57.9	+1.2
NJ2				ScP	ScP	07 31 43.0	-0.3
NJ2				ScS	ScS	07 35 35.0	-1.2
NJ2				pmax	pmax		
	comp=Z,29nm,0.6s						
BTO	**Baotou**	27.61	266	eP	P	07 25 57.7	0.0
BTO				pmax	pmax		
	comp=Z,19nm,0.8s						
TIY	**Taiyuan**	27.61	259	ScS	ScS	07 35 38.2	+0.8
TIY				pmax	pmax		
	comp=Z,100nm,4.6s						
TIY				LR	LR		
	comp=N,300nm,13.6s						
TIY				LR	LR		
	comp=E,160nm,5.2s						
TIY				LR	LR		
	comp=Z,180nm,8.0s						
TLY	**Talaya**	27.71	292	ScP	ScP	07 31 43.6	-0.5
	comp=Z,17nm,0.8s,baz=147,slow=3.7,SNR=11						
TLY	**Talaya**	27.71	292	eP	P	07 25 58.8	+0.5
TLY	**Talaya**	27.71	292	eP	P	07 25 58.9	+0.5
	comp=Z,126nm,0.7s						
TLY	**Talaya**	27.71	292	P	P	07 25 58.9	+0.5
	SNR=44						
TLY	**Talaya**	27.71	292	⇓iP	P	07 25 59.1	+0.8
TLY				pmax	pmax		
	comp=Z,131nm,0.7s						
TLY				MLR	MLR		
	comp=Z,132nm,12.0s						
ZAK	**Zakamensk**	28.23	290	eP	P	07 26 02.9	-0.1
ZAK				pmax	pmax		
	comp=Z,81nm,1.2s						
ANM	**Nome**	29.21	40	eP	P	07 26 11.8	+0.6
	comp=Z,45nm,1.0s						
ANM	**Nome**	29.21	40	eP	P	07 26 11.8	+0.6
ANM				pmax	pmax		
	comp=Z,45nm,1.0s						
MOY	**Mondy**	29.32	293	eP	P	07 26 12.8	+0.3
MOY				pmax	pmax		
	comp=Z,128nm,1.9s						
RDOG	**Red Dog Mine**	30.85	34	eP	P	07 26 25.1	-0.1
	comp=Z,14nm,0.6s						
WHN	**Wuhan**	31.11	246	⇓iP	P	07 26 27.8	-0.2
WHN				S	S	07 30 52.0	-2.5
WHN				ScP	ScP	07 31 56.2	+0.7
WHN				ScS	ScS	07 35 51.7	-2.6
WHN				pmax	pmax		
	comp=Z,110nm,0.7s						
KNGR	**Kungurtug, Tuv**	31.71	292	i P	P	07 26 34.6	+1.6
SDPT	**Sand Point**	31.86	59	eP	P	07 26 33.4	-0.5
	comp=Z,49nm,0.6s						
XAN	**Xi'an**	32.11	257	P	P	07 26 36.3	-0.2
XAN				pP	pP	07 28 05.7	-3.5
XAN				sP	PcP	07 29 08.5	+0.1
XAN				S	S	07 31 07.5	-2.4
XAN				PcS	PcS	07 32 56.5	+2.3
XAN				ScS	ScS	07 35 55.6	-3.9
XAN				pmax	pmax		
	comp=Z,210nm,1.9s						
CHGN	**Chignik**	32.82	56	eP	P	07 26 42.2	+0.1
	comp=Z,20nm,0.8s						
KRAR	**Krasnoyarsk**	33.09	303	c iP	P	07 26 40.8	-3.5
WAKE	**Wake Island**	33.56	146	eP	P	07 26 48.9	+0.1
	comp=Z,251nm,1.5s						
HVS	**Khovu-Aksy**	33.85	294	d iP	P	07 26 52.3	+1.3
HVS				pmax	pmax		
	comp=Z,147nm,0.6s						
MIDW	**Midway**	34.08	115	eP	P	07 26 53.6	+0.5
	comp=Z,138nm,0.8s						
LZH	**Lanzhou**	34.14	264	⇓P	P	07 26 55.1	+1.3
LZH				pP	pP	07 28 29.9	+2.3
LZH				S	S	07 31 41.2	+0.4
LZH				ScP	ScP	07 32 07.1	+0.8
LZH				ScS	ScS	07 36 11.4	+0.9
LZH				pmax	pmax		
	comp=Z,55nm,1.1s						
LZH				pmax	pmax		
	comp=Z,350nm,4.3s						
ENH	**Enshi**	34.27	251	eP	P	07 26 54.6	-0.1
	comp=Z,63nm,0.6s						
GTA	**Gaotai**	34.93	272	⇓P	P	07 27 01.3	+1.1
GTA				pP	pP	07 28 35.5	+1.1
GTA				sP	sP	07 29 34.2	-4.4
GTA				ScS	ScS	07 36 14.2	-0.4
GTA				pmax	pmax		
	comp=Z,190nm,1.0s						
CAST	**Castle Rocks**	35.02	43	eP	P	07 27 01.6	+1.1
	comp=Z,33nm,0.6s						
PPLA	**Purkeypile**	35.02	44	eP	P	07 27 02.1	+1.4
	comp=Z,27nm,1.0s						
SKT	**Skwentna**	35.43	45	eP	P	07 27 04.2	+0.3
	comp=Z,8.8nm,0.8s						
BPAW	**Bear Paw Mtn.**	35.45	42	eP	P	07 27 04.8	+0.8
	comp=Z,10nm,0.6s						
MLY	**Manley**	35.48	40	eP	P	07 27 05.0	+0.7
	comp=Z,16nm,0.4s						
GUMO	**Guam**	35.50	184	P	P	07 27 02.1	-2.9
	comp=Z,46nm,0.5s,baz=27,slow=2.3,SNR=8.2						
GUMO	**Guam**	35.50	184	eP	P	07 27 04.1	-0.9
	comp=Z,144nm,1.4s						
GUMO	**Guam**	35.50	184	eP	P	07 27 04.1	-0.9
GUMO				pmax	pmax		
	comp=Z,144nm,1.4s						
KTH	**Kantishna Hill**	35.53	43	eP	P	07 27 05.6	+0.9
	comp=Z,23nm,0.8s						
COLD	**Coldfoot**	35.60	36	eP	P	07 27 05.7	+0.5
	comp=Z,71nm,0.8s						
KDAK	**Kodiak Island**	35.64	53	P	P	07 27 05.3	-0.3
	comp=Z,23nm,0.5s,baz=243,slow=6.8,SNR=67						
KDAK	**Kodiak Island**	35.64	53	eP	P	07 27 05.5	-0.1

KDAK	Kodiak Island	35.64	53	eP	P	07 27 05.7	+0.1
	comp=Z,23nm,0.7s						
KDAK	Kodiak Island	35.64	53	eP	P	07 27 05.7	+0.1
KDAK				pmax	pmax		
	comp=Z,23nm,0.7s						
TRF	Thorofare Moun	35.82	43	eP	P	07 27 07.9	+0.6
	comp=Z,20nm,0.9s						
TOLK	Toolik Lake Re	35.82	34	P	P	07 27 07.4	+0.4
	baz=270						
TOLK	Toolik Lake Re	35.82	34	eP	P	07 27 07.4	+0.4
	comp=Z,82nm,0.6s						
SUA	Susitna One	35.88	46	eP	P	07 27 08.1	+0.3
	comp=Z,13nm,0.9s						
CNPM	China Poot	35.97	50	eP	P	07 27 08.3	-0.1
	comp=Z,22nm,0.7s						
BRLK	Bradley Lake	36.10	49	eP	P	07 27 09.7	+0.2
	comp=Z,13nm,0.7s						
BWN	Browne	36.10	42	eP	P	07 27 10.9	+1.5
	comp=Z,61nm,0.6s						
MCK	McKinley	36.39	42	eP	P	07 27 12.5	+0.7
	comp=Z,19nm,0.8s						
MCK	McKinley	36.39	42	eP	P	07 27 12.5	+0.7
MCK				pmax	pmax		
	comp=Z,19nm,0.8s						
RC01	Rabbit Creek A	36.42	47	eP	P	07 27 12.3	+0.3
	comp=Z,38nm,1.4s						
MDM	Murphy Dome	36.55	40	eP	P	07 27 13.6	+0.5
	comp=Z,45nm,1.3s						
PMR	Palmer	36.62	46	eP	P	07 27 13.9	+0.3
	comp=Z,11nm,0.7s						
PMR	Palmer	36.62	46	eP	P	07 27 13.9	+0.3
PMR				pmax	pmax		
	comp=Z,11nm,0.7s						
WRH	Wood River Hil	36.66	41	eP	P	07 27 14.4	+0.4
	comp=Z,18nm,0.6s						
GHO	Glory Hole Cre	36.68	45	eP	P	07 27 15.1	+0.7
	comp=Z,42nm,0.5s						
COLA	College	36.72	40	eP	P	07 27 15.2	+0.8
	comp=Z,59nm,0.6s						
COLA	College	36.72	40	eP	P	07 27 15.2	+0.8
COLA				pmax	pmax		
	comp=Z,59nm,0.6s						
CCB	Clear Creek Bu	36.77	41	eP	P	07 27 15.1	+0.3
	comp=Z,16nm,0.5s						
SML	Sawmill	36.95	45	eP	P	07 27 17.4	+0.9
	comp=Z,35nm,0.8s						
SML	Sawmill	36.95	45	eP	P	07 27 17.4	+0.9
SML				pmax	pmax		
	comp=Z,35nm,0.8s						
IL1	Eielson Array	37.14	40	eP	P	07 27 17.7	-0.2
ILAR	Eielson Array	37.14	40	P	P	07 27 17.8	-0.1
	comp=Z,21nm,0.6s,baz=259,slow=6.4,SNR=322						
ILAR				ScP	ScP	07 32 16.1	-0.6
	comp=Z,14nm,0.8s,baz=288,slow=4.3,SNR=14						
ILAR	Eielson Array	37.14	40	P	P	07 27 17.8	-0.1
ILAR				ScP	ScP	07 32 16.1	-0.6
ILB	Eielson Array	37.14	40	eP	P	07 27 18.0	+0.1
HDA	Harding Lake	37.16	41	eP	P	07 27 18.0	-0.1
	comp=Z,24nm,0.4s						
DHY	Denali Highway	37.18	43	eP	P	07 27 18.7	+0.3
	comp=Z,36nm,0.6s						
SCM	Sheep Creek Mo	37.42	45	eP	P	07 27 21.1	+0.8
	comp=Z,20nm,0.8s						
SCM	Sheep Creek Mo	37.42	45	eP	P	07 27 21.1	+0.8
SCM				pmax	pmax		
	comp=Z,20nm,0.8s						
CD2	Chengdu	37.45	257	⇓P	P	07 27 21.2	+0.2
CD2				pP	pP	07 28 55.4	-1.4
CD2				PP	PP	07 29 05.5	+0.8
CD2				sP	sP	07 29 57.9	-2.6
CD2				S	S	07 32 30.5	+0.4
CD2				sS	sS	07 35 24.8	-1.6
CD2				pmax	pmax		
	comp=Z,220nm,5.2s						
FYU	Fort Yukon	37.60	37	eP	P	07 27 22.8	+1.2
	comp=Z,115nm,0.8s						
PAX	Paxson	38.05	43	eP	P	07 27 25.3	-0.1
	comp=Z,6.3nm,0.6s						
PAX	Paxson	38.05	43	eP	P	07 27 25.3	-0.1
ZAA1	Zalesovo Array	38.10	302	eP	P	07 27 25.6	-0.3
ZAA1				ePcP	PcP	07 29 25.9	0.0
ZAA1				eScP	ScP	07 32 18.8	-1.7
ZAA0	Zalesovo Array	38.10	302	eP	P	07 27 25.6	-0.3
	comp=Z,169nm,0.6s						
ZALV	Zalesovo Beam	38.10	302	P	P	07 27 25.6	-0.3
	comp=Z,181nm,0.5s,baz=62,slow=6.5,SNR=432						
ZALV				PcP	PcP	07 29 25.9	0.0
	comp=Z,38nm,0.6s,baz=86,slow=1.8,SNR=8.3						
ZALV				ScP	ScP	07 32 18.8	-1.7
	comp=Z,15nm,0.6s,baz=74,slow=3.1,SNR=9.4						
ZALV	Zalesovo Beam	38.10	302	eP	P	07 27 25.8	-0.1
ZALV				PcP	PcP	07 29 25.9	0.0
ZALV				ScP	ScP	07 32 18.8	-1.7
DGZ	Jazzator, Alta	38.11	294	i P	P	07 27 27.4	+1.2
DGZ				pmax	pmax		
	comp=Z,54nm,0.6s						
KLU	Klutina	38.15	45	eP	P	07 27 27.0	+0.8
	comp=Z,26nm,0.8s						
DIV	Divide	38.30	46	eP	P	07 27 28.2	+0.8
	comp=Z,29nm,0.6s						
HARP	HAARP	38.30	44	eP	P	07 27 28.5	+1.1
	comp=Z,53nm,0.7s						
NVS	Novosibirsk	38.69	304	⇑iP	P	07 27 30.9	+0.3
NVS				e		07 29 18.1	
NVS				eS	S	07 32 40.3	-7.1
NVS				pmax	pmax		
	comp=N,54nm,0.9s						
NVS				pmax	pmax		
	comp=E,129nm,0.9s						
NVS				pmax	pmax		
	comp=Z,128nm,0.9s						
NVS				pmax	pmax		
	comp=N,54nm,1.7s						
NVS				pmax	pmax		
	comp=E,118nm,1.7s						
NVS				pmax	pmax		
	comp=Z,124nm,1.7s						
NVS				smax	smax		
	comp=N,19nm,1.3s						
NVS				smax	smax		
	comp=E,12nm,1.3s						
GYA	Guiyang	38.72	249	⇓iP	P	07 27 31.7	+0.3
GYA				pP	pP	07 29 08.6	+0.5
GYA				sP	sP	07 30 08.5	-3.0
GYA				ScP	ScP	07 32 23.3	-0.2
GYA				S	S	07 32 46.6	-2.3
GYA				PcS	PcS	07 33 18.9	-0.4
GYA				sS	sS	07 35 42.0	-4.4
GYA				SS	SS	07 36 01.0	-8.8
GYA				ScS	ScS	07 36 34.2	-2.5
GYA				pmax	pmax		
	comp=E,140nm,0.7s						
GYA				pmax	pmax		
	comp=E,160nm,5.2s						
BMRM	Bremner River	38.89	46	eP	P	07 27 33.2	+1.0
	comp=E,23nm,1.2s						
RAGM	Ragged Mountai	39.00	47	eP	P	07 27 34.5	+1.4
	comp=E,18nm,0.9s						
EGAK	Eagle	39.56	40	eP	P	07 27 37.5	0.0
	comp=E,45nm,0.6s						
CRQM	Cirque	39.63	46	eP	P	07 27 39.7	+1.4
	comp=E,36nm,1.0s						
TGL	Tana Glacier	39.78	46	eP	P	07 27 40.9	+1.5
	comp=E,15nm,0.9s						
BALM	Baldy	39.93	46	eP	P	07 27 41.6	+1.0
	comp=E,17nm,0.8s						
BALM	Baldy	39.93	46	eP	P	07 27 41.6	+1.0
BALM				pmax	pmax		
	comp=Z,17nm,0.8s						
DAWY	Dawson	40.47	40	eP	P	07 27 45.0	+0.2
	comp=Z,6.5nm,0.5s						
WMQ	Urumqi	40.54	286	P	P	07 27 46.8	+1.1
WMQ				pP	pP	07 29 24.9	+1.4
WMQ				PcP	PP	07 29 36.3	+1.6
WMQ				ScP	ScP	07 32 29.3	-1.0
WMQ				S	S	07 33 16.3	+1.4
WMQ				sS	sS	07 36 16.4	+2.6
WMQ				pmax	pmax		
	comp=Z,160nm,3.7s						
ZSN	Zaisan	40.60	292	⇓iP	P	07 27 46.6	+0.5
	comp=Z,12nm,0.9s						
ZSN				eS	S	07 33 17.0	+1.5
ZSN				eSS	SS	07 36 43.3	+3.9
INK	Inuvik	41.73	33	P	P	07 27 55.0	+0.4
	comp=Z,63nm,0.5s,baz=285,slow=6.1,SNR=201						
INK				ScP	ScP	07 32 32.7	-1.7
	comp=Z,21nm,0.9s,baz=290,slow=3.6,SNR=7.7						
INK	Inuvik	41.73	33	eP	P	07 27 55.0	+0.4
	comp=Z,63nm,0.5s						
INK				ScP	ScP	07 32 32.7	-1.7
INK	Inuvik	41.73	33	eP	P	07 27 55.0	+0.4
INK				pmax	pmax		
	comp=Z,63nm,0.5s						
SEM	Semipalatinsk	42.05	298	⇓iP	P	07 27 57.1	-0.6
	comp=Z,122nm,0.8s						
KMI	Kunming	42.12	252	P	P	07 27 58.8	+0.2
KMI				pP	pP	07 29 37.7	+0.2
KMI				PP	PP	07 29 49.7	+0.1
KMI				sP	sP	07 30 36.7	-3.5
KMI				S	S	07 33 37.6	-0.8
KMI				sS	sS	07 36 35.1	-3.7
KMI				SS	ScS	07 36 58.3	+0.6
KMI				pmax	pmax		
	comp=Z,73nm,1.3s						
KMI				pmax	pmax		
	comp=Z,280nm,4.2s						
MK31	Makanchi Array	42.47	293	eP	P	07 28 01.1	+0.3
MK31	Makanchi Array	42.47	293	i P	P	07 28 01.1	+0.3
MK31				pmax	pmax		
	comp=Z,218nm,0.6s						
MK32	Makanchi Array	42.47	293	eP	P	07 28 01.0	+0.2
MK32				ePcP	PcP	07 29 40.5	0.0
MK32				eScP	ScP	07 32 37.0	-0.9
MKAR	Makanchi Array	42.47	293	P	P	07 28 01.0	+0.2
	comp=Z,276nm,0.7s,baz=69,slow=8.0,SNR=2369						
MKAR				PcP	PcP	07 29 40.5	0.0
	comp=Z,22nm,0.7s,baz=60,slow=2.9,SNR=4.4						
MKAR				ScP	ScP	07 32 37.0	-0.9
	comp=Z,24nm,0.6s,baz=56,slow=4.0,SNR=14						
MKAR	Makanchi Array	42.47	293	eP	P	07 28 01.2	+0.4
	comp=Z,2µm,0.6s						
MKAR				PcP	PcP	07 29 40.5	0.0
MKAR				ScP	ScP	07 32 37.0	-0.9
MK01	Makanchi Array	42.47	293	eP	P	07 28 01.2	+0.4
QIZ	Qiongzhong	42.54	239	eP	P	07 28 03.7	+2.0
	comp=Z,9.7nm,0.8s						
MAKZ	Makanchi	42.65	293	eP	P	07 28 02.4	+0.2
	comp=Z,419nm,1.3s						
MAKZ	Makanchi	42.65	293	eP	P	07 28 02.4	+0.2
MAKZ				pmax	pmax		
	comp=Z,419nm,1.3s						
KURK	Kurchatov	42.86	299	eP	P	07 28 03.8	+0.1
KURK	Kurchatov	42.86	299	eP	P	07 28 03.8	+0.1
	comp=Z,566nm,0.8s						
KURK	Kurchatov	42.86	299	P	P	07 28 03.8	+0.1
	SNR=162						
KURK	Kurchatov	42.86	299	d iP	P	07 28 03.8	+0.1
KURK				pmax	pmax		
	comp=Z,611nm,0.8s						
KURBB	Kurchatov Arra	42.95	299	P	P	07 28 04.4	0.0
	comp=Z,427nm,0.7s,baz=65,slow=7.6,SNR=1594						
KURBB				ScP	ScP	07 32 38.5	-1.3
	comp=Z,22nm,0.7s,baz=69,slow=3.7,SNR=18						
PATS	Pohnpei	43.15	164	eP	P	07 28 07.9	+1.5
	comp=Z,113nm,0.9s						
SKAG	Skagway	43.75	46	eP	P	07 28 12.6	+2.1
	comp=Z,8.3nm,0.9s						
BESE	Bessie Mountai	44.32	47	eP	P	07 28 16.5	+1.5
	comp=Z,11nm,1.0s						
JIS	Juneau Island	44.67	47	eP	P	07 28 19.7	+2.1
	comp=Z,10nm,0.7s						
PDGK	Podgornoye	45.92	290	P	P	07 28 27.5	-0.1
PDGK				pmax	pmax		
	comp=Z,138nm,0.7s						
SHLS	Shalkode	46.03	290	⇓iP	P	07 28 26.7	-1.7
	comp=Z,72nm,0.6s						
SHLS				eS	S	07 34 30.1	-2.8
UZB	Uzynbulak	46.31	290	⇓iP	P	07 28 31.0	+0.5
	comp=Z,68nm,0.8s						
UZB				ePP	PP	07 30 28.1	+0.9
UZB				eS	S	07 34 38.3	+1.4
KPKS	Kokpek	46.34	290	⇓iP	P	07 28 31.3	+0.6
	comp=Z,113nm,0.8s						
KPKS				eS	S	07 34 39.0	+1.7
BVA0	Borovoye Array	46.37	306	P	P	07 28 30.8	+0.1
BVA0				pmax	pmax		
	comp=Z,178nm,0.6s						
BVAR	Borovoye Array	46.37	306	P	P	07 28 30.8	+0.1
	comp=Z,236nm,0.5s,baz=52,slow=7.9,SNR=1131						
BVAR				PcP	PcP	07 29 53.6	-0.4
	comp=Z,40nm,0.6s,baz=89,slow=3.4,SNR=7.1						
BVAR				ScP	ScP	07 32 52.6	-1.4
	comp=Z,21nm,0.6s,baz=73,slow=3.7,SNR=10						
BVAR	Borovoye Array	46.37	306	P	P	07 28 30.8	+0.1
BVAR				PcP	PcP	07 29 53.6	-0.4
BVAR				ScP	ScP	07 32 52.6	-1.4
BRVK	Borovoye	46.41	306	eP	P	07 28 31.2	+0.2
BRVK	Borovoye	46.41	306	eP	P	07 28 31.5	+0.6
	comp=Z,428nm,0.6s						
BRVK	Borovoye	46.41	306	P	P	07 28 31.2	+0.2
	SNR=125						
BRVK	Borovoye	46.41	306	d iP	P	07 28 31.2	+0.2
BRVK				pmax	pmax		
	comp=Z,342nm,0.6s						
LSA	Lhasa	46.45	267	eP	P	07 28 34.0	+1.9
	comp=Z,160nm,0.6s						
LSA	Lhasa	46.45	267	P	P	07 28 33.9	+1.8
LSA	Lhasa	46.45	267	eP	P	07 28 34.1	+1.9
LSA				pmax	pmax		
	comp=Z,160nm,0.6s						
WRAK	Wrangell Islan	46.46	49	eP	P	07 28 32.9	+1.6
	comp=Z,5.8nm,0.8s						
CRAG	Craig	46.51	51	eP	P	07 28 33.9	+2.3
	comp=Z,7.2nm,0.9s						
BRZS	Berezniki	46.57	301	⇓iP	P	07 28 32.4	+0.1
	comp=Z,178nm,0.6s						
BRZS				eS	S	07 34 41.1	+1.0
ZHN	Zhinishke	46.66	290	⇓iP	P	07 28 33.8	+0.7
	comp=Z,56nm,1.1s						
DLBC	Dease Lake	46.68	46	P	P	07 28 34.2	+1.2
	comp=Z,13nm,0.8s,baz=284,slow=9.3,SNR=28						
DLBC				ScP	ScP	07 32 56.8	+1.6
	comp=Z,18nm,1.2s,baz=288,slow=4.8,SNR=9.4						
DLBC	Dease Lake	46.68	46	eP	P	07 28 34.6	+1.6
	comp=Z,14nm,0.9s						
DLBC				ScP	ScP	07 32 56.8	+1.6
SATY	Saty	46.73	290	⇓iP	P	07 28 34.5	+0.8
	comp=Z,146nm,1.3s						
SATY				eS	S	07 34 44.4	+1.6
PRZ	Przheval'sk	47.05	289	eP	P	07 28 37.6	+1.4
	comp=Z,168nm,0.6s						
PRZ	Przheval'sk	47.05	289	eP	P	07 28 37.6	+1.4
PRZ				pmax	pmax		
	comp=Z,168nm,0.6s						
NONG	Nongkai	47.17	245	P	P	07 28 38.0	+0.8
	comp=Z,2.7nm,0.7s,comp=Z,112nm						
JOHN	Johnston Islan	47.49	117	eP	P	07 28 40.6	+1.0
	comp=Z,178nm,0.8s						
SKNT	Sakolnakorn	47.53	243	P	P	07 28 40.5	+0.6
	comp=Z,36nm,0.9s,comp=Z,1µm						
KUU	Kurty	47.55	292	⇓iP	P	07 28 39.5	-0.2
	comp=Z,121nm,0.6s						
KUU				eS	S	07 34 54.6	+0.8
AAA	Alma-Ata	47.57	291	eP	P	07 28 40.9	+0.9
	comp=Z,131nm,0.7s						
TARG	Taragay, Kyrgy	47.83	289	eP	P	07 28 43.4	+1.1
	comp=Z,134nm,0.7s						
DIB	Dawson Inlet,	47.91	53	eP	P	07 28 43.6	+1.5
	comp=Z,24nm,1.1s						
PAYA	Payao	48.16	249	P	P	07 28 45.5	+0.9
	comp=Z,45nm,0.7s,comp=Z,503nm						
CMAI	Chiengmai2	48.24	251	P	P	07 28 46.0	+0.7
	comp=Z,11nm,1.1s,comp=Z,120nm						
BTLS	Baital	48.32	295	i P	P	07 28 45.4	0.0
	comp=Z,24nm,0.7s						
ULHL	Ulahol	48.51	290	P	P	07 28 48.0	+0.8
	SNR=85						
TKM2	Tokmak 2	48.53	291	P	P	07 28 47.8	+0.4
	SNR=135						
TKM2	Tokmak 2	48.53	291	P	P	07 28 47.7	+0.4
TKM2				pmax	pmax		
	comp=Z,114nm,0.8s						
SHL	Shillong	48.75	262	⇓iP	P	07 28 50.0	+0.9
SHL				i S	S	07 35 11.0	0.0
CHMS	Chumysh	49.01	292	P	P	07 28 51.1	+0.5
	SNR=52						
USP	Ospenovka	49.01	292	P	P	07 28 51.4	+0.8
	SNR=14						
KBK	Karagaybulak	49.08	291	P	P	07 28 52.0	+0.8
	SNR=65						
CMMT	Chiang Mai	49.14	250	P	P	07 28 52.3	+0.5
	comp=Z,145nm,0.8s,comp=Z,1µm						
CHTO	Chiang Mai	49.14	250	eP	P	07 28 52.5	+0.7
	comp=Z,103nm,0.8s						
CHTO	Chiang Mai	49.14	250	P	P	07 28 52.7	+0.9
	SNR=19						
CHTO	Chiang Mai	49.14	250	eP	P	07 28 52.6	+0.7
CHTO				pmax	pmax		
	comp=Z,103nm,0.8s						
CHTO	Chiang Mai	49.14	250	P	P	07 28 52.5	+0.7
	comp=Z,642nm,0.8s,comp=Z,5µm						
FRU	Bishkek	49.18	292	⇓eP	P	07 28 53.0	+1.1
FRU				e		07 37 42.0	
FRU				pmax	pmax		
	comp=Z,300nm,1.5s						
KZA	Kyzart	49.22	291	P	P	07 28 53.8	+1.2
	SNR=32						
AAK	Ala-Archa	49.37	292	P	P	07 28 54.0	+0.6
	SNR=131						
AAK	Ala-Archa	49.37	292	eP	P	07 28 53.9	+0.5
AAK	Ala-Archa	49.37	292	eP	P	07 28 54.0	+0.6
	comp=Z,220nm,0.7s						
AAK	Ala-Archa	49.37	292	P	P	07 28 53.9	+0.5
AAK				pmax	pmax		
	comp=Z,191nm,0.7s						
CM31	Chiang Mai Arr	49.41	249	eP	P	07 28 55.2	+1.4
CMAR	Chiang Mai Arr	49.41	249	P	P	07 28 55.0	+1.1
	comp=Z,42nm,0.8s,baz=30,slow=6.7,SNR=166						
CMAR				ScP	ScP	07 33 08.2	+0.7
	comp=Z,21nm,0.7s,baz=13,slow=3.6,SNR=27						
CMAR	Chiang Mai Arr	49.41	249	P	P	07 28 55.0	+1.1
CMAR				ScP	ScP	07 33 08.2	+0.7
CMAR	Chiang Mai Arr	49.41	249	P	P	07 28 55.0	+1.1
CMAR				pmax	pmax		
	comp=Z,42nm,0.8s						
CMAR				pmax	pmax		
	comp=N,21nm,0.7s						
CM01	Chiang Mai Arr	49.43	249	eP	P	07 28 54.9	+0.9
SVE	Sverdlovsk	49.45	314	c iP	P	07 28 54.1	+0.6
SVE				eS	S	07 35 20.7	+1.5
SVE				pmax	pmax		
	comp=Z,594nm,0.8s						
PHIT	Phitsanulok	49.48	247	P	P	07 28 55.6	+1.3
	comp=Z,68nm,0.9s						
KBS	Kingsbay	49.51	350	eP	P	07 28 53.7	+0.1
KBS	Kingsbay	49.51	350	eP	P	07 28 53.8	+0.1
	comp=Z,194nm,0.7s						
KBS	Kingsbay	49.51	350	⇓iP	P	07 28 53.8	+0.1
KBS				IAmb	IAmb	07 28 54.5	
	comp=Z,195nm,0.7s						
SPA0	Spitsbergen Ar	49.54	348	eP	P	07 28 53.3	-0.7
SPA0	Spitsbergen Ar	49.54	348	⇓iP	P	07 28 53.3	-0.7
SPA0				IAmb	IAmb	07 28 55.0	
	comp=Z,71nm,0.9s						
SPITS	Spitsbergen Ar	49.54	348	P	P	07 28 53.2	-0.7
	comp=Z,16nm,0.4s,baz=32,slow=8.5,SNR=103						
SPITS				PcP	PcP	07 30 04.7	-0.4
	comp=Z,13nm,0.6s,baz=8.7,slow=1.9,SNR=2.4						
SPITS				ScP	ScP	07 33 06.7	-0.3
	comp=Z,9.0nm,0.7s,baz=72,slow=4.7,SNR=4.1						
SPITS	Spitsbergen Ar	49.54	348	P	P	07 28 53.2	-0.7
SPITS				PcP	PcP	07 30 04.7	-0.4
SPITS				ScP	ScP	07 33 06.8	-0.3
KEKH	Kekaha	49.56	104	eP	P	07 28 56.0	+1.1
	comp=Z,116nm,0.8s						
UCH	Uchtor	49.59	291	P	P	07 28 55.8	+0.5
	SNR=28						
RES	Resolute Bay	49.77	18	eP	P	07 28 55.8	+0.2
	comp=Z,279nm,0.6s						
RES	Resolute Bay	49.77	18	eP	P	07 28 55.8	+0.2
RES				pmax	pmax		
	comp=Z,279nm,0.6s						
EKS2	Erkin-Say	49.79	292	P	P	07 28 57.2	+0.7
	SNR=36						
AML	Almayashu	50.14	292	P	P	07 29 00.1	+0.8
	SNR=20						
MYLDM	Lahad Datu	50.19	219	eP	P	07 29 00.3	+0.8
	comp=Z,34nm,1.2s						
KSH	Kashi	50.24	287	P	P	07 29 04.1	+4.3
KSH				PcP	PcP	07 30 12.9	+4.3
KSH				pP	pP	07 30 46.1	+2.2
KSH				PP	PP	07 31 09.2	+6.6
KSH				S	S	07 35 36.4	+5.6
KSH				ScS	ScS	07 37 53.2	+2.3
KSH				SS	SS	07 39 21.6	+8.0
KSH				pmax	pmax		
	comp=Z,200nm,1.2s						
TAPN	Taplejung	50.26	267	eP	P	07 29 01.0	+0.7
	comp=Z,145nm,0.6s						
HSPB	Hornsund (broa	50.56	347	eP	P	07 29 01.1	-0.3
HSPB				IAmb	IAmb	07 29 02.2	
	comp=Z,112nm,0.9s						
ARU	Arti	50.63	314	eP	P	07 29 02.1	-0.1
ARU	Arti	50.63	314	eP	P	07 29 02.1	-0.1
	comp=Z,472nm,0.7s						
ARU	Arti	50.63	314	d iP	P	07 29 02.1	-0.1
ARU						07 30 09.0	
ARU						07 31 02.7	
ARU				S	S	07 35 35.5	+0.2
ARU						07 37 49.0	
ARU				pmax	pmax		
	comp=Z,405nm,0.6s						
MNAS	Manas	50.66	293	P	P	07 29 03.5	+0.7
MNAS				pmax	pmax		
	comp=Z,136nm,0.6s						
BBB	Bella Bella	50.72	52	eP	P	07 29 04.4	+1.6
	comp=Z,27nm,1.0s						
OPA	Opana	50.86	102	eP	P	07 29 05.5	+1.2
	comp=Z,198nm,0.9s						
OPA	Opana	50.86	102	eP	P	07 29 05.6	+1.2
OPA				pmax	pmax		
	comp=Z,198nm,0.9s						
BRDH	Bariadhala	50.93	260	P	P	07 29 05.8	+0.9
	comp=Z,281nm,0.6s,baz=90,slow=10,SNR=9.1						
BRDH	Bariadhala	50.93	260	P	P	07 29 05.8	+0.9
MANU	Manus Island	50.97	180	eP	P	07 29 06.0	+0.8
	comp=Z,63nm,0.9s						
KIP	Kipapa	51.05	103	eP	P	07 29 07.1	+1.4
	comp=Z,65nm,0.6s						
KIP	Kipapa	51.05	103	⇓eP	P	07 29 06.2	+0.5
KIP				pmax	pmax		
	comp=Z,376nm,0.7s						
JIRN	Jiri	51.05	269	eP	P	07 29 07.0	+0.9
	comp=Z,826nm,0.7s						
BAKI	Biak	51.07	195	P	P	07 29 06.9	+1.0
GUN	Gumba	51.09	269	eP	P	07 29 07.0	+0.6
	comp=Z,400nm,0.5s						
UMPA	Umpang Tak	51.19	248	P	P	07 29 09.1	+2.3
	comp=Z,34nm,0.9s,comp=Z,2µm						
YKW3	Yellowknife Ar	51.24	36	eP	P	07 29 06.6	+0.2
	comp=Z,28nm,0.8s						
RAMN	Ramite	51.26	268	eP	P	07 29 08.0	+0.5
	comp=Z,711nm,0.7s						
YKA	Yellowknife Ar	51.28	36	P	P	07 29 06.8	+0.1
	comp=Z,27nm,0.6s,baz=304,slow=7.1,SNR=116						
YKA				PcP	PcP	07 30 12.5	+0.7
	comp=Z,2.8nm,0.5s,baz=309,slow=3.8,SNR=7.3						
YKA				ScP	ScP	07 33 15.6	+0.9
	comp=Z,17nm,0.7s,baz=303,slow=4.2,SNR=26						
YKA	Yellowknife Ar	51.28	36	P	P	07 29 06.8	+0.1
YKA				PcP	PcP	07 30 12.6	+0.7
YKA				ScP	ScP	07 33 15.7	+0.9
UTHA	Uthaitani	51.33	246	P	P	07 29 09.0	+1.2
	comp=Z,24nm,0.8s,comp=Z,228nm						
SFK	Sufi-Kurgan	51.49	289	P	P	07 29 09.2	+0.3
SFK				pmax	pmax		
	comp=Z,210nm,1.0s						
KK31	Karatay Array	51.51	294	eP	P	07 29 08.9	+0.1
KK31	Karatay Array	51.51	294	i P	P	07 29 08.9	+0.1
KK31				pmax	pmax		
	comp=Z,138nm,0.8s						
KKAR	Karatay Array	51.51	294	eP	P	07 29 08.9	+0.1
KKAR	Karatay Array	51.51	294	eP	P	07 29 08.9	+0.1
KKN	Kakani	51.56	269	eP	P	07 29 10.3	+0.7
	comp=Z,239nm,0.5s						
PKIN	Phulchoki	51.63	269	eP	P	07 29 10.6	+0.4
	comp=Z,167nm,0.5s						
SIJI	Sorong	51.72	201	P	P	07 29 11.2	+0.6
	comp=Z,62nm,0.6s,baz=4.3,slow=9.9,SNR=36						
JAY	Jayapura	51.77	189	P	P	07 29 11.7	+0.7
	comp=Z,449nm,1.3s,comp=Z,6µm						
DMN	Daman	51.80	269	eP	P	07 29 12.3	+0.9
	comp=Z,699nm,0.8s						
GKN	Gorkha	51.84	270	eP	P	07 29 12.4	+0.8
	comp=Z,577nm,0.5s						
BJO	Bjornoya	51.90	344	eP	P	07 29 11.3	+0.2
BJO				IAmb	IAmb	07 29 11.7	
	comp=Z,278nm,0.7s						

DANN	Dangsing	52.19	271	eP	P	07 29 15.4	+1.2
	comp=Z,966nm,0.5s						
IUG	Iuzhnay	52.35	294	⇓iP	P	07 29 16.0	+1.0
	comp=Z,181nm,0.7s						
TARA	Tarawa	52.38	147	eP	P	07 29 16.4	+1.1
	comp=Z,216nm,0.8s						
KHLH	Kahului Airpor	52.45	102	eP	P	07 29 17.5	+1.8
	comp=Z,225nm,0.9s						
SRDT	SRDT	52.47	246	P	P	07 29 17.1	+1.1
	comp=Z,62nm,0.9s,comp=Z,4µm						
LBMI	Labuha	52.47	205	P	P	07 29 15.9	-0.1
	comp=Z,58nm,0.7s						
TULEG	Thule	52.49	10	eP	P	07 29 14.7	-0.5
	comp=Z,144nm,0.7s						
CHM	Chimkent	52.51	294	eP	P	07 29 16.9	+0.9
	comp=Z,94nm,0.6s						
CHM				eSS	SS	07 39 52.6	+3.7
HLK	Haleakala	52.67	102	eP	P	07 29 18.9	+1.2
	comp=Z,220nm,1.3s						
KOLN	Koldanda	52.68	271	eP	P	07 29 18.5	+0.9
	comp=Z,465nm,0.7s						
PYUN	Piuthan	52.86	271	eP	P	07 29 19.7	+0.8
	comp=Z,1µm,1.0s						
LVZ	Lovozero	53.00	334	eP	P	07 29 18.6	-0.5
	comp=Z,154nm,0.8s						
LVZ	Lovozero	53.00	334	eP	P	07 29 18.6	-0.5
LVZ				pmax	pmax		
	comp=Z,154nm,0.8s						
MRSI	Marisa	53.19	212	P	P	07 29 21.2	+0.1
	comp=Z,85nm,1.0s,comp=Z,726nm						
PRGR	Permogore	53.24	324	⇓iP	P	07 29 21.0	+0.2
PRGR				e		07 31 27.2	
PRGR				eS	S	07 36 09.9	+0.1
PRGR				pmax	pmax		
	comp=Z,591nm,0.6s						
RABL	Rabaul	53.27	174	eP	P	07 29 23.7	+2.1
	comp=Z,580nm,0.9s						
PHET	Kaeng Krachan	53.30	244	P	P	07 29 23.4	+1.6
	comp=Z,51nm,0.8s,comp=Z,518nm						
MHA	Mahukona	53.30	102	eP	P	07 29 23.1	+1.3
MHA	Mahukona	53.30	102	eP	P	07 29 23.1	+1.3
FAKI	Fak Fak	53.49	199	P	P	07 29 23.5	+0.3
	comp=Z,229nm,0.9s,comp=Z,2µm						
FAKI	Fak Fak	53.49	199	eP	P	07 29 23.5	+0.3
	comp=Z,157nm,0.8s						
HPAH	Hawaii Prepara	53.55	102	eP	P	07 29 24.8	+1.1
	comp=Z,158nm,0.8s						
APA	Apatity	53.58	334	⇓iP	P	07 29 21.9	-1.2
APA				i		07 30 19.7	
APA				pmax	pmax		
	comp=Z,120nm,0.7s						
KKH	Kailua Kona	53.61	102	eP	P	07 29 25.5	+1.5
KKH	Kailua Kona	53.61	102	eP	P	07 29 25.5	+1.5
HUH	Hualalai	53.71	102	eP	P	07 29 26.2	+1.1
	comp=Z,103nm,1.0s						
KHLU	Kahalu‘u	53.74	102	eP	P	07 29 26.2	+1.1
	comp=Z,223nm,0.9s						
KEV	Kevo	53.76	338	eP	P	07 29 24.3	0.0
	comp=Z,148nm,0.8s						
KEV	Kevo	53.76	338	eP	P	07 29 24.3	0.0
KEV				pmax	pmax		
	comp=Z,149nm,0.8s						
POHA	Pohakuloa	53.85	102	eP	P	07 29 27.4	+1.4
	comp=Z,271nm,0.8s						
HAMF	Hammerfest	53.90	340	eP	P	07 29 24.9	-0.3
AB31	Akbulak array	53.94	306	P	P	07 29 26.2	+0.3
AB31				pmax	pmax		
	comp=Z,216nm,0.6s						
ABKAR	Akbulak array	53.94	306	eP	P	07 29 26.2	+0.2
MLOA	Mauna Loa Obse	53.98	102	eP	P	07 29 29.2	+2.0
	comp=Z,212nm,1.1s						
HMH	Humu‘ula Sheep	54.00	102	eP	P	07 29 28.6	+1.5
	comp=Z,138nm,0.8s						
MWH	Moku‘aweowe	54.01	102	eP	P	07 29 28.5	+1.1
	comp=Z,179nm,1.1s						
DAG	Danmarks Havn	54.06	356	⇓iP	P	07 29 26.0	-0.3
DAG				i		07 31 14.8	
DAG	Danmarks Havn	54.06	356	⇓iP	P	07 29 26.0	-0.3
DAG				i		07 31 14.8	
MPSI	Mapaga	54.06	215	P	P	07 29 27.6	+0.4
	comp=Z,17nm,1.3s						
MLH	Mauna Loa	54.14	102	eP	P	07 29 29.4	+1.4
	comp=Z,236nm,0.8s						
MLH	Mauna Loa	54.14	102	eP	P	07 29 29.4	+1.4
MLH				pmax	pmax		
	comp=Z,236nm,0.8s						
KHU	Kahuku	54.17	102	eP	P	07 29 29.4	+1.2
	comp=Z,220nm,0.8s						
KHU	Kahuku	54.17	102	eP	P	07 29 29.5	+1.2
KHU				pmax	pmax		
	comp=Z,221nm,0.8s						
AIN	Ainahou	54.18	102	eP	P	07 29 29.5	+1.3
	comp=Z,234nm,0.9s						
SANI	Sanana	54.25	207	P	P	07 29 28.0	-0.5
	comp=Z,90nm,0.7s,comp=Z,1µm						
AKTO	Aktyubinsk	54.26	308	P	P	07 29 27.9	-0.3
	comp=Z,84nm,0.6s,baz=57,slow=9.4,SNR=156						
ARA0	ARCESS Array S	54.28	338	eP	P	07 29 28.0	0.0
ARA0				ePcP	PcP	07 30 23.0	-0.3
ARA0				eScP	ScP	07 33 26.8	-1.0
ARCES	ARCESS Array B	54.28	338	P	P	07 29 28.0	0.0
	comp=Z,61nm,0.5s,baz=40,slow=8.8,SNR=393						
ARCES				PcP	PcP	07 30 23.0	-0.3
	comp=Z,22nm,0.8s,baz=47,slow=5.8,SNR=5.2						
ARCES				ScP	ScP	07 33 26.8	-1.0
	comp=Z,20nm,0.7s,baz=46,slow=6.9,SNR=10.0						
ARCES	ARCESS Array B	54.28	338	eP	P	07 29 28.2	+0.1
ARCES				PcP	PcP	07 30 23.0	-0.3
ARCES				ScP	ScP	07 33 26.8	-1.0
ARE0	ARCESS Array S	54.28	338	eP	P	07 29 28.0	0.0
	comp=Z,98nm,0.7s						
ARE0	ARCESS Array S	54.28	338	eP	P	07 29 28.1	0.0
ARE0				IAmb	IAmb	07 29 29.0	
	comp=Z,119nm,1.0s						
KKO	Keanakako‘i	54.28	102	eP	P	07 29 29.9	+1.0
	comp=Z,320nm,0.7s						
PUH	Pauahi	54.33	102	eP	P	07 29 30.5	+1.2
	comp=Z,147nm,0.7s						
HULD	Heiheiahulu Di	54.46	102	eP	P	07 29 31.4	+1.3
	comp=Z,194nm,0.9s						
APSI	Ampana	54.58	212	P	P	07 29 31.0	+0.1
	comp=Z,91nm,1.1s,comp=Z,1µm						
LLLB	Lillooet	54.83	51	eP	P	07 29 33.6	+1.4
	comp=Z,9.8nm,0.6s						
PGC	Sidney	55.18	54	eP	P	07 29 35.7	+1.1
	comp=Z,27nm,0.7s						
KTK1	Kautokeino	55.22	339	eP	P	07 29 34.7	+0.1
PCI	Palu	55.23	214	P	P	07 29 35.5	+0.1
	comp=Z,93nm,1.2s						
SBUM	Sibu	55.37	224	eP	P	07 29 38.4	+2.0
	comp=Z,28nm,0.9s						
KULLO	Kullorsuaq	55.47	8	⇓iP	P	07 29 35.7	-0.5
KULLO				i		07 31 24.4	
KULLO	Kullorsuaq	55.47	8	⇓iP	P	07 29 35.7	-0.5
KULLO				i		07 31 24.4	
A04D	Lummi Island	55.53	53	P	P	07 29 38.1	+1.1
	baz=307						
NIL	Nilore	55.57	283	eP	P	07 29 38.8	+1.2
	comp=Z,601nm,0.8s						
NIL	Nilore	55.57	283	eP	P	07 29 38.8	+1.2
NIL				pmax	pmax		
	comp=Z,601nm,0.8s						
NLWA	Neilton Lookou	55.72	55	eP	P	07 29 40.2	+1.8
	comp=Z,34nm,0.8s						
TRO	Tromso	55.72	341	eP	P	07 29 38.1	+0.1
TRO				IAmb	IAmb	07 29 38.7	
	comp=Z,315nm,0.7s						
KLMR	Klimovskoe	56.03	326	eP	P	07 29 36.8	-3.5
KLMR				pmax	pmax		
	comp=Z,290nm,0.8s						
KLMR	Klimovskoe	56.03	326	eP	P	07 29 36.8	-3.5
KLMR				AMP		07 29 40.8	
	comp=Z,290nm,0.8s						
KLMR				ePP	PP	07 31 48.5	-4.7
B05A	Bryant	56.13	54	P	P	07 29 42.6	+1.4
	baz=308,SNR=8.3						
NDI	New Delhi	56.25	276	eP	P	07 29 43.0	+0.6
B06A	Marblemount	56.30	53	eP	P	07 29 43.7	+1.4
	comp=Z,40nm,1.3s						
E03A	Lebam	56.40	56	eP	P	07 29 44.9	+1.8
	comp=Z,51nm,0.8s						
D05A	Enumclaw	56.85	55	eP	P	07 29 47.7	+1.6
	comp=Z,29nm,0.8s						
F04D	Rainier, OR	56.98	56	P	P	07 29 48.6	+1.5
	baz=309						
KDI	Kendari	57.10	210	P	P	07 29 49.5	+1.2
	comp=Z,72nm,0.9s						
LON	Longmire	57.22	55	eP	P	07 29 49.9	+1.1
	comp=Z,8.6nm,1.0s						
LON	Longmire	57.22	55	eP	P	07 29 49.9	+1.1
MTKI	Muara Teweh, K	57.22	220	P	P	07 29 50.2	+1.1
	comp=Z,148nm,0.9s						
SKLT	Songkhla	57.34	239	P	P	07 29 52.1	+2.2
	comp=Z,23nm,0.8s						
G03D	McMinnville, O	57.39	57	P	P	07 29 51.8	+1.9
	baz=309						
B08A	Colville Reser	57.52	52	eP	P	07 29 52.0	+1.3
	comp=Z,23nm,1.3s						
KBL	Kabul	57.67	287	eP	P	07 29 52.0	-0.2
	comp=Z,274nm,0.8s						
KBL	Kabul	57.67	287	eP	P	07 29 52.0	-0.2
KBL				pmax	pmax		
	comp=Z,274nm,0.8s						
COR	Corvallis	57.76	58	eP	P	07 29 55.0	+2.6
	comp=Z,91nm,0.8s						
COR	Corvallis	57.76	58	eP	P	07 29 55.0	+2.6
COR				pmax	pmax		
	comp=Z,91nm,0.8s						
STEI	Steigen	57.90	341	eP	P	07 29 52.6	-0.3
STEI				IAmb	IAmb	07 29 53.1	
	comp=Z,60nm,0.6s						
SPSI	Sidrap Palu	58.09	213	P	P	07 29 55.8	+0.9
	comp=Z,20nm,1.2s						
LOF	Lofoten	58.09	341	eP	P	07 29 53.7	-0.5
LOF				IAmb	IAmb	07 29 54.6	
	comp=Z,141nm,0.5s						
KEBM	Edson Butte	58.27	60	eP	P	07 29 58.0	+2.0
	comp=Z,68nm,1.0s						
I03D	Drain, OR	58.30	58	P	P	07 29 58.3	+2.3
	baz=310,SNR=11						
H04A	Detroit Lake	58.32	57	eP	P	07 29 58.0	+1.8
	comp=Z,72nm,0.8s						
G05D	Wamic, OR	58.44	56	P	P	07 29 58.7	+1.7
	baz=310,SNR=9.9						
SUMG	Summit	58.52	2	eP	P	07 29 58.7	+1.1
	comp=Z,231nm,0.5s						
SUMG	Summit	58.52	2	⇓iP	P	07 29 58.4	+0.8
	comp=Z,228nm,0.5s						
SUMG	Summit	58.52	2	⇓iP	P	07 29 58.4	+0.8
SUMG				pmax	pmax		
	comp=Z,230nm,0.5s						
NEW	Newport	58.72	51	P	P	07 30 00.1	+1.2
	baz=310,SNR=7.0						
NEW				S	S	07 37 20.2	-0.8
	baz=310						
NEW	Newport	58.72	51	eP	P	07 30 00.1	+1.2
	comp=Z,6.6nm,0.8s						
NEW	Newport	58.72	51	eP	P	07 30 00.1	+1.2
KBO	Bosley Butte	58.75	60	eP	P	07 30 01.4	+2.2
	comp=Z,70nm,1.1s						
I04A	Tendick Farm,	58.76	58	P	P	07 30 01.0	+1.8
	baz=310,SNR=31						
F07A	Phinny Hill Vi	58.77	55	eP	P	07 30 00.6	+1.5
	comp=Z,39nm,0.8s						
G06A	Carlson Farm,	58.81	56	eP	P	07 30 00.6	+1.0
	comp=Z,29nm,1.3s						
E08A	Dider Farm, El	58.85	54	eP	P	07 30 01.0	+1.3
	comp=Z,20nm,0.9s						
KULM	Kulim	58.87	238	eP	P	07 30 01.7	+1.5
	comp=Z,19nm,0.7s						
I05D	Terrebonne, OR	59.00	57	P	P	07 30 02.5	+1.7
	baz=310,SNR=23						
L02D	Cave Junction,	59.14	60	P	P	07 30 03.7	+2.0
	baz=310,SNR=8.0						
HUMO	Hull Mountain	59.22	59	eP	P	07 30 04.3	+2.0
	comp=Z,35nm,1.2s						
BKSI	Bulukumba	59.22	212	P	P	07 30 02.7	+0.2
	comp=Z,33nm,0.8s						
J04D	Umpqua Nationa	59.28	58	P	P	07 30 04.8	+1.9
	baz=310,SNR=35						
E09A	Wood Farm, Sta	59.32	53	eP	P	07 30 03.5	+0.6
	comp=Z,24nm,0.8s						
HNR	Honiara	59.34	166	P	P	07 30 04.3	+0.9
	comp=Z,91nm,0.2s,baz=135,slow=10,SNR=3.2						
HNR	Honiara	59.34	166	eP	P	07 30 04.3	+0.9
MOR8	Moi Rana	59.53	340	eP	P	07 30 02.7	-1.2
MOR8				IAmb	IAmb	07 30 03.3	
	comp=Z,332nm,0.7s						
KONS	Konsvik	59.55	341	eP	P	07 30 03.8	-0.1
KONS				IAmb	IAmb	07 30 04.3	
	comp=Z,52nm,0.8s						
PINE	Pine Mountain	59.58	57	eP	P	07 30 06.9	+2.0
	comp=Z,85nm,0.8s						
G08A	Pilot Rock	59.68	55	eP	P	07 30 06.8	+1.4
	comp=Z,9.5nm,0.8s						
J05D	Fort Rock, OR	59.74	58	P	P	07 30 08.1	+2.2
	baz=311,SNR=36						
JCC	Jacoby Creek,	59.76	61	eP	P	07 30 07.9	+2.1
	comp=Z,41nm,0.9s						
WALA	Waterton Lakes	59.81	49	eP	P	07 30 07.2	+1.0
	comp=Z,7.8nm,0.8s						
K04D	Chiloquin, OR	59.88	59	P	P	07 30 08.7	+1.8
	baz=311,SNR=13						
KHMM	Horse Mountain	59.90	61	eP	P	07 30 09.2	+2.2
	comp=Z,55nm,0.9s						
YBH	Yreka Blue Hor	59.92	60	P	P	07 30 07.9	+0.8
	comp=Z,37nm,0.9s,baz=354,slow=4.5,SNR=140						
YBH	Yreka Blue Hor	59.92	60	eP	P	07 30 09.2	+2.1
	comp=Z,39nm,0.9s						
M02C	Callahan	60.06	60	P	P	07 30 10.0	+2.0
	baz=311,SNR=25						
PUL	Pulkovo	60.07	329	eP	P	07 30 07.9	+0.4
PUL	Pulkovo	60.07	329	⇑iP	P	07 30 07.9	+0.4
PUL				pmax	pmax		
	comp=Z,422nm,0.8s						
F10A	Beach Ranch, E	60.15	53	eP	P	07 30 09.7	+1.2
	comp=Z,15nm,1.0s						
I07A	Izee	60.17	56	eP	P	07 30 10.6	+1.9
	comp=Z,14nm,0.9s						
FIA1	FINESS Array S	60.19	332	eP	P	07 30 08.2	-0.1
	comp=Z,418nm,0.7s						
FIA0	FINESS Array S	60.19	332	eP	P	07 30 07.2	-1.1
FIA0	FINESS Array S	60.19	332	eP	P	07 30 07.2	-1.1
FINES	FINESS Array B	60.19	332	P	P	07 30 07.2	-1.1
	comp=Z,307nm,0.6s,baz=36,slow=7.0,SNR=649						
FINES	FINESS Array B	60.19	332	P	P	07 30 07.2	-1.1
MOS	Moscow	60.26	322	eP	P	07 30 08.5	-0.4
MOS	Moscow	60.26	322	eP	P	07 30 07.8	-1.1
MOS				e		07 30 47.2	
MOS				e		07 32 28.1	
MOS				iS	S	07 37 34.1	-5.7
MOS				e		07 38 58.9	
MOS				pmax	pmax		
	comp=Z,235nm,0.8s						
MOS				pmax	pmax		
	comp=Z,300nm,0.9s						
K05A	Summer Lake	60.30	58	eP	P	07 30 11.9	+2.3
	comp=Z,88nm,0.9s						
KMRM	Mail Ridge	60.34	62	eP	P	07 30 11.9	+2.2
	comp=Z,53nm,0.8s						
M04C	Macdoel	60.38	59	P	P	07 30 12.0	+1.9
	baz=311,SNR=44						
N02D	Trinity Center	60.42	61	P	P	07 30 12.4	+2.0
	baz=311,SNR=33						
JTMT	Jette	60.50	50	eP	P	07 30 12.2	+1.4
	comp=Z,20nm,1.2s						
KCPM	Cahto Peak	60.76	62	eP	P	07 30 14.5	+1.8
	comp=Z,47nm,0.9s						
WDC	Whiskeytown Da	60.77	61	eP	P	07 30 14.1	+1.5
	comp=Z,31nm,0.9s						
WDC	Whiskeytown Da	60.77	61	eP	P	07 30 14.1	+1.5
WDC				pmax	pmax		
	comp=Z,31nm,0.9s						
BMO	Blue Mountains	60.85	54	eP	P	07 30 14.5	+1.4
	comp=Z,26nm,1.2s						
OBN	Obninsk	61.13	322	eP	P	07 30 13.9	-0.7
OBN	Obninsk	61.13	322	eP	P	07 30 14.1	-0.5
	comp=Z,283nm,0.9s						
OBN	Obninsk	61.13	322	d iP	P	07 30 13.9	-0.7
OBN				e		07 30 49.7	
OBN				e		07 32 37.7	
OBN				e*SP	sP	07 33 02.6	-1.8
OBN				iS	S	07 37 48.7	-1.9
OBN				eSSS	SSS	07 45 09.4	
OBN				pmax	pmax		
	comp=Z,229nm,0.7s						
OBN				MLR	MLR		
	comp=Z,113nm,14.0s						
MOD	Modoc Plateau	61.17	58	eP	P	07 30 16.8	+1.5
	comp=Z,27nm,0.7s						
ILULI	Ilulissat	61.18	7	eP	P	07 30 14.4	-0.4
	comp=Z,128nm,0.9s						
ILULI	Ilulissat	61.18	7	⇓iP	P	07 30 14.3	-0.4
	comp=Z,116nm,0.8s						
ILULI	Ilulissat	61.18	7	⇓iP	P	07 30 14.3	-0.4
ILULI				pmax	pmax		
	comp=Z,120nm,0.8s						
J08A	Circle Bar Ran	61.21	56	eP	P	07 30 17.3	+1.8
	comp=Z,37nm,1.0s						
MSO	Missoula	61.28	51	P	P	07 30 16.9	+1.0
	baz=312,SNR=22						
MSO	Missoula	61.28	51	eP	P	07 30 16.5	+0.5
	comp=Z,18nm,1.0s						
FCC	Fort Churchill	61.30	31	eP	P	07 30 15.6	0.0
	comp=Z,51nm,0.5s						
FCC	Fort Churchill	61.30	31	eP	P	07 30 15.6	0.0
FCC				pmax	pmax		
	comp=Z,51nm,0.5s						
FFC	Flin Flon	61.30	38	eP	P	07 30 16.3	+0.5
FFC	Flin Flon	61.30	38	eP	P	07 30 16.4	+0.6
	comp=Z,27nm,0.8s						
FFC	Flin Flon	61.30	38	eP	P	07 30 16.4	+0.6
FFC				pmax	pmax		
	comp=Z,27nm,0.8s						
O03D	Paynes Creek	61.38	61	P	P	07 30 17.5	+0.9
	baz=312,SNR=42						
O03D	Paynes Creek	61.38	61	eP	P	07 30 15.1	-1.5
NSS	Namsos	61.48	340	eP	P	07 30 16.3	-0.4
NSS				IAmb	IAmb	07 30 17.1	
	comp=Z,114nm,0.6s						
HOPS	Hopland Field	61.51	62	eP	P	07 30 18.7	+1.3
	comp=Z,24nm,0.9s						
MMRI	Maumere	61.62	209	eP	P	07 30 18.6	+0.2
	comp=Z,225nm,1.3s						
WVOR	Wild Horse Val	61.74	57	eP	P	07 30 20.6	+1.6
	comp=Z,52nm,1.0s						
WVOR	Wild Horse Val	61.74	57	eP	P	07 30 20.6	+1.6
WVOR				pmax	pmax		
	comp=Z,52nm,1.0s						
GDXM	Geysers	61.80	62	eP	P	07 30 21.6	+2.2
	comp=Z,40nm,1.0s						
PSI	Prapat	61.88	238	P	P	07 30 19.9	-0.3
	comp=Z,8.7nm,0.7s,baz=360,slow=3.8,SNR=7.7						
PSI				ScP	ScP	07 34 01.5	-0.8
	comp=Z,8.8nm,0.6s,baz=360,slow=3.9,SNR=5.1						
PSI	Prapat	61.88	238	eP	P	07 30 20.8	+0.5
	comp=Z,12nm,0.9s						
PSI				ScP	ScP	07 34 01.5	-0.8
PSI	Prapat	61.88	238	eP	P	07 30 20.8	+0.5
PSI				pmax	pmax		
	comp=Z,12nm,0.9s						
ORV	Oroville	62.05	61	eP	P	07 30 21.8	+0.9
	comp=Z,33nm,0.8s						
ORV	Oroville	62.05	61	eP	P	07 30 21.8	+0.9
ORV				pmax	pmax		
	comp=Z,33nm,0.8s						
SOEI	Soe	62.07	206	eP	P	07 30 21.5	+0.1
	comp=Z,29nm,0.7s						
GEYT	Alibeck	62.10	297	P	P	07 30 21.0	-0.4
	comp=Z,43nm,0.6s,baz=336,slow=3.2,SNR=90						
GYA0B	ALIBECK ARRAY	62.10	297	eP	P	07 30 22.1	+0.8
	comp=Z,105nm,0.8s						
VSU	Vasula	62.27	329	d iP	P	07 30 21.8	-0.1
VSU				pmax	pmax		
	comp=Z,651nm,0.8s						
HRY	Holter Researc	62.43	50	eP	P	07 30 24.8	+1.4
BEKR	Beckworth	62.49	60	eP	P	07 30 25.2	+1.2
	comp=Z,51nm,0.9s						
EGMT	Eagleton	62.55	48	P	P	07 30 25.1	+1.0
	baz=314,SNR=12						
EGMT	Eagleton	62.55	48	eP	P	07 30 25.1	+1.0
	comp=Z,21nm,1.0s						
MFID	Camas Ranch	62.60	55	eP	P	07 30 26.2	+1.6
	comp=Z,17nm,0.9s						
KNTN	Kanton	62.62	133	eP	P	07 30 26.3	+1.4
	comp=Z,110nm,0.8s						
CSPM	San Pablo Ridg	62.65	63	eP	P	07 30 27.4	+2.6
BATI	Baumata	62.68	207	P	P	07 30 25.1	-0.1
	comp=Z,54nm,0.6s,baz=262,slow=2.1,SNR=6.8						
BATI	Baumata	62.68	207	eP	P	07 30 25.1	-0.1
LRM	Limekiln Ridge	62.73	51	eP	P	07 30 26.6	+1.2
AFDM	Forest Hills D	62.76	61	eP	P	07 30 26.7	+1.1
	comp=Z,40nm,1.2s						
VSR	Storozhevoye	62.82	318	eP	P	07 30 25.0	-0.6
VSR				eS	S	07 38 10.4	-1.0
VSR				pmax	pmax		
	comp=Z,290nm,0.6s						
VSR				pmax	pmax		
	comp=Z,400nm,0.6s						
VSR				smax	smax		
	comp=N,60nm,1.8s						
COEN	Coen	62.92	185	eP	P	07 30 27.5	+0.8
	comp=N,109nm,0.8s						
VORD	Divnogorie	62.94	318	eP	P	07 30 26.4	0.0
VORD				pmax	pmax		
	comp=Z,300nm,0.7s						
TBLU	Trondheim	62.97	340	eP	P	07 30 25.3	-1.1
TBLU				IAmb	IAmb	07 30 25.9	
	comp=Z,179nm,0.7s						
DLMT	Dillon	62.97	51	eP	P	07 30 28.5	+1.6
	comp=Z,31nm,0.8s						
PAHR	Pah Rah Range	63.16	60	eP	P	07 30 29.5	+1.3
	comp=Z,56nm,0.9s						
RUBR	Rubicon Trail	63.16	61	eP	P	07 30 29.9	+1.5
	comp=Z,63nm,1.0s						
MCMT	McKenzie Canyo	63.21	52	eP	P	07 30 30.0	+1.4
HYB	Hyderabad	63.23	266	i P	P	07 30 30.0	+1.2
HYB				ePcP	PcP	07 31 00.0	-0.1
HLID	Hailey	63.26	54	P	P	07 30 30.0	+1.2
	baz=314,SNR=14						
HLID	Hailey	63.26	54	eP	P	07 30 30.2	+1.4
	comp=Z,5.5nm,0.7s						
VCNR	Virginia City	63.28	60	eP	P	07 30 30.7	+1.5
	comp=Z,28nm,0.8s						
BOZ	Bozeman (W)	63.30	50	P	P	07 30 30.2	+1.2
	baz=314,SNR=35						
BOZ	Bozeman (W)	63.30	50	eP	P	07 30 30.3	+1.2
	comp=Z,17nm,0.8s						
MTN	Manton Dam	63.36	198	eP	P	07 30 30.1	+0.6
	comp=Z,190nm,0.6s						
SFJD	Kangerlussuaq	63.39	8	P	P	07 30 28.2	-0.8
	comp=Z,64nm,0.6s,baz=351,slow=6.4,SNR=14						
SFJD	Kangerlussuaq	63.39	8	eP	P	07 30 28.8	-0.2
	comp=Z,79nm,0.6s						
SFJD	Kangerlussuaq	63.39	8	i P	P	07 30 28.7	-0.2
SFJD	Kangerlussuaq	63.39	8	eP	P	07 30 28.8	-0.2
SFJD				pmax	pmax		
	comp=Z,79nm,0.6s						
PNTR	Pine Nut	63.45	60	eP	P	07 30 31.8	+1.6
	comp=Z,42nm,0.8s						
CMB	Columbia Colle	63.72	62	eP	P	07 30 33.0	+1.3
	comp=Z,49nm,1.0s						
CMB	Columbia Colle	63.72	62	eP	P	07 30 33.0	+1.3
CMB				pmax	pmax		
	comp=Z,49nm,1.0s						
YERR	Yerington	63.73	60	eP	P	07 30 33.6	+1.6
	comp=Z,72nm,0.7s						
BMN	Battle Mountai	63.88	58	eP	P	07 30 34.5	+1.7
	comp=Z,29nm,0.8s						
QLMT	Earthquake Lak	63.93	51	eP	P	07 30 34.6	+1.4
WAKR	Walker	63.94	61	eP	P	07 30 35.2	+1.8
	comp=Z,32nm,0.7s						
SAO	San Andreas Ge	63.96	63	eP	P	07 30 34.2	+1.0
	comp=Z,17nm,1.0s						
SAO	San Andreas Ge	63.96	63	eP	P	07 30 34.3	+1.0
SAO				pmax	pmax		
	comp=Z,17nm,1.0s						
YHB	Horse Butte	64.11	51	eP	P	07 30 35.8	+1.5
	comp=Z,28nm,0.8s						
GCMT	Greycliff	64.15	49	eP	P	07 30 36.0	+1.5
MOL	Molde	64.17	341	eP	P	07 30 34.2	+0.2
MOL				IAmb	IAmb	07 30 34.4	
	comp=Z,51nm,0.7s						
YMR	Madison River	64.28	51	eP	P	07 30 37.3	+1.9
	comp=Z,34nm,1.3s						
DOMB	Dombas	64.29	340	eP	P	07 30 34.7	-0.2
DOMB				IAmb	IAmb	07 30 35.5	
	comp=Z,139nm,0.7s						
KVN	Kaiserville	64.33	59	eP	P	07 30 37.4	+1.6
	comp=Z,67nm,0.7s						
RYN	Ryan	64.38	60	eP	P	07 30 37.7	+1.6
	comp=Z,38nm,0.9s						
NC303	NORSAR Array S	64.46	338	eP	P	07 30 36.0	+0.1
NC303	NORSAR Array S	64.46	338	eP	P	07 30 36.0	+0.1
NC303				IAmb	IAmb	07 30 36.6	
	comp=Z,212nm,0.6s						
NC405	NORSAR Array S	64.47	338	eP	P	07 30 36.2	+0.2
YFT	Old Faithful	64.50	51	eP	P	07 30 39.9	+3.1
	comp=Z,21nm,0.8s						
NC204	NORSAR Array S	64.57	338	eP	P	07 30 36.8	+0.2

NB201	**NORSAR Array S**	**64.63**	**338**	*e*P	**P**	**07 30 37.2**	**+0.1**
AKN	**Aaknes**	**64.64**	**341**	*e*P	**P**	**07 30 37.1**	**0.0**
AKN				IAmb	IAmb	07 30 39.8	
	comp=Z,96nm,0.8s						
NV01	**Mina Array Sit**	**64.64**	**60**	*e*P	**P**	**07 30 39.3**	**+1.5**
NVAR	**Mina Array Bea**	**64.64**	**60**	P	**P**	**07 30 39.3**	**+1.5**
	comp=Z,39nm,0.8s,baz=295,slow=6.1,SNR=418						
NVAR				PcP	**PcP**	**07 31 07.5**	**+1.6**
	comp=Z,3.9nm,0.6s,baz=298,slow=4.9,SNR=3.7						
NVAR	**Mina Array Bea**	**64.64**	**60**	P	**P**	**07 30 39.3**	**+1.5**
NVAR				PcP	**PcP**	**07 31 07.5**	**+1.6**
YPP	**Pitchstone Pla**	**64.64**	**51**	*e*P	**P**	**07 30 40.2**	**+2.4**
	comp=Z,5.5nm,0.7s						
LHV	**Little Huntoon**	**64.65**	**60**	*e*P	**P**	**07 30 39.7**	**+2.2**
NB2	**NORSAR Subarra**	**64.66**	**338**	P	**P**	**07 30 37.1**	**-0.2**
	comp=Z,178nm,0.5s,baz=31,slow=6.5						
NB2	**NORSAR Subarra**	**64.66**	**338**	P	**P**	**07 30 37.1**	**-0.2**
	baz=31,slow=6.5						
H17A	**Grant Village**	**64.67**	**51**	P	**P**	**07 30 40.7**	**+2.7**
	baz=315,SNR=21						
H17A	**Grant Village**	**64.67**	**51**	*e*P	**P**	**07 30 40.9**	**+3.0**
	comp=Z,22nm,0.9s						
IDID	**Didziasalis**	**64.72**	**327**	*e*P	**P**	**07 30 37.8**	**+0.1**
IDID				IAmb	IAmb	07 30 38.5	
	comp=Z,109nm,0.8s						
PMPB	**Monarch Peak**	**64.72**	**63**	*e*P	**P**	**07 30 40.1**	**+2.0**
	comp=Z,37nm,1.1s						
NV11	**Mina Array Sit**	**64.72**	**60**	*e*P	**P**	**07 30 39.7**	**+1.5**
	comp=Z,2.2nm,0.8s						
MDPB	**Devils Postpil**	**64.75**	**61**	*e*P	**P**	**07 30 39.9**	**+1.4**
	comp=Z,22nm,0.9s						
NBO00	**NORSAR Array S**	**64.78**	**338**	*e*P	**P**	**07 30 37.9**	**-0.1**
OMMB	**Old Mammoth Mi**	**64.81**	**61**	*e*P	**P**	**07 30 40.7**	**+1.7**
	comp=Z,9.9nm,0.9s						
HFS	**Hagfors**	**64.81**	**336**	P	**P**	**07 30 37.4**	**-0.8**
	comp=Z,281nm,0.7s,baz=55,slow=5.5,SNR=941						
HFS	**Hagfors**	**64.81**	**336**	P	**P**	**07 30 37.4**	**-0.8**
RLMT	**Red Lodge**	**64.82**	**50**	P	**P**	**07 30 40.0**	**+1.3**
	baz=315,SNR=18						
RLMT	**Red Lodge**	**64.82**	**50**	*e*P	**P**	**07 30 40.4**	**+1.6**
	comp=Z,12nm,0.8s						
FLWY	**Flagg Ranch**	**64.83**	**51**	*e*P	**P**	**07 30 41.1**	**+2.3**
	comp=Z,8.9nm,0.8s						
IMW	**Indian Meadow**	**64.84**	**51**	*e*P	**P**	**07 30 41.0**	**+2.0**
	comp=Z,15nm,1.1s						
NC602	**NORSAR Array S**	**64.84**	**338**	*e*P	**P**	**07 30 38.0**	**-0.4**
DGMT	**Dagmar**	**64.85**	**44**	P	**P**	**07 30 39.2**	**+0.5**
	baz=317,SNR=8.3						
DGMT	**Dagmar**	**64.85**	**44**	*e*P	**P**	**07 30 39.7**	**+1.0**
	comp=Z,23nm,0.6s						
IIGN	**Ignalina**	**64.87**	**327**	*e*P	**P**	**07 30 41.9**	**+3.3**
IIGN				IAmb	IAmb	07 30 42.5	
	comp=Z,136nm,0.7s						
MLAC	**Mammoth, Mammo**	**64.89**	**61**	P	**P**	**07 30 40.9**	**+1.5**
	baz=314,SNR=8.4						
NAO01	**NORSAR Array S**	**64.91**	**338**	*e*P	**P**	**07 30 38.6**	**-0.2**
MICGM	**Minsk**	**64.94**	**326**	⇓*i*P	**P**	**07 30 38.0**	**-1.0**
MICGM				PM		07 30 39.0	
	comp=Z,1.0nm,1.0s						
MICGM				PM		07 30 40.0	
	comp=N,0.3nm,1.0s						
MICGM				PM		07 30 40.0	
	comp=E,0.2nm,1.0s						
MICGM				*e*PP	**PP**	**07 33 10.0**	**-0.9**
MICGM				*e*PPP	PPP	07 34 53.0	
MICGM				*e*S	**S**	**07 38 34.0**	**-2.8**
MICGM				*e*ScS	**SKSac**	**07 39 34.0**	**-4.4**
MICGM				*e*SS	SS	07 43 34.0	+32
MICGM				*e*SSS	SSS	07 46 35.0	
MNK	**Minsk**	**64.94**	**326**	⇓*i*P	**P**	**07 30 38.0**	**-1.0**
MNK				*e*		07 33 10.0	
MNK				*e*PPP	PPP	07 34 53.0	
MNK				*e*S	**S**	**07 38 34.0**	**-2.8**
MNK				*e*		07 39 34.0	
MNK				pmax	pmax		
	comp=Z,990nm,1.0s						
MNK				pmax	pmax		
	comp=N,300nm,1.0s						
MNK				pmax	pmax		
	comp=E,240nm,1.8s						
FXWY	**Fox Creek**	**64.97**	**52**	*e*P	**P**	**07 30 41.6**	**+1.8**
	comp=E,12nm,0.8s						
NACGM	**Naroch**	**65.02**	**327**	*e*P	**P**	**07 30 38.0**	**-1.6**
NACGM				PM		07 30 39.0	
	comp=Z,1.3nm,1.0s						
NACGM				*e*S	**S**	**07 38 35.0**	**-2.8**
MOOW	**Moose Ponds**	**65.04**	**51**	*e*P	**P**	**07 30 42.0**	**+1.8**
	comp=Z,20nm,1.0s						
TPAW	**Teton Pass**	**65.12**	**52**	*e*P	**P**	**07 30 43.0**	**+2.3**
	comp=Z,34nm,1.1s						
LAO	**LASA Array**	**65.19**	**47**	P	**P**	**07 30 42.2**	**+1.3**
	baz=316,SNR=8.1						
LAO	**LASA Array**	**65.19**	**47**	*e*P	**P**	**07 30 42.0**	**+1.1**
	comp=Z,10.0nm,0.8s						
LOHW	**Long Hollow**	**65.21**	**52**	*e*P	**P**	**07 30 42.9**	**+1.7**
	comp=Z,19nm,1.1s						
SNOW	**Snow King Moun**	**65.24**	**52**	*e*P	**P**	**07 30 43.4**	**+1.9**
	comp=Z,29nm,1.3s						
REDW	**Red Top Meadow**	**65.26**	**52**	*e*P	**P**	**07 30 43.3**	**+1.7**
	comp=Z,19nm,1.0s						
GROC	**Groznyy**	**65.32**	**308**	*e*P	**P**	**07 30 39.9**	**-1.7**
GROC				*e*		07 31 06.1	
GROC				*e*		07 33 13.9	
GROC				*e*S	**S**	**07 38 47.5**	**+5.7**
GROC				pmax	pmax		
	comp=Z,129nm,0.8s						
UGM	**Wanagama**	**65.34**	**221**	*e*P	**P**	**07 30 42.1**	**0.0**
	comp=Z,94nm,1.2s						
HVU	**Hansel Valley**	**65.36**	**54**	*e*P	**P**	**07 30 43.6**	**+1.4**
	comp=Z,10nm,0.8s						
HVU	**Hansel Valley**	**65.36**	**54**	*e*P	**P**	**07 30 43.6**	**+1.4**
HVU				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PAGB	**Antelope Grade**	**65.38**	**63**	*e*P	**P**	**07 30 43.7**	**+1.5**
	comp=Z,95nm,1.2s						
AKT	**Akhty**	**65.51**	**306**	⇓*i*P	**P**	**07 30 43.6**	**+0.6**
AKT				*e*		07 31 08.8	
AKT				*e*		07 33 15.8	
AKT				*e**SP	**sP**	**07 33 33.1**	**-1.3**
AKT				*e*S	**S**	**07 38 43.0**	**-1.4**
AKT				pmax	pmax		
	comp=Z,227nm,0.8s						
ANGG	**Ammassalik, Gr**	**65.52**	**2**	*e*P	**P**	**07 30 42.0**	**-0.5**
	comp=Z,73nm,0.8s						
AHID	**Auburn Hatcher**	**65.55**	**52**	*e*P	**P**	**07 30 44.8**	**+1.4**
	comp=Z,24nm,1.3s						
TIN	**Tinemaha, Big**	**65.63**	**61**	P	**P**	**07 30 45.3**	**+1.4**
	baz=314						
HYA	**Hoyanger**	**65.72**	**341**	*e*P	**P**	**07 30 43.4**	**-0.3**
HYA				IAmb	IAmb	07 30 44.6	
	comp=Z,180nm,0.8s						
OSL	**Oslo**	**65.74**	**338**	*e*P	**P**	**07 30 43.4**	**-0.5**
OSL				IAmb	IAmb	07 30 44.6	
	comp=Z,99nm,0.7s						
SMMC	**Simmler**	**65.81**	**64**	P	**P**	**07 30 46.4**	**+1.5**
	baz=314,SNR=10						
BGU	**Big Grassy Mou**	**65.83**	**55**	*e*P	**P**	**07 30 46.5**	**+1.4**
	comp=Z,8.1nm,0.7s						
SPUT	**South Promonto**	**65.87**	**54**	*e*P	**P**	**07 30 46.9**	**+1.5**
	comp=Z,18nm,0.7s						
VES	**Vestal, Richgr**	**65.98**	**63**	P	**P**	**07 30 46.2**	**+0.3**
	baz=314,SNR=25						
CRGC	**Crocker Grade**	**66.02**	**63**	*e*P	**P**	**07 30 49.5**	**+3.2**
BORG	**Borgarnes**	**66.12**	**355**	*e*P	**P**	**07 30 48.1**	**+1.8**
	comp=Z,142nm,0.8s						
SUE	**Sulen**	**66.12**	**341**	*e*P	**P**	**07 30 46.2**	**0.0**
SUE				IAmb	IAmb	07 30 47.3	
	comp=Z,146nm,0.9s						
HWUT	**Hardware Ranch**	**66.13**	**54**	*e*P	**P**	**07 30 48.5**	**+1.5**
	comp=Z,30nm,0.8s						
CWC	**Cottonwood Cre**	**66.15**	**62**	P	**P**	**07 30 48.2**	**+1.1**
	baz=314						
GRAC	**Grapevine Rang**	**66.17**	**61**	P	**P**	**07 30 48.7**	**+1.6**
	baz=315,SNR=54						
PKM	**Mcpherson Peak**	**66.22**	**64**	P	**P**	**07 30 49.0**	**+1.3**
	baz=314,SNR=12						
R11A	**Troy Canyon, C**	**66.23**	**59**	P	**P**	**07 30 48.8**	**+1.1**
	baz=315,SNR=28						
R11A	**Troy Canyon, C**	**66.23**	**59**	*e*P	**P**	**07 30 48.8**	**+1.1**
	comp=Z,12nm,0.8s						
NCK	**Nalchik**	**66.24**	**309**	*de*P	**P**	**07 30 48.2**	**+0.8**
NCK				pmax	pmax		
	comp=Z,252nm,0.7s						
KONO	**Kongsberg**	**66.27**	**338**	*e*P	**P**	**07 30 47.4**	**+0.1**
	comp=Z,85nm,1.0s						
KONO	**Kongsberg**	**66.27**	**338**	*d i*P	**P**	**07 30 47.1**	**-0.2**
KONO				pmax	pmax		
	comp=Z,98nm,1.1s						
KONO	**Kongsberg**	**66.27**	**338**	⇓*i*P	**P**	**07 30 47.2**	**0.0**
KONO				IAmb	IAmb	07 30 48.1	
	comp=Z,68nm,0.9s						
XMAS	**Kiritimati**	**66.30**	**116**	*e*P	**P**	**07 30 49.1**	**+1.0**
	comp=Z,275nm,1.5s						
BW06	**Boulder Array**	**66.35**	**52**	P	**P**	**07 30 49.2**	**+0.9**
	baz=316,SNR=38						
BW06	**Boulder Array**	**66.35**	**52**	*e*P	**P**	**07 30 49.4**	**+1.0**
	comp=Z,36nm,1.1s						
PD31	**Pinedale Array**	**66.35**	**52**	*e*P	**P**	**07 30 49.2**	**+0.9**
PDAR	**Pinedale Array**	**66.35**	**52**	P	**P**	**07 30 49.2**	**+0.9**
	comp=Z,23nm,0.7s,baz=310,slow=1.0,SNR=234						
PDAR	**Pinedale Array**	**66.35**	**52**	*e*P	**P**	**07 30 49.4**	**+1.0**
KIV	**Kislovodsk**	**66.36**	**310**	*e*P	**P**	**07 30 49.0**	**+0.7**
KIV	**Kislovodsk**	**66.36**	**310**	*e*P	**P**	**07 30 49.1**	**+0.9**
	comp=Z,328nm,0.8s						
KIV	**Kislovodsk**	**66.36**	**310**	P	**P**	**07 30 49.0**	**+0.7**
	SNR=56						
KIV	**Kislovodsk**	**66.36**	**310**	*i* P	**P**	**07 30 49.2**	**+0.9**
	SNR=43						
KIV	**Kislovodsk**	**66.36**	**310**	*e*P	**P**	**07 30 49.0**	**+0.7**
KIV				*e*		07 33 24.9	
KIV				*e*S	**S**	**07 38 56.0**	**+1.7**
KIV				pmax	pmax		
	comp=Z,432nm,1.0s						
KIV				pmax	pmax		
	comp=Z,46nm,2.7s						
KIV				MLR	MLR		
	comp=Z,105nm,17.0s						
KBZ	**Khabaz**	**66.42**	**310**	P	**P**	**07 30 49.4**	**+0.9**
	comp=Z,220nm,0.8s,baz=68,slow=3.7,SNR=283						
KBZ	**Khabaz**	**66.42**	**310**	*e*P	**P**	**07 30 49.4**	**+0.9**
DUG	**Dugway, Tooele**	**66.46**	**55**	P	**P**	**07 30 50.4**	**+1.4**
	baz=315,SNR=47						
DUG	**Dugway, Tooele**	**66.46**	**55**	*e*P	**P**	**07 30 50.5**	**+1.5**
	comp=Z,28nm,0.8s						
ISA	**Isabella, Lake**	**66.46**	**62**	P	**P**	**07 30 49.3**	**+0.3**
	baz=315,SNR=18						
ISA	**Isabella, Lake**	**66.46**	**62**	*e*P	**P**	**07 30 49.3**	**+0.3**
	comp=Z,23nm,0.9s						
ISA	**Isabella, Lake**	**66.46**	**62**	*e*P	**P**	**07 30 49.3**	**+0.3**
ISA				pmax	pmax		
	comp=Z,23nm,0.9s						
DAC	**Darwin (Calif)**	**66.54**	**61**	*e*P	**P**	**07 30 50.5**	**+0.9**
	comp=Z,25nm,1.1s						
DAC	**Darwin (Calif)**	**66.54**	**61**	*e*P	**P**	**07 30 50.5**	**+0.9**
DAC				pmax	pmax		
	comp=Z,25nm,1.1s						
ASK	**Askoy**	**66.55**	**341**	*e*P	**P**	**07 30 49.4**	**+0.5**
ASK				IAmb	IAmb	07 30 50.0	
	comp=Z,144nm,0.9s						
TCUT	**Toone Canyon**	**66.56**	**54**	*e*P	**P**	**07 30 51.2**	**+1.5**
	comp=Z,36nm,0.8s						
ZEI	**Tsey**	**66.59**	**309**	*e*P	**P**	**07 30 49.2**	**-0.6**
ZEI				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BER	**Bergen**	**66.60**	**341**	*e*P	**P**	**07 30 49.1**	**-0.2**
ARVC	**Arvin**	**66.63**	**63**	P	**P**	**07 30 50.5**	**+0.5**
	baz=315						
DUS	**Dusheti**	**66.67**	**308**	*e*P	**P**	**07 30 51.4**	**+1.2**
CTU	**Camp Tracy**	**66.68**	**54**	*e*P	**P**	**07 30 51.9**	**+1.5**
	comp=Z,16nm,0.9s						
MPMC	**Manual Prospec**	**66.75**	**61**	P	**P**	**07 30 52.0**	**+1.1**
	baz=315,SNR=39						
DGRG	**David-gareji**	**66.78**	**307**	*e*P	**P**	**07 30 51.6**	**+0.8**
FURC	**Furnace Creek,**	**66.83**	**61**	P	**P**	**07 30 52.6**	**+1.5**
	baz=315,SNR=67						
TPNV	**Topopah Spring**	**66.84**	**60**	P	**P**	**07 30 52.7**	**+1.3**
	baz=315,SNR=69						
TPNV	**Topopah Spring**	**66.84**	**60**	*e*P	**P**	**07 30 52.6**	**+1.3**
	comp=Z,60nm,0.8s						
NEY	**Neytrino**	**66.86**	**310**	*de*P	**P**	**07 30 52.2**	**+0.8**
NEY				pmax	pmax		
	comp=Z,20nm,0.7s						
JLU	**Jordanelle**	**66.90**	**54**	*e*P	**P**	**07 30 53.1**	**+1.3**
	comp=Z,15nm,0.9s						
TBLG	**Delisi**	**66.91**	**307**	*e*P	**P**	**07 30 52.7**	**+1.0**
	comp=Z,207nm,0.7s						
TBLG	**Delisi**	**66.91**	**307**	*e*P	**P**	**07 30 52.6**	**+1.0**
ONI	**Oni**	**66.96**	**309**	*e*P	**P**	**07 30 53.0**	**+1.1**
SUW	**Suwalki**	**67.01**	**328**	*i* P	**P**	**07 30 51.2**	**-0.7**
	comp=Z,600nm,1.7s						
SUW				*e*S	**S**	**07 38 59.4**	**-1.9**
SUW	**Suwalki**	**67.01**	**328**	*e*P	**P**	**07 30 50.9**	**-1.0**
	comp=Z,152nm,0.7s						
SUW	**Suwalki**	**67.01**	**328**	⇓*i*P	**P**	**07 30 51.2**	**-0.7**
SUW				*e*S	**S**	**07 38 59.4**	**-1.9**
SUW				pmax	pmax		
	comp=Z,600nm,1.7s						
NLU	**North Lily Min**	**67.03**	**55**	*e*P	**P**	**07 30 54.0**	**+1.5**
	comp=Z,28nm,0.9s						
OSI	**Osito Audit: C**	**67.05**	**63**	P	**P**	**07 30 53.7**	**+1.1**
	baz=315,SNR=6.7						
OSI	**Osito Audit: C**	**67.05**	**63**	*e*P	**P**	**07 30 54.2**	**+1.6**
	comp=Z,51nm,0.8s						
LRMC	**Laurel Mtn Rad**	**67.05**	**62**	P	**P**	**07 30 53.6**	**+0.9**
	baz=315,SNR=14						
PSUT	**Pine Spring**	**67.07**	**57**	*e*P	**P**	**07 30 54.2**	**+1.4**
	comp=Z,22nm,0.8s						
ULM	**Lac du Bonnet**	**67.13**	**38**	P	**P**	**07 30 52.5**	**-0.2**
	comp=Z,7.6nm,0.5s,baz=326,slow=6.8,SNR=14						
ULM	**Lac du Bonnet**	**67.13**	**38**	*e*P	**P**	**07 30 52.5**	**-0.2**
	comp=Z,16nm,1.0s						
ULM	**Lac du Bonnet**	**67.13**	**38**	*e*P	**P**	**07 30 52.5**	**-0.2**
ULM				pmax	pmax		
	comp=Z,16nm,1.0s						
BLG	**Laguna Peak, P**	**67.20**	**64**	P	**P**	**07 30 54.2**	**+0.7**
	baz=315						
BLS5	**Blasjo**	**67.22**	**340**	*e*P	**P**	**07 30 53.3**	**+0.2**
BLS5				IAmb	IAmb	07 30 54.1	
	comp=Z,49nm,0.6s						
MPU	**Maple Canyon**	**67.22**	**55**	*e*P	**P**	**07 30 55.2**	**+1.4**
	comp=Z,29nm,0.8s						
EDW2	**Edwards Air Fo**	**67.29**	**63**	P	**P**	**07 30 55.1**	**+1.1**
	baz=315,SNR=34						
MDND	**Maddock**	**67.38**	**42**	P	**P**	**07 30 55.2**	**+0.9**
	baz=319						
MDND	**Maddock**	**67.38**	**42**	*e*P	**P**	**07 30 55.5**	**+1.2**
	comp=Z,24nm,0.8s						
AKASG	**Malin Array Be**	**67.38**	**323**	P	**P**	**07 30 53.8**	**-0.4**
	comp=Z,254nm,0.6s,baz=37,slow=6.4,SNR=528						
AKASG	**Malin Array Be**	**67.38**	**323**	P	**P**	**07 30 53.8**	**-0.4**
AKBB	**Malin Array Si**	**67.38**	**323**	*e*P	**P**	**07 30 53.9**	**-0.4**
	comp=Z,258nm,0.7s						
KIEV	**Kiev**	**67.39**	**323**	*e*P	**P**	**07 30 53.9**	**-0.4**
	comp=Z,252nm,0.6s						
KIEV	**Kiev**	**67.39**	**323**	*i* P	**P**	**07 30 53.9**	**-0.4**
	SNR=20						
KIEV	**Kiev**	**67.39**	**323**	*c i*P	**P**	**07 30 53.4**	**-0.9**
KIEV				pmax	pmax		
	comp=Z,241nm,0.7s						
AK11	**Malin Array Si**	**67.42**	**323**	*e*P	**P**	**07 30 53.8**	**-0.7**
KLNR	**Kaliningrad**	**67.53**	**330**	*d i*P	**P**	**07 30 54.5**	**-0.6**
KLNR				pmax	pmax		
	comp=Z,359nm,0.6s						
DECC	**Green Verdugo**	**67.53**	**63**	P	**P**	**07 30 56.4**	**+0.9**
	baz=315,SNR=14						
SHOC	**Shoshone, Teco**	**67.56**	**61**	P	**P**	**07 30 56.6**	**+0.9**
	baz=315,SNR=7.8						
PASC	**Pasadena Art C**	**67.68**	**63**	*e*P	**P**	**07 30 57.3**	**+0.9**
	comp=Z,26nm,0.8s						
KMY	**Karmoy**	**67.68**	**340**	IAmb	IAmb	07 30 56.7	
	comp=Z,98nm,0.7s						
KMY				*e*P	**P**	**07 30 56.8**	**+0.9**
GSC	**Goldstone, Bar**	**67.68**	**62**	P	**P**	**07 30 57.4**	**+0.9**
	baz=315,SNR=26						
GSC	**Goldstone, Bar**	**67.68**	**62**	*e*P	**P**	**07 30 57.6**	**+1.1**
	comp=Z,33nm,0.9s						
GSC	**Goldstone, Bar**	**67.68**	**62**	*e*P	**P**	**07 30 57.6**	**+1.1**
GSC				pmax	pmax		
	comp=Z,33nm,0.9s						
MWC	**Mount Wilson**	**67.71**	**63**	*e*P	**P**	**07 30 57.7**	**+0.8**
	comp=Z,36nm,0.8s						
MWC	**Mount Wilson**	**67.71**	**63**	*e*P	**P**	**07 30 57.7**	**+0.8**
MWC				pmax	pmax		
	comp=Z,36nm,0.8s						
HOMB	**Homborsund**	**67.76**	**338**	*e*P	**P**	**07 30 56.0**	**-0.3**
HOMB				IAmb	IAmb	07 30 57.3	
	comp=Z,63nm,0.8s						
SHPR	**Sheep Range**	**67.77**	**60**	*e*P	**P**	**07 30 58.7**	**+1.5**
	comp=Z,28nm,0.9s						
TCRU	**Three Creeks R**	**67.79**	**56**	*e*P	**P**	**07 30 58.7**	**+1.4**
	comp=Z,16nm,0.7s						
AKH	**Akhalkalaki**	**67.79**	**308**	⇑*i*P	**P**	**07 30 58.2**	**+1.0**
AKH	**Akhalkalaki**	**67.79**	**308**	*e*P	**P**	**07 30 57.4**	**+0.2**
	comp=Z,130nm,1.0s						
AKH	**Akhalkalaki**	**67.79**	**308**	*e*P	**P**	**07 30 58.2**	**+1.0**
STAV	**Stavanger**	**67.83**	**340**	*e*P	**P**	**07 30 57.4**	**+0.6**
STAV				IAmb	IAmb	07 30 58.3	
	comp=Z,85nm,0.8s						
BFSC	**Mount Baldy Ra**	**67.94**	**63**	P	**P**	**07 30 59.0**	**+0.9**
	baz=315,SNR=20						
TMUT	**Trail Mountain**	**67.97**	**55**	*e*P	**P**	**07 30 59.8**	**+1.4**
	comp=Z,33nm,0.8s						
K22A	**Casper**	**67.97**	**50**	P	**P**	**07 30 58.6**	**+0.3**
	baz=317,SNR=7.7						
K22A	**Casper**	**67.97**	**50**	*e*P	**P**	**07 30 59.0**	**+0.7**
	comp=Z,8.9nm,0.6s						
MSU	**Marysvale**	**68.00**	**56**	*e*P	**P**	**07 31 00.5**	**+1.9**
SNART	**Snartemo**	**68.01**	**339**	*e*P	**P**	**07 30 58.2**	**+0.3**
SNART				IAmb	IAmb	07 30 58.9	
	comp=Z,123nm,0.6s						
CCUT	**Cedar City**	**68.04**	**58**	*e*P	**P**	**07 31 00.3**	**+1.5**
	comp=Z,13nm,0.8s						
GNI	**Garni**	**68.05**	**306**	P	**P**	**07 30 59.6**	**+0.9**
	comp=Z,92nm,0.9s,baz=227,slow=2.0,SNR=45						
GNI	**Garni**	**68.05**	**306**	*e*P	**P**	**07 30 59.6**	**+0.9**
CIS	**Catalina Islan**	**68.08**	**64**	P	**P**	**07 30 59.5**	**+0.6**
	baz=315						
P17A	**Butcher Ranch,**	**68.09**	**55**	*e*P	**P**	**07 31 00.3**	**+1.3**
	comp=Z,38nm,1.1s						
TUQ	**Turquoise Moun**	**68.09**	**61**	P	**P**	**07 31 00.4**	**+1.4**
	baz=316,SNR=36						
SOC	**Sochi**	**68.11**	**312**	*d i*P	**P**	**07 30 59.1**	**+0.3**
SOC				*e*		07 33 39.1	
SOC				*e*PPP	PPP	07 35 22.2	
SOC				*e*S	**S**	**07 39 14.9**	**+0.4**
SOC				pmax	pmax		
	comp=Z,157nm,0.7s						
RSSD	**Black Hills**	**68.12**	**47**	P	**P**	**07 30 59.8**	**+0.6**
	baz=318						
RSSD	**Black Hills**	**68.12**	**47**	*e*P	**P**	**07 30 59.8**	**+0.6**
	comp=Z,13nm,0.8s						
RSSD	**Black Hills**	**68.12**	**47**	*e*P	**P**	**07 30 59.8**	**+0.6**
RSSD				pmax	pmax		
	comp=Z,13nm,0.8s						
LRW	**Lerwick**	**68.14**	**344**	⇓*e*P	**P**	**07 30 58.9**	**+0.2**
LRW				IAmb	IAmb	07 30 59.2	
	comp=Z,112nm,0.5s						
SZCU	**Shurtz Canyon**	**68.16**	**58**	*e*P	**P**	**07 31 01.1**	**+1.6**
	comp=Z,14nm,0.8s						
P18A	**Preston Nutter**	**68.24**	**54**	*e*P	**P**	**07 31 01.4**	**+1.3**
	comp=Z,29nm,1.0s						
HEC	**Hector,Ludlow**	**68.29**	**62**	P	**P**	**07 31 01.4**	**+1.2**
	baz=316,SNR=25						
ANN	**Anapa**	**68.30**	**314**	*e*P	**P**	**07 30 59.8**	**-0.2**
ANN	**Anapa**	**68.30**	**314**	*e*P	**P**	**07 30 59.7**	**-0.2**
ANN				*e*S	**S**	**07 39 16.6**	**0.0**
ANN				pmax	pmax		
	comp=Z,124nm,0.6s						
RWWY	**Rawlins**	**68.33**	**51**	*e*P	**P**	**07 31 01.5**	**+1.0**
	comp=Z,18nm,0.9s						
MTPU	**Mount Pierson**	**68.34**	**57**	*e*P	**P**	**07 31 02.7**	**+1.9**
	comp=Z,16nm,0.7s						
A33A	**Warroad**	**68.35**	**39**	P	**P**	**07 30 60.0**	**-0.2**
	baz=321,SNR=15						
BBRC	**Big Bear Solar**	**68.35**	**62**	P	**P**	**07 31 01.8**	**+1.0**
	baz=316,SNR=24						
SRU	**San Rafael Swe**	**68.47**	**55**	*e*P	**P**	**07 31 02.4**	**+1.1**
	comp=Z,46nm,0.9s						
SRU	**San Rafael Swe**	**68.47**	**55**	*e*P	**P**	**07 31 02.4**	**+1.1**
SRU				pmax	pmax		
	comp=Z,47nm,0.9s						
LCMT	**Little Creek M**	**68.49**	**58**	*e*P	**P**	**07 31 02.8**	**+1.4**
	comp=Z,13nm,0.8s						
AGMN	**Agassiz Nation**	**68.65**	**40**	P	**P**	**07 31 01.5**	**-0.5**
	baz=321,SNR=7.8						
AGMN	**Agassiz Nation**	**68.65**	**40**	*e*P	**P**	**07 31 01.7**	**-0.3**
	comp=Z,8.1nm,0.6s						
MURC	**Murrieta**	**68.66**	**63**	P	**P**	**07 31 03.0**	**+0.7**
	baz=316,SNR=14						
PKCU	**Pink Cliffs**	**68.70**	**57**	*e*P	**P**	**07 31 04.9**	**+2.0**
	comp=Z,26nm,0.8s						
GMRC	**Granite Mounta**	**68.71**	**61**	P	**P**	**07 31 04.0**	**+1.2**
	baz=316,SNR=32						
KNB	**Kanab**	**68.72**	**58**	*e*P	**P**	**07 31 04.5**	**+1.6**
	comp=Z,26nm,1.0s						
BSD	**Bornholm Skovb**	**68.76**	**333**	⇓*i*P	**P**	**07 31 01.9**	**-0.6**
	comp=Z,194nm,0.7s						
BSD				*i*		07 32 50.3	
BSD	**Bornholm Skovb**	**68.76**	**333**	⇓*i*P	**P**	**07 31 01.9**	**-0.6**
BSD				pmax	pmax		
	comp=Z,190nm,0.7s						
LDFC	**Landfair**	**68.82**	**61**	*e*P	**P**	**07 31 04.6**	**+1.2**
	comp=Z,84nm,0.9s						
CTA	**Charters Tower**	**68.92**	**181**	P	**P**	**07 31 03.8**	**-0.1**
	comp=Z,61nm,0.8s,baz=358,slow=7.2,SNR=34						
CTAO	**Charters Tower**	**68.92**	**181**	*e*P	**P**	**07 31 04.5**	**+0.6**
	comp=Z,88nm,0.9s						
CTAO	**Charters Tower**	**68.92**	**181**	*e*P	**P**	**07 31 04.5**	**+0.6**
CTAO				pmax	pmax		
	comp=Z,88nm,0.9s						
O20A	**White River Ci**	**68.94**	**53**	P	**P**	**07 31 04.5**	**+0.3**
	baz=317,SNR=18						
O20A	**White River Ci**	**68.94**	**53**	*e*P	**P**	**07 31 05.0**	**+0.8**
	comp=Z,26nm,1.0s						
COP	**Copenhagen**	**68.99**	**335**	⇓*i*P	**P**	**07 31 04.0**	**+0.1**
	comp=Z,117nm,0.6s						
COP	**Copenhagen**	**68.99**	**335**	⇓*i*P	**P**	**07 31 04.0**	**+0.1**
COP				pmax	pmax		
	comp=Z,120nm,0.6s						
B34A	**Aery, Baudette**	**69.00**	**39**	P	**P**	**07 31 03.6**	**-0.5**
	baz=322,SNR=14						
BELC	**Belle Mtn. Jos**	**69.07**	**62**	P	**P**	**07 31 05.6**	**+0.6**
	baz=316,SNR=22						
PFO	**Pinyon Flats O**	**69.08**	**63**	P	**P**	**07 31 05.8**	**+0.8**
	baz=316,SNR=13						
PFO	**Pinyon Flats O**	**69.08**	**63**	*e*P	**P**	**07 31 05.9**	**+0.8**
	comp=Z,37nm,1.0s						
PFO	**Pinyon Flats O**	**69.08**	**63**	*e*P	**P**	**07 31 05.9**	**+0.9**
PFO				pmax	pmax		
	comp=Z,37nm,1.0s						
XPFO	**Piæon Flat**	**69.08**	**63**	*e*P	**P**	**07 31 05.9**	**+0.8**
	comp=Z,40nm,1.1s						
C33A	**Trail**	**69.10**	**40**	P	**P**	**07 31 04.3**	**-0.5**
	baz=321						
MUD	**Monsted U’grnd**	**69.20**	**337**	⇓*i*P	**P**	**07 31 05.3**	**+0.2**
	comp=Z,68nm,0.7s						
MUD	**Monsted U’grnd**	**69.20**	**337**	⇓*i*P	**P**	**07 31 05.3**	**+0.2**
MUD				pmax	pmax		
	comp=Z,68nm,0.7s						
109C	**Camp Elliot, M**	**69.22**	**64**	P	**P**	**07 31 06.5**	**+0.8**
	baz=316,SNR=6.7						
CPE	**Camp Elliot**	**69.22**	**64**	*e*P	**P**	**07 31 06.9**	**+1.2**
	comp=Z,40nm,1.0s						
IVI	**Ivigtut**	**69.30**	**8**	*e*P	**P**	**07 31 05.4**	**-0.2**
	comp=Z,57nm,0.6s						
NEE2	**Needles Airpor**	**69.32**	**61**	P	**P**	**07 31 07.1**	**+0.9**
	baz=316						
LLD	**Lille Linde**	**69.36**	**335**	⇓*i*P	**P**	**07 31 06.1**	**0.0**
	comp=Z,124nm,0.6s						
LLD	**Lille Linde**	**69.36**	**335**	⇓*i*P	**P**	**07 31 06.1**	**0.0**
LLD				pmax	pmax		
	comp=Z,120nm,0.6s						
PALK	**Pallekele**	**69.37**	**257**	P	**P**	**07 31 06.7**	**-0.2**
	comp=Z,59nm,0.7s,baz=315,slow=1.4,SNR=24						
PALK	**Pallekele**	**69.37**	**257**	*e*P	**P**	**07 31 07.3**	**+0.4**
	comp=Z,70nm,0.8s						
PALK	**Pallekele**	**69.37**	**257**	*i* P	**P**	**07 31 07.2**	**+0.4**
	SNR=7.7						
PALK	**Pallekele**	**69.37**	**257**	*i* P	**P**	**07 31 07.7**	**+0.8**
U15A	**North Rim**	**69.44**	**58**	*e*P	**P**	**07 31 08.8**	**+1.4**
	comp=Z,29nm,0.8s						
IRM	**Iron Mountain**	**69.45**	**61**	P	**P**	**07 31 08.3**	**+1.2**
	baz=316,SNR=53						
B35A	**Bob, Littlefor**	**69.48**	**39**	P	**P**	**07 31 06.7**	**-0.3**
	baz=322,SNR=34						
B35A	**Bob, Littlefor**	**69.48**	**39**	*e*P	**P**	**07 31 06.8**	**-0.2**
	comp=Z,30nm,0.6s						
W13A	**Hualapai Mount**	**69.50**	**60**	*e*P	**P**	**07 31 08.8**	**+1.1**
	comp=Z,19nm,0.8s						
PHWY	**Pilot Hill**	**69.51**	**50**	*e*P	**P**	**07 31 08.8**	**+1.1**
	comp=Z,14nm,1.5s						
C34A	**RKJ Ranch, Bem**	**69.55**	**40**	P	**P**	**07 31 06.7**	**-0.8**
	baz=322,SNR=7.3						
NRS	**Narsarsuaq**	**69.58**	**7**	*e*P	**P**	**07 31 06.7**	**-0.6**
	comp=Z,155nm,1.4s						
NRS	**Narsarsuaq**	**69.58**	**7**	*i* P	**P**	**07 31 07.3**	**0.0**
NRS	**Narsarsuaq**	**69.58**	**7**	*i* P	**P**	**07 31 07.3**	**0.0**
GKP	**Gorka Klasztor**	**69.61**	**331**	*i* P	**P**	**07 31 07.7**	**0.0**
	comp=Z,500nm,2.2s						
GKP				*e*S	**S**	**07 39 31.1**	**-0.3**

GKP	Gorka Klasztor	69.61	331	⇓iP	P	07 31 07.7	0.0
GKP				eS	S	07 39 31.1	-0.3
GKP				pmax	pmax		
	comp=Z,500nm,2.2s						
MONP2	Monument Peak	69.62	63	P	P	07 31 08.6	+0.2
	baz=316,SNR=13						
BAR	Barrett	69.62	63	eP	P	07 31 08.9	+0.8
	comp=Z,28nm,0.8s						
BEL	Belsk	69.62	328	i P	P	07 31 08.4	+0.7
	comp=Z,1µm,1.3s						
BEL				eS	S	07 39 31.3	-0.3
BEL	Belsk	69.62	328	⇓iP	P	07 31 08.4	+0.7
BEL				eS	S	07 39 31.3	-0.3
BEL				pmax	pmax		
	comp=Z,1µm,1.3s						
BC3	Big Chuckawall	69.64	62	P	P	07 31 09.1	+0.8
	baz=316,SNR=26						
PV09	Paradox Valley	69.66	54	eP	P	07 31 10.7	+2.0
FITZ	Fitzroy Crossi	69.68	202	eP	P	07 31 09.3	+0.8
	comp=Z,42nm,0.8s						
PV21	Cone Mtn., Par	69.70	54	eP	P	07 31 10.1	+1.3
	comp=Z,39nm,0.8s						
RGN	Rugen	69.72	334	eP	P	07 31 09.1	+0.9
	comp=Z,181nm,0.7s						
SIM	Simferopol’	69.73	316	deP	P	07 31 08.5	0.0
SIM				e		07 33 53.0	
SIM				eS	S	07 39 34.0	+0.9
SIM				pmax	pmax		
	comp=Z,126nm,0.9s						
WRAB	Tennant Creek	69.73	193	eP	P	07 31 09.3	+0.5
	comp=Z,95nm,0.8s						
WRAB	Tennant Creek	69.73	193	deP	P	07 31 08.6	-0.2
WRAB				pmax	pmax		
	comp=Z,117nm,0.9s						
WB2	Warramunga Arr	69.74	193	eP	P	07 31 09.3	+0.4
	comp=Z,129nm,0.9s						
WR1	Warramunga Arr	69.74	193	eP	P	07 31 08.8	-0.1
	comp=Z,172nm,1.1s						
WRA	Warramunga Arr	69.74	193	P	P	07 31 08.8	-0.1
	comp=Z,106nm,0.8s,baz=9.2,slow=6.1,SNR=382						
WRA	Warramunga Arr	69.74	193	P	P	07 31 08.8	-0.1
SORM	Soroca	69.75	321	⇓iP	P	07 31 08.3	-0.3
SORM	Soroca	69.75	321	⇓P	P	07 31 08.3	-0.3
WC3	Warramunga Arr	69.75	193	eP	P	07 31 09.3	+0.4
	comp=Z,121nm,0.9s						
PV23	Carpenter Ridg	69.76	54	eP	P	07 31 10.5	+1.3
	comp=Z,51nm,0.9s						
PV10	Paradox Valley	69.80	55	eP	P	07 31 11.2	+1.8
PV10				eS	S	07 39 31.0	-3.6
PV14	Lion Creek, Pa	69.81	55	eP	P	07 31 10.5	+1.1
	comp=Z,48nm,0.9s						
PV22	Blue Mesa, Par	69.82	54	eP	P	07 31 10.5	+1.0
	comp=Z,39nm,0.8s						
PV20	West Nyswonger	69.86	54	eP	P	07 31 11.0	+1.3
	comp=Z,56nm,1.0s						
PV19	Morning Glory	69.88	55	eP	P	07 31 10.9	+1.1
	comp=Z,42nm,1.0s						
C35A	Jirik Farms, M	69.90	39	P	P	07 31 09.0	-0.5
	baz=322,SNR=6.1						
PV16	Nyswonger Mesa	69.91	54	eP	P	07 31 11.1	+1.1
	comp=Z,63nm,1.2s						
PV17	East Wray Mesa	69.91	55	eP	P	07 31 11.1	+1.1
	comp=Z,62nm,0.9s						
PDMCI	Parker Dam,Lak	69.93	61	P	P	07 31 10.9	+1.0
	baz=316,SNR=18						
PV11	David Mesa, Pa	69.94	54	eP	P	07 31 11.4	+1.2
	comp=Z,44nm,0.9s						
SWSC	Sam W. Stewart	69.94	63	P	P	07 31 10.7	+0.7
	baz=316,SNR=7.9						
PV18	Skein Mesa, Pa	69.96	55	eP	P	07 31 11.7	+1.4
	comp=Z,47nm,1.1s						
PV12	Saucer Basin,	69.97	54	eP	P	07 31 11.4	+1.1
	comp=Z,23nm,1.0s						
IKP	In-Ko-Pah, Jac	69.97	63	P	P	07 31 11.3	+1.0
	baz=316,SNR=14						
PV05	Paradox Valley	69.98	55	eP	P	07 31 11.8	+1.4
F32A	Veblen	69.99	42	P	P	07 31 09.8	-0.3
	baz=321						
PV03	Paradox Valley	69.99	54	eP	P	07 31 11.1	+0.6
PV13	Radium Mtn., P	70.08	55	eP	P	07 31 12.2	+1.1
	comp=Z,39nm,0.8s						
PV02	Paradox Valley	70.08	54	eP	P	07 31 12.3	+1.2
	comp=Z,33nm,1.4s						
LVV	L’vov	70.10	325	eP	P	07 31 10.0	-0.6
Y12C	Blythe	70.11	61	P	P	07 31 12.3	+1.4
	baz=316,SNR=30						
Y12C	Blythe	70.11	61	eP	P	07 31 12.4	+1.4
	comp=Z,80nm,1.1s						
BIGH	Upper Bighouse	70.18	344	⇓eP	P	07 31 11.1	+0.2
BIGH				IAmb	IAmb	07 31 11.5	
	comp=Z,199nm,0.6s						
PV01	Paradox Valley	70.23	54	eP	P	07 31 13.1	+1.1
SUSD	Miller	70.27	44	P	P	07 31 12.1	+0.4
	baz=320,SNR=12						
G32A	Webster	70.30	43	P	P	07 31 12.0	+0.1
	baz=321,SNR=14						
G32A	Webster	70.30	43	eP	P	07 31 12.2	+0.3
	comp=Z,32nm,0.8s						
SMCO	Snowmass	70.30	53	eP	P	07 31 13.5	+1.0
	comp=Z,17nm,0.8s						
C36A	Pine Crest Far	70.33	38	P	P	07 31 11.8	-0.2
	baz=323,SNR=16						
D35A	Remer	70.36	40	P	P	07 31 11.5	-0.7
	baz=322,SNR=7.3						
GLA	Glamis	70.43	62	P	P	07 31 14.2	+1.2
	baz=317,SNR=15						
GLA	Glamis	70.43	62	eP	P	07 31 14.4	+1.4
	comp=Z,56nm,0.9s						
GLA	Glamis	70.43	62	eP	P	07 31 14.4	+1.4
GLA				pmax	pmax		
	comp=Z,57nm,0.9s						
KIS	Kishinev	70.46	320	i P	P	07 31 13.0	+0.2
	comp=Z,500nm,1.2s						
KIS	Kishinev	70.46	320	ePP	PP	07 33 56.0	-2.1
KIS	Kishinev	70.46	320	⇑iP	P	07 31 12.9	+0.2
KIS	Kishinev	70.46	320	⇑P	P	07 31 13.0	+0.2
ISCO	Idaho Springs	70.54	51	P	P	07 31 15.0	+1.1
	baz=318,SNR=15						
ISCO	Idaho Springs	70.54	51	eP	P	07 31 14.9	+1.1
	comp=Z,15nm,1.3s						
ISCO	Idaho Springs	70.54	51	eP	P	07 31 14.9	+1.0
ISCO				pmax	pmax		
	comp=Z,15nm,1.3s						
WUAZ	Wupatki	70.61	58	P	P	07 31 15.6	+1.5
	baz=317,SNR=19						
WUAZ	Wupatki	70.61	58	eP	P	07 31 15.7	+1.5
	comp=Z,21nm,0.9s						
C37A	Embarrass	70.61	38	P	P	07 31 13.3	-0.4
	baz=323,SNR=17						
E35A	Pequot Lakes	70.63	40	P	P	07 31 13.4	-0.4
	baz=322,SNR=5.8						
D36A	Goodland	70.65	39	P	P	07 31 13.5	-0.5
	baz=323,SNR=6.4						
D36A	Goodland	70.65	39	eP	P	07 31 13.6	-0.4
	comp=Z,10.0nm,0.9s						
EYMN	Ely	70.72	38	P	P	07 31 14.1	-0.3
	baz=324,SNR=18						
EYMN	Ely	70.72	38	eP	P	07 31 14.1	-0.3
	comp=Z,24nm,0.8s						
KWP	Kalwaria Pacla	70.75	326	i P	P	07 31 15.1	+0.6
	comp=Z,800nm,1.7s						
KWP				eSKSac	SKSac	07 40 23.0	+0.4
KWP	Kalwaria Pacla	70.75	326	eP	P	07 31 15.2	+0.6
	comp=Z,5µm,1.3s						
KWP	Kalwaria Pacla	70.75	326	⇓iP	P	07 31 15.1	+0.6
KWP				e		07 40 23.0	
KWP				pmax	pmax		
	comp=Z,800nm,1.7s						
G33A	Ortonville	70.82	42	P	P	07 31 15.1	+0.1
	baz=322,SNR=13						
IAS	Iasi	70.82	321	⇓iP	P	07 31 14.9	0.0
IAS	Iasi	70.82	321	⇓P	P	07 31 14.9	0.0
Y14A	Wickenburg	70.84	60	eP	P	07 31 16.8	+1.4
	comp=Z,25nm,0.6s						
F34A	Alexandria	70.86	41	P	P	07 31 14.9	-0.3
	baz=322,SNR=9.4						
H32A	Carlson Farm,	70.91	43	P	P	07 31 15.4	-0.1
	baz=321,SNR=11						
MCD	Coleburn Disti	70.92	344	⇓iP	P	07 31 15.3	-0.1
MVCO	Mesa Verde	70.94	55	P	P	07 31 17.2	+1.0
	baz=318,SNR=33						
MVCO	Mesa Verde	70.94	55	eP	P	07 31 17.3	+1.1
	comp=Z,35nm,0.8s						
D37A	Cotton	70.97	39	P	P	07 31 15.3	-0.5
	baz=323,SNR=8.9						
C38A	Sawbill Land.	70.99	38	P	P	07 31 15.4	-0.6
	baz=324,SNR=24						
F35A	Swanville	71.11	41	P	P	07 31 16.4	-0.3
	baz=322,SNR=7.5						
LEOM	Leova	71.11	320	⇑iP	P	07 31 16.8	+0.2
LEOM	Leova	71.11	320	⇑P	P	07 31 16.8	+0.2
MME1	Meikle Cairn	71.12	344	⇓eP	P	07 31 16.2	-0.3
G34A	Benson	71.13	42	P	P	07 31 16.8	-0.1
	baz=322,SNR=12						
E36A	McGregor	71.14	40	P	P	07 31 16.7	-0.2
	baz=323,SNR=16						
PRAR	RASCA	71.23	322	⇓iP	P	07 31 17.2	-0.2
113A	Mohawk Valley,	71.25	62	eP	P	07 31 18.7	+1.0
	comp=Z,40nm,1.0s						
MDO	Dochfour	71.26	344	⇓iP	P	07 31 17.2	-0.1
OJC	Ojcow	71.32	328	i P	P	07 31 18.1	+0.3
	comp=Z,500nm,1.7s						
OJC				eS	S	07 39 50.1	-0.7
OJC				eSKSac	SKSac	07 40 21.4	-5.4
OJC	Ojcow	71.32	328	eP	P	07 31 18.1	+0.3
	comp=Z,205nm,1.1s						
OJC	Ojcow	71.32	328	⇓iP	P	07 31 18.1	+0.3
OJC				eS	S	07 39 50.1	-0.7
OJC				e		07 40 21.4	
OJC				pmax	pmax		
	comp=Z,500nm,1.7s						
X16A	Lo Mia Camp, P	71.38	59	eP	P	07 31 20.4	+1.7
	comp=Z,27nm,0.8s						
Q24A	Divide	71.41	52	P	P	07 31 19.6	+0.7
	baz=319,SNR=5.3						
Q24A	Divide	71.41	52	eP	P	07 31 20.0	+1.1
	comp=Z,6.9nm,0.7s						
DRUM	Mains of Drumt	71.41	343	⇓eP	P	07 31 17.9	-0.3
DRUM				IAmb	IAmb	07 31 20.0	
	comp=Z,79nm,1.2s						
BUR08	Bucovina Ar. S	71.41	323	eP	P	07 31 18.9	+0.3
BUR04	Bucovina Ar. S	71.43	323	eP	P	07 31 18.9	+0.3
BURAR	Bucovina Array	71.43	323	⇓iP	P	07 31 18.8	+0.2
BURAR	Bucovina Array	71.43	323	⇓P	P	07 31 18.8	+0.2
S22A	4UR Ranch, Cre	71.44	54	P	P	07 31 20.1	+1.0
	baz=318,SNR=30						
S22A	4UR Ranch, Cre	71.44	54	eP	P	07 31 20.4	+1.3
	comp=Z,19nm,1.0s						
OGNE	Ogallala	71.48	48	P	P	07 31 19.7	+0.6
	baz=320						
OGNE	Ogallala	71.48	48	eP	P	07 31 19.4	+0.4
	comp=Z,28nm,0.8s						
F36A	Milaca	71.55	40	P	P	07 31 18.6	-0.6
	baz=323,SNR=11						
F36A	Milaca	71.55	40	eP	P	07 31 18.6	-0.6
	comp=Z,10.0nm,0.4s						
BANOM	Banah	71.56	288	i P	P	07 31 19.6	0.0
	SNR=7.3						
SHME	Shamm	71.57	289	i P	P	07 31 19.3	-0.4
	SNR=16						
KPL	Plockton	71.58	345	⇓iP	P	07 31 19.3	+0.2
KPL				IAmb	IAmb	07 31 20.0	
	comp=Z,216nm,0.7s						
BIZ	Bicaz	71.62	322	⇑iP	P	07 31 20.1	+0.5
G35A	Watkins	71.65	41	P	P	07 31 20.0	+0.1
	baz=323,SNR=11						
G35A	Watkins	71.65	41	eP	P	07 31 20.0	+0.1
	comp=Z,24nm,0.6s						
C40A	Isle Royale Na	71.67	36	P	P	07 31 19.1	-0.8
	baz=325						
C40A	Isle Royale Na	71.67	36	eP	P	07 31 19.1	-0.8
	comp=Z,14nm,1.4s						
UZH	Uzhgorod	71.73	325	c iP	P	07 31 19.5	-0.7
UZH				i		07 31 33.1	
TESR	Tescani	71.74	321	⇑iP	P	07 31 20.6	+0.2
E38A	The Farm, Brul	71.77	38	P	P	07 31 20.2	-0.3
	baz=324,SNR=13						
E38A	The Farm, Brul	71.77	38	eP	P	07 31 20.4	-0.2
	comp=Z,37nm,0.9s						
W18A	Petrified Fore	71.81	57	P	P	07 31 22.5	+1.3
	baz=318						
W18A	Petrified Fore	71.81	57	eP	P	07 31 22.4	+1.2
	comp=Z,20nm,1.1s						
CRVS	Cervenica-Dubn	71.81	326	eP	P	07 31 21.1	+0.4
CRVS				eS	S	07 39 54.7	-1.8
CRVS				pmax	pmax		
	comp=Z,52nm,0.7s						
CRVS	Cervenica-Dubn	71.81	326	eP	P	07 31 21.1	+0.4
CRVS				eS	S	07 39 54.6	-1.9
ECSD	EROS Data Cent	71.88	43	P	P	07 31 21.2	0.0
	baz=322,SNR=31						
ECSD	EROS Data Cent	71.88	43	eP	P	07 31 21.4	+0.2
	comp=Z,15nm,0.6s						
TLCR		71.89	319	⇑iP	P	07 31 21.7	+0.5
TLCR		71.89	319	⇑P	P	07 31 21.7	+0.5
H35A	Sunnyside Ranc	71.91	42	P	P	07 31 21.7	+0.3
	baz=322,SNR=19						
G36A	St. Michael	71.95	41	P	P	07 31 21.4	-0.1
	baz=323						
KSP	Ksiaz	71.99	330	i P	P	07 31 22.0	+0.3
	comp=Z,300nm,1.5s						
KSP				eS	S	07 39 57.9	-0.4
KSP	Ksiaz	71.99	330	⇓iP	P	07 31 22.0	+0.3
KSP				eS	S	07 39 57.9	-0.4
KSP				pmax	pmax		
	comp=Z,300nm,1.5s						
MDH	Madha	72.01	288	P	P	07 31 21.5	-0.8
WSAR	Wadi Sarin	72.03	285	P	P	07 31 22.0	-0.4
	comp=Z,36nm,1.0s,baz=59,slow=6.8,SNR=11						
F37A	Hinrichs Farm,	72.04	40	P	P	07 31 21.7	-0.4
	baz=324						
MSFE	Esma-Masafi	72.05	288	P	P	07 31 22.5	-0.1
BMR	Baia Mare	72.06	324	⇑iP	P	07 31 22.7	+0.6
BMR	Baia Mare	72.06	324	⇑P	P	07 31 22.7	+0.6
X18A	Snowflake	72.13	58	eP	P	07 31 24.5	+1.5
	comp=Z,24nm,1.1s						
PETR	Petresti	72.14	320	⇓iP	P	07 31 23.8	+1.2
SDCO	Great Sand Dun	72.14	53	P	P	07 31 24.1	+0.9
	baz=319,SNR=16						
SDCO	Great Sand Dun	72.14	53	eP	P	07 31 24.2	+1.0
	comp=Z,9.7nm,0.9s						
F38A	Pierce - Schro	72.16	39	P	P	07 31 23.0	+0.2
	baz=324,SNR=27						
CFR	Carcaliu	72.19	320	⇓iP	P	07 31 22.8	-0.1
CFR	Carcaliu	72.19	320	⇓P	P	07 31 22.8	-0.1
ARCR	ARCALIA	72.20	323	⇓iP	P	07 31 24.0	+1.0
OKC	Ostrava-Krasne	72.22	328	⇓eP	P	07 31 23.4	+0.4
OKC				eS	SKiKP	07 39 59.1	+0.3
OKC				ex	x	07 42 30.5	
OKC	Ostrava-Krasne	72.22	328	eP	P	07 31 23.4	+0.4
OKC				eS	SKiKP	07 39 59.1	+0.3
VRI	Vrincioaia	72.23	321	⇓iP	P	07 31 23.7	+0.5
VRI	Vrincioaia	72.23	321	⇓P	P	07 31 23.7	+0.5
PLOR	Plostina	72.28	321	⇓iP	P	07 31 24.1	+0.6
PLOR	Plostina	72.28	321	⇓P	P	07 31 24.2	+0.7
UOSS	Minazif	72.33	288	eP	P	07 31 23.8	-0.3
	comp=Z,224nm,1.4s						
UOSS	Minazif	72.33	288	i P	P	07 31 23.8	-0.3
	SNR=10						
LANS	Liptovska Anna	72.33	327	eP	P	07 31 25.0	+1.2
LANS	Liptovska Anna	72.33	327	eP	P	07 31 25.0	+1.2
E39A	Mellen	72.36	38	P	P	07 31 23.4	-0.6
	baz=324,SNR=44						
SPMN	Marine on St.	72.36	40	P	P	07 31 23.5	-0.4
	baz=324,SNR=6.2						
SPMN	Marine on St.	72.36	40	eP	P	07 31 23.7	-0.3
	comp=Z,22nm,1.3s						
UPC	Upice	72.37	330	⇓eP	P	07 31 24.2	+0.3
UPC	Upice	72.37	330	eP	P	07 31 24.2	+0.3
ESY	Stoneypath	72.37	343	⇓iP	P	07 31 23.6	-0.2
AFI	Afiamalu	72.38	138	P	P	07 31 24.6	+0.2
	comp=Z,54nm,0.8s,baz=82,slow=22,SNR=6.3						
AFI	Afiamalu	72.38	138	eP	P	07 31 24.8	+0.3
	comp=Z,85nm,1.1s						
AFI	Afiamalu	72.38	138	eP	P	07 31 24.8	+0.3
AFI				pmax	pmax		
	comp=Z,85nm,1.1s						
214A	Organ Pipe Nat	72.40	62	P	P	07 31 25.4	+0.9
	baz=318,SNR=25						
DPC	Dobruska-Polom	72.40	330	⇓iP	P	07 31 24.8	+0.7
DPC				eS	SKiKP	07 40 00.5	+1.4
DPC				eSKS	SKSac	07 40 34.1	-0.9
DPC	Dobruska-Polom	72.40	330	⇓iP	P	07 31 24.8	+0.7
DPC				eS	SKiKP	07 40 00.5	+1.4
DPC				e		07 40 34.1	
HATD	Hatta, Dubai	72.46	288	P	P	07 31 24.9	0.0
	SNR=5.1						
HATD	Hatta, Dubai	72.46	288	i P	P	07 31 25.0	+0.2
	SNR=15						
EDI	Edinburgh	72.47	343	eP	P	07 31 23.8	-0.5
MORC	Moravsky Berou	72.47	329	⇓iP	P	07 31 24.8	+0.2
MORC	Moravsky Berou	72.47	329	eP	P	07 31 25.2	+0.6
	comp=Z,186nm,0.8s						
MORC	Moravsky Berou	72.47	329	⇓P	P	07 31 24.8	+0.2
MORC	Moravsky Berou	72.47	329	⇓iP	P	07 31 25.0	+0.4
MORC				e		07 33 23.9	
MORC				eS	S	07 40 03.5	-0.4
KRLC	Kraliky	72.48	329	⇓eP	P	07 31 25.2	+0.6
KRLC	Kraliky	72.48	329	eP	P	07 31 25.2	+0.6
SCHQ	Schefferville	72.49	20	P	P	07 31 24.3	-0.2
	comp=Z,22nm,0.5s,baz=332,slow=5.8,SNR=17						
SCHQ	Schefferville	72.49	20	eP	P	07 31 24.3	-0.2
	comp=Z,55nm,1.1s						
GRER		72.52	320	⇑iP	P	07 31 26.1	+1.3
KECS	Kecovo	72.52	326	eP	P	07 31 25.5	+0.7
KECS				pmax	pmax		
	comp=Z,47nm,1.0s						
KECS	Kecovo	72.52	326	eP	P	07 31 25.5	+0.7
E40A	Wakefield	72.57	38	P	P	07 31 25.7	+0.5
	baz=325,SNR=97						
F39A	Loretta	72.59	39	P	P	07 31 25.2	0.0
	baz=324,SNR=22						
D41A	Chassel	72.60	36	P	P	07 31 25.1	-0.1
	baz=325,SNR=9.6						
D41A	Chassel	72.60	36	eP	P	07 31 25.3	+0.1
	comp=Z,20nm,0.6s						
ASHO	Ashiyiah	72.61	288	P	P	07 31 25.7	0.0
	SNR=5.1						
ASHO	Ashiyiah	72.61	288	i P	P	07 31 25.7	0.0
	SNR=14						
NAZ	Nazwa, Dubai	72.63	288	i P	P	07 31 25.8	0.0
	SNR=9.0						
CLL	Collm	72.64	332	⇓iP	P	07 31 25.3	-0.1
	comp=Z,341nm,0.6s						
CLL				e(PcP)	PcP	07 31 41.0	+1.8
CLL				i pP	pP	07 33 24.0	+3.0
	comp=Z,133nm,1.6s						
CLL				eS	S	07 40 03.0	-2.4
CLL				eSKSac	SKKSac	07 40 37.0	+0.1
CLL	Collm	72.64	332	eP	P	07 31 25.3	-0.1
	comp=Z,315nm,0.6s						
CLL	Collm	72.64	332	⇓iP	P	07 31 25.3	-0.1
CLL				pmax	pmax		
	comp=Z,341nm,0.6s						
TIRR	Tirgusor	72.65	319	⇑iP	P	07 31 25.7	+0.1
TIRR	Tirgusor	72.65	319	eP	P	07 31 25.7	+0.1
	comp=Z,89nm,0.9s						
TIRR	Tirgusor	72.65	319	⇑P	P	07 31 25.7	+0.1
KSCO	Kaye Shedlock’	72.66	50	P	P	07 31 25.9	0.0
	baz=320						
KSCO	Kaye Shedlock’	72.66	50	eP	P	07 31 26.9	+1.0
	comp=Z,4.7nm,0.6s						
HARR	Harsova	72.67	319	⇑iP	P	07 31 26.0	+0.3
HARR	Harsova	72.67	319	⇑P	P	07 31 26.0	+0.3
DOPR	Dopca	72.70	322	⇓iP	P	07 31 26.9	+1.0
SOHO	SOHO	72.70	287	i P	P	07 31 25.9	-0.3
	SNR=17						
BRG	Berggiesshubel	72.72	331	i P	P	07 31 25.8	-0.1
	comp=Z,76nm,0.9s						
BRG				ePP	PP	07 34 14.7	-2.3
	comp=Z,16nm,1.0s						
BRG				S	SKiKP	07 40 00.0	+0.5
BRG	Berggiesshubel	72.72	331	i P	P	07 31 25.8	-0.1
BRG				e		07 34 14.7	
BRG				S	SKiKP	07 40 00.0	+0.5
BRG				pmax	pmax		
	comp=Z,76nm,0.9s						
BRG				pmax	pmax		
	comp=Z,16nm,1.0s						
CJR	Cluj-Napoca	72.81	323	⇓iP	P	07 31 27.4	+0.9
CJR	Cluj-Napoca	72.81	323	⇓P	P	07 31 27.4	+0.9
G38A	Ridgeland	72.81	40	P	P	07 31 25.8	-0.7
	baz=324,SNR=9.7						
I36A	Fitzsimmons Fa	72.81	42	P	P	07 31 26.5	0.0
	baz=323						
PVCC	Panska Ves	72.82	331	⇓iP	P	07 31 27.0	+0.5
PVCC	Panska Ves	72.82	331	⇓iP	P	07 31 27.0	+0.5
PGBU	Glenifferbraes	72.82	344	⇓iP	P	07 31 26.6	+0.3
PGBU				IAmb	IAmb	07 31 27.4	
	comp=Z,231nm,1.1s						
H37A	Dierke Farm, C	72.83	41	P	P	07 31 26.4	-0.2
	baz=324,SNR=6.2						
EFOR	EFORIE	72.86	319	⇓iP	P	07 31 27.6	+0.8
MLR	Muntele Rosu	72.86	321	P	P	07 31 26.7	-0.2
	comp=Z,24nm,0.7s,baz=50,slow=2.9,SNR=147						
MLR	Muntele Rosu	72.86	321	⇑iP	P	07 31 27.1	+0.1
MLR	Muntele Rosu	72.86	321	eP	P	07 31 27.1	+0.1
	comp=Z,116nm,0.8s						
MLR	Muntele Rosu	72.86	321	⇑P	P	07 31 27.1	+0.1
DZM	Mont Dzumac	72.89	162	P	P	07 31 28.3	+1.1
	comp=Z,76nm,0.9s,baz=18,slow=5.3,SNR=34						
DZM	Mont Dzumac	72.89	162	eP	P	07 31 29.7	+2.4
	comp=Z,215nm,1.1s						
DZM	Mont Dzumac	72.89	162	eP	P	07 31 29.6	+2.4
	comp=Z,116nm,1.1s						
PGOR	Pogoanele	72.90	320	⇑iP	P	07 31 28.4	+1.4
LTVH	L˜'tav˜'rtes,	72.91	325	⇓ex	P	07 31 28.9	+1.9
ISR	Istrita	72.91	321	⇑iP	P	07 31 27.7	+0.5
ISR	Istrita	72.91	321	⇑P	P	07 31 27.7	+0.5
F40A	Park Falls	72.91	38	P	P	07 31 26.9	-0.2
	baz=325,SNR=34						
ILGA	Ilgaz	72.92	314	eP	P	07 31 29.1	+1.5
	comp=Z,232nm,1.1s						
E41A	Kenton	72.93	37	P	P	07 31 26.9	-0.3
	baz=325,SNR=40						
MDB	Medias	72.96	322	⇓iP	P	07 31 28.4	+1.0
MDB	Medias	72.96	322	⇓P	P	07 31 28.4	+1.0
AMRR	Amara	72.99	320	⇑iP	P	07 31 28.0	+0.5
AMRR	Amara	72.99	320	⇑P	P	07 31 28.0	+0.5
BGNE	Belgrade	72.99	46	P	P	07 31 27.3	-0.4
	baz=322						
G39A	Holcombe	73.00	39	P	P	07 31 27.3	-0.3
	baz=324						
H38A	Maiden Rock	73.03	40	P	P	07 31 27.3	-0.4
	baz=324						
ESK	Eskdalemuir	73.05	343	eP	P	07 31 27.8	+0.1
	comp=Z,88nm,0.9s						
ESK	Eskdalemuir	73.05	343	eP	P	07 31 27.6	-0.1
ESK				IAmb	IAmb	07 31 28.5	
	comp=Z,83nm,0.9s						
ESK	Eskdalemuir	73.05	343	eP	P	07 31 27.8	+0.1
ESK				pmax	pmax		
	comp=Z,88nm,0.9s						
I37A	Lemond, Waseca	73.08	41	P	P	07 31 28.3	+0.2
	baz=323,SNR=15						
I37A	Lemond, Waseca	73.08	41	eP	P	07 31 26.7	-1.4
	comp=Z,33nm,0.6s						
ASUD	Al Ashush, Dub	73.10	288	P	P	07 31 28.8	+0.2
	SNR=8.8						
ASUD	Al Ashush, Dub	73.10	288	i P	P	07 31 28.6	+0.1
	SNR=24						
VYHS	Vyhne	73.11	327	eP	P	07 31 28.9	+0.7
VYHS				pmax	pmax		
	comp=Z,62nm,0.7s						
VYHS	Vyhne	73.11	327	eP	P	07 31 28.9	+0.7
COWI	Conover	73.16	37	eP	P	07 31 28.2	-0.3
	comp=Z,17nm,0.5s						
T25A	Trinidad	73.16	52	P	P	07 31 29.4	+0.4
	baz=320,SNR=20						
T25A	Trinidad	73.16	52	eP	P	07 31 29.7	+0.7
	comp=Z,20nm,0.9s						
ICOR	Ion Corvin	73.19	319	⇓iP	P	07 31 29.8	+1.1
VRAC	Vranov	73.20	329	⇑iP	P	07 31 29.3	+0.6
VRAC	Vranov	73.20	329	⇑P	P	07 31 29.3	+0.6
VRAC	Vranov	73.20	329	⇓iP	P	07 31 29.4	+0.7
VRAC				e		07 33 28.2	
JAVC	Velka Javorina	73.21	328	⇓iP	P	07 31 30.3	+1.5
PSZ	Piszkesteto	73.21	326	⇓iP	P	07 31 29.3	+0.4
PSZ	Piszkesteto	73.21	326	⇓ex	P	07 31 29.3	+0.4
PSZ	Piszkesteto	73.21	326	eP	P	07 31 29.3	+0.4
	comp=Z,105nm,0.8s						
PSZ	Piszkesteto	73.21	326	⇓P	P	07 31 29.3	+0.4
J36A	Seneca 1, Swea	73.22	42	P	P	07 31 28.3	-0.6
	baz=323						
J36A	Seneca 1, Swea	73.22	42	eP	P	07 31 28.8	-0.1
	comp=Z,8.7nm,0.7s						
ALNE	Al Ain	73.25	287	i P	P	07 31 29.5	0.0
	SNR=13						
PRA	Prague	73.26	331	⇓eP	P	07 31 29.6	+0.6
PRA	Prague	73.26	331	eP	P	07 31 29.6	+0.6
EDMD	Edmundbyers	73.26	342	⇓eP	P	07 31 28.2	-0.8
EDMD				IAmb	IAmb	07 31 29.5	
	comp=Z,45nm,0.9s						
BHH	Howats Hill	73.26	343	⇓iP	P	07 31 29.2	+0.3
VOIR		73.27	322	⇑iP	P	07 31 29.9	+0.7
VOIR		73.27	322	⇑P	P	07 31 29.9	+0.7
GOPC	GO Pecny, Ondr	73.28	330	⇓iP	P	07 31 29.7	+0.6

GOPC				eS	S	07 40 11.1	-1.6
GOPC				eSKS	SKSac	07 40 38.0	-3.6
GOPC	**GO Pecny, Ondr**	**73.28**	**330**	⇓iP	**P**	**07 31 29.7**	**+0.6**
GOPC				eS	S	07 40 11.1	-1.6
GOPC				e		07 40 38.0	
BSY	**Bisya**	**73.29**	**285**	P	**P**	**07 31 30.2**	**+0.5**
	SNR=8.3						
PRU	**Pruhonice**	**73.30**	**330**	⇓iP	**P**	**07 31 29.6**	**+0.4**
PRU				eS	S	07 40 11.6	-1.2
PRU				eSKS	SKSac	07 40 40.1	-1.6
PRU	**Pruhonice**	**73.30**	**330**	⇓iP	**P**	**07 31 29.6**	**+0.4**
PRU				eS	S	07 40 11.6	-1.2
PRU				e		07 40 40.1	
TUC	**Tucson**	**73.30**	**60**	P	**P**	**07 31 30.7**	**+1.1**
	baz=318						
TUC	**Tucson**	**73.30**	**60**	eP	**P**	**07 31 30.8**	**+1.1**
	comp=Z,24nm,1.3s						
TUC	**Tucson**	**73.30**	**60**	eP	**P**	**07 31 30.8**	**+1.1**
TUC				pmax	pmax		
	comp=Z,25nm,1.3s						
AJN	**Ajban**	**73.36**	**288**	i P	**P**	**07 31 29.5**	**-0.5**
	SNR=7.3						
E42A	**Champion**	**73.37**	**36**	P	**P**	**07 31 29.4**	**-0.3**
	baz=326,SNR=8.5						
SULR		**73.39**	**320**	⇓iP	**P**	**07 31 30.6**	**+0.8**
G40A	**Rib Lake**	**73.41**	**38**	P	**P**	**07 31 29.8**	**-0.2**
	baz=325,SNR=13						
G40A	**Rib Lake**	**73.41**	**38**	eP	**P**	**07 31 30.0**	**0.0**
	comp=Z,17nm,1.0s						
H39A	**Augusta**	**73.44**	**39**	P	**P**	**07 31 29.9**	**-0.2**
	baz=324						
AS01	**Alice Springs**	**73.46**	**193**	eP	**P**	**07 31 31.8**	**+1.4**
AS31	**Alice Springs**	**73.47**	**193**	eP	**P**	**07 31 31.8**	**+1.4**
	comp=Z,42nm,0.6s						
ASAR	**Alice Springs**	**73.47**	**193**	P	**P**	**07 31 31.8**	**+1.3**
	comp=Z,135nm,0.7s,baz=4.5,slow=5.3,SNR=1565						
ASAR	**Alice Springs**	**73.47**	**193**	P	**P**	**07 31 31.8**	**+1.3**
F41A	**Three Lakes**	**73.47**	**38**	P	**P**	**07 31 30.3**	**0.0**
	baz=325,SNR=27						
F41A	**Three Lakes**	**73.47**	**38**	eP	**P**	**07 31 30.5**	**+0.2**
	comp=Z,34nm,0.8s						
KRUC	**Moravsky**	**73.48**	**329**	⇓iP	**P**	**07 31 30.8**	**+0.5**
KRUC				e		07 33 30.0	
KRUC				eS	S	07 40 15.0	+0.2
ARR	**Arges**	**73.50**	**322**	⇑iP	**P**	**07 31 31.7**	**+1.2**
I38A	**Scanlan Farm,**	**73.52**	**41**	P	**P**	**07 31 30.0**	**-0.6**
	baz=324,SNR=7.0						
J37A	**Redenius Farm,**	**73.58**	**42**	P	**P**	**07 31 30.8**	**-0.2**
	baz=323,SNR=18						
SMOL	**Smolenice**	**73.59**	**328**	eP	**P**	**07 31 31.0**	**+0.1**
SMOL	**Smolenice**	**73.59**	**328**	eP	**P**	**07 31 31.0**	**+0.1**
BBO1	**Bothel**	**73.61**	**343**	⇓iP	**P**	**07 31 31.2**	**+0.4**
K36A	**Gilmore City**	**73.72**	**43**	P	**P**	**07 31 31.5**	**-0.2**
	baz=323,SNR=11						
KESW	**Keswick, Cumbr**	**73.72**	**343**	⇓eP	**P**	**07 31 31.5**	**0.0**
KESW				IAmb	IAmb	07 31 32.7	
	comp=Z,260nm,1.0s						
TASM	**ASL Pad, Albuq**	**73.73**	**55**	P	**P**	**07 31 33.6**	**+1.4**
	baz=319,SNR=16						
ANMO	**Albuquerque**	**73.73**	**55**	P	**P**	**07 31 32.9**	**+0.7**
	comp=Z,9.8nm,0.8s,baz=297,slow=5.1,SNR=38						
ANMO	**Albuquerque**	**73.73**	**55**	P	**P**	**07 31 33.5**	**+1.3**
	baz=319						
ANMO	**Albuquerque**	**73.73**	**55**	c iP	**P**	**07 31 33.5**	**+1.3**
ANMO				pmax	pmax		
	comp=Z,24nm,1.5s						
TASL	**Snake Pit, Alb**	**73.73**	**55**	P	**P**	**07 31 33.5**	**+1.3**
	baz=319,SNR=21						
NKC	**Novy Kostel**	**73.75**	**332**	⇓iP	**P**	**07 31 32.0**	**+0.2**
NKC	**Novy Kostel**	**73.75**	**332**	⇓iP	**P**	**07 31 32.0**	**+0.2**
MODS	**Modra-Piesok**	**73.76**	**328**	eP	**P**	**07 31 32.9**	**+1.0**
MODS				pmax	pmax		
	comp=Z,164nm,1.1s						
MODS	**Modra-Piesok**	**73.76**	**328**	eP	**P**	**07 31 32.9**	**+1.0**
LAZ	**Ladron**	**73.77**	**56**	eP	**P**	**07 31 34.1**	**+1.7**
E43A	**Lone Tree Farm**	**73.77**	**36**	P	**P**	**07 31 31.4**	**-0.5**
	baz=326,SNR=6.0						
E43A	**Lone Tree Farm**	**73.77**	**36**	eP	**P**	**07 31 31.6**	**-0.4**
	comp=Z,17nm,0.6s						
LOT	**Lotru**	**73.78**	**322**	⇓iP	**P**	**07 31 32.4**	**+0.2**
WTSB	**Winterswijk**	**73.84**	**336**	ePcP	**P**	**07 31 36.0**	**+3.8**
WTSB	**Winterswijk**	**73.84**	**336**	i P	**P**	**07 31 32.2**	**0.0**
	comp=Z,194nm,0.6s						
H40A	**Chili**	**73.86**	**39**	P	**P**	**07 31 32.3**	**-0.2**
	baz=325,SNR=9.9						
G41A	**Antigo**	**73.87**	**38**	P	**P**	**07 31 32.4**	**-0.2**
	baz=325						
SGRR	**Singureni**	**73.88**	**320**	⇑iP	**P**	**07 31 32.5**	**-0.1**
BUD	**Budapest**	**73.89**	**326**	⇓ex	**P**	**07 31 33.5**	**+0.9**
K37A	**Belmond**	**73.97**	**42**	P	**P**	**07 31 32.8**	**-0.4**
	baz=324,SNR=7.6						
E44A	**Grand Marais A**	**73.98**	**35**	P	**P**	**07 31 33.0**	**-0.1**
	baz=327,SNR=5.4						
E44A	**Grand Marais A**	**73.98**	**35**	eP	**P**	**07 31 33.5**	**+0.3**
	comp=Z,54nm,0.6s						
BR101	**Keskin Array S**	**73.99**	**313**	eP	**P**	**07 31 34.0**	**+0.4**
BR101				ePP	**PP**	**07 34 28.5**	**+0.3**
BR131	**Keskin Array S**	**73.99**	**313**	eP	**P**	**07 31 34.0**	**+0.4**
BRTR	**Keskin Array B**	**73.99**	**313**	P	**P**	**07 31 34.0**	**+0.4**
	comp=Z,45nm,0.8s,baz=69,slow=4.2,SNR=158						
BRTR				PP	**PP**	**07 34 28.5**	**+0.3**
	comp=Z,12nm,0.9s,baz=64,slow=7.0,SNR=6.1						
BRTR	**Keskin Array B**	**73.99**	**313**	P	**P**	**07 31 34.0**	**+0.4**
BRTR				PP	**PP**	**07 34 28.5**	**+0.3**
I39A	**Houston**	**74.01**	**40**	P	**P**	**07 31 32.8**	**-0.6**
	baz=324,SNR=25						
I39A	**Houston**	**74.01**	**40**	eP	**P**	**07 31 33.0**	**-0.4**
	comp=Z,38nm,0.6s						
HPK	**Haverah Park**	**74.01**	**342**	⇓eP	**P**	**07 31 33.6**	**+0.4**
HPK				IAmb	IAmb	07 31 34.3	
	comp=Z,301nm,0.6s						
J38A	**Wedel Dairy, R**	**74.04**	**41**	P	**P**	**07 31 33.1**	**-0.5**
	baz=324						
LENM	**Lemitar**	**74.04**	**56**	eP	**P**	**07 31 35.4**	**+1.4**
L36A	**Harm Buss Farm**	**74.05**	**43**	P	**P**	**07 31 33.6**	**0.0**
	baz=323						
IDGL	**Inch Island, C**	**74.06**	**345**	⇓eP	**P**	**07 31 33.4**	**+0.1**
IDGL				IAmb	IAmb	07 31 34.2	
	comp=Z,124nm,0.7s						
PRD	**Provadia**	**74.09**	**319**	eP	**P**	**07 31 34.4**	**+0.6**
LPM	**Los Pinos Moun**	**74.11**	**56**	eP	**P**	**07 31 35.8**	**+1.4**
G42A	**Mountain**	**74.15**	**37**	P	**P**	**07 31 34.0**	**-0.1**
	baz=326,SNR=11						
G42A	**Mountain**	**74.15**	**37**	eP	**P**	**07 31 34.1**	**0.0**
	comp=Z,25nm,0.7s						
MATQ	**Matagami**	**74.15**	**29**	P	**P**	**07 31 33.2**	**-0.8**
	baz=331						
F43A	**Flat Rock, Esc**	**74.16**	**36**	P	**P**	**07 31 33.8**	**-0.4**
	baz=326,SNR=5.2						
H41A	**Junction City**	**74.17**	**39**	P	**P**	**07 31 34.0**	**-0.3**
	baz=325						
H41A	**Junction City**	**74.17**	**39**	eP	**P**	**07 31 34.1**	**-0.1**
	comp=Z,12nm,0.7s						
MBWA	**Marble Bar**	**74.20**	**207**	eP	**P**	**07 31 34.9**	**+0.3**
	comp=Z,43nm,0.8s						
EIDS	**Eidsvold**	**74.23**	**177**	eP	**P**	**07 31 36.1**	**+1.4**
	comp=Z,50nm,0.8s						
BNM	**Barren Site**	**74.24**	**56**	eP	**P**	**07 31 36.5**	**+1.4**
CBKS	**Cedar Bluff**	**74.25**	**48**	P	**P**	**07 31 34.4**	**-0.4**
	baz=321						
CSKK	**Csˆ‡kako**	**74.27**	**327**	⇓ePg	**P**	**07 31 35.4**	**+0.6**
ANTO	**Ankara**	**74.29**	**313**	⇑iP	**P**	**07 31 35.8**	**+0.7**
ANTO	**Ankara**	**74.29**	**313**	eP	**P**	**07 31 36.1**	**+1.0**
	comp=Z,141nm,0.7s						
ANTO	**Ankara**	**74.29**	**313**	⇑P	**P**	**07 31 35.9**	**+0.8**
IOMK	**Kirk Michael**	**74.31**	**343**	⇓eP	**P**	**07 31 34.6**	**-0.2**
IOMK				IAmb	IAmb	07 31 35.2	
	comp=Z,72nm,0.6s						
BR231	**Keskin MP Arra**	**74.32**	**313**	eP	**P**	**07 31 36.2**	**+0.8**
F44A	**Big Bay de Noc**	**74.33**	**36**	P	**P**	**07 31 34.9**	**-0.3**
	baz=327						
KHC	**Kasperske Hory**	**74.35**	**331**	⇓iP	**P**	**07 31 35.9**	**+0.6**
KHC				eS	**S**	**07 40 21.1**	**-3.4**
KHC				ex	x	07 42 07.4	
KHC	**Kasperske Hory**	**74.35**	**331**	eP	**P**	**07 31 36.0**	**+0.8**
	comp=Z,67nm,0.8s						
KHC	**Kasperske Hory**	**74.35**	**331**	⇓iP	**P**	**07 31 35.9**	**+0.6**
KHC				eS	**S**	**07 40 21.1**	**-3.4**
J39A	**Decorah**	**74.35**	**41**	P	**P**	**07 31 34.5**	**-0.8**
	baz=324,SNR=15						
I40A	**Norwalk**	**74.36**	**40**	P	**P**	**07 31 35.0**	**-0.3**
	baz=325,SNR=16						
G43A	**Wallace**	**74.43**	**37**	P	**P**	**07 31 35.6**	**-0.1**
	baz=326,SNR=10						
G43A	**Wallace**	**74.43**	**37**	eP	**P**	**07 31 35.8**	**+0.1**
	comp=Z,23nm,0.8s						
L37A	**Phoenix Point,**	**74.44**	**43**	P	**P**	**07 31 35.5**	**-0.3**
	baz=324,SNR=8.2						
WIM	**Isle of Man**	**74.44**	**343**	⇓iP	**P**	**07 31 35.7**	**+0.1**
K38A	**Parkersburg**	**74.45**	**42**	P	**P**	**07 31 35.5**	**-0.4**
	baz=324						
E45A	**Wooded Hills,**	**74.48**	**35**	P	**P**	**07 31 35.6**	**-0.4**
	baz=327,SNR=5.8						
BZS	**Buzias**	**74.49**	**324**	⇑iP	**P**	**07 31 35.7**	**-0.3**
BZS	**Buzias**	**74.49**	**324**	⇑P	**P**	**07 31 35.7**	**-0.3**
M36A	**Felix, Anita**	**74.50**	**44**	P	**P**	**07 31 36.4**	**+0.2**
	baz=323						
I41A	**Arkdale**	**74.53**	**39**	P	**P**	**07 31 36.0**	**-0.3**
	baz=325,SNR=7.1						
I41A	**Arkdale**	**74.53**	**39**	eP	**P**	**07 31 36.3**	**0.0**
	comp=Z,13nm,0.6s						
SLMH	**Al Salmeh**	**74.56**	**308**	i P	**P**	**07 31 33.9**	**-2.7**
LBWR	**Ladybower, Pea**	**74.56**	**341**	⇓eP	**P**	**07 31 36.4**	**+0.2**
LBWR				IAmb	IAmb	07 31 37.0	
	comp=Z,236nm,0.6s						
GEC2	**GERESS Array S**	**74.56**	**330**	eP	**P**	**07 31 36.7**	**+0.1**
	comp=Z,76nm,0.7s						
GEC2	**GERESS Array S**	**74.56**	**330**	eP	**P**	**07 31 36.7**	**+0.2**
GEC2				pmax	pmax		
	comp=Z,76nm,0.7s						
GERES	**GERESS Array B**	**74.56**	**330**	P	**P**	**07 31 36.6**	**+0.1**
	comp=Z,78nm,0.7s,baz=34,slow=5.7,SNR=489						
GERES	**GERESS Array B**	**74.56**	**330**	P	**P**	**07 31 36.6**	**+0.1**
GEA0	**GERESS Array S**	**74.57**	**330**	eP	**P**	**07 31 36.8**	**+0.3**
GMM	**Mts of Mourne**	**74.58**	**344**	eP	**P**	**07 31 36.2**	**-0.2**
ZIMR		**74.59**	**320**	⇑iP	**P**	**07 31 36.8**	**+0.2**
ZIMR		**74.59**	**320**	⇑P	**P**	**07 31 36.8**	**+0.2**
GRFO	**Grafenberg**	**74.60**	**332**	eP	**P**	**07 31 37.2**	**+0.6**
	comp=Z,244nm,0.7s						
GRFO	**Grafenberg**	**74.60**	**332**	eP	**P**	**07 31 37.2**	**+0.6**
GRFO				pmax	pmax		
	comp=Z,244nm,0.7s						
CONA	**Conrad Observa**	**74.63**	**329**	i P	**P**	**07 31 37.9**	**+1.0**
	comp=Z,140nm,0.7s,SNR=96						
SRE	**Strehaia**	**74.65**	**322**	⇓iP	**P**	**07 31 37.5**	**+0.5**
SRE	**Strehaia**	**74.65**	**322**	⇓P	**P**	**07 31 37.5**	**+0.5**
SZH	**Strazhica**	**74.67**	**320**	eP	**P**	**07 31 37.1**	**0.0**
WACR	**West Acre**	**74.67**	**340**	eP	**P**	**07 31 36.6**	**-0.3**
WACR				IAmb	IAmb	07 31 37.9	
	comp=Z,235nm,1.0s						
H42A	**Shiocton**	**74.71**	**38**	P	**P**	**07 31 37.2**	**-0.1**
	baz=326,SNR=7.0						
H42A	**Shiocton**	**74.71**	**38**	eP	**P**	**07 31 37.3**	**0.0**
	comp=Z,16nm,0.5s						
J40A	**Soldiers Grove**	**74.71**	**40**	P	**P**	**07 31 36.5**	**-0.8**
	baz=325,SNR=12						
L38A	**Oak Wood Farm,**	**74.77**	**42**	P	**P**	**07 31 37.4**	**-0.3**
	baz=324,SNR=5.7						
HERR	**Herculane**	**74.79**	**323**	⇓iP	**P**	**07 31 37.4**	**-0.3**
K39A	**Oelwein**	**74.79**	**41**	P	**P**	**07 31 36.8**	**-0.9**
	baz=324,SNR=7.6						
121A	**Cookes Peak, D**	**74.82**	**58**	P	**P**	**07 31 39.9**	**+1.6**
	baz=319,SNR=19						
319A	**Douglas**	**74.84**	**60**	eP	**P**	**07 31 39.9**	**+1.4**
	comp=Z,50nm,0.8s						
SCIA	**State Center**	**74.85**	**42**	P	**P**	**07 31 38.1**	**0.0**
	baz=324						
F45A	**CMU Biological**	**74.92**	**35**	P	**P**	**07 31 38.0**	**-0.4**
	baz=327						
STNC	**Stoke**	**74.95**	**342**	⇓eP	**P**	**07 31 38.5**	**+0.1**
STNC				IAmb	IAmb	07 31 39.2	
	comp=Z,88nm,0.7s						
LSQQ	**Lebel-sur-Quev**	**74.97**	**28**	P	**P**	**07 31 37.8**	**-0.9**
	baz=332						
CHGQ	**Chibougamau**	**75.01**	**26**	P	**P**	**07 31 38.0**	**-0.9**
	baz=333						
JMB	**Yambol**	**75.04**	**319**	eP	**P**	**07 31 39.5**	**+0.3**
J41A	**Loganville**	**75.04**	**40**	P	**P**	**07 31 38.8**	**-0.4**
	baz=325,SNR=24						
H43A	**Windswept, Lux**	**75.05**	**37**	P	**P**	**07 31 39.2**	**0.0**
	baz=326,SNR=15						
H43A	**Windswept, Lux**	**75.05**	**37**	eP	**P**	**07 31 39.2**	**0.0**
	comp=Z,45nm,0.6s						
I42A	**Draeger Farm,**	**75.07**	**39**	P	**P**	**07 31 39.2**	**-0.1**
	baz=326,SNR=7.1						
WME	**Myndd Eilian**	**75.08**	**343**	⇓eP	**P**	**07 31 38.9**	**-0.2**
CWF	**Charnwood Fore**	**75.09**	**341**	⇓eP	**P**	**07 31 39.2**	**-0.1**
CWF				IAmb	IAmb	07 31 39.6	
	comp=Z,51nm,0.7s						
MORH	**Mˆ‡rˆ¡gy, Hung**	**75.11**	**326**	⇓ex	**P**	**07 31 39.1**	**-0.4**
K40A	**Colesburg**	**75.11**	**41**	P	**P**	**07 31 38.9**	**-0.7**
	baz=325,SNR=5.2						
F46A	**Macinaw City C**	**75.13**	**35**	P	**P**	**07 31 39.3**	**-0.2**
	baz=328,SNR=16						
WPM1	**Penmaenmawr**	**75.13**	**343**	⇓eP	**P**	**07 31 39.4**	**-0.1**
MDVR	**Moldovita**	**75.15**	**323**	⇑iP	**P**	**07 31 39.5**	**-0.3**
HGN	**Heimansgroeve**	**75.16**	**336**	ePcP	**P**	**07 31 43.5**	**+3.9**
HGN	**Heimansgroeve**	**75.16**	**336**	i P	**P**	**07 31 39.6**	**0.0**
	comp=Z,126nm,0.7s						
WLF1	**Llynfaes**	**75.20**	**343**	eP	**P**	**07 31 39.5**	**-0.3**
BEBN	**Eben Emael**	**75.20**	**336**	⇓P	**P**	**07 31 39.9**	**0.0**
	comp=Z,27nm,0.6s						
L39A	**Vinton**	**75.21**	**41**	P	**P**	**07 31 39.4**	**-0.8**
	baz=324,SNR=6.0						
MOA	**Molln**	**75.24**	**329**	i P	**P**	**07 31 40.7**	**+0.5**
	comp=Z,92nm,0.8s,SNR=48						
MEM	**Membach**	**75.28**	**336**	⇓P	**P**	**07 31 40.4**	**0.0**
	comp=Z,131nm,0.9s						
YLL	**Llanberis**	**75.30**	**343**	⇓eP	**P**	**07 31 40.3**	**-0.1**
JFWS	**Jewell Farm**	**75.31**	**40**	P	**P**	**07 31 39.8**	**-0.9**
	baz=325,SNR=9.9						
JFWS	**Jewell Farm**	**75.31**	**40**	eP	**P**	**07 31 40.2**	**-0.4**
	comp=Z,16nm,0.6s						
JFWS	**Jewell Farm**	**75.31**	**40**	eP	**P**	**07 31 40.3**	**-0.4**
JFWS				pmax	pmax		
	comp=Z,16nm,0.6s						
N37A	**Lee Faris, Mou**	**75.33**	**44**	P	**P**	**07 31 41.1**	**+0.3**
	baz=324,SNR=7.8						
N37A	**Lee Faris, Mou**	**75.33**	**44**	eP	**P**	**07 31 41.4**	**+0.6**
	comp=Z,19nm,0.5s						
ARSA	**Arzberg**	**75.33**	**328**	i P	**P**	**07 31 41.5**	**+0.7**
	comp=Z,28nm,0.5s,SNR=31						
FOEL	**Foel Wylfa**	**75.34**	**342**	⇓eP	**P**	**07 31 41.0**	**+0.3**
FOEL				IAmb	IAmb	07 31 41.8	
	comp=Z,133nm,0.9s						
I43A	**Langenfeld Bro**	**75.38**	**38**	P	**P**	**07 31 40.8**	**-0.3**
	baz=326						
MZR	**Muzera**	**75.44**	**288**	i P	**P**	**07 31 41.7**	**0.0**
	SNR=59						
J42A	**Columbus**	**75.45**	**39**	P	**P**	**07 31 41.1**	**-0.4**
	baz=326,SNR=18						
LLW	**Llanuwychllyn**	**75.47**	**342**	⇓eP	**P**	**07 31 41.5**	**+0.1**
KSU1	**Kansas State U**	**75.53**	**46**	P	**P**	**07 31 41.4**	**-0.6**
	baz=323						
KSU1	**Kansas State U**	**75.53**	**46**	eP	**P**	**07 31 41.9**	**-0.1**
	comp=Z,9.1nm,0.8s						
K41A	**Shullsburg**	**75.54**	**40**	P	**P**	**07 31 41.3**	**-0.7**
	baz=325,SNR=8.3						
UCC	**Uccle**	**75.55**	**337**	eP	**P**	**07 31 41.9**	**+0.1**
	comp=Z,49nm,0.6s						
UCC	**Uccle**	**75.55**	**337**	eP	**P**	**07 31 41.9**	**+0.1**
UCC				pmax	pmax		
	comp=Z,49nm,0.6s						
BEHE	**Becsehely**	**75.57**	**327**	⇓ex	**P**	**07 31 42.1**	**+0.1**
L40A	**Anamosa**	**75.59**	**41**	P	**P**	**07 31 41.5**	**-0.8**
	baz=325						
L40A	**Anamosa**	**75.59**	**41**	eP	**P**	**07 31 41.8**	**-0.5**
	comp=Z,12nm,1.0s						
DSB	**Dublin**	**75.61**	**344**	eP	**P**	**07 31 42.2**	**+0.1**
	comp=Z,72nm,0.9s						
HLM1	**Long Mynd**	**75.63**	**342**	⇓eP	**P**	**07 31 42.5**	**+0.2**
HLM1				IAmb	IAmb	07 31 42.9	
	comp=Z,54nm,0.6s						
HSIG		**75.64**	**62**	eP	**P**	**07 31 43.2**	**+0.5**
	comp=Z,42nm,1.4s						
M39A	**Webster**	**75.66**	**42**	P	**P**	**07 31 42.0**	**-0.6**
	baz=324,SNR=9.1						
J43A	**Natural Harves**	**75.69**	**39**	P	**P**	**07 31 42.3**	**-0.5**
	baz=326						
KOGS	**Kog**	**75.77**	**328**	i P	**P**	**07 31 42.9**	**-0.2**
K42A	**Prairie Point,**	**75.80**	**39**	P	**P**	**07 31 42.7**	**-0.7**
	baz=326,SNR=10						
O37A	**Wolven Farm, M**	**75.83**	**44**	P	**P**	**07 31 43.8**	**+0.2**
	baz=324,SNR=10						
SNF	**Seneffe**	**75.83**	**337**	⇓P	**P**	**07 31 43.3**	**-0.1**
	comp=Z,60nm,0.9s						
DIM	**Dimitrovgrad**	**75.83**	**319**	eP	**P**	**07 31 44.2**	**+0.6**
BELQ	**Belleterre**	**75.88**	**30**	P	**P**	**07 31 42.8**	**-0.9**
	baz=331						
L41A	**Preston**	**75.89**	**41**	P	**P**	**07 31 43.2**	**-0.7**
	baz=325,SNR=6.5						
N39A	**Derby Farms, D**	**76.00**	**43**	P	**P**	**07 31 44.5**	**-0.1**
	baz=324,SNR=6.3						
N39A	**Derby Farms, D**	**76.00**	**43**	eP	**P**	**07 31 44.8**	**+0.2**
	comp=Z,13nm,0.6s						
SOKA	**Soboth**	**76.00**	**328**	i P	**P**	**07 31 44.9**	**+0.3**
	comp=Z,116nm,0.9s,SNR=79						
PGB	**Panagyurishte**	**76.00**	**320**	eP	**P**	**07 31 45.1**	**+0.5**
M40A	**Post Highland**	**76.00**	**42**	P	**P**	**07 31 44.0**	**-0.6**
	baz=325						
PERS	**Pernice**	**76.00**	**328**	i P	**P**	**07 31 44.7**	**+0.2**
PERS				e		07 33 44.8	
STU	**Stuttgart**	**76.03**	**333**	eP	**P**	**07 31 44.0**	**-0.5**
	comp=Z,89nm,0.8s						
STU	**Stuttgart**	**76.03**	**333**	eP	**P**	**07 31 44.0**	**-0.5**
STU				pmax	pmax		
	comp=Z,89nm,0.8s						
WLF	**Walferdange**	**76.10**	**335**	⇑P	**P**	**07 31 45.0**	**+0.1**
WLF	**Walferdange**	**76.10**	**335**	eP	**P**	**07 31 45.1**	**+0.2**
	comp=Z,44nm,0.9s						
WLF	**Walferdange**	**76.10**	**335**	eP	**P**	**07 31 45.1**	**+0.2**
WLF				pmax	pmax		
	comp=Z,44nm,0.9s						
EPT	**El Paso**	**76.10**	**57**	eP	**P**	**07 31 46.4**	**+1.0**
	comp=Z,28nm,1.1s						
DOU	**Dourbes**	**76.13**	**336**	⇓P	**P**	**07 31 44.9**	**-0.1**
MCH1	**Michaelchurch**	**76.14**	**342**	⇓eP	**P**	**07 31 44.8**	**-0.3**
MCH1				IAmb	IAmb	07 31 46.0	
	comp=Z,104nm,0.8s						
SRIG	**Santa Rosalia**	**76.15**	**64**	eP	**P**	**07 31 45.8**	**+0.2**
	comp=Z,22nm,1.0s						
O38A	**Galt**	**76.17**	**44**	P	**P**	**07 31 45.7**	**+0.2**
	baz=324,SNR=6.2						
STRD	**Stroud**	**76.18**	**341**	eP	**P**	**07 31 45.2**	**0.0**
P37A	**Lathrop**	**76.20**	**45**	P	**P**	**07 31 45.8**	**+0.2**
	baz=324,SNR=9.8						
KDZ	**Kurdzhali**	**76.21**	**319**	eP	**P**	**07 31 46.5**	**+0.8**
KBA	**Koelnbreinsper**	**76.22**	**330**	i P	**P**	**07 31 46.3**	**+0.4**
	comp=Z,169nm,0.6s,SNR=106						
MONM	**Monmouth**	**76.25**	**342**	⇓iP	**P**	**07 31 45.9**	**+0.2**
MONM				IAmb	IAmb	07 31 46.8	
	comp=Z,147nm,0.8s						
K43A	**Burlington**	**76.29**	**39**	P	**P**	**07 31 45.4**	**-0.7**
	baz=326						
K43A	**Burlington**	**76.29**	**39**	eP	**P**	**07 31 45.9**	**-0.1**
	comp=Z,12nm,0.8s						
L42A	**Oliver, Polo**	**76.31**	**40**	P	**P**	**07 31 45.6**	**-0.6**
	baz=326,SNR=5.0						
L42A	**Oliver, Polo**	**76.31**	**40**	eP	**P**	**07 31 45.7**	**-0.5**
	comp=Z,11nm,0.6s						
AMTX	**Amarillo**	**76.31**	**52**	P	**P**	**07 31 46.8**	**+0.3**
	baz=321						
AMTX	**Amarillo**	**76.31**	**52**	eP	**P**	**07 31 47.3**	**+0.8**
	comp=Z,28nm,1.1s						
OBKA	**Obir**	**76.31**	**329**	i P	**P**	**07 31 46.4**	**+0.1**
	comp=Z,55nm,0.6s,SNR=28						
VTS	**Vitosha**	**76.36**	**321**	⇓iP	**P**	**07 31 47.0**	**+0.4**
VTS	**Vitosha**	**76.36**	**321**	eP	**P**	**07 31 47.1**	**+0.4**
	comp=Z,221nm,0.8s						
VTS	**Vitosha**	**76.36**	**321**	eP	**P**	**07 31 47.2**	**+0.5**
VTS	**Vitosha**	**76.36**	**321**	P	**P**	**07 31 47.1**	**+0.4**
VTS	**Vitosha**	**76.36**	**321**	eP	**P**	**07 31 47.1**	**+0.4**
VTS				pmax	pmax		
	comp=Z,221nm,0.8s						
GOLS	**Golise**	**76.37**	**328**	i P	**P**	**07 31 46.6**	**+0.1**
DIVS	**Divibare**	**76.39**	**324**	eP	**P**	**07 31 46.9**	**+0.1**
	comp=Z,97nm,0.8s						
N40A	**Mertquake, Sal**	**76.40**	**42**	P	**P**	**07 31 46.6**	**-0.1**
	baz=325						
HGH	**Gray Hill**	**76.44**	**341**	⇓iP	**P**	**07 31 46.9**	**+0.2**
MSTX	**Muleshoe**	**76.44**	**54**	P	**P**	**07 31 47.5**	**+0.3**
	baz=321,SNR=9.3						
MSTX	**Muleshoe**	**76.44**	**54**	eP	**P**	**07 31 47.7**	**+0.5**
	comp=Z,15nm,1.0s						
M41A	**Milan**	**76.45**	**41**	P	**P**	**07 31 46.6**	**-0.4**
	baz=325						
HMNX	**Herstmonceux**	**76.47**	**339**	⇓eP	**P**	**07 31 47.4**	**+0.6**
HMNX				IAmb	IAmb	07 31 48.5	
	comp=Z,424nm,0.9s						
O39A	**Kirksville**	**76.48**	**43**	P	**P**	**07 31 46.9**	**-0.3**
	baz=324,SNR=6.0						
MYKA	**Terra Mystica**	**76.51**	**329**	i P	**P**	**07 31 47.2**	**-0.2**
	comp=Z,53nm,0.8s,SNR=29						
IWEX	**Carrickbyrne,**	**76.51**	**344**	⇓eP	**P**	**07 31 47.2**	**+0.1**
P38A	**Dawn**	**76.55**	**44**	P	**P**	**07 31 47.8**	**+0.2**
	baz=324,SNR=13						
P38A	**Dawn**	**76.55**	**44**	eP	**P**	**07 31 47.9**	**+0.4**
	comp=Z,17nm,0.6s						
L43A	**Garden Prairie**	**76.55**	**39**	P	**P**	**07 31 46.9**	**-0.6**
	baz=326						
ALN	**Alexandroupoli**	**76.55**	**318**	eP	**P**	**07 31 47.8**	**+0.2**
	comp=Z,68nm,1.1s						
ALN	**Alexandroupoli**	**76.55**	**318**	P	**P**	**07 31 47.7**	**+0.2**
ALN	**Alexandroupoli**	**76.55**	**318**	eP	**P**	**07 31 47.8**	**+0.2**
ALN				pmax	pmax		
	comp=Z,68nm,1.1s						
WATA	**Walderalm**	**76.57**	**331**	i P	**P**	**07 31 49.4**	**+1.7**
	comp=Z,124nm,0.5s,SNR=49						
WTTA	**Wattenberg**	**76.61**	**331**	i P	**P**	**07 31 48.8**	**+0.8**
	comp=Z,134nm,0.5s,SNR=53						
BFO	**Black Forest**	**76.68**	**333**	eP	**P**	**07 31 48.1**	**0.0**
	comp=Z,90nm,1.0s						
BFO	**Black Forest**	**76.68**	**333**	eP	**P**	**07 31 48.2**	**0.0**
BFO				pmax	pmax		
	comp=Z,90nm,1.0s						
RETA	**Reutte**	**76.69**	**331**	i P	**P**	**07 31 48.6**	**+0.3**
	comp=Z,81nm,0.7s,SNR=40						
MOTA	**Moosalm**	**76.71**	**331**	i P	**P**	**07 31 50.0**	**+1.4**
	comp=Z,102nm,0.6s,SNR=70						
LJU	**Ljubljana**	**76.72**	**328**	i P	**P**	**07 31 48.0**	**-0.4**
LJU				e		07 33 45.3	
OZLJ	**Ozalj**	**76.77**	**328**	P	**P**	**07 31 48.5**	**-0.1**
MNTX	**Cornudas Mount**	**76.78**	**57**	P	**P**	**07 31 50.2**	**+1.2**
	baz=320,SNR=36						
MNTX	**Cornudas Mount**	**76.78**	**57**	eP	**P**	**07 31 50.2**	**+1.2**
	comp=Z,23nm,1.0s						
TOBO	**Tobermory, Bru**	**76.78**	**33**	P	**P**	**07 31 48.0**	**-0.7**
	baz=330						
ABTA	**Abfaltersbach**	**76.78**	**330**	i P	**P**	**07 31 48.4**	**-0.5**
	comp=Z,54nm,0.9s,SNR=29						
CADS	**Cadrg**	**76.83**	**329**	i P	**P**	**07 31 47.8**	**-1.2**
O40A	**La Belle**	**76.89**	**43**	P	**P**	**07 31 49.5**	**+0.1**
	baz=325,SNR=16						
BLY	**Banja Luka**	**76.89**	**326**	⇑iP	**P**	**07 31 49.2**	**-0.2**
BLY	**Banja Luka**	**76.89**	**326**	eP	**P**	**07 31 49.1**	**-0.2**
	comp=Z,27nm,0.6s						
BOJS	**Bojanci**	**76.94**	**328**	i P	**P**	**07 31 49.2**	**-0.4**
GDL2	**Guadalupe Moun**	**76.95**	**56**	eP	**P**	**07 31 51.5**	**+1.5**
ISP	**Isparta**	**76.99**	**314**	⇑iP	**P**	**07 31 49.8**	**-0.3**
ISP	**Isparta**	**76.99**	**314**	eP	**P**	**07 31 49.8**	**-0.3**
	comp=Z,55nm,0.7s						
ISP	**Isparta**	**76.99**	**314**	⇑P	**P**	**07 31 49.8**	**-0.3**
P39B	**Salisbury**	**77.01**	**44**	P	**P**	**07 31 49.9**	**-0.2**
	baz=324,SNR=7.3						
KKB	**Krupnik**	**77.02**	**321**	eP	**P**	**07 31 50.8**	**+0.7**
Q38A	**Cooks Store, C**	**77.04**	**44**	P	**P**	**07 31 50.3**	**+0.1**
	baz=324,SNR=9.0						
GBRS	**Gornja Briga**	**77.07**	**328**	i P	**P**	**07 31 50.1**	**-0.2**
M43A	**Waltham Townsh**	**77.08**	**40**	P	**P**	**07 31 49.9**	**-0.5**
	baz=326						
N42A	**Yates City**	**77.12**	**41**	P	**P**	**07 31 50.2**	**-0.4**
	baz=326,SNR=5.3						
FETA	**Feichten**	**77.12**	**331**	i P	**P**	**07 31 51.2**	**+0.5**
	comp=Z,91nm,1.1s,SNR=41						
NVR	**Nevrokopi**	**77.12**	**320**	P	**P**	**07 31 51.0**	**+0.3**
NVR	**Nevrokopi**	**77.12**	**320**	P	**P**	**07 31 51.0**	**+0.3**
ECH	**Echery**	**77.13**	**334**	eP	**P**	**07 31 50.6**	**0.0**
	comp=Z,82nm,0.8s						
KLBO	**Killbear Provi**	**77.14**	**32**	P	**P**	**07 31 49.1**	**-1.5**
	baz=330						
DAVA	**Damuels**	**77.15**	**332**	i P	**P**	**07 31 51.2**	**+0.3**
	comp=Z,103nm,0.8s,SNR=44						
Q39A	**Willow Grove F**	**77.27**	**44**	P	**P**	**07 31 51.5**	**0.0**
	baz=324,SNR=15						
PLE	**Pljevlja**	**77.27**	**324**	⇓iP	**P**	**07 31 51.6**	**0.0**
TRI	**Trieste**	**77.28**	**329**	eP	**P**	**07 31 50.6**	**-0.8**
	comp=Z,65nm,0.8s						
TRI	**Trieste**	**77.28**	**329**	eP	**P**	**07 31 50.6**	**-0.8**
TRI				pmax	pmax		
	comp=Z,65nm,0.8s						
P40A	**Paris**	**77.29**	**43**	P	**P**	**07 31 51.7**	**+0.1**
	baz=325,SNR=11						
P40A	**Paris**	**77.29**	**43**	eP	**P**	**07 31 52.0**	**+0.3**
	comp=Z,15nm,0.6s						
O41A	**Passleys Farm,**	**77.33**	**42**	P	**P**	**07 31 51.6**	**-0.3**
	baz=325,SNR=8.3						
BUKO	**Buck Lake**	**77.34**	**32**	P	**P**	**07 31 51.0**	**-0.8**

	baz=331						
MANT	Manisa	77.37	315	*e*P	P	07 31 52.5	+0.2
	comp=Z,507nm,1.2s						
N43A	Stutzman Famil	77.39	40	P	P	07 31 51.5	-0.6
	baz=326						
HTL	Hartland	77.39	342	⇓*e*P	P	07 31 52.2	+0.3
HTL				IAmb	IAmb	07 31 52.7	
	comp=Z,38nm,0.7s						
SRS	Serrai	77.42	320	P	P	07 31 52.1	-0.2
SRS	Serrai	77.42	320	P	P	07 31 52.1	-0.2
SRS	Serrai	77.42	320	P	P	07 31 52.1	-0.2
BMRO	Meriville Lake	77.44	33	P	P	07 31 52.0	-0.3
	baz=330						
IVA	Berane	77.46	323	⇓*i*P	P	07 31 52.7	+0.1
QASN	Qassioun	77.48	307	*i* P	P	07 31 52.8	-0.1
M44A	Midewin, Midew	77.50	39	P	P	07 31 51.9	-0.8
	baz=327						
M44A	Midewin, Midew	77.50	39	*e*P	P	07 31 53.0	+0.3
	comp=Z,29nm,1.1s						
STIP	Stip	77.53	321	⇓*i*P	P	07 31 51.5	-1.4
R38A	Fenwick Farm,	77.53	45	P	P	07 31 52.2	-0.7
	baz=324						
TOTH	TOTAH	77.54	307	*i* P	P	07 31 49.9	-3.3
UPM	Unac-Piva	77.57	324	⇓*i*P	P	07 31 52.6	-0.7
DAVOX	Davos/Dischmat	77.60	332	P	P	07 31 53.2	-0.2
	comp=Z,64nm,0.6s,baz=12,slow=8.6,SNR=81						
DAVOX	Davos/Dischmat	77.60	332	*e*P	P	07 31 53.2	-0.2
UDBI	Udbina	77.60	327	P	P	07 31 52.2	-1.1
SKO	Skopje	77.60	322	*i* P	P	07 31 53.6	+0.3
P41A	Barry, Barry	77.61	42	P	P	07 31 53.3	0.0
	baz=325,SNR=9.9						
O42A	Bath	77.62	41	P	P	07 31 53.2	-0.1
	baz=326						
KOME	Kolasin	77.63	324	⇓*i*P	P	07 31 53.1	-0.4
BRCO	Bruce Peninsul	77.66	34	P	P	07 31 53.3	-0.2
	baz=330						
HDIL	Hopedale	77.66	41	P	P	07 31 53.2	-0.3
	baz=326						
PVY	Plav	77.67	323	*e*P	P	07 31 53.5	-0.3
KNT	Kendrikon	77.68	320	P	P	07 31 53.8	+0.1
KNT	Kendrikon	77.68	320	P	P	07 31 53.8	+0.1
KNT	Kendrikon	77.68	320	P	P	07 31 53.8	+0.1
VAY	Valandovo	77.68	321	P	P	07 31 54.0	+0.3
VAY	Valandovo	77.68	321	P	P	07 31 54.0	+0.3
VAY	Valandovo	77.68	321	P	P	07 31 54.0	+0.3
Q40A	Laux Farm, Aux	77.72	43	P	P	07 31 53.6	-0.3
	baz=325,SNR=7.6						
LATQ	La Tuque	77.74	27	P	P	07 31 53.4	-0.5
	baz=334						
LIA	Limnos Island	77.75	318	P	P	07 31 53.9	-0.1
LIA	Limnos Island	77.75	318	P	P	07 31 53.9	-0.1
BRBR	Barbar	77.75	307	*i* P	P	07 31 54.4	-0.1
BASO	Ashfield	77.78	34	P	P	07 31 54.0	-0.2
	baz=330						
DYA	Yadsworthy	77.81	342	⇓*e*P	P	07 31 54.2	0.0
DYA				IAmb	IAmb	07 31 55.1	
	comp=Z,92nm,0.9s						
BCI	Bajram Curri	77.82	323	*i* PN	P	07 31 54.2	-0.3
R39A	Chumby, Stover	77.83	44	P	P	07 31 54.1	-0.4
	baz=324,SNR=6.0						
NKY	Niksic	77.86	324	⇓*i*P	P	07 31 54.0	-0.8
PEMO	Pembroke	77.87	30	P	P	07 31 53.9	-0.7
	baz=332						
O43A	Sugar Creek Fa	77.88	41	P	P	07 31 54.4	-0.3
	baz=326						
BWLO	Walkerton	77.88	34	P	P	07 31 54.2	-0.5
	baz=330						
CSS	Mathiatis	77.88	310	*e*P	P	07 31 55.1	+0.1
	comp=Z,84nm,0.7s						
CSS	Mathiatis	77.88	310	P	P	07 31 55.0	+0.1
CLWO	Collingwood	77.89	33	P	P	07 31 54.3	-0.5
	baz=330						
WMOK	Wichita Mounta	77.91	50	P	P	07 31 55.5	+0.4
	baz=322,SNR=16						
WMOK	Wichita Mounta	77.91	50	*e*P	P	07 31 55.4	+0.3
	comp=Z,21nm,1.3s						
NKME	Niksic	77.92	324	⇓*i*P	P	07 31 54.2	-0.8
N44A	Piper City	77.95	40	P	P	07 31 54.9	-0.2
	baz=327						
BRY	Bratogost	77.97	324	⇓*i*P	P	07 31 54.4	-1.0
S38A	Stockton	77.98	45	P	P	07 31 54.8	-0.6
	baz=324,SNR=5.2						
P42A	Winchester	78.00	42	P	P	07 31 55.1	-0.3
	baz=326,SNR=6.3						
P42A	Winchester	78.00	42	*e*P	P	07 31 55.4	-0.1
	comp=Z,13nm,0.6s						
SIGR	SIGRI	78.01	317	P	P	07 31 53.3	-2.2
SIGR	SIGRI	78.01	317	P	P	07 31 53.3	-2.2
SADO	Sadowa	78.02	32	*e*P	P	07 31 54.5	-0.9
	comp=Z,7.5nm,0.6s						
PDG	Podgorica	78.09	323	⇑*i*P	P	07 31 55.2	-0.6
TTG	Podgorica	78.09	323	⇓*i*P	P	07 31 55.1	-0.7
TTG	Podgorica	78.09	323	*e*P	P	07 31 55.2	-0.6
	comp=Z,114nm,0.7s						
TTG				*e*pP	pP	07 33 55.1	+1.4
TTG	Podgorica	78.09	323	*e*P	P	07 31 55.2	-0.6
TTG				*e**PP	pP	07 33 55.1	+1.4
TTG				pmax	pmax		
	comp=Z,114nm,0.7s						
CEME	Cevo	78.12	324	⇓*i*P	P	07 31 55.2	-0.9
Q41A	Truxton	78.13	43	P	P	07 31 56.3	+0.2
	baz=325,SNR=17						
PUK	Puka	78.17	323	*i* PN	P	07 31 55.6	-0.8
KRUS	Krusevo	78.19	322	⇓*i*P	P	07 31 56.5	0.0
R40A	Maddies Statio	78.20	44	P	P	07 31 56.3	-0.2
	baz=325,SNR=9.6						
R40A	Maddies Statio	78.20	44	*e*P	P	07 31 56.6	+0.1
	comp=Z,7.4nm,0.6s						
S39A	Bolivar	78.20	45	P	P	07 31 56.1	-0.4
	baz=324,SNR=5.6						
S39A	Bolivar	78.20	45	*e*P	P	07 31 56.0	-0.5
	comp=Z,6.5nm,1.0s						
ASF	Jabal al Asfar	78.21	306	P	P	07 31 57.2	+0.4
	comp=Z,38nm,0.9s,baz=63,slow=2.3,SNR=36						
ASF	Jabal al Asfar	78.21	306	*e*P	P	07 31 57.2	+0.4
BANO	Bancroft	78.22	31	P	P	07 31 56.1	-0.4
	baz=332						
TRQ	Mont Tremblant	78.25	28	*e*P	P	07 31 56.5	-0.3
PHP	Peshkopia	78.25	322	*i* PN	P	07 31 56.0	-0.8
T38A	Diamond	78.28	46	P	P	07 31 56.9	-0.1
	baz=324,SNR=11						
CCA1	Carnmenellis	78.31	342	⇓*e*P	P	07 31 56.9	0.0
CCA1				IAmb	IAmb	07 31 57.8	
	comp=Z,128nm,1.0s						
STON	Ston	78.31	325	P	P	07 31 55.4	-1.6
P43A	Skaggs, Pawnee	78.32	41	P	P	07 31 56.8	-0.3
	baz=326						
DRME	Dracevica, Mon	78.32	323	⇓*i*P	P	07 31 56.8	-0.3
BUM	Brajici-Budva	78.34	324	⇓*i*P	P	07 31 56.5	-0.8
MMAI	Mount Meron Ar	78.34	307	P	P	07 31 57.6	+0.1
	comp=Z,75nm,0.5s,baz=55,slow=6.7,SNR=81						
MMAI	Mount Meron Ar	78.34	307	P	P	07 31 57.6	+0.1
O44A	Mansfield	78.35	40	P	P	07 31 56.9	-0.4
	baz=326						
HCY	Herceg Novi	78.37	324	⇓*i*P	P	07 31 56.4	-1.0
PAIG	Paliouri	78.37	319	P	P	07 31 57.0	-0.4
PAIG	Paliouri	78.37	319	P	P	07 31 57.0	-0.4
PAIG	Paliouri	78.37	319	P	P	07 31 57.0	-0.4
TUL1	Leonard	78.46	48	P	P	07 31 58.0	+0.1
	baz=324,SNR=13						
TUL1	Leonard	78.46	48	*e*P	P	07 31 58.6	+0.6
	comp=Z,20nm,0.8s						
TUL1				*e*pP	pP	07 33 58.4	+2.4
Q42A	Golden Eagle	78.47	42	P	P	07 31 58.1	+0.2
	baz=326,SNR=10						
PLVO	Plevna	78.49	30	P	P	07 31 57.4	-0.5
	baz=332						
ULC	Ulcinj	78.49	323	⇓*i*P	P	07 31 57.4	-0.6
AAM	Ann Arbor	78.49	36	P	P	07 31 58.1	+0.1
	baz=329						
AAM	Ann Arbor	78.49	36	*e*P	P	07 31 57.6	-0.3
	comp=Z,26nm,0.9s						
AAM	Ann Arbor	78.49	36	*e*P	P	07 31 57.7	-0.3
AAM				pmax	pmax		
	comp=Z,26nm,0.9s						
O45A	Potomac	78.58	40	P	P	07 31 58.4	-0.1
	baz=327,SNR=19						
OHR	Ohrid	78.59	322	*i* P	P	07 31 58.2	-0.5
YER	Yerkesik	78.60	315	P	P	07 31 59.3	+0.5
CHOS	Chios island	78.60	317	P	P	07 31 58.7	-0.1
CHOS	Chios island	78.60	317	P	P	07 31 58.7	-0.1
R41A	Rosebud	78.60	43	P	P	07 31 58.5	-0.2
	baz=325,SNR=5.2						
ELFO	Elginfield	78.61	34	P	P	07 31 58.8	+0.2
	baz=330						
JSA	Saint Aubin	78.61	340	⇓*e*P	P	07 31 58.7	+0.2
JSA				IAmb	IAmb	07 31 59.4	
	comp=Z,155nm,0.8s						
FNA	Florina	78.63	321	*e*P	P	07 31 58.5	-0.3
	comp=Z,106nm,0.8s						
FNA	Florina	78.63	321	P	P	07 31 58.4	-0.4
FNA	Florina	78.63	321	*e*P	P	07 31 58.5	-0.3
FNA				pmax	pmax		
	comp=Z,107nm,0.8s						
ORIO	Orleans, Innes	78.63	29	P	P	07 31 58.0	-0.7
	baz=333						
S40A	Lebanon	78.66	45	P	P	07 31 58.8	-0.2
	baz=325,SNR=6.6						
ALFO	Alfred	78.67	29	P	P	07 31 58.5	-0.4
	baz=333						
ACTO	Acton	78.71	33	P	P	07 31 59.3	+0.1
	baz=331						
SFIN	Lafayette	78.73	39	P	P	07 31 59.0	-0.3
	baz=327,SNR=5.2						
SFIN	Lafayette	78.73	39	*e*P	P	07 31 59.0	-0.3
	comp=Z,9.3nm,0.6s						
LIT	Litokhoron	78.74	320	*e*P	P	07 31 58.6	-0.8
	comp=Z,75nm,1.2s						
LIT	Litokhoron	78.74	320	P	P	07 31 58.4	-1.0
LIT	Litokhoron	78.74	320	*e*P	P	07 31 58.6	-0.8
LIT				pmax	pmax		
	comp=Z,75nm,1.2s						
PKRO	Pickering	78.75	32	P	P	07 31 58.8	-0.5
	baz=331						
SENIN	Lac Senin/Sane	78.76	333	*e*P	P	07 32 00.0	+0.4
	comp=Z,32nm,0.6s						
DELO	Deloro Mine	78.76	31	P	P	07 31 57.8	-1.6
	baz=332						
KSL	Kastellorizon	78.78	313	P	P	07 31 59.1	-0.5
Q43A	New Douglas	78.82	42	P	P	07 31 59.6	-0.2
	baz=326						
P44A	Sand Creek, Wi	78.85	41	P	P	07 31 60.0	0.0
	baz=326,SNR=5.3						
CCM	Cathedral Cave	78.86	43	P	P	07 32 00.5	+0.5
	baz=325						
CCM	Cathedral Cave	78.86	43	*e*P	P	07 32 01.1	+1.1
	comp=Z,7.6nm,0.9s						
CCM	Cathedral Cave	78.86	43	*e*P	P	07 32 01.1	+1.1
CCM				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KZN	Kozani	78.86	321	P	P	07 31 59.3	-0.8
KZN	Kozani	78.86	321	P	P	07 31 59.3	-0.8
KZN	Kozani	78.86	321	P	P	07 31 59.3	-0.8
R42A	Luebbering	78.88	43	P	P	07 32 00.5	+0.3
	baz=326						
AOS	Alonnisos	78.92	319	P	P	07 32 00.0	-0.3
AOS	Alonnisos	78.92	319	P	P	07 32 00.0	-0.3
DRWO	Darlington Wes	78.95	32	P	P	07 32 00.3	-0.1
	baz=331						
DRCO	St. Marys Ceme	78.95	32	P	P	07 31 59.8	-0.6
	baz=331						
S41A	Jillco Farms,	79.01	44	P	P	07 32 00.9	0.0
	baz=325						
T40A	Mansfield	79.02	45	P	P	07 32 00.7	-0.2
	baz=325,SNR=6.4						
WLVO	Wesleyville	79.02	32	P	P	07 32 00.3	-0.4
	baz=332						
XOR	Xorichti	79.05	319	P	P	07 32 00.2	-0.9
XOR	Xorichti	79.05	319	P	P	07 32 00.2	-0.9
HHAR	Hobbs	79.05	46	*e*P	P	07 32 01.4	+0.2
	comp=Z,8.8nm,0.6s						
HHAR				*e*pP	pP	07 34 03.5	+4.1
NEST	Nestorio	79.07	321	P	P	07 32 01.0	-0.3
NEO	Neokhori	79.08	319	P	P	07 32 01.7	+0.4
NEO	Neokhori	79.08	319	P	P	07 32 01.7	+0.4
SKIA	Skiathos	79.10	319	P	P	07 32 00.7	-0.6
FYTO	Fytoko, Volos	79.12	319	P	P	07 32 00.8	-0.6
FYTO	Fytoko, Volos	79.12	319	P	P	07 32 00.8	-0.6
ABTX	Abilene, Hawle	79.13	52	P	P	07 32 02.1	+0.5
	baz=322,SNR=12						
ABTX	Abilene, Hawle	79.13	52	*e*P	P	07 32 02.5	+0.9
	comp=Z,48nm,1.4s						
Q44A	Meyer Farm, Va	79.15	41	P	P	07 32 01.4	-0.1
	baz=326						
P45A	Graceland, Par	79.17	40	P	P	07 32 01.5	-0.2
	baz=327						
P45A	Graceland, Par	79.17	40	*e*P	P	07 32 01.3	-0.4
	comp=Z,10nm,0.6s						
U39A	Green Forest	79.19	46	P	P	07 32 02.0	+0.1
	baz=324,SNR=22						
TYNO	Tyneside	79.22	33	P	P	07 32 01.1	-0.8
	baz=331						
O47A	Sheridan	79.24	39	P	P	07 32 01.4	-0.6
	baz=328						
R43A	Red Bud	79.27	42	P	P	07 32 02.0	-0.2
	baz=326						
ARMA	Armidale	79.28	176	*e*P	P	07 32 04.3	+2.0
	comp=Z,56nm,0.8s						
FVM	French Village	79.28	43	*e*P	P	07 32 03.6	+1.3
	comp=Z,7.1nm,0.4s						
S42A	Caledonia	79.30	43	P	P	07 32 02.2	-0.2
	baz=326						
P46A	Rosedale	79.33	40	P	P	07 32 02.5	0.0
	baz=327,SNR=7.3						
KPRO	Kipourio	79.33	321	P	P	07 32 01.6	-1.0
THL	Klokotos Trika	79.38	320	P	P	07 32 01.1	-1.7
SMIA	Simia	79.45	319	P	P	07 32 02.7	-0.5
T41A	Mountain View	79.45	44	P	P	07 32 03.1	-0.1
	baz=325,SNR=9.8						
U40A	Yellville	79.50	45	P	P	07 32 03.6	+0.1
	baz=325,SNR=44						
Q45A	Warren Harvey,	79.53	41	P	P	07 32 03.5	0.0
	baz=327						
TX31	Lajitas Ar. Si	79.53	57	*e*P	P	07 32 05.3	+1.4
TXAR	Lajitas Array	79.54	57	P	P	07 32 05.0	+1.1
	comp=Z,36nm,0.8s,baz=294,slow=3.9,SNR=296						
TXAR	Lajitas Array	79.54	57	P	P	07 32 05.0	+1.1
TXAR	Lajitas Array	79.54	57	P	P	07 32 05.0	+1.1
V39A	Pettigrew	79.55	46	P	P	07 32 03.7	-0.1
	baz=324,SNR=16						
R44A	Waltonville	79.66	42	P	P	07 32 03.8	-0.4
	baz=326,SNR=5.3						
MEDO	Medina	79.67	32	P	P	07 32 04.1	0.0
	baz=332						
LONY	Lake Ozonia	79.67	29	P	P	07 32 03.6	-0.6
	baz=334						
LONY	Lake Ozonia	79.67	29	*e*P	P	07 32 03.6	-0.6
	comp=Z,7.0nm,0.8s						
OLIL	Olney	79.69	41	*e*P	P	07 32 04.6	+0.2
	comp=Z,6.3nm,0.6s						
AGG	Agios Georgios	79.70	320	*e*P	P	07 32 03.4	-1.1
	comp=Z,144nm,0.9s						
AGG	Agios Georgios	79.70	320	P	P	07 32 02.9	-1.6
AGG	Agios Georgios	79.70	320	*e*P	P	07 32 03.4	-1.1
AGG				pmax	pmax		
	comp=Z,144nm,0.9s						
LPIG	La Paz	79.71	65	P	P	07 32 05.5	+0.8
	comp=Z,22nm,0.7s,baz=24,slow=3.8,SNR=9.8						
LPIG	La Paz	79.71	65	*e*P	P	07 32 05.5	+0.8
LKR	Lokris	79.73	319	P	P	07 32 03.5	-1.1
LKR	Lokris	79.73	319	P	P	07 32 03.5	-1.1
PQI	Presque Isle	79.73	24	*e*P	P	07 32 04.0	-0.5
	comp=Z,12nm,0.8s						
T42A	Van Buren	79.77	44	P	P	07 32 04.9	+0.1
	baz=326,SNR=7.8						
T42A	Van Buren	79.77	44	*e*P	P	07 32 05.1	+0.2
	comp=Z,4.7nm,0.6s						
VLC	Villacollemand	79.77	330	*e*P	P	07 32 04.9	+0.1
	comp=Z,88nm,0.9s						
S43A	Fulton Ridge,	79.78	43	P	P	07 32 04.7	-0.2
	baz=326,SNR=5.0						
JAN	Janina	79.79	321	P	P	07 32 05.2	+0.2
JAN	Janina	79.79	321	P	P	07 32 05.2	+0.2
JAN	Janina	79.79	321	P	P	07 32 05.2	+0.2
P47A	Martinsville	79.83	39	P	P	07 32 04.8	-0.3
	baz=328,SNR=5.5						
APE	Apeiranthos	79.92	316	⇓*e*P	P	07 32 05.1	-0.6
APE				pmax	pmax		
	comp=Z,99nm,1.8s						
RAYN	Ar Rayn	79.94	294	*e*P	P	07 32 06.3	+0.3
	comp=Z,95nm,1.1s						
RAYN	Ar Rayn	79.94	294	*i* P	P	07 32 06.2	+0.2
	SNR=56						
U41A	Viola	79.95	45	P	P	07 32 05.6	-0.2
	baz=325						
V40A	Witts Springs	79.97	46	P	P	07 32 05.7	-0.3
	baz=325,SNR=7.8						
V40A	Witts Springs	79.97	46	*e*P	P	07 32 06.0	0.0
	comp=Z,6.6nm,0.6s						
R45A	Skylar, Fairfi	79.97	41	P	P	07 32 05.9	0.0
	baz=327						
N50A	Nevada	80.00	37	P	P	07 32 06.0	0.0
	baz=329						
VILL	Villia	80.00	318	P	P	07 32 04.8	-1.3
W39A	Magazine	80.01	47	P	P	07 32 06.2	+0.1
	baz=324						
W39A	Magazine	80.01	47	*e*P	P	07 32 06.7	+0.6
	comp=Z,10nm,1.2s						
EVR	Evrytania	80.01	320	P	P	07 32 05.2	-1.0
EVR	Evrytania	80.01	320	P	P	07 32 05.2	-1.0
ERPA	Erie	80.03	34	P	P	07 32 05.9	-0.2
	baz=331						
SIUC	Southern Illin	80.05	42	*e*P	P	07 32 06.5	+0.3
	comp=Z,16nm,0.6s						
S44A	Carbondale	80.05	42	P	P	07 32 06.4	+0.1
	baz=326,SNR=7.4						
VLY	Voula,Athens	80.05	318	P	P	07 32 04.7	-1.6
VLY	Voula,Athens	80.05	318	P	P	07 32 04.7	-1.6
SGD	Sagiada	80.08	321	P	P	07 32 06.1	-0.3
T43A	Greenville	80.09	43	P	P	07 32 06.6	+0.1
	baz=326,SNR=6.4						
IGT	Igoumenitsa	80.11	321	P	P	07 32 06.1	-0.5
IGT	Igoumenitsa	80.11	321	P	P	07 32 06.1	-0.5
IGT	Igoumenitsa	80.11	321	P	P	07 32 06.1	-0.5
BNI	Bardonecchia	80.13	333	*e*P	P	07 32 07.2	+0.4
	comp=Z,30nm,0.9s						
BNI	Bardonecchia	80.13	333	*e*P	P	07 32 07.2	+0.4
BNI				pmax	pmax		
	comp=Z,30nm,0.9s						
DSF	Desfina	80.13	319	P	P	07 32 05.2	-1.6
DSF	Desfina	80.13	319	P	P	07 32 05.2	-1.6
Q47A	Bedord North L	80.23	40	P	P	07 32 07.3	+0.1
	baz=328,SNR=9.2						
MMNY	Mt. Morris Dam	80.24	32	*e*P	P	07 32 06.8	-0.4
	comp=Z,21nm,0.6s						
ANX	Ano Chora	80.24	320	P	P	07 32 06.4	-1.0
SLBS	Sierra La Lagu	80.24	65	*e*P	P	07 32 09.0	+1.3
	comp=Z,26nm,0.9s						
U42A	Revenden	80.26	44	P	P	07 32 07.7	+0.3
	baz=326						
HPIG		80.26	60	*e*P	P	07 32 08.9	+1.1
	comp=Z,24nm,0.8s						
LTK	Loutraki	80.27	319	P	P	07 32 05.6	-1.9
LTK	Loutraki	80.27	319	P	P	07 32 05.6	-1.9
PBMO	Poplar Bluff	80.28	44	*e*P	P	07 32 07.9	+0.4
	comp=Z,8.3nm,0.6s						
V41A	Mountainview	80.30	45	P	P	07 32 07.6	-0.1
	baz=325,SNR=19						
SERG	Sergoula	80.33	319	P	P	07 32 06.7	-1.1
O50A	Cable	80.35	37	P	P	07 32 07.8	-0.1
	baz=329,SNR=7.3						
W40A	Ferguson Farm,	80.35	46	P	P	07 32 08.3	+0.4
	baz=325,SNR=7.8						
W40A	Ferguson Farm,	80.35	46	*e*P	P	07 32 07.9	0.0
	comp=Z,11nm,0.6s						
S45A	Carrier Mills	80.36	42	P	P	07 32 07.8	-0.1
	baz=327						
TRIZ	Trizonia	80.36	319	P	P	07 32 06.7	-1.2
NCB	Newcomb	80.37	29	*e*P	P	07 32 07.6	-0.3
R46A	Gibon Southern	80.37	41	P	P	07 32 07.8	-0.2
	baz=327						
EFP	Efpalio	80.38	320	P	P	07 32 07.3	-0.7
THAL	Thalero	80.39	319	P	P	07 32 06.5	-1.5
PVO	Paravola	80.39	320	P	P	07 32 07.6	-0.4
X39A	Fountain Ranch	80.40	47	P	P	07 32 08.7	+0.5
	baz=324,SNR=8.4						
KARP	Karpathos	80.41	314	*e*P	P	07 32 07.5	-0.8
	comp=Z,182nm,0.7s						
KARP	Karpathos	80.41	314	P	P	07 32 07.3	-1.0
VT1	Waterbury	80.50	28	*e*P	P	07 32 08.8	+0.2
	comp=Z,42nm,1.0s						
LAKA	Lakka	80.51	319	P	P	07 32 07.9	-0.8
LAKA	Lakka	80.51	319	P	P	07 32 07.9	-0.8
ACSO	Alum Creek Sta	80.53	37	P	P	07 32 08.7	0.0
	baz=329,SNR=6.2						
ACSO	Alum Creek Sta	80.53	37	*e*P	P	07 32 08.9	+0.2
	comp=Z,20nm,0.8s						
PDO	Prodromos	80.55	320	P	P	07 32 08.5	-0.4
DID	Didima	80.58	318	P	P	07 32 06.5	-2.6
DID	Didima	80.58	318	P	P	07 32 06.5	-2.6
MATE	Matera	80.60	324	⇓*i*P	P	07 32 08.7	-0.4
KLV	Kalavryta, Ach	80.60	319	P	P	07 32 08.1	-1.2
KLV	Kalavryta, Ach	80.60	319	P	P	07 32 08.1	-1.2
LKD2	Lefkada island	80.61	321	P	P	07 32 08.4	-0.8
LKD2	Lefkada island	80.61	321	P	P	07 32 08.4	-0.8
GUR	Goura	80.61	319	P	P	07 32 07.9	-1.4
GUR	Goura	80.61	319	P	P	07 32 07.9	-1.4
U43A	Rector	80.62	44	P	P	07 32 09.5	+0.2
	baz=326,SNR=5.1						
MIAR	Mount Ida	80.63	47	P	P	07 32 10.0	+0.6
	baz=325,SNR=9.4						
MIAR	Mount Ida	80.63	47	*e*P	P	07 32 10.2	+0.8
	comp=Z,6.7nm,0.8s						
MIAR	Mount Ida	80.63	47	*e*P	P	07 32 10.2	+0.8
MIAR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
V42A	Cord	80.64	45	P	P	07 32 09.2	-0.2
	baz=326,SNR=6.5						
PKME	Peaks-Kenny Pk	80.68	25	P	P	07 32 09.2	-0.2
	baz=337,SNR=6.3						
PKME	Peaks-Kenny Pk	80.68	25	*e*P	P	07 32 09.4	0.0
	comp=Z,25nm,1.0s						
M54A	Oil Creek Stat	80.68	34	P	P	07 32 09.4	-0.1
	baz=331						
R47A	Wooly Knot Far	80.72	40	P	P	07 32 09.7	-0.1
	baz=328,SNR=11						
S46A	Don Dixon Farm	80.73	41	P	P	07 32 09.8	0.0
	baz=327						
JCT	Junction City	80.73	54	P	P	07 32 10.4	+0.3
	baz=322,SNR=17						
JCT	Junction City	80.73	54	*e*P	P	07 32 10.5	+0.5
	comp=Z,20nm,0.8s						
JCT	Junction City	80.73	54	*e*P	P	07 32 10.5	+0.5
JCT				pmax	pmax		
	comp=Z,20nm,0.8s						
P50A	Jamestown	80.73	38	P	P	07 32 09.7	-0.1
	baz=329,SNR=8.7						
W41B	Gary Mavity, V	80.75	46	P	P	07 32 10.1	+0.1
	baz=325,SNR=10						
W41B	Gary Mavity, V	80.75	46	*e*P	P	07 32 10.7	+0.7
	comp=Z,10nm,0.6s						
W41B				*e*pP	pP	07 34 12.6	+3.7
WHTX	Lake Whitney,	80.76	51	P	P	07 32 10.7	+0.6
	baz=323,SNR=14						
WHTX	Lake Whitney,	80.76	51	*e*P	P	07 32 10.7	+0.6
	comp=Z,41nm,1.0s						
STKA	Stephens Creek	80.81	185	P	P	07 32 10.3	+0.2
	comp=Z,31nm,0.8s,baz=346,slow=6.1,SNR=76						
STKA	Stephens Creek	80.81	185	*e*P	P	07 32 11.1	+1.0
	comp=Z,9.1nm,0.9s						
LBNH	Lisbon	80.84	27	P	P	07 32 10.4	+0.1
	baz=335,SNR=5.1						
LBNH	Lisbon	80.84	27	*e*P	P	07 32 10.6	+0.3
	comp=Z,13nm,0.8s						
LBNH	Lisbon	80.84	27	*e*P	P	07 32 10.6	+0.3
LBNH				pmax	pmax		
	comp=Z,13nm,0.8s						
DRO	Drossia	80.87	319	P	P	07 32 10.4	-0.2
WCI	Wyandotte Cave	80.88	40	P	P	07 32 10.8	+0.2
	baz=328						
WCI	Wyandotte Cave	80.88	40	*e*P	P	07 32 10.9	+0.3
	comp=Z,11nm,0.6s						
WCI	Wyandotte Cave	80.88	40	*e*P	P	07 32 10.9	+0.3
WCI				pmax	pmax		
	comp=Z,11nm,0.6s						
RLS	Riolos of Patr	80.88	320	P	P	07 32 10.4	-0.2
RLS	Riolos of Patr	80.88	320	P	P	07 32 10.4	-0.2
R48A	Northridge Ran	80.91	40	P	P	07 32 11.0	+0.3
	baz=328,SNR=6.5						
W42A	Bald Knob	81.01	45	P	P	07 32 11.6	+0.3
	baz=326						
X40A	Basin Creek Fa	81.03	47	P	P	07 32 11.6	+0.1
	baz=325,SNR=7.5						
X40A	Basin Creek Fa	81.03	47	*e*P	P	07 32 12.0	+0.5
	comp=Z,7.4nm,0.8s						
N54A	Moraine State	81.04	34	P	P	07 32 11.3	-0.1
	baz=331,SNR=6.1						
N54A	Moraine State	81.04	34	*e*P	P	07 32 11.4	+0.1
	comp=Z,17nm,0.8s						
V43A	Jonesboro	81.04	44	P	P	07 32 11.4	0.0
	baz=326						
VLX	Vlachokerasia	81.07	319	P	P	07 32 10.4	-1.3
VLX	Vlachokerasia	81.07	319	P	P	07 32 10.4	-1.3
ACCN	Adirondack Com	81.07	29	*e*P	P	07 32 11.3	-0.2
	comp=Z,26nm,1.1s						
VTN	Vitineika	81.12	320	P	P	07 32 12.1	+0.3
KFL	Anninata	81.12	320	P	P	07 32 11.4	-0.5

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VLS   Valsamata          81.15 320  P     P      07 32 11.3 -0.7
VLS   Valsamata          81.15 320  P     P      07 32 11.3 -0.7
VLS   Valsamata          81.15 320  P     P      07 32 11.3 -0.7
X41A  Kaden, Bauxite     81.18  46  P     P      07 32 12.6 +0.3
      baz=325,SNR=5.8
WVL   Waterville         81.21  26  eP    P      07 32 12.2  0.0
      comp=Z,12nm,0.7s
VLI   Veliai             81.37 318  P     P      07 32 10.6 -2.5
VLI   Veliai             81.37 318  P     P      07 32 10.6 -2.5
BINY  Binghamton         81.37  31  P     P      07 32 12.7 -0.3
      baz=333
BINY  Binghamton         81.37  31  eP    P      07 32 12.2 -0.9
      comp=Z,7.7nm,0.7s
FORT  Forrest            81.41 197  eP    P      07 32 13.9 +0.8
      comp=Z,144nm,0.7s
ITM   Ithomi             81.42 319  eP    P      07 32 12.5 -1.0
      comp=Z,173nm,0.8s
ITM   Ithomi             81.42 319  P     P      07 32 12.4 -1.0
S48A  Wiedeman Farm,     81.46  40  P     P      07 32 13.5 -0.1
      baz=328,SNR=5.8
CUC   Castrocucco        81.51 324  eP    P      07 32 12.5 -1.4
      comp=Z,26nm,1.0s
LAST  Lasithi            81.51 315  P     P      07 32 14.0  0.0
T47A  Sharon Grove       81.58  41  P     P      07 32 14.3 +0.1
      baz=328
T47A  Sharon Grove       81.58  41  eP    P      07 32 14.4 +0.1
      comp=Z,9.1nm,0.7s
DYR   Agios Nikonas      81.59 318  P     P      07 32 13.3 -1.0
FFD   Franklin Falls     81.62  28  eP    P      07 32 14.0 -0.3
      comp=Z,28nm,0.7s
U46A  Springville        81.63  42  P     P      07 32 14.7 +0.2
      baz=327
Y41A  Eaglette Beard     81.64  47  P     P      07 32 15.1 +0.6
      baz=325
435B  Jarrell            81.65  52  P     P      07 32 15.1 +0.3
      baz=323
IDI   Anoyia             81.68 316  P     P      07 32 13.2 -1.7
      comp=Z,41nm,0.6s,baz=16,slow=4.9,SNR=35
IDI   Anoyia             81.68 316⇑iP    P      07 32 13.4 -1.4
IDI   Anoyia             81.68 316  eP    P      07 32 13.5 -1.3
      comp=Z,61nm,0.7s
EMMW  East Machias       81.69  24  eP    P      07 32 14.1 -0.5
      comp=Z,23nm,0.9s
KTHR  Kythira            81.72 318  P     P      07 32 13.6 -1.4
PYL   PYLOS              81.74 319  P     P      07 32 13.7 -1.3
PYL   PYLOS              81.74 319  P     P      07 32 13.7 -1.3
Z40A  Long Farm, Mag     81.76  48  P     P      07 32 16.0 +0.8
      baz=325
T48A  Bowling Green      81.78  41  P     P      07 32 15.5 +0.3
      baz=328
TIP   Timpagrande        81.85 323⇑iP    P      07 32 15.2 -0.4
TIP   Timpagrande        81.85 323  eP    P      07 32 15.5 -0.2
      comp=Z,208nm,1.5s
TIP                                 epP   pP     07 34 18.3 +3.3
TIP   Timpagrande        81.85 323  P     P      07 32 15.4 -0.2
VAM   Vamos              81.89 316  P     P      07 32 15.6 -0.3
VAM   Vamos              81.89 316  P     P      07 32 15.6 -0.3
VAM   Vamos              81.89 316  P     P      07 32 15.6 -0.3
ANKY  Antikythira Is     81.92 317  P     P      07 32 14.7 -1.2
ANKY  Antikythira Is     81.92 317  P     P      07 32 14.7 -1.2
X43A  Marvell            81.93  45  P     P      07 32 16.9 +0.8
      baz=326
X43A  Marvell            81.93  45  eP    P      07 32 17.0 +1.0
      comp=Z,14nm,0.6s
SIVA  Sivas              81.94 316  P     P      07 32 15.8 -0.3
SIVA  Sivas              81.94 316  P     P      07 32 15.8 -0.3
IMMV  Iera Moni Meta     81.95 317  P     P      07 32 15.6 -0.5
U47A  Clarksville        81.95  42  P     P      07 32 16.3 +0.2
      baz=328
WVT   Waverly            81.98  42  P     P      07 32 16.4 +0.2
      baz=327
WVT   Waverly            81.98  42  eP    P      07 32 16.6 +0.3
      comp=Z,8.4nm,0.5s
WVT   Waverly            81.98  42  eP    P      07 32 16.6 +0.3
WVT                                  pmax  pmax
      comp=Z,8.0nm,0.5s
KSPA  Keystone Colle     82.02  31  eP    P      07 32 16.2 -0.2
      comp=Z,14nm,0.7s
Z41A  Richland Creek     82.05  47  P     P      07 32 17.4 +0.8
      baz=325
Y42A  Garnett, Star      82.06  46  P     P      07 32 17.4 +0.7
      baz=326
SSPA  Standing Stone     82.09  33  P     P      07 32 16.6 -0.1
      baz=332
SSPA  Standing Stone     82.09  33  eP    P      07 32 16.7 -0.1
      comp=Z,16nm,1.0s
V46A  Holladay           82.12  43  P     P      07 32 17.1 +0.1
      baz=327,SNR=8.1
T49A  Edmonton           82.15  40  P     P      07 32 17.3 +0.2
      baz=328
T49A  Edmonton           82.15  40  eP    P      07 32 17.4 +0.2
      comp=Z,7.3nm,1.0s
O56A  Blue Knob Stat     82.17  34  P     P      07 32 17.1 -0.1
      baz=332,SNR=11
O56A  Blue Knob Stat     82.17  34  eP    P      07 32 17.4 +0.2
      comp=Z,22nm,0.9s
W45A  Hickory Valley     82.18  44  P     P      07 32 17.5 +0.1
      baz=327
U48A  Cassie Pea, Po     82.22  41  P     P      07 32 17.7 +0.2
      baz=328
MCWV  Mont Chateau       82.23  35  P     P      07 32 17.6 +0.2
      baz=331,SNR=5.6
MCWV  Mont Chateau       82.23  35  eP    P      07 32 18.0 +0.6
      comp=Z,14nm,0.6s
NATX  Nacogdoches        82.36  49  P     P      07 32 19.7 +1.5
      baz=324,SNR=12
NATX  Nacogdoches        82.36  49  eP    P      07 32 19.8 +1.5
      comp=Z,65nm,0.8s
V47A  Nunnelly           82.37  42  P     P      07 32 18.3  0.0
      baz=327,SNR=9.2
S51A  Beattyville        82.50  38  P     P      07 32 18.6 -0.3
      baz=329
T50A  Nancy              82.51  40  P     P      07 32 19.0 +0.1
      baz=329,SNR=5.9
HRV   Adam Dziewonsk     82.53  28  P     P      07 32 19.1 +0.1
      baz=336
HRV   Adam Dziewonsk     82.53  28  eP    P      07 32 19.3 +0.4
      comp=Z,32nm,1.0s
HRV   Adam Dziewonsk     82.53  28  eP    P      07 32 19.3 +0.4
HRV                                  pmax  pmax
      comp=Z,32nm,1.0s
141A  Papa Simpson,      82.54  48  P     P      07 32 19.4 +0.2
      baz=325
U49A  Red Boiling Sp     82.55  41  P     P      07 32 19.1  0.0
      baz=328,SNR=6.7
W46A  Michie             82.57  43  P     P      07 32 19.3  0.0
      baz=327
240A  Hunter Patters     82.58  49  P     P      07 32 19.9 +0.6
      baz=325
N59A  State Game Lan     82.58  32  P     P      07 32 19.2 -0.1
      baz=333,SNR=8.8
N59A  State Game Lan     82.58  32  eP    P      07 32 19.4 +0.1
      comp=Z,37nm,1.3s
OXF   Oxford             82.62  44  P     P      07 32 19.8 +0.3
      baz=327
OXF   Oxford             82.62  44  eP    P      07 32 19.4 -0.1
      comp=Z,32nm,1.3s
OXF   Oxford             82.62  44  eP    P      07 32 19.4 -0.1
OXF                                  pmax  pmax
      comp=Z,32nm,1.3s
833A  Chaparral WMA,     82.65  55  P     P      07 32 20.9 +1.2
      baz=323,SNR=12
833A  Chaparral WMA,     82.65  55  eP    P      07 32 21.0 +1.2
      comp=Z,26nm,0.9s
S52A  Salyersville       82.68  38  P     P      07 32 19.9 +0.1
      baz=330
X45A  UM Field Stati     82.70  44  P     P      07 32 20.0 +0.1
      baz=327
Y44A  Strider, Charl     82.70  45  P     P      07 32 20.6 +0.7
      baz=326,SNR=7.1
WES   Weston             82.71  28  eP    P      07 32 20.1 +0.3
      comp=Z,37nm,0.9s
WES   Weston             82.71  28  eP    P      07 32 20.1 +0.3
WES                                  pmax  pmax
      comp=Z,37nm,0.9s
V48A  Smith Brothers     82.75  42  P     P      07 32 20.4 +0.2
      baz=328,SNR=8.9
V48A  Smith Brothers     82.75  42  eP    P      07 32 20.3 +0.2
      comp=Z,9.2nm,0.6s
BCX   Boston College     82.80  28  eP    P      07 32 20.6 +0.3
      comp=Z,28nm,1.0s
PLAL  Pickwick Lake      82.83  43  eP    P      07 32 20.3 -0.3
      comp=Z,7.2nm,0.6s
ODNJ  Ogdensburg         82.83  31  eP    P      07 32 20.0 -0.4
      comp=Z,10nm,0.7s
PAGS  Pennsylvania G     82.86  33  eP    P      07 32 20.7 +0.1
      comp=Z,17nm,0.7s
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X46A  Booneville         82.95  44  P     P      07 32 21.2  0.0
      baz=327
CEL   Celeste            82.98 324  eP    P      07 32 20.6 -0.7
      comp=Z,71nm,0.8s
241A  Mo Tay, Goldon     83.00  48  P     P      07 32 22.5 +1.0
      baz=325
241A  Mo Tay, Goldon     83.00  48  eP    P      07 32 21.1 -0.4
      comp=Z,23nm,0.8s
LUPA  Lehigh Univers     83.00  31  eP    P      07 32 21.2 -0.1
      comp=Z,1.0nm,0.5s
Y45A  Yeager Farm, C     83.09  45  P     P      07 32 22.8 +0.9
      baz=327,SNR=5.4
V49A  McMinnville        83.12  41  P     P      07 32 22.0  0.0
      baz=328
PAL   Palisades          83.13  30  P     P      07 32 21.8 -0.1
      baz=334
Z44A  Pea Ridge, Bel     83.16  46  P     P      07 32 23.0 +0.8
      baz=326
143A  Socs Landing,      83.18  47  P     P      07 32 22.8 +0.5
      baz=326
MVL   Millersville       83.20  32  eP    P      07 32 22.5 +0.2
      comp=Z,12nm,0.6s
BRNJ  Basking Ridge      83.20  31  eP    P      07 32 22.6 +0.3
      comp=Z,22nm,0.7s
W48A  Pulaski            83.20  42  P     P      07 32 22.6 +0.2
      baz=328,SNR=17
T52A  Hallie             83.20  38  P     P      07 32 22.7 +0.2
      baz=330
X47A  Russelville        83.31  43  P     P      07 32 22.9 -0.1
      baz=327,SNR=6.4
Y46A  Houston            83.39  44  P     P      07 32 23.8 +0.4
      baz=327,SNR=15
Z45A  Winona             83.43  45  P     P      07 32 24.2 +0.6
      baz=326
341A  Kurthwood          83.44  49  P     P      07 32 24.8 +1.1
      baz=325,SNR=7.4
341A  Kurthwood          83.44  49  eP    P      07 32 24.4 +0.8
      comp=Z,38nm,1.3s
TZTN  Tazewell           83.46  39  P     P      07 32 23.8 +0.1
      baz=329
TZTN  Tazewell           83.46  39  eP    P      07 32 24.1 +0.4
      comp=Z,5.5nm,0.6s
W49A  Belvidere          83.51  42  P     P      07 32 24.2 +0.2
      baz=328,SNR=5.1
V50A  Pikevile           83.55  41  P     P      07 32 24.1 -0.1
      baz=329
SWET  Sewanee            83.58  41  eP    P      07 32 24.2 -0.2
      comp=Z,18nm,0.5s
X48A  Hartselle          83.73  43  P     P      07 32 25.1  0.0
      baz=328,SNR=7.8
X48A  Hartselle          83.73  43  eP    P      07 32 25.0  0.0
      comp=Z,8.8nm,0.6s
V51A  Loudon             83.75  40  P     P      07 32 25.1 -0.1
      baz=329
Y47A  UCPARC, Winfie     83.83  43  P     P      07 32 25.7 +0.1
      baz=327
W50A  Signal Mountai     83.86  41  P     P      07 32 25.7  0.0
      baz=328
W50A  Signal Mountai     83.86  41  eP    P      07 32 26.1 +0.3
      comp=Z,6.8nm,0.6s
VBMS  Vicksburg          84.00  46  P     P      07 32 27.1 +0.7
      baz=326
X49A  Woodville          84.00  42  P     P      07 32 26.5 +0.1
      baz=328,SNR=12
U53A  Fall Branch        84.01  38  P     P      07 32 26.1 -0.4
      baz=330
V52A  Sevierville        84.04  39  P     P      07 32 26.7 +0.1
      baz=329
V52A  Sevierville        84.04  39  eP    P      07 32 27.0 +0.4
      comp=Z,6.7nm,0.6s
244A  Avery, Jackson     84.06  46  P     P      07 32 28.1 +1.3
      baz=326,SNR=6.7
CAN   Canberra           84.09 179  eP    P      07 32 28.0 +1.4
      comp=Z,41nm,0.9s
CAN   Canberra           84.09 179  eP    P      07 32 28.0 +1.4
CAN                                  pmax  pmax
      comp=Z,41nm,0.9s
TKL   Tuckaleechee C     84.12  40  P     P      07 32 26.6 -0.4
      comp=Z,4.5nm,0.6s,baz=231,slow=6.5,SNR=17
TKL   Tuckaleechee C     84.12  40  eP    P      07 32 27.3 +0.3
      comp=Z,4.9nm,0.7s
TKL   Tuckaleechee C     84.12  40  eP    P      07 32 27.3 +0.3
TKL                                  pmax  pmax
      comp=Z,5.0nm,0.7s
Y48A  Jasper             84.13  43  P     P      07 32 26.9 -0.1
      baz=328
BLA   Blacksburg         84.14  37  P     P      07 32 26.9 -0.2
      baz=331
BLA   Blacksburg         84.14  37  eP    P      07 32 27.5 +0.4
      comp=Z,11nm,0.6s
BLA   Blacksburg         84.14  37  eP    P      07 32 27.5 +0.4
BLA                                  pmax  pmax
      comp=Z,11nm,0.6s
343A  Vidalia            84.24  48  P     P      07 32 28.3 +0.7
      baz=326
Z47A  Carrollton         84.32  44  P     P      07 32 27.9 -0.1
      baz=327
146A  Union              84.34  45  P     P      07 32 29.4 +1.4
      baz=327,SNR=5.6
X50B  Fort Payne         84.34  42  P     P      07 32 27.8 -0.3
      baz=328
CVRD  Centerville Ro     84.38  34  eP    P      07 32 28.5 +0.4
      comp=Z,33nm,1.0s
Z48A  Northport          84.41  44  P     P      07 32 27.8 -0.6
      baz=328
CBN   Corbin Frederi     84.42  34  P     P      07 32 28.3  0.0
      baz=332
CBN   Corbin Frederi     84.42  34  eP    P      07 32 29.0 +0.7
      comp=Z,26nm,0.8s
IP07  Quail              84.43  34  eP    P      07 32 29.0 +0.6
      comp=Z,8.5nm,0.7s
245A  Little AP, Sta     84.45  46  P     P      07 32 30.0 +1.4
      baz=326,SNR=6.1
V53A  Saluda             84.51  39  P     P      07 32 28.9  0.0
      baz=330
Y49A  Blount Mountai     84.51  42  P     P      07 32 29.0  0.0
      baz=328
Y49A  Blount Mountai     84.51  42  eP    P      07 32 28.9  0.0
      comp=Z,5.7nm,0.6s
344A  Westbrook Farm     84.53  47  P     P      07 32 29.1 +0.1
      baz=326
344A  Westbrook Farm     84.53  47  eP    P      07 32 30.8 +1.8
      comp=Z,22nm,0.9s
W52A  Murphy             84.54  40  P     P      07 32 29.3 +0.2
      baz=329
X51A  Calhoun            84.59  41  P     P      07 32 29.2 -0.1
      baz=329
147A  Livingston         84.67  44  P     P      07 32 30.2 +0.5
      baz=327
Y50A  Piedmont           84.78  42  P     P      07 32 30.3  0.0
      baz=328
W53A  Cullowhee          84.80  39  P     P      07 32 30.4  0.0
      baz=330
URVA  University of      84.92  34  eP    P      07 32 31.3 +0.5
LRAL  Lakeview Retre     84.95  43  P     P      07 32 30.9 -0.2
      baz=328
X52A  Dahlonega          84.97  40  P     P      07 32 31.2  0.0
      baz=329
345A  Thompson Farm,     84.98  46  P     P      07 32 32.2 +1.0
      baz=326
Z49A  Columbiana         85.02  43  P     P      07 32 31.4 -0.1
      baz=328,SNR=5.1
247A  Quitman            85.03  45  P     P      07 32 32.3 +0.8
      baz=327
BG3   Lake Jocassee      85.04  39  eP    P      07 32 31.3 -0.2
      comp=Z,6.2nm,0.5s
Y51A  Rockmart           85.07  41  P     P      07 32 31.6  0.0
      baz=329,SNR=6.5
543A  St. Martinvill     85.11  48  P     P      07 32 32.4 +0.6
      baz=326
346A  Big Creek Wild     85.19  46  P     P      07 32 31.9 -0.3
      baz=327
Z50A  Ashland            85.24  42  P     P      07 32 32.8 +0.3
      baz=328,SNR=14
Z50A  Ashland            85.24  42  eP    P      07 32 32.8 +0.3
      comp=Z,17nm,0.6s
X53A  Estanollee         85.31  40  P     P      07 32 33.2 +0.5
      baz=330
LNIG  Linares            85.32  57  eP    P      07 32 33.1 +0.1
      comp=Z,10.0nm,1.2s
NCAT  North Carolina     85.38  37  eP    P      07 32 33.2 +0.2
      comp=Z,8.7nm,0.6s
248A  Dixon Mills        85.40  44  P     P      07 32 33.7 +0.5
      baz=328
149A  Jones              85.41  43  P     P      07 32 33.4 +0.1
      baz=328,SNR=6.0
544A  White Castle       85.43  48  P     P      07 32 33.8 +0.4
      baz=326
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Y52A  Lilburn            85.53  41  P     P      07 32 34.1 +0.2
      baz=329
PMOR  Pomariorio Ree     85.56 119  eP    P      07 32 35.9 +1.8
      comp=Z,104nm,1.1s
KMSC  Kings Mountain     85.57  38  P     P      07 32 34.2 +0.2
      baz=331
347A  Saraland           85.61  45  P     P      07 32 35.1 +0.9
      baz=327,SNR=8.4
150A  Eclectic           85.75  43  P     P      07 32 34.9 +0.1
      baz=328
Y53A  Monroe             85.75  40  P     P      07 32 35.1 +0.3
      baz=330
249A  Camden             85.78  44  P     P      07 32 36.3 +1.2
      baz=328,SNR=9.0
545A  Edgard             85.81  47  P     P      07 32 35.4 +0.2
      baz=326
348A  Jackson            85.89  45  P     P      07 32 36.8 +1.2
      baz=328
VAH   Vaihoa             85.90 119  eP    P      07 32 37.5 +1.8
      comp=Z,104nm,1.4s
Z52A  Williamson         85.96  41  P     P      07 32 36.3 +0.4
      baz=329
NWAO  Narrogin (SRO)     86.01 205  P     P      07 32 35.4 -0.5
      comp=Z,61nm,0.8s,baz=294,slow=10.0,SNR=22
447A  Lucedale           86.06  46  P     P      07 32 37.7 +1.3
      baz=327
Y54A  Tignall            86.12  40  P     P      07 32 37.2 +0.5
      baz=330,SNR=5.6
151A  Opelika            86.12  42  P     P      07 32 36.1 -0.5
      baz=329
250A  Grady              86.17  43  P     P      07 32 37.2 +0.3
      baz=328
250A  Grady              86.17  43  eP    P      07 32 37.9 +1.0
      comp=Z,9.7nm,0.6s
GOGA  Godfrey            86.18  41  P     P      07 32 37.0 +0.1
      baz=330
645A  Chauvin            86.24  48  P     P      07 32 38.1 +0.8
      baz=326
Z53A  Monticello         86.24  41  P     P      07 32 37.5 +0.3
      baz=330
152A  Waverly Hall       86.27  42  P     P      07 32 37.3 -0.1
      baz=329
349A  Repton             86.28  44  P     P      07 32 37.7 +0.3
      baz=328
251A  Midway             86.45  43  P     P      07 32 38.5 +0.3
      baz=329
BRAL  Brewton            86.49  44  P     P      07 32 38.6 +0.2
      baz=328
TAMR  Tamra              86.56 328  epP   pP     07 34 36.1 -3.7
Z54A  Sparta             86.59  40  P     P      07 32 39.5 +0.7
      baz=330
PBRG  Braganca           86.63 341  eP    P      07 32 37.8 -1.2
      comp=Z,22nm,2.0s
PPT   Papeete            86.66 122  P     P      07 32 39.9 +0.6
      comp=Z,54nm,0.9s,baz=312,slow=5.2,SNR=7.2
PPT2  Papeete2           86.68 122  eP    P      07 32 41.4 +2.0
      comp=Z,79nm,1.2s
PPTF  Pamatai, Papee     86.69 122  eP    P      07 32 40.1 +0.6
      comp=Z,60nm,0.9s
PAE   Paea               86.74 122  eP    P      07 32 42.4 +2.8
      comp=Z,8.3nm,1.1s
449A  Pace               86.76  45  P     P      07 32 41.0 +1.3
      baz=328
TIAR  Tiarei             86.78 121  eP    P      07 32 42.7 +2.8
      comp=Z,25nm,1.0s
PGAV  Gavieira, Arco     86.79 342  eP    P      07 32 38.7 -1.1
      comp=Z,51nm,1.4s
252A  Lumpkin            86.83  42  P     P      07 32 40.7 +0.7
      baz=329
PCAB  Cabril             86.99 342  eP    P      07 32 39.5 -1.1
      comp=Z,43nm,1.6s
154A  Montrose           87.02  41  P     P      07 32 41.6 +0.7
      baz=330
TVO   Taravao            87.02 122  eP    P      07 32 43.0 +2.0
      comp=Z,18nm,1.2s
351A  Pinckard           87.06  43  P     P      07 32 42.1 +1.0
      baz=329
OUZ   Omahuta            87.15 159  eP    P      07 32 44.2 +3.1
      comp=Z,60nm,1.1s
352A  Blakely            87.19  43  P     P      07 32 42.6 +0.9
      baz=329,SNR=5.1
352A  Blakely            87.19  43  eP    P      07 32 42.8 +1.1
      comp=Z,19nm,0.6s
POLO  Lamas de Olo       87.26 342  eP    P      07 32 40.9 -1.1
      comp=Z,25nm,1.8s
MVO   Moncorvo           87.30 341  eP    P      07 32 41.0 -1.2
      comp=Z,37nm,1.3s
PVRL  Vila Real          87.34 342  eP    P      07 32 41.5 -0.8
      comp=Z,51nm,0.9s
254A  Abbeville          87.51  41  P     P      07 32 44.2 +1.0
      baz=330
CMAH  Djebel Manchou     87.53 329  P     pP     07 34 47.2 +2.4
CAEH  ’Ain El Ouahch     87.58 329  P     pP     07 34 47.2 +2.2
353A  Camilla            87.62  42  P     P      07 32 45.0 +1.3
      baz=329
PTO   Porto              87.66 342  eP    P      07 32 42.8 -0.9
      comp=Z,45nm,1.7s
KEST  Kesra              87.66 327  P     P      07 32 43.7 -0.3
      comp=Z,49nm,0.8s,baz=32,slow=1.5,SNR=66
KEST  Kesra              87.66 327  eP    P      07 32 43.9 -0.1
      comp=Z,54nm,0.8s
TIGA  Tifton             87.81  42  P     P      07 32 45.4 +0.8
      baz=330
ABSA  Djebel Ababsia     87.83 329  P     pP     07 34 48.7 +2.4
255A  Hazlehurst         87.88  41  P     P      07 32 45.6 +0.7
      baz=330
PVIS  Viseu              87.92 341  eP    P      07 32 43.9 -1.1
      comp=Z,24nm,1.6s
CKFL  Kef-Lekhel         87.97 329  P     pP     07 34 49.6 +2.5
ES19  SONSECA Array      87.98 338  eP    P      07 32 44.4 -1.0
ES19                                epP   pP     07 34 48.6 +1.6
ESDC  Sonseca Array      88.02 338  P     P      07 32 44.5 -1.1
      comp=Z,2.6nm,0.5s,baz=17,slow=4.2,SNR=20
ESLA  Sonseca Array      88.02 338  eP    P      07 32 44.6 -1.0
      comp=Z,20nm,1.4s
ESLA                                epP   pP     07 34 50.9 +3.6
THTN  Thala              88.05 327  eP    P      07 32 46.3 +0.5
      comp=Z,83nm,1.2s
THTN                                epP   pP     07 34 51.4 +3.9
MTE   Manteigas          88.15 341  eP    P      07 32 45.1 -1.0
      comp=Z,27nm,0.3s
MTE   Manteigas          88.15 341  eP    P      07 32 44.9 -1.2
      comp=Z,17nm,0.7s
355A  Pearson            88.22  41  P     P      07 32 47.5 +1.0
      baz=330
PAB   San Pablo          88.24 339  eP    P      07 32 45.4 -1.2
      comp=Z,16nm,1.3s
PAB                                 epP   pP     07 34 52.6 +4.3
PAB   San Pablo          88.24 339  eP    P      07 32 45.4 -1.2
PAB                                  pmax  pmax
      comp=Z,16nm,1.3s
454A  Quitman            88.42  42  P     P      07 32 48.6 +1.1
      baz=330
356A  Blackshear         88.54  41  P     P      07 32 48.1 +0.1
      baz=330
PCBR  Castelo Branco     88.67 341  eP    P      07 32 47.1 -1.4
      comp=Z,19nm,1.6s
PCAS  Casmilo, Conde     88.68 342  eP    P      07 32 47.3 -1.2
      comp=Z,42nm,2.0s
PMRV  Marv??o            89.05 341  eP    P      07 32 50.0 -0.3
      comp=Z,14nm,1.3s
456A  Hilliard           89.11  41  P     P      07 32 49.8 -0.9
      baz=330
CART  Cartagena          89.23 335  epP   pP     07 34 56.2 +3.1
ALMR  Almeirim           89.56 342  eP    P      07 32 51.1 -1.5
ALMR                                 AMb   AMB   07 32 51.6
      comp=Z,43nm,0.7s
ALMR  Almeirim           89.56 342  eP    P      07 32 51.4 -1.2
      comp=Z,62nm,1.5s
ALMR  Almeirim           89.56 342  eP    P      07 32 51.1 -1.5
PMTG  Montargil          89.57 341  eP    P      07 32 51.6 -1.1
      comp=Z,18nm,2.0s
PESTR Estremoz           89.63 341  eP    P      07 32 51.9 -1.1
      comp=Z,20nm,1.3s
PESTR Estremoz           89.63 341  eP    P      07 32 52.2 -0.8
      comp=Z,4.9nm,0.8s
EVO   Evora              90.04 341  eP    P      07 32 54.1 -0.8
      comp=Z,22nm,1.4s
PNCL  Nicolau / Gran     90.55 341  eP    P      07 32 56.3 -0.9
      comp=Z,33nm,1.6s
HIZ   Hauiti             90.59 159  eP    P      07 32 59.2 +2.2
      comp=Z,47nm,1.2s
ATD   Arta Tunnel        90.70 288  P     P      07 32 58.4  0.0
      comp=Z,24nm,0.8s,baz=337,slow=7.7,SNR=7.2
ATD   Arta Tunnel        90.70 288  eP    P      07 32 58.4  0.0
MESJ  Messejana          90.75 341  eP    P      07 32 57.0 -1.1
MESJ                                 AMb   AMB   07 33 00.6
      comp=Z,23nm,1.7s
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MESJ	Messejana	90.75	341	eP	P	07 32 57.1	-1.1
	comp=Z,23nm,1.6s						
MESJ	Messejana	90.75	341	eP	P	07 32 57.0	-1.1
PCVE	Castro Verde	90.91	341	eP	P	07 32 58.1	-0.8
	comp=Z,35nm,0.9s						
PVAQ	Vaqueiros	91.06	340	eP	P	07 32 58.4	-1.2
	comp=Z,26nm,1.5s						
MORF	Marmelete	91.35	341	eP	P	07 32 59.8	-1.3
MORF	Marmelete	91.35	341	eP	P	07 32 59.7	-1.3
MDT	Midelt	94.69	337	P	P	07 33 15.1	-1.3
	comp=Z,3.2nm,0.7s,baz=74,slow=5.5,SNR=8.4						
MDT	Midelt	94.69	337	eP	P	07 33 15.1	-1.3
TOA1	Torodi Ar. Sit	110.99	324	ePdif	Pdif	07 34 29.3	+0.2
TOA1				ePKiKP	PKiKP	07 38 22.6	-2.3
TOA1				ePKKPbc	PKKPbc	07 49 22.5	+0.7
TOA1				ePKKPab	PKKPdf	07 49 35.2	-1.4
TORD	Torodi Ar. Bea	111.00	324	Pdiff	Pdif	07 34 29.3	+0.2
	baz=22,slow=4.7						
TORD				PKiKP	PKiKP	07 38 22.6	-2.4
	baz=18,slow=2.1						
TORD				PKKPbc	PKKPbc	07 49 22.5	+0.8
	baz=214,slow=2.4						
TORD				PKKPab	PKKPdf	07 49 35.2	-1.4
	baz=199,slow=4.8						
TORD	Torodi Ar. Bea	111.00	324	Pdif	Pdif	07 34 29.3	+0.2
TORD				PKiKP	PKiKP	07 38 22.6	-2.4
TORD				PKKPbc	PKKPbc	07 49 22.5	+0.8
TORD				PKKPab	PKKPdf	07 49 35.2	-1.4
CASY	Casey	118.49	196	ePKPdf	PKPdf	07 38 37.7	+0.1
DBIC	Dimbokro	119.38	328	PKP	PKPdf	07 38 40.4	-0.7
	comp=Z,8.3nm,0.5s,baz=5.0,slow=2.4,SNR=17						
DBIC				PP	PP	07 40 09.6	-1.6
	comp=Z,12nm,0.7s,baz=354,slow=9.1,SNR=5.5						
DBIC				PKKPab	PKKPab	07 48 57.9	-2.2
	comp=Z,5.0nm,0.9s,baz=180,slow=6.4,SNR=5.1						
DBIC	Dimbokro	119.38	328	ePKPdf	PKPdf	07 38 40.4	-0.7
DBIC				PP	PP	07 40 09.6	-1.6
DBIC				PKKPab	PKKPab	07 48 57.9	-2.2
TIC	Toumodi	119.45	328	ePKIKP	PKPdf	07 38 40.2	-1.0
TIC	Toumodi	119.45	328	ePKP2	PKKPab	07 48 58.1	-1.7
KIC	Kosan Boka	119.62	328	ePKIKP	PKPdf	07 38 40.6	-0.9
	comp=Z,10nm,0.5s						
KIC	Kosan Boka	119.62	328	ePKP2	PKKPab	07 48 57.0	-2.0
	comp=Z,30nm,0.9s						
LIC	Lamto	119.85	328	ePKIKP	PKPdf	07 38 40.7	-1.3
	comp=Z,45nm,1.0s						
LIC	Lamto	119.85	328	ePKP2	PKKPab	07 48 56.4	-1.6
	comp=Z,101nm,1.7s						
LSZ	Lusaka	120.46	282	ePKPdf	PKPdf	07 38 43.4	+0.2
LSZ	Lusaka	120.46	282	ePKIKP	PKPdf	07 38 43.4	+0.2
PTGA	Pitinga	126.35	35	PKP	PKPdf	07 38 54.0	-0.4
	comp=Z,2.1nm,0.5s,baz=84,slow=3.7,SNR=5.3						
PTGA	Pitinga	126.35	35	ePKPdf	PKPdf	07 38 55.3	+0.9
VNDA	Vanda	126.70	176	PKP	PKPdf	07 38 52.9	-0.3
	comp=Z,4.5nm,0.7s,baz=322,slow=4.1,SNR=23						
VNDA				PKKP	PKKPdf	07 49 06.9	-2.7
	comp=Z,0.5nm,0.3s,baz=306,slow=1.6,SNR=11						
VNDA	Vanda	126.70	176	ePKPdf	PKPdf	07 38 53.2	+0.2
VNDA				PKKP	PKKPdf	07 49 06.9	-2.7
VNDA	Vanda	126.70	176	ePKIKP	PKPdf	07 38 53.3	+0.2
SBA	Scott Base	127.28	175	ePKPdf	PKPdf	07 38 54.9	+0.7
SBA	Scott Base	127.28	175	ePKIKP	PKPdf	07 38 54.9	+0.7
NNA	Nana	128.01	60	PKP	PKPdf	07 38 57.0	-0.5
	comp=Z,10nm,0.7s,baz=333,slow=6.9,SNR=5.3						
LBTB	Lobatse	129.15	276	ePKPdf	PKPdf	07 39 00.2	+0.8
BOSA	Boshof	131.81	273	PKhKP	PKPpre	07 39 00.1	
	comp=Z,2.0nm,0.5s,baz=72,slow=5.0,SNR=4.6						
BOSA				PP	PP	07 41 29.9	-4.0
	comp=Z,3.6nm,0.8s,baz=339,slow=3.5,SNR=3.5						
BOSA				SKPbc	SKPbc	07 41 37.2	-1.0
	comp=Z,44nm,1.0s,baz=41,slow=2.8,SNR=19						
BOSA	Boshof	131.81	273	ePKPdf	PKPdf	07 39 00.1	-4.4
MAW	Mawson	132.27	211	PKP	PKPdf	07 39 03.9	+0.1
	comp=Z,6.4nm,0.8s,baz=351,slow=3.3,SNR=16						
MAW				SKPbc	SKPbc	07 41 38.5	+0.3
	comp=Z,42nm,0.9s,baz=54,slow=3.3,SNR=39						
MAW				SKKPbc	SKKPbc	07 51 04.0	-1.2
	comp=Z,5.7nm,0.8s,baz=274,slow=4.7,SNR=11						
MAW	Mawson	132.27	211	ePKPdf	PKPdf	07 39 05.6	+1.7
MAW				SKPbc	SKPbc	07 41 38.5	+0.3
MAW				SKKPbc	SKKPbc	07 51 04.0	-1.2
MAW	Mawson	132.27	211	ePKIKP	PKPdf	07 39 05.6	+1.7
MAW						07 41 38.5	
MAW						07 51 04.0	
SAML	Samuel	132.46	43	ePKPdf	PKPdf	07 39 07.1	+1.2
SAML	Samuel	132.46	43	ePKIKP	PKPdf	07 39 07.1	+1.2
LPAZ	La Paz	136.34	54	PKP	PKPdf	07 39 13.8	0.0
	comp=Z,5.1nm,0.7s,baz=14,slow=5.5,SNR=22						
LPAZ				SKPbc	SKPbc	07 41 53.5	-0.1
	comp=Z,20nm,0.9s,baz=1.6,slow=6.2,SNR=28						
LPAZ	La Paz	136.34	54	PKP	PKPdf	07 39 13.8	0.0
LPAZ				SKPbc	SKPbc	07 41 53.5	-0.1
MNMC	Minye Minye	137.86	58	ePKPdf	PKPdf	07 39 16.4	+0.3
QSPA	South Pole Qui	138.87	180	PKhKP	PKPpre	07 39 06.7	
	comp=Z,7.6nm,0.5s,baz=313,slow=1.0,SNR=44						
QSPA				SKPbc	SKPbc	07 41 56.7	-1.8
	comp=Z,18nm,0.8s,baz=28,slow=4.3,SNR=10.0						
QSPA				SKKPbc	SKKPbc	07 50 38.7	-2.8
	comp=Z,9.4nm,1.2s,baz=246,slow=1.4,SNR=5.2						
PB01	IPOC Station P	139.44	60	ePKPdf	PKPdf	07 39 20.0	+1.3
SIV	San Ignacio	139.61	45	PKhKP	PKPpre	07 39 12.0	
	comp=Z,1.1nm,0.5s,baz=295,slow=3.2,SNR=8.7						
SIV				SKPbc	SKPbc	07 42 01.3	-0.9
	comp=Z,20nm,0.8s,baz=324,slow=2.1,SNR=22						
SIV	San Ignacio	139.61	45	eSKPbc	SKPbc	07 42 01.3	-0.9
SYO	Syowa Base	140.88	213	⇑eP	PKPdf	07 39 14.0	-5.7
GO02	Mina Guanaco	142.57	64	ePKPdf	PKPdf	07 39 22.7	-1.9
GO03	Copiap	143.99	67	ePKPbc	PKPdf	07 39 26.9	+0.3
LCO	Las Campanas	144.73	69	ePKPdf	PKPab	07 39 29.1	-0.2
LCO	Las Campanas	144.73	69	ePKIKP	PKPab	07 39 29.2	-0.2
GO04	Tololo Observa	145.48	71	ePKPdf	PKPdf	07 39 29.2	-0.2
ROC1	El Roble	147.24	75	ePKPdf	PKPdf	07 39 32.9	+0.7
PEL	Peldehue	147.56	75	ePKPbc	PKPbc	07 39 36.2	+0.1
PEL	Peldehue	147.56	75	ePKP2	PKPbc	07 39 36.2	+0.1
GO05	HualaæØ	147.95	79	ePKPbc	PKPbc	07 39 36.9	0.0
NVL	N'lazarevskaya	150.10	208	⇓iPKIKP	PKPbc	07 39 41.7	+0.7
NVL				pmax	pmax		
	comp=Z,29nm,0.7s						
CPUP	Villa Florida	150.22	49	PKPbc	PKPbc	07 39 42.9	+0.3
	comp=Z,16nm,0.9s,baz=323,slow=2.3,SNR=29						
CPUP				PKPab	PKPab	07 39 50.3	-1.0
	comp=Z,3.6nm,0.6s,baz=321,slow=2.8,SNR=7.2						
CPUP	Villa Florida	150.22	49	ePKPbc	PKPbc	07 39 43.0	+0.3
CPUP				ePKPab	PKPab	07 39 50.7	-0.6
PLCA	Paso Flores	152.08	87	PKP	PKPdf	07 39 39.1	-0.2
	comp=Z,5.3nm,0.8s,baz=307,slow=2.0,SNR=12						
PLCA				PKPbc	PKiKP	07 39 46.8	+0.1
	comp=Z,23nm,0.6s,baz=299,slow=3.2,SNR=82						
PLCA				PKPab	PKPab	07 39 59.6	+0.6
	comp=Z,27nm,0.8s,baz=304,slow=7.1,SNR=18						
PLCA				PKKP		07 48 14.0	
	comp=Z,2.1nm,0.9s,baz=212,slow=0.8,SNR=2.9						
PLCA	Paso Flores	152.08	87	ePKPdf	PKPdf	07 39 39.0	-0.3
PLCA				ePKPbc	PKiKP	07 39 47.1	+0.4
PLCA				ePKPab	PKPab	07 39 59.9	+0.9
PLCA				PKKP		07 48 14.0	
PLCA	Paso Flores	152.08	87	ePKIKP	PKPdf	07 39 39.0	-0.3
SNAA	Sanae	153.60	201	PKP	PKPbc	07 39 48.0	-0.8
SNAA				x	x	07 40 05.0	
SNAA	Sanae	153.60	201	PKP	PKPdf	07 39 39.6	-0.9
	comp=Z,2.7nm,1.1s,baz=99,slow=3.1,SNR=4.4						
SNAA				PKPbc	PKPbc	07 39 47.7	-1.1
	comp=Z,6.9nm,0.8s,baz=145,slow=1.7,SNR=23						
SNAA				PKPab	PKPab	07 40 04.2	-0.4
	comp=Z,14nm,0.9s,baz=96,slow=5.9,SNR=13						
SNAA	Sanae	153.60	201	ePKPdf	PKPdf	07 39 40.2	-0.3
SNAA				ePKPbc	PKPbc	07 39 48.5	-0.3
SNAA				ePKPab	PKPab	07 40 05.2	+0.6
VNA3	Neumayer Olymp	155.40	198	PKP	PKPdf	07 39 44.6	+1.7
VNA3				x	x	07 39 52.2	
VNA1	Neumayer--Stat	155.56	199	PKP	PKPdf	07 39 44.8	+1.7
VNA1				x	x	07 40 12.9	
PMSA	Palmer Station	157.13	145	PKPab	PKPab	07 40 19.8	0.0
	comp=Z,20nm,0.9s,baz=288,slow=3.2,SNR=4.3						
PMSA	Palmer Station	157.13	145	ePKPab	PKPab	07 40 20.5	+0.7

SKHL ***09*** *07:22:41.0±1.3, 49°.09N×148°.31E, h563^{km}±28^{km}, mb5.6/5, msh5.7/7*

MOS ***09*** *07:22:43.5±1.5, 49°.10N×147°.39E, h558^{km}, mb4.9/49, Error ellipse: s-maj=11.7km s-min=6.7km az=70.8*

KRSC ***09*** *07:22:43.8±2.5, 48°.93N×147°.63E, h557^{km}±33^{km}, ML5.5*

NEIC ***09*** *07:22:44.7±0.2, 49°.22N×147°.32E, h558^{km}±2^{km}, mb4.8/282, Error ellipse: s-maj=3.2km s-min=2.0km az=137.0*

IDC ***09*** *07:22:44.8±0.6, 49°.20N×147°.33E, h562^{km}±6^{km}, mb4.3/57, mb1 4.4/64, mb1mx4.3/76, mbtmp5.2/64, Error ellipse: s-maj=6.5km s-min=5.5km az=116.0*

ISCJB ***09*** *07:22:44.0±0.2, 49°.17N±0°.02×147°.36E±0°.03, h561^{km}±2^{km}, mb4.8/338, Error ellipse: s-maj=4.1km s-min=2.3km az=138.9*

ISC 09 07:22:44.4±0.4, **49°.14N**±0°.03×**147°.44E**±0°.04, **h559**^{km}±4^{km}, **n683,** σ1^{s}**43**/765, **mb4.8**/339, **9C-14D, Sea of Okhotsk**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UGL	Uglegorsk	3.53	271	i P	P	07 24 04.4	+1.0
UGL				AMB	AMB	07 24 05.0	
	3µm,1.1s						
UGL				AMB	AMB	07 24 05.5	
	2µm,0.6s						
UGL				eS	S	07 25 08.2	+0.2
UGL				A	A	07 25 11.0	
	11µm,2.4s						
UGL				A	A	07 25 11.0	
	2µm,1.0s						
UGL				A	A	07 25 11.0	
	984nm,1.0s						
TYV	Tymovskoe	3.54	301	eP	P	07 24 04.5	+1.1
TYV				AMB	AMB	07 24 05.1	
	4µm,4.0s						
TYV				AMB	AMB	07 24 05.2	
	1µm,1.0s						
TYV				eS	S	07 25 08.6	+0.5
TYV				A	A	07 25 10.8	
	370nm,1.0s						
TYV				A	A	07 25 11.1	
	5µm,4.0s						
TYV	Tymovskoe	3.54	301	⇑iP	P	07 24 04.5	+1.1
TYV				eS	S	07 25 08.0	-0.1
TYV				pmax	pmax		
	comp=Z,1µm,0.8s						
TYV				pmax	pmax		
	comp=Z,4µm,4.0s						
TYV				smax	smax		
	comp=E,540nm,1.2s						
TYV				smax	smax		
	comp=E,5µm,3.8s						
YSS	Yuzh-Sakhalins	3.83	237	eP	P	07 24 06.3	+0.7
YSS				AMB	AMB	07 24 07.2	
	comp=E,252nm,0.4s						
YSS				AMB	AMB	07 24 12.8	
	comp=E,900nm,6.0s						
YSS				eS	S	07 25 11.8	0.0
YSS				A	A	07 25 14.5	
	comp=E,9µm,4.0s						
YSS				A	A	07 25 15.2	
	comp=E,680nm,0.9s						
YSS	Yuzh-Sakhalins	3.83	237	eP	P	07 24 06.8	+1.2
YSS	Yuzh-Sakhalins	3.83	237	⇑eP	P	07 24 06.9	+1.3
YSS				eS	S	07 25 11.9	+0.1
YSS				pmax	pmax		
	comp=Z,330nm,0.4s						
YSS				smax	smax		
	comp=E,10µm,4.2s						
YSS				smax	smax		
	comp=N,730nm,0.9s						
YSS				smax	smax		
	comp=E,1µm,1.2s						
YSS				MLR	MLR		
	comp=Z,700nm,10.0s						
KUR	Kuril'sk	3.92	176	i P	P	07 24 03.8	-2.5
KUR				AMB	AMB	07 24 05.0	
	comp=Z,486nm,0.3s						
KUR				AMB	AMB	07 24 05.0	
	comp=Z,186nm,0.3s						
KUR				AMB	AMB	07 24 05.0	
	comp=Z,2µm,0.3s						
KUR				AMB	AMB	07 24 05.6	
	comp=Z,1µm,2.0s						
KUR				i S	S	07 25 09.0	-4.0
KUR				A	A	07 25 12.7	
	comp=Z,9µm,3.0s						
KUR				A	A	07 25 25.0	
	comp=Z,569nm,0.9s						
KUR				A	A	07 25 25.0	
	comp=Z,311nm,0.9s						
KUR	Kuril'sk	3.92	176	c iP	P	07 24 04.5	-1.8
KUR				i S	S	07 25 10.3	-2.7
KUR				pmax	pmax		
	comp=E,186nm,0.4s						
KUR				pmax	pmax		
	comp=Z,2µm,0.4s						
KUR				pmax	pmax		
	comp=N,486nm,0.3s						
KUR				smax	smax		
	comp=N,569nm,0.9s						
KUR				smax	smax		
	comp=E,311nm,0.9s						
LAGR	Lagunnoye	5.21	193	eP	P	07 24 14.0	-2.5
LAGR				AMB	AMB	07 24 21.0	
	comp=E,2µm,0.6s						
LAGR				i S	S	07 25 26.7	-5.0
LAGR	Lagunnoye	5.21	193	eP	P	07 24 14.1	-2.5
LAGR				i S	S	07 25 26.7	-5.0
LAGR				pmax	pmax		
	comp=Z,2µm,0.6s						
LAGR				pmax	pmax		
	comp=N,2µm,0.4s						
YUK	Yuzh-Kuril'sk	5.22	193	i P	P	07 24 14.0	-2.5
YUK				AMB	AMB	07 24 15.0	
	comp=N,344nm,0.4s						
YUK				AMB	AMB	07 24 15.0	
	comp=N,1µm,0.4s						
YUK				i S	S	07 25 27.0	-4.8
YUK				A	A	07 25 31.6	
	comp=N,12µm,3.0s						
YUK	Yuzh-Kuril'sk	5.22	193	d iP	P	07 24 14.1	-2.5
YUK				i S	S	07 25 27.1	-4.8
YUK				pmax	pmax		
	comp=E,344nm,0.4s						
YUK				pmax	pmax		
	comp=Z,1µm,0.4s						
GRPR	Tuman	5.27	193	i P	P	07 24 14.0	-3.1
GRPR				AMB	AMB	07 24 16.0	
	comp=Z,678nm,0.4s						
GRPR				AMB	AMB	07 24 16.0	
	comp=Z,718nm,0.4s						
GRPR				AMB	AMB	07 24 16.0	
	comp=Z,1µm,0.4s						
GRPR				i S	S	07 25 28.3	-4.5
GRPR	Tuman	5.27	193	c iP	P	07 24 14.2	-2.9
GRPR				i S	S	07 25 28.3	-4.5
GRPR				pmax	pmax		
	comp=E,718nm,0.4s						
GRPR				pmax	pmax		
	comp=Z,1µm,0.4s						
GRPR				pmax	pmax		
	comp=N,678nm,0.5s						
SHO	Shikotan	5.29	185	i P	P	07 24 13.0	-4.2
SHO				AMB	AMB	07 24 15.0	
	comp=N,708nm,0.5s						
SHO				AMB	AMB	07 24 15.0	
	comp=N,724nm,0.5s						
SHO				AMB	AMB	07 24 15.0	
	comp=N,1µm,0.5s						
SHO				i S	S	07 25 24.0	-8.9
SHO	Shikotan	5.29	185	d iP	P	07 24 13.8	-3.4
SHO				i S	S	07 25 24.9	-8.0
SHO				pmax	pmax		
	comp=Z,1µm,0.4s						
SHO				pmax	pmax		
	comp=N,708nm,0.5s						
SHO				pmax	pmax		
	comp=E,724nm,0.4s						
GLVR	Golovnino	5.56	195	eP	P	07 24 15.0	-4.5
GLVR				AMB	AMB	07 24 18.0	
	comp=E,1µm,0.4s						
GLVR				AMB	AMB	07 24 18.0	
	comp=E,1µm,0.4s						
GLVR				AMB	AMB	07 24 18.0	
	comp=E,3µm,0.4s						
GLVR				i S	S	07 25 33.2	-4.1
GLVR	Golovnino	5.56	195	eP	P	07 24 15.6	-3.9
GLVR				i S	S	07 25 33.2	-4.1
GLVR				pmax	pmax		
	comp=N,1µm,0.4s						
GLVR				pmax	pmax		
	comp=E,1µm,0.4s						
GLVR				pmax	pmax		
	comp=Z,3µm,0.4s						
SKR	Severo-Kuril's	5.82	71	eP	P	07 24 14.0	-7.6
SKR				AMB	AMB	07 24 14.9	
	comp=Z,400nm,0.6s						
SKR				eS	S	07 25 31.2	-10
SKR				A	A	07 25 41.4	
	comp=Z,2µm,2.0s						
SKR				A	A	07 25 41.4	
	comp=Z,4µm,2.0s						
SKR				A	A	07 25 41.7	
	comp=Z,670nm,0.7s						
SKR				A	A	07 25 41.7	
	comp=Z,780nm,0.7s						
SKR	Severo-Kuril's	5.82	71	eP	P	07 24 23.3	+1.7
SKR				eS	S	07 25 39.4	-1.9
SKR	Severo-Kuril's	5.82	71	P	P	07 24 23.3	+1.7
SKR				S	S	07 25 39.4	-1.9
ASAJ	Asahikawa	6.03	215	P	P	07 24 22.9	-0.8
	comp=Z,36nm,0.3s,baz=38,slow=14,SNR=11						
ASAJ				S	S	07 25 42.6	-2.2
	comp=Z,3.4nm,0.3s,baz=18,slow=20,SNR=5.1						
PAU	Pauzhetka	6.44	65	eP	P	07 24 29.2	+2.0
PAU				eS	S	07 25 49.3	-2.3
PAU	Pauzhetka	6.44	65	P	P	07 24 29.2	+2.0
PAU				S	S	07 25 49.3	-2.3
MIPR	Malaya Ipel'ka	6.70	59	eP	P	07 24 29.9	+0.2
MIPR	Malaya Ipel'ka	6.70	59	P	P	07 24 29.9	+0.2
KDTR	Khodutka, Kamc	7.30	64	eS	S	07 26 00.7	-5.7
PEA0B	Petropavlovsk-	7.58	54	eP	P	07 24 38.1	0.0
PETK	Petropavlovsk-	7.58	54	P	P	07 24 37.5	-0.6
	baz=237,slow=8.8						
PETK				S	S	07 26 09.5	-1.9
	baz=193,slow=12						
PETK				ScP	ScP	07 32 50.5	-1.0
	baz=127,slow=2.2						
PETK	Petropavlovsk-	7.58	54	eP	P	07 24 37.9	-0.1
PETK				S	S	07 26 09.5	-1.9
PETK				ScP	ScP	07 32 50.5	-1.0
PETK	Petropavlovsk-	7.58	54	eP	P	07 24 37.9	-0.1
PETK				S	S	07 26 09.5	-1.9
PEA1	Petropavlovsk-	7.58	54	eP	P	07 24 37.5	-0.6
MTVR	Mutnovka	7.59	60	eS	S	07 26 11.6	-0.2
ERM	Erimo	7.73	204	⇑eP	P	07 24 39.9	+0.2
RUS	Russkaya	7.76	61	eP	P	07 24 42.7	+3.0
RUS				eS	S	07 26 12.7	-1.8
RUS	Russkaya	7.76	61	P	P	07 24 42.7	+3.0
RUS				S	S	07 26 12.7	-1.8
PET	Petropavlovsk	8.06	57	P	P	07 24 44.1	+1.4
PET				S	S	07 26 19.3	-0.6
DALK	Dalny	8.12	57	eS	S	07 26 19.4	-1.6
UGLR	Uglovaya	8.23	56	eS	S	07 26 21.8	-1.5
NLC	Nalytchevo	8.50	57	eS	S	07 26 25.3	-2.6
TUMR	Tumrok	9.93	47	eS	S	07 26 54.8	+0.5
KMNR	Kamenistaya	10.23	45	eS	S	07 27 00.5	+0.5
MKZ	Mys Kozlova	10.37	53	eS	S	07 26 55.7	-6.6
BZMR	Bezymyannaya	10.46	44	eS	S	07 27 04.7	+0.5
BZWR	Bezymyannyi-We	10.47	44	eS	S	07 27 04.7	+0.1
LGNR	Loginova	10.63	44	eS	S	07 27 05.9	-1.9
MA2	Magadan	10.64	9	P	P	07 25 07.6	-1.0
	comp=Z,6.8nm,0.3s,baz=178,slow=11,SNR=4.0						
MA2				S	S	07 27 05.1	-2.2
	comp=Z,0.7nm,0.3s,baz=163,slow=20,SNR=2.9						
CIRR	Tsirk	10.68	44	eS	S	07 27 08.9	+0.5
SRKR	Sorokina	11.18	43	eS	S	07 27 16.5	-1.2
KBTR	Krutoberegovo	11.70	47	eS	S	07 27 21.5	-5.7
JYA	Atsumi	11.91	211	P	P	07 25 22.1	0.0
JMM	Marumori	12.25	206	P	P	07 25 25.5	0.0
BKI	Bering	12.88	55	eS	S	07 27 47.6	-1.8
JSD	Sado	12.92	214	P	P	07 25 32.4	-0.1
JYT	Yasato	13.95	205	P	P	07 25 42.1	-0.9
SEY	Seymchan	14.10	9	P	P	07 25 43.4	-0.7
	comp=Z,5.1nm,0.3s,baz=213,slow=13,SNR=5.9						
SEY				S	S	07 28 12.8	+0.9
	baz=180,slow=20,SNR=2.1						
SEY	Seymchan	14.10	9	d iP	P	07 25 44.1	0.0
MJA0	Matsu Arr-Jizo	14.26	211	eP	P	07 25 46.5	+0.2
MJA0				pmax	pmax		
	comp=Z,12nm,0.3s						
MJB9	Matsu-Tunnel	14.28	212	eP	P	07 25 46.4	0.0
MAJO	Matsushiro	14.28	212	eP	P	07 25 46.1	-0.3
MAJO	Matsushiro	14.28	212	c iP	P	07 25 47.0	+0.6
MAT	Matsushiro	14.28	212	P	P	07 25 46.0	-0.5
MAT	Matsushiro	14.28	212	P	P	07 25 45.9	-0.5
MAT				S	S	07 28 18.6	+2.4
MJAR	Matsushiro Arr	14.28	212	P	P	07 25 46.5	+0.1
	comp=Z,12nm,0.3s,baz=9.8,slow=9.0,SNR=24						
MJAR				S	S	07 28 15.4	-0.8
	baz=30,slow=13,SNR=1.9						
MJAR				ScP	ScP	07 32 59.4	-1.7
	comp=Z,0.9nm,0.3s,baz=282,slow=0.8,SNR=8.9						
JRY	Ryogami san	14.53	209	P	P	07 25 48.7	-0.3
JGN	Niukaw	14.88	214	P	P	07 25 52.7	+0.2
JGF	Kuroka	15.42	212	P	P	07 25 57.6	-0.4
INU	Inuyama	15.77	213	eP	P	07 26 01.5	+0.2
	comp=Z,58nm,0.6s						
YAK	Yakutsk	16.28	329	P	P	07 26 04.3	-1.3
	comp=Z,0.4nm,0.3s,baz=34,slow=3.9,SNR=13						
YAK				S	S	07 28 46.0	-3.8
	comp=Z,0.0nm,0.3s,baz=232,slow=1.2,SNR=2.0						
YAK	Yakutsk	16.28	329	eP	P	07 26 04.4	-1.3
	comp=Z,786nm,0.8s						
YAK				S	S	07 28 46.0	-3.8
JWT	Wachi	16.44	217	P	P	07 26 06.4	-1.2
JIE	Ise	16.74	212	P	P	07 26 10.8	+0.4
JHJ2	Mitsune	16.99	202	eP	P	07 26 13.1	+0.4
	comp=Z,252nm,0.9s						
JHJ	Hachijo jima 2	16.99	202	P	P	07 26 12.8	+0.1
	comp=Z,34nm,0.3s,baz=22,slow=14,SNR=6.7						
SMY	Shemya	17.14	68	eP	P	07 26 15.4	+1.7
	comp=Z,86nm,1.0s						
SMY	Shemya	17.14	68	eP	P	07 26 15.4	+1.7
SMY				pmax	pmax		
	comp=Z,86nm,1.0s						
JAD	Aida	17.23	220	P	P	07 26 13.6	-1.2
JHS	Saijyo	17.64	222	P	P	07 26 18.6	+0.1
JWZ	Kozaga	17.87	214	P	P	07 26 21.1	+0.4
HIA	Hailar	18.07	281	deP	P	07 26 21.2	-1.1
KS01	Wonju Array Si	18.33	238	ePcP	PcP	07 30 27.0	+0.6
KSRS	Korea Array	18.33	238	P	P	07 26 26.1	+1.4
	comp=Z,0.5nm,0.3s,baz=45,slow=9.4,SNR=3.4						
KSRS				PcP	PcP	07 30 27.4	+1.1
	comp=Z,0.5nm,0.3s,baz=10,slow=0.3,SNR=4.7						
KSRS	Korea Array	18.33	238	P	P	07 26 26.1	+1.4
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KS15	Wonju Array Si	18.36	238	eP	P	07 26 26.1	+1.1
KS15				ePcP	PcP	07 30 27.4	+1.0
KSAR	Wonju Array Be	18.36	238	P	P	07 26 26.1	+1.1
KSAR				PcP	PcP	07 30 27.4	+1.0
KSAR	Wonju Array Be	18.36	238	P	P	07 26 26.1	+1.1
JNU	Nakatsue	20.22	224	P	P	07 26 42.3	+0.3
	comp=Z,13nm,0.6s,baz=26,slow=5.5,SNR=8.0						
JNU				ScP	ScP	07 33 12.4	-1.2
	comp=Z,7.9nm,0.9s,baz=79,slow=5.2,SNR=3.6						
JNU	Nakatsue	20.22	224	eP	P	07 26 42.3	+0.3
	comp=Z,22nm,0.8s						
JNU				ScP	ScP	07 33 12.4	-1.2
CBIJ	Chichi jima	22.38	192	eP	P	07 27 01.0	-0.5
	comp=Z,168nm,0.7s						
JCJ	Chichijima	22.38	192	P	P	07 27 00.4	-1.1
	comp=Z,134nm,0.6s,baz=287,slow=19,SNR=11						
KIWB	Kanaga Island	22.55	70	eP	P	07 27 01.4	-1.3
BJT	Baijiatuau	23.92	259	eP	P	07 27 15.6	+0.6
	comp=Z,12nm,0.6s						
BJT	Baijiatuau	23.92	259	eP	P	07 27 15.6	+0.6
BJT				pmax	pmax		
	comp=Z,12nm,0.6s						
TIXI	Tiksi	24.15	346	P	P	07 27 15.4	-1.2
	comp=Z,21nm,0.4s,baz=162,slow=9.5,SNR=6.8						
TIXI	Tiksi	24.15	346	eP	P	07 27 15.9	-0.7
	comp=Z,32nm,0.5s						
TIXI	Tiksi	24.15	346	⇓eP	P	07 27 15.7	-0.8
TIXI				pmax	pmax		
	comp=Z,18nm,0.5s						
JAM	Amami Oshima	24.81	220	P	P	07 27 24.0	+1.0
ULN	Ulaanbaatar	26.57	283	eP	P	07 27 38.8	+0.4
	comp=Z,28nm,1.3s						
ULN	Ulaanbaatar	26.57	283	deP	P	07 27 38.5	0.0
ULN				pmax	pmax		
	comp=Z,27nm,1.4s						
JOW	Kunigami	26.76	221	P	P	07 27 40.0	-0.2

	comp=Z,69nm,0.5s,baz=17,slow=6.8,SNR=19						
JOW	Kunigami	26.76	221	eP	P	07 27 40.6	+0.4
	comp=Z,75nm,0.6s						
SONA0	Songino Array	27.00	283	eP	P	07 27 41.4	-0.8
SONA0				eS	S	07 31 41.5	+0.7
SONA0	Songino Array	27.00	283	eScP	S	07 31 41.5	+0.7
SONM	Songino Array	27.00	283	P	P	07 27 41.4	-0.8
	comp=Z,6.6nm,0.6s,baz=52,slow=9.3,SNR=4.6						
SONM				ScP	ScP	07 33 30.8	-1.4
	comp=Z,14nm,0.7s,baz=103,slow=1.7,SNR=11						
SONM	Songino Array	27.00	283	ScP	S	07 31 41.5	+0.7
	comp=Z,76nm,0.7s,baz=102,slow=2.1,SNR=52						
SONM	Songino Array	27.00	283	ScP	S	07 31 41.5	+0.7
TLY	Talaya	27.71	292	P	P	07 27 47.4	-0.8
	comp=Z,14nm,0.5s,baz=125,slow=12,SNR=7.2						
TLY	Talaya	27.71	292	eP	P	07 27 48.8	+0.5
	comp=Z,42nm,1.2s						
TLY	Talaya	27.71	292	eP	P	07 27 48.8	+0.5
TLY				pmax	pmax		
	comp=Z,42nm,1.2s						
YOJ	Yonaguni jima	31.19	227	eP	P	07 28 16.1	-2.4
	comp=Z,49nm,1.0s						
YOJ	Yonaguni jima	31.19	227	eP	P	07 28 16.1	-2.4
YOJ				pmax	pmax		
	comp=Z,49nm,1.0s						
SDPT	Sand Point	31.84	59	eP	P	07 28 22.9	-0.7
	comp=Z,48nm,1.1s						
CHGN	Chignik	32.81	56	eP	P	07 28 31.9	+0.1
	comp=Z,18nm,0.9s						
YULB	Yu-li	32.92	228	eP	P	07 28 33.9	+0.6
	comp=Z,9.1nm,1.0s						
TPUB	Ta-pu	33.33	229	eP	P	07 28 37.1	+0.4
	comp=Z,11nm,0.6s						
TWG	Pinlang	33.52	228	eP	P	07 28 38.4	+0.2
	comp=Z,65nm,0.5s						
WAKE	Wake Island	33.56	146	eP	P	07 28 38.6	0.0
	comp=Z,323nm,1.4s						
HVS	Khovu-Aksy	33.86	294⇑	eP	P	07 28 42.3	+1.4
HVS				pmax	pmax		
	comp=Z,84nm,1.3s						
ENH	Enshi	34.28	251	eP	P	07 28 45.2	+0.5
	comp=Z,26nm,1.3s						
CAST	Castle Rocks	35.01	43	eP	P	07 28 51.1	+0.9
	comp=Z,43nm,0.7s						
PPLA	Purkeypile	35.01	44	eP	P	07 28 51.3	+0.9
	comp=Z,84nm,1.3s						
OHAK	Old Harbor	35.38	54	eP	P	07 28 52.2	-1.2
	comp=Z,44nm,1.0s						
SKT	Skwentna	35.42	45	eP	P	07 28 53.9	+0.2
	comp=Z,16nm,1.0s						
BPAW	Bear Paw Mtn.	35.44	42	eP	P	07 28 54.2	+0.5
	comp=Z,23nm,0.8s						
MLY	Manley	35.47	40	eP	P	07 28 54.7	+0.6
	comp=Z,34nm,1.0s						
GUMO	Guam	35.51	184	P	P	07 28 51.7	-3.2
	comp=Z,35nm,0.3s,baz=351,slow=4.5,SNR=8.1						
GUMO	Guam	35.51	184	eP	P	07 28 53.9	-1.0
	comp=Z,76nm,0.9s						
GUMO	Guam	35.51	184	eP	P	07 28 53.9	-1.0
GUMO				pmax	pmax		
	comp=Z,76nm,0.9s						
KTH	Kantishna Hill	35.52	43	eP	P	07 28 55.6	+1.1
	comp=Z,62nm,0.9s						
COLD	Coldfoot	35.59	36	eP	P	07 28 55.0	+0.1
	comp=Z,77nm,1.0s						
KDAK	Kodiak Island	35.63	53	P	P	07 28 55.3	-0.1
	comp=Z,20nm,0.5s,baz=279,slow=3.8,SNR=14						
KDAK	Kodiak Island	35.63	53	eP	P	07 28 55.3	-0.1
	comp=Z,81nm,1.4s						
KDAK	Kodiak Island	35.63	53	eP	P	07 28 55.3	-0.1
KDAK				pmax	pmax		
	comp=Z,81nm,1.4s						
HOM	Homer	35.73	49	eP	P	07 28 57.6	+1.4
	comp=Z,51nm,0.9s						
TRF	Thorofare Moun	35.81	43	eP	P	07 28 57.6	+0.6
	comp=Z,20nm,0.6s						
TOLK	Toolik Lake Re	35.81	34	eP	P	07 28 57.1	+0.3
	comp=Z,72nm,0.4s						
SUA	Susitna One	35.87	46	eP	P	07 28 57.5	+0.1
	comp=Z,40nm,1.1s						
CNPM	China Poot	35.96	50	eP	P	07 28 57.9	-0.3
	comp=Z,43nm,0.8s						
MCK	McKinley	36.38	42	eP	P	07 29 02.1	+0.6
	comp=Z,42nm,1.0s						
MCK	McKinley	36.38	42	eP	P	07 29 02.1	+0.6
MCK				pmax	pmax		
	comp=Z,42nm,1.0s						
RC01	Rabbit Creek A	36.41	47	eP	P	07 29 02.5	+0.8
	comp=Z,70nm,1.2s						
GHO	Glory Hole Cre	36.67	46	eP	P	07 29 04.6	+0.6
	comp=Z,130nm,1.0s						
COLA	College	36.71	40	eP	P	07 29 04.8	+0.7
	comp=Z,123nm,1.0s						
COLA	College	36.71	40	eP	P	07 29 04.8	+0.7
COLA				pmax	pmax		
	comp=Z,123nm,1.0s						
ILAR	Eielson Array	37.13	40	P	P	07 29 07.3	-0.3
	comp=Z,48nm,0.9s,baz=249,slow=5.7,SNR=32						
ILAR				ScP	ScP	07 34 05.5	-1.0
	comp=Z,5.0nm,0.9s,baz=286,slow=4.4,SNR=6.7						
ILB	Eielson Array	37.13	40	eP	P	07 29 07.3	-0.3
HDA	Harding Lake	37.15	41	eP	P	07 29 07.2	-0.6
	comp=Z,32nm,0.5s						
SCM	Sheep Creek Mo	37.41	45	eP	P	07 29 10.6	+0.6
	comp=Z,37nm,0.8s						
SCM	Sheep Creek Mo	37.41	45	eP	P	07 29 10.6	+0.6
SCM				pmax	pmax		
	comp=Z,37nm,0.8s						
ZAA1	Zalesovo Array	38.11	302	eP	P	07 29 15.4	-0.4
ZAA1				ePcP	PcP	07 31 15.7	-0.1
ZALV	Zalesovo Beam	38.11	302	P	P	07 29 15.4	-0.4
	comp=Z,34nm,0.4s,baz=60,slow=6.6,SNR=17						
ZALV				PcP	PcP	07 31 15.7	-0.1
	comp=Z,5.1nm,0.3s,baz=89,slow=3.3,SNR=7.0						
ZALV				ScP	ScP	07 34 09.3	-1.2
	comp=Z,6.3nm,0.5s,baz=64,slow=3.3,SNR=4.7						
KLU	Klutina	38.13	46	eP	P	07 29 16.5	+0.6
	comp=Z,96nm,1.2s						
DIV	Divide	38.28	46	eP	P	07 29 17.7	+0.6
	comp=Z,49nm,0.6s						
BMRM	Bremner River	38.88	46	eP	P	07 29 22.8	+0.8
	comp=Z,45nm,1.2s						
RAGM	Ragged Mountai	38.99	47	eP	P	07 29 23.8	+1.0
	comp=Z,86nm,1.3s						
TGL	Tana Glacier	39.77	46	eP	P	07 29 30.3	+1.1
	comp=Z,38nm,0.8s						
INK	Inuvik	41.72	33	P	P	07 29 44.5	+0.1
	comp=Z,28nm,0.3s,baz=302,slow=11,SNR=32						
INK	Inuvik	41.72	33	eP	P	07 29 44.5	+0.1
	comp=Z,43nm,0.6s						
INK	Inuvik	41.72	33	eP	P	07 29 44.5	+0.1
INK				pmax	pmax		
	comp=Z,43nm,0.6s						
MK32	Makanchi Array	42.48	293	eP	P	07 29 50.7	0.0
MKAR	Makanchi Array	42.48	293	P	P	07 29 50.7	0.0
	comp=Z,56nm,0.7s,baz=68,slow=7.7,SNR=13						
MKAR				ScP	ScP	07 34 26.6	-1.3
	comp=Z,6.2nm,0.7s,baz=66,slow=5.0,SNR=9.8						
KURK	Kurchatov	42.86	299	eP	P	07 29 54.3	+0.7
KURK				ePcP	PcP	07 31 31.3	-0.2
KURK				ScP	ScP	07 34 27.6	-1.8
KURK				S	S	07 35 36.4	-1.4
KURK	Kurchatov	42.86	299	eP	P	07 29 54.3	+0.7
KURK				e		07 31 31.3	
KURK				S	S	07 35 36.4	-1.4
KURBB	Kurchatov Arra	42.96	299	P	P	07 29 54.3	0.0
	comp=Z,56nm,0.6s,baz=70,slow=8.5,SNR=18						
KURBB				PcP	PcP	07 31 31.3	-0.6
	comp=Z,6.1nm,0.8s,baz=60,slow=5.5,SNR=4.8						
KURBB				ScP	ScP	07 34 27.6	-2.2
	comp=Z,5.2nm,0.5s,baz=71,slow=4.1,SNR=9.2						
KURBB				S	S	07 35 36.4	-2.7
	comp=Z,1.1nm,0.6s,baz=116,slow=6.5,SNR=2.8						
PATS	Pohnpei	43.15	164	eP	P	07 29 57.7	+1.4
	comp=Z,117nm,0.9s						
BESE	Bessie Mountai	44.31	47	eP	P	07 30 06.4	+1.6
	comp=Z,36nm,1.1s						
BVAR	Borovoye Array	46.38	306	P	P	07 30 20.7	+0.1
	comp=Z,39nm,0.5s,baz=50,slow=7.7,SNR=11						
BVAR				PcP	PcP	07 31 42.9	-0.9
	comp=Z,9.2nm,0.4s,baz=64,slow=4.6,SNR=8.0						
BVAR				ScP	ScP	07 34 42.4	-1.6
	comp=Z,4.3nm,0.6s,baz=66,slow=4.9,SNR=5.0						
BRVK	Borovoye	46.42	306	d iP	P	07 30 21.0	+0.1
BRVK				pmax	pmax		
	comp=Z,59nm,0.6s						
WRAK	Wrangell Islan	46.45	49	eP	P	07 30 22.7	+1.7
	comp=Z,14nm,1.0s						
LSA	Lhasa	46.46	267	eP	P	07 30 24.1	+2.0
	comp=Z,26nm,0.6s						
LSA	Lhasa	46.46	267	eP	P	07 30 24.1	+2.0
LSA				pmax	pmax		
	comp=Z,26nm,0.6s						
DLBC	Dease Lake	46.67	46	P	P	07 30 23.6	+0.8
	comp=Z,16nm,0.8s,baz=308,slow=7.7,SNR=13						
DLBC				ScP	ScP	07 34 45.1	-0.1
	comp=Z,6.1nm,1.1s,baz=228,slow=4.3,SNR=5.0						
DLBC	Dease Lake	46.67	46	eP	P	07 30 24.6	+1.9
	comp=Z,26nm,1.0s						
DLBC				ScP	ScP	07 34 45.1	-0.1
DIB	Dawson Inlet,	47.90	53	eP	P	07 30 33.5	+1.6
	comp=Z,34nm,1.3s						
CM31	Chiang Mai Arr	49.43	249	eP	P	07 30 45.0	+1.2
CMAR	Chiang Mai Arr	49.43	249	P	P	07 30 45.0	+1.2
	comp=Z,3.8nm,0.6s,baz=27,slow=7.0,SNR=5.0						
CMAR				ScP	ScP	07 34 57.9	+0.4
	comp=Z,4.0nm,0.6s,baz=18,slow=3.5,SNR=5.2						
CMAR	Chiang Mai Arr	49.43	249	P	P	07 30 45.0	+1.2
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
CMAR				pmax	pmax		
	comp=N,4.0nm,0.6s						
SPA0	Spitsbergen Ar	49.54	348	eP	P	07 30 42.1	-1.6
SPITS	Spitsbergen Ar	49.54	348	P	P	07 30 42.1	-1.6
	comp=N,18nm,0.8s,baz=73,slow=12,SNR=6.1						
ARU	Arti	50.64	314	*PP	P	07 30 49.9	-2.2
MANU	Manus Island	50.98	180	eP	P	07 30 55.6	+0.6
	comp=N,50nm,0.9s						
YKW3	Yellowknife Ar	51.23	36	eP	P	07 30 55.5	-0.6
	comp=N,22nm,0.6s						
YKA	Yellowknife Ar	51.27	36	P	P	07 30 56.3	-0.1
	comp=N,17nm,0.5s,baz=304,slow=7.2,SNR=22						
YKA				PcP	PcP	07 32 02.0	+0.4
	comp=N,3.4nm,0.6s,baz=309,slow=3.7,SNR=5.5						
YKA				ScP	ScP	07 35 05.1	+0.4
	comp=N,6.3nm,0.8s,baz=302,slow=4.3,SNR=8.4						
YKB5	Yellowknife Ar	51.27	36	eP	P	07 30 56.4	-0.1
YKB5				ePcP	PcP	07 32 02.0	+0.4
SIJI	Sorong	51.73	201	P	P	07 31 00.9	+0.4
	comp=N,35nm,0.5s,baz=13,slow=9.0,SNR=18						
TARA	Tarawa	52.38	147	eP	P	07 31 06.1	+0.9
	comp=N,184nm,0.9s						
TULEG	Thule	52.48	10	eP	P	07 31 04.4	-0.6
	comp=N,79nm,0.9s						
FAKI	Fak Fak	53.50	199	eP	P	07 31 13.1	0.0
	comp=N,122nm,1.1s						
APA	Apatity	53.58	334	i *PP	P	07 31 09.0	-3.9
KKH	Kailua Kona	53.60	102	eP	P	07 31 15.4	+1.6
KKH	Kailua Kona	53.60	102	eP	P	07 31 15.4	+1.6
POHA	Pohakuloa	53.84	102	eP	P	07 31 16.6	+0.8
	comp=N,209nm,0.8s						
AKTO	Aktyubinsk	54.27	308	P	P	07 31 17.4	-0.7
	comp=N,13nm,0.4s,baz=51,slow=8.4,SNR=4.4						
ARA0	ARCESS Array S	54.28	338	eP	P	07 31 17.7	-0.2
ARCES	ARCESS Array B	54.28	338	P	P	07 31 17.7	-0.2
	comp=N,10nm,0.4s,baz=41,slow=8.6,SNR=7.1						
ARCES				ScP	ScP	07 35 16.4	-1.3
	comp=N,5.6nm,0.8s,baz=57,slow=4.5,SNR=4.4						
HULD	Heiheiahulu Di	54.45	102	eP	P	07 31 21.0	+1.2
	comp=N,119nm,0.9s						
LLLB	Lillooet	54.81	51	eP	P	07 31 23.1	+1.2
	comp=N,18nm,1.0s						
SBUM	Sibu	55.38	224	eP	P	07 31 27.8	+1.5
	comp=N,16nm,0.7s						
SBUM	Sibu	55.38	224	epP	P	07 31 27.8	+1.5
NLWA	Neilton Lookou	55.70	55	eP	P	07 31 29.7	+1.5
	comp=N,27nm,0.9s						
NLWA	Neilton Lookou	55.70	55	epP	P	07 31 29.7	+1.5
KLMR	Klimovskoe	56.04	326	epP	P	07 31 28.0	-2.2
KLMR	Klimovskoe	56.04	326	e*PP	P	07 31 28.0	-2.2
B08A	Colville Reser	57.51	52	epP	P	07 31 41.5	+1.0
COR	Corvallis	57.75	58	epP	P	07 31 44.8	+2.6
COR	Corvallis	57.75	58	e*PP	P	07 31 44.8	+2.6
C09A	Chrisman Ranch	58.41	52	epP	P	07 31 47.3	+0.7
NEW	Newport	58.70	51	epP	P	07 31 49.2	+0.6
NEW	Newport	58.70	51	e*PP	P	07 31 49.2	+0.6
WALA	Waterton Lakes	59.80	49	epP	P	07 31 56.6	+0.5
YBH	Yreka Blue Hor	59.91	60	P	P	07 31 56.8	0.0
	comp=N,6.2nm,0.8s,baz=331,slow=5.0,SNR=7.8						
YBH	Yreka Blue Hor	59.91	60	epP	P	07 31 59.0	+2.2
F10A	Beach Ranch, E	60.14	53	epP	P	07 31 59.6	+1.3
FIA0	FINESS Array S	60.19	332	eP	P	07 31 57.8	-0.4
FIA0	FINESS Array S	60.19	332	eP	P	07 31 57.8	-0.4
FINES	FINESS Array B	60.19	332	P	P	07 31 57.8	-0.4
	comp=N,65nm,0.6s,baz=38,slow=10,SNR=12						
FINES	FINESS Array B	60.19	332	eP	P	07 31 57.7	-0.4
FINES				pmax	pmax		
	comp=Z,66nm,0.6s						
MOS	Moscow	60.26	322	e*PP	P	07 31 58.3	-0.4
K05A	Summer Lake	60.28	58	epP	P	07 32 01.5	+2.1
JTMT	Jette	60.49	50	epP	P	07 32 01.9	+1.3
BMO	Blue Mountains	60.84	54	epP	P	07 32 04.4	+1.5
OBN	Obninsk	61.13	322	i *PP	P	07 32 03.4	-1.0
ILULI	Ilulissat	61.18	7	eP	P	07 32 04.0	-0.5
	comp=Z,37nm,0.7s						
ILULI	Ilulissat	61.18	7	eP	P	07 32 04.0	-0.5
ILULI				pmax	pmax		
	comp=Z,37nm,0.7s						
J08A	Circle Bar Ran	61.20	56	epP	P	07 32 07.3	+2.0
FCC	Fort Churchill	61.29	31	eP	P	07 32 05.2	-0.2
	comp=Z,40nm,0.6s						
FCC	Fort Churchill	61.29	31	eP	P	07 32 05.2	-0.2
FCC				pmax	pmax		
	comp=Z,40nm,0.6s						
WVOR	Wild Horse Val	61.73	57	e*PP	P	07 32 10.4	+1.6
WVOR	Wild Horse Val	61.73	57	epP	P	07 32 10.4	+1.6
GEYT	Alibeck	62.11	297	P	P	07 32 10.2	-1.0
	comp=Z,10.0nm,0.7s,baz=293,slow=7.9,SNR=4.6						
VSU	Vasula	62.27	329	d iP	P	07 32 11.5	-0.3
VSU				pmax	pmax		
	comp=Z,127nm,0.7s						
EGMT	Eagleton	62.54	48	eP	P	07 32 14.5	+0.7
	comp=Z,76nm,1.2s						
MFID	Camas Ranch	62.59	55	epP	P	07 32 15.7	+1.4
BATI	Baumata	62.69	207	P	P	07 32 15.0	-0.1
	comp=Z,32nm,0.4s,baz=253,slow=1.1,SNR=3.9						
VSR	Storozhevoye	62.82	318	e*PP	P	07 32 14.4	-1.1
COEN	Coen	62.93	185	epP	P	07 32 17.3	+0.7
PAHR	Pah Rah Range	63.14	60	epP	P	07 32 19.4	+1.4
HYB	Hyderabad	63.24	266	epP	P	07 32 20.0	+1.2
VCNR	Virginia City	63.27	60	epP	P	07 32 20.8	+1.9
BMN	Battle Mountai	63.87	58	epP	P	07 32 24.3	+1.7
QLMT	Earthquake Lak	63.92	51	epP	P	07 32 24.0	+1.0
YHB	Horse Butte	64.10	51	epP	P	07 32 25.5	+1.5
GCMT	Greycliff	64.14	49	epP	P	07 32 25.5	+1.2
YMR	Madison River	64.27	51	epP	P	07 32 26.5	+1.3
RYN	Ryan	64.37	60	epP	P	07 32 27.7	+1.9
YFT	Old Faithful	64.49	51	epP	P	07 32 29.3	+2.7
NV01	Mina Array Sit	64.63	60	eP	P	07 32 28.4	+0.8
NVAR	Mina Array Bea	64.63	60	P	P	07 32 28.4	+0.8
	comp=Z,2.3nm,0.6s,baz=93,slow=22,SNR=8.8						
YPP	Pitchstone Pla	64.63	51	epP	P	07 32 29.9	+2.4
H17A	Grant Village	64.66	51	epP	P	07 32 30.3	+2.6
IDID	Didziasalis	64.72	327	eP	P	07 32 27.1	-0.4
RLMT	Red Lodge	64.81	50	epP	P	07 32 29.8	+1.2
HFS	Hagfors	64.81	336	P	P	07 32 27.2	-0.8
	comp=Z,66nm,0.7s,baz=71,slow=6.2,SNR=21						
IMW	Indian Meadow	64.83	51	epP	P	07 32 30.4	+1.6
DGMT	Dagmar	64.84	44	eP	P	07 32 29.0	+0.5
	comp=Z,58nm,1.0s						
IIGN	Ignalina	64.87	327	eP	P	07 32 30.4	+1.9
MICGM	Minsk	64.94	326	epP	P	07 32 28.0	-0.9
MNK	Minsk	64.94	326	e*PP	P	07 32 28.0	-0.9
FXWY	Fox Creek	64.96	52	epP	P	07 32 31.0	+1.4
MOOW	Moose Ponds	65.03	51	epP	P	07 32 31.4	+1.4
TPAW	Teton Pass	65.11	52	epP	P	07 32 32.5	+2.0
LAO	LASA Array	65.18	47	eP	P	07 32 31.6	+0.9
	comp=Z,44nm,1.2s						
LOHW	Long Hollow	65.20	52	epP	P	07 32 32.4	+1.4
SNOW	Snow King Moun	65.23	52	epP	P	07 32 32.8	+1.6
REDW	Red Top Meadow	65.25	52	epP	P	07 32 32.7	+1.4
GROC	Groznyy	65.32	308	e*PP	P	07 32 31.8	+0.3
AKT	Akhty	65.52	306	e*PP	P	07 32 33.2	+0.3
AHID	Auburn Hatcher	65.54	52	eP	P	07 32 34.1	+0.9
	comp=Z,21nm,1.2s						
LEM	Lembang	65.68	224	P	P	07 32 34.8	+0.5
	comp=Z,24nm,0.5s,baz=307,slow=20,SNR=3.1						
NCK	Nalchik	66.24	309⇓	eP	P	07 32 37.9	+0.6
NCK				pmax	pmax		
	comp=Z,63nm,0.8s						
KONO	Kongsberg	66.27	338	d eP	P	07 32 36.9	-0.2
KONO				pmax	pmax		
	comp=Z,34nm,1.5s						
BW06	Boulder Array	66.34	52	eP	P	07 32 38.7	+0.5
PD31	Pinedale Array	66.34	52	eP	P	07 32 38.7	+0.5
PDAR	Pinedale Array	66.34	52	P	P	07 32 38.7	+0.5
	comp=Z,19nm,0.7s,baz=40,slow=1.0,SNR=29						
KIV	Kislovodsk	66.37	310	e*PP	P	07 32 38.9	+0.7
KBZ	Khabaz	66.43	310	P	P	07 32 39.1	+0.7
	comp=Z,30nm,0.7s,baz=70,slow=4.0,SNR=4.9						
DUG	Dugway, Tooele	66.45	55	eP	P	07 32 40.1	+1.3
	comp=Z,14nm,0.8s						
DUG	Dugway, Tooele	66.45	55	eP	P	07 32 40.1	+1.3
DUG				pmax	pmax		
	comp=Z,14nm,0.8s						
DAC	Darwin (Calif)	66.53	61	eP	P	07 32 40.9	+1.5
	comp=Z,4.6nm,0.9s						
DAC	Darwin (Calif)	66.53	61	eP	P	07 32 40.9	+1.5
DAC				pmax	pmax		
	comp=Z,5.0nm,0.9s						
TCUT	Toone Canyon	66.55	54	eP	P	07 32 41.0	+1.5
	comp=Z,25nm,0.8s						
TCUT	Toone Canyon	66.55	54	epP	P	07 32 41.0	+1.5
CTU	Camp Tracy	66.67	54	eP	P	07 32 41.5	+1.3
	comp=Z,10nm,0.9s						
NEY	Neytrino	66.86	310⇑	eP	P	07 32 42.2	+0.9
NEY				pmax	pmax		
	comp=Z,4.0nm,0.6s						
JLU	Jordanelle	66.89	54	eP	P	07 32 42.9	+1.3
	comp=Z,9.9nm,0.9s						
TBLG	Delisi	66.92	307	eP	P	07 32 42.8	+1.3
	comp=Z,49nm,0.8s						
TBLG	Delisi	66.92	307	epP	P	07 32 42.8	+1.3
SUW	Suwalki	67.01	328	e*PP	P	07 32 41.0	-0.8
SUW	Suwalki	67.01	328	epP	P	07 32 41.0	-0.8
NLU	North Lily Min	67.02	55	eP	P	07 32 43.8	+1.5
	comp=Z,20nm,1.0s						
NLU	North Lily Min	67.02	55	epP	P	07 32 43.8	+1.5
ULM	Lac du Bonnet	67.12	39	P	P	07 32 42.0	-0.5
	comp=Z,9.6nm,0.6s,baz=317,slow=8.7,SNR=7.4						
ULM	Lac du Bonnet	67.12	39	eP	P	07 32 42.0	-0.5
	comp=Z,28nm,1.1s						
ULM	Lac du Bonnet	67.12	39	eP	P	07 32 42.0	-0.5
ULM				pmax	pmax		
	comp=Z,28nm,1.1s						
MPU	Maple Canyon	67.21	55	eP	P	07 32 44.8	+1.2
	comp=Z,15nm,0.8s						
MDND	Maddock	67.37	42	eP	P	07 32 44.5	+0.4
	comp=Z,72nm,0.9s						
AKASG	Malin Array Be	67.39	323	P	P	07 32 43.5	-0.7
	comp=Z,61nm,0.5s,baz=38,slow=6.4,SNR=16						
AKBB	Malin Array Si	67.39	323	eP	P	07 32 43.5	-0.6
	comp=Z,53nm,0.9s						
AKBB	Malin Array Si	67.39	323	eP	P	07 32 43.5	-0.6
AKBB				pmax	pmax		
	comp=Z,53nm,0.9s						
KIEV	Kiev	67.40	323	d iP	P	07 32 43.3	-0.9
KIEV				pmax	pmax		
	comp=Z,39nm,0.6s						
KLNR	Kaliningrad	67.53	330	d iP	P	07 32 44.2	-0.7
KLNR				pmax	pmax		
	comp=Z,68nm,0.6s						
K22A	Casper	67.96	50	eP	P	07 32 48.3	+0.2
	comp=Z,10nm,0.6s						
MSU	Marysvale	67.99	56	eP	P	07 32 50.2	+1.8
MSU	Marysvale	67.99	56	epP	P	07 32 50.2	+1.8
P17A	Butcher Ranch,	68.08	55	eP	P	07 32 50.2	+1.4
	comp=Z,15nm,0.9s						
RSSD	Black Hills	68.11	47	eP	P	07 32 49.4	+0.4
	comp=Z,26nm,0.9s						
RSSD	Black Hills	68.11	47	eP	P	07 32 49.4	+0.4
RSSD				pmax	pmax		
	comp=Z,26nm,0.9s						
ANN	Anapa	68.31	314	e*PP	P	07 32 49.5	-0.3
RWWY	Rawlins	68.32	51	eP	P	07 32 50.9	+0.6
	comp=Z,19nm,0.8s						
LCMT	Little Creek M	68.48	58	eP	P	07 32 52.7	+1.5
	comp=Z,8.9nm,1.2s						
AGMN	Agassiz Nation	68.64	40	eP	P	07 32 51.1	-0.7
	comp=Z,12nm,0.7s						
CTA	Charters Tower	68.92	181	P	P	07 32 53.5	-0.2
	comp=Z,38nm,0.8s,baz=8.5,slow=6.4,SNR=15						
O20A	White River Ci	68.92	53	eP	P	07 32 54.4	+0.5
	comp=Z,16nm,0.8s						
PALK	Pallekele	69.38	257	P	P	07 32 56.4	-0.4
	comp=Z,4.9nm,0.5s,baz=112,slow=5.1,SNR=3.0						
PALK	Pallekele	69.38	257	eP	P	07 32 56.4	-0.4
	comp=Z,35nm,1.2s						
PALK	Pallekele	69.38	257	eP	P	07 32 56.4	-0.4
PALK				pmax	pmax		
	comp=Z,35nm,1.2s						
GKP	Gorka Klasztor	69.62	331	epP	P	07 32 57.3	-0.3
BEL	Belsk	69.63	328	epP	P	07 32 58.0	+0.3
PV09	Paradox Valley	69.65	54	eP	P	07 33 00.0	+1.6
FITZ	Fitzroy Crossi	69.69	202	eP	P	07 32 59.0	+0.7
	comp=Z,34nm,1.0s						
SIM	Simferopol’	69.74	316	e*PP	P	07 32 59.0	+0.6
WRAB	Tennant Creek	69.74	193	eP	P	07 32 58.9	+0.3
	comp=Z,132nm,1.4s						
WRAB	Tennant Creek	69.74	193	c iP	P	07 32 58.8	+0.1
WRAB				pmax	pmax		
	comp=Z,99nm,1.2s						
WB2	Warramunga Arr	69.75	193	eP	P	07 32 58.0	-0.8
WR1	Warramunga Arr	69.75	193	eP	P	07 32 58.9	+0.1
	comp=Z,160nm,1.3s						
WRA	Warramunga Arr	69.75	193	P	P	07 32 58.9	+0.1
	comp=Z,35nm,0.4s,baz=8.3,slow=6.3,SNR=46						
PV10	Paradox Valley	69.79	55	eP	P	07 33 00.8	+1.6
PV10				ePcP	PcP	07 33 10.6	-6.9
PV14	Lion Creek, Pa	69.80	55	eP	P	07 33 00.3	+1.1
	comp=Z,26nm,0.9s						
PV20	West Nyswonger	69.85	55	eP	P	07 33 00.8	+1.3
	comp=Z,27nm,0.9s						
PV16	Nyswonger Mesa	69.90	54	eP	P	07 33 00.9	+1.1
	comp=Z,30nm,1.2s						
PV17	East Wray Mesa	69.90	55	eP	P	07 33 00.6	+0.8
	comp=Z,31nm,0.8s						
PV18	Skein Mesa, Pa	69.95	55	eP	P	07 33 01.2	+1.1
	comp=Z,22nm,1.0s						
PV03	Paradox Valley	69.98	54	eP	P	07 33 01.7	+1.4
Y12C	Blythe	70.09	61	eP	P	07 33 02.3	+1.5
	comp=Z,14nm,0.9s						
G32A	Webster	70.29	43	eP	P	07 33 01.7	0.0
	comp=Z,113nm,1.0s						
GLA	Glamis	70.42	62	eP	P	07 33 04.5	+1.7
	comp=Z,13nm,0.8s						
GLA	Glamis	70.42	62	eP	P	07 33 04.5	+1.7
GLA				pmax	pmax		
	comp=Z,13nm,0.8s						
KIS	Kishinev	70.46	320	i pP	P	07 33 02.0	-0.7
ISCO	Idaho Springs	70.53	51	eP	P	07 33 04.6	+0.9
	comp=Z,10nm,1.1s						
ISCO	Idaho Springs	70.53	51	eP	P	07 33 04.6	+0.9
ISCO				pmax	pmax		
	comp=Z,10.0nm,1.1s						
WUAZ	Wupatki	70.60	58	ePcP	PcP	07 33 14.1	-6.8
WUAZ	Wupatki	70.60	58	epP	PcP	07 33 14.1	-6.8
D36A	Goodland	70.64	39	eP	P	07 33 02.9	-0.9
	comp=Z,22nm,1.1s						
EYMN	Ely	70.71	38	eP	P	07 33 03.6	-0.6
	comp=Z,63nm,1.1s						
KWP	Kalwaria Pacla	70.75	326	epP	P	07 33 04.8	+0.4
Y14A	Wickenburg	70.83	60	eP	P	07 33 06.6	+1.4
	comp=Z,6.6nm,0.8s						
MVCO	Mesa Verde	70.93	55	eP	P	07 33 07.1	+1.1
	comp=Z,17nm,0.8s						
113A	Mohawk Valley,	71.24	62	eP	P	07 33 08.9	+1.4
	comp=Z,9.7nm,1.0s						
OJC	Ojcow	71.32	328	epP	P	07 33 07.7	0.0
X16A	Lo Mia Camp, P	71.36	59	eP	P	07 33 10.3	+1.8
X16A				ePcP	PcP	07 33 19.4	-4.8
S22A	4UR Ranch, Cre	71.43	54	eP	P	07 33 10.3	+1.4
	comp=Z,10nm,1.0s						
OGNE	Ogallala	71.47	48	eP	P	07 33 09.2	+0.4
	comp=Z,45nm,0.8s						
F36A	Milaca	71.54	40	eP	P	07 33 08.2	-0.8
	comp=Z,12nm,0.5s						
G35A	Watkins	71.64	41	eP	P	07 33 09.6	-0.1
	comp=Z,36nm,0.8s						
E38A	The Farm, Brul	71.76	38	eP	P	07 33 09.8	-0.5
	comp=Z,53nm,1.0s						
CRVS	Cervenica-Dubn	71.82	326	epP	P	07 33 10.6	0.0
KSP	Ksiaz	71.99	330	epP	P	07 33 11.4	-0.1
X18A	Snowflake	72.12	58	eP	P	07 33 14.8	+1.9
	comp=Z,15nm,1.2s						
LANS	Liptovska Anna	72.33	327	epP	P	07 33 14.3	+0.7
SPMN	Marine on St.	72.35	40	eP	P	07 33 13.2	-0.5

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             comp=Z,30nm,1.3s
UPC   Upice             72.37 330  epP       P       07 33 14.1 +0.3
AFI   Afiamalu          72.38 138   P        P       07 33 14.2 -0.1
             comp=Z,30nm,0.8s,baz=286,slow=7.4,SNR=3.7
AFI   Afiamalu          72.38 138  eP        P       07 33 14.2 -0.1
             comp=Z,43nm,0.8s
AFI   Afiamalu          72.38 138  eP        P       07 33 14.2 -0.1
AFI                                 pmax     pmax
             comp=Z,43nm,0.8s
DPC   Dobruska-Polom    72.40 330  epP       P       07 33 14.2 +0.2
MORC  Moravsky Berou    72.48 329  e         P       07 33 14.6 +0.2
SCHQ  Schefferville     72.48  20   P        P       07 33 13.8 -0.5
             comp=Z,12nm,0.5s,baz=340,slow=8.0,SNR=3.6
SCHQ  Schefferville     72.48  20  eP        P       07 33 13.8 -0.5
             comp=Z,39nm,1.3s
KRLC  Kraliky           72.48 329  epP       P       07 33 14.7 +0.2
KECS  Kecovo            72.53 326  epP       P       07 33 15.3 +0.6
D41A  Chassel           72.59  36  eP        P       07 33 14.7 -0.4
             comp=Z,28nm,0.8s
CLL   Collm             72.64 332⇓ iP        P       07 33 14.9 -0.4
             comp=Z,84nm,0.6s
CLL                                ePcP      PcP     07 33 30.0 +1.0
CLL                                i pP      pP      07 35 13.9 +3.3
             comp=Z,51nm,1.6s
CLL                                esP       PP      07 36 05.0 -1.1
CLL   Collm             72.64 332  eP        P       07 33 14.8 -0.5
             comp=Z,81nm,0.5s
CLL   Collm             72.64 332  eP        P       07 33 14.8 -0.5
CLL                                 pmax     pmax
             comp=Z,81nm,0.5s
BRG   Berggiesshubel    72.72 331  i pP      P       07 33 15.4 -0.4
             comp=Z,21nm,1.0s
PVCC  Panska Ves        72.82 331  epP       P       07 33 16.4 +0.1
MLR   Muntele Rosu      72.86 321   P        P       07 33 16.2 -0.6
             comp=Z,5.4nm,0.6s,baz=28,slow=2.7,SNR=5.9
DZM   Mont Dzumac       72.89 162   P        P       07 33 18.2 +1.2
             comp=Z,62nm,1.0s,baz=356,slow=3.7,SNR=16
DZM   Mont Dzumac       72.89 162  eP        P       07 33 19.3 +2.2
             comp=Z,74nm,1.0s
DZM   Mont Dzumac       72.89 162  epP       P       07 33 19.3 +2.2
             comp=Z,182nm,1.1s
ILGA  Ilgaz             72.93 314  eP        P       07 33 19.2 +1.7
             comp=Z,119nm,1.4s
BGNE  Belgrade          72.98  46  eP        P       07 33 17.7 +0.3
             comp=Z,76nm,0.8s
I37A  Lemond, Waseca    73.07  41  eP        P       07 33 17.9  0.0
             comp=Z,49nm,0.7s
VYHS  Vyhne             73.11 327  epP       P       07 33 18.4 +0.3
COWI  Conover           73.15  37  eP        P       07 33 17.8 -0.5
             comp=Z,31nm,1.1s
COWI  Conover           73.15  37  epP       P       07 33 17.8 -0.5
T25A  Trinidad          73.15  53  eP        P       07 33 19.5 +0.7
             comp=Z,14nm,0.9s
VRAC  Vranov            73.20 329  e         P       07 33 19.0 +0.4
J36A  Seneca 1, Swea    73.20  42  eP        P       07 33 18.5 -0.2
             comp=Z,24nm,1.0s
JAVC  Velka Javorina    73.21 328  e         P       07 33 19.7 +1.0
PSZ   Piszkesteto       73.21 326  eP        P       07 33 19.5 +0.8
             comp=Z,25nm,0.8s
PSZ   Piszkesteto       73.21 326  eP        P       07 33 19.5 +0.8
PSZ                                 pmax     pmax
             comp=Z,25nm,0.8s
PSZ   Piszkesteto       73.21 326  ePKKPdf   P       07 33 19.6 +0.8
GOPC  GO Pecny, Ondr    73.28 330  epP       P       07 33 19.2 +0.2
TUC   Tucson            73.28  60  eP        P       07 33 21.2 +1.8
TUC                                ePcP      PcP     07 33 30.3 -2.0
TUC   Tucson            73.28  60  eP        P       07 33 21.2 +1.8
TUC                                e                 07 33 30.3
PRU   Pruhonice         73.30 330  epP       P       07 33 19.2 +0.1
G40A  Rib Lake          73.40  38  eP        P       07 33 19.4 -0.4
             comp=Z,27nm,1.1s
F41A  Three Lakes       73.46  38  eP        P       07 33 19.9 -0.3
             comp=Z,44nm,0.8s
AS31  Alice Springs     73.47 193  eP        P       07 33 21.6 +1.2
             comp=Z,40nm,0.4s
ASAR  Alice Springs     73.47 193   P        P       07 33 21.6 +1.2
             comp=Z,72nm,0.6s,baz=9.6,slow=5.6,SNR=61
KRUC  Moravsky          73.48 329  e         P       07 33 20.2 +0.1
ANMO  Albuquerque       73.72  55   P        P       07 33 22.7 +0.7
             comp=Z,4.3nm,0.8s,baz=327,slow=8.4,SNR=7.9
ANMO  Albuquerque       73.72  55  eP        P       07 33 22.7 +0.7
             comp=Z,4.5nm,0.8s
ANMO  Albuquerque       73.72  55⇓ eP        P       07 33 23.1 +1.1
ANMO                                pmax     pmax
             comp=Z,4.0nm,0.8s
NKC   Novy Kostel       73.75 332  epP       P       07 33 21.9 +0.2
E43A  Lone Tree Farm    73.76  36  eP        P       07 33 21.1 -0.7
             comp=Z,17nm,0.6s
MODS  Modra-Piesok      73.76 328  epP       P       07 33 22.2 +0.4
BUD   Budapest          73.90 326  ePKKPdf   P       07 33 23.5 +1.0
E44A  Grand Marais A    73.97  35  eP        P       07 33 22.7 -0.3
             comp=Z,146nm,1.4s
BR101 Keskin Array S    74.00 313  eP        P       07 33 23.4  0.0
I39A  Houston           74.00  40  eP        P       07 33 22.4 -0.7
             comp=Z,59nm,0.6s
BRTR  Keskin Array B    74.00 313   P        P       07 33 23.4  0.0
             comp=Z,10nm,0.8s,baz=66,slow=4.3,SNR=7.0
H41A  Junction City     74.16  39  eP        P       07 33 23.6 -0.5
             comp=Z,42nm,1.3s
MBWA  Marble Bar        74.21 207  eP        P       07 33 24.7 +0.2
             comp=Z,20nm,0.7s
BNM   Barren Site       74.23  56  eP        P       07 33 26.4 +1.5
EIDS  Eidsvold          74.24 177  eP        P       07 33 25.9 +1.3
             comp=Z,35nm,0.8s
CSKK  Csˆ‡kako          74.28 327  ePKKPdf   P       07 33 25.1 +0.4
KHC   Kasperske Hory    74.35 331  epP       P       07 33 25.3 +0.2
G43A  Wallace           74.42  37  eP        P       07 33 25.2 -0.2
             comp=Z,79nm,1.4s
K38A  Parkersburg       74.44  42  eP        P       07 33 25.1 -0.6
             comp=Z,35nm,1.3s
I41A  Arkdale           74.52  39  eP        P       07 33 25.8 -0.3
             comp=Z,40nm,1.2s
GEC2  GERESS Array S    74.56 330  eP        P       07 33 26.2 -0.2
             comp=Z,19nm,0.7s
GEC2  GERESS Array S    74.56 330  eP        P       07 33 26.2 -0.2
GEC2                                pmax     pmax
             comp=Z,19nm,0.7s
GERES GERESS Array B    74.56 330   P        P       07 33 26.2 -0.2
             comp=Z,16nm,0.6s,baz=32,slow=5.5,SNR=14
CONA  Conrad Observa    74.64 329  i P       P       07 33 27.5 +0.7
             comp=Z,41nm,0.8s,SNR=7.8
CONA  Conrad Observa    74.64 329  i pP      P       07 33 27.5 +0.7
             comp=Z,41nm,0.8s,SNR=7.8
H42A  Shiocton          74.70  38  eP        P       07 33 26.9 -0.2
             comp=Z,49nm,1.2s
SCIA  State Center      74.84  42  eP        P       07 33 28.0  0.0
             comp=Z,49nm,1.0s
I42A  Draeger Farm,     75.06  39  eP        P       07 33 28.8 -0.3
I42A  Draeger Farm,     75.06  39  eP        P       07 33 28.8 -0.3
             comp=Z,33nm,1.0s
MORH  Mˆ‡rˆ¡gy, Hung    75.11 326  ePKKPdf   P       07 33 28.8 -0.5
HGN   Heimansgroeve     75.16 336  epP       P       07 33 29.0 -0.5
HGN   Heimansgroeve     75.16 336  eX        PcP     07 33 39.2 -0.7
MOA   Molln             75.24 329  i P       P       07 33 30.2 +0.1
             comp=Z,20nm,0.9s,SNR=5.7
MOA   Molln             75.24 329  i pP      P       07 33 30.2 +0.1
             comp=Z,20nm,0.9s,SNR=5.7
JFWS  Jewell Farm       75.30  40  eP        P       07 33 29.5 -1.0
             comp=Z,25nm,0.5s
JFWS  Jewell Farm       75.30  40  eP        P       07 33 29.5 -1.0
JFWS                                pmax     pmax
             comp=Z,25nm,0.5s
N37A  Lee Faris, Mou    75.31  44  eP        P       07 33 30.7 +0.1
             comp=Z,81nm,1.2s
N37A                               ePcP      PcP     07 33 41.8 +1.0
ARSA  Arzberg           75.34 328  i P       P       07 33 31.0 +0.3
             comp=Z,14nm,0.9s
ARSA  Arzberg           75.34 328  i pP      P       07 33 31.0 +0.3
             comp=Z,14nm,0.9s
KSU1  Kansas State U    75.52  46  eP        P       07 33 31.3 -0.4
             comp=Z,24nm,0.8s
BEHE  Becsehely         75.57 327  ePKKPdf   P       07 33 32.3 +0.4
L40A  Anamosa           75.58  41  eP        P       07 33 31.1 -1.0
             comp=Z,17nm,0.7s
KOGS  Kog               75.77 328  i pP      P       07 33 32.6 -0.4
N39A  Derby Farms, D    75.99  43  eP        P       07 33 34.0 -0.3
             comp=Z,43nm,0.9s
SOKA  Soboth            76.00 328  i P       P       07 33 34.5 +0.1
             comp=Z,33nm,0.9s,SNR=8.1
SOKA  Soboth            76.00 328  i pP      P       07 33 34.5 +0.1
             comp=Z,33nm,0.9s,SNR=8.1
PERS  Pernice           76.01 328  i pP      P       07 33 34.3 -0.1
KBA   Koelnbreinsper    76.22 330  i P       P       07 33 36.4 +0.7
             comp=Z,78nm,1.0s,SNR=13
KBA   Koelnbreinsper    76.22 330  i pP      P       07 33 36.4 +0.7
             comp=Z,78nm,1.0s,SNR=13
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K43A  Burlington        76.28  39  eP        P       07 33 35.4 -0.5
             comp=Z,42nm,1.2s
L42A  Oliver, Polo      76.30  40  eP        P       07 33 34.9 -1.1
             comp=Z,25nm,0.8s
AMTX  Amarillo          76.30  52  eP        P       07 33 36.8 +0.6
             comp=Z,18nm,1.1s
AMTX                               epP       PcP     07 33 49.9 +4.6
OBKA  Obir              76.31 329  i P       P       07 33 35.9 -0.2
             comp=Z,14nm,0.7s,SNR=5.2
OBKA  Obir              76.31 329  i pP      P       07 33 35.9 -0.2
             comp=Z,14nm,0.7s,SNR=5.2
VTS   Vitosha           76.37 321  eP        P       07 33 36.8 +0.2
             comp=Z,50nm,0.8s
VTS   Vitosha           76.37 321  eP        P       07 33 36.8 +0.2
VTS                                 pmax     pmax
             comp=Z,50nm,0.8s
MSTX  Muleshoe          76.43  54  eP        P       07 33 37.5 +0.5
             comp=Z,9.2nm,0.9s
MYKA  Terra Mystica     76.52 329  i P       P       07 33 36.8 -0.4
             comp=Z,20nm,1.0s,SNR=5.2
MYKA  Terra Mystica     76.52 329  i pP      P       07 33 36.8 -0.4
             comp=Z,20nm,1.0s,SNR=5.2
P38A  Dawn              76.53  44  eP        P       07 33 37.3  0.0
             comp=Z,58nm,1.0s
WATA  Walderalm         76.57 331  i P       P       07 33 39.1 +1.5
             comp=Z,30nm,0.5s,SNR=10.0
WATA  Walderalm         76.57 331  i pP      P       07 33 39.1 +1.5
             comp=Z,30nm,0.5s,SNR=10.0
WTTA  Wattenberg        76.62 331  i P       P       07 33 38.4 +0.5
             comp=Z,26nm,0.5s,SNR=10
WTTA  Wattenberg        76.62 331  i pP      P       07 33 38.4 +0.5
             comp=Z,26nm,0.5s,SNR=10
BFO   Black Forest      76.68 333  i P       P       07 33 40.5 +2.5
RETA  Reutte            76.70 331  i P       P       07 33 38.5 +0.3
             comp=Z,22nm,0.7s,SNR=7.0
RETA  Reutte            76.70 331  i pP      P       07 33 38.5 +0.3
             comp=Z,22nm,0.7s,SNR=7.0
MOTA  Moosalm           76.71 331  i P       P       07 33 39.7 +1.3
             comp=Z,28nm,0.6s,SNR=8.8
MOTA  Moosalm           76.71 331  i pP      P       07 33 39.7 +1.3
             comp=Z,28nm,0.6s,SNR=8.8
LJU   Ljubljana         76.72 328  epP       P       07 33 37.7 -0.6
MNTX  Cornudas Mount    76.76  57  eP        P       07 33 40.0 +1.2
             comp=Z,6.8nm,1.0s
ABTA  Abfaltersbach     76.79 330  eP        P       07 33 39.1 +0.4
             comp=Z,14nm,0.8s
ABTA  Abfaltersbach     76.79 330  epP       P       07 33 39.1 +0.4
             comp=Z,14nm,0.8s
N41A  Harden Midland    76.85  42  eP        P       07 33 38.8 -0.2
             comp=Z,33nm,1.1s
BOJS  Bojanci           76.94 328  epP       P       07 33 39.0 -0.5
FETA  Feichten          77.12 331  i P       P       07 33 40.9 +0.3
             comp=Z,24nm,1.0s,SNR=7.2
FETA  Feichten          77.12 331  i pP      P       07 33 40.9 +0.3
             comp=Z,24nm,1.0s,SNR=7.2
ECH   Echery            77.13 334  eP        P       07 33 39.3 -1.1
             comp=Z,20nm,0.7s
ECH   Echery            77.13 334  eP        P       07 33 39.3 -1.1
ECH                                 pmax     pmax
             comp=Z,20nm,0.7s
DAVA  Damuels           77.15 332  eP        P       07 33 40.9 +0.2
             comp=Z,32nm,0.9s
DAVA  Damuels           77.15 332  epP       P       07 33 40.9 +0.2
             comp=Z,32nm,0.9s
P40A  Paris             77.28  43  eP        P       07 33 41.3 -0.1
             comp=Z,38nm,0.7s
M44A  Midewin, Midew    77.49  39  eP        P       07 33 42.2 -0.3
             comp=Z,42nm,1.1s
DAVOX Davos/Dischmat    77.60 332   P        P       07 33 42.4 -0.8
             comp=Z,16nm,0.7s,baz=34,slow=8.4,SNR=7.2
HDIL  Hopedale          77.65  41  eP        P       07 33 43.0 -0.4
             comp=Z,36nm,0.9s
P42A  Winchester        77.99  42  eP        P       07 33 44.9 -0.3
             comp=Z,23nm,0.8s
TTG   Podgorica         78.09 324  eP        P       07 33 45.1 -0.6
             comp=Z,59nm,1.0s
TTG   Podgorica         78.09 324  eP        P       07 33 45.1 -0.6
TTG                                 pmax     pmax
             comp=Z,59nm,1.0s
M46A  Old House Fiel    78.17  38  eP        P       07 33 46.2  0.0
             comp=Z,24nm,0.9s
R40A  Maddies Statio    78.19  44  eP        P       07 33 46.0 -0.4
             comp=Z,30nm,1.0s
S39A  Bolivar           78.19  45  eP        P       07 33 45.6 -0.7
             comp=Z,18nm,0.8s
ASF   Jabal al Asfar    78.22 306   P        P       07 33 46.9 +0.2
             comp=Z,9.4nm,0.9s,baz=33,slow=9.6,SNR=6.8
TRQ   Mont Tremblant    78.24  28  eP        P       07 33 45.9 -0.6
MMAI  Mount Meron Ar    78.35 307   P        P       07 33 47.8 +0.4
             comp=Z,16nm,0.5s,baz=50,slow=6.7,SNR=11
TUL1  Leonard           78.45  48  eP        P       07 33 48.2 +0.4
             comp=Z,24nm,0.8s
AAM   Ann Arbor         78.48  36  eP        P       07 33 48.1 +0.3
             comp=Z,22nm,0.6s
AAM   Ann Arbor         78.48  36  eP        P       07 33 48.1 +0.3
AAM                                 pmax     pmax
             comp=Z,23nm,0.6s
SFIN  Lafayette         78.72  39  eP        P       07 33 48.7 -0.5
             comp=Z,35nm,1.2s
CCM   Cathedral Cave    78.85  43  eP        P       07 33 50.4 +0.6
             comp=Z,28nm,1.0s
CCM   Cathedral Cave    78.85  43  eP        P       07 33 50.4 +0.6
CCM                                 pmax     pmax
             comp=Z,28nm,1.0s
HHAR  Hobbs             79.04  46  eP        P       07 33 50.9  0.0
             comp=Z,12nm,0.7s
ABTX  Abilene, Hawle    79.12  52  eP        P       07 33 52.0 +0.6
             comp=Z,11nm,0.9s
P45A  Graceland, Par    79.16  40  eP        P       07 33 51.1 -0.4
             comp=Z,34nm,1.0s
FVM   French Village    79.27  43  eP        P       07 33 52.9 +0.8
             comp=Z,11nm,0.6s
FVM   French Village    79.27  43  eP        P       07 33 52.9 +0.8
FVM                                 pmax     pmax
             comp=Z,11nm,0.6s
ARMA  Armidale          79.29 176  eP        P       07 33 54.0 +1.8
             comp=Z,49nm,1.1s
TXAR  Lajitas Array     79.52  57   P        P       07 33 54.9 +1.2
             comp=Z,9.9nm,0.6s,baz=289,slow=4.8,SNR=22
LONY  Lake Ozonia       79.66  29  eP        P       07 33 53.3 -0.7
             comp=Z,7.1nm,0.8s
OLIL  Olney             79.67  41  eP        P       07 33 54.3 +0.1
             comp=Z,17nm,0.9s
LPIG  La Paz            79.70  65   P        P       07 33 55.5 +1.0
             comp=Z,11nm,0.3s,baz=54,slow=7.9,SNR=2.4
PQI   Presque Isle      79.72  24  eP        P       07 33 53.9 -0.4
             comp=Z,19nm,1.0s
T42A  Van Buren         79.76  44  eP        P       07 33 54.4 -0.2
             comp=Z,20nm,0.9s
VLC   Villacollemand    79.77 330  eP        P       07 33 54.6 -0.1
             comp=Z,44nm,1.1s
V40A  Witts Springs     79.96  46  eP        P       07 33 55.6 -0.2
             comp=Z,19nm,1.1s
W39A  Magazine          80.00  47  eP        P       07 33 56.1 +0.2
             comp=Z,12nm,1.0s
ERPA  Erie              80.02  34  eP        P       07 33 56.3 +0.3
             comp=Z,68nm,1.4s
SIUC  Southern Illin    80.03  42  eP        P       07 33 56.1  0.0
             comp=Z,31nm,0.6s
BNI   Bardonecchia      80.13 333  eP        P       07 33 56.7 +0.1
             comp=Z,10nm,0.9s
BNI   Bardonecchia      80.13 333  eP        P       07 33 56.7 +0.1
BNI                                 pmax     pmax
             comp=Z,10.0nm,0.9s
MMNY  Mt. Morris Dam    80.23  32  eP        P       07 33 56.6 -0.4
             comp=Z,60nm,1.5s
PBMO  Poplar Bluff      80.27  44  eP        P       07 33 57.4 +0.1
             comp=Z,36nm,1.0s
W40A  Ferguson Farm,    80.34  46  eP        P       07 33 58.1 +0.4
             comp=Z,26nm,1.1s
NCB   Newcomb           80.36  29  eP        P       07 33 57.1 -0.6
             comp=Z,19nm,1.4s
ALLY  Alegheny Colle    80.37  34  eP        P       07 33 58.0 +0.2
             comp=Z,31nm,0.8s
KARP  Karpathos         80.42 314  eP        P       07 33 57.6 -0.6
             comp=Z,52nm,0.8s
VT1   Waterbury         80.50  28  eP        P       07 33 58.2 -0.2
             comp=Z,42nm,1.1s
USIN  University of     80.50  41  eP        P       07 33 58.8 +0.3
             comp=Z,32nm,0.8s
ACSO  Alum Creek Sta    80.52  37  eP        P       07 33 58.5 -0.1
             comp=Z,34nm,0.9s
MIAR  Mount Ida         80.62  47  eP        P       07 33 59.5 +0.3
             comp=Z,10nm,0.7s
MIAR  Mount Ida         80.62  47  eP        P       07 33 59.5 +0.3
MIAR                                pmax     pmax
             comp=Z,10.0nm,0.7s
PARMO Parma             80.67  43  eP        P       07 34 00.3 +1.0
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             comp=Z,57nm,0.8s
PKME  Peaks-Kenny Pk    80.67  25  eP        P       07 33 59.2  0.0
             comp=Z,12nm,0.9s
M54A  Oil Creek Stat    80.67  34  eP        P       07 33 59.2 -0.1
             comp=Z,38nm,1.3s
JCT   Junction City     80.72  54  eP        P       07 34 00.3 +0.5
             comp=Z,11nm,0.9s
W41B  Gary Mavity, V    80.74  46  eP        P       07 34 00.1 +0.3
             comp=Z,34nm,1.1s
WHTX  Lake Whitney,     80.75  51  eP        P       07 34 00.3 +0.5
             comp=Z,29nm,1.0s
STKA  Stephens Creek    80.82 185   P        P       07 34 00.8 +0.8
             comp=Z,15nm,0.8s,baz=348,slow=7.6,SNR=9.4
STKA  Stephens Creek    80.82 185  eP        P       07 34 00.8 +0.8
             comp=Z,6.3nm,1.0s
LBNH  Lisbon            80.83  28  eP        P       07 34 00.5 +0.4
WCI   Wyandotte Cave    80.87  40  eP        P       07 34 00.3 -0.1
             comp=Z,22nm,0.8s
WCI   Wyandotte Cave    80.87  40  eP        P       07 34 00.3 -0.1
WCI                                 pmax     pmax
             comp=Z,22nm,0.8s
UALR  University of     81.02  46  eP        P       07 34 01.2 -0.1
             comp=Z,13nm,1.4s
X40A  Basin Creek Fa    81.02  47  eP        P       07 34 01.9 +0.6
             comp=Z,19nm,1.2s
N54A  Moraine State     81.03  34  eP        P       07 34 01.2  0.0
             comp=Z,52nm,1.3s
ACCN  Adirondack Com    81.06  29  eP        P       07 34 00.8 -0.5
             comp=Z,33nm,1.3s
GNAR  Gosnell           81.12  44  eP        P       07 34 02.7 +0.9
             comp=Z,59nm,1.2s
GLAT  Glass             81.20  43  eP        P       07 34 02.9 +0.8
             comp=Z,78nm,1.2s
WVL   Waterville        81.20  26  eP        P       07 34 01.9 -0.1
             comp=Z,9.5nm,0.7s
BINY  Binghamton        81.36  31  eP        P       07 34 02.5 -0.4
             comp=Z,15nm,0.9s
FORT  Forrest           81.42 197  eP        P       07 34 03.8 +0.8
             comp=Z,66nm,0.7s
ITM   Ithomi            81.43 319  eP        P       07 34 02.4 -0.9
             comp=Z,51nm,0.9s
T47A  Sharon Grove      81.56  41  eP        P       07 34 04.1 +0.1
             comp=Z,27nm,0.9s
FFD   Franklin Falls    81.61  28  eP        P       07 34 04.8 +0.6
             comp=Z,53nm,1.3s
TRY   Troy              81.65  29  eP        P       07 34 04.2 -0.1
             comp=Z,10.0nm,0.8s
IDI   Anoyia            81.69 316   P        P       07 34 03.0 -1.8
             comp=Z,16nm,0.7s,baz=36,slow=7.7,SNR=4.1
IDI   Anoyia            81.69 316  eP        P       07 34 03.0 -1.8
             comp=Z,26nm,0.8s
TIP   Timpagrande       81.85 323  eP        P       07 34 05.1 -0.4
             comp=Z,91nm,1.3s
X43A  Marvell           81.92  45  eP        P       07 34 06.7 +0.8
             comp=Z,39nm,1.0s
WVT   Waverly           81.97  42  eP        P       07 34 06.1  0.0
             comp=Z,16nm,0.6s
WVT   Waverly           81.97  42  eP        P       07 34 06.1  0.0
WVT                                 pmax     pmax
             comp=Z,16nm,0.6s
KSPA  Keystone Colle    82.00  31  eP        P       07 34 05.2 -1.0
             comp=Z,11nm,0.7s
SSPA  Standing Stone    82.08  33  eP        P       07 34 06.1 -0.4
             comp=Z,12nm,0.8s
T49A  Edmonton          82.14  40  eP        P       07 34 06.8 -0.1
             comp=Z,12nm,0.8s
O56A  Blue Knob Stat    82.16  34  eP        P       07 34 06.8 -0.3
             comp=Z,35nm,1.0s
BBOO  Buckleboo         82.21 190  eP        P       07 34 07.6 +0.5
             comp=Z,9.3nm,0.7s
MCWV  Mont Chateau      82.22  35  eP        P       07 34 06.8 -0.5
             comp=Z,21nm,0.8s
NATX  Nacogdoches       82.34  49  eP        P       07 34 09.2 +1.2
             comp=Z,57nm,0.8s
S51A  Beattyville       82.49  39  eP        P       07 34 08.7  0.0
             comp=Z,13nm,0.8s
HRV   Adam Dziewonsk    82.52  28  eP        P       07 34 08.8 +0.1
             comp=Z,26nm,1.0s
HRV   Adam Dziewonsk    82.52  28  eP        P       07 34 08.8 +0.1
HRV                                 pmax     pmax
             comp=Z,26nm,1.0s
N59A  State Game Lan    82.57  32  eP        P       07 34 08.7 -0.4
             comp=Z,44nm,1.3s
OXF   Oxford            82.61  44  eP        P       07 34 09.4 +0.1
             comp=Z,42nm,1.0s
833A  Chaparral WMA,    82.64  55  eP        P       07 34 10.1 +0.5
             comp=Z,13nm,1.0s
WES   Weston            82.70  28  eP        P       07 34 09.3 -0.3
             comp=Z,37nm,1.0s
WES   Weston            82.70  28  eP        P       07 34 09.3 -0.3
WES                                 pmax     pmax
             comp=Z,37nm,1.0s
V48A  Smith Brothers    82.74  42  eP        P       07 34 09.8 -0.2
             comp=Z,31nm,1.1s
BCX   Boston College    82.79  28  eP        P       07 34 10.3 +0.2
             comp=Z,23nm,1.0s
PLAL  Pickwick Lake     82.82  43  eP        P       07 34 10.2 -0.2
             comp=Z,18nm,0.6s
ODNJ  Ogdensburg        82.82  31  eP        P       07 34 09.7 -0.6
             comp=Z,6.8nm,0.7s
PAGS  Pennsylvania G    82.86  33  eP        P       07 34 10.0 -0.5
             comp=Z,37nm,1.2s
241A  Mo Tay, Goldon    82.99  48  eP        P       07 34 11.0 -0.3
             comp=Z,26nm,0.8s
BRYW  Bryant College    83.06  28  eP        P       07 34 12.0 +0.5
             comp=Z,19nm,1.0s
PAL   Palisades         83.12  30  eP        P       07 34 11.6 -0.2
             comp=Z,20nm,0.6s
PAL   Palisades         83.12  30  eP        P       07 34 11.6 -0.2
PAL                                 pmax     pmax
             comp=Z,20nm,0.6s
143A  Socs Landing,     83.17  47  eP        P       07 34 12.9 +0.8
             comp=Z,24nm,1.1s
MVL   Millersville      83.19  32  eP        P       07 34 11.7 -0.4
             comp=Z,14nm,1.0s
BRNJ  Basking Ridge     83.19  31  eP        P       07 34 12.3 +0.1
             comp=Z,21nm,0.8s
341A  Kurthwood         83.43  49  eP        P       07 34 14.4 +0.9
             comp=Z,34nm,1.4s
TZTN  Tazewell          83.45  39  eP        P       07 34 13.5 -0.1
             comp=Z,24nm,1.2s
PSUB  Penn St. - Bra    83.57  32  eP        P       07 34 13.7 -0.3
             comp=Z,12nm,0.7s
SWET  Sewanee           83.57  41  eP        P       07 34 13.8 -0.3
             comp=Z,26nm,0.6s
X48A  Hartselle         83.72  43  eP        P       07 34 14.5 -0.4
             comp=Z,15nm,0.6s
V51A  Loudon            83.74  40  eP        P       07 34 14.8 -0.2
             comp=Z,20nm,1.3s
W50A  Signal Mountai    83.85  41  eP        P       07 34 14.8 -0.8
             comp=Z,15nm,0.9s
CPCT  Cooper Cave       83.97  40  eP        P       07 34 16.2 +0.1
             comp=Z,14nm,1.0s
V52A  Sevierville       84.03  39  eP        P       07 34 16.4  0.0
             comp=Z,12nm,0.6s
CAN   Canberra          84.10 179  eP        P       07 34 17.9 +1.4
             comp=Z,30nm,1.0s
CAN   Canberra          84.10 179  eP        P       07 34 17.9 +1.4
CAN                                 pmax     pmax
             comp=Z,30nm,1.0s
TKL   Tuckaleechee C    84.11  40   P        P       07 34 16.3 -0.5
             comp=Z,9.9nm,0.8s,baz=211,slow=5.9,SNR=9.9
TKL   Tuckaleechee C    84.11  40  eP        P       07 34 17.0 +0.2
             comp=Z,10nm,0.7s
TKL   Tuckaleechee C    84.11  40  eP        P       07 34 17.0 +0.2
TKL                                 pmax     pmax
             comp=Z,10.0nm,0.7s
BLA   Blacksburg        84.13  37  eP        P       07 34 17.1 +0.2
             comp=Z,34nm,1.2s
BLA   Blacksburg        84.13  37  eP        P       07 34 17.1 +0.2
BLA                                 pmax     pmax
             comp=Z,34nm,1.2s
VAE   Valguarnera       84.24 324   P        P       07 34 16.4 -1.0
             comp=Z,9.4nm,0.4s,baz=291,slow=8.6,SNR=2.6
RAR   Rarotonga         84.30 132   P        P       07 34 18.3 +0.6
             comp=Z,12nm,0.7s,baz=101,slow=5.2,SNR=2.4
146A  Union             84.33  45  eP        P       07 34 19.1 +1.2
             comp=Z,80nm,1.0s
CVRD  Centerville Ro    84.37  34  eP        P       07 34 18.1 +0.1
             comp=Z,39nm,1.0s
CBN   Corbin Frederi    84.41  34  eP        P       07 34 18.5 +0.4
             comp=Z,34nm,0.8s
IP07  Quail             84.42  35  eP        P       07 34 18.6 +0.3
             comp=Z,21nm,1.1s
V53A  Saluda            84.50  39  eP        P       07 34 18.9 +0.1
             comp=Z,6.3nm,1.0s
Y49A  Blount Mountai    84.50  42  eP        P       07 34 18.6 -0.2
             comp=Z,20nm,1.1s
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344A	**Westbrook Farm**	84.52	47	eP	P	07 34 20.3	+1.5
	comp=Z,39nm,1.2s						
X51A	**Calhoun**	84.58	41	eP	P	07 34 19.0	-0.1
	comp=Z,23nm,1.3s						
147A	**Livingston**	84.66	44	eP	P	07 34 20.0	+0.5
	comp=Z,78nm,1.4s						
LRAL	**Lakeview Retre**	84.94	43	eP	P	07 34 20.5	-0.3
BG3	**Lake Jocassee**	85.03	39	eP	P	07 34 21.4	+0.1
	comp=Z,10nm,0.6s						
Z50A	**Ashland**	85.23	42	eP	P	07 34 22.3	0.0
	comp=Z,42nm,0.8s						
NCAT	**North Carolina**	85.37	37	eP	P	07 34 22.9	0.0
	comp=Z,11nm,0.7s						
PMOR	**Pomariorio Ree**	85.55	119	epP	P	07 34 26.5	+2.6
VAH	**Vaihoa**	85.89	119	epP	P	07 34 27.0	+1.5
NWAO	**Narrogin (SRO)**	86.02	205	P	P	07 34 25.6	-0.1
	comp=Z,23nm,0.8s,baz=74,slow=7.4,SNR=9.4						
NWAO	**Narrogin (SRO)**	86.02	205	eP	P	07 34 25.8	0.0
	comp=Z,58nm,1.2s						
NWAO	**Narrogin (SRO)**	86.02	205	eP	P	07 34 25.8	0.0
NWAO				pmax	pmax		
	comp=Z,58nm,1.2s						
250A	**Grady**	86.16	43	eP	P	07 34 27.1	+0.4
	comp=Z,56nm,1.2s						
GOGA	**Godfrey**	86.17	41	eP	P	07 34 27.3	+0.6
	comp=Z,28nm,1.5s						
GOGA	**Godfrey**	86.17	41	eP	P	07 34 27.3	+0.6
GOGA				pmax	pmax		
	comp=Z,28nm,1.5s						
152A	**Waverly Hall**	86.26	42	eP	P	07 34 26.9	-0.3
	comp=Z,7.4nm,0.8s						
BRAL	**Brewton**	86.48	44	eP	P	07 34 30.0	+1.7
	comp=Z,39nm,0.6s						
PPT	**Papeete**	86.66	122	P	P	07 34 30.5	+1.4
	comp=Z,29nm,0.9s,baz=14,slow=8.3,SNR=5.2						
PPT2	**Papeete2**	86.67	122	epP	P	07 34 32.0	+2.7
PAE	**Paea**	86.73	122	epP	P	07 34 33.0	+3.6
TIAR	**Tiarei**	86.78	121	epP	P	07 34 32.2	+2.5
154A	**Montrose**	87.00	41	eP	P	07 34 31.6	+0.9
	comp=Z,28nm,0.9s						
TVO	**Taravao**	87.01	122	epP	P	07 34 33.7	+2.9
253A	**Americus**	87.03	42	eP	P	07 34 31.3	+0.4
	comp=Z,39nm,1.1s						
OUZ	**Omahuta**	87.15	159	eP	P	07 34 33.5	+2.5
	comp=Z,46nm,1.1s						
352A	**Blakely**	87.18	43	eP	P	07 34 32.1	+0.6
	comp=Z,34nm,0.6s						
451A	**Vernon**	87.54	44	eP	P	07 34 34.9	+1.7
	comp=Z,63nm,1.0s						
KEST	**Kesra**	87.66	327	P	P	07 34 33.4	-0.4
	comp=Z,13nm,0.8s,baz=263,slow=3.1,SNR=5.2						
KEST	**Kesra**	87.66	327	eP	P	07 34 32.9	-0.9
	comp=Z,68nm,1.1s						
TIGA	**Tifton**	87.80	42	eP	P	07 34 35.3	+0.9
	comp=Z,29nm,0.7s						
255A	**Hazlehurst**	87.87	41	eP	P	07 34 35.7	+1.0
	comp=Z,97nm,1.4s						
ESDC	**Sonseca Array**	88.02	338	P	P	07 34 34.7	-0.7
	comp=Z,1.4nm,0.6s,baz=359,slow=5.8,SNR=4.6						
THTN	**Thala**	88.05	327	eP	P	07 34 36.3	+0.6
	comp=Z,130nm,1.3s						
555A	**McAlpin**	89.21	42	eP	P	07 34 41.9	+0.9
	comp=Z,29nm,1.1s						
656A	**Willston**	90.04	42	eP	P	07 34 46.4	+1.6
	comp=Z,17nm,0.8s						
HIZ	**Hauiti**	90.59	159	eP	P	07 34 49.2	+2.3
	comp=Z,54nm,1.5s						
BKZ	**Black Stump Fm**	91.61	158	eP	P	07 34 53.2	+1.5
	comp=Z,24nm,1.3s						
TAU	**Tasmania Unive**	91.67	180	eP	P	07 34 53.1	+1.4
	comp=Z,41nm,1.4s						
TAU	**Tasmania Unive**	91.67	180	eP	P	07 34 53.1	+1.4
TAU				pmax	pmax		
	comp=Z,41nm,1.4s						
MDT	**Midelt**	94.69	337	P	P	07 35 04.4	-1.9
	comp=Z,1.7nm,0.8s,baz=333,slow=2.3,SNR=2.9						
TOA1	**Torodi Ar. Sit**	111.00	324	ePdif	Pdif	07 36 19.1	0.0
TOA1				ePKiKP	PKiKP	07 40 13.0	-1.8
TORD	**Torodi Ar. Bea**	111.00	324	Pdiff	Pdif	07 36 19.1	0.0
	baz=40,slow=5.1						
TORD				PKiKP	PKiKP	07 40 13.0	-1.8
	baz=23,slow=2.0						
CASY	**Casey**	118.50	196	ePKPdf	PKPdf	07 40 27.4	-0.1
DBIC	**Dimbokro**	119.38	328	PKP	PKPdf	07 40 29.7	-1.2
	comp=Z,2.1nm,0.5s,baz=288,slow=1.9,SNR=3.1						
DBIC	**Dimbokro**	119.38	328	ePKPdf	PKPdf	07 40 30.0	-0.9
DBIC	**Dimbokro**	119.38	328	ePKIKP	PKPdf	07 40 30.0	-0.9
PTGA	**Pitinga**	126.34	35	PKP	PKPdf	07 40 44.1	-0.1
	comp=Z,2.3nm,0.5s,baz=93,slow=4.7,SNR=5.8						
PTGA	**Pitinga**	126.34	35	ePKPpre	PKPdf	07 40 44.1	-0.1
PTGA				ePKPdf	PKiKP	07 40 44.6	-0.2
VNDA	**Vanda**	126.70	176	PKP	PKPdf	07 40 42.5	-0.4
	comp=Z,2.0nm,0.6s,baz=324,slow=4.9,SNR=6.5						
VNDA				SKP		07 43 23.0	
	comp=Z,3.1nm,1.0s,baz=267,slow=1.4,SNR=4.4						
VNDA	**Vanda**	126.70	176	ePKPpre	PKPdf	07 40 42.8	-0.2
VNDA				ePKPdf	PKiKP	07 40 43.2	-0.3
VNDA				SKP		07 43 23.0	
VNDA	**Vanda**	126.70	176	ePKIKP	PKPdf	07 40 42.8	-0.2
BOSA	**Boshof**	131.82	273	SKPbc	SKPbc	07 43 27.1	-1.2
	comp=Z,3.5nm,0.6s,baz=70,slow=5.7,SNR=3.0						
MAW	**Mawson**	132.28	211	SKPbc	SKPbc	07 43 28.3	0.0
	comp=Z,19nm,1.0s,baz=43,slow=4.8,SNR=8.7						
MAW	**Mawson**	132.28	211	ePKPdf	PKPdf	07 40 55.4	+1.7
MAW				SKPbc	SKPbc	07 43 28.3	0.0
MAW	**Mawson**	132.28	211	ePKIKP	PKPdf	07 40 55.4	+1.7
MAW						07 43 28.3	
SAML	**Samuel**	132.45	43	ePKPdf	PKPdf	07 40 56.8	+1.0
SAML	**Samuel**	132.45	43	ePKIKP	PKPdf	07 40 56.8	+1.0
LPAZ	**La Paz**	136.32	54	SKPbc	SKPbc	07 43 42.7	-0.9
	comp=Z,8.6nm,0.9s,baz=356,slow=4.6,SNR=7.0						
RCBR	**Riachuelo**	136.75	5	SKP	SKPdf	07 43 47.3	+1.3
	comp=Z,112nm,0.8s,baz=29,slow=0.2,SNR=5.3						
QSPA	**South Pole Qui**	138.87	180	SKPbc	SKPbc	07 43 45.7	-2.8
	comp=Z,10nm,0.7s,baz=306,slow=1.0,SNR=10						
SIV	**San Ignacio**	139.60	45	PKP	PKPdf	07 41 08.8	-0.2
	comp=Z,3.3nm,0.9s,baz=83,slow=1.4,SNR=5.2						
SIV				SKPbc	SKPbc	07 43 50.5	-1.6
	comp=Z,9.2nm,0.9s,baz=266,slow=2.4,SNR=7.8						
LCO	**Las Campanas**	144.72	69	ePKPdf	PKPab	07 41 19.3	+0.2
LCO	**Las Campanas**	144.72	69	ePKIKP	PKPab	07 41 19.3	+0.2
PEL	**Peldehue**	147.55	75	ePKPbc	PKPbc	07 41 26.6	+0.7
PEL	**Peldehue**	147.55	75	ePKP2	PKPbc	07 41 26.6	+0.7
GO05	**HualaæØ**	147.94	79	ePKPbc	PKPbc	07 41 26.6	-0.2
CPUP	**Villa Florida**	150.21	49	PKPbc	PKPbc	07 41 32.7	+0.2
	comp=Z,7.7nm,0.8s,baz=298,slow=2.4,SNR=7.3						
CPUP				PKPab	PKPab	07 41 41.2	+0.1
	comp=Z,3.8nm,0.8s,baz=339,slow=6.2,SNR=3.5						
PLCA	**Paso Flores**	152.07	87	PKPbc	PKPbc	07 41 36.6	+0.2
	comp=Z,4.4nm,0.4s,baz=323,slow=2.2,SNR=16						
PLCA				PKPab	PKPab	07 41 49.8	+1.0
	comp=Z,11nm,0.9s,baz=326,slow=3.1,SNR=5.2						
SNAA	**Sanae**	153.61	201	PKPbc	PKPbc	07 41 37.7	-1.1
	comp=Z,1.8nm,0.4s,baz=161,slow=2.1,SNR=7.6						
SNAA				PKPab	PKPab	07 41 54.2	-0.3
	comp=Z,3.8nm,0.5s,baz=102,slow=1.4,SNR=7.0						
SNAA	**Sanae**	153.61	201	ePKPbc	PKPbc	07 41 38.2	-0.6
SNAA				ePKPab	PKPab	07 41 55.0	+0.6

JMA 09 07:23:24.3, 32°.57N×130°.05E, h11^{km}±1^{km}, M0.1, Kyushu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHD	**Hondo**	0.13	145	P	Pg	07 23 27.4	0.0
JHD				S	Sg	07 23 29.7	+0.1
NGSJ	**Nagasakinomoza**	0.22	286	P	Pg	07 23 29.0	+0.1
NGSJ				S	Sg	07 23 32.1	0.0

*IDC **09** 07:41:17.2±1.8, 8°.26N×92°.16E, h0^{km}, mb3.6/5, mb1 3.8/6, mb1mx3.4/67, mbtmp3.7/6, ML4.2/1, MS3.4/2, Ms1 3.4/2, ms1mx2.5/73, Error ellipse: s-maj=66.5km s-min=20.7km az=63.0*

ISC 09 07:41:20.9±1.6, **8°.3N**±0°.2×**92°.2E**±0°.3, **h24^{km}, n13, σ0^{s}.31**/7, **mb3.6**/5, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	**Prapat**	8.63	129	LR	LR	07 46 31.1	
	comp=Z,123nm,18.5s,baz=270,slow=36						
PALK	**Pallekele**	11.43	266	Sn	Sn	07 45 59.6	-10
	0.8nm,0.3s,baz=295,slow=17,SNR=7.6						
CMAR	**Chiang Mai Arr**	12.05	32	Pn	Pn	07 44 11.4	+0.1
	0.4nm,0.3s,baz=229,slow=14,SNR=14						
H08S3	**Diego Garcia H**	25.22	232	T	T	08 13 04.8	
	baz=50,slow=75,SNR=228						
H08S2	**Diego Garcia H**	25.22	232	T	T	08 13 06.1	
	baz=50,slow=75,SNR=79						
H08S1	**Diego Carcia H**	25.24	232	T	T	08 13 07.2	
	baz=50,slow=75,SNR=13						
MKAR	**Makanchi Array**	39.29	349	P	P	07 48 48.0	+0.1
	1.1nm,0.5s,baz=168,slow=8.3,SNR=17						
SIJI	**Sorong**	39.99	101	LR	LR	08 07 49.9	
	comp=Z,78nm,18.5s,slow=40						
SONM	**Songino Array**	41.21	15	P	P	07 49 03.6	-0.3
	0.4nm,0.5s,baz=204,slow=7.9,SNR=2.8						
KURBB	**Kurchatov Arra**	43.70	347	P	P	07 49 24.2	+0.3
	0.9nm,0.6s,baz=175,slow=7.6,SNR=9.8						
WRA	**Warramunga Arr**	50.08	125	P	P	07 50 14.1	-0.2
	0.5nm,0.8s,baz=302,slow=9.5,SNR=12						
ASAR	**Alice Springs**	51.67	129	P	P	07 50 26.6	+0.3
	0.5nm,0.6s,baz=303,slow=7.2,SNR=8.8						
PDAR	**Pinedale Array**	125.45	20	PKP	PKPdf	08 00 20.4	-0.2
	0.2nm,0.6s,baz=175,slow=3.7,SNR=3.6						

IDC 09 08:20:31.6±1.8, **0°.64N×127°.29E, h0^{km}, mb3.6**/4, **mb1 3.8**/4, **mb1mx3.4**/63, **mbtmp3.6**/4, **MS4.0**/1, **Ms1 4.0**/1, **ms1mx2.4**/39, **Error ellipse: s-maj=171.7km s-min=21.2km az=67.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	21.59	162	P	P	08 25 22.8	-0.5
	0.4nm,0.3s,baz=341,slow=11,SNR=19						
ASAR	**Alice Springs**	25.01	166	P	P	08 25 57.8	+0.4
	1.2nm,0.5s,baz=339,slow=9.8,SNR=16						
CTA	**Charters Tower**	27.75	139	LR	LR	08 38 12.6	
	comp=Z,290nm,20.7s,baz=327,slow=38						
MKAR	**Makanchi Array**	60.40	326	P	P	08 30 42.6	-0.3
	0.2nm,0.4s,baz=121,slow=7.4,SNR=5.4						
KURBB	**Kurchatov Arra**	64.63	328	P	P	08 31 11.2	+0.2
	0.4nm,0.6s,baz=133,slow=6.2,SNR=5.4						

*TIR **09** 08:29:16.5, 41°.36N×20°.94E, h20^{km}, Md3.1/5*
*SKO **09** 08:29:16.4, 41°.34N×20°.87E, h15^{km}, M2.2, ML2.5*
*ATH **09** 08:29:17.0, 41°.36N×20°.90E, h15^{km}±1^{km}, ML2.5/9, Error ellipse: s-maj=2.6km s-min=1.1km az=136.0*
*PDG **09** 08:29:17.8±0.3, 41°.31N×20°.88E, h2^{km}, ML3.0/11, Error ellipse: s-maj=0.6km s-min=0.6km az=0.0*
*BEO **09** 08:29:18.6±0.4, 41°.35N×20°.96E, h6^{km}±3^{km}, ML2.4/10*
*THE **09** 08:29:18.1, 41°.34N×20°.98E, h0^{km}±2^{km}, ML2.5/4, Error ellipse: s-maj=2.7km s-min=0.9km az=52.0*
*CSEM **09** 08:29:18.6±0.1, 41°.34N×20°.96E, h10^{km}, ML2.5, Error ellipse: s-maj=3.9km s-min=2.2km az=54.0*

ISC 09 08:29:17.9±1.0, **41°.33N**±0°.01×**20°.92E**±0°.02, **h4^{km}**±9^{km}, **n113, σ0^{s}.92**/194, **15C-12D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHR	**Ohrid**	0.24	203	⇑iPg	Pg	08 29 22.4	-0.2
OHR				i Sg	Sg	08 29 25.9	+0.2
OHR				eLg	Lg	08 29 26.5	
	comp=E,988nm,0.3s						
OHR				eLg	Lg	08 29 26.5	
	comp=N,992nm,0.4s						
KRUS	**Krusevo**	0.25	81	⇑iPg	Pg	08 29 23.4	+0.7
KRUS				i Sg	Sg	08 29 27.7	+1.7
BIA	**Bitola**	0.43	136	P	Pg	08 29 26.7	+0.4
BIA				S	Sg	08 29 31.9	0.0
BIA	**Bitola**	0.43	136	⇑iPg	Pg	08 29 26.7	+0.4
BIA				i Sg	Sb	08 29 34.4	-0.7
BIA	**Bitola**	0.43	136	P	Pg	08 29 26.7	+0.4
BIA				S	Sg	08 29 31.9	0.0
PHP	**Peshkopia**	0.51	314	i Pg	Pg	08 29 26.6	-1.0
PHP				i Sg	Sg	08 29 33.6	-0.6
PHP	**Peshkopia**	0.51	314	i PG	Pg	08 29 26.6	-1.0
PHP				i SG	Sg	08 29 33.6	-0.6
FNA	**Florina**	0.65	148	ePg	Pg	08 29 29.7	-0.6
FNA				eSg	Sg	08 29 39.7	+1.0
FNA	**Florina**	0.65	148	P	Pg	08 29 29.6	-0.6
FNA				S	Sg	08 29 39.6	+0.8
FNA				AML	AML	08 29 43.6	
	comp=E,2553µm,0.2s						
FNA				AML	AML	08 29 43.6	
	comp=N,2124µm,0.3s						
FNA	**Florina**	0.65	148	P	Pg	08 29 29.8	-0.6
FNA				S	Sg	08 29 39.5	+0.8
FNA	**Florina**	0.65	148	P	Pg	08 29 29.9	-0.4
FNA				S	Sg	08 29 39.5	+0.8
KBN	**Korca**	0.71	188	i Pg	Pg	08 29 31.6	0.0
KBN				i Sg	Sb	08 29 42.2	-0.9
KBN	**Korca**	0.71	188	i PG	Pg	08 29 31.6	0.0
KBN				i SG	Sb	08 29 42.2	-0.9
SKO	**Skopje**	0.75	31	ePg	Pg	08 29 32.5	+0.3
SKO				eSg	Sg	08 29 42.2	+0.3
SKO	**Skopje**	0.75	31	P	Pg	08 29 32.5	+0.3
SKO	**Skopje**	0.75	31	i Pg	Pg	08 29 32.6	+0.3
SKO				i Sg	Sg	08 29 42.5	+0.5
SKO	**Skopje**	0.75	31	P	Pg	08 29 32.5	+0.3
SKO				eSg	Sg	08 29 42.2	+0.3
NEST	**Nestorio**	0.92	174	P	Pg	08 29 34.5	-1.0
NEST				S	Sg	08 29 47.9	+0.4
NEST				AML	AML	08 29 54.0	
	comp=E,668µm,0.3s						
NEST				AML	AML	08 29 54.8	
	comp=N,631µm,0.5s						
NEST	**Nestorio**	0.92	174	P	Pg	08 29 34.7	-0.8
NEST				S	Sb	08 29 49.3	+0.2
NEST	**Nestorio**	0.92	174	P	Pg	08 29 34.8	-0.8
NEST				S	Sg	08 29 48.1	+0.6
STIP	**Stip**	1.01	69	⇑iPg	Pn	08 29 40.0	+1.1
STIP				i Sg	Sn	08 29 56.9	+3.3
PUK	**Puka**	1.05	313	i Pg	Pg	08 29 36.0	-2.0
PUK				i Sg	Sg	08 29 52.2	+0.6
PUK	**Puka**	1.05	313	i PG	Pg	08 29 36.0	-2.0
PUK				i SG	Sg	08 29 52.2	+0.6
PENT	**Pentalofos**	1.15	172	P	Pg	08 29 40.1	+0.2
PENT				S	Sb	08 29 55.8	+0.3
PENT				AML	AML	08 30 01.2	
	comp=N,442µm,0.4s						
PENT				AML	AML	08 30 03.2	
	comp=E,460µm,0.4s						
PENT	**Pentalofos**	1.15	172	P	Pg	08 29 39.7	-0.2
PENT				S	Sb	08 29 55.7	+0.1
GRG	**Griva**	1.18	108	P	Pg	08 29 40.2	-0.3
GRG				S	Sn	08 29 57.4	-0.2
GRG				AML	AML	08 29 59.6	
	comp=N,240µm,0.3s						
GRG				AML	AML	08 29 59.9	
	comp=E,224µm,0.3s						
GRG	**Griva**	1.18	108	P	Pg	08 29 39.9	-0.5
GRG				S	Sb	08 29 55.9	-0.5
GRG	**Griva**	1.18	108	P	Pg	08 29 40.0	-0.5
GRG				S	Sb	08 29 55.9	-0.5
KZN	**Kozani**	1.21	148	P	Pg	08 29 40.3	-0.8
KZN				S	Sb	08 29 57.5	+0.2
KZN				AML	AML	08 30 02.3	
	comp=N,393µm,0.4s						
KZN				AML	AML	08 30 03.8	
	comp=E,362µm,0.5s						
KZN	**Kozani**	1.21	148	P	Pg	08 29 40.7	-0.4
KZN				S	Sn	08 29 59.1	+0.6
KZN	**Kozani**	1.21	148	P	Pg	08 29 40.7	-0.4
KZN				S	Sn	08 29 57.7	-0.8
BCI	**Bajram Curri**	1.22	329	i Pn	Pg	08 29 39.9	-1.3
BCI				i Sn	Sn	08 29 58.4	-0.1
BCI	**Bajram Curri**	1.22	329	i PN	Pg	08 29 39.9	-1.3
BCI				i SN	Sn	08 29 58.4	-0.1
VAY	**Valandovo**	1.24	90	ePg	Pb	08 29 40.8	-1.0
VAY				eSg	Sg	08 29 57.7	0.0
VAY	**Valandovo**	1.24	90	P	Pb	08 29 40.5	-1.3
VAY	**Valandovo**	1.24	90	i Pg	Pb	08 29 40.5	-1.3
VAY				i Sg	Sn	08 29 58.4	-0.8
VAY				eLg	Lg	08 29 59.6	
	comp=E,64nm,0.4s						
VAY				eLg	Lg	08 30 00.8	
	comp=N,69nm,0.6s						
VAY	**Valandovo**	1.24	90	P	Pb	08 29 40.5	-1.3
VAY	**Valandovo**	1.24	90	ePg	Pb	08 29 40.8	-1.0
VAY				eSg	Sg	08 29 57.7	0.0
ULC	**Ulcinj**	1.41	297	⇑iPg	Pn	08 29 42.9	-1.4
ULC				eSg	Sg	08 30 04.7	+1.6
ULC	**Ulcinj**	1.41	297	⇑iPg	Pn	08 29 42.9	-1.4
ULC				eSg	Sg	08 30 04.7	+1.6
KPRO	**Kipourio**	1.42	166	P	Pb	08 29 44.6	-0.3
KPRO				S	Sg	08 30 04.1	+0.7
KPRO				AML	AML	08 30 09.2	
	comp=E,392µm,0.4s						
KPRO				AML	AML	08 30 14.9	
	comp=N,371µm,0.8s						
KPRO	**Kipourio**	1.42	166	P	Pn	08 29 44.4	0.0
KPRO				S	Sg	08 30 04.1	+0.7
PVY	**Plav**	1.45	331	⇓iPg	Pn	08 29 44.9	-0.1
PVY				eSg	Sg	08 30 07.4	+2.9
PVY	**Plav**	1.45	331	⇓iPg	Pn	08 29 44.9	-0.1
PVY				eSg	Sg	08 30 07.4	+2.9
KNT	**Kendrikon**	1.50	96	P	Pb	08 29 46.0	-0.3
KNT				S	Sg	08 30 06.0	0.0
KNT				AML	AML	08 30 10.3	
	comp=N,212µm,0.5s						
KNT				AML	AML	08 30 12.0	
	comp=E,106µm,0.7s						
KNT	**Kendrikon**	1.50	96	P	Pn	08 29 45.7	+0.2
KNT				S	Sg	08 30 06.2	+0.2
DRME	**Dracevica, Mon**	1.56	304	⇑iPg	Pn	08 29 46.0	-0.3
DRME				eSg	Sg	08 30 10.4	+2.5
DRME	**Dracevica, Mon**	1.56	304	ePn	Pn	08 29 45.7	-0.6
DRME	**Dracevica, Mon**	1.56	304	⇑iPg	Pn	08 29 46.0	-0.3
DRME				eSg	Sg	08 30 10.4	+2.5
BARS	**Barje**	1.62	24	ePn	Pn	08 29 47.2	-0.1
BARS				eSn	Sn	08 30 07.6	-1.0
BARS	**Barje**	1.62	24	ePn	Pn	08 29 47.2	-0.1
BARS				eSn	Sn	08 30 07.6	-1.0
PDG	**Podgorica**	1.66	312	ePn	Pn	08 29 47.4	-0.3
PDG				eSn	Sb	08 30 10.6	+0.4
PDG	**Podgorica**	1.66	312	P	Pb	08 29 48.6	-0.4
PDG				S	Sg	08 30 10.9	-0.3
PDG	**Podgorica**	1.66	312	P	Pb	08 29 48.6	-0.4
PDG				eSn	Sb	08 30 10.6	+0.4
TTG	**Podgorica**	1.66	312	⇑iPn	Pb	08 29 48.6	-0.4
TTG				eSn	Sg	08 30 13.2	+2.0
LIT	**Litokhoron**	1.71	135	P	Pn	08 29 47.7	-0.8
LIT	**Litokhoron**	1.71	135	P	Pn	08 29 48.3	-0.2
BEY	**Berane**	1.72	334	⇓iPn	Pb	08 29 49.4	-0.7
BEY				eSn	Sg	08 30 15.0	+1.9
IVA	**Berane**	1.72	334	⇓iPn	Pb	08 29 49.4	-0.7
IVA				eSn	Sg	08 30 15.0	+1.9
SGD	**Sagiada**	1.80	197	P	Pb	08 29 51.3	0.0
SGD	**Sagiada**	1.80	197	P	Pb	08 29 50.7	-0.6
BUM	**Brajici-Budva**	1.80	303	⇓iPn	Pn	08 29 50.2	+0.5
BUM				eSn	Sg	08 30 16.8	+1.1
BUM	**Brajici-Budva**	1.80	303	⇓iPn	Pn	08 29 50.2	+0.5
BUM				eSn	Sg	08 30 16.8	+1.1
HORT	**Hortiatis**	1.80	113	P	Pn	08 29 48.9	-0.9
HORT	**Hortiatis**	1.80	113	P	Pn	08 29 49.5	-0.3
KEK	**Kerkira**	1.83	208	P	Pn	08 29 50.0	-0.1
KEK				S	Sb	08 30 15.6	+0.4
KEK	**Kerkira**	1.83	208	P	Pn	08 29 50.2	+0.1
KEK				S	Sb	08 30 15.2	+0.1
KOME	**Kolasin**	1.84	326	⇓iPn	Pb	08 29 51.7	-0.5
KOME				eSn	Sg	08 30 17.2	+0.1
KOME	**Kolasin**	1.84	326	⇓iPn	Pb	08 29 51.7	-0.5
KOME				eSn	Sg	08 30 17.2	+0.1
IGT	**Igoumenitsa**	1.85	194	eSn	Sb	08 30 16.0	+0.2
SELS	**Selova**	1.89	4	ePn	Pn	08 29 50.3	-0.7
SELS				eSn	Sb	08 30 15.9	-1.0
CEME	**Cevo**	1.93	310	⇑iPn	Pb	08 29 52.8	-0.8
CEME				eSn	Sg	08 30 19.9	+0.1
CEME	**Cevo**	1.93	310	⇑iPn	Pb	08 29 52.8	-0.8
CEME				eSn	Sg	08 30 19.9	+0.1
THL	**Klokotos Trika**	1.95	154	P	Pn	08 29 52.2	+0.5
THL				S	Sg	08 30 19.6	-1.0
THL				AML	AML	08 30 23.9	
	comp=E,91µm,0.8s						
THL				AML	AML	08 30 25.1	
	comp=N,110µm,0.6s						
THL	**Klokotos Trika**	1.95	154	P	Pn	08 29 52.2	+0.5
THL				S	Sb	08 30 18.8	+0.2
SRS	**Serrai**	2.02	95	ePn	Pn	08 29 52.3	-0.5
SRS	**Serrai**	2.02	95	P	Pn	08 29 52.2	-0.6
SRS	**Serrai**	2.02	95	ePn	Pn	08 29 52.3	-0.5
SRS	**Serrai**	2.02	95	P	Pn	08 29 52.6	-0.2
NKME	**Niksic**	2.05	315	ePn	Pb	08 29 54.6	-1.1
NKME				eSn	Sg	08 30 23.1	-0.7
NKME	**Niksic**	2.05	315	ePn	Pb	08 29 54.6	-1.1
NKME				eSn	Sg	08 30 23.1	-0.7
SJES	**Sjenica**	2.05	340	ePn	Pn	08 29 53.8	+0.6
SJES				eSn	Sn	08 30 18.7	-0.6
NKY	**Niksic**	2.06	316	⇑iPn	Pn	08 29 54.6	+1.2
NKY				eSn	Sb	08 30 23.1	+1.2
NKY	**Niksic**	2.06	316	⇑iPn	Pn	08 29 54.6	+1.2
NKY				eSn	Sb	08 30 23.1	+1.2
HCY	**Herceg Novi**	2.13	302	⇓iPn	Pn	08 29 55.2	+1.0
HCY				eSn	Sb	08 30 23.6	-0.1
HCY	**Herceg Novi**	2.13	302	⇓iPn	Pn	08 29 55.2	+1.0
HCY				eSn	Sb	08 30 23.6	-0.1
NVR	**Nevrokopi**	2.21	89	P	Pn	08 29 56.0	+0.6
NVR	**Nevrokopi**	2.21	89	P	Pn	08 29 55.9	+0.5
PLE	**Pljevlja**	2.30	331	⇑iPn	Pn	08 29 57.3	+0.7
PLE				eSn	Sb	08 30 29.0	+0.3
PLE	**Pljevlja**	2.30	331	⇑iPn	Pn	08 29 57.3	+0.7
PLE				eSn	Sb	08 30 29.0	+0.3
IVAS	**Ivanjica**	2.31	346	ePn	Pn	08 29 57.2	+0.4
IVAS	**Ivanjica**	2.31	346	ePn	Pn	08 29 57.2	+0.4
ZAPS	**Zavoj**	2.32	33	ePn	Pn	08 29 57.6	+0.8
TREB	**Trebinje**	2.36	307	ePn	Pn	08 29 58.0	+0.6
BRY	**Bratogost**	2.37	312	⇓iPn	Pn	08 29 58.9	+1.3
BRY				eSn	Sb	08 30 30.5	-0.2
BRY	**Bratogost**	2.37	312	⇓iPn	Pn	08 29 58.9	+1.3
BRY				eSn	Sb	08 30 30.5	-0.2
UPM	**Unac-Piva**	2.40	322	ePn	Pn	08 29 59.0	+1.0
UPM				eSn	Sb	08 30 31.2	-0.4
UPM	**Unac-Piva**	2.40	322	ePn	Pn	08 29 59.0	+1.0
UPM				eSn	Sb	08 30 31.2	-0.4
PAIG	**Paliouri**	2.52	123	P	Pn	08 29 59.7	+0.1
PAIG	**Paliouri**	2.52	123	P	Pn	08 29 59.9	+0.3
AGG	**Agios Georgios**	2.55	154	P	Pn	08 29 59.4	-0.6
AGG				S	Sn	08 30 32.1	+0.7
AGG				AML	AML	08 30 35.1	
	comp=N,132µm,0.6s						
AGG				AML	AML	08 30 38.2	
	comp=E,141µm,0.4s						
AGG	**Agios Georgios**	2.55	154	P	Pn	08 30 00.0	0.0
AGG				S	Sn	08 30 32.4	+1.0
LKD2	**Lefkada island**	2.55	185	P	Pb	08 30 02.2	-2.0
LKD2	**Lefkada island**	2.55	185	P	Pn	08 30 01.4	+1.4
PVO	**Paravola**	2.75	170	P	Pn	08 30 03.8	+1.1
PVO	**Paravola**	2.75	170	P	Pn	08 30 03.7	+1.0
BBLS	**Lazići**	2.77	337	ePn	Pn	08 30 02.8	-0.3
ANX	**Ano Chora**	2.84	164	P	Pn	08 30 05.8	+1.7
ANX	**Ano Chora**	2.84	164	P	Pn	08 30 05.3	+1.2
DIVS	**Divibare**	2.85	346	ePn	Pn	08 30 04.2	0.0
STON	**Ston**	2.85	304	ePn	Pn	08 30 04.2	+0.2
STON				Sn	Sn	08 30 40.8	+2.0
STON	**Ston**	2.85	304	ePn	Pn	08 30 04.2	+0.2
UDBI	**Udbina**	4.95	312	ePn	Pn	08 30 34.0	+0.9
UDBI				Sn	Sn	08 31 32.3	+1.5

*NIED **09** 08:30:00, 42°.10N×142°.50E, h62^{km}, Mw3.9 Best double couple: $M_0$8.27000×10^{14} NP1:ϕ_s227.00000°, δ25.00000°, λ113.00000°. NP2:ϕ_s22.00000°, δ68.00000°, λ80.00000°.*
*BJI **09** 08:30:13.8, 42°.13N×143°.26E, h74^{km}, mb4.7/14, mB4.7/9*
*ISCJB **09** 08:30:18.3±0.2, 42°.07N±0°.03×142°.49E±0°.03, h72^{km}±2^{km}, mb4.1/31, Error ellipse: s-maj=5.4km s-min=2.8km az=149.7*
*MOS **09** 08:30:18.4±0.8, 42°.05N×142°.49E, h77^{km}, mb4.3/12, Error ellipse: s-maj=10.6km s-min=7.1km az=68.8*
*JMA **09** 08:30:18.9±0.2, 42°.07N×142°.48E, h67^{km}±2^{km}, M3.8 Broadband fault plane solution: P waves. NP1: ϕ_s14.00000°, δ85.00000°, λ97.00000°. NP2:ϕ_s135.00000°, δ9.00000°, λ31.00000°. Principal axes: T Plg49.0000°, Azm292.0000°; N Plg7.0000°, Azm193.0000°; P Plg40.0000°, Azm97.0000°;*
JMA Felt II J1.
*NEIC **09** 08:30:19.1±0.7, 42°.03N×142°.96E, h88^{km}±5^{km}, mb4.4/7 Error ellipse: s-maj=11.6km s-min=7.7km az=119.0*
NEIC Felt at Shizunai. Also felt at Aomori, Honshu. Recorded [2 JMA] in southern Hokkaido.
*SKHL **09** 08:30:20.0±0.9, 41°.97N×142°.70E, h82^{km}±2^{km}, mb5.4/5, msh5.9/6*
*IDC **09** 08:30:20.2±1.6, 42°.10N×142°.40E, h74^{km}±12^{km}, mb3.6/18,*

mb1 3.7/22, mb1mx3.6/70, mbtmp3.9/22, MS2.7/5, Ms1 2.7/5, ms1mx2.4/61, Error ellipse: s-maj=15.4km s-min=10.3km az=125.0

ISC 09 08:30:19.8±0.6**, 42°.05N**±0°.04×**142°.49E**±0°.03**, h71**^{km}±5^{km}**, n121,** σ**1^{s}.46**/146**, mb4.2**/31**, 5C-11D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNBK	**Urakawa-nobuka**	0.30	41	⇑P	Pn	08 30 29.4	-1.7
JNBK				eS	Sn	08 30 37.1	-2.3
JSHD	**Hidakashinhida**	0.36	357	P	Pn	08 30 30.2	-1.3
JSHD				eS	Sn	08 30 39.3	-0.8
ERM	**Erimo**	0.50	94	eP	Pn	08 30 31.8	-0.8
ERM	**Erimo**	0.50	94	ePn	Pn	08 30 31.9	-0.8
ERM				eSn	Sn	08 30 40.4	-1.8
ERM	**Erimo**	0.50	94	ePN	Pn	08 30 31.9	-0.8
ERM				e		08 30 40.4	
JEM	**Erimo**	0.50	94	⇑P	Pn	08 30 31.8	-0.9
JEM				eS	Sn	08 30 41.3	-0.8
MYR	**Moyori**	0.64	68	eP	Pn	08 30 33.1	-1.0
MYR				eS	Sn	08 30 43.6	-1.0
JTHR	**Tokachihiroo**	0.65	68	P	Pn	08 30 33.3	-0.9
JTHR				eS	Sn	08 30 44.0	-0.8
JBT2	**Biratori 2**	0.73	353	⇓P	Pn	08 30 33.7	-1.4
JBT2				eS	Sn	08 30 44.9	-1.6
JCH	**Churui**	0.86	49	⇑P	Pn	08 30 35.6	-1.0
JCH				eS	Sn	08 30 48.3	-0.7
JKB	**Kayabe**	1.10	262	⇓P	Pn	08 30 38.3	-1.3
JKB				eS	Sn	08 30 52.5	-1.8
JEW	**Eniwo**	1.10	316	⇓P	Pn	08 30 38.6	-1.0
JFR	**Furan**	1.11	4	⇓P	Pn	08 30 38.5	-1.3
JNB	**Noboribetsu**	1.15	292	⇓P	Pn	08 30 38.4	-1.9
JNB				eS	Sn	08 30 53.4	-2.2
JOT	**Ohata**	1.27	239	⇓P	Pn	08 30 40.6	-1.2
JOT				eS	Sn	08 30 57.0	-1.2
JOB	**Onbets**	1.31	49	⇑P	Pn	08 30 42.3	0.0
JOB				eS	Sn	08 31 00.1	+1.0
JAB	**Ashibetsu**	1.46	352	⇓P	Pn	08 30 43.7	-0.6
HRK	**Horoka**	1.49	18	eP	Pn	08 30 44.8	+0.1
HRK				eS	Sn	08 31 04.7	+1.2
JAR	**Ashorobuto**	1.56	37	⇑P	Pn	08 30 44.7	-0.9
JYM2	**Yakumo 2**	1.58	273	⇓P	Pn	08 30 44.5	-1.3
JYM2				eS	Sn	08 31 03.9	-1.6
JSR	**Shiriuchi**	1.63	252	⇓P	Pn	08 30 45.4	-1.2
JSR				eS	Sn	08 31 05.6	-1.2
JTM	**Tenmabayashi**	1.66	221	P	Pn	08 30 46.3	-0.6
JTM				eS	Sn	08 31 07.1	-0.2
ASAJ	**Asahikawa**	2.06	2	P	Pn	08 30 52.2	-0.1
	54nm,0.3s,baz=213,slow=10,SNR=166						
ASAJ				S	Sn	08 31 16.9	-0.2
	34nm,0.3s,baz=249,slow=32,SNR=14						
ASAJ				LR	LR	08 31 50.9	
	comp=Z,62nm,21.2s,baz=6.0,slow=45						
ASAJ	**Asahikawa**	2.06	2	ePn	Pn	08 30 52.3	-0.1
ASAJ				eSn	Sn	08 31 19.4	+2.3
GLVR	**Golovnino**	2.79	52	eP	Pn	08 31 02.0	-0.2
GLVR				eS	Sn	08 31 33.0	-1.7
GLVR				A	A	08 31 39.0	
	2µm,0.2s						
GLVR				A	A	08 31 39.0	
	699nm,0.2s						
GLVR	**Golovnino**	2.79	52	ePN	Pn	08 31 02.4	+0.2
GLVR				eS	Sn	08 31 33.1	-1.7
GLVR				smax	smax		
	comp=N,2µm,0.2s						
GLVR				smax	smax		
	comp=E,699nm,0.1s						
GRPR	**Tuman**	3.09	50	eP	Pn	08 31 06.0	-0.2
GRPR				AMB	AMB	08 31 09.0	
	comp=E,151nm,0.2s						
GRPR				eS	Sn	08 31 40.0	-2.0
GRPR				A	A	08 31 42.0	
	comp=E,298nm,0.3s						
GRPR				A	A	08 31 42.0	
	comp=E,470nm,0.3s						
GRPR	**Tuman**	3.09	50	ePN	Pn	08 31 06.3	+0.1
GRPR				eS	Sn	08 31 40.3	-1.7
GRPR				pmax	pmax		
	comp=Z,151nm,0.2s						
GRPR				smax	smax		
	comp=N,298nm,0.3s						
GRPR				smax	smax		
	comp=E,470nm,0.3s						
LAGR	**Lagunnoye**	3.14	49	eP	Pn	08 31 07.0	+0.1
LAGR				AMB	AMB	08 31 13.0	
	comp=E,112nm,0.1s						
LAGR				AMB	AMB	08 31 13.0	
	comp=E,187nm,0.1s						
LAGR				eS	Sn	08 31 42.0	-1.2
LAGR				A	A	08 31 50.0	
	comp=E,623nm,0.2s						
LAGR				A	A	08 31 50.0	
	comp=E,210nm,0.2s						
LAGR	**Lagunnoye**	3.14	49	ePN	Pn	08 31 07.3	+0.4
LAGR				eS	Sn	08 31 42.2	-1.0
LAGR				pmax	pmax		
	comp=N,112nm,0.1s						
LAGR				pmax	pmax		
	comp=Z,187nm,0.1s						
LAGR				smax	smax		
	comp=N,623nm,0.2s						
LAGR				smax	smax		
	comp=E,210nm,0.1s						
YUK	**Yuzh-Kuril’sk**	3.17	50	i P	Pn	08 31 07.0	-0.3
YUK				AMB	AMB	08 31 14.0	
	comp=E,28nm,0.2s						
YUK				AMB	AMB	08 31 14.0	
	comp=E,135nm,0.2s						
YUK				AMB	AMB	08 31 14.0	
	comp=E,163nm,0.2s						
YUK				i S	Sn	08 31 42.0	-1.9
YUK				A	A	08 31 49.0	
	comp=E,367nm,0.3s						
YUK	**Yuzh-Kuril’sk**	3.17	50d	iPN	Pn	08 31 07.7	+0.4
YUK				i S	Sn	08 31 42.6	-1.3
YUK				pmax	pmax		
	comp=Z,163nm,0.2s						
YUK				pmax	pmax		
	comp=N,28nm,0.1s						
YUK				pmax	pmax		
	comp=E,135nm,0.1s						
YUK				smax	smax		
	comp=N,188nm,0.2s						
YUK				smax	smax		
	comp=E,367nm,0.3s						
SHO	**Shikotan**	3.67	59	i P	Pn	08 31 13.0	-1.1
SHO				AMB	AMB	08 31 14.0	
	comp=E,28nm,0.2s						
SHO				AMB	AMB	08 31 14.0	
	comp=E,34nm,0.2s						
SHO				AMB	AMB	08 31 14.0	
	comp=E,93nm,0.2s						
SHO				i S	Sn	08 31 53.0	-3.1
SHO				A	A	08 31 55.0	
	comp=E,270nm,0.3s						
SHO				A	A	08 31 55.0	
	comp=E,317nm,0.3s						
SHO	**Shikotan**	3.67	59d	iPN	Pn	08 31 13.8	-0.3
SHO				i S	Sn	08 31 53.6	-2.5
SHO				pmax	pmax		
	comp=N,28nm,0.2s						
SHO				pmax	pmax		
	comp=E,34nm,0.2s						
SHO				pmax	pmax		
	comp=Z,93nm,0.2s						
SHO				smax	smax		
	comp=E,317nm,0.2s						
SHO				smax	smax		
	comp=N,270nm,0.5s						
YSS	**Yuzh-Sakhalins**	4.90	2	eP	Pn	08 31 32.7	+1.8
YSS	**Yuzh-Sakhalins**	4.90	2	ePn	Pn	08 31 31.3	+0.3
YSS	**Yuzh-Sakhalins**	4.90	2	ePN	Pn	08 31 31.5	+0.6
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
KUR	**Kuril’sk**	5.03	49	eP	Pn	08 31 34.0	+1.3
KUR				AMB	AMB	08 31 35.0	
	comp=Z,56nm,0.4s						
KUR				eS	Sn	08 32 29.0	-0.5
KUR				A	A	08 32 35.0	
	comp=Z,66nm,0.3s						
KUR				A	A	08 32 35.0	
	comp=Z,33nm,0.3s						
KUR	**Kuril’sk**	5.03	49	ePN	Pn	08 31 34.2	+1.5
KUR				eS	Sn	08 32 30.4	+0.9
KUR				pmax	pmax		
	comp=Z,56nm,0.4s						
KUR				smax	smax		
	comp=N,69nm,0.3s						
KUR				smax	smax		
	comp=E,50nm,0.4s						
MJB9	**Matsu-Tunnel**	6.42	213	ePn	Pn	08 31 53.2	+1.3
MAJO	**Matsushiro**	6.42	212	eP	Pn	08 31 52.9	+1.1
MAJO	**Matsushiro**	6.42	212	ePn	Pn	08 31 52.9	+1.1
MAJO	**Matsushiro**	6.42	212	ePN	Pn	08 31 52.9	+1.1
MJAR	**Matsushiro Arr**	6.42	212	P	Pn	08 31 52.0	+0.2
	comp=E,0.8nm,0.3s,baz=32,slow=12,SNR=6.8						
INU	**Inuyama**	7.94	214	ePn	Pn	08 32 14.4	+1.8
USRK	**Ussuriysk Ar.**	7.97	289	P	Pn	08 32 12.4	-0.5
	baz=134,slow=28						
USRK				LR	LR	08 35 20.4	
	comp=E,64nm,20.5s,baz=137,slow=38						
JHJ	**Hachijo jima 2**	9.17	194	P	Pn	08 32 26.9	-2.4
	comp=E,3.4nm,0.3s,baz=351,slow=19,SNR=5.2						
JHJ				S	Sn	08 34 02.3	-8.7
	comp=E,5.7nm,0.3s,baz=131,slow=19,SNR=3.5						
MDJ	**Mudanjiang**	9.74	290	ePn	Pn	08 32 39.9	+2.9
KLR	**Kul’dur**	10.39	317	P	Pn	08 32 46.8	+1.0
	comp=E,0.0nm,0.3s,baz=119,slow=12,SNR=7.8						
KSRS	**Korea Array**	12.11	253	P	Pn	08 33 10.3	+0.9
	comp=E,0.5nm,0.3s,baz=74,slow=13,SNR=4.1						
KSRS				LR	LR	08 37 48.0	
	comp=E,10nm,19.0s,baz=182,slow=37						
KS01	**Wonju Array Si**	12.12	253	ePn	Pn	08 33 13.2	+3.7
KS15	**Wonju Array Si**	12.14	253	ePn	Pn	08 33 15.3	+5.4
NJ2	**Nanjing**	21.28	250	eP	P	08 35 01.7	+1.3
NJ2				pmax	pmax		
	comp=E,21nm,0.5s						
HHC	**Hu-ho-hao-te**	23.15	277	eP	P	08 35 18.7	-1.5
HHC				pP	pP	08 35 37.6	+2.2
HHC				S	S	08 39 19.2	-6.9
HHC				sS	sS	08 40 00.3	+6.5
HHC				pmax	pmax		
	comp=E,19nm,0.9s						
HHC				pmax	pmax		
	comp=E,240nm,7.5s						
WHN	**Wuhan**	25.31	252	P	P	08 35 45.1	+5.4
SONA1	**Songino Array**	26.02	295	eP	P	08 35 46.1	-0.1
SONM	**Songino Array**	26.02	295	P	P	08 35 45.7	-0.6
	comp=E,1.2nm,0.5s,baz=78,slow=8.4,SNR=7.7						
TWG	**Pinlang**	26.23	230	eP	P	08 35 48.9	+0.8
	comp=E,63nm,1.1s						
H11N2	**WAKE ISLAND Hy**	30.36	130	T	T	09 07 51.3	
	baz=324,slow=75,SNR=109						
H11N1	**WAKE ISLAND Hy**	30.38	130	T	T	09 08 03.0	
	baz=324,slow=75,SNR=129						
H11N3	**WAKE ISLAND Hy**	30.38	130	T	T	09 08 06.2	
	baz=324,slow=75,SNR=74						
H11S1	**WAKE ISLAND Hy**	31.23	131	T	T	09 09 09.8	
	baz=325,slow=76,SNR=87						
H11S3	**WAKE ISLAND Hy**	31.23	131	T	T	09 09 10.2	
	baz=325,slow=76,SNR=82						
H11S2	**WAKE ISLAND Hy**	31.25	131	T	T	09 09 14.0	
	baz=325,slow=76,SNR=90						
CD2	**Chengdu**	32.81	263	eP	P	08 36 46.0	-0.5
CD2				pmax	pmax		
	comp=E,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=E,140nm,5.2s						
GYA	**Guiyang**	33.17	254	eP	P	08 36 51.0	+1.3
GYA				pmax	pmax		
	comp=E,10.0nm,0.8s						
KMI	**Kunming**	36.79	255	P	P	08 37 21.9	+0.9
KMI				pmax	pmax		
	comp=E,13nm,0.5s						
KMI				pmax	pmax		
	comp=E,68nm,5.3s						
ZAA0	**Zalesovo Array**	39.31	308	eP	P	08 37 41.1	-0.5
	comp=E,3.0nm,0.8s						
ZALV	**Zalesovo Beam**	39.31	308	P	P	08 37 40.8	-0.8
	comp=E,2.4nm,0.6s,baz=88,slow=8.4,SNR=8.7						
ZALV				LR	LR	08 53 49.9	
	comp=E,17nm,18.7s,baz=79,slow=36						
ZALV	**Zalesovo Beam**	39.31	308	eP	P	08 37 41.1	-0.5
ZALV	**Zalesovo Beam**	39.31	308	eP	P	08 37 41.1	-0.5
WMQ	**Urumqi**	39.53	292	P	P	08 37 45.8	+2.1
WMQ				pmax	pmax		
	comp=E,21nm,0.8s						
MK01	**Makanchi Array**	42.34	298	eP	P	08 38 06.0	-0.6
MK31	**Makanchi Array**	42.34	298	eP	P	08 38 06.2	-0.4
MK31	**Makanchi Array**	42.34	298	eP	P	08 38 06.2	-0.4
MKAR	**Makanchi Array**	42.34	298	P	P	08 38 06.5	-0.2
	comp=E,2.5nm,0.8s,baz=82,slow=8.9,SNR=18						
MKAR	**Makanchi Array**	42.34	298	eP	P	08 38 06.2	-0.4
MKAR	**Makanchi Array**	42.34	298	eP	P	08 38 06.2	-0.4
	comp=E,16nm,0.8s						
MAKZ	**Makanchi**	42.54	298	eP	P	08 38 08.3	0.0
	comp=E,2.9nm,0.8s						
MAKZ	**Makanchi**	42.54	298	eP	P	08 38 08.3	0.0
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KURK	**Kurchatov**	43.64	304	eP	P	08 38 16.3	-0.8
KURK	**Kurchatov**	43.64	304	eP	P	08 38 16.3	-0.8
	comp=Z,5.0nm,0.8s						
KURK	**Kurchatov**	43.64	304	P	P	08 38 17.3	+0.2
KURK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KURBB	**Kurchatov Arra**	43.72	304	P	P	08 38 17.3	-0.4
	comp=Z,5.0nm,0.7s,baz=76,slow=8.6,SNR=25						
CMAR	**Chiang Mai Arr**	43.75	251	P	P	08 38 18.7	+0.4
	comp=Z,0.6nm,0.3s,baz=51,slow=7.1,SNR=4.9						
ILAR	**Eielson Array**	44.86	35	P	P	08 38 26.6	-0.1
	comp=Z,0.3nm,0.4s,baz=263,slow=5.3,SNR=8.1						
BVAR	**Borovoye Array**	47.92	309	P	P	08 38 50.5	-0.2
	comp=Z,4.2nm,0.4s,baz=76,slow=9.8,SNR=34						
BRVK	**Borovoye**	47.98	309	eP	P	08 38 51.4	+0.2
BRVK	**Borovoye**	47.98	309	eP	P	08 38 51.1	-0.1
	comp=Z,2.7nm,0.4s						
BRVK	**Borovoye**	47.98	309	eP	P	08 38 51.1	-0.1
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.4s						
KSH	**Kashi**	49.27	291	eP	P	08 39 03.1	+1.6
KSH				PcP	PcP	08 40 22.7	-0.7
KSH				PP	PP	08 40 59.9	+4.2
KSH				PcS	PcS	08 44 16.1	-3.9
KSH				S	S	08 46 02.2	-0.2
KSH				pmax	pmax		
	comp=Z,83nm,4.2s						
INK	**Inuvik**	49.57	29	P	P	08 39 02.9	-0.3
	comp=Z,1.0nm,0.5s,baz=304,slow=11,SNR=9.1						
KK31	**Karatay Array**	51.45	297	eP	P	08 39 17.1	-0.6
KK31	**Karatay Array**	51.45	297	eP	P	08 39 17.2	-0.6
KKAR	**Karatay Array**	51.45	297	eP	P	08 39 17.2	-0.5
KKAR	**Karatay Array**	51.45	297	eP	P	08 39 17.2	-0.5
ABKAR	**Akbulak array**	55.43	308	eP	P	08 39 46.6	-0.1
RES	**Resolute Bay**	57.54	15	eP	P	08 40 00.7	-0.7
	comp=Z,1.7nm,0.9s						
RES	**Resolute Bay**	57.54	15	eP	P	08 40 00.7	-0.7
RES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
YKA	**Yellowknife Ar**	59.08	32	P	P	08 40 12.7	+0.5
	comp=Z,0.5nm,0.8s,baz=304,slow=6.9,SNR=3.0						
WRA	**Warramunga Arr**	62.14	189	P	P	08 40 33.1	-0.4
	comp=Z,0.7nm,0.7s,baz=7.3,slow=6.9,SNR=8.2						
FIA1	**FINESS Array S**	64.78	332	eP	P	08 40 50.0	-0.4
FINES	**FINESS Array B**	64.78	332	P	P	08 40 50.0	-0.5
	comp=Z,2.1nm,0.6s,baz=38,slow=9.6,SNR=7.6						
FINES				LR	LR	09 13 50.6	
	comp=Z,20nm,20.1s,baz=284,slow=40						
FINES	**FINESS Array B**	64.78	332	P	P	08 40 50.0	-0.5
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FINES				MLR	MLR		
	comp=Z,20nm,20.1s						
ASAR	**Alice Springs**	65.87	189	P	P	08 40 57.8	-0.1
	comp=Z,0.1nm,0.3s,baz=17,slow=9.8,SNR=3.6						
NC405	**NORSAR Array S**	69.68	337	eP	P	08 41 21.4	-0.1
HFS	**Hagfors**	69.87	335	P	P	08 41 21.7	-0.9
	comp=Z,1.7nm,0.5s,baz=52,slow=5.7,SNR=12						
NB2	**NORSAR Subarra**	69.89	337	P	P	08 41 21.7	-1.1
	comp=Z,1.0nm,0.6s,baz=36,slow=6.2						
AKASG	**Malin Array Be**	70.86	322	P	P	08 41 26.5	-2.2
	comp=Z,0.7nm,0.4s,baz=43,slow=6.1,SNR=5.7						
NVAR	**Mina Array Bea**	71.37	55	P	P	08 41 33.9	+1.5
	comp=Z,0.1nm,0.3s,baz=74,slow=8.3,SNR=2.9						
PDAR	**Pinedale Array**	73.59	47	P	P	08 41 45.9	+0.3
	comp=Z,0.3nm,0.6s,baz=228,slow=1.8,SNR=4.9						
BUR08	**Bucovina Ar. S**	74.89	322	eP	P	08 41 53.0	+0.2
BUR04	**Bucovina Ar. S**	74.90	321	eP	P	08 41 52.7	-0.2
EML	**El Monte Cty P**	75.84	59	eP	P	08 41 52.6	-5.8
BORC	**Borrego Spring**	75.86	58	eP	P	08 41 52.2	-6.3
BRTR	**Keskin Array B**	76.16	311	P	P	08 41 59.7	-0.7
	comp=Z,0.3nm,0.4s,baz=52,slow=4.6,SNR=3.2						
TXAR	**Lajitas Array**	86.42	53	P	P	08 42 54.9	+0.1
	comp=Z,0.4nm,0.6s,baz=285,slow=3.2,SNR=4.6						
CDVI	**St. Croix**	115.39	29	ePKPdf	PKPdf	08 48 50.2	-3.5
SNAA	**Sanae**	145.78	199	PKP	PKPdf	08 49 47.7	-1.3
SNAA	**Sanae**	145.78	199	PKiKP	PKPdf	08 49 50.9	+1.9
SNAA	**Sanae**	145.78	199	PKPbc	PKPdf	08 49 47.7	-1.3
	comp=Z,0.5nm,0.4s,baz=234,slow=8.7,SNR=10						

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*MOS **09** 09:05:10.1±1.4, 53°.80N×168°.15E, h140^{km}, mb4.2/1, Error ellipse: s-maj=20.5km s-min=10.0km az=21.0*

KRSC 09 09:05:10.2±1.6**, 53°.80N**×**168°.15E, h140**^{km}±30^{km}**, ML4.1, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	**Bering**	1.89	319	eP	Pn	09 05 43.5	+0.2
BKI				eS	Sn	09 06 11.3	+2.5
BKI	**Bering**	1.89	319	PN	Pn	09 05 43.5	+0.2
BKI				S	Sn	09 06 11.3	+2.5
MKZ	**Mys Kozlova**	3.85	284	eP	Pn	09 06 09.4	+1.4
MKZ				eS	Sn	09 06 53.4	+0.5
MKZ	**Mys Kozlova**	3.85	284	PN	Pn	09 06 09.4	+1.4
MKZ				S	Sn	09 06 53.4	+0.5
KBTR	**Krutoberegovo**	3.90	310	eP	Pn	09 06 10.7	+2.0
SMKR	**Semkarok**	4.73	309	eP	Pn	09 06 21.5	+1.7
SMKR	**Semkarok**	4.73	309	PN	Pn	09 06 21.5	+1.7
ZLN	**Zelenaya**	4.78	301	eP	Pn	09 06 23.0	+2.5
ZLN	**Zelenaya**	4.78	301	PN	Pn	09 06 23.0	+2.5
TUMR	**Tumrok**	4.89	291	eP	Pn	09 06 24.5	+2.6
TUMR	**Tumrok**	4.89	291	PN	Pn	09 06 24.5	+2.6
SPN	**Mys Shipunski**	4.91	265	eP	Pn	09 06 22.9	+0.9
SPN				eS	Sn	09 07 19.2	+1.2
SPN	**Mys Shipunski**	4.91	265	PN	Pn	09 06 22.9	+0.9
SPN				S	Sn	09 07 19.2	+1.2
SRKR	**Sorokina**	4.91	308	eP	Pn	09 06 23.9	+1.7
SRKR	**Sorokina**	4.91	308	PN	Pn	09 06 23.9	+1.7
KMNR	**Kamenistaya**	4.98	296	eP	Pn	09 06 26.1	+3.0
KMNR	**Kamenistaya**	4.98	296	PN	Pn	09 06 26.1	+3.0
KII	**Karymskiy**	5.15	276	eP	Pn	09 06 27.6	+2.3
KII				eS	Sn	09 07 25.1	+1.2
KII	**Karymskiy**	5.15	276	PN	Pn	09 06 27.6	+2.3
KII				S	Sn	09 07 25.1	+1.2
NLC	**Nalytchevo**	5.29	267	eP	Pn	09 06 28.3	+1.1
NLC				eS	Sn	09 07 28.7	+1.5
NLC	**Nalytchevo**	5.29	267	PN	Pn	09 06 28.3	+1.1
NLC				S	Sn	09 07 28.7	+1.5
SDLR	**Sedlovina**	5.55	268	eP	Pn	09 06 33.1	+2.4
SDLR	**Sedlovina**	5.55	268	PN	Pn	09 06 33.1	+2.4
UGLR	**Uglovaya**	5.60	268	eP	Pn	09 06 33.2	+1.8
UGLR	**Uglovaya**	5.60	268	PN	Pn	09 06 33.2	+1.8
SMAR	**Somma**	5.60	268	eP	Pn	09 06 32.8	+1.3
SMAR	**Somma**	5.60	268	PN	Pn	09 06 32.8	+1.3
DALK	**Dalny**	5.67	266	P	Pn	09 06 36.0	+3.8
DALK	**Dalny**	5.67	266	PN	Pn	09 06 36.0	+3.8
ESO	**Esso**	5.86	295	P	Pn	09 06 37.1	+2.4
ESO	**Esso**	5.86	295	PN	Pn	09 06 37.1	+2.4
RUS	**Russkaya**	5.96	261	eP	Pn	09 06 38.8	+2.7
RUS	**Russkaya**	5.96	261	PN	Pn	09 06 38.8	+2.7
GNL	**Ganaly**	6.06	273	eP	Pn	09 06 41.5	+4.0
GNL	**Ganaly**	6.06	273	PN	Pn	09 06 41.5	+4.0
KRMR	**Karymshinskiy**	6.08	265	eS	Sn	09 07 47.2	+1.0
ASAK	**Asacha**	6.33	261	eP	Pn	09 06 43.6	+2.4
ASAK	**Asacha**	6.33	261	PN	Pn	09 06 43.6	+2.4
KDTR	**Khodutka, Kamc**	6.42	256	eP	Pn	09 06 45.0	+2.7
KDTR				eS	Sn	09 07 55.3	+0.9

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*ISCJB **09** 09:18:17.5±1.3, 17°.5S±0°.6×178°.8W±0°.4, h539^{km}, mb3.5/8, Error ellipse: s-maj=90.9km s-min=16.4km az=149.6*

*IDC **09** 09:18:26.0±22.0, 17°.69S×178°.80W, h640^{km}±314^{km}, mb3.0/8, mb1 3.3/8, mb1mx2.9/44, mbtmp4.0/8, Error ellipse: s-maj=111.4km s-min=69.5km az=6.0*

ISC 09 09:18:18.3±1.5**, 17°.5S**±0°.6×**178°.7W**±0°.4**, h539**^{km}**, n8,** σ**0^{s}.49**/8**, mb3.4**/8**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	38.59	241	P	P	09 24 55.3	0.0
	1.7nm,0.8s,baz=103,slow=9.3,SNR=3.7						
WRA	**Warramunga Arr**	44.44	259	P	P	09 25 41.8	0.0
	1.3nm,0.7s,baz=96,slow=7.1,SNR=35						
ASAR	**Alice Springs**	44.64	254	P	P	09 25 43.5	+0.2
	5.5nm,0.7s,baz=87,slow=8.8,SNR=93						
YBH	**Yreka Blue Hor**	78.38	39	P	P	09 29 24.2	+0.9
	0.9nm,0.7s,baz=243,slow=6.8,SNR=5.1						
NVAR	**Mina Array Bea**	79.31	44	P	P	09 29 28.1	-0.4
	0.5nm,0.6s,baz=223,slow=8.8,SNR=6.2						
ILAR	**Eielson Array**	85.54	13	P	P	09 29 58.8	-0.3
	0.5nm,0.7s,baz=230,slow=6.3,SNR=4.4						
TXAR	**Lajitas Array**	86.00	58	P	P	09 30 02.1	-0.1
	0.8nm,0.7s,baz=212,slow=6.2,SNR=10						
PDAR	**Pinedale Array**	87.24	44	P	P	09 30 07.5	-0.4
	0.4nm,0.6s,baz=210,slow=2.8,SNR=5.6						

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*NEIC **09** 09:20:15.7±0.0, 16°.20N×95°.65W, h68^{km}, MD4.0(MEX), After MEX.*

MEX 09 09:20:15.8±0.5**, 16°.22N**×**95°.66W, h66**^{km}±9^{km}**, MD4.0, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	**Huatulco**	0.62	224	eP	Pn	09 20 27.7	-1.9
HUIG				eS	Sn	09 20 38.1	-1.6
HUIG	**Huatulco**	0.62	224	ePg	Pn	09 20 27.7	-1.9
HUIG				eSn	Sn	09 20 38.1	-1.6
VHO	**Vista Hermosa**	1.33	310	eP	Pn	09 20 37.3	-1.4
VHO				eS	Sn	09 20 53.6	-2.1
VHO	**Vista Hermosa**	1.33	310	ePn	Pn	09 20 37.3	-1.4
VHO				eSn	Sn	09 20 53.8	-2.0
TUIG	**Tuzandepetl**	2.16	33	i S	Sn	09 21 13.8	-1.3
PNIG	**Pinotepa**	2.38	274	eP	Pn	09 20 51.1	-1.4
PNIG				i S	Sn	09 21 19.5	-1.1
PNIG	**Pinotepa**	2.38	274	ePn	Pn	09 20 51.1	-1.4
PNIG				eSn	Sn	09 21 19.4	-1.3
PCIG		2.40	102	eP	Pn	09 20 51.8	-1.0
PCIG				i S	Sn	09 21 19.1	-2.1
PCIG		2.40	102	ePn	Pn	09 20 51.8	-1.0
PCIG				eSn	Sn	09 21 19.1	-2.0
TGIG		2.49	77	eP	Pn	09 20 53.0	-1.1
TGIG				i S	Sn	09 21 22.3	-1.2
TGIG		2.49	77	ePn	Pn	09 20 53.0	-1.1
TGIG				eSn	Sn	09 21 24.1	+0.5
TLIG	**Tlapa**	3.09	296	eP	Pn	09 21 00.9	-1.4
TLIG				i S	Sn	09 21 36.8	-1.4
TLIG	**Tlapa**	3.09	296	ePn	Pn	09 20 59.3	-3.0
TLIG				ePg		09 21 02.0	
TLIG				eSn	Sn	09 21 41.7	+3.5
MYIG	**MØrida**	7.33	49	ePn	Pn	09 21 57.5	-2.6
JCT	**Junction City**	14.69	346	ePn	P	09 23 42.8	-1.9
W39A	**Magazine**	18.97	5	eP	Pn	09 24 36.0	+2.8
KMSC	**Kings Mountain**	22.79	32	eP	P	09 25 15.2	+2.2
TMUT	**Trail Mountain**	26.71	332	eP	P	09 25 51.9	+2.5
PASC	**Pasadena Art C**	27.01	316	eP	P	09 25 52.5	+0.8
BAKC	**Calstate**	28.31	317	eP	P	09 26 03.9	+0.6

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*ISCJB **09** 09:28:46.6±1.0, 1°.1N±0°.1×91°.8E±0°.1, h10^{km}, mb3.6/6, MS3.0/1, Error ellipse: s-maj=22.5km s-min=13.0km az=29.3*

*IDC **09** 09:28:47.1±1.5, 1°.02N×91°.74E, h0^{km}, mb3.5/6, mb1 3.8/9, mb1mx3.6/64, mbtmp3.7/9, ML4.2/3, MS3.0/1, Ms1 3.0/1, ms1mx2.3/55, Error ellipse: s-maj=44.0km s-min=19.7km az=51.0*

ISC 09 09:28:48.6±1.3**, 1°.0N**±0°.2×**91°.8E**±0°.1**, h10**^{km}**, n14,** σ**0^{s}.66**/10**, mb3.6**/6**, North Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	**Prapat**	7.37	76	Pn	Pn	09 30 36.5	0.0
	1.2nm,0.3s,baz=0.1,slow=15,SNR=4.5						
PSI				Sn	Sn	09 31 50.7	-10
	3.2nm,0.3s,baz=180,slow=18,SNR=7.0						
PALK	**Pallekele**	12.65	300	Pn	Pn	09 31 48.7	-0.1
	1.8nm,0.3s,baz=116,slow=9.9,SNR=6.9						
PALK				Sn	Sn	09 33 56.9	-13
	0.6nm,0.3s,baz=118,slow=0.8,SNR=2.6						
CMAR	**Chiang Mai Arr**	18.70	22	P	P	09 33 06.4	-0.9

	0.5nm,0.3s,baz=215,slow=13,SNR=8.7						
H08S2	Diego Garcia H	21.06	246	T	T	09 55 21.3	
	baz=64,slow=74,SNR=8.9						
H08S3	Diego Garcia H	21.06	246	T	T	09 55 23.9	
	baz=64,slow=74,SNR=22						
H08S1	Diego Carcia H	21.08	246	T	T	09 55 25.7	
	baz=64						
SIJI	Sorong	39.55	93	LR	LR	09 54 02.8	
	comp=Z,18nm,18.5s,baz=41,slow=38						
MKAR	Makanchi Array	46.32	351	P	P	09 37 14.1	-0.6
	0.5nm,0.7s,baz=178,slow=9.8,SNR=3.3						
WRA	Warramunga Arr	46.64	119	P	P	09 37 17.9	+0.2
	0.6nm,1.1s,baz=300,slow=8.2,SNR=3.0						
ASAR	Alice Springs	47.73	124	P	P	09 37 25.7	-0.4
	0.1nm,0.6s,baz=299,slow=8.6,SNR=2.3						
SONM	Songino Array	48.32	13	P	P	09 37 31.4	+1.0
	1.3nm,0.5s,baz=191,slow=9.7,SNR=7.4						
KURBB	Kurchatov Arra	50.67	349	P	P	09 37 47.8	-0.3
	0.2nm,0.4s,baz=171,slow=7.1,SNR=4.7						
ZALV	Zalesovo Beam	53.05	355	P	P	09 38 06.5	+0.7
	0.6nm,0.4s,baz=168,slow=8.5,SNR=2.7						
TXAR	Lajitas Array	146.40	25	PKPbc	PKPbc	09 48 30.6	-0.1
	0.3nm,0.9s,baz=289,slow=2.8,SNR=2.8						

MEX 09 09:34:33.8±0.8**, 16.°52N×94.°73W, h97**^{km}±10^{km}**, MD3.8, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	1.52	241	*i* P	Pn	09 34 58.2	-1.9
HUIG				*i* S	Sn	09 35 19.2	-0.9
TUIG	Tuzandepetl	1.53	11	*i* P	Pn	09 34 58.6	-1.7
TUIG				*i* S	Sn	09 35 17.9	-2.4
TGIG		1.57	80	*i* P	Pn	09 34 59.9	-0.9
TGIG				*i* S	Sn	09 35 19.6	-1.6
PCIG		1.67	119	*e*P	Pn	09 35 01.1	-0.9
PCIG				*i* S	Sn	09 35 22.4	-1.0
VHO	Vista Hermosa	1.99	286	*e*P	Pn	09 35 05.4	-0.9
VHO				*e*S	Sn	09 35 29.9	-1.3
PNIG	Pinotepa	3.26	268	*e*P	Pn	09 35 21.2	-1.8
PNIG				*i* S	Sn	09 35 59.6	-1.3
TLIG	Tlapa	3.81	286	*e*P	Pn	09 35 30.2	-0.3
TLIG				*e*S	Sn	09 36 13.2	-1.1

NIED ***09*** *09:42:00, 37.°40N×141.°90E, h32^{km}, Mw3.6 Best double couple: $M_0$2.56000×10^{14} NP1:ϕ_s314.00000°, δ31.00000°, λ153.00000°. NP2:ϕ_s67.00000°, δ76.00000°, λ61.00000°.*

IDC ***09*** *09:42:36.0±1.4, 37.°34N×142.°20E, h0^{km}, mb3.7/6, mb1 3.7/9, mb1mx3.5/67, mbtmp3.7/9, ML3.3/3, MS2.3/2, Ms1 2.3/2, ms1mx2.0/73, Error ellipse: s-maj=34.7km s-min=19.0km az=76.0*

JMA ***09*** *09:42:41.5±0.2, 37.°40N×141.°88E, h38^{km}±4^{km}, M3.6*

ISC 09 09:42:37.4±2.1**, 37.°39N**±0.°04×**142.°07E**±0.°07**, h10**^{km}±11^{km}**, n27, σ1^{s}.66**/32**, mb3.7**/6**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	0.95	269	P	Pg	09 42 56.3	+0.5
JFK				S	Sg	09 43 06.6	-1.6
ONAJ	Iwakimizuishiy	1.05	255	P	Pb	09 42 57.9	+0.1
ONAJ				S	Sb	09 43 09.6	-2.1
JMM	Marumori	1.12	296	P	Pb	09 42 59.1	+0.1
JMM				S	Sb	09 43 10.9	-2.7
JIO	Ouri	1.21	332	P	Pn	09 43 01.1	+0.7
JIO				S	Sb	09 43 14.4	-1.8
JFFD	Fukushimafurud	1.24	257	P	Pn	09 43 00.6	-0.3
JFT	Otama	1.39	276	P	Pn	09 43 03.5	+0.6
JFT				S	Sn	09 43 18.8	-2.5
JHO	Hitachi	1.43	238	P	Pn	09 43 02.9	-0.6
JOU	Okura	1.48	312	P	Pn	09 43 05.5	+1.3
JOU				S	Sn	09 43 22.6	-1.1
JMK	Ichinoseki	1.70	337	P	Pn	09 43 08.6	+1.4
JYS	Shirataka	1.79	298	P	Pn	09 43 10.5	+2.0
JYS				S	Sn	09 43 31.2	-0.2
JFY	Yanaizu	1.89	271	P	Pn	09 43 12.2	+2.4
MJAR	Matsushiro Arr	3.21	256	Pn	Pn	09 43 29.6	+1.7
	1.5nm,0.3s,baz=157,slow=30,SNR=11						
MJAR				Sn	Sn	09 44 07.5	+1.3
	1.3nm,0.3s,baz=75,slow=14,SNR=4.9						
MJAR				LR	LR	09 44 56.8	
	comp=Z,47nm,20.7s,baz=110,slow=43						
MAT	Matsushiro	3.21	256	P	Pn	09 43 31.2	+3.3
MAT				*e*S	Sn	09 44 08.6	+2.4
JHJ	Hachijo jima 2	4.65	204	Pn	Pn	09 43 49.0	+1.3
	8.7nm,0.3s,baz=82,slow=21,SNR=6.7						
JHJ				Sn	Sn	09 44 40.0	-1.8
	8.9nm,0.3s,baz=307,slow=20,SNR=2.5						
JHJ				LR	LR	09 45 49.6	
	comp=Z,42nm,20.3s,baz=272,slow=42						
ASAJ	Asahikawa	6.74	3	Pn	Pn	09 44 18.1	+1.8
	0.6nm,0.3s,baz=217,slow=16,SNR=5.5						
ASAJ				Sn	Sn	09 45 31.0	-2.2
	0.6nm,0.3s,baz=144,slow=19,SNR=2.3						
H11N2	WAKE ISLAND Hy	27.88	122	T	T	10 18 00.7	
	baz=315,slow=75,SNR=15						
H11N1	WAKE ISLAND Hy	27.89	122	T	T	10 17 58.8	
	baz=315,slow=75,SNR=8.6						
H11N3	WAKE ISLAND Hy	27.90	122	T	T	10 18 10.0	
	baz=315,slow=75,SNR=8.9						
SONM	Songino Array	28.03	303	P	P	09 48 30.2	+1.4
	0.4nm,0.5s,baz=115,slow=9.0,SNR=3.1						
H11S1	WAKE ISLAND Hy	28.62	124	T	T	10 18 58.4	
	baz=317,slow=76,SNR=8.1						
H11S3	WAKE ISLAND Hy	28.62	124	T	T	10 19 00.1	
	baz=317,slow=76,SNR=9.3						
H11S2	WAKE ISLAND Hy	28.63	124	T	T	10 18 55.5	
	baz=317,slow=76,SNR=6.4						
ZALV	Zalesovo Beam	42.07	312	P	P	09 50 29.5	+0.4
	0.6nm,0.3s,baz=78,slow=13,SNR=2.9						
MKAR	Makanchi Array	44.38	302	P	P	09 50 48.9	+0.9
	1.4nm,0.7s,baz=89,slow=9.8,SNR=14						
KURBB	Kurchatov Arra	46.20	308	P	P	09 51 02.8	+0.5
	1.4nm,0.4s,baz=82,slow=8.2,SNR=15						
WRA	Warramunga Arr	57.48	189	P	P	09 52 26.9	+0.1
	0.3nm,0.6s,baz=5.7,slow=7.3,SNR=6.6						
ASAR	Alice Springs	61.21	189	P	P	09 52 51.8	-0.7
	0.4nm,1.0s,baz=9.5,slow=7.0,SNR=2.9						

IDC ***09*** *09:50:33.3±0.6, 7.°29N×73.°17W, h0^{km}, mb3.8/12, mb1 4.1/14, mb1mx3.9/42, mbtmp3.9/14, ML4.4/3, MS3.2/9, Ms1 3.2/9, ms1mx2.9/48, Error ellipse: s-maj=25.1km s-min=14.3km az=54.0*

ISCJB ***09*** *09:50:36.8±0.5, 7.°38N±0.°03×73.°02W±0.°03, h31^{km}±4^{km}, mb4.1/30, MS3.0/6, Error ellipse: s-maj=4.5km s-min=4.0km az=40.2*

RSNC ***09*** *09:50:37.8±0.9, 7.°37N×73.°12W, h4^{km}±5^{km}, ML4.4, Mw4.2*

NEIC ***09*** *09:50:39.7±0.5, 7.°38N×73.°03W, h42^{km}±5^{km}, mb4.3/22, Error ellipse: s-maj=6.2km s-min=5.1km az=106.0*

NEIC Felt [II] at Bucaramanga. Also felt at Floridablanca, Giron and Matanza.

ISC 09 09:50:36.1±1.1**, 7.°33N**±0.°02×**73.°05W**±0.°03**, h16**^{km}±7^{km}**, n84, σ1^{s}.68**/102**, mb4.2**/30**, MS3.1**/6**, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAMC	Pamplona, Colo	0.35	88	*e*P	Pn	09 50 46.4	-0.6
PAMC				*e*S	Sb	09 50 52.5	+2.7
PAMC				*i*		09 50 54.8	
	comp=Z,16μm,0.6s						
BRRC	Barranca, Sant	0.69	252	*e*P	Pb	09 50 49.7	-0.1
BRRC				*e*S	Sb	09 50 58.6	-0.5
BRRC				*i*		09 51 00.2	
	comp=Z,5μm,0.3s						
BARC	Barichara	0.74	190	*e*P	Pn	09 50 51.8	-0.4
BARC				*e*S	Sb	09 51 02.0	+1.2
BARC				*i*		09 51 04.0	
	comp=Z,15μm,0.2s						
OCAC	Ocana	0.94	344	*e*P	Pg	09 50 53.0	-1.5
OCAC				*e*S	Sg	09 51 05.0	-1.9
RUSC	La Rusia	1.43	181	*e*Pn	Pg	09 51 04.2	+0.5
RUSC				*e*Sn	Sn	09 51 18.9	-1.6
RUSC	La Rusia	1.43	181	*e*P	Pg	09 51 04.2	+0.5
RUSC				*e*S	Sg	09 51 23.2	+0.9
RUSC				*i*		09 51 26.5	
	comp=Z,5μm,0.2s						
PTBC	PUERTO BERRIO,	1.60	241	*e*P	Pb	09 51 04.5	-0.8
PTBC				*e*S	Sb	09 51 25.2	-0.2
PTBC				*i*		09 51 26.8	
	comp=Z,10μm,0.5s						
ZARC	Zaragoza, Cauc	1.80	275	*e*P	Pb	09 51 07.2	-1.5
ZARC				*e*S	Sb	09 51 29.5	-1.6
ZARC				*i*		09 51 31.2	
	comp=Z,7μm,0.4s						
UREC	San Jos˜ı de U	2.50	280	*e*S	Sn	09 51 47.2	+0.9
CODC	Agustˆ›n Codaz	2.62	352	*e*P	Pn	09 51 19.1	+1.2
CODC				*e*S	Sn	09 51 50.7	+1.3
HELC	Santa Helena	2.71	246	*e*Pn	Pn	09 51 21.2	+1.8
HELC				*e*Sn	Sn	09 51 46.4	-5.6
HELC	Santa Helena	2.71	246	*e*P	Pn	09 51 21.2	+1.8
HELC				*e*S	Sn	09 51 53.9	+1.9
ROSC	El Rosal	2.77	207	Pn	Pb	09 51 24.6	-1.0
	comp=Z,39nm,0.3s,baz=298,slow=5.0,SNR=51						
ROSC				Lg	Lg	09 52 05.3	
	comp=Z,187nm,0.3s,baz=348,slow=23,SNR=9.1						
ROSC	El Rosal	2.77	207	*e*Pn	Pb	09 51 24.5	-1.1
ROSC				*e*Sn	Sg	09 52 04.4	-1.0
SDV	Santo Domingo	2.85	57	Pn	Pb	09 51 25.5	-1.3
	comp=Z,163nm,0.3s,baz=181,slow=15,SNR=95						
SDV				Lg	Lg	09 52 04.9	
	comp=Z,215nm,0.3s,baz=10,slow=12,SNR=6.7						
SDV	Santo Domingo	2.85	57	*e*Pn	Pb	09 51 25.3	-1.5
SDV				*e*Sn	Sb	09 52 02.4	+0.8
SJCC	San Jacinto, C	3.31	321	*e*P	Pn	09 51 29.0	+1.6
SJCC				*e*S	Sn	09 52 07.2	+0.7
PRAC	Prado	4.03	207	*e*Pn	Pn	09 51 40.5	+3.2
BCIP	Isla Barro Col	6.96	286	*e*Pn	Pn	09 52 18.2	+0.6
PCRV	Puerto La Cruz	8.79	71	Pn	Pn	09 52 45.4	+2.7
	comp=Z,18nm,0.3s,baz=219,slow=6.8,SNR=57						
PCRV				Sn	Sn	09 54 22.3	+0.8
	comp=Z,3.6nm,0.3s,baz=325,slow=14,SNR=2.9						
PCRV				Lg	Lg	09 55 16.9	
	comp=Z,2.6nm,0.3s,baz=97,slow=16,SNR=1.5						
OTAV	Otavalo	8.87	218	*e*Pn	Pn	09 52 46.4	+2.3
BANI	BANI	11.31	13	*e*Pn	Pn	09 53 18.2	+1.0
MTDJ	Mount Denham	11.68	338	*e*Pn	Pn	09 53 24.4	+2.0
CRPR	Cabo Rojo, PR	12.09	28	*e*Pn	Pn	09 53 27.0	-0.9
MPR	Mayaguez	12.26	27	*e*Pn	Pn	09 53 29.8	-0.3
ICMP	Isla Caja de M	12.27	31	*e*Pn	Pn	09 53 32.4	+2.0
AOPR	Arecibo Observ	12.55	29	*e*Pn	Pn	09 53 34.3	0.0
SJG	San Juan	12.65	31	Pn	Pn	09 53 34.3	-1.3
	comp=Z,0.9nm,0.3s,baz=222,slow=12,SNR=11						
SJG				LR	LR	09 58 55.2	
	comp=Z,130nm,19.9s,baz=240,slow=39						
SJG	San Juan	12.65	31	*e*Pn	Pn	09 53 34.0	-1.6
SJG				*e*Pn	Pn	09 53 34.3	-1.3
CDVI	St. Croix	13.14	37	*e*Pn	Pn	09 53 42.3	0.0
PTGA	Pitinga	15.31	121	Pn	Pn	09 54 10.9	-0.9
	comp=Z,0.8nm,0.3s,baz=300,slow=18,SNR=7.4						
PTGA				Sn	Sn	09 56 55.1	-6.2
	comp=Z,0.8nm,0.3s,baz=276,slow=8.6,SNR=6.2						
PTGA				Lg	Lg	09 58 39.8	
	comp=Z,2.7nm,0.3s,baz=212,slow=22,SNR=7.5						
PTGA				LR	LR	10 00 42.2	
	comp=Z,174nm,19.5s,baz=272,slow=40						
PTGA	Pitinga	15.31	121	*e*Pn	Pn	09 54 11.3	-0.5
	comp=Z,7.6nm,0.8s						
PTGA				Sn	Sn	09 56 55.1	-6.2
PTGA				Lg	Lg	09 58 39.8	
TGUH	Tegucigalpa,Un	15.49	297	*e*Pn	Pn	09 54 14.2	+0.1
	comp=Z,28nm,0.8s						
SAML	Samuel	18.92	149	*e*P	Pn	09 54 57.8	+0.6
	comp=Z,7.2nm,0.7s						
NNA	Nana	19.55	191	LR	LR	10 04 04.0	
	comp=Z,120nm,18.2s,baz=350,slow=42						
CMIG	Matias Romero	23.42	296	LR	LR	10 06 06.5	
	comp=Z,86nm,18.5s,baz=107,slow=40						
LPAZ	La Paz	23.96	168	P	P	09 55 50.2	-0.5
	comp=Z,1.8nm,0.7s,baz=350,slow=8.2,SNR=10.0						
LPAZ	La Paz	23.96	168	*e*P	P	09 55 50.5	-0.2
	comp=Z,11nm,1.4s						
SIV	San Ignacio	26.03	153	P	P	09 56 08.3	-0.6
	comp=Z,1.2nm,0.8s,baz=313,slow=13,SNR=7.7						
TKL	Tuckaleechee C	29.86	342	LR	LR	10 09 27.8	
	comp=Z,44nm,20.6s,baz=227,slow=38						
LNIG	Linares	30.70	308	*e*P	P	09 56 50.1	-0.5
	comp=Z,4.2nm,0.9s						
WVT	Waverly	31.70	337	*e*P	P	09 56 59.6	+0.5
	comp=Z,5.8nm,1.1s						
PBMO	Poplar Bluff	33.32	334	*e*P	P	09 57 14.1	+0.7
	comp=Z,5.5nm,1.0s						
W39A	Magazine	33.65	328	*e*P	P	09 57 16.8	+0.6
	comp=Z,7.2nm,1.1s						
T42A	Van Buren	33.82	334	*e*P	P	09 57 18.5	+0.8
	comp=Z,2.9nm,0.6s						
CCM	Cathedral Cave	34.75	334	*e*P	P	09 57 27.0	+1.2
	comp=Z,7.7nm,0.7s						
TXAR	Lajitas Array	36.18	311	P	P	09 57 38.4	0.0
	comp=Z,1.7nm,0.8s,baz=127,slow=9.4,SNR=18						
TXAR				PcP	PcP	10 00 03.7	-0.2
	comp=Z,1.0nm,1.0s,baz=134,slow=7.2,SNR=4.3						
TXAR				LR	LR	10 13 45.6	
	comp=Z,10nm,21.5s,baz=0.0,slow=39						
TX31	Lajitas Ar. Si	36.18	311	*e*P	P	09 57 38.4	+0.1
TX31				*e*P	P	09 57 38.8	+0.4
MNTX	Cornudas Mount	38.68	313	*e*P	P	09 58 00.1	+0.7
	comp=Z,6.0nm,1.3s						
LPIG	La Paz	39.38	299	LR	LR	10 15 15.8	
	comp=Z,29nm,19.0s,baz=170,slow=38						
ANMO	Albuquerque	41.19	317	P	P	09 58 18.9	-1.6
	comp=Z,0.4nm,0.5s,baz=150,slow=20,SNR=2.0						
ANMO				LR	LR	10 19 33.8	
	comp=Z,28nm,18.3s,baz=62,slow=42						
SDCO	Great Sand Dun	42.20	321	*e*P	P	09 58 29.9	+1.1
	comp=Z,2.4nm,0.9s						
PV13	Radium Mtn., P	44.57	319	*e*P	P	09 58 48.4	+0.6
	comp=Z,2.9nm,0.8s						
Y14A	Wickenburg	45.37	311	*e*P	P	09 58 54.6	+0.5
	comp=Z,7.5nm,1.4s						
U15A	North Rim	46.01	315	*e*P	P	09 59 00.5	+1.1
	comp=Z,2.3nm,1.0s						
GLA	Glamis	46.37	309	*e*P	P	09 59 02.5	+0.5
	comp=Z,4.6nm,1.0s						
KNB	Kanab	46.67	315	*e*P	P	09 59 05.7	+1.2
	comp=Z,3.6nm,1.0s						
ULM	Lac du Bonnet	46.84	340	P	P	09 59 03.7	-1.6
	comp=Z,2.2nm,0.8s,baz=152,slow=3.3,SNR=3.0						
LCMT	Little Creek M	46.96	315	*e*P	P	09 59 07.5	+0.8
	comp=Z,2.6nm,1.0s						
PD31	Pinedale Array	47.71	324	*e*P	P	09 59 12.0	-0.6
PDAR	Pinedale Array	47.71	324	P	P	09 59 12.0	-0.6
	comp=Z,0.7nm,0.8s,baz=115,slow=10.0,SNR=6.3						
PDAR	Pinedale Array	47.71	324	*e*P	P	09 59 12.3	-0.2
REDW	Red Top Meadow	48.83	324	*e*P	P	09 59 20.5	-0.7
	comp=Z,3.8nm,1.0s						
NV01	Mina Array Sit	51.18	314	*e*P	P	09 59 38.9	-0.2
NVAR	Mina Array Bea	51.18	314	P	P	09 59 38.9	-0.2
	comp=Z,0.5nm,0.7s,baz=121,slow=6.8,SNR=5.6						
NVAR				PcP	PcP	10 00 54.7	+0.2
	comp=Z,0.4nm,0.5s,baz=135,slow=4.3,SNR=4.7						
MFID	Camas Ranch	51.88	321	*e*P	P	09 59 44.6	+0.5
	comp=Z,4.1nm,1.3s						
PINE	Pine Mountain	55.31	319	*e*P	P	10 00 10.0	+0.6
	comp=Z,5.4nm,0.9s						
YBH	Yreka Blue Hor	55.62	316	P	P	10 00 09.8	-1.8
	comp=Z,1.0nm,0.8s,baz=164,slow=7.4,SNR=7.3						
YKA	Yellowknife Ar	62.82	340	P	P	10 01 00.5	-0.3
	comp=Z,3.4nm,0.6s,baz=130,slow=6.6,SNR=38						
YKW3	Yellowknife Ar	62.87	340	*e*P	P	10 01 00.9	-0.2
	comp=Z,6.4nm,1.2s						
TOA1	Torodi Ar. Sit	73.57	78	*e*P	P	10 02 10.6	+1.4
TORD	Torodi Ar. Bea	73.57	78	P	P	10 02 10.6	+1.4
	comp=Z,0.6nm,1.0s,baz=290,slow=3.4						
ILAR	Eielson Array	76.54	335	P	P	10 02 24.6	-0.8
	comp=Z,0.8nm,0.8s,baz=95,slow=3.9,SNR=8.9						
ILB	Eielson Array	76.54	335	*e*P	P	10 02 24.6	-0.8
NOA	NORSAR Array B	80.86	29	LR	LR	10 33 54.8	
	comp=Z,9.5nm,21.7s,baz=195,slow=32						
SNAA	Sanae	90.80	163	P	P	10 03 37.6	-0.8
	comp=Z,0.7nm,0.8s,baz=239,slow=5.9,SNR=4.4						
MK32	Makanchi Array	121.83	20	*e*PKPdf	PKPdf	10 09 30.6	+0.7
MKAR	Makanchi Array	121.83	20	PKP	PKPdf	10 09 30.6	+0.7
	comp=Z,0.5nm,0.8s,baz=297,slow=3.2,SNR=6.7						
KSH	Kashi	125.28	29	*e*PKP	PKPdf	10 09 38.0	+1.1
KSH				PP	PP	10 11 32.4	+6.6
KSH				PKS	PKSdf	10 13 13.2	-0.4
KSH				AMB	AMB		
	comp=Z,82nm,5.5s						
AS31	Alice Springs	149.46	235	*e*PKPbc	PKPbc	10 10 24.7	-0.9
ASAR	Alice Springs	149.46	235	PKPbc	PKPbc	10 10 24.2	-1.4
	comp=Z,2.8nm,0.7s,baz=116,slow=3.1,SNR=27						
WR1	Warramunga Arr	150.64	242	*e*PKPbc	PKPbc	10 10 27.8	-0.7
WRA	Warramunga Arr	150.64	242	PKPbc	PKPbc	10 10 27.8	-0.7
	comp=Z,3.7nm,0.5s,baz=106,slow=2.7,SNR=70						
CMAR	Chiang Mai Arr	153.19	17	PKPab	PKPab	10 10 43.7	-2.1
	comp=Z,1.1nm,0.3s,baz=327,slow=7.0,SNR=4.5						

IDC ***09*** *10:02:51.0±0.8, 10.°42S×78.°68W, h0^{km}, mb3.9/11, mb1 4.0/14, mb1mx3.9/47, mbtmp3.9/14, ML3.3/3, MS3.1/2, Ms1 3.1/2, ms1mx2.7/40, Error ellipse: s-maj=33.5km s-min=14.3km az=42.0*

ISCJB ***09*** *10:02:56.8±0.5, 10.°29S±0.°09×78.°51W±0.°09, h52^{km}, mb4.0/12, MS2.9/1, Error ellipse: s-maj=17.2km s-min=6.3km az=44.3*

NEIC ***09*** *10:02:58.1±1.1, 10.°38S×78.°50W, h49^{km}±10^{km}, mb4.1/3, ML4.3(ARE), Error ellipse: s-maj=14.1km s-min=7.3km az=49.0*

NEIC Felt [II] at Huarmey.

ISC 09 10:02:58.3±0.8**, 10.°4S**±0.°1×**78.°5W**±0.°1**, h52**^{km}**, n31, σ1^{s}.17**/32**, mb3.9**/12**, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	2.32	134	Pn	Pn	10 03 33.4	-0.6
	28nm,0.3s,baz=329,slow=6.5,SNR=71						
NNA				Sn	Sn	10 04 03.3	+1.9
	145nm,0.3s,baz=149,slow=20,SNR=11						
OTAV	Otavalo	10.54	0	*e*Pn	Pn	10 05 27.7	+0.6
LPAZ	La Paz	11.71	121	Pn	Pn	10 05 42.3	-1.1
	0.0nm,0.3s,baz=309,slow=14,SNR=1.8						
SAML	Samuel	15.20	86	*e*Pn	Pn	10 06 28.4	-1.5
	9.6nm,0.7s						
SIV	San Ignacio	17.90	110	P	Pn	10 07 03.7	0.0
	0.1nm,0.3s,baz=20,slow=15,SNR=2.4						
SIV				LR	LR	10 15 12.8	
	comp=Z,75nm,18.8s,baz=286,slow=41						
PTGA	Pitinga	20.80	64	P	P	10 07 36.8	+1.4
	4.3nm,0.8s,baz=280,slow=22,SNR=5.1						
PTGA				LR	LR	10 15 49.4	
	comp=Z,48nm,20.7s,baz=258,slow=37						
PTGA	Pitinga	20.80	64	*e*P	P	10 07 35.8	+0.3
SDD	Santo Domingo	29.88	17	*e*P	P	10 08 59.8	-1.4
	56nm,0.9s						
LTX	Lajitas	46.32	329	*e*P	P	10 11 19.9	+0.6
TXAR	Lajitas Array	46.32	329	P	P	10 11 19.9	+0.6
	0.3nm,0.9s,baz=156,slow=8.1,SNR=4.6						
ANMO	Albuquerque	52.25	331	P	P	10 12 04.4	-0.2
	0.6nm,0.7s,baz=146,slow=7.0,SNR=4.2						
ANMO	Albuquerque	52.25	331	*e*P	P	10 12 04.4	-0.2
	1.8nm,1.0s						
EML	El Monte Cty P	56.43	321	*e*P	P	10 12 31.3	-3.5
BBRC	Big Bear Solar	57.41	322	*e*P	P	10 12 41.6	-0.5
BREC	Barre Substati	57.75	321	*e*P	P	10 12 46.8	+2.6
SBI	Santa Barbara	58.18	320	*e*P	P	10 12 48.1	+0.9
NLU	North Lily Min	58.93	330	*e*P	P	10 12 53.7	+1.1
	2.9nm,1.1s						
CARC	Carrizo Plain	59.89	321	*e*P	P	10 12 57.8	-1.3
PDAR	Pinedale Array	60.00	334	P	P	10 13 00.1	+0.2
	0.1nm,0.5s,baz=150,slow=8.9,SNR=2.6						
NV01	Mina Array Sit	61.10	325	*e*P	P	10 13 07.6	+0.2
NVAR	Mina Array Bea	61.10	325	P	P	10 13 08.1	+0.6
	0.8nm,0.8s,baz=116,slow=6.8,SNR=6.0						
YBH	Yreka Blue Hor	65.82	325	P	P	10 13 37.7	-0.7
	1.5nm,0.9s,baz=297,slow=4.5,SNR=3.5						
DBIC	Dimbokro	75.29	80	P	P	10 14 37.9	+1.3
	9.4nm,1.0s,baz=292,slow=15,SNR=3.3						
SNAA	Sanae	75.73	162	P	P	10 14 37.7	-0.4
	1.8nm,1.1s,baz=317,slow=5.5,SNR=4.2						
YKA	Yellowknife Ar	77.82	344	P	P	10 14 49.2	-0.7
	0.4nm,0.4s,baz=142,slow=6.0,SNR=9.3						
KOWA	Kowa	77.89	73	P	P	10 14 51.1	-0.1
	1.3nm,0.4s,baz=217,slow=5.1,SNR=4.1						
TOA1	Torodi Ar. Sit	82.98	75	*e*P	P	10 15 18.6	0.0
TORD	Torodi Ar. Bea	82.98	75	P	P	10 15 18.6	0.0
	0.7nm,1.0s,baz=280,slow=8.3						
ASAR	Alice Springs	133.63	223	PKP	PKPdf	10 22 09.7	-0.4
	0.4nm,1.1s,baz=138,slow=1.6,SNR=4.2						
WR1	Warramunga Arr	135.79	227	*e*PKPdf	PKPdf	10 22 14.5	+0.4
WRA	Warramunga Arr	135.79	227	PKP	PKPdf	10 22 14.5	+0.3
	0.4nm,0.7s,baz=125,slow=1.9,SNR=4.6						

IDC 09 10:09:48.0±7.7**, 15.°67S×172.°79W, h0**^{km}**, mb3.7**/2**, mb1 4.0**/2**, mb1mx3.4**/50**, mbtmp3.7**/2**, Error ellipse: s-maj=342.0km s-min=66.3km az=140.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	50.35	257	P	P	10 18 47.1	-0.1
	0.1nm,0.4s,baz=94,slow=7.8,SNR=6.9						
ASAR	Alice Springs	50.58	252	P	P	10 18 48.9	-0.1
	1.1nm,0.4s,baz=89,slow=8.1,SNR=28						
BRTR	Keskin Array B	146.73	321	PKPbc	PKPdf	10 29 31.4	+0.7
	0.4nm,0.5s,baz=10,slow=8.8,SNR=3.3						

ISCJB ***09*** *10:15:33.5±0.6, 17.°68S±0.°06×70.°27W±0.°08, h123^{km}±5^{km}, mb3.6/9, Error ellipse: s-maj=14.0km s-min=7.9km az=24.3*

GUC ***09*** *10:15:34.2±0.6, 17.°65S×70.°24W, h107^{km}±4^{km}, ML3.5*

IDC ***09*** *10:15:38.0±1.9, 17.°51S×69.°97W, h144^{km}±15^{km}, mb3.4/9, mb1 3.7/12, mb1mx3.5/48, mbtmp3.9/12, Error ellipse: s-maj=21.6km s-min=16.5km az=61.0*

ISC 09 10:15:34.2±0.9**, 17.°65S**±0.°06×**70.°32W**±0.°10**, h111**^{km}±8^{km}**, n22, σ1^{s}.09**/30**, mb3.5**/9**, 2C-1D, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARCH	Arica	0.84	179	*e*P	Pn	10 15 53.8	-0.1
ARCH				*e*S	Sn	10 16 08.7	0.0
PB12	IPOC Station P	0.96	181	⇑*i*P	Pn	10 15 54.9	-0.3
PB12				*e*S	Sn	10 16 10.8	-0.2
PB12				IAML		10 16 17.3	
	comp=E,1μm,0.6s						
PB16	IPOC Station P	1.03	132	⇓*i*P	Pn	10 15 56.6	+0.2
PB16				*e*S	Sn	10 16 13.4	+0.4
PB16				IAML		10 16 15.0	
	comp=N,1μm,0.3s						
MNMC	Minye Minye	1.63	155	⇑*i*P	Pn	10 16 03.6	+0.8
MNMC				*e*S	Sn	10 16 25.3	+0.7
PSGC	Pisagua	1.95	175	*e*P	Pn	10 16 06.6	-0.1
PSGC				*e*S	Sn	10 16 30.9	-0.6
PSGC				IAML		10 16 32.5	
	comp=E,307nm,0.9s						
LPAZ	La Paz	2.49	57	P	Pn	10 16 14.7	+0.6
	comp=E,25nm,0.3s,baz=247,slow=8.6,SNR=1067						
LPAZ				S	Sn	10 16 44.4	-0.3
	comp=E,5.9nm,0.3s,baz=346,slow=23,SNR=7.9						
LPAZ	La Paz	2.49	57	*e*P	Pn	10 16 14.7	+0.6
LPAZ				*e*S	Sn	10 16 44.8	+0.2
PB08	IPOC Station P	2.71	156	*e*P	Pn	10 16 18.1	+1.3
PB08				*e*S	Sn	10 16 50.0	+0.5
PB08				IAML		10 16 52.2	
	comp=N,183nm,0.4s						
PB01	IPOC Station P	3.47	167	*e*P	Pn	10 16 26.3	-0.2
PB01				*e*S	Sn	10 17 04.8	-2.1
SIV	San Ignacio	9.00	81	P	Pn	10 17 38.8	-2.5
	comp=N,6.7nm,0.3s,baz=279,slow=9.8,SNR=117						
PTGA	Pitinga	19.65	32	P	P	10 19 52.0	-2.4
	comp=N,1.1nm,0.3s,baz=99,slow=24,SNR=9.0						
PLCA	Paso Flores	23.01	180	P	P	10 20 31.2	+1.6
	comp=N,0.8nm,0.5s,baz=36,slow=14,SNR=4.8						
TXAR	Lajitas Array	56.73	325	P	P	10 25 07.3	+0.6
	comp=N,0.2nm,0.6s,baz=150,slow=9.3,SNR=3.4						
SNAA	Sanae	66.33	161	P	P	10 26 11.5	+0.9
	comp=N,0.6nm,0.9s,baz=299,slow=10,SNR=3.2						
DBIC	Dimbokro	68.98	75	P	P	10 26 26.6	-1.4
	comp=N,1.6nm,0.3s,baz=226,slow=7.5,SNR=6.3						
PDAR	Pinedale Array	70.13	330	P	P	10 26 35.3	+0.5
	comp=N,0.2nm,0.5s,baz=101,slow=4.7,SNR=2.4						
NVAR	Mina Array Bea	71.66	322	P	P	10 26 45.0	+0.8
	comp=N,0.2nm,0.6s,baz=164,slow=7.3,SNR=3.3						
KOWA	Kowa	72.77	68	P	P	10 26 49.5	-1.4
	comp=N,1.1nm,0.3s,baz=258,slow=8.7,SNR=3.3						
TORD	Torodi Ar. Bea	77.36	72	P	P	10 27 14.8	-2.6
	comp=N,2.1nm,0.6s,baz=248,slow=5.1						
YKA	Yellowknife Ar	87.13	341	P	P	10 28 07.5	+0.4
	comp=N,0.7nm,0.7s,baz=133,slow=5.4,SNR=6.8						
ASAR	Alice Springs	132.61	211	PKP	PKPdf	10 34 37.4	+0.8
	comp=N,0.2nm,0.8s,baz=103,slow=1.2,SNR=3.2						
WRA	Warramunga Arr	135.49	214	PKP	PKPdf	10 34 42.3	+0.2
	comp=N,0.2nm,0.4s,baz=132,slow=1.6,SNR=6.1						

IDC ***09*** *10:16:51.5±0.8, 15.°29S×173.°80W, h0^{km}, mb4.0/12, mb1 4.3/12, mb1mx4.0/50, mbtmp4.0/12, MS3.4/7, Ms1 3.4/7, ms1mx3.1/37, Error ellipse: s-maj=44.8km s-min=18.1km az=141.0*

*NEIC **09** 10:16:52.8±0.3, 15°.34S×173°.78W, h10^{km}, mb4.5/60, Error ellipse: s-maj=19.0km s-min=6.5km az=146.0*

ISC 09 10:16:52.7±0.8**, 15°.3S**±0°.3×**173°.6W**±0°.2**, h10^{km}, n99,** σ**1^{s}16**/93**, mb4.5**/71**, MS3.5**/5**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.25	52	Pn	Pn	10 17 27.7	-2.3
	116nm,0.3s,baz=16,slow=7.4,SNR=270						
AFI				Sn	Sn	10 17 47.3	-11
	311nm,0.3s,baz=41,slow=19,SNR=24						
AFI				LR	LR	10 18 07.9	
	comp=Z,1µm,18.9s,baz=144,slow=32						
AFI	Afiamalu	2.25	52	ePn	Pn	10 17 27.8	-2.3
AFI				e		10 17 28.0	
AFI				eSn	Sn	10 17 47.3	-11
RAR	Rarotonga	14.39	116	LR	LR	10 24 26.1	
	comp=Z,35nm,21.8s,baz=296,slow=31						
DZM	Mont Dzumac	20.05	247	LR	LR	10 28 25.5	
	comp=Z,133nm,18.7s,baz=62,slow=35						
DZM	Mont Dzumac	20.05	247	eLR	LR	10 27 07.4	
	382nm,27.9s						
PPT2	Papeete2	23.15	99	eLQ	LQ	10 26 06.0	
	218nm,27.8s						
PPT2				eLR	LR	10 27 03.6	
	134nm,27.5s						
URZ	Urewera	24.29	198	P	P	10 22 11.3	+1.0
	8.6nm,0.7s,baz=20,slow=3.0,SNR=6.3						
HNR	Honiara	26.47	280	LR	LR	10 31 53.7	
	comp=Z,41nm,21.1s,baz=130,slow=34						
STKA	Stephens Creek	43.91	240	LR	LR	10 40 35.7	
	comp=Z,57nm,20.2s,baz=25,slow=32						
WR1	Warramunga Arr	49.67	257	eP	P	10 25 43.4	-1.7
	2.7nm,1.1s						
WRA	Warramunga Arr	49.67	257	P	P	10 25 43.4	-1.8
	0.2nm,0.8s,baz=96,slow=6.9,SNR=2.7						
AS31	Alice Springs	49.95	252	eP	P	10 25 44.6	-2.6
	0.6nm,0.9s						
ASAR	Alice Springs	49.95	252	P	P	10 25 44.6	-2.6
	0.3nm,0.6s,baz=88,slow=8.1,SNR=7.0						
CARC	Carrizo Plain	71.60	44	eP	P	10 28 11.4	-3.1
PASC	Pasadena Art C	72.09	46	eP	P	10 28 18.2	+0.7
CHNC	Chino	72.35	46	eP	P	10 28 21.5	+2.5
LRRC	Littlerock Res	72.40	46	eP	P	10 28 17.4	-1.8
PFO	Pinyon Flats O	73.00	47	P	P	10 28 25.0	+1.9
	1.9nm,0.3s,baz=109,slow=7.0,SNR=11						
PFO	Pinyon Flats O	73.00	47	eP	P	10 28 23.7	+0.7
	5.8nm,1.1s						
YBH	Yreka Blue Hor	73.64	37	P	P	10 28 27.7	+1.1
	3.6nm,0.9s,baz=195,slow=5.3,SNR=7.6						
BEKR	Beckworth	73.92	40	eP	P	10 28 29.3	+0.9
	3.2nm,1.1s						
NV01	Mina Array Sit	74.39	42	eP	P	10 28 31.5	+0.3
NVAR	Mina Array Bea	74.39	42	P	P	10 28 31.5	+0.3
	1.3nm,0.8s,baz=231,slow=10,SNR=9.5						
NV11	Mina Array Sit	74.49	42	eP	P	10 28 32.6	+0.9
	0.2nm,1.0s						
KVN	Kaiserville	74.87	42	eP	P	10 28 34.5	+0.5
	2.1nm,1.0s						
MOD	Modoc Plateau	75.17	38	eP	P	10 28 36.6	+1.0
	5.7nm,1.0s						
K05A	Summer Lake	75.32	37	eP	P	10 28 38.0	+1.5
	12nm,1.1s						
SHPR	Sheep Range	75.43	45	eP	P	10 28 38.4	+1.2
	4.1nm,1.1s						
Y14A	Wickenburg	75.64	48	eP	P	10 28 38.6	+0.3
	3.8nm,0.9s						
PINE	Pine Mountain	75.94	36	eP	P	10 28 41.6	+1.6
	13nm,1.0s						
BMN	Battle Mountai	76.21	41	eP	P	10 28 42.5	+0.9
	3.0nm,1.0s						
WVOR	Wild Horse Val	76.48	39	eP	P	10 28 44.1	+1.1
	4.8nm,1.0s						
TUC	Tucson	76.48	51	eP	P	10 28 44.0	+0.8
	5.7nm,1.0s						
X16A	Lo Mia Camp, P	77.00	49	eP	P	10 28 46.9	+0.6
	5.7nm,1.0s						
LCMT	Little Creek M	77.01	46	eP	P	10 28 46.6	+0.5
	2.8nm,1.0s						
J08A	Circle Bar Ran	77.12	38	eP	P	10 28 47.7	+1.1
	8.8nm,1.1s						
319A	Douglas	77.19	52	eP	P	10 28 48.5	+1.3
	5.3nm,1.0s						
CCUT	Cedar City	77.20	45	eP	P	10 28 47.9	+0.5
	3.3nm,1.1s						
PSUT	Pine Spring	77.38	44	eP	P	10 28 48.5	+0.2
	3.3nm,0.9s						
U15A	North Rim	77.38	46	eP	P	10 28 49.6	+1.2
	6.9nm,1.1s						
WUAZ	Wupatki	77.58	48	eP	P	10 28 50.5	+1.0
	3.3nm,1.1s						
PKCU	Pink Cliffs	77.87	46	eP	P	10 28 52.6	+1.4
	11nm,1.1s						
G08A	Pilot Rock	77.97	36	eP	P	10 28 52.5	+1.2
	7.7nm,1.1s						
MTPU	Mount Pierson	78.26	45	eP	P	10 28 54.6	+1.2
	4.3nm,0.9s						
MSU	Marysvale	78.50	45	eP	P	10 28 55.7	+1.2
BMO	Blue Mountains	78.67	37	eP	P	10 28 55.8	+0.6
	4.3nm,1.0s						
MFID	Camas Ranch	78.74	39	eP	P	10 28 56.4	+0.7
	4.9nm,1.0s						
F10A	Beach Ranch, E	79.36	36	eP	P	10 28 59.5	+0.6
	5.8nm,0.9s						
TMUT	Trail Mountain	79.54	44	eP	P	10 29 01.8	+1.4
	8.2nm,1.1s						
MPU	Maple Canyon	79.61	44	eP	P	10 29 01.6	+1.0
	3.3nm,1.1s						
HLID	Hailey	79.68	39	eP	P	10 29 02.0	+1.2
	6.1nm,0.9s						
HVU	Hansel Valley	79.77	42	eP	P	10 29 02.2	+0.9
	3.3nm,1.0s						
SRU	San Rafael Swe	79.92	45	eP	P	10 29 03.3	+1.1
	4.4nm,1.0s						
TCUT	Toone Canyon	80.31	43	eP	P	10 29 05.5	+1.1
	15nm,1.0s						
PV09	Paradox Valley	80.58	46	eP	P	10 29 07.0	+1.1
PV19	Morning Glory	80.59	46	eP	P	10 29 06.9	+1.0
	8.6nm,1.2s						
PV14	Lion Creek, Pa	80.59	46	eP	P	10 29 06.9	+0.9
	8.0nm,0.9s						
PV23	Carpenter Ridg	80.64	46	eP	P	10 29 07.3	+1.0
	9.1nm,0.9s						
PV11	David Mesa, Pa	80.67	46	eP	P	10 29 07.2	+0.9
	4.7nm,0.9s						
PV21	Cone Mtn., Par	80.72	46	eP	P	10 29 07.2	+0.6
	5.4nm,0.9s						
LTX	Lajitas	80.72	56	eP	P	10 29 07.1	+0.4
PV12	Saucer Basin,	80.72	46	eP	P	10 29 07.8	+1.1
	6.9nm,1.1s						
TX31	Lajitas Ar. Si	80.72	56	eP	P	10 29 06.6	-0.1
TX31				eP	P	10 29 07.2	+0.5
TXAR	Lajitas Array	80.72	56	P	P	10 29 07.1	+0.4
	1.8nm,1.1s,baz=231,slow=6.0,SNR=13						
ANMO	Albuquerque	80.89	50	P	P	10 29 08.5	+0.9
	1.3nm,0.8s,baz=234,slow=12,SNR=5.8						
ANMO				LR	LR	10 57 00.0	
	comp=Z,36nm,20.2s,baz=250,slow=30						
ANMO	Albuquerque	80.89	50	eP	P	10 29 08.4	+0.8
	1.4nm,0.8s						
MCMT	McKenzie Canyo	81.30	39	eP	P	10 29 10.4	+0.8
MSO	Missoula	81.72	37	eP	P	10 29 11.8	+0.2
	6.0nm,1.1s						
DLMT	Dillon	81.74	39	eP	P	10 29 12.8	+1.1
	5.8nm,1.0s						
REDW	Red Top Meadow	81.79	41	eP	P	10 29 13.2	+1.0
	1.9nm,1.1s						
TPAW	Teton Pass	81.79	41	eP	P	10 29 13.3	+1.0
	4.2nm,0.9s						
FXWY	Fox Creek	81.82	41	eP	P	10 29 13.3	+0.9
	4.4nm,1.1s						
S22A	4UR Ranch, Cre	81.85	47	eP	P	10 29 13.7	+1.0
	6.2nm,1.0s						
IMW	Indian Meadow	82.00	40	eP	P	10 29 14.1	+0.7
	3.3nm,0.9s						
MOOW	Moose Ponds	82.05	41	eP	P	10 29 14.4	+0.9
	2.2nm,1.0s						
LOHW	Long Hollow	82.07	41	eP	P	10 29 14.1	+0.4
	2.9nm,1.1s						
CCB	Clear Creek Bu	82.11	11	eP	P	10 29 14.2	+1.1
	3.2nm,0.9s						
FLWY	Flagg Ranch	82.25	40	eP	P	10 29 15.9	+1.4
	4.7nm,1.0s						
YHB	Horse Butte	82.28	40	eP	P	10 29 15.8	+1.1
	7.8nm,1.0s						
BW06	Boulder Array	82.33	42	eP	P	10 29 15.8	+0.8
	5.2nm,1.1s						
PD31	Pinedale Array	82.33	42	eP	P	10 29 15.2	+0.2
PDAR	Pinedale Array	82.33	42	P	P	10 29 15.2	+0.2
	1.1nm,0.8s,baz=220,slow=3.9,SNR=9.9						
PDAR	Pinedale Array	82.33	42	eP	P	10 29 14.9	-0.1
YMR	Madison River	82.38	40	eP	P	10 29 17.1	+1.8
	4.4nm,1.2s						
SMCO	Snowmass	82.39	46	eP	P	10 29 15.9	+0.2
	3.2nm,1.0s						
ILAR	Eielson Array	82.39	11	P	P	10 29 15.2	+0.6
	0.8nm,0.7s,baz=221,slow=6.7,SNR=7.9						
BOZ	Bozeman (W)	82.44	39	eP	P	10 29 16.4	+1.0
	3.3nm,1.1s						
SDCO	Great Sand Dun	82.80	48	eP	P	10 29 18.2	+0.5
	1.0nm,1.1s						
HRY	Holter Researc	82.89	38	eP	P	10 29 18.2	+0.5
MSTX	Muleshoe	83.25	52	eP	P	10 29 20.1	+0.2
	1.4nm,0.9s						
RLMT	Red Lodge	83.65	40	eP	P	10 29 23.0	+1.2
	4.9nm,1.1s						
ABTX	Abilene, Hawle	85.17	54	eP	P	10 29 28.8	-0.8
	11nm,1.0s						
INK	Inuvik	88.22	14	P	P	10 29 44.7	+1.1
	3.2nm,0.9s,baz=117,slow=4.5,SNR=4.2						
YKA	Yellowknife Ar	90.09	23	P	P	10 29 53.3	+0.8
	0.5nm,0.7s,baz=235,slow=2.2,SNR=4.0						
ULM	Lac du Bonnet	93.98	39	LR	LR	11 04 16.6	
	comp=Z,40nm,21.9s,baz=329,slow=30						
CLL	Collm	143.70	353	i PKPdf	PKPdf	10 36 28.2	+0.3
BR101	Keskin Array S	145.96	321	ePKPdf	PKPab	10 36 34.7	+1.1
BRTR	Keskin Array B	145.96	321	PKPbc	PKPab	10 36 34.7	+1.1
	2.1nm,0.9s,baz=36,slow=2.3,SNR=7.6						
GERES	GERESS Array B	146.02	351	PKPbc	PKPab	10 36 33.6	+0.1
	0.4nm,0.3s,baz=66,slow=1.2,SNR=6.3						

MEX 09 10:26:47.0±0.4**, 19°.25N×98°.93W, h5^{km}**±2^{km}**, MD3.7, Central Mexico**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AMVM	AMECAMECA	0.18	130	eP	Pg	10 26 50.3	-0.4
AMVM				eS	Sg	10 26 52.8	-0.2
PPM	Popocatepetl	0.34	122	eP	Pg	10 26 53.5	-0.3
PPM				eS	Sg	10 26 58.6	+0.3
YAIG	Yautepec	0.40	199	eP	Pg	10 26 54.7	-0.1
YAIG				eS	Sg	10 27 00.2	+0.1
TPIG	Tehuac#an	1.70	119	i P	Pn	10 27 14.3	-3.1
TPIG				eS	Sn	10 27 35.0	-4.6
TLIG	Tlapa	1.71	168	eP	Pn	10 27 13.8	-3.8
TLIG				eS	Sn	10 27 35.2	-4.7

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*ISCJB **09** 10:38:56.6±0.1, 17°.12N±0°.02×146°.11E±0°.03, h98^{km}, mb4.9/246, Error ellipse: s-maj=3.9km s-min=2.9km az=13.2*

*BJI **09** 10:38:59.2, 17°.10N×146°.10E, h126^{km}, mb4.6/27, mB4.7/13*

*MOS **09** 10:39:00.0±1.0, 17°.15N×145°.98E, h131^{km}, mb4.9/34, Error ellipse: s-maj=10.2km s-min=6.0km az=83.3*

*GCMT **09** 10:39:00.9±0.4, 17°.04N×146°.63E, h99^{km}±4^{km}, MW4.9/69, Moment Tensor Solution. s14,c14; s69,c107; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.15±.13; $M_{\theta\theta}$2.49±.14; $M_{\phi\phi}$-2.65±.14; $M_{r\theta}$-1.32±.07; $M_{\theta\phi}$0.82±.15; $M_{\phi r}$1.05±.08; Best double couple: $M_0$3.18300×10^{16} NP1:ϕ_s307.00000°, δ89.00000°, λ32.00000°. NP2: ϕ_s216.00000°, δ58.00000°, λ179.00000°. Principal axes: T 3.1040, Plg23.0000°, Azm176.0000°; N 0.1510, Plg58.0000°, Azm309.0000°; P -3.2620, Plg21.0000°, Azm77.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **09** 10:39:00.8±0.7, 17°.14N×146°.02E, h126^{km}±6^{km}, mb5.0/207 Error ellipse: s-maj=4.1km s-min=2.7km az=101.0*

*IDC **09** 10:39:00.4±1.3, 17°.20N×146°.05E, h127^{km}±11^{km}, mb4.3/30, mb1 4.3/33, mb1mx4.2/59, mbtmp4.7/33, MS3.4/26, Ms1 3.4/26, ms1mx3.3/49, Error ellipse: s-maj=14.0km s-min=6.7km az=96.0*

ISC 09 10:38:57.6±0.3**, 17°.20N**±0°.04×**146°.19E**±0°.06**, h98^{km}, n535,** σ**1^{s}27**/528**, mb5.0**/245**, 8C-5D, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	3.81	200	P	Pn	10 39 55.7	+1.4
	186nm,0.3s,baz=117,slow=4.0,SNR=116						
GUMO				S	Sn	10 40 38.0	-0.1
	136nm,0.3s,baz=305,slow=22,SNR=7.5						
GUMO	Guam	3.81	200	ePn	Pn	10 39 55.5	+1.2
GUMO				ePn	Pn	10 39 55.7	+1.4
GUMO				eSn	Sn	10 40 38.0	-0.1
GUMO				eSn	Sn	10 40 38.6	+0.4
GUMO	Guam	3.81	200	eP	Pn	10 39 55.5	+1.2
GUMO				e		10 40 38.6	
CBIJ	Chichi jima	10.52	340	ePn	Pn	10 41 28.1	+2.7
CBIJ				eSn	Sn	10 43 14.2	-7.1
JCJ	Chichijima	10.52	340	P	Pn	10 41 28.1	+2.7
	5.1nm,0.3s,baz=318,slow=19,SNR=2.8						
JCJ				S	Sn	10 43 14.2	-7.0
	baz=221,slow=20						
PATS	Pohnpei	15.70	130	ePn	Pn	10 42 31.1	-2.2
	76nm,0.8s						
PATS				eSn	Sn	10 45 10.0	-17
JHJ	Hachijo jima 2	16.87	341	P	P	10 42 49.5	+1.4
	5.5nm,0.3s,baz=284,slow=19,SNR=3.4						
JHJ				S	S	10 45 57.5	-1.6
	5.9nm,0.3s,baz=58,slow=23,SNR=3.0						
JOW	Kunigami	19.16	303	P	Pn	10 43 15.8	+0.6
	4.2nm,0.3s,baz=185,slow=5.9,SNR=8.4						
JOW				LR	LR	10 49 18.5	
	comp=Z,187nm,19.8s,baz=148,slow=32						
JOW	Kunigami	19.16	303	eP	Pn	10 43 14.9	-0.3
	35nm,0.9s						
MANU	Manus Island	19.16	176	eP	Pn	10 43 14.6	-0.8
	129nm,0.6s						
H11S3	WAKE ISLAND Hy	19.55	83	T	T	11 04 09.1	
	baz=272,slow=75,SNR=18						
H11S1	WAKE ISLAND Hy	19.57	83	T	T	11 04 08.9	
	baz=272,slow=75,SNR=20						
H11S2	WAKE ISLAND Hy	19.57	83	T	T	11 04 11.8	
	baz=272,slow=75,SNR=21						
H11N1	WAKE ISLAND Hy	19.80	80	T	T	11 04 34.3	
	baz=264,slow=75,SNR=48						
H11N2	WAKE ISLAND Hy	19.80	79	T	T	11 04 27.1	
	baz=264,slow=75,SNR=64						
H11N3	WAKE ISLAND Hy	19.81	80	T	T	11 04 34.8	
	baz=264,slow=75,SNR=53						
INU	Inuyama	19.84	337	eP	Pn	10 43 24.3	+1.2
	8.6nm,0.7s						
JAY	Jayapura	20.33	196	P	P	10 43 27.3	+1.2
	171nm,0.9s,baz=358,slow=4.4,SNR=26						
JAY				LR	LR	10 51 50.4	
	comp=Z,72nm,18.3s,baz=309,slow=38						
JAY	Jayapura	20.33	196	P	Pn	10 43 28.5	-0.5
MJAR	Matsushiro Arr	20.52	341	P	P	10 43 29.2	+1.2
	5.3nm,0.7s,baz=166,slow=9.0,SNR=11						
MJAR				ScP	ScP	10 50 58.3	-5.3
	2.4nm,1.0s,baz=175,slow=3.3,SNR=5.7						
MAJO	Matsushiro	20.52	341	eP	Pn	10 43 29.8	-1.2
	16nm,0.8s						
MAJO	Matsushiro	20.52	341	c iP	P	10 43 28.6	+0.6
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MAT	Matsushiro	20.52	341	P	P	10 43 28.3	+0.3
MJB9	Matsu-Tunnel	20.52	341	eP	Pn	10 43 29.8	-1.3
	comp=Z,16nm,0.8s						
GENI	Genyem	20.55	197	P	Pn	10 43 30.8	-0.7
BAKI	Biak	20.81	210	P	Pn	10 43 33.3	-1.3
JNU	Nakatsue	21.01	322	P	P	10 43 34.5	+1.1
	comp=Z,1.2nm,0.4s,baz=26,slow=18,SNR=2.2						
JNU	Nakatsue	21.01	322	eP	P	10 43 34.5	+1.1
	comp=Z,7.7nm,1.1s						
SRPI	Serui, Papua	21.34	208	P	P	10 43 38.4	+1.4
RABL	Rabaul	22.06	164	eP	P	10 43 45.7	+1.1
	comp=Z,321nm,1.0s						
WAMI	Wamena	22.22	200	P	P	10 43 47.7	+1.5
SIJI	Sorong	23.21	221	P	P	10 43 56.6	+0.3
	comp=Z,67nm,0.5s,baz=18,slow=14,SNR=33						
SIJI				LR	LR	10 51 19.5	
	comp=Z,150nm,19.5s,baz=12,slow=32						
TWG	Pinlang	24.24	287	eP	P	10 44 05.7	+0.2
	comp=Z,46nm,0.8s						
FAKI	Fak Fak	24.27	216	P	P	10 44 05.6	-0.2
FAKI	Fak Fak	24.27	216	eP	P	10 44 05.4	-0.4
	comp=Z,46nm,0.7s						
YHNB	Yeheng	24.31	292	eP	P	10 44 07.1	+0.9
	comp=Z,34nm,1.1s						
TGY	Tagaytay City	24.50	266	LR	LR	10 50 33.6	
	comp=Z,34nm,21.7s,baz=5.5,slow=28						
SSLB	Suanglung	24.51	290	eP	P	10 44 09.1	+1.1
	comp=Z,15nm,0.9s						
TNTI	Ternate	24.69	231	eP	P	10 44 09.8	+0.1
	comp=Z,19nm,0.7s						
ERM	Erimo	24.86	355	⇓eP	P	10 44 13.7	+2.7
ERM				pmax	pmax		
	comp=Z,11nm,0.9s						
KSRS	Korea Array	25.80	325	P	P	10 44 19.9	+0.5
	comp=Z,1.1nm,0.5s,baz=146,slow=9.3,SNR=6.1						
KSRS				LR	LR	10 53 21.9	
	comp=Z,81nm,21.7s,baz=142,slow=34						
KS15	Wonju Array Si	25.81	325	eP	P	10 44 19.9	+0.3
KSAR	Wonju Array Be	25.81	325	P	P	10 44 19.9	+0.4
KSAR	Wonju Array Be	25.81	325	P	P	10 44 20.0	+0.4
KS01	Wonju Array Si	25.83	325	eP	P	10 44 20.8	+1.0
ASAJ	Asahikawa	27.00	354	P	P	10 44 30.4	+0.2
	comp=Z,3.3nm,0.5s,baz=204,slow=17,SNR=7.6						
NJ2	Nanjing	28.81	306	eP	P	10 44 47.3	+0.8
NJ2				pmax	pmax		
	comp=Z,12nm,0.7s						
LUWI	Luwuk	29.35	234	eP	P	10 44 51.0	-0.5
	comp=Z,72nm,0.6s						
USRK	Ussuriysk Ar.	29.46	339	LR	LR	10 55 25.6	
	comp=Z,33nm,19.9s,baz=149,slow=34						
HNR	Honiara	29.75	152	LR	LR	10 57 42.4	
	comp=Z,61nm,18.9s,baz=334,slow=38						
MDJ	Mudanjiang	30.69	336	P	P	10 45 04.4	+1.4
MDJ				pmax	pmax		
	comp=Z,6.0nm,0.5s						
COEN	Coen	31.11	186	eP	P	10 45 07.1	+0.2
	comp=Z,29nm,0.9s						
MTN	Manton Dam	33.35	207	eP	P	10 45 26.1	-0.5
	comp=Z,18nm,0.5s						
KLR	Kul'dur	34.03	343	⇓eP	P	10 45 30.9	-1.2
SOEI	Soe	34.45	221	eP	P	10 45 34.9	-1.4
	comp=Z,28nm,0.9s						
BATI	Baumata	35.18	221	P	P	10 45 40.8	-1.6
	comp=Z,29nm,0.6s,baz=60,slow=20,SNR=3.6						
BATI				LR	LR	10 59 40.8	
	comp=Z,114nm,19.6s,baz=127,slow=35						
SBUM	Sibu	36.44	250	eP	P	10 45 52.6	-0.6
	comp=Z,11nm,1.2s						
PETK	Petropavlovsk-	36.95	12	P	P	10 45 58.1	+1.0
	comp=Z,11nm,0.8s,baz=181,slow=7.1						
PETK				ScP	ScP	10 51 49.3	-5.2
	baz=169,slow=4.3						
PETK				LR	LR	10 59 12.3	
	comp=Z,47nm,21.3s,baz=189,slow=33						
PEA1	Petropavlovsk-	36.95	12	eP	P	10 45 58.1	+1.0
PET	Petropavlovsk	37.06	12	⇑iP	P	10 45 59.2	+1.3
PET				pmax	pmax		
	comp=Z,40nm,1.2s						
CTA	Charters Tower	37.06	180	P	P	10 45 57.8	-0.5
	comp=Z,7.9nm,0.5s,baz=3.6,slow=11,SNR=16						
GYA	Guiyang	37.70	291	eP	P	10 46 06.1	+2.1
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC	Hu-ho-hao-te	37.98	316	eP	P	10 46 08.2	+2.1
HHC				pP	pP	10 46 32.3	+3.6
HHC				PP	PnPn	10 47 38.3	+1.1
HHC				S	S	10 51 51.9	+0.7
HHC				sS	sS	10 52 38.0	+7.9
HHC				pmax	pmax		
	comp=Z,18nm,1.0s						
HHC				pmax	pmax		
	comp=Z,84nm,4.8s						
WRAB	Tennant Creek	38.69	198	eP	P	10 46 11.4	-0.7
	comp=Z,95nm,0.8s						
WRAB				eS	S	10 51 59.2	-2.7
WRAB	Tennant Creek	38.69	198	c iP	P	10 46 10.9	-1.2
WRAB				pmax	pmax		
	comp=Z,101nm,0.8s						
WB2	Warramunga Arr	38.70	198	eP	P	10 46 10.3	-1.9
WB2				eP	P	10 46 11.5	-0.6
WR1	Warramunga Arr	38.70	198	eP	P	10 46 11.1	-1.1
	comp=Z,109nm,0.8s						
WRA	Warramunga Arr	38.70	198	P	P	10 46 11.1	-1.1
	comp=Z,75nm,0.7s,baz=24,slow=9.4,SNR=175						
WRA				ScP	ScP	10 51 56.8	-4.8
	comp=Z,2.5nm,1.0s,baz=28,slow=4.4,SNR=6.4						
WRA				LR	LR	11 03 22.9	
	comp=Z,46nm,18.7s,baz=130,slow=38						
FITZ	Fitzroy Crossi	40.49	211	eP	P	10 46 26.6	-0.5
	comp=Z,8.3nm,0.8s						
CD2	Chengdu	40.84	298	eP	P	10 46 30.0	+0.1
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,160nm,5.0s						
KMI	Kunming	41.14	289	P	P	10 46 33.6	+0.9
KMI				pmax	pmax		
	comp=Z,16nm,0.6s						
KMI				pmax	pmax		
	comp=Z,62nm,4.3s						
LZH	Lanzhou	41.88	305	eP	P	10 46 41.9	+3.4
LZH				pP	sP	10 47 09.7	-2.8
LZH				sP	pP	10 47 21.0	+20
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
AS01	Alice Springs	42.34	197	eP	P	10 46 41.3	-0.9
AS31	Alice Springs	42.35	197	eP	P	10 46 41.6	-0.7
	comp=Z,6.4nm,0.4s						
AS31				eS	S	10 52 57.0	+0.6
ASAR	Alice Springs	42.36	197	P	P	10 46 41.2	-1.0
	comp=Z,12nm,0.7s,baz=23,slow=5.7,SNR=187						
ASAR				ScP	ScP	10 52 10.8	-5.1
	comp=Z,1.3nm,0.9s,baz=10,slow=4.1,SNR=5.1						
ASAR				S	S	10 52 57.0	+0.6
	comp=Z,2.7nm,0.9s,baz=20,slow=21,SNR=12						
ASAR				LR	LR	11 03 38.4	
	comp=Z,44nm,20.4s,baz=9.0,slow=35						
MA2	Magadan	42.44	3	P	P	10 46 42.7	+0.2
	comp=Z,25nm,0.8s,baz=161,slow=7.0,SNR=26						
MA2	Magadan	42.44	3	eP	P	10 46 43.1	+0.6
	comp=Z,31nm,0.9s						
MA2	Magadan	42.44	3	eP	P	10 46 43.1	+0.6
MA2				pmax	pmax		
	comp=Z,31nm,0.9s						
DZM	Mont Dzumac	43.78	152	P	P	10 46 54.2	+0.4
	comp=Z,33nm,1.1s,baz=158,slow=12,SNR=8.5						
DZM				LR	LR	11 02 41.8	
	comp=Z,86nm,19.6s,baz=21,slow=32						
DZM	Mont Dzumac	43.78	152	eP	P	10 46 54.2	+0.4
	comp=Z,88nm,1.1s						
DZM	Mont Dzumac	43.78	152	eLR	LR	10 59 12.0	
	comp=Z,119nm,22.4s						
DZM	Mont Dzumac	43.78	152	eP	P	10 46 54.7	+0.9
	comp=Z,44nm,1.1s						
ULN	Ulaanbaatar	44.23	322	ceP	P	10 46 59.0	+1.7
ULN				pmax	pmax		
	comp=Z,8.0nm,1.4s						
SONA0	Songino Array	44.60	322	eP	P	10 47 01.1	+0.9
SONM	Songino Array	44.60	322	P	P	10 47 01.1	+0.9
	comp=Z,1.6nm,0.5s,baz=133,slow=7.3,SNR=12						
SONA1	Songino Array	44.60	322	eP	P	10 47 01.4	+1.2
CMAR	Chiang Mai Arr	44.90	279	P	P	10 47 03.8	+1.0
	comp=Z,2.3nm,0.5s,baz=74,slow=6.0,SNR=9.2						
SEY	Seymchan	45.89	4	P	P	10 47 10.7	+0.8
	comp=Z,11nm,0.8s,baz=184,slow=6.7,SNR=34						
SEY	Seymchan	45.89	4	⇑iP	P	10 47 10.9	+1.0
MBWA	Marble Bar	46.11	215	eP	P	10 47 11.7	-0.5
	comp=Z,10nm,0.7s						
ZAK	Zakamensk	47.62	324	eP	P	10 47 24.9	+1.1
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
ARMA	Armidale	47.63	174	eP	P	10 47 24.3	+0.3
	comp=Z,20nm,0.7s						
TLY	Talaya	48.05	326	⇓eP	P	10 47 27.7	+0.7
TLY				pmax	pmax		
	comp=Z,2.0nm,0.7s						
PSI	Prapat	48.54	258	P	P	10 47 33.1	+1.7
	comp=Z,5.8nm,0.6s,baz=57,slow=7.1,SNR=3.5						
STKA	Stephens Creek	49.00	185	P	P	10 47 33.8	-0.6
	comp=Z,15nm,0.8s,baz=347,slow=8.8,SNR=35						
STKA				LR	LR	11 08 39.1	
	comp=Z,20nm,18.8s,baz=23,slow=36						
STKA	Stephens Creek	49.00	185	eP	P	10 47 33.8	-0.6
	comp=Z,5.8nm,1.1s						
STKA	Stephens Creek	49.00	185	eP	P	10 47 33.8	-0.6
STKA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BBOO	Buckleboo	50.67	191	eP	P	10 47 46.7	-0.3
	comp=Z,140nm,0.6s						

FORT	Forrest	50.79	200	*e*P	P	10 47 47.8	-0.2
	comp=Z,71nm,1.3s						
UNV	Unalaska Valle	51.62	34	*e*P	P	10 47 54.0	+0.1
	comp=Z,20nm,0.6s						
AFI	Afiamalu	51.74	124	LR	LR	11 04 18.1	
	comp=Z,19nm,20.9s,baz=48,slow=29						
AKUT	Akutan	52.14	34	*e*P	P	10 47 58.3	+0.5
	comp=Z,46nm,1.0s						
CAN	Canberra	52.30	177	*e*P	P	10 48 00.2	+1.0
	comp=Z,51nm,0.6s						
CAN	Canberra	52.30	177	*e*P	P	10 48 00.2	+1.0
CAN				pmax	pmax		
	comp=Z,51nm,0.6s						
SDPT	Sand Point	55.44	34	*e*P	P	10 48 22.6	+0.8
	comp=Z,69nm,0.7s						
WMQ	Urumqi	55.64	312	P	P	10 48 26.5	+2.9
WMQ				pP	sP	10 48 56.4	-2.0
WMQ				sP	PcP	10 49 08.9	-13
WMQ				pmax	pmax		
	comp=Z,18nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,240nm,4.7s						
WMQ				LR	LR		
	comp=Z,120nm,23.7s						
WMQ				LR	LR		
	comp=Z,220nm,23.7s						
WMQ				LR	LR		
	comp=Z,110nm,21.7s						
CHGN	Chignik	56.87	33	*e*P	P	10 48 32.1	+0.2
	comp=Z,34nm,1.1s						
DGZ	Jazzator, Alta	56.95	319	⇓*e*P	P	10 48 33.8	+0.9
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.2s						
NWAO	Narrogin (SRO)	57.02	209	P	P	10 48 31.9	-1.3
	comp=Z,18nm,0.7s,baz=276,slow=8.0,SNR=14						
NWAO				LR	LR	11 13 20.8	
	comp=Z,37nm,20.0s,baz=275,slow=36						
NWAO	Narrogin (SRO)	57.02	209	*e*P	P	10 48 32.0	-1.3
OUZ	Omahuta	58.27	154	P	P	10 48 43.9	+1.9
WCZ	Waipu Caves	59.20	154	P	P	10 48 50.0	+1.6
ZAA1	Zalesovo Array	59.48	323	*e*P	P	10 48 48.6	-1.6
ZALV	Zalesovo Beam	59.48	323	P	P	10 48 48.6	-1.6
	comp=Z,1.3nm,0.4s,baz=110,slow=6.9,SNR=6.4						
ZALV				LR	LR	11 14 26.0	
	comp=Z,23nm,19.9s,baz=66,slow=36						
ZALV	Zalesovo Beam	59.48	323	*e*P	P	10 48 49.7	-0.5
ZALV	Zalesovo Beam	59.48	323	*e*P	P	10 48 49.7	-0.5
MK01	Makanchi Array	59.83	314	*e*P	P	10 48 52.3	-0.5
OHAK	Old Harbor	59.83	33	*e*P	P	10 48 52.7	+0.2
MK31	Makanchi Array	59.84	314	*e*P	P	10 48 52.3	-0.6
MK31	Makanchi Array	59.84	314	*e*P	P	10 48 52.3	-0.6
MK32	Makanchi Array	59.84	314	*e*P	P	10 48 52.4	-0.4
MKAR	Makanchi Array	59.84	314	P	P	10 48 52.4	-0.4
	comp=Z,0.6nm,0.5s,baz=85,slow=8.2,SNR=9.5						
MKAR				ScP	ScP	10 53 25.9	-4.8
	comp=Z,1.3nm,0.9s,baz=96,slow=6.1,SNR=3.5						
MKAR	Makanchi Array	59.84	314	*e*P	P	10 48 52.3	-0.6
	comp=Z,8.1nm,0.6s						
MKAR	Makanchi Array	59.84	314	*e*P	P	10 48 52.3	-0.6
MKAR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
MAKZ	Makanchi	60.05	314	*e*P	P	10 48 53.8	-0.5
	comp=Z,1.8nm,0.6s						
MAKZ	Makanchi	60.05	314	*e*P	P	10 48 53.8	-0.5
MAKZ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KDAK	Kodiak Island	60.35	33	P	P	10 48 56.5	+0.5
	comp=Z,18nm,0.6s,baz=130,slow=0.3,SNR=34						
KDAK	Kodiak Island	60.35	33	*e*P	P	10 48 56.9	+0.8
	comp=Z,26nm,0.8s						
CNPM	China Poot	61.49	31	*e*P	P	10 49 04.0	+0.2
	comp=Z,63nm,0.7s						
HIZ	Hauiti	61.60	155	P	P	10 49 05.6	+0.9
BRLK	Bradley Lake	61.73	31	*e*P	P	10 49 05.6	+0.2
	comp=Z,41nm,0.7s						
PPLA	Purkeypile	62.01	27	*e*P	P	10 49 08.3	+0.9
	comp=Z,14nm,0.8s						
SKT	Skwentna	62.03	28	*e*P	P	10 49 07.7	+0.3
	comp=Z,30nm,1.1s						
VRZ	Vera Road	62.08	155	P	P	10 49 09.0	+1.0
CAST	Castle Rocks	62.21	27	*e*P	P	10 49 09.5	+0.9
	comp=Z,35nm,0.7s						
URZ	Urewera	62.34	153	LR	LR	11 13 32.6	
	comp=Z,42nm,19.9s,baz=340,slow=33						
COVZ	Chateau Observ	62.46	155	P	P	10 49 11.5	+0.9
WHVZ	Whangaehu Hut	62.55	155	P	P	10 49 12.2	+0.8
RTZ	Ruatahuna	62.58	153	P	P	10 49 10.9	-0.5
RC01	Rabbit Creek A	62.61	29	*e*P	P	10 49 11.7	+0.4
	comp=Z,31nm,0.6s						
KURK	Kurchatov	62.69	319	*e*P	P	10 49 09.9	-2.1
KURK	Kurchatov	62.69	319	⇑*e*P	P	10 49 11.9	-0.1
KURK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KURBB	Kurchatov Arra	62.74	318	P	P	10 49 09.9	-2.4
	comp=Z,3.2nm,0.9s,baz=99,slow=6.3,SNR=21						
BKZ	Black Stump Fm	62.83	154	*e*P	P	10 49 12.5	-0.5
	comp=Z,14nm,0.6s						
BKZ	Black Stump Fm	62.83	154	P	P	10 49 12.8	-0.3
BPAW	Bear Paw Mtn.	62.88	26	*e*P	P	10 49 13.8	+0.7
	comp=Z,30nm,1.0s						
NMHZ	Naumai	62.91	154	P	P	10 49 13.9	+0.4
BHHZ	Black Hill Sta	62.92	154	P	P	10 49 13.4	-0.2
TRF	Thorofare Moun	62.99	27	*e*P	P	10 49 14.2	+0.2
	comp=Z,28nm,1.0s						
PMR	Palmer	63.02	29	*e*P	P	10 49 14.1	+0.2
	comp=Z,38nm,1.3s						
PMR	Palmer	63.02	29	*e*P	P	10 49 14.1	+0.2
PMR				pmax	pmax		
	comp=Z,38nm,1.3s						
GHO	Glory Hole Cre	63.16	29	*e*P	P	10 49 15.6	+0.5
	comp=Z,24nm,0.8s						
DUWZ	D'Urville Isla	63.20	157	P	P	10 49 15.5	+0.1
DSZ	Denniston Nort	63.26	159	P	P	10 49 15.8	0.0
MLY	Manley	63.26	25	*e*P	P	10 49 16.5	+0.9
	comp=Z,13nm,0.7s						
NNZ	Nelson	63.36	157	P	P	10 49 15.9	-0.4
TSZ	Takapari Road	63.36	155	P	P	10 49 16.1	-0.3
SML	Sawmill	63.44	29	*e*P	P	10 49 17.4	+0.6
	comp=Z,64nm,0.8s						
SML	Sawmill	63.44	29	*e*P	P	10 49 17.4	+0.6
SML				pmax	pmax		
	comp=Z,64nm,0.8s						
KAHZ	Kahuranaki	63.52	154	P	P	10 49 17.9	+0.3
BWN	Browne	63.54	26	*e*P	P	10 49 18.5	+1.1
	comp=Z,45nm,0.9s						
DVHZ	Dannevirke	63.65	155	P	P	10 49 17.7	-0.7
MCK	McKinley	63.65	27	*e*P	P	10 49 18.4	+0.3
	comp=Z,20nm,1.2s						
MCK	McKinley	63.65	27	*e*P	P	10 49 18.4	+0.3
MCK				pmax	pmax		
	comp=Z,20nm,1.2s						
TCW	Tory Channel	63.69	157	P	P	10 49 18.7	+0.2
OGWZ	Otaki Gorge	63.69	156	P	P	10 49 18.2	-0.4
MRZ	Mangatainoka R	63.72	155	P	P	10 49 18.1	-0.7
HOWZ	Holdsworth Sta	63.90	156	P	P	10 49 19.8	-0.1
CAW	Cannon Point	63.90	156	P	P	10 49 19.5	-0.4
SCM	Sheep Creek Mo	63.91	29	*e*P	P	10 49 20.9	+0.9
	comp=Z,65nm,0.9s						
SCM	Sheep Creek Mo	63.91	29	*e*P	P	10 49 20.9	+0.9
SCM				pmax	pmax		
	comp=Z,65nm,0.9s						
BFZ	Birch Farm	64.00	155	P	P	10 49 20.2	-0.4
MTW	Mount Morrison	64.11	156	P	P	10 49 20.7	-0.6
KSH	Kashi	64.12	306	*e*P	P	10 49 23.9	+2.1
KSH				*e*PcP	sP	10 49 57.3	+0.2
KSH				PP	PP	10 51 49.0	+5.2
COLD	Coldfoot	64.14	23	*e*P	P	10 49 22.1	+0.8
	comp=Z,5.7nm,0.8s						
DHY	Denali Highway	64.17	28	*e*P	P	10 49 22.6	+0.9
	comp=Z,20nm,1.2s						
TMWZ	Te Maipa	64.22	155	P	P	10 49 21.7	-0.4
MDM	Murphy Dome	64.27	25	*e*P	P	10 49 22.4	+0.2
	comp=Z,8.2nm,0.7s						
CCB	Clear Creek Bu	64.36	26	*e*P	P	10 49 22.3	-0.4
	comp=Z,24nm,1.4s						
PLWZ	Palliser	64.37	156	P	P	10 49 22.5	-0.5
COLA	College	64.40	26	*e*P	P	10 49 24.1	+1.2
	comp=Z,7.8nm,0.7s						
COLA	College	64.40	26	*e*P	P	10 49 24.1	+1.2
COLA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KHZ	Kahutara	64.46	158	*e*P	P	10 49 22.1	-1.5
	comp=Z,19nm,0.6s						
KLU	Klutina	64.50	30	*e*P	P	10 49 25.1	+1.3
	comp=Z,19nm,0.8s						
DIV	Divide	64.50	30	*e*P	P	10 49 24.2	+0.4
	comp=Z,58nm,1.4s						
PALK	Pallekele	64.51	270	LR	LR	11 18 32.3	
	comp=Z,39nm,18.1s,baz=200,slow=37						
OXZ	Oxford	64.74	159	*e*P	P	10 49 24.2	-1.2
	comp=Z,14nm,0.7s						
IL1	Eielson Array	64.78	26	*e*P	P	10 49 24.7	-0.8
ILAR	Eielson Array	64.78	26	P	P	10 49 24.5	-1.0
	comp=Z,4.5nm,0.5s,baz=246,slow=6.3,SNR=81						
ILAR				LR	LR	11 14 04.0	
	comp=Z,32nm,21.7s,baz=269,slow=32						
ILB	Eielson Array	64.78	26	*e*P	P	10 49 24.5	-1.0
TOLK	Toolik Lake Re	64.81	21	P	P	10 49 25.9	+0.3
	baz=252						
TOLK				S	S	10 57 59.5	+0.9
	baz=252						
TOLK	Toolik Lake Re	64.81	21	*e*P	P	10 49 26.9	+1.3
	comp=Z,6.6nm,0.8s						
HARP	HAARP	65.03	29	*e*P	P	10 49 28.4	+1.3
	comp=Z,50nm,0.8s						
BMRM	Bremner River	65.03	30	*e*P	P	10 49 28.4	+1.2
	comp=Z,29nm,0.9s						
EGAK	Eagle	67.19	26	*e*P	P	10 49 41.3	+0.5
	comp=Z,23nm,1.3s						
DAWY	Dawson	67.86	27	*e*P	P	10 49 46.0	+0.8
BVAR	Borovoye Array	67.92	321	P	P	10 49 43.7	-2.0
	comp=Z,1.8nm,0.6s,baz=101,slow=7.6,SNR=12						
BVAR				LR	LR	11 21 30.8	
	comp=Z,30nm,18.3s,baz=104,slow=38						
BRVK	Borovoye	67.99	321	⇑*e*P	P	10 49 46.6	+0.5
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KK31	Karatay Array	68.08	310	*e*P	P	10 49 46.5	-0.5
KK31	Karatay Array	68.08	310	*e*P	P	10 49 46.5	-0.5
KKAR	Karatay Array	68.08	310	*e*P	P	10 49 46.3	-0.6
KKAR	Karatay Array	68.08	310	*e*P	P	10 49 46.3	-0.6
INK	Inuvik	70.56	23	P	P	10 50 00.7	-1.0
	comp=Z,6.9nm,1.0s,baz=208,slow=8.5,SNR=12						
INK	Inuvik	70.56	23	*e*P	P	10 50 01.9	+0.2
	comp=Z,7.7nm,0.9s						
INK	Inuvik	70.56	23	*e*P	P	10 50 01.9	+0.2
INK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
WRAK	Wrangell Islan	71.14	36	*e*P	P	10 50 06.8	+1.3
	comp=Z,13nm,0.9s						
DIB	Dawson Inlet,	71.25	39	*e*P	P	10 50 06.7	+0.6
	comp=Z,15nm,0.9s						
PPT2	Papeete2	72.06	115	*e*LR	LR	11 11 57.7	
	comp=Z,60nm,24.0s						
DLBC	Dease Lake	72.28	33	*e*P	P	10 50 13.9	+1.5
	comp=Z,35nm,1.3s						
ARU	Arti	74.55	325	*d* *i*P	P	10 50 25.7	+0.1
ARU						10 50 38.1	
ARU						10 53 10.2	
ARU				S	S	10 59 53.4	+0.4
ARU				SS	SS	11 04 36.3	-5.0
ARU				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ABKAR	Akbulak array	74.75	317	*e*P	P	10 50 24.9	-1.9
AKTO	Aktyubinsk	75.79	319	P	P	10 50 30.5	-2.4
	comp=Z,0.6nm,0.3s,baz=149,slow=8.1,SNR=2.8						
AKTO				LR	LR	11 24 35.3	
	comp=Z,32nm,20.6s,baz=88,slow=36						
NLWA	Neilton Lookou	77.50	44	*e*P	P	10 50 44.2	+1.6
	comp=Z,41nm,1.4s						
E03A	Lebam	77.89	45	*e*P	P	10 50 46.5	+1.9
	comp=Z,28nm,0.9s						
LLLB	Lillooet	78.11	41	*e*P	P	10 50 47.1	+1.2
	comp=Z,21nm,1.3s						
F04D	Rainier, OR	78.36	45	P	P	10 50 47.9	+0.5
	baz=283						
G03D	McMinnville, O	78.38	46	P	P	10 50 48.8	+1.3
	baz=283						
B05A	Bryant	78.49	43	P	P	10 50 49.1	+1.1
	baz=283,SNR=5.1						
I03D	Drain, OR	78.65	48	P	P	10 50 50.2	+1.2
	baz=283,SNR=7.2						
D05A	Enumclaw	78.80	44	*e*P	P	10 50 51.8	+2.1
	comp=Z,39nm,1.1s						
L02D	Cave Junction,	78.81	49	P	P	10 50 51.5	+1.6
	baz=283,SNR=5.1						
KHMM	Horse Mountain	79.01	51	*e*P	P	10 50 53.5	+2.3
	comp=Z,21nm,0.7s						
LON	Longmire	79.02	44	*e*P	P	10 50 51.9	+0.9
	comp=Z,21nm,1.4s						
YKW3	Yellowknife Ar	79.06	28	*e*P	P	10 50 51.0	+0.2
	comp=Z,10nm,1.0s						
YKA	Yellowknife Ar	79.08	28	P	P	10 50 50.8	-0.1
	comp=Z,4.8nm,0.7s,baz=284,slow=5.5,SNR=27						
HUMO	Hull Mountain	79.18	49	*e*P	P	10 50 53.7	+1.8
	comp=Z,14nm,0.6s						
H04A	Detroit Lake	79.24	47	*e*P	P	10 50 53.2	+1.0
	comp=Z,27nm,1.0s						
I04A	Tendick Farm,	79.29	47	P	P	10 50 53.4	+0.9
	baz=284,SNR=12						
KCPM	Cahto Peak	79.39	52	*e*P	P	10 50 55.1	+1.8
	comp=Z,79nm,1.1s						
M02C	Callahan	79.54	50	P	P	10 50 54.8	+0.9
	baz=284,SNR=10						
YBH	Yreka Blue Hor	79.56	50	*e*P	P	10 50 55.7	+1.6
	comp=Z,14nm,0.8s						
YBH	Yreka Blue Hor	79.56	50	*e*P	P	10 50 55.7	+1.6
YBH				pmax	pmax		
	comp=Z,14nm,0.8s						
J04D	Umpqua Nationa	79.64	48	P	P	10 50 55.8	+1.2
	baz=284,SNR=14						
G05D	Wamic, OR	79.71	46	P	P	10 50 56.0	+1.2
	baz=284						
N02D	Trinity Center	79.74	50	P	P	10 50 56.6	+1.5
	baz=284,SNR=9.2						
I05D	Terrebonne, OR	79.91	47	P	P	10 50 56.8	+0.9
	baz=284,SNR=6.0						
WDC	Whiskeytown Da	79.96	51	*e*P	P	10 50 57.7	+1.5
	comp=Z,27nm,1.4s						
WDC	Whiskeytown Da	79.96	51	*e*P	P	10 50 57.7	+1.5
WDC				pmax	pmax		
	comp=Z,27nm,1.4s						
K04D	Chiloquin, OR	80.04	48	P	P	10 50 57.8	+1.1
	baz=284,SNR=9.8						
M04C	Macdoel	80.18	49	P	P	10 50 58.7	+1.2
	baz=284,SNR=8.5						
J05D	Fort Rock, OR	80.24	48	P	P	10 50 59.2	+1.4
	baz=284,SNR=31						
B08A	Colville Reser	80.25	42	*e*P	P	10 50 58.6	+0.9
	comp=Z,22nm,0.7s						
PINE	Pine Mountain	80.33	47	*e*P	P	10 50 59.7	+1.4
	comp=Z,71nm,0.8s						
O03D	Paynes Creek	80.58	51	P	P	10 51 00.3	+0.7
	baz=285,SNR=8.4						
K05A	Summer Lake	80.63	48	*e*P	P	10 51 01.4	+1.4
	comp=Z,41nm,0.8s						
RES	Resolute Bay	80.76	14	*e*P	P	10 51 00.0	+0.2
	comp=Z,21nm,1.3s						
RES	Resolute Bay	80.76	14	*e*P	P	10 51 00.0	+0.2
RES				pmax	pmax		
	comp=Z,21nm,1.3s						
D08A	Wollman Farm,	80.86	44	*e*P	P	10 51 01.8	+0.9
	comp=Z,17nm,1.0s						
E08A	Dider Farm, El	80.92	44	*e*P	P	10 51 02.2	+1.0
	comp=Z,17nm,1.2s						
ORV	Oroville	80.99	51	*e*P	P	10 51 02.8	+1.1
	comp=Z,26nm,1.0s						
ORV	Oroville	80.99	51	*e*P	P	10 51 02.8	+1.1
ORV				pmax	pmax		
	comp=Z,26nm,1.0s						
C09A	Chrisman Ranch	81.09	43	*e*P	P	10 51 03.0	+0.9
	comp=Z,14nm,0.6s						
MOD	Modoc Plateau	81.26	49	*e*P	P	10 51 04.1	+0.8
	comp=Z,18nm,0.8s						
G08A	Pilot Rock	81.31	45	*e*P	P	10 51 04.5	+1.1
	comp=Z,12nm,1.3s						
E09A	Wood Farm, Sta	81.52	44	*e*P	P	10 51 05.7	+1.3
	comp=Z,15nm,0.8s						
AFDM	Forest Hills D	81.54	52	*e*P	P	10 51 05.6	+1.0
	comp=Z,24nm,1.1s						
NEW	Newport	81.70	42	P	P	10 51 05.8	+0.5
	baz=286						
NEW	Newport	81.70	42	*e*P	P	10 51 05.7	+0.3
	comp=Z,16nm,0.9s						
NEW	Newport	81.70	42	*e*P	P	10 51 05.7	+0.3
NEW				pmax	pmax		
	comp=Z,16nm,0.9s						
BEKR	Beckworth	81.75	51	*e*P	P	10 51 06.9	+1.0
	comp=Z,33nm,0.7s						
RUBR	Rubicon Trail	82.13	52	*e*P	P	10 51 09.4	+1.4
	comp=Z,24nm,0.9s						
J08A	Circle Bar Ran	82.17	47	*e*P	P	10 51 09.1	+1.1
	comp=Z,19nm,0.9s						
CMB	Columbia Colle	82.22	53	*e*P	P	10 51 09.4	+1.1
	comp=Z,22nm,0.8s						
CMB	Columbia Colle	82.22	53	*e*P	P	10 51 09.4	+1.1
CMB				pmax	pmax		
	comp=Z,22nm,0.8s						
F10A	Beach Ranch, E	82.28	44	*e*P	P	10 51 08.8	+0.3
	comp=Z,11nm,1.4s						
WVOR	Wild Horse Val	82.31	48	*e*P	P	10 51 09.7	+0.9
	comp=Z,22nm,1.0s						
WVOR	Wild Horse Val	82.31	48	*e*P	P	10 51 09.7	+0.9
WVOR				pmax	pmax		
	comp=Z,22nm,1.0s						
VCNR	Virginia City	82.44	51	*e*P	P	10 51 10.8	+1.2
	comp=Z,18nm,0.8s						
PAHR	Pah Rah Range	82.52	51	*e*P	P	10 51 10.8	+0.8
	comp=Z,30nm,1.1s						
PNTR	Pine Nut	82.53	52	*e*P	P	10 51 11.5	+1.4
	comp=Z,40nm,0.8s						
BMO	Blue Mountains	82.55	45	*e*P	P	10 51 10.7	+0.7
	comp=Z,20nm,1.1s						
BMO	Blue Mountains	82.55	45	*e*P	P	10 51 10.7	+0.7
BMO				pmax	pmax		
	comp=Z,20nm,1.1s						
WAKR	Walker	82.81	52	*e*P	P	10 51 12.9	+1.3
	comp=Z,17nm,0.7s						
YERR	Yerington	82.83	52	*e*P	P	10 51 12.8	+1.2
	comp=Z,24nm,0.7s						
PAGB	Antelope Grade	82.96	55	*e*P	P	10 51 13.8	+1.7
	comp=Z,39nm,1.0s						
SMMC	Simmler	83.27	55	P	P	10 51 15.0	+1.3
	baz=286						
MDPB	Devils Postpil	83.33	53	*e*P	P	10 51 15.5	+1.2
	comp=Z,14nm,1.0s						
OMMB	Old Mammoth Mi	83.40	53	*e*P	P	10 51 16.0	+1.3
	comp=Z,12nm,1.0s						
RYN	Ryan	83.47	52	*e*P	P	10 51 15.9	+1.1
	comp=Z,23nm,0.9s						
WALA	Waterton Lakes	83.49	41	*e*P	P	10 51 15.8	+1.1
	comp=Z,15nm,1.3s						
MLAC	Mammoth, Mammo	83.52	53	P	P	10 51 16.3	+1.1
	baz=287,SNR=7.3						
PKM	Mcpherson Peak	83.53	56	P	P	10 51 15.8	+0.5
	baz=286						
KVN	Kaiserville	83.66	51	*e*P	P	10 51 16.9	+1.0
	comp=Z,25nm,0.8s						
JTMT	Jette	83.68	42	*e*P	P	10 51 16.6	+0.9
	comp=Z,24nm,1.4s						
NV01	Mina Array Sit	83.69	52	*e*P	P	10 51 17.2	+1.1
NVAR	Mina Array Bea	83.69	52	P	P	10 51 17.2	+1.1
	comp=Z,21nm,0.7s,baz=264,slow=6.0,SNR=239						
NV11	Mina Array Sit	83.80	52	*e*P	P	10 51 17.7	+1.2
	comp=Z,1.4nm,0.8s						
VES	Vestal, Richgr	83.84	55	P	P	10 51 16.6	+0.1
	baz=287,SNR=13						
BMN	Battle Mountai	83.91	50	*e*P	P	10 51 18.2	+1.1
	comp=Z,13nm,1.0s						
BMN	Battle Mountai	83.91	50	*e*P	P	10 51 18.2	+1.1
BMN				pmax	pmax		
	comp=Z,13nm,1.0s						
SCZ2	Santa Cruz Isl	83.93	56	P	P	10 51 18.8	+1.7
	baz=287						
MFID	Camas Ranch	84.00	47	*e*P	P	10 51 18.2	+0.8
	comp=Z,22nm,1.0s						
ARA0	ARCESS Array S	84.05	342	*e*P	P	10 51 15.4	-1.6
ARCES	ARCESS Array B	84.05	342	P	P	10 51 15.4	-1.6
	comp=Z,3.0nm,0.8s,baz=76,slow=10,SNR=5.1						
TULEG	Thule	84.12	8	*e*P	P	10 51 18.1	+0.9
	comp=Z,65nm,1.2s						
TIN	Tinemaha, Big	84.14	53	P	P	10 51 18.9	+0.6
	baz=287						
MSO	Missoula	84.19	43	P	P	10 51 19.3	+1.0
	baz=289						
MSO	Missoula	84.19	43	*e*P	P	10 51 19.0	+0.7
	comp=Z,3.7nm,0.8s						
SNCC	San Nicolas Is	84.23	57	P	P	10 51 19.1	+0.5
	baz=287						
ARVC	Arvin	84.24	55	P	P	10 51 19.0	+0.3
	baz=287						
ISA	Isabella, Lake	84.36	55	P	P	10 51 19.4	0.0
	baz=287,SNR=8.5						
ISA	Isabella, Lake	84.36	55	*e*P	P	10 51 19.8	+0.5
	comp=Z,11nm,1.0s						
ISA	Isabella, Lake	84.36	55	*e*P	P	10 51 19.8	+0.5
ISA				pmax	pmax		
	comp=Z,11nm,1.0s						
CWC	Cottonwood Cre	84.44	54	P	P	10 51 20.1	+0.3
	baz=287						
OSI	Osito Audit: C	84.47	56	P	P	10 51 21.6	+1.6
	baz=287						
GRAC	Grapevine Rang	84.82	53	P	P	10 51 22.3	+0.7
	baz=288,SNR=9.3						
DAC	Darwin (Calif)	84.86	54	*e*P	P	10 51 22.7	+0.7
	comp=Z,12nm,1.1s						
DAC	Darwin (Calif)	84.86	54	*e*P	P	10 51 22.7	+0.7
DAC				pmax	pmax		
	comp=Z,12nm,1.1s						
DECC	Green Verdugo	84.89	56	P	P	10 51 22.3	+0.3
	baz=287						
HLID	Hailey	84.93	46	P	P	10 51 23.1	+0.9
	baz=289						
HLID	Hailey	84.93	46	*e*P	P	10 51 23.4	+1.2
	comp=Z,14nm,1.2s						
EDW2	Edwards Air Fo	84.97	55	P	P	10 51 23.3	+0.8
	baz=287,SNR=9.9						
MPMC	Manual Prospec	85.01	54	P	P	10 51 23.6	+0.9
	baz=288,SNR=24						
LRMC	Laurel Mtn Rad	85.03	55	P	P	10 51 23.5	+0.7
	baz=288,SNR=18						
CIS	Catalina Islan	85.07	57	P	P	10 51 23.8	+0.9
	baz=287						
FMP	Fort Macarthur	85.08	56	P	P	10 51 23.4	+0.5
	baz=287						
SCI2	San Clemente I	85.09	57	P	P	10 51 24.3	+1.3
	baz=287						
MWC	Mount Wilson	85.11	56	*e*P	P	10 51 24.1	+0.8
	comp=Z,24nm,1.3s						
MWC	Mount Wilson	85.11	56	*e*P	P	10 51 24.1	+0.8
MWC				pmax	pmax		
	comp=Z,24nm,1.3s						
FURC	Furnace Creek,	85.37	53	P	P	10 51 25.0	+0.8
	baz=288,SNR=13						
BFSC	Mount Baldy Ra	85.42	56	P	P	10 51 24.8	0.0
	baz=288						
LRM	Limekiln Ridge	85.50	43	*e*P	P	10 51 25.9	+0.8
DLMT	Dillon	85.56	44	*e*P	P	10 51 25.8	+0.6
	comp=Z,5.8nm,0.8s						
MCMT	McKenzie Canyo	85.57	44	*e*P	P	10 51 26.1	+0.6
HRY	Holter Researc	85.60	42	*e*P	P	10 51 26.3	+0.9
TPNV	Topopah Spring	85.69	53	P	P	10 51 26.8	+0.7
	baz=288,SNR=20						
TPNV	Topopah Spring	85.69	53	*e*P	P	10 51 26.8	+0.7
	comp=Z,14nm,0.9s						
TPNV	Topopah Spring	85.69	53	*e*P	P	10 51 26.8	+0.7
TPNV				pmax	pmax		
	comp=Z,14nm,0.9s						
R11A	Troy Canyon, C	85.75	51	P	P	10 51 27.1	+0.7
	baz=289,SNR=27						
R11A	Troy Canyon, C	85.75	51	*e*P	P	10 51 27.3	+0.9
	comp=Z,16nm,1.0s						
RRX	Edison Barstow	85.75	55	P	P	10 51 26.7	+0.4
	baz=288						
GSC	Goldstone, Bar	85.77	54	P	P	10 51 27.0	+0.5
	baz=288,SNR=9.4						
GSC	Goldstone, Bar	85.77	54	*e*P	P	10 51 27.5	+1.1
	comp=Z,20nm,1.0s						
GSC	Goldstone, Bar	85.77	54	*e*P	P	10 51 27.5	+1.1
GSC				pmax	pmax		
	comp=Z,20nm,1.0s						
MURC	Murrieta	85.98	56	P	P	10 51 27.2	-0.2
	baz=288						
SHOC	Shoshone, Teco	86.00	54	P	P	10 51 28.0	+0.6
	baz=288,SNR=6.7						
BBRC	Big Bear Solar	86.00	56	P	P	10 51 28.1	+0.3
	baz=288						
BOZ	Bozeman (W)	86.12	43	P	P	10 51 28.7	+0.7
	baz=291						
BOZ	Bozeman (W)	86.12	43	*e*P	P	10 51 28.7	+0.7
	comp=Z,25nm,1.3s						
BOZ	Bozeman (W)	86.12	43	*e*P	P	10 51 28.7	+0.7
BOZ				pmax	pmax		
	comp=Z,25nm,1.3s						
109C	Camp Elliot, M	86.28	57	P	P	10 51 29.3	+0.4
	baz=288						
CPE	Camp Elliot	86.28	57	*e*P	P	10 51 29.8	+1.0
	comp=Z,15nm,0.8s						
HEC	Hector,Ludlow	86.28	55	P	P	10 51 29.5	+0.5
	baz=288,SNR=7.7						

CRY	Cary Ranch	86.36	56	*e*P	P	10 51 32.4	+3.0
TUQ	Turquoise Moun	86.41	54	P	P	10 51 30.2	+0.6
	baz=289,SNR=11						
EGMT	Eagleton	86.44	41	P	P	10 51 29.7	+0.2
	baz=292						
EGMT	Eagleton	86.44	41	*e*P	P	10 51 29.7	+0.2
	comp=Z,17nm,1.0s						
QLMT	Earthquake Lak	86.52	44	*e*P	P	10 51 31.4	+1.4
PFO	Pinyon Flats O	86.56	56	P	P	10 51 30.6	+0.2
	baz=288,SNR=12						
PFO	Pinyon Flats O	86.56	56	*e*P	P	10 51 31.1	+0.7
	comp=Z,22nm,1.1s						
PFO	Pinyon Flats O	86.56	56	*e*P	P	10 51 31.1	+0.7
PFO				pmax	pmax		
	comp=Z,22nm,1.1s						
XPFO	Piæon Flat	86.57	56	*e*P	P	10 51 31.1	+0.7
	comp=Z,20nm,1.0s						
SHPR	Sheep Range	86.66	53	*e*P	P	10 51 32.4	+1.5
	comp=Z,11nm,0.9s						
HVU	Hansel Valley	86.66	47	*e*P	P	10 51 32.2	+1.4
	comp=Z,22nm,1.1s						
HVU	Hansel Valley	86.66	47	*e*P	P	10 51 32.2	+1.4
HVU				pmax	pmax		
	comp=Z,22nm,1.1s						
YHB	Horse Butte	86.70	44	*e*P	P	10 51 32.8	+1.8
	comp=Z,34nm,1.1s						
BGU	Big Grassy Mou	86.77	48	*e*P	P	10 51 32.3	+1.0
	comp=Z,12nm,1.3s						
OBN	Obninsk	86.78	327	*e*P	P	10 51 30.4	-0.4
OBN				*e*		10 54 56.1	
OBN				pmax	pmax		
	comp=Z,7.0nm,0.4s						
BELC	Belle Mtn. Jos	86.81	56	P	P	10 51 31.7	+0.1
	baz=289,SNR=9.1						
MONP2	Monument Peak	86.82	57	P	P	10 51 32.2	+0.4
	baz=288,SNR=6.1						
GMRC	Granite Mounta	86.82	55	P	P	10 51 32.3	+0.7
	baz=289,SNR=12						
YMR	Madison River	86.89	44	*e*P	P	10 51 33.9	+2.0
	comp=Z,40nm,1.0s						
PSUT	Pine Spring	86.97	51	*e*P	P	10 51 33.2	+0.8
	comp=Z,22nm,1.0s						
SPUT	South Promonto	87.05	48	*e*P	P	10 51 33.6	+0.9
	comp=Z,20nm,1.1s						
YPP	Pitchstone Pla	87.14	44	*e*P	P	10 51 35.4	+2.1
	comp=Z,6.6nm,1.1s						
IKP	In-Ko-Pah, Jac	87.15	57	P	P	10 51 33.7	+0.5
	baz=289						
DUG	Dugway, Tooele	87.17	49	P	P	10 51 34.0	+0.8
	baz=290						
DUG	Dugway, Tooele	87.17	49	*e*P	P	10 51 34.0	+0.8
	comp=Z,44nm,1.4s						
DUG	Dugway, Tooele	87.17	49	*e*P	P	10 51 34.0	+0.8
DUG				pmax	pmax		
	comp=Z,44nm,1.4s						
IMW	Indian Meadow	87.18	45	*e*P	P	10 51 35.0	+1.6
	comp=Z,18nm,0.9s						
FXWY	Fox Creek	87.22	45	*e*P	P	10 51 34.9	+1.4
	comp=Z,14nm,1.1s						
H17A	Grant Village	87.24	44	P	P	10 51 35.7	+2.1
	baz=292						
H17A	Grant Village	87.24	44	*e*P	P	10 51 36.7	+3.0
	comp=Z,27nm,1.1s						
FLWY	Flagg Ranch	87.28	45	*e*P	P	10 51 35.4	+1.6
	comp=Z,30nm,0.9s						
SWSC	Sam W. Stewart	87.30	56	P	P	10 51 33.9	+0.1
	baz=289						
TPAW	Teton Pass	87.32	45	*e*P	P	10 51 35.5	+1.4
	comp=Z,12nm,1.0s						
GCMT	Greycliff	87.33	43	*e*P	P	10 51 35.1	+1.2
BC3	Big Chuckawall	87.35	56	P	P	10 51 34.8	+0.6
	baz=289,SNR=11						
MOOW	Moose Ponds	87.36	45	*e*P	P	10 51 35.5	+1.3
	comp=Z,10nm,0.9s						
IRM	Iron Mountain	87.43	55	P	P	10 51 35.1	+0.7
	baz=289,SNR=11						
REDW	Red Top Meadow	87.43	45	*e*P	P	10 51 35.7	+1.2
	comp=Z,9.5nm,1.0s						
SNOW	Snow King Moun	87.46	45	*e*P	P	10 51 35.7	+1.0
	comp=Z,5.8nm,0.9s						
AHID	Auburn Hatcher	87.48	46	*e*P	P	10 51 35.8	+1.1
	comp=Z,25nm,1.1s						
LOHW	Long Hollow	87.51	45	*e*P	P	10 51 35.8	+0.8
	comp=Z,9.9nm,1.2s						
HWUT	Hardware Ranch	87.57	47	*e*P	P	10 51 35.9	+0.7
	comp=Z,19nm,0.8s						
KIV	Kislovodsk	87.59	315	*e*P	P	10 51 33.5	-1.6
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,33nm,20.0s						
NEE2	Needles Airpor	87.64	54	P	P	10 51 36.1	+0.7
	baz=289						
CCUT	Cedar City	87.67	51	*e*P	P	10 51 37.0	+1.2
	comp=Z,17nm,1.1s						
CTU	Camp Tracy	87.76	48	*e*P	P	10 51 37.1	+1.0
	comp=Z,12nm,0.9s						
NLU	North Lily Min	87.79	49	*e*P	P	10 51 37.4	+1.1
	comp=Z,14nm,1.0s						
RLMT	Red Lodge	87.84	43	*e*P	P	10 51 38.0	+1.5
	comp=Z,9.9nm,1.1s						
TCUT	Toone Canyon	87.85	48	*e*P	P	10 51 37.3	+0.6
	comp=Z,20nm,0.7s						
SZCU	Shurtz Canyon	87.86	51	*e*P	P	10 51 37.6	+0.9
	comp=Z,12nm,1.0s						
LCMT	Little Creek M	87.94	52	*e*P	P	10 51 38.2	+1.2
	comp=Z,12nm,1.0s						
JLU	Jordanelle	88.01	48	*e*P	P	10 51 38.1	+0.8
	comp=Z,20nm,0.9s						
GLA	Glamis	88.04	56	P	P	10 51 37.4	0.0
	baz=289						
Y12C	Blythe	88.05	55	P	P	10 51 38.0	+0.7
	baz=289,SNR=5.3						
Y12C	Blythe	88.05	55	*e*P	P	10 51 38.1	+0.7
	comp=Z,10nm,0.8s						
MPU	Maple Canyon	88.08	49	*e*P	P	10 51 38.7	+1.0
	comp=Z,15nm,1.1s						
FFC	Flin Flon	88.09	33	*e*P	P	10 51 37.4	+0.3
	comp=Z,19nm,1.4s						
FFC	Flin Flon	88.09	33	*e*P	P	10 51 37.4	+0.3
FFC				pmax	pmax		
	comp=Z,19nm,1.4s						
W13A	Hualapai Mount	88.10	54	*e*P	P	10 51 39.1	+1.2
	comp=Z,8.4nm,0.9s						
PDMCI	Parker Dam,Lak	88.17	55	P	P	10 51 38.7	+0.8
	baz=290,SNR=6.8						
MSU	Marysvale	88.22	50	*e*P	P	10 51 39.7	+1.3
KNB	Kanab	88.26	52	*e*P	P	10 51 39.9	+1.4
	comp=Z,27nm,1.0s						
KNB	Kanab	88.26	52	*e*P	P	10 51 39.9	+1.4
KNB				pmax	pmax		
	comp=Z,27nm,1.0s						
MTPU	Mount Pierson	88.38	51	*e*P	P	10 51 40.7	+1.4
	comp=Z,7.6nm,1.0s						
FIA0	FINESS Array S	88.43	335	*e*P	P	10 51 37.4	-1.1
FIA0	FINESS Array S	88.43	335	*e*P	P	10 51 37.4	-1.1
FINES	FINESS Array B	88.43	335	P	P	10 51 37.4	-1.1
	comp=Z,1.3nm,0.5s,baz=37,slow=4.8,SNR=5.9						
PKCU	Pink Cliffs	88.49	51	*e*P	P	10 51 41.9	+2.0
	comp=Z,18nm,1.1s						
BW06	Boulder Array	88.53	46	P	P	10 51 40.0	+0.2
	baz=292						
BW06	Boulder Array	88.53	46	*e*P	P	10 51 40.2	+0.4
	comp=Z,2.5nm,0.7s						
PD31	Pinedale Array	88.53	46	*e*P	P	10 51 40.1	+0.4
PDAR	Pinedale Array	88.53	46	P	P	10 51 40.0	+0.3
	comp=Z,1.7nm,0.6s,baz=67,slow=0.1,SNR=23						
PDAR				LR	LR	11 23 50.2	
	comp=Z,19nm,21.6s,baz=348,slow=30						
TMUT	Trail Mountain	88.65	49	*e*P	P	10 51 41.6	+1.1
	comp=Z,9.9nm,1.0s						
U15A	North Rim	88.86	52	*e*P	P	10 51 42.8	+1.2
	comp=Z,12nm,0.9s						
P17A	Butcher Ranch,	88.92	49	*e*P	P	10 51 42.8	+1.2
	comp=Z,20nm,1.2s						
113A	Mohawk Valley,	88.97	56	*e*P	P	10 51 42.9	+1.1
	comp=Z,9.7nm,1.0s						
LAO	LASA Array	89.17	41	P	P	10 51 42.7	+0.2
	baz=294						
LAO	LASA Array	89.17	41	*e*P	P	10 51 43.3	+0.8
	comp=Z,14nm,1.0s						
Y14A	Wickenburg	89.18	55	*e*P	P	10 51 43.8	+1.0
	comp=Z,16nm,0.8s						
SRU	San Rafael Swe	89.21	49	*e*P	P	10 51 43.5	+0.6
	comp=Z,17nm,1.0s						
SRU	San Rafael Swe	89.21	49	*e*P	P	10 51 43.6	+0.6
SRU				pmax	pmax		
	comp=Z,17nm,1.0s						
P18A	Preston Nutter	89.22	49	*e*P	P	10 51 43.7	+0.5
	comp=Z,7.1nm,0.9s						
WUAZ	Wupatki	89.88	53	P	P	10 51 46.5	+0.4
	baz=291						
214A	Organ Pipe Nat	90.01	57	P	P	10 51 47.8	+1.1
	baz=290						
X16A	Lo Mia Camp, P	90.22	54	*e*P	P	10 51 49.5	+1.6
	comp=Z,5.5nm,1.0s						
PV09	Paradox Valley	90.45	49	*e*P	P	10 51 50.0	+1.0
O20A	White River Ci	90.45	48	P	P	10 51 49.2	+0.4
	baz=293						
O20A	White River Ci	90.45	48	*e*P	P	10 51 49.3	+0.5
	comp=Z,18nm,1.0s						
PV21	Cone Mtn., Par	90.54	49	*e*P	P	10 51 50.3	+1.0
	comp=Z,33nm,1.3s						
PV23	Carpenter Ridg	90.55	49	*e*P	P	10 51 50.4	+1.1
	comp=Z,33nm,1.0s						
RWWY	Rawlins	90.56	46	*e*P	P	10 51 50.2	+0.9
	comp=Z,18nm,1.1s						
PV14	Lion Creek, Pa	90.57	49	*e*P	P	10 51 50.4	+1.0
	comp=Z,34nm,1.1s						
PV19	Morning Glory	90.63	50	*e*P	P	10 51 50.5	+0.9
	comp=Z,39nm,1.3s						
PV20	West Nyswonger	90.63	49	*e*P	P	10 51 50.7	+1.0
	comp=Z,36nm,1.1s						
K22A	Casper	90.64	45	P	P	10 51 49.6	0.0
	baz=294						
K22A	Casper	90.64	45	*e*P	P	10 51 50.4	+0.8
	comp=Z,13nm,1.1s						
PV17	East Wray Mesa	90.66	50	*e*P	P	10 51 50.7	+0.9
	comp=Z,31nm,1.1s						
PV16	Nyswonger Mesa	90.68	49	*e*P	P	10 51 50.8	+0.9
	comp=Z,28nm,1.2s						
PV22	Blue Mesa, Par	90.68	49	*e*P	P	10 51 50.7	+0.8
	comp=Z,20nm,1.5s						
PV18	Skein Mesa, Pa	90.71	50	*e*P	P	10 51 50.8	+0.8
	comp=Z,23nm,1.2s						
PV11	David Mesa, Pa	90.71	49	*e*P	P	10 51 51.0	+0.9
	comp=Z,35nm,1.1s						
PV03	Paradox Valley	90.75	50	*e*P	P	10 51 50.7	+0.5
PV12	Saucer Basin,	90.76	49	*e*P	P	10 51 51.3	+1.0
	comp=Z,37nm,1.2s						
PV13	Radium Mtn., P	90.80	50	*e*P	P	10 51 51.1	+0.6
	comp=Z,16nm,1.1s						
PV02	Paradox Valley	90.85	50	*e*P	P	10 51 51.5	+0.8
	comp=Z,22nm,1.3s						
W18A	Petrified Fore	91.27	53	P	P	10 51 53.3	+0.7
	baz=292						
W18A	Petrified Fore	91.27	53	*e*P	P	10 51 54.0	+1.4
	comp=Z,6.8nm,0.9s						
MVCO	Mesa Verde	91.40	50	P	P	10 51 54.0	+0.7
	baz=293						
MVCO	Mesa Verde	91.40	50	*e*P	P	10 51 54.3	+1.0
	comp=Z,13nm,1.3s						
TUC	Tucson	91.49	56	P	P	10 51 54.8	+1.2
	baz=292						
TUC	Tucson	91.49	56	*e*P	P	10 51 54.8	+1.2
	comp=Z,7.4nm,1.1s						
RSSD	Black Hills	91.66	43	P	P	10 51 54.3	-0.1
	baz=296						
RSSD	Black Hills	91.66	43	*e*P	P	10 51 54.6	+0.3
	comp=Z,12nm,1.4s						
RSSD	Black Hills	91.66	43	*e*P	P	10 51 54.6	+0.3
RSSD				pmax	pmax		
	comp=Z,12nm,1.4s						
SMCO	Snowmass	91.73	48	*e*P	P	10 51 56.2	+1.2
	comp=Z,20nm,1.0s						
PHWY	Pilot Hill	91.92	46	*e*P	P	10 51 56.5	+0.9
	comp=Z,11nm,1.1s						
S22A	4UR Ranch, Cre	92.41	49	P	P	10 51 59.0	+0.9
	baz=294						
S22A	4UR Ranch, Cre	92.41	49	*e*P	P	10 51 59.0	+0.9
	comp=Z,12nm,1.1s						
ISCO	Idaho Springs	92.44	47	P	P	10 51 59.0	+0.8
	baz=295						
ISCO	Idaho Springs	92.44	47	*e*P	P	10 51 59.4	+1.3
	comp=Z,9.6nm,1.0s						
ISCO	Idaho Springs	92.44	47	*e*P	P	10 51 59.4	+1.3
ISCO				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MDND	Maddock	92.68	38	P	P	10 51 58.6	-0.1
	baz=299						
319A	Douglas	93.03	56	*e*P	P	10 52 02.4	+1.6
	comp=Z,5.7nm,0.9s						
Q24A	Divide	93.11	48	P	P	10 52 01.5	+0.2
	baz=295						
SDCO	Great Sand Dun	93.37	49	P	P	10 52 02.8	+0.4
	baz=295						
SDCO	Great Sand Dun	93.37	49	*e*P	P	10 52 03.3	+0.8
	comp=Z,4.9nm,1.1s						
121A	Cookes Peak, D	93.76	54	P	P	10 52 05.0	+0.8
	baz=293						
TASM	ASL Pad, Albuq	93.81	52	P	P	10 52 04.7	+0.3
	baz=294						
ANMO	Albuquerque	93.82	52	P	P	10 52 04.3	-0.1
	comp=Z,3.3nm,1.0s,baz=254,slow=7.0,SNR=8.5						
ANMO	Albuquerque	93.82	52	P	P	10 52 04.7	+0.3
	baz=294						
ANMO	Albuquerque	93.82	52	*e*P	P	10 52 05.5	+1.1
	comp=Z,6.9nm,1.3s						
ANMO	Albuquerque	93.82	52	⇑*i*P	P	10 52 05.4	+1.0
ANMO				pmax	pmax		
	comp=Z,8.0nm,1.7s						
Y22E	IRIS PASSCAL I	93.82	53	P	P	10 52 04.6	+0.2
	baz=294						
TASL	Snake Pit, Alb	93.82	52	P	P	10 52 04.8	+0.4
	baz=294						
HFS	Hagfors	93.94	338	P	P	10 52 04.7	+0.6
	comp=Z,0.8nm,0.5s,baz=131,slow=15,SNR=4.3						
HFS				LR	LR	11 37 34.4	
	comp=Z,25nm,18.4s,baz=148,slow=37						
NOA	NORSAR Array B	94.13	340	LR	LR	11 37 15.8	
	comp=Z,10.0nm,20.3s,baz=30,slow=37						
OGNE	Ogallala	94.40	45	P	P	10 52 07.6	+0.8
	baz=297						
T25A	Trinidad	94.42	49	P	P	10 52 07.6	+0.4
	baz=295						
T25A	Trinidad	94.42	49	*e*P	P	10 52 08.2	+1.0
	comp=Z,6.9nm,1.3s						
AGMN	Agassiz Nation	94.61	36	P	P	10 52 07.1	-0.4
	baz=302						
LPIG	La Paz	94.85	63	LR	LR	11 27 31.4	
	comp=Z,23nm,20.6s,baz=279,slow=31						
KSCO	Kaye Shedlock’	94.86	47	P	P	10 52 09.0	-0.1
	baz=297						
KSCO	Kaye Shedlock’	94.86	47	*e*P	P	10 52 09.8	+0.8
	comp=Z,16nm,1.1s						
VNDA	Vanda	94.97	177	*e*P	P	10 52 09.4	+1.0
	comp=Z,1.4nm,0.9s						
VNDA	Vanda	94.97	177	*e*P	P	10 52 09.4	+1.0
VNDA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MNTX	Cornudas Mount	95.96	54	P	P	10 52 14.5	+0.4
	baz=294						
MNTX	Cornudas Mount	95.96	54	*e*P	P	10 52 15.2	+1.1
	comp=Z,2.8nm,1.1s						
ECSD	EROS Data Cent	96.56	40	P	P	10 52 16.2	-0.3
	baz=301						
F35A	Swanville	96.66	38	P	P	10 52 17.0	+0.1
	baz=303						
RCY	Rachaya	96.68	308	*e*P	P	10 52 19.0	+1.6
DQRL	Deir Qamar	96.79	308	*e*P	P	10 52 14.1	-3.8
EYMN	Ely	97.23	35	P	Pdif	10 52 19.6	+0.1
	baz=306						
F36A	Milaca	97.27	37	P	Pdif	10 52 19.9	+0.2
	baz=304						
AMTX	Amarillo	97.39	50	P	Pdif	10 52 20.8	+0.2
	baz=297						
F38A	Pierce - Schro	98.17	37	P	P	10 52 23.4	-0.3
	baz=305						
LTX	Lajitas	98.29	56	*e*P	Pdif	10 52 25.3	+0.5
LTX	Lajitas	98.29	56	*e*P	Pdif	10 52 25.3	+0.6
TXAR	Lajitas Array	98.29	56	P	Pdif	10 52 25.3	+0.5
	comp=Z,0.7nm,1.0s,baz=261,slow=6.2,SNR=4.6						
TXAR				LR	LR	11 31 29.0	
	comp=Z,15nm,20.5s,baz=0.0,slow=32						
K36A	Gilmore City	98.48	41	P	P	10 52 24.8	-0.4
	baz=303						
C40A	Isle Royale Na	98.52	34	P	P	10 52 25.0	-0.2
	baz=308						
F39A	Loretta	98.74	36	P	P	10 52 25.3	-1.0
	baz=306						
G39A	Holcombe	98.96	37	P	P	10 52 26.8	-0.5
	baz=306						
E40A	Wakefield	99.00	36	P	Pdif	10 52 27.4	-0.1
	baz=307						
F40A	Park Falls	99.19	36	P	Pdif	10 52 27.7	-0.6
	baz=306						
H39A	Augusta	99.25	38	P	Pdif	10 52 28.1	-0.4
	baz=305						
G40A	Rib Lake	99.53	37	P	Pdif	10 52 29.5	-0.3
	baz=306						
WMOK	Wichita Mounta	99.57	49	P	Pdif	10 52 30.0	-0.3
	baz=299						
L38A	Oak Wood Farm,	99.67	40	P	Pdif	10 52 30.3	-0.2
	baz=304						
J39A	Decorah	99.77	39	P	Pdif	10 52 31.0	+0.1
	baz=305						
H40A	Chili	99.80	37	P	Pdif	10 52 30.8	-0.2
	baz=306						
M38A	Pleasantville	99.92	41	P	Pdif	10 52 31.3	-0.3
	baz=304						
ABTX	Abilene, Hawle	99.93	51	P	Pdif	10 52 31.5	-0.4
	baz=298						
Z49A	Columbiana	108.98	45	P	PKiKP	10 57 15.8	-0.4
	baz=307						
SSPA	Standing Stone	109.38	34	P	PKiKP	10 57 17.0	+0.2
	baz=315						
Y51A	Rockmart	109.53	43	P	PKiKP	10 57 16.9	-0.4
	baz=308						
N59A	State Game Lan	110.30	33	P	PKiKP	10 57 18.1	-0.4
	baz=317						
NVL	N’lazarevskaya	119.92	196	*e*PKIKP	PKPdf	10 57 34.8	-1.1
NVL				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SNAA	Sanae	122.56	191	PKP	PKPdf	10 57 39.0	-2.1
	comp=Z,0.6nm,0.5s,baz=202,slow=18,SNR=5.5						
SNAA	Sanae	122.56	191	PKIKP	PKPdf	10 57 39.0	-2.1
TOA1	Torodi Ar. Sit	133.75	308	*e*PKPdf	PKPdf	10 58 01.9	-2.0
TORD	Torodi Ar. Bea	133.75	308	PKP	PKPdf	10 58 01.9	-2.0
	comp=Z,0.6nm,0.9s,baz=228,slow=1.7						
PLCA	Paso Flores	140.64	134	PKP	PKPdf	10 58 14.7	-1.4
	comp=Z,1.5nm,0.7s,baz=94,slow=1.8,SNR=4.6						
GO04	Tololo Observa	143.91	118	*e*PKPdf	PKPbc	10 58 21.1	+0.7
LCO	Las Campanas	144.23	116	*e*PKPdf	PKPdf	10 58 22.9	-0.1
LCO	Las Campanas	144.23	116	*e*PKIKP	PKPdf	10 58 22.9	-0.1
MNMC	Minye Minye	145.98	99	*e*PKPdf	PKPab	10 58 28.0	+0.2
LPAZ	La Paz	147.15	94	PKPbc	PKPbc	10 58 30.4	-0.7
	comp=Z,6.0nm,0.6s,baz=11,slow=3.7,SNR=26						
LPAZ	La Paz	147.15	94	*e*PKPdf	PKPbc	10 58 30.5	-0.5
LPAZ	La Paz	147.15	94	*e*PKP2	PKPbc	10 58 30.5	-0.5
PTGA	Pitinga	149.50	60	*e*PKPbc	PKPbc	10 58 36.5	0.0
SAML	Samuel	150.27	78	*e*PKPdf	PKPdf	10 58 34.1	+1.0
SAML	Samuel	150.27	78	*e*PKIKP	PKPdf	10 58 34.1	+1.0

MEX 09 10:40:30.4±0.4, 27°.96N×112°.04W, h3^{km}±5^{km}, MD3.6, Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRIG	Santa Rosalia	0.66	196	*e*P	Pg	10 40 42.4	-0.6
SRIG				*e*S	Sg	10 40 51.8	+0.2
GUYB	Guaymas	1.03	93	*e*P	Pg	10 40 47.6	-2.6
GUYB				*e*S	Sg	10 41 01.5	-2.1
HSIG		1.43	42	*e*P	Pn	10 40 53.8	-3.5
HSIG				*i* S	Sb	10 41 11.5	-4.8

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*SJA **09** 10:59:32.9±1.1, 31°.74S×71°.94W, h40^{km}±999^{km}, ML3.5, MW3.5*

*GUC **09** 10:59:33.2±0.4, 31°.63S×71°.45W, h28^{km}±8^{km}, ML3.5*

ISC 09 10:59:30.1±2.7, 31°.61S±0°.06×71°.7W±0°.1, h0^{km}±16^{km}, n13, σ0^s.84/23, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROCH	El Roble	1.49	156	*e*P	Pn	10 59 58.1	-0.3
ROCH				*e*S	Sn	11 00 17.4	-1.2
ROCH				IAML		11 00 22.2	
	comp=N,969nm,0.4s						
ROC1	El Roble	1.49	156	*e*P	Pn	10 59 58.2	-0.2
GO04	Tololo Observa	1.64	29	*e*P	Pb	11 00 01.3	-0.1
GO04				*e*S	Sg	11 00 23.1	+0.2
GO04				IAML		11 00 27.4	
	comp=E,2µm,0.4s						
TLL	Tololo Astrono	1.64	29	*e*P	Pb	11 00 01.3	-0.1
TLL				*e*S	Sg	11 00 23.0	+0.1
TLL				IAML		11 00 34.9	
	comp=N,755nm,0.5s						
PEL	Peldehue	1.77	150	*e*P	Pn	11 00 02.4	+0.3
PEL				*e*S	Sn	11 00 24.4	-0.9
PEL				IAML		11 00 28.4	
	comp=E,471nm,0.3s						
CLCH	Cerro Calan	2.05	151	*e*P	Pn	11 00 06.7	+0.8
CLCH				*e*S	Sn	11 00 32.1	-0.1
CLCH				IAML		11 00 42.8	
	comp=N,616nm,0.6s						
RTLS	Leoncito	2.08	96	*e*P	Pg	11 00 10.1	0.0
RTLS				*e*S	Sg	11 00 37.1	0.0
RTLS				IAML		11 00 39.1	
	comp=Z,283nm,0.7s						
AUSP	Uspallata	2.08	108	*e*P	Pg	11 00 10.2	+0.1
AUSP				*e*S	Sg	11 00 37.6	+0.5
FCH	Farellones	2.10	145	*e*P	Pn	11 00 08.0	+1.1
FCH				*e*S	Sn	11 00 34.1	+0.3
FCH				IAML		11 00 37.8	
	comp=E,466nm,0.4s						
LMEL	Las Melosas	2.58	150	*e*P	Pn	11 00 14.7	+1.4
LMEL				*e*S	Sn	11 00 45.8	+0.4
LMEL				IAML		11 00 58.0	
	comp=N,460nm,0.2s						
ACDV	Cuesta del Vie	2.66	58	*e*P	Pb	11 00 18.6	-0.2
ACDV				*e*S	Sb	11 00 52.8	+0.7
AMOG	MOGNA	2.85	77	*e*P	Pb	11 00 21.2	-0.7
AGUA	GUANDACOL	3.50	54	*e*P	Pb	11 00 30.8	-2.3

IDC 09 11:07:48.6±3.4, 27°.26N×142°.85E, h96^{km}±17^{km}, mb3.0/2, mb1 3.2/3, mb1mx2.8/58, mbtmp3.3/3, Error ellipse: s-maj=72.7km s-min=26.6km az=79.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	0.61	255	P	Pn	11 08 05.0	+0.1
	2.4nm,0.3s,baz=358,slow=15,SNR=4.4						
JCJ				S	Sn	11 08 18.6	+1.7
	16nm,0.3s,baz=253,slow=19,SNR=7.6						
MJAR	Matsushiro Arr	10.06	338	P	Pn	11 10 10.9	+0.8
	0.3nm,0.3s,baz=157,slow=11,SNR=5.0						
WRA	Warramunga Arr	47.64	191	P	P	11 16 15.6	+0.3
	0.5nm,0.9s,baz=12,slow=8.6,SNR=5.0						
MKAR	Makanchi Array	50.83	309	P	P	11 16 39.0	-0.4
	0.1nm,0.3s,baz=91,slow=9.1,SNR=4.3						

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*ISCJB **09** 11:28:46.0±0.6, 34°.10N±0°.05×141°.86E±0°.07, h21^{km}, mb3.9/10, Error ellipse: s-maj=8.9km s-min=6.1km az=155.4*

*IDC **09** 11:28:45.1±1.0, 34°.13N×141°.79E, h0^{km}, mb3.8/8, mb1 3.9/12, mb1mx3.7/64, mbtmp3.8/12, ML3.5/4, Error ellipse: s-maj=26.7km s-min=15.8km az=75.0*

*JMA **09** 11:28:47.4±0.6, 34°.09N×141°.79E, h36^{km}±4^{km}, M3.4*

*NEIC **09** 11:28:50.4±0.7, 34°.11N×141°.78E, h35^{km}±9^{km}, mb4.1/3, Error ellipse: s-maj=26.9km s-min=16.8km az=74.0*

ISC 09 11:28:47.4±0.8, 34°.15N±0°.05×141°.88E±0°.08, h21^{km}, n36, σ1^s.84/43, mb4.0/10, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	0.90	304	P	Pb	11 29 03.4	-0.5
BSO3	Boso 3	1.31	300	P	Pn	11 29 09.8	-0.3
BSO4	Boso 4	1.52	304	P	Pn	11 29 13.4	+0.1
JMKN	Mikurajimanish	1.92	263	P	Pn	11 29 17.4	-1.4
JHJ2	Mitsune	2.01	240	*e*Pn	Pn	11 29 20.2	+0.2
JHJ2	Mitsune	2.01	240	P	Pn	11 29 20.0	0.0
JHJ	Hachijo jima 2	2.03	240	Pn	Pn	11 29 20.1	-0.2
	128nm,0.3s,baz=338,slow=21,SNR=75						
JHJ				Sn	Sn	11 29 42.5	-2.5
	108nm,0.3s,baz=79,slow=21,SNR=14						
JIM2	Oshima 3	2.10	286	P	Pn	11 29 19.8	-1.5
JIZS	Izushimoda	2.54	284	P	Pn	11 29 26.0	-1.4
JOD2	Odawara 2	2.56	297	P	Pn	11 29 26.3	-1.3
JAG	Ashikaga	3.02	320	P	Pn	11 29 34.1	+0.2
MJAR	Matsushiro Arr	3.83	310	Pn	Pn	11 29 45.4	+0.2
	3.7nm,0.3s,baz=34,slow=13,SNR=33						
MJAR				Sn	Sn	11 30 30.4	+0.8
	2.9nm,0.3s,baz=204,slow=21,SNR=8.2						
MAJO	Matsushiro	3.84	310	*e*Pn	Pn	11 29 46.3	+1.1
MAJO				*e*Sn	Sn	11 30 30.4	+0.7
MAT	Matsushiro	3.84	310	P	Pn	11 29 46.1	+0.9

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MAT				S	Sn	11 30 24.4	-5.3
MJB9	Matsu-Tunnel	3.84	310	ePn	Pn	11 29 46.2	+0.9
INU	Inuyama	4.18	288	ePn	Pn	11 29 51.0	+1.2
JCJ	Chichijima	7.04	178	Pn	Pn	11 30 29.5	+0.3
	3.6nm,0.3s,baz=218,slow=17,SNR=3.3						
JCJ				Sn	Sn	11 31 43.9	-4.6
	2.9nm,0.3s,baz=152,slow=17,SNR=2.2						
ASAJ	Asahikawa	9.97	3	Pn	Pn	11 31 08.7	-0.6
	0.5nm,0.3s,baz=275,slow=14,SNR=4.4						
ASAJ				Sn	Sn	11 32 54.0	-6.5
	0.3nm,0.3s,baz=259,slow=18,SNR=4.8						
KSRS	Korea Array	11.80	290	Pn	Pn	11 31 35.8	+1.4
	0.1nm,0.3s,baz=35,slow=29,SNR=4.7						
SONA1	Songino Array	29.78	308	eP	P	11 34 53.4	+0.7
SONA0	Songino Array	29.79	308	eP	P	11 34 53.6	+0.9
SONM	Songino Array	29.79	308	P	P	11 34 53.6	+0.9
	1.8nm,0.8s,baz=106,slow=10,SNR=8.1						
MK01	Makanchi Array	46.02	305	eP	P	11 37 10.1	+0.8
MK31	Makanchi Array	46.02	305	eP	P	11 37 09.5	+0.3
MK32	Makanchi Array	46.02	305	eP	P	11 37 10.4	+1.2
MKAR	Makanchi Array	46.02	305	P	P	11 37 10.4	+1.2
	1.2nm,0.6s,baz=88,slow=9.5,SNR=12						
MKAR	Makanchi Array	46.02	305	eP	P	11 37 09.9	+0.7
	8.8nm,0.8s						
KURK	Kurchatov	48.05	310	eP	P	11 37 25.5	+0.6
	3.0nm,0.9s						
KURK				eP	P	11 37 25.9	+1.0
KURBB	Kurchatov Arra	48.11	310	P	P	11 37 25.9	+0.4
	1.8nm,0.9s,baz=86,slow=7.9,SNR=11						
ILAR	Eielson Array	51.74	31	P	P	11 37 55.9	+3.0
	0.3nm,0.8s,baz=278,slow=8.4,SNR=4.1						
ILB	Eielson Array	51.74	31	eP	P	11 37 54.4	+1.5
BVAR	Borovoye Array	52.82	314	P	P	11 38 01.3	+0.3
	0.3nm,0.4s,baz=75,slow=7.6,SNR=3.1						
WR1	Warramunga Arr	54.27	189	eP	P	11 38 12.6	+0.7
	0.8nm,0.6s						
WRA	Warramunga Arr	54.27	189	P	P	11 38 12.6	+0.7
	0.8nm,0.5s,baz=5.4,slow=7.5,SNR=27						
ASAR	Alice Springs	57.99	189	P	P	11 38 39.1	+0.6
	0.4nm,0.7s,baz=13,slow=8.7,SNR=8.7						
AKTO	Aktyubinsk	60.91	313	P	P	11 38 57.2	-1.2
	0.8nm,0.4s,baz=49,slow=9.3,SNR=2.5						

MAN 09 11:34:21.9, 8°.00N×125°.93E, h15^{km}, mb4.7, ML3.5, MS3.4, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	Bislig	0.47	67⇓	iP	Pn	11 34 35.5	+1.4
BIPH				i S	Sn	11 34 41.8	-0.3
BUKP	Musuan	0.87	262	eP	Pb	11 34 38.5	-0.2
BUKP				eS	Sn	11 34 51.4	-0.7
DMPH	Davao City--Mi	1.00	205⇑	iP	Pn	11 34 45.9	+4.4
DMPH				i S	Sn	11 35 05.5	+10
BUTP	Butuan	1.01	342	eP	Pb	11 34 36.6	-4.6
BUTP				eS	Sn	11 35 00.3	+4.7
MATI	Mati	1.10	163	eP	Pb	11 34 40.6	-2.0
MATI				eS	Sn	11 34 58.7	+1.0
CGP	Cagayan de Oro	1.30	290⇑	eP	Pn	11 34 44.9	-0.8
CGP				eS	Sg	11 35 03.7	-0.4
SKMP	Bagumbayan, Su	2.01	223	eP	Pn	11 34 55.0	-0.4
SKMP				eS	Sb	11 35 21.8	-1.4
PAGZ	Pagadian	2.53	267	eP	Pn	11 34 47.7	-15
PAGZ				eS	Sn	11 35 29.5	-3.5

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*ISCJB **09** 11:34:51.6±0.5, 33°.41N±0°.06×137°.82E±0°.07, h350^{km}, mb3.2/7, Error ellipse: s-maj=9.0km s-min=7.7km az=146.5*

*JMA **09** 11:34:51.3±0.2, 33°.44N×137°.87E, h360^{km}, M2.8*

*IDC **09** 11:34:52.3±0.6, 33°.42N×137°.86E, h353^{km}±12^{km}, mb3.1/7, mb1 3.1/10, mb1mx2.9/64, mbtmp3.8/10, Error ellipse: s-maj=35.0km s-min=10.2km az=67.0*

ISC 09 11:34:52.3±0.8, 33°.46N±0°.07×137°.83E±0°.08, h350^{km}, n28, σ0^{s}.87/33, mb3.2/7, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TTO1	TONANKAI O.B.S	0.88	281	P	Pn	11 35 38.1	+0.9
JIE	Ise	1.31	315	P	Pn	11 35 40.0	+0.6
JHJ	Hachijo jima 2	1.68	101	P	Pn	11 35 41.7	+0.2
	16nm,0.3s,baz=112,slow=22,SNR=21						
JHJ				S	S	11 36 21.9	+0.9
	8.5nm,0.3s,baz=331,slow=23,SNR=5.9						
JHJ2	Mitsune	1.70	101	P	Pn	11 35 42.3	+0.6
JWZ	Kozaga	1.77	273	P	Pn	11 35 41.7	-0.4
JWY	Kouya	2.01	293	P	Pn	11 35 44.2	+0.5
JOD2	Odawara 2	2.08	30	P	Pn	11 35 44.9	+0.8
JRY	Ryogami san	2.70	19	P	Pn	11 35 49.9	+0.9
JWT	Wachi	2.71	313	P	Pn	11 35 49.5	+0.5
JAI	Aioi	2.83	278	P	Pn	11 35 49.9	-0.3
BSO1	Boso 1	2.88	65	S	S	11 36 35.6	-0.7
JKG	Kaga	3.07	337	P	Pn	11 35 52.6	+0.4
MJAR	Matsushiro Arr	3.09	6	P	Pn	11 35 52.7	+0.3
	3.1nm,0.3s,baz=189,slow=10,SNR=82						
MJAR				S	S	11 36 40.8	-0.1
	0.1nm,0.3s,baz=184,slow=16,SNR=4.3						
MAT	Matsushiro	3.09	6	P	Pn	11 35 52.8	+0.4
MAT				eS	S	11 36 40.6	-0.3
MAT	Matsushiro	3.09	6	P	Pn	11 35 53.0	+0.6
MAT				S	S	11 36 40.8	-0.1
JAG	Ashikaga	3.25	24	P	Pn	11 35 53.1	-0.8
JAG				S	S	11 36 40.5	-2.9
JMN	Monobe	3.30	276	P	Pn	11 35 54.5	0.0
JSZ	Suzu	4.00	355	P	Pn	11 36 01.5	+0.3
JOI	OKI	4.70	308	P	Pn	11 36 09.4	+0.8
KSRS	Korea Array	9.01	299	P	Pn	11 36 58.5	+0.2
	0.3nm,0.3s,baz=113,slow=12,SNR=10						
ASAJ	Asahikawa	11.27	18	P	P	11 37 26.0	+0.3
	0.7nm,0.3s,baz=220,slow=18,SNR=7.9						
SONM	Songino Array	27.61	311	P	P	11 40 10.8	+2.1
	0.9nm,0.6s,baz=123,slow=9.8,SNR=5.2						
MKAR	Makanchi Array	43.63	305	P	P	11 42 23.7	+0.3
	0.3nm,0.3s,baz=87,slow=9.2,SNR=8.4						
KURBB	Kurchatov Arra	45.98	310	P	P	11 42 41.5	0.0
	0.7nm,0.4s,baz=91,slow=9.2,SNR=6.2						
BVAR	Borovoye Array	50.87	314	P	P	11 43 17.5	-0.9
	0.4nm,0.4s,baz=74,slow=5.3,SNR=7.5						
WRA	Warramunga Arr	53.21	184	P	P	11 43 35.0	-0.8
	1.0nm,0.6s,baz=0.7,slow=7.6,SNR=25						
ASAR	Alice Springs	56.93	184	P	P	11 44 01.1	-1.1
	0.3nm,0.4s,baz=17,slow=12,SNR=15						
FINES	FINESS Array B	70.58	332	P	P	11 45 29.8	-0.2
	0.5nm,0.4s,baz=46,slow=5.5,SNR=5.9						

MEX 09 11:56:31.7±0.7, 16°.47N×98°.55W, h16^{km}±30^{km}, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.42	101	i P	Pg	11 56 39.1	-1.0
PNIG				eS	Sg	11 56 44.2	-1.7
TLIG	Tlapa	1.08	359	eP	Pb	11 56 48.5	-3.7
TLIG				eS	Sb	11 57 01.4	-4.7
VHO	Vista Hermosa	1.84	71	i P	Pn	11 56 59.5	-3.3
VHO				i S	Sn	11 57 22.1	-3.8

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*CSEM **09** 12:05:07.6, 38°.99N×37°.79E, h14^{km}, ML2.6*

*DDA **09** 12:05:07.6, 38°.99N×37°.79E, h14^{km}, Ml2.6*

ISC 09 12:05:05.9±1.5, 38°.89N±0°.04×37°.70E±0°.04, h11^{km}±13^{km}, n15, σ1^{s}.40/24, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HEKM	Malatya_Hekimh	0.20	94	i P	Pb	12 05 11.3	-0.4
HEKM				i S	Sb	12 05 15.7	+2.4
HEKM	Malatya_Hekimh	0.20	94	P	Pb	12 05 11.3	-0.4
HEKM				S	Sb	12 05 15.7	+2.4
DARE	Darende-Malaty	0.36	208	PG	Pb	12 05 15.1	+0.7
DARE				SG	Sn	12 05 22.3	+4.2
CUKAN	kangal_SIVAS	0.46	336	i P	Pb	12 05 15.9	-0.2
CUKAN	kangal_SIVAS	0.46	336	P	Pb	12 05 15.9	-0.2
AKCD	Akcadag	0.62	164	i P	Pb	12 05 18.5	-0.3
AKCD				i S	Sn	12 05 31.6	+0.9
AKCD	Akcadag	0.62	164	P	Pb	12 05 18.5	-0.3
AKCD				S	Sn	12 05 31.6	+0.9
KEMA	Kemaliye	0.72	58	i P	Pg	12 05 19.1	-0.7
KEMA	Kemaliye	0.72	58	P	Pg	12 05 19.1	-0.7
MALT	Malatya	0.81	135	PG	Pb	12 05 21.8	-0.2
ELZG	Elazig	1.08	111	i P	Pb	12 05 26.0	-0.6
ELZG				i S	Sn	12 05 42.5	+0.5
ELZG	Elazig	1.08	111	P	Pb	12 05 26.0	-0.6
ELZG				S	Sn	12 05 42.5	+0.5
PTK	Pertek	1.32	90	ePG	Pb	12 05 30.1	-0.6
KELT	Kelkit	1.73	43	i P	Pg	12 05 38.6	-0.6
KELT				i S	Sg	12 06 03.2	+1.5
KELT	Kelkit	1.73	43	P	Pg	12 05 38.6	-0.6
KELT				S	Sg	12 06 03.2	+1.5

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*MOS **09** 12:25:44.7±1.2, 0°.11S×122°.68E, h81^{km}, mb5.3/56, Error ellipse: s-maj=8.0km s-min=4.7km az=106.7*

*ISCJB **09** 12:25:46.0±0.3, 0°.22S±0°.02×122°.80E±0°.02, h97^{km}±2^{km}, mb5.1/172, Error ellipse: s-maj=3.4km s-min=3.1km az=28.0*

*BJI **09** 12:25:45.4, 0°.20S×122°.80E, h87^{km}, mb5.3/69, mB5.1/46, Ms4.3/47, Ms7 4.0/40*

*GCMT **09** 12:25:47.3±0.2, 0°.15S×122°.80E, h77^{km}±1^{km}, MW5.1/94, Moment Tensor Solution. s65,c89; s94,c156; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.11±.14; $M_{\theta\theta}$-0.39±.11; $M_{\phi\phi}$-3.72±.13; $M_{r\theta}$2.07±.08; $M_{\theta\phi}$-2.60±.10; $M_{\phi r}$-0.70±.11; Best double couple: $M_0$5.19300×10^{16} NP1:ϕ_s53.00000°, δ53.00000°, λ125.00000°. NP2: ϕ_s184.00000°, δ49.00000°, λ53.00000°. Principal axes: T 5.2260, Plg63.0000°, Azm25.0000°; N -0.0670, Plg27.0000°, Azm211.0000°; P -5.1600, Plg3.0000°, Azm120.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*DJA **09** 12:25:47.0±0.2, 0°S±2°×12°3E±°, h58^{km}±3^{km}, M5.2/40, mb5.3/40, mB5.6/28, MLv5.5/21, Mw(mB)5.1/28*

*NEIC **09** 12:25:47.3±0.4, 0°.17S×122°.79E, h94^{km}±3^{km}, mb5.3/85, Error ellipse: s-maj=4.0km s-min=2.9km az=63.0*

*IDC **09** 12:25:47.5±1.1, 0°.14S×122°.69E, h98^{km}±8^{km}, mb4.7/33, mb1 4.7/38, mb1mx4.6/53, mbtmp5.0/38, MS3.7/41, Ms1 3.7/41, ms1mx3.6/58, Error ellipse: s-maj=11.6km s-min=7.9km az=73.0*

ISC 09 12:25:46.6±0.3, 0°.21S±0°.03×122°.73E±0°.04, h90^{km}±2^{km}, h90^{km}:pP-P, n677, σ1^{s}.41/739, mb5.2/171, 22C-12D, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUWI	Luwuk	0.83	177	P	Pn	12 26 03.1	-1.3
LUWI	Luwuk	0.83	177	ePn	Pn	12 26 03.7	-0.7
LUWI				eSn	Sn	12 26 16.8	-0.9
MRSI	Marisa	1.04	311	P	Pn	12 26 06.6	-0.2
APSI	Ampana	1.29	237	P	Pn	12 26 09.5	-0.2
KMSI	Cibinong	1.47	58	P	Pn	12 26 12.4	+0.4
MPSI	Mapaga	2.88	281	P	Pn	12 26 31.0	+0.5
PCI	Palu	2.98	257	P	Pn	12 26 32.0	+0.2
KDI	Kendari	3.73	182	P	Pn	12 26 41.2	-0.7
SANI	Sanana	3.73	119	P	Pn	12 26 39.4	-2.6
TTSI	Tana Toraja	4.05	226	P	Pn	12 26 46.8	+0.5
TNTI	Ternate	4.74	78	P	Pn	12 26 55.6	-0.1
TNTI	Ternate	4.74	78	ePn	Pn	12 26 54.9	-0.7
TNTI				eSn	Sn	12 27 51.0	+1.6
SPSI	Sidrap Palu	4.76	218	P	Pn	12 26 56.0	0.0
LBMI	Labuha	4.79	95	P	Pn	12 26 55.6	-0.8
SGKI	Sangatta, Kali	5.14	266	P	Pn	12 27 02.4	+1.3
	589nm,1.0s,6µm3.8nm						
NLAI	Namlea	5.30	125	P	Pn	12 27 02.9	-0.5
	902nm,0.6s,16µm5.2nm						
SMKI	Samarinda	5.53	268	P	Pn	12 27 08.1	+1.7
BKSI	Bulukumba	5.71	207	P	Pn	12 27 08.3	-0.6
	189nm,0.8s,2µm1.2nm						
BKB	Balikpapan	5.93	260	P	Pn	12 27 12.5	+0.7
	1µm,0.9s,11µm3.9nm						
AAI	Ambon	6.46	122	P	Pn	12 27 20.0	+0.8
	470nm,0.5s,7µm2.0nm						
MYLDM	Lahad Datu	6.82	322	ePn	Pn	12 27 26.8	+2.8
SKMP	Bagumbayan, Su	6.92	15	eP	Pn	12 27 24.7	-0.8
SKMP				eS	Sn	12 28 38.0	-4.8
MSAI	Masohi	6.93	117	P	Pn	12 27 25.5	-0.1
ZCP	Zamboanga City	7.12	355⇑	iP	Pn	12 27 29.0	+0.8
KBKI	Kotabaru	7.24	245	P	Pn	12 27 29.6	-0.2
CTBH	Cotabato--PC H	7.53	12⇑	eP	Pn	12 27 34.8	+1.0
CTBH				eS	Sn	12 28 47.9	-10
DMPH	Davao City--Mi	7.76	21⇑	eP	Pn	12 27 42.5	+5.7
DMPH				eS	Sn	12 29 10.2	+7.1
DAV	Davao City (W)	7.77	21	P	Pn	12 27 39.0	+2.0
	63nm,0.3s,baz=123,slow=3.7,SNR=6.7						
DAV				S	Sn	12 29 09.1	+5.6
	71nm,0.3s,baz=139,slow=22,SNR=2.5						
DAV				LR	LR	12 31 22.5	
	comp=Z,510nm,18.9s,baz=168,slow=43						
DAV	Davao City (W)	7.77	21	ePn	Pn	12 27 36.4	-0.6
DAV				e		12 27 36.8	
DAV				eSn	Sn	12 29 09.1	+5.6
MTKI	Muara Teweh, K	7.87	265	P	Pn	12 27 39.9	+1.6
PAGZ	Pagadian	8.03	5	eP	Pn	12 27 41.9	+1.3
BNDI	Bandanaira	8.35	121	P	Pn	12 27 44.9	0.0
MMRI	Maumere	8.38	183	P	Pn	12 27 45.8	+0.4
MMRI	Maumere	8.38	183	ePn	Pn	12 27 46.4	+1.0
EDFI	Ende, Flores	8.55	187	P	Pn	12 27 48.0	+0.3
	128nm,0.7s,1µm0.5nm						
SIJI	Sorong	8.56	94	P	Pn	12 27 48.3	+0.5
	7.4nm,0.3s,baz=259,slow=11,SNR=21						
SIJI				S	Sn	12 29 25.4	+2.6
	4.0nm,0.3s,baz=334,slow=23,SNR=11						
SIJI				LR	LR	12 32 04.4	
	comp=Z,467nm,21.4s,baz=255,slow=44						
CGP	Cagayan de Oro	8.83	13⇓	eP	Pn	12 27 58.3	+6.9
KKM	Kota Kinabalu	8.99	314	ePn	Pn	12 27 56.5	+2.7
SOEI	Soe	9.61	171	P	Pn	12 28 02.3	+0.2
SOEI	Soe	9.61	171	ePn	Pn	12 28 04.6	+2.5
PLAI	Plampang	9.88	210	P	Pn	12 28 05.6	-0.2
FAKI	Fak Fak	9.89	106	P	Pn	12 28 04.0	-1.9
	206nm,0.9s,2µm						
FAKI	Fak Fak	9.89	106	ePn	Pn	12 28 03.3	-2.6
BATI	Baumata	9.97	175	P	Pn	12 28 09.3	+2.2
	6.5nm,0.3s,baz=321,slow=4.5,SNR=6.0						
BATI				LR	LR	12 32 20.7	
	comp=Z,755nm,21.6s,baz=14,slow=39						
BATI	Baumata	9.97	175	P	Pn	12 28 07.4	+0.3
GUIM	Jordan	10.77	359	eP	Pn	12 28 18.7	+0.9
SBUM	Sibu	10.83	284	ePn	Pn	12 28 20.7	+1.9
STKI	Sintang	11.26	271	P	Pn	12 28 26.3	+1.8
PBKI	Pangkalan Bun	11.33	257	P	Pn	12 28 41.6	+16
OCLP	Ormoc	11.34	9	eP	Pn	12 28 28.7	+3.1
KMPI	Kaimana, Papua	11.49	107	P	Pn	12 28 34.8	+7.1
RKPI	Ransiki, Papua	11.52	97	P	Pn	12 28 28.3	+0.2
RCP	Roxas	11.69	0⇓	eP	Pn	12 28 34.3	+3.9
JAGI	Jajag, Banyuwa	11.85	226	ePn	Pn	12 28 33.4	+0.9
OTRP	Odiongan	12.51	357	eP	Pn	12 28 43.9	+2.5
KSM	Kuching	12.53	278	ePn	Pn	12 28 43.1	+1.4
SJMP	San Jose	12.69	353	eP	Pn	12 28 46.9	+3.1
NGJI	Ngawi	13.30	237	P	P	12 29 02.8	+4.6
PWJI	Pagerwojo	13.37	234	P	Pn	12 28 55.6	+2.8
BAKI	Biak	13.41	94	P	Pn	12 28 55.8	+2.5
	195nm,1.2s,2µm						
PVCP	Virac	13.79	6	eP	P	12 29 01.8	-1.9
LUBP	Lubang	14.07	350	eP	Pn	12 29 03.7	+1.8
TGY	Tagaytay City	14.33	353	P	P	12 29 09.5	-0.3
	36nm,0.3s,baz=186,slow=2.5,SNR=11						
TGY				LR	LR	12 34 38.4	
	comp=Z,256nm,19.9s,baz=162,slow=37						
MTN	Manton Dam	15.07	147	ePn	Pn	12 29 14.7	0.0
	86nm,1.1s						
KPJI	Karang Pucung	15.47	242	P	P	12 29 22.5	+0.1
CMJI	Cimerak	16.10	242	P	P	12 29 44.1	+15
LEM	Lembang	16.45	246	P	P	12 29 33.9	+0.5
	3.3nm,0.3s,baz=73,slow=7.2,SNR=6.8						
LEM				LR	LR	12 35 52.6	
	comp=Z,875nm,19.8s,baz=68,slow=37						
CISI	Cisompet, Garu	16.57	244	P	P	12 29 36.3	+1.7
CISI	Cisompet, Garu	16.57	244	ePn	P	12 29 35.0	+0.5
	144nm,0.9s						
DBJI	Dramaga	17.14	248	P	P	12 29 44.3	+3.3
	101nm,1.8s,6µm						
SKJI	Sukabumi	17.49	247	P	Pn	12 29 52.2	+7.4
GENI	Genyem	17.59	98	P	Pn	12 29 47.2	+1.1
FITZ	Fitzroy Crossi	18.01	171	eP	P	12 29 50.4	+0.1
	45nm,0.9s						
JAY	Jayapura	18.11	97	P	Pn	12 29 52.4	-0.1
	0.7nm,0.3s,baz=278,slow=7.0,SNR=5.8						
JAY				LR	LR	12 38 19.9	
	comp=Z,198nm,21.6s,baz=324,slow=41						
JAY	Jayapura	18.11	97	P	Pn	12 29 52.4	-0.1
	444nm,1.2s,5µm						
CGJI	Cibinong	18.15	249	P	Pn	12 29 56.4	+3.6
	203nm,1.3s						
KLI	Kotabumi	18.44	255	P	Pn	12 30 09.9	+14
KASI	Kota Agung	18.95	254	P	Pn	12 30 03.4	+1.0
MYKOM	Kota Tinggi	18.98	276	eP	Pn	12 30 02.9	+0.1
	42nm,0.8s						
MDSI	Maura Dua	19.01	257	P	Pn	12 30 03.2	+0.1
LWLI	Liwa	19.25	255	P	Pn	12 30 10.4	+4.4
	112nm,0.9s,5µm						
MNAI	Manna	20.18	258	eP	Pn	12 30 17.3	+0.5
	266nm,1.0s						
MASI	Maura Aman, Be	20.68	262	P	Pn	12 30 23.0	+0.2
	328nm,1.1s,5µm						
MBWA	Marble Bar	21.03	188	eP	P	12 30 24.3	+1.2
	35nm,1.1s						
KRJI	Kerinci	21.34	265	P	P	12 30 30.7	+3.9
	243nm,1.2s,4µm						
BKNI	Bangkinang	21.70	271	P	P	12 30 34.6	+4.2
	222nm,1.1s,8µm						
BKNI	Bangkinang	21.70	271	eP	P	12 30 31.3	+0.9
	261nm,1.1s						
IPM	Ipoh	22.18	282	eP	P	12 30 36.9	+1.3
	82nm,1.2s						
WRAB	Tennant Creek	22.67	151	eP	P	12 30 40.7	+0.1
	54nm,1.0s						
WRAB	Tennant Creek	22.67	151	eP	P	12 30 40.7	+0.1
WRAB				pmax	pmax		
	comp=Z,54nm,1.0s						
WRA	Warramunga Arr	22.67	151	P	P	12 30 40.8	+0.1
	comp=Z,42nm,1.1s,baz=331,slow=10,SNR=83						
WRA				PcP	PcP	12 34 30.0	-0.3
	comp=Z,4.9nm,0.7s,baz=325,slow=2.1,SNR=4.9						
WRA				ScP	ScP	12 37 59.4	-0.8
	comp=Z,14nm,0.6s,baz=332,slow=2.6,SNR=51						
WRA				PKiKP	PKiKP	12 42 14.0	-1.5
	comp=Z,0.5nm,0.7s,baz=330,slow=1.4,SNR=4.6						
WR1	Warramunga Arr	22.67	151	eP	P	12 30 40.8	+0.1
	comp=Z,48nm,1.1s						
WR1				ePcP	PcP	12 34 30.0	-0.3
WR1				e		12 42 14.0	
WB2	Warramunga Arr	22.68	151	eP	P	12 30 39.6	-1.2
WB2				eP	P	12 30 40.5	-0.2
KULM	Kulim	22.72	284	eP	P	12 30 41.9	+0.6
	comp=Z,33nm,0.8s						
QIZ	Qiongzhong	22.93	327	P	P	12 30 43.9	+0.7
QIZ				pP	pP	12 31 00.7	-0.7
QIZ				sP	sP	12 31 09.4	-3.2
QIZ				S	S	12 34 48.4	+2.0
QIZ				sS	sS	12 35 18.9	-0.5
QIZ				pmax	pmax		
	comp=Z,170nm,3.8s						
QIZ	Qiongzhong	22.93	327	eP	P	12 30 44.5	+1.3
	comp=Z,178nm,1.8s						
TWG	Pinlang	22.95	356	eP	P	12 30 43.2	-0.2
	comp=Z,387nm,0.7s						
MNSI	Mandailing Nat	23.17	272	P	P	12 30 46.9	+1.2
TPUB	Ta-pu	23.46	355	eP	P	12 30 49.1	+0.9
	comp=Z,370nm,0.7s						
YULB	Yu-li	23.50	357	eP	P	12 30 47.5	-1.1
	comp=Z,595nm,1.7s						
SISI	Saibi	23.66	267	P	P	12 30 51.2	+1.0
SSLB	Suanglung	23.92	356	eP	P	12 30 53.1	+0.7
	comp=Z,425nm,0.9s						
CHBT	CHBT	23.98	303	P	P	12 30 55.7	+2.7
	comp=Z,123nm,0.6s,comp=Z,2µm						
PSI	Prapat	23.98	277	P	P	12 30 53.5	+0.3
	comp=Z,69nm,0.8s,baz=178,slow=1.2,SNR=58						
PSI				LR	LR	12 41 22.2	
	comp=Z,279nm,18.4s,baz=90,slow=39						
PSI	Prapat	23.98	277	eP	P	12 30 53.5	+0.3
	comp=Z,90nm,0.9s						
PSI	Prapat	23.98	277	eP	P	12 30 53.5	+0.3
PSI				pmax	pmax		
	comp=Z,90nm,0.9s						
NACB	Ninganchiao	24.26	357	eP	P	12 30 54.8	-0.6
	comp=Z,81nm,0.8s						
TRTT	Trang	24.32	290	P	P	12 30 58.3	+2.2
	comp=Z,26nm,1.2s						
COEN	Coen	24.42	125	eP	P	12 30 57.4	+0.4
	comp=Z,109nm,1.7s						
TSI	Tuntungan	24.43	279	P	P	12 31 01.0	+3.9
	comp=Z,111nm,1.0s						
YOJ	Yonaguni jima	24.53	1	eP	P	12 30 59.3	+1.5
	comp=Z,273nm,0.7s						
YOJ	Yonaguni jima	24.53	1	eP	P	12 30 59.3	+1.5
YOJ				pmax	pmax		
	comp=Z,273nm,0.7s						
MANU	Manus Island	24.70	94	eP	P	12 31 01.4	+1.8
	comp=Z,49nm,0.8s						
YHNB	Yeheng	24.77	357	eP	P	12 31 00.5	+0.4
	comp=Z,240nm,0.7s						
SRAK	Srakaew	24.88	305	P	P	12 31 00.3	-0.9
GZH	Guangzhou	24.89	339	P	P	12 31 07.0	+5.9
GZH				sP	sP	12 31 32.6	+0.7
GZH				pmax	pmax		
	comp=Z,180nm,4.1s						
TATO	Taipei	25.07	357	eP	P	12 31 03.6	+1.0
	comp=Z,241nm,0.9s						
SKNT	Sakolnakorn	25.16	314	P	P	12 31 05.4	+1.7
	comp=Z,42nm,1.0s						
GSI	Gunungsitoli	25.20	273	P	P	12 31 06.9	+2.8
	comp=Z,228nm,1.1s						
GSI	Gunungsitoli	25.20	273	eP	P	12 31 04.3	+0.3
	comp=Z,263nm,1.1s						
KCSI	Kotacane, Aceh	25.22	279	P	P	12 31 04.6	+0.3
QZH	Quanzhou	25.32	351⇓	iP	P	12 31 04.4	-0.6
QZH				S	S	12 35 26.3	+1.6
QZH				pmax	pmax		
	comp=Z,67nm,1.0s						
QZH				LR	LR		
	comp=Z,360nm,23.7s						
AS31	Alice Springs	25.72	156	eP	P	12 31 09.7	+1.0
	comp=Z,6.0nm,0.9s						
AS31				ePcP	PcP	12 34 37.5	+0.6
ASAR	Alice Springs	25.72	156	P	P	12 31 10.0	+1.3
	comp=Z,11nm,0.7s,baz=343,slow=14,SNR=87						
ASAR				PcP	PcP	12 34 37.5	+0.6
	comp=Z,17nm,0.7s,baz=342,slow=2.0,SNR=28						
ASAR				ScP	ScP	12 38 08.0	-0.5
	comp=Z,10nm,0.6s,baz=342,slow=2.8,SNR=38						
ASAR				LR	LR	12 41 52.0	
	comp=Z,212nm,20.3s,baz=322,slow=37						
AS01	Alice Springs	25.73	156	eP	P	12 31 09.3	+0.5
PHET	Kaeng Krachan	26.36	300	P	P	12 31 17.4	+2.9
	comp=Z,14nm,0.8s,comp=Z,157nm						
NONG	Nongkai	26.47	314	P	P	12 31 16.9	+1.4
	comp=Z,3.2nm,0.8s,comp=Z,306nm						
MLSI	Meulaboh, Aceh	26.68	280	P	P	12 31 18.1	+0.7
JOW	Kunigami	27.41	11	P	P	12 31 26.1	+2.2
	comp=Z,23nm,1.0s,baz=145,slow=9.2,SNR=4.9						
JOW				LR	LR	12 43 33.9	
	comp=Z,91nm,20.0s,baz=210,slow=39						
SRDT	SRDT	27.48	303	P	P	12 31 28.8	+4.2
	comp=Z,22nm,2.0s						
UTHA	Uthaitani	27.83	305	P	P	12 31 30.6	+2.9
	comp=Z,9.5nm,0.7s,comp=Z,101nm						
PHIT	Phitsanulok	27.96	309	P	P	12 31 32.4	+3.5
	comp=Z,34nm,1.0s						
UMPA	Umpang Tak	28.65	306	P	P	12 31 40.7	+5.7
	comp=Z,5.7nm,0.8s						
LAMP	Lampang	29.35	311	P	P	12 31 44.0	+2.8
	comp=Z,11nm,0.7s,comp=Z,117nm						
RABL	Rabaul	29.67	98	eP	P	12 31 45.2	+1.0
	comp=Z,198nm,0.8s						
PAYA	Payao	29.68	312	P	P	12 31 46.6	+2.4
	comp=Z,12nm,1.5s						
CM01	Chiang Mai Arr	29.81	310	eP	P	12 31 47.1	+1.9
CM31	Chiang Mai Arr	29.84	310	eP	P	12 31 47.1	+1.6
CMAR	Chiang Mai Arr	29.84	310	P	P	12 31 48.1	+2.5
	comp=Z,8.4nm,0.7s,baz=129,slow=7.0,SNR=17						
CMAR				ScP	ScP	12 38 20.6	-0.5
	comp=Z,1.3nm,0.8s,baz=174,slow=2.9,SNR=5.9						
CMAR				LR	LR	12 44 26.4	
	comp=Z,205nm,20.6s,baz=118,slow=38						
CMMT	Chiang Mai	30.05	310	P	P	12 31 49.7	+2.3
	comp=Z,65nm,1.4s,comp=Z,952nm						
CHTO	Chiang Mai	30.05	310	eP	P	12 31 49.7	+2.3
	comp=Z,161nm,1.5s						
CHTO	Chiang Mai	30.05	310	eP	P	12 31 49.7	+2.3
CHTO				pmax	pmax		
	comp=Z,161nm,1.5s						
CHTO	Chiang Mai	30.05	310	P	P	12 31 49.7	+2.3
	comp=Z,290nm,1.4s,comp=Z,4µm						
CTA	Charters Tower	30.34	132	PcP	PcP	12 34 49.8	+1.5
	comp=Z,8.4nm,0.8s,baz=246,slow=3.8,SNR=4.2						
CMAI	Chiengmai2	30.64	312	P	P	12 31 54.8	+2.0
	comp=Z,11nm,1.1s						
GYA	Guiyang	30.70	331⇑	iP	P	12 31 55.1	+1.9
GYA				pP	pP	12 32 15.0	+1.2

GYA				sP	sP	12 32 26.0	+1.8
GYA				PP	**PP**	**12 33 00.8**	**-3.4**
GYA				PcP	**PcP**	**12 34 49.6**	**+0.4**
GYA				S	**S**	**12 36 51.2**	**+1.5**
GYA				sS	sS	12 37 27.0	+1.7
GYA				SS	**SnSn**	**12 38 40.5**	**+3.3**
GYA				pmax	pmax		
	comp=Z,60nm,0.8s						
GYA				pmax	pmax		
	comp=Z,150nm,5.0s						
GYA				LR	LR		
	comp=Z,330nm,17.3s						
GYA				LR	LR		
	comp=Z,410nm,17.8s						
GYA				LR	LR		
	comp=Z,420nm,17.6s						
FORT	**Forrest**	**30.82**	**171**	*e*P	**P**	**12 31 54.1**	**+0.1**
	comp=Z,35nm,0.8s						
WHN	**Wuhan**	**31.61**	**346**	⇓*i*P	**P**	**12 32 03.7**	**+2.8**
WHN				pP	**sP**	**12 32 27.9**	**-4.1**
WHN				S	**S**	**12 37 06.5**	**+3.1**
WHN				pmax	pmax		
	comp=Z,100nm,1.1s						
WHN				pmax	pmax		
	comp=Z,440nm,3.5s						
WHN				LR	LR		
	comp=Z,530nm,15.5s						
KMI	**Kunming**	**31.75**	**324**	P	**P**	**12 32 05.4**	**+2.8**
KMI				pP	pP	12 32 25.0	+1.8
KMI				sP	sP	12 32 35.5	+1.9
KMI				S	**S**	**12 37 09.4**	**+3.1**
KMI				sS	sS	12 37 43.8	+1.9
KMI				SS	**SnSn**	**12 39 04.6**	**+1.9**
KMI				pmax	pmax		
	comp=Z,30nm,0.7s						
KMI				pmax	pmax		
	comp=Z,120nm,3.1s						
KMI				LR	LR		
	comp=Z,250nm,14.9s						
KMI				LR	LR		
	comp=Z,200nm,15.8s						
KMI				LR	LR		
	comp=Z,370nm,30.7s						
NJ2	**Nanjing**	**32.30**	**354**	*e*P	**P**	**12 32 08.7**	**+1.8**
NJ2				pP	**pP**	**12 32 27.8**	**+0.2**
NJ2				sP	**sP**	**12 32 36.7**	**-1.3**
NJ2				pmax	pmax		
	comp=Z,47nm,0.6s						
ENH	**Enshi**	**32.83**	**339**	*e*P	**P**	**12 32 13.9**	**+2.2**
	comp=Z,288nm,0.8s						
NWAO	**Narrogin (SRO)**	**32.95**	**189**	P	**P**	**12 32 13.2**	**+0.5**
	comp=Z,8.3nm,0.6s,baz=256,slow=8.0,SNR=12						
NWAO				LR	LR	12 46 04.8	
	comp=Z,138nm,22.0s,baz=224,slow=37						
CBIJ	**Chichi jima**	**32.97**	**33**	*e*P	**P**	**12 32 11.7**	**-1.3**
	comp=Z,175nm,0.7s						
JCJ	**Chichijima**	**32.97**	**33**	P	**P**	**12 32 12.3**	**-0.7**
	comp=Z,172nm,0.7s,baz=218,slow=19,SNR=10.0						
JNU	**Nakatsue**	**34.03**	**12**	LR	LR	12 46 58.1	
	comp=Z,45nm,20.2s,baz=124,slow=37						
BBOO	**Buckleboo**	**34.78**	**160**	*e*P	**P**	**12 32 29.0**	**+0.4**
	comp=Z,79nm,1.7s						
CD2	**Chengdu**	**35.81**	**331**	⇑P	**P**	**12 32 38.8**	**+1.3**
CD2				pP	pP	12 32 59.0	+0.6
CD2				sP	sP	12 33 09.3	+0.6
CD2				PP	**PP**	**12 34 02.1**	**+1.5**
CD2				S	**S**	**12 38 11.5**	**+2.9**
CD2				sS	sS	12 38 47.0	+2.4
CD2				pmax	pmax		
	comp=Z,240nm,5.1s						
CD2				LR	LR		
	comp=Z,440nm,15.2s						
CD2				LR	LR		
	comp=Z,470nm,12.3s						
CD2				LR	LR		
	comp=Z,430nm,12.7s						
STKA	**Stephens Creek**	**36.20**	**152**	P	**P**	**12 32 41.7**	**+1.0**
	comp=Z,9.8nm,0.9s,baz=310,slow=8.0,SNR=16						
STKA				PcP	**PcP**	**12 35 04.5**	**0.0**
	comp=Z,11nm,0.7s,baz=334,slow=8.4,SNR=3.8						
STKA				ScP	**ScP**	**12 38 40.6**	**-2.3**
	comp=Z,3.1nm,0.8s,baz=339,slow=8.8,SNR=4.1						
STKA				LR	LR	12 48 42.2	
	comp=Z,191nm,18.8s,baz=357,slow=38						
STKA	**Stephens Creek**	**36.20**	**152**	*e*P	**P**	**12 32 41.0**	**+0.3**
	comp=Z,3.9nm,1.1s						
STKA				*e*PcP	**PcP**	**12 35 04.5**	**0.0**
XAN	**Xi’an**	**36.45**	**341**	P	**P**	**12 32 43.8**	**+0.9**
XAN				pP	pP	12 33 07.4	+3.6
XAN				sP	sP	12 33 18.6	+4.4
XAN				PP	**PnPn**	**12 34 12.5**	**+4.2**
XAN				S	**S**	**12 38 20.0**	**+1.7**
XAN				sS	sS	12 38 59.5	+5.2
XAN				SS	**SnSn**	**12 40 54.5**	**-1.5**
XAN				ScS	**ScS**	**12 42 48.9**	**-1.6**
XAN				pmax	pmax		
	comp=Z,62nm,1.1s						
XAN				pmax	pmax		
	comp=Z,130nm,3.9s						
XAN				LR	LR		
	comp=Z,240nm,18.7s						
XAN				LR	LR		
	comp=Z,160nm,17.3s						
XAN				LR	LR		
	comp=Z,310nm,19.8s						
TIA	**Tai’an**	**36.61**	**352**	P	**P**	**12 32 45.4**	**+1.2**
TIA				pmax	pmax		
	comp=Z,13nm,1.8s						
TJN	**Taejon**	**36.66**	**6**	⇑*e*P	**P**	**12 32 46.2**	**+1.7**
JHJ	**Hachijo jima 2**	**36.84**	**24**	LR	LR	12 46 25.2	
	comp=Z,91nm,21.7s,baz=237,slow=34						
KS15	**Wonju Array Si**	**37.77**	**7**	*e*P	**P**	**12 32 54.6**	**+0.7**
KSAR	**Wonju Array Be**	**37.77**	**7**	P	**P**	**12 32 54.0**	**+0.2**
KSAR	**Wonju Array Be**	**37.77**	**7**	P	**P**	**12 32 54.1**	**+0.2**
KSRS	**Korea Array**	**37.78**	**7**	P	**P**	**12 32 54.0**	**0.0**
	comp=Z,14nm,0.9s,baz=182,slow=10,SNR=56						
KSRS				LR	LR	12 47 20.6	
	comp=Z,70nm,21.3s,baz=184,slow=34						
INU	**Inuyama**	**37.81**	**19**	*e*P	**P**	**12 32 53.7**	**-0.6**
	comp=Z,75nm,1.0s						
BRDH	**Bariadhala**	**37.85**	**309**	LR	LR	12 50 47.0	
	comp=Z,176nm,18.2s,baz=87,slow=40						
HNR	**Honiara**	**38.16**	**105**	P	**P**	**12 32 57.5**	**0.0**
	comp=Z,176nm,0.9s,baz=174,slow=6.0,SNR=3.5						
MAJO	**Matsushiro**	**39.29**	**20**	*e*P	**P**	**12 33 05.6**	**-1.1**
	comp=Z,78nm,0.9s						
MAJO	**Matsushiro**	**39.29**	**20**	*e*P	**P**	**12 33 05.6**	**-1.1**
MAJO				pmax	pmax		
	comp=Z,78nm,0.9s						
MAT	**Matsushiro**	**39.29**	**20**	P	**P**	**12 33 05.5**	**-1.2**
MJAR	**Matsushiro Arr**	**39.29**	**20**	P	**P**	**12 33 05.8**	**-0.9**
	comp=Z,64nm,0.8s,baz=198,slow=9.7,SNR=179						
MJAR				ScP	**ScP**	**12 38 53.1**	**-1.4**
	comp=Z,2.2nm,0.8s,baz=191,slow=5.2,SNR=6.1						
MJAR				LR	LR	12 50 26.8	
	comp=Z,47nm,19.4s,baz=195,slow=38						
MJB9	**Matsu-Tunnel**	**39.29**	**20**	*e*P	**P**	**12 33 05.5**	**-1.3**
	comp=Z,79nm,0.9s						
LZH	**Lanzhou**	**40.16**	**336**	*e*P	**P**	**12 33 16.1**	**+2.0**
LZH				pP	sP	12 33 40.6	-5.0
LZH				sP	pP	12 33 52.0	+17
LZH				PP	**PP**	**12 34 49.9**	**+1.6**
LZH				S	**S**	**12 39 09.5**	**-4.9**
LZH				sS	sS	12 39 51.0	+0.2
LZH				pmax	pmax		
	comp=Z,56nm,1.2s						
LZH				pmax	pmax		
	comp=Z,270nm,4.8s						
LZH				LR	LR		
	comp=Z,260nm,13.2s						
LZH				LR	LR		
	comp=Z,310nm,13.9s						
LZH				LR	LR		
	comp=Z,400nm,15.0s						
BJT	**Baijiatuau**	**40.48**	**352**	*e*P	**P**	**12 33 17.4**	**+0.9**
	comp=Z,34nm,0.8s						
BJT	**Baijiatuau**	**40.48**	**352**	*e*P	**P**	**12 33 17.4**	**+0.9**
BJT				pmax	pmax		
	comp=Z,34nm,0.8s						
BJI	**Beijing**	**40.50**	**352**	⇓*i*P	**P**	**12 33 17.7**	**+1.0**
BJI				pmax	pmax		
	comp=Z,55nm,0.7s						
BJI				LR	LR		
	comp=Z,180nm,13.7s						
ARMA	**Armidale**	**40.70**	**140**	*e*P	**P**	**12 33 20.6**	**+1.9**
	comp=Z,14nm,0.8s						
HHC	**Hu-ho-hao-te**	**42.11**	**347**	*e*P	**P**	**12 33 31.5**	**+1.5**
HHC				sP	sP	12 34 03.9	+2.3
HHC				S	**S**	**12 39 46.7**	**+3.7**
HHC				sS	sS	12 40 22.0	+2.4
HHC				pmax	pmax		
	comp=Z,25nm,1.0s						
HHC				pmax	pmax		
	comp=Z,100nm,5.3s						
HHC				LR	LR		
	comp=Z,180nm,13.9s						
HHC				LR	LR		
	comp=Z,130nm,11.0s						
HHC				LR	LR		
	comp=Z,130nm,12.9s						
BTO	**Baotou**	**42.24**	**346**	*e*P	**P**	**12 33 29.6**	**-1.4**
LSA	**Lhasa**	**42.32**	**317**	*e*P	**P**	**12 33 34.7**	**+2.4**
	comp=Z,54nm,0.6s						
LSA	**Lhasa**	**42.32**	**317**	*e*P	**P**	**12 33 34.7**	**+2.4**
LSA				pmax	pmax		
	comp=Z,54nm,0.6s						
PALK	**Pallekele**	**42.57**	**281**	LR	LR	12 51 19.7	
	comp=Z,154nm,21.8s,baz=107,slow=36						
CAN	**Canberra**	**42.66**	**148**	*e*P	**P**	**12 33 36.5**	**+2.0**
	comp=Z,47nm,0.9s						
CAN	**Canberra**	**42.66**	**148**	*e*P	**P**	**12 33 36.5**	**+2.0**
CAN				pmax	pmax		
	comp=Z,47nm,0.9s						
ODAN	**Odare**	**43.36**	**311**	*e*P	**P**	**12 33 41.9**	**+1.4**
	comp=Z,80nm,0.7s						
TAPN	**Taplejung**	**43.38**	**312**	*e*P	**P**	**12 33 42.3**	**+1.5**
	comp=Z,63nm,0.7s						
RAMN	**Ramite**	**44.00**	**311**	*e*P	**P**	**12 33 47.3**	**+1.6**
	comp=Z,172nm,0.6s						
GTA	**Gaotai**	**44.66**	**335**	*e*P	**P**	**12 33 52.5**	**+1.9**
GTA				pP	pP	12 34 11.1	-1.0
GTA				sP	sP	12 34 20.1	-2.2
GTA				S	**S**	**12 40 21.1**	**+0.7**
GTA				sS	sS	12 40 57.3	0.0
GTA				SS	**ScS**	**12 43 34.0**	**-5.6**
GTA				pmax	pmax		
	comp=Z,47nm,1.0s						
GTA				pmax	pmax		
	comp=Z,100nm,6.7s						
GTA				LR	LR		
	comp=Z,120nm,19.2s						
GTA				LR	LR		
	comp=Z,96nm,17.9s						
GTA				LR	LR		
	comp=Z,190nm,16.0s						
JIRN	**Jiri**	**44.69**	**311**	*e*P	**P**	**12 33 52.4**	**+1.1**
	comp=Z,142nm,0.6s						
USA0B	**Ussuriysk Arra**	**44.98**	**9**	*e*P	**P**	**12 33 52.5**	**-0.3**
	comp=Z,118nm,1.5s						
USRK	**Ussuriysk Ar.**	**44.98**	**9**	P	**P**	**12 33 52.8**	**0.0**
	comp=Z,24nm,0.6s,baz=193,slow=5.7						
USRK				LR	LR	12 51 17.6	
	comp=Z,42nm,21.3s,baz=181,slow=34						
MDJ	**Mudanjiang**	**45.05**	**7**	P	**P**	**12 33 50.7**	**-2.7**
MDJ				pmax	pmax		
	comp=Z,97nm,1.0s						
MDJ	**Mudanjiang**	**45.05**	**7**	*e*P	**P**	**12 33 53.5**	**+0.1**
	comp=Z,62nm,0.9s						
GUN	**Gumba**	**45.05**	**311**	*e*P	**P**	**12 33 55.3**	**+1.2**
	comp=Z,205nm,0.7s						
PKIN	**Phulchoki**	**45.24**	**311**	*e*P	**P**	**12 33 56.2**	**+0.7**
	comp=Z,54nm,0.7s						
KKN	**Kakani**	**45.44**	**311**	*e*P	**P**	**12 33 58.2**	**+1.2**
	comp=Z,97nm,0.9s						
DMN	**Daman**	**45.48**	**311**	*e*P	**P**	**12 33 58.4**	**+1.0**
	comp=Z,67nm,0.7s						
ERM	**Erimo**	**45.90**	**21**	*e*P	**P**	**12 34 00.2**	**+0.1**
	comp=Z,47nm,1.2s						
ERM	**Erimo**	**45.90**	**21**	⇑*e*P	**P**	**12 34 00.9**	**+0.8**
ERM				pmax	pmax		
	comp=Z,20nm,0.8s						
GKN	**Gorkha**	**46.04**	**311**	*e*P	**P**	**12 34 02.6**	**+0.9**
	comp=Z,100nm,0.6s						
KOLN	**Koldanda**	**46.71**	**310**	*e*P	**P**	**12 34 07.5**	**+0.5**
	comp=Z,95nm,0.6s						
HYB	**Hyderabad**	**46.87**	**294**	*i* P	**P**	**12 34 09.0**	**+0.8**
DANN	**Dangsing**	**46.88**	**311**	*e*P	**P**	**12 34 09.3**	**+0.9**
	comp=Z,279nm,0.8s						
PYUN	**Piuthan**	**47.34**	**310**	*e*P	**P**	**12 34 12.8**	**+0.9**
	comp=Z,245nm,0.8s						
ASAJ	**Asahikawa**	**47.56**	**19**	P	**P**	**12 34 13.6**	**+0.5**
	comp=Z,91nm,0.6s,baz=219,slow=10,SNR=84						
ASAJ	**Asahikawa**	**47.56**	**19**	*e*P	**P**	**12 34 13.3**	**+0.3**
	comp=Z,105nm,0.7s						
DZM	**Mont Dzumac**	**47.79**	**120**	P	**P**	**12 34 16.0**	**+0.6**
	comp=Z,13nm,0.9s,baz=136,slow=19,SNR=3.7						
DZM				LR	LR	12 55 59.5	
	comp=Z,60nm,18.2s,baz=314,slow=38						
DZM	**Mont Dzumac**	**47.79**	**120**	*e*LR	LR	12 47 55.6	
	comp=Z,416nm,37.6s						
DZM	**Mont Dzumac**	**47.79**	**120**	*e*P	**P**	**12 34 16.0**	**+0.6**
	comp=Z,24nm,1.1s						
YUK	**Yuzh-Kuril’sk**	**48.64**	**22**	*c i*P	P	12 34 12.9	-8.5
YUK				*e**PP	pP	12 34 31.6	-12
YUK				*i* SS	SS	12 44 35.2	-13
YUK				pmax	pmax		
	comp=Z,176nm,2.1s						
YUK				pmax	pmax		
	comp=N,145nm,1.1s						
YUK				pmax	pmax		
	comp=E,139nm,1.1s						
YUK				pmax	pmax		
	comp=Z,268nm,1.1s						
ULN	**Ulaanbaatar**	**49.79**	**346**	*e*P	**P**	**12 34 30.6**	**+0.3**
	comp=Z,33nm,0.8s						
ULN	**Ulaanbaatar**	**49.79**	**346**	*c i*P	**P**	**12 34 30.7**	**+0.4**
ULN				pmax	pmax		
	comp=Z,37nm,0.8s						
KLR	**Kul’dur**	**49.86**	**8**	*c i*P	**P**	**12 34 29.9**	**-0.7**
SONA0	**Songino Array**	**49.92**	**346**	*e*P	**P**	**12 34 32.0**	**+0.8**
SONM	**Songino Array**	**49.92**	**346**	P	**P**	**12 34 32.0**	**+0.8**
	comp=Z,25nm,0.7s,baz=162,slow=9.0,SNR=137						
SONM				ScP	**ScP**	**12 39 35.8**	**-2.2**
	comp=Z,1.4nm,1.0s,baz=158,slow=4.2,SNR=4.1						
SONM				LR	LR	12 56 53.9	
	comp=Z,70nm,20.0s,baz=147,slow=37						
SONA1	**Songino Array**	**49.93**	**346**	*e*P	**P**	**12 34 31.2**	**-0.1**
YSS	**Yuzh-Sakhalins**	**50.14**	**18**	*e*P	**P**	**12 34 32.3**	**-0.5**
	comp=Z,48nm,0.7s						
YSS	**Yuzh-Sakhalins**	**50.14**	**18**	α*e*P	**P**	**12 34 32.2**	**-0.5**
YSS				pmax	pmax		
	comp=Z,50nm,0.8s						
YSS				pmax	pmax		
	comp=N,30nm,0.7s						
YSS				MLR	MLR		
	comp=Z,100nm,16.0s						
KUR	**Kuril’sk**	**50.42**	**23**	⇓*e*P	**P**	**12 34 36.5**	**+1.6**
GRNR	**Gornyy**	**52.11**	**11**	*e*P	**P**	**12 34 49.5**	**+2.0**
GRNR				pmax	pmax		
	comp=Z,57nm,1.0s						
ZAK	**Zakamensk**	**53.07**	**345**	*e*P	**P**	**12 34 54.9**	**+0.3**
ZAK				pmax	pmax		
	comp=Z,14nm,1.2s						
TYV	**Tymovskoe**	**53.63**	**16**	*e*P	**P**	**12 34 59.0**	**+0.4**
TYV				*e*S	**S**	**12 42 27.0**	**+1.7**
TYV				pmax	pmax		
	comp=Z,200nm,6.4s						
TYV				pmax	pmax		
	comp=Z,18nm,0.7s						
TYV				smax	smax		
	comp=E,5.0nm,1.2s						
TYV				smax	smax		
	comp=E,400nm,11.3s						
WMQ	**Urumqi**	**53.83**	**329**	P	**P**	**12 35 01.5**	**+1.2**
WMQ				sP	sP	12 35 32.8	+0.3
WMQ				pmax	pmax		
	comp=E,65nm,0.9s						
WMQ				LR	LR		
	comp=E,220nm,21.7s						
WMQ				LR	LR		
	comp=E,270nm,25.5s						
WMQ				LR	LR		
	comp=E,270nm,26.3s						
TLY	**Talaya**	**54.16**	**345**	*e*P	**P**	**12 35 03.4**	**+0.9**
	comp=E,21nm,0.8s						
TLY	**Talaya**	**54.16**	**345**	*e*P	**P**	**12 35 03.2**	**+0.7**
TLY				*e*S	**S**	**12 42 28.1**	**-4.4**
TLY				pmax	pmax		
	comp=Z,41nm,1.4s						
TLY				MLR	MLR		
	comp=Z,71nm,17.0s						
MOY	**Mondy**	**54.85**	**344**	*e*P	**P**	**12 35 08.9**	**+1.3**
MOY				pmax	pmax		
	comp=Z,54nm,1.5s						
KNGR	**Kungurtug, Tuv**	**54.99**	**341**	⇓*e*P	**P**	**12 35 10.1**	**+1.4**
NKL	**Nikolayevsk**	**55.24**	**13**	*i* P	**P**	**12 35 10.0**	**-0.2**
NKL				pmax	pmax		
	comp=N,43nm,1.0s						
NKL				pmax	pmax		
	comp=Z,86nm,1.0s						
HVS	**Khovu-Aksy**	**56.77**	**339**	⇑*e*P	**P**	**12 35 22.8**	**+1.5**
HVS				pmax	pmax		
	comp=Z,50nm,1.1s						
NIL	**Nilore**	**57.32**	**311**	*e*P	**P**	**12 35 26.5**	**+1.0**
	comp=Z,21nm,0.7s						
NIL	**Nilore**	**57.32**	**311**	*e*P	**P**	**12 35 26.5**	**+1.0**
NIL				pmax	pmax		
	comp=Z,21nm,0.7s						
PDGK	**Podgornoye**	**58.05**	**324**	P	**P**	**12 35 30.8**	**+0.2**
PDGK				pmax	pmax		
	comp=Z,35nm,1.0s						
SKR	**Severo-Kuril’s**	**58.10**	**24**	⇑*e*P	**P**	**12 35 31.2**	**+0.7**
KSH	**Kashi**	**58.15**	**318**	P	**P**	**12 35 32.7**	**+1.4**
KSH				sP	sP	12 36 08.5	+4.8
KSH				PcP	**PcP**	**12 36 22.1**	**+0.1**
KSH				S	**S**	**12 43 24.0**	**-2.1**
KSH				ScS	**ScS**	**12 45 07.1**	**-5.7**
KSH				SS	**SS**	**12 47 19.1**	**-0.1**
KSH				pmax	pmax		
	comp=Z,33nm,0.9s						
KSH				pmax	pmax		
	comp=Z,91nm,6.6s						
KSH				LR	LR		
	comp=Z,370nm,16.0s						
KSH				LR	LR		
	comp=Z,320nm,16.8s						
TARG	**Taragay, Kyrgy**	**58.16**	**322**	*e*P	**P**	**12 35 32.4**	**+0.8**
	comp=Z,20nm,1.1s						
DGZ	**Jazzator, Alta**	**58.19**	**334**	*e*P	**P**	**12 35 31.8**	**+0.4**
DGZ				pmax	pmax		
	comp=Z,14nm,0.9s						
BOD	**Bodaibo**	**58.27**	**355**	*e*P	**P**	**12 35 31.4**	**-0.2**
BOD				pmax	pmax		
	comp=Z,43nm,1.3s						
MK01	**Makanchi Array**	**58.63**	**329**	*e*P	**P**	**12 35 34.4**	**0.0**
MK31	**Makanchi Array**	**58.65**	**329**	*e*P	**P**	**12 35 34.5**	**0.0**
MK31	**Makanchi Array**	**58.65**	**329**	*e*P	**P**	**12 35 34.5**	**0.0**
MK32	**Makanchi Array**	**58.65**	**329**	*e*P	**P**	**12 35 35.0**	**+0.5**
MKAR	**Makanchi Array**	**58.65**	**329**	P	**P**	**12 35 35.0**	**+0.5**
	comp=Z,11nm,0.6s,baz=125,slow=8.6,SNR=100						
MKAR				ScP	**ScP**	**12 40 14.9**	**-1.2**
	comp=Z,0.8nm,0.6s,baz=137,slow=4.8,SNR=5.3						
MKAR				LR	LR	13 04 33.8	
	comp=Z,72nm,18.0s,baz=118,slow=40						
MKAR				PKPPKP	**P’P’df**	**13 05 11.3**	**+0.6**
	comp=Z,0.7nm,0.9s,baz=298,slow=3.1,SNR=3.3						
MKAR	**Makanchi Array**	**58.65**	**329**	*e*P	**P**	**12 35 34.6**	**+0.1**
	comp=Z,79nm,0.6s						
MKAR				ScP	**ScP**	**12 40 14.9**	**-1.2**
MKAR				P’P’		13 05 11.3	
MKAR	**Makanchi Array**	**58.65**	**329**	P	**P**	**12 35 35.0**	**+0.5**
MKAR				pmax	pmax		
	comp=Z,11nm,0.6s						
MKAR				pmax	pmax		
	comp=N,1.0nm,0.6s						
MKAR				MLR	MLR		
	comp=Z,73nm,18.0s						
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MAKZ	**Makanchi**	**58.82**	**328**	*e*P	**P**	**12 35 35.6**	**-0.1**
	comp=Z,22nm,1.0s						
MAKZ	**Makanchi**	**58.82**	**328**	*e*P	**P**	**12 35 35.6**	**-0.1**
MAKZ				pmax	pmax		
	comp=Z,22nm,1.0s						
KZA	**Kyzart**	**59.95**	**321**	P	**P**	**12 35 45.0**	**+0.9**
	SNR=17						
SFK	**Sufi-Kurgan**	**60.05**	**318**	P	**P**	**12 35 45.0**	**+0.4**
SFK				pmax	pmax		
	comp=Z,14nm,1.1s						
TKM2	**Tokmak 2**	**60.18**	**322**	P	**P**	**12 35 45.8**	**+0.4**
	SNR=18						
TKM2	**Tokmak 2**	**60.18**	**322**	P	**P**	**12 35 45.7**	**+0.4**
TKM2				pmax	pmax		
	comp=Z,18nm,0.9s						
KBK	**Karagaybulak**	**60.45**	**321**	P	**P**	**12 35 48.4**	**+1.2**
	SNR=12						
UCH	**Uchtor**	**60.50**	**320**	P	**P**	**12 35 49.0**	**+1.1**
	SNR=14						
PEA0B	**Petropavlovsk-**	**60.58**	**23**	*e*P	**P**	**12 35 47.8**	**+0.1**
	comp=Z,26nm,0.8s						
PETK	**Petropavlovsk-**	**60.58**	**23**	P	**P**	**12 35 48.2**	**+0.6**
	comp=Z,22nm,0.7s,baz=231,slow=8.7						
PETK				LR	LR	12 59 39.8	
	comp=Z,25nm,21.3s,baz=220,slow=34						
PETK	**Petropavlovsk-**	**60.58**	**23**	*e*P	**P**	**12 35 48.0**	**+0.4**
PETK	**Petropavlovsk-**	**60.58**	**23**	*e*P	**P**	**12 35 48.0**	**+0.4**
PEA1	**Petropavlovsk-**	**60.59**	**23**	*e*P	**P**	**12 35 48.2**	**+0.6**
AAK	**Ala-Archa**	**60.72**	**321**	LR	LR	13 04 53.6	
	comp=Z,61nm,18.3s,baz=113,slow=39						
AAK	**Ala-Archa**	**60.72**	**321**	P	**P**	**12 35 51.4**	**+2.4**
	SNR=8.1						
AAK	**Ala-Archa**	**60.72**	**321**	*e*P	**P**	**12 35 49.5**	**+0.5**
	comp=Z,16nm,0.8s						
AAK	**Ala-Archa**	**60.72**	**321**	*e*P	**P**	**12 35 49.5**	**+0.5**
AAK				pmax	pmax		
	comp=Z,16nm,0.8s						
FRU	**Bishkek**	**60.75**	**321**	*e*P	**P**	**12 35 51.0**	**+2.0**
FRU				*e*		12 36 13.0	
FRU				pmax	pmax		
	comp=Z,75nm,2.5s						
KBL	**Kabul**	**60.87**	**310**	*e*P	**P**	**12 35 50.3**	**+0.1**
	comp=Z,40nm,0.7s						
KBL	**Kabul**	**60.87**	**310**	*e*P	**P**	**12 35 50.3**	**+0.1**
KBL				pmax	pmax		
	comp=Z,40nm,0.7s						
PET	**Petropavlovsk**	**60.90**	**24**	*e*P	**P**	**12 35 50.5**	**+0.7**
	comp=Z,95nm,1.4s						
PET	**Petropavlovsk**	**60.90**	**24**	*e*P	**P**	**12 35 50.2**	**+0.5**
PET				*e*S	**S**	**12 43 56.5**	**-4.2**
PET				*e**SS	**sS**	**12 44 35.5**	**-3.8**
PET				pmax	pmax		
	comp=Z,54nm,1.3s						
PET				MLR	MLR		
	comp=Z,100nm,16.0s						
AML	**Almayashu**	**60.97**	**320**	P	**P**	**12 35 52.0**	**+1.1**
	SNR=7.0						
RPZ	**Rata Peaks**	**61.01**	**142**	*e*P	**P**	**12 35 51.3**	**+0.6**
	comp=Z,87nm,1.1s						
USP	**Ospenovka**	**61.05**	**321**	P	**P**	**12 35 51.3**	**+0.3**
	SNR=19						
EKS2	**Erkin-Say**	**61.19**	**321**	P	**P**	**12 35 53.2**	**+1.1**
	SNR=14						
MNAS	**Manas**	**61.91**	**320**	P	**P**	**12 35 57.4**	**+0.4**
MNAS				pmax	pmax		
	comp=Z,25nm,0.9s						
YAK	**Yakutsk**	**62.30**	**4**	*e*P	**P**	**12 35 58.7**	**-0.3**
	comp=Z,62nm,0.6s						
YAK	**Yakutsk**	**62.30**	**4**	*e*P	**P**	**12 35 58.2**	**-0.8**
YAK				*e**PP	**pP**	**12 36 24.2**	**+2.5**
YAK				*e*		12 36 41.7	
YAK				*e*		12 38 16.7	
YAK				*e*S	**S**	**12 44 16.4**	**-1.6**
YAK				*e**SS	**sS**	**12 44 58.3**	**+1.5**
YAK				*e*		12 45 38.0	
YAK				*e*SS	**SS**	**12 48 23.8**	**+0.7**
YAK				pmax	pmax		
	comp=Z,32nm,0.9s						
YAK				pmax	pmax		
	comp=N,9.0nm,1.5s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.4s						
YAK				pmax	pmax		
	comp=Z,50nm,2.2s						
YAK				pmax	pmax		
	comp=N,21nm,1.8s						
YAK				pmax	pmax		
	comp=E,14nm,1.6s						
YAK				smax	smax		
	comp=N,30nm,3.2s						
YAK				smax	smax		
	comp=E,26nm,3.7s						
ZAA0	**Zalesovo Array**	**62.39**	**336**	*e*P	**P**	**12 35 58.8**	**-1.0**
	comp=E,16nm,0.9s						
ZALV	**Zalesovo Beam**	**62.39**	**336**	P	**P**	**12 35 58.7**	**-1.1**
	comp=E,8.0nm,0.8s,baz=122,slow=5.7,SNR=29						
ZALV				PP	**PP**	**12 38 17.9**	**-0.2**
	comp=E,4.5nm,0.8s,baz=133,slow=8.1,SNR=3.7						
ZALV				LR	LR	13 03 21.6	

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       comp=E,72nm,21.0s,baz=68,slow=36
ZALV                                PKPPKP P'P'df   13 05 05.7 +1.4
       comp=E,0.7nm,0.5s,baz=310,slow=11,SNR=3.8
ZALV   Zalesovo Beam     62.39 336 eP      P        12 35 58.4 -1.4
ZALV                                PP     PP       12 38 17.9 -0.2
ZAA1   Zalesovo Array    62.39 336 eP      P        12 35 58.7 -1.1
ZAA1                               ePP     PP       12 38 17.9 -0.2
BKZ    Black Stump Fm    62.49 135 eP      P        12 36 01.2 +0.3
       comp=E,51nm,1.3s
KURBB  Kurchatov Arra    63.01 330  P      P        12 36 03.7 -0.3
       comp=E,20nm,0.8s,baz=132,slow=5.8,SNR=78
KURBB                               PP     PP       12 38 24.4 +0.8
       comp=E,0.9nm,0.3s,baz=129,slow=7.3,SNR=3.3
KURBB                               PKPPKP P'P'df   13 05 01.6 -2.0
       comp=E,0.6nm,0.2s,baz=282,slow=3.7,SNR=4.1
KURK   Kurchatov         63.02 330 eP      P        12 36 03.4 -0.6
       comp=E,63nm,0.9s
KURK                               eP      P        12 36 03.7 -0.3
KURK                               ePP     PP       12 38 24.4 +0.7
KURK   Kurchatov         63.02 330deP      P        12 36 03.9 -0.1
KURK                                pmax   pmax
       comp=Z,71nm,1.0s
KK31   Karatay Array     63.50 320 eP      P        12 36 07.9 +0.5
KK31   Karatay Array     63.50 320 i P     P        12 36 08.6 +1.2
KK31                                pmax   pmax
       comp=Z,10.0nm,0.8s
KKAR   Karatay Array     63.50 320 eP      P        12 36 08.8 +1.4
KKAR   Karatay Array     63.50 320 eP      P        12 36 08.8 +1.4
MA2    Magadan           63.51  16 eP      P        12 36 07.5 +0.4
       comp=Z,88nm,0.8s
MA2    Magadan           63.51  16 eP      P        12 36 07.5 +0.4
MA2                                 pmax   pmax
       comp=Z,88nm,0.8s
NVS    Novosibirsk       63.68 336 eP      P        12 36 07.2 -1.1
NVS                                e                12 36 31.2
NVS                                e                12 38 28.0
NVS                                eS      S        12 44 36.0 +0.5
NVS                                 pmax   pmax
       comp=N,19nm,1.4s
NVS                                 pmax   pmax
       comp=E,18nm,1.4s
NVS                                 pmax   pmax
       comp=Z,25nm,1.4s
NVS                                 pmax   pmax
       comp=N,17nm,2.0s
NVS                                 pmax   pmax
       comp=E,14nm,2.0s
NVS                                 pmax   pmax
       comp=Z,24nm,2.0s
NVS                                 smax   smax
       comp=N,7.0nm,1.5s
NVS                                 smax   smax
       comp=E,9.0nm,1.5s
WSAR   Wadi Sarin        66.40 295  LR     LR       13 08 46.4
       comp=E,81nm,18.0s,baz=108,slow=39
CASY   Casey             66.50 185 eP      P        12 36 26.9 +0.6
       comp=E,30nm,0.9s
SEY    Seymchan          66.78  14c iP     P        12 36 28.4 +0.3
BVA0   Borovoye Array    68.52 329  P      P        12 36 38.5 -0.8
BVA0                                pmax   pmax
       comp=Z,36nm,1.3s
BVAR   Borovoye Array    68.52 329  P      P        12 36 39.0 -0.3
       comp=Z,15nm,1.0s,baz=126,slow=7.3,SNR=62
BVAR                                LR     LR       13 06 55.1
       comp=Z,41nm,21.7s,baz=110,slow=36
BRVK   Borovoye          68.59 329 eP      P        12 36 39.5 -0.3
       comp=Z,31nm,1.1s
BRVK   Borovoye          68.59 329c iP     P        12 36 39.1 -0.7
BRVK                                pmax   pmax
       comp=Z,31nm,1.0s
GEYT   Alibeck           70.32 311  P      P        12 36 50.1 -0.7
       comp=Z,2.6nm,0.3s,baz=104,slow=6.5,SNR=2.0
GEYT                                LR     LR       13 13 17.2
       comp=Z,36nm,18.7s,baz=270,slow=41
TIXI   Tiksi             71.85   2 eP      P        12 36 57.4 -1.9
       comp=Z,25nm,0.9s
TIXI   Tiksi             71.85   2c iP     P        12 36 57.8 -1.5
TIXI                                pmax   pmax
       comp=Z,32nm,1.0s
AB31   Akbulak array     72.73 322 i P     P        12 37 04.1 -0.9
AB31                                pmax   pmax
       comp=Z,13nm,0.9s
ABKAR  Akbulak array     72.73 322 eP      P        12 37 04.3 -0.7
ATKA   Atka Island       73.99  35 eP      P        12 37 11.6 -0.7
       comp=Z,53nm,0.8s
AKTO   Aktyubinsk        74.31 323  P      P        12 37 13.6 -0.7
       comp=Z,17nm,0.8s,baz=111,slow=6.5,SNR=53
AKTO                                LR     LR       13 14 21.2
       comp=Z,38nm,19.0s,baz=115,slow=39
SVE    Sverdlovsk        75.27 330⇑iP      P        12 37 19.1 -0.5
SVE                                 pmax   pmax
       comp=Z,55nm,1.4s
ARU    Arti              76.17 329 eP      P        12 37 23.0 -1.8
       comp=Z,26nm,1.0s
ARU    Arti              76.17 329⇑iP      P        12 37 23.0 -1.8
ARU                                 AP     pP       12 37 46.5 -1.7
ARU                                 PP     PP       12 40 14.3 -2.6
ARU                                 S      S        12 46 59.7 -1.8
ARU                                 pmax   pmax
       comp=Z,50nm,1.7s
OPO    Ambohidratompo    76.23 251  P      P        12 37 24.7 -1.4
       comp=Z,5.8nm,0.8s,baz=86,slow=19,SNR=5.0
RAYN   Ar Rayn           78.38 294 eP      P        12 37 37.7 -0.2
       comp=Z,32nm,1.9s
RAYN   Ar Rayn           78.38 294 eP      P        12 37 37.7 -0.2
RAYN                                pmax   pmax
       comp=Z,32nm,1.9s
MAW    Mawson            78.71 200  P      P        12 37 39.7 +1.0
       comp=Z,7.0nm,0.9s,baz=36,slow=8.3,SNR=13
MAW    Mawson            78.71 200 eP      P        12 37 39.5 +0.8
       comp=Z,4.7nm,1.3s
UNV    Unalaska Valle    78.92  35 eP      P        12 37 38.8 -1.3
       comp=Z,116nm,1.8s
AKUT   Akutan            79.41  35 eP      P        12 37 42.2 -0.6
VNDA   Vanda             80.08 172  P      P        12 37 46.4 +0.4
       comp=Z,8.4nm,0.8s,baz=310,slow=6.3,SNR=55
VNDA                                LR     LR       13 15 48.1
       comp=Z,27nm,18.2s,baz=316,slow=37
VNDA   Vanda             80.08 172 eP      P        12 37 46.6 +0.6
VNDA                               ePcP    P        12 37 46.7 +0.7
VNDA   Vanda             80.08 172 eP      P        12 37 46.6 +0.6
ATD    Arta Tunnel       80.13 282  LR     LR       13 11 38.7
       comp=Z,38nm,19.8s,baz=291,slow=34
FALS   False Pass        80.92  34 eP      P        12 37 50.8 -0.1
       comp=Z,131nm,0.6s
SBA    Scott Base        81.03 171 eP      P        12 37 52.4 +1.3
       comp=Z,6.4nm,0.9s
SBA    Scott Base        81.03 171 eP      P        12 37 52.4 +1.3
SBA                                 pmax   pmax
       comp=Z,6.0nm,0.9s
ZEI    Tsey              81.94 313 eP      P        12 37 56.4 -0.5
ZEI                                 pmax   pmax
       comp=Z,10.0nm,0.5s
SDPT   Sand Point        82.67  34 eP      P        12 37 59.7 -0.4
       comp=Z,76nm,0.6s
KBZ    Khabaz            82.79 314  P      P        12 38 00.3 -0.6
       comp=Z,7.0nm,0.9s,baz=125,slow=2.3,SNR=7.9
NEY    Neytrino          82.86 314⇑iP      P        12 38 02.5 +0.9
NEY                                 pmax   pmax
       comp=Z,3.0nm,1.4s
KIV    Kislovodsk        82.97 314 eP      P        12 38 00.5 -1.5
KIV                                 pmax   pmax
       comp=Z,8.0nm,1.0s
KIV                                 MLR    MLR
       comp=Z,37nm,19.0s
CHGN   Chignik           83.99  33 eP      P        12 38 06.4 -0.4
       comp=Z,19nm,0.9s
PRGR   Permogore         84.06 332 eP      P        12 38 04.4 -2.7
PRGR                               e*PP    pP       12 38 26.6 -4.3
PRGR                                pmax   pmax
       comp=Z,51nm,1.5s
RDOG   Red Dog Mine      84.38  21 eP      P        12 38 09.4 +0.8
       comp=Z,31nm,0.8s
VORD   Divnogorie        86.02 321 eP      P        12 38 17.0 -0.1
VORD                                pmax   pmax
       comp=Z,50nm,0.5s
VSR    Storozhevoye      86.12 321 eP      P        12 38 16.4 -1.2
VSR                                 pmax   pmax
       comp=Z,60nm,1.1s
ASF    Jabal al Asfar    86.58 302  P      P        12 38 20.1 -0.3
       comp=Z,5.5nm,1.0s,baz=82,slow=3.3,SNR=5.2
ANN    Anapa             86.80 315 eP      P        12 38 20.1 -1.0
ANN                                e*PP    pP       12 38 42.9 -2.1
ANN                                 pmax   pmax
       comp=Z,56nm,1.0s
KLMR   Klimovskoe        86.86 331 eP      P        12 38 18.3 -2.7
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KLMR                               e                12 41 39.1
KLMR                                pmax   pmax
       comp=Z,53nm,1.3s
KLMR   Klimovskoe        86.86 331 eP      P        12 38 18.4 -2.6
KLMR                                AMP             12 38 21.0
       comp=Z,53nm,1.3s
KLMR                               ePP     PP       12 41 39.2 -5.6
OHAK   Old Harbor        86.91  33 eP      P        12 38 20.1 -1.2
KDAK   Kodiak Island     87.33  32 i P     P        12 38 23.6 +0.3
SYO    Syowa Base        87.34 201⇓eP      P        12 38 23.0 -0.1
SYO    Syowa Base        87.34 201⇑eP      P        12 38 32.6 +9.5
MOS    Moscow            87.41 326 eP      P        12 38 22.9 -0.8
MOS                                e                12 41 51.6
MOS                                 pmax   pmax
       comp=Z,33nm,0.8s
PPT    Papeete           87.74 107  LR     LR       13 19 23.9
       comp=Z,18nm,20.3s,baz=300,slow=37
PPT2   Papeete2          87.74 107 eLR     LR       13 06 33.1
       comp=Z,301nm,38.8s
MMAI   Mount Meron Ar    87.87 303  LR     LR       13 25 43.8
       comp=Z,32nm,18.5s,baz=210,slow=41
OBN    Obninsk           87.97 325deP      P        12 38 25.6 -0.8
OBN                                e*PP    pP       12 38 49.3 -1.1
OBN                                e*SP    sP       12 38 59.3 -0.7
OBN                                e                12 41 50.7
OBN                                 pmax   pmax
       comp=Z,46nm,1.4s
CAST   Castle Rocks      88.02  27 eP      P        12 38 25.3 -1.3
       comp=Z,5.6nm,0.7s
BPAW   Bear Paw Mtn.     88.56  26 eP      P        12 38 28.8 -0.3
       comp=Z,8.4nm,1.0s
MLY    Manley            88.72  25 eP      P        12 38 29.7 -0.2
       comp=Z,14nm,0.9s
COLD   Coldfoot          89.05  23 eP      P        12 38 31.5 +0.2
       comp=Z,12nm,0.9s
TOLK   Toolik Lake Re    89.35  21  P      P        12 38 32.4 -0.3
       baz=268
TOLK   Toolik Lake Re    89.35  21 eP      P        12 38 32.7  0.0
       comp=Z,5.7nm,0.9s
BR101  Keskin Array S    89.43 310 eP      P        12 38 33.1 -0.8
BRTR   Keskin Array B    89.43 310  P      P        12 38 33.1 -0.8
       comp=Z,1.9nm,0.9s,baz=106,slow=3.1,SNR=8.0
BRTR                                LR     LR       13 25 40.2
       comp=Z,18nm,18.1s,baz=100,slow=40
QSPA   South Pole Qui    89.72 180  P      P        12 38 35.0 +0.4
       comp=Z,8.5nm,0.8s,baz=338,slow=2.2,SNR=24
QSPA                                LR     LR       13 20 06.4
       comp=Z,53nm,18.6s,baz=288,slow=36
QSPA   South Pole Qui    89.72 180 eP      P        12 38 35.0 +0.4
QSPA                               eP      P        12 38 35.3 +0.7
CCB    Clear Creek Bu    89.96  26 eP      P        12 38 34.4 -1.2
       comp=Z,15nm,1.2s
DHY    Denali Highway    90.14  27 eP      P        12 38 35.9 -0.8
       comp=Z,6.3nm,0.8s
ILAR   Eielson Array     90.35  25  P      P        12 38 36.3 -1.1
       comp=Z,1.2nm,0.6s,baz=256,slow=4.6,SNR=7.6
ILB    Eielson Array     90.35  25 eP      P        12 38 36.3 -1.1
TGL    Tana Glacier      92.36  29 eP      P        12 38 47.1 +0.1
       comp=Z,12nm,0.8s
AKASG  Malin Array Be    92.39 321  P      P        12 38 44.9 -2.3
       comp=Z,1.4nm,0.6s,baz=75,slow=4.0,SNR=10
AKASG                               PP     PP       12 42 25.9 -3.2
       comp=Z,0.4nm,0.5s,baz=76,slow=8.1,SNR=4.0
AKASG                               LR     LR       13 24 23.2
       comp=Z,28nm,21.4s,baz=75,slow=38
AKBB   Malin Array Si    92.39 321 eP      P        12 38 45.2 -1.9
       comp=Z,5.3nm,1.0s
AKBB                               ePP     PP       12 42 25.9 -3.2
AKBB   Malin Array Si    92.39 321 eP      P        12 38 45.3 -1.9
AKBB                               e                12 42 25.9
AKBB                                pmax   pmax
       comp=Z,5.0nm,1.0s
KIEV   Kiev              92.40 321⇓iP      P        12 38 45.7 -1.5
KIEV                                pmax   pmax
       comp=Z,11nm,1.9s
ARA0   ARCESS Array S    92.73 340 eP      P        12 38 48.7 +0.3
ARCES  ARCESS Array B    92.73 340  P      P        12 38 48.7 +0.3
       comp=Z,1.2nm,0.6s,baz=87,slow=4.6,SNR=5.0
VSU    Vasula            93.32 328⇓eP      P        12 38 49.9 -1.4
VSU                                 pmax   pmax
       comp=Z,37nm,0.9s
FIA0   FINESS Array S    93.37 331 eP      P        12 38 49.7 -1.8
FIA0   FINESS Array S    93.37 331 eP      P        12 38 49.7 -1.8
FINES  FINESS Array B    93.37 331  P      P        12 38 49.7 -1.8
       comp=Z,2.3nm,0.9s,baz=106,slow=5.1,SNR=3.3
FINES                               LR     LR       13 23 15.6
       comp=Z,52nm,21.0s,baz=92,slow=37
SPITS  Spitsbergen Ar    93.53 349  P      P        12 38 50.3 -1.6
       comp=Z,15nm,0.8s,baz=69,slow=7.9,SNR=5.5
SPITS                               LR     LR       13 26 48.6
       comp=Z,42nm,18.7s,baz=50,slow=39
DAWY   Dawson            93.64  26 eP      P        12 38 53.0 +0.2
       comp=Z,12nm,1.0s
LSZ    Lusaka            94.33 255 eP      P        12 38 55.9 -1.1
       comp=Z,7.2nm,0.9s
LSZ    Lusaka            94.33 255 eP      P        12 38 55.9 -1.1
LSZ                                 pmax   pmax
       comp=Z,7.0nm,0.9s
MLR    Muntele Rosu      94.92 315  LR     LR       13 28 54.5
       comp=Z,14nm,19.3s,baz=73,slow=40
MLR    Muntele Rosu      94.92 315 eP      P        12 38 58.7 -0.4
       comp=Z,8.6nm,1.3s
MLR    Muntele Rosu      94.92 315 eP      P        12 38 58.7 -0.4
MLR                                 pmax   pmax
       comp=Z,9.0nm,1.3s
BUR04  Bucovina Ar. S    95.23 318 eP      P        12 38 59.2 -1.3
BUR08  Bucovina Ar. S    95.24 318 eP      P        12 39 00.0 -0.5
INK    Inuvik            95.26  21 eP      P        12 38 59.4 -0.6
       comp=Z,6.2nm,0.8s
INK    Inuvik            95.26  21 eP      P        12 38 59.4 -0.6
INK                                 pmax   pmax
       comp=Z,6.0nm,0.8s
SKAG   Skagway           96.25  30 eP      P        12 39 05.0 +0.3
       comp=Z,16nm,1.0s
BOSA   Boshof            96.47 241  P      P        12 39 06.9 +0.3
       comp=Z,1.4nm,0.5s,baz=78,slow=3.2,SNR=3.8
BOSA                                LR     LR       13 17 37.6
       comp=Z,90nm,19.4s,baz=144,slow=32
HFS    Hagfors           99.58 331  P      Pdif     12 39 19.1 -0.5
       comp=Z,1.4nm,0.4s,baz=90,slow=2.9,SNR=10.0
HFS                                 LR     LR       13 26 55.6
       comp=Z,37nm,21.6s,baz=76,slow=37
SNAA   Sanae            100.40 195  P      Pdif     12 39 23.5 +0.3
       comp=Z,1.3nm,0.9s,baz=31,slow=15,SNR=3.7
YKA    Yellowknife Ar   104.70  24  Pdiff  Pdif     12 39 43.1 +0.8
       comp=Z,0.1nm,0.4s,baz=304,slow=4.9,SNR=5.4
YKA                                 PKKPbc PKKPbc   12 55 25.4 -3.5
       comp=Z,1.8nm,0.8s,baz=113,slow=2.5,SNR=12
MSO    Missoula         112.33  38  P      PKiKP    12 44 13.1 +0.7
       baz=296
NVAR   Mina Array Bea   112.50  48  PKiKP  PKiKP    12 44 13.2 +0.2
       comp=Z,0.8nm,0.7s,baz=268,slow=2.4,SNR=7.7
NVAR                                PKKPab PKKPab   12 55 11.4 -0.2
       comp=Z,0.7nm,0.9s,baz=120,slow=8.7,SNR=4.3
CWC    Cottonwood Cre   113.29  50  P      PKiKP    12 44 15.2 +0.7
       baz=288
HLID   Hailey           113.38  42  P      PKiKP    12 44 15.4 +0.8
       baz=294
GRAC   Grapevine Rang   113.66  49  P      PKiKP    12 44 15.5 +0.3
       baz=289
EDW2   Edwards Air Fo   113.83  52  P      PKiKP    12 44 16.3 +0.7
       baz=288
MPMC   Manual Prospec   113.86  50  P      PKiKP    12 44 16.7 +0.9
       baz=288
LRMC   Laurel Mtn Rad   113.90  51  P      PKiKP    12 44 16.7 +1.0
       baz=288
CIS    Catalina Islan   113.93  53  P      PKiKP    12 44 15.1 -0.6
       baz=287
FURC   Furnace Creek,   114.21  50  P      PKPdf    12 44 17.2 +1.1
       baz=289
EGMT   Eagleton         114.30  36  P      PKPdf    12 44 13.7 -2.4
       baz=300
BOZ    Bozeman (W)      114.31  39  P      PKPdf    12 44 16.0 -0.2
       baz=297
TPNV   Topopah Spring   114.52  49  P      PKPdf    12 44 17.1 +0.2
       baz=290
R11A   Troy Canyon, C   114.53  47  P      PKPdf    12 44 17.4 +0.5
       baz=291
GSC    Goldstone, Bar   114.63  51  P      PKPdf    12 44 17.0 -0.1
       baz=289
HEC    Hector,Ludlow    115.15  51  P      PKPdf    12 44 19.0 +0.9
       baz=289
TUQ    Turquoise Moun   115.27  50  P      PKPdf    12 44 19.2 +0.8
       baz=289
PFO    Pinyon Flats O   115.43  53  P      PKPdf    12 44 19.0 +0.3
       baz=288
SHPR   Sheep Range      115.49  49 ePKPdf  PKPdf    12 44 19.5 +0.7
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BELC   Belle Mtn. Jos   115.67  52  P      PKPdf    12 44 19.0 -0.2
       baz=289
MONP2  Monument Peak    115.68  53  P      PKPdf    12 44 19.0 -0.3
       baz=288
GMRC   Granite Mounta   115.69  51  P      PKPdf    12 44 20.0 +0.8
       baz=289
TPAW   Teton Pass       115.69  41 ePKPdf  PKPdf    12 44 19.2  0.0
PSUT   Pine Spring      115.73  47 ePKPdf  PKPdf    12 44 18.7 -0.6
REDW   Red Top Meadow   115.81  41 ePKPdf  PKPdf    12 44 20.0 +0.7
DUG    Dugway, Tooele   115.83  45  P      PKPdf    12 44 19.0 -0.4
       baz=294
DUG    Dugway, Tooele   115.83  45 ePKPdf  PKPdf    12 44 20.2 +0.8
DUG    Dugway, Tooele   115.83  45 ePKIKP  PKPdf    12 44 20.2 +0.8
LOHW   Long Hollow      115.86  40 ePKPdf  PKPdf    12 44 20.0 +0.6
HWUT   Hardware Ranch   116.11  43 ePKPdf  PKPdf    12 44 20.2 +0.3
BC3    Big Chuckawall   116.22  52  P      PKPdf    12 44 20.7 +0.5
       baz=289
IRM    Iron Mountain    116.30  52  P      PKPdf    12 44 20.7 +0.5
       baz=289
CCUT   Cedar City       116.46  47 ePKPdf  PKPdf    12 44 21.4 +0.7
SZCU   Shurtz Canyon    116.65  47 ePKPdf  PKPdf    12 44 21.8 +0.7
LCMT   Little Creek M   116.75  48 ePKPdf  PKPdf    12 44 22.0 +0.8
BW06   Boulder Array    116.93  41  P      PKPdf    12 44 21.4 -0.1
       baz=298
PD31   Pinedale Array   116.93  41 ePKPdf  PKPdf    12 44 21.0 -0.5
PDAR   Pinedale Array   116.93  41  PKP    PKPdf    12 44 21.0 -0.5
       comp=Z,0.6nm,0.6s,baz=243,slow=0.7,SNR=7.6
PDAR                                PKKPbc PKKPbc   12 54 46.2 -2.5
       comp=Z,1.4nm,0.9s,baz=116,slow=6.8,SNR=5.1
PDAR   Pinedale Array   116.93  41 ePKPdf  PKPdf    12 44 20.9 -0.6
W13A   Hualapai Mount   116.95  50 ePKPdf  PKPdf    12 44 23.0 +1.3
LAO    LASA Array       117.05  36  P      PKPdf    12 44 21.7 +0.4
       baz=302
LAO    LASA Array       117.05  36 ePKPdf  PKPdf    12 44 22.2 +0.9
PKCU   Pink Cliffs      117.27  47 ePKPdf  PKPdf    12 44 22.8 +0.3
TMUT   Trail Mountain   117.33  45 ePKPdf  PKPdf    12 44 23.3 +0.8
U15A   North Rim        117.68  48 ePKPdf  PKPdf    12 44 24.7 +1.5
P18A   Preston Nutter   117.86  44 ePKPdf  PKPdf    12 44 24.1 +0.6
SRU    San Rafael Swe   117.89  45 ePKPdf  PKPdf    12 44 23.7 +0.3
SRU    San Rafael Swe   117.89  45 ePKIKP  PKPdf    12 44 23.7 +0.3
WUAZ   Wupatki          118.71  49  P      PKPdf    12 44 25.8 +0.7
       baz=293
WUAZ   Wupatki          118.71  49 ePKPdf  PKPdf    12 44 26.1 +1.1
214A   Organ Pipe Nat   118.87  53  P      PKPdf    12 44 25.6 +0.3
       baz=290
RWWY   Rawlins          118.98  41 ePKPdf  PKPdf    12 44 25.6 +0.1
O20A   White River Ci   119.02  43  P      PKPdf    12 44 25.7 +0.1
       baz=297
O20A   White River Ci   119.02  43 ePKPdf  PKPdf    12 44 26.2 +0.7
X16A   Lo Mia Camp, P   119.08  50 ePKPdf  PKPdf    12 44 27.1 +1.3
PV09   Paradox Valley   119.13  45 ePKPdf  PKPdf    12 44 27.0 +1.0
PV21   Cone Mtn., Par   119.22  45 ePKPdf  PKPdf    12 44 26.5 +0.4
PV23   Carpenter Ridg   119.24  45 ePKPdf  PKPdf    12 44 26.5 +0.4
PV14   Lion Creek, Pa   119.26  45 ePKPdf  PKPdf    12 44 26.9 +0.8
PV20   West Nyswonger   119.32  45 ePKPdf  PKPdf    12 44 26.7 +0.5
PV17   East Wray Mesa   119.35  45 ePKPdf  PKPdf    12 44 26.9 +0.7
PV16   Nyswonger Mesa   119.37  45 ePKPdf  PKPdf    12 44 27.1 +0.8
PV18   Skein Mesa, Pa   119.40  45 ePKPdf  PKPdf    12 44 27.0 +0.7
PV03   Paradox Valley   119.44  45 ePKPdf  PKPdf    12 44 27.2 +0.8
PV13   Radium Mtn., P   119.50  45 ePKPdf  PKPdf    12 44 27.3 +0.8
PV02   Paradox Valley   119.54  45 ePKPdf  PKPdf    12 44 27.6 +0.9
RSSD   Black Hills      119.72  37  P      PKPdf    12 44 26.1 -0.7
       baz=303
RSSD   Black Hills      119.72  37 ePKPdf  PKPdf    12 44 26.3 -0.5
MVCO   Mesa Verde       120.14  46  P      PKPdf    12 44 28.3 +0.5
       baz=296
MVCO   Mesa Verde       120.14  46 ePKPdf  PKPdf    12 44 28.8 +1.0
X18A   Snowflake        120.17  49 ePKPdf  PKPdf    12 44 28.5 +0.6
TORD   Torodi Ar. Bea   120.20 285  PKP    PKPdf    12 44 26.9 -1.3
       comp=Z,1.5nm,0.8s,baz=119,slow=2.1
TORD                                PKKPbc PKKPbc   12 54 35.2 -0.6
       baz=242,slow=3.1
TOA1   Torodi Ar. Sit   120.20 285 ePKPdf  PKPdf    12 44 26.9 -1.4
ULM    Lac du Bonnet    120.30  28  PKP    PKPdf    12 44 25.8 -1.6
       comp=Z,4.5nm,0.8s,baz=279,slow=1.9,SNR=6.4
TUC    Tucson           120.36  52  P      PKPdf    12 44 28.4 +0.3
       baz=291
TUC    Tucson           120.36  52 ePKPdf  PKPdf    12 44 29.3 +1.1
TUC    Tucson           120.36  52 ePKIKP  PKPdf    12 44 29.3 +1.1
ISCO   Idaho Springs    120.95  42  P      PKPdf    12 44 28.8 -0.7
       baz=300
ISCO   Idaho Springs    120.95  42 ePKPdf  PKPdf    12 44 29.4  0.0
ISCO   Idaho Springs    120.95  42 ePKIKP  PKPdf    12 44 29.4  0.0
S22A   4UR Ranch, Cre   121.09  45  P      PKPdf    12 44 30.4 +0.7
       baz=297
S22A   4UR Ranch, Cre   121.09  45 ePKPdf  PKPdf    12 44 30.8 +1.1
319A   Douglas          121.89  53 ePKPdf  PKPdf    12 44 32.0 +0.8
SDCO   Great Sand Dun   122.02  44  P      PKPdf    12 44 31.7 +0.2
       baz=298
SDCO   Great Sand Dun   122.02  44 ePKPdf  PKPdf    12 44 32.2 +0.7
B34A   Aery, Baudette   122.10  28  P      PKPdf    12 44 29.6 -1.3
       baz=314
ANMO   Albuquerque      122.61  48  PKP    PKPdf    12 44 32.5 -0.1
       comp=Z,6.0nm,1.0s,baz=198,slow=3.2,SNR=14
ANMO   Albuquerque      122.61  48 ePKPdf  PKPdf    12 44 33.3 +0.7
ANMO   Albuquerque      122.61  48⇑iPKIKP  PKPdf    12 44 33.2 +0.6
121A   Cookes Peak, D   122.62  51  P      PKPdf    12 44 33.2 +0.6
       baz=294
BNM    Barren Site      122.83  48 ePKPdf  PKPdf    12 44 33.9 +0.8
T25A   Trinidad         123.08  44  P      PKPdf    12 44 33.3 -0.2
       baz=299
T25A   Trinidad         123.08  44 ePKPdf  PKPdf    12 44 34.3 +0.9
EYMN   Ely              123.96  27  P      PKPdf    12 44 33.5 -1.1
       baz=317
D37A   Cotton           124.10  28  P      PKPdf    12 44 33.4 -1.4
       baz=316
E36A   McGregor         124.15  29  P      PKPdf    12 44 34.2 -0.8
       baz=315
ECSD   EROS Data Cent   124.27  34  P      PKPdf    12 44 33.8 -1.5
       baz=310
ECSD   EROS Data Cent   124.27  34 ePKPdf  PKPdf    12 44 34.8 -0.4
F36A   Milaca           124.48  30  P      PKPdf    12 44 34.9 -0.7
       baz=314
F36A   Milaca           124.48  30 ePKPdf  PKPdf    12 44 35.1 -0.5
H35A   Sunnyside Ranc   124.60  32  P      PKPdf    12 44 35.3 -0.5
       baz=312
MNTX   Cornudas Mount   124.82  51  P      PKPdf    12 44 37.3 +0.6
       baz=295
MNTX   Cornudas Mount   124.82  51 ePKPdf  PKPdf    12 44 37.5 +0.8
BGNE   Belgrade         124.83  37  P      PKPdf    12 44 35.6 -0.8
       baz=307
E38A   The Farm, Brul   124.91  28  P      PKPdf    12 44 35.9 -0.5
       baz=317
E38A   The Farm, Brul   124.91  28 ePKPdf  PKPdf    12 44 35.8 -0.5
C40A   Isle Royale Na   125.02  26  P      PKPdf    12 44 35.8 -0.7
       baz=320
C40A   Isle Royale Na   125.02  26 ePKPdf  PKPdf    12 44 36.2 -0.3
F38A   Pierce - Schro   125.22  29  P      PKPdf    12 44 36.3 -0.7
       baz=316
E39A   Mellen           125.55  28  P      PKPdf    12 44 36.6 -1.0
       baz=318
F39A   Loretta          125.72  28  P      PKPdf    12 44 37.4 -0.5
       baz=317
MSTX   Muleshoe         125.77  47  P      PKPdf    12 44 38.6  0.0
       baz=299
MSTX   Muleshoe         125.77  47 ePKPdf  PKPdf    12 44 38.5  0.0
J36A   Seneca 1, Swea   125.78  33  P      PKPdf    12 44 37.9 -0.3
       baz=312
E40A   Wakefield        125.80  27  P      PKPdf    12 44 37.3 -0.8
       baz=318
I37A   Lemond, Waseca   125.82  32  P      PKPdf    12 44 38.3  0.0
       baz=313
I37A   Lemond, Waseca   125.82  32 ePKPdf  PKPdf    12 44 38.2  0.0
D41A   Chassel          125.93  26  P      PKPdf    12 44 37.5 -0.8
       baz=320
H38A   Maiden Rock      125.94  30  P      PKPdf    12 44 37.7 -0.7
       baz=315
G39A   Holcombe         126.05  29  P      PKPdf    12 44 38.1 -0.5
       baz=316
F40A   Park Falls       126.09  28  P      PKPdf    12 44 37.8 -0.9
       baz=318
E41A   Kenton           126.21  27  P      PKPdf    12 44 38.2 -0.7
       baz=319
J37A   Redenius Farm,   126.22  32  P      PKPdf    12 44 38.4 -0.6
       baz=313
I38A   Scanlan Farm,    126.36  31  P      PKPdf    12 44 38.5 -0.7
       baz=315
H39A   Augusta          126.43  30  P      PKPdf    12 44 38.5 -0.9
       baz=316
G40A   Rib Lake         126.53  29  P      PKPdf    12 44 38.7 -0.9
       baz=318
G40A   Rib Lake         126.53  29 ePKPdf  PKPdf    12 44 39.2 -0.4
F41A   Three Lakes      126.70  27  P      PKPdf    12 44 39.9  0.0
       baz=319
F41A   Three Lakes      126.70  27 ePKPdf  PKPdf    12 44 39.8 -0.1
```

E42A	Champion	126.70	26	P	PKPdf	12 44 39.3	-0.6
	baz=321						
J38A	Wedel Dairy, R	126.79	32	P	PKPdf	12 44 37.9	-2.2
	baz=314						
I39A	Houston	126.90	31	P	PKPdf	12 44 39.4	-1.0
	baz=315						
I39A	Houston	126.90	31	ePKPdf	PKPdf	12 44 39.3	-1.0
H40A	Chili	126.91	29	P	PKPdf	12 44 39.6	-0.7
	baz=317						
E43A	Lone Tree Farm	127.15	26	P	PKPdf	12 44 39.5	-1.2
	baz=322						
E43A	Lone Tree Farm	127.15	26	ePKPdf	PKPdf	12 44 40.5	-0.2
TX31	Lajitas Ar. Si	127.15	52	ePKPdf	PKPdf	12 44 41.2	-0.2
TX31				ePKPdf	PKiKP	12 44 41.6	-0.3
TXAR	Lajitas Array	127.15	52	PKP	PKPdf	12 44 39.5	-1.8
	comp=Z,2.0nm,0.9s,baz=240,slow=0.7,SNR=14						
J39A	Decorah	127.17	31	P	PKPdf	12 44 40.2	-0.6
	baz=315						
DBIC	Dimbokro	127.32	278	PKP	PKPdf	12 44 42.2	+0.3
	comp=Z,9.4nm,1.2s,baz=82,slow=5.8,SNR=4.4						
L38A	Oak Wood Farm,	127.33	33	P	PKPdf	12 44 40.5	-0.6
	baz=313						
G42A	Mountain	127.38	27	P	PKPdf	12 44 40.8	-0.4
	baz=319						
G42A	Mountain	127.38	27	ePKPdf	PKPdf	12 44 40.4	-0.7
F43A	Flat Rock, Esc	127.50	26	P	PKPdf	12 44 40.5	-0.9
	baz=321						
M38A	Pleasantville	127.69	34	P	PKPdf	12 44 41.2	-0.7
	baz=312						
F44A	Big Bay de Noc	127.71	25	P	PKPdf	12 44 41.0	-0.7
	baz=322						
G43A	Wallace	127.71	27	P	PKPdf	12 44 41.1	-0.7
	baz=320						
L39A	Vinton	127.87	32	P	PKPdf	12 44 40.9	-1.3
	baz=314						
K40A	Colesburg	127.92	31	P	PKPdf	12 44 41.6	-0.6
	baz=315						
J41A	Loganville	128.02	30	P	PKPdf	12 44 41.8	-0.6
	baz=317						
JFWS	Jewell Farm	128.22	31	P	PKPdf	12 44 41.6	-1.3
	baz=316						
P37A	Lathrop	128.23	36	P	PKPdf	12 44 41.3	-1.7
	baz=310						
L40A	Anamosa	128.32	32	P	PKPdf	12 44 42.1	-1.0
	baz=315						
L40A	Anamosa	128.32	32	ePKPdf	PKPdf	12 44 42.7	-0.4
CHGQ	Chibougamau	128.37	14	P	PKPdf	12 44 42.3	-0.6
	baz=338						
K41A	Shullsburg	128.42	31	P	PKPdf	12 44 41.6	-1.6
	baz=316						
N39A	Derby Farms, D	128.44	34	P	PKPdf	12 44 42.8	-0.5
	baz=313						
LSQQ	Lebel-sur-Quev	128.46	16	P	PKPdf	12 44 42.4	-0.7
	baz=334						
M40A	Post Highland	128.63	33	P	PKPdf	12 44 42.7	-1.0
	baz=314						
L41A	Preston	128.70	32	P	PKPdf	12 44 43.4	-0.4
	baz=316						
K42A	Prairie Point,	128.78	30	P	PKPdf	12 44 42.3	-1.6
	baz=317						
Q38A	Cooks Store, C	129.07	37	P	PKPdf	12 44 43.8	-0.7
	baz=310						
L42A	Oliver, Polo	129.18	31	P	PKPdf	12 44 44.3	-0.4
	baz=316						
P39B	Salisbury	129.23	35	P	PKPdf	12 44 44.7	-0.1
	baz=312						
R38A	Fenwick Farm,	129.39	37	P	PKPdf	12 44 43.8	-1.4
	baz=310						
Q39A	Willow Grove F	129.39	36	P	PKPdf	12 44 45.2	0.0
	baz=311						
N41A	Harden Midland	129.47	33	P	PKPdf	12 44 44.4	-0.9
	baz=314						
P40A	Paris	129.61	35	P	PKPdf	12 44 44.7	-0.9
	baz=312						
JCT	Junction City	129.64	49	P	PKPdf	12 44 45.6	-0.4
	baz=299						
JCT	Junction City	129.64	49	ePKPdf	PKPdf	12 44 46.2	+0.3
JCT	Junction City	129.64	49	ePKIKP	PKPdf	12 44 46.3	+0.3
S38A	Stockton	129.74	38	P	PKPdf	12 44 44.0	-1.9
	baz=309						
R39A	Chumby, Stover	129.83	37	P	PKPdf	12 44 45.7	-0.3
	baz=310						
O41A	Passleys Farm,	129.87	34	P	PKPdf	12 44 45.8	-0.3
	baz=314						
T38A	Diamond	129.87	39	P	PKPdf	12 44 46.6	+0.4
	baz=308						
Q40A	Laux Farm, Aux	129.95	35	P	PKPdf	12 44 46.3	0.0
	baz=312						
S39A	Bolivar	130.06	38	P	PKPdf	12 44 45.8	-0.7
	baz=310						
S39A	Bolivar	130.06	38	ePKPdf	PKPdf	12 44 46.0	-0.5
R40A	Maddies Statio	130.30	36	P	PKPdf	12 44 46.3	-0.6
	baz=311						
R40A	Maddies Statio	130.30	36	ePKPdf	PKPdf	12 44 47.3	+0.4
TOBO	Tobermory, Bru	130.31	22	P	PKPdf	12 44 47.2	+0.5
	baz=327						
T39A	Clever	130.45	38	P	PKPdf	12 44 46.7	-0.5
	baz=309						
Q41A	Truxton	130.46	35	P	PKPdf	12 44 46.8	-0.5
	baz=313						
S40A	Lebanon	130.62	37	P	PKPdf	12 44 47.2	-0.4
	baz=311						
U39A	Green Forest	130.79	39	P	PKPdf	12 44 46.9	-1.0
	baz=309						
R41A	Rosebud	130.82	36	P	PKPdf	12 44 48.2	+0.3
	baz=312						
T40A	Mansfield	130.90	38	P	PKPdf	12 44 47.7	-0.4
	baz=310						
V39A	Pettigrew	131.02	40	P	PKPdf	12 44 47.5	-0.9
	baz=308						
CCM	Cathedral Cave	131.06	36	P	PKPdf	12 44 47.6	-0.8
	baz=312						
CCM	Cathedral Cave	131.06	36	ePKPdf	PKPdf	12 44 48.8	+0.4
CCM	Cathedral Cave	131.06	36	ePKIKP	PKPdf	12 44 48.8	+0.4
S41A	Jillco Farms,	131.08	37	P	PKPdf	12 44 47.4	-1.0
	baz=311						
U40A	Yellville	131.20	39	P	PKPdf	12 44 48.0	-0.7
	baz=309						
W39A	Magazine	131.32	40	P	PKPdf	12 44 48.7	-0.2
	baz=308						
T41A	Mountain View	131.42	37	P	PKPdf	12 44 48.9	-0.2
	baz=311						
CLWO	Collingwood	131.43	22	P	PKPdf	12 44 49.3	+0.4
	baz=329						
S42A	Caledonia	131.52	36	P	PKPdf	12 44 48.6	-0.7
	baz=313						
X39A	Fountain Ranch	131.52	41	P	PKPdf	12 44 49.4	0.0
	baz=307						
P44A	Sand Creek, Wi	131.56	33	P	PKPdf	12 44 48.6	-0.6
	baz=316						
V40A	Witts Springs	131.56	39	P	PKPdf	12 44 48.8	-0.6
	baz=309						
V40A	Witts Springs	131.56	39	ePKPdf	PKPdf	12 44 49.2	-0.2
BANO	Bancroft	131.77	20	P	PKPdf	12 44 50.1	+0.6
	baz=332						
U41A	Viola	131.78	38	P	PKPdf	12 44 48.8	-1.0
	baz=310						
T42A	Van Buren	131.84	37	P	PKPdf	12 44 50.0	+0.1
	baz=312						
T42A	Van Buren	131.84	37	ePKPdf	PKPdf	12 44 50.5	+0.6
MIAR	Mount Ida	131.85	41	P	PKPdf	12 44 49.9	-0.1
	baz=307						
MIAR	Mount Ida	131.85	41	ePKPdf	PKPdf	12 44 50.2	+0.3
MIAR	Mount Ida	131.85	41	ePKIKP	PKPdf	12 44 50.3	+0.3
V41A	Mountainview	132.00	39	P	PKPdf	12 44 49.2	-1.1
	baz=310						
S43A	Fulton Ridge,	132.07	35	P	PKPdf	12 44 48.4	-1.9
	baz=313						
ELFO	Elginfield	132.09	24	P	PKPdf	12 44 49.8	-0.4
	baz=327						
R44A	Waltonville	132.17	34	P	PKPdf	12 44 48.7	-1.8
	baz=315						
U42A	Revenden	132.19	38	P	PKPdf	12 44 49.9	-0.7
	baz=311						
Q45A	Warren Harvey,	132.22	33	P	PKPdf	12 44 50.3	-0.2
	baz=316						
ACTO	Acton	132.23	22	P	PKPdf	12 44 51.1	+0.7
	baz=328						
V42A	Cord	132.46	38	P	PKPdf	12 44 50.4	-0.7
	baz=311						
R45A	Skylar, Fairfi	132.58	33	P	PKPdf	12 44 52.0	+0.7
	baz=316						
N50A	Nevada	133.29	27	P	PKPdf	12 44 52.8	+0.3
	baz=323						
R47A	Wooly Knot Far	133.53	32	P	PKPdf	12 44 52.6	-0.4
	baz=318						
O50A	Cable	133.57	28	P	PKPdf	12 44 52.5	-0.5
	baz=322						
T46A	Princeton	133.69	34	P	PKPdf	12 44 53.4	+0.1
	baz=315						
M54A	Oil Creek Stat	134.17	24	P	PKPdf	12 44 53.6	-0.5
	baz=328						
S48A	Wiedeman Farm,	134.25	32	P	PKPdf	12 44 54.1	-0.3
	baz=318						
WVT	Waverly	134.37	35	P	PKPdf	12 44 54.2	-0.5
	baz=315						
WVT	Waverly	134.37	35	ePKPdf	PKPdf	12 44 54.7	0.0
WVT	Waverly	134.37	35	ePKIKP	PKPdf	12 44 54.7	0.0
U47A	Clarksville	134.45	34	P	PKPdf	12 44 55.6	+0.8
	baz=316						
T48A	Bowling Green	134.47	33	P	PKPdf	12 44 54.7	-0.1
	baz=317						
N54A	Moraine State	134.50	24	P	PKPdf	12 44 55.2	+0.4
	baz=327						
OXF	Oxford	134.53	38	P	PKPdf	12 44 54.2	-0.8
	baz=312						
S49A	Springfield	134.56	31	P	PKPdf	12 44 55.8	+0.8
	baz=319						
T49A	Edmonton	134.94	32	P	PKPdf	12 44 55.1	-0.6
	baz=318						
PLAL	Pickwick Lake	135.02	37	ePKPdf	PKPdf	12 44 56.1	+0.2
T50A	Nancy	135.37	32	P	PKPdf	12 44 55.3	-1.3
	baz=319						
S51A	Beattyville	135.54	30	P	PKPdf	12 44 56.4	-0.5
	baz=321						
W48A	Pulaski	135.58	35	P	PKPdf	12 44 56.0	-1.0
	baz=315						
SSPA	Standing Stone	135.61	23	P	PKPdf	12 44 55.8	-1.0
	baz=330						
U50A	Jamestown	135.82	32	P	PKPdf	12 44 56.4	-1.0
	baz=318						
Y47A	UCPARC, Winfie	135.89	37	P	PKPdf	12 44 56.0	-1.6
	baz=313						
X49A	Woodville	136.38	36	P	PKPdf	12 44 58.4	-0.1
	baz=315						
TZTN	Tazewell	136.40	31	P	PKPdf	12 44 59.4	+0.9
	baz=320						
Z48A	Northport	136.43	38	P	PKPdf	12 44 57.9	-0.7
	baz=313						
W50A	Signal Mountai	136.46	34	P	PKPdf	12 44 58.2	-0.4
	baz=317						
U52A	Thorn Hill	136.61	31	P	PKPdf	12 44 59.0	+0.1
	baz=320						
Y49A	Blount Mountai	136.79	36	P	PKPdf	12 44 59.6	+0.3
	baz=315						
W51A	Cleveland	136.80	34	P	PKPdf	12 44 59.6	+0.4
	baz=318						
X50B	Fort Payne	136.80	35	P	PKPdf	12 44 59.6	+0.3
	baz=316						
V52A	Sevierville	136.91	32	P	PKPdf	12 44 59.7	+0.2
	baz=320						
TKL	Tuckaleechee C	136.96	32	PKP	PKPdf	12 44 58.9	-0.6
	comp=Z,7.8nm,0.9s,baz=342,slow=3.0,SNR=6.3						
TKL				SKPbc	SKPbc	12 48 23.1	-1.5
	comp=Z,2.8nm,0.7s,baz=333,slow=2.3,SNR=3.8						
TKL	Tuckaleechee C	136.96	32	ePKPdf	PKPdf	12 45 01.0	+1.5
LRAL	Lakeview Retre	137.00	38	P	PKPdf	12 44 59.9	+0.2
	baz=313						
Z49A	Columbiana	137.18	37	P	PKPdf	12 44 58.6	-1.4
	baz=314						
V53A	Saluda	137.46	31	P	PKPdf	12 45 00.7	+0.2
	baz=320						
PLCA	Paso Flores	137.50	165	PKP	PKPdf	12 44 59.4	-1.0
	comp=Z,4.3nm,0.8s,baz=213,slow=1.3,SNR=6.4						
PLCA				SKP		12 48 26.5	
	comp=Z,3.9nm,0.8s,baz=199,slow=2.3,SNR=10						
PLCA				SKPab	SKPab	12 48 33.4	0.0
	comp=Z,3.2nm,1.1s,baz=166,slow=1.2,SNR=3.6						
Z50A	Ashland	137.50	36	P	PKPdf	12 45 00.9	+0.3
	baz=315						
W53A	Cullowhee	137.66	32	P	PKPdf	12 45 01.2	+0.2
	baz=320						
X52A	Dahlonega	137.69	33	P	PKPdf	12 45 02.7	+1.7
	baz=318						
150A	Eclectic	137.89	37	P	PKPdf	12 45 01.5	+0.2
	baz=314						
Y52A	Lilburn	138.14	34	P	PKPdf	12 45 03.5	+1.7
	baz=318						
151A	Opelika	138.37	37	P	PKPdf	12 45 01.9	-0.3
	baz=315						
Z52A	Williamson	138.43	35	P	PKPdf	12 45 03.4	+1.1
	baz=317						
KMSC	Kings Mountain	138.62	30	P	PKPdf	12 45 03.1	+0.5
	baz=322						
252A	Lumpkin	139.10	37	P	PKPdf	12 45 02.6	-1.0
	baz=315						
455A	Stateville	141.01	36	P	PKPdf	12 45 08.4	+1.3
	baz=316						
758A	Lake Helen	143.39	37	P	PKPbc	12 45 09.6	+0.9
	baz=317						
859A	Kempfer Cattle	144.23	37	P	PKPbc	12 45 11.1	-0.1
	baz=317						
058A	Arcadia	144.38	39	P	PKPbc	12 45 11.9	+0.3
	baz=315						
PEL	Peldehue	144.50	160	ePKPdf	PKPdf	12 45 12.9	-0.3
PEL	Peldehue	144.50	160	ePKIKP	PKPdf	12 45 12.9	-0.3
ROC1	El Roble	144.54	160	ePKPdf	PKPdf	12 45 13.2	-0.4
959A	Okeechobee	144.63	38	P	PKPdf	12 45 13.1	-0.4
	baz=316						
059A	Moore Haven	144.86	39	P	PKPbc	12 45 13.4	+0.2
	baz=315						
059Z	Ave Maria	145.11	40	P	PKPdf	12 45 15.2	+0.8
	baz=314						
060A	Indiantown	145.30	38	P	PKPab	12 45 15.5	+0.7
	baz=317						
LCO	Las Campanas	148.23	157	ePKPdf	PKPbc	12 45 21.8	-1.6
LCO	Las Campanas	148.23	157	ePKIKP	PKPbc	12 45 21.8	-1.6
GO03	Copiap	149.68	157	ePKPbc	PKPbc	12 45 28.0	+1.2
GO02	Mina Guanaco	152.10	156	ePKPdf	PKPdf	12 45 27.5	+1.3
CPUP	Villa Florida	153.61	180	PKP	PKPdf	12 45 28.4	+0.4
	comp=Z,5.7nm,0.9s,baz=139,slow=1.1,SNR=8.0						
CPUP				PKPbc	PKiKP	12 45 36.4	+0.5
	comp=Z,12nm,0.7s,baz=182,slow=1.2,SNR=19						
CPUP				PKPab	PKPab	12 45 48.6	+0.3
	comp=Z,7.7nm,0.8s,baz=224,slow=1.0,SNR=6.2						
CPUP	Villa Florida	153.61	180	ePKPdf	PKPdf	12 45 28.9	+1.0
CPUP				ePKPbc	PKiKP	12 45 36.7	+0.9
CPUP				ePKPab	PKPab	12 45 48.6	+0.3
PB01	IPOC Station P	155.74	151	ePKPdf	PKPdf	12 45 32.7	+1.6
MNMC	Minye Minye	157.29	148	ePKPdf	PKPdf	12 45 34.2	+0.8
OTAV	Otavalo	158.82	90	ePKPdf	PKPdf	12 45 36.9	+1.2
OTAV	Otavalo	158.82	90	ePKIKP	PKPdf	12 45 36.9	+1.2
LPAZ	La Paz	160.42	147	PKP	PKPdf	12 45 38.1	+0.6
	comp=Z,7.1nm,0.9s,baz=53,slow=0.4,SNR=16						
LPAZ	La Paz	160.42	147	ePKPdf	PKPdf	12 45 38.5	+0.9
RUSC	La Rusia	163.24	70	ePKPdf	PKPdf	12 45 39.8	-0.7
SIV	San Ignacio	163.47	167	PKP	PKPdf	12 45 40.3	+0.4
	comp=Z,6.7nm,0.9s,baz=192,slow=1.0,SNR=32						
SIV				PKPab	PKPab	12 46 32.0	+0.8
	comp=Z,3.6nm,0.8s,baz=219,slow=5.3,SNR=7.9						
SAML	Samuel	169.16	147	ePKPdf	PKPdf	12 45 44.9	+0.5
SAML	Samuel	169.16	147	ePKIKP	PKPdf	12 45 44.9	+0.5
PTGA	Pitinga	177.15	109	PKP	PKPdf	12 45 46.7	-0.9
	comp=Z,1.3nm,0.3s,baz=127,slow=21,SNR=4.7						

NDI ***09*** *12:30:14.0±2.6, 26°.17N×92°.95E, h34^{km}±10^{km}, ML3.5*

ISC 09 12:30:15.0±1.3**, 26°.19N**±0°.04×**92°.94E**±0°.04**, h35**^{km}**, n11, σ1^{s}.21**/15**, Northeastern India**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TEZP	TEZPUR	0.44	344	eP	Pn	12 30 24.6	-0.2
TEZP				eS	Sn	12 30 31.2	-0.4
GUWA	GUWAHATI	1.12	270	eS	Sn	12 30 48.0	-0.3
GUWA				IAML		12 30 48.2	
	comp=N,658nm,0.2s						
GUWA				IAML		12 30 48.4	
	comp=E,657nm,0.1s						
SHL	Shillong	1.13	237	eP	Pn	12 30 34.7	+0.2
SHL				eS	Sn	12 30 49.0	+0.1
SHL				IAML		12 30 50.3	
	comp=N,390nm,0.1s						
SHL				IAML		12 30 50.6	
	comp=E,645nm,0.2s						
KOHI	KOHIMA	1.16	114	eP	Pn	12 30 36.4	+1.6
KOHI				ex	x	12 30 51.8	
KOHI				IAML		12 30 52.2	
	comp=N,400nm,0.5s						
KOHI				IAML		12 30 52.3	
	comp=E,240nm,0.5s						
ITAN	ITANAGAR	1.18	36	eP	Pn	12 30 35.6	+0.5
ITAN				eS	Sn	12 30 50.5	+0.6
ITAN				eS		12 30 50.7	
ITAN				IAML		12 30 51.4	
	comp=E,1µm,0.1s						
ITAN				IAML		12 30 51.5	
	comp=N,1µm,0.1s						
JORH	JORHAT	1.30	65	eS	Sn	12 30 52.5	-0.4
JORH				IAML		12 30 54.2	
	comp=N,858nm,0.1s						
JORH				IAML		12 30 54.8	
	comp=E,1µm,0.3s						
ZIRO	ZIRO	1.56	31	eP	Pn	12 30 40.0	-0.4
ZIRO				ex	x	12 30 56.1	
ZIRO				IAML		12 31 17.9	
	comp=E,437nm,0.5s						
ZIRO				IAML		12 31 19.7	
IMP	Imphal	1.63	146	eP	Pn	12 30 41.9	+0.5
IMP				eS	Sn	12 30 58.6	-2.6
TURI	Tura	2.43	255	eS	Sn	12 31 21.4	+0.6
TURI				IAML		12 31 23.3	
	comp=E,791nm,0.2s						
TURI				IAML		12 31 23.3	
	comp=N,576nm,0.3s						
AZL	Aizawl	2.45	185	ex	Sn	12 31 22.7	+1.2
SAIH	SAIHA	3.69	179	eS	Sn	12 31 49.7	-2.2

ISCJB ***09*** *12:34:19.0±0.3, 59°.70N±0°.03×153°.70W±0°.07, h151^{km}±4^{km}, mb3.7/2, Error ellipse: s-maj=6.4km s-min=3.7km az=32.3*

NEIC ***09*** *12:34:21.0±0.0, 59°.67N×153°.62W, h146^{km}, mb3.8/1, ML3.0(AEIC), After AEIC.*

IDC ***09*** *12:34:22.2±8.4, 59°.95N×153°.70W, h150^{km}±71^{km}, mb3.4/2, mb1 3.2/4, mb1mx2.8/67, mbtmp3.5/4, Error ellipse: s-maj=72.1km s-min=35.4km az=18.0*

ISC 09 12:34:20.1±0.9**, 59°.71N**±0°.04×**153°.72W**±0°.05**, h146**^{km}±7^{km}**, n73, σ0^{s}.71**/85**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUNW	Augustine NWes	0.35	159	P	Pn	12 34 40.5	+0.2
AUW	Augustine West	0.36	159	P	Pn	12 34 40.6	+0.2
MCNL	McNeil River	0.61	211	P	Pn	12 34 41.5	-0.2
CDD	Cape Douglas	0.78	177	P	Pn	12 34 42.8	-0.1
RDWB	Redoubt West	0.90	29	P	Pn	12 34 43.6	-0.2
RDWB				S	Sn	12 35 01.2	-0.7
RDJH	Redoubt Jeurge	1.00	27	P	Pn	12 34 44.7	0.0
RDJH				S	Sn	12 35 02.9	-0.5
HOM	Homer	1.05	92	P	Pn	12 34 45.4	+0.4
HOM				S	Sn	12 35 04.2	+0.3
KAPH	Katmai Pasha	1.16	196	P	Pn	12 34 46.0	0.0
KAPH				S	Sn	12 35 05.0	-0.8
KAHC	Katmai Hardscr	1.25	213	P	Pn	12 34 46.6	-0.3
CNPM	China Poot	1.27	97	P	Pn	12 34 47.1	0.0
CNPM				S	Sn	12 35 07.7	+0.1
KAHG	Katmai Hook Gl	1.29	200	P	Pn	12 34 47.3	0.0
BRLK	Bradley Lake	1.44	86	P	Pn	12 34 48.5	-0.2
BRLK				S	Sn	12 35 09.5	-1.1
KAKN	Katmai Knife C	1.57	207	P	Pn	12 34 50.2	-0.1
KAKN				S	Sn	12 35 12.3	-1.1
KABU	Katmai Buttres	1.65	210	P	Pn	12 34 51.3	+0.1
SPCR	Spurr Chakacha	1.68	26	P	Pn	12 34 51.6	+0.3
SPCP	Crater Peak Br	1.75	26	P	Pn	12 34 52.7	+0.5
SPCP				S	Sn	12 35 17.8	+1.0
ANCK	Angle Creek	1.77	212	P	Pn	12 34 52.6	+0.2
SPCG	Spurr Capps Gl	1.80	27	P	Pn	12 34 53.1	+0.4
SPCG				S	Sn	12 35 18.2	+0.4
CAHL	Cahill	1.85	207	P	Pn	12 34 53.6	+0.3
KDAK	Kodiak Island	2.02	162	P	Pn	12 34 54.2	-0.9
KDAK				S	Sn	12 35 20.5	-1.6
FIB	Fire Island	2.29	49	P	Pn	12 34 59.4	+1.1
SUA	Susitna One	2.29	39	P	Pn	12 34 59.0	+0.4
SUA				S	Sn	12 35 28.0	-0.2
PLK2	Peulik 2	2.37	216	P	Pn	12 34 59.8	+0.3
RC01	Rabbit Creek A	2.42	53	P	Pn	12 34 59.9	-0.1
RC01				S	Sn	12 35 28.9	-1.7
PLK1	Peulik 1	2.43	219	P	Pn	12 35 00.4	+0.2
OHAK	Old Harbor	2.50	175	P	Pn	12 34 58.7	-2.3
SKT	Skwentna	2.52	24	P	Pn	12 35 01.5	+0.2
PMR	Palmer	2.95	48	P	Pn	12 35 06.0	-0.5
KNK	Knik Glacier	3.11	54	P	Pn	12 35 08.1	-0.6
TRAP	Trapper Creek	3.13	31	P	Pn	12 35 09.2	+0.3
GHO	Glory Hole Cre	3.14	47	P	Pn	12 35 08.4	-0.6
PPLA	Purkeypile	3.29	12	P	Pn	12 35 12.0	+0.9
SML	Sawmill	3.38	49	P	Pn	12 35 11.6	-0.6
TT01	Tatalina	3.40	342	P	Pn	12 35 11.8	-0.5
HIN	Hinchinbrook I	3.69	76	P	Pn	12 35 15.9	-0.1
MID	Middleton Isla	3.77	91	P	Pn	12 35 17.0	0.0
SCM	Sheep Creek Mo	3.79	53	P	Pn	12 35 16.7	-0.8
CAST	Castle Rocks	3.81	11	P	Pn	12 35 17.9	+0.2
KTH	Kantishna Hill	4.08	18	P	Pn	12 35 21.3	0.0
TRF	Thorofare Moun	4.10	22	P	Pn	12 35 21.3	-0.3
DIV	Divide	4.19	67	P	Pn	12 35 22.6	-0.1
KLU	Klutina	4.24	62	P	Pn	12 35 22.9	-0.5
CHUM	Lake Minchumin	4.25	8	P	Pn	12 35 23.7	+0.4
DHY	Denali Highway	4.55	39	P	Pn	12 35 26.9	-0.7
BPAW	Bear Paw Mtn.	4.60	15	P	Pn	12 35 27.5	-0.5
HARP	HAARP	4.96	53	P	Pn	12 35 33.2	+0.4
PAX	Paxson	5.15	47	P	Pn	12 35 35.5	+0.2
GLB	Gilahina Butte	5.19	66	P	Pn	12 35 36.1	+0.2
VRDI	Verde Repeater	5.30	69	P	Pn	12 35 37.5	-0.1
NEA	Nenana	5.35	22	P	Pn	12 35 37.1	-0.8
WRH	Wood River Hil	5.46	27	P	Pn	12 35 38.5	-1.0
MLY	Manley	5.52	13	P	Pn	12 35 39.5	-0.8
CCB	Clear Creek Bu	5.68	27	P	Pn	12 35 41.2	-1.1
SDPT	Sand Point	5.68	223	P	Pn	12 35 41.2	-1.2
PTPK	Patty Peak	5.77	70	P	Pn	12 35 44.0	+0.3
KIAG	Kiagna River	5.78	73	P	Pn	12 35 44.1	+0.2
BALM	Baldy	5.80	72	P	Pn	12 35 44.5	+0.4
MDM	Murphy Dome	5.86	24	P	Pn	12 35 43.8	-0.9
BAGL	Bagley Icefiel	5.87	77	P	Pn	12 35 45.4	+0.5
ILAR	Eielson Array	6.00	29	P	Pn	12 35 45.9	-0.7
	2.5nm,0.3s,baz=217,slow=13,SNR=151						
ILAR				S	Sn	12 36 51.6	-2.6
	1.1nm,0.3s,baz=213,slow=23,SNR=14						
ILB	Eielson Array	6.00	29	P	Pn	12 35 45.5	-1.1
GRNC	Granite Creek	6.05	75	P	Pn	12 35 47.8	+0.2
BARN	Barnard Glacie	6.13	72	P	Pn	12 35 49.1	+0.5
IM05	Indian Mountai	6.29	360	P	Pn	12 35 50.8	+0.3
BCA3	Beaver Creek A	6.65	54	P	Pn	12 35 55.4	+0.1
YUK3	Moose Creek	6.82	67	P	Pn	12 35 58.4	+0.6
PRP	Porcupine Dome	6.95	29	P	Pn	12 35 58.7	-0.7
PNL	Peninsula	7.25	84	P	Pn	12 36 03.4	0.0
EGAK	Eagle	7.75	44	ePn	Pn	12 36 09.2	-0.9
	1.9nm,0.6s						
BM3	Burnt Mountain	8.73	24	P	Pn	12 36 21.4	-1.6
YKA	Yellowknife Ar	18.91	65	P	P	12 38 30.5	+1.4
	0.0nm,0.3s,baz=276,slow=10,SNR=2.3						
SONM	Songino Array	54.67	306	P	P	12 43 34.5	+1.0
	0.5nm,0.4s,baz=58,slow=7.1,SNR=3.7						
ZALV	Zalesovo Beam	57.39	323	P	P	12 43 52.3	-0.3
	0.9nm,0.6s,baz=37,slow=7.4,SNR=2.1						

ISCJB ***09*** *12:49:44.2±0.4, 42°.60N±0°.02×22°.96E±0°.03, h5^{km}±3^{km}, Error ellipse: s-maj=3.9km s-min=2.6km az=153.2*

CSEM ***09*** *12:49:44.5±0.1, 42°.59N×22°.97E, h2^{km}, ML2.6, Error ellipse: s-maj=2.7km s-min=1.9km az=58.0*

BEO ***09*** *12:49:44.8±0.3, 42°.57N×23°.00E, h8^{km}±2^{km}, ML2.7/9*

THE ***09*** *12:49:46.1, 42°.50N×23°.06E, h1^{km}±2^{km}, ML2.6/3, Error ellipse: s-maj=3.7km s-min=1.0km az=305.0*

SOF ***09*** *12:49:46.9, 42°.47N×23°.18E, h2^{km}, MD2.6*

ISC 09 12:49:44.5±0.8**, 42°.57N**±0°.02×**23°.05E**±0°.02**, h14**^{km}±5^{km}**, n65, σ1^{s}.17**/94**, 5C-6D, Bulgaria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VTS	Vitosha	0.12	79	ePg	Pg	12 49 48.1	0.0
VTS				eSg	Sb	12 49 51.2	-0.2
VTS	Vitosha	0.12	79	⇑iP	Pg	12 49 48.3	+0.2
VTS				S	Sb	12 49 51.3	-0.2
VTS	Vitosha	0.12	79	i P	Pb	12 49 50.0	+1.3
VTS	Vitosha	0.12	79	P	Pg	12 49 48.0	0.0
VTS				S	Sg	12 49 51.0	+0.5
VTS	Vitosha	0.12	79	ePg	Pg	12 49 48.1	0.0
VTS				S	Sg	12 49 51.0	+0.5
BOSS	Bosilegrad	0.42	260	ePg	Pg	12 49 52.7	-0.3
BOSS				eSg	Sg	12 49 57.9	-0.8
BOSS	Bosilegrad	0.42	260	ePg	Pg	12 49 52.7	-0.3
KKB	Krupnik	0.70	178	i P	Pb	12 49 59.1	+0.6
KKB	Krupnik	0.70	178	i P	Pb	12 49 59.1	+0.6
ZAPS	Zavoj	0.77	337	ePg	Pg	12 49 58.9	-0.5
ZAPS				eSg	Sb	12 50 09.7	-0.2

PGB	**Panagyurishte**	**0.83**	**91**	*i* P	**Pn**	**12 50 01.3**	**-0.5**
PGB	**Panagyurishte**	**0.83**	**91**	*i* P	**Pn**	**12 50 01.3**	**-0.5**
BARS	**Barje**	**0.94**	**286**	*e*Pg	**Pb**	**12 50 01.8**	**-0.8**
BARS				*e*Sg	**Sb**	**12 50 13.7**	**-1.2**
BARS	**Barje**	**0.94**	**286**	*e*Pg	**Pb**	**12 50 01.8**	**-0.8**
BARS				*e*Sg	**Sb**	**12 50 13.7**	**-1.2**
MMB	**Musomiste**	**1.10**	**152**	*i* P	**Pg**	**12 50 07.1**	**+1.4**
MMB	**Musomiste**	**1.10**	**152**	*i* P	**Pg**	**12 50 07.1**	**+1.4**
VAY	**Valandovo**	**1.30**	**196**	*e*Pg	**Pn**	**12 50 07.8**	**-0.3**
VAY				*e*Sg	**Sn**	**12 50 25.8**	**+0.6**
VAY	**Valandovo**	**1.30**	**196**	P	**Pg**	**12 50 09.7**	**+0.3**
VAY				S	**Sg**	**12 50 26.2**	**-0.1**
VAY	**Valandovo**	**1.30**	**196**	*e*Pg	**Pn**	**12 50 07.8**	**-0.3**
VAY	**Valandovo**	**1.30**	**196**	P	**Pg**	**12 50 09.7**	**+0.3**
VAY				*e*Sg	**Sn**	**12 50 25.8**	**+0.6**
VAY				S	**Sg**	**12 50 26.2**	**-0.1**
SKO	**Skopje**	**1.33**	**244**	*e*Pg	**Pn**	**12 50 08.1**	**-0.5**
SKO	**Skopje**	**1.33**	**244**	*e*Pg	**Pn**	**12 50 08.1**	**-0.5**
NVR	**Nevrokopi**	**1.36**	**153**	P	**Pg**	**12 50 11.1**	**+0.4**
NVR				S	**Sg**	**12 50 29.2**	**+0.8**
NVR	**Nevrokopi**	**1.36**	**153**	P	**Pg**	**12 50 11.1**	**+0.4**
NVR				S	**Sg**	**12 50 29.2**	**+0.8**
ZAGS	**Zajecar**	**1.38**	**335**	*e*Pg	**Pb**	**12 50 10.1**	**+0.1**
ZAGS				*e*Sg	**Sb**	**12 50 28.0**	**+0.5**
ZAGS	**Zajecar**	**1.38**	**335**	*e*Pg	**Pb**	**12 50 10.1**	**+0.1**
KNT	**Kendrikon**	**1.41**	**185**	P	**Pb**	**12 50 11.1**	**+0.6**
KNT				S	**Sg**	**12 50 29.6**	**-0.3**
KNT	**Kendrikon**	**1.41**	**185**	P	**Pb**	**12 50 11.1**	**+0.6**
KNT				S	**Sg**	**12 50 29.6**	**-0.3**
BOVS	**Bovan**	**1.45**	**318**	*e*Pg	**Pb**	**12 50 11.0**	**-0.2**
BOVS				*e*Sg	**Sg**	**12 50 30.3**	**-0.9**
BOVS	**Bovan**	**1.45**	**318**	*e*Pg	**Pb**	**12 50 11.0**	**-0.2**
BOVS				*e*Sg	**Sg**	**12 50 30.3**	**-0.9**
SRS	**Serrai**	**1.51**	**164**	P	**Pg**	**12 50 13.0**	**-0.4**
SRS				S	**Sg**	**12 50 33.0**	**0.0**
SRS	**Serrai**	**1.51**	**164**	P	**Pg**	**12 50 13.0**	**-0.4**
SRS				S	**Sg**	**12 50 33.0**	**0.0**
RZN	**Rozhen**	**1.52**	**125**	*i* P	**Pg**	**12 50 14.4**	**+0.7**
RZN	**Rozhen**	**1.52**	**125**	*i* P	**Pg**	**12 50 14.4**	**+0.7**
SELS	**Selova**	**1.56**	**295**	*e*Pg	**Pn**	**12 50 12.2**	**+0.4**
SELS				*e*Sg	**Sb**	**12 50 33.0**	**+0.3**
SELS	**Selova**	**1.56**	**295**	*e*Pg	**Pn**	**12 50 12.2**	**+0.4**
SELS				*e*Sg	**Sb**	**12 50 33.0**	**+0.3**
KUBS	**Kucevo**	**2.10**	**332**	*e*Sn	**Pn**	**12 50 20.1**	**+0.9**
KUBS	**Kucevo**	**2.10**	**332**	*e*Pn	**Sn**	**12 50 45.4**	**+0.4**
GRUS	**Gruza**	**2.15**	**309**	*e*Pn	**Pn**	**12 50 20.7**	**+0.8**
GRUS				*e*Sn	**Sn**	**12 50 46.7**	**+0.3**
GRUS	**Gruza**	**2.15**	**309**	*e*Pn	**Pn**	**12 50 20.7**	**+0.8**
GRUS				*e*Sn	**Sn**	**12 50 46.7**	**+0.3**
THAS	**Thassos island**	**2.33**	**147**	P	**Pb**	**12 50 24.5**	**-1.7**
THAS	**Thassos island**	**2.33**	**147**	P	**Pb**	**12 50 24.5**	**-1.7**
RDO	**Rodhopi**	**2.34**	**127**	P	**Pb**	**12 50 24.9**	**-1.5**
RDO	**Rodhopi**	**2.34**	**127**	P	**Pb**	**12 50 24.9**	**-1.5**
IVAS	**Ivanjica**	**2.35**	**296**	*e*Pn	**Pn**	**12 50 23.4**	**+0.7**
IVAS				*e*Sn	**Sn**	**12 50 51.6**	**+0.3**
IVAS	**Ivanjica**	**2.35**	**296**	*e*Pn	**Pn**	**12 50 23.4**	**+0.7**
IVAS				*e*Sn	**Sn**	**12 50 51.6**	**+0.3**
HERR	**Herculane**	**2.36**	**349**	⇓*i*P	**Pn**	**12 50 23.5**	**+0.8**
HERR	**Herculane**	**2.36**	**349**	S	**Sn**	**12 50 53.2**	**+1.8**
HERR	**Herculane**	**2.36**	**349**	⇓*i*P	**Pn**	**12 50 23.5**	**+0.8**
MDVR	**Moldovita**	**2.42**	**337**	⇑*i*P	**Pn**	**12 50 25.2**	**+1.6**
MDVR	**Moldovita**	**2.42**	**337**	S	**Sn**	**12 50 53.8**	**+0.9**
MDVR	**Moldovita**	**2.42**	**337**	⇑*i*P	**Pn**	**12 50 25.2**	**+1.6**
ALN	**Alexandroupoli**	**2.80**	**126**	P	**Pb**	**12 50 31.6**	**-2.6**
ALN	**Alexandroupoli**	**2.80**	**126**	P	**Pb**	**12 50 31.6**	**-2.6**
VOIR		**3.21**	**26**	⇓*i*P	**Pn**	**12 50 36.5**	**+2.0**
VOIR		**3.21**	**26**	⇓*i*P	**Pn**	**12 50 36.5**	**+2.0**
VOIR				S	**Sn**	**12 51 13.4**	**+0.8**
BZS	**Buzias**	**3.22**	**342**	*e*Pn	**Pn**	**12 50 35.3**	**+0.8**
BZS	**Buzias**	**3.22**	**342**	⇑*i*P	**Pn**	**12 50 35.3**	**+0.8**
BZS	**Buzias**	**3.22**	**342**	S	**Sn**	**12 51 14.2**	**+1.6**
BZS	**Buzias**	**3.22**	**342**	⇑*i*P	**Pn**	**12 50 35.3**	**+0.8**
MLR	**Muntele Rosu**	**3.59**	**35**	⇓*i*P	**Pn**	**12 50 41.5**	**+1.7**
MLR	**Muntele Rosu**	**3.59**	**35**	⇓*i*P	**Pn**	**12 50 41.5**	**+1.7**
MLR				S	**Sn**	**12 51 23.8**	**+1.7**
DRGR		**4.23**	**357**	S	**Sg**	**12 52 00.5**	**+0.3**
TIRR	**Tirgusor**	**4.34**	**62**	S	**Sg**	**12 51 58.7**	**-4.9**
CFR	**Carcaliu**	**4.51**	**53**	S	**Sg**	**12 52 04.9**	**-4.3**

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*NEIC **09** 12:56:37.0±0.3, 33°.06S×68°.26W, h142^{km}±2^{km}, mb4.6/106,*
MD4.7(SJA), Error ellipse: s-maj=4.6km s-min=3.3km
az=73.0
NEIC Felt [III] at Mendoza and San Juan.
*ISCJB **09** 12:56:37.7±0.2, 33°.02S±0°.02×68°.38W±0°.03, h162^{km}±1^{km},*
mb4.5/115, Error ellipse: s-maj=4.1km s-min=3.7km
az=24.2
*SJA **09** 12:56:37.6±0.9, 33°.07S×68°.44W, h165^{km}±4^{km}, ML4.7,*
MW4.6, Fault plane solution: NP1:ϕ_s290.10000°,
δ55.90000°, λ-40.00000°.
*IDC **09** 12:56:38.7±0.4, 33°.06S×68°.37W, h159^{km}±3^{km}, mb4.3/17,*
mb1 4.4/20, mb1mx4.3/36, mbtmp4.8/20, Error ellipse:
s-maj=13.3km s-min=9.8km az=88.0
*GUC **09** 12:56:38.6±0.4, 32°.99S×68°.48W, h160^{km}±7^{km}, ML5.1*
ISC 09 12:56:38.9±0.3, **33°.04S**±0°.03×**68°.44W**±0°.03, **h161**^{km}±2^{km},
h161^{km}**:pP-P, n488,** σ**1**^{s}**17**/576, **mb4.5**/116, **18C-11D,**
Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAGR	**Agrelo**	**0.33**	**261**	⇓*e*P	**Pn**	**12 57 00.8**	**-0.2**
AVIZ	**Vizcacheras**	**0.44**	**189**	*i* P	**Pn**	**12 57 01.0**	**-0.3**
ARCO	**CERRO ARCO**	**0.46**	**295**	*e*P	**Pn**	**12 57 01.2**	**-0.4**
ARCO				IAML		12 57 02.0	
	comp=Z,7µm,0.3s						
ARCO				*i* S	**Sn**	**12 57 18.7**	**0.0**
ASAL	**Salagasta**	**0.56**	**323**	⇓*e*P	**Pn**	**12 57 02.0**	**+0.1**
AUSP	**Uspallata**	**1.14**	**315**	⇑*e*P	**Pn**	**12 57 06.5**	**+0.2**
ACAN	**Cantantal**	**1.30**	**55**	⇓*e*P	**Pn**	**12 57 07.4**	**+0.1**
RTLS	**Leoncito**	**1.43**	**329**	⇑*e*P	**Pn**	**12 57 09.4**	**+0.4**
RTLS				*i* S	**Sn**	**12 57 31.1**	**-0.9**
ZON	**Zonda**	**1.50**	**352**	⇑*e*P	**Pn**	**12 57 09.5**	**+0.1**
ZON				*e*S	**Sn**	**12 57 32.6**	**-0.2**
ZON				IAML		12 57 33.5	
	comp=Z,9µm,0.3s						
SJA	**San Juan**	**1.51**	**356**	⇑*e*P	**Pn**	**12 57 06.6**	**-2.9**
SJA				*i* S	**Sn**	**12 57 32.8**	**-0.1**
FCH	**Farellones**	**1.58**	**259**	⇑*i*P	**Pn**	**12 57 10.5**	**0.0**
FCH				*i* S	**Sn**	**12 57 35.1**	**+0.3**
FCH				IAML		12 57 47.7	
	comp=E,6µm,0.4s						
LMEL	**Las Melosas**	**1.69**	**241**	⇑*i*P	**Pn**	**12 57 11.2**	**-0.1**
LMEL				*e*S	**Sn**	**12 57 36.1**	**-0.3**
LMEL				IAML		12 57 45.4	
	comp=N,6µm,0.8s						
RTLL	**Cerro Villicun**	**1.70**	**359**	*i* P	**Pn**	**12 57 11.6**	**+0.1**
	baz=280,slow=2.3						
RTLL				*e*S	**Sn**	**12 57 35.9**	**-0.7**
RFA	**San Rafael**	**1.73**	**181**	⇑*e*P	**Pn**	**12 57 11.0**	**-0.8**
CLCH	**Cerro Calan**	**1.80**	**258**	⇑*i*P	**Pn**	**12 57 12.3**	**-0.2**
CLCH				*i* S	**Sn**	**12 57 38.1**	**-0.3**
CLCH				IAML		12 57 40.8	
	comp=N,20µm,0.5s						
PEL	**Peldehue**	**1.89**	**266**	*e*Pn	**Pn**	**12 57 13.0**	**-0.5**
PEL				*e*Sn	**Sn**	**12 57 40.0**	**-0.1**
PEL	**Peldehue**	**1.89**	**266**	⇑*i*P	**Pn**	**12 57 12.9**	**-0.5**
PEL				*e*S	**Sn**	**12 57 39.2**	**-1.0**
PEL				IAML		12 57 42.3	
	comp=N,43µm,0.3s						
ANTU	**Antumapu**	**1.92**	**253**	*e*P	**Pn**	**12 57 13.4**	**-0.4**
AMOG	**MOGNA**	**2.09**	**359**	⇑*e*P	**Pn**	**12 57 16.2**	**+0.4**
ROCH	**El Roble**	**2.17**	**271**	⇑*e*P	**Pn**	**12 57 15.8**	**-1.0**
ROCH				*e*S	**Sn**	**12 57 44.9**	**-1.1**
ROC1	**El Roble**	**2.17**	**271**	*e*Pn	**Pn**	**12 57 16.1**	**-0.8**
ROC1				*e*Sn	**Sn**	**12 57 45.0**	**-1.2**
ROC1	**El Roble**	**2.17**	**271**	*i* P	**Pn**	**12 57 16.0**	**-0.9**
ROC1				*i* S	**Sn**	**12 57 45.0**	**-1.2**
MRA	**San Martin**	**2.37**	**76**	⇓*e*P	**Pn**	**12 57 18.9**	**-0.2**
MRA				*e*S	**Sn**	**12 57 49.2**	**-1.0**
ACDV	**Cuesta del Vie**	**2.92**	**348**	⇓*e*P	**Pn**	**12 57 26.6**	**+0.7**
ACDV				*i* S	**Sn**	**12 58 01.7**	**-0.5**
AROD	**Rodeo**	**2.99**	**343**	⇓*e*P	**Pn**	**12 57 28.0**	**+1.0**
AROD				*e*S	**Sn**	**12 58 04.3**	**+0.1**
SUCO	**SUCO**	**2.99**	**97**	⇓*e*P	**Pn**	**12 57 26.2**	**-0.5**
GO04	**Tololo Observa**	**3.50**	**324**	*e*Pn	**Pn**	**12 57 33.0**	**-0.2**
GO04				*e*Sn	**Sn**	**12 58 14.4**	**-0.9**
GO04	**Tololo Observa**	**3.50**	**324**	⇑*e*P	**Pn**	**12 57 33.0**	**-0.2**
TLL	**Tololo Astrono**	**3.50**	**324**	*e*P	**Pn**	**12 57 33.0**	**-0.3**
TLL				*e*S	**Sn**	**12 58 13.9**	**-1.6**
TLL				IAML		12 58 17.0	
	comp=E,6µm,1.0s						
GO05	**HualaæØ**	**3.51**	**235**	*e*Pn	**Pn**	**12 57 30.1**	**-3.0**
GO05				*e*Sn	**Sn**	**12 58 10.8**	**-4.5**
GO05	**HualaæØ**	**3.51**	**235**	*e*P	**Pn**	**12 57 30.2**	**-2.9**
AGUA	**GUANDACOL**	**3.54**	**359**	*i* P	**Pn**	**12 57 34.4**	**+0.7**
AGUA				*i* S	**Sn**	**12 58 11.4**	**-4.7**
TCA	**Tanti**	**3.67**	**64**	*i* P	**Pn**	**12 57 34.5**	**-0.8**
TCA				*i* S	**Sn**	**12 58 16.5**	**-2.6**
PIL	**Pilar**	**4.09**	**72**	⇓*e*P	**Pn**	**12 57 39.8**	**-0.8**
VCA	**Vinchina**	**4.29**	**3**	⇑*e*P	**Pn**	**12 57 43.7**	**+0.3**
VCA				*i* S	**Sn**	**12 58 31.6**	**-2.0**
VCA	**Vinchina**	**4.29**	**3**	⇑*e*P	**Pn**	**12 57 43.5**	**+0.1**
VCA				*e*S	**Sn**	**12 58 31.5**	**-2.1**
LCO	**Las Campanas**	**4.46**	**334**	*e*Pn	**Pn**	**12 57 44.9**	**-0.8**
LCO				*e*Sn	**Sn**	**12 58 36.2**	**-1.5**
LCO	**Las Campanas**	**4.46**	**334**	⇑*i*P	**Pn**	**12 57 45.1**	**-0.6**
LCO				*i* S	**Sn**	**12 58 29.3**	**-8.4**
LCO	**Las Campanas**	**4.46**	**334**	⇑*i*P	**Pn**	**12 57 45.0**	**-0.8**
LCO				*e*S	**Sn**	**12 58 34.5**	**-3.2**
CCHI	**Chillan**	**4.65**	**219**	*i* P	**Pn**	**12 57 44.7**	**-3.1**
CCHI				*i* S	**Sn**	**12 58 36.8**	**-4.9**
CCHI	**Chillan**	**4.65**	**219**	⇓*e*P	**Pn**	**12 57 44.7**	**-3.1**
CYA	**Choya**	**5.11**	**27**	*i* P	**Pn**	**12 57 52.1**	**-1.9**
CYA				*i* S	Sn	12 58 43.6	-9.2
CYA	**Choya**	**5.11**	**27**	⇓*e*P	**Pn**	**12 57 52.0**	**-2.0**
CANA	**Caviahue**	**5.29**	**203**	*e*P	**Pn**	**12 57 55.5**	**-1.0**
GO03	**Copiap**	**5.64**	**344**	*e*Pn	**Pn**	**12 58 00.3**	**-0.7**
GO03				*e*Sn	**Sn**	**12 59 02.0**	**-3.4**
AHML	**Horco Molle**	**6.79**	**24**	⇓*e*P	**Pn**	**12 58 13.6**	**-2.6**
TRQA	**Tornquist**	**7.26**	**135**	*e*Pn	**Pn**	**12 58 20.2**	**-2.2**
PLCA	**Paso Flores**	**7.87**	**192**	P	**Pn**	**12 58 28.4**	**-2.0**
	comp=E,7.3nm,0.3s,baz=28,slow=10,SNR=239						
PLCA	**Paso Flores**	**7.87**	**192**	*e*Pn	**Pn**	**12 58 28.2**	**-2.3**
GO02	**Mina Guanaco**	**7.91**	**352**	*e*Pn	**Pn**	**12 58 30.2**	**-1.2**
SLA	**San Lorenzo**	**8.67**	**18**	⇑*i*P	**Pn**	**12 58 41.1**	**-0.3**
HJA	**Humahuaca**	**10.15**	**16**	*i* P	**Pn**	**12 59 01.3**	**+0.2**
PB04	**IPOC Station P**	**10.77**	**351**	*e*Pn	**Pn**	**12 59 05.6**	**-3.5**
YJA	**Yavi**	**11.12**	**14**	⇑*i*P	**Pn**	**12 59 14.4**	**+0.4**
CPUP	**Villa Florida**	**11.74**	**58**	P	**Pn**	**12 59 19.2**	**-2.2**
	comp=E,7.5nm,0.3s,baz=220,slow=11,SNR=58						
CPUP	**Villa Florida**	**11.74**	**58**	*e*Pn	Pn	12 59 16.6	-4.9
PB01	**IPOC Station P**	**11.98**	**355**	*e*Pn	**Pn**	**12 59 22.0**	**-2.8**
MNMC	**Minye Minye**	**13.89**	**355**	*e*Pn	**Pn**	**12 59 48.2**	**-1.0**
LPAZ	**La Paz**	**16.68**	**1**	P	**Pn**	**13 00 26.1**	**+2.1**
	comp=E,7.1nm,0.3s,baz=168,slow=8.3,SNR=155						
LPAZ	**La Paz**	**16.68**	**1**	*e*P	**Pn**	**13 00 25.8**	**+1.8**
	comp=E,157nm,1.3s						
SIV	**San Ignacio**	**18.23**	**23**	P	**P**	**13 00 40.4**	**+0.3**
	comp=E,20nm,0.3s,baz=217,slow=12,SNR=317						
EFI	**East Falkland**	**20.11**	**161**	*e*P	**P**	**13 00 58.7**	**-1.2**
	comp=E,112nm,0.5s						
SPB	**Sao Paulo**	**20.72**	**68**	*e*P	**P**	**13 01 06.0**	**-0.7**
	comp=E,40nm,0.9s						
SPB				*e*pP	**pP**	**13 01 33.7**	**-1.1**
NNA	**Nana**	**22.32**	**338**	*e*P	**P**	**13 01 24.5**	**+1.0**
	comp=E,52nm,1.4s						
SAML	**Samuel**	**24.46**	**13**	*e*P	**P**	**13 01 43.0**	**0.0**
	comp=E,7.8nm,0.8s						
PTGA	**Pitinga**	**33.11**	**16**	P	**P**	**13 02 59.4**	**-0.4**
	comp=E,10nm,0.3s,baz=290,slow=22,SNR=31						
PTGA				pP	**pP**	**13 03 33.9**	**+0.2**
	comp=E,8.9nm,0.7s,baz=190,slow=10,SNR=3.9						
RUSC	**La Rusia**	**38.96**	**353**	*e*P	**P**	**13 03 50.6**	**+0.6**
	comp=E,4.3nm,0.4s						
RUSC				*e*pP	**pP**	**13 04 26.3**	**+1.5**
HELC	**Santa Helena**	**39.59**	**349**	*e*P	**P**	**13 03 55.9**	**+0.9**
	comp=E,76nm,0.5s						
PCRV	**Puerto La Cruz**	**43.12**	**5**	P	**P**	**13 04 22.4**	**-1.1**
	comp=E,3.8nm,0.4s,baz=0.0,slow=8.1,SNR=2.6						
VNA3	**Neumayer Olymp**	**49.13**	**159**	P	**P**	**13 05 09.6**	**-0.2**
VNA3	**Neumayer Olymp**	**49.13**	**159**	PKiKP	**PKiKP**	**13 13 18.1**	**+0.2**
VNA3				S	**S**	**13 12 04.5**	**+2.2**
VNA1	**Neumayer--Stat**	**49.40**	**158**	P	**P**	**13 05 11.8**	**0.0**
VNA1	**Neumayer--Stat**	**49.40**	**158**	PKiKP	**PKiKP**	**13 13 19.3**	**+1.2**
VNA1				S	**S**	**13 12 14.3**	**+8.5**
SNAA	**Sanae**	**51.35**	**158**	P	**P**	**13 05 26.1**	**-0.4**
SNAA				S	**S**	**13 12 37.4**	**+4.4**
SNAA	**Sanae**	**51.35**	**158**	P	**P**	**13 05 26.1**	**-0.4**
	comp=E,12nm,0.4s,baz=285,slow=7.2,SNR=60						
SNAA	**Sanae**	**51.35**	**158**	*e*P	**P**	**13 05 26.3**	**-0.2**
	comp=E,17nm,0.8s						
QSPA	**South Pole Qui**	**57.20**	**180**	P	**P**	**13 06 09.5**	**+0.6**
	comp=E,11nm,0.8s,baz=155,slow=8.1,SNR=26						
QSPA	**South Pole Qui**	**57.20**	**180**	*e*P	**P**	**13 06 09.5**	**+0.6**
QSPA				*e*P	**P**	**13 06 09.6**	**+0.6**
VNDA	**Vanda**	**65.62**	**191**	P	**P**	**13 07 06.3**	**+1.3**
	comp=E,2.7nm,0.8s,baz=133,slow=6.9,SNR=16						
VNDA	**Vanda**	**65.62**	**191**	*e*P	**P**	**13 07 05.9**	**+0.9**
	comp=E,4.1nm,0.9s						
150A	**Eclectic**	**67.36**	**344**	P	**P**	**13 07 17.0**	**+0.4**
	baz=164						
833A	**Chaparral WMA,**	**67.73**	**331**	P	**P**	**13 07 20.2**	**+1.2**
	baz=152						
833A	**Chaparral WMA,**	**67.73**	**331**	*e*P	**P**	**13 07 20.1**	**+1.1**
	comp=E,34nm,0.9s						
245A	**Little AP, Sta**	**67.82**	**340**	P	**P**	**13 07 20.5**	**+1.1**
	baz=161						
Z50A	**Ashland**	**67.96**	**344**	P	**P**	**13 07 20.2**	**-0.1**
	baz=164						
Z50A	**Ashland**	**67.96**	**344**	*e*P	**P**	**13 07 20.6**	**+0.3**
	comp=E,6.3nm,0.8s						
147A	**Livingston**	**67.98**	**342**	P	**P**	**13 07 20.6**	**+0.1**
	baz=162						
LRAL	**Lakeview Retre**	**68.01**	**343**	P	**P**	**13 07 20.6**	**0.0**
	baz=163						
Y53A	**Monroe**	**68.05**	**346**	P	**P**	**13 07 20.8**	**0.0**
	baz=166						
Z49A	**Columbiana**	**68.05**	**344**	P	**P**	**13 07 20.8**	**-0.1**
	baz=164						
244A	**Avery, Jackson**	**68.05**	**340**	P	**P**	**13 07 21.8**	**+0.9**
	baz=160						
Y52A	**Lilburn**	**68.15**	**346**	P	**P**	**13 07 21.6**	**+0.1**
	baz=166						
145A	**Houston Renfro**	**68.36**	**341**	P	**P**	**13 07 23.4**	**+0.6**
	baz=161						
Y51A	**Rockmart**	**68.39**	**345**	P	**P**	**13 07 23.3**	**+0.2**
	baz=165						
Z47A	**Carrollton**	**68.43**	**342**	P	**P**	**13 07 23.2**	**0.0**
	baz=162						
Z48A	**Northport**	**68.47**	**343**	P	**P**	**13 07 23.3**	**-0.2**
	baz=163						
Y50A	**Piedmont**	**68.53**	**345**	P	**P**	**13 07 23.6**	**-0.2**
	baz=164						
X53A	**Estanollee**	**68.62**	**347**	P	**P**	**13 07 24.1**	**-0.3**
	baz=166						
Y49A	**Blount Mountai**	**68.66**	**344**	P	**P**	**13 07 24.5**	**-0.1**
	baz=164						
X52A	**Dahlonega**	**68.83**	**346**	P	**P**	**13 07 25.4**	**-0.3**
	baz=166						
KMSC	**Kings Mountain**	**68.89**	**349**	P	**P**	**13 07 26.0**	**0.0**
	baz=168						
X51A	**Calhoun**	**68.99**	**346**	P	**P**	**13 07 26.9**	**+0.2**
	baz=165						
X51A	**Calhoun**	**68.99**	**346**	*e*P	**P**	**13 07 26.6**	**-0.1**
	comp=E,18nm,0.8s						
Y47A	**UCPARC, Winfie**	**69.04**	**343**	P	**P**	**13 07 27.2**	**+0.2**
	baz=162						
X50B	**Fort Payne**	**69.06**	**345**	P	**P**	**13 07 27.0**	**-0.2**
	baz=164						
W53A	**Cullowhee**	**69.24**	**347**	P	**P**	**13 07 28.2**	**-0.2**
	baz=167						
X49A	**Woodville**	**69.26**	**344**	P	**P**	**13 07 28.3**	**0.0**
	baz=164						
Y46A	**Houston**	**69.28**	**342**	P	**P**	**13 07 28.7**	**+0.3**
	baz=162						
W52A	**Murphy**	**69.31**	**346**	P	**P**	**13 07 28.7**	**0.0**
	baz=166						
HPIG		**69.35**	**325**	*e*P	**P**	**13 07 30.0**	**+0.6**
	comp=E,7.7nm,0.7s						
X48A	**Hartselle**	**69.37**	**344**	P	**P**	**13 07 29.4**	**+0.4**
	baz=163						
X48A	**Hartselle**	**69.37**	**344**	*e*P	**P**	**13 07 29.7**	**+0.7**
	comp=E,19nm,1.3s						
Y45A	**Yeager Farm, C**	**69.45**	**341**	P	**P**	**13 07 29.4**	**0.0**
	baz=161						
V53A	**Saluda**	**69.66**	**348**	P	**P**	**13 07 31.0**	**+0.2**
	baz=167						
V53A	**Saluda**	**69.66**	**348**	*e*P	**P**	**13 07 31.4**	**+0.5**
	comp=E,18nm,1.3s						
W50A	**Signal Mountai**	**69.70**	**345**	P	**P**	**13 07 31.2**	**+0.2**
	baz=165						
W50A	**Signal Mountai**	**69.70**	**345**	*e*P	**P**	**13 07 31.6**	**+0.5**
	comp=E,10nm,0.8s						
CPCT	**Cooper Cave**	**69.78**	**346**	*e*P	**P**	**13 07 31.9**	**+0.5**
	comp=E,6.1nm,0.9s						
JCT	**Junction City**	**69.80**	**331**	P	**P**	**13 07 32.3**	**+0.5**
	baz=152						
JCT	**Junction City**	**69.80**	**331**	*e*P	**P**	**13 07 32.2**	**+0.5**
	comp=E,28nm,1.3s						
TKL	**Tuckaleechee C**	**69.83**	**347**	P	**P**	**13 07 31.7**	**-0.1**
	comp=E,5.1nm,0.8s,baz=200,slow=5.8,SNR=4.9						
TKL	**Tuckaleechee C**	**69.83**	**347**	*e*P	**P**	**13 07 31.7**	**-0.1**
	comp=E,10nm,1.1s						
W49A	**Belvidere**	**69.83**	**344**	P	**P**	**13 07 31.9**	**+0.1**
	baz=164						
X45A	**UM Field Stati**	**69.93**	**342**	P	**P**	**13 07 32.4**	**-0.1**
	baz=161						
V52A	**Sevierville**	**69.97**	**347**	P	**P**	**13 07 32.3**	**-0.4**
	baz=166						
W48A	**Pulaski**	**70.00**	**344**	P	**P**	**13 07 32.8**	**0.0**
	baz=163,SNR=5.9						
OXF	**Oxford**	**70.02**	**342**	P	**P**	**13 07 32.8**	**-0.2**
	baz=161						
V51A	**Loudon**	**70.08**	**346**	P	**P**	**13 07 33.2**	**-0.2**
	baz=166						
V50A	**Pikevile**	**70.11**	**346**	P	**P**	**13 07 33.5**	**0.0**
	baz=165						
WHTX	**Lake Whitney,**	**70.24**	**334**	P	**P**	**13 07 34.3**	**-0.1**
	baz=154						
W47A	**Westpoint**	**70.27**	**343**	P	**P**	**13 07 34.2**	**-0.2**
	baz=163						
V49A	**McMinnville**	**70.37**	**345**	P	**P**	**13 07 34.7**	**-0.4**
	baz=164						
LTX	**Lajitas**	**70.45**	**328**	*e*P	**P**	**13 07 36.5**	**+0.7**
TXAR	**Lajitas Array**	**70.45**	**328**	P	**P**	**13 07 36.5**	**+0.7**
	comp=E,2.8nm,0.8s,baz=145,slow=8.0,SNR=24						
TXAR				pP	**pP**	**13 08 15.7**	**+1.1**
	comp=E,0.4nm,0.6s,baz=151,slow=8.2,SNR=2.0						
TX31	**Lajitas Ar. Si**	**70.45**	**328**	*e*P	**P**	**13 07 36.4**	**+0.6**
TX31				*e*P	**P**	**13 07 36.7**	**+0.9**
V48A	**Smith Brothers**	**70.55**	**344**	P	**P**	**13 07 36.2**	**0.0**
	baz=164,SNR=5.4						
V48A	**Smith Brothers**	**70.55**	**344**	*e*P	**P**	**13 07 36.6**	**+0.4**
	comp=E,14nm,0.9s						
Y40A	**Okolona**	**70.67**	**338**	P	**P**	**13 07 37.3**	**+0.4**
	baz=158						
V47A	**Nunnelly**	**70.80**	**344**	P	**P**	**13 07 37.3**	**-0.3**
	baz=163,SNR=6.0						
V46A	**Holladay**	**70.92**	**343**	P	**P**	**13 07 38.1**	**-0.3**
	baz=162,SNR=8.5						
U49A	**Red Boiling Sp**	**71.06**	**345**	P	**P**	**13 07 39.0**	**-0.3**
	baz=165						
V45A	**Humboldt**	**71.07**	**342**	P	**P**	**13 07 39.4**	**+0.1**
	baz=162						
T52A	**Hallie**	**71.09**	**348**	P	**P**	**13 07 38.9**	**-0.6**
	baz=167						
WVT	**Waverly**	**71.16**	**343**	P	**P**	**13 07 39.6**	**-0.3**
	baz=163						
WVT	**Waverly**	**71.16**	**343**	*e*P	**P**	**13 07 39.8**	**-0.1**
	comp=E,20nm,0.8s						
WVT				*e*pP	**pP**	**13 08 17.0**	**-1.6**
U48A	**Cassie Pea, Po**	**71.23**	**345**	P	**P**	**13 07 40.1**	**-0.1**
	baz=164						
MIAR	**Mount Ida**	**71.25**	**338**	P	**P**	**13 07 40.5**	**+0.1**
	baz=158						
U47A	**Clarksville**	**71.33**	**344**	P	**P**	**13 07 40.7**	**-0.1**
	baz=163						
X39A	**Fountain Ranch**	**71.39**	**338**	P	**P**	**13 07 42.1**	**+0.8**
	baz=157						
W41B	**Gary Mavity, V**	**71.43**	**340**	P	**P**	**13 07 41.9**	**+0.4**
	baz=159						
W41B	**Gary Mavity, V**	**71.43**	**340**	*e*P	**P**	**13 07 41.8**	**+0.4**
	comp=E,6.9nm,0.9s						
T49A	**Edmonton**	**71.58**	**346**	P	**P**	**13 07 41.9**	**-0.4**
	baz=165						
T49A	**Edmonton**	**71.58**	**346**	*e*P	**P**	**13 07 42.2**	**-0.2**
	comp=E,6.9nm,0.8s						
LIC	**Lamto**	**71.62**	**70**	*e*P	**P**	**13 07 43.4**	**+0.3**
	comp=E,70nm,0.7s						
ABTX	**Abilene, Hawle**	**71.63**	**333**	P	**P**	**13 07 43.3**	**+0.5**
	baz=153						
ABTX	**Abilene, Hawle**	**71.63**	**333**	*e*P	**P**	**13 07 43.7**	**+0.9**
	comp=E,13nm,0.8s						
S51A	**Beattyville**	**71.72**	**347**	P	**P**	**13 07 43.1**	**-0.1**
	baz=166						
T48A	**Bowling Green**	**71.77**	**345**	P	**P**	**13 07 43.7**	**+0.3**
	baz=164						
V42A	**Cord**	**71.78**	**341**	P	**P**	**13 07 43.3**	**-0.3**
	baz=160						
TIC	**Toumodi**	**71.88**	**69**	*e*P	**P**	**13 07 45.4**	**+0.7**
W39A	**Magazine**	**71.92**	**338**	P	**P**	**13 07 45.2**	**+0.8**
	baz=158,SNR=11						
W39A	**Magazine**	**71.92**	**338**	*e*P	**P**	**13 07 45.4**	**+1.0**
	comp=E,16nm,0.9s						
KIC	**Kosan Boka**	**71.92**	**70**	*e*P	**P**	**13 07 44.8**	**-0.2**
	comp=E,65nm,0.8s						
V41A	**Mountainview**	**71.98**	**340**	P	**P**	**13 07 44.7**	**-0.1**
	baz=159,SNR=5.2						
DBIC	**Dimbokro**	**72.02**	**69**	P	**P**	**13 07 45.6**	**0.0**
	comp=E,9.4nm,0.8s,baz=213,slow=13,SNR=5.0						
DBIC				pP	**pP**	**13 08 23.3**	**-1.1**
	comp=E,17nm,0.7s,baz=210,slow=6.9,SNR=7.0						
T46A	**Princeton**	**72.05**	**344**	P	**P**	**13 07 44.9**	**-0.3**
	baz=163						
V40A	**Witts Springs**	**72.19**	**339**	P	**P**	**13 07 45.9**	**-0.2**
	baz=159						
S48A	**Wiedeman Farm,**	**72.22**	**345**	P	**P**	**13 07 46.2**	**0.0**
	baz=164						
U42A	**Revenden**	**72.25**	**341**	P	**P**	**13 07 46.2**	**-0.1**
	baz=160,SNR=6.7						
U41A	**Viola**	**72.43**	**340**	P	**P**	**13 07 47.4**	**-0.1**
	baz=159,SNR=5.2						
V39A	**Pettigrew**	**72.47**	**339**	P	**P**	**13 07 48.0**	**+0.3**
	baz=158						
S46A	**Don Dixon Farm**	**72.62**	**344**	P	**P**	**13 07 47.6**	**-0.9**
	baz=163						
T43A	**Greenville**	**72.68**	**342**	P	**P**	**13 07 48.8**	**-0.1**
	baz=161						
U40A	**Yellville**	**72.71**	**340**	P	**P**	**13 07 49.1**	**0.0**
	baz=159,SNR=7.6						
S45A	**Carrier Mills**	**72.81**	**343**	P	**P**	**13 07 49.9**	**+0.3**
	baz=162						
T42A	**Van Buren**	**72.84**	**341**	P	**P**	**13 07 49.7**	**-0.2**
	baz=160						
R48A	**Northridge Ran**	**72.90**	**346**	P	**P**	**13 07 49.9**	**-0.3**
	baz=165						
U39A	**Green Forest**	**72.92**	**339**	P	**P**	**13 07 50.4**	**0.0**
	baz=158,SNR=6.8						
HHAR	**Hobbs**	**72.97**	**339**	*e*P	**P**	**13 07 50.8**	**+0.2**
	comp=E,12nm,1.1s						
T41A	**Mountain View**	**73.04**	**341**	P	**P**	**13 07 51.0**	**0.0**
	baz=160,SNR=13						
S43A	**Fulton Ridge,**	**73.08**	**342**	P	**P**	**13 07 50.9**	**-0.4**
	baz=161						
MAW	**Mawson**	**73.22**	**163**	P	**P**	**13 07 51.7**	**0.0**
	comp=E,3.0nm,0.4s,baz=218,slow=6.9,SNR=17						
MAW	**Mawson**	**73.22**	**163**	*e*P	**P**	**13 07 51.7**	**0.0**
	comp=E,2.2nm,0.6s						
MNTX	**Cornudas Mount**	**73.23**	**328**	P	**P**	**13 07 51.9**	**-0.4**
	baz=148,SNR=11						
MNTX	**Cornudas Mount**	**73.23**	**328**	*e*P	**P**	**13 07 52.0**	**-0.4**
	comp=E,5.4nm,0.8s						
R45A	**Skylar, Fairfi**	**73.33**	**344**	P	**P**	**13 07 52.9**	**+0.3**
	baz=163						
T40A	**Mansfield**	**73.35**	**340**	P	**P**	**13 07 52.9**	**+0.1**
	baz=159						
PPT	**Papeete**	**73.37**	**260**	P	**P**	**13 07 54.2**	**+0.7**
	comp=E,15nm,0.7s,baz=212,slow=12,SNR=4.0						
PPT				pP	**pP**	**13 08 30.8**	**-1.7**
	comp=E,5.0nm,0.5s,baz=102,slow=20,SNR=1.3						
S42A	**Caledonia**	**73.46**	**342**	P	**P**	**13 07 52.8**	**-0.6**
	baz=160						
R44A	**Waltonville**	**73.48**	**343**	P	**P**	**13 07 52.8**	**-0.7**
	baz=162						
T39A	**Clever**	**73.49**	**339**	P	**P**	**13 07 53.8**	**+0.1**
	baz=158						
S41A	**Jillco Farms,**	**73.55**	**341**	P	**P**	**13 07 54.0**	**0.0**
	baz=160,SNR=13						
FVM	**French Village**	**73.56**	**342**	*e*P	**P**	**13 07 55.0**	**+0.9**
	comp=E,13nm,1.0s						
S40A	**Lebanon**	**73.77**	**340**	P	**P**	**13 07 55.3**	**0.0**
	baz=159						
T38A	**Diamond**	**73.77**	**339**	P	**P**	**13 07 55.4**	**+0.1**
	baz=158,SNR=6.9						
CCM	**Cathedral Cave**	**73.85**	**341**	P	**P**	**13 07 56.7**	**+0.9**
	baz=160						
CCM	**Cathedral Cave**	**73.85**	**341**	*e*P	**P**	**13 07 56.8**	**+1.1**
	comp=E,12nm,1.0s						
CCM				*e*pP	**pP**	**13 08 37.0**	**+2.2**
Q45A	**Warren Harvey,**	**73.87**	**344**	P	**P**	**13 07 55.2**	**-0.6**
	baz=163						
R42A	**Luebbering**	**73.94**	**342**	P	**P**	**13 07 56.1**	**-0.1**
	baz=160						

MSTX	Muleshoe	74.06	331	P	P	13 07 57.3	+0.1
	baz=150,SNR=8.3						
MSTX	Muleshoe	74.06	331	eP	P	13 07 57.7	+0.5
	comp=E,12nm,0.9s						
MSTX				epP	pP	13 08 38.8	+2.5
S39A	Bolivar	74.09	340	P	P	13 07 57.3	+0.2
	baz=158,SNR=12						
S39A	Bolivar	74.09	340	eP	P	13 07 57.4	+0.2
	comp=E,28nm,1.3s						
S39A				epP	pP	13 08 37.9	+1.7
R41A	Rosebud	74.11	341	P	P	13 07 57.3	+0.1
	baz=160,SNR=6.9						
ACSO	Alum Creek Sta	74.13	348	P	P	13 07 57.6	+0.3
	baz=167						
O50A	Cable	74.16	348	P	P	13 07 57.5	0.0
	baz=167						
S38A	Stockton	74.20	339	P	P	13 07 57.9	+0.1
	baz=158,SNR=15						
Q43A	New Douglas	74.29	343	P	P	13 07 57.9	-0.3
	baz=162						
R40A	Maddies Statio	74.35	341	P	P	13 07 58.5	-0.1
	baz=159,SNR=13						
R40A	Maddies Statio	74.35	341	eP	P	13 07 58.7	+0.1
	comp=E,18nm,0.8s						
R40A				epP	pP	13 08 39.2	+1.4
P46A	Rosedale	74.35	345	P	P	13 07 58.7	+0.1
	baz=164						
P45A	Graceland, Par	74.39	345	P	P	13 07 58.9	+0.1
	baz=163						
N54A	Moraine State	74.40	351	P	P	13 07 59.3	+0.5
	baz=170						
AMTX	Amarillo	74.42	332	P	P	13 07 59.4	+0.1
	baz=151						
AMTX	Amarillo	74.42	332	eP	P	13 07 59.9	+0.7
	comp=E,10nm,0.8s						
Q42A	Golden Eagle	74.47	342	P	P	13 07 59.3	+0.1
	baz=161						
P44A	Sand Creek, Wi	74.53	344	P	P	13 07 59.5	-0.1
	baz=162						
R39A	Chumby, Stover	74.59	340	P	P	13 07 60.0	0.0
	baz=159,SNR=7.8						
N50A	Nevada	74.69	348	P	P	13 08 00.2	-0.3
	baz=167						
Q41A	Truxton	74.69	342	P	P	13 08 00.5	0.0
	baz=160						
R38A	Fenwick Farm,	74.72	339	P	P	13 08 00.5	-0.3
	baz=158,SNR=5.1						
O47A	Sheridan	74.73	346	P	P	13 07 60.0	-0.8
	baz=164						
319A	Douglas	74.79	325	eP	P	13 08 03.0	+1.5
	comp=E,14nm,1.0s						
319A				epP	pP	13 08 44.5	+3.9
P43A	Skaggs, Pawnee	74.91	343	P	P	13 08 01.4	-0.4
	baz=162						
Q40A	Laux Farm, Aux	74.95	341	P	P	13 08 02.2	+0.1
	baz=160,SNR=5.3						
121A	Cookes Peak, D	75.03	326	P	P	13 08 03.7	+0.8
	baz=147,SNR=6.4						
P42A	Winchester	75.06	343	P	P	13 08 02.3	-0.3
	baz=161						
P42A	Winchester	75.06	343	eP	P	13 08 02.6	0.0
	comp=E,13nm,1.1s						
Q39A	Willow Grove F	75.25	340	P	P	13 08 03.9	+0.1
	baz=159						
P41A	Barry, Barry	75.32	342	P	P	13 08 03.9	-0.2
	baz=160						
Q38A	Cooks Store, C	75.35	340	P	P	13 08 04.6	+0.2
	baz=158,SNR=9.0						
P40A	Paris	75.45	341	P	P	13 08 04.9	0.0
	baz=160,SNR=8.5						
P40A	Paris	75.45	341	eP	P	13 08 04.3	-0.6
	comp=E,16nm,0.8s						
P40A				epP	pP	13 08 45.5	+1.4
O43A	Sugar Creek Fa	75.47	344	P	P	13 08 04.6	-0.4
	baz=162						
O42A	Bath	75.57	343	P	P	13 08 05.1	-0.4
	baz=161						
P39B	Salisbury	75.60	341	P	P	13 08 05.5	-0.3
	baz=159,SNR=6.6						
N44A	Piper City	75.68	345	P	P	13 08 05.6	-0.6
	baz=163						
O41A	Passleys Farm,	75.69	342	P	P	13 08 05.8	-0.4
	baz=161						
O40A	La Belle	75.95	342	P	P	13 08 07.4	-0.3
	baz=160						
LPM	Los Pinos Moun	76.00	328	eP	P	13 08 09.1	+0.7
N43A	Stutzman Famil	76.06	344	P	P	13 08 07.9	-0.4
	baz=162						
P37A	Lathrop	76.15	340	P	P	13 08 08.1	-0.7
	baz=158						
N42A	Yates City	76.16	343	P	P	13 08 08.4	-0.4
	baz=161						
M44A	Midewin, Midew	76.23	345	P	P	13 08 08.7	-0.6
	baz=163						
N41A	Harden Midland	76.24	343	P	P	13 08 09.1	-0.3
	baz=161						
N41A	Harden Midland	76.24	343	eP	P	13 08 09.4	+0.1
	comp=E,19nm,0.8s						
LAZ	Ladron	76.30	328	eP	P	13 08 11.3	+1.2
TASL	Snake Pit, Alb	76.45	329	P	P	13 08 12.1	+1.2
	baz=148,SNR=9.2						
ANMO	Albuquerque	76.45	329	P	P	13 08 12.0	+1.0
	comp=E,4.6nm,0.8s,baz=155,slow=8.9,SNR=15						
ANMO	Albuquerque	76.45	329	eP	P	13 08 12.1	+1.2
	comp=E,9.1nm,1.2s						
TASM	ASL Pad, Albuq	76.46	329	P	P	13 08 12.1	+1.2
	baz=148,SNR=8.3						
M43A	Waltham Townsh	76.48	344	P	P	13 08 10.3	-0.4
	baz=162						
O37A	Wolven Farm, M	76.62	340	P	P	13 08 11.4	-0.2
	baz=158						
N39A	Derby Farms, D	76.83	341	P	P	13 08 12.3	-0.3
	baz=159						
N39A	Derby Farms, D	76.83	341	eP	P	13 08 12.7	0.0
	comp=E,16nm,1.0s						
LBNH	Lisbon	76.97	357	P	P	13 08 14.8	+1.4
	baz=177						
214A	Organ Pipe Nat	77.02	322	P	P	13 08 15.3	+1.3
	baz=143						
M40A	Post Highland	77.07	342	P	P	13 08 13.5	-0.4
	baz=160						
L43A	Garden Prairie	77.14	345	P	P	13 08 14.4	0.0
	baz=162						
CBKS	Cedar Bluff	77.17	335	P	P	13 08 15.3	+0.6
	baz=153						
L42A	Oliver, Polo	77.18	344	P	P	13 08 14.7	+0.1
	baz=162						
M39A	Webster	77.31	342	P	P	13 08 14.9	-0.5
	baz=160						
L41A	Preston	77.45	343	P	P	13 08 15.5	-0.6
	baz=161						
T25A	Trinidad	77.47	331	P	P	13 08 17.8	+1.2
	baz=150,SNR=10						
T25A	Trinidad	77.47	331	eP	P	13 08 17.8	+1.2
	comp=E,9.9nm,0.9s						
T25A				epP	pP	13 08 59.2	+3.2
LONY	Lake Ozonia	77.49	356	P	P	13 08 16.7	+0.5
	baz=175						
KOWA	Kowa	77.51	63	P	P	13 08 17.2	+0.2
	comp=E,5.9nm,0.6s,baz=230,slow=4.9,SNR=16						
KOWA				pP	pP	13 08 55.4	-1.0
	comp=E,15nm,0.6s,baz=219,slow=4.6,SNR=9.5						
KOWA	Kowa	77.51	63	eP	P	13 08 17.2	+0.2
KOWA				eP	P	13 08 17.3	+0.3
KOWA				epP	pP	13 08 55.4	-1.0
KOWA				epP	pP	13 08 55.5	-0.9
M38A	Pleasantville	77.52	341	P	P	13 08 16.4	-0.1
	baz=159						
K43A	Burlington	77.55	345	P	P	13 08 16.6	-0.1
	baz=163						
L40A	Anamosa	77.61	343	P	P	13 08 17.0	0.0
	baz=160						
L40A	Anamosa	77.61	343	eP	P	13 08 16.9	-0.1
	comp=E,24nm,0.8s						
L40A				epP	pP	13 08 57.4	+0.9
X18A	Snowflake	77.69	326	eP	P	13 08 19.2	+1.3
	comp=E,2.9nm,0.6s						
M37A	Trindle Farm,	77.74	341	P	P	13 08 17.7	0.0
	baz=158						
BOSA	Boshof	77.82	116	P	P	13 08 18.6	-0.3
	comp=E,15nm,0.5s,baz=249,slow=3.8,SNR=32						
BOSA	Boshof	77.82	116	eP	P	13 08 18.4	-0.5
	comp=E,26nm,0.4s						
BOSA				eP	P	13 08 18.6	-0.3
BOSA				eS	S	13 17 58.5	-0.1
K42A	Prairie Point,	77.85	344	P	P	13 08 18.2	0.0
	baz=162						
L39A	Vinton	77.86	342	P	P	13 08 17.9	-0.5
	baz=160						
K41A	Shullsburg	77.90	344	P	P	13 08 18.5	-0.1
	baz=161						
M36A	Felix, Anita	78.00	340	P	P	13 08 19.8	+0.6
	baz=158						
W18A	Petrified Fore	78.08	326	P	P	13 08 20.8	+0.8
	baz=146						
JFWS	Jewell Farm	78.18	344	P	P	13 08 20.4	+0.2
	baz=161						
K40A	Colesburg	78.19	343	P	P	13 08 20.0	-0.2
	baz=161						
J43A	Natural Harves	78.22	345	P	P	13 08 20.2	-0.1
	baz=163						
J42A	Columbus	78.31	345	P	P	13 08 20.6	-0.2
	baz=162						
X16A	Lo Mia Camp, P	78.31	325	eP	P	13 08 22.7	+1.3
	comp=E,7.3nm,0.9s						
X16A				epP	pP	13 09 04.5	+3.6
K39A	Oelwein	78.38	343	P	P	13 08 20.8	-0.4
	baz=160						
SDCO	Great Sand Dun	78.43	331	P	P	13 08 23.0	+1.0
	baz=149,SNR=6.8						
SDCO	Great Sand Dun	78.43	331	eP	P	13 08 23.2	+1.2
	comp=E,2.8nm,0.8s						
J41A	Loganville	78.56	344	P	P	13 08 22.0	-0.2
	baz=162						
K38A	Parkersburg	78.56	342	P	P	13 08 23.1	+0.9
	baz=159						
I43A	Langenfeld Bro	78.64	346	P	P	13 08 22.2	-0.4
	baz=163						
J40A	Soldiers Grove	78.75	344	P	P	13 08 23.0	-0.3
	baz=161						
I42A	Draeger Farm,	78.81	345	P	P	13 08 23.4	-0.1
	baz=162						
K37A	Belmond	78.90	341	P	P	13 08 23.4	-0.6
	baz=159						
GLA	Glamis	78.93	322	P	P	13 08 24.9	+0.4
	baz=142						
J39A	Decorah	78.93	343	P	P	13 08 23.9	-0.4
	baz=160						
BGNE	Belgrade	78.97	338	P	P	13 08 25.0	+0.4
	baz=155						
S22A	4UR Ranch, Cre	78.98	330	P	P	13 08 25.5	+0.5
	baz=148,SNR=7.8						
S22A	4UR Ranch, Cre	78.98	330	eP	P	13 08 26.1	+1.1
	comp=E,2.9nm,0.8s						
TRQ	Mont Tremblant	79.08	356	eP	P	13 08 25.7	+0.6
J38A	Wedel Dairy, R	79.11	342	P	P	13 08 24.7	-0.5
	baz=160						
H43A	Windswept, Lux	79.12	346	P	P	13 08 26.3	+1.1
	baz=164						
WUAZ	Wupatki	79.17	326	P	P	13 08 27.3	+1.4
	baz=144						
WUAZ	Wupatki	79.17	326	eP	P	13 08 27.2	+1.2
	comp=E,6.3nm,1.0s						
MVCO	Mesa Verde	79.25	328	P	P	13 08 27.4	+0.9
	baz=147						
MVCO	Mesa Verde	79.25	328	eP	P	13 08 27.4	+1.0
	comp=E,6.5nm,0.9s						
Y12C	Blythe	79.32	322	P	P	13 08 28.2	+1.6
	baz=142						
Q24A	Divide	79.33	332	P	P	13 08 27.8	+0.9
	baz=149						
I39A	Houston	79.37	343	P	P	13 08 26.4	-0.2
	baz=160						
J37A	Redenius Farm,	79.38	342	P	P	13 08 26.4	-0.2
	baz=159						
J36A	Seneca 1, Swea	79.61	341	P	P	13 08 27.7	-0.2
	baz=158						
J36A	Seneca 1, Swea	79.61	341	eP	P	13 08 28.6	+0.7
	comp=E,18nm,1.1s						
H41A	Junction City	79.66	345	P	P	13 08 27.9	-0.2
	baz=162						
BC3	Big Chuckawall	79.72	322	P	P	13 08 29.9	+1.0
	baz=141						
I38A	Scanlan Farm,	79.75	343	P	P	13 08 28.5	-0.2
	baz=160						
H40A	Chili	79.83	344	P	P	13 08 28.7	-0.4
	baz=161						
LBTB	Lobatse	79.95	113	eP	P	13 08 30.3	-0.2
	comp=E,33nm,0.6s						
IRM	Iron Mountain	79.96	322	P	P	13 08 31.3	+1.3
	baz=142						
I37A	Lemond, Waseca	80.00	342	P	P	13 08 30.1	+0.1
	baz=159						
I37A	Lemond, Waseca	80.00	342	eP	P	13 08 30.3	+0.3
	comp=E,11nm,0.8s						
G42A	Mountain	80.00	346	P	P	13 08 30.1	+0.2
	baz=163						
PV13	Radium Mtn., P	80.18	329	eP	P	13 08 32.0	+0.6
	comp=E,10nm,1.2s						
PV02	Paradox Valley	80.18	329	eP	P	13 08 32.7	+1.3
	comp=E,7.5nm,1.1s						
XPFO	Piæon Flat	80.22	321	eP	P	13 08 32.6	+1.1
	comp=E,14nm,1.2s						
PFO	Pinyon Flats O	80.22	321	P	P	13 08 32.9	+1.3
	baz=141						
PFO	Pinyon Flats O	80.22	321	eP	P	13 08 32.6	+1.0
	comp=E,12nm,1.1s						
ISCO	Idaho Springs	80.23	332	P	P	13 08 32.8	+1.0
	baz=149,SNR=6.8						
ISCO	Idaho Springs	80.23	332	eP	P	13 08 32.7	+1.0
	comp=E,7.0nm,1.1s						
SMCO	Snowmass	80.25	331	eP	P	13 08 33.2	+1.2
	comp=E,7.5nm,0.9s						
SMCO				epP	pP	13 09 15.4	+3.8
PV03	Paradox Valley	80.27	329	eP	P	13 08 32.5	+0.6
BELC	Belle Mtn. Jos	80.28	322	P	P	13 08 32.6	+0.7
	baz=141						
U15A	North Rim	80.34	325	eP	P	13 08 33.8	+1.4
	comp=E,3.3nm,0.8s						
G40A	Rib Lake	80.40	345	P	P	13 08 33.2	+1.1
	baz=162						
MURC	Murrieta	80.60	320	P	P	13 08 34.6	+1.1
	baz=140						
F41A	Three Lakes	80.61	345	P	P	13 08 33.3	+0.1
	baz=162						
ECSD	EROS Data Cent	80.62	340	P	P	13 08 33.4	0.0
	baz=156						
ECSD	EROS Data Cent	80.62	340	eP	P	13 08 33.5	+0.2
	comp=E,13nm,0.9s						
ECSD				epP	pP	13 09 13.7	+0.7
G38A	Ridgeland	80.69	343	P	P	13 08 33.4	-0.2
	baz=160						
GMRC	Granite Mounta	80.71	322	P	P	13 08 35.5	+1.3
	baz=141						
E43A	Lone Tree Farm	80.80	347	P	P	13 08 34.6	+0.4
	baz=164						
CASY	Casey	81.00	180	eP	P	13 08 34.5	-0.7
	comp=E,5.7nm,0.9s						
F40A	Park Falls	81.00	345	P	P	13 08 35.5	+0.2
	baz=162						
H35A	Sunnyside Ranc	81.01	341	P	P	13 08 35.2	-0.1
	baz=158						
E42A	Champion	81.03	346	P	P	13 08 35.7	+0.3
	baz=163						
TOA0	Torodi Ar. Sit	81.06	68	eP	P	13 08 34.6	-1.6
TOA0				eP	P	13 08 36.3	0.0
TOA0				epP	pP	13 09 14.7	-1.3
TORD	Torodi Ar. Bea	81.06	68	P	P	13 08 36.2	-0.1
	comp=E,4.4nm,0.6s,baz=261,slow=5.7						
TORD				pP	pP	13 09 14.7	-1.3
	baz=251,slow=4.4						
TOA1	Torodi Ar. Sit	81.06	68	eP	P	13 08 36.2	-0.1
TOA1				epP	pP	13 09 14.7	-1.3
KNB	Kanab	81.07	325	eP	P	13 08 37.4	+1.3
	comp=E,11nm,1.1s						
KNB				epP	pP	13 09 19.8	+3.9
HEC	Hector,Ludlow	81.09	322	P	P	13 08 37.7	+1.5
	baz=141						
F39A	Loretta	81.18	344	P	P	13 08 36.3	0.0
	baz=161						
LCMT	Little Creek M	81.27	325	eP	P	13 08 37.7	+0.6
	comp=E,3.0nm,1.1s						
BFSC	Mount Baldy Ra	81.34	321	P	P	13 08 38.4	+0.9
	baz=140						
TUQ	Turquoise Moun	81.35	322	P	P	13 08 38.7	+1.1
	baz=141						
F38A	Pierce - Schro	81.44	344	P	P	13 08 37.8	+0.2
	baz=160						
E40A	Wakefield	81.45	345	P	P	13 08 38.1	+0.5
	baz=162						
PHWY	Pilot Hill	81.46	333	eP	P	13 08 39.1	+1.0
	comp=E,6.5nm,0.7s						
E39A	Mellen	81.53	345	P	P	13 08 38.3	+0.2
	baz=161						
H32A	Carlson Farm,	81.57	339	P	P	13 08 38.1	-0.2
	baz=156						
O20A	White River Ci	81.58	330	P	P	13 08 39.4	+0.7
	baz=147						
MTPU	Mount Pierson	81.60	327	eP	P	13 08 40.1	+1.0
	comp=E,3.7nm,0.9s						
SZCU	Shurtz Canyon	81.66	326	eP	P	13 08 40.3	+1.1
	comp=E,3.8nm,1.1s						
GSC	Goldstone, Bar	81.70	322	P	P	13 08 40.6	+1.3
	baz=141						
F36A	Milaca	81.75	343	P	P	13 08 39.0	-0.2
	baz=159						
F36A	Milaca	81.75	343	eP	P	13 08 39.2	0.0
	comp=E,5.4nm,0.8s						
CCUT	Cedar City	81.76	325	eP	P	13 08 41.6	+1.9
	comp=E,6.3nm,1.0s						
D41A	Chassel	81.77	346	P	P	13 08 40.0	+0.8
	baz=163						
D41A	Chassel	81.77	346	eP	P	13 08 40.0	+0.8
	comp=E,27nm,0.8s						
SHPR	Sheep Range	81.80	324	eP	P	13 08 40.8	+0.8
	comp=E,4.2nm,0.8s						
SHOC	Shoshone, Teco	81.89	323	P	P	13 08 41.4	+1.1
	baz=141						
E38A	The Farm, Brul	81.97	344	P	P	13 08 41.8	+1.5
	baz=160						
E38A	The Farm, Brul	81.97	344	eP	P	13 08 40.4	0.0
	comp=E,6.5nm,0.7s						
EDW2	Edwards Air Fo	82.00	321	P	P	13 08 41.4	+0.5
	baz=140						
P18A	Preston Nutter	82.02	329	eP	P	13 08 42.0	+0.9
	comp=E,4.6nm,0.8s						
F34A	Alexandria	82.14	341	P	P	13 08 42.2	+1.0
	baz=157						
TMUT	Trail Mountain	82.17	328	eP	P	13 08 43.2	+1.2
	comp=E,3.0nm,0.9s						
SCZ2	Santa Cruz Isl	82.22	319	P	P	13 08 42.8	+0.8
	baz=139						
E36A	McGregor	82.30	343	P	P	13 08 42.0	-0.1
	baz=159						
LRMC	Laurel Mtn Rad	82.30	321	P	P	13 08 43.8	+1.2
	baz=140						
FURC	Furnace Creek,	82.63	323	P	P	13 08 44.9	+0.9
	baz=141						
MPMC	Manual Prospec	82.64	322	P	P	13 08 45.3	+0.9
	baz=140						
TPNV	Topopah Spring	82.69	323	P	P	13 08 46.0	+1.4
	baz=141						
TPNV	Topopah Spring	82.69	323	eP	P	13 08 46.1	+1.5
	comp=E,12nm,1.4s						
D37A	Cotton	82.70	344	P	P	13 08 44.4	+0.3
	baz=160						
PSUT	Pine Spring	82.77	326	eP	P	13 08 46.5	+1.5
	comp=E,4.6nm,1.0s						
ISA	Isabella, Lake	82.85	321	P	P	13 08 46.6	+1.3
	baz=140						
DAC	Darwin (Calif)	82.86	322	eP	P	13 08 46.8	+1.3
	comp=E,8.3nm,1.0s						
C38A	Sawbill Land.	82.96	345	P	P	13 08 45.2	-0.3
	baz=161						
FIGC	Figueroa Mtn.	82.96	319	eP	P	13 08 46.9	+1.0
D35A	Remer	83.02	343	P	P	13 08 45.8	+0.1
	baz=158						
K22A	Casper	83.02	333	P	P	13 08 47.0	+0.9
	baz=148						
C37A	Embarrass	83.18	344	P	P	13 08 46.4	-0.2
	baz=160						
EYMN	Ely	83.23	345	P	P	13 08 46.7	-0.2
	baz=161						
GRAC	Grapevine Rang	83.30	323	P	P	13 08 48.9	+1.4
	baz=140						
VES	Vestal, Richgr	83.31	321	P	P	13 08 48.2	+0.7
	baz=139						
C36A	Pine Crest Far	83.36	344	P	P	13 08 48.2	+0.7
	baz=160						
RSSD	Black Hills	83.37	335	P	P	13 08 48.5	+0.6
	baz=150						
RSSD	Black Hills	83.37	335	eP	P	13 08 48.5	+0.6
	comp=E,7.1nm,0.9s						
R11A	Troy Canyon, C	83.46	325	P	P	13 08 49.7	+1.2
	baz=142						
R11A	Troy Canyon, C	83.46	325	eP	P	13 08 49.9	+1.4
	comp=E,7.1nm,1.3s						
C35A	Jirik Farms, M	83.58	343	P	P	13 08 48.3	-0.3
	baz=159						
DUG	Dugway, Tooele	83.62	327	P	P	13 08 49.9	+0.6
	baz=144						
B35A	Bob, Littlefor	84.13	343	P	P	13 08 51.1	-0.3
	baz=159						
B35A	Bob, Littlefor	84.13	343	eP	P	13 08 51.6	+0.2
	comp=E,6.0nm,0.8s						
HWUT	Hardware Ranch	84.22	329	eP	P	13 08 52.5	+0.2
	comp=E,17nm,1.5s						
BW06	Boulder Array	84.33	331	P	P	13 08 52.8	0.0
	baz=146						
PD31	Pinedale Array	84.33	331	eP	P	13 08 52.8	0.0
PD31				epP	pP	13 09 34.8	+1.9
PDAR	Pinedale Array	84.33	331	P	P	13 08 52.8	0.0
	comp=E,0.4nm,0.5s,baz=143,slow=7.9,SNR=5.0						
PDAR				pP	pP	13 09 34.8	+1.9
	comp=E,0.8nm,0.7s,baz=116,slow=5.1,SNR=3.5						
PDAR	Pinedale Array	84.33	331	eP	P	13 08 52.1	-0.8
PDAR				pP	pP	13 09 34.8	+1.9
B34A	Aery, Baudette	84.47	343	P	P	13 08 52.9	-0.2
	baz=158						
MLAC	Mammoth, Mammo	84.54	322	P	P	13 08 54.5	+0.5
	baz=140						
AGMN	Agassiz Nation	84.61	342	P	P	13 08 53.7	-0.1
	baz=157						
OMMB	Old Mammoth Mi	84.61	322	eP	P	13 08 55.3	+0.8
	comp=E,8.4nm,1.2s						
MDPB	Devils Postpil	84.66	322	eP	P	13 08 55.8	+1.1
	comp=E,8.3nm,1.3s						
NV01	Mina Array Sit	84.87	323	eP	P	13 08 56.5	+0.8
NV01				epP	pP	13 09 38.1	+2.4
NVAR	Mina Array Bea	84.87	323	P	P	13 08 56.7	+1.0
	comp=E,2.3nm,0.8s,baz=153,slow=5.9,SNR=16						
NVAR				pP	pP	13 09 38.0	+2.3
	comp=E,1.4nm,0.8s,baz=155,slow=5.8,SNR=4.3						
NVAR				sP	sP	13 09 53.5	+0.9
	comp=E,1.2nm,0.8s,baz=146,slow=4.7,SNR=3.3						
HVU	Hansel Valley	84.88	328	eP	P	13 08 55.4	-0.2
	comp=E,5.2nm,0.8s						
HVU				epP	pP	13 09 37.7	+2.1
A33A	Warroad	85.08	343	P	P	13 08 56.2	0.0
	baz=158						
MDND	Maddock	85.23	340	P	P	13 08 57.2	+0.3
	baz=154						
KVN	Kaiserville	85.25	323	eP	P	13 08 58.0	+0.5
	comp=E,3.3nm,0.8s						
TPAW	Teton Pass	85.50	330	eP	P	13 08 59.4	+0.7
	comp=E,5.6nm,1.1s						
WAKR	Walker	85.51	322	eP	P	13 09 00.1	+1.3
	comp=E,8.7nm,1.2s						
YERR	Yerington	85.77	323	eP	P	13 09 01.0	+0.9
	comp=E,4.7nm,1.0s						
IMW	Indian Meadow	85.83	331	eP	P	13 09 00.8	+0.4
	comp=E,5.7nm,0.9s						
IMW				epP	pP	13 09 42.7	+2.2
FLWY	Flagg Ranch	85.88	331	eP	P	13 09 01.3	+0.7
	comp=E,7.4nm,1.0s						
FLWY				epP	pP	13 09 43.2	+2.5
PNTR	Pine Nut	86.03	323	eP	P	13 09 01.6	+0.2
	comp=E,6.3nm,0.8s						
H17A	Grant Village	86.09	331	P	P	13 09 02.1	+0.5
	baz=146						
RLMT	Red Lodge	86.17	332	P	P	13 09 02.4	+0.4
	baz=147						
RLMT	Red Lodge	86.17	332	eP	P	13 09 02.7	+0.7
	comp=E,4.1nm,0.6s						
VCNR	Virginia City	86.21	323	eP	P	13 09 03.3	+1.0
	comp=E,7.6nm,1.4s						
LAO	LASA Array	86.36	335	P	P	13 09 03.0	+0.4
	baz=149						
LAO	LASA Array	86.36	335	eP	P	13 09 03.3	+0.7
	comp=E,12nm,1.1s						
PAHR	Pah Rah Range	86.39	323	eP	P	13 09 04.0	+1.0
	comp=E,9.3nm,1.3s						
ULM	Lac du Bonnet	86.41	343	P	P	13 09 02.7	0.0
	comp=E,4.4nm,0.8s,baz=148,slow=7.0,SNR=6.0						
ULM				pP	pP	13 09 43.0	+0.1
	comp=E,2.9nm,0.7s,baz=176,slow=7.5,SNR=2.1						
ULM	Lac du Bonnet	86.41	343	eP	P	13 09 02.9	+0.2
	comp=E,6.8nm,0.9s						
ULM				pP	pP	13 09 43.0	+0.1
YMR	Madison River	86.47	331	eP	P	13 09 04.1	+0.7
	comp=E,12nm,1.0s						
HLID	Hailey	87.03	328	P	P	13 09 07.1	+1.0
	baz=143						
HLID	Hailey	87.03	328	eP	P	13 09 07.2	+1.0

	comp=E,7.0nm,1.1s						
HLID				epP	pP	13 09 49.0	+2.7
DGMT	Dagmar	87.21	337	P	P	13 09 07.4	+0.8
	baz=150						
DGMT	Dagmar	87.21	337	eP	P	13 09 07.8	+1.1
	comp=E,28nm,1.1s						
LSZ	Lusaka	87.22	106	eP	P	13 09 07.8	+0.1
	comp=E,7.5nm,0.8s						
MCMT	McKenzie Canyo	87.38	330	eP	P	13 09 09.2	+1.4
MCMT				epP	pP	13 09 50.7	+2.6
BOZ	Bozeman (W)	87.50	331	P	P	13 09 08.7	+0.5
	baz=145						
MFID	Camas Ranch	87.55	328	eP	P	13 09 09.6	+1.1
	comp=E,7.1nm,1.4s						
DLMT	Dillon	87.71	331	eP	P	13 09 10.5	+1.3
	comp=E,10nm,1.4s						
LRM	Limekiln Ridge	88.02	331	eP	P	13 09 11.9	+1.1
LRM				epP	pP	13 09 53.3	+2.1
O03D	Paynes Creek	88.06	322	P	P	13 09 10.8	-0.1
	baz=138						
J08A	Circle Bar Ran	88.72	326	eP	P	13 09 15.3	+1.3
	comp=E,14nm,0.8s						
J08A				epP	pP	13 09 56.9	+2.4
EGMT	Eagleton	88.78	334	P	P	13 09 14.1	0.0
	baz=146						
N02D	Trinity Center	89.03	322	P	P	13 09 16.1	+0.6
	baz=137						
BMO	Blue Mountains	89.33	328	eP	P	13 09 17.6	+0.7
	comp=E,1.7nm,0.8s						
K05A	Summer Lake	89.41	324	eP	P	13 09 18.4	+1.1
	comp=E,7.7nm,1.0s						
J05D	Fort Rock, OR	89.99	324	P	P	13 09 21.0	+1.0
	baz=138						
PINE	Pine Mountain	90.22	325	eP	P	13 09 22.4	+1.3
	comp=E,16nm,1.4s						
I05D	Terrebonne, OR	90.82	325	P	P	13 09 24.7	+1.0
	baz=138						
WALA	Waterton Lakes	91.22	332	eP	P	13 09 26.2	+0.7
	comp=E,9.5nm,1.1s						
HTW	Haystack Looko	93.59	327	eP	P	13 09 36.3	-0.1
ESDC	Sonseca Array	93.76	44	pP	pP	13 10 17.1	-0.9
	comp=E,0.1nm,0.3s,baz=245,slow=4.8,SNR=2.5						
ILAR	Eielson Array	114.72	332	PKP	PKPdf	13 14 59.3	+0.1
	comp=E,0.5nm,0.9s,baz=171,slow=1.3,SNR=5.3						
TOLK	Toolik Lake Re	117.22	336	P	PKPdf	13 15 04.8	+0.7
	baz=111						
AKASG	Malin Array Be	119.34	46	PKP	PKPdf	13 15 07.8	-0.7
	comp=E,0.8nm,0.5s,baz=258,slow=3.1,SNR=4.2						
AKASG				pPKP	pPKPdf	13 15 50.0	-0.9
	comp=E,0.3nm,0.3s,baz=237,slow=4.3,SNR=1.7						
AKBB	Malin Array Si	119.34	46	ePKPdf	PKPdf	13 15 07.8	-0.7
ASAR	Alice Springs	119.72	204	PKP	PKPdf	13 15 09.3	-1.1
	comp=E,0.4nm,0.5s,baz=126,slow=1.5,SNR=9.7						
ASAR				pPKP	pPKPdf	13 15 51.5	-1.2
	comp=E,0.2nm,0.5s,baz=124,slow=1.7,SNR=1.9						
ASAR				SKP		13 18 28.8	
	comp=E,0.9nm,0.8s,baz=178,slow=2.2,SNR=6.6						
ASAR				PKKPbc	PKKPbc	13 25 19.4	-1.1
	comp=E,0.5nm,0.9s,baz=337,slow=3.5,SNR=3.9						
ASAR				PKKP	PKKPdf	13 25 59.5	+9.0
	comp=E,0.2nm,0.7s,baz=342,slow=3.2,SNR=4.1						
ARA0	ARCESS Array S	121.89	24	ePKPdf	PKPdf	13 15 12.8	-0.2
ARCES	ARCESS Array B	121.89	24	PKP	PKPdf	13 15 12.8	-0.1
	comp=E,1.0nm,0.7s,baz=256,slow=3.6,SNR=2.7						
WR1	Warramunga Arr	123.00	206	ePKPdf	PKPdf	13 15 15.5	-1.1
WRA	Warramunga Arr	123.00	206	PKP	PKPdf	13 15 15.5	-1.1
	comp=E,0.6nm,0.3s,baz=154,slow=2.0,SNR=46						
WRA				pPKP	pPKPdf	13 15 56.7	-2.3
	comp=E,1.0nm,0.6s,baz=165,slow=1.6,SNR=4.0						
WRA				SKP		13 18 35.8	
	comp=E,1.7nm,0.8s,baz=162,slow=1.5,SNR=7.9						
WRA				PKKPbc	PKKPbc	13 25 07.0	-1.0
	comp=E,0.5nm,0.8s,baz=344,slow=4.2,SNR=5.7						
PEA1	Petropavlovsk-	141.61	316	ePKPpre	PKPpre	13 15 46.0	
PETK	Petropavlovsk-	141.61	316	PKhKP	PKPpre	13 15 45.9	
	baz=90,slow=5.1						
GUMO	Guam	144.03	245	PKP	PKPab	13 15 53.3	-0.3
	comp=E,100nm,1.1s,baz=180,slow=14,SNR=4.7						
BVAR	Borovoye Array	144.52	43	PKP	PKPdf	13 15 55.4	-0.2
	comp=E,1.8nm,0.4s,baz=323,slow=2.3,SNR=17						
PSI	Prapat	147.67	156	PKPbc	PKPbc	13 16 03.9	-1.4
	comp=E,5.0nm,0.8s,baz=180,slow=7.6,SNR=3.2						
KURBB	Kurchatov Arra	150.09	44	PKPbc	PKPbc	13 16 10.8	+0.8
	comp=E,6.4nm,0.6s,baz=296,slow=3.0,SNR=59						
KURBB				pPKPbc	pPKPbc	13 16 50.5	-1.7
	comp=E,7.7nm,0.7s,baz=296,slow=3.3,SNR=8.1						
KURK	Kurchatov	150.11	44	ePKPbc	PKPbc	13 16 10.8	+0.7
KSH	Kashi	150.72	67	ePKPbc	PKPdf	13 16 05.6	-0.8
KSH				sPKP		13 17 04.8	
KSH				PKS	PKSdf	13 19 39.2	-2.0
KSH				PP	PP	13 19 50.1	-0.7
ZAA1	Zalesovo Array	151.77	34	ePKPbc	PKPbc	13 16 14.2	+0.4
ZALV	Zalesovo Beam	151.77	34	PKPbc	PKPbc	13 16 14.2	+0.4
	comp=E,14nm,0.5s,baz=302,slow=3.3,SNR=54						
ZALV				pPKPbc	pPKPbc	13 16 56.3	+0.3
	comp=E,15nm,0.5s,baz=297,slow=2.8,SNR=10						
MK32	Makanchi Array	153.85	50	ePKPdf	PKPdf	13 16 10.2	-0.5
MK32				ePKPbc	PKiKP	13 16 18.9	+0.1
MKAR	Makanchi Array	153.85	50	PKP	PKPdf	13 16 10.2	-0.5
	comp=E,0.5nm,0.9s,baz=270,slow=1.4,SNR=3.6						
MKAR				PKPbc	PKiKP	13 16 18.9	+0.1
	comp=E,1.0nm,0.6s,baz=301,slow=2.0,SNR=10.0						
MKAR				pPKP	pPKPdf	13 16 52.4	-0.8
	comp=E,0.9nm,0.4s,baz=318,slow=1.8,SNR=4.7						
MKAR				pPKPbc	pPKPbc	13 17 01.0	0.0
	comp=E,1.7nm,0.6s,baz=302,slow=2.3,SNR=5.5						
MJAR	Matsushiro Arr	157.87	287	PKPab	PKPab	13 16 50.4	+0.3
	comp=E,3.8nm,0.8s,baz=126,slow=2.2,SNR=13						
MAJO	Matsushiro	157.87	287	ePKPab	PKPab	13 16 51.2	+1.1
WMQ	Urumqi	158.50	53	ePKP	PKPdf	13 16 16.9	0.0
CMAR	Chiang Mai Arr	161.59	139	PKP	PKPdf	13 16 21.7	+0.7
	comp=E,0.5nm,0.3s,baz=254,slow=2.5,SNR=4.4						
SONA0	Songino Array	164.71	13	ePKPab	PKPab	13 17 20.4	+0.7
SONM	Songino Array	164.71	13	PKPab	PKPab	13 17 20.4	+0.7
	comp=E,1.0nm,0.8s,baz=329,slow=2.5,SNR=3.2						
SONM				pPKPab	pPKPab	13 18 00.8	+0.4
	comp=E,1.6nm,0.7s,baz=305,slow=3.9,SNR=5.8						
KSRS	Korea Array	165.93	293	PKP	PKPdf	13 16 24.9	+0.5
	comp=E,0.3nm,0.5s,baz=284,slow=24,SNR=1.8						
KSRS				PKPab	sPKPdf	13 17 23.3	-0.1
	comp=E,2.1nm,1.0s,baz=68,slow=4.8,SNR=6.2						
KSAR	Wonju Array Be	165.96	293	PKP	PKPdf	13 16 24.9	+0.4
KSAR				PKPab	sPKPdf	13 17 23.3	-0.1
HHC	Hu-ho-hao-te	172.20	0	ePKP	PKPdf	13 16 27.2	-1.2
NJ2	Nanjing	173.77	263	ePKP	PKPdf	13 16 29.9	+0.7

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*NNC **09** 13:04:37.9±0.9, 37°.09N×71°.22E, h169^{km}±13^{km}, mb2.8, mpv3.7, Error ellipse: s-maj=9.8km s-min=7.5km az=64.0*

*IDC **09** 13:04:40.6±8.6, 37°.26N×71°.26E, h207^{km}±54^{km}, mb3.4/3, mb1 3.2/9, mb1mx3.0/63, mbtmp3.9/9, MS3.1/1, Ms1 3.1/1, ms1mx2.2/51, Error ellipse: s-maj=85.3km s-min=39.7km az=172.0*

ISC 09 13:04:38.4±2.0**, 37°.1N**±0°.2×**71°.3E**±0°.1**, h200^{km}, n17, σ0^{s}.64**/22**, mb3.7**/3**, 7C-4D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.36	30	⇑Pn	Pn	13 05 31.7	-0.8
	23nm,0.3s						
SFK				⇓Sn	Sn	13 06 13.9	-1.0
	19nm,0.2s						
MNAS	Manas	5.44	9	⇓Pn	Pn	13 05 58.1	-0.4
	3.8nm,0.4s						
MNAS				⇓Sn	Sn	13 07 01.7	-0.2
	17nm,0.5s						
KK31	Karatay Array	6.02	354	Pn	Pn	13 06 05.3	-0.5
	1.2nm,0.2s,baz=176,slow=13,SNR=35						
KK31				⇑Sn	Sn	13 07 14.2	-0.9
	7.1nm,0.5s,baz=182,slow=19,SNR=20						
AAK	Ala-Archa	6.03	23	P	Pn	13 06 06.4	+0.3
	2.3nm,0.3s,baz=213,slow=12,SNR=6.0						
AAK				S	Sn	13 07 15.1	-0.5
	1.0nm,0.3s,baz=165,slow=15,SNR=2.0						
AAK	Ala-Archa	6.03	23	⇑Pn	Pn	13 06 06.1	0.0
	2.8nm,0.3s						
AAK				⇑Sn	Sn	13 07 15.6	+0.1
	13nm,0.8s						
TKM2	Tokmak 2	6.66	28	⇑Pn	Pn	13 06 14.1	-0.1
	1.9nm,0.5s						
TKM2				⇑Sn	Sn	13 07 31.4	+1.0
	3.1nm,0.7s						
MKAR	Makanchi Array	12.64	37	P	P	13 07 34.1	-0.9
	0.1nm,0.3s,baz=214,slow=11,SNR=4.8						
KURBB	Kurchatov Arra	14.46	19	P	P	13 07 55.8	+0.8
	0.2nm,0.3s,baz=209,slow=10,SNR=5.6						
AB31	Akbulak array	14.69	329	⇓P	P	13 07 58.0	+0.4
	0.4nm,0.4s,baz=140,slow=12,SNR=13						
BVAR	Borovoye Array	15.93	358	P	Pn	13 08 12.8	+1.2
	0.3nm,0.3s,baz=182,slow=10,SNR=4.4						
AKTO	Aktyubinsk	16.40	329	P	Pn	13 08 17.4	+0.1
	0.6nm,0.3s,baz=139,slow=12,SNR=7.1						
AKTO	Aktyubinsk	16.40	329	⇑P	Pn	13 08 16.9	-0.4
	2.3nm,0.5s						
ZALV	Zalesovo Beam	19.25	25	P	P	13 08 47.7	+0.3
	0.3nm,0.3s,baz=206,slow=9.6,SNR=5.6						
SONM	Songino Array	27.77	56	LR	LR	13 22 30.9	
	comp=Z,42nm,19.2s,baz=260,slow=39						
FINES	FINESS Array B	37.13	326	P	P	13 11 29.8	+0.4
	1.3nm,0.7s,baz=153,slow=13,SNR=1.4						
ARCES	ARCESS Array B	40.69	337	P	P	13 11 58.7	-0.2
	2.7nm,1.0s,baz=102,slow=8.4,SNR=4.3						
HFS	Hagfors	42.76	321	P	P	13 12 15.5	-0.2
	1.2nm,0.4s,baz=81,slow=8.9,SNR=7.8						

RSNC 09 13:08:16.3±0.8**, 6°.77N**×**73°.16W, h144^{km}**±4^{km}**, ML2.9, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.18	186	eP	Pn	13 08 35.8	-0.3
BARC				eS	Sn	13 08 50.6	-0.5
BARC				i		13 08 52.9	
	comp=Z,107nm,0.4s						
BRRC	Barranca, Sant	0.64	302	eP	Pn	13 08 37.6	-0.2
BRRC				eS	Sn	13 08 54.3	+0.2
BRRC				i		13 08 55.4	
	comp=Z,145nm,0.1s						
PAMC	Pamplona, Colo	0.73	39	eP	Pn	13 08 38.7	-0.2
PAMC				eS	Sn	13 08 55.8	-0.4
RUSC	La Rusia	0.88	175	eS	Sn	13 08 57.3	-0.8
PTBC	PUERTO BERRIO,	1.30	260	eP	Pn	13 08 42.3	-1.1
PTBC				eS	Sn	13 09 03.6	-0.5
OCAC	Ocana	1.47	354	eP	Pn	13 08 44.6	-0.6
OCAC				i		13 09 09.5	
	comp=Z,165nm,0.2s						
ZARC	Zaragoza, Cauc	1.83	293	eP	Pn	13 08 48.2	-0.9
ZARC				eS	Sn	13 09 13.4	-0.8
ZARC				i		13 09 19.6	
	comp=Z,63nm,0.3s						
NORC	Norcasia	2.08	235	eP	Pn	13 08 51.8	-0.2
NORC				eS	Sn	13 09 19.5	0.0
CHIC	Chingaza	2.20	195	eP	Pn	13 08 53.9	0.0
CHIC				eS	Sn	13 09 23.0	+0.2
CHIC				i		13 09 26.9	
	comp=Z,51nm,0.5s						
HELC	Santa Helena	2.42	256	eS	Sn	13 09 26.4	-1.0
HELC				i		13 09 34.8	
	comp=Z,35nm,0.5s						
TOLC	Tolima	3.05	225	eP	Pn	13 09 04.0	-0.4
PRAC	Prado	3.49	210	eS	Pn	13 09 09.5	-0.3
PRAC	Prado	3.49	210	eP	Pn	13 09 09.3	-0.5

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*ISCJB **09** 13:28:13.6±0.6, 55°.95S±0°.09×28°.0W±0°.2, h121^{km}, mb4.3/9, Error ellipse: s-maj=16.3km s-min=9.0km az=140.6*

*IDC **09** 13:28:14.9±2.1, 55°.90S×27°.94W, h115^{km}±17^{km}, mb4.1/8, mb1 4.2/10, mb1mx3.9/32, mbtmp4.4/10, Error ellipse: s-maj=20.4km s-min=15.5km az=70.0*

*NEIC **09** 13:28:16.0±1.1, 55°.96S×28°.05W, h128^{km}±8^{km}, mb4.1/1, Error ellipse: s-maj=13.9km s-min=8.5km az=53.0*

ISC 09 13:28:15.3±0.6**, 55°.9S**±0°.1×**28°.0W**±0°.1**, h121^{km}, n34, σ0^{s}.78**/30**, mb4.2**/8**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	5.16	285	ePn	Pn	13 29 29.7	-0.5
VNA1	Neumayer--Stat	17.08	157	P	P	13 32 05.8	-0.3
VNA3	Neumayer Olymp	17.26	160	P	P	13 32 07.3	-0.8
SNAA	Sanae	19.04	156	P	P	13 32 27.2	-0.4
SNAA	Sanae	19.04	156	P	P	13 32 27.1	-0.4
	5.3nm,0.3s,baz=310,slow=9.8,SNR=194						
PMSA	Palmer Station	19.65	229	P	P	13 32 33.1	-1.1
	0.7nm,0.3s,baz=124,slow=22,SNR=5.7						
TRQA	Tornquist	28.86	294	eP	P	13 34 02.8	+0.6
QSPA	South Pole Qui	34.33	180	P	P	13 34 50.8	+0.8
	11nm,0.6s,baz=170,slow=3.0,SNR=40						
QSPA	South Pole Qui	34.33	180	eP	P	13 34 50.3	+0.4
CPUP	Villa Florida	36.39	312	P	P	13 35 07.6	-0.1
	0.4nm,0.3s,baz=150,slow=12,SNR=3.2						
MAW	Mawson	40.52	144	P	P	13 35 41.4	-0.3
	2.8nm,0.7s,baz=226,slow=12,SNR=6.9						
VNDA	Vanda	46.68	183	P	P	13 36 32.2	+1.2
	8.6nm,0.7s,baz=186,slow=6.4,SNR=66						
H10S2	ASCENSION HYDR	48.01	18	T	T	14 28 59.7	
	baz=190						
H10S3	ASCENSION HYDR	48.01	18	T	T	14 29 10.4	
	baz=190						
H10S1	ASCENSION HYDR	48.02	18	T	T	14 28 59.0	
	baz=190						
H10N1	ASCENSION HYDR	49.12	18	T	T	14 30 44.4	
	baz=188						
H10N3	ASCENSION HYDR	49.13	18	T	T	14 30 19.0	
	baz=188						
H10N2	ASCENSION HYDR	49.14	18	T	T	14 30 31.7	
	baz=188						
LBTB	Lobatse	49.40	74	P	P	13 36 52.8	+0.2
	3.0nm,0.8s,baz=222,slow=12,SNR=3.2						
LPAZ	La Paz	49.94	306	P	P	13 36 57.7	+0.3
	1.7nm,0.6s,baz=136,slow=6.1,SNR=7.6						
SAML	Samuel	54.40	316	eP	P	13 37 30.0	+0.4
	2.3nm,0.8s						
TORD	Torodi Ar. Bea	73.16	30	P	P	13 39 32.3	-0.2
	3.9nm,0.8s,baz=198,slow=6.1						
ASAR	Alice Springs	99.25	163	P	Pdif	13 41 42.1	-1.2
	0.8nm,0.8s,baz=189,slow=4.9,SNR=7.3						
WRA	Warramunga Arr	102.96	163	P	Pdif	13 41 59.3	-0.5
	0.1nm,0.8s,baz=196,slow=4.4,SNR=2.9						
FINES	FINESS Array B	124.47	28	PKP	PKPdf	13 46 58.2	-0.3
	2.1nm,0.8s,baz=241,slow=3.9,SNR=3.5						
BVAR	Borovoye Array	135.09	58	PKP	PKPdf	13 47 20.2	+1.2
	0.3nm,0.4s,baz=273,slow=2.7,SNR=3.1						
BVAR				SKPbc	SKPbc	13 50 37.0	-1.2
	0.6nm,0.6s,baz=224,slow=4.0,SNR=4.4						
YKA	Yellowknife Ar	135.78	318	PKP	PKPdf	13 47 20.0	0.0
	0.5nm,0.7s,baz=148,slow=1.7,SNR=3.7						
YKA				SKPbc	SKPbc	13 50 40.2	+0.2
	0.7nm,0.8s,baz=122,slow=2.5,SNR=4.4						
MKAR	Makanchi Array	137.27	72	SKPbc	SKPbc	13 50 43.5	-1.6
	0.5nm,0.8s,baz=222,slow=1.5,SNR=5.3						
KURBB	Kurchatov Arra	137.65	65	SKPbc	SKPbc	13 50 45.3	-0.8
	0.8nm,0.7s,baz=238,slow=3.2,SNR=8.2						
KURK	Kurchatov	137.75	65	SKPbc	SKPbc	13 50 45.3	-1.0
ZALV	Zalesovo Beam	142.71	64	PKP	PKPdf	13 47 34.1	+1.2
	1.5nm,0.3s,baz=259,slow=2.9,SNR=4.1						
DAWY	Dawson	146.38	312	ePKPbc	PKPbc	13 47 40.0	-0.5
ILAR	Eielson Array	149.70	312	PKPbc	PKPbc	13 47 49.3	+0.1
	4.5nm,0.9s,baz=130,slow=1.6,SNR=50						
SONM	Songino Array	151.16	87	PKPbc	PKPbc	13 47 53.5	+0.2
	1.3nm,0.5s,baz=228,slow=3.6,SNR=7.9						

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*ISCJB **09** 13:31:59.3±0.5, 49°.84N±0°.03×18°.51E±0°.03, h0^{km}, Error ellipse: s-maj=4.8km s-min=3.0km az=15.2*

*CSEM **09** 13:31:59.5±0.4, 49°.87N×18°.56E, h1^{km}, ML2.7/7, Error ellipse: s-maj=8.4km s-min=3.6km az=30.0*

*IPEC **09** 13:32:00.2±0.3, 49°.84N×18°.59E, h0^{km}, ML1.9/3, Error ellipse: s-maj=2.2km s-min=1.8km az=62.0*

*PRU **09** 13:32:00.7, 49°.83N×18°.51E, h0^{km}*

ISC 09 13:31:59.8±0.8**, 49°.81N**±0°.04×**18°.59E**±0°.03**, h0^{km}, n29, σ0^{s}.59**/48**, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.29	277	ePG	Pg	13 32 06.1	+0.8
OKC				eSG	Sg	13 32 08.5	-0.5
	comp=Z,34nm,0.2s						
OKC	Ostrava-Krasne	0.29	277	Pg	Pg	13 32 06.1	+0.8
OKC				Sg	Sg	13 32 08.5	-0.5
	34nm,0.2s						
MORC	Moravsky Berou	0.68	268	ePg	Pg	13 32 13.3	+0.5
MORC				eSg	Sg	13 32 21.4	-0.1
	19nm,0.2s,baz=85						
MORC	Moravsky Berou	0.68	268	ePG	Pg	13 32 13.3	+0.5
MORC				eSG	Sg	13 32 21.4	-0.1
MORC	Moravsky Berou	0.68	268	ePg	Pg	13 32 13.3	+0.5
	baz=85						
MORC				eSg	Sg	13 32 21.4	-0.1
	19nm,0.2s,baz=85						
LANS	Liptovska Anna	0.87	138	ePG	Pb	13 32 17.9	+0.1
LANS				eSG	Sb	13 32 30.1	+0.1
LANS	Liptovska Anna	0.87	138	ePg	Pb	13 32 17.9	+0.1
LANS				eSg	Sb	13 32 30.1	+0.1
OJC	Ojcow	0.88	62	ePg	Pg	13 32 17.3	+0.5
OJC				eSg	Sb	13 32 30.3	-0.1
JAVC	Velka Javorina	1.12	213	ePg	Pb	13 32 22.2	+0.1
JAVC	Velka Javorina	1.12	213	ePG	Pb	13 32 22.2	+0.1
JAVC	Velka Javorina	1.12	213	ePg	Pb	13 32 22.2	+0.1
	baz=31						
KRLC	Kraliky	1.20	284	eSG	Sg	13 32 38.0	-0.2
	comp=Z,7.5nm,0.3s						
KRLC	Kraliky	1.20	284	Sg	Sg	13 32 38.0	-0.2
	7.5nm,0.3s						
VYHS	Vyhne	1.32	173	ePG	Pb	13 32 25.5	0.0
VYHS				eSG	Sn	13 32 43.9	0.0
VYHS				eLG	Lg	13 32 51.9	
VYHS	Vyhne	1.32	173	ePn	Pb	13 32 25.5	0.0
VRAC	Vranov	1.39	250	ePg	Pg	13 32 26.1	-0.3
	baz=67						
VRAC				eSg	Sg	13 32 44.1	-0.3
	16nm,0.3s,baz=67						
VRAC	Vranov	1.39	250	ePG	Pg	13 32 26.2	-0.2
VRAC				eSG	Sg	13 32 44.1	-0.3
VRAC	Vranov	1.39	250	ePg	Pg	13 32 26.1	-0.3
	baz=67						
VRAC				eSg	Sg	13 32 44.1	-0.3
	16nm,0.3s,baz=67						
DPC	Dobruska-Polom	1.56	291	ePG	Pn	13 32 28.4	-0.4
DPC				eSG	Sn	13 32 48.5	-1.2
	comp=Z,11nm,0.3s						
DPC	Dobruska-Polom	1.56	291	Pg	Pn	13 32 28.4	-0.4
DPC				Sg	Sn	13 32 48.5	-1.2
	11nm,0.3s						
KRUC	Moravsky	1.61	243	ePg	Pn	13 32 29.7	+0.2
	baz=61						
KRUC				eSg	Sb	13 32 51.2	-0.1
	14nm,0.2s,baz=61						
KRUC	Moravsky	1.61	243	ePG	Pn	13 32 29.8	+0.2
KRUC				eSG	Sb	13 32 51.3	-0.1
KRUC	Moravsky	1.61	243	ePg	Pn	13 32 29.7	+0.2
	baz=61						
KRUC				eSg	Sb	13 32 51.2	-0.1
	14nm,0.2s,baz=61						
MODS	Modra-Piesok	1.67	211	eSN	Sb	13 32 52.8	-0.2
MODS				eLG	Lg	13 32 53.3	
UPC	Upice	1.80	294	ePG	Pn	13 32 32.2	+0.1
UPC				eSG	Sb	13 32 56.6	-0.1
UPC	Upice	1.80	294	Pg	Pn	13 32 32.2	+0.1
UPC				Sg	Sb	13 32 56.6	-0.1
PRU	Pruhonice	2.62	276	eSG	Sb	13 33 21.1	+0.7
	comp=Z,4.4nm,0.3s						
PRU	Pruhonice	2.62	276	Sg	Sb	13 33 21.1	+0.7
	4.4nm,0.3s						
KHC	Kasperske Hory	3.34	260	eSG	Sb	13 33 43.6	+2.6
	comp=Z,5.0nm,0.4s						

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*ISCJB **09** 13:36:31.6±0.2, 23°.79N±0°.01×121°.76E±0°.02, h44^{km}±5^{km}, Error ellipse: s-maj=2.9km s-min=2.0km az=42.7*

*JMA **09** 13:36:31.1, 23°.78N×121°.71E, h45^{km}±1^{km}, M2.5*

*TAP **09** 13:36:31.4, 23°.80N×121°.73E, h46^{km}, ML3.0, B*

ISC 09 13:36:32.1±1.2**, 23°.79N**±0°.02×**121°.74E**±0°.02**, h41^{km}**±6^{km}**, n76, σ0^{s}.82**/136**, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENLB	Shoufeng	0.17	311	eP	Pn	13 36 39.4	+0.1
	baz=312						
ENLB				eS	Sn	13 36 45.8	+1.5
	baz=312						
HWA	Hwalien	0.22	326	eP	Pn	13 36 39.9	+0.2
	baz=329						
HWA				eS	Sn	13 36 46.8	+1.8
	baz=329						
ESL	Shilin	0.28	275	P	Pn	13 36 39.7	-0.6
	baz=273						
ESL				eS	Sn	13 36 45.9	-0.1
	baz=273						
EGFH	Guangfu	0.31	247	P	Pn	13 36 40.4	-0.2
	baz=255						
EGFH				eS	Sn	13 36 46.5	0.0
	baz=255						
TWD	Chiawan	0.32	335	P	Pn	13 36 40.1	-0.5
	baz=338						
TWD				eS	Sn	13 36 46.7	0.0
	baz=338						
NACB	Ninganchiao	0.41	341	eP	Pn	13 36 41.0	-0.7
	baz=333						
NACB				eS	Sn	13 36 48.0	-0.4
	baz=333						
HGSD	Ruisui	0.42	225	P	Pn	13 36 41.8	-0.1
	baz=235						
EHY	Hungye	0.48	234	eP	Pn	13 36 41.8	-0.8
	baz=240						
EHY				eS	Sn	13 36 48.8	-1.2
	baz=240						
WHF	Hehuan Shan	0.56	309	P	Pn	13 36 43.0	-1.1
	baz=304						
WHF				eS	Sn	13 36 51.5	-1.1
	baz=304						
YULB	Yu-li	0.57	226	eP	Pn	13 36 42.8	-1.1
	baz=231						
YULB				eS	Sn	13 36 51.0	-1.2
	baz=231						
CHGB	Renai	0.58	297	P	Pn	13 36 43.6	-0.7
	baz=300						
CHGB				eS	Sn	13 36 52.3	-0.5
	baz=300						
TWF1	Yuli	0.60	223	eP	Pn	13 36 43.2	-1.0
	baz=229						
TWF1				eS	Sn	13 36 52.5	-0.4
	baz=229						
NANB	Nanao	0.63	1	P	Pn	13 36 44.3	-0.4
	baz=6.0						
NANB				eS	Sn	13 36 53.1	-0.6
	baz=6.0						
ENA	Nanau	0.64	360	eP	Pn	13 36 44.3	-0.4
	baz=8.0						
ENA				eS	Sn	13 36 53.4	-0.3
	baz=8.0						
ENAH	Nanao	0.66	5	eP	Pn	13 36 44.6	-0.4
	baz=6.0						
ENAH				eS	Sn	13 36 54.3	0.0
	baz=6.0						
TWT	Tachien	0.69	312	eP	Pn	13 36 45.2	-0.4
	baz=311						
TWT				eS	Sn	13 36 55.0	-0.3
	baz=311						
TDCB	Techi	0.70	311	eP	Pn	13 36 45.2	-0.6
	baz=311						
TDCB				eS	Sn	13 36 54.8	-0.8
	baz=311						
NNSB	Datong	0.71	333	P	Pn	13 36 44.9	-1.0
	baz=333						
NNSB				eS	Sn	13 36 54.9	-0.9
	baz=333						
NNSH	Datong	0.71	333	P	Pn	13 36 44.9	-1.0
	baz=333						
NNSH				eS	Sn	13 36 54.9	-1.0
	baz=333						
FULB	Fuli	0.72	215	P	Pn	13 36 45.4	-0.5
	baz=225						
FULB				eS	Sn	13 36 56.8	+1.0
	baz=225						
SSLB	Suanglung	0.72	270	eS	Sn	13 36 55.0	-0.8
	baz=269						
NNS	Nan Shan	0.73	333	eP	Pn	13 36 45.2	-0.9
	baz=333						
NNS				eS	Sn	13 36 55.4	-0.8
	baz=333						
CHKT	Chengkung	0.77	207	eP	Pn	13 36 45.8	-0.8
	baz=196						
CHKT				eS	Sn	13 36 56.3	-0.7
	baz=196						
YUS	Yu-Shan	0.78	248	eP	Pn	13 36 46.7	-0.5
	baz=246						
YUS				eS	Sn	13 36 57.6	-0.4
	baz=246						
DPDB	Guoxing	0.79	288	eP	Pn	13 36 46.1	-0.7
	baz=286						
DPDB				eS	Sn	13 36 56.8	-0.6
	baz=286						
TYC	Yuchr	0.82	278	P	Pn	13 36 46.7	-0.5
	baz=280						

TYC				*e*S	Sn	13 36 58.5	+0.3
	baz=280						
TWC	Suao	0.82	7	*e*P	Pn	13 36 47.0	-0.3
	baz=9.0						
TWC				*e*S	Sn	13 36 58.1	-0.1
	baz=9.0						
EOS1	EOS1	0.83	25	*e*P	Pn	13 36 47.1	-0.3
	baz=36						
ENTT	Nioudou	0.86	349	P	Pn	13 36 47.2	-0.7
	baz=350						
ENTT				*e*S	Sn	13 36 58.8	-0.5
	baz=350						
ELDTW	Lidau	0.90	228	*e*P	Pn	13 36 47.8	-0.6
	baz=227						
ALS	Alishan	0.90	252	*e*P	Pn	13 36 48.5	-0.2
	baz=251						
ALS				*e*S	Sn	13 37 00.3	-0.4
	baz=251						
TWE	Neicheng	0.93	356	*e*P	Pn	13 36 48.4	-0.3
	baz=347						
TWE				*e*S	Sn	13 37 00.5	-0.4
	baz=347						
WJS	Zhushan	0.93	272	*e*P	Pn	13 36 49.0	+0.3
	baz=271						
WJS				*e*S	Sn	13 37 02.1	+1.2
	baz=271						
YHNB	Yeheng	0.94	339	P	Pn	13 36 48.2	-0.7
	baz=340						
YHNB				*e*S	Sn	13 37 00.3	-0.9
	baz=340						
NSK	Sanguang	0.95	338	P	Pn	13 36 48.5	-0.6
	baz=339						
NSK				*e*S	Sn	13 37 00.8	-0.7
	baz=339						
SLBB	Yuanshan	0.96	354	*e*P	Pn	13 36 48.8	-0.5
	baz=346						
WNT	Mingjian	0.97	275	*e*P	Pn	13 36 49.6	+0.2
	baz=264						
WNT				*e*S	Sn	13 37 02.9	+1.0
	baz=264						
CHN5	Tsauling	0.99	259	P	Pn	13 36 49.5	-0.2
	baz=258						
CHN5				*e*S	Sn	13 37 03.6	+1.0
	baz=258						
NWLT	Wulai	1.01	347	*e*P	Pn	13 36 50.4	+0.5
	baz=348						
NWLT				*e*S	Sn	13 37 02.6	-0.3
	baz=348						
NTC	Toucheng	1.06	4	*e*P	Pn	13 36 50.8	+0.2
	baz=5.0						
NTC				*e*S	Sn	13 37 05.1	+0.9
	baz=5.0						
NSTT	Nanjuang	1.08	321	*e*P	Pn	13 36 50.7	-0.1
	baz=321						
NSTT				*e*S	Sn	13 37 04.5	0.0
	baz=321						
LIOB	Emei	1.08	322	*e*P	Pn	13 36 50.9	+0.1
	baz=322						
LIOB				*e*S	Sn	13 37 04.9	+0.3
	baz=322						
WGK	Gukeng	1.09	265	*e*P	Pn	13 36 50.9	0.0
	baz=264						
WGK				*e*S	Sn	13 37 06.1	+1.3
	baz=264						
NSY	Sanyi	1.09	305	*e*P	Pn	13 36 50.8	-0.2
	baz=305						
NSY				*e*S	Sn	13 37 05.7	+0.8
	baz=305						
STYT	Tauyuan	1.10	236	P	Pn	13 36 51.2	0.0
	baz=234						
STYT				*e*S	Sn	13 37 05.6	+0.4
	baz=234						
TWH	Lutao	1.10	193	*e*P	Pn	13 36 50.0	-1.1
	baz=191						
TWH				*e*S	Sn	13 37 04.0	-1.1
	baz=191						
WDLH	Douliu	1.11	265	*e*P	Pn	13 36 51.4	+0.2
	baz=264						
WDLH				*e*S	Sn	13 37 07.0	+1.7
	baz=264						
WCHH	Zhanghua	1.12	285	*e*P	Pn	13 36 51.5	+0.1
	baz=284						
WCHH				*e*S	Sn	13 37 07.3	+1.8
	baz=284						
TPUB	Ta-pu	1.13	245	P	Pn	13 36 51.5	-0.1
	baz=244						
TPUB				*e*S	Sn	13 37 06.9	+1.0
	baz=244						
CHN4	Tsaushan	1.14	248	P	Pn	13 36 52.0	+0.3
	baz=247						
CHN4				*e*S	Sn	13 37 07.9	+1.8
	baz=247						
NMLH	Miaoli	1.14	311	*e*P	Pn	13 36 51.5	-0.2
	baz=310						
TWGBT	Beinan	1.14	212	*e*P	Pn	13 36 50.1	-1.6
	baz=211						
TWG	Pinlang	1.15	213	*e*P	Pn	13 36 50.4	-1.3
	baz=211						
WLTB	Daxi	1.15	337	*e*S	Sn	13 37 07.5	+1.3
	baz=344						
WTP	Ta-pu	1.17	243	*e*P	Pn	13 36 52.2	+0.1
	baz=241						
WTP				*e*S	Sn	13 37 08.4	+1.5
	baz=241						
TIPB	Shuangxi	1.18	4	*e*P	Pn	13 36 52.3	+0.1
	baz=350						
TIPB				*e*S	Sn	13 37 08.0	+0.9
	baz=350						
TWA	Mucha	1.19	353	*e*S	Sn	13 37 08.2	+0.8
	baz=354						
TWK	Hsinying	1.26	246	*e*P	Pn	13 36 53.7	+0.3
	baz=244						
TWK				*e*S	Sn	13 37 10.0	+0.8
	baz=244						
RLNB	Erlin	1.27	275	*e*P	Pn	13 36 53.4	0.0
	baz=264						
RLNB				*e*S	Sn	13 37 10.9	+1.6
	baz=264						
SGST	Jiashian	1.28	237	*e*P	Pn	13 36 54.4	+0.8
	baz=235						
SGST				*e*S	Sn	13 37 11.2	+1.8
	baz=235						
JYNG	Yonagunijimaku	1.28	59	P	Pn	13 36 53.8	+0.2
JYNG				*e*S	Sn	13 37 10.7	+1.2
YOJ	Yonaguni jima	1.34	60	*e*P	Pn	13 36 54.7	+0.3
	baz=61						
YOJ				*e*S	Sn	13 37 11.2	+0.3
	baz=61						
YOJ	Yonaguni jima	1.34	60	P	Pn	13 36 54.6	+0.3
YOJ				S	Sn	13 37 11.0	+0.1
ECL	Taimali	1.39	212	*e*P	Pn	13 36 53.7	-1.4
	baz=205						
SSD	Sandimen	1.46	225	*e*P	Pn	13 36 56.8	+0.8
	baz=216						
MASBT	Mashibuluo	1.56	221	*e*P	Pn	13 36 57.4	+0.1
	baz=220						
MASBT				*e*S	Sn	13 37 18.5	+2.2
	baz=220						
EAST	Anshuo	1.62	211	*e*P	Pn	13 36 57.7	-0.7
	baz=201						
IRIF	Iriomote-Funau	1.90	73	P	Pn	13 37 02.1	+0.1
IRIF				S	Sn	13 37 25.5	+0.8
HATJ	Hateruma jima	1.91	82	P	Pn	13 37 02.2	+0.1
HATJ				S	Sn	13 37 25.3	+0.4
WDGT	Dungji	1.98	255	*e*P	Pn	13 37 02.7	-0.5
	baz=254						
PNG	Penghu	2.02	264	*e*P	Pn	13 37 02.9	-0.8
	baz=263						
JKRS	Kuro-shima	2.12	77	P	Pn	13 37 05.5	+0.4
JKRS				S	Sn	13 37 31.1	+0.9
VCHM	Qimei	2.20	255	*e*S	Sn	13 37 31.3	-0.9
	baz=254						
JIJ	Ishigaki jima	2.27	75	P	Pn	13 37 06.8	-0.3
JIJ				S	Sn	13 37 32.6	-1.2
JISG	Ishigakijimahi	2.48	71	P	Pn	13 37 09.6	-0.4
JISG				S	Sn	13 37 37.6	-1.4
JTJ	Tarama	2.83	72	P	Pn	13 37 14.6	-0.3
JTJ				S	Sn	13 37 48.5	+0.7

IDC 09 13:48:10.7±19.0**, 28.°05S**×**73.°65E, h0**^{km}**, mb3.9**/3**, mb1 4.2**/3**, mb1mx3.5**/77**, mbtmp3.9**/3**, Error ellipse: s-maj=486.1km s-min=49.5km az=135.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S2	Diego Garcia H	20.33	357	T	T	14 15 17.5	
	baz=174,slow=76						
H08S1	Diego Carcia H	20.33	357	T	T	14 15 20.9	
	baz=174,slow=76						
H08S3	Diego Garcia H	20.34	357	T	T	14 15 14.6	
	baz=174,slow=76						
H01W2	Cape Leeuwin H	35.02	112	T	T	14 30 27.5	
	baz=268,slow=75,SNR=6.7						
H01W3	Cape Leeuwin H	35.02	112	T	T	14 30 26.8	
	baz=268,slow=75,SNR=3.9						
H01W1	Cape Leeuwin H	35.03	112	T	T	14 30 29.2	
	baz=268,slow=75,SNR=4.3						
ASAR	Alice Springs	53.93	100	P	P	13 57 35.8	-0.6
	1.0nm,1.1s,baz=249,slow=6.6,SNR=7.4						
WRA	Warramunga Arr	55.55	96	P	P	13 57 48.6	+0.4
	2.7nm,1.0s,baz=249,slow=6.9,SNR=10						
VNDA	Vanda	62.44	166	P	P	13 58 35.1	0.0
	2.0nm,1.0s,baz=274,slow=8.4,SNR=5.9						

IDC 09 13:49:34.2±7.4**, 22.°34N**×**143.°61E, h0**^{km}**, mb3.7**/5**, mb1 3.7**/5**, mb1mx3.4**/82**, mbtmp3.7**/5**, Error ellipse: s-maj=300.0km s-min=28.0km az=77.0, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H11S3	WAKE ISLAND Hy	21.96	96	T	T	14 18 01.5	
	baz=284,slow=75,SNR=22						
H11S1	WAKE ISLAND Hy	21.97	96	T	T	14 17 56.3	
	baz=284,slow=75,SNR=17						
H11S2	WAKE ISLAND Hy	21.98	96	T	T	14 18 00.5	
	baz=284,slow=75,SNR=16						
WRA	Warramunga Arr	42.99	193	P	P	13 57 35.3	-0.1
	0.7nm,1.1s,baz=14,slow=8.7,SNR=4.5						
ASAR	Alice Springs	46.70	192	P	P	13 58 02.3	-2.7
	0.4nm,1.0s,baz=13,slow=5.8,SNR=2.8						
ZALV	Zalesovo Beam	53.95	321	P	P	13 58 59.3	-0.3
	1.1nm,0.3s,baz=118,slow=5.5,SNR=4.5						
MKAR	Makanchi Array	54.55	312	P	P	13 59 04.1	-0.1
	0.2nm,0.6s,baz=96,slow=8.8,SNR=2.3						
KURBB	Kurchatov Arra	57.32	317	P	P	13 59 24.0	+0.1
	0.4nm,0.5s,baz=96,slow=8.5,SNR=4.3						
BVAR	Borovoye Array	62.44	319	P	P	13 59 59.1	0.0
	0.9nm,0.6s,baz=101,slow=6.2,SNR=5.3						

GUC 09 13:50:35.3±0.4**, 31.°49S**×**71.°94W, h47**^{km}±10^{km}**, ML3.7, 1C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO04	Tololo Observa	1.64	37	*e*P	Pn	13 51 02.6	+0.8
GO04				*i* S	Sn	13 51 23.5	+1.6
TLL	Tololo Astrono	1.64	37	*e*P	Pn	13 51 02.7	+0.8
TLL				*i* S	Sn	13 51 23.5	+1.6
TLL				IAML		13 51 28.7	
	comp=E,1μm,0.5s						
ROCH	El Roble	1.68	152	*e*P	Pn	13 51 02.9	+0.5
ROCH				IAML		13 51 28.8	
	comp=N,1μm,0.8s						
PEL	Peldehue	1.96	148	⇑*i*P	Pn	13 51 06.9	+0.7
PEL				*i* S	Sn	13 51 30.9	+1.2
PEL				IAML		13 51 36.2	
	comp=E,850nm,1.4s						
CLCH	Cerro Calan	2.24	148	*e*S	Sn	13 51 37.5	+0.9
CLCH				IAML		13 51 47.8	
	comp=N,883nm,0.5s						
FCH	Farellones	2.31	143	*e*P	Pn	13 51 12.2	+1.1
FCH				*i* S	Sn	13 51 40.1	+1.6
FCH				IAML		13 51 47.2	
	comp=E,399nm,0.3s						
LCO	Las Campanas	2.69	24	*e*P	Pn	13 51 17.2	+0.9
LCO				*e*S	Sn	13 51 49.2	+1.4
LCO				IAML		13 52 01.3	
	comp=N,379nm,0.9s						
LMEL	Las Melosas	2.77	149	*e*P	Pn	13 51 18.4	+1.0
LMEL				*i* S	Sn	13 51 50.5	+0.8
LMEL				IAML		13 52 00.8	
	comp=N,528nm,0.4s						

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*BJI **09** 13:54:55.8, 35.°26N×28.°54E, h61^{km}, mb5.3/78, mB5.4/55, Ms5.2/88, Ms7 4.9/77*
*ISK **09** 13:54:57.8, 35.°58N×29.°01E, h23^{km}, ML6.0/42*
*NIC **09** 13:54:58.4±0.3, 35.°52N×28.°88E, h50^{km}, mb5.6, ML5.7 Felt I=II MM at Pafos, Lemesos and Lefkosia.*
NIC Felt II MM at Pafos, lemesos and lefkosia.
*PDG **09** 13:54:58.2±0.8, 35.°46N×29.°01E, h50^{km}±16^{km}, ML5.5/10, Error ellipse: s-maj=0.9km s-min=0.9km az=90.0*
*GII **09** 13:54:58.0±0.8, 35.°40N×28.°86E, h54^{km}, mb5.4/2, MD5.6/2*
*ISCJB **09** 13:54:58.5±0.1, 35.°54N±0.°01×28.°966E±0.°008, h53^{km}±1^{km}, mb5.6/453, MS4.8/179, Error ellipse: s-maj=1.7km s-min=1.1km az=13.0*
*ATH **09** 13:54:59.6, 35.°62N×28.°87E, h43^{km}±11^{km}, ML5.4/18, Error ellipse: s-maj=13.4km s-min=0.6km az=108.0*
*PDA **09** 13:54:59.8, 35.°52N×28.°88E, h50^{km}, Mw5.7*
*MOS **09** 13:54:59.4±1.0, 35.°62N×28.°93E, h56^{km}, mb5.9/97, MS4.7/62, Error ellipse: s-maj=4.3km s-min=2.3km az=96.6*
*GCMT **09** 13:55:00.6±0.1, 35.°36N×28.°96E, h71^{km}±1^{km}, MW5.8/116, Moment Tensor Solution. s116,c195; s103,c245; Duration: 1^{s}8 Moment tensor: Scale 10^{17}Nm; M_{rr}0.41±.05; $M_{\theta\theta}$-5.24±.06; $M_{\phi\phi}$4.83±.06; $M_{r\theta}$-0.52±.06; $M_{\theta\phi}$0.57±.06; $M_{\phi r}$0.76±.06; Best double couple: $M_0$5.15400×10^{17} NP1:ϕ_s318.00000°, δ87.00000°, λ170.00000°. NP2:ϕ_s48.00000°, δ80.00000°, λ3.00000°. Principal axes: T 4.9810, Plg9.0000°, Azm273.0000°; N 0.3490, Plg79.0000°, Azm125.0000°; P -5.3270, Plg6.0000°, Azm4.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*
*DDA **09** 13:55:00.4, 35.°71N×28.°86E, h40^{km}, Ml6.0*
*IDC **09** 13:55:00.7±1.4, 35.°63N×28.°94E, h52^{km}±12^{km}, mb5.3/59, mb1 5.3/68, mb1mx5.2/83, mbtmp5.5/68, ML5.2/10, MS4.7/54, Ms1 4.7/54, ms1mx4.6/71, Error ellipse: s-maj=7.7km s-min=7.0km az=135.0*
*NEIC **09** 13:55:00.0±0.0, 35.°62N×28.°93E, h56^{km}, Moment Tensor Solution. s11 Moment tensor: Scale 10^{17}Nm; M_{rr}0.56; $M_{\theta\theta}$-3.59; $M_{\phi\phi}$3.03; $M_{r\theta}$-0.54; $M_{\theta\phi}$0.28; $M_{\phi r}$0.79; Best double couple: $M_0$3.50000×10^{17} NP1:ϕ_s316.00000°, δ84.00000°, λ163.00000°. NP2:ϕ_s48.00000°, δ73.00000°, λ6.00000°. Principal axes: T 3.2700, Plg16.0000°, Azm271.0000°; N 0.4200, Plg71.0000°, Azm118.0000°; P -3.6800, Plg7.0000°, Azm3.0000°;*
*NEIC **09** 13:55:00.6±0.3, 35.°60N×28.°92E, h56^{km}±2^{km}, mb5.6/297, MW5.6, MW5.6 Error ellipse: s-maj=3.0km s-min=2.1km az=189.0, Moment Tensor Solution. s27 Moment tensor: Scale 10^{17}Nm; M_{rr}0.17; $M_{\theta\theta}$-3.65; $M_{\phi\phi}$3.48; $M_{r\theta}$-0.61; $M_{\theta\phi}$0.53; $M_{\phi r}$0.60; Best double couple: $M_0$3.70000×10^{17} NP1:ϕ_s139.00000°, δ90.00000°, λ-167.00000°. NP2: ϕ_s49.00000°, δ77.00000°, λ0.00000°. Principal axes: T 3.6100, Plg9.0000°, Azm273.0000°; N 0.1900, Plg77.0000°, Azm140.0000°; P -3.8000, Plg9.0000°, Azm5.0000°;*
NEIC Felt [IV] at Limassol and [II] at Nicosia, Cyprus. Also felt at Dhoros, Evdhimou, Kyrenia, Mazotos, Paphos, Pissouri and Yioulou. Felt [III] at Al Jizah and Cairo, Egypt. Also felt at Alexandria. Felt [III] at Antalya, Fethiye and Marmaris; [II] at Alanya and Kas, Turkey. Also felt at Manavgat and Serik. Felt at Bat Yam, Qiryat Motzkin and Tel Aviv-Yafo, Israel.
*SFS **09** 13:55:01.0, 35.°67N×28.°78E, h0^{km}, ML5.8*
*CSEM **09** 13:55:01.0±0.1, 35.°61N×28.°95E, h60^{km}, mb5.6/99, ML5.9/11, Mw5.7, Error ellipse: s-maj=1.8km s-min=1.2km az=5.0*
*THE **09** 13:55:01.3, 35.°61N×28.°97E, h62^{km}±4^{km}, ML5.5/7, Error ellipse: s-maj=4.9km s-min=0.7km az=47.0*
*NSSC **09** 13:55:12.6±0.8, 35.°80N×30.°35E, h38^{km}±999^{km}, ML5.5*
ISC 09 13:55:00.6±0.3**, 35.°60N**±0.°02×**28.°95E**±0.°02**, h57**^{km}±2^{km}**, h57**^{km}**:pP-P, n2513, σ1^{s}41**/2886**, mb5.6**/501**, MS4.8**/179**, 91C-116D, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSL	Kastellorizon	0.76	43	P	Pn	13 55 14.9	-0.5
KSL				S	Sn	13 55 28.0	+1.9
KSL				AML	AML	13 55 30.0	
KSL				AML	AML	13 55 33.8	
KSL	Kastellorizon	0.76	43	P	Pn	13 55 14.9	-0.5
KSL				S	Sn	13 55 27.2	+1.1
AKAS	Kas	0.83	40	PG	Pn	13 55 15.3	-1.1
AKAS				SG	Sn	13 55 25.8	-2.2
AKAS	Kas	0.83	40	⇑*i*P	Pn	13 55 16.2	-0.2
AKAS				*i* S	Sn	13 55 28.7	+0.7
AKAS	Kas	0.83	40	*e*Pg	Pn	13 55 15.3	-1.1
AKAS	Kas	0.83	40	P	Pn	13 55 16.2	-0.2
AKAS				S	Sn	13 55 28.7	+0.7
ARG	Arkhangelos	0.91	313	PG	Pn	13 55 17.1	-0.3
ARG				SG	Sn	13 55 29.8	+0.1
ARG	Arkhangelos	0.91	313	P	Pn	13 55 17.3	0.0
ARG				S	Sn	13 55 30.0	+0.3
ARG				AML	AML	13 55 32.2	
ARG				AML	AML	13 55 33.1	
ARG	Arkhangelos	0.91	313	P	Pn	13 55 16.9	-0.5
ARG				S	Sn	13 55 29.6	-0.1
ARG	Arkhangelos	0.91	313	P	Pn	13 55 16.8	-0.6
ARG	Arkhangelos	0.91	313	*e*Pg	Pn	13 55 17.1	-0.3
ARG				S	Sn	13 55 29.2	-0.5
FETY	Fethiye	1.04	6	PG	Pn	13 55 17.6	-1.5
FETY				SG	Sn	13 55 32.2	-0.6
FETY	Fethiye	1.04	6	P	Pn	13 55 18.4	-0.7
FETY				S	Sn	13 55 32.6	-0.2
FETY	Fethiye	1.04	6	*e*Pg	Pn	13 55 17.6	-1.5
FETY	Fethiye	1.04	6	P	Pn	13 55 18.6	-0.5
FETY				S	Sn	13 55 32.4	-0.4
DALY	Dalyan (Mu˜la	1.24	349	PN	Pn	13 55 20.6	-1.1
DALY				SN	Sn	13 55 37.3	-0.2
DALY	Dalyan (Mu˜la	1.24	349	⇓*i*P	Pn	13 55 21.2	-0.5
DALY				*i* S	Sn	13 55 37.2	-0.2
DALY	Dalyan (Mu˜la	1.24	349	*e*Pn	Pn	13 55 20.6	-1.1
DALY	Dalyan (Mu˜la	1.24	349	P	Pn	13 55 21.2	-0.5
DALY				*e*Sn	Sn	13 55 37.3	-0.2
MRSB	Marmaris-Mugla	1.27	332	PN	Pn	13 55 21.7	-0.5
MRSB	Marmaris-Mugla	1.27	332	*e*Pn	Pn	13 55 21.7	-0.5
TURN	Turunc	1.30	348	PN	Pn	13 55 22.5	0.0
TURN	Turunc	1.30	348	⇓*i*P	Pn	13 55 22.6	0.0
TURN				*i* S	Sn	13 55 40.0	+1.0
TURN	Turunc	1.30	348	P	Pn	13 55 22.6	0.0
TURN				S	Sn	13 55 40.0	+1.0
ELL	Elmali	1.39	34	PN	Pn	13 55 24.8	+1.0
ELL	Elmali	1.39	34	*e*Pn	Pn	13 55 24.8	+1.0
KARP	Karpathos	1.46	269	PN	Pn	13 55 24.9	+0.2
KARP	Karpathos	1.46	269	P	Pn	13 55 25.2	+0.5
KARP				S	Sn	13 55 43.7	+0.9
KARP				AML	AML	13 55 44.9	
KARP				AML	AML	13 55 47.5	
KARP	Karpathos	1.46	269	*e*Pn	Pn	13 55 24.9	+0.2
KARP	Karpathos	1.46	269	P	Pn	13 55 24.9	+0.2
KARP				S	Sn	13 55 44.2	+1.4
KARP	Karpathos	1.46	269	P	Pn	13 55 24.9	+0.2
KARP				S	Sn	13 55 44.2	+1.4
DATC	Datca-Mugla	1.56	318	PN	Pn	13 55 26.5	+0.5
DATC	Datca-Mugla	1.56	318	*e*Pn	Pn	13 55 26.5	+0.5
DAT	Datca	1.58	316	PN	Pn	13 55 26.6	+0.1
DAT	Datca	1.58	316	⇓*i*P	Pn	13 55 26.6	+0.1
DAT				*i* S	Sn	13 55 46.3	+0.4
DAT	Datca	1.58	316	P	Pn	13 55 26.6	+0.1
DAT				S	Sn	13 55 46.3	+0.4
YER	Yerkesik	1.63	341	PN	Pn	13 55 27.4	+0.4
YER	Yerkesik	1.63	341	P	Pn	13 55 27.1	+0.1
YER				S	Sn	13 55 47.7	+0.8
YER	Yerkesik	1.63	341	P	Pn	13 55 27.1	+0.1
YER	Yerkesik	1.63	341	*e*Pn	Pn	13 55 27.4	+0.4
YER				S	Sn	13 55 47.7	+0.8
GOLH	Golhisar	1.71	17	⇑*i*P	Pn	13 55 29.4	+1.2
GOLH				*i* S	Sn	13 55 51.2	+2.2
GOLH	Golhisar	1.71	17	P	Pn	13 55 29.4	+1.2
GOLH				S	Sn	13 55 51.2	+2.2
NISR	Nisiros	1.79	305	P	Pn	13 55 29.7	+0.5
NISR				AML	AML	13 56 01.4	
NISR				AML	AML	13 56 03.4	
NISR	Nisiros	1.79	305	P	Pn	13 55 28.9	-0.2
NISR				S	Sn	13 55 51.7	+1.0
NISR	Nisiros	1.79	305	P	Pn	13 55 28.9	-0.2
NISR				S	Sn	13 55 51.7	+1.0
KORT	Korkueli	1.80	39	PN	Pn	13 55 30.1	+0.7
KORT	Korkueli	1.80	39	⇑*i*P	Pn	13 55 30.4	+0.9
KORT				*i* S	Sn	13 55 53.8	+2.5
KORT	Korkueli	1.80	39	*e*Pn	Pn	13 55 30.1	+0.7
KORT	Korkueli	1.80	39	P	Pn	13 55 30.4	+0.9
KORT				S	Sn	13 55 53.8	+2.5
TAVA	DENIZLI_Tavas	1.86	359	⇓*i*P	Pn	13 55 30.7	+0.4
TAVA				*i* S	Sn	13 55 52.9	+0.1
TAVA	DENIZLI_Tavas	1.86	359	P	Pn	13 55 30.7	+0.4
TAVA				S	Sn	13 55 52.9	+0.1
ANTB	Antalya	1.90	46	PN	Pn	13 55 31.9	+1.3
ANTB	Antalya	1.90	46	*e*Pn	Pn	13 55 31.9	+1.3
MLSB	Milas	1.94	331	PN	Pn	13 55 30.7	-0.6
MLSB	Milas	1.94	331	*e*Pn	Pn	13 55 30.7	-0.6
BODT	Bodrum	1.97	318	PN	Pn	13 55 31.2	-0.5
BODT	Bodrum	1.97	318	P	Pn	13 55 31.6	-0.1
BODT				S	Sn	13 55 55.6	+0.3
BODT	Bodrum	1.97	318	*e*Pn	Pn	13 55 31.2	-0.5
BODT	Bodrum	1.97	318	P	Pn	13 55 31.6	-0.1
BODT				S	Sn	13 55 55.6	+0.3
DENT	Denizli	2.15	2	PN	Pn	13 55 33.5	-0.7
DENT	Denizli	2.15	2	*e*Pn	Pn	13 55 33.5	-0.7
AYDN	Tasoluk	2.23	338	⇓*i*P	Pn	13 55 35.7	+0.4
AYDN				*i* S	Sn	13 56 02.9	+1.2
AYDN	Tasoluk	2.23	338	P	Pn	13 55 35.7	+0.4
AYDN				S	Sn	13 56 02.9	+1.2
BRDR	BURDUR-Merkez	2.28	23	⇑*i*P	Pn	13 55 36.8	+0.9
BRDR				*i* S	Sn	13 56 04.7	+1.9
BRDR	BURDUR-Merkez	2.28	23	P	Pn	13 55 36.8	+0.9
BRDR				S	Sn	13 56 04.7	+1.9
BCK	Bucak	2.28	35	PN	Pn	13 55 37.0	+1.1
BCK	Bucak	2.28	35	*e*Pn	Pn	13 55 37.0	+1.1
ZKR	Zakros	2.28	259	P	Pn	13 55 36.5	+0.6
ZKR				S	Sn	13 56 03.1	+0.2
ZKR				AML	AML	13 56 05.0	
	comp=N,48819μm,0.7s						
ZKR				AML	AML	13 56 07.5	
	comp=E,61423μm,0.6s						
ZKR	Zakros	2.28	259	P	Pn	13 55 36.3	+0.4
ZKR				S	Sn	13 56 04.3	+1.4
ZKR	Zakros	2.28	259	P	Pn	13 55 36.3	+0.4
ZKR				S	Sn	13 56 04.3	+1.4
MNVG	Manavgat-Antal	2.33	58	PN	Pn	13 55 35.3	-1.1
MNVG	Manavgat-Antal	2.33	58	*e*Pn	Pn	13 55 35.3	-1.1
AYDB	Zeytinkoy-Aydi	2.49	340	PN	Pn	13 55 38.5	-0.4
AYDB	Zeytinkoy-Aydi	2.49	340	*e*Pn	Pn	13 55 38.5	-0.4
SUTC	Sutluce-Ispart	2.50	41	PN	Pn	13 55 38.1	-0.9
SUTC	Sutluce-Ispart	2.50	41	*e*Pn	Pn	13 55 38.1	-0.9
KEPZ	Antalya-Kepez	2.51	58	⇑*i*P	Pn	13 55 39.6	+0.6
KEPZ				*i* S	Sn	13 56 06.5	-2.0
KEPZ	Antalya-Kepez	2.51	58	P	Pn	13 55 39.6	+0.6
ISP	Isparta	2.56	29	PN	Pn	13 55 38.9	-0.8
ISP	Isparta	2.56	29	⇑*i*P	Pn	13 55 40.5	+0.8
ISP	Isparta	2.56	29	*e*Pn	Pn	13 55 40.3	+0.6
ISP	Isparta	2.56	29	P	Pn	13 55 40.1	+0.4
ISP	Isparta	2.56	29	Pn	Pn	13 55 39.8	+0.1
ISP	Isparta	2.56	29	*c i*P	Pn	13 55 40.2	+0.5
ISP	Isparta	2.56	29	P	Pn	13 55 40.1	+0.4
ISP				S	Sn	13 56 11.7	+2.0
ANAF	Anafi Island	2.69	287	P	Pn	13 55 40.6	-0.8
ANAF				S	Sn	13 56 10.7	-2.1
ANAF	Anafi Island	2.69	287	P	Pn	13 55 41.1	-0.3
ANAF	Anafi Island	2.69	287	P	Pn	13 55 41.1	-0.3
ANAF				S	Sn	13 56 11.1	-1.6
SMG	Samos	2.71	322	P	Pn	13 55 41.0	-0.6
SMG	Samos	2.71	322	P	Pn	13 55 41.5	-0.2
SMG				S	Sn	13 56 13.0	-0.2
SMG	Samos	2.71	322	P	Pn	13 55 41.5	-0.2
SMG				S	Sn	13 56 13.0	-0.2
NPS	Neapolis	2.75	264	P	Pn	13 55 42.8	+0.5
NPS				S	Sn	13 56 12.0	-2.2
NPS				AML	AML	13 56 15.6	
	comp=E,74190μm,0.6s						
NPS				AML	AML	13 56 17.0	
	comp=N,69772μm,1.0s						
NPS	Neapolis	2.75	264	P	Pn	13 55 42.6	+0.4
NPS	Neapolis	2.75	264	P	Pn	13 55 42.6	+0.4
NPS				S	Sn	13 56 12.7	-1.5
KHL	Karahalli	2.76	9	PN	Pn	13 55 42.1	-0.4

KHL	Karahalli	2.76	9	ePn	Pn	13 55 42.1	-0.4
AMGA	Amorgos Island	2.76	297	P	Pn	13 55 41.5	-0.9
AMGA				S	Sn	13 56 13.5	-1.1
AMGA				AML	AML	13 56 15.3	
	comp=N,33713µm,0.6s						
AMGA				AML	AML	13 56 19.8	
	comp=E,27956µm,1.0s						
AMGA	Amorgos Island	2.76	297	P	Pn	13 55 42.0	-0.4
AMGA	Amorgos Island	2.76	297	P	Pn	13 55 42.0	-0.4
AMGA				S	Sn	13 56 13.5	-1.1
BAGO	Egridir - ISPA	2.81	31	⇑iP	Pn	13 55 43.0	-0.1
BAGO				iS	Sn	13 56 16.6	+0.7
KZIL	AFYON_Kizioren	2.82	19	⇓iP	Pn	13 55 43.9	+0.5
KZIL				iS	Sn	13 56 16.5	+0.3
KZIL	AFYON_Kizioren	2.82	19	P	Pn	13 55 43.9	+0.5
KZIL				S	Sn	13 56 16.5	+0.3
AKMC	Akamas	2.82	101	P	Pn	13 55 42.6	-0.7
	baz=280						
AKMC	Akamas	2.82	101	P	Pn	13 55 42.6	-0.7
LAST	Lasithi	2.87	262	P	Pn	13 55 45.4	+1.5
LAST				AML	AML	13 56 20.2	
	comp=E,50832µm,0.7s						
LAST				AML	AML	13 56 21.8	
	comp=N,45046µm,0.8s						
LAST	Lasithi	2.87	262	P	Pn	13 55 44.5	+0.5
LAST	Lasithi	2.87	262	P	Pn	13 55 44.5	+0.5
PPCY	Paphos	2.87	103	P	Pn	13 55 43.1	-0.8
	baz=283						
PPCY	Paphos	2.87	103	P	Pn	13 55 43.1	-0.8
MANT	Manisa	2.91	354	⇓iP	Pn	13 55 44.0	-0.6
MANT				iS	Sn	13 56 17.6	-0.8
MANT	Manisa	2.91	354	ePn	Pn	13 55 43.9	-0.7
MANT	Manisa	2.91	354	P	Pn	13 55 44.0	-0.6
MANT				S	Sn	13 56 17.6	-0.8
KULA	Kula-Manisa	2.92	356	PN	Pn	13 55 44.4	-0.3
KULA	Kula-Manisa	2.92	356	ePn	Pn	13 55 44.4	-0.3
THR8	Santorini-Mono	2.93	287	P	Pn	13 55 44.1	-0.6
THR8	Santorini-Mono	2.93	287	P	Pn	13 55 44.1	-0.6
SANT	Santorini	2.93	286	PN	Pn	13 55 44.9	+0.1
SANT	Santorini	2.93	286	P	Pn	13 55 43.9	-0.9
SANT				AML	AML	13 56 18.4	
	comp=N,34498µm,0.8s						
SANT				AML	AML	13 56 19.9	
	comp=E,68482µm,0.5s						
SANT	Santorini	2.93	286	⇑iP	Pn	13 55 44.4	-0.5
SANT	Santorini	2.93	286	ePn	Pn	13 55 44.3	-0.5
SANT	Santorini	2.93	286	P	Pn	13 55 44.3	-0.5
SANT	Santorini	2.93	286	P	Pn	13 55 44.3	-0.5
SANT				S	Sn	13 56 17.1	-1.8
SAP2K	Karterados	2.95	287	P	Pn	13 55 44.1	-0.9
SAP2K	Karterados	2.95	287	P	Pn	13 55 44.8	-0.3
DGB	˜zmir	2.96	327	⇓iP	Pn	13 55 44.7	-0.4
DGB				iS	Sn	13 56 18.8	-0.5
THT1	Athinios (Pele	2.96	286	P	Pn	13 55 43.1	-2.0
THT1				AML	AML	13 56 18.4	
	comp=N,27711µm,0.3s						
THT1				AML	AML	13 56 20.9	
	comp=E,32517µm,0.6s						
THT1	Athinios (Pele	2.96	286	P	Pn	13 55 44.8	-0.3
THT1	Athinios (Pele	2.96	286	P	Pn	13 55 44.8	-0.3
SFIR	Foira Santorin	2.97	287	P	Pn	13 55 45.1	-0.2
SFIR	Foira Santorin	2.97	287	P	Pn	13 55 45.1	-0.2
THR7	Fira-Santorini	2.97	287	P	Pn	13 55 44.1	-1.2
THR7	Fira-Santorini	2.97	287	P	Pn	13 55 45.1	-0.2
THR7	Fira-Santorini	2.97	287	P	Pn	13 55 45.1	-0.2
THR2	Thira island,	2.97	288	P	Pn	13 55 44.8	-0.5
THR2	Thira island,	2.97	288	P	Pn	13 55 44.8	-0.5
THR6	Thira Island,	2.98	286	P	Pn	13 55 44.9	-0.5
THR6	Thira Island,	2.98	286	P	Pn	13 55 44.9	-0.5
THT2	Imerovigli	2.98	287	P	Pn	13 55 47.4	+1.9
THT2	Imerovigli	2.98	287	P	Pn	13 55 46.4	+1.0
SAP1	Santorini-Akro	2.98	286	P	Pn	13 55 44.9	-0.5
SAP1	Santorini-Akro	2.98	286	P	Pn	13 55 44.9	-0.5
SAP1	Santorini-Akro	2.98	286	P	Pn	13 55 44.9	-0.5
THR3	Thira Island,	2.99	287	P	Pn	13 55 45.2	-0.3
THR3	Thira Island,	2.99	287	P	Pn	13 55 45.2	-0.3
CMBO	Columbo, Santo	3.00	288	P	Pn	13 55 45.3	-0.3
CMBO	Columbo, Santo	3.00	288	P	Pn	13 55 45.4	-0.3
CMBO	Columbo, Santo	3.00	288	P	Pn	13 55 45.4	-0.3
THR9	Santorini-Faro	3.01	286	P	Pn	13 55 44.7	-1.1
THR9	Santorini-Faro	3.01	286	P	Pn	13 55 45.2	-0.6
ALFC	Alefka	3.02	97	P	Pn	13 55 44.9	-1.0
	baz=277						
ALFC	Alefka	3.02	97	P	Pn	13 55 44.9	-1.0
SAP4	Santorini-Oia	3.03	288	P	Pn	13 55 45.9	-0.2
SAP4	Santorini-Oia	3.03	288	P	Pn	13 55 45.8	-0.2
SAP4	Santorini-Oia	3.03	288	P	Pn	13 55 45.8	-0.2
SAP3	Santorini-Thir	3.04	287	P	Pn	13 55 46.2	-0.1
SAP3	Santorini-Thir	3.04	287	P	Pn	13 55 46.1	-0.1
SAP3	Santorini-Thir	3.04	287	P	Pn	13 55 46.1	-0.1
APE	Apeiranthos	3.13	299	P	Pn	13 55 47.2	-0.2
APE				AML	AML	13 56 23.3	
	comp=N,42947µm,0.9s						
APE				AML	AML	13 56 24.1	
	comp=E,35053µm,1.0s						
APE	Apeiranthos	3.13	299	⇑iP	Pn	13 55 47.4	-0.1
APE	Apeiranthos	3.13	299	P	Pn	13 55 47.4	-0.1
APE	Apeiranthos	3.13	299	⇑P	Pn	13 55 47.4	-0.1
APE	Apeiranthos	3.13	299	P	Pn	13 55 47.4	-0.1
APE				S	Sn	13 56 21.9	-1.7
IOSP	Ios island	3.17	292	P	Pn	13 55 47.2	-0.7
IOSP				AML	AML	13 56 23.2	
	comp=N,65659µm,0.6s						
IOSP				AML	AML	13 56 24.2	
	comp=E,51567µm,0.4s						
IOSP	Ios island	3.17	292	P	Pn	13 55 47.7	-0.3
IOSP	Ios island	3.17	292	P	Pn	13 55 47.7	-0.3
BLCB	Balcova	3.17	332	PN	Pn	13 55 48.3	+0.2
BLCB	Balcova	3.17	332	ePn	Pn	13 55 48.3	+0.2
IACM	Heraklion	3.18	266	P	Pn	13 55 47.7	-0.5
IACM	Heraklion	3.18	266	P	Pn	13 55 48.1	0.0
IACM	Heraklion	3.18	266	P	Pn	13 55 48.1	0.0
KSTL	Kastelli Herak	3.18	266	P	Pn	13 55 46.0	-2.1
LEF	Lefka	3.26	97	PN	Pn	13 55 47.9	-1.3
LEF	Lefka	3.26	97	P	Pn	13 55 47.5	-1.7
LEF	Lefka	3.26	97	ePn	Pn	13 55 47.9	-1.3
AKDN	Akdeniz- K˜–br	3.29	94	PN	Pn	13 55 48.8	-0.9
AKDN	Akdeniz- K˜–br	3.29	94	ePn	Pn	13 55 48.8	-0.9
DOGA	KONYA_Doganhis	3.32	40	⇑iP	Pn	13 55 51.5	+1.3
DOGA				iS	Sn	13 56 29.2	+0.7
DOGA	KONYA_Doganhis	3.32	40	P	Pn	13 55 51.5	+1.3
DOGA				S	Sn	13 56 29.2	+0.7
IDI	Anoyia	3.33	266	P	Pn	13 55 50.0	-0.3
	comp=E,1µm,0.3s,baz=84,slow=14,SNR=1737						
IDI				S	Sn	13 56 28.6	0.0
	comp=E,1µm,0.3s,baz=306,slow=18,SNR=6.3						
IDI	Anoyia	3.33	266	PN	Pn	13 55 50.1	-0.1
IDI	Anoyia	3.33	266	⇑iP	Pn	13 55 49.8	-0.4
IDI	Anoyia	3.33	266	S	Sn	13 56 25.7	-2.9
SZAC	Souni	3.33	103	P	Pn	13 55 49.2	-1.0
	baz=284						
SZAC	Souni	3.33	103	P	Pn	13 55 49.2	-1.0
URLA	Izmir	3.34	326	PN	Pn	13 55 50.7	+0.3
URLA	Izmir	3.34	326	⇓iP	Pn	13 55 50.0	-0.4
URLA				iS	Sn	13 56 25.9	-2.9
URLA	Izmir	3.34	326	P	Pn	13 55 50.0	-0.4
URLA	Izmir	3.34	326	ePn	Pn	13 55 50.7	+0.3
URLA				S	Sn	13 56 25.9	-2.9
ERMK	Ermenek	3.37	71	⇑iP	Pn	13 55 51.2	+0.2
ERMK				iS	Sn	13 56 31.4	+1.5
ERMK	Ermenek	3.37	71	P	Pn	13 55 51.2	+0.2
ERMK				S	Sn	13 56 31.4	+1.5
AKHS	Akhisar	3.40	345	⇓iP	Pn	13 55 50.4	-0.8
AKHS				iS	Sn	13 56 29.2	-1.0
AKHS	Akhisar	3.40	345	P	Pn	13 55 50.4	-0.8
AKHS				S	Sn	13 56 29.2	-1.0
AKS	Akhisar	3.40	345	PN	Pn	13 55 51.4	+0.2
AKS	Akhisar	3.40	345	ePn	Pn	13 55 51.4	+0.2
TEKE	Tekeli-Mersin	3.43	80	PN	Pn	13 55 50.9	-0.6
TEKE	Tekeli-Mersin	3.43	80	ePn	Pn	13 55 50.9	-0.6
SHAP	Saphane-Kutahy	3.43	4	PN	Pn	13 55 51.6	0.0
SHAP	Saphane-Kutahy	3.43	4	ePn	Pn	13 55 51.6	0.0
SIVA	Sivas	3.43	262	P	Pn	13 55 52.5	+0.9
SIVA	Sivas	3.43	262	P	Pn	13 55 52.2	+0.6
SIVA	Sivas	3.43	262	P	Pn	13 55 52.2	+0.6
DEMI	Demirci	3.44	357	⇓iP	Pn	13 55 51.4	-0.4
DEMI				iS	Sn	13 56 31.2	-0.2
DEMI	Demirci	3.44	357	P	Pn	13 55 51.4	-0.4
DEMI				S	Sn	13 56 31.2	-0.2
TMBK	Timbaki Herakl	3.46	263	P	Pn	13 55 53.0	+1.0
TMBK	Timbaki Herakl	3.46	263	P	Pn	13 55 53.0	+1.0
GEDZ	Gediz	3.46	6	PN	Pn	13 55 51.9	-0.2
GEDZ	Gediz	3.46	6	ePn	Pn	13 55 51.9	-0.2
SIMA	Simav-Kutahya	3.48	0	PN	Pn	13 55 52.2	-0.1
SIMA	Simav-Kutahya	3.48	0	ePn	Pn	13 55 52.2	-0.1
KMER	Konya-Meram	3.50	51	⇑iP	Pn	13 55 54.0	+1.3
KMER				iS	Sn	13 56 34.0	+1.1
KMER	Konya-Meram	3.50	51	P	Pn	13 55 54.0	+1.3
KMER				S	Sn	13 56 34.0	+1.1
BOLV	Bolvadin	3.50	27	⇑iP	Pn	13 55 53.2	+0.5
BOLV				iS	Sn	13 56 32.6	-0.3
BOLV	Bolvadin	3.50	27	P	Pn	13 55 53.2	+0.5
BOLV				S	Sn	13 56 32.6	-0.3
GDZ	Gediz	3.51	7	⇓iP	Pn	13 55 52.6	-0.2
GDZ				iS	Sn	13 56 46.5	+13
GDZ	Gediz	3.51	7	P	Pn	13 55 52.6	-0.2
MAMC	Mammari	3.51	96	P	Pn	13 55 51.5	-1.2
	baz=276						
MAMC	Mammari	3.51	96	P	Pn	13 55 51.5	-1.2
KRBN	Karaburun	3.55	328	PN	Pn	13 55 53.5	+0.3
KRBN	Karaburun	3.55	328	ePn	Pn	13 55 53.5	+0.3
KONT	Konya--Tatoy	3.60	48	PN	Pn	13 55 53.8	-0.2
KONT	Konya--Tatoy	3.60	48	⇑iP	Pn	13 55 55.4	+1.4
KONT				iS	Sn	13 56 34.7	-0.7
KONT	Konya--Tatoy	3.60	48	ePn	Pn	13 55 53.8	-0.2
TNSA	Tinos	3.61	304	P	Pn	13 55 55.8	+1.8
TNSA				AML	AML	13 56 36.0	
	comp=E,10636µm,0.9s						
TNSA				AML	AML	13 56 36.8	
	comp=N,10384µm,1.1s						
TNSA	Tinos	3.61	304	P	Pn	13 55 55.1	+1.1
CHOS	Chios island	3.62	321	PN	Pn	13 55 54.6	+0.3
CHOS	Chios island	3.62	321	P	Pn	13 55 53.2	-1.1
CHOS				AML	AML	13 56 37.3	
	comp=N,27334µm,1.2s						
CHOS				AML	AML	13 56 39.6	
	comp=E,21841µm,0.8s						
CHOS	Chios island	3.62	321	P	Pn	13 55 53.9	-0.4
CHOS	Chios island	3.62	321	P	Pn	13 55 53.9	-0.4
CHOS	Chios island	3.62	321	ePn	Pn	13 55 54.6	+0.3
PRNS	Prines Rethymn	3.64	268	P	Pn	13 55 54.9	+0.5
PRNS	Prines Rethymn	3.64	268	P	Pn	13 55 54.9	+0.5
CSS	Mathiatis	3.64	99	PN	Pn	13 55 53.8	-0.7
CSS	Mathiatis	3.64	99	ePn	Pn	13 55 53.5	-1.0
CSS	Mathiatis	3.64	99	P	Pn	13 55 53.2	-1.3
	baz=279						
CSS	Mathiatis	3.64	99	Pn	Pn	13 55 52.8	-1.7
CSS	Mathiatis	3.64	99	P	Pn	13 55 53.2	-1.3
CSS	Mathiatis	3.64	99	ePn	Pn	13 55 53.5	-1.0
OREN	Orenkoy-Mersin	3.71	79	PN	Pn	13 55 54.9	-0.5
OREN	Orenkoy-Mersin	3.71	79	ePn	Pn	13 55 54.9	-0.5
TEVE	Tevekalti-Mers	3.74	76	PN	Pn	13 55 55.4	-0.5
TEVE	Tevekalti-Mers	3.74	76	ePn	Pn	13 55 55.4	-0.5
AKK1	Akkuyu-Mersin	3.77	80	PN	Pn	13 55 55.7	-0.5
AKK1	Akkuyu-Mersin	3.77	80	ePn	Pn	13 55 55.7	-0.5
LADK	Ladik-KONYA	3.77	45	PN	Pn	13 55 56.2	-0.2
LADK	Ladik-KONYA	3.77	45	ePn	Pn	13 55 56.2	-0.2
GULN	MERSIN_Gulnar	3.78	80	⇑iP	Pn	13 55 55.5	-0.8
GULN				iS	Sn	13 56 37.6	-1.9
GULN	MERSIN_Gulnar	3.78	80	P	Pn	13 55 55.5	-0.8
AKKU	Akkuyu-Mersin	3.78	80	PN	Pn	13 55 55.8	-0.5
AKKU	Akkuyu-Mersin	3.78	80	ePn	Pn	13 55 55.8	-0.5
DKL	Dikili	3.83	335	PN	Pn	13 55 57.4	+0.4
DKL	Dikili	3.83	335	ePn	Pn	13 55 57.4	+0.4
MHLA	Plaka, Milos I	3.84	289	P	Pn	13 55 57.3	+0.1
MHLA	Plaka, Milos I	3.84	289	P	Pn	13 55 57.4	+0.3
MHLO	Agia Marina, M	3.84	288	P	Pn	13 55 57.3	+0.2
MHLO	Agia Marina, M	3.84	288	P	Pn	13 55 57.8	+0.6
MHLO				S	Sn	13 56 38.5	-2.5
MHLO	Agia Marina, M	3.84	288	P	Pn	13 55 57.8	+0.6
TVSB	Tavsanli	3.87	6	PN	Pn	13 55 58.0	+0.3
TVSB	Tavsanli	3.87	6	ePn	Pn	13 55 58.0	+0.3
VAM	Vamos	3.88	269	P	Pn	13 55 57.7	-0.1
VAM	Vamos	3.88	269	P	Pn	13 55 57.2	-0.5
VAM	Vamos	3.88	269	P	Pn	13 55 57.2	-0.5
KUTH	Kutahya	3.89	12	PN	Pn	13 55 58.6	+0.7
KUTH	Kutahya	3.89	12	ePn	Pn	13 55 58.6	+0.7
IKL	Isikli	3.90	79	PN	Pn	13 55 57.5	-0.5
IKL	Isikli	3.90	79	ePn	Pn	13 55 57.5	-0.5
STEP	BALIKESIR_Sava	3.90	346	iP	Pn	13 55 57.3	-0.7
STEP	BALIKESIR_Sava	3.90	346	P	Pn	13 55 57.3	-0.7
SERI	Serifos	3.92	295	P	Pn	13 55 58.4	0.0
SERI				AML	AML	13 56 40.7	
	comp=N,15435µm,1.2s						
SERI				AML	AML	13 56 43.8	
	comp=E,6284µm,1.0s						
SERI	Serifos	3.92	295	P	Pn	13 55 58.7	+0.3
SERI	Serifos	3.92	295	P	Pn	13 55 58.7	+0.3
KEBE	Keben-Mersin	3.95	76	PN	Pn	13 55 58.7	-0.1
KEBE	Keben-Mersin	3.95	76	ePn	Pn	13 55 58.7	-0.1
PSRA	Psara	4.00	318	P	Pn	13 56 01.6	+2.3
PSRA	Psara	4.00	318	P	Pn	13 56 00.7	+1.4
CHAN	Chania	4.00	270	P	Pn	13 55 59.4	0.0
CHAN	Chania	4.00	270	P	Pn	13 55 59.4	0.0
DURS	Dursunbey	4.01	355	iP	Pn	13 55 59.4	-0.3
DURS	Dursunbey	4.01	355	P	Pn	13 55 59.4	-0.3
KIZT	Kizilcal	4.03	35	PN	Pn	13 56 00.2	+0.4
KIZT	Kizilcal	4.03	35	ePn	Pn	13 56 00.2	+0.4
GVDS	Gavdos	4.05	261	P	Pn	13 56 00.4	+0.4
GVDS	Gavdos	4.05	261	P	Pn	13 56 00.4	+0.4
GVD	Gavdhos	4.05	261	P	Pn	13 55 59.4	-0.7
GVD				AML	AML	13 56 50.2	
	comp=E,34973µm,0.4s						
GVD				AML	AML	13 56 50.9	
	comp=N,35380µm,0.5s						
GVD	Gavdhos	4.05	261	P	Pn	13 56 00.1	0.0
GVD	Gavdhos	4.05	261	P	Pn	13 56 00.1	0.0
IMMV	Iera Moni Meta	4.05	270	P	Pn	13 55 59.0	-1.1
IMMV	Iera Moni Meta	4.05	270	P	Pn	13 56 00.1	0.0
IMMV	Iera Moni Meta	4.05	270	P	Pn	13 56 00.1	0.0
AYVA	Ayvalik	4.12	335	iP	Pn	13 56 01.3	+0.4
AYVA	Ayvalik	4.12	335	P	Pn	13 56 01.3	+0.4
ESKT	Eskisehir	4.20	21	PN	Pn	13 56 02.5	+0.3
ESKT	Eskisehir	4.20	21	iP	Pn	13 56 02.0	-0.2
ESKT	Eskisehir	4.20	21	ePn	Pn	13 56 02.5	+0.3
SEYT	Eskypehyr	4.20	21	P	Pn	13 56 02.0	-0.2
PRK	Paraskevi	4.22	330	P	Pn	13 56 02.0	-0.4
PRK				AML	AML	13 56 50.2	
	comp=N,34345µm,0.8s						
PRK				AML	AML	13 56 51.5	
	comp=E,37575µm,0.8s						
PRK	Paraskevi	4.22	330	P	Pn	13 56 02.6	+0.2
PRK	Paraskevi	4.22	330	P	Pn	13 56 02.6	+0.2
EREN	Erenkoy	4.26	89	PN	Pn	13 56 01.2	-1.7
EREN	Erenkoy	4.26	89	ePn	Pn	13 56 01.2	-1.7
CHBY	Cihanbeyli	4.34	45	PN	Pn	13 56 04.2	+0.1
CHBY	Cihanbeyli	4.34	45	ePn	Pn	13 56 04.2	+0.1
AUSIV	SIVRIHISAR	4.35	27	PN	Pn	13 56 04.6	+0.2
AUSIV	SIVRIHISAR	4.35	27	iP	Pn	13 56 04.5	+0.2
AUSIV	SIVRIHISAR	4.35	27	P	Pn	13 56 04.5	+0.2
KARY	Karystos	4.36	305	P	Pn	13 56 05.4	+1.1
KARY	Karystos	4.36	305	P	Pn	13 56 05.2	+0.9
KARY	Karystos	4.36	305	P	Pn	13 56 05.2	+0.9
SIGR	SIGRI	4.37	327	PN	Pn	13 56 04.6	+0.2
SIGR	SIGRI	4.37	327	ePn	Pn	13 56 04.6	+0.2
AUBOZ	BOZOYUK	4.39	11	PN	Pn	13 56 05.4	+0.6
AUBOZ	BOZOYUK	4.39	11	iP	Pn	13 56 05.3	+0.6
AUBOZ	BOZOYUK	4.39	11	P	Pn	13 56 05.3	+0.5
AUKUT	KUTAHYA	4.43	11	iP	Pn	13 55 58.1	-7.3
AUKUT				iS	Sn	13 56 56.2	+0.5
BORA	Eskisehir	4.44	15	PN	Pn	13 56 05.6	+0.1
BORA	Eskisehir	4.44	15	ePn	Pn	13 56 05.6	+0.1
GPNR	Gulpinar-Canak	4.46	331	PN	Pn	13 56 06.0	+0.4
GPNR	Gulpinar-Canak	4.46	331	ePn	Pn	13 56 06.0	+0.4
SULT	Sultanhani-AKS	4.49	53	PN	Pn	13 56 06.2	+0.1
SULT	Sultanhani-AKS	4.49	53	ePn	Pn	13 56 06.2	+0.1
GONE	Gonen-Balikesi	4.55	348	PN	Pn	13 56 06.7	-0.2
GONE	Gonen-Balikesi	4.55	348	ePn	Pn	13 56 06.7	-0.2
ANKY	Antikythira Is	4.60	275	P	Pn	13 56 06.0	-1.7
ANKY	Antikythira Is	4.60	275	P	Pn	13 56 07.1	-0.5
ANKY	Antikythira Is	4.60	275	P	Pn	13 56 07.1	-0.5
CAVI	Cavuskoy	4.65	8	PN	Pn	13 56 08.7	+0.4
CAVI	Cavuskoy	4.65	8	ePn	Pn	13 56 08.7	+0.4
MERS	Mersin	4.68	73	PN	Pn	13 56 08.9	+0.1
MERS	Mersin	4.68	73	ePn	Pn	13 56 08.9	+0.1
KCTX	Karacabey (Bur	4.68	354	PN	Pn	13 56 09.5	+0.7
KCTX	Karacabey (Bur	4.68	354	ePn	Pn	13 56 09.5	+0.7
EZN	Ezine	4.71	335	PN	Pn	13 56 09.4	+0.4
EZN	Ezine	4.71	335	P	Pn	13 56 08.9	-0.1
EZN	Ezine	4.71	335	P	Pn	13 56 08.9	-0.1
EZN	Ezine	4.71	335	ePn	Pn	13 56 09.4	+0.4
AUMIH	MIHALICIK	4.71	24	PN	Pn	13 56 09.8	+0.5
AUMIH	MIHALICIK	4.71	24	iP	Pn	13 56 09.6	+0.3
AUMIH	MIHALICIK	4.71	24	P	Pn	13 56 09.6	+0.3
VLY	Voula,Athens	4.71	300	P	Pn	13 56 10.5	+1.4
VLY	Voula,Athens	4.71	300	P	Pn	13 56 10.0	+0.9
VLY	Voula,Athens	4.71	300	P	Pn	13 56 10.0	+0.9
KULU	Kulu	4.72	42	PN	Pn	13 56 09.6	+0.3
KULU	Kulu	4.72	42	ePn	Pn	13 56 09.6	+0.3
DION	Dionisos Attik	4.72	303	P	Pn	13 56 11.1	+1.8
DION	Dionisos Attik	4.72	303	P	Pn	13 56 10.5	+1.2
IZI	Iznik	4.75	5	PN	Pn	13 56 10.6	+0.9
IZI	Iznik	4.75	5	ePn	Pn	13 56 10.6	+0.9
YDRA	Hydra	4.75	293	P	Pn	13 56 11.9	+2.2
YDRA	Hydra	4.75	293	P	Pn	13 56 11.1	+1.4
PTL	Penteli	4.76	302	P	Pn	13 56 10.5	+0.7
PTL	Penteli	4.76	302	P	Pn	13 56 10.5	+0.7
PTL	Penteli	4.76	302	P	Pn	13 56 10.5	+0.7
MDNY	Mudanya-Bursa	4.76	359	PN	Pn	13 56 10.8	+1.0
MDNY	Mudanya-Bursa	4.76	359	ePn	Pn	13 56 10.8	+1.0
KKUL	Konya-Kulu	4.77	40	iP	Pn	13 56 11.1	+1.1
KKUL	Konya-Kulu	4.77	40	P	Pn	13 56 11.1	+1.1
ATHU	Athens Univers	4.77	301	P	Pn	13 56 11.2	+1.2
ATHU	Athens Univers	4.77	301	P	Pn	13 56 11.0	+1.0
ATHU	Athens Univers	4.77	301	P	Pn	13 56 11.0	+1.0
KNL	Bal˜–kesir	4.80	347	iP	Pn	13 56 10.0	-0.3
SKY	Skiros Island	4.80	314	P	Pn	13 56 12.5	+2.2
SKY	Skiros Island	4.80	314	P	Pn	13 56 11.8	+1.5
BOZC	Bozcaada	4.82	332	PN	Pn	13 56 10.4	-0.2
BOZC	Bozcaada	4.82	332	iP	Pn	13 56 10.7	+0.1
BOZC	Bozcaada	4.82	332	ePn	Pn	13 56 10.4	-0.2
EDC	Edincik	4.82	350	PN	Pn	13 56 11.1	+0.5
EDC	Edincik	4.82	350	ePn	Pn	13 56 11.1	+0.5
ATH	Athens Observa	4.82	301	P	Pn	13 56 12.4	+1.8
ATH	Athens Observa	4.82	301	P	Pn	13 56 11.7	+1.1
ATH	Athens Observa	4.82	301	P	Pn	13 56 11.7	+1.1
KYTH	Kithira	4.84	280	P	Pn	13 56 09.4	-1.4
KYTH				AML	AML	13 57 05.7	
	comp=E,22200µm,0.6s						
KYTH				AML	AML	13 57 06.9	
	comp=N,16781µm,0.5s						
KYTH	Kithira	4.84	280	P	Pn	13 56 10.6	-0.3
ADVT	Abdulvahap	4.87	7	PN	Pn	13 56 12.1	+0.8
ADVT	Abdulvahap	4.87	7	ePn	Pn	13 56 12.1	+0.8
KTHR	Kythira	4.87	280	P	Pn	13 56 11.1	-0.2
KTHR	Kythira	4.87	280	P	Pn	13 56 11.1	-0.2
MNVA	Monemvasia	4.91	285	P	Pn	13 56 12.7	+0.9
MNVA	Monemvasia	4.91	285	P	Pn	13 56 12.6	+0.9
YLV	Yalova	4.97	4	PN	Pn	13 56 12.8	0.0
YLV	Yalova	4.97	4	ePn	Pn	13 56 12.8	0.0
DID	Didima	4.98	294	P	Pn	13 56 13.1	+0.3
DID	Didima	4.98	294	P	Pn	13 56 13.4	+0.6
DID	Didima	4.98	294	P	Pn	13 56 13.4	+0.6
GULT	Gulveren	4.98	14	PN	Pn	13 56 13.5	+0.6
GULT	Gulveren	4.98	14	ePn	Pn	13 56 13.5	+0.6
VLI	Veliai	4.99	285	P	Pn	13 56 12.3	-0.7
VLI	Veliai	4.99	285	P	Pn	13 56 12.9	-0.1
VLI	Veliai	4.99	285	P	Pn	13 56 12.9	-0.1
GEYV	SAKARYA_Geyve	4.99	12	iP	Pn	13 56 13.5	+0.5
GEYV	SAKARYA_Geyve	4.99	12	P	Pn	13 56 13.5	+0.5
KRND	KRANIDI	5.00	293	P	Pn	13 56 14.1	+1.0
KRND	KRANIDI	5.00	293	P	Pn	13 56 14.1	+1.0
SBT5	Esenkoy-Cinarc	5.03	359	PN	Pn	13 56 14.3	+0.9
SBT5	Esenkoy-Cinarc	5.03	359	ePn	Pn	13 56 14.3	+0.9
GULA	Gulagac	5.04	56	PN	Pn	13 56 14.2	+0.4
GULA	Gulagac	5.04	56	ePn	Pn	13 56 14.2	+0.4
AFSR	Af¯ar-Bala (A	5.05	39	PN	Pn	13 56 14.5	+0.7
AFSR	Af¯ar-Bala (A	5.05	39	ePn	Pn	13 56 14.5	+0.7
LPK	Lapseki	5.07	341	PN	Pn	13 56 14.5	+0.5
LPK	Lapseki	5.07	341	ePn	Pn	13 56 14.5	+0.5
GELI	Tayfur-Gelibol	5.18	339	PN	Pn	13 56 15.7	+0.2
GELI	Tayfur-Gelibol	5.18	339	ePn	Pn	13 56 15.7	+0.2
MDUB	Mudurnu	5.18	19	PN	Pn	13 56 16.5	+0.9
MDUB	Mudurnu	5.18	19	ePn	Pn	13 56 16.5	+0.9
GADA	Gvkgeada	5.18	333	PN	Pn	13 56 16.5	+1.0
GADA	Gvkgeada	5.18	333	P	Pn	13 56 15.9	+0.4
GADA	Gvkgeada	5.18	333	P	Pn	13 56 15.9	+0.4
GADA	Gvkgeada	5.18	333	ePn	Pn	13 56 16.5	+1.0
GOKC	Gokceada-Canak	5.18	333	PN	Pn	13 56 15.6	+0.1
GOKC	Gokceada-Canak	5.18	333	ePn	Pn	13 56 15.6	+0.1
SPNC	Sapanca-Adapaz	5.19	11	PN	Pn	13 56 16.8	+1.1
SPNC	Sapanca-Adapaz	5.19	11	ePn	Pn	13 56 16.8	+1.1
VILL	Villia	5.19	301	P	Pn	13 56 16.9	+1.1
VILL	Villia	5.19	301	P	Pn	13 56 16.9	+1.1
KARA	Karaisali	5.20	70	PN	Pn	13 56 16.4	+0.6
KARA	Karaisali	5.20	70	ePn	Pn	13 56 16.4	+0.6
BR231	Keskin MP Arra	5.21	34	ePn	Pn	13 56 16.8	+0.7
BR231	Keskin MP Arra	5.21	34	ePn	Pn	13 56 16.8	+0.7
LIA	Limnos Island	5.23	326	P	Pn	13 56 15.6	-0.6
LIA	Limnos Island	5.23	326	P	Pn	13 56 16.5	+0.3
LIA	Limnos Island	5.23	326	P	Pn	13 56 16.5	+0.3
ANTO	Ankara	5.24	34	PN	Pn	13 56 17.3	+0.8
ANTO	Ankara	5.24	34	⇑iP	Pn	13 56 17.3	+0.8
ANTO	Ankara	5.24	34	ePn	Pn	13 56 16.8	+0.3
ANTO	Ankara	5.24	34	P	Pn	13 56 17.2	+0.8
	SNR=384						
ANTO	Ankara	5.24	34	⇑P	Pn	13 56 17.3	+0.8
ANTO	Ankara	5.24	34	ePn	Pn	13 56 16.8	+0.3
ANTO	Ankara	5.24	34	P	Pn	13 56 17.2	+0.8
	SNR=384						
LOD	Lodumlu	5.24	34	PN	Pn	13 56 17.3	+0.8
LOD	Lodumlu	5.24	34	ePn	Pn	13 56 17.3	+0.8
HRT	Hereke	5.25	6	PN	Pn	13 56 16.7	+0.2
HRT	Hereke	5.25	6	ePn	Pn	13 56 16.7	+0.2
VIL2	Platees	5.25	301	P	Pn	13 56 17.4	+0.9
SAUV	Serdivan-Sakar	5.25	12	PN	Pn	13 56 16.7	+0.2
SAUV	Serdivan-Sakar	5.25	12	ePn	Pn	13 56 16.7	+0.2
RKY	Sarkoy-Tekirda	5.27	345	PN	Pn	13 56 16.4	-0.4
RKY	Sarkoy-Tekirda	5.27	345	ePn	Pn	13 56 16.4	-0.4
SART	Tekirdag	5.27	345	iP	Pn	13 56 16.4	-0.5
SART	Tekirdag	5.27	345	P	Pn	13 56 16.4	-0.5
KRTS	Karatas	5.29	78	PN	Pn	13 56 16.8	-0.3
KRTS	Karatas	5.29	78	ePn	Pn	13 56 16.8	-0.3
SBT3	Marmara-Eregli	5.33	352	PN	Pn	13 56 18.7	+1.2
SBT3	Marmara-Eregli	5.33	352	ePn	Pn	13 56 18.7	+1.2
LOUT	Loutraki	5.36	298	P	Pn	13 56 19.7	+1.7
LOUT	Loutraki	5.36	298	P	Pn	13 56 19.2	+1.2
LOUT	Loutraki	5.36	298	P	Pn	13 56 19.2	+1.2
LTK	Loutraki	5.38	299	P	Pn	13 56 19.4	+1.2
LTK	Loutraki	5.38	299	P	Pn	13 56 19.5	+1.2
LTK	Loutraki	5.38	299	P	Pn	13 56 19.5	+1.2
AOS	Alonnisos	5.39	313	PN	Pn	13 56 20.0	+1.6
AOS	Alonnisos	5.39	313	P	Pn	13 56 19.4	+1.0
AOS	Alonnisos	5.39	313	P	Pn	13 56 19.4	+1.0
AOS	Alonnisos	5.39	313	P	Pn	13 56 19.4	+1.0
AOS	Alonnisos	5.39	313	ePn	Pn	13 56 20.0	+1.6
ERIK	Erikli-Kesan	5.42	340	PN	Pn	13 56 20.2	+1.4
SAHE	Sakarya_HENDEK	5.46	15	iP	Pn	13 56 19.5	+0.2
KAVV	Kandilli-Istan	5.46	1	PN	Pn	13 56 19.9	+0.6
DYR	Agios Nikonas	5.48	284	P	Pn	13 56 19.8	+0.2
DYR	Agios Nikonas	5.48	284	P	Pn	13 56 20.3	+0.7
DYR	Agios Nikonas	5.48	284	P	Pn	13 56 20.3	+0.7
TKR	Tekirdag	5.50	349	PN	Pn	13 56 20.8	+0.9
KESN	Edirne-Kesan	5.52	342	iP	Pn	13 56 19.9	-0.6
PROD	Prodromos	5.53	301	P	Pn	13 56 21.9	+1.6
PROD	Prodromos	5.53	301	P	Pn	13 56 21.4	+1.1
PROD	Prodromos	5.53	301	P	Pn	13 56 21.4	+1.1
YURE	YUREGIR	5.54	75	PN	Pn	13 56 20.9	+0.4
BRTR	Keskin Array B	5.55	41	P	Pn	13 56 20.8	0.0
	comp=N,72nm,0.3s,baz=218,slow=13,SNR=853						
BRTR				S	Sn	13 57 23.1	-0.1
	comp=N,285nm,0.3s,baz=20,slow=17,SNR=27						
BRTR				LR	LR	13 59 00.3	
	comp=N,7µm,21.8s,baz=210,slow=43						
BR131	Keskin Array S	5.55	41	ePn	Pn	13 56 21.2	+0.4
BR131	Keskin Array S	5.55	41	P	Pn	13 56 21.0	+0.2
BR131				S	Sn	13 57 22.9	-0.3
BR131	Keskin Array S	5.55	41	P	Pn	13 56 21.0	+0.2
BR131				S	Sn	13 57 23.0	-0.3
SMTH	Samothraki Isl	5.56	332	P	Pn	13 56 19.5	-1.3
SMTH	Samothraki Isl	5.56	332	P	Pn	13 56 20.9	+0.1
SMTH	Samothraki Isl	5.56	332	P	Pn	13 56 20.9	+0.1
SILT	Sile	5.57	5	PN	Pn	13 56 21.6	+0.7
KAND	Kocaeli-Kandir	5.58	10	iP	Pn	13 56 21.3	+0.4
BGKT	Bogazkoy	5.58	359	PN	Pn	13 56 20.5	-0.5
VLX	Vlachokerasia	5.58	290	P	Pn	13 56 21.5	+0.4
VLX	Vlachokerasia	5.58	290	P	Pn	13 56 21.6	+0.4
VLX	Vlachokerasia	5.58	290	P	Pn	13 56 21.6	+0.4
ENEZ	Enez	5.58	338	PN	Pn	13 56 22.4	+1.4
THAL	Thalero	5.60	298	P	Pn	13 56 23.1	+1.9
THAL	Thalero	5.60	298	P	Pn	13 56 22.7	+1.4

THAL	Thalero	5.60	298	P	Pn	13 56 22.7	+1.4
CRLT	Corlu	5.61	351	PN	Pn	13 56 22.3	+0.9
CMDR	Camlidere-ANKA	5.62	29	*i* P	Pn	13 56 22.8	+1.0
SMIA	Simia	5.63	307	P	Pn	13 56 23.9	+2.2
SMIA	Simia	5.63	307	P	Pn	13 56 23.4	+1.7
SMIA	Simia	5.63	307	P	Pn	13 56 23.4	+1.7
SKIA	Skiathos	5.63	311	P	Pn	13 56 23.3	+1.5
SKIA	Skiathos	5.63	311	P	Pn	13 56 23.1	+1.3
SKIA	Skiathos	5.63	311	P	Pn	13 56 23.1	+1.3
CTKS	Kestanelik-??a	5.64	357	PN	Pn	13 56 22.6	+0.8
LKR	Lokris	5.65	304	P	Pn	13 56 22.8	+0.9
LKR	Lokris	5.65	304	P	Pn	13 56 23.1	+1.2
LKR	Lokris	5.65	304	P	Pn	13 56 23.1	+1.2
KLYT	Kilyos	5.65	1	PN	Pn	13 56 22.7	+0.8
SLVT	Silivri	5.65	354	PN	Pn	13 56 22.4	+0.4
BEYL	Beirut	5.66	106	*e*P	Pn	13 56 20.0	-2.0
TRIP	Tripoli	5.71	292	P	Pn	13 56 23.2	+0.3
TRIP	Tripoli	5.71	292	P	Pn	13 56 23.5	+0.6
TRIP	Tripoli	5.71	292	P	Pn	13 56 23.5	+0.6
HNTI	Hanita	5.73	114	Pn	Pn	13 56 20.9	-2.2
BCAM	Yenicaga	5.76	24	*i* P	Pn	13 56 23.9	+0.3
ALN	Alexandroupoli	5.76	338	PN	Pn	13 56 23.3	-0.2
ALN	Alexandroupoli	5.76	338	P	Pn	13 56 22.1	-1.4
ALN	Alexandroupoli	5.76	338	*e*Pn	Pn	13 56 23.3	-0.2
ALN	Alexandroupoli	5.76	338	P	Pn	13 56 23.1	-0.4
ALN	Alexandroupoli	5.76	338	*e*P	Pn	13 56 23.3	-0.2
ALN	Alexandroupoli	5.76	338	*e*P	Pn	13 56 23.3	-0.2
BHL	Bhannes	5.77	105	*e*P	Pn	13 56 21.5	-2.3
DQRL	Deir Qamar	5.77	107	*e*P	Pn	13 56 21.7	-2.1
GUR	Goura	5.79	296	P	Pn	13 56 25.7	+1.6
GUR	Goura	5.79	296	P	Pn	13 56 25.1	+1.0
GUR	Goura	5.79	296	P	Pn	13 56 25.1	+1.0
OFRI	‘Ofer	5.82	119	Pn	Pn	13 56 22.2	-2.2
OFRI				Sn	Sn	13 57 24.8	-5.0
YAYL	Yayladag	5.83	84	PN	Pn	13 56 25.2	+0.6
DSF	Desfina	5.86	301	P	Pn	13 56 26.3	+1.4
DSF	Desfina	5.86	301	P	Pn	13 56 26.0	+1.1
DSF	Desfina	5.86	301	P	Pn	13 56 26.0	+1.1
NEO	Neokhori	5.87	311	P	Pn	13 56 28.6	+3.5
NEO	Neokhori	5.87	311	P	Pn	13 56 27.2	+2.2
NEO	Neokhori	5.87	311	P	Pn	13 56 27.2	+2.2
ITM	Ithomi	5.88	288	PN	Pn	13 56 27.0	+1.8
ITM	Ithomi	5.88	288	P	Pn	13 56 25.3	+0.2
ITM	Ithomi	5.88	288	*e*Pn	Pn	13 56 25.9	+0.8
ITM	Ithomi	5.88	288	P	Pn	13 56 25.8	+0.6
ITM	Ithomi	5.88	288	P	Pn	13 56 25.8	+0.6
CTYL	Yalikoy Yolu	5.89	355	PN	Pn	13 56 24.8	-0.5
HWQ	Hawqa	5.90	101	*e*P	Pn	13 56 23.6	-1.9
DLFA	Delphi	5.91	301	P	Pn	13 56 29.7	+4.1
BLGI	Bet Lehem HaGe	5.91	117	Pn	Pn	13 56 23.4	-2.2
QRWL	Qaraoun	5.92	108	*e*P	Pn	13 56 24.5	-1.3
TAHT	Tahtakopru-Hat	5.92	80	PN	Pn	13 56 25.8	+0.1
XOR	Xorichti	5.92	311	P	Pn	13 56 26.7	+0.9
XOR	Xorichti	5.92	311	P	Pn	13 56 26.7	+0.9
MMA0B	Mount Meron ar	5.93	114	Pn	Pn	13 56 23.8	-2.1
MMAI	Mount Meron Ar	5.93	114	P	Pn	13 56 25.3	-0.6
	comp=N,1μm,0.3s,baz=297,slow=11,SNR=364						
MMAI				S	Sn	13 57 28.8	-3.7
	comp=N,4μm,0.3s,baz=303,slow=23,SNR=10						
PYL	PYLOS	5.97	285	P	Pn	13 56 23.5	-2.8
KLV	Kalavryta, Ach	5.97	296	P	Pn	13 56 27.6	+1.1
KLV	Kalavryta, Ach	5.97	296	P	Pn	13 56 26.8	+0.3
KLV	Kalavryta, Ach	5.97	296	P	Pn	13 56 26.8	+0.3
MES2	Methoni	5.98	284	P	Pn	13 56 24.5	-2.0
THAS	Thassos island	6.01	328	P	Pn	13 56 26.8	-0.1
THAS	Thassos island	6.01	328	P	Pn	13 56 26.8	-0.1
KDZE	Karadeniz Ereo	6.03	18	PN	Pn	13 56 27.2	0.0
KSDI	Kefar Szold	6.04	111	Pn	Pn	13 56 25.6	-1.8
SHBL	Chebaa	6.04	110	*e*P	Pn	13 56 26.2	-1.3
RCY	Rachaya	6.06	108	*e*P	Pn	13 56 26.7	-1.0
SLTI	Sal’it	6.07	122	Pn	Pn	13 56 25.1	-2.7
ALIK	Aliki, Aigiali	6.09	298	P	Pn	13 56 29.7	+1.7
ALIK	Aliki, Aigiali	6.09	298	P	Pn	13 56 29.7	+1.7
MES3	Kyparissia	6.09	288	P	Pn	13 56 29.2	+1.2
FYTO	Fytoko, Volos	6.11	310	P	Pn	13 56 30.2	+2.0
FYTO	Fytoko, Volos	6.11	310	P	Pn	13 56 29.9	+1.7
FYTO	Fytoko, Volos	6.11	310	P	Pn	13 56 29.9	+1.7
PHSR	Pinarhisar	6.13	350	PN	Pn	13 56 28.4	-0.1
AMT	Artemida-Makis	6.14	290	P	Pn	13 56 29.6	+0.9
AMT	Artemida-Makis	6.14	290	P	Pn	13 56 29.8	+1.1
AMT	Artemida-Makis	6.14	290	P	Pn	13 56 29.8	+1.1
OUR	Ouranopolis	6.14	322	PN	Pn	13 56 28.3	-0.4
RDO	Rodhopi	6.15	335	PN	Pn	13 56 30.6	+1.7
RDO	Rodhopi	6.15	335	P	Pn	13 56 28.8	-0.1
RDO	Rodhopi	6.15	335	P	Pn	13 56 28.8	-0.1
TRIZ	Trizonia	6.16	299	P	Pn	13 56 31.4	+2.5
TRIZ	Trizonia	6.16	299	P	Pn	13 56 30.7	+1.8
TRIZ	Trizonia	6.16	299	P	Pn	13 56 30.7	+1.8
LAKA	Lakka	6.18	297	P	Pn	13 56 31.1	+1.9
LAKA	Lakka	6.18	297	P	Pn	13 56 30.4	+1.2
LAKA	Lakka	6.18	297	P	Pn	13 56 30.4	+1.2
BRBR	Barbar	6.18	109	*i* P	Pn	13 56 28.2	-1.3
BRBR				*e*S	Sn	13 57 23.5	-15
BRBR				AML	AML	13 57 38.8	
	comp=E,10μm,0.5s						
BRBR				AML	AML	13 57 38.9	
	comp=N,22μm,0.8s						
SERG	Sergoula	6.19	299	P	Pn	13 56 32.0	+2.6
SERG	Sergoula	6.19	299	P	Pn	13 56 31.4	+2.0
SERG	Sergoula	6.19	299	P	Pn	13 56 31.4	+2.0
CANT	Cankiri	6.21	35	PN	Pn	13 56 31.0	+1.3
MMLI	Mount Malkishu	6.23	119	PN	Pn	13 56 29.7	-0.3
MMLI	Mount Malkishu	6.23	119	Pn	Pn	13 56 27.6	-2.4
MMLI				Sn	Sn	13 57 35.2	-4.6
DRO	Drossia	6.27	294	P	Pn	13 56 31.7	+1.2
DRO	Drossia	6.27	294	P	Pn	13 56 31.7	+1.2
AGG	Agios Georgios	6.29	305	PN	Pn	13 56 32.7	+2.0
AGG	Agios Georgios	6.29	305	P	Pn	13 56 32.1	+1.4
AGG	Agios Georgios	6.29	305	*e*Pn	Pn	13 56 32.5	+1.8
AGG	Agios Georgios	6.29	305	P	Pn	13 56 32.1	+1.4
AGG	Agios Georgios	6.29	305	*e*P	Pn	13 56 32.5	+1.8
AGG	Agios Georgios	6.29	305	P	Pn	13 56 32.1	+1.4
EFP	Efpalio	6.30	299	P	Pn	13 56 32.9	+2.0
EFP	Efpalio	6.30	299	P	Pn	13 56 32.5	+1.6
EFP	Efpalio	6.30	299	P	Pn	13 56 32.5	+1.6
UPR	University Cam	6.33	297	P	Pn	13 56 33.7	+2.4
ANX	Ano Chora	6.36	300	P	Pn	13 56 34.4	+2.6
ANX	Ano Chora	6.36	300	P	Pn	13 56 33.8	+2.0
ANX	Ano Chora	6.36	300	P	Pn	13 56 33.8	+2.0
QASN	Qassioun	6.39	107	*i* P	Pn	13 56 31.9	-0.3
QASN				*e*S	Sn	13 57 28.4	-15
QASN				AML	AML	13 57 44.1	
	comp=N,21μm,0.5s						
QASN				AML	AML	13 57 46.6	
	comp=E,49μm,0.5s						
BNN	Bunyan	6.39	57	PN	Pn	13 56 33.3	+1.1
HMDT	Nahal Hemdat	6.40	120	Pn	Pn	13 56 30.3	-2.0
CORM	Corum	6.41	43	PN	Pn	13 56 33.5	+1.0
AMAZ	Amatzia	6.42	127	Pn	Pn	13 56 30.7	-1.9
KVLA	Kavala	6.43	327	P	Pn	13 56 34.0	+1.4
PLG	Polygyros	6.45	319	P	Pn	13 56 35.1	+2.2
YOZ	Yozgat	6.47	50	PN	Pn	13 56 34.4	+1.1
EDRB	Edirne	6.47	345	PN	Pn	13 56 33.5	+0.2
RLS	Riolos of Patr	6.48	294	P	Pn	13 56 36.2	+2.8
KZIT	Kziot	6.53	134	PN	Pn	13 56 34.7	+0.6
KZIT	Kziot	6.53	134	Pn	Pn	13 56 32.2	-1.9
TOTH	TOTAH	6.57	108	*i* P	Pn	13 56 34.5	-0.2
TOTH				*e*S	Sn	13 57 32.9	-15
TOTH				AML	AML	13 57 47.8	
	comp=N,13μm,0.7s						
TOTH				AML	AML	13 57 58.7	
	comp=E,7μm,0.6s						
EVR	Evrytania	6.59	302	P	Pn	13 56 37.5	+2.5
SARI	SarD1z-Kayseri	6.60	63	PN	Pn	13 56 35.8	+0.6
ILGA	Ilgaz	6.61	33	*e*Pn	Pn	13 56 36.1	+0.8
ILGA	Ilgaz	6.61	33	*e*Pn	Pn	13 56 36.1	+0.8
KDZ	Kurdzhali	6.65	336	*e*P	Pn	13 56 35.9	+0.3
VTN	Vitineika	6.65	293	P	Pn	13 56 36.5	+0.9
PVO	Paravola	6.65	299	P	Pn	13 56 39.5	+3.8
KMRS	Kahramanmaras	6.68	71	PN	Pn	13 56 35.2	-0.9
DSI	Dead Sea	6.70	125	Pn	Pn	13 56 34.2	-2.2
THL	Klokotos Trika	6.78	308	P	Pn	13 56 39.5	+2.1
HORT	Hortiatis	6.80	319	PN	Pn	13 56 39.4	+1.7
LIT	Litokhoron	6.80	313	*e*Pn	Pn	13 56 39.5	+1.7
LIT	Litokhoron	6.80	313	*e*P	Pn	13 56 39.5	+1.7
LIT	Litokhoron	6.80	313	*e*P	Pn	13 56 39.5	+1.7
GAZ	Gaziantep	6.85	74	PN	Pn	13 56 37.8	-0.7
MZDA	Masada	6.86	127	Pn	Pn	13 56 36.2	-2.3
PDO	Prodromos	6.89	298	P	Pn	13 56 39.8	+0.8
RZN	Rozhen	6.92	333	*e*P	Pn	13 56 41.2	+1.6
DIM	Dimitrovgrad	6.97	339	*e*P	Pn	13 56 40.0	-0.1
NVR	Nevrokopi	6.99	327	P	Pn	13 56 40.7	+0.3
KFL	Anninata	7.01	293	P	Pn	13 56 38.7	-1.9
MGNA	Meganis¸„	7.20	298	P	Pn	13 56 44.0	+0.9
MMB	Musomiste	7.25	327	*e*P	Pn	13 56 44.7	+0.8
ZFRI	Zfri	7.25	132	Pn	Pn	13 56 41.0	-2.9
PLD	Plovdiv	7.29	334	PN	Pn	13 56 45.9	+1.4
PRNI	Paran	7.29	134	Pn	Pn	13 56 41.7	-2.9
PRNI				Sn	Sn	13 58 00.4	-5.6
SLMH	Al Salmeh	7.31	83	*i* P	Pn	13 56 42.2	-2.6
SLMH				*e*S	Sn	13 57 46.4	-20
SLMH				AML	AML	13 58 20.2	
	comp=E,8μm,0.6s						
SLMH				AML	AML	13 58 22.5	
	comp=N,7μm,0.7s						
GRG	Griva	7.42	318	PN	Pn	13 56 47.8	+1.5
ASF	Jabal al Asfar	7.44	115	P	Pn	13 56 46.0	-0.6
	comp=N,68nm,0.3s,baz=245,slow=7.6,SNR=180						
ASF				S	Sn	13 58 04.7	-4.9
	comp=N,117nm,0.3s,baz=221,slow=16,SNR=3.8						
DARE	Darende-Malaty	7.44	64	PN	Pn	13 56 47.1	+0.5
BZK	Bozkurt	7.48	30	PN	Pn	13 56 48.1	+1.1
HRFI	Mount Harif	7.55	136	PN	Pn	13 56 48.1	0.0
HRFI	Mount Harif	7.55	136	Pn	Pn	13 56 45.5	-2.6
VAY	Valandovo	7.59	321	*i* Pn	Pn	13 56 50.7	+2.1
TOKT	Tokat	7.63	50	PN	Pn	13 56 50.2	+1.1
MBRI	Mt Berech	7.66	137	Pn	Pn	13 56 47.0	-2.7
PRD	Provadia	7.69	352	*e*P	Pn	13 56 50.2	+0.4
SVSK	Karacayir	7.70	54	PN	Pn	13 56 50.8	+0.8
KKB	Krupnik	7.76	326	*e*P	Pn	13 56 53.1	+2.3
EIL	Elat	7.78	138	P	Pn	13 56 49.0	-2.2
	comp=N,153nm,0.3s,baz=342,slow=12,SNR=230						
EIL				S	Sn	13 58 09.6	-8.3
	comp=N,378nm,0.3s,baz=11,slow=11,SNR=5.6						
EIL				LR	LR	14 02 23.2	
	comp=N,4μm,18.3s,baz=332,slow=57						
EIL	Elat	7.78	138	Pn	Pn	13 56 48.5	-2.7
DIKM	Dikmen	7.80	37	PN	Pn	13 56 52.4	+1.0
KVT	Kavak	7.81	43	PN	Pn	13 56 52.5	+0.9
PGB	Panagyurishte	7.88	333	*e*P	Pn	13 56 53.6	+1.1
FNA	Florina	7.89	313	PN	Pn	13 56 53.9	+1.1
FNA	Florina	7.89	313	*e*Pn	Pn	13 56 55.6	+2.8
FNA	Florina	7.89	313	*e*P	Pn	13 56 55.6	+2.8
FNA	Florina	7.89	313	*e*P	Pn	13 56 55.6	+2.8
SGD	Sagiada	7.99	303	P	Pn	13 56 53.3	-0.8
MALT	Malatya	8.06	68	PN	Pn	13 56 53.8	-1.3
STIP	Stip	8.06	321	*i* Pn	Pn	13 56 55.4	+0.3
BIA	Bitola	8.07	314	*i* Pn	Pn	13 56 58.9	+3.7
HQLS		8.13	139	P	Pn	13 56 53.6	-2.5
HQLS				S	Sn	13 58 17.7	-8.8
KBN	Korca	8.16	310	*i* PN	Pn	13 56 60.0	+3.6
URFA	Urfa	8.16	74	PN	Pn	13 56 56.7	+0.3
RSDY	Resadiye-TOKAT	8.17	52	PN	Pn	13 56 57.1	+0.6
MANR	Mangalia	8.21	358	⇑*i*P	Pn	13 56 58.7	+1.7
HAQS	Haql	8.25	141	P	Pn	13 56 55.7	-2.0
HAQS				S	Sn	13 58 19.7	-10
KASA	Kassiopi	8.26	303	P	Pn	13 56 58.6	+0.9
VTS	Vitosha	8.29	329	⇑*i*P	Pn	13 57 00.1	+1.9
VTS	Vitosha	8.29	329	*e*Pn	Pn	13 56 59.9	+1.7
VTS	Vitosha	8.29	329	*e*P	Pn	13 57 00.6	+2.4
VTS	Vitosha	8.29	329	⇑P	Pn	13 57 00.1	+1.9
VTS	Vitosha	8.29	329	*e*Pn	Pn	13 56 59.9	+1.7
KRUS	Krusevo	8.34	316	*i* Pn	Pn	13 57 01.9	+2.9
OHR	Ohrid	8.44	313	⇑*i*Pn	Pn	13 57 04.1	+3.8
EFOR	EFORIE	8.48	358	⇑*i*P	Pn	13 57 02.4	+1.8
ICOR	Ion Corvin	8.55	354	⇓*i*P	Pn	13 57 02.8	+1.1
SKO	Skopje	8.65	320	*i* Pn	Pn	13 57 05.6	+2.5
SVRC	Sivrice-ELAZID	8.74	68	PN	Pn	13 57 03.3	-1.2
JLOS		8.80	139	P	Pn	13 57 02.8	-2.5
JLOS				S	Sn	13 58 29.8	-13
RSHS		8.81	144	P	Pn	13 57 04.3	-1.0
RSHS				S	Sn	13 58 25.1	-18
BDAS	Al Bad‘	8.85	142	P	Pn	13 57 03.0	-2.8
BDAS				S	Sn	13 58 34.1	-10
TIRR	Tirgusor	8.86	358	⇓*i*P	Pn	13 57 07.0	+1.1
TIRR	Tirgusor	8.86	358	*e*Pn	Pn	13 57 06.2	+0.3
TIRR	Tirgusor	8.86	358	⇓P	Pn	13 57 07.0	+1.1
TIRR	Tirgusor	8.86	358	*e*Pn	Pn	13 57 06.2	+0.3
TIRR	Tirgusor	8.86	358	P	Pn	13 57 07.0	+1.1
VLO	Vlora	8.90	306	*i* PN	Pn	13 57 08.0	+1.5
SGRR	Singureni	8.91	346	⇑*i*P	Pn	13 57 08.3	+1.7
PTK	Pertek	8.95	65	PN	Pn	13 57 07.2	-0.2
TLB	Topalu	9.01	356	⇓*i*P	Pn	13 57 08.3	+0.4
TLB	Topalu	9.01	356	⇓P	Pn	13 57 08.3	+0.4
TLB	Topalu	9.01	356	P	Pn	13 57 08.3	+0.4
PHP	Peshkopia	9.01	315	*i* PN	Pn	13 57 10.8	+2.8
AMRR	Amara	9.09	353	⇓*i*P	Pn	13 57 10.1	+1.1
AMRR	Amara	9.09	353	⇓P	Pn	13 57 10.1	+1.1
AMRR	Amara	9.09	353	P	Pn	13 57 10.1	+1.1
HARR	Harsova	9.12	355	⇓*i*P	Pn	13 57 09.8	+0.4
HARR	Harsova	9.12	355	⇓P	Pn	13 57 09.8	+0.4
HARR	Harsova	9.12	355	P	Pn	13 57 09.8	+0.4
DYBB	Diyarbakir	9.28	72	PN	Pn	13 57 11.7	-0.1
SULR		9.30	348	⇓*i*P	Pn	13 57 13.3	+1.4
ESPY	Espiye-Giresun	9.34	52	PN	Pn	13 57 13.0	+0.5
HUMR	Humele	9.42	342	⇓*i*P	Pn	13 57 14.4	+0.8
ERZN	Erzincan	9.43	62	PN	Pn	13 57 14.0	+0.1
MAZI	Mazidag	9.44	75	PN	Pn	13 57 13.9	-0.1
PUK	Puka	9.55	315	*i* PN	Pn	13 57 18.4	+2.9
TLCR		9.58	359	⇑*i*P	Pn	13 57 17.1	+1.4
TLCR		9.58	359	⇑P	Pn	13 57 17.1	+1.4
TLCR		9.58	359	P	Pn	13 57 17.1	+1.4
CFR	Carcaliu	9.59	357	⇑*i*P	Pn	13 57 16.1	+0.2
CFR	Carcaliu	9.59	357	⇑P	Pn	13 57 16.1	+0.2
CFR	Carcaliu	9.59	357	P	Pn	13 57 16.1	+0.2
BCI	Bajram Curri	9.66	317	*i* PN	Pn	13 57 20.5	+3.5
ISR	Istrita	9.69	350	⇑*i*P	Pn	13 57 18.8	+1.6
ISR	Istrita	9.69	350	⇑P	Pn	13 57 18.8	+1.6
ISR	Istrita	9.69	350	P	Pn	13 57 18.8	+1.6
TBKS	Tabuk	9.78	137	P	Pn	13 57 17.7	-0.9
PVY	Plav	9.88	318	⇑*i*Pn	Pn	13 57 22.3	+2.4
PVY				*e*Sn	Sn	13 59 08.4	-0.9
ULC	Ulcinj	9.88	313	⇑*i*Pn	Pn	13 57 21.1	+1.1
ULC				*e*Sn	Sn	13 59 09.2	-0.2
ULC	Ulcinj	9.88	313	⇑*i*Pn	Pn	13 57 21.1	+1.1
ULC				*e*Sn	Sn	13 59 09.2	-0.2
GRER		9.89	352	⇓*i*P	Pn	13 57 22.0	+2.1
GIUM	Giurgiulesti	9.89	357	⇑*i*P	Pn	13 57 21.2	+1.2
BNGB	Bing˘¶l	9.94	67	PN	Pn	13 57 20.7	-0.1
YEDI	Yedisu-Bingol	9.98	64	PN	Pn	13 57 21.3	0.0
ALU	Alushta	9.98	23	*e*P	Pn	13 57 20.6	-0.7
ALU	Alushta	9.98	23	*e*P	Pn	13 57 20.6	-0.7
BAYT	Ayd˜–ntepe-Bay	10.04	58	PN	Pn	13 57 22.2	-0.1
DRME	Dracevica, Mon	10.06	314	⇑*i*Pn	Pn	13 57 23.6	+1.3
DRME				*e*Sn	Sn	13 59 13.1	-0.4
DRME	Dracevica, Mon	10.06	314	*e*Pn	Pn	13 57 23.1	+0.8
DRME				*e*Sn	Sn	13 59 13.1	-0.4
SRE	Strehaia	10.06	336	⇓*i*P	Pn	13 57 24.0	+1.7
SRE	Strehaia	10.06	336	⇓P	Pn	13 57 24.0	+1.7
SRE	Strehaia	10.06	336	P	Pn	13 57 24.0	+1.7
BEY	Berane	10.10	319	⇑*i*Pn	Pn	13 57 25.5	+2.6
BEY				*e*Sn	Sn	13 59 13.7	-1.0
IVA	Berane	10.10	319	⇑*i*Pn	Pn	13 57 25.5	+2.6
IVA				*e*Sn	Sn	13 59 13.7	-1.0
SIM	Simferopol’	10.14	21	*e*P	Pn	13 57 23.9	+0.5
SIM				*e*S	Sn	13 59 14.5	-1.0
SIM				pmax	pmax		
	comp=Z,639nm,1.1s						
SIM				smax	smax		
	comp=E,574μm,0.8s						
SIM				smax	smax		
	comp=N,493nm,1.7s						
SIM				MLR	MLR		
	comp=Z,2μm,6.6s						
SIM	Simferopol’	10.14	21	*e*P	Pn	13 57 23.9	+0.5
	comp=Z,639nm,1.1s						
SIM				*e*S	Sn	13 59 14.5	-1.0
	comp=Z,2μm,6.6s						
SVAN	Silvan-Diyarba	10.14	72	PN	Pn	13 57 23.3	-0.2
MLR	Muntele Rosu	10.14	348	P	Pn	13 57 24.7	+1.2
	comp=Z,3.2nm,0.3s,baz=160,slow=3.4,SNR=466						
MLR				S	Sn	13 59 18.4	+2.6
	comp=Z,1.7nm,0.3s,baz=295,slow=15,SNR=1.1						
MLR				LR	LR	14 02 06.8	
	comp=Z,2μm,21.1s,baz=168,slow=42						
MLR	Muntele Rosu	10.14	348	⇑*i*P	Pn	13 57 24.9	+1.3
MLR	Muntele Rosu	10.14	348	⇑P	Pn	13 57 24.9	+1.3
MLR	Muntele Rosu	10.14	348	*e*Pn	Pn	13 57 24.6	+1.0
PDG	Podgorica	10.17	315	⇑*i*P	Pn	13 57 24.8	+1.1
PDG	Podgorica	10.17	315	S	Sn	13 59 16.7	+0.5
PDG	Podgorica	10.17	315	*e*Pn	Pn	13 57 24.9	+1.2
PDG				*e*Sn	Sn	13 59 15.0	-1.2
TTG	Podgorica	10.17	315	⇑*i*Pn	Pn	13 57 24.9	+1.2
TTG				*e*Sn	Sn	13 59 15.0	-1.2
TTG	Podgorica	10.17	315	*e*Pn	Pn	13 57 24.5	+0.8
TTG	Podgorica	10.17	315	*e*P	Pn	13 57 24.5	+0.8
TTG	Podgorica	10.17	315	*e*P	Pn	13 57 24.5	+0.8
PETR	Petresti	10.20	353	⇓*i*P	Pn	13 57 25.2	+1.0
VOIR		10.27	344	⇓*i*P	Pn	13 57 26.4	+1.2
VOIR		10.27	344	⇓P	Pn	13 57 26.4	+1.2
VOIR		10.27	344	P	Pn	13 57 26.4	+1.2
KOME	Kolasin	10.29	318	⇑*i*Pn	Pn	13 57 27.8	+2.2
KOME				*e*Sn	Sn	13 59 18.2	-1.2
KOME	Kolasin	10.29	318	⇑*i*Pn	Pn	13 57 27.8	+2.2
KOME				*e*Sn	Sn	13 59 18.2	-1.2
ARR	Arges	10.30	343	⇑*i*P	Pn	13 57 26.6	+1.0
BUM	Brajici-Budva	10.30	314	⇑*i*Pn	Pn	13 57 26.6	+1.0
BUM				*e*Sn	Sn	13 59 18.4	-1.1
BUM	Brajici-Budva	10.30	314	⇑*i*Pn	Pn	13 57 26.6	+1.0
BUM				*e*Sn	Sn	13 59 18.4	-1.1
TIP	Timpagrande	10.34	294	⇑*i*P	Pn	13 57 23.8	-2.4
TIP	Timpagrande	10.34	294	*e*Pn	Pn	13 57 23.5	-2.7
TIP	Timpagrande	10.34	294	*e*Pn	Pn	13 57 23.5	-2.7
CGL1	Ceglie Messapi	10.35	303	*e*P	Pn	13 57 24.7	-1.6
CGL1				S	Sn	13 59 12.8	-7.9
PLOR	Plostina	10.39	351	⇓*i*P	Pn	13 57 27.8	+0.9
PLOR	Plostina	10.39	351	⇓P	Pn	13 57 27.8	+0.9
PLOR	Plostina	10.39	351	P	Pn	13 57 27.8	+0.9
VRI	Vrincioaia	10.40	351	PN	Pn	13 57 27.5	+0.6
VRI	Vrincioaia	10.40	351	⇑*i*P	Pn	13 57 28.0	+1.1
VRI	Vrincioaia	10.40	351	⇑P	Pn	13 57 28.0	+1.1
VRI	Vrincioaia	10.40	351	P	Pn	13 57 28.0	+1.1
TAR1	Taranto	10.43	302	⇓*i*P	Pn	13 57 25.3	-2.0
TAR1				S	Sn	13 59 15.8	-6.8
CEME	Cevo	10.43	315	⇑*i*Pn	Pn	13 57 28.7	+1.2
CEME				*e*Sn	Sn	13 59 22.1	-0.7
CEME	Cevo	10.43	315	⇑*i*Pn	Pn	13 57 28.7	+1.2
CEME				*e*Sn	Sn	13 59 22.1	-0.7
FASA	Fasano	10.50	303	⇓*i*P	Pn	13 57 26.6	-1.8
FASA				S	Sn	13 59 17.1	-7.4
HERR	Herculane	10.53	334	⇓*i*P	Pn	13 57 29.2	+0.5
NKME	Niksic	10.55	316	⇓*i*Pn	Pn	13 57 30.7	+1.6
NKME				*e*Sn	Sn	13 59 24.9	-0.8
NKME	Niksic	10.55	316	⇓*i*Pn	Pn	13 57 30.7	+1.6
NKME				*e*Sn	Sn	13 59 24.9	-0.8
NKY	Niksic	10.56	316	⇓*i*Pn	Pn	13 57 31.0	+1.8
NKY				*e*Sn	Sn	13 59 24.9	-1.0
NKY	Niksic	10.56	316	⇓*i*Pn	Pn	13 57 31.0	+1.8
NKY				*e*Sn	Sn	13 59 24.9	-1.0
VRTB	Varto-Mus	10.57	67	PN	Pn	13 57 29.2	-0.2
MASS	Massafra	10.57	302	⇓*i*P	Pn	13 57 27.3	-2.0
LOT	Lotru	10.60	340	PN	Pn	13 57 30.3	+0.5
LOT	Lotru	10.60	340	⇓*i*P	Pn	13 57 29.9	+0.1
HCY	Herceg Novi	10.62	313	⇑*i*Pn	Pn	13 57 30.0	0.0
HCY				*e*Sn	Sn	13 59 26.6	-0.8
HCY	Herceg Novi	10.62	313	⇑*i*Pn	Pn	13 57 30.0	0.0
HCY				*e*Sn	Sn	13 59 26.6	-0.8
PLE	Pljevlja	10.68	319	⇑*i*Pn	Pn	13 57 32.8	+1.9
PLE				*e*Sn	Sn	13 59 27.8	-1.2
PLE	Pljevlja	10.68	319	⇑*i*Pn	Pn	13 57 32.8	+1.9
PLE				*e*Sn	Sn	13 59 27.8	-1.2
DOPR	Dopca	10.70	347	⇓*i*P	Pn	13 57 32.1	+1.0
MDVR	Moldovita	10.71	331	⇓*i*P	Pn	13 57 32.4	+1.2
CHOM	Cayeli-Rize	10.78	56	PN	Pn	13 57 32.2	+0.1
CEL	Celeste	10.78	288	*e*Pn	Pn	13 57 29.0	-3.3
CEL	Celeste	10.78	288	*e*Pn	Pn	13 57 29.0	-3.3
UPM	Unac-Piva	10.86	317	⇓*i*Pn	Pn	13 57 35.4	+2.0
UPM				*e*Sn	Sn	13 59 32.6	-0.8
UPM	Unac-Piva	10.86	317	⇑*i*Pn	Pn	13 57 34.8	+1.4
UPM				*e*Sn	Sn	13 59 32.6	-0.8
GURO	Guroymak-BITLI	10.86	70	PN	Pn	13 57 33.0	-0.4
LEOM	Leova	10.88	357	PN	Pn	13 57 34.2	+0.7
LEOM	Leova	10.88	357	⇓*i*P	Pn	13 57 35.0	+1.5
LEOM	Leova	10.88	357	⇓P	Pn	13 57 35.0	+1.5
LEOM	Leova	10.88	357	P	Pn	13 57 35.0	+1.5
MATE	Matera	10.88	301	⇑*i*P	Pn	13 57 31.3	-2.2
MATE	Matera	10.88	301	S	Sn	13 59 26.7	-7.0
WJHS		10.89	142	P	Pn	13 57 31.8	-2.0
DIVS	Divibare	10.92	324	*e*Pn	Pn	13 57 35.9	+1.7
DIVS	Divibare	10.92	324	⇓*i*Pn	Pn	13 57 35.9	+1.7
BAI	Bari	10.95	304	*e*P	Pn	13 57 32.3	-2.2
BAI				S	Sn	13 59 25.4	-10
SG1	Sgolgore (BA)	10.98	302	*e*P	Pn	13 57 32.5	-2.4
SG1				S	Sn	13 59 25.9	-10
SIRT	Sirnak	11.02	76	PN	Pn	13 57 35.2	-0.3
TESR	Tescani	11.04	352	⇓*i*P	Pn	13 57 35.5	-0.2
BBLS	Lazići	11.05	321	⇑*i*Pn	Pn	13 57 38.8	+2.9
BIDS	Bi’r al Bayda’	11.07	140	P	Pn	13 57 34.1	-2.1
ANN	Anapa	11.24	33	*d* *i*P	Pn	13 57 38.5	+0.1
ANN				*e*S	Sn	13 59 45.0	+2.5
ANN				pmax	pmax		
	comp=Z,1μm,1.4s						
ANN				MLR	MLR		
	comp=Z,3μm,9.0s						
ANN				MLR	MLR		
	comp=E,600nm,9.0s						
ANN				MLR	MLR		
	comp=N,3μm,9.0s						
ANN	Anapa	11.24	33	*i* P	Pn	13 57 38.5	+0.1
	comp=N,3μm,9.0s						
ANN				*e*S	Sn	13 59 45.0	+2.5
	comp=N,3μm,9.0s						
DEV	Deva	11.25	338	⇑*i*P	Pn	13 57 40.1	+1.6
DEV	Deva	11.25	338	⇑P	Pn	13 57 40.1	+1.6
DEV	Deva	11.25	338	P	Pn	13 57 40.1	+1.6
CUC	Castrocucco	11.28	297	*e*Pn	Pn	13 57 36.5	-2.5
CUC	Castrocucco	11.28	297	*e*Pn	Pn	13 57 36.5	-2.5
MILM	Milestii Mici	11.31	360	⇓*i*P	Pn	13 57 40.5	+1.1
STON	Ston	11.35	313	*i* Pn	Pn	13 57 39.0	-0.9
STON				Sn	Sn	13 59 40.6	-4.4
KIS	Kishinev	11.39	360	*i* P	Pn	13 57 41.0	+0.5
	comp=N,13μm,2.4s						
KIS	Kishinev	11.39	360	*i* PP	Pn	13 57 48.0	+7.5
KIS				*i* sP		13 58 54.0	
KIS				*e*S	Sn	13 59 44.0	-2.1
KIS				*i* Li		14 00 28.0	
KIS				*i* Lg1		14 00 40.0	
KIS				*i* Lg2		14 01 05.0	
KIS				*e*Rg	Rg	14 01 16.0	
KIS				LRM	MLR	14 05 16.0	
	comp=N,2μm,12.0s						
KIS	Kishinev	11.39	360	κ *i*P	Pn	13 57 41.0	+0.5
KIS				*e*S	Sn	13 59 44.0	-2.1
KIS				pmax	pmax		
	comp=Z,10μm,1.8s						
KIS				pmax	pmax		
	comp=Z,13μm,2.4s						
KIS				pmax	pmax		
	comp=N,22μm,2.0s						
KIS				pmax	pmax		
	comp=E,3μm,2.2s						
KIS				MLR	MLR		
	comp=N,2μm,12.0s						
KIS				MLR	MLR		
	comp=E,2μm,12.0s						
KIS				MLR	MLR		
	comp=Z,2μm,12.0s						
KIS				MLR	MLR		
	comp=Z,2μm,12.0s						
KIS	Kishinev	11.39	360	*i* P	Pn	13 57 41.0	+0.5
	comp=Z,22μm,2.0s						
KIS				*e*S	Sn	13 59 44.0	-2.1
	comp=Z,2μm,12.0s						
BZS	Buzias	11.45	333	⇑*i*P	Pn	13 57 41.4	+0.1
BZS	Buzias	11.45	333	⇑P	Pn	13 57 41.4	+0.1
BZS	Buzias	11.45	333	P	Pn	13 57 41.4	+0.1
TEKS	Tekeris	11.48	324	⇑*i*Pn	Pn	13 57 44.5	+2.8
SOC	Sochi	11.51	43	*i* P	Pn	13 57 42.1	0.0
SOC				*i*		13 59 51.2	
SOC				pmax	pmax		
	comp=Z,386nm,1.1s						
SOC				MLR	MLR		
	comp=Z,2μm,14.0s						
SOC	Sochi	11.51	43	*i* P	Pn	13 57 42.1	0.0
	comp=Z,2μm,14.0s						
SOC				*i* S	Sn	13 59 51.2	+2.2
BCA	Borcka	11.51	56	PN	Pn	13 57 42.0	-0.2
BIZ	Bicaz	11.53	350	⇓*i*P	Pn	13 57 43.0	+0.6
IAS	Iasi	11.63	355	⇓*i*P	Pn	13 57 45.3	+1.6
IAS	Iasi	11.63	355	⇓P	Pn	13 57 45.3	+1.6
IAS	Iasi	11.63	355	P	Pn	13 57 45.3	+1.6
WDD	Wied Dalam	11.73	275	*e*Pn	Pn	13 57 40.1	-5.1

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WDD   Wied Dalam      11.73 275  ePn     Pn     13 57 40.1  -5.0
CJR   Cluj-Napoca     11.81 342⇑iP      Pn     13 57 48.2 +1.9
CJR   Cluj-Napoca     11.81 342 ⇑P      Pn     13 57 48.2 +1.9
CJR   Cluj-Napoca     11.81 342  P       Pn     13 57 48.2 +1.9
AGRB  Hanur-Agry      11.83  66  PN      Pn     13 57 46.1  -0.6
VAE   Valguarnera     11.85 283  P       Pn     13 57 45.7  -1.1
      comp=Z,35nm,0.3s,baz=59,slow=4.2,SNR=156
VAE                              S       Sn     13 59 43.5   -14
      comp=Z,30nm,0.3s,baz=42,slow=23,SNR=2.0
VANB  Van             11.91  71  PN      Pn     13 57 47.3  -0.5
CUKT  Cukurca         11.93  78  PN      Pn     13 57 47.3  -0.7
ARCR  ARCALIA         11.98 345⇓iP      Pn     13 57 50.4 +1.8
BURAR Bucovina Array  12.33 348⇓iP      Pn     13 57 54.0 +0.7
BURAR Bucovina Array  12.33 348 ⇓P      Pn     13 57 54.0 +0.7
BUR04 Bucovina Ar. S  12.33 348  ePn     Pn     13 57 53.1  -0.3
BUR04 Bucovina Ar. S  12.33 348  ePn     Pn     13 57 53.1  -0.3
BUR08 Bucovina Ar. S  12.36 348  ePn     Pn     13 57 53.8   0.0
BUR08 Bucovina Ar. S  12.36 348  ePn     Pn     13 57 53.8   0.0
CLDR  Caldiran        12.42  69  PN      Pn     13 57 54.2  -0.6
SORM  Soroca          12.54 358⇓iP      Pn     13 57 56.3 +0.2
SORM  Soroca          12.54 358 ⇓P      Pn     13 57 56.3 +0.2
SORM  Soroca          12.54 358  P       Pn     13 57 56.3 +0.2
BMR   Baia Mare       12.73 343⇓iP      Pn     13 58 00.1 +1.3
BMR   Baia Mare       12.73 343 ⇓P      Pn     13 58 00.1 +1.3
BMR   Baia Mare       12.73 343  P       Pn     13 58 00.1 +1.3
AKH   Akhalkalaki     12.78  59  PN      Pn     13 57 59.1  -0.5
AKH   Akhalkalaki     12.78  59⇑iP      Pn     13 58 02.0 +2.4
AKH   Akhalkalaki     12.78  59  ePn     Pn     13 58 00.2 +0.6
AKH   Akhalkalaki     12.78  59  eP      Pn     13 58 00.2 +0.6
AKH   Akhalkalaki     12.78  59  ePn     Pn     13 58 00.2 +0.6
AKH   Akhalkalaki     12.78  59⇑iP      Pn     13 58 02.0 +2.4
CLTB  Caltabellotta   12.80 284  ePn     Pn     13 57 57.6  -2.2
CLTB  Caltabellotta   12.80 284  ePn     Pn     13 57 57.6  -2.2
BLY   Banja Luka      12.81 319⇑iP      Pn     13 58 00.3 +0.4
BLY   Banja Luka      12.81 319  ePn     Pn     13 57 59.5  -0.4
BLY   Banja Luka      12.81 319⇑iPn     Pn     13 58 00.5 +0.6
TASB  TASBURUN-IGDIR  12.86  66  PN      Pn     13 57 59.9  -0.7
LTVH  Lˆˈtavˆˈrtes,   12.90 338⇓ePKKPbc Pn     13 58 04.3 +3.3
NEY   Neytrino        13.10  50ceP      Pn     13 58 05.4 +1.5
NEY   Neytrino        13.10  50  eP      Pn     13 58 05.4 +1.5
MORH  Mˆ‡rˆ¡gy, Hung  13.15 327⇓ePKKPbc Pn     13 58 05.3 +0.9
GNI   Garni           13.28  65  P       Pn     13 58 07.9 +1.5
      comp=Z,2.7nm,0.3s,baz=313,slow=2.9,SNR=26
GNI                              LR      LR     14 04 09.6
      comp=Z,4µm,18.6s,baz=28,slow=41
KIV   Kislovodsk      13.45  47  ePn     Pn     13 58 09.8 +1.1
KIV   Kislovodsk      13.45  47  P       Pn     13 58 10.0 +1.3
      SNR=200
KIV   Kislovodsk      13.45  47  i P     Pn     13 58 09.8 +1.1
      SNR=94
KIV   Kislovodsk      13.45  47  eP      Pn     13 58 09.5 +0.8
KIV                              eS      Sn     14 00 38.3 +1.8
KIV                              pmax    pmax
      comp=Z,506nm,1.1s
KIV                              MLR     MLR
      comp=Z,941nm,11.0s
KIV   Kislovodsk      13.45  47  P       Pn     13 58 10.0 +1.3
      SNR=200
KBZ   Khabaz          13.46  49  P       Pn     13 58 11.2 +2.6
      comp=Z,1.9nm,0.3s,baz=245,slow=11,SNR=133
KBZ                              S       Sn     14 00 44.0 +7.5
      comp=Z,0.7nm,0.3s,baz=240,slow=2.3,SNR=1.0
KVAR  Kislovodsk Arr  13.46  48  P       Pn     13 58 11.2 +2.4
      baz=233,slow=15,SNR=57
KVAR                             S       Sn     14 00 44.4 +7.7
      baz=185,slow=23,SNR=1.1
KVAR                             LR      LR     14 04 21.7
      comp=Z,2µm,19.0s,baz=222,slow=42
UDBI  Udbina          13.46 315  ePn     Pn     13 58 08.2  -0.6
UDBI                             Sn      Sn     14 00 34.3  -2.3
ZEI   Tsey            13.63  54  eP      Pn     13 58 08.8  -2.4
ZEI                              pmax    pmax
      comp=Z,229nm,0.9s
TBLG  Delisi          13.77  59  PN      Pn     13 58 12.4  -0.5
TBLG  Delisi          13.77  59  ePn     Pn     13 58 12.9   0.0
TBLG  Delisi          13.77  59  eP      Pn     13 58 12.9   0.0
TBLG  Delisi          13.77  59  ePn     Pn     13 58 12.9   0.0
NCK   Nalchik         13.77  51⇓eP      Pn     13 58 14.9 +2.0
NCK   Nalchik         13.77  51  eP      Pn     13 58 14.9 +2.0
UZH   Uzhgorod        13.92 341  eP      Pn     13 58 13.5  -1.4
UZH                              eS      Sn     14 00 49.1 +1.4
UZH                              MLR     MLR
      comp=N,600nm,11.0s
UZH                              MLR     MLR
      comp=Z,400nm,11.0s
UZH   Uzhgorod        13.92 341  eP      Pn     13 58 13.5  -1.4
BUD   Budapest        13.99 331⇓ePKKPab Pn     13 58 16.1 +0.2
NVLJ  Novalja         14.00 314  i Pn    Pn     13 58 15.4  -0.5
NVLJ                             Sn      Sn     14 00 44.4  -5.1
PSZ   Piszkesteto     14.03 334⇓iP      Pn     13 58 16.6 +0.2
PSZ   Piszkesteto     14.03 334⇓ePKKPab Pn     13 58 16.4   0.0
PSZ   Piszkesteto     14.03 334  ePn     Pn     13 58 16.1  -0.3
PSZ   Piszkesteto     14.03 334 ⇓P      Pn     13 58 16.6 +0.2
PSZ   Piszkesteto     14.03 334  ePn     Pn     13 58 16.1  -0.3
PSZ   Piszkesteto     14.03 334  P       Pn     13 58 16.6 +0.2
BEHE  Becsehely       14.21 324⇓ePKKPab Pn     13 58 18.7   0.0
CSKK  Csˆ‡kako        14.21 329⇓ePKKPab Pn     13 58 21.3 +2.6
OZLJ  Ozalj           14.30 319  ePn     Pn     13 58 21.1 +1.2
KECS  Kecovo          14.32 337  eP      Pn     13 58 22.5 +2.4
KECS  Kecovo          14.32 337  ePN     Pn     13 58 22.5 +2.4
KECS  Kecovo          14.32 337  eP      Pn     13 58 22.5 +2.4
BOJS  Bojanci         14.35 318  ePn     Pn     13 58 19.8  -0.7
BOJS                             eSn     Sn     14 00 53.6  -4.4
      comp=Z,5µm,8.9s
CRVS  Cervenica-Dubn  14.39 340  eP      Pn     13 58 21.4 +0.2
CRVS                             e              14 01 07.1
CRVS  Cervenica-Dubn  14.39 340  ePN     Pn     13 58 21.4 +0.2
CRVS  Cervenica-Dubn  14.39 340  eSN     Sn     14 01 07.1 +7.8
CRVS  Cervenica-Dubn  14.39 340  eP      Pn     13 58 21.4 +0.2
SRO2  Moca            14.47 330  eP      Pn     13 58 23.9 +1.7
SRO2  Moca            14.47 330  ePN     Pn     13 58 23.9 +1.7
SRO2  Moca            14.47 330  eP      Pn     13 58 23.9 +1.7
LVV   L'vov           14.66 347  eP      Pn     13 58 25.6 +1.0
LVV                              pmax    pmax
      comp=Z,2µm,2.1s
LVV                              MLR     MLR
      comp=N,2µm,10.0s
LVV                              MLR     MLR
      comp=E,1µm,10.0s
LVV                              MLR     MLR
      comp=Z,2µm,10.0s
LVV   L'vov           14.66 347  eP      Pn     13 58 25.6 +1.0
      comp=Z,2µm,2.1s
KWP   Kalwaria Pacla  14.75 344  i P     Pn     13 58 27.3 +1.5
KWP                              eS      S      14 01 28.6 +4.9
KWP   Kalwaria Pacla  14.75 344  ePn     Pn     13 58 26.5 +0.7
KWP   Kalwaria Pacla  14.75 344⇓iP      Pn     13 58 27.3 +1.5
KWP   Kalwaria Pacla  14.75 344  ePn     Pn     13 58 26.5 +0.7
KWP   Kalwaria Pacla  14.75 344  i P     Pn     13 58 27.3 +1.5
VISS  Visnje          14.76 318  ePn     Pn     13 58 25.2  -0.8
VYHS  Vyhne           14.90 333  eP      Pn     13 58 27.7   0.0
VYHS  Vyhne           14.90 333  ePN     Pn     13 58 27.7   0.0
VYHS  Vyhne           14.90 333  eP      P      13 58 33.2 +1.0
VYHS                             eS      S      14 01 28.3 +1.5
VYHS  Vyhne           14.90 333  eP      Pn     13 58 27.7   0.0
GROC  Groznyy         15.06  55  eP      Pn     13 58 29.6  -0.3
GROC                             eS      Sn     14 01 14.5  -1.0
GROC                             pmax    pmax
      comp=Z,424nm,1.2s
GROC  Groznyy         15.06  55  eP      Pn     13 58 29.6  -0.3
      comp=Z,424nm,1.2s
AK11  Malin Array Si  15.07   1  ePn     Pn     13 58 27.6  -2.4
AK11  Malin Array Si  15.07   1  ePn     Pn     13 58 27.6  -2.4
KIEV  Kiev            15.09   1  ePn     Pn     13 58 28.5  -1.7
      comp=Z,724nm,1.0s
KIEV  Kiev            15.09   1  i P     Pn     13 58 28.8  -1.4
      SNR=83
KIEV  Kiev            15.09   1diP      Pn     13 58 27.7  -2.5
KIEV  Kiev            15.09   1  ePn     Pn     13 58 28.5  -1.7
      comp=Z,724nm,1.0s
KIEV  Kiev            15.09   1  P       Pn     13 58 28.8  -1.4
      SNR=83
AKASG Malin Array Be  15.10   1  P       Pn     13 58 29.9  -0.4
      comp=Z,13nm,0.3s,baz=186,slow=9.9,SNR=204
AKASG                            S       Sn     14 01 23.3 +7.1
      comp=Z,2.2nm,0.3s,baz=190,slow=20,SNR=2.4
AKASG                            LR      LR     14 05 38.9
      comp=Z,1µm,18.9s,baz=150,slow=42
AKBB  Malin Array Si  15.10   1  ePn     Pn     13 58 28.9  -1.4
      comp=Z,747nm,1.0s
AKBB  Malin Array Si  15.10   1  eP      Pn     13 58 28.9  -1.4
AKBB                             pmax    pmax
      comp=Z,747nm,1.0s
AKBB  Malin Array Si  15.10   1  eP      Pn     13 58 28.9  -1.4
      comp=Z,747nm,1.0s
NIE   Niedzica        15.20 338  eP      Pn     13 58 32.3 +0.7
NIE                              eS      S      14 01 25.8  -7.1
NIE   Niedzica        15.20 338⇓eP      Pn     13 58 32.3 +0.7
NIE                              eS      S      14 01 25.8  -7.1
SOKA  Soboth          15.22 321  i Pn    Pn     13 58 31.9  -0.1
      comp=Z,235nm,1.2s,SNR=163
SOKA                             eSn     Sn     14 01 18.8  -0.7
      comp=Z,1µm,4.0s
SOKA  Soboth          15.22 321  Pn      Pn     13 58 31.9  -0.1
      comp=Z,235nm,1.2s,SNR=163
SOKA                             Sn      Sn     14 01 18.8  -0.7
      comp=Z,1µm,4.0s
LANS  Liptovska Anna  15.23 336  eP      P      13 58 34.0  -1.9
LANS  Liptovska Anna  15.23 336  ePN     P      13 58 34.0  -1.9
LANS  Liptovska Anna  15.23 336  eP      P      13 58 34.0  -1.9
TRI   Trieste         15.30 316  ePn     Pn     13 58 31.3  -1.6
      comp=Z,282nm,1.0s
TRI   Trieste         15.30 316  eP      Pn     13 58 31.3  -1.6
TRI                              pmax    pmax
      comp=Z,282nm,1.0s
TRI   Trieste         15.30 316  eP      Pn     13 58 31.3  -1.6
      comp=Z,282nm,1.0s
OBKA  Obir            15.36 320  i Pn    Pn     13 58 33.2  -0.6
      comp=Z,267nm,1.5s,SNR=30
OBKA                             Sn      Sn     14 01 22.4  -0.5
      comp=Z,1µm,3.5s
OBKA  Obir            15.36 320  Pn      Pn     13 58 33.2  -0.6
      comp=Z,267nm,1.5s,SNR=30
OBKA                             Sn      Sn     14 01 22.4  -0.5
      comp=Z,1µm,3.5s
ARSA  Arzberg         15.37 323  i Pn    Pn     13 58 34.1 +0.3
      comp=Z,98nm,1.1s,SNR=35
ARSA                             eSn     Sn     14 01 24.3 +1.4
      comp=Z,1µm,5.7s
ARSA  Arzberg         15.37 323  Pn      Pn     13 58 34.1 +0.3
      comp=Z,98nm,1.1s,SNR=35
ARSA                             Sn      Sn     14 01 24.3 +1.4
      comp=Z,1µm,5.7s
MODS  Modra-Piesok    15.41 329  eP      Pn     13 58 35.2 +0.8
MODS                             e              14 01 28.6
MODS  Modra-Piesok    15.41 329  ePN     Pn     13 58 35.2 +0.8
MODS  Modra-Piesok    15.41 329  eP      P      13 58 38.6 +0.7
MODS  Modra-Piesok    15.41 329  eSN     Sn     14 01 28.5 +4.5
MODS  Modra-Piesok    15.41 329  eP      Pn     13 58 35.2 +0.8
SMOL  Smolenice       15.46 330  eP      P      13 58 39.4 +0.9
SMOL  Smolenice       15.46 330  e       P      13 58 39.4 +0.9
SMOL  Smolenice       15.46 330  eP      P      13 58 39.4 +0.9
GORS  Gorjuse         15.54 318  ePn     Pn     13 58 34.9  -1.2
CADS  Cadrg           15.62 317  ePn     Pn     13 58 36.0  -1.1
CADS                             eP      P      13 58 43.4 +3.1
CADS                             eSn     Sn     14 01 25.9  -3.3
JAVC  Velka Javorina  15.64 331  ePN     Pn     13 58 37.5 +0.2
CONA  Conrad Observa  15.69 326  i Pn    Pn     13 58 38.1 +0.1
      comp=Z,322nm,1.3s,SNR=136
CONA                             eSn     Sn     14 01 31.5 +0.6
      comp=Z,2µm,3.6s
CONA  Conrad Observa  15.69 326  Pn      Pn     13 58 38.1 +0.1
      comp=Z,322nm,1.3s,SNR=136
CONA                             Sn      Sn     14 01 31.5 +0.6
      comp=Z,2µm,3.6s
AKT   Akhty           15.82  63⇓iP      Pn     13 58 40.8 +1.1
AKT                              eS      S      14 01 41.8  -4.0
AKT                              pmax    pmax
      comp=Z,135nm,0.7s
AKT                              smax    smax
      comp=N,54nm,1.2s
AKT                              smax    smax
      comp=E,54nm,1.5s
AKT   Akhty           15.82  63  i P     Pn     13 58 40.8 +1.1
      comp=E,135nm,0.7s
MYKA  Terra Mystica   15.92 318  i Pn    Pn     13 58 40.5  -0.5
      comp=E,255nm,1.7s,SNR=37
MYKA                             eSn     Sn     14 01 36.3  -0.2
      comp=E,2µm,5.8s
MYKA  Terra Mystica   15.92 318  Pn      Pn     13 58 40.5  -0.5
      comp=E,255nm,1.7s,SNR=37
MYKA                             Sn      Sn     14 01 36.3  -0.2
      comp=E,2µm,5.8s
KEST  Kesra           15.94 276  P       Pn     13 58 41.5 +0.3
      comp=E,3.9nm,0.3s,baz=44,slow=7.9,SNR=192
KEST                             S       S      14 01 46.9  -1.4
      comp=E,2.6nm,0.3s,baz=340,slow=21,SNR=1.7
KEST                             LR      LR     14 06 24.1
      comp=E,2µm,20.2s,baz=22,slow=43
KEST  Kesra           15.94 276  ePn     Pn     13 58 40.4  -0.8
      comp=E,5µm,0.9s
KEST                             S       S      14 01 46.9  -1.4
KEST  Kesra           15.94 276  ePn     Pn     13 58 40.4  -0.8
      comp=E,5µm,0.9s
KEST                             S       S      14 01 46.9  -1.4
OJC   Ojcow           16.06 338  eP      Pn     13 58 41.9  -0.7
OJC                              eS      Sn     14 01 41.3 +1.7
OJC   Ojcow           16.06 338  ePn     Pn     13 58 41.2  -1.4
      comp=E,427nm,1.4s
OJC   Ojcow           16.06 338⇓eP      Pn     13 58 41.9  -0.7
OJC                              eS      Sn     14 01 41.3 +1.7
OJC   Ojcow           16.06 338  ePn     Pn     13 58 41.2  -1.4
      comp=E,427nm,1.4s
OJC   Ojcow           16.06 338  eP      Pn     13 58 41.9  -0.7
TAMR  Tamra           16.06 281  ePn     Pn     13 58 41.1  -1.6
      comp=E,782nm,1.1s
TAMR  Tamra           16.06 281  ePn     Pn     13 58 41.1  -1.6
      comp=E,782nm,1.1s
MAK   Makhachkala     16.12  57  eP      P      13 58 46.1 +0.3
MAK                              eS      Sn     14 01 44.1 +2.9
MAK                              pmax    pmax
      comp=Z,1µm,0.8s
MAK                              MLR     MLR
      comp=Z,3µm,15.0s
MAK   Makhachkala     16.12  57  eP      P      13 58 46.1 +0.3
      comp=Z,1µm,0.8s
OKC   Ostrava-Krasne  16.27 334  eP      Pn     13 58 45.8 +0.6
OKC                              ex      x      13 58 49.5
OKC                              eS      Sn     14 01 47.1 +2.4
OKC                              AMS     AMS    14 06 40.0
      comp=Z,4µm,10.4s
OKC   Ostrava-Krasne  16.27 334  eP      Pn     13 58 45.8 +0.6
OKC                              eS      Sn     14 01 47.1 +2.4
OKC                              MLR     MLR
      comp=Z,4µm,10.4s
OKC   Ostrava-Krasne  16.27 334  eP      Pn     13 58 45.8 +0.6
KRUC  Moravsky        16.32 329  ePN     Pn     13 58 45.5  -0.3
KRUC  Moravsky        16.32 329  eS      S      14 01 54.8  -0.9
KBA   Koelnbreinsper  16.36 319  i Pn    Pn     13 58 46.9 +0.3
      comp=Z,308nm,1.5s,SNR=46
KBA   Koelnbreinsper  16.36 319  Pn      Pn     13 58 46.9 +0.3
      comp=Z,308nm,1.5s,SNR=46
MOA   Molln           16.40 323  i Pn    P      13 58 47.9  -1.0
      comp=Z,228nm,1.7s,SNR=74
MOA                              i Sn    Sn     14 01 48.5 +0.7
      comp=Z,2µm,5.8s
MOA   Molln           16.40 323  Pn      P      13 58 47.9  -1.0
      comp=Z,228nm,1.7s,SNR=74
MOA                              Sn      Sn     14 01 48.5 +0.7
      comp=Z,2µm,5.8s
VRAC  Vranov          16.43 330  P       P      13 58 49.0  -0.2
      comp=Z,1.4nm,0.3s,baz=139,slow=10,SNR=47
VRAC                             S       S      14 01 55.6  -2.4
      comp=Z,0.3nm,0.3s,baz=259,slow=20,SNR=5.3
VRAC                             LR      LR     14 06 25.4
      comp=Z,2µm,18.1s,baz=149,slow=42
VRAC  Vranov          16.43 330⇓iP      Pn     13 58 47.2   0.0
VRAC  Vranov          16.43 330 ⇓P      Pn     13 58 47.2   0.0
VRAC  Vranov          16.43 330  ePN     Pn     13 58 47.3   0.0
VRAC  Vranov          16.43 330  eS      S      14 01 58.2 +0.2
MORC  Moravsky Berou  16.44 333⇓iP      Pn     13 58 47.5 +0.1
MORC  Moravsky Berou  16.44 333  ePn     Pn     13 58 47.1  -0.3
      comp=Z,480nm,1.5s
MORC  Moravsky Berou  16.44 333 ⇓P      Pn     13 58 47.5 +0.1
MORC  Moravsky Berou  16.44 333  ePN     Pn     13 58 47.4 +0.1
RAC   Raciborz        16.46 335  eP      Pn     13 58 47.8 +0.2
RAC                              eS      S      14 01 56.0  -2.6
RAC                              MLR     MLR
      comp=Z,4µm,16.8s
RAC   Raciborz        16.46 335  eP      Pn     13 58 47.8 +0.2
      comp=Z,4µm,16.8s
RAC                              eS      S      14 01 56.0  -2.6
THTN  Thala           16.49 276  ePn     Pn     13 58 47.8  -0.4
      comp=Z,3µm,1.4s
THTN  Thala           16.49 276  ePn     Pn     13 58 47.8  -0.4
      comp=Z,3µm,1.4s
VLC   Villacollemand  16.59 307  ePn     Pn     13 58 46.7  -2.7
      comp=Z,306nm,1.3s
VLC   Villacollemand  16.59 307  ePn     Pn     13 58 46.7  -2.7
      comp=Z,306nm,1.3s
ABTA  Abfaltersbach   16.61 317  i Pn    Pn     13 58 48.8  -0.9
      comp=Z,125nm,1.0s,SNR=61
ABTA                             eSn     Sn     14 01 51.8  -1.4
      comp=Z,567nm,2.0s
ABTA  Abfaltersbach   16.61 317  Pn      Pn     13 58 48.8  -0.9
      comp=Z,125nm,1.0s,SNR=61
ABTA                             Sn      Sn     14 01 51.8  -1.4
      comp=Z,567nm,2.0s
KRLC  Kraliky         16.97 332  eP      P      13 58 55.2   0.0
KRLC                             ex      x      13 58 58.8
KRLC                             epP     pP     13 59 06.6  -0.9
KRLC  Kraliky         16.97 332  eP      P      13 58 55.2   0.0
KRLC  Kraliky         16.97 332  eP      P      13 58 55.2   0.0
VORD  Divnogorie      17.08  23  eP      Pn     13 58 54.9  -0.4
VORD                             eS      S      14 02 08.3  -2.9
VORD                             pmax    pmax
      comp=Z,2µm,1.6s
VORD                             pmax    pmax
      comp=Z,1µm,1.0s
VORD                             smax    smax
      comp=N,3.0nm,1.9s
VORD  Divnogorie      17.08  23  eP      Pn     13 58 54.9  -0.4
      comp=N,1µm,1.0s
BEL   Belsk           17.25 343  i P     P      13 58 58.0  -0.2
BEL                              eS      S      14 02 11.9  -2.7
BEL   Belsk           17.25 343⇓iP      P      13 58 58.0  -0.2
BEL                              eS      S      14 02 11.9  -2.7
BEL   Belsk           17.25 343  i P     P      13 58 58.0  -0.2
BEL                              eS      S      14 02 11.9  -2.7
VSR   Storozhevoye    17.26  22  eP      Pn     13 58 56.3  -1.2
VSR                              eS      S      14 02 11.7  -3.1
VSR                              pmax    pmax
      comp=Z,2µm,1.8s
VSR                              pmax    pmax
      comp=Z,660nm,1.1s
VSR                              smax    smax
      comp=E,2µm,3.3s
VSR   Storozhevoye    17.26  22  eP      Pn     13 58 56.3  -1.2
      comp=E,660nm,1.1s
GEA0  GERESS Array S  17.35 324  ePn     Pn     13 58 58.7  -0.1
GEA0  GERESS Array S  17.35 324  ePn     Pn     13 58 58.7  -0.1
GEC2  GERESS Array S  17.36 324  ePn     P      13 58 59.5   0.0
      comp=E,665nm,1.6s
GEC2  GERESS Array S  17.36 324  eP      P      13 58 59.5   0.0
GEC2                             pmax    pmax
      comp=Z,665nm,1.6s
GEC2  GERESS Array S  17.36 324  eP      P      13 58 59.5   0.0
      comp=Z,665nm,1.6s
GERES GERESS Array B  17.36 324  P       P      13 58 60.0 +0.4
      comp=Z,9.3nm,0.3s,baz=134,slow=11,SNR=170
GERES                            S       Sn     14 02 12.9 +1.7
      baz=121,slow=15,SNR=1.8
GERES                            LR      LR     14 05 55.3
      comp=Z,4µm,19.7s,baz=142,slow=38
DPC   Dobruska-Polom  17.36 332  eP      P      13 58 59.8 +0.3
DPC                              eS      Sn     14 02 12.3 +1.1
DPC                              AMS     AMS    14 09 20.0
      comp=Z,2µm,12.4s
DPC   Dobruska-Polom  17.36 332  eP      P      13 58 59.8 +0.3
DPC                              eS      Sn     14 02 12.3 +1.1
DPC                              MLR     MLR
      comp=Z,2µm,12.4s
DPC   Dobruska-Polom  17.36 332  eP      P      13 58 59.8 +0.3
      comp=Z,2µm,12.4s
DPC                              S       Sn     14 02 12.3 +1.1
WTTA  Wattenberg      17.40 317  i P     P      13 59 00.8 +0.6
      comp=Z,246nm,1.4s,SNR=51
WTTA                             eSn     Sn     14 02 10.6  -1.8
      comp=Z,2µm,6.5s
WTTA  Wattenberg      17.40 317  P       P      13 59 00.8 +0.6
      comp=Z,246nm,1.4s,SNR=51
WTTA                             Sn      Sn     14 02 10.6  -1.8
      comp=Z,2µm,6.5s
ABSA  Djebel Ababsia  17.40 279  P       Pn     13 58 59.3  -0.2
ABSA  Djebel Ababsia  17.40 279  P       Pn     13 58 59.3  -0.2
CMAH  Djebel Manchou  17.43 280  P       Pn     13 58 58.9  -0.9
CMAH  Djebel Manchou  17.43 280  P       Pn     13 58 58.9  -0.9
WATA  Walderalm       17.48 317  i P     P      13 59 01.8 +0.8
      comp=Z,454nm,1.4s,SNR=39
WATA  Walderalm       17.48 317  P       P      13 59 01.8 +0.8
      comp=Z,454nm,1.4s,SNR=39
UPC   Upice           17.61 332  eP      P      13 59 02.8 +0.6
UPC                              eS      Sn     14 02 17.3 +0.2
UPC                              AMS     AMS    14 07 40.0
      comp=Z,3µm,10.1s
UPC   Upice           17.61 332  eP      P      13 59 02.8 +0.6
UPC                              eS      Sn     14 02 17.3 +0.2
UPC                              MLR     MLR
      comp=Z,3µm,10.1s
KHC   Kasperske Hory  17.61 325  eP      P      13 59 03.0 +0.7
KHC                              ex      x      13 59 10.7
KHC                              eS      Sn     14 02 16.1  -1.2
KHC                              AMS     AMS    14 07 10.0
      comp=Z,4µm,11.8s
KHC   Kasperske Hory  17.61 325  ePn     P      13 59 02.4 +0.1
      comp=Z,113nm,1.0s
KHC   Kasperske Hory  17.61 325  eP      P      13 59 03.0 +0.7
KHC                              eS      Sn     14 02 16.1  -1.2
KHC                              MLR     MLR
      comp=Z,4µm,11.8s
KHC   Kasperske Hory  17.61 325  ePn     P      13 59 02.4 +0.1
      comp=Z,113nm,1.0s
KHC   Kasperske Hory  17.61 325  eP      P      13 59 03.0 +0.7
KHC                              S       Sn     14 02 16.1  -1.2
GOPC  GO Pecny, Ondr  17.64 329  eP      P      13 59 02.7 +0.1
GOPC                             eS      Sn     14 02 17.4  -0.6
GOPC                             AMS     AMS    14 08 30.0
      comp=Z,3µm,11.4s
GOPC  GO Pecny, Ondr  17.64 329  eP      P      13 59 02.7 +0.1
GOPC                             eS      Sn     14 02 17.4  -0.6
GOPC                             MLR     MLR
      comp=Z,3µm,11.4s
GOPC  GO Pecny, Ondr  17.64 329  eP      P      13 59 02.7 +0.1
      comp=Z,3µm,11.4s
GOPC                             S       Sn     14 02 17.4  -0.6
VORR  Voronezh        17.67  21  eP      P      13 59 03.0 +0.2
VORR                             pmax    pmax
      comp=Z,2µm,1.2s
VORR  Voronezh        17.67  21  eP      P      13 59 03.0 +0.2
      comp=Z,2µm,1.2s
MOTA  Moosalm         17.75 317  i P     P      13 59 04.6 +0.7
      comp=Z,216nm,0.8s,SNR=58
KSP   Ksiaz           17.77 333  i P     P      13 59 04.5 +0.5
KSP                              eS      S      14 02 23.4  -1.7
KSP   Ksiaz           17.77 333⇓iP      P      13 59 04.5 +0.5
KSP                              eS      S      14 02 23.4  -1.7
KSP   Ksiaz           17.77 333  i P     P      13 59 04.5 +0.5
KSP                              eS      S      14 02 23.4  -1.7
FETA  Feichten        17.77 316  i P     P      13 59 04.7 +0.5
      comp=Z,281nm,0.8s,SNR=183
FETA                             eSn     Sn     14 02 21.5 +0.1
      comp=Z,3µm,3.7s
FETA  Feichten        17.77 316  P       P      13 59 04.7 +0.5
      comp=Z,281nm,0.8s,SNR=183
FETA                             Sn      Sn     14 02 21.5 +0.1
      comp=Z,3µm,3.7s
PRU   Pruhonice       17.80 328  eP      P      13 59 04.8 +0.5
PRU                              epP     pP     13 59 14.1  -2.6
PRU                              eS      Sn     14 02 20.8  -1.0
PRU                              AMS     AMS    14 07 20.0
      comp=Z,3µm,11.3s
PRU   Pruhonice       17.80 328  eP      P      13 59 04.8 +0.5
PRU                              eS      Sn     14 02 20.8  -1.0
PRU                              MLR     MLR
      comp=Z,3µm,11.3s
PRU   Pruhonice       17.80 328  eP      P      13 59 04.8 +0.5
PRU                              S       Sn     14 02 20.8  -1.0
CAEH  'Ain El Ouahch  17.88 280  P       Pn     13 59 04.8  -0.5
CAEH  'Ain El Ouahch  17.88 280  P       Pn     13 59 04.8  -0.5
PRA   Prague          17.91 328  eP      Pn     13 59 06.6 +1.1
PRA                              eS      Sn     14 02 24.8 +0.4
PRA                              AMS     AMS    14 07 10.0
      comp=Z,3µm,10.1s
PRA   Prague          17.91 328  eP      Pn     13 59 06.6 +1.1
PRA                              eS      Sn     14 02 24.8 +0.4
PRA                              MLR     MLR
      comp=Z,3µm,10.1s
PRA   Prague          17.91 328  eP      Pn     13 59 06.6 +1.1
      comp=Z,3µm,10.1s
PRA                              S       Sn     14 02 24.8 +0.4
CKFL  Kef-Lekhel      18.00 279  P       P      13 59 06.2  -0.6
CKFL  Kef-Lekhel      18.00 279  P       P      13 59 06.2  -0.6
RETA  Reutte          18.02 317  i Pn    Pn     13 59 07.0   0.0
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       comp=Z,270nm,1.6s,SNR=35
RETA                             eSn     Sn      14 02 26.5 -0.6
       comp=Z,446nm,1.9s
RETA   Reutte           18.02 317  Pn    Pn      13 59 07.0  0.0
       comp=Z,270nm,1.6s,SNR=35
RETA                               Sn    Sn      14 02 26.5 -0.6
       comp=Z,446nm,1.9s
DAVOX  Davos/Dischmat   18.14 314  P     Pn      13 59 09.0 +0.5
       comp=Z,1.8nm,0.3s,baz=129,slow=6.5,SNR=41
DAVOX                              LR    LR      14 06 46.3
       comp=Z,2µm,21.7s,baz=122,slow=39
CASM   Ain Smara        18.20 279  P     Pn      13 59 09.1 -0.1
CASM   Ain Smara        18.20 279  P     Pn      13 59 09.1 -0.1
PVCC   Panska Ves       18.20 330 eP     Pn      13 59 09.3 +0.2
PVCC                              eS     Sn      14 02 30.9 -0.4
PVCC                               AMS   AMS     14 07 40.0
       comp=Z,2µm,10.4s
PVCC   Panska Ves       18.20 330 eP     Pn      13 59 09.3 +0.2
PVCC                              eS     Sn      14 02 30.9 -0.4
PVCC                               MLR   MLR
       comp=Z,2µm,10.4s
PVCC   Panska Ves       18.20 330 eP     Pn      13 59 09.3 +0.2
       comp=Z,2µm,10.4s
PVCC                               S     Sn      14 02 30.9 -0.4
CTEI   Djebel Teioual   18.28 278  P     P       13 59 09.9  0.0
CTEI   Djebel Teioual   18.28 278  P     P       13 59 09.9  0.0
DAVA   Damuels          18.41 315 i Pn   P       13 59 11.1  0.0
       comp=Z,211nm,1.2s,SNR=56
DAVA                              i Sn   Sn      14 02 35.2 -1.3
       comp=Z,809nm,2.0s
DFRA   Djebel Bou Aff   18.67 280  P     Pn      13 59 14.7 -0.3
DFRA   Djebel Bou Aff   18.67 280  P     Pn      13 59 14.7 -0.3
BRG    Berggiesshubel   18.72 329 i P    Pn      13 59 15.1 -0.3
       comp=Z,565nm,1.1s
BRG                                S     Sn      14 02 38.0 -5.9
       comp=N,2µm,16.0s
       comp=E,3µm,12.9s
       comp=Z,2µm,12.6s
BRG    Berggiesshubel   18.72 329 i P    Pn      13 59 15.1 -0.3
BRG                                S     Sn      14 02 38.0 -5.9
BRG                                pmax  pmax
       comp=Z,565nm,1.1s
BRG                                MLR   MLR
       comp=N,2µm,16.0s
BRG                                MLR   MLR
       comp=E,3µm,12.9s
BRG                                MLR   MLR
       comp=Z,2µm,12.6s
BRG    Berggiesshubel   18.72 329 i P    Pn      13 59 15.1 -0.3
       comp=Z,565nm,1.1s
RAYN   Ar Rayn          18.73 125 eP     Pn      13 59 15.6 -0.2
       comp=Z,224nm,0.9s
RAYN   Ar Rayn          18.73 125 i P    Pn      13 59 16.0 +0.2
       SNR=202
RAYN   Ar Rayn          18.73 125 eP     Pn      13 59 15.6 -0.2
RAYN                               pmax  pmax
       comp=Z,224nm,0.9s
RAYN   Ar Rayn          18.73 125 eP     Pn      13 59 15.6 -0.2
       comp=Z,224nm,0.9s
SUW    Suwalki          18.85 349 i P    P       13 59 16.0 +0.2
SUW                               eS     Sn      14 02 41.9 -5.0
SUW                               e              14 02 57.3
SUW    Suwalki          18.85 349 eP     P       13 59 15.9 +0.2
       comp=Z,3µm,1.1s
SUW    Suwalki          18.85 349⇓iP     P       13 59 16.0 +0.2
SUW                               eS     Sn      14 02 41.9 -5.0
NKC    Novy Kostel      18.91 326 eP     P       13 59 16.6 +0.1
NKC                               ex     x       13 59 20.2
NKC                               eS     S       14 02 45.2 -3.1
NKC                                AMS   AMS     14 09 10.0
       comp=Z,3µm,14.2s
NKC    Novy Kostel      18.91 326 eP     P       13 59 16.6 +0.1
NKC                               eS     S       14 02 45.2 -3.1
NKC                                MLR   MLR
       comp=Z,3µm,14.2s
NKC    Novy Kostel      18.91 326 eP     P       13 59 16.6 +0.1
NKC                                S     S       14 02 45.2 -3.1
MICGM  Minsk            18.92 358⇓eP     P       13 59 14.0 -2.5
MICGM                              PM            13 59 16.0
       comp=Z,4.7nm,0.8s
MICGM                              PM            13 59 16.0
       comp=N,5.4nm,1.0s
MICGM                              PM            13 59 17.0
       comp=Z,19nm,3.0s
MICGM                              PM            13 59 19.0
       comp=N,12nm,3.0s
MICGM                             ePP    sP      13 59 40.0 +3.9
MICGM                             ePPP   PPP     13 59 46.0
MICGM                             eS     S       14 02 34.0  -14
MICGM                             esS    Sn      14 02 40.0 -8.6
MICGM                             eSS    SnSn    14 03 10.0 +6.6
MICGM                             eSSS   SSS     14 03 38.0
MICGM                             eLR    LR      14 05 50.0
MNK    Minsk            18.92 358⇓eP     P       13 59 14.0 -2.5
MNK                               eS     S       14 02 34.0  -14
MNK                                pmax  pmax
       comp=Z,5µm,0.8s
MNK                                pmax  pmax
       comp=N,5µm,1.0s
MNK                                pmax  pmax
       comp=Z,19µm,3.0s
MNK                                pmax  pmax
       comp=N,12µm,3.0s
CKHR   Kef el Ahmar     19.01 278  P     Pn      13 59 18.7 -0.4
CKHR   Kef el Ahmar     19.01 278  P     Pn      13 59 18.7 -0.4
SET    Setif            19.08 279  P     P       13 59 18.0 -0.6
SET    Setif            19.08 279  P     P       13 59 18.0 -0.6
GRFO   Grafenberg       19.13 323 eP     P       13 59 18.6 -0.3
       comp=N,641nm,1.6s
GRFO   Grafenberg       19.13 323 eP     P       13 59 18.6 -0.3
GRFO                               pmax  pmax
       comp=Z,641nm,1.6s
GRFO   Grafenberg       19.13 323 eP     P       13 59 18.6 -0.3
       comp=Z,641nm,1.6s
NACGM  Naroch           19.37 356 eP     P       13 59 22.0 +0.6
NACGM                              PM            13 59 24.0
       comp=Z,3.3nm,1.0s
NACGM                             eS     S       14 02 52.0 -5.3
NACGM                             esS    Sn      14 03 06.0 +6.7
NACGM                             eLQ    LQ      14 05 16.0
NACGM                             eLR    LR      14 07 12.0
BNI    Bardonecchia     19.38 306 eP     P       13 59 20.9 -0.9
       comp=Z,520nm,1.6s
BNI    Bardonecchia     19.38 306 eP     P       13 59 20.9 -0.9
BNI                                pmax  pmax
       comp=Z,520nm,1.6s
BNI    Bardonecchia     19.38 306 eP     P       13 59 20.9 -0.9
       comp=Z,520nm,1.6s
CLL    Collm            19.44 329⇓iP     P       13 59 22.6 +0.3
       comp=Z,508nm,1.0s
CLL                               ePmax          13 59 23.0
CLL                               ePlp           13 59 25.0
CLL                               ePlp           13 59 25.0
CLL                               ePlp           13 59 25.0
CLL                               epP    pP      13 59 33.0 -1.7
CLL                               eS     S       14 02 57.0 -1.9
       comp=Z,4µm,7.9s
CLL                               e              14 03 26.0
CLL                                Lmax          14 08 00.0
CLL                               i ScS  ScS     14 10 54.2  0.0
CLL    Collm            19.44 329 eP     P       13 59 22.1 -0.2
       comp=Z,378nm,0.8s
CLL    Collm            19.44 329⇓iP     P       13 59 22.6 +0.3
CLL                               eS     S       14 02 57.0 -1.9
CLL                                pmax  pmax
       comp=Z,508nm,1.0s
CLL    Collm            19.44 329 eP     P       13 59 22.1 -0.2
       comp=Z,378nm,0.8s
GKP    Gorka Klasztor   19.50 339 i P    P       13 59 22.9  0.0
GKP                               eS     S       14 03 00.9 +0.9
GKP    Gorka Klasztor   19.50 339⇓iP     P       13 59 22.9  0.0
GKP                               eS     S       14 03 00.9 +0.9
GKP    Gorka Klasztor   19.50 339 i P    P       13 59 22.9  0.0
GKP                               eS     S       14 03 00.9 +0.9
SENIN  Lac Senin/Sane   19.50 310 eP     P       13 59 21.8 -1.4
       comp=Z,2µm,1.9s
STU    Stuttgart        19.61 318 eP     P       13 59 23.4 -0.8
       comp=Z,276nm,1.1s
STU    Stuttgart        19.61 318 eP     P       13 59 23.4 -0.8
STU                                pmax  pmax
       comp=Z,276nm,1.1s
STU    Stuttgart        19.61 318 eP     P       13 59 23.4 -0.8
       comp=Z,276nm,1.1s
BFO    Black Forest     19.85 316 eP     P       13 59 26.2 -0.6
       comp=Z,191nm,1.0s
BFO    Black Forest     19.85 316 i P    P       13 59 26.8  0.0
BFO    Black Forest     19.85 316 i P    P       13 59 26.8  0.0
KLNR   Kaliningrad      19.95 345d iP    P       13 59 27.4 -0.4
KLNR   Kaliningrad      19.95 345 i P    P       13 59 27.4 -0.4
MAHO   Mahon            19.96 290 i P    P       13 59 25.3 -2.7
OBN    Obninsk          20.21  13  P     P       13 59 30.6  0.0
       comp=Z,6µm,0.8s,baz=192,slow=18,SNR=338
OBN                                S     S       14 03 11.6 -2.5
       comp=Z,91nm,0.5s,baz=256,slow=21,SNR=1.1
OBN                                LR    LR      14 08 51.4
       comp=Z,6µm,19.7s,baz=194,slow=41
OBN    Obninsk          20.21  13 eP     P       13 59 30.7 +0.1
       comp=Z,3µm,1.3s
OBN                                S     S       14 03 11.6 -2.5
OBN    Obninsk          20.21  13d iP    P       13 59 30.8 +0.1
OBN                               e              13 59 49.1
OBN                               eS     S       14 03 11.2 -2.9
OBN                               eSS    SnSn    14 03 37.5 +2.4
OBN                                pmax  pmax
       comp=Z,3µm,1.2s
OBN                                MLR   MLR
       comp=Z,3µm,22.0s
OBN    Obninsk          20.21  13 eP     P       13 59 30.7 +0.1
       comp=Z,3µm,1.3s
OBN                                S     S       14 03 11.6 -2.5
AKET   Djebel Ketaf     20.32 279  P     P       13 59 31.0 -1.1
AKET   Djebel Ketaf     20.32 279  P     P       13 59 31.0 -1.1
ECH    Echery           20.46 315 eP     P       13 59 32.3 -1.1
       comp=Z,177nm,1.1s
ECH    Echery           20.46 315 eP     P       13 59 32.3 -1.1
ECH                                pmax  pmax
       comp=Z,177nm,1.1s
ECH    Echery           20.46 315 eP     P       13 59 32.3 -1.1
       comp=Z,177nm,1.1s
ADJB   Djebel Djouab    20.67 279  P     P       13 59 34.9 -0.9
ADJB   Djebel Djouab    20.67 279  P     P       13 59 34.9 -0.9
ABA    Alger-Bouzarea   20.93 281  P     P       13 59 37.1 -1.5
ABA    Alger-Bouzarea   20.93 281  P     P       13 59 37.1 -1.5
PBUR   Paburg˜          20.99 349 eP     P       13 59 38.4 -0.5
MOS    Moscow           21.00  14α iP    P       13 59 40.7 +1.6
MOS                               e              13 59 57.6
MOS                               e              13 59 58.1
MOS                               i S    S       14 03 31.2 +1.5
MOS                               e              14 03 49.3
MOS                               eSS    SnSn    14 03 55.5 +1.1
MOS                                pmax  pmax
       comp=Z,5µm,1.6s
MOS                                pmax  pmax
       comp=N,2µm,1.4s
MOS                                pmax  pmax
       comp=E,760nm,1.2s
MOS                                pmax  pmax
       comp=Z,9µm,1.9s
MOS                                smax  smax
       comp=N,5µm,4.6s
MOS                                smax  smax
       comp=E,5µm,4.9s
MOS                                MLR   MLR
       comp=E,3µm,24.0s
MOS                                MLR   MLR
       comp=Z,4µm,24.0s
MOS                                MLR   MLR
       comp=N,4µm,23.0s
MOS    Moscow           21.00  14 i P    P       13 59 40.7 +1.6
       comp=N,9µm,1.9s
EMHD   Djebel Mahouad   21.05 279  P     P       13 59 38.8 -1.2
EMHD   Djebel Mahouad   21.05 279  P     P       13 59 38.8 -1.2
WLF    Walferdange      21.77 317 ⇑P     P       13 59 48.5 +1.1
       comp=Z,150nm,1.2s
WLF    Walferdange      21.77 317 eP     P       13 59 47.6 +0.2
       comp=Z,176nm,1.0s
WLF    Walferdange      21.77 317 eP     P       13 59 47.6 +0.2
WLF                                pmax  pmax
       comp=Z,176nm,1.0s
WLF    Walferdange      21.77 317 eP     P       13 59 47.6 +0.2
       comp=Z,176nm,1.0s
BSD    Bornholm Skovb   21.79 338 i P    P       13 59 45.0 -2.5
       comp=Z,137nm,0.9s
BSD                               i S    S       14 03 38.8 -6.4
BSD    Bornholm Skovb   21.79 338 i P    P       13 59 45.0 -2.5
BSD                               i S    S       14 03 38.8 -6.4
BSD                                pmax  pmax
       comp=Z,140nm,0.9s
RGN    Rugen            21.84 335 eP     P       13 59 45.1 -2.9
       comp=Z,299nm,1.2s
EBNR   Beni Rached      22.19 280  P     P       13 59 51.4 -0.7
EBNR   Beni Rached      22.19 280  P     P       13 59 51.4 -0.7
ECHA   Ech Chlef        22.33 280  P     P       13 59 53.4 -0.2
ECHA   Ech Chlef        22.33 280  P     P       13 59 53.4 -0.2
MEM    Membach          22.36 319 ⇑P     P       13 59 53.1 -0.6
       comp=Z,69nm,1.1s
HGN    Heimansgroeve    22.48 320 eP     P       13 59 53.7 -1.3
HGN                               eS     S       14 03 54.1 -3.7
ETRT   Tiaret           22.49 278  P     P       13 59 54.5 -0.9
ETRT   Tiaret           22.49 278  P     P       13 59 54.5 -0.9
EANR   'Ain N'Sour      22.57 279  P     P       13 59 55.0 -1.2
EANR   'Ain N'Sour      22.57 279  P     P       13 59 55.0 -1.2
BEBN   Eben Emael       22.64 319 ⇑P     P       13 59 54.9 -1.8
WTSB   Winterswijk      22.74 323 eP     P       13 59 55.8 -2.0
LLD    Lille Linde      22.85 335 i P    P       13 59 57.6 -1.2
       comp=Z,178nm,0.8s
LLD    Lille Linde      22.85 335 i P    P       13 59 57.6 -1.2
LLD                                pmax  pmax
       comp=Z,180nm,0.8s
DOU    Dourbes          22.86 317 ⇑P     P       13 59 56.1 -2.9
       comp=Z,48nm,1.4s
COP    Copenhagen       23.06 336⇓iP     P       13 59 59.6 -1.3
COP                               i S    S       14 04 06.3 -1.0
COP    Copenhagen       23.06 336⇓iP     P       13 59 59.6 -1.3
COP                               i S    S       14 04 06.3 -1.0
SNF    Seneffe          23.24 318 ⇑P     P       14 00 02.8 +0.1
UCC    Uccle            23.34 318 ⇑P     P       14 00 03.6 -0.2
UCC    Uccle            23.34 318 eP     P       14 00 02.1 -1.7
       comp=Z,95nm,1.0s
UCC    Uccle            23.34 318 eP     P       14 00 02.1 -1.7
UCC                                pmax  pmax
       comp=Z,95nm,1.0s
UCC    Uccle            23.34 318  P     P       14 00 03.6 -0.2
GEYT   Alibeck          23.44  76  P     P       14 00 04.8 -0.2
       comp=Z,39nm,0.8s,baz=289,slow=9.0,SNR=17
GEYT                               S     S       14 04 15.6 +1.5
       comp=Z,20nm,1.0s,baz=286,slow=41,SNR=4.1
GYA0B  ALIBECK ARRAY    23.44  76 eP     P       14 00 04.5 -0.4
       comp=Z,315nm,1.0s
GYA0B  ALIBECK ARRAY    23.44  76 eP     P       14 00 04.5 -0.4
       comp=Z,315nm,1.0s
ODJA   Bouhanifia       23.67 278  P     P       14 00 00.0 -7.0
ODJA   Bouhanifia       23.67 278  P     P       14 00 00.0 -7.0
USTO   Oran             23.93 279  P     P       14 00 11.0 +1.7
TAM    Tamanrasset      24.03 244 eP     P       14 00 11.4 +0.8
       comp=Z,959nm,1.1s
TAM    Tamanrasset      24.03 244 eP     P       14 00 11.4 +0.8
TAM                                pmax  pmax
       comp=Z,959nm,1.1s
TAM    Tamanrasset      24.03 244 eP     P       14 00 11.4 +0.8
       comp=Z,959nm,1.1s
CART   Cartagena        24.09 284 eP     P       14 00 08.7 -2.0
       comp=Z,144nm,0.9s
CART   Cartagena        24.09 284 eP     P       14 00 08.7 -2.0
       comp=Z,144nm,0.9s
PUL    Pulkovo          24.20   2⇑eP     P       14 00 13.1 +1.6
PUL                                pmax  pmax
       comp=Z,1µm,1.0s
MZR    Muzera           24.73 114 i P    P       14 00 17.1 +0.4
       SNR=26
MUD    Monsted U'grnd   24.80 333 i P    P       14 00 17.9 +0.9
       comp=Z,608nm,1.5s
MUD    Monsted U'grnd   24.80 333 i P    P       14 00 17.9 +0.9
MUD                                pmax  pmax
       comp=Z,610nm,1.5s
AJN    Ajban            25.00 109 i P    P       14 00 20.0 +0.8
       SNR=39
UMQ    Umm Al-Quwin     25.03 106 i P    P       14 00 21.4 +2.0
       SNR=48
DAMY   Dhamar           25.11 143 eP     P       14 00 21.7 +1.1
       comp=Z,623nm,1.2s
SHME   Shamm            25.15 105 i P    P       14 00 21.9 +1.3
       SNR=30
SHME   Shamm            25.15 105  P     P       14 00 21.0 +0.4
       SNR=9.6
SHME                               S     S       14 04 42.0 +0.4
ASUD   Al Ashush, Dub   25.23 108  P     P       14 00 22.3 +1.0
       SNR=17
ASUD                               S     S       14 04 44.4 +1.6
ASUD   Al Ashush, Dub   25.23 108 i P    P       14 00 22.5 +1.3
       SNR=11
NAZ    Nazwa, Dubai     25.30 107  P     P       14 00 22.8 +0.9
       SNR=35
NAZ                                S     S       14 04 45.9 +2.0
NAZ    Nazwa, Dubai     25.30 107 i P    P       14 00 22.8 +0.9
       SNR=70
NAZ    Nazwa, Dubai     25.30 107  P     P       14 00 22.8 +0.9
       SNR=35
NAZ                                S     S       14 04 45.9 +2.0
BANOM  Banah            25.33 105  P     P       14 00 23.5 +1.3
       SNR=8.2
BANOM                              S     S       14 04 45.5 +0.9
BANOM  Banah            25.33 105 i P    P       14 00 22.6 +0.3
       SNR=16
BANOM  Banah            25.33 105  P     P       14 00 22.6 +0.3
       SNR=16
BANOM                              S     S       14 04 45.5 +0.9
MSFE   Esma-Masafi      25.50 106 i P    P       14 00 24.3 +0.6
       SNR=32
MDH    Madha            25.64 106 i P    P       14 00 25.7 +0.7
       SNR=32
MDH    Madha            25.64 106  P     P       14 00 25.7 +0.7
       SNR=8.0
AKTO   Aktyubinsk       25.70  46  P     P       14 00 25.8 +0.4
       comp=Z,876nm,0.7s,baz=248,slow=8.5,SNR=1119
AKTO                               S     S       14 04 46.8 -3.1
       comp=Z,32nm,1.1s,baz=41,slow=19,SNR=2.6
AKTO                               LR    LR      14 14 05.0
       comp=Z,803nm,21.0s,baz=246,slow=44
UCM    Universidad Co   25.73 290 i P    P       14 00 25.7 -0.1
UOSS   Minazif          25.74 107 eP     P       14 00 26.2 +0.3
       comp=Z,763nm,1.4s
UOSS   Minazif          25.74 107 i P    P       14 00 26.2 +0.3
       SNR=20
UOSS   Minazif          25.74 107  P     P       14 00 26.2 +0.3
       SNR=20
HATD   Hatta, Dubai     25.75 107  P     P       14 00 26.4 +0.4
       SNR=20
HATD                               S     S       14 04 52.8 +1.7
HATD   Hatta, Dubai     25.75 107 i P    P       14 00 26.3 +0.4
       SNR=47
HATD   Hatta, Dubai     25.75 107  P     P       14 00 26.3 +0.3
       SNR=47
HATD                               S     S       14 04 52.8 +1.7
ASHO   Ashiyiah         25.77 108  P     P       14 00 26.3 +0.1
       SNR=32
ASHO   Ashiyiah         25.77 108 i P    P       14 00 26.5 +0.3
       SNR=41
ASHO   Ashiyiah         25.77 108  P     P       14 00 26.3 +0.1
       SNR=32
ALNE   Al Ain           25.86 109 i P    P       14 00 27.6 +0.6
       SNR=27
ALNE   Al Ain           25.86 109  P     P       14 00 27.8 +0.8
       SNR=34
ALNE                               S     S       14 04 53.3 +0.5
MELI   Melilla          25.92 279 i P    P       14 00 27.3 -0.1
FINES  FINESS Array B   25.93 357  P     P       14 00 27.7 +0.4
       comp=Z,138nm,0.8s,baz=151,slow=8.7,SNR=147
FINES                              S     S       14 04 50.8 -2.4
       comp=Z,6.9nm,0.7s,baz=173,slow=16,SNR=2.1
FINES                              LR    LR      14 12 11.3
       comp=Z,2µm,21.6s,baz=174,slow=40
FIA1   FINESS Array S   25.93 357 eP     P       14 00 26.6 -0.6
       comp=Z,271nm,0.9s
KLMR   Klimovskoe       26.17  12 eP     P       14 00 28.2 -1.1
KLMR                              eS     S       14 04 55.7 -1.2
KLMR   Klimovskoe       26.17  12 eP     P       14 00 28.3 -1.1
KLMR                               AMP           14 00 34.3
       comp=Z,4µm,1.4s
KLMR                              eS     S       14 04 55.8 -1.2
KLMR                              eS     S       14 04 55.8 -1.2
KLMR                               LQ    LQ      14 08 43.0
KLMR                               LQ    LQ      14 08 43.0
KLMR                               LR    LR      14 10 24.0
BDHA   Al Bayda'        26.21 141 eP     P       14 00 32.3 +1.9
ES19   SONSECA Array    26.24 289 eP     P       14 00 29.9 -0.5
ES19   SONSECA Array    26.24 289 eP     P       14 00 29.9 -0.5
ESDC   Sonseca Array    26.30 289  P     P       14 00 30.9  0.0
       comp=Z,204nm,0.6s,baz=81,slow=9.2,SNR=538
ESDC                               S     S       14 04 57.4 -2.1
       comp=Z,7.6nm,1.1s,baz=83,slow=15,SNR=4.1
ESDC                               LR    LR      14 11 43.6
       comp=Z,943nm,20.6s,baz=85,slow=38
ESLA   Sonseca Array    26.30 289 eP     P       14 00 30.3 -0.6
       comp=Z,760nm,1.1s
ESLA   Sonseca Array    26.30 289 eP     P       14 00 30.3 -0.6
       comp=Z,760nm,1.1s
SOHO   SOHO             26.42 108 i P    P       14 00 32.5 +0.5
       SNR=90
HOMB   Homborsund       26.42 335 eP     P       14 00 31.4 -0.3
HOMB                               IAmb  IAmb    14 00 33.8
       comp=Z,71nm,1.3s
AB31   Akbulak array    26.43  49 i P    P       14 00 32.2 +0.4
AB31                               pmax  pmax
       comp=Z,90nm,0.7s
AB31   Akbulak array    26.43  49 i P    P       14 00 32.2 +0.4
       comp=Z,90nm,0.7s
ABKAR  Akbulak array    26.43  49 eP     P       14 00 32.1 +0.2
ABKAR  Akbulak array    26.43  49 eP     P       14 00 32.1 +0.2
HFS    Hagfors          26.46 343  P     P       14 00 31.5 -0.5
       comp=Z,45nm,0.5s,baz=151,slow=9.4,SNR=95
HFS                                S     S       14 04 54.9 -6.8
       comp=Z,13nm,0.9s,baz=141,slow=18,SNR=1.9
HFS                                LR    LR      14 13 00.1
       comp=Z,3µm,19.0s,baz=154,slow=41
JSA    Saint Aubin      26.48 310 eP     P       14 00 31.3 -1.0
JSA                                IAmb  IAmb    14 00 32.8
       comp=Z,380nm,1.2s
JSA    Saint Aubin      26.48 310 eP     P       14 00 31.3 -1.0
PAB    San Pablo        26.60 289 eP     P       14 00 33.2 -0.4
       comp=Z,519nm,1.0s
PAB                                LR    LR
       comp=Z,1µm,20.0s
PAB    San Pablo        26.60 289 eP     P       14 00 33.2 -0.4
PAB                                pmax  pmax
       comp=Z,519nm,1.0s
PAB                                MLR   MLR
       comp=Z,1µm,20.0s
PAB    San Pablo        26.60 289 eP     P       14 00 33.2 -0.4
       comp=Z,1µm,20.0s
ARQ    Araqi            26.84 110  P     P       14 00 36.6 +0.7
       SNR=32
EMAL   Malaga-Limoner   26.89 282 i P    P       14 00 35.9 -0.3
SNART  Snartemo         26.92 334 eP     P       14 00 36.1 -0.1
SNART                              IAmb  IAmb    14 00 36.9
       comp=Z,55nm,1.2s
PVLZ   Peæn de          27.04 279 i P    P       14 00 37.9 +0.4
ATD    Arta Tunnel      27.07 149  P     P       14 00 38.9 +0.9
       comp=Z,52nm,0.9s,baz=319,slow=9.4,SNR=14
ATD                                LR    LR      14 12 46.9
       comp=Z,592nm,20.7s,baz=338,slow=39
ATD    Arta Tunnel      27.07 149 eP     P       14 00 37.4 -0.6
       comp=Z,129nm,1.1s
OSL    Oslo             27.07 340 eP     P       14 00 36.0 -1.5
OSL                                IAmb  IAmb    14 00 37.1
       comp=Z,54nm,0.8s
KONO   Kongsberg        27.16 338 eP     P       14 00 37.1 -1.3
       comp=Z,302nm,1.3s
KONO   Kongsberg        27.16 338 eP     P       14 00 37.1 -1.3
KONO                               pmax  pmax
       comp=Z,302nm,1.3s
KONO   Kongsberg        27.16 338 eP     P       14 00 37.1 -1.3
KONO                               IAmb  IAmb    14 00 41.0
       comp=Z,282nm,1.2s
HOQ    Hoqain           27.32 108  P     P       14 00 40.2 +0.1
       SNR=20
HOQ    Hoqain           27.32 108  P     P       14 00 40.2 +0.1
       SNR=20
CWF    Charnwood Fore   27.36 318 eP     P       14 00 38.4 -1.8
CWF                                IAmb  IAmb    14 00 39.1
       comp=Z,21nm,0.8s
CWF    Charnwood Fore   27.36 318 eP     P       14 00 38.4 -1.8
NC602  NORSAR Array S   27.52 341 eP     P       14 00 39.5 -2.0
NC602  NORSAR Array S   27.52 341 eP     P       14 00 41.8 +0.2
NC602                              IAmb  IAmb    14 00 44.9
       comp=Z,432nm,0.6s
BSY    Bisya            27.69 110  P     P       14 00 44.1 +0.6
       SNR=24
BSYO   Bisya            27.73 110  P     P       14 00 44.1 +0.3
       SNR=24
HGH    Gray Hill        27.74 315 eP     P       14 00 42.1 -1.5
CEU    Ceuta            27.78 281 i P    P       14 00 41.8 -2.3
CEU                               eS     S       14 05 18.3 -4.5
NAO01  NORSAR Array S   27.79 341 eP     P       14 00 43.3 -0.6
NC405  NORSAR Array S   27.80 342 eP     P       14 00 42.8 -1.3
MONM   Monmouth         27.82 316 eP     P       14 00 42.2 -2.1
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MONM				IAmb	IAmb	14 00 46.5	
	comp=Z,46nm,1.1s						
MDT	Midelt	27.82	274	P	P	14 00 45.0	+0.3
	comp=Z,99nm,1.1s,baz=92,slow=10.0,SNR=82						
MDT				S	S	14 05 23.7	-0.1
	comp=Z,8.3nm,0.9s,baz=271,slow=23,SNR=1.4						
MDT				LR	LR	14 14 08.6	
	comp=Z,1µm,21.0s,baz=65,slow=41						
NB201	NORSAR Array S	27.86	342	eP	P	14 00 43.6	-0.9
NB2	NORSAR Subarra	27.87	342	P	P	14 00 43.4	-1.3
	comp=Z,125nm,1.7s,baz=148,slow=9.3						
NB2	NORSAR Subarra	27.87	342	P	P	14 00 43.4	-1.3
	baz=148,slow=9.3						
LBWR	Ladybower, Pea	27.89	319	eP	P	14 00 43.3	-1.7
LBWR				IAmb	IAmb	14 00 44.5	
	comp=Z,57nm,1.3s						
STAV	Stavanger	27.90	334	eP	P	14 00 44.1	-0.8
STAV				IAmb	IAmb	14 00 44.8	
	comp=Z,28nm,1.1s						
NBO00	NORSAR Array S	27.98	341	eP	P	14 00 45.0	-0.6
NC303	NORSAR Array S	27.99	342	eP	P	14 00 44.5	-1.2
MCH1	Michaelchurch	27.99	316	eP	P	14 00 43.3	-2.5
MCH1				IAmb	IAmb	14 00 46.2	
	comp=Z,141nm,1.8s						
BLS5	Blasjo	28.00	335	eP	P	14 00 45.1	-0.7
BLS5				IAmb	IAmb	14 00 46.1	
	comp=Z,55nm,1.0s						
STNC	Stoke	28.01	318	eP	P	14 00 45.1	-0.9
PRGR	Permogore	28.12	17	⇓iP	P	14 00 47.3	+0.5
PRGR				eS	S	14 05 31.3	+3.6
PRGR				pmax	pmax		
	comp=Z,831nm,1.0s						
HLM1	Long Mynd	28.14	317	eP	P	14 00 45.4	-1.8
HLM1				IAmb	IAmb	14 00 47.8	
	comp=Z,55nm,1.4s						
SMDO	Samad	28.17	108	P	P	14 00 49.3	+1.4
	SNR=19						
NC204	NORSAR Array S	28.19	341	eP	P	14 00 46.5	-1.0
KMY	Karmoy	28.26	334	eP	P	14 00 48.3	+0.2
SFS	San Fernando	28.35	282	eP	P	14 00 46.7	-2.5
	comp=Z,425nm,1.2s						
SFS	San Fernando	28.35	282	eP	P	14 00 46.7	-2.5
SFS				pmax	pmax		
	comp=Z,425nm,1.2s						
SFS	San Fernando	28.35	282	eP	P	14 00 47.3	-1.9
SFS				eS	S	14 05 29.7	-2.2
PBRG	Braganca	28.39	293	eP	P	14 00 49.0	-0.6
	comp=Z,543nm,1.2s						
PBRG				eS	S	14 05 30.7	-1.9
PBRG	Braganca	28.39	293	eP	P	14 00 49.0	-0.6
PBRG				eS	S	14 05 30.7	-1.9
FOEL	Foel Wylfa	28.47	317	eP	P	14 00 48.7	-1.4
FOEL				IAmb	IAmb	14 00 51.3	
	comp=Z,104nm,1.2s						
WSAR	Wadi Sarin	28.52	107	P	P	14 00 51.1	+0.2
	comp=Z,21nm,0.7s,baz=293,slow=14,SNR=10.0						
WSAR				S	S	14 05 35.5	+0.6
	comp=Z,10nm,1.0s,baz=96,slow=18,SNR=1.8						
WSAR				LR	LR	14 15 30.8	
	comp=Z,1µm,18.1s,baz=320,slow=43						
JMDO	Jabal Madar	28.59	110	P	P	14 00 51.4	-0.1
	SNR=16						
MVO	Moncorvo	28.61	292	eP	P	14 00 51.4	-0.2
	comp=Z,580nm,1.8s						
MVO				eS	S	14 05 34.3	-1.7
MVO	Moncorvo	28.61	292	eP	P	14 00 51.4	-0.2
MVO				eS	S	14 05 34.3	-1.7
EDMD	Edmundbyers	28.69	322	eP	P	14 00 50.1	-2.0
EDMD				IAmb	IAmb	14 00 51.2	
	comp=Z,31nm,0.8s						
LLW	Llanuwychllyn	28.71	317	eP	P	14 00 49.7	-2.5
PBAR	Barrancos	28.79	286	eP	P	14 00 52.6	-0.5
	comp=Z,1µm,1.5s						
PBAR				eS	S	14 05 37.2	-1.6
PBAR	Barrancos	28.79	286	eP	P	14 00 52.6	-0.5
PBAR				eS	S	14 05 37.2	-1.6
ARU	Arti	28.90	35	P	P	14 00 54.3	+0.4
	comp=Z,186nm,0.9s,baz=240,slow=5.7,SNR=268						
ARU				S	S	14 05 35.5	-4.6
	comp=Z,15nm,0.8s,baz=290,slow=22,SNR=1.6						
ARU				LR	LR	14 13 35.1	
	comp=Z,1µm,20.5s,baz=240,slow=39						
ARU	Arti	28.90	35	eP	P	14 00 53.7	-0.1
	comp=Z,410nm,1.1s						
ARU				S	S	14 05 35.5	-4.6
ARU	Arti	28.90	35	d iP	P	14 00 54.1	+0.2
ARU						14 01 46.9	
ARU				PPP	PPP	14 01 58.5	
ARU						14 04 02.0	
ARU				S	S	14 05 42.1	+2.0
ARU				SS	SnSn	14 07 10.4	+3.4
ARU						14 11 32.3	
ARU				pmax	pmax		
	comp=Z,500nm,1.2s						
PMRV	Marv??o	28.95	289	eP	P	14 00 53.9	-0.7
	comp=Z,517nm,1.2s						
PMRV				eS	S	14 05 40.3	-1.1
PMRV	Marv??o	28.95	289	eP	P	14 00 53.9	-0.7
PMRV				eS	S	14 05 40.3	-1.1
PCBR	Castelo Branco	28.99	289	eP	P	14 00 54.5	-0.4
	comp=Z,530nm,1.5s						
PCBR				eS	S	14 05 42.2	+0.3
PCBR	Castelo Branco	28.99	289	eP	P	14 00 54.5	-0.4
PCBR				eS	S	14 05 42.2	+0.3
WPM1	Penmaenmawr	29.01	318	eP	P	14 00 53.4	-1.5
MTE	Manteigas	29.02	291	eP	P	14 00 54.8	-0.4
	comp=Z,607nm,1.4s						
MTE				eS	S	14 05 42.6	+0.1
MTE	Manteigas	29.02	291	eP	P	14 00 54.5	-0.7
	comp=Z,349nm,1.0s						
MTE	Manteigas	29.02	291	eP	P	14 00 54.8	-0.4
MTE				eS	S	14 05 42.6	+0.1
BER	Bergen	29.09	336	eP	P	14 00 56.8	+1.3
BER				IAmb	IAmb	14 00 58.0	
	comp=Z,34nm,1.0s						
PVRL	Vila Real	29.12	292	eP	P	14 00 56.4	+0.3
	comp=Z,319nm,1.7s						
PVRL	Vila Real	29.12	292	eP	P	14 00 56.4	+0.3
WBK	Wadi Bani Khal	29.12	108	P	P	14 00 58.1	+1.9
	SNR=14						
WBK	Wadi Bani Khal	29.12	108	P	P	14 00 58.1	+1.9
	SNR=14						
PESTR	Estremoz	29.15	287	eP	P	14 00 55.6	-0.8
	comp=Z,593nm,1.1s						
PESTR				eS	S	14 05 43.1	-1.4
PESTR	Estremoz	29.15	287	eP	P	14 00 55.2	-1.1
	comp=Z,251nm,1.0s						
PESTR	Estremoz	29.15	287	eP	P	14 00 55.6	-0.8
PESTR				eS	S	14 05 43.1	-1.4
KESW	Keswick, Cumbr	29.16	321	eP	P	14 00 54.0	-2.2
KESW				IAmb	IAmb	14 01 02.3	
	comp=Z,60nm,1.3s						
POLO	Lamas de Olo	29.18	293	eP	P	14 00 56.5	-0.2
	comp=Z,277nm,1.1s						
POLO				eS	S	14 05 42.9	-2.2
POLO	Lamas de Olo	29.18	293	eP	P	14 00 56.5	-0.2
POLO				eS	S	14 05 42.9	-2.2
ASK	Askoy	29.21	336	eP	P	14 00 58.0	+1.5
ASK				IAmb	IAmb	14 00 58.7	
	comp=Z,27nm,1.1s						
PVIS	Viseu	29.27	291	eP	P	14 00 57.5	+0.1
	comp=Z,689nm,1.7s						
PVIS				eS	S	14 05 46.3	-0.1
PVIS	Viseu	29.27	291	eP	P	14 00 57.5	+0.1
PVIS				eS	S	14 05 46.3	-0.1
DOMB	Dombas	29.27	341	eP	P	14 00 57.3	+0.1
DOMB				IAmb	IAmb	14 00 58.4	
	comp=Z,40nm,1.0s						
RTC	Rabat Centre	29.35	277	eP	P	14 00 57.8	-0.3
	comp=Z,1µm,0.8s						
RTC	Rabat Centre	29.35	277	eP	P	14 00 57.8	-0.3
	comp=Z,1µm,0.8s						
PCAB	Cabril	29.35	293	eP	P	14 00 58.2	+0.1
	comp=Z,498nm,1.1s						
PCAB				eS	S	14 05 48.5	+0.8
PCAB	Cabril	29.35	293	eP	P	14 00 58.2	+0.1
PCAB				eS	S	14 05 48.5	+0.8
HYA	Hoyanger	29.41	338	eP	P	14 00 58.0	-0.3
HYA				IAmb	IAmb	14 00 59.5	
	comp=Z,46nm,1.1s						
PVAQ	Vaqueiros	29.41	284	eP	P	14 00 58.1	-0.6
	comp=Z,918nm,1.3s						
PVAQ				eS	S	14 05 46.5	-2.1
PVAQ	Vaqueiros	29.41	284	eP	P	14 00 58.1	-0.6
PVAQ				eS	S	14 05 46.5	-2.1
PBEJ	Beja	29.45	286	eP	P	14 00 59.5	+0.5
	comp=Z,701nm,1.6s						
PBEJ				eS	S	14 05 48.9	-0.3
PBEJ	Beja	29.45	286	eP	P	14 00 59.5	+0.5
PBEJ				eS	S	14 05 48.9	-0.3
BHH	Howats Hill	29.45	322	eP	P	14 00 56.9	-1.9
EVO	Evora	29.51	287	eP	P	14 00 59.1	-0.4
	comp=Z,378nm,1.6s						
EVO				eS	S	14 05 48.5	-1.6
EVO	Evora	29.51	287	eP	P	14 00 59.1	-0.4
EVO				eS	S	14 05 50.9	+0.8
PGAV	Gavieira, Arco	29.53	294	eP	P	14 01 00.5	+0.7
	comp=Z,509nm,1.6s						
PGAV				eS	S	14 05 50.5	-0.1
PGAV	Gavieira, Arco	29.53	294	eP	P	14 01 00.5	+0.7
PGAV				eS	S	14 05 50.5	-0.1
ESK	Eskdalemuir	29.55	322	eP	P	14 00 57.5	-2.2
	comp=Z,107nm,1.2s						
ESK				LR	LR		
	comp=Z,1µm,21.0s						
ESK	Eskdalemuir	29.55	322	eP	P	14 00 57.5	-2.2
ESK				pmax	pmax		
	comp=Z,107nm,1.2s						
ESK				MLR	MLR		
	comp=Z,1µm,21.0s						
PBDV	Barranco-do-Ve	29.61	284	eP	P	14 01 00.1	-0.3
	comp=Z,1µm,1.2s						
PBDV				eS	S	14 05 50.0	-1.7
PBDV	Barranco-do-Ve	29.61	284	eP	P	14 01 00.1	-0.3
PBDV				eS	S	14 05 50.0	-1.7
PMTG	Montargil	29.63	288	eP	P	14 00 59.9	-0.6
	comp=Z,430nm,1.6s						
PMTG				eS	S	14 05 50.5	-1.4
PCVE	Castro Verde	29.64	285	eP	P	14 01 00.1	-0.5
	comp=Z,330nm,1.5s						
PCVE				eS	S	14 05 50.6	-1.5
PCVE	Castro Verde	29.64	285	eP	P	14 01 00.1	-0.5
PCVE				eS	S	14 05 50.6	-1.5
COI	Coimbra	29.69	290	eP	P	14 01 01.2	+0.1
	comp=Z,712nm,1.1s						
COI	Coimbra	29.69	290	eP	P	14 01 01.2	+0.1
JLN	Jalan Bani Buh	29.72	109	P	P	14 01 01.9	+0.4
	SNR=13						
PTOM	Tomar	29.73	289	eP	P	14 01 01.8	+0.4
	comp=Z,580nm,1.1s						
PTOM				eS	S	14 05 53.4	-0.1
PTOM	Tomar	29.73	289	eP	P	14 01 01.8	+0.4
PTOM				eS	S	14 05 53.4	-0.1
MESJ	Messejana	29.75	285	eP	P	14 01 01.2	-0.5
MESJ				AMb	AMB	14 01 03.7	
	comp=Z,377nm,1.4s						
MESJ				eS	S	14 05 54.4	+0.4
MESJ	Messejana	29.75	285	eP	P	14 01 01.3	-0.4
	comp=Z,403nm,1.2s						
MESJ				eS	S	14 05 53.1	-0.8
MESJ	Messejana	29.75	285	eP	P	14 01 01.1	-0.5
MESJ				eS	S	14 05 54.3	+0.4
MESJ	Messejana	29.75	285	eP	P	14 01 01.3	-0.4
MESJ				eS	S	14 05 53.1	-0.8
PCAS	Casmilo, Conde	29.77	290	eP	P	14 01 01.7	-0.1
	comp=Z,417nm,1.3s						
PCAS				eS	S	14 05 52.9	-1.2
PCAS	Casmilo, Conde	29.77	290	eP	P	14 01 01.7	-0.1
PCAS				eS	S	14 05 52.9	-1.2
SUE	Sulen	29.78	336	eP	P	14 00 60.0	-1.6
SUE				IAmb	IAmb	14 01 02.3	
	comp=Z,33nm,0.9s						
IOMK	Kirk Michael	29.78	319	eP	P	14 01 00.2	-1.5
IOMK				IAmb	IAmb	14 01 01.0	
	comp=Z,52nm,1.2s						
WIM	Isle of Man	29.79	319	eP	P	14 01 00.2	-1.6
PTO	Porto	29.80	292	eP	P	14 01 02.5	+0.5
	comp=Z,551nm,1.1s						
PTO	Porto	29.80	292	eP	P	14 01 02.5	+0.5
ALMR	Almeirim	29.89	288	eP	P	14 01 02.5	-0.4
ALMR				AMb	AMB	14 01 04.5	
	comp=Z,392nm,1.1s						
ALMR				eS	S	14 05 56.5	+0.5
ALMR	Almeirim	29.89	288	eP	P	14 01 02.9	0.0
	comp=Z,604nm,1.1s						
ALMR				eS	S	14 05 56.9	+0.8
ALMR	Almeirim	29.89	288	eP	P	14 01 02.4	-0.4
ALMR				eS	S	14 05 56.5	+0.5
ALMR	Almeirim	29.89	288	eP	P	14 01 02.9	0.0
ALMR				eS	S	14 05 56.5	+0.5
AKN	Aaknes	29.96	339	eP	P	14 01 03.8	+0.6
AKN				IAmb	IAmb	14 01 05.4	
	comp=Z,61nm,1.0s						
PNCL	Nicolau / Gran	29.96	286	eP	P	14 01 03.6	+0.1
	comp=Z,479nm,1.9s						
PNCL				eS	S	14 05 56.1	-1.1
PNCL	Nicolau / Gran	29.96	286	eP	P	14 01 03.6	+0.1
PNCL				eS	S	14 05 56.1	-1.1
AVE	Averroes	29.97	276	i P	P	14 01 03.0	-0.6
AVE				eS	S	14 05 59.6	+2.2
SVE	Sverdlovsk	30.08	35	c iP	P	14 01 05.2	+0.9
SVE				eS	S	14 05 58.6	-0.1
SVE				pmax	pmax		
	comp=Z,444nm,1.1s						
MOL	Molde	30.12	340	eP	P	14 01 05.0	+0.4
MOL				IAmb	IAmb	14 01 05.7	
	comp=Z,136nm,1.4s						
MORF	Marmelete	30.16	284	eP	P	14 01 04.8	-0.6
MORF				AMb	AMB	14 01 08.0	
	comp=Z,174nm,1.7s						
MORF				eS	S	14 06 00.8	+0.3
MORF	Marmelete	30.16	284	eP	P	14 01 05.4	0.0
	comp=Z,172nm,1.5s						
MORF				eS	S	14 05 58.6	-1.9
MORF	Marmelete	30.16	284	eP	P	14 01 04.8	-0.6
MORF				eS	S	14 06 00.8	+0.3
MORF	Marmelete	30.16	284	eP	P	14 01 05.4	0.0
MORF				eS	S	14 06 00.8	+0.3
PTEO	Sao Teotonio	30.19	285	eP	P	14 01 05.4	-0.1
	comp=Z,652nm,1.9s						
PTEO				eS	S	14 06 00.2	-0.5
PTEO	Sao Teotonio	30.19	285	eP	P	14 01 05.4	-0.1
PTEO				eS	S	14 06 00.2	-0.5
PFVI	Vila Bisbo	30.33	284	eP	P	14 01 06.3	-0.5
	comp=Z,287nm,1.5s						
PFVI				eS	S	14 06 01.7	-1.3
PFVI	Vila Bisbo	30.33	284	eP	P	14 01 06.0	-0.8
	comp=Z,139nm,0.8s						
PFVI	Vila Bisbo	30.33	284	eP	P	14 01 06.3	-0.5
PFVI				eS	S	14 06 01.7	-1.3
LIS	Lisbon	30.38	287	eP	P	14 01 06.7	-0.4
LIS				AMb	AMB	14 01 09.6	
	comp=Z,681nm,0.9s						
LIS				eS	S	14 06 04.0	+0.2
LIS	Lisbon	30.38	287	eP	P	14 01 08.0	+0.8
	comp=Z,955nm,1.1s						
LIS	Lisbon	30.38	287	eP	P	14 01 06.7	-0.4
LIS				eS	S	14 06 03.9	+0.2
LIS	Lisbon	30.38	287	eP	P	14 01 08.0	+0.8
PMST	Lisbon--Monsan	30.40	287	eP	P	14 01 08.3	+0.9
	comp=Z,848nm,1.5s						
PMST				eS	S	14 06 05.5	+1.4
PMST	Lisbon--Monsan	30.40	287	eP	P	14 01 08.3	+0.9
PMST				eS	S	14 06 05.5	+1.4
PGBU	Glenifferbraes	30.43	322	eP	P	14 01 05.6	-1.8
PGBU				IAmb	IAmb	14 01 11.9	
	comp=Z,78nm,1.2s						
PMAFR	Mafra	30.46	288	eP	P	14 01 08.1	+0.2
	comp=Z,654nm,1.1s						
PMAFR				eS	S	14 06 05.4	+0.4
PMAFR	Mafra	30.46	288	eP	P	14 01 08.1	+0.2
PMAFR				eS	S	14 06 05.4	+0.4
EAB	Aberfoyle	30.53	323	eP	P	14 01 07.0	-1.4
NSS	Namsos	30.73	346	eP	P	14 01 09.5	-0.5
NSS				IAmb	IAmb	14 01 13.0	
	comp=Z,44nm,1.2s						
MOR8	Moi Rana	31.78	349	eP	P	14 01 19.7	+0.5
MOR8				IAmb	IAmb	14 01 20.6	
	comp=Z,84nm,0.9s						
APA	Apatity	32.12	3	⇑iP	P	14 01 21.3	-0.8
APA				i PPP	PPP	14 02 29.0	
APA				i S	S	14 06 30.0	-0.3
APA				i SS	SnSn	14 08 29.0	+4.1
APA				pmax	pmax		
	comp=Z,92nm,1.0s						
APA				MLR	MLR		
	comp=Z,2µm,16.0s						
STOK	Stokkvaagen	32.16	348	eP	P	14 01 23.0	+0.5
VAL	Valentia	32.21	313	eP	P	14 01 23.8	+0.7
VAL				i S	S	14 06 26.2	-5.7
KONS	Konsvik	32.30	348	eP	P	14 01 23.6	0.0
KONS				IAmb	IAmb	14 01 24.7	
	comp=Z,73nm,1.0s						
LODK	Lodwar	32.56	168	i P	P	14 01 28.1	+1.5
LODK				i P	P	14 01 28.3	+1.7
LODK				i P	P	14 01 28.7	+2.1
LODK				e		14 01 32.2	
	baz=357,slow=12						
LODK	Lodwar	32.56	168	i P	P	14 01 28.2	+1.7
LODK				i P	P	14 01 28.2	+1.7
LODK				i P	P	14 01 28.7	+2.1
LODK				e		14 01 36.5	
	baz=356,slow=8.6						
KBL	Kabul	32.68	80	eP	P	14 01 27.1	-0.6
	comp=Z,37nm,1.0s						
KBL	Kabul	32.68	80	eP	P	14 01 27.1	-0.6
KBL				pmax	pmax		
	comp=Z,37nm,1.0s						
KBL	Kabul	32.68	80	eP	P	14 01 27.1	-0.6
	comp=Z,37nm,1.0s						
KK31	Karatay Array	32.74	64	eP	P	14 01 28.1	+0.2
KK31	Karatay Array	32.74	64	i P	P	14 01 28.5	+0.6
KK31				pmax	pmax		
	comp=Z,39nm,0.6s						
KKAR	Karatay Array	32.74	64	eP	P	14 01 28.1	+0.2
KKAR	Karatay Array	32.74	64	eP	P	14 01 28.1	+0.2
TOA0	Torodi Ar. Sit	33.20	235	eP	P	14 01 31.5	-0.6
TORD	Torodi Ar. Bea	33.20	235	P	P	14 01 31.2	-0.9
	comp=Z,196nm,0.8s,baz=38,slow=7.3						
TORD				S	S	14 06 43.7	-4.4
	baz=32,slow=19						
TORD				LR	LR	14 17 15.6	
	comp=Z,3µm,21.1s,baz=0.0,slow=40						
STEI	Steigen	33.31	351	eP	P	14 01 33.0	+0.6
STEI				IAmb	IAmb	14 01 33.9	
	comp=Z,561nm,1.2s						
KTK1	Kautokeino	33.62	356	eP	P	14 01 35.4	+0.2
LOF	Lofoten	33.73	350	eP	P	14 01 35.5	-0.7
LOF				IAmb	IAmb	14 01 36.8	
	comp=Z,182nm,1.4s						
BRVK	Borovoye	33.76	46	eP	P	14 01 37.0	+0.4
	comp=Z,198nm,1.0s						
BRVK				LR	LR		
	comp=Z,1µm,22.0s						
BRVK	Borovoye	33.76	46	P	P	14 01 37.9	+1.3
	SNR=86						
BRVK	Borovoye	33.76	46	d iP	P	14 01 37.6	+1.0
BRVK				pmax	pmax		
	comp=Z,260nm,1.3s						
BVAR	Borovoye Array	33.81	46	P	P	14 01 38.0	+0.9
	comp=Z,126nm,0.9s,baz=243,slow=6.3,SNR=354						
BVAR				LR	LR	14 19 10.5	
	comp=Z,2µm,21.5s,baz=262,slow=43						
BVAR	Borovoye Array	33.81	46	P	P	14 01 38.0	+0.9
BVAR				pmax	pmax		
	comp=Z,127nm,0.9s						
BVAR				MLR	MLR		
	comp=Z,2µm,21.5s						
ARE0	ARCESS Array S	34.05	358	eP	P	14 01 38.8	-0.1
	comp=Z,195nm,1.0s						
ARE0	ARCESS Array S	34.05	358	eP	P	14 01 39.4	+0.4
ARE0				IAmb	IAmb	14 01 40.8	
	comp=Z,184nm,1.0s						
ARCES	ARCESS Array B	34.05	358	P	P	14 01 39.3	+0.3
	comp=Z,113nm,0.9s,baz=177,slow=7.2,SNR=191						
ARCES				S	S	14 06 58.1	-2.0
	comp=Z,14nm,0.9s,baz=166,slow=25,SNR=2.9						
ARCES				LR	LR	14 17 10.2	
	comp=Z,2µm,18.2s,baz=166,slow=39						
ARCES	ARCESS Array B	34.05	358	eP	P	14 01 37.5	-1.5
ARCES				S	S	14 06 58.1	-2.0
MNAS	Manas	34.22	65	P	P	14 01 41.5	+0.5
MNAS				pmax	pmax		
	comp=Z,70nm,1.3s						
MNAS	Manas	34.22	65	P	P	14 01 41.5	+0.5
	comp=Z,70nm,1.3s						
KEV	Kevo	34.23	359	eP	P	14 01 40.8	+0.3
	comp=Z,280nm,1.2s						
KEV				LR	LR		
	comp=Z,2µm,20.0s						
KEV	Kevo	34.23	359	eP	P	14 01 40.8	+0.3
KEV				pmax	pmax		
	comp=Z,280nm,1.2s						
KEV				MLR	MLR		
	comp=Z,2µm,20.0s						
TRO	Tromso	34.53	354	eP	P	14 01 43.4	+0.3
TRO				IAmb	IAmb	14 01 44.1	
	comp=Z,353nm,1.3s						
SFK	Sufi-Kurgan	35.20	69	P	P	14 01 50.5	+1.0
SFK				pmax	pmax		
	comp=Z,138nm,0.7s						
SFK	Sufi-Kurgan	35.20	69	P	P	14 01 50.5	+1.0
	comp=Z,138nm,0.7s						
HAMF	Hammerfest	35.22	357	eP	P	14 01 49.0	0.0
HAMF				IAmb	IAmb	14 01 50.2	
	comp=Z,90nm,1.1s						
USP	Ospenovka	35.64	63	P	P	14 01 53.2	+0.1
	comp=Z,4.9nm,0.2s,SNR=6.0						
AAK	Ala-Archa	35.68	65	P	P	14 01 54.6	+1.1
	comp=Z,82nm,0.8s,baz=230,slow=4.5,SNR=62						
AAK				S	S	14 07 25.2	-1.0
	comp=Z,2.2nm,0.3s,baz=142,slow=8.2,SNR=1.6						
AAK				LR	LR	14 19 24.3	
	comp=Z,1µm,19.9s,baz=268,slow=41						
AAK	Ala-Archa	35.68	65	⇓P	P	14 01 54.2	+0.6
	comp=Z,27nm,0.5s,SNR=50						
AAK	Ala-Archa	35.68	65	eP	P	14 01 54.0	+0.4
	comp=Z,86nm,0.8s						
AAK				S	S	14 07 25.2	-1.0
AAK	Ala-Archa	35.68	65	eP	P	14 01 54.0	+0.4
	comp=Z,86nm,0.8s						
AAK				S	S	14 07 25.2	-1.0
	comp=Z,1µm,19.9s						
UCH	Uchtor	35.73	65	⇓P	P	14 01 54.8	+0.5
	comp=Z,1.9nm,0.3s,SNR=49						
FRU	Bishkek	35.76	64	eP	P	14 01 54.0	-0.1
FRU				i		14 02 12.0	
FRU				eS	S	14 07 25.0	-2.1
FRU				e		14 07 50.0	
FRU				pmax	pmax		
	comp=Z,400nm,1.9s						
MBAR	Mbarara	36.05	177	P	P	14 01 58.0	+1.1
	comp=Z,214nm,1.1s,baz=358,slow=7.2,SNR=124						
MBAR				S	S	14 07 37.9	+5.7
	comp=Z,3.0nm,0.2s,baz=284,slow=24,SNR=1.6						
MBAR	Mbarara	36.05	177	eP	P	14 01 57.9	+1.1
	comp=Z,370nm,1.2s						
MBAR				S	S	14 07 37.9	+5.7
MBAR	Mbarara	36.05	177	i P	P	14 01 58.3	+1.4
MBAR				eS	S	14 07 33.7	+1.5
KOWA	Kowa	36.25	243	P	P	14 01 58.7	+0.2
	comp=Z,127nm,0.9s,baz=50,slow=7.4,SNR=120						
KOWA				S	S	14 07 31.8	-3.2
	comp=Z,17nm,1.1s,baz=162,slow=19,SNR=2.4						
KOWA				LR	LR	14 18 19.9	
	comp=Z,2µm,19.2s,baz=45,slow=39						
KOWA	Kowa	36.25	243	eP	P	14 01 58.0	-0.5
	comp=Z,621nm,1.6s						
KOWA				S	S	14 07 31.8	-3.2
NIL	Nilore	36.28	80	eP	P	14 01 58.6	0.0
	comp=Z,124nm,0.8s						
NIL				LR	LR		
	comp=Z,569nm,21.0s						
NIL	Nilore	36.28	80	eP	P	14 01 58.6	0.0
NIL				pmax	pmax		
	comp=Z,125nm,0.8s						
NIL				MLR	MLR		
	comp=Z,569nm,21.0s						
NIL	Nilore	36.28	80	eP	P	14 01 58.6	0.0
	comp=Z,124nm,0.8s						
TKM2	Tokmak 2	36.47	64	P	P	14 02 00.8	+0.5
TKM2				pmax	pmax		
	comp=Z,94nm,1.0s						
KSH	Kashi	37.16	70	P	P	14 02 06.1	0.0
KSH				sP	sP	14 02 28.0	+0.8
KSH				PP	PnPn	14 03 33.1	+0.6
KSH				S	S	14 07 45.7	-3.0
KSH				PcS	PcS	14 08 14.7	+1.0
KSH				SS	SnSn	14 10 16.6	-11
KSH				pmax	pmax		
	comp=Z,92nm,1.3s						
KSH				pmax	pmax		
	comp=Z,390nm,3.5s						
KSH				LR	LR		

	comp=Z,720nm,13.7s						
KSH				LR	LR		
	comp=Z,360nm,12.8s						
KSH				LR	LR		
	comp=Z,1µm,19.7s						
BHJ	**Bhuj**	37.28	98	*e*P	P	14 02 08.3	+1.1
KMBO	**Kilima Mbogo**	37.35	166	P	P	14 02 22.9	+15
	comp=Z,27nm,0.8s,baz=352,slow=8.9,SNR=47						
KMBO	**Kilima Mbogo**	37.35	166	P	P	14 02 22.9	+15
KMBO				LR	LR		
	comp=Z,1µm,20.0s						
KMBO	**Kilima Mbogo**	37.35	166	*e*P	P	14 02 22.1	+14
KMBO	**Kilima Mbogo**	37.35	166	*e*P	P	14 02 22.1	+14
KMBO	**Kilima Mbogo**	37.35	166	*e*P	P	14 02 22.1	+14
AAA	**Alma-Ata**	37.41	63	*e*P	P	14 02 09.1	+0.9
AAA				*i* S	S	14 07 54.4	+2.0
AAA				pmax	pmax		
	comp=Z,200nm,3.5s						
AAA				smax	smax		
	comp=N,900nm,6.3s						
AAA	**Alma-Ata**	37.41	63	*e*P	P	14 02 09.1	+0.9
	comp=N,200nm,3.5s						
AAA				*i* S	S	14 07 54.4	+2.0
	comp=N,900nm,6.3s						
KURBB	**Kurchatov Arra**	38.44	51	P	P	14 02 16.9	+0.3
	comp=N,231nm,0.8s,baz=275,slow=8.9,SNR=622						
KURBB				PP	PP	14 03 42.7	-2.6
	comp=N,33nm,0.9s,baz=274,slow=12,SNR=2.7						
KURBB				S	S	14 08 06.0	-1.5
	comp=N,8.5nm,1.1s,baz=273,slow=17,SNR=4.4						
KURK	**Kurchatov**	38.50	51	*e*P	P	14 02 17.3	+0.1
	comp=N,266nm,0.8s						
KURK				PP	PP	14 03 42.7	-3.2
KURK				S	S	14 08 06.0	-2.4
KURK				LR	LR		
	comp=Z,2µm,22.0s						
KURK	**Kurchatov**	38.50	51	P	P	14 02 17.5	+0.3
	SNR=140						
KURK	**Kurchatov**	38.50	51	*de*P	P	14 02 17.2	+0.1
KURK				pmax	pmax		
	comp=Z,318nm,0.9s						
PRZ	**Przheval'sk**	38.57	64	*e*P	P	14 02 19.4	+1.4
	comp=Z,163nm,1.1s						
PRZ	**Przheval'sk**	38.57	64	*e*P	P	14 02 19.5	+1.4
PRZ				pmax	pmax		
	comp=Z,163nm,1.1s						
MACI	**Morro de la Ar**	39.00	272	*e*P	P	14 02 22.9	+1.1
	comp=Z,1µm,0.9s						
MACI	**Morro de la Ar**	39.00	272	*e*P	P	14 02 22.9	+1.1
	comp=Z,1µm,0.9s						
DHRM	**DHARAMSHALA**	39.14	81	*e*P	P	14 02 23.6	+0.6
PDGK	**Podgornoye**	39.27	63	P	P	14 02 24.2	+0.3
PDGK				pmax	pmax		
	comp=Z,69nm,0.8s						
BJO	**Bjornoya**	39.28	356	*e*P	P	14 02 23.8	+0.4
BJO				IAmb	IAmb	14 02 24.5	
	comp=Z,89nm,0.8s						
SMLA	**Simla**	40.20	82	*e*P	P	14 02 31.7	+0.2
SMLA				*e*S	S	14 08 35.5	+1.0
MAKZ	**Makanchi**	40.73	57	*e*P	P	14 02 35.7	-0.1
	comp=Z,54nm,0.6s						
MAKZ	**Makanchi**	40.73	57	*e*P	P	14 02 35.7	-0.1
MAKZ				pmax	pmax		
	comp=Z,54nm,0.6s						
MK31	**Makanchi Array**	40.94	57	*i* P	P	14 02 37.6	+0.1
MK31				pmax	pmax		
	comp=Z,100nm,0.7s						
MKAR	**Makanchi Array**	40.94	57	P	P	14 02 37.7	+0.2
	comp=Z,113nm,0.7s,baz=274,slow=5.3,SNR=428						
MKAR				S	S	14 08 45.3	+0.1
	comp=Z,5.9nm,1.1s,baz=270,slow=1.7,SNR=3.0						
MKAR				LR	LR	14 23 01.3	
	comp=Z,854nm,19.7s,baz=268,slow=41						
MK01	**Makanchi Array**	40.95	57	*e*P	P	14 02 37.8	+0.2
DDI	**Dehra Dun**	41.20	83	*e*P	P	14 02 40.1	+0.2
DDI				IAmb	IAmb	14 02 41.6	
	comp=Z,84nm,0.7s						
NVS	**Novosibirsk**	41.59	45⇑	*i*P	P	14 02 43.6	+0.9
NVS				*e*		14 04 19.4	
NVS				*e*S	S	14 08 53.9	-0.7
NVS				*e*SS	SS	14 11 53.1	-7.9
NVS				pmax	pmax		
	comp=N,31nm,0.9s						
NVS				pmax	pmax		
	comp=E,80nm,0.9s						
NVS				pmax	pmax		
	comp=Z,170nm,0.9s						
NVS				pmax	pmax		
	comp=N,50nm,1.5s						
NVS				pmax	pmax		
	comp=E,105nm,1.5s						
NVS				pmax	pmax		
	comp=Z,222nm,1.5s						
NVS				smax	smax		
	comp=N,212nm,2.0s						
NVS				smax	smax		
	comp=E,74nm,1.4s						
BORG	**Borgarnes**	41.68	330	*e*P	P	14 02 44.1	+0.9
	comp=E,306nm,1.8s						
BORG				LR	LR		
	comp=Z,849nm,22.0s						
BORG	**Borgarnes**	41.68	330	*e*P	P	14 02 44.1	+0.9
BORG				pmax	pmax		
	comp=Z,306nm,1.8s						
BORG				MLR	MLR		
	comp=Z,849nm,22.0s						
HSPB	**Hornsund (broa**	41.94	355	*e*P	P	14 02 45.7	+0.5
HSPB				IAmb	IAmb	14 02 47.5	
	comp=Z,63nm,1.0s						
DBIC	**Dimbokro**	42.31	235	P	P	14 02 48.5	-0.4
	comp=Z,240nm,0.9s,baz=24,slow=9.7,SNR=93						
DBIC				S	S	14 09 01.2	-4.7
	comp=Z,30nm,1.2s,baz=267,slow=20,SNR=10						
DBIC				LR	LR	14 22 40.8	
	comp=Z,2µm,19.7s,baz=23,slow=39						
DBIC	**Dimbokro**	42.31	235	*e*P	P	14 02 48.4	-0.6
	comp=Z,264nm,0.9s						
DBIC				S	S	14 09 01.2	-4.7
DBIC	**Dimbokro**	42.31	235	*e*P	P	14 02 48.6	-0.4
DBIC	**Dimbokro**	42.31	235	*e*P	P	14 02 48.6	-0.4
DBIC	**Dimbokro**	42.31	235	*e*P	P	14 02 48.6	-0.4
TIC	**Toumodi**	42.44	235	*e*P	P	14 02 49.3	-0.7
KIC	**Kosan Boka**	42.46	235	*e*P	P	14 02 49.7	-0.5
	comp=Z,928nm,1.1s						
ZAA0	**Zalesovo Array**	42.46	46	*e*P	P	14 02 49.0	-0.8
	comp=Z,82nm,0.6s						
ZALV	**Zalesovo Beam**	42.46	46	P	P	14 02 49.5	-0.3
	comp=Z,100nm,0.7s,baz=266,slow=9.6,SNR=205						
ZALV				S	S	14 09 03.4	-4.1
	comp=Z,1.0nm,0.3s,baz=253,slow=15,SNR=3.8						
ZALV				LR	LR	14 24 23.8	
	comp=Z,1µm,21.5s,baz=275,slow=42						
ZALV	**Zalesovo Beam**	42.46	46	*e*P	P	14 02 49.0	-0.8
ZALV				S	S	14 09 03.4	-4.1
ZALV	**Zalesovo Beam**	42.46	46	P	P	14 02 49.5	-0.3
ZALV				S	S	14 09 03.4	-4.1
ZALV				pmax	pmax		
	comp=Z,102nm,0.7s						
ZALV				smax	smax		
	comp=N,1.0nm,0.3s						
ZALV				MLR	MLR		
	comp=Z,1µm,21.5s						
LIC	**Lamto**	42.75	235	*e*P	P	14 02 51.7	-0.9
	comp=Z,1µm,1.1s						
BART	**Pico Bartolome**	42.95	290	*e*P	P	14 02 54.6	+0.6
	comp=Z,497nm,1.1s						
BART	**Pico Bartolome**	42.95	290	*e*P	P	14 02 54.6	+0.6
	comp=Z,497nm,1.1s						
SPA0	**Spitsbergen Ar**	43.02	356	*e*P	P	14 02 54.7	+0.6
SPA0	**Spitsbergen Ar**	43.02	356	*e*P	P	14 02 55.1	+1.0
SPA0				IAmb	IAmb	14 02 56.1	
	comp=Z,284nm,1.2s						
SPITS	**Spitsbergen Ar**	43.02	356	P	P	14 02 55.0	+0.9
	comp=Z,116nm,1.0s,baz=150,slow=6.8,SNR=23						
SPITS	**Spitsbergen Ar**	43.02	356	P	P	14 02 55.0	+0.9
POO	**Poona**	43.05	101	*e*P	P	14 02 56.5	+1.4
PSMN	**Pico do Norte,**	43.06	288	*e*P	P	14 02 55.5	+0.6
	comp=Z,419nm,1.8s						
PSMN	**Pico do Norte,**	43.06	288	*e*P	P	14 02 55.5	+0.6
	comp=Z,419nm,1.8s						
PSMA	**Santa Maria**	43.11	288	*e*P	P	14 02 56.0	+0.7
	comp=Z,594nm,1.2s						
CMLA	**Cha da Macela**	43.22	290	*e*P	P	14 02 57.5	+1.3
	comp=Z,526nm,1.1s						
CMLA	**Cha da Macela**	43.22	290	*e*P	P	14 02 57.0	+0.8
	comp=Z,340nm,1.0s						
CMLA				LR	LR		
	comp=Z,914nm,22.0s						
CMLA	**Cha da Macela**	43.22	290	*i* P	P	14 02 58.6	+2.4
CMLA	**Cha da Macela**	43.22	290	*e*P	P	14 02 57.0	+0.8
	comp=Z,340nm,1.0s						
PDA	**Ponta Delgada**	43.33	290	*e*P	P	14 02 58.5	+1.5
	comp=Z,840nm,1.2s						
PDA	**Ponta Delgada**	43.33	290	*e*P	P	14 02 58.5	+1.5
	comp=Z,840nm,1.2s						
PSET	**Sete Cidades**	43.36	290	*e*P	P	14 02 58.7	+1.4
	comp=Z,444nm,1.0s						
PSET	**Sete Cidades**	43.36	290	*e*P	P	14 02 58.7	+1.4
	comp=Z,444nm,1.0s						
BHPL	**Bhopal**	43.59	93	*e*P	P	14 02 59.6	+0.3
BHPL				IAmb	IAmb	14 03 00.7	
	comp=Z,84nm,1.2s						
KBS	**Kingsbay**	44.01	355	*e*P	P	14 03 02.1	+0.1
	comp=Z,226nm,1.1s						
KBS				LR	LR		
	comp=Z,1µm,22.0s						
KBS	**Kingsbay**	44.01	355	*e*P	P	14 03 02.1	+0.1
KBS				pmax	pmax		
	comp=Z,226nm,1.1s						
KBS				MLR	MLR		
	comp=Z,1µm,22.0s						
KBS	**Kingsbay**	44.01	355	*e*P	P	14 03 02.4	+0.4
KBS				IAmb	IAmb	14 03 04.5	
	comp=Z,218nm,1.1s						
DGZ	**Jazzator, Alta**	44.16	53	*i* P	P	14 03 04.2	+0.4
DGZ				pmax	pmax		
	comp=Z,57nm,0.7s						
PSCM	**Serra do Cume**	44.21	291	*e*P	P	14 03 05.3	+1.2
	comp=Z,300nm,1.3s						
PSCM	**Serra do Cume**	44.21	291	*e*P	P	14 03 05.3	+1.2
	comp=Z,300nm,1.3s						
ADH	**Angra Heroismo**	44.31	291	*e*P	P	14 03 06.0	+1.1
	comp=Z,159nm,1.1s						
ADH	**Angra Heroismo**	44.31	291	*e*P	P	14 03 06.0	+1.1
	comp=Z,159nm,1.1s						
PGRA	**Graciosa**	44.78	292	*e*P	P	14 03 09.4	+0.8
	comp=Z,158nm,1.2s						
PMAN	**Manadas**	44.96	292	*e*P	P	14 03 09.9	-0.2
	comp=Z,195nm,0.7s						
ROSA	**Rosais**	45.05	292	*e*P	P	14 03 12.3	+1.5
	comp=Z,199nm,1.4s						
ROSA	**Rosais**	45.05	292	*e*P	P	14 03 11.9	+1.1
	comp=Z,137nm,1.1s						
ROSA	**Rosais**	45.05	292	*e*P	P	14 03 11.9	+1.1
	comp=Z,137nm,1.1s						
WMQ	**Urumqi**	45.10	61	P	P	14 03 13.3	+2.1
WMQ				pP	pP	14 03 25.2	-0.7
WMQ				sP	sP	14 03 34.9	+2.4
WMQ				S	S	14 09 47.1	+0.8
WMQ				pmax	pmax		
	comp=Z,320nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,700nm,3.7s						
WMQ				LR	LR		
	comp=Z,5µm,26.7s						
WMQ				LR	LR		
	comp=Z,3µm,17.1s						
WMQ				LR	LR		
	comp=Z,3µm,30.9s						
PICO	**Pico**	45.25	291	*e*P	P	14 03 13.8	+1.3
	comp=Z,123nm,1.2s						
HOR	**Horta**	45.40	292	*e*P	P	14 03 14.5	+1.0
HOR	**Horta**	45.40	292	*e*P	P	14 03 14.5	+1.0
PCED	**Cedros**	45.43	292	*e*P	P	14 03 15.2	+1.4
	comp=Z,103nm,1.1s						
PCED	**Cedros**	45.43	292	*e*P	P	14 03 15.2	+1.4
	comp=Z,103nm,1.1s						
KLRI	**Killari**	45.50	100	*e*P	P	14 03 14.7	0.0
KLRI				IAmb	IAmb	14 03 20.5	
	comp=Z,36nm,0.7s						
NGP	**Nagpur**	45.91	94⇓	*e*P	P	14 03 14.2	-3.6
NGP				*e*S	P	14 03 18.0	+0.2
PYUN	**Piuthan**	46.03	84	*e*P	P	14 03 19.6	+0.7
	comp=Z,325nm,0.7s						
DAG	**Danmarks Havn**	46.33	346⇓	*i*P	P	14 03 20.8	+0.4
	comp=Z,40nm,0.9s						
DAG	**Danmarks Havn**	46.33	346⇓	*i*P	P	14 03 20.8	+0.4
DAG				pmax	pmax		
	comp=Z,40nm,0.9s						
SRSP	**Sriramsagar**	46.45	97	*e*P	P	14 03 21.9	-0.2
SRSP				IAmb	IAmb	14 03 23.6	
	comp=Z,61nm,0.8s						
DANN	**Dangsing**	46.55	83	*e*P	P	14 03 23.8	+0.7
	comp=Z,1µm,0.8s						
KOLN	**Koldanda**	46.66	84	*e*P	P	14 03 24.0	+0.2
	comp=Z,296nm,0.7s						
H07N1	**FLORES T-PHASE**	46.97	294	*e*P	P	14 03 27.3	+1.4
KRAR	**Krasnoyarsk**	47.10	44*c*	*i*P	P	14 03 26.8	+0.1
MSEY	**Mahe Island**	47.17	143	*e*P	P	14 03 28.9	+1.2
	comp=Z,188nm,1.0s						
MSEY				LR	LR		
	comp=Z,1µm,19.0s						
MSEY	**Mahe Island**	47.17	143	*i* P	P	14 03 29.0	+1.4
	SNR=7.2						
MSEY	**Mahe Island**	47.17	143	*i* P	P	14 03 30.4	+2.7
RPR	**Rampur**	47.26	97	*e*P	P	14 03 28.5	+0.1
RPR				IAmb	IAmb	14 03 29.8	
	comp=Z,52nm,0.8s						
GKN	**Gorkha**	47.40	83	*e*P	P	14 03 29.6	0.0
	comp=Z,447nm,0.9s						
HYBB	**Hyderabad (bro**	47.42	99	*e*P	P	14 03 29.7	0.0
HYBB				IAmb	IAmb	14 03 31.1	
	comp=Z,50nm,0.7s						
HYB	**Hyderabad**	47.42	99	*i* P	P	14 03 29.0	-0.7
HYB	**Hyderabad**	47.42	99	*e*P	P	14 03 29.5	-0.2
HYB				IAmb	IAmb	14 03 31.2	
	comp=Z,54nm,0.6s						
URV	**Uravakonda**	47.74	103	*e*P	P	14 03 32.3	+0.1
URV				IAmb	IAmb	14 03 34.4	
	comp=Z,43nm,0.7s						
DMN	**Daman**	47.94	83	*e*P	P	14 03 34.1	+0.2
	comp=Z,457nm,0.8s						
KKN	**Kakani**	48.01	83	*e*P	P	14 03 34.2	-0.2
	comp=Z,238nm,0.7s						
HVS	**Khovu-Aksy**	48.01	50*c*	*i*P	P	14 03 36.8	+2.9
HVS				pmax	pmax		
	comp=Z,228nm,0.8s						
PKIN	**Phulchoki**	48.19	83	*e*P	P	14 03 35.6	-0.2
	comp=Z,259nm,0.8s						
SRLM	**Srisailam**	48.40	100	*e*P	P	14 03 37.4	+0.1
SRLM				IAmb	IAmb	14 03 39.4	
	comp=Z,61nm,0.7s						
GUN	**Gumba**	48.44	82	*e*P	P	14 03 37.7	-0.2
	comp=Z,250nm,0.7s						
NJS	**Nagarjunasagar**	48.49	100	*e*P	P	14 03 37.7	-0.2
NJS				IAmb	IAmb	14 03 40.8	
	comp=Z,73nm,0.9s						
JIRN	**Jiri**	48.80	82	*e*P	P	14 03 40.6	0.0
	comp=Z,505nm,1.0s						
ADKI	**Addanki**	49.41	100	*e*P	P	14 03 44.7	-0.2
ADKI				IAmb	IAmb	14 03 46.7	
	comp=Z,60nm,0.8s						
RAMN	**Ramite**	49.42	83	*e*P	P	14 03 45.0	-0.3
	comp=Z,300nm,0.9s						
SUMG	**Summit**	49.69	339	*e*P	P	14 03 47.0	+0.1
	comp=Z,76nm,1.0s						
SUMG	**Summit**	49.69	339⇓	*i*P	P	14 03 47.5	+0.7
	comp=Z,79nm,1.0s						
SUMG	**Summit**	49.69	339⇓	*i*P	P	14 03 47.5	+0.7
SUMG				pmax	pmax		
	comp=Z,79nm,1.0s						
PVM	**Polavaram**	49.98	97	*e*P	P	14 03 49.9	+0.6
PVM				IAmb	IAmb	14 03 52.3	
	comp=Z,45nm,1.2s						
ODAN	**Odare**	50.10	83	*e*P	P	14 03 50.1	-0.3
	comp=Z,102nm,0.8s						
TAPN	**Taplejung**	50.15	82	*e*P	P	14 03 50.7	-0.2
	comp=Z,242nm,1.0s						
BOK	**Bokaro**	50.23	87	*e*P	P	14 03 50.2	-0.9
BOK				IAmb	IAmb	14 03 52.6	
	comp=Z,54nm,0.7s						
SKHT	**Srikalahasti**	50.38	102	*e*P	P	14 03 52.3	0.0
SKHT				IAmb	IAmb	14 03 54.8	
	comp=Z,151nm,0.8s						
KNGR	**Kungurtug, Tuv**	50.48	50	*i* P	P	14 03 55.6	+2.8
LSZ	**Lusaka**	50.60	181	P	P	14 03 55.7	+1.7
	comp=Z,55nm,1.1s,baz=357,slow=7.0,SNR=30						
LSZ	**Lusaka**	50.60	181	*e*P	P	14 03 54.5	+0.5
	comp=Z,95nm,1.2s						
LSZ				LR	LR		
	comp=Z,2µm,21.0s						
LSZ	**Lusaka**	50.60	181	P	P	14 03 56.0	+2.0
	SNR=14						
GTK	**Tadong**	50.88	82	*e*P	P	14 03 56.2	0.0
GTK				IAmb	IAmb	14 03 57.9	
	comp=Z,84nm,0.8s						
SACV	**Santiago Islan**	51.12	260	*e*P	P	14 03 57.7	-0.3
	comp=Z,382nm,1.1s						
SACV				LR	LR		
	comp=Z,624nm,22.0s						
CHLP	**Challavanipeta**	51.30	94	*e*P	P	14 03 58.6	-0.7
CHLP				IAmb	IAmb	14 04 02.3	
	comp=Z,44nm,0.8s						
LSA	**Lhasa**	51.95	78	*e*P	P	14 04 04.0	-0.5
	comp=Z,64nm,1.1s						
LSA				LR	LR		
	comp=Z,584nm,22.0s						
LSA	**Lhasa**	51.95	78	P	P	14 04 04.8	+0.3
LSA	**Lhasa**	51.95	78	*e*P	P	14 04 04.0	-0.5
LSA				pmax	pmax		
	comp=Z,64nm,1.1s						
LSA				MLR	MLR		
	comp=Z,584nm,22.0s						
LSA	**Lhasa**	51.95	78	P	P	14 04 04.8	+0.3
MOY	**Mondy**	52.42	48	*e*P	P	14 04 09.1	+1.8
MOY				pmax	pmax		
	comp=Z,97nm,1.3s						
DHUB	**DHUBRI**	52.57	83	*e*P	P	14 04 07.3	-1.2
TURI	**Tura**	53.05	83	*e*P	P	14 04 09.8	-2.4
ILULI	**Ilulissat**	53.73	334	*e*P	P	14 04 15.0	-1.5
	comp=Z,96nm,1.4s						
ILULI	**Ilulissat**	53.73	334	*e*P	P	14 04 15.0	-1.5
ILULI				pmax	pmax		
	comp=Z,96nm,1.4s						
SFJD	**Kangerlussuaq**	53.78	331	LR	LR	14 28 54.8	
	comp=Z,856nm,19.6s,baz=86,slow=38						
GUWA	**GUWAHATI**	53.86	82	*e*P	P	14 04 17.9	-0.2
TLY	**Talaya**	54.03	48	P	P	14 04 20.8	+1.8
	comp=Z,59nm,1.0s,baz=262,slow=7.2,SNR=63						
TLY	**Talaya**	54.03	48	*e*P	P	14 04 20.2	+1.3
	comp=Z,79nm,1.0s						
TLY				LR	LR		
	comp=Z,579nm,20.0s						
TLY	**Talaya**	54.03	48	P	P	14 04 21.0	+2.1
	SNR=63						
TLY	**Talaya**	54.03	48*d*	*i*P	P	14 04 20.9	+1.9
TLY				*e*S	S	14 11 50.3	-0.4
TLY				*e*SS	SS	14 15 35.0	+2.7
TLY				pmax	pmax		
	comp=Z,93nm,1.0s						
TLY				MLR	MLR		
	comp=Z,863nm,19.0s						
ZAK	**Zakamensk**	54.12	50	*e*P	P	14 04 20.9	+1.1
ZAK				pmax	pmax		
	comp=Z,100nm,1.1s						
IRK	**Irkutsk**	54.27	47	*e*P	P	14 04 20.8	+0.1
IRK				pmax	pmax		
	comp=Z,125nm,1.3s						
SHL	**Shillong**	54.29	82	*e*P	P	14 04 20.1	-1.3
SHL				IAmb	IAmb	14 04 22.9	
	comp=Z,32nm,0.8s						
SHL	**Shillong**	54.29	82	*e*P	P	14 04 21.0	-0.5
TEZP	**TEZPUR**	54.56	80	*e*P	P	14 04 22.6	-0.6
ZIRO	**ZIRO**	55.01	79	*e*P	P	14 04 26.7	+0.1
GTA	**Gaotai**	55.01	63	*e*P	P	14 04 25.8	-0.6
GTA				pP	pP	14 04 41.2	-0.4
GTA				sP	sP	14 04 47.8	-0.3
GTA				S	S	14 12 04.3	-0.3
GTA				sS	sS	14 12 32.0	+1.9
GTA				SS	SS	14 15 49.6	+1.1
GTA				pmax	pmax		
	comp=Z,28nm,1.0s						
GTA				pmax	pmax		
	comp=Z,120nm,6.2s						
GTA				LR	LR		
	comp=Z,780nm,23.7s						
GTA				LR	LR		
	comp=Z,380nm,16.8s						
GTA				LR	LR		
	comp=Z,680nm,24.1s						
PALK	**Pallekele**	55.01	108	P	P	14 04 27.1	+0.5
	comp=Z,80nm,0.9s,baz=296,slow=9.9,SNR=15						
PALK				LR	LR	14 31 36.1	
	comp=Z,1µm,18.1s,baz=226,slow=40						
PALK	**Pallekele**	55.01	108	*e*P	P	14 04 25.9	-0.7
	comp=Z,135nm,1.1s						
PALK	**Pallekele**	55.01	108	*i* P	P	14 04 26.2	-0.4
	SNR=6.4						
PALK	**Pallekele**	55.01	108	*i* P	P	14 04 27.8	+1.2
KULLO	**Kullorsuaq**	55.05	341⇓	*i*P	P	14 04 26.1	+0.2
	comp=Z,84nm,1.2s						
KULLO	**Kullorsuaq**	55.05	341⇓	*i*P	P	14 04 26.1	+0.2
KULLO				pmax	pmax		
	comp=Z,84nm,1.2s						
ITAN	**ITANAGAR**	55.08	79	*e*P	P	14 04 27.3	+0.4
BRDH	**Bariadhala**	55.43	85	LR	LR	14 33 27.5	
	comp=Z,833nm,19.2s,baz=327,slow=42						
TSUM	**Tsumeb**	55.55	193	P	P	14 04 31.5	+1.1
	comp=Z,19nm,1.0s,baz=11,slow=7.8,SNR=7.2						
TSUM	**Tsumeb**	55.55	193	*e*P	P	14 04 27.9	-2.4
	comp=Z,66nm,1.2s						
TSUM				LR	LR		
	comp=Z,3µm,19.0s						
JORH	**JORHAT**	55.67	80	*e*P	P	14 04 32.6	+1.4
KOHI	**KOHIMA**	56.02	81	*e*P	P	14 04 35.7	+1.8
KOHI				IAmb	IAmb	14 04 37.2	
	comp=Z,205nm,1.5s						
MOKO	**MOKOCHONG**	56.08	80	*e*P	P	14 04 33.5	-0.7
IMP	**Imphal**	56.29	82	*e*P	P	14 04 36.4	+0.7
IMP				IAmb	IAmb	14 04 38.8	
	comp=Z,56nm,0.6s						
OPO	**Ambohidratompo**	56.58	159	P	P	14 04 39.6	+1.9
	comp=Z,106nm,1.0s,baz=337,slow=7.5,SNR=26						
SAIH	**SAIHA**	56.61	85	*e*P	P	14 04 38.0	0.0
SAIH				IAmb	IAmb	14 04 40.3	
	comp=Z,40nm,0.4s						
SONM	**Songino Array**	56.80	52	P	P	14 04 40.2	+1.1
	comp=Z,67nm,0.8s,baz=283,slow=8.0,SNR=247						
SONM				S	S	14 12 26.1	-2.0
	comp=Z,0.3nm,0.3s,baz=268,slow=14,SNR=3.5						
SONM				LR	LR	14 32 27.5	
	comp=Z,2µm,21.5s,baz=295,slow=40						
SONA1	**Songino Array**	56.80	52	*e*P	P	14 04 39.5	+0.4
ABPO	**Ambohimpanom**	57.01	159	*e*P	P	14 04 42.4	+1.6
	comp=Z,114nm,1.1s						
ABPO				LR	LR		
	comp=Z,409nm,22.0s						
ABPO	**Ambohimpanom**	57.01	159	*e*P	P	14 04 42.4	+1.6
ABPO				pmax	pmax		
	comp=Z,114nm,1.1s						
ABPO				MLR	MLR		
	comp=Z,409nm,22.0s						
ULN	**Ulaanbaatar**	57.21	52	*e*P	P	14 04 42.5	+0.5
	comp=Z,97nm,0.9s						
ULN				LR	LR		
	comp=Z,2µm,21.0s						
ULN	**Ulaanbaatar**	57.21	52	P	P	14 04 43.1	+1.1
	SNR=60						
ULN	**Ulaanbaatar**	57.21	52*c*	*e*P	P	14 04 42.8	+0.8
ULN				pmax	pmax		
	comp=Z,104nm,0.8s						
TULEG	**Thule**	57.48	344	*e*P	P	14 04 43.1	-0.1
	comp=Z,183nm,1.1s						
BOD	**Bodaibo**	58.19	39	*e*P	P	14 04 49.0	+0.5
BOD				pmax	pmax		
	comp=Z,94nm,1.0s						
LZH	**Lanzhou**	59.21	66	*e*P	P	14 04 57.1	+0.9
LZH				pP	pP	14 05 14.0	+2.5
LZH				sP	sP	14 05 21.8	+3.9
LZH				PP	PP	14 07 08.2	+0.9
LZH				S	S	14 13 00.5	+0.5
LZH				SS	SS	14 16 52.1	-2.6
LZH				pmax	pmax		
	comp=Z,120nm,1.2s						
LZH				pmax	pmax		
	comp=Z,250nm,5.4s						
LZH				LR	LR		
	comp=Z,1µm,16.3s						
LZH				LR	LR		
	comp=Z,1µm,14.1s						
LZH				LR	LR		
	comp=Z,2µm,17.9s						
TIXI	**Tiksi**	59.66	21	P	P	14 04 59.3	+0.9
	comp=Z,168nm,0.9s,baz=301,slow=8.1,SNR=126						
TIXI				LR	LR	14 33 48.7	
	comp=Z,737nm,21.3s,baz=276,slow=39						
TIXI	**Tiksi**	59.66	21	*e*P	P	14 04 59.2	+0.7
	comp=Z,247nm,1.0s						
TIXI	**Tiksi**	59.66	21*d*	*i*P	P	14 04 59.8	+1.4

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TIXI                               pmax    pmax
      comp=Z,301nm,1.1s
TIXI                               MLR     MLR
      comp=Z,660nm,20.0s
LBTB  Lobatse          60.37 183   P       P        14 05 05.3 +1.4
      comp=Z,70nm,1.2s,baz=356,slow=8.9,SNR=24
LBTB  Lobatse          60.37 183  eP       P        14 05 05.3 +1.4
      comp=Z,137nm,1.4s
CD2   Chengdu          61.33  71   P       P        14 05 10.5 -0.1
CD2                                pP      pP       14 05 25.5 -0.5
CD2                                sP      sP       14 05 32.2 -0.2
CD2                                PP      PP       14 07 25.5 -0.4
CD2                                PcS     PcS      14 09 55.2 -0.4
CD2                                S       S        14 13 26.3 -0.7
CD2                                SS      SS       14 17 28.4 +0.5
CD2                                pmax    pmax
      comp=Z,450nm,5.3s
CD2                                LR      LR
      comp=Z,3µm,31.4s
CD2                                LR      LR
      comp=Z,3µm,32.4s
CD2                                LR      LR
      comp=Z,2µm,27.0s
BTO   Baotou           61.84  59  eP       P        14 05 14.2 +0.3
FRB   Frobisher Bay    61.85 330   P       P        14 05 13.3 -0.1
      comp=Z,35nm,1.0s,baz=71,slow=7.6,SNR=9.4
CMAI  Chiengmai2       62.78  84   P       P        14 05 20.1 -0.5
      comp=Z,6.3nm,1.2s
HHC   Hu-ho-hao-te     62.80  58  eP       P        14 05 22.1 +1.7
HHC                                pP      pP       14 05 33.6 -2.2
HHC                                sP      sP       14 05 39.8 -2.4
HHC                                S       S        14 13 47.7 +2.3
HHC                                sS      sS       14 14 10.6 -0.8
HHC                                pmax    pmax
      comp=Z,180nm,1.1s
HHC                                pmax    pmax
      comp=Z,430nm,5.8s
HHC                                LR      LR
      comp=Z,2µm,22.1s
HHC                                LR      LR
      comp=Z,750nm,18.6s
HHC                                LR      LR
      comp=Z,1µm,21.6s
KMI   Kunming          63.20  77   P       P        14 05 24.3 +0.9
KMI                                pP      pP       14 05 41.2 +2.4
KMI                                sP      sP       14 05 45.0 -0.2
KMI                                PP      PP       14 07 46.1 +3.4
KMI                                S       S        14 13 49.0 -2.0
KMI                                sS      sS       14 14 13.2 -3.8
KMI                                SS      SS       14 17 58.0 +0.3
KMI                                pmax    pmax
      comp=Z,46nm,0.9s
KMI                                pmax    pmax
      comp=Z,310nm,4.5s
KMI                                LR      LR
      comp=Z,630nm,25.6s
KMI                                LR      LR
      comp=Z,520nm,23.6s
KMI                                LR      LR
      comp=Z,720nm,28.2s
CHTO  Chiang Mai       63.27  85  eP       P        14 05 21.9 -1.7
      comp=Z,243nm,1.9s
CHTO                               LR      LR
      comp=Z,369nm,20.0s
CHTO  Chiang Mai       63.27  85   P       P        14 05 22.9 -0.7
      SNR=9.7
CHTO  Chiang Mai       63.27  85  eP       P        14 05 21.9 -1.7
CHTO                               pmax    pmax
      comp=Z,243nm,1.9s
CHTO                               MLR     MLR
      comp=Z,369nm,20.0s
CHTO  Chiang Mai       63.27  85   P       P        14 05 23.2 -0.4
      comp=Z,223nm,1.5s,comp=Z,4µm
CMMT  Chiang Mai       63.27  85   P       P        14 05 23.1 -0.6
      comp=Z,50nm,1.5s,comp=Z,868nm
CM31  Chiang Mai Arr   63.45  86  eP       P        14 05 24.2 -0.6
CMAR  Chiang Mai Arr   63.45  86   P       P        14 05 24.2 -0.6
      comp=Z,22nm,0.8s,baz=296,slow=8.0,SNR=66
CMAR                               S       S        14 13 53.0 -0.9
      comp=Z,0.3nm,0.5s,baz=288,slow=18,SNR=3.4
CMAR                               PKP2bc           14 34 28.1
      comp=Z,0.3nm,0.3s,baz=129,slow=1.3,SNR=2.8
CMAR                               LR      LR       14 38 09.4
      comp=Z,294nm,21.6s,baz=286,slow=41
CM01  Chiang Mai Arr   63.48  86  eP       P        14 05 24.0 -1.1
PAYA  Payao            63.74  84   P       P        14 05 23.1 -3.7
XAN   Xi’an            63.85  66   P       P        14 05 27.2 -0.1
XAN                                pP      pP       14 05 40.2 -2.6
XAN                                sP      sP       14 05 45.2 -4.0
XAN                                PcP     PcP      14 06 02.3 -0.4
XAN                                PP      PP       14 07 54.2 +6.2
XAN                                S       S        14 13 59.0 +0.5
XAN                                ScS     SKSac    14 15 13.5 -2.7
XAN                                SS      SS       14 18 09.3 +2.2
XAN                                pmax    pmax
      comp=Z,83nm,1.9s
XAN                                LR      LR
      comp=Z,710nm,22.3s
XAN                                LR      LR
      comp=Z,550nm,20.8s
XAN                                LR      LR
      comp=Z,630nm,21.6s
YAK   Yakutsk          63.93  31   P       P        14 05 26.9 -0.3
      comp=Z,22nm,0.6s,baz=271,slow=2.1,SNR=26
YAK                                LR      LR       14 35 48.9
      comp=Z,738nm,21.2s,baz=274,slow=38
YAK   Yakutsk          63.93  31  eP       P        14 05 26.7 -0.6
      comp=Z,68nm,0.9s
YAK   Yakutsk          63.93  31d iP       P        14 05 27.6 +0.3
YAK                               e*PP     pP       14 05 44.4 +1.7
YAK                               e                 14 05 58.5
YAK                               e                 14 07 46.0
YAK                               i S      S        14 13 56.1 -2.4
YAK                               eS       S        14 13 56.8 -1.7
YAK                               e*SS     sS       14 14 22.2 -2.3
YAK                               e                 14 15 15.5
YAK                                pmax    pmax
      comp=Z,70nm,1.5s
YAK                                pmax    pmax
      comp=N,21nm,1.5s
YAK                                pmax    pmax
      comp=E,50nm,1.5s
YAK                                pmax    pmax
      comp=Z,177nm,1.8s
YAK                                pmax    pmax
      comp=E,168nm,1.8s
YAK                                pmax    pmax
      comp=N,94nm,1.8s
YAK                                smax    smax
      comp=E,95nm,2.5s
YAK                                smax    smax
      comp=N,210nm,2.5s
BOSA  Boshof           63.96 184   P       P        14 05 29.4 +1.4
      comp=N,66nm,1.1s,baz=358,slow=7.7,SNR=20
BOSA                               LR      LR       14 35 49.7
      comp=N,1µm,18.8s,baz=5.5,slow=38
BOSA  Boshof           63.96 184  eP       P        14 05 29.1 +1.2
      comp=N,134nm,1.3s
LAMP  Lampang          63.97  85   P       P        14 05 28.3  0.0
      comp=N,29nm,0.8s,comp=N,274nm
RES   Resolute Bay     64.02 346   P       P        14 05 28.2 +0.5
      comp=N,18nm,0.8s,baz=59,slow=6.0,SNR=24
RES   Resolute Bay     64.02 346  eP       P        14 05 28.3 +0.6
      comp=N,33nm,1.0s
RES   Resolute Bay     64.02 346  eP       P        14 05 28.3 +0.6
RES                                pmax    pmax
      comp=Z,33nm,1.0s
CLNS  Chul’man         64.04  37  eP       P        14 05 29.4 +1.2
CLNS                               pmax    pmax
      comp=Z,26nm,1.0s
CLNS                               pmax    pmax
      comp=E,11nm,1.0s
CLNS                               pmax    pmax
      comp=N,15nm,1.1s
HIA   Hailar           64.50  47  eP       P        14 05 31.9 +0.6
      comp=N,107nm,1.2s
HIA                                LR      LR
      comp=Z,611nm,21.0s
HIA   Hailar           64.50  47  eP       P        14 05 32.0 +0.6
HIA                                pmax    pmax
      comp=Z,107nm,1.2s
HIA                                MLR     MLR
      comp=Z,611nm,21.0s
UMPA  Umpang Tak       64.55  88   P       P        14 05 32.7 +0.6
      comp=Z,17nm,0.8s,comp=Z,621nm
NANT  Nan              64.70  84   P       P        14 05 32.4 -0.6
      comp=Z,12nm,0.7s,comp=Z,153nm
TIY   Taiyuan          64.77  61  eP       P        14 05 33.9 +0.6
TIY                                pP      pP       14 05 46.9 -1.9
TIY                                sP      sP       14 05 53.2 -2.0
TIY                                S       S        14 14 06.3 -3.5
TIY                                SS      SS       14 18 29.4 +8.1
TIY                                pmax    pmax
      comp=Z,200nm,3.5s
TIY                                LR      LR
      comp=Z,380nm,8.1s
TIY                                LR      LR
      comp=Z,310nm,12.8s
TIY                                LR      LR
      comp=Z,260nm,12.8s
SCHQ  Schefferville    64.84 321   P       P        14 05 33.4  0.0
      comp=Z,33nm,0.5s,baz=60,slow=7.6,SNR=13
SCHQ                               LR      LR       14 33 29.9
      comp=Z,330nm,21.4s,baz=68,slow=36
SCHQ  Schefferville    64.84 321  eP       P        14 05 31.8 -1.6
PHIT  Phitsanulok      65.30  86   P       P        14 05 38.6 +1.6
      comp=Z,69nm,1.2s,comp=Z,596nm
UTHA  Uthaitani        65.37  88   P       P        14 05 37.5 +0.1
      comp=Z,19nm,1.1s,comp=Z,167nm
GYA   Guiyang          65.65  74⇑iP       P        14 05 39.0 -0.3
GYA                                pP      pP       14 05 56.2 +1.4
GYA                                sP      sP       14 06 02.8 +1.6
GYA                                PP      PP       14 08 07.1 +3.0
GYA                                S       S        14 14 19.6 -1.5
GYA                                sS      sS       14 14 46.0 -1.2
GYA                                SKS     SKSac    14 15 27.2 -3.1
GYA                                pmax    pmax
      comp=Z,90nm,0.9s
GYA                                pmax    pmax
      comp=Z,140nm,5.7s
GYA                                LR      LR
      comp=Z,380nm,13.2s
GYA                                LR      LR
      comp=Z,480nm,15.2s
GYA                                LR      LR
      comp=Z,410nm,15.4s
SRDT  SRDT             65.75  89   P       P        14 05 40.9 +1.0
      comp=Z,30nm,1.5s
ENH   Enshi            66.01  69  eP       P        14 05 40.0 -1.4
      comp=Z,111nm,0.8s
ENH                               eS       S        14 14 24.2 -1.0
ENH                                LR      LR
      comp=Z,429nm,20.0s
ENH   Enshi            66.01  69  eP       P        14 05 40.0 -1.4
      comp=Z,111nm,0.8s
ENH                               eS       S        14 14 24.2 -1.0
BJI   Beijing          66.32  57   P       P        14 05 43.8 +0.6
BJI                                pP      sP       14 06 02.0 -3.1
BJI                                S       S        14 14 30.8 +2.3
BJI                                sS      sS       14 14 52.2 -2.5
BJI                                LR      LR
      comp=Z,5µm,35.3s
BJI                                LR      LR
      comp=Z,3µm,38.2s
BJT   Baijiatuau       66.33  57  eP       P        14 05 43.2  0.0
      comp=Z,94nm,1.1s
BJT                                LR      LR
      comp=Z,826nm,20.0s
BJT   Baijiatuau       66.33  57  eP       P        14 05 43.3  0.0
BJT                                pmax    pmax
      comp=Z,94nm,1.1s
BJT                                MLR     MLR
      comp=Z,826nm,20.0s
ZEA   Zeya             66.66  40  eP       P        14 05 46.3 +1.2
ZEA                               e                 14 06 04.0
ZEA                               e                 14 08 10.0
ZEA                               eS       S        14 14 36.0 +3.9
ZEA                               ePS      PnS      14 15 01.0 +1.1
ZEA                               eSSS     SSS      14 21 48.0
ZEA                                pmax    pmax
      comp=Z,32nm,1.0s
ZEA                                pmax    pmax
      comp=E,200nm,4.0s
ZEA                                pmax    pmax
      comp=Z,400nm,4.0s
ZEA                                pmax    pmax
      comp=Z,200nm,6.0s
ZEA                                smax    smax
      comp=E,200nm,9.0s
ZEA                                smax    smax
      comp=N,800nm,8.0s
PHET  Kaeng Krachan    66.95  90   P       P        14 05 47.4 -0.1
      comp=N,19nm,0.9s,comp=N,220nm
NONG  Nongkai          67.06  84   P       P        14 05 47.4 -0.8
      comp=N,1.2nm,1.2s,comp=N,254nm
SUR   Sutherland       68.05 187   P       P        14 05 55.7 +1.5
      comp=N,18nm,0.8s,baz=9.9,slow=5.5,SNR=9.9
SUR   Sutherland       68.05 187  eP       P        14 05 55.3 +1.1
SUR                                LR      LR
      comp=Z,4µm,19.0s
SKNT  Sakolnakorn      68.31  84   P       P        14 05 55.6 -0.5
      comp=Z,32nm,1.2s
SRAK  Srakaew          68.32  88   P       P        14 05 58.9 +2.7
      comp=Z,221nm,0.8s,comp=Z,2µm
TIA   Tai’an           68.79  60   P       P        14 05 59.1 +0.3
TIA                                S       S        14 14 59.3 +1.1
TIA                                pmax    pmax
      comp=Z,78nm,0.9s
TIA                                LR      LR
      comp=Z,700nm,26.7s
TIA                                LR      LR
      comp=Z,500nm,36.5s
TIA                                LR      LR
      comp=Z,510nm,24.1s
CHBT  CHBT             69.24  89   P       P        14 06 04.1 +2.2
      comp=Z,36nm,0.6s,comp=Z,846µm
MLSI  Meulaboh, Aceh   69.24 100   P       P        14 06 00.0 -1.9
PQI   Presque Isle     69.38 313  eP       P        14 06 02.4 +0.1
      comp=Z,118nm,1.3s
WHN   Wuhan            69.55  67   P       P        14 06 03.8 +0.2
WHN                                sP      sP       14 06 24.5 -1.1
WHN                                S       S        14 15 07.3  0.0
WHN                                LR      LR
      comp=Z,1µm,16.4s
WHN                                LR      LR
      comp=Z,950nm,15.6s
WHN                                LR      LR
      comp=Z,1µm,22.7s
TRTT  Trang            69.83  95   P       P        14 06 06.1 +0.5
      comp=Z,25nm,1.1s,comp=Z,417nm
EMMW  East Machias     70.03 311  eP       P        14 06 06.5 +0.2
      comp=Z,56nm,0.8s
CN2   Changchun        70.56  50  eP       P        14 06 10.5 +0.9
CN2                               eS       S        14 15 15.8 -2.9
CN2                                pmax    pmax
      comp=Z,30nm,1.3s
CN2                                pmax    pmax
      comp=Z,200nm,4.0s
CN2                                LR      LR
      comp=Z,640nm,21.0s
CN2                                LR      LR
      comp=Z,490nm,21.0s
CN2                                LR      LR
      comp=Z,610nm,22.0s
DL2   Dalian           70.56  56⇓iP       P        14 06 10.7 +1.0
DL2                                pP      pP       14 06 23.6 -1.8
DL2                                S       S        14 15 17.5 -1.5
DL2                                pmax    pmax
      comp=Z,34nm,0.9s
DL2                                pmax    pmax
      comp=Z,76nm,3.8s
DL2                                LR      LR
      comp=Z,310nm,18.0s
DL2                                LR      LR
      comp=Z,400nm,16.6s
DL2                                LR      LR
      comp=Z,610nm,24.5s
KCSI  Kotacane, Aceh   70.78 100   P       P        14 06 09.7 -1.7
PKME  Peaks-Kenny Pk   70.87 312   P       P        14 06 12.1 +0.7
      baz=58,SNR=6.5
PKME  Peaks-Kenny Pk   70.87 312  eP       P        14 06 12.1 +0.7
      comp=Z,60nm,1.4s
PKME                               LR      LR
      comp=Z,558nm,21.0s
SKLT  Songkhla         70.96  95   P       P        14 06 13.2 +0.7
      comp=Z,60nm,0.9s,comp=Z,1µm
CHGQ  Chibougamau      71.30 318   P       P        14 06 12.6 -1.3
      baz=57
KLR   Kul’dur          71.38  42   P       P        14 06 15.5 +1.0
      comp=Z,2.2nm,0.8s,baz=302,slow=7.6,SNR=62
KLR   Kul’dur          71.38  42d iP       P        14 06 15.7 +1.2
TSI   Tuntungan        71.43  99   P       P        14 06 15.9 +0.6
      comp=Z,95nm,0.5s,comp=Z,4µm
WVL   Waterville       71.45 312  eP       P        14 06 15.7 +0.7
      comp=Z,61nm,1.4s
GSI   Gunungsitoli     71.94 102   P       P        14 06 18.7 +0.4
SEY   Seymchan         71.95  24   P       P        14 06 19.2 +1.6
      comp=Z,162nm,1.1s,baz=300,slow=6.6,SNR=195
QIZ   Qiongzhong       71.95  79   P       P        14 06 18.4  0.0
QIZ                                pP      pP       14 06 33.5 -0.6
QIZ                                S       S        14 15 32.0 -3.6
QIZ                                sS      sS       14 16 01.6 -0.5
QIZ                                LR      LR
      comp=Z,490nm,29.4s
QIZ                                LR      LR
      comp=Z,360nm,24.1s
QIZ                                LR      LR
      comp=Z,350nm,28.9s
QIZ   Qiongzhong       71.95  79  eP       P        14 06 18.2 -0.2
      comp=Z,48nm,1.0s
QIZ                                LR      LR
      comp=Z,317nm,20.0s
NJ2   Nanjing          72.11  63  eP       P        14 06 19.7 +0.6
NJ2                                pP      pP       14 06 33.6 -1.3
NJ2                                sP      sP       14 06 41.1 -0.1
NJ2                                S       S        14 15 33.9 -3.1
NJ2                                pmax    pmax
      comp=Z,49nm,0.8s
NJ2                                pmax    pmax
      comp=Z,320nm,5.7s
NJ2                                LR      LR
      comp=Z,710nm,20.6s
NJ2                                LR      LR
      comp=Z,480nm,20.6s
NJ2                                LR      LR
      comp=Z,1µm,23.9s
PSI   Prapat           72.13 100   P       P        14 06 19.4 -0.3
      comp=Z,80nm,0.9s,baz=357,slow=1.0,SNR=37
PSI                                S       S        14 15 34.0 -4.0
      comp=Z,2.2nm,0.4s,baz=180,slow=20,SNR=1.5
PSI                                LR      LR       14 41 35.4
      comp=Z,371nm,21.7s,baz=270,slow=39
PSI   Prapat           72.13 100  eP       P        14 06 18.3 -1.4
      comp=Z,154nm,1.2s
PSI                                S       S        14 15 34.0 -4.0
GZH   Guangzhou        72.59  74   P       P        14 06 22.8 +0.7
GZH                                PP      PP       14 09 07.7 +3.8
GZH                                S       S        14 15 43.7 +1.0
GZH                                LR      LR
      comp=Z,430nm,23.5s
GZH                                LR      LR
      comp=Z,550nm,23.5s
MDJ   Mudanjiang       72.66  47   PFAKE            14 06 30.0 +7.8
MDJ                                LR      LR
      comp=Z,343nm,20.0s
LBNH  Lisbon           73.00 312   P       P        14 06 25.5 +1.2
      baz=57,SNR=15
LBNH  Lisbon           73.00 312  eP       P        14 06 25.2 +1.0
      comp=Z,51nm,0.8s
LBNH  Lisbon           73.00 312  eP       P        14 06 25.2 +1.0
LBNH                               pmax    pmax
      comp=Z,51nm,0.8s
GRNR  Gornyy           73.00  39  eP       P        14 06 27.6 +3.4
GRNR                               pmax    pmax
      comp=Z,100nm,1.0s
MATQ  Matagami         73.13 319   P       P        14 06 24.7 -0.2
      baz=55
LSQQ  Lebel-sur-Quev   73.18 319   P       P        14 06 25.5 +0.3
      baz=55
RCBR  Riachuelo        73.37 250   P       P        14 06 27.7 +0.8
      comp=Z,75nm,0.9s,baz=30,slow=8.3,SNR=6.7
RCBR  Riachuelo        73.37 250  eP       P        14 06 27.9 +1.0
      comp=Z,77nm,0.9s
RCBR  Riachuelo        73.37 250  eP       P        14 06 27.9 +1.0
RCBR                               pmax    pmax
      comp=Z,77nm,0.9s
TRQ   Mont Tremblant   73.44 315  eP       P        14 06 27.0 +0.1
VT1   Waterbury        73.44 313  eP       P        14 06 27.7 +0.8
      comp=Z,46nm,1.3s
BCX   Boston College   73.58 310  eP       P        14 06 28.3 +0.6
      comp=Z,69nm,0.9s
WES   Weston           73.65 311  eP       P        14 06 29.2 +1.1
      comp=Z,76nm,0.9s
NKL   Nikolayevsk      73.69  36  i P      P        14 06 29.5 +1.4
NKL                               i S      S        14 15 56.5 +2.3
NKL                               e                 14 20 40.0
NKL                                pmax    pmax
      comp=E,26nm,1.0s
NKL                                pmax    pmax
      comp=Z,130nm,1.0s
NKL                                pmax    pmax
      comp=Z,500nm,5.0s
NKL                                smax    smax
      comp=N,1µm,10.0s
NKL                                MLR     MLR
      comp=E,500nm,16.0s
NKL                                MLR     MLR
      comp=Z,500nm,16.0s
HRV   Adam Dziewonsk   73.73 311   P       P        14 06 28.7 +0.2
      baz=56
HRV   Adam Dziewonsk   73.73 311  eP       P        14 06 29.1 +0.6
      comp=Z,40nm,1.0s
HRV   Adam Dziewonsk   73.73 311  eP       P        14 06 29.2 +0.6
HRV                                pmax    pmax
      comp=Z,40nm,1.0s
MA2   Magadan          73.73  27   P       P        14 06 29.9 +1.6
      comp=Z,379nm,1.0s,baz=318,slow=6.3,SNR=240
MA2   Magadan          73.73  27  eP       P        14 06 29.6 +1.3
      comp=Z,458nm,1.0s
MA2                                LR      LR
      comp=Z,916nm,21.0s
MNSI  Mandailing Nat   73.84 101   P       P        14 06 29.2 -0.4
ALFO  Alfred           73.97 315   P       P        14 06 30.4 +0.5
      baz=55
BRYW  Bryant College   74.04 310  eP       P        14 06 32.0 +1.6
      comp=Z,62nm,1.0s
SSE   Sheshan          74.31  63   P       P        14 06 29.4 -2.7
SSE                                S       S        14 15 59.2 -2.7
SSE                                pmax    pmax
      comp=Z,10.0nm,0.6s
SSE                                LR      LR
      comp=Z,250nm,23.3s
SSE                                LR      LR
      comp=Z,270nm,24.7s
USRK  Ussuriysk Ar.    74.31  47   P       P        14 06 31.9  0.0
      comp=Z,106nm,0.9s,baz=292,slow=4.7
USRK                               LR      LR       14 44 25.8
      comp=Z,466nm,18.4s,baz=299,slow=40
QUA2  Belchertown      74.34 311  eP       P        14 06 33.6 +1.5
      comp=Z,29nm,0.8s
LONY  Lake Ozonia      74.37 314   P       P        14 06 33.4 +1.1
      baz=55,SNR=17
LONY  Lake Ozonia      74.37 314  eP       P        14 06 33.3 +1.0
      comp=Z,44nm,0.9s
LONY                               LR      LR
      comp=Z,447nm,19.0s
ORIO  Orleans, Innes   74.43 315   P       P        14 06 34.2 +1.7
      baz=55
ACCN  Adirondack Com   74.52 312  eP       P        14 06 34.8 +1.6
      comp=Z,78nm,1.4s
NCB   Newcomb          74.52 313  eP       P        14 06 35.3 +2.1
      comp=Z,52nm,1.4s
BBSR  BB Station       74.64 299  eP       P        14 06 34.3 +0.3
      comp=Z,56nm,0.9s
BBSR                               LR      LR
      comp=Z,290nm,20.0s
INCN  Inchon           74.67  55  eP       P        14 06 34.0 -0.2
      comp=Z,50nm,0.9s
INCN                               LR      LR
      comp=Z,881nm,21.0s
FCC   Fort Churchill   74.75 333  eP       P        14 06 33.6 -0.5
      comp=Z,29nm,1.1s
FCC   Fort Churchill   74.75 333  eP       P        14 06 33.6 -0.5
FCC                                pmax    pmax
      comp=Z,29nm,1.1s
BELQ  Belleterre       75.08 318   P       P        14 06 36.2 -0.1
      baz=53
PEMO  Pembroke         75.29 316   P       P        14 06 38.1 +0.5
      baz=54
KS01  Wonju Array Si   75.51  54  eP       P        14 06 38.6 -0.3
KS15  Wonju Array Si   75.52  54  eP       P        14 06 38.9 -0.1
KSAR  Wonju Array Be   75.52  54   P       P        14 06 39.2 +0.3
KSAR                               S       S        14 16 13.3 -1.9
KSRS  Korea Array      75.54  54   P       P        14 06 39.2 +0.2
      comp=Z,46nm,1.0s,baz=298,slow=4.9,SNR=118
KSRS                               S       S        14 16 13.3 -2.1
      comp=Z,0.3nm,0.4s,baz=345,slow=29,SNR=2.2
KSRS                               LR      LR       14 43 50.9
      comp=Z,766nm,21.5s,baz=310,slow=39
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PLVO	Plevna	75.57	315	P	P	14 06 39.9	+0.7
	baz=54						
PLVO	Plevna	75.57	315	*e*P	P	14 06 40.0	+0.8
	comp=Z,54nm,1.0s						
INK	Inuvik	75.58	353	P	P	14 06 39.2	+0.5
	comp=Z,19nm,0.9s,baz=6.6,slow=6.9,SNR=25						
INK	Inuvik	75.58	353	*e*P	P	14 06 38.3	-0.4
	comp=Z,48nm,1.1s						
QZH	Quanzhou	75.66	70⇓	*i*P	P	14 06 36.4	-3.6
QZH				S	S	14 16 14.7	-2.5
QZH				pmax	pmax		
	comp=Z,35nm,1.1s						
QZH				LR	LR		
	comp=Z,580nm,24.6s						
QZH				LR	LR		
	comp=Z,330nm,22.3s						
QZH				LR	LR		
	comp=Z,430nm,28.4s						
TJN	Taejon	75.76	55*d*	*i*P	P	14 06 40.7	+0.3
PAL	Palisades	76.02	311	P	P	14 06 42.2	+0.4
	baz=55						
PAL	Palisades	76.02	311	*e*P	P	14 06 42.6	+0.8
	comp=Z,45nm,1.0s						
PAL	Palisades	76.02	311	*e*P	P	14 06 42.6	+0.8
PAL				pmax	pmax		
	comp=Z,45nm,1.0s						
TOLK	Toolik Lake Re	76.07	359	P	P	14 06 42.7	+1.1
	baz=1.3						
TOLK	Toolik Lake Re	76.07	359	*e*P	P	14 06 42.5	+0.9
	comp=Z,96nm,1.4s						
BANO	Bancroft	76.07	316	P	P	14 06 42.9	+0.8
	baz=53						
TYV	Tymovskoe	76.08	37	*e*P	P	14 06 44.0	+2.1
TYV				pmax	pmax		
	comp=Z,600nm,5.8s						
TYV				pmax	pmax		
	comp=Z,57nm,1.2s						
DELO	Deloro Mine	76.19	315	P	P	14 06 42.6	-0.1
	baz=54						
RDOG	Red Dog Mine	76.28	5	*e*P	P	14 06 43.3	+0.5
	comp=Z,74nm,1.2s						
ODNJ	Ogdensburg	76.41	311	*e*P	P	14 06 45.4	+1.4
	comp=Z,50nm,0.9s						
BINY	Binghamton	76.60	312	P	P	14 06 45.5	+0.4
	baz=54						
BINY	Binghamton	76.60	312	*e*P	P	14 06 46.5	+1.4
	comp=Z,49nm,0.9s						
BINY				LR	LR		
	comp=Z,469nm,20.0s						
BRNJ	Basking Ridge	76.62	311	*e*P	P	14 06 46.8	+1.6
	comp=Z,68nm,1.0s						
BUKO	Buck Lake	76.65	317	P	P	14 06 46.0	+0.7
	baz=53						
KSPA	Keystone Colle	76.84	312	*e*P	P	14 06 48.1	+1.6
	comp=Z,63nm,1.0s						
SADO	Sadowa	76.91	316	P	P	14 06 46.8	0.0
	comp=Z,14nm,0.9s,baz=69,slow=5.3,SNR=9.0						
SADO	Sadowa	76.91	316	*e*P	P	14 06 48.0	+1.2
	comp=Z,34nm,0.9s						
WLVO	Wesleyville	77.00	315	P	P	14 06 48.1	+0.9
	baz=53						
KLBO	Killbear Provi	77.16	317	P	P	14 06 48.2	0.0
	baz=52						
LUPA	Lehigh Univers	77.16	311	*e*P	P	14 06 48.5	+0.2
	comp=Z,4.8nm,1.4s						
DRWO	Darlington Wes	77.22	315	P	P	14 06 48.4	-0.1
	baz=53						
N59A	State Game Lan	77.22	311	P	P	14 06 49.3	+0.6
	baz=54						
N59A	State Game Lan	77.22	311	*e*P	P	14 06 49.6	+1.0
	comp=Z,36nm,0.8s						
MMNY	Mt. Morris Dam	77.43	314	*e*P	P	14 06 50.4	+0.7
	comp=Z,55nm,1.0s						
MEDO	Medina	77.49	314	P	P	14 06 51.2	+1.2
	baz=53						
COLD	Coldfoot	77.49	360	*e*P	P	14 06 50.4	+0.7
	comp=Z,77nm,1.1s						
PSUB	Penn St. - Bra	77.61	310	*e*P	P	14 06 51.4	+0.7
	comp=Z,41nm,1.1s						
CLWO	Collingwood	77.76	316	P	P	14 06 52.9	+1.4
	baz=52						
TATO	Taipei	77.84	68	PFAKE		14 07 00.0	+7.7
TATO				LR	LR		
	comp=Z,442nm,22.0s						
YKW3	Yellowknife Ar	77.89	344	*e*P	P	14 06 51.4	-0.5
	comp=Z,36nm,1.0s						
YHNB	Yeheng	77.93	68	*e*P	P	14 06 53.4	+0.5
	comp=Z,99nm,1.2s						
YHNB	Yeheng	77.93	68	*e*P	P	14 06 53.4	+0.5
	comp=Z,99nm,1.2s						
YKA	Yellowknife Ar	77.94	344	P	P	14 06 51.9	-0.3
	comp=Z,10.0nm,0.7s,baz=35,slow=5.4,SNR=74						
YKA				S	S	14 16 39.5	-1.3
	comp=Z,0.3nm,0.7s,baz=26,slow=12,SNR=2.7						
YKA				LR	LR	14 44 43.9	
	comp=Z,28nm,20.2s,baz=33,slow=38						
TOBO	Tobermory, Bru	77.96	317	P	P	14 06 52.9	+0.3
	baz=51						
SSLB	Suanglung	78.09	69	*e*P	P	14 06 55.8	+2.0
	comp=Z,19nm,0.9s						
SSLB	Suanglung	78.09	69	*e*P	P	14 06 55.8	+2.0
	comp=Z,19nm,0.9s						
TPUB	Ta-pu	78.11	70	*e*P	P	14 06 52.8	-1.1
	comp=Z,42nm,0.9s						
TPUB	Ta-pu	78.11	70	*e*P	P	14 06 52.8	-1.1
	comp=Z,42nm,0.9s						
MVL	Millersville	78.12	311	*e*P	P	14 06 53.5	-0.1
	comp=Z,64nm,1.0s						
BMRO	Meriville Lake	78.19	317	P	P	14 06 54.3	+0.4
	baz=51						
TYNO	Tyneside	78.35	315	P	P	14 06 55.1	+0.3
	baz=52						
BWLO	Walkerton	78.44	316	P	P	14 06 56.1	+0.8
	baz=51						
YULB	Yu-li	78.58	69	*e*P	P	14 06 56.2	-0.2
	comp=Z,46nm,1.0s						
YULB	Yu-li	78.58	69	*e*P	P	14 06 56.2	-0.2
	comp=Z,46nm,1.0s						
YSS	Yuzh-Sakhalins	78.65	40	*e*P	P	14 06 56.6	+0.3
	comp=Z,267nm,1.3s						
YSS				LR	LR		
	comp=Z,491nm,21.0s						
YSS	Yuzh-Sakhalins	78.65	40κ	*e*P	P	14 06 58.0	+1.6
YSS				*e*		14 09 57.0	
YSS				*e*S	S	14 16 49.3	+0.4
YSS				*e*PS	PnS	14 17 42.0	+5.1
YSS				*e*SS	SS	14 21 55.0	+2.2
YSS				pmax	pmax		
	comp=Z,110nm,1.1s						
YSS				pmax	pmax		
	comp=E,40nm,1.0s						
YSS				pmax	pmax		
	comp=Z,300nm,8.2s						
YSS				MLR	MLR		
	comp=Z,700nm,16.0s						
SSPA	Standing Stone	78.68	312	P	P	14 06 57.2	+0.5
	baz=53						
SSPA	Standing Stone	78.68	312	*e*P	P	14 06 57.9	+1.2
	comp=Z,71nm,1.3s						
TWG	Pinlang	78.72	70	*e*P	P	14 06 56.8	-0.4
	comp=Z,346nm,1.5s						
TWG	Pinlang	78.72	70	*e*P	P	14 06 56.8	-0.4
	comp=Z,346nm,1.5s						
BASO	Ashfield	78.80	316	P	P	14 06 57.4	+0.1
	baz=51						
ERPA	Erie	79.02	314	P	P	14 06 58.3	-0.3
	baz=52						
ERPA	Erie	79.02	314	*e*P	P	14 06 57.7	-0.8
	comp=Z,71nm,0.9s						
ELFO	Elginfield	79.12	316	P	P	14 06 60.0	+0.9
	baz=51						
E45A	Wooded Hills,	79.21	320	P	P	14 06 58.9	-0.5
	baz=49						
M54A	Oil Creek Stat	79.21	314	P	P	14 06 59.3	-0.3
	baz=52						
M54A	Oil Creek Stat	79.21	314	*e*P	P	14 07 00.3	+0.7
	comp=Z,50nm,0.9s						
O56A	Blue Knob Stat	79.31	312	P	P	14 07 00.2	0.0
	baz=52						
O56A	Blue Knob Stat	79.31	312	*e*P	P	14 07 01.0	+0.8
	comp=Z,34nm,1.0s						
F46A	Macinaw City C	79.36	319	P	P	14 07 00.4	+0.1
	baz=49						
ALLY	Alegheny Colle	79.41	314	*e*P	P	14 07 02.0	+1.3
	comp=Z,71nm,1.4s						
EGAK	Eagle	79.65	356	*e*P	P	14 07 01.9	+0.4
	comp=Z,198nm,2.0s						
EGAK				LR	LR		
	comp=Z,263nm,20.0s						
MLY	Manley	79.70	360	*e*P	P	14 07 02.6	+0.7
	comp=Z,58nm,1.2s						
N54A	Moraine State	79.74	313	P	P	14 07 01.5	-1.0
	baz=52						
N54A	Moraine State	79.74	313	*e*P	P	14 07 03.4	+0.9
	comp=Z,56nm,1.1s						
F45A	CMU Biological	79.82	320	P	P	14 07 01.7	-1.1
	baz=49						
COLA	College	79.83	359	*e*P	P	14 07 03.4	+0.9
	comp=Z,124nm,1.4s						
COLA	College	79.83	359	*e*P	P	14 07 03.4	+0.9
COLA				pmax	pmax		
	comp=Z,124nm,1.4s						
CBN	Corbin Frederi	79.84	310	P	P	14 07 01.5	-1.5
	baz=52						
CBN	Corbin Frederi	79.84	310	*e*P	P	14 07 02.9	-0.2
CBN				LR	LR		
	comp=Z,498nm,21.0s						
IL1	Eielson Array	79.91	358	*e*P	P	14 07 02.9	0.0
ILAR	Eielson Array	79.91	358	P	P	14 07 03.4	+0.4
	comp=Z,12nm,1.0s,baz=352,slow=3.6,SNR=83						
ILAR				PKKPbc	PKKPbc	14 25 47.5	-0.8
	comp=Z,2.2nm,1.1s,baz=222,slow=1.1,SNR=9.8						
ILAR				PKPPKP	P’P’df	14 33 49.1	-7.0
	comp=Z,0.9nm,0.8s,baz=214,slow=2.9,SNR=6.4						
JNU	Nakatsue	79.99	56	P	P	14 07 04.1	+0.1
	comp=Z,48nm,1.0s,baz=345,slow=4.2,SNR=19						
JNU				LR	LR	14 47 40.6	
	comp=Z,580nm,19.2s,baz=304,slow=40						
JNU	Nakatsue	79.99	56	*e*P	P	14 07 03.2	-0.8
	comp=Z,66nm,1.1s						
CCB	Clear Creek Bu	80.06	359	*e*P	P	14 07 03.8	+0.1
	comp=Z,93nm,1.2s						
F44A	Big Bay de Noc	80.11	320	P	P	14 07 03.7	-0.6
	baz=48,SNR=9.5						
E43A	Lone Tree Farm	80.14	321	P	P	14 07 04.6	+0.1
	baz=48,SNR=11						
E43A	Lone Tree Farm	80.14	321	*e*P	P	14 07 04.0	-0.6
	comp=Z,43nm,1.1s						
C40A	Isle Royale Na	80.18	323	P	P	14 07 03.9	-0.8
	baz=47						
C40A	Isle Royale Na	80.18	323	*e*P	P	14 07 04.2	-0.5
	comp=Z,51nm,1.2s						
CVRD	Centerville Ro	80.19	310	*e*P	P	14 07 04.6	-0.3
	comp=Z,29nm,1.0s						
DAWY	Dawson	80.24	355	*e*P	P	14 07 05.1	+0.3
	comp=Z,115nm,1.4s						
URVA	University of	80.32	309	*e*P	P	14 07 05.8	+0.1
ASAJ	Asahikawa	80.41	42	P	P	14 07 06.5	+0.4
	comp=Z,38nm,1.2s,baz=262,slow=11,SNR=9.0						
ASAJ	Asahikawa	80.41	42	*e*P	P	14 07 06.6	+0.5
	comp=Z,44nm,1.0s						
IP07	Quail	80.42	310	*e*P	P	14 07 06.8	+0.6
	comp=Z,30nm,1.0s						
MCWV	Mont Chateau	80.46	312	P	P	14 07 06.3	-0.1
	baz=51						
D41A	Chassel	80.47	322	P	P	14 07 05.4	-0.9
	baz=47						
D41A	Chassel	80.47	322	*e*P	P	14 07 06.2	-0.1
	comp=Z,107nm,1.4s						
ANWB	Willy Bob	80.51	285	PFAKE		14 07 20.0	+13
ANWB				LR	LR		
	comp=Z,429nm,22.0s						
BWN	Browne	80.56	359	*e*P	P	14 07 06.5	0.0
	comp=Z,93nm,1.3s						
E42A	Champion	80.57	321	P	P	14 07 07.0	+0.1
	baz=47,SNR=9.0						
F43A	Flat Rock, Esc	80.59	320	P	P	14 07 06.8	-0.2
	baz=48,SNR=9.4						
BPAW	Bear Paw Mtn.	80.64	360	*e*P	P	14 07 06.6	-0.3
	comp=Z,85nm,1.2s						
FFC	Flin Flon	80.66	334	*e*P	P	14 07 06.3	-0.9
	comp=Z,22nm,0.9s						
FFC				LR	LR		
	comp=Z,854nm,22.0s						
FFC	Flin Flon	80.66	334	*e*P	P	14 07 06.3	-0.9
FFC				pmax	pmax		
	comp=Z,22nm,0.9s						
FFC				MLR	MLR		
	comp=Z,854nm,22.0s						
MCK	McKinley	80.99	359	*e*P	P	14 07 08.5	-0.3
	comp=Z,125nm,1.2s						
MCK	McKinley	80.99	359	*e*P	P	14 07 08.5	-0.3
MCK				pmax	pmax		
	comp=Z,125nm,1.2s						
AAM	Ann Arbor	81.02	316	P	P	14 07 08.5	-0.8
	baz=50						
AAM	Ann Arbor	81.02	316	*e*P	P	14 07 09.4	+0.2
AAM				LR	LR		
	comp=Z,440nm,22.0s						
E41A	Kenton	81.08	322	P	P	14 07 08.4	-1.2
	baz=47						
PEA0B	Petropavlovsk-	81.09	28	*e*P	P	14 07 09.2	-0.3
	comp=Z,255nm,1.2s						
PETK	Petropavlovsk-	81.09	28	P	P	14 07 09.6	0.0
	comp=Z,112nm,1.0s,baz=308,slow=4.7						
PETK				LR	LR	14 48 31.9	
	comp=Z,299nm,21.4s,baz=309,slow=40						
PETK	Petropavlovsk-	81.09	28	*e*P	P	14 07 08.8	-0.7
PETK	Petropavlovsk-	81.09	28	*e*P	P	14 07 08.8	-0.7
F42A	Maple Grove Fa	81.14	321	P	P	14 07 08.9	-1.0
	baz=47						
G43A	Wallace	81.25	320	P	P	14 07 10.1	-0.4
	baz=47,SNR=6.5						
G43A	Wallace	81.25	320	*e*P	P	14 07 10.1	-0.4
	comp=Z,66nm,1.3s						
BBGH	Gun Hill	81.28	280	PFAKE		14 07 20.0	+8.9
BBGH				LR	LR		
	comp=Z,861nm,22.0s						
TRF	Thorofare Moun	81.29	360	*e*P	P	14 07 10.4	-0.2
	comp=Z,91nm,1.3s						
EYMN	Ely	81.29	324	P	P	14 07 10.5	-0.2
	baz=45,SNR=5.7						
EYMN	Ely	81.29	324	*e*P	P	14 07 10.0	-0.7
	comp=Z,46nm,1.4s						
EYMN				LR	LR		
	comp=Z,664nm,21.0s						
CAST	Castle Rocks	81.32	0	*e*P	P	14 07 10.2	-0.3
	comp=Z,85nm,1.3s						
C38A	Sawbill Land.	81.35	324	P	P	14 07 09.6	-1.4
	baz=45						
COWI	Conover	81.42	322	*e*P	P	14 07 11.2	-0.1
	comp=Z,39nm,0.9s						
COWI				LR	LR		
	comp=Z,735nm,22.0s						
PET	Petropavlovsk	81.53	28	*e*P	P	14 07 11.7	-0.1
	comp=Z,104nm,1.3s						
PET				LR	LR		
	comp=Z,528nm,19.0s						
PET	Petropavlovsk	81.53	28κ	*i*P	P	14 07 11.7	-0.1
PET				*e*S	S	14 17 19.4	+0.5
PET				pmax	pmax		
	comp=Z,400nm,3.3s						
PET				pmax	pmax		
	comp=Z,69nm,1.2s						
PET				MLR	MLR		
	comp=Z,700nm,20.0s						
E40A	Wakefield	81.56	322	P	P	14 07 12.1	0.0
	baz=46,SNR=11						
DHY	Denali Highway	81.62	358	*e*P	P	14 07 12.3	-0.1
	comp=Z,68nm,0.9s						
ULM	Lac du Bonnet	81.63	328	P	P	14 07 12.3	-0.1
	comp=Z,8.2nm,0.5s,baz=65,slow=5.5,SNR=9.7						
ULM				LR	LR	14 44 48.9	
	comp=Z,707nm,19.6s,baz=44,slow=37						
ULM	Lac du Bonnet	81.63	328	*e*P	P	14 07 11.9	-0.5
	comp=Z,44nm,1.2s						
G42A	Mountain	81.64	321	P	P	14 07 13.0	+0.5
	baz=47,SNR=13						
G42A	Mountain	81.64	321	*e*P	P	14 07 12.3	-0.2
	comp=Z,41nm,1.0s						
F41A	Three Lakes	81.65	321	P	P	14 07 12.7	+0.1
	baz=46,SNR=9.6						
F41A	Three Lakes	81.65	321	*e*P	P	14 07 12.4	-0.3
	comp=Z,49nm,1.3s						
FDF	Fort de France	81.66	282	*e*P	P	14 07 14.9	+1.7
FDF	Fort de France	81.66	282	*e*P	P	14 07 14.9	+1.7
N50A	Nevada	81.71	315	P	P	14 07 12.2	-0.8
	baz=50						
C37A	Embarrass	81.78	324	P	P	14 07 11.7	-1.5
	baz=45						
H43A	Windswept, Lux	81.82	320	P	P	14 07 13.0	-0.5
	baz=47						
JOW	Kunigami	81.83	63	P	P	14 07 13.7	-0.1
	comp=Z,106nm,1.1s,baz=337,slow=6.3,SNR=14						
JOW				LR	LR	14 48 00.4	
	comp=Z,181nm,21.1s,baz=48,slow=39						
JOW	Kunigami	81.83	63	*e*P	P	14 07 13.8	-0.1
	comp=Z,171nm,1.2s						
PPLA	Purkeypile	81.84	1	*e*P	P	14 07 13.9	+0.4
	comp=Z,105nm,1.3s						
E39A	Mellen	81.94	323	P	P	14 07 13.7	-0.4
	baz=46,SNR=10						
ACSO	Alum Creek Sta	81.96	314	P	P	14 07 13.8	-0.5
	baz=50						
ACSO	Alum Creek Sta	81.96	314	PFAKE		14 07 30.0	+16
ACSO				LR	LR		
	comp=Z,462nm,21.0s						
CNNC	Cliffs of the	81.97	308	P	P	14 07 13.7	-0.7
	baz=52						
CNNC	Cliffs of the	81.97	308	PFAKE		14 07 30.0	+16
CNNC				LR	LR		
	comp=Z,541nm,20.0s						
F40A	Park Falls	82.04	322	P	P	14 07 14.1	-0.5
	baz=46,SNR=8.3						
B35A	Bob, Littlefor	82.05	325	P	P	14 07 14.4	-0.3
	baz=44,SNR=6.9						
B35A	Bob, Littlefor	82.05	325	*e*P	P	14 07 14.5	-0.1
	comp=Z,52nm,1.4s						
G41A	Antigo	82.05	321	P	P	14 07 13.9	-0.9
	baz=46						
VWCC	Virginia Weste	82.05	310	*e*P	P	14 07 15.8	+0.9
C36A	Pine Crest Far	82.07	325	P	P	14 07 14.6	-0.1
	baz=44,SNR=6.7						
ERM	Erimo	82.10	43	*e*P	P	14 07 16.1	+1.1
	comp=Z,60nm,1.0s						
ERM				LR	LR		
	comp=Z,705nm,22.0s						
ERM	Erimo	82.10	43*c*	*i*P	P	14 07 16.7	+1.7
ERM				pmax	pmax		
	comp=Z,75nm,1.1s						
HARP	HAARP	82.22	357	*e*P	P	14 07 16.0	+0.7
	comp=Z,72nm,1.1s						
YUK	Yuzh-Kuril’sk	82.22	40*c*	*i*P	P	14 07 14.2	-1.4
YUK				e*PP	pP	14 07 28.7	-2.9
YUK				*e*		14 10 20.6	
YUK				*e*PPP	PPP	14 12 13.6	
YUK				*e*S	S	14 17 26.6	+0.2
YUK				*e*SS	SS	14 22 47.9	+1.7
YUK				pmax	pmax		
	comp=Z,274nm,1.1s						
YUK				pmax	pmax		
	comp=N,51nm,0.8s						
YUK				pmax	pmax		
	comp=E,95nm,0.7s						
YUK				pmax	pmax		
	comp=Z,280nm,1.3s						
YUK				MLR	MLR		
	comp=Z,463nm,19.0s						
YUK				MLR	MLR		
	comp=E,545nm,22.0s						
YUK				MLR	MLR		
	comp=N,329nm,17.0s						
E38A	The Farm, Brul	82.27	323	P	P	14 07 15.5	-0.4
	baz=45						
E38A	The Farm, Brul	82.27	323	*e*P	P	14 07 15.7	-0.1
	comp=N,38nm,1.4s						
D37A	Cotton	82.30	324	P	P	14 07 15.8	-0.2
	baz=44						
SKR	Severo-Kuril’s	82.31	31	*e*P	P	14 07 16.9	+1.0
SKR				e*PP	pP	14 07 32.8	+0.9
SKR				*e*		14 10 20.6	
SKR				*e*S	S	14 17 18.6	-8.4
SKR				*e*SSS	SSS	14 26 15.3	
SKR				pmax	pmax		
	comp=Z,129nm,1.2s						
SKR				pmax	pmax		
	comp=Z,300nm,2.0s						
SKR				pmax	pmax		
	comp=Z,100nm,2.6s						
SKR				MLR	MLR		
	comp=Z,400nm,20.0s						
BLA	Blacksburg	82.35	311	P	P	14 07 16.0	-0.5
	baz=51						
BLA	Blacksburg	82.35	311	PFAKE		14 07 30.0	+14
BLA				LR	LR		
	comp=Z,415nm,20.0s						
B34A	Aery, Baudette	82.38	326	P	P	14 07 16.1	-0.3
	baz=43,SNR=9.4						
A33A	Warroad	82.38	327	P	P	14 07 15.4	-1.0
	baz=43,SNR=8.7						
O50A	Cable	82.39	314	P	P	14 07 15.8	-0.9
	baz=49						
I43A	Langenfeld Bro	82.42	320	P	P	14 07 16.1	-0.6
	baz=47,SNR=11						
KUR	Kuril’sk	82.44	39	*e*P	P	14 07 17.1	+0.4
KUR				*i* S	S	14 17 28.1	-0.5
KUR				pmax	pmax		
	comp=Z,125nm,1.3s						
F39A	Loretta	82.44	322	P	P	14 07 16.5	-0.3
	baz=45,SNR=8.1						
G40A	Rib Lake	82.53	322	P	P	14 07 17.1	-0.1
	baz=46,SNR=6.3						
G40A	Rib Lake	82.53	322	*e*P	P	14 07 17.0	-0.3
	comp=Z,51nm,1.1s						
SVB	Belmont	82.56	281	*e*P	P	14 07 19.8	+1.9
	comp=Z,104nm,0.8s						
STVI	Saint Thomas	82.61	287	*e*P	P	14 07 17.7	-0.3
	comp=Z,115nm,1.4s						
STVI	Saint Thomas	82.61	287	*e*P	P	14 07 17.7	-0.3
	comp=Z,115nm,1.4s						
D36A	Goodland	82.64	324	P	P	14 07 17.5	-0.3
	baz=44,SNR=5.1						
D36A	Goodland	82.64	324	*e*P	P	14 07 17.4	-0.3
	comp=Z,53nm,1.3s						
C35A	Jirik Farms, M	82.64	325	P	P	14 07 17.2	-0.5
	baz=44,SNR=7.5						
NCAT	North Carolina	82.65	309	*e*P	P	14 07 17.2	-0.8
	comp=Z,42nm,1.3s						
INU	Inuyama	82.69	52	*e*P	P	14 07 18.4	+0.2
	comp=Z,44nm,1.2s						
MJB9	Matsu-Tunnel	82.69	50	*e*P	P	14 07 17.8	-0.5
	comp=Z,60nm,1.1s						
MAJO	Matsushiro	82.70	50	*e*P	P	14 07 17.8	-0.5
	comp=Z,54nm,1.1s						
MAJO				LR	LR		
	comp=Z,669nm,21.0s						
MAJO	Matsushiro	82.70	50*d*	*i*P	P	14 07 18.9	+0.6
MAJO				pmax	pmax		
	comp=Z,58nm,1.1s						
MAT	Matsushiro	82.70	50	P	P	14 07 18.5	+0.2
MAT				S	S	14 17 32.0	+0.3
MJAR	Matsushiro Arr	82.70	50	P	P	14 07 19.2	+0.9
	comp=Z,53nm,1.1s,baz=301,slow=5.5,SNR=88						
MJAR				LR	LR	14 49 05.9	
	comp=Z,580nm,20.0s,baz=315,slow=39						
H41A	Junction City	82.70	321	P	P	14 07 17.4	-0.8
	baz=46						
H41A	Junction City	82.70	321	*e*P	P	14 07 17.5	-0.7
	comp=Z,30nm,1.0s						
E37A	Wrenshall	82.71	324	P	P	14 07 16.5	-1.6
	baz=44						
SKT	Skwentna	82.76	0	*e*P	P	14 07 17.6	-0.6
	comp=Z,68nm,1.1s						
CDVI	St. Croix	82.80	287	*e*P	P	14 07 19.6	+0.6
	comp=Z,352nm,0.8s						
I42A	Draeger Farm,	82.82	320	P	P	14 07 17.9	-0.9
	baz=46						
I42A	Draeger Farm,	82.82	320	*e*P	P	14 07 18.2	-0.6
	comp=Z,55nm,1.3s						
P50A	Jamestown	82.85	314	P	P	14 07 18.8	-0.2
	baz=49						
SCM	Sheep Creek Mo	82.86	358	*e*P	P	14 07 18.9	+0.2
	comp=Z,176nm,1.2s						
SCM	Sheep Creek Mo	82.86	358	*e*P	P	14 07 18.9	+0.2
SCM				pmax	pmax		
	comp=Z,176nm,1.2s						
F38A	Pierce - Schro	82.88	323	P	P	14 07 19.2	+0.2
	baz=45,SNR=8.1						
J43A	Natural Harves	82.91	319	P	P	14 07 18.5	-0.8
	baz=47						
SML	Sawmill	82.91	359	*e*P	P	14 07 19.1	+0.1
	comp=Z,190nm,1.7s						
SML	Sawmill	82.91	359	*e*P	P	14 07 19.1	+0.1
SML				pmax	pmax		
	comp=Z,190nm,1.7s						
GHO	Glory Hole Cre	82.96	359	*e*P	P	14 07 19.5	+0.3
	comp=Z,114nm,1.2s						
G39A	Holcombe	83.01	322	P	P	14 07 19.3	-0.4
	baz=45,SNR=16						
AGMN	Agassiz Nation	83.07	326	P	P	14 07 19.4	-0.6
	baz=42						
AGMN	Agassiz Nation	83.07	326	*e*P	P	14 07 19.6	-0.4
	comp=Z,58nm,1.5s						

AGMN				LR	LR		
	comp=Z,558nm,21.0s						
H40A	Chili	83.08	321	P	P	14 07 20.0	0.0
	baz=46,SNR=11						
C34A	RKJ Ranch, Bem	83.11	326	P	P	14 07 18.6	-1.6
	baz=43						
M46A	Old House Fiel	83.12	317	P	P	14 07 20.1	-0.2
	baz=48						
M46A	Old House Fiel	83.12	317	*e*P	P	14 07 20.2	-0.2
	comp=Z,44nm,1.0s						
D35A	Remer	83.13	325	P	P	14 07 19.9	-0.4
	baz=43,SNR=5.9						
PMR	Palmer	83.14	359	*e*P	P	14 07 19.8	-0.2
	comp=Z,139nm,1.4s						
PMR	Palmer	83.14	359	*e*P	P	14 07 19.8	-0.2
PMR				pmax	pmax		
	comp=Z,139nm,1.4s						
E36A	McGregor	83.15	324	P	P	14 07 20.1	-0.4
	baz=44,SNR=8.0						
KLU	Klutina	83.16	358	*e*P	P	14 07 20.1	-0.2
	comp=Z,78nm,1.4s						
I41A	Arkdale	83.20	320	P	P	14 07 20.8	+0.1
	baz=46						
I41A	Arkdale	83.20	320	*e*P	P	14 07 20.1	-0.7
	comp=Z,54nm,1.1s						
MTP	Monte Pirata	83.22	287	*e*P	P	14 07 20.9	-0.3
	comp=Z,173nm,1.4s						
MTP	Monte Pirata	83.22	287	*e*P	P	14 07 20.9	-0.3
	comp=Z,173nm,1.4s						
SUA	Susitna One	83.28	360	*e*P	P	14 07 21.1	+0.1
	comp=Z,102nm,1.2s						
J42A	Columbus	83.33	320	P	P	14 07 20.8	-0.6
	baz=46						
K43A	Burlington	83.33	319	P	P	14 07 21.3	0.0
	baz=47						
K43A	Burlington	83.33	319	*e*P	P	14 07 21.7	+0.3
	comp=Z,82nm,1.3s						
CBYP	Canovanas	83.36	288	*e*P	P	14 07 21.9	-0.1
	comp=Z,80nm,1.1s						
F37A	Hinrichs Farm,	83.42	323	P	P	14 07 21.2	-0.6
	baz=44						
HUMP	Col San Antoni	83.42	287	*e*P	P	14 07 23.0	+0.8
	comp=Z,132nm,1.0s						
C33A	Trail	83.42	326	P	P	14 07 21.6	-0.2
	baz=42						
G38A	Ridgeland	83.43	322	P	P	14 07 21.0	-0.9
	baz=45,SNR=8.3						
L44A	Lake County Fo	83.46	318	P	P	14 07 20.1	-2.0
	baz=47						
H39A	Augusta	83.49	322	P	P	14 07 21.8	-0.4
	baz=45,SNR=8.4						
DIV	Divide	83.52	357	*e*P	P	14 07 22.4	+0.3
	comp=Z,26nm,1.0s						
GRGR	Grenville	83.53	280	PFAKE		14 07 30.0	+7.1
GRGR				LR	LR		
	comp=Z,319nm,22.0s						
M45A	Boilermakers S	83.63	317	P	P	14 07 20.9	-2.1
	baz=47						
BMRM	Bremner River	83.64	357	*e*P	P	14 07 23.1	+0.4
	comp=Z,62nm,1.1s						
RC01	Rabbit Creek A	83.65	359	*e*P	P	14 07 23.0	+0.3
	comp=Z,127nm,1.3s						
E35A	Pequot Lakes	83.67	325	P	P	14 07 22.8	-0.3
	baz=43,SNR=7.6						
S52A	Salyersville	83.67	312	P	P	14 07 22.2	-1.1
	baz=49						
SJG	San Juan	83.67	288	P	P	14 07 23.7	+0.2
	comp=Z,25nm,0.9s,baz=26,slow=12,SNR=8.5						
SJG	San Juan	83.67	288	*e*P	P	14 07 23.6	0.0
	comp=Z,106nm,1.4s						
SJG				LR	LR		
	comp=Z,246nm,21.0s						
N46A	Monticello	83.68	317	P	P	14 07 22.3	-0.9
	baz=48						
I40A	Norwalk	83.71	321	P	P	14 07 22.5	-0.8
	baz=45						
F36A	Milaca	83.76	324	P	P	14 07 22.9	-0.6
	baz=44,SNR=14						
F36A	Milaca	83.76	324	*e*P	P	14 07 22.9	-0.6
	comp=Z,30nm,0.9s						
TGL	Tana Glacier	83.76	356	*e*P	P	14 07 23.3	-0.1
	comp=Z,36nm,1.1s						
J41A	Loganville	83.76	320	P	P	14 07 22.5	-1.1
	baz=46,SNR=9.2						
O47A	Sheridan	83.80	316	P	P	14 07 22.3	-1.6
	baz=48						
K42A	Prairie Point,	83.81	319	P	P	14 07 22.1	-1.8
	baz=46						
SPMN	Marine on St.	83.86	323	P	P	14 07 23.1	-1.0
	baz=44						
SPMN	Marine on St.	83.86	323	*e*P	P	14 07 23.5	-0.6
	comp=Z,52nm,1.0s						
L43A	Garden Prairie	83.90	319	P	P	14 07 22.7	-1.7
	baz=46						
T52A	Hallie	83.99	312	P	P	14 07 24.7	-0.2
	baz=49						
H38A	Maiden Rock	84.00	322	P	P	14 07 23.3	-1.5
	baz=44						
AOPR	Arecibo Observ	84.01	288	*e*P	P	14 07 24.7	-0.6
	comp=Z,58nm,0.8s						
AOPR	Arecibo Observ	84.01	288	*e*P	P	14 07 24.7	-0.6
	comp=Z,58nm,0.8s						
S51A	Beattyville	84.01	313	P	P	14 07 24.5	-0.5
	baz=49						
S51A	Beattyville	84.01	313	*e*P	P	14 07 25.6	+0.6
	comp=Z,16nm,0.8s						
E34A	Wadena	84.06	325	P	P	14 07 24.8	-0.3
	baz=43						
M44A	Midewin, Midew	84.07	318	P	P	14 07 25.3	+0.1
	baz=47						
M44A	Midewin, Midew	84.07	318	*e*P	P	14 07 25.1	-0.1
	comp=Z,104nm,1.3s						
OBIP	Obispado Ponce	84.07	288	*e*P	P	14 07 26.3	+0.7
	comp=Z,80nm,1.0s						
OBIP	Obispado Ponce	84.07	288	*e*P	P	14 07 26.3	+0.7
	comp=Z,80nm,1.0s						
J40A	Soldiers Grove	84.12	320	P	P	14 07 25.1	-0.4
	baz=45,SNR=5.8						
N45A	Kentland	84.14	317	P	P	14 07 23.7	-1.9
	baz=47						
I39A	Houston	84.20	321	P	P	14 07 24.3	-1.5
	baz=45,SNR=10						
I39A	Houston	84.20	321	*e*P	P	14 07 25.3	-0.6
	comp=Z,31nm,0.8s						
JFWS	Jewell Farm	84.20	320	P	P	14 07 24.2	-1.6
	baz=46						
JFWS	Jewell Farm	84.20	320	*e*P	P	14 07 25.5	-0.3
	comp=Z,64nm,1.1s						
JFWS				LR	LR		
	comp=Z,523nm,22.0s						
JFWS	Jewell Farm	84.20	320	*e*P	P	14 07 25.5	-0.3
JFWS				pmax	pmax		
	comp=Z,64nm,1.1s						
JFWS				MLR	MLR		
	comp=Z,523nm,22.0s						
RAGM	Ragged Mountai	84.22	357	*e*P	P	14 07 26.4	+0.7
	comp=Z,118nm,1.4s						
U53A	Fall Branch	84.22	311	P	P	14 07 25.7	-0.5
	baz=50						
SFIN	Lafayette	84.23	316	P	P	14 07 25.0	-1.0
	baz=47						
SFIN	Lafayette	84.23	316	*e*P	P	14 07 25.8	-0.3
	comp=Z,52nm,1.1s						
KMSC	Kings Mountain	84.23	309	P	P	14 07 25.9	-0.3
	baz=50,SNR=7.6						
KMSC	Kings Mountain	84.23	309	*e*P	P	14 07 26.5	+0.3
	comp=Z,29nm,1.0s						
F35A	Swanville	84.26	324	P	P	14 07 24.4	-1.7
	baz=43						
AGP	Aguadilla	84.27	288	*e*P	P	14 07 26.4	-0.2
	comp=Z,401nm,1.5s						
AGP	Aguadilla	84.27	288	*e*P	P	14 07 26.4	-0.2
	comp=Z,401nm,1.5s						
G36A	St. Michael	84.32	323	P	P	14 07 25.3	-1.1
	baz=44						
P47A	Martinsville	84.36	315	P	P	14 07 26.0	-0.7
	baz=48						
H37A	Dierke Farm, C	84.38	322	P	P	14 07 25.6	-1.1
	baz=44						
MPR	Mayaguez	84.39	288	*e*P	P	14 07 27.4	+0.2
	comp=Z,128nm,1.5s						
SKAG	Skagway	84.40	352	*e*P	P	14 07 27.0	+0.5
	comp=Z,36nm,1.3s						
K41A	Shullsburg	84.44	320	P	P	14 07 26.0	-1.1
	baz=46						
I38A	Scanlan Farm,	84.47	322	P	P	14 07 26.3	-0.9
	baz=44						
CRPR	Cabo Rojo, PR	84.48	288	*e*P	P	14 07 27.2	-0.4
	comp=Z,517nm,1.7s						
CRPR	Cabo Rojo, PR	84.48	288	*e*P	P	14 07 27.2	-0.4
	comp=Z,517nm,1.7s						
N44A	Piper City	84.52	317	P	P	14 07 25.9	-1.6
	baz=47						
L42A	Oliver, Polo	84.52	319	P	P	14 07 26.6	-0.9
	baz=46,SNR=12						
L42A	Oliver, Polo	84.52	319	*e*P	P	14 07 27.3	-0.2
	comp=Z,105nm,1.1s						
M43A	Waltham Townsh	84.53	318	P	P	14 07 26.0	-1.6
	baz=46						
F34A	Alexandria	84.64	324	P	P	14 07 26.2	-1.8
	baz=42						
J39A	Decorah	84.66	321	P	P	14 07 27.7	-0.5
	baz=45,SNR=20						
O45A	Potomac	84.67	317	P	P	14 07 27.9	-0.3
	baz=47						
DLBC	Dease Lake	84.68	349	P	P	14 07 28.9	+0.9
	comp=Z,12nm,1.1s,baz=21,slow=10,SNR=14						
DLBC				LR	LR	14 47 50.7	
	comp=Z,374nm,21.7s,baz=333,slow=37						
DLBC	Dease Lake	84.68	349	*e*P	P	14 07 28.8	+0.7
	comp=Z,23nm,1.1s						
TZTN	Tazewell	84.70	312	P	P	14 07 28.5	0.0
	baz=49						
TZTN	Tazewell	84.70	312	*e*P	P	14 07 28.9	+0.4
	comp=Z,39nm,1.1s						
BLO	Bloomington	84.72	315	*e*P	P	14 07 28.7	+0.2
	comp=Z,60nm,0.8s						
BLO	Bloomington	84.72	315	*e*P	P	14 07 28.7	+0.2
BLO				pmax	pmax		
	comp=Z,60nm,0.8s						
JSC	Jenkinsville	84.73	309	*e*P	P	14 07 29.8	+1.1
	comp=Z,20nm,0.9s						
JSC	Jenkinsville	84.73	309	*e*P	P	14 07 29.8	+1.1
JSC				pmax	pmax		
	comp=Z,20nm,0.9s						
PAULI	Pauline	84.74	309	*e*P	P	14 07 29.4	+0.7
	comp=Z,49nm,1.2s						
NHSC	New Hope	84.78	307	P	P	14 07 27.2	-1.8
	baz=50						
NHSC	New Hope	84.78	307	PFAKE		14 07 40.0	+11
NHSC				LR	LR		
	comp=Z,577nm,20.0s						
P46A	Rosedale	84.80	316	P	P	14 07 28.0	-0.9
	baz=47						
V53A	Saluda	84.81	311	P	P	14 07 29.2	0.0
	baz=49,SNR=5.5						
V53A	Saluda	84.81	311	*e*P	P	14 07 30.0	+0.9
	comp=Z,20nm,0.9s						
K40A	Colesburg	84.81	320	P	P	14 07 28.4	-0.6
	baz=45,SNR=12						
Q47A	Bedord North L	84.82	315	P	P	14 07 28.2	-0.8
	baz=48						
R48A	Northridge Ran	84.86	314	P	P	14 07 28.1	-1.2
	baz=48						
H36A	Jessenland, He	84.88	323	P	P	14 07 28.3	-1.0
	baz=43						
L41A	Preston	84.92	319	P	P	14 07 29.3	-0.2
	baz=45,SNR=30						
M42A	Sheffield	84.95	319	P	P	14 07 28.4	-1.3
	baz=46						
BRLK	Bradley Lake	84.99	360	*e*P	P	14 07 30.3	+0.8
	comp=Z,40nm,1.2s						
N43A	Stutzman Famil	85.00	318	P	P	14 07 28.5	-1.4
	baz=46						
I37A	Lemond, Waseca	85.03	322	P	P	14 07 29.6	-0.4
	baz=44,SNR=9.3						
I37A	Lemond, Waseca	85.03	322	*e*P	P	14 07 29.9	-0.1
	comp=Z,91nm,1.0s						
MDND	Maddock	85.06	328	P	P	14 07 29.3	-0.8
	baz=40						
MDND	Maddock	85.06	328	*e*P	P	14 07 29.3	-0.8
	comp=Z,90nm,1.2s						
J38A	Wedel Dairy, R	85.06	321	P	P	14 07 29.5	-0.7
	baz=44,SNR=11						
O44A	Mansfield	85.15	317	P	P	14 07 29.5	-1.2
	baz=46						
T50A	Nancy	85.16	313	P	P	14 07 30.7	-0.1
	baz=48,SNR=30						
P45A	Graceland, Par	85.17	316	P	P	14 07 30.2	-0.5
	baz=47,SNR=14						
P45A	Graceland, Par	85.17	316	*e*P	P	14 07 30.4	-0.4
	comp=Z,92nm,1.2s						
V52A	Sevierville	85.19	311	P	P	14 07 31.2	+0.2
	baz=49,SNR=6.5						
V52A	Sevierville	85.19	311	*e*P	P	14 07 31.1	+0.2
	comp=Z,41nm,1.1s						
K39A	Oelwein	85.20	321	P	P	14 07 30.3	-0.6
	baz=44,SNR=11						
BESE	Bessie Mountai	85.20	352	*e*P	P	14 07 31.9	+1.2
	comp=Z,29nm,1.2s						
WCI	Wyandotte Cave	85.22	314	P	P	14 07 30.7	-0.3
	baz=48						
WCI	Wyandotte Cave	85.22	314	*e*P	P	14 07 31.6	+0.5
	comp=Z,88nm,1.1s						
WCI	Wyandotte Cave	85.22	314	*e*P	P	14 07 31.6	+0.5
WCI				pmax	pmax		
	comp=Z,88nm,1.1s						
G34A	Benson	85.22	324	P	P	14 07 30.2	-0.8
	baz=42						
CNPM	China Poot	85.23	0	*e*P	P	14 07 31.0	+0.3
	comp=Z,79nm,1.3s						
H35A	Sunnyside Ranc	85.24	323	P	P	14 07 30.8	-0.2
	baz=43,SNR=7.6						
Q46A	CEJHS Indians,	85.29	316	P	P	14 07 30.6	-0.8
	baz=47						
R47A	Wooly Knot Far	85.31	315	P	P	14 07 31.3	-0.2
	baz=48						
L40A	Anamosa	85.31	320	P	P	14 07 30.8	-0.6
	baz=45,SNR=34						
L40A	Anamosa	85.31	320	*e*P	P	14 07 30.6	-0.8
	comp=Z,166nm,1.0s						
HDIL	Hopedale	85.33	318	P	P	14 07 31.4	-0.1
	baz=46						
HDIL	Hopedale	85.33	318	*e*P	P	14 07 31.6	0.0
	comp=Z,157nm,1.1s						
HDIL				LR	LR		
	comp=Z,442nm,19.0s						
BG3	Lake Jocassee	85.33	310	*e*P	P	14 07 32.5	+0.9
	comp=Z,29nm,1.0s						
I36A	Fitzsimmons Fa	85.33	323	P	P	14 07 30.9	-0.6
	baz=43						
W53A	Cullowhee	85.36	310	P	P	14 07 31.0	-1.0
	baz=49						
CISI	Cisompet, Garu	85.39	103	*e*P	P	14 07 31.2	-1.1
	comp=Z,287nm,1.3s						
HODGE	Hodges	85.40	309	*e*P	P	14 07 32.6	+0.6
	comp=Z,19nm,1.1s						
TKL	Tuckaleechee C	85.41	311	P	P	14 07 32.7	+0.6
	comp=Z,26nm,0.8s,baz=94,slow=5.9,SNR=19						
TKL				LR	LR	14 46 28.7	
	comp=Z,297nm,19.1s,baz=64,slow=36						
TKL	Tuckaleechee C	85.41	311	*e*P	P	14 07 32.2	+0.1
	comp=Z,44nm,0.9s						
M41A	Milan	85.43	319	P	P	14 07 31.2	-0.9
	baz=45						
F32A	Veblen	85.45	325	P	P	14 07 31.7	-0.4
	baz=41						
S48A	Wiedeman Farm,	85.46	314	P	P	14 07 32.1	-0.2
	baz=48,SNR=14						
GRTK	Grand Turk	85.50	293	PFAKE		14 07 40.0	+7.3
GRTK				LR	LR		
	comp=Z,597nm,20.0s						
T49A	Edmonton	85.52	313	P	P	14 07 32.7	+0.1
	baz=48,SNR=20						
T49A	Edmonton	85.52	313	*e*P	P	14 07 32.7	+0.1
	comp=Z,84nm,1.1s						
O43A	Sugar Creek Fa	85.52	317	P	P	14 07 31.4	-1.2
	baz=46						
N42A	Yates City	85.54	318	P	P	14 07 32.3	-0.3
	baz=46,SNR=13						
J37A	Redenius Farm,	85.62	322	P	P	14 07 32.4	-0.6
	baz=44,SNR=24						
G33A	Ortonville	85.64	325	P	P	14 07 32.0	-1.0
	baz=42						
V51A	Loudon	85.67	312	P	P	14 07 34.0	+0.7
	baz=48,SNR=14						
V51A	Loudon	85.67	312	*e*P	P	14 07 33.7	+0.4
	comp=Z,150nm,1.3s						
L39A	Vinton	85.67	320	P	P	14 07 32.7	-0.5
	baz=44,SNR=13						
K38A	Parkersburg	85.70	321	P	P	14 07 32.8	-0.6
	baz=44,SNR=5.3						
K38A	Parkersburg	85.70	321	*e*P	P	14 07 32.6	-0.8
	comp=Z,31nm,0.7s						
P44A	Sand Creek, Wi	85.70	317	P	P	14 07 33.8	+0.4
	baz=46,SNR=8.5						
Q45A	Warren Harvey,	85.84	316	P	P	14 07 34.3	+0.2
	baz=47,SNR=5.8						
X53A	Estanollee	85.88	310	P	P	14 07 34.8	+0.4
	baz=49,SNR=12						
JHJ	Hachijo jima 2	85.88	52	LR	LR	14 50 01.9	
	comp=Z,334nm,21.6s,baz=318,slow=38						
W52A	Murphy	85.88	311	P	P	14 07 35.2	+0.8
	baz=49,SNR=11						
W52A	Murphy	85.88	311	*e*P	P	14 07 35.2	+0.8
	comp=Z,65nm,1.1s						
Y54A	Tignall	85.91	309	P	P	14 07 35.0	+0.4
	baz=49,SNR=19						
OLIL	Olney	85.91	316	*e*P	P	14 07 33.6	-0.8
	comp=Z,111nm,1.0s						
M40A	Post Highland	85.93	319	P	P	14 07 33.6	-0.9
	baz=45						
R46A	Gibon Southern	85.93	315	P	P	14 07 33.8	-0.8
	baz=47						
J36A	Seneca 1, Swea	86.00	322	P	P	14 07 34.2	-0.6
	baz=43						
J36A	Seneca 1, Swea	86.00	322	*e*P	P	14 07 33.7	-1.2
	comp=Z,70nm,0.8s						
O42A	Bath	86.01	318	P	P	14 07 35.0	+0.1
	baz=46						
CPCT	Cooper Cave	86.01	311	*e*P	P	14 07 35.8	+0.8
	comp=Z,120nm,1.1s						
T48A	Bowling Green	86.03	314	P	P	14 07 35.0	-0.1
	baz=48,SNR=29						
K37A	Belmond	86.05	322	P	P	14 07 35.3	+0.1
	baz=43						
257A	Skidaway Islan	86.06	307	P	P	14 07 35.2	-0.1
	baz=50						
U49A	Red Boiling Sp	86.06	313	P	P	14 07 35.4	+0.1
	baz=48,SNR=24						
N41A	Harden Midland	86.07	319	P	P	14 07 34.6	-0.7
	baz=45,SNR=13						
N41A	Harden Midland	86.07	319	*e*P	P	14 07 34.8	-0.4
	comp=Z,105nm,1.1s						
P43A	Skaggs, Pawnee	86.09	317	P	P	14 07 34.9	-0.4
	baz=46,SNR=12						
G32A	Webster	86.09	325	P	P	14 07 34.9	-0.4
	baz=41						
G32A	Webster	86.09	325	*e*P	P	14 07 34.8	-0.5
	comp=Z,86nm,0.5s						
L38A	Oak Wood Farm,	86.16	321	P	P	14 07 34.8	-0.9
	baz=44,SNR=11						
X52A	Dahlonega	86.18	310	P	P	14 07 35.7	-0.3
	baz=49,SNR=24						
USIN	University of	86.19	315	*e*P	P	14 07 35.7	-0.2
	comp=Z,90nm,1.1s						
V50A	Pikevile	86.22	312	P	P	14 07 35.7	-0.3
	baz=48,SNR=41						
M39A	Webster	86.22	320	P	P	14 07 35.2	-0.8
	baz=44						
Q44A	Meyer Farm, Va	86.32	316	P	P	14 07 36.1	-0.4
	baz=46,SNR=5.2						
R45A	Skylar, Fairfi	86.32	315	P	P	14 07 36.5	0.0
	baz=46,SNR=21						
N40A	Mertquake, Sal	86.33	319	P	P	14 07 35.5	-1.1
	baz=45						
S46A	Don Dixon Farm	86.41	315	P	P	14 07 36.6	-0.4
	baz=47,SNR=5.5						
Z54A	Sparta	86.41	309	P	P	14 07 36.3	-0.8
	baz=49,SNR=20						
SCIA	State Center	86.46	321	P	P	14 07 35.8	-1.3
	baz=44						
SCIA	State Center	86.46	321	P	P	14 07 36.9	-0.3
	comp=Z,71nm,1.2s						
SCIA				LR	LR		
	comp=Z,441nm,21.0s						
DGMT	Dagmar	86.47	331	P	P	14 07 36.2	-0.9
	baz=36						
DGMT	Dagmar	86.47	331	*e*P	P	14 07 37.2	+0.1
	comp=Z,60nm,1.3s						
DGMT				LR	LR		
	comp=Z,659nm,21.0s						
Y53A	Monroe	86.48	310	P	P	14 07 37.1	-0.3
	baz=49,SNR=16						
O41A	Passleys Farm,	86.50	318	P	P	14 07 36.4	-1.0
	baz=45,SNR=9.9						
U48A	Cassie Pea, Po	86.52	313	P	P	14 07 37.4	-0.1
	baz=47,SNR=8.0						
T47A	Sharon Grove	86.53	314	P	P	14 07 37.1	-0.5
	baz=47,SNR=7.5						
T47A	Sharon Grove	86.53	314	*e*P	P	14 07 37.0	-0.6
	comp=Z,131nm,1.3s						
K36A	Gilmore City	86.56	322	P	P	14 07 36.7	-0.9
	baz=43						
155A	Kite	86.57	308	P	P	14 07 38.1	+0.3
	baz=49,SNR=9.3						
L37A	Phoenix Point,	86.58	321	P	P	14 07 36.9	-0.8
	baz=43						
P42A	Winchester	86.58	318	P	P	14 07 37.6	-0.2
	baz=45,SNR=9.3						
P42A	Winchester	86.58	318	*e*P	P	14 07 37.3	-0.5
	comp=Z,102nm,1.2s						
256A	Glennville	86.61	307	P	P	14 07 38.0	0.0
	baz=50						
H32A	Carlson Farm,	86.62	325	P	P	14 07 37.3	-0.6
	baz=41						
V49A	McMinnville	86.64	312	P	P	14 07 38.1	0.0
	baz=48,SNR=12						
W50A	Signal Mountai	86.66	312	P	P	14 07 38.6	+0.4
	baz=48,SNR=16						
W50A	Signal Mountai	86.66	312	*e*P	P	14 07 38.2	0.0
	comp=Z,175nm,1.5s						
Q43A	New Douglas	86.67	317	P	P	14 07 38.5	+0.3
	baz=46,SNR=10						
GOGA	Godfrey	86.69	309	P	P	14 07 38.8	+0.3
	baz=49,SNR=22						
GOGA	Godfrey	86.69	309	*e*P	P	14 07 38.6	+0.3
	comp=Z,52nm,0.8s						
GOGA				LR	LR		
	comp=Z,288nm,20.0s						
GOGA	Godfrey	86.69	309	*e*P	P	14 07 38.7	+0.3
GOGA				pmax	pmax		
	comp=Z,52nm,0.8s						
GOGA				MLR	MLR		
	comp=Z,288nm,20.0s						
357A	Townsend	86.71	307	P	P	14 07 38.4	-0.1
	baz=50						
Y52A	Lilburn	86.77	310	P	P	14 07 39.7	+0.9
	baz=49,SNR=23						
Y52A	Lilburn	86.77	310	*e*P	P	14 07 39.6	+0.7
	comp=Z,95nm,0.9s						
X51A	Calhoun	86.80	311	P	P	14 07 37.9	-1.0
	baz=48						
X51A	Calhoun	86.80	311	*e*P	P	14 07 39.8	+0.8
	comp=Z,63nm,0.9s						
M38A	Pleasantville	86.80	320	P	P	14 07 38.5	-0.4
	baz=44,SNR=14						
R44A	Waltonville	86.81	316	P	P	14 07 38.0	-0.8
	baz=46						
ECSD	EROS Data Cent	86.81	324	P	P	14 07 38.3	-0.6
	baz=42,SNR=16						
ECSD	EROS Data Cent	86.81	324	*e*P	P	14 07 38.3	-0.6
	comp=Z,22nm,1.0s						
ECSD				LR	LR		
	comp=Z,580nm,20.0s						
N39A	Derby Farms, D	86.83	320	P	P	14 07 38.2	-0.8
	baz=44						
N39A	Derby Farms, D	86.83	320	*e*P	P	14 07 38.3	-0.6
	comp=Z,76nm,1.1s						
Z53A	Monticello	86.85	309	P	P	14 07 39.7	+0.5
	baz=49,SNR=14						
P41A	Barry, Barry	86.91	318	P	P	14 07 39.3	0.0
	baz=45,SNR=7.4						
S45A	Carrier Mills	86.91	315	P	P	14 07 39.1	-0.3
	baz=46,SNR=5.7						
T46A	Princeton	86.95	314	P	P	14 07 38.6	-1.1
	baz=47						
KDAK	Kodiak Island	86.97	1	P	P	14 07 39.8	+0.6
	comp=Z,32nm,1.1s,baz=352,slow=7.1,SNR=7.8						
KDAK	Kodiak Island	86.97	1	*e*P	P	14 07 39.8	+0.6
	comp=Z,69nm,1.3s						
KDAK				LR	LR		
	comp=Z,168nm,21.0s						
KDAK	Kodiak Island	86.97	1	*i* P	P	14 07 40.6	+1.4
WRAK	Wrangell Islan	86.97	350	*e*P	P	14 07 39.9	+0.6
	comp=Z,50nm,1.3s						
WRAK				LR	LR		
	comp=Z,445nm,22.0s						
154A	Montrose	86.99	308	P	P	14 07 40.3	+0.5
	baz=49						
154A	Montrose	86.99	308	*e*P	P	14 07 41.1	+1.2
	comp=Z,171nm,1.1s						
U47A	Clarksville	87.01	314	P	P	14 07 39.6	-0.3
	baz=47,SNR=14						

SWET	Sewanee	87.02	312	*e*P	P	14 07 40.6	+0.5
	comp=Z,36nm,1.1s						
255A	Hazlehurst	87.03	308	P	P	14 07 40.0	0.0
	baz=49						
255A	Hazlehurst	87.03	308	*e*P	P	14 07 40.4	+0.3
	comp=Z,90nm,0.8s						
O40A	La Belle	87.03	319	P	P	14 07 39.5	-0.4
	baz=44,SNR=12						
L36A	Harm Buss Farm	87.06	322	P	P	14 07 39.3	-0.8
	baz=43						
Q42A	Golden Eagle	87.16	317	P	P	14 07 40.7	+0.1
	baz=45						
356A	Blackshear	87.19	307	P	P	14 07 40.8	0.0
	baz=50						
V48A	Smith Brothers	87.21	313	P	P	14 07 40.4	-0.5
	baz=47						
V48A	Smith Brothers	87.21	313	*e*P	P	14 07 40.8	-0.2
	comp=Z,39nm,1.1s						
SIUC	Southern Illin	87.25	316	*e*P	P	14 07 40.4	-0.7
	comp=Z,182nm,1.3s						
M37A	Trindle Farm,	87.26	321	P	P	14 07 40.6	-0.5
	baz=43						
R43A	Red Bud	87.27	316	P	P	14 07 40.9	-0.2
	baz=46						
457A	Yulee	87.27	306	P	P	14 07 41.0	-0.2
	baz=50						
N38A	Joes South For	87.27	320	P	P	14 07 40.8	-0.4
	baz=44,SNR=7.6						
S44A	Carbondale	87.29	316	P	P	14 07 40.9	-0.3
	baz=46,SNR=11						
W49A	Belvidere	87.29	312	P	P	14 07 40.8	-0.5
	baz=48,SNR=14						
O39A	Kirksville	87.30	319	P	P	14 07 40.9	-0.4
	baz=44						
X50B	Fort Payne	87.36	311	P	P	14 07 41.5	-0.2
	baz=48,SNR=5.6						
Y51A	Rockmart	87.37	310	P	P	14 07 41.4	-0.3
	baz=48,SNR=21						
SUSD	Miller	87.38	326	P	P	14 07 40.9	-0.7
	baz=40						
T45A	Paducah	87.41	315	P	P	14 07 41.2	-0.6
	baz=46						
153A	Fort Valley	87.42	309	P	P	14 07 40.5	-1.4
	baz=49						
Z52A	Williamson	87.44	310	P	P	14 07 42.2	+0.1
	baz=48,SNR=32						
456A	Hilliard	87.51	306	P	P	14 07 40.5	-1.9
	baz=50						
Q41A	Truxton	87.51	318	P	P	14 07 42.4	+0.1
	baz=45,SNR=20						
WVT	Waverly	87.54	314	P	P	14 07 41.4	-1.0
	baz=47						
WVT	Waverly	87.54	314	*e*P	P	14 07 41.6	-0.8
	comp=Z,24nm,0.9s						
WVT	Waverly	87.54	314	*e*P	P	14 07 41.7	-0.8
WVT				pmax	pmax		
	comp=Z,24nm,0.9s						
P40A	Paris	87.55	318	P	P	14 07 41.5	-1.0
	baz=44						
P40A	Paris	87.55	318	*e*P	P	14 07 41.8	-0.7
	comp=Z,86nm,1.3s						
V47A	Nunnelly	87.56	313	P	P	14 07 42.6	0.0
	baz=47,SNR=7.3						
U46A	Springville	87.59	314	P	P	14 07 42.2	-0.5
	baz=46						
M36A	Felix, Anita	87.60	321	P	P	14 07 41.3	-1.4
	baz=43						
355A	Pearson	87.65	307	P	P	14 07 42.8	-0.2
	baz=49						
W48A	Pulaski	87.68	312	P	P	14 07 43.1	-0.1
	baz=47,SNR=11						
X49A	Woodville	87.74	312	P	P	14 07 43.9	+0.4
	baz=47,SNR=9.1						
R42A	Luebbering	87.75	317	P	P	14 07 42.3	-1.2
	baz=45						
FVM	French Village	87.75	316	*e*P	P	14 07 43.4	-0.1
	comp=Z,137nm,1.4s						
FVM	French Village	87.75	316	*e*P	P	14 07 43.4	-0.1
FVM				pmax	pmax		
	comp=Z,137nm,1.4s						
557A	Orange Park	87.78	306	P	P	14 07 43.4	-0.3
	baz=50						
Y50A	Piedmont	87.79	311	P	P	14 07 43.8	+0.1
	baz=48						
N37A	Lee Faris, Mou	87.81	320	P	P	14 07 43.5	-0.2
	baz=43,SNR=7.6						
N37A	Lee Faris, Mou	87.81	320	*e*P	P	14 07 43.2	-0.5
	comp=Z,48nm,0.9s						
Z51A	Franklin	87.83	310	P	P	14 07 44.0	+0.1
	baz=48						
S43A	Fulton Ridge,	87.84	316	P	P	14 07 43.7	-0.2
	baz=45,SNR=39						
658A	Bunnell	87.84	305	P	P	14 07 43.6	-0.4
	baz=50						
O38A	Galt	87.89	320	P	P	14 07 43.3	-0.8
	baz=43						
T44A	Benton	87.90	315	P	P	14 07 43.9	-0.3
	baz=46						
V46A	Holladay	87.94	314	P	P	14 07 43.9	-0.4
	baz=46						
U45A	Rockin P Farm,	87.94	314	P	P	14 07 44.5	+0.1
	baz=46						
Q40A	Laux Farm, Aux	87.95	318	P	P	14 07 44.6	+0.2
	baz=44,SNR=10.0						
P39B	Salisbury	87.96	319	P	P	14 07 44.1	-0.4
	baz=44						
152A	Waverly Hall	87.97	309	P	P	14 07 45.0	+0.3
	baz=48,SNR=24						
152A	Waverly Hall	87.97	309	*e*P	P	14 07 44.9	+0.3
	comp=Z,53nm,0.7s						
253A	Americus	88.00	309	P	P	14 07 45.4	+0.7
	baz=48,SNR=7.6						
253A	Americus	88.00	309	*e*P	P	14 07 45.3	+0.6
	comp=Z,125nm,1.1s						
W47A	Westpoint	88.00	313	P	P	14 07 44.7	0.0
	baz=47						
CRAG	Craig	88.00	350	*e*P	P	14 07 45.2	+1.0
	comp=Z,32nm,1.3s						
R41A	Rosebud	88.06	317	P	P	14 07 45.0	0.0
	baz=45,SNR=22						
TIGA	Tifton	88.06	308	P	P	14 07 44.8	-0.3
	baz=49						
758A	Lake Helen	88.10	305	P	P	14 07 46.3	+1.1
	baz=50,SNR=6.2						
S42A	Caledonia	88.11	316	P	P	14 07 45.3	+0.1
	baz=45,SNR=18						
657A	Interlachen	88.14	305	P	P	14 07 44.8	-0.6
	baz=50						
N36A	Muff Farm, Cla	88.15	321	P	P	14 07 45.8	+0.4
	baz=42						
455A	Stateville	88.16	307	P	P	14 07 44.8	-0.7
	baz=49						
CCM	Cathedral Cave	88.16	317	P	P	14 07 46.1	+0.7
	baz=45						
CCM	Cathedral Cave	88.16	317	*e*P	P	14 07 46.1	+0.7
	comp=Z,48nm,0.8s						
CCM	Cathedral Cave	88.16	317	*e*P	P	14 07 46.1	+0.7
CCM				pmax	pmax		
	comp=Z,48nm,0.8s						
O37A	Wolven Farm, M	88.21	320	P	P	14 07 45.3	-0.3
	baz=43						
X48A	Hartselle	88.21	312	P	P	14 07 45.2	-0.5
	baz=47						
X48A	Hartselle	88.21	312	*e*P	P	14 07 45.6	-0.1
	comp=Z,93nm,1.9s						
Y49A	Blount Mountai	88.23	311	P	P	14 07 45.8	0.0
	baz=47						
Y49A	Blount Mountai	88.23	311	*e*P	P	14 07 46.2	+0.3
	comp=Z,22nm,1.1s						
556A	Lake Butler	88.23	306	P	P	14 07 46.2	+0.3
	baz=49,SNR=5.1						
P38A	Dawn	88.28	319	P	P	14 07 45.6	-0.4
	baz=43						
U44B	Burton Farm, H	88.28	315	P	P	14 07 45.9	-0.1
	baz=46						
T43A	Greenville	88.30	316	P	P	14 07 46.6	+0.5
	baz=45						
Z50A	Ashland	88.33	310	P	P	14 07 46.0	-0.3
	baz=48,SNR=9.6						
Z50A	Ashland	88.33	310	*e*P	P	14 07 46.8	+0.5
	comp=Z,20nm,0.9s						
U44A	Portageville	88.36	315	P	P	14 07 45.7	-0.6
	baz=46						
Q39A	Willow Grove F	88.40	319	P	P	14 07 46.6	+0.1
	baz=44,SNR=5.6						
252A	Lumpkin	88.43	309	P	P	14 07 47.1	+0.4
	baz=48,SNR=5.8						
151A	Opelika	88.45	310	P	P	14 07 46.6	-0.3
	baz=48						
PLAL	Pickwick Lake	88.47	313	*e*P	P	14 07 47.5	+0.6
	comp=Z,34nm,1.0s						
859A	Kempfer Cattle	88.47	304	P	P	14 07 46.4	-0.6
	baz=50						
555A	McAlpin	88.52	306	P	P	14 07 47.5	+0.3
	baz=49						
353A	Camilla	88.53	308	P	P	14 07 47.5	+0.3
	baz=48						
R40A	Maddies Statio	88.56	318	P	P	14 07 47.5	+0.2
	baz=44,SNR=18						
R40A	Maddies Statio	88.56	318	*e*P	P	14 07 47.0	-0.2
	comp=Z,80nm,1.0s						
454A	Quitman	88.57	307	P	P	14 07 47.5	+0.1
	baz=49						
PBMO	Poplar Bluff	88.60	316	*e*P	P	14 07 47.3	-0.2
	comp=Z,74nm,1.1s						
Y48A	Jasper	88.66	312	P	P	14 07 47.6	-0.2
	baz=47						
X47A	Russelville	88.66	313	P	P	14 07 47.5	-0.3
	baz=47						
858A	St. Cloud	88.69	304	P	P	14 07 47.7	-0.3
	baz=50						
757A	Oxford	88.69	305	P	P	14 07 47.2	-0.8
	baz=49						
LAO	LASA Array	88.72	331	P	P	14 07 48.6	+0.6
	baz=35						
LAO	LASA Array	88.72	331	*e*P	P	14 07 47.9	-0.1
	comp=Z,105nm,1.4s						
LAO				LR	LR		
	comp=Z,831nm,22.0s						
656A	Willston	88.73	306	P	P	14 07 48.6	+0.4
	baz=49						
P37A	Lathrop	88.73	320	P	P	14 07 47.3	-0.8
	baz=43						
Z49A	Columbiana	88.75	311	P	P	14 07 48.6	+0.3
	baz=47						
060A	Indiantown	88.76	303	P	P	14 07 49.4	+1.0
	baz=50						
S41A	Jillco Farms,	88.77	317	P	P	14 07 48.6	+0.3
	baz=44,SNR=19						
251A	Midway	88.79	309	P	P	14 07 48.8	+0.4
	baz=48,SNR=7.4						
T42A	Van Buren	88.80	316	P	P	14 07 48.4	0.0
	baz=45,SNR=19						
T42A	Van Buren	88.80	316	*e*P	P	14 07 48.1	-0.3
	comp=Z,89nm,1.1s						
DWPF	Disney Wildern	88.80	304	P	P	14 07 48.9	+0.3
	baz=50						
DWPF	Disney Wildern	88.80	304	*e*P	P	14 07 48.0	-0.6
	comp=Z,73nm,0.8s						
Q38A	Cooks Store, C	88.80	319	P	P	14 07 48.4	-0.1
	baz=43,SNR=7.5						
150A	Eclectic	88.83	310	P	P	14 07 49.2	+0.5
	baz=48,SNR=9.2						
352A	Blakely	88.89	309	P	P	14 07 49.3	+0.3
	baz=48						
453A	Whigham	88.92	308	P	P	14 07 49.0	-0.1
	baz=48						
453A	Whigham	88.92	308	*e*P	P	14 07 48.2	-0.9
	comp=Z,126nm,1.5s						
EGMT	Eagleton	88.94	334	P	P	14 07 49.1	+0.1
	baz=32						
EGMT	Eagleton	88.94	334	*e*P	P	14 07 48.9	-0.1
	comp=Z,45nm,1.0s						
EGMT				LR	LR		
	comp=Z,733nm,21.0s						
R39A	Chumby, Stover	88.96	318	P	P	14 07 49.4	+0.2
	baz=44,SNR=12						
554A	Perry	89.02	307	P	P	14 07 49.6	+0.1
	baz=49						
SDPT	Sand Point	89.06	5	*e*P	P	14 07 49.0	-0.2
	comp=Z,175nm,1.4s						
X46A	Booneville	89.07	313	P	P	14 07 49.9	+0.2
	baz=46						
655A	Horseshoe Beac	89.11	306	P	P	14 07 50.2	+0.2
	baz=49						
LRAL	Lakeview Retre	89.15	311	P	P	14 07 50.4	+0.3
	baz=47,SNR=9.2						
LRAL	Lakeview Retre	89.15	311	*e*P	P	14 07 50.2	+0.1
	comp=Z,18nm,0.8s						
T41A	Mountain View	89.17	317	P	P	14 07 50.5	+0.3
	baz=44,SNR=38						
S40A	Lebanon	89.18	317	P	P	14 07 50.2	0.0
	baz=44,SNR=12						
857A	Zephyrhills	89.24	305	P	P	14 07 50.9	+0.3
	baz=49						
Z48A	Northport	89.26	312	P	P	14 07 51.3	+0.6
	baz=47						
060Z	West Palm Beac	89.30	302	P	P	14 07 50.9	0.0
	baz=50						
BGNE	Belgrade	89.31	323	P	P	14 07 50.3	-0.5
	baz=40						
BGNE	Belgrade	89.31	323	*e*P	P	14 07 49.6	-1.2
	comp=Z,108nm,1.0s						
Q37A	Longview Farm,	89.31	319	P	P	14 07 51.1	+0.3
	baz=43						
149A	Jones	89.31	311	P	P	14 07 50.9	0.0
	baz=47						
059A	Moore Haven	89.34	303	P	P	14 07 51.0	-0.1
	baz=50						
059A	Moore Haven	89.34	303	*e*P	P	14 07 49.9	-1.2
	comp=Z,111nm,0.9s						
958A	Wauchula	89.36	304	P	P	14 07 51.7	+0.5
	baz=50						
U42A	Revenden	89.36	316	P	P	14 07 50.6	-0.4
	baz=45,SNR=19						
250A	Grady	89.41	310	P	P	14 07 52.1	+0.7
	baz=47						
GTBY	Guantanamo Bay	89.42	294	PFAKE		14 08 00.0	+8.4
GTBY				LR	LR		
	comp=Z,286nm,20.0s						
553A	Crawfordville	89.43	307	P	P	14 07 51.6	+0.1
	baz=48						
452A	Marianna	89.48	308	P	P	14 07 51.4	-0.3
	baz=48						
WALA	Waterton Lakes	89.48	337	*e*P	P	14 07 50.8	-0.8
	comp=Z,16nm,1.1s						
T40A	Mansfield	89.51	317	P	P	14 07 51.0	-0.8
	baz=44						
R38A	Fenwick Farm,	89.52	319	P	P	14 07 51.3	-0.5
	baz=43,SNR=12						
PTGA	Pitinga	89.54	269	P	P	14 07 53.6	+1.4
	comp=Z,48nm,0.9s,baz=56,slow=7.2,SNR=66						
PTGA	Pitinga	89.54	269	*e*P	P	14 07 53.8	+1.6
	comp=Z,90nm,1.0s						
PTGA				LR	LR		
	comp=Z,10µm,20.0s						
S39A	Bolivar	89.56	318	P	P	14 07 51.3	-0.7
	baz=44						
S39A	Bolivar	89.56	318	*e*P	P	14 07 52.1	+0.1
	comp=Z,32nm,1.2s						
OXF	Oxford	89.59	313	P	P	14 07 51.6	-0.5
	baz=46						
X45A	UM Field Stati	89.64	313	P	P	14 07 50.6	-1.8
	baz=46						
Z47A	Carrollton	89.69	312	P	P	14 07 52.6	-0.1
	baz=46						
Y46A	Houston	89.70	313	P	P	14 07 51.5	-1.2
	baz=46						
AKUT	Akutan	89.73	9	*e*P	P	14 07 53.3	+0.9
U41A	Viola	89.75	316	P	P	14 07 52.5	-0.4
	baz=44						
350A	Dozier	89.83	309	P	P	14 07 53.4	0.0
	baz=47						
V42A	Cord	89.83	315	P	P	14 07 53.4	+0.1
	baz=45						
RSSD	Black Hills	89.89	328	P	P	14 07 53.1	-0.6
	baz=36						
RSSD	Black Hills	89.89	328	*e*P	P	14 07 53.8	0.0
	comp=Z,43nm,1.5s						
RSSD	Black Hills	89.89	328	*e*P	P	14 07 53.8	0.0
RSSD				pmax	pmax		
	comp=Z,43nm,1.5s						
S38A	Stockton	89.93	318	P	P	14 07 53.1	-0.6
	baz=43,SNR=8.3						
249A	Camden	89.94	310	P	P	14 07 54.4	+0.5
	baz=47						
T39A	Clever	90.08	317	P	P	14 07 54.2	-0.2
	baz=43						
DIB	Dawson Inlet,	90.10	349	*e*P	P	14 07 54.5	+0.3
	comp=Z,22nm,1.2s						
Y45A	Yeager Farm, C	90.12	313	P	P	14 07 54.6	0.0
	baz=46						
U40A	Yellville	90.27	317	P	P	14 07 55.0	-0.3
	baz=44,SNR=7.9						
KSU1	Kansas State U	90.27	321	*e*P	P	14 07 55.0	-0.3
KSU1				LR	LR		
	comp=Z,709nm,22.0s						
V41A	Mountainview	90.28	316	P	P	14 07 55.0	-0.4
	baz=44,SNR=6.9						
BBB	Bella Bella	90.31	346	LR	LR	14 49 54.3	
	comp=Z,347nm,20.5s,baz=53,slow=36						
349A	Repton	90.41	310	P	P	14 07 56.0	-0.1
	baz=47						
BRAL	Brewton	90.45	310	PFAKE		14 08 10.0	+14
BRAL				LR	LR		
	comp=Z,339nm,20.0s						
T38A	Diamond	90.57	318	P	P	14 07 55.9	-0.8
	baz=43						
U39A	Green Forest	90.60	317	P	P	14 07 56.0	-0.9
	baz=43,SNR=14						
V40A	Witts Springs	90.65	316	P	P	14 07 56.8	-0.3
	baz=44						
V40A	Witts Springs	90.65	316	*e*P	P	14 07 56.6	-0.6
	comp=Z,24nm,1.1s						
JTMT	Jette	90.74	336	*e*P	P	14 07 57.4	-0.1
	comp=Z,25nm,1.1s						
W41B	Gary Mavity, V	90.77	316	P	P	14 07 58.2	+0.5
	baz=44						
W41B	Gary Mavity, V	90.77	316	*e*P	P	14 07 56.8	-0.8
	comp=Z,34nm,1.3s						
HRY	Holter Researc	90.80	334	*e*P	P	14 07 55.9	-1.8
HHAR	Hobbs	90.93	317	*e*P	P	14 07 57.6	-0.8
	comp=Z,42nm,1.3s						
V39A	Pettigrew	91.08	317	P	P	14 07 58.8	-0.4
	baz=43						
NEW	Newport	91.19	338	P	P	14 08 00.5	+1.0
	comp=Z,8.0nm,0.8s,baz=16,slow=4.9,SNR=12						
NEW				LR	LR	14 52 30.5	
	comp=Z,338nm,18.2s,baz=28,slow=38						
NEW	Newport	91.19	338	P	P	14 07 58.9	-0.6
	baz=27						
NEW	Newport	91.19	338	*e*P	P	14 08 00.1	+0.7
RLMT	Red Lodge	91.20	332	P	P	14 07 59.6	-0.1
	baz=33						
RLMT	Red Lodge	91.20	332	*e*P	P	14 07 59.2	-0.6
	comp=Z,12nm,0.9s						
RLMT				LR	LR		
	comp=Z,603nm,21.0s						
W40A	Ferguson Farm,	91.23	316	P	P	14 07 59.4	-0.4
	baz=44						
DAV	Davao City (W)	91.29	80	PFAKE		14 08 10.0	+10
DAV				LR	LR		
	comp=Z,246nm,20.0s						
MSO	Missoula	91.43	336	P	P	14 07 59.4	-1.3
	baz=29						
MSO	Missoula	91.43	336	*e*P	P	14 08 00.5	-0.2
	comp=Z,12nm,1.0s						
OGNE	Ogallala	91.52	325	P	P	14 08 00.5	-0.7
	baz=38						
OGNE	Ogallala	91.52	325	PFAKE		14 08 10.0	+8.8
OGNE				LR	LR		
	comp=Z,398nm,21.0s						
X40A	Basin Creek Fa	91.60	315	P	P	14 08 00.5	-1.0
	baz=44						
X40A	Basin Creek Fa	91.60	315	*e*P	P	14 08 01.5	-0.1
	comp=Z,12nm,0.9s						
245A	Little AP, Sta	91.61	312	P	P	14 08 00.2	-1.4
	baz=46						
W39A	Magazine	91.63	316	P	P	14 08 00.8	-0.8
	baz=43						
W39A	Magazine	91.63	316	*e*P	P	14 08 00.9	-0.8
	comp=Z,97nm,1.9s						
BOZ	Bozeman (W)	91.68	334	P	P	14 08 00.8	-1.1
	baz=31						
BOZ	Bozeman (W)	91.68	334	*e*P	P	14 08 01.5	-0.4
	comp=Z,41nm,1.5s						
BOZ				LR	LR		
	comp=Z,846nm,22.0s						
BOZ	Bozeman (W)	91.68	334	*e*P	P	14 08 01.5	-0.4
BOZ				pmax	pmax		
	comp=Z,41nm,1.5s						
BOZ				MLR	MLR		
	comp=Z,846nm,22.0s						
LRM	Limekiln Ridge	91.78	334	*e*P	P	14 08 02.0	-0.5
346A	Big Creek Wild	91.79	311	P	P	14 08 00.6	-1.9
	baz=46						
C09A	Chrisman Ranch	91.95	339	*e*P	P	14 08 03.0	+0.1
	comp=Z,14nm,0.8s						
MIAR	Mount Ida	91.98	316	P	P	14 08 03.2	-0.1
	baz=43,SNR=12						
MIAR	Mount Ida	91.98	316	*e*P	P	14 08 03.2	-0.1
	comp=Z,50nm,1.2s						
MIAR				LR	LR		
	comp=Z,345nm,21.0s						
MIAR	Mount Ida	91.98	316	*e*P	P	14 08 03.2	-0.1
MIAR				pmax	pmax		
	comp=Z,50nm,1.2s						
MIAR				MLR	MLR		
	comp=Z,345nm,21.0s						
CBKS	Cedar Bluff	92.08	322	P	P	14 08 02.5	-1.2
	baz=39						
CBKS	Cedar Bluff	92.08	322	*e*P	P	14 08 03.3	-0.5
CBKS				LR	LR		
	comp=Z,755nm,20.0s						
CBKS	Cedar Bluff	92.08	322	*e*P	P	14 08 03.3	-0.5
CBKS				MLR	MLR		
	comp=Z,755nm,20.0s						
LKWY	Lake	92.10	332	PFAKE		14 08 20.0	+16
LKWY				LR	LR		
	comp=Z,1µm,20.0s						
446A	Poplarville	92.15	311	P	P	14 08 03.5	-0.6
	baz=46						
K22A	Casper	92.15	329	P	P	14 08 02.9	-1.2
	baz=35						
K22A	Casper	92.15	329	*e*P	P	14 08 03.0	-1.2
	comp=Z,22nm,1.0s						
Y40A	Okolona	92.20	315	P	P	14 08 04.2	-0.1
	baz=44						
TUL1	Leonard	92.21	318	P	P	14 08 03.6	-0.7
	baz=42						
TUL1	Leonard	92.21	318	*e*P	P	14 08 04.5	+0.2
	comp=Z,30nm,0.9s						
DLMT	Dillon	92.23	334	*e*P	P	14 08 04.9	+0.5
	comp=Z,19nm,1.2s						
YHB	Horse Butte	92.25	333	*e*P	P	14 08 03.8	-0.8
	comp=Z,18nm,1.2s						
QLMT	Earthquake Lak	92.27	333	*e*P	P	14 08 04.0	-0.7
X39A	Fountain Ranch	92.31	316	P	P	14 08 05.2	+0.4
	baz=43,SNR=8.5						
YFT	Old Faithful	92.37	332	*e*P	P	14 08 05.1	-0.1
	comp=Z,18nm,1.0s						
142A	Monroe	92.47	313	P	P	14 08 05.7	+0.2
	baz=44						
YPP	Pitchstone Pla	92.51	332	*e*P	P	14 08 05.9	0.0
	comp=Z,29nm,1.2s						
SDV	Santo Domingo	92.59	283	P	P	14 08 07.4	+0.7
	comp=Z,49nm,0.8s,baz=32,slow=3.9,SNR=18						
SDV	Santo Domingo	92.59	283	*e*P	P	14 08 06.5	-0.1
	comp=Z,72nm,0.9s						
SDV				LR	LR		
	comp=Z,292nm,21.0s						
B05A	Bryant	92.60	341	P	P	14 08 05.1	-0.8
	baz=23						
FLWY	Flagg Ranch	92.63	332	*e*P	P	14 08 05.2	-1.2
	comp=Z,29nm,1.3s						
MCMT	McKenzie Canyo	92.78	334	*e*P	P	14 08 07.4	+0.2
445A	Amite	92.79	311	P	P	14 08 06.4	-0.7
	baz=45						
PHWY	Pilot Hill	92.79	327	*e*P	P	14 08 06.8	-0.5
	comp=Z,16nm,0.9s						
IMW	Indian Meadow	92.88	332	*e*P	P	14 08 07.1	-0.6
	comp=Z,21nm,1.3s						
MOOW	Moose Ponds	92.93	332	*e*P	P	14 08 08.7	+0.9
LOHW	Long Hollow	92.99	332	*e*P	P	14 08 09.4	+1.3
E09A	Wood Farm, Sta	93.06	338	*e*P	P	14 08 07.5	-0.5
	comp=Z,17nm,1.1s						
FXWY	Fox Creek	93.13	332	*e*P	P	14 08 08.8	+0.1
	comp=Z,8.3nm,1.0s						
TPAW	Teton Pass	93.23	332	*e*P	P	14 08 09.2	-0.1
	comp=Z,8.7nm,0.9s						
F10A	Beach Ranch, E	93.26	337	*e*P	P	14 08 09.0	-0.1
	comp=Z,13nm,1.1s						
BW06	Boulder Array	93.30	331	P	P	14 08 08.3	-1.3
	baz=33						
BW06	Boulder Array	93.30	331	*e*P	P	14 08 08.5	-1.0
	comp=Z,22nm,1.6s						
BW06				LR	LR		
	comp=Z,692nm,21.0s						
PD31	Pinedale Array	93.30	331	*e*P	P	14 08 08.1	-1.4
PDAR	Pinedale Array	93.30	331	P	P	14 08 08.6	-0.9
	comp=Z,2.1nm,0.9s,baz=59,slow=3.7,SNR=13						
PDAR				LR	LR	14 52 19.3	
	comp=Z,347nm,20.0s,baz=40,slow=37						
PDAR	Pinedale Array	93.30	331	*e*P	P	14 08 08.0	-1.5

KSCO	Kaye Shedlock’	93.33	324	P	P	14 08 08.9	-0.7
	baz=38						
KSCO	Kaye Shedlock’	93.33	324	*e*P	P	14 08 09.2	-0.5
	comp=Z,31nm,0.9s						
KAPI	Kappang	93.54	94	PFAKE		14 08 20.0	+9.3
KAPI				LR	LR		
	comp=Z,273nm,20.0s						
HAWA	Hanford	93.59	339	*e*P	P	14 08 11.1	+0.6
	comp=Z,13nm,0.9s						
HAWA				LR	LR		
	comp=Z,414nm,21.0s						
NLWA	Neilton Lookou	93.86	342	PFAKE		14 08 20.0	+8.2
NLWA				LR	LR		
	comp=Z,868nm,22.0s						
AHID	Auburn Hatcher	93.90	332	PFAKE		14 08 20.0	+7.7
AHID				LR	LR		
	comp=Z,539nm,20.0s						
ISCO	Idaho Springs	94.08	327	P	P	14 08 12.5	-0.7
	baz=36						
ISCO	Idaho Springs	94.08	327	*e*P	P	14 08 14.8	+1.5
ISCO				LR	LR		
	comp=Z,685nm,22.0s						
BMO	Blue Mountains	94.28	337	*e*P	P	14 08 12.7	-1.2
	comp=Z,12nm,1.0s						
BMO				LR	LR		
	comp=Z,691nm,21.0s						
BMO	Blue Mountains	94.28	337	*e*P	P	14 08 12.7	-1.2
BMO				pmax	pmax		
	comp=Z,12nm,1.0s						
BMO				MLR	MLR		
	comp=Z,691nm,21.0s						
HLID	Hailey	94.44	334	P	P	14 08 14.7	0.0
	baz=29						
HLID	Hailey	94.44	334	*e*P	P	14 08 14.3	-0.4
	comp=Z,10nm,1.5s						
HLID				LR	LR		
	comp=Z,356nm,21.0s						
Q24A	Divide	94.54	326	P	P	14 08 15.3	-0.1
	baz=36						
NATX	Nacogdoches	94.63	315	PFAKE		14 08 30.0	+14
NATX				LR	LR		
	comp=Z,468nm,20.0s						
WMOK	Wichita Mounta	94.70	319	P	P	14 08 15.8	-0.1
	baz=40						
WMOK	Wichita Mounta	94.70	319	*e*P	P	14 08 15.2	-0.6
	comp=Z,16nm,1.1s						
WMOK				LR	LR		
	comp=Z,523nm,22.0s						
WMOK	Wichita Mounta	94.70	319	*e*P	P	14 08 15.3	-0.6
WMOK				pmax	pmax		
	comp=Z,16nm,1.1s						
WMOK				MLR	MLR		
	comp=Z,523nm,22.0s						
G06A	Carlson Farm,	94.96	339	*e*P	P	14 08 16.8	-0.1
	comp=Z,39nm,1.7s						
MFID	Camas Ranch	95.06	335	*e*P	P	14 08 17.8	+0.3
	comp=Z,17nm,1.2s						
HWUT	Hardware Ranch	95.07	331	*e*P	P	14 08 16.2	-1.4
	comp=Z,9.7nm,0.9s						
HWUT				LR	LR		
	comp=Z,688nm,22.0s						
HVU	Hansel Valley	95.39	332	*e*P	P	14 08 17.2	-1.8
	comp=Z,12nm,1.1s						
HVU	Hansel Valley	95.39	332	*e*P	P	14 08 17.2	-1.8
HVU				pmax	pmax		
	comp=Z,12nm,1.1s						
T25A	Trinidad	95.67	324	P	P	14 08 19.8	-0.7
	baz=36						
T25A	Trinidad	95.67	324	*e*P	P	14 08 18.3	-2.2
	comp=Z,9.1nm,1.0s						
SDCO	Great Sand Dun	95.69	325	P	P	14 08 19.8	-0.9
	baz=36						
SDCO	Great Sand Dun	95.69	325	*e*P	P	14 08 19.0	-1.7
	comp=Z,14nm,1.4s						
SDCO				LR	LR		
	comp=Z,443nm,21.0s						
JLU	Jordanelle	95.88	331	*e*P	P	14 08 20.1	-1.3
	comp=Z,24nm,1.6s						
I05D	Terrebonne, OR	95.99	339	P	P	14 08 21.9	+0.3
	baz=24						
BGU	Big Grassy Mou	96.22	332	*e*P	P	14 08 21.5	-1.3
	comp=Z,13nm,1.3s						
S22A	4UR Ranch, Cre	96.30	326	P	P	14 08 23.2	-0.3
	baz=35						
S22A	4UR Ranch, Cre	96.30	326	*e*P	P	14 08 21.9	-1.5
	comp=Z,6.0nm,1.0s						
PINE	Pine Mountain	96.37	339	*e*P	P	14 08 23.4	-0.1
	comp=Z,20nm,1.3s						
DUG	Dugway, Tooele	96.77	331	PFAKE		14 08 40.0	+15
DUG				LR	LR		
	comp=Z,515nm,21.0s						
SRU	San Rafael Swe	96.77	329	*e*P	P	14 08 24.3	-1.1
	comp=Z,10nm,1.2s						
SRU	San Rafael Swe	96.77	329	*e*P	P	14 08 24.3	-1.1
SRU				pmax	pmax		
	comp=Z,10.0nm,1.2s						
ABTX	Abilene, Hawle	96.78	318	P	P	14 08 25.3	-0.1
	baz=40						
ABTX	Abilene, Hawle	96.78	318	*e*P	P	14 08 25.4	0.0
	comp=Z,32nm,1.5s						
SAML	Samuel	96.86	264	*e*P	P	14 08 26.1	+0.2
	comp=Z,19nm,1.4s						
SAML				LR	LR		
	comp=Z,359nm,19.0s						
WVOR	Wild Horse Val	96.88	336	*e*P	P	14 08 26.1	+0.3
	comp=Z,12nm,1.3s						
WVOR				LR	LR		
	comp=Z,616nm,21.0s						
WVOR	Wild Horse Val	96.88	336	*e*P	P	14 08 26.1	+0.3
WVOR				pmax	pmax		
	comp=Z,12nm,1.3s						
WVOR				MLR	MLR		
	comp=Z,616nm,21.0s						
J05D	Fort Rock, OR	96.92	339	P	P	14 08 26.2	+0.3
	baz=24						
ELK	Elko	97.20	333	LR	LR	14 55 40.4	
	comp=Z,516nm,19.6s,baz=72,slow=38						
J04D	Umpqua Nationa	97.22	339	P	P	14 08 27.3	0.0
	baz=23						
K05A	Summer Lake	97.33	338	*e*P	Pdif	14 08 29.4	+1.5
MVCO	Mesa Verde	97.49	327	PFAKE		14 08 40.0	+11
MVCO				LR	LR		
	comp=Z,653nm,21.0s						
MOD	Modoc Plateau	97.89	337	*e*P	Pdif	14 08 30.9	+0.5
	comp=Z,7.4nm,0.9s						
MTPU	Mount Pierson	98.36	330	*e*P	Pdif	14 08 32.9	0.0
	comp=Z,8.6nm,1.3s						
ANMO	Albuquerque	98.41	324	LR	LR	14 54 01.7	
	comp=Z,393nm,20.3s,baz=42,slow=36						
TASM	ASL Pad, Albuq	98.42	324	P	P	14 08 31.0	-1.9
	baz=35						
M04C	Macdoel	98.47	338	P	P	14 08 32.7	-0.2
	baz=24						
JCT	Junction City	98.51	317	PFAKE		14 08 40.0	+6.8
JCT				LR	LR		
	comp=Z,349nm,20.0s						
PSUT	Pine Spring	98.61	331	*e*P	Pdif	14 08 34.6	+0.9
	comp=Z,6.9nm,1.2s						
L02D	Cave Junction,	98.64	340	P	P	14 08 33.4	-0.2
	baz=22						
YBH	Yreka Blue Hor	98.78	339	LR	LR	14 57 28.7	
	comp=Z,264nm,19.2s,baz=18,slow=38						
M02C	Callahan	99.13	339	P	Pdif	14 08 35.7	-0.2
	baz=23						
SIV	San Ignacio	99.15	257	P	Pdif	14 08 37.4	+1.2
	comp=Z,2.4nm,0.8s,baz=91,slow=5.2,SNR=7.2						
R11A	Troy Canyon, C	99.43	332	P	Pdif	14 08 37.6	+0.2
	baz=29						
R11A	Troy Canyon, C	99.43	332	*e*P	Pdif	14 08 37.2	-0.2
	comp=Z,6.6nm,1.4s						
N02D	Trinity Center	99.47	339	P	Pdif	14 08 37.8	+0.4
	baz=23						
KVTX	Kingsville	99.63	314	PFAKE		14 08 50.0	+12
KVTX				LR	LR		
	comp=Z,471nm,20.0s						
BCIP	Isla Barro Col	99.64	289	PFAKE		14 08 50.0	+12
BCIP				LR	LR		
	comp=Z,332nm,21.0s						
BATI	Baumata	99.67	96	LR	LR	14 58 11.3	
	comp=Z,380nm,22.0s,baz=306,slow=38						
O03D	Paynes Creek	99.82	338	P	Pdif	14 08 38.3	-0.6
	baz=24						
WUAZ	Wupatki	100.17	328	P	Pdif	14 08 39.7	-1.0
	baz=32						
WUAZ	Wupatki	100.17	328	PFAKE		14 08 50.0	+9.3
WUAZ				LR	LR		
	comp=Z,334nm,20.0s						
NVAR	Mina Array Bea	100.35	334	P	Pdif	14 08 42.2	+0.7
	comp=Z,0.4nm,0.7s,baz=38,slow=4.6,SNR=5.0						
NVAR				PKKPbc	PKKPbc	14 24 57.2	+0.1
	comp=Z,0.8nm,0.8s,baz=199,slow=6.0,SNR=5.5						
MNTX	Cornudas Mount	100.51	322	P	Pdif	14 08 41.8	-0.3
	baz=36						
MNTX	Cornudas Mount	100.51	322	*e*Pdif	Pdif	14 08 41.5	-0.6
MNTX				LR	LR		
	comp=Z,582nm,20.0s						
TPNV	Topopah Spring	100.91	332	P	Pdif	14 08 43.0	-0.9
	baz=28						
TX31	Lajitas Ar. Si	101.50	319	*e*Pdif	Pdif	14 08 46.3	-0.3
TXAR	Lajitas Array	101.50	319	P	Pdif	14 08 46.9	+0.3
	comp=Z,1.4nm,0.9s,baz=52,slow=4.9,SNR=10						
TXAR				PKKPbc	PKKPbc	14 24 54.5	+1.0
	comp=Z,1.0nm,1.0s,baz=190,slow=6.4,SNR=4.5						
GUMO	Guam	102.19	63	PFAKE		14 09 00.0	+10
GUMO				LR	LR		
	comp=Z,225nm,20.0s						
GSC	Goldstone, Bar	102.57	332	P	Pdif	14 08 49.9	-1.4
	baz=28						
TUC	Tucson	102.61	326	PFAKE		14 09 00.0	+8.5
TUC				LR	LR		
	comp=Z,877nm,22.0s						
PFO	Pinyon Flats O	103.92	331	PFAKE		14 09 10.0	+13
PFO				LR	LR		
	comp=Z,563nm,22.0s						
OTAV	Otavalo	103.96	280	PFAKE		14 09 10.0	+12
OTAV				LR	LR		
	comp=Z,272nm,21.0s						
SYO	Syowa Base	104.59	176⇑	*e*pPdiff	pPdif	14 09 15.2	-0.1
LPAZ	La Paz	104.95	261	PKiKP	PKiKP	14 13 20.8	+3.3
	comp=Z,3.2nm,1.0s,baz=76,slow=4.2,SNR=4.0						
HOPE	Hope Point	105.71	214	PFAKE		14 13 30.0	
HOPE				LR	LR		
	comp=Z,349nm,21.0s						
VNA1	Neumayer--Stat	109.27	192	PP	PP	14 13 58.6	+4.9
SNAA	Sanae	109.30	190	PP	PP	14 13 55.8	+1.8
NNA	Nana	109.67	269	PFAKE		14 13 40.0	
NNA				LR	LR		
	comp=Z,283nm,19.0s						
VNA3	Neumayer Olymp	110.02	192	PKiKP	PKiKP	14 13 25.0	+0.4
VNA3	Neumayer Olymp	110.02	192	PP	PP	14 13 59.9	+0.8
TRQA	Tornquist	111.48	238	PFAKE		14 13 40.0	
TRQA				LR	LR		
	comp=Z,551nm,20.0s						
MIDW	Midway	111.84	25	PFAKE		14 13 40.0	
MIDW				LR	LR		
	comp=Z,257nm,19.0s						
LCO	Las Campanas	113.53	250	PFAKE		14 13 40.0	
LCO				LR	LR		
	comp=Z,730nm,22.0s						
WRA	Warramunga Arr	113.58	98	PKiKP	PKiKP	14 13 32.5	-0.3
	comp=Z,3.5nm,1.1s,baz=314,slow=1.5,SNR=9.2						
WRA				PKKPbc	PKKPbc	14 24 17.3	+1.8
	comp=Z,2.9nm,1.0s,baz=121,slow=3.2,SNR=13						
WRAB	Tennant Creek	113.58	98	*e*PKPdf	PKiKP	14 13 33.3	+0.5
WRAB				LR	LR		
	comp=Z,366nm,19.0s						
WRAB	Tennant Creek	113.58	98	*e*PKIKP	PKiKP	14 13 33.3	+0.5
WRAB				MLR	MLR		
	comp=Z,366nm,19.0s						
ASAR	Alice Springs	115.10	102	PKP	PKPdf	14 13 35.3	-0.4
	comp=Z,5.6nm,1.0s,baz=295,slow=1.2,SNR=28						
ASAR				PKKPbc	PKKPbc	14 24 11.4	+1.0
	comp=Z,1.9nm,0.7s,baz=123,slow=3.6,SNR=25						
PLCA	Paso Flores	118.61	239	PKP	PKPdf	14 13 43.2	+1.2
	comp=Z,3.5nm,0.9s,baz=5.9,slow=4.9,SNR=7.3						
CASY	Casey	118.80	153	PFAKE		14 13 50.0	+8.6
CASY				LR	LR		
	comp=Z,57nm,20.0s						
CTA	Charters Tower	123.31	92	PKP	PKPdf	14 13 51.9	+0.4
	comp=Z,25nm,1.1s,baz=323,slow=2.8,SNR=5.3						
STKA	Stephens Creek	124.86	107	PKP	PKPdf	14 13 54.3	+0.1
	comp=Z,13nm,1.0s,baz=320,slow=3.7,SNR=9.3						
STKA	Stephens Creek	124.86	107	*e*PKPdf	PKPdf	14 13 54.2	0.0
QSPA	South Pole Qui	125.45	180	PKP	PKPdf	14 13 54.5	+0.2
	comp=Z,32nm,1.1s,baz=223,slow=1.7,SNR=26						
QSPA	South Pole Qui	125.45	180	*e*PKPdf	PKPdf	14 13 54.3	0.0
HNR	Honiara	128.45	72	PFAKE		14 14 10.0	+8.4
HNR				LR	LR		
	comp=Z,478nm,20.0s						
VNDA	Vanda	133.34	167	PKP	PKPdf	14 14 10.1	+1.1
	comp=Z,1.8nm,0.9s,baz=280,slow=6.4,SNR=7.2						
SBA	Scott Base	133.97	169	*e*PKPdf	PKPdf	14 14 11.7	+1.6
SBA				LR	LR		
	comp=Z,602nm,20.0s						
SBA	Scott Base	133.97	169	*e*PKIKP	PKPdf	14 14 11.7	+1.6
SBA				MLR	MLR		
	comp=Z,602nm,20.0s						
DZM	Mont Dzumac	140.70	82	*e*PP	PP	14 17 32.7	+7.9
	comp=Z,93nm,26.6s						
DZM	Mont Dzumac	140.70	82	*e*LR	LR	15 00 18.7	
	comp=Z,488nm,22.9s						
RPN	Rapa Nui	143.61	272	PKP	PKPdf	14 14 30.3	+1.1
	comp=Z,53nm,0.8s,baz=63,slow=9.0,SNR=3.2						
DCZ	Deep Cove	147.06	120	*e*PKPbc	PKPbc	14 14 36.9	+0.1
WHZ	Wether Hill Ro	147.60	121	*e*PKPbc	PKPbc	14 14 38.6	+0.3
FOZ	Fox Glacier	149.04	117	*e*PKPbc	PKPbc	14 14 42.7	+0.7
ODZ	Otahua Downs	149.55	120	*e*PKPbc	PKPbc	14 14 44.5	+1.2
RPZ	Rata Peaks	149.93	117	PKPbc	PKPbc	14 14 45.2	+0.9
	comp=Z,113nm,1.0s,baz=298,slow=0.5,SNR=12						
OXZ	Oxford	150.66	117	*e*PKPbc	PKPbc	14 14 46.4	+0.4
LTZ	Lake Taylor	150.85	115	*e*PKPbc	PKPbc	14 14 45.9	-0.6
MQZ	McQueen’s Vall	151.09	117	*e*PKPbc	PKPbc	14 14 47.3	+0.3
THZ	Tophouse	151.34	113	*e*PKPbc	PKPbc	14 14 47.2	-0.5
TAOE	Nuku Hiva Isla	151.58	337	*e*LR	LR	15 05 39.3	
	comp=Z,395nm,23.9s						
KHZ	Kahutara	151.80	115	*e*PKPbc	PKPbc	14 14 49.0	+0.4
SNZO	South Karori	152.70	112	PFAKE		14 14 50.0	-0.7
SNZO				LR	LR		
	comp=Z,352nm,21.0s						
URZ	Urewera	154.47	105	PKPab	PKPab	14 15 08.2	-1.1
	comp=Z,36nm,1.1s,baz=104,slow=5.4,SNR=6.5						
URZ	Urewera	154.47	105	*e*PKPbc	PKPbc	14 14 52.8	-1.8
URZ				*e*PKPab	sPKPdf	14 15 09.2	0.0
RAO	Raoul Island	156.50	82	PFAKE		14 15 00.0	+11
RAO				LR	LR		
	comp=Z,567nm,19.0s						
PPT2	Papeete2	162.02	355	*e*PP	PP	14 19 27.5	+2.4
	comp=Z,70nm,23.5s						
PPT2	Papeete2	162.02	355	*e*SS	SS	14 39 49.0	+10
	comp=Z,239nm,31.2s						
PPT2	Papeete2	162.02	355	*e*LR	LR	15 09 56.5	
	comp=Z,925nm,27.8s						
TBI	Tubuai	167.72	353	*e*SS	SS	14 40 47.6	+10
	comp=Z,427nm,28.2s						
TBI	Tubuai	167.72	353	*e*LR	LR	15 12 50.2	
	comp=Z,850nm,26.0s						

IDC 09 13:56:02.5±6.7**, 14°.48S**×**167°.19E, h165**km±51km**, mb3.4**/4**, mb1 3.6**/5**, mb1mx3.3**/59**, mbtmp3.9**/5**, Error ellipse: s-maj=56.4km s-min=31.2km az=22.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.58	185	P	Pn	13 57 50.5	0.0
	1.2nm,0.3s,baz=114,slow=18,SNR=22						
DZM				S	Sn	13 59 11.2	-4.3
	0.2nm,0.3s,baz=71,slow=11,SNR=2.1						
STKA	Stephens Creek	29.09	229	P	P	14 01 48.5	+0.7
	2.7nm,0.5s,baz=57,slow=9.0,SNR=12						
WRA	Warramunga Arr	31.81	255	P	P	14 02 11.5	-0.3
	0.3nm,0.4s,baz=85,slow=9.1,SNR=9.8						
ASAR	Alice Springs	32.69	249	P	P	14 02 19.1	-0.3
	0.6nm,0.4s,baz=77,slow=9.3,SNR=31						
VNDA	Vanda	63.10	181	P	P	14 06 11.5	-0.5
	0.6nm,0.6s,baz=0.8,slow=7.2,SNR=5.3						
ARCES	ARCESS Array B	119.99	345	PKP	PKPdf	14 14 33.2	+0.3
	0.9nm,0.5s,baz=50,slow=1.9,SNR=4.6						

CSEM ***09*** *13:56:17.1, 47°.54N×12°.81E, h0km, ML1.6/4, Suspected Mining explosion.*

VIE 09 13:56:17.1±0.5**, 47°.54N**×**12°.81E, h0**km**, mb1.2**/1**, ml1.6**/4**, Error ellipse: s-maj=7.6km s-min=2.6km az=158.0 10 km ESE of Lofer Suspected Mining explosion., Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WTTA	Wattenberg	0.84	251	*e*Pg	Pg	13 56 31.9	-1.4
	3.2nm,0.2s						
WTTA	Wattenberg	0.84	251	Pg	Pg	13 56 31.9	-1.3
	3.2nm,0.2s						
WATA	Walderalm	0.86	257	*e*Pg	Pg	13 56 32.9	-0.6
	1.2nm,0.1s						
WATA				*e*Sg	Sg	13 56 45.8	+1.1
	2.2nm,0.2s						
WATA	Walderalm	0.86	257	Pg	Pg	13 56 32.9	-0.7
	1.2nm,0.1s						
WATA				Sg	Sg	13 56 45.8	+1.1
	2.2nm,0.2s						
MOA	Molln	1.03	72	*e*Pg	Pg	13 56 37.2	+0.4
	0.3nm,0.1s						
MOA				*e*Sg	Sb	13 56 52.3	+0.4
	2.1nm,0.2s						
MOA	Molln	1.03	72	Pg	Pg	13 56 37.2	+0.3
	0.3nm,0.1s						
MOA				Sg	Sb	13 56 52.3	+0.4
	2.1nm,0.2s						
MOTA	Moosalm	1.17	261	*e*Pg	Pg	13 56 39.9	+0.3
	4.2nm,0.1s						
MOTA				*e*Sg	Sn	13 56 57.8	+0.2
	5.8nm,0.2s						
MOTA	Moosalm	1.17	261	Pg	Pg	13 56 39.9	+0.3
	4.2nm,0.1s						
MOTA				Sg	Sn	13 56 57.8	+0.1
	5.8nm,0.2s						

SOME ***09*** *14:01:03.9, 42°.92N×78°.32E, h15km*

KRNET ***09*** *14:01:03.7±0.1, 42°.91N×78°.34E, h20km, mb3.6*

KNET ***09*** *14:01:06.0±0.4, 42°.80N×78°.12E, h0km, ml3.1, Error ellipse: s-maj=8.2km s-min=3.0km az=3.0*

ISC 09 14:01:03.3±1.0**, 42°.89N**±0°.03×**78°.34E**±0°.02**, h11**km±9km**, n40, σ0**s**42**/77**, 21C-10D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZHN	Zhinishke	0.28	15	⇑*i*P	Pg	14 01 09.2	0.0
	baz=16						
ZHN				⇑*i*S	Sg	14 01 13.2	0.0
	baz=16						
ZHN	Zhinishke	0.28	15	⇑*i*P	Pg	14 01 09.2	0.0
	719nm,0.1s						
ZHN				⇑*i*S	Sg	14 01 13.2	0.0
	6μm,0.2s						
PRZ	Przheval’sk	0.41	173	⇓*i*P	Pb	14 01 13.4	+0.7
	baz=72						
PRZ				⇓*i*S	Sb	14 01 18.8	-0.3
	baz=72						
UZB	Uzynbulak	0.56	63	⇑*i*P	Pg	14 01 14.4	0.0
	baz=65						
UZB				⇑*i*S	Sg	14 01 22.2	+0.3
	baz=65						
UZB	Uzynbulak	0.56	63	⇑*i*P	Pg	14 01 14.4	0.0
	128nm,0.2s						
UZB				⇑*i*S	Sg	14 01 22.2	+0.3
	298nm,0.4s						
KURS	Kuram	0.61	349	*e*P	Pg	14 01 15.0	-0.2
	baz=48						
KURS				*e*S	Sg	14 01 23.2	0.0
	baz=48						
KURS	Kuram	0.61	349	*e*P	Pg	14 01 15.0	-0.2
	16nm,0.2s						
KURS				*e*S	Sg	14 01 23.1	0.0
	129nm,0.3s						
KPKS	Kokpek	0.63	24	*e*P	Pg	14 01 15.4	-0.1
	baz=25						
KPKS				*e*S	Sg	14 01 23.7	-0.1
	baz=25						
KPKS	Kokpek	0.63	24	*e*P	Pg	14 01 15.4	-0.1
	125nm,0.4s						
KPKS				*e*S	Sg	14 01 23.7	-0.1
	322nm,0.5s						
PDGK	Podgornoye	0.95	62	⇓*i*P	Pg	14 01 21.2	-0.5
	baz=63						
PDGK				⇓*i*S	Sg	14 01 33.6	-0.5
	baz=63						
KOTS	Kotyrbulak	0.96	291	*e*P	Pg	14 01 21.6	-0.2
	16nm,0.2s						
KOTS				*e*S	Sg	14 01 34.3	0.0
	77nm,0.3s						
TNSS	Tian-Shan	1.03	279	*e*P	Pg	14 01 23.0	-0.2
	baz=77						
TNSS				*e*S	Sg	14 01 36.6	0.0
	baz=77						
TNSS	Tian-Shan	1.03	279	*e*P	Pg	14 01 23.0	-0.2
	5.0nm,0.1s						
TNSS				*e*S	Sg	14 01 36.6	0.0
	35nm,0.2s						
AAA	Alma-Ata	1.09	287	*e*P	Pb	14 01 24.0	-0.2
	baz=86						
AAA				*e*S	Sg	14 01 38.7	+0.3
	baz=86						
AAA	Alma-Ata	1.09	287	*e*P	Pb	14 01 24.0	-0.2
	33nm,0.2s						
AAA				*e*S	Sg	14 01 38.7	+0.3
	126nm,0.2s						
TARG	Taragay, Kyrgy	1.23	199	⇓*i*P	Pn	14 01 26.9	+0.1
	baz=99						
TARG				⇓*i*S	Sb	14 01 42.5	-0.3
	baz=99						
IZV	Izvestkoviy	1.27	277	*e*P	Pn	14 01 27.2	0.0
	baz=76						
IZV				*e*S	Sg	14 01 44.3	-0.1
	baz=76						
IZV	Izvestkoviy	1.27	277	*e*P	Pn	14 01 27.2	0.0
	18nm,0.2s						
IZV				*e*S	Sg	14 01 44.2	-0.1
	181nm,0.5s						
ARXS	Arharly	1.37	345	*e*P	Pb	14 01 28.7	-0.4
	20nm,0.3s						
ARXS				*e*S	Sn	14 01 46.5	-0.1
	52nm,0.3s						
CHKK	Chushkaly	1.37	315	⇑*i*P	Pb	14 01 28.9	-0.2
	baz=15						
CHKK				⇑*e*S	Sg	14 01 47.3	-0.3
	baz=15						
CHKK	Chushkaly	1.37	315	⇑*i*P	Pb	14 01 28.9	-0.2
	32nm,0.2s						
CHKK				*e*S	Sg	14 01 47.2	-0.3
	55nm,0.3s						
MTBS	Maitube	1.42	280	*e*P	Pb	14 01 29.7	-0.1
	baz=79						
MTBS				*e*S	Sg	14 01 48.5	-0.4
	baz=79						
MTBS	Maitube	1.42	280	*e*P	Pb	14 01 29.7	-0.1
	15nm,0.2s						
MTBS				*e*S	Sg	14 01 48.5	-0.4
	35nm,0.2s						
KTBS	Karatobe	1.46	305	*e*P	Pb	14 01 30.4	-0.1
	34nm,0.1s						
KTBS				*e*S	Sg	14 01 49.5	-0.8
	77nm,0.2s						
KTMS	Ketmen	1.58	69	*e*P	Pb	14 01 32.2	-0.4
	baz=69						
KTMS				*e*S	Sb	14 01 52.7	+0.1
	baz=69						
KTMS	Ketmen	1.58	69	*e*P	Pb	14 01 32.2	-0.4
	20nm,0.2s						
KTMS				*e*S	Sb	14 01 52.7	+0.1
	28nm,0.2s						
ULHL	Ulahol	1.68	248	P	Pb	14 01 34.3	0.0
	88nm,0.3s,SNR=224						
ULHL				⇓S	Sb	14 01 56.4	+0.9
	85nm,0.2s						
ULHL	Ulahol	1.68	248	⇑*i*P	Pb	14 01 34.3	0.0
	baz=47						
ULHL				⇑*i*S	Sg	14 01 56.6	-0.7
	baz=47						
KST	Kastek	1.75	276	*e*P	Pb	14 01 35.6	+0.1
	baz=75						
KST				*e*S	Sg	14 01 58.5	-1.0
	baz=75						
KST	Kastek	1.75	276	*e*P	Pb	14 01 35.6	+0.1
	9.8nm,0.3s						
KST				*e*S	Sg	14 01 58.5	-1.0
	31nm,0.4s						
KUU	Kurty	1.77	305	⇓*i*P	Pb	14 01 35.7	0.0
	baz=5.0						
KUU				⇓*e*S	Sb	14 01 58.2	+0.3
	baz=5.0						
KUU	Kurty	1.77	305	⇓*i*P	Pb	14 01 35.7	0.0
	41nm,0.2s						
KUU				*e*S	Sb	14 01 58.2	+0.3
	65nm,0.2s						
DJR	Jarkent	1.79	36	*e*P	Pb	14 01 36.5	+0.4
	38nm,0.2s						
DJR				*e*S	Sg	14 01 59.8	-0.9
	48nm,0.4s						
BOOM	Boomskoye usch	1.81	258	⇑*i*P	Pb	14 01 37.2	+0.6
	baz=57						

BOOM				⇑*i*S	**Sg**	**14 02 00.6**	**-1.0**
	baz=57						
TKM2	**Tokmak 2**	**2.01**	**272**	⇑P	**Pb**	**14 01 40.5**	**+0.5**
	3.3nm,0.1s,SNR=34						
TKM2				⇑S	**Sg**	**14 02 08.4**	**+0.3**
	45nm,0.1s						
TKM2	**Tokmak 2**	**2.01**	**272**	⇑*i*P	**Pb**	**14 01 39.9**	**-0.1**
	baz=71						
TKM2				⇑*i*S	**Sb**	**14 02 06.2**	**+1.0**
	baz=71						
TDK	**Taldyqorghan**	**2.11**	**1**	*e*P	**Pb**	**14 01 41.8**	**+0.2**
	28nm,0.4s						
TDK				*e*S	**Sb**	**14 02 08.9**	**+1.2**
	267nm,0.5s						
KZA	**Kyzart**	**2.42**	**251**	P	**Pb**	**14 01 47.5**	**+0.3**
	13nm,0.2s,SNR=14						
KBK	**Karagaybulak**	**2.50**	**266**	⇑P	**Pb**	**14 01 49.0**	**+0.6**
	6.4nm,0.1s,SNR=8.9						
CHMS	**Chumysh**	**2.63**	**274**	⇑P	**Pb**	**14 01 50.6**	**+0.1**
	3.8nm,0.2s,SNR=9.2						

ISCJB ***09*** *14:24:37.0±0.6, 37°.69S±0°.04×73°.80W±0°.09, h23^{km}, mb4.3/10, Error ellipse: s-maj=10.0km s-min=5.9km az=3.0*

IDC ***09*** *14:24:36.1±1.0, 37°.61S×73°.36W, h0^{km}, mb4.0/7, mb1 4.1/9, mb1mx3.9/40, mbtmp4.0/9, ML3.7/2, Error ellipse: s-maj=35.0km s-min=20.2km az=77.0*

NEIC ***09*** *14:24:37.0±0.0, 37°.70S×73°.87W, h30^{km}, mb4.3/2, ML4.3(GUC), After GUC.*

NEIC Felt [IV] at Curanilahue, Lebu and Los Alamos; [III] at Arauco and Canete; [II] at Concepcion.

GUC ***09*** *14:24:37.3±0.7, 37°.70S×73°.87W, h30^{km}±6^{km}, ML4.3*

ISC 09 14:24:38.8±0.8**, 37°.68S**±0°.05×**73°.7W**±0°.1**, h23**^{km}**, n23, σ1^{s}.16**/26**, mb4.2**/10**, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CCSP	**San Pedro de C**	**0.94**	**29**	*e*P	**Pb**	**14 24 55.0**	**-1.4**
CCSP				*e*S	**Sb**	**14 25 08.6**	**+0.1**
CCSP				IAML		14 25 11.7	
	comp=N,9µm,0.8s						
TMU	**Temuco**	**1.35**	**142**	*e*P	**Pn**	**14 25 01.7**	**-0.5**
TMU				*i* S	**Sn**	**14 25 19.9**	**+0.4**
TMU				IAML		14 25 30.5	
	comp=N,3µm,0.5s						
CCHI	**Chillan**	**1.67**	**51**	*e*P	**Pn**	**14 25 07.2**	**+0.7**
CCHI				*e*S	**Sn**	**14 25 29.9**	**+2.7**
CCHI				IAML		14 25 38.8	
	comp=E,6µm,0.6s						
GO05	**HualaæØ**	**3.01**	**28**	*e*P	**Pn**	**14 25 24.8**	**-0.3**
GO05				IAML		14 26 22.8	
	comp=E,1µm,0.8s						
PLCA	**Paso Flores**	**3.90**	**142**	Pn	**Pn**	**14 25 37.8**	**+0.4**
	comp=E,1.4nm,0.3s,baz=336,slow=11,SNR=38						
PLCA				Lg	Lg	14 26 32.2	
	comp=E,1.9nm,0.3s,baz=336,slow=20,SNR=2.6						
TRQA	**Tornquist**	**9.26**	**96**	*e*Pn	**Pn**	**14 26 52.3**	**+1.4**
CPUP	**Villa Florida**	**17.86**	**55**	P	**Pn**	**14 28 43.0**	**-2.7**
	comp=E,0.1nm,0.3s,baz=215,slow=12,SNR=2.1						
LPAZ	**La Paz**	**21.86**	**14**	P	**P**	**14 29 31.3**	**+0.8**
	comp=E,4.2nm,0.9s,baz=180,slow=10,SNR=12						
SIV	**San Ignacio**	**24.30**	**31**	P	**P**	**14 29 53.8**	**-0.8**
	comp=E,1.7nm,0.7s,baz=237,slow=13,SNR=9.6						
SAML	**Samuel**	**30.13**	**21**	*e*P	**P**	**14 30 46.1**	**-0.8**
	comp=E,2.1nm,0.8s						
VNA3	**Neumayer Olymp**	**46.50**	**156**	P	**P**	**14 33 04.3**	**+0.6**
VNA1	**Neumayer--Stat**	**46.85**	**155**	P	**P**	**14 33 06.6**	**+0.1**
PCRV	**Puerto La Cruz**	**48.35**	**12**	P	**P**	**14 33 18.1**	**-0.6**
	comp=E,3.9nm,0.4s,baz=90,slow=3.0,SNR=2.2						
SNAA	**Sanae**	**48.72**	**157**	P	**P**	**14 33 21.7**	**+0.7**
SNAA	**Sanae**	**48.72**	**157**	P	**P**	**14 33 21.5**	**+0.4**
	comp=E,5.8nm,1.1s,baz=275,slow=5.9,SNR=13						
TXAR	**Lajitas Array**	**72.34**	**333**	P	**P**	**14 36 04.0**	**+1.4**
	comp=E,0.5nm,0.8s,baz=144,slow=7.4,SNR=6.1						
KOWA	**Kowa**	**83.35**	**66**	P	**P**	**14 37 03.8**	**-0.4**
	comp=E,1.8nm,0.5s,baz=199,slow=4.2,SNR=3.6						
ECSD	**EROS Data Cent**	**83.66**	**343**	*e*P	**P**	**14 37 05.2**	**+0.1**
	comp=E,4.4nm,0.9s						
NVAR	**Mina Array Bea**	**86.17**	**326**	P	**P**	**14 37 19.5**	**+1.4**
	comp=E,65nm,1.0s,baz=161,slow=6.7,SNR=2.9						
TORD	**Torodi Ar. Bea**	**86.69**	**71**	P	**P**	**14 37 19.4**	**-1.6**
	comp=E,0.6nm,0.9s,baz=192,slow=5.9						
BVAR	**Borovoye Array**	**150.82**	**47**	PKPbc	**PKPbc**	**14 44 29.6**	**+1.0**
	comp=E,1.6nm,0.6s,baz=327,slow=2.4,SNR=12						
ZALV	**Zalesovo Beam**	**158.01**	**35**	PKPab	**PKPab**	**14 45 06.2**	**-0.3**
	comp=E,0.7nm,0.5s,baz=322,slow=9.4,SNR=3.6						
MKAR	**Makanchi Array**	**160.07**	**55**	PKPab	**PKPab**	**14 45 15.4**	**-0.2**
	comp=E,0.6nm,0.7s,baz=282,slow=3.8,SNR=6.1						

ISCJB ***09*** *14:46:32.7±0.5, 4°.42N±0°.06×123°.78E±0°.10, h400^{km}, mb3.3/10, Error ellipse: s-maj=13.7km s-min=7.2km az=161.8*

IDC ***09*** *14:46:37.3±2.8, 4°.16N×123°.77E, h457^{km}±38^{km}, mb3.0/10, mb1 3.2/12, mb1mx3.0/61, mbtmp4.0/12, Error ellipse: s-maj=24.6km s-min=11.8km az=72.0*

DJA ***09*** *14:46:40.4±1.0, 4°N±9°×12°4E±°, h362^{km}±15^{km}, M4.3/6, mb4.3/4, mB4.6/3, MLv4.4/6, Mw(mB)3.9/3*

ISC 09 14:46:33.7±0.6**, 4°.32N**±0°.07×**123°.79E**±0°.10**, h400**^{km}**, n18, σ1^{s}.83**/20**, mb3.3**/10**, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRSI	**Marisa**	**4.24**	**206**	P	**Pn**	**14 47 50.6**	**+2.4**
TNTI	**Ternate**	**5.02**	**135**	P	**Pn**	**14 47 58.6**	**+2.6**
LUWI	**Luwuk**	**5.42**	**191**	S	**S**	**14 49 09.7**	**-0.8**
APSI	**Ampana**	**5.62**	**202**	P	**Pn**	**14 48 04.8**	**+2.5**
LBMI	**Labuha**	**6.16**	**143**	P	**Pn**	**14 48 10.1**	**+1.9**
LBMI				S	**S**	**14 49 23.2**	**-2.0**
SANI	**Sanana**	**6.70**	**161**	P	**Pn**	**14 48 13.9**	**-0.2**
SIJI	**Sorong**	**9.07**	**124**	P	**P**	**14 48 43.3**	**+2.2**
	1.0nm,0.3s,baz=159,slow=20,SNR=5.6						
BATI	**Baumata**	**14.43**	**181**	P	**P**	**14 49 40.9**	**+0.7**
	4.5nm,0.3s,baz=48,slow=4.4,SNR=6.2						
WRA	**Warramunga Arr**	**26.25**	**157**	P	**P**	**14 51 32.3**	**-2.3**
	0.8nm,0.3s,baz=335,slow=10,SNR=37						
CMAR	**Chiang Mai Arr**	**28.06**	**302**	P	**P**	**14 51 51.7**	**+1.0**
	0.4nm,0.6s,baz=118,slow=7.8,SNR=4.5						
ASAR	**Alice Springs**	**29.51**	**161**	P	**P**	**14 52 01.8**	**-1.6**
	0.9nm,0.5s,baz=332,slow=8.0,SNR=38						
MJAR	**Matsushiro Arr**	**34.70**	**21**	P	**P**	**14 52 47.8**	**-0.1**
	0.7nm,0.6s,baz=195,slow=8.3,SNR=3.9						
STKA	**Stephens Creek**	**39.79**	**156**	P	**P**	**14 53 29.2**	**-0.9**
	2.0nm,0.4s,baz=337,slow=8.8,SNR=12						
SONM	**Songino Array**	**45.86**	**344**	P	**P**	**14 54 19.6**	**+1.6**
	0.2nm,0.5s,baz=163,slow=1.5,SNR=3.5						
MKAR	**Makanchi Array**	**55.42**	**326**	P	**P**	**14 55 28.1**	**-0.4**
	0.7nm,0.5s,baz=123,slow=7.4,SNR=10						
MKAR				PcP	**PcP**	**14 56 21.1**	**-2.1**
	0.6nm,0.7s,baz=132,slow=4.3,SNR=4.3						
PETK	**Petropavlovsk-**	**56.04**	**24**	P	**P**	**14 55 33.3**	**+0.7**
	1.1nm,0.7s,baz=204,slow=3.2						
KURBB	**Kurchatov Arra**	**59.69**	**328**	P	**P**	**14 55 56.2**	**-1.4**
	0.5nm,0.6s,baz=143,slow=6.7,SNR=5.9						
ARU	**Arti**	**72.88**	**328**	P	**P**	**14 57 17.9**	**-2.4**
	1.0nm,0.3s,baz=104,slow=12,SNR=3.8						

ATH ***09*** *14:56:41.9, 35°.62N×28°.91E, h36^{km}±9^{km}, ML2.1/2, Error ellipse: s-maj=11.7km s-min=1.3km az=7.0*

ISK ***09*** *14:56:41.9, 35°.66N×28°.92E, h23^{km}, ML2.7/7*

ISCJB ***09*** *14:56:42.7±0.9, 35°.64N±0°.06×28°.94E±0°.05, h58^{km}±14^{km}, Error ellipse: s-maj=9.3km s-min=5.9km az=166.6*

DDA ***09*** *14:56:42.1, 35°.68N×28°.88E, h54^{km}, Ml3.0*

CSEM ***09*** *14:56:43.1±0.2, 35°.65N×28°.91E, h30^{km}, ML2.1, Error ellipse: s-maj=4.9km s-min=2.5km az=165.0*

ISC 09 14:56:42.3±1.5**, 35°.60N**±0°.06×**28°.98E**±0°.03**, h58**^{km}±16^{km}**, n52, σ0^{s}.87**/74**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSL	**Kastellorizon**	**0.74**	**41**	P	**Pn**	**14 56 57.1**	**+0.2**
KSL				S	**Sn**	**14 57 08.0**	**+0.4**
KSL				AML	AML	14 57 09.6	
	comp=N,229µm,0.3s						
KSL				AML	AML	14 57 11.7	
	comp=E,378µm,0.4s						
AKAS	**Kas**	**0.81**	**38**	PG	**Pn**	**14 56 58.3**	**+0.3**
AKAS				SG	**Sn**	**14 57 09.9**	**+0.4**
AKAS	**Kas**	**0.81**	**38**	*i* P	**Pn**	**14 56 58.2**	**+0.3**
AKAS				*i* S	**Sn**	**14 57 09.7**	**+0.2**
AKAS	**Kas**	**0.81**	**38**	*e*Pg	**Pn**	**14 56 58.3**	**+0.3**
AKAS				S	**Sn**	**14 57 09.6**	**+0.2**
ARG	**Arkhangelos**	**0.93**	**312**	PG	**Pn**	**14 56 59.1**	**-0.2**
ARG				SG	**Sn**	**14 57 12.0**	**+0.1**
ARG	**Arkhangelos**	**0.93**	**312**	P	**Pn**	**14 56 59.2**	**-0.2**
ARG				S	**Sn**	**14 57 10.8**	**-1.1**
ARG				AML	AML	14 57 12.6	
	comp=E,349µm,0.3s						
ARG				AML	AML	14 57 15.5	
	comp=N,155µm,0.3s						
ARG	**Arkhangelos**	**0.93**	**312**	*e*Pg	**Pn**	**14 56 59.1**	**-0.2**
ARG				S	**Sn**	**14 57 11.0**	**-0.9**
ARG				*e*Sg		14 57 12.0	
FETY	**Fethiye**	**1.04**	**5**	PG	**Pn**	**14 57 00.6**	**-0.2**
FETY				SG	**Sn**	**14 57 14.4**	**-0.1**
FETY	**Fethiye**	**1.04**	**5**	P	**Pn**	**14 57 00.3**	**-0.5**
FETY	**Fethiye**	**1.04**	**5**	*e*Pg	**Pn**	**14 57 00.6**	**-0.2**
FETY				*e*Sg	**Sn**	**14 57 14.4**	**-0.1**
DALY	**Dalyan (Mu˜la**	**1.25**	**348**	PN	**Pn**	**14 57 03.3**	**-0.2**
DALY	**Dalyan (Mu˜la**	**1.25**	**348**	*i* P	**Pn**	**14 57 03.2**	**-0.2**
DALY				*i* S	**Sn**	**14 57 18.7**	**-0.6**
DALY	**Dalyan (Mu˜la**	**1.25**	**348**	*e*Pn	**Pn**	**14 57 03.3**	**-0.2**
MRSB	**Marmaris-Mugla**	**1.28**	**331**	PN	**Pn**	**14 57 04.1**	**0.0**
MRSB	**Marmaris-Mugla**	**1.28**	**331**	*e*Pn	**Pn**	**14 57 04.1**	**0.0**
TURN	**Turunc**	**1.31**	**347**	PN	**Pn**	**14 57 04.1**	**-0.3**
TURN	**Turunc**	**1.31**	**347**	*i* P	**Pn**	**14 57 04.5**	**+0.1**
TURN				*i* S	**Sn**	**14 57 21.1**	**+0.2**
TURN	**Turunc**	**1.31**	**347**	*e*Pn	**Pn**	**14 57 04.1**	**-0.3**
TURN	**Turunc**	**1.31**	**347**	P	**Pn**	**14 57 04.5**	**+0.1**
TURN				S	**Sn**	**14 57 21.0**	**+0.2**
ELL	**Elmali**	**1.37**	**33**	PN	**Pn**	**14 57 06.5**	**+1.2**
ELL	**Elmali**	**1.37**	**33**	*e*Pn	**Pn**	**14 57 06.5**	**+1.2**
KARP	**Karpathos**	**1.48**	**269**	PN	**Pn**	**14 57 07.0**	**+0.3**
KARP	**Karpathos**	**1.48**	**269**	P	**Pn**	**14 57 06.8**	**+0.1**
KARP				S	**Sn**	**14 57 26.2**	**+1.1**
KARP	**Karpathos**	**1.48**	**269**	P	**Pn**	**14 57 07.0**	**+0.3**
KARP				S	**Sn**	**14 57 25.9**	**+0.8**
DAT	**Datca**	**1.60**	**315**	PN	**Pn**	**14 57 08.5**	**+0.1**
DAT	**Datca**	**1.60**	**315**	*i* P	**Pn**	**14 57 08.0**	**-0.4**
DAT				*i* S	**Sn**	**14 57 27.1**	**-1.1**
DAT	**Datca**	**1.60**	**315**	P	**Pn**	**14 57 08.0**	**-0.4**
DAT	**Datca**	**1.60**	**315**	*e*Pn	**Pn**	**14 57 08.5**	**+0.1**
DAT				S	**Sn**	**14 57 27.0**	**-1.1**
YER	**Yerkesik**	**1.64**	**340**	PN	**Pn**	**14 57 09.7**	**+0.9**
YER	**Yerkesik**	**1.64**	**340**	*e*Pn	**Pn**	**14 57 09.7**	**+0.9**
GOLH	**Golhisar**	**1.70**	**16**	*i* P	**Pn**	**14 57 11.0**	**+1.2**
GOLH	**Golhisar**	**1.70**	**16**	P	**Pn**	**14 57 11.0**	**+1.2**
KORT	**Korkueli**	**1.79**	**38**	PN	**Pn**	**14 57 12.1**	**+1.2**
KORT	**Korkueli**	**1.79**	**38**	*i* P	**Pn**	**14 57 12.4**	**+1.5**
KORT	**Korkueli**	**1.79**	**38**	*e*Pn	**Pn**	**14 57 12.1**	**+1.2**
KORT	**Korkueli**	**1.79**	**38**	P	**Pn**	**14 57 12.4**	**+1.5**
TAVA	**DENIZLI_Tavas**	**1.87**	**358**	*i* P	**Pn**	**14 57 12.3**	**+0.3**
TAVA				*i* S	**Sn**	**14 57 35.2**	**+0.7**
TAVA	**DENIZLI_Tavas**	**1.87**	**358**	P	**Pn**	**14 57 12.3**	**+0.3**
TAVA				S	**Sn**	**14 57 35.2**	**+0.7**
BODT	**Bodrum**	**1.99**	**318**	PN	**Pn**	**14 57 13.4**	**-0.2**
BODT	**Bodrum**	**1.99**	**318**	*e*Pn	**Pn**	**14 57 13.4**	**-0.2**
DNZL	**Cakiroluk**	**2.09**	**1**	*i* P	**Pn**	**14 57 15.4**	**+0.3**
DNZL	**Cakiroluk**	**2.09**	**1**	P	**Pn**	**14 57 15.4**	**+0.3**
AYDN	**Tasoluk**	**2.24**	**337**	*i* P	**Pn**	**14 57 17.6**	**+0.5**
AYDN				*i* S	**Sn**	**14 57 43.0**	**-0.6**
AYDN	**Tasoluk**	**2.24**	**337**	P	**Pn**	**14 57 17.6**	**+0.5**
AYDN				S	**Sn**	**14 57 43.0**	**-0.6**
SUTC	**Sutluce-Ispart**	**2.48**	**40**	PN	**Pn**	**14 57 22.5**	**+2.1**
SUTC	**Sutluce-Ispart**	**2.48**	**40**	*e*Pn	**Pn**	**14 57 22.5**	**+2.1**
KEPZ	**Antalya-Kepez**	**2.49**	**58**	*i* P	**Pn**	**14 57 18.0**	**-2.4**
KEPZ				*i* S	**Sn**	**14 57 48.0**	**-1.6**
KEPZ	**Antalya-Kepez**	**2.49**	**58**	P	**Pn**	**14 57 18.0**	**-2.4**
KEPZ				S	**Sn**	**14 57 48.0**	**-1.6**
AYDB	**Zeytinkoy-Aydi**	**2.50**	**340**	PN	**Pn**	**14 57 20.7**	**0.0**
AYDB	**Zeytinkoy-Aydi**	**2.50**	**340**	*e*Pn	**Pn**	**14 57 20.7**	**0.0**
LAST	**Lasithi**	**2.89**	**262**	P	**Pn**	**14 57 26.5**	**+0.5**
LAST	**Lasithi**	**2.89**	**262**	P	**Pn**	**14 57 26.8**	**+0.8**

IDC 09 14:58:09.1±1.9**, 2°.19N**×**126°.66E, h0**^{km}**, mb3.5**/4**, mb1 3.6**/4**, mb1mx3.3**/57**, mbtmp3.5**/4**, Error ellipse: s-maj=190.8km s-min=20.8km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.25**	**161**	P	P	15 03 16.6	-1.8
	0.5nm,0.4s,baz=340,slow=10,SNR=18						
ASAR	**Alice Springs**	**26.65**	**165**	P	P	15 03 51.4	+1.6
	0.2nm,0.8s,baz=339,slow=7.4,SNR=4.1						
MKAR	**Makanchi Array**	**58.77**	**326**	P	P	15 08 09.5	+0.3
	0.4nm,0.4s,baz=124,slow=7.7,SNR=6.1						
KURBB	**Kurchatov Arra**	**62.99**	**328**	P	P	15 08 37.4	-0.4
	0.4nm,0.4s,baz=129,slow=5.9,SNR=8.5						

WEL 09 14:58:17.0±0.6**, 33°S**±7°×**17°9W**±1°9**, h33**^{km}**, ML4.5**/28**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**3.99**	**20**	S	Sn	15 00 02.6	+1.2
MXZ	**Matakaoa Point**	**4.87**	**201**	P	Pn	14 59 32.1	+4.3
MXZ				S	Sn	15 00 24.7	+1.7
WMGZ	**Waiomatatini S**	**5.08**	**199**	P	Pn	14 59 33.3	+2.5
WMGZ				S	Sn	15 00 31.5	+3.3
HAZ	**Te Kaha**	**5.22**	**204**	P	Pn	14 59 35.0	+2.4
HAZ				S	Sn	15 00 33.0	+1.4
PKGZ	**Pakihiroa**	**5.24**	**202**	P	Pn	14 59 36.2	+3.2
PKGZ				S	Sn	15 00 33.3	+1.0
PUZ	**Puketiti**	**5.36**	**199**	P	Pn	14 59 34.4	-0.2
PUZ				S	Sn	15 00 36.3	+1.2
KUZ	**Kuaotunu**	**5.40**	**225**	P	Pn	14 59 38.3	+3.1
RUGZ	**Raukumara Rang**	**5.44**	**204**	P	Pn	14 59 38.0	+2.2
RUGZ				S	Sn	15 00 36.1	-1.2
TWGZ	**Tauwhareparae**	**5.53**	**201**	P	Pn	14 59 39.5	+2.4
TWGZ				S	Sn	15 00 41.1	+1.6
CNGZ	**Carnagh Statio**	**5.76**	**198**	P	Pn	14 59 40.1	0.0
OPRZ	**Ohinepanea**	**5.79**	**213**	P	Pn	14 59 42.8	+2.4
TKGZ	**Te Karaka**	**5.82**	**201**	P	Pn	14 59 43.1	+2.2
TKGZ				S	Sn	15 00 45.3	-1.1
MWZ	**Matawai**	**5.82**	**204**	P	Pn	14 59 42.0	+1.0
URZ	**Urewera**	**5.91**	**207**	P	Pn	14 59 42.5	+0.4
MKAZ	**Moumakai**	**5.98**	**226**	P	Pn	14 59 44.5	+1.4
RIGZ	**Rimuhau**	**6.09**	**201**	P	Pn	14 59 46.7	+2.0
MUGZ	**Murupara**	**6.23**	**208**	P	Pn	14 59 47.2	+0.6
ALRZ	**Allen Road**	**6.47**	**210**	P	Pn	14 59 50.6	+0.6
RAHZ	**Arahi**	**6.50**	**204**	P	Pn	14 59 50.4	+0.1
MTHZ	**Maungataniwha**	**6.53**	**206**	P	Pn	14 59 50.2	-0.5
NMHZ	**Naumai**	**6.76**	**205**	P	Pn	14 59 54.0	+0.1
BKZ	**Black Stump Fm**	**6.93**	**207**	P	Pn	14 59 55.3	-1.0
KATZ	**Kakaramea**	**7.10**	**212**	P	Pn	14 59 59.5	+0.9
MCHZ	**McNeill Hill**	**7.10**	**205**	P	Pn	14 59 57.2	-1.4
KWHZ	**Kaweka Forest**	**7.18**	**206**	P	Pn	14 59 58.0	-1.7
WTVZ	**West Tongariro**	**7.26**	**212**	P	Pn	15 00 00.6	-0.2
NGZ	**Ngauruhoe**	**7.31**	**211**	P	Pn	15 00 01.4	-0.1
COVZ	**Chateau Observ**	**7.35**	**212**	P	Pn	15 00 02.1	0.0
KAHZ	**Kahuranaki**	**7.36**	**202**	P	Pn	14 59 59.8	-2.3
TUVZ	**Tukino**	**7.36**	**211**	P	Pn	15 00 01.7	-0.5
BHHZ	**Black Hill Sta**	**7.38**	**208**	P	Pn	15 00 00.9	-1.5
KRHZ	**Kereru**	**7.40**	**206**	P	Pn	14 59 59.6	-3.0
WHVZ	**Whangaehu Hut**	**7.40**	**211**	P	Pn	15 00 02.0	-0.8
MOVZ	**Moawhango**	**7.43**	**210**	P	Pn	15 00 01.3	-1.9
PXZ	**Pawanui**	**7.58**	**202**	P	Pn	15 00 02.1	-2.9
PNHZ	**Pukenui**	**7.70**	**206**	P	Pn	15 00 04.3	-2.4
PRHZ	**Porangahau**	**7.87**	**202**	P	Pn	15 00 07.0	-2.0
TSZ	**Takapari Road**	**7.91**	**206**	P	Pn	15 00 06.2	-3.5
WAZ	**Wanganui**	**8.05**	**212**	P	Pn	15 00 09.3	-2.3
BFZ	**Birch Farm**	**8.37**	**203**	P	Pn	15 00 13.2	-2.7

ISCJB ***09*** *14:59:39.1±0.8, 33°.8N±0°.1×96°.9E±0°.2, h10^{km}, mb3.4/5, Error ellipse: s-maj=27.2km s-min=10.9km az=150.4*

IDC ***09*** *14:59:39.1±1.2, 33°.76N×96°.82E, h0^{km}, mb3.4/5, mb1 3.6/7, mb1mx3.4/71, mbtmp3.5/7, ML3.8/2, Error ellipse: s-maj=44.1km s-min=19.8km az=59.0*

BJI ***09*** *14:59:42.8, 33°.88N×96°.86E, h6^{km}, ML3.2/9, Ms3.2/3, Ms7 3.1/3*

ISC 09 14:59:41.2±1.0**, 33°.8N**±0°.1×**97°.0E**±0°.2**, h10**^{km}**, n9, σ1^{s}.48**/8**, mb3.6**/5**, Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GTA	**Gaotai**	**6.07**	**21**	*e*P	Pb	15 01 22.6	-4.6
GTA				pP	Pg	15 01 27.0	-10
GTA				sP	Pn	15 01 30.6	+19
GTA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WMQ	**Urumqi**	**12.35**	**327**	*e*P	**Pn**	**15 02 39.1**	**+2.0**
CMAR	**Chiang Mai Arr**	**15.36**	**173**	Pn	**Pn**	**15 03 18.8**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=348,slow=12,SNR=11						
MKAR	**Makanchi Array**	**17.11**	**324**	P	**Pn**	**15 03 38.6**	**-1.8**
	comp=Z,0.2nm,0.3s,baz=134,slow=14,SNR=13						
KURBB	**Kurchatov Arra**	**21.57**	**327**	P	**P**	**15 04 29.5**	**-1.3**
	comp=Z,0.3nm,0.4s,baz=132,slow=11,SNR=5.3						
ZALV	**Zalesovo Beam**	**21.92**	**341**	P	**P**	**15 04 33.9**	**-0.6**
	comp=Z,1.0nm,0.8s,baz=153,slow=9.7,SNR=2.5						
KSRS	**Korea Array**	**25.38**	**73**	P	**P**	**15 05 08.9**	**+0.3**
	comp=Z,0.8nm,0.6s,baz=271,slow=8.6,SNR=3.0						
WRA	**Warramunga Arr**	**64.22**	**141**	P	**P**	**15 10 15.4**	**-1.0**
	comp=Z,0.5nm,1.0s,baz=335,slow=7.2,SNR=3.6						
ASAR	**Alice Springs**	**67.08**	**143**	P	**P**	**15 10 35.2**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=323,slow=5.8,SNR=3.0						

TRN 09 15:13:38.1, 10°.79N×**62°.17W, h72**^{km}**, MD3.5, Near coast of Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRN	**Trinidad (W)**	**0.77**	**101**	*i* P	Pn	15 13 53.8	0.0
TRN				*e*S	Sn	15 14 06.2	+0.7
TPP	**Pointe-a-Pierr**	**0.85**	**124**	*e*P	Pn	15 13 55.1	+0.3
TPP				*e*S	Sn	15 14 07.4	+0.2
TBH	**Brigand Hill**	**1.12**	**106**	*e*P	Pn	15 13 58.6	+0.3
TBH				*e*S	Sn	15 14 13.2	-0.1
GRGR	**Grenville**	**1.42**	**21**	*e*	Pn	15 14 00.4	-1.7
GRGR	**Grenville**	**1.42**	**21**	*e*P	Pn	15 14 01.7	-0.4
GRGR				*e*S	Sn	15 14 20.1	-0.1
GRHS	**Sauteurs**	**1.51**	**20**	*e*P	Pn	15 14 02.7	-0.6
GRHS				*e*S	Sn	15 14 21.9	-0.4
GRSS	**Sisters**	**1.59**	**20**	*e*P	Pn	15 14 04.2	-0.1
TOSP	**Speyside**	**1.68**	**72**	*e*P	Pn	15 14 05.9	+0.5
TOSP				*e*S	Sn	15 14 25.2	-1.0
FCV	**Fort Charlotte**	**2.52**	**21**	*e*P	Pn	15 14 16.8	0.0
SVB	**Belmont**	**2.62**	**20**	*e*P	Pn	15 14 18.6	+0.4
SVB				*e*S	Sn	15 14 48.9	-0.1
SVCV	**St. Vincent, C**	**2.66**	**22**	*e*P	Pn	15 14 19.0	+0.3
SVCV				*e*S	Sn	15 14 48.8	-1.1
SVV	**Soufriere Volc**	**2.67**	**20**	*e*P	Pn	15 14 19.8	+0.9
SVV				*e*S	Sn	15 14 49.4	-0.9
SSV	**Crater Summit**	**2.69**	**21**	*e*P	Pn	15 14 20.1	+0.9
SSV				*e*S	Sn	15 14 50.2	-0.6
MCLT	**Moule a Chique**	**3.14**	**22**	*e*P	Pn	15 14 25.4	+0.2
MCLT				*e*S	Sn	15 15 00.7	-0.8

ISCJB ***09*** *15:13:43.8±0.3, 41°.87N±0°.02×12°.70E±0°.02, h15^{km}±2^{km}, Error ellipse: s-maj=3.0km s-min=2.7km az=168.8*

ROM ***09*** *15:13:43.5±0.1, 41°.871N±0°.004×12°.715E±0°.007, h11^{km}, ML3.5/37*

LDG ***09*** *15:13:43.2±0.2, 41°.91N×12°.77E, h10^{km}, Ml3.2/7, Error ellipse: s-maj=5.2km s-min=3.6km az=19.0*

CSEM ***09*** *15:13:45.7±0.3, 41°.90N×12°.72E, h10^{km}, ML3.2, Error ellipse: s-maj=13.1km s-min=4.1km az=6.0*

ISC 09 15:13:43.7±0.8**, 41°.86N**±0°.03×**12°.70E**±0°.02**, h16**^{km}±4^{km}**, n102, σ2^{s}.30**/120**, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RMP	**Rome, Mte Porz**	**0.05**	**178**	*e*P	**Pg**	**15 13 46.3**	**-0.4**
RMP				S	**Sg**	**15 13 47.4**	**-1.3**
RMP				AML	AML		
RMP				AML	AML		
RMP				AML	AML		
RMP				AML	AML		
RMP				AML	AML		
RMP				AML	AML		
RMP				AML	AML		
RMP				AML	AML		
MA9	**Marino**	**0.10**	**199**	*i* P	**Pg**	**15 13 46.9**	**-0.2**
MA9				S	**Sg**	**15 13 48.9**	**-0.5**
MA9				AML	AML		
MA9				AML	AML		
MA9				AML	AML		
MA9				AML	AML		
MA9				AML	AML		
MA9				AML	AML		
MA9				AML	AML		
MA9				AML	AML		
SAMA	**S.Maria delle**	**0.11**	**225**	*i* P	**Pg**	**15 13 47.1**	**-0.2**
SAMA				S	**Sg**	**15 13 49.3**	**-0.3**
SAMA				AML	AML		
SAMA				AML	AML		
	comp=N,75150µm,0.6s						
SAMA				AML	AML		
SAMA				AML	AML		
	comp=N,75150µm,0.6s						
SAMA				AML	AML		
SAMA				AML	AML		
	comp=N,75150µm,0.6s						
SAMA				AML	AML		
SAMA				AML	AML		
	comp=N,75150µm,0.6s						
ROM9	**Roma**	**0.14**	**257**	*i* P	**Pg**	**15 13 47.7**	**0.0**
ROM9				S	**Sb**	**15 13 51.1**	**+0.3**
ROM9				AML	AML		
	comp=E,62550µm,0.7s						
ROM9				AML	AML		
	comp=N,80250µm,0.4s						
ROM9				AML	AML		
	comp=E,62550µm,0.7s						
ROM9				AML	AML		
	comp=N,80250µm,0.4s						
ROM9				AML	AML		
	comp=E,62550µm,0.7s						
ROM9				AML	AML		
	comp=N,80250µm,0.4s						
ROM9				AML	AML		
	comp=N,80250µm,0.4s						
ROM9				AML	AML		
	comp=E,62550µm,0.7s						
MTCE	**Montecelio**	**0.17**	**11**	*i* P	**Pg**	**15 13 47.4**	**-0.6**
MTCE				S	**Sg**	**15 13 50.5**	**-0.4**
MTCE				AML	AML		
	comp=E,21300µm,0.8s						
MTCE				AML	AML		
	comp=N,20800µm,0.6s						
MTCE				AML	AML		
	comp=E,21300µm,0.8s						
MTCE				AML	AML		
	comp=N,20800µm,0.6s						
MTCE				AML	AML		
	comp=E,21300µm,0.8s						
MTCE				AML	AML		
	comp=N,20800µm,0.6s						
MTCE				AML	AML		
	comp=N,20800µm,0.6s						
MTCE				AML	AML		
	comp=E,21300µm,0.8s						
LAV9	**Lanuvio**	**0.18**	**180**	P	**Pg**	**15 13 48.7**	**+0.5**
LAV9				S	**Sb**	**15 13 52.1**	**+0.1**
LAV9				AML	AML		
	comp=E,96450µm,0.5s						
LAV9				AML	AML		
LAV9				AML	AML		
LAV9				AML	AML		
LAV9				AML	AML		
	comp=E,96400µm,0.5s						
LAV9				AML	AML		
LAV9				AML	AML		
LAV9				AML	AML		
LAV9				AML	AML		
	comp=E,96400µm,0.6s						
LAV9				AML	AML		
LAV9				AML	AML		
LAV9				AML	AML		
LAV9				AML	AML		
	comp=E,96400µm,0.6s						
LAV9				AML	AML		
LAV9				AML	AML		
LAV9				AML	AML		
CERT	**Cerreto**	**0.23**	**67**	*i* P	**Pg**	**15 13 48.6**	**-0.3**
CERT				S	**Sg**	**15 13 52.4**	**-0.2**
CERT				AML	AML		
	comp=E,42350µm,0.7s						
CERT				AML	AML		
	comp=N,34250µm,0.8s						

CERT				AML	AML		
	comp=E,42350µm,0.7s						
CERT				AML	AML		
	comp=N,34250µm,0.8s						
CERT				AML	AML		
	comp=E,42350µm,0.7s						
CERT				AML	AML		
	comp=N,34250µm,0.8s						
CERT				AML	AML		
	comp=N,34250µm,0.8s						
CERT				AML	AML		
	comp=E,42350µm,0.7s						
FIAM	**Fiamignano**	**0.51**	**37**	*e*P	**Pg**	**15 13 53.3**	**-0.7**
FIAM				AML	AML		
	comp=E,7330µm,0.8s						
FIAM				AML	AML		
	comp=N,8060µm,0.6s						
FIAM				AML	AML		
	comp=E,7330µm,0.8s						
FIAM				AML	AML		
	comp=N,8060µm,0.6s						
FIAM				AML	AML		
	comp=E,7330µm,0.8s						
FIAM				AML	AML		
	comp=N,8060µm,0.6s						
GIUL	**Giuliano Di Ro**	**0.51**	**126**	P	**Pg**	**15 13 53.7**	**-0.3**
GIUL				S	**Sb**	**15 14 01.5**	**0.0**
GIUL				AML	AML		
	comp=E,8150µm,0.5s						
GIUL				AML	AML		
	comp=N,13800µm,0.6s						
GIUL				AML	AML		
	comp=E,8150µm,0.5s						
GIUL				AML	AML		
	comp=N,13800µm,0.6s						
GIUL				AML	AML		
	comp=E,8150µm,0.5s						
GIUL				AML	AML		
	comp=N,13800µm,0.6s						
PTQR	**Pietraquaria**	**0.55**	**73**	*i* P	**Pg**	**15 13 54.0**	**-0.7**
PTQR				S	**Sg**	**15 14 00.9**	**-1.0**
PTQR				AML	AML		
	comp=E,4285µm,1.0s						
PTQR				AML	AML		
	comp=N,4690µm,0.3s						
PTQR				AML	AML		
	comp=E,4285µm,1.0s						
PTQR				AML	AML		
	comp=N,4690µm,0.3s						
PTQR				AML	AML		
	comp=N,4690µm,0.3s						
PTQR				AML	AML		
	comp=E,4285µm,1.0s						
TOLF	**Tolfa**	**0.56**	**292**	*e*P	**Pg**	**15 13 54.4**	**-0.4**
TOLF				AML	AML		
	comp=E,5555µm,0.4s						
TOLF				AML	AML		
	comp=N,10705µm,0.7s						
TOLF				AML	AML		
	comp=E,5555µm,0.4s						
TOLF				AML	AML		
	comp=N,10705µm,0.7s						
TOLF				AML	AML		
	comp=E,5555µm,0.4s						
TOLF				AML	AML		
	comp=N,10705µm,0.7s						
TOLF				AML	AML		
	comp=E,5555µm,0.4s						
TOLF				AML	AML		
	comp=N,10705µm,0.7s						
VVLD	**Villa Vallelon**	**0.69**	**89**	*i* P	**Pg**	**15 13 56.4**	**-0.8**
VVLD				AML	AML		
	comp=E,6965µm,0.6s						
VVLD				AML	AML		
	comp=N,8065µm,0.9s						
VVLD				AML	AML		
	comp=E,6965µm,0.6s						
VVLD				AML	AML		
	comp=N,8070µm,0.9s						
VVLD				AML	AML		
	comp=E,6965µm,0.6s						
VVLD				AML	AML		
	comp=N,8070µm,0.9s						
T0104	**Madonna delle**	**0.69**	**43**	P	**Pg**	**15 13 56.2**	**-1.0**
T0104				AML	AML		
	comp=E,4550µm,0.4s						
T0104				AML	AML		
	comp=N,4250µm,0.7s						
T0104				AML	AML		
	comp=E,4600µm,0.4s						
T0104				AML	AML		
	comp=N,4255µm,0.7s						
T0104				AML	AML		
	comp=N,4250µm,0.7s						
T0104				AML	AML		
	comp=N,4255µm,0.7s						
T0104				AML	AML		
	comp=E,4600µm,0.4s						
T0104				AML	AML		
	comp=E,4550µm,0.4s						
CESX	**Cesi**	**0.75**	**353**	P	**Pg**	**15 13 57.7**	**-0.8**
CESX				AML	AML		
	comp=E,2760µm,1.1s						
CESX				AML	AML		
	comp=N,3135µm,0.5s						
CESX				AML	AML		
	comp=E,2760µm,1.1s						
CESX				AML	AML		
	comp=N,3135µm,0.5s						
CESX				AML	AML		
	comp=E,2760µm,1.1s						
CESX				AML	AML		
	comp=N,3135µm,0.5s						
POFI	**Posta Fibreno**	**0.77**	**100**	*i* P	**Pg**	**15 13 57.8**	**-0.9**
POFI				AML	AML		
	comp=E,4295µm,0.9s						
POFI				AML	AML		
	comp=N,3645µm,0.5s						
POFI				AML	AML		
	comp=E,4500µm,0.9s						
POFI				AML	AML		
	comp=N,3960µm,0.5s						
POFI				AML	AML		
	comp=E,4295µm,0.9s						
POFI				AML	AML		
	comp=N,3640µm,0.5s						
POFI				AML	AML		
	comp=E,4500µm,0.9s						
POFI				AML	AML		
	comp=N,3960µm,0.5s						
POFI				AML	AML		
	comp=E,4500µm,0.9s						
POFI				AML	AML		
	comp=E,4295µm,0.9s						
POFI				AML	AML		
	comp=N,3640µm,0.5s						
POFI				AML	AML		
	comp=N,3960µm,0.5s						
FAGN	**Fagnano**	**0.77**	**58**	P	**Pg**	**15 13 58.5**	**-0.3**
FAGN				AML	AML		
	comp=E,11050µm,0.5s						
FAGN				AML	AML		
	comp=N,9240µm,0.5s						
FAGN				AML	AML		
	comp=E,11050µm,0.5s						
FAGN				AML	AML		
	comp=N,9240µm,0.5s						
LNSS	**Leonessa**	**0.78**	**19**	P	**Pg**	**15 13 57.7**	**-1.4**
LNSS				AML	AML		
	comp=E,3240µm,1.4s						
LNSS				AML	AML		
	comp=N,3095µm,1.5s						
LNSS				AML	AML		
	comp=E,3240µm,1.4s						
LNSS				AML	AML		
	comp=N,3090µm,1.5s						
LNSS				AML	AML		
	comp=E,3240µm,1.4s						
LNSS				AML	AML		
	comp=N,3090µm,1.5s						
CAMP	**Campotosto**	**0.86**	**38**	P	**Pb**	**15 13 59.4**	**-0.9**
SMA1	**SAN MARTINO**	**0.90**	**31**	P	**Pb**	**15 14 00.8**	**-0.2**
SMA1				AML	AML		
	comp=E,3770µm,1.2s						
SMA1				AML	AML		
	comp=N,3615µm,1.2s						
SMA1				AML	AML		
	comp=E,3765µm,1.2s						
SMA1				AML	AML		
	comp=N,3615µm,1.2s						
SMA1				AML	AML		
	comp=N,3615µm,1.2s						
SMA1				AML	AML		
	comp=E,3765µm,1.2s						
MOMA	**Monte Martano**	**0.95**	**354**	P	**Pb**	**15 14 01.2**	**-0.6**
MOMA				AML	AML		
	comp=E,2200µm,0.6s						
MOMA				AML	AML		
	comp=N,1575µm,0.7s						
MOMA				AML	AML		
	comp=E,2200µm,0.6s						
MOMA				AML	AML		
	comp=N,1575µm,0.7s						
MOMA				AML	AML		
	comp=N,1575µm,0.7s						
MOMA				AML	AML		
	comp=E,2200µm,0.6s						
TERO	**Teramo**	**1.01**	**41**	P	**Pb**	**15 14 02.8**	**-0.1**
TERO				AML	AML		
	comp=E,648µm,0.8s						
TERO				AML	AML		
	comp=N,1170µm,0.6s						
TERO				AML	AML		
	comp=E,648µm,0.8s						
TERO				AML	AML		
	comp=N,1170µm,0.6s						
TERO				AML	AML		
	comp=E,648µm,0.8s						
TERO				AML	AML		
	comp=N,1170µm,0.6s						
NRCA	**Norcia**	**1.02**	**17**	P	**Pb**	**15 14 02.3**	**-0.8**
NRCA				AML	AML		
	comp=E,1120µm,0.6s						
NRCA				AML	AML		
	comp=N,1042µm,0.7s						
NRCA				AML	AML		
	comp=E,1120µm,0.6s						
NRCA				AML	AML		
	comp=N,1042µm,0.7s						
CERA	**Filignano**	**1.02**	**104**	*e*P	**Pb**	**15 14 02.0**	**-1.0**
CERA				AML	AML		
	comp=E,4230µm,0.8s						
CERA				AML	AML		
	comp=N,2675µm,0.6s						
CERA				AML	AML		
	comp=E,4405µm,0.8s						
CERA				AML	AML		
	comp=N,2805µm,0.5s						
CERA				AML	AML		
	comp=E,4225µm,0.8s						
CERA				AML	AML		
	comp=N,2675µm,0.6s						
CERA				AML	AML		
	comp=E,4405µm,0.8s						
CERA				AML	AML		
	comp=N,2805µm,0.5s						
CERA				AML	AML		
	comp=N,2675µm,0.6s						
CERA				AML	AML		
	comp=N,2805µm,0.5s						
CERA				AML	AML		
	comp=E,4225µm,0.8s						
CERA				AML	AML		
	comp=E,4405µm,0.8s						
RNI2	**Rionero Sannit**	**1.10**	**98**	P	**Pb**	**15 14 03.7**	**-0.6**
RNI2				AML	AML		
	comp=E,3590µm,0.7s						
RNI2				AML	AML		
	comp=N,3590µm,1.1s						
RNI2				AML	AML		
	comp=E,3715µm,0.7s						
RNI2				AML	AML		
	comp=N,3700µm,1.1s						
RNI2				AML	AML		
	comp=E,3590µm,0.7s						
RNI2				AML	AML		
	comp=N,3585µm,1.1s						
RNI2				AML	AML		
	comp=E,3715µm,0.7s						
RNI2				AML	AML		
	comp=N,3700µm,1.1s						
RNI2				AML	AML		
	comp=E,3715µm,0.7s						
RNI2				AML	AML		
	comp=E,3590µm,0.7s						
RNI2				AML	AML		
	comp=N,3700µm,1.1s						
RNI2				AML	AML		
	comp=N,3585µm,1.1s						
LPEL	**Lama dei Pelig**	**1.12**	**80**	P	**Pb**	**15 14 04.5**	**-0.2**
LPEL				AML	AML		
	comp=E,2135µm,0.7s						
LPEL				AML	AML		
	comp=N,1220µm,0.6s						
LPEL				AML	AML		
	comp=E,2135µm,0.7s						
LPEL				AML	AML		
	comp=N,1220µm,0.6s						
MODR	**Mondragone**	**1.14**	**129**	P	**Pb**	**15 14 04.4**	**-0.5**
MODR				AML	AML		
	comp=E,3075µm,0.6s						
MODR				AML	AML		
	comp=N,3610µm,0.5s						
MODR				AML	AML		
	comp=E,3075µm,0.6s						
MODR				AML	AML		
	comp=N,3610µm,0.5s						
MODR				AML	AML		
	comp=N,3610µm,0.5s						
MODR				AML	AML		
	comp=E,3075µm,0.6s						
MGAB	**Montegabbione**	**1.14**	**338**	P	**Pb**	**15 14 04.8**	**-0.2**
MGAB				AML	AML		
	comp=E,1110µm,0.5s						
MGAB				AML	AML		
	comp=N,1500µm,0.6s						
MGAB				AML	AML		
	comp=E,1110µm,0.5s						
MGAB				AML	AML		
	comp=N,1420µm,0.6s						
MGAB				AML	AML		
	comp=N,1500µm,0.6s						
MGAB				AML	AML		
	comp=N,1420µm,0.6s						
MGAB				AML	AML		
	comp=E,1110µm,0.5s						
MGAB				AML	AML		
	comp=E,1110µm,0.5s						
SACS	**San Casciano d**	**1.15**	**330**	P	**Pn**	**15 14 05.3**	**+0.1**
SACS				AML	AML		
	comp=E,681µm,0.7s						
SACS				AML	AML		
	comp=N,821µm,0.8s						
SACS				AML	AML		
	comp=E,696µm,0.7s						
SACS				AML	AML		
	comp=N,804µm,0.8s						
SACS				AML	AML		
	comp=E,681µm,0.7s						
SACS				AML	AML		
	comp=N,822µm,0.8s						
SACS				AML	AML		
	comp=E,697µm,0.7s						
SACS				AML	AML		
	comp=N,803µm,0.8s						
SACS				AML	AML		
	comp=E,681µm,0.7s						
SACS				AML	AML		
	comp=E,697µm,0.7s						
SACS				AML	AML		
	comp=N,822µm,0.8s						
SACS				AML	AML		
	comp=N,803µm,0.8s						
CESI	**CESI - Serrava**	**1.15**	**7**	P	**Pn**	**15 14 04.4**	**-0.9**
CESI				AML	AML		
	comp=E,356µm,0.4s						
CESI				AML	AML		
	comp=N,1265µm,1.3s						
CESI				AML	AML		
	comp=E,356µm,0.4s						
CESI				AML	AML		
	comp=N,1265µm,1.3s						
CESI				AML	AML		
	comp=E,356µm,0.4s						
CESI				AML	AML		
	comp=N,1265µm,1.3s						
ASSB	**Assisi San Ben**	**1.18**	**359**	P	**Pn**	**15 14 05.4**	**-0.3**
ASSB				AML	AML		
	comp=E,1124µm,0.8s						
ASSB				AML	AML		
	comp=N,1500µm,1.4s						
ASSB				AML	AML		
	comp=E,1124µm,0.8s						
ASSB				AML	AML		
	comp=N,1500µm,1.4s						
ASSB				AML	AML		
	comp=N,1500µm,1.4s						
ASSB				AML	AML		
	comp=E,1124µm,0.8s						
MIDA	**Miranda**	**1.18**	**100**	P	**Pn**	**15 14 04.6**	**-1.1**
MIDA				AML	AML		
	comp=E,1655µm,0.4s						
MIDA				AML	AML		
	comp=N,1825µm,0.7s						
MIDA				AML	AML		
	comp=E,1685µm,0.4s						
MIDA				AML	AML		
	comp=N,1745µm,0.6s						
MIDA				AML	AML		
	comp=E,1655µm,0.4s						
MIDA				AML	AML		
	comp=E,1685µm,0.4s						
MIDA				AML	AML		
	comp=N,1825µm,0.7s						
MIDA				AML	AML		
	comp=N,1745µm,0.6s						
VENT	**Ventotene**	**1.20**	**153**	P	**Pn**	**15 14 05.4**	**-0.3**
FDMO	**Fiordimonte**	**1.21**	**14**	P	**Pn**	**15 14 05.4**	**-0.6**
FDMO				AML	AML		
	comp=E,940µm,0.9s						
FDMO				AML	AML		
	comp=N,902µm,0.9s						
FDMO				AML	AML		
	comp=E,940µm,0.9s						
FDMO				AML	AML		
	comp=N,902µm,0.9s						
FDMO				AML	AML		
	comp=N,902µm,0.9s						
FDMO				AML	AML		
	comp=E,940µm,0.9s						
MAON	**Monte Argentar**	**1.30**	**296**	P	**Pn**	**15 14 06.9**	**-0.3**
MAON				AML	AML		
	comp=E,946µm,0.7s						
MAON				AML	AML		
	comp=N,617µm,0.8s						
MAON				AML	AML		
	comp=E,946µm,0.7s						
MAON				AML	AML		
	comp=N,618µm,0.8s						
MAON				AML	AML		
	comp=E,946µm,0.7s						
MAON				AML	AML		
	comp=N,618µm,0.8s						
SGG	**Gregorio Mates**	**1.34**	**110**	P	**Pn**	**15 14 08.3**	**+0.5**
SGG				AML	AML		
	comp=E,1115µm,0.7s						
SGG				AML	AML		
	comp=N,1040µm,0.7s						
SGG				AML	AML		
	comp=E,1115µm,0.7s						
SGG				AML	AML		
	comp=N,1040µm,0.7s						
SGG				AML	AML		
	comp=E,1115µm,0.7s						
SGG				AML	AML		
	comp=N,1040µm,0.7s						
PTRJ	**Pietraroja**	**1.46**	**109**	AML	AML		
	comp=N,2430µm,0.8s						
PTRJ				AML	AML		
	comp=E,1785µm,1.3s						
PTRJ				AML	AML		
	comp=N,2430µm,0.8s						
PTRJ				AML	AML		
	comp=E,1785µm,1.3s						
CING	**Cingoli**	**1.56**	**13**	P	**Pb**	**15 14 12.5**	**+0.3**
CING				AML	AML		
	comp=E,602µm,1.0s						
CING				AML	AML		
	comp=N,496µm,1.5s						
CING				AML	AML		
	comp=N,496µm,1.5s						
CING				AML	AML		
	comp=E,602µm,1.0s						
CASP	**Castiglione de**	**1.65**	**305**	P	**Pn**	**15 14 11.9**	**-0.1**
CASP				AML	AML		
	comp=E,306µm,0.6s						
CASP				AML	AML		
	comp=N,397µm,1.1s						
CASP				AML	AML		
	comp=E,306µm,0.6s						
CASP				AML	AML		
	comp=N,397µm,1.1s						
CIGN	**Sant'Elia a Pi**	**1.66**	**96**	P	**Pb**	**15 14 14.7**	**+0.8**
SMPL	**Sampolo**	**2.56**	**276**	P	**Pn**	**15 14 24.5**	**0.0**
SMPL				AML	AML		
	comp=E,2850µm,0.6s						
SMPL				AML	AML		
	comp=N,2930µm,0.5s						
SMPL				AML	AML		
	comp=E,2850µm,0.6s						
SMPL				AML	AML		
	comp=N,2930µm,0.5s						
SMPL				AML	AML		
	comp=E,2850µm,0.6s						
SMPL				AML	AML		
	comp=N,2930µm,0.5s						
PGF	**Pioggiola**	**2.83**	**285**	*e*P	**Pn**	**15 14 30.0**	**+1.6**
PGF				*e*Sn	**Sn**	**15 15 01.4**	**-0.8**
	comp=N,80nm,0.8s						
PGF	**Pioggiola**	**2.83**	**285**	*e*P	**Pn**	**15 14 30.0**	**+1.6**
PGF	**Pioggiola**	**2.83**	**285**	P	**Pn**	**15 14 29.9**	**+1.6**
NVLJ	**Novalja**	**3.13**	**30**	Sn	**Sn**	**15 15 10.6**	**+1.2**
VSL	**Villasalto**	**3.46**	**228**	P	**Pn**	**15 14 37.1**	**+0.3**
UDBI	**Udbina**	**3.48**	**39**	*e*Pn	**Pn**	**15 14 38.8**	**+1.5**
CGL	**Cagliari Serpe**	**3.60**	**227**	P	**Pn**	**15 14 39.3**	**+0.4**
STON	**Ston**	**3.84**	**73**	*e*Pn	**Pn**	**15 14 44.7**	**+2.7**
STON	**Ston**	**3.84**	**73**	*e*Pn	**Pn**	**15 14 44.3**	**+2.2**
TREB	**Trebinje**	**4.28**	**77**	*e*Pn	**Pn**	**15 14 49.9**	**+1.8**
HCY	**Herceg Novi**	**4.35**	**80**	*e*Pn	**Pn**	**15 14 51.0**	**+1.9**
SBF	**Sospel**	**4.36**	**299**	*e*P	**Pn**	**15 14 49.6**	**+0.3**
	SNR=19						
SBF				*e*Sn	**Sn**	**15 15 38.2**	**-1.5**
	comp=N,18nm,0.6s						
SBF	**Sospel**	**4.36**	**299**	*e*P	**Pn**	**15 14 49.6**	**+0.3**
	SNR=19						
BRY	**Bratogost**	**4.45**	**75**	*e*Pn	**Pn**	**15 14 53.9**	**+3.3**
UPM	**Unac-Piva**	**4.78**	**72**	*e*Pn	**Pn**	**15 14 58.4**	**+3.2**
LMR	**La Mourre**	**4.80**	**290**	*e*P	**Pn**	**15 14 56.9**	**+1.6**
	SNR=1.4						
LMR				*e*Sn	**Sn**	**15 15 48.4**	**-2.2**
LMR	**La Mourre**	**4.80**	**290**	*e*P	**Pn**	**15 14 56.9**	**+1.6**
	SNR=1.4						
DRME	**Dracevica, Mon**	**4.84**	**84**	*e*Pn	**Pn**	**15 14 58.5**	**+2.6**
ABTA	**Abfaltersbach**	**4.89**	**358**	*e*Pn	**Pn**	**15 14 58.4**	**+1.8**
	comp=N,9.4nm,0.9s						
ABTA	**Abfaltersbach**	**4.89**	**358**	P	**Pn**	**15 14 58.4**	**+1.8**
	comp=N,9.4nm,0.9s						
PDG	**Podgorica**	**4.91**	**81**	*e*Pn	**Pn**	**15 14 59.5**	**+2.8**
HAPS	**Han Pijesak,Bl**	**5.10**	**62**	*e*Pn	**Pn**	**15 15 01.4**	**+1.9**
SOKA	**Soboth**	**5.10**	**18**	*i* P	**Pn**	**15 15 01.6**	**+2.1**
	comp=N,1.7nm,0.6s						
SOKA	**Soboth**	**5.10**	**18**	P	**Pn**	**15 15 01.6**	**+2.1**
	comp=N,1.7nm,0.6s						
MBDF	**Montbardon**	**5.19**	**306**	*e*P	**Pn**	**15 15 03.6**	**+2.8**
	SNR=3.7						
MBDF				*e*S	**Sn**	**15 16 04.8**	**+4.4**
	comp=N,13nm,0.7s						
MBDF	**Montbardon**	**5.19**	**306**	*e*P	**Pn**	**15 15 03.6**	**+2.8**
	SNR=3.7						
MBDF				*e*S	**Sn**	**15 16 04.8**	**+4.4**
	comp=N,6.6nm,0.7s						
BBLS	**Lazići**	**5.32**	**66**	*e*Pn	**Pn**	**15 15 05.0**	**+2.5**
LPG	**La Plagne**	**5.64**	**312**	*e*P	Pn	15 15 12.6	+5.5
	SNR=4.5						
SMRF	**Simiane la Rot**	**5.64**	**294**	*e*P	**Pn**	**15 15 08.5**	**+1.6**
	SNR=5.9						
SMRF				*e*Sn	**Sn**	**15 16 08.2**	**-3.2**
	comp=N,8.9nm,0.9s						
SMRF	**Simiane la Rot**	**5.64**	**294**	*e*P	**Pn**	**15 15 08.5**	**+1.6**
	SNR=5.9						
LPL	**La Plagne**	**5.66**	**312**	*e*P	**Pn**	**15 15 11.9**	**+4.5**
	SNR=2.8						
LPL				*e*Sn	**Sn**	**15 16 05.7**	**-6.4**

	comp=N,2.2nm,0.3s						
LPL	**La Plagne**	**5.66**	**312**	*e*P	**Pn**	**15 15 11.9**	**+4.5**
	SNR=2.8						
DIVS	**Divibare**	**5.80**	**65**	*e*Pn	**Pn**	**15 15 11.0**	**+1.9**
ORIF	**Oris-en-Rattie**	**5.83**	**304**	*e*P	**Pn**	**15 15 14.0**	**+4.4**
	SNR=6.0						
ORIF				*e*Sn	**Sn**	**15 16 12.6**	**-3.5**
	comp=N,6.2nm,0.6s						
ORIF	**Oris-en-Rattie**	**5.83**	**304**	*e*P	**Pn**	**15 15 14.0**	**+4.4**
	SNR=6.0						
MOA	**Molln**	**6.09**	**10**	*e*Pn	**Pn**	**15 15 14.9**	**+1.8**
	comp=N,3.4nm,0.5s						
MOA	**Molln**	**6.09**	**10**	Pn	**Pn**	**15 15 14.9**	**+1.8**
	comp=N,3.4nm,0.5s						
GRUS	**Gruza**	**6.23**	**68**	*e*Pn	**Pn**	**15 15 17.4**	**+2.5**
SELS	**Selova**	**6.37**	**75**	*e*Pn	**Pn**	**15 15 18.4**	**+1.6**
CONA	**Conrad Observa**	**6.47**	**19**	*e*P	**Pn**	**15 15 20.8**	**+2.5**
	comp=N,2.5nm,0.6s						
CONA	**Conrad Observa**	**6.47**	**19**	P	**Pn**	**15 15 20.8**	**+2.5**
	comp=N,2.5nm,0.6s						
VIVF	**Saint-Julien-l**	**6.57**	**300**	*e*P	**Pn**	**15 15 22.5**	**+2.8**
VIVF				*e*Sn	**Sn**	**15 16 26.9**	**-7.3**
	comp=N,1.7nm,0.4s						
VIVF	**Saint-Julien-l**	**6.57**	**300**	*e*P	**Pn**	**15 15 22.5**	**+2.8**
BARS	**Barje**	**6.82**	**79**	*e*Pn	**Pn**	**15 15 24.5**	**+1.4**
LASF	**Ste Croix**	**6.85**	**292**	*e*P	**Pn**	**15 15 23.9**	**+0.4**
	SNR=2.8						
BOVS	**Bovan**	**6.86**	**72**	*e*Pn	**Pn**	**15 15 27.0**	**+3.4**
KHC	**Kasperske Hory**	**7.30**	**5**	*e*PN	**Pn**	**15 15 31.8**	**+2.2**
KHC				*e*x	x	15 15 42.9	
KHC				*e*SN	**Sn**	**15 16 51.4**	**-0.7**
KHC	**Kasperske Hory**	**7.30**	**5**	Pn	**Pn**	**15 15 31.8**	**+2.2**
KHC				Sn	**Sn**	**15 16 51.4**	**-0.7**
HAU	**Haudompre**	**7.62**	**326**	*e*Pn	**Pn**	**15 15 30.8**	**-3.2**
MTLF	**Montolieu**	**7.88**	**284**	*e*P	**Pn**	**15 15 41.3**	**+3.8**
MTLF	**Montolieu**	**7.88**	**284**	*e*P	**Pn**	**15 15 41.3**	**+3.8**
SMF	**Signal de Mont**	**7.96**	**310**	*e*P	**Pn**	**15 15 41.8**	**+3.2**
	SNR=3.1						
SMF	**Signal de Mont**	**7.96**	**310**	*e*P	**Pn**	**15 15 41.8**	**+3.2**
	SNR=3.1						
LOR	**Lormes**	**8.31**	**314**	*e*P	**Pn**	**15 15 47.2**	**+3.7**
	SNR=2.0						
LOR	**Lormes**	**8.31**	**314**	*e*P	**Pn**	**15 15 47.2**	**+3.7**
	SNR=2.0						
AVF	**Avril sur Loir**	**8.32**	**309**	*e*P	**Pn**	**15 15 47.6**	**+4.1**
	SNR=3.4						
AVF	**Avril sur Loir**	**8.32**	**309**	*e*P	**Pn**	**15 15 47.6**	**+4.1**
	SNR=3.4						
CAF	**Calviac**	**8.33**	**295**	*e*P	**Pn**	**15 15 46.4**	**+2.6**
CAF	**Calviac**	**8.33**	**295**	*e*P	**Pn**	**15 15 46.4**	**+2.6**
RJF	**Les Rejaudoux**	**8.82**	**297**	*e*P	**Pn**	**15 15 53.3**	**+2.9**
RJF	**Les Rejaudoux**	**8.82**	**297**	*e*P	**Pn**	**15 15 53.3**	**+2.9**
ETSF	**Etsaut**	**9.87**	**280**	*e*Pn	**Pn**	**15 16 01.7**	**-3.2**
	SNR=1.4						

MEX 09 15:24:32.2±0.3**,16°.02N**×**98°.51W,h16**^{km}±49^{km}**,MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.52**	**45**	*i* P	Pg	15 24 40.9	-1.7
PNIG				*e*S	Sg	15 24 47.8	-1.9
TLIG	**Tlapa**	**1.54**	**358**	*e*P	Pn	15 24 55.6	-3.5
TLIG				*e*S	Sn	15 25 13.6	-5.2
VHO	**Vista Hermosa**	**2.00**	**58**	*i* P	Pn	15 25 03.1	-2.4
VHO				*e*S	Sn	15 25 25.9	-4.5

ISCJB ***09*** *15:26:09.7±0.9, 21°.28S±0°.10×178°.6W±0°.1, h500*^{km}*, mb3.8/8, Error ellipse: s-maj=17.8km s-min=12.9km az=14.4*

IDC ***09*** *15:26:11.8±2.1, 21°.10S×178°.52W, h522*^{km}*±23*^{km}*, mb3.4/8, mb1 3.4/11, mb1mx3.1/46, mbtmp4.3/11, Error ellipse: s-maj=23.5km s-min=20.2km az=153.0*

ISC 09 15:26:10.4±0.9**,21°.4S**±0°.1×**178°.5W**±0°.1**,h500**^{km}**,n16,** σ**2**^{s}**.12**/16**,mb3.9**/8**,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**9.78**	**42**	P	**P**	**15 28 26.0**	**+0.3**
	1.7nm,0.3s,baz=225,slow=1.5,SNR=7.6						
DZM	**Mont Dzumac**	**14.04**	**264**	P	**P**	**15 29 12.1**	**+1.4**
	0.2nm,0.3s,baz=204,slow=19,SNR=2.6						
URZ	**Urewera**	**17.26**	**192**	P	**P**	**15 29 45.0**	**+1.3**
	0.6nm,0.3s,baz=291,slow=2.3,SNR=5.8						
URZ				S	**S**	**15 32 33.5**	**-4.7**
	0.1nm,0.3s,baz=45,slow=13,SNR=2.2						
CTA	**Charters Tower**	**32.98**	**266**	P	**P**	**15 32 03.7**	**+0.2**
	2.9nm,0.4s,baz=88,slow=11,SNR=13						
STKA	**Stephens Creek**	**37.02**	**245**	P	**P**	**15 32 38.3**	**+1.1**
	0.8nm,0.6s,baz=87,slow=14,SNR=3.6						
ASAR	**Alice Springs**	**43.90**	**258**	P	**P**	**15 33 32.1**	**-0.3**
	2.0nm,0.5s,baz=92,slow=8.1,SNR=80						
ASAR				PcP	**pP**	**15 35 06.6**	**+1.8**
	0.5nm,0.6s,baz=102,slow=4.1,SNR=9.3						
JAY	**Jayapura**	**43.91**	**290**	P	**P**	**15 33 31.1**	**-1.5**
	11nm,0.7s,baz=194,slow=7.9,SNR=6.0						
WRA	**Warramunga Arr**	**44.05**	**263**	P	**P**	**15 33 32.6**	**-1.0**
	0.8nm,0.3s,baz=94,slow=6.7,SNR=50						
SIJI	**Sorong**	**53.04**	**286**	P	**P**	**15 34 39.4**	**-1.3**
	14nm,0.8s,baz=73,slow=3.8,SNR=8.1						
MAW	**Mawson**	**80.60**	**200**	P	**P**	**15 37 31.7**	**+1.7**
	1.1nm,0.8s,baz=141,slow=6.5,SNR=3.4						
CMAR	**Chiang Mai Arr**	**89.99**	**290**	P	**P**	**15 38 15.7**	**-0.9**
	0.4nm,0.4s,baz=151,slow=2.1,SNR=4.1						
BVAR	**Borovoye Array**	**119.46**	**320**	PKP	**PKPdf**	**15 43 59.2**	**-3.3**
	0.4nm,0.3s,baz=90,slow=2.9,SNR=4.3						
HFS	**Hagfors**	**140.32**	**350**	PKhKP	PKPpre	15 44 33.5	
	0.6nm,0.4s,baz=10,slow=3.2,SNR=4.1						
AKASG	**Malin Array Be**	**143.55**	**330**	PKhKP	PKPpre	15 44 42.9	
	1.6nm,0.4s,baz=48,slow=4.6,SNR=9.6						
BRTR	**Keskin Array B**	**147.09**	**311**	PKPbc	**PKPdf**	**15 44 55.1**	**+0.9**
	0.7nm,0.5s,baz=128,slow=6.1,SNR=4.1						
MMAI	**Mount Meron Ar**	**147.85**	**298**	PKPbc	**PKPdf**	**15 44 58.3**	**+2.8**
	1.6nm,0.5s,baz=64,slow=6.6,SNR=3.7						

JMA ***09*** *15:36:48.2±0.4, 45°.62N×151°.58E, h30*^{km}*, M3.9*

SKHL 09 15:36:47.1±1.0**,45°.18N**×**151°.99E,h54**^{km}±5^{km}**,mb4.3**/3**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.92**	**273**	*i* P	Pn	15 37 31.0	+0.1
KUR				AMB	AMB	15 37 31.0	
	22nm,0.2s						
KUR				AMB	AMB	15 37 31.0	
	5.0nm,0.2s						
KUR				AMB	AMB	15 37 31.0	
	34nm,0.2s						
KUR				*i* S	Sn	15 38 03.0	-1.7
KUR				A	A	15 38 08.0	
	153nm,0.3s						
KUR				A	A	15 38 08.0	
	72nm,0.3s						
SHO	**Shikotan**	**3.92**	**252**	*i* P	Pn	15 37 45.0	+0.3
SHO				AMB	AMB	15 37 47.0	
	6.0nm,0.3s						
SHO				AMB	AMB	15 37 47.0	
	15nm,0.3s						
SHO				*i* S	Sn	15 38 28.0	-1.3
SHO				A	A	15 38 31.0	
	44nm,0.2s						
SHO				A	A	15 38 31.0	
	17nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**4.52**	**258**	*i* P	Pn	15 37 53.0	0.0
YUK				AMB	AMB	15 37 55.0	
	35nm,0.4s						
YUK				*e*S	Sn	15 38 43.0	-1.2
YUK				A	A	15 38 49.0	
	150nm,0.6s						
YUK				A	A	15 38 49.0	
	222nm,0.6s						
LAGR	**Lagunnoye**	**4.57**	**258**	*e*S	Sn	15 38 45.0	-0.4
GRPR	**Tuman**	**4.60**	**257**	*e*P	Pn	15 37 55.0	+1.0
GRPR				*e*S	Sn	15 38 46.0	-0.1
NEM2	**Nemuro 2**	**4.84**	**250**	P	Pn	15 37 56.9	-0.4
NEM2				*e*S	Sn	15 38 47.6	-4.4
GLVR	**Golovnino**	**4.85**	**255**	*e*P	Pn	15 37 58.0	+0.5
GLVR				*e*S	Sn	15 38 52.0	-0.3
JRA	**Rausu**	**5.06**	**258**	P	Pn	15 38 01.8	+1.4
JNK	**Nakash**	**5.45**	**256**	P	Pn	15 38 06.5	+0.8
JNK				*e*S	Sn	15 39 03.5	-3.5
JAK	**Akkeshi**	**5.69**	**250**	P	Pn	15 38 08.6	-0.3
JAK				*e*S	Sn	15 39 08.8	-4.1
JTKR	**Abashiri--Toko**	**5.90**	**261**	P	Pn	15 38 13.3	+1.5
JAR	**Ashorobuto**	**6.20**	**255**	P	Pn	15 38 16.9	+0.9
JAR				*e*S	Sn	15 39 22.1	-3.3
JMP	**Maruseppu**	**6.27**	**262**	P	Pn	15 38 18.9	+1.9
JCH	**Churui**	**6.74**	**251**	P	Pn	15 38 23.4	0.0
JCH				*e*S	Sn	15 39 34.0	-4.7
JNBK	**Urakawa-nobuka**	**7.29**	**250**	P	Pn	15 38 30.8	-0.1
JNBK				*e*S	Sn	15 39 45.8	-6.5
JBT2	**Biratori 2**	**7.35**	**254**	P	Pn	15 38 31.9	+0.2
JKB	**Kayabe**	**8.61**	**251**	*e*S	Sn	15 40 16.5	-8.1

ISCJB ***09*** *15:40:20.7±0.3, 0°.88N±0°.07×29°.11W±0°.05, h16*^{km}*, mb4.5/40, MS3.9/40, Error ellipse: s-maj=10.9km s-min=6.9km az=156.7*

BJI ***09*** *15:40:20.0, 0°.80N×29°.10W, h10*^{km}*, mB5.3/2, Ms5.5/1, Ms7 5.3/1*

IDC ***09*** *15:40:20.1±0.5, 0°.83N×29°.13W, h0*^{km}*, mb4.3/22, mb1 4.5/22, mb1mx4.2/55, mbtmp4.3/22, MS3.8/39, Ms1 3.8/39, ms1mx3.7/59, Error ellipse: s-maj=17.6km s-min=11.9km az=149.0*

NEIC ***09*** *15:40:21.2±0.2, 0°.82N×29°.13W, h10*^{km}*, mb4.8/20, Error ellipse: s-maj=9.0km s-min=5.6km az=147.0*

ISC 09 15:40:22.2±0.4**,0°.84N**±0°.09×**29°.15W**±0°.08**,h16**^{km}**,n103,** σ**1**^{s}**.33**/72**,mb4.6**/40**,MS3.9**/40**,Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RCBR	**Riachuelo**	**9.45**	**225**	*e*Pn	**Pn**	**15 42 36.0**	**-1.9**
SACV	**Santiago Islan**	**15.07**	**21**	*e*Pn	**Pn**	**15 43 52.5**	**-2.2**
	71nm,0.6s						
H10N3	**ASCENSION HYDR**	**16.96**	**121**	T	T	16 01 46.1	
	baz=300,slow=75,SNR=538						
H10N2	**ASCENSION HYDR**	**16.97**	**121**	T	T	16 01 48.0	
	baz=300,slow=75,SNR=1993						
H10N1	**ASCENSION HYDR**	**16.98**	**121**	T	T	16 01 48.4	
	baz=300,slow=75,SNR=672						
H10S3	**ASCENSION HYDR**	**17.40**	**124**	T	T	16 02 22.5	
	baz=303,slow=75,SNR=617						
H10S1	**ASCENSION HYDR**	**17.41**	**124**	T	T	16 02 23.6	
	baz=303,slow=75,SNR=878						
H10S2	**ASCENSION HYDR**	**17.42**	**124**	T	T	16 02 24.5	
	baz=303,slow=75,SNR=752						
LIC	**Lamto**	**24.66**	**77**	*e*P	**P**	**15 45 42.8**	**+0.3**
	114nm,1.0s						
TIC	**Toumodi**	**24.75**	**76**	*e*P	**P**	**15 45 43.5**	**+0.1**
DBIC	**Dimbokro**	**24.91**	**76**	P	**P**	**15 45 44.9**	**0.0**
	85nm,0.9s,baz=242,slow=11,SNR=22						
DBIC				LR	LR	15 53 35.5	
	comp=Z,241nm,19.1s,baz=240,slow=32						
DBIC	**Dimbokro**	**24.91**	**76**	*e*P	**P**	**15 45 43.7**	**-1.1**
	116nm,1.1s						
KIC	**Kosan Boka**	**24.96**	**77**	*e*P	**P**	**15 45 45.0**	**-0.3**
	119nm,1.0s						
KOWA	**Kowa**	**28.31**	**60**	P	**P**	**15 46 15.4**	**0.0**
	16nm,0.8s,baz=244,slow=10.0,SNR=17						
KOWA				LR	LR	15 56 11.6	
	comp=Z,394nm,18.9s,baz=220,slow=34						
KOWA	**Kowa**	**28.31**	**60**	*e*P	**P**	**15 46 14.3**	**-1.1**
	16nm,0.8s						
TOA0	**Torodi Ar. Sit**	**32.91**	**67**	*e*P	**P**	**15 46 54.3**	**-1.7**
	24nm,1.3s						
TORD	**Torodi Ar. Bea**	**32.91**	**67**	P	**P**	**15 46 55.8**	**-0.3**
	6.5nm,0.8s,baz=251,slow=9.7						
TORD				LR	LR	15 58 02.0	
	comp=Z,300nm,20.8s,baz=280,slow=32						
H05S1	**Guadeloupe/Mar**	**34.11**	**295**	T	T	16 22 47.2	
	SNR=22						
H05N1	**Guadeloupe/Mar**	**35.01**	**298**	T	T	16 23 54.3	
	SNR=12						
SAML	**Samuel**	**35.27**	**253**	*e*P	**P**	**15 47 16.6**	**0.0**
	12nm,0.9s						
SIV	**San Ignacio**	**35.68**	**241**	P	**P**	**15 47 20.7**	**+0.5**
	6.3nm,0.9s,baz=87,slow=10,SNR=23						
PSMA	**Santa Maria**	**36.17**	**5**	*e*T	T	16 25 07.1	
PSMN	**Pico do Norte,**	**36.19**	**6**	*e*T	T	16 25 07.5	
CPUP	**Villa Florida**	**38.32**	**223**	P	**P**	**15 47 42.7**	**+0.3**
	6.8nm,1.2s,baz=25,slow=9.8,SNR=4.0						
CPUP				LR	LR	16 03 15.3	
	comp=Z,790nm,19.1s,baz=48,slow=36						
MDT	**Midelt**	**39.31**	**34**	P	**P**	**15 47 52.3**	**+1.6**
	4.7nm,0.8s,baz=228,slow=8.8,SNR=7.8						
MDT				LR	LR	16 02 23.6	
	comp=Z,238nm,19.9s,baz=176,slow=34						
TAM	**Tamanrasset**	**40.14**	**55**	*e*P	**P**	**15 47 58.0**	**+0.1**
	6.0nm,1.0s						
H09N1	**TRISTAN DA CUN**	**40.82**	**159**	T	T	16 31 43.5	
	SNR=11						
H09W1	**TRISTAN DA CUN**	**40.84**	**159**	T	T	16 31 42.7	
	SNR=9.0						
LPAZ	**La Paz**	**42.06**	**244**	P	**P**	**15 48 15.5**	**+1.1**
	9.1nm,0.8s,baz=41,slow=4.9,SNR=28						
LPAZ				LR	LR	16 05 23.7	
	comp=Z,279nm,18.3s,baz=90,slow=36						
LPAZ	**La Paz**	**42.06**	**244**	*e*P	**P**	**15 48 14.3**	**-0.1**
	13nm,0.9s						
ESDC	**Sonseca Array**	**44.96**	**28**	P	**P**	**15 48 37.5**	**+0.8**
	2.7nm,0.7s,baz=226,slow=8.8,SNR=21						
ES19	**SONSECA Array**	**45.01**	**28**	*e*P	**P**	**15 48 37.0**	**-0.1**
ROSC	**El Rosal**	**45.28**	**276**	P	**P**	**15 48 40.6**	**+0.6**
	11nm,0.5s,baz=217,slow=20,SNR=4.0						
ROSC				LR	LR	16 06 17.2	
	comp=Z,115nm,20.1s,baz=120,slow=34						
ROSC	**El Rosal**	**45.28**	**276**	*e*P	**P**	**15 48 40.0**	**0.0**
	9.7nm,0.7s						
GO02	**Mina Guanaco**	**46.88**	**234**	*e*P	**P**	**15 48 52.2**	**-0.3**
	38nm,1.4s						
NNA	**Nana**	**49.04**	**253**	LR	LR	16 09 11.5	
	comp=Z,65nm,19.1s,baz=14,slow=35						
KEST	**Kesra**	**49.82**	**42**	P	**P**	**15 49 15.8**	**+1.1**
	2.4nm,0.7s,baz=262,slow=7.0,SNR=3.5						
KEST				LR	LR	16 10 49.3	
	comp=Z,213nm,19.7s,baz=231,slow=37						
TSUM	**Tsumeb**	**49.99**	**116**	P	**P**	**15 49 17.6**	**+1.4**
	3.7nm,0.9s,baz=292,slow=5.5,SNR=4.0						
VAE	**Valguarnera**	**54.18**	**43**	LR	LR	16 13 10.9	
	comp=Z,136nm,18.0s,baz=324,slow=36						
PLCA	**Paso Flores**	**55.91**	**217**	LR	LR	16 13 19.8	
	comp=Z,130nm,19.2s,baz=100,slow=35						
DAVOX	**Davos/Dischmat**	**57.02**	**31**	LR	LR	16 13 03.1	
	comp=Z,77nm,18.2s,slow=34						
LBTB	**Lobatse**	**58.83**	**120**	P	**P**	**15 50 20.2**	**-0.3**
	4.0nm,0.8s,baz=294,slow=3.8,SNR=4.4						
BOSA	**Boshof**	**59.68**	**124**	P	**P**	**15 50 25.8**	**-0.7**
	7.7nm,1.1s,baz=309,slow=3.3,SNR=3.6						
BOSA				LR	LR	16 10 50.2	
	comp=Z,125nm,21.4s,baz=224,slow=31						
TTG	**Podgorica**	**59.92**	**40**	*e*P	**P**	**15 50 26.9**	**-0.7**
	8.3nm,1.1s						
GOGA	**Godfrey**	**60.28**	**309**	*e*P	**P**	**15 50 29.3**	**-1.0**
	11nm,1.3s						
GEA0	**GERESS Array S**	**60.32**	**31**	*e*P	**P**	**15 50 29.4**	**-0.9**
GERES	**GERESS Array B**	**60.32**	**31**	P	**P**	**15 50 30.5**	**+0.1**
	1.2nm,0.7s,baz=224,slow=5.6,SNR=7.2						
GERES				LR	LR	16 14 56.0	
	comp=Z,70nm,18.7s,baz=268,slow=34						
FNA	**Florina**	**60.52**	**42**	*e*P	**P**	**15 50 32.7**	**+0.9**
	8.6nm,0.9s						
IDI	**Anoyia**	**60.74**	**49**	LR	LR	16 18 52.6	
	comp=Z,119nm,18.1s,baz=260,slow=38						
DIVS	**Divibare**	**61.23**	**38**	*e*P	**P**	**15 50 37.0**	**+0.3**
	3.7nm,0.8s						
TKL	**Tuckaleechee C**	**61.33**	**311**	LR	LR	16 11 15.5	
	comp=Z,128nm,21.8s,baz=110,slow=30						
VRAC	**Vranov**	**62.12**	**32**	LR	LR	16 17 17.9	
	comp=Z,40nm,18.6s,baz=246,slow=36						
MLR	**Muntele Rosu**	**65.62**	**39**	P	**P**	**15 51 06.0**	**+0.3**
	1.8nm,1.1s,baz=6.2,slow=2.2,SNR=3.5						
MLR				LR	LR	16 18 44.3	
	comp=Z,19nm,21.5s,baz=247,slow=35						
MLR	**Muntele Rosu**	**65.62**	**39**	*e*P	**P**	**15 51 05.7**	**-0.1**
	15nm,1.3s						
KMBO	**Kilima Mbogo**	**66.43**	**92**	LR	LR	16 16 26.7	
	comp=Z,101nm,19.4s,baz=88,slow=33						
EIL	**Elat**	**67.22**	**58**	LR	LR	16 21 50.5	
	comp=Z,226nm,18.1s,baz=264,slow=37						
NB2	**NORSAR Subarra**	**67.45**	**20**	P	**P**	**15 51 20.5**	**+3.5**
	comp=Z,15nm,2.0s,baz=223,slow=6.5						
NOA	**NORSAR Array B**	**67.45**	**20**	LR	LR	16 17 47.1	
	comp=Z,50nm,19.1s,baz=235,slow=33						
HFS	**Hagfors**	**67.70**	**22**	LR	LR	16 16 28.6	
	comp=Z,60nm,21.2s,baz=236,slow=32						
MMAI	**Mount Meron Ar**	**68.36**	**55**	LR	LR	16 21 07.5	
	comp=Z,47nm,20.3s,baz=260,slow=36						
BRTR	**Keskin Array B**	**68.78**	**47**	P	**P**	**15 51 26.3**	**+0.3**
	comp=Z,2.1nm,0.9s,baz=212,slow=4.4,SNR=6.9						
BRTR				LR	LR	16 23 11.9	
	comp=Z,68nm,18.9s,baz=256,slow=37						
BR131	**Keskin Array S**	**68.79**	**47**	*e*P	**P**	**15 51 25.7**	**-0.2**
L40A	**Anamosa**	**69.00**	**315**	*e*P	**P**	**15 51 27.4**	**+0.3**
	comp=Z,8.2nm,0.8s						
KIEV	**Kiev**	**69.83**	**35**	*e*P	**P**	**15 51 31.8**	**-0.2**
	comp=Z,7.5nm,1.1s						
AKASG	**Malin Array Be**	**69.84**	**35**	P	**P**	**15 51 31.8**	**-0.3**
	comp=Z,4.3nm,0.7s,baz=244,slow=6.2,SNR=8.1						
D36A	**Goodland**	**71.97**	**320**	*e*P	**P**	**15 51 46.5**	**+1.3**
	comp=Z,9.7nm,0.9s						
VNA1	**Neumayer--Stat**	**72.68**	**173**	P	**P**	**15 51 53.3**	**+4.5**
VNA1	**Neumayer--Stat**	**72.68**	**173**	PKiKP	**PKiKP**	**15 57 48.7**	**-0.8**
VNA3	**Neumayer Olymp**	**73.07**	**174**	P	**P**	**15 51 52.8**	**+1.6**
FINES	**FINESS Array B**	**73.34**	**24**	P	**P**	**15 51 53.4**	**+0.5**
	comp=Z,2.1nm,0.9s,baz=230,slow=4.7,SNR=4.5						
FINES				LR	LR	16 20 46.3	
	comp=Z,94nm,20.6s,baz=272,slow=33						
SNAA	**Sanae**	**74.35**	**172**	P	**P**	**15 51 59.8**	**+1.1**
SNAA	**Sanae**	**74.35**	**172**	P	**P**	**15 51 59.7**	**+0.9**
	comp=Z,2.2nm,0.8s,baz=326,slow=5.5,SNR=8.6						
SNAA	**Sanae**	**74.35**	**172**	*e*P	**P**	**15 51 59.6**	**+0.9**
	comp=Z,5.8nm,1.1s						
ULM	**Lac du Bonnet**	**74.65**	**322**	LR	LR	16 19 28.1	
	comp=Z,84nm,21.8s,baz=314,slow=31						
RAYN	**Ar Rayn**	**75.60**	**66**	P	**P**	**15 52 05.1**	**-1.8**
	comp=Z,3.3nm,0.9s						
TXAR	**Lajitas Array**	**76.11**	**300**	P	**P**	**15 52 09.6**	**-0.2**
	comp=Z,1.3nm,0.9s,baz=122,slow=7.6,SNR=10						
TXAR				LR	LR	16 24 03.0	
	comp=Z,48nm,21.8s,baz=0.0,slow=34						
TX31	**Lajitas Ar. Si**	**76.11**	**300**	*e*P	**P**	**15 52 09.8**	**0.0**
KVAR	**Kislovodsk Arr**	**76.41**	**45**	LR	LR	16 27 50.0	
	comp=Z,38nm,20.0s,slow=37						
KBZ	**Khabaz**	**76.50**	**45**	LR	LR	16 27 20.9	
	comp=Z,59nm,21.2s,baz=238,slow=37						
GNI	**Garni**	**77.17**	**49**	LR	LR	16 27 40.1	
	comp=Z,60nm,20.7s,baz=254,slow=37						
SDCO	**Great Sand Dun**	**78.70**	**308**	*e*P	**P**	**15 52 24.5**	**0.0**
	comp=Z,1.7nm,1.0s						
ANMO	**Albuquerque**	**79.12**	**305**	LR	LR	16 22 36.7	
	comp=Z,126nm,20.7s,baz=93,slow=32						
RPN	**Rapa Nui**	**81.64**	**243**	LR	LR	16 25 21.2	
	comp=Z,56nm,19.7s,baz=93,slow=33						
PDAR	**Pinedale Array**	**82.39**	**313**	P	**P**	**15 52 45.6**	**+1.5**
	comp=Z,0.6nm,0.7s,baz=76,slow=7.8,SNR=4.6						
PDAR				LR	LR	16 26 19.0	
	comp=Z,23nm,19.4s,baz=144,slow=34						
MTPU	**Mount Pierson**	**83.99**	**308**	*e*P	**P**	**15 52 52.5**	**-0.1**
	comp=Z,3.6nm,1.2s						
YKA	**Yellowknife Ar**	**87.16**	**332**	P	**P**	**15 53 08.5**	**+1.2**
	comp=Z,0.4nm,0.9s,baz=96,slow=5.7,SNR=3.0						
YKA				LR	LR	16 27 43.4	
	comp=Z,6.2nm,22.0s,baz=174,slow=33						
AKTO	**Aktyubinsk**	**87.55**	**40**	LR	LR	16 35 58.4	
	comp=Z,21nm,18.8s,baz=289,slow=38						
WBSM	**Bird Springs**	**88.70**	**305**	*e*P	**P**	**15 53 16.3**	**+0.7**
NVAR	**Mina Array Bea**	**88.82**	**308**	P	**P**	**15 53 14.9**	**-1.2**
	comp=Z,0.6nm,0.7s,baz=115,slow=5.5,SNR=4.8						
NVAR				LR	LR	16 28 08.2	
	comp=Z,58nm,19.6s,baz=241,slow=32						
YBH	**Yreka Blue Hor**	**92.11**	**312**	LR	LR	16 30 18.7	
	comp=Z,62nm,21.2s,baz=116,slow=32						
BVAR	**Borovoye Array**	**95.08**	**37**	LR	LR	16 35 15.0	
	comp=Z,38nm,21.9s,baz=332,slow=35						
AAK	**Ala-Archa**	**99.45**	**47**	LR	LR	16 43 45.2	
	comp=Z,28nm,18.2s,baz=316,slow=38						
KSH	**Kashi**	**101.10**	**50**	P	**Pdif**	**15 54 09.4**	**-2.7**
KSH				PP	**PP**	**15 58 20.0**	**-0.6**
KSH				SKS		16 04 47.3	
LZH	**Lanzhou**	**122.94**	**45**	*e*PKP	**PKPdf**	**15 59 14.2**	**-4.3**
LZH				LR	LR		
	comp=Z,480nm,15.7s						
LZH				LR	LR		
	comp=Z,720nm,19.5s						
HHC	**Hu-ho-hao-te**	**125.28**	**36**	*e*PKP	**PKPdf**	**15 59 22.8**	**0.0**
CD2	**Chengdu**	**125.29**	**50**	PKP	**PKPdf**	**15 59 20.5**	**-2.5**
CMAR	**Chiang Mai Arr**	**125.52**	**67**	PKP	**PKPdf**	**15 59 25.6**	**+1.9**
	comp=Z,1.4nm,0.9s,baz=295,slow=3.3,SNR=8.4						
GYA	**Guiyang**	**129.52**	**54**	*e*Pdif	**Pdif**	**15 56 16.8**	**-1.9**
GYA				PKP	**PKPdf**	**15 59 30.0**	**-1.3**
GYA				PP	**PP**	**16 01 42.3**	**+1.4**
GYA				AMB	AMB		
	comp=Z,120nm,7.8s						
NJ2	**Nanjing**	**135.43**	**40**	*e*PKP	**PKPdf**	**15 59 40.7**	**-1.4**
ASAR	**Alice Springs**	**151.98**	**145**	PKPbc	**PKPbc**	**16 00 17.6**	**0.0**
	comp=Z,3.4nm,0.9s,baz=202,slow=1.7,SNR=28						
AS31	**Alice Springs**	**151.98**	**145**	*e*PKPbc	**PKPbc**	**16 00 16.8**	**-0.8**
AS01	**Alice Springs**	**152.01**	**145**	*e*PKPbc	**PKPbc**	**16 00 17.1**	**-0.5**
WRA	**Warramunga Arr**	**155.06**	**141**	PKPab	**PKPab**	**16 00 39.7**	**-0.2**
	comp=Z,0.7nm,0.9s,baz=223,slow=3.6,SNR=5.6						

NNC 09 15:45:15.1±5.9**,39°.09N**×**75°.68E,h0**^{km}**,mb3.6,mpv3.1, 4C-1D,Error ellipse: s-maj=53.7km s-min=43.0km az=31.0,Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**1.92**	**299**	⇑Pn	Pn	15 45 49.0	-0.4
	1.0nm,0.1s						
SFK				⇑Sn	Sb	15 46 15.9	0.0
	27nm,0.2s						
MNAS	**Manas**	**4.17**	**326**	⇑Pn	Pn	15 46 21.4	+1.2
	4.0nm,0.5s						
MNAS				⇑Sn	Sn	15 47 11.6	+2.0
	2.8nm,0.4s						
KK31	**Karatay Array**	**5.60**	**317**	Pn	Pn	15 46 38.2	-1.5
	0.6nm,0.3s,baz=135,slow=13,SNR=5.9						
KK31				⇓Sn	Sn	15 47 41.1	-3.6
	1.1nm,0.3s,baz=144,slow=22,SNR=8.4						

CASC 09 15:59:59.1±1.3**,13°.09N**×**87°.62W,h177**^{km}±7^{km}**,MD3.6, ML3.4,Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**0.28**	**312**	*e*P	Pn	16 00 24.2	+1.3
LCND	**La Caˆ–ada**	**0.34**	**310**	*e*P	Pn	16 00 22.7	-0.3
LCND				*e*S	Sn	16 00 41.3	0.0
CNGN	**Cerro Negro**	**1.07**	**123**	*e*P	Pn	16 00 26.6	-0.5
CNGN				*e*S	Sn	16 00 49.4	+0.7
ESTN	**Estel**	**1.22**	**89**	*e*P	Pn	16 00 28.7	+0.3
MOMN	**Momotombo**	**1.25**	**122**	*e*P	Pn	16 00 29.1	+0.5
MOMN				*e*S	Sn	16 00 53.0	+1.6
COPN	**Copaltepe**	**1.35**	**132**	*e*P	Pn	16 00 29.7	+0.3
COPN				*e*S	Sn	16 00 53.6	+0.7
COPN				IAML		16 00 53.9	
	comp=Z,352nm,0.2s						
RCON	**San Juan de Ri**	**1.48**	**74**	*e*P	Pn	16 00 31.4	+0.6
LFRS	**El Faro**	**1.50**	**291**	*e*P	Pn	16 00 31.4	+0.5
LFRS				*e*S	Sn	16 00 56.1	+0.7
SNJE	**San Jose**	**2.08**	**292**	*e*P	Pn	16 00 37.4	+0.4
SNJE				*e*S	Sn	16 01 08.9	+2.5
SBLS	**San Blas**	**2.08**	**291**	*e*P	Pn	16 00 37.9	+0.8
IXG	**Ixpaco**	**2.96**	**292**	*e*P	Pn	16 00 47.8	+0.5

MAN 09 16:08:16.6,15°.72N×**120°.21E,h0**^{km}**,mb4.6,ML3.4,MS3.3, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCZP	**Santa Cruz**	**0.30**	**281**	*e*P	Pg	16 08 22.7	+0.4
SCZP				*e*S	Sb	16 08 28.7	-1.6
BOLP	**Bolinao**	**0.72**	**336**	*e*P	Pg	16 08 29.0	-1.4
BOLP				*e*S	Sb	16 08 41.2	-1.2
BALP	**Baler**	**1.31**	**89**	*e*P	Pg	16 08 41.1	-0.7
BALP				*e*S	Sn	16 09 00.4	0.0
ABRA	**Dolores**	**1.98**	**14**	*e*P	Pb	16 08 52.6	-0.9
ABRA				*e*S	Sg	16 09 20.2	0.0
APYP	**Conner**	**2.35**	**25**	*e*P	Pb	16 08 58.6	-1.2
APYP				*e*S	Sn	16 09 22.8	-3.2

MAN 09 16:14:01.6,11°.21N×**125°.56E,h25**^{km}**,mb4.7,ML3.5, MS3.4,1C-2D,Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.41**	**344**	*e*P	Pn	16 14 11.4	-0.6
BESP				*e*S	Sn	16 14 20.7	+1.9
PLP	**Palo**	**0.57**	**266**	⇑*e*P	Pb	16 14 13.3	+0.3

PLP				*i* S	Sn	16 14 23.5	+0.8
OCLP	**Ormoc**	**0.94**	**261**	*e*P	Pb	16 14 19.9	+0.6
OCLP				*e*S	Sn	16 14 36.0	+4.0
MSLP	**Maasin**	**1.27**	**213**	*e*P	Pn	16 14 23.4	-0.3
MSLP				*e*S	Sb	16 14 41.4	+0.6
SCPH	**Surigao**	**1.42**	**183**⇓	*e*P	Pn	16 14 23.2	-2.6
SCPH				*e*S	Sn	16 14 41.1	-2.6
CNP	**Catarman**	**1.56**	**326**	*e*P	Pn	16 14 27.3	-0.5
CNP				*e*S	Sb	16 14 48.8	-0.4
PVCP	**Virac**	**2.74**	**330**	*e*P	Pn	16 14 44.8	+0.7
PVCP				*e*S	Sn	16 15 16.2	-0.2
RCP	**Roxas**	**2.78**	**278**⇓	*e*P	Pn	16 14 45.9	+1.3
GUIM	**Jordan**	**2.97**	**259**	*e*P	Pn	16 14 45.0	-2.2
GUIM				*e*S	Sn	16 15 15.3	-6.8

MEX 09 16:17:11.8±0.3**,16°.38N**×**98°.34W,h25**^{km}±5^{km}**,MD3.7, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.20**	**86**	*i* P	Pb	16 17 16.4	-1.1
PNIG				*i* S	Sb	16 17 20.1	-1.3
TLIG	**Tlapa**	**1.20**	**349**	*e*P	Pn	16 17 30.7	-2.4
TLIG				*i* S	Sn	16 17 44.9	-3.8
VHO	**Vista Hermosa**	**1.68**	**66**	*e*P	Pn	16 17 37.5	-2.3
VHO				*e*S	Sn	16 17 57.5	-3.2

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*ISCJB **09** 16:29:40.5±1.3,5°.4S±0°.1×150°.5E±0°.3,h114^{km},mb3.5/6, Error ellipse: s-maj=41.2km s-min=12.5km az=21.5*

*IDC **09** 16:29:46.8±3.1,5°.64S×150°.43E,h164^{km}±28^{km},mb3.2/6, mb1 3.5/7,mb1mx3.1/46,mbtmp3.8/7,Error ellipse: s-maj=41.8km s-min=12.2km az=116.0*

ISC 09 16:29:41.5±1.3**,5°.6S**±0°.1×**150°.4E**±0°.3**,h114**^{km}**,n7,** σ**1^{s}.77**/10**,mb3.6**/6**,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**14.96**	**195**	P	**P**	**16 33 11.2**	**+1.3**
	0.1nm,0.3s,baz=27,slow=9.0,SNR=2.7						
WRA	**Warramunga Arr**	**21.16**	**226**	P	**P**	**16 34 18.2**	**+0.6**
	1.5nm,0.3s,baz=50,slow=11,SNR=36						
WRA				S	**S**	**16 38 04.1**	**-2.6**
	0.7nm,1.0s,baz=49,slow=16,SNR=3.0						
WRA				PcP	**PcP**	**16 38 18.8**	**-0.4**
	0.5nm,0.5s,baz=47,slow=2.0,SNR=5.7						
ASAR	**Alice Springs**	**23.99**	**220**	P	**P**	**16 34 47.0**	**+1.3**
	0.3nm,0.3s,baz=52,slow=9.0,SNR=21						
ASAR				S	**S**	**16 38 53.1**	**-1.4**
	0.9nm,0.9s,baz=42,slow=15,SNR=5.3						
KSRS	**Korea Array**	**47.68**	**336**	P	**P**	**16 38 07.8**	**+1.3**
	0.7nm,0.8s,baz=144,slow=8.5,SNR=4.6						
SONM	**Songino Array**	**65.75**	**329**	P	**P**	**16 40 15.7**	**+1.4**
	0.4nm,0.3s,baz=148,slow=6.3,SNR=3.4						
ILAR	**Eielson Array**	**83.79**	**23**	P	**P**	**16 41 55.9**	**-1.9**
	0.5nm,0.6s,baz=251,slow=4.8,SNR=6.7						
BVAR	**Borovoye Array**	**88.45**	**323**	P	**P**	**16 42 19.3**	**-1.5**
	0.2nm,0.4s,baz=88,slow=4.6,SNR=2.6						

IDC 09 16:51:10.6±4.9**,30°.52S**×**178°.84W,h0**^{km}**,mb3.3**/2**, mb1 3.6**/2**,mb1mx3.3**/44**,mbtmp3.3**/2**,Error ellipse: s-maj=150.4km s-min=21.1km az=140.0,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**1.49**	**33**	Pn	Pb	16 51 39.2	0.0
	58nm,0.3s,baz=156,slow=20,SNR=3.7						
RAO				Sn	Sg	16 51 58.4	-0.2
	33nm,0.3s,baz=90,slow=20,SNR=4.0						
ASAR	**Alice Springs**	**42.38**	**267**	P	P	16 59 06.6	-0.4
	0.3nm,0.6s,baz=106,slow=7.1,SNR=6.8						
WRA	**Warramunga Arr**	**43.38**	**273**	P	P	16 59 14.8	-0.3
	0.4nm,0.9s,baz=111,slow=8.1,SNR=5.6						
FINES	**FINESS Array B**	**145.00**	**339**	PKPbc	PKPbc	17 10 48.0	-0.4
	0.4nm,0.4s,baz=57,slow=5.1,SNR=4.0						

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*NIED **09** 16:56:00,38°.50N×141°.80E,h56^{km},Mw3.6 Best double couple: M$_0$2.97000×10^{14} NP1:φ$_s$251.00000°,δ33.00000°, λ129.00000°. NP2:φ$_s$27.00000°,δ65.00000°,λ67.00000°.*

*ISCJB **09** 16:56:18.2±0.8,38°.52N±0°.04×141°.79E±0°.10,h63^{km}±5^{km}, mb3.7/6,Error ellipse: s-maj=12.9km s-min=5.7km az=17.7*

*IDC **09** 16:56:19.4±2.4,38°.56N×141°.86E,h58^{km}±21^{km},mb3.3/6, mb1 3.4/11,mb1mx3.2/68,mbtmp3.6/11,ML3.3/4,Error ellipse: s-maj=30.0km s-min=16.1km az=89.0*

*JMA **09** 16:56:20.0±0.1,38°.54N×141°.72E,h54^{km}±1^{km},M3.7*

JMA Felt II J1.

ISC 09 16:56:18.9±1.3**,38°.54N**±0°.05×**141°.9E**±0°.1**,h48**^{km}±10^{km}**, n29,**σ**2^{s}.01**/34**,mb3.6**/6**,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIO	**Ouri**	**0.40**	**258**	P	**Pn**	**16 56 29.5**	**+0.6**
JIO				S	**Sn**	**16 56 35.9**	**-0.1**
OFUJ	**Ofunato**	**0.56**	**346**	P	**Pn**	**16 56 32.0**	**+1.2**
OFUJ				S	**Sn**	**16 56 40.2**	**+0.8**
JMK	**Ichinoseki**	**0.64**	**310**	P	**Pn**	**16 56 32.5**	**+0.6**
JMK				S	**Sn**	**16 56 41.2**	**0.0**
JOU	**Okura**	**0.94**	**260**	P	**Pn**	**16 56 35.7**	**-0.2**
JOU				S	**Sn**	**16 56 47.5**	**-0.8**
JOM	**Ohasama**	**1.03**	**335**	P	**Pn**	**16 56 37.8**	**+0.8**
JOM				S	**Sn**	**16 56 50.8**	**+0.4**
JMM	**Marumori**	**1.07**	**231**	P	**Pn**	**16 56 37.1**	**-0.4**
JMM				S	**Sn**	**16 56 50.0**	**-1.2**
JYK	**Kaneyama**	**1.23**	**289**	P	**Pn**	**16 56 39.7**	**0.0**
JRG	**Rokugo**	**1.28**	**313**	P	**Pn**	**16 56 40.7**	**+0.3**
JFK	**Kawauchi**	**1.40**	**214**	S	**Sn**	**16 56 58.4**	**-1.0**
JYS	**Shirataka**	**1.44**	**258**	P	**Pn**	**16 56 42.6**	**+0.1**
JYS				S	**Sn**	**16 56 59.9**	**-0.3**
JFT	**Otama**	**1.57**	**230**	P	**Pn**	**16 56 44.8**	**+0.5**
MJAR	**Matsushiro Arr**	**3.51**	**237**	P	**Pn**	**16 57 12.8**	**+1.8**
	1.5nm,0.3s,baz=35,slow=12,SNR=21						
MJAR				S	**Sn**	**16 57 59.2**	**+8.0**
	0.8nm,0.3s,baz=37,slow=17,SNR=2.9						
MAT	**Matsushiro**	**3.51**	**237**	P	**Pn**	**16 57 12.7**	**+1.7**
MAT				S	**Sn**	**16 57 56.2**	**+4.9**
ASAJ	**Asahikawa**	**5.60**	**6**	P	**Pn**	**16 57 40.4**	**+0.8**
	0.8nm,0.3s,baz=211,slow=11,SNR=14						
ASAJ				S	**Sn**	**16 58 40.3**	**-2.4**
	0.2nm,0.3s,baz=25,slow=14,SNR=1.5						
JHJ	**Hachijo jima 2**	**5.66**	**198**	P	**Pn**	**16 57 40.5**	**+0.1**
	4.2nm,0.3s,baz=133,slow=23,SNR=6.8						
JHJ				S	**Sn**	**16 58 40.6**	**-3.5**
	5.8nm,0.3s,baz=270,slow=20,SNR=4.0						
USRK	**Ussuriysk Ar.**	**9.32**	**311**	P	**Pn**	**16 58 30.6**	**+0.1**
	baz=124,slow=14						
KSRS	**Korea Array**	**11.04**	**269**	P	**Pn**	**16 58 53.7**	**-0.4**
	0.2nm,0.3s,baz=74,slow=14,SNR=3.5						
SEY	**Seymchan**	**25.25**	**11**	P	**P**	**17 01 39.3**	**-0.8**
	1.2nm,0.9s,baz=176,slow=13,SNR=3.3						
H11N2	**WAKE ISLAND Hy**	**28.66**	**124**	T	T	17 32 27.5	
	baz=316,slow=75,SNR=99						
H11N1	**WAKE ISLAND Hy**	**28.67**	**124**	T	T	17 32 28.2	
	baz=316,slow=75,SNR=153						
H11N3	**WAKE ISLAND Hy**	**28.68**	**124**	T	T	17 32 28.9	
	baz=316,slow=75,SNR=106						
H11S1	**WAKE ISLAND Hy**	**29.42**	**126**	T	T	17 33 26.1	
	baz=318,slow=76,SNR=84						
H11S3	**WAKE ISLAND Hy**	**29.42**	**126**	T	T	17 33 26.2	
	baz=318,slow=76,SNR=120						
H11S2	**WAKE ISLAND Hy**	**29.44**	**126**	T	T	17 33 27.3	
	baz=318,slow=76,SNR=96						
MKAR	**Makanchi Array**	**43.63**	**301**	P	**P**	**17 04 18.0**	**-0.5**
	0.9nm,0.8s,baz=83,slow=9.9,SNR=7.9						
KURBB	**Kurchatov Arra**	**45.36**	**307**	P	**P**	**17 04 31.6**	**-0.7**
	1.7nm,0.5s,baz=81,slow=8.2,SNR=17						
BVAR	**Borovoye Array**	**49.83**	**311**	P	**P**	**17 05 06.4**	**-0.4**
	0.3nm,0.3s,baz=87,slow=7.9,SNR=3.4						
WRA	**Warramunga Arr**	**58.59**	**188**	P	**P**	**17 06 10.4**	**-0.5**
	0.4nm,0.6s,baz=5.9,slow=7.1,SNR=8.5						
ASAR	**Alice Springs**	**62.32**	**188**	P	**P**	**17 06 35.9**	**-0.3**
	0.5nm,1.2s,baz=16,slow=4.8,SNR=4.7						

IDC 09 17:07:45.4±2.0**,10°.75S**×**123°.53E,h0**^{km}**,mb3.4**/1**, mb1 3.2**/3**,mb1mx3.1**/50**,mbtmp3.1**/3**,ML2.5**/2**,Error ellipse: s-maj=44.0km s-min=13.2km az=100.0,Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**0.56**	**14**	Pg	Pg	17 07 56.3	+0.3
	93nm,0.3s,baz=126,slow=7.2,SNR=54						
BATI				Lg	Lg	17 08 03.6	
	155nm,0.3s,baz=252,slow=20,SNR=38						
WRA	**Warramunga Arr**	**13.86**	**133**	Pn	Pn	17 11 02.2	-1.0
	0.0nm,0.3s,baz=304,slow=13,SNR=3.1						
WRA				Sn	Sn	17 13 29.0	-9.0
	0.1nm,0.3s,baz=316,slow=26,SNR=4.5						
ASAR	**Alice Springs**	**16.21**	**144**	Pn	Pn	17 11 35.5	+0.8
	0.0nm,0.3s,baz=318,slow=12,SNR=2.7						
ASAR				Sn	Sn	17 14 27.4	-8.0
	0.0nm,0.3s,baz=317,slow=23,SNR=3.2						
MKAR	**Makanchi Array**	**68.09**	**331**	P	P	17 18 47.0	-0.1
	0.1nm,0.5s,baz=128,slow=7.9,SNR=4.2						

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*JMA **09** 17:13:07.2±0.2,24°.78N×122°.69E,h131^{km}±2^{km},M1.8*

*TAP **09** 17:13:07.9,24°.84N×122°.67E,h126^{km}±1^{km},ML3.0,D*

*ISCJB **09** 17:13:08.1±0.6,24°.79N±0°.03×122°.70E±0°.02, h118^{km}±4^{km},Error ellipse: s-maj=5.1km s-min=2.9km az=171.9*

ISC 09 17:13:07.1±1.7**,24°.85N**±0°.06×**122°.69E**±0°.03**, h128**^{km}±10^{km}**,n63,**σ**0^{s}.94**/116**,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYNG	**Yonagunijimaku**	**0.46**	**150**	P	**Pn**	**17 13 26.1**	**+0.3**
YOJ	**Yonaguni jima**	**0.48**	**143**	*e*P	**Pn**	**17 13 25.8**	**-0.1**
	baz=140						
YOJ				*e*S	**Sn**	**17 13 40.3**	**+0.3**
	baz=140						
EOS1	**EOS1**	**0.59**	**240**	*e*P	**Pn**	**17 13 27.0**	**+0.5**
	baz=239						
EOS1				*e*S	**Sn**	**17 13 42.1**	**+0.9**
	baz=239						
TIPB	**Shuangxi**	**0.80**	**279**	*e*P	**Pn**	**17 13 28.4**	**+0.2**
	baz=279						
TIPB				*e*S	**Sn**	**17 13 42.7**	**-1.3**
	baz=279						
TWC	**Suao**	**0.80**	**253**	*e*P	**Pn**	**17 13 28.9**	**+0.8**
	baz=252						
TWC				*e*S	**Sn**	**17 13 43.5**	**-0.5**
	baz=252						
NWF	**Wu-fen Shan**	**0.86**	**285**	*e*P	**Pn**	**17 13 29.0**	**+0.3**
	baz=286						
NWF				*e*S	**Sn**	**17 13 42.5**	**-2.5**
	baz=286						
WFSB	**Wu-fen Shan**	**0.86**	**285**	*e*P	**Pn**	**17 13 28.9**	**+0.3**
	baz=286						
WFSB				*e*S	**Sn**	**17 13 42.4**	**-2.4**
	baz=286						
ILA	**Ilan**	**0.86**	**265**	*e*S	**Sn**	**17 13 43.8**	**-1.0**
	baz=264						
ENAH	**Nanao**	**0.90**	**244**	*e*S	**Sn**	**17 13 45.6**	**+0.2**
	baz=243						
TWE	**Neicheng**	**0.94**	**263**	*e*P	**Pn**	**17 13 29.8**	**+0.5**
	baz=262						
TWE				*e*S	**Sn**	**17 13 45.6**	**-0.5**
	baz=262						
NANB	**Nanao**	**0.95**	**244**	*e*P	**Pn**	**17 13 30.0**	**+0.5**
	baz=243						
NANB				*e*S	**Sn**	**17 13 46.2**	**-0.1**
	baz=243						
ENA	**Nanau**	**0.96**	**245**	*e*P	**Pn**	**17 13 29.9**	**+0.4**
	baz=243						
ENA				*e*S	**Sn**	**17 13 46.7**	**+0.2**
	baz=243						
SLBB	**Yuanshan**	**0.97**	**265**	*e*P	**Pn**	**17 13 30.0**	**+0.4**
	baz=264						
SLBB				*e*S	**Sn**	**17 13 46.1**	**-0.5**
	baz=264						
TWA	**Mucha**	**1.02**	**278**	*e*S	**Sn**	**17 13 47.0**	**-0.5**
	baz=278						
YM07	**YM07**	**1.03**	**289**	*e*P	**Pn**	**17 13 30.2**	**0.0**
	baz=289						
YM07				*e*S	**Sn**	**17 13 47.5**	**-0.2**
	baz=289						
ENTT	**Nioudou**	**1.04**	**259**	*e*S	**Sn**	**17 13 48.8**	**+0.9**
	baz=258						
IRIF	**Iriomote-Funau**	**1.07**	**118**	P	**Pn**	**17 13 30.6**	**0.0**
IRIF				*e*S	**Sn**	**17 13 48.0**	**-0.3**
YM10	**YM10**	**1.07**	**287**	*e*P	**Pn**	**17 13 31.6**	**+1.0**
	baz=287						
YM10				*e*S	**Sn**	**17 13 48.4**	**-0.1**
	baz=287						
YM04	**YM04**	**1.09**	**286**	*e*P	**Pn**	**17 13 31.1**	**+0.3**
	baz=286						
YM04				*e*S	**Sn**	**17 13 48.6**	**-0.2**
	baz=286						
NACB	**Ninganchiao**	**1.20**	**236**	*e*P	**Pn**	**17 13 32.1**	**+0.2**
	baz=235						
NACB				S	**Sn**	**17 13 50.3**	**-0.4**
	baz=235						
YHNB	**Yeheng**	**1.21**	**262**	*e*P	**Pn**	**17 13 32.4**	**+0.3**
	baz=261						
YHNB				S	**Sn**	**17 13 51.2**	**+0.3**
	baz=261						
NSK	**Sanguang**	**1.23**	**262**	*e*P	**Pn**	**17 13 32.6**	**+0.4**
	baz=262						
NSK				*e*S	**Sn**	**17 13 50.9**	**-0.4**
	baz=262						
TWD	**Chiawan**	**1.26**	**233**	*e*P	**Pn**	**17 13 33.3**	**+0.8**
	baz=232						
TWD				*e*S	**Sn**	**17 13 51.1**	**-0.5**
	baz=232						
NNSB	**Datong**	**1.26**	**251**	*e*P	**Pn**	**17 13 33.4**	**+0.7**
	baz=250						
NNSB				*e*S	**Sn**	**17 13 50.6**	**-1.4**
	baz=250						
NNSH	**Datong**	**1.26**	**251**	*e*P	**Pn**	**17 13 33.4**	**+0.8**
	baz=250						
NNSH				*e*S	**Sn**	**17 13 51.0**	**-1.0**
	baz=250						
NNS	**Nan Shan**	**1.27**	**252**	*e*P	**Pn**	**17 13 33.4**	**+0.7**
	baz=251						
NNS				*e*S	**Sn**	**17 13 51.6**	**-0.5**
	baz=251						
HATJ	**Hateruma jima**	**1.28**	**128**	*e*S	**Sn**	**17 13 53.0**	**+0.9**
JKRS	**Kuro-shima**	**1.34**	**117**	P	**Pn**	**17 13 34.1**	**+0.8**
JKRS				*e*S	**Sn**	**17 13 53.3**	**0.0**
ENLB	**Shoufeng**	**1.37**	**227**	*e*S	**Sn**	**17 13 54.6**	**+0.8**
	baz=226						
JIJ	**Ishigaki jima**	**1.40**	**110**	P	**Pn**	**17 13 34.4**	**+0.4**
JIJ				S	**Sn**	**17 13 53.7**	**-0.8**
WHF	**Hehuan Shan**	**1.48**	**242**	P	**Pn**	**17 13 36.1**	**+0.8**
	baz=241						
WHF				*e*S	**Sn**	**17 13 56.7**	**0.0**
	baz=241						
JISG	**Ishigakijimahi**	**1.49**	**100**	P	**Pn**	**17 13 35.3**	**+0.3**
JISG				*e*S	**Sn**	**17 13 55.5**	**-0.7**
TWT	**Tachien**	**1.50**	**247**	*e*P	**Pn**	**17 13 35.9**	**+0.5**
	baz=246						
TWT				*e*S	**Sn**	**17 13 57.1**	**+0.4**
	baz=246						
TDCB	**Techi**	**1.52**	**247**	*e*P	**Pn**	**17 13 36.6**	**+1.2**
	baz=246						
TDCB				*e*S	**Sn**	**17 13 56.1**	**-0.9**
	baz=246						
LIOB	**Emei**	**1.54**	**263**	*e*P	**Pn**	**17 13 35.9**	**+0.3**
	baz=262						
LIOB				*e*S	**Sn**	**17 13 57.1**	**-0.1**
	baz=262						
ESL	**Shilin**	**1.54**	**228**	*e*P	**Pn**	**17 13 36.7**	**+1.1**
	baz=227						
ESL				*e*S	**Sn**	**17 13 55.8**	**-1.5**
	baz=227						
NSTT	**Nanjuang**	**1.55**	**262**	*e*P	**Pn**	**17 13 35.9**	**+0.2**
	baz=262						
NSTT				*e*S	**Sn**	**17 13 56.9**	**-0.6**
	baz=262						
CHGB	**Renai**	**1.59**	**241**	P	**Pn**	**17 13 37.5**	**+1.1**
	baz=240						
CHGB				*e*S	**Sn**	**17 13 58.6**	**-0.1**
	baz=240						
EGFH	**Guangfu**	**1.65**	**225**	*e*S	**Sn**	**17 13 57.7**	**-1.7**
	baz=224						
HGSD	**Ruisui**	**1.78**	**221**	*e*P	**Pn**	**17 13 38.1**	**-0.2**
	baz=220						
HGSD				*e*S	**Sn**	**17 14 01.7**	**-0.5**
	baz=220						
DPDB	**Guoxing**	**1.80**	**244**	*e*P	**Pn**	**17 13 40.4**	**+1.7**
	baz=243						
DPDB				*e*S	**Sn**	**17 14 02.2**	**-0.5**
	baz=243						
EHY	**Hungye**	**1.83**	**223**	*e*P	**Pn**	**17 13 40.2**	**+1.2**
	baz=222						
EHY				*e*S	**Sn**	**17 14 02.0**	**-1.3**
	baz=222						
JTJ	**Tarama**	**1.84**	**96**	P	**Pn**	**17 13 39.4**	**+0.4**
JTJ				S	**Sn**	**17 14 02.9**	**-0.5**
SMLT	**Sun Moon Lake**	**1.90**	**240**	*e*P	**Pn**	**17 13 41.6**	**+1.7**
	baz=239						
SMLT				*e*S	**Sn**	**17 14 04.9**	**0.0**
	baz=239						
SSLB	**Suanglung**	**1.91**	**237**	*e*P	**Pn**	**17 13 41.4**	**+1.5**
	baz=236						
SSLB				*e*S	**Sn**	**17 14 05.5**	**+0.6**
	baz=236						
TYC	**Yuchr**	**1.92**	**241**	*e*P	**Pn**	**17 13 41.8**	**+1.8**
	baz=240						
TYC				*e*S	**Sn**	**17 14 07.0**	**+1.8**
	baz=240						
YULB	**Yu-li**	**1.93**	**222**	*e*P	**Pn**	**17 13 39.8**	**-0.4**
	baz=220						
YULB				*e*S	**Sn**	**17 14 04.1**	**-1.4**
	baz=220						
TWF1	**Yuli**	**1.96**	**221**	*e*P	**Pn**	**17 13 41.0**	**+0.4**
	baz=220						
TWF1				*e*S	**Sn**	**17 14 04.7**	**-1.4**
	baz=220						
WJS	**Zhushan**	**2.06**	**241**	*e*P	**Pn**	**17 13 41.7**	**-0.1**
	baz=240						
WJS				*e*S	**Sn**	**17 14 09.8**	**+1.5**
	baz=240						
FULB	**Fuli**	**2.08**	**218**	*e*P	**Pn**	**17 13 42.4**	**+0.3**
	baz=217						
FULB				*e*S	**Sn**	**17 14 08.0**	**-0.7**
	baz=217						
YUS	**Yu-Shan**	**2.09**	**230**	*e*P	**Pn**	**17 13 43.6**	**+1.0**
	baz=229						
YUS				*e*S	**Sn**	**17 14 08.8**	**-0.8**
	baz=229						
CHKT	**Chengkung**	**2.12**	**215**	*e*P	**Pn**	**17 13 42.5**	**0.0**
	baz=214						
CHKT				*e*S	**Sn**	**17 14 08.3**	**-1.3**
	baz=214						
ALS	**Alishan**	**2.18**	**233**	*e*P	**Pn**	**17 13 45.3**	**+1.8**
	baz=231						
ALS				*e*S	**Sn**	**17 14 10.6**	**-0.8**
	baz=231						
CHN5	**Tsauling**	**2.22**	**236**	*e*P	**Pn**	**17 13 45.0**	**+1.2**
	baz=235						
CHN5				*e*S	**Sn**	**17 14 12.5**	**+0.6**
	baz=235						
ELDTW	**Lidau**	**2.25**	**223**	*e*P	**Pn**	**17 13 44.7**	**+0.5**
	baz=222						
ELDTW				*e*S	**Sn**	**17 14 11.2**	**-1.5**
	baz=222						
JIRB	**Irabujima**	**2.25**	**90**	*e*S	**Sn**	**17 14 12.5**	**0.0**
TWH	**Lutao**	**2.40**	**208**	*e*P	**Pn**	**17 13 46.0**	**0.0**
	baz=206						
TWH				*e*S	**Sn**	**17 14 15.0**	**-0.8**
	baz=206						
TPUB	**Ta-pu**	**2.43**	**231**	*e*P	**Pn**	**17 13 47.1**	**+0.7**
	baz=230						
TPUB				*e*S	**Sn**	**17 14 17.2**	**+0.5**
	baz=230						
STYT	**Tauyuan**	**2.44**	**227**	*e*P	**Pn**	**17 13 47.9**	**+1.4**
	baz=226						
STYT				*e*S	**Sn**	**17 14 18.1**	**+1.3**
	baz=226						
WTP	**Ta-pu**	**2.48**	**230**	*e*P	**Pn**	**17 13 46.9**	**-0.2**
	baz=229						
WTP				*e*S	**Sn**	**17 14 16.4**	**-1.3**
	baz=229						
TWGBT	**Beinan**	**2.50**	**217**	*e*P	**Pn**	**17 13 47.1**	**-0.2**
	baz=215						
TWGBT				*e*S	**Sn**	**17 14 17.0**	**-1.2**
	baz=215						
CHN1	**Nanshi**	**2.58**	**231**	*e*P	**Pn**	**17 13 48.7**	**+0.4**
	baz=229						
CHN1				*e*S	**Sn**	**17 14 19.0**	**-1.0**
	baz=229						
PHUB	**P’eng-hu**	**3.14**	**246**	*e*S	**Sn**	**17 14 29.9**	**-3.0**
	baz=244						

IDC 09 17:14:20.3±1.9**,10°.78S**×**123°.57E,h0**^{km}**,mb3.6**/1**, mb1 3.3**/3**,mb1mx3.1**/47**,mbtmp3.1**/3**,ML2.7**/2**,Error ellipse: s-maj=46.3km s-min=13.0km az=95.0,Timor region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**0.57**	**9**	Pg	Pg	17 14 31.6	+0.2
	165nm,0.3s,baz=122,slow=2.9,SNR=79						
BATI				Lg	Lg	17 14 39.1	
	284nm,0.3s,baz=246,slow=20,SNR=52						
WRA	**Warramunga Arr**	**13.81**	**133**	Pn	Pn	17 17 36.4	-1.1
	0.0nm,0.3s,baz=304,slow=14,SNR=3.6						
WRA				Sn	Sn	17 20 03.7	-8.0
	0.1nm,0.3s,baz=294,slow=21,SNR=5.3						
ASAR	**Alice Springs**	**16.16**	**144**	Pn	Pn	17 18 09.7	+0.6
	0.1nm,0.3s,baz=320,slow=13,SNR=5.6						
ASAR				Sn	Sn	17 21 03.2	-5.9
	0.0nm,0.3s,baz=321,slow=23,SNR=3.3						
MKAR	**Makanchi Array**	**68.14**	**331**	P	P	17 25 22.3	0.0
	0.4nm,0.5s,baz=138,slow=7.9,SNR=5.8						

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*MOS **09** 17:44:19.2±2.5,48°.82N×156°.43E,h7^{km},mb4.2/1,Error ellipse: s-maj=99.9km s-min=13.2km az=81.5*

KRSC 09 17:44:19.2±1.8**,48°.82N**×**156°.43E,h7**^{km}±18^{km}**,ML4.1, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril’s**	**1.88**	**354**	*e*P	Pn	17 44 51.1	-0.7
SKR				*e*S	Sn	17 45 15.8	0.0
SKR	**Severo-Kuril’s**	**1.88**	**354**	*e*PN	Pn	17 44 51.2	-0.6
SKR				*e*S	Sn	17 45 15.1	-0.7
SKR				pmax	pmax		
	comp=Z,29nm,0.4s						
SKR				smax	smax		
	comp=E,282nm,0.3s						
SKR				smax	smax		
	comp=N,190nm,0.2s						
PAU	**Pauzhetka**	**2.67**	**5**	*e*S	Sb	17 45 37.7	-2.5
KDTR	**Khodutka, Kamc**	**3.18**	**19**	*e*P	Pb	17 45 13.0	-3.0
KDTR				*e*S	Sb	17 45 51.6	-3.3
ASAK	**Asacha**	**3.69**	**14**	*e*P	Pb	17 45 21.0	-3.8
ASAK	**Asacha**	**3.69**	**14**	PN	Pb	17 45 21.0	-3.8
MTVR	**Mutnovka**	**3.84**	**16**	*e*P	Pn	17 45 22.9	+4.1
MTVR				*e*S	Sb	17 46 10.1	-3.9
MTVR	**Mutnovka**	**3.84**	**16**	PN	Pn	17 45 22.9	+4.1
MTVR				S	Sb	17 46 10.1	-3.9
RUS	**Russkaya**	**3.86**	**19**	*e*P	Pn	17 45 22.1	+3.2
RUS				*e*S	Sn	17 46 08.7	+4.2
RUS	**Russkaya**	**3.86**	**19**	PN	Pn	17 45 22.1	+3.2
RUS				S	Sn	17 46 08.7	+4.2
PET	**Petropavlovsk**	**4.44**	**18**	*e*PN	Pb	17 45 36.8	-0.7
PET				*e*S	Sb	17 46 25.3	-5.9
PET				smax	smax		
	comp=N,33nm,0.6s						
PET				smax	smax		
	comp=E,31nm,0.6s						
DALK	**Dalny**	**4.47**	**18**	*e*P	Pn	17 45 31.3	+4.0
DALK				*e*S	Sn	17 46 24.8	+5.2
DALK	**Dalny**	**4.47**	**18**	PN	Pn	17 45 31.3	+4.0
DALK				S	Sn	17 46 24.8	+5.2
AVH	**Avacha**	**4.69**	**17**	*e*P	Pn	17 45 36.0	+5.6
AVH	**Avacha**	**4.69**	**17**	PN	Pn	17 45 36.0	+5.6

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*NNC **09** 17:44:20.2±8.7,43°.18N×80°.22E,h0^{km},mb2.8,mpv2.2, Error ellipse: s-maj=80.2km s-min=21.9km az=161.0*

*KRNET **09** 17:44:25.0±0.1,43°.19N×79°.92E,h24^{km},mb2.9*

*SOME **09** 17:44:25.6,43°.18N×79°.95E,h20^{km}*

*ISCJB **09** 17:44:26.3±0.7,43°.17N±0°.04×79°.94E±0°.05,h10^{km},Error ellipse: s-maj=6.3km s-min=3.4km az=140.6*

ISC 09 17:44:24.6±1.0**,43°.16N**±0°.04×**79°.95E**±0°.03**,h10**^{km}**,n29,** σ**1^{s}.24**/54**,18C-5D,Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHLS	**Shalkode**	**0.36**	**270**	*e*P	**Pg**	**17 44 29.5**	**-2.2**
	baz=18						
SHLS				*e*S	**Sg**	**17 44 32.9**	**-3.5**
	baz=18						
SHLS	**Shalkode**	**0.36**	**270**	*e*P	**Pg**	**17 44 29.5**	**-2.2**

	174nm,0.1s						
SHLS				eS	Sg	17 44 33.0	-3.5
	609nm,0.2s						
PDGK	Podgornoye	0.38	297	⇑P	Pb	17 44 33.1	-0.3
	0.7nm,0.1s						
PDGK				⇓S	Sb	17 44 38.5	-0.8
	74nm,0.3s						
PDGK	Podgornoye	0.38	297	⇑iP	Pb	17 44 33.1	-0.3
	baz=94						
PDGK				⇑iS	Sb	17 44 39.0	-0.4
	baz=94						
KTMS	Ketmen	0.41	46	eP	Pb	17 44 33.8	-0.2
	baz=48						
KTMS				eS	Sb	17 44 39.9	-0.5
	baz=48						
KTMS	Ketmen	0.41	46	eP	Pb	17 44 33.8	-0.2
	99nm,0.1s						
KTMS				eS	Sb	17 44 39.9	-0.5
	61nm,0.3s						
UZB	Uzynbulak	0.68	269	⇑iP	Pg	17 44 37.5	-0.2
	baz=67						
UZB				⇓iS	Sg	17 44 46.7	+0.1
	baz=67						
UZB	Uzynbulak	0.68	269	⇑iP	Pg	17 44 37.5	-0.2
	5.6nm,0.2s						
UZB				⇓iS	Sg	17 44 46.8	+0.1
	99nm,0.1s						
KPKS	Kokpek	0.97	289	eP	Pg	17 44 42.8	-0.5
	baz=86						
KPKS				eS	Sg	17 44 55.5	-0.4
	baz=86						
KPKS	Kokpek	0.97	289	eP	Pg	17 44 42.8	-0.5
	11nm,0.1s						
KPKS				eS	Sg	17 44 55.5	-0.4
	41nm,0.3s						
ZHN	Zhinishke	1.11	271	eP	Pg	17 44 45.6	-0.3
	baz=69						
ZHN				⇑iS	Sg	17 44 59.4	-0.9
	baz=69						
ZHN	Zhinishke	1.11	271	eP	Pg	17 44 45.6	-0.3
	4.1nm,0.2s						
ZHN				⇑iS	Sg	17 44 59.4	-0.9
	75nm,0.2s						
SATY	Saty	1.14	265	eP	Pb	17 44 45.9	-0.5
	4.6nm,0.1s						
SATY				eS	Sg	17 45 00.2	-0.9
	42nm,0.3s						
DJR	Jarkent	1.18	354	eP	Pn	17 44 47.0	-0.2
	1.6nm,0.1s						
DJR				eS	Sn	17 45 03.3	0.0
	22nm,0.2s						
PRZ	Przheval'sk	1.33	240	⇑iP	Pn	17 44 49.3	0.0
	baz=38						
PRZ				⇑iS	Sb	17 45 06.7	-0.1
	baz=38						
ARXS	Arharly	1.86	305	eP	Pb	17 44 58.8	+0.1
	1.0nm,0.3s						
ARXS				eS	Sb	17 45 22.6	+0.4
	14nm,0.5s						
KOTS	Kotyrbulak	2.08	273	eP	Pb	17 45 02.9	+0.5
	1.4nm,0.3s						
KOTS				eS	Sb	17 45 29.4	+1.0
	14nm,0.7s						
MDOK	Medeo	2.12	271	⇑Lg	Lg	17 45 30.2	
	3.5nm,0.6s						
MDOK	Medeo	2.12	271	eP	Pb	17 45 03.6	+0.3
	1.0nm,0.4s						
MDOK				eS	Sb	17 45 30.6	+1.0
	4.7nm,0.4s						
TARG	Taragay, Kyrgy	2.14	229	⇑iP	Pb	17 45 02.8	-0.8
	baz=28						
TARG				⇑iS	Sb	17 45 30.6	+0.3
	baz=28						
KAPS	Kapalarasan	2.17	349	eP	Pb	17 45 03.3	-0.6
	0.5nm,0.3s						
KAPS				eS	Sb	17 45 30.4	-0.4
	7.3nm,0.4s						
TNSS	Tian-Shan	2.20	268	eP	Pb	17 45 04.8	+0.1
	baz=67						
TNSS				eS	Sb	17 45 32.7	+0.5
	baz=67						
TNSS	Tian-Shan	2.20	268	eP	Pb	17 45 04.8	+0.1
	1.7nm,0.3s						
TNSS				eS	Sb	17 45 32.6	+0.5
	4.8nm,0.5s						
KTBS	Karatobe	2.44	284	eP	Pb	17 45 08.5	-0.1
	0.3nm,0.3s						
KTBS				eS	Sb	17 45 39.0	+0.2
	5.3nm,0.2s						
ULHL	Ulahol	2.88	253	⇑iP	Pn	17 45 13.2	+2.5
	baz=52						
ULHL				⇑iS	Sb	17 45 48.8	-2.8
	baz=52						
KST	Kastek	2.92	269	eP	Pb	17 45 16.6	-0.2
	3.9nm,2.3s						
KST				eS	Sb	17 45 53.1	+0.4
	2.5nm,0.6s						
BOOM	Boomskoye usch	3.02	259	⇑iP	Pn	17 45 15.2	+2.5
	baz=58						
BOOM				⇑iS	Sn	17 45 51.3	+2.3
	baz=58						
MAKZ	Makanchi	3.92	21	⇓Pg	Pn	17 45 27.0	+2.2
	0.4nm,0.2s						
MAKZ				⇑Lg	Lg	17 46 27.7	
	0.4nm,0.4s						
MK31	Makanchi Array	3.99	24	⇑Pg	Pn	17 45 28.0	+2.1
	0.1nm,0.2s,baz=204,slow=13,SNR=11						
MK31				⇓Lg	Lg	17 46 29.7	
	0.2nm,0.2s,baz=207,slow=28,SNR=4.2						

GUC 09 17:51:10.6±0.4, 24°.07S×67°.70W, h217^{km}±11^{km}, ML3.5, 6C-1D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB15	IPOC Station P	1.83	297	⇑eP	Pn	17 51 50.7	+1.6
PB15				eS	S	17 52 20.9	+2.0
PB15				IAML		17 52 24.5	
	comp=E,341nm,0.2s						
GO02	Mina Guanaco	2.04	237	⇑eP	Pn	17 51 52.0	+0.9
GO02				eS	S	17 52 24.7	+2.2
PB06	IPOC Station P	2.19	308	⇑iP	Pn	17 51 54.2	+1.7
PB06				iS	S	17 52 27.1	+2.1
PB06				IAML		17 52 29.2	
	comp=N,163nm,0.1s						
PB05	IPOC Station P	2.60	297	eP	Pn	17 51 58.6	+1.9
PB09	IPOC Station P	2.67	327	eP	Pn	17 51 59.4	+1.7
PB09				eS	S	17 52 36.4	+2.2
PB09				IAML		17 52 38.3	
	comp=N,65nm,0.6s						
PB10	IPOC Station P	2.67	281	⇑eP	Pn	17 52 00.1	+2.6
PB10				eS	S	17 52 36.9	+3.1
PB10				IAML		17 52 41.8	
	comp=E,22nm,0.4s						
PB03	IPOC Station P	2.76	316	⇑eP	Pn	17 52 00.1	+1.5
PB03				IAML		17 52 38.9	
	comp=E,156nm,0.3s						
PB04	IPOC Station P	2.84	307	⇑eP	Pn	17 52 01.5	+1.9
PB04				IAML		17 52 43.2	
	comp=N,87nm,0.4s						
PB07	IPOC Station P	3.08	319	⇓eP	Pn	17 52 03.8	+1.5
PB07				eS	S	17 52 44.0	+1.5
PB02	IPOC Station P	3.40	323	eP	Pn	17 52 07.1	+1.1
PB02				eS	S	17 52 50.0	+0.8
PB01	IPOC Station P	3.43	331	eP	Pn	17 52 07.0	+0.6

NNC 09 17:52:42.3±1.9, 37°.67N×71°.39E, h0^{km}, mb3.6, mpv3.2, 1C-4D, Error ellipse: s-maj=15.0km s-min=12.1km az=166.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	2.86	35	⇓Pn	Pn	17 53 29.4	0.0
	6.1nm,0.3s						
SFK				⇓Sn	Sn	17 54 06.0	+1.3
	3.2nm,0.2s						
MNAS	Manas	4.89	10	⇓Pn	Pn	17 53 56.8	-0.3
	1.2nm,0.3s						
MNAS				⇓Sn	Sn	17 54 55.3	+0.8
	3.4nm,0.6s						
KK31	Karatay Array	5.47	353	Pn	Pn	17 54 05.8	+0.8
	0.5nm,0.2s,baz=173,slow=13,SNR=13						
KK31				⇑Sn	Sn	17 55 10.6	+1.9
	1.7nm,0.5s,baz=174,slow=23,SNR=8.7						

*ISCJB **09** 17:58:19.9±0.7, 41°.10N±0°.08×112°.83W±0°.09, h0^{km}, Error ellipse: s-maj=13.1km s-min=7.7km az=142.0*
*NEIC **09** 17:58:21.2±0.7, 41°.10N×112°.79W, h0^{km}, ML1.7, Error ellipse: s-maj=11.8km s-min=6.8km az=142.0, Suspected Mining explosion.*
NEIC 70 km [44 miles] W of Ogden.
*IDC **09** 17:58:21.3±0.9, 41°.37N×112°.97W, h0^{km}, mb1 2.4/2, mb1mx2.4/60, mbtmp1.9/2, ML2.7/2, Error ellipse: s-maj=47.1km s-min=5.3km az=155.0*
ISC 09 17:58:19.8±1.1, 41°.10N±0°.07×112°.60W±0°.06, h0^{km}, n9, σ1ˢ.09/10, Utah

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUG	Dugway, Tooele	0.92	190	eP	Pb	17 58 37.8	-0.9
HWUT	Hardware Ranch	0.93	57	eP	Pn	17 58 41.2	+0.9
AHID	Auburn Hatcher	2.00	33	eP	Pn	17 58 55.5	+0.4
ELK	Elko	2.04	261	Pg	Pb	17 58 57.0	-0.8
	1.9nm,0.3s,baz=112,slow=15,SNR=26						
ELK				Lg	Lg	17 59 18.1	
	0.9nm,0.3s,baz=45,slow=20,SNR=6.1						
HLID	Hailey	2.81	332	eP	Pn	17 59 06.1	0.0
BW06	Boulder Array	2.81	53	eP	Pb	17 59 09.6	-1.4
PDAR	Pinedale Array	2.81	53	Pn	Pb	17 59 09.5	-1.5
	0.2nm,0.3s,baz=233,slow=14,SNR=3.1						
PDAR				Pg	Pg	17 59 14.8	+1.1
	1.1nm,0.3s,baz=233,slow=15,SNR=14						
PDAR				Lg	Lg	17 59 54.0	
	1.1nm,0.3s,baz=231,slow=20,SNR=8.0						
NVAR	Mina Array Bea	5.14	241	Pn	Pn	17 59 37.8	-0.5
	0.1nm,0.3s,baz=54,slow=15,SNR=2.8						
NVAR				Pg	Pb	17 59 51.2	+0.4
	0.1nm,0.3s,baz=59,slow=18,SNR=3.1						
I56US	NEWPORT INFRAS	7.86	337	i		18 42 20.0	
	baz=160,slow=313,SNR=5.3						

*ISCJB **09** 18:09:26.2±0.5, 38°.65N±0°.02×31°.16E±0°.03, h2^{km}±6^{km}, Error ellipse: s-maj=4.2km s-min=3.8km az=43.1*
*CSEM **09** 18:09:26.4±0.2, 38°.63N×31°.16E, h8^{km}, ML2.7, Error ellipse: s-maj=3.8km s-min=3.2km az=62.0*
*DDA **09** 18:09:26.0, 38°.66N×31°.18E, h7^{km}, Ml2.7*
*ISK **09** 18:09:26.0, 38°.63N×31°.17E, h7^{km}, ML1.8/4*
ISC 09 18:09:26.0±1.2, 38°.65N±0°.02×31°.18E±0°.02, h3^{km}±11^{km}, n32, σ0ˢ.69/51, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOLV	Bolvadin	0.20	291	iP	Pg	18 09 30.4	+0.6
BOLV				iS	Sg	18 09 32.9	+0.5
BOLV	Bolvadin	0.20	291	P	Pg	18 09 30.4	+0.6
BOLV				S	Sg	18 09 32.9	+0.5
KIZT	Kizilcal	0.59	67	PG	Pb	18 09 38.5	-0.6
KIZT				SG	Sb	18 09 47.4	-0.6
KIZT	Kizilcal	0.59	67	ePg	Pb	18 09 38.5	-0.6
KIZT				eSg	Sb	18 09 47.4	-0.6
DOGA	KONYA_Doganhis	0.66	145	iP	Pg	18 09 38.6	-0.1
DOGA				iS	Sb	18 09 48.9	-1.0
DOGA	KONYA_Doganhis	0.66	145	P	Pg	18 09 38.6	-0.1
DOGA				S	Sb	18 09 48.9	-1.0
BAGO	Egridir - ISPA	0.72	205	iP	Pg	18 09 40.1	+0.2
BAGO				iS	Sb	18 09 50.4	-1.3
AUSIV	SIVRIHISAR	0.84	19	PG	Pb	18 09 43.0	-0.3
AUSIV				SG	Sb	18 09 55.2	+0.1
AUSIV	SIVRIHISAR	0.84	19	iP	Pn	18 09 44.1	-0.8
AUSIV				iS	Sg	18 09 53.6	+0.6
AUSIV	SIVRIHISAR	0.84	19	ePg	Pb	18 09 43.0	-0.3
AUSIV	SIVRIHISAR	0.84	19	P	Pn	18 09 44.1	-0.8
AUSIV				S	Sg	18 09 53.6	+0.6
AUSIV				eSg	Sb	18 09 55.2	+0.1
KZIL	AFYON_Kizioren	0.91	245	iP	Pb	18 09 44.3	-0.1
KZIL				iS	Sb	18 09 56.7	-0.3
KZIL	AFYON_Kizioren	0.91	245	P	Pb	18 09 44.3	-0.1
KZIL				S	Sb	18 09 56.7	-0.3
ESKT	Eskisehir	0.91	344	iP	Pg	18 09 43.4	-0.1
ESKT				iS	Sg	18 09 54.7	-0.6
SEYT	Eskypehyr	0.91	344	P	Pg	18 09 43.4	-0.1
SEYT				S	Sg	18 09 54.7	-0.6
LADK	Ladik-KONYA	1.03	115	PG	Pg	18 09 45.6	-0.1
LADK				SG	Sb	18 10 00.7	+0.2
LADK	Ladik-KONYA	1.03	115	ePg	Pg	18 09 45.6	-0.1
LADK				eSg	Sb	18 10 00.7	+0.2
KONT	Konya--Tatoy	1.16	127	PN	Pn	18 09 49.1	-0.1
KONT	Konya--Tatoy	1.16	127	iP	Pn	18 09 48.7	-0.5
KONT				iS	Sn	18 10 05.7	+0.1
KONT	Konya--Tatoy	1.16	127	ePn	Pn	18 09 49.1	-0.1
SUTC	Sutluce-Ispart	1.18	187	PN	Pb	18 09 48.5	-0.6
SUTC	Sutluce-Ispart	1.18	187	ePn	Pb	18 09 48.5	-0.6
AUMIH	MIHALICIK	1.24	11	PN	Pn	18 09 50.5	+0.1
AUMIH	MIHALICIK	1.24	11	ePn	Pn	18 09 50.5	+0.1
KMER	Konya-Meram	1.28	133	iP	Pg	18 09 51.4	+0.9
KMER				iS	Sn	18 10 11.7	+3.0
KMER	Konya-Meram	1.28	133	P	Pg	18 09 51.4	+0.9
CHBY	Cihanbeyli	1.34	92	PN	Pg	18 09 51.9	+0.3
CHBY	Cihanbeyli	1.34	92	ePn	Pg	18 09 51.9	+0.3
BORA	Eskisehir	1.36	336	PN	Pg	18 09 52.3	+0.3
BORA	Eskisehir	1.36	336	ePn	Pg	18 09 52.3	+0.3
TVSB	Tavsanli	1.56	301	PN	Pb	18 09 54.8	-0.8
TVSB	Tavsanli	1.56	301	ePn	Pb	18 09 54.8	-0.8

*ISCJB **09** 18:18:59.3±0.8, 35°.52S±0°.05×179°.0W±0°.1, h47^{km}, mb4.1/4, MS3.5/7, Error ellipse: s-maj=15.7km s-min=5.2km az=21.5*
*IDC **09** 18:19:00.3±1.4, 35°.20S×179°.80W, h0^{km}, mb4.2/3, mb1 4.4/4, mb1mx3.9/40, mbtmp4.3/4, ML4.5/1, MS3.5/8, Ms1 3.5/8, ms1mx3.1/45, Error ellipse: s-maj=38.6km s-min=32.3km az=149.0*
*NEIC **09** 18:19:05.9±1.4, 35°.47S×179°.96W, h35^{km}, mb4.2/1, Error ellipse: s-maj=34.0km s-min=21.7km az=111.0*
*WEL **09** 18:19:05.0, 35°.47S×179°.96W, h35^{km}, ML4.8/37*
ISC 09 18:19:01.4±1.0, 35°.47S±0°.07×179°.1W±0°.1, h47^{km}, n110, σ1ˢ.61/111, mb4.2/4, MS3.5/7, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.94	224	P	Pn	18 19 46.5	+1.0
WMGZ	Waiomatatini S	3.06	219	P	Pn	18 19 50.0	+2.7
PKGZ	Pakihiroa	3.29	222	P	Pn	18 19 52.4	+1.9
PUZ	Puketiti	3.34	218	P	Pn	18 19 53.1	+2.1
HAZ	Te Kaha	3.37	227	P	Pn	18 19 52.6	+1.1
TWGZ	Tauwhareparae	3.56	220	P	Pn	18 19 56.3	+2.2
RUGZ	Raukumara Rang	3.57	225	P	Pn	18 19 55.9	+1.5
WIZ	White Island	3.60	234	P	Pn	18 19 57.5	+2.8
CNGZ	Carnagh Statio	3.69	215	P	Pn	18 19 58.7	+2.9
TKGZ	Te Karaka	3.83	218	P	Pn	18 19 59.6	+2.0
TKGZ				S	Sn	18 20 41.9	+0.5
MWZ	Matawai	3.92	222	P	Pn	18 20 00.5	+1.5
RIGZ	Rimuhau	4.07	217	P	Pn	18 20 02.9	+1.8
RAGZ	Rawiri	4.09	221	P	Pn	18 20 03.0	+1.5
URZ	Urewera	4.10	226	Pn	Pn	18 20 02.1	+0.6
	35nm,0.3s,baz=50,slow=7.9,SNR=209						
URZ				Sn	Sn	18 20 48.0	-0.2
	17nm,0.3s,baz=315,slow=20,SNR=4.5						
URZ	Urewera	4.10	226	P	Pn	18 20 02.5	+1.0
OPRZ	Ohinepanea	4.20	234	P	Pn	18 20 03.1	+0.3
EDRZ	Edgecumbe	4.23	230	P	Pn	18 20 06.1	+2.8
TGRZ	Tauranga	4.34	237	P	Pn	18 20 04.9	+0.1
KUZ	Kuaotunu	4.36	252	P	Pn	18 20 03.7	-1.3
KNZ	Kokohu	4.37	215	P	Pn	18 20 07.1	+2.0
MHGZ	Mahia Peninsul	4.37	212	P	Pn	18 20 06.7	+1.6
LIRZ	Lichensteins R	4.40	234	P	Pn	18 20 07.5	+1.8
MKRZ	Makatiti	4.42	232	P	Pn	18 20 07.8	+1.8
MUGZ	Murupara	4.45	226	P	Pn	18 20 06.5	+0.2
TARZ	Mount Tarawera	4.46	230	P	Pn	18 20 08.2	+1.7
GRZ	Great Barrier	4.46	258	P	Pn	18 20 04.8	-1.7
KARZ	Kaharoa	4.50	234	P	Pn	18 20 07.5	+0.5
RRRZ	Republican Roa	4.51	229	P	Pn	18 20 08.8	+1.6
HLRZ	Highlands Stat	4.56	231	P	Pn	18 20 09.1	+1.2
HLRZ				P		18 20 09.2	
UTU	Utuhina	4.62	233	P	Pn	18 20 12.4	+3.8
UTU				P	Pn	18 20 12.4	+3.8
WHHZ	Waihua	4.62	218	P	Pn	18 20 11.1	+2.5
WHHZ				S	Sn	18 21 01.4	+0.4
HSRZ	Hossack Road	4.67	231	P	Pn	18 20 10.8	+1.6
PRRZ	Plateau Road	4.69	229	P	Pn	18 20 10.6	+1.1
HRRZ	Handcock Road	4.69	230	P	Pn	18 20 10.8	+1.2
GRRZ	Galatos Road	4.77	232	P	Pn	18 20 12.5	+1.8
NMHZ	Naumai	4.86	221	P	Pn	18 20 12.9	+0.9
MRHZ	Matea Rd	4.89	225	P	Pn	18 20 13.1	+0.8
KUTZ	Kaahu Road	5.04	232	P	Pn	18 20 16.1	+1.7
WHTZ	Whakaora	5.06	229	P	Pn	18 20 16.1	+1.4
BKZ	Black Stump Fm	5.08	222	P	Pn	18 20 15.0	+0.1
TLZ	Tolley Road	5.14	235	P	Pn	18 20 16.2	+0.5
CKHZ	Cape Kidnapper	5.15	215	P	Pn	18 20 17.4	+1.5
CKHZ				S	Sn	18 21 13.4	-0.6
MCHZ	McNeill Hill	5.17	219	P	Pn	18 20 17.1	+0.9
MCHZ				S	Sn	18 21 15.3	+0.8
WATZ	Wairara	5.22	230	P	Pn	18 20 17.7	+0.8
RATZ	Rangitukua	5.30	229	P	Pn	18 20 18.9	+0.9
KWHZ	Kaweka Forest	5.30	221	P	Pn	18 20 18.9	+0.9
RITZ	Rihia Road	5.31	227	P	Pn	18 20 18.9	+0.8
KAHZ	Kahuranaki	5.35	215	P	Pn	18 20 18.6	-0.1
KATZ	Kakaramea	5.41	228	P	Pn	18 20 20.8	+1.2
KRHZ	Kereru	5.49	219	P	Pn	18 20 20.9	+0.3
KRHZ				P	Pn	18 20 20.9	+0.3
KRVZ	Karewarewa	5.52	228	P	Pn	18 20 21.7	+0.7
BHHZ	Black Hill Sta	5.54	222	P	Pn	18 20 21.7	+0.4
PXZ	Pawanui	5.55	214	P	Pn	18 20 22.1	+0.7
WTVZ	West Tongariro	5.56	228	P	Pn	18 20 22.1	+0.5
NGZ	Ngauruhoe	5.59	227	P	Pn	18 20 22.6	+0.5
TUVZ	Tukino	5.62	226	P	Pn	18 20 22.7	+0.2
TWVZ	Taurewa	5.63	229	P	Pn	18 20 22.8	+0.3
COVZ	Chateau Observ	5.64	227	P		18 20 23.5	
COVZ				P	Pn	18 20 23.4	+0.6
MOVZ	Moawhango	5.66	224	P	Pn	18 20 22.6	-0.3
WHVZ	Whangaehu Hut	5.67	226	P	Pn	18 20 23.1	-0.1
FWVZ	Far West T-bar	5.67	227	P	Pn	18 20 23.8	+0.5
DRZ	Dome Shelter	5.68	226	P	Pn	18 20 25.6	+2.1
HIZ	Hauiti	5.69	236	P	Pn	18 20 24.1	+0.8
HIZ				P		18 20 24.2	
WPHZ	Waipukurau	5.77	216	P	Pn	18 20 24.3	-0.1
PNHZ	Pukenui	5.78	218	P	Pn	18 20 24.5	0.0
MTVZ	Mangateitei	5.81	226	P	Pn	18 20 26.1	+1.1
PKVZ	Pokaka	5.82	227	P	Pn	18 20 26.0	+0.9
PRHZ	Porangahau	5.84	214	P	Pn	18 20 25.9	+0.5
TSZ	Takapari Road	6.01	219	P	Pn	18 20 27.1	-0.6
ANWZ	Angora Road	6.07	214	P	Pn	18 20 29.4	+0.9
VRZ	Vera Road	6.08	231	P	Pn	18 20 29.5	+0.8
VRZ				P	Pn	18 20 29.5	+0.8
DVHZ	Dannevirke	6.09	216	P	Pn	18 20 28.3	-0.4
GLKZ	Green Lake	6.28	10	P	Pn	18 20 32.2	+0.9
GLKZ				S	Sn	18 21 41.2	-0.5
WAZ	Wanganui	6.33	226	P	Pn	18 20 33.1	+1.0
BFZ	Birch Farm	6.35	214	P	Pn	18 20 30.9	-1.5
PRWZ	Pori Road	6.38	216	P	Pn	18 20 33.3	+0.5
OHWZ	Ohakea	6.45	221	P	Pn	18 20 33.8	+0.1
LREZ	Lake Rotokare	6.50	230	P	Pn	18 20 34.9	+0.5
PREZ	Palmer Road	6.59	232	P	Pn	18 20 39.0	+3.3
TIWZ	Tintock	6.59	215	P	Pn	18 20 35.4	-0.3
PKE	Pukeiti	6.62	234	P	Pn	18 20 39.1	+3.0
MRZ	Mangatainoka R	6.65	217	P	Pn	18 20 35.0	-1.4
KHEZ	Kahui Hut	6.66	233	P	Pn	18 20 39.8	+3.1
TMWZ	Te Maipa	6.85	213	P	Pn	18 20 38.6	-0.7
HOWZ	Holdsworth Sta	6.86	216	P	Pn	18 20 38.8	-0.6
OGWZ	Otaki Gorge	6.97	218	P	Pn	18 20 39.9	-1.0
MTW	Mount Morrison	7.07	215	P	Pn	18 20 41.0	-1.3
KIW	Kapiti Island	7.14	219	P	Pn	18 20 41.2	-2.0
KIW				S	Sn	18 21 58.0	-4.9
TRWZ	Traveller	7.18	213	P	Pn	18 20 44.3	+0.6
MSWZ	Moikau Station	7.39	215	P	Pn	18 20 44.8	-1.9
PLWZ	Palliser	7.51	214	P	Pn	18 20 46.5	-1.8
TCW	Tory Channel	7.72	220	P	Pn	18 20 49.2	-1.9
RPZ	Rata Peaks	11.18	220	Pn	Pn	18 21 34.8	-3.7
	1.4nm,0.3s,baz=147,slow=3.9,SNR=9.4						
RPZ				Sn	Sn	18 23 28.8	-13
	1.7nm,0.3s,baz=162,slow=20,SNR=8.4						
DZM	Mont Dzumac	18.36	313	LR	LR	18 29 04.0	
	comp=Z,207nm,18.0s,baz=160,slow=34						
DZM	Mont Dzumac	18.36	313	eLR	LR	18 27 04.4	
	248nm,23.4s						
RAR	Rarotonga	22.12	55	LR	LR	18 30 51.3	
	comp=Z,50nm,20.6s,baz=229,slow=32						
PPT2	Papeete2	31.70	64	eLR	LR	18 33 53.7	
	196nm,25.8s,baz=236						
PPT	Papeete	31.72	64	LR	LR	18 39 26.4	
	comp=Z,20nm,18.4s,baz=250,slow=38						
STKA	Stephens Creek	32.73	265	LR	LR	18 37 29.1	
	comp=Z,82nm,18.2s,baz=28,slow=34						
CTA	Charters Tower	34.04	287	P	P	18 25 42.3	+1.2
	5.1nm,1.0s,baz=139,slow=8.3,SNR=4.3						
ASAR	Alice Springs	42.15	273	P	P	18 26 49.5	+0.1
	0.6nm,0.3s,baz=115,slow=7.6,SNR=40						
ASAR				LR	LR	18 44 23.8	
	comp=Z,180nm,18.2s,baz=128,slow=37						
WRAB	Tennant Creek	43.60	278	eP	P	18 27 00.8	-0.4
	3.0nm,0.6s						
WRA	Warramunga Arr	43.60	278	P	P	18 27 01.6	+0.4
	3.9nm,0.8s,baz=119,slow=7.6,SNR=46						
WRA				LR	LR	18 45 34.7	
	comp=Z,75nm,18.6s,baz=185,slow=37						
TAOE	Nuku Hiva Isla	44.33	63	eLR	LR	18 39 36.3	
	121nm,27.7s						
NWAO	Narrogin (SRO)	51.87	253	LR	LR	18 48 14.4	
	comp=Z,47nm,20.8s,baz=242,slow=34						
LEM	Lembang	72.44	274	LR	LR	19 02 39.2	
	comp=Z,48nm,18.9s,baz=162,slow=36						
FINES	FINESS Array B	149.49	336	PKPbc	PKPab	18 38 48.6	-0.9
	1.0nm,0.4s,baz=28,slow=3.3,SNR=10						
DBIC	Dimbokro	150.86	168	PKPbc	PKPab	18 38 56.9	+0.5
	5.7nm,0.9s,baz=163,slow=3.9,SNR=3.9						
MMAI	Mount Meron Ar	151.43	275	PKPbc	PKPab	18 38 55.2	-3.4
	2.4nm,0.6s,baz=269,slow=11,SNR=3.2						
BRTR	Keskin Array B	153.78	289	PKPbc	PKPbc	18 38 58.9	+3.6
	0.4nm,0.5s,baz=101,slow=2.9,SNR=3.7						

MEX 09 18:24:54.3±0.3, 27°.19N×112°.01W, h20^{km}, MD3.6, Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRIG	Santa Rosalia	0.25	302	iP	Pb	18 24 59.2	-0.9
	baz=122,slow=6.9						
SRIG				eS	Sb	18 25 03.0	-1.1

*CSEM **09** 18:39:08.9±0.1, 37°.56N×36°.37E, h2^{km}, ML3.8, Error ellipse: s-maj=3.0km s-min=2.5km az=162.0*
*DDA **09** 18:39:08.3, 37°.59N×36°.34E, h6^{km}, Ml3.8*
*ISK **09** 18:39:08.6, 37°.56N×36°.38E, h8^{km}, ML3.0/19*
ISC 09 18:39:08.7±0.8, 37°.57N±0°.02×36°.35E±0°.01, h3^{km}±4^{km}, n100, σ0ˢ.69/145, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANDN	Andirin	0.01	336	iP	Pg	18 39 09.4	-0.1
ANDN				iS	Sg	18 39 10.3	+0.4
ANDN	Andirin	0.01	336	P	Pg	18 39 09.4	-0.1
ANDN				S	Sg	18 39 10.4	+0.4
KMRS	Kahramanmaras	0.44	98	PG	Pg	18 39 17.4	+0.2
KMRS				SG	Sg	18 39 23.4	+0.5
KMRS	Kahramanmaras	0.44	98	ePg	Pg	18 39 17.4	+0.2
KMRS				eSg	Sg	18 39 23.4	+0.5
SAIM	ADANA	0.46	332	iP	Pg	18 39 16.8	-0.7
SAIM				iS	Sg	18 39 24.3	+0.9
SAIM	ADANA	0.46	332	P	Pg	18 39 16.8	-0.7
SAIM				S	Sg	18 39 24.3	+0.9
GAZ	Gaziantep	0.79	120	PG	Pb	18 39 24.1	-1.1
GAZ	Gaziantep	0.79	120	ePg	Pb	18 39 24.1	-1.1
SARI	SarD1z-Kayseri	0.84	4	PG	Pg	18 39 25.0	+0.3
SARI				SG	Sb	18 39 37.8	+0.1
YURE	YUREGIR	0.94	218	PG	Pb	18 39 27.2	-0.4
YURE	YUREGIR	0.94	218	iP	Pn	18 39 28.9	+0.1
YURE	YUREGIR	0.94	218	ePg	Pb	18 39 27.2	-0.4
YURE	YUREGIR	0.94	218	P	Pn	18 39 28.9	+0.1
YAHY	KAYSERI_Yahyal	0.94	304	iP	Pg	18 39 26.1	-0.7
YAHY				iS	Sg	18 39 38.2	-0.7
YAHY	KAYSERI_Yahyal	0.94	304	P	Pg	18 39 26.0	-0.7
YAHY				S	Sg	18 39 38.2	-0.7
KUZU	Kuzuini	0.98	144	iP	Pb	18 39 28.2	-0.2
KUZU				iS	Sb	18 39 41.9	0.0
KUZU	Kuzuini	0.98	144	P	Pb	18 39 28.2	-0.2
KUZU				S	Sb	18 39 41.9	0.0
KARA	Karaisali	1.08	254	PN	Pg	18 39 29.5	+0.2
KARA				SN	Sn	18 39 45.6	-0.5
KARA	Karaisali	1.08	254	ePn	Pg	18 39 29.5	+0.2
KARA				eSn	Sn	18 39 45.6	-0.5
TAHT	Tahtakopru-Hat	1.20	186	PN	Pn	18 39 31.9	-0.5
TAHT				SN	Sn	18 39 48.9	-0.3

TAHT	Tahtakopru-Hat	1.20	186	*e*Pn	Pn	18 39 31.9	-0.5
TAHT				*e*Sn	Sn	18 39 48.9	-0.3
KRTD	Karatas-Adana	1.23	218	PN	Pn	18 39 32.6	-0.1
KRTD	Karatas-Adana	1.23	218	*e*Pn	Pn	18 39 32.6	-0.1
KRTS	Karatas	1.27	218	PN	Pb	18 39 33.3	+0.1
KRTS	Karatas	1.27	218	*e*Pn	Pb	18 39 33.3	+0.1
GULE	Gulek	1.28	258	*i* P	Pn	18 39 32.5	-1.2
GULE				*i* S	Sn	18 39 53.5	+2.0
GULE	Gulek	1.28	258	P	Pn	18 39 32.5	-1.2
GULE				S	Sn	18 39 53.5	+2.0
BNN	Bunyan	1.34	343	PN	Pn	18 39 34.2	-0.2
BNN	Bunyan	1.34	343	*e*Pn	Pn	18 39 34.2	-0.2
DARE	Darende-Malaty	1.34	42	PN	Pn	18 39 34.0	-0.4
DARE	Darende-Malaty	1.34	42	*e*Pn	Pn	18 39 34.0	-0.4
CUGUR	Gurin_S˜VAS	1.36	32	*i* P	Pg	18 39 35.7	+0.9
CUGUR				*i* S	Sn	18 39 53.9	+0.6
CUGUR	Gurin_S˜VAS	1.36	32	P	Pg	18 39 35.7	+0.9
CUGUR				S	Sn	18 39 53.9	+0.6
AKCD	Akcadag	1.44	59	*i* P	Pn	18 39 35.3	-0.5
AKCD				*i* S	Sg	18 39 55.0	+0.1
AKCD	Akcadag	1.44	59	P	Pn	18 39 35.3	-0.5
AKCD				S	Sg	18 39 55.0	+0.1
NIG	Nigde	1.48	292	PN	Pn	18 39 36.1	-0.3
NIG	Nigde	1.48	292	*e*Pn	Pn	18 39 36.1	-0.3
YAYL	Yayladag	1.55	187	PN	Pb	18 39 37.6	-0.4
YAYL	Yayladag	1.55	187	*i* P	Pg	18 39 39.0	+0.7
YAYL				*i* S	Sg	18 39 58.5	+0.1
YAYL	Yayladag	1.55	187	*e*Pn	Pb	18 39 37.6	-0.4
YAYL	Yayladag	1.55	187	P	Pg	18 39 39.0	+0.7
YAYL				S	Sg	18 39 58.5	+0.1
ATAB	Bozova	1.55	93	*i* P	Pn	18 39 36.7	-0.5
ATAB				*i* S	Sg	18 40 00.6	+2.1
ATAB	Bozova	1.55	93	P	Pn	18 39 36.7	-0.5
MERS	Mersin	1.62	245	PN	Pb	18 39 38.6	-0.7
MERS	Mersin	1.62	245	*e*Pn	Pb	18 39 38.6	-0.7
AVNS	Nevsehir-Avano	1.71	317	*i* P	Pb	18 39 40.6	-0.2
AVNS				*i* S	Sg	18 40 04.2	+0.6
AVNS	Nevsehir-Avano	1.71	317	P	Pb	18 39 40.6	-0.2
AVNS				S	Sg	18 40 04.2	+0.6
CUALT	Altinyayla-SIV	1.73	11	*i* P	Pg	18 39 41.7	-0.2
CUALT				*i* S	Sg	18 40 05.4	+1.2
CUALT	Altinyayla-SIV	1.73	11	P	Pg	18 39 41.7	-0.2
CUALT				S	Sg	18 40 05.4	+1.2
KERG	Konya-Eregli	1.78	266	*i* P	Pb	18 39 41.8	-0.2
KERG				*i* S	Sg	18 40 05.6	-0.2
KERG	Konya-Eregli	1.78	266	P	Pb	18 39 41.8	-0.2
KERG				S	Sg	18 40 05.6	-0.2
MALT	Malatya	1.80	65	PN	Pn	18 39 40.5	-0.3
MALT	Malatya	1.80	65	*e*Pn	Pn	18 39 40.5	-0.3
HEKM	Malatya_Hekimh	1.82	44	*i* P	Pb	18 39 42.8	0.0
HEKM				*i* S	Sg	18 40 09.3	+2.2
HEKM	Malatya_Hekimh	1.82	44	P	Pb	18 39 42.8	0.0
GULA	Gulagac	1.84	295	PN	Pb	18 39 42.1	-0.9
GULA	Gulagac	1.84	295	*e*Pn	Pb	18 39 42.1	-0.9
CUSAR	Sarkisla-SIVAS	1.85	357	*i* P	Pb	18 39 42.3	-0.9
CUSAR				*i* S	Sg	18 40 08.1	+0.1
CUSAR	Sarkisla-SIVAS	1.85	357	P	Pb	18 39 42.3	-0.9
CUSAR				S	Sg	18 40 08.1	+0.1
SURC	SANLIURFA_SURC	1.93	110	*i* P	Pn	18 39 42.0	-0.5
SURC				*i* S	Sn	18 40 06.2	-1.2
SURC	SANLIURFA_SURC	1.93	110	P	Pn	18 39 42.0	-0.5
SURC				S	Sn	18 40 06.2	-1.2
CUKAN	kangal_SIVAS	1.95	26	*i* P	Pb	18 39 44.0	-1.0
CUKAN				*i* S	Sg	18 40 11.2	-0.2
CUKAN	kangal_SIVAS	1.95	26	P	Pb	18 39 44.0	-1.0
URFA	Urfa	1.97	93	PN	Pn	18 39 42.2	-0.8
URFA	Urfa	1.97	93	*e*Pn	Pn	18 39 42.2	-0.8
KIZK	Mersin	2.08	239	PN	Pn	18 39 44.9	+0.5
KIZK	Mersin	2.08	239	*i* P	Pn	18 39 44.6	+0.2
KIZK				*i* S	Sn	18 40 11.6	+0.9
KIZK	Mersin	2.08	239	P	Pn	18 39 44.6	+0.2
KIZK				S	Sn	18 40 11.6	+0.9
SANL	SANLIURFA_Merk	2.14	100	*i* P	Pn	18 39 44.5	-0.8
SANL				*i* S	Sg	18 40 17.6	+0.1
SANL	SANLIURFA_Merk	2.14	100	P	Pn	18 39 44.5	-0.8
YOZ	Yozgat	2.22	339	PN	Pn	18 39 46.9	+0.4
YOZ	Yozgat	2.22	339	*e*Pn	Pn	18 39 46.9	+0.4
ELZG	Elazig	2.28	65	*i* P	Pn	18 39 47.5	+0.2
ELZG				*i* S	Sg	18 40 20.7	-1.1
ELZG	Elazig	2.28	65	P	Pn	18 39 47.5	+0.2
AKSY	AKSARAY - Alti	2.31	299	*i* P	Pn	18 39 48.3	+0.6
AKSY				*i* S	Sg	18 40 22.4	-0.5
AKSY	AKSARAY - Alti	2.31	299	P	Pn	18 39 48.3	+0.6
SULT	Sultanhani-AKS	2.33	286	PN	Pn	18 39 48.7	+0.7
SULT	Sultanhani-AKS	2.33	286	*e*Pn	Pn	18 39 48.7	+0.7
SCER	sogukcermik	2.37	15	*i* P	Pn	18 39 49.8	+1.2
SCER				*i* S	Sg	18 40 24.3	-0.4
SCER	sogukcermik	2.37	15	P	Pn	18 39 49.8	+1.2
KEMA	Kemaliye	2.39	44	*i* P	Pn	18 39 49.1	+0.3
KEMA				*i* S	Sg	18 40 25.6	+0.1
KEMA	Kemaliye	2.39	44	P	Pn	18 39 49.1	+0.3
KEBE	Keben-Mersin	2.39	243	PN	Pn	18 39 49.7	+0.9
KEBE	Keben-Mersin	2.39	243	*e*Pn	Pn	18 39 49.7	+0.9
SVSK	Karacayir	2.40	12	PN	Pn	18 39 49.4	+0.6
SVSK	Karacayir	2.40	12	*e*Pn	Pn	18 39 49.4	+0.6
SVRC	Sivrice-ELAZID	2.47	70	PN	Pn	18 39 49.9	-0.1
SVRC	Sivrice-ELAZID	2.47	70	*e*Pn	Pn	18 39 49.9	-0.1
IKL	Isikli	2.52	239	PN	Pn	18 39 51.1	+0.6
IKL	Isikli	2.52	239	*e*Pn	Pn	18 39 51.1	+0.6
CDAG	Cicekdag	2.57	324	*i* P	Pn	18 39 52.3	+1.0
CDAG				*i* S	Sb	18 40 26.6	-0.9
CDAG	Cicekdag	2.57	324	P	Pn	18 39 52.3	+1.0
CDAG				S	Sb	18 40 26.6	-0.9
AKKU	Akkuyu-Mersin	2.65	239	PN	Pn	18 39 52.7	+0.4
AKKU	Akkuyu-Mersin	2.65	239	*e*Pn	Pn	18 39 52.7	+0.4
PTK	Pertek	2.73	60	PN	Pn	18 39 54.1	+0.4
PTK	Pertek	2.73	60	*e*Pn	Pn	18 39 54.1	+0.4
DYBB	Diyarbakir	3.03	82	PN	Pn	18 39 57.8	+0.2
DIY	Diyarbakir	3.09	83	*e*Pn	Pn	18 39 57.8	-0.6
MAZI	Mazidag	3.26	91	PN	Pn	18 40 00.7	-0.1
MAZI	Mazidag	3.26	91	*e*Pn	Pn	18 40 00.7	-0.1

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*ISCJB **09** 18:45:25.3±0.3, 81°.24N±0°.05×3°.1W±0°.3, h10^{km}, mb4.1/34, MS3.7/30, Error ellipse: s-maj=8.1km s-min=4.9km az=33.4*

*IDC **09** 18:45:25.7±0.4, 81°.35N×3°.20W, h0^{km}, mb3.9/27, mb1 4.1/29, mb1mx3.9/80, mbtmp4.0/29, ML4.4/3, MS3.7/34, Ms1 3.7/34, ms1mx3.5/75, Error ellipse: s-maj=15.2km s-min=9.2km az=29.0*

*CSEM **09** 18:45:25.3±0.2, 81°.32N×2°.95W, h2^{km}, mb4.6/6, Error ellipse: s-maj=9.8km s-min=5.1km az=33.0*

*NEIC **09** 18:45:27.1±0.3, 81°.33N×2°.87W, h10^{km}, mb4.6/8, Error ellipse: s-maj=10.6km s-min=5.8km az=32.0*

*BER **09** 18:45:28.2±2.1, 81°.61N×1°.02W, h15^{km}±88^{km}, ML3.4, ML4.2(NAO)*

ISC 09 18:45:27.0±0.5, **81°.27N**±0°.07×**2°.58W**±0°.06, **h10**^{km}, **n84**, σ**1^{s}.83**/80, **mb4.0**/34, **MS3.6**/30, **North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	Kingsbay	3.43	126	Pn	Pn	18 46 19.6	-0.8
KBS				Sn	Sn	18 46 56.9	-4.1
KBS	Kingsbay	3.43	126	*e*Pn	Pn	18 46 19.3	-1.0
KBS	Kingsbay	3.43	126	*i* P	Pn	18 46 18.8	-1.6
	SNR=49						
KBS	Kingsbay	3.43	126	Pn	Pn	18 46 19.6	-0.8
KBS				*i* S	Sn	18 46 57.0	-3.9
	SNR=49						
KBS	Kingsbay	3.43	126	*e*P	Pn	18 46 19.4	-0.9
KBS				*e*S	Sn	18 46 57.0	-3.9
KBS				IAML		18 47 03.1	
	comp=Z,130nm,0.4s						
SPA0	Spitsbergen Ar	4.57	123	Pn	Pn	18 46 35.5	-0.5
	baz=336,slow=11						
SPA0				Sn	Sn	18 47 25.4	-3.7
	baz=335,slow=14						
SPA0	Spitsbergen Ar	4.57	123	Pn	Pn	18 46 35.5	-0.5
	SNR=512						
SPA0	Spitsbergen Ar	4.57	123	Pn	Pn	18 46 35.5	-0.5
	baz=336,slow=11						
SPA0				Sn	Sn	18 47 25.4	-3.7
	baz=335,slow=14						
SPITS	Spitsbergen Ar	4.57	123	Pn	Pn	18 46 35.4	-0.7
	baz=333,slow=14,SNR=290						
SPITS				Sn	Sn	18 47 26.0	-3.1
	baz=339,slow=16,SNR=2.5						
SPITS				LR	LR	18 48 27.7	
	comp=Z,2μm,18.0s,baz=330,slow=39						
DAG	Danmarks Havn	5.43	222	*i* P	Pn	18 46 45.9	-1.9
DAG	Danmarks Havn	5.43	222	*i* P	Pn	18 46 46.0	-1.9
	SNR=46						
HSPB	Hornsund (broa	5.45	132	*e*Pn	Pn	18 46 48.5	+0.4
HSPB				*e*Sn	Sn	18 47 53.0	+2.3
HSPB	Hornsund (broa	5.45	132	*e*P	Pn	18 46 47.8	-0.3
HSPB				*e*S	Sn	18 47 47.6	-3.1
HSPB				IAML		18 47 52.2	
	comp=Z,37nm,0.3s						
HOPEN	Hopen	7.05	118	Pn	Pn	18 47 08.7	-1.3
HOPEN	Hopen	7.05	118	*e*P	Pn	18 47 08.9	-1.2
JNW	Jan Mayen West	10.38	191	*e*P	Pn	18 47 56.3	+0.7
JNE	Jan Mayen East	10.42	190	*e*P	Pn	18 47 56.4	+0.3
JNE				IAML		18 47 58.1	
	comp=Z,90nm,0.2s						
JMIC	Jan Mayen	10.43	191	Pn	Pn	18 47 56.4	+0.1
	comp=Z,22nm,0.3s,baz=159,slow=15,SNR=10						
JMIC				Sn	Sn	18 49 47.6	-5.3
	comp=Z,4.9nm,0.3s,baz=172,slow=18,SNR=4.3						
JMIC	Jan Mayen	10.43	191	*e*P	Pn	18 47 57.0	+0.7
SUMG	Summit	11.58	242	*i* P	Pn	18 48 07.8	-4.6
KULLO	Kullorsuaq	12.61	269	*i* P	Pn	18 48 18.9	-7.1
KULLO				*i* S	Sn	18 50 29.0	-17
ARA0	ARCESS Array S	13.46	135	P	Pn	18 48 38.3	+0.6
	baz=352,slow=11						
ARA0	ARCESS Array S	13.46	135	P	Pn	18 48 38.3	+0.6
	baz=352,slow=11						
ARCES	ARCESS Array B	13.46	135	Pn	Pn	18 48 38.0	+0.4
	comp=Z,0.6nm,0.3s,baz=354,slow=11,SNR=11						
ARCES				Sn	Sn	18 51 01.1	-5.9
	comp=Z,0.3nm,0.3s,baz=355,slow=19,SNR=3.3						
ARCES				LR	LR	18 53 30.2	
	comp=Z,272nm,21.8s,baz=337,slow=36						
ARE0	ARCESS Array S	13.46	135	*e*P	Pn	18 48 38.4	+0.7
RES	Resolute Bay	18.00	301	Pn	Pn	18 49 28.3	-8.5
	comp=Z,0.9nm,0.3s,baz=24,slow=8.9,SNR=11						
RES				LR	LR	18 56 10.7	
	comp=Z,401nm,18.7s,baz=48,slow=36						
RES	Resolute Bay	18.00	301	*e*P	Pn	18 49 28.3	-8.5
	comp=Z,10nm,0.8s						
SFJD	Kangerlussuaq	18.40	248	LR	LR	18 56 50.2	
	comp=Z,332nm,20.9s,baz=29,slow=37						
NB2	NORSAR Subarra	20.68	161	P	Pn	18 50 09.1	0.0
	baz=0.7,slow=11						
NB2	NORSAR Subarra	20.68	161	P	P	18 50 07.9	+1.2
	comp=Z,12nm,1.1s,baz=355,slow=11						
NB2	NORSAR Subarra	20.68	161	P	Pn	18 50 09.1	0.0
	baz=0.7,slow=11						
NOA	NORSAR Array B	20.68	161	LR	LR	18 56 58.8	
	comp=Z,90nm,18.1s,baz=350,slow=33						
NRA0	NORESS Array S	21.00	160	P	P	18 50 11.8	+1.7
	baz=342,slow=12						
NRA0	NORESS Array S	21.00	160	P	P	18 50 11.8	+1.7
	baz=342,slow=12						
FIA0	FINESS Array S	21.39	141	P	P	18 50 15.7	+1.4
	baz=348,slow=14						
FIA0	FINESS Array S	21.39	141	P	P	18 50 15.7	+1.4
	baz=348,slow=14						
FINES	FINESS Array B	21.39	141	P	P	18 50 15.9	+1.7
	comp=Z,4.7nm,0.8s,baz=139,slow=9.1,SNR=9.8						
FINES				PcP	PcP	18 54 16.6	-0.6
	comp=Z,1.4nm,0.7s,baz=48,slow=2.1,SNR=3.4						
FINES				LR	LR	18 58 06.0	
	comp=Z,214nm,21.4s,baz=353,slow=35						
HFS	Hagfors	21.72	158	P	P	18 50 19.0	+1.2
	baz=11,slow=10						
HFS	Hagfors	21.72	158	P	P	18 50 19.2	+1.4
	comp=Z,9.1nm,0.8s,baz=8.7,slow=11,SNR=17						
HFS				LR	LR	18 57 23.1	
	comp=Z,96nm,18.3s,baz=352,slow=33						
HFS	Hagfors	21.72	158	P	P	18 50 19.0	+1.2
	baz=11,slow=10						
KLMR	Klimovskoe	23.47	125	*e*P	P	18 50 36.6	+0.4
KLMR				AMP		18 50 48.1	
	comp=Z,15nm,1.2s						
FRB	Frobisher Bay	24.10	264	P	P	18 50 40.9	-1.3
	comp=Z,11nm,0.9s,baz=28,slow=11,SNR=5.4						
FRB				LR	LR	19 00 28.2	
	comp=Z,211nm,18.9s,baz=38,slow=38						
YKA	Yellowknife Ar	31.93	306	P	P	18 51 52.2	0.0
	comp=Z,1.1nm,0.8s,baz=10,slow=8.7,SNR=5.4						
YKA				PcP	PcP	18 54 41.2	-0.7
	comp=Z,0.4nm,0.7s,baz=9.7,slow=3.3,SNR=4.4						
YKA				LR	LR	19 04 41.4	
	comp=Z,28nm,20.1s,baz=16,slow=36						
AKASG	Malin Array Be	32.30	141	P	P	18 51 55.7	+0.2
	comp=Z,0.2nm,0.3s,baz=348,slow=9.5,SNR=4.0						
AKASG				LR	LR	19 05 32.4	
	comp=Z,39nm,20.2s,baz=10.0,slow=37						
SCHQ	Schefferville	32.38	257	LR	LR	19 04 58.1	
	comp=Z,227nm,21.1s,baz=30,slow=36						
ILAR	Eielson Array	32.89	333	P	P	18 52 01.5	+0.9
	comp=Z,0.5nm,0.7s,baz=356,slow=6.2,SNR=5.8						
ILAR				PcP	PcP	18 54 42.8	-1.7
	comp=Z,0.4nm,0.8s,baz=355,slow=3.9,SNR=4.7						
GERES	GERESS Array B	32.98	160	P	P	18 52 04.0	+2.3
	comp=Z,1.2nm,0.9s,baz=358,slow=6.9,SNR=5.4						
GERES				LR	LR	19 04 46.4	
	comp=Z,59nm,18.6s,baz=9.5,slow=35						
DAVOX	Davos/Dischmat	34.87	165	LR	LR	19 05 51.8	
	comp=Z,69nm,20.3s,baz=48,slow=35						
BVAR	Borovoye Array	35.45	95	P	P	18 52 24.7	+1.8
	comp=Z,0.7nm,0.7s,baz=355,slow=9.7,SNR=4.5						
BVAR				LR	LR	19 10 19.3	
	comp=Z,215nm,18.7s,baz=345,slow=42						
AKTO	Aktyubinsk	36.12	109	P	P	18 52 30.3	+1.7
	comp=Z,2.1nm,0.9s,baz=345,slow=6.3,SNR=7.4						
AKTO				LR	LR	19 10 21.2	
	comp=Z,171nm,18.3s,baz=356,slow=41						
ZALV	Zalesovo Beam	36.75	81	P	P	18 52 34.8	+0.8
	comp=Z,0.4nm,0.4s,baz=350,slow=17,SNR=2.9						
ZALV				LR	LR	19 11 39.6	
	comp=Z,157nm,18.6s,baz=266,slow=43						
MLR	Muntele Rosu	37.16	146	LR	LR	19 07 59.8	
	comp=Z,35nm,18.8s,baz=5.5,slow=36						
KURK	Kurchatov	38.95	88	*e*P	P	18 52 50.2	-2.3
	comp=Z,44nm,1.1s						
KURBB	Kurchatov Arra	39.02	88	P	P	18 52 54.3	+1.1
	comp=Z,2.0nm,0.8s,baz=350,slow=7.3,SNR=20						
KDAK	Kodiak Island	40.22	335	P	P	18 53 01.9	-1.1
	comp=Z,8.9nm,0.8s,baz=30,slow=7.6,SNR=6.1						
KBZ	Khabaz	40.67	128	P	P	18 53 09.4	+2.5
	comp=Z,3.3nm,0.8s,baz=9.5,slow=6.1,SNR=5.0						
KBZ				LR	LR	19 10 50.7	
	comp=Z,74nm,19.2s,baz=10.0,slow=37						
ULM	Lac du Bonnet	41.23	283	P	P	18 53 11.1	-0.4
	comp=Z,3.5nm,0.6s,baz=9.9,slow=5.4,SNR=5.1						
ULM				LR	LR	19 09 23.7	
	comp=Z,99nm,21.2s,baz=30,slow=35						
ESDC	Sonseca Array	41.73	182	P	P	18 53 16.8	+1.1
	comp=Z,1.7nm,0.7s,baz=5.6,slow=8.0,SNR=10						
AGMN	Agassiz Nation	43.13	283	*e*P	P	18 53 26.2	-0.7
	comp=Z,2.9nm,0.8s						
MKAR	Makanchi Array	43.33	86	P	P	18 53 29.7	+1.1
	comp=Z,0.9nm,0.6s,baz=346,slow=8.4,SNR=11						
MKAR				LR	LR	19 14 14.0	
	comp=Z,78nm,21.3s,baz=338,slow=40						
BRTR	Keskin Array B	43.60	139	P	P	18 53 33.5	+2.5
	comp=Z,1.2nm,0.9s,baz=344,slow=4.3,SNR=5.6						
BRTR				LR	LR	19 13 01.2	
	comp=Z,53nm,20.2s,baz=346,slow=38						
GNI	Garni	44.43	126	LR	LR	19 13 12.5	
	comp=Z,47nm,18.7s,baz=342,slow=37						
SONM	Songino Array	45.83	63	P	P	18 53 49.2	+0.4
	comp=Z,0.6nm,0.8s,baz=326,slow=7.2,SNR=4.0						
SONM				LR	LR	19 14 19.5	
	comp=Z,154nm,20.2s,baz=336,slow=38						
KEST	Kesra	45.87	166	P	P	18 53 50.9	+1.8
	comp=Z,3.8nm,0.6s,baz=12,slow=4.3,SNR=5.9						
NEW	Newport	46.15	303	LR	LR	19 13 14.7	
	comp=Z,261nm,20.0s,baz=19,slow=36						
AAK	Ala-Archa	46.20	95	P	P	18 53 53.5	+1.8
	comp=Z,1.4nm,0.3s,baz=225,slow=8.6,SNR=2.4						
AAK				LR	LR	19 17 16.0	
	comp=Z,132nm,18.1s,baz=334,slow=41						
IDI	Anoyia	47.21	149	LR	LR	19 13 50.3	
	comp=Z,37nm,18.9s,baz=290,slow=36						
ECSD	EROS Data Cent	47.70	282	*e*P	P	18 54 03.3	0.0
	comp=Z,11nm,0.9s						
GEYT	Alibeck	48.39	113	LR	LR	19 19 43.9	
	comp=Z,61nm,19.2s,baz=335,slow=42						
BMO	Blue Mountains	49.52	302	*e*P	P	18 54 16.5	-0.8
	comp=Z,3.5nm,1.0s						
PDAR	Pinedale Array	50.53	294	P	P	18 54 25.6	+0.4
	comp=Z,0.5nm,0.9s,baz=334,slow=6.0,SNR=3.1						
PDAR				LR	LR	19 15 57.3	
	comp=Z,247nm,18.3s,baz=9.5,slow=36						
YBH	Yreka Blue Hor	53.28	306	LR	LR	19 17 39.7	
	comp=Z,104nm,18.2s,baz=2.0,slow=36						
TKL	Tuckaleechee C	53.66	268	P	P	18 54 48.0	-0.2
	comp=Z,3.6nm,0.9s,baz=336,slow=6.2,SNR=3.0						
TKL				LR	LR	19 17 16.2	
	comp=Z,94nm,19.9s,baz=8.0,slow=36						
NVAR	Mina Array Bea	55.97	301	P	P	18 55 05.1	-0.2
	comp=Z,0.8nm,0.8s,baz=26,slow=4.4,SNR=4.8						
NVAR				LR	LR	19 18 53.7	
	comp=Z,136nm,21.4s,baz=302,slow=36						
MIAR	Mount Ida	56.24	277	*e*P	P	18 55 05.9	-1.1
	comp=Z,5.9nm,0.9s						
ANMO	Albuquerque	57.77	289	P	P	18 55 17.0	-1.0
	comp=Z,1.0nm,0.7s,baz=355,slow=11,SNR=3.1						
ANMO				LR	LR	19 20 24.3	
	comp=Z,120nm,18.6s,baz=24,slow=36						
DAC	Darwin (Calif)	58.00	300	*e*P	P	18 55 19.4	-0.1
	comp=Z,4.8nm,1.2s						
JCT	Junction City	61.17	282	*e*P	P	18 55 41.0	-0.4
	comp=Z,13nm,1.0s						
TXAR	Lajitas Array	62.87	286	P	P	18 55 52.0	-0.9
	comp=Z,1.7nm,0.8s,baz=35,slow=4.4,SNR=16						
TXAR				LR	LR	19 23 38.8	
	comp=Z,121nm,18.0s,baz=0.0,slow=36						
TORD	Torodi Ar. Bea	68.17	176	P	P	18 56 26.4	-0.7
	comp=Z,1.8nm,0.6s,baz=0.1,slow=5.7						
LPIG	La Paz	68.98	291	LR	LR	19 27 14.9	
	comp=Z,75nm,18.1s,baz=23,slow=36						
CMAR	Chiang Mai Arr	73.62	76	P	P	18 56 59.2	-0.9
	comp=Z,0.3nm,0.6s,baz=346,slow=6.6,SNR=3.8						
WRA	Warramunga Arr	116.11	46	PKP	PKPdf	19 04 08.1	-1.5
	comp=Z,0.5nm,0.7s,baz=344,slow=2.8,SNR=5.3						
ASAR	Alice Springs	119.74	47	PKP	PKPdf	19 04 15.3	-1.2
	comp=Z,0.5nm,0.6s,baz=355,slow=2.1,SNR=16						

IDC 09 18:46:04.2±719.0, **50°.89N**×**85°.54E**, **h0**^{km}, **Error ellipse: s-maj=309.8km s-min=66.9km az=170.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	3.09	352	*i*		19 04 50.0	
	baz=172,slow=345,SNR=5.3						
I31KZ	AKTYUBINSK INF	17.42	279	*i*		20 28 20.0	
	baz=76,slow=307,SNR=0.9						
I43RU	DUBNA INFRASON	28.62	301	*i*		21 43 50.0	
	baz=84,slow=364,SNR=0.6						

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*NIED **09** 18:47:00, 40°.40N×142°.10E, h53^{km}, Mw3.8 Best double couple: $M_0$4.99000×10^{14} NP1:ϕ_s196.00000°, δ21.00000°, λ84.00000°. NP2:ϕ_s22.00000°, δ69.00000°, λ92.00000°.*

*ISCJB **09** 18:47:44.2±0.7, 40°.38N±0°.03×142°.11E±0°.09, h61^{km}±4^{km}, mb3.8/10, Error ellipse: s-maj=11.5km s-min=5.5km az=4.5*

*JMA **09** 18:47:45.5±0.1, 40°.35N×142°.08E, h50^{km}±1^{km}, M3.9*

JMA Felt II J1.

*IDC **09** 18:47:46.5±1.8, 40°.39N×142°.18E, h72^{km}±15^{km}, mb3.5/10, mb1 3.6/15, mb1mx3.3/78, mbtmp3.8/15, MS2.2/3, Ms1 2.2/3, ms1mx2.1/69, Error ellipse: s-maj=26.0km s-min=11.7km az=96.0*

ISC 09 18:47:44.5±1.2, **40°.36N**±0°.04×**142°.20E**±0°.09, **h53**^{km}±9^{km}, **n25**, σ**1^{s}.68**/35, **mb3.8**/10, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	0.49	211	P	Pn	18 47 56.2	+0.3
JTH				S	Sn	18 48 03.6	-0.5
JANG	Nango	0.52	271	P	Pn	18 47 56.0	-0.2
JANG				S	Sn	18 48 03.3	-1.3
JKZ	Kuzumaki	0.76	241	P	Pn	18 47 59.3	0.0
JKZ				S	Sn	18 48 09.0	-1.0
JARK	Aomorirokkasho	0.90	316	P	Pn	18 48 00.8	-0.2
JARK				S	Sn	18 48 11.8	-1.3
JTM	Tenmabayashi	0.96	297	P	Pn	18 48 01.4	-0.3
JTM				S	Sn	18 48 12.8	-1.6
JOM	Ohasama	1.13	218	P	Pn	18 48 04.4	+0.4
JOM				S	Sn	18 48 17.9	-0.6
JAH	Hinai	1.21	262	P	Pn	18 48 05.1	0.0
JAH				S	Sn	18 48 19.3	-1.1
JOT	Ohata	1.34	320	P	Pn	18 48 06.7	-0.2
JRG	Rokugo	1.54	232	P	Pn	18 48 10.0	+0.4
ASAJ	Asahikawa	3.76	4	P	Pn	18 48 42.2	+2.2
	6.7nm,0.3s,baz=216,slow=9.6,SNR=81						
ASAJ				S	Sn	18 49 25.0	+2.0
	3.7nm,0.3s,baz=73,slow=20,SNR=7.1						
ASAJ				LR	LR	18 50 23.7	
	comp=Z,38nm,19.7s,baz=176,slow=42						
MAT	Matsushiro	4.93	221	P	Pn	18 48 58.1	+2.0
MAT				*e*S	Sn	18 49 54.7	+2.8
MJAR	Matsushiro Arr	4.93	221	P	Pn	18 48 58.9	+2.8
	1.0nm,0.3s,baz=26,slow=12,SNR=23						
MJAR				LR	LR	18 50 42.7	
	comp=Z,16nm,21.6s,baz=265,slow=36						
JHJ	Hachijo jima 2	7.48	196	P	Pn	18 49 32.5	+1.5
	2.8nm,0.3s,baz=116,slow=20,SNR=6.6						
JHJ				S	Sn	18 50 48.6	-6.0
	1.4nm,0.3s,baz=72,slow=20,SNR=2.8						
USRK	Ussuriysk Ar.	8.48	300	P	Pn	18 49 46.8	+2.1
	baz=94,slow=15						
KSRS	Korea Array	11.49	260	P	Pn	18 50 27.9	+2.1
	0.1nm,0.3s,baz=65,slow=14,SNR=3.3						
KSRS				LR	LR	18 54 25.7	
	comp=Z,23nm,20.5s,baz=80,slow=35						
SONM	Songino Array	26.59	298	P	P	18 53 16.5	-1.2
	0.4nm,0.3s,baz=99,slow=8.0,SNR=3.4						
ZALV	Zalesovo Beam	40.20	310	P	P	18 55 15.6	+0.1
	2.1nm,0.4s,baz=96,slow=9.2,SNR=8.9						
MKAR	Makanchi Array	42.95	299	P	P	18 55 37.9	-0.2
	0.7nm,0.4s,baz=92,slow=8.7,SNR=12						
KURBB	Kurchatov Arra	44.50	305	P	P	18 55 50.4	-0.1
	2.1nm,0.5s,baz=80,slow=8.6,SNR=16						
BVAR	Borovoye Array	48.84	310	P	P	18 56 24.5	+0.1
	0.8nm,0.4s,baz=76,slow=8.9,SNR=7.8						
WRA	Warramunga Arr	60.44	189	P	P	18 57 48.3	-0.3
	0.4nm,0.8s,baz=6.1,slow=7.0,SNR=7.4						
ASAR	Alice Springs	64.17	188	P	P	18 58 13.9	+0.4
	0.3nm,0.6s,baz=358,slow=7.0,SNR=5.2						
FINES	FINESS Array B	66.16	332	P	P	18 58 25.3	-0.8
	1.2nm,0.7s,baz=60,slow=9.1,SNR=4.6						
HFS	Hagfors	71.31	336	P	P	18 58 58.4	+0.3
	1.0nm,0.7s,baz=26,slow=6.9,SNR=4.3						
AKASG	Malin Array Be	72.05	322	P	P	18 59 02.5	-0.2
	0.2nm,0.2s,baz=44,slow=5.6,SNR=4.0						

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*IDC **09** 18:50:44.1±0.8, 10°.24N×126°.23E, h0^{km}, mb3.6/9, mb1 3.7/9, mb1mx3.5/60, mbtmp3.6/9, Error ellipse: s-maj=48.6km s-min=16.2km az=69.0*

*MAN **09** 18:50:47.2, 10°.50N×126°.62E, h25^{km}, mb4.9, ML3.9, MS3.9*

ISC 09 18:50:45.9±2.2, **10°.40N**±0°.04×**126°.43E**±0°.09, **h12**^{km}±12^{km}, **n20**, σ**1^{s}.49**/30, **mb3.6**/10, **1C-2D**, **Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	1.11	236	⇓*e*P	Pn	18 51 09.8	+2.4
BESP	Borongan	1.54	321	*e*P	Pb	18 51 14.7	+0.4
BESP				*e*S	Sg	18 51 48.8	+13
MSLP	Maasin	1.57	260	*e*P	Pg	18 51 16.5	+0.5
MSLP				*e*S	Sg	18 51 47.5	+11
PLP	Palo	1.61	298	⇑*i*P	Pb	18 51 15.8	+0.1
PLP				*i* S	Sg	18 51 38.6	+0.7
BUTP	Butuan	1.63	209	*e*P	Pg	18 51 16.2	-1.0
BUTP				*e*S	Sg	18 51 43.2	+4.8
OCLP	Ormoc	1.90	290	*e*P	Pg	18 51 21.4	-1.0
OCLP				*e*S	Sg	18 51 45.9	-1.2
LLP	Lapu-Lapu	2.43	268	*e*P	Pn	18 51 26.7	+1.2
LLP				*e*S	Sg	18 52 01.7	-2.2
CGP	Cagayan de Oro	2.58	222	⇓*e*P	Pb	18 51 30.9	-1.3
CGP				*e*S	Sb	18 52 03.4	-0.5
CNP	Catarman	2.72	321	*e*P	Pn	18 51 29.9	+0.4
CNP				*e*S	Sn	18 52 03.9	+1.6
BUKP	Musuan	2.85	208	*e*P	Pb	18 51 35.2	-1.5
BUKP				*e*S	Sb	18 52 11.2	-0.5
KSRS	Korea Array	26.97	3	P	P	18 56 29.0	+1.6
	0.7nm,0.7s,baz=171,slow=8.6,SNR=4.0						
CMAR	Chiang Mai Arr	27.77	290	P	P	18 56 34.0	-0.9
	0.7nm,0.8s,baz=100,slow=7.4,SNR=4.9						
WRA	Warramunga Arr	31.14	166	P	P	18 57 04.0	-0.8
	0.2nm,0.7s,baz=348,slow=9.3,SNR=2.5						

WRA				PcP	PcP	18 59 59.4	-0.6
	0.2nm,0.8s,baz=352,slow=3.4,SNR=2.3						
ASAR	Alice Springs	34.64	168	P	P	18 57 34.1	-1.2
	0.2nm,0.5s,baz=352,slow=7.0,SNR=11						
ASAR				PcP	PcP	19 00 09.8	+0.1
	0.5nm,1.0s,baz=332,slow=2.2,SNR=3.6						
SONM	Songino Array	40.95	339	P	P	18 58 29.8	+1.2
	0.3nm,0.6s,baz=162,slow=6.1,SNR=2.6						
MKAR	Makanchi Array	52.02	323	P	P	18 59 55.4	0.0
	0.7nm,0.7s,baz=126,slow=8.3,SNR=9.6						
MKAR				PcP	PcP	19 01 07.6	0.0
	0.7nm,0.6s,baz=115,slow=5.0,SNR=5.8						
ZALV	Zalesovo Beam	54.59	331	P	P	19 00 13.8	-0.3
	2.8nm,0.8s,baz=122,slow=5.9,SNR=8.2						
KURBB	Kurchatov Arra	56.05	325	P	P	19 00 25.0	+0.2
	1.0nm,0.7s,baz=128,slow=7.2,SNR=13						
ARCES	ARCESS Array B	84.12	340	P	P	19 03 14.7	-1.9
	3.8nm,0.9s,baz=59,slow=7.5,SNR=3.0						
FINES	FINESS Array B	85.85	332	P	P	19 03 25.2	-0.1
	1.6nm,0.8s,baz=66,slow=4.8,SNR=5.1						

IDC 09 18:57:34.6±1.6**, 25°.62N×109°.90W, h0^{km}, mb1 3.3**/3**, mb1mx3.1**/55**, mbtmp2.8**/3**, ML3.5**/3**, Error ellipse: s-maj=28.7km s-min=11.9km az=111.0, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPIG	La Paz	1.56	194	Pg	Pb	18 58 04.4	0.0
	17nm,0.3s,baz=16,slow=18,SNR=12						
LPIG				Lg	Lg	18 58 23.0	
	31nm,0.3s,baz=181,slow=23,SNR=15						
TXAR	Lajitas Array	6.66	55	Pn	Pn	18 59 13.5	-0.3
	0.1nm,0.3s,baz=240,slow=12,SNR=4.1						
TXAR				Lg	Lg	19 01 05.0	
	0.9nm,0.3s,baz=234,slow=33,SNR=6.0						
ANMO	Albuquerque	9.76	17	Lg	Lg	19 02 45.9	
	0.1nm,0.3s,baz=115,slow=19,SNR=3.2						
NVAR	Mina Array Bea	14.61	333	Pn	Pn	19 01 05.0	+2.1
	0.1nm,0.3s,baz=151,slow=11,SNR=2.5						
PDAR	Pinedale Array	17.11	1	P	Pn	19 01 36.1	+0.8
	0.0nm,0.3s,baz=170,slow=13,SNR=2.6						

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*NIED **09** 19:07:00, 45°.60N×151°.60E, h38^{km}, Mw3.9 Best double couple: $M_0 8.70000\times10^{14}$ NP1:ϕ_s145.00000°, δ47.00000°, λ2.00000°. NP2:ϕ_s53.00000°, δ88.00000°, λ137.00000°.*

*IDC **09** 19:07:11.0±1.8, 45°.43N×151°.77E, h0^{km}, mb3.8/7, mb1 3.9/8, mb1mx3.5/69, mbtmp3.8/8, ML3.5/1, Error ellipse: s-maj=47.1km s-min=31.8km az=97.0*

*ISCJB **09** 19:07:14.1±0.7, 45°.09N±0°.09×151°.68E±0°.08, h36^{km}, mb3.8/8, Error ellipse: s-maj=14.7km s-min=5.3km az=153.4*

*JMA **09** 19:07:14.9±0.8, 45°.61N×151°.56E, h30^{km}, M4.1*

*SKHL **09** 19:07:15.5±0.6, 44°.91N×151°.79E, h43^{km}±2^{km}, mb4.4/3*

*MOS **09** 19:07:17.5±0.9, 45°.28N×151°.44E, h61^{km}, mb4.5/3, Error ellipse: s-maj=20.9km s-min=12.9km az=171.5*

ISC 09 19:07:15.1±1.1**, 44°.96N**±0°.09×**151°.78E**±0°.10**, h36^{km}, n46, σ1^{s}89**/61**, mb3.7**/8**, 2C-1D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.79	277	*i* P	Pn	19 07 57.9	+0.8
KUR				AMB	AMB	19 07 59.0	
	19nm,0.4s						
KUR				AMB	AMB	19 07 59.0	
	24nm,0.4s						
KUR				AMB	AMB	19 07 59.0	
	59nm,0.4s						
KUR				*i* S	Sn	19 08 30.0	+0.5
KUR				A	A	19 08 35.0	
	190nm,0.4s						
KUR				A	A	19 08 35.0	
	244nm,0.4s						
KUR	Kuril'sk	2.79	277	*d i*PN	Pn	19 07 57.5	+0.4
KUR				*e*S	Sn	19 08 29.9	+0.5
KUR				pmax	pmax		
	comp=Z,59nm,0.3s						
KUR				pmax	pmax		
	comp=N,19nm,0.2s						
KUR				pmax	pmax		
	comp=E,13nm,0.3s						
KUR				smax	smax		
	comp=E,244nm,0.5s						
KUR				smax	smax		
	comp=N,190nm,0.4s						
SHO	Shikotan	3.71	255	*i* P	Pn	19 08 10.9	+1.1
SHO				AMB	AMB	19 08 21.0	
	comp=N,14nm,0.4s						
SHO				AMB	AMB	19 08 21.0	
	comp=N,19nm,0.4s						
SHO				AMB	AMB	19 08 21.0	
	comp=N,23nm,0.4s						
SHO				*i* S	Sn	19 08 52.0	-0.3
SHO				A	A	19 09 01.0	
	comp=N,70nm,0.4s						
SHO				A	A	19 09 01.0	
	comp=N,58nm,0.4s						
SHO	Shikotan	3.71	255	*c i*PN	Pn	19 08 10.9	+1.1
SHO				*i* S	Sn	19 08 52.6	+0.3
SHO				pmax	pmax		
	comp=N,14nm,0.4s						
SHO				pmax	pmax		
	comp=Z,23nm,0.4s						
SHO				pmax	pmax		
	comp=E,19nm,0.3s						
SHO				smax	smax		
	comp=N,70nm,0.4s						
SHO				smax	smax		
	comp=E,58nm,0.3s						
YUK	Yuzh-Kuril'sk	4.34	260	*i* P	Pn	19 08 20.0	+1.6
YUK				AMB	AMB	19 08 26.0	
	comp=E,36nm,0.4s						
YUK				AMB	AMB	19 08 26.0	
	comp=E,30nm,0.4s						
YUK				AMB	AMB	19 08 26.0	
	comp=E,70nm,0.4s						
YUK				*i* S	Sn	19 09 08.0	+0.4
YUK				A	A	19 09 21.0	
	comp=E,107nm,0.4s						
YUK				A	A	19 09 21.0	
	comp=E,275nm,0.4s						
YUK	Yuzh-Kuril'sk	4.34	260	*c i*PN	Pn	19 08 20.5	+2.1
YUK				*i* S	Sn	19 09 08.2	+0.6
YUK				pmax	pmax		
	comp=Z,70nm,0.4s						
YUK				pmax	pmax		
	comp=N,36nm,0.5s						
YUK				pmax	pmax		
	comp=E,30nm,0.4s						
YUK				smax	smax		
	comp=N,107nm,0.4s						
YUK				smax	smax		
	comp=E,275nm,0.6s						
LAGR	Lagunnoye	4.38	260	*e*S	Sn	19 09 11.0	+2.2
GRPR	Tuman	4.41	259	*e*P	Pn	19 08 21.0	+1.6
GRPR				*e*S	Sn	19 09 10.0	+0.5
GRPR				A	A	19 09 25.0	
	comp=E,58nm,0.4s						
GRPR				A	A	19 09 25.0	
	comp=E,130nm,0.4s						
GRPR	Tuman	4.41	259	*e*PN	Pn	19 08 21.9	+2.5
GRPR				*e*S	Sn	19 09 10.7	+1.2
GRPR				smax	smax		
	comp=E,130nm,0.5s						
GRPR				smax	smax		
	comp=N,58nm,0.4s						
NEM2	Nemuro 2	4.63	252	P	Pn	19 08 23.2	+0.8
NEM2				*e*S	Sn	19 09 13.9	-0.9
GLVR	Golovnino	4.66	257	*e*P	Pn	19 08 24.0	+1.2
GLVR				*e*S	Sn	19 09 16.0	+0.5
GLVR	Golovnino	4.66	257	*e*PN	Pn	19 08 24.3	+1.5
GLVR				*e*S	Sn	19 09 16.6	+1.1
JRA	Rausu	4.88	260	P	Pn	19 08 27.6	+1.8
JRA				*e*S	Sn	19 09 22.7	+1.7
JNK	Nakash	5.25	257	P	Pn	19 08 32.4	+1.4
JNK				*e*S	Sn	19 09 30.2	-0.1
JAK	Akkeshi	5.48	251	P	Pn	19 08 34.4	+0.3
JAK				*e*S	Sn	19 09 34.8	-1.0
JTKR	Abashiri--Toko	5.72	263	P	Pn	19 08 39.3	+1.9
JAR	Ashorobuto	6.00	257	P	Pn	19 08 41.5	+0.2
JAR				*e*S	Sn	19 09 39.2	-10
JOB	Onbets	6.10	253	*e*S	Sn	19 09 50.9	-0.1
JMP	Maruseppu	6.10	264	P	Pn	19 08 44.7	+2.0
JCH	Churui	6.53	252	P	Pn	19 08 50.2	+1.7
JCH				*e*S	Sn	19 10 00.0	-1.7
JKK2	Kamakawa 2	6.56	264	P	Pn	19 08 51.2	+2.2
YSS	Yuzh-Sakhalins	6.60	291	*e*PN	Pn	19 08 50.1	+0.6
YSS				MLR	MLR		
	comp=Z,200nm,12.0s						
ASAJ	Asahikawa	6.62	266	Pn	Pn	19 08 52.0	+2.2
	comp=Z,0.9nm,0.3s,baz=64,slow=19,SNR=8.5						
MYR	Moyori	6.72	250	*e*P	Pn	19 08 53.0	+1.9
MYR				*e*S	Sn	19 10 04.8	-1.6
JEM	Erimo	6.93	248	P	Pn	19 08 56.8	+2.8
JNBK	Urakawa-nobuka	7.08	251	P	Pn	19 08 57.5	+1.4
JNBK				*e*S	Sn	19 10 12.4	-2.8
JBT2	Biratori 2	7.15	256	P	Pn	19 08 58.0	+1.0
JBT2				*e*S	Sn	19 10 17.7	+0.8
JNB	Noboribetsu	8.17	256	P	Pn	19 09 13.0	+2.0
JNB				*e*S	Sn	19 10 40.3	-1.8
JKB	Kayabe	8.40	252	P	Pn	19 09 14.8	+0.6
JKB				*e*S	Sn	19 10 42.8	-5.0
JANG	Nango	8.84	242	*e*S	Sn	19 10 52.7	-5.9
JRG	Rokugo	9.97	240	P	Pn	19 09 37.6	+1.9
JRG				*e*S	Sn	19 11 22.1	-4.1
H11N2	WAKE ISLAND Hy	28.12	149	T	T	19 43 50.5	
	baz=338,slow=75,SNR=20						
H11N1	WAKE ISLAND Hy	28.13	149	T	T	19 43 53.3	
	baz=338,slow=75,SNR=14						
H11N3	WAKE ISLAND Hy	28.13	149	T	T	19 43 55.1	
	baz=338,slow=75,SNR=12						
H11S1	WAKE ISLAND Hy	29.17	150	T	T	19 45 16.7	
	baz=339,slow=74						
H11S3	WAKE ISLAND Hy	29.18	150	T	T	19 45 11.5	
	baz=339,slow=74						
H11S2	WAKE ISLAND Hy	29.19	150	T	T	19 45 18.2	
	baz=339						
MKAR	Makanchi Array	46.95	298	P	P	19 15 40.9	-1.2
	comp=Z,0.3nm,0.5s,baz=72,slow=8.0,SNR=5.9						
KURK	Kurchatov	47.59	305	P	P	19 15 46.0	-1.0
KURBB	Kurchatov Arra	47.68	304	P	P	19 15 46.0	-1.7
	comp=Z,0.3nm,0.4s,baz=73,slow=7.9,SNR=6.3						
FINES	FINESS Array B	65.26	335	P	P	19 17 51.1	-1.4
	comp=Z,2.0nm,0.7s,baz=33,slow=7.3,SNR=8.3						
WRA	Warramunga Arr	66.52	198	P	P	19 18 05.2	+4.1
	comp=Z,0.4nm,0.9s,baz=16,slow=6.2,SNR=3.4						
NB2	NORSAR Subarra	69.61	341	P	P	19 18 18.7	-1.5
	comp=Z,0.5nm,0.5s,baz=28,slow=6.5						
HFS	Hagfors	69.80	339	P	P	19 18 20.3	-1.0
	comp=Z,2.2nm,0.6s,baz=46,slow=6.2,SNR=10						
AKASG	Malin Array Be	72.51	326	P	P	19 18 36.7	-1.1
	comp=Z,0.7nm,0.3s,baz=37,slow=6.4,SNR=4.7						
GERES	GERESS Array B	79.64	333	P	P	19 19 18.7	+0.1
	comp=Z,0.2nm,0.4s,baz=40,slow=7.7,SNR=2.8						

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*NIED **09** 19:25:00, 29°.30N×130°.30E, h38^{km}, Mw5.5 Best double couple: $M_0 2.35000\times10^{17}$ NP1:ϕ_s188.00000°, δ31.00000°, λ57.00000°. NP2:ϕ_s45.00000°, δ64.00000°, λ108.00000°.*

*BJI **09** 19:25:03.5, 29°.11N×130°.46E, h50^{km}, mb5.0/79, mB5.4/73, Ms5.4/94, Ms7 5.3/87*

*IDC **09** 19:25:05.2±2.2, 29°.37N×130°.19E, h29^{km}±15^{km}, mb4.8/45, mb1 4.8/50, mb1mx4.7/71, mbtmp5.0/50, ML4.4/5, MS5.0/62, Ms1 5.1/62, ms1mx5.0/70, Error ellipse: s-maj=10.2km s-min=9.2km az=86.0*

*MOS **09** 19:25:05.9±1.1, 29°.44N×130°.12E, h43^{km}, mb5.4/53, MS5.3/32, Error ellipse: s-maj=5.6km s-min=3.7km az=105.8*

*ISCJB **09** 19:25:06.1±0.2, 29°.34N±0°.02×130°.17E±0°.02, h45^{km}±2^{km}, mb5.0/157, MS5.2/214, Error ellipse: s-maj=3.2km s-min=1.9km az=43.8*

*JMA **09** 19:25:06.2, 29°.33N×130°.23E, h51^{km}±2^{km}, M5.3*

JMA Felt II J1.

*NEIC **09** 19:25:07.1±0.5, 29°.38N×130°.10E, h39^{km}±4^{km}, mb5.1/8, MS5.1/114, MW5.5, MW5.6, Error ellipse: s-maj=4.6km s-min=3.1km az=147.0, Moment Tensor Solution. s56 Moment tensor: Scale 10^{17}Nm; M_{rr}1.50; $M_{\theta\theta}$-0.47; $M_{\phi\phi}$-1.03; $M_{r\theta}$0.69; $M_{\theta\phi}$-0.62; $M_{\phi r}$0.88; Best double couple: $M_0 1.90000\times10^{17}$ NP1:ϕ_s210.00000°, δ27.00000°, λ85.00000°. NP2:ϕ_s36.00000°, δ64.00000°, λ93.00000°. Principal axes: T 1.8800, Plg71.0000°, Azm312.0000°; N -0.0700, Plg2.0000°, Azm215.0000°; P -1.8100, Plg19.0000°, Azm124.0000°;*

NEIC Recorded [2 JMA] on Amami-oshima, Kikaiga-shima, Kuchino-shima, Nakano-shima and Tanega-shima.

*GCMT **09** 19:25:07.1±0.1, 29°.23N×130°.31E, h34^{km}, MW5.6/109, Moment Tensor Solution. s107,c206; s109,c288; Duration: 1^{s}5 Moment tensor: Scale 10^{17}Nm; M_{rr}2.64±.04; $M_{\theta\theta}$-0.81±.03; $M_{\phi\phi}$-1.83±.03; $M_{r\theta}$1.00±.03; $M_{\theta\phi}$-1.14±.02; $M_{\phi r}$0.93±.03; Best double couple: $M_0 2.94000\times10^{17}$ NP1:ϕ_s39.00000°, δ59.00000°, λ96.00000°. NP2:ϕ_s207.00000°, δ32.00000°, λ80.00000°. Principal axes: T 2.9910, Plg75.0000°, Azm327.0000°; N -0.1040, Plg5.0000°, Azm216.0000°; P -2.8880, Plg14.0000°, Azm125.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*NEIC **09** 19:25:08.0±0.0, 29°.19N×130°.41E, h40^{km}, Moment Tensor Solution. s43 Moment tensor: Scale 10^{17}Nm; M_{rr}1.97; $M_{\theta\theta}$-0.79; $M_{\phi\phi}$-1.18; $M_{r\theta}$1.67; $M_{\theta\phi}$-0.65; $M_{\phi r}$1.34; Best double couple: $M_0 2.80000\times10^{17}$ NP1:ϕ_s47.00000°, δ70.00000°, λ96.00000°. NP2:ϕ_s211.00000°, δ21.00000°, λ75.00000°. Principal axes: T 2.9800, Plg64.0000°, Azm326.0000°; N -0.3600, Plg5.0000°, Azm225.0000°; P -2.6200, Plg24.0000°, Azm132.0000°;*

ISC 09 19:25:06.9±0.3**, 29°.27N**±0°.03×**130°.28E**±0°.03**, h42^{km}**±2^{km}**, h42^{km}:pP-P, n979, σ1^{s}87**/999**, mb5.0**/157**, MS5.2**/219**, 69C-21D, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNN	Nakanoshima	0.67	328	P	Pn	19 25 18.9	-1.1
JNN				S	Sn	19 25 28.1	-1.3
JTAJ	Takarajima	0.95	263	P	Pn	19 25 23.2	-0.6
JYAK	Yakushimahirau	0.98	11	P	Pn	19 25 23.2	-1.0
JYAK				*e*S	Sn	19 25 36.9	0.0
JZK	Kikaishima	0.99	196	P	Pn	19 25 24.6	+0.2
JAM	Amami Oshima	1.05	215	P	Pn	19 25 25.0	-0.1
JAM				S	Sn	19 25 39.4	+0.9
JKC	Kuchinoerabu	1.19	356	P	Pn	19 25 26.0	-1.0
JMTN	Minamitane	1.24	25	P	Pn	19 25 27.4	-0.4
JMTN				*e*S	Sn	19 25 42.8	-0.5
JAMN	Amaminishikomi	1.42	224	P	Pn	19 25 30.2	0.0
JAMN				*e*S	Sn	19 25 47.5	-0.1
JTN	Tanegashima 3	1.50	24	P	Pn	19 25 30.9	-0.5
JTN				*e*S	Sn	19 25 49.5	-0.2
JTK	Tokunoshima	1.89	219	P	Pn	19 25 37.3	+0.6
JTK				*e*S	Sn	19 25 59.6	+0.3
JTSR	Tashiro 2	1.96	16	P	Pn	19 25 37.3	-0.4
JTSR				S	Sn	19 26 01.9	+0.7
JSU	Suzuyama	2.23	4	P	Pn	19 25 40.7	-0.7
JNAR	Kushima--Naru	2.40	21	P	Pn	19 25 43.7	0.0
JOKE	Okinoerabujima	2.43	219	P	Pn	19 25 44.5	+0.4
JOKE				*e*S	Sn	19 26 13.8	+1.1
JSJ	Shimokoshiki	2.44	349	P	Pn	19 25 43.2	-1.1
JYRO	Yoronjima	2.77	216	P	Pn	19 25 48.4	-0.3
JYRO				*e*S	Sn	19 26 18.9	-1.9
JZO	Okuchi	2.87	5	P	Pn	19 25 50.3	+0.1
JOW	Kunigami	3.01	217	Pn	Pn	19 25 52.4	+0.3
	97nm,0.3s,baz=272,slow=28,SNR=88						
JOW				Sn	Sn	19 26 37.0	+10
	391nm,0.3s,baz=160,slow=24,SNR=5.7						
JOW	Kunigami	3.01	217	*e*Pn	Pn	19 25 51.9	-0.2
JOW				Sn	Sn	19 26 37.0	+10
JOW	Kunigami	3.01	217	P	Pn	19 25 52.6	+0.5
JOW				*e*S	Sn	19 26 27.7	+0.7
JIH	Iheya	3.03	223	P	Pn	19 25 52.4	+0.1
JIH				*e*S	Sn	19 26 27.4	+0.1
JTSN	Tsuno	3.14	19	P	Pn	19 25 53.1	-0.8
JHHC	Hyugahichiya	3.37	20	P	Pn	19 25 55.9	-1.0
JNTH	Nagotoyohara	3.40	217	P	Pn	19 25 57.2	-0.2
JNTH				*e*S	Sn	19 26 35.7	-0.8
JKIT	Kitakata	3.49	16	P	Pn	19 25 58.5	-0.1
JMZ	Minamidaito 2	3.54	166	P	Pn	19 25 57.1	-2.3
JMZ				*e*S	Sn	19 26 36.1	-3.9
JTA	Tamana	3.68	3	P	Pn	19 26 02.2	+0.9
JSKE	Saikikamae	3.78	21	P	Pn	19 26 01.0	-1.6
JAGN	Aguni-jima	3.79	226	P	Pn	19 26 03.3	+0.5
JAGN				*e*S	Sn	19 26 46.1	-0.1
JJT3	Tamagusuku3	3.83	216	P	Pn	19 26 03.5	+0.2
JNU	Nakatsue	3.87	7	Pn	Pn	19 26 04.5	+0.6
	62nm,0.3s,baz=198,slow=3.1,SNR=538						
JNU				Sn	Sn	19 26 53.6	+5.5
	58nm,0.3s,baz=212,slow=18,SNR=4.6						
JNU				LR	LR	19 26 55.6	
	comp=Z,6µm,21.9s,baz=164,slow=29						
JNU	Nakatsue	3.87	7	P	Pn	19 26 04.7	+0.8
JKE	Kume jima 2	4.27	227	P	Pn	19 26 09.2	-0.2
JKE				*e*S	Sn	19 26 58.3	+0.4
JHIK	Hikimi	5.42	15	P	Pn	19 26 24.3	-0.9
JISG	Ishigakijimahi	7.09	230	P	Pn	19 26 45.7	-2.3
JKN2	Miekihoku	7.11	44	P	Pn	19 26 47.9	-0.4
TJN	Taejon	7.50	342	⇓*e*P	Pn	19 26 56.3	+2.7
JFM	Mihama	7.88	36	P	Pn	19 26 58.7	-0.2
YOJ	Yonaguni jima	8.07	235	*e*Pn	Pn	19 27 00.5	-1.1
YOJ	Yonaguni jima	8.07	235	*e*P	Pn	19 27 00.5	-1.1
SSE	Sheshan	8.08	285	P	Pn	19 27 03.8	+2.1
SSE				S	Sn	19 28 31.9	+0.2
SSE				pmax	pmax		
	comp=Z,9.0nm,0.5s						
SSE				pmax	pmax		
	comp=Z,360nm,4.4s						
SSE				LR	LR		
	comp=N,6µm,14.5s						
SSE				LR	LR		
	comp=E,9µm,16.7s						
INU	Inuyama	8.31	42	*e*Pn	Pn	19 27 04.3	-0.6
KS15	Wonju Array Si	8.39	347	*e*Pn	Pn	19 27 09.1	+3.2
KSAR	Wonju Array Be	8.39	347	Pn	Pn	19 27 08.9	+3.0
KSAR				Sn	Sn	19 28 50.0	+11
KSAR	Wonju Array Be	8.39	347	P	Pn	19 27 08.9	+3.0
KSRS	Korea Array	8.39	347	Pn	Pn	19 27 08.9	+3.0
	3.9nm,0.3s,baz=158,slow=14,SNR=67						
KSRS				Sn	Sn	19 28 50.0	+11
	baz=166,slow=28,SNR=2.7						
KSRS				LR	LR	19 30 36.9	
	comp=Z,20µm,19.5s,baz=158,slow=40						
KS01	Wonju Array Si	8.42	347	*e*Pn	Pn	19 27 08.8	+2.5
JYZW	Yoshizawa	8.51	46	P	Pn	19 27 07.5	0.0
INCN	Inchon	8.74	341	*e*Pn	Pn	19 27 14.4	+3.7
INCN	Inchon	8.74	341	P	Pn	19 27 15.7	+5.0
	SNR=22						
INCN	Inchon	8.74	341	*e*P	Pn	19 27 14.4	+3.7
TATO	Taipei	8.93	243	*e*Pn	Pn	19 27 19.5	+6.2
JHJ	Hachijo jima 2	8.99	62	Pn	Pn	19 27 14.2	0.0
	117nm,0.3s,baz=87,slow=9.5,SNR=73						
JHJ				Sn	Sn	19 28 51.2	-2.9
	baz=78,slow=20,SNR=1.5						
JHJ				LR	LR	19 30 27.4	
	comp=Z,9µm,21.3s,baz=268,slow=36						
JHJ2	Mitsune	9.02	63	*e*Pn	Pn	19 27 14.4	0.0
JGN	Niukaw	9.11	39	P	Pn	19 27 15.8	-0.1
YHNB	Yeheng	9.17	242	*e*Pn	Pn	19 27 21.3	+4.5
NACB	Ninganchiao	9.28	239	*e*Pn	Pn	19 27 25.8	+7.7
JJH	Hakui	9.37	34	P	Pn	19 27 20.2	+0.9
MAJO	Matsushiro	9.84	41	*e*Pn	Pn	19 27 25.6	-0.2
MAJO	Matsushiro	9.84	41	*d i*P	Pn	19 27 25.8	0.0
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.4s						
MAT	Matsushiro	9.84	41	P	Pn	19 27 26.0	+0.2
MAT	Matsushiro	9.84	41	P	Pn	19 27 25.6	-0.2
MAT				S	Sn	19 29 20.2	+5.3
MJAR	Matsushiro Arr	9.84	41	Pn	Pn	19 27 25.6	-0.1
	comp=Z,5.1nm,0.3s,baz=237,slow=15,SNR=45						
MJB9	Matsu-Tunnel	9.84	40	*e*Pn	Pn	19 27 25.7	-0.1
YULB	Yu-li	9.96	236	*e*Pn	Pn	19 27 24.7	-2.9
SSLB	Suanglung	9.98	239	*e*Pn	Pn	19 27 28.2	+0.4
NJ2	Nanjing	10.22	289	*e*P	Pn	19 27 32.2	+1.2
NJ2				PP	PnPn	19 27 41.4	+2.6
NJ2				sP		19 27 45.7	
NJ2				S	Sn	19 29 27.4	+3.1
NJ2				pmax	pmax		
	comp=Z,160nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,2µm,4.9s						
NJ2				LR	LR		
	comp=Z,14µm,17.3s						
NJ2				LR	LR		
	comp=Z,14µm,19.0s						
NJ2				LR	LR		
	comp=Z,19µm,17.4s						
TWG	Pinlang	10.48	234	*e*Pn	Pn	19 27 36.5	+1.9
TPUB	Ta-pu	10.51	238	*e*Pn	Pn	19 27 35.4	+0.4
CBIJ	Chichi jima	10.72	99	*e*Pn	Pn	19 27 37.3	-0.5
CBIJ				Sn	Sn	19 29 31.2	-5.4
JCJ	Chichijima	10.72	99	Pn	Pn	19 27 36.6	-1.3
	comp=Z,37nm,0.3s,baz=84,slow=2.3,SNR=14						
JCJ				Sn	Sn	19 29 31.2	-5.4
	comp=Z,5.5nm,0.3s,baz=108,slow=20,SNR=2.4						
JCJ				LR	LR	19 31 13.8	
	comp=Z,9µm,21.9s,baz=291,slow=34						
QZH	Quanzhou	11.27	250	⇑*i*P	Pn	19 27 44.4	-1.0
QZH				S	Sn	19 29 51.9	+1.8
QZH				LR	LR		
	comp=N,10µm,14.2s						
QZH				LR	LR		
	comp=E,5µm,12.6s						
QZH				LR	LR		
	comp=Z,9µm,19.9s						
DL2	Dalian	11.98	326	⇑*i*P	Pn	19 27 58.1	+3.1
DL2				S	Sn	19 30 11.3	+4.0
DL2				pmax	pmax		
	comp=Z,79nm,1.4s						
DL2				pmax	pmax		
	comp=Z,560nm,4.7s						
DL2				LR	LR		
	comp=Z,13µm,18.6s						
DL2				LR	LR		
	comp=Z,16µm,15.9s						
DL2				LR	LR		
	comp=Z,20µm,16.6s						
TIA	Tai'an	13.05	305	P	Pn	19 28 13.0	+3.3
TIA				S	Sn	19 30 42.9	+9.4
TIA				pmax	pmax		
	comp=Z,28nm,1.1s						
TIA				pmax	pmax		
	comp=Z,1µm,7.1s						
TIA				LR	LR		
	comp=Z,11µm,12.4s						
TIA				LR	LR		
	comp=Z,13µm,15.5s						
TIA				LR	LR		
	comp=Z,17µm,14.1s						
SNY	Shenyang	13.66	338	⇑P	Pn	19 28 20.4	+2.5
SNY				S	Sn	19 30 57.2	+9.1
SNY				pmax	pmax		
	comp=Z,56nm,2.3s						
SNY				pmax	pmax		
	comp=Z,3µm,6.7s						
SNY				LR	LR		
	comp=Z,19µm,15.3s						
SNY				LR	LR		
	comp=Z,11µm,13.5s						
SNY				LR	LR		
	comp=Z,30µm,15.3s						
WHN	Wuhan	13.88	279	⇓*i*P	Pn	19 28 23.2	+2.2
WHN				pP	P	19 28 34.3	+6.0
WHN				sP		19 28 40.7	
WHN				LR	LR		
	comp=Z,8µm,10.9s						
WHN				LR	LR		
	comp=Z,29µm,17.0s						
WHN				LR	LR		
	comp=Z,28µm,19.6s						
USRK	Ussuriysk Ar.	14.96	5	Pn	Pn	19 28 36.4	+1.0
	baz=180,slow=8.6						
USRK				LR	LR	19 34 32.4	
	comp=Z,6µm,20.1s,baz=170,slow=38						
CN2	Changchun	15.01	346	*e*P	P	19 28 39.4	-1.4
CN2				*e*S	Sn	19 31 27.7	+6.7
CN2				pmax	pmax		
	comp=Z,20nm,1.3s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,18µm,15.0s						
CN2				LR	LR		
	comp=Z,5µm,15.0s						
CN2				LR	LR		
	comp=Z,19µm,15.0s						
MDJ	Mudanjiang	15.32	358	P	Pn	19 28 38.5	-1.6
MDJ				S	Sn	19 31 33.2	+4.5
MDJ				pmax	pmax		

	comp=Z,14nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,2µm,9.1s						
MDJ				LR	LR		
	comp=Z,6µm,20.4s						
MDJ				LR	LR		
	comp=Z,5µm,12.7s						
MDJ				LR	LR		
	comp=Z,7µm,19.6s						
MDJ	**Mudanjiang**	**15.32**	**358**	*e*P	**Pn**	**19 28 40.7**	**+0.5**
	comp=Z,38nm,0.9s						
BJT	**Baijiatuau**	**15.78**	**316**	*e*P	**P**	**19 28 47.7**	**-1.8**
	comp=Z,123nm,0.8s						
BJT	**Baijiatuau**	**15.78**	**316**	*e*P	**P**	**19 28 47.7**	**-1.8**
BJT				pmax	pmax		
	comp=Z,123nm,0.8s						
BJI	**Beijing**	**15.79**	**317**⇑	*i*P	**P**	**19 28 48.0**	**-1.5**
BJI				pmax	pmax		
	comp=Z,86nm,1.2s						
BJI				pmax	pmax		
	comp=Z,7µm,7.9s						
BJI				LR	LR		
	comp=Z,6µm,14.2s						
BJI				LR	LR		
	comp=Z,8µm,14.1s						
BJI				LR	LR		
	comp=Z,6µm,20.4s						
GZH	**Guangzhou**	**16.40**	**252**	P	**Pn**	**19 28 47.1**	**-7.0**
GZH				S	**Sn**	**19 31 52.2**	**-2.9**
GZH				LR	LR		
	comp=N,8µm,16.7s						
GZH				LR	LR		
	comp=E,7µm,16.1s						
ERM	**Erimo**	**16.44**	**36**⇑	*e*P	**P**	**19 28 56.3**	**-0.4**
ERM				pmax	pmax		
	comp=Z,20nm,1.0s						
TIY	**Taiyuan**	**17.08**	**304**	*e*P	**P**	**19 29 04.0**	**0.0**
TIY				S	**Sn**	**19 32 09.7**	**-1.9**
TIY				pmax	pmax		
	comp=Z,160nm,1.1s						
TIY				pmax	pmax		
	comp=Z,2µm,5.8s						
TIY				LR	LR		
	comp=Z,11µm,14.3s						
TIY				LR	LR		
	comp=Z,11µm,17.1s						
TIY				LR	LR		
	comp=Z,13µm,17.0s						
TGY	**Tagaytay City**	**17.40**	**212**	LR	LR	19 35 30.9	
	comp=Z,2µm,21.2s,baz=5.5,slow=36						
ASAJ	**Asahikawa**	**17.77**	**30**	P	**Pn**	**19 29 08.2**	**-2.8**
	comp=Z,1.5nm,0.3s,baz=212,slow=11,SNR=24						
ASAJ				LR	LR	19 36 12.0	
	comp=Z,11µm,21.1s,baz=230,slow=38						
ASAJ	**Asahikawa**	**17.77**	**30**	*e*Pn	**Pn**	**19 29 07.9**	**-3.1**
ENH	**Enshi**	**18.08**	**278**	*e*P	**Pn**	**19 29 14.6**	**-0.4**
	comp=Z,136nm,0.9s						
XAN	**Xi’an**	**18.79**	**290**	P	**P**	**19 29 22.3**	**-0.4**
XAN				pP	pP	19 29 32.0	-1.0
XAN				sP	sP	19 29 38.2	-0.2
XAN				PP	**PnPn**	**19 29 42.9**	**+6.6**
XAN				pmax	pmax		
	comp=Z,45nm,0.8s						
XAN				pmax	pmax		
	comp=Z,2µm,5.4s						
XAN				LR	LR		
	comp=Z,6µm,17.3s						
XAN				LR	LR		
	comp=Z,6µm,18.0s						
XAN				LR	LR		
	comp=Z,8µm,18.7s						
HHC	**Hu-ho-hao-te**	**19.14**	**312**	*e*P	**Pn**	**19 29 27.6**	**-0.2**
HHC				pP	sP	19 29 39.2	-3.1
HHC				S	**Sn**	**19 32 58.6**	**-2.8**
HHC				sS	sS	19 33 10.8	-7.2
HHC				pmax	pmax		
	comp=Z,78nm,1.2s						
HHC				pmax	pmax		
	comp=Z,1µm,5.1s						
HHC				LR	LR		
	comp=Z,7µm,16.7s						
HHC				LR	LR		
	comp=Z,8µm,17.7s						
HHC				LR	LR		
	comp=Z,12µm,17.0s						
YUK	**Yuzh-Kuril’sk**	**19.27**	**36***c*	*i*P	**Pn**	**19 29 28.7**	**-0.4**
YUK				*i* S	**Sn**	**19 33 05.1**	**+1.0**
YUK				pmax	pmax		
	comp=N,45nm,0.7s						
YUK				pmax	pmax		
	comp=Z,76nm,0.7s						
YUK				pmax	pmax		
	comp=E,42nm,0.6s						
YUK				smax	smax		
	comp=E,280nm,2.3s						
YUK				smax	smax		
	comp=N,246nm,2.0s						
YUK				MLR	MLR		
	comp=Z,5µm,21.0s						
YUK				MLR	MLR		
	comp=N,2µm,16.0s						
YUK				MLR	MLR		
	comp=E,1µm,20.0s						
SHO	**Shikotan**	**19.66**	**38**	*e*P	**P**	**19 29 32.0**	**-0.1**
SHO				*e*S	**S**	**19 33 10.9**	**-0.7**
SHO				pmax	pmax		
	comp=Z,234nm,3.3s						
SHO				pmax	pmax		
	comp=Z,21nm,1.0s						
SHO				pmax	pmax		
	comp=N,8.0nm,1.2s						
SHO				pmax	pmax		
	comp=E,9.0nm,1.0s						
SHO				smax	smax		
	comp=N,227nm,6.4s						
SHO				smax	smax		
	comp=E,224nm,4.6s						
SHO				MLR	MLR		
	comp=Z,4µm,19.0s						
SHO				MLR	MLR		
	comp=E,3µm,21.0s						
SHO				MLR	MLR		
	comp=N,3µm,18.0s						
LLP	**Lapu-Lapu**	**19.77**	**199**	*e*P	**Pn**	**19 29 36.3**	**+1.1**
KLR	**Kul’dur**	**19.96**	**3**	P	**P**	**19 29 33.8**	**-1.5**
	comp=N,0.1nm,0.3s,baz=182,slow=7.9,SNR=77						
KLR	**Kul’dur**	**19.96**	**3***c*	*i*P	**P**	**19 29 33.5**	**-1.8**
BTO	**Baotou**	**20.04**	**310**	*e*P	**P**	**19 29 35.5**	**-1.0**
YSS	**Yuzh-Sakhalins**	**20.15**	**25**	*e*P	**P**	**19 29 37.3**	**-0.1**
YSS				LR	LR		
	comp=Z,3µm,19.0s						
YSS	**Yuzh-Sakhalins**	**20.15**	**25**	*e*P	**P**	**19 29 37.0**	**-0.4**
YSS				*e*		19 29 50.2	
YSS				*e**SP	**sP**	**19 29 57.0**	**+3.9**
YSS				*e*S	**S**	**19 33 18.0**	**-3.2**
YSS				*e*SS	**SnSn**	**19 33 48.0**	**+7.8**
YSS				pmax	pmax		
	comp=N,2µm,1.3s						
YSS				pmax	pmax		
	comp=Z,2µm,1.3s						
YSS				pmax	pmax		
	comp=E,830nm,1.4s						
YSS				pmax	pmax		
	comp=Z,900nm,5.6s						
YSS				pmax	pmax		
	comp=N,500nm,5.3s						
YSS				pmax	pmax		
	comp=E,400nm,5.3s						
YSS				MLR	MLR		
	comp=Z,5µm,16.0s						
YSS				MLR	MLR		
	comp=N,4µm,18.0s						
GUMO	**Guam**	**20.65**	**136**	P	Pn	19 29 44.7	-0.9
	comp=N,192nm,1.0s,baz=226,slow=1.6,SNR=14						
GUMO				LR	LR	19 36 10.0	
	comp=N,4µm,20.5s,baz=321,slow=32						
GYA	**Guiyang**	**21.06**	**268**⇑	*i*P	**P**	**19 29 48.2**	**+0.6**
GYA				pP	sP	19 30 01.6	-1.7
GYA				PP	**PnPn**	**19 30 13.0**	**+5.4**
GYA				S	**S**	**19 33 39.6**	**-0.3**
GYA				sS	sS	19 33 55.2	-1.4
GYA				SS	**SnSn**	**19 34 10.0**	**+7.0**
GYA				pmax	pmax		
	comp=N,90nm,0.7s						
GYA				pmax	pmax		
	comp=N,450nm,6.2s						
GYA				LR	LR		
	comp=N,7µm,16.9s						
GYA				LR	LR		
	comp=N,9µm,16.9s						
GYA				LR	LR		
	comp=N,14µm,16.7s						
KUR	**Kuril’sk**	**21.13**	**36***c*	*i*P	**P**	**19 29 47.9**	**-0.1**
KUR				*i*		19 30 06.0	
KUR				*e*S	**S**	**19 33 42.0**	**+1.3**
KUR				*i*		19 33 48.5	
KUR				*e*SS	**SnSn**	**19 34 07.0**	**+2.7**
KUR				pmax	pmax		
	comp=Z,481nm,1.2s						
KUR				pmax	pmax		
	comp=N,146nm,1.1s						
KUR				pmax	pmax		
	comp=Z,2µm,4.5s						
KUR				pmax	pmax		
	comp=Z,2µm,17.0s						
KUR				pmax	pmax		
	comp=E,1µm,14.0s						
KUR				pmax	pmax		
	comp=N,3µm,17.0s						
QIZ	**Qiongzhong**	**21.23**	**246**	P	**P**	**19 29 50.7**	**+1.4**
QIZ				sP	**sP**	**19 30 04.6**	**-0.4**
QIZ				sS	**sS**	**19 34 00.9**	**+1.2**
QIZ				LR	LR		
	comp=N,4µm,16.2s						
QIZ				LR	LR		
	comp=N,5µm,19.1s						
QIZ				LR	LR		
	comp=N,4µm,22.6s						
QIZ	**Qiongzhong**	**21.23**	**246**	*e*P	**P**	**19 29 50.9**	**+1.6**
	comp=N,61nm,1.1s						
QIZ				LR	LR		
	comp=Z,5µm,20.0s						
HIA	**Hailar**	**21.53**	**341**	*e*P	**P**	**19 29 51.5**	**-0.8**
	comp=Z,135nm,1.5s						
HIA				LR	LR		
	comp=Z,9µm,21.0s						
HIA	**Hailar**	**21.53**	**341**	*e*P	**P**	**19 29 51.5**	**-0.8**
HIA				pmax	pmax		
	comp=Z,135nm,1.5s						
HIA				MLR	MLR		
	comp=Z,9µm,21.0s						
BUKP	**Musuan**	**21.84**	**194**	*e*P	**P**	**19 29 55.0**	**-0.9**
GRNR	**Gornyy**	**21.96**	**10**	*e*P	**P**	**19 29 55.7**	**-1.2**
GRNR				pmax	pmax		
	comp=Z,33nm,1.1s						
DAV	**Davao City (W)**	**22.53**	**192**	LR	LR	19 39 17.2	
	comp=Z,2µm,20.0s,baz=29,slow=38						
CD2	**Chengdu**	**22.99**	**281**	⇑P	**P**	**19 30 08.0**	**-0.1**
CD2				pP	pP	19 30 20.0	+1.4
CD2				sP	sP	19 30 26.4	+2.5
CD2				PcP	**PcP**	**19 33 57.7**	**+0.9**
CD2				S	**S**	**19 34 14.5**	**-1.1**
CD2				pmax	pmax		
	comp=Z,500nm,0.7s						
CD2				pmax	pmax		
	comp=Z,2µm,6.3s						
CD2				LR	LR		
	comp=Z,28µm,16.3s						
CD2				LR	LR		
	comp=Z,21µm,13.1s						
CD2				LR	LR		
	comp=Z,25µm,14.9s						
LZH	**Lanzhou**	**23.23**	**294**	*e*P	**P**	**19 30 10.0**	**-0.5**
LZH				pP	pP	19 30 22.7	+1.5
LZH				sP	sP	19 30 28.2	+1.8
LZH				PP	**PnPn**	**19 30 43.8**	**+6.6**
LZH				S	**S**	**19 34 18.4**	**-1.2**
LZH				sS	sS	19 34 33.1	-5.4
LZH				pmax	pmax		
	comp=Z,210nm,1.4s						
LZH				pmax	pmax		
	comp=Z,2µm,5.8s						
LZH				LR	LR		
	comp=Z,10µm,11.2s						
LZH				LR	LR		
	comp=Z,15µm,13.0s						
LZH				LR	LR		
	comp=Z,19µm,15.8s						
TYV	**Tymovskoe**	**23.49**	**20**	*e*P	**P**	**19 30 13.4**	**+0.8**
TYV				*e*		19 34 25.6	
TYV				pmax	pmax		
	comp=Z,2µm,5.0s						
TYV				pmax	pmax		
	comp=Z,77nm,1.6s						
TYV				MLR	MLR		
	comp=Z,5µm,17.0s						
TYV				MLR	MLR		
	comp=E,5µm,16.0s						
ZEA	**Zeya**	**24.54**	**356**	*e*P	**P**	**19 30 20.0**	**-2.4**
ZEA				*e*		19 30 28.0	
ZEA				pmax	pmax		
	comp=N,700nm,5.0s						
ZEA				pmax	pmax		
	comp=Z,800nm,5.0s						
ZEA				pmax	pmax		
	comp=E,24nm,1.0s						
ZEA				pmax	pmax		
	comp=N,100nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,110nm,1.2s						
ZEA				MLR	MLR		
	comp=Z,3µm,18.0s						
ZEA				MLR	MLR		
	comp=E,3µm,13.0s						
ZEA				MLR	MLR		
	comp=N,3µm,18.0s						
KMI	**Kunming**	**24.82**	**267**	P	**P**	**19 30 25.7**	**+0.2**
KMI				pP	sP	19 30 38.9	-3.0
KMI				sP	pP	19 30 44.7	+7.9
KMI				PP	**PnPn**	**19 31 05.2**	**+6.0**
KMI				S	**S**	**19 34 36.6**	**-9.0**
KMI				sS	sS	19 35 02.8	-1.7
KMI				pmax	pmax		
	comp=N,83nm,0.6s						
KMI				pmax	pmax		
	comp=N,800nm,5.4s						
KMI				LR	LR		
	comp=N,6µm,14.7s						
KMI				LR	LR		
	comp=N,8µm,16.6s						
KMI				LR	LR		
	comp=N,11µm,15.8s						
NKL	**Nikolayevsk**	**25.05**	**15**	*i* P	**P**	**19 30 27.0**	**0.0**
NKL				*e*		19 30 40.0	
NKL				*e*		19 34 46.0	
NKL				pmax	pmax		
	comp=N,600nm,8.0s						
NKL				pmax	pmax		
	comp=Z,1µm,8.0s						
NKL				pmax	pmax		
	comp=Z,43nm,1.0s						
NKL				MLR	MLR		
	comp=N,3µm,16.0s						
NKL				MLR	MLR		
	comp=E,1µm,16.0s						
NKL				MLR	MLR		
	comp=Z,6µm,16.0s						
ULN	**Ulaanbaatar**	**25.81**	**322**	*e*P	**P**	**19 30 32.6**	**-1.5**
ULN				LR	LR		
	comp=Z,13µm,20.0s						
ULN	**Ulaanbaatar**	**25.81**	**322**	P	**P**	**19 30 32.7**	**-1.5**
	SNR=48						
ULN	**Ulaanbaatar**	**25.81**	**322***c*	*e*P	**P**	**19 30 33.8**	**-0.3**
ULN				pmax	pmax		
	comp=Z,72nm,0.9s						
CIT	**Chita**	**25.91**	**336**	*e*P	**P**	**19 30 34.7**	**-0.1**
CIT				*e*		19 30 44.1	
CIT				*e*		19 30 54.3	
CIT				pmax	pmax		
	comp=Z,111nm,1.1s						
SONM	**Songino Array**	**26.14**	**322**	P	**P**	**19 30 35.6**	**-1.5**
	comp=Z,42nm,1.1s,baz=136,slow=8.6,SNR=39						
SONM				LR	LR	19 42 20.1	
	comp=Z,15µm,18.9s,baz=124,slow=40						
SONA1	**Songino Array**	**26.14**	**322**	*e*P	**P**	**19 30 35.3**	**-1.9**
GTA	**Gaotai**	**27.00**	**300**	*e*P	**P**	**19 30 44.9**	**-0.1**
GTA				pP	pP	19 30 56.1	-0.3
GTA				sP	sP	19 31 02.0	+0.5
GTA				PcP	**PcP**	**19 34 06.8**	**+1.1**
GTA				S	**S**	**19 35 15.7**	**-4.0**
GTA				SS	**SnSn**	**19 36 30.4**	**+2.3**
GTA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,420nm,7.4s						
GTA				LR	LR		
	comp=Z,4µm,15.6s						
GTA				LR	LR		
	comp=Z,10µm,16.7s						
GTA				LR	LR		
	comp=Z,15µm,17.0s						
SKNT	**Sakolnakorn**	**27.04**	**249**	P	**P**	**19 30 46.3**	**+0.9**
	comp=Z,11nm,1.1s						
NONG	**Nongkai**	**27.18**	**252**	P	**P**	**19 30 48.7**	**+2.1**
	comp=Z,0.4nm,1.1s						
TNTI	**Ternate**	**28.48**	**186**	*e*P	**P**	**19 31 01.8**	**+3.6**
SKR	**Severo-Kuril’s**	**28.88**	**35**	*e*P	**P**	**19 31 02.6**	**+1.2**
SKR				*e**PP	**pP**	**19 31 14.4**	**+1.5**
SKR				*e*		19 31 53.3	
SKR				*e*PPP	PPP	19 32 12.0	
SKR				*e*S	**S**	**19 35 45.4**	**-3.3**
SKR				pmax	pmax		
	comp=Z,66nm,1.1s						
SKR				pmax	pmax		
	comp=Z,300nm,14.8s						
SKR				pmax	pmax		
	comp=Z,500nm,14.1s						
SKR				MLR	MLR		
	comp=Z,4µm,19.0s						
SKR				MLR	MLR		
	comp=Z,3µm,19.0s						
ZAK	**Zakamensk**	**29.30**	**324**	*e*P	**P**	**19 31 03.5**	**-1.8**
ZAK				pmax	pmax		
	comp=Z,18nm,1.1s						
PBKT	**Sadao Pong**	**29.72**	**251**	P	**P**	**19 31 09.7**	**+0.5**
	comp=Z,19nm,1.2s						
MRSI	**Marisa**	**29.72**	**197**	P	P	19 31 15.4	+6.2
CMAI	**Chiengmai2**	**29.81**	**259**	P	**P**	**19 31 12.7**	**+2.5**
	comp=Z,1.8nm,1.2s						
LBMI	**Labuha**	**29.86**	**186**	P	P	19 31 17.9	+7.4
PHIT	**Phitsanulok**	**29.88**	**253**	P	**P**	**19 31 15.3**	**+4.7**
	comp=Z,13nm,0.7s						
TLY	**Talaya**	**29.90**	**326**	P	**P**	**19 31 10.4**	**-0.1**
	comp=Z,2.9nm,0.5s,baz=138,slow=5.1,SNR=18						
TLY	**Talaya**	**29.90**	**326**	P	**P**	**19 31 10.4**	**-0.1**
TLY				LR	LR		
	comp=Z,9µm,19.0s						
TLY	**Talaya**	**29.90**	**326**	P	**P**	**19 31 09.5**	**-1.1**
TLY	**Talaya**	**29.90**	**326***c*	*i*P	**P**	**19 31 09.6**	**-0.9**
TLY				*e*		19 32 26.8	
TLY				*e*S	**S**	**19 36 10.5**	**+5.7**
TLY				pmax	pmax		
	comp=Z,28nm,1.4s						
TLY				MLR	MLR		
	comp=Z,8µm,17.0s						
LAMP	**Lampang**	**29.91**	**256**	P	**P**	**19 31 12.4**	**+1.4**
	comp=Z,5.1nm,0.7s,comp=Z,56nm						
IRK	**Irkutsk**	**29.95**	**327**	*e*P	**P**	**19 31 10.4**	**-0.5**
IRK				pmax	pmax		
	comp=Z,66nm,1.3s						
SIJI	**Sorong**	**29.99**	**178**	P	**P**	**19 31 11.8**	**+0.2**
	comp=Z,1.6nm,0.6s,baz=340,slow=19,SNR=3.3						
SRAK	**Srakaew**	**30.22**	**246**	P	**P**	**19 31 10.2**	**-3.4**
CMMT	**Chiang Mai**	**30.37**	**257**	P	**P**	**19 31 15.4**	**+0.4**
	comp=Z,12nm,0.7s,comp=Z,366nm						
CHTO	**Chiang Mai**	**30.37**	**257**	*e*P	**P**	**19 31 14.5**	**-0.5**
CHTO				*e*PcP	**PcP**	**19 34 16.5**	**+2.2**
CHTO				LR	LR		
	comp=Z,4µm,19.0s						
CHTO	**Chiang Mai**	**30.37**	**257**	P	**P**	**19 31 14.0**	**-1.0**
	SNR=5.3						
CHTO	**Chiang Mai**	**30.37**	**257**	*e*P	**P**	**19 31 14.5**	**-0.5**
CHTO				*e*		19 34 16.5	
CHTO				MLR	MLR		
	comp=Z,4µm,19.0s						
CHTO	**Chiang Mai**	**30.37**	**257**	P	**P**	**19 31 15.5**	**+0.5**
	comp=Z,52nm,0.7s,comp=Z,1µm						
MPSI	**Mapaga**	**30.44**	**201**	P	P	19 31 21.2	+5.7
CM31	**Chiang Mai Arr**	**30.53**	**256**	*e*P	**P**	**19 31 16.9**	**+0.6**
CMAR	**Chiang Mai Arr**	**30.53**	**256**	P	**P**	**19 31 15.6**	**-0.8**
	comp=Z,1.5nm,0.6s,baz=55,slow=7.7,SNR=17						
CMAR				PcP	**PcP**	**19 34 15.2**	**+0.4**
	comp=Z,2.3nm,0.7s,baz=35,slow=1.5,SNR=7.5						
CMAR				ScP	**ScP**	**19 37 57.2**	**+3.3**
	comp=Z,1.5nm,1.1s,baz=56,slow=2.3,SNR=4.7						
CMAR				LR	LR	19 44 19.7	
	comp=Z,4µm,19.7s,baz=66,slow=38						
CM01	**Chiang Mai Arr**	**30.53**	**256**	*e*P	**P**	**19 31 17.1**	**+0.7**
CM01				*e*PcP	**PcP**	**19 34 15.2**	**+0.5**
BOD	**Bodaibo**	**30.71**	**343**	*e*P	**P**	**19 31 15.7**	**-1.8**
BOD				pmax	pmax		
	comp=Z,12nm,1.0s						
CHBT	**CHBT**	**30.72**	**244**	P	**P**	**19 31 19.0**	**+0.9**
	comp=Z,96nm,0.5s,comp=Z,246µm						
PEA0B	**Petropavlovsk-**	**31.16**	**32**	*e*P	**P**	**19 31 22.1**	**+0.5**
PETK	**Petropavlovsk-**	**31.16**	**32**	P	**P**	**19 31 22.0**	**+0.4**
	comp=Z,10nm,1.1s,baz=224,slow=4.0						
PETK				LR	LR	19 43 57.9	
	comp=Z,4µm,20.5s,baz=227,slow=36						
PETK	**Petropavlovsk-**	**31.16**	**32**	*e*P	**P**	**19 31 21.6**	**+0.1**
PETK	**Petropavlovsk-**	**31.16**	**32**	*e*P	**P**	**19 31 21.7**	**+0.1**
MOY	**Mondy**	**31.22**	**324**	*e*P	**P**	**19 31 21.5**	**-0.8**
MOY				pmax	pmax		
	comp=Z,27nm,1.3s						
UTHA	**Uthaitani**	**31.50**	**251**	P	**P**	**19 31 27.7**	**+2.8**
	comp=Z,4.4nm,1.1s						
PET	**Petropavlovsk**	**31.56**	**33**	*e*P	**P**	**19 31 24.9**	**-0.1**
PET				LR	LR		
	comp=Z,3µm,21.0s						
PET	**Petropavlovsk**	**31.56**	**33***c*	*i*P	**P**	**19 31 25.8**	**+0.7**
PET				*e**PP	**pP**	**19 31 36.8**	**+0.3**
PET				*e*S	**S**	**19 36 30.1**	**-0.6**
PET				*e**SS	**sS**	**19 36 48.5**	**-1.3**
PET				pmax	pmax		
	comp=Z,500nm,4.3s						
PET				pmax	pmax		
	comp=Z,29nm,1.3s						
PET				pmax	pmax		
	comp=Z,300nm,13.6s						
PET				MLR	MLR		
	comp=Z,4µm,19.0s						
PET				MLR	MLR		
	comp=Z,3µm,19.0s						
PCI	**Palu**	**31.63**	**200**	P	P	19 31 31.8	+5.7
UMPA	**Umpang Tak**	**31.66**	**253**	P	**P**	**19 31 29.7**	**+3.4**
	comp=Z,6.2nm,0.9s,comp=Z,510nm						
FAKI	**Fak Fak**	**32.07**	**176**	*e*P	**P**	**19 31 32.2**	**+2.3**
SRDT	**SRDT**	**32.39**	**249**	P	**P**	**19 31 34.6**	**+1.8**
	comp=Z,19nm,1.2s						
NLAI	**Namlea**	**32.47**	**186**	P	P	19 31 40.8	+7.4
KNGR	**Kungurtug, Tuv**	**32.53**	**320**⇑	*e*P	**P**	**19 31 34.3**	**+0.5**
YAK	**Yakutsk**	**32.76**	**359**	*e*P	**P**	**19 31 35.5**	**0.0**
YAK				LR	LR		
	comp=Z,4µm,22.0s						
YAK	**Yakutsk**	**32.76**	**359**	*e*P	**P**	**19 31 35.3**	**-0.2**
YAK				*e*		19 32 42.5	
YAK				*e*		19 34 19.8	
YAK				*e*S	**S**	**19 36 47.0**	**-2.2**
YAK				*e**SS	**sS**	**19 37 09.3**	**+0.9**
YAK				*e*		19 41 57.2	
YAK				pmax	pmax		
	comp=Z,51nm,1.1s						
YAK				pmax	pmax		
	comp=N,29nm,1.4s						
YAK				pmax	pmax		
	comp=E,9.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,17nm,1.3s						
YAK				pmax	pmax		
	comp=N,9.0nm,1.5s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.4s						
YAK				smax	smax		
	comp=E,131nm,3.2s						
YAK				smax	smax		
	comp=N,119nm,4.6s						
YAK				MLR	MLR		
	comp=Z,4µm,25.0s						
YAK				MLR	MLR		
	comp=N,6µm,23.0s						
YAK				MLR	MLR		
	comp=E,2µm,20.0s						
PHET	**Kaeng Krachan**	**32.77**	**247**	P	**P**	**19 31 38.3**	**+2.2**
	comp=E,14nm,0.9s,comp=E,162nm						
GENI	**Genyem**	**33.07**	**162**	P	P	19 31 48.2	+10
JAY	**Jayapura**	**33.15**	**161**	LR	LR	19 42 21.7	
	comp=E,4µm,21.6s,baz=346,slow=31						
MA2	**Magadan**	**33.35**	**19**	*e*P	**P**	**19 31 40.1**	**-0.6**

MA2				LR	LR		
	comp=Z,2µm,22.0s						
MA2	Magadan	33.35	19	eP	P	19 31 40.1	-0.6
MA2				MLR	MLR		
	comp=Z,2µm,22.0s						
LSA	Lhasa	33.96	281	eP	P	19 31 47.0	+0.1
	comp=Z,15nm,0.8s						
LSA				LR	LR		
	comp=Z,6µm,19.0s						
LSA	Lhasa	33.96	281	i P	P	19 31 47.2	+0.3
	SNR=22						
LSA	Lhasa	33.96	281	eP	P	19 31 47.0	+0.1
LSA				pmax	pmax		
	comp=Z,15nm,0.8s						
LSA				MLR	MLR		
	comp=Z,6µm,19.0s						
SHL	Shillong	34.19	273	eP	P	19 31 47.2	-1.4
SHL	Shillong	34.19	273	eP	P	19 31 49.0	+0.4
SHL				ex	x	19 34 27.0	
SHL				eS	PcS	19 38 15.0	+3.5
SHL	Shillong	34.19	273	eP	P	19 31 47.2	-1.4
WAKE	Wake Island	34.49	98	PFAKE		19 32 10.0	+19
WAKE				LR	LR		
	comp=Z,2µm,21.0s						
H11N2	WAKE ISLAND Hy	34.52	98	T	T	20 08 33.9	
	baz=292,slow=75						
H11N1	WAKE ISLAND Hy	34.53	98	T	T	20 08 38.8	
	baz=292,slow=75						
H11N3	WAKE ISLAND Hy	34.54	98	T	T	20 08 37.2	
	baz=292,slow=75						
H11S3	WAKE ISLAND Hy	34.84	100	T	T	20 09 28.6	
	baz=290,slow=74						
H11S1	WAKE ISLAND Hy	34.85	100	T	T	20 09 31.2	
	baz=290						
H11S2	WAKE ISLAND Hy	34.86	100	T	T	20 09 33.9	
	baz=290,slow=74						
HVS	Khovu-Aksy	34.93	319	⇑eP	P	19 31 55.6	+0.9
HVS				pmax	pmax		
	comp=Z,26nm,1.0s						
BRDH	Bariadhala	35.24	268	LR	LR	19 48 24.4	
	comp=Z,2µm,19.1s,baz=171,slow=40						
KAPI	Kappang	35.56	198	PFAKE		19 32 10.0	+10
KAPI				LR	LR		
	comp=Z,2µm,22.0s						
TRTT	Trang	35.80	240	P	P	19 32 06.2	+3.8
	comp=Z,11nm,0.9s						
SEY	Seymchan	36.59	17	LR	LR	19 47 56.8	
	comp=Z,4µm,20.3s,baz=180,slow=38						
SEY	Seymchan	36.59	17	c iP	P	19 32 09.0	+0.5
WMQ	Urumqi	36.75	305	eP	P	19 32 11.7	+1.4
WMQ				pP	sP	19 32 24.3	-2.6
WMQ				PP	PnPn	19 33 39.9	+5.3
WMQ				S	S	19 37 51.8	+0.6
WMQ				pmax	pmax		
	comp=Z,31nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,210nm,5.5s						
WMQ				LR	LR		
	comp=Z,6µm,17.7s						
WMQ				LR	LR		
	comp=Z,9µm,19.7s						
WMQ				LR	LR		
	comp=Z,10µm,20.7s						
TPRI	Tanjung Pinang	37.39	226	P	P	19 32 18.3	+2.4
KRAR	Krasnoyarsk	37.60	326	⇑eP	P	19 32 17.6	+0.4
ODAN	Odare	37.77	277	eP	P	19 32 18.7	-0.7
	comp=Z,70nm,0.7s						
DGZ	Jazzator, Alta	38.20	314	i P	P	19 32 22.4	-0.2
DGZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
RAMN	Ramite	38.44	277	eP	P	19 32 24.2	-0.8
	comp=Z,25nm,0.5s						
JIRN	Jiri	38.63	279	eP	P	19 32 27.0	+0.3
	comp=Z,74nm,0.7s						
EDFI	Ende, Flores	38.70	194	P	P	19 32 33.1	+6.1
GUN	Gumba	38.84	279	eP	P	19 32 29.0	+0.6
	comp=Z,94nm,0.5s						
SOEI	Soe	39.23	189	eP	P	19 32 36.9	+5.5
ZSN	Zaisan	39.33	310	LR	LR	19 50 24.2	
	comp=Z,434nm,12.5s						
PKIN	Phulchoki	39.33	279	eP	P	19 32 31.5	-1.0
	comp=Z,89nm,0.8s						
KKN	Kakani	39.38	279	eP	P	19 32 32.3	-0.5
	comp=Z,85nm,0.7s						
TSI	Tuntungan	39.53	236	P	P	19 32 36.2	+2.4
DMN	Daman	39.58	279	eP	P	19 32 33.6	-0.9
	comp=Z,158nm,1.2s						
PLAI	Plampang	39.75	200	P	P	19 32 41.2	+5.5
PSI	Prapat	39.76	234	P	P	19 32 36.5	+0.6
	comp=Z,17nm,0.6s,baz=0.1,slow=7.4,SNR=19						
PSI				LR	LR	19 49 01.5	
	comp=Z,1µm,21.6s,baz=89,slow=36						
PSI	Prapat	39.76	234	eP	P	19 32 36.6	+0.7
BATI	Baumata	39.77	190	P	P	19 32 34.5	-1.3
	comp=Z,32nm,0.7s,baz=180,slow=2.0,SNR=3.9						
BATI				LR	LR	19 48 49.8	
	comp=Z,417nm,21.7s,baz=27,slow=36						
GKN	Gorkha	39.89	280	eP	P	19 32 36.6	-0.4
	comp=Z,37nm,0.6s						
KCSI	Kotacane, Aceh	40.09	236	P	P	19 32 38.4	-0.1
BKNI	Bangkinang	40.09	229	eP	P	19 32 37.4	-1.1
DANN	Dangsing	40.57	280	eP	P	19 32 42.8	0.0
	comp=Z,149nm,0.8s						
MLSI	Meulaboh, Aceh	40.60	239	P	P	19 32 42.7	0.0
MNSI	Mandailing Nat	40.73	231	P	P	19 32 44.4	+0.6
MK01	Makanchi Array	40.95	309	eP	P	19 32 44.9	-0.5
MK31	Makanchi Array	40.96	309	eP	P	19 32 45.0	-0.5
MK31	Makanchi Array	40.96	309	eP	P	19 32 44.9	-0.5
MK31				pmax	pmax		
	comp=Z,14nm,0.9s						
MKAR	Makanchi Array	40.96	309	P	P	19 32 44.9	-0.5
	comp=Z,11nm,0.8s,baz=90,slow=11,SNR=69						
MKAR				PcP	PcP	19 34 44.3	-0.8
	comp=Z,7.2nm,0.7s,baz=69,slow=4.1,SNR=6.7						
MKAR				ScP	ScP	19 38 31.9	+0.5
	comp=Z,5.2nm,0.9s,baz=91,slow=4.9,SNR=8.5						
MKAR				LR	LR	19 51 38.0	
	comp=Z,3µm,18.1s,baz=103,slow=39						
ZAA0	Zalesovo Array	41.01	320	eP	P	19 32 44.2	-1.5
ZAA0				ePcP	PcP	19 34 45.1	+0.1
ZALV	Zalesovo Beam	41.01	320	P	P	19 32 44.3	-1.4
	comp=Z,7.2nm,0.4s,baz=106,slow=8.5,SNR=38						
ZALV				PcP	PcP	19 34 44.1	-0.9
	comp=Z,18nm,1.0s,baz=103,slow=2.0,SNR=9.2						
ZALV				ScP	ScP	19 38 32.0	+0.7
	comp=Z,2.4nm,0.8s,baz=101,slow=4.7,SNR=3.6						
ZALV				LR	LR	19 51 21.6	
	comp=Z,8µm,18.4s,baz=122,slow=39						
MAKZ	Makanchi	41.17	309	eP	P	19 32 46.5	-0.7
MAKZ	Makanchi	41.17	309	eP	P	19 32 46.5	-0.7
PYUN	Piuthan	41.28	280	eP	P	19 32 48.3	-0.3
	comp=Z,164nm,0.8s						
MTN	Manton Dam	41.88	179	eP	P	19 32 52.4	-0.7
LEM	Lembang	42.00	215	P	P	19 32 55.6	+1.2
	comp=Z,59nm,0.6s,baz=30,slow=8.1,SNR=7.4						
LEM				LR	LR	19 51 17.9	
	comp=Z,809nm,21.7s,baz=27,slow=37						
NVS	Novosibirsk	42.17	321	⇓iP	P	19 32 54.1	-1.0
NVS				e		19 34 47.9	
NVS				e		19 42 54.7	
NVS				pmax	pmax		
	comp=N,10.0nm,1.3s						
NVS				pmax	pmax		
	comp=E,21nm,1.3s						
NVS				pmax	pmax		
	comp=Z,27nm,1.3s						
TIXI	Tiksi	42.43	359	eP	P	19 32 55.6	-1.4
TIXI				LR	LR		
	comp=Z,3µm,22.0s						
TIXI	Tiksi	42.43	359	c iP	P	19 32 54.7	-2.3
TIXI				pmax	pmax		
	comp=Z,34nm,1.2s						
CISI	Cisompet, Garu	42.53	214	eP	P	19 33 00.2	+1.6
PDGK	Podgornoye	42.64	303	P	P	19 32 58.0	-1.3
PDGK				pmax	pmax		
	comp=Z,8.0nm,0.6s						
SHLS	Shalkode	42.65	303	eP	P	19 32 56.1	-3.3
	comp=Z,3.1nm,1.0s						
SHLS				ePP	PP	19 34 34.9	-3.9
SHLS				LR	LR	19 51 24.2	
SEM	Semipalatinsk	42.87	314	eP	P	19 33 00.5	-0.7
	comp=Z,44nm,0.9s						
SEM				ePP	PP	19 34 40.1	-0.9
SEM				LR	LR	19 51 58.0	
	comp=Z,3µm,16.0s						
UZB	Uzynbulak	42.98	303	i P	P	19 33 01.4	-0.7
	comp=Z,3.4nm,0.7s						
UZB				ePP	PP	19 34 41.5	-0.8
UZB				LR	LR	19 53 29.0	
	comp=Z,640nm,15.7s						
KPKS	Kokpek	43.23	304	eP	P	19 33 03.0	-1.1
	comp=Z,4.9nm,0.7s						
KPKS				ePP	PP	19 34 44.2	-0.7
KPKS				LR	LR	19 53 01.8	
	comp=Z,2µm,17.1s						
ZHN	Zhinishke	43.41	303	eP	P	19 33 05.0	-0.6
	comp=Z,2.4nm,0.7s						
ZHN				ePP	PP	19 34 46.6	-0.2
ZHN				LR	LR	19 53 44.8	
	comp=Z,555nm,14.4s						
PRZ	Przheval'sk	43.42	302	eP	P	19 33 06.2	+0.4
PRZ	Przheval'sk	43.42	302	eP	P	19 33 06.2	+0.4
SATY	Saty	43.42	303	eP	P	19 33 05.4	-0.3
	comp=Z,8.3nm,1.3s						
SATY				eS	S	19 39 29.1	-2.0
KURK	Kurchatov	43.94	314	PcP	PcP	19 34 54.0	-0.8
KURK				ScP	ScP	19 38 42.7	-0.6
KURK				LR	LR		
	comp=Z,18µm,20.0s						
KURK	Kurchatov	43.94	314	P	P	19 33 07.5	-2.0
	SNR=34						
KURK	Kurchatov	43.94	314	c iP	P	19 33 08.3	-1.2
KURK				pmax	pmax		
	comp=Z,119nm,1.3s						
KURBB	Kurchatov Arra	43.98	314	P	P	19 33 09.2	-0.7
	comp=Z,22nm,0.4s,baz=101,slow=8.6,SNR=339						
KURBB				PcP	PcP	19 34 54.0	-1.0
	comp=Z,11nm,1.0s,baz=102,slow=3.5,SNR=5.3						
KURBB				ScP	ScP	19 38 42.7	-0.7
	comp=Z,1.0nm,0.9s,baz=110,slow=4.0,SNR=3.0						
MDOK	Medeo	44.42	303	eP	P	19 33 13.5	-0.2
	comp=Z,141nm,0.8s						
MDOK				LR	LR	19 53 38.8	
	comp=Z,2µm,16.2s						
AAA	Alma-Ata	44.52	303	eP	P	19 33 14.6	+0.2
	comp=Z,14nm,1.1s						
AAA				LR	LR	19 53 43.7	
	comp=Z,2µm,16.9s						
AAA	Alma-Ata	44.52	303	eP	P	19 33 14.1	-0.3
AAA				pmax	pmax		
	comp=Z,300nm,8.8s						
AAA				MLR	MLR		
	comp=Z,3µm,17.0s						
KUU	Kurty	44.94	304	eP	P	19 33 17.7	+0.1
	comp=Z,11nm,1.0s						
KUU				eS	S	19 39 51.1	-1.8
KUU				LR	LR	19 53 34.5	
	comp=Z,4µm,19.9s						
KSH	Kashi	45.37	298	P	P	19 33 23.4	+2.1
KSH				pP	sP	19 33 35.8	-2.3
KSH				PcP	PcP	19 35 02.3	+2.1
KSH				PcS	PcS	19 38 54.4	+0.1
KSH				S	S	19 39 59.2	-0.2
KSH				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KSH				pmax	pmax		
	comp=Z,170nm,4.6s						
KSH				LR	LR		
	comp=Z,1µm,16.9s						
KSH				LR	LR		
	comp=Z,4µm,19.0s						
KSH				LR	LR		
	comp=Z,3µm,17.0s						
TKM2	Tokmak 2	45.49	303	P	P	19 33 21.5	-0.8
	SNR=32						
TKM2	Tokmak 2	45.49	303	P	P	19 33 22.2	-0.1
TKM2				pmax	pmax		
	comp=Z,15nm,1.0s						
MIDW	Midway	45.59	78	PFAKE		19 33 40.0	+17
MIDW				LR	LR		
	comp=Z,970nm,20.0s						
KZA	Kyzart	45.77	302	P	P	19 33 25.5	+0.7
	SNR=12						
KBK	Karagaybulak	45.97	302	P	P	19 33 26.2	+0.1
	SNR=12						
CHMS	Chumysh	46.10	303	P	P	19 33 26.8	-0.1
	SNR=18						
FRU	Bishkek	46.21	303	eP	P	19 33 28.0	+0.2
FRU				e		19 33 40.0	
FRU				e		19 40 12.0	
USP	Ospenovka	46.28	303	P	P	19 33 28.0	-0.4
	SNR=9.1						
AAK	Ala-Archa	46.31	302	eP	P	19 33 28.9	+0.2
AAK	Ala-Archa	46.31	302	eP	P	19 33 28.9	+0.2
UCH	Uchtor	46.31	302	P	P	19 33 29.8	+0.7
	SNR=29						
BTLS	Baital	46.58	306	eP	P	19 33 30.1	-0.5
	comp=Z,8.8nm,0.9s						
BTLS				LR	LR	19 54 47.0	
	comp=Z,787nm,15.6s						
EKS2	Erkin-Say	46.83	302	P	P	19 33 34.0	+1.2
	SNR=11						
SFK	Sufi-Kurgan	47.22	299	P	P	19 33 35.5	-0.5
SFK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
FITZ	Fitzroy Crossi	47.31	186	eP	P	19 33 36.7	+0.3
BRZS	Berezniki	47.65	312	eP	P	19 33 38.2	-0.6
	comp=Z,37nm,1.0s						
BRZS				ePP	PP	19 35 30.5	0.0
BRZS				LR	LR	19 55 15.1	
	comp=Z,1µm,14.0s						
MNAS	Manas	47.78	302	P	P	19 33 39.6	-0.6
MNAS				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HNR	Honiara	47.94	139	LR	LR	19 54 01.8	
	comp=Z,1µm,18.5s,baz=12,slow=36						
NIL	Nilore	48.33	290	eP	P	19 33 44.3	-0.1
NIL				LR	LR		
	comp=Z,2µm,21.0s						
NIL	Nilore	48.33	290	eP	P	19 33 44.3	-0.1
NIL				MLR	MLR		
	comp=Z,2µm,21.0s						
HYB	Hyderabad	48.60	268	i P	P	19 33 47.0	+0.4
WRAB	Tennant Creek	49.08	175	PFAKE		19 34 00.0	+10
WRAB				LR	LR		
	comp=Z,1µm,21.0s						
WRAB	Tennant Creek	49.08	175	deP	P	19 33 51.7	+1.6
WRAB				pmax	pmax		
	comp=Z,8.0nm,0.6s						
WRA	Warramunga Arr	49.09	175	P	P	19 33 49.4	-0.8
	comp=Z,9.0nm,0.6s,baz=354,slow=8.4,SNR=42						
WRA				LR	LR	19 53 03.7	
	comp=Z,1µm,21.7s,baz=350,slow=34						
TARA	Tarawa	49.16	116	PFAKE		19 34 00.0	+9.1
TARA				LR	LR		
	comp=Z,96nm,20.0s						
KK31	Karatay Array	49.20	303	eP	P	19 33 50.6	-0.4
KK31	Karatay Array	49.20	303	i P	P	19 33 50.7	-0.2
KK31				pmax	pmax		
	comp=Z,16nm,0.8s						
KKAR	Karatay Array	49.20	303	eP	P	19 33 50.6	-0.4
BVA0	Borovoye Array	49.28	316	i P	P	19 33 50.7	-0.6
BVA0				pmax	pmax		
	comp=Z,72nm,1.1s						
BVAR	Borovoye Array	49.28	316	P	P	19 33 50.6	-0.8
	comp=Z,66nm,0.8s,baz=91,slow=9.2,SNR=167						
BVAR				PcP	PcP	19 35 12.7	-1.0
	comp=Z,19nm,0.8s,baz=101,slow=2.7,SNR=4.0						
BVAR				ScP	ScP	19 39 05.6	+0.1
	comp=Z,1.6nm,0.9s,baz=49,slow=4.4,SNR=4.5						
BVAR				LR	LR	19 56 25.3	
	comp=Z,6µm,19.9s,baz=99,slow=38						
BRVK	Borovoye	49.34	316	eP	P	19 33 50.2	-1.6
BRVK				LR	LR		
	comp=Z,5µm,22.0s						
BRVK	Borovoye	49.34	316	P	P	19 33 50.2	-1.6
	SNR=73						
BRVK	Borovoye	49.34	316	c iP	P	19 33 51.1	-0.7
BRVK				pmax	pmax		
	comp=Z,159nm,1.0s						
IUG	Iuzhnay	49.64	302	eP	P	19 33 54.4	0.0
	comp=Z,7.2nm,1.3s						
CHM	Chimkent	49.94	302	eP	P	19 33 56.4	-0.1
	comp=Z,14nm,0.8s						
CHM				LR	LR	19 56 37.1	
	comp=Z,918nm,19.2s						
MBWA	Marble Bar	51.16	193	eP	P	19 34 04.2	-1.6
	comp=Z,95nm,1.1s						
MBWA				LR	LR		
	comp=Z,593nm,20.0s						
CTA	Charters Tower	51.44	161	LR	LR	19 54 57.8	
	comp=Z,2µm,20.0s,baz=0.0,slow=35						
CTAO	Charters Tower	51.44	161	PFAKE		19 34 20.0	+12
CTAO				LR	LR		
	comp=Z,3µm,20.0s						
PALK	Pallekele	51.45	255	LR	LR	19 56 44.0	
	comp=Z,1µm,21.8s,baz=188,slow=37						
KBL	Kabul	51.57	293	eP	P	19 34 09.5	+0.3
KBL	Kabul	51.57	293	eP	P	19 34 09.5	+0.3
ASAR	Alice Springs	52.75	176	P	P	19 34 17.8	+0.1
	comp=Z,2.5nm,0.7s,baz=352,slow=5.8,SNR=18						
ASAR				LR	LR	19 55 08.0	
	comp=Z,886nm,21.9s,baz=2.0,slow=34						
AS01	Alice Springs	52.75	176	eP	P	19 34 17.4	-0.3
RDOG	Red Dog Mine	54.54	25	eP	P	19 34 32.0	+1.7
SVE	Sverdlovsk	55.01	321	deP	P	19 34 33.4	-0.4
SVE				eS	S	19 42 33.5	+21
SVE				pmax	pmax		
	comp=Z,89nm,1.2s						
SVE				MLR	MLR		
	comp=Z,13µm,17.0s						
SVE				MLR	MLR		
	comp=E,10µm,17.0s						
AB31	Akbulak array	55.94	312	P	P	19 34 40.1	-0.5
AB31				pmax	pmax		
	comp=Z,86nm,0.9s						
ABKAR	Akbulak array	55.94	312	eP	P	19 34 39.7	-0.9
CHGN	Chignik	55.94	40	eP	P	19 34 39.5	-1.0
ARU	Arti	56.17	321	eP	P	19 34 40.5	-1.6
ARU				LR	LR		
	comp=Z,4µm,19.0s						
ARU	Arti	56.17	321	c iP	P	19 34 40.8	-1.4
ARU						19 35 37.6	
ARU						19 36 44.9	
ARU				PPP	PPP	19 38 04.6	
ARU				S	S	19 42 26.6	-1.7
ARU						19 44 23.0	
ARU				pmax	pmax		
	comp=Z,97nm,1.2s						
ARU				MLR	MLR		
	comp=Z,7µm,17.0s						
AKTO	Aktyubinsk	57.03	313	P	P	19 34 47.8	-0.6
	comp=Z,34nm,0.9s,baz=86,slow=8.0,SNR=57						
AKTO				LR	LR	20 01 23.3	
	comp=Z,8µm,19.1s,baz=86,slow=38						
PPLA	Purkeypile	58.74	32	eP	P	19 35 01.1	+0.7
CAST	Castle Rocks	58.76	31	eP	P	19 35 01.3	+1.0
KDAK	Kodiak Island	59.00	38	LR	LR	19 59 50.1	
	comp=Z,1µm,21.4s,baz=255,slow=35						
KDAK	Kodiak Island	59.00	38	eP	P	19 35 01.6	-0.3
KDAK	Kodiak Island	59.00	38	i P	P	19 35 01.7	-0.3
SKT	Skwentna	59.12	33	eP	P	19 35 02.8	0.0
BPAW	Bear Paw Mtn.	59.20	30	eP	P	19 35 04.2	+0.8
MLY	Manley	59.24	29	eP	P	19 35 04.4	+0.7
COLD	Coldfoot	59.34	26	eP	P	19 35 04.9	+0.7
GEYT	Alibeck	59.38	299	P	P	19 35 03.7	-1.4
	comp=Z,7.7nm,0.7s,baz=183,slow=5.9,SNR=5.0						
GEYT				LR	LR	20 05 12.0	
	comp=Z,2µm,18.1s,baz=5.0,slow=41						
GYA0B	ALIBECK ARRAY	59.38	299	eP	P	19 35 05.1	+0.1
CNPM	China Poot	59.50	35	eP	P	19 35 07.1	+1.5
TOLK	Toolik Lake Re	59.51	25	P	P	19 35 05.6	+0.2
	baz=273						
SUA	Susitna One	59.54	33	eP	P	19 35 05.6	-0.2
TRF	Thorofare Moun	59.56	31	eP	P	19 35 07.3	+1.2
BRLK	Bradley Lake	59.65	35	eP	P	19 35 07.5	+0.9
RC01	Rabbit Creek A	60.06	34	eP	P	19 35 09.5	+0.2
MCK	McKinley	60.13	30	eP	P	19 35 09.6	-0.2
MCK	McKinley	60.13	30	eP	P	19 35 09.6	-0.2
PMR	Palmer	60.29	33	eP	P	19 35 10.2	-0.6
PMR	Palmer	60.29	33	eP	P	19 35 10.2	-0.6
MDM	Murphy Dome	60.31	29	eP	P	19 35 11.3	+0.3
GHO	Glory Hole Cre	60.37	33	eP	P	19 35 11.5	0.0
CCB	Clear Creek Bu	60.53	29	eP	P	19 35 12.1	-0.3
SML	Sawmill	60.64	33	eP	P	19 35 13.1	-0.2
SML	Sawmill	60.64	33	eP	P	19 35 13.1	-0.2
IL1	Eielson Array	60.90	29	eP	P	19 35 13.4	-1.6
ILAR	Eielson Array	60.90	29	P	P	19 35 13.8	-1.2
	comp=Z,4.5nm,0.9s,baz=274,slow=4.9,SNR=27						
ILAR				PP	PP	19 37 34.9	+5.8
	comp=Z,2.8nm,1.1s,baz=284,slow=7.3,SNR=3.8						
ILAR				LR	LR	20 02 02.9	
	comp=Z,1µm,21.6s,baz=290,slow=36						
ILB	Eielson Array	60.90	29	eP	P	19 35 14.3	-0.7
DHY	Denali Highway	60.91	31	eP	P	19 35 15.4	+0.1
SCM	Sheep Creek Mo	61.11	32	eP	P	19 35 16.6	0.0
SCM	Sheep Creek Mo	61.11	32	eP	P	19 35 16.6	0.0
STKA	Stephens Creek	61.76	169	P	P	19 35 21.3	+0.2
	comp=Z,1.8nm,0.6s,baz=334,slow=4.7,SNR=4.5						
STKA				LR	LR	20 02 26.2	
	comp=Z,629nm,20.9s,baz=350,slow=36						
STKA	Stephens Creek	61.76	169	eP	P	19 35 23.2	+2.2
STKA	Stephens Creek	61.76	169	eP	P	19 35 23.3	+2.2
DZM	Mont Dzumac	61.80	142	P	P	19 35 23.1	+1.4
	comp=Z,8.4nm,0.9s,baz=150,slow=14,SNR=2.8						
DZM				LR	LR	19 59 45.9	
	comp=Z,787nm,21.2s,baz=327,slow=34						
DZM	Mont Dzumac	61.80	142	eS	S	19 43 47.2	+5.1
	comp=Z,2µm,26.2s						
DZM	Mont Dzumac	61.80	142	eLR	LR	19 53 57.0	
	comp=Z,2µm,25.2s						
KLU	Klutina	61.83	33	eP	P	19 35 21.8	+0.4
DIV	Divide	61.96	33	eP	P	19 35 22.9	+0.6
HARP	HAARP	62.02	32	eP	P	19 35 23.6	+0.9
PRGR	Permogore	62.21	327	eP	P	19 35 22.2	-1.6
PRGR				e		19 36 02.5	
PRGR				pmax	pmax		
	comp=Z,19nm,0.5s						
BMRM	Bremner River	62.55	33	eP	P	19 35 26.8	+0.6
RAGM	Ragged Mountai	62.63	34	eP	P	19 35 28.0	+1.3
NWAO	Narrogin (SRO)	63.09	192	LR	LR	20 05 10.5	
	comp=Z,484nm,20.7s,baz=271,slow=38						
EGAK	Eagle	63.32	29	eP	P	19 35 30.8	-0.4
EGAK				LR	LR		
	comp=Z,1µm,22.0s						
TGL	Tana Glacier	63.44	33	eP	P	19 35 32.6	+0.4
WSAR	Wadi Sarin	63.65	283	P	P	19 35 33.8	-0.3
	comp=Z,13nm,0.9s,baz=68,slow=9.4,SNR=5.9						
WSAR				LR	LR	20 07 19.3	
	comp=Z,777nm,19.6s,baz=86,slow=40						
DAWY	Dawson	64.23	29	eP	P	19 35 37.7	+0.4
KIP	Kipapa	64.39	79	PFAKE		19 35 50.0	+11
KIP				LR	LR		
	comp=Z,3µm,22.0s						
BANOM	Banah	64.62	287	P	P	19 35 39.2	-1.2
SHME	Shamm	64.71	287	P	P	19 35 41.0	0.0
MDH	Madha	64.85	286	P	P	19 35 43.3	+1.4
MSFE	Esma-Masafi	64.95	286	P	P	19 35 43.4	+0.9
UOSS	Minazif	65.06	286	P	P	19 35 43.0	-0.3
SOHO	SOHO	65.09	285	i P	P	19 35 43.3	-0.2
	SNR=13						
HATD	Hatta, Dubai	65.17	286	P	P	19 35 44.1	+0.1
KLMR	Klimovskoe	65.26	327	eP	P	19 35 41.5	-2.4
KLMR				e		19 38 05.1	
KLMR				pmax	pmax		
	comp=Z,42nm,1.5s						
KLMR				MLR	MLR		
	comp=Z,3µm,15.0s						
KLMR	Klimovskoe	65.26	327	eP	P	19 35 41.5	-2.4
KLMR				AMP		19 35 45.4	
	comp=Z,42nm,1.5s						
KLMR				ePP	PP	19 38 05.2	-2.2
KLMR				LQ	LQ	19 59 56.4	
KLMR				LQ	LQ	19 59 56.4	
KLMR				LR	LR	20 04 34.1	
KLMR				AMP		20 08 02.4	
	comp=Z,3µm,14.9s						
ASHO	Ashiyiah	65.29	285	i P	P	19 35 44.8	0.0
	SNR=6.7						
UMQ	Umm Al-Quwin	65.30	286	P	P	19 35 46.1	+1.3
INK	Inuvik	65.38	24	eP	P	19 35 44.5	-0.1
INK	Inuvik	65.38	24	eP	P	19 35 44.5	-0.1
ALNE	Al Ain	65.78	285	i P	P	19 35 48.4	+0.4
	SNR=10						
APA	Apatity	65.85	335	⇑iP	P	19 35 45.8	-1.8
APA				pmax	pmax		
	comp=Z,29nm,0.9s						
APA				MLR	MLR		
	comp=Z,2µm,19.0s						
ASUD	Al Ashush, Dub	65.92	286	P	P	19 35 48.2	-0.7
AKT	Akhty	66.04	305	eP	P	19 35 48.9	-0.6
AKT				e		19 36 19.8	
AKT				e		19 38 22.0	
AKT				pmax	pmax		
	comp=Z,59nm,0.9s						
SPITS	Spitsbergen Ar	66.23	348	P	P	19 35 48.6	-1.4

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       comp=Z,18nm,0.9s,baz=10,slow=8.8,SNR=6.3
SPITS                            LR      LR      20 06 24.4
       comp=Z,2µm,20.7s,baz=55,slow=38
DGAR   Diego Garcia     66.49 246  PFAKE           19 36 00.0 +7.5
DGAR                             LR      LR
       comp=Z,796nm,19.0s
KBS    Kingsbay         66.60 349  PFAKE           19 36 00.0 +7.7
KBS                              LR      LR
       comp=Z,2µm,22.0s
GROC   Groznyy          66.84 308 eP      P        19 35 51.6 -2.8
GROC                             e*PP    pP       19 36 07.8 +1.0
GROC                             eS      S        19 44 39.5 -4.5
GROC                             pmax    pmax
       comp=Z,76nm,1.4s
HSPB   Hornsund (broa   66.98 347 eP      P        19 35 54.6 -0.1
POHA   Pohakuloa        67.18  79  PFAKE           19 36 10.0  +13
POHA                             LR      LR
       comp=Z,720nm,21.0s
KEV    Kevo             67.28 338 eP      P        19 35 55.1 -1.6
KEV                              LR      LR
       comp=Z,6µm,21.0s
KEV    Kevo             67.28 338 eP      P        19 35 55.1 -1.6
KEV                              MLR     MLR
       comp=Z,6µm,21.0s
SKAG   Skagway          67.41  33 eP      P        19 35 58.8 +1.1
MOS    Moscow           67.77 322 eP      P        19 36 00.0  0.0
MOS                              e                 19 38 23.6
MOS                              eS      S        19 44 54.8 +0.1
MOS                              pmax    pmax
       comp=Z,39nm,0.7s
MOS                              MLR     MLR
       comp=N,3µm,19.0s
MOS                              MLR     MLR
       comp=E,5µm,19.0s
MOS                              MLR     MLR
       comp=Z,7µm,19.0s
ARCES  ARCESS Array B   67.85 338  P      P        19 35 58.6 -1.7
       comp=Z,22nm,1.1s,baz=66,slow=7.6,SNR=17
ARCES                            LR      LR      20 09 14.3
       comp=Z,4µm,22.0s,baz=59,slow=39
BESE   Bessie Mountai   67.94  34 eP      P        19 36 02.1 +1.0
MZR    Muzera           68.11 285  P      P        19 36 02.9 +0.1
NCK    Nalchik          68.26 309⇑eP      P        19 36 02.6 -0.8
NCK                              pmax    pmax
       comp=Z,26nm,1.2s
ZEI    Tsey             68.29 308 eP      P        19 36 02.3 -1.6
ZEI                              pmax    pmax
       comp=Z,29nm,0.8s
VSR    Storozhevoye     68.44 317 eP      P        19 36 02.3 -2.0
VSR                              pmax    pmax
       comp=Z,30nm,1.0s
VSR                              MLR     MLR
       comp=Z,7µm,15.0s
VORD   Divnogorie       68.45 317 eP      P        19 36 02.6 -1.8
VORD                             pmax    pmax
       comp=Z,10.0nm,0.8s
VORD                             MLR     MLR
       comp=Z,19µm,24.0s
OBN    Obninsk          68.55 322  PFAKE           19 36 20.0  +15
OBN                              LR      LR
       comp=Z,3µm,19.0s
OBN    Obninsk          68.55 322ceP      P        19 36 03.6 -1.3
OBN                              e*PP    sP       19 36 19.9 -2.3
OBN                              e                 19 36 29.1
OBN                              e                 19 38 34.8
OBN                              ePPP    PPP      19 40 15.7
OBN                              eS      S        19 45 01.5 -2.5
OBN                              pmax    pmax
       comp=Z,30nm,1.2s
OBN                              MLR     MLR
       comp=Z,5µm,19.0s
GNI    Garni            68.62 305  LR     LR      20 11 17.8
       comp=Z,999nm,19.0s,baz=69,slow=40
KBZ    Khabaz           68.66 309  P      P        19 36 05.8  0.0
       comp=Z,46nm,1.1s,baz=69,slow=1.4,SNR=30
KBZ                              LR      LR      20 11 04.9
       comp=Z,1µm,19.0s,baz=65,slow=40
KIV    Kislovodsk       68.72 309 eP      P        19 36 06.2 -0.1
KIV                              LR      LR
       comp=Z,2µm,20.0s
KIV    Kislovodsk       68.72 309  P      P        19 36 05.7 -0.6
       SNR=22
KIV    Kislovodsk       68.72 309 i P     P        19 36 06.0 -0.3
       SNR=13
KIV    Kislovodsk       68.72 309 eP      P        19 36 05.6 -0.8
KIV                              eS      S        19 45 04.0 -2.6
KIV                              eSS     SS       19 49 30.1 -1.2
KIV                              pmax    pmax
       comp=Z,85nm,1.1s
KIV                              pmax    pmax
       comp=Z,112nm,4.2s
NEY    Neytrino         68.94 309⇑eP      P        19 36 08.4 +0.5
NEY                              pmax    pmax
       comp=Z,8.0nm,1.3s
CRAG   Craig            69.95  37 eP      P        19 36 14.3 +0.7
WRAK   Wrangell Islan   69.99  36  PFAKE           19 36 30.0  +16
WRAK                             LR      LR
       comp=Z,625nm,19.0s
DLBC   Dease Lake       70.34  33  P      P        19 36 17.0 +0.9
       comp=Z,11nm,1.2s,baz=315,slow=5.9,SNR=8.7
DLBC   Dease Lake       70.34  33 eP      P        19 36 17.6 +1.5
AFI    Afiamalu         70.48 119  LR     LR      20 01 36.8
       comp=Z,883nm,21.0s,baz=324,slow=31
SOC    Sochi            70.86 310c iP     P        19 36 17.8 -1.6
SOC                              e*PP    pP       19 36 32.7 +0.8
SOC                              e*SP    PcP      19 36 40.3 +0.5
SOC                              e                 19 38 54.4
SOC                              ePPP    PPP      19 40 36.2
SOC                              eS      S        19 45 28.1 -3.4
SOC                              e*SS    SKiKP    19 45 55.2 -3.0
SOC                              eSS     SS       19 50 01.4 -2.6
SOC                              pmax    pmax
       comp=Z,47nm,0.8s
SOC                              MLR     MLR
       comp=Z,2µm,18.0s
FIA1   FINESS Array S   71.12 331 eP      P        19 36 18.2 -2.3
FINES  FINESS Array B   71.12 331  P      P        19 36 18.3 -2.3
       comp=Z,8.9nm,0.6s,baz=58,slow=5.8,SNR=65
FINES                            PP      PP       19 38 58.4 +0.3
       comp=Z,6.8nm,1.0s,baz=72,slow=6.2,SNR=4.2
FINES                            LR      LR      20 10 52.2
       comp=Z,3µm,18.7s,baz=58,slow=39
DIB    Dawson Inlet,    71.19  39 eP      P        19 36 21.6 +0.4
ANN    Anapa            71.90 312 eP      P        19 36 24.4 -1.2
ANN                              e*PP    sP       19 36 40.0 -2.9
ANN                              eS      S        19 45 38.3 -5.2
ANN                              pmax    pmax
       comp=Z,77nm,1.4s
ANN                              MLR     MLR
       comp=Z,4µm,17.0s
VSU    Vasula           72.17 328c iP     P        19 36 25.5 -1.4
VSU                              pmax    pmax
       comp=Z,140nm,1.0s
RES    Resolute Bay     72.22  11 eP      P        19 36 27.0  0.0
RES    Resolute Bay     72.22  11 eP      P        19 36 27.0  0.0
DAG    Danmarks Havn    72.48 353 i P     P        19 36 26.8 -1.7
       comp=Z,47nm,1.2s
DAG    Danmarks Havn    72.48 353 eP      P        19 36 26.8 -1.7
DAG                              pmax    pmax
       comp=Z,47nm,1.2s
MICGM  Minsk            73.40 324 eP      P        19 36 33.0 -1.4
MICGM                            epP     pP       19 36 43.0 -3.9
MICGM                            eS      S        19 45 52.0 -8.2
MICGM                            eLR     LR      20 06 20.0
MICGM                            LRM     MLR     20 12 00.0
       comp=Z,10nm,20.0s
MNK    Minsk            73.40 324 eP      P        19 36 33.0 -1.4
MNK                              e*PP    pP       19 36 43.0 -3.9
MNK                              eS      S        19 45 52.0 -8.2
MNK                              MLR     MLR
       comp=Z,10µm,20.0s
TAU    Tasmania Unive   73.52 167  PFAKE           19 36 50.0  +15
TAU                              LR      LR
       comp=Z,2µm,21.0s
XMAS   Kiritimati       73.55  97  PFAKE           19 36 50.0  +14
XMAS                             LR      LR
       comp=Z,5.0nm,19.0s
NACGM  Naroch           73.78 324 e       P        19 36 34.0 -2.6
NACGM                            eLR     LR      20 10 36.0
NACGM                            LRM     MLR     20 12 18.0
       comp=Z,4.3nm,18.0s
SIM    Simferopol'      73.99 313 eP      P        19 36 36.7 -1.3
SIM                              e*PP    pP       19 36 51.0 +0.5
SIM                              e                 19 39 30.0
SIM                              ePPP    PPP      19 41 11.0
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SIM                              pmax    pmax
       comp=Z,15nm,1.0s
BBB    Bella Bella      74.03  39  P      P        19 36 37.9 -0.2
       comp=Z,11nm,1.0s,baz=278,slow=5.9,SNR=4.9
BBB    Bella Bella      74.03  39 eP      P        19 36 38.4 +0.3
AKASG  Malin Array Be   74.40 320  P      P        19 36 38.3 -2.0
       comp=Z,2.6nm,0.3s,baz=53,slow=6.4,SNR=37
AKASG                            LR      LR      20 12 03.4
       comp=Z,4µm,18.4s,baz=55,slow=38
AKBB   Malin Array Si   74.40 320 eP      P        19 36 38.6 -1.7
KIEV   Kiev             74.42 320 eP      P        19 36 38.5 -1.8
KIEV                             LR      LR
       comp=Z,4µm,19.0s
KIEV   Kiev             74.42 320 i P     P        19 36 38.1 -2.3
       SNR=14
KIEV   Kiev             74.42 320 eP      P        19 36 38.6 -1.8
KIEV                             MLR     MLR
       comp=Z,4µm,19.0s
AK11   Malin Array Si   74.44 320 eP      P        19 36 39.0 -1.6
RAYN   Ar Rayn          74.57 289  PFAKE           19 36 50.0 +8.1
RAYN                             LR      LR
       comp=Z,1µm,19.0s
RAYN   Ar Rayn          74.57 289 i P     P        19 36 40.8 -1.1
       SNR=22
YKA    Yellowknife Ar   75.00  26  P      P        19 36 43.5  0.0
       comp=Z,6.3nm,0.9s,baz=302,slow=5.4,SNR=19
YKA                              LR      LR      20 11 50.4
       comp=Z,35nm,21.9s,baz=304,slow=37
SUW    Suwalki          76.05 324 eP      P        19 36 48.7 -0.9
SUW                              LMZ     LR      20 13 37.6
       comp=Z,5µm,18.2s
SUW    Suwalki          76.05 324 eP      P        19 36 48.8 -0.9
SUW    Suwalki          76.05 324 eP      P        19 36 48.8 -0.9
SORM   Soroca           76.10 318⇑iP      P        19 36 48.8 -1.3
SORM   Soroca           76.10 318 ⇑P      P        19 36 48.8 -1.3
KULLO  Kullorsuaq       76.29   2 i P     P        19 36 49.6 -1.1
       comp=Z,54nm,1.1s
       comp=Z,1µm,17.0s
KULLO  Kullorsuaq       76.29   2 eP      P        19 36 49.6 -1.1
KULLO                            pmax    pmax
       comp=Z,54nm,1.1s
KULLO                            MLR     MLR
       comp=Z,1µm,17.0s
KIS    Kishinev         76.36 316 eP      P        19 36 50.0 -1.6
KIS    Kishinev         76.36 316 ePcP    PcP      19 37 00.0 -3.3
KIS    Kishinev         76.36 316 ePP     PP       19 39 54.0  +11
KIS    Kishinev         76.36 316 ePPP    PPP      19 41 40.0
KIS                              eS      S        19 46 28.0 -5.5
KIS                              esS     sS       19 46 54.0 -0.5
KIS    Kishinev         76.36 316 eP      P        19 36 50.0 -1.6
KIS                              e                 19 37 00.0
KIS                              eS      S        19 46 28.0 -5.5
KIS                              e*SS    sS       19 46 54.0 -0.5
KIS                              ePS     PnS      19 47 26.0  +11
KIS                              MLR     MLR
       comp=Z,4µm,16.0s
KIS                              MLR     MLR
       comp=N,2µm,17.0s
KIS                              MLR     MLR
       comp=E,3µm,16.0s
KIS                              MLR     MLR
       comp=Z,5µm,17.0s
RAO    Raoul Island     76.37 135  PFAKE           19 37 10.0  +18
RAO                              LR      LR
       comp=Z,2µm,21.0s
BR131  Keskin Array S   76.60 308 eP      P        19 36 52.8 -0.6
BRTR   Keskin Array B   76.60 308  P      P        19 36 52.4 -0.9
       comp=Z,16nm,0.8s,baz=99,slow=4.9,SNR=41
BRTR                             LR      LR      20 16 14.2
       comp=Z,810nm,18.8s,baz=28,slow=40
HFS    Hagfors          76.97 333  P      P        19 36 52.9 -1.8
       comp=Z,6.7nm,0.5s,baz=68,slow=5.3,SNR=33
HFS                              LR      LR      20 16 04.0
       comp=Z,3µm,18.4s,baz=42,slow=40
HFS    Hagfors          76.97 333  P      P        19 36 53.0 -1.8
ANTO   Ankara           77.12 308⇓iP      P        19 36 53.3 -2.8
ANTO   Ankara           77.12 308 eP      P        19 36 56.7 +0.5
ANTO                             LR      LR
       comp=Z,2µm,22.0s
ANTO   Ankara           77.12 308 ⇓P      P        19 36 53.3 -2.8
KLNR   Kaliningrad      77.22 326⇑eP      P        19 36 55.8 -0.5
KLNR                             pmax    pmax
       comp=Z,41nm,0.9s
NB2    NORSAR Subarra   77.39 334  P      P        19 36 54.8 -2.4
       comp=Z,28nm,1.1s,baz=47,slow=5.6
NB2    NORSAR Subarra   77.39 334  P      P        19 36 54.8 -2.4
       baz=47,slow=5.6
NOA    NORSAR Array B   77.39 334  LR     LR      20 15 44.1
       comp=Z,2µm,19.3s,baz=50,slow=39
ASF    Jabal al Asfar   77.64 300  P      P        19 36 59.3 +0.1
       comp=Z,19nm,1.2s,baz=67,slow=0.4,SNR=14
ASF                              LR      LR      20 17 42.1
       comp=Z,1µm,19.4s,baz=26,slow=41
CFR    Carcaliu         77.65 315⇑iP      P        19 36 57.6 -1.3
CFR    Carcaliu         77.65 315 ⇑P      P        19 36 57.6 -1.3
LVV    L'vov            77.75 320 eP      P        19 36 53.3 -6.1
LVV                              MLR     MLR
       comp=N,2µm,17.0s
LVV                              MLR     MLR
       comp=E,3µm,17.0s
LVV                              MLR     MLR
       comp=Z,4µm,17.0s
TIRR   Tirgusor         77.83 314⇑iP      P        19 36 58.8 -1.1
TIRR   Tirgusor         77.83 314 eP      P        19 36 59.1 -0.8
TIRR   Tirgusor         77.83 314 ⇑P      P        19 36 58.8 -1.1
TESR   Tescani          77.90 317⇑iP      P        19 36 59.2 -1.1
TLB    Topalu           78.00 314⇑iP      P        19 36 59.4 -1.4
TLB    Topalu           78.00 314 ⇑P      P        19 36 59.4 -1.4
HARR   Harsova          78.02 315⇓iP      P        19 36 58.9 -2.0
HARR   Harsova          78.02 315 ⇓P      P        19 36 58.9 -2.0
SUMG   Summit           78.13 357 eP      P        19 37 01.0 -0.5
SUMG   Summit           78.13 357 i P     P        19 37 01.2 -0.4
       comp=Z,33nm,0.8s
SUMG   Summit           78.13 357 i P     P        19 37 01.2 -0.4
SUMG                             pmax    pmax
       comp=Z,33nm,0.8s
VRI    Vrincioaia       78.17 316⇑iP      P        19 37 00.7 -1.2
VRI    Vrincioaia       78.17 316 ⇑P      P        19 37 00.7 -1.2
BUR08  Bucovina Ar. S   78.19 318 eP      P        19 37 01.5 -0.6
BURAR  Bucovina Array   78.19 318⇑iP      P        19 37 01.0 -1.0
BURAR  Bucovina Array   78.19 318 ⇑P      P        19 37 01.0 -1.0
BUR04  Bucovina Ar. S   78.20 318 eP      P        19 37 01.0 -1.1
LLLB   Lillooet         78.20  38 eP      P        19 37 02.6 +0.7
PLOR   Plostina         78.23 316⇑iP      P        19 37 01.3 -0.9
PLOR   Plostina         78.23 316 ⇑P      P        19 37 01.3 -0.9
MMAI   Mount Meron Ar   78.38 301  P      P        19 37 03.4  0.0
       comp=Z,15nm,1.0s,baz=77,slow=9.0,SNR=10
MMAI                             LR      LR      20 17 08.6
       comp=Z,539nm,18.2s,baz=45,slow=40
BEL    Belsk            78.43 323 eP      P        19 37 04.1 +1.0
BEL                              e                 19 44 39.2
BEL    Belsk            78.43 323 eP      P        19 37 04.1 +1.0
KWP    Kalwaria Pacla   78.58 321 eP      P        19 37 03.5 -0.5
KWP                              e                 19 44 43.2
KWP                              LMZ     LR      20 14 40.0
       comp=Z,7µm,18.9s
KWP    Kalwaria Pacla   78.58 321 eP      P        19 37 03.2 -0.7
KWP    Kalwaria Pacla   78.58 321 eP      P        19 37 03.3 -0.7
A04D   Lummi Island     78.74  40  P      P        19 37 05.6 +0.8
       baz=302
NLWA   Neilton Lookou   78.76  42 eP      P        19 37 06.0 +0.9
NLWA                             epP     sP       19 37 19.9 -2.6
NLWA                             LR      LR
       comp=Z,406nm,22.0s
MLR    Muntele Rosu     78.84 316  P      P        19 37 05.6  0.0
       comp=Z,2.4nm,1.0s,baz=66,slow=5.3
MLR                              LR      LR      20 15 09.1
       comp=Z,1µm,19.4s,baz=56,slow=38
MLR    Muntele Rosu     78.84 316⇑iP      P        19 37 04.1 -1.6
MLR    Muntele Rosu     78.84 316 eP      P        19 37 05.3 -0.4
MLR    Muntele Rosu     78.84 316 ⇑P      P        19 37 04.1 -1.6
DOPR   Dopca            78.93 317⇑iP      P        19 37 05.1 -0.9
CSS    Mathiatis        79.01 304 eP      P        19 37 07.3 +0.6
MSEY   Mahe Island      79.11 258  PFAKE           19 37 20.0  +12
MSEY                             LR      LR
       comp=Z,1µm,20.0s
B05A   Bryant           79.33  40  P      P        19 37 08.4 +0.4
       baz=302
UZH    Uzhgorod         79.34 320 eP      P        19 37 08.3 +0.2
UZH                              e                 19 37 16.3
UZH                              e                 19 37 20.3
UZH                              e                 19 37 29.3
E03A   Lebam            79.38  42 eP      P        19 37 09.7 +1.2
BSD    Bornholm Skovb   79.45 328 i P     P        19 37 07.8 -0.8
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       comp=Z,40nm,1.0s
       comp=Z,6µm,17.0s
BSD    Bornholm Skovb   79.45 328 eP      P        19 37 07.8 -0.8
BSD                              pmax    pmax
       comp=Z,40nm,1.0s
BSD                              MLR     MLR
       comp=Z,6µm,17.0s
TRPA   Tarpa            79.47 320⇑iP      P        19 37 08.2 -0.6
TRPA   Tarpa            79.47 320⇓eP      P        19 37 10.0 +1.2
DAMY   Dhamar           79.50 281 eP      P        19 37 11.1 +1.1
CRVS   Cervenica-Dubn   79.66 321 eP      P        19 37 10.0 +0.1
CRVS                             pmax    pmax
       comp=Z,21nm,1.1s
CRVS   Cervenica-Dubn   79.66 321 eP      P        19 37 10.0 +0.1
CRVS                             eL      L        20 15 21.6
ARR    Arges            79.69 316⇑iP      P        19 37 09.9 -0.4
F03A   Seaside          79.70  43 eP      P        19 37 12.6 +2.4
OJC    Ojcow            79.84 322 eP      P        19 37 09.9 -0.9
OJC                              e                 19 44 44.8
OJC                              LMZ     LR      20 15 47.9
       comp=Z,5µm,17.6s
OJC    Ojcow            79.84 322 eP      P        19 37 09.9 -0.9
OJC    Ojcow            79.84 322 eP      P        19 37 09.9 -0.9
OJC                              MLR     MLR
       comp=Z,5µm,17.6s
NIE    Niedzica         80.01 321 eP      P        19 37 11.1 -0.7
NIE                              e                 19 44 46.9
NIE                              LMZ     LR      20 15 36.9
       comp=Z,2µm,21.2s
NIE    Niedzica         80.01 321 eP      P        19 37 11.1 -0.7
NIE                              MLR     MLR
       comp=Z,2µm,21.2s
DRGR                    80.08 318⇑iP      P        19 37 11.6 -0.7
DRGR                    80.08 318 ⇑P      P        19 37 11.6 -0.7
RVC    Mount Rainier-   80.10  41 eP      P        19 37 16.8 +4.3
LOT    Lotru            80.17 317⇑iP      P        19 37 12.8 -0.1
URZ    Urewera          80.18 144  LR     LR      20 08 36.4
       comp=Z,539nm,21.4s,baz=312,slow=32
G03D   McMinnville, O   80.26  43  P      P        19 37 14.9 +1.7
       baz=302
LON    Longmire         80.30  42 eP      P        19 37 14.3 +0.8
LON    Longmire         80.30  42 eP      P        19 37 14.3 +0.8
COR    Corvallis        80.56  44 eP      P        19 37 15.7 +0.8
       comp=Z,46nm,1.2s
COR    Corvallis        80.56  44 eP      P        19 37 15.7 +0.8
COR                              pmax    pmax
       comp=Z,46nm,1.2s
LANS   Liptovska Anna   80.61 322 eP      P        19 37 15.5 +0.4
LANS   Liptovska Anna   80.61 322 eP      P        19 37 15.5 +0.4
B08A   Colville Reser   80.82  39 eP      P        19 37 16.9 +0.6
KEBM   Edson Butte      80.83  46 eP      P        19 37 18.8 +2.4
KEBM                             epP     pP       19 37 30.4 +1.3
OKC    Ostrava-Krasne   80.93 323 eP      P        19 37 15.6 -1.1
OKC                              ePP     PP       19 40 22.9 +1.8
OKC                              eS      S        19 47 26.3 +4.0
OKC                              AMS     AMS     20 16 30.0
       comp=Z,3µm,16.6s
OKC    Ostrava-Krasne   80.93 323 eP      P        19 37 15.6 -1.1
OKC                              e                 19 40 22.9
OKC                              eS      S        19 47 26.3 +4.0
OKC                              MLR     MLR
       comp=Z,3µm,16.6s
I03D   Drain, OR        81.00  45  P      P        19 37 17.8 +0.5
       baz=302
PSZ    Piszkesteto      81.07 320⇑iP      P        19 37 17.0 -0.6
PSZ    Piszkesteto      81.07 320⇓eP      P        19 37 18.7 +1.1
PSZ    Piszkesteto      81.07 320 eP      P        19 37 17.4 -0.2
PSZ    Piszkesteto      81.07 320 ⇑P      P        19 37 17.0 -0.6
ALN    Alexandroupoli   81.12 312 eP      P        19 37 18.4 +0.5
HERR   Herculane        81.28 317⇑iP      P        19 37 17.9 -0.8
MORC   Moravsky Berou   81.29 323⇑iP      P        19 37 18.9 +0.2
MORC   Moravsky Berou   81.29 323 eP      P        19 37 17.9 -0.8
MORC   Moravsky Berou   81.29 323 ⇑P      P        19 37 18.9 +0.2
MORC   Moravsky Berou   81.29 323 eP      P        19 37 17.9 -0.8
KSP    Ksiaz            81.31 324 eP      P        19 37 18.1 -0.6
KSP                              e                 19 44 46.7
KSP                              LMZ     LR      20 17 02.5
       comp=Z,6µm,18.7s
KSP    Ksiaz            81.31 324 eP      P        19 37 18.1 -0.6
KSP                              MLR     MLR
       comp=Z,6µm,18.7s
VYHS   Vyhne            81.33 321 eP      P        19 37 19.2 +0.3
VYHS                             pmax    pmax
       comp=Z,21nm,1.1s
VYHS   Vyhne            81.33 321 eP      P        19 37 19.2 +0.3
BZS    Buzias           81.36 318⇑iP      P        19 37 18.0 -1.1
BZS    Buzias           81.36 318 ⇑P      P        19 37 18.0 -1.1
SNZO   South Karori     81.36 148  PFAKE           19 37 30.0  +11
SNZO                             LR      LR
       comp=Z,953nm,20.0s
G05D   Wamic, OR        81.40  43  P      P        19 37 19.1 -0.3
       baz=303
KRLC   Kraliky          81.51 323 eP      P        19 37 23.1 +3.2
KRLC   Kraliky          81.51 323 eP      P        19 37 23.1 +3.2
I04A   Tendick Farm,    81.53  44  P      P        19 37 19.7 -0.4
       baz=303
DPC    Dobruska-Polom   81.59 324 eP      P        19 37 20.4 +0.1
DPC                              epP     pP       19 37 30.2 -2.8
DPC                              ePP     PP       19 40 27.9 +1.3
DPC                              AMS     AMS     20 16 50.0
       comp=Z,6µm,17.5s
DPC    Dobruska-Polom   81.59 324 eP      P        19 37 20.4 +0.1
DPC                              e                 19 37 30.2
DPC                              e                 19 40 27.9
DPC                              MLR     MLR
       comp=Z,6µm,17.5s
UPC    Upice            81.66 324 eP      P        19 37 19.5 -1.1
UPC                              ePCP    PcP      19 37 25.8 -0.5
UPC                              epP     pP       19 37 30.4 -2.9
UPC                              ePP     PP       19 40 28.7 +1.6
UPC                              eSS     SS       19 52 50.9 +4.1
UPC                              AMS     AMS     20 17 10.0
       comp=Z,7µm,17.7s
UPC    Upice            81.66 324 eP      P        19 37 19.5 -1.1
UPC                              e                 19 37 30.4
UPC                              e                 19 40 28.7
UPC                              eSS     SS       19 52 50.9 +4.1
UPC                              MLR     MLR
       comp=Z,7µm,17.7s
L02D   Cave Junction,   81.66  46  P      P        19 37 21.1 +0.4
       baz=302
RPZ    Rata Peaks       81.68 151  LR     LR      20 11 02.4
       comp=Z,557nm,19.1s,baz=320,slow=34
C09A   Chrisman Ranch   81.72  39 eP      P        19 37 21.8 +0.8
JAVC   Velka Javorina   81.75 322 eP      P        19 37 22.1 +0.9
MDVR   Moldovita        81.76 317⇑iP      P        19 37 20.3 -1.0
D08A   Wollman Farm,    81.78  40 eP      P        19 37 22.1 +0.8
BUD    Budapest         81.80 320⇓eP      P        19 37 22.8 +1.4
HAWA   Hanford          81.81  41 eP      P        19 37 22.3 +0.9
HAWA                             LR      LR
       comp=Z,384nm,19.0s
HUMO   Hull Mountain    81.83  46 eP      P        19 37 22.8 +1.2
I05D   Terrebonne, OR   81.88  43  P      P        19 37 22.2 +0.2
       baz=303
E08A   Dider Farm, El   82.02  41 eP      P        19 37 23.5 +0.9
VTS    Vitosha          82.03 315⇑iP      P        19 37 21.9 -1.0
VTS    Vitosha          82.03 315 eP      P        19 37 22.6 -0.3
VTS    Vitosha          82.03 315  P      P        19 37 21.3 -1.6
VTS    Vitosha          82.03 315 ⇑P      P        19 37 21.9 -1.0
VRAC   Vranov           82.06 323⇑iP      P        19 37 23.1 +0.3
VRAC   Vranov           82.06 323 ⇑P      P        19 37 23.1 +0.3
VRAC   Vranov           82.06 323 eP      P        19 37 23.1 +0.3
SMOL   Smolenice        82.08 322 eP      P        19 37 24.1 +1.2
SMOL   Smolenice        82.08 322 eP      P        19 37 24.1 +1.2
NEW    Newport          82.09  39  P      P        19 37 23.1 +0.2
       comp=Z,17nm,1.0s,baz=304,slow=4.3,SNR=13
NEW                              LR      LR      20 12 30.2
       comp=Z,169nm,21.6s,baz=312,slow=35
NEW    Newport          82.09  39 eP      P        19 37 23.6 +0.6
NEW    Newport          82.09  39 eP      P        19 37 23.6 +0.6
SIGR   SIGRI            82.11 311  P      P        19 37 18.8 -4.4
SIGR   SIGRI            82.11 311  P      P        19 37 18.8 -4.4
THAS   Thassos island   82.13 312  P      P        19 37 20.9 -2.3
LIA    Limnos Island    82.20 311  P      P        19 37 22.1 -1.5
LIA    Limnos Island    82.20 311  P      P        19 37 22.1 -1.5
ATD    Arta Tunnel      82.25 279  P      P        19 37 23.5 -0.9
       comp=Z,27nm,1.0s,baz=38,slow=6.4,SNR=3.9
ATD    Arta Tunnel      82.25 279 eP      P        19 37 26.8 +2.5
MODS   Modra-Piesok     82.25 322 eP      P        19 37 24.3 +0.6
MODS                             pmax    pmax
       comp=Z,50nm,1.2s
MODS   Modra-Piesok     82.25 322 eP      P        19 37 24.3 +0.6
NVR    Nevrokopi        82.29 313  P      P        19 37 21.7 -2.4
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NVR	Nevrokopi	82.29	313	P	P	19 37 21.7	-2.4
CSKK	Csˆ‡kako	82.30	321	⇓*e*P	P	19 37 24.8	+0.8
KRUC	Moravsky	82.31	323	*e*P	P	19 37 24.2	+0.1
PVCC	Panska Ves	82.38	325	*e*P	P	19 37 24.3	-0.1
PVCC				*e*PP	PP	19 40 31.9	-1.1
PVCC				AMS	AMS	20 18 50.0	
	comp=Z,5µm,15.7s						
PVCC	Panska Ves	82.38	325	*e*P	P	19 37 24.3	-0.1
PVCC				*e*		19 40 31.9	
PVCC				MLR	MLR		
	comp=Z,5µm,15.7s						
PINE	Pine Mountain	82.42	44	*e*P	P	19 37 26.0	+1.1
YBH	Yreka Blue Hor	82.45	46	P	P	19 37 25.3	+0.3
	comp=Z,8.5nm,0.9s,baz=303,slow=3.0,SNR=14						
YBH				LR	LR	20 06 46.7	
	comp=Z,171nm,21.9s,baz=306,slow=30						
YBH	Yreka Blue Hor	82.45	46	*e*P	P	19 37 26.1	+1.1
BRG	Berggiesshubel	82.49	325	*e*P	P	19 37 25.3	+0.4
	comp=Z,35nm,1.8s						
BRG				PP	PP	19 40 38.0	+4.2
BRG	Berggiesshubel	82.49	325	*e*P	P	19 37 25.3	+0.4
BRG						19 40 38.0	
BRG				pmax	pmax		
	comp=Z,35nm,1.8s						
J05D	Fort Rock, OR	82.52	44	P	P	19 37 26.0	+0.5
	baz=304						
M02C	Callahan	82.54	47	P	P	19 37 25.6	+0.1
	baz=303						
GOPC	GO Pecny, Ondr	82.64	324	*e*P	P	19 37 25.7	-0.1
GOPC				*e*pP	pP	19 37 34.4	-4.1
GOPC				*e*PP	PP	19 40 30.3	-4.9
GOPC				*e*SKS	S	19 47 47.9	+7.9
GOPC				AMS	AMS	20 17 40.0	
	comp=Z,6µm,18.5s						
GOPC	GO Pecny, Ondr	82.64	324	*e*P	P	19 37 25.7	-0.1
GOPC				*e*		19 37 34.4	
GOPC				*e*		19 40 30.3	
GOPC				MLR	MLR		
	comp=Z,6µm,18.5s						
CLL	Collm	82.68	326	*i* P	P	19 37 24.8	-1.1
	comp=Z,40nm,1.1s						
CLL				*i* (PcP)	PcP	19 37 33.5	+2.7
CLL				*i* pP	pP	19 37 38.0	-0.6
CLL				*e*PP	PP	19 40 33.0	-2.4
CLL				*e*SKSac	S	19 47 38.0	-2.3
CLL				*e*sS	sS	19 48 05.0	+3.5
CLL				*e*PPS	PPS	19 48 53.0	
CLL				*e*SS	SS	19 53 18.0	+16
CLL				*e*SSS	SSS	19 57 06.0	
CLL				Lm	MLR	20 18 00.0	
	comp=N,4µm,19.7s						
CLL				Lm	MLR	20 18 00.0	
	comp=E,4µm,18.8s						
CLL				Lm	MLR	20 18 00.0	
	comp=Z,9µm,18.4s						
CLL	Collm	82.68	326	*e*P	P	19 37 24.9	-1.0
CLL	Collm	82.68	326	*e*P	P	19 37 24.9	-1.0
PRU	Pruhonice	82.72	324	*e*P	P	19 37 25.6	-0.6
PRU				*e*pP	pP	19 37 34.9	-4.0
PRU				*e*x	x	19 37 40.6	
PRU				*e*PP	PP	19 40 31.2	-4.6
PRU				*e*SKS	S	19 47 48.2	+7.4
PRU				*e*SS	SS	19 53 17.2	+15
PRU				AMS	AMS	20 17 40.0	
	comp=Z,6µm,17.8s						
PRU	Pruhonice	82.72	324	*e*P	P	19 37 25.6	-0.6
PRU				*e*		19 37 40.6	
PRU				*e*		19 40 31.2	
PRU				MLR	MLR		
	comp=Z,6µm,17.8s						
PRA	Prague	82.73	324	AMS	AMS	20 17 50.0	
	comp=Z,6µm,17.7s						
MORH	Mˆ‡rˆ¡gy, Hung	82.74	319	⇓*e*P	P	19 37 27.0	+0.7
G08A	Pilot Rock	82.76	42	*e*P	P	19 37 27.4	+0.8
N02D	Trinity Center	82.86	47	P	P	19 37 27.9	+0.7
	baz=303						
M04C	Macdoel	82.97	46	P	P	19 37 28.9	+1.1
	baz=303						
KNT	Kendrikon	83.00	313	P	P	19 37 25.4	-2.4
KNT	Kendrikon	83.00	313	P	P	19 37 25.4	-2.4
KNT	Kendrikon	83.00	313	P	P	19 37 25.4	-2.4
K05A	Summer Lake	83.04	45	*e*P	P	19 37 29.2	+1.0
VAY	Valandovo	83.12	314	P	P	19 37 26.2	-2.2
VAY	Valandovo	83.12	314	P	P	19 37 26.2	-2.2
VAY	Valandovo	83.12	314	⇑*i*P	P	19 37 26.8	-1.5
VAY	Valandovo	83.12	314	P	P	19 37 26.2	-2.2
I07A	Izee	83.12	43	*e*P	P	19 37 30.8	+2.3
STIP	Stip	83.16	314	*i* P	P	19 37 26.5	-2.1
DIVS	Divibare	83.16	317	*e*P	P	19 37 27.5	-1.2
PAIG	Paliouri	83.17	312	P	P	19 37 26.2	-2.4
PAIG	Paliouri	83.17	312	P	P	19 37 26.2	-2.4
PAIG	Paliouri	83.17	312	P	P	19 37 26.2	-2.4
WDC	Whiskeytown Da	83.18	47	*e*P	P	19 37 29.4	+0.7
CONA	Conrad Observa	83.28	322	*i* P	P	19 37 29.1	-0.1
	comp=Z,41nm,1.1s,SNR=27						
WALA	Waterton Lakes	83.32	37	*e*P	P	19 37 29.9	+0.5
GRG	Griva	83.43	313	P	P	19 37 27.1	-2.9
GRG	Griva	83.43	313	P	P	19 37 27.1	-2.9
GRG	Griva	83.43	313	P	P	19 37 27.1	-2.9
AOS	Alonnisos	83.44	311	P	P	19 37 27.9	-2.2
AOS	Alonnisos	83.44	311	P	P	19 37 27.9	-2.2
SKO	Skopje	83.47	315	⇑*i*P	P	19 37 29.5	-0.7
NKC	Novy Kostel	83.63	325	*e*P	P	19 37 30.6	-0.3
NKC				*e*PP	PP	19 40 42.0	-1.3
NKC				*e*S	S	19 47 49.9	-0.1
NKC				AMS	AMS	20 19 10.0	
	comp=Z,8µm,16.1s						
NKC	Novy Kostel	83.63	325	*e*P	P	19 37 30.6	-0.3
NKC				*e*		19 40 42.0	
NKC				*e*S	S	19 47 49.9	-0.1
NKC				MLR	MLR		
	comp=Z,8µm,16.1s						
BEHE	Becsehely	83.64	320	⇓*e*P	P	19 37 32.2	+1.2
BORG	Borgarnes	83.70	348	PFAKE		19 37 40.0	+9.1
BORG				LR	LR		
	comp=Z,361nm,22.0s						
KHC	Kasperske Hory	83.75	324	*e*P	P	19 37 31.1	-0.4
KHC				*e*pP	pP	19 37 42.5	-1.7
KHC				*e*PP	PP	19 40 45.9	+1.6
KHC				*e*S	S	19 47 52.5	+1.2
KHC				AMS	AMS	20 18 20.0	
	comp=Z,6µm,19.8s						
KHC	Kasperske Hory	83.75	324	*e*P	P	19 37 30.4	-1.1
KHC	Kasperske Hory	83.75	324	*e*P	P	19 37 31.1	-0.4
KHC				*e*		19 37 42.5	
KHC				*e*		19 40 45.9	
KHC				*e*S	S	19 47 52.5	+1.2
KHC				MLR	MLR		
	comp=Z,6µm,19.8s						
XOR	Xorichti	83.78	312	P	P	19 37 28.3	-3.6
XOR	Xorichti	83.78	312	P	P	19 37 28.3	-3.6
O03D	Paynes Creek	83.81	47	P	P	19 37 31.8	-0.3
	baz=304						
LIT	Litokhoron	83.84	313	*e*P	P	19 37 31.1	-1.0
LIT	Litokhoron	83.84	313	P	P	19 37 30.0	-2.1
LIT	Litokhoron	83.84	313	*e*P	P	19 37 31.1	-1.0
GEC2	GERESS Array S	83.86	324	*e*P	P	19 37 31.6	-0.6
GEC2	GERESS Array S	83.86	324	*e*P	P	19 37 31.6	-0.6
GERES	GERESS Array B	83.86	324	P	P	19 37 31.1	-1.1
	comp=Z,23nm,1.1s,baz=52,slow=5.2,SNR=46						
GERES				PP	PP	19 40 46.6	+1.3
	comp=Z,1.7nm,0.9s,baz=48,slow=5.9,SNR=4.3						
GERES				LR	LR	20 18 46.7	
	comp=Z,5µm,19.1s,baz=54,slow=38						
MOD	Modoc Plateau	83.86	45	*e*P	P	19 37 33.1	+0.7
GEA0	GERESS Array S	83.86	324	*e*P	P	19 37 31.1	-1.1
ARSA	Arzberg	83.87	322	*i* P	P	19 37 31.5	-0.7
	comp=Z,21nm,1.1s,SNR=13						
BMO	Blue Mountains	83.97	41	*e*P	P	19 37 33.1	+0.3
BMO				LR	LR		
	comp=Z,439nm,21.0s						
BMO	Blue Mountains	83.97	41	*e*P	P	19 37 33.1	+0.3
BMO				MLR	MLR		
	comp=Z,439nm,21.0s						
RAR	Rarotonga	84.00	118	LR	LR	20 08 21.8	
	comp=Z,644nm,19.5s,baz=308,slow=31						
SFJD	Kangerlussuaq	84.03	0	P	P	19 37 31.1	-1.4
	comp=Z,17nm,0.4s,baz=318,slow=4.6,SNR=5.5						
SFJD	Kangerlussuaq	84.03	0	*e*P	P	19 37 32.4	-0.1
SFJD				LR	LR		
	comp=Z,1µm,20.0s						
SFJD	Kangerlussuaq	84.03	0	*e*P	P	19 37 32.4	-0.1
SFJD				MLR	MLR		
	comp=Z,1µm,20.0s						
J08A	Circle Bar Ran	84.15	43	*e*P	P	19 37 34.6	+0.8
FNA	Florina	84.17	314	*e*P	P	19 37 33.3	-0.6
MOA	Molln	84.18	323	*i* P	P	19 37 33.2	-0.5
	comp=Z,44nm,1.4s,SNR=23						
OHR	Ohrid	84.35	314	*i* P	P	19 37 33.6	-1.2
ORV	Oroville	84.41	48	*e*P	P	19 37 35.2	+0.2
ORV	Oroville	84.41	48	*e*P	P	19 37 35.2	+0.2
BLY	Banja Luka	84.43	319	⇓*i*P	P	19 37 33.8	-1.2
BLY	Banja Luka	84.43	319	*e*P	P	19 37 36.5	+1.5
PERS	Pernice	84.46	321	*i* P	P	19 37 33.8	-1.4
PERS				*e*pP	pP	19 37 49.5	+1.5
SOKA	Soboth	84.48	321	*i* P	P	19 37 34.5	-0.9
	comp=Z,69nm,1.3s,SNR=61						
LAST	Lasithi	84.49	307	P	P	19 37 33.7	-1.9
LAST	Lasithi	84.49	307	P	P	19 37 33.7	-1.9
AGG	Agios Georgios	84.53	312	*e*P	P	19 37 33.7	-2.0
AGG	Agios Georgios	84.53	312	P	P	19 37 33.3	-2.4
AGG	Agios Georgios	84.53	312	*e*P	P	19 37 33.7	-2.0
PDG	Podgorica	84.55	316	⇑*i*P	P	19 37 34.9	-0.8
TTG	Podgorica	84.55	316	*e*P	P	19 37 35.8	+0.1
WVOR	Wild Horse Val	84.58	44	*e*P	P	19 37 36.7	+0.7
WVOR				LR	LR		
	comp=Z,516nm,20.0s						
WVOR	Wild Horse Val	84.58	44	*e*P	P	19 37 36.7	+0.7
WVOR				MLR	MLR		
	comp=Z,516nm,20.0s						
GRFO	Grafenberg	84.59	325	*e*P	P	19 37 35.3	-0.4
MSO	Missoula	84.67	38	*e*P	P	19 37 37.2	+0.9
DSF	Desfina	84.74	311	P	P	19 37 32.9	-3.9
DSF	Desfina	84.74	311	P	P	19 37 32.9	-3.9
IDI	Anoyia	84.83	308	P	P	19 37 35.9	-1.4
	comp=Z,31nm,1.0s,baz=56,slow=4.5,SNR=8.6						
IDI				LR	LR	20 21 31.5	
	comp=Z,916nm,19.9s,baz=50,slow=40						
IDI	Anoyia	84.83	308	⇓*i*P	P	19 37 34.8	-2.5
IDI	Anoyia	84.83	308	*e*P	P	19 37 37.6	+0.2
OBKA	Obir	84.85	321	*i* P	P	19 37 35.1	-2.2
	comp=Z,21nm,1.1s,SNR=14						
FCC	Fort Churchill	84.85	21	*e*P	P	19 37 36.9	+0.1
FCC	Fort Churchill	84.85	21	*e*P	P	19 37 36.9	+0.1
ANGG	Ammassalik, Gr	84.96	355	*e*P	P	19 37 36.1	-1.1
BEKR	Beckworth	84.97	47	*e*P	P	19 37 37.9	-0.1
FFC	Flin Flon	85.06	27	*e*P	P	19 37 37.8	-0.2
FFC				LR	LR		
	comp=Z,477nm,19.0s						
FFC	Flin Flon	85.06	27	*e*P	P	19 37 37.8	-0.2
FFC				MLR	MLR		
	comp=Z,477nm,19.0s						
BOJS	Bojanci	85.07	320	*e*P	P	19 37 37.2	-1.0
BOJS				*e*pP	sP	19 37 52.8	-3.0
BOJS				*e*S	S	19 48 08.5	+4.0
AFDM	Forest Hills D	85.09	48	*e*P	P	19 37 38.8	+0.3
GUR	Goura	85.12	311	P	P	19 37 35.8	-3.0
GUR	Goura	85.12	311	P	P	19 37 35.8	-3.0
EFP	Efpalio	85.14	312	P	P	19 37 36.2	-2.5
LJU	Ljubljana	85.14	321	*e*P	P	19 37 37.5	-1.1
KBA	Koelnbreinsper	85.15	322	*i* P	P	19 37 37.3	-1.5
	comp=Z,10nm,0.8s,SNR=7.4						
KLV	Kalavryta, Ach	85.19	311	P	P	19 37 35.4	-3.7
KLV	Kalavryta, Ach	85.19	311	P	P	19 37 35.4	-3.7
LAKA	Lakka	85.19	311	P	P	19 37 35.8	-3.2
LAKA	Lakka	85.19	311	P	P	19 37 35.8	-3.2
MYKA	Terra Mystica	85.27	322	*i* P	P	19 37 37.9	-1.4
	comp=Z,20nm,1.0s,SNR=13						
IMMV	Iera Moni Meta	85.37	308	P	P	19 37 38.3	-1.6
PDO	Prodromos	85.51	312	P	P	19 37 37.4	-3.2
SGD	Sagiada	85.55	313	P	P	19 37 38.3	-2.4
PAHR	Pah Rah Range	85.68	47	*e*P	P	19 37 42.1	+0.5
MFID	Camas Ranch	85.68	42	*e*P	P	19 37 42.5	+1.1
VCNR	Virginia City	85.74	47	*e*P	P	19 37 43.4	+1.4
DYR	Agios Nikonas	85.78	310	P	P	19 37 39.1	-2.8
ABTA	Abfaltersbach	85.80	322	*i* P	P	19 37 39.8	-2.1
	comp=Z,36nm,1.2s,SNR=21						
ITM	Ithomi	85.81	311	*e*P	P	19 37 40.7	-1.5
ITM	Ithomi	85.81	311	P	P	19 37 38.7	-3.4
HRY	Holter Researc	85.88	38	*e*P	P	19 37 43.0	+0.6
PNTR	Pine Nut	85.89	47	*e*P	P	19 37 43.7	+1.0
WTTA	Wattenberg	85.93	323	*e*P	P	19 37 41.3	-1.4
	comp=Z,9.1nm,0.6s						
CMB	Columbia Colle	85.98	48	*e*P	P	19 37 43.2	+0.2
CMB	Columbia Colle	85.98	48	*e*P	P	19 37 43.2	+0.2
PYL	PYLOS	86.10	310	P	P	19 37 39.9	-3.6
PYL	PYLOS	86.10	310	P	P	19 37 39.9	-3.6
LRM	Limekiln Ridge	86.11	39	*e*P	P	19 37 44.2	+0.5
EGMT	Eagleton	86.12	36	*e*P	P	19 37 43.9	+0.3
EGMT				LR	LR		
	comp=Z,664nm,21.0s						
MOTA	Moosalm	86.16	323	*i* P	P	19 37 43.1	-0.7
	comp=Z,7.9nm,1.0s						
YERR	Yerington	86.18	47	*e*P	P	19 37 44.6	+0.5
RETA	Reutte	86.24	324	*e*P	P	19 37 42.9	-1.2
	comp=Z,10.0nm,1.3s						
DLMT	Dillon	86.32	39	*e*P	P	19 37 45.2	+0.6
WAKR	Walker	86.33	48	*e*P	P	19 37 45.9	+1.0
HLID	Hailey	86.41	41	*e*P	P	19 37 46.1	+1.0
HLID				LR	LR		
	comp=Z,430nm,21.0s						
MEM	Membach	86.48	328	⇑P	P	19 37 44.5	-0.5
	comp=Z,15nm,1.3s						
BEBN	Eben Emael	86.50	328	⇑P	P	19 37 44.7	-0.4
MCMT	McKenzie Canyo	86.51	39	*e*P	P	19 37 47.4	+1.7
FETA	Feichten	86.56	323	*e*P	P	19 37 44.8	-1.0
	comp=Z,12nm,1.3s						
BMN	Battle Mountai	86.61	45	*e*P	P	19 37 47.0	+0.8
BOZ	Bozeman (W)	86.70	38	*e*P	P	19 37 46.9	+0.4
BOZ				LR	LR		
	comp=Z,751nm,22.0s						
BOZ	Bozeman (W)	86.70	38	*e*P	P	19 37 46.9	+0.4
BOZ				MLR	MLR		
	comp=Z,751nm,22.0s						
ESK	Eskdalemuir	86.82	335	PFAKE		19 38 00.0	+13
ESK				LR	LR		
	comp=Z,2µm,20.0s						
DAVA	Damuels	86.83	324	*e*P	P	19 37 45.7	-1.4
	comp=Z,8.2nm,1.0s						
RYN	Ryan	86.84	47	*e*P	P	19 37 48.3	+1.0
KVN	Kaiserville	86.87	46	*e*P	P	19 37 48.4	+0.9
KVN	Kaiserville	86.87	46	*e*P	P	19 37 48.4	+0.9
BFO	Black Forest	86.92	325	*e*P	P	19 37 47.3	0.0
BFO				LR	LR		
	comp=Z,229nm,19.0s						
BFO	Black Forest	86.92	325	*i* P	P	19 37 47.7	+0.4
WLF	Walferdange	87.06	327	⇓P	P	19 37 47.1	-0.8
	comp=Z,33nm,1.3s						
WLF	Walferdange	87.06	327	*e*P	P	19 37 47.2	-0.8
WLF	Walferdange	87.06	327	*e*P	P	19 37 47.2	-0.8
NV01	Mina Array Sit	87.10	47	*e*P	P	19 37 49.1	+0.5
NVAR	Mina Array Bea	87.10	47	P	P	19 37 49.0	+0.3
	comp=Z,5.3nm,0.7s,baz=288,slow=4.5,SNR=27						
NVAR				LR	LR	20 19 11.6	
	comp=Z,149nm,18.1s,baz=72,slow=37						
OMMB	Old Mammoth Mi	87.12	48	*e*P	P	19 37 50.2	+1.3
OMMB				*e*pP	pP	19 38 02.8	+1.0
DAVOX	Davos/Dischmat	87.16	324	LR	LR	20 21 12.5	
	comp=Z,5µm,18.6s,baz=46,slow=39						
NV11	Mina Array Sit	87.19	47	*e*P	P	19 37 49.9	+0.9
MLAC	Mammoth, Mammo	87.22	48	P	P	19 37 49.7	+0.4
	baz=306						
QLMT	Earthquake Lak	87.29	39	*e*P	P	19 37 51.3	+1.8
PAGB	Antelope Grade	87.37	50	*e*P	P	19 37 51.1	+1.4
YHB	Horse Butte	87.47	39	*e*P	P	19 37 52.3	+1.9
DOU	Dourbes	87.48	328	⇓P	P	19 37 49.6	-0.3
	comp=Z,13nm,1.9s						
ECH	Echery	87.57	326	*e*P	P	19 37 49.2	-1.3
ECH	Echery	87.57	326	*e*P	P	19 37 49.2	-1.3
GCMT	Greycliff	87.62	37	*e*P	P	19 37 51.4	+0.4
ELK	Elko	87.63	44	P	P	19 37 52.4	+1.2
	comp=Z,5.5nm,1.0s,baz=357,slow=2.5,SNR=12						
YMR	Madison River	87.65	39	*e*P	P	19 37 53.4	+2.1
SMMC	Simmler	87.77	50	P	P	19 37 52.7	+1.0
	baz=305						
YFT	Old Faithful	87.86	39	*e*P	P	19 37 55.3	+3.1
TIP	Timpagrande	87.99	315	⇑*i*P	P	19 37 52.0	-0.7
TIP	Timpagrande	87.99	315	*e*P	P	19 37 52.1	-0.6
YPP	Pitchstone Pla	88.00	39	*e*P	P	19 37 55.9	+2.9
LKWY	Lake	88.03	39	PFAKE		19 38 00.0	+6.9
LKWY				LR	LR		
	comp=Z,854nm,22.0s						
H17A	Grant Village	88.04	39	P	P	19 37 54.8	+1.7
	baz=310						
VES	Vestal, Richgr	88.08	50	P	P	19 37 53.6	+0.5
	baz=305						
CUC	Castrocucco	88.08	316	*e*P	P	19 37 51.9	-1.3
IMW	Indian Meadow	88.16	39	*e*P	P	19 37 55.2	+1.4
FLWY	Flagg Ranch	88.17	39	*e*P	P	19 37 55.7	+2.0
RLMT	Red Lodge	88.27	38	*e*P	P	19 37 55.0	+0.8
RLMT				LR	LR		
	comp=Z,505nm,20.0s						
FXWY	Fox Creek	88.28	40	*e*P	P	19 37 55.7	+1.4
MOOW	Moose Ponds	88.36	39	*e*P	P	19 37 56.1	+1.4
CWC	Cottonwood Cre	88.40	49	P	P	19 37 55.5	+0.6
	baz=306						
TPAW	Teton Pass	88.42	40	*e*P	P	19 37 56.5	+1.5
HVU	Hansel Valley	88.46	42	*e*P	P	19 37 56.2	+1.2
HVU	Hansel Valley	88.46	42	*e*P	P	19 37 56.2	+1.2
LOHW	Long Hollow	88.53	39	*e*P	P	19 37 56.8	+1.4
REDW	Red Top Meadow	88.55	40	*e*P	P	19 37 56.8	+1.2
ISA	Isabella, Lake	88.59	49	P	P	19 37 55.6	0.0
	baz=306						
VLC	Villacollemand	88.61	321	*e*P	P	19 37 57.7	+2.2
SENIN	Lac Senin/Sane	88.76	324	*e*P	P	19 37 59.0	+2.6
AHID	Auburn Hatcher	88.80	40	*e*P	P	19 37 57.2	+0.6
AHID				LR	LR		
	comp=Z,486nm,19.0s						
LAO	LASA Array	88.80	35	*e*P	P	19 37 57.5	+1.1
LAO				LR	LR		
	comp=Z,723nm,22.0s						
DAC	Darwin (Calif)	88.81	48	*e*P	P	19 37 59.2	+2.3
DAC				*e*pP	pP	19 38 09.8	+0.1
DAC	Darwin (Calif)	88.81	48	*e*P	P	19 37 59.2	+2.3
DAC				*e**PP	pP	19 38 09.8	+0.1
BGU	Big Grassy Mou	88.84	43	*e*P	P	19 37 58.3	+1.4
R11A	Troy Canyon, C	88.87	46	P	P	19 37 57.6	+0.6
	baz=307						
MPMC	Manual Prospec	89.01	49	P	P	19 37 58.6	+0.9
	baz=306						
CEL	Celeste	89.08	314	*e*P	P	19 37 57.6	-0.3
FURC	Furnace Creek,	89.18	48	P	P	19 37 59.5	+1.3
	baz=307						
LRMC	Laurel Mtn Rad	89.22	49	P	P	19 38 00.1	+1.4
	baz=306						
HWUT	Hardware Ranch	89.27	41	*e*P	P	19 37 59.8	+0.9
HWUT				LR	LR		
	comp=Z,447nm,20.0s						
TPNV	Topopah Spring	89.29	47	*e*P	P	19 37 59.6	+0.6
TPNV	Topopah Spring	89.29	47	*e*P	P	19 37 59.6	+0.6
EDW2	Edwards Air Fo	89.36	50	P	P	19 37 59.4	+0.1
	baz=306						
DUG	Dugway, Tooele	89.43	43	*e*P	P	19 38 01.0	+1.4
DUG				LR	LR		
	comp=Z,385nm,20.0s						
DUG	Dugway, Tooele	89.43	43	*e*P	P	19 38 01.0	+1.4
DUG				MLR	MLR		
	comp=Z,385nm,20.0s						
BW06	Boulder Array	89.66	40	*e*P	P	19 38 01.1	+0.4
BW06				LR	LR		
	comp=Z,608nm,20.0s						
PD31	Pinedale Array	89.66	40	*e*P	P	19 38 01.1	+0.3
PDAR	Pinedale Array	89.66	40	P	P	19 38 00.8	0.0
	comp=Z,5.5nm,1.0s,baz=318,slow=2.0,SNR=24						
TCUT	Toone Canyon	89.67	42	*e*P	P	19 38 02.3	+1.4
PSUT	Pine Spring	89.83	45	*e*P	P	19 38 03.2	+1.6
GSC	Goldstone, Bar	89.90	49	P	P	19 38 02.2	+0.3
	baz=307						
GSC	Goldstone, Bar	89.90	49	*e*P	P	19 38 02.6	+0.8
GSC				*e*pP	sP	19 38 20.7	+1.3
GSC	Goldstone, Bar	89.90	49	*e*P	P	19 38 02.6	+0.8
GSC				*e**PP	sP	19 38 20.7	+1.3
BNI	Bardonecchia	89.98	324	*e*P	P	19 38 04.6	+2.6
JLU	Jordanelle	89.98	42	*e*P	P	19 38 04.9	+2.6
JLU				*e*pP	sP	19 38 17.7	-2.2
NLU	North Lily Min	90.02	43	*e*P	P	19 38 04.9	+2.4
PPT	Papeete	90.19	110	LR	LR	20 10 42.7	
	comp=Z,430nm,21.8s,baz=298,slow=30						
PPT2	Papeete2	90.19	110	*e*S	S	19 49 00.3	+5.9
	comp=Z,458nm,26.5s						
PPT2				*e*SS	SS	19 55 00.2	+5.5
	comp=Z,528nm,26.2s						
PPT2	Papeete2	90.19	110	*e*LR	LR	20 06 52.2	
	comp=Z,979nm,23.2s,baz=298						
MPU	Maple Canyon	90.25	43	*e*P	P	19 38 05.3	+1.9
SHPR	Sheep Range	90.25	47	*e*P	P	19 38 05.2	+1.7
PMOR	Pomariorio Ree	90.29	107	*e*T	T	21 17 46.6	
	comp=Z,5.4nm,0.2s						
VAE	Valguarnera	90.49	314	LR	LR	20 23 27.7	
	comp=Z,1µm,18.3s,baz=34,slow=39						
HEC	Hector,Ludlow	90.49	49	P	P	19 38 04.5	-0.1
	baz=307						
CCUT	Cedar City	90.74	45	*e*P	P	19 38 07.5	+1.6
MSU	Marysvale	90.87	44	*e*P	P	19 38 08.3	+1.8
MSU	Marysvale	90.87	44	*e*P	P	19 38 08.3	+1.8
ULM	Lac du Bonnet	90.89	28	P	P	19 38 05.5	-0.5
	comp=Z,20nm,1.0s,baz=320,slow=6.3,SNR=12						
ULM				LR	LR	20 20 31.6	
	comp=Z,498nm,22.0s,baz=328,slow=37						
ULM	Lac du Bonnet	90.89	28	*e*P	P	19 38 05.8	-0.1
ULM	Lac du Bonnet	90.89	28	*e*P	P	19 38 05.9	-0.1
TMUT	Trail Mountain	90.96	43	*e*P	P	19 38 09.0	+2.0
GMRC	Granite Mounta	90.97	49	P	P	19 38 07.2	+0.4
	baz=307						
P17A	Butcher Ranch,	91.12	43	*e*P	P	19 38 09.0	+1.5
PFO	Pinyon Flats O	91.14	50	P	P	19 38 07.5	-0.1
	baz=307						
PFO	Pinyon Flats O	91.14	50	*e*P	P	19 38 11.3	+3.6
PFO				LR	LR		
	comp=Z,588nm,20.0s						
XPFO	Piæon Flat	91.14	50	*e*P	P	19 38 11.3	+3.6
LCMT	Little Creek M	91.15	46	*e*P	P	19 38 09.0	+1.3
LCMT				*e*pP	pP	19 38 21.3	+0.8
MTPU	Mount Pierson	91.16	44	*e*P	P	19 38 09.8	+1.8
BELC	Belle Mtn. Jos	91.21	50	P	P	19 38 07.6	-0.4
	baz=307						
Q16A	Castle Valley	91.22	43	*e*P	P	19 38 10.3	+2.2
P18A	Preston Nutter	91.31	42	*e*P	P	19 38 10.0	+1.4
K22A	Casper	91.40	38	P	P	19 38 08.7	0.0
	baz=313						
KNB	Kanab	91.41	46	*e*P	P	19 38 10.6	+1.6
SRU	San Rafael Swe	91.48	43	*e*P	P	19 38 10.3	+1.0
SRU	San Rafael Swe	91.48	43	*e*P	P	19 38 10.3	+1.0
MONP2	Monument Peak	91.59	51	P	P	19 38 09.9	0.0
	baz=307						
RWWY	Rawlins	91.68	39	*e*P	P	19 38 11.0	+0.8
IRM	Iron Mountain	91.68	49	P	P	19 38 10.1	+0.1
	baz=308						
RSSD	Black Hills	91.69	36	*e*P	P	19 38 10.9	+0.8
RSSD	Black Hills	91.69	36	*e*P	P	19 38 10.9	+0.8
VAL	Valentia	92.03	337	*e*P	P	19 38 02.5	-8.7
O20A	White River Ci	92.14	41	P	P	19 38 12.5	+0.2
	baz=312						
PDMCI	Parker Dam,Lak	92.25	48	P	P	19 38 13.3	+0.7
	baz=308						
AGMN	Agassiz Nation	92.41	29	*e*P	P	19 38 13.0	-0.1
AGMN				LR	LR		
	comp=Z,465nm,20.0s						
GLA	Glamis	92.56	50	P	P	19 38 13.6	-0.6
	baz=308						
PV09	Paradox Valley	92.70	43	*e*P	P	19 38 16.6	+1.6
PHWY	Pilot Hill	92.90	39	*e*P	P	19 38 16.7	+0.8
PV03	Paradox Valley	93.03	43	*e*P	P	19 38 17.6	+1.2
KMBO	Kilima Mbogo	93.19	270	PFAKE		19 38 30.0	+12
KMBO				LR	LR		
	comp=Z,812nm,20.0s						
TBI	Tubuai	93.20	115	*e*S	S	19 49 26.0	+4.9
	comp=Z,534nm,24.5s						
TBI	Tubuai	93.20	115	*e*LR	LR	20 08 24.6	
	comp=Z,742nm,31.2s,baz=301						
B35A	Bob, Littlefor	93.24	28	P	P	19 38 16.2	-0.7
	baz=323						
WUAZ	Wupatki	93.27	46	*e*P	P	19 38 18.8	+1.3
WUAZ				LR	LR		
	comp=Z,374nm,20.0s						
ABPO	Ambohimpanom	93.31	250	*e*P	P	19 38 18.4	+0.5
ABPO				LR	LR		
	comp=Z,340nm,20.0s						
ABPO	Ambohimpanom	93.31	250	*e*P	P	19 38 18.4	+0.5
ABPO				MLR	MLR		
	comp=Z,340nm,20.0s						
SMCO	Snowmass	93.51	41	*e*P	P	19 38 20.1	+1.2
C35A	Jirik Farms, M	93.66	28	P	P	19 38 18.2	-0.7
	baz=323						
ISCO	Idaho Springs	93.85	40	*e*P	P	19 38 21.4	+1.1
ISCO				LR	LR		
	comp=Z,629nm,22.0s						
ISCO	Idaho Springs	93.85	40	*e*P	P	19 38 21.4	+1.1
ISCO				MLR	MLR		
	comp=Z,629nm,22.0s						

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TAOE  Nuku Hiva Isla    93.89  98 eSP      SP       19 50 45.3 +3.4
      comp=Z,426nm,29.3s
TAOE  Nuku Hiva Isla    93.89  98 eLR      LR       20 08 40.7
      comp=Z,1µm,23.7s
MVCO  Mesa Verde        93.93  43 eP       P        19 38 22.3 +1.6
MVCO                              epP      sP       19 38 35.9 -2.4
MVCO                               LR      LR
      comp=Z,413nm,19.0s
G32A  Webster           94.03  32  P       P        19 38 21.6 +0.9
      baz=320
C36A  Pine Crest Far    94.08  28  P       P        19 38 20.3 -0.5
      baz=324
C37A  Embarrass         94.37  27  P       P        19 38 21.9 -0.2
      baz=324
EYMN  Ely               94.47  27  PFAKE            19 38 30.0 +7.4
EYMN                               LR      LR
      comp=Z,565µm,20.0s
214A  Organ Pipe Nat    94.58  50  P       P        19 38 24.3 +0.8
      baz=309
Q24A  Divide            94.69  40  P       P        19 38 23.8 -0.4
      baz=314
KEST  Kesra             94.74 316  LR      LR       20 26 07.5
      comp=Z,2µm,19.4s,baz=356,slow=39
C38A  Sawbill Land.     94.74  27  P       P        19 38 24.4 +0.6
      baz=325
F35A  Swanville         94.87  30  P       P        19 38 25.1 +0.6
      baz=322
G34A  Benson            94.88  31  P       P        19 38 25.2 +0.6
      baz=321
E36A  McGregor          94.90  29  P       P        19 38 24.9 +0.3
      baz=323
SCHQ  Schefferville     94.95  10  LR      LR       20 24 01.2
      comp=Z,1µm,20.2s,baz=340,slow=37
OGNE  Ogallala          94.99  37  PFAKE            19 38 40.0  +15
OGNE                               LR      LR
      comp=Z,511nm,20.0s
F36A  Milaca            95.31  29  P       P        19 38 26.3 -0.2
      baz=323
SDCO  Great Sand Dun    95.33  41  PFAKE            19 38 40.0  +13
SDCO                               LR      LR
      comp=Z,398nm,22.0s
E38A  The Farm, Brul    95.53  28  P       P        19 38 26.8 -0.7
      baz=324
ECSD  EROS Data Cent    95.60  32  PFAKE            19 38 40.0  +12
ECSD                               LR      LR
      comp=Z,573nm,20.0s
H35A  Sunnyside Ranc    95.66  31  P       P        19 38 27.9 -0.2
      baz=322
TUC   Tucson            95.69  48 eP       P        19 38 29.8 +1.2
TUC                               epP      pP       19 38 43.0 +1.6
TUC                                LR      LR
      comp=Z,642nm,21.0s
TUC   Tucson            95.69  48 eP       P        19 38 29.8 +1.2
TUC                               e*PP     pP       19 38 43.0 +1.6
TUC                                MLR     MLR
      comp=Z,642nm,21.0s
F38A  Pierce - Schro    95.92  28  P       P        19 38 29.0 -0.3
      baz=324
E39A  Mellen            96.12  27  P       P        19 38 29.6 -0.6
      baz=325
E40A  Wakefield         96.32  27  P       P        19 38 31.0  0.0
      baz=326
F39A  Loretta           96.35  28  P       P        19 38 30.5 -0.7
      baz=325
CASY  Casey             96.44 188  PFAKE            19 38 40.0 +9.2
CASY                               LR      LR
      comp=Z,88nm,22.0s
F40A  Park Falls        96.67  27  P       P        19 38 31.6 -1.0
      baz=326
E41A  Kenton            96.67  26  P       P        19 38 33.4 +0.8
      baz=326
ANMO  Albuquerque       96.67  44  PFAKE            19 38 50.0  +17
ANMO                               LR      LR
      comp=Z,424nm,20.0s
ANMO  Albuquerque       96.67  44⇓eP       P        19 38 34.3 +1.2
ANMO                               pmax    pmax
      comp=Z,2.0nm,1.2s
G39A  Holcombe          96.76  28  P       P        19 38 32.5 -0.6
      baz=325
I37A  Lemond, Waseca    96.83  30  P       P        19 38 33.8 +0.4
      baz=323
COWI  Conover           96.90  26  PFAKE            19 38 50.0  +16
COWI                               LR      LR
      comp=Z,514nm,19.0s
G40A  Rib Lake          97.17  28  P       P        19 38 34.7 -0.2
      baz=325
F41A  Three Lakes       97.22  27  P       Pdif     19 38 35.2  0.0
      baz=326
H40A  Chili             97.62  28  P       Pdif     19 38 37.4 +0.4
      baz=325
CBKS  Cedar Bluff       97.75  37  PFAKE            19 38 50.0  +12
CBKS                               LR      LR
      comp=Z,482nm,21.0s
G42A  Mountain          97.89  26  P       P        19 38 37.5 -0.6
      baz=327
G43A  Wallace           98.17  26  P       Pdif     19 38 39.4  0.0
      baz=327
SCIA  State Center      98.59  31  PFAKE            19 38 50.0 +8.6
SCIA                               LR      LR
      comp=Z,515nm,21.0s
MBAR  Mbarara           98.62 274 eP       Pdif     19 38 43.3 +1.1
MBAR  Mbarara           98.62 274 eP       Pdif     19 38 43.3 +1.1
JFWS  Jewell Farm       99.08  29  PFAKE            19 39 00.0  +16
JFWS                               LR      LR
      comp=Z,495nm,19.0s
KSU1  Kansas State U    99.15  35  PFAKE            19 39 00.0  +16
KSU1                               LR      LR
      comp=Z,848nm,22.0s
ES19  SONSECA Array     99.22 326 eP       Pdif     19 38 42.9 -1.5
ESDC  Sonseca Array     99.27 326  P       Pdif     19 38 43.1 -1.4
      comp=Z,1.0nm,0.7s,baz=19,slow=4.5,SNR=8.8
ESDC                               PP      PP       19 42 45.7 -1.2
      comp=Z,3.2nm,1.0s,baz=30,slow=6.8,SNR=7.6
ESDC                               LR      LR       20 28 57.0
      comp=Z,2µm,18.2s,baz=20,slow=39
PGAV  Gavieira, Arco    99.46 330 ePdif    Pdif     19 38 47.9 +2.5
PGAV  Gavieira, Arco    99.46 330 ePP      PP       19 42 53.2 +5.0
PGAV                              eS       S        19 49 40.9  -34
PGAV  Gavieira, Arco    99.46 330 eLR      LR       20 15 22.5
      comp=Z,3µm,18.0s
MNTX  Cornudas Mount    99.53  46  PFAKE            19 39 00.0  +14
MNTX                               LR      LR
      comp=Z,356nm,21.0s
MVO   Moncorvo          99.55 329 ePdif    Pdif     19 38 47.3 +1.5
MVO   Moncorvo          99.55 329 ePP      PP       19 42 49.5 +0.6
MVO                               eS       SKSac    19 49 20.5 -0.6
MVO   Moncorvo          99.55 329 eLQ      LQ       20 14 01.5
MVO                               eLR      LR       20 16 13.3
      comp=Z,2µm,18.0s
PAB   San Pablo         99.56 326  PFAKE            19 39 00.0  +14
PAB                                LR      LR
      comp=Z,2µm,19.0s
MTE   Manteigas        100.39 329 ePdif    Pdif     19 38 51.1 +1.6
MTE   Manteigas        100.39 329 ePP      PP       19 42 58.0 +2.7
MTE                               eS       SKSac    19 49 27.8 +2.5
MTE   Manteigas        100.39 329 eLQ      LQ       20 10 16.8
MTE                               eLR      LR       20 16 50.8
      comp=Z,4µm,18.0s
PMRV  Marv??o          101.10 328 ePP      PP       19 43 03.1 +2.5
PMRV  Marv??o          101.10 328 eLQ      LQ       20 14 35.6
PMRV                              eLR      LR       20 17 54.4
      comp=Z,3µm,20.0s
WMOK  Wichita Mounta   101.27  39  PFAKE            19 39 10.0  +16
WMOK                               LR      LR
      comp=Z,579nm,21.0s
HDIL  Hopedale         101.42  30  PFAKE            19 39 10.0  +16
HDIL                               LR      LR
      comp=Z,728nm,21.0s
AAM   Ann Arbor        102.21  25  PFAKE            19 39 10.0  +13
AAM                                LR      LR
      comp=Z,499nm,21.0s
TXAR  Lajitas Array    102.23  46  P       Pdif     19 38 58.7 +0.7
      comp=Z,2.1nm,1.1s,baz=244,slow=3.7,SNR=6.1
TXAR                               PP      PKiKP    19 43 16.5 -3.4
      comp=Z,0.4nm,0.7s,baz=258,slow=2.7,SNR=3.0
LIS   Lisbon           102.48 329 ePP      PP       19 43 11.5 +0.5
LIS                                AMS     AMS      20 32 05.7
      comp=Z,3µm,18.5s
MESJ  Messejana        102.76 327 ePP      PP       19 43 13.7 +0.6
MESJ                              eSS      SS       19 57 50.6 +1.1
MESJ                               AMS     AMS      20 32 15.8
      comp=Z,2µm,18.9s
PVAQ  Vaqueiros        102.87 327 ePP      PP       19 43 14.4 +0.4
PVAQ                              eS       SKSac    19 49 45.1 +8.0
PVAQ  Vaqueiros        102.87 327 eLQ      LQ       20 18 02.4
PVAQ                              eLR      LR       20 23 07.8
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      comp=Z,2µm,22.0s
LONY  Lake Ozonia      103.03  18  PFAKE            19 39 10.0 +8.9
LONY                               LR      LR
      comp=Z,1µm,22.0s
MORF  Marmelete        103.39 327 ePP      PP       19 43 18.5 +0.6
MORF                               AMS     AMS      20 32 26.8
      comp=Z,3µm,20.9s
PKME  Peaks-Kenny Pk   103.70  14  PFAKE            19 39 20.0  +16
PKME                               LR      LR
      comp=Z,723nm,20.0s
JCT   Junction City    103.79  43  PFAKE            19 39 20.0  +15
JCT                                LR      LR
      comp=Z,395nm,20.0s
MIAR  Mount Ida        104.20  36  PFAKE            19 39 20.0  +13
MIAR                               LR      LR
      comp=Z,612nm,22.0s
ACSO  Alum Creek Sta   104.26  26  PFAKE            19 39 20.0  +13
ACSO                               LR      LR
      comp=Z,558nm,21.0s
BINY  Binghamton       104.87  20  PFAKE            19 39 20.0  +11
BINY                               LR      LR
      comp=Z,1µm,21.0s
NATX  Nacogdoches      105.78  39  PFAKE            19 43 40.0
NATX                               LR      LR
      comp=Z,643nm,20.0s
KVTX  Kingsville       107.07  44  PFAKE            19 43 40.0
KVTX                               LR      LR
      comp=Z,481nm,19.0s
LSZ   Lusaka           107.70 262  PFAKE            19 43 40.0
LSZ                                LR      LR
      comp=Z,1µm,22.0s
BLA   Blacksburg       107.86  25  PFAKE            19 43 40.0
BLA                                LR      LR
      comp=Z,956nm,19.0s
CBN   Corbin Frederi   108.06  23  PFAKE            19 43 40.0
CBN                                LR      LR
      comp=Z,851nm,20.0s
SBA   Scott Base       109.06 172  PFAKE            19 43 40.0
SBA                                LR      LR
      comp=Z,489nm,19.0s
CMLA  Cha da Macela    109.57 340  PFAKE            19 43 40.0
CMLA                               LR      LR
      comp=Z,681nm,20.0s
GOGA  Godfrey          109.94  30  PFAKE            19 43 50.0
GOGA                               LR      LR
      comp=Z,560nm,21.0s
BRAL  Brewton          110.18  34  PFAKE            19 43 50.0
BRAL                               LR      LR
      comp=Z,537nm,21.0s
CNNC  Cliffs of the    110.55  24  PFAKE            19 43 50.0
CNNC                               LR      LR
      comp=Z,840nm,20.0s
PMOZ  Porto Moniz, M   110.97 331 eLR      LR       20 19 04.4
      comp=Z,1µm,20.0s
NHSC  New Hope         111.57  27  PFAKE            19 43 50.0
NHSC                               LR      LR
      comp=Z,932nm,19.0s
TORD  Torodi Ar. Bea   114.89 303  PKP     PKPdf    19 43 42.7 -1.1
      comp=Z,1.4nm,1.0s,baz=90,slow=1.4
BOSA  Boshof           115.53 250  PKP     PKPdf    19 43 44.0 -0.7
      comp=Z,2.1nm,0.8s,baz=59,slow=5.9,SNR=2.4
BBSR  BB Station       117.06  14  PFAKE            19 44 00.0  +12
BBSR                               LR      LR
      comp=Z,830nm,22.0s
KOWA  Kowa             118.03 308  PKP     PKPdf    19 43 49.2 -0.6
      comp=Z,1.6nm,0.4s,baz=89,slow=2.4,SNR=3.9
TSUM  Tsumeb           118.53 263  PFAKE            19 44 00.0 +9.2
TSUM                               LR      LR
      comp=Z,1µm,22.0s
QSPA  South Pole Qui   119.04 180  PKP     PKPdf    19 43 49.4 -0.8
      comp=Z,2.3nm,0.6s,baz=232,slow=1.4,SNR=7.2
QSPA  South Pole Qui   119.04 180  PKP     PKPdf    19 43 49.5 -0.8
QSPA                               LR      LR
      comp=Z,494nm,20.0s
DBIC  Dimbokro         123.99 302  PKP     PKPdf    19 44 00.3 -1.0
      comp=Z,6.8nm,0.8s,baz=90,slow=2.0,SNR=3.6
GTBY  Guantanamo Bay   125.29  30  PFAKE            19 44 20.0  +16
GTBY                               LR      LR
      comp=Z,513nm,21.0s
GRTK  Grand Turk       125.45  25  PFAKE            19 44 20.0  +16
GRTK                               LR      LR
      comp=Z,668nm,21.0s
MTDJ  Mount Denham     125.67  33  PFAKE            19 44 20.0  +15
MTDJ                               LR      LR
      comp=Z,637nm,19.0s
NVL   N'lazarevskaya   126.65 201 ePKIKP   PKPdf    19 44 12.5 +7.9
JTS   JuntasAbangare   128.02  46  PFAKE            19 44 20.0  +11
JTS                                LR      LR
      comp=Z,308nm,20.0s
SACV  Santiago Islan   129.30 327  PFAKE            19 44 20.0 +8.6
SACV                               LR      LR
      comp=Z,408nm,19.0s
SJG   San Juan         130.29  21  PFAKE            19 44 30.0  +17
SJG                                LR      LR
      comp=Z,577nm,22.0s
SNAA  Sanae            130.58 198  PKP     PKPdf    19 44 12.2  0.0
      comp=Z,3.2nm,1.1s,baz=94,slow=3.1,SNR=4.9
ANWB  Willy Bob        131.90  16  PFAKE            19 44 30.0  +14
ANWB                               LR      LR
      comp=Z,480nm,22.0s
BCIP  Isla Barro Col   132.00  42  PFAKE            19 44 30.0  +13
BCIP                               LR      LR
      comp=Z,406nm,19.0s
BBGH  Gun Hill         136.77  14  PFAKE            19 44 40.0  +15
BBGH                               LR      LR
      comp=Z,596nm,19.0s
SDV   Santo Domingo    137.03  31  PFAKE            19 44 40.0  +14
SDV                                LR      LR
      comp=Z,422nm,20.0s
GRGR  Grenville        137.25  17  PFAKE            19 44 40.0  +14
GRGR                               LR      LR
      comp=Z,404nm,22.0s
OTAV  Otavalo          139.82  48  PFAKE            19 44 40.0 +8.3
OTAV                               LR      LR
      comp=Z,267nm,22.0s
ASCN  Ascension        140.58 295  PFAKE            19 44 40.0 +7.5
ASCN                               LR      LR
      comp=Z,662nm,21.0s
NNA   Nana             149.46  61  PKPbc   PKPbc    19 44 51.9 -0.3
      comp=Z,20nm,0.7s,baz=321,slow=4.3,SNR=7.3
NNA   Nana             149.46  61  PKPbc   PKPbc    19 44 51.9 -0.3
NNA                                LR      LR
      comp=Z,212nm,21.0s
NNA   Nana             149.46  61 i PKP2   PKPbc    19 44 52.7 +0.5
PTGA  Pitinga          149.98  21  PFAKE            19 45 00.0 +0.9
PTGA                               LR      LR
      comp=Z,9µm,20.0s
RCBR  Riachuelo        153.27 328  PFAKE            19 45 10.0 -2.9
RCBR                               LR      LR
      comp=Z,67µm,22.0s
SAML  Samuel           156.15  35 eP       PKPdf    19 44 57.1 -0.4
SAML                               LR      LR
      comp=Z,615nm,21.0s
SAML  Samuel           156.15  35 ePKIKP   PKPdf    19 44 57.1 -0.4
SAML                               MLR     MLR
      comp=Z,615nm,21.0s
LPAZ  La Paz           158.70  57  PKP     PKPdf    19 45 03.0 +1.7
      comp=Z,1.0nm,0.7s,baz=349,slow=2.2,SNR=3.9
LPAZ                               PKPab   PKPab    19 45 37.4 +0.5
      comp=Z,6.1nm,1.2s,baz=313,slow=3.1,SNR=5.4
LCO   Las Campanas     161.66  94  PFAKE            19 45 20.0  +16
LCO                                LR      LR
      comp=Z,572nm,20.0s
TRQA  Tornquist        166.56 134  PFAKE            19 45 20.0  +12
TRQA                               LR      LR
      comp=Z,803nm,22.0s
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ISCJB ***09*** *19:26:12.3±0.3, 18.°10S±0.°08×178.°20W±0.°05, h590km, mb4.4/33, Error ellipse: s-maj=10.9km s-min=6.0km az=172.6*

NEIC ***09*** *19:26:13.6±0.8, 18.°11S×178.°22W, h592km±9km, mb4.8/3, Error ellipse: s-maj=12.3km s-min=7.8km az=155.0*

IDC ***09*** *19:26:14.4±1.3, 18.°14S×178.°27W, h596km±15km, mb3.8/23, mb1 3.9/25, mb1mx3.6/54, mbtmp4.8/25, Error ellipse: s-maj=14.5km s-min=8.9km az=158.0*

ISC 09 19:26:13.3±0.5**, 18.°1S**±0.°1×**178.°19W**±0.°07**, h590**km**, n124,** σ**0.^{s}91**/126**, mb4.4**/33**, 16C-13D, Fiji Islands region**

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Code  Station Name       Δ°   AZ°   Phase ID             Time      Res
                                  Op       ISC        h  m  s      ISC
AFI   Afiamalu           7.42  57  P       P        19 28 07.3 +0.3
      11nm,0.3s,baz=222,slow=2.2,SNR=11
AFI                                S       S        19 29 36.4 -3.6
      7.3nm,0.3s,baz=90,slow=20,SNR=4.9
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DZM   Mont Dzumac       14.98 252  P       P        19 29 21.7  0.0
      2.2nm,0.3s,baz=108,slow=18,SNR=13
DZM   Mont Dzumac       14.98 252 eP       P        19 29 22.3 +0.6
URZ   Urewera           20.53 191  P       P        19 30 11.1 -1.0
      4.2nm,0.6s,baz=95,slow=18,SNR=2.9
PAE   Paea              27.22  94 eP       P        19 31 12.0 +0.4
      5.6nm,1.2s
PPT2  Papeete2          27.23  93 eP       P        19 31 12.2 +0.4
      19nm,0.8s
PPT   Papeete           27.23  93  P       P        19 31 12.9 +1.2
      24nm,0.6s,baz=164,slow=1.9,SNR=7.6
TIAR  Tiarei            27.45  93 eP       P        19 31 14.0 +0.3
      7.1nm,0.8s
TVO   Taravao           27.52  94 eP       P        19 31 14.6 +0.3
      4.4nm,0.7s
PMOR  Pomariorio Ree    29.18  89 eP       P        19 31 29.1 +0.4
      66nm,1.1s
VAH   Vaihoa            29.40  89 eP       P        19 31 30.5  0.0
      44nm,1.2s
CTA   Charters Tower    33.63 261  P       P        19 32 06.3 -0.2
      6.6nm,0.6s,baz=99,slow=10,SNR=11
CTAO  Charters Tower    33.63 261 eP       P        19 32 06.3 -0.2
STKA  Stephens Creek    38.74 241  P       P        19 32 49.1 +0.8
      3.6nm,0.5s,baz=89,slow=9.8,SNR=15
JAY   Jayapura          43.16 286  P       P        19 33 23.9 +0.4
      33nm,0.7s,baz=184,slow=7.6,SNR=22
WRAB  Tennant Creek     44.80 260 eP       P        19 33 35.4 -0.7
      29nm,0.8s
WRA   Warramunga Arr    44.81 260  P       P        19 33 35.6 -0.6
      7.2nm,0.5s,baz=96,slow=7.3,SNR=207
WRA                                PcP     PcP      19 35 05.5 +0.3
      1.6nm,0.4s,baz=90,slow=4.2,SNR=5.4
WRA                                S       S        19 39 28.7 -3.0
      0.6nm,0.7s,baz=97,slow=12,SNR=2.9
ASAR  Alice Springs     44.95 254  P       P        19 33 37.1 -0.1
      33nm,0.6s,baz=87,slow=8.5,SNR=454
ASAR                               PcP     PcP      19 35 05.8 +0.2
      3.6nm,0.5s,baz=104,slow=3.8,SNR=6.3
ASAR                               S       S        19 39 31.5 -2.1
      1.5nm,0.8s,baz=89,slow=16,SNR=8.0
GUMO  Guam              48.15 308  P       P        19 34 01.5 +0.3
      57nm,0.7s,baz=350,slow=11,SNR=5.6
SIJI  Sorong            52.48 283  P       P        19 34 32.9  0.0
      55nm,0.7s,baz=131,slow=4.5,SNR=45
BATI  Baumata           56.74 270  P       P        19 35 04.1 +1.5
      24nm,0.6s,baz=146,slow=2.8,SNR=4.2
MBWA  Marble Bar        58.24 256 eP       P        19 35 12.2 -0.4
MJAR  Matsushiro Arr    68.17 323  P       P        19 36 15.4 -0.4
      8.0nm,0.6s,baz=163,slow=5.8,SNR=41
MAJO  Matsushiro        68.17 323 eP       P        19 36 15.4 -0.4
MAT   Matsushiro        68.17 323  P       P        19 36 15.3 -0.5
JNU   Nakatsue          70.41 316  P       P        19 36 29.1 -0.1
      1.6nm,0.3s,baz=136,slow=6.3,SNR=5.0
ASAJ  Asahikawa         71.52 331  P       P        19 36 36.7 +1.2
      8.6nm,0.7s,baz=201,slow=3.5,SNR=11
PETK  Petropavlovsk-    73.89 345  P       P        19 36 49.2 +0.3
      9.9nm,0.6s,baz=125,slow=8.5
KSRS  Korea Array       74.97 318  P       P        19 36 56.1 +1.0
      2.3nm,0.8s,baz=134,slow=6.8,SNR=11
KSAR  Wonju Array Be    74.98 318  P       P        19 36 56.1 +0.9
USRK  Ussuriysk Ar.     76.87 326  P       P        19 37 06.8 +1.3
      3.0nm,0.6s,baz=95,slow=7.2
MDJ   Mudanjiang        78.44 325 eP       P        19 37 15.0 +1.0
      12nm,0.8s
NVAR  Mina Array Bea    79.40  44  P       P        19 37 20.3 +0.8
      0.5nm,0.6s,baz=221,slow=8.8,SNR=5.1
PSI   Prapat            84.11 275  P       P        19 37 43.8 -0.1
      2.9nm,0.4s,baz=180,slow=8.8,SNR=9.0
TXAR  Lajitas Array     85.91  58  P       P        19 37 54.7 +2.6
      1.7nm,0.8s,baz=220,slow=6.9,SNR=13
ILAR  Eielson Array     86.00  13  P       P        19 37 51.1 -0.5
      1.6nm,0.4s,baz=220,slow=5.1,SNR=16
CMAR  Chiang Mai Arr    89.14 290  P       P        19 38 08.9 +1.5
      4.3nm,0.9s,baz=119,slow=2.1,SNR=22
CMMT  Chiang Mai        89.25 290  P       P        19 38 09.1 +1.2
      6.1nm,0.8s
CHTO  Chiang Mai        89.26 290  P       P        19 38 09.1 +1.2
      27nm,0.8s
YAK   Yakutsk           89.81 338 eP       P        19 38 07.5 -1.9
      30nm,0.9s
SNAA  Sanae             90.43 179  P       P        19 38 12.5 +0.2
SNAA  Sanae             90.43 179  P       P        19 38 12.6 +0.2
      1.0nm,0.6s,baz=256,slow=8.3,SNR=11
VNA3  Neumayer Olymp    90.56 176  P       P        19 38 13.7 +0.7
VNA1  Neumayer--Stat    91.23 177  P       P        19 38 05.7  -10
SONM  Songino Array     93.81 319  P       P        19 38 29.3 +0.9
      0.7nm,0.6s,baz=127,slow=5.4,SNR=2.5
ZALV  Zalesovo Beam    108.50 322  PKiKP   PKiKP    19 43 34.7 -0.7
      0.5nm,0.5s,baz=346,slow=3.0,SNR=2.8
MKAR  Makanchi Array   109.40 314  PKiKP   PKiKP    19 43 36.6 -0.8
      0.9nm,0.5s,baz=106,slow=2.4,SNR=20
KURK  Kurchatov        112.09 318  PKiKP   PKiKP    19 43 41.7 -0.6
KURBB Kurchatov Arra   112.14 318  PKiKP   PKiKP    19 43 41.7 -0.7
      1.0nm,0.6s,baz=82,slow=1.5,SNR=8.6
BVAR  Borovoye Array   117.11 321  PKP     PKPdf    19 43 51.1 -0.8
      1.9nm,0.4s,baz=117,slow=1.6,SNR=18
SPITS Spitsbergen Ar   119.45 357  PKP     PKPdf    19 43 55.0 -0.8
      9.1nm,1.0s,baz=346,slow=5.2,SNR=3.0
AKTO  Aktyubinsk       125.13 319  PKP     PKPdf    19 44 07.1 -0.3
      1.5nm,0.7s,baz=103,slow=7.1,SNR=5.1
ARCES ARCESS Array B   126.52 350  PKP     PKPdf    19 44 09.3 -0.2
      3.8nm,0.8s,baz=5.7,slow=1.2,SNR=8.1
FINES FINESS Array B   133.41 344  PKP     PKPdf    19 44 20.5 -2.2
      1.6nm,0.7s,baz=45,slow=4.0,SNR=6.2
HFS   Hagfors          137.13 351  PKhKP   PKPpre   19 44 19.6
      1.2nm,0.3s,baz=66,slow=3.6,SNR=9.7
AKASG Malin Array Be   140.81 332  PKhKP   PKPpre   19 44 30.3
      0.6nm,0.4s,baz=39,slow=4.6,SNR=6.1
AKASG                              PKP     PKiKP    19 44 38.3 -1.2
      0.8nm,0.4s,baz=44,slow=3.3,SNR=5.6
SORM  Soroca           143.04 330⇑iP       PKPab    19 44 38.5  0.0
TLCR                   144.83 326⇓iP       PKPab    19 44 45.1 -0.3
BURAR Bucovina Array   144.86 332⇓iP       PKPab    19 44 45.7 +0.1
BIZ   Bicaz            144.96 331⇓iP       PKPab    19 44 45.6 -0.3
TESR  Tescani          145.01 330⇓iP       PKPbc    19 44 45.2 +0.1
BRTR  Keskin Array B   145.05 315  PKPbc   PKPbc    19 44 45.5 -0.1
      5.5nm,0.7s,baz=135,slow=4.5,SNR=29
CFR   Carcaliu         145.19 327⇓iP       PKPbc    19 44 46.0 +0.4
VRI   Vrincioaia       145.43 329⇓iP       PKPbc    19 44 46.1 -0.3
PLOR  Plostina         145.48 329⇑iP       PKPbc    19 44 46.8 +0.3
TIRR  Tirgusor         145.52 325⇑iP       PKPbc    19 44 46.5 -0.1
ANTO  Ankara           145.55 316⇓iP       PKPbc    19 44 46.7 -0.3
BMR   Baia Mare        145.56 334⇑iP       PKPbc    19 44 47.4 +0.8
TRPA  Tarpa            145.59 335⇑iP       PKPbc    19 44 47.4 +0.7
HARR  Harsova          145.63 326⇓iP       PKPbc    19 44 47.2 +0.3
TLB   Topalu           145.64 326⇑iP       PKPbc    19 44 47.3 +0.4
ARCR  ARCALIA          145.64 332⇑iP       PKPbc    19 44 47.0 +0.1
CLL   Collm            145.67 348⇓iPKPbc   PKPbc    19 44 47.1 +0.3
      comp=Z,20nm,0.8s
OKC   Ostrava-Krasne   145.70 341 ePKP     PKPbc    19 44 47.6 +0.7
UPC   Upice            145.71 344 ePKP     PKPab    19 44 47.9 -0.8
DPC   Dobruska-Polom   145.77 343 ePKP     PKPbc    19 44 47.7 +0.5
DPC                               ex       x        19 44 49.4
LANS  Liptovska Anna   145.87 339 ePKP     PKPab    19 44 48.7 -0.8
BRG   Berggiesshubel   145.88 346 ePKP     PKPbc    19 44 47.8 +0.4
      comp=Z,9.8nm,0.7s
BRG                                S       tx       19 48 02.0
BRG                                SS      tx       19 53 39.0
      comp=N,3µm,17.1s
      comp=E,3µm,17.1s
      comp=Z,6µm,17.3s
KRLC  Kraliky          145.89 343 ePKP     PKPbc    19 44 48.4 +0.8
MORC  Moravsky Berou   145.94 342⇑iP       PKPbc    19 44 48.4 +0.7
MORC  Moravsky Berou   145.94 342 ePKP     PKPbc    19 44 48.1 +0.4
DOPR  Dopca            146.01 330⇑iP       PKPbc    19 44 48.5 +0.5
PVCC  Panska Ves       146.05 345 ePKP     PKPbc    19 44 48.9 +1.0
MLR   Muntele Rosu     146.08 329⇑iP       PKPbc    19 44 48.6 +0.2
CJR   Cluj-Napoca      146.26 333⇓iP       PKPbc    19 44 47.9 -0.8
MMAI  Mount Meron Ar   146.41 303  PKPbc   PKPbc    19 44 50.1 +0.6
      comp=Z,9.6nm,0.6s,baz=57,slow=5.3,SNR=17
VOIR                   146.56 330⇑iP       PKPbc    19 44 50.0 +0.4
PRU   Pruhonice        146.56 345 ePKP     PKPbc    19 44 50.1 +0.8
GOPC  GO Pecny, Ondr   146.57 345 ePKP     PKPbc    19 44 50.0 +0.6
DRGR                   146.58 334⇑iP       PKPbc    19 44 50.1 +0.5
VRAC  Vranov           146.63 342 ePKP     PKPbc    19 44 50.3 +0.7
VRAC                              e                 19 44 53.1
VYHS  Vyhne            146.65 339 ePKP     PKPbc    19 44 50.2 +0.6
JAVC  Velka Javorina   146.71 341 ePKP     PKPab    19 44 51.6 -1.3
ARR   Arges            146.81 330⇓iP       PKPbc    19 44 49.1 -1.1
KRUC  Moravsky         146.91 342 ePKP     PKPbc    19 44 50.8 +0.5
KRUC                              e                 19 44 54.1
MODS  Modra-Piesok     147.26 341 ePKP     PKPbc    19 44 52.3 +1.0
KHC   Kasperske Hory   147.59 346 ePKP     PKPbc    19 44 52.9 +0.8
KHC                               ex       x        19 44 57.6
GERES GERESS Array B   147.83 345  PKPbc   PKPbc    19 44 53.0 +0.2
      comp=Z,7.1nm,0.7s,baz=22,slow=3.5,SNR=52
```

BZS	**Buzias**	**147.98**	**333⇑**	*i*P	**PKPbc**	**19 44 52.6**	**-0.5**
CONA	**Conrad Observa**	**148.09**	**342**	*i* PKiKP	**PKPbc**	**19 44 54.1**	**+0.6**
	comp=Z,7.3nm,0.8s						
HERR	**Herculane**	**148.20**	**332⇑**	*i*P	**PKPbc**	**19 44 52.8**	**-0.9**
MDVR	**Moldovita**	**148.59**	**332⇓**	*i*P	**PKPbc**	**19 44 53.0**	**-1.8**
MOA	**Molln**	**148.60**	**344**	*i* PKPbc	**PKPbc**	**19 44 54.7**	**0.0**
	comp=Z,4.2nm,1.0s						
ARSA	**Arzberg**	**148.80**	**342**	*i* PKPbc	**PKPbc**	**19 44 55.2**	**+0.1**
	comp=Z,4.8nm,1.1s						
KDZ	**Kurdzhali**	**149.03**	**324**	P	**PKPbc**	**19 44 55.0**	**-0.9**
RZN	**Rozhen**	**149.39**	**325**	P	**PKPbc**	**19 44 56.0**	**-1.0**
SOKA	**Soboth**	**149.46**	**342**	*i* PKPbc	**PKPbc**	**19 44 56.5**	**-0.3**
	comp=Z,6.7nm,0.9s						
VTS	**Vitosha**	**149.54**	**328⇑**	*i*P	**PKPbc**	**19 44 56.2**	**-1.1**
VTS	**Vitosha**	**149.54**	**328**	P	**PKPbc**	**19 44 57.0**	**-0.3**
WATA	**Walderalm**	**149.74**	**347**	*i* PKiKP	**PKiKP**	**19 44 58.4**	**+0.2**
	comp=Z,5.1nm,0.5s						
OBKA	**Obir**	**149.75**	**342**	*i* PKPbc	**PKPbc**	**19 44 56.9**	**-0.6**
	comp=Z,3.1nm,0.8s						
RETA	**Reutte**	**149.76**	**348**	*i* PKPbc	**PKPbc**	**19 44 57.1**	**-0.4**
	comp=Z,3.4nm,0.8s						
WTTA	**Wattenberg**	**149.79**	**347**	*i* PKiKP	**PKPbc**	**19 44 57.9**	**+0.2**
	comp=Z,12nm,1.0s						
MOTA	**Moosalm**	**149.83**	**347**	*i* PKiKP	**PKiKP**	**19 44 58.6**	**+0.2**
	comp=Z,8.6nm,0.9s						
MYKA	**Terra Mystica**	**149.89**	**344**	*i* PKPbc	**PKPbc**	**19 44 57.2**	**-0.6**
	comp=Z,5.3nm,0.5s						
MMB	**Musomiste**	**149.99**	**326**	P	**PKPbc**	**19 44 58.0**	**-0.2**
ABTA	**Abfaltersbach**	**150.07**	**345**	*i* PKPbc	**PKPbc**	**19 44 57.9**	**-0.4**
	comp=Z,13nm,0.6s						
DAVA	**Damuels**	**150.12**	**349**	*i* PKiKP	**PKPbc**	**19 44 58.5**	**0.0**
	comp=Z,9.2nm,0.7s						
FETA	**Feichten**	**150.21**	**348**	*i* PKiKP	**PKPbc**	**19 44 58.9**	**+0.2**
	comp=Z,12nm,1.0s						
BLY	**Banja Luka**	**150.45**	**337⇑**	*i*P	**PKPbc**	**19 44 57.7**	**-1.4**
DAVOX	**Davos/Dischmat**	**150.61**	**349**	PKPbc	**PKPbc**	**19 45 00.4**	**+0.7**
	comp=Z,14nm,0.7s,baz=329,slow=5.9,SNR=21						
PDG	**Podgorica**	**151.54**	**332⇓**	*i*P	**PKPbc**	**19 44 58.8**	**-2.8**
IDI	**Anoyia**	**153.29**	**314**	PKPbc	**PKPbc**	**19 45 06.4**	**+0.6**
	comp=Z,4.5nm,0.6s,baz=45,slow=2.9,SNR=5.5						
ESDC	**Sonseca Array**	**157.90**	**12**	PKPab	**PKPab**	**19 45 40.5**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=328,slow=4.6,SNR=4.1						

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*CSEM **09** 19:26:17.1±0.3, 49°.93N×18°.45E, h1^{km}, Error ellipse: s-maj=5.7km s-min=3.6km az=45.0*

PRU 09 19:26:17.6, 49°.89N×18°.45E, h0^{km}, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.20**	**255**	*e*PG	Pg	19 26 21.4	-0.1
OKC				*e*SG	Sg	19 26 24.3	+0.2
	comp=Z,6.0nm,0.4s						
OKC	**Ostrava-Krasne**	**0.20**	**255**	Pg	Pg	19 26 21.4	-0.1
OKC				Sg	Sg	19 26 24.3	+0.2
	6.0nm,0.4s						
MORC	**Moravsky Berou**	**0.60**	**259**	*e*Pg	Pg	19 26 28.9	-0.2
MORC				*e*Sg	Sg	19 26 36.6	-0.2
MORC	**Moravsky Berou**	**0.60**	**259**	*e*PG	Pg	19 26 28.9	-0.2
MORC				*e*SG	Sg	19 26 36.6	-0.2
KRLC	**Kraliky**	**1.09**	**280**	*e*SG	Sg	19 26 52.5	-0.2
KRLC	**Kraliky**	**1.09**	**280**	Sg	Sg	19 26 52.5	-0.2
DPC	**Dobruska-Polom**	**1.45**	**289**	*e*SG	Sg	19 27 03.1	-0.9
DPC	**Dobruska-Polom**	**1.45**	**289**	Sg	Sg	19 27 03.1	-0.9

MAN 09 19:28:08.4, 9°.86N×124°.62E, h31^{km}, mb4.3, ML3.1, MS2.8, 2C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSLP	**Maasin**	**0.36**	**41**	*e*P	Pn	19 28 17.7	+0.2
MSLP				*e*S	Sn	19 28 25.3	+1.6
TBP	**Tagbilaran**	**0.76**	**257⇑**	*e*P	Pb	19 28 24.0	+0.8
LLP	**Lapu-Lapu**	**0.79**	**306⇓**	*e*P	Pn	19 28 22.3	-1.0
LLP				*e*S	Sn	19 28 34.1	+0.1
CGP	**Cagayan de Oro**	**1.40**	**177⇑**	*e*P	Pn	19 28 32.0	+0.3
CGP				*e*S	Sn	19 28 49.0	-0.1
GUIM	**Jordan**	**2.14**	**291**	*e*P	Pn	19 28 42.7	+0.8

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*ISCJB **09** 19:36:55.6±0.5, 38°.33N±0°.04×38°.96E±0°.03, h2^{km}±7^{km}, Error ellipse: s-maj=6.1km s-min=4.0km az=10.7*

*CSEM **09** 19:36:55.6±0.2, 38°.35N×38°.97E, h8^{km}, ML2.6, Error ellipse: s-maj=5.0km s-min=3.2km az=14.0*

*DDA **09** 19:36:55.9, 38°.35N×38°.94E, h7^{km}, Ml2.6*

*ISK **09** 19:36:55.4, 38°.36N×38°.96E, h8^{km}±3^{km}, ML1.8/5*

ISC 09 19:36:55.9±0.9, **38°.35N**±0°.03×**38°.97E**±0°.02, **h12**^{km}±7^{km}, **n20**, σ**0^{s}.54**/34, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ELZG	**Elazig**	**0.15**	**4**	*i* P	**Pg**	**19 36 59.6**	**-0.1**
ELZG				*i* S	**Sg**	**19 37 02.1**	**-0.2**
ELZG	**Elazig**	**0.15**	**4**	P	**Pg**	**19 36 59.6**	**-0.1**
ELZG				S	**Sg**	**19 37 02.2**	**-0.2**
SVRC	**Sivrice-ELAZID**	**0.27**	**83**	PG	**Pg**	**19 37 01.2**	**-0.3**
SVRC				SG	**Sg**	**19 37 05.5**	**+0.2**
SVRC	**Sivrice-ELAZID**	**0.27**	**83**	*e*Pg	**Pg**	**19 37 01.2**	**-0.3**
SVRC				*e*Sg	**Sg**	**19 37 05.5**	**+0.2**
MALT	**Malatya**	**0.43**	**266**	PG	**Pg**	**19 37 04.1**	**-0.4**
MALT				SG	**Sg**	**19 37 10.6**	**+0.4**
MALT	**Malatya**	**0.43**	**266**	*e*Pg	**Pg**	**19 37 04.1**	**-0.4**
MALT				*e*Sg	**Sg**	**19 37 10.6**	**+0.4**
PTK	**Pertek**	**0.64**	**31**	PG	**Pg**	**19 37 08.1**	**-0.3**
PTK	**Pertek**	**0.64**	**31**	*e*Pg	**Pg**	**19 37 08.1**	**-0.3**
AKCD	**Akcadag**	**0.83**	**267**	*i* P	**Pg**	**19 37 11.3**	**-0.6**
AKCD				*i* S	**Sb**	**19 37 23.1**	**-0.4**
AKCD	**Akcadag**	**0.83**	**267**	P	**Pg**	**19 37 11.3**	**-0.6**
AKCD				S	**Sb**	**19 37 23.1**	**-0.4**
URFA	**Urfa**	**0.91**	**188**	PG	**Pg**	**19 37 13.5**	**0.0**
URFA	**Urfa**	**0.91**	**188**	*e*Pg	**Pg**	**19 37 13.5**	**0.0**
HEKM	**Malatya_Hekimh**	**0.95**	**304**	*i* P	**Pb**	**19 37 14.3**	**-0.2**
HEKM				*i* S	**Sb**	**19 37 28.2**	**+1.0**
HEKM	**Malatya_Hekimh**	**0.95**	**304**	P	**Pb**	**19 37 14.3**	**-0.2**
HEKM				S	**Sb**	**19 37 28.2**	**+1.0**
KEMA	**Kemaliye**	**0.99**	**338**	*i* P	**Pg**	**19 37 14.4**	**-0.7**
KEMA				*i* S	**Sb**	**19 37 28.6**	**+0.4**
KEMA	**Kemaliye**	**0.99**	**338**	P	**Pg**	**19 37 14.4**	**-0.7**
KEMA				S	**Sb**	**19 37 28.6**	**+0.4**
DIYA	**Diyarbakir**	**1.00**	**115**	*i* P	**Pb**	**19 37 15.7**	**+0.5**
DIYA				*i* S	**Sn**	**19 37 30.1**	**+0.2**
DIYA	**Diyarbakir**	**1.00**	**115**	P	**Pb**	**19 37 15.7**	**+0.5**
DIYA				S	**Sn**	**19 37 30.1**	**+0.2**
DYBB	**Diyarbakir**	**1.00**	**113**	PG	**Pb**	**19 37 15.2**	**0.0**
DIY	**Diyarbakir**	**1.09**	**114**	*e*Pg	**Pg**	**19 37 15.2**	**-1.7**

IDC 09 19:59:24.6±3.2, **33°.26S**×**177°.72W**, **h0**^{km}, **mb3.7**/2, **mb1 4.0**/4, **mb1mx3.7**/44, **mbtmp3.9**/4, **ML3.9**/2, **MS4.1**/1, **Ms1 4.1**/1, **ms1mx3.2**/41, **Error ellipse: s-maj=74.0km s-min=33.8km az=116.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**4.00**	**358**	Sn	Sn	20 01 05.9	-8.9
	77nm,0.3s,baz=84,slow=20,SNR=4.5						
URZ	**Urewera**	**6.52**	**219**	Pn	Pn	20 01 02.3	+0.5
	1.6nm,0.3s,baz=266,slow=6.3,SNR=12						
URZ				Sn	Sn	20 02 17.0	+0.2
	5.1nm,0.3s,baz=153,slow=23,SNR=13						
RPZ	**Rata Peaks**	**13.63**	**217**	Pn	Pn	20 02 37.6	-1.5
	1.1nm,0.3s,baz=79,slow=2.4,SNR=4.9						
RPZ				Sn	Sn	20 04 58.8	-13
	0.5nm,0.3s,baz=62,slow=14,SNR=4.4						
ASAR	**Alice Springs**	**43.27**	**270**	P	P	20 07 28.4	+0.3
	0.7nm,0.7s,baz=110,slow=7.4,SNR=8.0						
WRA	**Warramunga Arr**	**44.51**	**275**	P	P	20 07 37.8	-0.3
	0.7nm,0.4s,baz=115,slow=7.6,SNR=30						
RPN	**Rapa Nui**	**58.49**	**104**	LR	LR	20 29 47.6	
	comp=Z,192nm,21.6s,baz=262,slow=31						
FINES	**FINESS Array B**	**147.90**	**339**	PKPbc	PKPbc	20 19 10.1	-0.7
	2.2nm,0.9s,baz=46,slow=5.5,SNR=4.3						

TRN 09 20:06:54.7, 11°.65N×61°.47W, h23^{km}, MD3.6, 1C, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GRGR	**Grenville**	**0.51**	**340⇑**	*e*P	Pn	20 07 06.7	+0.1
GRGR				*e*S	Sn	20 07 15.6	+0.9
GRHS	**Sauteurs**	**0.59**	**344**	*e*P	Pn	20 07 07.2	-0.6
GRHS				*e*S	Sn	20 07 17.3	+0.6
GRSS	**Sisters**	**0.66**	**348**	*e*P	Pn	20 07 08.5	-0.1
GRSS				*e*S	Sn	20 07 18.2	-0.2
TPR	**Prospect**	**0.82**	**124**	*e*S	Sn	20 07 24.1	+1.7
BOT	**Bacolet**	**0.88**	**123**	*e*P	Pn	20 07 12.5	+0.8
TOSP	**Speyside**	**0.98**	**111**	*e*P	Pn	20 07 14.8	+1.7
TOSP				*e*S	Sn	20 07 28.5	+2.1
TRN	**Trinidad (W)**	**1.00**	**176**	*e*P	Pn	20 07 15.3	+2.0
TRN				*e*S	Sn	20 07 29.1	+2.4
TBH	**Brigand Hill**	**1.23**	**161**	*e*P	Pb	20 07 17.4	+0.2
TBH				*e*S	Sb	20 07 33.8	+1.2
TPP	**Pointe-a-Pierr**	**1.32**	**179**	*e*P	Pb	20 07 18.4	-0.4
TPP				*e*S	Sb	20 07 36.8	+1.4
FCV	**Fort Charlotte**	**1.51**	**8**	*e*P	Pb	20 07 21.5	-0.7
FCV				*e*S	Sb	20 07 40.7	-0.2
SVB	**Belmont**	**1.63**	**8**	*e*P	Pb	20 07 23.6	-0.5
SVB				*e*S	Sb	20 07 44.1	0.0
SVV	**Soufriere Volc**	**1.68**	**9**	*e*P	Pb	20 07 24.3	-0.5
SVV				*e*S	Sb	20 07 45.6	0.0
SSV	**Crater Summit**	**1.69**	**9**	*e*P	Pn	20 07 23.9	+1.0
SSV				*e*S	Sb	20 07 46.1	+0.1
MCLT	**Moule a Chique**	**2.11**	**14**	*e*P	Pn	20 07 29.7	+1.0
MCLT				*e*S	Sn	20 07 55.1	+0.8
SLB	**Belfond**	**2.21**	**11**	*e*P	Pn	20 07 31.8	+1.8
SLB				*e*S	Sn	20 07 57.6	+1.0
BIM	**Bigot**	**2.88**	**8**	*e*P	Pn	20 07 40.7	+1.5
BIM				*e*S	Sn	20 08 12.2	-1.0
TRMF	**Trois Ilets**	**2.90**	**8**	*e*P	Pn	20 07 41.2	+1.7
MVM	**Montagne Vaucl**	**2.94**	**11**	*e*P	Pn	20 07 42.2	+2.1
LPMF	**Morne Lapointe**	**2.95**	**10**	*e*P	Pn	20 07 42.1	+1.9
FDF	**Fort de France**	**3.08**	**6**	*e*P	Pn	20 07 43.2	+1.2
FDF				*e*S	Sn	20 08 13.9	-4.3
PML	**Morne Lenard**	**3.12**	**5**	*e*P	Pn	20 07 44.5	+1.9
GBMF	**Grand Be**	**3.14**	**5**	*e*P	Pn	20 07 44.9	+2.0
CXM	**Morne La Croix**	**3.16**	**5**	*e*P	Pn	20 07 45.2	+2.1
CXM				*e*S	Sn	20 08 19.3	-0.9
PCM	**Pelee Case Pet**	**3.16**	**5**	*e*P	Pn	20 07 44.3	+1.2
BAMF	**Morne Balai**	**3.16**	**6**	*e*P	Pn	20 07 45.0	+1.8

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*BJI **09** 20:13:02.6, 25°.42N×96°.51E, h10^{km}, mb4.9/52, mB5.0/37, ML4.9/9, Ms5.3/63, Ms7 5.0/54*

*IDC **09** 20:13:02.3±0.4, 25°.32N×96°.57E, h0^{km}, mb4.6/45, mb1 4.7/47, mb1mx4.6/68, mbtmp4.6/47, ML4.6/2, MS4.5/55, Ms1 4.5/55, ms1mx4.4/71, Error ellipse: s-maj=10.8km s-min=8.0km az=53.0*

*ISCJB **09** 20:13:04.9±0.1, 25°.32N±0°.02×96°.45E±0°.02, h25^{km}, mb4.9/199, MS4.6/75, Error ellipse: s-maj=2.5km s-min=1.9km az=17.7*

*NDI **09** 20:13:05.3±3.0, 25°.30N×96°.64E, h30^{km}, ML5.1, mb5.1(NEIC)*

*MOS **09** 20:13:05.6±1.1, 25°.29N×96°.49E, h33^{km}, mb5.2/72, MS4.6/24, Error ellipse: s-maj=6.3km s-min=3.7km az=119.8*

*NEIC **09** 20:13:07.4±1.7, 25°.35N×96°.53E, h31^{km}±12^{km}, mb5.1/94, Error ellipse: s-maj=5.1km s-min=4.0km az=209.0*

*GCMT **09** 20:13:07.4±0.1, 25°.29N×96°.66E, h12^{km}, MW5.1/115, Moment Tensor Solution. s55,c70; s115,c197; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.21±.12; $M_{\theta\theta}$6.73±.09; $M_{\phi\phi}$-5.52±.10; $M_{r\theta}$-0.23±.28; $M_{\theta\phi}$1.27±.10; $M_{\phi r}$0.81±.30; Best double couple: $M_0$6.33100×10^{16} NP1:ϕ_s129.00000°, δ84.00000°, λ-8.00000°. NP2: ϕ_s220.00000°, δ82.00000°, λ-173.00000°. Principal axes: T 6.8630, Plg1.0000°, Azm174.0000°; N -1.0640, Plg80.0000°, Azm270.0000°; P -5.7990, Plg10.0000°, Azm84.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 09 20:13:07.0±0.3, **25°.33N**±0°.03×**96°.48E**±0°.03, **h25**^{km}, **n585**, σ**1^{s}.62**/621, **mb5.0**/201, **MS4.6**/76, **49C-33D, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOKO	**MOKOCHONG**	**2.03**	**299**	*e*P	**Pb**	**20 13 41.7**	**-1.6**
MOKO				*e*S	**Sn**	**20 14 05.2**	**+0.9**
MOKO				IAML		20 14 13.0	
	comp=N,44µm,0.7s						
MOKO				IAML		20 14 13.0	
	comp=E,31µm,0.9s						
LKP	**Lekhapani**	**2.07**	**344**	*e*P	**Pn**	**20 13 40.8**	**+0.6**
LKP				*e*x	x	20 14 07.2	
LKP				IAML		20 14 17.6	
	comp=N,20µm,1.1s						
LKP				IAML		20 14 21.2	
	comp=E,17µm,1.4s						
KOHI	**KOHIMA**	**2.18**	**281**	*e*P	**Pb**	**20 13 44.1**	**-1.7**
KOHI				*e*S	**Sn**	**20 14 08.7**	**+0.5**
JORH	**JORHAT**	**2.45**	**305**	*e*P	**Pn**	**20 13 45.6**	**+0.2**
JORH				*e*S	**Sn**	**20 14 14.1**	**-0.5**
JORH				IAML		20 14 53.2	
	comp=E,17µm,1.3s						
JORH				IAML		20 14 55.9	
	comp=N,25µm,1.7s						
ITAN	**ITANAGAR**	**3.07**	**307**	*e*P	**Pn**	**20 13 54.5**	**+0.6**
ITAN				*e*S	**Sn**	**20 14 26.1**	**-3.7**
ITAN				IAML		20 15 01.7	
	comp=E,9µm,1.4s						
ITAN				IAML		20 15 03.9	
	comp=N,9µm,0.8s						
ZIRO	**ZIRO**	**3.22**	**313**	*e*P	**Pn**	**20 13 55.5**	**-0.6**
ZIRO				*e*S	**Sn**	**20 14 34.1**	**+0.4**
ZIRO				IAML		20 14 48.1	
	comp=N,23µm,0.7s						
ZIRO				IAML		20 14 50.6	
	comp=E,16µm,0.8s						
SILR	**SILCHAR**	**3.38**	**261**	*e*P	**Pn**	**20 13 59.1**	**+0.8**
SILR				IAML		20 15 25.5	
	comp=E,6µm,1.5s						
SILR				IAML		20 15 29.2	
	comp=N,5µm,0.0s						
TEZP	**TEZPUR**	**3.56**	**292**	*e*P	**Pn**	**20 13 59.9**	**-0.7**
TEZP				*e*x	x	20 14 38.3	
SHL	**Shillong**	**4.17**	**274**	*e*Pn	**Pn**	**20 14 09.3**	**+0.1**
SHL	**Shillong**	**4.17**	**274**	*e*P	**Pn**	**20 14 09.2**	**+0.1**
SHL				*e*x	x	20 15 00.9	
SHL	**Shillong**	**4.17**	**274**	*e*P	**Pn**	**20 14 09.3**	**+0.1**
SAIH	**SAIHA**	**4.27**	**229**	*e*P	**Pn**	**20 14 11.6**	**+1.0**
SAIH				*e*x	x	20 15 00.8	
GUWA	**GUWAHATI**	**4.41**	**282**	*e*P	**Pn**	**20 14 11.3**	**-1.0**
GUWA				*e*S	**Sn**	**20 15 00.2**	**-2.7**
AGT	**Agartala**	**4.98**	**254**	*e*P	**Pn**	**20 14 20.9**	**+0.8**
AGT				*e*x	x	20 15 19.3	
BELO	**BELONIA**	**5.04**	**247**	*e*P	**Pn**	**20 14 18.0**	**-3.1**
BELO				*e*S	**Sn**	**20 15 15.4**	**-3.1**
BRDH	**Bariadhala**	**5.16**	**240**	Pn	**Pn**	**20 14 22.4**	**-0.2**
	comp=N,41nm,0.3s,baz=76,slow=16,SNR=2.8						
BRDH				Sn	**Sn**	**20 15 26.6**	**+5.2**
	comp=N,23nm,0.3s,baz=72,slow=20,SNR=4.5						
TURI	**Tura**	**5.56**	**274**	*e*P	**Pn**	**20 14 29.1**	**+0.8**
TURI				*e*S	**Sn**	**20 15 31.8**	**+0.4**
TURI				IAML		20 15 37.2	
	comp=E,774nm,0.3s						
TURI				IAML		20 16 14.9	
	comp=N,32µm,1.4s						
KMI	**Kunming**	**5.67**	**91**	⇑Pn	**Pn**	**20 14 30.8**	**+0.9**
KMI				Sn	**Sn**	**20 15 38.0**	**+3.7**
KMI				Sg	Sb	20 16 04.1	+11
KMI				smax	smax		
	comp=N,1µm,1.6s						
KMI				smax	smax		
	comp=N,850nm,1.1s						
KMI				LR	LR		
	comp=N,16µm,7.7s						
KMI				LR	LR		
	comp=N,20µm,7.4s						
KMI				LR	LR		
	comp=N,20µm,10.3s						
CMAI	**Chiengmai2**	**5.87**	**156**	P	**Pn**	**20 14 31.6**	**-1.1**
	comp=N,55nm,0.7s,comp=N,0.9nm						
LSA	**Lhasa**	**6.43**	**314**	*e*P	**Pn**	**20 14 41.5**	**+1.0**
	comp=N,104nm,0.7s						
LSA	**Lhasa**	**6.43**	**314**	P	**Pn**	**20 14 42.9**	**+2.3**
LSA	**Lhasa**	**6.43**	**314**	*e*P	**Pn**	**20 14 41.6**	**+1.0**
LSA				pmax	pmax		
	comp=Z,103nm,0.7s						
PAYA	**Payao**	**6.72**	**152**	P	**Pn**	**20 14 43.7**	**-0.5**
	comp=Z,218nm,1.3s,comp=Z,2µmcomp=Z,0.9nm						
CHTO	**Chiang Mai**	**6.88**	**160**	*e*Pn	**Pn**	**20 14 45.6**	**-0.8**
CHTO	**Chiang Mai**	**6.88**	**160**	P	**Pn**	**20 14 45.6**	**-0.8**
	SNR=14						
CHTO	**Chiang Mai**	**6.88**	**160**	*e*P	**Pn**	**20 14 45.6**	**-0.8**
CHTO	**Chiang Mai**	**6.88**	**160**	P	**Pn**	**20 14 45.5**	**-0.8**
	comp=Z,1µm,1.4s,comp=Z,15µmcomp=Z,13nm						
CMMT	**Chiang Mai**	**6.88**	**160**	P	**Pn**	**20 14 45.5**	**-0.9**
	comp=Z,316nm,1.4s,comp=Z,3µmcomp=Z,2.9nm						
CM31	**Chiang Mai Arr**	**7.21**	**161**	*e*Pn	**Pn**	**20 14 50.8**	**-0.1**
CMAR	**Chiang Mai Arr**	**7.21**	**161**	Pn	**Pn**	**20 14 50.5**	**-0.4**
	comp=Z,2.0nm,0.3s,baz=336,slow=14,SNR=51						
CMAR				Pg	Pb	20 15 17.1	+5.5
	comp=Z,4.3nm,0.3s,baz=338,slow=16,SNR=28						
CMAR				Lg	Lg	20 16 46.5	
	baz=335,slow=29,SNR=2.9						
CMAR				LR	LR	20 18 15.7	
	comp=Z,2µm,20.1s,baz=339,slow=44						
CM01	**Chiang Mai Arr**	**7.25**	**161**	*e*Pn	**Pn**	**20 14 50.6**	**-0.9**
GTK	**Tadong**	**7.34**	**287**	*e*P	**Pn**	**20 14 52.1**	**-0.7**
LAMP	**Lampang**	**7.38**	**156**	P	**Pn**	**20 14 54.5**	**+1.3**
	comp=Z,38nm,0.8s,comp=Z,447nmcomp=Z,0.4nm						
TAPN	**Taplejung**	**8.12**	**286**	*e*Pn	**Pn**	**20 15 03.4**	**-0.3**
TAPN				*e*Sn	**Sn**	**20 16 34.3**	**-0.6**
	comp=Z,2µm,0.9s						
ODAN	**Odare**	**8.32**	**283**	*e*Pn	**Pn**	**20 15 06.5**	**+0.2**
ODAN				*e*Sn	**Sn**	**20 16 39.6**	**+0.1**
	comp=Z,1µm,0.7s						
CD2	**Chengdu**	**8.49**	**47**	P	**Pn**	**20 15 10.1**	**+1.6**
CD2				S	**Sn**	**20 16 47.3**	**+3.8**
CD2				LR	LR		
	comp=Z,51µm,8.6s						
CD2				LR	LR		
	comp=Z,18µm,7.7s						
RAMN	**Ramite**	**9.03**	**282**	*e*Pn	**Pn**	**20 15 15.8**	**-0.2**
RAMN				*e*Sn	**Sn**	**20 16 56.7**	**-0.3**
	comp=Z,3µm,1.4s						
UMPA	**Umpang Tak**	**9.35**	**166**	P	**Pn**	**20 15 23.6**	**+3.3**
	comp=Z,13nm,0.9s,comp=Z,303nm						
JIRN	**Jiri**	**9.51**	**286**	*e*Pn	**Pn**	**20 15 22.3**	**-0.4**
NONG	**Nongkai**	**9.52**	**138**	P	**Pn**	**20 15 25.9**	**+3.3**
	comp=Z,0.6nm,1.1s,comp=Z,171nm						
PBKT	**Sadao Pong**	**9.67**	**153**	P	**Pn**	**20 15 25.5**	**+0.8**
	comp=Z,36nm,0.8s,comp=Z,1µm						
BOK	**Bokaro**	**9.77**	**263**	*e*P	**Pn**	**20 15 24.6**	**-1.3**
GUN	**Gumba**	**9.83**	**287**	*e*Pn	**Pn**	**20 15 26.3**	**-0.8**
GUN				*e*Sn	**Sn**	**20 17 14.9**	**-2.0**
	comp=Z,1µm,0.8s						
UTHA	**Uthaitani**	**10.11**	**164**	P	**Pn**	**20 15 30.9**	**+0.2**
	comp=Z,19nm,0.8s,comp=Z,167nm						
PKIN	**Phulchoki**	**10.18**	**285**	*e*Pn	**Pn**	**20 15 31.4**	**-0.5**
PKIN				*e*Sn	**Sn**	**20 17 23.3**	**-2.2**
	comp=Z,702nm,0.7s						
KKN	**Kakani**	**10.32**	**286**	*e*Pn	**Pn**	**20 15 32.7**	**-1.1**
KKN				*e*Sn	**Sn**	**20 17 27.0**	**-1.8**
	comp=Z,1µm,1.1s						
DMN	**Daman**	**10.44**	**285**	*e*Pn	**Pn**	**20 15 34.2**	**-1.2**
DMN				*e*Sn	**Sn**	**20 17 30.6**	**-1.2**
	comp=Z,2µm,1.3s						
SKNT	**Sakolnakorn**	**10.86**	**139**	P	**Pn**	**20 15 43.0**	**+2.0**
	comp=Z,18nm,1.5s						
GKN	**Gorkha**	**10.92**	**287**	*e*Pn	**Pn**	**20 15 40.2**	**-1.7**
GKN				*e*Sn	**Sn**	**20 17 41.5**	**-2.0**
	comp=Z,1µm,1.1s						
SRDT	**SRDT**	**11.21**	**167**	P	**Pn**	**20 15 48.6**	**+2.9**
	comp=Z,30nm,1.2s,comp=Z,2µm						
DANN	**Dangsing**	**11.75**	**288**	*e*Pn	**Pn**	**20 15 51.4**	**-2.0**
DANN				*e*Sn	**Sn**	**20 18 00.9**	**-3.0**
	comp=Z,986nm,1.1s						
KOLN	**Koldanda**	**11.79**	**285**	*e*Pn	**Pn**	**20 15 52.0**	**-1.8**
PYUN	**Piuthan**	**12.37**	**286**	*e*Pn	**Pn**	**20 15 59.8**	**-2.0**
PYUN				*e*Sn	**Sn**	**20 18 15.1**	**-3.9**
	comp=Z,798nm,1.1s						
LZH	**Lanzhou**	**12.44**	**29**	*e*P	**Pn**	**20 16 00.7**	**-2.0**
LZH				pP	P	20 16 06.8	-7.6
LZH				sP		20 16 11.3	
LZH				S	**Sn**	**20 18 24.4**	**+3.8**
LZH				sS		20 18 33.1	
LZH				pmax	pmax		
	comp=Z,24nm,1.2s						
LZH				pmax	pmax		
	comp=Z,98nm,4.7s						
LZH				LR	LR		
	comp=Z,11µm,12.8s						
LZH				LR	LR		
	comp=Z,12µm,12.5s						
LZH				LR	LR		
	comp=Z,13µm,13.1s						
ENH	**Enshi**	**12.51**	**64**	*e*P	**Pn**	**20 16 00.8**	**-2.8**
	comp=Z,90nm,1.1s						
CHLP	**Challavanipeta**	**13.38**	**242**	*e*P	**Pn**	**20 16 15.0**	**-0.4**
CHLP				IAmb	IAmb	20 16 19.2	
	comp=Z,28nm,1.0s						
XAN	**Xi’an**	**13.85**	**48**	P	**Pn**	**20 16 21.0**	**-0.8**
XAN				pP	P	20 16 24.7	-5.2
XAN				sP		20 16 27.8	
XAN				S	**Sn**	**20 18 53.6**	**-1.2**
XAN				sS	S	20 18 58.6	-18
XAN				SS	**SnSn**	**20 19 09.0**	**+1.6**
XAN				pmax	pmax		
	comp=Z,24nm,0.8s						
XAN				LR	LR		
	comp=Z,9µm,12.9s						
XAN				LR	LR		
	comp=Z,4µm,16.9s						
QIZ	**Qiongzhong**	**13.87**	**114**	P	**Pn**	**20 16 17.7**	**-4.4**
QIZ				LR	LR		
	comp=Z,8µm,12.6s						
QIZ				LR	LR		
	comp=Z,5µm,13.1s						
QIZ				LR	LR		
	comp=Z,2µm,10.4s						
PBA	**Port Blair**	**14.06**	**195**	*e*P	Pn	20 16 23.2	-1.4
GTA	**Gaotai**	**14.31**	**10**	*e*P	**Pn**	**20 16 23.5**	**-4.7**
GTA				pP	P	20 16 29.0	-6.1
GTA				sP		20 16 32.7	
GTA				S	**Sn**	**20 19 02.6**	**-3.6**
GTA				sS	S	20 19 11.7	-14
GTA				SS	**SnSn**	**20 19 18.1**	**-1.0**
GTA				pmax	pmax		
	comp=Z,180nm,5.8s						
GTA				LR	LR		
	comp=Z,8µm,10.6s						
GTA				LR	LR		
	comp=Z,12µm,14.3s						
GTA				LR	LR		
	comp=Z,8µm,11.0s						
VIS	**Vishakhapatnam**	**14.39**	**241**	*e*P	**Pn**	**20 16 27.9**	**-1.3**
GZH	**Guangzhou**	**15.54**	**95**	P	**P**	**20 16 47.6**	**-1.1**
GZH				LR	LR		
	comp=Z,2µm,6.1s						
GZH				LR	LR		
	comp=Z,5µm,5.9s						
PVM	**Polavaram**	**16.00**	**243**	*e*P	**Pn**	**20 16 51.8**	**+1.2**
PVM				IAmb	IAmb	20 16 59.0	
	comp=Z,83nm,0.9s						
NGP	**Nagpur**	**16.55**	**259⇓**	*e*P	**Pn**	**20 16 57.1**	**-0.5**
NGP				*e*x	x	20 19 59.4	
WHN	**Wuhan**	**16.61**	**68**	P	**Pn**	**20 16 56.3**	**-2.0**
WHN				pP	**P**	**20 17 00.4**	**-0.1**
WHN				LR	LR		
	comp=Z,8µm,9.4s						
WHN				LR	LR		
	comp=Z,14µm,11.8s						
DDI	**Dehra Dun**	**17.04**	**291**	*e*P	**Pn**	**20 17 03.5**	**-0.2**
RPR	**Rampur**	**17.18**	**251**	*e*P	**P**	**20 17 07.3**	**+0.4**
RPR				IAmb	IAmb	20 17 13.2	
	comp=Z,170nm,1.0s						
BHPL	**Bhopal**	**17.50**	**267**	*e*P	**Pn**	**20 17 07.1**	**-2.3**
SMLA	**Simla**	**17.97**	**293**	*e*x	**Pn**	**20 17 10.9**	**-4.2**
SRSP	**Sriramsagar**	**17.97**	**253**	*e*P	**Pn**	**20 17 14.7**	**-0.5**
SRSP				IAmb	IAmb	20 17 19.4	
	comp=Z,98nm,1.0s						
ADKI	**Addanki**	**18.10**	**242**	*e*P	**P**	**20 17 17.8**	**+0.8**
ADKI				IAmb	IAmb	20 17 20.9	
	comp=Z,38nm,0.9s						
NJS	**Nagarjunasagar**	**18.25**	**245**	*e*P	**P**	**20 17 19.7**	**+0.9**
NJS				IAmb	IAmb	20 17 23.6	
	comp=Z,73nm,1.2s						
TIY	**Taiyuan**	**18.33**	**44**	*e*P	**Pn**	**20 17 21.2**	**+1.6**
TIY				S	**Sn**	**20 20 42.9**	**-0.8**
TIY				SS	**SnSn**	**20 21 02.1**	**+4.5**
TIY				pmax	pmax		
	comp=Z,29nm,0.5s						
TIY				pmax	pmax		
	comp=Z,250nm,4.7s						
TIY				LR	LR		
	comp=Z,4µm,9.1s						
TIY				LR	LR		
	comp=Z,2µm,7.5s						

TIY				LR	LR		
	comp=Z,4µm,12.2s						
HYB	Hyderabad	18.45	248	iP	Pn	20 17 22.5	+1.3
HYB	Hyderabad	18.45	248	eP	P	20 17 20.0	-0.9
HYBB	Hyderabad (bro	18.45	248	eP	Pn	20 17 21.7	+0.6
HYBB				IAmb	IAmb	20 17 25.2	
	comp=Z,107nm,0.8s						
SRLM	Srisailam	18.83	244	eP	Pn	20 17 25.9	+0.1
SRLM				IAmb	IAmb	20 17 28.4	
	comp=Z,100nm,0.9s						
BTO	Baotou	18.96	33	eP	P	20 17 18.2	-8.3
DHRM	DHARAMSHALA	18.97	296	eP	P	20 17 25.7	-1.1
SKHT	Srikalahasti	19.54	237	eP	Pn	20 17 34.8	+0.5
SKHT				IAmb	IAmb	20 17 40.4	
	comp=Z,121nm,1.4s						
MDRS	Chennai	19.57	234	eP	P	20 17 32.7	-0.5
BSI	Banda Aceh	19.76	184	P	Pn	20 17 36.3	-0.6
WMQ	Urumqi	19.79	341	P	P	20 17 36.3	+0.8
WMQ				pP	pP	20 17 42.4	+0.1
WMQ				S	S	20 21 17.9	+0.7
WMQ				PcS	PcS	20 25 32.1	+1.8
WMQ				pmax	pmax		
	comp=Z,150nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,430nm,6.3s						
WMQ				LR	LR		
	comp=Z,6µm,13.7s						
WMQ				LR	LR		
	comp=Z,4µm,11.1s						
WMQ				LR	LR		
	comp=Z,5µm,15.3s						
KLRI	Killari	19.83	253	eP	P	20 17 36.1	0.0
KLRI				IAmb	IAmb	20 17 40.5	
	comp=Z,108nm,0.9s						
NJ2	Nanjing	20.71	66	eP	P	20 17 45.3	-0.3
NJ2				pP	Pn	20 17 48.9	+0.9
NJ2				S	Sn	20 21 38.7	-2.4
NJ2				sS	sS	20 21 45.2	-1.5
NJ2				pmax	pmax		
	comp=Z,29nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,420nm,3.5s						
NJ2				LR	LR		
	comp=Z,4µm,11.9s						
NJ2				LR	LR		
	comp=Z,3µm,9.2s						
URV	Uravakonda	20.77	244	eP	P	20 17 47.4	+1.0
URV				IAmb	IAmb	20 17 49.9	
	comp=Z,80nm,0.9s						
MLSI	Meulaboh, Aceh	20.95	180	P	P	20 17 48.8	+0.6
KCSI	Kotacane, Aceh	21.72	177	P	P	20 17 57.7	+1.2
TSI	Tuntungan	21.80	174	P	P	20 18 01.2	+3.9
	comp=Z,293nm,1.1s						
NIL	Nilore	21.82	298	eP	P	20 17 56.4	-1.1
	comp=Z,217nm,0.9s						
NIL	Nilore	21.82	298	eP	P	20 17 56.4	-1.1
NIL				pmax	pmax		
	comp=Z,217nm,0.9s						
TPTI		21.96	178	P	P	20 17 59.4	+0.4
BJT	Baijiatuau	22.04	44	eP	P	20 18 00.4	+0.6
	comp=Z,52nm,1.0s						
BJT	Baijiatuau	22.04	44	eP	P	20 18 00.4	+0.6
BJT				pmax	pmax		
	comp=Z,52nm,1.0s						
POO	Poona	22.05	257	ex	P	20 18 01.6	+1.6
TPUB	Ta-pu	22.09	90	eP	P	20 17 59.7	-0.8
	comp=Z,38nm,1.2s						
KSH	Kashi	22.28	314	eP	P	20 18 02.6	+0.1
KSH				sP	pP	20 18 09.4	-0.1
KSH				PcP	PcP	20 21 58.7	+0.8
KSH				S	S	20 22 00.5	-6.0
KSH				SS	SnSn	20 22 44.9	+10
KSH				pmax	pmax		
	comp=Z,100nm,1.3s						
KSH				pmax	pmax		
	comp=Z,360nm,4.7s						
SSLB	Suanglung	22.30	89	eP	P	20 18 03.8	+1.0
	comp=Z,40nm,1.1s						
SSE	Sheshan	22.49	70	P	P	20 18 03.8	-0.9
SSE				S	S	20 22 09.7	-0.4
SSE				pmax	pmax		
	comp=Z,29nm,0.7s						
SSE				pmax	pmax		
	comp=Z,110nm,4.1s						
SSE				LR	LR		
	comp=Z,3µm,12.9s						
SSE				LR	LR		
	comp=Z,1µm,13.1s						
PSI	Prapat	22.53	174	P	P	20 18 05.0	-0.2
	comp=Z,16nm,0.9s,baz=0.0,slow=7.0,SNR=11						
PSI				Lg	Lg	20 25 05.4	
	comp=Z,2.1nm,0.5s,baz=360,slow=23,SNR=2.5						
PSI				LR	LR	20 27 29.5	
	comp=Z,1µm,19.8s,baz=283,slow=38						
PSI	Prapat	22.53	174	eP	P	20 18 06.0	+0.8
	comp=Z,42nm,1.1s						
PSI				Lg	Lg	20 25 05.4	
PSI	Prapat	22.53	174	eP	P	20 18 06.0	+0.8
PSI				pmax	pmax		
	comp=Z,42nm,1.1s						
TWG	Pinlang	22.58	91	eP	P	20 18 06.7	+0.9
	comp=Z,332nm,1.3s						
SHLS	Shalkode	22.60	326⇑	iP	P	20 18 04.0	-1.8
	comp=Z,45nm,1.1s						
SHLS				eS	S	20 22 11.5	-0.6
SHLS				LR	LR	20 29 09.1	
	comp=Z,349nm,9.6s						
PRZ	Przheval'sk	22.68	323	eP	P	20 18 07.2	+0.5
	comp=Z,90nm,0.8s						
PRZ	Przheval'sk	22.68	323	eP	P	20 18 07.3	+0.5
PRZ				pmax	pmax		
	comp=Z,90nm,0.8s						
YULB	Yu-li	22.68	90	eP	P	20 18 08.2	+1.4
	comp=Z,44nm,1.2s						
UZB	Uzynbulak	22.81	326⇑	iP	P	20 18 08.3	+0.1
	comp=Z,20nm,1.5s						
UZB				eS	S	20 22 19.3	+3.3
UZB				LR	LR	20 29 36.2	
	comp=Z,180nm,9.7s						
NACB	Ninganchiao	22.83	88	eP	P	20 18 09.3	+1.0
	comp=Z,54nm,1.1s						
SATY	Saty	23.07	325	iP	P	20 18 10.8	-0.1
	comp=Z,24nm,1.1s						
SATY				iS	S	20 22 23.6	+3.2
SATY				LR	LR	20 29 33.4	
	comp=Z,500nm,10.5s						
ZHN	Zhinishke	23.13	325	eP	P	20 18 11.5	0.0
	comp=Z,16nm,2.1s						
ZHN				eS	S	20 22 24.7	+3.3
ZHN				LR	LR	20 29 37.1	
	comp=Z,336nm,11.3s						
KPKS	Kokpek	23.21	326⇑	iP	P	20 18 12.4	+0.2
	comp=Z,22nm,1.3s						
KPKS				iS	S	20 22 25.8	+3.1
KPKS				LR	LR	20 28 53.0	
	comp=Z,507nm,11.7s						
GOA	Goa	23.35	250	eP	P	20 18 11.2	-2.4
PALK	Pallekele	23.45	223	P	P	20 18 14.3	-0.4
	comp=Z,22nm,1.1s,baz=116,slow=15,SNR=2.6						
PALK				LR	LR	20 28 20.6	
	comp=Z,2µm,21.7s,baz=295,slow=39						
ULHL	Ulahol	23.73	320	P	P	20 18 17.8	+0.4
	SNR=17						
SBSI	Sibolga	23.76	174	P	P	20 18 26.7	+9.1
SONM	Songino Array	23.79	17	P	P	20 18 16.5	-1.2
	comp=Z,13nm,0.8s,baz=199,slow=9.7,SNR=48						
SONM				LR	LR	20 28 38.7	
	comp=Z,3µm,21.0s,baz=200,slow=39						
SONA1	Songino Array	23.80	17	eP	P	20 18 16.3	-1.6
MDOK	Medeo	23.87	323	iP	P	20 18 19.1	+0.4
	comp=Z,420nm,1.8s						
MDOK				eS	S	20 22 36.9	+3.5
MDOK				LR	LR	20 28 23.7	
	comp=Z,2µm,15.4s						
GSI	Gunungsitoli	23.91	177	P	P	20 18 17.2	-1.9
GSI	Gunungsitoli	23.91	177	eP	P	20 18 20.8	+1.8
	comp=Z,124nm,1.0s						
ZSN	Zaisan	23.92	340	eP	P	20 18 19.2	+0.3
	comp=Z,6.8nm,1.3s						
ZSN				ePP	PnPn	20 18 47.9	+0.3
ZSN				LR	LR	20 28 56.3	
	comp=Z,81nm,9.5s						
AAA	Alma-Ata	23.97	323	eP	P	20 18 20.2	+0.6
	comp=Z,46nm,1.2s						
AAA				eS	S	20 22 38.7	+3.8
AAA				LR	LR	20 28 47.1	
	comp=Z,1µm,15.0s						
ULN	Ulaanbaatar	23.99	18	eP	P	20 18 18.6	-1.1
	comp=Z,27nm,0.9s						
ULN	Ulaanbaatar	23.99	18	P	P	20 18 18.2	-1.5
	SNR=22						
ULN	Ulaanbaatar	23.99	18c	iP	P	20 18 18.2	-1.5
ULN				pmax	pmax		
	comp=Z,92nm,2.5s						
MK01	Makanchi Array	24.20	336	eP	P	20 18 20.2	-1.3
KZA	Kyzart	24.21	319	P	P	20 18 23.7	+1.6
	SNR=13						
MK31	Makanchi Array	24.22	336	eP	P	20 18 21.3	-0.4
MK31	Makanchi Array	24.22	336	eP	P	20 18 21.3	-0.4
MKAR	Makanchi Array	24.22	336	P	P	20 18 21.1	-0.7
	comp=Z,21nm,0.6s,baz=146,slow=9.5,SNR=219						
MKAR				S	S	20 22 43.6	+4.9
	comp=Z,1.3nm,0.9s,baz=143,slow=12,SNR=3.3						
MKAR				LR	LR	20 29 07.0	
	comp=Z,2µm,19.1s,baz=150,slow=40						
MKAR	Makanchi Array	24.22	336	eP	P	20 18 21.3	-0.4
	comp=Z,283nm,0.8s						
MKAR				S	S	20 22 43.6	+4.9
MAKZ	Makanchi	24.35	335	eP	P	20 18 22.7	-0.2
	comp=Z,128nm,1.6s						
MAKZ	Makanchi	24.35	335	eP	P	20 18 22.7	-0.2
MAKZ				pmax	pmax		
	comp=Z,128nm,1.6s						
TKM2	Tokmak 2	24.52	321	P	P	20 18 25.1	+0.4
	SNR=31						
MNSI	Mandailing Nat	24.58	173	P	P	20 18 25.3	+0.1
KBK	Karagaybulak	24.73	320	P	P	20 18 27.2	+0.6
	SNR=10						
UCH	Uchtor	24.73	318	P	P	20 18 28.1	+1.1
	SNR=12						
KUU	Kurty	24.74	323⇑	iP	P	20 18 26.0	-0.5
	comp=Z,10nm,0.7s						
KUU				ePP	PnPn	20 18 58.4	-0.5
AAK	Ala-Archa	24.99	319	P	P	20 18 29.7	+0.8
	comp=Z,16nm,0.9s,baz=114,slow=10,SNR=15						
AAK				LR	LR	20 30 23.9	
	comp=Z,984nm,18.5s,baz=114,slow=42						
AAK	Ala-Archa	24.99	319	P	P	20 18 30.3	+1.4
	SNR=8.2						
AAK	Ala-Archa	24.99	319	eP	P	20 18 30.3	+1.4
	comp=Z,58nm,1.2s						
FRU	Bishkek	25.04	320	eP	P	20 18 30.0	+0.8
FRU				i		20 18 40.0	
FRU				eS	S	20 22 56.0	+4.1
FRU				pmax	pmax		
	comp=Z,80nm,2.0s						
CHMS	Chumysh	25.06	320	P	P	20 18 30.0	+0.6
	SNR=15						
AML	Almayashu	25.18	317	P	P	20 18 28.4	-2.5
	SNR=7.2						
KNGR	Kungurtug, Tuv	25.24	2	eP	P	20 18 34.1	+3.0
DGZ	Jazzator, Alta	25.32	346	iP	P	20 18 32.4	+0.6
DGZ				pmax	pmax		
	comp=Z,25nm,1.2s						
USP	Ospenovka	25.37	320	P	P	20 18 33.0	+0.8
	SNR=17						
KBL	Kabul	25.42	298	eP	P	20 18 33.3	+0.3
	comp=Z,119nm,0.9s						
KBL	Kabul	25.42	298	eP	P	20 18 33.3	+0.3
KBL				pmax	pmax		
	comp=Z,119nm,0.9s						
EKS2	Erkin-Say	25.43	318	P	P	20 18 33.6	+0.7
	SNR=50						
TPRI	Tanjung Pinang	25.48	161	P	P	20 18 32.6	-0.8
TGY	Tagaytay City	25.54	111	LR	LR	20 29 01.7	
	comp=Z,652nm,19.1s,baz=302,slow=38						
ZAK	Zakamensk	25.55	10	eP	P	20 18 33.7	-0.2
ZAK				pmax	pmax		
	comp=Z,77nm,1.2s						
HVS	Khovu-Aksy	25.85	356d	eP	P	20 18 38.9	+2.4
HVS				pmax	pmax		
	comp=Z,62nm,0.8s						
MOY	Mondy	26.52	6	eP	P	20 18 42.9	+0.3
MOY				pmax	pmax		
	comp=Z,74nm,2.3s						
SISI	Saibi	26.62	174	P	P	20 18 46.8	+3.1
BTLS	Baital	26.73	323	eP	P	20 18 44.5	+0.1
	comp=Z,6.0nm,1.0s						
BTLS				LR	LR	20 30 11.1	
	comp=Z,180nm,11.0s						
TLY	Talaya	26.87	10	P	P	20 18 45.9	+0.2
	comp=Z,3.0nm,0.7s,baz=191,slow=16,SNR=6.0						
TLY				LR	LR	20 30 22.7	
	comp=Z,2µm,19.1s,baz=200,slow=39						
TLY	Talaya	26.87	10c	iP	P	20 18 45.5	-0.2
TLY				eS	S	20 23 26.5	+5.8
TLY				pmax	pmax		
	comp=Z,15nm,1.3s						
TLY				MLR	MLR		
	comp=Z,2µm,20.0s						
IUG	Iuzhnay	27.50	314	eP	P	20 18 51.8	+0.3
	comp=Z,14nm,1.4s						
IRK	Irkutsk	27.52	10	eP	P	20 18 51.4	0.0
IRK				pmax	pmax		
	comp=Z,84nm,1.7s						
KKAR	Karatay Array	27.68	316	eP	P	20 18 55.0	+2.0
KKAR	Karatay Array	27.68	316	eP	P	20 18 55.0	+2.0
CHM	Chimkent	27.86	314	LR	LR	20 30 07.8	
	comp=Z,358nm,17.5s						
SEM	Semipalatinsk	28.00	338	eP	P	20 18 55.6	-0.4
	comp=Z,7.6nm,1.0s						
SEM				LR	LR	20 30 42.7	
	comp=Z,603nm,16.4s						
JOW	Kunigami	28.56	80	LR	LR	20 31 27.2	
	comp=Z,3µm,18.9s,baz=288,slow=39						
TJN	Taejon	28.59	60⇓	eP	P	20 19 01.5	+0.3
KURBB	Kurchatov Arra	28.79	336	P	P	20 19 02.2	-0.5
	comp=Z,7.2nm,0.6s,baz=148,slow=8.8,SNR=58						
KURK	Kurchatov	28.83	336	eP	P	20 19 02.7	-0.4
	comp=Z,25nm,0.8s						
KURK	Kurchatov	28.83	336	P	P	20 19 02.6	-0.5
	SNR=25						
KURK	Kurchatov	28.83	336c	iP	P	20 19 03.1	-0.1
KURK				pmax	pmax		
	comp=Z,20nm,1.0s						
STKI	Sintang	29.00	148	P	P	20 19 07.0	+2.0
KSAR	Wonju Array Be	29.26	58	P	P	20 19 04.3	-2.8
KSAR	Wonju Array Be	29.26	58	P	P	20 19 04.4	-2.8
KS01	Wonju Array Si	29.28	58	eP	P	20 19 05.2	-2.1
KSRS	Korea Array	29.29	58	P	P	20 19 04.3	-3.1
	comp=Z,2.6nm,0.9s,baz=245,slow=8.2,SNR=8.8						
KSRS				LR	LR	20 31 08.2	
	comp=Z,2µm,18.2s,baz=258,slow=37						
KSRS	Korea Array	29.29	58	P	P	20 19 04.3	-3.1
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KSRS				MLR	MLR		
	comp=Z,2µm,18.2s						
ZAA0	Zalesovo Array	29.88	346	eP	P	20 19 12.0	-0.4
	comp=Z,15nm,0.8s						
ZALV	Zalesovo Beam	29.88	346	P	P	20 19 11.9	-0.4
	comp=Z,6.2nm,0.6s,baz=170,slow=8.2,SNR=41						
ZALV				LR	LR	20 32 43.2	
	comp=Z,1µm,18.9s,baz=94,slow=40						
ZALV	Zalesovo Beam	29.88	346	eP	P	20 19 11.7	-0.7
ZALV	Zalesovo Beam	29.88	346	eP	P	20 19 11.7	-0.7
CN2	Changchun	29.91	45	eP	P	20 19 11.9	-0.9
BRZS	Berezniki	30.74	329	eP	P	20 19 20.4	+0.3
	comp=Z,17nm,0.8s						
BRZS				LR	LR	20 32 59.0	
	comp=Z,447nm,12.4s						
KRAR	Krasnoyarsk	30.76	356⇑	eP	P	20 19 21.4	+1.2
JNU	Nakatsue	30.90	67	P	P	20 19 21.9	+0.2
	comp=Z,7.9nm,0.9s,baz=282,slow=5.3,SNR=5.3						
JNU				LR	LR	20 31 18.7	
	comp=Z,1µm,19.2s,baz=295,slow=36						
JNU	Nakatsue	30.90	67	eP	P	20 19 21.0	-0.7
	comp=Z,36nm,1.3s						
NVS	Novosibirsk	31.06	345⇑	iP	P	20 19 22.3	-0.5
NVS				e		20 24 22.0	
NVS				pmax	pmax		
	comp=N,30nm,1.2s						
NVS				pmax	pmax		
	comp=E,28nm,1.2s						
NVS				pmax	pmax		
	comp=Z,46nm,1.2s						
TNG	Tangerang	32.84	161	P	P	20 19 46.0	+7.2
MSHR	Mys Shultsa	33.22	50⇓	eP	P	20 19 42.6	+0.7
LEM	Lembang	33.75	160	LR	LR	20 33 25.9	
	comp=Z,911nm,20.4s,baz=332,slow=36						
BVAR	Borovoye Array	33.90	332	P	P	20 19 47.4	-0.3
	comp=Z,14nm,0.6s,baz=138,slow=10.0,SNR=49						
BVAR				LR	LR	20 34 56.6	
	comp=Z,1µm,19.3s,baz=134,slow=39						
BRVK	Borovoye	33.97	332	eP	P	20 19 48.0	-0.3
	comp=Z,30nm,1.0s						
BRVK	Borovoye	33.97	332	P	P	20 19 47.8	-0.5
	SNR=16						
BRVK	Borovoye	33.97	332⇑	iP	P	20 19 47.7	-0.6
BRVK				pmax	pmax		
	comp=Z,25nm,0.8s						
USRK	Ussuriysk Ar.	34.36	48	P	P	20 19 49.9	-1.9
	comp=Z,15nm,0.8s,baz=252,slow=7.0						
USRK				LR	LR	20 35 37.5	
	comp=Z,565nm,20.4s,baz=248,slow=40						
WSAR	Wadi Sarin	34.49	275	LR	LR	20 37 04.3	
	comp=Z,544nm,18.2s,baz=99,slow=42						
GEYT	Alibeck	34.76	301	P	P	20 19 55.9	+0.5
	comp=Z,12nm,0.6s,baz=97,slow=9.4,SNR=26						
GEYT				LR	LR	20 37 32.3	
	comp=Z,546nm,18.2s,baz=240,slow=42						
GYA0B	ALIBECK ARRAY	34.76	301	eP	P	20 19 56.4	+0.9
	comp=Z,60nm,1.0s						
BOD	Bodaibo	34.78	16	eP	P	20 19 54.8	-0.5
BOD				pmax	pmax		
	comp=Z,18nm,1.6s						
INU	Inuyama	36.16	64	eP	P	20 20 07.0	-0.5
	comp=Z,83nm,1.6s						
TTSI	Tana Toraja	36.17	138	P	P	20 20 09.3	+1.7
SOHO	SOHO	36.21	277	P	P	20 20 10.0	+1.9
KLR	Kul'dur	36.32	40	P	P	20 20 07.1	-1.6
	comp=Z,0.5nm,0.8s,baz=262,slow=9.1,SNR=11						
ZEA	Zeya	36.46	31	eP	P	20 20 09.7	-0.1
ZEA				pmax	pmax		
	comp=Z,15nm,1.0s						
ZEA				MLR	MLR		
	comp=E,1µm,15.0s						
ZEA				MLR	MLR		
	comp=Z,3µm,15.0s						
ZEA				MLR	MLR		
	comp=N,2µm,12.0s						
LUWI	Luwuk	36.53	132	P	P	20 20 11.1	+0.3
LUWI	Luwuk	36.53	132	eP	P	20 20 10.7	-0.1
	comp=N,136nm,1.0s						
ASHO	Ashiyiah	36.55	278	P	P	20 20 11.9	+1.0
SPSI	Sidrap Palu	36.87	139	P	P	20 20 14.1	+0.5
ABKAR	Akbulak array	37.08	320	eP	P	20 20 14.8	-0.2
MJB9	Matsu-Tunnel	37.23	62	eP	P	20 20 15.4	-1.2
	comp=N,23nm,0.8s						
MAT	Matsushiro	37.23	62	P	P	20 20 14.6	-2.0
MAJO	Matsushiro	37.23	62	eP	P	20 20 15.2	-1.4
	comp=N,22nm,0.8s						
MAJO	Matsushiro	37.23	62d	iP	P	20 20 14.6	-2.0
MAJO				pmax	pmax		
	comp=Z,35nm,1.1s						
MJAR	Matsushiro Arr	37.23	62	P	P	20 20 15.2	-1.4
	comp=Z,9.1nm,0.7s,baz=266,slow=9.7,SNR=53						
MJAR				LR	LR	20 37 03.4	
	comp=Z,788nm,20.1s,baz=265,slow=39						
CLNS	Chul'man	37.54	25	eP	P	20 20 18.8	-0.1
CLNS				pmax	pmax		
	comp=Z,16nm,0.9s						
CLNS				pmax	pmax		
	comp=E,11nm,1.1s						
CLNS				pmax	pmax		
	comp=N,10.0nm,0.9s						
CLNS				MLR	MLR		
	comp=Z,1µm,13.0s						
CLNS				MLR	MLR		
	comp=E,2µm,12.0s						
CLNS				MLR	MLR		
	comp=N,733nm,13.0s						
BKSI	Bulukumba	38.16	140	P	P	20 20 26.3	+1.7
JHJ	Hachijo jima 2	38.36	68	LR	LR	20 36 06.6	
	comp=N,631nm,19.7s,baz=287,slow=36						
AKTO	Aktyubinsk	38.72	321	P	P	20 20 28.5	-0.4
	comp=N,17nm,0.9s,baz=121,slow=8.1,SNR=31						
AKTO				LR	LR	20 37 31.4	
	comp=N,929nm,18.4s,baz=120,slow=38						
GRNR	Gornyy	39.71	40	eP	P	20 20 38.1	+0.9
GRNR				pmax	pmax		
	comp=Z,20nm,0.9s						
SVE	Sverdlovsk	40.65	330⇑	eP	P	20 20 45.2	+0.3
SVE				eS	S	20 26 53.3	+0.1
SVE				pmax	pmax		
	comp=Z,58nm,1.4s						
SVE				MLR	MLR		
	comp=Z,836nm,15.0s						
WBSI	Waikabubak, Su	41.31	144	P	P	20 20 51.7	+0.9
ARU	Arti	41.37	329	P	P	20 20 50.5	-0.3
	comp=Z,5.7nm,0.5s,baz=116,slow=5.1,SNR=14						
ARU	Arti	41.37	329	eP	P	20 20 50.1	-0.8
	comp=Z,17nm,0.8s						
ARU	Arti	41.37	329⇑	iP	P	20 20 50.1	-0.8
ARU				PP	PP	20 22 26.4	-0.1
ARU				S	S	20 27 05.7	+1.7
ARU				SS	SS	20 30 00.0	-8.1
ARU				pmax	pmax		
	comp=Z,32nm,1.7s						
ARU				MLR	MLR		
	comp=Z,1µm,19.0s						
ASAJ	Asahikawa	41.66	51	P	P	20 20 52.8	-0.6
	comp=Z,18nm,0.8s,baz=290,slow=9.7,SNR=12						
ASAJ				LR	LR	20 38 37.5	
	comp=Z,436nm,18.4s,baz=266,slow=37						
ASAJ	Asahikawa	41.66	51	eP	P	20 20 53.7	+0.2
	comp=Z,71nm,1.0s						
ERM	Erimo	41.71	55⇓	eP	P	20 20 54.4	+0.6
ERM				pmax	pmax		
	comp=Z,22nm,1.0s						
MMRI	Maumere	42.06	140	eP	P	20 21 00.2	+3.3
	comp=Z,54nm,0.9s						
YSS	Yuzh-Sakhalins	42.39	47	eP	P	20 20 58.5	-0.8
	comp=Z,50nm,0.9s						
YSS	Yuzh-Sakhalins	42.39	47	eP	P	20 20 59.0	-0.3
YSS				e		20 21 07.0	
YSS				MLR	MLR		
	comp=Z,600nm,11.0s						
SIJI	Sorong	42.54	122	P	P	20 20 59.9	-1.1
	comp=Z,8.4nm,0.8s,baz=319,slow=16,SNR=6.1						
YAK	Yakutsk	42.92	22	P	P	20 21 02.8	-0.6
	comp=Z,7.5nm,0.5s,baz=276,slow=1.5,SNR=7.0						
YAK				LR	LR	20 38 21.5	
	comp=Z,755nm,18.9s,baz=270,slow=35						
YAK	Yakutsk	42.92	22	eP	P	20 21 04.7	+1.3
	comp=Z,23nm,1.0s						
YAK	Yakutsk	42.92	22	eP	P	20 21 04.5	+1.1
YAK				pmax	pmax		
	comp=Z,18nm,1.0s						
YAK				pmax	pmax		
	comp=E,11nm,1.4s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.5s						
YAK				MLR	MLR		
	comp=Z,1µm,18.0s						
YAK				MLR	MLR		
	comp=E,647nm,16.0s						
YAK				MLR	MLR		
	comp=N,2µm,24.0s						
AKT	Akhty	43.19	304	eP	P	20 21 05.9	-0.1
AKT				e		20 22 49.1	
AKT				e		20 22 53.6	
AKT				pmax	pmax		
	comp=Z,46nm,1.2s						
TYV	Tymovskoe	43.42	42	eP	P	20 21 10.2	+2.6
TYV				e		20 27 37.9	
TYV				pmax	pmax		
	comp=Z,13nm,0.8s						
TYV				pmax	pmax		
	comp=Z,300nm,6.3s						
TYV				MLR	MLR		
	comp=E,2µm,11.0s						
TYV				MLR	MLR		
	comp=Z,2µm,11.0s						
YUK	Yuzh-Kuril'sk	43.97	52	eP	P	20 21 20.3	+8.2
YUK				pmax	pmax		
	comp=Z,16nm,3.0s						
YUK				pmax	pmax		
	comp=E,8.0nm,2.0s						
YUK				pmax	pmax		
	comp=N,46nm,4.0s						
YUK				pmax	pmax		
	comp=Z,16nm,3.8s						
SOEI	Soe	44.15	139	P	P	20 21 12.4	-1.6
SOEI	Soe	44.15	139	eP	P	20 21 12.0	-2.0
	comp=Z,228nm,1.2s						
BATI	Baumata	44.15	140	P	P	20 21 12.4	-1.4
	comp=Z,17nm,0.7s,baz=328,slow=17,SNR=4.2						
BATI				LR	LR	20 43 10.5	

	comp=Z,721nm,19.3s,baz=303,slow=41						
GROC	Groznyy	44.81	307	*e*P	P	20 21 18.2	-0.6
GROC				*e*		20 22 57.4	
GROC				*e*S	S	20 27 58.5	+3.8
GROC				pmax	pmax		
	comp=Z,87nm,1.3s						
GNI	Garni	45.35	302	P	P	20 21 25.3	+1.9
	comp=Z,37nm,1.1s,baz=165,slow=2.5,SNR=15						
GNI				LR	LR	20 43 18.0	
	comp=Z,380nm,19.7s,baz=66,slow=40						
ZEI	Tsey	46.15	306	*e*P	P	20 21 28.9	-0.8
ZEI				pmax	pmax		
	comp=Z,54nm,1.5s						
RAYN	Ar Rayn	46.23	279	*e*P	P	20 21 29.9	-0.5
	comp=Z,32nm,1.1s						
RAYN	Ar Rayn	46.23	279	*i* P	P	20 21 29.5	-0.9
	SNR=17						
RAYN	Ar Rayn	46.23	279	*e*P	P	20 21 29.9	-0.5
RAYN				pmax	pmax		
	comp=Z,32nm,1.1s						
NCK	Nalchik	46.43	307	⇑*e*P	P	20 21 33.3	+1.6
NCK				pmax	pmax		
	comp=Z,17nm,0.7s						
GUMO	Guam	46.86	95	LR	LR	20 40 23.2	
	comp=Z,220nm,19.9s,baz=274,slow=35						
KBZ	Khabaz	46.96	307	P	P	20 21 37.3	+1.5
	comp=Z,2.7nm,0.6s,baz=93,slow=7.6,SNR=7.2						
KBZ				LR	LR	20 43 52.0	
	comp=Z,463nm,19.0s,baz=90,slow=39						
NEY	Neytrino	47.05	306	⇑*e*P	P	20 21 37.4	+0.7
NEY				pmax	pmax		
	comp=Z,2.0nm,0.6s						
EATA	Eleskirt	47.07	302	*i* P	P	20 21 40.5	+3.4
KIV	Kislovodsk	47.13	307	*e*P	P	20 21 37.6	+0.4
	comp=Z,21nm,0.7s						
KIV	Kislovodsk	47.13	307	P	P	20 21 37.6	+0.4
	SNR=11						
KIV	Kislovodsk	47.13	307	*i* P	P	20 21 36.3	-1.0
	SNR=6.4						
KIV	Kislovodsk	47.13	307	*e*P	P	20 21 38.5	+1.2
KIV				pmax	pmax		
	comp=Z,30nm,1.1s						
KIV				MLR	MLR		
	comp=Z,491nm,16.0s						
EKAR	Karacoban	47.39	301	*i* P	P	20 21 43.0	+3.5
SRTM	Siirt_Merkez	47.51	299	*i* P	P	20 21 40.2	-0.2
HOMI	Horasan	47.52	302	*i* P	P	20 21 43.7	+3.1
ARTV	Artvin	47.53	304	*i* P	P	20 21 41.2	+0.6
DAGI	Agillar	47.53	303	*i* P	P	20 21 40.2	-0.3
DDEM	Demirkent	47.65	303	*i* P	P	20 21 41.9	+0.5
ERZM	Erzurum	47.93	302	*i* P	P	20 21 48.1	+4.3
TNCL	Tunceli-Merkez	49.35	301	*i* P	P	20 21 57.6	+3.0
KELT	Kelkit	49.55	302	*i* P	P	20 21 55.8	-0.3
PRGR	Permogore	49.71	331	*e*P	P	20 21 58.2	+1.5
PRGR				*e*S	S	20 29 04.9	+1.0
PRGR				pmax	pmax		
	comp=Z,29nm,0.8s						
TIXI	Tiksi	49.78	13	LR	LR	20 44 24.3	
	comp=Z,623nm,19.6s,baz=258,slow=38						
TIXI	Tiksi	49.78	13	*e*P	P	20 21 56.9	-0.3
	comp=Z,14nm,1.2s						
TIXI	Tiksi	49.78	13	*de*P	P	20 21 57.3	+0.2
TIXI				pmax	pmax		
	comp=Z,15nm,1.3s						
ELZG	Elazig	49.81	300	*i* P	P	20 22 01.8	+3.7
KEMA	Kemaliye	50.16	301	*i* P	P	20 22 00.2	-0.5
SURC	SANLIURFA_SURC	50.20	298	*i* P	P	20 22 00.7	-0.2
VORD	Divnogorie	50.23	316	*e*P	P	20 22 00.3	-0.5
VORD				pmax	pmax		
	comp=Z,9.0nm,1.1s						
VSR	Storozhevoye	50.34	317	*e*P	P	20 22 00.5	-1.2
VSR				*e*S	S	20 29 10.8	-2.3
VSR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
VSR				smax	smax		
	comp=N,50nm,1.7s						
VSR				MLR	MLR		
	comp=Z,980nm,24.0s						
SUSE	Susehri	50.36	302	*i* P	P	20 22 04.0	+1.8
MA2	Magadan	50.57	32	LR	LR	20 43 25.3	
	comp=Z,412nm,19.7s,baz=250,slow=36						
MA2	Magadan	50.57	32	*e*P	P	20 22 01.8	-1.5
	comp=Z,21nm,0.9s						
MA2	Magadan	50.57	32	*e*P	P	20 22 01.8	-1.5
MA2				pmax	pmax		
	comp=Z,21nm,0.9s						
HEKM	Malatya_Hekimh	50.59	301	*i* P	P	20 22 05.5	+1.4
GENI	Genyem	50.61	117	P	P	20 22 04.5	+0.3
CUZAR	Zara_SIVAS	50.70	302	*i* P	P	20 22 05.0	+0.2
MBWA	Marble Bar	51.44	152	*e*P	P	20 22 08.8	-1.4
	comp=Z,48nm,0.9s						
ERBA	Erbaa	51.45	303	*i* P	P	20 22 09.8	-0.5
FITZ	Fitzroy Crossi	51.66	144	*e*P	P	20 22 11.6	-0.4
	comp=Z,16nm,1.0s						
MOS	Moscow	52.00	322	*e*P	P	20 22 13.3	-0.8
MOS				*e*		20 22 20.8	
MOS				*i*		20 24 09.0	
MOS				*e*S	S	20 29 36.7	+0.8
MOS				pmax	pmax		
	comp=Z,33nm,0.9s						
MOS				MLR	MLR		
	comp=Z,700nm,17.0s						
ASF	Jabal al Asfar	52.12	292	P	P	20 22 15.2	-0.3
	comp=Z,4.6nm,0.7s,baz=72,slow=4.4,SNR=8.9						
ASF				LR	LR	20 48 08.3	
	comp=Z,478nm,18.6s,baz=13,slow=40						
HAVZ	Havza	52.22	303	*i* P	P	20 22 16.3	+0.3
KLMR	Klimovskoe	52.23	329	*e*P	P	20 22 14.9	-0.8
KLMR				*e*		20 24 14.1	
KLMR				pmax	pmax		
	comp=Z,41nm,1.0s						
KLMR	Klimovskoe	52.23	329	*e*P	P	20 22 14.9	-0.8
KLMR				AMP		20 22 19.6	
	comp=Z,41nm,1.0s						
KLMR				*e*PP	PP	20 24 14.2	+0.2
KLMR				LQ	LQ	20 40 49.3	
KLMR				LQ	LQ	20 40 49.3	
SEY	Seymchan	52.37	29	⇑*i*P	P	20 22 17.4	+0.7
ATD	Arta Tunnel	52.38	265	LR	LR	20 44 13.7	
	comp=Z,421nm,19.0s,baz=74,slow=36						
OBN	Obninsk	52.49	321	*c i*P	P	20 22 18.0	+0.3
OBN				*e*		20 23 30.7	
OBN				*e*		20 24 15.6	
OBN				*e*PPP	PPP	20 25 20.2	
OBN				*e*S	S	20 29 43.8	+1.3
OBN				*e*SS	SS	20 33 24.4	+4.0
OBN				pmax	pmax		
	comp=Z,42nm,1.7s						
OBN				MLR	MLR		
	comp=Z,343nm,15.0s						
PETK	Petropavlovsk-	52.97	41	P	P	20 22 21.9	+0.6
	comp=Z,8.5nm,0.9s,baz=224,slow=4.0						
PETK				LR	LR	20 46 09.8	
	comp=Z,459nm,19.2s,baz=255,slow=38						
PETK	Petropavlovsk-	52.97	41	*e*P	P	20 22 22.6	+1.2
PETK	Petropavlovsk-	52.97	41	*e*P	P	20 22 22.6	+1.2
GULE	Gulek	53.22	299	*i* P	P	20 22 23.0	-0.6
MMAI	Mount Meron Ar	53.24	293	P	P	20 22 24.9	+1.2
	comp=Z,4.4nm,0.8s,baz=70,slow=4.7,SNR=6.1						
SIM	Simferopol’	53.30	308	P	P	20 22 23.3	-0.6
SIM				MLR	MLR		
	comp=Z,400nm,17.5s						
CDAG	Cicekdag	53.33	302	*i* P	P	20 22 26.6	+2.3
PET	Petropavlovsk	53.53	42	⇓*e*P	P	20 22 25.9	+0.5
PET				pmax	pmax		
	comp=Z,21nm,1.2s						
AKSY	AKSARAY - Alti	53.88	301	*i* P	P	20 22 27.6	-0.8
BR131	Keskin Array S	53.88	302	*e*P	P	20 22 27.5	-1.0
BRTR	Keskin Array B	53.88	302	P	P	20 22 27.4	-1.1
	comp=Z,3.4nm,0.7s,baz=120,slow=7.9,SNR=21						
BRTR				LR	LR	20 48 04.0	
	comp=Z,264nm,19.9s,baz=30,slow=39						
ANTO	Ankara	54.52	302	⇓*i*P	P	20 22 32.1	-0.9
ANTO	Ankara	54.52	302	*e*P	P	20 22 35.0	+2.0
	comp=Z,29nm,0.9s						
ANTO	Ankara	54.52	302	P	P	20 22 32.8	-0.2
	SNR=14						
ANTO	Ankara	54.52	302	⇓P	P	20 22 32.1	-0.9
ANTO				*e*		20 22 37.5	
BR231	Keskin MP Arra	54.54	302	*e*P	P	20 22 36.4	+3.2
ISP	Isparta	56.51	300	⇑*e*P	P	20 22 48.7	+1.3
ISP				pmax	pmax		
	comp=Z,44nm,2.0s						
AKASG	Malin Array Be	56.57	315	P	P	20 22 45.3	-2.1
	comp=Z,3.3nm,0.5s,baz=78,slow=6.2,SNR=5.9						
AKASG				LR	LR	20 48 49.9	
	comp=Z,437nm,20.0s,baz=85,slow=38						
AKBB	Malin Array Si	56.57	315	*e*P	P	20 22 45.7	-1.8
	comp=Z,13nm,1.0s						
KIEV	Kiev	56.58	315	*e*P	P	20 22 45.6	-1.9
	comp=Z,14nm,1.1s						
KIEV	Kiev	56.58	315	P	P	20 22 45.3	-2.2
KIEV	Kiev	56.58	315	⇓*e*P	P	20 22 47.1	-0.4
KIEV				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SORM	Soroca	57.20	312	⇓*i*P	P	20 22 50.7	-1.2
SORM	Soroca	57.20	312	⇓P	P	20 22 50.7	-1.2
TIRR	Tirgusor	57.38	308	⇑*i*P	P	20 22 52.6	-0.7
TIRR	Tirgusor	57.38	308	*e*P	P	20 22 53.1	-0.2
	comp=Z,16nm,1.1s						
TIRR	Tirgusor	57.38	308	⇑P	P	20 22 52.6	-0.7
MICGM	Minsk	57.44	320	*e*P	P	20 22 53.0	-0.5
MNK	Minsk	57.44	320	*e*P	P	20 22 53.0	-0.5
CFR	Carcaliu	57.52	309	⇓*i*P	P	20 22 53.1	-1.1
CFR	Carcaliu	57.52	309	⇓P	P	20 22 53.1	-1.1
TLB	Topalu	57.64	308	⇓*i*P	P	20 22 53.0	-2.0
TLB	Topalu	57.64	308	⇓P	P	20 22 53.1	-2.0
HARR	Harsova	57.71	308	⇓*i*P	P	20 22 54.2	-1.4
HARR	Harsova	57.71	308	⇓P	P	20 22 54.2	-1.4
ICOR	Ion Corvin	57.85	308	⇑*i*P	P	20 22 55.7	-0.9
NACGM	Naroch	58.08	320	*e*	P	20 22 56.0	-2.0
WRA	Warramunga Arr	58.14	137	P	P	20 22 57.5	-1.4
	comp=Z,17nm,0.7s,baz=324,slow=7.5,SNR=124						
WRAB	Tennant Creek	58.14	137	*e*P	P	20 22 58.0	-0.8
	comp=Z,58nm,1.1s						
WRAB	Tennant Creek	58.14	137	*de*P	P	20 22 58.4	-0.4
WRAB				pmax	pmax		
	comp=Z,23nm,0.8s						
WB2	Warramunga Arr	58.14	137	*e*P	P	20 22 58.2	-0.7
	comp=Z,74nm,1.3s						
VSU	Vasula	58.22	325	⇓*i*P	P	20 22 57.4	-1.5
VSU				pmax	pmax		
	comp=Z,51nm,1.3s						
PRD	Provadia	58.23	307	P	P	20 22 59.0	-0.3
VRI	Vrincioaia	58.45	310	⇑*i*P	P	20 23 00.2	-0.6
VRI	Vrincioaia	58.45	310	⇑P	P	20 23 00.2	-0.6
TESR	Tescani	58.45	310	⇓*i*P	P	20 22 59.4	-1.4
PLOR	Plostina	58.51	310	⇓*i*P	P	20 23 00.7	-0.5
PLOR	Plostina	58.51	310	⇓P	P	20 23 00.7	-0.5
ISR	Istrita	58.65	309	⇑*i*P	P	20 23 02.2	-0.1
ISR	Istrita	58.65	309	⇑P	P	20 23 02.2	-0.1
FIA1	FINESS Array S	58.73	328	*e*P	P	20 23 01.0	-1.4
FINES	FINESS Array B	58.73	328	P	P	20 23 00.9	-1.5
	comp=Z,4.2nm,0.7s,baz=104,slow=8.0,SNR=19						
FINES				LR	LR	20 50 46.6	
	comp=Z,476nm,18.2s,baz=98,slow=38						
BIZ	Bicaz	58.79	311	⇑*i*P	P	20 23 01.9	-1.3
MLR	Muntele Rosu	59.03	309	P	P	20 23 04.5	-0.5
	comp=Z,2.6nm,0.6s,baz=48,slow=5.9,SNR=21						
MLR				LR	LR	20 51 09.7	
	comp=Z,200nm,19.9s,baz=60,slow=39						
MLR	Muntele Rosu	59.03	309	⇓*i*P	P	20 23 05.0	0.0
MLR	Muntele Rosu	59.03	309	*e*P	P	20 23 04.6	-0.4
	comp=Z,25nm,0.9s						
MLR	Muntele Rosu	59.03	309	⇓P	P	20 23 05.0	0.0
SZH	Strazhica	59.29	307	P	P	20 23 06.0	-0.7
BURAR	Bucovina Array	59.34	312	⇑*i*P	P	20 23 06.1	-0.9
BURAR	Bucovina Array	59.34	312	⇑P	P	20 23 06.1	-0.9
BUR04	Bucovina Ar. S	59.34	312	*e*P	P	20 23 05.8	-1.3
BUR08	Bucovina Ar. S	59.35	312	*e*P	P	20 23 05.8	-1.3
ALN	Alexandroupoli	59.52	304	*e*P	P	20 23 09.5	+1.2
	comp=Z,12nm,1.0s						
ALN	Alexandroupoli	59.52	304	P	P	20 23 07.6	-0.7
ALN	Alexandroupoli	59.52	304	*e*P	P	20 23 09.5	+1.2
ALN				pmax	pmax		
	comp=Z,12nm,1.0s						
KARP	Karpathos	59.54	298	*e*P	P	20 23 09.8	+1.2
	comp=Z,85nm,0.8s						
VOIR		59.66	309	⇓*i*P	P	20 23 08.0	-1.3
VOIR		59.66	309	⇓P	P	20 23 08.0	-1.3
ARCES	ARCESS Array B	59.86	337	P	P	20 23 09.5	-0.7
	comp=Z,5.4nm,0.6s,baz=78,slow=7.2,SNR=14						
ARCES				LR	LR	20 51 59.5	
	comp=Z,472nm,19.4s,baz=95,slow=39						
ARCES	ARCESS Array B	59.86	337	*e*P	P	20 23 12.6	+2.4
ARE0	ARCESS Array S	59.86	337	*e*P	P	20 23 10.3	+0.1
KDZ	Kurdzhali	59.88	305	P	P	20 23 11.0	+0.2
LVV	L’vov	59.94	314	*e*P	P	20 23 09.8	-1.2
ARCR	ARCALIA	59.97	311	⇑*i*P	P	20 23 11.3	0.0
SUW	Suwalki	60.20	319	*e*P	P	20 23 10.8	-1.9
SUW	Suwalki	60.20	319	*e*P	P	20 23 13.7	+0.9
	comp=Z,73nm,1.1s						
SUW	Suwalki	60.20	319	*e*P	P	20 23 10.8	-1.9
BMR	Baia Mare	60.49	312	⇓*i*P	P	20 23 14.8	0.0
BMR	Baia Mare	60.49	312	⇓P	P	20 23 14.8	0.0
CJR	Cluj-Napoca	60.53	311	⇑*i*P	P	20 23 15.6	+0.4
CJR	Cluj-Napoca	60.53	311	⇑P	P	20 23 15.6	+0.4
KTK1	Kautokeino	60.60	337	*e*P	P	20 23 14.8	-0.4
HAMF	Hammerfest	60.63	339	*e*P	P	20 23 15.8	+0.4
PGB	Panagyurishte	60.67	306	P	P	20 23 17.0	+0.8
AS31	Alice Springs	60.72	140	*e*P	P	20 23 16.0	-0.7
ASAR	Alice Springs	60.72	140	P	P	20 23 15.9	-0.7
	comp=Z,7.3nm,0.5s,baz=323,slow=6.6,SNR=99						
ASAR				LR	LR	20 51 30.7	
	comp=Z,229nm,21.6s,baz=322,slow=38						
ASAR	Alice Springs	60.72	140	P	P	20 23 16.0	-0.7
ASAR				pmax	pmax		
	comp=Z,7.0nm,0.5s						
ASAR				MLR	MLR		
	comp=Z,229nm,21.6s						
AS01	Alice Springs	60.74	140	*e*P	P	20 23 16.2	-0.6
KWP	Kalwaria Pacla	60.81	314	*e*P	P	20 23 15.8	-1.2
KWP	Kalwaria Pacla	60.81	314	*e*P	P	20 23 15.9	-1.2
	comp=Z,217nm,0.7s						
KWP	Kalwaria Pacla	60.81	314	*e*P	P	20 23 15.8	-1.2
TRPA	Tarpa	61.08	313	⇑*i*P	P	20 23 18.0	-0.8
DRGR		61.12	311	⇑*i*P	P	20 23 18.3	-1.0
DRGR		61.12	311	⇑P	P	20 23 18.3	-1.0
UZH	Uzhgorod	61.19	313	*e*P	P	20 23 17.1	-2.4
UZH				*e*		20 23 25.3	
UZH				*i*		20 23 35.5	
NWAO	Narrogin (SRO)	61.22	160	P	P	20 23 18.9	-1.0
	comp=Z,5.9nm,0.9s,baz=211,slow=9.1,SNR=4.2						
NWAO				LR	LR	20 49 10.8	
	comp=Z,668nm,21.8s,baz=199,slow=35						
VTS	Vitosha	61.36	306	⇑*i*P	P	20 23 20.4	-0.7
VTS	Vitosha	61.36	306	*e*P	P	20 23 19.4	-1.6
	comp=Z,28nm,0.9s						
VTS	Vitosha	61.36	306	P	P	20 23 20.0	-1.1
VTS	Vitosha	61.36	306	P	P	20 23 20.7	-0.4
VTS	Vitosha	61.36	306	⇑P	P	20 23 20.4	-0.7
IDI	Anoyia	61.41	298	P	P	20 23 20.1	-1.3
	comp=Z,6.3nm,0.6s,baz=18,slow=6.4,SNR=5.3						
IDI				LR	LR	20 52 53.0	
	comp=Z,184nm,20.3s,baz=100,slow=39						
AOS	Alonnisos	61.44	302	P	P	20 23 20.7	-0.8
AOS	Alonnisos	61.44	302	P	P	20 23 20.7	-0.8
CRVS	Cervenica-Dubn	61.70	314	*e*P	P	20 23 23.8	+0.7
CRVS				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CRVS	Cervenica-Dubn	61.70	314	*e*P	P	20 23 23.8	+0.7
KNT	Kendrikon	61.83	305	P	P	20 23 21.6	-2.5
KNT	Kendrikon	61.83	305	P	P	20 23 21.6	-2.5
KNT	Kendrikon	61.83	305	P	P	20 23 21.6	-2.5
KLNR	Kaliningrad	61.90	320	⇑*e*P	P	20 23 27.5	+3.3
KLNR				pmax	pmax		
	comp=Z,60nm,1.1s						
BZS	Buzias	62.03	310	⇓*i*P	P	20 23 24.3	-1.0
BZS	Buzias	62.03	310	⇓P	P	20 23 24.3	-1.0
MDVR	Moldovita	62.09	309	⇓*i*P	P	20 23 25.1	-0.7
IMMV	Iera Moni Meta	62.10	298	P	P	20 23 20.7	-5.3
TRO	Tromso	62.17	337	*e*P	P	20 23 25.2	-0.6
GRG	Griva	62.24	305	P	P	20 23 24.6	-2.2
GRG	Griva	62.24	305	P	P	20 23 24.6	-2.2
GRG	Griva	62.24	305	P	P	20 23 24.6	-2.2
LIT	Litokhoron	62.33	304	*e*P	P	20 23 28.2	+0.8
	comp=Z,99nm,1.9s						
LIT	Litokhoron	62.33	304	*e*P	P	20 23 28.2	+0.8
LIT				pmax	pmax		
	comp=Z,99nm,1.9s						
NIE	Niedzica	62.39	314	*e*P	P	20 23 27.3	-0.4
NIE	Niedzica	62.39	314	*e*P	P	20 23 27.3	-0.4
OJC	Ojcow	62.61	315	*e*P	P	20 23 28.5	-0.6
OJC	Ojcow	62.61	315	*e*P	P	20 23 31.9	+2.8
	comp=Z,11nm,0.9s						
OJC	Ojcow	62.61	315	*e*P	P	20 23 28.5	-0.6
AGG	Agios Georgios	62.66	302	*e*P	P	20 23 28.3	-1.4
	comp=Z,67nm,1.0s						
AGG	Agios Georgios	62.66	302	P	P	20 23 28.4	-1.3
AGG	Agios Georgios	62.66	302	*e*P	P	20 23 28.3	-1.4
AGG				pmax	pmax		
	comp=Z,67nm,1.0s						
THL	Klokotos Trika	62.79	303	P	P	20 23 22.9	-7.6
FNA	Florina	63.03	305	*e*P	P	20 23 30.8	-1.3
	comp=Z,29nm,1.3s						
FNA	Florina	63.03	305	*e*P	P	20 23 30.8	-1.3
FNA				pmax	pmax		
	comp=Z,29nm,1.3s						
ITM	Ithomi	63.35	301	*e*P	P	20 23 35.0	+0.7
	comp=Z,33nm,1.1s						
SPA0	Spitsbergen Ar	63.36	347	*e*P	P	20 23 31.8	-1.8
SPITS	Spitsbergen Ar	63.36	347	P	P	20 23 32.2	-1.5
	comp=Z,2.6nm,0.5s,baz=19,slow=6.1,SNR=3.0						
SPITS				LR	LR	20 55 59.3	
	comp=Z,541nm,19.5s,baz=85,slow=41						
DIVS	Divibare	63.42	308	*e*P	P	20 23 34.4	-0.4
	comp=Z,9.6nm,0.9s						
HSPB	Hornsund (broa	63.47	346	*e*P	P	20 23 33.8	-0.5
VYHS	Vyhne	63.48	313	*e*P	P	20 23 33.5	-1.4
VYHS				pmax	pmax		
	comp=Z,7.0nm,1.6s						
VYHS	Vyhne	63.48	313	*e*P	P	20 23 33.5	-1.4
STEI	Steigen	63.51	335	*e*P	P	20 23 34.0	-0.7
OKC	Ostrava-Krasne	63.72	315	AMS	AMS	20 55 00.0	
	comp=Z,400nm,14.9s						
MOR8	Moi Rana	63.91	333	*e*P	P	20 23 35.8	-1.7
MORH	Mˆ‡rˆ¡gy, Hung	63.99	311	⇑*e*P	P	20 23 38.6	+0.3
CSKK	Csˆ‡kako	64.05	312	⇑*e*P	P	20 23 38.7	0.0
MORC	Moravsky Berou	64.12	315	⇑*i*P	P	20 23 38.6	-0.6
MORC	Moravsky Berou	64.12	315	*e*P	P	20 23 38.2	-1.0
	comp=Z,13nm,1.0s						
MORC	Moravsky Berou	64.12	315	⇑P	P	20 23 38.6	-0.6
MORC	Moravsky Berou	64.12	315	*e*P	P	20 23 38.6	-0.6
LOF	Lofoten	64.14	336	*e*P	P	20 23 37.9	-0.9
LOF				IAmb	IAmb	20 23 49.1	
	comp=Z,79nm,1.2s						
JAVC	Velka Javorina	64.18	314	*e*P	P	20 23 40.5	+0.9
PDG	Podgorica	64.27	307	⇑*i*P	P	20 23 38.2	-2.0
TTG	Podgorica	64.27	307	*e*P	P	20 23 38.0	-2.2
	comp=Z,25nm,0.9s						
TTG	Podgorica	64.27	307	*e*P	P	20 23 38.0	-2.2
TTG				pmax	pmax		
	comp=Z,25nm,0.9s						
KONS	Konsvik	64.42	334	*e*P	P	20 23 39.8	-1.0
MODS	Modra-Piesok	64.52	313	*e*P	P	20 23 41.5	-0.3
MODS				pmax	pmax		
	comp=Z,16nm,1.3s						
MODS	Modra-Piesok	64.52	313	*e*P	P	20 23 41.5	-0.3
KRLC	Kraliky	64.55	315	*e*P	P	20 23 42.8	+0.8
KRLC				*e*pP	sP	20 23 51.9	-1.0
KRLC	Kraliky	64.55	315	*e*P	P	20 23 42.8	+0.8
KRLC				*e*		20 23 51.9	
KSP	Ksiaz	64.73	316	*e*P	P	20 23 43.0	-0.1
KSP	Ksiaz	64.73	316	*e*P	P	20 23 43.0	-0.1
DPC	Dobruska-Polom	64.80	316	*e*P	P	20 23 43.2	-0.4
DPC				*e*pP	sP	20 23 53.3	-1.2
DPC				AMS	AMS	20 54 40.0	
	comp=Z,500nm,16.5s						
DPC	Dobruska-Polom	64.80	316	*e*P	P	20 23 43.2	-0.4
DPC				*e*		20 23 53.3	
DPC				MLR	MLR		
	comp=Z,500nm,16.5s						
VRAC	Vranov	64.81	315	⇑*i*P	P	20 23 42.9	-0.7
VRAC	Vranov	64.81	315	⇑P	P	20 23 42.9	-0.7
VRAC	Vranov	64.81	315	*e*P	P	20 23 42.6	-1.0
HFS	Hagfors	64.83	327	P	P	20 23 42.0	-1.5
	comp=Z,4.0nm,0.5s,baz=103,slow=6.5,SNR=12						
HFS				LR	LR	20 53 47.6	
	comp=Z,904nm,18.2s,baz=82,slow=38						
OPO	Ambohidratompo	64.84	233	LR	LR	20 50 00.6	
	comp=Z,349nm,20.9s,baz=12,slow=34						
UPC	Upice	64.97	316	*e*P	P	20 23 44.1	-0.5
UPC				AMS	AMS	20 51 40.0	
	comp=Z,500nm,19.1s						
UPC	Upice	64.97	316	*e*P	P	20 23 44.1	-0.5
UPC				MLR	MLR		
	comp=Z,500nm,19.1s						
KRUC	Moravsky	64.98	314	*e*P	P	20 23 43.4	-1.3
ABPO	Ambohimpanom	65.11	232	*e*P	P	20 23 47.2	+1.1
	comp=Z,16nm,1.1s						
ABPO	Ambohimpanom	65.11	232	*e*P	P	20 23 47.2	+1.1
ABPO				pmax	pmax		
	comp=Z,16nm,1.1s						
BEHE	Becsehely	65.21	311	⇑*e*P	P	20 23 47.8	+1.5
BLY	Banja Luka	65.27	310	⇑*i*P	P	20 23 45.9	-0.8
BLY	Banja Luka	65.27	310	*e*P	P	20 23 48.1	+1.4
	comp=Z,14nm,1.0s						
CONA	Conrad Observa	65.54	313	*i* P	P	20 23 48.1	-0.4
	comp=Z,26nm,1.1s,SNR=11						
NC303	NORSAR Array S	65.81	328	*e*P	P	20 23 50.5	+0.6
GOPC	GO Pecny, Ondr	65.85	315	*e*P	P	20 23 50.0	-0.4
GOPC				*e*x	x	20 23 53.7	
GOPC				AMS	AMS	20 53 40.0	
	comp=Z,500nm,18.5s						
GOPC	GO Pecny, Ondr	65.85	315	*e*P	P	20 23 50.0	-0.4
GOPC				MLR	MLR		
	comp=Z,500nm,18.5s						
PVCC	Panska Ves	65.87	316	*e*P	P	20 23 50.6	+0.1
PVCC				*e*x	x	20 23 55.0	
PVCC				AMS	AMS	20 52 40.0	
	comp=Z,500nm,16.8s						
PVCC	Panska Ves	65.87	316	*e*P	P	20 23 50.6	+0.1
PVCC				MLR	MLR		
	comp=Z,500nm,16.8s						
ARSA	Arzberg	65.90	313	*e*P	P	20 23 50.4	-0.4
	comp=Z,8.5nm,0.8s						
NB2	NORSAR Subarra	65.92	328	P	P	20 23 48.6	-2.0
	comp=Z,3.7nm,0.7s,baz=82,slow=6.5						
NB2	NORSAR Subarra	65.92	328	P	P	20 23 48.6	-2.0
	baz=82,slow=6.5						
NOA	NORSAR Array B	65.92	328	LR	LR	20 52 25.7	
	comp=Z,228nm,20.7s,baz=100,slow=36						
PRU	Pruhonice	65.99	316	*e*P	P	20 23 50.8	-0.4
PRU				*e*x	x	20 23 54.6	
PRU				AMS	AMS	20 55 30.0	
	comp=Z,600nm,16.3s						
PRU	Pruhonice	65.99	316	*e*P	P	20 23 50.8	-0.4
PRU				MLR	MLR		
	comp=Z,600nm,16.3s						
NC204	NORSAR Array S	66.10	328	*e*P	P	20 23 50.5	-1.3
BRG	Berggiesshubel	66.19	317	*e*P	P	20 23 52.3	-0.2
	comp=Z,5.1nm,0.9s						
BRG				*i*		20 23 54.3	
	comp=Z,13nm,0.9s						
	comp=N,401nm,15.2s						
	comp=E,512nm,20.5s						
	comp=Z,589nm,16.1s						
BRG	Berggiesshubel	66.19	317	*e*P	P	20 23 52.3	-0.2
BRG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BRG				pmax	pmax		
	comp=Z,13nm,0.9s						
BRG				MLR	MLR		
	comp=N,401nm,15.2s						
BRG				MLR	MLR		
	comp=E,512nm,20.5s						
BRG				MLR	MLR		
	comp=Z,589nm,16.1s						
SOKA	Soboth	66.34	312	*e*P	P	20 23 52.4	-1.3
	comp=Z,15nm,1.3s,SNR=5.4						
MATE	Matera	66.53	305	⇑*i*P	P	20 23 53.4	-1.4
MOA	Molln	66.61	313	*e*P	P	20 23 54.0	-1.3
	comp=Z,16nm,0.8s						
CLL	Collm	66.69	317	*i* P	P	20 23 54.7	-1.0
	comp=Z,13nm,1.1s						
CLL	Collm	66.69	317	*e*P	P	20 23 54.1	-1.5
	comp=Z,12nm,1.0s						
CLL	Collm	66.69	317	*e*P	P	20 23 54.2	-1.5
CLL				pmax	pmax		
	comp=Z,12nm,1.0s						
OBKA	Obir	66.71	312	*e*P	P	20 23 55.7	-0.3
	comp=Z,7.8nm,0.9s						
GEC2	GERESS Array S	66.76	315	*e*P	P	20 23 55.3	-1.1
	comp=Z,18nm,1.0s						
GERES	GERESS Array B	66.76	315	P	P	20 23 54.8	-1.5
	comp=Z,3.1nm,0.6s,baz=64,slow=6.0,SNR=31						
GERES				LR	LR	20 57 08.9	
	comp=Z,411nm,18.2s,baz=84,slow=40						
GEA0	GERESS Array S	66.76	314	*e*P	P	20 23 55.0	-1.3
KHC	Kasperske Hory	66.78	315	*e*P	P	20 23 54.7	-1.7
KHC				*e*x	x	20 23 59.5	
KHC				AMS	AMS	20 55 20.0	
	comp=Z,400nm,20.3s						

KHC	**Kasperske Hory**	66.78	315	*e*P	P	20 23 54.9	-1.5
	comp=Z,3.7nm,1.1s						
KHC	**Kasperske Hory**	66.78	315	*e*P	P	20 23 54.7	-1.7
KHC				MLR	MLR		
	comp=Z,400nm,20.3s						
TIP	**Timpagrande**	66.85	304	⇑*i*P	P	20 23 53.4	-3.6
TIP	**Timpagrande**	66.85	304	*e*P	P	20 23 55.8	-1.3
	comp=Z,12nm,1.0s						
NKC	**Novy Kostel**	67.26	316	AMS	AMS	20 54 20.0	
	comp=Z,600nm,21.8s						
CUC	**Castrocucco**	67.35	305	*e*P	P	20 24 00.2	0.0
	comp=Z,18nm,0.9s						
MOL	**Molde**	67.36	330	*e*P	P	20 23 59.4	-0.4
KBA	**Koelnbreinsper**	67.39	313	*e*P	P	20 23 58.8	-1.7
	comp=Z,18nm,1.2s						
CEL	**Celeste**	67.73	303	*e*P	P	20 24 03.3	+0.6
	comp=Z,28nm,0.8s						
ABTA	**Abfaltersbach**	68.02	312	*i* P	P	20 24 02.7	-1.6
	comp=Z,13nm,1.0s						
GRFO	**Grafenberg**	68.15	316	*e*P	P	20 24 08.5	+3.5
	comp=Z,20nm,1.2s						
GRFO	**Grafenberg**	68.15	316	*e*P	P	20 24 08.5	+3.5
GRFO				pmax	pmax		
	comp=Z,20nm,1.2s						
SNART	**Snartemo**	68.43	325	*e*P	P	20 24 07.4	+0.8
WTTA	**Wattenberg**	68.47	313	*e*P	P	20 24 07.4	+0.1
	comp=Z,19nm,1.2s						
WATA	**Walderalm**	68.50	313	*e*P	P	20 24 06.5	-0.9
	comp=Z,4.6nm,0.5s						
MOTA	**Moosalm**	68.80	313	*e*P	P	20 24 09.1	-0.2
	comp=Z,24nm,0.8s,SNR=26						
RETA	**Reutte**	68.99	314	*e*P	P	20 24 08.6	-1.8
	comp=Z,23nm,0.8s,SNR=17						
FETA	**Feichten**	69.13	313	*e*P	P	20 24 09.3	-2.1
	comp=Z,23nm,1.1s,SNR=15						
DAVA	**Damuels**	69.62	314	*e*P	P	20 24 13.7	-0.7
	comp=Z,30nm,1.3s						
STU	**Stuttgart**	69.67	315	*e*P	P	20 24 18.2	+3.7
	comp=Z,22nm,0.8s						
DAVOX	**Davos/Dischmat**	69.76	313	P	P	20 24 13.6	-1.7
	comp=Z,27nm,0.9s,baz=72,slow=6.4,SNR=14						
DAVOX				LR	LR	20 59 15.8	
	comp=Z,366nm,19.0s,baz=64,slow=40						
BFO	**Black Forest**	70.34	315	*e*P	P	20 24 19.9	+1.2
	comp=Z,10nm,1.2s						
BFO	**Black Forest**	70.34	315	*e*P	P	20 24 19.9	+1.2
BFO				pmax	pmax		
	comp=Z,10.0nm,1.2s						
HNR	**Honiara**	70.75	111	LR	LR	20 53 45.2	
	comp=Z,61nm,21.6s,baz=301,slow=35						
ECH	**Echery**	71.13	315	*e*P	P	20 24 27.3	+3.9
	comp=Z,5.3nm,0.9s						
WLF	**Walferdange**	71.33	317	⇑P	P	20 24 24.2	-0.4
	comp=Z,36nm,1.1s						
WLF	**Walferdange**	71.33	317	*e*P	P	20 24 24.4	-0.2
	comp=Z,51nm,1.0s						
WLF	**Walferdange**	71.33	317	*e*P	P	20 24 24.4	-0.2
WLF				pmax	pmax		
	comp=Z,51nm,1.0s						
STKA	**Stephens Creek**	71.36	140	P	P	20 24 24.1	-0.7
	comp=Z,5.2nm,0.8s,baz=318,slow=7.5,SNR=10						
STKA				LR	LR	21 00 06.1	
	comp=Z,257nm,20.1s,baz=316,slow=40						
STKA	**Stephens Creek**	71.36	140	*e*P	P	20 24 24.7	-0.2
	comp=Z,4.2nm,1.2s						
SENIN	**Lac Senin/Sane**	71.58	313	*e*P	P	20 24 25.1	-1.3
	comp=Z,8.8nm,0.8s						
BNI	**Bardonecchia**	72.40	312	*e*P	P	20 24 29.6	-1.7
	comp=Z,25nm,1.1s						
BNI	**Bardonecchia**	72.40	312	*e*P	P	20 24 29.6	-1.7
BNI				pmax	pmax		
	comp=Z,25nm,1.1s						
KEST	**Kesra**	73.49	302	P	P	20 24 39.4	+1.6
	comp=Z,21nm,1.1s,baz=38,slow=2.9,SNR=11						
KEST	**Kesra**	73.49	302	*e*P	P	20 24 39.4	+1.6
	comp=Z,72nm,1.5s						
THTN	**Thala**	74.05	302	*e*P	P	20 24 43.2	+2.0
	comp=Z,13nm,1.1s						
CMAH	**Djebel Manchou**	74.65	303	P	P	20 24 43.7	-0.9
ABSA	**Djebel Ababsia**	74.73	303	P	P	20 24 44.3	-0.8
CKFL	**Kef-Lekhel**	75.26	303	P	P	20 24 48.4	+0.2
MLY	**Manley**	76.31	24	*e*P	P	20 24 53.5	-0.1
	comp=Z,21nm,1.2s						
CAST	**Castle Rocks**	76.63	25	*e*P	P	20 24 55.2	-0.1
	comp=Z,17nm,1.2s						
BPAW	**Bear Paw Mtn.**	76.70	25	*e*P	P	20 24 54.6	-1.1
	comp=Z,9.6nm,1.0s						
PPLA	**Purkeypile**	76.85	26	*e*P	P	20 24 55.7	-1.1
	comp=Z,21nm,1.1s						
MDM	**Murphy Dome**	77.26	23	*e*P	P	20 24 57.5	-1.4
	comp=Z,41nm,1.3s						
SKT	**Skwentna**	77.58	27	*e*P	P	20 24 59.6	-1.1
	comp=Z,18nm,1.1s						
CCB	**Clear Creek Bu**	77.58	23	*e*P	P	20 25 00.3	-0.3
	comp=Z,12nm,1.5s						
SUMG	**Summit**	77.69	347	*e*P	P	20 25 01.0	-0.6
	comp=Z,20nm,1.1s						
SUMG	**Summit**	77.69	347	*i* P	P	20 25 00.8	-0.8
	comp=Z,20nm,1.1s						
SUMG	**Summit**	77.69	347	*i* P	P	20 25 00.8	-0.8
SUMG				pmax	pmax		
	comp=Z,20nm,1.1s						
LSZ	**Lusaka**	77.79	247	*e*P	P	20 25 03.7	+1.0
	comp=Z,8.4nm,1.0s						
LSZ	**Lusaka**	77.79	247	*e*P	P	20 25 03.7	+1.0
LSZ				pmax	pmax		
	comp=Z,8.0nm,1.0s						
IL1	**Eielson Array**	77.84	23	*e*P	P	20 24 58.2	-3.8
ILAR	**Eielson Array**	77.84	23	P	P	20 24 59.4	-2.7
	comp=Z,1.4nm,0.8s,baz=289,slow=5.5,SNR=15						
ILAR				LR	LR	21 02 31.3	
	comp=Z,663nm,19.0s,baz=316,slow=38						
ILB	**Eielson Array**	77.84	23	*e*P	P	20 25 02.3	+0.2
SUA	**Susitna One**	78.17	27	*e*P	P	20 25 03.0	-1.1
	comp=Z,18nm,1.1s						
PMR	**Palmer**	78.75	26	*e*P	P	20 25 05.7	-1.4
	comp=Z,19nm,1.1s						
PMR	**Palmer**	78.75	26	*e*P	P	20 25 05.7	-1.4
PMR				pmax	pmax		
	comp=Z,19nm,1.1s						
SML	**Sawmill**	78.95	26	*e*P	P	20 25 07.3	-1.0
	comp=Z,26nm,1.0s						
SML	**Sawmill**	78.95	26	*e*P	P	20 25 07.3	-1.0
SML				pmax	pmax		
	comp=Z,26nm,1.0s						
SCM	**Sheep Creek Mo**	79.33	26	*e*P	P	20 25 11.2	+0.7
	comp=Z,18nm,1.2s						
SCM	**Sheep Creek Mo**	79.33	26	*e*P	P	20 25 11.2	+0.7
SCM				pmax	pmax		
	comp=Z,18nm,1.2s						
INK	**Inuvik**	79.70	17	*e*P	P	20 25 11.8	-0.4
	comp=Z,15nm,1.0s						
INK	**Inuvik**	79.70	17	*e*P	P	20 25 11.8	-0.4
INK				pmax	pmax		
	comp=Z,15nm,1.0s						
EGAK	**Eagle**	79.81	22	*e*P	P	20 25 12.3	-0.5
	comp=Z,16nm,1.1s						
KLU	**Klutina**	80.08	26	*e*P	P	20 25 13.3	-1.2
DAWY	**Dawson**	80.85	22	*e*P	P	20 25 18.1	-0.5
BMRM	**Bremner River**	80.91	26	*e*P	P	20 25 18.6	-0.3
	comp=Z,34nm,1.2s						
TAM	**Tamanrasset**	81.38	291	*e*P	P	20 25 23.2	+0.9
	comp=Z,16nm,1.4s						
TAM	**Tamanrasset**	81.38	291	*e*P	P	20 25 23.2	+0.9
TAM				pmax	pmax		
	comp=Z,16nm,1.4s						
ES19	**SONSECA Array**	81.67	310	*e*P	P	20 25 23.6	+0.2
ESDC	**Sonseca Array**	81.72	310	P	P	20 25 23.0	-0.7
	comp=Z,3.5nm,0.8s,baz=53,slow=5.2,SNR=19						
ESDC				LR	LR	21 05 07.3	
	comp=Z,207nm,20.8s,baz=105,slow=38						
ESLA	**Sonseca Array**	81.72	310	*e*P	P	20 25 25.0	+1.3
	comp=Z,12nm,1.3s						
PAB	**San Pablo**	82.05	310	*e*P	P	20 25 27.3	+1.9
	comp=Z,20nm,1.6s						
PAB	**San Pablo**	82.05	310	*e*P	P	20 25 27.3	+1.9
PAB				pmax	pmax		
	comp=Z,20nm,1.6s						
MVO	**Moncorvo**	83.14	312	*e*P	P	20 25 32.5	+1.4
	comp=Z,16nm,1.4s						
PCBR	**Castelo Branco**	84.06	311	*e*P	P	20 25 37.7	+2.0
	comp=Z,14nm,1.8s						
PBAR	**Barrancos**	84.54	310	*e*P	P	20 25 38.9	+0.7
	comp=Z,57nm,1.6s						
SFJD	**Kangerlussuaq**	84.68	348	LR	LR	21 08 50.7	
	comp=Z,484nm,18.0s,baz=36,slow=40						
LBTB	**Lobatse**	84.84	239	*e*P	P	20 25 42.8	+2.9
	comp=Z,83nm,2.0s						
LBTB	**Lobatse**	84.84	239	*e*P	P	20 25 42.8	+2.9
LBTB				pmax	pmax		
	comp=Z,83nm,2.0s						
EVO	**Evora**	85.05	310	*e*P	P	20 25 42.3	+1.6
	comp=Z,22nm,1.7s						
PVAQ	**Vaqueiros**	85.38	309	*e*P	P	20 25 44.3	+1.9
	comp=Z,37nm,1.5s						
SKAG	**Skagway**	85.40	24	*e*P	P	20 25 42.4	+0.3
	comp=Z,45nm,1.4s						
BOSA	**Boshof**	86.94	236	P	P	20 25 49.0	-1.3
	comp=Z,6.2nm,1.0s,baz=137,slow=3.3,SNR=3.9						
BOSA				LR	LR	21 00 54.3	
	comp=Z,411nm,21.1s,baz=26,slow=33						
BOSA	**Boshof**	86.94	236	P	P	20 25 49.0	-1.3
TORD	**Torodi Ar. Bea**	88.71	284	P	P	20 25 58.3	-0.7
	comp=Z,2.8nm,0.9s,baz=27,slow=3.3						
YKA	**Yellowknife Ar**	89.02	14	P	P	20 25 57.1	-2.4
	comp=Z,0.6nm,0.8s,baz=327,slow=4.4,SNR=3.2						
YKA				LR	LR	21 09 03.7	
	comp=Z,53nm,21.2s,baz=308,slow=38						
KOWA	**Kowa**	93.09	287	P	P	20 26 19.3	0.0
	comp=Z,5.0nm,0.8s,baz=77,slow=6.1,SNR=6.7						
MAW	**Mawson**	95.98	192	LR	LR	21 07 38.2	
	comp=Z,142nm,18.3s,baz=42,slow=34						
CMLA	**Cha da Macela**	96.93	317	*i* P	P	20 26 36.9	+0.4
AFI	**Afiamalu**	97.37	102	LR	LR	21 06 03.4	
	comp=Z,66nm,20.8s,baz=104,slow=33						
SCHQ	**Schefferville**	98.88	350	LR	LR	21 16 06.6	
	comp=Z,199nm,20.3s,baz=354,slow=38						
PLCA	**Paso Flores**	161.22	212	PKPab	PKPab	20 33 49.6	+0.5
	comp=Z,4.0nm,0.9s,baz=133,slow=4.7,SNR=5.4						

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*IDC **09** 20:34:36.3±2.0, 35°.83N×141°.37E, h0^{km}, mb3.5/5, mb1 3.6/7, mb1mx3.4/69, mbtmp3.5/7, ML3.5/2, Error ellipse: s-maj=57.8km s-min=20.0km az=68.0*

*ISCJB **09** 20:34:43.7±0.8, 35°.64N±0°.05×140°.8E±0°.1, h58^{km}±5^{km}, mb3.4/5, Error ellipse: s-maj=15.0km s-min=7.6km az=161.8*

*JMA **09** 20:34:45.4±0.2, 35°.65N×140°.64E, h45^{km}±2^{km}, M2.8*

ISC 09 20:34:44.9±1.1**, 35°.64N**±0°.05×**140°.77E**±0°.10**, h51**^{km}±8^{km}**, n14,** σ0^s**54**/18**, mb3.4**/5**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	**Chosi**	0.09	52	P	Pn	20 34 53.0	+0.2
CHOJ				S	Sn	20 34 58.6	+0.2
JIHU	**Itakohorinouch**	0.38	329	P	Pn	20 34 55.1	+0.3
JCN	**Nagara**	0.51	244	P	Pn	20 34 56.1	-0.3
BSO4	**Boso 4**	0.74	208	P	Pn	20 34 59.0	-0.1
JYT	**Yasato**	0.74	322	P	Pn	20 34 58.5	-0.8
JYT				S	Sn	20 35 08.6	-1.1
BSO3	**Boso 3**	0.87	194	P	Pn	20 35 01.0	+0.4
MJAR	**Matsushiro Arr**	2.26	294	Pn	Pn	20 35 20.5	+0.7
	7.6nm,0.3s,baz=102,slow=14,SNR=60						
MAT	**Matsushiro**	2.26	294	P	Pn	20 35 20.1	+0.3
MAT				S	Sn	20 35 47.5	+1.0
JHJ	**Hachijo jima 2**	2.65	198	Pn	Pn	20 35 25.1	-0.1
	21nm,0.3s,baz=154,slow=2.6,SNR=11						
JHJ				Sn	Sn	20 35 55.5	-0.6
	34nm,0.3s,baz=56,slow=22,SNR=10						
ZALV	**Zalesovo Beam**	42.48	314	P	P	20 42 34.7	-0.1
	0.3nm,0.5s,baz=107,slow=7.7,SNR=2.2						
MKAR	**Makanchi Array**	44.43	303	P	P	20 42 51.0	+0.3
	0.2nm,0.6s,baz=88,slow=7.1,SNR=4.2						
KURBB	**Kurchatov Arra**	46.46	309	P	P	20 43 06.7	+0.1
	0.9nm,0.8s,baz=84,slow=8.2,SNR=6.6						
WRA	**Warramunga Arr**	55.62	187	P	P	20 44 15.5	-0.2
	0.4nm,0.5s,baz=2.1,slow=7.5,SNR=13						
ASAR	**Alice Springs**	59.34	187	P	P	20 44 41.9	0.0
	0.2nm,0.6s,baz=12,slow=11,SNR=2.9						

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*NIED **09** 20:44:00, 45°.40N×151°.20E, h26^{km}, Mw4.2 Best double couple: $M_0$2.02000×10^{15} NP1:ϕ_s245.00000°, δ42.00000°, λ155.00000°. NP2:ϕ_s354.00000°, δ73.00000°, λ50.00000°.*

*SKHL **09** 20:44:00.9±0.9, 45°.14N×151°.43E, h44^{km}±9^{km}, mb5.4/7*

*NEIC **09** 20:44:00.3±0.5, 45°.32N×151°.20E, h10^{km}, mb4.9/3, Error ellipse: s-maj=13.3km s-min=8.0km az=136.0*

*ISCJB **09** 20:44:01.5±0.6, 45°.28N±0°.04×151°.18E±0°.06, h34^{km}±4^{km}, mb4.3/42, MS4.4/1, Error ellipse: s-maj=8.7km s-min=4.3km az=139.7*

*JMA **09** 20:44:02.2±0.7, 45°.42N×151°.19E, h30^{km}, M4.7*

*MOS **09** 20:44:03.0±0.8, 45°.37N×151°.07E, h42^{km}, mb4.7/19, Error ellipse: s-maj=7.2km s-min=5.8km az=94.8*

*BJI **09** 20:44:03.0, 45°.40N×151°.10E, h40^{km}, mb4.4/12, mB4.9/8*

*IDC **09** 20:44:06.7±2.5, 45°.45N×150°.97E, h57^{km}±21^{km}, mb3.9/23, mb1 4.0/30, mb1mx3.9/73, mbtmp4.2/30, ML4.2/5, MS3.7/4, Ms1 3.7/4, ms1mx3.0/76, Error ellipse: s-maj=16.2km s-min=11.9km az=126.0*

ISC 09 20:44:04.2±0.9**, 45°.22N**±0°.06×**151°.17E**±0°.06**, h43**^{km}±7^{km}**, n209,** σ1^s**46**/238**, mb4.3**/42**, 24C-20D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	2.34	272	*i* P	Pn	20 44 38.0	-2.0
KUR				AMB	AMB	20 44 42.0	
	246nm,0.3s						
KUR				AMB	AMB	20 44 42.0	
	230nm,0.3s						
KUR				AMB	AMB	20 44 42.0	
	464nm,0.3s						
KUR				*i* S	Sn	20 45 06.0	-1.5
KUR				A	A	20 45 11.0	
	2μm,0.6s						
KUR				A	A	20 45 11.0	
	781nm,0.6s						
KUR	**Kuril'sk**	2.34	272	⇑*e*PN	Pn	20 44 38.3	-1.7
KUR				*i* S	Sn	20 45 07.3	-0.2
KUR				pmax	pmax		
	comp=Z,717nm,0.3s						
KUR				pmax	pmax		
	comp=E,207nm,0.1s						
KUR				pmax	pmax		
	comp=N,308nm,0.2s						
KUR				smax	smax		
	comp=N,3μm,1.3s						
KUR				smax	smax		
	comp=N,2μm,0.6s						
KUR				smax	smax		
	comp=E,898nm,0.6s						
SHO	**Shikotan**	3.38	248	*i* P	Pn	20 44 54.0	-0.4
SHO				AMB	AMB	20 44 56.0	
	comp=E,47nm,0.3s						
SHO				AMB	AMB	20 44 56.0	
	comp=E,95nm,0.3s						
SHO				AMB	AMB	20 44 56.0	
	comp=E,142nm,0.3s						
SHO				*e*S	Sn	20 45 34.0	+0.7
SHO				A	A	20 45 50.0	
	comp=E,271nm,0.3s						
SHO				A	A	20 45 50.0	
	comp=E,658nm,0.3s						
SHO	**Shikotan**	3.38	248	*d i*PN	Pn	20 44 54.1	-0.4
SHO				*e*S	Sn	20 45 34.4	+1.1
SHO				pmax	pmax		
	comp=Z,142nm,0.3s						
SHO				pmax	pmax		
	comp=N,47nm,0.2s						
SHO				pmax	pmax		
	comp=E,95nm,0.3s						
SHO				smax	smax		
	comp=N,271nm,0.3s						
SHO				smax	smax		
	comp=E,658nm,0.3s						
YUK	**Yuzh-Kuril'sk**	3.97	255	*e*P	Pn	20 45 02.0	-0.5
YUK				AMB	AMB	20 45 07.0	
	comp=E,78nm,0.4s						
YUK				AMB	AMB	20 45 07.0	
	comp=E,259nm,0.4s						
YUK				AMB	AMB	20 45 07.0	
	comp=E,315nm,0.4s						
YUK				*e*S	Sn	20 45 48.2	+0.4
YUK				A	A	20 45 58.0	
	comp=E,756nm,0.4s						
YUK				A	A	20 45 58.0	
	comp=E,470nm,0.4s						
YUK	**Yuzh-Kuril'sk**	3.97	255	*e*PN	Pn	20 45 02.5	0.0
YUK				*e*S	Sn	20 45 49.0	+1.2
YUK				pmax	pmax		
	comp=Z,315nm,0.5s						
YUK				pmax	pmax		
	comp=N,78nm,0.2s						
YUK				pmax	pmax		
	comp=E,259nm,0.4s						
YUK				smax	smax		
	comp=E,470nm,0.4s						
YUK				smax	smax		
	comp=N,756nm,0.3s						
LAGR	**Lagunnoye**	4.02	255	*e*P	Pn	20 45 04.0	+0.9
LAGR				AMB	AMB	20 45 08.0	
	comp=N,140nm,0.3s						
LAGR				AMB	AMB	20 45 08.0	
	comp=N,272nm,0.3s						
LAGR				AMB	AMB	20 45 08.0	
	comp=N,255nm,0.3s						
LAGR				*e*S	Sn	20 45 52.0	+3.1
LAGR				A	A	20 46 06.0	
	comp=N,1μm,0.5s						
LAGR				A	A	20 46 06.0	
	comp=N,2μm,0.5s						
LAGR	**Lagunnoye**	4.02	255	*e*PN	Pn	20 45 04.0	+0.9
LAGR				*e*S	Sn	20 45 52.0	+3.1
LAGR				pmax	pmax		
	comp=Z,255nm,0.3s						
LAGR				pmax	pmax		
	comp=E,272nm,0.4s						
LAGR				pmax	pmax		
	comp=N,140nm,0.2s						
LAGR				smax	smax		
	comp=N,1μm,0.5s						
LAGR				smax	smax		
	comp=E,2μm,0.5s						
GRPR	**Tuman**	4.05	254	*e*P	Pn	20 45 03.0	-0.5
GRPR				AMB	AMB	20 45 08.0	
	comp=E,49nm,0.2s						
GRPR				AMB	AMB	20 45 08.0	
	comp=E,44nm,0.2s						
GRPR				AMB	AMB	20 45 08.0	
	comp=E,216nm,0.2s						
GRPR				*e*S	Sn	20 45 50.0	+0.3
GRPR				A	A	20 45 54.0	
	comp=E,594nm,0.2s						
GRPR				A	A	20 45 54.0	
	comp=E,165nm,0.2s						
GRPR	**Tuman**	4.05	254	*e*PN	Pn	20 45 03.3	-0.2
GRPR				*e*S	Sn	20 45 50.7	+1.0
GRPR				pmax	pmax		
	comp=Z,216nm,0.2s						
GRPR				pmax	pmax		
	comp=N,49nm,0.1s						
GRPR				pmax	pmax		
	comp=E,44nm,0.1s						
GRPR				smax	smax		
	comp=N,594nm,0.3s						
GRPR				smax	smax		
	comp=E,165nm,0.2s						
GLVR	**Golovnino**	4.31	252	*e*P	Pn	20 45 06.0	-1.1
GLVR				AMB	AMB	20 45 11.0	
	comp=E,158nm,0.3s						
GLVR				AMB	AMB	20 45 11.0	
	comp=E,143nm,0.3s						
GLVR				AMB	AMB	20 45 11.0	
	comp=E,263nm,0.3s						
GLVR				*i* S	Sn	20 45 55.0	-1.1
GLVR				A	A	20 46 05.0	
	comp=E,726nm,0.3s						
GLVR				A	A	20 46 05.0	
	comp=E,160nm,0.3s						
GLVR	**Golovnino**	4.31	252	*e*PN	Pn	20 45 06.2	-0.9
GLVR				*i* S	Sn	20 45 55.8	-0.3
GLVR				pmax	pmax		
	comp=Z,263nm,0.3s						
GLVR				pmax	pmax		
	comp=N,158nm,0.5s						
GLVR				pmax	pmax		
	comp=E,143nm,0.2s						
GLVR				smax	smax		
	comp=E,160nm,0.2s						
GLVR				smax	smax		
	comp=N,726nm,0.3s						
NEM2	**Nemuro 2**	4.32	246	P	Pn	20 45 06.2	-1.0
NEM2				*e*S	Sn	20 45 53.3	-3.0
JRA	**Rausu**	4.51	256	P	Pn	20 45 10.3	+0.4
JRA				*e*S	Sn	20 46 02.4	+1.4
JNK	**Nakash**	4.90	253	P	Pn	20 45 15.5	+0.2
JAK	**Akkeshi**	5.17	247	P	Pn	20 45 17.8	-1.1
JAK				*e*S	Sn	20 46 14.7	-2.5
JTKR	**Abashiri--Toko**	5.34	259	P	Pn	20 45 22.2	+1.0
JAR	**Ashorobuto**	5.65	253	P	Pn	20 45 26.4	+0.8
JMP	**Maruseppu**	5.71	261	P	Pn	20 45 27.2	+0.8
JOB	**Onbets**	5.77	249	P	Pn	20 45 27.2	0.0
HRK	**Horoka**	6.03	256	*e*P	Pn	20 45 32.4	+1.6
HRK				*e*S	Sn	20 46 41.9	+3.4
YSS	**Yuzh-Sakhalins**	6.11	289	*e*P	Pn	20 45 32.5	+0.7
YSS	**Yuzh-Sakhalins**	6.11	289	*e*P	Pn	20 45 32.3	+0.5
	comp=N,27nm,0.4s						
YSS	**Yuzh-Sakhalins**	6.11	289	*e*PN	Pn	20 45 32.4	+0.7
YSS				*e*S	Sn	20 46 41.8	+1.5
YSS				pmax	pmax		
	comp=Z,20nm,0.6s						
YSS				MLR	MLR		
	comp=Z,400nm,14.0s						
JKK2	**Kamakawa 2**	6.17	260	P	Pn	20 45 34.1	+1.4
JCH	**Churui**	6.21	248	P	Pn	20 45 32.4	-0.9
JCH				*e*S	Sn	20 46 41.5	-1.5
ASAJ	**Asahikawa**	6.21	263	P	Pn	20 45 35.3	+2.0
	comp=Z,2.6nm,0.3s,baz=79,slow=17,SNR=31						
ASAJ				S	Sn	20 47 01.4	+18
	comp=Z,1.0nm,0.3s,baz=225,slow=19,SNR=1.9						
ASAJ				LR	LR	20 48 01.2	
	comp=Z,404nm,18.7s,baz=110,slow=38						
ASAJ	**Asahikawa**	6.21	263	P	Pn	20 45 35.1	+1.8
SKR	**Severo-Kuril's**	6.39	29	*e*P	Pn	20 45 35.0	-0.7
SKR				AMB	AMB	20 45 38.0	
	comp=Z,81nm,0.5s						
SKR				*e*S	Sn	20 46 46.0	-1.4
SKR				A	A	20 46 49.0	
	comp=Z,134nm,0.5s						
SKR				A	A	20 46 49.0	
	comp=Z,97nm,0.5s						
SKR	**Severo-Kuril's**	6.39	29	*e*PN	Pn	20 45 35.8	+0.1
SKR				pmax	pmax		
	comp=Z,81nm,0.5s						
SKR				MLR	MLR		
	comp=Z,400nm,19.0s						
SKR				MLR	MLR		
	comp=E,700nm,12.0s						
SKR				MLR	MLR		
	comp=N,700nm,14.0s						
MYR	**Moyori**	6.42	246	*e*P	Pn	20 45 35.8	-0.3
MYR				*e*S	Sn	20 46 46.0	-2.0
JFR	**Furan**	6.50	255	P	Pn	20 45 38.5	+1.2
JWK2	**Keihoku**	6.55	274	P	Pn	20 45 41.1	+3.3
ERM	**Erimo**	6.64	244	*e*P	Pn	20 45 40.8	+1.7
ERM	**Erimo**	6.64	244	*e*P	Pn	20 45 39.7	+0.5
	comp=N,130nm,0.4s						
ERM	**Erimo**	6.64	244	*d i*PN	Pn	20 45 40.8	+1.7
ERM				pmax	pmax		
	comp=Z,45nm,1.0s						
JEM	**Erimo**	6.64	244	P	Pn	20 45 39.8	+0.7
JAB	**Ashibetsu**	6.64	258	P	Pn	20 45 41.5	+2.4
JNBK	**Urakawa-nobuka**	6.77	247	P	Pn	20 45 39.9	-1.0
JBT2	**Biratori 2**	6.80	252	P	Pn	20 45 41.1	-0.3
JBT2				*e*S	Sn	20 46 58.8	+1.3
UGL	**Uglegorsk**	7.31	305	*e*P	Pn	20 45 47.1	-1.2
JNB	**Noboribetsu**	7.83	253	P	Pn	20 45 55.2	-0.2
JNB				*e*S	Sn	20 47 20.3	-2.3
TYV	**Tymovskoe**	8.03	318	*e*PN	Pn	20 45 56.7	-1.4
TYV				pmax	pmax		
	comp=Z,12nm,0.6s						
JKB	**Kayabe**	8.08	249	P	Pn	20 45 58.1	-0.8
JKB				*e*S	Sn	20 47 22.7	-6.2
JYM2	**Yakumo 2**	8.42	252	P	Pn	20 46 02.9	-0.7
JSH	**Shimam**	8.43	256	P	Pn	20 46 04.4	+0.7
JANG	**Nango**	8.59	239	P	Pn	20 46 02.9	-3.0
JANG				*e*S	Sn	20 47 31.8	-10
JTM	**Tenmabayashi**	8.63	243	P	Pn	20 46 04.8	-1.6
JTM				*e*S	Sn	20 47 34.9	-7.4
JSR	**Shiriuchi**	8.66	249	P	Pn	20 46 05.6	-1.2
JTH	**Tanohata**	8.66	236	P	Pn	20 46 03.9	-2.9
JTH				*e*S	Sn	20 47 33.5	-10
PETK	**Petropavlovsk-**	8.97	26	P	Pn	20 46 11.3	+0.2
	baz=207,slow=12						
JOSM	**Okushiri--Mats**	9.04	254	P	Pn	20 46 12.2	+0.2
OFUJ	**Ofunato**	9.35	232	P	Pn	20 46 13.5	-2.8

JRG	**Rokugo**	**9.73**	**237**	P	**Pn**	**20 46 20.1**	**-1.4**
JIO	**Ouri**	**9.97**	**231**	P	**Pn**	**20 46 21.8**	**-2.9**
MJA0	**Matsu Arr-Jizo**	**13.05**	**233**	*e*PN	**Pn**	**20 47 09.5**	**+2.5**
MAJO	**Matsushiro**	**13.08**	**233**	*e*P	**Pn**	**20 47 07.4**	**+0.1**
	comp=Z,3.0nm,0.5s						
MAJO	**Matsushiro**	**13.08**	**233**	*c i*PN	**Pn**	**20 47 09.9**	**+2.6**
MAJO				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MJAR	**Matsushiro Arr**	**13.08**	**233**	P	**Pn**	**20 47 05.8**	**-1.5**
	comp=Z,0.4nm,0.3s,baz=43,slow=10,SNR=7.1						
MJAR				LR	LR	20 52 26.2	
	comp=Z,140nm,21.0s,baz=40,slow=38						
USRK	**Ussuriysk Ar.**	**13.69**	**273**	P	**Pn**	**20 47 15.4**	**-0.1**
	baz=78,slow=14						
USRK				LR	LR	20 51 48.3	
	comp=Z,212nm,19.1s,baz=255,slow=34						
KLR	**Kul'dur**	**13.79**	**294**	P	**Pn**	**20 47 19.9**	**+3.0**
	comp=Z,0.0nm,0.3s,baz=106,slow=18,SNR=10						
KLR	**Kul'dur**	**13.79**	**294**	*e*P	**Pn**	**20 47 15.4**	**-1.5**
KLR	**Kul'dur**	**13.79**	**294**	⇓*e*P	**Pn**	**20 47 15.4**	**-1.5**
MA2	**Magadan**	**14.38**	**359**	P	**Pn**	**20 47 23.2**	**-1.7**
	comp=Z,0.9nm,0.3s,baz=214,slow=18,SNR=3.2						
ZEA	**Zeya**	**17.66**	**307**	*e*P	**Pn**	**20 48 05.8**	**-1.0**
ZEA				pmax	pmax		
	comp=Z,12nm,1.0s						
SEY	**Seymchan**	**17.76**	**2**	P	**Pn**	**20 48 07.2**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=184,slow=9.4,SNR=5.0						
SEY	**Seymchan**	**17.76**	**2**	⇓*i*P	**Pn**	**20 48 07.8**	**-0.1**
KSRS	**Korea Array**	**19.06**	**254**	P	**P**	**20 48 23.2**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=61,slow=11,SNR=9.9						
KSRS	**Korea Array**	**19.06**	**254**	*e*P	**P**	**20 48 23.1**	**+0.3**
KSAR	**Wonju Array Be**	**19.09**	**254**	P	**P**	**20 48 23.2**	**+0.1**
KSAR	**Wonju Array Be**	**19.09**	**254**	P	**P**	**20 48 23.2**	**+0.1**
JNU	**Nakatsue**	**19.77**	**239**	P	**Pn**	**20 48 32.3**	**-0.2**
	comp=Z,0.4nm,0.3s,baz=210,slow=2.4,SNR=4.0						
YAK	**Yakutsk**	**20.95**	**331**	P	**P**	**20 48 41.8**	**-1.2**
	comp=Z,8.6nm,0.3s,baz=224,slow=1.5,SNR=8.3						
YAK	**Yakutsk**	**20.95**	**331**	*e*P	**P**	**20 48 42.1**	**-1.0**
YAK	**Yakutsk**	**20.95**	**331**	*e*P	**P**	**20 48 42.0**	**-1.0**
YAK	**Yakutsk**	**20.95**	**331**	*e*P	**P**	**20 48 42.0**	**-1.0**
YAK				pmax	pmax		
	comp=Z,18nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**28.56**	**148**	T	T	21 20 42.5	
	baz=342,slow=74						
H11N1	**WAKE ISLAND Hy**	**28.58**	**148**	T	T	21 20 46.5	
	baz=342,slow=74						
H11N3	**WAKE ISLAND Hy**	**28.58**	**148**	T	T	21 20 34.5	
	baz=342						
TIXI	**Tiksi**	**28.58**	**345**	P	**P**	**20 49 55.4**	**-0.3**
	comp=Z,1.6nm,0.4s,baz=179,slow=3.1,SNR=4.6						
H11S1	**WAKE ISLAND Hy**	**29.61**	**149**	T	T	21 22 10.0	
	baz=337,slow=76,SNR=337						
H11S3	**WAKE ISLAND Hy**	**29.62**	**149**	T	T	21 22 06.5	
	baz=337,slow=76,SNR=322						
H11S2	**WAKE ISLAND Hy**	**29.63**	**149**	T	T	21 22 11.7	
	baz=337,slow=76,SNR=208						
ULN	**Ulaanbaatar**	**30.16**	**291**	⇓*e*P	**P**	**20 50 11.9**	**+1.8**
ULN				pmax	pmax		
	comp=Z,4.0nm,1.9s						
SONM	**Songino Array**	**30.59**	**291**	P	**P**	**20 50 14.6**	**+0.6**
	comp=Z,0.7nm,0.6s,baz=79,slow=7.7,SNR=4.8						
LZH	**Lanzhou**	**36.59**	**273**	*e*P	**P**	**20 51 06.9**	**+0.7**
LZH				pP	pP	20 51 16.2	-1.7
LZH				sP	sP	20 51 21.1	-1.8
LZH				pmax	pmax		
	comp=Z,21nm,1.1s						
ILAR	**Eielson Array**	**38.59**	**37**	P	**P**	**20 51 22.5**	**-0.1**
	comp=Z,0.6nm,0.5s,baz=261,slow=7.1,SNR=8.4						
DGZ	**Jazzator, Alta**	**42.18**	**300**	⇓*e*P	**P**	**20 51 52.4**	**-0.2**
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ZALV	**Zalesovo Beam**	**42.42**	**307**	PcP	**PcP**	**20 53 47.0**	**+0.3**
	comp=Z,1.7nm,0.7s,baz=68,slow=2.9,SNR=7.1						
MKAR	**Makanchi Array**	**46.45**	**298**	P	**P**	**20 52 25.0**	**-1.6**
	comp=Z,1.5nm,0.7s,baz=78,slow=8.7,SNR=14						
MKAR				PcP	**PcP**	**20 54 00.6**	**-0.1**
	comp=Z,0.8nm,0.5s,baz=47,slow=2.9,SNR=6.8						
MKAR	**Makanchi Array**	**46.45**	**298**	*e*P	**P**	**20 52 25.9**	**-0.8**
KURK	**Kurchatov**	**47.09**	**304**	*e*P	**P**	**20 52 31.1**	**-0.5**
KURK	**Kurchatov**	**47.09**	**304**	P	**P**	**20 52 30.7**	**-0.9**
KURK				PcP	**PcP**	**20 54 02.7**	**-0.1**
KURK	**Kurchatov**	**47.09**	**304**	P	**P**	**20 52 30.7**	**-0.9**
KURK						20 54 02.7	
KURBB	**Kurchatov Arra**	**47.18**	**304**	P	**P**	**20 52 30.7**	**-1.6**
	comp=Z,1.7nm,0.8s,baz=74,slow=8.4,SNR=8.2						
KURBB				PcP	**PcP**	**20 54 02.7**	**-0.4**
	comp=Z,1.1nm,0.9s,baz=69,slow=3.5,SNR=5.3						
LSA	**Lhasa**	**49.01**	**273**	*e*P	**P**	**20 52 48.0**	**+0.8**
	comp=Z,7.6nm,0.9s						
LSA	**Lhasa**	**49.01**	**273**	*e*P	**P**	**20 52 48.0**	**+0.8**
LSA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CMAR	**Chiang Mai Arr**	**50.69**	**256**	P	**P**	**20 53 00.1**	**+0.6**
	comp=Z,0.8nm,0.7s,baz=39,slow=7.2,SNR=9.8						
CMAR				PcP	**PcP**	**20 54 17.6**	**+1.2**
	comp=Z,0.6nm,0.8s,baz=0.1,slow=4.6,SNR=4.2						
BRVK	**Borovoye**	**50.83**	**310**	*e*P	**P**	**20 53 01.2**	**+1.0**
BRVK	**Borovoye**	**50.83**	**310**	⇑*e*P	**P**	**20 53 01.2**	**+1.0**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
RES	**Resolute Bay**	**52.71**	**18**	P	**P**	**20 53 12.8**	**-1.0**
	comp=Z,2.4nm,0.9s,baz=352,slow=6.1,SNR=5.4						
YKA	**Yellowknife Ar**	**52.96**	**35**	P	**P**	**20 53 16.4**	**+0.6**
	comp=Z,0.6nm,0.4s,baz=298,slow=6.4,SNR=3.7						
JIRN	**Jiri**	**53.72**	**274**	*e*P	**P**	**20 53 22.8**	**+0.4**
	comp=Z,20nm,0.4s						
GUN	**Gumba**	**53.78**	**275**	*e*P	**P**	**20 53 22.9**	**+0.1**
	comp=Z,14nm,0.4s						
RAMN	**Ramite**	**53.86**	**273**	*e*P	**P**	**20 53 23.4**	**+0.1**
	comp=Z,14nm,0.3s						
KSH	**Kashi**	**53.98**	**292**	P	**P**	**20 53 27.8**	**+3.9**
KSH				PcP	**PcP**	**20 54 31.0**	**+2.4**
KSH				PP	**PP**	**20 55 31.6**	**+6.4**
KSH				PcS	**PcS**	**20 58 28.4**	**+0.3**
KSH				S	**S**	**21 00 55.7**	**-1.0**
KSH				SS	**SS**	**21 04 38.4**	**+0.5**
KSH				pmax	pmax		
	comp=Z,170nm,5.9s						
KKN	**Kakani**	**54.28**	**275**	*e*P	**P**	**20 53 26.6**	**+0.3**
	comp=Z,30nm,0.9s						
PKIN	**Phulchoki**	**54.33**	**275**	*e*P	**P**	**20 53 26.6**	**-0.1**
	comp=Z,4.8nm,0.4s						
DMN	**Daman**	**54.51**	**275**	*e*P	**P**	**20 53 28.4**	**+0.4**
	comp=Z,12nm,0.4s						
GKN	**Gorkha**	**54.60**	**276**	*e*P	**P**	**20 53 28.7**	**+0.1**
	comp=Z,10nm,0.4s						
DANN	**Dangsing**	**55.01**	**277**	*e*P	**P**	**20 53 32.2**	**+0.5**
	comp=Z,25nm,0.6s						
ARU	**Arti**	**55.23**	**317**	*e*P	**P**	**20 53 30.5**	**-1.9**
ARU	**Arti**	**55.23**	**317**	*d i*P	**P**	**20 53 30.5**	**-1.9**
ARU				*PP	**pP**	**20 53 45.1**	**+0.5**
ARU						20 54 31.7	
ARU				S	**S**	**21 01 10.3**	**-2.3**
ARU				pmax	pmax		
	comp=Z,6.0nm,1.7s						
NIL	**Nilore**	**59.10**	**288**	*e*P	**P**	**20 54 00.1**	**-0.1**
	comp=Z,58nm,0.9s						
NIL	**Nilore**	**59.10**	**288**	*e*P	**P**	**20 54 00.1**	**-0.1**
NIL				pmax	pmax		
	comp=Z,58nm,0.9s						
SUMG	**Summit**	**62.31**	**3**	*i* P	**P**	**20 54 21.2**	**-0.7**
	comp=Z,15nm,0.9s						
SUMG	**Summit**	**62.31**	**3**	*i* P	**P**	**20 54 21.2**	**-0.7**
SUMG				pmax	pmax		
	comp=Z,15nm,0.9s						
FINES	**FINESS Array B**	**64.84**	**334**	P	**P**	**20 54 36.1**	**-2.1**
	comp=Z,2.3nm,0.7s,baz=47,slow=5.8,SNR=19						
FINES	**FINESS Array B**	**64.84**	**334**	*e*P	**P**	**20 54 36.7**	**-1.5**
FINES	**FINESS Array B**	**64.84**	**334**	*e*P	**P**	**20 54 36.7**	**-1.5**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
OBN	**Obninsk**	**65.80**	**325**	*e*P	**P**	**20 54 43.7**	**-0.8**
OBN				*e*		20 55 16.1	
OBN				*e*		20 57 11.2	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GEYT	**Alibeck**	**66.22**	**300**	P	**P**	**20 54 46.9**	**-0.8**
	comp=Z,1.1nm,0.7s,baz=54,slow=6.3,SNR=5.2						
WRAB	**Tennant Creek**	**66.62**	**197**	⇑*e*P	**P**	**20 54 51.8**	**+1.6**
WRAB				pmax	pmax		
	comp=Z,5.0nm,1.0s						
WRA	**Warramunga Arr**	**66.64**	**197**	P	**P**	**20 54 51.2**	**+1.0**
	comp=Z,2.4nm,0.8s,baz=16,slow=6.8,SNR=16						
PDAR	**Pinedale Array**	**66.75**	**52**	P	**P**	**20 54 52.4**	**+1.2**
	comp=Z,0.9nm,1.0s,baz=323,slow=0.7,SNR=6.0						
VSU	**Vasula**	**66.94**	**332**	⇑*e*P	**P**	**20 54 51.5**	**-0.2**
VSU				pmax	pmax		
	comp=Z,43nm,1.6s						
NB2	**NORSAR Subarra**	**69.23**	**340**	P	**P**	**20 55 04.6**	**-1.6**
	comp=Z,1.3nm,0.5s,baz=26,slow=6.5						
HFS	**Hagfors**	**69.41**	**339**	P	**P**	**20 55 05.5**	**-1.7**
	comp=Z,1.5nm,0.3s,baz=56,slow=5.4,SNR=22						
ASAR	**Alice Springs**	**70.34**	**197**	P	**P**	**20 55 15.3**	**+2.0**
	comp=Z,1.7nm,0.8s,baz=12,slow=6.5,SNR=18						
ASAR	**Alice Springs**	**70.34**	**197**	*e*P	**P**	**20 55 15.5**	**+2.2**
ASAR	**Alice Springs**	**70.34**	**197**	*e*P	**P**	**20 55 15.5**	**+2.2**
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NCK	**Nalchik**	**70.74**	**313**	⇑*i*P	**P**	**20 55 16.3**	**+0.6**
NCK				pmax	pmax		
	comp=Z,17nm,1.2s						
KIV	**Kislovodsk**	**70.89**	**314**	*e*P	**P**	**20 55 17.7**	**+1.0**
KIV	**Kislovodsk**	**70.89**	**314**	*e*P	**P**	**20 55 17.7**	**+1.0**
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KBZ	**Khabaz**	**70.94**	**313**	P	**P**	**20 55 16.7**	**-0.1**
	comp=Z,9.2nm,0.9s,baz=48,slow=2.8,SNR=12						
AKASG	**Malin Array Be**	**72.05**	**325**	P	**P**	**20 55 22.1**	**-1.3**
	comp=Z,1.7nm,0.5s,baz=36,slow=6.4,SNR=5.6						
KIEV	**Kiev**	**72.06**	**325**	*e*P	**P**	**20 55 22.3**	**-1.2**
KIEV	**Kiev**	**72.06**	**325**	⇓*e*P	**P**	**20 55 22.3**	**-1.2**
KIEV				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SORM	**Soroca**	**74.42**	**324**	⇓*i*P	**P**	**20 55 36.5**	**-0.9**
SORM	**Soroca**	**74.42**	**324**	⇓P	**P**	**20 55 36.5**	**-0.9**
KWP	**Kalwaria Pacla**	**75.43**	**328**	*e*P	**P**	**20 55 43.3**	**0.0**
KWP	**Kalwaria Pacla**	**75.43**	**328**	*e*P	**P**	**20 55 43.3**	**0.0**
OJC	**Ojcow**	**75.99**	**330**	*e*P	**P**	**20 55 45.4**	**-1.1**
OJC	**Ojcow**	**75.99**	**330**	*e*P	**P**	**20 55 45.4**	**-1.1**
BURAR	**Bucovina Array**	**76.11**	**326**	⇓*i*P	**P**	**20 55 46.7**	**-0.6**
BURAR	**Bucovina Array**	**76.11**	**326**	⇓P	**P**	**20 55 46.7**	**-0.6**
TESR	**Tescani**	**76.41**	**324**	⇓*i*P	**P**	**20 55 47.9**	**-1.0**
NIE	**Niedzica**	**76.48**	**329**	*e*P	**P**	**20 55 49.3**	**0.0**
NIE	**Niedzica**	**76.48**	**329**	*e*P	**P**	**20 55 49.3**	**0.0**
TLCR		**76.55**	**322**	⇑*i*P	**P**	**20 55 48.0**	**-1.7**
TLCR		**76.55**	**322**	⇑P	**P**	**20 55 48.0**	**-1.7**
KSP	**Ksiaz**	**76.65**	**333**	*e*P	**P**	**20 55 49.9**	**-0.3**
KSP	**Ksiaz**	**76.65**	**333**	*e*P	**P**	**20 55 49.9**	**-0.3**
TRPA	**Tarpa**	**76.73**	**327**	⇑*i*P	**P**	**20 55 50.3**	**-0.3**
CFR	**Carcaliu**	**76.85**	**322**	⇑*i*P	**P**	**20 55 50.4**	**-1.0**
CFR	**Carcaliu**	**76.85**	**322**	⇑P	**P**	**20 55 50.4**	**-1.0**
UPC	**Upice**	**77.03**	**332**	*e*P	**P**	**20 55 52.3**	**-0.1**
UPC	**Upice**	**77.03**	**332**	*e*P	**P**	**20 55 52.3**	**-0.1**
MORC	**Moravsky Berou**	**77.15**	**331**	⇑*i*P	**P**	**20 55 52.6**	**-0.5**
MORC	**Moravsky Berou**	**77.15**	**331**	⇑P	**P**	**20 55 52.6**	**-0.5**
MORC	**Moravsky Berou**	**77.15**	**331**	*e*P	**P**	**20 55 52.4**	**-0.7**
CLL	**Collm**	**77.28**	**335**	⇑*i*P	**P**	**20 55 52.5**	**-1.2**
	comp=Z,7.0nm,0.6s						
CLL	**Collm**	**77.28**	**335**	⇑*i*P	**P**	**20 55 52.5**	**-1.2**
CLL				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HARR	**Harsova**	**77.32**	**322**	⇓*i*P	**P**	**20 55 53.3**	**-0.8**
HARR	**Harsova**	**77.32**	**322**	⇓P	**P**	**20 55 53.3**	**-0.8**
TLB	**Topalu**	**77.36**	**322**	⇓*i*P	**P**	**20 55 53.6**	**-0.6**
TLB	**Topalu**	**77.36**	**322**	⇓P	**P**	**20 55 53.6**	**-0.6**
BRG	**Berggiesshubel**	**77.37**	**334**	*e*P	**P**	**20 55 54.5**	**+0.2**
	comp=Z,4.5nm,1.1s						
BRG	**Berggiesshubel**	**77.37**	**334**	*e*P	**P**	**20 55 54.5**	**+0.2**
BRG				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MLR	**Muntele Rosu**	**77.52**	**324**	P	**P**	**20 55 55.7**	**+0.4**
	comp=Z,1.0nm,0.6s,baz=90,slow=2.0,SNR=9.9						
MLR	**Muntele Rosu**	**77.52**	**324**	⇑*i*P	**P**	**20 55 55.3**	**-0.1**
MLR	**Muntele Rosu**	**77.52**	**324**	⇑P	**P**	**20 55 55.3**	**-0.1**
DRGR		**77.76**	**327**	⇑*i*P	**P**	**20 55 55.9**	**-0.7**
DRGR		**77.76**	**327**	⇑P	**P**	**20 55 55.9**	**-0.7**
VYHS	**Vyhne**	**77.78**	**330**	*e*P	**P**	**20 55 56.2**	**-0.4**
VYHS				pmax	pmax		
	comp=Z,5.0nm,1.5s						
VYHS	**Vyhne**	**77.78**	**330**	*e*P	**P**	**20 55 56.2**	**-0.4**
ICOR	**Ion Corvin**	**77.83**	**322**	⇑*i*P	**P**	**20 55 57.1**	**+0.2**
VRAC	**Vranov**	**77.87**	**332**	*e*P	**P**	**20 55 56.8**	**-0.3**
JAVC	**Velka Javorina**	**77.88**	**331**	*e*P	**P**	**20 55 57.7**	**+0.5**
VOIR		**77.94**	**324**	⇑*i*P	**P**	**20 55 57.4**	**-0.2**
VOIR		**77.94**	**324**	⇑P	**P**	**20 55 57.4**	**-0.2**
GOPC	**GO Pecny, Ondr**	**77.94**	**333**	*e*P	**P**	**20 55 57.1**	**-0.4**
GOPC	**GO Pecny, Ondr**	**77.94**	**333**	*e*P	**P**	**20 55 57.1**	**-0.4**
PRU	**Pruhonice**	**77.95**	**333**	*e*P	**P**	**20 55 56.8**	**-0.7**
PRU	**Pruhonice**	**77.95**	**333**	*e*P	**P**	**20 55 56.8**	**-0.7**
KRUC	**Moravsky**	**78.15**	**332**	*e*P	**P**	**20 55 57.9**	**-0.7**
MODS	**Modra-Piesok**	**78.44**	**331**	*e*P	**P**	**20 56 00.7**	**+0.5**
MODS				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MODS	**Modra-Piesok**	**78.44**	**331**	*e*P	**P**	**20 56 00.7**	**+0.5**
BRTR	**Keskin Array B**	**78.56**	**316**	P	**P**	**20 56 00.4**	**-0.9**
	comp=Z,2.3nm,0.9s,baz=96,slow=5.0,SNR=9.7						
BRTR	**Keskin Array B**	**78.56**	**316**	*e*P	**P**	**20 56 01.1**	**-0.1**
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KHC	**Kasperske Hory**	**79.01**	**333**	*e*P	**P**	**20 56 03.2**	**-0.2**
KHC				*e*pP	**PcP**	**20 56 06.9**	**-4.9**
KHC	**Kasperske Hory**	**79.01**	**333**	*e*P	**P**	**20 56 03.2**	**-0.2**
KHC				*e*		20 56 06.9	
BZS	**Buzias**	**79.16**	**327**	⇑*i*P	**P**	**20 56 03.3**	**-0.9**
BZS	**Buzias**	**79.16**	**327**	⇑P	**P**	**20 56 03.4**	**-0.8**
GERES	**GERESS Array B**	**79.22**	**333**	P	**P**	**20 56 03.8**	**-0.8**
	comp=Z,2.0nm,0.6s,baz=34,slow=5.7,SNR=22						
GERES	**GERESS Array B**	**79.22**	**333**	*e*P	**P**	**20 56 04.0**	**-0.6**
GERES	**GERESS Array B**	**79.22**	**333**	*e*P	**P**	**20 56 04.0**	**-0.6**
GERES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
GRFO	**Grafenberg**	**79.25**	**335**	*e*P	**P**	**20 56 04.3**	**-0.3**
	comp=Z,6.1nm,0.8s						
GRFO	**Grafenberg**	**79.25**	**335**	*e*P	**P**	**20 56 04.3**	**-0.3**
GRFO				pmax	pmax		
	comp=Z,6.0nm,0.8s						
TXAR	**Lajitas Array**	**79.43**	**59**	P	**P**	**20 56 07.7**	**+1.6**
	comp=Z,0.7nm,0.5s,baz=289,slow=4.1,SNR=4.6						
VTS	**Vitosha**	**81.03**	**324**	⇓*i*P	**P**	**20 56 14.0**	**-0.6**
VTS	**Vitosha**	**81.03**	**324**	⇓P	**P**	**20 56 14.0**	**-0.6**
BFO	**Black Forest**	**81.32**	**336**	*i* P	**P**	**20 56 15.7**	**-0.1**
DAVOX	**Davos/Dischmat**	**82.25**	**334**	P	**P**	**20 56 20.8**	**-0.2**
	comp=Z,1.3nm,0.5s,baz=342,slow=19,SNR=3.3						
PDG	**Podgorica**	**82.76**	**326**	⇓*i*P	**P**	**20 56 22.3**	**-1.2**
MMAI	**Mount Meron Ar**	**82.79**	**310**	P	**P**	**20 56 24.2**	**+0.3**
	comp=Z,1.6nm,0.5s,baz=63,slow=6.6,SNR=6.5						
KEST	**Kesra**	**92.34**	**330**	LR	LR	21 41 53.5	
	comp=Z,140nm,21.7s,baz=228,slow=38						
PLCA	**Paso Flores**	**149.40**	**97**	PKPbc	**PKPbc**	**21 03 49.2**	**+1.1**
	comp=Z,2.0nm,0.8s,baz=311,slow=4.4,SNR=4.7						
SNAA	**Sanae**	**150.70**	**196**	PKPbc	**PKPbc**	**21 03 50.8**	**+0.5**
	comp=Z,3.0nm,0.8s,baz=120,slow=3.5,SNR=14						

IDC 09 20:44:27.1±4.0,**4°.64S**×**126°.22E**,**h390**^{km}±28^{km},**mb3.0**/2,
mb1 3.2/5,**mb1mx2.7**/57,**mbtmp4.0**/5,**Error ellipse:**
s-maj=88.5km s-min=15.2km az=128.0,Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**6.08**	**205**	P	Pn	20 45 59.8	-0.6
	3.5nm,0.3s,baz=81,slow=5.4,SNR=5.4						
BATI				S	S	20 47 15.8	-0.4
	3.2nm,0.3s,baz=90,slow=20,SNR=2.9						
SIJI	**Sorong**	**6.28**	**53**	P	Pn	20 46 03.7	+1.2
	1.6nm,0.3s,baz=265,slow=23,SNR=29						
SIJI				S	S	20 47 19.9	-0.2
	0.3nm,0.3s,baz=45,slow=20,SNR=2.6						
WRA	**Warramunga Arr**	**17.14**	**153**	P	P	20 48 03.0	0.0
	0.5nm,0.3s,baz=340,slow=9.9,SNR=34						
ASAR	**Alice Springs**	**20.31**	**159**	P	P	20 48 35.3	0.0
	0.8nm,0.4s,baz=344,slow=14,SNR=20						
STKA	**Stephens Creek**	**30.69**	**154**	P	P	20 50 07.7	+0.1
	1.1nm,0.5s,baz=323,slow=8.6,SNR=4.4						

SCB 09 20:53:58.5±3.1,**17°.38S**×**69°.25W**,**h0**^{km}±5^{km},**ML3.5**/4,
Error ellipse: s-maj=20.5km s-min=5.1km az=2.0,
Peru-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BBOD	**La Paz, Gloria**	**0.97**	**40**	P	Pn	20 54 20.6	+0.8
BBOJ	**La Paz, Jacaqu**	**1.09**	**69**	P	Pn	20 54 23.2	+1.7
LPAZ	**La Paz**	**1.53**	**45**	P	Pn	20 54 27.0	-0.6
LPAZ				S	Sn	20 54 50.8	+2.4
LPAZ				AML	AML	20 54 52.5	
	266nm,0.4s						
BBOB	**La Paz, Bander**	**1.63**	**41**	P	Pn	20 54 27.3	-1.6
MNMC	**Minye Minye**	**1.77**	**191**	P	Pb	20 54 31.9	-0.2
BS05	**Cuyupaya**	**2.24**	**81**	P	Pn	20 54 38.0	+0.8
BS05				S	Sn	20 55 06.9	+1.2
PSGC	**Pisagua**	**2.36**	**200**	P	Pn	20 54 37.4	-1.1
PSGC				S	Sn	20 55 09.2	+1.0
PSGC				AML	AML	20 55 11.1	
	124nm,0.2s						
PB08	**IPOC Station P**	**2.75**	**178**	P	Pn	20 54 44.5	+0.3
PB01	**IPOC Station P**	**3.65**	**183**	P	Pn	20 54 54.8	-1.6
PB01				S	Sn	20 55 39.6	-0.6
PB01				AML	AML	20 55 41.0	
	185nm,0.3s						
BB01	**Montecillos**	**3.87**	**101**	P	Pn	20 54 59.0	-0.5
PB02	**IPOC Station P**	**3.97**	**189**	P	Pn	20 54 58.7	-2.0
PB02				S	Sn	20 55 46.0	-2.0
PB02				AML	AML	20 55 48.3	
	147nm,0.3s						
BB03	**San Joaquˆ›n**	**4.20**	**86**	P	Pn	20 55 00.7	-3.1
PB04	**IPOC Station P**	**5.00**	**190**	P	Pn	20 55 12.1	-2.9
MOCB	**Mochara**	**5.15**	**139**	P	Pn	20 55 18.3	+1.1
BB02	**La Guardia**	**5.68**	**96**	P	Pn	20 55 21.2	-3.0

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*ISCJB **09** 21:01:32.9±0.3,7°.71S±0°.03×127°.57E±0°.04,h162^{km},*
mb4.2/19,Error ellipse: s-maj=5.3km s-min=4.3km az=3.1
*NEIC **09** 21:01:33.3±0.7,7°.63S×127°.57E,h158^{km}±8^{km},mb4.4/7,*
Error ellipse: s-maj=9.0km s-min=7.4km az=48.0
*DJA **09** 21:01:34.2±0.3,8°S±3°×12°8E±°,h177^{km}±14^{km},M4.4/12,*
mb4.2/10,mB5.0/3,MLv4.5/12,Mw(mB)4.3/3
*IDC **09** 21:01:34.9±1.4,7°.64S×127°.43E,h166^{km}±12^{km},mb3.7/12,*
mb1 3.9/15,mb1mx3.5/55,mbtmp4.3/15,Error ellipse:
s-maj=15.6km s-min=9.6km az=97.0
ISC 09 21:01:33.9±0.4,**7°.71S**±0°.05×**127°.57E**±0°.06,**h162**^{km},**n59,**
σ**1^{s}.51**/67,**mb4.2**/19,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**3.71**	**94**	*e*Pn	**Pn**	**21 02 31.6**	**+0.9**
SOEI	**Soe**	**3.84**	**238**	P	**Pn**	**21 02 33.5**	**+0.9**
SOEI	**Soe**	**3.84**	**238**	*e*Pn	**Pn**	**21 02 33.4**	**+0.9**
NLAI	**Namlea**	**4.47**	**354**	P	**Pn**	**21 02 43.4**	**+2.8**
MSAI	**Masohi**	**4.54**	**17**	P	**Pn**	**21 02 43.5**	**+1.9**
BATI	**Baumata**	**4.58**	**237**	P	**Pn**	**21 02 43.2**	**+1.1**
	42nm,0.3s,baz=114,slow=2.7,SNR=62						
BATI				S	**Sn**	**21 03 35.3**	**-0.1**
	106nm,0.3s,baz=81,slow=20,SNR=23						
BATI	**Baumata**	**4.58**	**237**	P	**Pn**	**21 02 43.3**	**+1.1**
MMRI	**Maumere**	**5.36**	**260**	P	**Pn**	**21 02 52.7**	**+0.5**
MMRI	**Maumere**	**5.36**	**260**	*e*Pn	**Pn**	**21 02 52.7**	**+0.5**
SANI	**Sanana**	**5.84**	**344**	P	**Pn**	**21 03 00.0**	**+1.3**
EDFI	**Ende, Flores**	**5.91**	**260**	P	**Pn**	**21 02 59.7**	**+0.1**
MTN	**Manton Dam**	**6.19**	**146**	*e*Pn	**Pn**	**21 03 03.4**	**+0.2**
FAKI	**Fak Fak**	**6.66**	**45**	P	**Pn**	**21 03 09.0**	**-0.6**
FAKI	**Fak Fak**	**6.66**	**45**	*e*Pn	**Pn**	**21 03 07.8**	**-1.8**
LBMI	**Labuha**	**7.03**	**359**	P	**Pn**	**21 03 16.5**	**+2.0**
	46nm,1.7s,0.2nm						
WSI	**Waingapu**	**7.45**	**254**	P	**Pn**	**21 03 20.7**	**+0.8**
SIJI	**Sorong**	**7.73**	**29**	P	**Pn**	**21 03 23.6**	**-0.3**
	3.0nm,0.3s,baz=184,slow=22,SNR=17						
SIJI				S	**Sn**	**21 04 51.4**	**+1.0**
	1.3nm,0.3s,baz=287,slow=19,SNR=4.4						
WBSI	**Waikabubak, Su**	**8.31**	**256**	P	**Pn**	**21 03 32.6**	**+1.1**
FITZ	**Fitzroy Crossi**	**10.49**	**190**	*e*Pn	**Pn**	**21 03 57.7**	**-2.5**
JAGI	**Jajag, Banyuwa**	**13.30**	**266**	*e*Pn	**Pn**	**21 04 36.7**	**0.0**
WRAB	**Tennant Creek**	**13.81**	**152**	*e*Pn	**Pn**	**21 04 42.0**	**-1.1**
WRA	**Warramunga Arr**	**13.81**	**152**	P	**Pn**	**21 04 40.5**	**-2.6**
	4.3nm,0.3s,baz=340,slow=12,SNR=137						
WRA				S	Sn	21 07 06.9	-10
	3.1nm,0.3s,baz=330,slow=22,SNR=7.6						
WB2	**Warramunga Arr**	**13.82**	**152**	*e*Pn	**Pn**	**21 04 41.9**	**-1.3**
COEN	**Coen**	**16.53**	**113**	*e*P	**Pn**	**21 05 17.0**	**+0.4**
	12nm,0.8s						
AS31	**Alice Springs**	**16.99**	**160**	*e*P	**Pn**	**21 05 22.7**	**+0.6**
	9.2nm,0.4s						
ASAR	**Alice Springs**	**16.99**	**160**	P	**Pn**	**21 05 22.4**	**+0.3**
	6.5nm,0.3s,baz=338,slow=11,SNR=399						
ASAR				S	**S**	**21 08 25.5**	**-4.8**
	1.2nm,0.3s,baz=316,slow=17,SNR=5.7						
SMRI	**Semarang**	**17.00**	**271**	*e*P	**P**	**21 05 20.8**	**-0.7**
	149nm,1.7s						
AS01	**Alice Springs**	**17.00**	**160**	*e*P	**Pn**	**21 05 23.5**	**+1.2**
FORT	**Forrest**	**22.95**	**179**	*e*P	**P**	**21 06 24.9**	**+0.8**
	58nm,1.5s						
BBOO	**Buckleboo**	**26.19**	**164**	*e*P	**P**	**21 06 55.0**	**+1.5**
	65nm,1.9s						
NWAO	**Narrogin (SRO)**	**26.86**	**200**	P	**P**	**21 07 00.6**	**+1.1**
	4.9nm,0.5s,baz=242,slow=6.3,SNR=5.9						
STKA	**Stephens Creek**	**27.36**	**153**	P	**P**	**21 07 05.5**	**+1.4**
	4.0nm,0.5s,baz=317,slow=10,SNR=13						
STKA	**Stephens Creek**	**27.36**	**153**	*e*P	**P**	**21 07 05.2**	**+1.1**
STKA				*e*pP	**pP**	**21 07 38.8**	**+1.0**
NACB	**Ninganchiao**	**32.23**	**350**	*e*P	**P**	**21 07 45.0**	**-2.0**
	15nm,0.8s						
CBIJ	**Chichi jima**	**37.39**	**22**	*e*P	**P**	**21 08 29.4**	**-1.8**
	506nm,1.9s						
CMAR	**Chiang Mai Arr**	**38.39**	**313**	P	**P**	**21 08 39.4**	**-0.4**
	0.5nm,0.4s,baz=132,slow=6.5,SNR=8.2						
CMAR				ScP	**S**	**21 14 21.4**	**-1.3**
	0.3nm,0.6s,baz=175,slow=2.0,SNR=4.1						
GYA	**Guiyang**	**39.57**	**330**	*e*P	**P**	**21 08 50.0**	**+0.4**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC	**Hu-ho-hao-te**	**50.52**	**344**	*e*P	**P**	**21 10 17.4**	**+1.7**
HHC				pmax	pmax		
	comp=Z,11nm,1.1s						
HHC				pmax	pmax		
	comp=Z,120nm,5.1s						
USRK	**Ussuriysk Ar.**	**51.83**	**4**	P	**P**	**21 10 27.0**	**+1.8**
	comp=Z,2.2nm,0.7s,baz=164,slow=8.8						
SONM	**Songino Array**	**58.39**	**343**	P	**P**	**21 11 13.0**	**+0.6**
	comp=Z,0.3nm,0.5s,baz=134,slow=8.3,SNR=2.9						
SONA1	**Songino Array**	**58.40**	**343**	*e*P	**P**	**21 11 12.2**	**-0.3**
WMQ	**Urumqi**	**62.71**	**329**	P	**P**	**21 11 43.0**	**+1.3**
KSH	**Kashi**	**66.94**	**319**	*e*P	**P**	**21 12 11.1**	**+1.9**
KSH				*e*PcP	**PcP**	**21 12 38.0**	**+1.5**
KSH				sP	sP	21 13 07.3	+1.9
KSH				PcS		21 16 40.3	
KSH				S	**S**	**21 20 46.7**	**-2.8**
KSH				ScS	**SKSac**	**21 21 46.1**	**-4.9**
KSH				pmax	pmax		
	comp=Z,82nm,5.1s						
MK01	**Makanchi Array**	**67.50**	**328**	*e*P	**P**	**21 12 12.0**	**-0.6**
MK31	**Makanchi Array**	**67.53**	**328**	*e*P	**P**	**21 12 12.2**	**-0.4**
MKAR	**Makanchi Array**	**67.53**	**328**	P	**P**	**21 12 11.6**	**-1.0**
	comp=Z,0.9nm,0.6s,baz=127,slow=7.6,SNR=14						
MKAR	**Makanchi Array**	**67.53**	**328**	*e*P	**P**	**21 12 12.2**	**-0.5**
	comp=Z,6.0nm,0.6s						
ZALV	**Zalesovo Beam**	**71.18**	**335**	P	**P**	**21 12 33.4**	**-1.5**
	comp=Z,1.2nm,0.5s,baz=131,slow=4.2,SNR=5.2						
ZALV	**Zalesovo Beam**	**71.18**	**335**	*e*P	**P**	**21 12 33.6**	**-1.2**
KURBB	**Kurchatov Arra**	**71.88**	**330**	P	**P**	**21 12 38.3**	**-0.8**
	comp=Z,1.5nm,0.6s,baz=132,slow=5.0,SNR=20						
KURK	**Kurchatov**	**71.89**	**330**	*e*P	**P**	**21 12 38.9**	**-0.3**
	comp=Z,4.7nm,1.3s						
VNDA	**Vanda**	**72.04**	**173**	P	**P**	**21 12 41.0**	**+1.3**
	comp=Z,1.5nm,0.5s,baz=314,slow=6.1,SNR=12						
VNDA	**Vanda**	**72.04**	**173**	*e*P	**P**	**21 12 41.1**	**+1.4**
	comp=Z,1.9nm,0.7s						
SEY	**Seymchan**	**72.97**	**12**	P	**P**	**21 12 45.9**	**+0.6**
	comp=Z,1.0nm,0.5s,baz=261,slow=3.4,SNR=6.3						
TIXI	**Tiksi**	**79.20**	**0**	P	**P**	**21 13 20.3**	**-0.1**
	comp=Z,1.0nm,0.5s,baz=248,slow=5.0,SNR=3.5						
QSPA	**South Pole Qui**	**82.27**	**180**	P	**P**	**21 13 37.6**	**+0.6**
	comp=Z,2.9nm,0.6s,baz=294,slow=2.2,SNR=9.6						
TORD	**Torodi Ar. Bea**	**126.57**	**281**	PKP	**PKPdf**	**21 20 18.4**	**-0.5**
	comp=Z,0.5nm,0.7s,baz=150,slow=4.6						
CPUP	**Villa Florida**	**145.83**	**172**	PKPbc	**PKPab**	**21 20 55.6**	**+0.2**
	comp=Z,2.0nm,0.4s,baz=186,slow=1.0,SNR=5.8						
LPAZ	**La Paz**	**151.54**	**147**	PKPbc	**PKPbc**	**21 21 11.6**	**+1.0**
	comp=Z,1.3nm,0.4s,baz=32,slow=3.9,SNR=9.0						

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*ISCJB **09** 21:08:13.0±0.8,32°.44N±0°.05×141°.98E±0°.08,h31^{km},*
mb3.6/4,Error ellipse: s-maj=10.1km s-min=6.7km
az=164.9
*JMA **09** 21:08:14.1±0.2,32°.43N×141°.77E,h108^{km},M3.1*
*IDC **09** 21:08:14.1±2.5,32°.11N×141°.38E,h0^{km},mb3.5/4,*
mb1 3.6/6,mb1mx3.4/67,mbtmp3.6/6,ML3.4/2,MS3.1/1,
Ms1 3.1/1,ms1mx2.3/57,Error ellipse: s-maj=85.5km
s-min=16.6km az=63.0
ISC 09 21:08:14.6±1.0,**32°.40N**±0°.05×**142°.02E**±0°.09,**h31**^{km},**n18,**
σ**2^{s}.31**/23,**mb3.7**/4,**Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	1.91	273	P	Pn	21 08 43.7	-1.3
JHJ2	Mitsune	1.99	292	P	Pn	21 08 44.8	-1.3
JHCJ	Hachijojimakas	1.99	290	P	Pn	21 08 44.4	-1.7
JHJ	Hachijo jima 2	2.02	291	Pn	Pn	21 08 44.8	-1.7
	26nm,0.3s,baz=252,slow=20,SNR=32						
JHJ				Sn	Sn	21 09 08.6	-2.0
	33nm,0.3s,baz=246,slow=20,SNR=5.4						
JHJ				LR	LR	21 09 37.9	
	comp=Z,137nm,18.1s,baz=110,slow=51						
BSO1	Boso 1	2.41	339	P	Pn	21 08 51.6	+0.2
BSO1				eS	Sn	21 09 20.1	+0.5
JMKN	Mikurajimanish	2.52	307	eS	Sn	21 09 20.4	-2.8
JHO	Hitachi	4.37	345	P	Pn	21 09 18.4	-0.5
JAG	Ashikaga	4.54	333	P	Pn	21 09 21.1	-0.1
JFK	Kawauchi	5.04	350	P	Pn	21 09 27.1	-1.1
JFK				eS	Sn	21 10 20.6	-4.8
MJAR	Matsushiro Arr	5.19	324	Pn	Pn	21 09 30.7	+0.5
	0.5nm,0.3s,baz=162,slow=13,SNR=4.6						
JCJ	Chichijima	5.29	178	Pn	Pn	21 09 31.1	-0.4
	3.3nm,0.3s,baz=246,slow=20,SNR=2.9						
JCJ				Sn	Sn	21 10 28.2	-3.1
	6.3nm,0.3s,baz=288,slow=20,SNR=2.7						
JFT	Otama	5.29	345	P	Pn	21 09 31.2	-0.3
JFT				eS	Sn	21 10 28.8	-2.6
JMK	Ichinoseki	6.57	355	P	Pn	21 09 48.7	-0.4
JMK				eS	Sn	21 10 58.1	-4.8
KSRS	Korea Array	12.62	297	LR	LR	21 15 57.8	
	comp=Z,81nm,19.3s,baz=318,slow=38						
MKAR	Makanchi Array	47.12	306	P	P	21 16 44.5	+0.7
	0.3nm,0.5s,baz=89,slow=9.5,SNR=4.9						
WRA	Warramunga Arr	52.56	189	P	P	21 17 26.1	+0.8
	0.6nm,0.5s,baz=5.5,slow=7.6,SNR=17						
BVAR	Borovoye Array	54.13	315	P	P	21 17 40.3	+3.8
	0.5nm,0.4s,baz=103,slow=7.9,SNR=3.4						
ASAR	Alice Springs	56.29	189	P	P	21 17 54.7	+2.3
	0.2nm,0.5s,baz=8.8,slow=8.4,SNR=3.3						

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*IDC **09** 21:45:02.3±1.9, 8°.89S×125°.69E, h0^{km}, mb3.5/1, mb1 3.7/4, mb1mx3.4/49, mbtmp3.5/4, ML3.5/3, MS2.7/1, Ms1 2.7/1, ms1mx2.3/34, Error ellipse: s-maj=34.2km s-min=31.0km az=102.0*

*ISCJB **09** 21:45:03.7±1.0, 8°.91S±0°.09×125°.78E±0°.06, h33^{km}, mb3.6/1, Error ellipse: s-maj=12.8km s-min=8.6km az=11.3*

*DJA **09** 21:45:08.9±1.0, 9°S±6°×12°5E±°, h10^{km}, M4.0/6, mb4.3/2, MLv3.9/6*

ISC 09 21:45:05.4±1.3**, 9°.0S**±0°.1×**125°.76E**±0°.08**, h35^{km}, n11,** σ**2^{s}.00**/16**, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.67	242	P	Pn	21 45 33.1	+0.8
BATI	Baumata	2.41	239	Pn	Pn	21 45 43.3	+1.0
	18nm,0.3s,baz=148,slow=2.6,SNR=22						
BATI				LR	LR	21 46 11.6	
	comp=Z,153nm,19.3s,baz=232,slow=29						
BATI				Sn	Sn	21 46 12.8	+2.1
	15nm,0.3s,baz=147,slow=20,SNR=3.7						
BATI	Baumata	2.41	239	P	Pn	21 45 43.0	+0.6
BATI				S	Sn	21 46 11.0	+0.4
MMRI	Maumere	3.50	275	P	Pn	21 45 57.9	+0.5
EDFI	Ende, Flores	4.03	273	P	Pn	21 46 04.4	-0.4
EDFI				S	Sn	21 46 47.1	-3.8
BASI	Baing, Sumba	5.26	256	P	Pn	21 46 21.0	-0.6
WBSI	Waikabubak, Su	6.32	263	P	Pn	21 46 35.0	-1.3
PLAI	Plampang	7.89	270	P	Pn	21 46 57.3	-0.5
WRA	Warramunga Arr	13.70	144	Pn	Pn	21 48 18.7	+1.4
	0.2nm,0.3s,baz=320,slow=14,SNR=20						
WRA				Sn	Sn	21 50 44.9	-3.6
	0.2nm,0.3s,baz=316,slow=24,SNR=5.3						
ASAR	Alice Springs	16.56	153	Pn	P	21 48 58.0	+0.6
	0.1nm,0.3s,baz=323,slow=11,SNR=11						
ASAR				Sn	Sn	21 51 54.6	-3.4
	0.1nm,0.3s,baz=313,slow=19,SNR=4.8						
MKAR	Makanchi Array	67.67	329	P	P	21 56 00.6	+1.5
	0.3nm,0.5s,baz=115,slow=5.5,SNR=5.0						

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*NIED **09** 22:03:00, 25°.70N×123°.90E, h175^{km}, Mw4.0 Best double couple: $M_0$9.78000×10^{14} NP1:ϕ_s269.00000°, δ40.00000°, λ-123.00000°. NP2:ϕ_s129.00000°, δ57.00000°, λ-65.00000°.*

*ISCJB **09** 22:03:09.4±0.3, 25°.78N±0°.07×123°.95E±0°.05, h189^{km}±6^{km}, mb3.5/13, Error ellipse: s-maj=12.7km s-min=4.6km az=148.9*

*IDC **09** 22:03:09.7±2.5, 25°.76N×123°.84E, h177^{km}±24^{km}, mb3.3/13, mb1 3.4/14, mb1mx3.2/61, mbtmp3.8/14, Error ellipse: s-maj=24.5km s-min=12.2km az=58.0*

*JMA **09** 22:03:12.2±0.2, 25°.68N×123°.92E, h178^{km}, M4.0*

ISC 09 22:03:10.0±0.7**, 25°.87N**±0°.08×**123°.90E**±0°.06**, h180**^{km}±9^{km}**, n35,** σ**1^{s}.18**/58**, mb3.5**/13**, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JISG	Ishigakijimahi	1.33	164	P	Pn	22 03 41.1	+0.7
JISG				S	Sn	22 04 03.3	-0.6
JTJ	Tarama	1.42	149	P	Pn	22 03 42.2	+1.0
JTJ				S	Sn	22 04 04.7	-0.7
JIJ	Ishigaki jima	1.52	172	P	Pn	22 03 42.3	+0.2
JIJ				S	Sn	22 04 04.9	-2.1
IRIF	Iriomote-Funau	1.54	186	P	Pn	22 03 42.5	+0.2
IRIF				eS	Sn	22 04 06.2	-1.1
JIKM	Ikemajima	1.54	127	P	Pn	22 03 44.0	+1.7
JIKM				S	Sn	22 04 07.5	+0.2
JIRB	Irabujima	1.55	132	P	Pn	22 03 43.5	+1.1
JIRB				S	Sn	22 04 06.9	-0.6
YOJ	Yonaguni jima	1.62	210	P	Pn	22 03 43.9	+0.8
YOJ				S	Sn	22 04 08.1	-0.6
JKRS	Kuro-shima	1.63	177	P	Pn	22 03 43.7	+0.5
JKRS				S	Sn	22 04 07.5	-1.4
JMJ	Miyako jima 2	1.64	130	P	Pn	22 03 44.9	+1.6
JMJ				S	Sn	22 04 09.1	0.0
JYNG	Yonagunijimaku	1.66	212	P	Pn	22 03 44.1	+0.6
JYNG				S	Sn	22 04 08.5	-0.9
JOGS	Gusukube	1.75	129	P	Pn	22 03 46.0	+1.6
JOGS				S	Sn	22 04 11.2	+0.1
HATJ	Hateruma jima	1.81	183	P	Pn	22 03 45.3	+0.3
HATJ				S	Sn	22 04 10.5	-1.7
JKE	Kume jima 2	2.63	79	P	Pn	22 03 55.9	+1.7
JAGN	Aguni-jima	3.08	76	P	Pn	22 04 01.1	+1.5
JAGN				S	Sn	22 04 38.7	+0.4
JJT3	Tamagusuku3	3.50	85	P	Pn	22 04 06.2	+1.4
JJT3				S	Sn	22 04 47.2	-0.4
JNTH	Nagotoyohara	3.76	79	P	Pn	22 04 08.9	+0.9
JNTH				S	Sn	22 04 51.1	-2.2
JIH	Iheya	3.82	71	P	Pn	22 04 09.9	+1.1
JIH				S	Sn	22 04 53.2	-1.6
JOW	Kunigami	4.04	75	P	Pn	22 04 11.9	+0.4
	16nm,0.3s,baz=153,slow=14,SNR=103						
JOW				S	Sn	22 04 56.9	-2.8
	104nm,0.3s,baz=121,slow=26,SNR=56						
JOW	Kunigami	4.04	75	P	Pn	22 04 11.8	+0.3
JOW				S	Sn	22 04 57.4	-2.3
JYRO	Yoronjima	4.24	73	P	Pn	22 04 14.4	+0.4
JYRO				S	Sn	22 05 01.8	-2.4
JOKE	Okinoerabujima	4.43	69	P	Pn	22 04 17.0	+0.4
JOKE				eS	Sn	22 05 07.4	-1.5
KSRS	Korea Array	12.04	16	P	P	22 05 59.3	-1.9
	0.3nm,0.3s,baz=200,slow=14,SNR=5.7						
SONM	Songino Array	25.90	332	P	P	22 08 26.1	+0.8
	0.6nm,0.9s,baz=168,slow=2.8,SNR=2.7						
MKAR	Makanchi Array	38.91	313	P	P	22 10 18.6	+0.6
	0.6nm,0.4s,baz=103,slow=9.1,SNR=16						
MKAR				PcP	PcP	22 12 24.4	-0.6
	0.5nm,0.7s,baz=88,slow=4.4,SNR=5.3						
ZALV	Zalesovo Beam	40.23	325	P	P	22 10 28.8	-0.1
	4.0nm,0.5s,baz=115,slow=8.3,SNR=16						
KURBB	Kurchatov Arra	42.47	318	P	P	22 10 47.5	+0.5
	0.9nm,0.6s,baz=110,slow=9.2,SNR=11						
WRA	Warramunga Arr	46.65	166	P	P	22 11 19.4	-1.1
	0.4nm,0.4s,baz=348,slow=8.7,SNR=10						
BVAR	Borovoye Array	47.98	319	P	P	22 11 30.8	+0.4
	0.6nm,0.5s,baz=108,slow=6.6,SNR=7.7						
BVAR				PcP	PcP	22 12 55.7	0.0
	0.5nm,0.6s,baz=92,slow=3.5,SNR=5.6						
ASAR	Alice Springs	50.19	168	P	P	22 11 47.2	-0.3
	0.5nm,0.8s,baz=355,slow=9.5,SNR=5.0						
ASAR				PcP	PcP	22 13 03.1	-0.9
	0.4nm,0.6s,baz=339,slow=2.4,SNR=4.8						
GEYT	Alibeck	56.09	300	P	P	22 12 31.1	+0.5
	2.2nm,0.7s,baz=0.0,slow=0.6,SNR=6.8						
ILAR	Eielson Array	66.58	28	P	P	22 13 41.8	+1.3
	0.2nm,0.6s,baz=291,slow=5.7,SNR=4.0						
FINES	FINESS Array B	71.24	330	P	P	22 14 09.2	+0.1
	0.5nm,0.7s,baz=54,slow=7.1,SNR=6.2						
BRTR	Keskin Array B	74.16	307	P	P	22 14 27.4	+0.4
	0.9nm,0.9s,baz=94,slow=8.7,SNR=4.2						
HFS	Hagfors	77.30	331	P	P	22 14 43.6	-0.6
	0.5nm,0.4s,baz=90,slow=12,SNR=4.5						
NVAR	Mina Array Bea	93.52	44	P	P	22 16 06.8	+1.1
	0.2nm,0.3s,baz=298,slow=5.7,SNR=3.3						

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*ATH **09** 22:16:54.2, 41°.56N×19°.86E, h5^{km}±2^{km}, ML2.5/9, Error ellipse: s-maj=2.8km s-min=1.7km az=4.0*

*TIR **09** 22:16:55.7, 41°.38N×19°.95E, h6^{km}, Md3.1/5*

*THE **09** 22:16:56.6, 41°.45N×19°.97E, h3^{km}±4^{km}, ML2.3/4, Error ellipse: s-maj=5.6km s-min=1.1km az=41.0*

*CSEM **09** 22:16:57.1±0.2, 41°.43N×19°.87E, h2^{km}, ML2.0, Error ellipse: s-maj=5.0km s-min=2.8km az=58.0*

*PDG **09** 22:16:57.7±0.5, 41°.47N×19°.92E, h3^{km}±1^{km}, ML2.6/11, Error ellipse: s-maj=0.9km s-min=1.2km az=0.0*

ISC 09 22:16:56.7±1.1**, 41°.41N**±0°.01×**19°.93E**±0°.02**, h4**^{km}±9^{km}**, n133,** σ**1^{s}.46**/191**, 22C-11D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PHP	Peshkopia	0.47	54	i Pg	Pg	22 17 05.2	-0.7
PHP				i Sg	Sg	22 17 12.7	+0.7
PHP	Peshkopia	0.47	54	i PG	Pg	22 17 05.2	-0.7
PHP				i SG	Sg	22 17 12.7	+0.7
PUK	Puka	0.63	358	i Pg	Pg	22 17 08.9	0.0
PUK	Puka	0.63	358	i PG	Pg	22 17 08.9	0.0
PUK				i SG	Sb	22 17 19.8	+0.1
OHR	Ohrid	0.72	114	i Pg	Pg	22 17 09.7	-0.9
OHR				i Sg	Sn	22 17 25.1	-0.2
ULC	Ulcinj	0.76	317	ePg	Pg	22 17 10.1	-1.1
ULC				eSg	Sb	22 17 22.3	-0.8
ULC	Ulcinj	0.76	317	ePg	Pg	22 17 10.1	-1.1
ULC	Ulcinj	0.76	317	P	Pg	22 17 10.5	-0.7
DRME	Dracevica, Mon	0.96	325	⇑iPg	Pg	22 17 13.9	-1.2
DRME				eSg	Sb	22 17 28.7	-0.2
DRME	Dracevica, Mon	0.96	325	ePn	Pg	22 17 13.5	-1.6
DRME	Dracevica, Mon	0.96	325	⇑iPg	Pg	22 17 13.9	-1.2
DRME				eSg	Sb	22 17 28.7	-0.2
BCI	Bajram Curri	0.96	6	i Pn	Pg	22 17 14.7	-0.5
BCI				i Sn	Sn	22 17 29.7	-1.5
BCI	Bajram Curri	0.96	6	i PN	Pg	22 17 14.7	-0.5
BCI				i SN	Sn	22 17 29.7	-1.5
KRUS	Krusevo	0.99	92	i Pg	Pg	22 17 14.3	-1.5
KRUS				i Sg	Sg	22 17 29.4	+0.7
PRZK	Prizren	1.01	37	P	Pg	22 17 15.9	-0.3
KBN	Korca	1.02	140	i Pn	Pg	22 17 16.1	-0.2
KBN				i Sn	Sb	22 17 30.2	-0.5
KBN	Korca	1.02	140	i PN	Pg	22 17 16.1	-0.2
KBN				i SN	Sg	22 17 30.2	+0.7
BIA	Bitola	1.12	110	P	Pb	22 17 17.1	-1.6
BIA				S	Sg	22 17 33.0	+0.2
BIA	Bitola	1.12	110	i Pg	Pb	22 17 17.4	-1.3
BIA				i Sg	Sn	22 17 35.0	-0.2
BIA	Bitola	1.12	110	P	Pb	22 17 17.1	-1.6
PDG	Podgorica	1.14	334	⇓iP	Pb	22 17 18.2	-0.8
PDG				S	Sn	22 17 39.1	+3.6
PDG	Podgorica	1.14	334	P	Pb	22 17 16.8	-2.2
PDG				S	Sn	22 17 33.9	-1.6
PDG	Podgorica	1.14	334	P	Pb	22 17 16.8	-2.2
PDG	Podgorica	1.14	334	⇓iPg	Pb	22 17 17.4	-1.6
PDG				S	Sn	22 17 33.9	-1.6
PDG				eSg	Sn	22 17 34.6	-0.9
TTG	Podgorica	1.14	334	⇓iPg	Pb	22 17 17.4	-1.6
TTG				eSg	Sn	22 17 34.6	-0.9
BUM	Brajici-Budva	1.18	319	⇓iPg	Pb	22 17 18.2	-1.5
BUM				eSg	Sn	22 17 36.9	+0.3
BUM	Brajici-Budva	1.18	319	⇓iPg	Pb	22 17 18.2	-1.5
BUM				eSg	Sn	22 17 36.9	+0.3
PVY	Plav	1.19	1	⇑iPg	Pb	22 17 18.0	-1.9
PVY				eSg	Sn	22 17 36.2	-0.7
PVY	Plav	1.19	1	⇑iPg	Pb	22 17 18.0	-1.9
PVY				eSg	Sn	22 17 36.2	-0.7
FNA	Florina	1.26	119	P	Pn	22 17 18.9	-2.3
FNA				S	Sn	22 17 39.6	+1.0
FNA				AML	AML	22 17 45.5	
	comp=E,859µm,0.4s						
FNA				AML	AML	22 17 47.1	
	comp=N,663µm,0.9s						
FNA	Florina	1.26	119	P	Pn	22 17 19.6	-1.6
FNA				S	Sn	22 17 39.0	+0.4
FNA	Florina	1.26	119	P	Pn	22 17 19.6	-1.6
FNA				S	Sn	22 17 39.5	+0.9
SKO	Skopje	1.26	63	ePg	Pn	22 17 20.6	-0.6
SKO				i Sg	Sb	22 17 37.5	-0.3
NEST	Nestorio	1.31	139	P	Pg	22 17 22.2	+0.4
NEST				AML	AML	22 17 49.7	
	comp=N,204µm,0.7s						
NEST				AML	AML	22 17 51.0	
	comp=E,254µm,0.6s						
NEST	Nestorio	1.31	139	P	Pn	22 17 20.4	-1.4
NEST				S	Sg	22 17 39.3	+0.6
NEST	Nestorio	1.31	139	P	Pb	22 17 21.9	0.0
NEST				S	Sg	22 17 39.3	+0.6
CEME	Cevo	1.36	327	⇑iPg	Pn	22 17 21.6	-1.0
CEME				eSg	Sg	22 17 42.9	+2.3
CEME	Cevo	1.36	327	⇑iPg	Pn	22 17 21.6	-1.0
CEME				eSg	Sg	22 17 42.9	+2.3
BEY	Berane	1.46	359	⇑iPg	Pn	22 17 23.2	-0.8
BEY				eSg	Sg	22 17 45.7	+2.0
IVA	Berane	1.46	359	⇑iPg	Pn	22 17 23.2	-0.8
IVA				eSg	Sg	22 17 45.7	+2.0
KOME	Kolasin	1.47	348	ePg	Pn	22 17 23.4	-0.7
KOME				eSg	Sg	22 17 46.4	+2.3
KOME	Kolasin	1.47	348	ePg	Pn	22 17 23.4	-0.7
KOME				eSg	Sg	22 17 46.4	+2.3
HCY	Herceg Novi	1.49	315	⇑iPg	Pb	22 17 24.5	-0.5
HCY				eSg	Sg	22 17 47.4	+2.8
HCY	Herceg Novi	1.49	315	⇑iPg	Pb	22 17 24.5	-0.5
HCY	Herceg Novi	1.49	315	ePn	Pg	22 17 24.8	-0.5
HCY				eSg	Sg	22 17 47.4	+2.8
NKME	Niksic	1.54	332	ePg	Pn	22 17 24.6	-0.4
NKME				eSg	Sg	22 17 48.4	+2.2
NKME	Niksic	1.54	332	ePg	Pn	22 17 24.6	-0.4
NKME				eSg	Sg	22 17 48.4	+2.2
NKY	Niksic	1.57	334	⇑iPg	Pb	22 17 25.7	-0.6
NKY				eSg	Sg	22 17 49.8	+2.7
NKY	Niksic	1.57	334	⇑iPg	Pb	22 17 25.7	-0.6
NKY				eSg	Sg	22 17 49.8	+2.7
KEK	Kerkira	1.70	183	P	Pb	22 17 27.4	-1.1
KEK				S	Sg	22 17 53.4	+2.2
KEK				AML	AML	22 18 06.3	
	comp=N,125µm,0.7s						
KEK				AML	AML	22 18 12.4	
	comp=E,103µm,1.0s						
KEK	Kerkira	1.70	183	P	Pb	22 17 27.8	-0.7
KEK				S	Sb	22 17 49.3	-0.9
KEK	Kerkira	1.70	183	P	Pb	22 17 27.8	-0.7
KEK				S	Sb	22 17 49.3	-0.9
STIP	Stip	1.72	80	i Pn	Pg	22 17 29.6	-0.1
SCTE	Santa Cesarea	1.74	220	P	Pb	22 17 29.0	-0.1
SCTE	Santa Cesarea	1.74	220	P	Pb	22 17 28.6	-0.6
TREB	Trebinje	1.76	319	ePn	Pb	22 17 28.5	-1.0
KZN	Kozani	1.78	128	P	Pg	22 17 30.6	-0.3
KZN				AML	AML	22 18 04.9	
	comp=N,198µm,0.9s						
KZN				AML	AML	22 18 05.4	
	comp=E,242µm,0.8s						
KZN	Kozani	1.78	128	P	Pb	22 17 30.2	+0.3
SGD	Sagiada	1.81	172	P	Pb	22 17 30.4	0.0
SGD	Sagiada	1.81	172	P	Pn	22 17 29.0	+0.3
SGD	Sagiada	1.81	172	P	Pn	22 17 29.0	+0.3
BRY	Bratogost	1.81	326	⇓iPn	Pb	22 17 29.8	-0.8
BRY				eSn	Sg	22 17 56.4	+1.4
BRY	Bratogost	1.81	326	⇓iPn	Pb	22 17 29.8	-0.8
KPRO	Kipourio	1.82	143	P	Pg	22 17 32.1	+0.5
KPRO				AML	AML	22 18 06.2	
	comp=N,150µm,0.8s						
KPRO				AML	AML	22 18 17.1	
	comp=E,204µm,0.9s						
KPRO	Kipourio	1.82	143	P	Pg	22 17 31.2	-0.4
SJES	Sjenica	1.85	1	ePn	Pb	22 17 30.2	-1.0
IGT	Igoumenitsa	1.90	171	P	Pn	22 17 30.0	+0.1
IGT				S	Sg	22 18 00.3	+2.5
IGT				AML	AML	22 18 05.2	
	comp=E,123µm,0.8s						
IGT				AML	AML	22 18 12.9	
	comp=N,106µm,0.6s						
IGT	Igoumenitsa	1.90	171	P	Pn	22 17 30.4	+0.5
IGT				S	Sb	22 17 55.2	-0.8
IGT	Igoumenitsa	1.90	171	P	Pb	22 17 30.8	-1.2
IGT				S	Sb	22 17 55.2	-0.8
GRG	Griva	1.92	103	P	Pn	22 17 30.6	+0.4
GRG				AML	AML	22 18 03.8	
	comp=N,144µm,0.8s						
GRG				AML	AML	22 18 07.7	
	comp=E,147µm,0.9s						
GRG	Griva	1.92	103	P	Pn	22 17 30.3	+0.1
GRG	Griva	1.92	103	P	Pn	22 17 30.8	+0.6
UPM	Unac-Piva	1.95	337	⇑iPn	Pb	22 17 32.6	-0.3
UPM				eSn	Sg	22 17 59.9	+0.6
UPM	Unac-Piva	1.95	337	P	Pn	22 17 30.3	-0.4
UPM	Unac-Piva	1.95	337	⇑iPn	Pb	22 17 32.6	-0.3
UPM				eSn	Sg	22 17 59.9	+0.6
PLE	Pljevlja	1.96	348	⇑iPn	Pb	22 17 32.5	-0.6
PLE				eSn	Sg	22 18 00.2	+0.4
PLE	Pljevlja	1.96	348	⇑iPn	Pb	22 17 32.5	-0.6
PLE				eSn	Sg	22 18 00.2	+0.4
BARS	Barje	1.99	44	ePn	Pb	22 17 32.6	-0.9
IVAS	Ivanjica	2.17	4	ePn	Pn	22 17 34.4	+0.7
STON	Ston	2.21	312	i Pn	Pb	22 17 35.0	-2.2
STON				Sn	Sb	22 18 04.2	-0.7
STON	Ston	2.21	312	ePn	Pn	22 17 34.6	+0.5
NOCI	Noci	2.25	255	P	Pn	22 17 34.1	-0.6
NOCI	Noci	2.25	255	P	Pn	22 17 34.2	-0.6
KNT	Kendrikon	2.25	95	P	Pn	22 17 34.6	-0.2
KNT				AML	AML	22 18 13.2	
	comp=N,90µm,0.8s						
KNT				AML	AML	22 18 19.1	
	comp=E,67µm,1.0s						
KNT	Kendrikon	2.25	95	P	Pn	22 17 35.0	+0.2
LIT	Litokhoron	2.34	123	P	Pb	22 17 38.3	-1.2
LIT	Litokhoron	2.34	123	P	Pb	22 17 37.9	-1.6
THL	Klokotos Trika	2.43	139	P	Pb	22 17 38.8	-2.2
THL				S	Sb	22 18 09.9	-1.5
THL				AML	AML	22 18 28.9	
	comp=N,60µm,1.3s						
THL				AML	AML	22 18 32.1	
	comp=E,56µm,0.9s						
THL	Klokotos Trika	2.43	139	P	Pb	22 17 38.9	-2.2
THL				S	Sb	22 18 10.8	-0.6
BBLS	Lazići	2.49	351	ePn	Pb	22 17 40.3	-1.7
GRUS	Gruza	2.54	13	ePn	Pn	22 17 40.2	+1.4
BOVS	Bovan	2.58	30	ePn	Pn	22 17 40.7	+1.4
DIVS	Divibare	2.69	1	ePn	Pb	22 17 45.0	-0.5
VTS	Vitosha	2.71	63	⇑iP	Pb	22 17 43.5	-2.5
VTS	Vitosha	2.71	63	⇑iP	Pb	22 17 43.5	-2.5
VTS				S	Sb	22 18 21.2	+1.6
ZAPS	Zavoj	2.74	46	ePn	Pb	22 17 44.9	-1.4
HAPS	Han Pijesak,Bl	2.77	345	ePn	Pn	22 17 43.1	+1.1
SRS	Serrai	2.78	95	P	Pn	22 17 44.0	+2.0
SRS	Serrai	2.78	95	P	Pn	22 17 43.4	+1.4
TRUS	Trudelj	2.83	7	ePn	Pn	22 17 43.6	+0.8
PLG	Polygyros	2.86	110	P	Pb	22 17 46.3	-2.0
PLG	Polygyros	2.86	110	P	Pn	22 17 45.4	+2.3
EVR	Evrytania	2.88	149	P	Pb	22 17 47.4	-1.3
EVR	Evrytania	2.88	149	P	Pb	22 17 46.4	-2.3
NVR	Nevrokopi	2.96	90	P	Pn	22 17 45.6	+1.1
NVR	Nevrokopi	2.96	90	P	Pn	22 17 45.4	+0.9
AGG	Agios Georgios	3.01	142	P	Pn	22 17 47.2	+2.0
AGG	Agios Georgios	3.01	142	P	Pn	22 17 47.2	+2.0
ANX	Ano Chora	3.20	151	P	Pb	22 17 51.1	-3.1
ANX	Ano Chora	3.20	151	P	Pn	22 17 50.5	+2.6
PAIG	Paliouri	3.21	116	P	Pn	22 17 48.8	+0.9
PAIG	Paliouri	3.21	116	P	Pn	22 17 49.2	+1.2
XOR	Xorichti	3.22	128	P	Pn	22 17 48.4	+0.3
XOR	Xorichti	3.22	128	P	Pn	22 17 49.2	+1.1
TIP	Timpagrande	3.29	228	P	Pn	22 17 48.4	-0.8
TIP	Timpagrande	3.29	228	P	Pn	22 17 49.1	0.0
MDVR	Moldovita	3.62	21	⇑iP	Pn	22 17 52.9	-0.6
MDVR	Moldovita	3.62	21	⇑iP	Pn	22 17 52.9	-0.6
MDVR				S	Sn	22 18 39.6	+2.9
THAS	Thassos island	3.71	101	P	Pn	22 17 56.0	+1.2
THAS	Thassos island	3.71	101	P	Pn	22 17 56.1	+1.3
FGSL	Fruska Gora	3.75	359	ePn	Pn	22 17 55.7	+0.4
AOS	Alonnisos	3.76	125	P	Pn	22 17 55.9	+0.4
AOS	Alonnisos	3.76	125	P	Pn	22 17 56.7	+1.2
BLY	Banja Luka	3.90	330	⇑iP	Pb	22 18 01.3	-4.7
BLY	Banja Luka	3.90	330	S	Sg	22 19 04.7	+2.8
BLY	Banja Luka	3.90	330	⇑iP	Pb	22 18 01.3	-4.7
HERR	Herculane	3.92	27	⇓iP	Pn	22 17 58.8	+1.1
HERR	Herculane	3.92	27	⇓iP	Pn	22 17 58.8	+1.1
UDBI	Udbina	4.36	317	ePn	Pn	22 18 05.0	+1.2
BZS	Buzias	4.38	16	⇓iP	Pn	22 18 06.9	+2.9
BZS	Buzias	4.38	16	⇓iP	Pn	22 18 06.9	+2.9
BZS				S	Sn	22 18 59.9	+4.4
MORH	Mˆ‡rˆ¡gy, Hung	4.89	349	ePn	Pn	22 18 10.8	-0.2
CRES	Cresnjev	5.48	325	ePn	Pn	22 18 19.4	+0.3

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*IDC **09** 22:18:55.0±2.3, 36°.24N×140°.47E, h0^{km}, mb3.4/4, mb1 3.5/5, mb1mx3.3/61, mbtmp3.5/5, ML3.9/1, Error ellipse: s-maj=60.8km s-min=23.3km az=66.0*

*ISCJB **09** 22:19:02.3±0.7, 36°.00N±0°.06×139°.93E±0°.07, h56^{km}±6^{km}, mb3.4/4, Error ellipse: s-maj=10.6km s-min=8.3km az=140.9*

*JMA **09** 22:19:04.0, 36°.04N×139°.88E, h43^{km}±1^{km}, M3.2 Broadband fault plane solution: P waves. NP1: ϕ_s44.00000°, δ81.00000°, λ75.00000°. NP2:ϕ_s282.00000°, δ17.00000°, λ147.00000°. Principal axes: T Plg52.0000°, Azm297.0000°; N Plg14.0000°, Azm46.0000°; P Plg34.0000°, Azm146.0000°;*

JMA Felt I J1.

ISC 09 22:19:03.3±1.0**, 36°.02N**±0°.06×**139°.91E**±0°.06**, h49**^{km}±10^{km}**, n11,** σ**0^{s}.44**/16**, mb3.5**/4**, 1C-3D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYT	Yasato	0.31	48	⇑P	Pn	22 19 12.7	+0.3
JYT				S	Sn	22 19 18.8	-0.1
JAG	Ashikaga	0.55	317	⇓P	Pn	22 19 15.2	+0.1
JAG				S	Sn	22 19 23.1	-0.4
JRY	Ryogami san	0.82	270	⇓P	Pn	22 19 18.6	0.0
JRY				eS	Sn	22 19 29.5	-0.3
JKT	Katashina	0.92	324	⇓P	Pn	22 19 19.9	0.0
MJAR	Matsushiro Arr	1.47	291	Pn	Pn	22 19 27.6	+0.2
	5.4nm,0.3s,baz=110,slow=7.9,SNR=57						
MAT	Matsushiro	1.47	291	P	Pn	22 19 28.3	+0.9
MAT				S	Sn	22 19 45.8	+0.3
JHJ	Hachijo jima 2	2.90	182	Pn	Pn	22 19 47.5	+0.6
	34nm,0.3s,baz=86,slow=14,SNR=34						
JHJ				Sn	Sn	22 20 19.8	-0.7
	12nm,0.3s,baz=252,slow=20,SNR=4.4						
ZALV	Zalesovo Beam	41.71	313	P	P	22 26 47.1	+0.1
	0.6nm,0.6s,baz=90,slow=8.6,SNR=2.7						
MKAR	Makanchi Array	43.64	303	P	P	22 27 02.9	+0.1
	0.2nm,0.7s,baz=87,slow=10,SNR=2.5						
KURBB	Kurchatov Arra	45.68	309	P	P	22 27 18.9	0.0
	0.4nm,0.5s,baz=83,slow=7.5,SNR=6.5						
WRA	Warramunga Arr	55.91	186	P	P	22 28 35.9	-0.3
	0.3nm,0.8s,baz=2.4,slow=7.6,SNR=5.2						

RSNC 09 22:27:01.3±0.8**, 6°.82N**×**73°.16W, h138**^{km}±4^{km}**, ML3.3, Mw3.8, 1D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.22	186	eP	Pn	22 27 20.2	-0.3
BARC				eS	Sn	22 27 34.7	-0.3
BARC				i		22 27 36.2	
	comp=Z,643nm,0.2s						
BRRC	Barranca, Sant	0.62	298	eP	Pn	22 27 22.1	+0.1
BRRC				i		22 27 40.3	
	comp=Z,717nm,0.2s						
PAMC	Pamplona, Colo	0.69	41	eP	Pn	22 27 23.1	0.0
PAMC				eS	Sn	22 27 39.9	+0.4
RUSC	La Rusia	0.92	175	eP	Pn	22 27 24.2	-0.7
RUSC				eS	Sn	22 27 42.1	-0.6
RUSC				i		22 27 44.6	
	comp=Z,230nm,0.3s						
PTBC	PUERTO BERRIO,	1.32	258	eP	Pn	22 27 27.1	-1.0
PTBC				eS	Sn	22 27 47.4	-1.0
PTBC				i		22 27 50.8	

	comp=Z,287nm,0.2s						
TAMC	Tame, Arauca	1.41	105	⇓iP	Pn	22 27 28.6	-0.5
TAMC				i		22 27 28.7	
	comp=Z,488nm,0.2s						
TAMC				eS	Sn	22 27 49.5	-0.7
OCAC	Ocana	1.42	354	eP	Pn	22 27 28.6	-0.7
OCAC				eS	Sn	22 27 50.2	-0.5
YOPC	Yopal, Colombi	1.63	153	eP	Pn	22 27 30.9	-0.7
YOPC				eS	Sn	22 27 54.2	-0.4
YOPC				i		22 27 56.4	
	comp=Z,112nm,0.6s						
ZARC	Zaragoza, Cauc	1.81	292	eP	Pn	22 27 33.3	-0.2
ZARC				eS	Sn	22 27 57.6	-0.6
NORC	Norcasia	2.11	234	eP	Pn	22 27 36.9	-0.1
NORC				eS	Sn	22 28 03.9	-0.6
CHIC	Chingaza	2.25	195	eP	Pn	22 27 38.5	-0.7
CHIC				eS	Sn	22 28 07.8	-0.3
ROSC	El Rosal	2.28	210	eP	Pn	22 27 39.9	+0.3
ROSC				eS	Sn	22 28 08.4	-0.4
ROSC				i		22 28 16.7	
	comp=Z,113nm,0.6s						
HELC	Santa Helena	2.44	255	eP	Pn	22 27 41.8	+0.4
HELC				eS	Sn	22 28 11.9	-0.3
HELC				i		22 28 19.3	
	comp=Z,117nm,0.3s						
VILC	Villavicencio,	2.74	191	eP	Pn	22 27 43.9	-1.2
VILC				i		22 28 22.1	
	comp=Z,50nm,0.3s						
DBBC	Dabeiba	3.03	274	eP	Pn	22 27 48.6	-0.1
TOLC	Tolima	3.09	224	eP	Pn	22 27 50.0	+0.3
TOLC				eS	Sn	22 28 26.9	-0.1
CODC	Agustˆ›n Codaz	3.11	355	eP	Pn	22 27 48.4	-1.2
CODC				i		22 28 35.1	
	comp=Z,45nm,0.4s						
PRAC	Prado	3.53	209	eP	Pn	22 27 54.7	-0.4
PRAC				eS	Sn	22 28 36.9	0.0
SJCC	San Jacinto, C	3.66	327	eP	Pn	22 27 55.2	-1.6
SJCC				i		22 28 39.6	
	comp=Z,53nm,0.6s						

IDC 09 22:33:36.1±32.0**, 24°.58S×179°.31E, h550^{km}**±283^{km}**, mb3.2**/4**, mb1 3.4**/4**, mb1mx2.9**/48**, mbtmp4.3**/4**, Error ellipse: s-maj=246.4km s-min=89.6km az=90.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	30.86	272	P	P	22 39 08.8	+0.7
	3.2nm,0.5s,baz=83,slow=12,SNR=4.2						
STKA	Stephens Creek	33.89	249	P	P	22 39 32.2	-1.4
	0.5nm,0.3s,baz=99,slow=13,SNR=3.8						
ASAR	Alice Springs	41.31	262	P	P	22 40 34.5	+0.2
	1.5nm,0.4s,baz=95,slow=7.4,SNR=23						
ASAR				PcP	PcP	22 42 19.6	-0.1
	0.3nm,0.5s,baz=113,slow=3.5,SNR=3.3						
WRA	Warramunga Arr	41.74	267	P	P	22 40 37.2	-0.5
	3.5nm,0.5s,baz=100,slow=6.8,SNR=75						
BRTR	Keskin Array B	147.48	306	PKPbc	PKPbc	22 52 18.2	-0.6
	0.5nm,0.6s,baz=130,slow=3.9,SNR=3.7						

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*ISCJB **09** 22:47:20.5±0.9, 28°.59S±0°.04×69°.15W±0°.04, h117^{km}±11^{km}, Error ellipse: s-maj=6.5km s-min=5.9km az=163.4*

*GUC **09** 22:47:20.7±0.6, 28°.57S×69°.34W, h121^{km}±27^{km}, ML3.6*

*SJA **09** 22:47:20.7±0.8, 28°.63S×69°.16W, h118^{km}±5^{km}, ML3.8, MW3.7*

ISC 09 22:47:21.1±1.6**, 28°.59S**±0°.04×**69°.16W**±0°.04**, h116^{km}**±13^{km}**, n13, σ0^s.84**/25**, 6C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VCA	Vinchina	0.85	100	eP	Pn	22 47 42.2	+0.8
VCA				IAML		22 47 42.8	
	comp=Z,2μm,0.2s						
VCA				eS	Sn	22 47 57.7	+0.8
VCA	Vinchina	0.85	100	⇑iP	Pn	22 47 41.5	0.0
VCA				i S	Sn	22 47 55.4	-1.5
VCA				IAML		22 47 58.0	
	comp=N,2μm,0.4s						
AGUA	GUANDACOL	1.07	147	eP	Pn	22 47 44.2	+0.7
AGUA				eS	Sn	22 48 00.8	+0.2
GO03	Copiap	1.37	316	⇑iP	Pn	22 47 46.1	-0.7
GO03				i S	Sn	22 48 05.6	-0.7
GO03				IAML		22 48 08.9	
	comp=N,547nm,0.2s						
LCO	Las Campanas	1.41	252	eP	Pn	22 47 48.0	+0.5
LCO				eS	Sn	22 48 08.3	+0.7
LCO	Las Campanas	1.41	252	⇑iP	Pn	22 47 47.7	+0.2
LCO				i S	Sn	22 48 07.4	-0.1
LCO				IAML		22 48 08.6	
	comp=N,2μm,0.3s						
TLL	Tololo Astrono	2.13	222	⇑iP	Pn	22 47 56.2	0.0
TLL				i S	Sn	22 48 22.9	-0.1
TLL				IAML		22 48 27.5	
	comp=N,362nm,0.4s						
GO04	Tololo Observa	2.13	222	⇑iP	Pn	22 47 55.1	-1.1
GO04				i S	Sn	22 48 22.5	-0.5
GO04				IAML		22 48 30.6	
	comp=E,692nm,0.5s						
AMOG	MOGNA	2.41	166	eP	Pn	22 48 00.3	+0.6
AMOG				eS	Sn	22 48 29.1	-0.2
RTLL	Cerro Villicun	2.79	168	eP	Pn	22 48 05.4	+0.8
RTLL				eS	Sn	22 48 37.4	-0.7
CYA	Choya	2.96	88	eP	Pn	22 48 07.1	+0.3
CYA	Choya	2.96	88	⇑iP	Pn	22 48 07.1	+0.3
CYA				i S	Sn	22 48 39.8	-2.1
CYA				IAML		22 48 41.0	
	comp=E,124nm,0.2s						
GO02	Mina Guanaco	3.43	354	eP	Pn	22 48 14.1	+0.8
GO02				i S	Sn	22 48 54.3	+0.7
GO02				IAML		22 49 02.0	
	comp=E,48nm,0.3s						

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*ATH **09** 23:06:56.4, 36°.41N×28°.85E, h34^{km}±5^{km}, ML2.2/3, Error ellipse: s-maj=6.5km s-min=1.0km az=177.0*

*DDA **09** 23:06:56.4, 36°.37N×28°.84E, h7^{km}, Ml2.9*

*ISK **09** 23:06:56.9, 36°.42N×28°.86E, h23^{km}, ML2.3/13*

*ISCJB **09** 23:06:57.5±0.4, 36°.37N±0°.03×28°.85E±0°.03, h29^{km}±4^{km}, Error ellipse: s-maj=5.2km s-min=3.9km az=4.3*

*CSEM **09** 23:06:57.3±0.2, 36°.38N×28°.87E, h24^{km}±1^{km}, ML2.3, Error ellipse: s-maj=3.7km s-min=2.7km az=5.0*

ISC 09 23:06:57.5±1.0**, 36°.40N**±0°.03×**28°.85E**±0°.02**, h22^{km}**±4^{km}**, n56, σ0^s.67**/85**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FETY	Fethiye	0.30	38	PG	Pb	23 07 03.8	-0.6
FETY				SG	Sb	23 07 09.4	+0.3
FETY	Fethiye	0.30	38	ePg	Pb	23 07 03.8	-0.6
FETY				S	Sb	23 07 09.3	+0.2
DALY	Dalyan (Mu˜la	0.45	339	PG	Pb	23 07 06.2	-0.5
DALY				SG	Sb	23 07 14.1	+1.1
DALY	Dalyan (Mu˜la	0.45	339	i P	Pb	23 07 05.9	-0.8
DALY				i S	Sb	23 07 13.6	+0.6
DALY	Dalyan (Mu˜la	0.45	339	P	Pb	23 07 05.9	-0.8
DALY	Dalyan (Mu˜la	0.45	339	ePg	Pb	23 07 06.2	-0.5
DALY				S	Sb	23 07 13.6	+0.6
DALY				eSg	Sb	23 07 14.1	+1.1
TURN	Turunc	0.52	337	PG	Pn	23 07 09.2	-0.3
TURN				SG	Sn	23 07 18.4	+0.7
TURN	Turunc	0.52	337	i P	Pn	23 07 09.3	-0.3
TURN				i S	Sn	23 07 18.0	+0.3
TURN	Turunc	0.52	337	ePg	Pn	23 07 09.2	-0.3
TURN				S	Sn	23 07 18.0	+0.3
ARG	Arkhangelos	0.61	253	PG	Pn	23 07 10.4	-0.5
ARG				SG	Sn	23 07 19.9	-0.2
ARG	Arkhangelos	0.61	253	P	Pb	23 07 09.5	-0.1
ARG				S	Sb	23 07 18.5	+0.7
ARG				AML	AML	23 07 19.7	
	comp=N,272μm,0.3s						
ARG				AML	AML	23 07 20.0	
	comp=E,529μm,0.3s						
ARG	Arkhangelos	0.61	253	P	Pb	23 07 09.4	-0.2
ARG	Arkhangelos	0.61	253	ePg	Pn	23 07 10.4	-0.5
ARG				S	Sb	23 07 18.6	+0.7
ARG				eSg	Sn	23 07 19.9	-0.2
MRSB	Marmaris-Mugla	0.62	301	PG	Pb	23 07 09.2	-0.5
MRSB	Marmaris-Mugla	0.62	301	ePg	Pb	23 07 09.2	-0.5
AKAS	Kas	0.63	105	PG	Pb	23 07 09.5	-0.4
AKAS	Kas	0.63	105	i P	Pb	23 07 09.0	-0.9
AKAS				i S	Sb	23 07 18.5	+0.1
AKAS	Kas	0.63	105	P	Pb	23 07 09.0	-0.9
AKAS	Kas	0.63	105	ePg	Pb	23 07 09.5	-0.4
AKAS				S	Sb	23 07 18.5	+0.1
KSL	Kastellorizon	0.64	112	P	Pb	23 07 09.6	-0.5
KSL				S	Sn	23 07 19.6	-1.1
KSL				AML	AML	23 07 21.0	
	comp=E,434μm,0.3s						
KSL				AML	AML	23 07 24.2	
	comp=N,153μm,0.5s						
YER	Yerkesik	0.87	328	PG	Pn	23 07 14.1	-0.4
YER				SG	Sn	23 07 26.2	-0.3
YER	Yerkesik	0.87	328	ePg	Pn	23 07 14.1	-0.4
YER				eSg	Sn	23 07 26.2	-0.3
ELL	Elmali	0.92	67	PG	Pb	23 07 14.7	-0.1
ELL	Elmali	0.92	67	ePg	Pb	23 07 14.7	-0.1
GOLH	Golhisar	1.01	34	i P	Pb	23 07 16.0	-0.4
GOLH				i S	Sn	23 07 31.2	+1.0
GOLH	Golhisar	1.01	34	P	Pb	23 07 16.0	-0.4
GOLH				S	Sn	23 07 31.2	+1.0
DATC	Datca-Mugla	1.03	291	PG	Pn	23 07 16.4	-0.2
DATC	Datca-Mugla	1.03	291	ePg	Pn	23 07 16.4	-0.2
TAVA	DENIZLI_Tavas	1.07	3	i P	Pn	23 07 16.4	-0.8
TAVA				i S	Sn	23 07 31.6	+0.1
TAVA	DENIZLI_Tavas	1.07	3	P	Pn	23 07 16.5	-0.8
TAVA				S	Sn	23 07 31.6	+0.1
DAT	Datca	1.08	288	PN	Pn	23 07 17.2	-0.2
DAT	Datca	1.08	288	i P	Pn	23 07 16.5	-0.9
DAT				i S	Sn	23 07 32.4	+0.6
DAT	Datca	1.08	288	P	Pn	23 07 16.5	-0.9
DAT	Datca	1.08	288	ePn	Pn	23 07 17.2	-0.2
DAT				S	Sn	23 07 32.4	+0.6
MLSB	Milas	1.25	316	PN	Pn	23 07 19.2	-0.4
MLSB	Milas	1.25	316	ePn	Pn	23 07 19.2	-0.4
KORT	Korkueli	1.35	63	PN	Pb	23 07 21.8	-0.3
KORT	Korkueli	1.35	63	i P	Pb	23 07 21.6	-0.5
KORT				i S	Sb	23 07 41.4	+2.4
KORT	Korkueli	1.35	63	P	Pb	23 07 21.6	-0.5
KORT				S	Sb	23 07 41.4	+2.4
DENT	Denizli	1.36	6	PN	Pn	23 07 20.6	-0.7
DENT	Denizli	1.36	6	ePn	Pn	23 07 20.6	-0.7
BODT	Bodrum	1.41	299	PN	Pn	23 07 21.4	-0.4
BODT	Bodrum	1.41	299	ePn	Pn	23 07 21.4	-0.4
KARP	Karpathos	1.61	239	P	Pn	23 07 24.7	0.0
KARP	Karpathos	1.61	239	P	Pn	23 07 24.6	0.0
BRDR	BURDUR-Merkez	1.62	36	i P	Pn	23 07 24.6	-0.3
BRDR				i S	Sb	23 07 46.0	-0.8
BRDR	BURDUR-Merkez	1.62	36	P	Pn	23 07 24.5	-0.3
AYDB	Zeytinkoy-Aydi	1.73	334	PN	Pn	23 07 26.0	-0.4
AYDB	Zeytinkoy-Aydi	1.73	334	ePn	Pn	23 07 26.0	-0.4
SUTC	Sutluce-Ispart	2.03	57	PN	Pn	23 07 30.5	0.0
SUTC	Sutluce-Ispart	2.03	57	ePn	Pn	23 07 30.5	0.0
SMG	Samos	2.08	310	P	Pn	23 07 30.8	-0.3
SMG				S	Sn	23 07 56.0	-0.4
SMG				AML	AML	23 08 00.1	
	comp=E,139μm,0.3s						
SMG				AML	AML	23 08 00.3	
	comp=N,126μm,0.2s						
SMG	Samos	2.08	310	P	Pn	23 07 30.8	-0.3
SMG				S	Sn	23 07 55.9	-0.4
NPS	Neapolis	2.87	248	P	Pn	23 07 41.4	-0.5
LAST	Lasithi	3.01	247	P	Pn	23 07 44.5	+0.6
LAST	Lasithi	3.01	247	P	Pn	23 07 44.3	+0.4

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*IDC **09** 23:10:50.9±10.0, 19°.09N×145°.76E, h122^{km}±98^{km}, mb3.2/11, mb1 3.4/11, mb1mx3.2/64, mbtmp3.6/11, Error ellipse: s-maj=31.6km s-min=15.3km az=88.0*

*ISCJB **09** 23:10:52.4±0.8, 19°.1N±0°.1×145°.7E±0°.2, h150^{km}, mb3.4/11, Error ellipse: s-maj=28.6km s-min=15.6km az=178.5*

ISC 09 23:10:53.8±1.0**, 19°.1N**±0°.1×**145°.6E**±0°.2**, h150^{km}, n11, σ0^s.89**/10**, mb3.5**/11**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSRS	Korea Array	23.95	323	P	P	23 15 55.5	+1.3
	0.6nm,0.4s,baz=140,slow=7.9,SNR=4.3						
KLR	Kul'dur	32.07	343	P	P	23 17 06.4	+0.1
	0.1nm,0.5s,baz=186,slow=8.3,SNR=5.0						
WRA	Warramunga Arr	40.33	196	P	P	23 18 16.3	-0.5
	0.5nm,0.4s,baz=18,slow=8.8,SNR=24						
SONM	Songino Array	42.78	321	P	P	23 18 35.9	-0.7
	0.3nm,0.5s,baz=125,slow=6.4,SNR=5.8						
ASAR	Alice Springs	44.00	196	P	P	23 18 47.4	+0.8
	0.5nm,0.5s,baz=21,slow=11,SNR=7.3						
SEY	Seymchan	44.05	4	P	P	23 18 47.0	+0.6
	0.8nm,0.4s,baz=21,slow=15,SNR=4.1						
MKAR	Makanchi Array	58.12	314	P	P	23 20 34.5	+2.7
	0.2nm,0.6s,baz=116,slow=9.8,SNR=2.2						
ILAR	Eielson Array	63.34	26	P	P	23 21 05.8	-0.8
	0.2nm,0.5s,baz=256,slow=6.4,SNR=2.7						
BVAR	Borovoye Array	66.11	320	P	P	23 21 25.0	+0.1
	0.6nm,0.6s,baz=113,slow=7.8,SNR=2.8						
NVAR	Mina Array Bea	82.97	52	P	P	23 23 03.3	+0.6
	0.4nm,0.6s,baz=263,slow=5.1,SNR=3.7						
FINES	FINESS Array B	86.49	335	P	P	23 23 18.5	-1.0
	1.0nm,0.8s,baz=53,slow=7.4,SNR=5.2						

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*IDC **09** 23:13:54.2±3.2, 24°.54N×94°.96E, h0^{km}, mb3.5/5, mb1 3.6/5, mb1mx3.2/73, mbtmp3.5/5, MS2.8/1, Ms1 2.8/1, ms1mx2.2/53, Error ellipse: s-maj=334.8km s-min=19.3km az=58.0*

*ISCJB **09** 23:14:04.6±0.9, 25°.45N±0°.07×96°.23E±0°.06, h100^{km}, mb3.3/5, Error ellipse: s-maj=10.1km s-min=7.4km az=17.9*

ISC 09 23:14:06.9±1.2**, 25°.51N**±0°.09×**96°.20E**±0°.08**, h100^{km}, n14, σ2^s.36**/17**, mb3.4**/5**, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LKP	Lekhapani	1.84	350	eP	Pn	23 14 34.1	-3.4
LKP				eS	Sn	23 14 59.8	-1.0
KOHI	KOHIMA	1.90	277	eP	Pn	23 14 36.9	-1.4
KOHI				eS	Sn	23 14 58.5	-3.8
KOHI				IAML		23 15 12.3	
	comp=N,130nm,0.3s						
KOHI				IAML		23 15 13.4	
	comp=E,139nm,0.4s						
ITAN	ITANAGAR	2.75	307	eS	Sn	23 15 22.6	+0.6
ITAN				IAML		23 15 38.1	
	comp=N,113nm,0.3s						
ITAN				IAML		23 15 38.8	
	comp=E,107nm,0.2s						
ZIRO	ZIRO	2.91	314	eP	Pn	23 14 49.2	-2.4
ZIRO				eS	Sn	23 15 25.8	-0.2
TEZP	TEZPUR	3.25	291	eP	Pn	23 14 54.1	-1.9
TEZP				eS	Sn	23 15 35.5	+1.7
TEZP				IAML		23 15 39.0	
	comp=N,92nm,0.4s						
TEZP				IAML		23 15 40.1	
	comp=E,44nm,0.1s						
SHL	Shillong	3.90	272	eP	Pn	23 15 01.4	-3.5
SHL				eS	Sn	23 15 51.5	+1.8
GUWA	GUWAHATI	4.12	281	eS	Sn	23 15 54.5	-0.2
CMAR	Chiang Mai Arr	7.46	160	Lg	Lg	23 17 41.5	
	comp=E,0.1nm,0.3s,baz=340,slow=34,SNR=2.6						
MKAR	Makanchi Array	23.96	336	P	P	23 19 14.2	+2.4
	comp=E,0.7nm,0.5s,baz=140,slow=9.7,SNR=11						
KURBB	Kurchatov Arra	28.52	336	P	P	23 19 55.7	+2.9
	comp=E,0.2nm,0.3s,baz=144,slow=10.0,SNR=2.7						
KSRS	Korea Array	29.42	58	LR	LR	23 34 12.4	
	comp=E,16nm,18.7s,baz=280,slow=40						
BVAR	Borovoye Array	33.62	332	P	P	23 20 39.1	+1.5
	comp=E,0.3nm,0.5s,baz=153,slow=9.7,SNR=3.2						
WRA	Warramunga Arr	58.44	137	P	P	23 23 50.7	-1.8
	comp=E,0.3nm,0.9s,baz=320,slow=7.6,SNR=2.8						
ASAR	Alice Springs	61.02	140	P	P	23 24 11.7	+1.5
	comp=E,0.2nm,0.5s,baz=318,slow=6.8,SNR=3.0						

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*NIED **09** 23:15:00, 38°.60N×142°.20E, h56^{km}, Mw3.8 Best double couple: M$_0$6.28000×10^{14} NP1:ϕ_s38.00000°, δ43.00000°, λ-22.00000°. NP2:ϕ_s144.00000°, δ75.00000°, λ-131.00000°.*

JMA 09 23:15:32.9±0.1**, 38°.59N×142°.22E, h37^{km}**±2^{km}**, M3.5, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.65	319	P	Pn	23 15 45.8	+0.1
OFUJ				eS	Sn	23 15 54.5	-0.2
JIO	Ouri	0.70	259	P	Pn	23 15 46.1	-0.1
JIO				S	Sn	23 15 55.1	-0.7
JMK	Ichinoseki	0.86	295	P	Pn	23 15 48.8	+0.3
JMK				eS	Sn	23 15 59.6	-0.3
JOM	Ohasama	1.14	321	P	Pn	23 15 53.0	+0.7
JOM				S	Sn	23 16 07.4	+0.7
JOU	Okura	1.24	260	P	Pn	23 15 54.3	+0.6
JOU				eS	Sn	23 16 09.4	+0.2
JMM	Marumori	1.34	238	P	Pn	23 15 55.1	+0.1
JMM				S	Sn	23 16 10.8	-0.7
JTH	Tanohata	1.38	349	P	Pn	23 15 56.0	+0.5
JRG	Rokugo	1.48	304	P	Pn	23 15 58.1	+1.2
JYK	Kaneyama	1.49	283	P	Pn	23 15 58.3	+1.2
MAT	Matsushiro	3.79	239	P	Pn	23 16 32.3	+3.6

MAN 09 23:25:25.7, 9°.29N×125°.64E, h20^{km}, mb4.2, ML3.1, MS2.8, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUTP	Butuan	0.32	184	eP	Pb	23 25 34.0	+1.2
BUTP				eS	Sn	23 25 42.7	+1.4
SCPH	Surigao	0.51	343	⇓eP	Pb	23 25 36.6	+0.6
SCPH				eS	Sn	23 25 47.3	+1.2
BUKP	Musuan	1.52	202	eP	Pn	23 25 51.2	-0.5
BUKP				eS	Sb	23 26 11.9	-0.1

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*ISCJB **09** 23:29:34.2±0.5, 16°.87N±0°.06×94°.43W±0°.04, h126^{km}±4^{km}, mb3.8/5, Error ellipse: s-maj=10.1km s-min=5.8km az=6.9*

*IDC **09** 23:29:34.4±1.0, 16°.83N×94°.52W, h121^{km}±24^{km}, mb3.6/5, mb1 3.8/5, mb1mx3.3/41, mbtmp4.0/5, Error ellipse: s-maj=131.6km s-min=27.1km az=65.0*

*MEX **09** 23:29:37.1±0.5, 16°.90N×94°.41W, h120^{km}±3^{km}, MD4.0*

*NEIC **09** 23:29:38.1±0.0, 16°.71N×94°.49W, h100^{km}, MD4.0(MEX), After MEX.*

ISC 09 23:29:34.8±0.8**, 16°.83N**±0°.06×**94°.45W**±0°.04**, h123^{km}**±6^{km}**, n20, σ0^s.97**/33**, mb3.7**/5**, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	Matias Romero	0.50	302	P	Pn	23 29 53.5	+0.5
	253nm,0.3s,baz=162,slow=5.3,SNR=923						
CMIG				S	Sn	23 30 06.8	0.0
	1μm,0.3s,baz=15,slow=20,SNR=252						
CMIG	Matias Romero	0.50	302	i P	Pn	23 29 53.7	+0.6
CMIG				eS	Sn	23 30 06.8	0.0
TUIG	Tuzandepetl	1.20	1	i P	Pn	23 29 59.1	0.0
TUIG				eS	Sn	23 30 16.1	-1.5
TGIG		1.27	92	eP	Pn	23 30 00.4	+0.5
TGIG				i S	Sn	23 30 18.5	-0.4
TGIG		1.27	92	eP	Pn	23 30 00.4	+0.5
TGIG				i S	Sn	23 30 18.5	-0.4
PCIG		1.62	133	eP	Pn	23 30 05.0	+1.1
PCIG				i S	Sn	23 30 27.0	+1.1
PCIG		1.62	133	eP	Pn	23 30 05.0	+1.1
PCIG				eS	Sn	23 30 26.0	+0.1
HUIG	Huatulco	1.91	237	eP	Pn	23 30 06.6	-0.7
HUIG				eS	Sn	23 30 32.3	+0.1
HUIG	Huatulco	1.91	237	eP	Pn	23 30 06.6	-0.7
HUIG				eS	Sn	23 30 29.6	-2.5
VHO	Vista Hermosa	2.20	277	eP	Pn	23 30 12.7	+1.5
VHO				eS	Sn	23 30 39.2	+0.2
VHO	Vista Hermosa	2.20	277	eP	Pn	23 30 12.7	+1.5
VHO				eS	Sn	23 30 39.2	+0.2
PNIG	Pinotepa	3.56	264	eP	Pn	23 30 28.4	-0.2
PNIG				i S	Sn	23 31 11.7	+1.5
PNIG	Pinotepa	3.56	264	eP	Pn	23 30 28.1	-0.5
TLIG	Tlapa	4.01	281	eP	Pn	23 30 36.1	+1.5
TLIG				i S	Sn	23 31 21.4	+0.4
TLIG	Tlapa	4.01	281	eP	Pn	23 30 36.1	+1.5
LPAZ	La Paz	41.90	140	P	P	23 37 14.0	-0.1
	1.2nm,0.8s,baz=306,slow=2.9,SNR=4.4						
YKA	Yellowknife Ar	47.76	348	P	P	23 37 58.7	-0.5
	0.9nm,0.6s,baz=162,slow=6.3,SNR=3.6						
ARCES	ARCESS Array B	84.20	18	P	P	23 41 51.9	-0.2
	1.7nm,0.7s,baz=304,slow=4.7,SNR=5.8						
KOWA	Kowa	86.30	76	P	P	23 42 03.3	-0.3
	2.7nm,0.8s,baz=287,slow=4.2,SNR=6.9						
GERES	GERESS Array B	88.92	39	P	P	23 42 15.8	+0.1
	0.1nm,0.3s,baz=310,slow=6.3,SNR=4.2						

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*IDC **09** 23:40:31.5±0.9, 11°.79N×126°.14E, h0^{km}, mb4.1/15, mb1 4.3/15, mb1mx3.9/58, mbtmp4.1/15, ML5.2/1, MS3.3/26, Ms1 3.3/26, ms1mx3.2/60, Error ellipse: s-maj=45.7km s-min=14.0km az=70.0*

*ISCJB **09** 23:40:33.8±1.0, 11°.33N±0°.03×124°.57E±0°.04, h5^{km}±8^{km}, mb4.1/20, MS3.3/24, Error ellipse: s-maj=7.1km s-min=4.4km az=12.4*

*MAN **09** 23:40:34.5, 11°.28N×124°.63E, h12^{km}, mb4.9, ML3.8, MS3.8*

*NEIC **09** 23:40:36.9±0.6, 11°.72N×126°.01E, h35^{km}, mb4.1/5, Error ellipse: s-maj=23.1km s-min=8.1km az=66.0*

NEIC Felt [III PIVS] at Capoocan, Carigara and Leyte; [II PIVS] at Kanaga, Ormoc and San Isidro, Leyte. Also felt [II PIVS] at Biliran, Biliran Island.

ISC 09 23:40:34.2±1.2**, 11°.30N**±0°.03×**124°.55E**±0°.03**, h5^{km}**±8^{km}**, n58, σ1^s.56**/48**, mb4.0**/20**, MS3.3**/24**, 1C-4D, Leyte**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OCLP	Ormoc	0.25	166	eP	Pg	23 40 39.7	+0.6
OCLP				eS	Sb	23 40 47.5	+1.6
PLP	Palo	0.44	107	⇓eP	Pg	23 40 42.4	-0.4
PLP				i S	Sg	23 40 48.6	0.0
BESP	Borongan	0.92	71	eP	Pb	23 40 51.2	-1.5
BESP				eS	Sb	23 41 05.4	+0.1
LLP	Lapu-Lapu	1.13	210	⇓iP	Pb	23 40 54.6	-1.7
LLP				i S	Sn	23 41 11.9	-0.7
MSLP	Maasin	1.20	165	eP	Pn	23 40 56.3	-1.4
MSLP				eS	Sg	23 41 16.3	+3.6
CNP	Catarman	1.21	5	eP	Pn	23 40 56.6	-1.3
CNP				eS	Sn	23 41 13.4	-1.2
TBP	Tagbilaran	1.73	203	eP	Pb	23 41 05.8	-0.8
RCP	Roxas	1.79	279	⇑eP	Pb	23 41 06.4	-1.1
RCP				eS	Sg	23 41 31.3	-0.4
GUIM	Jordan	2.04	251	eP	Pn	23 41 07.4	-1.8
GUIM				eS	Sn	23 41 32.2	-2.8
PVCP	Virac	2.32	351	eP	Pn	23 41 12.3	-0.8
PVCP				eS	Sn	23 41 42.1	+0.1
SNPH	Sibulan	2.33	214	⇓iP	Pn	23 41 13.3	0.0
SNPH				i S	Sg	23 41 47.8	-1.4
BUTP	Butuan	2.54	155	eP	Pb	23 41 18.3	-2.1
BUTP				eS	Sg	23 41 54.1	-1.9
JAP	San Jose, Anti	2.61	258	⇓eP	Pg	23 41 24.0	-0.3
JAP				eS	Sg	23 42 10.8	+13
OTRP	Odiongan	2.69	293	eP	Pn	23 41 19.5	+1.2
OTRP				eS	Sb	23 41 54.1	-2.2
BUKP	Musuan	3.43	171	eP	Pn	23 41 29.2	+0.7
BUKP				eS	Sg	23 42 25.2	+0.5
PAGZ	Pagadian	3.61	199	eP	Pn	23 41 30.2	-0.8
PAGZ				eS	Sn	23 42 12.8	-1.2
TGY	Tagaytay City	4.49	309	Pn	Pb	23 41 56.0	+2.3
	75nm,0.3s,baz=102,slow=6.4,SNR=3.0						
JOW	Kunigami	15.85	12	LR	LR	23 49 43.2	
	comp=Z,87nm,18.1s,baz=340,slow=36						
GUMO	Guam	19.97	81	LR	LR	23 51 11.6	
	comp=Z,88nm,18.8s,baz=255,slow=35						
BATI	Baumata	21.38	182	P	P	23 45 25.9	+3.0
	26nm,0.4s,baz=274,slow=11,SNR=3.2						
BATI				LR	LR	23 55 26.8	
	comp=Z,80nm,18.2s,baz=32,slow=41						
JNU	Nakatsue	22.49	14	LR	LR	23 53 55.0	
	comp=Z,32nm,20.2s,baz=124,slow=37						
LEM	Lembang	24.66	224	LR	LR	23 56 48.0	
	comp=Z,91nm,18.8s,baz=33,slow=37						
CMAR	Chiang Mai Arr	25.73	289	P	P	23 46 16.6	+11
	1.0nm,0.3s,baz=102,slow=6.0,SNR=5.1						
CMAR				LR	LR	23 55 39.8	
	comp=Z,27nm,21.6s,baz=135,slow=34						
JHJ	Hachijo jima 2	25.83	30	LR	LR	23 56 30.3	
	comp=Z,43nm,18.6s,baz=249,slow=39						
KSRS	Korea Array	26.22	6	LR	LR	23 56 12.8	
	comp=Z,66nm,20.7s,baz=212,slow=37						

PSI	Prapat	26.77	254	LR	LR	00 00 53.3	
	comp=Z,44nm,19.3s,baz=96,slow=43						
MJAR	Matsushiro Arr	28.00	24	LR	LR	23 56 18.5	
	comp=Z,68nm,20.4s,baz=230,slow=35						
WRAB	Tennant Creek	32.50	163	P	P	23 47 04.5	-1.6
	0.7nm,0.8s						
WRA	Warramunga Arr	32.51	163	P	P	23 47 04.1	-2.1
	1.4nm,0.9s,baz=343,slow=9.3,SNR=9.0						
MBWA	Marble Bar	32.60	188	P	P	23 47 10.4	+3.5
	2.7nm,0.8s						
BRDH	Bariadhala	33.36	294	LR	LR	00 01 13.4	
	comp=Z,91nm,20.8s,baz=144,slow=36						
ASAR	Alice Springs	35.93	165	P	P	23 47 35.1	-0.8
	1.4nm,0.8s,baz=351,slow=8.9,SNR=17						
ASAR				LR	LR	00 03 21.1	
	comp=Z,15nm,21.9s,baz=356,slow=38						
LSA	Lhasa	36.06	306	P	P	23 47 43.5	+6.0
	1.0nm,0.4s						
ASAJ	Asahikawa	36.22	22	LR	LR	00 02 21.3	
	comp=Z,36nm,20.3s,baz=194,slow=37						
SONM	Songino Array	39.48	341	P	P	23 48 05.9	+0.1
	1.9nm,0.9s,baz=159,slow=9.7,SNR=10						
SONM				LR	LR	00 04 41.8	
	comp=Z,50nm,21.6s,baz=88,slow=37						
HNR	Honiara	40.78	119	LR	LR	00 03 02.1	
	comp=Z,51nm,20.7s,baz=318,slow=34						
PALK	Pallekele	43.42	269	LR	LR	00 07 59.7	
	comp=Z,27nm,18.3s,baz=115,slow=37						
STKA	Stephens Creek	45.93	160	LR	LR	00 11 19.2	
	comp=Z,23nm,19.7s,baz=18,slow=40						
PETK	Petropavlovsk-	49.43	26	LR	LR	00 07 37.5	
	comp=Z,38nm,21.7s,baz=205,slow=34						
MKAR	Makanchi Array	50.19	323	P	P	23 49 32.8	+1.7
	0.6nm,0.6s,baz=124,slow=7.9,SNR=7.4						
NIL	Nilore	51.76	304	P	P	23 49 48.1	+4.9
	6.1nm,0.8s						
ZALV	Zalesovo Beam	52.92	332	P	P	23 49 52.5	+1.1
	1.1nm,0.8s,baz=197,slow=4.5,SNR=3.5						
ZALV				LR	LR	00 13 06.4	
	comp=Z,25nm,18.6s,baz=68,slow=37						
AAK	Ala-Archa	53.41	315	LR	LR	00 13 56.1	
	comp=Z,77nm,21.7s,baz=92,slow=37						
KURK	Kurchatov	54.27	326	P	P	23 50 02.5	+1.3
KURBB	Kurchatov Arra	54.27	326	P	P	23 50 02.5	+1.2
	1.7nm,1.0s,baz=124,slow=7.4,SNR=5.0						
BVAR	Borovoye Array	59.87	326	P	P	23 50 41.3	+0.4
	0.1nm,0.3s,baz=112,slow=6.5,SNR=2.5						
BRVK	Borovoye	59.94	326	P	P	23 50 42.5	+1.1
	0.9nm,0.4s						
AKTO	Aktyubinsk	66.46	320	LR	LR	00 22 56.0	
	comp=Z,62nm,18.1s,baz=109,slow=38						
ARU	Arti	67.44	327	LR	LR	00 23 47.2	
	comp=Z,22nm,18.2s,baz=102,slow=38						
ARCES	ARCESS Array B	82.65	340	P	P	23 52 57.6	-0.8
	4.1nm,0.9s,baz=83,slow=7.6,SNR=3.3						
FINES	FINESS Array B	84.19	331	P	P	23 53 04.8	-1.7
	5.8nm,1.1s,baz=67,slow=6.4,SNR=5.4						
AKASG	Malin Array Be	84.70	321	P	P	23 53 09.8	+0.5
	4.7nm,1.0s,baz=65,slow=4.4,SNR=7.3						
AKASG				LR	LR	00 32 46.3	
	comp=Z,16nm,19.4s,baz=210,slow=37						
MAW	Mawson	90.08	200	P	P	23 53 39.1	+4.3
	1.4nm,0.6s,baz=84,slow=10,SNR=8.7						
HFS	Hagfors	90.36	332	LR	LR	00 38 17.5	
	comp=Z,24nm,18.9s,baz=76,slow=38						
NOA	NORSAR Array B	91.09	333	LR	LR	00 37 15.8	
	comp=Z,21nm,21.1s,baz=70,slow=37						
VNDA	Vanda	91.16	172	P	P	23 53 39.9	+0.2
	1.2nm,0.9s,baz=275,slow=2.7,SNR=5.0						
IDI	Anoyia	91.30	306	LR	LR	00 39 35.9	
	comp=Z,11nm,18.6s,baz=104,slow=38						
GERES	GERESS Array B	94.85	322	P	P	23 53 56.5	-1.0
	0.4nm,0.6s,baz=71,slow=3.3,SNR=2.7						

DDA ***10*** *00:10:32.4, 38.°31N×26.°39E, h15^{km}, Ml2.7*
ATH ***10*** *00:10:33.3, 38.°29N×26.°59E, h32^{km}±3^{km}, ML2.0/3, Error ellipse: s-maj=5.1km s-min=1.6km az=216.0*
ISK ***10*** *00:10:33.7, 38.°22N×26.°54E, h5^{km}, ML2.2/5*
CSEM ***10*** *00:10:34.2±0.2, 38.°27N×26.°51E, h15^{km}, ML2.2, Error ellipse: s-maj=5.2km s-min=4.2km az=35.0*
ISCJB ***10*** *00:10:34.4±0.4, 38.°29N±0.°03×26.°54E±0.°03, h14^{km}±3^{km}, Error ellipse: s-maj=4.7km s-min=3.4km az=35.6*
THE ***10*** *00:10:34.0, 38.°31N×26.°56E, h23^{km}±2^{km}, ML1.7/4, Error ellipse: s-maj=3.2km s-min=0.6km az=235.0*
ISC 10 00:10:33.9±0.8**, 38.°29N**±0.°02×**26.°52E**±0.°02**, h17**^{km}±5^{km}**, n41, σ0^{s}.73**/68**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URLA	Izmir	0.09	37	PG	Pg	00 10 37.3	-0.1
URLA				SG	Sg	00 10 40.0	+0.3
URLA	Izmir	0.09	37	*i* P	Pg	00 10 37.1	-0.3
URLA				*i* S	Sg	00 10 39.9	+0.3
URLA	Izmir	0.09	37	*e*Pg	Pg	00 10 37.3	-0.1
URLA				*e*Sg	Sg	00 10 40.0	+0.3
CESE	ˆe¯me	0.18	284	PG	Pg	00 10 38.2	-0.2
CESE	ˆe¯me	0.18	284	*e*Pg	Pg	00 10 38.2	-0.2
KRBN	Karaburun	0.31	4	PG	Pb	00 10 41.6	+0.6
KRBN	Karaburun	0.31	4	*e*Pg	Pb	00 10 41.6	+0.6
DGB	˜zmir	0.37	130	*i* P	Pb	00 10 41.5	-0.5
DGB				*i* S	Sb	00 10 46.7	-0.8
CHOS	Chios island	0.38	285	PG	Pb	00 10 42.7	+0.4
CHOS				SG	Sb	00 10 48.5	+0.5
CHOS	Chios island	0.38	285	P	Pb	00 10 42.4	0.0
CHOS				S	Sb	00 10 48.9	+0.9
CHOS				AML	AML	00 10 49.7	
	comp=N,205μm,0.3s						
CHOS				AML	AML	00 10 50.0	
	comp=E,328μm,0.4s						
CHOS	Chios island	0.38	285	P	Pb	00 10 42.7	+0.4
CHOS				S	Sb	00 10 48.6	+0.5
CHOS	Chios island	0.38	285	P	Pb	00 10 42.7	+0.4
CHOS				*e*Sg	Sb	00 10 48.5	+0.5
BLCB	Balcova	0.42	76	PG	Pb	00 10 42.6	-0.3
BLCB				SG	Sb	00 10 48.5	-0.5
BLCB	Balcova	0.42	76	*e*Pg	Pb	00 10 42.6	-0.3
BLCB				*e*Sg	Sb	00 10 48.5	-0.5
FOCM	Foˆ§a	0.46	21	PG	Pb	00 10 44.2	+0.7
FOCM	Foˆ§a	0.46	21	*e*Pg	Pb	00 10 44.2	+0.7
SMG	Samos	0.63	157	P	Pg	00 10 46.1	-0.2
SMG				S	Sb	00 10 55.6	+0.6
SMG				AML	AML	00 10 57.6	
	comp=E,584μm,0.2s						
SMG				AML	AML	00 10 58.8	
	comp=N,321μm,0.4s						
SMG	Samos	0.63	157	P	Pg	00 10 46.1	-0.2
SMG				S	Sb	00 10 55.5	+0.5
SMG	Samos	0.63	157	P	Pg	00 10 46.1	-0.2
SMG				S	Sb	00 10 55.5	+0.5
PSRA	Psara	0.80	289	P	Pn	00 10 51.9	+1.4
PSRA				S	Sn	00 11 02.2	+0.3
PSRA	Psara	0.80	289	P	Pn	00 10 50.9	+0.5
PSRA				S	Sn	00 11 02.2	+0.3
DKL	Dikili	0.84	21	PG	Pn	00 10 51.3	+0.3
DKL	Dikili	0.84	21	*e*Pg	Pn	00 10 51.3	+0.3
PRK	Paraskevi	0.98	348	P	Pb	00 10 52.1	-0.3
PRK				S	Sb	00 11 04.5	-0.5
PRK				AML	AML	00 11 09.1	
	comp=E,152μm,0.4s						
PRK				AML	AML	00 11 09.4	
	comp=N,132μm,0.3s						
PRK	Paraskevi	0.98	348	P	Pb	00 10 50.9	-1.5
PRK				S	Sb	00 11 04.3	-0.8
PRK	Paraskevi	0.98	348	P	Pb	00 10 52.2	-0.3
PRK				S	Sg	00 11 05.3	-0.4
SIGR	SIGRI	1.06	331	P	Pb	00 10 50.9	-2.9
SIGR				S	Sb	00 11 06.4	-1.1
SIGR	SIGRI	1.06	331	P	Pb	00 10 52.4	-1.5
SIGR				S	Sb	00 11 06.1	-1.4
SIGR	SIGRI	1.06	331	P	Pb	00 10 52.4	-1.5
SIGR				S	Sb	00 11 07.6	+0.1
AYDB	Zeytinkoy-Aydi	1.13	107	PN	Pg	00 10 55.3	-0.5
AYDB	Zeytinkoy-Aydi	1.13	107	*e*Pn	Pg	00 10 55.3	-0.5
AYDN	Tasoluk	1.24	120	*i* P	Pg	00 10 58.0	+0.2
AYDN				*i* S	Sb	00 11 12.1	-0.6
AYDN	Tasoluk	1.24	120	P	Pg	00 10 58.0	+0.2
AYDN				S	Sb	00 11 12.1	-0.6
STEP	BALIKESIR_Sava	1.43	40	*i* P	Pb	00 11 00.4	+0.2
STEP				*i* S	Sg	00 11 21.4	+1.2
STEP	BALIKESIR_Sava	1.43	40	P	Pb	00 11 00.4	+0.2
STEP				S	Sg	00 11 21.4	+1.2
APE	Apeiranthos	1.45	213	P	Pn	00 10 58.6	-0.8
APE	Apeiranthos	1.45	213	P	Pn	00 10 58.6	-0.8
BAYC	CANAKKALE_Bayr	1.45	1	*i* P	Pn	00 10 59.4	-0.1
BAYC				*i* S	Sn	00 11 18.4	+0.2
BAYC	CANAKKALE_Bayr	1.45	1	P	Pn	00 10 59.4	-0.1
BAYC				S	Sn	00 11 18.4	+0.2
KULA	Kula-Manisa	1.69	82	PN	Pb	00 11 04.9	+0.2
KULA	Kula-Manisa	1.69	82	*e*Pn	Pb	00 11 04.9	+0.2

NIED ***10*** *00:32:00, 32.°40N×141.°80E, h5^{km}, Mw4.4 Best double couple: M$_0$4.94000×10^{15} NP1:ϕ_s162.00000°, δ22.00000°, λ39.00000°. NP2:ϕ_s35.00000°, δ76.00000°, λ107.00000°.*
IDC ***10*** *00:32:22.5±0.7, 32.°36N×141.°73E, h0^{km}, mb4.1/14, mb1 4.3/15, mb1mx4.0/64, mbtmp4.1/15, ML3.2/2, MS3.5/27, Ms1 3.5/27, ms1mx3.4/59, Error ellipse: s-maj=20.2km s-min=14.5km az=53.0*
BJI ***10*** *00:32:24.4, 32.°38N×142.°14E, h42^{km}, mb4.5/34, mB4.6/24, Ms4.1/16, Ms7 3.9/15*
JMA ***10*** *00:32:25.2±0.8, 32.°43N×141.°84E, h74^{km}, M3.9*
ISCJB ***10*** *00:32:26.8±0.3, 32.°38N±0.°04×141.°65E±0.°05, h39^{km}, mb4.4/39, MS3.6/23, Error ellipse: s-maj=6.3km s-min=4.5km az=142.7*
NEIC ***10*** *00:32:28.6±0.8, 32.°37N×141.°67E, h40^{km}±7^{km}, mb4.5/20, Error ellipse: s-maj=6.5km s-min=5.1km az=108.0*
ISC 10 00:32:28.5±0.5**, 32.°44N**±0.°06×**141.°81E**±0.°06**, h39**^{km}**, n101, σ1^{s}.47**/94**, mb4.5**/39**, MS3.5**/23**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	1.73	272	P	Pn	00 32 54.0	-2.1
JHJ2	Mitsune	1.81	292	*e*Pn	Pn	00 32 54.9	-2.2
JHJ2	Mitsune	1.81	292	P	Pn	00 32 55.5	-1.6
JHJ	Hachijo jima 2	1.84	292	Pn	Pn	00 32 55.5	-2.0
	106nm,0.3s,baz=337,slow=18,SNR=46						
JHJ				Sn	Sn	00 33 18.9	-0.6
	206nm,0.3s,baz=351,slow=23,SNR=8.8						
BSO1	Boso 1	2.32	343	P	Pn	00 33 02.3	-1.4
BSO3	Boso 3	2.60	336	P	Pn	00 33 06.4	-1.4
JYN	Shimob	4.08	319	P	Pn	00 33 29.7	+1.2
JRY	Ryogami san	4.31	327	P	Pn	00 33 30.5	-1.0
JRY				*e*S	Sn	00 34 21.2	+0.7
JAG	Ashikaga	4.43	335	P	Pn	00 33 32.0	-1.2
JAG				*e*S	Sn	00 34 22.5	-1.0
JIE	Ise	4.69	296	P	Pn	00 33 36.0	-0.8
INU	Inuyama	4.93	307	*e*Pn	Pn	00 33 40.6	+0.5
MJAR	Matsushiro Arr	5.06	325	Pn	Pn	00 33 40.7	-1.2
	2.0nm,0.3s,baz=155,slow=11,SNR=16						
MJAR				LR	LR	00 35 54.8	
	comp=Z,417nm,19.8s,baz=145,slow=42						
MAJO	Matsushiro	5.06	325	*e*Pn	Pn	00 33 41.8	-0.1
MAT	Matsushiro	5.06	325	P	Pn	00 33 42.7	+0.8
MAT				S	Sn	00 34 37.9	-1.2
MJB9	Matsu-Tunnel	5.07	325	*e*Pn	Pn	00 33 41.9	-0.1
JFT	Otama	5.21	347	P	Pn	00 33 42.2	-1.8
JFT				*e*S	Sn	00 34 39.7	-3.1
JNU	Nakatsue	9.23	277	Pn	Pn	00 34 40.5	+1.4
	0.3nm,0.3s,baz=68,slow=11,SNR=5.8						
JNU				LR	LR	00 38 24.3	
	comp=Z,377nm,18.1s,baz=123,slow=39						
JNU	Nakatsue	9.23	277	*e*Pn	Pn	00 34 39.2	+0.1
ASAJ	Asahikawa	11.68	3	LR	LR	00 40 30.3	
	comp=Z,152nm,20.2s,baz=190,slow=42						
KSRS	Korea Array	12.44	298	LR	LR	00 40 18.9	
	comp=Z,264nm,19.6s,baz=110,slow=38						
JOW	Kunigami	13.02	248	LR	LR	00 40 41.2	
	comp=Z,288nm,18.3s,baz=273,slow=39						
USRK	Ussuriysk Ar.	14.04	330	LR	LR	00 41 06.4	
	comp=Z,193nm,18.8s,baz=137,slow=37						
KLR	Kul'dur	18.39	339	P	P	00 36 39.7	-0.4
	0.0nm,0.3s,baz=149,slow=10,SNR=9.1						
KLR				LR	LR	00 43 42.4	
	comp=Z,9.5nm,18.2s,baz=122,slow=37						
NJ2	Nanjing	19.42	275	*e*P	P	00 36 50.7	-0.7
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
NACB	Ninganchiao	19.59	250	*e*P	P	00 36 52.2	-1.1
	16nm,0.8s						
SSLB	Suanglung	20.29	250	*e*P	P	00 36 59.5	-1.4
	16nm,0.9s						
HHC	Hu-ho-hao-te	25.58	298	*e*P	P	00 37 52.8	-1.2
HHC				PP	PnPn	00 38 32.8	+1.9
HHC				S	S	00 42 13.8	-5.6
HHC				pmax	pmax		
	comp=Z,16nm,1.1s						
HHC				pmax	pmax		
	comp=Z,75nm,6.7s						
HHC				LR	LR		
	comp=N,200nm,13.8s						
HHC				LR	LR		
	comp=E,210nm,13.2s						
HHC				LR	LR		
	comp=Z,180nm,12.1s						
TGY	Tagaytay City	26.38	231	LR	LR	00 48 10.5	
	comp=Z,102nm,19.3s,baz=154,slow=36						
XAN	Xi'an	27.49	282	P	P	00 38 08.3	-3.0
XAN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,51nm,4.3s						
ULN	Ulaanbaatar	30.41	311	*e*P	P	00 38 37.3	+0.2
	5.5nm,0.8s						
YAK	Yakutsk	30.63	349	LR	LR	00 51 24.8	
	comp=Z,78nm,18.9s,baz=154,slow=37						
SONA1	Songino Array	30.82	310	*e*P	P	00 38 41.1	+0.4
SONM	Songino Array	30.82	310	P	P	00 38 41.3	+0.5
	4.9nm,0.8s,baz=115,slow=8.5,SNR=24						
SONM				LR	LR	00 51 30.4	
	comp=Z,112nm,20.2s,baz=86,slow=37						
GYA	Guiyang	31.08	268	*e*P	P	00 38 42.8	-0.5
GYA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LZH	Lanzhou	31.45	287	*e*P	P	00 38 47.8	+1.3
LZH				pP	pP	00 38 58.2	+0.8
LZH				sP	sP	00 39 03.9	+1.8
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
CD2	Chengdu	32.31	278	*e*P	P	00 38 51.5	-2.4
TLY	Talaya	33.73	316	LR	LR	00 53 31.8	
	comp=Z,119nm,18.2s,baz=122,slow=38						
KMI	Kunming	34.86	268	P	P	00 39 16.1	-0.3
KMI				pmax	pmax		
	comp=Z,12nm,0.6s						
KMI				pmax	pmax		
	comp=Z,39nm,4.0s						
CMAR	Chiang Mai Arr	40.86	261	LR	LR	00 59 15.2	
	comp=Z,31nm,18.1s,baz=86,slow=40						
WMQ	Urumqi	43.36	301	P	P	00 40 28.2	+1.2
WMQ				pP	pP	00 40 39.7	+1.6
WMQ				pmax	pmax		
	comp=Z,14nm,0.8s						
WMQ				LR	LR		
	comp=N,150nm,22.3s						
WMQ				LR	LR		
	comp=E,96nm,15.9s						
WMQ				LR	LR		
	comp=Z,110nm,18.1s						
BRDH	Bariadhala	45.18	271	LR	LR	01 02 57.3	
	comp=Z,130nm,18.2s,baz=168,slow=41						
ZAA0	Zalesovo Array	45.34	316	*e*P	P	00 40 41.8	-0.8
ZAA0				*e*pP	pP	00 40 54.8	+0.9
ZALV	Zalesovo Beam	45.34	316	P	P	00 40 41.5	-1.1
	1.1nm,0.6s,baz=74,slow=6.3,SNR=7.0						
ZALV				LR	LR	01 00 25.2	
	comp=Z,59nm,18.4s,baz=70,slow=37						
ZALV	Zalesovo Beam	45.34	316	*e*P	P	00 40 41.7	-0.9
MK01	Makanchi Array	46.95	306	*e*P	P	00 40 54.4	-1.0
MK31	Makanchi Array	46.95	306	*e*P	P	00 40 54.9	-0.6
MKAR	Makanchi Array	46.95	306	P	P	00 40 54.7	-0.8
	4.6nm,0.7s,baz=87,slow=9.7,SNR=37						
MKAR				LR	LR	01 01 10.8	
	comp=Z,52nm,18.7s,baz=90,slow=37						
MKAR	Makanchi Array	46.95	306	*e*P	P	00 40 54.9	-0.6
	44nm,0.6s						
MAKZ	Makanchi	47.17	306	*e*P	P	00 40 56.9	-0.2
	5.3nm,0.8s						
KURK	Kurchatov	49.12	311	*e*P	P	00 41 11.2	-0.8
	7.2nm,0.9s						
KURBB	Kurchatov Arra	49.18	311	P	P	00 41 11.6	-0.9
	3.3nm,0.7s,baz=91,slow=8.3,SNR=28						
LEM	Lembang	50.83	226	LR	LR	01 03 12.2	
	comp=Z,48nm,18.4s,baz=186,slow=36						
BWN	Browne	52.10	31	*e*P	P	00 41 34.4	0.0
	19nm,1.0s						
WRAB	Tennant Creek	52.56	189	*e*P	P	00 41 36.9	-1.3
	21nm,0.9s						
WB2	Warramunga Arr	52.57	189	*e*P	P	00 41 37.0	-1.3
WRA	Warramunga Arr	52.57	189	P	P	00 41 36.7	-1.6
	4.3nm,0.5s,baz=5.5,slow=7.6,SNR=95						
FITZ	Fitzroy Crossi	52.58	199	*e*P	P	00 41 37.9	-0.5
	17nm,1.7s						
KSH	Kashi	52.69	297	P	P	00 41 43.1	+3.8
KSH				PcP	PcP	00 42 52.0	+3.2
KSH				PP	PP	00 43 42.6	+4.0
KSH				S	S	00 49 06.8	+2.3
KSH				SS	SS	00 52 45.1	+2.1
KSH				pmax	pmax		
	comp=Z,68nm,4.2s						
IL1	Eielson Array	53.24	30	*e*P	P	00 41 42.8	0.0
ILAR	Eielson Array	53.24	30	P	P	00 41 42.8	-0.1
	1.0nm,0.9s,baz=269,slow=4.9,SNR=7.0						
BVAR	Borovoye Array	53.97	315	P	P	00 41 47.5	-0.8
	2.6nm,0.5s,baz=92,slow=8.7,SNR=9.5						
BVAR				LR	LR	01 04 22.8	
	comp=Z,50nm,20.3s,baz=66,slow=36						
BRVK	Borovoye	54.03	315	*e*P	P	00 41 48.6	-0.2
	3.6nm,0.6s						
AS01	Alice Springs	56.29	189	*e*P	P	00 42 04.1	-1.2
AS01				*e*pP	pP	00 42 14.5	-2.3
ASAR	Alice Springs	56.30	189	P	P	00 42 04.4	-1.0
	0.6nm,0.4s,baz=7.7,slow=8.5,SNR=13						
DZM	Mont Dzumac	59.10	153	LR	LR	01 07 18.4	
	comp=Z,40nm,19.5s,baz=254,slow=36						
ARU	Arti	60.06	320	*e*P	P	00 42 30.8	-0.5
	4.9nm,0.9s						
AKTO	Aktyubinsk	62.04	314	LR	LR	01 09 18.7	
	comp=Z,29nm,18.0s,baz=40,slow=36						
STKA	Stephens Creek	63.97	180	P	P	00 42 57.5	-0.2
	2.3nm,0.7s,baz=346,slow=8.3,SNR=3.7						
FORT	Forrest	64.20	193	*e*P	P	00 42 59.3	0.0
	23nm,0.9s						
GEYT	Alibeck	66.41	301	LR	LR	01 14 00.3	
	comp=Z,29nm,18.2s,baz=255,slow=38						
YBH	Yreka Blue Hor	72.93	51	LR	LR	01 08 08.1	
	comp=Z,30nm,21.7s,baz=318,slow=29						
FINES	FINESS Array B	73.04	333	P	P	00 43 53.8	-0.3
	0.4nm,0.4s,baz=50,slow=6.0,SNR=6.2						
GNI	Garni	74.75	308	LR	LR	01 19 41.2	
	comp=Z,43nm,19.9s,baz=60,slow=38						
LRM	Limekiln Ridge	77.22	44	*e*P	P	00 44 19.6	+0.8
NV01	Mina Array Sit	77.51	52	*e*P	P	00 44 21.7	+1.2
NVAR	Mina Array Bea	77.51	52	P	P	00 44 20.9	+0.4
	1.0nm,0.7s,baz=280,slow=6.8,SNR=7.1						
BOZ	Bozeman (W)	77.83	44	*e*P	P	00 44 23.4	+1.3
	8.9nm,1.8s						
HFS	Hagfors	78.41	336	LR	LR	01 21 15.0	
	comp=Z,43nm,21.5s,baz=26,slow=37						
NB2	NORSAR Subarra	78.55	338	P	P	00 44 24.8	-0.8
	comp=Z,6.2nm,1.4s,baz=44,slow=5.9						
NOA	NORSAR Array B	78.55	338	LR	LR	01 22 23.9	
	comp=Z,28nm,19.2s,baz=45,slow=38						
TPNV	Topopah Spring	79.67	53	*e*P	P	00 44 33.2	+0.8
	comp=Z,5.0nm,1.1s						
DUG	Dugway, Tooele	80.13	49	*e*P	P	00 44 36.2	+1.4
	comp=Z,2.0nm,0.8s						
PSUT	Pine Spring	80.39	50	*e*P	P	00 44 38.6	+2.3
	comp=Z,3.4nm,1.1s						
PDAR	Pinedale Array	80.67	45	P	P	00 44 38.4	+0.6
	comp=Z,0.2nm,0.4s,baz=268,slow=4.5,SNR=3.9						
LCMT	Little Creek M	81.64	51	*e*P	P	00 44 43.8	+0.9
	comp=Z,3.2nm,1.0s						
P17A	Butcher Ranch,	81.86	48	*e*P	P	00 44 44.4	+0.4
	comp=Z,3.7nm,0.8s						
KNB	Kanab	81.92	51	*e*P	P	00 44 46.0	+1.6
	comp=Z,6.0nm,1.1s						
BUR08	Bucovina Ar. S	82.12	322	*e*P	P	00 44 45.4	+0.2
BUR04	Bucovina Ar. S	82.13	322	*e*P	P	00 44 45.0	-0.2
BRTR	Keskin Array B	82.16	312	P	P	00 44 45.4	-0.2
	comp=Z,1.1nm,0.8s,baz=102,slow=5.2,SNR=6.6						
BRTR				LR	LR	01 26 56.2	
	comp=Z,18nm,19.0s,baz=100,slow=40						
SRU	San Rafael Swe	82.20	48	*e*P	P	00 44 47.0	+1.1
	comp=Z,4.6nm,0.7s						
RAYN	Ar Rayn	82.73	293	*e*P	P	00 44 48.5	-0.2
	comp=Z,3.4nm,0.8s						
ULM	Lac du Bonnet	83.16	33	LR	LR	01 23 42.2	
	comp=Z,22nm,19.1s,baz=60,slow=37						
VYHS	Vyhne	84.70	326	*e*P	P	00 44 58.4	+0.1
CLL	Collm	85.25	331	*e*P	P	00 45 01.0	+0.1
GERES	GERESS Array B	86.79	329	LR	LR	01 26 30.1	
	comp=Z,39nm,18.1s,baz=64,slow=37						
LPIG	La Paz	91.18	60	LR	LR	01 20 30.2	
	comp=Z,23nm,20.0s,baz=264,slow=32						
TX31	Lajitas Ar. Si	92.66	53	*e*P	P	00 45 37.6	+0.9
TXAR	Lajitas Array	92.66	53	P	P	00 45 37.6	+0.9
	comp=Z,0.9nm,0.9s,baz=298,slow=3.1,SNR=9.3						
SAML	Samuel	147.11	50	*e*PKPdf	PKPdf	00 52 05.4	-0.5
LPAZ	La Paz	148.49	66	PKPbc	PKPbc	00 52 12.9	+0.6
	comp=Z,1.2nm,0.7s,baz=13,slow=4.5,SNR=4.6						

ISCJB ***10*** *00:43:29.0±0.7, 29.°89S±0.°07×178.°8W±0.°2, h400^{km}, mb3.5/2, Error ellipse: s-maj=22.6km s-min=6.9km az=15.7*
IDC ***10*** *00:43:29.7±1.5, 29.°91S×179.°11W, h375^{km}±21^{km}, mb3.3/2, mb1 3.6/3, mb1mx3.1/40, mbtmp4.2/3, Error ellipse: s-maj=48.8km s-min=25.4km az=113.0*
WEL ***10*** *00:43:34.8±0.7, 30°S±13°×17°9W±3°4, h337^{km}±12^{km}*
ISC 10 00:43:29.4±1.3**, 30.°0S**±0.°1×**178.°7W**±0.°2**, h400**^{km}**, n39, σ2^{s}.20**/47**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	0.97	43	P	Pn	00 44 19.1	-1.3
RIZ	Raoul Island	0.98	42	P	Pn	00 44 19.3	-1.2
RAO	Raoul Island	0.98	43	P	Pn	00 44 19.1	-1.4
	46nm,0.3s,baz=55,slow=23,SNR=3.2						
RAO				S	S	00 44 55.6	-6.0
	86nm,0.3s,baz=84,slow=22,SNR=4.7						
GRZ	Great Barrier	7.95	217	P	P	00 45 26.8	+2.7
MXZ	Matakaoa Point	7.97	198	P	P	00 45 27.8	+3.6
WMGZ	Waiomatatini S	8.18	196	P	P	00 45 27.3	+0.7
HAZ	Te Kaha	8.29	200	P	P	00 45 29.4	+1.6
HAZ				S	S	00 47 01.5	-3.0
PKGZ	Pakihiroa	8.34	198	P	P	00 45 32.0	+3.6
RUGZ	Raukumara Rang	8.52	200	P	P	00 45 32.3	+1.8
RUGZ				S	S	00 47 04.9	-4.6
TWGZ	Tauwhareparae	8.63	198	P	P	00 45 35.2	+3.5
TWGZ				S	S	00 47 10.0	-1.7
OPRZ	Ohinepanea	8.79	206	P	P	00 45 37.4	+4.1
MWZ	Matawai	8.90	200	P	Pn	00 45 34.5	-0.2
MWZ				S	S	00 47 15.2	-2.3
TKGZ	Te Karaka	8.91	198	P	P	00 45 37.2	+2.4
TKGZ				S	S	00 47 16.1	-1.5
URZ	Urewera	8.96	202	P	Pn	00 45 35.0	-0.2
	4.7nm,0.3s,baz=268,slow=3.8,SNR=36						
URZ				S	S	00 47 16.5	-2.2
	4.0nm,0.3s,baz=81,slow=22,SNR=12						
URZ	Urewera	8.96	202	P	Pn	00 45 35.2	0.0
URZ				S	S	00 47 16.4	-2.3
RIGZ	Rimuhau	9.19	198	P	P	00 45 40.6	+2.7
RIGZ				S	S	00 47 20.9	-2.5
MUGZ	Murupara	9.27	203	P	Pn	00 45 40.7	+1.8
RTZ	Ruatahuna	9.33	201	P	Pn	00 45 41.9	+2.3
SNGZ	Shannon Statio	9.37	199	P	Pn	00 45 43.3	+3.2
RAHZ	Arahi	9.57	200	P	Pn	00 45 44.3	+2.0
RAHZ				S	S	00 47 29.7	-1.7
MRHZ	Matea Rd	9.71	203	P	Pn	00 45 45.7	+1.7
ARHZ	Aropaoanui	9.92	200	P	Pn	00 45 49.2	+2.9
MCHZ	McNeill Hill	10.18	201	P	Pn	00 45 51.3	+2.0
KWHZ	Kaweka Forest	10.24	202	P	Pn	00 45 51.9	+1.8
WTVZ	West Tongariro	10.26	206	P	Pn	00 45 52.4	+2.0
TWVZ	Taurewa	10.28	207	P	Pn	00 45 53.0	+2.4
NGZ	Ngauruhoe	10.31	206	P	Pn	00 45 53.0	+2.0
WHVZ	Whangaehu Hut	10.41	205	P	P	00 45 52.7	+1.1
BHHZ	Black Hill Sta	10.42	203	P	P	00 45 52.3	+0.7
KAHZ	Kahuranaki	10.45	199	P	P	00 45 52.3	+0.5
MOVZ	Moawhango	10.46	204	P	Pn	00 45 53.6	+0.9
KRHZ	Kereru	10.46	202	P	Pn	00 45 54.1	+1.4
PXZ	Pawanui	10.67	199	P	Pn	00 45 56.5	+1.5
PNHZ	Pukenui	10.76	202	P	P	00 45 55.9	+0.6
PRHZ	Porangahau	10.95	199	P	Pn	00 45 59.5	+1.2
TSZ	Takapari Road	10.97	202	P	Pn	00 45 59.0	+0.4
ASAR	Alice Springs	42.54	267	P	P	00 50 47.4	-0.6
	0.8nm,0.5s,baz=104,slow=7.9,SNR=14						
WRA	Warramunga Arr	43.49	272	P	P	00 50 54.5	-1.0
	2.3nm,0.5s,baz=111,slow=7.1,SNR=67						
FINES	FINESS Array B	144.55	340	PKP	PKPbc	01 02 20.2	+2.4

2.1nm,0.6s,baz=64,slow=4.4,SNR=8.3

ISCJB ***10*** *00:45:16.2±0.5, 54°.43N±0°.06×168°.56E±0°.06, h24^{km}, mb3.7/15, MS2.9/5, Error ellipse: s-maj=8.4km s-min=4.9km az=171.9*
IDC ***10*** *00:45:16.2±0.7, 54°.93N×168°.56E, h0^{km}, mb3.8/12, mb1 4.1/13, mb1mx3.7/75, mbtmp3.8/13, MS2.9/6, Ms1 3.0/6, ms1mx2.6/63, Error ellipse: s-maj=29.2km s-min=13.4km az=167.0*
KRSC ***10*** *00:45:18.8±1.6, 54°.46N×168°.27E, h77^{km}±25^{km}, ML4.2*
MOS ***10*** *00:45:19.5±0.6, 54°.46N×168°.35E, h63^{km}, mb4.2/2, Error ellipse: s-maj=10.3km s-min=6.4km az=19.3*
NEIC ***10*** *00:45:21.4±0.5, 54°.94N×168°.52E, h35^{km}, mb4.1/1, Error ellipse: s-maj=19.8km s-min=7.3km az=164.0*
ISC 10 00:45:18.6±0.7**, 54°.44N**±0°.06×**168°.48E**±0°.06**, h24**^{km}**, n96, σ1^{s}.25**/98**, mb3.8**/15**, MS3.0**/5**, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	**Bering**	**1.64**	**299**	*e*P	**Pn**	**00 45 44.6**	**-1.2**
BKI				*e*S	**Sn**	**00 46 06.3**	**+0.1**
BKI	**Bering**	**1.64**	**299**	PN	**Pn**	**00 45 44.6**	**-1.2**
BKI				S	**Sn**	**00 46 06.3**	**+0.1**
KBTR	**Krutoberegovo**	**3.69**	**301**	*e*P	**Pn**	**00 46 13.6**	**-0.4**
KBTR				*e*S	**Sn**	**00 46 56.4**	**-0.2**
KBTR	**Krutoberegovo**	**3.69**	**301**	PN	**Pn**	**00 46 13.6**	**-0.4**
KBTR				S	**Sn**	**00 46 56.4**	**-0.2**
MKZ	**Mys Kozlova**	**3.94**	**274**	*e*P	**Pn**	**00 46 17.7**	**+0.3**
MKZ				*e*S	**Sn**	**00 47 00.1**	**-2.7**
MKZ	**Mys Kozlova**	**3.94**	**274**	PN	**Pn**	**00 46 17.7**	**+0.3**
MKZ				S	**Sn**	**00 47 00.1**	**-2.7**
SMKR	**Semkarok**	**4.53**	**301**	*e*P	**Pn**	**00 46 25.8**	**+0.2**
SMKR	**Semkarok**	**4.53**	**301**	PN	**Pn**	**00 46 25.8**	**+0.2**
BDR	**Baidarnaya**	**4.65**	**300**	*e*P	**Pn**	**00 46 28.1**	**+0.8**
BDR	**Baidarnaya**	**4.65**	**300**	PN	**Pn**	**00 46 28.1**	**+0.8**
ZLN	**Zelenaya**	**4.67**	**293**	*e*P	**Pn**	**00 46 29.2**	**+1.6**
ZLN	**Zelenaya**	**4.67**	**293**	PN	**Pn**	**00 46 29.2**	**+1.6**
SRKR	**Sorokina**	**4.71**	**301**	*e*P	**Pn**	**00 46 28.2**	**+0.1**
SRKR	**Sorokina**	**4.71**	**301**	PN	**Pn**	**00 46 28.2**	**+0.1**
CIRR	**Tsirk**	**4.73**	**294**	*e*P	**Pn**	**00 46 28.7**	**+0.3**
CIRR	**Tsirk**	**4.73**	**294**	PN	**Pn**	**00 46 28.7**	**+0.3**
LGNR	**Loginova**	**4.75**	**293**	*e*P	**Pn**	**00 46 30.3**	**+1.4**
LGNR	**Loginova**	**4.75**	**293**	PN	**Pn**	**00 46 30.3**	**+1.4**
BZMR	**Bezymyannaya**	**4.82**	**291**	*e*P	**Pn**	**00 46 31.5**	**+1.8**
BZMR	**Bezymyannaya**	**4.82**	**291**	PN	**Pn**	**00 46 31.5**	**+1.8**
BZWR	**Bezymyannyi-We**	**4.82**	**292**	*e*P	**Pn**	**00 46 30.2**	**+0.5**
BZWR	**Bezymyannyi-We**	**4.82**	**292**	PN	**Pn**	**00 46 30.2**	**+0.5**
KRSR	**Krestovskiy**	**4.86**	**295**	*e*P	**Pn**	**00 46 30.3**	**+0.1**
KRSR	**Krestovskiy**	**4.86**	**295**	PN	**Pn**	**00 46 30.3**	**+0.1**
TUMR	**Tumrok**	**4.89**	**283**	*e*P	**Pn**	**00 46 31.1**	**+0.5**
TUMR	**Tumrok**	**4.89**	**283**	PN	**Pn**	**00 46 31.1**	**+0.5**
KIRR	**Kirishev**	**4.90**	**291**	*e*P	**Pn**	**00 46 31.6**	**+0.8**
KIRR	**Kirishev**	**4.90**	**291**	PN	**Pn**	**00 46 31.6**	**+0.8**
KMNR	**Kamenistaya**	**4.92**	**289**	*e*P	**Pn**	**00 46 31.5**	**+0.6**
KMNR	**Kamenistaya**	**4.92**	**289**	PN	**Pn**	**00 46 31.5**	**+0.6**
KPT	**Kopyto**	**4.97**	**291**	*e*P	**Pn**	**00 46 31.6**	**-0.1**
KPT	**Kopyto**	**4.97**	**291**	PN	**Pn**	**00 46 31.6**	**-0.1**
SPN	**Mys Shipunski**	**5.20**	**258**	*e*P	**Pn**	**00 46 34.5**	**-0.2**
SPN				*e*S	**Sn**	**00 47 31.6**	**-2.2**
SPN	**Mys Shipunski**	**5.20**	**258**	PN	**Pn**	**00 46 34.5**	**-0.2**
SPN				S	**Sn**	**00 47 31.6**	**-2.2**
KII	**Karymskiy**	**5.32**	**269**	*e*P	**Pn**	**00 46 36.4**	**0.0**
KII	**Karymskiy**	**5.32**	**269**	PN	**Pn**	**00 46 36.4**	**0.0**
NLC	**Nalytchevo**	**5.56**	**260**	*e*S	**Sn**	**00 47 40.7**	**-2.1**
OSSR	**Ossora**	**5.66**	**331**	*e*P	**Pn**	**00 46 41.9**	**+0.8**
OSSR	**Ossora**	**5.66**	**331**	PN	**Pn**	**00 46 41.9**	**+0.8**
SDLR	**Sedlovina**	**5.80**	**262**	*e*P	**Pn**	**00 46 43.5**	**+0.4**
SDLR	**Sedlovina**	**5.80**	**262**	PN	**Pn**	**00 46 43.5**	**+0.4**
SMAR	**Somma**	**5.85**	**262**	*e*P	**Pn**	**00 46 44.4**	**+0.5**
SMAR	**Somma**	**5.85**	**262**	PN	**Pn**	**00 46 44.4**	**+0.5**
UGLR	**Uglovaya**	**5.85**	**262**	*e*P	**Pn**	**00 46 44.8**	**+1.0**
UGLR	**Uglovaya**	**5.85**	**262**	PN	**Pn**	**00 46 44.8**	**+1.0**
KRX	**Arik**	**5.92**	**263**	*e*P	**Pn**	**00 46 44.6**	**-0.1**
KRX	**Arik**	**5.92**	**263**	PN	**Pn**	**00 46 44.6**	**-0.1**
KOK	**Koryaka**	**5.94**	**263**	*e*P	**Pn**	**00 46 45.1**	**+0.1**
KOK	**Koryaka**	**5.94**	**263**	PN	**Pn**	**00 46 45.1**	**+0.1**
DALK	**Dalny**	**5.95**	**260**	*e*P	**Pn**	**00 46 45.8**	**+0.8**
DALK	**Dalny**	**5.95**	**260**	PN	**Pn**	**00 46 45.8**	**+0.8**
GNL	**Ganaly**	**6.25**	**267**	*e*P	**Pn**	**00 46 50.4**	**+1.1**
GNL	**Ganaly**	**6.25**	**267**	PN	**Pn**	**00 46 50.4**	**+1.1**
RUS	**Russkaya**	**6.29**	**255**	*e*P	**Pn**	**00 46 50.6**	**+0.9**
RUS				*e*S	**Sn**	**00 47 58.6**	**-2.1**
RUS	**Russkaya**	**6.29**	**255**	PN	**Pn**	**00 46 50.6**	**+0.9**
KRMR	**Karymshinskiy**	**6.37**	**260**	*e*P	**Pn**	**00 46 51.9**	**+1.1**
KRMR				*e*S	**Sn**	**00 48 01.4**	**-1.2**
KRMR	**Karymshinskiy**	**6.37**	**260**	PN	**Pn**	**00 46 51.9**	**+1.1**
KRMR				S	**Sn**	**00 48 01.4**	**-1.2**
MTVR	**Mutnovka**	**6.46**	**256**	*e*P	**Pn**	**00 46 52.5**	**+0.3**
MTVR				*e*S	**Sn**	**00 48 02.6**	**-2.5**
MTVR	**Mutnovka**	**6.46**	**256**	PN	**Pn**	**00 46 52.5**	**+0.3**
PETK	**Petropavlovsk-**	**6.53**	**263**	Pn	**Pn**	**00 46 55.0**	**+1.9**
	baz=77,slow=18						
PALN	**Palana**	**6.60**	**318**	*e*P	**Pn**	**00 46 55.6**	**+1.7**
PALN	**Palana**	**6.60**	**318**	PN	**Pn**	**00 46 55.6**	**+1.7**
ASAK	**Asacha**	**6.66**	**256**	*e*P	**Pn**	**00 46 55.4**	**+0.6**
ASAK	**Asacha**	**6.66**	**256**	PN	**Pn**	**00 46 55.4**	**+0.6**
KDTR	**Khodutka, Kamc**	**6.80**	**251**	*e*P	**Pn**	**00 46 57.5**	**+0.9**
KDTR				*e*S	**Sn**	**00 48 10.3**	**-2.9**
APC	**Apacha**	**6.90**	**262**	*e*P	**Pn**	**00 47 00.2**	**+2.1**
APC	**Apacha**	**6.90**	**262**	PN	**Pn**	**00 47 00.2**	**+2.1**
MIPR	**Malaya Ipel'ka**	**7.35**	**258**	*e*P	**Pn**	**00 47 06.3**	**+2.1**
MIPR	**Malaya Ipel'ka**	**7.35**	**258**	PN	**Pn**	**00 47 06.3**	**+2.1**
ASAJ	**Asahikawa**	**19.69**	**249**	LR	LR	00 56 21.5	
	comp=Z,22nm,21.1s,baz=196,slow=33						
KDAK	**Kodiak Island**	**21.75**	**65**	P	**P**	**00 50 06.2**	**-1.7**
	3.4nm,0.5s,baz=304,slow=8.6,SNR=5.5						
KLR	**Kul'dur**	**23.10**	**272**	P	**P**	**00 50 22.9**	**+0.6**
	0.5nm,1.0s,baz=50,slow=11,SNR=9.8						
ILAR	**Eielson Array**	**24.28**	**47**	P	**P**	**00 50 31.9**	**-1.7**
	1.5nm,0.7s,baz=255,slow=7.4,SNR=18						
ILAR				LR	LR	00 59 25.9	
	comp=Z,50nm,19.1s,baz=343,slow=36						
EGAK	**Eagle**	**26.74**	**47**	*e*P	**P**	**00 50 53.9**	**-1.9**
	5.6nm,1.0s						
MJAR	**Matsushiro Arr**	**27.45**	**242**	LR	LR	01 02 50.4	
	comp=Z,16nm,19.3s,baz=45,slow=38						
KSRS	**Korea Array**	**32.37**	**255**	LR	LR	01 04 34.2	
	comp=Z,16nm,21.4s,baz=34,slow=36						
H11N2	**WAKE ISLAND Hy**	**34.67**	**183**	T	T	01 28 46.7	
	baz=1.9,slow=76,SNR=161						
H11N3	**WAKE ISLAND Hy**	**34.69**	**183**	T	T	01 28 47.7	
	baz=1.9,slow=76,SNR=161						
H11N1	**WAKE ISLAND Hy**	**34.69**	**183**	T	T	01 28 48.0	
	baz=1.9,slow=76,SNR=157						
H11S1	**WAKE ISLAND Hy**	**35.90**	**183**	T	T	01 30 18.9	
	baz=1.9,slow=76,SNR=62						
H11S3	**WAKE ISLAND Hy**	**35.91**	**183**	T	T	01 30 17.6	
	baz=1.9,slow=76,SNR=29						
H11S2	**WAKE ISLAND Hy**	**35.91**	**183**	T	T	01 30 20.0	
	baz=1.9,slow=76,SNR=93						
SONM	**Songino Array**	**38.37**	**286**	P	**P**	**00 52 38.7**	**+1.2**
	0.9nm,0.6s,baz=51,slow=7.0,SNR=5.5						
YKA	**Yellowknife Ar**	**38.71**	**46**	P	**P**	**00 52 38.8**	**-1.3**
	0.7nm,0.6s,baz=306,slow=7.9,SNR=3.4						
SPITS	**Spitsbergen Ar**	**46.54**	**352**	LR	LR	01 12 18.3	
	comp=Z,30nm,18.8s,baz=355,slow=35						
NVAR	**Mina Array Bea**	**50.59**	**77**	P	**P**	**00 54 15.4**	**0.0**
	0.5nm,0.6s,baz=306,slow=9.6,SNR=4.4						
KURK	**Kurchatov**	**51.14**	**305**	P	**P**	**00 54 18.9**	**-0.1**
KURK	**Kurchatov**	**51.14**	**305**	P	**P**	**00 54 19.0**	**-0.1**
KURBB	**Kurchatov Arra**	**51.24**	**305**	P	**P**	**00 54 18.9**	**-0.9**
	1.3nm,0.8s,baz=54,slow=7.5,SNR=11						
PDAR	**Pinedale Array**	**52.46**	**67**	P	**P**	**00 54 29.0**	**-0.3**
	0.3nm,0.6s,baz=320,slow=4.4,SNR=4.7						
BVAR	**Borovoye Array**	**53.33**	**312**	P	**P**	**00 54 34.5**	**-0.8**
	2.6nm,0.6s,baz=45,slow=8.1,SNR=15						
CMAR	**Chiang Mai Arr**	**63.31**	**265**	P	**P**	**00 55 47.1**	**+1.7**
	0.7nm,0.3s,baz=31,slow=6.4,SNR=4.3						
CMAR				LR	LR	01 26 03.4	
	comp=Z,12nm,18.3s,baz=125,slow=39						
NB2	**NORSAR Subarra**	**63.46**	**348**	P	**P**	**00 55 45.0**	**-0.9**
	comp=Z,0.6nm,0.6s,baz=16,slow=6.9						
TXAR	**Lajitas Array**	**65.50**	**74**	P	**P**	**00 55 59.3**	**-0.5**
	comp=Z,0.6nm,0.5s,baz=307,slow=5.2,SNR=15						
WRA	**Warramunga Arr**	**79.66**	**212**	P	**P**	**00 57 27.5**	**+3.8**
	comp=Z,0.4nm,0.6s,baz=25,slow=6.3,SNR=7.7						
ASAR	**Alice Springs**	**83.28**	**212**	P	P	00 57 47.8	+4.8
	comp=Z,0.6nm,0.8s,baz=18,slow=4.8,SNR=6.2						

SOME ***10*** *00:51:48.6, 42°.15N×81°.62E, h5^{km}*
NNC ***10*** *00:51:50.0±2.1, 42°.28N×81°.81E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=18.6km s-min=9.0km az=167.0*
ISC 10 00:51:48.8±2.6**, 42°.24N**±0°.09×**81°.63E**±0°.08**, h3**^{km}±14^{km}**, n18, σ1^{s}.68**/32**, 8C-5D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.53**	**322**	*e*P	**Pg**	**00 52 18.4**	**+0.4**
	52nm,0.3s						
KTMS				*e*S	**Sg**	**00 52 39.8**	**+2.0**
	44nm,0.4s						
SHLS	**Shalkode**	**1.84**	**301**	*e*P	**Pn**	**00 52 20.0**	**-1.4**
	33nm,0.2s						
SHLS				*e*S	**Sn**	**00 52 43.1**	**-2.3**
	73nm,0.4s						
PDGK	**Podgornoye**	**1.91**	**305**	⇑Pn	**Pb**	**00 52 24.6**	**+0.2**
	11nm,0.4s						
PDGK				⇓Sn	**Sg**	**00 52 52.5**	**+2.2**
	72nm,0.6s						
UZB	**Uzynbulak**	**2.12**	**296**	*e*P	**Pg**	**00 52 29.0**	**-0.5**
	19nm,0.2s						
UZB				*e*S	**Sg**	**00 52 59.0**	**+2.0**
	40nm,0.3s						
DJR	**Jarkent**	**2.48**	**328**	*e*P	**Pb**	**00 52 34.8**	**+0.7**
	3.5nm,0.3s						
DJR				*e*S	**Sg**	**00 53 08.3**	**-0.2**
	28nm,0.4s						
SATY	**Saty**	**2.52**	**290**	*e*P	**Pg**	**00 52 36.2**	**-0.8**
	9.9nm,0.3s						
SATY				*e*S	**Sg**	**00 53 11.1**	**+1.5**
	38nm,0.2s						
ZHN	**Zhinishke**	**2.53**	**293**	*e*P	**Pg**	**00 52 36.7**	**-0.6**
	8.0nm,0.4s						
ZHN				*e*S	**Sg**	**00 53 11.4**	**+1.3**
	37nm,0.3s						
KURS	**Kuram**	**2.83**	**297**	*e*P	**Pb**	**00 52 41.5**	**+1.4**
	1.4nm,0.6s						
KURS				*e*S	**Sg**	**00 53 19.6**	**-0.1**
	14nm,0.5s						
ARXS	**Arharly**	**3.41**	**307**	*e*P	**Pb**	**00 52 51.5**	**+1.6**
	3.1nm,0.3s						
ARXS				*e*S	**Sg**	**00 53 36.7**	**-1.5**
	15nm,0.4s						
KAPS	**Kapalarasan**	**3.46**	**332**	*e*P	**Pb**	**00 52 50.3**	**-0.4**
	6.5nm,0.3s						
KAPS				*e*S	**Sb**	**00 53 34.2**	**+1.0**
	22nm,0.3s						
KOTS	**Kotyrbulak**	**3.47**	**288**	*e*P	**Pb**	**00 52 52.3**	**+1.3**
	4.0nm,0.3s						
KOTS				*e*S	**Sg**	**00 53 38.0**	**-2.3**
	23nm,0.5s						
IZV	**Izvestkoviy**	**3.79**	**284**	*e*P	**Pb**	**00 52 58.0**	**+1.6**
	4.1nm,0.5s						
IZV				*e*S	**Sg**	**00 53 48.0**	**-2.4**
	13nm,0.4s						
KTBS	**Karatobe**	**3.92**	**294**	*e*P	**Pb**	**00 53 00.6**	**+2.1**
	0.3nm,0.2s						
KTBS				*e*S	**Sg**	**00 53 52.5**	**-2.1**
	7.2nm,0.4s						
TKM2	**Tokmak 2**	**4.51**	**281**	⇑Pg	**Pg**	**00 53 14.5**	**-0.6**
	2.9nm,0.8s						
TKM2				⇓Lg	Lg	00 54 18.0	
	5.4nm,0.8s						
MAKZ	**Makanchi**	**4.57**	**3**	⇑Pn	**Pn**	**00 53 00.8**	**+1.9**
	1.8nm,0.3s						
MAKZ				⇓Lg	Lg	00 54 11.5	
	19nm,0.8s						
MK31	**Makanchi Array**	**4.58**	**6**	⇓Pn	**Pn**	**00 53 01.6**	**+2.7**
	0.3nm,0.3s,baz=184,slow=13,SNR=23						
MK31				⇓Pg	**Pg**	**00 53 13.4**	**-3.0**
	2.5nm,0.6s,baz=184,slow=15,SNR=9.3						
MK31				⇑Lg	Lg	00 54 11.9	
	10nm,0.7s,baz=186,slow=30,SNR=8.4						
KURBB	**Kurchatov Arra**	**8.65**	**347**	⇑Pn	**Pn**	**00 53 55.1**	**+0.3**
	1.2nm,0.8s						
KURBB				⇑Lg	Lg	00 56 21.0	
	5.9nm,0.6s						
KURK	**Kurchatov**	**8.73**	**347**	⇑Pn	**Pn**	**00 53 55.1**	**-0.8**
	0.9nm,0.7s						
KURK				⇑Lg	Lg	00 56 27.2	
	5.0nm,0.8s						

ATH ***10*** *01:09:25.4, 35°.59N×28°.93E, h37^{km}±9^{km}, ML1.7/2, Error ellipse: s-maj=10.8km s-min=1.2km az=6.0*
DDA ***10*** *01:09:25.9, 35°.71N×28°.87E, h31^{km}, Ml2.9*
CSEM ***10*** *01:09:26.8±0.3, 35°.66N×28°.90E, h24^{km}±2^{km}, ML1.7, Error ellipse: s-maj=5.7km s-min=3.1km az=160.0*
ISK ***10*** *01:09:26.4, 35°.72N×28°.87E, h18^{km}, ML2.6/13*
ISC 10 01:09:26.7±1.4**, 35°.67N**±0°.05×**28°.88E**±0°.03**, h21**^{km}±5^{km}**, n54, σ0^{s}.55**/80**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSL	**Kastellorizon**	**0.74**	**50**	P	**Pb**	**01 09 40.8**	**-0.1**
KSL				S	**Sn**	**01 09 52.1**	**-0.5**
KSL				AML	AML	01 09 53.2	
	comp=N,92µm,0.3s						
KSL				AML	AML	01 09 54.7	
	comp=E,174µm,0.3s						
AKAS	**Kas**	**0.81**	**46**	PG	**Pb**	**01 09 42.2**	**+0.1**
AKAS				SG	**Sn**	**01 09 53.5**	**-1.0**
AKAS	**Kas**	**0.81**	**46**	*i* P	**Pb**	**01 09 41.9**	**-0.2**
AKAS				*i* S	**Sb**	**01 09 53.2**	**+0.5**
AKAS	**Kas**	**0.81**	**46**	P	**Pb**	**01 09 41.9**	**-0.2**
AKAS	**Kas**	**0.81**	**46**	*e*Pg	**Pb**	**01 09 42.2**	**+0.1**
AKAS				S	**Sb**	**01 09 53.2**	**+0.5**
ARG	**Arkhangelos**	**0.82**	**312**	PG	**Pb**	**01 09 42.2**	**0.0**
ARG	**Arkhangelos**	**0.82**	**312**	P	**Pn**	**01 09 43.1**	**0.0**
ARG				S	**Sn**	**01 09 55.6**	**+1.1**
ARG				AML	AML	01 09 56.4	
	comp=E,110µm,0.3s						
ARG				AML	AML	01 09 59.6	
	comp=N,59µm,0.3s						
ARG	**Arkhangelos**	**0.82**	**312**	*e*Pg	**Pb**	**01 09 42.2**	**0.0**
ARG	**Arkhangelos**	**0.82**	**312**	P	**Pn**	**01 09 43.0**	**0.0**
ARG				S	**Sn**	**01 09 55.6**	**+1.1**
FETY	**Fethiye**	**0.97**	**10**	PG	**Pb**	**01 09 44.4**	**-0.5**
FETY				SG	**Sn**	**01 09 58.3**	**-0.1**
FETY	**Fethiye**	**0.97**	**10**	P	**Pb**	**01 09 43.9**	**-1.0**
FETY	**Fethiye**	**0.97**	**10**	*e*Pg	**Pb**	**01 09 44.4**	**-0.5**
FETY				S	**Sb**	**01 09 57.3**	**0.0**
FETY				*e*Sg	**Sn**	**01 09 58.3**	**-0.1**
DALY	**Dalyan (Mu˜la**	**1.16**	**351**	PN	**Pn**	**01 09 47.3**	**-0.3**
DALY	**Dalyan (Mu˜la**	**1.16**	**351**	*i* P	**Pn**	**01 09 47.3**	**-0.3**
DALY				*i* S	**Sn**	**01 10 03.0**	**+0.2**
DALY	**Dalyan (Mu˜la**	**1.16**	**351**	P	**Pn**	**01 09 47.3**	**-0.3**
DALY				S	**Sn**	**01 10 03.0**	**+0.2**
MRSB	**Marmaris-Mugla**	**1.18**	**332**	PN	**Pn**	**01 09 46.9**	**-1.1**
MRSB	**Marmaris-Mugla**	**1.18**	**332**	*e*Pn	**Pn**	**01 09 46.9**	**-1.1**
TURN	**Turunc**	**1.22**	**349**	PN	**Pn**	**01 09 48.6**	**+0.1**
TURN				SN	**Sb**	**01 10 04.2**	**-0.1**
TURN	**Turunc**	**1.22**	**349**	*i* P	**Pn**	**01 09 48.4**	**-0.1**
TURN				*i* S	**Sn**	**01 10 04.7**	**+0.3**
TURN	**Turunc**	**1.22**	**349**	P	**Pn**	**01 09 48.4**	**-0.1**
TURN				*e*Sn	**Sb**	**01 10 04.2**	**-0.1**
ELL	**Elmali**	**1.36**	**37**	PN	**Pn**	**01 09 50.4**	**-0.1**
ELL	**Elmali**	**1.36**	**37**	*e*Pn	**Pn**	**01 09 50.4**	**-0.1**
KARP	**Karpathos**	**1.41**	**265**	PN	**Pb**	**01 09 51.9**	**-0.3**
KARP	**Karpathos**	**1.41**	**265**	P	**Pn**	**01 09 50.9**	**-0.2**
KARP				S	**Sn**	**01 10 09.4**	**+0.3**
KARP	**Karpathos**	**1.41**	**265**	P	**Pn**	**01 09 50.9**	**-0.2**
KARP	**Karpathos**	**1.41**	**265**	*e*Pn	**Pb**	**01 09 51.9**	**-0.3**
KARP				S	**Sn**	**01 10 09.4**	**+0.3**
DAT	**Datca**	**1.49**	**315**	PN	**Pn**	**01 09 52.8**	**+0.4**
DAT	**Datca**	**1.49**	**315**	*i* P	**Pn**	**01 09 52.3**	**-0.1**
DAT				*i* S	**Sn**	**01 10 11.3**	**0.0**
DAT	**Datca**	**1.49**	**315**	P	**Pn**	**01 09 52.3**	**-0.1**
DAT	**Datca**	**1.49**	**315**	*e*Pn	**Pn**	**01 09 52.8**	**+0.4**
DAT				S	**Sn**	**01 10 11.3**	**0.0**
YER	**Yerkesik**	**1.54**	**342**	PN	**Pb**	**01 09 53.9**	**-0.6**
YER	**Yerkesik**	**1.54**	**342**	*e*Pn	**Pb**	**01 09 53.9**	**-0.6**
GOLH	**Golhisar**	**1.65**	**19**	*i* P	**Pn**	**01 09 55.0**	**+0.4**
GOLH				*i* S	**Sn**	**01 10 15.7**	**+0.4**
GOLH	**Golhisar**	**1.65**	**19**	P	**Pn**	**01 09 55.0**	**+0.4**
GOLH				S	**Sn**	**01 10 15.7**	**+0.4**
KORT	**Korkueli**	**1.78**	**41**	PN	**Pn**	**01 09 56.4**	**+0.1**
KORT	**Korkueli**	**1.78**	**41**	*i* P	**Pn**	**01 09 54.8**	**-1.5**
KORT				*i* S	**Sn**	**01 10 17.7**	**-0.7**
KORT	**Korkueli**	**1.78**	**41**	P	**Pn**	**01 09 54.8**	**-1.5**
KORT	**Korkueli**	**1.78**	**41**	*e*Pn	**Pn**	**01 09 56.4**	**+0.1**
KORT				S	**Sn**	**01 10 17.7**	**-0.7**
TAVA	**DENIZLI_Tavas**	**1.79**	**1**	*i* P	**Pn**	**01 09 56.5**	**0.0**
TAVA				*i* S	**Sn**	**01 10 19.0**	**+0.4**
TAVA	**DENIZLI_Tavas**	**1.79**	**1**	P	**Pn**	**01 09 56.5**	**0.0**
TAVA				S	**Sn**	**01 10 19.0**	**+0.4**
MLSB	**Milas**	**1.85**	**331**	PN	**Pn**	**01 09 57.3**	**+0.1**
MLSB	**Milas**	**1.85**	**331**	*e*Pn	**Pn**	**01 09 57.3**	**+0.1**
BODT	**Bodrum**	**1.88**	**318**	PN	**Pn**	**01 09 57.7**	**+0.1**
BODT	**Bodrum**	**1.88**	**318**	*e*Pn	**Pn**	**01 09 57.7**	**+0.1**
ANTB	**Antalya**	**1.88**	**49**	PN	**Pn**	**01 09 58.6**	**+1.0**
ANTB	**Antalya**	**1.88**	**49**	*e*Pn	**Pn**	**01 09 58.6**	**+1.0**
AYDN	**Tasoluk**	**2.14**	**338**	*i* P	**Pn**	**01 10 01.4**	**+0.1**
AYDN				*i* S	**Sn**	**01 10 27.9**	**+0.7**
AYDN	**Tasoluk**	**2.14**	**338**	P	**Pn**	**01 10 01.4**	**+0.1**
AYDN				S	**Sn**	**01 10 27.9**	**+0.7**
AYDB	**Zeytinkoy-Aydi**	**2.41**	**341**	PN	**Pn**	**01 10 04.6**	**-0.3**
AYDB	**Zeytinkoy-Aydi**	**2.41**	**341**	*e*Pn	**Pn**	**01 10 04.6**	**-0.3**
SUTC	**Sutluce-Ispart**	**2.48**	**43**	PN	**Pn**	**01 10 07.1**	**+1.1**
SUTC	**Sutluce-Ispart**	**2.48**	**43**	*e*Pn	**Pn**	**01 10 07.1**	**+1.1**
NPS	**Neapolis**	**2.70**	**262**	P	**Pn**	**01 10 08.3**	**-0.6**
NPS	**Neapolis**	**2.70**	**262**	P	**Pn**	**01 10 08.6**	**-0.3**

IDC 10 01:12:22.6±4.4**, 11°.51S**×**166°.52E, h0**^{km}**, mb3.6**/3**, mb1 3.9**/3**, mb1mx3.5**/46**, mbtmp3.6**/3**, Error ellipse: s-maj=223.5km s-min=31.1km az=139.0, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**32.04**	**251**	P	P	01 18 52.0	+0.6
	0.8nm,1.1s,baz=82,slow=9.3,SNR=5.5						
ASAR	**Alice Springs**	**33.27**	**244**	P	P	01 19 01.5	-0.6
	0.5nm,0.7s,baz=68,slow=9.0,SNR=4.1						
ILAR	**Eielson Array**	**83.71**	**18**	P	P	01 24 53.0	0.0
	0.5nm,0.5s,baz=237,slow=5.2,SNR=13						

NORS ***10*** *01:15:16.6±0.0, 42°.47N×43°.46E, h7^{km}*
TIF ***10*** *01:15:17.4, 42°.53N×43°.54E, h11^{km}±3^{km}*
MOS ***10*** *01:15:17.7±0.0, 42°.50N×43°.47E, h13^{km}, MPVA2.8*
ISCJB ***10*** *01:15:18.2±0.5, 42°.54N±0°.03×43°.47E±0°.03, h5^{km}±5^{km}, Error ellipse: s-maj=4.7km s-min=3.6km az=174.2*
CSEM ***10*** *01:15:18.1±0.3, 42°.50N×43°.49E, h2^{km}, ML1.8, Error ellipse: s-maj=7.8km s-min=4.4km az=157.0*
DDA ***10*** *01:15:54.4, 42°.70N×43°.85E, h11^{km}, Ml3.1*
ISC 10 01:15:18.0±0.8**, 42°.54N**±0°.02×**43°.53E**±0°.02**, h11**^{km}±5^{km}**, n29, σ0^{s}.79**/57**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONI	**Oni**	**0.08**	**315**	P	**Pg**	**01 15 20.5**	**0.0**
ONI				S	**Sg**	**01 15 22.4**	**+0.1**
ONI	**Oni**	**0.08**	**315**	P	**Pg**	**01 15 20.5**	**0.0**
ONI				S	**Sg**	**01 15 22.4**	**+0.1**
DIGR	**Digorskoe uzhe**	**0.37**	**6**	*e*Pg	**Pg**	**01 15 25.5**	**+0.1**
DIGR				*e*Sg	**Sg**	**01 15 31.4**	**+1.1**
ZEI	**Tsey**	**0.37**	**47**	*e*Pg	**Pg**	**01 15 26.0**	**+0.5**
ZEI				*e*Sg	**Sb**	**01 15 32.3**	**-0.4**
LACR	**Lac**	**0.64**	**63**	*e*Pg	**Pg**	**01 15 30.5**	**+0.1**
LACR				*e*Sg	**Sb**	**01 15 39.6**	**-0.6**
KORR	**Kora**	**0.68**	**36**	*e*Pg	**Pb**	**01 15 32.8**	**+0.9**
KORR				*e*Sg	**Sn**	**01 15 43.2**	**-1.0**
GUDG	**Gudauri**	**0.71**	**95**	P	**Pg**	**01 15 31.7**	**0.0**
GUDG				S	**Sg**	**01 15 41.2**	**+0.2**
GUDG	**Gudauri**	**0.71**	**95**	P	**Pg**	**01 15 31.7**	**0.0**
GUDG				S	**Sg**	**01 15 41.2**	**+0.2**
LSNR	**Lesken**	**0.77**	**16**	*e*Pg	**Pn**	**01 15 34.5**	**-0.4**
LSNR				*e*Sg	**Sb**	**01 15 45.0**	**+0.9**
ARNR	**Ardon**	**0.85**	**41**	*e*Pg	**Pn**	**01 15 36.6**	**+0.7**
ARNR				*e*Sg	**Sn**	**01 15 49.2**	**+0.8**
STDR	**Stavd-Durt**	**0.92**	**25**	*e*Pg	**Pg**	**01 15 35.3**	**-0.4**
STDR				*e*Sg	**Sn**	**01 15 50.0**	**-0.1**
NEY	**Neytrino**	**0.93**	**321**	*e*Pg	**Pg**	**01 15 35.6**	**-0.3**
NEY				*e*Sg	**Sg**	**01 15 47.1**	**-0.9**
NCK	**Nalchik**	**0.96**	**3**	*e*Pg	**Pg**	**01 15 35.6**	**-0.9**
NCK				*e*Sg	**Sn**	**01 15 52.3**	**+1.1**
DUS	**Dusheti**	**0.98**	**117**	P	**Pn**	**01 15 37.5**	**-0.2**
DUS				S	**Sn**	**01 15 51.7**	**+0.1**
DUS	**Dusheti**	**0.98**	**117**	P	**Pn**	**01 15 37.5**	**-0.2**
DUS				S	**Sn**	**01 15 51.7**	**+0.1**
BTKR	**Batakoyurt**	**1.12**	**41**	*e*Pg	**Pb**	**01 15 36.8**	**-2.6**
BTKR				*e*Sg	**Sb**	**01 15 53.1**	**-0.9**
AKH	**Akhalkalaki**	**1.12**	**181**	P	**Pb**	**01 15 38.6**	**-0.9**
AKH				S	**Sb**	**01 15 54.2**	**0.0**
AKH	**Akhalkalaki**	**1.12**	**181**	P	**Pb**	**01 15 38.6**	**-0.9**
AKH				S	**Sb**	**01 15 54.2**	**0.0**
EPOS	**Posof**	**1.19**	**210**	*i* P	**Pb**	**01 15 39.2**	**-1.5**
EPOS				*i* S	**Sb**	**01 15 55.3**	**-0.8**
EPOS	**Posof**	**1.19**	**210**	P	**Pb**	**01 15 39.2**	**-1.5**
EPOS				S	**Sb**	**01 15 55.3**	**-0.8**
SHA1	**Shidzhatmaz**	**1.36**	**332**	*e*Pg	**Pb**	**01 15 43.8**	**+0.2**
SHA1				*e*Sg	**Sn**	**01 16 01.9**	**+0.6**
KIV	**Kislovodsk**	**1.55**	**337**	*e*Pg	**Pn**	**01 15 46.4**	**+0.8**
KIV				*e*Sg	**Sg**	**01 16 07.5**	**-0.3**
DGRG	**David-gareji**	**1.75**	**128**	P	**Pb**	**01 15 50.6**	**+0.5**
DGRG				S	**Sg**	**01 16 15.2**	**+0.9**
ARTV	**Artvin**	**1.80**	**222**	*i* P	**Pn**	**01 15 49.9**	**+0.7**
ARTV				*i* S	**Sn**	**01 16 13.1**	**+0.9**
ARTV	**Artvin**	**1.80**	**222**	P	**Pn**	**01 15 49.9**	**+0.7**
ARTV				S	**Sn**	**01 16 13.1**	**+0.9**
DAGI	**Agillar**	**1.89**	**220**	*i* P	**Pn**	**01 15 51.4**	**+1.1**
DAGI				*i* S	**Sb**	**01 16 16.7**	**+0.5**
DBAD	**Bademkaya**	**2.04**	**223**	*i* P	**Pn**	**01 15 53.3**	**+0.9**
DBAD				*i* S	**Sb**	**01 16 20.4**	**-0.2**
DBAD	**Bademkaya**	**2.04**	**223**	P	**Pn**	**01 15 53.3**	**+0.9**
DDEM	**Demirkent**	**2.11**	**220**	*i* P	**Pb**	**01 15 55.9**	**-0.4**
DDEM				*i* S	**Sb**	**01 16 21.7**	**-0.9**

SOME ***10*** *01:21:05.0, 44°.28N×83°.57E, h15^{km}*
NNC ***10*** *01:21:12.5±2.3, 44°.42N×82°.97E, h0^{km}, mb3.0, mpv2.6, Error ellipse: s-maj=29.0km s-min=10.0km az=113.0*
ISC 10 01:21:05.3±3.6**, 44°.1N**±0°.1×**84°.2E**±0°.2**, h10**^{km}**, n9, σ3^{s}.02**/12**, 4C-2D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**2.84**	**258**	*e*P	**Pn**	**01 21 49.5**	**-1.5**
	18nm,0.3s						
KTMS				*e*S	**Sn**	**01 22 22.0**	**-3.3**
	15nm,0.3s						
MK31	**Makanchi Array**	**3.02**	**335**	⇓Pn	**Pn**	**01 21 54.1**	**+1.0**
	1.6nm,0.3s,baz=158,slow=16,SNR=56						
MK31				⇑Lg	Lg	01 22 29.2	
	1.8nm,0.3s,baz=160,slow=27,SNR=10						
MAKZ	**Makanchi**	**3.13**	**331**	⇑Pn	**Pn**	**01 21 53.6**	**-1.2**
	1.5nm,0.5s						
MAKZ				⇓Lg	Lg	01 22 31.6	
	4.9nm,0.4s						
DJR	**Jarkent**	**3.17**	**276**	*e*P	**Pn**	**01 21 54.4**	**-0.8**
	6.3nm,0.4s						
DJR				*e*S	**Sn**	**01 22 29.8**	**-3.3**
	8.8nm,0.2s						
PDGK	**Podgornoye**	**3.48**	**259**	⇑Pn	**Pn**	**01 21 57.9**	**-1.8**
	0.9nm,0.3s						
PDGK				⇑Lg	Lg	01 22 39.5	
	7.0nm,0.5s						
SHLS	**Shalkode**	**3.55**	**256**	*e*P	Pn	01 21 56.5	-4.0
	8.5nm,0.3s						
SHLS				*e*S	Sn	01 22 33.6	-9.0
	23nm,0.4s						
KAPS	**Kapalarasan**	**3.64**	**291**	*e*P	**Pn**	**01 22 02.4**	**+0.6**
	1.2nm,0.4s						
KAPS				*e*S	**Sn**	**01 22 43.4**	**-1.4**
	4.0nm,0.4s						
UZB	**Uzynbulak**	**3.86**	**258**	*e*P	**Pn**	**01 22 07.5**	**+2.6**
	1.5nm,0.5s						
UZB				*e*S	**Sn**	**01 22 53.0**	**+2.7**
	2.7nm,0.4s						
ARXS	**Arharly**	**4.57**	**274**	*e*P	Pn	01 22 19.8	+5.2
	4.1nm,0.3s						
ARXS				*e*S	**Sn**	**01 23 13.8**	**+5.9**
	3.8nm,0.4s						

BEO ***10*** *01:22:24.7±0.5, 44°.00N×16°.35E, h0^{km}, ML2.8/10*
ISCJB ***10*** *01:22:28.1±0.5, 44°.05N±0°.02×16°.72E±0°.03, h1^{km}±3^{km}, Error ellipse: s-maj=4.3km s-min=2.0km az=137.4*
CSEM ***10*** *01:22:30.0±0.1, 44°.07N×16°.79E, h10^{km}, ML2.4/5, Error ellipse: s-maj=4.2km s-min=2.2km az=54.0*
PDG ***10*** *01:22:30.0±0.3, 44°.07N×16°.82E, h10^{km}±1^{km}, ML2.9/11,*

Error ellipse: s-maj=1.1km s-min=1.4km az=0.0

PRU ***10*** *01:22:31.4, 44.°16N×16.°78E, h0^{km}*

ISC 10 01:22:29.4±1.1**, 44.°02N**±0.°02×**16.°78E**±0.°02**, h10**^{km}±9^{km}**, n123,** σ1^{s}**13**/214**, 30C-17D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MGRS	Mrkonjic Grad	0.45	29	⇑iPg	Pg	01 22 37.8	-0.5
MGRS				eSg	Sg	01 22 44.4	0.0
BLY	Banja Luka	0.79	22	⇓iPg	Pg	01 22 42.5	-2.1
BLY				eSg	Sg	01 22 55.1	+0.2
BLY	Banja Luka	0.79	22	⇑iP	Pg	01 22 44.5	-0.1
BLY				S	Sb	01 22 55.7	-0.1
BLY	Banja Luka	0.79	22	ePg	Pg	01 22 43.8	-0.8
BLY	Banja Luka	0.79	22	⇑iP	Pg	01 22 44.5	-0.1
BLY				eSg	Sg	01 22 55.0	+0.2
BLY	Banja Luka	0.79	22	ePg	Pg	01 22 43.8	-0.8
BLY				eSg	Sg	01 22 55.0	+0.2
UDBI	Udbina	0.89	305	i Pg	Pg	01 22 46.0	-0.5
UDBI				Sg	Sn	01 23 00.5	-0.4
PRIJ	Prijedor	0.95	357	eSg	Sb	01 23 00.4	-0.2
DOB	Doboj	1.19	53	ePg	Pn	01 22 50.6	-1.4
DOB				eSg	Sn	01 23 10.8	+2.6
DOB	Doboj	1.19	53	ePg	Pn	01 22 50.6	-1.4
DOB				eSg	Sb	01 23 06.7	-0.6
DOB	Doboj	1.19	53	ePg	Pn	01 22 50.6	-1.4
DOB				eSg	Sb	01 23 06.7	-0.6
STON	Ston	1.33	149	ePn	Pn	01 22 51.5	-2.4
STON				eSg	Sg	01 23 13.9	+1.7
STON	Ston	1.33	149	ePn	Pn	01 22 51.8	-2.1
STON				Sn	Sn	01 23 12.1	+0.4
STON	Ston	1.33	149	ePn	Pn	01 22 51.5	-2.4
STON	Ston	1.33	149	⇑iPg	Pn	01 22 52.2	-1.7
STON				eSg	Sb	01 23 10.8	-0.6
STON	Ston	1.33	149	⇑iPg	Pn	01 22 52.2	-1.7
STON				eSg	Sb	01 23 10.8	-0.6
NVLJ	Novalja	1.47	292	i Pn	Pn	01 22 56.1	+0.2
NVLJ				Sn	Sg	01 23 18.4	+1.6
HAPS	Han Pijesak,BI	1.57	87	ePn	Pb	01 22 58.5	0.0
HAPS				eSg	Sg	01 23 24.5	+4.6
HAPS	Han Pijesak,BI	1.57	87	ePn	Pb	01 22 58.5	0.0
HAPS				eSn	Sn	01 23 17.8	0.0
HAPS	Han Pijesak,BI	1.57	87	ePn	Pn	01 22 56.8	-0.6
HAPS				eSn	Sn	01 23 17.8	0.0
BRY	Bratogost	1.70	130	⇑iPn	Pb	01 23 00.8	0.0
BRY				eSn	Sg	01 23 25.2	+1.1
BRY	Bratogost	1.70	130	ePn	Pn	01 22 59.4	+0.2
BRY				eSn	Sn	01 23 21.2	+0.1
BRY	Bratogost	1.70	130	ePn	Pn	01 22 59.4	+0.2
BRY				eSn	Sn	01 23 21.2	+0.1
TREB	Trebinje	1.73	138	ePn	Pn	01 22 59.8	+0.3
TREB				eSn	Sn	01 23 22.0	+0.3
TREB	Trebinje	1.73	138	ePn	Pn	01 22 59.8	+0.3
TREB				eSn	Sn	01 23 22.0	+0.3
UPM	Unac-Piva	1.75	117	⇓iPn	Pn	01 23 00.8	+0.9
UPM				eSn	Sg	01 23 26.4	+0.8
UPM	Unac-Piva	1.75	117	ePn	Pn	01 23 00.1	+0.2
UPM				eSn	Sn	01 23 22.3	0.0
UPM	Unac-Piva	1.75	117	ePn	Pn	01 23 00.1	+0.2
UPM				eSn	Sn	01 23 22.3	0.0
OZLJ	Ozalj	1.85	330	ePn	Pn	01 23 01.7	+0.7
ZAG	Zagreb	1.89	343	ePn	Pn	01 23 02.0	+0.3
ZAG				eSn	Sb	01 23 26.5	-1.1
ZAG	Zagreb	1.89	343	ePn	Pn	01 23 02.0	+0.3
ZAG				eSn	Sb	01 23 26.5	-1.1
BBLS	Lazići	1.91	94	⇑iPn	Pn	01 23 02.2	+0.3
BBLS				eSn	Sg	01 23 30.9	+0.3
BBLS	Lazići	1.91	94	⇑iPn	Pn	01 23 02.2	+0.3
BBLS				eSn	Sn	01 23 26.2	+0.2
BBLS	Lazići	1.91	94	⇑iPn	Pn	01 23 02.0	+0.1
BBLS				eSn	Sn	01 23 26.2	+0.2
HCY	Herceg Novi	2.01	141	⇑iPn	Pb	01 23 05.4	-0.6
HCY				eSn	Sg	01 23 33.5	-0.5
HCY	Herceg Novi	2.01	141	ePn	Pn	01 23 03.7	+0.4
HCY				eSn	Sn	01 23 28.5	0.0
HCY	Herceg Novi	2.01	141	ePn	Pn	01 23 03.7	+0.4
HCY				eSn	Sn	01 23 28.5	0.0
NKY	Niksic	2.02	126	⇑iPn	Pb	01 23 05.8	-0.3
NKY				eSn	Sb	01 23 32.7	+1.4
NKY	Niksic	2.02	126	⇑iPn	Pb	01 23 05.8	-0.3
NKY				eSn	Sb	01 23 32.7	+1.4
PLE	Pljevlja	2.02	109	⇓iPn	Pb	01 23 05.3	-0.9
PLE				eSn	Sb	01 23 31.8	+0.5
PLE	Pljevlja	2.02	109	⇓iPn	Pb	01 23 05.3	-0.9
PLE				eSn	Sb	01 23 31.8	+0.5
NKME	Niksic	2.02	128	⇑iPn	Pb	01 23 05.7	-0.5
NKME				eSn	Sb	01 23 32.6	+1.2
NKME	Niksic	2.02	128	⇑iPn	Pb	01 23 05.7	-0.5
NKME				eSn	Sb	01 23 32.6	+1.2
CRES	Cresnjev	2.04	333	ePn	Pn	01 23 04.0	+0.3
CRES				eSn	Sn	01 23 30.0	+0.9
CRES	Cresnjev	2.04	333	ePn	Pn	01 23 04.0	+0.3
CRES				eSn	Sn	01 23 30.0	+0.9
RIY	Rijeka	2.09	309	ePn	Pn	01 23 05.1	+0.6
RIY				eSn	Sn	01 23 31.5	+1.0
CEME	Cevo	2.15	133	⇓iPn	Pb	01 23 07.1	-1.3
CEME				eSn	Sb	01 23 36.5	+1.4
CEME	Cevo	2.15	133	⇓iPn	Pb	01 23 07.1	-1.3
KOME	Kolasin	2.31	119	⇓iPn	Pb	01 23 09.7	-1.5
KOME				eSn	Sb	01 23 40.5	+0.7
KOME	Kolasin	2.31	119	⇓iPn	Pb	01 23 09.7	-1.5
BUM	Brajici-Budva	2.31	137	⇓iPn	Pn	01 23 09.2	+1.6
BUM				eSn	Sb	01 23 40.9	+1.1
BUM	Brajici-Budva	2.31	137	⇓iPn	Pn	01 23 09.2	+1.6
DIVS	Divibare	2.32	87	⇑iPn	Pn	01 23 07.7	0.0
DIVS				eSn	Sb	01 23 42.0	+2.0
DIVS	Divibare	2.32	87	⇑iPn	Pn	01 23 07.7	0.0
DIVS				eSn	Sn	01 23 36.2	0.0
DIVS	Divibare	2.32	87	ePn	Pn	01 23 07.3	-0.4
DIVS				eSn	Sn	01 23 36.2	0.0
PDG	Podgorica	2.41	130	ePn	Pn	01 23 08.9	+0.1
PDG				eSg	Sg	01 23 47.5	+0.7
PDG	Podgorica	2.41	130	⇑iP	Pb	01 23 11.4	-1.4
PDG	Podgorica	2.41	130	S	Sb	01 23 43.9	+1.4
PDG	Podgorica	2.41	130	ePn	Pn	01 23 09.3	+0.5
PDG	Podgorica	2.41	130	⇑iP	Pb	01 23 11.4	-1.4
PDG				eSn	Sn	01 23 38.2	-0.1
PDG	Podgorica	2.41	130	ePn	Pn	01 23 09.3	+0.5
PDG				eSn	Sn	01 23 38.2	-0.1
TTG	Podgorica	2.41	130	⇑iPn	Pb	01 23 11.0	-1.8
TTG				eSn	Sb	01 23 42.9	+0.4
SJES	Sjenica	2.44	107	⇑iPn	Pn	01 23 09.9	+0.5
SJES				eSn	Sb	01 23 44.6	+1.0
FGSL	Fruska Gora	2.45	61	ePn	Pn	01 23 10.2	+0.8
FRGS	Fruska Gora	2.45	61	ePn	Pn	01 23 10.2	+0.8
FRGS				eSn	Sb	01 23 43.9	+0.2
FRGS	Fruska Gora	2.45	61	ePn	Pn	01 23 09.1	-0.3
FRGS				eSn	Sn	01 23 39.5	+0.2
FRGS	Fruska Gora	2.45	61	ePn	Pn	01 23 09.1	-0.3
FRGS				eSn	Sn	01 23 39.5	+0.2
BEHE	Becsehely	2.45	360	ePn	Pn	01 23 10.2	+0.8
BEHE				eSn	Sn	01 23 40.2	+0.8
BEHE	Becsehely	2.45	360	ePn	Pn	01 23 10.2	+0.8
BEHE				eSn	Sn	01 23 40.2	+0.8
IVAS	Ivanjica	2.48	99	⇑iPn	Pn	01 23 10.4	+0.5
IVAS				eSn	Sb	01 23 44.6	-0.1
IVAS	Ivanjica	2.48	99	⇑iPn	Pn	01 23 10.4	+0.5
BEY	Berane	2.54	116	ePn	Pn	01 23 12.6	+1.9
BEY				eSn	Sb	01 23 45.9	-0.6
DRME	Dracevica, Mon	2.54	135	ePn	Pn	01 23 12.4	+1.8
DRME				eSn	Sb	01 23 46.1	-0.3
DRME	Dracevica, Mon	2.54	135	ePn	Pn	01 23 11.2	+0.6
DRME				eSn	Sn	01 23 42.1	+0.5
DRME	Dracevica, Mon	2.54	135	ePn	Pn	01 23 11.2	+0.6
DRME				eSn	Sn	01 23 42.1	+0.5
IVA	Berane	2.54	116	ePn	Pn	01 23 12.6	+1.9
IVA				eSn	Sb	01 23 45.9	-0.6
MORH	Mˆ‡rˆ¡gy, Hung	2.56	30	⇓ePn	Pn	01 23 10.1	-0.8
MORH				eSn	Sg	01 23 52.0	+0.3
MORH	Mˆ‡rˆ¡gy, Hung	2.56	30	ePn	Pn	01 23 10.7	-0.2
MORH				eSn	Sn	01 23 42.5	+0.4
MORH	Mˆ‡rˆ¡gy, Hung	2.56	30	ePn	Pn	01 23 10.7	-0.2
MORH				eSn	Sn	01 23 42.5	+0.4
LJU	Ljubljana	2.58	323	ePn	Pn	01 23 11.5	+0.4
LJU				eSn	Sn	01 23 43.1	+0.6
LJU	Ljubljana	2.58	323	ePn	Pn	01 23 11.5	+0.4
LJU				eSn	Sn	01 23 43.1	+0.6
TRUS	Trudelj	2.62	84	ePn	Pn	01 23 12.5	+0.8
TRUS	Trudelj	2.62	84	ePn	Pn	01 23 12.5	+0.8
PVY	Plav	2.73	120	ePn	Pn	01 23 15.1	+1.8
PVY				eSn	Sb	01 23 49.8	-1.9
PVY	Plav	2.73	120	ePn	Pn	01 23 15.1	+1.8
PVY				eSn	Sb	01 23 49.8	-1.9
ULC	Ulcinj	2.74	138	⇓iPn	Pn	01 23 14.7	+1.3
ULC				eSn	Sb	01 23 50.7	-1.3
ULC	Ulcinj	2.74	138	⇓iPn	Pn	01 23 14.7	+1.3
ULC				eSn	Sb	01 23 50.7	-1.3
GRUS	Gruza	2.85	91	⇑iPn	Pn	01 23 14.5	-0.3
GRUS				eSn	Sb	01 23 52.9	-2.2
GRUS	Gruza	2.85	91	⇑iPn	Pn	01 23 14.5	-0.3
GRUS				eSn	Sb	01 23 52.9	-2.2
OBKA	Obir	2.94	328	ePg	Pg	01 23 24.4	-1.4
	1.9nm,0.2s						
OBKA				Sn	Sn	01 23 52.2	+0.5
	3.3nm,0.4s						
SELS	Selova	3.25	103	⇑iPn	Pn	01 23 20.2	-0.2
SELS	Selova	3.25	103	⇑iPn	Pn	01 23 20.2	-0.2
ARSA	Arzberg	3.35	345	ePn	Pn	01 23 18.5	-3.2
ARSA	Arzberg	3.35	345	ePg	Pn	01 23 22.7	+0.9
	1.1nm,0.2s						
ARSA				eSn	Sn	01 24 00.9	-0.7
	0.7nm,0.2s						
ARSA	Arzberg	3.35	345	ePn	Pn	01 23 18.5	-3.2
ARSA	Arzberg	3.35	345	Pg	Pn	01 23 22.7	+0.9
	1.1nm,0.2s						
ARSA				Sn	Sn	01 24 00.9	-0.7
	0.7nm,0.2s						
MATE	Matera	3.37	181	⇓iP	Sn	01 23 59.5	-2.4
MATE	Matera	3.37	181	S	Sg	01 24 19.4	+1.8
MYKA	Terra Mystica	3.42	321	ePn	Pn	01 23 22.1	-0.7
	0.5nm,0.2s						
MYKA				Sg	Sg	01 24 20.0	+0.7
	2.1nm,0.3s						
MYKA	Terra Mystica	3.42	321	Pn	Pn	01 23 22.1	-0.7
	0.5nm,0.2s						
CSKK	Csˆ‡kako	3.50	17	ex	Pn	01 23 24.3	+0.5
BOVS	Bovan	3.59	94	⇑iPn	Pn	01 23 24.9	-0.1
BOVS	Bovan	3.59	94	⇑iPn	Pn	01 23 24.9	-0.1
MDVR	Moldovita	3.62	76	⇑iP	Pb	01 23 33.0	-0.4
BZS	Buzias	3.80	63	⇓iP	Pb	01 23 38.8	+2.4
BZS	Buzias	3.80	63	S	Sn	01 24 12.3	-0.2
BZS	Buzias	3.80	63	S	Sn	01 24 12.3	-0.2
BARS	Barje	3.86	106	⇓iPn	Pn	01 23 29.1	+0.3
BARS	Barje	3.86	106	⇓iPn	Pn	01 23 29.1	+0.3
ABTA	Abfaltersbach	4.06	314	ePg	Pn	01 23 33.3	+1.8
	0.4nm,0.2s						
ABTA				eSn	Sn	01 24 20.4	+1.3
	0.2nm,0.1s						
ABTA	Abfaltersbach	4.06	314	Pg	Pn	01 23 33.3	+1.8
	0.4nm,0.2s						
ABTA				Sn	Sn	01 24 20.4	+1.3
	0.2nm,0.1s						
MOA	Molln	4.21	336	ePg	Pn	01 23 35.2	+1.6
	0.3nm,0.1s						
MOA				i Sn	Sn	01 24 23.4	+0.6
	0.7nm,0.2s						
MOA	Molln	4.21	336	Pg	Pn	01 23 35.2	+1.6
	0.3nm,0.1s						
MOA				Sn	Sn	01 24 23.4	+0.6
	0.7nm,0.2s						
KRUS	Krusevo	4.23	127	⇑iPn	Pn	01 23 35.6	+1.7
PSZ	Piszkesteto	4.46	28	ex	Pn	01 23 37.2	+0.1
VYHS	Vyhne	4.70	17	ePN	Pn	01 23 40.6	+0.3
VYHS				eSN	Sn	01 24 32.5	-2.3
VYHS	Vyhne	4.70	17	ePn	Pn	01 23 40.6	+0.3
VYHS				eSn	Sn	01 24 32.5	-2.3
FETA	Feichten	5.20	307	i Pn	Pn	01 23 46.7	-0.7
	5μm,0.0s						
FETA				eSn	Sn	01 24 46.4	-1.0
FETA	Feichten	5.20	307	Pn	Pn	01 23 46.7	-0.7
	5μm,0.0s						
FETA				Sn	Sn	01 24 46.4	-1.0
RETA	Reutte	5.45	312	ePg	Pn	01 23 52.4	+1.7
	0.2nm,0.1s						
RETA				i Sn	Sn	01 24 54.8	+1.3
	0.1nm,0.1s						
RETA	Reutte	5.45	312	Pg	Pn	01 23 52.4	+1.7
	0.2nm,0.1s						
RETA				Sn	Sn	01 24 54.8	+1.3
	0.1nm,0.1s						
KHC	Kasperske Hory	5.57	338	ePN	Pn	01 23 53.5	+1.3
KHC				eSN	Sn	01 24 54.3	-1.9
KHC	Kasperske Hory	5.57	338	Pn	Pn	01 23 53.5	+1.3
KHC				Sn	Sn	01 24 54.3	-1.9

TRN 10 01:38:57.7, 11.°15N×61.°77W, h77^{km}, MD3.8, 1D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRN	Trinidad (W)	0.61	144	eP	Pn	01 39 12.0	-0.2
TRN				eS	Sn	01 39 22.3	-0.6
TPP	Pointe-a-Pierr	0.88	159	eP	Pn	01 39 15.6	+0.4
TPP				eS	Sn	01 39 28.2	0.0
TBH	Brigand Hill	0.95	134	eP	Pn	01 39 17.1	+1.1
TBH				eS	Sn	01 39 29.7	0.0
ALNG	Atlantic LNG	0.96	175	eP	Pn	01 39 15.6	-0.6
GRGR	Grenville	0.99	7	⇓iP	Pn	01 39 15.7	-0.8
GRGR				eS	Sn	01 39 30.4	0.0
BUAY	Buenos Aires	1.04	175	eP	Pn	01 39 17.7	+0.7
GRHS	Sauteurs	1.08	7	eP	Pn	01 39 18.6	+1.0
GRHS				eS	Sn	01 39 33.1	+0.8
GRSS	Sisters	1.16	8	eP	Pn	01 39 19.8	+1.2
GRSS				eS	Sn	01 39 33.8	-0.2
TOSP	Speyside	1.22	83	eP	Pn	01 39 19.6	+0.3
TOSP				eS	Sn	01 39 35.9	+0.4
FCV	Fort Charlotte	2.06	14	eP	Pn	01 39 30.0	-0.4
FCV				eS	Sn	01 39 54.0	-1.3
SVB	Belmont	2.17	13	eP	Pn	01 39 32.1	+0.2
SVB				eS	Sn	01 39 57.6	-0.3
SVCV	St. Vincent, C	2.20	16	eP	Pn	01 39 32.2	0.0
SVCV				eS	Sn	01 39 58.1	-0.5
SVV	Soufriere Volc	2.23	14	eP	Pn	01 39 32.8	+0.2
SVV				eS	Sn	01 39 58.9	-0.3
SSV	Crater Summit	2.24	15	eP	Pn	01 39 33.1	+0.2
SSV				eS	Sn	01 39 59.1	-0.6
MCLT	Moule a Chique	2.67	18	eP	Pn	01 39 39.7	+1.0
MCLT				eS	Sn	01 40 10.0	-0.1
SLB	Belfond	2.76	15	eP	Pn	01 39 39.8	0.0
SLB				eS	Sn	01 40 11.3	-0.9
BBGH	Gun Hill	2.94	47	eP	Pn	01 39 42.0	-0.2
BBGH				eS	Sn	01 40 16.1	-0.3
BBSP	Saint Philip	2.98	49	eP	Pn	01 39 42.3	-0.5
BIM	Bigot	3.42	11	eP	Pn	01 39 49.1	+0.3
BIM				eS	Sn	01 40 26.1	-2.1
TRMF	Trois Ilets	3.44	12	eP	Pn	01 39 49.5	+0.4
ZAM	Aeronautique	3.48	12	eP	Pn	01 39 49.1	-0.4
MVM	Montagne Vaucl	3.49	14	eP	Pn	01 39 50.5	+0.7
LPMF	Morne Lapointe	3.50	13	eP	Pn	01 39 50.3	+0.5
FDF	Fort de France	3.62	10	eP	Pn	01 39 51.4	0.0
FDF				eS	Sn	01 40 30.6	-2.5
PML	Morne Lenard	3.66	9	eP	Pn	01 39 52.0	-0.1
GBMF	Grand Be	3.68	9	eP	Pn	01 39 52.5	+0.2
PCM	Pelee Case Pet	3.69	8	eP	Pn	01 39 52.5	0.0
BAMF	Morne Balai	3.70	9	eP	Pn	01 39 52.5	-0.1
DSHT	Scott's Head	4.06	5	eP	Pn	01 39 58.5	+1.0
DSHT				eS	Sn	01 40 41.9	-2.0
BBL	Barber's Block	4.36	4	eP	Pn	01 40 02.3	+0.7
BBL	Barber's Block	4.36	4	eS	Sn	01 40 49.1	-2.2
MDPO	Dominica; Chan	4.41	4	eP	Pn	01 40 02.0	-0.3
MDPO	Dominica; Chan	4.41	4	eS	Sn	01 40 50.5	-1.9
TBG	Guadaloupe-3	4.68	1	eP	Pn	01 40 06.5	+0.6
TBG	Guadaloupe-3	4.68	1	eS	Sn	01 40 56.9	-2.0
MGG	Marie-Galante	4.76	5	eP	Pn	01 40 07.2	+0.1
MGG	Marie-Galante	4.76	5	eS	Sn	01 40 57.9	-3.1
DOG	Dongo Capester	4.86	2	eP	Pn	01 40 09.5	+1.1
LZG	Guadaloupe-1	4.96	360	eP	Pn	01 40 10.7	+0.9
DEG	La Desirade	5.18	8	eP	Pn	01 40 13.6	+0.7
DEG	La Desirade	5.18	8	eS	Sn	01 41 08.6	-2.8
MLYT	Lee's Yard	5.56	356	eP	Pn	01 40 18.8	+0.9
MLYT	Lee's Yard	5.56	356	eS	Sn	01 41 18.0	-2.5
ANWB	Willy Bob	6.48	360	eP	Pn	01 40 32.0	+1.5
ANWB	Willy Bob	6.48	360	eS	Sn	01 41 39.6	-3.6

NIED ***10*** *01:52:00, 29.°30N×141.°80E, h5^{km}, Mw4.3 Best double couple: M$_0$3.32000×10^{15} NP1:φ$_s$283.00000°, δ15.00000°, λ13.00000°. NP2:φ$_s$181.00000°, δ87.00000°, λ105.00000°.*

IDC ***10*** *01:52:30.3±0.7, 29.°25N×141.°96E, h0^{km}, mb4.0/12, mb1 4.2/13, mb1mx3.9/59, mbtmp4.0/13, ML4.1/1, MS3.2/8, Ms1 3.2/8, ms1mx2.9/61, Error ellipse: s-maj=26.0km s-min=14.5km az=76.0*

ISCJB ***10*** *01:52:33.0±0.3, 29.°28N±0.°04×141.°82E±0.°10, h30^{km}, mb4.2/22, MS3.2/3, Error ellipse: s-maj=12.8km s-min=4.3km az=166.2*

NEIC ***10*** *01:52:34.1±3.8, 29.°21N×141.°94E, h26^{km}±27^{km}, mb4.6/10, Error ellipse: s-maj=9.9km s-min=6.3km az=77.0*

ISC 10 01:52:34.5±0.5**, 29.°29N**±0.°06×**141.°9E**±0.°1**, h30**^{km}**, n53,** σ1^{s}**28**/50**, mb4.3**/22**, MS3.3**/3**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	2.20	174	ePn	Pn	01 53 08.9	-0.2
CBIJ				eSn	Sn	01 53 35.0	-0.2
JCJ	Chichijima	2.20	174	Pn	Pn	01 53 08.9	-0.2
	baz=24,slow=20						
JCJ				Sn	Sn	01 53 35.0	-0.2
	62nm,0.3s,baz=263,slow=23,SNR=20						
MJAR	Matsushiro Arr	7.88	338	Pn	Pn	01 54 25.7	-1.4
	2.4nm,0.3s,baz=159,slow=11,SNR=33						
MJAR				LR	LR	01 57 21.2	
	comp=Z,118nm,19.6s,baz=155,slow=37						
MAJO	Matsushiro	7.88	338	ePn	Pn	01 54 26.5	-0.5
MAJO				eSn	Sn	01 55 55.2	0.0
MAT	Matsushiro	7.88	338	P	Pn	01 54 26.4	-0.6
MAT				S	Sn	01 55 50.9	-4.3
MJB9	Matsu-Tunnel	7.88	338	ePn	Pn	01 54 26.6	-0.5
JNU	Nakatsue	10.21	295	LR	LR	01 59 07.7	
	comp=Z,133nm,18.2s,baz=123,slow=39						
JOW	Kunigami	12.31	262	LR	LR	01 59 57.6	
	comp=Z,115nm,19.0s,baz=264,slow=36						
KSRS	Korea Array	14.25	308	LR	LR	02 01 23.8	
	comp=Z,83nm,18.2s,baz=129,slow=37						
ASAJ	Asahikawa	14.80	2	LR	LR	02 03 25.8	
	comp=Z,90nm,20.6s,baz=166,slow=44						
KLR	Kul'dur	21.38	341	P	P	01 57 20.5	+1.1
	0.1nm,0.3s,baz=145,slow=10,SNR=5.8						
PETK	Petropavlovsk-	26.46	22	LR	LR	02 09 19.3	
	comp=Z,34nm,20.4s,baz=248,slow=38						
SONA1	Songino Array	33.01	314	eP	P	01 59 07.0	0.0
SONA0	Songino Array	33.01	314	eP	P	01 59 07.8	+0.8
SONM	Songino Array	33.01	314	P	P	01 59 07.9	+0.8
	1.9nm,0.6s,baz=114,slow=7.9,SNR=9.0						
ATKA	Atka Island	39.53	42	eP	P	02 00 00.6	-1.9
	66nm,1.4s						
CMAR	Chiang Mai Arr	40.57	264	LR	LR	02 18 12.0	
	comp=Z,43nm,19.6s,baz=70,slow=38						
SOEI	Soe	42.40	206	eP	P	02 00 24.9	-1.7
	23nm,1.2s						
MTN	Manton Dam	43.17	196	eP	P	02 00 32.0	-0.7
	5.9nm,1.0s						
ZAA1	Zalesovo Array	47.70	318	eP	P	02 01 09.4	+1.2
ZALV	Zalesovo Beam	47.70	318	P	P	02 01 09.4	+1.2
	1.4nm,0.5s,baz=86,slow=7.9,SNR=5.5						
ZALV	Zalesovo Beam	47.70	318	eP	P	02 01 09.2	+1.0
MK01	Makanchi Array	48.92	308	eP	P	02 01 18.2	+0.4
MK31	Makanchi Array	48.93	308	eP	P	02 01 18.3	+0.5
MK32	Makanchi Array	48.93	308	eP	P	02 01 18.2	+0.4
MKAR	Makanchi Array	48.93	308	P	P	02 01 18.2	+0.4
	0.9nm,0.6s,baz=90,slow=9.4,SNR=13						
MKAR	Makanchi Array	48.93	308	eP	P	02 01 18.3	+0.4
	8.0nm,0.8s						
WRAB	Tennant Creek	49.48	189	eP	P	02 01 21.6	-0.6
	9.2nm,1.4s						
WB2	Warramunga Arr	49.49	189	eP	P	02 01 20.6	-1.7
WR1	Warramunga Arr	49.50	189	eP	P	02 01 22.1	-0.3
	4.1nm,0.9s						
WRA	Warramunga Arr	49.50	189	P	P	02 01 22.1	-0.3
	2.5nm,0.7s,baz=8.6,slow=7.9,SNR=34						
FITZ	Fitzroy Crossi	49.67	200	eP	P	02 01 22.6	-1.0
	1.4nm,0.9s						
KURK	Kurchatov	51.31	313	eP	P	02 01 36.7	+0.9
	13nm,1.1s						
KURBB	Kurchatov Arra	51.37	313	P	P	02 01 37.1	+0.9
	4.6nm,0.6s,baz=91,slow=7.1,SNR=42						
AS31	Alice Springs	53.22	189	eP	P	02 01 49.5	-0.7
	1.4nm,1.4s						
ASAR	Alice Springs	53.22	189	P	P	02 01 49.5	-0.7
	0.2nm,0.5s,baz=0.7,slow=5.1,SNR=4.6						
ILAR	Eielson Array	55.90	29	P	P	02 02 09.6	+0.4
	0.3nm,0.6s,baz=262,slow=6.1,SNR=4.1						
ILB	Eielson Array	55.90	29	eP	P	02 02 09.6	+0.4
BVAR	Borovoye Array	56.29	316	P	P	02 02 13.0	+0.8
	3.8nm,0.5s,baz=99,slow=8.9,SNR=19						
ABKAR	Akbulak array	63.42	313	eP	P	02 03 01.7	+0.4
AKTO	Aktyubinsk	64.32	315	LR	LR	02 31 59.7	
	comp=Z,32nm,21.4s,baz=135,slow=37						
FIA0	FINESS Array S	75.89	334	eP	P	02 04 17.5	-0.3
FINES	FINESS Array B	75.89	334	P	P	02 04 17.5	-0.3
	1.3nm,0.9s,baz=64,slow=4.4,SNR=6.2						
KBZ	Khabaz	76.36	313	P	P	02 04 22.0	+1.2
	3.2nm,0.9s,baz=84,slow=3.2,SNR=4.0						
NV01	Mina Array Sit	79.34	52	eP	P	02 04 38.6	+0.7
NVAR	Mina Array Bea	79.34	52	P	P	02 04 38.6	+0.7
	0.5nm,0.8s,baz=264,slow=8.1,SNR=3.4						
GATR	Gnd/Air Tx Cnt	79.63	56	eP	P	02 04 42.2	+2.9
CRY	Cary Ranch	82.84	56	eP	P	02 04 52.6	-3.8
GMRC	Granite Mounta	82.99	54	eP	P	02 04 56.7	-0.5
RAYN	Ar Rayn	84.07	294	eP	P	02 05 04.3	+1.5
	8.9nm,0.8s						
BR131	Keskin Array S	84.36	313	eP	P	02 05 04.8	+0.6
LTX	Lajitas	94.46	53	eP	P	02 05 53.7	+1.4
TXAR	Lajitas Array	94.46	53	P	P	02 05 53.7	+1.4
	0.4nm,0.9s,baz=270,slow=4.5,SNR=3.9						

ISK ***10*** *02:03:17.8, 37.°18N×29.°17E, h6^{km}, ML2.3/9*

ISCJB ***10*** *02:03:18.8±0.5, 37.°13N±0.°03×29.°13E±0.°04, h7^{km}±6^{km}, Error ellipse: s-maj=5.0km s-min=4.5km az=7.3*

CSEM ***10*** *02:03:18.3±0.1, 37.°17N×29.°16E, h10^{km}, ML2.8, Error ellipse: s-maj=2.9km s-min=2.5km az=54.0*

DDA ***10*** *02:03:18.6, 37.°15N×29.°11E, h7^{km}, Ml2.8*

ISC 10 02:03:18.9±1.1**, 37.°15N**±0.°02×**29.°14E**±0.°02**, h6**^{km}±11^{km}**, n36,** σ1^{s}**28**/48**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GOLH	Golhisar	0.35	75	i P	Pb	02 03 26.4	-1.3
GOLH				i S	Sb	02 03 33.7	+0.1
GOLH	Golhisar	0.35	75	P	Pb	02 03 26.4	-1.3
TAVA	DENIZLI_Tavas	0.36	331	i P	Pg	02 03 25.4	-0.6
TAVA				i S	Sg	02 03 31.1	+0.3
TAVA	DENIZLI_Tavas	0.36	331	P	Pg	02 03 25.4	-0.6
TAVA				S	Sg	02 03 31.1	+0.3
TURN	Turunc	0.51	238	PG	Pn	02 03 34.3	+1.6
TURN	Turunc	0.51	238	i P	Pn	02 03 34.6	+2.0
DALY	Dalyan (Mu˜la	0.51	230	PG	Pg	02 03 28.7	+0.1
DALY	Dalyan (Mu˜la	0.51	230	i P	Pg	02 03 28.3	-0.3
DALY				i S	Sg	02 03 35.8	+0.6
DALY	Dalyan (Mu˜la	0.51	230	P	Pg	02 03 28.3	-0.3
DALY	Dalyan (Mu˜la	0.51	230	ePg	Pg	02 03 28.7	+0.1
DALY				S	Sg	02 03 35.8	+0.6
FETY	Fethiye	0.51	185	PG	Pg	02 03 28.7	0.0
FETY				SG	Sb	02 03 36.9	-1.1
FETY	Fethiye	0.51	185	P	Pg	02 03 28.3	-0.4
FETY	Fethiye	0.51	185	ePg	Pg	02 03 28.7	0.0
FETY				S	Sb	02 03 36.8	-1.2
DNZL	Cakiroluk	0.55	353	i P	Pg	02 03 28.5	-0.9
DNZL				i S	Sb	02 03 39.2	0.0
DNZL	Cakiroluk	0.55	353	P	Pg	02 03 28.5	-0.9
YER	Yerkesik	0.68	269	PG	Pg	02 03 32.3	+0.3
YER				SG	Sg	02 03 41.6	+0.8
YER	Yerkesik	0.68	269	ePg	Pg	02 03 32.3	+0.3
YER				eSg	Sg	02 03 41.6	+0.8
ELL	Elmali	0.74	122	PG	Pg	02 03 32.1	-0.9
ELL	Elmali	0.74	122	ePg	Pg	02 03 32.1	-0.9
KORT	Korkueli	0.98	98	PG	Pg	02 03 36.6	-1.1
KORT	Korkueli	0.98	98	ePg	Pg	02 03 36.6	-1.1
AKAS	Kas	0.99	157	PG	Pb	02 03 37.9	-0.6
AKAS	Kas	0.99	157	ePg	Pb	02 03 37.9	-0.6
MLSB	Milas	1.09	278	PN	Pg	02 03 40.0	+0.1
MLSB	Milas	1.09	278	ePn	Pg	02 03 40.0	+0.1
AYDN	Tasoluk	1.12	298	i P	Pb	02 03 39.5	-1.3
AYDN				i S	Sn	02 03 58.4	+1.3
AYDN	Tasoluk	1.12	298	P	Pb	02 03 39.5	-1.3
ARG	Arkhangelos	1.23	221	PN	Pg	02 03 42.6	+0.1
ARG	Arkhangelos	1.23	221	ePn	Pg	02 03 42.6	+0.1
AYDB	Zeytinkoy-Aydi	1.27	309	PN	Pn	02 03 42.4	-1.0
AYDB	Zeytinkoy-Aydi	1.27	309	ePn	Pn	02 03 42.4	-1.0
DAT	Datca	1.32	252	PN	Pg	02 03 43.9	-0.2
DAT	Datca	1.32	252	ePn	Pg	02 03 43.9	-0.2
KZIL	AFYON_Kizioren	1.37	35	i P	Pg	02 03 47.0	+1.9

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
KZIL				*i* S	Sg	02 04 08.9	+6.1
KULA	Kula-Manisa	1.42	345	PN	Pn	02 03 44.3	-1.0
KULA	Kula-Manisa	1.42	345	*e*Pn	Pn	02 03 44.3	-1.0

MEX 10 02:12:08.0±0.3, 16°.22N×98°.14W, h4^{km}±4^{km}, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.17	3	*e*P	Pg	02 12 11.3	-0.1
PNIG				*i* S	Sg	02 12 13.8	0.0
TLIG	Tlapa	1.40	343	*e*P	Pn	02 12 30.8	-3.7
TLIG				*e*S	Sg	02 12 48.5	-4.6
VHO	Vista Hermosa	1.59	58	*e*P	Pn	02 12 32.8	-4.4
VHO				*i* S	Sn	02 12 54.0	-4.3

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*ATH **10** 02:14:33.6, 36°.37N×28°.93E, h40^{km}±2^{km}, ML2.1/3, Error ellipse: s-maj=3.7km s-min=1.3km az=166.0*
*DDA **10** 02:14:33.8, 36°.42N×28°.92E, h7^{km}, Ml2.9*
*ISK **10** 02:14:33.8, 36°.45N×28°.93E, h22^{km}, ML2.4/9*
*ISCJB **10** 02:14:34.4±0.4, 36°.43N±0°.04×28°.93E±0°.04, h29^{km}±4^{km}, Error ellipse: s-maj=6.6km s-min=4.7km az=15.8*
*CSEM **10** 02:14:34.2±0.1, 36°.42N×28°.93E, h20^{km}, ML2.4, Error ellipse: s-maj=4.1km s-min=2.7km az=6.0*
ISC 10 02:14:33.5±1.4, 36°.39N±0°.03×28°.92E±0°.02, h16^{km}±11^{km}, n43, σ0^{s}46/63, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FETY	Fethiye	0.28	28	PG	Pb	02 14 39.9	-0.2
FETY	Fethiye	0.28	28	*e*Pg	Pb	02 14 39.9	-0.2
FETY				S	Sb	02 14 45.4	+0.9
DALY	Dalyan (Mu˜la	0.47	333	PG	Pb	02 14 43.3	-0.2
DALY				SG	Sb	02 14 49.9	-0.3
DALY	Dalyan (Mu˜la	0.47	333	*i* P	Pb	02 14 43.3	-0.2
DALY				*i* S	Sb	02 14 49.8	-0.3
DALY	Dalyan (Mu˜la	0.47	333	P	Pb	02 14 43.3	-0.2
DALY				*e*Sg	Sb	02 14 49.9	-0.3
TURN	Turunc	0.54	332	PG	Pn	02 14 46.5	-0.1
TURN				SG	Sn	02 14 56.2	+0.9
TURN	Turunc	0.54	332	*i* P	Pn	02 14 46.4	-0.1
TURN				*i* S	Sn	02 14 56.0	+0.7
TURN	Turunc	0.54	332	P	Pn	02 14 46.4	-0.1
TURN				S	Sn	02 14 56.0	+0.7
AKAS	Kas	0.57	106	PG	Pb	02 14 45.3	0.0
AKAS				SG	Sn	02 14 55.2	-1.1
AKAS	Kas	0.57	106	*i* P	Pb	02 14 45.2	0.0
AKAS				*i* S	Sb	02 14 54.5	+1.3
AKAS	Kas	0.57	106	*e*Pg	Pb	02 14 45.3	0.0
AKAS				S	Sb	02 14 54.5	+1.3
AKAS				*e*Sg	Sn	02 14 55.2	-1.1
KSL	Kastellorizon	0.59	114	P	Pg	02 14 44.8	-0.2
KSL				S	Sn	02 14 56.0	-0.3
KSL				AML	AML	02 14 56.3	
	comp=E,323µm,0.5s						
KSL				AML	AML	02 14 57.0	
	comp=N,156µm,0.5s						
ARG	Arkhangelos	0.67	255	PG	Pn	02 14 47.9	-0.3
ARG				SG	Sn	02 14 58.3	0.0
ARG	Arkhangelos	0.67	255	P	Pb	02 14 46.8	+0.1
ARG				S	Sn	02 14 58.1	-0.2
ARG				AML	AML	02 14 58.1	
	comp=N,252µm,0.3s						
ARG				AML	AML	02 14 58.4	
	comp=E,385µm,0.3s						
ARG	Arkhangelos	0.67	255	P	Pb	02 14 47.1	+0.4
ARG	Arkhangelos	0.67	255	*e*Pg	Pn	02 14 47.9	-0.3
ARG				S	Sn	02 14 57.8	-0.5
ARG				*e*Sg	Sn	02 14 58.3	0.0
MRSB	Marmaris-Mugla	0.67	299	PG	Pb	02 14 46.8	+0.1
MRSB	Marmaris-Mugla	0.67	299	*e*Pg	Pb	02 14 46.8	+0.1
ELL	Elmali	0.87	66	PG	Pg	02 14 50.6	+0.2
ELL	Elmali	0.87	66	*e*Pg	Pg	02 14 50.6	+0.2
YER	Yerkesik	0.90	326	PG	Pg	02 14 51.0	0.0
YER	Yerkesik	0.90	326	*e*Pg	Pg	02 14 51.0	0.0
GOLH	Golhisar	0.99	31	*i* P	Pb	02 14 51.6	-0.7
GOLH	Golhisar	0.99	31	P	Pb	02 14 51.6	-0.7
TAVA	DENIZLI_Tavas	1.07	360	*i* P	Pb	02 14 53.3	-0.4
TAVA	DENIZLI_Tavas	1.07	360	P	Pb	02 14 53.3	-0.4
DAT	Datca	1.13	288	PN	Pn	02 14 54.7	-0.1
DAT	Datca	1.13	288	*i* P	Pn	02 14 54.9	+0.1
DAT	Datca	1.13	288	P	Pn	02 14 54.9	+0.1
MLSB	Milas	1.29	315	PN	Pn	02 14 56.9	+0.1
MLSB	Milas	1.29	315	*e*Pn	Pn	02 14 56.9	+0.1
KORT	Korkueli	1.30	62	PN	Pn	02 14 56.9	-0.2
KORT	Korkueli	1.30	62	*i* P	Pb	02 14 57.9	+0.2
KORT	Korkueli	1.30	62	*e*Pn	Pn	02 14 56.9	-0.2
KORT	Korkueli	1.30	62	P	Pb	02 14 57.8	+0.2
BODT	Bodrum	1.46	298	PN	Pn	02 14 58.9	-0.2
BODT	Bodrum	1.46	298	*e*Pn	Pn	02 14 58.9	-0.2
KARP	Karpathos	1.66	240	P	Pn	02 15 01.4	-0.5
KARP				S	Sn	02 15 22.6	-0.3
KARP	Karpathos	1.66	240	P	Pn	02 15 01.6	-0.3
KARP				S	Sn	02 15 22.5	-0.3
AYDB	Zeytinkoy-Aydi	1.76	332	PN	Pn	02 15 02.9	-0.5
AYDB	Zeytinkoy-Aydi	1.76	332	*e*Pn	Pn	02 15 02.9	-0.5
SMG	Samos	2.12	309	P	Pn	02 15 08.8	+0.5
SMG				S	Sn	02 15 34.3	0.0
SMG				AML	AML	02 15 35.5	
	comp=N,84µm,0.5s						
SMG				AML	AML	02 15 37.9	
	comp=E,93µm,0.5s						
SMG	Samos	2.12	309	P	Pn	02 15 08.7	+0.5
SMG				S	Sn	02 15 34.2	-0.1

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*ISCJB **10** 02:18:28.5±0.5, 33°.22N±0°.03×35°.48E±0°.04, h13^{km}±5^{km}, Error ellipse: s-maj=6.7km s-min=3.7km az=31.0*
*GII **10** 02:18:28.0±0.0, 33°.15N×35°.49E, h1^{km}, MD1.1/2*
*CSEM **10** 02:18:31.9, 33°.32N×35°.59E, h5^{km}, ML2.7*
*GRAL **10** 02:18:31.9±0.3, 33°.32N×35°.59E, h6^{km}±2^{km}, MD2.7*
ISC 10 02:18:28.7±1.0, 33°.24N±0°.03×35°.49E±0°.04, h18^{km}±6^{km}, n19, σ0^{s}91/29, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSDI	Kefar Szold	0.15	107	Pg	Pg	02 18 33.2	+0.2
NATI	Neve Ativ	0.21	83	Pg	Pg	02 18 34.1	+0.3
NATI				Sg	Sg	02 18 37.9	+0.6
MMA0B	Mount Meron ar	0.23	197	Pg	Pg	02 18 34.0	-0.2
SHBL	Chebaa	0.24	63	*e*P	Pg	02 18 34.6	+0.2
SHBL				*e*S	Sg	02 18 36.6	-1.8
SHBL	Chebaa	0.24	63	*e*P	Pg	02 18 34.6	+0.2
SHBL				*e*S	Sg	02 18 36.6	-1.8
HNTI	Hanita	0.30	240	Pg	Pg	02 18 35.5	+0.2
HNTI				Sg	Sg	02 18 40.3	+0.5
KSHT	Keshet	0.37	133	Pg	Pg	02 18 36.7	+0.2
KSHT				Sg	Sg	02 18 41.9	+0.1
RCY	Rachaya	0.39	48	*e*P	Pg	02 18 37.0	0.0
RCY				*e*S	Sg	02 18 40.7	-1.8
DQRL	Deir Qamar	0.47	9	*e*P	Pb	02 18 38.9	+0.3
DQRL				*e*S	Sg	02 18 44.1	-0.8
DQRL	Deir Qamar	0.47	9	*e*P	Pb	02 18 38.9	+0.3
DQRL				*e*S	Sg	02 18 44.1	-0.8
OFRI	‘Ofer	0.74	215	Pg	Pg	02 18 42.2	-1.1
MMLI	Mount Malkishu	0.80	184	Pg	Pg	02 18 43.0	-1.3
HMDT	Nahal Hemdat	0.98	178	Pg	Pg	02 18 46.3	-1.5
HMDT				Sg	Sg	02 19 00.3	-0.4
SLTI	Sal’it	1.06	201	Pg	Pg	02 18 48.4	-0.9
SLTI				Sg	Sg	02 19 03.0	-0.2
HWQ	Hawqa	1.11	20	*e*P	Pg	02 18 49.9	-0.4
HWQ	Hawqa	1.11	20	*e*P	Pg	02 18 49.8	-0.4
DSI	Dead Sea	1.66	183	Pn	Pn	02 18 57.6	+0.6
AMAZ	Amatzia	1.77	196	Pn	Pn	02 18 59.6	+1.2
YTIR	Yattir	1.89	190	Pn	Pn	02 19 01.1	+0.9

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*BJI **10** 02:28:08.5, 25°.20S×176°.30W, h8^{km}, mb5.3/36, mB5.5/25, Ms4.9/19, Ms7 4.6/15*
*ISCJB **10** 02:28:09.1±1.6, 25°.09S±0°.03×176°.42W±0°.04, h4^{km}±10^{km}, mb5.1/168, MS4.4/43, Error ellipse: s-maj=6.2km s-min=3.6km az=37.4*
*IDC **10** 02:28:09.2±0.4, 24°.64S×176°.35W, h0^{km}, mb4.9/20, mb1 5.1/21, mb1mx4.8/45, mbtmp4.9/21, ML5.7/1, MS4.2/34, Ms1 4.2/34, ms1mx4.2/45, Error ellipse: s-maj=16.3km s-min=14.1km az=119.0*
*NEIC **10** 02:28:12.0±0.5, 25°.14S×176°.41W, h17^{km}±3^{km}, mb5.1/139, Error ellipse: s-maj=8.5km s-min=4.5km az=134.0*
*GCMT **10** 02:28:12.0±0.2, 24°.75S×175°.93W, h39^{km}±1^{km}, MW5.2/109, Moment Tensor Solution. s77,c110; s109,c175; Duration: 1^{s}0 Moment tensor: Scale 10^{17} Nm; M$_{rr}$0.25±.02; M$_{\theta\theta}$0.61±.02; M$_{\phi\phi}$-0.86±.02; M$_{r\theta}$-0.34±.02; M$_{\theta\phi}$-0.34±.01; M$_{\phi r}$0.12±.02; Best double couple: M$_0$0.91600×10^{17} NP1:ϕ_s331.00000°, δ71.00000°, λ23.00000°. NP2:ϕ_s233.00000°, δ68.00000°, λ160.00000°. Principal axes: T 0.8880, Plg29.0000°, Azm193.0000°; N 0.0550, Plg61.0000°, Azm8.0000°; P -0.9430, Plg2.0000°, Azm102.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*MOS **10** 02:28:14.0±1.4, 24°.84S×176°.54W, h33^{km}, mb5.3/38, MS4.6/7 Error ellipse: s-maj=11.4km s-min=9.1km az=78.7*
ISC 10 02:28:13.2±0.6, 25°.11S±0°.04×176°.09W±0°.05, h26^{km}±3^{km}, n662, σ2^{s}19/672, mb5.1/168, MS4.4/44, 44C-27D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	Raoul Island	4.44	201	P	Pn	02 29 24.4	+5.6
RAO	Raoul Island	4.44	201	Pn	Pn	02 29 21.7	+2.9
	352nm,0.3s,baz=313,slow=7.8,SNR=17						
RAO				Sn	Sb	02 30 19.0	-4.5
	223nm,0.3s,baz=272,slow=24,SNR=2.3						
RAO	Raoul Island	4.44	201	Pn	Pn	02 29 17.7	-1.1
RAO				*e*Sn	Sn	02 30 14.8	+5.2
GLKZ	Green Lake	4.45	201	P	Pn	02 29 24.6	+5.7
NIUE	Niue	8.29	45	P	Pn	02 30 04.7	-7.0
	baz=7.8						
AFI	Afiamalu	11.86	21	Pn	Pn	02 30 50.5	-10
	126nm,0.3s,baz=62,slow=1.0,SNR=44						
AFI				Sn	Sn	02 32 47.2	-25
	16nm,0.3s,baz=65,slow=17,SNR=3.1						
AFI	Afiamalu	11.86	21	*e*Pn	Pn	02 30 50.7	-10
AFI				*e*Sn	Sn	02 32 44.0	-28
AFI	Afiamalu	11.86	21	*e*P	Pn	02 30 50.7	-10
MXZ	Matakaoa Point	13.30	200	P	Pn	02 31 23.5	+3.2
OUZ	Omahuta	13.45	219	*e*Pn	Pn	02 31 24.7	+2.4
OUZ	Omahuta	13.45	219	P	P	02 31 30.2	-1.2
WMGZ	Waiomatatini S	13.51	199	P	Pn	02 31 21.4	-1.7
WMGZ				S	Sn	02 33 50.4	-2.0
KUZ	Kuaotunu	13.56	209	P	P	02 31 29.3	-3.2
WCZ	Waipu Caves	13.57	215	P	P	02 31 30.3	-2.4
HAZ	Te Kaha	13.65	201	P	Pn	02 31 22.5	-2.5
HAZ				S	Sn	02 33 56.7	+1.0
PKGZ	Pakihiroa	13.68	200	P	Pn	02 31 21.7	-3.8
PKGZ				S	Sn	02 33 53.7	-2.8
PUZ	Puketiti	13.79	199	P	Pn	02 31 23.1	-3.8
WIAZ	Waiheke Island	13.86	211	P	P	02 31 38.4	+2.5
RUGZ	Raukumara Rang	13.87	201	P	Pn	02 31 25.9	-2.2
TWGZ	Tauwhareparae	13.97	200	P	Pn	02 31 26.5	-3.0
TWGZ				S	Sn	02 34 01.7	-2.0
OPRZ	Ohinepanea	14.16	204	P	P	02 31 41.2	+2.0
CNGZ	Carnagh Statio	14.19	199	P	Pn	02 31 29.6	-2.7
CNGZ				P	Pn	02 31 29.6	-2.7
TKGZ	Te Karaka	14.25	200	P	Pn	02 31 30.5	-2.7
TKGZ				S	Sn	02 34 06.8	-3.7
MWZ	Matawai	14.26	201	P	Pn	02 31 33.4	0.0
MWZ				S	Sn	02 34 06.4	-4.3
URZ	Urewera	14.33	202	Pn	Pn	02 31 31.7	-2.5
	1.2nm,0.3s,baz=269,slow=5.1,SNR=11						
URZ				Sn	Sn	02 34 07.3	-4.9
	3.4nm,0.3s,baz=258,slow=4.0,SNR=3.6						
URZ	Urewera	14.33	202	P	Pn	02 31 31.7	-2.5
RAGZ	Rawiri	14.44	201	P	P	02 31 40.7	-1.7
TOZ	Tahuroa Road	14.48	208	P	P	02 31 41.2	-1.5
RIGZ	Rimuhau	14.52	200	P	Pn	02 31 35.0	-2.0
RIGZ				P	P	02 31 36.6	-6.7
PRGZ	Paritu Road	14.69	199	P	Pn	02 31 38.3	-0.9
SNGZ	Shannon Statio	14.72	201	P	Pn	02 31 36.3	-3.4
SNGZ				S	Sn	02 34 18.9	-3.1
KNZ	Kokohu	14.84	199	P	Pn	02 31 42.9	+1.7
MHGZ	Mahia Peninsul	14.89	198	P	Pn	02 31 43.3	+1.4
RAHZ	Arahi	14.93	201	P	Pn	02 31 41.9	-0.6
MTHZ	Maungataniwha	14.95	202	P	Pn	02 31 42.7	-0.1
TLZ	Tolley Road	14.97	206	P	Pn	02 31 46.2	+3.1
MRHZ	Matea Rd	15.08	203	P	Pn	02 31 45.0	+0.5
ARHZ	Aropaoanui	15.27	201	P	Pn	02 31 43.3	-3.6
RATZ	Rangitukua	15.35	205	P	P	02 31 54.6	+2.1
BKZ	Black Stump Fm	15.35	202	*e*Pn	Pn	02 31 44.4	-3.7
	48nm,0.9s						
BKZ				*e*Sn	Sn	02 34 39.5	+2.2
BKZ	Black Stump Fm	15.35	202	P	Pn	02 31 47.6	-0.5
HIZ	Hauiti	15.41	208	*e*Pn	Pn	02 31 47.1	-1.7
	97nm,0.5s						
KATZ	Kakaramea	15.47	205	P	P	02 31 56.1	+2.2
RAR	Rarotonga	15.50	79	Pn	Pn	02 31 45.0	-5.0
	27nm,0.3s,baz=240,slow=8.7,SNR=43						
RAR				Sn	Sn	02 34 19.7	-21
	6.9nm,0.3s,baz=95,slow=15,SNR=4.7						
RAR				LR	LR	02 36 47.7	
	comp=Z,1µm,20.4s,baz=263,slow=33						
RAR	Rarotonga	15.50	79	*e*Pn	Pn	02 31 45.0	-5.0
	294nm,1.0s						
RAR				*e*Sn	Sn	02 34 18.5	-23
RAR	Rarotonga	15.50	79	*e*P	Pn	02 31 45.0	-5.0
RAR				pmax	pmax		
	comp=Z,294nm,1.0s						
MCHZ	McNeill Hill	15.53	201	P	P	02 31 55.3	+0.8
KRVZ	Karewarewa	15.60	205	P	P	02 31 56.0	+0.7
KWHZ	Kaweka Forest	15.61	202	P	Pn	02 31 49.1	-2.3
WTVZ	West Tongariro	15.63	205	P	P	02 31 55.3	-0.5
TWVZ	Taurewa	15.65	205	P	Pn	02 31 52.4	+0.3
NGZ	Ngauruhoe	15.68	205	P	Pn	02 31 52.6	+0.1
WHVZ	Whangaehu Hut	15.78	204	P	Pn	02 31 52.5	-1.3
BHHZ	Black Hill Sta	15.79	203	P	Pn	02 31 51.0	-2.8
KAHZ	Kahuranaki	15.79	200	P	Pn	02 31 52.4	-1.4
KRHZ	Kereru	15.82	202	P	Pn	02 31 51.8	-2.4
MOVZ	Moawhango	15.83	204	P	Pn	02 31 56.3	+2.0
MTVZ	Mangateitei	15.91	205	P	P	02 32 00.4	+1.6
VRZ	Vera Road	15.97	207	P	P	02 32 00.1	+0.8
PXZ	Pawanui	16.01	200	P	Pn	02 31 57.5	+0.9
PNHZ	Pukenui	16.12	202	P	Pn	02 31 54.9	-3.1
WPHZ	Waipukurau	16.18	201	P	P	02 32 02.5	+0.8
DZM	Mont Dzumac	16.29	277	Pn	P	02 32 05.0	+1.9
	comp=Z,3.6nm,0.3s,baz=95,slow=16,SNR=22						
DZM				LR	LR	02 35 44.7	
	comp=Z,772nm,21.3s,baz=89,slow=28						
DZM	Mont Dzumac	16.29	277	*e*Pn	P	02 32 05.6	+2.5
	comp=Z,689nm,1.6s						
DZM				*e*LR	LR	02 35 54.6	
	comp=Z,2µm,24.6s						
DZM	Mont Dzumac	16.29	277	*e*Pn	P	02 32 05.3	+2.2
	comp=Z,136nm,0.9s						
TSZ	Takapari Road	16.33	202	P	P	02 32 03.2	-0.3
LREZ	Lake Rotokare	16.40	207	P	P	02 32 07.4	+3.3
WAZ	Wanganui	16.42	205	P	P	02 32 04.7	+0.3
KHEZ	Kahui Hut	16.42	208	P	P	02 32 07.4	+3.0
DVHZ	Dannevirke	16.48	201	P	Pn	02 32 00.4	-2.2
ANWZ	Angora Road	16.53	200	P	Pn	02 32 03.1	0.0
POWZ	Post Office Ro	16.70	202	P	Pn	02 32 05.7	+0.4
PRWZ	Pori Road	16.77	201	P	P	02 32 08.1	-0.2
BFZ	Birch Farm	16.80	201	*e*Pn	Pn	02 32 05.8	-0.8
	comp=Z,166nm,1.1s						
BFZ				*e*Sn	Sn	02 35 03.7	-8.7
TIWZ	Tintock	17.00	201	P	Pn	02 32 08.6	-0.6
TRWZ	Traveller	17.63	201	P	Pn	02 32 16.7	-0.2
PAWZ	Paruwai Farm	17.70	201	P	Pn	02 32 18.1	+0.3
SNZO	South Karori	17.88	203	*e*Pn	Pn	02 32 15.3	-4.7
	comp=Z,85nm,0.6s						
THZ	Tophouse	18.95	206	*e*P	P	02 32 30.4	-1.9
	comp=Z,40nm,0.5s						
KHZ	Kahutara	19.27	204	*e*P	P	02 32 29.7	-6.0
	comp=Z,87nm,0.6s						
KHZ				*e*Sn	Sn	02 35 58.3	-14
LTZ	Lake Taylor	20.07	206	*e*P	P	02 32 40.9	-3.6
	comp=Z,29nm,0.5s						
OXZ	Oxford	20.62	205	*e*P	P	02 32 47.8	-2.6
	comp=Z,66nm,0.9s						
MQZ	McQueen’s Vall	20.71	204	*e*P	P	02 32 48.6	-2.8
	comp=Z,19nm,0.7s						
RPZ	Rata Peaks	21.33	206	P	P	02 32 58.5	+0.4
	comp=Z,15nm,0.5s,baz=97,slow=0.9,SNR=8.3						
RPZ				LR	LR	02 41 16.4	
	comp=Z,1µm,21.3s,baz=26,slow=36						
RPZ	Rata Peaks	21.33	206	*e*P	P	02 32 58.5	+0.4
	comp=Z,28nm,0.6s						
FOZ	Fox Glacier	21.70	209	*e*P	P	02 32 58.2	-3.8
	comp=Z,45nm,0.7s						
KNTN	Kanton	22.60	11	*e*P	P	02 33 19.4	+7.5
	comp=Z,124nm,0.8s						
ODZ	Otahua Downs	22.61	205	*e*P	P	02 33 11.2	-0.6
	comp=Z,22nm,0.8s						
LHI	Lord Howe Isla	22.76	248	*e*P	P	02 33 12.1	-1.4
	comp=Z,89nm,0.9s						
MLZ	Mavora Lakes	23.90	208	*e*P	P	02 33 24.3	-0.4
	comp=Z,70nm,1.5s						
TBI	Tubuai	24.34	91	*e*P	P	02 33 28.6	-0.4
	comp=Z,222nm,1.0s						
TBI				*e*S	S	02 37 41.3	-5.5
	comp=Z,659nm,26.8s						
TBI				*e*LQ	LQ	02 38 13.9	
	comp=Z,2µm,33.0s						
TBI				*e*LR	LR	02 39 20.0	
	comp=Z,2µm,25.8s,baz=264						
TBI	Tubuai	24.34	91	*e*T	T	02 58 43.3	
	comp=Z,72nm,0.3s						
WHZ	Wether Hill Ro	24.39	208	*e*P	P	02 33 27.9	-1.4
	comp=Z,59nm,1.4s						
PAE	Paea	25.74	78	*e*P	P	02 33 41.7	0.0
	comp=Z,7.6nm,0.9s						
PAE	Paea	25.74	78	*e*T	T	03 00 19.0	
	comp=Z,40nm,0.3s						
PPT2	Papeete2	25.77	78	*e*P	P	02 33 42.4	+0.3
	comp=Z,74nm,1.0s						
PPT2				*e*S	S	02 38 05.5	-4.5
	comp=Z,599nm,31.0s						
PPT2				*e*LQ	LQ	02 38 56.6	
	comp=Z,2µm,26.2s						
PPT2				*e*LR	LR	02 40 00.9	
	comp=Z,3µm,25.5s,baz=247						
PPT2	Papeete2	25.77	78	*e*T	T	03 00 22.5	
	comp=Z,28nm,0.3s						
PPT	Papeete	25.78	78	P	P	02 33 42.3	+0.2
	comp=Z,86nm,1.0s,baz=314,slow=4.3,SNR=9.8						
PPT				LR	LR	02 40 58.7	
	comp=Z,1µm,21.5s,baz=253,slow=30						
PPTF	Pamatai, Papee	25.78	78	*e*P	P	02 33 42.3	+0.1
	comp=Z,103nm,1.0s						
TIAR	Tiarei	25.99	78	*e*P	P	02 33 44.0	0.0
	comp=Z,44nm,1.0s						
TIAR	Tiarei	25.99	78	*e*T	T	03 00 37.0	
	comp=Z,4.9nm,0.3s						
TVO	Taravao	25.99	79	*e*P	P	02 33 44.5	+0.4
	comp=Z,25nm,0.9s						
TVO	Taravao	25.99	79	*e*T	T	03 00 37.8	
	comp=Z,5.1nm,0.3s						
HNR	Honiara	27.61	300	LR	LR	02 43 19.1	
	comp=Z,652nm,19.5s,baz=150,slow=34						
PMOR	Pomariorio Ree	28.28	75	*e*T	T	03 03 26.8	
	comp=Z,4.1nm,0.3s						
VAH	Vaihoa	28.41	75	*e*T	T	03 03 36.7	
	comp=Z,28nm,0.3s						
EIDS	Eidsvold	29.66	262	P	P	02 34 16.9	+0.2
	baz=30,SNR=4.3						
EIDS	Eidsvold	29.66	262	*e*P	P	02 34 17.7	+1.0
	comp=Z,26nm,0.8s						
MGCD	Mangrove Creek	29.67	247	P	P	02 34 18.4	+1.7
	baz=30,SNR=5.3						
CNB	Canberra Magne	31.40	243	P	P	02 34 34.3	+2.1
	baz=32,SNR=9.3						
RMQ	Roma	31.62	260	P	P	02 34 35.1	+1.0
	baz=32,SNR=6.9						
CAN	Canberra	31.70	243	*e*P	P	02 34 36.5	+1.7
	comp=Z,24nm,1.2s						
CAN	Canberra	31.70	243	*e*P	P	02 34 36.5	+1.7
CAN				pmax	pmax		
	comp=Z,24nm,1.2s						
MILA	Mila	31.89	240	P	P	02 34 37.9	+1.4
	baz=32,SNR=7.2						
YNG	Young	32.04	245	P	P	02 34 40.1	+2.3
	baz=32,SNR=7.1						
CMSA	Cobar Meteorol	34.12	250	P	P	02 34 56.3	+0.4
	baz=34,SNR=11						
MOO	Moorlands	34.75	231	P	P	02 35 02.3	+1.1
	baz=35,SNR=4.5						
TOO	Toolangi	34.85	240	P	P	02 35 03.1	+0.8
	baz=35,SNR=15						
CTA	Charters Tower	35.04	270	P	P	02 35 02.9	-1.2
	comp=Z,31nm,0.8s,baz=99,slow=13,SNR=28						
CTAO	Charters Tower	35.04	270	*e*P	P	02 35 01.7	-2.3
	comp=Z,39nm,0.8s						
CTAO	Charters Tower	35.04	270	*e*P	P	02 35 01.7	-2.3
CTAO				pmax	pmax		
	comp=Z,39nm,0.8s						
MTSU	Mount Surprise	37.35	273	P	P	02 35 22.6	-1.2
	baz=37,SNR=29						
RKT	Rikitea	37.48	96	*e*LR	LR	02 45 27.0	
	comp=Z,717nm,26.0s						
RKT	Rikitea	37.48	96	*e*T	T	03 15 11.0	
	comp=Z,12nm,0.3s						
STKA	Stephens Creek	37.62	250	P	P	02 35 26.1	+0.3
	baz=38,SNR=10						
STKA	Stephens Creek	37.62	250	P	P	02 35 25.1	-0.8
	comp=Z,5.7nm,0.5s,baz=92,slow=10,SNR=11						
STKA				PcP	PcP	02 37 43.9	+0.7
	comp=Z,4.8nm,0.6s,baz=96,slow=7.3,SNR=3.6						
STKA				LR	LR	02 48 40.4	
	comp=Z,987nm,21.8s,baz=80,slow=33						
STKA	Stephens Creek	37.62	250	*e*P	P	02 35 26.1	+0.3
	comp=Z,2.9nm,1.2s						
STKA				*e*PcP	PcP	02 37 43.9	+0.7
ARPS	Mount Arapiles	37.64	242	P	P	02 35 26.5	+0.5
	baz=38,SNR=7.8						
TAOE	Nuku Hiva Isla	37.83	71	*e*S	S	02 41 16.7	-1.0
	comp=Z,218nm,28.1s						
TAOE				*e*LR	LR	02 45 32.7	
	comp=Z,1µm,26.2s,baz=246						
COEN	Coen	39.81	278	P	P	02 35 43.5	-1.0
	baz=40,SNR=7.5						
COEN	Coen	39.81	278	*e*P	P	02 35 43.9	-0.6
	comp=Z,24nm,1.0s						
HTT	Hallett	39.86	247	P	P	02 35 44.2	-0.5
	baz=40,SNR=19						
QIS	Mount Isa	40.95	267	P	P	02 35 53.3	-0.6
	baz=41,SNR=7.2						
BBOO	Buckleboo	42.28	248	P	P	02 36 03.3	-1.3
	baz=42,SNR=22						
BBOO	Buckleboo	42.28	248	*e*P	P	02 36 02.0	-2.6
	comp=Z,13nm,0.8s						
AS01	Alice Springs	45.31	261	*e*P	P	02 36 27.2	-1.9
AS31	Alice Springs	45.35	261	*e*P	P	02 36 27.2	-2.3
	comp=Z,8.2nm,1.0s						
AS31				*e*S	S	02 43 01.7	-7.4
ASAR	Alice Springs	45.35	261	P	P	02 36 27.6	-1.9
	comp=Z,9.5nm,0.6s,baz=93,slow=7.1,SNR=71						
ASAR				S	S	02 43 01.7	-7.4
	comp=Z,3.5nm,1.0s,baz=86,slow=17,SNR=9.7						
ASAR				LR	LR	02 54 07.2	
	comp=Z,829nm,19.4s,baz=106,slow=34						
WRAB	Tennant Creek	45.87	266	*e*P	P	02 36 31.0	-2.6
	comp=Z,18nm,0.8s						
WRAB	Tennant Creek	45.87	266⇑	*e*P	P	02 36 30.8	-2.8
WRAB				pmax	pmax		
	comp=Z,16nm,0.8s						
WR1	Warramunga Arr	45.88	266	*e*P	P	02 36 31.1	-2.5
	comp=Z,25nm,0.8s						
WR1				*e*PcP	PcP	02 38 11.0	+0.4
WR1				*e*ScP	ScP	02 42 07.7	+5.6
WRA	Warramunga Arr	45.88	266	P	P	02 36 31.1	-2.5
	comp=Z,12nm,0.6s,baz=102,slow=7.9,SNR=92						
WRA				PcP	PcP	02 38 11.0	+0.4
	comp=Z,6.6nm,0.8s,baz=101,slow=3.7,SNR=5.8						
WRA				ScP	ScP	02 42 07.7	+5.6
	comp=Z,3.1nm,1.0s,baz=102,slow=4.1,SNR=5.4						
WRA				LR	LR	02 54 07.6	
	comp=Z,620nm,19.8s,baz=110,slow=34						
JAY	Jayapura	47.26	291	LR	LR	02 56 11.2	
	comp=Z,226nm,18.3s,baz=348,slow=36						
JAY	Jayapura	47.26	291	P	P	02 36 42.3	-2.3
FORT	Forrest	49.24	250	P	P	02 36 57.7	-1.9
	baz=49,SNR=33						
FORT	Forrest	49.24	250	*e*P	P	02 36 57.6	-1.9
	comp=Z,30nm,0.6s						
KDU	Kakadu	49.94	274	P	P	02 37 01.6	-3.5
	baz=50,SNR=4.4						
WRKA	Warakurna	50.05	258	P	P	02 37 03.8	-2.2
	baz=50,SNR=87						
MTN	Manton Dam	51.09	274	P	P	02 37 11.8	-2.0
	baz=51,SNR=3.9						
MTN	Manton Dam	51.09	274	*e*P	P	02 37 11.6	-2.2
	comp=Z,7.7nm,0.6s						
KNRA	Kununurra	52.24	269	P	P	02 37 21.2	-1.2
	baz=52,SNR=17						
SBA	Scott Base	53.42	184	*e*P	P	02 37 31.3	+1.0
SBA	Scott Base	53.42	184	*e*P	P	02 37 31.3	+1.0
VNDA	Vanda	53.51	186	P	P	02 37 36.0	+5.0

	comp=Z,7.6nm,0.9s,baz=6.5,slow=7.6,SNR=23						
VNDA				LR	LR	02 57 49.4	
	comp=Z,96nm,20.2s,baz=23,slow=33						
VNDA	Vanda	53.51	186	*e*P	P	02 37 34.3	+3.4
	comp=Z,44nm,1.4s						
VNDA	Vanda	53.51	186	*e*P	P	02 37 34.3	+3.4
VNDA				pmax	pmax		
	comp=Z,44nm,1.4s						
GUMO	Guam	54.11	311	LR	LR	02 58 48.9	
	comp=Z,138nm,20.6s,baz=123,slow=34						
FITZ	Fitzroy Crossi	54.28	265	P	P	02 37 36.4	-1.0
	baz=54,SNR=56						
FITZ	Fitzroy Crossi	54.28	265	*e*P	P	02 37 35.2	-2.2
	comp=Z,25nm,0.8s						
KMBL	Kambalda	54.38	248	P	P	02 37 37.5	-0.6
	baz=54,SNR=4.5						
MSAI	Masohi	57.05	283	P	P	02 37 53.4	-4.0
KLBR	Kellerberrin	57.81	247	P	P	02 38 01.3	-1.2
	baz=58,SNR=5.7						
NWAO	Narrogin (SRO)	57.98	246	LR	LR	03 00 33.0	
	comp=Z,302nm,21.0s,baz=311,slow=34						
MEEK	Meekatharra	58.17	253	P	P	02 38 04.6	-0.6
	baz=58,SNR=8.7						
SOEI	Soe	58.48	274	P	P	02 38 10.1	+2.5
SOEI	Soe	58.48	274	*e*P	P	02 38 08.6	+1.0
	comp=Z,47nm,0.9s						
MBWA	Marble Bar	58.66	260	*e*P	P	02 38 07.3	-1.3
	comp=Z,12nm,0.8s						
BATI	Baumata	58.85	273	LR	LR	03 02 15.0	
	comp=Z,721nm,20.9s,baz=140,slow=35						
BLDU	Ballidu	58.89	248	P	P	02 38 08.7	-1.4
	baz=59,SNR=16						
RPN	Rapa Nui	59.32	108	LR	LR	02 57 39.2	
	comp=Z,128nm,19.5s,baz=282,slow=30						
MORW	Morawa	59.80	250	P	P	02 38 15.5	-0.9
	baz=60,SNR=6.2						
CASY	Casey	60.60	206	*e*P	P	02 38 23.4	+2.2
	comp=Z,79nm,0.8s						
EDFI	Ende, Flores	61.22	274	P	P	02 38 22.9	-3.5
WBSI	Waikabubak, Su	62.95	272	P	P	02 38 42.1	+4.2
GIRL	Giralia	63.10	256	P	P	02 38 39.2	+0.5
	baz=63,SNR=4.5						
BKSI	Bulukumba	64.05	277	P	P	02 38 43.9	-1.2
QSPA	South Pole Qui	64.99	180	P	P	02 38 54.4	+3.8
	comp=Z,44nm,0.9s,baz=43,slow=3.6						
QSPA				LR	LR	03 02 30.9	
	comp=Z,172nm,21.7s,baz=37,slow=32						
QSPA	South Pole Qui	64.99	180	*e*P	P	02 38 54.6	+3.9
DAV	Davao City (W)	65.11	291	LR	LR	03 05 24.5	
	comp=Z,58nm,21.0s,baz=174,slow=34						
MPSI	Mapaga	66.75	282	P	P	02 39 00.1	-2.5
JHJ	Hachijo jima 2	71.54	322	LR	LR	03 07 10.7	
	comp=Z,66nm,19.1s,baz=118,slow=33						
LEM	Lembang	74.74	270	LR	LR	03 11 03.6	
	comp=Z,312nm,21.5s,baz=222,slow=35						
MJAR	Matsushiro Arr	74.94	323	P	P	02 39 48.4	-3.6
	comp=Z,3.0nm,0.6s,baz=164,slow=5.6,SNR=9.0						
MJAR				LR	LR	03 07 55.0	
	comp=Z,88nm,21.6s,baz=140,slow=32						
MAJO	Matsushiro	74.94	323	*e*P	P	02 39 48.4	-3.6
MAJO	Matsushiro	74.94	323	*e*P	P	02 39 48.4	-3.6
MAT	Matsushiro	74.94	323	P	P	02 39 48.7	-3.2
MAT				S	S	02 49 32.6	+4.8
ERM	Erimo	76.68	330⇓	*e*P	P	02 40 02.7	+1.1
ERM				pmax	pmax		
	comp=Z,20nm,1.2s						
JNU	Nakatsue	76.81	316	LR	LR	03 09 00.1	
	comp=Z,81nm,19.8s,baz=123,slow=32						
MAW	Mawson	77.84	200	P	P	02 40 11.0	+3.0
	baz=78,SNR=25						
MAW	Mawson	77.84	200	P	P	02 40 10.9	+3.0
	comp=Z,22nm,0.6s,baz=140,slow=6.1,SNR=53						
MAW				LR	LR	03 13 50.2	
	comp=Z,395nm,19.6s,baz=96,slow=35						
MAW	Mawson	77.84	200	*e*P	P	02 40 11.0	+3.0
	comp=Z,8.8nm,0.9s						
TPUB	Ta-pu	77.94	303	*e*P	P	02 40 10.3	+1.0
	comp=Z,24nm,0.8s						
MDSI	Maura Dua	78.82	270	P	P	02 40 14.9	+0.6
SNCC	San Nicolas Is	79.14	45	P	P	02 40 18.0	+2.3
	baz=230						
SKR	Severo-Kuril’s	79.36	342	*e*P	P	02 40 13.1	-3.2
SKR				*e*S	S	02 50 09.0	-6.1
SKR				MLR	MLR		
	comp=Z,100nm,17.0s						
GATR	Gnd/Air Tx Cnt	79.36	44	*e*P	P	02 40 17.2	+0.4
SCZ2	Santa Cruz Isl	79.55	45	P	P	02 40 20.4	+2.5
	baz=230						
SBC	Santa Barbara	79.79	44	P	P	02 40 21.9	+2.8
	baz=230						
PKM	Mcpherson Peak	80.01	44	P	P	02 40 22.3	+1.8
	baz=230						
SMMC	Simmler	80.17	44	P	P	02 40 23.6	+2.4
	baz=230						
RPV	Rancho Palos V	80.18	46	*e*P	P	02 40 25.9	+4.6
LPIG	La Paz	80.30	58	LR	LR	03 09 16.2	
	comp=Z,171nm,19.3s,baz=226,slow=31						
OSI	Osito Audit: C	80.53	45	P	P	02 40 25.3	+2.1
	baz=231						
CACC	Caltech Cellar	80.61	45	*e*P	P	02 40 23.9	+0.4
YSS	Yuzh-Sakhalins	80.78	333	*e*P	P	02 40 23.5	-0.6
	comp=Z,28nm,0.9s						
YSS	Yuzh-Sakhalins	80.78	333	*e*P	P	02 40 22.7	-1.4
YSS				*e*		02 40 32.4	
YSS				*e*		02 43 22.4	
YSS				*e*PPP	PPP	02 45 21.0	
YSS				*e*S	S	02 50 24.2	-6.1
YSS				*e*		02 50 34.0	
YSS				*e*PPS	PPS	02 51 23.0	
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
YSS				pmax	pmax		
	comp=N,20nm,0.9s						
YSS				pmax	pmax		
	comp=Z,200nm,4.2s						
YSS				MLR	MLR		
	comp=Z,200nm,16.0s						
YSS				MLR	MLR		
	comp=N,200nm,17.0s						
YSS				MLR	MLR		
	comp=E,200nm,16.0s						
ARVC	Arvin	80.78	44	P	P	02 40 26.7	+2.2
	baz=231						
PSRC	Puddingstone R	80.79	46	*e*P	P	02 40 27.2	+2.7
MURC	Murrieta	80.88	46	P	P	02 40 26.9	+1.9
	baz=232						
MONP2	Monument Peak	80.96	47	P	P	02 40 27.1	+1.4
	baz=232						
BFSC	Mount Baldy Ra	80.97	46	P	P	02 40 27.5	+1.9
	baz=232						
IKP	In-Ko-Pah, Jac	81.02	48	P	P	02 40 27.2	+1.3
	baz=233						
VES	Vestal, Richgr	81.08	44	P	P	02 40 27.5	+1.6
	baz=230						
PEA0B	Petropavlovsk-	81.16	344	*e*P	P	02 40 24.5	-1.5
	comp=E,54nm,1.1s						
PETK	Petropavlovsk-	81.16	344	P	P	02 40 24.2	-1.9
	comp=E,21nm,0.7s,baz=123,slow=7.5						
PETK	Petropavlovsk-	81.16	344	*e*P	P	02 40 24.0	-2.0
PETK	Petropavlovsk-	81.16	344	*e*P	P	02 40 24.0	-2.0
EDW2	Edwards Air Fo	81.16	45	P	P	02 40 28.5	+2.0
	baz=231						
PEA1	Petropavlovsk-	81.16	344	*e*P	P	02 40 24.1	-1.9
FRD	Ford Ranch, An	81.21	47	P	P	02 40 28.3	+1.4
	baz=232						
KMRM	Mail Ridge	81.24	38	*e*P	P	02 40 26.5	-0.4
	comp=E,31nm,0.9s						
ISA	Isabella, Lake	81.34	44	P	P	02 40 29.8	+2.2
	baz=231						
ISA	Isabella, Lake	81.34	44	*e*P	P	02 40 30.4	+2.9
	comp=E,20nm,1.1s						
PFO	Pinyon Flats O	81.37	47	P	P	02 40 29.6	+1.8
	baz=232						
PFO	Pinyon Flats O	81.37	47	*e*P	P	02 40 29.5	+1.7
	comp=E,16nm,1.2s						
PFO	Pinyon Flats O	81.37	47	*e*P	P	02 40 29.5	+1.7
PFO				pmax	pmax		
	comp=Z,16nm,1.2s						
SWSC	Sam W. Stewart	81.41	48	P	P	02 40 29.4	+1.6
	baz=233						
KSRS	Korea Array	81.48	318	P	P	02 40 26.1	-1.9
	comp=Z,1.4nm,0.5s,baz=141,slow=5.8,SNR=6.1						
KSRS				LR	LR	03 12 13.1	
	comp=Z,118nm,20.5s,baz=120,slow=33						
KS15	Wonju Array Si	81.50	318	*e*P	P	02 40 26.1	-2.0
KSAR	Wonju Array Be	81.50	318	P	P	02 40 26.1	-2.0
KSAR	Wonju Array Be	81.50	318	P	P	02 40 26.2	-2.0
KS01	Wonju Array Si	81.52	318	*e*P	P	02 40 26.7	-1.5
CMB	Columbia Colle	81.69	41	*e*P	P	02 40 31.3	+2.0
	comp=Z,8.9nm,1.0s						
CMB	Columbia Colle	81.69	41	*e*P	P	02 40 31.3	+2.0
CMB				pmax	pmax		
	comp=Z,9.0nm,1.0s						
LRMC	Laurel Mtn Rad	81.73	45	P	P	02 40 31.8	+2.1
	baz=231						
BELC	Belle Mtn. Jos	81.91	47	P	P	02 40 32.6	+1.9
	baz=233						
BC3	Big Chuckawall	82.07	47	P	P	02 40 33.5	+2.0
	baz=233						
CWC	Cottonwood Cre	82.08	44	P	P	02 40 33.3	+1.7
	baz=231						
GLA	Glamis	82.12	48	P	P	02 40 33.4	+1.7
	baz=233						
WDC	Whiskeytown Da	82.14	38	*e*P	P	02 40 33.6	+2.2
	comp=Z,13nm,1.1s						
GSC	Goldstone, Bar	82.18	45	P	P	02 40 33.5	+1.6
	baz=232						
GSC	Goldstone, Bar	82.18	45	*e*P	P	02 40 33.6	+1.6
	comp=Z,13nm,1.0s						
GSC	Goldstone, Bar	82.18	45	*e*P	P	02 40 33.6	+1.6
GSC				pmax	pmax		
	comp=Z,13nm,1.0s						
HEC	Hector,Ludlow	82.20	46	P	P	02 40 33.5	+1.4
	baz=232						
MPMC	Manual Prospec	82.22	44	P	P	02 40 34.0	+1.7
	baz=231						
OMMB	Old Mammoth Mi	82.26	42	*e*P	P	02 40 36.8	+4.1
	comp=Z,17nm,1.3s						
N02D	Trinity Center	82.31	38	P	P	02 40 34.8	+2.3
	baz=227						
O03D	Paynes Creek	82.36	39	P	P	02 40 34.8	+2.0
	baz=228						
MLAC	Mammoth, Mammo	82.37	42	P	P	02 40 35.0	+1.9
	baz=230						
TIN	Tinemaha, Big	82.38	43	P	P	02 40 34.9	+1.9
	baz=231						
CHGN	Chignik	82.46	10	*e*P	P	02 40 34.5	+1.7
	comp=Z,19nm,0.9s						
M02C	Callahan	82.51	37	P	P	02 40 36.1	+2.5
	baz=227						
WAKR	Walker	82.57	41	*e*P	P	02 40 36.6	+2.5
	comp=Z,15nm,1.0s						
IRM	Iron Mountain	82.57	47	P	P	02 40 35.6	+1.7
	baz=233						
GMRC	Granite Mounta	82.61	46	P	P	02 40 36.0	+1.7
	baz=233						
L02D	Cave Junction,	82.63	36	P	P	02 40 36.4	+2.4
	baz=227						
SYO	Syowa Base	82.63	192⇑	*e*P	P	02 40 34.0	+0.3
SYO	Syowa Base	82.63	192⇓	*i*pP	pP	02 40 39.4	-2.8
SYO	Syowa Base	82.63	192⇓	*i*sP	P	02 40 41.2	+7.5
SYO	Syowa Base	82.63	192	*e*SH	SKSac	02 50 52.0	-0.9
Y12C	Blythe	82.74	48	P	P	02 40 36.7	+1.9
	baz=234						
Y12C	Blythe	82.74	48	*e*P	P	02 40 37.3	+2.5
	comp=Z,25nm,1.3s						
YBH	Yreka Blue Hor	82.82	37	*e*P	P	02 40 37.4	+2.2
	comp=Z,15nm,1.3s						
YBH	Yreka Blue Hor	82.82	37	*e*P	P	02 40 37.4	+2.2
YBH				pmax	pmax		
	comp=Z,15nm,1.3s						
TUQ	Turquoise Moun	82.83	46	P	P	02 40 37.4	+1.9
	baz=232						
PNTR	Pine Nut	82.85	41	*e*P	P	02 40 37.8	+2.2
	comp=Z,14nm,0.8s						
214A	Organ Pipe Nat	82.86	50	P	P	02 40 37.4	+1.9
	baz=235						
FURC	Furnace Creek,	82.87	44	P	P	02 40 37.7	+2.3
	baz=232						
GRAC	Grapevine Rang	82.88	44	P	P	02 40 37.3	+1.8
	baz=231						
SHOC	Shoshone, Teco	82.89	45	P	P	02 40 37.6	+2.0
	baz=232						
BEKR	Beckworth	82.91	40	*e*P	P	02 40 38.1	+2.3
	comp=Z,14nm,1.4s						
VCNR	Virginia City	82.95	41	*e*P	P	02 40 35.4	-0.7
	comp=Z,12nm,1.2s						
LDFC	Landfair	83.15	46	*e*P	P	02 40 38.8	+1.8
	comp=Z,64nm,1.0s						
RYN	Ryan	83.19	42	*e*P	P	02 40 40.6	+3.3
	comp=Z,13nm,1.4s						
NV01	Mina Array Sit	83.20	42	*e*P	P	02 40 37.7	+0.3
NVAR	Mina Array Bea	83.20	42	P	P	02 40 37.9	+0.5
	comp=Z,3.5nm,0.9s,baz=225,slow=8.0,SNR=18						
NVAR				LR	LR	03 13 34.4	
	comp=Z,166nm,18.4s,baz=118,slow=33						
HUMO	Hull Mountain	83.28	36	*e*P	P	02 40 39.8	+2.3
	comp=Z,23nm,1.4s						
NEE2	Needles Airpor	83.28	47	P	P	02 40 39.2	+1.6
	baz=233						
NV11	Mina Array Sit	83.29	42	*e*P	P	02 40 39.3	+1.5
	comp=Z,0.7nm,1.0s						
PDMCI	Parker Dam,Lak	83.33	47	P	P	02 40 39.9	+2.0
	baz=234						
M04C	Macdoel	83.34	38	P	P	02 40 40.2	+2.3
	baz=228						
PAHR	Pah Rah Range	83.37	40	*e*P	P	02 40 39.7	+1.6
	comp=Z,7.7nm,1.0s						
SNAA	Sanae	83.37	178	P	P	02 40 39.8	+2.1
SNAA	Sanae	83.37	178	P	P	02 40 39.8	+2.1
	comp=Z,53nm,0.8s,baz=185,slow=4.9,SNR=185						
SNAA				LR	LR	03 15 27.7	
	comp=Z,186nm,20.4s,baz=230,slow=34						
SNAA	Sanae	83.37	178	*e*P	P	02 40 39.6	+1.9
VNA3	Neumayer Olymp	83.44	176	P	P	02 40 40.0	+2.1
TPNV	Topopah Spring	83.55	44	*e*P	P	02 40 41.6	+2.4
	comp=Z,8.9nm,0.9s						
KVN	Kaiserville	83.72	42	*e*P	P	02 40 41.2	+1.2
	comp=Z,8.8nm,1.0s						
KVN	Kaiserville	83.72	42	*e*P	P	02 40 41.2	+1.2
KVN				pmax	pmax		
	comp=Z,9.0nm,1.0s						
USA0B	Ussuriysk Arra	83.74	325	*e*P	P	02 40 38.7	-1.0
	comp=Z,24nm,1.1s						
USRK	Ussuriysk Ar.	83.74	325	P	P	02 40 38.3	-1.4
	comp=Z,10nm,0.9s,baz=147,slow=3.4						
I03D	Drain, OR	83.82	35	P	P	02 40 43.0	+2.9
	baz=227						
Y14A	Wickenburg	83.88	48	*e*P	P	02 40 42.8	+2.0
	comp=Z,17nm,0.8s						
TYV	Tymovskoe	83.94	335	*e*P	P	02 40 39.2	-1.3
TYV				pmax	pmax		
	comp=Z,35nm,1.0s						
K04D	Chiloquin, OR	83.95	37	P	P	02 40 43.2	+2.2
	baz=228						
SHPR	Sheep Range	83.97	45	*e*P	P	02 40 43.3	+2.0
	comp=Z,11nm,1.1s						
VNA1	Neumayer--Stat	84.12	176	P	P	02 40 43.6	+2.3
NJ2	Nanjing	84.15	309	*e*P	P	02 40 45.9	+3.8
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
J04D	Umpqua Nationa	84.17	36	P	P	02 40 44.1	+1.9
	baz=228						
NVL	N’lazarevskaya	84.23	183⇑	*i*P	P	02 40 43.9	+2.0
NVL				*e*S	SKSac	02 50 55.0	-8.4
NVL				*e*SS	SS	02 56 36.9	+3.4
NVL				pmax	pmax		
	comp=Z,33nm,1.1s						
MOD	Modoc Plateau	84.27	38	*e*P	P	02 40 44.5	+1.8
	comp=Z,16nm,1.0s						
I04A	Tendick Farm,	84.38	36	P	P	02 40 45.3	+2.2
	baz=227						
TUC	Tucson	84.48	51	*e*P	P	02 40 45.6	+1.7
	comp=Z,18nm,0.9s						
TUC	Tucson	84.48	51	*e*P	P	02 40 45.6	+1.7
TUC				pmax	pmax		
	comp=Z,18nm,0.9s						
K05A	Summer Lake	84.49	37	*e*P	P	02 40 44.7	+0.9
	comp=Z,29nm,1.0s						
J05D	Fort Rock, OR	84.67	37	P	P	02 40 46.7	+2.0
	baz=228						
R11A	Troy Canyon, C	84.82	43	P	P	02 40 47.1	+1.5
	baz=232						
R11A	Troy Canyon, C	84.82	43	*e*P	P	02 40 48.5	+2.9
	comp=Z,4.4nm,1.2s						
PLCA	Paso Flores	84.86	133	P	P	02 40 48.6	+2.8
	comp=Z,7.3nm,1.1s,baz=234,slow=5.1,SNR=6.3						
PLCA				LR	LR	03 09 29.3	
	comp=Z,180nm,22.0s,baz=276,slow=29						
PLCA	Paso Flores	84.86	133	*e*P	P	02 40 49.3	+3.4
	comp=Z,19nm,1.3s						
PLCA	Paso Flores	84.86	133	P	P	02 40 48.6	+2.8
PLCA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
G03D	McMinnville, O	84.91	34	P	P	02 40 48.4	+2.8
	baz=227						
319A	Douglas	85.03	52	*e*P	P	02 40 49.5	+2.8
	comp=Z,16nm,0.8s						
H04A	Detroit Lake	85.11	35	*e*P	P	02 40 48.2	+1.5
	comp=Z,36nm,1.4s						
BMN	Battle Mountai	85.11	41	*e*P	P	02 40 47.7	+0.7
	comp=Z,13nm,1.0s						
BMN	Battle Mountai	85.11	41	*e*P	P	02 40 47.7	+0.7
BMN				pmax	pmax		
	comp=Z,13nm,1.0s						
PINE	Pine Mountain	85.17	37	*e*P	P	02 40 49.3	+2.1
	comp=Z,20nm,0.9s						
MNSI	Mandailing Nat	85.19	273	P	P	02 40 48.5	+0.7
X16A	Lo Mia Camp, P	85.21	49	*e*P	P	02 40 49.4	+1.7
	comp=Z,18nm,1.0s						
MDJ	Mudanjiang	85.28	324	*e*P	P	02 40 47.0	-0.5
	comp=Z,32nm,1.3s						
I05D	Terrebonne, OR	85.32	36	P	P	02 40 50.1	+2.3
	baz=228						
HPIG		85.35	58	*e*P	P	02 40 51.1	+2.6
	comp=Z,11nm,0.9s						
LCMT	Little Creek M	85.51	46	*e*P	P	02 40 51.0	+1.9
	comp=Z,9.2nm,1.0s						
WVOR	Wild Horse Val	85.56	39	*e*P	P	02 40 50.9	+1.8
	comp=Z,19nm,1.3s						
WVOR	Wild Horse Val	85.56	39	*e*P	P	02 40 50.9	+1.8
WVOR				pmax	pmax		
	comp=Z,19nm,1.3s						
E03A	Lebam	85.68	33	*e*P	P	02 40 51.4	+2.0
	comp=Z,40nm,1.1s						
CCUT	Cedar City	85.75	45	*e*P	P	02 40 52.0	+1.6
	comp=Z,14nm,1.2s						
KNB	Kanab	85.79	46	*e*P	P	02 40 52.9	+2.4
	comp=Z,27nm,1.5s						
KNB	Kanab	85.79	46	*e*P	P	02 40 52.9	+2.4
KNB				pmax	pmax		
	comp=Z,27nm,1.5s						
U15A	North Rim	85.79	47	*e*P	P	02 40 52.1	+1.5
	comp=Z,22nm,1.0s						
WUAZ	Wupatki	85.88	48	*e*P	P	02 40 53.1	+2.1
	comp=Z,12nm,1.0s						
G05D	Wamic, OR	85.94	35	P	P	02 40 53.1	+2.3
	baz=228						
SZCU	Shurtz Canyon	85.95	45	*e*P	P	02 40 54.0	+2.7
	comp=Z,11nm,1.1s						
PSUT	Pine Spring	86.02	44	*e*P	P	02 40 54.1	+2.4
	comp=Z,5.8nm,1.0s						
J08A	Circle Bar Ran	86.25	38	*e*P	P	02 40 53.3	+0.8
	comp=Z,21nm,1.4s						
EFI	East Falkland	86.28	147⇓	*e*P	P	02 40 55.0	+2.5
EFI				pmax	pmax		
	comp=Z,90nm,1.5s						
X18A	Snowflake	86.29	49	*e*P	P	02 40 55.3	+2.3
	comp=Z,12nm,0.8s						
PKCU	Pink Cliffs	86.37	46	*e*P	P	02 40 55.7	+2.2
	comp=Z,14nm,1.0s						
GRNR	Gornyy	86.38	332	*e*P	P	02 40 54.1	+1.3
GRNR				pmax	pmax		
	comp=Z,42nm,1.0s						
NKL	Nikolayevsk	86.50	336	*e*P	P	02 40 51.0	-2.3
NKL				pmax	pmax		
	comp=Z,43nm,1.0s						
WHN	Wuhan	86.57	306	*e*P	P	02 40 54.0	-0.2
PSI	Prapat	86.64	275	LR	LR	03 22 32.0	
	comp=Z,138nm,18.3s,baz=90,slow=38						
121A	Cookes Peak, D	86.72	52	P	P	02 40 56.5	+1.4
	baz=238						
W18A	Petrified Fore	86.77	49	P	P	02 40 56.8	+1.5
	baz=236						
W18A	Petrified Fore	86.77	49	*e*P	P	02 40 57.4	+2.1
	comp=Z,16nm,1.1s						
MTPU	Mount Pierson	86.80	45	*e*P	P	02 40 58.1	+2.5
	comp=Z,9.8nm,1.0s						
CN2	Changchun	87.00	322	*e*P	P	02 40 54.5	-1.5
CN2				*e*S	S	02 51 36.2	+3.2
CN2				pmax	pmax		
	comp=Z,20nm,1.2s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,90nm,17.0s						
CN2				LR	LR		
	comp=Z,100nm,17.0s						
MSU	Marysvale	87.07	45	*e*P	P	02 40 59.0	+2.2
MSU	Marysvale	87.07	45	*e*P	P	02 40 59.0	+2.2
G08A	Pilot Rock	87.22	36	*e*P	P	02 40 58.8	+1.5
	comp=Z,9.6nm,1.0s						
KLR	Kul’dur	87.36	329⇑	*i*P	P	02 40 55.8	-1.8
B05A	Bryant	87.58	33	P	P	02 41 01.0	+2.3
	baz=227						
DUG	Dugway, Tooele	87.65	43	*e*P	P	02 41 06.0	+6.5
	comp=Z,5.7nm,1.3s						
TIA	Tai’an	87.66	312	P	P	02 40 58.2	-1.2
TIA				pmax	pmax		
	comp=Z,15nm,0.9s						
MFID	Camas Ranch	87.78	39	*e*P	P	02 41 01.5	+1.5
	comp=Z,7.0nm,1.1s						
BMO	Blue Mountains	87.84	38	*e*P	P	02 41 01.7	+1.5
	comp=Z,3.2nm,1.0s						
BMO	Blue Mountains	87.84	38	*e*P	P	02 41 01.7	+1.5
BMO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MNTX	Cornudas Mount	88.01	54	*e*P	P	02 41 01.7	+0.5
	comp=Z,19nm,0.9s						
TXAR	Lajitas Array	88.09	56	LR	LR	03 14 01.2	
	comp=Z,127nm,19.5s,baz=0.0,slow=31						
TMUT	Trail Mountain	88.14	45	*e*P	P	02 41 03.8	+1.8
	comp=Z,9.8nm,0.7s						
LENM	Lemitar	88.16	51	*e*P	P	02 41 03.7	+1.7
LAZ	Ladron	88.17	51	*e*P	P	02 41 04.0	+1.9
SKNT	Sakolnakorn	88.32	290	P	P	02 41 03.7	+0.8
D08A	Wollman Farm,	88.39	35	*e*P	P	02 41 03.1	+0.6
	comp=Z,11nm,0.8s						
BNM	Barren Site	88.40	51	*e*P	P	02 41 04.9	+1.6
E09A	Wood Farm, Sta	88.45	36	*e*P	P	02 41 06.8	+3.9
	comp=Z,9.3nm,0.9s						
SPUT	South Promonto	88.52	42	*e*P	P	02 41 04.8	+1.2
	comp=Z,6.3nm,1.0s						
P17A	Butcher Ranch,	88.54	45	*e*P	P	02 41 04.0	+0.2
	comp=Z,5.3nm,0.9s						
F10A	Beach Ranch, E	88.59	37	*e*P	P	02 41 03.5	-0.2
	comp=Z,14nm,1.0s						
MA2	Magadan	88.67	344	*e*P	P	02 41 03.6	0.0
	comp=Z,110nm,1.1s						
MA2	Magadan	88.67	344	*e*P	P	02 41 03.6	0.0
MA2				pmax	pmax		
	comp=Z,110nm,1.1s						
HLID	Hailey	88.69	40	*e*P	P	02 41 06.2	+1.9
	comp=Z,4.0nm,1.0s						
TASM	ASL Pad, Albuq	88.93	50	P	P	02 41 07.2	+1.4
	baz=238						
ANMO	Albuquerque	88.94	50	P	P	02 41 06.3	+0.6
	comp=Z,6.4nm,1.0s,baz=204,slow=6.4,SNR=16						
ANMO				LR	LR	03 15 26.3	
	comp=Z,307nm,18.9s,baz=240,slow=32						
ANMO	Albuquerque	88.94	50	*e*P	P	02 41 06.6	+0.8
	comp=Z,11nm,1.0s						
ANMO	Albuquerque	88.94	50⇓	*e*P	P	02 41 06.3	+0.6
ANMO				pmax	pmax		
	comp=Z,7.0nm,1.0s						
TASL	Snake Pit, Alb	88.94	50	P	P	02 41 06.9	+1.2
	baz=238						
B08A	Colville Reser	89.02	34	*e*P	P	02 41 05.0	-0.6
	comp=Z,12nm,1.0s						
TCUT	Toone Canyon	89.06	43	*e*P	P	02 41 08.2	+2.0
	comp=Z,16nm,0.9s						
PMR	Palmer	89.09	13	*e*P	P	02 41 07.7	+2.2
	comp=Z,14nm,1.1s						
PMR	Palmer	89.09	13	*e*P	P	02 41 07.7	+2.2
PMR				pmax	pmax		
	comp=Z,14nm,1.1s						
C09A	Chrisman Ranch	89.20	35	*e*P	P	02 41 07.6	+1.2
	comp=Z,15nm,0.9s						
HWUT	Hardware Ranch	89.24	43	*e*P	P	02 41 06.6	-0.4
	comp=Z,3.6nm,0.9s						
GHO	Glory Hole Cre	89.30	13	*e*P	P	02 41 05.9	-0.7
	comp=Z,20nm,1.0s						
DIV	Divide	89.38	14	*e*P	P	02 41 07.5	+0.5
	comp=Z,22nm,1.1s						
BMRM	Bremner River	89.50	15	*e*P	P	02 41 07.4	-0.1
	comp=Z,16nm,0.9s						
ENH	Enshi	90.06	304	*e*P	P	02 41 11.3	+0.4
	comp=Z,33nm,1.1s						
S22A	4UR Ranch, Cre	90.16	48	P	P	02 41 12.9	+1.4
	baz=238						
S22A	4UR Ranch, Cre	90.16	48	*e*P	P	02 41 11.9	+0.4

	comp=Z,15nm,1.3s						
PHET	Kaeng Krachan	90.32	284	P	P	02 41 16.3	+3.9
MCMT	McKenzie Canyo	90.34	39	*e*P	P	02 41 14.1	+2.0
BJI	Beijing	90.38	315	*e*P	P	02 41 10.4	-1.7
BJI				pmax	pmax		
	comp=Z,21nm,1.7s						
GYA	Guiyang	90.43	299	*e*P	P	02 41 14.8	+2.0
GYA				pP	pP	02 41 20.6	-0.8
GYA				PP	PP	02 44 51.5	+3.7
GYA				SKS	SKSac	02 51 41.8	-1.0
GYA				S	S	02 52 05.0	-1.4
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,6.2s						
O20A	White River Ci	90.51	45	P	P	02 41 14.8	+1.8
	baz=237						
TRF	Thorofare Moun	90.58	11	*e*P	P	02 41 11.3	-1.4
	comp=Z,21nm,0.7s						
REDW	Red Top Meadow	90.67	41	*e*P	P	02 41 15.1	+1.4
	comp=Z,19nm,1.4s						
TPAW	Teton Pass	90.69	41	*e*P	P	02 41 15.3	+1.5
	comp=Z,7.7nm,1.1s						
DHY	Denali Highway	90.79	13	*e*P	P	02 41 15.8	+2.2
	comp=Z,8.9nm,1.0s						
SMCO	Snowmass	90.82	47	*e*P	P	02 41 17.5	+2.8
	comp=Z,4.8nm,0.9s						
MSO	Missoula	90.92	37	*e*P	P	02 41 15.0	+0.4
	comp=Z,6.4nm,1.1s						
MOOW	Moose Ponds	90.96	41	*e*P	P	02 41 17.8	+2.8
	comp=Z,6.6nm,1.3s						
LOHW	Long Hollow	90.96	41	*e*P	P	02 41 16.3	+1.3
	comp=Z,20nm,1.5s						
SDCO	Great Sand Dun	91.05	48	*e*P	P	02 41 17.1	+1.4
	comp=Z,4.4nm,0.8s						
MSTX	Muleshoe	91.06	53	*e*P	P	02 41 17.6	+2.0
	comp=Z,30nm,0.8s						
BPAW	Bear Paw Mtn.	91.06	11	*e*P	P	02 41 16.4	+1.7
	comp=Z,4.4nm,1.0s						
MCK	McKinley	91.08	12	*e*P	P	02 41 15.8	+1.0
	comp=Z,13nm,0.9s						
MCK	McKinley	91.08	12	*e*P	P	02 41 15.8	+1.0
MCK				pmax	pmax		
	comp=Z,13nm,0.9s						
BW06	Boulder Array	91.12	43	*e*P	P	02 41 16.4	+0.6
	comp=Z,4.8nm,0.9s						
PDAR	Pinedale Array	91.12	43	P	P	02 41 15.6	-0.2
	comp=Z,2.7nm,0.9s,baz=204,slow=3.3,SNR=16						
PDAR				PKKP	PKKPdf	02 58 38.0	+0.4
	comp=Z,0.3nm,0.8s,baz=106,slow=5.4,SNR=3.5						
PDAR				LR	LR	03 17 12.9	
	comp=Z,113nm,19.8s,baz=247,slow=32						
LRM	Limekiln Ridge	91.15	39	*e*P	P	02 41 17.2	+1.4
QLMT	Earthquake Lak	91.17	40	*e*P	P	02 41 17.9	+2.0
FLWY	Flagg Ranch	91.17	41	*e*P	P	02 41 17.8	+1.8
	comp=Z,20nm,1.0s						
SEY	Seymchan	91.24	346	⇑*e*P	P	02 41 15.2	-0.3
H17A	Grant Village	91.42	41	P	P	02 41 18.4	+1.2
	baz=236						
H17A	Grant Village	91.42	41	*e*P	P	02 41 20.3	+3.1
	comp=Z,10.0nm,1.1s						
T25A	Trinidad	91.49	49	P	P	02 41 18.8	+1.2
	baz=240						
BOZ	Bozeman (W)	91.49	39	*e*P	P	02 41 17.6	+0.3
	comp=Z,20nm,1.0s						
BOZ	Bozeman (W)	91.49	39	*e*P	P	02 41 17.6	+0.3
BOZ				pmax	pmax		
	comp=Z,19nm,1.0s						
DLBC	Dease Lake	91.60	22	*e*P	P	02 41 19.4	+1.9
	comp=Z,6.6nm,0.9s						
UTHA	Uthaitani	91.61	286	P	P	02 41 22.5	+4.1
Q24A	Divide	91.92	48	P	P	02 41 20.7	+1.0
	baz=239						
MLY	Manley	91.97	10	*e*P	P	02 41 20.7	+1.8
	comp=Z,4.1nm,1.2s						
CCB	Clear Creek Bu	92.13	12	*e*P	P	02 41 19.8	+0.2
	comp=Z,7.7nm,0.8s						
WALA	Waterton Lakes	92.26	36	*e*P	P	02 41 21.8	+1.0
	comp=Z,10.0nm,1.2s						
XAN	Xi'an	92.30	307	P	P	02 41 20.1	-1.1
XAN				pP	pP	02 41 26.4	-3.4
XAN				sP	sP	02 41 29.2	-3.6
XAN				PP	PP	02 45 02.3	0.0
XAN				SKS	SKSac	02 51 52.0	-1.0
XAN				S	S	02 52 21.4	-1.5
XAN				sS	pS	02 52 32.2	-1.7
XAN				SS	SS	02 58 38.0	+3.7
XAN				pmax	pmax		
	comp=Z,13nm,1.0s						
XAN				pmax	pmax		
	comp=Z,92nm,5.4s						
XAN				LR	LR		
	comp=Z,94nm,24.4s						
XAN				LR	LR		
	comp=Z,96nm,24.4s						
XAN				LR	LR		
	comp=Z,140nm,24.4s						
MDM	Murphy Dome	92.33	11	*e*P	P	02 41 22.2	+1.6
	comp=Z,7.2nm,0.9s						
IL1	Eielson Array	92.41	12	*e*P	P	02 41 20.6	-0.3
ILAR	Eielson Array	92.41	12	P	P	02 41 19.2	-1.7
	comp=Z,2.6nm,0.9s,baz=221,slow=5.6,SNR=15						
ILB	Eielson Array	92.41	12	*e*P	P	02 41 21.0	+0.1
ZEA	Zeya	92.49	330	*e*P	P	02 41 11.7	-10
ZEA				pmax	pmax		
	comp=Z,21nm,1.2s						
RLMT	Red Lodge	92.60	41	*e*P	P	02 41 24.1	+1.5
	comp=Z,16nm,1.5s						
LAMP	Lampang	92.72	289	P	P	02 41 24.5	+1.1
GCMT	Greycliff	92.74	40	*e*P	P	02 41 24.5	+1.4
K22A	Casper	92.94	44	P	P	02 41 25.9	+1.8
	baz=238						
KMI	Kunming	92.98	296	P	P	02 41 26.3	+1.5
KMI				pP	pP	02 41 32.2	-1.1
KMI				sP	sP	02 41 34.8	-1.6
KMI				pmax	pmax		
	comp=Z,16nm,0.6s						
KMI				pmax	pmax		
	comp=Z,100nm,5.5s						
KMI				LR	LR		
	comp=Z,150nm,14.6s						
KMI				LR	LR		
	comp=Z,150nm,15.5s						
KMI				LR	LR		
	comp=Z,160nm,20.8s						
NNA	Nana	93.18	105	LR	LR	03 14 02.4	
	comp=Z,194nm,20.8s,baz=242,slow=29						
CM01	Chiang Mai Arr	93.25	289	*e*P	P	02 41 25.9	0.0
CM31	Chiang Mai Arr	93.28	289	*e*P	P	02 41 25.9	-0.2
CMAR	Chiang Mai Arr	93.28	289	P	P	02 41 25.9	-0.2
	comp=Z,5.2nm,0.7s,baz=137,slow=3.3,SNR=28						
CMAR				LR	LR	03 21 14.3	
	comp=Z,42nm,21.9s,baz=146,slow=34						
DAWY	Dawson	93.40	15	*e*P	P	02 41 26.8	+1.2
	comp=Z,5.6nm,0.9s						
CMMT	Chiang Mai	93.43	289	P	P	02 41 27.2	+0.5
	comp=Z,14nm,1.0s,comp=Z,0.1nm						
CHTO	Chiang Mai	93.43	289	*e*P	P	02 41 27.2	+0.5
	comp=Z,15nm,1.0s						
CHTO	Chiang Mai	93.43	289	*e*P	P	02 41 27.2	+0.5
CHTO				pmax	pmax		
	comp=Z,15nm,1.0s						
CHTO	Chiang Mai	93.43	289	P	P	02 41 27.3	+0.5
CHTO	Chiang Mai	93.43	289	P	P	02 41 27.3	+0.5
	comp=Z,64nm,1.0s,comp=Z,0.2nm						
EGAK	Eagle	93.60	14	*e*P	P	02 41 29.2	+2.8
	comp=Z,8.8nm,1.0s						
HHC	Hu-ho-hao-te	93.80	314	*e*P	P	02 41 30.3	+2.2
HHC				S	S	02 52 38.2	+2.1
HHC				SS	SS	02 59 01.0	+5.3
HHC				pmax	pmax		
	comp=Z,25nm,1.0s						
HHC				pmax	pmax		
	comp=Z,120nm,5.6s						
HHC				LR	LR		
	comp=Z,94nm,12.1s						
HHC				LR	LR		
	comp=Z,150nm,18.2s						
CMAI	Chiengmai2	93.82	290	P	P	02 41 30.2	+1.5
	comp=Z,2.4nm,1.0s,comp=Z,88nmcomp=Z,0.1nm						
EGMT	Eagleton	93.93	38	*e*P	P	02 41 29.6	+1.2
	comp=Z,6.6nm,0.9s						
CD2	Chengdu	94.72	302	*e*P	P	02 41 33.0	+0.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,140nm,5.2s						
LAO	LASA Array	95.24	40	*e*P	P	02 41 37.2	+2.8
	comp=Z,8.6nm,0.9s						
RSSD	Black Hills	95.25	43	*e*P	P	02 41 35.0	+0.2
	comp=Z,12nm,0.9s						
RSSD	Black Hills	95.25	43	*e*P	P	02 41 35.0	+0.2
RSSD				pmax	pmax		
	comp=Z,12nm,0.9s						
TOLK	Toolik Lake Re	95.48	9	P	P	02 41 38.3	+3.3
	baz=204						
LZH	Lanzhou	96.93	307	*e*P	P	02 41 38.2	-4.4
LZH				pP	PcP	02 41 44.0	+1.3
LZH				sP	pP	02 41 47.2	-3.9
LZH				pmax	pmax		
	comp=Z,15nm,1.1s						
LPAZ	La Paz	98.68	112	LR	LR	03 19 19.0	
	comp=Z,72nm,18.0s,baz=232,slow=31						
YKA	Yellowknife Ar	99.95	24	LR	LR	03 21 44.5	
	comp=Z,16nm,19.8s,baz=269,slow=32						
ULN	Ulaanbaatar	99.97	318	⇑*e*P	Pdif	02 41 57.1	+1.2
ULN				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SONA0	Songino Array	100.35	318	*e*Pdif	Pdif	02 41 57.0	-0.5
SONM	Songino Array	100.35	318	P	Pdif	02 41 57.0	-0.5
	comp=Z,1.0nm,0.8s,baz=130,slow=4.6,SNR=4.4						
WMQ	Urumqi	111.23	309	*e*PKP	PKiKP	02 46 45.2	+0.6
WMQ				LR	LR		
	comp=Z,220nm,34.3s						
WMQ				LR	LR		
	comp=Z,230nm,27.3s						
WMQ				LR	LR		
	comp=Z,320nm,29.9s						
DGZ	Jazzator, Alta	112.79	316	⇑*e*PKIKP	PKiKP	02 46 49.1	+1.6
ZALV	Zalesovo Beam	115.15	320	PKP	PKPdf	02 46 49.6	-2.1
	comp=Z,0.5nm,0.4s,baz=123,slow=4.3,SNR=3.2						
ZAA1	Zalesovo Array	115.15	320	*e*PKiKP	PKPdf	02 46 49.6	-2.1
MK01	Makanchi Array	115.58	312	*e*PKPdf	PKPdf	02 46 51.0	-1.8
MK32	Makanchi Array	115.60	312	*e*PKPdf	PKPdf	02 46 50.5	-2.3
MKAR	Makanchi Array	115.60	312	PKP	PKPdf	02 46 50.5	-2.3
	comp=Z,1.6nm,0.8s,baz=96,slow=2.4,SNR=5.6						
KURK	Kurchatov	118.53	316	*e*PKPdf	PKPdf	02 46 58.6	+0.3
KURK	Kurchatov	118.53	316	PKIKP	PKPdf	02 46 56.0	-2.3
KURK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURBB	Kurchatov Arra	118.58	316	PKP	PKPdf	02 46 56.0	-2.4
	comp=Z,1.3nm,0.7s,baz=99,slow=1.9,SNR=9.7						
KSH	Kashi	118.91	303	*e*PKP	PKPdf	02 46 57.4	-2.1
KSH				PP	PP	02 48 22.7	+3.6
KSH				PKS	PKSdf	02 50 32.7	-3.6
KSH				SKS	SKSdf	02 54 05.1	-4.9
KSH				SS	SS	03 04 38.4	+0.8
KSH				AMB	AMB		
	comp=Z,91nm,4.7s						
BOSA	Boshof	122.78	202	PKP	PKPdf	02 47 07.9	+0.5
	comp=Z,6.2nm,1.0s,baz=166,slow=3.6,SNR=4.0						
KK31	Karatay Array	123.43	306	*e*PKPdf	PKPdf	02 47 06.8	-1.2
KKAR	Karatay Array	123.43	306	*e*PKPdf	PKPdf	02 47 06.8	-1.2
KBL	Kabul	123.56	296	*e*PKPdf	PKPdf	02 47 10.9	+2.2
BVAR	Borovoye Array	123.70	318	PKP	PKPdf	02 47 06.4	-1.7
	comp=Z,1.9nm,0.6s,baz=90,slow=3.0,SNR=9.7						
BRVK	Borovoye	123.76	318	⇓*e*PKIKP	PKPdf	02 47 08.5	+0.2
SUMG	Summit	127.17	15	*i* P	PKPdf	02 47 31.0	+16
	comp=Z,13nm,1.2s						
ARU	Arti	129.96	324	PKP	PKPdf	02 47 19.5	-0.5
	comp=Z,2.0nm,0.3s,baz=146,slow=1.8,SNR=7.3						
ARU	Arti	129.96	324	PKP	PKPdf	02 47 19.4	-0.5
ARU				*e*PKPdf	PKiKP	02 47 22.5	+1.7
ARU	Arti	129.96	324	*i* PKIKP	PKPdf	02 47 20.4	+0.4
ARU						02 49 32.1	
ARU				SS	SS	03 06 55.6	+0.2
AKTO	Aktyubinsk	131.63	316	PKP	PKPdf	02 47 23.1	-0.3
	comp=Z,1.8nm,0.7s,baz=271,slow=1.8,SNR=5.9						
LSZ	Lusaka	133.40	213	*e*PKPdf	PKPdf	02 47 29.8	+1.8
ARA0	ARCESS Array S	133.75	350	*e*PKPdf	PKPdf	02 47 25.1	-1.7
ARA0				*e*SKPbc	SKiKP	02 51 02.8	+0.3
ARCES	ARCESS Array B	133.75	350	PKP	PKPdf	02 47 25.1	-1.7
	comp=Z,4.7nm,0.8s,baz=329,slow=1.4,SNR=10						
ARCES				SKP		02 51 02.8	
	comp=Z,5.9nm,0.9s,baz=359,slow=4.9,SNR=5.3						
KLMR	Klimovskoe	136.78	335	*e*PKIKP	PKPdf	02 47 30.3	-2.4
KLMR				pmax	pmax		
	comp=Z,9.0nm,1.4s						
KLMR	Klimovskoe	136.78	335	*e*PKPdf	PKPdf	02 47 30.3	-2.4
KLMR				AMP		02 47 36.8	
	comp=Z,9.0nm,1.4s						
FIA0	FINESS Array S	140.67	343	*e*PKPpre	PKPpre	02 47 31.1	
FIA0	FINESS Array S	140.67	343	*e*PKHKP	PKPpre	02 47 31.1	
FINES	FINESS Array B	140.67	343	PKhKP	PKPpre	02 47 31.1	
	comp=Z,1.7nm,0.8s,baz=33,slow=4.5,SNR=6.1						
OBN	Obninsk	141.62	330	⇓*i*PKIKP	PKPdf	02 47 43.5	+1.9
OBN				*e*		02 50 41.3	
OBN				pmax	pmax		
	comp=Z,8.0nm,0.6s						
RAYN	Ar Rayn	142.17	277	*e*PKPdf	PKPdf	02 47 41.7	-2.0
RAYN	Ar Rayn	142.17	277	*e*PKIKP	PKPdf	02 47 41.7	-2.0
VSR	Storozhevoye	142.53	323	*e*PKIKP	PKPdf	02 47 46.0	+2.6
VSR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
VORD	Divnogorie	142.59	323	*e*PKIKP	PKPdf	02 47 46.1	+2.6
VORD				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ZEI	Tsey	142.83	308	*i* PKIKP	PKPdf	02 47 48.5	+4.0
NCK	Nalchik	142.85	310	⇓*e*PKIKP	PKPdf	02 47 43.1	-1.2
VSU	Vasula	142.96	340	⇓*e*PKIKP	PKPdf	02 47 42.3	-1.6
KIV	Kislovodsk	143.35	311	*i* PKIKP	PKPdf	02 47 46.2	+0.9
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
NC303	NORSAR Array S	143.53	354	*e*PKPpre	PKPab	02 47 41.8	+0.5
NEY	Neytrino	143.54	310	⇓*e*PKIKP	PKPdf	02 47 45.0	-0.7
MBAR	Mbarara	143.57	229	*e*PKPdf	PKPbc	02 47 45.1	+1.1
NB2	NORSAR Subarra	143.73	354	PKP	PKPab	02 47 42.2	0.0
	comp=Z,3.7nm,0.8s,baz=17,slow=2.6						
HFS	Hagfors	144.34	352	PKP	PKPab	02 47 43.6	-0.8
	comp=Z,7.4nm,0.7s,baz=54,slow=3.7,SNR=21						
KONO	Kongsberg	145.25	355	*e*PKPbc	PKPdf	02 47 48.0	+0.1
KONO	Kongsberg	145.25	355	⇑*e*PKIKP	PKPbc	02 47 47.1	-0.5
SOC	Sochi	145.50	311	*e*PKIKP	PKPbc	02 47 49.2	+0.2
SOC				*i*		02 47 53.8	
SOC				*e*		02 51 11.0	
SOC				*e*PPP	PPP	02 54 31.1	
SOC				pmax	pmax		
	comp=Z,9.0nm,0.4s						
SOC				pmax	pmax		
	comp=Z,12nm,0.6s						
MICGM	Minsk	145.68	335	*e*P	PKPdf	02 47 48.0	-0.8
MNK	Minsk	145.68	335	*e*PKIKP	PKPdf	02 47 48.0	-0.8
ANN	Anapa	146.55	314	*i* PKP2	PKPab	02 47 53.1	0.0
ANN				*e*		02 51 14.7	
ANN				pmax	pmax		
	comp=Z,64nm,1.0s						
SUW	Suwalki	147.75	339	*e*PKP	PKPbc	02 47 55.1	0.0
SUW	Suwalki	147.75	339	*e*PKPbc	PKPab	02 47 56.7	-0.9
SUW	Suwalki	147.75	339	*e*PKP2	PKPbc	02 47 55.1	0.0
AKASG	Malin Array Be	147.87	329	PKPbc	PKPdf	02 47 53.8	+1.2
	comp=Z,22nm,0.8s,baz=44,slow=3.8,SNR=33						
AKBB	Malin Array Si	147.87	329	*e*PKPdf	PKPdf	02 47 54.1	+1.5
KIEV	Kiev	147.88	329	*e*PKPdf	PKPdf	02 47 53.9	+1.2
KIEV	Kiev	147.88	329	⇑*e*PKIKP	PKPdf	02 47 53.7	+1.1
AK11	Malin Array Si	147.91	329	*e*PKPdf	PKPbc	02 47 54.5	-1.2
SLMH	Al Salmeh	148.86	299	*i* P	PKPdf	02 47 42.6	-12
BSD	Bornholm Skovb	148.94	348	*i* P	PKPbc	02 47 58.1	-0.1
	comp=Z,58nm,1.3s						
BSD	Bornholm Skovb	148.94	348	*e*PKP2	PKPbc	02 47 58.1	-0.1
BSD				pmax	pmax		
	comp=Z,59nm,1.3s						
ROSA	Rosais	149.69	56	*e*PKPbc	PKPbc	02 48 00.9	+0.2
SORM	Soroca	150.02	326	⇑*i*P	PKPbc	02 48 00.2	-0.9
SORM	Soroca	150.02	326	⇑PKP2	PKPbc	02 48 00.2	-0.9
GKP	Gorka Klasztor	150.14	344	*e*PKP	PKPbc	02 48 01.1	-0.2
GKP	Gorka Klasztor	150.14	344	*e*PKP2	PKPbc	02 48 01.0	-0.2
BEL	Belsk	150.37	339	*e*PKP	PKPbc	02 48 02.7	+0.9
BEL	Belsk	150.37	339	*e*PKP2	PKPbc	02 48 02.7	+0.9
TOTH	TOTAH	150.54	294	*i* P	PKPdf	02 47 57.7	+0.1
QASN	Qassioun	150.65	294	*i* P	PKPdf	02 47 56.5	-1.3
LVV	L'vov	150.79	333	*e*PKIKP	PKPbc	02 48 01.9	-1.0
BRBR	Barbar	150.93	294	*i* P	PKPdf	02 47 59.2	+0.8
BR101	Keskin Array S	151.13	308	*e*PKPdf	PKPdf	02 47 57.3	-1.1
BR101				*e*PKPbc	PKPbc	02 48 03.1	-1.2
BR131	Keskin Array S	151.13	308	*e*PKPbc	PKPbc	02 48 03.2	-1.1
BRTR	Keskin Array B	151.13	308	PKP	PKPdf	02 47 57.3	-1.1
	comp=Z,0.6nm,0.8s,baz=151,slow=3.3,SNR=4.7						
BRTR				PKPbc	PKPbc	02 48 03.1	-1.1
	comp=Z,6.3nm,1.0s,baz=119,slow=4.4,SNR=7.6						
KWP	Kalwaria Pacla	151.48	334	*e*PKP	PKPbc	02 48 03.6	-1.0
KWP	Kalwaria Pacla	151.48	334	*e*PKIKP	PKPbc	02 48 03.6	-1.0
PRAR	RASCA	151.59	327	⇑*i*P	PKPab	02 48 10.0	-3.5
ANTO	Ankara	151.69	308	⇑*i*P	PKPbc	02 48 04.4	-1.1
ANTO	Ankara	151.69	308	*e*pPKPdf	PKPbc	02 48 05.0	-0.5
ANTO	Ankara	151.69	308	⇑PKIKP	PKPbc	02 48 04.4	-1.1
BUR08	Bucovina Ar. S	151.89	329	*e*pPKPdf	PKPbc	02 48 05.2	-0.5
BURAR	Bucovina Array	151.91	329	⇑*i*P	PKPbc	02 48 04.8	-0.9
BURAR	Bucovina Array	151.91	329	⇑PKIKP	PKPbc	02 48 04.9	-0.8
BIZ	Bicaz	151.95	327	⇓*i*P	PKPbc	02 48 05.4	-0.3
TESR	Tescani	151.96	325	⇑*i*P	PKPbc	02 48 05.2	-0.6
CFR	Carcaliu	152.01	322	⇑*i*P	PKPbc	02 48 05.3	-0.6
CFR	Carcaliu	152.01	322	⇑PKIKP	PKPbc	02 48 05.3	-0.6
OJC	Ojcow	152.07	338	*e*PKP	PKPdf	02 48 01.8	+2.5
OJC	Ojcow	152.07	338	*e*pPKPdf	PKPbc	02 48 04.9	-1.0
OJC	Ojcow	152.07	338	*e*PKIKP	PKPdf	02 48 01.8	+2.5
TIRR	Tirgusor	152.28	320	⇓*i*P	PKPbc	02 48 05.5	-1.0
TIRR	Tirgusor	152.28	320	⇓PKIKP	PKPbc	02 48 05.5	-1.0
VRI	Vrincioaia	152.34	324	⇑*i*P	PKPbc	02 48 05.7	-1.0
VRI	Vrincioaia	152.34	324	⇑PKIKP	PKPbc	02 48 05.7	-1.0
PLOR	Plostina	152.40	324	⇑*i*P	PKPbc	02 48 05.7	-1.1
PLOR	Plostina	152.40	324	⇑PKIKP	PKPbc	02 48 05.7	-1.1
TLB	Topalu	152.42	321	⇓*i*P	PKPbc	02 48 06.4	-0.4
TLB	Topalu	152.42	321	⇓PKIKP	PKPbc	02 48 06.4	-0.4
HARR	Harsova	152.42	321	⇑*i*P	PKPbc	02 48 05.9	-0.9
HARR	Harsova	152.42	321	⇑PKIKP	PKPbc	02 48 05.9	-0.9
UZH	Uzhgorod	152.43	333	*c* *i*PKIKP	PKPbc	02 48 06.0	-0.7
UZH				*e*		02 48 22.6	
UZH				*e*		02 55 19.0	
CRVS	Cervenica-Dubn	152.55	334	*e*PKIKP	PKPdf	02 47 58.0	-2.1
CRVS				*e*		02 48 07.8	
CRVS				*e*		02 48 14.9	
CRVS	Cervenica-Dubn	152.55	334	*e*PKP	PKPdf	02 47 58.0	-2.1
CRVS				*e*		02 48 07.8	
CRVS				*e*		02 48 14.9	
NIE	Niedzica	152.57	336	*e*PKP	PKPdf	02 48 03.1	+3.0
NIE	Niedzica	152.57	336	*e*PKIKP	PKPdf	02 48 03.1	+3.0
KSP	Ksiaz	152.59	343	*e*PKP	PKPbc	02 48 06.5	-0.5
KSP	Ksiaz	152.59	343	*e*PKIKP	PKPbc	02 48 06.5	-0.5
TRPA	Tarpa	152.72	332	⇓*i*P	PKPbc	02 48 06.7	-0.7
CSS	Mathiatis	152.78	298	*e*PKPbc	PKPbc	02 48 09.7	+1.7
CLL	Collm	152.92	347	*i* PKPdf	PKPdf	02 47 59.4	-1.1
	comp=Z,3.0nm,1.0s						
CLL				*i* PKPbc	PKPbc	02 48 06.7	-1.0
	comp=Z,22nm,0.9s						
CLL				*i* PKPab	pPKPbc	02 48 16.8	+0.3
	comp=Z,16nm,0.8s						
CLL				*i*		02 48 28.8	
CLL	Collm	152.92	347	*e*pPKPdf	PKPbc	02 48 06.8	-1.0
CLL	Collm	152.92	347	*i* PKIKP	PKPbc	02 48 06.7	-1.0
CLL				*i*		02 48 16.8	
CLL				pmax	pmax		
	comp=Z,22nm,0.9s						
CLL				pmax	pmax		
	comp=Z,16nm,0.8s						
OKC	Ostrava-Krasne	152.94	340	⇑*e*PKP	PKPdf	02 48 04.3	+3.7
OKC				*e*x	x	02 48 30.5	
OKC	Ostrava-Krasne	152.94	340	*e*PKIKP	PKPdf	02 48 04.3	+3.7
UPC	Upice	152.97	343	AMS	AMS	03 56 00.0	
	comp=Z,200nm,20.1s						
DOPR	Dopca	152.97	326	⇓*i*P	PKPbc	02 48 05.8	-2.3
MLR	Muntele Rosu	153.00	324	⇓*i*P	PKPbc	02 48 09.0	+0.7
MLR	Muntele Rosu	153.00	324	⇓PKIKP	PKPbc	02 48 09.0	+0.7
DPC	Dobruska-Polom	153.03	342	⇑*e*PKP	PKPbc	02 48 08.8	+0.7
DPC				*e*PKPAB	sPKPbc	02 48 21.5	+1.6
DPC				AMS	AMS	03 51 30.0	
	comp=Z,200nm,21.0s						
DPC	Dobruska-Polom	153.03	342	*e*PKIKP	PKPbc	02 48 08.8	+0.7
DPC				*e*		02 48 21.5	
DPC				MLR	MLR		
	comp=Z,200nm,21.0s						
LANS	Liptovska Anna	153.09	337	*e*PKIKP	PKPbc	02 48 09.6	+1.3
LANS	Liptovska Anna	153.09	337	*e*PKP	PKPbc	02 48 09.6	+1.3
BRG	Berggiesshubel	153.14	346	*e*PKP	PKPbc	02 48 07.3	-0.9
	comp=Z,13nm,1.1s						
BRG				*i*		02 48 28.1	
	comp=Z,16nm,0.8s						
BRG	Berggiesshubel	153.14	346	*e*PKIKP	PKPbc	02 48 07.3	-0.9
BRG				pmax	pmax		
	comp=Z,13nm,1.2s						
BRG				pmax	pmax		
	comp=Z,16nm,0.8s						
MORC	Moravsky Berou	153.18	340	⇓*i*P	PKPbc	02 48 06.8	-1.6
MORC	Moravsky Berou	153.18	340	*e*PKPbc	PKPbc	02 48 10.1	+1.7
MORC	Moravsky Berou	153.18	340	⇓PKIKP	PKPbc	02 48 06.8	-1.6
MORC	Moravsky Berou	153.18	340	*e*PKP	PKPdf	02 48 02.9	+1.9
PVCC	Panska Ves	153.31	345	*e*PKPAB	PKPab	02 48 17.4	-3.2
PVCC	Panska Ves	153.31	345	*e*PKIKP	PKPab	02 48 17.4	-3.2
VOIR		153.51	325	⇑*i*P	PKPbc	02 48 10.9	+1.6
VOIR		153.51	325	⇑PKIKP	PKPbc	02 48 11.0	+1.6
DRGR		153.67	330	⇓*i*P	PKPbc	02 48 08.9	-0.7
DRGR		153.67	330	⇓PKIKP	PKPbc	02 48 08.9	-0.7
ARR	Arges	153.77	326	⇓*i*P	PKPbc	02 48 08.9	-1.0
PRU	Pruhonice	153.82	344	⇑*e*PKP	PKPbc	02 48 09.1	-0.7
PRU				AMS	AMS	03 58 00.0	
	comp=Z,200nm,23.1s						
PRU	Pruhonice	153.82	344	*e*PKIKP	PKPbc	02 48 09.1	-0.7
PRU				MLR	MLR		
	comp=Z,200nm,23.1s						
GOPC	GO Pecny, Ondr	153.83	344	⇑*e*PKP	PKPbc	02 48 14.5	+4.7
GOPC				AMS	AMS	03 57 30.0	
	comp=Z,200nm,26.2s						
GOPC	GO Pecny, Ondr	153.83	344	*e*PKIKP	PKPbc	02 48 14.5	+4.7
GOPC				MLR	MLR		
	comp=Z,200nm,26.2s						
VYHS	Vyhne	153.87	337	*e*PKIKP	PKPbc	02 48 10.4	+0.5
VYHS				*e*		02 48 21.7	
VYHS	Vyhne	153.87	337	*e*PKP	PKPbc	02 48 10.4	+0.5
VYHS				*e*		02 48 21.7	
VRAC	Vranov	153.88	341	⇑*i*P	PKPbc	02 48 14.9	+5.0
VRAC	Vranov	153.88	341	⇑PKIKP	PKPbc	02 48 14.9	+5.0
VRAC	Vranov	153.88	341	*e*PKP	PKPdf	02 48 03.4	+1.4
JAVC	Velka Javorina	153.95	339	*e*PKP	PKPdf	02 48 04.9	+2.8
PSZ	Piszkesteto	153.96	335	⇑*i*P	PKPbc	02 48 09.7	-0.5
PSZ	Piszkesteto	153.96	335	⇑PKIKP	PKPbc	02 48 09.7	-0.5
KRUC	Moravsky	154.16	341	*e*PKP	PKPdf	02 48 03.9	+1.5
MEM	Membach	154.49	357	⇑APKPbc		02 48 19.4	
MEM				⇓PKPab	PKPab	02 48 27.3	+1.8
MODS	Modra-Piesok	154.50	339	*e*PKIKP	PKPbc	02 48 13.4	+2.1
MODS				*e*		02 48 26.1	
MODS	Modra-Piesok	154.50	339	*e*PKP	PKPbc	02 48 13.4	+2.1
MODS				*e*		02 48 26.1	
GRFO	Grafenberg	154.80	349	*e*PKPab	PKPab	02 48 28.6	+1.6
KHC	Kasperske Hory	154.85	345	*e*PKPDF	PKPdf	02 48 02.0	-1.4
KHC				⇑*e*PKP	PKPbc	02 48 11.3	-0.7
KHC				*e*PKPAB	PKPab	02 48 28.5	+1.3
KHC				AMS	AMS	03 57 50.0	
	comp=Z,200nm,19.3s						
KHC	Kasperske Hory	154.85	345	*e*PKPbc	PKPbc	02 48 12.9	+0.9
KHC	Kasperske Hory	154.85	345	*e*PKIKP	PKPdf	02 48 02.0	-1.4
KHC				*e*		02 48 11.3	
KHC				MLR	MLR		
	comp=Z,200nm,19.3s						
DOU	Dourbes	155.04	359	⇓PKPab	PKPab	02 48 30.9	+3.0
BZS	Buzias	155.06	330	⇑*i*P	PKPdf	02 48 02.5	-1.2
BZS	Buzias	155.06	330	⇑PKIKP	PKPdf	02 48 02.5	-1.2
GEC2	GERESS Array S	155.09	345	*e*PKPdf	PKPdf	02 48 01.9	-1.9
GEC2				*e*PKPbc	sPKPdf	02 48 17.2	+1.6
GEC2	GERESS Array S	155.09	345	*e*PKIKP	PKPdf	02 48 01.9	-1.9
GEC2				*e*		02 48 17.2	
GERES	GERESS Array B	155.09	345	PKP	PKPdf	02 48 01.9	-1.9
	comp=Z,0.7nm,0.8s,baz=354,slow=1.3,SNR=6.0						
GEA0	GERESS Array S	155.10	345	*e*PKPdf	PKPdf	02 48 02.1	-1.7
GEA0				*e*PKPbc	pPKPdf	02 48 11.2	-1.4
HERR	Herculane	155.22	327	⇑*i*P	PKPdf	02 48 11.3	+7.3
CONA	Conrad Observa	155.34	340	PKiKP	PKPdf	02 48 14.7	+11
	comp=Z,5.3nm,1.1s						
WLF	Walferdange	155.42	356	⇑PKP	PKPab	02 48 31.7	+2.2
MDVR	Moldovita	155.64	328	⇑*i*P	PKPdf	02 48 06.3	+1.7
MOA	Molln	155.87	343	pPKPab	PKPab	02 48 34.1	+2.5
	comp=Z,9.3nm,1.3s						
ARSA	Arzberg	156.05	340	PKPab	PKPab	02 48 31.9	-0.5
	comp=Z,2.5nm,0.9s						
VTS	Vitosha	156.40	322	⇑*i*P	PKPab	02 48 27.0	-7.3
VTS	Vitosha	156.40	322	PKP2	PKPab	02 48 27.0	-7.3
BFO	Black Forest	156.56	353	*e*PKPab	PKPab	02 48 35.9	+1.4
SOKA	Soboth	156.71	340	*e*PKPab	PKPab	02 48 35.3	0.0
	comp=Z,6.8nm,1.0s						
ECH	Echery	156.79	354	*e*PKPab	PKPab	02 48 37.2	+1.7
KBA	Koelnbreinsper	156.82	343	*e*PKPab	PKPab	02 48 36.6	+0.8
	comp=Z,3.3nm,0.6s						
DIVS	Divibare	156.96	329	*e*PKPab	PKPab	02 48 34.8	-1.7
OBKA	Obir	157.01	341	PKPab	PKPab	02 48 36.0	-0.6

	comp=Z,4.0nm,1.0s						
RETA	Reutte	157.01	348	ePKPab	PKPab	02 48 36.2	-0.4
	comp=Z,2.4nm,0.6s						
WTTA	Wattenberg	157.05	346	ePKPab	PKPab	02 48 36.2	-0.6
	comp=Z,6.7nm,1.0s						
MOTA	Moosalm	157.08	347	ePKPab	PKPab	02 48 36.9	-0.1
	comp=Z,4.1nm,1.1s						
MYKA	Terra Mystica	157.15	343	ePKPab	PKPab	02 48 37.1	-0.1
	comp=Z,4.9nm,0.7s						
ABTA	Abfaltersbach	157.34	345	ePKPab	PKPab	02 48 35.5	-2.5
	comp=Z,3.7nm,0.8s						
DAVA	Damuels	157.36	349	ePKPab	PKPab	02 48 38.1	0.0
	comp=Z,4.7nm,1.1s						
FETA	Feichten	157.46	348	ePKPdf	PKPdf	02 48 06.6	-0.5
	comp=Z,4.0nm,1.3s						
STIP	Stip	157.57	322	i PKP	PKPab	02 48 36.9	-2.2
BLY	Banja Luka	157.64	335	ePKPab	PKPab	02 48 38.3	-1.0
PDG	Podgorica	158.58	328	⇓iP	PKPdf	02 48 21.3	+13
SENIN	Lac Senin/Sane	158.61	354	ePKPab	PKPab	02 48 45.4	+1.7
FNA	Florina	158.63	321	ePKPab	PKPab	02 48 44.9	+1.1
LIC	Lamto	159.37	154	eP	PKPab	02 48 48.2	+0.7
	comp=Z,70nm,1.2s						
KIC	Kosan Boka	159.60	155	eP	PKPab	02 48 50.1	+1.6
	comp=Z,60nm,1.1s						
TIC	Toumodi	159.75	154	eP	PKPab	02 48 50.4	+1.2
ITM	Ithomi	160.47	312	ePKPab	PKPab	02 48 50.3	-1.6
PAB	San Pablo	164.01	24	ePKPdf	PKPdf	02 48 15.3	+1.0
PAB	San Pablo	164.01	24	ePKIKP	PKPdf	02 48 15.3	+1.0
TOA0	Torodi Ar. Sit	167.92	170	ePKPdf	PKPdf	02 48 16.5	-1.5
TOA0				ePKPab	PKPab	02 49 25.9	+1.0
TOA0				ePKPab	pPKPab	02 49 27.4	-6.1
TORD	Torodi Ar. Bea	167.92	170	PKP	PKPdf	02 48 16.5	-1.5
	comp=Z,1.8nm,0.9s,baz=222,slow=1.9						
TORD				PKPab	PKPab	02 49 25.8	+0.9
	baz=195,slow=3.4						
TORD	Torodi Ar. Bea	167.92	170	PKP	PKPdf	02 48 16.5	-1.5
TOA1	Torodi Ar. Sit	167.93	170	ePKPdf	PKPdf	02 48 16.5	-1.5
TOA1				ePKPab	PKPab	02 49 25.8	+0.9
THTN	Thala	168.79	340	ePKPab	PKPab	02 49 30.8	+2.3
TAM	Tamanrasset	177.26	213	ePKPdf	PKPdf	02 48 22.4	+0.4
TAM				ePKPab	PKPab	02 50 08.3	+1.8
TAM	Tamanrasset	177.26	213	ePKIKP	PKPdf	02 48 22.4	+0.4
TAM				e		02 50 08.3	

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*ISCJB **10** 02:35:59.9±0.3, 12°.47N±0°.03×87°.75W±0°.02, h70^{km}±2^{km}, mb4.6/134, Error ellipse: s-maj=5.1km s-min=2.6km az=32.8*

*CASC **10** 02:36:00.4±2.2, 12°.48N×87°.80W, h53^{km}±39^{km}, MD4.3, ML4.3, mb4.6(NEIC)*

*IDC **10** 02:36:02.0±3.1, 12°.59N×87°.67W, h70^{km}±27^{km}, mb4.2/12, mb1 4.4/13, mb1mx4.0/46, mbtmp4.5/13, MS3.5/11, Ms1 3.4/11, ms1mx3.2/44, Error ellipse: s-maj=24.3km s-min=13.9km az=49.0*

*NEIC **10** 02:36:02.2±0.7, 12°.43N×87°.67W, h76^{km}±7^{km}, mb4.6/144, MD4.3(SNET), Error ellipse: s-maj=7.4km s-min=5.1km az=219.0*

NEIC Felt [I] at La Union, El Salvador.

ISC 10 02:36:00.6±0.6, **12°.47N**±0°.04×**87°.76W**±0°.04, **h58**^{km}±6^{km}, **n503,** σ1^{s}**36**/499, **mb4.6**/134, **MS3.3**/10, **2D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	Conchagua	0.80	355	eP	Pn	02 36 16.9	+0.7
CNCH				eS	Sn	02 36 29.5	+2.0
LCND	La Caˆ–ada	0.84	351	eP	Pn	02 36 16.4	-0.2
LCND				eS	Sn	02 36 28.8	+0.6
LCND				IAML		02 36 34.0	
	comp=Z,18µm,0.4s						
CNGN	Cerro Negro	1.04	88	eP	Pn	02 36 18.6	-0.5
CNGN				eS	Sn	02 36 33.0	+0.1
VSM	San Miguel	1.07	332	eP	Pn	02 36 19.2	-0.6
LCY	Lacayo	1.08	331	eP	Pn	02 36 19.0	-0.8
PACA	Pacayal	1.13	331	eP	Pn	02 36 19.1	-1.4
PACA				eS	Sn	02 36 35.2	0.0
COPN	Copaltepe	1.18	104	eP	Pn	02 36 20.8	-0.1
MOMN	Momotombo	1.19	93	eP	Pn	02 36 21.2	0.0
MOMN				eS	Sn	02 36 36.7	+0.1
TECA	Tecapa	1.25	325	eP	Pn	02 36 21.2	-0.9
UESV	Ojushtada	1.35	312	eP	Pn	02 36 25.1	+1.8
UESV				eS	Sn	02 36 43.8	+3.5
UESV				IAML		02 36 47.5	
	comp=Z,6µm,0.4s						
BRAN	Las Pilas	1.40	80	eP	Pn	02 36 23.6	-0.3
BRAN				eS	Sn	02 36 42.3	+0.9
ESTN	Estel	1.50	65	ePn	Pn	02 36 25.0	-0.3
ESTN				eSn	Sn	02 36 40.2	-3.6
ESTN	Estel	1.50	65	eP	Pn	02 36 25.5	+0.2
MGAN	Managua	1.51	102	eP	Pn	02 36 25.0	-0.4
SNVI	San Vicente	1.55	317	eP	Pn	02 36 25.4	-0.7
MASN	Masaya	1.65	107	eP	Pn	02 36 26.9	-0.4
TGUH	Tegucigalpa,Un	1.65	17	ePn	Pn	02 36 28.1	+0.8
TGUH				eSn	Sn	02 36 45.2	-2.2
LFRS	El Faro	1.71	312	⇓iP	Pn	02 36 27.5	-0.7
LBRS	Las Brisas	1.77	315	eP	Pn	02 36 28.8	-0.3
LOMA	San Marcos	1.81	311	eP	Pn	02 36 28.6	-0.9
LOMA				eS	Sn	02 36 50.6	-0.7
LFU	La Fuente	1.83	314	eP	Pn	02 36 29.5	-0.3
LFU				eS	Sn	02 36 52.4	+0.4
UDBS	Soyapango	1.84	313	eP	Pn	02 36 29.7	-0.3
UDBS				eS	Sn	02 36 51.3	-1.0
MATN	Matagalpa	1.85	76	eP	Pn	02 36 30.1	0.0
RCON	San Juan de Ri	1.86	57	⇓eP	Pn	02 36 31.0	+0.7
UESS	San Salvador	1.86	311	eP	Pn	02 36 30.3	+0.1
UESS				eS	Sn	02 36 51.9	-0.9
UESS				IAML		02 36 57.6	
	comp=Z,3µm,0.2s						
OPAM	San Salvador	1.87	312	eP	Pn	02 36 29.9	-0.4
OPAM				IAML		02 36 55.0	
	comp=Z,3µm,0.3s						
SNET	Serv Nac Est T	1.87	310	eP	Pn	02 36 29.7	-0.7
SNET				IAML		02 36 57.4	
	comp=Z,3µm,0.2s						
UEES	San Salvador	1.91	311	eP	Pn	02 36 29.5	-1.4
UEES				IAML		02 36 59.3	
	comp=Z,3µm,0.3s						
BOQS	Boqueron	1.94	310	eP	Pn	02 36 31.1	-0.4
CEDA	San Andres	2.07	310	eP	Pn	02 36 32.7	-0.4
CEDA				eS	Sn	02 36 56.9	-0.8
SBLS	San Blas	2.27	307	eP	Pn	02 36 35.8	-0.1
CRZ1	La Cruz	2.50	124	eP	Pn	02 36 38.2	-0.8
MESS	Mesas	3.05	124	eP	Pn	02 36 46.4	-0.1
CUI	Cuipilapa	3.12	125	eP	Pn	02 36 48.9	+1.5
VCR	Vista de Mar	3.13	138	eP	Pn	02 36 47.5	-0.1
ESPN	Las Esperanzas	3.39	94	eSn	Sn	02 37 28.0	-2.1
ESPN	Las Esperanzas	3.39	94	eP	Pn	02 36 51.3	+0.2
JTS	JuntasAbangare	3.50	128	ePn	Pn	02 36 53.3	+0.6
JTS				eSn	Sn	02 37 32.2	-0.7
CGA2	Cerro Gallo 2	4.05	127	eP	Pn	02 37 02.9	+2.7
HDC	Heredia	4.34	124	ePn	Pn	02 37 05.4	+1.2
HDC				eSn	Sn	02 37 50.6	-3.0
HDC	Heredia	4.34	124	eP	Pn	02 37 06.1	+1.9
LCR2	La Lucha 2	4.58	126	eP	Pn	02 37 10.8	+3.2
BUS	Buena Vista	4.88	126	eP	Pn	02 37 14.5	+2.5
DRK0	Durika	5.46	125	eP	Pn	02 37 21.7	+2.0
CCIG	Comitan	5.69	312	ePn	Pn	02 37 25.7	+3.0
ICCO	Coco Island	6.92	174	eP	Pn	02 37 39.6	+0.2
CMIG	Matias Romero	8.28	305	P	Pn	02 37 59.2	+1.1
	comp=Z,0.6nm,0.3s,baz=158,slow=9.8,SNR=14						
CMIG				S	Sn	02 39 31.7	+1.5
	comp=Z,0.5nm,0.3s,baz=329,slow=20,SNR=2.4						
TLIG	Tlapa	11.60	297	ePn	Pn	02 38 45.2	+1.6
OTAV	Otavalo	15.27	142	ePn	Pn	02 39 34.0	+0.8
	comp=Z,10nm,1.4s						
ROSC	El Rosal	15.29	119	LR	LR	02 46 13.5	
	comp=Z,89nm,18.6s,baz=324,slow=40						
PRAC	Prado	15.42	123	eP	P	02 39 39.7	+1.4
	comp=Z,6.7nm,0.9s						
058A	Arcadia	15.55	20	P	P	02 39 41.9	+2.4
	baz=202						
LNIG	Linares	16.59	320	ePn	P	02 39 51.4	+0.3
	comp=Z,13nm,1.2s						
859A	Kempfer Cattle	16.78	21	P	P	02 39 55.1	+1.9
	baz=203						
555A	McAlpin	18.12	13	P	Pn	02 40 11.8	+3.6
	baz=195						
555A	McAlpin	18.12	13	eP	Pn	02 40 16.6	+8.4
	comp=Z,58nm,1.1s						
446A	Poplarville	18.29	356	P	Pn	02 40 15.9	+5.6
	baz=175						
452A	Marianna	18.44	7	P	Pn	02 40 17.5	+5.4
	baz=188						
454A	Quitman	18.55	11	P	Pn	02 40 17.2	+3.8
	baz=192						
453A	Whigham	18.57	9	P	Pn	02 40 16.2	+2.5
	baz=190						
455A	Stateville	18.70	13	P	Pn	02 40 17.3	+2.0
	baz=194						
349A	Repton	18.80	2	P	Pn	02 40 17.9	+1.5
	baz=181						
351A	Pinckard	18.82	6	P	Pn	02 40 19.3	+2.7
	baz=186						
350A	Dozier	18.91	4	P	Pn	02 40 19.4	+1.7
	baz=184						
HKT	Hockley	18.94	338	eP	Pn	02 40 21.7	+3.7
	comp=Z,10nm,1.2s						
353A	Camilla	19.07	9	P	Pn	02 40 21.7	+2.1
	baz=190						
344A	Westbrook Farm	19.09	352	P	Pn	02 40 22.3	+2.4
	baz=171						
344A	Westbrook Farm	19.09	352	eP	Pn	02 40 22.1	+2.3
	comp=Z,42nm,0.9s						
833A	Chaparral WMA,	19.15	327	eP	Pn	02 40 21.5	+0.8
	comp=Z,14nm,0.6s						
TIGA	Tifton	19.27	11	P	Pn	02 40 23.4	+1.5
	baz=192						
TIGA	Tifton	19.27	11	eP	Pn	02 40 23.5	+1.5
	comp=Z,30nm,0.6s						
355A	Pearson	19.32	13	P	Pn	02 40 23.8	+1.2
	baz=194						
249A	Camden	19.42	2	P	Pn	02 40 25.0	+1.1
	baz=182,SNR=7.8						
341A	Kurthwood	19.42	346	P	Pn	02 40 24.5	+0.6
	baz=164						
341A	Kurthwood	19.42	346	eP	Pn	02 40 24.8	+0.9
	comp=Z,50nm,0.6s						
250A	Grady	19.46	4	P	Pn	02 40 25.4	+1.1
	baz=184						
247A	Quitman	19.50	358	P	Pn	02 40 26.3	+1.5
	baz=177						
248A	Dixon Mills	19.53	0	P	Pn	02 40 25.0	-0.1
	baz=180						
245A	Little AP, Sta	19.57	355	P	Pn	02 40 27.2	+1.7
	baz=174						
243A	Waterproof	19.62	351	P	Pn	02 40 26.9	+0.8
	baz=169						
252A	Lumpkin	19.63	8	P	Pn	02 40 26.5	+0.2
	baz=188						
251A	Midway	19.65	6	P	Pn	02 40 26.9	+0.4
	baz=186,SNR=7.8						
244A	Avery, Jackson	19.66	353	P	Pn	02 40 27.2	+0.5
	baz=171						
253A	Americus	19.78	9	P	Pn	02 40 28.4	+0.3
	baz=190						
253A	Americus	19.78	9	eP	Pn	02 40 28.2	+0.1
	comp=Z,25nm,0.6s						
254A	Abbeville	19.81	11	P	Pn	02 40 29.1	+0.7
	baz=193						
242A	Grayson	19.91	349	P	Pn	02 40 30.2	+0.6
	baz=167						
255A	Hazlehurst	19.96	13	P	Pn	02 40 30.4	+0.2
	baz=195						
255A	Hazlehurst	19.96	13	eP	Pn	02 40 30.6	+0.4
	comp=Z,23nm,0.7s						
241A	Mo Tay, Goldon	20.03	347	P	Pn	02 40 31.2	+0.2
	baz=165						
241A	Mo Tay, Goldon	20.03	347	eP	Pn	02 40 31.6	+0.6
	comp=Z,33nm,0.8s						
149A	Jones	20.05	2	P	Pn	02 40 30.9	-0.4
	baz=182						
148A	Greensboro	20.08	0	P	Pn	02 40 31.3	-0.3
	baz=180,SNR=7.1						
151A	Opelika	20.09	6	P	Pn	02 40 31.4	-0.3
	baz=187						
150A	Eclectic	20.11	4	P	Pn	02 40 32.9	+1.0
	baz=185						
147A	Livingston	20.11	359	P	Pn	02 40 32.3	+0.3
	baz=178						
145A	Houston Renfro	20.14	355	P	Pn	02 40 32.5	+0.2
	baz=174						
256A	Glennville	20.15	15	P	Pn	02 40 31.6	-0.9
	baz=196						
152A	Waverly Hall	20.30	7	P	Pn	02 40 34.0	-0.2
	baz=188						
152A	Waverly Hall	20.30	7	eP	Pn	02 40 34.0	-0.1
	comp=Z,24nm,0.9s						
435B	Jarrell	20.36	335	eP	Pn	02 40 37.2	+2.3
	comp=Z,14nm,0.7s						
LRAL	Lakeview Retre	20.48	2	eP	Pn	02 40 37.8	+1.5
	comp=Z,21nm,1.0s						
154A	Montrose	20.50	11	P	Pn	02 40 35.4	-1.2
	baz=193						
154A	Montrose	20.50	11	eP	Pn	02 40 36.2	-0.3
	comp=Z,78nm,0.6s						
155A	Kite	20.64	13	P	Pn	02 40 37.7	-0.4
	baz=194						
Z46A	Louisville	20.66	357	P	Pn	02 40 37.0	-1.4
	baz=176						
Z49A	Columbiana	20.66	3	P	Pn	02 40 37.0	-1.4
	baz=183,SNR=7.7						
Z50A	Ashland	20.75	4	P	P	02 40 38.1	+1.4
	baz=185,SNR=8.7						
Z50A	Ashland	20.75	4	eP	Pn	02 40 38.5	-1.2
	comp=Z,14nm,0.8s						
140A	Cam and Jess,	20.77	346	P	Pn	02 40 40.9	+1.1
	baz=164						
140A	Cam and Jess,	20.77	346	eP	Pn	02 40 40.5	+0.7
	comp=Z,42nm,1.0s						
Z48A	Northport	20.81	0	P	Pn	02 40 38.7	-1.5
	baz=180,SNR=6.5						
Z52A	Williamson	20.85	8	P	Pn	02 40 39.3	-1.4
	baz=189						
Z44A	Pea Ridge, Bel	20.85	354	P	Pn	02 40 40.5	-0.3
	baz=172						
Z45A	Winona	20.88	355	P	Pn	02 40 40.9	-0.1
	baz=174						
Z51A	Franklin	20.88	6	P	Pn	02 40 40.7	-0.4
	baz=187						
156A	Sylvania	20.89	15	P	Pn	02 40 41.2	0.0
	baz=197						
Z53A	Monticello	21.07	10	P	P	02 40 41.3	+1.3
	baz=191						
JCT	Junction City	21.10	330	eP	P	02 40 41.8	+1.3
	comp=Z,9.2nm,0.7s						
Z54A	Sparta	21.15	11	P	P	02 40 42.6	+1.7
	baz=193						
Z41A	Richland Creek	21.20	348	P	P	02 40 42.9	+1.5
	baz=166						
Z41A	Richland Creek	21.20	348	eP	P	02 40 43.1	+1.7
	comp=Z,25nm,0.8s						
GOGA	Godfrey	21.21	10	eP	P	02 40 43.7	+2.2
	comp=Z,18nm,0.8s						
Z40A	Long Farm, Mag	21.32	347	P	P	02 40 46.5	+3.8
	baz=164						
Y49A	Blount Mountai	21.32	3	P	P	02 40 44.0	+1.2
	baz=183,SNR=5.9						
Y49A	Blount Mountai	21.32	3	eP	P	02 40 44.5	+1.8
	comp=Z,28nm,1.0s						
Y47A	UCPARC, Winfie	21.33	360	P	P	02 40 43.9	+1.0
	baz=180						
Y46A	Houston	21.34	357	P	P	02 40 43.8	+0.9
	baz=177,SNR=10.0						
Y48A	Jasper	21.35	1	P	P	02 40 44.7	+1.6
	baz=181						
Y45A	Yeager Farm, C	21.36	356	P	P	02 40 45.5	+2.4
	baz=175						
WHTX	Lake Whitney,	21.38	337	P	P	02 40 45.4	+2.0
	baz=153						
WHTX	Lake Whitney,	21.38	337	eP	P	02 40 44.8	+1.4
	comp=Z,24nm,0.9s						
Y50A	Piedmont	21.40	5	P	P	02 40 45.5	+1.9
	baz=185						
Y51A	Rockmart	21.47	6	P	P	02 40 45.2	+0.9
	baz=187						
Y52A	Lilburn	21.56	8	P	P	02 40 47.1	+1.8
	baz=190						
Y52A	Lilburn	21.56	8	eP	P	02 40 47.1	+1.8
	comp=Z,25nm,0.6s						
SJG	San Juan	21.58	72	P	P	02 40 45.9	+0.3
	comp=Z,11nm,0.7s,baz=297,slow=6.8,SNR=4.9						
SJG				LR	LR	02 49 15.1	
	comp=Z,138nm,21.1s,baz=257,slow=37						
Y53A	Monroe	21.62	9	P	P	02 40 48.1	+2.1
	baz=191						
Y41A	Eaglette Beard	21.77	349	P	P	02 40 48.4	+1.0
	baz=167						
Y54A	Tignall	21.79	11	P	P	02 40 49.7	+1.9
	baz=193						
X48A	Hartselle	21.89	2	P	P	02 40 49.8	+1.0
	baz=182						
X48A	Hartselle	21.89	2	eP	P	02 40 49.8	+1.0
	comp=Z,19nm,0.9s						
X45A	UM Field Stati	21.91	356	P	P	02 40 49.0	+0.1
	baz=176						
X47A	Russelville	21.95	360	P	P	02 40 49.8	+0.4
	baz=180,SNR=8.3						
X50B	Fort Payne	21.98	5	P	P	02 40 50.3	+0.5
	baz=185						
X49A	Woodville	21.98	3	P	P	02 40 50.4	+0.7
	baz=184						
OXF	Oxford	21.99	356	eP	P	02 40 50.2	+0.3
	comp=Z,49nm,1.4s						
X46A	Booneville	22.00	358	P	P	02 40 50.0	0.0
	baz=178						
Y40A	Okolona	22.02	348	P	P	02 40 51.4	+1.1
	baz=165						
X53A	Estanollee	22.30	10	P	P	02 40 53.5	+0.2
	baz=191						
X52A	Dahlonega	22.31	8	P	P	02 40 53.7	+0.3
	baz=190						
X41A	Kaden, Bauxite	22.35	350	P	P	02 40 53.8	+0.1
	baz=168						
LTX	Lajitas	22.37	321	eP	P	02 40 54.6	+0.5
LTX				ePcP	PcP	02 44 48.7	+1.1
TXAR	Lajitas Array	22.37	321	P	P	02 40 54.6	+0.5
	comp=Z,11nm,0.7s,baz=144,slow=8.9,SNR=98						
TXAR				PcP	PcP	02 44 48.7	+1.1
	comp=Z,0.5nm,0.6s,baz=144,slow=5.0,SNR=4.6						
TXAR				LR	LR	02 50 25.4	
	comp=Z,40nm,21.0s,baz=0.0,slow=39						
TX31	Lajitas Ar. Si	22.37	321	eP	P	02 40 55.0	+0.9
PLAL	Pickwick Lake	22.41	359	eP	P	02 40 54.6	+0.2
	comp=Z,12nm,1.3s						
W48A	Pulaski	22.58	2	P	P	02 40 56.1	-0.1
	baz=182						
W49A	Belvidere	22.59	3	P	P	02 40 56.7	+0.3
	baz=184						
UALR	University of	22.59	350	eP	P	02 40 57.0	+0.7
	comp=Z,13nm,0.7s						
MIAR	Mount Ida	22.60	347	eP	P	02 40 56.9	+0.5
	comp=Z,27nm,0.8s						
W45A	Hickory Valley	22.62	357	P	P	02 40 56.0	-0.7
	baz=176						
W47A	Westpoint	22.68	0	P	P	02 40 56.9	-0.4
	baz=180						
X39A	Fountain Ranch	22.69	346	P	P	02 40 58.4	+1.0
	baz=164						
SWET	Sewanee	22.70	4	eP	P	02 40 58.1	+0.5
	comp=Z,13nm,1.0s						
W50A	Signal Mountai	22.74	5	P	P	02 40 57.4	-0.5
	baz=186						
W50A	Signal Mountai	22.74	5	eP	P	02 40 58.5	+0.6
	comp=Z,7.8nm,0.8s						
W51A	Cleveland	22.75	6	P	P	02 40 58.7	+0.7
	baz=187						
W52A	Murphy	22.79	8	P	P	02 40 59.2	+0.7
	baz=189						
W52A	Murphy	22.79	8	eP	P	02 41 00.1	+1.6
	comp=Z,40nm,1.4s						
ABTX	Abilene, Hawle	22.83	333	P	P	02 40 59.8	+0.9
	baz=149						
ABTX	Abilene, Hawle	22.83	333	eP	P	02 40 59.7	+0.8
	comp=Z,11nm,0.8s						
W41B	Gary Mavity, V	22.96	351	P	P	02 40 60.0	-0.2
	baz=168						
W41B	Gary Mavity, V	22.96	351	eP	P	02 41 00.4	+0.2
	comp=Z,15nm,1.0s						
W53A	Cullowhee	22.98	10	P	P	02 41 00.8	+0.3
	baz=191						
CPCT	Cooper Cave	23.07	7	eP	P	02 41 02.1	+0.9
	comp=Z,30nm,1.3s						
W40A	Ferguson Farm,	23.13	349	P	P	02 41 02.5	+0.7
	baz=167						
W40A	Ferguson Farm,	23.13	349	eP	P	02 41 02.6	+0.8
	comp=Z,16nm,0.7s						
V48A	Smith Brothers	23.18	2	P	P	02 41 01.7	-0.7
	baz=182						
V48A	Smith Brothers	23.18	2	eP	P	02 41 02.3	-0.1
	comp=Z,8.3nm,1.0s						
V50A	Pikevile	23.22	6	P	P	02 41 01.3	-1.5
	baz=186						
V46A	Holladay	23.23	359	P	P	02 41 01.7	-1.1
	baz=179						
V49A	McMinnville	23.25	4	P	P	02 41 02.5	-0.6
	baz=184						
V47A	Nunnelly	23.26	0	P	P	02 41 02.1	-1.0
	baz=180						
W39A	Magazine	23.27	347	P	P	02 41 03.9	+0.7
	baz=165						
W39A	Magazine	23.27	347	eP	P	02 41 04.0	+0.7
	comp=Z,17nm,1.1s						
KMSC	Kings Mountain	23.31	13	P	P	02 41 04.0	+0.4
	baz=196						
KMSC	Kings Mountain	23.31	13	eP	P	02 41 04.7	+1.1
	comp=Z,18nm,0.6s						
TKL	Tuckaleechee C	23.36	8	P	P	02 41 04.6	+0.5
	comp=Z,18nm,0.8s,baz=180,slow=11,SNR=24						
TKL				LR	LR	02 50 50.4	
	comp=Z,68nm,18.8s,baz=204,slow=38						
TKL	Tuckaleechee C	23.36	8	eP	P	02 41 05.1	+1.0
	comp=Z,18nm,0.8s						
V51A	Loudon	23.43	7	P	P	02 41 05.2	+0.4
	baz=188						
V51A	Loudon	23.43	7	eP	P	02 41 05.9	+1.2
	comp=Z,13nm,1.1s						
V42A	Cord	23.46	353	P	P	02 41 03.8	-1.2
	baz=171,SNR=8.2						
V53A	Saluda	23.53	10	P	P	02 41 05.3	-0.4
	baz=192						
V53A	Saluda	23.53	10	eP	P	02 41 06.5	+0.8
	comp=Z,12nm,0.8s						
V41A	Mountainview	23.55	351	P	P	02 41 05.2	-0.6
	baz=169						
V52A	Sevierville	23.57	8	P	P	02 41 06.1	+0.1
	baz=190						
V52A	Sevierville	23.57	8	eP	P	02 41 06.8	+0.8
	comp=Z,14nm,1.1s						
V40A	Witts Springs	23.68	350	P	P	02 41 07.0	-0.1
	baz=167						
V40A	Witts Springs	23.68	350	eP	P	02 41 07.0	-0.1
	comp=Z,23nm,1.3s						
U46A	Springville	23.79	359	P	P	02 41 07.1	-0.9
	baz=179,SNR=16						
U44B	Burton Farm, H	23.81	357	P	P	02 41 07.2	-1.0
	baz=176						
V39A	Pettigrew	23.86	348	P	P	02 41 09.3	+0.5
	baz=166						
U47A	Clarksville	23.87	1	P	P	02 41 07.7	-1.1
	baz=181,SNR=12						
U43A	Rector	23.91	355	P	P	02 41 08.3	-0.9
	baz=173,SNR=7.5						
U48A	Cassie Pea, Po	23.96	2	P	P	02 41 08.9	-0.7
	baz=183						
U42A	Revenden	23.98	353	P	P	02 41 08.8	-1.0
	baz=171,SNR=6.4						
U50A	Jamestown	23.99	6	P	P	02 41 09.7	-0.1
	baz=187						
U49A	Red Boiling Sp	24.00	4	P	P	02 41 09.5	-0.4
	baz=184						
U51A	La Follette	24.04	7	P	P	02 41 10.3	0.0
	baz=189						
U41A	Viola	24.06	352	P	P	02 41 09.5	-1.0
	baz=170,SNR=5.6						
U52A	Thorn Hill	24.14	9	P	P	02 41 11.7	+0.4
	baz=190						
U40A	Yellville	24.22	350	P	P	02 41 11.7	-0.2
	baz=168						
U53A	Fall Branch	24.24	10	P	P	02 41 12.2	0.0
	baz=192						
TZTN	Tazewell	24.27	8	eP	P	02 41 12.9	+0.6
	comp=Z,12nm,1.1s						
LPIG	La Paz	24.29	302	LR	LR	02 51 43.0	
	comp=Z,72nm,21.1s,baz=48,slow=39						
WMOK	Wichita Mounta	24.32	338	eP	P	02 41 12.6	-0.4
	comp=Z,6.5nm,0.6s						
PBMO	Poplar Bluff	24.32	355	eP	P	02 41 12.4	-0.5
	comp=Z,12nm,0.8s						
HHAR	Hobbs	24.35	348	eP	P	02 41 13.0	-0.2
	comp=Z,15nm,1.2s						
U39A	Green Forest	24.36	349	P	P	02 41 13.5	+0.3
	baz=166						
T47A	Sharon Grove	24.42	1	P	P	02 41 13.2	-0.5
	baz=181						
T47A	Sharon Grove	24.42	1	eP	P	02 41 13.4	-0.3
	comp=Z,24nm,0.6s						
TUL1	Leonard	24.44	344	P	P	02 41 15.0	+1.1

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      baz=161
TUL1  Leonard          24.44 344 eP    P     02 41 14.6 +0.7
      comp=Z,16nm,1.0s
T46A  Princeton        24.47 360  P    P     02 41 13.3 -0.9
      baz=180,SNR=6.3
T48A  Bowling Green    24.56   3  P    P     02 41 13.7 -1.4
      baz=183
T44A  Benton           24.57 356  P    P     02 41 13.3 -1.8
      baz=176
NCAT  North Carolina   24.59  16 eP    P     02 41 16.4 +1.2
      comp=Z,16nm,1.2s
T50A  Nancy            24.59   6  P    P     02 41 15.3  0.0
      baz=187
T49A  Edmonton         24.61   4  P    P     02 41 14.9 -0.6
      baz=185
T49A  Edmonton         24.61   4 eP    P     02 41 15.5  0.0
      comp=Z,6.5nm,0.8s
T43A  Greenville       24.61 355  P    P     02 41 14.5 -1.0
      baz=174,SNR=11
T51A  Gray             24.63   7  P    P     02 41 15.7  0.0
      baz=189
T42A  Van Buren        24.64 354  P    P     02 41 14.6 -1.2
      baz=172,SNR=14
T42A  Van Buren        24.64 354 eP    P     02 41 15.0 -0.7
      comp=Z,12nm,0.6s
T41A  Mountain View    24.73 352  P    P     02 41 15.8 -0.8
      baz=170,SNR=15
GDL2  Guadalupe Moun   24.86 325 eP    P     02 41 19.5 +1.5
T52A  Hallie           24.90   9  P    P     02 41 18.6 +0.4
      baz=191
T40A  Mansfield        24.94 351  P    P     02 41 18.7 +0.2
      baz=169
T39A  Clever           24.96 349  P    P     02 41 18.1 -0.6
      baz=167
S43A  Fulton Ridge,    25.08 356  P    P     02 41 18.5 -1.3
      baz=174
S46A  Don Dixon Farm   25.11   0  P    P     02 41 17.9 -2.1
      baz=180
S44A  Carbondale       25.15 357  P    P     02 41 19.2 -1.2
      baz=176
T38A  Diamond          25.15 348  P    P     02 41 19.9 -0.5
      baz=165
S41A  Jillco Farms,    25.26 353  P    P     02 41 20.4 -1.1
      baz=171,SNR=13
S49A  Springfield      25.30   5  P    P     02 41 21.4 -0.4
      baz=185
S42A  Caledonia        25.34 354  P    P     02 41 20.4 -1.8
      baz=173
S51A  Beattyville      25.34   8  P    P     02 41 22.2 +0.1
      baz=189
S51A  Beattyville      25.34   8 eP    P     02 41 22.5 +0.4
      comp=Z,8.8nm,0.8s
S40A  Lebanon          25.38 351  P    P     02 41 21.5 -1.0
      baz=169,SNR=9.8
MSTX  Muleshoe         25.40 330  P    P     02 41 22.3 -0.6
      baz=144
S39A  Bolivar          25.60 350  P    P     02 41 24.2 -0.3
      baz=167
S39A  Bolivar          25.60 350 eP    P     02 41 23.9 -0.7
      comp=Z,12nm,0.7s
R46A  Gibon Southern   25.64   0  P    P     02 41 23.8 -1.0
      baz=180
AMTX  Amarillo         25.64 333 eP    P     02 41 25.3 +0.3
      comp=Z,12nm,0.7s
S38A  Stockton         25.65 349  P    P     02 41 24.6 -0.4
      baz=166
CCM   Cathedral Cave   25.67 354 eP    P     02 41 25.2 +0.2
      comp=Z,9.8nm,0.7s
WCI   Wyandotte Cave   25.68   3 eP    P     02 41 25.2 -0.1
      comp=Z,13nm,0.7s
R44A  Waltonville      25.70 358  P    P     02 41 24.2 -1.1
      baz=177
R45A  Skylar, Fairfi   25.72 359  P    P     02 41 23.4 -2.1
      baz=179
R47A  Wooly Knot Far   25.74   2  P    P     02 41 24.5 -1.2
      baz=183
R43A  Red Bud          25.77 356  P    P     02 41 24.9 -1.1
      baz=175
R49A  Shelbyville      25.82   5  P    P     02 41 25.9 -0.5
      baz=186
R41A  Rosebud          25.92 353  P    P     02 41 26.2 -1.2
      baz=172,SNR=16
R40A  Maddies Statio   26.02 352  P    P     02 41 27.3 -1.1
      baz=170,SNR=6.5
R40A  Maddies Statio   26.02 352 eP    P     02 41 27.6 -0.7
      comp=Z,9.1nm,0.6s
R39A  Chumby, Stover   26.16 351  P    P     02 41 28.9 -0.7
      baz=168
R38A  Fenwick Farm,    26.19 349  P    P     02 41 29.6 -0.2
      baz=166
Q45A  Warren Harvey,   26.32 359  P    P     02 41 30.1 -0.8
      baz=179
Q44A  Meyer Farm, Va   26.35 358  P    P     02 41 30.3 -1.0
      baz=177
Q47A  Bedord North L   26.38   2  P    P     02 41 30.2 -1.3
      baz=183
Q48A  North Vernon     26.41   4  P    P     02 41 29.8 -2.0
      baz=184
Q41A  Truxton          26.55 354  P    P     02 41 31.9 -1.2
      baz=172
Q40A  Laux Farm, Aux   26.69 353  P    P     02 41 32.6 -1.7
      baz=170
Q51A  Peebles          26.74   8  P    P     02 41 34.7  0.0
      baz=189
Q39A  Willow Grove F   26.87 351  P    P     02 41 34.7 -1.3
      baz=168,SNR=13
Q38A  Cooks Store, C   26.89 350  P    P     02 41 35.3 -0.8
      baz=167
P47A  Martinsville     26.94   3  P    P     02 41 35.0 -1.5
      baz=183
P48A  Milroy           26.96   4  P    P     02 41 34.6 -2.2
      baz=185
Q37A  Longview Farm,   26.96 348  P    P     02 41 36.0 -0.8
      baz=165
P46A  Rosedale         27.04   1  P    P     02 41 36.7 -0.8
      baz=181
P49A  Miami Univ. Ec   27.09   5  P    P     02 41 36.4 -1.5
      baz=186
PTRD  Partlow Road     27.10  18 eP    P     02 41 39.1 +1.2
      comp=Z,121nm,0.1s
P42A  Winchester       27.10 356  P    P     02 41 36.6 -1.4
      baz=174
P40A  Paris            27.22 353  P    P     02 41 38.4 -0.6
      baz=171
P39B  Salisbury        27.27 352  P    P     02 41 38.2 -1.3
      baz=169,SNR=7.0
P38A  Dawn             27.52 350  P    P     02 41 40.6 -1.2
      baz=168,SNR=9.2
P38A  Dawn             27.52 350 eP    P     02 41 40.6 -1.2
      comp=Z,11nm,0.7s
O44A  Mansfield        27.58 359  P    P     02 41 40.9 -1.3
      baz=178
P37A  Lathrop          27.63 349  P    P     02 41 42.4 -0.3
      baz=166
KSU1  Kansas State U   27.66 345 eP    P     02 41 42.8 -0.3
      comp=Z,7.7nm,0.8s
O45A  Potomac          27.67   0  P    P     02 41 41.9 -1.2
      baz=180
O47A  Sheridan         27.69   3  P    P     02 41 41.6 -1.6
      baz=183
O48A  Farmland         27.77   4  P    P     02 41 42.4 -1.6
      baz=185
O49A  Covington        27.77   6  P    P     02 41 43.1 -0.9
      baz=187
SFIN  Lafayette        27.80   1  P    P     02 41 43.0 -1.3
      baz=181
O50A  Cable            27.81   7  P    P     02 41 43.0 -1.4
      baz=188
O38A  Galt             28.00 351  P    P     02 41 45.9 -0.2
      baz=168
HDIL  Hopedale         28.01 358 eP    P     02 41 45.3 -0.8
      comp=Z,9.4nm,0.9s
ANMO  Albuquerque      28.07 326  LR   LR    02 54 14.2
      comp=Z,66nm,19.1s,baz=78,slow=39
N46A  Monticello       28.33   2  P    P     02 41 47.8 -1.1
      baz=182
N43A  Stutzman Famil   28.39 358  P    P     02 41 48.4 -1.0
      baz=177
N40A  Mertquake, Sal   28.50 354  P    P     02 41 48.9 -1.5
      baz=172
N39A  Derby Farms, D   28.60 352  P    P     02 41 50.0 -1.3
      baz=170
N39A  Derby Farms, D   28.60 352 eP    P     02 41 50.6 -0.7
      comp=Z,46nm,1.9s
N37A  Lee Faris, Mou   28.74 350  P    P     02 41 52.6  0.0
      baz=167
M41A  Milan            28.90 356  P    P     02 41 52.7 -1.3
      baz=174
M40A  Post Highland    29.01 354  P    P     02 41 53.1 -1.9
      baz=172
M39A  Webster          29.15 353  P    P     02 41 55.2 -1.0
      baz=171
N54A  Moraine State    29.19  12  P    P     02 41 56.7 +0.1
      baz=195
N54A  Moraine State    29.19  12 eP    P     02 41 56.9 +0.2
      comp=Z,13nm,0.9s
M38A  Pleasantville    29.23 352  P    P     02 41 55.5 -1.4
      baz=169
PAGS  Pennsylvania G   29.31  17 eP    P     02 41 58.6 +0.9
      comp=Z,12nm,0.7s
M37A  Trindle Farm,    29.34 350  P    P     02 41 57.2 -0.7
      baz=167
SSPA  Standing Stone   29.37  15 eP    P     02 41 58.7 +0.5
      comp=Z,6.1nm,0.7s
L42A  Oliver, Polo     29.47 357  P    P     02 41 57.5 -1.6
      baz=176
M36A  Felix, Anita     29.52 349  P    P     02 41 59.2 -0.4
      baz=166
L41A  Preston          29.59 356  P    P     02 41 58.7 -1.4
      baz=174
L40A  Anamosa          29.64 355  P    P     02 41 59.1 -1.4
      baz=173
L40A  Anamosa          29.64 355 eP    P     02 41 59.2 -1.3
      comp=Z,11nm,1.0s
L39A  Vinton           29.77 354  P    P     02 42 00.4 -1.3
      baz=172
M54A  Oil Creek Stat   29.78  12  P    P     02 42 01.7 -0.2
      baz=196
M54A  Oil Creek Stat   29.78  12 eP    P     02 42 01.6 -0.2
      comp=Z,13nm,0.6s
L38A  Oak Wood Farm,   29.90 352  P    P     02 42 01.8 -1.1
      baz=170
L37A  Phoenix Point,   30.00 351  P    P     02 42 02.6 -1.2
      baz=168
BGNE  Belgrade         30.23 344  P    P     02 42 05.9 +0.1
      baz=159
K42A  Prairie Point,   30.23 358  P    P     02 42 04.1 -1.6
      baz=177
N59A  State Game Lan   30.23  18  P    P     02 42 06.0 +0.2
      baz=204
N59A  State Game Lan   30.23  18 eP    P     02 42 06.8 +1.0
      comp=Z,8.1nm,0.7s
K40A  Colesburg        30.26 355  P    P     02 42 04.3 -1.8
      baz=173
K39A  Oelwein          30.34 354  P    P     02 42 05.6 -1.1
      baz=172
K38A  Parkersburg      30.38 353  P    P     02 42 05.9 -1.2
      baz=170
PTGA  Pitinga          30.55 113  LR   LR    02 55 25.1
      comp=Z,126nm,20.6s,baz=306,slow=38
K37A  Belmond          30.61 351  P    P     02 42 08.1 -1.1
      baz=168
J42A  Columbus         30.76 358  P    P     02 42 08.9 -1.5
      baz=177
J43A  Natural Harves   30.80 359  P    P     02 42 09.7 -1.2
      baz=179
J41A  Loganville       30.84 357  P    P     02 42 10.0 -1.2
      baz=176
J40A  Soldiers Grove   30.92 356  P    P     02 42 10.5 -1.4
      baz=174
J39A  Decorah          30.94 354  P    P     02 42 11.2 -0.8
      baz=172
J38A  Wedel Dairy, R   31.01 353  P    P     02 42 11.1 -1.5
      baz=171
J37A  Redenius Farm,   31.13 352  P    P     02 42 12.8 -0.9
      baz=169
J36A  Seneca 1, Swea   31.27 351  P    P     02 42 13.9 -1.0
      baz=167
J36A  Seneca 1, Swea   31.27 351 eP    P     02 42 14.1 -0.8
      comp=Z,12nm,0.6s
I43A  Langenfeld Bro   31.30 359  P    P     02 42 13.3 -1.9
      baz=179
I42A  Draeger Farm,    31.32 358  P    P     02 42 13.7 -1.7
      baz=178
BINY  Binghamton       31.34  17 eP    P     02 42 16.1 +0.4
      comp=Z,9.9nm,1.0s
I40A  Norwalk          31.41 356  P    P     02 42 15.0 -1.2
      baz=174
I39A  Houston          31.44 355  P    P     02 42 14.7 -1.7
      baz=173,SNR=7.8
I39A  Houston          31.44 355 eP    P     02 42 15.2 -1.3
      comp=Z,11nm,0.6s
I41A  Arkdale          31.53 357  P    P     02 42 16.1 -1.1
      baz=176
I38A  Scanlan Farm,    31.70 354  P    P     02 42 17.4 -1.4
      baz=171
PV02  Paradox Valley   31.72 328 eP    P     02 42 18.8 -0.5
      comp=Z,5.5nm,0.5s
PV13  Radium Mtn., P   31.73 327 eP    P     02 42 20.6 +1.2
      comp=Z,5.9nm,0.6s
I37A  Lemond, Waseca   31.80 352  P    P     02 42 18.1 -1.6
      baz=169
I37A  Lemond, Waseca   31.80 352 eP    P     02 42 18.5 -1.1
      comp=Z,8.7nm,0.8s
PV03  Paradox Valley   31.81 327 eP    P     02 42 21.3 +1.2
PV12  Saucer Basin,    31.84 328 eP    P     02 42 21.8 +1.5
      comp=Z,29nm,0.6s
PV18  Skein Mesa, Pa   31.84 327 eP    P     02 42 21.6 +1.3
      comp=Z,19nm,0.6s
PV11  David Mesa, Pa   31.86 328 eP    P     02 42 21.8 +1.3
      comp=Z,24nm,0.6s
PV16  Nyswonger Mesa   31.89 327 eP    P     02 42 22.0 +1.2
      comp=Z,16nm,0.6s
PV17  East Wray Mesa   31.89 327 eP    P     02 42 21.9 +1.2
      comp=Z,27nm,0.6s
PV19  Morning Glory    31.93 327 eP    P     02 42 22.3 +1.2
      comp=Z,13nm,0.6s
H42A  Shiocton         31.93 359  P    P     02 42 18.6 -2.1
      baz=178
PV20  West Nyswonger   31.94 327 eP    P     02 42 22.2 +1.0
      comp=Z,17nm,0.6s
PV14  Lion Creek, Pa   31.99 327 eP    P     02 42 22.7 +1.0
      comp=Z,12nm,0.6s
PV23  Carpenter Ridg   32.05 328 eP    P     02 42 23.6 +1.4
      comp=Z,14nm,0.8s
ECSD  EROS Data Cent   32.07 348 eP    P     02 42 20.7 -1.3
      comp=Z,6.3nm,0.6s
H40A  Chili            32.12 356  P    P     02 42 21.2 -1.2
      baz=175
H39A  Augusta          32.24 355  P    P     02 42 21.7 -1.7
      baz=173
H38A  Maiden Rock      32.33 354  P    P     02 42 22.6 -1.6
      baz=172,SNR=5.2
PDMCI Parker Dam,Lak   32.36 317  P    P     02 42 25.8 +1.2
      baz=126
SAML  Samuel           32.39 130 eP    P     02 42 24.5 -0.7
      comp=Z,4.4nm,0.7s
H36A  Jessenland, He   32.43 352  P    P     02 42 24.3 -0.8
      baz=169
W13A  Hualapai Mount   32.66 318 eP    P     02 42 23.1 -4.4
      comp=Z,26nm,1.0s
G42A  Mountain         32.66 359  P    P     02 42 25.0 -2.1
      baz=179
G43A  Wallace          32.67   0  P    P     02 42 25.1 -2.2
      baz=180
H35A  Sunnyside Ranc   32.68 351  P    P     02 42 25.8 -1.5
      baz=167,SNR=10
G40A  Rib Lake         32.75 357  P    P     02 42 25.6 -2.4
      baz=175
G38A  Ridgeland        32.77 355  P    P     02 42 26.4 -1.7
      baz=172
G39A  Holcombe         32.83 356  P    P     02 42 26.9 -1.7
      baz=174
SPMN  Marine on St.    32.92 353  P    P     02 42 27.5 -1.9
      baz=171,SNR=5.6
SPMN  Marine on St.    32.92 353 eP    P     02 42 27.8 -1.6
      comp=Z,11nm,0.5s
O20A  White River Ci   32.94 330  P    P     02 42 31.4 +1.5
      baz=141
O20A  White River Ci   32.94 330 eP    P     02 42 31.4 +1.5
      comp=Z,16nm,0.7s
H32A  Carlson Farm,    32.98 347  P    P     02 42 28.8 -1.2
      baz=162
SADO  Sadowa           33.02  11  P    P     02 42 29.6 -0.7
      comp=Z,12nm,0.6s,baz=217,slow=9.6,SNR=29
G36A  St. Michael      33.05 352  P    P     02 42 28.7 -1.8
      baz=169
F41A  Three Lakes      33.17 358  P    P     02 42 30.1 -1.5
      baz=177
F43A  Flat Rock, Esc   33.25   1  P    P     02 42 29.9 -2.4
      baz=181
SUSD  Miller           33.28 345  P    P     02 42 32.1 -0.5
      baz=160
G34A  Benson           33.34 350  P    P     02 42 31.5 -1.6
      baz=166
F40A  Park Falls       33.40 357  P    P     02 42 31.4 -2.2
      baz=176
F44A  Big Bay de Noc   33.41   2  P    P     02 42 31.7 -1.9
      baz=182
F39A  Loretta          33.44 356  P    P     02 42 32.0 -2.0
      baz=174
G33A  Ortonville       33.44 349  P    P     02 42 32.7 -1.3
      baz=164
MTPU  Mount Pierson    33.50 324 eP    P     02 42 37.6 +2.6
      comp=Z,27nm,1.9s
COWI  Conover          33.54 358 eP    P     02 42 33.2 -1.6
      comp=Z,4.4nm,0.7s
F38A  Pierce - Schro   33.56 355  P    P     02 42 33.3 -1.7
      baz=173
F36A  Milaca           33.64 353  P    P     02 42 34.0 -1.6
      baz=170
F36A  Milaca           33.64 353 eP    P     02 42 34.1 -1.6
      comp=Z,4.7nm,0.7s
G32A  Webster          33.71 348  P    P     02 42 35.5 -0.9
      baz=163
G32A  Webster          33.71 348 eP    P     02 42 35.3 -1.0
      comp=Z,38nm,0.8s
E43A  Lone Tree Farm   33.80   1  P    P     02 42 34.3 -2.8
      baz=181
E43A  Lone Tree Farm   33.80   1 eP    P     02 42 35.6 -1.4
      comp=Z,5.7nm,0.8s
E42A  Champion         33.85 360  P    P     02 42 35.1 -2.4
      baz=180
E39A  Mellen           33.88 357  P    P     02 42 35.7 -2.0
      baz=175
E40A  Wakefield        33.91 357  P    P     02 42 36.2 -1.8
      baz=176
E38A  The Farm, Brul   34.17 355  P    P     02 42 38.3 -2.0
      baz=173
K22A  Casper           34.19 335  P    P     02 42 41.8 +1.1
      baz=146
E36A  McGregor         34.25 353  P    P     02 42 39.3 -1.7
      baz=170
LPAZ  La Paz           34.55 145  LR   LR    02 57 47.8
      comp=Z,72nm,20.4s,baz=306,slow=38
MPU   Maple Canyon     34.58 327 eP    P     02 42 45.3 +1.2
      comp=Z,8.4nm,0.7s
D37A  Cotton           34.80 354  P    P     02 42 43.4 -2.3
      baz=172
D36A  Goodland         34.89 354  P    P     02 42 44.1 -2.4
      baz=171
D36A  Goodland         34.89 354 eP    P     02 42 44.7 -1.8
      comp=Z,8.0nm,0.6s
D35A  Remer            34.90 352  P    P     02 42 43.7 -2.9
      baz=169
JLU   Jordanelle       34.90 328 eP    P     02 42 48.3 +1.3
      comp=Z,5.5nm,0.7s
CTU   Camp Tracy       35.13 328 eP    P     02 42 50.0 +1.1
      comp=Z,6.9nm,0.7s
C38A  Sawbill Land.    35.26 356  P    P     02 42 46.4 -3.3
      baz=174
TCUT  Toone Canyon     35.26 328 eP    P     02 42 51.5 +1.5
      comp=Z,15nm,0.6s
C37A  Embarrass        35.34 355  P    P     02 42 48.4 -1.9
      baz=172
DUG   Dugway, Tooele   35.34 326 eP    P     02 42 51.8 +1.1
      comp=Z,3.2nm,0.8s
C40A  Isle Royale Na   35.35 358  P    P     02 42 48.4 -2.0
      baz=178
C36A  Pine Crest Far   35.43 354  P    P     02 42 49.2 -1.9
      baz=171
C35A  Jirik Farms, M   35.50 353  P    P     02 42 49.8 -1.9
      baz=169,SNR=8.5
BW06  Boulder Array    35.61 332 eP    P     02 42 53.2 +0.2
      comp=Z,4.1nm,0.6s
PD31  Pinedale Array   35.61 332 eP    P     02 42 53.5 +0.5
PD31                             ePcP  PcP   02 45 19.8 -1.0
PDAR  Pinedale Array   35.61 332  P    P     02 42 53.0  0.0
      comp=Z,3.7nm,0.6s,baz=124,slow=9.5,SNR=27
PDAR                              PcP  PcP   02 45 19.8 -1.0
      comp=Z,0.5nm,0.7s,baz=157,slow=5.5,SNR=3.8
HWUT  Hardware Ranch   35.70 329 eP    P     02 42 54.5 +0.8
      comp=Z,19nm,0.6s
SPUT  South Promonto   35.94 328 eP    P     02 42 57.2 +1.5
      comp=Z,9.1nm,0.8s
BGU   Big Grassy Mou   35.97 327 eP    P     02 42 57.1 +1.0
      comp=Z,13nm,1.5s
B35A  Bob, Littlefor   36.12 353  P    P     02 42 54.4 -2.6
      baz=170
AHID  Auburn Hatcher   36.34 331 eP    P     02 42 59.8 +0.6
      comp=Z,22nm,0.6s
BAKC  Calstate         36.34 314 eP    P     02 42 56.5 -2.6
AGMN  Agassiz Nation   36.35 351 eP    P     02 42 57.8 -1.2
      comp=Z,13nm,1.0s
B34A  Aery, Baudette   36.36 352  P    P     02 42 57.2 -1.8
      baz=168,SNR=7.8
MDND  Maddock          36.63 347  P    P     02 43 00.3 -1.1
      baz=160
MDND  Maddock          36.63 347 eP    P     02 43 00.0 -1.4
      comp=Z,35nm,0.7s
REDW  Red Top Meadow   36.67 331 eP    P     02 43 03.0 +1.0
      comp=Z,40nm,0.6s
SNOW  Snow King Moun   36.70 332 eP    P     02 43 03.3 +1.0
      comp=Z,42nm,0.6s
LOHW  Long Hollow      36.75 332 eP    P     02 43 03.5 +0.8
      comp=Z,7.7nm,0.6s
TPAW  Teton Pass       36.82 331 eP    P     02 43 04.1 +0.8
      comp=Z,20nm,0.6s
A33A  Warroad          36.90 352  P    P     02 43 02.3 -1.3
      baz=167,SNR=9.6
MOOW  Moose Ponds      36.92 332 eP    P     02 43 04.5 +0.4
      comp=Z,9.7nm,0.7s
GATR  Gnd/Air Tx Cnt   36.95 312 eP    P     02 43 05.8 +1.5
FXWY  Fox Creek        36.97 332 eP    P     02 43 05.1 +0.6
      comp=Z,4.3nm,0.7s
IMW   Indian Meadow    37.12 332 eP    P     02 43 06.6 +0.6
      comp=Z,9.9nm,0.6s
FLWY  Flagg Ranch      37.16 332 eP    P     02 43 07.2 +1.0
      comp=Z,11nm,0.7s
H17A  Grant Village    37.34 333  P    P     02 43 09.1 +1.3
      baz=141
YPP   Pitchstone Pla   37.35 332 eP    P     02 43 10.5 +2.6
      comp=Z,3.7nm,0.7s
RLMT  Red Lodge        37.36 335 eP    P     02 43 08.2 +0.3
      comp=Z,4.8nm,0.6s
NV01  Mina Array Sit   37.49 319 eP    P     02 43 10.7 +1.6
NV01                             ePcP  PcP   02 45 27.2 +0.8
NVAR  Mina Array Bea   37.49 319  P    P     02 43 10.7 +1.6
      comp=Z,1.9nm,0.7s,baz=131,slow=7.3,SNR=6.0
NVAR                              PcP  PcP   02 45 27.3 +0.8
      comp=Z,2.2nm,0.6s,baz=131,slow=3.9,SNR=12
YFT   Old Faithful     37.51 333 eP    P     02 43 11.3 +2.2
      comp=Z,11nm,0.6s
YMR   Madison River    37.73 333 eP    P     02 43 12.9 +1.8
      comp=Z,15nm,0.9s
YHB   Horse Butte      37.90 333 eP    P     02 43 14.0 +1.5
      comp=Z,12nm,0.6s
GCMT  Greycliff        38.06 335 eP    P     02 43 14.3 +0.6
QLMT  Earthquake Lak   38.07 332 eP    P     02 43 15.6 +1.7
ULM   Lac du Bonnet    38.25 352  P    P     02 43 13.1 -2.0
      comp=Z,8.3nm,0.7s,baz=163,slow=8.7,SNR=10
ULM                               LR   LR    03 00 40.3
      comp=Z,51nm,20.1s,baz=178,slow=39
ULM   Lac du Bonnet    38.25 352 eP    P     02 43 13.2 -1.8
      comp=Z,7.4nm,0.7s
HLID  Hailey           38.56 328 eP    P     02 43 18.7 +0.7
      comp=Z,3.7nm,0.7s
SIV   San Ignacio      38.69 136  P    P     02 43 19.0 -0.2
      comp=Z,15nm,0.7s,baz=316,slow=8.0,SNR=104
SIV                               PcP  PcP   02 45 30.4 +0.1
      comp=Z,4.2nm,0.7s,baz=263,slow=2.9,SNR=7.0
MCMT  McKenzie Canyo   38.72 331 eP    P     02 43 21.1 +1.7
BOZ   Bozeman (W)      38.75 333 eP    P     02 43 20.5 +1.0
      comp=Z,9.5nm,0.6s
DLMT  Dillon           39.01 332 eP    P     02 43 22.9 +1.3
      comp=Z,9.9nm,0.7s
MFID  Camas Ranch      39.20 327 eP    P     02 43 23.8 +0.5
      comp=Z,4.3nm,1.0s
LRM   Limekiln Ridge   39.29 333 eP    P     02 43 24.9 +0.7
WVOR  Wild Horse Val   40.11 324 eP    P     02 43 31.3 +0.5
      comp=Z,9.3nm,0.8s
J08A  Circle Bar Ran   40.60 325 eP    P     02 43 35.2 +0.3
      comp=Z,3.3nm,0.7s
MSO   Missoula         40.73 332 eP    P     02 43 36.1 +0.2
      comp=Z,7.4nm,1.0s
O03D  Paynes Creek     40.78 319  P    P     02 43 36.6 +0.2
      baz=123
BMO   Blue Mountains   40.96 328 eP    P     02 43 37.1 -0.7
      comp=Z,4.3nm,0.8s
M04C  Macdoel          41.63 321  P    P     02 43 43.3 -0.1
      baz=125
F10A  Beach Ranch, E   41.68 329 eP    P     02 43 43.5 -0.2
      comp=Z,11nm,0.8s
PINE  Pine Mountain    42.27 324 eP    P     02 43 48.7  0.0
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	comp=Z,7.1nm,0.8s						
WALA	**Waterton Lakes**	**42.41**	**335**	*e*P	**P**	**02 43 50.0**	**+0.4**
	comp=Z,26nm,1.8s						
J04D	**Umpqua Nationa**	**42.63**	**322**	P	**P**	**02 43 51.4**	**-0.2**
	baz=126						
I04A	**Tendick Farm,**	**43.13**	**323**	P	**P**	**02 43 54.9**	**-0.5**
	baz=126						
NEW	**Newport**	**43.24**	**331**	*e*P	**P**	**02 43 55.9**	**-0.4**
	comp=Z,3.0nm,0.6s						
D08A	**Wollman Farm,**	**43.28**	**329**	*e*P	**P**	**02 43 56.6**	**+0.1**
	comp=Z,14nm,0.7s						
G05D	**Wamic, OR**	**43.37**	**325**	P	**P**	**02 43 58.2**	**+0.8**
	baz=128						
C09A	**Chrisman Ranch**	**43.47**	**330**	*e*P	**P**	**02 43 58.0**	**0.0**
	comp=Z,10nm,0.6s						
H04A	**Detroit Lake**	**43.52**	**324**	*e*P	**P**	**02 43 58.8**	**+0.2**
	comp=Z,6.8nm,0.8s						
FFC	**Flin Flon**	**43.61**	**348**	*e*P	**P**	**02 43 58.7**	**-0.4**
	comp=Z,6.6nm,0.7s						
B08A	**Colville Reser**	**44.37**	**330**	*e*P	**P**	**02 44 04.5**	**-0.7**
	comp=Z,5.5nm,0.8s						
G03D	**McMinnville, O**	**44.45**	**324**	P	**P**	**02 44 06.0**	**+0.1**
	baz=126						
LON	**Longmire**	**44.58**	**327**	*e*P	**P**	**02 44 07.2**	**+0.1**
	comp=Z,4.9nm,0.7s						
SCHQ	**Schefferville**	**45.35**	**17**	P	**P**	**02 44 11.6**	**-1.3**
	comp=Z,14nm,0.5s,baz=214,slow=7.1,SNR=7.0						
SCHQ				LR	LR	03 03 00.6	
	comp=Z,118nm,21.5s,baz=314,slow=36						
SCHQ	**Schefferville**	**45.35**	**17**	*e*P	**P**	**02 44 11.6**	**-1.3**
	comp=Z,18nm,0.6s						
MEGW	**Megler CREST B**	**45.42**	**325**	*e*P	**P**	**02 44 13.6**	**-0.1**
A04D	**Lummi Island**	**46.29**	**328**	P	**P**	**02 44 19.1**	**-1.3**
	baz=129						
CPUP	**Villa Florida**	**48.62**	**143**	P	**P**	**02 44 38.2**	**-0.5**
	comp=Z,2.1nm,0.7s,baz=306,slow=7.9,SNR=4.2						
CPUP	**Villa Florida**	**48.62**	**143**	*e*P	**P**	**02 44 38.2**	**-0.5**
	comp=Z,15nm,1.5s						
YKA	**Yellowknife Ar**	**53.51**	**345**	P	**P**	**02 45 13.2**	**-1.8**
	comp=Z,1.9nm,0.7s,baz=134,slow=8.3,SNR=10						
YKA				pP	**pP**	**02 45 28.7**	**-1.7**
	comp=Z,1.6nm,0.7s,baz=138,slow=8.0,SNR=4.6						
YKA				PcP	**PcP**	**02 46 19.2**	**-1.9**
	comp=Z,0.8nm,0.6s,baz=140,slow=4.2,SNR=4.2						
YKB5	**Yellowknife Ar**	**53.51**	**345**	*e*P	**P**	**02 45 13.2**	**-1.8**
YKB5				*e*pP	**pP**	**02 45 28.7**	**-1.7**
YKB5				*e*PcP	**PcP**	**02 46 19.2**	**-1.9**
DLBC	**Dease Lake**	**55.76**	**335**	*e*P	**P**	**02 45 31.9**	**+0.4**
	comp=Z,17nm,0.8s						
ILAR	**Eielson Array**	**65.88**	**336**	P	**P**	**02 46 38.5**	**-1.6**
	comp=Z,1.3nm,0.7s,baz=107,slow=5.5,SNR=18						
ILAR				pP	**pP**	**02 46 53.4**	**-2.4**
	comp=Z,1.9nm,1.0s,baz=111,slow=5.9,SNR=8.1						
ILB	**Eielson Array**	**65.88**	**336**	*e*P	**P**	**02 46 38.5**	**-1.6**
ILB				*e*pP	**pP**	**02 46 53.4**	**-2.4**
MLY	**Manley**	**67.50**	**336**	*e*P	**P**	**02 46 49.3**	**-1.1**
	comp=Z,24nm,2.0s						
PPT	**Papeete**	**67.93**	**245**	LR	LR	03 10 50.4	
	comp=Z,116nm,19.2s,baz=22,slow=31						
WR1	**Warramunga Arr**	**138.98**	**254**	*e*PKPpre	PKPpre	02 55 12.2	
WR1				*e*PKPdf	**PKPdf**	**02 55 21.9**	**+0.4**
WRA	**Warramunga Arr**	**138.98**	**254**	PKhKP	PKPpre	02 55 12.2	
	comp=Z,0.3nm,0.6s,baz=93,slow=3.2,SNR=6.3						
WRA				PKP	**PKPdf**	**02 55 22.0**	**+0.4**
	comp=Z,1.3nm,0.6s,baz=90,slow=2.6,SNR=14						
AS31	**Alice Springs**	**138.99**	**248**	*e*PKPpre	PKPpre	02 55 11.8	
AS31				*e*PKPdf	**PKPdf**	**02 55 21.8**	**+0.2**
ASAR	**Alice Springs**	**139.00**	**248**	PKhKP	PKPpre	02 55 11.8	
	comp=Z,0.3nm,0.3s,baz=100,slow=3.0,SNR=5.6						
ASAR				PKP	**PKPdf**	**02 55 21.8**	**+0.3**
	comp=Z,1.2nm,0.8s,baz=102,slow=1.8,SNR=11						

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*IDC **10** 02:38:37.3±3.0, 18.°94S×169.°43E, h269^{km}±31^{km}, mb3.6/7, mb1 3.8/8, mb1mx3.4/46, mbtmp4.2/8, Error ellipse: s-maj=50.8km s-min=22.9km az=148.0*

ISC 10 02:38:35.1±1.2**, 18.°7S**±0.°2×**169.°4E**±0.°3**, h240**^{km}**, n9, σ1^{s}36**/9**, mb3.8**/7**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**4.38**	**219**	P	**Pn**	**02 39 44.2**	**+1.1**
	2.3nm,0.3s,baz=70,slow=20,SNR=11						
STKA	**Stephens Creek**	**28.28**	**237**	P	**P**	**02 44 06.2**	**-0.3**
	3.8nm,0.7s,baz=62,slow=8.5,SNR=5.7						
WRA	**Warramunga Arr**	**33.09**	**262**	P	**P**	**02 44 47.5**	**-1.4**
	1.2nm,0.5s,baz=94,slow=8.7,SNR=7.5						
ASAR	**Alice Springs**	**33.42**	**255**	P	**P**	**02 44 50.8**	**-0.9**
	11nm,0.5s,baz=83,slow=9.0,SNR=108						
MJAR	**Matsushiro Arr**	**62.34**	**332**	P	**P**	**02 48 33.7**	**+1.4**
	0.6nm,0.3s,baz=161,slow=7.2,SNR=4.1						
SONM	**Songino Array**	**86.87**	**323**	P	**P**	**02 50 53.9**	**+1.1**
	1.1nm,0.7s,baz=136,slow=7.9,SNR=4.3						
NVAR	**Mina Array Bea**	**88.31**	**48**	P	**P**	**02 51 00.4**	**+0.5**
	0.4nm,0.6s,baz=219,slow=10,SNR=3.5						
ILAR	**Eielson Array**	**89.65**	**17**	P	**P**	**02 51 04.0**	**-1.3**
	0.5nm,0.8s,baz=224,slow=4.6,SNR=6.0						
ARCES	**ARCESS Array B**	**124.57**	**345**	PKP	**PKPdf**	**02 57 03.8**	**-1.5**
	5.2nm,0.9s,baz=49,slow=3.8,SNR=7.7						

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*CSEM **10** 02:46:24.1, 36.°01N×21.°84E, h23^{km}, ML1.3/2*

ATH 10 02:46:24.1, 36.°01N×21.°84E, h23^{km}±2^{km}**, ML1.3**/2**, Error ellipse: s-maj=4.5km s-min=1.9km az=39.0, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MES2	**Methoni**	**0.82**	**352**	P	Pb	02 46 39.3	-0.3
MES2				S	Sb	02 46 50.4	+0.1
MES2	**Methoni**	**0.82**	**352**	P	Pb	02 46 39.6	0.0
MES2				S	Sn	02 46 50.9	-0.7
DYR	**Agios Nikonas**	**0.85**	**28**	P	Pn	02 46 40.6	-0.1
DYR				S	Sn	02 46 52.4	+0.1
DYR				AML	AML	02 46 53.6	
	comp=E,35µm,0.3s						
DYR				AML	AML	02 46 55.8	
	comp=N,30µm,0.3s						
DYR	**Agios Nikonas**	**0.85**	**28**	P	Pn	02 46 40.5	-0.2
DYR				S	Sn	02 46 52.4	0.0
PYL	**PYLOS**	**0.88**	**355**	P	Pn	02 46 41.1	-0.1
PYL	**PYLOS**	**0.88**	**355**	P	Pn	02 46 41.1	-0.1
KYTH	**Kithira**	**1.01**	**75**	P	Pb	02 46 44.6	+1.7
KYTH	**Kithira**	**1.01**	**75**	P	Pb	02 46 44.0	+1.1
VLI	**Veliai**	**1.13**	**51**	P	Pb	02 46 45.6	+0.7
VLI	**Veliai**	**1.13**	**51**	P	Pb	02 46 45.7	+0.7
ITM	**Ithomi**	**1.17**	**3**	P	Pb	02 46 47.0	+1.4
ITM				S	Sb	02 47 02.9	+2.6
ITM				AML	AML	02 47 04.7	
	comp=E,40µm,0.7s						
ITM				AML	AML	02 47 06.2	
	comp=N,32µm,0.3s						
ITM	**Ithomi**	**1.17**	**3**	P	Pb	02 46 46.6	+1.0
ITM				S	Sb	02 47 02.7	+2.4
MES3	**Kyparissia**	**1.24**	**354**	P	Pb	02 46 47.6	+0.8
MES3				S	Sb	02 47 04.7	+2.3
MES3	**Kyparissia**	**1.24**	**354**	P	Pb	02 46 47.6	+0.8
MES3				S	Sb	02 47 04.8	+2.4
VLX	**Vlachokerasia**	**1.42**	**18**	P	Pb	02 46 50.2	+0.2
VLX	**Vlachokerasia**	**1.42**	**18**	P	Pb	02 46 50.4	+0.4
AMT	**Artemida-Makis**	**1.52**	**356**	P	Pb	02 46 52.3	+0.7
AMT	**Artemida-Makis**	**1.52**	**356**	P	Pb	02 46 52.1	+0.5

GUC 10 02:49:52.1±0.6**, 22.°30S×68.°75W, h106**^{km}±4^{km}**, ML3.7, 5C-4D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	**IPOC Station P**	**0.68**	**317**	⇓*e*P	Pn	02 50 10.8	+0.6
PB09				*i* S	Sn	02 50 24.5	+0.8
PB09				IAML		02 50 25.6	
	comp=N,2µm,0.8s						
PB06	**IPOC Station P**	**0.86**	**242**	⇑*e*P	Pn	02 50 12.3	+0.5
PB06				*i* S	Sn	02 50 27.4	+0.8
PB06				IAML		02 50 33.0	
	comp=N,2µm,0.4s						
PB03	**IPOC Station P**	**0.97**	**285**	⇑*e*P	Pn	02 50 13.4	+0.6
PB03				*i* S	Sn	02 50 29.4	+0.9
PB03				IAML		02 50 30.5	
	comp=E,4µm,0.6s						
PB07	**IPOC Station P**	**1.20**	**298**	⇑*e*P	Pn	02 50 16.2	+0.8
PB07				*i* S	Sn	02 50 34.1	+1.1
PB07				IAML		02 50 35.1	
	comp=N,3µm,0.6s						
PB04	**IPOC Station P**	**1.30**	**268**	⇑*e*P	Pn	02 50 17.1	+0.6
PB04				*i* S	Sn	02 50 36.5	+1.5
PB04				IAML		02 50 39.9	
	comp=N,2µm,0.2s						
PB01	**IPOC Station P**	**1.43**	**331**	⇓*e*P	Pn	02 50 18.3	+0.3
PB01				*i* S	Sn	02 50 38.8	+1.2
PB01				IAML		02 50 40.8	
	comp=E,872nm,0.5s						
PB02	**IPOC Station P**	**1.45**	**312**	⇓*e*P	Pn	02 50 19.0	+0.8
PB02				*i* S	Sn	02 50 38.7	+0.7
PB02				IAML		02 50 42.6	
	comp=E,2µm,0.5s						
PB05	**IPOC Station P**	**1.45**	**248**	⇑*e*P	Pn	02 50 18.6	+0.3
PB05				*i* S	Sn	02 50 39.1	+1.0
PB05				IAML		02 50 40.1	
	comp=E,1µm,0.9s						
PB08	**IPOC Station P**	**2.18**	**350**	⇓*e*P	Pn	02 50 28.7	+1.0
PB08				*i* S	Sn	02 50 55.7	+0.8
PB08				IAML		02 51 01.6	
	comp=E,327nm,0.4s						

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*ISCJB **10** 02:57:59.5±0.6, 2.°64N±0.°06×128.°29E±0.°05, h150^{km}, mb4.1/7, Error ellipse: s-maj=8.5km s-min=7.1km az=15.2*
*DJA **10** 02:58:01.6±0.8, 3°N±8°×12°8E±°, h142^{km}±6^{km}, M4.1/9, mb4.4/6, mB4.5/6, MLv4.2/9, Mw(mB)3.7/6*
*IDC **10** 02:58:03.4±2.6, 2.°57N×128.°54E, h176^{km}±27^{km}, mb3.8/7, mb1 3.9/8, mb1mx3.4/55, mbtmp4.2/8, MS3.9/4, Ms1 3.9/4, ms1mx3.1/59, Error ellipse: s-maj=49.8km s-min=12.9km az=74.0*

ISC 10 02:58:01.0±0.8**, 2.°55N**±0.°09×**128.°32E**±0.°07**, h150**^{km}**, n23, σ1^{s}60**/23**, mb4.1**/7**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**2.01**	**208**	P	**Pn**	**02 58 36.6**	**+0.4**
TNTI				S	**Sn**	**02 59 03.9**	**+0.6**
SIJI	**Sorong**	**4.50**	**139**	P	**Pn**	**02 59 09.3**	**+1.5**
	4.4nm,0.3s,baz=354,slow=13,SNR=9.8						
SIJI				S	**Sn**	**03 00 01.5**	**+1.6**
	3.2nm,0.3s,baz=106,slow=20,SNR=4.2						
KMSI	**Cibinong**	**4.76**	**246**	P	**Pn**	**02 59 11.0**	**-0.2**
KMSI				S	**Sn**	**03 00 04.8**	**-1.2**
SANI	**Sanana**	**5.13**	**207**	P	**Pn**	**02 59 14.5**	**-1.7**
	14nm,0.6s,862nm						
LUWI	**Luwuk**	**6.59**	**237**	P	**Pn**	**02 59 37.4**	**+1.8**
MRSI	**Marisa**	**6.70**	**252**	P	**Pn**	**02 59 38.0**	**+1.0**
	56nm,0.5s,629nm						
FAKI	**Fak Fak**	**6.71**	**144**	P	**Pn**	**02 59 39.3**	**+2.1**
APSI	**Ampana**	**7.50**	**243**	P	**Pn**	**02 59 47.6**	**-0.2**
MPSI	**Mapaga**	**8.70**	**255**	P	**Pn**	**03 00 07.7**	**+4.0**
TTSI	**Tana Toraja**	**10.15**	**237**	P	**Pn**	**03 00 21.9**	**-1.2**
BKSI	**Bulukumba**	**11.32**	**226**	P	**Pn**	**03 00 41.9**	**+3.4**
JAY	**Jayapura**	**13.37**	**112**	LR	LR	03 05 09.5	
	comp=Z,102nm,18.9s,baz=316,slow=32						
WRA	**Warramunga Arr**	**23.12**	**165**	P	**P**	**03 02 53.3**	**-0.8**
	5.2nm,0.4s,baz=343,slow=10.0,SNR=114						
ASAR	**Alice Springs**	**26.62**	**169**	P	**P**	**03 03 24.8**	**-0.9**
	1.6nm,0.5s,baz=352,slow=7.8,SNR=34						
ASAR				PcP	**PcP**	**03 06 45.8**	**-0.2**
	1.3nm,0.4s,baz=349,slow=2.2,SNR=15						
MJAR	**Matsushiro Arr**	**35.03**	**14**	P	**P**	**03 04 38.2**	**-1.2**
	1.3nm,0.5s,baz=189,slow=10,SNR=7.1						
STKA	**Stephens Creek**	**36.49**	**161**	P	**P**	**03 04 51.5**	**-0.3**
	12nm,0.3s,baz=336,slow=8.4,SNR=46						
PALK	**Pallekele**	**47.65**	**277**	LR	LR	03 26 42.7	
	comp=Z,261nm,21.8s,baz=118,slow=36						
MKAR	**Makanchi Array**	**59.42**	**325**	P	**P**	**03 07 48.6**	**+0.7**
	1.2nm,0.5s,baz=118,slow=8.0,SNR=10						
KURBB	**Kurchatov Arra**	**63.58**	**327**	P	**P**	**03 08 15.9**	**+0.3**
	1.1nm,0.4s,baz=128,slow=6.1,SNR=14						
BVAR	**Borovoye Array**	**69.17**	**327**	P	**P**	**03 08 51.3**	**+0.2**
	0.7nm,0.6s,baz=116,slow=6.7,SNR=3.8						
WSAR	**Wadi Sarin**	**70.34**	**294**	LR	LR	03 41 07.7	
	comp=Z,105nm,22.0s,baz=122,slow=37						
MMAI	**Mount Meron Ar**	**91.07**	**303**	LR	LR	03 56 42.8	
	comp=Z,114nm,20.4s,baz=235,slow=39						
TORD	**Torodi Ar. Bea**	**124.79**	**288**	PKP	**PKPdf**	**03 16 43.1**	**-1.0**
	0.2nm,0.3s,baz=96,slow=1.3						

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*ISCJB **10** 03:02:43.9±0.6, 43.°17N±0.°03×79.°96E±0.°04, h10^{km}, Error ellipse: s-maj=5.8km s-min=2.8km az=143.0*
*KRNET **10** 03:02:43.3±0.1, 43.°19N×79.°91E, h24^{km}, mb3.4*
*SOME **10** 03:02:43.3, 43.°13N×79.°93E, h25^{km}*
*NNC **10** 03:02:43.1±1.1, 43.°18N×80.°00E, h2^{km}±3^{km}, mb3.0, mpv2.8, Error ellipse: s-maj=9.3km s-min=5.0km az=160.0*

ISC 10 03:02:43.0±0.9**, 43.°17N**±0.°04×**79.°94E**±0.°03**, h10**^{km}**, n40, σ1^{s}35**/78**, 17C-11D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHLS	**Shalkode**	**0.35**	**268**	*e*P	**Pg**	**03 02 47.7**	**-2.3**
	baz=10.0						
SHLS				*e*S	**Sg**	**03 02 51.1**	**-3.5**
	baz=10.0						
SHLS	**Shalkode**	**0.35**	**268**	*e*P	**Pg**	**03 02 47.6**	**-2.3**
	776nm,0.1s						
SHLS				*e*S	**Sg**	**03 02 51.1**	**-3.5**
	662nm,0.2s						
PDGK	**Podgornoye**	**0.36**	**296**	⇓P	**Pb**	**03 02 51.2**	**-0.4**
	41nm,0.3s						
PDGK				⇑S	**Sb**	**03 02 57.1**	**-0.3**
	62nm,0.3s						
PDGK	**Podgornoye**	**0.36**	**296**	⇑*i*P	**Pb**	**03 02 51.2**	**-0.4**
	baz=94						
PDGK				⇑*i*S	**Sb**	**03 02 57.1**	**-0.3**
	baz=94						
KTMS	**Ketmen**	**0.41**	**48**	*e*P	**Pb**	**03 02 52.0**	**-0.5**
	baz=49						
KTMS				*e*S	**Sb**	**03 02 58.6**	**-0.2**
	baz=49						
KTMS	**Ketmen**	**0.41**	**48**	*e*P	**Pb**	**03 02 52.0**	**-0.5**
	136nm,0.1s						
KTMS				*e*S	**Sb**	**03 02 58.6**	**-0.2**
	101nm,0.1s						
UZB	**Uzynbulak**	**0.67**	**268**	*e*P	**Pg**	**03 02 55.7**	**-0.3**
	baz=67						
UZB				*e*S	**Sg**	**03 03 04.9**	**+0.1**
	baz=67						
UZB	**Uzynbulak**	**0.67**	**268**	*e*P	**Pg**	**03 02 55.6**	**-0.3**
	27nm,0.1s						
UZB				*e*S	**Sg**	**03 03 04.8**	**+0.1**
	342nm,0.1s						
KPKS	**Kokpek**	**0.96**	**288**	*e*P	**Pg**	**03 03 00.9**	**-0.6**
	baz=86						
KPKS				*e*S	**Sb**	**03 03 13.7**	**-0.9**
	baz=86						
KPKS	**Kokpek**	**0.96**	**288**	*e*P	**Pg**	**03 03 00.9**	**-0.6**
	38nm,0.1s						
KPKS				*e*S	**Sb**	**03 03 13.6**	**-0.9**
	211nm,0.2s						
ZHN	**Zhinishke**	**1.10**	**270**	*e*P	**Pg**	**03 03 03.3**	**-0.8**
	baz=69						
ZHN				*e*S	**Sg**	**03 03 17.4**	**-1.0**
	baz=69						
ZHN	**Zhinishke**	**1.10**	**270**	*e*P	**Pg**	**03 03 03.3**	**-0.8**
	17nm,0.1s						
ZHN				*e*S	**Sg**	**03 03 17.3**	**-1.0**
	252nm,0.2s						
SATY	**Saty**	**1.12**	**265**	*e*P	**Pb**	**03 03 03.8**	**-0.8**
	16nm,0.3s						
SATY				*e*S	**Sg**	**03 03 18.3**	**-0.9**
	213nm,0.2s						
DJR	**Jarkent**	**1.16**	**355**	*e*P	**Pn**	**03 03 05.1**	**-0.4**
	3.9nm,0.2s						
DJR				*e*S	**Sn**	**03 03 21.1**	**-0.4**
	23nm,0.2s						
PRZ	**Przheval'sk**	**1.32**	**239**	⇓*i*P	**Pb**	**03 03 07.5**	**-0.5**
	baz=38						
PRZ				⇓*i*S	**Sn**	**03 03 24.9**	**-0.6**
	baz=38						
KURS	**Kuram**	**1.33**	**284**	*e*P	**Pb**	**03 03 07.4**	**-0.6**
	baz=84						
KURS				*e*S	**Sb**	**03 03 24.3**	**-0.8**
	baz=84						
KURS	**Kuram**	**1.33**	**284**	*e*P	**Pb**	**03 03 07.3**	**-0.6**
	1.8nm,0.2s						
KURS				*e*S	**Sb**	**03 03 24.3**	**-0.8**
	22nm,0.3s						
ARXS	**Arharly**	**1.85**	**305**	*e*P	**Pb**	**03 03 16.9**	**0.0**
	3.6nm,0.2s						
ARXS				*e*S	**Sg**	**03 03 41.0**	**-1.4**
	24nm,0.3s						
KOTS	**Kotyrbulak**	**2.06**	**273**	*e*P	**Pb**	**03 03 19.5**	**-1.2**
	7.3nm,0.3s						
KOTS				*e*S	**Sb**	**03 03 45.4**	**-1.0**
	108nm,0.4s						
MDOK	**Medeo**	**2.11**	**271**	⇓Pn	**Pb**	**03 03 21.1**	**-0.3**
	2.2nm,0.5s						
MDOK				⇓Sn	**Sb**	**03 03 48.4**	**+0.6**
	19nm,0.5s						
MDOK	**Medeo**	**2.11**	**271**	*e*P	**Pb**	**03 03 21.1**	**-0.3**
	baz=70						
MDOK				*e*S	**Sb**	**03 03 48.2**	**+0.4**
	baz=70						
MDOK	**Medeo**	**2.11**	**271**	*e*P	**Pb**	**03 03 21.1**	**-0.3**
	2.5nm,0.4s						
MDOK				*e*S	**Sb**	**03 03 48.2**	**+0.4**
	30nm,0.4s						
TARG	**Taragay, Kyrgy**	**2.14**	**228**	⇑*i*P	**Pb**	**03 03 20.7**	**-1.3**
	baz=28						
TARG				⇑*i*S	**Sb**	**03 03 47.2**	**-1.6**
	baz=28						
KAPS	**Kapalarasan**	**2.15**	**349**	*e*P	**Pb**	**03 03 21.6**	**-0.6**
	1.4nm,0.2s						
KAPS				*e*S	**Sb**	**03 03 48.8**	**-0.1**
	14nm,0.3s						
TNSS	**Tian-Shan**	**2.19**	**267**	*e*P	**Pb**	**03 03 22.6**	**-0.4**
	baz=67						
TNSS				*e*S	**Sb**	**03 03 50.6**	**+0.2**
	baz=67						
TNSS	**Tian-Shan**	**2.19**	**267**	*e*P	**Pb**	**03 03 22.6**	**-0.4**
	9.5nm,0.2s						
TNSS				*e*S	**Sb**	**03 03 50.6**	**+0.2**
	35nm,0.4s						
CHKK	**Chushkaly**	**2.25**	**289**	*e*P	**Pb**	**03 03 23.5**	**-0.2**
	baz=89						
CHKK				*e*S	**Sb**	**03 03 51.9**	**+0.3**
	baz=89						
CHKK	**Chushkaly**	**2.25**	**289**	*e*P	**Pb**	**03 03 23.5**	**-0.2**
	0.9nm,0.2s						
CHKK				*e*S	**Sb**	**03 03 51.9**	**+0.3**
	50nm,0.2s						
KTBS	**Karatobe**	**2.43**	**284**	*e*P	**Pb**	**03 03 26.4**	**-0.4**
	baz=83						
KTBS				*e*S	**Sb**	**03 03 57.3**	**+0.5**
	baz=83						
KTBS	**Karatobe**	**2.43**	**284**	*e*P	**Pb**	**03 03 26.4**	**-0.4**
	2.7nm,0.1s						
KTBS				*e*S	**Sb**	**03 03 57.3**	**+0.5**
	34nm,0.4s						
IZV	**Izvestkoviy**	**2.44**	**268**	*e*P	**Pb**	**03 03 26.1**	**-0.9**
	baz=67						
IZV				*e*S	**Sb**	**03 03 57.5**	**+0.4**
	baz=67						
IZV	**Izvestkoviy**	**2.44**	**268**	*e*P	**Pb**	**03 03 26.1**	**-0.9**
	8.2nm,0.2s						
IZV				*e*S	**Sb**	**03 03 57.5**	**+0.4**
	54nm,0.2s						
ULHL	**Ulahol**	**2.88**	**252**	⇑*i*P	**Pn**	**03 03 31.2**	**+2.1**
	baz=52						
ULHL				⇑*i*S	**Sn**	**03 04 06.3**	**+2.5**
	baz=52						
BOOM	**Boomskoye usch**	**3.02**	**258**	⇓*i*P	**Pn**	**03 03 33.3**	**+2.3**
	baz=58						
BOOM				⇓*i*S	**Sn**	**03 04 10.0**	**+2.7**
	baz=58						
TKM2	**Tokmak 2**	**3.19**	**267**	⇓Pg	**Pb**	**03 03 40.0**	**+0.2**
	3.4nm,0.8s						
TKM2				⇑Lg	Lg	03 04 22.9	
	8.7nm,0.7s						
TKM2	**Tokmak 2**	**3.19**	**267**	⇑*i*P	**Pn**	**03 03 36.0**	**+2.6**
	baz=67						
TKM2				⇑*i*S	**Sb**	**03 04 14.7**	**-4.2**
	baz=67						
KZA	**Kyzart**	**3.63**	**254**	⇑*i*P	**Pn**	**03 03 41.6**	**+2.0**
	baz=54						
KZA				⇑*i*S	**Sn**	**03 04 24.8**	**+2.2**
	baz=54						
MAKZ	**Makanchi**	**3.91**	**21**	⇑Pn	**Pn**	**03 03 44.3**	**+1.2**
	0.8nm,0.6s						
MAKZ				⇑Sn	**Sn**	**03 04 30.7**	**+1.5**
	0.6nm,0.3s						
MAKZ				⇑Lg	Lg	03 04 46.9	
	1.6nm,0.5s						
MK31	**Makanchi Array**	**3.99**	**24**	⇑Pn	**Pn**	**03 03 45.9**	**+1.7**
	0.3nm,0.3s,baz=207,slow=13,SNR=12						
MK31				⇓Sn	**Sn**	**03 04 32.8**	**+1.8**
	0.5nm,0.3s,baz=206,slow=23,SNR=3.7						
MK31				⇓Lg	Lg	03 04 46.3	
	3.3nm,0.6s,baz=207,slow=27,SNR=4.7						
AAK	**Ala-Archa**	**4.03**	**264**	⇑Pn	**Pn**	**03 03 48.5**	**+3.6**
	1.2nm,0.4s						
AAK				⇓Lg	Lg	03 04 56.2	
	2.9nm,0.6s						

IDC 10 03:23:22.8±562.0**, 21.°75S×70.°45W, h0**^{km}**, Error ellipse: s-maj=228.7km s-min=120.5km az=29.0, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I08BO	**LAS PENAS INFR**	**5.82**	**19**	*i*		04 00 40.0	
	baz=199,slow=325,SNR=2.3						
I41PY	**VILLA FLORIDA**	**12.84**	**113**	*i*		04 42 00.0	
	baz=290,slow=306,SNR=1.5						
I09BR	**BRASILIA INFRA**	**22.09**	**78**	*i*		05 38 40.0	
	baz=250,slow=326,SNR=0.8						

MEX 10 03:26:50.7±1.2**, 17.°15N×100.°18W, h26**^{km}±22^{km}**, MD3.9, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ACP2	**Acapulco**	**0.39**	**134**	*e*P	Pb	03 26 57.0	-2.3
ACP2				*e*S	Sb	03 27 04.0	-1.1
ACX	**Acapulco**	**0.41**	**132**	*e*P	Pb	03 26 57.7	-1.9
ACX				*e*S	Sb	03 27 03.6	-2.1
MEIG	**Mezcala**	**0.94**	**35**	*e*P	Pn	03 27 04.8	-3.5
MEIG				*i* S	Sb	03 27 16.6	-4.0
ARIG	**Puente Sto Nin**	**1.14**	**352**	*e*P	Pn	03 27 07.6	-3.4
ARIG				*e*S	Sn	03 27 22.4	-3.3
ZIIG	**Zihuatanejo**	**1.31**	**290**	*e*P	Pn	03 27 11.1	-2.1
ZIIG				*i* S	Sn	03 27 27.2	-2.8
PLIG	**Platanillo**	**1.39**	**27**	*e*P	Pn	03 27 12.7	-1.9
PLIG				*e*S	Sn	03 27 29.5	-2.7
TLIG	**Tlapa**	**1.59**	**75**	*e*P	Pn	03 27 15.0	-2.3
TLIG				*i* S	Sn	03 27 33.1	-4.1
YAIG	**Yautepec**	**2.00**	**32**	*i* P	Pn	03 27 21.7	-1.4
YAIG				*i* S	Sn	03 27 44.9	-2.5

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*STR **10** 03:27:20.9±0.3, 48°N±3°×°±°, h0^{km}, M3.9/7, mb4.5/3, mB5.6/2, MLv3.6/7, Mw(mB)5.1/2*
*CSEM **10** 03:27:23.1±0.1, 48.°21N×0.°32W, h8^{km}, ML3.3/38, Error ellipse: s-maj=2.0km s-min=1.5km az=25.0*
*LDG **10** 03:27:24.6±0.0, 48.°23N×0.°36W, h2^{km}, Md3.5/6, Ml3.3/40, Error ellipse: s-maj=0.9km s-min=0.7km az=22.0*
*BGS **10** 03:27:24.2±0.4, 48.°25N×0.°34W, h4^{km}, ML2.7*

ISC 10 03:27:23.6±0.9**, 48.°22N**±0.°01×**0.°31W**±0.°01**, h15**^{km}±8^{km}**, n136, σ1^{s}15**/250**, France**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LDF	**La Druitiere**	**0.40**	**18**	*e*Pg	**Pb**	**03 27 32.0**	**-0.4**
	SNR=1.0						
LDF				*e*Sg	**Sg**	**03 27 36.7**	**-0.4**
	161nm,0.2s						
LDF	**La Druitiere**	**0.40**	**18**	*e*Pg	**Pb**	**03 27 32.0**	**-0.4**
	SNR=1.0						
LDF				*e*Sg	**Sg**	**03 27 36.7**	**-0.4**
	81nm,0.2s						
GRR	**Gorron**	**0.41**	**295**	*e*Pg	**Pg**	**03 27 31.7**	**-0.1**
	SNR=1.0						
GRR				*e*Sg	**Sg**	**03 27 36.3**	**-1.0**
	294nm,0.2s,SNR=1.0						
GRR	**Gorron**	**0.41**	**295**	*e*Pg	**Pg**	**03 27 31.7**	**-0.1**
	SNR=1.0						
GRR				*e*Sg	**Sg**	**03 27 36.3**	**-1.0**
	147nm,0.2s,SNR=1.0						
FLN	**La Foliniere**	**0.56**	**348**	*e*Pg	**Pg**	**03 27 34.8**	**+0.2**
	baz=172,SNR=1.0						
FLN				*e*Sg	**Sg**	**03 27 41.5**	**-0.6**
	436nm,0.2s,baz=171						
FLN	**La Foliniere**	**0.56**	**348**	*e*Pg	**Pg**	**03 27 34.8**	**+0.2**
	baz=172,SNR=1.0						
FLN				*e*Sg	**Sg**	**03 27 41.5**	**-0.6**
	218nm,0.2s,baz=171						
RENF	**Rennes**	**0.89**	**264**	Pg	**Pb**	**03 27 41.3**	**+0.5**
RENF				Sg	**Sg**	**03 27 52.3**	**-0.3**

SGMF	**Saint Gilles**	1.50	272	*e*Pn	Pn	03 27 50.8	+0.8
	SNR=1.0						
SGMF	**Saint Gilles**	1.50	272	*e*Pg	Pb	03 27 52.0	+0.8
	SNR=1.0						
SGMF				*e*Sg	Sn	03 28 10.9	+1.5
	299nm,0.3s,SNR=1.0						
SGMF	**Saint Gilles**	1.50	272	*e*Pn	Pn	03 27 50.8	+0.8
	SNR=1.0						
SGMF	**Saint Gilles**	1.50	272	*e*Pg	Pb	03 27 52.0	+0.8
	SNR=1.0						
SGMF				*e*Sg	Sn	03 28 10.9	+1.5
	150nm,0.3s,SNR=1.0						
JQE	**Queens East**	1.51	311	*e*P	Pn	03 27 50.5	+0.3
JQE				*e*S	Sn	03 28 09.4	-0.1
JQE	**Queens East**	1.51	311	*e*P	Pn	03 27 50.5	+0.3
JQE				*e*S	Sn	03 28 09.4	-0.1
JQE	**Queens East**	1.51	311	*e*P	Pn	03 27 50.5	+0.3
JQE				*e*S	Sn	03 28 09.4	-0.1
JRS	**Jersey**	1.53	310	*e*P	Pn	03 27 50.6	+0.2
JRS				*e*S	Sn	03 28 09.7	-0.4
JRS	**Jersey**	1.53	310	*e*P	Pn	03 27 50.6	+0.2
JRS				*e*S	Sn	03 28 09.7	-0.4
JRS	**Jersey**	1.53	310	*e*P	Pn	03 27 50.6	+0.2
JRS				*e*S	Sn	03 28 09.7	-0.4
JSA	**Saint Aubin**	1.57	309	*e*P	Pn	03 27 51.1	+0.2
JSA				*e*S	Sn	03 28 11.1	+0.1
JSA				IAML		03 28 14.2	
	comp=N,41nm,0.3s						
JSA				IAML		03 28 16.4	
	comp=E,39nm,0.2s						
JSA	**Saint Aubin**	1.57	309	*e*P	Pn	03 27 51.1	+0.2
JSA				*e*S	Sn	03 28 11.1	+0.1
JSA				IAML		03 28 14.2	
	comp=N,41nm,0.3s						
JSA				IAML		03 28 16.4	
	comp=E,39nm,0.2s						
JSA	**Saint Aubin**	1.57	309	Pn	Pn	03 27 51.1	+0.2
JSA				Pg	Pb	03 27 52.6	+0.2
JSA	**Saint Aubin**	1.57	309	*e*P	Pn	03 27 51.1	+0.2
JSA	**Saint Aubin**	1.57	309	Pg	Pb	03 27 52.6	+0.2
JSA				*e*S	Sn	03 28 11.1	+0.1
JSA				Sg	Sb	03 28 12.9	+0.9
MFF	**Saint Martin d**	1.62	176	*e*Pn	Pn	03 27 52.9	+1.3
	SNR=1.0						
MFF	**Saint Martin d**	1.62	176	*e*P	Pg	03 27 54.8	+0.1
MFF				*e*Sn	Sn	03 28 13.4	+1.2
MFF				*e*Sg	Sg	03 28 16.5	+0.8
	comp=E,98nm,0.3s,SNR=1.0						
MFF	**Saint Martin d**	1.62	176	*e*Pn	Pn	03 27 52.9	+1.3
	SNR=1.0						
MFF				*e*Sn	Sn	03 28 13.4	+1.2
MFF				*e*Sg	Sg	03 28 16.5	+0.8
	comp=E,49nm,0.3s,SNR=1.0						
QUIF	**Quistinic**	1.94	262	*e*Pn	Pn	03 27 56.7	+0.7
	SNR=1.0						
QUIF	**Quistinic**	1.94	262	*e*Pg	Pb	03 28 00.1	+1.5
QUIF				*e*S	Sb	03 28 23.6	+1.0
QUIF				*e*Sg	Sb	03 28 25.0	+2.4
	comp=E,125nm,0.3s,SNR=1.0						
QUIF	**Quistinic**	1.94	262	*e*Pn	Pn	03 27 56.7	+0.7
	SNR=1.0						
QUIF	**Quistinic**	1.94	262	*e*Pg	Pb	03 28 00.1	+1.5
QUIF				*e*Sg	Sb	03 28 25.0	+2.4
	comp=E,63nm,0.3s,SNR=1.0						
ROSF	**Rostrenen**	1.98	275	*e*Pn	Pn	03 27 57.3	+0.7
	SNR=1.0						
ROSF	**Rostrenen**	1.98	275	*e*Pg	Pb	03 28 00.5	+1.1
	SNR=1.0						
ROSF				*e*Sn	Sn	03 28 20.5	-0.7
ROSF				*e*Sg	Sb	03 28 26.0	+2.1
	comp=E,118nm,0.4s,SNR=1.0						
ROSF	**Rostrenen**	1.98	275	*e*Pn	Pn	03 27 57.3	+0.7
	SNR=1.0						
ROSF	**Rostrenen**	1.98	275	*e*Pg	Pb	03 28 00.5	+1.1
	SNR=1.0						
ROSF				*e*Sn	Sn	03 28 20.5	-0.7
ROSF				*e*Sg	Sb	03 28 26.0	+2.1
	comp=E,59nm,0.4s,SNR=1.0						
HYF	**Humbligny**	2.20	114	*e*P	Pb	03 28 03.4	+0.2
HYF	**Humbligny**	2.20	114	*e*Pg	Pg	03 28 06.0	+0.1
HYF				*e*Sn	Sn	03 28 28.0	+1.3
HYF	**Humbligny**	2.20	114	*e*Pg	Pg	03 28 06.0	+0.1
HYF				*e*Sn	Sn	03 28 28.0	+1.3
TCF	**Toulx Ste Croi**	2.58	137	*e*Pn	Pn	03 28 06.2	+1.3
	SNR=1.0						
TCF	**Toulx Ste Croi**	2.58	137	*e*Pg	Pg	03 28 13.6	+0.5
TCF				*e*Sn	Sn	03 28 36.9	+0.9
	comp=E,19nm,0.3s						
TCF				*e*Sg	Sg	03 28 47.0	+0.5
	comp=E,19nm,0.3s						
TCF	**Toulx Ste Croi**	2.58	137	*e*Pn	Pn	03 28 06.2	+1.3
	SNR=1.0						
TCF	**Toulx Ste Croi**	2.58	137	*e*Pg	Pg	03 28 13.6	+0.5
TCF				*e*Sn	Sn	03 28 36.9	+0.9
	comp=E,9.5nm,0.3s						
TCF				*e*Sg	Sg	03 28 47.0	+0.5
	comp=E,9.5nm,0.3s						
HMNX	**Herstmonceux**	2.69	9	*e*P	Pn	03 28 06.8	+0.5
HMNX				IAML		03 28 56.0	
	comp=N,118nm,0.3s						
HMNX				IAML		03 28 58.6	
	comp=E,104nm,0.7s						
HMNX	**Herstmonceux**	2.69	9	*e*P	Pn	03 28 06.8	+0.5
HMNX				IAML		03 28 56.0	
	comp=N,118nm,0.3s						
HMNX				IAML		03 28 58.6	
	comp=E,104nm,0.7s						
HMNX	**Herstmonceux**	2.69	9	*e*P	Pn	03 28 06.8	+0.5
BGF	**Bois d’Agland**	2.71	127	*e*Pn	Pn	03 28 08.1	+1.4
	SNR=1.0						
BGF	**Bois d’Agland**	2.71	127	*e*Pg	Pg	03 28 15.2	-0.3
BGF				*e*Sn	Sn	03 28 40.1	+0.9
	comp=E,80nm,0.3s						
BGF	**Bois d’Agland**	2.71	127	*e*Pn	Pn	03 28 08.1	+1.4
	SNR=1.0						
BGF	**Bois d’Agland**	2.71	127	*e*Pg	Pg	03 28 15.2	-0.3
BGF				*e*Sn	Sn	03 28 40.1	+0.9
	comp=E,40nm,0.3s						
SSF	**Saint Saulge**	2.83	113	*e*Pn	Pn	03 28 09.6	+1.4
	SNR=1.0						
SSF	**Saint Saulge**	2.83	113	*e*Pg	Pg	03 28 17.5	-0.3
SSF				*e*Sn	Sn	03 28 42.7	+0.7
	comp=E,42nm,0.4s						
SSF				*e*Sg	Sg	03 28 54.9	+0.5
	comp=E,29nm,0.3s						
SSF	**Saint Saulge**	2.83	113	*e*Pn	Pn	03 28 09.6	+1.4
	SNR=1.0						
SSF	**Saint Saulge**	2.83	113	*e*Pg	Pg	03 28 17.5	-0.3
SSF				*e*Sn	Sn	03 28 42.7	+0.7
	comp=E,21nm,0.4s						
SSF				*e*Sg	Sg	03 28 54.9	+0.5
	comp=E,14nm,0.3s						
AVF	**Avril sur Loir**	2.86	119	*e*Pn	Pn	03 28 10.0	+1.3
	SNR=1.0						
AVF	**Avril sur Loir**	2.86	119	*e*Pg	Pg	03 28 17.8	-0.6
AVF				*e*Sn	Sn	03 28 43.6	+0.7
	comp=E,13nm,0.2s						
AVF	**Avril sur Loir**	2.86	119	*e*Pn	Pn	03 28 10.0	+1.3
	SNR=1.0						
AVF	**Avril sur Loir**	2.86	119	*e*Pg	Pg	03 28 17.8	-0.6
AVF				*e*Sn	Sn	03 28 43.6	+0.7
	comp=E,6.3nm,0.2s						
LOR	**Lormes**	2.97	107	*e*Pn	Pn	03 28 11.3	+1.1
	baz=288,SNR=1.0						
LOR	**Lormes**	2.97	107	*e*Pg	Pg	03 28 20.2	-0.3
	baz=289						
LOR				*e*Sn	Sn	03 28 46.1	+0.5
	comp=E,46nm,0.3s,baz=281						
LOR	**Lormes**	2.97	107	Pn	Pn	03 28 11.4	+1.1
LOR				Pg	Pg	03 28 20.2	-0.3
LOR				Sn	Sb	03 28 55.4	+3.1
LOR				Sg	Sg	03 28 59.9	+1.0
LOR	**Lormes**	2.97	107	*e*Pn	Pn	03 28 11.3	+1.1
	baz=288,SNR=1.0						
LOR	**Lormes**	2.97	107	*e*Pg	Pg	03 28 20.2	-0.3
	baz=289						
LOR				*e*Sn	Sn	03 28 46.1	+0.5
	comp=E,23nm,0.3s,baz=281						
RJF	**Les Rejaudoux**	3.17	156	*e*Pn	Pn	03 28 13.9	+0.9
	SNR=1.0						
RJF	**Les Rejaudoux**	3.17	156	*e*Pg	Pg	03 28 23.5	-0.9
RJF				*e*Sn	Sn	03 28 49.6	-1.0
	comp=E,9.1nm,0.3s,SNR=1.0						
RJF				*e*Sg	Sg	03 29 05.1	-0.3
	comp=E,47nm,0.3s						
RJF	**Les Rejaudoux**	3.17	156	*e*Pn	Pn	03 28 13.9	+0.9
	SNR=1.0						
RJF	**Les Rejaudoux**	3.17	156	*e*Pg	Pg	03 28 23.5	-0.9
RJF				*e*Sn	Sn	03 28 49.6	-1.0
	comp=E,4.6nm,0.3s,SNR=1.0						
RJF				*e*Sg	Sg	03 29 05.1	-0.3
	comp=E,24nm,0.3s						
SMF	**Signal de Mont**	3.23	118	*e*Pn	Pn	03 28 15.0	+1.3
	SNR=1.0						
SMF	**Signal de Mont**	3.23	118	*e*Pg	Pg	03 28 24.5	-0.9
SMF				*e*Sn	Sn	03 28 52.5	+0.6
	comp=E,7.6nm,0.3s						
SMF				*e*Sg	Sg	03 29 07.6	+0.4
	comp=E,23nm,0.4s						
SMF	**Signal de Mont**	3.23	118	*e*Pn	Pn	03 28 15.0	+1.3
	SNR=1.0						
SMF	**Signal de Mont**	3.23	118	*e*Pg	Pg	03 28 24.5	-0.9
SMF				*e*Sn	Sn	03 28 52.5	+0.6
	comp=E,3.8nm,0.3s						
SMF				*e*Sg	Sg	03 29 07.6	+0.4
	comp=E,12nm,0.4s						
DYA	**Yadsworthy**	3.25	315	*e*P	Pn	03 28 14.1	+0.1
DYA				IAML		03 29 08.1	
	comp=N,11nm,0.4s						
DYA				IAML		03 29 08.9	
	comp=E,8.8nm,0.5s						
DYA	**Yadsworthy**	3.25	315	*e*P	Pn	03 28 14.1	+0.1
DYA				IAML		03 29 08.1	
	comp=N,11nm,0.4s						
DYA				IAML		03 29 08.9	
	comp=E,8.8nm,0.5s						
DYA	**Yadsworthy**	3.25	315	Pg	Pn	03 28 14.2	+0.1
DYA	**Yadsworthy**	3.25	315	*e*P	Pn	03 28 14.1	+0.1
LFF	**La Frestale**	3.36	167	*e*Pn	Pn	03 28 16.6	+1.1
	SNR=1.0						
LFF	**La Frestale**	3.36	167	*e*Pg	Pg	03 28 28.2	+0.3
LFF				*e*Sn	Sn	03 28 54.6	-0.5
	SNR=1.0						
LFF				*e*Sg	Sg	03 29 10.7	-0.7
	comp=E,25nm,0.2s,SNR=1.0						
LFF	**La Frestale**	3.36	167	*e*Pn	Pn	03 28 16.6	+1.1
	SNR=1.0						
LFF	**La Frestale**	3.36	167	*e*Pg	Pg	03 28 28.2	+0.3
LFF				*e*Sn	Sn	03 28 54.6	-0.5
	SNR=1.0						
LFF				*e*Sg	Sg	03 29 10.7	-0.7
	comp=E,13nm,0.2s,SNR=1.0						
BAIF	**Baives**	3.49	56	*e*Pn	Pn	03 28 17.7	+0.3
	SNR=1.0						
BAIF	**Baives**	3.49	56	*e*Pg	Pg	03 28 29.5	-1.0
BAIF				*e*Sn	Sn	03 28 57.7	-0.7
	SNR=1.0						
BAIF				*e*Sg	Sg	03 29 13.7	-2.0
	comp=E,8.8nm,0.2s,SNR=1.0						
BAIF	**Baives**	3.49	56	*e*Pn	Pn	03 28 17.7	+0.3
	SNR=1.0						
BAIF	**Baives**	3.49	56	*e*Pg	Pg	03 28 29.5	-1.0
BAIF				*e*Sn	Sn	03 28 57.7	-0.7
	SNR=1.0						
BAIF				*e*Sg	Sg	03 29 13.7	-2.0
	comp=E,4.4nm,0.2s,SNR=1.0						
SFTF	**Sexfontaines**	3.58	88	*e*Pn	Pn	03 28 20.2	+1.7
SFTF	**Sexfontaines**	3.58	88	*e*Pg	Pg	03 28 32.1	0.0
	baz=267						
SFTF				*e*Sn	Sn	03 29 00.4	-0.1
	baz=280						
SFTF				*e*Sg	Sg	03 29 17.9	-0.5
	comp=E,24nm,0.2s,baz=265						
SFTF	**Sexfontaines**	3.58	88	*e*Pn	Pn	03 28 20.2	+1.7
SFTF	**Sexfontaines**	3.58	88	*e*Pg	Pg	03 28 32.1	0.0
	baz=267						
SFTF				*e*Sn	Sn	03 29 00.4	-0.1
	baz=280						
SFTF				*e*Sg	Sg	03 29 17.9	-0.5
	comp=E,12nm,0.2s,baz=265						
MEZF	**Maizieres J’vi**	3.59	83	*e*Pn	Pn	03 28 19.8	+1.1
	baz=272,SNR=1.0						
MEZF	**Maizieres J’vi**	3.59	83	*e*Pg	Pg	03 28 31.7	-0.6
	baz=266						
MEZF				*e*Sn	Sn	03 29 00.8	+0.1
MEZF				*e*Sg	Sg	03 29 18.1	-0.6
	comp=E,28nm,0.3s,baz=265,SNR=1.0						
MEZF	**Maizieres J’vi**	3.59	83	*e*Pn	Pn	03 28 19.8	+1.1
	baz=272,SNR=1.0						
MEZF	**Maizieres J’vi**	3.59	83	*e*Pg	Pg	03 28 31.7	-0.6
	baz=266						
MEZF				*e*Sn	Sn	03 29 00.8	+0.1
MEZF				*e*Sg	Sg	03 29 18.1	-0.6
	comp=E,14nm,0.3s,baz=265,SNR=1.0						
CAF	**Calviac**	3.68	153	*e*Pn	Pn	03 28 20.6	+0.7
	SNR=1.0						
CAF	**Calviac**	3.68	153	*e*Pg	Pg	03 28 33.4	-0.6
CAF				*e*Sn	Sn	03 29 00.9	-2.1
	comp=E,4.9nm,0.2s						
CAF				*e*Sg	Sg	03 29 21.4	-0.2
	comp=E,31nm,0.4s						
CAF	**Calviac**	3.68	153	*e*Pn	Pn	03 28 20.6	+0.7
	SNR=1.0						
CAF	**Calviac**	3.68	153	*e*Pg	Pg	03 28 33.4	-0.6
CAF				*e*Sn	Sn	03 29 00.9	-2.1
	comp=E,2.5nm,0.2s						
CAF				*e*Sg	Sg	03 29 21.4	-0.2
	comp=E,16nm,0.4s						
CCA1	**Carnmenellis**	3.78	303	Pg	Pn	03 28 21.5	+0.1
GIVF	**Givet**	3.86	59	*e*Pn	Pn	03 28 23.5	+1.1
	SNR=1.0						
GIVF	**Givet**	3.86	59	*e*Pg	Pg	03 28 36.7	-0.8
GIVF				*e*Sn	Sn	03 29 04.7	-2.8
	SNR=1.0						
GIVF				*e*Sg	Sg	03 29 26.2	-1.3
	comp=E,23nm,0.4s						
GIVF	**Givet**	3.86	59	*e*Pn	Pn	03 28 23.5	+1.1
	SNR=1.0						
GIVF	**Givet**	3.86	59	*e*Pg	Pg	03 28 36.7	-0.8
GIVF				*e*Sg	Sg	03 29 26.2	-1.3
	comp=E,11nm,0.4s						
MONQ	**Montcuq**	3.99	164	Pg	Pn	03 28 24.7	+0.6
PAGF	**Fort de Pagny**	4.04	83	*e*Pn	Pn	03 28 25.8	+0.9
	baz=258						
PAGF				*e*Sn	Sn	03 29 11.1	-0.7
	baz=264						
PAGF				*e*Sg	Sg	03 29 32.4	-0.7
	comp=E,18nm,0.4s						
PAGF	**Fort de Pagny**	4.04	83	*e*Pn	Pn	03 28 25.8	+0.9
	baz=258						
PAGF				*e*Sn	Sn	03 29 11.1	-0.7
	baz=264						
PAGF				*e*Sg	Sg	03 29 32.4	-0.7
	comp=E,8.9nm,0.4s						
HAU	**Haudompre**	4.46	90	*e*Pn	Pn	03 28 31.3	+0.5
	SNR=1.0						
HAU	**Haudompre**	4.46	90	*e*Pg	Pg	03 28 47.9	-1.2
HAU				*e*Sn	Sn	03 29 21.7	-0.8
	SNR=1.0						
HAU				*e*Sg	Sg	03 29 46.4	-0.5
	comp=E,29nm,0.3s						
HAU	**Haudompre**	4.46	90	*e*Pn	Pn	03 28 31.3	+0.5
	SNR=1.0						
HAU	**Haudompre**	4.46	90	*e*Pg	Pg	03 28 47.9	-1.2
HAU				*e*Sn	Sn	03 29 21.7	-0.8
	SNR=1.0						
HAU				*e*Sg	Sg	03 29 46.4	-0.5
	comp=E,15nm,0.3s						
CABF	**La Chapelle**	4.63	108	*e*Pn	Pn	03 28 35.3	+2.2
	SNR=1.0						
CABF				*e*Sn	Sn	03 29 25.5	-1.1
	comp=E,1.5nm,0.2s,SNR=1.0						
CABF				*e*Sg	Sg	03 29 51.0	-1.2
	comp=E,12nm,0.5s						
CABF	**La Chapelle**	4.63	108	*e*Pn	Pn	03 28 35.3	+2.2
	SNR=1.0						
CABF				*e*Sn	Sn	03 29 25.5	-1.1
	comp=E,0.8nm,0.2s,SNR=1.0						
CABF				*e*Sg	Sg	03 29 51.0	-1.2
	comp=E,6.2nm,0.5s						
VIVF	**Saint-Julien-l**	4.81	133	*e*Pn	Pn	03 28 36.8	+1.3
	SNR=1.0						
VIVF	**Saint-Julien-l**	4.81	133	*e*Pg	Pg	03 28 54.3	-1.3
VIVF				*e*Sg	Sg	03 29 56.4	-1.5
	comp=E,3.2nm,0.3s,SNR=1.0						
VIVF	**Saint-Julien-l**	4.81	133	*e*Pn	Pn	03 28 36.8	+1.3
	SNR=1.0						
VIVF	**Saint-Julien-l**	4.81	133	*e*Pg	Pg	03 28 54.3	-1.3
VIVF				*e*Sg	Sg	03 29 56.4	-1.5
	comp=E,1.6nm,0.3s,SNR=1.0						
HINF	**Hinteralfeld**	4.82	92	*e*Pn	Pn	03 28 35.9	+0.2
	SNR=1.0						
HINF				*e*Sn	Sn	03 29 30.0	-1.3
	comp=E,13nm,0.2s						
HINF	**Hinteralfeld**	4.82	92	*e*Pn	Pn	03 28 35.9	+0.2
	SNR=1.0						
HINF				*e*Sn	Sn	03 29 30.0	-1.3
	comp=E,6.4nm,0.2s						
LASF	**Ste Croix**	5.05	144	*e*Pn	Pn	03 28 39.7	+0.9
LASF	**Ste Croix**	5.05	144	*e*Pg	Pg	03 28 58.7	-1.6
LASF				*e*Sg	Sg	03 30 04.8	-0.9
	comp=E,5.7nm,0.4s,SNR=1.0						
LASF	**Ste Croix**	5.05	144	*e*Pn	Pn	03 28 39.7	+0.9
LASF	**Ste Croix**	5.05	144	*e*Pg	Pg	03 28 58.7	-1.6
LASF				*e*Sg	Sg	03 30 04.8	-0.9
	comp=E,2.8nm,0.4s,SNR=1.0						
CDF	**Champ du Feu**	5.07	85	*e*Pn	Pn	03 28 38.6	-0.5
	SNR=1.0						
CDF				*e*Sg	Sg	03 30 04.4	-1.7
	comp=E,14nm,0.4s,SNR=1.0						
CDF	**Champ du Feu**	5.07	85	*e*Pn	Pn	03 28 38.6	-0.5
	SNR=1.0						
CDF				*e*Sg	Sg	03 30 04.4	-1.7
	comp=E,6.8nm,0.4s,SNR=1.0						
SJPF	**Ste Jean**	5.14	188	*e*Pn	Pn	03 28 39.9	-0.2
	SNR=1.0						
SJPF	**Ste Jean**	5.14	188	*e*Pg	Pg	03 29 00.1	-2.0
SJPF				*e*Sn	Sn	03 29 35.6	-3.6
SJPF				*e*Sg	Sg	03 30 05.4	-3.3
	comp=E,5.9nm,0.4s,SNR=1.0						
SJPF	**Ste Jean**	5.14	188	*e*Pn	Pn	03 28 39.9	-0.2
	SNR=1.0						
SJPF	**Ste Jean**	5.14	188	*e*Pg	Pg	03 29 00.1	-2.0
MTLF	**Montolieu**	5.19	159	*e*Pn	Pn	03 28 41.1	+0.4
	SNR=1.0						
MTLF				*e*Sn	Sn	03 29 36.6	-3.6
MTLF				*e*Sg	Sg	03 30 08.3	-1.7
	comp=E,4.4nm,0.3s,SNR=1.0						
MTLF	**Montolieu**	5.19	159	Pg	Pn	03 28 41.3	+0.7
MTLF	**Montolieu**	5.19	159	*e*Pn	Pn	03 28 41.1	+0.4
	SNR=1.0						
MTLF				*e*Sg	Sg	03 30 08.3	-1.7
	comp=E,2.2nm,0.3s,SNR=1.0						
EPF	**Esparros**	5.21	175	*e*Pn	Pn	03 28 40.6	-0.4
	SNR=1.0						
EPF				*e*Sn	Sn	03 29 37.2	-3.6
EPF				*e*Sg	Sg	03 30 08.6	-2.1
	comp=E,6.6nm,0.4s,SNR=1.0						
EPF	**Esparros**	5.21	175	*e*Pn	Pn	03 28 40.6	-0.4
	SNR=1.0						
EPF				*e*Sg	Sg	03 30 08.6	-2.1
	comp=E,3.3nm,0.4s,SNR=1.0						
ETSF	**Etsaut**	5.32	182	*e*Pn	Pn	03 28 42.0	-0.6
ETSF	**Etsaut**	5.32	182	*e*Pg	Pg	03 29 03.5	-2.0
ETSF				*e*Sn	Sn	03 29 41.3	-2.3
ETSF				*e*Sg	Sg	03 30 12.5	-1.8
	comp=E,3.8nm,0.4s						
ETSF	**Etsaut**	5.32	182	*e*Pn	Pn	03 28 42.0	-0.6
ETSF	**Etsaut**	5.32	182	*e*Pg	Pg	03 29 03.5	-2.0
ETSF				*e*Sg	Sg	03 30 12.5	-1.8
	comp=E,1.9nm,0.4s						
ORIF	**Oris-en-Rattie**	5.39	125	*e*Pn	Pn	03 28 45.7	+2.1
	SNR=1.0						
ORIF				*e*Sg	Sg	03 30 14.7	-1.9
	comp=E,2.3nm,0.4s						
ORIF	**Oris-en-Rattie**	5.39	125	*e*Pn	Pn	03 28 45.7	+2.1
	SNR=1.0						
ORIF				*e*Sg	Sg	03 30 14.7	-1.9
	comp=E,1.1nm,0.4s						
ABH	**Alteburg**	5.43	69	Pg	Pn	03 28 44.6	+0.6
LPL	**La Plagne**	5.53	117	*e*Sg	Sg	03 30 19.4	-1.7
	comp=E,2.3nm,0.4s						
LPL	**La Plagne**	5.53	117	*e*Sg	Sg	03 30 19.4	-1.7
	comp=E,1.1nm,0.4s						

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*IDC **10** 03:29:02.7±0.6, 54°.67N×168°.56E, h0^{km}, mb4.3/31, mb1 4.5/32, mb1mx4.3/78, mbtmp4.4/32, MS3.8/16, Ms1 3.8/16, ms1mx3.6/75, Error ellipse: s-maj=15.8km s-min=10.8km az=161.0*

*BJI **10** 03:29:03.0, 54°.60N×168°.50E, h15^{km}, mb4.7/19, mB4.8/18, Ms4.8/6, Ms7 4.5/4*

*ISCJB **10** 03:29:04.0±0.1, 54°.52N±0°.03×168°.59E±0°.02, h24^{km}, mb4.6/206, MS4.0/19, Error ellipse: s-maj=4.6km s-min=1.8km az=177.0*

*KRSC **10** 03:29:06.0±1.5, 54°.55N×168°.31E, h79^{km}±25^{km}, ML4.8*

*MOS **10** 03:29:05.8±0.9, 54°.47N×168°.49E, h38^{km}, mb4.7/46, Error ellipse: s-maj=5.7km s-min=4.5km az=35.9*

*GCMT **10** 03:29:06.4±0.5, 54°.51N×168°.54E, h24^{km}±2^{km}, MW4.9/79, Moment Tensor Solution. s17,c17; s79,c100; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.23±.18; M$_{\theta\theta}$-2.34±.14; M$_{\phi\phi}$2.57±.14; M$_{r\theta}$0.33±.22; M$_{\theta\phi}$-0.56±.13; M$_{\phi r}$0.64±.17; Best double couple: M$_0$2.61700×10^{16} NP1:ϕ_s38.00000°,δ89.00000°,λ16.00000°. NP2: ϕ_s308.00000°,δ74.00000°,λ179.00000°. Principal axes: T 2.7550, Plg11.0000°, Azm264.0000°; N -0.2780, Plg74.0000°, Azm41.0000°; P -2.4790, Plg10.0000°, Azm172.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **10** 03:29:06.4±1.4, 54°.64N×168°.49E, h22^{km}±10^{km}, mb4.7/148 Error ellipse: s-maj=5.7km s-min=2.4km az=174.0*

ISC 10 03:29:06.4±0.3**, 54°.52N**±0°.05×**168°.67E**±0°.03**, h24^{km}, n655,** σ**1°.95**/571**, mb4.7**/206**, MS4.0**/19**, 13C-19D, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	**Bering**	1.71	295	*e*P	Pn	03 29 32.0	-2.6
BKI				*e*S	Sn	03 29 53.3	-2.3
BKI	**Bering**	1.71	295	*i* P	Pn	03 29 31.9	-2.6
BKI				*e*S	Sn	03 29 51.0	-4.6
BKI	**Bering**	1.71	295	PN	Pn	03 29 31.9	-2.6
BKI				S	Sn	03 29 51.0	-4.6
SMY	**Shemya**	3.69	117	*e*Pn	Pn	03 29 59.5	-2.4
SMY				*e*Sn	Sn	03 30 44.1	-0.5
SMY	**Shemya**	3.69	117	*e*PN	Pn	03 29 59.5	-2.4
KBTR	**Krutoberegovo**	3.75	299	*e*P	Pn	03 30 00.9	-1.7
KBTR				*e*S	Sn	03 30 44.7	-1.2
KBTR	**Krutoberegovo**	3.75	299	*e*P	Pn	03 30 00.5	-2.1
KBTR				*e*S	Sn	03 30 41.2	-4.7
KBTR	**Krutoberegovo**	3.75	299	PN	Pn	03 30 00.5	-2.1
KBG	**Krutoberegovo**	3.82	300	*e*P	Pn	03 30 02.0	-1.7
KBG				*e*S	Sn	03 30 45.7	-2.0
KBG	**Krutoberegovo**	3.82	300	*e*P	Pn	03 30 01.9	-1.7
KBG				*e*S	Sn	03 30 42.8	-4.9
KBG	**Krutoberegovo**	3.82	300	PN	Pn	03 30 01.9	-1.7
MKZ	**Mys Kozlova**	4.04	273	*e*P	Pn	03 30 05.0	-1.7
MKZ				*e*S	Sn	03 30 47.6	-5.6
MKZ	**Mys Kozlova**	4.04	273	*i* P	Pn	03 30 05.0	-1.7
MKZ				*e*S	Sn	03 30 48.8	-4.4
MKZ	**Mys Kozlova**	4.04	273	PN	Pn	03 30 05.0	-1.7
SMKR	**Semkarok**	4.58	300	*e*P	Pn	03 30 13.3	-0.9
SMKR	**Semkarok**	4.58	300	*e*P	Pn	03 30 13.8	-0.4
SMKR				*e*S	Sn	03 31 02.8	-3.9
SMKR	**Semkarok**	4.58	300	PN	Pn	03 30 13.8	-0.4
BDR	**Baidarnaya**	4.71	299	*e*P	Pn	03 30 13.8	-2.1
BDR	**Baidarnaya**	4.71	299	PN	Pn	03 30 13.8	-2.1
ZLN	**Zelenaya**	4.74	292	*e*P	Pn	03 30 16.7	+0.3
ZLN	**Zelenaya**	4.74	292	*e*P	Pn	03 30 15.4	-1.0
ZLN	**Zelenaya**	4.74	292	PN	Pn	03 30 15.4	-1.0
SRKR	**Sorokina**	4.76	300	*e*P	Pn	03 30 15.4	-1.3
SRKR	**Sorokina**	4.76	300	*e*P	Pn	03 30 16.2	-0.5
SRKR	**Sorokina**	4.76	300	PN	Pn	03 30 16.2	-0.5
CIRR	**Tsirk**	4.80	293	*e*P	Pn	03 30 16.6	-0.6
CIRR	**Tsirk**	4.80	293	PN	Pn	03 30 16.6	-0.6
LGNR	**Loginova**	4.82	292	*e*P	Pn	03 30 16.9	-0.8
LGNR	**Loginova**	4.82	292	PN	Pn	03 30 16.9	-0.8
BZMR	**Bezymyannaya**	4.89	290	*e*P	Pn	03 30 17.8	-0.7
BZMR	**Bezymyannaya**	4.89	290	PN	Pn	03 30 17.8	-0.7
BZWR	**Bezymyannyi-We**	4.90	291	*e*P	Pn	03 30 18.7	+0.1
BZWR	**Bezymyannyi-We**	4.90	291	PN	Pn	03 30 18.7	+0.1
KLY	**Klyuchi**	4.91	295	*e*P	Pn	03 30 15.6	-3.0
KLY	**Klyuchi**	4.91	295	PN	Pn	03 30 15.6	-3.0
KRSR	**Krestovskiy**	4.93	294	*e*P	Pn	03 30 17.7	-1.2
KRSR	**Krestovskiy**	4.93	294	PN	Pn	03 30 17.7	-1.2
KIRR	**Kirishev**	4.98	290	*e*P	Pn	03 30 18.7	-1.0
KIRR	**Kirishev**	4.98	290	PN	Pn	03 30 18.7	-1.0
TUMR	**Tumrok**	4.98	282	*e*P	Pn	03 30 18.2	-1.5
TUMR	**Tumrok**	4.98	282	PN	Pn	03 30 18.2	-1.5
KMNR	**Kamenistaya**	5.00	288	*e*P	Pn	03 30 19.0	-0.9
KMNR	**Kamenistaya**	5.00	288	PN	Pn	03 30 19.0	-0.9

KPT	Kopyto	5.05	290	eP	Pn	03 30 20.0	-0.6
KPT	Kopyto	5.05	290	PN	Pn	03 30 20.0	-0.6
KOZ	Kozyrevsk	5.26	291	eP	Pn	03 30 22.9	-0.5
KOZ	Kozyrevsk	5.26	291	PN	Pn	03 30 22.9	-0.5
SPN	Mys Shipunski	5.32	258	eP	Pn	03 30 22.4	-1.8
SPN				eS	Sn	03 31 18.5	-6.1
SPN	Mys Shipunski	5.32	258	eP	Pn	03 30 22.7	-1.5
SPN				eS	Sn	03 31 19.8	-4.8
SPN	Mys Shipunski	5.32	258	PN	Pn	03 30 22.7	-1.5
KII	Karymskiy	5.43	269	eP	Pn	03 30 24.3	-1.5
KII				eS	Sn	03 31 23.7	-3.7
KII	Karymskiy	5.43	269	PN	Pn	03 30 24.3	-1.5
OSSR	Ossora	5.65	329	eP	Pn	03 30 27.1	-1.6
OSSR	Ossora	5.65	329	PN	Pn	03 30 27.1	-1.6
NLC	Nalytchevo	5.68	260	eP	Pn	03 30 27.6	-1.6
NLC				eS	Sn	03 31 28.7	-4.9
NLC	Nalytchevo	5.68	260	PN	Pn	03 30 27.6	-1.6
ESO	Esso	5.88	288	eP	Pn	03 30 31.5	-0.4
ESO	Esso	5.88	288	PN	Pn	03 30 31.5	-0.4
SDLR	Sedlovina	5.92	262	P	Pn	03 30 31.2	-1.4
SDLR	Sedlovina	5.92	262	PN	Pn	03 30 31.2	-1.4
SMAR	Somma	5.97	262	eP	Pn	03 30 31.6	-1.8
SMAR	Somma	5.97	262	PN	Pn	03 30 31.6	-1.8
UGLR	Uglovaya	5.97	261	eP	Pn	03 30 32.2	-1.0
UGLR	Uglovaya	5.97	261	eP	Pn	03 30 32.3	-1.0
UGLR	Uglovaya	5.97	261	PN	Pn	03 30 32.3	-1.0
AVH	Avacha	6.01	262	eP	Pn	03 30 33.2	-0.5
AVH	Avacha	6.01	262	PN	Pn	03 30 33.2	-0.5
KOK	Koryaka	6.06	262	eP	Pn	03 30 34.0	-0.5
KOK	Koryaka	6.06	262	PN	Pn	03 30 34.0	-0.5
DALK	Dalny	6.07	260	eP	Pn	03 30 32.6	-1.9
DALK				eS	Sn	03 31 38.3	-4.7
DALK	Dalny	6.07	260	PN	Pn	03 30 32.6	-1.9
TILK	Tilichiki	6.10	348	eP	Pn	03 30 34.0	-0.9
TILK	Tilichiki	6.10	348	PN	Pn	03 30 34.0	-0.9
PET	Petropavlovsk	6.13	260	ePN	Pn	03 30 35.7	+0.4
PET				MLR	MLR		
	comp=Z,1µm,18.0s						
GNL	Ganaly	6.37	267	eP	Pn	03 30 37.9	-0.8
GNL	Ganaly	6.37	267	PN	Pn	03 30 37.9	-0.8
RUS	Russkaya	6.42	255	eP	Pn	03 30 36.5	-2.7
RUS	Russkaya	6.42	255	eP	Pn	03 30 37.9	-1.3
RUS				eS	Sn	03 31 47.0	-4.6
RUS	Russkaya	6.42	255	PN	Pn	03 30 37.9	-1.3
KRMR	Karymshinskiy	6.49	259	eP	Pn	03 30 38.6	-1.6
KRMR				eS	Sn	03 31 48.8	-4.6
KRMR	Karymshinskiy	6.49	259	PN	Pn	03 30 38.6	-1.6
MTVR	Mutnovka	6.58	256	eP	Pn	03 30 40.1	-1.6
MTVR				eS	Sn	03 31 51.3	-4.7
MTVR	Mutnovka	6.58	256	PN	Pn	03 30 40.1	-1.6
PALN	Palana	6.62	317	eP	Pn	03 30 42.3	+0.3
PALN	Palana	6.62	317	PN	Pn	03 30 42.3	+0.3
PEA1	Petropavlovsk-	6.65	262	ePn	Pn	03 30 41.6	-0.9
PETK	Petropavlovsk-	6.65	262	Pn	Pn	03 30 41.6	-0.9
	baz=76,slow=17						
PETK				LR	LR	03 33 29.1	
	comp=Z,844nm,18.3s,baz=80,slow=40						
PETK	Petropavlovsk-	6.65	262	ePn	Pn	03 30 41.4	-1.1
PETK				eSn	Sn	03 31 57.9	+0.4
PETK	Petropavlovsk-	6.65	262	ePN	Pn	03 30 41.4	-1.1
PETK				e		03 31 57.9	
ASAK	Asacha	6.78	256	eP	Pn	03 30 44.0	-0.3
ASAK				eS	Sn	03 31 56.5	-4.3
ASAK	Asacha	6.78	256	PN	Pn	03 30 44.0	-0.3
KDTR	Khodutka, Kamc	6.92	251	eP	Pn	03 30 44.9	-1.3
KDTR				eS	Sn	03 31 58.2	-5.9
KDTR	Khodutka, Kamc	6.92	251	eP	Pn	03 30 44.5	-1.7
KDTR				eS	Sn	03 31 57.7	-6.4
MIPR	Malaya Ipel'ka	7.47	257	eP	Pn	03 30 53.3	-0.4
MIPR	Malaya Ipel'ka	7.47	257	PN	Pn	03 30 53.3	-0.4
PAU	Pauzhetka	7.78	252	eP	Pn	03 30 56.9	-1.1
PAU	Pauzhetka	7.78	252	PN	Pn	03 30 56.9	-1.1
SKR	Severo-Kuril's	8.55	248	eP	Pn	03 31 07.3	-1.2
SKR	Severo-Kuril's	8.55	248	PN	Pn	03 31 07.3	-1.2
GSTR	Great Sitkin T	9.46	99	ePn	Pn	03 31 18.9	-2.1
ATKA	Atka Island	10.50	96	ePn	Pn	03 31 34.0	-1.1
ATKA				eSn	Sn	03 33 30.5	-1.4
MA2	Magadan	10.97	305	LR	LR	03 35 49.7	
	comp=Z,620nm,18.1s,baz=97,slow=38						
MA2	Magadan	10.97	305⇑	ePN	Pn	03 31 42.9	+1.2
MA2				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SEY	Seymchan	11.91	322	Pn	Pn	03 31 55.6	+1.1
	comp=Z,0.2nm,0.3s,baz=128,slow=13,SNR=15						
SEY	Seymchan	11.91	322⇑	iPN	Pn	03 31 56.3	+1.8
NIKH	Nikolski High	13.38	87	ePn	Pn	03 32 13.1	-1.4
UNV	Unalaska Valle	14.53	83	ePn	Pn	03 32 29.8	-0.5
AKUT	Akutan	14.89	81	ePn	Pn	03 32 34.1	-1.0
OKH	Okha	15.13	277	eP	Pn	03 32 28.8	-9.5
TYV	Tymovskoe	16.15	268	eP	P	03 32 54.2	-0.4
TYV				pmax	pmax		
	comp=Z,200nm,5.6s						
TYV				pmax	pmax		
	comp=Z,35nm,1.1s						
NKL	Nikolayevsk	16.54	277	eP	Pn	03 32 57.0	+0.6
NKL				pmax	pmax		
	comp=Z,52nm,1.0s						
NKL				MLR	MLR		
	comp=N,700nm,15.0s						
NKL				MLR	MLR		
	comp=E,600nm,15.0s						
NKL				MLR	MLR		
	comp=Z,500nm,15.0s						
YSS	Yuzh-Sakhalins	17.99	256	eP	P	03 33 16.9	+2.0
YSS				eS	Sn	03 36 35.7	+1.4
YSS				pmax	pmax		
	comp=Z,10.0nm,0.6s						
YSS				pmax	pmax		
	comp=Z,200nm,4.4s						
YSS				pmax	pmax		
	comp=N,200nm,4.5s						
YSS				pmax	pmax		
	comp=E,100nm,4.5s						
YSS				MLR	MLR		
	comp=Z,300nm,17.0s						
YSS				MLR	MLR		
	comp=N,400nm,15.0s						
YSS				MLR	MLR		
	comp=E,400nm,17.0s						
YUK	Yuzh-Kuril'sk	18.12	244	d iP	Pn	03 33 15.6	-0.6
YUK				eS	Sn	03 36 37.5	-0.1
YUK				MLR	MLR		
	comp=Z,276nm,17.0s						
CHGN	Chignik	18.68	71	eP	P	03 33 21.6	-0.8
	comp=Z,73nm,1.0s						
ASAJ	Asahikawa	19.82	249	P	Pn	03 33 37.0	+0.4
	comp=Z,0.4nm,0.3s,baz=73,slow=8.4,SNR=6.6						
ASAJ	Asahikawa	19.82	249	eP	P	03 33 34.0	-1.0
	comp=Z,38nm,1.3s						
GRNR	Gornyy	19.82	272	eP	Pn	03 33 38.1	+1.4
GRNR				pmax	pmax		
	comp=Z,84nm,1.0s						
ERM	Erimo	20.95	244⇓	eP	P	03 33 45.7	-1.6
ERM				pmax	pmax		
	comp=Z,14nm,1.0s						
OHAK	Old Harbor	21.33	67	eP	P	03 33 49.1	-2.1
	comp=Z,73nm,0.9s						
YAK	Yakutsk	21.54	306	eP	P	03 33 55.1	+1.6
YAK				e*PP	sP	03 34 07.5	+4.3
YAK				eS	S	03 37 51.8	+1.0
YAK				eSS	SnSn	03 38 20.0	+5.4
YAK				e		03 45 17.6	
YAK				pmax	pmax		
	comp=Z,47nm,1.1s						
YAK				pmax	pmax		
	comp=E,21nm,1.4s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.4s						
YAK				smax	smax		
	comp=E,121nm,4.4s						
YAK				smax	smax		
	comp=N,105nm,4.0s						
YAK				MLR	MLR		
	comp=Z,383nm,16.0s						
YAK				MLR	MLR		
	comp=N,443nm,16.0s						
YAK				MLR	MLR		
	comp=E,138nm,15.0s						
KDAK	Kodiak Island	21.62	65	P	P	03 33 53.5	-0.8
	comp=E,15nm,0.7s,baz=279,slow=7.9,SNR=17						
KDAK	Kodiak Island	21.62	65	eP	P	03 33 54.1	-0.3
	comp=E,16nm,0.7s						
KDAK	Kodiak Island	21.62	65	i P	P	03 33 53.6	-0.8
PPLA	Purkeypile	21.67	52	eP	P	03 33 57.2	+2.1
	comp=E,38nm,1.2s						
CAST	Castle Rocks	21.76	50	eP	P	03 33 57.8	+1.9
	comp=E,9.2nm,0.9s						
SKT	Skwentna	21.92	54	eP	P	03 33 59.2	+1.6
	comp=E,17nm,1.1s						
CNPM	China Poot	22.13	61	eP	P	03 34 00.0	+0.2
	comp=E,25nm,0.9s						
BRLK	Bradley Lake	22.29	60	eP	P	03 34 02.4	+0.8
	comp=E,16nm,0.8s						
SUA	Susitna One	22.29	55	eP	P	03 34 02.3	+0.6
	comp=E,35nm,0.9s						
BPAW	Bear Paw Mtn.	22.32	48	eP	P	03 34 02.6	+0.7
	comp=E,16nm,1.1s						
MLY	Manley	22.55	46	eP	P	03 34 05.1	+0.7
	comp=E,19nm,1.2s						
TRF	Thorofare Moun	22.57	50	eP	P	03 34 05.1	+0.4
	comp=E,32nm,0.8s						
RC01	Rabbit Creek A	22.79	56	eP	P	03 34 07.8	+1.0
	comp=E,6.3nm,0.8s						
BWN	Browne	22.99	48	eP	P	03 34 11.4	+2.5
	comp=E,34nm,1.0s						
PMR	Palmer	23.06	55	eP	P	03 34 09.2	-0.4
	comp=E,8.4nm,0.8s						
PMR	Palmer	23.06	55	eP	P	03 34 09.2	-0.4
PMR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
GHO	Glory Hole Cre	23.16	55	eP	P	03 34 11.9	+1.2
	comp=Z,15nm,1.2s						
COLD	Coldfoot	23.17	41	eP	P	03 34 11.1	+0.4
	comp=Z,13nm,0.8s						
MCK	McKinley	23.19	50	eP	P	03 34 11.1	+0.1
	comp=Z,11nm,1.0s						
MCK	McKinley	23.19	50	eP	P	03 34 11.1	+0.1
MCK				pmax	pmax		
	comp=Z,11nm,1.0s						
KLR	Kul'dur	23.21	272	P	P	03 34 10.1	-1.1
	comp=Z,2.8nm,1.0s,baz=51,slow=11,SNR=22						
KLR				LR	LR	03 43 46.8	
	comp=Z,26nm,18.2s,baz=58,slow=38						
KLR	Kul'dur	23.21	272	d eP	P	03 34 10.2	-1.1
SML	Sawmill	23.44	55	eP	P	03 34 13.2	-0.3
	comp=Z,36nm,0.8s						
SML	Sawmill	23.44	55	eP	P	03 34 13.2	-0.3
SML				pmax	pmax		
	comp=Z,36nm,0.8s						
MDM	Murphy Dome	23.60	47	eP	P	03 34 15.2	+0.2
	comp=Z,10nm,0.8s						
COLA	College	23.75	47	eP	P	03 34 16.9	+0.5
	comp=Z,26nm,0.8s						
COLA	College	23.75	47	eP	P	03 34 16.9	+0.5
COLA				pmax	pmax		
	comp=Z,26nm,0.8s						
CCB	Clear Creek Bu	23.75	47	eP	P	03 34 16.4	0.0
	comp=Z,12nm,0.8s						
TOLK	Toolik Lake Re	23.75	37	P	P	03 34 17.3	+0.9
	baz=255						
TOLK	Toolik Lake Re	23.75	37	eP	P	03 34 17.0	+0.6
	comp=Z,36nm,0.8s						
DHY	Denali Highway	23.87	51	eP	P	03 34 17.8	0.0
	comp=Z,12nm,0.9s						
SCM	Sheep Creek Mo	23.91	54	eP	P	03 34 18.1	0.0
	comp=Z,26nm,0.8s						
SCM	Sheep Creek Mo	23.91	54	eP	P	03 34 18.1	0.0
SCM				pmax	pmax		
	comp=Z,27nm,0.8s						
ZEA	Zeya	24.04	285	eP	P	03 34 18.7	-0.5
ZEA				pmax	pmax		
	comp=E,36nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,46nm,1.4s						
HDA	Harding Lake	24.11	48	eP	P	03 34 20.5	+0.8
	comp=Z,15nm,0.8s						
TIXI	Tiksi	24.15	330	P	P	03 34 19.0	-1.1
	comp=Z,10nm,0.7s,baz=115,slow=10,SNR=21						
TIXI	Tiksi	24.15	330	eP	P	03 34 18.4	-1.7
	comp=Z,50nm,1.5s						
TIXI	Tiksi	24.15	330	d iP	P	03 34 19.1	-1.0
TIXI				pmax	pmax		
	comp=Z,28nm,1.3s						
IL1	Eielson Array	24.15	47	eP	P	03 34 19.0	-1.2
ILAR	Eielson Array	24.15	47	P	P	03 34 19.2	-1.0
	comp=Z,8.8nm,0.9s,baz=246,slow=7.5,SNR=72						
ILAR				LR	LR	03 43 14.2	
	comp=Z,206nm,21.0s,baz=272,slow=35						
ILAR	Eielson Array	24.15	47	eP	P	03 34 19.2	-1.0
ILAR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ILB	Eielson Array	24.15	47	eP	P	03 34 19.6	-0.6
KLU	Klutina	24.60	55	eP	P	03 34 24.1	-0.3
	comp=Z,21nm,0.8s						
DIV	Divide	24.70	56	eP	P	03 34 25.3	0.0
	comp=Z,10.0nm,0.8s						
BMRM	Bremner River	25.29	56	eP	P	03 34 30.9	+0.4
	comp=Z,21nm,0.8s						
RAGM	Ragged Mountai	25.32	58	eP	P	03 34 31.8	+1.0
	comp=Z,21nm,1.0s						
EGAK	Eagle	26.61	47	eP	P	03 34 42.0	-0.4
	comp=Z,16nm,0.8s						
DAWY	Dawson	27.41	49	eP	P	03 34 49.9	+0.2
	comp=Z,17nm,0.8s						
MJB9	Matsu-Tunnel	27.58	242	eP	P	03 34 52.2	+0.8
	comp=Z,26nm,0.8s						
MAJO	Matsushiro	27.58	242	eP	P	03 34 52.2	+0.7
	comp=Z,25nm,0.8s						
MAJO	Matsushiro	27.58	242⇓	eP	P	03 34 51.7	+0.3
MAJO				pmax	pmax		
	comp=Z,27nm,0.8s						
MAT	Matsushiro	27.58	242	P	P	03 34 51.9	+0.5
MJAR	Matsushiro Arr	27.58	242	P	P	03 34 51.5	+0.1
	comp=Z,6.0nm,0.8s,baz=28,slow=7.7,SNR=19						
BOD	Bodaibo	29.92	299	eP	P	03 35 10.7	-1.3
HIA	Hailar	30.14	280⇓	iP	P	03 35 12.8	-1.3
HIA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KSRS	Korea Array	32.49	255	P	P	03 35 35.2	+0.5
	comp=Z,5.0nm,0.9s,baz=67,slow=13,SNR=6.2						
KS01	Wonju Array Si	32.49	255	eP	P	03 35 34.4	-0.4
KS15	Wonju Array Si	32.52	255	eP	P	03 35 35.2	+0.2
KSAR	Wonju Array Be	32.52	255	P	P	03 35 35.2	+0.2
KSAR	Wonju Array Be	32.52	255	P	P	03 35 35.3	+0.2
DLBC	Dease Lake	33.05	58	eP	P	03 35 41.6	+2.1
	comp=Z,8.3nm,0.9s						
H11N2	WAKE ISLAND Hy	34.75	183	T	T	04 12 30.2	
	baz=2.0,slow=76,SNR=1164						
H11N3	WAKE ISLAND Hy	34.77	183	T	T	04 12 31.3	
	baz=2.0,slow=76,SNR=1703						
H11N1	WAKE ISLAND Hy	34.77	183	T	T	04 12 31.6	
	baz=2.0,slow=76,SNR=1548						
H11S1	WAKE ISLAND Hy	35.98	183	T	T	04 14 04.1	
	baz=2.1,slow=76,SNR=555						
H11S3	WAKE ISLAND Hy	35.99	183	T	T	04 13 57.9	
	baz=2.1,slow=76,SNR=199						
H11S2	WAKE ISLAND Hy	35.99	183	T	T	04 14 05.8	
	baz=2.1,slow=76,SNR=569						
ULN	Ulaanbaatar	38.07	286	eP	P	03 36 22.5	-0.4
	comp=Z,15nm,1.3s						
ULN	Ulaanbaatar	38.07	286⇓	eP	P	03 36 22.3	-0.6
ULN				pmax	pmax		
	comp=Z,13nm,1.3s						
SONA1	Songino Array	38.44	286	eP	P	03 36 25.6	-0.4
SONA0	Songino Array	38.45	286	eP	P	03 36 25.8	-0.3
SONM	Songino Array	38.45	286	P	P	03 36 25.8	-0.3
	comp=Z,3.3nm,0.6s,baz=58,slow=8.0,SNR=14						
YKA	Yellowknife Ar	38.58	46	P	P	03 36 26.2	-0.6
	comp=Z,1.7nm,0.7s,baz=292,slow=7.4,SNR=6.4						
YKA	Yellowknife Ar	38.58	46	eP	P	03 36 26.8	0.0
YKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ZAK	Zakamensk	38.78	292	eP	P	03 36 27.8	-1.0
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
NLWA	Neilton Lookou	41.59	71	eP	P	03 36 53.5	+1.5
	comp=Z,19nm,1.3s						
KNGR	Kungurtug, Tuv	41.74	295⇓	eP	P	03 36 53.9	+0.6
G03D	McMinnville, O	43.23	73	P	P	03 36 58.1	-7.2
	baz=306						
I04A	Tendick Farm,	44.59	74	P	P	03 37 11.5	-4.8
	baz=307						
NEW	Newport	44.73	66	P	P	03 37 14.2	-3.2
	baz=306						
L02D	Cave Junction,	44.96	77	P	P	03 37 09.9	-9.4
	baz=308						
J04D	Umpqua Nationa	45.11	75	P	P	03 37 14.6	-6.0
	baz=308						
PINE	Pine Mountain	45.41	73	eP	P	03 37 24.4	+1.3
	comp=Z,9.8nm,1.1s						
J05D	Fort Rock, OR	45.57	74	P	P	03 37 14.9	-9.3
	baz=308						
YBH	Yreka Blue Hor	45.74	77	LR	LR	03 54 01.4	
	comp=Z,155nm,20.1s,baz=324,slow=33						
YBH	Yreka Blue Hor	45.74	77	eP	P	03 37 26.8	+1.3
	comp=Z,5.0nm,0.8s						
XAN	Xi'an	45.85	269	P	P	03 37 28.5	+2.1
XAN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,27nm,4.6s						
M02C	Callahan	45.88	77	P	P	03 37 22.5	-4.2
	baz=309						
WALA	Waterton Lakes	45.93	63	eP	P	03 37 27.0	0.0
	comp=Z,13nm,1.0s						
K05A	Summer Lake	46.12	74	eP	P	03 37 29.9	+1.2
	comp=Z,15nm,1.3s						
ZAA1	Zalesovo Array	46.19	305	eP	P	03 37 26.8	-2.0
ZALV	Zalesovo Beam	46.19	305	P	P	03 37 26.8	-2.0
	comp=Z,1.8nm,0.7s,baz=39,slow=8.4,SNR=5.0						
ZALV	Zalesovo Beam	46.19	305	eP	P	03 37 27.2	-1.6
ZALV	Zalesovo Beam	46.19	305	eP	P	03 37 27.2	-1.6
M04C	Macdoel	46.20	76	P	P	03 37 22.9	-6.4
	baz=309						
NVS	Novosibirsk	46.40	307	eP	P	03 37 30.0	-0.4
NVS				pmax	pmax		
	comp=Z,41nm,2.1s						
SPA0	Spitsbergen Ar	46.48	352	eP	P	03 37 29.4	-1.4
SPITS	Spitsbergen Ar	46.48	352	P	P	03 37 29.4	-1.4
	comp=Z,4.2nm,0.6s,baz=359,slow=5.8,SNR=8.8						
SPITS				LR	LR	03 57 18.6	
	comp=Z,99nm,19.2s,baz=150,slow=37						
JTMT	Jette	46.55	65	eP	P	03 37 32.7	+0.8
	comp=Z,12nm,0.8s						
BMO	Blue Mountains	46.75	70	eP	P	03 37 33.8	+0.4
	comp=Z,4.1nm,1.1s						
BMO	Blue Mountains	46.75	70	eP	P	03 37 33.8	+0.4
BMO				pmax	pmax		
	comp=Z,4.0nm,1.1s						
MOD	Modoc Plateau	46.99	75	eP	P	03 37 35.8	+0.4
	comp=Z,13nm,1.1s						
O03D	Paynes Creek	47.21	78	P	P	03 37 28.6	-8.5
	baz=310						
LZH	Lanzhou	47.37	275	eP	P	03 37 38.9	+0.5
LZH				pP	pP	03 37 45.5	-0.3
LZH				sP	sP	03 37 48.0	-0.7
LZH				S	S	03 44 32.2	+1.3
LZH				pmax	pmax		
	comp=Z,26nm,1.1s						
LZH				pmax	pmax		
	comp=Z,100nm,4.2s						
LZH				LR	LR		
	comp=Z,840nm,13.8s						
LZH				LR	LR		
	comp=Z,680nm,13.0s						
LZH				LR	LR		
	comp=Z,930nm,14.2s						
GTA	Gaotai	47.42	281	eP	P	03 37 38.5	-0.3
GTA				pP	pP	03 37 41.6	-4.5
GTA				sP	sP	03 37 44.5	-4.5
GTA				S	S	03 44 32.2	+0.7
GTA				sS	pS	03 44 40.8	+0.7
GTA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,73nm,5.8s						
GTA				LR	LR		
	comp=Z,450nm,14.8s						
GTA				LR	LR		
	comp=Z,460nm,15.8s						
GTA				LR	LR		
	comp=Z,480nm,15.5s						
DGZ	Jazzator, Alta	47.50	300	eP	P	03 37 38.4	-0.9
DGZ				pmax	pmax		
	comp=Z,5.0nm,1.5s						
ORV	Oroville	47.88	78	eP	P	03 37 42.3	+0.1
	comp=Z,5.2nm,0.9s						
ORV	Oroville	47.88	78	eP	P	03 37 42.3	+0.1
ORV				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BEKR	Beckworth	48.31	77	eP	P	03 37 46.4	+0.6
	comp=Z,4.1nm,0.9s						
MFID	Camas Ranch	48.49	70	eP	P	03 37 47.3	+0.3
	comp=Z,3.6nm,0.9s						
EGMT	Eagleton	48.74	62	P	P	03 37 42.4	-6.4
	baz=309						
PAHR	Pah Rah Range	48.98	76	eP	P	03 37 51.5	+0.7
	comp=Z,10nm,1.3s						
HLID	Hailey	49.17	69	eP	P	03 37 52.5	+0.2
	comp=Z,2.9nm,1.0s						
PNTR	Pine Nut	49.27	77	eP	P	03 37 54.3	+1.1
	comp=Z,16nm,0.7s						
BOZ	Bozeman (W)	49.33	66	eP	P	03 37 53.6	+0.2
	comp=Z,3.6nm,0.9s						
BOZ	Bozeman (W)	49.33	66	eP	P	03 37 53.6	+0.2
BOZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
YERR	Yerington	49.55	77	eP	P	03 37 57.5	+2.3
	comp=Z,17nm,1.0s						
BMN	Battle Mountai	49.70	74	eP	P	03 37 57.7	+1.3
	comp=Z,4.4nm,0.8s						
BMN	Battle Mountai	49.70	74	eP	P	03 37 57.7	+1.3
BMN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WAKR	Walker	49.77	78	eP	P	03 37 58.1	+1.2
	comp=Z,6.5nm,0.8s						
YHB	Horse Butte	50.12	66	eP	P	03 38 00.9	+1.3
	comp=Z,11nm,1.0s						
KVN	Kaiserville	50.15	76	eP	P	03 38 00.8	+1.0
	comp=Z,4.1nm,0.8s						
KVN	Kaiserville	50.15	76	eP	P	03 38 00.8	+1.0
KVN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NV01	Mina Array Sit	50.46	77	eP	P	03 38 02.6	+0.4
NVAR	Mina Array Bea	50.46	77	P	P	03 38 02.7	+0.5
	comp=Z,2.8nm,0.8s,baz=296,slow=7.3,SNR=18						
NVAR				LR	LR	03 56 04.0	
	comp=Z,99nm,20.9s,baz=100,slow=32						
YFT	Old Faithful	50.51	66	eP	P	03 38 05.0	+2.5
	comp=Z,11nm,1.1s						
NV11	Mina Array Sit	50.55	77	eP	P	03 38 03.8	+1.0
	comp=Z,0.3nm,1.1s						
MDPB	Devils Postpil	50.57	78	eP	P	03 38 04.4	+1.3
	comp=Z,6.0nm,1.0s						
YPP	Pitchstone Pla	50.64	66	eP	P	03 38 05.9	+2.3
	comp=Z,6.0nm,1.3s						
H17A	Grant Village	50.68	66	P	P	03 38 01.8	-2.1
	baz=311						
H17A	Grant Village	50.68	66	eP	P	03 38 05.8	+1.9
	comp=Z,10nm,1.1s						
IMW	Indian Meadow	50.82	67	eP	P	03 38 05.2	+0.3
	comp=Z,5.3nm,0.9s						
FLWY	Flagg Ranch	50.83	67	eP	P	03 38 06.0	+1.1
	comp=Z,8.6nm,0.9s						
RLMT	Red Lodge	50.89	65	P	P	03 37 58.7	-6.7
	baz=311						
RLMT	Red Lodge	50.89	65	eP	P	03 38 05.9	+0.5
	comp=Z,6.8nm,0.8s						
FXWY	Fox Creek	50.95	67	eP	P	03 38 06.5	+0.6
	comp=Z,3.2nm,1.0s						
KURK	Kurchatov	51.19	305	eP	P	03 38 05.7	-1.5
	comp=Z,11nm,0.8s						
KURK	Kurchatov	51.19	305	d iP	P	03 38 05.4	-1.8
KURK				pmax	pmax		
	comp=Z,20nm,1.3s						
LOHW	Long Hollow	51.19	67	eP	P	03 38 08.1	+0.5
	comp=Z,3.0nm,0.8s						
KURBB	Kurchatov Arra	51.29	305	P	P	03 38 06.5	-1.5
	comp=Z,5.7nm,0.7s,baz=53,slow=7.6,SNR=51						
LAO	LASA Array	51.42	61	eP	P	03 38 09.9	+0.7
	comp=Z,9.3nm,1.1s						
SUMG	Summit	51.80	10	eP	P	03 38 15.8	+3.8
	comp=Z,28nm,1.5s						
GATR	Gnd/Air Tx Cnt	51.92	82	eP	P	03 38 10.7	-2.3
CWC	Cottonwood Cre	51.98	79	P	P	03 38 06.9	-6.6
	baz=313						
GRAC	Grapevine Rang	51.99	78	P	P	03 38 08.3	-5.2
	baz=313						
MK31	Makanchi Array	52.00	300	eP	P	03 38 11.3	-2.1
MK31	Makanchi Array	52.00	300	eP	P	03 38 11.3	-2.1
MK32	Makanchi Array	52.00	300	eP	P	03 38 11.3	-2.2
MKAR	Makanchi Array	52.00	300	P	P	03 38 11.3	-2.1
	comp=Z,1.9nm,0.6s,baz=48,slow=7.2,SNR=23						
MKAR	Makanchi Array	52.00	300	eP	P	03 38 11.3	-2.1
	comp=Z,50nm,1.4s						
MKAR	Makanchi Array	52.00	300	eP	P	03 38 11.3	-2.1
MKAR				pmax	pmax		

	comp=Z,50nm,1.4s						
MK01	Makanchi Array	52.02	300	eP	P	03 38 10.9	-2.6
HWUT	Hardware Ranch	52.04	69	eP	P	03 38 14.6	+0.7
	comp=Z,5.5nm,1.1s						
R11A	Troy Canyon, C	52.06	75	eP	P	03 38 14.8	+0.7
	comp=Z,8.2nm,1.4s						
MAKZ	Makanchi	52.15	300	eP	P	03 38 12.5	-2.0
	comp=Z,5.4nm,0.9s						
MAKZ	Makanchi	52.15	300	eP	P	03 38 12.5	-2.0
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
DUG	Dugway, Tooele	52.32	72	P	P	03 38 11.7	-4.3
	baz=312						
DUG	Dugway, Tooele	52.32	72	eP	P	03 38 17.6	+1.6
	comp=Z,3.7nm,0.8s						
DUG	Dugway, Tooele	52.32	72	eP	P	03 38 17.6	+1.6
DUG				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BW06	Boulder Array	52.33	67	P	P	03 38 12.4	-3.8
	baz=312						
BW06	Boulder Array	52.33	67	eP	P	03 38 17.0	+0.8
	comp=Z,8.6nm,1.1s						
PD31	Pinedale Array	52.33	67	eP	P	03 38 16.9	+0.7
PDAR	Pinedale Array	52.33	67	P	P	03 38 16.2	0.0
	comp=Z,2.5nm,0.8s,baz=302,slow=3.7,SNR=22						
PDAR				LR	LR	04 00 23.1	
	comp=Z,125nm,19.8s,baz=336,slow=36						
MPMC	Manual Prospec	52.58	78	P	P	03 38 09.6	-8.4
	baz=313						
FURC	Furnace Creek,	52.65	78	P	P	03 38 12.0	-6.3
	baz=313						
TPNV	Topopah Spring	52.66	77	eP	P	03 38 19.3	+0.7
	comp=Z,9.1nm,1.1s						
TPNV	Topopah Spring	52.66	77	eP	P	03 38 19.3	+0.7
TPNV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
PSUT	Pine Spring	52.90	74	eP	P	03 38 23.0	+2.6
	comp=Z,3.7nm,0.8s						
BVAR	Borovoye Array	53.36	312	P	P	03 38 22.2	-1.2
	comp=Z,11nm,0.6s,baz=48,slow=7.8,SNR=50						
ARA0	ARCESS Array S	53.39	345	eP	P	03 38 22.0	-1.3
ARCES	ARCESS Array B	53.39	345	P	P	03 38 22.0	-1.3
	comp=Z,3.0nm,0.6s,baz=27,slow=9.9,SNR=11						
BRVK	Borovoye	53.39	312	eP	P	03 38 22.5	-1.0
	comp=Z,17nm,0.6s						
BRVK	Borovoye	53.39	312	d iP	P	03 38 22.5	-1.0
BRVK				pmax	pmax		
	comp=Z,11nm,0.5s						
GSC	Goldstone, Bar	53.51	79	P	P	03 38 17.5	-7.3
	baz=314						
GSC	Goldstone, Bar	53.51	79	eP	P	03 38 25.5	+0.7
	comp=Z,9.3nm,1.3s						
GSC	Goldstone, Bar	53.51	79	eP	P	03 38 25.5	+0.7
GSC				pmax	pmax		
	comp=Z,9.0nm,1.3s						
PASC	Pasadena Art C	53.53	81	eP	P	03 38 28.8	+3.9
TMUT	Trail Mountain	53.84	71	eP	P	03 38 30.0	+2.6
	comp=Z,7.1nm,0.7s						
CCUT	Cedar City	53.87	74	eP	P	03 38 29.1	+1.6
	comp=Z,2.4nm,0.8s						
MDND	Maddock	53.94	56	P	P	03 38 18.7	-9.0
	baz=313						
MDND	Maddock	53.94	56	eP	P	03 38 28.4	+0.8
	comp=Z,14nm,0.8s						
CIAC	Catalina I. Ai	53.95	81	eP	P	03 38 18.8	-9.2
K22A	Casper	54.03	65	P	P	03 38 24.2	-4.4
	baz=313						
ULM	Lac du Bonnet	54.03	52	P	P	03 38 28.2	-0.1
	comp=Z,2.9nm,0.7s,baz=314,slow=7.2,SNR=3.6						
ULM				LR	LR	04 02 06.8	
	comp=Z,146nm,18.8s,baz=326,slow=37						
ULM	Lac du Bonnet	54.03	52	eP	P	03 38 28.7	+0.4
ULM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
Q16A	Castle Valley	54.12	72	eP	P	03 38 30.6	+1.3
	comp=Z,6.2nm,0.9s						
P18A	Preston Nutter	54.13	70	eP	P	03 38 32.2	+2.7
	comp=Z,17nm,1.1s						
MTPU	Mount Pierson	54.18	73	eP	P	03 38 32.5	+2.5
	comp=Z,2.9nm,0.8s						
RSSD	Black Hills	54.30	62	P	P	03 38 25.3	-5.3
	baz=313						
RSSD	Black Hills	54.30	62	eP	P	03 38 30.9	+0.2
	comp=Z,5.2nm,0.7s						
RSSD	Black Hills	54.30	62	eP	P	03 38 30.9	+0.2
RSSD				pmax	pmax		
	comp=Z,5.0nm,0.7s						
LCMT	Little Creek M	54.31	75	eP	P	03 38 32.1	+1.4
	comp=Z,3.8nm,0.9s						
SRU	San Rafael Swe	54.34	71	eP	P	03 38 32.0	+1.1
	comp=Z,14nm,0.8s						
SRU	San Rafael Swe	54.34	71	eP	P	03 38 32.0	+1.1
SRU				pmax	pmax		
	comp=Z,14nm,0.8s						
GMRC	Granite Mounta	54.54	78	eP	P	03 38 31.1	-1.2
KNB	Kanab	54.55	74	eP	P	03 38 33.9	+1.5
	comp=Z,6.6nm,0.9s						
KNB	Kanab	54.55	74	eP	P	03 38 33.9	+1.5
KNB				pmax	pmax		
	comp=Z,7.0nm,0.9s						
U15A	North Rim	55.27	74	eP	P	03 38 38.8	+1.0
	comp=Z,3.3nm,0.8s						
SFJD	Kangerlussuaq	55.27	18	LR	LR	04 03 30.8	
	comp=Z,55nm,20.7s,baz=332,slow=38						
IRM	Iron Mountain	55.28	78	P	P	03 38 29.6	-8.1
	baz=315						
W13A	Hualapai Mount	55.32	77	eP	P	03 38 38.7	+0.6
	comp=Z,3.1nm,0.8s						
AGMN	Agassiz Nation	55.41	54	eP	P	03 38 38.9	+0.6
	comp=Z,4.3nm,0.9s						
PV09	Paradox Valley	55.54	71	eP	P	03 38 41.6	+1.8
PV21	Cone Mtn., Par	55.59	70	eP	P	03 38 41.7	+1.7
	comp=Z,15nm,1.4s						
PV23	Carpenter Ridg	55.64	70	eP	P	03 38 41.4	+0.9
	comp=Z,8.6nm,0.8s						
ARU	Arti	55.66	321	P	P	03 38 38.9	-1.0
	comp=Z,4.9nm,0.4s,baz=54,slow=3.1,SNR=7.4						
ARU	Arti	55.66	321	eP	P	03 38 38.7	-1.2
	comp=Z,6.6nm,0.6s						
ARU	Arti	55.66	321	i P	P	03 38 38.8	-1.2
ARU				pmax	pmax		
	comp=Z,7.0nm,1.0s						
PV14	Lion Creek, Pa	55.69	71	eP	P	03 38 41.8	+1.0
	comp=Z,6.3nm,0.7s						
PV22	Blue Mesa, Par	55.71	70	eP	P	03 38 42.0	+1.2
	comp=Z,8.8nm,1.0s						
PV17	East Wray Mesa	55.79	71	eP	P	03 38 42.3	+0.8
	comp=Z,13nm,0.7s						
PV16	Nyswonger Mesa	55.80	71	eP	P	03 38 43.1	+1.6
	comp=Z,8.1nm,1.0s						
PRGR	Permogore	55.81	331	eP	P	03 38 40.0	-0.9
PRGR				pmax	pmax		
	comp=Z,20nm,0.5s						
PV11	David Mesa, Pa	55.83	71	eP	P	03 38 42.8	+1.1
	comp=Z,13nm,0.8s						
PV18	Skein Mesa, Pa	55.85	71	eP	P	03 38 43.0	+1.1
	comp=Z,8.9nm,0.7s						
PV12	Saucer Basin,	55.85	70	eP	P	03 38 42.8	+0.9
	comp=Z,8.8nm,0.8s						
PV03	Paradox Valley	55.87	71	eP	P	03 38 42.7	+0.7
PV13	Radium Mtn., P	55.96	71	eP	P	03 38 43.5	+0.8
	comp=Z,24nm,0.7s						
PV02	Paradox Valley	55.97	71	eP	P	03 38 44.8	+2.0
	comp=Z,8.1nm,0.7s						
PV01	Paradox Valley	56.11	70	eP	P	03 38 46.8	+3.0
SMCO	Snowmass	56.24	68	eP	P	03 38 45.6	+0.7
	comp=Z,4.3nm,1.0s						
B35A	Bob, Littlefor	56.36	53	P	P	03 38 41.1	-4.0
	baz=316						
WUAZ	Wupatki	56.44	75	eP	P	03 38 47.1	+1.0
	comp=Z,16nm,1.5s						
ISCO	Idaho Springs	56.53	67	P	P	03 38 43.9	-2.9
	baz=315						
ISCO	Idaho Springs	56.53	67	eP	P	03 38 47.9	+1.1
	comp=Z,6.8nm,1.0s						
ISCO	Idaho Springs	56.53	67	eP	P	03 38 47.9	+1.1
ISCO				pmax	pmax		
	comp=Z,7.0nm,1.0s						
Y14A	Wickenburg	56.66	77	eP	P	03 38 48.1	+0.6
	comp=Z,4.4nm,1.0s						
C35A	Jirik Farms, M	56.72	53	P	P	03 38 42.4	-5.3
	baz=316						
G32A	Webster	56.80	57	P	P	03 38 43.2	-5.0
	baz=315						
MVCO	Mesa Verde	56.82	71	P	P	03 38 42.4	-6.4
	baz=315						
MVCO	Mesa Verde	56.82	71	eP	P	03 38 48.3	-0.5
	comp=Z,4.1nm,0.9s						
D35A	Remer	57.14	54	P	P	03 38 45.2	-5.4
	baz=316						
X16A	Lo Mia Camp, P	57.20	76	eP	P	03 38 53.1	+1.6
	comp=Z,4.3nm,0.9s						
S22A	4UR Ranch, Cre	57.35	70	P	P	03 38 50.8	-1.8
	baz=315						
S22A	4UR Ranch, Cre	57.35	70	eP	P	03 38 54.2	+1.6
	comp=Z,7.3nm,1.0s						
E35A	Pequot Lakes	57.35	54	P	P	03 38 44.4	-7.8
	baz=316						
G33A	Ortonville	57.36	57	P	P	03 38 47.7	-4.5
	baz=316						
H32A	Carlson Farm,	57.37	58	P	P	03 38 43.7	-8.6
	baz=316						
F34A	Alexandria	57.50	56	P	P	03 38 45.3	-7.9
	baz=316						
C37A	Embarrass	57.53	52	P	P	03 38 44.1	-9.4
	baz=316						
OGNE	Ogallala	57.60	64	P	P	03 38 47.1	-7.0
	baz=315						
W18A	Petrified Fore	57.65	74	P	P	03 38 47.9	-6.7
	baz=315						
EYMN	Ely	57.69	52	P	P	03 38 48.0	-6.5
	baz=317						
EYMN	Ely	57.69	52	eP	P	03 38 54.3	-0.3
	comp=Z,5.6nm,0.8s						
F35A	Swanville	57.78	55	P	P	03 38 49.0	-6.2
	baz=316						
D37A	Cotton	57.84	53	P	P	03 38 48.4	-7.2
	baz=317						
E36A	McGregor	57.92	54	P	P	03 38 48.3	-7.8
	baz=316						
C38A	Sawbill Land.	57.96	52	P	P	03 38 47.6	-8.9
	baz=317						
KLMR	Klimovskoe	58.11	333	eP	P	03 38 55.4	-1.9
KLMR				pmax	pmax		
	comp=Z,22nm,1.4s						
KLMR	Klimovskoe	58.11	333	eP	P	03 38 55.4	-1.9
KLMR				AMP		03 38 57.4	
	comp=Z,22nm,1.4s						
F36A	Milaca	58.27	54	P	P	03 38 51.9	-6.8
	baz=317						
ECSD	EROS Data Cent	58.34	58	P	P	03 38 50.3	-8.8
	baz=316						
ECSD	EROS Data Cent	58.34	58	eP	P	03 38 58.7	-0.4
	comp=Z,2.4nm,0.8s						
H35A	Sunnyside Ranc	58.50	56	P	P	03 38 52.2	-8.1
	baz=316						
E38A	The Farm, Brul	58.65	53	P	P	03 38 53.9	-7.3
	baz=317						
FRU	Bishkek	58.67	301	eP	P	03 39 02.0	+0.5
F38A	Pierce - Schro	58.98	53	P	P	03 38 55.0	-8.6
	baz=317,SNR=6.2						
H36A	Jessenland, He	59.03	56	P	P	03 38 59.2	-4.7
	baz=317,SNR=7.9						
SPMN	Marine on St.	59.09	55	P	P	03 38 56.8	-7.5
	baz=317						
T25A	Trinidad	59.10	68	P	P	03 38 58.6	-6.2
	baz=316						
T25A	Trinidad	59.10	68	eP	P	03 39 05.8	+0.9
	comp=Z,5.7nm,0.9s						
BGNE	Belgrade	59.27	61	P	P	03 39 02.8	-2.9
	baz=316						
E39A	Mellen	59.28	52	P	P	03 39 02.3	-3.3
	baz=318						
I36A	Fitzsimmons Fa	59.40	56	P	P	03 39 01.1	-5.4
	baz=317						
F39A	Loretta	59.46	53	P	P	03 39 03.7	-3.2
	baz=318						
H37A	Dierke Farm, C	59.51	55	P	P	03 39 01.3	-5.9
	baz=317						
E40A	Wakefield	59.53	52	P	P	03 39 01.1	-6.3
	baz=318,SNR=6.5						
G38A	Ridgeland	59.58	54	P	P	03 39 02.4	-5.3
	baz=318						
TASM	ASL Pad, Albuq	59.59	72	P	P	03 39 01.2	-7.0
	baz=316						
ANMO	Albuquerque	59.60	72	LR	LR	04 02 38.1	
	comp=Z,110nm,21.0s,baz=280,slow=34						
ANMO	Albuquerque	59.60	72	eP	P	03 39 08.5	+0.3
	comp=Z,2.5nm,0.7s						
ANMO	Albuquerque	59.60	72⇑	eP	P	03 39 07.7	-0.5
ANMO				pmax	pmax		
	comp=Z,1.0nm,1.3s						
TASL	Snake Pit, Alb	59.60	72	P	P	03 38 59.3	-9.0
	baz=316						
D41A	Chassel	59.68	51	P	P	03 39 04.4	-4.0
	baz=318						
I37A	Lemond, Waseca	59.70	56	P	P	03 39 04.3	-4.3
	baz=317,SNR=8.1						
I37A	Lemond, Waseca	59.70	56	eP	P	03 39 08.9	+0.4
	comp=Z,15nm,0.8s						
J36A	Seneca 1, Swea	59.75	57	P	P	03 39 05.1	-3.8
	baz=317,SNR=5.2						
J36A	Seneca 1, Swea	59.75	57	eP	P	03 39 08.9	0.0
	comp=Z,8.8nm,0.8s						
F40A	Park Falls	59.83	52	P	P	03 39 04.6	-4.8
	baz=318						
E41A	Kenton	59.95	51	P	P	03 39 03.9	-6.4
	baz=318						
G40A	Rib Lake	60.28	53	P	P	03 39 07.4	-5.1
	baz=318						
CBKS	Cedar Bluff	60.36	64	P	P	03 39 07.8	-5.5
	baz=317						
CBKS	Cedar Bluff	60.36	64	eP	P	03 39 13.0	-0.3
	comp=Z,11nm,0.8s						
CBKS	Cedar Bluff	60.36	64	eP	P	03 39 13.0	-0.3
CBKS				pmax	pmax		
	comp=Z,11nm,0.8s						
KSH	Kashi	60.42	297	P	P	03 39 16.4	+2.7
KSH				ePcP	PcP	03 40 02.4	+4.0
KSH				PP	PP	03 41 31.4	+4.8
KSH				S	S	03 47 25.2	-2.0
KSH				ScS	SKKSac	03 49 01.5	-1.1
KSH				pmax	pmax		
	comp=Z,99nm,2.4s						
KSH				pmax	pmax		
	comp=Z,120nm,3.5s						
AKTO	Aktyubinsk	60.46	317	P	P	03 39 12.4	-1.3
	comp=Z,4.4nm,0.7s,baz=48,slow=7.5,SNR=13						
AKTO				LR	LR	04 07 56.6	
	comp=Z,236nm,18.8s,baz=46,slow=39						
KK31	Karatay Array	60.49	304	eP	P	03 39 12.7	-1.3
KK31	Karatay Array	60.49	304	eP	P	03 39 12.7	-1.3
KKAR	Karatay Array	60.49	304	eP	P	03 39 12.7	-1.3
KKAR	Karatay Array	60.49	304	eP	P	03 39 12.7	-1.3
K37A	Belmond	60.51	57	P	P	03 39 11.2	-3.0
	baz=318						
ABKAR	Akbulak array	60.59	315	eP	P	03 39 13.2	-1.3
FIA0	FINESS Array S	60.66	340	eP	P	03 39 13.4	-1.4
FIA0	FINESS Array S	60.66	340	eP	P	03 39 13.4	-1.4
FINES	FINESS Array B	60.66	340	P	P	03 39 13.4	-1.4
	comp=Z,2.6nm,0.8s,baz=36,slow=7.1,SNR=7.7						
FINES				LR	LR	04 11 49.6	
	comp=Z,93nm,18.6s,baz=56,slow=42						
FINES	FINESS Array B	60.66	340	eP	P	03 39 13.7	-1.1
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
J38A	Wedel Dairy, R	60.66	56	P	P	03 39 12.1	-3.1
	baz=318						
G42A	Mountain	61.12	52	P	P	03 39 16.7	-1.5
	baz=319						
I40A	Norwalk	61.12	54	P	P	03 39 16.6	-1.6
	baz=319						
F43A	Flat Rock, Esc	61.24	51	P	P	03 39 17.2	-1.9
	baz=319						
L38A	Oak Wood Farm,	61.31	57	P	P	03 39 15.7	-3.9
	baz=318						
K39A	Oelwein	61.41	56	P	P	03 39 17.6	-2.7
	baz=318						
J40A	Soldiers Grove	61.44	55	P	P	03 39 17.4	-3.0
	baz=319						
SKNT	Sakolnakorn	61.69	259	P	P	03 39 22.6	+0.2
	comp=Z,11nm,0.9s						
N37A	Lee Faris, Mou	61.74	59	P	P	03 39 14.8	-7.7
	baz=318						
N37A	Lee Faris, Mou	61.74	59	eP	P	03 39 22.5	0.0
	comp=Z,12nm,0.8s						
L39A	Vinton	61.80	56	P	P	03 39 15.3	-7.5
	baz=319						
J41A	Loganville	61.81	54	P	P	03 39 18.3	-4.6
	baz=319						
I42A	Draeger Farm,	61.92	53	P	P	03 39 16.3	-7.4
	baz=319						
O37A	Wolven Farm, M	62.22	59	P	P	03 39 21.0	-4.7
	baz=318						
L40A	Anamosa	62.22	56	P	P	03 39 18.7	-7.0
	baz=319						
K41A	Shullsburg	62.24	55	P	P	03 39 24.3	-1.6
	baz=319						
J42A	Columbus	62.26	54	P	P	03 39 22.0	-3.9
	baz=319						
I43A	Langenfeld Bro	62.28	53	P	P	03 39 18.7	-7.4
	baz=320						
L41A	Preston	62.56	55	P	P	03 39 24.2	-3.7
	baz=319						
K42A	Prairie Point,	62.57	54	P	P	03 39 24.7	-3.3
	baz=319						
MNTX	Cornudas Mount	62.62	73	eP	P	03 39 29.1	+0.6
	comp=Z,7.8nm,0.8s						
LAMP	Lampang	62.97	264	P	P	03 39 35.1	+4.1
	comp=Z,2.3nm,0.6s						
L42A	Oliver, Polo	63.01	55	P	P	03 39 27.5	-3.4
	baz=320						
M41A	Milan	63.07	56	P	P	03 39 23.1	-8.3
	baz=319						
CMMT	Chiang Mai	63.14	265	P	P	03 39 34.8	+2.7
	comp=Z,11nm,1.0s,comp=Z,640nm						
CHTO	Chiang Mai	63.14	265	eP	P	03 39 32.5	+0.4
	comp=Z,9.7nm,0.9s						
CHTO	Chiang Mai	63.14	265	eP	P	03 39 32.5	+0.4
CHTO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CHTO	Chiang Mai	63.14	265	P	P	03 39 34.8	+2.7
	comp=Z,49nm,1.0s						
SIJI	Sorong	63.20	223	P	P	03 39 33.2	+0.7
	comp=Z,4.8nm,0.6s,baz=0.9,slow=11,SNR=3.9						
NC204	NORSAR Array S	63.23	348	eP	P	03 39 32.0	-0.2
NC405	NORSAR Array S	63.27	348	eP	P	03 39 32.2	-0.2
O40A	La Belle	63.38	58	P	P	03 39 27.8	-5.6
	baz=319,SNR=5.8						
NB201	NORSAR Array S	63.39	348	eP	P	03 39 33.0	-0.2
Q38A	Cooks Store, C	63.40	60	P	P	03 39 29.0	-4.6
	baz=319						
NB2	NORSAR Subarra	63.41	348	P	P	03 39 32.4	-0.9
	comp=Z,3.4nm,0.6s,baz=15,slow=6.9						
NOA	NORSAR Array B	63.41	348	LR	LR	04 06 40.1	
	comp=Z,46nm,21.7s,baz=220,slow=36						
CM31	Chiang Mai Arr	63.42	265	eP	P	03 39 33.9	-0.1
CMAR	Chiang Mai Arr	63.42	265	P	P	03 39 33.9	-0.1
	comp=Z,3.9nm,0.7s,baz=22,slow=7.5,SNR=17						
CM01	Chiang Mai Arr	63.44	265	eP	P	03 39 33.8	-0.3
L44A	Lake County Fo	63.71	54	P	P	03 39 28.4	-7.1
	baz=320						
PBKT	Sadao Pong	63.74	262	P	P	03 39 39.3	+3.2
	comp=Z,5.8nm,0.8s,comp=Z,1µm						
P40A	Paris	63.75	58	P	P	03 39 29.6	-6.3
	baz=319						
P40A	Paris	63.75	58	eP	P	03 39 35.4	-0.5
	comp=Z,7.4nm,1.0s						
R38A	Fenwick Farm,	63.84	61	P	P	03 39 29.5	-7.0
	baz=319						
OBN	Obninsk	63.87	332⇑	eP	P	03 39 34.1	-2.3
OBN				e		03 41 55.1	
OBN				eS	S	03 48 40.2	+30
OBN				pmax	pmax		
	comp=Z,13nm,1.2s						
OBN				MLR	MLR		
	comp=Z,110nm,15.0s						
WMOK	Wichita Mounta	63.93	66	P	P	03 39 30.1	-7.1
	baz=318						
WMOK	Wichita Mounta	63.93	66	eP	P	03 39 37.1	-0.1
	comp=Z,5.7nm,0.9s						
WMOK	Wichita Mounta	63.93	66	eP	P	03 39 37.1	-0.1
WMOK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HFS	Hagfors	63.96	346	P	P	03 39 35.7	-1.2
	comp=Z,2.3nm,0.5s,baz=9.5,slow=4.5,SNR=15						
Q40A	Laux Farm, Aux	64.14	59	P	P	03 39 30.4	-8.1
	baz=320						
R39A	Chumby, Stover	64.18	60	P	P	03 39 32.9	-5.9
	baz=319						
S38A	Stockton	64.27	61	P	P	03 39 30.5	-8.9
	baz=319						
HDIL	Hopedale	64.31	56	P	P	03 39 36.7	-2.8
	baz=320						
HDIL	Hopedale	64.31	56	eP	P	03 39 39.3	-0.3
	comp=Z,12nm,0.8s						
P42A	Winchester	64.55	57	P	P	03 39 37.8	-3.3
	baz=320						
R40A	Maddies Statio	64.59	59	P	P	03 39 33.8	-7.6
	baz=320						
R40A	Maddies Statio	64.59	59	eP	P	03 39 40.3	-1.1
	comp=Z,11nm,1.4s						
Q41A	Truxton	64.59	58	P	P	03 39 32.8	-8.7
	baz=320						
M45A	Boilermakers S	64.63	54	P	P	03 39 37.3	-4.3
	baz=321						
N44A	Piper City	64.68	55	P	P	03 39 40.0	-1.9
	baz=320						
R41A	Rosebud	65.03	59	P	P	03 39 36.0	-8.2
	baz=320						
ABTX	Abilene, Hawle	65.07	68	P	P	03 39 36.6	-8.1
	baz=319						
ABTX	Abilene, Hawle	65.07	68	eP	P	03 39 44.6	-0.1
	comp=Z,6.7nm,0.9s						
SRAK	Srakaew	65.17	259	P	P	03 39 46.7	+1.3
	comp=Z,41nm,1.0s,comp=Z,612nm						
CCM	Cathedral Cave	65.28	59	P	P	03 39 39.9	-6.0
	baz=320						
O45A	Potomac	65.30	55	P	P	03 39 42.2	-3.8
	baz=321						
R42A	Luebbering	65.33	58	P	P	03 39 43.2	-3.0
	baz=320						
T40A	Mansfield	65.34	60	P	P	03 39 37.9	-8.4
	baz=320						
TX31	Lajitas Ar. Si	65.37	74	eP	P	03 39 47.0	+0.3
LTX	Lajitas	65.37	74	eP	P	03 39 47.0	+0.2
LTX	Lajitas	65.37	74	eP	P	03 39 47.0	+0.2
TXAR	Lajitas Array	65.37	74	P	P	03 39 47.0	+0.2
	comp=Z,2.4nm,0.6s,baz=304,slow=4.4,SNR=38						
TXAR	Lajitas Array	65.37	74	eP	P	03 39 46.9	+0.2
TXAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
S41A	Jillco Farms,	65.39	59	P	P	03 39 43.2	-3.5
	baz=320						
UTHA	Uthaitani	65.43	262	P	P	03 39 50.9	+3.8
	comp=Z,4.2nm,0.9s						
U39A	Green Forest	65.44	62	P	P	03 39 39.0	-8.0
	baz=320,SNR=6.2						
P44A	Sand Creek, Wi	65.48	56	P	P	03 39 40.2	-7.0
	baz=321						
SFIN	Lafayette	65.49	54	P	P	03 39 45.5	-1.7
	baz=321						
LPIG	La Paz	65.60	82	LR	LR	04 02 22.3	
	comp=Z,74nm,21.6s,baz=312,slow=30						
S42A	Caledonia	65.73	59	P	P	03 39 43.3	-5.5
	baz=320						
R43A	Red Bud	65.76	58	P	P	03 39 40.2	-8.9
	baz=320						
V39A	Pettigrew	65.78	62	P	P	03 39 46.8	-2.4
	baz=320,SNR=6.9						
U40A	Yellville	65.78	61	P	P	03 39 43.5	-5.7
	baz=320						
Q45A	Warren Harvey,	66.15	56	P	P	03 39 43.2	-8.2
	baz=321						
T42A	Van Buren	66.15	59	P	P	03 39 43.7	-7.9
	baz=320						
R44A	Waltonville	66.20	57	P	P	03 39 46.9	-4.9
	baz=321						
W39A	Magazine	66.20	63	P	P	03 39 46.7	-5.2
	baz=320						
V40A	Witts Springs	66.23	61	P	P	03 39 50.1	-2.0
	baz=320,SNR=7.5						
V40A	Witts Springs	66.23	61	eP	P	03 39 51.1	-1.0
	comp=Z,7.3nm,0.8s						
S43A	Fulton Ridge,	66.24	58	P	P	03 39 49.5	-2.7
	baz=321						
U41A	Viola	66.27	60	P	P	03 39 45.4	-6.9
	baz=320						
X39A	Fountain Ranch	66.56	63	P	P	03 39 51.0	-3.3
	baz=320						
W40A	Ferguson Farm,	66.58	62	P	P	03 39 50.8	-3.5
	baz=320						
W40A	Ferguson Farm,	66.58	62	eP	P	03 39 54.2	0.0
	comp=Z,13nm,0.9s						
V41A	Mountainview	66.58	61	P	P	03 39 48.5	-5.9
	baz=320,SNR=5.0						
P47A	Martinsville	66.59	55	P	P	03 39 48.3	-6.0
	baz=322						
U42A	Revenden	66.61	60	P	P	03 39 48.7	-5.7
	baz=320						
JCT	Junction City	66.63	70	P	P	03 39 48.0	-6.8
	baz=319						

MIAR	Mount Ida	66.82	63	P	P	03 39 52.7	-3.1
	baz=320						
MIAR	Mount Ida	66.82	63	eP	P	03 39 54.9	-0.9
	comp=Z,4.1nm,0.9s						
MIAR	Mount Ida	66.82	63	eP	P	03 39 54.9	-0.9
MIAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
Q47A	Bedord North L	66.95	55	P	P	03 39 54.8	-1.8
	baz=322						
V42A	Cord	66.96	60	P	P	03 39 53.4	-3.3
	baz=321						
W41B	Gary Mavity, V	67.01	61	P	P	03 39 54.9	-2.2
	baz=320						
X40A	Basin Creek Fa	67.25	62	P	P	03 39 56.6	-1.9
	baz=320						
O50A	Cable	67.31	52	P	P	03 39 56.5	-2.3
	baz=322						
ERPA	Erie	67.36	49	P	P	03 39 57.3	-1.8
	baz=324						
HBAR	Harrisburg	67.52	60	eP	P	03 39 59.7	-0.6
	comp=Z,428nm,0.7s						
ACSO	Alum Creek Sta	67.53	52	P	P	03 39 51.4	-8.9
	baz=323						
WCI	Wyandotte Cave	67.57	55	P	P	03 39 53.2	-7.3
	baz=322						
T46A	Princeton	67.73	57	P	P	03 39 55.3	-6.3
	baz=322						
M54A	Oil Creek Stat	67.99	49	P	P	03 39 56.0	-7.2
	baz=324						
S48A	Wiedeman Farm,	68.14	56	P	P	03 39 56.7	-7.4
	baz=322						
T47A	Sharon Grove	68.16	57	P	P	03 40 01.1	-3.2
	baz=322						
N54A	Moraine State	68.29	49	P	P	03 40 01.6	-3.5
	baz=324						
140A	Cam and Jess,	68.30	64	P	P	03 40 00.3	-4.9
	baz=321						
T48A	Bowling Green	68.41	56	P	P	03 40 00.1	-5.8
	baz=322						
WVT	Waverly	68.48	58	P	P	03 40 04.2	-2.1
	baz=322						
U47A	Clarksville	68.50	57	P	P	03 40 01.7	-4.7
	baz=322						
V46A	Holladay	68.60	58	P	P	03 39 60.0	-7.1
	baz=322						
U48A	Cassie Pea, Po	68.81	57	P	P	03 40 06.4	-2.0
	baz=322						
T49A	Edmonton	68.83	56	P	P	03 40 05.2	-3.3
	baz=322						
V47A	Nunnelly	68.88	58	P	P	03 40 06.1	-2.7
	baz=322						
OXF	Oxford	68.97	60	P	P	03 40 07.2	-2.2
	baz=322						
OXF	Oxford	68.97	60	eP	P	03 40 09.2	-0.2
	comp=Z,10nm,0.8s						
OXF	Oxford	68.97	60	eP	P	03 40 09.2	-0.2
OXF				pmax	pmax		
	comp=Z,11nm,0.8s						
SBUM	Sibu	69.12	243	eP	P	03 40 14.8	+4.3
	comp=Z,13nm,1.0s						
U49A	Red Boiling Sp	69.18	56	P	P	03 40 04.7	-5.9
	baz=322						
T50A	Nancy	69.23	55	P	P	03 40 03.9	-7.0
	baz=323						
PLAL	Pickwick Lake	69.27	59	eP	P	03 40 10.7	-0.5
	comp=Z,5.5nm,0.9s						
V48A	Smith Brothers	69.29	57	eP	P	03 40 11.1	-0.3
	comp=Z,6.1nm,0.9s						
W47A	Westpoint	69.30	58	P	P	03 40 06.5	-4.9
	baz=322						
MCWV	Mont Chateau	69.41	50	P	P	03 40 11.2	-0.9
	baz=324						
Y45A	Yeager Farm, C	69.42	60	P	P	03 40 07.1	-5.1
	baz=322						
SSPA	Standing Stone	69.48	48	P	P	03 40 07.9	-4.5
	baz=325						
W48A	Pulaski	69.71	58	P	P	03 40 12.9	-1.1
	baz=322						
V49A	McMinnville	69.72	57	P	P	03 40 12.5	-1.5
	baz=323						
X47A	Russelville	69.75	59	P	P	03 40 12.5	-1.7
	baz=322						
Y46A	Houston	69.75	60	P	P	03 40 13.0	-1.2
	baz=322						
AKASG	Malin Array Be	69.80	334	P	P	03 40 13.2	-1.0
	comp=Z,3.1nm,0.6s,baz=31,slow=6.3,SNR=8.4						
AKBB	Malin Array Si	69.80	334	eP	P	03 40 13.2	-1.0
	comp=Z,5.1nm,0.9s						
AKBB	Malin Array Si	69.80	334	eP	P	03 40 13.2	-1.0
AKBB				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KIEV	Kiev	69.81	334	⇓eP	P	03 40 13.2	-1.1
KIEV				pmax	pmax		
	comp=Z,6.0nm,0.9s						
V50A	Pikevile	70.18	56	P	P	03 40 16.4	-0.5
	baz=323						
145A	Houston Renfro	70.22	62	P	P	03 40 16.4	-0.7
	baz=322						
TZTN	Tazewell	70.23	55	P	P	03 40 17.4	+0.3
	baz=323						
V51A	Loudon	70.44	56	P	P	03 40 17.5	-0.9
	baz=323						
W50A	Signal Mountai	70.46	57	P	P	03 40 18.1	-0.5
	baz=323						
W50A	Signal Mountai	70.46	57	eP	P	03 40 18.1	-0.5
	comp=Z,5.2nm,0.8s						
X49A	Woodville	70.51	58	P	P	03 40 18.0	-0.9
	baz=323						
Z47A	Carrollton	70.69	60	P	P	03 40 17.8	-2.2
	baz=322						
V52A	Sevierville	70.77	55	P	P	03 40 13.9	-6.5
	baz=323						
Z48A	Northport	70.81	59	P	P	03 40 15.8	-4.8
	baz=322						
TKL	Tuckaleechee C	70.83	55	LR	LR	04 13 11.8	
	comp=Z,122nm,18.6s,baz=330,slow=37						
LRAL	Lakeview Retre	71.36	59	P	P	03 40 18.1	-6.0
	baz=323						
Z49A	Columbiana	71.47	59	P	P	03 40 20.1	-4.6
	baz=323						
W53A	Cullowhee	71.52	55	P	P	03 40 20.8	-4.4
	baz=324						
X52A	Dahlonega	71.63	56	P	P	03 40 22.3	-3.3
	baz=324						
KIV	Kislovodsk	71.67	322	eP	P	03 40 24.6	-1.3
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,94nm,18.0s						
Z50A	Ashland	71.72	58	P	P	03 40 20.8	-5.5
	baz=323						
Z50A	Ashland	71.72	58	eP	P	03 40 25.4	-0.8
	comp=Z,3.3nm,0.7s						
Y52A	Lilburn	72.14	57	P	P	03 40 24.1	-4.7
	baz=324						
150A	Eclectic	72.19	59	P	P	03 40 24.5	-4.5
	baz=323						
KMSC	Kings Mountain	72.41	54	P	P	03 40 25.8	-4.6
	baz=324						
OJC	Ojcow	72.42	340	eP	P	03 40 30.5	+0.3
	comp=Z,5.8nm,0.7s						
OJC	Ojcow	72.42	340	eP	P	03 40 30.5	+0.3
OJC				pmax	pmax		
	comp=Z,6.0nm,0.7s						
Z52A	Williamson	72.52	57	P	P	03 40 26.6	-4.3
	baz=324						
CLL	Collm	72.60	344	i P	P	03 40 31.1	-0.1
CLL	Collm	72.60	344	i P	P	03 40 31.1	-0.1
CRVS	Cervenica-Dubn	73.32	338	eP	P	03 40 35.9	+0.4
CRVS				pmax	pmax		
	comp=Z,17nm,2.2s						
CRVS	Cervenica-Dubn	73.32	338	eP	P	03 40 35.9	+0.4
252A	Lumpkin	73.33	58	P	P	03 40 32.9	-2.9
	baz=324						
LANS	Liptovska Anna	73.50	339	eP	P	03 40 35.4	-1.2
LANS	Liptovska Anna	73.50	339	eP	P	03 40 35.4	-1.2
BUR08	Bucovina Ar. S	73.64	335	eP	P	03 40 37.7	+0.2
BUR04	Bucovina Ar. S	73.66	335	eP	P	03 40 37.4	-0.2
BURAR	Bucovina Array	73.66	335	⇑iP	P	03 40 37.8	+0.2
BURAR	Bucovina Array	73.66	335	⇑P	P	03 40 37.8	+0.2
TRPA	Tarpa	73.81	337	⇑iP	P	03 40 37.5	-0.8
155A	Kite	73.93	56	P	P	03 40 36.3	-3.0
	baz=324						
BIZ	Bicaz	74.07	334	⇑iP	P	03 40 40.2	+0.3
254A	Abbeville	74.08	57	P	P	03 40 34.9	-5.3
	baz=324						
MTN	Manton Dam	74.25	218	eP	P	03 40 44.4	+3.2
	comp=Z,8.1nm,1.0s						
VYHS	Vyhne	74.26	340	eP	P	03 40 40.8	-0.2
VYHS				pmax	pmax		
	comp=Z,3.0nm,1.4s						
VYHS	Vyhne	74.26	340	eP	P	03 40 40.8	-0.2
KHC	Kasperske Hory	74.62	343	eP	P	03 40 43.6	+0.5
KHC				epP	pP	03 40 48.2	-2.6
KHC	Kasperske Hory	74.62	343	eP	P	03 40 43.8	+0.7
	comp=Z,4.1nm,1.4s						
KHC	Kasperske Hory	74.62	343	eP	P	03 40 43.8	+0.7
KHC				pmax	pmax		
	comp=Z,4.0nm,1.4s						
GEC2	GERESS Array S	74.87	343	eP	P	03 40 44.5	-0.2
	comp=Z,1.9nm,0.8s						
GEC2	GERESS Array S	74.87	343	eP	P	03 40 44.5	-0.2
GEC2				pmax	pmax		
	comp=Z,2.0nm,0.8s						
GERES	GERESS Array B	74.87	343	P	P	03 40 44.5	-0.2
	comp=Z,1.0nm,0.6s,baz=28,slow=6.0,SNR=9.6						
GERES	GERESS Array B	74.87	343	eP	P	03 40 44.8	+0.1
GERES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GEA0	GERESS Array S	74.88	343	eP	P	03 40 44.5	-0.3
DRGR		75.03	337	⇓iP	P	03 40 45.2	-0.4
DRGR		75.03	337	⇓P	P	03 40 45.2	-0.4
CFR	Carcaliu	75.17	332	⇑iP	P	03 40 46.1	-0.2
CFR	Carcaliu	75.17	332	⇑P	P	03 40 46.1	-0.2
CONA	Conrad Observa	75.38	341	i P	P	03 40 48.4	+0.8
	comp=Z,4.5nm,1.3s						
MLR	Muntele Rosu	75.46	334	P	P	03 40 48.6	+0.5
	comp=Z,0.6nm,0.6s,baz=27,slow=2.3,SNR=7.7						
MLR	Muntele Rosu	75.46	334	⇑iP	P	03 40 48.6	+0.5
MLR	Muntele Rosu	75.46	334	eP	P	03 40 48.6	+0.5
	comp=Z,3.3nm,0.7s						
VOIR		75.73	334	⇑iP	P	03 40 50.4	+0.7
VOIR		75.73	334	⇑P	P	03 40 50.4	+0.7
MOA	Molln	75.74	343	eP	P	03 40 46.4	-3.2
	comp=Z,5.7nm,1.4s						
ARSA	Arzberg	76.09	342	P	P	03 40 49.5	-2.1
	comp=Z,3.2nm,1.1s						
DZM	Mont Dzumac	76.30	182	eLR	LR	04 03 07.6	
	comp=Z,175nm,24.7s						
BZS	Buzias	76.39	337	⇓iP	P	03 40 52.5	-0.8
BZS	Buzias	76.39	337	⇓P	P	03 40 52.5	-0.8
557A	Orange Park	76.42	57	P	P	03 40 48.9	-4.8
	baz=325						
KBA	Koelnbreinsper	76.64	343	eP	P	03 40 56.1	+1.2
	comp=Z,7.9nm,0.8s						
SOKA	Soboth	76.73	342	eP	P	03 40 56.2	+0.9
	comp=Z,7.7nm,1.1s						
WTTA	Wattenberg	76.75	344	eP	P	03 40 53.8	-1.7
	comp=Z,2.8nm,0.5s						
MOTA	Moosalm	76.75	345	eP	P	03 40 56.3	+0.8
	comp=Z,1.7nm,0.8s						
OBKA	Obir	76.98	342	eP	P	03 40 57.6	+0.8
	comp=Z,9.9nm,0.9s						
ABTA	Abfaltersbach	77.11	343	P	P	03 40 57.5	0.0
	comp=Z,7.0nm,1.2s						
FETA	Feichten	77.12	345	P	P	03 40 55.4	-2.3
	comp=Z,3.3nm,1.1s						
DIVS	Divibare	78.20	338	eP	P	03 41 03.4	-0.2
	comp=Z,5.4nm,1.2s						
BR101	Keskin Array S	78.52	326	eP	P	03 41 05.0	-0.5
BR131	Keskin Array S	78.52	326	eP	P	03 41 05.6	+0.1
BRTR	Keskin Array B	78.52	326	P	P	03 41 05.0	-0.5
	comp=Z,1.4nm,0.7s,baz=45,slow=4.7,SNR=9.6						
BRTR	Keskin Array B	78.52	326	P	P	03 41 05.0	-0.5
VTS	Vitosha	78.86	335	⇓iP	P	03 41 06.4	-0.9
VTS	Vitosha	78.86	335	⇓P	P	03 41 06.4	-0.9
ALN	Alexandroupoli	79.71	332	eP	P	03 41 12.0	+0.2
	comp=Z,3.6nm,1.1s						
ALN	Alexandroupoli	79.71	332	eP	P	03 41 12.0	+0.2
ALN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
WR1	Warramunga Arr	79.78	213	eP	P	03 41 12.4	+0.2
	comp=Z,11nm,1.3s						
WRA	Warramunga Arr	79.78	213	P	P	03 41 12.4	+0.2
	comp=Z,3.7nm,0.8s,baz=25,slow=6.3,SNR=24						
PDG	Podgorica	79.95	338	⇓iP	P	03 41 11.6	-1.4
PPT2	Papeete2	80.16	140	eLR	LR	04 05 41.6	
	comp=Z,182nm,23.0s,baz=328						
AS01	Alice Springs	83.39	212	eP	P	03 41 32.3	+1.1
AS31	Alice Springs	83.40	212	eP	P	03 41 35.5	+4.1
	comp=Z,1.7nm,0.9s						
ASAR	Alice Springs	83.41	212	P	P	03 41 32.3	+0.9
	comp=Z,4.5nm,0.8s,baz=20,slow=5.0,SNR=32						
TIP	Timpagrande	83.61	338	⇓iP	P	03 41 32.0	-0.5
TIP	Timpagrande	83.61	338	eP	P	03 41 33.0	+0.5
	comp=Z,19nm,1.5s						
TBI	Tubuai	85.48	142	eLR	LR	04 08 07.7	
	comp=Z,115nm,24.5s						
ES19	SONSECA Array	85.94	354	eP	P	03 41 45.0	+0.8
ESDC	Sonseca Array	85.97	354	P	P	03 41 44.2	-0.1
	comp=Z,0.8nm,0.7s,baz=2.0,slow=5.1,SNR=7.6						
STKA	Stephens Creek	89.16	203	eP	P	03 42 04.0	+4.6
	comp=Z,1.6nm,1.0s						
STKA	Stephens Creek	89.16	203	eP	P	03 42 04.0	+4.6
STKA				pmax	pmax		
	comp=Z,2.0nm,1.0s						

NNC 10 03:31:45.7±2.4**, 37°.07N×70°.41E, h0km, mb3.6, mpv3.2, 2C-3D, Error ellipse: s-maj=18.1km s-min=16.1km az=176.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	3.81	39	⇓Pn	Pn	03 32 45.5	-0.4
	3.0nm,0.3s						
SFK				⇓Sn	Sn	03 33 33.0	+1.5
	8.2nm,0.3s						
MNAS	Manas	5.65	16	⇑Pn	Pn	03 33 11.1	+0.1
	1.0nm,0.3s						
MNAS				⇓Sn	Sn	03 34 17.9	+1.2
	8.1nm,0.6s						
KK31	Karatay Array	6.03	1	Pn	Pn	03 33 17.1	+1.0
	1.1nm,0.6s,baz=176,slow=12,SNR=18						
KK31				⇑Sn	Sn	03 34 26.6	+0.8
	2.6nm,0.4s,baz=186,slow=21,SNR=16						

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*CSEM **10** 03:38:27.9, 35°.62N×26°.53E, h44km, ML1.8/3*

ATH 10 03:38:27.9, 35°.62N×26°.53E, h44km±5km**, ML1.8**/3**, Error ellipse: s-maj=7.8km s-min=1.6km az=132.0, Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	Karpathos	0.52	97	P	Pn	03 38 40.0	+0.9
KARP				S	Sn	03 38 46.8	-0.3
KARP				AML	AML	03 38 47.9	
	comp=E,244μm,0.1s						
KARP				AML	AML	03 38 48.9	
	comp=N,189μm,0.1s						
KARP	Karpathos	0.52	97	P	Pn	03 38 39.9	+0.8
KARP				S	Sn	03 38 47.6	+0.5
ZKR	Zakros	0.56	207	P	Pn	03 38 39.1	-0.5
ZKR				S	Sn	03 38 49.9	+1.9
ZKR				AML	AML	03 38 50.9	
	comp=N,50μm,0.1s						
ZKR				AML	AML	03 38 51.0	
	comp=E,134μm,0.2s						
ZKR	Zakros	0.56	207	P	Pn	03 38 39.7	0.0
ZKR				S	Sn	03 38 49.7	+1.7
NPS	Neapolis	0.83	245	P	Pn	03 38 45.2	+1.9
NPS				S	Sn	03 38 54.8	+0.4
NPS				AML	AML	03 38 56.1	
	comp=N,107μm,0.2s						
NPS				AML	AML	03 38 56.5	
	comp=E,139μm,0.3s						
NPS	Neapolis	0.83	245	P	Pn	03 38 44.7	+1.5
NPS				S	Sn	03 38 55.5	+1.2
LAST	Lasithi	0.97	242	P	Pn	03 38 47.6	+2.4
LAST				S	Sn	03 38 58.8	+0.9
LAST	Lasithi	0.97	242	P	Pn	03 38 46.9	+1.7
LAST				S	Sn	03 38 59.2	+1.3
AMGA	Amorgos Island	1.32	337	P	Pn	03 38 50.5	+0.6
AMGA	Amorgos Island	1.32	337	P	Pn	03 38 50.8	+0.9
APE	Apeiranthos	1.66	331	P	Pn	03 38 56.2	+1.6
APE	Apeiranthos	1.66	331	P	Pn	03 38 56.1	+1.5

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*NIED **10** 03:48:00, 36°.80N×138°.40E, h8km, Mw5.1 Best double couple: $M_0$4.49000×10^{16} NP1:ϕ_s343.00000°, δ45.00000°, λ-13.00000°. NP2:ϕ_s82.00000°, δ81.00000°, λ-134.00000°.*

*BJI **10** 03:48:51.4, 36°.73N×138°.89E, h13km, mb4.7/58, mB4.9/49, Ms5.0/60, Ms7 4.7/55*

*IDC **10** 03:48:57.0±1.1, 36°.82N×138°.20E, h12km±8km, mb4.4/28, mb1 4.5/31, mb1mx4.4/74, mbtmp4.5/31, ML3.7/2, MS4.3/54, Ms1 4.3/54, ms1mx4.2/77, Error ellipse: s-maj=14.2km s-min=10.7km az=88.0*

*JMA **10** 03:48:57.4, 36°.83N×138°.39E, h9km±2km, M5.2 Broadband fault plane solution: P waves. NP1: ϕ_s93.00000°, δ71.00000°, λ-145.00000°. NP2: ϕ_s350.00000°, δ57.00000°, λ-23.00000°. Principal axes: T Plg9.0000°, Azm219.0000°; N Plg51.0000°, Azm118.0000°; P Plg38.0000°, Azm316.0000°;*

*ISCJB **10** 03:48:57.1±0.3, 36°.87N±0°.02×138°.23E±0°.02, h16km±2km, mb4.7/207, MS4.6/81 Error ellipse: s-maj=3.0km s-min=2.3km az=39.0*

*MOS **10** 03:48:58.5±1.2, 36°.77N×138°.19E, h33km, mb5.0/67, MS4.5/19, Error ellipse: s-maj=6.5km s-min=4.1km az=104.6*

*GCMT **10** 03:48:58.0±0.2, 36°.64N×138°.58E, h12km, MW5.0/103, Moment Tensor Solution. s41,c61; s103,c159; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.91±.10; $M_{\theta\theta}$2.38±.09; $M_{\phi\phi}$-0.46±.10; $M_{r\theta}$-0.81±.26; $M_{\theta\phi}$-2.83±.08; $M_{\phi r}$-1.85±.28; Best double couple: $M_0$4.10500×10^{16} NP1:ϕ_s338.00000°, δ64.00000°, λ-35.00000°. NP2: ϕ_s85.00000°, δ59.00000°, λ-149.00000°. Principal axes: T 4.1390, Plg3.0000°, Azm33.0000°; N -0.0630, Plg47.0000°, Azm126.0000°; P -4.0720, Plg43.0000°, Azm300.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **10** 03:48:58.0±0.6, 36°.78N×138°.09E, h16km±3km, mb4.8/141 Error ellipse: s-maj=3.8km s-min=3.4km az=151.0*

NEIC Felt at Nagano, Nagaoka, Numata and Ueda. Recorded [5L JMA] in Nagano.

ISC 10 03:48:58.0±0.5**, 36°.82N**±0°.02×**138°.33E**±0°.03**, h16km**±3km**, n520, σ1^{s}62**/524**, mb4.8**/209**, MS4.5**/82**, 44C-35D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MJB9	Matsu-Tunnel	0.29	201	ePg	Pg	03 49 03.4	-0.8
MJB9				eSg	Sg	03 49 07.2	-1.2
MAJO	Matsushiro	0.29	200	ePg	Pg	03 49 03.1	-1.2
MAJO				eSg	Sg	03 49 07.1	-1.4
MAJO	Matsushiro	0.29	200	c iP	Pg	03 49 03.3	-0.9
MAT	Matsushiro	0.29	200	P	Pg	03 49 03.3	-0.9
MAT				S	Sg	03 49 07.8	-0.7
MAT	Matsushiro	0.29	200	P	Pg	03 49 03.3	-0.9
MAT				S	Sg	03 49 07.9	-0.6
MJAR	Matsushiro Arr	0.29	200	Pg	Pg	03 49 03.4	-0.9
	3μm,0.3s,baz=16,slow=16						
MJAR				Lg	Lg	03 49 07.9	
	4μm,0.3s,baz=15,slow=28,SNR=54						
MJAR				LR	LR	03 49 31.6	
	comp=Z,104μm,21.9s,baz=200,slow=115						
JJN	Nakama	0.32	335	⇓P	Pg	03 49 04.1	-0.6
JJN				S	Sg	03 49 09.1	-0.2
JGK	Kuni	0.35	136	⇓P	Pg	03 49 04.4	-0.9
JNG	Nsakai	0.45	205	⇑P	Pg	03 49 06.2	-0.9
JNG				S	Sg	03 49 12.7	-0.5
JHK	Hiroka	0.70	52	⇑P	Pg	03 49 09.3	-2.4
JHK				S	Sg	03 49 18.4	-2.5
JIZZ	Izumozaki	0.78	23	⇑P	Pb	03 49 12.0	-1.1
JTT	Ttatey	0.83	256	⇑P	Pg	03 49 14.3	+0.1
JNT	Takato	0.95	190	⇑P	Pb	03 49 15.3	-0.9
JAG	Ashikaga	0.98	113	⇓P	Pb	03 49 15.2	-1.4
JSZ	Suzu	1.00	309	⇓P	Pb	03 49 15.5	-1.4
JGN	Niukaw	1.01	235	⇑P	Pb	03 49 16.8	-0.4
JSD	Sado	1.22	357	⇓P	Pn	03 49 18.6	-1.8
JFY	Yanaizu	1.25	61	⇑P	Pn	03 49 19.0	-1.8
JJH	Hakui	1.25	275	⇓P	Pn	03 49 20.3	-0.5
JNS	Sasagawa	1.27	38	⇑P	Pn	03 49 19.2	-1.9
JSB	Shiboa	1.28	83	⇑P	Pn	03 49 20.7	-0.6
JYN	Shimob	1.33	173	⇑P	Pn	03 49 21.8	-0.1
JGF	Kuroka	1.45	213	⇑P	Pn	03 49 24.1	+0.5
JNY	Yasuok	1.50	195	⇑P	Pn	03 49 24.7	+0.3
JHG	Hegura jima	1.53	313	⇓P	Pn	03 49 23.2	-1.4
JOD2	Odawara 2	1.67	158	⇑P	Pb	03 49 27.5	-0.8
JKG	Kaga	1.70	252	⇑P	Pn	03 49 27.8	+0.8
JFT	Otama	1.75	66	⇑P	Pn	03 49 27.3	-0.4
SHZ3	Shizuoka 3	1.75	183	⇑P	Pn	03 49 28.6	+0.9
JAO	Obara	1.77	210	⇑P	Pn	03 49 28.8	+0.7
JHO	Hitachi	1.81	96	⇑P	Pn	03 49 28.3	-0.2
INU	Inuyama	1.81	216	ePn	Pn	03 49 28.8	+0.2
INU				eSn	Sn	03 49 46.2	-5.0
AJI	Ajiro2	1.87	161	⇑P	Pb	03 49 30.7	-1.1
JYZW	Yoshizawa	1.88	195	P	Pn	03 49 30.4	+0.9
JYS	Shirataka	1.97	44	⇑P	Pn	03 49 30.2	-0.5
HMMJ	Hamamatsu 2	2.02	194	⇑P	Pn	03 49 32.5	+1.1
JIZS	Izushimoda	2.14	168	⇑P	Pn	03 49 34.1	+1.1
JSG	Sagara	2.14	183	⇑P	Pb	03 49 34.9	-1.5
JFM	Mihama	2.29	237	⇑P	Pn	03 49 36.3	+1.1
JTB	Tobi-shima	2.56	22	P	Pn	03 49 38.1	-0.8
TSUJ	Tsu 2	2.61	217	P	Pn	03 49 40.7	+1.1
JYK	Kaneyama	2.64	37	⇑P	Pn	03 49 39.7	-0.3
JIE	Ise	2.76	209	P	Pn	03 49 42.6	+1.1
JWT	Wachi	2.83	238	P	Pn	03 49 44.0	+1.5
JKN2	Miekihoku	3.07	214	⇑P	Pn	03 49 46.6	+0.8
JRG	Rokugo	3.15	34	⇑P	Pn	03 49 47.2	+0.2
JKSM	Kasumi	3.21	249	⇑P	Pn	03 49 48.9	+1.1
JHJ	Hachijo jima 2	3.88	162	Pn	Pn	03 49 59.2	+2.3
	87nm,0.3s,baz=279,slow=2.8,SNR=34						
JHJ				LR	LR	03 51 39.3	
	comp=Z,9μm,19.0s,baz=338,slow=41						
JHJ2	Mitsune	3.89	161	ePn	Pn	03 49 59.4	+2.3
ERM	Erimo	6.39	34	ePn	Pn	03 50 32.5	+0.9
ERM	Erimo	6.39	34	deP	Pn	03 50 32.4	+0.9
JNU	Nakatsue	7.14	241	Pn	Pn	03 50 44.7	+2.8
	2.3nm,0.3s,baz=64,slow=8.2,SNR=31						
JNU				LR	LR	03 53 42.7	
	comp=Z,7μm,18.2s,baz=27,slow=40						
JNU	Nakatsue	7.14	241	ePn	Pn	03 50 43.4	+1.5
MSHR	Mys Shultsa	7.98	318	⇓eP	Pn	03 50 52.4	-0.9
ASAJ	Asahikawa	7.98	23	Pn	Pn	03 50 54.1	+0.8
	0.5nm,0.3s,baz=229,slow=11,SNR=8.4						
ASAJ	Asahikawa	7.98	23	ePn	Pn	03 50 54.3	+1.0
KSRS	Korea Array	8.34	278	Pn	Pn	03 51 00.8	+2.6
	5.5nm,0.3s,baz=89,slow=15,SNR=46						
KSRS				LR	LR	03 54 05.6	
	comp=Z,3μm,18.8s,baz=96,slow=37						
KS01	Wonju Array Si	8.36	278	ePn	Pn	03 51 00.5	+1.9
KS15	Wonju Array Si	8.37	277	ePn	Pn	03 51 00.9	+2.3
KSAR	Wonju Array Be	8.37	277	Pn	Pn	03 51 00.8	+2.2
KSAR	Wonju Array Be	8.37	277	P	Pn	03 51 00.8	+2.2
USA0B	Ussuriysk Arra	8.81	329	ePn	Pn	03 51 03.8	-0.9
USRK	Ussuriysk Ar.	8.81	329	Pn	Pn	03 51 03.8	-0.9
	baz=140,slow=13						
USRK				LR	LR	03 53 57.5	
	comp=Z,709nm,21.0s,baz=141,slow=34						
TJN	Taejon	8.83	270	deP	Pn	03 51 07.1	+2.1
YUK	Yuzh-Kuril'sk	9.21	36	eP	Pn	03 51 12.8	+2.7
YUK				eS	Sn	03 52 58.5	+5.1
YUK				pmax	pmax		
	comp=Z,139nm,0.8s						
YUK				pmax	pmax		
	comp=E,76nm,0.7s						
YUK				pmax	pmax		
	comp=N,213nm,0.6s						
YUK				MLR	MLR		
	comp=Z,3μm,17.0s						
SHO	Shikotan	9.57	40	eP	Pn	03 51 20.4	+5.3
SHO				eS	Sn	03 53 12.0	+10
SHO				pmax	pmax		
	comp=Z,20nm,0.8s						
SHO				pmax	pmax		
	comp=E,7.0nm,0.2s						
SHO				pmax	pmax		
	comp=E,7.0nm,0.3s						
SHO				MLR	MLR		
SHO				MLR	MLR		
SHO				MLR	MLR		
	comp=E,3μm,18.0s						
MDJ	Mudanjiang	10.23	322	P	Pn	03 51 26.0	+1.9
MDJ				S	Sn	03 53 28.7	+10
MDJ				pmax	pmax		
	comp=E,37nm,1.6s						
MDJ				pmax	pmax		
	comp=E,240nm,3.5s						
MDJ				LR	LR		
	comp=E,7μm,16.1s						

MDJ				LR	LR		
	comp=E,7µm,15.0s						
MDJ				LR	LR		
	comp=E,8µm,13.3s						
MDJ	**Mudanjiang**	**10.23**	**322**	*e*Pn	**Pn**	**03 51 23.7**	**-0.4**
YSS	**Yuzh-Sakhalins**	**10.65**	**17**	*e*Pn	**Pn**	**03 51 33.4**	**+3.6**
YSS	**Yuzh-Sakhalins**	**10.65**	**17**	*e*P	**Pn**	**03 51 31.3**	**+1.5**
YSS				*e*S	**Sn**	**03 53 29.4**	**+0.7**
YSS				pmax	pmax		
	comp=Z,300nm,4.9s						
YSS				pmax	pmax		
	comp=Z,90nm,0.9s						
YSS				pmax	pmax		
	comp=E,70nm,0.8s						
YSS				MLR	MLR		
	comp=Z,3µm,17.0s						
YSS				MLR	MLR		
	comp=N,2µm,16.0s						
YSS				MLR	MLR		
	comp=E,2µm,14.0s						
KUR	**Kuril'sk**	**11.06**	**38**	*e*P	**Pn**	**03 51 37.4**	**+1.9**
KUR				*e*S	**Sn**	**03 53 42.1**	**+3.3**
KUR				pmax	pmax		
	comp=Z,70nm,1.0s						
KUR				pmax	pmax		
	comp=N,9.0nm,0.7s						
KUR				pmax	pmax		
	comp=E,18nm,0.8s						
KUR				MLR	MLR		
	comp=Z,2µm,14.0s						
CN2	**Changchun**	**12.05**	**309**	*e*P	**Pn**	**03 51 52.2**	**+3.2**
CN2				*e*S	**Sn**	**03 54 06.6**	**+3.6**
CN2				pmax	pmax		
	comp=Z,20nm,1.5s						
CN2				pmax	pmax		
	comp=Z,300nm,9.2s						
CN2				LR	LR		
	comp=Z,5µm,13.0s						
CN2				LR	LR		
	comp=Z,3µm,13.0s						
CN2				LR	LR		
	comp=Z,2µm,14.0s						
SNY	**Shenyang**	**12.47**	**298**	⇓P	**P**	**03 52 04.6**	**-1.9**
SNY				pmax	pmax		
	comp=Z,26nm,1.7s						
JOW	**Kunigami**	**13.11**	**223**	LR	LR	03 57 15.2	
	comp=Z,962nm,19.4s,baz=19,slow=38						
KLR	**Kul'dur**	**13.30**	**341**	Pn	**Pn**	**03 52 07.9**	**+1.8**
	comp=Z,0.1nm,0.3s,baz=151,slow=13,SNR=47						
KLR				LR	LR	03 56 31.0	
	comp=Z,92nm,20.0s,baz=154,slow=34						
KLR	**Kul'dur**	**13.30**	**341**	*d i*P	**Pn**	**03 52 08.5**	**+2.4**
DL2	**Dalian**	**13.37**	**284**	P	**P**	**03 52 20.3**	**+3.8**
DL2				S	**S**	**03 54 58.0**	**-1.2**
DL2				pmax	pmax		
	comp=Z,92nm,1.0s						
DL2				LR	LR		
	comp=N,5µm,11.1s						
DL2				LR	LR		
	comp=E,2µm,13.5s						
DL2				LR	LR		
	comp=Z,4µm,11.1s						
GRNR	**Gornyy**	**14.02**	**355**	*e*P	**Pn**	**03 52 19.8**	**+4.0**
GRNR				*e*		03 54 54.9	
GRNR				pmax	pmax		
	comp=Z,170nm,1.0s						
TYV	**Tymovskoe**	**14.38**	**11**	*e*P	**Pn**	**03 52 21.5**	**+0.7**
TYV				*e*		03 54 59.2	
TYV				pmax	pmax		
	comp=Z,52nm,1.1s						
TYV				pmax	pmax		
	comp=Z,500nm,3.9s						
TYV				MLR	MLR		
	comp=N,2µm,17.0s						
TYV				MLR	MLR		
	comp=Z,2µm,17.0s						
SSE	**Sheshan**	**15.32**	**253**	P	**Pn**	**03 52 33.2**	**-0.4**
SSE				S	**Sn**	**03 55 22.8**	**-0.2**
SSE				pmax	pmax		
	comp=Z,8.0nm,0.6s						
SSE				pmax	pmax		
	comp=Z,120nm,3.5s						
SSE				LR	LR		
	comp=Z,4µm,16.9s						
SSE				LR	LR		
	comp=Z,3µm,14.1s						
NJ2	**Nanjing**	**16.75**	**259**	*e*P	**Pn**	**03 52 50.7**	**-1.3**
NJ2				pP	**P**	**03 52 55.4**	**+1.3**
NJ2				S	**Sn**	**03 55 59.4**	**+1.7**
NJ2				pmax	pmax		
	comp=Z,13nm,0.6s						
NJ2				LR	LR		
	comp=Z,3µm,11.9s						
NJ2				LR	LR		
	comp=Z,3µm,14.1s						
NJ2				LR	LR		
	comp=Z,3µm,14.6s						
TIA	**Tai'an**	**17.06**	**274**	P	**P**	**03 53 00.8**	**+3.2**
TIA				pmax	pmax		
	comp=Z,50nm,0.9s						
BJI	**Beijing**	**17.65**	**287**	⇓*i*P	**P**	**03 53 04.8**	**+0.8**
BJI				S	**S**	**03 56 31.0**	**+4.3**
BJI				pmax	pmax		
	comp=Z,56nm,0.9s						
BJI				pmax	pmax		
	comp=Z,1µm,4.5s						
BJI				LR	LR		
	comp=Z,4µm,11.9s						
BJI				LR	LR		
	comp=Z,3µm,10.7s						
BJI				LR	LR		
	comp=Z,1µm,32.2s						
BJT	**Baijiatuau**	**17.66**	**287**	*e*Pn	**P**	**03 53 05.5**	**+1.4**
	comp=Z,51nm,0.9s						
BJT	**Baijiatuau**	**17.66**	**287**	*e*P	**P**	**03 53 05.5**	**+1.4**
BJT				pmax	pmax		
	comp=Z,51nm,0.9s						
HIA	**Hailar**	**18.36**	**318**	*e*Pn	**P**	**03 53 08.9**	**-3.0**
HIA	**Hailar**	**18.36**	**318**	*d i*P	**P**	**03 53 11.7**	**-0.2**
HIA				pmax	pmax		
	comp=Z,40nm,1.3s						
ZEA	**Zeya**	**18.59**	**339**	*e*P	**P**	**03 53 13.0**	**-1.3**
ZEA				pmax	pmax		
	comp=Z,700nm,6.0s						
ZEA				pmax	pmax		
	comp=N,300nm,4.0s						
ZEA				pmax	pmax		
	comp=N,65nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,71nm,1.2s						
ZEA				MLR	MLR		
	comp=Z,2µm,14.0s						
ZEA				MLR	MLR		
	comp=E,3µm,11.0s						
ZEA				MLR	MLR		
	comp=N,2µm,12.0s						
SKR	**Severo-Kuril's**	**18.83**	**37**	*e*P	P	03 53 06.1	-11
SKR				*e*S	**Sn**	**03 56 41.4**	**-6.3**
SKR				MLR	MLR		
	comp=Z,2µm,16.0s						
SKR				MLR	MLR		
	comp=Z,2µm,14.0s						
TIY	**Taiyuan**	**20.62**	**280**	*e*P	Pn	03 53 39.6	+0.7
TIY				SS	Sn	03 58 04.9	+34
TIY				pmax	pmax		
	comp=Z,310nm,4.9s						
TIY				LR	LR		
	comp=Z,2µm,11.9s						
TIY				LR	LR		
	comp=Z,3µm,13.9s						
TIY				LR	LR		
	comp=Z,3µm,14.1s						
QZH	**Quanzhou**	**20.62**	**241**	*e*P	Pn	03 53 47.3	+8.3
QZH				S	**S**	**03 57 26.1**	**-0.5**
QZH				LR	LR		
	comp=N,2µm,21.6s						
QZH				LR	LR		
	comp=E,2µm,18.5s						
QZH				LR	LR		
	comp=Z,1µm,15.2s						
WHN	**Wuhan**	**20.89**	**260**	P	Pn	03 53 43.0	+0.9
WHN				S	Sn	03 57 35.3	-2.3
WHN				LR	LR		
	comp=Z,5µm,11.0s						
WHN				LR	LR		
	comp=Z,2µm,10.7s						
WHN				LR	LR		
	comp=Z,7µm,17.1s						
PEA0B	**Petropavlovsk-**	**21.18**	**34**	*e*P	**P**	**03 53 45.5**	**+3.0**
	comp=Z,26nm,0.9s						
PETK	**Petropavlovsk-**	**21.18**	**34**	LR	LR	04 01 53.4	
	comp=Z,922nm,18.9s,baz=210,slow=37						
PETK	**Petropavlovsk-**	**21.18**	**34**	*e*P	**P**	**03 53 45.0**	**+2.5**
PETK	**Petropavlovsk-**	**21.18**	**34**	*e*P	**P**	**03 53 45.0**	**+2.5**
HHC	**Hu-ho-hao-te**	**21.21**	**289**	*e*P	**P**	**03 53 43.4**	**+0.4**
HHC				PP	**PnPn**	**03 54 06.2**	**+3.8**
HHC				S	**S**	**03 57 34.6**	**-3.7**
HHC				sS	Sn	03 57 44.2	-1.1
HHC				pmax	pmax		
	comp=Z,20nm,0.8s						
HHC				pmax	pmax		
	comp=Z,180nm,4.5s						
HHC				LR	LR		
	comp=Z,2µm,12.2s						
HHC				LR	LR		
	comp=Z,2µm,12.4s						
HHC				LR	LR		
	comp=Z,2µm,11.0s						
PET	**Petropavlovsk**	**21.55**	**35**	*e*P	**P**	**03 53 49.1**	**+2.6**
PET				*e*S	**S**	**03 57 45.7**	**+1.1**
PET				pmax	pmax		
	comp=Z,300nm,16.4s						
PET				MLR	MLR		
	comp=Z,2µm,19.0s						
PET				MLR	MLR		
	comp=Z,2µm,21.0s						
CLNS	**Chul'man**	**21.96**	**340**	*e*P	**P**	**03 53 47.5**	**-3.4**
CLNS				*e**PP	**sP**	**03 53 57.5**	**-0.1**
CLNS				*e*S	**S**	**03 57 55.8**	**+3.1**
CLNS				*e*SS	SnSn	03 58 36.9	+18
CLNS				pmax	pmax		
	comp=E,4.0nm,0.9s						
CLNS				pmax	pmax		
	comp=N,8.0nm,0.9s						
CLNS				pmax	pmax		
	comp=Z,15nm,1.1s						
CLNS				pmax	pmax		
	comp=E,8.0nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,15nm,1.0s						
CLNS				pmax	pmax		
	comp=N,22nm,0.9s						
CLNS				smax	smax		
	comp=E,151nm,10.1s						
CLNS				smax	smax		
	comp=N,315nm,11.6s						
CLNS				MLR	MLR		
	comp=Z,889nm,13.0s						
CLNS				MLR	MLR		
	comp=E,1µm,12.0s						
CLNS				MLR	MLR		
	comp=N,739nm,12.0s						
GUMO	**Guam**	**23.86**	**164**	LR	LR	04 02 21.0	
	comp=N,1µm,20.9s,baz=337,slow=34						
XAN	**Xi'an**	**24.08**	**272**	P	**P**	**03 54 12.4**	**-0.4**
XAN				pP	sP	03 54 19.8	+0.1
XAN				sP	pP	03 54 22.6	+4.9
XAN				pmax	pmax		
	comp=N,12nm,1.1s						
XAN				pmax	pmax		
	comp=N,110nm,5.0s						
XAN				LR	LR		
	comp=N,3µm,14.4s						
XAN				LR	LR		
	comp=N,1µm,13.7s						
XAN				LR	LR		
	comp=N,2µm,14.4s						
MA2	**Magadan**	**24.16**	**16**	P	**P**	**03 54 11.9**	**-1.2**
	comp=N,5.9nm,0.4s,baz=211,slow=7.6,SNR=7.5						
MA2				LR	LR	04 04 41.3	
	comp=N,1µm,18.6s,baz=202,slow=39						
MA2	**Magadan**	**24.16**	**16**	*e*P	**P**	**03 54 12.1**	**-1.0**
	comp=N,20nm,0.8s						
ENH	**Enshi**	**24.85**	**263**	*e*P	**P**	**03 54 20.1**	**+0.3**
	comp=N,41nm,0.9s						
ULN	**Ulaanbaatar**	**25.45**	**306**	*e*P	**P**	**03 54 24.6**	**-0.7**
	comp=N,24nm,1.2s						
ULN	**Ulaanbaatar**	**25.45**	**306**	*d i*P	**P**	**03 54 24.0**	**-1.2**
ULN				pmax	pmax		
	comp=Z,17nm,1.3s						
YAK	**Yakutsk**	**25.81**	**351**	P	**P**	**03 54 27.3**	**-0.9**
	comp=Z,34nm,0.4s,baz=253,slow=0.5,SNR=6.5						
YAK				LR	LR	04 03 32.1	
	comp=Z,667nm,20.4s,baz=175,slow=34						
YAK	**Yakutsk**	**25.81**	**351**	*e*P	**P**	**03 54 27.2**	**-0.9**
	comp=Z,91nm,0.8s						
YAK	**Yakutsk**	**25.81**	**351**	*e*P	**P**	**03 54 25.8**	**-2.3**
YAK				*e**PP	**sP**	**03 54 36.9**	**+1.9**
YAK				*e*		03 55 13.1	
YAK				*e*		03 57 51.6	
YAK				*e*S	**S**	**03 58 54.2**	**-2.5**
YAK				*e**SS	sS	03 59 13.7	+9.0
YAK				*e*SS	**SnSn**	**03 59 55.1**	**+2.6**
YAK				*e*		04 05 23.6	
YAK				pmax	pmax		
	comp=Z,63nm,1.1s						
YAK				pmax	pmax		
	comp=N,22nm,1.1s						
YAK				pmax	pmax		
	comp=E,9.0nm,1.4s						
YAK				pmax	pmax		
	comp=Z,122nm,2.3s						
YAK				pmax	pmax		
	comp=E,44nm,1.9s						
YAK				pmax	pmax		
	comp=N,93nm,2.0s						
YAK				smax	smax		
	comp=N,225nm,5.2s						
YAK				smax	smax		
	comp=E,150nm,4.1s						
YAK				MLR	MLR		
	comp=Z,1µm,15.0s						
YAK				MLR	MLR		
	comp=E,925nm,13.0s						
YAK				MLR	MLR		
	comp=N,1µm,14.0s						
SONA1	**Songino Array**	**25.87**	**305**	*e*P	**P**	**03 54 27.9**	**-1.1**
SONA0	**Songino Array**	**25.88**	**305**	*e*P	**P**	**03 54 27.9**	**-1.2**
SONM	**Songino Array**	**25.88**	**305**	P	**P**	**03 54 27.9**	**-1.2**
	comp=N,11nm,0.9s,baz=110,slow=9.6,SNR=23						
SONM	**Songino Array**	**25.88**	**305**	P	**P**	**03 54 27.9**	**-1.2**
SONM				pmax	pmax		
	comp=Z,14nm,1.0s						
BOD	**Bodaibo**	**26.45**	**330**	*e*P	**P**	**03 54 33.3**	**-0.6**
TGY	**Tagaytay City**	**27.44**	**219**	LR	LR	04 06 20.6	
	comp=Z,417nm,19.6s,baz=5.5,slow=38						
SEY	**Seymchan**	**27.54**	**14**	P	**P**	**03 54 44.7**	**+1.0**
	comp=Z,4.1nm,0.9s,baz=215,slow=8.5,SNR=14						
SEY	**Seymchan**	**27.54**	**14**	⇓*e*P	**P**	**03 54 45.4**	**+1.7**
LZH	**Lanzhou**	**27.67**	**279**	*e*P	**P**	**03 54 44.7**	**-0.6**
LZH				pP	pP	03 54 49.9	-0.3
LZH				sP	sP	03 54 52.6	+0.4
LZH				S	**S**	**03 59 26.9**	**+0.1**
LZH				sS	sS	03 59 42.1	+7.2
LZH				SS	**SnSn**	**04 00 45.7**	**+7.2**
LZH				pmax	pmax		
	comp=Z,17nm,1.2s						
LZH				pmax	pmax		
	comp=Z,54nm,4.1s						
LZH				LR	LR		
	comp=Z,3µm,10.8s						
LZH				LR	LR		
	comp=Z,2µm,11.9s						
LZH				LR	LR		
	comp=Z,3µm,11.9s						
ZAK	**Zakamensk**	**28.49**	**310**	*e*P	**P**	**03 54 49.7**	**-2.7**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
TLY	**Talaya**	**28.63**	**312**	LR	LR	04 05 12.2	
	comp=Z,423nm,20.8s,baz=98,slow=34						
TLY	**Talaya**	**28.63**	**312**	*e*P	**P**	**03 54 50.3**	**-3.3**
	comp=Z,4.2nm,0.7s						
TLY	**Talaya**	**28.63**	**312**	*e*P	**P**	**03 54 49.5**	**-4.1**
TLY				pmax	pmax		
	comp=Z,4.0nm,1.1s						
TLY				MLR	MLR		
	comp=Z,1µm,16.0s						
GYA	**Guiyang**	**28.75**	**258**	P	**P**	**03 54 54.5**	**-0.6**
GYA				PP	**PnPn**	**03 55 46.7**	**+0.9**
GYA				S	**S**	**03 59 40.4**	**-3.6**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,110nm,5.0s						
GYA				LR	LR		
	comp=Z,490nm,16.9s						
GYA				LR	LR		
	comp=Z,480nm,16.9s						
GYA				LR	LR		
	comp=Z,410nm,16.7s						
CD2	**Chengdu**	**29.20**	**269**	P	**P**	**03 54 57.0**	**-1.9**
CD2				pP	pP	03 55 02.5	-1.3
CD2				sP	sP	03 55 05.0	-0.8
CD2				S	**S**	**03 59 48.2**	**-2.7**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,160nm,5.2s						
CD2				LR	LR		
	comp=Z,8µm,13.9s						
CD2				LR	LR		
	comp=Z,7µm,13.7s						
CD2				LR	LR		
	comp=Z,5µm,16.5s						
GTA	**Gaotai**	**30.27**	**287**	*e*P	**P**	**03 55 08.6**	**+0.2**
GTA				pP	pP	03 55 13.7	+0.4
GTA				sP	sP	03 55 16.9	+1.6
GTA				PcP	**PcP**	**03 58 08.5**	**-0.2**
GTA				S	**S**	**04 00 09.2**	**+1.6**
GTA				sS	sS	04 00 20.5	+4.8
GTA				SS	**ScP**	**04 01 53.3**	**+2.9**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,65nm,5.0s						
GTA				LR	LR		
	comp=Z,1µm,13.1s						
GTA				LR	LR		
	comp=Z,970nm,12.4s						
GTA				LR	LR		
	comp=Z,760nm,13.1s						
QIZ	**Qiongzhong**	**30.61**	**242**	P	**P**	**03 55 14.0**	**+2.6**
QIZ				S	**S**	**04 00 14.1**	**+1.1**
QIZ				LR	LR		
	comp=Z,2µm,15.2s						
QIZ				LR	LR		
	comp=Z,2µm,15.7s						
QIZ				LR	LR		
	comp=Z,610nm,11.4s						
DAV	**Davao City (W)**	**31.81**	**205**	LR	LR	04 08 18.2	
	comp=Z,699nm,19.8s,baz=356,slow=36						
KNGR	**Kungurtug, Tuv**	**32.13**	**308**	⇑*i*P	**P**	**03 55 23.5**	**-1.2**
KMI	**Kunming**	**32.49**	**259**	P	**P**	**03 55 27.8**	**-0.4**
KMI				pP	pP	03 55 33.2	+0.1
KMI				sP	sP	03 55 35.4	+0.3
KMI				PP	**PnPn**	**03 56 35.3**	**-0.1**
KMI				S	**S**	**04 00 38.8**	**-4.0**
KMI				pmax	pmax		
	comp=Z,18nm,0.8s						
KMI				pmax	pmax		
	comp=Z,80nm,4.2s						
KMI				LR	LR		
	comp=Z,3µm,17.2s						
KMI				LR	LR		
	comp=Z,2µm,15.6s						
KMI				LR	LR		
	comp=Z,3µm,15.1s						
HVS	**Khovu-Aksy**	**34.60**	**309**	⇑*e*P	**P**	**03 55 47.2**	**+1.1**
HVS				pmax	pmax		
	comp=Z,6.0nm,0.9s						
TIXI	**Tiksi**	**35.25**	**355**	*e*P	**P**	**03 55 50.0**	**-1.4**
	comp=Z,24nm,1.0s						
TIXI	**Tiksi**	**35.25**	**355**	⇓*e*P	**P**	**03 55 49.7**	**-1.6**
TIXI				pmax	pmax		
	comp=Z,14nm,1.3s						
NONG	**Nongkai**	**36.12**	**248**	P	P	03 56 05.7	+6.3
SKNT	**Sakolnakorn**	**36.18**	**246**	P	P	03 56 06.7	+6.7
MYLDM	**Lahad Datu**	**36.35**	**215**	*e*P	**P**	**03 56 02.4**	**+1.0**
	comp=Z,21nm,1.1s						
TNTI	**Ternate**	**37.27**	**198**	*e*P	**P**	**03 56 06.2**	**-3.0**
	comp=Z,15nm,0.7s						
SIJI	**Sorong**	**38.06**	**192**	P	**P**	**03 56 15.9**	**-0.1**
	comp=Z,9.7nm,0.8s,baz=28,slow=6.6,SNR=5.3						
SIJI				LR	LR	04 10 15.9	
	comp=Z,316nm,21.8s,baz=7.5,slow=34						
DGZ	**Jazzator, Alta**	**38.52**	**306**	*i* P	**P**	**03 56 18.7**	**-1.0**
DGZ				pmax	pmax		
	comp=Z,7.0nm,1.0s						
WMQ	**Urumqi**	**38.73**	**297**	P	**P**	**03 56 21.8**	**+0.4**
WMQ				pP	pP	03 56 27.1	+0.7
WMQ				pmax	pmax		
	comp=Z,26nm,0.8s						
WMQ				pmax	pmax		
	comp=Z,210nm,5.7s						
WMQ				LR	LR		
	comp=Z,2µm,12.3s						
WMQ				LR	LR		
	comp=Z,1µm,13.3s						
WMQ				LR	LR		
	comp=Z,1µm,19.9s						
CMMT	**Chiang Mai**	**38.85**	**253**	P	P	03 56 31.7	+9.1
CHTO	**Chiang Mai**	**38.85**	**253**	*e*P	**P**	**03 56 19.6**	**-3.0**
	comp=Z,6.0nm,1.0s						
CHTO	**Chiang Mai**	**38.85**	**253**	*e*P	**P**	**03 56 19.6**	**-3.0**
CHTO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CHTO	**Chiang Mai**	**38.85**	**253**	P	P	03 56 32.0	+9.4
CM31	**Chiang Mai Arr**	**39.06**	**253**	*e*P	**P**	**03 56 24.9**	**+0.6**
CMAR	**Chiang Mai Arr**	**39.06**	**253**	P	**P**	**03 56 24.9**	**+0.6**
	comp=Z,1.0nm,0.3s,baz=46,slow=6.9,SNR=4.6						
CMAR				LR	LR	04 14 00.9	
	comp=Z,368nm,18.6s,baz=38,slow=39						
CM01	**Chiang Mai Arr**	**39.07**	**253**	*e*P	**P**	**03 56 22.7**	**-1.7**
SRAK	**Srakaew**	**39.52**	**245**	P	**P**	**03 56 26.1**	**-2.1**
	comp=Z,45nm,1.0s,comp=Z,454nm						
FAKI	**Fak Fak**	**39.94**	**189**	*e*P	**P**	**03 56 29.3**	**-2.3**
	comp=Z,15nm,0.9s						
ZAA0	**Zalesovo Array**	**40.24**	**313**	*e*P	**P**	**03 56 31.1**	**-2.6**
	comp=Z,4.8nm,1.0s						
ZAA1	**Zalesovo Array**	**40.24**	**313**	*e*P	**P**	**03 56 31.8**	**-1.9**
ZAA1				*e*PcP	**PcP**	**03 58 36.6**	**-0.8**
ZALV	**Zalesovo Beam**	**40.24**	**313**	P	**P**	**03 56 31.8**	**-1.9**
	comp=Z,0.6nm,0.3s,baz=52,slow=9.6,SNR=4.1						
ZALV				PcP	**PcP**	**03 58 36.6**	**-0.8**
	comp=Z,3.3nm,0.6s,baz=105,slow=3.6,SNR=3.6						
ZALV				LR	LR	04 14 08.1	
	comp=Z,321nm,19.2s,baz=22,slow=38						
ZALV	**Zalesovo Beam**	**40.24**	**313**	*e*P	**P**	**03 56 31.2**	**-2.5**
ZALV	**Zalesovo Beam**	**40.24**	**313**	*e*P	**P**	**03 56 31.3**	**-2.5**
SHL	**Shillong**	**40.93**	**268**	*e*P	**P**	**03 56 40.3**	**+0.2**
	comp=Z,17nm,0.9s						
SHL	**Shillong**	**40.93**	**268**	*e*P	**P**	**03 56 40.3**	**+0.2**
SHL				pmax	pmax		
	comp=Z,17nm,0.9s						
NVS	**Novosibirsk**	**41.21**	**314**	*e*P	**P**	**03 56 42.5**	**+0.8**
PHET	**Kaeng Krachan**	**42.00**	**246**	P	**P**	**03 56 51.1**	**+2.4**
	comp=Z,6.7nm,0.9s						
MK01	**Makanchi Array**	**42.14**	**302**	*e*P	**P**	**03 56 47.8**	**-1.7**
MK31	**Makanchi Array**	**42.14**	**302**	*e*P	**P**	**03 56 48.2**	**-1.3**
MK31	**Makanchi Array**	**42.14**	**302**	*e*P	**P**	**03 56 48.2**	**-1.3**
MK32	**Makanchi Array**	**42.14**	**302**	*e*P	**P**	**03 56 47.7**	**-1.8**
MKAR	**Makanchi Array**	**42.14**	**302**	P	**P**	**03 56 47.7**	**-1.8**
	comp=Z,3.2nm,0.8s,baz=90,slow=8.9,SNR=23						
MKAR				LR	LR	04 13 30.4	
	comp=Z,498nm,20.3s,baz=86,slow=35						
MKAR	**Makanchi Array**	**42.14**	**302**	*e*P	**P**	**03 56 48.2**	**-1.3**
	comp=Z,25nm,0.9s						
MKAR	**Makanchi Array**	**42.14**	**302**	*e*P	**P**	**03 56 48.2**	**-1.3**
MKAR				pmax	pmax		
	comp=Z,25nm,0.9s						
MAKZ	**Makanchi**	**42.35**	**302**	*e*P	**P**	**03 56 48.9**	**-2.4**
	comp=Z,4.1nm,0.8s						
MAKZ	**Makanchi**	**42.35**	**302**	*e*P	**P**	**03 56 48.9**	**-2.4**
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BRDH	**Bariadhala**	**42.51**	**264**	LR	LR	04 14 56.0	
	comp=Z,580nm,19.5s,baz=96,slow=37						
KSM	**Kuching**	**43.66**	**223**	*e*P	**P**	**03 57 02.3**	**+0.2**
	comp=Z,14nm,0.7s						
KURK	**Kurchatov**	**44.12**	**308**	*e*P	**P**	**03 57 04.0**	**-1.4**
	comp=Z,14nm,1.0s						
KURK	**Kurchatov**	**44.12**	**308**	⇑*i*P	**P**	**03 57 04.1**	**-1.4**
KURK				pmax	pmax		
	comp=Z,18nm,1.3s						
KURBB	**Kurchatov Arra**	**44.19**	**308**	P	**P**	**03 57 04.1**	**-1.9**
	comp=Z,11nm,1.1s,baz=85,slow=8.0,SNR=27						
RAMN	**Ramite**	**44.55**	**273**	*e*P	**P**	**03 57 09.5**	**0.0**
	comp=Z,48nm,1.0s						

JIRN	Jiri	44.57	274	eP	P	03 57 10.2	+0.4
	comp=Z,51nm,0.9s						
GUN	Gumba	44.72	274	eP	P	03 57 11.4	+0.5
	comp=Z,39nm,0.9s						
KKN	Kakani	45.25	274	eP	P	03 57 15.1	+0.1
	comp=Z,31nm,0.9s						
PRZ	Przheval'sk	45.66	296	eP	P	03 57 16.3	-1.8
	comp=Z,18nm,1.0s						
PRZ	Przheval'sk	45.66	296	eP	P	03 57 16.3	-1.8
PRZ				pmax	pmax		
	comp=Z,18nm,1.0s						
GKN	Gorkha	45.67	275	eP	P	03 57 18.3	0.0
	comp=Z,28nm,0.7s						
DANN	Dangsing	46.22	276	eP	P	03 57 22.5	-0.3
	comp=Z,69nm,0.9s						
TARG	Taragay, Kyrgy	46.28	296	eP	P	03 57 23.3	+0.1
	comp=Z,10nm,0.8s						
KOLN	Koldanda	46.60	275	eP	P	03 57 24.7	-0.9
	comp=Z,24nm,0.9s						
PYUN	Piuthan	46.94	276	eP	P	03 57 28.2	-0.2
	comp=Z,87nm,0.9s						
SOEI	Soe	48.17	199	eP	P	03 57 35.4	-2.3
	comp=Z,52nm,1.1s						
KSH	Kashi	48.23	293	eP	P	03 57 41.4	+3.3
KSH				sP	sP	03 57 50.6	+5.4
KSH				PcP	PcP	03 59 07.5	+2.4
KSH				S	S	04 04 40.3	+3.2
KSH				SS	SS	04 08 05.3	-0.8
KSH				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,100nm,6.5s						
KSH				LR	LR		
	comp=Z,360nm,13.1s						
KSH				LR	LR		
	comp=Z,690nm,14.1s						
KSH				LR	LR		
	comp=Z,440nm,20.3s						
FRU	Bishkek	48.27	298	eP	P	03 57 38.0	-0.3
FRU				MLR	MLR		
	comp=E,1µm,14.0s						
AAK	Ala-Archa	48.41	298	eP	P	03 57 39.3	-0.2
	comp=E,8.1nm,0.9s						
AAK	Ala-Archa	48.41	298	eP	P	03 57 39.3	-0.2
AAK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BATI	Baumata	48.76	199	P	P	03 57 41.3	-0.9
	comp=Z,16nm,0.4s,baz=4.4,slow=13,SNR=4.2						
BATI				LR	LR	04 17 52.7	
	comp=Z,200nm,20.0s,baz=11,slow=36						
BVAR	Borovoye Array	48.89	312	P	P	03 57 41.6	-1.3
	comp=Z,4.2nm,1.1s,baz=111,slow=7.9,SNR=12						
BVAR				LR	LR	04 18 59.1	
	comp=Z,58nm,19.8s,baz=78,slow=37						
KDAK	Kodiak Island	48.91	42	P	P	03 57 43.4	+0.5
	comp=Z,8.3nm,0.9s,baz=283,slow=16,SNR=5.3						
KDAK	Kodiak Island	48.91	42	eP	P	03 57 43.4	+0.5
	comp=Z,15nm,1.0s						
KDAK	Kodiak Island	48.91	42	eP	P	03 57 43.4	+0.5
KDAK				pmax	pmax		
	comp=Z,15nm,1.0s						
BRVK	Borovoye	48.95	312	eP	P	03 57 43.2	-0.1
	comp=Z,3.9nm,0.8s						
BRVK	Borovoye	48.95	312	⇓eP	P	03 57 42.1	-1.2
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
MLY	Manley	49.34	32	eP	P	03 57 47.1	+0.9
	comp=Z,6.0nm,0.8s						
SUA	Susitna One	49.51	37	eP	P	03 57 51.5	+3.9
	comp=Z,11nm,0.8s						
PSI	Prapat	49.59	236	LR	LR	04 21 47.8	
	comp=Z,381nm,18.8s,baz=89,slow=40						
MTN	Manton Dam	49.85	189	eP	P	03 57 49.4	-1.1
	comp=Z,14nm,0.8s						
PMR	Palmer	50.27	36	eP	P	03 57 56.4	+3.2
	comp=Z,7.2nm,1.0s						
PMR	Palmer	50.27	36	eP	P	03 57 56.4	+3.2
PMR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HNR	Honiara	50.28	152	LR	LR	04 17 50.8	
	comp=Z,528nm,21.6s,baz=322,slow=34						
GHO	Glory Hole Cre	50.35	36	eP	P	03 57 55.4	+1.4
	comp=Z,12nm,0.9s						
MDM	Murphy Dome	50.41	32	eP	P	03 57 54.9	+0.6
	comp=Z,22nm,1.5s						
DHY	Denali Highway	50.94	34	eP	P	03 57 58.9	+0.5
	comp=Z,5.5nm,0.8s						
ILAR	Eielson Array	51.00	32	P	P	03 57 57.9	-0.8
	comp=Z,1.7nm,1.0s,baz=271,slow=5.9,SNR=11						
ILAR				LR	LR	04 22 50.3	
	comp=Z,150nm,18.3s,baz=292,slow=40						
ILB	Eielson Array	51.00	32	eP	P	03 57 58.7	0.0
ILB				ePP	PP	03 59 59.7	+4.8
IL1	Eielson Array	51.00	32	eP	P	03 57 57.7	-0.9
KK31	Karatay Array	51.09	299	eP	P	03 57 59.2	-0.5
KKAR	Karatay Array	51.09	299	eP	P	03 57 59.2	-0.5
KKAR				ePP	PP	03 59 48.6	-7.5
DIV	Divide	51.93	37	eP	P	03 58 07.5	+1.7
	comp=Z,20nm,1.2s						
LEM	Lembang	52.07	220	LR	LR	04 20 50.7	
	comp=Z,200nm,20.0s,baz=45,slow=37						
NIL	Nilore	52.33	287	eP	P	03 58 09.5	+0.4
	comp=Z,27nm,0.8s						
NIL	Nilore	52.33	287	eP	P	03 58 09.5	+0.4
NIL				pmax	pmax		
	comp=Z,27nm,0.8s						
SVE	Sverdlovsk	53.67	318	⇓eP	P	03 58 18.6	0.0
SVE				pmax	pmax		
	comp=Z,18nm,1.2s						
SVE				MLR	MLR		
	comp=Z,890nm,15.0s						
ARU	Arti	54.88	318	eP	P	03 58 26.8	-0.6
	comp=Z,26nm,1.3s						
ARU	Arti	54.88	318	d iP	P	03 58 26.4	-1.0
ARU						03 59 26.6	
ARU				S	S	04 06 09.1	+1.2
ARU				SS	SS	04 09 43.7	-7.1
ARU				pmax	pmax		
	comp=Z,22nm,1.2s						
ARU				MLR	MLR		
	comp=Z,653nm,16.0s						
KBL	Kabul	55.18	290	eP	P	03 58 29.5	-0.7
	comp=Z,12nm,1.0s						
KBL	Kabul	55.18	290	eP	P	03 58 29.5	-0.7
KBL				pmax	pmax		
	comp=Z,12nm,1.0s						
INK	Inuvik	55.70	27	eP	P	03 58 37.1	+4.0
	comp=Z,12nm,1.1s						
INK	Inuvik	55.70	27	eP	P	03 58 37.1	+4.0
INK				pmax	pmax		
	comp=Z,12nm,1.1s						
FITZ	Fitzroy Crossi	55.92	195	eP	P	03 58 34.8	-0.4
	comp=Z,22nm,1.5s						
ABKAR	Akbulak array	56.18	309	eP	P	03 58 35.8	-1.1
WRAB	Tennant Creek	56.57	184	eP	P	03 58 38.7	-1.1
	comp=Z,25nm,1.1s						
WRAB	Tennant Creek	56.57	184	c iP	P	03 58 38.7	-1.1
WRAB				pmax	pmax		
	comp=Z,38nm,1.7s						
WB2	Warramunga Arr	56.58	184	eP	P	03 58 38.9	-1.0
	comp=Z,18nm,0.9s						
WR1	Warramunga Arr	56.58	185	eP	P	03 58 38.6	-1.3
	comp=Z,20nm,0.9s						
WRA	Warramunga Arr	56.58	185	P	P	03 58 38.6	-1.3
	comp=Z,16nm,0.7s,baz=0.3,slow=7.6,SNR=96						
WRA				LR	LR	04 21 08.6	
	comp=Z,263nm,21.4s,baz=10.0,slow=34						
PRGR	Permogore	59.59	326	eP	P	03 58 59.4	-1.2
PRGR				pmax	pmax		
	comp=Z,15nm,1.1s						
PALK	Pallekele	59.92	256	LR	LR	04 27 38.1	
	comp=Z,281nm,18.4s,baz=89,slow=39						
SPITS	Spitsbergen Ar	60.25	348	LR	LR	04 24 50.3	
	comp=Z,288nm,20.0s,baz=15,slow=36						
AS01	Alice Springs	60.30	185	eP	P	03 59 04.7	-1.1
AS31	Alice Springs	60.30	185	eP	P	03 59 05.2	-0.6
	comp=Z,2.5nm,1.1s						
ASAR	Alice Springs	60.30	185	P	P	03 59 04.8	-1.1
	comp=Z,5.3nm,0.9s,baz=9.6,slow=5.4,SNR=45						
ASAR				LR	LR	04 23 23.2	
	comp=Z,205nm,21.8s,baz=0.0,slow=34						
GEYT	Alibeck	61.77	298	P	P	03 59 14.9	-1.0
	comp=Z,4.0nm,0.3s,baz=45,slow=2.7,SNR=7.4						
GYA0B	ALIBECK ARRAY	61.77	298	eP	P	03 59 16.1	+0.2
	comp=Z,34nm,0.9s						
KLMR	Klimovskoe	62.61	327	eP	P	03 59 18.8	-2.3
KLMR				pmax	pmax		
	comp=Z,11nm,1.0s						
KLMR	Klimovskoe	62.61	327	eP	P	03 59 18.9	-2.2
KLMR				AMP		03 59 20.8	
	comp=Z,11nm,1.0s						
KLMR				LQ	LQ	04 22 11.1	
KLMR				LQ	LQ	04 22 11.1	
KLMR				LR	LR	04 24 35.4	
ARA0	ARCESS Array S	63.32	339	eP	P	03 59 25.2	-0.5
ARCES	ARCESS Array B	63.32	339	P	P	03 59 25.2	-0.5
	comp=Z,2.9nm,0.8s,baz=56,slow=11,SNR=4.6						
ARCES				LR	LR	04 30 29.2	
	comp=Z,324nm,18.4s,baz=66,slow=39						
RES	Resolute Bay	63.41	14	eP	P	03 59 26.8	+0.6
	comp=Z,15nm,1.1s						
RES	Resolute Bay	63.41	14	eP	P	03 59 26.8	+0.6
RES				pmax	pmax		
	comp=Z,15nm,1.1s						
DZM	Mont Dzumac	64.30	151	LR	LR	04 27 06.4	
	comp=Z,408nm,19.6s,baz=28,slow=36						
DZM	Mont Dzumac	64.30	151	eLR	LR	04 18 33.6	
	comp=Z,623nm,23.5s						
YKA	Yellowknife Ar	65.22	29	P	P	03 59 37.6	-0.7
	comp=Z,1.3nm,0.8s,baz=300,slow=5.9,SNR=4.9						
YKA				LR	LR	04 31 45.9	
	comp=Z,21nm,19.1s,baz=310,slow=39						
MAK	Makhachkala	66.63	307	eP	P	03 59 45.8	-1.8
MAK				e		04 02 10.7	
MAK				eS	S	04 08 38.5	+0.2
MAK				pmax	pmax		
	comp=Z,127nm,1.3s						
OBN	Obninsk	66.78	322	⇑eP	P	03 59 47.7	-0.6
OBN				e		04 00 15.1	
OBN				e		04 02 18.0	
OBN				eS	S	04 08 42.5	+2.9
OBN				pmax	pmax		
	comp=Z,11nm,0.5s						
OBN				MLR	MLR		
	comp=Z,695nm,14.0s						
AKT	Akhty	67.21	305	eP	P	03 59 49.8	-1.7
AKT				e		04 00 16.3	
AKT				e		04 02 20.0	
AKT				pmax	pmax		
	comp=Z,24nm,1.1s						
VSR	Storozhevoye	67.45	318	eP	P	03 59 51.5	-1.2
VSR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
VORD	Divnogorie	67.51	317	eP	P	03 59 51.6	-1.5
VORD				pmax	pmax		
	comp=Z,6.0nm,0.4s						
GROC	Groznyy	67.60	308	eP	P	03 59 53.5	-0.3
GROC				eS	S	04 08 52.4	+2.3
GROC				pmax	pmax		
	comp=Z,7.0nm,0.3s						
FIA1	FINESS Array S	67.84	331	eP	P	03 59 54.5	-0.5
FIA0	FINESS Array S	67.84	331	eP	P	03 59 54.3	-0.7
FIA0	FINESS Array S	67.84	331	eP	P	03 59 54.3	-0.7
FINES	FINESS Array B	67.84	331	P	P	03 59 54.3	-0.7
	comp=Z,12nm,1.0s,baz=90,slow=7.6,SNR=15						
FINES				LR	LR	04 29 59.8	
	comp=Z,287nm,18.7s,baz=50,slow=36						
FORT	Forrest	67.93	190	eP	P	03 59 55.9	+0.1
	comp=Z,29nm,0.8s						
STKA	Stephens Creek	68.40	177	P	P	03 59 58.8	0.0
	comp=Z,3.0nm,0.7s,baz=327,slow=8.5,SNR=4.8						
STKA				LR	LR	04 29 38.9	
	comp=Z,142nm,21.9s,baz=11,slow=36						
STKA	Stephens Creek	68.40	177	eP	P	03 59 58.8	0.0
	comp=Z,1.9nm,1.3s						
STKA	Stephens Creek	68.40	177	eP	P	03 59 58.8	0.0
STKA				pmax	pmax		
	comp=Z,2.0nm,1.3s						
WSAR	Wadi Sarin	68.53	283	LR	LR	04 33 41.1	
	comp=Z,238nm,18.2s,baz=96,slow=39						
NCK	Nalchik	68.84	309	⇓eP	P	04 00 03.1	+1.5
NCK				pmax	pmax		
	comp=Z,10.0nm,0.4s						
AFI	Afiamalu	68.93	127	LR	LR	04 25 01.4	
	comp=Z,204nm,21.2s,baz=7.0,slow=31						
ZEI	Tsey	69.01	308	eP	P	04 00 01.1	-1.9
ZEI				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KBZ	Khabaz	69.15	309	P	P	04 00 03.5	0.0
	comp=Z,11nm,1.0s,baz=17,slow=4.2,SNR=7.6						
KBZ				LR	LR	04 30 59.9	
	comp=Z,264nm,18.1s,baz=59,slow=36						
KIV	Kislovodsk	69.17	310	eP	P	04 00 04.6	+0.8
	comp=Z,43nm,1.1s						
KIV	Kislovodsk	69.17	310	eP	P	04 00 04.0	+0.3
KIV				pmax	pmax		
	comp=Z,38nm,1.1s						
KIV				MLR	MLR		
	comp=Z,296nm,17.0s						
VSU	Vasula	69.37	329	⇓eP	P	04 00 04.0	-0.6
VSU				pmax	pmax		
	comp=Z,60nm,1.1s						
NEY	Neytrino	69.51	309	⇓eP	P	04 00 07.2	+1.2
NEY				pmax	pmax		
	comp=Z,1.0nm,0.9s						
GNI	Garni	69.84	305	LR	LR	04 33 22.7	
	comp=Z,251nm,18.2s,baz=52,slow=38						
WPW	White Pass	70.38	46	eP	P	04 00 12.2	+1.0
SUMG	Summit	70.88	359	eP	P	04 00 14.3	+0.2
	comp=Z,12nm,1.0s						
SUMG	Summit	70.88	359	i P	P	04 00 13.6	-0.5
	comp=Z,9.6nm,0.9s						
SUMG	Summit	70.88	359	eP	P	04 00 13.6	-0.5
SUMG				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ANN	Anapa	71.88	313	eP	P	04 00 19.6	-0.5
ANN				ePPP	PPP	04 04 43.0	
ANN				pmax	pmax		
	comp=Z,65nm,1.2s						
ANN				MLR	MLR		
	comp=Z,444nm,15.0s						
NEW	Newport	71.99	43	LR	LR	04 35 19.8	
	comp=Z,79nm,18.0s,baz=348,slow=39						
PINE	Pine Mountain	72.34	48	eP	P	04 00 24.3	+1.0
	comp=Z,13nm,0.9s						
YBH	Yreka Blue Hor	72.41	51	LR	LR	04 28 47.9	
	comp=Z,54nm,19.4s,baz=320,slow=33						
E09A	Wood Farm, Sta	72.43	45	eP	P	04 00 25.5	+2.1
AKASG	Malin Array Be	72.94	321	P	P	04 00 25.2	-1.1
	comp=Z,4.8nm,0.6s,baz=48,slow=6.7,SNR=22						
AKASG				LR	LR	04 35 05.6	
	comp=Z,494nm,18.1s,baz=30,slow=38						
AKBB	Malin Array Si	72.94	321	eP	P	04 00 25.6	-0.7
	comp=Z,11nm,0.9s						
KIEV	Kiev	72.95	321	eP	P	04 00 24.7	-1.7
	comp=Z,10nm,0.9s						
KIEV	Kiev	72.95	321	⇓iP	P	04 00 25.1	-1.3
KIEV				pmax	pmax		
	comp=Z,10.0nm,0.8s						
K05A	Summer Lake	72.97	49	eP	P	04 00 28.8	+1.8
	comp=Z,6.6nm,0.8s						
AK11	Malin Array Si	72.98	321	eP	P	04 00 25.9	-0.7
NC405	NORSAR Array S	73.19	336	eP	P	04 00 27.4	-0.3
WALA	Waterton Lakes	73.24	41	eP	P	04 00 28.9	+0.6
	comp=Z,6.3nm,1.0s						
HFS	Hagfors	73.25	335	LR	LR	04 35 27.6	
	comp=Z,353nm,18.5s,baz=37,slow=38						
NC204	NORSAR Array S	73.38	336	eP	P	04 00 28.6	-0.3
NB2	NORSAR Subarra	73.41	336	P	P	04 00 27.6	-1.4
	comp=Z,16nm,1.2s,baz=42,slow=5.9						
NOA	NORSAR Array B	73.41	336	LR	LR	04 36 27.2	
	comp=Z,155nm,18.1s,baz=40,slow=39						
SUW	Suwalki	73.72	326	eP	P	04 00 30.5	-0.4
SUW	Suwalki	73.72	326	eP	P	04 00 31.5	+0.6
	comp=Z,28nm,1.0s						
SUW	Suwalki	73.72	326	eP	P	04 00 30.5	-0.4
JTMT	Jette	73.83	42	eP	P	04 00 33.7	+1.9
	comp=Z,11nm,0.9s						
BMO	Blue Mountains	73.87	46	eP	P	04 00 32.9	+0.8
	comp=Z,4.4nm,0.9s						
BMO	Blue Mountains	73.87	46	eP	P	04 00 32.9	+0.8
BMO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
J08A	Circle Bar Ran	74.06	48	eP	P	04 00 34.9	+1.6
	comp=Z,5.4nm,0.9s						
ORV	Oroville	74.40	52	eP	P	04 00 36.6	+1.4
	comp=Z,3.1nm,0.9s						
ORV	Oroville	74.40	52	eP	P	04 00 36.6	+1.4
ORV				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MSO	Missoula	74.57	43	eP	P	04 00 36.5	+0.3
	comp=Z,9.2nm,1.3s						
BEKR	Beckworth	74.94	51	eP	P	04 00 39.5	+0.9
	comp=Z,5.0nm,0.9s						
SORM	Soroca	74.97	319	⇓iP	P	04 00 37.0	-1.3
SORM	Soroca	74.97	319	⇓P	P	04 00 37.0	-1.3
FFC	Flin Flon	75.20	31	eP	P	04 00 39.4	-0.1
	comp=Z,9.4nm,1.0s						
FFC	Flin Flon	75.20	31	eP	P	04 00 39.4	-0.1
FFC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KIS	Kishinev	75.43	318	eP	P	04 00 40.0	-1.0
KIS				eL	L	04 14 14.0	
KIS				LRM	MLR	04 36 40.0	
	comp=Z,1µm,15.0s						
KIS	Kishinev	75.43	318	eP	P	04 00 40.0	-1.0
KIS				e		04 05 14.0	
KIS				MLR	MLR		
	comp=Z,1µm,15.0s						
KIS				MLR	MLR		
	comp=Z,1µm,15.0s						
MFID	Camas Ranch	75.58	46	eP	P	04 00 44.0	+2.0
	comp=Z,11nm,1.5s						
PAHR	Pah Rah Range	75.64	51	eP	P	04 00 43.3	+0.8
	comp=Z,9.7nm,1.3s						
HRY	Holter Researc	75.78	42	eP	P	04 00 44.5	+1.3
CMB	Columbia Colle	75.99	53	eP	P	04 00 45.1	+0.7
	comp=Z,12nm,1.3s						
CMB	Columbia Colle	75.99	53	eP	P	04 00 45.1	+0.7
CMB				pmax	pmax		
	comp=Z,12nm,1.3s						
LRM	Limekiln Ridge	76.01	43	eP	P	04 00 45.5	+0.8
EGMT	Eagleton	76.04	40	eP	P	04 00 45.2	+0.6
	comp=Z,15nm,0.9s						
LVV	L'vov	76.08	323	eP	P	04 00 43.6	-1.0
LVV				MLR	MLR		
	comp=Z,320nm,13.5s						
LVV				MLR	MLR		
	comp=N,280nm,13.3s						
LVV				MLR	MLR		
	comp=E,150nm,12.8s						
YERR	Yerington	76.16	52	eP	P	04 00 48.3	+2.7
	comp=E,16nm,1.4s						
DLMT	Dillon	76.21	43	eP	P	04 00 46.5	+0.8
	comp=E,16nm,1.0s						
HLID	Hailey	76.31	46	eP	P	04 00 47.2	+0.9
	comp=E,5.3nm,1.4s						
BMN	Battle Mountai	76.55	49	eP	P	04 00 50.0	+2.3
	comp=E,12nm,1.5s						
BOZ	Bozeman (W)	76.60	43	eP	P	04 00 48.5	+0.6
	comp=E,10nm,1.1s						
BOZ	Bozeman (W)	76.60	43	eP	P	04 00 48.5	+0.6
BOZ				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KVN	Kaiserville	76.83	51	eP	P	04 00 50.3	+0.9
	comp=Z,6.3nm,1.0s						
KVN	Kaiserville	76.83	51	eP	P	04 00 50.3	+0.9
KVN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KWP	Kalwaria Pacla	76.84	323	eP	P	04 00 49.6	+0.6
KWP	Kalwaria Pacla	76.84	323	eP	P	04 00 49.3	+0.3
	comp=Z,249nm,1.0s						
KWP	Kalwaria Pacla	76.84	323	eP	P	04 00 49.3	+0.3
KWP				pmax	pmax		
	comp=Z,249nm,1.0s						
TESR	Tescani	76.90	319	⇑iP	P	04 00 47.3	-2.0
BIZ	Bicaz	76.91	319	⇑iP	P	04 00 48.4	-1.0
BUR08	Bucovina Ar. S	76.92	320	eP	P	04 00 49.7	+0.1
BUR04	Bucovina Ar. S	76.93	320	eP	P	04 00 49.2	-0.4
BURAR	Bucovina Array	76.93	320	⇑iP	P	04 00 49.7	+0.1
BURAR	Bucovina Array	76.93	320	⇑P	P	04 00 49.7	+0.1
NV01	Mina Array Sit	77.08	52	eP	P	04 00 51.2	+0.4
NVAR	Mina Array Bea	77.08	52	P	P	04 00 51.6	+0.8
	comp=Z,2.5nm,0.8s,baz=297,slow=4.6,SNR=10						
NVAR				LR	LR	04 32 13.6	
	comp=Z,79nm,19.3s,baz=78,slow=34						
BR101	Keskin Array S	77.12	310	eP	P	04 00 50.5	-0.4
BR131	Keskin Array S	77.12	310	eP	P	04 00 51.4	+0.4
BRTR	Keskin Array B	77.12	310	P	P	04 00 50.5	-0.4
	comp=Z,4.0nm,1.0s,baz=102,slow=4.0,SNR=15						
BRTR				LR	LR	04 39 27.2	
	comp=Z,151nm,18.1s,baz=34,slow=39						
NV11	Mina Array Sit	77.17	52	eP	P	04 00 52.2	+1.0
	comp=Z,0.8nm,1.4s						
VRI	Vrincioaia	77.27	318	⇓iP	P	04 00 50.4	-1.1
VRI	Vrincioaia	77.27	318	⇓P	P	04 00 50.4	-1.1
YHB	Horse Butte	77.37	43	eP	P	04 00 55.3	+3.0
	comp=Z,6.6nm,0.9s						
GCMT	Greycliff	77.53	42	eP	P	04 00 54.0	+0.9
UZH	Uzhgorod	77.72	322	eP	P	04 00 53.4	-0.5
UZH				i		04 01 07.0	
UZH				eS	S	04 10 40.4	-4.9
UZH				ePS	PnS	04 11 23.4	-2.1
OJC	Ojcow	77.82	325	eP	P	04 00 54.4	-0.1
OJC	Ojcow	77.82	325	eP	P	04 00 54.3	-0.1
	comp=Z,26nm,1.1s						
OJC	Ojcow	77.82	325	eP	P	04 00 54.3	-0.1
OJC				pmax	pmax		
	comp=Z,26nm,1.1s						
MLR	Muntele Rosu	77.93	318	LR	LR	04 36 26.8	
	comp=Z,53nm,19.6s,baz=46,slow=37						
MLR	Muntele Rosu	77.93	318	eP	P	04 00 55.5	+0.2
	comp=Z,12nm,1.4s						
MLR	Muntele Rosu	77.93	318	eP	P	04 00 55.5	+0.2
MLR				pmax	pmax		
	comp=Z,13nm,1.4s						
TRPA	Tarpa	77.93	322	⇓iP	P	04 00 55.2	+0.1
TRPA	Tarpa	77.93	322	⇓eP	P	04 00 54.7	-0.4
CRVS	Cervenica-Dubn	77.94	323	eP	P	04 00 55.3	+0.2
CRVS				pmax	pmax		
	comp=Z,12nm,1.3s						
CRVS	Cervenica-Dubn	77.94	323	eP	P	04 00 55.3	+0.2
H17A	Grant Village	77.94	43	eP	P	04 00 58.1	+2.6
	comp=Z,19nm,1.4s						
IMW	Indian Meadow	78.06	44	eP	P	04 00 57.8	+1.6
	comp=Z,6.6nm,0.9s						
FLWY	Flagg Ranch	78.07	43	eP	P	04 00 58.7	+2.5
	comp=Z,17nm,1.4s						
NIE	Niedzica	78.14	324	eP	P	04 00 57.1	+0.8
NIE	Niedzica	78.14	324	eP	P	04 00 57.1	+0.8
FXWY	Fox Creek	78.17	44	eP	P	04 00 58.6	+1.7
	comp=Z,4.4nm,1.0s						
RLMT	Red Lodge	78.18	42	eP	P	04 00 57.8	+0.9
	comp=Z,5.1nm,0.9s						
TPAW	Teton Pass	78.31	44	eP	P	04 00 59.6	+1.9
	comp=Z,8.1nm,1.3s						
RAYN	Ar Rayn	78.44	291	eP	P	04 00 58.4	0.0
	comp=Z,22nm,1.4s						
RAYN	Ar Rayn	78.44	291	eP	P	04 00 58.4	0.0
RAYN				pmax	pmax		
	comp=Z,22nm,1.4s						
REDW	Red Top Meadow	78.45	44	eP	P	04 00 59.5	+1.1
	comp=Z,6.3nm,1.2s						
LANS	Liptovska Anna	78.72	324	eP	P	04 01 00.2	+0.7
LANS	Liptovska Anna	78.72	324	eP	P	04 01 00.2	+0.7
LAO	LASA Array	78.73	39	eP	P	04 01 00.5	+0.8
	comp=Z,22nm,1.5s						
DRGR		78.75	321	⇓iP	P	04 00 57.2	-2.6
DRGR		78.75	321	⇓P	P	04 00 57.2	-2.6
R11A	Troy Canyon, C	78.82	50	eP	P	04 01 01.1	+0.7
	comp=Z,9.1nm,1.4s						
OKC	Ostrava-Krasne	78.85	325	AMS	AMS	04 39 40.0	
	comp=Z,1µm,13.3s						
KSP	Ksiaz	78.96	327	eP	P	04 01 01.1	+0.4
KSP	Ksiaz	78.96	327	eP	P	04 01 01.1	+0.4
MORC	Moravsky Berou	79.17	325	⇓iP	P	04 01 01.8	-0.2
MORC	Moravsky Berou	79.17	325	eP	P	04 01 01.8	-0.2
	comp=Z,10nm,1.0s						
MORC	Moravsky Berou	79.17	325	eP	P	04 01 01.8	-0.2
MORC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MORC	Moravsky Berou	79.17	325	eP	P	04 01 01.7	-0.2
HWUT	Hardware Ranch	79.17	46	eP	P	04 01 03.8	+1.5
	comp=Z,8.8nm,1.4s						
TPNV	Topopah Spring	79.27	52	eP	P	04 01 03.5	+0.6
	comp=Z,3.9nm,0.8s						
TPNV	Topopah Spring	79.27	52	eP	P	04 01 03.5	+0.6
TPNV				pmax	pmax		
	comp=Z,4.0nm,0.8s						
DPC	Dobruska-Polom	79.30	326	eP	P	04 01 03.5	+0.8
DPC				AMS	AMS	04 40 10.0	
	comp=Z,1µm,13.8s						
DPC	Dobruska-Polom	79.30	326	eP	P	04 01 03.5	+0.8
DPC				MLR	MLR		
	comp=Z,1µm,13.8s						
UPC	Upice	79.33	327	AMS	AMS	04 40 40.0	
	comp=Z,1µm,13.4s						
DUG	Dugway, Tooele	79.34	48	eP	P	04 01 04.2	+1.0

	comp=Z,5.4nm,1.3s						
DUG	Dugway, Tooele	79.34	48	*e*P	P	04 01 04.2	+1.0
DUG				pmax	pmax		
	comp=Z,5.0nm,1.3s						
PSZ	Piszkesteto	79.37	323	⇓*i*P	P	04 01 03.1	0.0
PSZ	Piszkesteto	79.37	323	⇓*e*P	P	04 01 03.3	+0.2
PSZ	Piszkesteto	79.37	323	*e*P	P	04 01 03.1	0.0
	comp=Z,12nm,1.0s						
PSZ	Piszkesteto	79.37	323	*e*P	P	04 01 03.1	0.0
PSZ				pmax	pmax		
	comp=Z,12nm,1.0s						
VYHS	Vyhne	79.47	324	*e*P	P	04 01 03.9	+0.3
VYHS				pmax	pmax		
	comp=Z,6.0nm,1.3s						
VYHS	Vyhne	79.47	324	*e*P	P	04 01 03.9	+0.3
PD31	Pinedale Array	79.56	44	*e*P	P	04 01 05.1	+0.6
PDAR	Pinedale Array	79.56	44	P	P	04 01 04.6	+0.1
	comp=Z,1.1nm,0.8s,baz=301,slow=0.9,SNR=10						
PDAR	Pinedale Array	79.56	44	*e*P	P	04 01 04.5	0.0
JAVC	Velka Javorina	79.76	325	*e*P	P	04 01 06.1	+0.9
VRAC	Vranov	79.93	326	*e*P	P	04 01 06.2	+0.1
PVCC	Panska Ves	79.94	327	AMS	AMS	04 41 00.0	
	comp=Z,600nm,12.8s						
BRG	Berggiesshubel	79.95	328	*e*P	P	04 01 05.7	-0.5
	comp=Z,6.5nm,1.1s comp=N,550nm,14.1s comp=E,455nm,12.9s comp=Z,662nm,12.7s						
BRG	Berggiesshubel	79.95	328	*e*P	P	04 01 05.7	-0.5
BRG				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BRG				MLR	MLR		
	comp=N,550nm,14.1s						
BRG				MLR	MLR		
	comp=E,455nm,12.9s						
BRG				MLR	MLR		
	comp=Z,662nm,12.7s						
CLL	Collm	80.03	329	*i* P	P	04 01 05.5	-1.0
	comp=Z,15nm,1.1s						
CLL				*i* pP	pP	04 01 10.9	-0.9
	comp=Z,24nm,1.7s						
CLL				*i*		04 01 16.6	
CLL	Collm	80.03	329	*e*P	P	04 01 06.2	-0.3
	comp=Z,17nm,1.2s						
CLL	Collm	80.03	329	*i* P	P	04 01 05.5	-1.0
CLL				pmax	pmax		
	comp=Z,15nm,1.1s						
MMAI	Mount Meron Ar	80.06	304	LR	LR	04 40 46.8	
	comp=Z,117nm,18.4s,baz=350,slow=39						
BZS	Buzias	80.11	320	⇑*i*P	P	04 01 05.3	-1.8
BZS	Buzias	80.11	320	⇑P	P	04 01 05.3	-1.8
MPU	Maple Canyon	80.15	47	*e*P	P	04 01 09.1	+1.4
	comp=Z,4.7nm,1.1s						
KRUC	Moravsky	80.20	325	*e*P	P	04 01 07.5	0.0
SHPR	Sheep Range	80.23	52	*e*P	P	04 01 09.6	+1.5
	comp=Z,6.5nm,1.3s						
MODS	Modra-Piesok	80.29	325	*e*P	P	04 01 08.1	+0.1
MODS				pmax	pmax		
	comp=Z,12nm,1.2s						
MODS	Modra-Piesok	80.29	325	*e*P	P	04 01 08.1	+0.1
GOPC	GO Pecny, Ondr	80.30	327	AMS	AMS	04 41 20.0	
	comp=Z,1µm,12.9s						
PRA	Prague	80.34	327	AMS	AMS	04 41 20.0	
	comp=Z,1µm,13.1s						
PRU	Pruhonice	80.35	327	AMS	AMS	04 41 20.0	
	comp=Z,1µm,13.0s						
MSU	Marysvale	80.80	49	*e*P	P	04 01 13.3	+2.1
ULM	Lac du Bonnet	81.02	32	P	P	04 01 11.4	-0.5
	comp=Z,5.4nm,0.8s,baz=320,slow=7.1,SNR=4.9						
ULM				LR	LR	04 39 57.4	
	comp=Z,202nm,20.1s,baz=345,slow=38						
ULM	Lac du Bonnet	81.02	32	*e*P	P	04 01 11.6	-0.3
	comp=Z,12nm,1.1s						
NKC	Novy Kostel	81.07	328	AMS	AMS	04 42 10.0	
	comp=Z,700nm,13.6s						
MTPU	Mount Pierson	81.09	49	*e*P	P	04 01 14.8	+1.8
	comp=Z,7.8nm,1.5s						
LCMT	Little Creek M	81.11	50	*e*P	P	04 01 14.3	+1.6
	comp=Z,4.1nm,1.1s						
P18A	Preston Nutter	81.22	47	*e*P	P	04 01 15.1	+1.6
	comp=Z,9.2nm,1.3s						
CONA	Conrad Observa	81.27	325	*e*P	P	04 01 13.9	+0.5
	comp=Z,12nm,1.3s						
VTS	Vitosha	81.33	317	⇑*i*P	P	04 01 12.3	-1.6
VTS	Vitosha	81.33	317	*e*P	P	04 01 14.2	+0.3
	comp=Z,10.0nm,1.2s						
VTS	Vitosha	81.33	317	⇑P	P	04 01 12.3	-1.6
KNB	Kanab	81.36	50	*e*P	P	04 01 16.5	+2.3
	comp=Z,7.3nm,1.2s						
SRU	San Rafael Swe	81.39	47	*e*P	P	04 01 15.9	+1.6
	comp=Z,3.9nm,0.8s						
SRU	San Rafael Swe	81.39	47	*e*P	P	04 01 15.9	+1.6
SRU				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KHC	Kasperske Hory	81.41	327	*e*P	P	04 01 14.0	0.0
KHC				*e*x	x	04 01 22.5	
KHC				AMS	AMS	04 41 30.0	
	comp=Z,1µm,14.4s						
KHC	Kasperske Hory	81.41	327	*e*P	P	04 01 13.7	-0.3
	comp=Z,3.7nm,1.1s						
KHC	Kasperske Hory	81.41	327	*e*P	P	04 01 13.7	-0.3
KHC				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GEC2	GERESS Array S	81.57	327	*e*P	P	04 01 14.7	-0.3
	comp=Z,4.9nm,1.1s						
GEC2	GERESS Array S	81.57	327	*e*P	P	04 01 14.7	-0.3
GEC2				pmax	pmax		
	comp=Z,5.0nm,1.1s						
GERES	GERESS Array B	81.57	327	P	P	04 01 14.3	-0.6
	comp=Z,1.2nm,0.6s,baz=35,slow=5.6,SNR=14						
GERES				LR	LR	04 38 33.4	
	comp=Z,188nm,18.6s,baz=45,slow=36						
GEA0	GERESS Array S	81.57	327	*e*P	P	04 01 14.1	-0.8
W13A	Hualapai Mount	81.92	52	*e*P	P	04 01 18.9	+1.7
	comp=Z,5.2nm,1.3s						
ARSA	Arzberg	81.92	325	*e*P	P	04 01 14.7	-2.0
	comp=Z,8.3nm,1.1s						
DIVS	Divibare	81.99	320	*e*P	P	04 01 17.0	-0.3
	comp=Z,3.9nm,0.9s						
GRFO	Grafenberg	82.00	328	*e*P	P	04 01 17.1	0.0
	comp=Z,13nm,0.8s						
GRFO	Grafenberg	82.00	328	*e*P	P	04 01 17.1	0.0
GRFO				pmax	pmax		
	comp=Z,13nm,0.8s						
MOA	Molln	82.06	326	*e*P	P	04 01 17.8	+0.4
	comp=Z,4.5nm,1.2s						
RAR	Rarotonga	82.06	124	LR	LR	04 35 28.2	
	comp=Z,170nm,18.9s,baz=298,slow=34						
U15A	North Rim	82.07	50	*e*P	P	04 01 19.6	+1.5
	comp=Z,7.1nm,1.3s						
AGMN	Agassiz Nation	82.49	33	*e*P	P	04 01 19.6	-0.1
	comp=Z,4.3nm,0.9s						
SOKA	Soboth	82.57	325	*e*PcP	P	04 01 20.9	+0.7
	comp=Z,21nm,1.1s						
PV23	Carpenter Ridg	82.72	47	*e*P	P	04 01 22.6	+1.2
	comp=Z,9.5nm,0.9s						
PV14	Lion Creek, Pa	82.76	47	*e*P	P	04 01 22.9	+1.3
	comp=Z,10nm,1.0s						
PV22	Blue Mesa, Par	82.79	47	*e*P	P	04 01 23.0	+1.3
	comp=Z,7.6nm,1.1s						
PV17	East Wray Mesa	82.86	47	*e*P	P	04 01 23.4	+1.3
	comp=Z,12nm,1.1s						
PV16	Nyswonger Mesa	82.86	47	*e*P	P	04 01 23.5	+1.4
	comp=Z,5.2nm,0.8s						
PV18	Skein Mesa, Pa	82.91	47	*e*P	P	04 01 24.4	+2.0
	comp=Z,14nm,1.4s						
OBKA	Obir	82.92	325	*e*P	P	04 01 21.7	-0.3
	comp=Z,6.6nm,1.1s						
PV03	Paradox Valley	82.94	47	*e*P	P	04 01 23.9	+1.4
PV13	Radium Mtn., P	83.02	47	*e*P	P	04 01 24.3	+1.4
	comp=Z,11nm,1.3s						
KBA	Koelnbreinsper	83.05	326	*e*P	P	04 01 23.1	+0.3
	comp=Z,11nm,1.1s						
Y14A	Wickenburg	83.22	52	*e*P	P	04 01 25.0	+1.2
	comp=Z,9.5nm,1.4s						
WUAZ	Wupatki	83.22	50	*e*P	P	04 01 25.5	+1.6
MYKA	Terra Mystica	83.25	325	*e*P	P	04 01 22.3	-1.5
	comp=Z,6.1nm,1.0s						
B35A	Bob, Littlefor	83.37	32	*e*P	P	04 01 23.9	-0.3
	comp=Z,16nm,1.4s						
SMCO	Snowmass	83.41	45	*e*P	P	04 01 25.7	+0.6
	comp=Z,3.8nm,1.1s						
PDG	Podgorica	83.55	319	⇑*i*P	P	04 01 24.7	-0.5
TTG	Podgorica	83.55	319	*e*P	P	04 01 25.0	-0.3
	comp=Z,14nm,1.0s						
TTG	Podgorica	83.55	319	*e*P	P	04 01 25.0	-0.3
TTG				pmax	pmax		
	comp=Z,14nm,1.0s						
FNA	Florina	83.57	317	*e*P	P	04 01 25.5	0.0
	comp=Z,5.2nm,1.0s						
FNA	Florina	83.57	317	*e*P	P	04 01 25.5	0.0
FNA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ABTA	Abfaltersbach	83.67	326	*e*P	P	04 01 24.8	-1.2
	comp=Z,5.3nm,1.1s						
ISCO	Idaho Springs	83.75	44	*e*P	P	04 01 28.9	+2.1
	comp=Z,3.9nm,1.2s						
MOTA	Moosalm	83.84	327	*e*PcP	P	04 01 27.2	+0.4
	comp=Z,11nm,1.3s						
MVCO	Mesa Verde	83.84	48	*e*P	P	04 01 28.5	+1.3
	comp=Z,9.2nm,1.4s						
RETA	Reutte	83.88	327	*e*P	P	04 01 27.0	0.0
	comp=Z,13nm,1.2s						
X16A	Lo Mia Camp, P	83.90	51	*e*P	P	04 01 28.7	+1.3
	comp=Z,12nm,1.5s						
G32A	Webster	84.03	36	*e*P	P	04 01 28.2	+0.5
	comp=Z,26nm,0.9s						
BFO	Black Forest	84.25	329	*e*P	P	04 01 28.4	-0.4
	comp=Z,13nm,1.1s						
BFO	Black Forest	84.25	329	*e*P	P	04 01 28.4	-0.4
BFO				pmax	pmax		
	comp=Z,13nm,1.1s						
FETA	Feichten	84.25	327	*e*P	P	04 01 28.6	-0.4
	comp=Z,7.0nm,1.0s						
DAVA	Damuels	84.42	328	*e*P	P	04 01 26.9	-2.9
	comp=Z,8.7nm,1.0s						
S22A	4UR Ranch, Cre	84.46	46	*e*P	P	04 01 31.6	+1.2
	comp=Z,4.3nm,1.0s						
DAVOX	Davos/Dischmat	84.81	327	LR	LR	04 40 55.8	
	comp=Z,171nm,18.6s,baz=42,slow=37						
ECH	Echery	84.82	330	*e*P	P	04 01 31.5	-0.2
	comp=Z,5.4nm,0.9s						
ECH	Echery	84.82	330	*e*P	P	04 01 31.5	-0.2
ECH				pmax	pmax		
	comp=Z,5.0nm,0.9s						
SDCO	Great Sand Dun	85.23	46	*e*P	P	04 01 34.2	-0.1
	comp=Z,3.5nm,1.1s						
G35A	Watkins	85.45	34	*e*P	P	04 01 35.0	+0.2
	comp=Z,18nm,1.4s						
ECSD	EROS Data Cent	85.59	37	*e*P	P	04 01 35.4	-0.2
	comp=Z,3.9nm,0.8s						
E38A	The Farm, Brul	85.66	32	*e*P	P	04 01 35.4	-0.5
	comp=Z,9.1nm,1.0s						
TUC	Tucson	85.69	53	*e*P	P	04 01 37.4	+1.0
	comp=Z,11nm,1.4s						
TUC	Tucson	85.69	53	*e*P	P	04 01 37.4	+1.0
TUC				pmax	pmax		
	comp=Z,11nm,1.4s						
ITM	Ithomi	85.76	314	*e*P	P	04 01 35.6	-1.0
	comp=Z,18nm,0.8s						
SCHQ	Schefferville	86.19	14	LR	LR	04 42 40.7	
	comp=Z,207nm,20.3s,baz=329,slow=37						
T25A	Trinidad	86.27	45	*e*P	P	04 01 40.0	+0.6
	comp=Z,6.5nm,1.0s						
ANMO	Albuquerque	86.59	48	*e*P	P	04 01 43.0	+2.1
	comp=Z,3.4nm,1.1s						
ANMO	Albuquerque	86.59	48	⇑*e*P	P	04 01 42.0	+1.0
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.7s						
PPT	Papeete	86.77	115	LR	LR	04 41 59.5	
	comp=Z,119nm,18.3s,baz=302,slow=37						
PPT2	Papeete2	86.78	115	*e*LR	LR	04 28 59.0	
	comp=Z,320nm,30.5s						
I37A	Lemond, Waseca	86.87	35	*e*P	P	04 01 42.3	+0.4
	comp=Z,12nm,0.8s						
J36A	Seneca 1, Swea	86.97	36	*e*P	P	04 01 42.2	-0.1
	comp=Z,9.2nm,0.8s						
G40A	Rib Lake	87.30	32	*e*P	P	04 01 44.4	+0.5
	comp=Z,4.4nm,0.9s						
F41A	Three Lakes	87.38	31	*e*P	P	04 01 44.6	+0.3
	comp=Z,6.8nm,1.1s						
ATD	Arta Tunnel	87.52	282	LR	LR	04 46 31.0	
	comp=Z,107nm,18.2s,baz=28,slow=40						
TAOE	Nuku Hiva Isla	88.53	102	*e*LR	LR	04 29 50.6	
	comp=Z,197nm,25.1s						
N37A	Lee Faris, Mou	89.01	37	*e*P	P	04 01 52.6	+0.5
	comp=Z,12nm,0.9s						
P38A	Dawn	90.21	37	*e*P	P	04 01 57.9	+0.1
	comp=Z,5.2nm,0.6s						
TBI	Tubuai	90.56	119	*e*LR	LR	04 30 45.7	
	comp=Z,244nm,25.5s						
P40A	Paris	91.00	37	*e*P	P	04 02 01.7	+0.2
	comp=Z,5.5nm,0.8s						
WMOK	Wichita Mounta	91.17	44	*e*P	P	04 02 03.7	+1.3
	comp=Z,2.6nm,1.0s						
WMOK	Wichita Mounta	91.17	44	*e*P	P	04 02 03.7	+1.3
WMOK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
LPIG	La Paz	91.42	58	LR	LR	04 38 34.8	
	comp=Z,62nm,18.5s,baz=344,slow=32						
TX31	Lajitas Ar. Si	92.19	50	*e*P	P	04 02 07.6	+0.3
LTX	Lajitas	92.19	50	*e*P	P	04 02 07.5	+0.2
LTX	Lajitas	92.19	50	*e*P	P	04 02 07.5	+0.2
TXAR	Lajitas Array	92.19	50	P	P	04 02 07.5	+0.2
	comp=Z,3.6nm,1.1s,baz=321,slow=3.2,SNR=14						
CCM	Cathedral Cave	92.55	37	*e*P	P	04 02 11.2	+2.5
	comp=Z,5.8nm,1.0s						
CCM	Cathedral Cave	92.55	37	*e*P	P	04 02 11.2	+2.5
CCM				pmax	pmax		
	comp=Z,6.0nm,1.0s						
TKL	Tuckaleechee C	97.97	33	LR	LR	04 48 57.3	
	comp=Z,142nm,20.2s,baz=354,slow=37						
TOA1	Torodi Ar. Sit	115.69	312	*e*PKPdf	PKPdf	04 07 38.7	-1.4
TORD	Torodi Ar. Bea	115.69	312	PKP	PKPdf	04 07 38.7	-1.4
	comp=Z,0.4nm,0.7s,baz=3.2,slow=3.1						
QSPA	South Pole Qui	126.56	180	PKP	PKPdf	04 07 59.3	-0.1
	comp=Z,3.0nm,1.0s,baz=205,slow=0.7,SNR=6.2						
SAML	Samuel	146.08	40	*e*PKPdf	PKPdf	04 08 37.1	+0.2
SAML	Samuel	146.08	40	*e*PKP2	PKPdf	04 08 37.1	+0.2
LPAZ	La Paz	148.90	56	PKPbc	PKPbc	04 08 44.9	-1.3
	comp=Z,3.4nm,1.1s,baz=358,slow=6.9,SNR=4.4						
LPAZ	La Paz	148.90	56	*e*PKPbc	PKPbc	04 08 45.1	-1.0
LPAZ	La Paz	148.90	56	*e*PKP2	PKPbc	04 08 45.2	-1.0
MNMC	Minye Minye	149.85	62	*e*PKPbc	PKPbc	04 08 48.8	+0.7

JMA 10 03:50:12.8, 36°.81N×138°.40E, h9^{km}±1^{km}, M3.9, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAT	Matsushiro	0.31	210	P	Pg	03 50 18.6	-0.3
MAT				S	Sg	03 50 22.9	-0.2
MAT	Matsushiro	0.31	210	P	Pg	03 50 18.6	-0.3
MAT				S	Sg	03 50 22.9	-0.2
JGK	Kuni	0.31	142	P	Pg	03 50 19.5	+0.5
JJN	Nakama	0.35	327	P	Pg	03 50 19.9	+0.2
JJN				S	Sg	03 50 25.1	+0.8
JNG	Nsakai	0.47	211	P	Pg	03 50 21.6	-0.4
JNG				S	Sg	03 50 28.1	0.0
JHK	Hiroka	0.66	48	P	Pg	03 50 25.1	-0.5
JHK				S	Sg	03 50 33.4	-0.8
JKT	Katashina	0.68	93	P	Pg	03 50 26.1	+0.1
JKT				S	Sg	03 50 35.1	+0.2
JIZZ	Izumozaki	0.76	19	P	Pg	03 50 27.4	-0.1
JRY	Ryogami san	0.89	153	P	Pg	03 50 29.8	-0.1

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*IDC **10** 03:51:04.8±1.9, 33°.01N×137°.88E, h308^{km}±19^{km}, mb3.7/20, mb1 3.9/23, mb1mx3.6/74, mbtmp4.4/23, Error ellipse: s-maj=14.1km s-min=9.6km az=79.0*

*ISCJB **10** 03:51:06.2±0.5, 33°.09N±0°.07×138°.06E±0°.10, h341^{km}, mb3.9/21, Error ellipse: s-maj=11.2km s-min=9.1km az=4.3*

ISC 10 03:51:07.9±0.7, 33°.18N±0°.09×138°.1E±0°.1, h341^{km}, n28, σ1^{s}.31/31, mb4.0/21, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ	Hachijo jima 2	1.42	92	S	S	03 52 29.0	-3.2
	41nm,0.3s,baz=241,slow=22,SNR=4.0						
JCJ	Chichijima	7.02	149	P	Pn	03 52 44.5	-5.9
	16nm,0.3s,baz=286,slow=23,SNR=6.2						
JCJ				S	S	03 54 01.9	-12
	152nm,0.3s,baz=132,slow=22,SNR=24						
KSRS	Korea Array	9.34	300	P	Pn	03 53 17.6	-0.3
	0.7nm,0.3s,baz=105,slow=14,SNR=4.4						
ASAJ	Asahikawa	11.47	17	P	Pn	03 53 43.3	0.0
	4.8nm,0.3s,baz=174,slow=8.0,SNR=11						
ASAJ				S	S	03 55 47.8	-3.7
	0.9nm,0.3s,baz=346,slow=23,SNR=3.8						
USRK	Ussuriysk Ar.	11.99	338	P	Pn	03 53 49.1	-0.4
	baz=166,slow=11						
KLR	Kul'dur	16.72	345	P	P	03 54 41.1	-0.3
	0.1nm,0.3s,baz=167,slow=9.8,SNR=15						
SONM	Songino Array	27.97	311	P	P	03 56 28.7	+0.5
	5.0nm,0.6s,baz=123,slow=9.7,SNR=6.3						
ZALV	Zalesovo Beam	42.63	316	P	P	03 58 31.3	-0.3
	2.0nm,0.6s,baz=91,slow=7.7,SNR=3.6						
ZALV				PcP	PcP	04 00 16.5	0.0
	1.3nm,0.3s,baz=92,slow=1.9,SNR=3.7						
MKAR	Makanchi Array	43.98	305	P	P	03 58 41.9	-0.5
	1.9nm,0.3s,baz=86,slow=9.6,SNR=24						
MKAR				PcP	PcP	04 00 21.5	+0.2
	0.2nm,0.3s,baz=83,slow=7.8,SNR=3.5						
KURBB	Kurchatov Arra	46.33	311	P	P	03 58 59.8	-0.8
	4.6nm,0.5s,baz=89,slow=6.7,SNR=25						
BVAR	Borovoye Array	51.23	314	P	P	03 59 37.0	-0.5
	2.5nm,0.4s,baz=91,slow=7.2,SNR=7.3						
BVAR				PcP	PcP	04 00 47.2	-0.1
	0.9nm,0.4s,baz=72,slow=6.5,SNR=3.0						
KDAK	Kodiak Island	51.79	40	P	P	03 59 43.4	+1.9
	4.6nm,0.3s,baz=270,slow=4.1,SNR=16						
WRA	Warramunga Arr	52.94	184	P	P	03 59 48.8	-1.5
	3.9nm,0.3s,baz=0.2,slow=7.7,SNR=56						
ILAR	Eielson Array	54.20	31	P	P	04 00 00.1	+1.3
	1.6nm,0.6s,baz=247,slow=5.0,SNR=11						
ASAR	Alice Springs	56.67	185	P	P	04 00 15.7	-1.1
	2.8nm,0.5s,baz=16,slow=9.7,SNR=21						
INK	Inuvik	59.04	26	P	P	04 00 34.6	+2.0
	1.2nm,0.4s,baz=265,slow=5.8,SNR=4.7						
STKA	Stephens Creek	64.79	177	P	P	04 01 10.5	-0.4
	2.8nm,0.6s,baz=343,slow=8.0,SNR=4.4						
ARCES	ARCESS Array B	66.64	339	P	P	04 01 22.9	+0.7
	4.3nm,0.5s,baz=68,slow=8.7,SNR=29						
YKA	Yellowknife Ar	68.50	28	P	P	04 01 35.2	+1.5
	1.0nm,0.5s,baz=301,slow=6.1,SNR=5.2						
FINES	FINESS Array B	70.94	332	P	P	04 01 48.8	+0.2
	1.9nm,0.5s,baz=60,slow=6.7,SNR=10						
KBZ	Khabaz	71.33	310	P	P	04 01 51.7	+0.5
	3.0nm,0.7s,baz=61,slow=4.7,SNR=4.2						
AKASG	Malin Array Be	75.65	322	P	P	04 02 15.7	-0.3
	1.6nm,0.4s,baz=50,slow=5.3,SNR=5.3						
HFS	Hagfors	76.44	335	P	P	04 02 20.5	+0.2
	1.6nm,0.4s,baz=46,slow=4.2,SNR=12						
NB2	NORSAR Subarra	76.66	336	P	P	04 02 21.5	0.0
	comp=Z,0.6nm,0.4s,baz=43,slow=5.3						
BRTR	Keskin Array B	79.32	311	P	P	04 02 37.1	+0.4
	comp=Z,2.3nm,0.7s,baz=130,slow=4.2,SNR=6.6						
GERES	GERESS Array B	84.50	327	P	P	04 03 03.0	-0.1
	comp=Z,0.8nm,0.6s,baz=53,slow=5.0,SNR=4.4						
TXAR	Lajitas Array	94.65	51	P	P	04 03 53.4	+2.2
	comp=Z,0.3nm,0.6s,baz=345,slow=1.4,SNR=3.7						
TORD	Torodi Ar. Bea	117.94	310	PKP	PKPdf	04 09 14.5	-0.5
	comp=Z,0.4nm,0.9s,baz=16,slow=3.3						

JMA 10 03:51:46.1, 36°.83N×138°.39E, h10^{km}±2^{km}, M2.7, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAT	Matsushiro	0.32	207	P	Pg	03 51 52.2	-0.3
MAT				S	Sg	03 51 56.4	-0.4
JJN	Nakama	0.33	326	P	Pg	03 51 53.0	+0.3
JNG	Nsakai	0.48	209	P	Pg	03 51 54.9	-0.6
JNG				S	Sg	03 52 01.4	-0.5

JMA 10 03:51:55.7, 36°.83N×138°.40E, h7^{km}±2^{km}, M3.6, 3C, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAT	Matsushiro	0.33	208	P	Pg	03 52 01.5	-0.6
MAT				S	Sg	03 52 05.8	-0.6
MAT	Matsushiro	0.33	208	P	Pg	03 52 01.5	-0.6
MAT				S	Sg	03 52 05.8	-0.6
JGK	Kuni	0.33	144	P	Pg	03 52 02.6	+0.4
JJN	Nakama	0.33	325	P	Pg	03 52 02.5	+0.3
JJN				S	Sg	03 52 07.9	+1.3
JNG	Nsakai	0.49	210	⇑P	Pg	03 52 04.5	-0.6
JNG				S	Sg	03 52 11.0	-0.5
JHK	Hiroka	0.65	50	⇑P	Pg	03 52 07.7	-0.5
JHK				S	Sg	03 52 16.6	0.0
JKT	Katashina	0.68	95	P	Pg	03 52 08.7	-0.2
JIZZ	Izumozaki	0.74	19	⇑P	Pb	03 52 10.6	-0.4
JTT	Ttatey	0.89	256	P	Pb	03 52 13.1	-0.3
JRY	Ryogami san	0.91	153	P	Pg	03 52 12.7	-0.4
JSZ	Suzu	1.03	307	P	Pg	03 52 14.0	-1.5
JSZ				S	Sg	03 52 28.2	-0.8

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*ISCJB **10** 03:57:20.8±0.5, 36°.81N±0°.03×138°.40E±0°.04, h7^{km}±6^{km}, mb3.8/1, Error ellipse: s-maj=6.1km s-min=4.3km az=13.3*

*JMA **10** 03:57:21.2, 36°.82N×138°.39E, h8^{km}±2^{km}, M3.3 Broadband fault plane solution: P waves. NP1: ϕ_s70.00000°, δ78.00000°, λ-146.00000°. NP2: ϕ_s332.00000°, δ57.00000°, λ-14.00000°. Principal axes: T Plg14.0000°, Azm197.0000°; N Plg54.0000°, Azm87.0000°; P Plg32.0000°, Azm296.0000°;*

JMA Felt III J1.

*IDC **10** 03:57:22.5±1.4, 36°.66N×138°.31E, h18^{km}±9^{km}, mb3.6/1, mb1 3.8/2, mb1mx3.1/75, mbtmp3.6/2, ML3.5/1 Error ellipse: s-maj=23.0km s-min=5.4km az=19.0*

ISC 10 03:57:21.0±1.0, 36°.79N±0°.03×138°.42E±0°.03, h9^{km}±10^{km}, n13, σ0^{s}.53/20, 4C-4D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JGK	Kuni	0.29	143	⇓P	Pb	03 57 28.1	-0.3
MAT	Matsushiro	0.30	215	P	Pg	03 57 26.9	-0.2
MAT				S	Sg	03 57 31.2	0.0
MJAR	Matsushiro Arr	0.30	214	Pg	Pg	03 57 27.1	0.0
	462nm,0.3s,baz=18,slow=16,SNR=196						
MJAR				Lg	Lg	03 57 31.3	
	623nm,0.3s,baz=24,slow=27,SNR=57						
JJN	Nakama	0.37	326	⇓P	Pg	03 57 28.0	-0.3
JJN				S	Sg	03 57 33.4	+0.1
JNG	Nsakai	0.47	214	⇑P	Pg	03 57 29.8	-0.3
JNG				S	Sg	03 57 36.2	0.0
JHK	Hiroka	0.66	46	⇑P	Pg	03 57 33.2	-0.5
JHK				S	Sg	03 57 42.2	-0.2
JKT	Katashina	0.67	92	⇓P	Pg	03 57 34.2	+0.3
JIZZ	Izumozaki	0.77	17	⇑P	Pg	03 57 36.0	+0.1
JIZZ				S	Sb	03 57 47.5	+0.3
JRY	Ryogami san	0.87	153	⇑P	Pg	03 57 37.9	+0.2
JRY				*e*S	Sb	03 57 50.3	+0.3
JTT	Ttatey	0.90	258	P	Pg	03 57 38.2	0.0
JAG	Ashikaga	0.91	114	⇓P	Pb	03 57 38.9	0.0
JAG				*e*S	Sb	03 57 51.4	+0.3
KSRS	Korea Array	8.41	278	Pn	Pn	03 59 24.4	+1.4
	0.6nm,0.3s,baz=90,slow=15,SNR=4.2						
WRA	Warramunga Arr	56.56	185	P	P	04 07 02.7	-1.3
	1.0nm,0.9s,baz=0.3,slow=7.5,SNR=5.5						

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*IDC **10** 04:03:13.9±2.1, 36°.89N×138°.41E, h0^{km}, mb3.7/1, mb1 3.9/2, mb1mx3.3/70, mbtmp3.7/2, ML3.6/1, Error ellipse: s-maj=14.2km s-min=13.6km az=48.0*

*ISCJB **10** 04:03:15.5±0.6, 36°.78N±0°.04×138°.38E±0°.05, h25^{km}±7^{km}, mb3.8/1, Error ellipse: s-maj=7.6km s-min=5.1km az=34.1*

*JMA **10** 04:03:16.3, 36°.82N×138°.39E, h8^{km}±2^{km}, M3.5 Broadband fault plane solution: P waves. NP1: ϕ_s69.00000°, δ80.00000°, λ-152.00000°. NP2: ϕ_s334.00000°, δ62.00000°, λ-11.00000°. Principal axes: T Plg12.0000°, Azm199.0000°; N Plg60.0000°, Azm87.0000°; P Plg27.0000°, Azm295.0000°;*

JMA Felt II J1.

ISC 10 04:03:15.8±1.0, 36°.83N±0°.05×138°.38E±0°.05, h11^{km}±11^{km}, n10, σ0^{s}.83/16, 3C-3D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAT	Matsushiro	0.32	206	P	Pg	04 03 22.0	-0.3
MAT				S	Sg	04 03 26.3	-0.3
MJAR	Matsushiro Arr	0.32	206	Pg	Pg	04 03 22.1	-0.1
	711nm,0.3s,baz=17,slow=17,SNR=348						
MJAR				Lg	Lg	04 03 26.0	
	725nm,0.3s,baz=11,slow=28,SNR=50						
JJN	Nakama	0.32	327	⇓P	Pb	04 03 23.1	-0.5
JJN				S	Sb	04 03 28.7	-0.1
JGK	Kuni	0.34	142	⇓P	Pg	04 03 23.1	+0.5
JNG	Nsakai	0.48	208	⇑P	Pg	04 03 24.8	-0.4
JNG				S	Sg	04 03 31.1	-0.5

JHK	Hiroka	0.66	50	⇑P	Pg	04 03 28.2	-0.3
JHK				S	Sg	04 03 37.1	-0.1
JKT	Katashina	0.70	95	⇓P	Pg	04 03 29.1	-0.2
JKT				S	Sg	04 03 38.4	-0.1
JIZZ	Izumozaki	0.75	20	⇑P	Pb	04 03 31.0	+0.2
JIZZ				S	Sn	04 03 42.7	-0.8
KSRS	Korea Array	8.38	277	Pn	Pn	04 05 19.3	+2.2
	0.7nm,0.3s,baz=92,slow=14,SNR=4.0						
WRA	Warramunga Arr	56.59	185	P	P	04 12 57.5	-1.1
	0.5nm,0.5s,baz=0.5,slow=7.5,SNR=18						

CSEM ***10*** *04:04:33.2±0.2, 27.°93N×17.°94W, h10^{km}, ML3.8, Error ellipse: s-maj=8.4km s-min=4.1km az=103.0*

INMG ***10*** *04:04:34.9±0.7, 27.°62N×18.°08W, h23^{km}±2^{km}, ML3.5, Error ellipse: s-maj=4.2km s-min=3.2km az=62.0*

PDA ***10*** *04:04:35.2, 27.°83N×18.°16W, h20^{km}, mb3.8*

ISC 10 04:04:33.6±0.8**, 27.°89N**±0.°06×**17.°98W**±0.°06**, h20**^{km}±6^{km}**, n27, σ1^{s}.18**/39**, Canary Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTIG	El Hierro	0.12	155	P	Pg	04 04 39.3	+1.5
	907nm,0.1s,SNR=18						
CTAN	El Hierro	0.15	206	P	Pg	04 04 38.4	+0.2
	5μm,0.1s,SNR=7.9						
CTAN				S	Sg	04 04 41.1	-0.2
	33μm,0.2s,SNR=7.9						
CHIE	El Hierro	0.17	175	P	Pg	04 04 38.7	+0.3
	178nm,0.2s,SNR=18						
CTAD	Las Tabladas,	0.17	213	P	Pg	04 04 38.3	-0.1
	4μm,0.1s,SNR=18						
CTAD				S	Sg	04 04 41.1	-0.6
	30μm,0.2s,SNR=7.9						
CMCL	Mercadel, El H	0.18	192	P	Pg	04 04 38.5	-0.2
	8μm,0.1s,SNR=18						
CMCL				S	Sg	04 04 41.4	-0.7
	12μm,0.1s,SNR=7.9						
CJUL	El Julon, El H	0.19	209	P	Pg	04 04 38.4	-0.4
	7μm,0.1s,SNR=18						
CJUL				S	Sg	04 04 41.4	-0.8
	35μm,0.1s,SNR=7.9						
CORC	Orchilla, El H	0.24	218	P	Pb	04 04 38.5	-0.8
	7μm,0.1s,SNR=18						
CORC				S	Sb	04 04 41.7	-1.5
	68μm,0.3s,SNR=7.9						
CRST	La Restinga, E	0.25	181	P	Pb	04 04 38.4	-1.1
	9μm,0.1s,SNR=18						
CRAJ	Montana Rajada	1.27	73	S	Sb	04 05 12.2	-1.1
	1μm,0.1s,SNR=7.9						
EBAJ	Bajamar	1.58	66	S	Sn	04 05 19.9	-0.5
	141nm,0.2s,SNR=7.9						
FUL	Funchal	4.83	11	eP	Pn	04 05 45.9	+0.7
FUL				eS	Sn	04 06 38.6	-2.0
FUL				A	A	04 06 46.7	
	46nm,0.2s						
PMAR	Madeira	4.90	11	eP	Pn	04 05 46.2	-0.2
PMAR				eS	Sn	04 06 40.2	-2.4
PMAR				A	A	04 06 45.9	
	98nm,0.2s						
PMAR	Madeira	4.90	11	eP	Pn	04 05 46.2	-0.2
PMAR				eS	Sn	04 06 40.2	-2.4
PMOZ	Porto Moniz, M	4.96	8	eP	Pn	04 05 47.8	+0.7
PMOZ				eS	Sn	04 06 41.9	-2.0
PMOZ				A	A	04 06 50.3	
	100nm,0.3s						
PMOZ	Porto Moniz, M	4.96	8	eP	Pn	04 05 47.8	+0.7
PMOZ				eS	Sn	04 06 41.9	-2.0
PMPS	Porto Santo	5.34	15	eP	Pn	04 05 52.7	+0.5
PMPS				eS	Sn	04 06 51.6	-1.5
PMPS				A	A	04 06 57.5	
	16nm,0.2s						
PMPS	Porto Santo	5.34	15	eP	Pn	04 05 52.7	+0.5
PMPS				eS	Sn	04 06 51.6	-1.5
PMAN	Manadas	13.63	324	eP	Pn	04 07 46.8	+0.9
	32nm,0.4s						
PMAN	Manadas	13.63	324	eP	Pn	04 07 46.8	+0.9
	32nm,0.4s						
PICO	Pico	13.71	323	eP	Pn	04 07 47.8	+0.8
	21nm,0.3s						
PICO	Pico	13.71	323	eP	Pn	04 07 47.8	+0.8
	21nm,0.3s						
ROSA	Rosais	13.78	324	eP	Pn	04 07 49.1	+1.3
	33nm,0.5s						
ROSA	Rosais	13.78	324	eP	Pn	04 07 49.1	+1.3
	33nm,0.5s						
PGRA	Graciosa	13.88	326	eP	Pn	04 07 50.3	+1.1
	28nm,0.4s						
PGRA	Graciosa	13.88	326	eP	Pn	04 07 50.3	+1.1
	28nm,0.4s						
PCED	Cedros	13.95	323	eP	Pn	04 07 51.0	+0.8
	19nm,0.3s						
PCED	Cedros	13.95	323	eP	Pn	04 07 51.0	+0.8
	19nm,0.3s						

ISCJB ***10*** *04:06:52.7±0.1, 63.°45N±0.°02×149.°41W±0.°04, h115^{km}±1^{km}, mb4.0/30, Error ellipse: s-maj=3.1km s-min=2.7km az=160.4*

NEIC ***10*** *04:06:54.3±0.0, 63.°44N×149.°39W, h104^{km}, mb4.2/10, MW4.2, ML4.3(AEIC), Moment Tensor Solution. s40 Moment tensor: Scale 10^{15}Nm; M_{rr}1.87; $M_{\theta\theta}$-2.38; $M_{\phi\phi}$0.51; $M_{r\theta}$-0.12; $M_{\theta\phi}$1.11; $M_{\phi r}$1.33; Best double couple: $M_0$2.80000×10^{15} NP1:ϕ_s318.00000°, δ60.00000°, λ129.00000°. NP2:ϕ_s79.00000°, δ47.00000°, λ43.00000°. Principal axes: T 2.7300, Plg56.0000°, Azm280.0000°; N 0.0900, Plg33.0000°, Azm116.0000°; P -2.8300, Plg7.0000°, Azm21.0000°; After AEIC.*

NEIC Felt at Denali National Park, Fairbanks and North Pole.

IDC ***10*** *04:06:54.5±0.8, 63.°56N×149.°57W, h112^{km}±6^{km}, mb3.8/23, mb1 3.9/26, mb1mx3.7/77, mbtmp4.1/26 Error ellipse: s-maj=14.3km s-min=10.5km az=28.0*

ISC 10 04:06:54.0±0.5**, 63.°43N**±0.°03×**149.°42W**±0.°03**, h111**^{km}±4^{km}**, h110**^{km}**:pP-P, n172, σ1^{s}.27**/198**, mb4.2**/30**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MCK	McKinley	0.37	36	ePn	Pn	04 07 09.8	-0.4
MCK				eSn	Sn	04 07 21.1	-1.2
TRF	Thorofare Moun	0.39	273	ePn	Pn	04 07 10.2	-0.2
TRF				eSn	Sn	04 07 22.2	-0.6
HUR	Hurricane	0.47	192	ePn	Pn	04 07 10.2	-0.5
KTH	Kantishna Hill	0.68	281	ePn	Pn	04 07 12.2	-0.1
KTH				eSn	Sn	04 07 25.2	-0.9
BWN	Browne	0.74	359	ePn	Pn	04 07 12.6	-0.1
BWN				eSn	Sn	04 07 25.5	-1.4
BWN				eSn	Sn	04 07 25.9	-1.0
BPAW	Bear Paw Mtn.	0.96	315	ePn	Pn	04 07 14.7	-0.2
BPAW				eSn	Sn	04 07 29.6	-1.0
DHY	Denali Highway	0.99	110	ePn	Pn	04 07 14.9	-0.4
DHY				eSn	Sn	04 07 30.6	-0.8
NEA	Nenana	1.16	7	ePn	Pn	04 07 16.5	-0.3
TRAP	Trapper Creek	1.17	199	ePn	Pn	04 07 16.9	-0.1
CAST	Castle Rocks	1.20	270	ePn	Pn	04 07 16.9	-0.4
CAST				eSn	Sn	04 07 33.7	-1.3
WRH	Wood River Hil	1.20	29	ePn	Pn	04 07 16.9	-0.4
WRH				eSn	Sn	04 07 33.5	-1.4
PPLA	Purkeypile	1.36	248	ePn	Pn	04 07 19.6	+0.2
CHUM	Lake Minchumin	1.37	291	ePn	Pn	04 07 19.2	+0.1
CHUM				eSn	Sn	04 07 37.9	-0.4
CCB	Clear Creek Bu	1.41	30	ePn	Pn	04 07 19.2	-0.5
CCB				eSn	Sn	04 07 37.6	-1.6
HDA	Harding Lake	1.47	47	ePn	Pn	04 07 20.1	-0.3
PS08	TAPS Pump Stn8	1.60	45	ePn	Pn	04 07 21.5	-0.4
COLA	College	1.60	25	ePn	Pn	04 07 21.8	-0.1
MDM	Murphy Dome	1.62	18	ePn	Pn	04 07 22.0	-0.2
PS10	TAPS Pump St10	1.64	89	ePn	Pn	04 07 23.2	+0.7
GHO	Glory Hole Cre	1.69	172	ePn	Pn	04 07 23.3	+0.2
MLY	Manley	1.70	341	ePn	Pn	04 07 23.2	-0.1
PS09	TAPS Pump Stn9	1.70	71	ePn	Pn	04 07 23.2	0.0
SML	Sawmill	1.71	162	ePn	Pn	04 07 23.3	-0.1
ILAR	Eielson Array	1.74	39	P	Pn	04 07 23.1	-0.7
	78nm,0.3s,baz=221,slow=13,SNR=4550						
ILAR				S	Sn	04 07 45.1	-1.3
	148nm,0.3s,baz=233,slow=20,SNR=24						
ILB	Eielson Array	1.74	39	ePn	Pn	04 07 23.2	-0.5
ILB				eSn	Sn	04 07 45.1	-1.3
IL1	Eielson Array	1.75	39	ePn	Pn	04 07 21.8	-1.9
SKT	Skwentna	1.75	215	ePn	Pn	04 07 23.5	-0.4
GLM	Gilmore Dome	1.79	29	ePn	Pn	04 07 24.2	-0.2
PAX	Paxson	1.85	103	ePn	Pn	04 07 25.7	+0.5
PMR	Palmer	1.85	176	ePn	Pn	04 07 24.9	-0.2
SCM	Sheep Creek Mo	1.88	148	ePn	Pn	04 07 25.4	-0.1
SUA	Susitna One	2.07	198	ePn	Pn	04 07 28.1	+0.1
KNK	Knik Glacier	2.08	167	ePn	Pn	04 07 27.9	-0.1
HARP	HAARP	2.21	116	ePn	Pn	04 07 29.7	+0.1
PS11	TAPS Pump St11	2.27	125	ePn	Pn	04 07 31.0	+0.6
FIB	Fire Island	2.30	189	ePn	Pn	04 07 31.8	+1.0
RC01	Rabbit Creek A	2.36	184	ePn	Pn	04 07 31.9	+0.4
PS06	TAPS Pump Stn6	2.43	357	ePn	Pn	04 07 32.7	+0.3
SPCG	Spurr Capps Gl	2.47	211	P	Pn	04 07 33.0	0.0
SPCP	Crater Peak Br	2.52	212	ePn	Pn	04 07 33.8	0.0
KLU	Klutina	2.54	139	ePn	Pn	04 07 33.2	-0.7
PTE	Portage	2.59	176	ePn	Pn	04 07 34.8	+0.3
PRP	Porcupine Dome	2.69	37	ePn	Pn	04 07 35.7	-0.2
DIV	Divide	2.88	142	ePn	Pn	04 07 37.3	-1.0
RDJH	Redoubt Jeurge	3.27	211	P	Pn	04 07 43.9	+0.3
GLB	Gilahina Butte	3.29	125	ePn	Pn	04 07 43.8	0.0
HIN	Hinchinbrook I	3.35	154	ePn	Pn	04 07 43.7	-0.8
BMRM	Bremner River	3.35	135	ePn	Pn	04 07 43.9	-0.8
RDWB	Redoubt West	3.37	210	P	Pn	04 07 46.0	+1.1
PS05	TAPS Pump Stn5	3.43	352	ePn	Pn	04 07 46.1	+0.5
BCA3	Beaver Creek A	3.47	93	ePn	Pn	04 07 45.5	-0.7
VRDI	Verde Repeater	3.56	126	P	Pn	04 07 47.0	-0.5
FYU	Fort Yukon	3.61	28	ePn	Pn	04 07 48.1	+0.1
MCARA	McCarthy VSAT	3.62	122	P	Pn	04 07 48.7	+0.5
BRLK	Bradley Lake	3.75	191	ePn	Pn	04 07 50.0	+0.1
RAGM	Ragged Mountai	3.79	142	ePn	Pn	04 07 49.7	-0.8
COLD	Coldfoot	3.82	355	ePn	Pn	04 07 51.0	+0.2
EGAK	Eagle	3.87	66	ePn	Pn	04 07 51.1	-0.3
PTPK	Patty Peak	3.95	122	P	Pn	04 07 52.9	+0.1
CNPM	China Poot	4.02	193	ePn	Pn	04 07 53.5	0.0
BERG	Berg Lake	4.08	136	ePn	Pn	04 07 53.5	-0.8
BALM	Baldy	4.09	123	ePn	Pn	04 07 54.0	-0.6
TGL	Tana Glacier	4.10	128	ePn	Pn	04 07 53.9	-0.9
NICHA	Nichawak Mount	4.12	139	P	Pn	04 07 54.2	-0.7
KIAG	Kiagna River	4.16	124	P	Pn	04 07 54.6	-1.0
KHIT	Khitrov Hills	4.18	133	P	Pn	04 07 55.2	-0.6
KAIM	Kayak Island	4.25	144	ePn	Pn	04 07 55.5	-1.1
GRIN	Grindle Hills	4.29	135	P	Pn	04 07 57.1	0.0
MID	Middleton Isla	4.29	158	ePn	Pn	04 07 57.0	0.0
SUCK	Suckling Hills	4.31	139	P	Pn	04 07 56.7	-0.7
WAX	Waxell Ridge	4.31	131	ePn	Pn	04 07 57.3	-0.2
BARN	Barnard Glacie	4.34	120	ePn	Pn	04 07 58.3	+0.3
ISLE	Juniper Island	4.38	127	P	Pn	04 07 57.2	-1.3
BGLC	Bering Glacier	4.42	136	ePn	Pn	04 07 59.5	+0.7
BARK	Barkley Ridge	4.47	130	ePn	Pn	04 07 58.8	-0.8
BM3	Burnt Mountain	4.48	25	ePn	Pn	04 07 59.5	-0.2
DAWY	Dawson	4.50	77	ePn	Pn	04 07 59.4	-0.6
KULT	Kultieth River	4.50	132	P	Pn	04 07 59.5	-0.6
AUE	Augustine Isla	4.51	207	ePn	Pn	04 08 00.0	0.0
AUNW	Augustine NWes	4.51	207	P	Pn	04 08 00.5	+0.4
AUW	Augustine West	4.52	207	P	Pn	04 08 01.1	+0.9
SNH	Sunshine Point	4.52	133	ePn	Pn	04 08 00.1	-0.2
AUJK	Augustine Jueg	4.52	207	ePn	Pn	04 08 01.1	+0.8
CTGM	Chitina Glacie	4.53	120	ePn	Pn	04 08 00.5	0.0
AUI	Augustine Isla	4.54	207	P	Pn	04 08 01.2	+0.7
BAGL	Bagley Icefiel	4.55	127	ePn	Pn	04 07 59.5	-1.1
MESA	MESA	4.82	129	P	Pn	04 08 03.6	-0.8
RKAV	Rock Avalanche	4.95	126	P	Pn	04 08 05.9	-0.2
CDD	Cape Douglas	4.96	206	P	Pn	04 08 06.2	0.0
PS04	TAPS Pump Stn4	5.01	0	ePn	Pn	04 08 07.5	+0.6
CHX	Chaix Hills	5.20	127	ePn	Pn	04 08 10.0	+0.6
TOLK	Toolik Lake Re	5.23	359	ePn	Pn	04 08 11.1	+1.3
SAMH	Samovar Hills	5.27	125	P	Pn	04 08 10.6	+0.1
KAPH	Katmai Pasha	5.41	208	P	Pn	04 08 12.8	+0.4
KAHC	Katmai Hardscr	5.51	212	P	Pn	04 08 14.3	+0.6
KAKN	Katmai Knife C	5.84	211	P	Pn	04 08 18.3	+0.1
KDAK	Kodiak Island	5.88	197	P	Pn	04 08 16.5	-2.0
	5.3nm,0.3s,baz=39,slow=7.9,SNR=112						
KDAK				S	Sn	04 09 18.3	-6.2
	7.5nm,0.3s,baz=144,slow=19,SNR=4.3						
KDAK	Kodiak Island	5.88	197	ePn	Pn	04 08 17.5	-1.0
KDAK				eSn	Sn	04 09 18.3	-6.2
KABU	Katmai Buttres	5.92	212	P	Pn	04 08 19.7	+0.5
ANCK	Angle Creek	6.03	212	P	Pn	04 08 21.1	+0.4
PNL	Peninsula	6.10	124	ePn	Pn	04 08 20.9	-0.6
CAHL	Cahill	6.12	211	P	Pn	04 08 22.4	+0.5
OHAK	Old Harbor	6.52	199	ePn	Pn	04 08 24.4	-2.8
RDOG	Red Dog Mine	7.22	316	ePn	Pn	04 08 38.8	+2.1
RDOG				eSn	Sn	04 09 59.7	+2.7
ANNW	Aniakchak Nort	7.82	218	P	Pn	04 08 45.8	+0.9
SKAG	Skagway	7.83	114	ePn	Pn	04 08 45.2	+0.1
AZAC	Aniakchak	7.89	218	P	Pn	04 08 46.6	+0.8
INK	Inuvik	8.13	46	P	Pn	04 08 48.3	-0.6
	3.3nm,0.3s,baz=232,slow=17,SNR=61						
INK				S	Sn	04 10 15.2	-3.7
	0.6nm,0.3s,baz=143,slow=20,SNR=2.1						
INK	Inuvik	8.13	46	ePn	Pn	04 08 49.1	+0.2
INK				eSn	Sn	04 10 15.2	-3.7
CHGN	Chignik	8.46	216	ePn	Pn	04 08 52.2	-1.2
JIS	Juneau Island	8.96	118	ePn	Pn	04 08 59.6	-0.7
DLBC	Dease Lake	10.66	109	P	Pn	04 09 24.2	+0.9
	0.3nm,0.3s,baz=278,slow=8.9,SNR=4.8						
YKW3	Yellowknife Ar	15.72	77	ePn	Pn	04 10 28.0	-0.8
	3.2nm,0.8s						
YKA	Yellowknife Ar	15.74	78	P	Pn	04 10 28.2	-0.9
	0.2nm,0.3s,baz=286,slow=11,SNR=6.8						
ATKA	Atka Island	17.20	241	eP	Pn	04 10 47.0	0.0
	30nm,1.0s						
KIWB	Kanaga Island	18.65	244	eP	Pn	04 11 03.7	-0.7
KIWB				ePcP	PcP	04 15 23.7	-2.5
RES	Resolute Bay	21.50	36	P	P	04 11 33.3	0.0
	4.1nm,0.6s,baz=257,slow=11,SNR=18						
RES	Resolute Bay	21.50	36	eP	P	04 11 34.0	+0.7
	6.3nm,0.6s						
UMPQ	Umpqua Communi	25.16	131	eP	P	04 12 11.4	+2.9
SEY	Seymchan	25.49	295	P	P	04 12 10.9	-0.5
	7.2nm,0.7s,baz=90,slow=6.0,SNR=25						
MA2	Magadan	27.88	290	P	P	04 12 32.8	0.0
	3.1nm,0.3s,baz=60,slow=9.6,SNR=4.5						
TIXI	Tiksi	29.80	321	P	P	04 12 49.6	-0.1
	3.7nm,0.8s,baz=74,slow=5.1,SNR=6.3						
TIXI	Tiksi	29.80	321	eP	P	04 12 49.8	+0.1
PD31	Pinedale Array	30.86	113	eP	P	04 13 01.4	+1.8
PDAR	Pinedale Array	30.86	113	P	P	04 13 01.4	+1.8
	0.8nm,1.0s,baz=311,slow=7.7,SNR=4.3						
NV01	Mina Array Sit	31.22	128	eP	P	04 13 05.3	+2.5
NV01				epP	pP	04 13 29.4	+2.2
NVAR	Mina Array Bea	31.22	128	P	P	04 13 05.3	+2.5
	0.2nm,0.3s,baz=329,slow=6.3,SNR=2.3						
NVAR				pP	pP	04 13 29.3	+2.1
	2.1nm,0.9s,baz=304,slow=6.4,SNR=5.5						
WORM	Onyx Ranch	33.70	131	eP	P	04 13 22.9	-1.4
GATR	Gnd/Air Tx Cnt	33.99	134	eP	P	04 13 29.3	+2.5
GATR				epP	pP	04 13 52.8	+1.4
LCMT	Little Creek M	34.32	123	eP	P	04 13 33.0	+3.2
	2.2nm,1.0s						
KNB	Kanab	34.48	123	eP	P	04 13 34.2	+3.0
	2.5nm,1.0s						
WUAZ	Wupatki	36.35	122	eP	P	04 13 50.1	+2.9
	3.6nm,0.9s						
G40A	Rib Lake	37.35	90	eP	P	04 13 57.3	+1.9
	2.9nm,0.7s						
SPA0	Spitsbergen Ar	38.36	5	eP	P	04 14 03.4	0.0
SPITS	Spitsbergen Ar	38.36	5	P	P	04 14 03.4	0.0
	3.2nm,0.7s,baz=2.1,slow=7.9,SNR=6.8						
KLR	Kul’dur	42.98	289	P	P	04 14 40.9	-0.7
	0.1nm,0.5s,baz=34,slow=12,SNR=4.1						
TX31	Lajitas Ar. Si	44.82	117	eP	P	04 14 59.2	+2.5
LTX	Lajitas	44.82	117	eP	P	04 14 58.8	+2.0
TXAR	Lajitas Array	44.82	117	P	P	04 14 58.8	+2.0
	0.6nm,0.6s,baz=326,slow=6.0,SNR=12						
TXAR				pP	pP	04 15 23.4	+1.1
	0.5nm,0.5s,baz=326,slow=6.4,SNR=3.6						
ARA0	ARCESS Array S	47.26	2	eP	P	04 15 15.7	+0.4
ARCES	ARCESS Array B	47.26	2	P	P	04 15 15.7	+0.5
	3.8nm,0.8s,baz=8.2,slow=7.2,SNR=10.0						
MJAR	Matsushiro Arr	50.27	274	P	P	04 15 38.5	-0.2
	0.7nm,0.3s,baz=5.3,slow=6.9,SNR=4.2						
MAJO	Matsushiro	50.27	274	eP	P	04 15 38.5	-0.2
KSRS	Korea Array	54.08	283	P	P	04 16 07.3	+0.6
	2.3nm,0.7s,baz=45,slow=9.0,SNR=5.4						
KS15	Wonju Array Si	54.11	283	eP	P	04 16 07.3	+0.4
KSAR	Wonju Array Be	54.11	283	P	P	04 16 07.3	+0.4
SONA1	Songino Array	54.12	306	eP	P	04 16 08.2	+1.1
SONA0	Songino Array	54.14	306	eP	P	04 16 08.1	+0.9
SONM	Songino Array	54.14	306	P	P	04 16 08.1	+0.9
	2.8nm,0.9s,baz=40,slow=7.8,SNR=9.1						
FIA0	FINESS Array S	55.39	3	eP	P	04 16 14.7	-1.2
FINES	FINESS Array B	55.39	3	P	P	04 16 14.7	-1.2
	2.2nm,0.5s,baz=2.4,slow=9.0,SNR=10						
ZAA1	Zalesovo Array	55.58	324	eP	P	04 16 16.6	-0.8
ZAA0	Zalesovo Array	55.59	324	eP	P	04 16 17.7	+0.3
	6.9nm,1.3s						
ZALV	Zalesovo Beam	55.59	324	P	P	04 16 16.6	-0.8
	1.2nm,0.2s,baz=31,slow=6.1,SNR=7.6						
ZALV	Zalesovo Beam	55.59	324	eP	P	04 16 16.7	-0.7
HFS	Hagfors	56.09	10	P	P	04 16 19.9	-1.0
	2.2nm,0.6s,baz=356,slow=4.3,SNR=7.0						
BVAR	Borovoye Array	59.79	333	P	P	04 16 46.1	-0.7
	1.9nm,0.7s,baz=38,slow=7.3,SNR=7.9						
KURK	Kurchatov	60.11	327	eP	P	04 16 48.8	-0.3
KURBB	Kurchatov Arra	60.21	327	P	P	04 16 48.7	-1.0
	1.0nm,0.9s,baz=28,slow=6.9,SNR=5.0						
MK32	Makanchi Array	62.77	323	eP	P	04 17 05.5	-1.5
MKAR	Makanchi Array	62.77	323	P	P	04 17 05.5	-1.5
	0.4nm,0.4s,baz=46,slow=7.3,SNR=8.0						
MK01	Makanchi Array	62.79	323	eP	P	04 17 05.9	-1.2
AKTO	Aktyubinsk	64.44	341	P	P	04 17 17.5	-0.4
	3.2nm,0.8s,baz=360,slow=8.3,SNR=9.0						
ABKAR	Akbulak array	65.29	339	eP	P	04 17 23.4	0.0
AKASG	Malin Array Be	66.20	1	P	P	04 17 28.0	-1.2
	0.4nm,0.3s,baz=359,slow=6.2,SNR=4.7						
AKASG				pP	pP	04 17 56.1	-0.5
	0.8nm,0.5s,baz=0.2,slow=6.3,SNR=2.5						
AKBB	Malin Array Si	66.20	1	eP	P	04 17 28.0	-1.2
	2.3nm,0.7s						
AKBB				epP	pP	04 17 56.1	-0.5
GEC2	GERESS Array S	67.27	12	eP	P	04 17 36.0	-0.2
	1.9nm,0.8s						
GEC2				epP	pP	04 18 03.9	+0.3
GERES	GERESS Array B	67.27	12	P	P	04 17 36.0	-0.2
	0.3nm,0.3s,baz=353,slow=6.7,SNR=5.6						
GERES				pP	pP	04 18 03.9	+0.3
	0.5nm,0.7s,baz=335,slow=4.3,SNR=2.6						
ESDC	Sonseca Array	73.61	27	P	P	04 18 15.4	+0.6
	1.3nm,0.7s,baz=340,slow=5.7,SNR=7.7						
CM31	Chiang Mai Arr	82.89	297	eP	P	04 19 04.4	-1.7
CMAR	Chiang Mai Arr	82.89	297	P	P	04 19 04.4	-1.7
	0.8nm,0.3s,baz=4.8,slow=5.4,SNR=6.8						
QSPA	South Pole Qui	153.25	180	PKPbc	PKPbc	04 26 35.7	-1.4
	2.2nm,0.9s,baz=100,slow=3.7,SNR=4.5						

JMA 10 04:11:27.8±0.1**, 38.°85N**×**142.°05E, h46**^{km}±1^{km}**, M3.5, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	0.38	308	P	Pn	04 11 37.5	+0.1
OFUJ				S	Sn	04 11 44.2	+0.1
JMK	Ichinoseki	0.66	279	P	Pn	04 11 41.0	+0.2
JMK				S	Sn	04 11 50.2	+0.1
JIO	Ouri	0.68	234	P	Pn	04 11 41.0	-0.1
JIO				S	Sn	04 11 49.8	-0.8
JOM	Ohasama	0.86	317	P	Pn	04 11 43.8	+0.3
JOM				S	Sn	04 11 55.0	0.0
JTH	Tanohata	1.10	352	P	Pn	04 11 46.9	+0.1
JOU	Okura	1.19	246	P	Pn	04 11 48.1	+0.1
JOU				S	Sn	04 12 03.2	+0.2
JRG	Rokugo	1.23	297	P	Pn	04 11 48.9	+0.3
JYK	Kaneyama	1.32	273	P	Pn	04 11 50.2	+0.4
JMM	Marumori	1.39	226	P	Pn	04 11 50.6	-0.2
JMM				S	Sn	04 12 07.7	-0.3
JANG	Nango	1.58	345	P	Pn	04 11 53.3	0.0
JANG				S	Sn	04 12 13.2	+0.7

IDC 10 04:16:25.0±3.1**, 6.°74S**×**127.°17E, h415**^{km}±33^{km}**, mb3.1**/3**, mb1 2.9**/6**, mb1mx2.8**/53**, mbtmp3.7**/6**, Error ellipse: s-maj=54.6km s-min=12.6km az=65.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	4.89	225	P	P	04 17 47.1	+0.6
	13nm,0.3s,baz=42,slow=1.6,SNR=7.1						
BATI				S	S	04 18 52.9	-0.3
	5.4nm,0.3s,baz=342,slow=22,SNR=6.9						
WRA	Warramunga Arr	14.85	153	P	P	04 19 35.6	+0.1
	0.2nm,0.3s,baz=333,slow=11,SNR=20						
WRA				S	S	04 22 10.5	-2.6
	0.1nm,0.3s,baz=330,slow=21,SNR=5.3						
ASAR	Alice Springs	18.03	160	P	P	04 20 10.0	+0.7
	0.1nm,0.3s,baz=337,slow=10,SNR=4.4						
ASAR				S	S	04 23 15.0	+0.4
	0.1nm,0.3s,baz=344,slow=23,SNR=3.5						
MKAR	Makanchi Array	66.50	328	P	P	04 26 32.1	+0.2
	0.3nm,0.4s,baz=139,slow=6.8,SNR=6.0						
ZALV	Zalesovo Beam	70.14	335	P	P	04 26 53.4	-0.5
	0.8nm,0.4s,baz=120,slow=4.9,SNR=3.0						
KURBB	Kurchatov Arra	70.84	330	P	P	04 26 58.5	+0.3
	0.7nm,0.6s,baz=137,slow=5.5,SNR=9.3						

SFS ***10*** *04:19:49.0, 33.°98N×5.°44W, h0^{km}, ML4.1*

IDC ***10*** *04:19:50.6±2.3, 34.°23N×4.°97W, h0^{km}, mb3.5/5, mb1 3.6/6, mb1mx3.3/63, mbtmp3.4/6, ML3.4/1, Error ellipse: s-maj=71.1km s-min=12.5km az=89.0*

MDD ***10*** *04:19:51.9±0.7, 34.°15N×5.°34W, h0^{km}±7^{km}, mb4.3/27, Error ellipse: s-maj=4.5km s-min=4.4km az=106.0, PRXIMO*

CNRM ***10*** *04:19:52.8, 34.°06N×5.°17W, h10^{km}, ML3.7*

CSEM ***10*** *04:19:52.1±0.2, 34.°16N×5.°33W, h10^{km}, mb4.3, Error ellipse: s-maj=4.1km s-min=3.4km az=70.0*

ISCJB ***10*** *04:19:52.3±0.5, 34.°20N±0.°02×5.°41W±0.°03, h27^{km}±4^{km}, mb3.6/4, Error ellipse: s-maj=4.0km s-min=3.1km az=42.8*

INMG ***10*** *04:19:53.3±1.3, 34.°19N×5.°25W, h12^{km}±6^{km}, MD3.0, ML2.8, Error ellipse: s-maj=3.4km s-min=2.2km az=79.0*

IGIL ***10*** *04:19:54.3, 34.°20N×5.°22W, h14^{km}, ML2.7*

ISC 10 04:19:53.1±1.0**, 34.°21N**±0.°03×**5.°28W**±0.°02**, h19**^{km}±2^{km}**, n162, σ1^{s}.46**/275**, mb3.8**/4**, 1C-2D, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SICH	Sidi Chahed	0.11	196	P	Pg	04 19 56.4	-0.7
SICH				S	Sg	04 19 59.2	-0.5
RSA	Sarsar	0.80	326	P	Pn	04 20 11.2	+1.7
RSA				S	Sn	04 20 25.2	+4.2
RSA	Sarsar	0.80	326	P	Pn	04 20 11.2	+1.7
CHEFC	Chefchaouen	0.90	357	P	Pn	04 20 12.1	+1.3
CZD	Col de Zad	1.19	170	P	Pn	04 20 14.1	-0.9
CZD				S	Sb	04 20 30.0	-0.4
CZD	Col de Zad	1.19	170	P	Pn	04 20 14.1	-0.9
CZD				S	Sb	04 20 30.0	-0.4
PVLZ	Peæn de	1.25	40	eP	Pg	04 20 17.2	-0.2
PVLZ				eS	Sg	04 20 37.4	+3.6
RTC	Rabat Centre	1.33	261	P	Pb	04 20 18.0	+0.6
RTC				S	Sg	04 20 38.5	+2.5
RTC	Rabat Centre	1.33	261	P	Pb	04 20 18.0	+0.6
MPAL	Palemas	1.50	47	P	Pb	04 20 20.1	-0.2
MPAL				S	Sg	04 20 40.6	-0.9
MPAL	Palemas	1.50	47	P	Pb	04 20 20.1	-0.2
MPAL				S	Sg	04 20 40.6	-0.9
MDT	Midelt	1.50	158	Pg	Pn	04 20 17.8	-1.3
	47nm,0.3s,baz=348,slow=16,SNR=612						
MDT				Lg	Lg	04 20 36.4	
	183nm,0.3s,baz=108,slow=20,SNR=26						
MDT	Midelt	1.50	158	P	Pn	04 20 18.0	-1.1
MDT				S	Sn	04 20 37.1	-1.1
CEUT	Ceuta	1.67	359	P	Pg	04 20 24.7	-0.6
CEUT	Ceuta	1.67	359	P	Pg	04 20 24.7	-0.6
ECEU	Ceuta	1.68	357	P	Pb	04 20 24.6	+1.1
	11nm,0.1s,SNR=7.9						
ECEU	Ceuta	1.68	357	P	Pb	04 20 24.6	+1.1
	11nm,0.1s,SNR=7.9						
CEU	Ceuta	1.69	357	P	Pg	04 20 25.2	-0.4
CEU				S	Sg	04 20 52.2	+4.7
CEU	Ceuta	1.69	357	eP	Pg	04 20 25.2	-0.4
EMEL	Melilla	2.20	60	P	Pn	04 20 28.8	+0.2
	118nm,0.2s,SNR=7.9						
EMEL				S	Sb	04 20 58.5	-0.7
	82nm,0.2s,SNR=7.9						
EMLI	Melilla	2.21	60	P	Pn	04 20 28.8	+0.1
	118nm,0.2s,SNR=7.9						
EMLI				S	Sb	04 20 58.5	-0.8
	82nm,0.2s,SNR=7.9						
MELI	Melilla	2.21	60	P	Pn	04 20 29.0	+0.2
	45nm,0.2s,SNR=7.9						
MELI				S	Sb	04 20 59.8	+0.3
	66nm,0.2s,SNR=7.9						
MELI	Melilla	2.21	60	P	Pn	04 20 29.0	+0.2
	45nm,0.2s,SNR=7.9						
MELI				eS	Sn	04 20 57.7	+2.1
EMIJ	Mijas	2.38	10	P	Pn	04 20 30.3	-0.9

	7.5nm,0.2s,SNR=7.9						
EMIJ				S	**Sn**	**04 21 00.7**	**+0.7**
	11nm,0.3s,SNR=7.9						
EMIJ	**Mijas**	**2.38**	**10**	P	**Pn**	**04 20 30.3**	**-0.9**
	7.5nm,0.2s,SNR=7.9						
EMIJ				S	**Sn**	**04 21 00.7**	**+0.7**
	11nm,0.3s,SNR=7.9						
EMAL	**Malaga-Limoner**	**2.64**	**15**	*e*P	**Pn**	**04 20 36.2**	**+1.5**
EMAL				*e*S	**Sn**	**04 21 08.9**	**+2.8**
ELGU	**Los Guajares,**	**2.98**	**27**	P	**Pn**	**04 20 39.1**	**-0.3**
	6.1nm,0.1s,SNR=7.9						
ELGU				S	**Sn**	**04 21 15.9**	**+1.3**
	18nm,0.3s,SNR=7.9						
ELGU	**Los Guajares,**	**2.98**	**27**	P	**Pn**	**04 20 39.1**	**-0.3**
	6.1nm,0.1s,SNR=7.9						
ELGU				S	**Sn**	**04 21 15.9**	**+1.3**
	18nm,0.3s,SNR=7.9						
EGOR	**Sierra Gorda,**	**3.05**	**18**	P	**Pn**	**04 20 41.6**	**+1.2**
	6.0nm,0.3s,SNR=7.9						
EGOR				S	**Sb**	**04 21 20.9**	**-2.7**
	6.8nm,0.3s,SNR=7.9						
EGOR	**Sierra Gorda,**	**3.05**	**18**	P	**Pn**	**04 20 41.6**	**+1.2**
	6.0nm,0.3s,SNR=7.9						
EGOR				S	**Sb**	**04 21 20.9**	**-2.7**
	6.8nm,0.3s,SNR=7.9						
EBER	**Berja**	**3.31**	**35**	P	**Pn**	**04 20 44.1**	**0.0**
	5.2nm,0.3s,SNR=7.9						
EBER				S	**Sn**	**04 21 23.4**	**+0.3**
	23nm,0.4s,SNR=7.9						
EBER	**Berja**	**3.31**	**35**	P	**Pn**	**04 20 44.1**	**0.0**
	5.2nm,0.3s,SNR=7.9						
EBER				S	**Sn**	**04 21 23.4**	**+0.3**
	23nm,0.4s,SNR=7.9						
EQUE	**Quentar**	**3.34**	**26**	P	**Pn**	**04 20 46.4**	**+2.0**
	7.2nm,0.4s,SNR=13						
EQUE				S	**Sb**	**04 21 28.7**	**-3.5**
	7.2nm,0.3s						
EQUE	**Quentar**	**3.34**	**26**	P	**Pn**	**04 20 46.4**	**+2.0**
	7.2nm,0.4s,SNR=13						
HORN	**Hornachuelos**	**3.63**	**0**	P	**Pn**	**04 20 49.7**	**+1.4**
HORN				S	**Sn**	**04 21 33.7**	**+3.1**
OUK	**Oukaimeden**	**3.70**	**217**	P	**Pn**	**04 20 49.1**	**-0.5**
OUK	**Oukaimeden**	**3.70**	**217**	P	**Pn**	**04 20 49.1**	**-0.5**
PBDV	**Barranco-do-Ve**	**3.71**	**325**	*e*Pn	**Pn**	**04 20 49.8**	**+0.3**
PBDV				*e*Sn	**Sn**	**04 21 32.9**	**+0.2**
PBDV				A	A	04 21 39.8	
	11nm,0.4s						
PBDV	**Barranco-do-Ve**	**3.71**	**325**	P	**Pn**	**04 20 49.8**	**+0.3**
PBDV				S	**Sn**	**04 21 32.9**	**+0.2**
	11nm,0.4s						
PBDV	**Barranco-do-Ve**	**3.71**	**325**	P	**Pn**	**04 20 49.8**	**+0.3**
PBDV				S	**Sn**	**04 21 32.9**	**+0.2**
	11nm,0.4s						
EMIN	**Mina Concepcio**	**3.72**	**343**	P	**Pn**	**04 20 49.6**	**0.0**
	4.2nm,0.2s,SNR=34						
EMIN				S	**Sn**	**04 21 33.3**	**+0.4**
	2.8nm,0.1s						
EMIN	**Mina Concepcio**	**3.72**	**343**	P	**Pn**	**04 20 49.6**	**0.0**
	4.2nm,0.2s,SNR=34						
EMIN				S	**Sn**	**04 21 33.3**	**+0.4**
	2.8nm,0.1s						
ENIJ	**Nijar**	**3.72**	**41**	S	**Sn**	**04 21 31.8**	**-1.2**
	46nm,0.4s,SNR=7.9						
GORA	**Gorafe**	**3.73**	**29**	P	**Pn**	**04 20 54.1**	**+4.3**
	8.6nm,0.2s,SNR=7.9						
GORA				S	**Sn**	**04 21 37.4**	**+4.0**
	12nm,0.5s,SNR=7.9						
PVAQ	**Vaqueiros**	**3.75**	**329**	⇑*e*Pn	**Pn**	**04 20 50.3**	**+0.3**
PVAQ				*e*Sn	**Sn**	**04 21 32.7**	**-0.9**
PVAQ				A	A	04 21 35.0	
	25nm,0.4s						
PVAQ	**Vaqueiros**	**3.75**	**329**	P	**Pn**	**04 20 50.3**	**+0.3**
PVAQ				S	**Sn**	**04 21 32.7**	**-0.9**
	25nm,0.4s						
PVAQ	**Vaqueiros**	**3.75**	**329**	P	**Pn**	**04 20 50.2**	**+0.3**
PVAQ				S	**Sn**	**04 21 32.7**	**-0.9**
	25nm,0.4s						
EGRO	**El Granado**	**3.77**	**332**	P	**Pn**	**04 20 50.6**	**+0.4**
	5.5nm,0.1s,SNR=17						
EGRO				S	**Sn**	**04 21 32.9**	**-1.1**
	11nm,0.2s						
EGRO	**El Granado**	**3.77**	**332**	P	**Pn**	**04 20 50.6**	**+0.4**
	5.5nm,0.1s,SNR=17						
EGRO				S	**Sn**	**04 21 32.9**	**-1.1**
	11nm,0.2s						
ECAB	**El Cabril**	**3.86**	**358**	P	**Pn**	**04 20 52.0**	**+0.5**
	4.9nm,0.2s,SNR=39						
ECAB				S	**Sn**	**04 21 37.4**	**+1.1**
	7.4nm,0.2s,SNR=6.5						
ECAB	**El Cabril**	**3.86**	**358**	P	**Pn**	**04 20 52.0**	**+0.5**
	4.9nm,0.2s,SNR=39						
ECAB				S	**Sn**	**04 21 37.4**	**+1.1**
	7.4nm,0.2s,SNR=6.5						
EADA	**Adamuz**	**3.99**	**8**	P	**Pn**	**04 20 54.2**	**+0.9**
	3.2nm,0.1s,SNR=20						
EADA				S	**Sn**	**04 21 39.3**	**-0.2**
	5.4nm,0.2s						
EADA	**Adamuz**	**3.99**	**8**	P	**Pn**	**04 20 54.2**	**+0.9**
	3.2nm,0.1s,SNR=20						
EADA				S	**Sn**	**04 21 39.3**	**-0.2**
	5.4nm,0.2s						
EQES	**Quesada**	**4.01**	**26**	P	**Pn**	**04 20 55.2**	**+1.6**
	4.1nm,0.3s,SNR=23						
EQES				S	**Sn**	**04 21 45.3**	**+5.2**
	4.6nm,0.2s						
EQES	**Quesada**	**4.01**	**26**	P	**Pn**	**04 20 55.2**	**+1.6**
	4.1nm,0.3s,SNR=23						
PCVE	**Castro Verde**	**4.08**	**328**	*e*Pn	**Pn**	**04 20 54.9**	**+0.4**
PCVE				*e*Sn	**Sn**	**04 21 41.0**	**-0.7**
PCVE				A	A	04 21 47.0	
	15nm,0.3s						
PCVE	**Castro Verde**	**4.08**	**328**	P	**Pn**	**04 20 54.9**	**+0.4**
PCVE				S	**Sn**	**04 21 41.0**	**-0.7**
	15nm,0.3s						
PCVE	**Castro Verde**	**4.08**	**328**	P	**Pn**	**04 20 54.9**	**+0.4**
PCVE				S	**Sn**	**04 21 41.0**	**-0.7**
	15nm,0.3s						
PFVI	**Vila Bisbo**	**4.10**	**316**	*e*Pn	**Pn**	**04 20 56.7**	**+1.9**
PFVI				*e*Sn	**Sn**	**04 21 42.4**	**+0.2**
PFVI				A	A	04 21 51.5	
	7.1nm,0.3s						
PFVI	**Vila Bisbo**	**4.10**	**316**	P	**Pn**	**04 20 56.5**	**+1.7**
	11nm,0.2s,SNR=7.8						
PFVI				S	**Sn**	**04 21 41.8**	**-0.4**
	11nm,0.2s,SNR=7.9						
PFVI	**Vila Bisbo**	**4.10**	**316**	P	**Pn**	**04 20 56.5**	**+1.7**
	11nm,0.2s,SNR=7.8						
PFVI				S	**Sn**	**04 21 41.8**	**-0.4**
	11nm,0.2s,SNR=7.9						
PFVI				*e*Sn	**Sn**	**04 21 42.4**	**+0.2**
MORF	**Marmelete**	**4.13**	**319**	*e*P	**Pn**	**04 20 55.8**	**+0.6**
MORF	**Marmelete**	**4.13**	**319**	*e*Pn	**Pn**	**04 20 57.2**	**+2.0**
MORF				*e*Sn	**Sn**	**04 21 42.3**	**-0.7**
MORF				A	A	04 21 45.8	
	28nm,0.2s						
MORF	**Marmelete**	**4.13**	**319**	P	**Pn**	**04 20 55.8**	**+0.6**
MORF				S	**Sn**	**04 21 42.3**	**-0.7**
	28nm,0.2s						
MORF	**Marmelete**	**4.13**	**319**	P	**Pn**	**04 20 55.8**	**+0.6**
MORF	**Marmelete**	**4.13**	**319**	*e*Pn	**Pn**	**04 20 57.2**	**+2.0**
MORF				S	**Sn**	**04 21 42.3**	**-0.7**
	28nm,0.2s						
PBAR	**Barrancos**	**4.20**	**341**	*e*Pn	**Pn**	**04 20 57.5**	**+1.3**
PBAR				*e*Sn	**Sn**	**04 21 44.3**	**-0.4**
PBAR				A	A	04 21 48.7	
	19nm,0.3s						
PBAR	**Barrancos**	**4.20**	**341**	P	**Pn**	**04 20 57.5**	**+1.3**
PBAR				S	**Sn**	**04 21 44.3**	**-0.4**
	19nm,0.3s						
PBAR	**Barrancos**	**4.20**	**341**	P	**Pn**	**04 20 57.5**	**+1.3**
PBAR				S	**Sn**	**04 21 44.3**	**-0.4**
	19nm,0.3s						
MESJ	**Messejana**	**4.33**	**328**	*e*P	**Pn**	**04 20 58.3**	**+0.3**
MESJ				*e*S	**Sn**	**04 21 45.5**	**-2.5**
MESJ				AML	AML	04 21 48.6	
	comp=N,15nm,0.3s						
MESJ	**Messejana**	**4.33**	**328**	*e*Pn	**Pn**	**04 20 58.5**	**+0.5**
MESJ				*e*Sn	**Sn**	**04 21 47.9**	**-0.1**
MESJ				A	A	04 21 49.3	
	comp=N,13nm,0.2s						
MESJ	**Messejana**	**4.33**	**328**	P	**Pn**	**04 20 58.3**	**+0.3**
MESJ				S	**Sn**	**04 21 45.5**	**-2.5**
	comp=N,15nm,0.3s						
MESJ	**Messejana**	**4.33**	**328**	P	**Pn**	**04 20 58.3**	**+0.3**
MESJ				*e*Sn	**Sn**	**04 21 47.9**	**-0.1**
PBEJ	**Beja**	**4.34**	**332**	*e*Pn	**Pn**	**04 21 00.7**	**+2.6**
PBEJ				*e*Sn	**Sn**	**04 21 48.7**	**+0.5**
PBEJ				A	A	04 21 53.7	
	comp=N,8.8nm,0.6s						
PBEJ	**Beja**	**4.34**	**332**	P	**Pn**	**04 21 00.7**	**+2.6**
PBEJ				S	**Sn**	**04 21 48.7**	**+0.5**
	comp=N,4.4nm,0.6s						
PBEJ	**Beja**	**4.34**	**332**	*e*Pn	**Pn**	**04 21 00.7**	**+2.6**
PBEJ				*e*Sn	**Sn**	**04 21 48.7**	**+0.5**
PTEO	**Sao Teotonio**	**4.34**	**321**	*e*Pn	**Pn**	**04 20 58.4**	**+0.3**
PTEO				*e*Sn	**Sn**	**04 21 47.8**	**-0.4**
PTEO				A	A	04 21 50.9	
	comp=N,16nm,0.5s						
PTEO	**Sao Teotonio**	**4.34**	**321**	P	**Pn**	**04 20 58.4**	**+0.3**
PTEO				S	**Sn**	**04 21 47.8**	**-0.4**
	comp=N,7.9nm,0.5s						
PTEO	**Sao Teotonio**	**4.34**	**321**	P	**Pn**	**04 20 58.4**	**+0.3**
PTEO				S	**Sn**	**04 21 47.8**	**-0.4**
	comp=N,7.9nm,0.5s						
SESP	**Santiago Espad**	**4.49**	**29**	P	**Pn**	**04 21 02.3**	**+2.1**
	comp=N,7.0nm,0.4s,SNR=7.9						
SESP				S	**Sn**	**04 21 55.2**	**+3.2**
	comp=N,6.9nm,0.2s,SNR=7.9						
SESP	**Santiago Espad**	**4.49**	**29**	P	**Pn**	**04 21 02.3**	**+2.1**
	comp=N,7.0nm,0.4s,SNR=7.9						
SESP				S	**Sn**	**04 21 55.2**	**+3.2**
	comp=N,6.9nm,0.2s,SNR=7.9						
TTIG	**Tnine Tigouga,**	**4.53**	**217**	P	**Pn**	**04 20 58.6**	**-2.2**
PNCL	**Nicolau / Gran**	**4.70**	**327**	*e*Pn	**Pn**	**04 21 03.4**	**+0.5**
PNCL				*e*Sn	**Sn**	**04 21 56.2**	**-0.7**
PNCL				A	A	04 21 58.7	
	comp=N,8.1nm,0.2s						
PNCL	**Nicolau / Gran**	**4.70**	**327**	*e*Pn	**Pn**	**04 21 03.4**	**+0.5**
PNCL				*e*Sn	**Sn**	**04 21 56.2**	**-0.7**
EBAD	**Badajoz**	**4.75**	**343**	P	**Pn**	**04 21 03.8**	**+0.2**
	comp=N,6.5nm,0.1s,SNR=54						
EBAD				S	**Sn**	**04 21 56.9**	**-1.2**
	comp=N,8.2nm,0.2s						
EBAD	**Badajoz**	**4.75**	**343**	P	**Pn**	**04 21 03.8**	**+0.2**
	comp=N,6.5nm,0.1s,SNR=54						
EBAD				S	**Sn**	**04 21 56.9**	**-1.2**
	comp=N,8.2nm,0.2s						
EVO	**Evora**	**4.84**	**334**	*e*Pn	**Pn**	**04 21 05.3**	**+0.3**
EVO				*e*Sn	**Sn**	**04 21 59.8**	**-0.7**
EVO				A	A	04 22 02.8	
	comp=N,9.4nm,0.3s						
EVO	**Evora**	**4.84**	**334**	P	**Pn**	**04 21 05.3**	**+0.3**
EVO				S	**Sn**	**04 21 59.8**	**-0.7**
	comp=N,9.4nm,0.3s						
EVO	**Evora**	**4.84**	**334**	P	**Pn**	**04 21 05.3**	**+0.3**
EVO				S	**Sn**	**04 21 59.8**	**-0.7**
	comp=N,9.4nm,0.3s						
EMUR	**La Murta**	**4.88**	**41**	P	**Pn**	**04 21 07.6**	**+2.0**
	comp=N,1.5nm,0.3s,SNR=7.9						
EMUR				S	**Sn**	**04 22 02.2**	**+0.6**
	comp=N,4.8nm,0.4s,SNR=7.9						
EMUR	**La Murta**	**4.88**	**41**	P	**Pn**	**04 21 07.6**	**+2.0**
	comp=N,1.5nm,0.3s,SNR=7.9						
EMUR				S	**Sn**	**04 22 02.2**	**+0.6**
	comp=N,4.8nm,0.4s,SNR=7.9						
PESTR	**Estremoz**	**5.00**	**339**	*e*Pn	**Pn**	**04 21 08.0**	**+0.7**
PESTR				*e*Sn	**Sn**	**04 22 03.7**	**-0.8**
PESTR				A	A	04 22 10.2	
	comp=N,5.2nm,0.6s						
PESTR	**Estremoz**	**5.00**	**339**	P	**Pn**	**04 21 07.9**	**+0.7**
PESTR				*e*Sn	**Sn**	**04 22 03.7**	**-0.8**
ETOB	**Tobarra**	**5.35**	**33**	P	**Pn**	**04 21 14.1**	**+2.1**
	comp=N,3.2nm,0.2s,SNR=16						
ETOB				S	**Sn**	**04 22 14.7**	**+1.5**
	comp=N,5.8nm,0.5s						
ETOB	**Tobarra**	**5.35**	**33**	P	**Pn**	**04 21 14.1**	**+2.1**
	comp=N,3.2nm,0.2s,SNR=16						
ETOB				S	**Sn**	**04 22 14.7**	**+1.5**
	comp=N,5.8nm,0.5s						
PAB	**San Pablo**	**5.38**	**8**	P	**Pn**	**04 21 13.6**	**+1.2**
	comp=N,1.6nm,0.2s,SNR=7.9						
PAB				S	**Sn**	**04 22 10.4**	**-3.4**
	comp=N,0.8nm,0.1s,SNR=7.9						
PAB	**San Pablo**	**5.38**	**8**	P	**Pn**	**04 21 13.6**	**+1.2**
	comp=N,1.6nm,0.2s,SNR=7.9						
PMTG	**Montargil**	**5.39**	**335**	*e*Pn	**Pn**	**04 21 13.2**	**+0.7**
PMTG				*e*Sn	**Sn**	**04 22 13.8**	**-0.3**
PMTG				A	A	04 22 23.7	
	comp=N,6.6nm,0.4s						
PMTG	**Montargil**	**5.39**	**335**	*e*Pn	**Pn**	**04 21 13.2**	**+0.7**
PMTG				*e*Sn	**Sn**	**04 22 13.8**	**-0.3**
PMRV	**Marv??o**	**5.47**	**343**	*e*Pn	**Pn**	**04 21 14.3**	**+0.6**
PMRV				*e*Sn	**Sn**	**04 22 15.0**	**-1.1**
PMRV				A	A	04 22 35.2	
	comp=N,4.0nm,0.4s						
PMRV	**Marv??o**	**5.47**	**343**	P	**Pn**	**04 21 14.3**	**+0.6**
PMRV				S	**Sn**	**04 22 15.0**	**-1.1**
	comp=N,4.0nm,0.4s						
PMRV	**Marv??o**	**5.47**	**343**	P	**Pn**	**04 21 14.3**	**+0.6**
PMRV				S	**Sn**	**04 22 15.0**	**-1.1**
	comp=N,4.0nm,0.4s						
ESDC	**Sonseca Array**	**5.55**	**11**	Pn	**Pn**	**04 21 14.9**	**+0.2**
	comp=N,0.5nm,0.3s,baz=196,slow=13,SNR=4.3						
ESDC				Sn	**Sn**	**04 22 15.2**	**-2.9**
	comp=N,1.2nm,0.3s,baz=196,slow=22,SNR=5.6						
ESDC	**Sonseca Array**	**5.55**	**11**	P	**Pn**	**04 21 14.8**	**0.0**
	comp=N,0.6nm,0.2s,baz=197,slow=13,SNR=9.3						
ESDC				S	**Sn**	**04 22 16.8**	**-1.3**
	comp=N,1.8nm,0.2s,baz=196,slow=23,SNR=5.2						
ESDC	**Sonseca Array**	**5.55**	**11**	P	**Pn**	**04 21 14.8**	**0.0**
	comp=N,0.6nm,0.2s,SNR=9.3						
ALMR	**Almeirim**	**5.60**	**333**	*e*Pn	**Pn**	**04 21 16.3**	**+0.9**
ALMR				*e*Sn	**Sn**	**04 22 20.0**	**+0.8**
ALMR				A	A	04 22 28.7	
	comp=N,16nm,0.5s						
ALMR	**Almeirim**	**5.60**	**333**	P	**Pn**	**04 21 16.3**	**+0.9**
ALMR				S	**Sn**	**04 22 20.0**	**+0.8**
	comp=N,8.1nm,0.5s						
ALMR	**Almeirim**	**5.60**	**333**	P	**Pn**	**04 21 16.3**	**+0.9**
ALMR				S	**Sn**	**04 22 20.0**	**+0.8**
	comp=N,8.1nm,0.5s						
PMAFR	**Mafra**	**5.72**	**327**	*e*Pn	**Pn**	**04 21 17.7**	**+0.6**
PMAFR				*e*Sn	**Sn**	**04 22 21.6**	**-0.7**
PMAFR				A	A	04 22 24.0	
	comp=N,14nm,0.3s						
PMAFR	**Mafra**	**5.72**	**327**	P	**Pn**	**04 21 17.8**	**+0.7**
	comp=N,3.7nm,0.2s,SNR=7.9						
PMAFR				S	**Sn**	**04 22 20.5**	**-1.7**
	comp=N,7.0nm,0.3s,SNR=7.9						
PMAFR	**Mafra**	**5.72**	**327**	*e*Pn	**Pn**	**04 21 17.7**	**+0.6**
PMAFR				S	**Sn**	**04 22 20.5**	**-1.7**
	comp=N,7.0nm,0.3s,SNR=7.9						
PMAFR				*e*Sn	**Sn**	**04 22 21.6**	**-0.7**
EPLA	**Plasencia**	**5.88**	**354**	P	**Pn**	**04 21 19.8**	**+0.6**
	comp=N,3.7nm,0.2s,SNR=25						
EPLA				S	**Sn**	**04 22 22.7**	**-3.3**
	comp=N,4.4nm,0.3s						
EPLA	**Plasencia**	**5.88**	**354**	P	**Pn**	**04 21 19.8**	**+0.6**
	comp=N,3.7nm,0.2s,SNR=25						
PCBR	**Castelo Branco**	**5.89**	**343**	*e*Pn	**Pn**	**04 21 19.9**	**+0.6**
PCBR				*e*Sn	**Sn**	**04 22 24.1**	**-2.1**
PCBR				A	A	04 22 30.4	
	comp=N,3.0nm,0.3s						
PCBR	**Castelo Branco**	**5.89**	**343**	P	**Pn**	**04 21 19.9**	**+0.6**
PCBR				S	**Sn**	**04 22 24.1**	**-2.1**
	comp=N,1.5nm,0.3s						
PCBR	**Castelo Branco**	**5.89**	**343**	P	**Pn**	**04 21 19.9**	**+0.6**
PTOM	**Tomar**	**5.95**	**336**	*e*Pn	**Pn**	**04 21 21.2**	**+1.0**
PTOM	**Tomar**	**5.95**	**336**	P	**Pn**	**04 21 21.2**	**+1.0**
PTOM	**Tomar**	**5.95**	**336**	P	**Pn**	**04 21 21.2**	**+1.0**
PCAS	**Casmilo, Conde**	**6.37**	**337**	*e*Pn	**Pn**	**04 21 27.1**	**+1.1**
PCAS	**Casmilo, Conde**	**6.37**	**337**	*e*Pn	**Pn**	**04 21 27.1**	**+1.1**
ECHE	**Chera**	**6.38**	**32**	P	**Pn**	**04 21 26.3**	**+0.1**
	comp=N,0.4nm,0.2s,SNR=7.9						
ECHE	**Chera**	**6.38**	**32**	P	**Pn**	**04 21 26.3**	**+0.1**
	comp=N,0.4nm,0.2s,SNR=7.9						
MTE	**Manteigas**	**6.43**	**344**	*e*Pn	**Pn**	**04 21 27.4**	**+0.5**
MTE				*e*Sn	**Sn**	**04 22 38.5**	**-1.3**
MTE				A	A	04 22 44.1	
	comp=N,3.7nm,0.7s						
MTE	**Manteigas**	**6.43**	**344**	P	**Pn**	**04 21 27.4**	**+0.5**
MTE				S	**Sn**	**04 22 38.5**	**-1.3**
	comp=N,1.9nm,0.7s						
MTE	**Manteigas**	**6.43**	**344**	P	**Pn**	**04 21 27.4**	**+0.5**
MTE				S	**Sn**	**04 22 38.5**	**-1.3**
	comp=N,1.9nm,0.7s						
PVIS	**Viseu**	**6.82**	**343**	*e*Pn	**Pn**	**04 21 32.9**	**+0.8**
PVIS	**Viseu**	**6.82**	**343**	P	**Pn**	**04 21 32.9**	**+0.8**
PVIS	**Viseu**	**6.82**	**343**	P	**Pn**	**04 21 32.9**	**+0.8**
ETOR	**Torete**	**7.08**	**20**	P	**Pn**	**04 21 35.7**	**0.0**
	comp=N,1.0nm,0.3s,SNR=7.9						
ETOR				S	**Sn**	**04 22 53.9**	**-1.8**
	comp=N,1.1nm,0.3s,SNR=7.9						
ETOR	**Torete**	**7.08**	**20**	P	**Pn**	**04 21 35.7**	**0.0**
	comp=N,1.0nm,0.3s,SNR=7.9						
MVO	**Moncorvo**	**7.08**	**349**	*e*Pn	**Pn**	**04 21 36.3**	**+0.6**
MVO				*e*Sn	**Sn**	**04 22 52.9**	**-2.8**
MVO				A	A	04 22 56.7	
	comp=N,3.8nm,0.4s						
MVO	**Moncorvo**	**7.08**	**349**	P	**Pn**	**04 21 36.4**	**+0.6**
	comp=N,4.5nm,0.2s,SNR=18						
MVO				S	**Sn**	**04 22 52.4**	**-3.3**
	comp=N,4.7nm,0.3s,SNR=7.9						
MVO	**Moncorvo**	**7.08**	**349**	P	**Pn**	**04 21 36.4**	**+0.6**
	comp=N,4.5nm,0.2s,SNR=18						
EIBI	**Ibiza**	**7.17**	**46**	P	**Pn**	**04 21 38.1**	**+1.1**
	comp=N,1.6nm,0.2s,SNR=5.6						
EIBI				S	**Sn**	**04 22 57.4**	**-0.6**
	comp=N,4.4nm,0.4s,SNR=7.9						
EIBI	**Ibiza**	**7.17**	**46**	P	**Pn**	**04 21 38.1**	**+1.1**
	comp=N,1.6nm,0.2s,SNR=5.6						
PVRL	**Vila Real**	**7.31**	**345**	*e*Pn	**Pn**	**04 21 39.4**	**+0.5**
PVRL				*e*Sn	**Sn**	**04 22 58.5**	**-2.9**
PVRL	**Vila Real**	**7.31**	**345**	P	**Pn**	**04 21 39.4**	**+0.5**
PVRL				S	**Sn**	**04 22 58.5**	**-2.9**
PVRL	**Vila Real**	**7.31**	**345**	P	**Pn**	**04 21 39.4**	**+0.5**
POLO	**Lamas de Olo**	**7.42**	**345**	⇓*e*Pn	**Pn**	**04 21 41.0**	**+0.5**
POLO				*e*Sn	**Sn**	**04 23 01.3**	**-2.9**
POLO				A	A	04 23 05.0	
	comp=N,1.7nm,0.5s						
POLO	**Lamas de Olo**	**7.42**	**345**	⇓*e*Pn	**Pn**	**04 21 41.0**	**+0.5**
PBRG	**Braganca**	**7.67**	**352**	*e*Pn	**Pn**	**04 21 44.3**	**+0.5**
PBRG				*e*Sn	**Sn**	**04 23 08.1**	**-2.1**
PBRG				A	A	04 23 12.8	
	comp=N,1.8nm,0.3s						
PBRG	**Braganca**	**7.67**	**352**	P	**Pn**	**04 21 44.3**	**+0.5**
PBRG				S	**Sn**	**04 23 08.1**	**-2.1**
	comp=N,0.9nm,0.3s						
PBRG	**Braganca**	**7.67**	**352**	P	**Pn**	**04 21 44.3**	**+0.5**
PCAB	**Cabril**	**7.79**	**345**	*e*Pn	**Pn**	**04 21 45.9**	**+0.4**
PCAB				*e*Sn	**Sn**	**04 23 09.0**	**-4.2**
PCAB				A	A	04 23 14.2	
	comp=N,2.8nm,0.6s						
PCAB	**Cabril**	**7.79**	**345**	P	**Pn**	**04 21 45.9**	**+0.4**
PCAB				S	**Sn**	**04 23 09.0**	**-4.2**
	comp=N,1.4nm,0.6s						
PCAB	**Cabril**	**7.79**	**345**	P	**Pn**	**04 21 45.9**	**+0.4**
ELOB	**Lobios**	**7.95**	**345**	P	**Pn**	**04 21 48.0**	**+0.3**
	comp=N,1.8nm,0.3s,SNR=6.5						
ELOB				S	**Sn**	**04 23 13.3**	**-3.9**
	comp=N,1.5nm,0.3s,SNR=7.9						
ELOB	**Lobios**	**7.95**	**345**	P	**Pn**	**04 21 48.0**	**+0.3**
	comp=N,1.8nm,0.3s,SNR=6.5						
PGAV	**Gavieira, Arco**	**8.09**	**344**	*e*Pn	**Pn**	**04 21 50.5**	**+0.8**
PGAV				*e*Sn	**Sn**	**04 23 18.9**	**-1.7**
PGAV				A	A	04 23 21.8	
	comp=N,3.1nm,0.7s						
PGAV	**Gavieira, Arco**	**8.09**	**344**	*e*Pn	**Pn**	**04 21 50.5**	**+0.8**
ETOS	**Mallorca**	**8.53**	**47**	P	**Pn**	**04 21 58.0**	**+2.5**
	comp=N,1.3nm,0.4s,SNR=7.9						
ETOS	**Mallorca**	**8.53**	**47**	P	**Pn**	**04 21 58.0**	**+2.5**
	comp=N,1.3nm,0.4s,SNR=7.9						
EPON	**Pontenova**	**9.22**	**351**	P	**Pn**	**04 22 04.8**	**-0.2**
	comp=N,0.8nm,0.3s,SNR=7.9						
EPON	**Pontenova**	**9.22**	**351**	P	**Pn**	**04 22 04.8**	**-0.2**
	comp=N,0.8nm,0.3s,SNR=7.9						
EALK	**Alkurruntz**	**9.46**	**17**	P	**Pn**	**04 22 10.3**	**+1.8**
	comp=N,2.1nm,0.4s,SNR=7.9						
EALK	**Alkurruntz**	**9.46**	**17**	P	**Pn**	**04 22 10.3**	**+1.8**
	comp=N,2.1nm,0.4s,SNR=7.9						
GERES	**GERESS Array B**	**20.31**	**38**	P	**P**	**04 24 26.4**	**-1.5**
	comp=N,0.4nm,0.4s,baz=218,slow=11,SNR=5.3						
TORD	**Torodi Ar. Bea**	**21.91**	**162**	P	**P**	**04 24 45.6**	**+0.3**
	comp=N,0.3nm,0.6s,baz=337,slow=12						
ARCES	**ARCESS Array B**	**39.26**	**17**	P	**P**	**04 27 19.4**	**-0.7**
	comp=N,2.7nm,1.0s,baz=216,slow=7.5,SNR=2.3						
KURBB	**Kurchatov Arra**	**60.77**	**47**	P	**P**	**04 30 02.3**	**-1.2**
	comp=N,0.4nm,0.5s,baz=293,slow=7.5,SNR=4.6						
MKAR	**Makanchi Array**	**64.48**	**50**	P	**P**	**04 30 27.6**	**-0.8**
	comp=N,0.6nm,0.8s,baz=280,slow=6.2,SNR=4.0						

JMA ***10*** *04:23:34.1±0.5, 32°.35N×141°.93E, h91^{km}, M3.0*

ISCJB ***10*** *04:23:35.0±1.1, 32°.36N±0°.06×142°.0E±0°.2, h39^{km}, mb3.5/3, Error ellipse: s-maj=21.6km s-min=6.9km az=166.6*

IDC ***10*** *04:23:37.0±3.1, 31°.78N×140°.57E, h0^{km}, mb3.5/3, mb1 3.6/5, mb1mx3.4/65, mbtmp3.6/5, ML3.6/2, Error ellipse: s-maj=126.2km s-min=22.2km az=68.0*

ISC 10 04:23:35.9±1.2**, 32°.28N**±0°.06×**142°.0E**±0°.1**, h39**^{km}**, n12, **$\sigma 1^{s}$**91**/16**, mb3.6**/3**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAOM	**Aogashimamukai**	**1.90**	**276**	P	**Pn**	**04 24 04.6**	**-1.3**
JHCJ	**Hachijojimakas**	**2.02**	**294**	P	**Pn**	**04 24 05.8**	**-1.7**
BSO1	**Boso 1**	**2.52**	**340**	P	**Pn**	**04 24 12.8**	**-1.0**
BSO1				*e*S	**Sn**	**04 24 42.5**	**-0.5**
BSO3	**Boso 3**	**2.81**	**334**	P	**Pn**	**04 24 16.7**	**-1.4**
BSO3				*e*S	**Sn**	**04 24 49.2**	**-1.3**
JRY	**Ryogami san**	**4.53**	**326**	P	**Pn**	**04 24 41.4**	**-0.6**
JRY				S	**Sn**	**04 25 32.6**	**-0.8**
JAG	**Ashikaga**	**4.64**	**334**	P	**Pn**	**04 24 42.6**	**-0.9**
JCJ	**Chichijima**	**5.17**	**178**	Pn	**Pn**	**04 24 53.0**	**+2.2**
	6.3nm,0.3s,baz=292,slow=19,SNR=8.5						
JCJ				Sn	**Sn**	**04 25 46.2**	**-2.9**
	2.6nm,0.3s,baz=295,slow=19,SNR=2.2						
MJAR	**Matsushiro Arr**	**5.28**	**325**	Pn	**Pn**	**04 24 54.2**	**+1.9**
	1.0nm,0.3s,baz=152,slow=8.7,SNR=3.6						
JFT	**Otama**	**5.40**	**346**	S	**Sn**	**04 25 51.7**	**-3.2**
MKAR	**Makanchi Array**	**47.18**	**306**	P	**P**	**04 32 06.2**	**+1.6**
	0.3nm,0.7s,baz=88,slow=9.8,SNR=3.6						
KURBB	**Kurchatov Arra**	**49.41**	**311**	P	**P**	**04 32 23.9**	**+2.2**
	0.2nm,0.3s,baz=93,slow=8.0,SNR=3.3						
WRA	**Warramunga Arr**	**52.44**	**189**	P	**P**	**04 32 45.9**	**+1.1**
	0.5nm,0.6s,baz=5.4,slow=7.5,SNR=8.5						

MEX 10 04:29:13.8±0.4**, 16°.06N**×**98°.56W, h16**^{km}±40^{km}**, MD4.0, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.53**	**51**	*e*P	Pg	04 29 22.7	-1.7
PNIG				*e*S	Sg	04 29 29.7	-1.9
TLIG	**Tlapa**	**1.50**	**360**	*e*P	Pn	04 29 36.5	-3.7
TLIG				*e*S	Sn	04 29 54.3	-5.1
VHO	**Vista Hermosa**	**2.02**	**60**	*e*P	Pn	04 29 43.7	-3.8
VHO				*e*S	Sn	04 30 08.5	-4.1

NIED ***10*** *04:33:00, 36°.80N×138°.40E, h5^{km}, Mw4.0 Best double couple: $M_0$1.28000×10^{15} NP1:ϕ_s351.00000°, δ42.00000°, λ2.00000°. NP2:ϕ_s259.00000°, δ88.00000°, λ132.00000°.*

IDC ***10*** *04:33:23.5±1.4, 36°.94N×138°.39E, h0^{km}, mb3.7/3, mb1 3.9/3, mb1mx3.4/67, mbtmp3.7/3, MS3.0/5, Ms1 3.0/5, ms1mx2.7/70, Error ellipse: s-maj=11.0km s-min=8.4km az=25.0*

ISCJB ***10*** *04:33:26.1±0.5, 36°.80N±0°.03×138°.37E±0°.04, h25^{km}±5^{km}, mb3.7/3, MS3.0/2, Error ellipse: s-maj=6.1km s-min=4.7km az=24.4*

JMA ***10*** *04:33:26.6, 36°.83N×138°.39E, h9^{km}±2^{km}, M3.9 Broadband fault plane solution: P waves. NP1: ϕ_s84.00000°, δ73.00000°, λ-141.00000°. NP2: ϕ_s341.00000°, δ53.00000°, λ-21.00000°. Principal axes: T Plg13.0000°, Azm208.0000°; N Plg48.0000°, Azm103.0000°; P Plg39.0000°, Azm309.0000°;*

JMA Felt III J1.

ISC 10 04:33:25.3±1.4**, 36°.87N**±0°.05×**138°.44E**±0°.04**, h7**^{km}±11^{km}**, n18, **$\sigma 0^{s}$**99**/22**, mb3.7**/3**, 4C-4D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJN	**Nakama**	**0.32**	**316**	⇓P	**Pb**	**04 33 33.3**	**0.0**
JJN				S	**Sb**	**04 33 38.8**	**+0.1**
JGK	**Kuni**	**0.35**	**152**	⇓P	**Pb**	**04 33 33.5**	**-0.4**
MAT	**Matsushiro**	**0.38**	**209**	P	**Pg**	**04 33 32.4**	**-0.2**
MAT				S	**Sg**	**04 33 36.8**	**-0.8**
MJAR	**Matsushiro Arr**	**0.38**	**209**	Pg	**Pg**	**04 33 32.6**	**0.0**
	694nm,0.3s,baz=16,slow=17,SNR=1515						
MJAR				Lg	Lg	04 33 37.0	
	2µm,0.3s,baz=14,slow=28,SNR=98						
JNG	**Nsakai**	**0.54**	**210**	⇑P	**Pg**	**04 33 35.4**	**-0.3**

JNG				S	Sg	04 33 41.9	-0.8
JHK	Hiroka	0.60	51	⇑P	Pb	04 33 38.5	+0.4
JHK				S	Sb	04 33 47.2	+0.5
JKT	Katashina	0.66	99	⇓P	Pb	04 33 39.5	+0.3
JKT				S	Sb	04 33 48.8	+0.2
JIZZ	Izumozaki	0.69	18	⇑P	Pn	04 33 41.3	-0.2
JIZZ				S	Sn	04 33 53.1	+0.6
JAG	Ashikaga	0.93	118	⇓P	Pb	04 33 44.3	+0.5
JRY	Ryogami san	0.93	156	⇑P	Pg	04 33 43.4	+0.2
JRY				S	Sg	04 33 55.8	+0.5
JNU	Nakatsue	7.24	241	Pn	Pn	04 35 13.9	+2.3
	0.5nm,0.3s,baz=126,slow=8.1,SNR=4.1						
JNU				LR	LR	04 38 12.0	
	comp=Z,158nm,18.8s,baz=302,slow=40						
ASAJ	Asahikawa	7.90	22	LR	LR	04 38 18.8	
	comp=Z,121nm,19.4s,baz=255,slow=38						
KSRS	Korea Array	8.41	277	Pn	Pn	04 35 30.0	+2.4
	0.8nm,0.3s,baz=98,slow=15,SNR=4.5						
KSRS				LR	LR	04 38 24.2	
	comp=Z,77nm,19.8s,baz=85,slow=36						
MA2	Magadan	24.08	15	LR	LR	04 47 59.2	
	comp=Z,25nm,18.6s,baz=281,slow=36						
KURBB	Kurchatov Arra	44.22	308	P	P	04 41 33.9	-1.1
	0.5nm,0.6s,baz=84,slow=7.8,SNR=3.2						
WRA	Warramunga Arr	56.64	185	P	P	04 43 07.9	-1.3
	1.1nm,0.5s,baz=0.4,slow=7.6,SNR=39						
ASAR	Alice Springs	60.37	185	P	P	04 43 34.1	-1.0
	0.3nm,0.5s,baz=17,slow=13,SNR=4.3						
AFI	Afiamalu	68.90	127	LR	LR	05 17 15.3	
	comp=Z,13nm,18.2s,baz=131,slow=38						

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*IDC **10** 04:49:20.0±1.0, 14°.51N×92°.68W, h0^{km}, mb4.0/11, mb1 4.2/13, mb1mx4.0/49, mbtmp4.0/13, ML4.0/2, MS3.5/5, Ms1 3.5/5, ms1mx3.1/39, Error ellipse: s-maj=48.3km s-min=15.4km az=52.0*

*MEX **10** 04:49:25.4±0.6, 14°.33N×93°.25W, h16^{km}±50^{km}, MD4.0*

*NEIC **10** 04:49:26.6±0.0, 14°.39N×93°.20W, h17^{km}, mb4.2/54, MD4.1(MEX), After MEX.*

ISC 10 04:49:24.0±2.0**, 14°.34N**±0°.07×**93°.13W**±0°.05**, h27**^{km}±13^{km}**, n250, σ2.^{s}06**/245**, mb4.3**/44**, MS3.5**/5**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		1.01	56	*e*P	Pn	04 49 42.8	+0.5
THIG				*i* S	Sn	04 49 56.1	+0.5
THIG		1.01	56	*e*Pn	Pn	04 49 42.8	+0.5
THIG				*e*Sn	Sn	04 49 59.2	+3.6
PCIG		1.36	356	*e*P	Pn	04 49 46.1	-1.0
PCIG				*e*S	Sn	04 50 02.1	-2.1
PCIG		1.36	356	*e*Pn	Pn	04 49 46.1	-1.0
PCIG				*e*Sn	Sn	04 50 02.1	-2.1
CCIG	Comitan	2.15	26	*e*P	Pn	04 49 59.5	+1.3
CCIG				*i* S	Sn	04 50 24.5	+0.4
CCIG	Comitan	2.15	26	*e*Pn	Pb	04 50 01.0	-1.4
CCIG				*e*Sn	Sn	04 50 21.2	-2.9
CCIG				*e*Sn	Sb	04 50 29.9	+1.2
TGIG		2.42	0	*e*P	Pn	04 50 02.6	+0.8
TGIG				*i* S	Sn	04 50 30.8	+0.2
TGIG		2.42	0	*e*Pn	Pn	04 50 02.6	+0.8
TGIG				*e*Sn	Sb	04 50 34.4	-2.0
CMIG	Matias Romero	3.21	329	Pn	Pn	04 50 11.6	-1.1
	12nm,0.3s,baz=160,slow=13,SNR=93						
CMIG				Sn	Sn	04 50 49.4	-0.7
	32nm,0.3s,baz=108,slow=16,SNR=5.5						
TGUH	Tegucigalpa,Un	5.69	92	*e*Pn	Pn	04 50 48.9	+2.3
TLIG	Tlapa	6.13	302	*e*Pn	Pn	04 50 53.6	+0.7
TLIG				*e*Sn	Sn	04 52 03.9	+1.7
LVIG	Laguna Verde	6.21	330	*e*Pn	Pn	04 50 54.4	+0.6
LVIG				*e*Sn	Sn	04 52 07.0	+3.2
ESTN	Estel	6.69	100	*e*Pn	Pn	04 50 59.0	-1.5
ESPN	Las Esperanzas	8.86	103	*e*Pn	Pn	04 51 31.6	+1.4
833A	Chaparral WMA,	15.08	338	P	P	04 52 58.8	-1.5
	baz=156						
833A	Chaparral WMA,	15.08	338	*e*Pn	Pn	04 52 56.2	+1.0
	14nm,0.8s						
435B	Jarrell	16.87	347	P	P	04 53 19.8	-0.3
	baz=165						
435B	Jarrell	16.87	347	*e*Pn	Pn	04 53 19.0	+0.8
	10nm,0.9s						
447A	Lucedale	16.88	13	P	P	04 53 21.7	+1.5
	baz=195						
341A	Kurthwood	16.91	360	P	P	04 53 20.9	+0.4
	baz=180						
341A	Kurthwood	16.91	360	*e*Pn	Pn	04 53 19.3	+0.6
	17nm,1.1s						
345A	Thompson Farm,	17.12	9	P	P	04 53 25.0	+2.1
	baz=190						
JCT	Junction City	17.20	340	*e*Pn	P	04 53 27.2	+3.5
	5.6nm,0.6s						
347A	Saraland	17.49	13	P	P	04 53 30.0	+3.0
	baz=195						
241A	Mo Tay, Goldon	17.60	1	P	P	04 53 30.6	+2.4
	baz=181						
241A	Mo Tay, Goldon	17.60	1	*e*Pn	P	04 53 29.9	+1.8
	10nm,0.9s						
BRAL	Brewton	17.65	17	P	P	04 53 30.9	+2.2
	baz=200						
349A	Repton	17.78	17	P	P	04 53 32.6	+2.5
	baz=199						
LTX	Lajitas	17.82	329	*e*Pn	P	04 53 32.3	+1.6
TXAR	Lajitas Array	17.82	329	P	P	04 53 32.3	+1.6
	0.1nm,0.3s,baz=151,slow=8.8,SNR=17						
TX31	Lajitas Ar. Si	17.82	329	*e*Pn	P	04 53 33.1	+2.3
453A	Whigham	18.32	25	*e*P	Pn	04 53 44.2	+8.0
	55nm,1.4s						
352A	Blakely	18.64	22	P	Pn	04 53 43.3	+3.3
	baz=206						
352A	Blakely	18.64	22	*e*P	Pn	04 53 44.9	+4.9
	44nm,1.2s						
353A	Camilla	18.80	24	P	Pn	04 53 45.0	+3.1
	baz=208						
251A	Midway	19.03	20	P	Pn	04 53 47.9	+3.2
	baz=204						
TIGA	Tifton	19.13	26	P	P	04 53 45.8	+0.8
	baz=210						
TIGA	Tifton	19.13	26	*e*P	Pn	04 53 46.5	+0.5
	31nm,1.2s						
ABTX	Abilene, Hawle	19.14	343	P	Pn	04 53 47.1	+1.0
	baz=161						
ABTX	Abilene, Hawle	19.14	343	*e*P	Pn	04 53 47.3	+1.1
	5.5nm,0.8s						
252A	Lumpkin	19.18	22	P	P	04 53 45.7	+0.2
	baz=206						
WLAR	White Oak Lake	19.26	0	*e*P	Pn	04 53 53.1	+5.6
	9.3nm,0.8s						
150A	Eclectic	19.30	18	P	Pn	04 53 50.5	+2.5
	baz=201						
Z47A	Carrollton	19.33	13	P	P	04 53 48.3	+1.2
	baz=195						
151A	Opelika	19.45	20	P	Pn	04 53 50.0	+0.2
	baz=203						
Y41A	Eaglette Beard	19.46	1	P	Pn	04 53 50.5	+0.7
	baz=182						
Z48A	Northport	19.61	14	P	Pn	04 53 52.8	+1.0
	baz=196						
Z49A	Columbiana	19.70	17	P	Pn	04 53 53.9	+1.1
	baz=199						
152A	Waverly Hall	19.79	21	P	Pn	04 53 56.1	+2.3
	baz=205						
152A	Waverly Hall	19.79	21	*e*P	Pn	04 53 56.1	+2.3
	7.2nm,0.8s						
Y46A	Houston	19.84	11	P	Pn	04 53 56.1	+1.8
	baz=192						
Z50A	Ashland	19.93	18	P	Pn	04 53 55.7	+0.2
	baz=201						
Z50A	Ashland	19.93	18	*e*P	Pn	04 53 57.7	+2.1
	7.2nm,0.9s						
Y47A	UCPARC, Winfie	20.05	13	P	Pn	04 53 56.7	-0.3
	baz=195						
X41A	Kaden, Bauxite	20.07	1	P	P	04 53 56.8	+1.5
	baz=182						
X39A	Fountain Ranch	20.10	358	P	Pn	04 54 00.7	+3.2
	baz=177						
MIAR	Mount Ida	20.12	359	P	Pn	04 53 59.8	+2.1
	baz=179						
MIAR	Mount Ida	20.12	359	*e*P	P	04 53 57.0	+1.2
	15nm,0.9s						
Z52A	Williamson	20.37	21	P	Pn	04 54 00.9	+0.3
	baz=205						
GDL2	Guadalupe Moun	20.53	332	*e*P	Pn	04 54 05.7	+3.0
MNTX	Cornudas Mount	20.60	329	P	Pn	04 54 03.7	+0.4
	baz=144						
MNTX	Cornudas Mount	20.60	329	*e*P	Pn	04 54 03.2	-0.2
	4.7nm,0.8s						
X47A	Russelville	20.64	12	P	P	04 54 03.0	+1.5
	baz=195						
W41B	Gary Mavity, V	20.76	2	P	P	04 54 04.0	+1.3
	baz=183						
Z53A	Monticello	20.76	23	P	P	04 54 02.6	-0.1
	baz=207						
W40A	Ferguson Farm,	20.76	0	P	P	04 54 03.5	+0.8
	baz=180						
W40A	Ferguson Farm,	20.76	0	*e*P	Pn	04 54 06.6	+1.4
	35nm,1.5s						
X48A	Hartselle	20.76	14	P	Pn	04 54 05.5	+0.3
	baz=197						
X48A	Hartselle	20.76	14	*e*P	Pn	04 54 10.6	+5.4
	12nm,1.1s						
W39A	Magazine	20.77	358	P	P	04 54 02.8	0.0
	baz=178						
W39A	Magazine	20.77	358	*e*P	Pn	04 54 07.4	+2.1
	9.5nm,1.2s						
GOGA	Godfrey	20.91	23	P	P	04 54 03.9	-0.5
	baz=207						
GOGA	Godfrey	20.91	23	*e*P	P	04 54 05.2	+0.8
	17nm,1.1s						
WMOK	Wichita Mounta	20.94	347	P	P	04 54 06.3	+1.6
	baz=165						
WMOK	Wichita Mounta	20.94	347	*e*P	Pn	04 54 08.0	+0.7
	3.4nm,0.9s						
X49A	Woodville	21.00	16	P	P	04 54 05.7	+0.4
	baz=199						
Z54A	Sparta	21.01	25	P	P	04 54 07.1	+1.7
	baz=209						
W45A	Hickory Valley	21.03	9	P	P	04 54 10.4	+4.8
	baz=191						
PLAL	Pickwick Lake	21.05	12	*e*P	P	04 54 12.2	+6.4
	8.0nm,0.8s						
Y52A	Lilburn	21.10	21	P	P	04 54 10.9	+4.5
	baz=205						
Y52A	Lilburn	21.10	21	*e*P	P	04 54 12.7	+6.2
	14nm,0.9s						
V41A	Mountainview	21.37	2	P	P	04 54 10.6	+1.3
	baz=183,SNR=9.5						
V40A	Witts Springs	21.37	1	P	P	04 54 10.0	+0.7
	baz=181						
V40A	Witts Springs	21.37	1	*e*P	P	04 54 11.7	+2.4
	20nm,1.6s						
V40A				*e*S	S	04 58 08.1	+2.7
MSTX	Muleshoe	21.40	338	P	P	04 54 10.3	+0.5
	baz=154						
MSTX	Muleshoe	21.40	338	*e*P	P	04 54 10.4	+0.6
	6.9nm,0.8s						
V39A	Pettigrew	21.41	359	P	P	04 54 11.5	+1.7
	baz=179						
RUSC	La Rusia	21.43	111	*e*P	P	04 54 12.7	+2.0
	12nm,1.3s						
AMTX	Amarillo	21.86	341	P	P	04 54 15.5	+0.8
	baz=157						
AMTX	Amarillo	21.86	341	*e*P	P	04 54 15.4	+0.8
	14nm,0.6s						
HHAR	Hobbs	21.86	358	*e*P	P	04 54 16.0	+1.4
	4.7nm,0.7s						
U40A	Yellville	21.92	1	P	P	04 54 16.2	+0.9
	baz=181,SNR=7.5						
U41A	Viola	21.94	3	P	P	04 54 15.8	+0.5
	baz=183,SNR=7.6						
U39A	Green Forest	21.95	359	P	P	04 54 15.3	-0.2
	baz=179						
X53A	Estanollee	21.95	22	P	P	04 54 19.5	+4.0
	baz=206						
V47A	Nunnelly	21.98	12	P	P	04 54 19.3	+3.5
	baz=195						
U42A	Revenden	21.98	4	P	P	04 54 15.6	-0.2
	baz=185						
PBMO	Poplar Bluff	22.47	6	*e*P	P	04 54 22.0	+0.9
	6.9nm,0.8s						
121A	Cookes Peak, D	22.50	326	P	P	04 54 23.9	+2.2
	baz=140,SNR=14						
T39A	Clever	22.59	359	P	P	04 54 21.9	-0.5
	baz=180,SNR=9.6						
T38A	Diamond	22.62	358	P	P	04 54 22.3	-0.4
	baz=177						
T41A	Mountain View	22.64	3	P	P	04 54 22.6	-0.3
	baz=184,SNR=12						
T42A	Van Buren	22.67	4	P	P	04 54 22.0	-1.2
	baz=185						
T40A	Mansfield	22.72	1	P	P	04 54 22.9	-0.9
	baz=182						
TKL	Tuckaleechee C	22.83	20	LR	LR	05 03 26.5	
	comp=Z,103nm,19.5s,baz=236,slow=38						
S40A	Lebanon	23.17	1	P	P	04 54 26.4	-2.0
	baz=182						
S41A	Jillco Farms,	23.18	3	P	P	04 54 27.8	-0.7
	baz=184,SNR=6.2						
S38A	Stockton	23.20	358	P	P	04 54 27.8	-1.0
	baz=178,SNR=6.8						
S39A	Bolivar	23.25	360	P	P	04 54 27.5	-1.7
	baz=180						
S39A	Bolivar	23.25	360	*e*P	P	04 54 28.7	-0.5
	4.6nm,0.8s						
KMSC	Kings Mountain	23.28	25	P	P	04 54 27.0	-2.5
	baz=210						
S43A	Fulton Ridge,	23.29	6	P	P	04 54 26.8	-2.8
	baz=188						
LAZ	Ladron	23.65	330	*e*P	P	04 54 35.9	+2.5
CCM	Cathedral Cave	23.68	4	P	P	04 54 31.6	-1.7
	baz=185						
CCM	Cathedral Cave	23.68	4	*e*P	P	04 54 33.2	-0.2
	7.7nm,1.0s						
R38A	Fenwick Farm,	23.76	358	P	P	04 54 32.9	-1.2
	baz=178,SNR=6.6						
ANMO	Albuquerque	23.77	332	P	P	04 54 35.6	+1.1
	1.7nm,0.7s,baz=153,slow=13,SNR=7.1						
ANMO	Albuquerque	23.77	332	P	P	04 54 34.3	-0.2
	baz=147						
ANMO	Albuquerque	23.77	332	*e*P	P	04 54 35.9	+1.3
	4.8nm,1.2s						
TASM	ASL Pad, Albuq	23.77	332	P	P	04 54 35.1	+0.5
	baz=146						
R40A	Maddies Statio	23.86	2	P	P	04 54 31.7	-3.4
	baz=182						
R40A	Maddies Statio	23.86	2	*e*P	P	04 54 33.6	-1.5
	5.7nm,0.6s						
R39A	Chumby, Stover	23.88	0	P	P	04 54 32.0	-3.3
	baz=180						
R41A	Rosebud	23.91	3	P	P	04 54 32.2	-3.3
	baz=184						
TUC	Tucson	24.07	321	P	P	04 54 38.3	+1.1
	baz=134						
TUC	Tucson	24.07	321	*e*P	P	04 54 40.0	+2.7
	5.4nm,1.0s						
Q38A	Cooks Store, C	24.52	359	P	P	04 54 40.9	-0.3
	baz=179,SNR=5.1						
Q41A	Truxton	24.57	4	P	P	04 54 39.0	-2.6
	baz=185						
Q40A	Laux Farm, Aux	24.57	2	P	P	04 54 38.9	-2.7
	baz=183						
Q39A	Willow Grove F	24.61	0	P	P	04 54 40.0	-2.0
	baz=180						
T25A	Trinidad	24.83	338	P	P	04 54 44.5	+0.3
	baz=153						
T25A	Trinidad	24.83	338	*e*P	P	04 54 46.8	+2.6
	9.0nm,1.1s						
KSU1	Kansas State U	24.85	354	P	P	04 54 42.3	-1.9
	baz=172						
P39B	Salisbury	25.05	1	P	P	04 54 44.0	-2.0
	baz=181						
P40A	Paris	25.11	2	P	P	04 54 44.6	-1.9
	baz=183,SNR=5.7						
P40A	Paris	25.11	2	*e*P	P	04 54 45.2	-1.2
	8.2nm,0.8s						
214A	Organ Pipe Nat	25.12	318	P	P	04 54 46.8	0.0
	baz=130						
P37A	Lathrop	25.17	358	P	P	04 54 45.1	-2.0
	baz=177						
P38A	Dawn	25.19	359	P	P	04 54 45.1	-2.1
	baz=179						
P41A	Barry, Barry	25.30	4	P	P	04 54 46.6	-1.6
	baz=185						
O40A	La Belle	25.70	2	P	P	04 54 50.7	-1.1
	baz=183						
O37A	Wolven Farm, M	25.74	358	P	P	04 54 51.6	-0.6
	baz=178						
SDCO	Great Sand Dun	25.77	337	P	P	04 54 52.9	0.0
	baz=152						
SDCO	Great Sand Dun	25.77	337	*e*P	P	04 54 54.9	+2.1
	8.6nm,1.4s						
S22A	4UR Ranch, Cre	26.29	335	P	P	04 54 58.5	+0.9
	baz=149						
S22A	4UR Ranch, Cre	26.29	335	*e*P	P	04 54 59.8	+2.1
	4.6nm,1.1s						
N38A	Joes South For	26.35	360	P	P	04 54 56.6	-1.2
	baz=180						
N39A	Derby Farms, D	26.44	1	P	P	04 54 56.5	-2.1
	baz=182						
MVCO	Mesa Verde	26.57	332	P	P	04 54 59.6	-0.5
	baz=145						
MVCO	Mesa Verde	26.57	332	*e*P	P	04 55 03.7	+3.6
	3.0nm,0.8s						
M37A	Trindle Farm,	26.97	358	P	P	04 55 02.2	-1.1
	baz=178						
M38A	Pleasantville	26.98	360	P	P	04 55 02.5	-0.8
	baz=180						
M40A	Post Highland	27.00	3	P	P	04 55 01.5	-2.0
	baz=184						
M41A	Milan	27.03	4	P	P	04 55 01.9	-2.0
	baz=186						
M39A	Webster	27.05	2	P	P	04 55 02.7	-1.4
	baz=182						
PV01	Paradox Valley	27.36	333	*e*P	P	04 55 09.5	+2.3
SMCO	Snowmass	27.58	336	*e*P	P	04 55 15.8	+6.5
	11nm,1.4s						
PV12	Saucer Basin,	27.62	333	*e*P	P	04 55 12.2	+2.8
	7.5nm,0.9s						
ISCO	Idaho Springs	27.63	339	P	P	04 55 08.0	-1.6
	baz=153						
ISCO	Idaho Springs	27.63	339	*e*P	P	04 55 14.6	+5.0
	5.2nm,1.6s						
L40A	Anamosa	27.67	3	P	P	04 55 05.6	-3.9
	baz=184						
SWSC	Sam W. Stewart	27.72	316	P	P	04 55 11.2	+1.1
	baz=127						
MCWV	Mont Chateau	27.79	22	P	P	04 55 07.6	-3.1
	baz=209						
L44A	Lake County Fo	28.10	8	P	P	04 55 11.9	-1.5
	baz=191						
K40A	Colesburg	28.31	3	P	P	04 55 14.1	-1.1
	baz=184						
EML	El Monte Cty P	28.40	315	*e*P	P	04 55 19.8	+3.6
JFWS	Jewell Farm	28.58	4	P	P	04 55 17.0	-0.7
	baz=186						
J36A	Seneca 1, Swea	28.90	358	P	P	04 55 18.4	-2.2
	baz=178						
J39A	Decorah	28.92	2	P	P	04 55 17.0	-3.7
	baz=183						
ECSD	EROS Data Cent	29.44	355	P	P	04 55 24.0	-1.4
	baz=173						
I38A	Scanlan Farm,	29.61	1	P	P	04 55 25.4	-1.4
	baz=182						
I42A	Draeger Farm,	29.67	6	P	P	04 55 24.3	-3.0
	baz=188						
BREC	Barre Substati	29.70	315	*e*P	P	04 55 25.3	-2.4
I41A	Arkdale	29.75	5	P	P	04 55 27.1	-0.9
	baz=186						
GSC	Goldstone, Bar	29.81	319	P	P	04 55 29.0	+0.2
	baz=129						
H38A	Maiden Rock	30.24	1	P	P	04 55 30.0	-2.4
	baz=182						
H40A	Chili	30.27	4	P	P	04 55 31.8	-0.9
	baz=185						
H39A	Augusta	30.28	3	P	P	04 55 30.8	-2.0
	baz=184						
H32A	Carlson Farm,	30.28	354	P	P	04 55 30.1	-2.7
	baz=172						
N59A	State Game Lan	30.50	26	P	P	04 55 30.8	-4.0
	baz=215						
BLG	Laguna Peak, P	30.61	315	P	P	04 55 36.5	+0.6
	baz=124						
G38A	Ridgeland	30.74	2	P	P	04 55 34.5	-2.3
	baz=182						
SPMN	Marine on St.	30.78	0	P	P	04 55 36.2	-1.0
	baz=181						
G33A	Ortonville	30.88	355	P	P	04 55 36.6	-1.4
	baz=174						
G39A	Holcombe	30.89	3	P	P	04 55 36.7	-1.4
	baz=184						
RSSD	Black Hills	31.11	345	P	P	04 55 39.1	-1.2
	baz=159						
SBC	Santa Barbara	31.25	315	P	P	04 55 42.8	+1.4
	baz=123						
BINY	Binghamton	31.47	25	P	P	04 55 40.4	-2.9
	baz=213						
F38A	Pierce - Schro	31.53	2	P	P	04 55 41.6	-2.1
	baz=182						
F40A	Park Falls	31.58	4	P	P	04 55 42.5	-1.7
	baz=186						
PD31	Pinedale Array	31.66	337	*e*P	P	04 55 45.8	+0.5
PDAR	Pinedale Array	31.66	337	P	P	04 55 45.8	+0.5
	0.7nm,0.9s,baz=133,slow=6.5,SNR=5.8						
GATR	Gnd/Air Tx Cnt	31.85	314	*e*P	P	04 55 49.4	+2.6
E36A	McGregor	32.07	360	P	P	04 55 45.7	-2.8
	baz=180						
E40A	Wakefield	32.12	4	P	P	04 55 46.1	-2.8
	baz=186						
E35A	Pequot Lakes	32.13	358	P	P	04 55 47.7	-1.3
	baz=178						
E38A	The Farm, Brul	32.19	2	P	P	04 55 46.9	-2.6
	baz=183						
D35A	Remer	32.65	359	P	P	04 55 50.8	-2.8
	baz=178						
REDW	Red Top Meadow	32.67	336	*e*P	P	04 55 55.9	+1.8
	7.8nm,1.0s						
SNOW	Snow King Moun	32.72	336	*e*P	P	04 55 56.6	+2.0
	9.4nm,0.7s						
D37A	Cotton	32.72	1	P	P	04 55 52.6	-1.6
	baz=181						
NV01	Mina Array Sit	32.72	322	*e*P	P	04 55 56.8	+2.2
NV01				*e*PcP	PcP	04 58 41.1	+1.2
NVAR	Mina Array Bea	32.72	322	P	P	04 55 56.7	+2.1
	1.8nm,0.7s,baz=137,slow=9.2,SNR=12						
NVAR				PcP	PcP	04 58 41.1	+1.2
	0.6nm,0.8s,baz=134,slow=5.2,SNR=3.4						
LOHW	Long Hollow	32.79	336	*e*P	P	04 55 56.8	+1.7
	15nm,1.8s						
TPAW	Teton Pass	32.82	336	*e*P	P	04 55 57.9	+2.4
	6.3nm,0.9s						
IMW	Indian Meadow	33.16	336	*e*P	P	04 56 00.2	+1.8
	2.0nm,0.8s						
C35A	Jirik Farms, M	33.27	359	P	P	04 55 55.9	-3.0
	baz=179						
C38A	Sawbill Land.	33.31	2	P	P	04 55 56.6	-2.7
	baz=183						
C36A	Pine Crest Far	33.32	0	P	P	04 55 57.8	-1.6
	baz=181						
H17A	Grant Village	33.44	337	P	P	04 55 58.2	-2.6
	baz=148						
RLMT	Red Lodge	33.59	339	P	P	04 56 01.4	-0.7
	baz=151						
MDND	Maddock	33.84	352	P	P	04 56 01.1	-2.8
	baz=169						
MDND	Maddock	33.84	352	*e*P	P	04 56 05.6	+1.7
	14nm,0.8s						
B35A	Bob, Littlefor	33.92	359	P	P	04 55 59.8	-4.9
	baz=179						
AGMN	Agassiz Nation	33.93	357	P	P	04 56 02.6	-2.1
	baz=175						
LAO	LASA Array	34.06	344	P	P	04 56 04.8	-1.1
	baz=157						
B34A	Aery, Baudette	34.07	358	P	P	04 56 02.7	-3.2
	baz=178						
HLID	Hailey	34.35	332	P	P	04 56 09.1	+0.4
	baz=142						
HLID	Hailey	34.35	332	*e*P	P	04 56 10.5	+1.8
	1.6nm,0.9s						
MCMT	McKenzie Canyo	34.69	335	*e*P	P	04 56 14.4	+2.7
BOZ	Bozeman (W)	34.85	337	P	P	04 56 12.3	-0.6
	baz=148						
BOZ	Bozeman (W)	34.85	337	*e*P	P	04 56 18.1	+5.1
	6.6nm,1.5s						
DLMT	Dillon	35.03	336	*e*P	P	04 56 16.9	+2.4
	4.1nm,0.9s						
ULM	Lac du Bonnet	35.88	357	P	P	04 56 19.4	-2.2
	2.1nm,0.5s,baz=163,slow=6.4,SNR=3.7						
O03D	Paynes Creek	36.00	321	P	P	04 56 22.6	-0.2
	baz=128						
J08A	Circle Bar Ran	36.17	328	*e*P	P	04 56 26.1	+1.9
	3.9nm,0.8s						
EGMT	Eagleton	36.30	341	P	P	04 56 23.0	-2.3
	baz=152						
MSO	Missoula	36.77	336	P	P	04 56 27.2	-2.1
	baz=145						
F10A	Beach Ranch, E	37.49	332	*e*P	P	04 56 36.5	+1.0
	4.3nm,0.8s						
PRLK	Prince Lake	38.59	326	*e*P	P	04 56 45.5	+0.8
LPAZ	La Paz	39.20	140	P	P	04 56 49.5	-1.1
	0.6nm,0.8s,baz=297,slow=6.8,SNR=3.2						
SIV	San Ignacio	43.73	132	P	P	04 57 25.4	-1.8
	0.8nm,0.6s,baz=293,slow=7.7,SNR=5.5						

YKA	Yellowknife Ar	50.45	347	P	P	04 58 19.1	+0.2
	5.9nm,0.7s,baz=151,slow=7.4,SNR=32						
YKW3	Yellowknife Ar	50.51	347	eP	P	04 58 19.4	0.0
	7.6nm,0.8s						
INK	Inuvik	59.80	344	P	P	04 59 26.6	+0.2
	4.5nm,0.8s,baz=168,slow=5.4,SNR=3.9						
IL1	Eielson Array	62.09	337	eP	P	04 59 41.3	-0.8
ILAR	Eielson Array	62.09	337	P	P	04 59 42.0	-0.1
	1.5nm,1.0s,baz=141,slow=5.0,SNR=12						
ILB	Eielson Array	62.09	337	eP	P	04 59 42.0	-0.1
MLY	Manley	63.69	336	eP	P	04 59 53.3	+0.6
	6.3nm,1.3s						
SPITS	Spitsbergen Ar	79.97	11	LR	LR	05 38 11.1	
	comp=Z,45nm,20.4s,baz=110,slow=37						
ESDC	Sonseca Array	80.36	52	P	P	05 01 30.7	-2.5
	0.3nm,0.4s,baz=292,slow=5.6,SNR=5.1						
ES19	SONSECA Array	80.41	51	eP	P	05 01 31.6	-1.8
NOA	NORSAR Array B	84.36	28	LR	LR	05 37 28.2	
	comp=Z,18nm,21.3s,baz=295,slow=34						
KOWA	Kowa	85.66	76	P	P	05 01 59.8	-1.1
	1.2nm,0.7s,baz=288,slow=8.4,SNR=3.0						
HFS	Hagfors	85.83	29	LR	LR	05 40 33.8	
	comp=Z,20nm,18.4s,baz=278,slow=36						
FINES	FINESS Array B	90.65	25	LR	LR	05 42 32.8	
	comp=Z,27nm,19.4s,baz=254,slow=35						
WR1	Warramunga Arr	134.41	256	ePKPdf	PKPdf	05 08 39.8	-0.6
WRA	Warramunga Arr	134.41	256	PKP	PKPdf	05 08 39.8	-0.6
	0.2nm,0.7s,baz=84,slow=2.4,SNR=4.0						
CM31	Chiang Mai Arr	145.30	340	ePKPdf	PKPbc	05 08 59.6	-0.3
CMAR	Chiang Mai Arr	145.30	340	PKPbc	PKPbc	05 08 59.6	-0.3
	1.2nm,0.5s,baz=335,slow=4.1,SNR=10						

ISCJB **10** *04:49:54.8±0.3, 50°.34N±0°.05×96°.69E±0°.04, h12^{km}, mb4.0/16, MS4.2/1, Error ellipse: s-maj=7.1km s-min=3.8km az=13.8*

MOS **10** *04:49:55.1±1.5, 50°.39N×96°.72E, h12^{km}, mb4.3/9, Error ellipse: s-maj=11.7km s-min=7.6km az=42.2*

IDC **10** *04:49:55.4±0.8, 50°.16N×96°.74E, h0^{km}, mb4.0/8, mb1 3.9/12, mb1mx3.6/75, mbtmp3.8/12, ML2.9/4, MS3.5/2, Ms1 3.5/2, ms1mx2.5/73, Error ellipse: s-maj=22.2km s-min=10.9km az=11.0*

NEIC **10** *04:49:56.2±0.5, 49°.93N×96°.41E, h10^{km}, mb4.4/4, Error ellipse: s-maj=16.7km s-min=8.4km az=211.0*

ASRS **10** *04:50:03.7±1.6, 50°.66N×96°.10E, h15^{km}, Ms3.6/3*

ISC 10 04:49:57.6±0.5**, 50°.49N**±0°.05×**96°.84E**±0°.04**, h12^{km}, n70, $\sigma 2^{s}.33$**/79**, mb3.9**/16**, 4C-3D, Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNGR	Kungurtug, Tuv	0.45	75	i PG	Pg	04 50 06.0	-0.5
TDJR	Todzha	1.97	347	ePN	Pn	04 50 29.2	-1.7
TDJR				eS	Sn	04 50 53.1	-2.5
TDJR				smax	smax		
	comp=E,919nm,0.3s						
HVS	Khovu-Aksy	2.09	289	dePN	Pn	04 50 31.5	-1.1
MOY	Mondy	2.87	64	ePN	Pn	04 50 40.5	-2.9
MOY				e		04 51 24.9	
MOY				pmax	pmax		
	comp=Z,447nm,0.8s						
ARS	Arshan	3.79	66	ePN	Pb	04 51 04.1	-0.4
ARS				e		04 51 51.7	
ARS				pmax	pmax		
	comp=Z,187nm,0.5s						
ARS				smax	smax		
	comp=E,929nm,1.0s						
ZAK	Zakamensk	4.12	89	ePN	Pb	04 51 09.9	-0.2
ZAK				e		04 52 04.9	
ZAK				pmax	pmax		
	comp=Z,239nm,0.9s						
ZAK				smax	smax		
	comp=N,643nm,0.9s						
CERR	Cheremushki	4.12	307	ePn	Pn	04 50 57.2	-3.2
CERR				ePg	Pb	04 51 10.5	+0.4
CERR				eSg	Sb	04 51 57.6	-2.3
CERR	Cheremushki	4.12	307	ePN	Pn	04 50 57.2	-3.2
CERR				e		04 51 10.5	
CERR				e		04 51 57.6	
TLY	Talaya	4.45	72	Pg	Pb	04 51 16.3	+0.5
	comp=N,0.1nm,0.3s,baz=265,slow=11,SNR=14						
TLY				Lg	Lg	04 52 15.2	
	comp=N,0.1nm,0.3s,baz=54,slow=8.5,SNR=8.1						
TLY	Talaya	4.45	72	ePn	Pb	04 51 10.7	-5.0
TLY				eSn	Sn	04 52 00.7	+4.0
TLY				Lg	Lg	04 52 15.2	
TLY	Talaya	4.45	72	ePN	Pb	04 51 16.1	+0.3
TLY				e		04 52 15.8	
TLY				pmax	pmax		
	comp=Z,25nm,0.6s						
IRK	Irkutsk	4.98	66	ePN	Pb	04 51 25.4	+0.7
IRK				e		04 52 30.7	
IRK				pmax	pmax		
	comp=Z,155nm,0.4s						
IRK				smax	smax		
	comp=N,606nm,1.2s						
AKAR	Aktash	5.90	272	ePn	Pn	04 51 25.4	+0.5
AKAR				ePg	Pb	04 51 42.6	+2.2
AKAR				eSn	Sn	04 52 23.5	-8.9
AKAR				eSg	Sb	04 52 51.6	+0.6
AKAR	Aktash	5.90	272	ePN	Pn	04 51 25.4	+0.5
AKAR				e		04 51 42.6	
AKAR				e		04 52 51.6	
KRAR	Krasnoyarsk	6.02	338	⇑ePN	Pn	04 51 27.1	+0.6
TASR	Tashtagol	6.03	296	eSg	Sb	04 52 57.2	+2.7
DGZ	Jazzator, Alta	6.11	266	ePN	Pn	04 51 23.7	-4.1
SONA1	Songino Array	6.80	109	ePn	Pn	04 51 40.7	+3.3
SONA1				eSn	Sn	04 52 55.3	+0.5
SONA0	Songino Array	6.81	109	ePn	Pn	04 51 36.8	-0.6
SONA0				ePg	Pb	04 51 59.6	+3.7
SONM	Songino Array	6.81	109	Pn	Pn	04 51 36.8	-0.6
	comp=N,0.2nm,0.3s,baz=293,slow=15,SNR=1.9						
SONM				Pg	Pb	04 51 59.6	+3.7
	comp=N,1.9nm,0.3s,baz=287,slow=19,SNR=11						
SONM				Lg	Lg	04 53 31.6	
	comp=N,4.6nm,0.3s,baz=296,slow=31,SNR=14						
ELT	Eltsovka	7.13	297	ePn	Pn	04 51 39.1	-2.5
ELT				ePg	Pb	04 52 04.9	+3.7
ELT				eSg	Sb	04 53 29.6	+3.5
ELT	Eltsovka	7.13	297	ePN	Pn	04 51 39.1	-2.5
ELT				e		04 52 04.9	
ELT				e		04 53 29.6	
ULN	Ulaanbaatar	7.19	107	ePn	Pn	04 51 43.0	+0.3
ULN				eSn	Sn	04 53 02.8	-1.5
ULN	Ulaanbaatar	7.19	107	eP	Pn	04 51 43.0	+0.3
ULN				e		04 53 02.8	
UKR	Ust'-Kan	7.68	278	ePg	Pb	04 52 14.5	+3.9
UKR				eSg	Sb	04 53 47.8	+5.8
ZAA0	Zalesovo Array	8.15	300	ePn	Pn	04 51 59.8	+4.1
ZAA0				eSg	Sb	04 54 03.7	+8.1
ZALV	Zalesovo Beam	8.15	300	Pn	Pn	04 51 56.4	+0.7
	comp=N,0.2nm,0.3s,baz=122,slow=11,SNR=2.5						
ZALV				Lg	Lg	04 54 03.4	
	comp=N,1.6nm,0.3s,baz=113,slow=25,SNR=6.9						
ZALV				LR	LR	04 54 49.0	
	comp=N,73nm,19.0s,baz=218,slow=36						
ZAA1	Zalesovo Array	8.15	300	ePn	Pn	04 51 56.4	+0.6
WMQ	Urumqi	9.12	227	Pn	Pn	04 52 16.0	+6.9
WMQ				Sn	Sn	04 53 45.4	-6.2
WMQ				smax	smax		
	comp=N,35nm,0.4s						
WMQ				smax	smax		
	comp=E,69nm,0.5s						
NVS	Novosibirsk	9.34	303	eSg	Sn	04 54 37.3	+40
NVS	Novosibirsk	9.34	303	eP	Pn	04 52 32.4	+20
MK32	Makanchi Array	10.31	255	ePn	Pn	04 52 27.6	+2.3
MKAR	Makanchi Array	10.31	255	Pn	Pn	04 52 27.6	+2.3
	baz=75,slow=14,SNR=2.6						
MKAR				Pg		04 53 02.9	
	comp=E,0.3nm,0.3s,baz=58,slow=16,SNR=7.8						
MKAR				Lg	Lg	04 55 16.7	
	comp=E,0.6nm,0.3s,baz=54,slow=27,SNR=5.3						
KURK	Kurchatov	11.58	278	ePn	Pn	04 52 43.0	+0.3
KURK				Lg	Lg	04 55 56.2	
KURK	Kurchatov	11.58	278	eP	Pn	04 52 43.0	+0.3
KURBB	Kurchatov Arra	11.65	278	Pn	Pn	04 52 43.0	-0.6
	comp=E,0.1nm,0.3s,baz=85,slow=14,SNR=7.8						
KURBB				Lg	Lg	04 55 56.2	
	comp=E,0.1nm,0.3s,baz=78,slow=33,SNR=8.7						
BVAR	Borovoye Array	16.54	289	Pn	Pn	04 53 44.7	-4.6
	comp=E,0.2nm,0.3s,baz=82,slow=13,SNR=6.5						
BRVK	Borovoye	16.60	289	⇑eP	Pn	04 53 48.6	-1.4
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
YAK	Yakutsk	21.32	45	⇓eP	P	04 54 43.4	-0.7
YAK				pmax	pmax		
	comp=Z,12nm,0.4s						
ENH	Enshi	22.31	150	eP	P	04 54 48.9	-6.0
	comp=Z,15nm,1.0s						
KLR	Kul'dur	22.42	80	eP	P	04 54 57.2	+1.2
ARU	Arti	23.32	300	⇑eP	P	04 55 02.9	-2.3
ARU				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KS01	Wonju Array Si	25.64	109	eP	P	04 55 25.8	-1.2
KS15	Wonju Array Si	25.66	109	eP	P	04 55 27.2	+0.1
KSAR	Wonju Array Be	25.66	109	P	P	04 55 27.2	+0.2
KSAR	Wonju Array Be	25.66	109	P	P	04 55 27.3	+0.2
TIXI	Tiksi	25.67	23	P	P	04 55 29.5	+2.6
	comp=Z,4.0nm,0.8s,baz=266,slow=4.3,SNR=5.2						
TIXI	Tiksi	25.67	23	⇑eP	P	04 55 29.3	+2.4
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KSRS	Korea Array	25.68	109	P	P	04 55 27.2	0.0
	comp=Z,1.5nm,0.7s,baz=308,slow=8.2,SNR=5.6						
MA2	Magadan	31.38	52	eP	P	04 56 18.0	0.0
	comp=Z,9.9nm,1.4s						
MA2	Magadan	31.38	52	eP	P	04 56 18.0	0.0
MA2				pmax	pmax		
	comp=Z,10.0nm,1.4s						
ARA0	ARCESS Array S	37.62	327	eP	P	04 57 13.3	+1.6
ARCES	ARCESS Array B	37.62	327	P	P	04 57 13.3	+1.6
	comp=Z,2.1nm,0.8s,baz=77,slow=8.4,SNR=4.0						
FIA0	FINESS Array S	39.12	314	eP	P	04 57 25.5	+1.1
FIA0	FINESS Array S	39.12	314	eP	P	04 57 25.5	+1.1
FINES	FINESS Array B	39.12	314	P	P	04 57 25.5	+1.1
	comp=Z,1.3nm,0.5s,baz=72,slow=8.9,SNR=9.8						
AKASG	Malin Array Be	41.54	298	P	P	04 57 44.8	+0.2
	comp=Z,1.2nm,0.5s,baz=58,slow=8.3,SNR=4.5						
AKBB	Malin Array Si	41.54	298	eP	P	04 57 44.8	+0.2
	comp=Z,1.6nm,0.8s						
AKBB	Malin Array Si	41.54	298	eP	P	04 57 44.8	+0.2
AKBB				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KIEV	Kiev	41.55	298	⇓eP	P	04 57 43.5	-1.2
KIEV				pmax	pmax		
	comp=Z,1.0nm,0.6s						
HFS	Hagfors	45.23	316	P	P	04 58 15.0	+0.7
	comp=Z,2.5nm,0.6s,baz=57,slow=5.3,SNR=6.4						
HFS	Hagfors	45.23	316	P	P	04 58 15.0	+0.7
NB2	NORSAR Subarra	45.91	317	P	P	04 58 20.0	+0.3
	comp=Z,0.8nm,0.6s,baz=62,slow=7.9						
WR1	Warramunga Arr	77.53	144	eP	P	05 01 50.9	-2.2
	comp=Z,6.0nm,1.3s						
WRA	Warramunga Arr	77.53	144	P	P	05 01 50.9	-2.2
	comp=Z,0.9nm,0.8s,baz=346,slow=6.4,SNR=4.9						
WRA	Warramunga Arr	77.53	144	eP	P	05 01 51.3	-1.8
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ASAR	Alice Springs	80.78	146	P	P	05 02 08.8	-2.1
	comp=Z,0.9nm,0.8s,baz=334,slow=5.3,SNR=7.9						
ASAR	Alice Springs	80.78	146	eP	P	05 02 09.0	-1.9
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
OPO	Ambohidratompo	81.44	227	LR	LR	05 36 42.5	
	comp=Z,99nm,18.9s,baz=244,slow=35						
PLCA	Paso Flores	166.86	313	ePKIKP	PKPdf	05 09 59.4	-3.2
PLCA				pmax	pmax		
	comp=Z,3.0nm,0.9s						

SOME **10** *04:58:55.8, 44°.65N×82°.27E, h10^{km}*

ISCJB **10** *04:58:57.8±1.3, 44°.64N±0°.06×82°.4E±0°.1, h10^{km}, Error ellipse: s-maj=13.9km s-min=4.9km az=28.9*

NNC **10** *04:58:58.4±0.9, 44°.73N×82°.20E, h0^{km}, mb3.0, mpv2.6, Error ellipse: s-maj=12.8km s-min=2.1km az=116.0*

ISC 10 04:58:57.6±2.1**, 44°.60N**±0°.08×**82°.5E**±0°.1**, h10^{km}, n10, $\sigma 2^{s}.06$**/19**, 6C-2D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	Ketmen	1.95	235	eP	Pn	04 59 30.0	-0.9
	8.0nm,0.1s						
KTMS				eS	Sn	04 59 55.0	-0.5
	41nm,0.4s						
DJR	Jarkent	1.98	263	⇑iP	Pn	04 59 29.6	-1.7
	14nm,0.2s						
DJR				eS	Sn	04 59 54.2	-2.0
	12nm,0.2s						
MK31	Makanchi Array	2.20	356	⇑Pn	Pn	04 59 34.6	+0.3
	3.6nm,0.4s,baz=182,slow=14,SNR=399						
MK31				⇑Sn	Sn	05 00 02.2	+0.5
	7.9nm,0.3s,baz=186,slow=28,SNR=34						
MAKZ	Makanchi	2.24	350	⇑Pn	Pn	04 59 34.4	-0.4
	1.0nm,0.5s						
MAKZ				⇓Sn	Sn	05 00 02.3	-0.3
	13nm,0.5s						
KAPS	Kapalarasan	2.35	288	⇓iP	Pn	04 59 35.1	-1.3
	6.3nm,0.1s						
KAPS				eS	Sn	05 00 03.5	-1.9
	17nm,0.4s						
PDGK	Podgornoye	2.53	241	⇑Pn	Pn	04 59 38.9	-0.1
	2.1nm,0.4s						
PDGK				⇑Sn	Sn	05 00 10.5	+0.5
	30nm,0.7s						
SHLS	Shalkode	2.64	238	eP	Pn	04 59 37.7	-2.8
	12nm,0.3s						
SHLS				eS	Sn	05 00 07.7	-5.0
	46nm,0.3s						
UZB	Uzynbulak	2.92	241	eP	Pn	04 59 45.4	+1.1
	3.8nm,0.3s						
UZB				eS	Sn	05 00 21.3	+1.8
	5.6nm,0.3s						
KPKS	Kokpek	3.00	249	eP	Pn	04 59 46.3	+1.1
	12nm,0.2s						
KPKS				eS	Sn	05 00 22.8	+1.5
	46nm,0.4s						
ARXS	Arharly	3.39	265	eP	Pn	04 59 53.4	+2.8
	1.9nm,0.2s						
ARXS				eS	Sn	05 00 34.7	+3.7
	11nm,0.3s						

IDC **10** *05:13:18.1±0.8, 51°.29N×160°.60E, h0^{km}, mb3.8/14, mb1 3.9/16, mb1mx3.7/69, mbtmp3.7/16, ML2.9/1, MS2.5/2, Ms1 2.5/2, ms1mx2.1/64, Error ellipse: s-maj=19.3km s-min=17.1km az=8.0*

KRSC **10** *05:13:19.6±1.8, 51°.32N×160°.80E, h61^{km}±29^{km}, ML4.3*

ISCJB **10** *05:13:21.2±0.7, 51°.29N±0°.04×160°.77E±0°.05, h37^{km}±5^{km}, mb3.8/19, Error ellipse: s-maj=6.3km s-min=4.8km az=163.0*

MOS **10** *05:13:21.7±0.7, 51°.33N×160°.77E, h43^{km}, mb4.2/5, Error ellipse: s-maj=10.4km s-min=3.8km az=102.0*

NEIC **10** *05:13:24.6±1.2, 51°.35N×160°.49E, h43^{km}±9^{km}, mb4.0/2, Error ellipse: s-maj=11.5km s-min=8.0km az=162.0*

ISC 10 05:13:23.6±0.8**, 51°.29N**±0°.06×**160°.80E**±0°.05**, h36^{km}**±2^{km}**, n115, $\sigma 1^{s}.69$**/149**, mb3.8**/19**, 1C, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDTR	Khodutka, Kamc	1.78	288	eP	Pn	05 13 49.6	-2.1
KDTR				eS	Sn	05 14 10.0	-3.0
RUS	Russkaya	1.82	310	eP	Pn	05 13 50.3	-2.0
RUS				eS	Sn	05 14 11.6	-2.5
RUS	Russkaya	1.82	310	PN	Pn	05 13 50.3	-2.0
RUS				S	Sn	05 14 11.6	-2.5
SPN	Mys Shipunski	1.87	346	eP	Pn	05 13 50.7	-2.3
SPN				eS	Sn	05 14 11.8	-3.6
SPN	Mys Shipunski	1.87	346	PN	Pn	05 13 50.7	-2.3
SPN				S	Sn	05 14 11.8	-3.6
MTVR	Mutnovka	2.01	307	eP	Pn	05 13 53.3	-1.8
MTVR				eS	Sn	05 14 17.1	-2.0
MTVR	Mutnovka	2.01	307	PN	Pn	05 13 53.3	-1.8
MTVR				S	Sn	05 14 17.1	-2.0
NLC	Nalytchevo	2.09	335	eP	Pn	05 13 54.5	-1.4
NLC				eS	Sn	05 14 19.1	-1.5
NLC	Nalytchevo	2.09	335	PN	Pn	05 13 54.5	-1.4
NLC				S	Sn	05 14 19.1	-1.5
ASAK	Asacha	2.10	303	i P	Pn	05 13 55.0	-1.3
ASAK				eS	Sn	05 14 19.8	-1.5
ASAK	Asacha	2.10	303	PN	Pn	05 13 55.0	-1.3
ASAK				S	Sn	05 14 19.8	-1.5
DALK	Dalny	2.15	325	eP	Pn	05 13 55.5	-1.3
DALK				eS	Sn	05 14 20.3	-1.9
DALK	Dalny	2.15	325	PN	Pn	05 13 55.5	-1.3
DALK				S	Sn	05 14 20.3	-1.9
PET	Petropavlovsk	2.18	324	ePn	Pn	05 13 55.5	-1.8
PET	Petropavlovsk	2.18	324	ePN	Pn	05 13 56.5	-0.8
PET				eS	Sn	05 14 22.1	-0.9
PET				smax	smax		
	comp=N,191nm,0.5s						
PET				smax	smax		
	comp=E,164nm,0.5s						
KRMR	Karymshinskiy	2.26	314	eP	Pn	05 13 56.4	-1.9
KRMR				eS	Sn	05 14 22.8	-2.0
KRMR	Karymshinskiy	2.26	314	PN	Pn	05 13 56.4	-1.9
KRMR				S	Sn	05 14 22.8	-2.0
UGLR	Uglovaya	2.27	329	eP	Pn	05 13 57.7	-1.0
UGLR	Uglovaya	2.27	329	PN	Pn	05 13 57.7	-1.0
SDLR	Sedlovina	2.31	330	eP	Pn	05 13 57.9	-1.3
SDLR	Sedlovina	2.31	330	PN	Pn	05 13 57.9	-1.3
SMAR	Somma	2.33	329	i P	Pn	05 13 58.2	-1.3
SMAR	Somma	2.33	329	PN	Pn	05 13 58.2	-1.3
AVH	Avacha	2.35	328	eP	Pn	05 13 58.8	-0.9
AVH				eS	Sn	05 14 26.1	-1.2
AVH	Avacha	2.35	328	PN	Pn	05 13 58.8	-0.9
AVH				S	Sn	05 14 26.1	-1.2
KOK	Koryaka	2.41	327	eP	Pn	05 13 59.7	-0.8
KOK	Koryaka	2.41	327	PN	Pn	05 13 59.7	-0.8
KRX	Arik	2.46	328	eP	Pn	05 13 59.1	-2.1
KRX	Arik	2.46	328	PN	Pn	05 13 59.1	-2.1
PAU	Pauzhetka	2.50	276	eP	Pn	05 14 00.5	-1.2
PAU				eS	Sn	05 14 29.1	-1.8
PAU	Pauzhetka	2.50	276	PN	Pn	05 14 00.5	-1.2
PAU				S	Sn	05 14 29.1	-1.8
PEA0B	Petropavlovsk-	2.64	315	ePn	Pn	05 14 02.6	-0.9
PEA0B				eSn	Sn	05 14 32.3	-2.0
PETK	Petropavlovsk-	2.64	315	Pn	Pn	05 14 02.3	-1.2
	baz=127,slow=18						
PETK				Sn	Sn	05 14 34.5	+0.2
	baz=114,slow=23						
PETK				LR	LR	05 15 06.3	
	comp=E,94nm,18.9s,baz=103,slow=42						
PETK	Petropavlovsk-	2.64	315	ePn	Pn	05 14 02.0	-1.5
PETK				eSn	Sn	05 14 31.3	-3.0
PEA1	Petropavlovsk-	2.64	315	ePn	Pn	05 14 02.3	-1.3
PEA1				eSn	Sn	05 14 34.5	+0.1
MIPR	Malaya Ipel'ka	2.70	293	eP	Pn	05 14 03.5	-0.9
MIPR				eS	Sn	05 14 35.0	-0.7
MIPR	Malaya Ipel'ka	2.70	293	PN	Pn	05 14 03.5	-0.9
MIPR				S	Sn	05 14 35.0	-0.7
APC	Apacha	2.78	308	eP	Pn	05 14 05.1	-0.4
APC				eS	Sn	05 14 37.9	+0.2
APC	Apacha	2.78	308	PN	Pn	05 14 05.1	-0.4
APC				S	Sn	05 14 37.9	+0.2
KII	Karymskiy	2.87	344	eP	Pn	05 14 06.1	-0.7
KII				eS	Sn	05 14 39.2	-1.0
KII	Karymskiy	2.87	344	PN	Pn	05 14 06.1	-0.7
KII				S	Sn	05 14 39.2	-1.0
GNL	Ganaly	2.98	325	i P	Pn	05 14 08.0	-0.3
GNL				eS	Sn	05 14 42.9	+0.1
GNL	Ganaly	2.98	325	PN	Pn	05 14 08.0	-0.3
GNL				S	Sn	05 14 42.9	+0.1
SKR	Severo-Kuril's	3.02	260	eP	Pn	05 14 07.0	-1.8
SKR				eS	Sn	05 14 41.2	-2.4
SKR	Severo-Kuril's	3.02	260	ePN	Pn	05 14 07.2	-1.6
SKR				eS	Sn	05 14 40.5	-3.1
SKR				pmax	pmax		
	comp=Z,88nm,0.5s						
SKR				smax	smax		
	comp=E,502nm,0.5s						
SKR				smax	smax		
	comp=N,820nm,0.5s						
MKZ	Mys Kozlova	3.32	9	eP	Pn	05 14 10.5	-2.4
MKZ	Mys Kozlova	3.32	9	PN	Pn	05 14 10.5	-2.4
TUMR	Tumrok	4.02	355	eP	Pn	05 14 22.3	-0.4
TUMR				eS	Sn	05 15 07.3	-1.2
TUMR	Tumrok	4.02	355	PN	Pn	05 14 22.3	-0.4
TUMR				S	Sn	05 15 07.3	-1.2
KMNR	Kamenistaya	4.49	356	eP	Pn	05 14 28.5	-0.6
KMNR	Kamenistaya	4.49	356	PN	Pn	05 14 28.5	-0.6
BZMR	Bezymyannaya	4.66	358	eP	Pn	05 14 31.3	-0.1
BZMR	Bezymyannaya	4.66	358	PN	Pn	05 14 31.3	-0.1
BZWR	Bezymyannyi-We	4.69	358	eP	Pn	05 14 31.3	-0.6
BZWR	Bezymyannyi-We	4.69	358	PN	Pn	05 14 31.3	-0.6
KPT	Kopyto	4.70	356	eP	Pn	05 14 31.6	-0.3
KPT	Kopyto	4.70	356	PN	Pn	05 14 31.6	-0.3
ZLN	Zelenaya	4.74	0	eP	Pn	05 14 32.6	+0.1
ZLN	Zelenaya	4.74	0	PN	Pn	05 14 32.6	+0.1
LGNR	Loginova	4.80	359	eP	Pn	05 14 33.0	-0.6
LGNR	Loginova	4.80	359	PN	Pn	05 14 33.0	-0.6
CIRR	Tsirk	4.84	360	eP	Pn	05 14 34.2	+0.3
CIRR	Tsirk	4.84	360	PN	Pn	05 14 34.2	+0.3
KRSR	Krestovskiy	4.94	359	eP	Pn	05 14 32.5	-2.8
KRSR	Krestovskiy	4.94	359	PN	Pn	05 14 32.5	-2.8
BKI	Bering	5.00	36	eP	Pn	05 14 34.2	-1.8
BKI				eS	Sn	05 15 27.4	-5.1
BKI	Bering	5.00	36	PN	Pn	05 14 34.2	-1.8
KBTR	Krutoberegovo	5.07	13	eP	Pn	05 14 35.3	-1.7
KBTR	Krutoberegovo	5.07	13	PN	Pn	05 14 35.3	-1.7
BDR	Baidarnaya	5.29	2	eP	Pn	05 14 39.5	-0.6
BDR	Baidarnaya	5.29	2	PN	Pn	05 14 39.5	-0.6
SMKR	Semkarok	5.32	4	eP	Pn	05 14 40.1	-0.3
SMKR	Semkarok	5.32	4	PN	Pn	05 14 40.1	-0.3
SRKR	Sorokina	5.38	2	eP	Pn	05 14 41.0	-0.3
SRKR	Sorokina	5.38	2	PN	Pn	05 14 41.0	-0.3
MA2	Magadan	10.06	330	LR	LR	05 20 29.0	
	comp=N,20nm,18.2s,baz=201,slow=43						
MA2	Magadan	10.06	330	i PN	Pn	05 15 41.7	-3.6
SEY	Seymchan	12.52	342	i PN	Pn	05 16 18.6	-0.3
KLR	Kul'dur	18.63	275	P	P	05 17 37.5	-0.4
	comp=N,0.0nm,0.3s,baz=79,slow=12,SNR=6.5						
KLR	Kul'dur	18.63	275	i P	P	05 17 37.6	-0.3
TIXI	Tiksi	24.91	337	P	P	05 18 41.7	-1.0
	comp=N,3.6nm,0.6s,baz=123,slow=10,SNR=7.2						
TIXI	Tiksi	24.91	337	i P	P	05 18 41.4	-1.3
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KSRS	Korea Array	27.00	252	P	P	05 19 01.1	-0.8
	comp=Z,0.6nm,0.5s,baz=53,slow=12,SNR=3.0						
KSAR	Wonju Array Be	27.03	252	P	P	05 19 01.1	-1.1
KSAR	Wonju Array Be	27.03	252	P	P	05 19 01.1	-1.1
CAST	Castle Rocks	27.47	46	eP	P	05 19 06.7	+0.8
	comp=Z,3.2nm,1.0s						
ILAR	Eielson Array	29.81	43	P	P	05 19 27.2	+0.5
	comp=Z,0.2nm,0.5s,baz=246,slow=6.8,SNR=4.6						
ILAR	Eielson Array	29.81	43	eP	P	05 19 27.5	+0.8
H11N2	WAKE ISLAND Hy	31.86	169	T	T	05 54 17.0	
	baz=350						
H11N3	WAKE ISLAND Hy	31.87	169	T	T	05 54 41.1	
	baz=350						
H11N1	WAKE ISLAND Hy	31.87	169	T	T	05 54 24.2	
	baz=350						
ZAA1	Zalesovo Array	44.13	305	eP	P	05 21 26.4	-1.8
ZALV	Zalesovo Beam	44.14	305	P	P	05 21 26.4	-1.8
	comp=Z,0.6nm,0.4s,baz=56,slow=11,SNR=3.5						
KURK	Kurchatov	49.07	304	eP	P	05 22 06.3	-0.6
KURK	Kurchatov	49.07	304	eP	P	05 22 06.3	-0.6
KURBB	Kurchatov Arra	49.17	303	P	P	05 22 06.3	-1.4
	comp=Z,1.5nm,0.5s,baz=60,slow=7.3,SNR=9.0						
MK32	Makanchi Array	49.35	297	eP	P	05 22 07.9	-1.2
MKAR	Makanchi Array	49.35	297	P	P	05 22 07.9	-1.1
	comp=Z,0.2nm,0.4s,baz=62,slow=7.2,SNR=4.3						
MKAR	Makanchi Array	49.35	297	eP	P	05 22 08.0	-1.1
BVAR	Borovoye Array	51.86	310	P	P	05 22 26.8	-1.1
	comp=Z,1.5nm,0.5s,baz=40,slow=9.8,SNR=6.0						
BRVK	Borovoye	51.90	310	i P	P	05 22 25.5	-2.6
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ARU	Arti	55.03	319	c iP	P	05 22 49.8	-1.2
ARU						05 24 48.2	
ARU				S	S	05 30 29.6	-0.9
ARU				SS	SS	05 34 04.7	-8.9
ARU				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NVAR	Mina Array Bea	55.96	69	P	P	05 23 01.9	+3.6
	comp=Z,0.4nm,0.6s,baz=294,slow=6.8,SNR=4.2						
PDAR	Pinedale Array	58.04	60	P	P	05 23 14.0	+1.1
	comp=Z,0.6nm,0.7s,baz=332,slow=2.2,SNR=6.7						
FIA0	FINESS Array S	61.95	337	eP	P	05 23 38.6	-0.5
FIA0	FINESS Array S	61.95	337	eP	P	05 23 38.7	-0.5
FINES	FINESS Array B	61.95	337	P	P	05 23 38.6	-0.5
	comp=Z,1.4nm,0.8s,baz=40,slow=11,SNR=3.4						
FINES	FINESS Array B	61.95	337	P	P	05 23 38.6	-0.5
FINES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AKASG	Malin Array Be	70.39	330	P	P	05 24 32.5	-1.0

	comp=Z,0.9nm,0.5s,baz=31,slow=6.2,SNR=3.0						
TXAR	Lajitas Array	70.95	67	P	P	05 24 38.3	+1.0
	comp=Z,0.5nm,0.5s,baz=295,slow=4.9,SNR=9.9						
WR1	Warramunga Arr	74.63	206	*e*P	P	05 24 58.2	-0.8
	comp=Z,3.3nm,1.1s						
WRA	Warramunga Arr	74.63	206	P	P	05 24 58.2	-0.8
	comp=Z,0.6nm,0.9s,baz=18,slow=6.0,SNR=3.9						
BR101	Keskin Array S	78.29	321	*e*P	P	05 25 19.2	-0.6
BRTR	Keskin Array B	78.29	321	P	P	05 25 19.2	-0.6
	comp=Z,0.6nm,0.8s,baz=64,slow=5.7,SNR=2.5						
ASAR	Alice Springs	78.30	205	P	P	05 25 20.0	+0.4
	comp=Z,0.3nm,0.5s,baz=18,slow=6.2,SNR=3.3						

ISCJB ***10*** *05:31:53.0±0.4,24°.88N±0°.03×122°.37E±0°.02,h6^{km}±3^{km}, Error ellipse: s-maj=4.4km s-min=2.8km az=20.6*

JMA ***10*** *05:31:52.8±0.3,24°.83N×122°.35E,h1^{km}±3^{km},M2.9*

TAP ***10*** *05:31:52.6,24°.91N×122°.36E,h13^{km},ML3.1,C*

ISC 10 05:31:52.9±1.0**,24°.87N**±0°.03×**122°.36E**±0°.02**,h13**^{km}±9^{km}**, n49,σ0ˢ.36**/74**,Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.36	292	P	Pg	05 32 00.2	0.0
	baz=279						
TWB1				S	Sg	05 32 05.2	0.0
	baz=279						
EOS1	EOS1	0.38	213	P	Pb	05 32 01.6	+0.1
	baz=222						
EOS1				*e*S	Sb	05 32 08.3	+0.9
	baz=222						
NTC	Toucheng	0.48	268	*e*P	Pb	05 32 02.9	-0.4
	baz=264						
TIPB	Shuangxi	0.50	282	P	Pg	05 32 03.0	+0.3
	baz=277						
TIPB				*e*S	Sb	05 32 10.3	-0.4
	baz=277						
TWC	Suao	0.53	241	*i* P	Pg	05 32 03.3	-0.1
	baz=236						
TWC				*e*S	Sg	05 32 10.8	+0.3
	baz=236						
NWF	Wu-fen Shan	0.56	291	P	Pb	05 32 04.5	-0.2
	baz=287						
NWF				*e*S	Sg	05 32 11.9	+0.5
	baz=287						
WFSB	Wu-fen Shan	0.56	291	P	Pb	05 32 04.5	-0.1
	baz=287						
WFSB				*i* S	Sb	05 32 12.4	-0.2
	baz=287						
TWE	Neicheng	0.65	257	P	Pb	05 32 05.9	-0.2
	baz=243						
TWE				*e*S	Sg	05 32 14.4	+0.3
	baz=243						
ENAH	Nanao	0.65	230	*e*P	Pb	05 32 06.2	0.0
	baz=235						
JYNG	Yonagunijimaku	0.68	128	P	Pg	05 32 06.0	-0.1
JYNG				S	Sg	05 32 15.3	+0.3
NANB	Nanao	0.71	232	*e*P	Pg	05 32 06.8	0.0
	baz=229						
NANB				*e*S	Sb	05 32 17.1	+0.3
	baz=229						
TWA	Mucha	0.71	279	P	Pb	05 32 07.2	0.0
	baz=275						
TWA				*e*S	Sb	05 32 17.1	+0.2
	baz=275						
ENA	Nanau	0.72	232	*i* P	Pg	05 32 06.9	0.0
	baz=229						
ENA				*e*S	Sb	05 32 17.1	+0.1
	baz=229						
YOJ	Yonaguni jima	0.72	124	*i* P	Pg	05 32 07.0	+0.1
	baz=115						
YOJ				S	Sg	05 32 16.2	-0.2
	baz=115						
YOJ	Yonaguni jima	0.72	124	P	Pg	05 32 06.5	-0.4
YOJ				*e*S	Sg	05 32 15.8	-0.5
YM07	YM07	0.74	294	*i* P	Pb	05 32 07.5	-0.1
	baz=291						
YM07				*e*S	Sb	05 32 17.7	+0.1
	baz=291						
ENTT	Nioudou	0.76	252	P	Pb	05 32 08.6	+0.6
	baz=249						
YM11	YM11	0.77	292	*e*P	Pn	05 32 09.0	-0.6
	baz=290						
YM10	YM10	0.78	291	*i* P	Pb	05 32 08.2	-0.2
	baz=289						
NWLT	Wulai	0.79	263	P	Pb	05 32 08.5	0.0
	baz=260						
NWLT				*e*S	Sb	05 32 18.9	-0.1
	baz=260						
PCYT	Pengchaiyu	0.80	341	*e*P	Pb	05 32 08.9	+0.2
	baz=324						
TATO	Taipei	0.80	278	*i* P	Pb	05 32 08.6	0.0
	baz=274						
TATO				*e*S	Sb	05 32 19.2	-0.2
	baz=274						
YM04	YM04	0.80	291	*e*P	Pb	05 32 09.0	+0.3
	baz=288						
YM03	YM03	0.81	293	*e*P	Pb	05 32 08.9	+0.1
	baz=277						
YM03				*e*S	Sb	05 32 20.1	+0.4
	baz=277						
NTST	Danshui	0.88	290	*e*P	Pb	05 32 10.1	0.0
	baz=287						
YHNB	Yeheng	0.92	258	P	Pg	05 32 10.7	0.0
	baz=255						
YHNB				*e*S	Sb	05 32 23.3	+0.4
	baz=255						
NSK	Sanguang	0.93	258	*i* P	Pg	05 32 10.8	-0.2
	baz=255						
NSK				S	Sb	05 32 23.4	+0.1
	baz=255						
NACB	Ninganchiao	0.98	225	*e*P	Pg	05 32 11.7	-0.2
	baz=223						
NACB				*e*S	Sg	05 32 24.6	-0.2
	baz=223						
NNSB	Datong	0.99	244	P	Pb	05 32 12.1	+0.1
	baz=232						
NNSB				*e*S	Sb	05 32 25.6	+0.5
	baz=232						
NNSH	Datong	0.99	244	P	Pg	05 32 12.0	-0.1
	baz=232						
NNSH				*e*S	Sb	05 32 25.4	+0.3
	baz=232						
NNS	Nan Shan	1.00	245	*e*P	Pg	05 32 11.9	-0.2
	baz=233						
NNS				*e*S	Sb	05 32 25.6	+0.4
	baz=233						
TWD	Chiawan	1.05	222	*e*P	Pb	05 32 13.0	+0.1
	baz=228						
TWD				*e*S	Sn	05 32 27.8	-0.1
	baz=228						
WHF	Hehuan Shan	1.23	234	P	Pg	05 32 16.7	0.0
	baz=232						
WHF				*e*S	Sg	05 32 32.9	+0.1
	baz=232						
LIOB	Emei	1.24	260	*e*P	Pn	05 32 16.0	0.0
	baz=258						
TDCB	Techi	1.26	241	*e*P	Pb	05 32 16.7	+0.1
	baz=223						
CHGB	Renai	1.35	233	*e*P	Pg	05 32 18.6	-0.3
	baz=232						
IRIF	Iriomote-Funau	1.36	113	P	Pg	05 32 18.7	-0.3
HATJ	Hateruma jima	1.55	121	P	Pb	05 32 22.1	+0.7
HGSD	Ruisui	1.62	212	*e*P	Pb	05 32 22.4	-0.2
	baz=197						
JKRS	Kuro-shima	1.63	112	P	Pb	05 32 23.4	+0.6
TYC	Yuchr	1.68	235	*e*P	Pb	05 32 24.4	+0.7
	baz=234						
SSLB	Suanglung	1.68	230	*e*P	Pb	05 32 23.4	-0.3
	baz=229						
JIJ	Ishigaki jima	1.70	107	P	Pb	05 32 23.7	-0.3
YULB	Yu-li	1.76	214	*e*P	Pn	05 32 22.7	-0.5
	baz=212						
YUS	Yu-Shan	1.88	223	*e*P	Pn	05 32 26.4	+1.1
	baz=222						
FULB	Fuli	1.93	211	*e*P	Pb	05 32 27.2	-0.7
	baz=193						
ALS	Alishan	1.96	227	*e*P	Pb	05 32 28.3	-0.4
	baz=207						
CHN5	Tsauling	1.99	231	*e*P	Pb	05 32 28.9	-0.2
	baz=229						
CHN4	Tsaushan	2.21	227	*e*P	Pb	05 32 31.9	-0.9
	baz=226						

IDC 10 05:38:59.9±6.1**,31°.42S**×**137°.88E,h0**^{km}**,mb1 3.0**/3**, mb1mx3.0**/43**,mbtmp2.8**/3**,ML2.8**/3**,Error ellipse: s-maj=97.7km s-min=19.5km az=30.0,South Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	3.20	99	Pn	Pn	05 39 51.6	+0.1
	0.5nm,0.3s,baz=283,slow=12,SNR=5.1						
STKA				Sn	Sn	05 40 27.9	-2.5
	1.6nm,0.3s,baz=324,slow=20,SNR=8.1						
STKA				Lg	Lg	05 40 41.1	
	1.6nm,0.3s,baz=333,slow=19,SNR=5.4						
ASAR	Alice Springs	8.49	334	Pn	Pn	05 41 04.6	+0.3
	0.1nm,0.3s,baz=160,slow=14,SNR=2.6						
ASAR				Sn	Sn	05 42 39.4	-1.5
	0.1nm,0.3s,baz=158,slow=22,SNR=6.8						
WRA	Warramunga Arr	11.87	344	Pn	Pn	05 41 51.3	+0.8
	0.1nm,0.3s,baz=167,slow=11,SNR=10						
WRA				Sn	Sn	05 43 59.7	-4.0
	0.1nm,0.3s,baz=171,slow=22,SNR=4.2						

IDC 10 06:34:27.4±18.0**,21°.17S**×**69°.84E,h0**^{km}**,mb3.5**/4**, mb1 3.6**/4**,mb1mx3.4**/64**,mbtmp3.5**/4**,MS3.2**/2**,Ms1 3.3**/2**, ms1mx2.7**/40**,Error ellipse: s-maj=600.6km s-min=31.0km az=52.0,Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	13.69	11	T	T	06 52 33.4	
	baz=193,slow=76,SNR=6.9						
H08S2	Diego Garcia H	13.69	11	T	T	06 52 34.0	
	baz=193,slow=76,SNR=37						
H08S3	Diego Garcia H	13.71	11	T	T	06 52 35.2	
	baz=193,slow=76,SNR=72						
PALK	Pallekele	30.21	22	LR	LR	06 49 33.1	
	comp=Z,68nm,18.5s,baz=308,slow=30						
CMAR	Chiang Mai Arr	48.62	38	LR	LR	07 02 04.5	
	comp=Z,16nm,18.8s,baz=205,slow=34						
ASAR	Alice Springs	58.83	105	P	P	06 44 28.0	-0.2
	0.2nm,0.5s,baz=254,slow=6.5,SNR=2.7						
WRA	Warramunga Arr	60.02	101	P	P	06 44 36.5	+0.1
	0.8nm,1.0s,baz=258,slow=6.7,SNR=3.6						
MKAR	Makanchi Array	68.58	9	P	P	06 45 31.4	-0.5
	0.3nm,0.6s,baz=205,slow=6.4,SNR=3.6						
KURBB	Kurchatov Arra	71.89	6	P	P	06 45 52.7	+0.6
	0.3nm,0.6s,baz=199,slow=6.1,SNR=3.8						

IDC 10 06:37:35.0±0.9**,46°.84N**×**155°.31E,h0**^{km}**,mb3.5**/8**, mb1 3.7**/8**,mb1mx3.5**/65**,mbtmp3.5**/8**,MS2.2**/1**,Ms1 2.2**/1**, ms1mx2.0**/49**,Error ellipse: s-maj=29.2km s-min=23.0km az=101.0,East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAJ	Asahikawa	9.34	258	LR	LR	06 43 53.1	
	comp=Z,16nm,20.4s,baz=358,slow=40						
H11S1	WAKE ISLAND Hy	29.77	158	T	T	07 15 09.5	
	baz=345						
H11S3	WAKE ISLAND Hy	29.78	158	T	T	07 15 10.8	
	baz=345						
H11S2	WAKE ISLAND Hy	29.79	158	T	T	07 15 07.1	
	baz=345						
ILAR	Eielson Array	35.54	39	P	P	06 44 32.3	-1.0
	0.2nm,0.5s,baz=258,slow=7.7,SNR=6.2						
MKAR	Makanchi Array	48.24	298	P	P	06 46 16.3	-1.0
	0.2nm,0.6s,baz=75,slow=6.1,SNR=2.4						
KURBB	Kurchatov Arra	48.66	304	P	P	06 46 19.9	-0.5
	0.4nm,0.6s,baz=68,slow=8.4,SNR=4.1						
FINES	FINESS Array B	64.59	336	P	P	06 48 14.0	+0.4
	0.7nm,0.5s,baz=53,slow=7.5,SNR=2.8						
HFS	Hagfors	68.89	341	P	P	06 48 42.0	+1.0
	1.7nm,0.8s,baz=32,slow=8.5,SNR=3.6						
WRA	Warramunga Arr	69.11	201	P	P	06 48 42.4	-0.4
	0.2nm,0.7s,baz=21,slow=6.8,SNR=3.3						
ASAR	Alice Springs	72.80	201	P	P	06 49 05.8	+0.7
	0.2nm,0.5s,baz=13,slow=5.7,SNR=5.1						
TXAR	Lajitas Array	76.12	62	P	P	06 49 24.9	+0.1
	0.3nm,0.9s,baz=298,slow=1.9,SNR=3.6						

IDC 10 07:21:20.0±1.8**,3°.30S**×**152°.16E,h0**^{km}**,mb3.5**/3**, mb1 3.8**/3**,mb1mx3.4**/47**,mbtmp3.5**/3**,Error ellipse: s-maj=126.6km s-min=25.3km az=126.0,New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.00	225	P	P	07 26 38.1	+1.5
	0.8nm,0.3s,baz=54,slow=10,SNR=14						
ASAR	Alice Springs	26.86	219	P	P	07 27 03.4	+0.8
	0.2nm,0.3s,baz=55,slow=8.3,SNR=5.8						
ILAR	Eielson Array	81.02	22	P	P	07 33 34.8	-1.6
	0.3nm,0.8s,baz=238,slow=5.2,SNR=4.0						
TORD	Torodi Ar. Bea	149.21	290	PKPbc	PKPbc	07 41 11.3	-0.4
	baz=102,slow=2.9						

IDC 10 07:52:13.2±8.1**,5°.53S**×**128°.86E,h145**^{km}±100^{km}**,mb2.9**/1**, mb1 2.7**/4**,mb1mx2.7**/51**,mbtmp3.2**/4**,Error ellipse: s-maj=160.3km s-min=23.0km az=80.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.21	27	P	Pn	07 53 29.5	+0.1
	1.4nm,0.3s,baz=204,slow=20,SNR=6.6						
SIJI				S	Sn	07 54 21.9	-7.0
	1.4nm,0.3s,baz=221,slow=19,SNR=4.6						
WRA	Warramunga Arr	15.29	160	P	Pn	07 55 40.4	-1.0
	0.1nm,0.3s,baz=342,slow=12,SNR=5.4						
WRA				S	Sn	07 58 20.5	-11
	0.1nm,0.3s,baz=348,slow=24,SNR=5.1						
ASAR	Alice Springs	18.68	165	P	P	07 56 20.8	+0.5
	0.1nm,0.3s,baz=346,slow=10,SNR=5.0						
MKAR	Makanchi Array	66.38	327	P	P	08 02 46.5	0.0
	0.1nm,0.4s,baz=124,slow=7.8,SNR=3.8						

MEX 10 07:52:18.1±0.6**,17°.48N**×**95°.12W,h149**^{km}±12^{km}**,MD3.9, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VHO	Vista Hermosa	1.59	256	*e*P	Pn	07 52 47.4	-1.4
VHO				*e*S	Sn	07 53 10.5	-1.7
HUIG	Huatulco	1.94	209	*e*P	Pn	07 52 50.9	-1.7
HUIG				*i* S	Sn	07 53 17.4	-1.6
TGIG		2.04	110	*e*P	Pn	07 52 53.0	-0.7
TGIG				*i* S	Sn	07 53 18.3	-2.7
TLIG	Tlapa	3.29	272	*i* P	Pn	07 53 07.8	-1.4
TLIG				*i* S	Sn	07 53 46.1	-2.7

IDC 10 08:07:22.9±1.4**,7°.46S**×**158°.35E,h0**^{km}**,mb3.4**/3**, mb1 3.8**/4**,mb1mx3.5**/43**,mbtmp3.6**/4**,ML4.0**/1**,Error ellipse: s-maj=36.2km s-min=30.8km az=140.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	2.51	141	Pn	Pn	08 08 04.9	-0.2
	31nm,0.3s,baz=254,slow=4.6,SNR=20						
HNR				Sn	Sn	08 08 30.9	-5.6
	115nm,0.3s,baz=120,slow=23,SNR=10						
WRA	Warramunga Arr	26.37	240	P	P	08 13 02.4	+1.1
	0.7nm,0.9s,baz=65,slow=9.0,SNR=4.5						
H11S3	WAKE ISLAND Hy	27.07	18	T	T	08 41 36.2	
	baz=198,slow=76,SNR=94						
H11S2	WAKE ISLAND Hy	27.07	18	T	T	08 41 43.7	
	baz=198,slow=76,SNR=109						
H11S1	WAKE ISLAND Hy	27.09	18	T	T	08 41 44.8	
	baz=198,slow=76,SNR=61						
H11N1	WAKE ISLAND Hy	28.29	17	T	T	08 43 23.2	
	baz=196,slow=76,SNR=28						
H11N3	WAKE ISLAND Hy	28.30	17	T	T	08 43 23.5	
	baz=196,slow=76,SNR=37						
H11N2	WAKE ISLAND Hy	28.30	17	T	T	08 43 24.7	
	baz=196,slow=76,SNR=26						
ASAR	Alice Springs	28.45	233	P	P	08 13 18.7	-1.2
	0.3nm,0.6s,baz=59,slow=9.3,SNR=4.1						
ILAR	Eielson Array	82.61	21	P	P	08 19 47.9	+0.1
	0.2nm,0.8s,baz=226,slow=4.9,SNR=3.5						

DDA ***10*** *08:27:12.6,40°.04N×31°.85E,h7^{km},Ml2.4,Suspected Mining explosion.*

ISCJB ***10*** *08:27:14.4±0.5,40°.14N±0°.03×31°.68E±0°.04,h0^{km},Error ellipse: s-maj=4.6km s-min=3.5km az=138.4*

CSEM ***10*** *08:27:14.3±0.3,40°.12N×31°.70E,h2^{km},ML2.5,Error ellipse: s-maj=7.1km s-min=6.0km az=133.0,Suspected Mining explosion.*

ISK ***10*** *08:27:15.6,40°.10N×31°.53E,h14^{km},ML2.5/3*

ISC 10 08:27:14.1±0.8**,40°.18N**±0°.03×**31°.67E**±0°.03**,h0**^{km}**,n24, σ0ˢ.92**/41**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUMIH	MIHALICIK	0.34	206	PG	Pg	08 27 20.9	+0.3
AUMIH				SG	Sg	08 27 25.2	+0.2
AUMIH	MIHALICIK	0.34	206	*e*Pg	Pg	08 27 20.9	+0.3
AUMIH				*e*Sg	Sg	08 27 25.2	+0.2
MDUB	Mudurnu	0.47	309	PG	Pb	08 27 25.0	-0.3
MDUB				SG	Sb	08 27 32.0	-0.8
MDUB	Mudurnu	0.47	309	*e*Pg	Pb	08 27 25.0	-0.3
MDUB				*e*Sg	Sb	08 27 32.0	-0.8
BTAS	Taskesti	0.65	308	*i* P	Pb	08 27 28.4	0.0
BTAS				*i* S	Sn	08 27 40.5	-1.1
BTAS	Taskesti	0.65	308	P	Pb	08 27 28.4	0.0
BTAS				S	Sn	08 27 40.5	-1.1
CMDR	Camlidere-ANKA	0.69	62	*i* P	Pg	08 27 26.2	-1.1
CMDR				*i* S	Sb	08 27 38.8	-0.4
CMDR	Camlidere-ANKA	0.69	62	P	Pg	08 27 26.2	-1.1
CMDR				S	Sb	08 27 38.8	-0.4
BCAM	Yenicaga	0.70	25	*i* P	Pg	08 27 27.7	+0.1
BCAM				*i* S	Sb	08 27 38.9	-0.8
BCAM	Yenicaga	0.70	25	P	Pg	08 27 27.7	+0.1
BCAM				S	Sb	08 27 38.9	-0.8
ESKT	Eskisehir	0.91	224	*i* P	Pg	08 27 29.7	-1.9
ESKT				*i* S	Sg	08 27 43.9	+0.5
SEYT	Eskypehyr	0.91	224	P	Pg	08 27 29.7	-1.9
SEYT				S	Sg	08 27 43.9	+0.5
ANTO	Ankara	0.91	109	PG	Pn	08 27 35.3	+1.0
SAHE	Sakarya_HENDEK	0.92	317	*i* P	Pn	08 27 34.2	-0.1
SAHE				*i* S	Sn	08 27 51.3	+3.0
SAHE	Sakarya_HENDEK	0.92	317	P	Pn	08 27 34.2	-0.1
GULT	Gulveren	0.92	286	PG	Pg	08 27 32.3	+0.5
GULT				SG	Sg	08 27 44.6	+0.8
GULT	Gulveren	0.92	286	*e*Pg	Pg	08 27 32.3	+0.5
GULT				*e*Sg	Sg	08 27 44.6	+0.8
BORA	Eskisehir	0.98	253	PG	Pg	08 27 32.8	-0.1
BORA	Eskisehir	0.98	253	*i* P	Pg	08 27 32.9	0.0
BORA				*i* S	Sn	08 27 49.5	-0.4
BORA	Eskisehir	0.98	253	P	Pg	08 27 32.9	0.0
BORA				S	Sn	08 27 49.5	-0.4
AFSR	Af¯ar-Bala (A	1.30	124	PN	Pn	08 27 40.9	+1.3
AFSR	Af¯ar-Bala (A	1.30	124	*e*Pn	Pn	08 27 40.9	+1.3
KIZT	Kizilcal	1.30	173	PN	Pg	08 27 38.9	-0.2
KIZT	Kizilcal	1.30	173	*e*Pn	Pg	08 27 38.9	-0.2

NIED ***10*** *08:29:00,23°.60N×124°.20E,h11^{km},Mw3.7 Best double couple: $M_0$4.63000×10^{14} NP1:ϕ_s50.00000°,δ52.00000°, λ170.00000°. NP2:ϕ_s146.00000°,δ82.00000°,λ38.00000°.*

IDC ***10*** *08:29:31.6±1.2,23°.65N×123°.93E,h0^{km},mb3.3/5, mb1 3.7/6,mb1mx3.3/64,mbtmp3.4/6,ML3.9/1,MS2.7/4, Ms1 2.7/4,ms1mx2.4/35,Error ellipse: s-maj=47.0km s-min=25.4km az=88.0*

ISCJB ***10*** *08:29:34.9±1.0,23°.58N±0°.05×124°.20E±0°.04,h32^{km}±6^{km}, mb3.2/5,MS2.6/2,Error ellipse: s-maj=8.0km s-min=6.0km az=163.5*

JMA ***10*** *08:29:34.3±0.3,23°.56N×124°.23E,h32^{km}±4^{km},M3.5*

ISC 10 08:29:34.9±1.1**,23°.64N**±0°.09×**124°.24E**±0°.04**,h20**^{km}±6^{km}**, n23,σ0ˢ.93**/32**,mb3.2**/5**,Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HATJ	Hateruma jima	0.57	316	P	Pb	08 29 46.4	+0.1
HATJ				*e*S	Sb	08 29 54.6	+0.5
JKRS	Kuro-shima	0.63	340	P	Pn	08 29 48.1	-0.5
JKRS				*e*S	Sn	08 29 57.9	-0.2
JIJ	Ishigaki jima	0.72	353	P	Pb	08 29 49.2	+0.4
JIJ				S	Sn	08 30 00.6	+0.2
IRIF	Iriomote-Funau	0.83	326	P	Pn	08 29 51.1	-0.3
IRIF				S	Sn	08 30 02.6	-0.5
JISG	Ishigakijimahi	0.94	4	P	Pb	08 29 52.4	-0.1
JISG				*e*S	Sn	08 30 05.8	0.0
JTJ	Tarama	1.08	23	P	Pn	08 29 54.7	-0.1
JTJ				S	Sn	08 30 10.0	+0.9
YOJ	Yonaguni jima	1.39	306	P	Pn	08 29 58.9	-0.2
YOJ				S	Sn	08 30 16.3	-0.6
JYNG	Yonagunijimaku	1.43	304	P	Pn	08 29 59.4	-0.3
JYNG				*e*S	Sn	08 30 17.0	-0.9
JIRB	Irabujima	1.45	36	P	Pn	08 29 59.9	-0.1
JIRB				S	Sn	08 30 18.5	+0.1
JMJ	Miyako jima 2	1.51	39	P	Pn	08 30 01.3	+0.6
JMJ				*e*S	Sb	08 30 20.6	-0.3
JOGS	Gusukube	1.54	43	P	Pn	08 30 01.6	+0.5
JOGS				S	Sb	08 30 22.0	+0.3
JIKM	Ikemajima	1.57	36	P	Pn	08 30 01.6	0.0
JIKM				*e*S	Sb	08 30 22.3	-0.3
JOW	Kunigami	4.84	48	Pn	Pn	08 30 44.6	-1.9
	0.8nm,0.3s,baz=86,slow=15,SNR=1.1						
JOW				Sn	Sn	08 31 39.0	-2.9
	0.9nm,0.3s,baz=270,slow=19,SNR=1.6						
DAV	Davao City (W)	16.53	175	LR	LR	08 40 34.8	
	comp=Z,18nm,18.6s,baz=142,slow=40						
JHJ	Hachijo jima 2	16.60	52	LR	LR	08 39 34.6	
	comp=Z,17nm,19.0s,baz=26,slow=36						
MJAR	Matsushiro Arr	17.62	40	P	P	08 33 41.4	+1.4
	0.4nm,0.3s,baz=230,slow=9.8,SNR=7.7						
CMAR	Chiang Mai Arr	24.15	262	LR	LR	08 45 05.9	
	comp=Z,17nm,18.2s,baz=192,slow=39						
ASAJ	Asahikawa	25.37	32	LR	LR	08 45 21.2	
	comp=Z,23nm,21.3s,baz=195,slow=37						
MKAR	Makanchi Array	40.68	315	P	P	08 37 12.1	-1.7
	0.2nm,0.5s,baz=116,slow=9.9,SNR=1.8						
WRA	Warramunga Arr	44.43	166	P	P	08 37 44.4	0.0
	0.2nm,0.6s,baz=346,slow=9.0,SNR=2.0						
ASAR	Alice Springs	47.95	168	P	P	08 38 13.2	+1.0
	0.1nm,0.5s,baz=356,slow=13,SNR=1.8						
ILAR	Eielson Array	68.40	27	P	P	08 40 36.2	+1.4
	0.2nm,0.5s,baz=244,slow=5.6,SNR=4.6						
YKA	Yellowknife Ar	82.36	24	P	P	08 41 54.9	-0.2
	0.5nm,0.6s,baz=306,slow=5.4,SNR=4.7						

IDC ***10*** *09:03:56.6±4.2,54°.23N×163°.76W,h0^{km},mb3.4/3, mb1 3.8/5,mb1mx3.4/84,mbtmp3.5/5,ML3.4/2,MS2.5/1, Ms1 2.5/1,ms1mx2.1/53,Error ellipse: s-maj=73.2km s-min=39.6km az=103.0*

NEIC ***10*** *09:04:00.4±0.0,53°.96N×163°.69W,h26^{km},ML3.3(AEIC), After AEIC.*

ISC 10 09:03:57.3±1.5**,53°.98N**±0°.06×**163°.67W**±0°.03**, h10**^{km}±10^{km}**,n47,σ1ˢ.50**/49**,mb3.6**/3**,Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRPK	Brown Peak	0.67	356	P	Pn	09 04 13.8	+0.9
ISLZ	Isanotski Laza	0.75	358	P	Pn	09 04 14.9	+0.9
SSLS	Shishaldin Sou	0.76	345	P	Pn	09 04 15.4	+1.2
SSLS				S	Sn	09 04 26.2	+0.6
WESN	West Dahl Nort	0.80	318	P	Pn	09 04 15.6	+1.0
WESP	Westdahl Peak	0.80	310	P	Pn	09 04 15.6	+0.8
WESP				S	Sn	09 04 26.8	-0.1
SSLW	Shishaldin Wes	0.84	342	P	Pn	09 04 16.4	+1.2
SSBA	Shishaldin	0.84	342	P	Pn	09 04 16.3	+1.1
SSBA				S	Sn	09 04 28.4	+0.7
WECS	Westdahl Cape	0.85	311	P	Pn	09 04 16.4	+1.0
WEBT	Westdahl Beart	0.88	314	P	Pn	09 04 17.0	+1.2
FALS	False Pass	0.89	9	P	Pn	09 04 16.9	+1.1
FALS				S	Sn	09 04 29.6	+0.8
AKSA	Akutan Strait	1.21	278	P	Pn	09 04 20.5	+0.3
AKSA				S	Sg	09 04 35.7	-0.5
AKUT	Akutan	1.25	278	P	Pb	09 04 21.3	+0.4
AKUT				S	Sn	09 04 37.0	-0.6
DRIA	Deer Island	1.28	39	P	Pg	09 04 22.3	+0.4
HSB	Akutan Spr's B	1.34	280	P	Pb	09 04 22.7	+0.2
ZRO	Akutan Zero	1.37	276	P	Pn	09 04 22.8	+0.3
AKMO	Akutan Morgan	1.39	276	P	Pn	09 04 23.1	+0.4
DT1	Dutton Round H	1.39	35	P	Pg	09 04 24.0	0.0
AKRB	Akutan Reef Bi	1.42	277	P	Pg	09 04 24.5	-0.1
DOL	Dolgoi Island	1.57	41	P	Pb	09 04 26.8	+0.3
UNV	Unalaska Valle	1.68	267	P	Pn	09 04 26.5	-0.2
PS4A	Pavlof South-4	1.73	37	P	Pb	09 04 29.3	+0.2
MTBL	Makushin Table	1.78	271	P	Pn	09 04 29.1	+1.0
MREP	Makushin Rep't	1.83	266	P	Pn	09 04 29.3	+0.5
MSW	Makushin Switc	1.84	269	P	Pn	09 04 29.4	+0.4

MCIR	Makushin Cirqu	1.91	270	P	Pn	09 04 31.1	+1.2
SDPT	Sand Point	2.31	52	P	Pb	09 04 37.5	-1.4
SDPT				S	Sb	09 05 05.7	-1.7
OKER	Okmok East Rim	2.66	260	P	Pn	09 04 41.9	+1.6
OKTU	Okmok Mt. Tuli	2.67	259	P	Pn	09 04 42.0	+1.6
OKAK	Okmok	2.81	264	P	Pn	09 04 44.4	+2.2
NIKH	Nikolski High	3.26	254	P	Pn	09 04 49.4	+1.0
NIKH				S	Sn	09 05 29.2	+1.9
VNHG	Veniaminof 1	3.42	47	P	Pn	09 04 54.1	+3.4
ANNW	Aniakchak Nort	4.31	44	P	Pn	09 05 06.1	+3.2
SPIA	Saint Paul Isl	4.92	313	P	Pn	09 05 13.1	+1.9
OHAK	Old Harbor	6.72	57	P	Pn	09 05 35.1	-0.8
KDAK	Kodiak Island	7.30	54	Pn	Pn	09 05 44.2	+0.3
	0.7nm,0.3s,baz=232,slow=5.7,SNR=15						
KDAK				Sn	Sn	09 07 02.7	-4.0
	baz=311,slow=20,SNR=2.5						
ILAR	Eielson Array	13.73	31	Pn	P	09 07 16.8	-3.7
	0.1nm,0.3s,baz=227,slow=10,SNR=4.3						
INK	Inuvik	20.12	33	P	P	09 08 29.1	-1.8
	0.1nm,0.3s,baz=225,slow=2.9,SNR=3.6						
YKA	Yellowknife Ar	26.57	52	P	P	09 09 35.2	+0.1
	0.2nm,0.5s,baz=273,slow=8.6,SNR=4.0						
NVAR	Mina Array Bea	34.37	98	P	P	09 10 46.6	+2.1
	0.5nm,0.7s,baz=291,slow=7.5,SNR=4.6						
H11N2	WAKE ISLAND Hy	40.94	225	T	T	09 55 20.3	
	baz=26,slow=76,SNR=61						
H11N3	WAKE ISLAND Hy	40.95	225	T	T	09 55 11.2	
	baz=26,slow=76,SNR=56						
H11N1	WAKE ISLAND Hy	40.96	225	T	T	09 55 28.9	
	baz=26,slow=76,SNR=44						
H11S1	WAKE ISLAND Hy	42.12	224	T	T	09 56 47.0	
	baz=25,slow=76,SNR=70						
H11S2	WAKE ISLAND Hy	42.13	224	T	T	09 56 48.1	
	baz=25,slow=76,SNR=73						
H11S3	WAKE ISLAND Hy	42.13	224	T	T	09 56 48.3	
	baz=25,slow=76,SNR=65						
MJAR	Matsushiro Arr	43.15	271	LR	LR	09 31 30.6	
	comp=Z,5.4nm,20.1s,baz=220,slow=38						
TXAR	Lajitas Array	49.37	95	P	P	09 12 47.5	+0.5
	0.3nm,0.5s,baz=286,slow=4.9,SNR=4.9						

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*ISCJB **10** 09:05:17.8±0.5, 21°67S±0°03×179°17W±0°04, h584^{km}±6^{km}, mb4.5/100, Error ellipse: s-maj=5.6km s-min=4.3km az=31.6*

*NEIC **10** 09:05:17.7±0.6, 21°66S×179°11W, h576^{km}±7^{km}, mb4.6/75, Error ellipse: s-maj=6.7km s-min=5.0km az=136.0*

*WEL **10** 09:05:17.0, 21°66S×179°11W, h576^{km}*

*BJI **10** 09:05:17.2, 21°50S×179°20W, h572^{km}, mb4.7/18, mB4.8/13*

*IDC **10** 09:05:18.7±1.5, 21°59S×179°13W, h581^{km}±16^{km}, mb4.0/28, mb1 4.1/30, mb1mx4.0/49, mbtmp4.9/30, Error ellipse: s-maj=11.1km s-min=10.0km az=89.0*

ISC 10 09:05:18.3±0.5, **21°63S**±0°05×**179°05W**±0°06, **h585**^{km}±5^{km}**, n336,** σ1^{s}**46**/384**, mb4.5**/100**, 20C-15D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RIZ	Raoul Island	7.65	173	P	P	09 07 12.5	-1.2
RIZ				S	S	09 08 48.2	-0.2
RAO	Raoul Island	7.66	173	P	P	09 07 13.8	0.0
	62nm,0.3s,baz=107,slow=20,SNR=4.0						
RAO				S	S	09 08 47.4	-1.1
	89nm,0.3s,baz=83,slow=22,SNR=4.1						
RAO	Raoul Island	7.66	173	*e*P	P	09 07 13.8	0.0
RAO				*e*P	P	09 07 14.0	+0.2
RAO				*e*S	S	09 08 47.4	-1.1
RAO				*e*S	S	09 08 49.1	+0.7
GLKZ	Green Lake	7.67	173	P	P	09 07 13.8	0.0
GLKZ				S	S	09 08 47.1	-1.5
NIUE	Niue	8.93	75	P	P	09 07 24.4	-1.9
	baz=8.8,SNR=3.8						
AFI	Afiamalu	10.34	43	P	P	09 07 37.7	-2.7
	6.9nm,0.3s,baz=150,slow=6.0,SNR=6.9						
AFI				S	S	09 09 29.7	-7.3
	4.8nm,0.3s,baz=217,slow=23,SNR=7.3						
FUNA	Funafuti	13.13	352	*e*P	P	09 08 06.4	-2.4
DZM	Mont Dzumac	13.47	265	P	P	09 08 11.8	-0.5
	2.2nm,0.3s,baz=74,slow=17,SNR=9.9						
DZM	Mont Dzumac	13.47	265	*e*P	P	09 08 11.8	-0.5
OUZ	Omahuta	15.00	204	*e*P	P	09 08 28.3	+1.5
	34nm,0.7s						
OUZ	Omahuta	15.00	204	P	P	09 08 28.6	+1.8
GRZ	Great Barrier	15.34	197	P	P	09 08 30.4	+0.4
WCZ	Waipu Caves	15.38	201	P	P	09 08 32.2	+1.8
KUZ	Kuaotunu	15.74	196	P	P	09 08 34.7	+0.9
MXZ	Matakaoa Point	16.05	188	*e*P	P	09 08 34.6	-2.0
	52nm,1.1s						
MXZ	Matakaoa Point	16.05	188	P	P	09 08 34.9	-1.7
MXZ				S	S	09 11 13.1	-5.1
MKAZ	Moumakai	16.22	197	P	P	09 08 39.7	+1.5
WTAZ	Waiatarua	16.23	199	P	P	09 08 40.0	+1.7
WMGZ	Waiomatatini S	16.29	187	P	P	09 08 37.8	-1.0
WMGZ				S	S	09 11 19.3	-2.9
HAZ	Te Kaha	16.31	189	P	P	09 08 38.0	-1.0
HAZ				S	S	09 11 18.1	-4.4
PKGZ	Pakihiroa	16.40	188	P	P	09 08 38.4	-1.5
PKGZ				S	S	09 11 23.2	-0.9
RUGZ	Raukumara Rang	16.53	189	P	P	09 08 39.7	-1.5
RUGZ				S	S	09 11 23.8	-2.5
PUZ	Puketiti	16.55	187	P	P	09 08 40.7	-0.6
PUZ				S	S	09 11 25.3	-1.3
OPRZ	Ohinepanea	16.60	192	P	P	09 08 42.3	+0.6
TWGZ	Tauwhareparae	16.69	188	P	P	09 08 42.4	-0.2
TWGZ				S	S	09 11 25.3	-3.6
MARZ	Manawahe	16.72	192	P	P	09 08 43.3	+0.5
TOZ	Tahuroa Road	16.73	195	P	P	09 08 44.4	+1.6
KMRZ	Kaimai	16.73	194	P	P	09 08 44.8	+1.9
OMRZ	Omania	16.89	193	P	P	09 08 45.9	+1.5
MKRZ	Makatiti	16.90	192	P	P	09 08 43.4	-1.1
URZ	Urewera	16.90	190	P	P	09 08 41.3	-3.1
	7.2nm,0.3s,baz=272,slow=2.0,SNR=44						
URZ				S	S	09 11 25.5	-6.7
	0.8nm,0.3s,baz=167,slow=22,SNR=9.5						
URZ	Urewera	16.90	190	*e*P	P	09 08 41.3	-3.1
URZ				*e*P	P	09 08 42.1	-2.3
URZ				*e*S	S	09 11 25.5	-6.7
URZ				*e*S	S	09 11 32.0	-0.2
URZ	Urewera	16.90	190	P	P	09 08 41.4	-3.0
MWZ	Matawai	16.91	189	P	P	09 08 42.3	-2.2
MWZ				S	S	09 11 27.4	-5.0
CNGZ	Carnagh Statio	16.97	187	P	P	09 08 45.2	+0.2
TKGZ	Te Karaka	16.97	188	P	P	09 08 44.6	-0.4
RAGZ	Rawiri	17.09	189	P	P	09 08 45.4	-0.8
MUGZ	Murupara	17.18	191	P	P	09 08 45.7	-1.2
HRRZ	Handcock Road	17.18	192	P	P	09 08 47.0	-0.1
RIGZ	Rimuhau	17.24	188	P	P	09 08 46.9	-0.7
PRRZ	Plateau Road	17.27	192	P	P	09 08 47.5	-0.3
RTZ	Ruatahuna	17.27	191	P	P	09 08 46.2	-1.6
TLZ	Tolley Road	17.29	194	P	P	09 08 49.6	+1.6
ALRZ	Allen Road	17.34	192	P	P	09 08 48.6	+0.2
SNGZ	Shannon Statio	17.38	189	P	P	09 08 47.8	-0.9
MTHZ	Maungataniwha	17.53	191	P	P	09 08 44.7	-5.5
RAHZ	Arahi	17.55	190	P	P	09 08 49.4	-0.9
MRHZ	Matea Rd	17.59	192	P	P	09 08 49.3	-1.5
HIZ	Hauiti	17.63	196	*e*P	P	09 08 51.0	0.0
	27nm,0.9s						
RATZ	Rangitukua	17.75	193	P	P	09 08 51.5	-0.7
BKZ	Black Stump Fm	17.89	191	*e*P	P	09 08 51.5	-2.0
	22nm,1.1s						
BKZ	Black Stump Fm	17.89	191	P	P	09 08 51.2	-2.4
BFZ	Birch Farm	19.41	191	*e*P	P	09 09 05.5	-1.7
	18nm,1.1s						
BFZ				*e*S	S	09 12 10.6	-2.1
SNZO	South Karori	20.32	194	*e*P	P	09 09 13.7	-1.7
	30nm,0.8s						
THZ	Tophouse	21.19	197	*e*P	P	09 09 21.8	-1.6
	18nm,0.5s						
THZ				*e*S	S	09 12 37.1	-3.8
KHZ	Kahutara	21.64	195	*e*P	P	09 09 25.7	-1.5
	29nm,1.1s						
KHZ				*e*S	S	09 12 46.8	-1.0
LTZ	Lake Taylor	22.31	197	*e*P	P	09 09 31.9	-1.4
	19nm,0.5s						
OXZ	Oxford	22.88	197	*e*P	P	09 09 36.5	-1.8
	16nm,0.9s						
MQZ	McQueen’s Vall	23.07	195	*e*P	P	09 09 38.6	-1.4
	15nm,1.2s						
RPZ	Rata Peaks	23.51	198	P	P	09 09 42.9	-1.0
	7.9nm,0.5s,baz=38,slow=5.6,SNR=11						
RPZ	Rata Peaks	23.51	198	*e*P	P	09 09 42.5	-1.4
	9.6nm,0.9s						
RPZ				*e*P	P	09 09 43.0	-1.0
LBZ	Lake Benmore	24.38	199	*e*P	P	09 09 49.6	-2.0
	4.6nm,0.6s						
WKZ	Wanaka	25.14	200	*e*P	P	09 09 57.0	-1.4
	11nm,0.5s						
MLZ	Mavora Lakes	25.92	201	*e*P	P	09 10 05.9	+0.7
	12nm,0.6s						
WHZ	Wether Hill Ro	26.44	201	*e*P	P	09 10 10.8	+1.0
	51nm,0.6s						
EIDS	Eidsvold	27.61	256	P	P	09 10 20.6	+0.3
	baz=28,SNR=8.5						
EIDS	Eidsvold	27.61	256	*e*P	P	09 10 20.0	-0.3
	16nm,0.8s						
ARMA	Armidale	27.70	245	P	P	09 10 22.5	+1.4
	baz=28,SNR=26						
ARMA	Armidale	27.70	245	*e*P	P	09 10 21.7	+0.6
	32nm,0.6s						
MGCD	Mangrove Creek	28.79	240	P	P	09 10 31.9	+1.5
	baz=29,SNR=24						
RMQ	Roma	29.74	254	P	P	09 10 40.1	+1.3
	baz=30,SNR=12						
PMOR	Pomariorio Ree	30.27	83	*e*P	P	09 10 44.1	+0.7
	46nm,1.0s						
VAH	Vaihoa	30.45	83	*e*P	P	09 10 45.6	+0.7
	37nm,0.9s						
CNB	Canberra Magne	30.79	237	P	P	09 10 48.7	+1.1
	baz=31,SNR=32						
CTA	Charters Tower	32.42	266	P	P	09 11 02.1	+0.4
	21nm,0.5s,baz=90,slow=13,SNR=47						
CTAO	Charters Tower	32.42	266	*e*P	P	09 11 02.0	+0.4
	27nm,0.6s						
CMSA	Cobar Meteorol	32.91	245	P	P	09 11 06.1	+0.4
	baz=33,SNR=39						
QLP	Quilpie	33.80	254	P	P	09 11 13.5	+0.3
	baz=34,SNR=13						
TOO	Toolangi	34.44	235	P	P	09 11 19.1	+0.7
	baz=34,SNR=12						
MTSU	Mount Surprise	34.57	269	P	P	09 11 20.1	+0.4
	baz=35,SNR=19						
TAU	Tasmania Unive	35.14	225	*e*P	P	09 11 24.5	+0.4
	15nm,0.8s						
STKA	Stephens Creek	36.42	245	P	P	09 11 35.5	+0.6
	baz=36,SNR=52						
STKA	Stephens Creek	36.42	245	P	P	09 11 35.4	+0.6
	18nm,0.5s,baz=93,slow=10,SNR=108						
STKA	Stephens Creek	36.42	245	*e*P	P	09 11 35.4	+0.6
	5.0nm,0.6s						
COEN	Coen	36.69	276	P	P	09 11 37.9	+0.6
	baz=37,SNR=32						
COEN	Coen	36.69	276	*e*P	P	09 11 37.3	+0.1
	18nm,0.6s						
ARPS	Mount Arapiles	37.05	237	P	P	09 11 40.0	+0.2
	baz=37,SNR=6.6						
QIS	Mount Isa	38.51	264	P	P	09 11 51.6	-0.4
	baz=39,SNR=12						
HTT	Hallett	38.84	243	P	P	09 11 54.8	+0.3
	baz=39,SNR=19						
BBOO	Buckleboo	41.17	245	P	P	09 12 12.8	-0.3
	baz=41,SNR=9.1						
BBOO	Buckleboo	41.17	245	*e*P	P	09 12 13.0	-0.1
	37nm,0.8s						
AS01	Alice Springs	43.27	258	*e*P	P	09 12 29.4	-0.3
AS01				*e*S	S	09 18 12.4	-3.2
AS31	Alice Springs	43.31	258	*e*P	P	09 12 29.6	-0.4
	12nm,0.6s						
AS31				*e*PcP	PcP	09 14 05.6	+0.1
AS31				*e*S	S	09 18 13.4	-2.8
ASAR	Alice Springs	43.31	258	P	P	09 12 29.9	-0.2
	39nm,0.5s,baz=94,slow=7.9,SNR=800						
ASAR				PcP	PcP	09 14 05.6	+0.1
	8.1nm,0.8s,baz=103,slow=4.1,SNR=11						
ASAR				S	S	09 18 13.2	-2.9
	8.9nm,0.8s,baz=94,slow=15,SNR=33						
WB2	Warramunga Arr	43.47	263	*e*P	P	09 12 30.6	-0.7
	43nm,0.8s						
WRAB	Tennant Creek	43.47	263	*e*P	P	09 12 30.4	-0.8
	37nm,0.9s						
WRAB				*e*S	S	09 18 19.6	+1.1
WR1	Warramunga Arr	43.48	263	*e*P	P	09 12 30.8	-0.6
	49nm,0.8s						
WR1				*e*PcP	PcP	09 14 06.5	+0.5
WR1				*e*S	S	09 18 13.6	-5.0
WRA	Warramunga Arr	43.48	263	P	P	09 12 30.8	-0.6
	24nm,0.5s,baz=96,slow=7.7,SNR=463						
WRA				PcP	PcP	09 14 06.5	+0.5
	5.4nm,1.0s,baz=94,slow=4.0,SNR=5.3						
WRA				S	S	09 18 13.6	-5.0
	3.1nm,0.7s,baz=103,slow=15,SNR=13						
JAY	Jayapura	43.49	290	P	P	09 12 31.1	-0.4
	24nm,0.6s,baz=141,slow=4.0,SNR=16						
KDU	Kakadu	47.00	273	P	P	09 12 57.7	-0.5
	baz=47,SNR=20						
FORT	Forrest	47.95	248	P	P	09 13 04.6	-0.5
	baz=48,SNR=51						
FORT	Forrest	47.95	248	*e*P	P	09 13 04.5	-0.5
	53nm,0.6s						
MTN	Manton Dam	48.20	272	P	P	09 13 06.5	-0.6
	baz=48,SNR=15						
MTN	Manton Dam	48.20	272	*e*P	P	09 13 06.5	-0.6
	37nm,0.6s						
WRKA	Warakurna	48.22	255	P	P	09 13 07.0	-0.2
	baz=48,SNR=250						
KNRA	Kununurra	49.61	267	P	P	09 13 17.3	-0.2
	baz=50,SNR=12						
FITZ	Fitzroy Crossi	51.91	264	P	P	09 13 34.2	+0.1
	baz=52,SNR=24						
FITZ	Fitzroy Crossi	51.91	264	*e*P	P	09 13 34.3	+0.1
	11nm,0.7s						
KMBL	Kambalda	53.20	246	P	P	09 13 42.8	-0.4
	baz=53,SNR=13						
SOEI	Soe	55.56	273	*e*P	P	09 14 00.9	+0.8
	82nm,0.8s						
BATI	Baumata	55.98	272	P	P	09 14 04.4	+1.6
	45nm,0.4s,baz=27,slow=2.3,SNR=4.7						
MEEK	Meekatharra	56.63	252	P	P	09 14 06.3	-0.8
	baz=57,SNR=15						
MBWA	Marble Bar	56.66	258	*e*P	P	09 14 06.9	-0.5
	35nm,0.7s						
SBA	Scott Base	56.69	184	*e*P	P	09 14 09.8	+3.2
	16nm,1.0s						
KLBR	Kellerberrin	56.69	246	P	P	09 14 07.2	-0.3
	baz=57,SNR=14						
VNDA	Vanda	56.71	185	P	P	09 14 08.9	+2.2
	2.6nm,0.5s,baz=359,slow=6.4,SNR=26						
VNDA				PcP	PcP	09 14 54.9	+0.7
	3.0nm,0.9s,baz=336,slow=5.2,SNR=5.2						
NWAO	Narrogin (SRO)	56.99	244	P	P	09 14 09.6	+0.1
	baz=57,SNR=8.1						
NWAO	Narrogin (SRO)	56.99	244	P	P	09 14 08.9	-0.5
	12nm,0.8s,baz=359,slow=7.4,SNR=9.6						
BLDU	Ballidu	57.70	247	P	P	09 14 14.0	-0.4
	baz=58,SNR=24						
MUN	Mundaring	57.96	245	P	P	09 14 16.3	+0.3
	baz=58,SNR=6.5						
MORW	Morawa	58.50	248	P	P	09 14 19.3	-0.4
	baz=58,SNR=14						
GIRL	Giralia	61.31	255	P	P	09 14 39.5	+1.1
	baz=61,SNR=4.7						
CASY	Casey	62.53	205	*e*P	P	09 14 46.1	+0.6
	24nm,1.0s						
JAGI	Jajag, Banyuwa	65.40	270	*e*P	P	09 15 03.3	-1.4
	26nm,0.8s						
QSPA	South Pole Qui	68.45	180	P	P	09 15 23.9	+1.3
	23nm,0.8s,baz=41,slow=1.2,SNR=57						
QSPA	South Pole Qui	68.45	180	*e*P	P	09 15 23.9	+1.3
QSPA				*e*P	P	09 15 24.0	+1.4
MJAR	Matsushiro Arr	70.54	325	P	P	09 15 35.1	-0.2
	3.0nm,0.6s,baz=169,slow=6.5,SNR=12						
MAJO	Matsushiro	70.54	325	*e*P	P	09 15 35.1	-0.2
MAT	Matsushiro	70.54	325	P	P	09 15 35.3	0.0
LEM	Lembang	72.04	270	P	P	09 15 45.2	+0.5
	46nm,0.6s,baz=315,slow=19,SNR=6.1						
JNU	Nakatsue	72.43	318	P	P	09 15 45.4	-1.0
	8.1nm,0.9s,baz=90,slow=6.1,SNR=3.5						
KSM	Kuching	72.60	279	*e*P	P	09 15 47.9	+0.1
	21nm,0.8s						
TPUB	Ta-pu	73.77	304	*e*P	P	09 15 53.0	-1.2
	33nm,0.7s						
SSLB	Suanglung	73.78	304	*e*P	P	09 15 53.3	-1.1
	17nm,0.7s						
ASAJ	Asahikawa	74.25	332	P	P	09 15 58.0	+1.6
	5.0nm,0.6s,baz=279,slow=1.9,SNR=9.2						
ASAJ	Asahikawa	74.25	332	*e*P	P	09 15 57.6	+1.1
	9.3nm,0.9s						
PETK	Petropavlovsk-	77.11	346	P	P	09 16 12.5	+0.4
	6.9nm,0.8s,baz=125,slow=7.2						
PETK	Petropavlovsk-	77.11	346	*e*P	P	09 16 12.2	+0.1
PEA1	Petropavlovsk-	77.11	346	*e*P	P	09 16 12.5	+0.4
USRK	Ussuriysk Ar.	79.35	326	P	P	09 16 25.4	+1.2
	6.7nm,0.9s,baz=125,slow=7.2						
NJ2	Nanjing	79.85	310	*e*P	P	09 16 28.3	+1.2
NJ2				pmax	pmax		
	comp=Z,18nm,0.5s						
MAW	Mawson	80.17	200	P	P	09 16 29.1	+0.9
	baz=80,SNR=8.5						
MAW	Mawson	80.17	200	P	P	09 16 28.7	+0.6
	5.4nm,0.6s,baz=132,slow=7.1,SNR=16						
MAW	Mawson	80.17	200	*e*P	P	09 16 28.8	+0.6
	1.3nm,0.7s						
MAGC	SCE Magundon P	80.35	46	*e*P	P	09 16 27.8	-1.9
MDPB	Devils Postpil	81.56	44	*e*P	P	09 16 36.8	+0.6
	3.8nm,0.9s						
YBH	Yreka Blue Hor	81.78	39	P	P	09 16 39.1	+2.1
	3.1nm,0.8s,baz=214,slow=7.3,SNR=14						
WAKR	Walker	81.83	43	*e*P	P	09 16 38.2	+0.7
	3.7nm,0.6s						
PNTR	Pine Nut	82.07	43	*e*P	P	09 16 39.7	+1.0
	11nm,0.8s						
KDAK	Kodiak Island	82.14	14	P	P	09 16 38.1	-0.1
	2.7nm,0.6s,baz=81,slow=4.0,SNR=6.4						
YERR	Yerington	82.24	43	*e*P	P	09 16 40.7	+1.2
	4.8nm,0.6s						
IPM	Ipoh	82.30	278	*e*P	P	09 16 40.4	+0.2
	31nm,0.8s						
NV01	Mina Array Sit	82.52	44	*e*P	P	09 16 42.0	+1.0
NVAR	Mina Array Bea	82.52	44	P	P	09 16 42.3	+1.3
	2.5nm,0.7s,baz=227,slow=8.2,SNR=19						
PAHR	Pah Rah Range	82.57	42	*e*P	P	09 16 42.4	+1.3
	6.0nm,1.0s						
CN2	Changchun	82.59	323	*e*P	P	09 16 41.8	+0.9
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NV11	Mina Array Sit	82.61	44	*e*P	P	09 16 42.5	+1.2
	0.2nm,0.8s						
KVN	Kaiserville	83.00	43	*e*P	P	09 16 44.5	+1.1
	3.4nm,0.8s						
TPNV	Topopah Spring	83.03	46	*e*P	P	09 16 45.0	+1.5
	3.0nm,0.8s						
PSI	Prapat	83.61	276	*e*P	P	09 16 46.3	-0.6
	16nm,0.9s						
PINE	Pine Mountain	84.07	38	*e*P	P	09 16 50.1	+1.6
	12nm,1.1s						
TUC	Tucson	84.44	52	*e*P	P	09 16 52.1	+1.6
	4.5nm,1.0s						
WVOR	Wild Horse Val	84.62	40	*e*P	P	09 16 52.3	+1.1
	2.3nm,1.0s						
319A	Douglas	85.11	54	*e*P	P	09 16 54.9	+1.1
	9.4nm,1.1s						
SYO	Syowa Base	85.41	193⇑	*e*P	P	09 16 53.6	-0.8
SYO	Syowa Base	85.41	193⇓	*i*PcP	PcP	09 16 55.5	-0.8
SYO	Syowa Base	85.41	193⇓	*e*PKiKP	PKiKP	09 22 01.0	+1.1
U15A	North Rim	85.44	48	*e*P	P	09 16 57.1	+1.6
	4.9nm,0.8s						
NONG	Nongkai	85.75	291	P	P	09 16 58.4	+1.5
G08A	Pilot Rock	86.11	38	*e*P	P	09 16 59.7	+1.5
	5.2nm,1.0s						
GYA	Guiyang	86.36	300	*e*P	P	09 17 00.2	+0.4
GYA				pP	pP	09 19 04.8	-0.8
GYA				sP	sP	09 20 01.2	-3.2
GYA				PP	PP	09 20 33.6	+1.2
GYA				SKS	SKSac	09 26 31.0	-0.2
GYA				S	S	09 26 47.7	0.0
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GHO	Glory Hole Cre	86.55	14	*e*P	P	09 17 00.1	+0.3
	13nm,0.8s						
BMO	Blue Mountains	86.81	39	*e*P	P	09 17 02.5	+1.0
	1.9nm,0.8s						
MFID	Camas Ranch	86.88	41	*e*P	P	09 17 03.5	+1.6
	5.6nm,1.1s						
SNAA	Sanae	86.91	179	P	P	09 17 03.0	+1.5
SCM	Sheep Creek Mo	86.96	14	*e*P	P	09 17 02.0	+0.2
	13nm,0.6s						
PBKT	Sadao Pong	87.05	289	P	P	09 17 05.5	+2.4
VNA3	Neumayer Olymp	87.08	177	P	P	09 17 01.9	-0.4
SEY	Seymchan	87.25	347	P	P	09 17 03.3	+0.4
	5.9nm,0.8s,baz=149,slow=4.0,SNR=21						
CAST	Castle Rocks	87.38	12	*e*P	P	09 17 02.4	-1.2
	7.4nm,0.6s						
F10A	Beach Ranch, E	87.49	38	*e*P	P	09 17 05.5	+0.8
	11nm,0.9s						
TMUT	Trail Mountain	87.64	46	*e*P	P	09 17 07.2	+1.4
	3.6nm,0.9s						
VNA1	Neumayer--Stat	87.75	177	P	P	09 17 05.4	0.0
TRF	Thorofare Moun	87.75	12	*e*P	P	09 17 05.3	-0.3
	11nm,0.8s						
HLID	Hailey	87.82	41	*e*P	P	09 17 08.2	+1.9
	3.3nm,0.9s						
HVU	Hansel Valley	87.89	43	*e*P	P	09 17 08.0	+1.2
	3.2nm,0.9s						
UTHA	Uthaitani	88.00	287	P	P	09 17 10.3	+2.7
XAN	Xi’an	88.03	308	P	P	09 17 08.5	+1.1
XAN				pmax	pmax		
	comp=Z,12nm,0.9s						
XAN				pmax	pmax		
	comp=Z,37nm,4.7s						
MNTX	Cornudas Mount	88.20	55	*e*P	P	09 17 09.2	+1.0
	4.1nm,0.9s						
LTX	Lajitas	88.49	58	*e*P	P	09 17 11.1	+1.4
TX31	Lajitas Ar. Si	88.49	58	*e*P	P	09 17 10.8	+1.1
TX31				*e*P	P	09 17 11.2	+1.5
TXAR	Lajitas Array	88.49	58	P	P	09 17 11.1	+1.4
	2.7nm,0.9s,baz=214,slow=5.6,SNR=18						
TXAR				pP	pP	09 19 19.9	+3.6
	0.9nm,0.9s,baz=213,slow=4.8,SNR=6.3						
TXAR				PKKPbc	PKKPbc	09 34 49.0	+0.6
	0.5nm,0.6s,baz=67,slow=3.3,SNR=6.3						
ANMO	Albuquerque	88.87	52	P	P	09 17 12.7	+1.2
	1.2nm,0.7s,baz=203,slow=7.1,SNR=8.3						
ANMO	Albuquerque	88.87	52	*e*P	P	09 17 12.7	+1.2
	3.0nm,1.1s						
LAMP	Lampang	88.99	290	P	P	09 17 14.3	+2.2
PLCA	Paso Flores	89.21	134	P	P	09 17 14.2	+1.2
	6.2nm,1.1s,baz=275,slow=7.3,SNR=5.1						
CCB	Clear Creek Bu	89.33	13	*e*P	P	09 17 12.1	-0.5
	8.4nm,1.1s						
HHC	Hu-ho-hao-te	89.44	315	*e*P	P	09 17 12.5	-1.4
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,79nm,5.2s						
MCMT	McKenzie Canyo	89.44	41	*e*P	P	09 17 15.4	+1.4
MDM	Murphy Dome	89.51	13	*e*P	P	09 17 13.1	-0.4
	4.4nm,1.0s						
CM01	Chiang Mai Arr	89.54	290	*e*P	P	09 17 16.0	+1.3
CM31	Chiang Mai Arr	89.57	290	*e*P	P	09 17 16.9	+2.1
CMAR	Chiang Mai Arr	89.57	290	P	P	09 17 16.9	+2.1
	7.6nm,0.8s,baz=131,slow=3.1,SNR=34						
ILAR	Eielson Array	89.63	13	P	P	09 17 13.8	-0.3
	0.9nm,0.4s,baz=221,slow=4.7,SNR=19						
ILAR				pP	pP	09 19 22.4	+1.4
	0.8nm,1.0s,baz=233,slow=7.5,SNR=3.6						
ILB	Eielson Array	89.63	13	*e*P	P	09 17 13.6	-0.4
ILB				*e*pP	pP	09 19 22.4	+1.4
CMMT	Chiang Mai	89.70	290	P	P	09 17 17.0	+1.6
CHTO	Chiang Mai	89.70	290	*e*P	P	09 17 16.2	+0.8
	11nm,0.8s						
CHTO	Chiang Mai	89.70	290	P	P	09 17 17.1	+1.6
REDW	Red Top Meadow	89.92	43	*e*P	P	09 17 16.9	+0.7
	4.6nm,1.0s						
SNOW	Snow King Moun	90.04	43	*e*P	P	09 17 18.0	+1.2
	5.4nm,0.9s						
CMAI	Chiengmai2	90.05	291	P	P	09 17 18.9	+1.7
IMW	Indian Meadow	90.14	42	*e*P	P	09 17 18.5	+1.3
	2.9nm,0.9s						
BW06	Boulder Array	90.45	44	*e*P	P	09 17 18.8	+0.1
	1.6nm,0.8s						
PD31	Pinedale Array	90.45	44	*e*P	P	09 17 19.2	+0.5
PDAR	Pinedale Array	90.45	44	P	P	09 17 19.4	+0.7
	1.6nm,0.8s,baz=207,slow=3.3,SNR=16						
PDAR				PKKPbc	PKKPbc	09 34 44.2	-0.1
	0.2nm,0.7s,baz=64,slow=6.8,SNR=4.0						
PDAR	Pinedale Array	90.45	44	*e*P	P	09 17 18.9	+0.2
DAWY	Dawson	90.81	16	*e*P	P	09 17 20.4	+0.8
	3.0nm,1.1s						
SDCO	Great Sand Dun	90.83	49	*e*P	P	09 17 22.2	+1.5
	2.0nm,1.0s						
SONA0	Songino Array	95.96	319	*e*P	P	09 17 44.0	+0.5
SONM	Songino Array	95.96	319	P	P	09 17 44.0	+0.5
	0.7nm,0.4s,baz=111,slow=6.3,SNR=2.9						
ZAA1	Zalesovo Array	110.75	321	*e*PKiKP	PKiKP	09 22 42.6	-2.5
ZALV	Zalesovo Beam	110.75	321	PKiKP	PKiKP	09 22 42.6	-2.5
	1.5nm,0.6s,baz=151,slow=3.3,SNR=3.3						

MK32	Makanchi Array	111.25	313	ePKiKP	PKiKP	09 22 45.2	-1.1
MKAR	Makanchi Array	111.25	313	PKiKP	PKiKP	09 22 45.2	-1.1
	0.8nm,0.5s,baz=220,slow=1.0,SNR=8.2						
MKAR				PKKPbc	PKKPbc	09 33 44.3	-0.5
	0.6nm,0.7s,baz=316,slow=3.3,SNR=5.4						
KURK	Kurchatov	114.15	317	ePKiKP	PKPdf	09 22 50.5	-1.2
KURBB	Kurchatov Arra	114.20	317	PKP	PKPdf	09 22 50.5	-1.3
	1.8nm,0.7s,baz=110,slow=1.8,SNR=11						
KSH	Kashi	114.72	305	ePKP	PKPdf	09 22 50.1	-3.3
KSH				PP	PP	09 24 05.1	+2.3
KSH				PKS	PKSdf	09 26 25.5	-4.7
KK31	Karatay Array	119.17	308	ePKPdf	PKPdf	09 23 01.1	-0.6
KKAR	Karatay Array	119.17	308	ePKPdf	PKPdf	09 23 01.1	-0.6
BVAR	Borovoye Array	119.30	320	PKP	PKPdf	09 23 00.7	-0.8
	2.6nm,0.4s,baz=128,slow=0.9,SNR=16						
SPITS	Spitsbergen Ar	122.92	356	PKP	PKPdf	09 23 07.8	-0.1
	7.5nm,0.7s,baz=27,slow=4.8,SNR=9.3						
SUMG	Summit	124.47	13	ePKPdf	PKPdf	09 23 11.5	0.0
BOSA	Boshof	124.82	206	PKP	PKPdf	09 23 13.2	0.0
	3.2nm,0.9s,baz=207,slow=4.5,SNR=4.1						
AKTO	Aktyubinsk	127.24	318	PKP	PKPdf	09 23 16.8	-0.1
	2.1nm,0.5s,baz=104,slow=2.4,SNR=9.7						
ARA0	ARCESS Array S	129.84	349	ePKPdf	PKPdf	09 23 20.8	-0.5
ARCES	ARCESS Array B	129.84	349	PKP	PKPdf	09 23 20.8	-0.5
	4.5nm,0.6s,baz=358,slow=1.4,SNR=21						
ARCES				SKPbc	SKPab	09 25 50.7	+0.7
	4.7nm,0.7s,baz=11,slow=3.3,SNR=11						
KLMR	Klimovskoe	132.50	336	ePKPdf	PKPdf	09 23 25.7	-0.8
KLMR				AMP		09 23 27.2	
	comp=Z,5.0nm,0.9s						
LSZ	Lusaka	134.62	218	ePKPdf	PKPdf	09 23 32.7	+0.6
FIA0	FINESS Array S	136.56	343	ePKPdf	PKPdf	09 23 35.2	+1.1
FINES	FINESS Array B	136.56	343	PKP	PKPdf	09 23 35.2	+1.1
	comp=Z,3.0nm,0.6s,baz=7.4,slow=4.3,SNR=4.7						
FINES				SKPbc	SKPbc	09 26 12.4	+0.2
	comp=Z,1.9nm,0.9s,baz=40,slow=2.4,SNR=3.3						
NB2	NORSAR Subarra	139.97	352	PKP	PKPpre	09 23 33.1	
	comp=Z,1.0nm,0.6s,baz=23,slow=3.2						
NB2	NORSAR Subarra	139.97	352	PKP	PKPpre	09 23 33.1	
	comp=Z,1.0nm,0.6s,baz=23,slow=3.2						
HFS	Hagfors	140.48	350	PKhKP	PKPpre	09 23 34.7	
	comp=Z,2.1nm,0.3s,baz=85,slow=3.1,SNR=18						
HFS				SKPbc	SKPbc	09 26 23.4	+0.3
	comp=Z,3.9nm,0.8s,baz=72,slow=4.7,SNR=4.2						
MBAR	Mbarara	143.48	237	ePKPbc	PKPdf	09 23 47.8	-0.4
AKASG	Malin Array Be	143.50	330	PKP	PKPab	09 23 44.8	-0.9
	comp=Z,14nm,0.6s,baz=42,slow=4.4,SNR=62						
AKBB	Malin Array Si	143.50	330	ePKPbc	PKPab	09 23 44.9	-0.8
KIEV	Kiev	143.51	330	ePKPbc	PKPab	09 23 44.4	-1.3
SUW	Suwalki	143.52	338	ePKP	PKPbc	09 23 45.8	+0.1
AK11	Malin Array Si	143.54	330	ePKPbc	PKPab	09 23 44.9	-0.9
SORM	Soroca	145.63	327	⇓iP	PKPbc	09 23 51.6	-0.7
ASF	Jabal al Asfar	146.40	296	PKPbc	PKPbc	09 23 55.3	+0.2
	comp=Z,6.3nm,0.7s,baz=58,slow=3.2,SNR=10						
BR101	Keskin Array S	146.84	310	ePKPbc	PKPbc	09 23 55.7	-0.4
BR131	Keskin Array S	146.84	310	ePKPbc	PKPbc	09 23 55.9	-0.2
BRTR	Keskin Array B	146.84	310	PKPbc	PKPbc	09 23 55.7	-0.4
	comp=Z,6.9nm,0.7s,baz=138,slow=3.7,SNR=24						
KWP	Kalwaria Pacla	147.17	334	ePKP	PKPbc	09 23 56.6	+0.1
KWP	Kalwaria Pacla	147.17	334	ePKPbc	PKPbc	09 23 56.7	+0.3
TLCR		147.22	322	⇓iP	PKPbc	09 23 56.2	-0.5
ANTO	Ankara	147.38	311	⇑iP	PKPbc	09 23 57.9	+0.5
MMAI	Mount Meron Ar	147.49	298	PKPbc	PKPbc	09 23 58.0	+0.1
	comp=Z,14nm,0.6s,baz=69,slow=4.6,SNR=14						
BUR08	Bucovina Ar. S	147.52	329	ePKPbc	PKPbc	09 23 58.3	+0.7
BUR04	Bucovina Ar. S	147.53	329	ePKPbc	PKPbc	09 23 57.7	+0.1
BURAR	Bucovina Array	147.53	329	⇑iP	PKPbc	09 23 57.9	+0.3
BIZ	Bicaz	147.56	327	⇓iP	PKPbc	09 23 58.5	+0.9
TESR	Tescani	147.57	326	⇑iP	PKPbc	09 23 57.9	+0.3
CFR	Carcaliu	147.61	323	⇓iP	PKPbc	09 23 57.2	-0.5
OJC	Ojcow	147.83	337	ePKP	PKPbc	09 23 58.1	0.0
TIRR	Tirgusor	147.88	322	⇓iP	PKPbc	09 23 58.4	0.0
VRI	Vrincioaia	147.95	325	⇑iP	PKPbc	09 23 58.8	+0.2
PLOR	Plostina	148.00	325	⇑iP	PKPbc	09 23 58.7	0.0
TLB	Topalu	148.02	322	⇓iP	PKPbc	09 23 59.3	+0.6
CRVS	Cervenica-Dubn	148.25	334	ePKP	PKPbc	09 23 59.7	+0.5
NIE	Niedzica	148.30	336	ePKP	PKPbc	09 24 00.0	+0.6
TRPA	Tarpa	148.39	332	⇓iP	PKPbc	09 23 59.8	+0.3
EIL	Elat	148.40	292	PKPbc	PKPbc	09 24 02.4	+2.2
	comp=Z,6.6nm,0.6s,baz=358,slow=1.4,SNR=10						
KSP	Ksiaz	148.46	341	ePKP	PKPbc	09 24 00.2	+0.5
MLR	Muntele Rosu	148.61	325	PKPbc	PKPbc	09 23 59.6	-0.7
	comp=Z,4.1nm,1.1s,baz=54,slow=4.1,SNR=17						
MLR	Muntele Rosu	148.61	325	⇑iP	PKPbc	09 24 00.2	-0.2
CSS	Mathiatis	148.69	302	ePKPbc	PKPbc	09 24 00.8	+0.1
LANS	Liptovska Anna	148.83	336	ePKP	PKPbc	09 24 01.7	+1.0
LANS				e		09 24 07.5	
DPC	Dobruska-Polom	148.88	341	⇑ePKP	PKPbc	09 24 01.3	+0.5
DPC				ePKPAB	PKPab	09 24 08.1	+0.9
CLL	Collm	148.91	345	i PKPbc	PKPbc	09 24 00.9	+0.2
	comp=Z,32nm,1.1s						
CLL				i PKPab	PKPab	09 24 07.1	-0.1
	comp=Z,7.0nm,0.8s						
CLL				epPKPab	pPKPab	09 26 18.0	+1.1
CLL	Collm	148.91	345	ePKPbc	PKPbc	09 24 00.7	0.0
CJR	Cluj-Napoca	148.95	329	⇓iP	PKPbc	09 24 01.3	+0.2
MORC	Moravsky Berou	148.99	339	⇓iP	PKPbc	09 24 01.5	+0.4
MORC	Moravsky Berou	148.99	339	ePKPbc	PKPbc	09 24 01.6	+0.6
MORC	Moravsky Berou	148.99	339	ePKP	PKPbc	09 24 01.3	+0.2
BRG	Berggiesshubel	149.08	344	i PKP	PKPbc	09 24 01.5	+0.3
	comp=Z,26nm,1.1s						
PVCC	Panska Ves	149.23	343	⇑ePKP	PKPbc	09 24 01.9	+0.4
DRGR		149.31	330	⇓iP	PKPbc	09 24 02.1	+0.1
ARR	Arges	149.38	326	⇓iP	PKPbc	09 24 03.1	+0.9
VYHS	Vyhne	149.61	336	ePKP	PKPbc	09 24 02.7	+0.2
PRA	Prague	149.68	343	⇑ePKP	PKPbc	09 24 02.9	+0.3
VRAC	Vranov	149.71	340	PKPbc	PKPbc	09 24 03.1	+0.3
	comp=Z,9.6nm,0.9s,baz=97,slow=1.6,SNR=8.8						
VRAC				PKPab	PKPab	09 24 11.1	+0.5
	comp=Z,6.7nm,0.9s,baz=37,slow=4.4,SNR=6.1						
VRAC	Vranov	149.71	340	ePKP	PKPbc	09 24 02.9	+0.2
GOPC	GO Pecny, Ondr	149.72	342	⇑ePKP	PKPbc	09 24 03.1	+0.3
PRU	Pruhonice	149.72	342	⇑ePKP	PKPbc	09 24 02.8	+0.1
PRU				ePKPAB	PKPab	09 24 09.6	-1.0
JAVC	Velka Javorina	149.73	338	ePKP	PKPbc	09 24 04.2	+1.3
KRUC	Moravsky	149.98	339	ePKP	PKPbc	09 24 03.4	0.0
NKC	Novy Kostel	150.04	345	⇑ePKP	PKPbc	09 24 04.3	+0.8
MODS	Modra-Piesok	150.28	338	ePKP	PKPbc	09 24 04.5	+0.4
BZS	Buzias	150.69	330	⇑iP	PKPbc	09 24 05.4	+0.3
UCC	Uccle	150.76	356	⇑PKPbc	PKPbc	09 24 05.5	+0.4
KHC	Kasperske Hory	150.77	343	⇑ePKP	PKPbc	09 24 05.3	+0.1
KHC				ePKPAB	PKPab	09 24 15.5	+0.4
KHC	Kasperske Hory	150.77	343	ePKPdf	PKPdf	09 23 59.1	+0.1
MEM	Membach	150.80	353	⇑PKPbc	PKPbc	09 24 05.0	-0.2
HERR	Herculane	150.84	328	⇑iP	PKPbc	09 24 04.8	-0.7
GEC2	GERESS Array S	150.99	342	ePKPbc	PKPbc	09 24 05.6	-0.3
GERES	GERESS Array B	150.99	342	PKPbc	PKPbc	09 24 05.8	-0.1
	comp=Z,6.3nm,0.7s,baz=42,slow=2.2,SNR=33						
GEA0	GERESS Array S	151.00	342	ePKPbc	PKPbc	09 24 05.6	-0.2
CONA	Conrad Observa	151.15	339	ePKiKP	PKiKP	09 24 06.4	-0.1
	comp=Z,12nm,0.7s						
MDVR	Moldovita	151.26	328	⇓iP	PKPbc	09 24 06.5	0.0
ALN	Alexandroupoli	151.37	318	ePKPbc	PKPbc	09 24 05.7	-1.1
DOU	Dourbes	151.44	355	⇑PKPbc	PKPbc	09 24 06.5	-0.1
WLF	Walferdange	151.72	353	⇓PKPbc	PKPbc	09 24 08.0	+0.7
MOA	Molln	151.72	341	ePKPbc	PKPbc	09 24 06.7	-0.7
	comp=Z,4.3nm,0.8s						
ARSA	Arzberg	151.85	339	ePKPbc	PKPbc	09 24 07.2	-0.5
	comp=Z,3.6nm,0.7s						
VTS	Vitosha	152.00	323	⇑iP	PKPbc	09 24 08.4	0.0
VTS	Vitosha	152.00	323	ePKPdf	PKPdf	09 24 00.5	-0.7
VTS				ePKPbc	PKPbc	09 24 07.6	-0.8
SOKA	Soboth	152.51	339	ePKPdf	PKPdf	09 24 01.8	0.0
	comp=Z,4.4nm,0.9s						
DIVS	Divibare	152.59	329	ePKPdf	PKPdf	09 24 01.5	-0.4
DIVS				ePKPbc	PKPbc	09 24 09.4	-0.1
KBA	Koelnbreinsper	152.69	341	ePKPbc	PKPbc	09 24 08.3	-1.4
	comp=Z,9.6nm,1.1s						
BFO	Black Forest	152.71	349	ePKPbc	PKPbc	09 24 09.7	+0.1
WATA	Walderalm	152.95	344	ePKPdf	PKPdf	09 24 04.9	+2.5
	comp=Z,2.9nm,0.5s						
WTTA	Wattenberg	153.00	344	ePKPbc	PKPbc	09 24 08.2	-2.2
	comp=Z,10nm,0.9s						
MYKA	Terra Mystica	153.00	341	ePKPbc	PKPbc	09 24 09.3	-1.0
	comp=Z,3.4nm,0.6s						
RETA	Reutte	153.01	345	ePKPbc	PKPbc	09 24 10.1	-0.2
	comp=Z,2.3nm,0.6s						
MOTA	Moosalm	153.06	345	ePKiKP	PKiKP	09 24 11.6	+1.0
	comp=Z,4.7nm,0.8s						
ABTA	Abfaltersbach	153.24	342	ePKPbc	PKPbc	09 24 10.1	-0.8
	comp=Z,6.3nm,0.6s						
DAVA	Damuels	153.40	346	ePKPdf	PKPdf	09 24 03.4	+0.3
	comp=Z,4.9nm,0.9s						
FETA	Feichten	153.45	345	ePKPdf	PKPdf	09 24 02.2	-1.0
	comp=Z,4.5nm,1.2s						
DAVOX	Davos/Dischmat	153.88	346	PKPbc	PKPbc	09 24 11.9	-0.4
	comp=Z,1.8nm,0.4s,baz=353,slow=20,SNR=4.5						
FNA	Florina	154.23	322	ePKPdf	PKPdf	09 24 05.3	+1.0
FNA				ePKPbc	PKiKP	09 24 11.9	-1.2
ESDC	Sonseca Array	161.53	12	PKP	PKPdf	09 24 13.4	+0.3
	comp=Z,0.1nm,0.3s,baz=256,slow=2.3,SNR=3.1						
ESDC				PKPab	PKPab	09 25 02.3	+0.6
	comp=Z,0.1nm,0.2s,baz=339,slow=4.5,SNR=4.7						
TOA0	Torodi Ar. Sit	171.54	185	ePKPdf	PKPdf	09 24 19.5	-1.7
TOA0				ePKPab	PKPab	09 25 46.8	+0.4
TORD	Torodi Ar. Bea	171.54	185	PKP	PKPdf	09 24 19.9	-1.4
	comp=Z,2.6nm,0.9s,baz=16,slow=0.6						
TORD				PKPab	PKPab	09 25 46.8	+0.4
	baz=174,slow=1.4						
TORD				PP	PP	09 29 37.5	+0.7
	baz=165,slow=6.0						
TOA1	Torodi Ar. Sit	171.54	185	ePKPdf	PKPdf	09 24 19.9	-1.4
TOA1				ePKPab	PKPab	09 25 46.8	+0.4
TOA1				ePP	PP	09 29 37.5	+0.6

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*NAO **10** 09:21:37.6±2.2, 59°.23N×27°.64E, ML2.3*

*ISCJB **10** 09:21:38.9±0.8, 59°.29N±0°.03×27°.60E±0°.09, h0^{km}, Error ellipse: s-maj=6.7km s-min=4.1km az=22.2*

*CSEM **10** 09:21:39.5±0.5, 59°.28N×27°.61E, h2^{km}, ML2.9/4, Error ellipse: s-maj=10.5km s-min=6.4km az=112.0, Mining explosion.*

*HEL **10** 09:21:39.6±0.3, 59°.24N×27°.66E, h0^{km}, ML1.8, Explosion*

*MOS **10** 09:21:40.2, 59°.30N×27°.62E, M1.9, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

ISC 10 09:21:38.8±1.1**, 59°.27N**±0°.03×**27°.73E**±0°.05**, h0^{km}, n25, σ0^{s}.96**/46**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARBE	Arbavere	0.91	282	eP	Pg	09 21 56.3	+0.1
ARBE				eS	Sg	09 22 07.7	-0.2
ARBE	Arbavere	0.91	282	eP	Pg	09 21 56.3	+0.1
ARBE				eS	Sg	09 22 07.7	-0.2
VSU	Vasula	0.96	213	ePB	Pg	09 21 57.3	+0.2
VSU				eS	Sg	09 22 08.3	-1.2
VSU	Vasula	0.96	213	ePb	Pg	09 21 57.3	+0.2
VSU				Lg	Lg	09 22 08.4	
VSU				eS	Sg	09 22 09.1	-0.3
	174nm,0.9s,SNR=90						
VJF	Virojoki	1.28	356	eP	Pg	09 22 03.1	-0.2
VJF				MSG		09 22 19.0	
	comp=Z,8.6nm,0.2s						
VJF				eSB	Sg	09 22 20.2	+0.4
VJF	Virojoki	1.28	356	eP	Pg	09 22 03.1	-0.2
VJF				eSb	Sg	09 22 20.2	+0.4
PVF	Pernaja	1.59	325	ePG	Pn	09 22 08.4	+0.3
PVF				MSG		09 22 27.3	
	comp=Z,6.4nm,0.2s						
PVF				eSG	Sn	09 22 29.0	-0.3
PVF	Pernaja	1.59	325	ePg	Pn	09 22 08.4	+0.3
PVF				eSg	Sn	09 22 29.0	-0.3
	comp=Z,6.4nm,0.2s						
MEF	Metsahovi	1.94	301	ePG	Pb	09 22 14.5	-0.4
MEF				eSG	Sb	09 22 39.0	-0.6
MEF				MSG		09 22 40.8	
	comp=Z,4.5nm,0.1s						
MEF	Metsahovi	1.94	301	ePg	Pb	09 22 14.5	-0.4
MEF				eSg	Sb	09 22 39.0	-0.6
	comp=Z,4.5nm,0.1s						
MTSE	Matsula	2.10	256	ePB	Pb	09 22 16.6	-1.1
MTSE				eSB	Sn	09 22 42.8	+0.9
MTSE	Matsula	2.10	256	ePb	Pb	09 22 16.6	-1.1
MTSE				eSb	Sn	09 22 42.8	+0.9
MTSE				eS	Sb	09 22 43.2	-1.0
	SNR=50						
FIA0	FINESS Array S	2.33	340	Pn	Pn	09 22 17.8	-0.5
	baz=159,slow=16						
FIA0				Pg	Pb	09 22 20.5	-1.1
	baz=146,slow=16						
FIA0				Sn	Sb	09 22 49.8	-1.2
	baz=156,slow=28						
FIA0				Lg	Lg	09 22 52.3	
	baz=158,slow=28						
FIA0	FINESS Array S	2.33	340	eP	Pn	09 22 18.9	+0.6
FIA0				eSG	Sb	09 22 51.2	+0.2
FIA0				MSG		09 22 54.2	
	comp=Z,2.3nm,0.1s						
FIA0	FINESS Array S	2.33	340	Pn	Pn	09 22 17.8	-0.5
	SNR=9.7						
FIA0	FINESS Array S	2.33	340	eP	Pn	09 22 18.9	+0.6
FIA0	FINESS Array S	2.33	340	Pg	Pb	09 22 20.5	-1.1
FIA0				Sn	Sb	09 22 49.8	-1.2
	SNR=9.2						
FIA0				eSg	Sb	09 22 51.2	+0.2
	comp=Z,2.3nm,0.1s						
FIA0				Lg	Lg	09 22 52.3	
FIA1	FINESS Array S	2.33	340	eP	Pn	09 22 19.5	+1.2
FIA1				eSG	Sb	09 22 51.6	+0.6
FIA1				MSG		09 22 53.4	
	comp=Z,2.8nm,0.1s						
FIA1	FINESS Array S	2.33	340	eP	Pn	09 22 19.5	+1.2
FIA1				eSg	Sb	09 22 51.6	+0.6
	comp=Z,2.8nm,0.1s						
KEF	Keuruu	3.23	335	eP	Pn	09 22 32.4	+1.7
KEF				ePB	Pb	09 22 34.7	-2.3
KEF	Keuruu	3.23	335	eP	Pn	09 22 32.3	+1.7
RAF	Rauma	3.46	303	eP	Pn	09 22 35.5	+1.7
RAF	Rauma	3.46	303	eP	Pn	09 22 35.5	+1.7
RAF				eS	Sn	09 23 17.0	+1.5
	SNR=50						
JOF	Joensuu	4.06	24	eP	Pn	09 22 43.5	+1.6
HFS	Hagfors	7.16	283	Lg	Lg	09 25 16.0	
	baz=98,slow=37						

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*CSEM **10** 09:22:04.5, 45°.30N×19°.96E, h0^{km}, ML1.4, Mining explosion.*

BEO 10 09:22:04.5±1.4**, 45°.30N**×**19°.96E, h0^{km}, Ml1.4**/4**, Mining explosion., Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FGSL	Fruska Gora	0.18	217	ePg	Pg	09 22 07.6	-0.3
FGSL				eSg	Sg	09 22 09.7	-0.5
FRGS	Fruska Gora	0.18	218	ePg	Pg	09 22 07.6	-0.3
FRGS				eSg	Sg	09 22 09.7	-0.5
TEKS	Tekeris	0.81	203	ePg	Pg	09 22 19.0	-1.0
TEKS	Tekeris	0.81	203	ePg	Pg	09 22 19.0	-1.0
DIVS	Divibare	1.20	179	ePg	Pg	09 22 25.7	-1.8
DIVS				eSg	Sg	09 22 42.2	-0.8
DIVS	Divibare	1.20	179	ePg	Pg	09 22 25.7	-1.8
DIVS				eSg	Sg	09 22 42.2	-0.8
BBLS	Lazići	1.49	196	ePg	Pn	09 22 31.7	-0.8
BBLS				eSg	Sb	09 22 52.4	-0.1
BBLS	Lazići	1.49	196	ePg	Pn	09 22 31.7	-0.8
BBLS				eSg	Sb	09 22 52.4	-0.1

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*ISCJB **10** 09:23:49.3±0.4, 39°.70N±0°.03×29°.49E±0°.04, h0^{km}, Error ellipse: s-maj=5.1km s-min=3.5km az=20.8*

*DDA **10** 09:23:49.7, 39°.67N×29°.48E, h7^{km}, Ml2.7, Suspected Mining explosion.*

*CSEM **10** 09:23:49.2±0.3, 39°.68N×29°.48E, h1^{km}, ML2.3, Error ellipse: s-maj=7.1km s-min=4.8km az=112.0, Suspected Mining explosion.*

*ISK **10** 09:23:49.5, 39°.65N×29°.51E, h18^{km}, ML2.3/12*

ISC 10 09:23:49.4±0.8**, 39°.72N**±0°.03×**29°.42E**±0°.03**, h0^{km}, n38, σ0^{s}.65**/49**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TVSB	Tavsanli	0.27	172	PG	Pg	09 23 54.7	+0.2
TVSB				SG	Sg	09 23 58.6	+0.6
TVSB	Tavsanli	0.27	172	ePg	Pg	09 23 54.7	+0.2
TVSB				eSg	Sg	09 23 58.6	+0.6
CAVI	Cavuskoy	0.59	34	PG	Pb	09 24 01.9	-0.6
CAVI				SG	Sb	09 24 11.1	-0.3
CAVI	Cavuskoy	0.59	34	ePg	Pb	09 24 01.9	-0.6
CAVI				eSg	Sb	09 24 11.1	-0.3
GDZ	Gediz	0.63	175	i P	Pg	09 24 01.2	-0.2
GDZ				i S	Sg	09 24 09.8	+0.3
GDZ	Gediz	0.63	175	P	Pg	09 24 01.2	-0.2
GDZ				S	Sg	09 24 09.8	+0.3
DURS	Dursunbey	0.74	261	i P	Pb	09 24 04.6	-0.5
DURS				i S	Sb	09 24 15.8	+0.1
DURS	Dursunbey	0.74	261	P	Pb	09 24 04.6	-0.5
DURS				S	Sb	09 24 15.8	+0.1
MDNY	Mudanya-Bursa	0.77	328	PG	Pn	09 24 06.9	-0.6
MDNY	Mudanya-Bursa	0.77	328	ePg	Pn	09 24 06.9	-0.6
BORA	Eskisehir	0.82	78	i P	Pg	09 24 05.0	0.0
BORA	Eskisehir	0.82	78	P	Pg	09 24 05.0	0.0
YLV	Yalova	0.85	358	PG	Pn	09 24 07.9	-0.8
YLV	Yalova	0.85	358	ePg	Pn	09 24 07.9	-0.8
DEMI	Demirci	0.86	219	i P	Pg	09 24 05.2	-0.7
DEMI				i S	Sn	09 24 22.4	+0.2
DEMI	Demirci	0.86	219	P	Pg	09 24 05.2	-0.7
KCTX	Karacabey (Bur	0.98	304	PN	Pn	09 24 10.4	0.0
KCTX	Karacabey (Bur	0.98	304	ePn	Pn	09 24 10.4	0.0
SBT5	Esenkoy-Cinarc	1.00	336	PN	Pn	09 24 10.6	0.0
SBT5	Esenkoy-Cinarc	1.00	336	ePn	Pn	09 24 10.6	0.0
GULT	Gulveren	1.11	49	PN	Pg	09 24 10.7	+0.1
GULT	Gulveren	1.11	49	ePn	Pg	09 24 10.7	+0.1
HRT	Hereke	1.12	10	PN	Pb	09 24 11.5	-0.2
HRT	Hereke	1.12	10	ePn	Pb	09 24 11.5	-0.2
SAUV	Serdivan-Sakar	1.24	34	PN	Pg	09 24 12.7	-0.4
SAUV	Serdivan-Sakar	1.24	34	ePn	Pg	09 24 12.7	-0.4
KULA	Kula-Manisa	1.34	206	PN	Pg	09 24 13.3	-1.7
KULA	Kula-Manisa	1.34	206	ePn	Pg	09 24 13.3	-1.7
EDC	Edincik	1.35	298	PN	Pn	09 24 15.3	-0.2
EDC	Edincik	1.35	298	ePn	Pn	09 24 15.3	-0.2
STEP	BALIKESIR_Sava	1.35	256	i P	Pb	09 24 15.8	+0.2
STEP				i S	Sn	09 24 36.2	+1.9
STEP	BALIKESIR_Sava	1.35	256	P	Pb	09 24 15.8	+0.2
STEP				S	Sn	09 24 36.2	+1.9
KAVV	Kandilli-Istan	1.37	349	PN	Pg	09 24 15.6	-0.1
KAVV	Kandilli-Istan	1.37	349	ePn	Pg	09 24 15.6	-0.1
ISK	Istanbul-Kandi	1.38	349	PN	Pn	09 24 15.7	-0.1
ISK	Istanbul-Kandi	1.38	349	ePn	Pn	09 24 15.7	-0.1
SILT	Sile	1.45	7	PN	Pn	09 24 16.3	-0.5
SILT	Sile	1.45	7	ePn	Pn	09 24 16.3	-0.5

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*CSEM **10** 09:32:24.7, 35°.48N×7°.70E, h0^{km}, ML3.5*

CRAAG 10 09:32:24.7, 35°.48N×7°.70E, Ml3.5, Northern Algeria

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABSA	Djebel Ababsia	0.81	347	P	Pn	09 32 44.1	+0.6
ABSA	Djebel Ababsia	0.81	347	P	Pn	09 32 44.1	+0.6
CMAH	Djebel Manchou	1.16	349	P	Pb	09 32 47.8	+0.1
CMAH	Djebel Manchou	1.16	349	P	Pb	09 32 47.8	+0.1
CTEI	Djebel Teioual	1.20	299	P	Pn	09 32 48.9	0.0
CTEI	Djebel Teioual	1.20	299	P	Pn	09 32 48.9	0.0
CKFL	Kef-Lekhel	1.21	319	P	Pn	09 32 48.9	-0.1
CKFL	Kef-Lekhel	1.21	319	P	Pn	09 32 48.9	-0.1

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*IDC **10** 09:38:15.9±2.3, 62°.25N×149°.94W, h52^{km}±26^{km}, mb3.3/4, mb1 3.7/8, mb1mx3.3/78, mbtmp3.6/8, ML3.5/4, MS2.8/2, Ms1 2.8/2, ms1mx2.4/33, Error ellipse: s-maj=21.4km s-min=16.2km az=107.0*

*ISCJB **10** 09:38:16.2±0.2, 62°.18N±0°.02×149°.39W±0°.04, h64^{km}±4^{km}, mb3.3/4, Error ellipse: s-maj=3.1km s-min=3.0km az=137.6*

*NEIC **10** 09:38:17.9±0.0, 62°.18N×149°.41W, h47^{km}, ML3.4(AEIC), After AEIC.*

ISC 10 09:38:17.3±0.8**, 62°.17N**±0°.03×**149°.44W**±0°.03**, h53^{km}**±8^{km}**, n101, σ0^{s}.96**/114**, mb3.2**/4**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRAP	Trapper Creek	0.41	295	P	Pn	09 38 27.4	-0.4
GHO	Glory Hole Cre	0.47	148	P	Pn	09 38 28.1	-0.4
GHO				S	Sn	09 38 36.6	+0.1
PMR	Palmer	0.60	165	P	Pn	09 38 29.2	-0.6
PMR				S	Sn	09 38 38.9	0.0
SML	Sawmill	0.64	124	P	Pn	09 38 29.8	-0.7
SML				S	Sn	09 38 40.1	+0.1
HUR	Hurricane	0.82	354	P	Pn	09 38 32.2	-0.5
HUR				S	Sn	09 38 43.9	-0.1
KNK	Knik Glacier	0.89	148	P	Pn	09 38 33.4	-0.3
KNK				S	Sn	09 38 46.2	+0.5
SUA	Susitna One	0.94	222	P	Pn	09 38 34.3	-0.1
SUA				S	Sn	09 38 48.3	+1.4
SKT	Skwentna	1.00	260	P	Pn	09 38 34.5	-0.6
SKT				S	Sn	09 38 48.8	+0.6
SCM	Sheep Creek Mo	1.05	108	P	Pn	09 38 35.3	-0.6
SCM				S	Sn	09 38 50.3	+0.7
FIB	Fire Island	1.06	199	P	Pn	09 38 36.7	+0.8
RC01	Rabbit Creek A	1.09	187	P	Pn	09 38 36.1	-0.2
DHY	Denali Highway	1.32	45	P	Pn	09 38 38.7	-0.9
TRF	Thorofare Moun	1.34	344	P	Pn	09 38 39.5	-0.3
PPLA	Purkeypile	1.47	301	P	Pn	09 38 41.3	-0.2
PPLA				S	Sn	09 39 01.4	+1.7
SPCG	Spurr Capps Gl	1.51	236	P	Pn	09 38 42.9	+0.8
KTH	Kantishna Hill	1.55	335	P	Pn	09 38 42.4	-0.2
SPCP	Crater Peak Br	1.58	236	P	Pn	09 38 43.6	+0.6
MCK	McKinley	1.59	8	P	Pn	09 38 42.9	-0.1
SPCR	Spurr Chakacha	1.64	235	P	Pn	09 38 44.5	+0.8
CAST	Castle Rocks	1.75	317	P	Pn	09 38 44.9	-0.3
CAST				S	Sn	09 39 06.6	+0.3
KLU	Klutina	1.80	110	P	Pn	09 38 45.9	-0.1
PS11	TAPS Pump St11	1.87	91	P	Pn	09 38 48.0	+1.2
PAX	Paxson	2.01	65	P	Pn	09 38 49.5	+0.6
PAX				S	Sn	09 39 14.2	+1.4
BWN	Browne	2.01	360	P	Pn	09 38 48.7	-0.1
HARP	HAARP	2.02	81	P	Pn	09 38 49.7	+0.8
DIV	Divide	2.04	119	P	Pn	09 38 48.6	-0.6
BPAW	Bear Paw Mtn.	2.06	341	P	Pn	09 38 48.9	-0.7
PS10	TAPS Pump St10	2.11	52	P	Pn	09 38 51.4	+1.3
PS12	TAPS Pump St12	2.16	107	P	Pn	09 38 50.6	-0.1
CHUM	Lake Minchumin	2.16	324	P	Pn	09 38 50.8	0.0
RDJH	Redoubt Jeurge	2.26	227	P	Pn	09 38 52.9	+0.5
HIN	Hinchinbrook I	2.27	140	P	Pn	09 38 52.1	-0.3
RDWB	Redoubt West	2.35	226	P	Pn	09 38 53.9	+0.3
WRH	Wood River Hil	2.39	14	P	Pn	09 38 53.5	-0.5
NEA	Nenana	2.42	4	P	Pn	09 38 53.9	-0.6
BRLK	Bradley Lake	2.51	197	P	Pn	09 38 56.4	+0.8
HDA	Harding Lake	2.52	26	P	Pn	09 38 55.6	-0.1
CCB	Clear Creek Bu	2.60	16	P	Pn	09 38 56.0	-0.7
BMRM	Bremner River	2.61	115	P	Pn	09 38 56.3	-0.7
PS08	TAPS Pump Stn8	2.66	25	P	Pn	09 38 57.7	0.0
GLB	Gilahina Butte	2.77	103	P	Pn	09 38 59.2	0.0
GOAT	Goat Mountain	2.77	123	P	Pn	09 38 58.9	-0.3
CNPM	China Poot	2.79	199	P	Pn	09 39 00.5	+1.0
COLA	College	2.81	14	P	Pn	09 38 59.5	-0.1
ILAR	Eielson Array	2.85	23	P	Pn	09 39 00.3	0.0
	7.6nm,0.3s,baz=205,slow=14,SNR=379						
ILAR				S	Sn	09 39 32.6	-0.8
	17nm,0.3s,baz=210,slow=22,SNR=22						
ILB	Eielson Array	2.85	23	P	Pn	09 38 59.6	-0.7
MDM	Murphy Dome	2.85	10	P	Pn	09 38 59.9	-0.4
RAGM	Ragged Mountai	2.91	126	P	Pn	09 39 01.1	-0.1
MLY	Manley	2.93	349	P	Pn	09 39 01.0	-0.4
GLM	Gilmore Dome	2.98	17	P	Pn	09 39 02.2	+0.2
VRDI	Verde Repeater	3.01	106	P	Pn	09 39 01.8	-0.7
HMT	Hamilton	3.11	124	P	Pn	09 39 03.6	-0.1
TT01	Tatalina	3.14	287	P	Pn	09 39 03.5	-0.6
MCARA	McCarthy VSAT	3.15	102	P	Pn	09 39 04.5	+0.1
NICHA	Nichawak Mount	3.28	124	P	Pn	09 39 05.9	-0.2
BERG	Berg Lake	3.29	120	P	Pn	09 39 06.4	0.0
CRQM	Cirque	3.34	112	P	Pn	09 39 06.9	-0.2
AUNW	Augustine NWes	3.43	217	P	Pn	09 39 09.9	+1.8
AUW	Augustine West	3.43	217	P	Pn	09 39 09.9	+1.7
AUI	Augustine Isla	3.45	216	P	Pn	09 39 10.1	+1.6
KHIT	Khitrov Hills	3.45	117	P	Pn	09 39 08.4	-0.2
PTPK	Patty Peak	3.47	103	P	Pn	09 39 08.7	-0.2
BALM	Baldy	3.58	105	P	Pn	09 39 09.6	-0.7
KIAG	Kiagna River	3.61	107	P	Pn	09 39 10.0	-0.9
BCA3	Beaver Creek A	3.65	72	P	Pn	09 39 11.0	-0.3
ISLE	Juniper Island	3.76	112	P	Pn	09 39 12.0	-0.8
KULT	Kultieth River	3.78	118	P	Pn	09 39 12.8	-0.2
BARK	Barkley Ridge	3.79	115	P	Pn	09 39 12.9	-0.4
CDD	Cape Douglas	3.85	214	P	Pn	09 39 14.9	+0.9
BARN	Barnard Glacie	3.88	103	P	Pn	09 39 14.5	0.0
BAGL	Bagley Icefiel	3.92	112	P	Pn	09 39 14.4	-0.5
GRNC	Granite Creek	3.96	108	P	Pn	09 39 15.1	-0.6
BVCY	Beaver Creek	4.02	83	P	Pn	09 39 16.7	+0.5
CTGM	Chitina Glacie	4.06	104	P	Pn	09 39 16.9	-0.1
YUK2	White River	4.08	92	P	Pn	09 39 17.3	+0.1
MESA	MESA	4.14	115	P	Pn	09 39 17.9	-0.2
IM05	Indian Mountai	4.26	336	P	Pn	09 39 19.4	-0.1

YUK3	Moose Creek	4.26	91	P	Pn	09 39 19.9	+0.2
KAHC	Katmai Hardscr	4.48	220	P	Pn	09 39 23.2	+0.5
EGAK	Eagle	4.54	51	P	Pn	09 39 23.4	0.0
KAWH	Katmai	4.64	217	P	Pn	09 39 25.1	+0.3
KDAK	Kodiak Island	4.67	201	P	Pn	09 39 23.8	-1.3
	1.3nm,0.3s,baz=56,slow=7.3,SNR=48						
KDAK				S	Sn	09 40 12.8	-5.2
	2.1nm,0.3s,baz=277,slow=22,SNR=5.7						
KDAK				LR	LR	09 40 52.4	
	comp=Z,42nm,20.0s,baz=109,slow=34						
KDAK	Kodiak Island	4.67	201	P	Pn	09 39 24.1	-1.1
KAKN	Katmai Knife C	4.79	218	P	Pn	09 39 27.1	+0.2
KABU	Katmai Buttres	4.87	219	P	Pn	09 39 28.5	+0.5
DAWY	Dawson	4.95	63	*e*Pn	Pn	09 39 28.8	-0.2
ANCK	Angle Creek	5.00	220	P	Pn	09 39 30.2	+0.5
CAHL	Cahill	5.06	218	P	Pn	09 39 31.1	+0.5
COLD	Coldfoot	5.09	357	P	Pn	09 39 30.8	-0.1
OHAK	Old Harbor	5.33	203	P	Pn	09 39 31.8	-2.3
PNL	Peninsula	5.50	113	P	Pn	09 39 35.8	-0.8
BM3	Burnt Mountain	5.66	19	P	Pn	09 39 38.5	-0.2
TOLK	Toolik Lake Re	6.50	360	P	Pn	09 39 49.1	-1.1
INK	Inuvik	9.06	40	P	Pn	09 40 26.7	+1.5
	0.5nm,0.3s,baz=235,slow=20,SNR=13						
INK				S	Sn	09 42 04.5	-1.0
	0.4nm,0.3s,baz=210,slow=16,SNR=3.8						
YKA	Yellowknife Ar	16.07	73	P	Pn	09 42 01.0	+1.7
	0.2nm,0.3s,baz=284,slow=10,SNR=14						
YKA	Yellowknife Ar	16.07	73	P	Pn	09 42 01.0	+1.7
RES	Resolute Bay	22.54	34	P	P	09 43 12.3	+0.2
	0.6nm,0.6s,baz=218,slow=17,SNR=3.4						
SEY	Seymchan	26.05	298	P	P	09 43 41.2	-3.8
	1.9nm,0.7s,baz=76,slow=7.1,SNR=6.8						
PDAR	Pinedale Array	30.39	111	LR	LR	09 56 40.4	
	comp=Z,43nm,19.2s,baz=88,slow=36						
NVAR	Mina Array Bea	30.45	127	P	P	09 44 25.8	+1.0
	0.2nm,0.5s,baz=328,slow=9.9,SNR=5.3						
TXAR	Lajitas Array	44.26	116	P	P	09 46 21.6	+0.2
	0.2nm,0.5s,baz=322,slow=7.9,SNR=4.4						

*IDC **10** 09:52:40.9±2.0, 0°.29S×98°.14E, h0^{km}, mb3.7/5, mb1 3.9/7, mb1mx3.6/62, mbtmp3.7/7, ML4.3/2, MS3.1/4, Ms1 3.1/4, ms1mx2.6/60, Error ellipse: s-maj=71.4km s-min=20.0km az=62.0*

*ISCJB **10** 09:52:47.6±0.6, 0°.09N±0°.05×98°.48E±0°.07, h48^{km}, mb3.7/5, MS3.2/2, Error ellipse: s-maj=9.9km s-min=7.5km az=168.1*

*DJA **10** 09:52:48.2±0.6, 0°N±4°×9°9E±°, h28^{km}±8^{km}, M4.0/7, MLv4.0/7*

ISC 10 09:52:49.2±0.9, 0°.10N±0°.05×98°.48E±0°.07, h48^{km}, n25, σ1^{s}49/17, mb3.8/5, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBSI	Pulau Batu	0.25	234	P	Pn	09 52 56.7	-1.1
MNSI	Mandailing Nat	1.30	58	P	Pn	09 53 10.2	-0.7
MNSI				S	Sn	09 53 26.7	-0.5
SBSI	Sibolga	1.50	16	P	Pn	09 53 14.3	+0.5
GSI	Gunungsitoli	1.51	323	P	Pn	09 53 14.3	+0.5
SISI	Saibi	1.54	157	P	Pn	09 53 14.6	+0.4
BKNI	Bangkinang	2.56	85	P	Pn	09 53 34.7	+6.4
PSI	Prapat	2.72	9	Pn	Pn	09 53 29.1	-1.6
	14nm,0.3s,baz=181,slow=1.4,SNR=53						
PSI				LR	LR	09 54 51.6	
	comp=Z,242nm,22.0s,baz=232,slow=43						
PPSI	Pulau Pagai	3.22	152	P	Pn	09 53 37.0	-0.4
TPTI		3.40	337	P	Pn	09 53 37.4	-2.4
KCSI	Kotacane, Aceh	3.48	348	P	Pn	09 53 40.3	-0.6
CMAR	Chiang Mai Arr	18.25	1	P	Pn	09 57 00.0	+0.9
	0.7nm,0.3s,baz=190,slow=9.9,SNR=5.3						
CMAR				LR	LR	10 04 33.9	
	comp=Z,57nm,18.7s,baz=204,slow=38						
H08S2	Diego Garcia H	27.03	253	T	T	10 26 02.2	
	baz=74,slow=75,SNR=46						
H08S3	Diego Garcia H	27.04	253	T	T	10 25 53.8	
	baz=74,slow=75,SNR=232						
H08S1	Diego Carcia H	27.05	253	T	T	10 26 14.6	
	baz=74,slow=75,SNR=12						
H01W3	Cape Leeuwin H	37.75	159	T	T	10 40 22.4	
	baz=335						
H01W2	Cape Leeuwin H	37.76	159	T	T	10 40 21.6	
	baz=335						
H01W1	Cape Leeuwin H	37.77	159	T	T	10 40 22.9	
	baz=335						
WRA	Warramunga Arr	40.37	122	P	P	10 00 20.9	-1.8
	0.3nm,0.4s,baz=305,slow=8.9,SNR=7.8						
ASAR	Alice Springs	41.71	127	P	P	10 00 32.4	-1.4
	0.1nm,0.3s,baz=301,slow=7.8,SNR=5.7						
JNU	Nakatsue	44.81	40	LR	LR	10 21 00.5	
	comp=Z,18nm,18.1s,baz=302,slow=38						
SONM	Songino Array	48.04	7	P	P	10 01 26.9	+3.0
	0.7nm,0.3s,baz=192,slow=8.1,SNR=3.1						
MKAR	Makanchi Array	48.62	345	P	P	10 01 28.6	+0.4
	1.8nm,0.6s,baz=151,slow=8.4,SNR=18						
KURBB	Kurchatov Arra	53.13	344	P	P	10 02 00.9	-1.1
	0.6nm,0.7s,baz=174,slow=6.7,SNR=6.8						
MMAI	Mount Meron Ar	67.59	306	LR	LR	10 33 51.5	
	comp=Z,18nm,20.0s,baz=200,slow=37						
ILAR	Eielson Array	100.20	23	P	Pdif	10 06 31.7	+1.8
	0.4nm,0.9s,baz=246,slow=6.7,SNR=3.6						

MEX 10 10:07:59.7±0.5, 17°.07N×100°.10W, h30^{km}±8^{km}, MD3.8, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.16	261	*e*P	Pb	10 08 03.9	-1.7
CAIG				*i* S	Sb	10 08 08.2	-1.4
ACP2	Acapulco	0.28	134	*e*P	Pb	10 08 05.3	-1.7
ACP2				*e*S	Sb	10 08 10.0	-1.9
ACX	Acapulco	0.31	131	*e*P	Pb	10 08 05.9	-1.4
ACX				*e*S	Sb	10 08 10.2	-2.2
MEIG	Mezcala	0.96	28	*e*P	Pn	10 08 14.7	-2.6
MEIG				*e*S	Sn	10 08 26.8	-3.2
ARIG	Puente Sto Nin	1.22	349	*e*P	Pn	10 08 18.7	-2.1
ARIG				*e*S	Sn	10 08 33.5	-2.9
PLIG	Platanillo	1.43	23	*e*P	Pn	10 08 22.0	-1.7
PLIG				*e*S	Sn	10 08 38.4	-3.1

WEL 10 10:08:38.3, 37°S±6°×17°7E±°, h218^{km}±6^{km}, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAZ	Te Kaha	0.97	160	P	Pn	10 09 08.9	-0.6
HAZ				S	S	10 09 32.1	-2.0
MXZ	Matakaoa Point	1.04	134	P	Pn	10 09 09.5	-0.5
MXZ				S	S	10 09 34.1	-0.7
WHRZ	Whale Island	1.06	197	P	Pn	10 09 10.6	+0.4
RUGZ	Raukumara Rang	1.15	168	P	Pn	10 09 10.0	-1.0
RUGZ				S	S	10 09 34.1	-2.4
PKGZ	Pakihiroa	1.19	152	P	Pn	10 09 11.1	-0.1
OPRZ	Ohinepanea	1.19	213	P	Pn	10 09 10.9	-0.1
MARZ	Manawahe	1.27	206	P	Pn	10 09 11.8	+0.1
WMGZ	Waiomatatini S	1.28	140	P	Pn	10 09 11.7	-0.1
WMGZ				S	S	10 09 37.4	-0.5
WMGZ	Waiomatatini S	1.28	140	P	S	10 09 32.4	-5.4
KUZ	Kuaotunu	1.32	274	P	Pn	10 09 11.6	-0.5
EDRZ	Edgecumbe	1.35	201	P	Pn	10 09 12.7	+0.3
LIRZ	Lichensteins R	1.40	214	P	S	10 09 50.1	+11
PUZ	Puketiti	1.42	150	P	Pn	10 09 12.8	0.0
PUZ				S	S	10 09 38.5	-1.3
TWGZ	Tauwhareparae	1.42	160	P	Pn	10 09 13.5	+0.6
TWGZ				S	S	10 09 39.9	+0.1
URZ	Urewera	1.43	188	P	Pn	10 09 12.6	-0.2
URZ				S	S	10 09 38.5	-1.4
KARZ	Kaharoa	1.48	217	P	Pn	10 09 13.8	+0.5
MKRZ	Makatiti	1.48	209	P	Pn	10 09 14.5	+1.1
OMRZ	Omania	1.49	212	P	Pn	10 09 13.9	+0.5
MWZ	Matawai	1.49	175	P	Pn	10 09 13.5	0.0
MWZ				S	S	10 09 40.1	-0.8
MWZ	Matawai	1.49	175	P	S	10 09 40.7	-0.2
KMRZ	Kaimai	1.51	228	P	Pn	10 09 14.2	+0.6
TARZ	Mount Tarawera	1.55	206	P	Pn	10 09 14.9	+0.9
NGRZ	Ngongotaha	1.57	216	P	Pn	10 09 15.0	+0.9
TKGZ	Te Karaka	1.64	167	P	Pn	10 09 14.9	+0.3
TKGZ	Te Karaka	1.64	167	P	S	10 09 37.4	-5.6
RRRZ	Republican Roa	1.64	204	P	Pn	10 09 15.1	+0.4
RAGZ	Rawiri	1.65	179	P	Pn	10 09 15.1	+0.2
RAGZ	Rawiri	1.65	179	P	S	10 09 39.1	-4.3
MUGZ	Murupara	1.70	196	P	Pn	10 09 15.2	0.0
HSRZ	Hossack Road	1.71	211	P	Pn	10 09 16.3	+1.0
TOZ	Tahuroa Road	1.73	239	P	Pn	10 09 16.3	+0.8
HRRZ	Handcock Road	1.77	209	P	Pn	10 09 16.6	+0.7
CNGZ	Carnagh Statio	1.77	158	P	Pn	10 09 16.4	+0.6
MKAZ	Moumakai	1.79	261	P	Pn	10 09 16.5	+0.5
WIAZ	Waiheke Island	1.79	271	P	Pn	10 09 16.2	+0.1
RTZ	Ruatahuna	1.79	190	P	Pn	10 09 15.9	-0.3
RTZ	Ruatahuna	1.79	190	P	S	10 09 39.7	-6.0
GRRZ	Galatos Road	1.80	213	P	Pn	10 09 16.9	+0.7
PRRZ	Plateau Road	1.82	205	P	Pn	10 09 16.6	+0.3
RIGZ	Rimuhau	1.88	171	P	Pn	10 09 17.4	+0.4
RIGZ	Rimuhau	1.88	171	P	S	10 09 42.8	-4.4
ALRZ	Allen Road	1.90	205	P	Pn	10 09 17.5	+0.5
WPRZ	Whakapapatarin	1.93	209	P	Pn	10 09 18.1	+0.7
SNGZ	Shannon Statio	1.93	181	P	Pn	10 09 17.7	+0.2
SNGZ	Shannon Statio	1.93	181	P	S	10 09 47.3	-0.6
ETAZ	East Tamaki Re	1.96	266	P	Pn	10 09 18.3	+0.7
MTHZ	Maungataniwha	2.05	192	P	Pn	10 09 18.5	0.0
TLZ	Tolley Road	2.08	224	P	Pn	10 09 19.9	+1.0
RAHZ	Arahi	2.08	186	P	Pn	10 09 19.3	+0.4
PRGZ	Paritu Road	2.11	169	P	Pn	10 09 19.8	+0.6
PRGZ	Paritu Road	2.11	169	P	S	10 09 46.5	-4.7
MRHZ	Matea Rd	2.12	200	P	Pn	10 09 19.2	-0.1
KNZ	Kokohu	2.19	174	P	Pn	10 09 19.9	0.0
KNZ	Kokohu	2.19	174	P	S	10 09 48.4	-3.9
AWAZ	Awhitu Peninsu	2.19	263	P	Pn	10 09 20.6	+0.6
WHHZ	Waihua	2.23	183	P	Pn	10 09 20.8	+0.4
WHHZ	Waihua	2.23	183	P	S	10 09 52.7	-0.5
WTAZ	Waiatarua	2.24	267	P	Pn	10 09 21.1	+0.6
WATZ	Wairara	2.27	214	P	Pn	10 09 21.4	+0.7
NMHZ	Naumai	2.29	191	P	Pn	10 09 21.2	+0.1
MHGZ	Mahia Peninsul	2.34	170	P	Pn	10 09 21.9	+0.3
RATZ	Rangitukua	2.38	212	P	Pn	10 09 22.6	+0.6
BKZ	Black Stump Fm	2.42	196	P	Pn	10 09 21.9	-0.5
ARHZ	Aropaoanui	2.43	187	P	Pn	10 09 22.8	+0.3
KATZ	Kakaramea	2.50	211	P	Pn	10 09 23.3	0.0
HIZ	Hauiti	2.60	229	P	Pn	10 09 25.5	+1.3
WCZ	Waipu Caves	2.60	289	P	Pn	10 09 23.8	-0.6
KRVZ	Karewarewa	2.63	211	P	Pn	10 09 24.8	+0.1
MCHZ	McNeill Hill	2.65	191	P	Pn	10 09 25.0	+0.2
WTVZ	West Tongariro	2.67	211	P	Pn	10 09 25.0	-0.1
KWHZ	Kaweka Forest	2.68	196	P	Pn	10 09 25.0	-0.3
TWVZ	Taurewa	2.69	214	P	Pn	10 09 25.7	+0.2
NGZ	Ngauruhoe	2.71	210	P	Pn	10 09 25.8	+0.1
TUVZ	Tukino	2.77	209	P	Pn	10 09 26.2	-0.2
FWVZ	Far West T-bar	2.80	210	P	Pn	10 09 26.7	-0.1
WHVZ	Whangaehu Hut	2.81	209	P	Pn	10 09 26.5	-0.3
CKHZ	Cape Kidnapper	2.82	185	P	Pn	10 09 26.6	-0.1
BHHZ	Black Hill Sta	2.83	201	P	Pn	10 09 26.2	-0.8
MOVZ	Moawhango	2.86	206	P	Pn	10 09 26.5	-0.7
KRHZ	Kereru	2.90	195	P	Pn	10 09 27.0	-0.7
PKVZ	Pokaka	2.92	213	P	Pn	10 09 27.8	-0.1
MTVZ	Mangateitei	2.94	210	P	Pn	10 09 28.0	-0.2
KAHZ	Kahuranaki	2.97	187	P	Pn	10 09 28.4	0.0
PNHZ	Pukenui	3.20	196	P	Pn	10 09 30.1	-1.0
PXZ	Pawanui	3.21	187	P	Pn	10 09 30.5	-0.6
WPHZ	Waipukurau	3.30	192	P	Pn	10 09 31.3	-0.9
TSZ	Takapari Road	3.39	199	P	Pn	10 09 32.2	-1.2
WAZ	Wanganui	3.46	212	P	Pn	10 09 33.7	-0.4
PRHZ	Porangahau	3.46	189	P	Pn	10 09 33.3	-0.9
DVHZ	Dannevirke	3.58	195	P	Pn	10 09 34.3	-1.2
ANWZ	Angora Road	3.68	191	P	Pn	10 09 35.8	-0.8
POWZ	Post Office Ro	3.76	199	P	Pn	10 09 36.5	-1.2
PRWZ	Pori Road	3.86	196	P	Pn	10 09 38.0	-0.9
BFZ	Birch Farm	3.93	193	P	Pn	10 09 38.5	-1.2
MRZ	Mangatainoka R	4.06	200	P	Pn	10 09 39.5	-1.8
TIWZ	Tintock	4.09	196	P	Pn	10 09 40.4	-1.4
CPWZ	Castlepoint	4.16	192	P	Pn	10 09 42.1	-0.4
HOWZ	Holdsworth Sta	4.30	199	P	Pn	10 09 42.1	-2.2
OGWZ	Otaki Gorge	4.32	203	P	Pn	10 09 42.6	-1.9
TMWZ	Te Maipa	4.41	195	P	Pn	10 09 44.0	-1.6
KIW	Kapiti Island	4.45	205	P	Pn	10 09 43.9	-2.2
MTW	Mount Morrison	4.54	198	P	Pn	10 09 45.1	-2.2
CAW	Cannon Point	4.62	202	P	Pn	10 09 45.8	-2.4
TRWZ	Traveller	4.73	196	P	Pn	10 09 47.6	-2.1
PAWZ	Paruwai Farm	4.78	198	P	Pn	10 09 47.6	-2.6
DUWZ	D'Urville Isla	4.78	213	P	Pn	10 09 47.8	-2.5
MSWZ	Moikau Station	4.85	199	P	Pn	10 09 48.6	-2.5
BHW	Baring Head	4.95	202	P	Pn	10 09 49.6	-2.8
TCW	Tory Channel	4.98	208	P	Pn	10 09 50.1	-2.7
PLWZ	Palliser	5.00	199	P	Pn	10 09 50.3	-2.7
TUWZ	Tuamarina	5.29	209	P	Pn	10 09 53.7	-3.0
BSWZ	Blackbirch Sta	5.57	208	P	Pn	10 09 57.8	-2.3
THZ	Tophouse	6.01	214	P	Pn	10 10 03.7	-2.1
KHZ	Kahutara	6.30	207	P	Pn	10 10 06.6	-2.9
OKCZ	Okains Bay	7.62	204	P	Pn	10 10 23.6	-2.9
MQZ	McQueen's Vall	7.74	206	P	Pn	10 10 23.8	-4.2

*ISK **10** 10:11:23.9, 38°.77N×38°.91E, h18^{km}, ML2.6/7*

*CSEM **10** 10:11:24.8±0.3, 38°.75N×38°.95E, h10^{km}, ML2.8, Error ellipse: s-maj=6.1km s-min=4.9km az=161.0*

*ISCJB **10** 10:11:25.0±0.6, 38°.76N±0°.04×38°.95E±0°.04, h12^{km}±6^{km}, Error ellipse: s-maj=7.0km s-min=4.4km az=139.1*

*DDA **10** 10:11:25.4, 38°.77N×38°.94E, h7^{km}, Ml2.8*

ISC 10 10:11:24.8±1.0, 38°.76N±0°.03×38°.95E±0°.03, h14^{km}±9^{km}, n23, σ0^{s}66/37, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELZG	Elazig	0.26	174	*i* P	Pg	10 11 30.6	+0.2
ELZG				*i* S	Sb	10 11 36.4	+0.7
ELZG	Elazig	0.26	174	P	Pg	10 11 30.6	+0.2
ELZG				S	Sb	10 11 36.4	+0.7
PTK	Pertek	0.37	68	PG	Pg	10 11 32.3	-0.1
PTK				SG	Sb	10 11 38.9	-0.1
PTK	Pertek	0.37	68	*e*Pg	Pg	10 11 32.3	-0.1
PTK				*e*Sg	Sb	10 11 38.9	-0.1
SVRC	Sivrice-ELAZID	0.47	143	PG	Pg	10 11 34.2	+0.1
SVRC				SG	Sb	10 11 42.2	+0.4
SVRC	Sivrice-ELAZID	0.47	143	*e*Pg	Pg	10 11 34.2	+0.1
SVRC				*e*Sg	Sb	10 11 42.2	+0.4
TNCL	Tunceli-Merkez	0.58	52	*i* P	Pg	10 11 35.8	-0.5
TNCL				*i* S	Sb	10 11 46.1	+1.0
TNCL	Tunceli-Merkez	0.58	52	P	Pg	10 11 35.8	-0.5
TNCL				S	Sb	10 11 46.1	+1.0
MALT	Malatya	0.60	223	PG	Pg	10 11 36.1	-0.6
MALT				SG	Sg	10 11 45.0	+0.3
MALT	Malatya	0.60	223	*e*Pg	Pg	10 11 36.1	-0.6
MALT				*e*Sg	Sg	10 11 45.0	+0.3
KEMA	Kemaliye	0.62	325	*i* P	Pb	10 11 37.3	-0.3
KEMA				*i* S	Sb	10 11 46.9	+0.6
KEMA	Kemaliye	0.62	325	P	Pb	10 11 37.3	-0.3
KEMA				S	Sb	10 11 46.8	+0.6
HEKM	Malatya_Hekimh	0.79	279	*i* P	Pb	10 11 41.1	+0.7
HEKM				*i* S	Sn	10 11 55.1	+1.8
HEKM	Malatya_Hekimh	0.79	279	P	Pb	10 11 41.1	+0.7
AKCD	Akcadag	0.93	241	*i* P	Pg	10 11 42.6	-0.2
AKCD				*i* S	Sn	10 11 56.6	-0.1
AKCD	Akcadag	0.93	241	P	Pg	10 11 42.6	-0.2
AKCD				S	Sn	10 11 56.7	-0.1
ERZN	Erzincan	1.02	36	PG	Pg	10 11 44.1	-0.5
DARE	Darende-Malaty	1.16	261	PN	Pb	10 11 45.4	-1.4
DARE	Darende-Malaty	1.16	261	*e*Pn	Pb	10 11 45.4	-1.4
URFA	Urfa	1.32	185	PN	Pn	10 11 48.1	-0.8
MAZI	Mazidag	1.75	137	PN	Pn	10 11 54.6	-0.3
MAZI	Mazidag	1.75	137	*e*Pn	Pn	10 11 54.6	-0.3
KIS	Kishinev	11.09	321	*e*	Pn	10 13 45.0	-18

DJA 10 10:20:03.5±0.6, 2°S±5°×13°4E±°, h11^{km}±5^{km}, M4.1/6, MLv4.1/6, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RKPI	Ransiki, Papua	0.16	304	P	Pb	10 20 07.9	-0.6
RKPI				S	Sg	10 20 11.7	+2.1
SRPI	Serui, Papua	1.95	98	P	Pn	10 20 36.4	-0.1
KMPI	Kaimana, Papua	2.13	196	P	Pn	10 20 39.5	+0.4
FAKI	Fak Fak	2.44	237	P	Pn	10 20 43.4	+0.1

*BJI **10** 10:26:52.8, 2°.16S×134°.69E, h32^{km}, mb5.1/72, mB5.1/46, Ms4.8/66, Ms7 4.5/60*

*IDC **10** 10:26:54.8±0.4, 1°.65S×134°.26E, h0^{km}, mb4.8/27, mb1 4.9/32, mb1mx4.8/48, mbtmp4.9/32, ML4.9/5, MS4.3/39, Ms1 4.3/39, ms1mx4.2/53, Error ellipse: s-maj=14.2km s-min=10.0km az=76.0*

*ISCJB **10** 10:26:56.5±0.5, 1°.68S±0°.02×134°.32E±0°.02, h22^{km}±3^{km}, mb5.1/171, MS4.4/57, Error ellipse: s-maj=3.3km s-min=3.0km az=157.5*

*DJA **10** 10:26:57.9±0.2, 2°S±3°×13°4E±°, h10^{km}, M5.3/44, mb5.5/44, mB5.7/36, MLv5.8/6, Mw(mB)5.2/36, Mwp5.1/1*

*MOS **10** 10:26:57.9±1.1, 1°.68S×134°.26E, h33^{km}, mb5.2/44, MS4.4/7, Error ellipse: s-maj=9.6km s-min=5.4km az=106.3*

*GCMT **10** 10:26:59.6±0.1, 1°.55S×134°.30E, h20^{km}±1^{km}, MW5.2/113, Moment Tensor Solution. s72,c116; s113,c183; Duration: 1^{s}0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.38±.18; $M_{\theta\theta}$-2.09±.14; $M_{\phi\phi}$0.70±.17; $M_{r\theta}$0.18±.28; $M_{\theta\phi}$7.75±.14; $M_{\phi r}$4.49±.40; Best double couple: $M_0$9.14000×10^{16} NP1:ϕ_s353.00000°, δ83.00000°, λ150.00000°. NP2:ϕ_s87.00000°, δ60.00000°, λ8.00000°. Principal axes: T 8.9600, Plg26.0000°, Azm305.0000°; N 0.3590, Plg59.0000°, Azm160.0000°; P -9.3210, Plg15.0000°, Azm43.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **10** 10:26:59.6±1.3, 1°.69S×134°.25E, h30^{km}±9^{km}, mb5.2/88 Error ellipse: s-maj=4.5km s-min=3.8km az=57.0*

NEIC Felt [III] at Bintuni and Manokwari.

ISC 10 10:26:58.2±0.2, 1°.68S±0°.03×134°.28E±0°.03, h21^{km}±1^{km}, h21^{km}:pP-P, n452, σ1^{s}75/490, mb5.1/170, MS4.4/58, 13C-6D, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RKPI	Ransiki, Papua	0.20	328	P	Pb	10 27 02.6	-1.5
RKPI				S	Sb	10 27 06.1	-2.1
BAKI	Biak	1.89	75	P	Pn	10 27 27.7	-1.6
SRPI	Serui, Papua	1.97	96	P	Pn	10 27 29.1	-1.3
KMPI	Kaimana, Papua	2.05	196	P	Pb	10 27 33.9	-0.9
FAKI	Fak Fak	2.38	239	P	Pn	10 27 37.8	+1.8
FAKI	Fak Fak	2.38	239	*e*Pn	Pn	10 27 37.9	+1.9
FAKI				*e*Sn	Sn	10 28 04.3	-0.2
SIJI	Sorong	3.12	285	Pn	Pn	10 27 46.7	+0.5
	106nm,0.3s,baz=228,slow=22,SNR=273						
SIJI				Sn	Sn	10 28 23.3	+0.4
	561nm,0.3s,baz=337,slow=23,SNR=8.6						
SIJI				LR	LR	10 28 36.6	
	comp=Z,3µm,20.3s,baz=25,slow=33						
SIJI				Lg	Lg	10 28 37.0	
	469nm,0.3s,baz=158,slow=22,SNR=12						
BNDI	Bandanaira	5.20	237	P	Pn	10 28 16.8	+1.9
	3µm,1.1s,35µm67nm						
MSAI	Masohi	5.60	253	P	Pn	10 28 22.9	+2.6
	779nm,0.7s,6µm5.0nm						
GENI	Genyem	5.95	99	P	Pn	10 28 26.1	+0.9
	581nm,0.6s,8µm3.1nm						
AAI	Ambon	6.40	252	P	Pn	10 28 33.5	+2.2
JAY	Jayapura	6.47	97	Pn	Pn	10 28 32.5	+0.1
	11nm,0.3s,baz=210,slow=5.6,SNR=21						
JAY				Sn	Sn	10 29 46.0	+0.3
	baz=90,slow=20,SNR=1.8						
JAY				LR	LR	10 31 31.7	
	comp=Z,6µm,20.7s,baz=278,slow=43						
JAY	Jayapura	6.47	97	P	Pn	10 28 32.9	+0.5
LBMI	Labuha	6.86	279	P	Pn	10 28 38.9	+1.3
	1µm,1.0s,8µm4.4nm						
SAUI	Saumlaki	6.93	205	P	Pn	10 28 48.3	+10
SAUI	Saumlaki	6.93	205	*e*Pn	Pn	10 28 40.5	+1.9
TNTI	Ternate	7.33	289	P	Pn	10 28 46.4	+2.3
	265nm,1.2s,2µm3µm0.9nm						
TNTI	Ternate	7.33	289	*e*Pn	Pn	10 28 45.4	+1.3
NLAI	Namlea	7.34	258	P	Pn	10 28 45.6	+1.3
SANI	Sanana	8.30	267	P	Pn	10 28 56.3	-1.1
	470nm,0.8s,4µm						
PALU	Palau	8.96	1	P	Pn	10 29 06.3	-0.3
	baz=9.2,SNR=16						
KMSI	Cibinong	10.54	282	P	Pn	10 29 29.6	+1.4
	994nm,1.1s,15µm						
KDU	Kakadu	11.08	189	P	Pn	10 29 35.5	-0.2
	baz=11,SNR=373						
LUWI	Luwuk	11.52	273	P	Pn	10 29 41.2	-0.5
	466nm,0.9s,5µm						
LUWI	Luwuk	11.52	273	*e*Pn	Pn	10 29 40.9	-0.7
MTN	Manton Dam	11.52	196	P	Pn	10 29 41.8	+0.1
	baz=11,SNR=3.4						
MTN	Manton Dam	11.52	196	*e*Pn	Pn	10 29 41.4	-0.2
DAV	Davao City (W)	12.29	315	Pn	Pn	10 29 55.1	+3.0
	50nm,0.3s,baz=87,slow=7.5,SNR=5.1						
DAV	Davao City (W)	12.29	315	*e*Pn	Pn	10 29 51.5	-0.5
DAV				*e*		10 29 51.8	
MRSI	Marisa	12.52	280	P	Pn	10 29 56.7	+1.4
	69nm,0.7s,1µm						
APSI	Ampana	12.65	273	P	Pn	10 29 57.3	+0.2
	645nm,0.8s,5µm						
SKMP	Bagumbayan, Su	12.68	310	*e*P	Pn	10 29 59.2	+1.7
SOEI	Soe	12.79	231	P	Pn	10 30 03.1	+4.0
	381nm,0.8s,3µm						
SOEI	Soe	12.79	231	*e*Pn	Pn	10 30 00.1	+1.1
MANU	Manus Island	13.08	92	*e*Pn	Pn	10 30 05.9	+2.9
BUKP	Musuan	13.22	316	*e*P	Pn	10 30 07.7	+2.8
BATI	Baumata	13.53	231	Pn	Pn	10 30 08.9	-0.3
	15nm,0.3s,baz=54,slow=5.7,SNR=7.5						
BATI				Sn	Sn	10 32 33.5	-5.5
	8.3nm,0.3s,baz=346,slow=19,SNR=1.7						
BATI				LR	LR	10 36 09.0	
	comp=Z,3µm,19.3s,baz=30,slow=41						
BATI	Baumata	13.53	231	P	Pn	10 30 10.6	+1.4
	138nm,0.8s,1µm						
MMRI	Maumere	13.84	240	P	Pn	10 30 17.1	+3.8
	307nm,1.0s,4µm						
MMRI	Maumere	13.84	240	*e*Pn	Pn	10 30 14.6	+1.3
EDFI	Ende, Flores	14.37	240	P	Pn	10 30 23.2	+2.6
	133nm,1.5s,2µm						
PAGZ	Pagadian	14.41	311	*e*P	Pn	10 30 21.9	+0.7
PCI	Palu	14.46	273	P	Pn	10 30 24.3	+2.4
	277nm,1.1s,3µm						
TTSI	Tana Toraja	14.51	264	P	Pn	10 30 24.4	+1.8
	458nm,0.9s,4µm						
MPSI	Mapaga	14.52	278	P	Pn	10 30 23.4	+0.8
	58nm,1.4s,651nm						
BKSI	Bulukumba	14.59	255	P	Pn	10 30 24.1	+0.6
	105nm,1.0s,1µm						
SPSI	Sidrap Palu	14.67	261	P	Pn	10 30 26.9	+2.2
	145nm,0.8s,2µm						
KNRA	Kununurra	14.94	201	P	Pn	10 30 25.7	-2.6
	baz=15,SNR=118						
MSLP	Maasin	15.02	322	*e*P	P	10 30 32.9	-1.8
COEN	Coen	15.04	145	P	Pn	10 30 27.7	-2.0
	baz=15,SNR=16						
COEN	Coen	15.04	145	*e*Pn	Pn	10 30 27.8	-1.9
	61nm,0.8s						
PLP	Palo	15.76	324	⇓*e*P	Pn	10 30 38.5	-0.6
BASI	Baing, Sumba	16.04	238	P	P	10 30 45.5	-0.6
	395nm,0.9s,3µm						
WBSI	Waikabubak, Su	16.79	241	P	Pn	10 30 51.8	-0.5
	232nm,0.8s,2µm						
GUIM	Jordan	16.87	317	*e*P	P	10 30 55.6	+0.3
SMKI	Samarinda	17.11	274	P	P	10 30 59.3	+1.4
	205nm,1.1s,3µm						
MYLDM	Lahad Datu	17.17	293	*e*Pn	P	10 31 00.1	+1.5
	239nm,1.0s						
BKB	Balikpapan	17.38	271	P	P	10 31 11.1	+10
RCP	Roxas	17.45	319	⇑*e*P	P	10 31 03.6	+1.9
PLAI	Plampang	17.89	246	P	P	10 31 06.3	-0.3
	362nm,0.9s,4µm						
RABL	Rabaul	18.03	98	*e*Pn	P	10 31 09.8	+1.6
	158nm,0.6s						
WRAB	Tennant Creek	18.14	180	*e*Pn	Pn	10 31 07.1	-2.0
WRAB				*e*P	P	10 31 08.5	-0.8
WRAB	Tennant Creek	18.14	180	*e*P	Pn	10 31 07.1	-2.0
WB2	Warramunga Arr	18.15	180	*e*Pn	Pn	10 31 07.7	-1.5
	55nm,0.7s						
WB2				*e*Pn	P	10 31 08.8	-0.6
WR1	Warramunga Arr	18.15	180	*e*Pn	Pn	10 31 07.4	-1.8
	61nm,0.8s						
WR1				*e*Sn	Sn	10 34 17.5	-14
WRA	Warramunga Arr	18.15	180	P	Pn	10 31 07.4	-1.8
	7.3nm,0.3s,baz=0.9,slow=12,SNR=84						
WRA				S	Sn	10 34 17.5	-14
	0.7nm,0.3s,baz=0.9,slow=22,SNR=4.4						
WRA				Lg	Lg	10 36 39.9	
	baz=15,slow=26,SNR=4.3						
WRA				LR	LR	10 38 39.2	
	comp=Z,2µm,21.7s,baz=5.0,slow=39						
KBKI	Kotabaru	18.17	265	P	P	10 31 12.3	+2.7
	82nm,0.9s						
PVCP	Virac	18.20	327	*e*P	Pn	10 31 08.3	-1.4
PVCP				*e*S	Pn	10 31 10.8	+1.1
FITZ	Fitzroy Crossi	18.39	207	P	P	10 31 10.0	-2.0
	baz=18,SNR=205						

FITZ	Fitzroy Crossi	18.39	207	eP	P	10 31 10.4	-1.6
	259nm,0.9s						
GUMO	Guam	18.45	34	P	P	10 31 11.4	-1.3
	1.8nm,0.3s,baz=191,slow=7.6,SNR=4.4						
TWSI	Taliwang, Sumb	18.68	247	P	Pn	10 31 16.2	+0.5
	96nm,1.1s,1µm						
MTSU	Mount Surprise	19.09	150	P	P	10 31 19.9	+0.2
	baz=19,SNR=24						
SJMP	San Jose	19.19	317	eP	Pn	10 31 22.7	+0.9
MTKI	Muara Teweh, K	19.39	272	P	Pn	10 31 27.2	+2.9
QIS	Mount Isa	19.47	165	P	P	10 31 23.8	-0.1
	baz=19,SNR=36						
ENPP	El Nido	19.55	311	eP	P	10 31 24.4	-0.3
ENPP				eS	Sn	10 35 08.7	+3.7
KKM	Kota Kinabalu	19.60	293	eP	Pn	10 31 26.5	-0.4
	126nm,0.8s						
KKM	Kota Kinabalu	19.60	293	P	Pn	10 31 28.0	+1.1
SRBI	Singaraja	20.03	251	P	Pn	10 31 31.5	-0.3
	142nm,1.0s,2µm						
DNP	Denpasar	20.21	249	P	Pn	10 31 40.5	+6.5
IGBI	Denpasar	20.32	249	P	Pn	10 31 35.5	+0.2
	216nm,0.9s,3µm						
TGY	Tagaytay City	20.51	320	P	Pn	10 31 38.1	+0.6
	141nm,0.4s,baz=0.0,slow=6.1,SNR=3.7						
TGY				LR	LR	10 40 00.6	
	comp=Z,665nm,20.7s,baz=168,slow=38						
LUBP	Lubang	20.69	318	eP	P	10 31 36.9	-0.2
LUBP				eS	Sn	10 35 34.4	+1.8
JAGI	Jajag, Banyuwa	21.14	251	P	P	10 31 44.5	+2.4
	194nm,1.1s						
JAGI	Jajag, Banyuwa	21.14	251	eP	P	10 31 41.6	-0.5
	66nm,0.8s						
BALP	Baler	21.38	324	eP	P	10 31 44.2	-0.4
BLJI	Banyuglugur	21.47	253	P	P	10 31 47.8	+2.2
	141nm,1.0s,3µm						
CTA	Charters Tower	21.72	148	P	P	10 31 49.1	+0.8
	33nm,0.9s,baz=319,slow=11,SNR=16						
CTA				S	Sn	10 35 54.6	-2.8
	7.1nm,0.9s,baz=59,slow=18,SNR=2.3						
CTA				Lg	Lg	10 38 22.4	
	35nm,1.0s,baz=202,slow=9.5,SNR=3.2						
CTAO	Charters Tower	21.72	148	eP	P	10 31 49.9	+1.6
	55nm,0.8s						
GMJI	Gumukmas	21.76	252	P	P	10 31 50.2	+1.5
	83nm,0.8s,2µm						
AS01	Alice Springs	21.86	181	eP	P	10 31 49.3	-0.4
AS31	Alice Springs	21.86	181	eP	P	10 31 49.9	+0.1
	46nm,0.8s						
AS31				eS	S	10 35 47.1	-3.5
ASAR	Alice Springs	21.86	181	P	P	10 31 49.4	-0.4
	54nm,0.7s,baz=7.7,slow=11,SNR=269						
ASAR				S	S	10 35 47.1	-3.5
	27nm,1.0s,baz=359,slow=25,SNR=3.9						
ASAR				LR	LR	10 41 40.7	
	comp=Z,2µm,18.6s,baz=3.5,slow=40						
CAUP	Cauayan	22.21	327	eP	P	10 31 53.1	-0.4
GRJI	Gresik	22.35	256	P	P	10 31 59.1	+4.1
	218nm,0.9s,2µm						
SCZP	Santa Cruz	22.42	321	eP	P	10 31 55.2	-0.5
SBUM	Sibu	22.43	280	eP	P	10 31 57.6	+1.6
	60nm,1.0s						
SBUM	Sibu	22.43	280	P	P	10 31 58.0	+2.0
PBKI	Pangkalan Bun	22.62	267	P	P	10 32 00.3	+2.4
	562nm,1.1s,4µm						
STKI	Sintang	22.87	274	P	P	10 32 03.1	+2.5
	101nm,0.8s						
TBJI	Tambak Boyo	22.94	256	P	P	10 32 06.0	+4.7
	191nm,0.9s						
PWJI	Pagerwojo	23.25	254	P	P	10 32 05.7	+1.2
	115nm,1.0s						
APYP	Conner	23.28	327	eP	P	10 32 03.2	-1.5
NGJI	Ngawi	23.43	255	P	P	10 32 09.5	+3.2
	150nm,1.2s						
PCJI	Pacitan	23.90	254	P	P	10 32 10.2	-0.6
	147nm,1.1s						
WRKA	Warakurna	23.93	193	P	P	10 32 10.3	-0.7
	baz=24,SNR=210						
MBWA	Marble Bar	24.00	215	eP	P	10 32 12.5	+0.8
	152nm,0.9s						
MBWA	Marble Bar	24.00	215	P	P	10 32 14.1	+2.3
WOJI	Wonogiri, Jawa	24.06	254	P	P	10 32 14.3	+2.0
	88nm,0.9s						
KSM	Kuching	24.17	277	eP	P	10 32 14.7	+1.3
	216nm,0.8s						
KSM	Kuching	24.17	277	P	P	10 32 15.0	+1.6
SMRI	Semarang	24.35	257	P	P	10 32 20.1	+5.0
SMRI	Semarang	24.35	257	eP	P	10 32 16.2	+1.1
	415nm,0.9s						
UGM	Wanagama	24.46	255	P	P	10 32 26.6	+11
PATS	Pohnpei	25.43	70	eP	P	10 32 25.6	+0.8
	76nm,1.1s						
KPJI	Karang Pucung	25.88	257	P	P	10 32 29.6	+0.7
	348nm,1.0s,3µm						
JCJI	Jatiwangi	26.37	259	P	P	10 32 38.9	+5.5
CMJI	Cimerak	26.44	256	P	P	10 32 41.0	+7.1
QLP	Quilpie	26.55	160	P	P	10 32 33.9	-0.8
	baz=26,SNR=46						
CISI	Cisompet, Garu	27.01	257	P	P	10 32 40.6	+1.5
CISI	Cisompet, Garu	27.01	257	eP	P	10 32 37.9	-1.3
	158nm,0.8s						
LEM	Lembang	27.07	258	P	P	10 32 38.1	-1.7
	16nm,0.4s,baz=319,slow=19,SNR=3.0						
LEM				LR	LR	10 45 16.8	
	comp=Z,1µm,19.9s,baz=63,slow=41						
CBJI	Citeko	27.76	259	P	P	10 32 51.0	+5.2
DBJI	Dramaga	27.88	259	P	P	10 32 53.8	+6.9
YULB	Yu-li	27.94	334	eP	P	10 32 48.0	+0.7
	13nm,0.7s						
NACB	Ninganchiao	28.50	335	eP	P	10 32 51.6	-0.7
	28nm,0.9s						
EIDS	Eidsvold	28.59	147	P	P	10 32 54.6	+1.5
	baz=28,SNR=5.0						
EIDS	Eidsvold	28.59	147	eP	P	10 32 53.7	+0.6
	21nm,0.9s						
JOW	Kunigami	28.93	349	P	P	10 32 55.0	-1.0
	16nm,1.0s,baz=270,slow=13,SNR=2.4						
JOW				LR	LR	10 43 45.4	
	comp=Z,717nm,20.3s,baz=257,slow=35						
MEEK	Meekatharra	29.02	210	P	P	10 32 56.6	-0.4
	baz=29,SNR=8.7						
YHNB	Yeheng	29.03	335	eP	P	10 32 56.5	-0.7
	20nm,0.9s						
FORT	Forrest	29.54	191	eP	P	10 33 03.0	+1.5
	39nm,0.8s						
MYKOM	Kota Tinggi	30.62	276	eP	P	10 33 12.1	+0.8
	67nm,1.1s						
MYKOM	Kota Tinggi	30.62	276	P	P	10 33 13.0	+1.7
STKA	Stephens Creek	30.82	168	P	P	10 33 11.7	-1.1
	baz=31,SNR=24						
STKA	Stephens Creek	30.82	168	P	P	10 33 11.1	-1.7
	21nm,0.8s,baz=343,slow=8.5,SNR=32						
STKA	Stephens Creek	30.82	168	eP	P	10 33 11.5	-1.3
	7.5nm,1.1s						
BBOO	Buckleboo	31.01	177	P	P	10 33 13.2	-1.3
	baz=31,SNR=13						
CMSA	Cobar Meteorol	31.60	161	P	P	10 33 18.8	-0.8
	baz=32,SNR=14						
QIZ	Qiongzhong	31.63	312	P	P	10 33 16.8	-3.3
QIZ				sP	sP	10 33 32.1	+3.1
QIZ				S	S	10 38 26.8	-1.5
QIZ				sS	sS	10 38 41.9	+3.1
QIZ				LR	LR		
	comp=N,570nm,20.6s						
QIZ				LR	LR		
	comp=E,430nm,20.8s						
QIZ				LR	LR		
	comp=Z,640nm,23.5s						
QIZ	Qiongzhong	31.63	312	eP	P	10 33 19.7	-0.3
	27nm,0.9s						
KMBL	Kambalda	31.77	200	P	P	10 33 20.9	-0.3
	baz=32,SNR=21						
HTT	Hallett	31.89	173	P	P	10 33 21.4	-0.8
	baz=32,SNR=6.5						
GZH	Guangzhou	31.97	322	P	P	10 33 24.9	+1.9
GZH				PP	PnPn	10 34 31.0	+2.7
GZH				S	S	10 38 35.0	+1.5
GZH				LR	LR		
	comp=N,460nm,22.7s						
GZH				LR	LR		
	comp=E,430nm,16.1s						
MORW	Morawa	32.31	211	P	P	10 33 26.3	+0.4
	baz=32,SNR=4.4						
ARMA	Armidale	32.98	152	P	P	10 33 32.7	+0.8
	baz=33,SNR=6.5						
ARMA	Armidale	32.98	152	eP	P	10 33 32.8	+0.8
	26nm,0.8s						
BLDU	Ballidu	33.25	208	P	P	10 33 33.4	-0.7
	baz=33,SNR=21						
KLBR	Kellerberrin	33.60	206	P	P	10 33 36.6	-0.6
	baz=34,SNR=17						
IPM	Ipoh	33.79	281	eP	P	10 33 38.9	-0.2
	44nm,0.8s						
KULM	Kulim	34.30	282	eP	P	10 33 43.3	-0.2
	35nm,0.7s						
KULM	Kulim	34.30	282	P	P	10 33 44.0	+0.5
MUN	Mundaring	34.62	208	P	P	10 33 45.7	-0.4
	baz=35,SNR=3.2						
SKLT	Songkhla	34.72	285	P	P	10 33 47.8	+0.7
	62nm,0.8s						
JNU	Nakatsue	34.76	355	P	P	10 33 46.2	-1.1
	39nm,1.0s,baz=207,slow=3.8,SNR=11						
JNU	Nakatsue	34.76	355	eP	P	10 33 45.9	-1.4
	47nm,1.0s						
SSE	Sheshan	34.89	340	P	P	10 33 48.8	+0.4
SSE				S	S	10 39 17.3	-1.3
SSE				pmax	pmax		
	comp=Z,22nm,0.8s						
SSE				LR	LR		
	comp=N,370nm,20.0s						
SSE				LR	LR		
	comp=E,380nm,20.7s						
NWAO	Narrogin (SRO)	34.97	205	P	P	10 33 50.1	+1.0
	13nm,0.7s,baz=271,slow=10,SNR=3.6						
NWAO				LR	LR	10 51 05.4	
	comp=Z,855nm,18.5s,baz=261,slow=42						
JHJ	Hachijo jima 2	35.00	8	LR	LR	10 45 08.2	
	comp=Z,787nm,18.9s,baz=184,slow=31						
SKNT	Sakolnakorn	35.17	303	P	P	10 33 50.8	-0.2
	40nm,1.0s						
SRAK	Srakaew	35.55	297	P	P	10 33 49.5	-4.7
ARPS	Mount Arapiles	35.61	170	P	P	10 33 54.2	-0.3
	baz=36,SNR=39						
PSI	Prapat	35.62	277	P	P	10 33 54.3	-0.8
	34nm,1.1s,baz=7.1,slow=0.2,SNR=13						
PSI				LR	LR	10 50 35.1	
	comp=Z,467nm,19.1s,baz=91,slow=40						
PSI	Prapat	35.62	277	eP	P	10 33 54.4	-0.8
	54nm,0.9s						
TRTT	Trang	35.77	286	P	P	10 33 56.8	+0.6
	38nm,0.9s,462nm						
NONG	Nongkai	36.39	304	P	P	10 34 00.9	-0.6
	1.7nm,0.9s						
RKGY	Rocky Gully	36.52	204	P	P	10 34 02.7	+0.3
	baz=36,SNR=5.1						
NJ2	Nanjing	36.59	338	eP	P	10 34 03.4	+0.4
NJ2				pP	sP	10 34 12.2	+0.2
NJ2				S	S	10 39 46.9	+2.1
NJ2				sS	sS	10 40 01.4	+6.1
NJ2				pmax	pmax		
	comp=Z,30nm,0.8s						
NJ2				LR	LR		
	comp=N,670nm,19.5s						
NJ2				LR	LR		
	comp=E,620nm,16.3s						
NJ2				LR	LR		
	comp=Z,1µm,20.1s						
GSI	Gunungsitoli	36.82	274	eP	P	10 34 03.1	-2.1
	49nm,0.9s						
INU	Inuyama	36.92	4	eP	P	10 34 05.6	-0.2
	22nm,1.1s						
PKDT	Phuket	37.09	285	P	P	10 34 08.1	+0.6
	36nm,0.7s,4µm						
WHN	Wuhan	37.25	331	P	P	10 34 09.1	+0.5
WHN				sP	sP	10 34 22.5	+4.9
WHN				S	S	10 39 55.4	+0.6
WHN				LR	LR		
	comp=N,930nm,11.2s						
WHN				LR	LR		
	comp=E,320nm,12.0s						
WHN				LR	LR		
	comp=Z,1µm,23.3s						
DZM	Mont Dzumac	37.27	125	LR	LR	10 49 54.0	
	comp=Z,2µm,18.8s,baz=43,slow=37						
DZM	Mont Dzumac	37.27	125	eS	S	10 40 01.6	+6.0
	412nm,32.2s						
DZM				eLR	LR	10 44 26.0	
	2µm,23.9s						
PHET	Kaeng Krachan	37.31	294	P	P	10 34 09.9	+0.5
	20nm,0.9s,178nm						
PBKT	Sadao Pong	37.55	300	P	P	10 34 11.2	-0.1
	28nm,1.0s						
MJAR	Matsushiro Arr	38.20	5	P	P	10 34 14.6	-1.9
	2.6nm,0.7s,baz=186,slow=10,SNR=10						
MJAR				LR	LR	10 47 04.6	
	comp=Z,547nm,19.9s,baz=185,slow=32						
MAJO	Matsushiro	38.20	5	eP	P	10 34 17.8	+1.2
	12nm,1.0s						
MAJO	Matsushiro	38.20	5	ceP	P	10 34 18.5	+1.9
MAJO				pmax	pmax		
	comp=Z,12nm,0.9s						
MAT	Matsushiro	38.20	5	P	P	10 34 14.2	-2.4
MAT				S	S	10 40 07.4	-1.7
MJB9	Matsu-Tunnel	38.20	5	eP	P	10 34 16.8	+0.2
	comp=Z,12nm,1.0s						
SRDT	SRDT	38.29	296	P	P	10 34 18.2	+0.6
	comp=Z,81nm,1.0s,comp=Z,2µm						
PHIT	Phitsanulok	38.29	301	P	P	10 34 18.9	+1.3
	comp=Z,35nm,1.0s						
TJN	Taejon	38.41	351	iP	P	10 34 17.8	-0.4
H11N1	WAKE ISLAND Hy	38.42	55	T	T	11 15 31.3	
	baz=246,slow=75,SNR=3.6						
H11N2	WAKE ISLAND Hy	38.43	55	T	T	11 15 23.0	
	baz=246,slow=75,SNR=9.4						
H11N3	WAKE ISLAND Hy	38.44	55	T	T	11 15 35.7	
	baz=246,slow=75,SNR=6.7						
UTHA	Uthaitani	38.46	298	P	P	10 34 19.1	+0.1
	comp=Z,21nm,0.8s,comp=Z,157nm						
GYA	Guiyang	38.64	318	⇑iP	P	10 34 20.5	-0.1
GYA				pP	sP	10 34 31.0	+1.4
GYA				PP	PnPn	10 35 54.4	+3.1
GYA				S	S	10 40 16.2	-0.1
GYA				sS	sS	10 40 32.3	+5.4
GYA				pmax	pmax		
	comp=Z,30nm,0.9s						
GYA				pmax	pmax		
	comp=Z,120nm,5.0s						
GYA				LR	LR		
	comp=Z,590nm,17.0s						
GYA				LR	LR		
	comp=Z,580nm,16.9s						
GYA				LR	LR		
	comp=Z,510nm,17.3s						
NANT	Nan	38.78	303	P	P	10 34 22.0	+0.3
	comp=Z,10nm,0.8s,comp=Z,102nm						
UMPA	Umpang Tak	39.23	298	P	P	10 34 25.4	-0.2
	comp=Z,20nm,0.9s,comp=Z,525nm						
KS01	Wonju Array Si	39.41	352	eP	P	10 34 25.9	-0.7
LAMP	Lampang	39.55	302	P	P	10 34 28.6	+0.4
	comp=Z,17nm,0.8s,comp=Z,142nm						
CM01	Chiang Mai Arr	40.08	302	eP	P	10 34 32.2	-0.4
CM31	Chiang Mai Arr	40.11	302	eP	P	10 34 32.2	-0.6
CM31				ePcP	PcP	10 36 39.0	+1.7
CMAR	Chiang Mai Arr	40.11	302	P	P	10 34 33.0	+0.1
	comp=Z,21nm,0.8s,baz=124,slow=6.6,SNR=101						
CMAR				PcP	PcP	10 36 39.0	+1.7
	comp=Z,1.3nm,0.4s,baz=155,slow=2.0,SNR=4.1						
CMMT	Chiang Mai	40.26	302	P	P	10 34 33.8	-0.3
	comp=Z,41nm,0.9s,comp=Z,622nm						
CHTO	Chiang Mai	40.26	302	eP	P	10 34 33.9	-0.2
	comp=Z,29nm,0.8s						
CHTO	Chiang Mai	40.26	302	P	P	10 34 34.3	+0.2
	SNR=12						
CHTO	Chiang Mai	40.26	302	eP	P	10 34 33.9	-0.2
CHTO				pmax	pmax		
	comp=Z,29nm,0.8s						
CHTO	Chiang Mai	40.26	302	P	P	10 34 33.9	-0.2
	comp=Z,180nm,0.9s,comp=Z,2µm						
KMI	Kunming	40.54	313	P	P	10 34 37.4	+0.9
KMI				pP	sP	10 34 46.2	+0.6
KMI				sP	pP	10 34 49.4	+6.4
KMI				PP	PnPn	10 36 14.8	+0.7
KMI				S	S	10 40 43.7	-1.3
KMI				sS	sS	10 41 05.1	+9.4
KMI				SS	SS	10 43 47.1	+1.9
KMI				pmax	pmax		
	comp=Z,26nm,0.6s						
KMI				pmax	pmax		
	comp=Z,160nm,4.5s						
KMI				LR	LR		
	comp=Z,350nm,17.4s						
KMI				LR	LR		
	comp=Z,310nm,18.5s						
KMI				LR	LR		
	comp=Z,540nm,22.3s						
CMAI	Chiengmai2	40.69	304	P	P	10 34 37.9	+0.1
	comp=Z,3.9nm,1.2s,comp=Z,207nm						
TIA	Tai'an	40.95	339	P	P	10 34 39.2	-0.3
TIA				S	S	10 40 49.7	-0.7
TIA				pmax	pmax		
	comp=Z,26nm,0.9s						
TIA				LR	LR		
	comp=Z,360nm,14.3s						
TIA				LR	LR		
	comp=Z,200nm,10.0s						
TIA				LR	LR		
	comp=Z,740nm,23.6s						
XAN	Xi'an	42.79	328	P	P	10 34 54.1	-0.5
XAN				pP	sP	10 35 03.8	+0.1
XAN				sP	pP	10 35 07.8	+6.7
XAN				PP	PP	10 36 35.0	+0.8
XAN				S	S	10 41 11.3	-6.5
XAN				pmax	pmax		
	comp=Z,28nm,1.0s						
XAN				pmax	pmax		
	comp=Z,150nm,2.9s						
XAN				LR	LR		
	comp=Z,280nm,20.8s						
XAN				LR	LR		
	comp=Z,440nm,19.4s						
XAN				LR	LR		
	comp=Z,570nm,21.6s						
CD2	Chengdu	43.51	321	P	P	10 35 01.5	+1.0
CD2				pP	sP	10 35 10.8	+1.2
CD2				sP	pP	10 35 14.9	+7.9
CD2				PP	PP	10 36 43.2	+1.2
CD2				S	S	10 41 29.2	+0.7
CD2				sS	sS	10 41 45.2	+6.0
CD2				SS	SS	10 44 46.1	+2.6
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,160nm,5.2s						
CD2				LR	LR		
	comp=Z,1µm,19.6s						
CD2				LR	LR		
	comp=Z,880nm,17.7s						
CD2				LR	LR		
	comp=Z,1µm,19.6s						
BJT	Baijiatuau	44.69	340	eP	P	10 35 08.4	-1.3
	comp=Z,89nm,1.0s						
BJT	Baijiatuau	44.69	340	eP	P	10 35 08.4	-1.3
BJT				pmax	pmax		
	comp=Z,89nm,1.0s						
BJI	Beijing	44.70	340	⇑iP	P	10 35 09.6	-0.2
BJI				S	S	10 41 45.6	+0.2
BJI				pmax	pmax		
	comp=Z,120nm,1.0s						
BJI				LR	LR		
	comp=Z,650nm,23.7s						
BJI				LR	LR		
	comp=Z,2µm,20.2s						
BJI				LR	LR		
	comp=Z,4µm,73.9s						
USA0B	Ussuriysk Arra	45.72	358	eP	P	10 35 17.4	-0.5
	comp=Z,16nm,1.0s						
USRK	Ussuriysk Ar.	45.72	358	P	P	10 35 17.3	-0.5
	comp=Z,9.8nm,0.7s,baz=182,slow=7.8						
CN2	Changchun	45.96	351	eP	P	10 35 19.6	-0.2
CN2				eS	S	10 42 03.1	-0.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,200nm,21.0s						
CN2				LR	LR		
	comp=Z,600nm,21.0s						
CN2				LR	LR		
	comp=Z,200nm,21.0s						
ASAJ	Asahikawa	46.20	8	P	P	10 35 21.3	-0.3
	comp=Z,11nm,0.8s,baz=213,slow=13,SNR=13						
ASAJ				LR	LR	10 51 37.3	
	comp=Z,298nm,21.7s,baz=204,slow=32						
ASAJ	Asahikawa	46.20	8	eP	P	10 35 21.1	-0.5
MDJ	Mudanjiang	46.28	355	eP	P	10 35 22.2	0.0
	comp=Z,22nm,0.6s						
YUK	Yuzh-Kuril'sk	46.68	11	diP	P	10 35 23.6	-1.8
YUK				e		10 37 04.8	
YUK				eS	S	10 42 13.4	-0.3
YUK				eSS	SS	10 45 34.4	-5.9
YUK				pmax	pmax		
	comp=Z,114nm,1.0s						
YUK				pmax	pmax		
	comp=E,60nm,0.9s						
YUK				pmax	pmax		
	comp=N,64nm,0.5s						
YUK				pmax	pmax		
	comp=Z,179nm,1.3s						
LZH	Lanzhou	47.08	326	eP	P	10 35 30.0	+1.1
LZH				pP	sP	10 35 40.8	+2.8
LZH				sP	pP	10 35 45.2	+10
LZH				PP	PP	10 37 19.8	0.0
LZH				S	S	10 42 19.5	-0.6
LZH				sS	sS	10 42 37.7	+6.9
LZH				SS	SS	10 45 42.5	-4.9
LZH				pmax	pmax		
	comp=Z,96nm,1.3s						
LZH				pmax	pmax		
	comp=Z,290nm,4.3s						
LZH				LR	LR		
	comp=Z,530nm,12.9s						
LZH				LR	LR		
	comp=Z,600nm,11.9s						
LZH				LR	LR		
	comp=Z,770nm,13.6s						
HHC	Hu-ho-hao-te	47.12	336	eP	P	10 35 29.8	+0.8
HHC				sP	sP	10 35 47.4	+9.3
HHC				S	S	10 42 20.9	+0.5
HHC				sS	sS	10 42 38.9	+7.7
HHC				pmax	pmax		
	comp=Z,38nm,0.9s						
HHC				pmax	pmax		
	comp=Z,130nm,5.3s						
HHC				LR	LR		
	comp=Z,560nm,14.7s						
HHC				LR	LR		
	comp=Z,380nm,15.0s						
HHC				LR	LR		
	comp=Z,520nm,16.5s						
BTO	Baotou	47.55	335	eP	P	10 35 29.4	-3.0
YSS	Yuzh-Sakhalins	49.00	8	eP	P	10 35 43.4	+0.1
	comp=Z,35nm,0.8s						
YSS	Yuzh-Sakhalins	49.00	8	⇓eP	P	10 35 43.5	+0.1
YSS				e		10 35 55.4	
YSS				e		10 37 04.5	
YSS				e		10 37 42.0	
YSS				ePPP	PPP	10 38 35.4	
YSS				eS	S	10 42 41.4	-5.2
YSS				eSS	SS	10 46 13.0	-4.8
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
YSS				pmax	pmax		
	comp=Z,200nm,2.8s						
YSS				smax	smax		
	comp=N,300nm,5.0s						
YSS				smax	smax		
	comp=E,100nm,6.5s						
YSS				MLR	MLR		
	comp=Z,200nm,17.0s						
YSS				MLR	MLR		
	comp=N,200nm,13.0s						
YSS				MLR	MLR		
	comp=E,200nm,15.0s						
SHL	Shillong	49.14	306	eP	P	10 35 44.3	-0.7
	comp=E,40nm,0.8s						
SHL	Shillong	49.14	306	eP	P	10 35 44.5	-0.5
SHL	Shillong	49.14	306	eP	P	10 35 44.3	-0.7
SHL				pmax	pmax		
	comp=Z,40nm,0.8s						
KLR	Kul'dur	50.75	358	ceP	P	10 35 56.5	-0.2
LSA	Lhasa	51.66	311	eP	P	10 36 04.7	+0.3
	comp=Z,13nm,0.8s						
LSA	Lhasa	51.66	311	eP	P	10 36 04.7	+0.3
LSA				pmax	pmax		
	comp=Z,13nm,0.8s						
GTA	Gaotai	51.68	326	⇑P	P	10 36 04.2	+0.2
GTA				pP	sP	10 36 14.4	+1.3
GTA				sP	pP	10 36 18.3	+7.7
GTA				S	S	10 43 23.6	-0.9

GTA				sS	sS	10 43 39.4	+4.0
GTA				SS	SS	10 47 01.1	-0.1
GTA				pmax	pmax		
	comp=Z,18nm,1.2s						
GTA				pmax	pmax		
	comp=Z,110nm,4.6s						
GTA				LR	LR		
	comp=Z,300nm,16.8s						
GTA				LR	LR		
	comp=Z,240nm,19.6s						
GTA				LR	LR		
	comp=Z,450nm,17.9s						
HIA	Hailar	52.28	348	i P	P	10 36 07.5	-0.6
HIA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
GRNR	Gornyy	52.28	2	eP	P	10 36 02.1	-6.0
TYV	Tymovskoe	52.83	7	eP	P	10 36 12.4	+0.3
TYV				eS	S	10 43 39.5	0.0
TYV				pmax	pmax		
	comp=Z,26nm,1.3s						
TYV				pmax	pmax		
	comp=Z,200nm,7.6s						
TYV				smax	smax		
	comp=E,600nm,11.3s						
RPZ	Rata Peaks	53.09	147	LR	LR	10 58 59.7	
	comp=E,852nm,18.4s,baz=346,slow=36						
ODAN	Odare	53.33	306	eP	P	10 36 16.1	-0.5
	comp=E,75nm,0.7s						
URZ	Urewera	53.49	138	LR	LR	10 59 27.3	
	comp=E,1µm,18.6s,baz=327,slow=36						
BKZ	Black Stump Fm	53.57	140	eP	P	10 36 18.0	+0.1
	comp=E,14nm,1.0s						
RAMN	Ramite	54.01	305	eP	P	10 36 21.4	-0.2
	comp=E,96nm,0.8s						
PALK	Pallekele	54.19	280	LR	LR	11 02 18.5	
	comp=E,321nm,20.2s,baz=153,slow=39						
JIRN	Jiri	54.63	306	eP	P	10 36 25.9	-0.4
	comp=E,71nm,0.8s						
AFI	Afiamalu	54.67	106	LR	LR	10 58 16.4	
	comp=E,327nm,21.4s,baz=242,slow=34						
ULN	Ulaanbaatar	54.76	338	eP	P	10 36 26.8	+0.3
	comp=E,14nm,1.1s						
ULN	Ulaanbaatar	54.76	338	P	P	10 36 27.6	+1.1
	SNR=12						
ULN	Ulaanbaatar	54.76	338	ceP	P	10 36 27.0	+0.5
ULN				pmax	pmax		
	comp=Z,17nm,1.3s						
NKL	Nikolayevsk	54.90	5	eP	P	10 36 28.0	+0.9
NKL				e		10 36 35.0	
NKL				pmax	pmax		
	comp=Z,43nm,1.0s						
GUN	Gumba	54.99	306	eP	P	10 36 28.4	-0.4
	comp=Z,51nm,0.6s						
SONA0	Songino Array	54.99	337	eP	P	10 36 28.2	+0.1
SONM	Songino Array	54.99	337	P	P	10 36 28.2	+0.1
	comp=Z,4.2nm,0.8s,baz=150,slow=8.0,SNR=13						
SONM				LR	LR	10 59 31.1	
	comp=Z,379nm,20.0s,baz=145,slow=36						
SONA1	Songino Array	54.99	337	eP	P	10 36 27.7	-0.5
KKN	Kakani	55.42	306	eP	P	10 36 31.2	-0.6
DMN	Daman	55.49	305	eP	P	10 36 31.8	-0.5
	comp=Z,51nm,0.9s						
ZEA	Zeya	55.53	355	eP	P	10 36 32.2	+0.4
ZEA				pmax	pmax		
	comp=Z,32nm,1.2s						
ZEA				MLR	MLR		
	comp=N,500nm,18.0s						
ZEA				MLR	MLR		
	comp=Z,600nm,18.0s						
GKN	Gorkha	56.03	306	eP	P	10 36 35.6	-0.5
	comp=Z,80nm,1.0s						
KOLN	Koldanda	56.79	305	eP	P	10 36 41.3	-0.2
	comp=Z,78nm,0.8s						
DANN	Dangsing	56.88	306	eP	P	10 36 41.9	-0.4
	comp=Z,70nm,1.0s						
PYUN	Piuthan	57.41	305	eP	P	10 36 45.9	0.0
	comp=Z,253nm,0.8s						
PEA0B	Petropavlovsk-	58.01	16	eP	P	10 36 50.1	+0.7
	comp=Z,36nm,1.1s						
PETK	Petropavlovsk-	58.01	16	P	P	10 36 49.5	+0.1
	comp=Z,9.7nm,0.8s,baz=186,slow=5.8						
PETK				LR	LR	11 01 34.4	
	comp=Z,103nm,20.0s,baz=197,slow=36						
PETK	Petropavlovsk-	58.01	16	eP	P	10 36 49.3	-0.1
PETK	Petropavlovsk-	58.01	16	eP	P	10 36 49.3	-0.1
PEA1	Petropavlovsk-	58.01	16	eP	P	10 36 49.5	+0.1
HYB	Hyderabad	58.08	292	i P	P	10 36 50.0	-0.6
PET	Petropavlovsk	58.21	17	eP	P	10 36 50.1	-0.7
PET				eS	S	10 44 49.7	-1.6
PET				eSS	SS	10 48 43.0	-0.4
PET				pmax	pmax		
	comp=Z,27nm,1.2s						
PET				MLR	MLR		
	comp=Z,200nm,18.0s						
ZAK	Zakamensk	58.25	337	eP	P	10 36 50.9	-0.4
ZAK				pmax	pmax		
	comp=Z,15nm,1.1s						
TLY	Talaya	59.16	338	eP	P	10 36 58.5	+1.1
TLY				eS	S	10 45 01.1	-2.7
TLY				pmax	pmax		
	comp=Z,6.0nm,0.9s						
IRK	Irkutsk	59.38	339	eP	P	10 36 46.7	-12
IRK				pmax	pmax		
	comp=Z,45nm,31.0s						
MOY	Mondy	60.16	337	eP	P	10 37 05.4	+0.9
MOY				pmax	pmax		
	comp=Z,33nm,1.5s						
BOD	Bodaibo	61.50	348	eP	P	10 37 12.3	-1.0
BOD				e		10 37 20.8	
WMQ	Urumqi	61.50	323	P	P	10 37 14.5	+0.8
WMQ				pP	sP	10 37 25.5	+2.6
WMQ				S	S	10 45 35.4	+1.2
WMQ				SS	SS	10 49 41.8	+6.2
WMQ				pmax	pmax		
	comp=Z,57nm,1.3s						
WMQ				LR	LR		
	comp=Z,730nm,16.5s						
WMQ				LR	LR		
	comp=Z,560nm,18.1s						
WMQ				LR	LR		
	comp=Z,450nm,19.5s						
MA2	Magadan	62.43	9	i P	P	10 37 19.7	+0.1
MA2				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HVS	Khovu-Aksy	62.89	333	i P	P	10 37 22.9	0.0
HVS				pmax	pmax		
	comp=Z,24nm,1.0s						
YAK	Yakutsk	63.63	358	eP	P	10 37 27.4	-0.1
	comp=Z,113nm,0.8s						
YAK	Yakutsk	63.63	358	eP	P	10 37 26.8	-0.7
YAK				e*PP	sP	10 37 37.3	+0.6
YAK				e		10 38 02.1	
YAK				eS	S	10 45 58.4	-1.8
YAK				e*SS	sS	10 46 12.4	+1.1
YAK				e		10 47 16.5	
YAK				eSSS	SSS	10 53 01.8	
YAK				pmax	pmax		
	comp=Z,56nm,0.9s						
YAK				pmax	pmax		
	comp=N,11nm,1.1s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.3s						
YAK				pmax	pmax		
	comp=Z,132nm,4.3s						
YAK				pmax	pmax		
	comp=E,64nm,4.1s						
YAK				pmax	pmax		
	comp=N,57nm,4.2s						
YAK				smax	smax		
	comp=E,138nm,5.1s						
YAK				smax	smax		
	comp=N,70nm,4.8s						
YAK				MLR	MLR		
	comp=Z,279nm,18.0s						
YAK				MLR	MLR		
	comp=N,296nm,20.0s						
YAK				MLR	MLR		
	comp=E,52nm,19.0s						
DGZ	Jazzator, Alta	65.05	329	i P	P	10 37 37.0	-0.3
DGZ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SEY	Seymchan	65.87	9	d iP	P	10 37 42.3	+0.2
MK01	Makanchi Array	66.29	324	eP	P	10 37 45.0	-0.1
MK31	Makanchi Array	66.31	324	eP	P	10 37 45.3	0.0
MK31	Makanchi Array	66.31	324	eP	P	10 37 45.3	0.0
MK32	Makanchi Array	66.31	324	eP	P	10 37 45.2	0.0
MKAR	Makanchi Array	66.31	324	P	P	10 37 45.2	0.0
	comp=Z,14nm,0.6s,baz=114,slow=7.9,SNR=143						
MKAR				LR	LR	11 09 44.8	
	comp=Z,208nm,18.0s,baz=120,slow=39						
MKAR	Makanchi Array	66.31	324	eP	P	10 37 45.3	0.0
	comp=Z,87nm,0.8s						
MKAR	Makanchi Array	66.31	324	eP	P	10 37 45.3	0.0
MKAR				pmax	pmax		
	comp=Z,87nm,0.8s						
MAKZ	Makanchi	66.50	324	eP	P	10 37 46.4	-0.1
	comp=Z,23nm,0.8s						
MAKZ	Makanchi	66.50	324	eP	P	10 37 46.4	-0.1
MAKZ				pmax	pmax		
	comp=Z,23nm,0.8s						
PRZ	Przheval'sk	66.72	318	eP	P	10 37 49.1	+0.9
	comp=Z,21nm,0.7s						
PRZ	Przheval'sk	66.72	318	eP	P	10 37 49.1	+0.9
PRZ				pmax	pmax		
	comp=Z,21nm,0.7s						
TARG	Taragay, Kyrgy	66.80	317	eP	P	10 37 49.3	+0.3
	comp=Z,9.8nm,0.9s						
NIL	Nilore	67.18	308	eP	P	10 37 51.4	+0.3
	comp=Z,12nm,0.8s						
NIL	Nilore	67.18	308	eP	P	10 37 51.4	+0.3
NIL				pmax	pmax		
	comp=Z,12nm,0.8s						
KSH	Kashi	67.18	314	P	P	10 37 52.5	+1.4
KSH				sP	sP	10 38 06.8	+6.4
KSH				ePcP	PcP	10 38 20.7	+1.6
KSH				PP	PP	10 40 23.8	+4.4
KSH				S	S	10 46 41.5	-3.4
KSH				ScS	SKSac	10 47 41.3	-6.4
KSH				pmax	pmax		
	comp=Z,20nm,1.0s						
KSH				pmax	pmax		
	comp=Z,160nm,3.9s						
KSH				LR	LR		
	comp=Z,480nm,18.0s						
KSH				LR	LR		
	comp=Z,200nm,17.7s						
ZAA0	Zalesovo Array	68.86	331	eP	P	10 38 01.0	-0.2
ZAA0				epP	sP	10 38 09.7	-0.8
ZALV	Zalesovo Beam	68.86	331	P	P	10 38 00.1	-1.1
	comp=Z,5.9nm,0.8s,baz=118,slow=6.0,SNR=9.0						
ZALV				LR	LR	11 07 32.2	
	comp=Z,120nm,21.5s,baz=77,slow=35						
ZALV	Zalesovo Beam	68.86	331	eP	P	10 37 59.8	-1.4
ZAA1	Zalesovo Array	68.87	331	eP	P	10 38 00.1	-1.1
FRU	Bishkek	69.41	317	eP	P	10 38 10.0	+5.1
AAK	Ala-Archa	69.42	317	LR	LR	11 10 44.8	
	comp=Z,114nm,19.5s,baz=95,slow=38						
AAK	Ala-Archa	69.42	317	eP	P	10 38 05.6	+0.5
	comp=Z,8.9nm,1.1s						
AAK	Ala-Archa	69.42	317	eP	P	10 38 05.6	+0.5
AAK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
NVS	Novosibirsk	70.14	331	eP	P	10 38 13.1	+4.1
NVS				pmax	pmax		
	comp=Z,25nm,1.4s						
NVS				pmax	pmax		
	comp=N,12nm,1.3s						
NVS				pmax	pmax		
	comp=E,15nm,1.1s						
KURK	Kurchatov	70.37	326	eP	P	10 38 09.4	-1.1
	comp=E,23nm,0.9s						
KURK				eP	P	10 38 10.0	-0.5
KURK	Kurchatov	70.37	326	P	P	10 38 10.5	-0.1
	SNR=12						
KURK	Kurchatov	70.37	326	c iP	P	10 38 09.9	-0.6
KURK				pmax	pmax		
	comp=Z,20nm,0.9s						
KURBB	Kurchatov Arra	70.37	326	P	P	10 38 10.0	-0.5
	comp=Z,15nm,0.9s,baz=119,slow=5.6,SNR=88						
MNAS	Manas	70.73	316	P	P	10 38 06.9	-6.2
MNAS				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KBL	Kabul	70.78	307	eP	P	10 38 13.2	-0.5
	comp=Z,16nm,0.9s						
KBL	Kabul	70.78	307	eP	P	10 38 13.2	-0.5
KBL				pmax	pmax		
	comp=Z,16nm,0.9s						
KK31	Karatay Array	72.31	316	eP	P	10 38 22.5	-0.1
KK31	Karatay Array	72.31	316	i P	P	10 38 21.4	-1.2
KK31				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KKAR	Karatay Array	72.31	316	eP	P	10 38 22.5	-0.1
KKAR	Karatay Array	72.31	316	eP	P	10 38 22.5	-0.1
TIXI	Tiksi	73.28	358	eP	P	10 38 26.9	-0.8
	comp=Z,14nm,1.0s						
TIXI	Tiksi	73.28	358	eP	P	10 38 27.7	0.0
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BVA0	Borovoye Array	75.96	326	i P	P	10 38 42.4	-1.2
BVA0				pmax	pmax		
	comp=Z,16nm,0.9s						
BVAR	Borovoye Array	75.96	326	P	P	10 38 42.8	-0.8
	comp=Z,5.6nm,0.7s,baz=111,slow=7.9,SNR=26						
BRVK	Borovoye	76.04	326	eP	P	10 38 43.6	-0.4
	comp=Z,13nm,1.0s						
BRVK	Borovoye	76.04	326	P	P	10 38 43.8	-0.2
	SNR=9.3						
BRVK	Borovoye	76.04	326	ceP	P	10 38 43.7	-0.3
BRVK				pmax	pmax		
	comp=Z,34nm,1.3s						
PPT2	Papeete2	76.29	108	eP	P	10 38 49.0	+2.8
	comp=Z,42nm,1.4s						
PPT2				eS	S	10 48 33.4	+3.0
	comp=Z,117nm,25.5s						
PPT2	Papeete2	76.29	108	eLQ	LQ	10 59 16.4	
	comp=Z,750nm,32.2s						
PPT2				eLR	LR	11 02 33.7	
	comp=Z,565nm,26.5s						
TBI	Tubuai	76.72	113	eS	S	10 48 39.0	+4.2
	comp=Z,198nm,26.0s						
TBI	Tubuai	76.72	113	eLQ	LQ	10 59 29.6	
	comp=Z,493nm,41.8s						
TBI				eLR	LR	11 02 46.3	
	comp=Z,392nm,30.8s						
VNDA	Vanda	77.22	174	P	P	10 38 49.7	-0.6
	comp=Z,4.5nm,0.8s,baz=320,slow=6.3,SNR=24						
VNDA				LR	LR	11 12 52.5	
	comp=Z,812nm,18.2s,baz=346,slow=36						
VNDA	Vanda	77.22	174	eP	P	10 38 50.0	-0.3
VNDA				e		10 38 50.8	
WSAR	Wadi Sarin	77.50	294	P	P	10 38 53.0	+0.1
	comp=Z,13nm,0.9s,baz=133,slow=7.6,SNR=5.9						
WSAR				LR	LR	11 15 09.2	
	comp=Z,55nm,21.5s,baz=112,slow=37						
SDPT	Sand Point	77.57	32	eP	P	10 38 53.3	+0.7
	comp=Z,86nm,1.2s						
PMOR	Pomariorio Ree	77.81	105	eP	P	10 38 57.5	+2.8
	comp=Z,68nm,1.3s						
BIDO	Bidbid	77.99	294	P	P	10 38 57.0	+1.3
	SNR=5.0						
SBA	Scott Base	78.05	173	eP	P	10 38 56.1	+1.2
	comp=Z,5.5nm,1.0s						
SBA	Scott Base	78.05	173	eP	P	10 38 56.1	+1.2
SBA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MDH	Madha	79.86	296	P	P	10 39 07.4	+1.5
UOSS	Minazif	79.91	296	eP	P	10 39 05.9	-0.3
	comp=Z,22nm,1.0s						
UOSS	Minazif	79.91	296	P	P	10 39 05.8	-0.3
BANOM	Banah	79.93	297	P	P	10 39 06.1	-0.2
BANOM	Banah	79.93	297	P	P	10 39 06.6	+0.3
HATD	Hatta, Dubai	79.96	295	P	P	10 39 06.1	-0.3
HATD	Hatta, Dubai	79.96	295	i P	P	10 39 06.5	+0.1
	SNR=6.3						
MSFE	Esma-Masafi	79.99	296	i P	P	10 39 06.6	0.0
	SNR=6.5						
ASHO	Ashiyiah	80.01	295	P	P	10 39 05.9	-0.9
ASHO	Ashiyiah	80.01	295	P	P	10 39 06.3	-0.4
SHME	Shamm	80.09	297	i P	P	10 39 07.2	0.0
	SNR=8.3						
GEYT	Alibeck	80.14	309	P	P	10 39 06.6	-0.6
	comp=Z,3.7nm,0.3s,baz=93,slow=10,SNR=7.6						
GEYT				LR	LR	11 17 08.5	
	comp=Z,126nm,21.9s,baz=35,slow=38						
GYA0B	ALIBECK ARRAY	80.14	309	eP	P	10 39 06.2	-1.0
	comp=Z,15nm,0.8s						
ALNE	Al Ain	80.22	295	i P	P	10 39 07.7	-0.2
	SNR=17						
NAZ	Nazwa, Dubai	80.40	296	P	P	10 39 08.3	-0.5
NAZ	Nazwa, Dubai	80.40	296	P	P	10 39 08.5	-0.3
ASUD	Al Ashush, Dub	80.66	295	P	P	10 39 10.1	-0.1
ASUD	Al Ashush, Dub	80.66	295	i P	P	10 39 10.0	-0.1
	SNR=7.1						
AB31	Akbulak array	81.09	320	i P	P	10 39 10.9	-1.1
AB31				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ABKAR	Akbulak array	81.09	320	eP	P	10 39 11.4	-0.6
MAW	Mawson	81.43	202	P	P	10 39 12.8	-0.6
	comp=Z,4.3nm,0.9s,baz=44,slow=6.3,SNR=5.4						
MAW				LR	LR	11 13 23.2	
	comp=Z,486nm,19.5s,baz=62,slow=34						
MAW	Mawson	81.43	202	eP	P	10 39 14.5	+1.1
	comp=Z,1.9nm,0.9s						
OHAK	Old Harbor	81.97	32	eP	P	10 39 16.9	+0.6
	comp=Z,13nm,0.9s						
MZR	Muzera	82.19	293	P	P	10 39 18.2	-0.1
KDAK	Kodiak Island	82.49	31	eP	P	10 39 20.3	+1.2
	comp=Z,20nm,0.8s						
KDAK	Kodiak Island	82.49	31	i P	P	10 39 20.0	+0.9
SVE	Sverdlovsk	82.50	328	eP	P	10 39 19.2	0.0
SVE				pmax	pmax		
	comp=Z,39nm,1.5s						
AKTO	Aktyubinsk	82.56	321	P	P	10 39 18.9	-0.8
	comp=Z,4.7nm,0.9s,baz=108,slow=9.6,SNR=10						
AKTO				LR	LR	11 20 24.0	
	comp=Z,166nm,18.2s,baz=100,slow=39						
AKTO	Aktyubinsk	82.56	321	P	P	10 39 17.0	-2.7
AKTO				pmax	pmax		
	comp=Z,19nm,1.2s						
ARU	Arti	83.52	327	LR	LR	11 19 04.4	
	comp=Z,86nm,19.6s,baz=98,slow=38						
ARU	Arti	83.52	327	d iP	P	10 39 24.7	+0.2
ARU						10 42 34.5	
ARU				S	S	10 49 44.0	-1.2
ARU				SS	SS	10 55 04.1	-7.2
ARU				pmax	pmax		
	comp=Z,29nm,1.7s						
CNPM	China Poot	83.61	30	eP	P	10 39 25.2	+0.3
	comp=Z,14nm,1.0s						
BRLK	Bradley Lake	83.84	29	eP	P	10 39 26.7	+0.6
	comp=Z,12nm,1.0s						
PPLA	Purkeypile	84.03	26	eP	P	10 39 27.8	+0.6
	comp=Z,18nm,1.2s						
SKT	Skwentna	84.09	27	eP	P	10 39 27.6	+0.2
	comp=Z,19nm,1.0s						
CAST	Castle Rocks	84.22	26	eP	P	10 39 29.2	+1.2
	comp=Z,17nm,1.1s						
RC01	Rabbit Creek A	84.71	28	eP	P	10 39 30.4	-0.1
	comp=Z,32nm,0.9s						
BPAW	Bear Paw Mtn.	84.87	25	eP	P	10 39 32.7	+1.4
	comp=Z,3.6nm,0.8s						
TRF	Thorofare Moun	85.01	26	eP	P	10 39 32.4	+0.2
	comp=Z,16nm,1.2s						
PMR	Palmer	85.11	28	eP	P	10 39 32.4	0.0
	comp=Z,22nm,1.0s						
PMR	Palmer	85.11	28	eP	P	10 39 32.4	0.0
PMR				pmax	pmax		
	comp=Z,22nm,1.0s						
MLY	Manley	85.20	24	eP	P	10 39 33.8	+0.8
	comp=Z,27nm,1.0s						
GHO	Glory Hole Cre	85.24	28	eP	P	10 39 33.7	+0.5
	comp=Z,11nm,1.0s						
TAOE	Nuku Hiva Isla	85.37	99	eSS	SS	10 55 40.4	-0.3
	comp=Z,79nm,23.7s						
TAOE	Nuku Hiva Isla	85.37	99	eLR	LR	11 06 37.9	
	comp=Z,440nm,26.2s						
SML	Sawmill	85.52	28	eP	P	10 39 34.9	+0.3
	comp=Z,38nm,1.1s						
SML	Sawmill	85.52	28	eP	P	10 39 34.9	+0.3
SML				pmax	pmax		
	comp=Z,38nm,1.1s						
BWN	Browne	85.53	25	eP	P	10 39 36.1	+1.6
	comp=Z,63nm,1.0s						
MCK	McKinley	85.66	26	eP	P	10 39 35.2	-0.1
	comp=Z,65nm,1.2s						
MCK	McKinley	85.66	26	eP	P	10 39 35.2	-0.1
MCK				pmax	pmax		
	comp=Z,65nm,1.2s						
COLD	Coldfoot	85.96	22	eP	P	10 39 37.8	+1.2
	comp=Z,4.3nm,0.8s						
SCM	Sheep Creek Mo	86.00	28	eP	P	10 39 37.6	+0.6
	comp=Z,39nm,1.0s						
SCM	Sheep Creek Mo	86.00	28	eP	P	10 39 37.6	+0.6
SCM				pmax	pmax		
	comp=Z,39nm,1.0s						
DHY	Denali Highway	86.22	27	eP	P	10 39 38.8	+0.7
	comp=Z,36nm,1.0s						
MDM	Murphy Dome	86.22	25	eP	P	10 39 38.8	+0.8
	comp=Z,9.7nm,1.0s						
CCB	Clear Creek Bu	86.34	25	eP	P	10 39 37.9	-0.6
	comp=Z,29nm,1.0s						
TOLK	Toolik Lake Re	86.53	21	eP	P	10 39 41.3	+1.9
	comp=Z,7.1nm,1.1s						
DIV	Divide	86.60	29	eP	P	10 39 40.9	+0.9
	comp=Z,42nm,1.0s						
HDA	Harding Lake	86.66	25	eP	P	10 39 40.8	+0.7
	comp=Z,17nm,0.8s						
OPO	Ambohidratompo	86.72	252	P	P	10 39 39.3	-2.3
	comp=Z,3.9nm,0.7s,baz=96,slow=10						
ILAR	Eielson Array	86.75	25	P	P	10 39 40.4	-0.2
	comp=Z,5.5nm,0.9s,baz=256,slow=4.6,SNR=44						
ILAR				LR	LR	11 11 52.5	
	comp=Z,76nm,20.6s,baz=278,slow=31						
ILB	Eielson Array	86.75	25	eP	P	10 39 40.1	-0.5
IL1	Eielson Array	86.75	25	eP	P	10 39 39.4	-1.2
HARP	HAARP	87.10	27	eP	P	10 39 42.6	+0.3
	comp=Z,27nm,1.0s						
BMRM	Bremner River	87.14	29	eP	P	10 39 42.6	0.0
	comp=Z,46nm,1.2s						
TGL	Tana Glacier	87.97	29	eP	P	10 39 47.4	+0.7
	comp=Z,41nm,1.1s						
QSPA	South Pole Qui	88.26	180	P	P	10 39 47.2	-0.8
	comp=Z,4.7nm,0.7s,baz=311,slow=2.5,SNR=12						
QSPA	South Pole Qui	88.26	180	eP	P	10 39 47.2	-0.8
QSPA				eP	P	10 39 47.5	-0.4
AKT	Akhty	88.51	311	eP	P	10 39 50.2	+0.5
AKT				e		10 43 17.6	
AKT				pmax	pmax		
	comp=Z,17nm,0.9s						
EGAK	Eagle	89.18	25	eP	P	10 39 53.9	+1.7
	comp=Z,7.4nm,0.9s						
RAYN	Ar Rayn	89.54	293	eP	P	10 39 53.7	-1.1
	comp=Z,16nm,0.8s						
RAYN	Ar Rayn	89.54	293	i P	P	10 39 54.4	-0.5
	SNR=20						
RAYN	Ar Rayn	89.54	293	eP	P	10 39 53.7	-1.1
RAYN				pmax	pmax		
	comp=Z,16nm,0.8s						
DAWY	Dawson	89.88	26	eP	P	10 39 56.5	+1.0
	comp=Z,12nm,1.0s						
SYO	Syowa Base	90.13	201	⇑eX	P	10 40 04.0	+7.5
GNI	Garni	90.72	310	LR	LR	11 24 26.2	
	comp=Z,92nm,21.9s,baz=96,slow=38						
PRGR	Permogore	90.82	331	eP	P	10 39 57.3	-2.5
PRGR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ZEI	Tsey	91.41	313	eP	P	10 40 03.9	+0.6
ZEI				pmax	pmax		
	comp=Z,10.0nm,0.4s						
ATD	Arta Tunnel	91.73	281	LR	LR	11 20 54.1	
	comp=Z,53nm,20.0s,baz=28,slow=35						
KBZ	Khabaz	92.15	314	P	P	10 40 07.2	+0.8
	comp=Z,2.3nm,0.9s,baz=124,slow=3.6,SNR=3.3						
KBZ				LR	LR	11 25 25.8	
	comp=Z,99nm,21.6s,baz=57,slow=38						
KVAR	Kislovodsk Arr	92.30	314	LR	LR	11 25 35.2	
	comp=Z,104nm,21.1s,baz=76,slow=38						
KLMR	Klimovskoe	93.78	331	eP	P	10 40 10.1	-3.5
KLMR				e		10 43 56.5	
KLMR				pmax	pmax		
	comp=Z,18nm,1.4s						
KLMR	Klimovskoe	93.78	331	eP	P	10 40 10.1	-3.5
KLMR				AMP		10 40 20.3	
	comp=Z,18nm,1.4s						
KLMR				ePP	PP	10 43 56.6	-2.3
KLMR				LQ	LQ	11 15 59.5	
KLMR				LQ	LQ	11 15 59.5	
APA	Apatity	95.69	338	⇓iP	P	10 40 22.3	+0.1
APA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
APA				MLR	MLR		
	comp=Z,300nm,17.0s						
OBN	Obninsk	95.79	325	⇑eP	P	10 40 21.9	-0.9
OBN				e		10 44 15.7	
OBN				eSS	SS	10 58 10.6	+1.6
OBN				pmax	pmax		
	comp=Z,4.0nm,0.6s						
OBN				MLR	MLR		
	comp=Z,143nm,21.0s						

SPITS	Spitsbergen Ar	97.18	349	LR	LR	11 27 23.7	
	comp=Z,103nm,21.0s,baz=160,slow=37						
ARA0	ARCESS Array S	98.07	340	eP	P	10 40 31.4	-1.5
ARCES	ARCESS Array B	98.07	340	P	P	10 40 31.5	-1.5
	comp=Z,3.2nm,0.7s,baz=82,slow=7.4,SNR=8.4						
ARCES				LR	LR	11 27 57.2	
	comp=Z,135nm,21.3s,baz=100,slow=37						
MMAI	Mount Meron Ar	98.36	303	LR	LR	11 32 01.0	
	comp=Z,89nm,19.7s,baz=120,slow=40						
EIL	Elat	98.94	300	LR	LR	11 32 32.1	
	comp=Z,59nm,18.0s,baz=87,slow=40						
BR101	Keskin Array S	99.26	310	eP	Pdif	10 40 36.5	-2.6
BRTR	Keskin Array B	99.26	310	P	Pdif	10 40 36.5	-2.6
	comp=Z,0.5nm,0.5s,baz=111,slow=5.4,SNR=3.8						
BRTR				LR	LR	11 33 25.0	
	comp=Z,31nm,18.8s,baz=76,slow=40						
YKA	Yellowknife Ar	101.12	26	P	Pdif	10 40 46.1	-0.5
	comp=Z,0.9nm,1.0s,baz=304,slow=6.6,SNR=3.1						
SNAA	Sanae	101.78	193	Pdiff	Pdif	10 40 53.7	+4.2
VNA3	Neumayer Olymp	103.53	191	Pdiff	Pdif	10 40 57.4	+0.2
NVAR	Mina Array Bea	104.65	51	Pdiff	Pdif	10 41 03.8	+0.6
	comp=Z,0.7nm,0.9s,baz=231,slow=5.7,SNR=3.5						
NVAR				PKiKP	PP	10 45 23.1	+0.4
	comp=Z,0.4nm,0.8s,baz=272,slow=6.9,SNR=4.1						
PDAR	Pinedale Array	110.14	45	PKKPab	PKKPab	10 56 39.3	-2.8
	comp=Z,0.3nm,0.8s,baz=144,slow=3.2,SNR=3.4						
CLL	Collm	110.39	325	eSP	SP	10 55 27.0	-3.8
CLL				eSS	SS	11 01 29.0	-1.2
CLL				LmH		11 27 00.0	
	comp=N,400nm,18.2s						
CLL				LmH		11 27 00.0	
	comp=E,400nm,20.6s						
CLL				LmV		11 33 00.0	
	comp=Z,300nm,19.5s						
GERES	GERESS Array B	110.96	322	PKiKP	PKiKP	10 45 30.9	+0.6
	comp=Z,1.1nm,0.8s,baz=38,slow=1.7,SNR=5.5						
LTX	Lajitas	118.51	57	ePKPdf	PKPdf	10 45 45.5	+0.2
LTX	Lajitas	118.51	57	ePKIKP	PKPdf	10 45 45.5	+0.2
TXAR	Lajitas Array	118.51	57	PKP	PKPdf	10 45 45.5	+0.2
	comp=Z,0.6nm,0.9s,baz=225,slow=2.4,SNR=5.1						
TXAR				PKKPbc	PKKPbc	10 55 58.3	-4.5
	comp=Z,0.1nm,0.4s,baz=122,slow=1.2,SNR=3.4						
C40A	Isle Royale Na	120.65	33	ePKPdf	PKPdf	10 45 49.9	+1.1
S39A	Bolivar	123.53	45	ePKPdf	PKPdf	10 45 54.8	+0.2
P42A	Winchester	124.63	41	ePKPdf	PKPdf	10 45 56.2	-0.4
ESDC	Sonseca Array	126.44	320	PKP	PKPdf	10 45 60.0	-0.3
	comp=Z,0.1nm,0.3s,baz=12,slow=3.7,SNR=3.4						
ESDC				SKPbc	SKPbc	10 49 19.4	
	comp=Z,0.3nm,0.3s,baz=43,slow=6.7,SNR=4.3						
TOA0	Torodi Ar. Sit	131.72	286	ePKPdf	PKPdf	10 46 10.8	0.0
TORD	Torodi Ar. Bea	131.72	286	PKP	PKPdf	10 46 10.9	+0.1
	comp=Z,1.6nm,0.7s,baz=62,slow=2.3						
TORD				SKPbc	SKPbc	10 49 33.8	-1.8
	baz=78,slow=3.7						
TOA1	Torodi Ar. Sit	131.72	286	ePKPdf	PKPdf	10 46 10.9	+0.1
PLCA	Paso Flores	132.10	155	PKP	PKPdf	10 46 12.3	+1.3
	comp=Z,2.3nm,0.7s,baz=288,slow=1.5,SNR=6.0						
KOWA	Kowa	136.89	289	SKPbc	SKPbc	10 49 49.9	-2.5
	comp=Z,5.0nm,0.9s,baz=16,slow=5.1,SNR=5.9						
DBIC	Dimbokro	138.96	278	PKP	PKPdf	10 46 24.2	-0.2
	comp=Z,4.7nm,0.9s,baz=18,slow=3.2,SNR=2.7						
LCO	Las Campanas	141.22	144⇑	ePKIKP	PKPdf	10 46 33.5	+5.0
GO02	Mina Guanaco	144.69	141	ePKPdf	PKPdf	10 46 34.7	0.0
NNA	Nana	146.23	115c	iPKP2	PKPab	10 46 47.7	+8.6
NNA				pmax	pmax		
	comp=Z,83nm,1.3s						
PB01	IPOC Station P	147.58	135	ePKPbc	PKPab	10 46 43.4	-0.8
MNMC	Minye Minye	148.73	133	ePKPdf	PKPdf	10 46 43.2	+1.6
HELC	Santa Helena	149.93	81	ePKPbc	PKPbc	10 46 48.5	-0.2
CPUP	Villa Florida	149.98	159	PKP	PKPdf	10 46 43.5	+0.4
	comp=Z,13nm,0.9s,baz=217,slow=2.0,SNR=3.3						
CPUP				PKPbc	PKPbc	10 46 48.3	+0.3
	comp=Z,13nm,0.9s,baz=239,slow=2.2,SNR=18						
PRAC	Prado	150.80	85	ePKPbc	PKPbc	10 46 50.1	-0.2
ROSC	El Rosal	151.28	83	PKPbc	PKPbc	10 46 51.6	-0.3
	comp=Z,14nm,0.6s,baz=97,slow=1.9,SNR=7.3						
ROSC	El Rosal	151.28	83	ePKPbc	PKPbc	10 46 51.3	-0.6
LPAZ	La Paz	151.56	130	PKP	PKPdf	10 46 48.4	+1.8
	comp=Z,2.3nm,0.9s,baz=36,slow=1.3,SNR=8.6						
LPAZ				PKPbc	PKPbc	10 46 54.1	+1.3
	comp=Z,16nm,0.8s,baz=243,slow=1.9,SNR=42						
RUSC	La Rusia	152.38	81	ePKPbc	PKPbc	10 46 52.5	-2.1

MEX 10 10:34:39.3±0.4, 16°.22N×98°.08W, h5km±5km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.17	344	eP	Pg	10 34 42.6	-0.2
PNIG				eS	Sg	10 34 45.1	-0.1
TLIG	Tlapa	1.41	341	eP	Pn	10 35 01.9	-3.9
TLIG				eS	Sb	10 35 19.7	-4.9
VHO	Vista Hermosa	1.54	57	i P	Pn	10 35 04.4	-3.2
VHO				i S	Sn	10 35 22.7	-5.4

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*ISK **10** 10:40:23.2, 36°.62N×32°.16E, h6km, ML2.8/5*
*ISCJB **10** 10:40:24.2±0.8, 36°.64N±0°.05×32°.18E±0°.05, h8km±5km, Error ellipse: s-maj=10.4km s-min=4.3km az=30.8*
*CSEM **10** 10:40:24.0±0.2, 36°.60N×32°.17E, h10km, ML2.7, Error ellipse: s-maj=7.3km s-min=2.4km az=26.0*
*DDA **10** 10:40:24.1, 36°.64N×32°.19E, h7km, Ml2.7*
ISC 10 10:40:23.4±1.6, **36°.63N**±0°.06×**32°.16E**±0°.04, **h5**km±13km, **n23**, σ**0s.40**/38, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEPZ	Antalya-Kepez	0.52	302	i P	Pb	10 40 35.2	+0.1
KEPZ				i S	Sb	10 40 42.9	-0.2
KEPZ	Antalya-Kepez	0.52	302	P	Pb	10 40 35.2	+0.1
KEPZ				S	Sb	10 40 42.8	-0.2
ERMK	Ermenek	0.61	89	i P	Pg	10 40 35.2	0.0
ERMK				i S	Sb	10 40 44.9	-0.8
ERMK	Ermenek	0.61	89	P	Pg	10 40 35.2	0.0
ERMK				S	Sb	10 40 44.8	-0.8
TEVE	Tevekalti-Mers	1.05	100	PG	Pg	10 40 44.0	+0.4
TEVE				SG	Sb	10 40 58.8	+0.4
TEVE	Tevekalti-Mers	1.05	100	ePg	Pg	10 40 44.0	+0.4
TEVE				eSg	Sb	10 40 58.8	+0.4
GULN	MERSIN_Gulnar	1.20	111	i P	Pg	10 40 46.4	-0.1
GULN				i S	Sb	10 41 02.5	-0.1
GULN	MERSIN_Gulnar	1.20	111	P	Pg	10 40 46.4	-0.1
GULN				S	Sb	10 41 02.5	-0.1
AKKU	Akkuyu-Mersin	1.22	112	PN	Pg	10 40 46.6	-0.2
AKKU				SN	Sn	10 41 04.2	+0.1
AKKU	Akkuyu-Mersin	1.22	112	ePn	Pg	10 40 46.6	-0.2
AKKU				eSn	Sn	10 41 04.2	+0.1
SUTC	Sutluce-Ispart	1.25	313	PN	Pn	10 40 47.8	0.0
SUTC	Sutluce-Ispart	1.25	313	ePn	Pn	10 40 47.8	0.0
KEBE	Keben-Mersin	1.27	98	PN	Pn	10 40 47.6	-0.3
KEBE	Keben-Mersin	1.27	98	ePn	Pn	10 40 47.6	-0.3
IKL	Isikli	1.29	107	PN	Pn	10 40 48.2	0.0
IKL				SN	Sn	10 41 05.8	-0.1
IKL	Isikli	1.29	107	ePn	Pn	10 40 48.2	0.0
IKL				eSn	Sn	10 41 05.8	-0.1
KONT	Konya--Tatoy	1.32	7	PN	Pn	10 40 49.1	+0.4
KONT	Konya--Tatoy	1.32	7	i P	Pn	10 40 48.7	+0.1
KONT				i S	Sb	10 41 04.7	-1.4
KONT	Konya--Tatoy	1.32	7	ePn	Pn	10 40 49.1	+0.4
LADK	Ladik-KONYA	1.58	6	PN	Pn	10 40 52.5	+0.3
LADK	Ladik-KONYA	1.58	6	ePn	Pn	10 40 52.5	+0.3
KERG	Konya-Eregli	1.76	63	i P	Pn	10 40 54.8	+0.1
KERG				i S	Sn	10 41 18.1	+0.5
KERG	Konya-Eregli	1.76	63	P	Pn	10 40 54.8	+0.1
KERG				S	Sn	10 41 18.1	+0.5

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*ISCJB **10** 10:43:53.4±0.3, 59°.66S±0°.07×26°.3W±0°.1, h40km, mb4.6/26, MS3.7/4, Error ellipse: s-maj=12.4km s-min=6.9km az=141.9*
*IDC **10** 10:43:58.6±1.8, 59°.66S×26°.45W, h72km±14km, mb4.3/15, mb1 4.4/15, mb1mx4.2/31, mbtmp4.6/15, MS3.6/6, Ms1 3.6/6, ms1mx3.3/30, Error ellipse: s-maj=17.0km s-min=13.6km az=74.0*
*NEIC **10** 10:44:04.0±2.1, 59°.64S×26°.43W, h123km±18km, mb4.6/20, Error ellipse: s-maj=9.4km s-min=6.3km az=53.0*
ISC 10 10:43:54.8±0.4, **59°.65S**±0°.08×**26°.00W**±0°.09, **h40**km, **n84**, σ**1s.65**/85, **mb4.6**/24, **MS3.7**/4, **1D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	Neumayer--Stat	13.24	154	P	Pn	10 47 00.7	+0.8
VNA1				S	Sn	10 49 18.8	-6.7
VNA3	Neumayer Olymp	13.40	157	P	Pn	10 47 01.9	-0.2
VNA3				S	Sn	10 49 17.9	-11
SNAA	Sanae	15.22	152	P	Pn	10 47 27.3	+0.6
SNAA				S	Sn	10 50 00.3	-14
SNAA	Sanae	15.22	152	P	Pn	10 47 27.2	+0.6
	9.4nm,0.3s,baz=354,slow=7.2,SNR=301						
SNAA				S	Sn	10 50 00.1	-14
	1.9nm,0.3s,baz=316,slow=16,SNR=6.0						
SNAA				LR	LR	10 52 15.7	
	comp=Z,201nm,19.5s,baz=286,slow=32						
SNAA	Sanae	15.22	152	ePn	Pn	10 47 27.4	+0.6
	27nm,0.6s						
SNAA				S	Sn	10 50 00.1	-14
PMSA	Palmer Station	18.25	238	LR	LR	10 53 41.4	
	comp=Z,246nm,21.3s,baz=84,slow=32						
PMSA	Palmer Station	18.25	238	eP	Pn	10 48 09.8	+5.2
	12nm,0.6s						
EFI	East Falkland	19.60	280	eP	P	10 48 19.4	+0.1
	38nm,1.0s						
SYO	Syowa Base	28.46	136⇓	eP	P	10 49 45.6	+0.2
QSPA	South Pole Qui	30.59	180	P	P	10 50 05.7	+1.1
	5.5nm,0.5s,baz=198,slow=1.4,SNR=32						
QSPA	South Pole Qui	30.59	180	eP	P	10 50 05.5	+0.9
	7.7nm,0.6s						
QSPA				eP	P	10 50 05.7	+1.1
TRQA	Tornquist	31.43	297	eP	P	10 50 11.9	-0.2
	6.0nm,0.8s						
PLCA	Paso Flores	33.39	284	P	P	10 50 27.8	-1.4
	1.9nm,0.5s,baz=195,slow=7.6,SNR=7.9						
PLCA				LR	LR	11 03 39.1	
	comp=Z,68nm,18.6s,baz=160,slow=36						
MAW	Mawson	36.92	140	P	P	10 51 00.1	+1.0
	8.1nm,1.0s,baz=252,slow=4.0,SNR=6.8						
MAW				PcP	PcP	10 53 19.2	-0.5
	1.1nm,0.3s,baz=267,slow=4.8,SNR=5.0						
MAW	Mawson	36.92	140	eP	P	10 51 01.0	+1.9
	2.1nm,1.0s						
MAW				ePcP	PcP	10 53 19.2	-0.5
PEL	Peldehue	39.49	292	eP	P	10 51 20.8	-0.5
	28nm,0.9s						
CPUP	Villa Florida	39.70	313	P	P	10 51 23.2	+0.2
	2.1nm,0.3s,baz=148,slow=6.3,SNR=11						
CPUP				LR	LR	11 07 43.8	
	comp=Z,30nm,20.2s,baz=150,slow=36						
CPUP	Villa Florida	39.70	313	eP	P	10 51 22.8	-0.2
	3.3nm,1.0s						
SBA	Scott Base	42.53	184	eP	P	10 51 47.9	+2.2
	5.3nm,0.7s						
VNDA	Vanda	43.00	182	P	P	10 51 51.0	+1.5
	6.6nm,0.6s,baz=184,slow=7.1,SNR=54						
VNDA				PcP	PcP	10 53 37.1	-1.8
	1.3nm,0.5s,baz=180,slow=3.0,SNR=5.0						
VNDA	Vanda	43.00	182	eP	P	10 51 51.0	+1.5
VNDA				e		10 51 51.2	
VNDA				PcP	PcP	10 53 37.1	-1.8
GO02	Mina Guanaco	45.77	299	eP	P	10 52 11.8	-0.7
	13nm,0.5s						
BOSA	Boshof	46.38	71	P	P	10 52 19.8	+2.6
	4.5nm,0.5s,baz=211,slow=7.5,SNR=5.9						
PB01	IPOC Station P	49.33	302	eP	P	10 52 39.3	-0.7
	10nm,0.7s						
LBTB	Lobatse	49.57	69	P	P	10 52 44.3	+2.5
	7.9nm,0.8s,baz=234,slow=7.4,SNR=7.1						
CASY	Casey	50.31	159	eP	P	10 52 48.1	+1.4
	6.3nm,0.8s						
MNMC	Minye Minye	51.07	303	eP	P	10 52 52.7	-0.7
	20nm,0.5s						
H10S2	ASCENSION HYDR	51.30	14	T	T	11 48 37.6	
	baz=188,slow=74,SNR=20						
H10S3	ASCENSION HYDR	51.31	14	T	T	11 48 37.9	
	baz=188,slow=74,SNR=20						
H10S1	ASCENSION HYDR	51.32	14	T	T	11 48 38.9	
	baz=188,slow=74,SNR=20						
H10N1	ASCENSION HYDR	52.42	14	T	T	11 50 06.6	
	baz=190						
H10N3	ASCENSION HYDR	52.42	14	T	T	11 50 16.6	
	baz=190,slow=74						
H10N2	ASCENSION HYDR	52.44	14	T	T	11 50 06.0	
	baz=190,slow=74						
LPAZ	La Paz	53.00	306	P	P	10 53 07.3	-0.8
	3.1nm,0.4s,baz=132,slow=4.9,SNR=50						
LPAZ	La Paz	53.00	306	eP	P	10 53 07.8	-0.4
	3.8nm,0.4s						
DBIC	Dimbokro	68.22	23	P	P	10 54 52.5	+1.4
	6.3nm,1.0s,baz=195,slow=5.5,SNR=3.3						
OTAV	Otavalo	72.18	304	eP	P	10 55 14.8	-1.2
	4.4nm,1.0s						
PRAC	Prado	73.87	308	eP	P	10 55 24.7	-0.7
	4.1nm,0.6s						
PRAC				ePcP	sP	10 55 42.1	+0.1
TOA0	Torodi Ar. Sit	75.92	28	eP	P	10 55 37.3	+0.3
TOA0				eP	P	10 55 39.0	+2.0
TORD	Torodi Ar. Bea	75.92	28	P	P	10 55 37.5	+0.5
	3.8nm,0.5s,baz=205,slow=5.8						
TOA1	Torodi Ar. Sit	75.92	28	eP	P	10 55 37.5	+0.4
RPZ	Rata Peaks	76.05	193	P	P	10 55 37.9	+0.3
	6.0nm,0.9s,baz=26,slow=4.0,SNR=3.1						
URZ	Urewera	80.59	198	P	P	10 56 02.7	-0.1
	3.7nm,0.7s,baz=231,slow=6.5,SNR=4.0						
STKA	Stephens Creek	88.24	169	P	P	10 56 42.0	+0.4
	3.0nm,0.7s,baz=147,slow=3.3,SNR=5.6						
STKA				LR	LR	11 35 22.4	
	comp=Z,56nm,18.8s,baz=199,slow=35						
STKA	Stephens Creek	88.24	169	eP	P	10 56 42.0	+0.4
	0.9nm,0.8s						
ASAR	Alice Springs	95.36	162	P	P	10 57 14.2	-0.5
	3.0nm,0.7s,baz=183,slow=3.9,SNR=33						
ASAR				PKKPbc	PKKPbc	11 14 04.9	+0.8
	0.1nm,0.4s,baz=356,slow=3.2,SNR=4.1						
ASAR				LR	LR	11 37 44.1	
	comp=Z,88nm,20.6s,baz=182,slow=34						
AS31	Alice Springs	95.36	162	eP	P	10 57 14.2	-0.5
	1.4nm,0.5s						
AS01	Alice Springs	95.37	162	eP	P	10 57 14.0	-0.8
WR1	Warramunga Arr	99.08	161	eP	Pdif	10 57 30.6	-1.0
	2.3nm,1.0s						
WRA	Warramunga Arr	99.08	161	P	Pdif	10 57 30.6	-1.0
	0.5nm,0.7s,baz=197,slow=4.6,SNR=6.5						
CLTC	Calectric	119.36	288	ePKPdf	PKPdf	11 02 39.0	-0.1
PD31	Pinedale Array	122.74	300	ePKPdf	PKPdf	11 02 43.4	-2.2
PDAR	Pinedale Array	122.74	300	PKP	PKPdf	11 02 43.4	-2.2
	0.2nm,0.4s,baz=90,slow=3.4,SNR=5.5						
CMAR	Chiang Mai Arr	123.17	112	PKP	PKPdf	11 02 46.8	-0.1
	1.4nm,0.5s,baz=230,slow=3.8,SNR=7.1						
NV01	Mina Array Sit	123.31	290	ePKPdf	PKPdf	11 02 46.5	-0.3
NVAR	Mina Array Bea	123.31	290	PKP	PKPdf	11 02 46.5	-0.3
	0.3nm,0.6s,baz=147,slow=3.0,SNR=5.3						
HFS	Hagfors	123.38	23	PKP	PKPdf	11 02 44.9	-1.0
	2.1nm,0.9s,baz=169,slow=8.5,SNR=3.6						
FIA0	FINESS Array S	127.27	28	ePKPdf	PKPdf	11 02 52.8	-0.5
FINES	FINESS Array B	127.27	28	PKP	PKPdf	11 02 52.8	-0.5
	0.9nm,0.4s,baz=71,slow=1.1,SNR=9.3						
SCO	Scoresbysund	129.87	2	ePKPpre	PKPpre	11 02 49.6	
ARA0	ARCESS Array S	134.04	23	ePKPdf	PKPdf	11 03 05.0	-0.9
ARCES	ARCESS Array B	134.04	23	PKP	PKPdf	11 03 05.0	-0.9
	1.4nm,0.5s,baz=224,slow=2.5,SNR=7.3						
ARCES				SKPbc	SKPbc	11 06 29.1	-2.6
	2.5nm,0.8s,baz=242,slow=1.9,SNR=5.3						
MK32	Makanchi Array	137.34	74	ePKPdf	PKPdf	11 03 12.4	-0.4
MKAR	Makanchi Array	137.34	74	PKhKP	PKPpre	11 03 01.5	
	0.2nm,0.4s,baz=225,slow=8.0,SNR=1.8						
MKAR				PKP	PKPdf	11 03 12.4	-0.4
	0.7nm,0.8s,baz=241,slow=1.5,SNR=3.5						
MKAR				SKPbc	SKPbc	11 06 40.0	-2.6
	0.8nm,0.8s,baz=227,slow=7.7,SNR=5.2						
WMQ	Urumqi	137.91	81	ePKP	PKPdf	11 03 16.3	+2.3
KURBB	Kurchatov Arra	138.18	68	PKhKP	PKPpre	11 03 05.5	
	0.2nm,0.3s,baz=218,slow=2.4,SNR=2.5						
KURBB				PKP	PKPdf	11 03 14.2	+0.1
	0.3nm,0.2s,baz=227,slow=2.4,SNR=2.9						
KURK	Kurchatov	138.28	68	ePKPpre	PKPpre	11 03 05.5	
KURK				ePKPdf	PKPdf	11 03 14.2	-0.1
YKA	Yellowknife Ar	139.22	315	PKP	PKPdf	11 03 14.6	-1.1
	0.9nm,0.4s,baz=133,slow=2.2,SNR=26						
YKA				SKPbc	SKPbc	11 06 41.5	-5.8
	0.3nm,0.5s,baz=136,slow=2.9,SNR=5.8						
ZALV	Zalesovo Beam	143.28	68	PKhKP	PKPpre	11 03 20.3	
	3.3nm,0.4s,baz=233,slow=3.7,SNR=10						
ZALV	Zalesovo Beam	143.28	68	ePKPpre	PKPpre	11 03 20.0	
ZAA1	Zalesovo Array	143.28	68	ePKPpre	PKPpre	11 03 20.3	
NJ2	Nanjing	143.86	124	ePKP	PKPdf	11 03 27.7	+2.7
HHC	Hu-ho-hao-te	147.74	106	ePKPbc	PKPbc	11 03 35.1	+0.7
DAWY	Dawson	149.58	307	ePKPdf	PKPbc	11 03 36.2	-2.1
SONA0	Songino Array	150.14	92	ePKPbc	PKPbc	11 03 40.8	+0.5
SONM	Songino Array	150.14	92	PKPbc	PKPbc	11 03 40.8	+0.5
	8.2nm,0.7s,baz=225,slow=2.2,SNR=23						
SONA1	Songino Array	150.16	92	ePKPdf	PKPdf	11 03 35.8	+0.6
ULN	Ulaanbaatar	150.50	92	ePKPbc	PKPbc	11 03 40.3	-0.9
IL1	Eielson Array	152.88	306	ePKPbc	PKPbc	11 03 43.6	-2.3
ILAR	Eielson Array	152.88	306	PKPbc	PKPbc	11 03 44.5	-1.4
	1.3nm,0.4s,baz=148,slow=2.0,SNR=35						
ILB	Eielson Array	152.88	306	ePKPbc	PKPbc	11 03 44.6	-1.2
CCB	Clear Creek Bu	153.22	306	ePKPbc	PKPbc	11 03 45.2	-1.4
BPAW	Bear Paw Mtn.	154.40	304	ePKPbc	PKPbc	11 03 48.0	-1.2
TOLK	Toolik Lake Re	154.75	314	ePKPbc	PKPbc	11 03 49.2	-0.6

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*NDI **10** 10:44:59.2±2.9, 26°.75N×92°.32E, h15km±8km, ML3.5*
ISC 10 10:45:00.8±1.5, **26°.68N**±0°.10×**92°.36E**±0°.04, **h16**km±9km, **n8**, σ**1s.24**/14, **Northeastern India**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TEZP	TEZPUR	0.40	98	eP	Pg	10 45 08.7	-0.3
TEZP				eS	Sg	10 45 14.6	+0.1
GUWA	GUWAHATI	0.77	231	eP	Pg	10 45 16.1	+0.2
GUWA				eS	Sg	10 45 27.4	+1.4
GUWA				eS	Sg	10 45 27.4	+1.4
GUWA				IAML		10 45 28.5	
	comp=N,1µm,0.1s						
GUWA				IAML		10 45 28.8	
	comp=E,1µm,0.1s						
SHL	Shillong	1.19	201	ePG	Pg	10 45 22.0	-1.8
SHL				eP		10 45 23.3	
SHL				eS	Sg	10 45 38.5	-0.8
SHL				IAML		10 45 40.8	
	comp=N,357nm,0.1s						
SHL				IAML		10 45 40.8	
	comp=E,537nm,0.2s						
ZIRO	ZIRO	1.57	57	eP	Pn	10 45 26.5	-1.8
ZIRO				eS	Sn	10 45 46.3	-2.1
ZIRO				IAML		10 45 49.7	
	comp=E,2µm,0.6s						
ZIRO				IAML		10 45 49.7	
	comp=N,2µm,0.3s						
JORH	JORHAT	1.69	87	ex	x	10 45 33.3	
JORH				eS	Sn	10 45 52.1	+1.1
JORH				IAML		10 45 52.9	
	comp=N,2µm,0.2s						
JORH				IAML		10 45 53.0	
	comp=E,1µm,0.1s						
KOHI	KOHIMA	1.83	121	eP	Pn	10 45 30.7	-1.2
KOHI				eS	Sn	10 45 55.9	+1.1
KOHI				IAML		10 46 06.6	
	comp=E,94nm,0.3s						
KOHI				IAML		10 46 07.1	
	comp=N,117nm,0.4s						
MOKO	MOKOCHONG	1.96	100	eP	Pn	10 45 34.1	+0.5
MOKO				eS	Sn	10 45 58.2	+0.2
MOKO				IAML		10 46 07.4	
	comp=N,272nm,0.3s						
MOKO				IAML		10 46 08.9	
	comp=E,397nm,0.5s						
TURI	Tura	2.14	239	eP	Pn	10 45 35.9	0.0
TURI				eS	Sn	10 46 01.7	-0.4
TURI				IAML		10 46 09.9	
	comp=E,362nm,0.1s						
TURI				IAML		10 46 10.1	
	comp=N,261nm,0.2s						

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*IDC **10** 10:46:33.6±0.8, 16°.71S×167°.09E, h0km, mb4.5/16, mb1 4.6/18, mb1mx4.4/46, mbtmp4.6/18, ML4.7/2, MS3.7/14, Ms1 3.7/14, ms1mx3.5/48, Error ellipse: s-maj=24.4km s-min=14.3km az=86.0*
*ISCJB **10** 10:46:36.1±0.4, 16°.69S±0°.05×166°.99E±0°.07, h25km, mb4.6/38, MS3.9/16, Error ellipse: s-maj=10.2km s-min=6.1km az=160.2*
*NEIC **10** 10:46:37.9±3.2, 16°.68S×167°.06E, h28km±23km, mb4.7/20, Error ellipse: s-maj=10.9km s-min=6.4km az=61.0*
*GCMT **10** 10:46:37.9±0.3, 16°.64S×167°.03E, h21km±1km, MW4.9/77, Moment Tensor Solution. s26,c33; s77,c106; Duration: 0 Moment tensor: Scale 10^16Nm; Mrr-1.33±.18; Mθθ0.36±.12; Mφφ0.96±.14; Mrθ-0.29±.19; Mθφ2.47±.08; Mφr-0.11±.21; Best double couple: M0 2.51600×10^16 NP1:φs85.00000°,δ82.00000°,λ-14.00000°. NP2: φs177.00000°,δ77.00000°,λ-171.00000°. Principal axes: T 3.1720, Plg4.0000°, Azm132.0000°; N -1.3080, Plg74.0000°, Azm234.0000°; P -1.8610, Plg15.0000°, Azm41.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*BJI **10** 10:46:38.5, 16°.51S×167°.34E, h45km, mb4.7/21, mB5.0/11, Ms4.7/6, Ms7 4.3/5*
ISC 10 10:46:37.6±0.5, **16°.76S**±0°.06×**167°.1E**±0°.1, **h25**km, **n70**, σ**1s.37**/66, **mb4.7**/38, **MS3.8**/16, **2C-2D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	5.32	186	Pn	Pn	10 47 54.4	-1.1
	11nm,0.3s,baz=0.3,slow=8.5,SNR=383						
DZM				Sn	Sn	10 48 53.6	-2.5
	19nm,0.3s,baz=314,slow=22,SNR=8.7						
HNR	Honiara	10.06	316	Pn	Pn	10 49 00.0	-0.6
	12nm,0.3s,baz=136,slow=6.1,SNR=6.0						
EIDS	Eidsvold	17.20	237	ePn	P	10 50 37.4	-0.3
	48nm,1.1s						
RABL	Rabaul	19.24	309	eP	P	10 51 00.4	+0.2
	74nm,1.1s						
OUZ	Omahuta	19.28	164	eP	Pn	10 51 02.2	+0.5
	28nm,0.9s						
CTA	Charters Tower	20.03	257	P	Pn	10 51 10.1	-0.6
	5.0nm,0.7s,baz=109,slow=5.2,SNR=4.0						
HIZ	Hauiti	22.72	164	eP	P	10 51 39.3	+1.7
	40nm,1.1s						
URZ	Urewera	23.16	160	P	P	10 51 43.2	+1.0
	21nm,0.7s,baz=329,slow=4.9,SNR=20						
URZ	Urewera	23.16	160	eP	P	10 51 42.4	+0.3
	47nm,1.0s						
URZ				eP	P	10 51 43.2	+1.0
BKZ	Black Stump Fm	23.79	162	eP	P	10 51 48.6	+0.2
	22nm,0.9s						
CAN	Canberra	24.53	218	eP	P	10 51 56.9	+1.5
	34nm,1.1s						
BFZ	Birch Farm	25.12	163	eP	P	10 52 00.2	-0.4
	13nm,0.8s						
THZ	Tophouse	25.41	170	eP	P	10 52 04.1	+0.8
	16nm,0.8s						
KHZ	Kahutara	26.16	169	eP	P	10 52 11.0	+1.1
	34nm,1.2s						
LTZ	Lake Taylor	26.31	171	eP	P	10 52 13.2	+1.8
	14nm,1.0s						
OXZ	Oxford	26.81	172	eP	P	10 52 18.1	+2.3
	17nm,1.2s						
STKA	Stephens Creek	27.57	232	P	P	10 52 23.7	+0.9
	20nm,0.8s,baz=57,slow=7.5,SNR=36						
STKA				LR	LR	11 01 19.5	
	comp=Z,164nm,20.0s,baz=31,slow=32						
STKA	Stephens Creek	27.57	232	eP	P	10 52 24.0	+1.2
	4.5nm,0.8s						
WB2	Warramunga Arr	31.19	259	eP	P	10 52 54.7	-0.4
	3.8nm,0.8s						
WR1	Warramunga Arr	31.20	259	eP	P	10 52 54.1	-1.1
	2.9nm,0.8s						
WRA	Warramunga Arr	31.20	259	P	P	10 52 54.1	-1.1
	2.5nm,0.8s,baz=90,slow=9.2,SNR=24						
AS01	Alice Springs	31.78	252	eP	P	10 52 59.7	-0.6
AS31	Alice Springs	31.82	252	eP	P	10 53 00.5	-0.2
	10nm,0.8s						
ASAR	Alice Springs	31.82	252	P	P	10 53 00.8	+0.2
	31nm,0.8s,baz=79,slow=8.9,SNR=219						
GUMO	Guam	37.29	323	LR	LR	11 08 02.3	
	comp=Z,149nm,18.6s,baz=134,slow=35						
FITZ	Fitzroy Crossi	39.50	262	eP	P	10 54 06.9	+0.4
	4.4nm,0.9s						
DAV	Davao City (W)	47.38	297	LR	LR	11 14 10.8	
	comp=Z,81nm,20.6s,baz=152,slow=35						
NWAO	Narrogin (SRO)	47.57	241	P	P	10 55 11.4	0.0
	18nm,0.9s,baz=297,slow=8.1,SNR=6.2						
TGY	Tagaytay City	54.92	301	LR	LR	11 19 00.9	
	comp=Z,43nm,18.1s,baz=82,slow=36						
JHJ	Hachijo jima 2	56.04	332	LR	LR	11 18 35.9	
	comp=Z,57nm,20.6s,baz=136,slow=34						
JOW	Kunigami	57.42	318	LR	LR	11 21 56.6	
	comp=Z,77nm,18.0s,baz=286,slow=37						
LEM	Lembang	58.85	272	LR	LR	11 22 12.3	

	comp=Z,44nm,19.5s,baz=142,slow=36						
MJAR	Matsushiro Arr	59.62	333	P	P	10 56 37.9	-1.7
	2.9nm,1.0s,baz=174,slow=8.0,SNR=9.2						
MAJO	Matsushiro	59.62	333	eP	P	10 56 37.9	-1.7
JNU	Nakatsue	60.47	325	P	P	10 56 44.9	-0.6
	10nm,1.1s,baz=27,slow=6.8,SNR=3.1						
JNU				LR	LR	11 20 57.9	
	comp=Z,74nm,20.5s,baz=123,slow=34						
CASY	Casey	61.59	203	eP	P	10 56 52.8	+0.2
	5.3nm,0.8s						
ASAJ	Asahikawa	64.58	341	P	P	10 57 14.1	+1.4
	3.6nm,1.0s,baz=219,slow=14,SNR=3.8						
ASAJ				LR	LR	11 20 43.4	
	comp=Z,98nm,21.4s,baz=146,slow=32						
NJ2	Nanjing	67.00	317	eP	P	10 57 29.1	+0.5
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
USRK	Ussuriysk Ar.	68.61	334	P	P	10 57 38.6	+0.2
	3.7nm,0.8s,baz=116,slow=9.8						
PETK	Petropavlovsk-	70.05	354	P	P	10 57 46.5	-0.7
	3.5nm,0.8s,baz=133,slow=7.4						
PETK				LR	LR	11 24 53.3	
	comp=Z,105nm,18.9s,baz=167,slow=33						
PEA1	Petropavlovsk-	70.06	354	eP	P	10 57 46.5	-0.7
CN2	Changchun	71.29	329	eP	P	10 57 54.5	-0.4
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
GYA	Guiyang	72.72	305	eP	P	10 58 05.0	+1.0
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
QSPA	South Pole Qui	73.28	180	P	P	10 58 07.0	+0.3
	8.5nm,0.9s,baz=9.4,slow=3.7,SNR=14						
QSPA	South Pole Qui	73.28	180	eP	P	10 58 07.0	+0.3
QSPA				eP	P	10 58 07.4	+0.7
XAN	Xi'an	74.93	313	P	P	10 58 16.8	+0.1
XAN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,30nm,3.6s						
CMAR	Chiang Mai Arr	75.61	295	P	P	10 58 20.7	-0.2
	0.7nm,0.3s,baz=133,slow=5.0,SNR=3.6						
CMAR				LR	LR	11 34 00.9	
	comp=Z,12nm,18.4s,baz=110,slow=38						
RPN	Rapa Nui	76.98	115	LR	LR	11 31 22.9	
	comp=Z,51nm,18.3s,baz=264,slow=35						
HHC	Hu-ho-hao-te	77.01	320	eP	P	10 58 29.9	+1.4
HHC				sP	sP	10 58 50.4	+11
HHC				S	S	11 08 14.6	-1.1
HHC				sS	SKSac	11 08 39.3	-0.2
HHC				pmax	pmax		
	comp=Z,20nm,1.0s						
HHC				pmax	pmax		
	comp=Z,87nm,5.2s						
HHC				LR	LR		
	comp=N,100nm,9.5s						
HHC				LR	LR		
	comp=E,160nm,13.8s						
HHC				LR	LR		
	comp=Z,160nm,15.6s						
LZH	Lanzhou	79.55	313	eP	P	10 58 44.4	+1.6
LZH				pP	sP	10 58 57.0	+3.2
LZH				sP	pP	10 59 02.4	+12
LZH				pmax	pmax		
	comp=Z,16nm,1.0s						
MAW	Mawson	79.94	202	P	P	10 58 44.4	+0.3
	2.8nm,0.8s,baz=86,slow=4.0,SNR=3.2						
GTA	Gaotai	83.94	314	eP	P	10 59 06.5	+0.7
GTA				pP	sP	10 59 19.1	+2.3
GTA				sP	pP	10 59 24.1	+10
GTA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
SONA0	Songino Array	84.02	324	eP	P	10 59 05.7	-0.3
SONM	Songino Array	84.02	324	P	P	10 59 05.7	-0.3
	1.4nm,0.8s,baz=119,slow=12,SNR=5.3						
SONM				LR	LR	11 36 48.2	
	comp=Z,45nm,18.6s,baz=87,slow=36						
SONA1	Songino Array	84.02	324	eP	P	10 59 04.5	-1.5
SONA1				epP	sP	10 59 16.7	-0.4
SYO	Syowa Base	86.72	197	⇓eP	P	10 59 18.5	-0.5
BABR	Babbit Peak	87.90	48	eP	P	10 59 27.7	+2.1
DEVC	Devers	88.35	54	eP	P	10 59 27.8	+0.2
ILAR	Eielson Array	88.51	18	P	P	10 59 23.4	-4.1
	0.4nm,0.6s,baz=243,slow=5.0,SNR=6.4						
ILAR				LR	LR	11 37 57.4	
	comp=Z,78nm,18.1s,baz=284,slow=35						
ILB	Eielson Array	88.51	18	eP	P	10 59 24.5	-3.1
SNAA	Sanae	91.52	183	P	P	10 59 41.3	-0.4
	3.6nm,1.1s,baz=167,slow=4.3,SNR=7.1						
SNAA	Sanae	91.52	183	eP	P	10 59 41.5	-0.3
	6.0nm,1.1s						
WMQ	Urumqi	94.01	315	P	P	10 59 53.8	+0.1
WMQ				sP	sP	11 00 11.3	+6.5
WMQ				pmax	pmax		
	comp=Z,5.0nm,0.7s						
WMQ				LR	LR		
	comp=N,100nm,22.1s						
WMQ				LR	LR		
	comp=E,180nm,24.9s						
WMQ				LR	LR		
	comp=Z,150nm,27.7s						
MAKZ	Makanchi	98.75	316	eP	P	11 00 09.6	-5.4
	11nm,1.0s						
KSH	Kashi	101.30	308	eP	Pdif	11 00 27.2	+0.5
KSH				PP	PP	11 04 40.4	+4.0
SCO	Scoresbysund	126.01	4	ePKPpre	PKPpre	11 05 28.2	
MEM	Membach	142.97	340	⇑PKP	PKPdf	11 06 11.4	+2.4
SNF	Seneffe	143.60	341	⇑PKP	PKPdf	11 06 13.1	+3.0
DOU	Dourbes	143.87	341	⇓PKP	PKPdf	11 06 12.9	+2.3
DAVOX	Davos/Dischmat	144.60	333	PKP	PKPdf	11 06 12.0	-0.3
	5.7nm,0.7s,baz=225,slow=10.0,SNR=4.5						

IDC 10 11:06:42.4±52.0, 15°.13S×172°.54W, h0km, mb4.2/3, mb1 4.4/3, mb1mx3.6/52, mbtmp4.2/3, Error ellipse: s-maj=1015.0km s-min=174.3km az=78.0, Samoa Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	44.89	240	P	P	11 14 59.3	+0.3
	0.9nm,0.3s,baz=97,slow=11,SNR=7.3						
WRA	Warramunga Arr	50.72	256	P	P	11 15 44.0	-0.4
	0.6nm,0.4s,baz=94,slow=6.9,SNR=29						
ASAR	Alice Springs	50.98	252	P	P	11 15 46.2	-0.2
	6.5nm,0.6s,baz=89,slow=7.9,SNR=152						

NIED ***10*** *11:08:00, 45°.60N×151°.60E, h8km, Mw4.1 Best double couple: M0 1.36000×10^15 NP1:φs247.00000°, δ31.00000°, λ102.00000°. NP2:φs53.00000°, δ60.00000°, λ83.00000°.*
JMA ***10*** *11:08:11.1±0.8, 45°.61N×151°.61E, h30km, M3.9*
SKHL ***10*** *11:08:12.5±0.2, 45°.23N×151°.70E, h46km±9km, mb4.4/4*
ISC 10 11:08:10.5±2.5, 44°.9N±0°.2×151°.9E±0°.2, h41km, n20, σ2°11/29, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.88	278	i P	Pn	11 08 54.0	+0.1
KUR				AMB	AMB	11 08 55.0	
	16nm,0.4s						
KUR				AMB	AMB	11 08 55.0	
	44nm,0.4s						
KUR				AMB	AMB	11 08 55.0	
	26nm,0.4s						
KUR				i S	Sn	11 09 25.0	-2.3
KUR				A	A	11 09 32.0	
	248nm,0.4s						
KUR				A	A	11 09 32.0	
	65nm,0.4s						
SHO	Shikotan	3.78	256	i P	Pn	11 09 07.0	+0.8
SHO				AMB	AMB	11 09 15.0	
	8.0nm,0.3s						
SHO				AMB	AMB	11 09 15.0	
	11nm,0.3s						
SHO				AMB	AMB	11 09 15.0	
	21nm,0.3s						
SHO				eS	Sn	11 09 48.0	-1.4
SHO				A	A	11 10 01.0	
	49nm,0.3s						
SHO				A	A	11 10 01.0	
	79nm,0.3s						
YUK	Yuzh-Kuril'sk	4.41	261	erx	rx	11 10 12.0	
GRPR	Tuman	4.48	261	eP	Pn	11 09 18.0	+2.1
GRPR				AMB	AMB	11 09 24.0	
	44nm,0.4s						
GRPR				eS	Sn	11 10 08.0	+1.3
GRPR				A	A	11 10 13.0	
	94nm,0.4s						
GRPR				A	A	11 10 13.0	
	65nm,0.4s						
NEM2	Nemuro 2	4.69	253	P	Pn	11 09 19.9	+1.2
NEM2				eS	Sn	11 10 10.8	-1.0
GLVR	Golovnino	4.72	258	eP	Pn	11 09 21.0	+1.8
GLVR				AMB	AMB	11 09 23.0	
	41nm,0.3s						
GLVR				eS	Sn	11 10 12.0	-0.7
GLVR				A	A	11 10 17.0	
	110nm,0.3s						
GLVR				A	A	11 10 17.0	
	69nm,0.3s						
JRA	Rausu	4.95	261	P	Pn	11 09 24.7	+2.4
JNK	Nakash	5.33	258	P	Pn	11 09 29.3	+1.8
JAK	Akkeshi	5.54	253	P	Pn	11 09 31.3	+1.0
JAK				eS	Sn	11 10 30.0	-2.7
JTKR	Abashiri--Toko	5.80	264	P	Pn	11 09 36.0	+2.0
JAR	Ashorobuto	6.07	258	P	Pn	11 09 40.2	+2.5
JAR				eS	Sn	11 10 47.1	+1.2
JMP	Maruseppu	6.18	265	P	Pn	11 09 41.4	+2.2
SKR	Severo-Kuril's	6.46	25	eP	Pn	11 09 42.0	-0.9
JCH	Churui	6.59	253	P	Pn	11 09 46.8	+2.0
JCH				eS	Sn	11 10 58.0	-0.6
JKK2	Kamakawa 2	6.64	264	P	Pn	11 09 47.7	+2.2
ASAJ	Asahikawa	6.70	267	P	Pn	11 09 49.4	+3.1
MYR	Moyori	6.78	251	eP	Pn	11 09 49.8	+2.5
MYR				eS	Sn	11 11 01.6	-1.6
JNBK	Urakawa-nobuka	7.14	252	eS	Sn	11 11 11.4	-0.7
JBT2	Biratori 2	7.21	256	P	Pn	11 09 54.7	+1.3
JKB	Kayabe	8.47	253	P	Pn	11 10 11.8	+1.3
JKB				eS	Sn	11 11 39.2	-5.5

TEH ***10*** *11:10:03.4, 35°.47N×44°.34E, h10km, ML3.8*
IDC ***10*** *11:10:03.2±1.0, 35°.52N×44°.81E, h0km, mb3.8/7, mb1 3.9/10, mb1mx3.6/57, mbtmp3.8/10, ML3.5/3, Error ellipse: s-maj=21.2km s-min=15.7km az=119.0*
ISN ***10*** *11:10:05.0±0.9, 35°.67N×44°.79E, h4km±3km, ML4.0*
CSEM ***10*** *11:10:06.6±0.2, 35°.62N×44°.74E, h10km, ML4.0, Error ellipse: s-maj=5.2km s-min=4.0km az=47.0*
DDA ***10*** *11:10:49.5, 35°.90N×44°.46E, h10km, Ml3.8*
ISC 10 11:10:03.4±1.3, 35°.64N±0°.03×44°.77E±0°.04, h0km±10km, n75, σ1°69/81, mb3.8/7, Iraq

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDHR	Dehrash	1.62	125	ePn	Pg	11 10 34.9	+0.4
IDHR				e		11 10 59.4	
	comp=N,75µm,0.2s						
IDHR				e		11 10 59.6	
	comp=E,12µm,0.1s						
IDHR				e		11 11 00.6	
	comp=Z,54µm,0.1s						
IDHR	Dehrash	1.62	125	ePn	Pg	11 10 34.9	+0.4
CUKT	Cukurca	1.86	330	PG	Pb	11 10 37.9	-0.4
CUKT				SG	Sg	11 11 03.6	+0.5
CUKT	Cukurca	1.86	330	i P	Pb	11 10 38.1	-0.2
CUKT				i S	Sg	11 11 03.7	+0.5
CUKT	Cukurca	1.86	330	ePg	Pb	11 10 38.2	-0.2
CUKT	Cukurca	1.86	330	P	Pb	11 10 38.1	-0.2
CUKT				S	Sg	11 11 03.7	+0.6
ILIN	Lien	1.93	111	ePn	Pb	11 10 40.0	+0.3
ILIN				e		11 11 09.1	
	comp=E,18µm,0.2s						
ILIN				e		11 11 11.7	
	comp=Z,16µm,0.3s						
ILIN	Lien	1.93	111	ePn	Pb	11 10 40.0	+0.3
YOVA	Hakkari_Yˆ…kse	1.98	349	i P	Pb	11 10 40.7	+0.2
YOVA				i S	Sg	11 11 08.1	+1.0
YOVA	Hakkari_Yˆ…kse	1.98	349	P	Pb	11 10 40.7	+0.2
YOVA				S	Sg	11 11 08.1	+1.0
IVIS	Veis	2.04	123	ePn	Pb	11 10 41.5	+0.2
IVIS				e		11 11 14.1	
	comp=Z,11µm,0.3s						
IVIS				e		11 11 17.6	
	comp=E,9µm,0.2s						
IVIS				e		11 11 18.2	
	comp=N,13µm,0.3s						
IVIS	Veis	2.04	123	ePn	Pb	11 10 41.5	+0.2
HAKT	HAKKARI	2.10	336	i P	Pb	11 10 41.6	-0.8
HAKT				i S	Sg	11 11 09.9	-0.9
HAKT	HAKKARI	2.10	336	P	Pb	11 10 41.6	-0.8
HAKT				S	Sg	11 11 09.9	-0.9
KCHF	Cheshme Sefid,	2.31	126	ePn	Pb	11 10 44.1	-1.9
KCHF	Cheshme Sefid,	2.31	126	ePn	Pb	11 10 44.1	-1.9
BHD	Baghdad	2.39	188	ePn	Pb	11 10 46.0	-1.2
	SNR=3.0						
BHD				eSn	Sb	11 11 15.5	-1.7
	SNR=3.0						
SIRT	Sirnak	2.64	315	PG	Pn	11 10 47.9	+0.5
SIRT				SG	Sb	11 11 22.5	-2.1
SIRT	Sirnak	2.64	315	ePg	Pn	11 10 47.8	+0.4
SIRT	Sirnak	2.64	315	ePg	Pn	11 10 47.8	+0.4
IBST	Bostanabad	2.67	39	ePn	Pn	11 10 49.6	+1.7
IBST				e		11 11 31.7	
	comp=N,3µm,0.4s						
IBST				e		11 11 33.7	
	comp=E,3µm,0.3s						
IBST				e		11 11 34.6	
	comp=Z,4µm,0.2s						
IBST	Bostanabad	2.67	39	ePn	Pn	11 10 49.6	+1.7
IKOM	Komasi	2.69	122	ePn	Pb	11 10 50.3	-2.1
IKOM				e		11 11 38.8	
	comp=Z,99nm,0.2s						
IKOM	Komasi	2.69	122	ePn	Pb	11 10 50.3	-2.1
ISHB	Shabestar	2.72	14	ePn	Pn	11 10 50.3	+1.7
ISHB				e		11 11 37.0	
	comp=Z,5µm,0.2s						
ISHB				e		11 11 38.4	
	comp=E,21µm,0.3s						
ISHB				e		11 11 40.2	
	comp=N,21µm,0.3s						
IBZA	Bozab	2.79	114	e		11 11 39.3	
	comp=Z,2µm,0.2s						
ITBZ	Tabriz	2.81	23	e		11 11 35.6	
	comp=N,3µm,0.3s						
ITBZ				e		11 11 38.8	
	comp=E,4µm,0.3s						
ITBZ				e		11 11 39.6	
	comp=Z,2µm,0.2s						
VANB	Van	3.15	340	ePG	Pn	11 10 56.4	+2.0
VANB	Van	3.15	340	ePn	Pn	11 10 55.8	+1.4
VANB	Van	3.15	340	ePn	Pn	11 10 55.8	+1.4
IHRS	Heris	3.23	34	ePn	Pb	11 10 59.0	-2.8
IHRS				e		11 11 07.8	
	comp=Z,2µm,0.3s						
IHRS				e		11 11 55.6	
	comp=N,2µm,0.4s						
IHRS				e		11 11 59.9	
	comp=E,3µm,0.3s						
IHRS	Heris	3.23	34	ePn	Pb	11 10 59.0	-2.8
SRTM	Siirt_Merkez	3.27	317	i P	Pn	11 10 58.0	+1.9
SRTM				i S	Sg	11 11 49.4	+0.8
SRTM	Siirt_Merkez	3.27	317	P	Pn	11 10 58.0	+1.9
IKFM	Kafar-mosalman	3.30	129	ePn	Pn	11 10 58.8	+2.5
IKFM				e		11 11 58.3	
	comp=E,99nm,0.2s						
IKFM				e		11 11 58.5	
	comp=Z,99nm,0.3s						
IKFM				e		11 12 01.3	
	comp=N,99nm,0.4s						
IKFM	Kafar-mosalman	3.30	129	ePn	Pn	11 10 58.8	+2.5
HKZM	Kohzaman	3.38	93	ePn	Pn	11 10 59.8	+2.1
HKZM				e		11 11 12.7	
	comp=E,99nm,0.3s						
HKZM				e		11 11 59.7	
	comp=N,99nm,0.3s						
HKZM				e		11 12 07.4	
	comp=Z,99nm,0.3s						
HKZM	Kohzaman	3.38	93	ePn	Pn	11 10 59.8	+2.1
HSAM	Samen	3.46	113	ePn	Pn	11 11 00.9	+2.2
HSAM				e		11 12 02.8	
	comp=E,99nm,0.4s						
HSAM				e		11 12 10.3	
	comp=N,99nm,0.3s						
HSAM	Samen	3.46	113	ePn	Pn	11 11 00.9	+2.2
MARD	Mardin	3.62	299	eP	Pn	11 11 02.7	+1.8
MARD				i S	Sn	11 11 45.0	+0.5
GURO	Guroymak-BITLI	3.64	324	ePG	Pn	11 11 03.0	+1.9
HAGD	Aghdareh	3.67	102	e		11 11 18.4	
	comp=Z,99nm,0.1s						
HAGD				ePn	Pn	11 11 04.6	+3.0
HAGD				e		11 11 58.1	
	comp=N,99nm,0.0s						
HAGD				e		11 12 04.1	
	comp=E,99nm,0.1s						
QABG	Abgarm-Qazvin	3.92	88	e		11 12 20.6	
	comp=Z,99nm,0.9s						
QABG				e		11 12 21.2	
	comp=N,99nm,1.0s						
QABG				e		11 12 21.9	
	comp=E,99nm,0.8s						
MAZI	Mazidag	3.93	299	ePG	Pn	11 11 06.6	+1.5
IRAZ	Razeghan	4.21	92	e		11 11 26.4	
	comp=Z,1µm,0.3s						
IRAZ				e		11 12 24.4	
	comp=E,2µm,0.5s						
IRAZ				e		11 12 36.7	
	comp=N,771nm,0.5s						
DYBB	Diyarbakir	4.38	303	ePG	Pn	11 11 13.2	+2.0
IGZV	Ghazvin	4.48	79	ePn	Pn	11 11 15.9	+3.1
IGZV				e		11 12 34.3	
	comp=Z,660nm,0.2s						
IGZV				e		11 12 34.3	
	comp=N,931nm,0.2s						
IGZV				e		11 12 39.4	
	comp=E,705nm,0.2s						
IGZV	Ghazvin	4.48	79	ePn	Pn	11 11 15.9	+3.1
GNI	Garni	4.50	360	Pg	Pg	11 11 29.5	-0.2
	comp=E,3.2nm,0.3s,baz=156,slow=18,SNR=6.0						
GNI				Lg	Lg	11 12 32.8	
	comp=E,0.5nm,0.3s,baz=125,slow=19,SNR=1.9						
RTB	Rutbah	4.52	236	ePn	Pn	11 11 16.0	+2.9
	SNR=3.0						
RTB				eSn	Sn	11 12 06.0	-0.4
	SNR=3.0						
BNGB	Bingˆ¶l	4.67	317	ePG	Pn	11 11 17.3	+2.0
NSR	Nassriya	4.76	166	ePn	Pn	11 11 20.0	+3.6
	SNR=3.0						
NSR				eSn	Sn	11 12 12.0	-0.2
	SNR=3.0						
QALM	Alamut, Qazvin	4.83	79	e		11 12 48.4	
	comp=N,99nm,0.5s						
QALM				e		11 12 54.8	
	comp=Z,99nm,0.4s						
QALM				e		11 12 55.8	
	comp=E,99nm,0.5s						
SVRC	Sivrice-ELAZID	5.16	304	ePG	Pn	11 11 24.5	+2.5
PTK	Pertek	5.38	309	ePG	Pn	11 11 26.9	+1.8
IKLH	Kolahrood	6.08	110	ePn	Pn	11 11 38.4	+3.6
IKLH				e		11 12 30.8	
	comp=Z,302nm,0.1s						
IKLH				e		11 12 48.8	
	comp=N,348nm,0.2s						
IKLH				e		11 12 53.8	
	comp=E,327nm,0.1s						
IKLH	Kolahrood	6.08	110	ePn	Pn	11 11 38.4	+3.6
ISFB	Sefidab	6.26	100	ePn	Pn	11 11 38.6	+1.4
ISFB				e		11 12 14.7	
	comp=Z,106nm,0.3s						
ISFB	Sefidab	6.26	100	ePn	Pn	11 11 38.6	+1.4
IZEF	Zefreh	6.83	111	ePn	Pn	11 11 47.2	+2.1
IZEF				e		11 11 53.0	
	comp=Z,121nm,0.1s						
IZEF				e		11 11 54.5	
	comp=E,102nm,0.2s						
IZEF				e		11 12 03.5	
	comp=N,106nm,0.1s						
IZEF	Zefreh	6.83	111	ePn	Pn	11 11 47.2	+2.1
ASF	Jabal al Asfar	7.40	244	Pn	Pn	11 11 52.8	0.0
	comp=N,0.2nm,0.3s,baz=349,slow=5.2,SNR=2.3						
ASF				Lg	Lg	11 13 54.8	
	comp=N,0.6nm,0.3s,baz=37,slow=20,SNR=2.4						
IRAM	Ramesheh	7.40	119	ePn	Pn	11 11 53.7	+0.8
IRAM				e		11 13 19.8	
	comp=E,115nm,0.2s						
IRAM				e		11 13 20.5	
	comp=Z,80nm,0.2s						
IRAM				e		11 13 22.4	
	comp=N,144nm,0.2s						
IRAM	Ramesheh	7.40	119	ePn	Pn	11 11 53.7	+0.8
MMAI	Mount Meron Ar	8.18	254	Lg	Lg	11 14 24.2	
	comp=N,1.8nm,0.3s,baz=75,slow=25,SNR=3.6						
WSAR	Wadi Sarin	17.25	132	P	Pn	11 14 02.7	-3.1
	comp=N,0.3nm,0.3s,baz=325,slow=12,SNR=2.8						
AKTO	Aktyubinsk	17.63	29	P	P	11 14 11.8	+0.4
	comp=N,0.3nm,0.3s,baz=211,slow=9.0,SNR=3.8						
BVAR	Borovoye Array	25.05	38	P	P	11 15 28.9	-0.2
	comp=N,0.5nm,0.4s,baz=230,slow=8.9,SNR=3.8						
FINES	FINESS Array B	28.42	341	P	P	11 15 59.7	+0.3
	comp=N,0.7nm,0.4s,baz=133,slow=7.8,SNR=4.6						
KURBB	Kurchatov Arra	28.53	48	P	P	11 16 00.8	+0.2
	comp=N,0.4nm,0.3s,baz=260,slow=9.2,SNR=2.2						
MKAR	Makanchi Array	30.07	57	P	P	11 16 14.1	-0.2
	comp=N,0.3nm,0.5s,baz=260,slow=7.2,SNR=3.5						
HFS	Hagfors	31.64	330	P	P	11 16 28.2	+0.3
	comp=N,1.8nm,0.4s,baz=132,slow=10,SNR=11						
ESDC	Sonseca Array	38.42	291	P	P	11 17 26.6	0.0
	comp=N,0.2nm,0.3s,baz=74,slow=8.0,SNR=4.6						
BOSA	Boshof	66.51	199	P	P	11 20 55.6	+0.6
	comp=N,1.4nm,0.5s,baz=15,slow=8.1,SNR=5.7						

STR 10 11:18:51.5±0.9, 49°N±4°×°±°, h0km, M2.9/4, MLv2.9/4, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OPP	Oppenau	0.50	232	Pg	Pn	11 19 04.9	-0.9
OPP				Sg	Sb	11 19 09.7	-1.2
WLS	Welschbruch	1.02	248	Pg	Pn	11 19 15.6	+2.5
WLS				Sg	Sn	11 19 28.6	+0.5
KIZ	Kirchzarten	1.02	214	Pg	Pb	11 19 12.5	+0.4
KIZ				Sg	Sg	11 19 20.3	-4.0

WEL 10 11:32:16.2, 43°.6S±1°.0×172°.6E±0°.9, h9km±1km, ML4.8/16, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MQZ	McQueen's Vall	0.10	132	P	Pg	11 32 19.9	+1.2
MQZ				S	Sg	11 32 21.8	+1.3
EYCZ	Eyrewell	0.26	327	P	Pb	11 32 22.6	-0.3
EYCZ				S	Sb	11 32 26.2	-1.3
AKCZ	Akaroa Harbour	0.35	132	P	Pb	11 32 24.5	-0.1
OKCZ	Okains Bay	0.38	103	P	Pb	11 32 25.2	0.0
OKCZ				S	Sb	11 32 30.6	-0.6
OXZ	Oxford	0.48	310	P	Pb	11 32 26.6	-0.2
LTZ	Lake Taylor	0.88	347	P	Pb	11 32 34.1	+0.5
LTZ				S	Sb	11 32 46.3	+0.8
RPZ	Rata Peaks	1.09	265	P	Pn	11 32 37.5	-0.1
INZ	Inchbonnie	1.22	318	P	Pg	11 32 40.4	+0.9
KHZ	Kahutara	1.42	31	P	Pn	11 32 41.2	-0.9
WVZ	Waitaha Valley	1.44	292	P	Pb	11 32 42.7	-0.3
LBZ	Lake Benmore	1.86	245	P	Pn	11 32 48.6	+0.4
THZ	Tophouse	1.89	8	P	Pn	11 32 48.1	-0.5
ODZ	Otahua Downs	1.96	223	P	Pn	11 32 49.6	0.0
DSZ	Denniston Nort	1.97	344	P	Pn	11 32 49.9	+0.2
FOZ	Fox Glacier	1.99	272	P	Pb	11 32 51.3	-1.2
BSWZ	Blackbirch Sta	2.16	27	P	Pn	11 32 51.9	-0.4
CMWZ	Cape Campbell	2.25	34	P	Pn	11 32 54.1	+0.5
TUWZ	Tuamarina	2.44	26	P	Pn	11 32 55.3	-0.8
NNZ	Nelson	2.50	15	P	Pn	11 32 56.9	0.0
HHSZ	Highcliff Hill	2.64	211	P	Pn	11 32 58.8	-0.1
TCW	Tory Channel	2.74	28	P	Pn	11 32 59.6	-0.7
JCZ	Jackson Bay	2.76	260	P	Pn	11 33 01.6	+1.0
WKZ	Wanaka	2.80	244	P	Pn	11 33 01.3	+0.1
QRZ	Quartz Range	2.81	360	P	Pn	11 33 01.0	-0.2
BHW	Baring Head	2.81	38	P	Pn	11 33 00.4	-0.8
EAZ	Earnscleugh	2.81	234	P	Pn	11 33 01.4	+0.1
PLWZ	Palliser	2.88	45	P	Pn	11 33 00.8	-1.4
MSWZ	Moikau Station	2.99	43	P	Pn	11 33 02.2	-1.5
DUWZ	D'Urville Isla	3.01	20	P	Pn	11 33 04.3	+0.3
PAWZ	Paruwai Farm	3.10	44	P	Pn	11 33 03.6	-1.7
TUZ	Tuapeka	3.11	221	P	Pn	11 33 05.4	0.0
CAW	Cannon Point	3.14	37	P	Pn	11 33 04.3	-1.5
TRWZ	Traveller	3.22	47	P	Pn	11 33 05.5	-1.4
KIW	Kapiti Island	3.28	33	P	Pn	11 33 06.8	-1.0
MTW	Mount Morrison	3.31	42	P	Pn	11 33 06.4	-1.6
OGWZ	Otaki Gorge	3.43	36	P	Pn	11 33 08.5	-1.2
MSZ	Milford Sound	3.48	251	P	Pn	11 33 10.7	+0.3
HOWZ	Holdsworth Sta	3.51	40	P	Pn	11 33 09.8	-1.1

TMWZ	Te Maipa	3.54	46	P	Pn	11 33 09.5	-1.8
MLZ	Mavora Lakes	3.61	240	P	Pn	11 33 12.2	-0.1
MRZ	Mangatainoka R	3.73	38	P	Pn	11 33 12.1	-1.9
SYZ	Scrubby Hill	3.77	219	P	Pn	11 33 14.6	+0.2
TIWZ	Tintock	3.78	42	P	Pn	11 33 13.2	-1.4
WHZ	Wether Hill Ro	3.98	234	P	Pn	11 33 16.5	-0.8
PRWZ	Pori Road	4.00	41	P	Pn	11 33 16.1	-1.4
POWZ	Post Office Ro	4.03	38	P	Pn	11 33 16.6	-1.4
BFZ	Birch Farm	4.04	44	P	Pn	11 33 15.9	-2.2
WAZ	Wanganui	4.29	26	P	Pn	11 33 22.9	+1.3
DVHZ	Dannevirke	4.29	40	P	Pn	11 33 19.5	-2.1
ANWZ	Angora Road	4.32	44	P	Pn	11 33 19.9	-2.0
NMEZ	Namu Road	4.34	14	P	Pn	11 33 23.1	+0.9
TSZ	Takapari Road	4.39	37	P	Pn	11 33 21.3	-1.7
LREZ	Lake Rotokare	4.40	19	P	Pn	11 33 25.8	+2.7
PREZ	Palmer Road	4.46	16	P	Pn	11 33 24.8	+0.9
KHEZ	Kahui Hut	4.48	15	P	Pn	11 33 25.8	+1.6
APZ	The Paps	4.54	224	P	Pn	11 33 24.5	-0.4
PRHZ	Porangahau	4.54	44	P	Pn	11 33 22.8	-2.2
PKE	Pukeiti	4.57	14	P	Pn	11 33 26.2	+0.8
DREZ	Durham Road	4.62	16	P	Pn	11 33 27.2	+1.1
PNHZ	Pukenui	4.62	38	P	Pn	11 33 24.1	-2.0
MHEZ	Mangahewa	4.75	17	P	Pn	11 33 30.6	+2.7
MTVZ	Mangateitei	4.78	28	P	Pn	11 33 29.5	+1.1
VRZ	Vera Road	4.80	21	P	Pn	11 33 29.5	+0.8
PKVZ	Pokaka	4.83	27	P	Pn	11 33 29.5	+0.5
MOVZ	Moawhango	4.86	31	P	Pn	11 33 29.3	-0.2
BHHZ	Black Hill Sta	4.91	34	P	Pn	11 33 29.4	-0.8
KRHZ	Kereru	4.91	37	P	Pn	11 33 27.9	-2.2
WHVZ	Whangaehu Hut	4.91	29	P	Pn	11 33 30.3	0.0
FWVZ	Far West T-bar	4.93	28	P	Pn	11 33 30.9	+0.4
TUVZ	Tukino	4.95	29	P	Pn	11 33 31.2	+0.4
COVZ	Chateau Observ	4.97	28	P	Pn	11 33 32.4	+1.4
NGZ	Ngauruhoe	5.01	28	P	Pn	11 33 31.7	0.0
KAHZ	Kahuranaki	5.02	42	P	Pn	11 33 30.1	-1.6
TWVZ	Taurewa	5.05	26	P	Pn	11 33 33.0	+0.8
WTVZ	West Tongariro	5.06	28	P	Pn	11 33 32.9	+0.5
MCHZ	McNeill Hill	5.22	38	P	Pn	11 33 33.5	-0.8
HIZ	Hauiti	5.41	20	P	Pn	11 33 36.5	-0.4

ISCJB ***10*** *11:33:19.1±0.3, 41°.45S±0°.03×173°.89E±0°.03, h73km±4km, mb3.9/2, Error ellipse: s-maj=5.7km s-min=3.6km az=145.8*

WEL ***10*** *11:33:19.5, 41°S±2°×17°4E±°, h61km±3km, ML4.6/23*

NEIC ***10*** *11:33:19.4±0.0, 41°.41S×173°.76E, h67km, ML4.6(WEL), After WEL.*

NEIC Felt at Christchurch.

IDC ***10*** *11:33:20.9±1.3, 41°.09S×173°.84E, h75km±14km, mb3.6/2, mb1 3.9/3, mb1mx3.4/39, mbtmp3.9/3, Error ellipse: s-maj=29.1km s-min=9.7km az=132.0*

ISC 10 11:33:19.8±0.8**, 41°.40S**±0°.03×**173°.80E**±0°.03**, h58**km±5km**, n141, σ1s99**/147**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TUWZ	Tuamarina	0.11	108	P	Pn	11 33 28.9	+0.4
TUWZ				S	Sn	11 33 34.9	+0.1
BSWZ	Blackbirch Sta	0.32	170	Pn	Pn	11 33 30.4	+0.6
BSWZ	Blackbirch Sta	0.32	170	P	Pn	11 33 30.5	+0.6
NNZ	Nelson	0.36	299	P	Pn	11 33 30.1	-0.1
NNZ				S	Sn	11 33 37.5	-0.3
TCW	Tory Channel	0.40	63	*e*Pn	Pn	11 33 31.2	+0.7
TCW				*e*Sn	Sn	11 33 39.5	+1.2
TCW	Tory Channel	0.40	63	P	Pn	11 33 31.3	+0.7
TCW				S	Sn	11 33 38.8	+0.4
CMWZ	Cape Campbell	0.47	139	P	Pn	11 33 32.8	+1.5
DUWZ	D'Urville Isla	0.60	9	P	Pn	11 33 33.0	+0.3
SNZO	South Karori	0.68	83	*e*Pn	Pn	11 33 34.4	+0.8
SNZO				*e*Sn	Sn	11 33 45.8	+2.0
THZ	Tophouse	0.77	241	*e*Pn	Pn	11 33 34.9	+0.2
THZ				*e*Sn	Sn	11 33 44.5	-1.3
THZ	Tophouse	0.77	241	P	Pn	11 33 35.0	+0.2
THZ				S	Sn	11 33 45.7	-0.1
BHW	Baring Head	0.80	91	*e*Sn	Sn	11 33 52.4	+5.9
BHW	Baring Head	0.80	91	P	Pn	11 33 35.7	+0.5
KIW	Kapiti Island	0.99	58	*e*Pn	Pn	11 33 39.4	+1.8
KIW				*e*Sn	Sn	11 33 54.5	+3.6
KIW	Kapiti Island	0.99	58	P	Pn	11 33 38.5	+0.9
KIW				S	Sn	11 33 53.4	+2.6
CAW	Cannon Point	0.99	74	*e*Sn	Sn	11 33 57.2	+6.3
CAW	Cannon Point	0.99	74	P	Pn	11 33 38.2	+0.5
KHZ	Kahutara	1.04	191	P	Pn	11 33 39.0	+0.8
MSWZ	Moikau Station	1.09	92	P	Pn	11 33 39.0	+0.1
PLWZ	Palliser	1.10	100	P	Pn	11 33 39.2	0.0
QRZ	Quartz Range	1.12	300	*e*Sn	Sn	11 33 55.0	+1.2
QRZ	Quartz Range	1.12	300	P	Pn	11 33 39.9	+0.6
QRZ				P	Pn	11 33 39.4	+0.1
QRZ				S	Sn	11 33 54.4	+0.6
OGWZ	Otaki Gorge	1.18	61	P	Pn	11 33 40.7	+0.6
PAWZ	Paruwai Farm	1.22	90	*e*Sn	Sn	11 34 03.7	+7.4
PAWZ	Paruwai Farm	1.22	90	P	Pn	11 33 40.5	-0.2
MTW	Mount Morrison	1.30	80	P	Pn	11 33 41.5	-0.2
HOWZ	Holdsworth Sta	1.39	70	P	Pn	11 33 42.7	-0.2
TRWZ	Traveller	1.42	91	P	Pn	11 33 43.0	-0.3
MRZ	Mangatainoka R	1.53	62	P	Pn	11 33 44.7	-0.1
DSZ	Denniston Nort	1.54	256	P	Pn	11 33 45.7	+0.7
TMWZ	Te Maipa	1.60	80	P	Pn	11 33 45.2	-0.6
OHWZ	Ohakea	1.65	45	P	Pn	11 33 47.5	+1.1
OHWZ				S	Sn	11 34 11.6	+5.0
TIWZ	Tintock	1.69	69	P	Pn	11 33 46.5	-0.6
LTZ	Lake Taylor	1.79	219	P	Pn	11 33 50.6	+2.2
LTZ				S	Sn	11 34 12.7	+2.5
POWZ	Post Office Ro	1.80	57	P	Pn	11 33 48.1	-0.4
PRWZ	Pori Road	1.84	64	P	Pn	11 33 48.8	-0.3
WAZ	Wanganui	1.87	29	P	Pn	11 33 51.5	+2.0
CPWZ	Castlepoint	1.88	76	P	Pn	11 33 48.9	-0.5
BFZ	Birch Farm	1.98	70	*e*Pn	Pn	11 33 49.7	-1.3
BFZ				*e*Sn	Sn	11 34 32.9	+18
BFZ	Birch Farm	1.98	70	P	Pn	11 33 50.0	-1.0
NMEZ	Namu Road	1.98	2	P	Pn	11 33 52.8	+1.9
LREZ	Lake Rotokare	1.99	14	P	Pn	11 33 53.9	+2.9
PREZ	Palmer Road	2.07	8	P	Pn	11 33 54.5	+2.4
DVHZ	Dannevirke	2.10	59	P	Pn	11 33 51.6	-1.0
KHEZ	Kahui Hut	2.10	4	P	Pn	11 33 54.7	+1.9
TSZ	Takapari Road	2.12	52	P	Pn	11 33 52.5	-0.3
INZ	Inchbonnie	2.20	232	P	Pn	11 33 55.7	+1.8
PKE	Pukeiti	2.20	4	P	Pn	11 33 56.0	+2.0
DREZ	Durham Road	2.23	8	P	Pn	11 33 56.4	+2.1
ANWZ	Angora Road	2.23	66	P	Pn	11 33 53.3	-1.0
PNHZ	Pukenui	2.35	52	P	Pn	11 33 55.2	-0.8
MHEZ	Mangahewa	2.35	10	P	Pn	11 33 58.2	+2.2
MTVZ	Mangateitei	2.38	33	P	Pn	11 33 57.7	+1.3
VRZ	Vera Road	2.38	18	P	Pn	11 33 59.1	+2.6
WPHZ	Waipukurau	2.41	57	P	Pn	11 33 56.2	-0.5
PKVZ	Pokaka	2.41	30	P	Pn	11 33 58.6	+1.7
PRHZ	Porangahau	2.43	63	P	Pn	11 33 55.7	-1.4
PRHZ				P	Pn	11 33 55.7	-1.4
MOVZ	Moawhango	2.48	37	P	Pn	11 33 57.9	+0.1
TRVZ	Turoa	2.48	33	P	Pn	11 33 59.2	+1.2
DRZ	Dome Shelter	2.51	33	P	Pn	11 33 59.6	+1.2
WHVZ	Whangaehu Hut	2.51	33	P	Pn	11 33 59.4	+1.0
FWVZ	Far West T-bar	2.52	33	P	Pn	11 33 59.6	+1.1
TUVZ	Tukino	2.55	34	P	Pn	11 33 60.0	+1.1
COVZ	Chateau Observ	2.56	32	P	Pn	11 34 00.2	+1.2
BHHZ	Black Hill Sta	2.57	43	P	Pn	11 33 59.1	+0.1
NGZ	Ngauruhoe	2.61	32	P	Pn	11 34 00.7	+1.1
KRHZ	Kereru	2.62	49	P	Pn	11 33 59.1	-0.7
TWVZ	Taurewa	2.64	29	P	Pn	11 34 01.5	+1.5
WTVZ	West Tongariro	2.66	32	P	Pn	11 34 01.5	+1.3
KRVZ	Karewarewa	2.69	32	P	Pn	11 34 02.1	+1.3
PXZ	Pawanui	2.69	61	P	Pn	11 33 59.0	-1.6
KWHZ	Kaweka Forest	2.81	46	P	Pn	11 34 01.5	-0.8
KATZ	Kakaramea	2.82	32	P	Pn	11 34 05.3	+2.8
WVZ	Waitaha Valley	2.83	233	P	Pn	11 34 03.9	+1.4
KAHZ	Kahuranaki	2.83	57	P	Pn	11 34 01.7	-0.9
RITZ	Rihia Road	2.88	34	P	Pn	11 34 03.7	+0.4
RATZ	Rangitukua	2.94	32	P	Pn	11 34 07.6	+3.5
MCHZ	McNeill Hill	2.95	50	P	Pn	11 34 03.6	-0.5
HIZ	Hauiti	2.99	16	*e*Pn	Pn	11 34 06.4	+1.7
HIZ				*e*Sn	Sn	11 34 48.1	+8.8
HIZ	Hauiti	2.99	16	P	Pn	11 34 06.5	+1.8
BKZ	Black Stump Fm	3.03	44	*e*Pn	Pn	11 34 04.3	-1.0
BKZ	Black Stump Fm	3.03	44	P	Pn	11 34 04.3	-1.0
CKHZ	Cape Kidnapper	3.04	56	P	Pn	11 34 03.8	-1.6
HATZ	Hinemaiaia	3.06	36	P	Pn	11 34 11.5	+5.8
WATZ	Wairara	3.07	30	P	Pn	11 34 08.9	+3.1
RPZ	Rata Peaks	3.08	220	P	Pn	11 34 11.1	+5.1
	199nm,0.3s,baz=285,slow=3.0,SNR=4.1						
RPZ				S	Sn	11 34 49.7	+8.1
	142nm,0.3s,baz=13,slow=18,SNR=5.9						
RPZ	Rata Peaks	3.08	220	P	Pn	11 34 11.4	+5.4
WHTZ	Whakaora	3.19	32	P	Pn	11 34 12.5	+5.0
WHTZ				P	Pn	11 34 12.5	+5.0
NMHZ	Naumai	3.25	46	P	Pn	11 34 07.4	-0.9
MRHZ	Matea Rd	3.25	39	P	Pn	11 34 07.2	-1.2
KUTZ	Kaahu Road	3.29	29	P	Pn	11 34 14.1	+5.2
TLZ	Tolley Road	3.34	24	P	Pn	11 34 11.8	+2.3
WPRZ	Whakapapatarin	3.40	33	P	Pn	11 34 09.9	-0.4
ALRZ	Allen Road	3.44	35	P	Pn	11 34 09.9	-0.9
MTHZ	Maungataniwha	3.45	44	P	Pn	11 34 09.7	-1.3
PRRZ	Plateau Road	3.51	35	P	Pn	11 34 10.9	-0.9
PRRZ				P		11 34 11.0	
GRRZ	Galatos Road	3.52	31	P	Pn	11 34 17.3	+5.2
HRRZ	Handcock Road	3.56	33	P	Pn	11 34 12.3	-0.2
HSRZ	Hossack Road	3.61	32	P	Pn	11 34 18.9	+5.7
FOZ	Fox Glacier	3.64	233	P	Pn	11 34 14.8	+1.2
RTZ	Ruatahuna	3.70	42	P	Pn	11 34 12.9	-1.5
MUGZ	Murupara	3.70	39	P	Pn	11 34 12.9	-1.6
UTU	Utuhina	3.71	31	P	Pn	11 34 21.2	+6.7
SNGZ	Shannon Statio	3.77	47	P	Pn	11 34 13.3	-2.1
SNGZ				P		11 34 15.3	
NGRZ	Ngongotaha	3.77	30	P	Pn	11 34 19.5	+4.0
TARZ	Mount Tarawera	3.78	34	P	Pn	11 34 15.4	-0.2
KNZ	Kokohu	3.79	53	P	Pn	11 34 13.5	-2.2
OMRZ	Omania	3.83	32	P	Pn	11 34 20.7	+4.4
MKRZ	Makatiti	3.85	33	P	Pn	11 34 21.4	+4.9
MHGZ	Mahia Peninsul	3.86	56	P	Pn	11 34 14.2	-2.4
TOZ	Tahuroa Road	3.89	20	*e*Sn	Sn	11 35 04.5	+3.1
TOZ	Tahuroa Road	3.89	20	P	Pn	11 34 18.0	+1.0
KMRZ	Kaimai	3.91	26	P	Pn	11 34 20.6	+3.2
PRGZ	Paritu Road	3.98	53	P	Pn	11 34 16.2	-2.2
RAGZ	Rawiri	4.01	45	P	Pn	11 34 17.4	-1.4
URZ	Urewera	4.04	40	P	Pn	11 34 16.6	-2.5
	6.2nm,0.3s,baz=245,slow=6.7,SNR=16						
URZ				S	Sn	11 35 00.9	-4.1
	17nm,0.3s,baz=14,slow=8.2,SNR=4.0						
URZ	Urewera	4.04	40	*e*Pn	Pn	11 34 16.5	-2.5
URZ				*e*Sn	Sn	11 35 16.6	+12
TGRZ	Tauranga	4.12	28	P	Pn	11 34 23.6	+3.3
OPRZ	Ohinepanea	4.13	32	P	Pn	11 34 19.4	-0.9
AWAZ	Awhitu Peninsu	4.37	9	P	Pn	11 34 25.2	+1.6
KBAZ	Karaka Road Bo	4.38	11	P	Pn	11 34 25.6	+1.9
MKAZ	Moumakai	4.41	14	P	Pn	11 34 25.5	+1.3
WTAZ	Waiatarua	4.50	8	P	Pn	11 34 27.0	+1.6
ETAZ	East Tamaki Re	4.52	12	P	Pn	11 34 27.1	+1.4
RUGZ	Raukumara Rang	4.55	42	P	Pn	11 34 24.2	-1.9
TWGZ	Tauwhareparae	4.55	46	P	Pn	11 34 24.0	-2.1
JCZ	Jackson Bay	4.56	232	P	Pn	11 34 27.4	+1.1
EPAZ	Eden Park BICE	4.57	10	P	Pn	11 34 28.2	+1.9
HBAZ	Herne Bay Bore	4.60	9	P	Pn	11 34 28.5	+1.8
RVAZ	Riverhead Bore	4.66	8	P	Pn	11 34 28.8	+1.3
HAZ	Te Kaha	4.76	42	P	Pn	11 34 26.9	-2.0
KUZ	Kuaotunu	4.88	18	P	Pn	11 34 31.5	+1.0
MXZ	Matakaoa Point	5.18	44	*e*Pn	Pn	11 34 34.8	+0.2
MXZ				*e*Sn	Sn	11 35 52.7	+20
OUZ	Omahuta	6.17	358	*e*Pn	Pn	11 34 49.2	+1.0
ASAR	Alice Springs	37.61	285	P	P	11 40 28.1	-1.0
	0.9nm,0.4s,baz=127,slow=7.0,SNR=23						
WRA	Warramunga Arr	39.66	290	P	P	11 40 44.8	-1.4
	0.9nm,0.4s,baz=127,slow=8.1,SNR=25						
YKA	Yellowknife Ar	118.24	30	PKP	PKPdf	11 51 57.5	-1.8
	0.4nm,0.8s,baz=230,slow=1.7,SNR=4.8						
DBIC	Dimbokro	145.40	182	PKPbc	PKPab	11 52 51.8	+0.1
	2.0nm,0.6s,baz=161,slow=6.5,SNR=3.6						
ARCES	ARCESS Array B	147.33	340	PKPbc	PKPdf	11 52 53.4	+0.3
	1.0nm,0.6s,baz=64,slow=2.1,SNR=7.8						
TORD	Torodi Ar. Bea	151.03	196	PKPbc	PKPbc	11 53 05.5	-1.0
	baz=151,slow=1.5						
FINES	FINESS Array B	152.05	327	PKPbc	PKPbc	11 53 04.7	-2.8
	2.0nm,0.8s,baz=324,slow=6.9,SNR=3.6						

NIED ***10*** *11:40:00, 45°.40N×151°.80E, h20km, Mw4.0 Best double couple: M₀1.03000×10¹⁵ NP1:φs183.00000°, δ33.00000°, λ49.00000°. NP2:φs49.00000°, δ66.00000°, λ113.00000°.*

IDC ***10*** *11:40:11.0±1.0, 45°.39N×151°.66E, h0km, mb3.8/12, mb1 3.9/16, mb1mx3.7/66, mbtmp3.8/16, ML3.4/2, MS3.5/3, Ms1 3.5/3, ms1mx2.7/65, Error ellipse: s-maj=24.4km s-min=19.0km az=136.0*

ISCJB ***10*** *11:40:11.8±0.5, 45°.02N±0°.07×151°.77E±0°.06, h30km, mb4.0/15, MS3.7/2, Error ellipse: s-maj=11.2km s-min=3.7km az=150.2*

JMA ***10*** *11:40:12.2±0.4, 45°.43N×151°.81E, h30km, M4.3*

NEIC ***10*** *11:40:13.1±2.9, 45°.32N×151°.70E, h16km±18km, mb4.6/2, Error ellipse: s-maj=11.0km s-min=6.8km az=137.0*

SKHL ***10*** *11:40:14.4±0.5, 45°.05N×151°.81E, h49km±9km, mb4.6/6*

MOS ***10*** *11:40:15.6±1.0, 45°.26N×151°.48E, h49km, mb4.2/1, Error ellipse: s-maj=13.3km s-min=9.7km az=152.8*

ISC 10 11:40:14.4±0.7**, 45°.15N**±0°.08×**151°.66E**±0°.06**, h30**km**, n94, σ1s97**/108**, mb4.1**/15**, 1C, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.68	273	*e*P	Pb	11 40 58.0	-3.6
KUR				AMB	AMB	11 41 05.0	
	16nm,0.3s						
KUR				AMB	AMB	11 41 05.0	
	80nm,0.3s						
KUR				*e*S	Sb	11 41 31.0	-3.0
KUR				A	A	11 41 36.7	
	155nm,0.4s						
KUR				A	A	11 41 36.7	
	169nm,0.4s						
KUR	Kuril'sk	2.68	273	*e*PN	Pn	11 40 56.8	+1.4
KUR				*i* S	Sn	11 41 29.8	+3.0
KUR				pmax	pmax		
	comp=Z,80nm,0.4s						
KUR				pmax	pmax		
	comp=N,43nm,0.3s						
KUR				pmax	pmax		
	comp=E,16nm,0.3s						
KUR				smax	smax		
	comp=N,322nm,0.4s						
KUR				smax	smax		
	comp=E,60nm,0.6s						
SHO	Shikotan	3.68	251	*i* P	Pn	11 41 09.0	-0.2
SHO				AMB	AMB	11 41 12.0	
	comp=E,12nm,0.4s						
SHO				AMB	AMB	11 41 12.0	
	comp=E,36nm,0.4s						
SHO				*i* S	Sn	11 41 50.0	-1.5
SHO				A	A	11 41 54.0	
	comp=E,156nm,0.4s						
SHO				A	A	11 41 54.0	
	comp=E,105nm,0.4s						
SHO	Shikotan	3.68	251	⇑*i*PN	Pn	11 41 09.6	+0.4
SHO				*i* S	Sn	11 41 50.9	-0.6
SHO				pmax	pmax		
	comp=N,12nm,0.4s						
SHO				pmax	pmax		
	comp=E,12nm,0.4s						
SHO				pmax	pmax		
	comp=Z,36nm,0.4s						
SHO				smax	smax		
	comp=E,105nm,0.5s						
SHO				smax	smax		
	comp=N,156nm,0.4s						
YUK	Yuzh-Kuril'sk	4.29	257	*e*P	Pn	11 41 19.0	+1.5
YUK				AMB	AMB	11 41 21.0	
	comp=N,32nm,0.3s						
YUK				AMB	AMB	11 41 21.0	
	comp=N,36nm,0.3s						
YUK				AMB	AMB	11 41 21.0	
	comp=N,54nm,0.3s						
YUK				*e*S	Sn	11 42 07.0	+0.6
YUK				A	A	11 42 14.0	
	comp=N,130nm,0.3s						
YUK				A	A	11 42 14.0	
	comp=N,97nm,0.3s						
YUK	Yuzh-Kuril'sk	4.29	257	*e*PN	Pn	11 41 19.0	+1.5
YUK				*e*S	Sn	11 42 07.6	+1.2
YUK				pmax	pmax		
	comp=Z,54nm,0.4s						
YUK				pmax	pmax		
	comp=N,32nm,0.2s						
YUK				pmax	pmax		
	comp=E,36nm,0.2s						
YUK				smax	smax		
	comp=N,130nm,0.4s						
YUK				smax	smax		
	comp=E,97nm,0.3s						
LAGR	Lagunnoye	4.33	257	*e*S	Sn	11 42 10.0	+2.5
GRPR	Tuman	4.36	257	*e*P	Pn	11 41 21.0	+2.5
GRPR				AMB	AMB	11 41 29.0	
	comp=E,56nm,0.5s						
GRPR				AMB	AMB	11 41 29.0	
	comp=E,50nm,0.5s						
GRPR				AMB	AMB	11 41 29.0	
	comp=E,72nm,0.5s						
GRPR				*e*S	Sn	11 42 11.0	+2.7
GRPR				A	A	11 42 15.0	
	comp=E,118nm,0.4s						
GRPR				A	A	11 42 15.0	
	comp=E,98nm,0.4s						
GRPR	Tuman	4.36	257	*e*PN	Pn	11 41 21.3	+2.8
GRPR				*e*S	Sn	11 42 11.8	+3.5
GRPR				pmax	pmax		
	comp=Z,72nm,0.5s						
GRPR				pmax	pmax		
	comp=E,50nm,0.6s						
GRPR				pmax	pmax		
	comp=N,56nm,0.2s						
GRPR				smax	smax		
	comp=E,98nm,0.5s						
GRPR				smax	smax		
	comp=N,118nm,0.4s						
NEM2	Nemuro 2	4.60	249	P	Pn	11 41 21.7	-0.2
NEM2				*e*S	Sn	11 42 13.7	-0.6
GLVR	Golovnino	4.61	254	*e*P	Pn	11 41 23.0	+1.1
GLVR				AMB	AMB	11 41 29.0	
	comp=N,64nm,0.4s						
GLVR				AMB	AMB	11 41 29.0	
	comp=N,59nm,0.4s						
GLVR				AMB	AMB	11 41 29.0	
	comp=N,69nm,0.4s						
GLVR				*e*S	Sn	11 42 14.0	-0.5
GLVR				A	A	11 42 23.0	
	comp=N,183nm,0.4s						
GLVR				A	A	11 42 23.0	
	comp=N,182nm,0.4s						
GLVR	Golovnino	4.61	254	*e*PN	Pn	11 41 23.1	+1.1
GLVR				*e*S	Sn	11 42 14.8	+0.3
GLVR				pmax	pmax		
	comp=Z,69nm,0.6s						
GLVR				pmax	pmax		
	comp=E,59nm,0.4s						
GLVR				pmax	pmax		
	comp=N,64nm,0.3s						
GLVR				smax	smax		
	comp=E,182nm,0.5s						
GLVR				smax	smax		
	comp=N,183nm,0.4s						
JRA	Rausu	4.82	258	P	Pn	11 41 27.1	+2.2
JRA				*e*S	Sn	11 42 23.7	+4.0
JNK	Nakash	5.21	255	P	Pn	11 41 31.3	+1.1
JAK	Akkeshi	5.45	249	P	Pn	11 41 33.4	-0.1
JAK				*e*S	Sn	11 42 34.1	-1.1
JTKR	Abashiri--Toko	5.66	261	P	Pn	11 41 38.5	+2.1
JTKR				*e*S	Sn	11 42 47.0	+6.7
JAR	Ashorobuto	5.96	255	P	Pn	11 41 42.1	+1.6
JMP	Maruseppu	6.03	262	P	Pn	11 41 44.0	+2.4
JOB	Onbets	6.07	251	P	Pn	11 41 42.6	+0.6
JOB				*e*S	Sn	11 42 49.3	-1.0
SKR	Severo-Kuril's	6.30	27	*e*P	Pn	11 41 45.6	+0.5
SKR				AMB	AMB	11 41 46.1	
	comp=N,13nm,0.5s						
HRK	Horoka	6.34	258	*e*P	Pn	11 41 48.5	+2.7
YSS	Yuzh-Sakhalins	6.45	289	*e*Pn	Pn	11 41 47.3	+0.1
YSS	Yuzh-Sakhalins	6.45	289	*e*PN	Pn	11 41 43.2	-4.0
YSS				pmax	pmax		
	comp=Z,10.0nm,0.6s						
YSS				MLR	MLR		
	comp=Z,200nm,16.0s						
YSS				MLR	MLR		
	comp=N,200nm,14.0s						
JKK2	Kamakawa 2	6.50	262	P	Pn	11 41 50.3	+2.4
JCH	Churui	6.50	250	P	Pn	11 41 48.6	+0.6
JCH				*e*S	Sn	11 43 01.0	-0.1
ASAJ	Asahikawa	6.54	264	Pn	Pn	11 41 50.6	+2.1
	comp=N,0.8nm,0.3s,baz=88,slow=16,SNR=13						
ASAJ				LR	LR	11 44 47.4	
	comp=N,182nm,19.0s,baz=90,slow=42						
ASAJ	Asahikawa	6.54	264	*e*Pn	Pn	11 41 51.2	+2.7
ASAJ	Asahikawa	6.54	264	P	Pn	11 41 51.6	+3.1
MYR	Moyori	6.70	248	*e*P	Pn	11 41 51.7	+1.0
JEM	Erimo	6.92	246	P	Pn	11 41 53.9	+0.3
ERM	Erimo	6.92	246	*e*Pn	Pn	11 41 56.7	+3.0
ERM	Erimo	6.92	246	*e*PN	Pn	11 41 56.7	+3.0
JBT2	Biratori 2	7.11	254	P	Pn	11 41 56.8	+0.5
JNB	Noboribetsu	8.13	255	P	Pn	11 42 11.8	+1.5
JNB				*e*S	Sn	11 43 39.5	-1.6
JKB	Kayabe	8.38	251	P	Pn	11 42 14.0	+0.3
JKB				*e*S	Sn	11 43 42.2	-5.0
JYM2	Yakumo 2	8.73	254	P	Pn	11 42 18.8	+0.3
JANG	Nango	8.85	241	P	Pn	11 42 18.5	-1.7
JANG				*e*S	Sn	11 43 51.7	-7.1
PETK	Petropavlovsk-	8.90	24	Pn	Pn	11 42 18.1	-2.7
	baz=178,slow=7.5						
PETK	Petropavlovsk-	8.90	24	*e*Pn	Pn	11 42 19.3	-1.5
JTM	Tenmabayashi	8.90	244	P	Pn	11 42 20.9	+0.1
JTM				*e*S	Sn	11 43 55.1	-4.9
PEA1	Petropavlovsk-	8.90	24	*e*Pn	Pn	11 42 18.1	-2.7
JTH	Tanohata	8.90	238	*e*S	Sn	11 43 51.6	-8.5
JOSM	Okushiri--Mats	9.35	255	P	Pn	11 42 28.5	+1.5
OFUJ	Ofunato	9.58	234	P	Pn	11 42 29.0	-1.1
OFUJ				*e*S	Sn	11 44 08.7	-8.0
JRG	Rokugo	9.98	239	P	Pn	11 42 35.0	-0.7
JRG				*e*S	Sn	11 44 20.5	-6.1
JIO	Ouri	10.19	233	P	Pn	11 42 37.2	-1.3
MJA0	Matsu Arr-Jizo	13.29	234	*e*PN	P	11 43 33.5	+3.2
MAJO	Matsushiro	13.31	234	*e*Pn	Pn	11 43 21.1	-0.1
MAJO	Matsushiro	13.31	234	*e*PN	Pn	11 43 21.1	-0.1
MJAR	Matsushiro Arr	13.31	234	Pn	Pn	11 43 21.1	-0.1
	comp=N,0.1nm,0.3s,baz=29,slow=12,SNR=5.2						
USRK	Ussuriysk Ar.	14.03	273	Pn	Pn	11 43 29.6	-1.4
	baz=104,slow=12						
H11N2	WAKE ISLAND Hy	28.32	149	T	T	12 17 02.2	
	baz=332,slow=74						
H11N1	WAKE ISLAND Hy	28.34	149	T	T	12 17 55.1	
	baz=332,slow=74						
H11N3	WAKE ISLAND Hy	28.34	149	T	T	12 17 36.0	
	baz=332						
H11S1	WAKE ISLAND Hy	29.37	150	T	T	12 19 20.0	
	baz=338						
H11S3	WAKE ISLAND Hy	29.38	150	T	T	12 18 53.3	
	baz=338						
H11S2	WAKE ISLAND Hy	29.39	150	T	T	12 19 02.7	
	baz=338						
ILAR	Eielson Array	38.44	37	P	P	11 47 33.1	+0.2
	comp=N,0.7nm,0.9s,baz=269,slow=7.7,SNR=7.1						
MK31	Makanchi Array	46.79	298	*e*P	P	11 48 40.5	-0.4
MK31	Makanchi Array	46.79	298	*e*P	P	11 48 40.5	-0.4
MK32	Makanchi Array	46.79	298	*e*P	P	11 48 42.3	+1.3
MK32				*e*PcP	PcP	11 50 14.9	+1.1
MKAR	Makanchi Array	46.79	298	P	P	11 48 42.3	+1.3
	comp=N,1.0nm,0.7s,baz=74,slow=7.9,SNR=11						
MKAR				PcP	PcP	11 50 14.9	+1.1
	comp=N,0.3nm,0.6s,baz=79,slow=3.2,SNR=3.1						
MKAR				LR	LR	12 09 30.8	
	comp=N,81nm,19.3s,baz=72,slow=38						
MKAR	Makanchi Array	46.79	298	*e*P	P	11 48 40.8	-0.2
	comp=N,8.8nm,0.6s						
MKAR				PcP	PcP	11 50 14.9	+1.1
MKAR	Makanchi Array	46.79	298	*e*P	P	11 48 40.8	-0.2
MKAR						11 50 14.9	
MK01	Makanchi Array	46.79	298	*e*P	P	11 48 40.8	-0.2
KURK	Kurchatov	47.42	304	*e*P	P	11 48 45.5	-0.2
KURK	Kurchatov	47.42	304	*e*P	P	11 48 45.5	-0.2
KURBB	Kurchatov Arra	47.51	304	P	P	11 48 45.5	-0.9
	comp=N,0.6nm,0.5s,baz=70,slow=8.6,SNR=4.5						
BVAR	Borovoye Array	51.10	310	P	P	11 49 13.2	-0.7
	comp=N,0.4nm,0.5s,baz=54,slow=7.3,SNR=3.1						
SPITS	Spitsbergen Ar	54.01	350	P	P	11 49 35.0	-0.1
	comp=N,3.8nm,0.8s,baz=70,slow=22,SNR=2.9						
SPITS	Spitsbergen Ar	54.01	350	P	P	11 49 35.0	-0.1
KK31	Karatay Array	55.88	299	*e*P	P	11 49 49.7	+0.5
KK31	Karatay Array	55.88	299	*e*P	P	11 49 49.7	+0.5
KKAR	Karatay Array	55.88	299	*e*P	P	11 49 50.0	+0.8
KKAR	Karatay Array	55.88	299	*e*P	P	11 49 50.0	+0.8
ABKAR	Akbulak array	58.67	310	*e*P	P	11 50 08.3	-0.3
AKTO	Aktyubinsk	59.04	312	P	P	11 50 11.0	-0.2
	comp=N,1.3nm,0.5s,baz=77,slow=9.8,SNR=3.1						
AKTO				LR	LR	12 18 16.7	
	comp=N,65nm,18.7s,baz=52,slow=39						

NV01	**Mina Array Sit**	64.09	61	*e*P	P	11 50 44.4	-1.3
NVAR	**Mina Array Bea**	64.09	61	P	P	11 50 45.0	-0.8
	comp=N,0.2nm,0.5s,baz=307,slow=7.8,SNR=2.5						
H17A	**Grant Village**	64.91	52	*e*pP	pP	11 50 59.0	-1.4
FIA0	**FINESS Array S**	65.05	334	*e*P	P	11 50 50.9	-0.4
FIA0	**FINESS Array S**	65.05	334	*e*P	P	11 50 50.9	-0.4
FINES	**FINESS Array B**	65.05	334	P	P	11 50 50.9	-0.4
	comp=N,2.6nm,0.7s,baz=37,slow=7.4,SNR=7.0						
WR1	**Warramunga Arr**	66.67	198	*e*P	P	11 51 04.7	+2.5
	comp=N,1.6nm,1.0s						
WRA	**Warramunga Arr**	66.67	198	P	P	11 51 04.7	+2.5
	comp=N,0.4nm,1.0s,baz=14,slow=6.5,SNR=2.6						
CIAC	**Catalina I. Ai**	67.18	65	*e*P	P	11 51 06.2	+0.7
NB2	**NORSAR Subarra**	69.41	341	P	P	11 51 18.3	-0.8
	comp=Z,1.1nm,0.6s,baz=28,slow=6.5						
HFS	**Hagfors**	69.60	339	P	P	11 51 19.9	-0.2
	comp=Z,3.4nm,0.6s,baz=66,slow=3.6,SNR=10						
ASAR	**Alice Springs**	70.37	197	P	P	11 51 28.8	+3.5
	comp=Z,0.2nm,0.6s,baz=214,slow=39,SNR=3.1						
KBZ	**Khabaz**	71.23	314	P	P	11 51 30.9	+0.5
	comp=Z,6.9nm,0.9s,baz=60,slow=1.5,SNR=9.1						
AKASG	**Malin Array Be**	72.31	326	P	P	11 51 36.4	-0.4
	comp=Z,1.2nm,0.5s,baz=35,slow=5.9,SNR=5.3						
BUR08	**Bucovina Ar. S**	76.34	326	*e*P	P	11 52 00.8	+0.4
BUR04	**Bucovina Ar. S**	76.36	326	*e*P	P	11 52 01.0	+0.4
CLL	**Collm**	77.50	335	*i* P	P	11 52 06.2	-0.5

GUC 10 11:41:26.0±0.7, 21°.93S×67°.77W, h210km, ML3.5, 1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB01	**IPOC Station P**	1.83	299	*e*P	Pn	11 42 04.8	+1.1
PB01				*i* S	S	11 42 34.8	+2.2
PB01				IAML		11 42 36.0	
	comp=N,351nm,0.4s						
PB03	**IPOC Station P**	1.85	266	*e*P	Pn	11 42 05.0	+1.1
PB03				*i* S	S	11 42 35.3	+2.2
PB03				IAML		11 42 35.6	
	comp=E,266nm,0.2s						
PB08	**IPOC Station P**	2.20	324	*e*P	Pn	11 42 09.3	+1.5
PB08				*i* S	S	11 42 42.1	+2.2
PB08				IAML		11 42 44.8	
	comp=E,73nm,0.5s						
PB04	**IPOC Station P**	2.24	259	*e*P	Pn	11 42 09.3	+1.4
PB04				*i* S	S	11 42 42.4	+2.2
PB04				IAML		11 42 44.5	
	comp=E,152nm,0.2s						
PB05	**IPOC Station P**	2.43	247	*e*P	Pn	11 42 11.2	+1.3
PB05				*i* S	S	11 42 45.0	+1.3
PB05				IAML		11 42 50.0	
	comp=E,72nm,0.4s						
PSGC	**Pisagua**	3.20	316	*e*P	Pn	11 42 19.0	+0.3
PSGC				*i* S	S	11 43 00.2	+0.8
MNMC	**Minye Minye**	3.27	328	*e*P	Pn	11 42 20.8	+1.2
MNMC				*i* S	S	11 43 02.9	+1.7
PB16	**IPOC Station P**	3.93	335	⇓*e*P	Pn	11 42 29.4	+1.5
PB16				*i* S	S	11 43 17.9	+1.8

NNC 10 12:07:52.1±3.0, 37°.40N×71°.96E, h249km±26km, mb2.3, mpv3.5, 7C-3D, Error ellipse: s-maj=29.4km s-min=25.1km az=76.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	2.87	24	⇑P	Pn	12 08 43.1	-0.2
	2.2nm,0.4s						
SFK				⇑S	S	12 09 24.4	+0.5
	154nm,0.4s						
MNAS	**Manas**	5.10	5	⇑P	Pn	12 09 09.4	+0.4
	7.5nm,0.5s						
MNAS				⇑S	S	12 10 11.4	+1.0
	20nm,0.5s						
AAK	**Ala-Archa**	5.58	20	⇑P	Pn	12 09 15.3	+0.3
	3.8nm,0.5s						
AAK				⇓S	S	12 10 23.8	+2.6
	10nm,0.9s						
KK31	**Karatay Array**	5.80	349	⇑P	Pn	12 09 17.8	+0.1
	1.3nm,0.3s,baz=168,slow=12,SNR=22						
KK31				⇓S	S	12 10 25.7	-0.4
	2.5nm,0.3s,baz=169,slow=23,SNR=12						
TKM2	**Tokmak 2**	6.18	26	⇑P	Pn	12 09 22.6	+0.2
	8.5nm,0.7s						
TKM2				⇓S	S	12 10 32.6	-2.2
	1.2nm,0.4s						

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*ISK **10** 12:08:27.7, 38°.70N×43°.56E, h17km, ML2.6/3*
*CSEM **10** 12:08:28.3±0.3, 38°.68N×43°.56E, h12km, ML2.6, Error ellipse: s-maj=7.4km s-min=4.8km az=115.0*
*ISCJB **10** 12:08:29.3±0.6, 38°.70N±0°.03×43°.52E±0°.05, h7km±5km, Error ellipse: s-maj=6.6km s-min=4.3km az=8.8*
*DDA **10** 12:08:29.1, 38°.69N×43°.50E, h7km, Ml2.6*

ISC 10 12:08:28.3±1.1, 38°.69N±0°.02×43°.55E±0°.03, h11km±10km, n24, σ0s.78/42, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VANB	**Van**	0.16	232	PG	Pb	12 08 33.2	-0.2
VANB	**Van**	0.16	232	*e*Pg	Pb	12 08 33.2	-0.2
TVAN	**Van**	0.20	215	*i* P	Pb	12 08 33.7	-0.5
TVAN	**Van**	0.20	215	P	Pb	12 08 33.7	-0.5
VMUR	**Van-Muradiye**	0.29	3	*i* P	Pb	12 08 35.7	-0.1
VMUR				*i* S	Sb	12 08 42.2	+1.5
VMUR	**Van-Muradiye**	0.29	3	P	Pb	12 08 35.7	-0.1
VMUR				S	Sb	12 08 42.2	+1.5
CLDR	**Caldiran**	0.53	32	PG	Pg	12 08 38.5	-0.2
CLDR				SG	Sg	12 08 46.3	+0.5
CLDR	**Caldiran**	0.53	32	*i* P	Pb	12 08 39.4	-0.4
CLDR				*i* S	Sn	12 08 49.6	-1.6
CLDR	**Caldiran**	0.53	32	*e*Pg	Pg	12 08 38.5	-0.2
CLDR	**Caldiran**	0.53	32	P	Pb	12 08 39.4	-0.4
CLDR				*e*Sg	Sg	12 08 46.3	+0.5
CLDR				S	Sn	12 08 49.6	-1.6
GEVA	**Gevas**	0.54	226	*i* P	Pg	12 08 38.4	-0.5
GEVA				*i* S	Sb	12 08 48.2	+0.4
GEVA	**Gevas**	0.54	226	P	Pg	12 08 38.4	-0.5
GEVA				S	Sb	12 08 48.2	+0.4
ADCV	**BITLIS_Adilcev**	0.66	280	*i* P	Pg	12 08 41.0	-0.1
ADCV				*i* S	Sb	12 08 50.9	-0.3
ADCV	**BITLIS_Adilcev**	0.66	280	P	Pg	12 08 41.0	-0.1
ADCV				S	Sb	12 08 50.9	-0.3
TUTA	**Tutak**	0.91	321	*i* P	Pg	12 08 45.7	-0.2
TUTA				*i* S	Sg	12 08 58.2	+0.4
TUTA	**Tutak**	0.91	321	P	Pg	12 08 45.7	-0.2
TUTA				S	Sg	12 08 58.2	+0.4
AGRB	**Hanur-Agry**	0.98	334	PG	Pg	12 08 46.9	-0.3
AGRB				SG	Sb	12 09 01.1	+0.6
AGRB	**Hanur-Agry**	0.98	334	*e*Pg	Pg	12 08 46.9	-0.3
AGRB				*e*Sg	Sb	12 09 01.1	+0.6
HAKT	**HAKKARI**	1.14	174	*i* P	Pb	12 08 49.9	-0.3
HAKT				*i* S	Sn	12 09 08.1	+1.9
HAKT	**HAKKARI**	1.14	174	P	Pb	12 08 49.9	-0.3
HAKT				S	Sn	12 09 08.1	+1.9
GURO	**Guroymak-BITLI**	1.20	264	PN	Pn	12 08 50.4	-0.8
GURO	**Guroymak-BITLI**	1.20	264	*e*Pn	Pn	12 08 50.4	-0.8
EATA	**Eleskirt**	1.43	325	*i* P	Pg	12 08 56.4	+0.6
EATA				*i* S	Sg	12 09 15.1	+0.8
EATA	**Eleskirt**	1.43	325	P	Pg	12 08 56.4	+0.6
EATA				S	Sg	12 09 15.1	+0.8

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*ISCJB **10** 12:14:39.2±0.4, 49°.84N±0°.03×18°.50E±0°.03, h0km, Error ellipse: s-maj=4.7km s-min=2.5km az=15.5*
*CSEM **10** 12:14:40.1±0.2, 49°.83N×18°.52E, h1km, ML3.1/8, Error ellipse: s-maj=4.4km s-min=2.4km az=15.0*
*IPEC **10** 12:14:40.0±0.3, 49°.83N×18°.62E, h1km±2km, ML2.2/3, Error ellipse: s-maj=2.2km s-min=1.8km az=59.0*
*PRU **10** 12:14:41.0, 49°.82N×18°.51E, h0km*

ISC 10 12:14:39.9±0.8, 49°.84N±0°.03×18°.52E±0°.02, h0km, n37, σ0s.73/66, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	0.24	271	*e*PG	Pg	12 14 46.3	+1.8
OKC				*e*SG	Sg	12 14 48.8	+1.2
	comp=Z,109nm,0.4s						
OKC	**Ostrava-Krasne**	0.24	271	Pg	Pg	12 14 46.3	+1.8
OKC				Sg	Sg	12 14 48.8	+1.2
	109nm,0.4s						
MORC	**Moravsky Berou**	0.63	265	*e*Pg	Pb	12 14 53.3	-0.6
	baz=85						
MORC				*e*Sg	Sb	12 15 02.0	-1.3
	46nm,0.3s,baz=85						
MORC	**Moravsky Berou**	0.63	265	*e*PG	Pb	12 14 53.5	-0.4
MORC				*e*SG	Sg	12 15 01.5	+1.2
MORC	**Moravsky Berou**	0.63	265	*e*Pg	Pb	12 14 53.3	-0.6
	baz=85						
MORC				*e*Sg	Sb	12 15 02.0	-1.3
	46nm,0.3s,baz=85						
OJC	**Ojcow**	0.91	65	*e*Pg	Pg	12 14 57.5	+0.1
OJC				*e*Sg	Sb	12 15 10.6	-0.8
OJC	**Ojcow**	0.91	65	*e*Pg	Pg	12 14 57.5	+0.1
OJC				*e*Sg	Sb	12 15 10.6	-0.8
LANS	**Liptovska Anna**	0.92	137	*e*PG	Pg	12 14 57.9	+0.3
LANS				*e*SG	Sg	12 15 09.6	0.0
LANS	**Liptovska Anna**	0.92	137	*e*Pg	Pg	12 14 57.9	+0.3
LANS				*e*Sg	Sg	12 15 09.6	0.0
JAVC	**Velka Javorina**	1.12	210	*e*Pg	Pb	12 15 02.3	0.0
JAVC	**Velka Javorina**	1.12	210	*e*PG	Pb	12 15 02.2	0.0
JAVC	**Velka Javorina**	1.12	210	*e*Pg	Pb	12 15 02.3	0.0
	baz=32						
KRLC	**Kraliky**	1.15	283	*e*PG	Pg	12 15 01.7	-0.2
KRLC				*e*SG	Sb	12 15 18.0	-0.1
	comp=Z,14nm,0.2s						
KRLC	**Kraliky**	1.15	283	Pg	Pg	12 15 01.7	-0.2
KRLC				Sg	Sb	12 15 18.0	-0.1
	14nm,0.2s						
NIE	**Niedzica**	1.23	109	*e*Pg	Pg	12 15 03.6	+0.1
NIE				*e*Sg	Sb	12 15 21.1	+0.5
NIE	**Niedzica**	1.23	109	*e*Pg	Pg	12 15 03.6	+0.1
NIE				*e*Sg	Sb	12 15 21.1	+0.5
VRAC	**Vranov**	1.36	248	*e*Pg	Pg	12 15 06.0	+0.1
	baz=68						
VRAC				*e*Sg	Sb	12 15 24.1	0.0
	31nm,0.3s,baz=68						
VRAC	**Vranov**	1.36	248	*e*PG	Pb	12 15 06.4	+0.2
VRAC				*e*SG	Sb	12 15 24.2	+0.1
VRAC	**Vranov**	1.36	248	*e*Pg	Pg	12 15 06.0	+0.1
	baz=68						
VRAC				*e*Sg	Sb	12 15 24.1	0.0
	31nm,0.3s,baz=68						
VYHS	**Vyhne**	1.36	171	*e*PG	Pg	12 15 05.7	-0.3
VYHS				*e*SG	Sg	12 15 23.7	+0.2
VYHS				*e*LG	Lg	12 15 32.0	
VYHS	**Vyhne**	1.36	171	*e*Pg	Pg	12 15 05.7	-0.3
VYHS				*e*Sn	Sg	12 15 23.7	+0.2
DPC	**Dobruska-Polom**	1.50	291	*e*PG	Pg	12 15 08.6	-0.2
DPC				*e*SG	Sn	12 15 29.1	+0.5
	comp=Z,22nm,0.3s						
DPC	**Dobruska-Polom**	1.50	291	Pg	Pg	12 15 08.6	-0.2
DPC				Sg	Sn	12 15 29.1	+0.5
	22nm,0.3s						
KRUC	**Moravsky**	1.58	242	*e*Pn	Pb	12 15 10.0	-0.1
KRUC				*e*Sg	Sg	12 15 31.4	+0.6
	20nm,0.2s,baz=61						
KRUC	**Moravsky**	1.58	242	*e*PG	Pn	12 15 09.7	+0.4
KRUC				*e*SG	Sg	12 15 31.3	+0.5
KRUC	**Moravsky**	1.58	242	*e*Pn	Pb	12 15 10.0	-0.1
	baz=61						
KRUC				*e*Sg	Sg	12 15 31.4	+0.6
	20nm,0.2s,baz=61						
KSP	**Ksiaz**	1.75	306	*e*Pg	Pg	12 15 13.5	+0.1
KSP				*e*Sg	Sg	12 15 36.4	+0.4
KSP	**Ksiaz**	1.75	306	*e*Pg	Pg	12 15 13.5	+0.1
KSP				*e*Sg	Sg	12 15 36.4	+0.4
UPC	**Upice**	1.75	294	*e*PG	Pb	12 15 13.0	+0.2
UPC				*e*SG	Sg	12 15 36.2	+0.2
UPC	**Upice**	1.75	294	Pg	Pb	12 15 13.0	+0.2
UPC				Sg	Sg	12 15 36.2	+0.2
GOPC	**GO Pecny, Ondr**	2.41	273	*e*SG	Sg	12 15 56.5	-0.9
	comp=Z,7.5nm,0.3s						
GOPC	**GO Pecny, Ondr**	2.41	273	Sg	Sg	12 15 56.5	-0.9
	7.5nm,0.3s						
PRU	**Pruhonice**	2.57	275	*e*SG	Sg	12 16 01.1	-1.5
	comp=Z,6.9nm,0.4s						
PRU	**Pruhonice**	2.57	275	Sg	Sg	12 16 01.1	-1.5
	6.9nm,0.4s						
BRG	**Berggiesshubel**	3.11	291	SG	Sg	12 16 19.1	-0.7
	5.0nm,0.4s						
KHC	**Kasperske Hory**	3.29	260	*e*PG	Pg	12 15 41.9	-1.2
KHC				*e*SG	Sg	12 16 24.3	-1.5
	comp=Z,6.6nm,0.4s						
KHC	**Kasperske Hory**	3.29	260	Pg	Pg	12 15 41.9	-1.2
KHC				Sg	Sg	12 16 24.3	-1.5
	6.6nm,0.4s						

IDC 10 12:35:09.3±7.1, 7°.11S×127°.20E, h377km±75km, mb3.2/1, mb1 3.2/4, mb1mx2.7/54, mbtmp4.0/4, Error ellipse: s-maj=97.7km s-min=92.2km az=164.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	4.65	228	P	Pn	12 36 27.4	+0.7
	4.0nm,0.3s,baz=70,slow=3.8,SNR=4.4						
BATI				S	S	12 37 29.2	-0.1
	11nm,0.3s,baz=270,slow=19,SNR=7.4						
WRA	**Warramunga Arr**	14.52	152	P	P	12 38 17.6	0.0
	0.7nm,0.3s,baz=331,slow=10,SNR=60						
ASAR	**Alice Springs**	17.68	159	P	P	12 38 52.0	+0.5
	1.1nm,0.3s,baz=337,slow=11,SNR=29						
STKA	**Stephens Creek**	28.07	153	P	P	12 40 27.4	-0.5
	0.8nm,0.4s,baz=342,slow=12,SNR=6.0						

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*ISCJB **10** 12:37:39.1±0.4, 32°.19N±0°.02×115°.24W±0°.02, h9km±2km, Error ellipse: s-maj=3.3km s-min=2.8km az=25.8*
*MEX **10** 12:37:39.6±0.3, 32°.42N×114°.98W, h29km±3km, MD3.8*
*ECX **10** 12:37:41.4±0.6, 32°.23N×115°.31W, h6km, MD3.0, ML3.2*
*NEIC **10** 12:37:41.4±0.0, 32°.23N×115°.31W, h6km, ML3.1(PAS), ML3.2(ECX), After ECX.*

ISC 10 12:37:39.3±1.0, 32°.23N±0°.02×115°.32W±0°.02, h18km±9km, n70, σ1s.28/99, 7C-6D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPBX	**Cerro Prieto**	0.19	4	⇓*e*P	Pb	12 37 44.3	+0.5
CPBX				*e*S	Sb	12 37 48.0	+1.2
CPBX				⇑*e*		12 37 49.5	
CPBX				IAML		12 37 49.5	
	comp=E,13µm,0.2s						
CPBX				⇓*e*		12 37 50.9	
CPBX				IAML		12 37 50.9	
	comp=N,13µm,0.2s						
MBIG	**Mexicali**	0.21	30	*e*P	Pb	12 37 45.2	+1.0
MBIG	**Mexicali**	0.21	30	*e*P	Pb	12 37 44.3	+0.1
MBIG				*e*S	Sb	12 37 48.0	+0.6
DREC	**Desert Rsrch C**	0.58	350	*e*P	Pn	12 37 52.0	-0.7
ERPC	**Ernies Place**	0.59	331	*e*Pg	Pn	12 37 52.7	-0.1
WESC	**Westside Schoo**	0.63	327	*e*P	Pn	12 37 53.0	-0.4
WESC	**Westside Schoo**	0.63	327	*e*Pg	Pn	12 37 54.4	+1.0
WESC				*e*Sg	Sn	12 38 03.2	+0.2
COA	**Coachella**	0.65	15	*e*P	Pn	12 37 53.2	-0.4
COA	**Coachella**	0.65	15	*e*Pg	Pn	12 37 53.3	-0.4
YUH	**Yuha Desert**	0.66	310	⇓*i*P	Pn	12 37 53.1	-0.7
YUH	**Yuha Desert**	0.66	310	*e*Pg	Pn	12 37 53.1	-0.7
YMD	**Yuma Desert**	0.73	64	⇑*i*P	Pn	12 37 54.1	-0.7
RMX	**La Rumorosa**	0.74	300	⇑*e*P	Pg	12 37 53.8	-0.1
RMX				⇑*e*		12 38 03.4	
RMX				IAML		12 38 03.4	
	comp=E,2µm,0.2s						
IKP	**In-Ko-Pah, Jac**	0.79	302	P	Pn	12 37 55.5	-0.2
	baz=123,SNR=32						
IKP				S	Sg	12 38 06.1	+0.8
	baz=123						
IKP	**In-Ko-Pah, Jac**	0.79	302	*e*P	Pn	12 37 55.4	-0.2
SWSC	**Sam W. Stewart**	0.82	331	P	Pg	12 37 55.3	-0.1
	baz=150,SNR=19						
SWSC				S	Sg	12 38 06.4	+0.1
	baz=150						
CRR	**Carrizo Plain**	0.85	320	*e*Pg	Pn	12 37 56.9	+0.4
GLA	**Glamis**	0.92	27	P	Pg	12 37 56.8	-0.5
	baz=205,SNR=52						
GLA				S	Sb	12 38 07.9	-0.8
	baz=205						
GLA	**Glamis**	0.92	27	*e*Pg	Pn	12 37 57.1	-0.3
GLA				*e*Sg	Sn	12 38 09.6	-0.6
ERRC	**Elmore Ranch**	0.98	335	*e*Sn	Sn	12 38 14.3	+2.7
ZAX	**El Zacaton**	1.08	229	⇑*e*P	Pg	12 38 00.3	0.0
CBX	**Cerro Bola**	1.14	275	⇑*e*P	Pg	12 38 01.4	-0.1
CBX				*e*S	Sg	12 38 16.9	+0.5
CBX				IAML		12 38 18.0	
	comp=N,703nm,0.6s						
MONP2	**Monument Peak**	1.14	306	P	Pg	12 38 01.8	+0.3
	baz=126,SNR=41						
MONP2				S	Sg	12 38 16.7	+0.3
	baz=126						
TJIG	**Tijuana**	1.16	280	⇑*e*P	Pg	12 38 01.5	-0.4
TJIG	**Tijuana**	1.16	280	*e*P	Pg	12 38 01.4	-0.4
TJIG				*e*S	Sg	12 38 18.7	+1.6
SPIG	**San Pedro Mart**	1.19	186	*e*P	Pg	12 38 01.6	-0.7
SPIG	**San Pedro Mart**	1.19	186	*e*P	Pg	12 38 01.7	-0.7
SPIG				*e*S	Sg	12 38 18.9	+1.0
SPIG	**San Pedro Mart**	1.19	186	*e*Pg	Pg	12 38 01.7	-0.7
SPIG				*e*Sn	Sg	12 38 18.9	+1.0
SPX	**San Pedro Mart**	1.19	186	⇓*e*P	Pg	12 38 01.7	-0.7
SPX				*e*		12 38 20.0	
SPX				IAML		12 38 20.0	
	comp=E,267nm,0.4s						
SPX	**San Pedro Mart**	1.19	186	*e*Pg	Pg	12 38 01.4	-0.9
SPX				*e*Sn	Sg	12 38 18.1	+0.1
ECNX	**Esteban Cantu**	1.23	243	⇓*e*P	Pg	12 38 02.7	-0.4
BAR	**Barrett**	1.23	292	⇓*e*P	Pg	12 38 02.6	-0.5
BAR	**Barrett**	1.23	292	*e*Pg	Pg	12 38 02.5	-0.6
BAR				*e*Sg	Sg	12 38 18.7	-0.5
BAR				*e*Sn	Sn	12 38 19.4	+1.7
113A	**Mohawk Valley,**	1.42	67	*e*Pn	Pb	12 38 04.4	-0.8
113A				*e*Sn	Sn	12 38 21.3	-1.1
BC3	**Big Chuckawall**	1.43	356	P	Pn	12 38 04.4	-0.1
	baz=175,SNR=22						
BC3				S	Sn	12 38 22.1	-0.7
	baz=175						
EML	**El Monte Cty P**	1.45	298	*e*Pn	Pg	12 38 07.1	-0.1
EML				*e*Sn	Sg	12 38 25.7	-0.4
DPP	**Dos Picos Cty**	1.57	300	*e*Pn	Pg	12 38 09.1	-0.5
DPP				*e*Sn	Sg	12 38 29.5	-0.5
HWB	**Hans Werner Br**	1.59	300	*e*Pn	Pg	12 38 10.2	+0.1
HWB				*e*Sn	Sg	12 38 30.6	-0.2
109C	**Camp Elliot, M**	1.64	294	P	Pb	12 38 08.4	-0.7
	baz=114						
CPE	**Camp Elliot**	1.64	294	*e*Pn	Pb	12 38 09.2	+0.1
CPE				*e*Sn	Sb	12 38 30.8	+1.3
CPE				*e*Sn	Sg	12 38 31.4	-0.9
Y12C	**Blythe**	1.66	24	*e*Pn	Pg	12 38 11.1	-0.1
FRD	**Ford Ranch, An**	1.66	320	*e*Sn	Sg	12 38 32.8	-0.1
XPFO	**Piæon Flat**	1.68	326	*e*Pn	Pn	12 38 08.1	+0.2
XPFO				*e*Sn	Sn	12 38 29.1	+0.1
PFO	**Pinyon Flats O**	1.68	326	P	Pn	12 38 07.9	0.0
	baz=145,SNR=8.2						
PFO	**Pinyon Flats O**	1.68	326	*e*Pn	Pn	12 38 08.3	+0.4
PFO				*e*Sn	Sb	12 38 31.9	+1.3
SNDA	**J Saunders Pla**	1.71	321	*e*Sn	Sg	12 38 35.6	+1.0
PLM	**Palomar**	1.71	311	*e*Sn	Sg	12 38 35.4	+0.6
DNR	**Dunn Ranch,Anz**	1.73	321	*e*Sn	Sg	12 38 36.9	+1.8
CRY	**Cary Ranch**	1.79	319	*e*Pn	Pg	12 38 14.4	+0.7
CRY				*e*Sn	Sg	12 38 37.0	0.0
IRM	**Iron Mountain**	1.93	4	Pb	Pb	12 38 13.5	-0.5
	baz=184,SNR=12						
BACC	**Bachelor Mtn.**	2.00	314	*e*Sn	Sg	12 38 44.0	+0.3
DGR	**Domenigoni Val**	2.01	315	*e*Pn	Pg	12 38 18.1	+0.2
DGR				*e*Sn	Sg	12 38 43.5	-0.5
MURC	**Murrieta**	2.09	311	Sb	Sg	12 38 45.6	-1.0
	baz=131						
214A	**Organ Pipe Nat**	2.15	97	P	Pn	12 38 13.9	-0.3
	baz=277,SNR=15						
214A				S	Sn	12 38 38.8	-1.6
	baz=277						
CLTC	**Calectric**	2.50	319	*e*Sn	Sb	12 38 55.1	+1.0
Y14A	**Wickenburg**	2.59	48	*e*Pn	Pb	12 38 24.7	-0.5
CIS	**Catalina Islan**	2.85	295	Sb	Sg	12 39 08.1	-3.1
	baz=114						
MWC	**Mount Wilson**	3.04	312	*e*Pn	Pb	12 38 31.5	-1.4
W13A	**Hualapai Mount**	3.10	22	*e*Pn	Pn	12 38 29.7	+2.1
DECC	**Green Verdugo**	3.23	309	*e*Pn	Pn	12 38 26.7	-2.5
SBI	**Santa Barbara**	3.36	293	*e*Pn	Pn	12 38 32.9	+2.0
SBI				*e*Sn	Sb	12 39 16.6	-2.2
CCCA	**Chr Cany lake**	3.70	333	*e*Sg	Sg	12 39 33.6	-4.6
TUC	**Tucson**	3.84	88	*e*Pn	Pn	12 38 38.0	+0.4
X16A	**Lo Mia Camp, P**	3.91	55	*e*Pn	Pn	12 38 40.5	+1.8
BAKC	**Calstate**	4.42	316	*e*Sn	Sb	12 39 49.8	+0.3
BAKC				*e*Sg	Sg	12 39 57.0	-4.4
WUAZ	**Wupatki**	4.64	44	*e*Pn	Pn	12 38 51.6	+2.9
U15A	**North Rim**	4.88	30	*e*Pn	Pn	12 38 54.9	+2.9
X18A	**Snowflake**	5.04	62	*e*Pn	Pn	12 38 56.2	+2.0
W18A	**Petrified Fore**	5.48	57	*e*Pn	Pn	12 39 03.0	+2.8
LENM	**Lemitar**	7.26	72	*e*Pn	Pn	12 39 26.9	+2.3

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*NIED **10** 12:42:00, 24°.60N×122°.30E, h5km, Mw4.2 Best double couple: M0 2.09000×10^15 NP1:φs140.00000°, δ35.00000°, λ-16.00000°. NP2:φs243.00000°, δ81.00000°, λ-124.00000°.*
*ISCJB **10** 12:42:55.9±0.3, 24°.73N±0°.01×122°.40E±0°.01, h5km±2km, mb4.1/24, MS3.4/11, Error ellipse: s-maj=2.5km s-min=1.8km az=4.9*
*JMA **10** 12:42:57.6, 24°.64N×122°.30E, h33km±3km, M4.2*
*NEIC **10** 12:42:57.1±0.2, 24°.67N×122°.29E, h10km, mb4.7/10, Error ellipse: s-maj=5.0km s-min=4.5km az=107.0*
*TAP **10** 12:42:57.1, 24°.71N×122°.30E, h12km, ML4.6, C*
*BJI **10** 12:42:57.0, 24°.93N×122°.37E, h5km, mb4.2/6, mB4.3/6, ML4.0/5, Ms3.9/7, Ms7 3.7/7*
*IDC **10** 12:43:03.6±3.4, 24°.77N×122°.41E, h65km±33km, mb3.6/13, mb1 3.7/14, mb1mx3.5/63, mbtmp3.9/14, ML3.8/1, MS3.4/15, Ms1 3.4/15, ms1mx3.1/59, Error ellipse: s-maj=18.6km s-min=12.2km az=72.0*

ISC 10 12:42:57.3±0.8, 24°.68N±0°.02×122°.34E±0°.02, h12km±5km, n180, σ0s.93/236, mb4.2/25, MS3.5/11, 18C-27D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS1	**EOS1**	0.23	236	⇑P	Pg	12 43 02.6	+0.4
	baz=224						
EOS1				S	Sb	12 43 06.7	+1.2
	baz=224						
EGS		0.41	294	⇓*i*P	Pg	12 43 04.8	-0.6
	baz=292						
EGS				*e*S	Sg	12 43 10.9	+0.1
	baz=292						
TWC	**Suao**	0.45	261	⇓*i*P	Pg	12 43 05.2	-1.0
	baz=255						
TWB1	**Santiao Chiao**	0.46	316	⇑*e*P	Pg	12 43 05.9	-0.4
	baz=317						
TWB1				*e*S	Sg	12 43 11.0	-1.4
	baz=317						
NTC	**Toucheng**	0.49	291	*e*P	Pg	12 43 06.4	-0.6
	baz=288						
NTC				*e*S	Sg	12 43 13.0	-0.6
	baz=288						
ENAH	**Nanao**	0.53	245	*e*P	Pg	12 43 07.0	-0.7
	baz=239						
ILA	**Ilan**	0.55	279	⇓*i*P	Pg	12 43 07.3	-0.7
	baz=267						
ILA				*e*S	Sb	12 43 16.7	+0.2
	baz=267						
TIPB	**Shuangxi**	0.55	302	⇓*i*P	Pg	12 43 07.7	-0.3
	baz=301						
TIPB				*e*S	Sg	12 43 13.6	-1.8
	baz=301						
NANB	**Nanao**	0.59	245	⇓P	Pg	12 43 08.0	-0.9
	baz=248						
NANB				*e*S	Sg	12 43 16.5	-0.2
	baz=248						
JYNG	**Yonagunijimaku**	0.60	112	P	Pb	12 43 09.6	-0.1
JYNG				*e*S	Sb	12 43 18.0	0.0
ENA	**Nanau**	0.60	245	P	Pg	12 43 08.0	-1.0
	baz=240						
TWE	**Neicheng**	0.61	274	⇓*i*P	Pg	12 43 08.2	-1.0
	baz=262						
TWE				*e*S	Sg	12 43 17.0	-0.3
	baz=262						
NWF	**Wu-fen Shan**	0.64	308	*e*P	Pg	12 43 09.6	-0.2
	baz=307						
NWF				S	Sb	12 43 19.3	-0.1
	baz=307						
WFSB	**Wu-fen Shan**	0.64	308	⇓P	Pg	12 43 09.7	0.0
	baz=307						
WFSB				S	Sb	12 43 19.3	0.0
	baz=307						
YOJ	**Yonaguni jima**	0.65	109	⇓P	Pb	12 43 10.6	+0.1
	baz=111						
YOJ				*e*S	Sb	12 43 19.4	-0.1
	baz=111						

YOJ	Yonaguni jima	0.65	109	*e*Pg	Pb	12 43 10.6	+0.1
YOJ	Yonaguni jima	0.65	109	P	Pb	12 43 10.5	0.0
YOJ				*e*S	Sb	12 43 19.8	+0.3
ENTT	Nioudou baz=263	0.70	267	⇓*i*P	Pg	12 43 09.8	-1.2
TWA	Mucha baz=284	0.75	294	⇓P	Pg	12 43 11.3	-0.5
TWA	baz=284			*e*S	Sg	12 43 21.1	-0.5
NWLT	Wulai baz=268	0.77	277	*e*P	Pg	12 43 11.5	-0.7
YM07	YM07 baz=307	0.82	307	⇓P	Pb	12 43 13.3	-0.2
YM07	baz=307			S	Sb	12 43 24.3	-0.2
TAP1	Taipei baz=309	0.82	296	⇓P	Pb	12 43 13.4	-0.2
TAP1	baz=309			S	Sb	12 43 24.6	0.0
TATO	Taipei baz=281	0.83	291	⇓P	Pg	12 43 12.9	-0.4
TATO	baz=281			*e*S	Sg	12 43 22.8	-1.3
TATO	Taipei	0.83	291	*e*Pg	Pg	12 43 12.8	-0.5
TATO				*e*Sg	Sg	12 43 22.9	-1.2
TAP	Taipei baz=309	0.84	295	*e*P	Pb	12 43 13.7	0.0
TAP	baz=309			S	Sb	12 43 25.1	+0.1
NACB	Ninganchiao baz=240	0.84	234	⇑P	Pg	12 43 12.5	-1.1
NACB	baz=240			*e*S	Sg	12 43 23.6	-1.1
NACB	Ninganchiao	0.84	234	*e*Pg	Pg	12 43 12.5	-1.1
YM11	YM11 baz=303	0.85	305	⇓*e*P	Pn	12 43 14.8	-0.3
YM10	YM10 baz=304	0.85	304	⇓P	Pb	12 43 13.9	-0.1
YM10	baz=304			*e*S	Sg	12 43 24.8	-0.2
YM04	YM04 baz=302	0.87	303	⇓*i*P	Pg	12 43 14.0	-0.1
YM04	baz=302			S	Sg	12 43 24.9	-0.6
YHNB	Yeheng baz=261	0.88	270	⇓P	Pg	12 43 13.0	-1.2
YHNB	baz=261			S	Sg	12 43 25.7	0.0
YHNB	Yeheng	0.88	270	*e*Pg	Pg	12 43 13.1	-1.2
NSK	Sanguang baz=261	0.89	270	⇓*i*P	Pg	12 43 13.2	-1.3
NSK	baz=261			*e*S	Sg	12 43 25.5	-0.7
TWY	Chenhua baz=312	0.90	312	⇓*i*P	Pb	12 43 14.7	-0.1
TWY	baz=312			S	Sb	12 43 26.7	0.0
TWD	Chiawan baz=233	0.90	229	P	Pg	12 43 13.7	-1.1
TWD	baz=233			*e*S	Sn	12 43 28.3	-0.5
NNSB	Datong baz=251	0.91	254	⇓P	Pg	12 43 13.5	-1.3
NNSB	baz=251			*e*S	Sg	12 43 25.5	-1.2
NNSH	Datong baz=257	0.91	254	*e*P	Pg	12 43 13.5	-1.4
NNS	Nan Shan baz=251	0.91	255	*e*P	Pg	12 43 13.6	-1.3
NNS	baz=251			*e*S	Sg	12 43 26.7	-0.2
TWS1	Kuangyinshan baz=296	0.94	297	⇓P	Pg	12 43 15.4	+0.1
TWS1	baz=296			*e*S	Sb	12 43 27.9	+0.1
NTST	Danshui baz=300	0.94	301	*e*P	Pb	12 43 15.3	-0.2
NTST	baz=300			*e*S	Sb	12 43 28.3	+0.3
HWA	Hwalien baz=227	0.97	224	*e*P	Pn	12 43 16.7	0.0
PCYT	Pengchaiyu baz=347	0.98	346	⇑*i*P	Pb	12 43 15.3	-0.9
WLTB	Daxi baz=285	1.00	280	⇓P	Pg	12 43 16.7	0.0
WLTB	baz=285			*e*S	Sn	12 43 30.5	-0.7
ENLB	Shoufeng baz=197	1.02	221	*e*P	Pn	12 43 17.9	+0.4
ENLB	baz=197			*e*S	Sn	12 43 33.9	+2.1
NCU	National Centr baz=284	1.09	286	*e*P	Pb	12 43 17.8	-0.2
NCU	baz=284			*e*S	Sn	12 43 33.2	-0.1
NCUH	Zhongli baz=282	1.09	286	*e*P	Pg	12 43 18.7	+0.5
WHF	Hehuan Shan baz=238	1.11	242	*e*P	Pb	12 43 17.6	-1.2
WHF	baz=238			*e*S	Sg	12 43 33.3	-0.1
TWT	Tachien baz=236	1.14	248	*e*P	Pb	12 43 19.0	-0.1
TDCB	Techi baz=238	1.16	249	⇑P	Pb	12 43 19.0	-0.3
ESL	Shilin baz=199	1.20	224	⇑P	Pn	12 43 19.7	-0.1
ESL	baz=199			*e*S	Sg	12 43 37.7	+1.8
LIOB	Emei baz=255	1.21	269	⇓P	Pb	12 43 19.9	-0.1
LIOB	baz=255			S	Sg	12 43 36.2	0.0
NSTT	Nanjuang baz=255	1.22	268	⇓P	Pb	12 43 20.2	-0.1
NSTT	baz=255			S	Sn	12 43 36.3	-0.3
CHGB	Renai baz=236	1.23	240	*e*P	Pn	12 43 20.0	-0.5
CHGB	baz=236			*e*S	Sg	12 43 38.3	+1.3
SBCB	Hsinchu baz=294	1.24	275	*e*P	Pb	12 43 20.3	-0.3
SBCB	baz=294			*e*S	Sg	12 43 38.5	+1.3
HSN	Hsinchu baz=276	1.25	276	*e*P	Pg	12 43 21.1	-0.3
HSN	baz=276			*e*S	Sg	12 43 37.8	+0.2
EGFH	Guangfu baz=200	1.31	220	*e*P	Pn	12 43 20.9	-0.5
IRIF	Iriomote-Funau	1.31	105	P	Pn	12 43 20.3	-1.1
IRIF				*e*S	Sb	12 43 38.3	-0.3
NMLH	Miaoli baz=262	1.42	265	*e*P	Pg	12 43 24.5	0.0
NMLH	baz=262			*e*S	Sg	12 43 43.4	+0.4
DPDB	Guoxing baz=240	1.44	244	*e*P	Pb	12 43 24.1	0.0
DPDB	baz=240			*e*S	Sg	12 43 44.2	+0.5
HGSD	Ruisui baz=199	1.45	215	⇑P	Pn	12 43 23.1	-0.2
NSY	Sanyi baz=257	1.46	260	⇓P	Pg	12 43 25.0	-0.4
NSY	baz=257			S	Sg	12 43 44.6	+0.2
HATJ	Hateruma jima	1.47	115	P	Pn	12 43 23.1	-0.5
EHY	Hungye baz=215	1.49	219	⇑P	Pn	12 43 23.3	-0.6
PTSB	Yuanli baz=280	1.51	261	⇓P	Pg	12 43 25.9	-0.4
PTSB	baz=280			*e*S	Sg	12 43 46.4	+0.6
SMLT	Sun Moon Lake baz=243	1.54	239	⇓P	Pb	12 43 25.7	0.0
SMLT	baz=243			*e*S	Sg	12 43 47.3	+0.6
SSLB	Suanglung baz=238	1.55	235	⇑P	Pb	12 43 25.4	-0.5
SSLB	baz=238			*e*S	Sb	12 43 46.0	+0.6
SSLB	Suanglung	1.55	235	*e*Pn	Pb	12 43 25.5	-0.4
TYC	Yuchr baz=237	1.56	241	*e*P	Pb	12 43 26.0	0.0
TYC	baz=237			*e*S	Sg	12 43 47.5	+0.1
JKRS	Kuro-shima	1.58	106	P	Pn	12 43 24.7	-0.5
JKRS				S	Sn	12 43 45.5	-0.1
YULB	Yu-li baz=213	1.60	217	⇑P	Pn	12 43 24.8	-0.6
YULB	Yu-li	1.60	217	*e*Pn	Pn	12 43 24.6	-0.8
TWF1	Yuli baz=201	1.63	216	⇑*i*P	Pn	12 43 25.3	-0.5
JIJ	Ishigaki jima	1.67	100	P	Pn	12 43 25.3	-1.1
JIJ				S	Sn	12 43 46.3	-1.4
WJS	Zhushan baz=216	1.70	240	*e*P	Pg	12 43 29.2	-0.8
WJS	baz=216			*e*S	Sg	12 43 53.1	+1.1
WNT	Mingjian baz=239	1.71	242	⇑*e*P	Pg	12 43 29.8	-0.3
WNT	baz=239			*e*S	Sg	12 43 52.7	+0.4
WCHH	Zhanghua baz=246	1.73	250	*e*P	Pg	12 43 30.4	-0.1
YUS	Yu-Shan baz=223	1.74	227	⇑*e*P	Pb	12 43 28.5	-0.9
FULB	Fuli baz=197	1.76	213	⇑P	Pn	12 43 27.2	-0.4
JISG	Ishigakijimahi	1.80	93	P	Pn	12 43 27.8	-0.3
CHKT	Chengkung baz=193	1.81	210	⇑P	Pn	12 43 27.2	-1.0
CHN5	Tsauling baz=212	1.86	235	*e*P	Pb	12 43 31.1	-0.1
CHN5	baz=212			*e*S	Sg	12 43 57.5	+0.3
WGK	Gukeng baz=255	1.90	239	*e*P	Pb	12 43 32.5	+0.6
WGK	baz=255			*e*S	Sg	12 43 58.5	0.0
WDLH	Douliu baz=235	1.92	239	*e*P	Pb	12 43 32.5	+0.3
RLNB	Erlin baz=243	1.97	247	*e*P	Pb	12 43 32.6	-0.4
WTCT	Ta-ch’eng baz=243	2.05	247	*e*P	Pn	12 43 31.7	+0.2
CHN2	Minshiung baz=214	2.05	237	*e*P	Pg	12 43 35.6	-1.1
CHN2	baz=214			*e*S	Sg	12 44 03.3	0.0
TPUB	Ta-pu baz=207	2.08	229	⇑P	Pb	12 43 34.2	-0.8
TPUB	baz=207			*e*S	Sb	12 44 01.1	+0.3
TPUB	Ta-pu	2.08	229	*e*Pn	Pb	12 43 33.8	-1.2
CHY	Chiayi baz=216	2.11	236	*e*P	Pb	12 43 35.6	+0.1
TWH	Lutao baz=197	2.11	202	*e*P	Pn	12 43 31.4	-1.0
TWH	baz=197			*e*S	Sn	12 43 56.6	-2.0
WTP	Ta-pu baz=209	2.13	228	*e*P	Pb	12 43 34.9	-0.9
JTJ	Tarama	2.15	91	P	Pn	12 43 33.4	+0.5
TWGBT	Beinan baz=209	2.18	212	*e*P	Pn	12 43 32.2	-1.2
TWG	Pinlang baz=209	2.19	212	*e*P	Pn	12 43 32.4	-1.0
TWG	Pinlang	2.19	212	*e*Pn	Pn	12 43 32.4	-1.0
WSF	Szhu baz=258	2.19	242	*e*P	Pn	12 43 34.8	+1.2
WSF	baz=258			*e*S	Sb	12 44 04.1	+0.1
TWK	Hsinying baz=209	2.20	231	*e*P	Pb	12 43 35.8	-1.3
TWK	baz=209			*e*S	Sb	12 44 03.6	-0.8
WLGB	Puzi baz=254	2.21	238	*e*P	Pb	12 43 36.4	-0.9
WLGB	baz=254			*e*S	Sb	12 44 06.0	+1.4
CHN1	Nanshi baz=211	2.23	228	*e*P	Pb	12 43 36.2	-1.3
SGST	Jiashian baz=204	2.26	226	⇑P	Pb	12 43 36.6	-1.4
SGST	baz=204			*e*S	Sb	12 44 06.8	+0.8
SLGT	Liugui baz=220	2.29	223	⇑*e*P	Pn	12 43 36.5	+1.6
CHN8	Yiju baz=213	2.36	236	*e*P	Pb	12 43 37.6	-2.0
CHN8	baz=213			*e*S	Sb	12 44 09.2	+0.5
CHN3	Shinhua baz=207	2.41	229	*e*P	Pb	12 43 40.0	-0.6
CHN3	baz=207			*e*S	Sb	12 44 12.0	+1.7
SSD	Sandimen baz=199	2.48	219	*e*P	Pn	12 43 38.9	+1.4
SSD	baz=199			*e*S	Sb	12 44 10.7	-1.7
TAI1	Yung-k’ang baz=227	2.53	230	*e*P	Pb	12 43 40.4	-2.2
JIRB	Irabujima	2.58	86	P	Pn	12 43 39.6	+0.7
SGLT	Jiouru baz=204	2.58	221	*e*P	Pn	12 43 39.5	+0.6
MASBT	Mashibuluo baz=199	2.59	218	*e*P	Pn	12 43 39.6	+0.7
MASBT	baz=199			*e*S	Sn	12 44 12.4	+2.1
MATB	Ma-tsu baz=300	2.61	305	*e*P	Pn	12 43 37.9	-1.5
VWUC	VWUC baz=273	2.64	277	*e*P	Pn	12 43 38.8	-1.0
JIKM	Ikemajima	2.65	84	P	Pn	12 43 41.1	+1.2
TAW	Tawu baz=207	2.66	210	*e*P	Pn	12 43 39.5	-0.5
EAST	Anshuo baz=208	2.67	211	*e*P	Pn	12 43 39.2	-0.9
JMJ	Miyako jima 2	2.69	87	P	Pn	12 43 41.7	+1.3
LAY	Lan-yu baz=193	2.73	196	*e*P	Pn	12 43 39.7	-1.3
PNG	Penghu baz=243	2.77	247	*e*P	Pn	12 43 42.5	+1.0
PHUB	P’eng-hu baz=242	2.78	246	*e*P	Pn	12 43 43.1	+1.4
SCZT	Fangliau baz=199	2.79	215	*e*P	Pn	12 43 43.3	+1.6
JOGS	Gusukube	2.79	88	P	Pn	12 43 42.9	+1.1
WDGT	Dungji baz=237	2.83	241	*e*P	Pn	12 43 44.0	+1.7
TWP	Hsiaoliuchiu baz=216	2.95	218	*e*P	Pb	12 43 48.1	-1.7
VCHM	Qimei baz=240	3.04	242	*e*P	Pn	12 43 46.6	+1.4
VCHM	baz=240			*e*S	Sn	12 44 22.8	+1.4
HEN	Hengchun baz=197	3.04	209	*e*P	Pn	12 43 45.8	+0.6
TSEB	Hengchuen, Pin baz=195	3.07	206	*e*P	Pn	12 43 45.6	+0.1
TWK1	Hengchun baz=196	3.07	208	*e*P	Pn	12 43 45.0	-0.6
TWKBT	Hengchun baz=192	3.07	208	*e*P	Pn	12 43 44.9	-0.7
TWKBT	baz=192			*e*S	Sn	12 44 23.4	+1.2
QZH	Quanzhou	3.42	275	Pn	Pn	12 43 50.6	+0.2
QZH				Sn	Sn	12 44 28.4	-2.4
QZH	comp=N,210nm,0.8s			smax	smax		
QZH	comp=E,170nm,0.7s			smax	smax		
QZH	comp=N,590nm,10.5s			LR	LR		
QZH	comp=E,890nm,8.9s			LR	LR		
QZH	comp=Z,780nm,9.7s			LR	LR		
KNM	Kinmen baz=263	3.57	267	*e*P	Pn	12 43 54.6	+2.2
JOW	Kunigami 5.4nm,0.3s,baz=194,slow=12,SNR=9.8	5.76	67	P	Pn	12 44 24.8	+2.1
JOW	Kunigami baz=72	5.76	67	*e*P	Pn	12 44 24.7	+2.1
JOW	Kunigami	5.76	67	*e*Pn	Pn	12 44 24.6	+1.9
WHN	Wuhan	9.18	311	*e*P	Pn	12 45 14.5	+5.0
WHN	comp=N,780nm,9.3s			LR	LR		
WHN	comp=E,580nm,4.8s			LR	LR		
WHN	comp=Z,390nm,9.9s			LR	LR		
TGY	Tagaytay City comp=Z,92nm,19.9s,baz=134,slow=40	10.61	187	LR	LR	12 50 12.2	
JNU	Nakatsue comp=Z,66nm,21.5s,baz=294,slow=37	11.25	40	LR	LR	12 49 58.0	
KS15	Wonju Array Si	13.58	19	*e*Pn	Pn	12 46 10.8	+1.1
KS01	Wonju Array Si	13.61	19	*e*Pn	Pn	12 46 10.0	-0.1
DAV	Davao City (W) comp=Z,65nm,20.3s,baz=338,slow=36	17.78	169	LR	LR	12 53 47.4	
MJAR	Matsushiro Arr comp=Z,79nm,18.4s,baz=235,slow=39	18.04	45	LR	LR	12 54 48.9	
USRK	Ussuriysk Ar. 2.7nm,0.6s,baz=215,slow=12	21.01	20	P	P	12 47 41.9	+1.3
CMAR	Chiang Mai Arr 1.2nm,0.8s,baz=58,slow=7.8,SNR=7.6	22.61	259	P	P	12 48 00.9	+2.9
CMAR	comp=Z,102nm,18.7s,baz=74,slow=37			LR	LR	12 57 05.8	
GUMO	Guam comp=Z,32nm,18.6s,baz=310,slow=36	23.93	113	LR	LR	12 57 13.7	
SBUM	Sibu 3.1nm,0.7s	24.16	205	*e*P	P	12 48 12.9	-0.6
TNTI	Ternate 8.7nm,0.8s	24.26	168	*e*P	P	12 48 14.6	+0.2
ASAJ	Asahikawa 1.5nm,0.3s,baz=247,slow=7.2,SNR=7.1	25.48	35	P	P	12 48 24.0	-1.3
ASAJ	comp=Z,127nm,18.1s,baz=250,slow=38			LR	LR	12 58 58.0	
LUWI	Luwuk 21nm,0.8s	25.57	179	*e*P	P	12 48 24.7	-1.6
KLR	Kul’dur 0.2nm,0.7s,baz=247,slow=6.4,SNR=8.4	25.59	14	P	P	12 48 26.0	-0.2
KLR	Kul’dur	25.59	14	*e*P	P	12 48 26.0	-0.2
ULN	Ulaanbaatar 3.0nm,0.8s	26.12	336	*e*P	P	12 48 31.7	+0.5
SONA0	Songino Array	26.34	335	*e*P	P	12 48 33.6	+0.4
SONM	Songino Array 5.3nm,0.9s,baz=148,slow=10,SNR=11	26.34	335	P	P	12 48 33.6	+0.4
SONA1	Songino Array	26.35	335	*e*P	P	12 48 33.7	+0.4
YSS	Yuzh-Sakhalins 12nm,0.9s	27.56	31	*e*P	P	12 48 45.9	+1.9
TLY	Talaya comp=Z,39nm,21.0s,baz=152,slow=39	30.52	337	LR	LR	13 02 54.8	
MK32	Makanchi Array	38.72	315	*e*P	P	12 50 21.3	+0.1
MKAR	Makanchi Array 1.6nm,0.3s,baz=99,slow=11,SNR=1.7	38.72	315	P	P	12 50 21.3	+0.1
PETK	Petropavlovsk- comp=Z,52nm,18.6s,baz=269,slow=37	38.87	34	LR	LR	13 07 07.8	
MA2	Magadan comp=Z,74nm,18.2s,baz=244,slow=38	40.13	22	LR	LR	13 08 14.1	
ZALV	Zalesovo Beam 0.9nm,0.5s,baz=126,slow=9.7,SNR=3.5	40.41	326	P	P	12 50 34.4	-0.8
ZAA1	Zalesovo Array	40.41	326	*e*P	P	12 50 34.4	-0.8
KURK	Kurchatov	42.40	319	*e*P	P	12 50 50.4	-1.1
KURBB	Kurchatov Arra 0.2nm,0.3s,baz=119,slow=7.6,SNR=3.7	42.42	319	P	P	12 50 50.4	-1.3
WRAB	Tennant Creek 18nm,1.1s	45.86	164	*e*P	P	12 51 19.0	-0.5
WR1	Warramunga Arr 13nm,0.6s	45.87	164	*e*P	P	12 51 19.4	-0.2
WR1				*e*PcP	PcP	12 52 56.0	-0.8
WRA	Warramunga Arr 8.6nm,0.6s,baz=346,slow=8.7,SNR=94	45.87	164	P	P	12 51 19.4	-0.2
WRA	1.0nm,0.7s,baz=347,slow=3.6,SNR=2.8			PcP	PcP	12 52 56.0	-0.8
WB2	Warramunga Arr 14nm,0.8s	45.87	164	*e*P	P	12 51 19.8	+0.1
BVAR	Borovoye Array 0.3nm,0.5s,baz=85,slow=11,SNR=2.5	47.96	320	P	P	12 51 35.1	-0.6
AS31	Alice Springs 1.9nm,0.5s	49.35	166	*e*P	P	12 51 47.1	+0.4
ASAR	Alice Springs 3.6nm,0.7s,baz=346,slow=11,SNR=64	49.35	166	P	P	12 51 47.0	+0.3
AS01	Alice Springs	49.36	166	*e*P	P	12 51 47.1	+0.4
CTA	Charters Tower 3.6nm,0.9s,baz=0.0,slow=8.1,SNR=2.5	50.22	150	P	P	12 51 54.0	+0.7
ABKAR	Akbulak array	53.85	314	*e*P	P	12 52 19.8	-0.3
STKA	Stephens Creek 1.8nm,0.7s,baz=331,slow=9.4,SNR=4.6	59.17	161	P	P	12 52 58.2	+0.1
KVAR	Kislovodsk Arr comp=Z,36nm,18.5s,baz=168,slow=39	66.09	309	LR	LR	13 25 42.9	
SKT	Skwentna 22nm,0.6s	66.73	31	*e*P	P	12 53 50.8	+2.7
ILAR	Eielson Array 0.1nm,0.5s,baz=272,slow=5.3,SNR=3.2	68.29	27	P	P	12 53 57.0	-0.9
SPITS	Spitsbergen Ar comp=Z,30nm,18.6s,baz=210,slow=39	69.22	348	LR	LR	13 28 17.3	
FINES	FINESS Array B comp=Z,40nm,18.5s,baz=98,slow=38	71.55	330	LR	LR	13 28 00.6	
HFS	Hagfors comp=Z,40nm,18.1s,baz=70,slow=38	77.65	331	LR	LR	13 32 41.3	
NOA	NORSAR Array B comp=Z,19nm,18.7s,baz=75,slow=38	78.28	332	LR	LR	13 32 01.8	
YKA	Yellowknife Ar 0.2nm,0.6s,baz=301,slow=6.1,SNR=3.3	82.10	23	P	P	12 55 16.7	-0.7

IDC ***10*** *13:00:21.8±2.8, 18°.93N×145°.33E, h161^{km}±27^{km}, mb3.5/8, mb1 3.7/9, mb1mx3.3/75, mbtmp3.9/9, Error ellipse: s-maj=31.7km s-min=17.5km az=103.0*

ISCJB ***10*** *13:00:25.6±0.7, 18°.78N±0°.08×145°.3E±0°.3, h214^{km}, mb3.5/8, Error ellipse: s-maj=38.0km s-min=10.2km az=6.0*

ISC 10 13:00:26.9±0.8**, 18°.8N**±0°.1×**145°.3E**±0°.3**, h214^{km}, n10, σ1^{s}.03**/10**, mb3.6**/8**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam 1.6nm,0.3s,baz=241,slow=18,SNR=5.0	5.15	185	P	Pn	13 01 37.9	-5.8
GUMO	6.4nm,0.3s,baz=340,slow=15,SNR=3.4			S	S	13 02 42.8	-1.3
WRA	Warramunga Arr 0.6nm,0.3s,baz=13,slow=8.6,SNR=34	39.93	196	P	P	13 07 41.6	+1.0
ASAR	Alice Springs 0.3nm,0.5s,baz=15,slow=6.9,SNR=14	43.61	195	P	P	13 08 11.4	+1.2
ILAR	Eielson Array 0.5nm,0.7s,baz=262,slow=4.7,SNR=6.1	63.76	26	P	P	13 10 34.7	-1.0
BVAR	Borovoye Array 0.6nm,0.5s,baz=76,slow=6.1,SNR=3.3	66.21	320	P	P	13 10 51.9	+0.1
YKA	Yellowknife Ar 0.6nm,0.5s,baz=289,slow=5.5,SNR=6.6	78.11	28	P	P	13 12 02.0	+0.1
ARCES	ARCESS Array B 1.9nm,0.8s,baz=78,slow=8.4,SNR=3.1	82.34	342	P	P	13 12 24.7	+0.3
NVAR	Mina Array Bea 1.3nm,0.7s,baz=262,slow=6.1,SNR=14	83.38	52	P	P	13 12 31.4	+0.7
FINES	FINESS Array B 1.5nm,0.8s,baz=49,slow=4.2,SNR=3.8	86.69	335	P	P	13 12 45.0	-1.3
LPAZ	La Paz 0.5nm,0.4s,baz=257,slow=6.1,SNR=4.1	148.02	91	PKPbc	PKPbc	13 19 48.7	0.0

ISCJB ***10*** *13:03:39.9±0.2, 26°.49N±0°.02×93°.13E±0°.02, h64^{km}±3^{km}, mb4.2/24, Error ellipse: s-maj=3.9km s-min=3.1km az=177.5*

IDC ***10*** *13:03:40.6±0.5, 26°.46N×93°.18E, h51^{km}±4^{km}, mb3.7/18, mb1 3.9/19, mb1mx3.6/74, mbtmp4.0/19, MS2.8/3, Ms1 2.9/3, ms1mx2.5/62, Error ellipse: s-maj=14.4km s-min=9.5km az=76.0*

NDI ***10*** *13:03:41.4±2.6, 26°.50N×93°.20E, h52^{km}±18^{km}, ML4.5*

NEIC ***10*** *13:03:55.0±1.1, 27°.07N×90°.66E, h35^{km}, mb4.7/7, Error ellipse: s-maj=22.7km s-min=15.1km az=164.0*

ISC 10 13:03:40.7±0.5**, 26°.48N**±0°.03×**93°.11E**±0°.04**, h54^{km}**±4^{km}**, n73, σ1^{s}.67**/106**, mb4.2**/25**, Northeastern India**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TEZP	TEZPUR	0.31	296	*e*P	Pn	13 03 51.9	+1.6
TEZP				*e*S	Sn	13 03 59.1	+1.8
TEZP	comp=N,20µm,0.1s			IAML		13 04 00.0	
TEZP	comp=E,20µm,0.1s			IAML		13 04 00.0	
ITAN	ITANAGAR	0.86	40	*e*P	Pn	13 03 57.4	+0.7
ITAN				*e*S	Sn	13 04 07.8	-0.7
ITAN	comp=E,29µm,0.2s			IAML		13 04 09.6	
ITAN	comp=N,49µm,0.1s			IAML		13 04 09.7	
JORH	JORHAT	1.06	76	*e*P	Pn	13 03 58.6	-0.8
JORH				*e*S	Sn	13 04 11.9	-1.2
JORH	comp=E,27µm,0.2s			IAML		13 04 12.9	
JORH	comp=N,27µm,0.2s			IAML		13 04 13.0	
KOHI	KOHIMA	1.18	130	*e*P	Pn	13 04 01.5	+0.3
KOHI				*e*S	Sn	13 04 15.7	-0.6
KOHI	comp=N,15µm,0.3s			IAML		13 04 16.4	

KOHI				IAML		13 04 16.9	
	comp=E,17μm,0.2s						
ZIRO	ZIRO	1.23	32	*e*P	Pn	13 04 01.5	-0.4
ZIRO				*e*S	Sn	13 04 17.4	-0.2
ZIRO				IAML		13 04 18.4	
	comp=E,32μm,0.5s						
ZIRO				IAML		13 04 19.5	
	comp=N,38μm,0.2s						
MOKO	MOKOCHONG	1.27	97	*e*P	Pn	13 04 02.0	-0.4
MOKO				*e*S	Sn	13 04 16.4	-2.1
MOKO				IAML		13 04 18.9	
	comp=E,11μm,0.3s						
MOKO				IAML		13 04 19.3	
	comp=N,14μm,0.2s						
GUWA	GUWAHATI	1.30	258	*e*P	Pn	13 04 04.2	+1.6
GUWA				*e*S	Sn	13 04 21.1	+2.1
GUWA				IAML		13 04 21.7	
	comp=N,6μm,0.2s						
GUWA				IAML		13 04 22.1	
	comp=E,4μm,0.2s						
SHL	Shillong	1.43	231	*e*P	Pn	13 04 05.2	+0.7
SHL				*e*S	Sn	13 04 23.8	+1.5
SHL				IAML		13 04 23.9	
	comp=E,6μm,0.2s						
SHL				IAML		13 04 24.1	
	comp=N,8μm,0.1s						
SILR	SILCHAR	1.72	189	*e*P	Pn	13 04 09.5	+1.2
SILR				*e*x	Sn	13 04 24.4	-4.7
SILR				IAML		13 04 29.5	
	comp=E,3μm,0.3s						
SILR				IAML		13 04 29.7	
	comp=N,3μm,0.4s						
IMP	Imphal	1.81	155	*e*P	Pn	13 04 10.1	+0.5
IMP				*e*x	Sn	13 04 26.8	-4.8
IMP				IAML		13 04 27.4	
	comp=N,820nm,0.5s						
IMP				IAML		13 04 34.3	
	comp=E,14μm,0.3s						
LKP	Lekhapani	2.59	70	*e*P	Pn	13 04 20.2	+0.1
LKP				*e*S	Sn	13 04 47.5	-3.0
LKP				*e*S		13 04 47.6	
LKP				IAML		13 04 50.0	
	comp=N,3μm,0.4s						
LKP				IAML		13 04 50.2	
	comp=E,3μm,0.2s						
TURI	Tura	2.66	250	*e*P	Pn	13 04 24.0	+2.8
TURI				*e*S	Sn	13 04 54.5	+2.2
TURI				IAML		13 04 56.2	
	comp=E,4μm,0.1s						
TURI				IAML		13 04 56.7	
	comp=N,9μm,0.4s						
DHUB	DHUBRI	2.83	261	*e*P	Pn	13 04 24.6	+1.1
DHUB				*e*S	Sn	13 04 56.0	-0.4
DHUB				*e*S		13 04 57.4	
DHUB				IAML		13 04 58.0	
	comp=N,2μm,0.2s						
DHUB				IAML		13 04 58.3	
	comp=E,2μm,0.2s						
AGT	Agartala	3.09	213	*e*P	Pn	13 04 28.1	+1.1
AGT				*e*P		13 04 29.1	
AGT				*e*S	Sn	13 05 03.4	+0.7
AGT				IAML		13 05 06.8	
	comp=N,906nm,0.2s						
BELO	BELONIA	3.56	205	*e*P	Pn	13 04 35.0	+1.6
BELO				*e*S	Sn	13 05 15.1	+0.9
LSA	Lhasa	3.64	332	Pn	Pn	13 04 37.1	+2.0
SAIH	SAIHA	3.98	182	*e*P	Pn	13 04 39.9	+0.6
SAIH				*e*S	Sn	13 05 24.4	-0.4
BRDH	Bariadhala	4.02	200	P	Pn	13 04 40.9	+1.2
	comp=N,143nm,0.3s,baz=64,slow=23,SNR=18						
BRDH				S	Sn	13 05 26.3	+0.7
	comp=N,146nm,0.3s,baz=47,slow=23,SNR=7.0						
BRDH				LR	LR	13 07 16.9	
	comp=N,116nm,21.2s,baz=72,slow=54						
GTK	Tadong	4.11	283	*e*P	Pn	13 04 42.2	+1.1
GTK				*e*S	Sn	13 05 28.8	+0.7
GTK				IAML		13 05 32.1	
	comp=N,383nm,0.2s						
GTK				IAML		13 05 32.1	
	comp=E,435nm,0.1s						
TAPN	Taplejung	4.89	281	*e*Pn	Pn	13 04 53.5	+1.4
TAPN				*e*Sn	Sn	13 05 48.0	+0.4
	comp=E,371nm,0.3s						
ODAN	Odare	5.13	275	*e*Pn	Pn	13 04 57.4	+2.2
ODAN				*e*Sn	Sn	13 05 55.8	+2.5
	comp=E,459nm,0.3s						
RAMN	Ramite	5.84	276	*e*Pn	Pn	13 05 06.5	+1.5
RAMN				*e*Sn	Sn	13 06 10.8	+0.1
	comp=E,260nm,0.3s						
JIRN	Jiri	6.28	282	*e*Pn	Pn	13 05 12.2	+1.1
JIRN				*e*Sn	Sn	13 06 20.2	-1.5
	comp=E,500nm,0.3s						
GUN	Gumba	6.59	284	*e*Pn	Pn	13 05 16.8	+1.4
GUN				*e*Sn	Sn	13 06 26.7	-2.7
	comp=E,245nm,0.3s						
PKIN	Phulchoki	6.96	281	*e*Pn	Pn	13 05 20.8	+0.4
PKIN				*e*Sn	Sn	13 06 37.0	-1.4
	comp=E,163nm,0.3s						
KKN	Kakani	7.09	282	*e*Pn	Pn	13 05 23.0	+0.8
KKN				*e*Sn	Sn	13 06 40.4	-1.1
	comp=E,87nm,0.2s						
DMN	Daman	7.22	281	*e*Pn	Pn	13 05 24.4	+0.5
DMN				*e*Sn	Sn	13 06 42.9	-1.8
	comp=E,94nm,0.3s						
GKN	Gorkha	7.69	283	*e*Pn	Pn	13 05 31.0	+0.7
GKN				*e*Sn	Sn	13 06 53.4	-2.7
	comp=E,284nm,0.3s						
CMAI	Chiengmai2	8.50	139	P	Pn	13 05 42.6	+1.1
	comp=E,2.1nm,1.0s,comp=E,0.0nm						
DANN	Dangsing	8.51	285	*e*Pn	Pn	13 05 41.2	-0.4
DANN				*e*Sn	Sn	13 07 13.1	-3.3
	comp=E,212nm,0.4s						
KOLN	Koldanda	8.57	281	*e*Pn	Pn	13 05 41.9	-0.4
KOLN				*e*Sn	Sn	13 07 15.2	-2.5
	comp=E,151nm,0.4s						
PYUN	Piuthan	9.14	282	*e*Pn	Pn	13 05 49.3	-0.9
PYUN				*e*Sn	Sn	13 07 28.9	-2.9
	comp=E,261nm,0.6s						
CHTO	Chiang Mai	9.34	144	P	Pn	13 05 54.6	+1.8
	comp=E,21nm,0.7s						
CMMT	Chiang Mai	9.34	144	P	Pn	13 05 54.5	+1.7
	comp=E,5.0nm,0.7s						
CMAR	Chiang Mai Arr	9.64	145	P	Pn	13 05 56.2	-0.6
	comp=E,0.7nm,0.3s,baz=315,slow=13,SNR=18						
CMAR				LR	LR	13 10 02.3	
	comp=E,46nm,21.9s,baz=336,slow=40						
LAMP	Lampang	9.95	141	P	Pn	13 06 02.5	+1.3
	comp=E,2.8nm,0.9s						
UTHA	Uthaitani	12.37	150	P	Pn	13 06 34.9	+0.7
	comp=E,4.1nm,0.9s						
SMLA	Simla	14.72	292	*e*x	Pn	13 07 03.7	-2.0
HYB	Hyderabad	16.22	239	*i* P	P	13 07 30.0	+2.5
HYB				*e*S	S	13 10 30.5	-4.3
TARG	Taragay, Kyrgy	19.75	324	*e*Pn	P	13 07 59.7	-6.8
	comp=E,7.1nm,0.9s						
MK31	Makanchi Array	22.01	340	*e*P	P	13 08 31.0	+0.6
MKAR	Makanchi Array	22.01	340	P	P	13 08 30.8	+0.4
	comp=E,7.8nm,0.6s,baz=147,slow=11,SNR=7.5						
AAK	Ala-Archa	22.16	321	P	P	13 08 33.8	+1.5
	comp=E,1.6nm,0.3s,baz=124,slow=6.7,SNR=5.1						
KBL	Kabul	22.20	297	*e*P	P	13 08 25.6	-7.2
	comp=E,28nm,0.8s						
SONM	Songino Array	23.73	23	P	P	13 08 49.2	+1.2
	comp=E,1.1nm,0.6s,baz=206,slow=9.6,SNR=3.6						
SONM				sP	sP	13 09 06.6	-1.3
	comp=E,2.9nm,0.7s,baz=202,slow=13,SNR=5.8						
SONA1	Songino Array	23.75	23	*e*P	sP	13 09 06.9	-1.1
KK31	Karatay Array	24.77	318	*e*P	P	13 08 56.1	-1.2
KURBB	Kurchatov Arra	26.57	339	P	P	13 09 14.1	+0.6
	comp=E,2.2nm,0.7s,baz=156,slow=9.9,SNR=11						
KURBB				pP	pP	13 09 28.4	+1.3
	comp=E,3.7nm,0.9s,baz=148,slow=9.8,SNR=9.8						
KURK	Kurchatov	26.62	339	P	P	13 09 13.5	-0.5
	comp=E,19nm,0.7s						
ZALV	Zalesovo Beam	28.12	350	P	P	13 09 28.0	+0.7
	comp=E,1.3nm,0.3s,baz=176,slow=6.3,SNR=4.0						
BVAR	Borovoye Array	31.48	333	LR	LR	13 24 23.8	
	comp=E,30nm,18.6s,baz=170,slow=39						
AKTO	Aktyubinsk	35.91	321	P	P	13 10 36.4	+0.8
	comp=E,2.7nm,0.8s,baz=127,slow=6.0,SNR=7.4						
MJAR	Matsushiro Arr	39.43	64	P	P	13 11 05.5	0.0
	comp=E,1.6nm,0.7s,baz=270,slow=10,SNR=6.8						
RAYN	Ar Rayn	43.05	277	*e*P	P	13 11 34.8	-0.7
	comp=E,33nm,2.0s						
ASF	Jabal al Asfar	48.87	291	P	P	13 12 22.1	+0.8
	comp=E,1.6nm,0.6s,baz=215,slow=2.6,SNR=3.3						
ILGA	Ilgaz	50.56	303	*e*P	P	13 12 35.4	+1.2
	comp=E,16nm,0.9s						
BR131	Keskin Array S	50.69	301	*e*P	P	13 12 34.3	-0.8
BRTR	Keskin Array B	50.69	301	P	P	13 12 35.0	-0.1
	comp=E,1.4nm,0.7s,baz=97,slow=8.2,SNR=4.7						
AKASG	Malin Array Be	53.62	315	P	P	13 12 56.1	-0.2
	comp=E,0.3nm,0.3s,baz=80,slow=6.7,SNR=4.1						
MLR	Muntele Rosu	55.95	309	P	P	13 13 14.4	+0.9
	comp=E,0.8nm,0.8s,baz=82,slow=5.5,SNR=4.7						
MLR	Muntele Rosu	55.95	309	*e*P	P	13 13 15.0	+1.4
	comp=E,5.5nm,0.9s						
FINES	FINESS Array B	56.15	328	P	P	13 13 15.0	+0.5
	comp=E,1.8nm,0.6s,baz=97,slow=9.8,SNR=6.5						
ARCES	ARCESS Array B	57.64	337	P	P	13 13 25.7	+0.7
	comp=E,1.5nm,0.7s,baz=89,slow=7.6,SNR=2.8						
WRA	Warramunga Arr	61.07	135	P	P	13 13 49.3	0.0
	comp=E,0.3nm,0.6s,baz=324,slow=7.2,SNR=11						
WRA				pP	pP	13 14 02.5	-1.7
	comp=E,4.0nm,0.7s,baz=324,slow=7.4,SNR=20						
HFS	Hagfors	62.20	326	P	P	13 13 56.6	+0.2
	comp=E,2.7nm,0.4s,baz=86,slow=6.1,SNR=16						
NB2	NORSAR Subarra	63.32	327	P	P	13 14 03.3	-0.6
	comp=Z,0.5nm,0.5s,baz=83,slow=6.5						
ASAR	Alice Springs	63.57	138	P	P	13 14 06.4	+0.5
	comp=Z,0.2nm,0.5s,baz=327,slow=6.6,SNR=3.5						
ASAR				pP	pP	13 14 19.8	-1.2
	comp=Z,1.8nm,0.5s,baz=322,slow=6.8,SNR=16						
CLL	Collm	63.77	316	*e*P	P	13 14 08.0	+1.1
GERES	GERESS Array B	63.78	314	P	P	13 14 07.7	+0.5
	comp=Z,2.0nm,0.7s,baz=71,slow=4.9,SNR=8.0						
GERES				sP	sP	13 14 28.2	-0.1
	comp=Z,0.8nm,0.5s,baz=76,slow=5.6,SNR=2.9						
GEA0	GERESS Array S	63.78	314	*e*P	P	13 14 07.6	+0.4
ILAR	Eielson Array	77.96	22	pP	pP	13 15 48.5	+0.4
	comp=Z,0.4nm,0.7s,baz=308,slow=4.4,SNR=4.2						
BOSA	Boshof	85.08	235	*e*P	P	13 16 19.6	+8.6
	comp=Z,88nm,1.8s						
TORD	Torodi Ar. Bea	85.48	282	P	P	13 16 12.8	-0.5
	comp=Z,2.2nm,0.8s,baz=77,slow=3.4						
TORD				pP	pP	13 16 29.3	+0.5
	baz=79,slow=4.6						
TORD				sP	sP	13 16 34.9	0.0
	baz=67,slow=3.9						

ISCJB ***10*** *13:09:14.8±0.3, 46°.15N±0°.04×142°.99E±0°.07, h355km±3km, mb3.1/7, Error ellipse: s-maj=7.2km s-min=5.7km az=169.4*

JMA ***10*** *13:09:15.1±0.2, 46°.13N×142°.94E, h357km±2km, M3.3*

IDC ***10*** *13:09:15.8±0.6, 46°.28N×142°.84E, h344km±12km, mb3.0/7, mb1 3.3/14, mb1mx3.0/79, mbtmp3.9/14, Error ellipse: s-maj=21.1km s-min=13.9km az=163.0*

SKHL ***10*** *13:09:16.9±0.6, 46°.11N×142°.88E, h340km±23km, mb3.8/5, msh4.5/3*

ISC 10 13:09:15.5±0.6**, 46°.11N**±0°.05×**142°.99E**±0°.06**, h351**km±6km**, n46, σ1ˢ04**/62**, mb3.2**/7**, 1C, Sakhalin Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YSS	Yuzh-Sakhalins	0.86	349⇑	*e*P	Pn	13 10 01.1	+0.4
YSS				AMB	AMB	13 10 01.5	
	10.0nm,0.4s						
YSS				*e*S	S	13 10 35.4	-1.7
YSS				A	A	13 10 35.5	
	50nm,0.5s						
JWK2	Keihoku	1.10	224	P	Pn	13 10 02.2	+0.4
JWK2				*e*S	S	13 10 38.8	-0.2
JSE	Soyaes	1.18	194	P	Pn	13 10 02.4	+0.2
JSE				*e*S	S	13 10 38.7	-1.0
JRR	Rishiri	1.52	231	P	Pn	13 10 04.2	+0.3
JRR				*e*S	S	13 10 42.8	0.0
JSS	Shosan	1.89	205	P	Pn	13 10 06.9	+0.7
JSS				*e*S	S	13 10 47.7	+0.8
JYG	Yagishiri	2.01	214	P	Pn	13 10 07.2	+0.2
JYG				*e*S	S	13 10 48.6	+0.2
ASAJ	Asahikawa	2.01	188	P	Pn	13 10 07.8	+0.8
	3.7nm,0.3s,baz=349,slow=6.7,SNR=47						
ASAJ				S	S	13 10 49.7	+1.3
	0.5nm,0.3s,baz=90,slow=20,SNR=7.3						
ASAJ	Asahikawa	2.01	188	P	Pn	13 10 07.9	+0.8
ASAJ				*e*S	S	13 10 50.1	+1.6
JMP	Maruseppu	2.12	173	P	Pn	13 10 08.5	+0.6
JTKR	Abashiri--Toko	2.24	163	P	Pn	13 10 09.5	+0.8
JTKR				*e*S	S	13 10 52.0	+0.6
JKK2	Kamakawa 2	2.24	184	P	Pn	13 10 09.6	+0.8
JRA	Rausu	2.65	144	P	Pn	13 10 12.9	+1.0
JAR	Ashorobuto	2.87	168	P	Pn	13 10 14.8	+1.0
JAR				*e*S	S	13 11 01.9	+1.1
YUK	Yuzh-Kuril'sk	2.91	134	*e*S	S	13 11 01.2	-0.1
YUK				A	A	13 11 03.6	
	80nm,0.7s						
YUK				A	A	13 11 03.6	
	70nm,0.7s						
JFR	Furan	2.96	186	P	Pn	13 10 15.1	+0.4
JAK	Akkeshi	3.34	158	P	Pn	13 10 18.2	0.0
JAK				*e*S	S	13 11 07.1	-1.5
NEM2	Nemuro 2	3.38	143	P	Pn	13 10 16.9	-1.5
NEM2				*e*S	S	13 11 06.9	-2.2
JEW	Eniwo	3.45	199	P	Pn	13 10 20.4	+1.2
JEW				*e*S	S	13 11 10.1	-0.3
JCH	Churui	3.50	175	P	Pn	13 10 19.0	-0.7
SHO	Shikotan	3.53	128	*e*P	Pn	13 10 21.2	+1.3
SHO				AMB	AMB	13 10 22.7	
	10.0nm,0.2s						
SHO				*e*S	S	13 11 10.6	-1.1
SHO				A	A	13 11 15.0	
	50nm,0.2s						
SHO				A	A	13 11 15.0	
	30nm,0.2s						
JNBK	Urakawa-nobuka	3.83	183	P	Pn	13 10 22.5	-0.4
JNBK				*e*S	S	13 11 16.7	-0.6
JKB	Kayabe	4.45	199	P	Pn	13 10 29.0	-0.3
JKB				*e*S	S	13 11 25.6	-3.2
TEY	Ternei	4.61	259	*e*P	Pn	13 10 31.0	+0.1
TEY				AMB	AMB	13 10 31.7	
	10.0nm,0.7s						
JOSM	Okushiri--Mats	4.75	213	P	Pn	13 10 32.3	-0.2
TYV	Tymovskoe	4.76	357	*e*S	S	13 11 33.5	-1.1
JOT	Ohata	4.93	197	P	Pn	13 10 33.8	-0.6
GRNR	Gornyy	6.39	319	*e*P	Pn	13 10 52.0	+1.4
GRNR				AMB	AMB	13 10 52.8	
	12nm,0.7s						
USRK	Ussuriysk Ar.	8.00	260	P	Pn	13 11 09.6	0.0
	baz=58,slow=12						
KLR	Kul'dur	8.20	296	P	Pn	13 11 11.3	-0.5
	0.0nm,0.3s,baz=107,slow=12,SNR=4.2						
EKMR	Ekimchan	9.53	321	*e*P	Pn	13 11 27.0	-0.7
EKMR				AMB	AMB	13 11 28.2	
	10.0nm,0.5s						
MJB9	Matsu-Tunnel	10.21	202	*e*P	Pn	13 11 36.3	+0.3
	11nm,0.5s						
MAJO	Matsushiro	10.21	202	*e*P	P	13 11 36.6	-0.6
	12nm,0.5s						
MAT	Matsushiro	10.21	202	P	P	13 11 37.0	-0.2
MJAR	Matsushiro Arr	10.21	202	P	P	13 11 37.4	+0.1
	1.5nm,0.3s,baz=27,slow=9.4,SNR=31						
PETK	Petropavlovsk-	11.82	48	P	Pn	13 11 55.0	+0.1
	baz=224,slow=14						
ZEA	Zeya	12.67	313	*e*P	Pn	13 12 04.8	-0.1
ZEA				AMB	AMB	13 12 05.2	
	20nm,0.8s						
JHJ	Hachijo jima 2	13.20	192	P	Pn	13 12 14.3	+2.9
	5.7nm,0.3s,baz=83,slow=23,SNR=7.8						
MA2	Magadan	14.27	16	P	P	13 12 22.0	+0.3
	0.1nm,0.3s,baz=171,slow=9.4,SNR=4.5						
SEY	Seymchan	17.68	14	P	P	13 12 58.0	-0.6
	0.4nm,0.3s,baz=193,slow=9.7,SNR=12						
SONM	Songino Array	24.88	287	P	P	13 14 07.2	-0.4
	0.4nm,0.3s,baz=90,slow=10,SNR=2.6						
ILAR	Eielson Array	41.38	38	P	P	13 16 27.6	-0.4
	0.4nm,0.6s,baz=270,slow=8.0,SNR=6.0						
KURBB	Kurchatov Arra	41.85	301	P	P	13 16 30.7	-1.3
	0.5nm,0.3s,baz=72,slow=9.5,SNR=8.4						
INK	Inuvik	45.88	31	P	P	13 17 03.3	-0.1
	3.0nm,1.1s,baz=298,slow=9.5,SNR=4.8						
YKA	Yellowknife Ar	55.47	33	P	P	13 18 14.2	-0.2
	0.6nm,0.6s,baz=306,slow=6.8,SNR=7.8						
NVAR	Mina Array Bea	68.78	56	P	P	13 19 44.5	+1.9
	0.3nm,0.6s,baz=289,slow=6.9,SNR=3.8						
PDAR	Pinedale Array	70.59	48	P	P	13 19 54.6	+1.1
	0.4nm,0.7s,baz=270,slow=3.0,SNR=3.9						

IDC 10 13:14:25.8±7.4**, 31°.05S**×**178°.15W, h200**km±40km**, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.2**/40**, mbtmp4.0**/3**, Error ellipse: s-maj=158.4km s-min=30.6km az=158.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	1.81	7	P	Pn	13 15 02.2	-0.1
	54nm,0.3s,baz=18,slow=23,SNR=5.8						
RAO				S	Sn	13 15 22.8	-8.0
	115nm,0.3s,baz=100,slow=13,SNR=5.5						
CTA	Charters Tower	33.78	280	P	P	13 20 48.7	-0.1
	8.1nm,1.1s,baz=121,slow=5.9,SNR=2.8						
ASAR	Alice Springs	42.95	268	P	P	13 22 05.4	+0.2
	0.4nm,0.3s,baz=103,slow=7.5,SNR=9.0						
WRA	Warramunga Arr	43.99	273	P	P	13 22 13.3	-0.3
	0.7nm,0.4s,baz=110,slow=8.2,SNR=33						
FINES	FINESS Array B	145.71	340	PKPbc	PKPbc	13 33 40.5	+0.2
	1.0nm,0.5s,baz=38,slow=2.5,SNR=5.7						
BRTR	Keskin Array B	152.79	297	PKPbc	PKPbc	13 33 57.6	-1.5
	0.3nm,0.3s,baz=43,slow=8.7,SNR=3.0						

ISCJB ***10*** *13:19:27.0±0.5, 0°.34S±0°.05×121°.92E±0°.07, h10km, mb3.7/8, Error ellipse: s-maj=10.7km s-min=7.3km az=0.8*

IDC ***10*** *13:19:26.1±1.1, 0°.36S×122°.01E, h0km, mb3.8/8, mb1 3.9/8, mb1mx3.6/49, mbtmp3.8/8, MS2.7/1, Ms1 2.7/1, ms1mx2.2/55, Error ellipse: s-maj=58.9km s-min=19.9km az=65.0*

DJA ***10*** *13:19:29.9±0.3, 0°S±3°×12°2E±°, h10km, M4.0/8, mB5.1/1, mb4.3/4, MLv3.9/8, Mw(mB)4.5/1*

ISC 10 13:19:27.9±0.7**, 0°.35S**±0°.07×**121°.94E**±0°.06**, h10**km**, n21, σ1ˢ04**/18**, mb3.8**/8**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
APSI	Ampana	0.63	208	P	Pb	13 19 40.0	-1.1
MRSI	Marisa	0.82	360	P	Pn	13 19 44.9	-0.6
LUWI	Luwuk	1.08	130	P	Pn	13 19 49.6	+0.5
MPSI	Mapaga	2.15	288	P	Pn	13 20 03.7	-0.2
PCI	Palu	2.18	255	P	Pb	13 20 06.9	-0.5
KMSI	Cibinong	2.23	66	P	Pg	13 20 11.8	+1.0
TTSI	Tana Toraja	3.42	218	P	Pn	13 20 22.8	+1.5
KDI	Kendari	3.65	169	P	Pg	13 20 40.9	+3.0
SPSI	Sidrap Palu	4.20	211	P	Pn	13 20 33.4	+1.3
BKSI	Bulukumba	5.27	200	P	Pn	13 20 46.5	-0.2
LBMI	Labuha	5.57	93	P	Pb	13 20 55.9	-9.4
DAV	Davao City (W)	8.21	26	LR	LR	13 24 46.3	
	comp=Z,54nm,22.0s,baz=164,slow=39						
EDFI	Ende, Flores	8.35	182	P	Pn	13 21 30.3	+1.0
WRA	Warramunga Arr	22.95	149	P	P	13 24 31.3	-1.4
	0.5nm,0.5s,baz=328,slow=10,SNR=6.9						
ASAR	Alice Springs	25.93	154	P	P	13 25 00.8	+0.2
	0.3nm,0.7s,baz=332,slow=7.8,SNR=4.4						
SONM	Songino Array	49.86	346	P	P	13 28 22.4	+0.9
	0.7nm,0.5s,baz=160,slow=8.9,SNR=2.7						
MKAR	Makanchi Array	58.35	329	P	P	13 29 24.3	+0.9
	0.3nm,0.4s,baz=120,slow=8.5,SNR=4.2						
PETK	Petropavlovsk-	61.02	24	P	P	13 29 41.7	+0.1
	0.6nm,0.5s,baz=198,slow=4.3						
ZALV	Zalesovo Beam	62.19	336	P	P	13 29 50.0	+0.5
	0.6nm,0.4s,baz=116,slow=6.6,SNR=2.5						
KURBB	Kurchatov Arra	62.73	330	P	P	13 29 51.6	-1.6
	0.5nm,0.2s,baz=126,slow=5.7,SNR=4.1						
ILAR	Eielson Array	90.81	25	P	P	13 32 30.0	-1.3
	0.1nm,0.7s,baz=243,slow=5.9,SNR=2.8						

JMA 10 13:19:58.1, 33°.78N×134°.31E, h5km**, M0.6, Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JAI	Aioi	0.12	84	P	Pg	13 20 00.6	+0.1
JAI				S	Sg	13 20 02.4	+0.2
JMN	Monobe	0.36	262	P	Pg	13 20 05.4	+0.3
JMN				S	Sg	13 20 10.4	+0.5
JJS	Sakaide	0.67	332	P	Pg	13 20 11.0	0.0
JWM	Minabe	0.87	85	*e*S	Sg	13 20 26.4	+0.2

JMA 10 13:20:57.4, 36°.82N×138°.39E, h9km±2km**, M1.5, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAT	Matsushiro	0.31	208	P	Pg	13 21 03.2	-0.4
MAT				*e*S	Sg	13 21 07.4	-0.4
MAT	Matsushiro	0.31	208	P	Pg	13 21 03.2	-0.4
MAT				S	Sg	13 21 07.3	-0.5
JJN	Nakama	0.34	327	P	Pg	13 21 04.3	+0.2
JJN				S	Sg	13 21 09.8	+1.3
JNG	Nsakai	0.47	210	P	Pg	13 21 06.1	-0.5
JNG				S	Sg	13 21 12.4	-0.5
JHK	Hiroka	0.66	49	S	Sg	13 21 18.5	-0.3

NORS ***10*** *13:22:28.3±0.0, 42°.67N×42°.55E, h19km*

MOS ***10*** *13:22:28.4±0.0, 42°.68N×42°.57E, h15km, MPVA3.1*

CSEM ***10*** *13:23:25.8, 42°.29N×42°.21E, h9km, ML2.5*

DDA ***10*** *13:23:25.8, 42°.29N×42°.21E, h9km, Ml2.5*

ISC 10 13:23:26.4±1.1**, 42°.56N**±0°.03×**42°.47E**±0°.03**, h8**km±10km**, n18, σ1ˢ07**/36**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEY	Neytrino	0.71	15	*e*Pg	Pg	13 23 39.9	-0.2
NEY				*e*Sg	Sg	13 23 48.2	-1.1
DIGR	Digorskoe uzhe	0.88	67	*e*Pg	Pg	13 23 43.3	-0.1
DIGR				*e*Sg	Sg	13 23 55.1	+0.3
ZEI	Tsey	1.08	78	*e*Pg	Pn	13 23 47.7	-0.4
ZEI				*e*Sg	Sb	13 24 01.7	-0.1
SHA1	Shidzhatmaz	1.18	7	*e*Pg	Pg	13 23 50.1	+1.0
SHA1				*e*Sg	Sb	13 24 03.5	-1.3
KORR	Kora	1.28	66	*e*Pg	Pg	13 23 50.9	-0.1
KORR				*e*Sg	Sb	13 24 07.0	-0.6
ARXR	Arkhyz	1.33	319	*e*Pg	Pg	13 23 51.6	-0.2
ARXR				*e*Sg	Sb	13 24 08.9	0.0
DBOC	Borcka	1.36	206	*i* P	Pg	13 23 52.5	+0.1
DBOC				*i* S	Sn	13 24 11.3	+1.4
DBOC	Borcka	1.36	206	P	Pg	13 23 52.5	+0.1
DBOC				S	Sn	13 24 11.3	+1.4
LACR	Lac	1.37	78	*e*Pg	Pb	13 23 52.2	-0.2
LACR				*e*Sg	Sn	13 24 09.7	-0.7
KIV0	Kislovodsk Arr	1.40	7	*e*Pg	Pb	13 23 53.2	+0.4
KIV0				*e*Sg	Sn	13 24 10.6	-0.5
STDR	Stavd-Durt	1.42	55	*e*Pg	Pg	13 23 54.9	+1.3
STDR				*e*Sg	Sb	13 24 12.1	+0.8
ARTV	Artvin	1.44	197	*i* P	Pg	13 23 54.3	+0.4
ARTV				*i* S	Sg	13 24 14.4	+1.8
ARTV	Artvin	1.44	197	P	Pg	13 23 54.3	+0.4
ARTV				S	Sg	13 24 14.4	+1.8
DAGI	Agillar	1.54	196	*i* P	Pg	13 23 55.2	-0.8
DAGI				*i* S	Sg	13 24 15.8	-0.1
DBAD	Bademkaya	1.65	201	*i* P	Pg	13 23 55.4	-2.6
DBAD				*i* S	Sg	13 24 20.1	+0.7
DBAD	Bademkaya	1.65	201	P	Pg	13 23 55.4	-2.6
DBAD				S	Sg	13 24 20.1	+0.7
DDEM	Demirkent	1.75	198	*i* P	Pg	13 23 58.8	-1.2
DDEM				*i* S	Sg	13 24 22.9	+0.1
DDEM	Demirkent	1.75	198	P	Pg	13 23 58.8	-1.2
DDEM				S	Sg	13 24 22.9	+0.1

NIED ***10*** *13:43:00, 35°.80N×141°.00E, h11km, Mw3.4 Best double couple: $M_0$1.40000×10^{14} NP1:ϕ_s18.00000°, δ42.00000°, λ-78.00000°. NP2:ϕ_s183.00000°, δ49.00000°, λ-100.00000°.*

ISCJB ***10*** *13:43:53.4±1.3, 35°.79N±0°.04×141°.19E±0°.07, h12km±7km, mb3.7/4, Error ellipse: s-maj=9.4km s-min=5.8km az=167.0*

IDC ***10*** *13:43:53.4±1.5, 35°.77N×141°.10E, h0km, mb3.6/4, mb1 3.6/8, mb1mx3.4/67, mbtmp3.7/8, ML3.3/4, Error ellipse: s-maj=38.2km s-min=17.2km az=80.0*

JMA ***10*** *13:43:55.8±0.2, 35°.79N×141°.04E, h16km±1km, M3.6 Broadband fault plane solution: P waves. NP1: ϕ_s330.00000°, δ87.00000°, λ-130.00000°. NP2: ϕ_s237.00000°, δ41.00000°, λ-5.00000°. Principal axes: T Plg30.0000°, Azm92.0000°; N Plg40.0000°, Azm333.0000°; P Plg35.0000°, Azm206.0000°;*

JMA Felt I J1.

ISC 10 13:43:56.1±1.1**, 35°.80N**±0°.04×**140°.97E**±0°.06**, h15**km±6km**,**

n22,σ1ˢ19/24,mb3.6/4,2C-2D,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	0.14	223	⇑P	Pg	13 44 00.0	+0.2
CHOJ				S	Sg	13 44 02.8	+0.5
JIHU	Itakohorinouch	0.40	294	P	Pb	13 44 05.3	+0.5
JIHU				S	Sb	13 44 12.3	+1.6
JHYU	Hitachinakayam	0.62	330	P	Pb	13 44 08.8	+0.2
JHYU				S	Sb	13 44 17.9	+0.8
JCN	Nagara	0.74	239	⇓P	Pn	13 44 11.7	-0.2
JYT	Yasato	0.76	304	⇑P	Pg	13 44 10.4	-0.5
JYT				S	Sg	13 44 20.8	-0.1
JHO	Hitachi	0.87	338	⇓P	Pb	13 44 12.0	-0.9
BSO3	Boso 3	1.07	201	P	Pb	13 44 15.6	-0.5
MJAR	Matsushiro Arr	2.35	289	Pn	Pn	13 44 33.7	-0.5
	6.6nm,0.3s,baz=104,slow=8.1,SNR=51						
MJAR				Sn	Sg	13 45 11.3	-0.5
	3.6nm,0.3s,baz=71,slow=16,SNR=5.9						
MAT	Matsushiro	2.36	289	P	Pn	13 44 34.4	+0.2
MAT				eS	Sn	13 45 00.4	-2.5
JHJ	Hachijo jima 2	2.85	200	Pn	Pn	13 44 41.2	+0.2
	1.9nm,0.3s,baz=299,slow=15,SNR=6.0						
JHJ				Sn	Sn	13 45 17.0	+1.9
	15nm,0.3s,baz=255,slow=22,SNR=5.5						
ASAJ	Asahikawa	8.40	8	Pn	Pn	13 45 56.8	-0.4
	0.6nm,0.3s,baz=232,slow=6.8,SNR=5.2						
ASAJ				Sn	Sn	13 47 34.5	+2.9
	0.1nm,0.3s,baz=307,slow=20,SNR=2.2						
JCJ	Chichijima	8.74	173	Pn	Pn	13 46 00.3	-1.7
	1.6nm,0.3s,baz=270,slow=20,SNR=2.8						
H11N2	WAKE ISLAND Hy	27.85	118	T	T	14 18 41.6	
	baz=311,slow=75,SNR=204						
H11N1	WAKE ISLAND Hy	27.86	118	T	T	14 18 41.0	
	baz=311,slow=75,SNR=174						
H11N3	WAKE ISLAND Hy	27.87	118	T	T	14 18 41.9	
	baz=311,slow=75,SNR=245						
H11S1	WAKE ISLAND Hy	28.52	120	T	T	14 19 30.2	
	baz=312,slow=75,SNR=267						
H11S3	WAKE ISLAND Hy	28.52	120	T	T	14 19 30.2	
	baz=312,slow=75,SNR=273						
H11S2	WAKE ISLAND Hy	28.53	120	T	T	14 19 33.2	
	baz=312,slow=75,SNR=206						
MKAR	Makanchi Array	44.48	303	P	P	13 52 07.3	+0.7
	2.7nm,0.5s,baz=76,slow=12,SNR=4.0						
KURBB	Kurchatov Arra	46.49	309	P	P	13 52 22.8	+0.4
	0.3nm,0.3s,baz=84,slow=8.3,SNR=3.0						
WRA	Warramunga Arr	55.80	188	P	P	13 53 32.0	-0.6
	0.3nm,0.5s,baz=5.0,slow=7.4,SNR=6.6						
ASAR	Alice Springs	59.52	188	P	P	13 53 58.2	-0.6
	0.3nm,0.9s,baz=20,slow=14,SNR=4.9						

MEX 10 14:01:56.7±1.1,19°.72N×105°.24W,h28km±34km,MD3.5, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CJM	Chamela	0.28	140	*i* P	Pb	14 02 02.0	-1.8
	baz=320,slow=7.9						
CJM				eS	Sb	14 02 07.6	-1.0
PUVA	Puert Vallarta	0.91	1	eP	Pn	14 02 10.9	-2.6
PUVA				eS	Sb	14 02 22.1	-3.5
ANIG	Ahuacatlan	1.49	27	eP	Pn	14 02 20.8	-0.9
ANIG				eS	Sn	14 02 38.6	-1.7

MAN 10 14:28:49.3,6°.12N×125°.55E,h40km,mb4.7,ML3.5,MS3.4, 1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GSPH	General Santos	0.59	267	⇓eP	Pn	14 29 00.8	-0.6
GSPH				eS	Sn	14 29 06.7	-3.4
SKMP	Bagumbayan, Su	1.07	292	eP	Pn	14 29 07.6	-0.3
SKMP				eS	Sn	14 29 23.0	+1.4
MATI	Mati	1.08	41	eP	Pn	14 29 08.7	+0.6
MATI				eS	Sn	14 29 22.7	+0.8

MAN 10 14:37:19.2,16°.62N×120°.17E,h51km,mb4.6,ML3.4, MS3.3,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BOLP	Bolinao	0.34	227	eP	Pn	14 37 30.3	+1.5
BOLP				eS	Sn	14 37 39.7	+4.0
SCZP	Santa Cruz	0.87	197	eP	Pn	14 37 35.5	+0.3
SCZP				eS	Sn	14 37 49.5	+2.6
ABRA	Dolores	1.15	27	eP	Pn	14 37 39.5	+0.5
ABRA				eS	Sn	14 37 55.9	+2.3
PCPH	Palayan	1.37	140	eP	Pn	14 37 43.9	+1.9
APYP	Conner	1.61	39	eP	Pn	14 37 45.5	+0.4
APYP				eS	Sn	14 38 06.1	+1.3
LUBP	Lubang	2.87	179	eP	Pn	14 38 04.0	+1.6
ENPP	El Nido	5.43	188	eP	Pn	14 38 34.5	-3.1

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*JMA **10** 14:50:03.7±0.6,45°.64N×151°.10E,h30km,M3.9*

SKHL 10 14:50:04.4±1.2,45°.14N×151°.27E,h38km±2km,mb4.6/6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.41	273	*i* P	Pn	14 50 40.0	-1.2
KUR				AMB	AMB	14 50 44.0	
	24nm,0.3s						
KUR				AMB	AMB	14 50 44.0	
	19nm,0.3s						
KUR				AMB	AMB	14 50 44.0	
	46nm,0.3s						
KUR				*i* S	Sn	14 51 07.0	-2.4
KUR				A	A	14 51 11.0	
	224nm,0.3s						
KUR				A	A	14 51 11.0	
	132nm,0.3s						
SHO	Shikotan	3.42	250	*i* P	Pn	14 50 56.0	+0.9
SHO				AMB	AMB	14 50 59.0	
	8.0nm,0.3s						
SHO				AMB	AMB	14 50 59.0	
	7.0nm,0.3s						
SHO				AMB	AMB	14 50 59.0	
	14nm,0.3s						
SHO				*i* S	Sn	14 51 34.0	-0.4
SHO				A	A	14 51 38.0	
	61nm,0.3s						
SHO				A	A	14 51 38.0	
	112nm,0.3s						
YUK	Yuzh-Kuril'sk	4.02	256	*i* P	Pn	14 51 05.5	+2.2
YUK				AMB	AMB	14 51 09.1	
	44nm,0.3s						
YUK				AMB	AMB	14 51 09.1	
	32nm,0.3s						
YUK				AMB	AMB	14 51 09.1	
	48nm,0.3s						
YUK				*i* S	Sn	14 51 50.0	+0.9
YUK				A	A	14 51 52.0	
	70nm,0.3s						
YUK				A	A	14 51 52.0	
	129nm,0.3s						
LAGR	Lagunnoye	4.06	256	*i* P	Pn	14 51 06.0	+2.1
LAGR				AMB	AMB	14 51 09.0	
	53nm,0.4s						
LAGR				*i* S	Sn	14 51 52.0	+1.8
LAGR				A	A	14 52 04.0	
	252nm,0.4s						
LAGR				A	A	14 52 04.0	
	92nm,0.4s						
GRPR	Tuman	4.09	256	eP	Pn	14 51 06.0	+1.6
GRPR				AMB	AMB	14 51 11.0	
	53nm,0.3s						
GRPR				eS	Sn	14 51 52.0	+1.0
GRPR				A	A	14 52 00.0	
	72nm,0.3s						
GRPR				A	A	14 52 00.0	
	130nm,0.3s						
NEM2	Nemuro 2	4.35	248	P	Pn	14 51 07.9	0.0
NEM2				eS	Sn	14 51 55.8	-1.4
GLVR	Golovnino	4.35	253	*i* P	Pn	14 51 09.0	+1.1
GLVR				AMB	AMB	14 51 10.0	
	42nm,0.3s						
GLVR				*i* S	Sn	14 51 59.0	+1.7
GLVR				A	A	14 52 07.0	
	97nm,0.4s						
GLVR				A	A	14 52 07.0	
	129nm,0.4s						
JRA	Rausu	4.56	257	P	Pn	14 51 12.8	+2.1
JRA				eS	Sn	14 52 04.6	+2.2
JNK	Nakash	4.95	254	P	Pn	14 51 17.6	+1.5
JNK				eS	Sn	14 52 13.3	+1.3
JAK	Akkeshi	5.20	248	P	Pn	14 51 19.9	+0.4
JAK				eS	Sn	14 52 16.6	-1.6
JTKR	Abashiri--Toko	5.39	260	P	Pn	14 51 24.0	+1.9
JAR	Ashorobuto	5.70	254	P	Pn	14 51 28.3	+1.9
JAR				eS	Sn	14 52 32.0	+1.5
JMP	Maruseppu	5.76	261	P	Pn	14 51 29.9	+2.6
JOB	Onbets	5.81	250	P	Pn	14 51 29.7	+1.8
JOB				eS	Sn	14 52 33.5	+0.3
JCH	Churui	6.25	249	P	Pn	14 51 34.7	+0.8
JCH				eS	Sn	14 52 43.0	-1.0
MYR	Moyori	6.45	247	eP	Pn	14 51 38.0	+1.3
MYR				eS	Sn	14 52 47.9	-1.1
JEM	Erimo	6.67	245	eS	Sn	14 52 54.5	+0.2
JNBK	Urakawa-nobuka	6.80	248	P	Pn	14 51 41.8	+0.3
JNBK				eS	Sn	14 52 54.0	-3.7
JBT2	Biratori 2	6.85	253	P	Pn	14 51 43.2	+1.0
JBT2				eS	Sn	14 53 01.5	+2.7
JNB	Noboribetsu	7.87	254	P	Pn	14 51 58.1	+1.9
JNB				eS	Sn	14 53 23.0	-0.9
JKB	Kayabe	8.12	250	P	Pn	14 52 00.1	+0.5
JKB				eS	Sn	14 53 25.8	-4.2
JANG	Nango	8.61	240	eS	Sn	14 53 36.9	-5.3

MAN 10 14:53:02.0,14°.08N×120°.88E,h32km,mb4.1,ML2.9, MS2.5,1D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGY	Tagaytay City	0.06	73	⇓*i*P	Pb	14 53 07.7	+0.1
BOAC	Boac	1.13	123	eP	Pn	14 53 22.0	+0.5
BOAC				eS	Sn	14 53 36.1	+0.1
SJMP	San Jose	1.63	172	eP	Pn	14 53 29.2	+0.8
SJMP				eS	Sn	14 53 48.2	-0.2

NEIC 10 14:56:23.9±0.0,64°.47N×146°.83W,h5km,ML3.6(AEIC), After AEIC.,Central Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PS08	TAPS Pump Stn8	0.07	2	P	Pg	14 56 25.6	0.0
PS08				S	Sg	14 56 26.5	-0.2
HDA	Harding Lake	0.08	221	P	Pg	14 56 25.8	+0.1
HDA				S	Sg	14 56 27.0	+0.1
ILB	Eielson Array	0.30	355	P	Pg	14 56 29.8	0.0
CCB	Clear Creek Bu	0.46	293	P	Pg	14 56 32.7	0.0
WRH	Wood River Hil	0.55	271	P	Pg	14 56 34.4	0.0
WRH				S	Sg	14 56 41.5	0.0
GLM	Gilmore Dome	0.57	335	P	Pg	14 56 35.0	0.0
PS09	TAPS Pump Stn9	0.71	139	P	Pg	14 56 37.7	+0.1
PS09				S	Sg	14 56 47.0	+0.2
MDM	Murphy Dome	0.78	310	P	Pg	14 56 38.6	-0.2
MDM				S	Sb	14 56 50.5	-0.3
NEA	Nenana	0.98	277	P	Pg	14 56 42.1	-0.5
PS10	TAPS Pump St10	1.15	156	P	Pg	14 56 45.4	-0.5
MCK	McKinley	1.19	232	P	Pg	14 56 46.2	-0.4
MCK				S	Sn	14 57 03.5	-0.2
BWN	Browne	1.19	257	P	Pg	14 56 45.3	-1.4
BWN				S	Sg	14 57 01.0	-1.0
PRP	Porcupine Dome	1.19	27	P	Pg	14 56 46.0	-0.7
DHY	Denali Highway	1.42	190	P	Pn	14 56 50.5	-0.1
DHY				S	Sb	14 57 09.3	-0.1
PAX	Paxson	1.62	158	P	Pn	14 56 53.4	+0.1
MLY	Manley	1.77	290	P	Pn	14 56 54.0	-1.2
TRF	Thorofare Moun	1.84	238	P	Pn	14 56 56.0	-0.3
BPAW	Bear Paw Mtn.	1.85	260	P	Pn	14 56 55.2	-1.1
PS06	TAPS Pump Stn6	1.85	320	P	Pn	14 56 56.0	-0.4
HUR	Hurricane	1.95	221	P	Pn	14 56 58.2	+0.5
KTH	Kantishna Hill	2.02	245	P	Pn	14 56 58.0	-0.8
HARP	HAARP	2.20	159	P	Pn	14 57 02.4	+1.2
FYU	Fort Yukon	2.21	17	P	Pn	14 57 01.4	+0.2
EGAK	Eagle	2.46	80	P	Pn	14 57 04.7	0.0
CHUM	Lake Minchumin	2.47	259	P	Pn	14 57 03.8	-1.0
CAST	Castle Rocks	2.55	248	P	Pn	14 57 05.0	-0.9
TRAP	Trapper Creek	2.64	217	P	Pn	14 57 07.5	+0.4
BCA3	Beaver Creek A	2.65	120	P	Pn	14 57 05.9	-1.4
SCM	Sheep Creek Mo	2.66	185	P	Pn	14 57 08.8	+1.3
SML	Sawmill	2.76	195	P	Pn	14 57 09.9	+1.1
PPLA	Purkeypile	2.86	239	P	Pn	14 57 09.8	-0.5
GHO	Glory Hole Cre	2.87	200	P	Pn	14 57 11.3	+0.9
KLU	Klutina	3.02	172	P	Pn	14 57 14.4	+2.0
PMR	Palmer	3.07	201	P	Pn	14 57 13.9	+0.9
COLD	Coldfoot	3.10	335	P	Pn	14 57 13.5	+0.1
BM3	Burnt Mountain	3.10	16	P	Pn	14 57 13.3	-0.2
KNK	Knik Glacier	3.16	194	P	Pn	14 57 16.3	+2.0
IM05	Indian Mountai	3.27	301	P	Pn	14 57 15.0	-0.8
SKT	Skwentna	3.28	223	P	Pn	14 57 16.4	+0.4
GLB	Gilahina Butte	3.34	154	P	Pn	14 57 17.1	+0.4
BVCY	Beaver Creek	3.38	125	P	Pn	14 57 16.4	-0.9
DIV	Divide	3.39	171	P	Pn	14 57 18.9	+1.5
SUA	Susitna One	3.51	212	P	Pn	14 57 20.1	+0.9
VRDI	Verde Repeater	3.60	153	P	Pn	14 57 21.8	+1.2
RC01	Rabbit Creek A	3.65	203	P	Pn	14 57 22.5	+1.5
YUK2	White River	3.83	132	P	Pn	14 57 22.6	-0.9
PTPK	Patty Peak	3.85	147	P	Pn	14 57 24.9	+0.9
YUK3	Moose Creek	3.96	130	P	Pn	14 57 24.0	-1.4
HIN	Hinchinbrook I	4.09	178	P	Pn	14 57 28.0	+0.9
KIAG	Kiagna River	4.11	148	P	Pn	14 57 29.0	+1.5
TOLK	Toolik Lake Re	4.33	347	P	Pn	14 57 32.0	+1.6
TT01	Tatalina	4.38	253	P	Pn	14 57 30.0	-1.0
BRLK	Bradley Lake	5.09	204	P	Pn	14 57 41.5	+0.7
CNPM	China Poot	5.38	205	P	Pn	14 57 46.1	+1.4
CDD	Cape Douglas	6.43	213	P	Pn	14 58 00.7	+1.5
KDAK	Kodiak Island	7.26	205	P	Pn	14 58 10.9	+0.4

MAN 10 15:00:51.2,10°.28N×123°.26E,h1km,mb4.2,ML3.0,MS2.6, 1C-1D,Cebu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LLP	Lapu-Lapu	0.70	87	⇑eP	Pg	15 01 04.9	+0.2
LLP				*i* S	Sg	15 01 15.0	+1.2
GUIM	Jordan	0.74	298	eP	Pb	15 01 06.5	-0.4
GUIM				eS	Sb	15 01 18.9	+1.3
TBP	Tagbilaran	0.84	134	eP	Pg	15 01 07.6	+0.3
SNPH	Sibulan	0.93	181	⇓*i*P	Pg	15 01 07.0	-2.1
SNPH				*i* S	Sg	15 01 18.2	-2.9
MSLP	Maasin	1.59	95	eP	Pn	15 01 20.1	-0.3
MSLP				eS	Sg	15 01 42.7	+0.5
CUYO	Cuyo Island	2.27	285	eP	Pn	15 01 30.5	+0.6
CUYO				eS	Sn	15 01 60.0	+1.4

MAN 10 15:02:54.3,8°.53N×126°.21E,h97km,mb4.7,ML3.6,MS3.5, 5C-1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	Bislig	0.37	156	⇑eP	Pn	15 03 10.2	+1.3
BIPH				*i* S	Sn	15 03 21.2	+1.5
BUTP	Butuan	0.73	307	eP	Pn	15 03 12.6	+0.9
BUTP				eS	Sn	15 03 27.2	+2.5
BUKP	Musuan	1.31	241	eP	Pn	15 03 19.8	+1.7
BUKP				eS	Sn	15 03 38.7	+2.7
SCPH	Surigao	1.44	330	⇑eP	Pn	15 03 20.5	+0.8
SCPH				eS	Sn	15 03 40.4	+1.6
CGP	Cagayan de Oro	1.50	267	⇑eP	Pn	15 03 21.1	+0.7
CGP				eS	Sn	15 03 40.2	0.0
MATI	Mati	1.57	178	eP	Pn	15 03 22.8	+1.5
MATI				eS	Sn	15 03 47.1	+5.4
DMPH	Davao City--Mi	1.59	206	⇑*i*P	Pn	15 03 28.7	+7.2
DMPH				*i* S	Sn	15 03 48.6	+6.4
MSLP	Maasin	2.08	320	eP	Pn	15 03 28.1	+0.3
MSLP				eS	Sn	15 03 56.0	+2.6
CTBH	Cotabato--PC H	2.34	236	⇑*i*P	Pn	15 03 32.7	+1.6
CTBH				*i* S	Sn	15 04 01.8	+2.4
SKMP	Bagumbayan, Su	2.59	220	eP	Pn	15 03 34.4	-0.1
SKMP				eS	Sn	15 04 05.9	+0.5
TBP	Tagbilaran	2.59	297	eP	Pn	15 03 37.0	+2.4
PAGZ	Pagadian	2.88	257	eP	Pn	15 03 38.8	+0.5
PAGZ				eS	Sn	15 04 13.4	+1.1
PLP	Palo	2.89	335	⇓eP	Pn	15 03 38.5	-0.1
PLP				eS	Sn	15 04 11.3	-1.3
BESP	Borongan	3.15	346	eP	Pn	15 03 42.9	+0.9
BESP				eS	Sn	15 04 14.7	-4.1
CNP	Catarman	4.24	339	eP	Pn	15 03 56.2	-0.5
CNP				eS	Sn	15 04 42.6	-2.5

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*NIED **10** 15:04:00,35°.90N×141°.50E,h29km,Mw3.9 Best double couple: M₀7.30000×10¹⁴ NP1:φₛ249.00000°,δ43.00000°, λ-120.00000°. NP2:φₛ107.00000°,δ54.00000°, λ-65.00000°.*

*ISCJB **10** 15:04:25.5±1.0,35°.83N±0°.04×141°.70E±0°.05,h19km±7km, mb4.0/16,MS2.6/2,Error ellipse: s-maj=7.4km s-min=6.0km az=2.8*

*IDC **10** 15:04:25.1±0.6,35°.81N×141°.50E,h0km,mb3.8/15, mb1 3.9/20,mb1mx3.8/75,mbtmp3.8/20,ML3.6/3,MS2.7/6, Ms1 2.7/6,ms1mx2.5/66,Error ellipse: s-maj=17.3km s-min=13.1km az=112.0*

*NEIC **10** 15:04:26.4±0.4,35°.80N×141°.54E,h10km,mb4.3/1,Error ellipse: s-maj=9.1km s-min=7.8km az=111.0*

*JMA **10** 15:04:28.5±0.2,35°.89N×141°.54E,h35km±2km,M3.6*

ISC 10 15:04:26.1±1.8,35°.83N±0°.05×141°.59E±0°.05,h9km±11km, n46,σ1ˢ20/46,mb3.9/16,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CHOJ	Chosi	0.60	258	P	Pn	15 04 40.0	-0.9
CHOJ				S	Sn	15 04 48.6	-2.2
JIHU	Itakohorinouch	0.87	279	P	Pn	15 04 44.6	+0.1
JIHU				eS	Sn	15 04 56.3	-1.1
JHYU	Hitachinakayam	0.95	302	P	Pb	15 04 45.1	+0.3
JHYU				S	Sb	15 04 57.1	-0.5
JHO	Hitachi	1.13	314	P	Pb	15 04 47.4	-0.4
JHO				eS	Sb	15 05 01.1	-1.5
JYT	Yasato	1.19	290	P	Pb	15 04 48.4	-0.5
JYT				eS	Sb	15 05 02.6	-1.9
BSO1	Boso 1	1.28	203	P	Pg	15 04 50.8	+0.2
BSO3	Boso 3	1.35	221	P	Pg	15 04 52.1	+0.1
JFK	Kawauchi	1.63	340	P	Pn	15 04 54.9	-0.2
MJAR	Matsushiro Arr	2.82	285	Pn	Pn	15 05 12.2	+0.8
	4.5nm,0.3s,baz=192,slow=9.4,SNR=33						
MJAR				Sn	Sn	15 05 47.4	+1.8
	6.1nm,0.3s,baz=85,slow=19,SNR=5.6						
MJAR				LR	LR	15 06 25.7	
	comp=Z,135nm,18.1s,baz=95,slow=44						
MAJO	Matsushiro	2.82	285	ePn	Pn	15 05 12.7	+1.3
MAT	Matsushiro	2.82	285	P	Pn	15 05 12.9	+1.5
MAT				eS	Sn	15 05 47.6	+2.0
JHJ	Hachijo jima 2	3.09	209	Pn	Pn	15 05 15.1	0.0
	34nm,0.3s,baz=90,slow=23,SNR=28						
JHJ				Sn	Sn	15 05 50.7	-1.5
	56nm,0.3s,baz=278,slow=22,SNR=13						
JHJ				LR	LR	15 06 39.2	
	comp=Z,108nm,19.0s,baz=80,slow=44						
ERM	Erimo	6.29	11	ePn	Pn	15 05 59.5	+0.5
ASAJ	Asahikawa	8.31	5	Pn	Pn	15 06 26.4	-0.3
	0.9nm,0.3s,baz=228,slow=11,SNR=16						
ASAJ				Sn	Sn	15 07 56.7	-4.0
	0.7nm,0.3s,baz=90,slow=20,SNR=2.6						
CBIJ	Chichi jima	8.73	176	Pn	Pn	15 06 31.6	-1.0
CBIJ				Sn	Sn	15 08 00.9	-10
JCJ	Chichijima	8.73	176	Pn	Pn	15 06 31.6	-1.0
	baz=350,slow=7.3						
JCJ				Sn	Sn	15 08 00.9	-10
	baz=0.0,slow=20						
JNU	Nakatsue	9.24	256	LR	LR	15 10 46.1	
	comp=Z,150nm,19.6s,baz=121,slow=42						
USRK	Ussuriysk Ar.	11.13	322	Pn	Pn	15 07 05.9	+0.6
	baz=130,slow=13						
KLR	Kul'dur	15.21	335	LR	LR	15 13 47.0	
	comp=Z,6.0nm,18.4s,baz=111,slow=37						
PETK	Petropavlovsk-	20.66	28	P	P	15 09 05.9	-0.2
	1.1nm,0.8s,baz=189,slow=8.2						
MA2	Magadan	24.50	11	LR	LR	15 21 24.8	
	comp=Z,16nm,18.5s,baz=288,slow=42						
H11N2	WAKE ISLAND Hy	27.43	119	T	T	15 39 13.5	
	baz=311,slow=75,SNR=50						
H11N1	WAKE ISLAND Hy	27.44	119	T	T	15 39 14.1	
	baz=311,slow=75,SNR=39						
H11N3	WAKE ISLAND Hy	27.45	119	T	T	15 39 15.1	
	baz=311,slow=75,SNR=42						
H11S1	WAKE ISLAND Hy	28.11	121	T	T	15 40 11.4	
	baz=313,slow=75,SNR=41						
H11S3	WAKE ISLAND Hy	28.11	121	T	T	15 40 11.1	
	baz=313,slow=75,SNR=38						
H11S2	WAKE ISLAND Hy	28.12	121	T	T	15 40 06.8	
	baz=313,slow=75,SNR=28						
DAV	Davao City (W)	32.17	211	LR	LR	15 21 45.1	
	comp=Z,19nm,21.6s,baz=133,slow=32						
CMAR	Chiang Mai Arr	41.34	257	P	P	15 12 11.1	-1.4
	0.2nm,0.3s,baz=34,slow=7.8,SNR=3.3						
ZALV	Zalesovo Beam	42.83	313	P	P	15 12 23.6	-0.6
	0.8nm,0.4s,baz=105,slow=8.3,SNR=4.1						
MKAR	Makanchi Array	44.88	303	P	P	15 12 41.2	+0.3
	1.2nm,0.9s,baz=98,slow=8.8,SNR=5.5						
KURK	Kurchatov	46.79	309	eP	P	15 12 54.4	-1.4
	18nm,0.8s						
KURBB	Kurchatov Arra	46.85	309	P	P	15 12 56.2	-0.1
	1.2nm,0.4s,baz=86,slow=8.1,SNR=7.5						
ILAR	Eielson Array	50.44	32	P	P	15 13 24.8	+1.1
	0.7nm,0.8s,baz=270,slow=5.6,SNR=12						
BVAR	Borovoye Array	51.49	313	P	P	15 13 31.8	0.0
	0.3nm,0.5s,baz=68,slow=9.5,SNR=4.2						
BVAR				PcP	PcP	15 14 46.3	+0.4
	0.7nm,0.7s,baz=69,slow=4.8,SNR=3.7						
BRVK	Borovoye	51.54	313	eP	P	15 13 31.9	-0.3
	2.0nm,0.6s						
WRA	Warramunga Arr	55.90	188	P	P	15 14 04.1	-0.2
	2.1nm,1.0s,baz=5.0,slow=7.6,SNR=12						
ASAR	Alice Springs	59.62	188	P	P	15 14 30.8	+0.3
	0.6nm,0.8s,baz=15,slow=11,SNR=11						
SPITS	Spitsbergen Ar	61.73	349	P	P	15 14 43.9	-0.3
	4.0nm,0.9s,baz=63,slow=13,SNR=11						
RES	Resolute Bay	63.73	14	P	P	15 14 58.5	+0.9
	3.0nm,0.9s,baz=23,slow=6.4,SNR=4.6						
YKA	Yellowknife Ar	64.78	30	P	P	15 15 05.7	+1.1
	0.6nm,0.6s,baz=300,slow=6.6,SNR=6.7						
NVAR	Mina Array Bea	75.60	53	P	P	15 16 13.7	+2.0
	0.6nm,0.7s,baz=281,slow=5.5,SNR=5.6						
PDAR	Pinedale Array	78.41	45	P	P	15 16 28.8	+1.3
	0.5nm,0.9s,baz=288,slow=12,SNR=2.8						
ULM	Lac du Bonnet	80.43	33	P	P	15 16 37.7	-0.3
	1.3nm,0.4s,baz=288,slow=9.6,SNR=2.3						
LPAZ	La Paz	147.16	61	PKPbc	PKPbc	15 24 10.6	-0.3
	1.1nm,0.6s,baz=216,slow=2.1,SNR=5.0						
SIV	San Ignacio	151.74	51	PKPbc	PKPbc	15 24 22.3	+0.6
	2.0nm,0.6s,baz=292,slow=5.6,SNR=9.5						

GUC 10 15:14:36.2±0.6,21°.36S×67°.23W,h260km±12km,ML3.8, 5C-4D,Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	IPOC Station P	1.92	257	⇑*i*P	Pn	15 15 20.2	+1.2
PB09				*i* S	S	15 15 54.0	+1.2
PB01	IPOC Station P	2.13	278	⇑*i*P	Pn	15 15 21.8	+1.0
PB01				*i* S	S	15 15 56.1	+0.2
PB01				IAML		15 15 58.5	
	comp=N,107nm,0.3s						
PB08	IPOC Station P	2.17	304	⇓*i*P	Pn	15 15 22.4	+0.9
PB08				*i* S	S	15 15 58.2	+1.0
PB03	IPOC Station P	2.44	253	⇑*i*P	Pn	15 15 25.1	+1.3
PB03				*i* S	S	15 16 02.4	+1.0
PB03				IAML		15 16 03.8	
	comp=E,310nm,0.1s						
PB02	IPOC Station P	2.48	270	⇓*i*P	Pn	15 15 25.6	+1.5
PB02				*i* S	S	15 16 02.6	+0.6
PB02				IAML		15 16 05.9	
	comp=E,247nm,0.1s						
PB06	IPOC Station P	2.55	238	⇓*i*P	Pn	15 15 26.1	+1.2
PB06				*i* S	S	15 16 04.2	+0.8
PB06				IAML		15 16 05.5	
	comp=E,100nm,0.1s						
PB15	IPOC Station P	2.77	228	*i* P	Pn	15 15 28.6	+1.5
PB15				*i* S	S	15 16 08.4	+0.9
PB04	IPOC Station P	2.88	250	⇑*i*P	Pn	15 15 29.8	+1.6
PB04				*i* S	S	15 16 10.5	+1.1
PB04				IAML		15 16 12.9	
	comp=N,117nm,0.1s						
PB05	IPOC Station P	3.13	241	⇑*i*P	Pn	15 15 32.4	+1.6
PB05				⇓*i*S	S	15 16 14.8	+0.7

IGQ 10 15:21:15.9±0.5,2°S±4°×8°0W±°,h49km±6km,MLv4.5/8,

Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MILO	**Milagro-Astudi**	**0.35**	**83**	P	Pn	15 21 27.2	+1.8
MILO				S	Sn	15 21 36.9	+4.7
COHC	**Cochancay**	**0.66**	**103**	P	Pn	15 21 29.2	+0.1
COHC				S	Sn	15 21 40.3	+1.7
ARIO	**Riobamba**	**1.37**	**61**	P	Pn	15 21 38.0	-1.0
RIOE1	**Riobamba**	**1.39**	**66**	P	Pn	15 21 38.4	-0.9
RIOE1				S	Sn	15 21 55.5	-1.2
QUEV	**Quevedo**	**1.41**	**25**	P	Pn	15 21 37.5	-1.7
QUEV				S	Sn	15 21 54.2	-2.4
IGUA	**Igualata**	**1.51**	**57**	P	Pn	15 21 40.8	-0.3
BMAS	**Trigal station**	**1.64**	**60**	P	Pn	15 21 43.4	+0.8
BIL2	**Estacion Bilba**	**1.64**	**58**	P	Pn	15 21 42.4	-0.2
ARRY	**Arrayan**	**1.66**	**61**	P	Pn	15 21 42.1	-0.8
BBIL	**Ulba Tungurahu**	**1.66**	**58**	P	Pn	15 21 42.6	-0.3
BBIL				S	Sn	15 22 03.4	+0.3
BPAT	**Tungurahua Vol**	**1.68**	**61**	P	Pn	15 21 42.6	-0.6
BPAT				S	Sn	15 22 03.6	-0.2
JUI6	**Juive**	**1.69**	**58**	P	Pn	15 21 42.8	-0.5
RETU	**Refugio**	**1.69**	**59**	P	Pn	15 21 43.0	-0.5
POND	**Pondoa**	**1.70**	**58**	P	Pn	15 21 43.0	-0.5
POND				S	Sn	15 22 03.9	-0.4
RUN5	**Runtun**	**1.73**	**59**	P	Pn	15 21 43.7	-0.1
BULB	**Ulba Tungurahu**	**1.73**	**59**	P	Pn	15 21 43.6	-0.3
BULB				S	Sn	15 22 05.0	0.0
BRUN	**Tungurahua Vol**	**1.74**	**59**	P	Pn	15 21 43.4	-0.5
BRUN				S	Sn	15 22 04.5	-0.6
PIS1	**Pisayambo**	**1.97**	**50**	P	Pn	15 21 47.9	+0.6
PISA	**Pisayambo**	**1.97**	**50**	P	Pn	15 21 47.7	+0.4
ILLI	**Illinizas Sur**	**1.98**	**36**	P	Pn	15 21 47.1	-0.3
PAST	**Pastocalle**	**2.05**	**38**	P	Pn	15 21 48.3	0.0
BMOR	**Cotopaxi Volca**	**2.14**	**42**	P	Pn	15 21 49.5	-0.2
BMOR				S	Sn	15 22 15.3	0.0
BNAS	**Cotopaxi Volca**	**2.17**	**41**	P	Pn	15 21 50.0	-0.1
BREF	**Cotopaxi Volca**	**2.20**	**42**	P	Pn	15 21 50.7	+0.1
NAS2	**Nasa**	**2.20**	**41**	P	Pn	15 21 50.5	+0.1
BTAM	**Cotopaxi Volca**	**2.22**	**43**	P	Pn	15 21 50.5	-0.3
BVC2	**Cotopaxi Volca**	**2.22**	**42**	P	Pn	15 21 50.5	-0.3
MAG1	**Magdalena**	**2.24**	**3**	P	Pn	15 21 49.2	-1.4
VC1	**Cotopaxi 1**	**2.24**	**42**	P	Pn	15 21 51.1	+0.1
COV1	**Cotopaxi Volc**	**2.27**	**43**	P	Pn	15 21 50.6	-0.9
PITA	**Cotopaxi Volc**	**2.29**	**40**	P	Pn	15 21 51.4	-0.2
NINA	**Atacazo Ninahu**	**2.31**	**34**	P	Pn	15 21 54.1	+2.2
NINA				S	Sn	15 22 19.5	+0.1
ANTM	**Antisana-La Mi**	**2.44**	**43**	P	Pn	15 21 53.2	-0.6
ANTG	**Antisana-Guama**	**2.44**	**42**	P	Pn	15 21 53.2	-0.6
GGPC	**Guagua Pichinc**	**2.50**	**31**	P	Pn	15 21 54.3	-0.3
ANTS	**Antisana-Sarah**	**2.50**	**44**	P	Pn	15 21 54.1	-0.6
PINO	**Pino**	**2.51**	**31**	P	Pn	15 21 54.1	-0.6
YANA	**Yana**	**2.56**	**31**	P	Pn	15 21 54.6	-0.8
OTAV	**Otavalo**	**2.93**	**30**	P	Pn	15 21 59.3	-1.1
CUIC	**Cuicocha-Domo**	**3.03**	**31**	P	Pn	15 22 00.9	-0.8
IMBA	**Imbabura, San**	**3.09**	**33**	P	Pn	15 22 02.5	-0.1
URCU	**Urcuqui**	**3.20**	**31**	P	Pn	15 22 03.6	-0.5

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*ISCJB **10** 15:39:40.9±0.6, 32°.36N±0°.04×115°.29W±0°.04, h18^{km}±6^{km},*
Error ellipse: s-maj=7.0km s-min=5.2km az=35.3
*MEX **10** 15:39:41.5±0.6, 32°.52N×115°.11W, h14^{km}±3^{km}, MD3.6*
*ECX **10** 15:39:41.9±0.6, 32°.32N×115°.30W, h5^{km}, MD2.5, ML2.7*

ISC 10 15:39:40.2±0.9, 32°.38N±0°.04×115°.28W±0°.04, h20^{km}±5^{km}, n18, σ0^s.46/27, 2C-2D, California-Baja California border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPBX	**Cerro Prieto**	**0.05**	**331**	*e*P	**Pg**	**15 39 43.4**	**-0.5**
CPBX				*e*S	**Sg**	**15 39 45.9**	**-0.4**
CPBX				IAML		15 39 48.8	
	comp=E,6μm,0.4s						
CPBX				⇑*e*		15 39 48.8	
MBIG	**Mexicali**	**0.07**	**64**	*e*P	**Pg**	**15 39 44.6**	**+0.6**
MBIG				*e*S	**Sg**	**15 39 46.9**	**+0.4**
COA	**Coachella**	**0.50**	**15**	*e*P	**Pn**	**15 39 52.3**	**-0.1**
YUH	**Yuha Desert**	**0.61**	**297**	⇑*i*P	**Pg**	**15 39 53.0**	**+0.6**
YMD	**Yuma Desert**	**0.64**	**74**	*e*P	**Pn**	**15 39 53.9**	**-0.4**
RMX	**La Rumorosa**	**0.71**	**289**	*e*P	**Pb**	**15 39 53.9**	**-0.3**
RMX				*e*S	**Sb**	**15 40 02.4**	**-1.2**
IKP	**In-Ko-Pah, Jac**	**0.76**	**291**	⇓*i*P	**Pg**	**15 39 55.4**	**+0.2**
ECBX	**El Chinero**	**0.92**	**168**	*e*P	**Pb**	**15 39 57.5**	**-0.1**
ECBX				*e*S	**Sb**	**15 40 09.3**	**-0.1**
ECBX				*e*		15 40 10.4	
ECBX				IAML		15 40 10.4	
	comp=E,187nm,0.3s						
CBX	**Cerro Bola**	**1.18**	**267**	*e*P	**Pb**	**15 40 02.3**	**+0.4**
CBX				*e*S	**Sn**	**15 40 17.8**	**+0.6**
CBX	**Cerro Bola**	**1.18**	**267**	*e*P	**Pb**	**15 40 02.4**	**+0.4**
CBX				*e*S	**Sg**	**15 40 17.9**	**-0.6**
TJIG	**Tijuana**	**1.19**	**273**	*e*P	**Pb**	**15 40 02.1**	**0.0**
TJIG				*e*S	**Sn**	**15 40 17.9**	**+0.6**
ZAX	**El Zacaton**	**1.21**	**225**	*e*P	**Pn**	**15 40 01.8**	**-0.4**
ZAX				*e*S	**Sb**	**15 40 17.6**	**-0.1**
BAR	**Barrett**	**1.22**	**285**	*e*P	**Pb**	**15 40 03.0**	**+0.3**
ECNX	**Esteban Cantu**	**1.33**	**238**	*e*P	**Pn**	**15 40 04.2**	**+0.3**
SPIG	**San Pedro Mart**	**1.33**	**187**	*e*P	**Pn**	**15 40 03.9**	**-0.2**
SPIG	**San Pedro Mart**	**1.33**	**187**	*e*P	**Pn**	**15 40 03.9**	**-0.2**
SPIG				*i* S	**Sg**	**15 40 23.4**	**-0.3**
SPX	**San Pedro Mart**	**1.34**	**187**	*e*P	**Pn**	**15 40 04.0**	**-0.1**
SPX				IAML		15 40 25.0	
	comp=N,61nm,0.2s						
SPX				⇓*e*		15 40 25.0	
PBX	**Punta Banda**	**1.38**	**243**	*e*P	**Pb**	**15 40 05.4**	**-0.1**

IDC 10 15:47:44.0±491.0, 47°.68N×46°.11E, h0^{km}, Error ellipse: s-maj=243.5km s-min=144.5km az=169.0, Ukraine-Moldova-Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I31KZ	**AKTYUBINSK INF**	**8.30**	**66**	*i*		16 40 35.0	
	baz=256,slow=320,SNR=12						
I43RU	**DUBNA INFRASON**	**10.56**	**332**	*i*		16 56 40.0	
	baz=143,slow=322,SNR=1.5						
I26DE	**FREYUNG INFRAS**	**21.51**	**285**	*i*		17 57 50.0	
	baz=82,slow=307,SNR=0.8						

MAN 10 15:49:15.6, 11°.12N×124°.64E, h33^{km}, mb4.6, ML3.5, MS3.4, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OCLP	**Ormoc**	**0.07**	**201**	*e*P	Pb	15 49 21.8	+0.5
OCLP				*e*S	Sb	15 49 26.5	+1.4
PLP	**Palo**	**0.34**	**83**	⇓*i*P	Pn	15 49 24.7	+0.5
PLP				*i* S	Sn	15 49 31.4	+1.6
BESP	**Borongan**	**0.92**	**59**	*e*P	Pn	15 49 32.6	+0.4
BESP				*e*S	Sb	15 49 46.0	+0.9
CNP	**Catarman**	**1.38**	**1**	*e*P	Pn	15 49 39.6	+1.0
CNP				*e*S	Sn	15 49 55.1	-0.6

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*IDC **10** 15:58:11.1±0.9, 9°.51N×125°.93E, h0^{km}, mb3.7/7, mb1 3.8/8, mb1mx3.5/62, mbtmp3.7/8, ML4.2/1, MS2.7/1, Ms1 2.7/1, ms1mx2.2/54, Error ellipse: s-maj=50.8km s-min=17.9km az=78.0*
*MAN **10** 15:58:17.5, 9°.58N×126°.30E, h22^{km}, mb4.7, ML3.6, MS3.5*

ISC 10 15:58:10.8±1.4, 9°.65N±0°.03×126°.47E±0°.05, h1^{km}±10^{km}, n32, σ1^s.60/40, mb3.5/7, 2C-3D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.98**	**278**	⇓*e*P	**Pn**	**15 58 32.2**	**+0.5**
SCPH				*e*S	**Sb**	**15 58 43.1**	**-0.9**
BUTP	**Butuan**	**1.08**	**231**	*e*P	**Pn**	**15 58 34.3**	**+1.2**
BUTP				*e*S	**Sb**	**15 58 47.0**	**+0.1**
BIPH	**Bislig**	**1.46**	**184**	⇓*i*P	**Pg**	**15 58 41.3**	**+2.4**
BIPH				*i* S	**Sg**	**15 58 58.0**	**+0.1**
MSLP	**Maasin**	**1.66**	**287**	*e*P	**Pg**	**15 58 43.8**	**+1.1**
MSLP				*e*S	**Sb**	**15 59 03.3**	**-0.4**
PLP	**Palo**	**2.10**	**316**	⇓*e*P	**Pg**	**15 58 51.0**	**-0.2**
PLP				*e*S	**Sb**	**15 59 15.0**	**-1.5**
CGP	**Cagayan de Oro**	**2.12**	**236**	⇑*e*P	**Pb**	**15 58 49.6**	**-0.5**
CGP				*e*S	**Sn**	**15 59 12.5**	**-1.9**
BESP	**Borongan**	**2.19**	**332**	*e*P	**Pb**	**15 58 51.4**	**+0.2**
BESP				*e*S	**Sg**	**15 59 20.8**	**-0.4**
BUKP	**Musuan**	**2.25**	**219**	*e*P	**Pb**	**15 58 52.1**	**-0.1**
BUKP				*e*S	**Sb**	**15 59 19.5**	**-1.1**
OCLP	**Ormoc**	**2.30**	**307**	*e*P	**Pg**	**15 58 54.5**	**-0.6**
LLP	**Lapu-Lapu**	**2.56**	**285**	*e*P	**Pb**	**15 58 57.0**	**-0.5**
LLP				*e*S	**Sn**	**15 59 26.6**	**+1.4**
TBP	**Tagbilaran**	**2.58**	**271**	*e*P	**Pb**	**15 58 58.4**	**+0.6**
MATI	**Mati**	**2.70**	**185**	*e*P	**Pb**	**15 58 58.5**	**-1.4**
MATI				*e*S	**Sb**	**15 59 32.3**	**-1.2**
DAV	**Davao City (W)**	**2.71**	**199**	Pn	**Pn**	**15 58 52.3**	**-3.3**
	59nm,0.3s,baz=30,slow=20,SNR=3.2						
DAV				Sn	**Sb**	**15 59 32.7**	**-1.3**
	55nm,0.3s,baz=292,slow=16,SNR=2.0						
CTBH	**Cotabato--PC H**	**3.27**	**223**	⇑*e*P	**Pb**	**15 59 06.5**	**-3.1**
CTBH				*i* S	**Sn**	**15 59 43.4**	**+0.6**
CNP	**Catarman**	**3.35**	**328**	*e*P	**Pb**	**15 59 08.3**	**-2.8**
CNP				*e*S	**Sb**	**15 59 49.0**	**-3.4**
PAGZ	**Pagadian**	**3.54**	**240**	*e*P	**Pn**	**15 59 08.6**	**+1.7**
PAGZ				*e*S	**Sn**	**15 59 47.4**	**-2.1**
GUIM	**Jordan**	**3.94**	**285**	*e*P	**Pn**	**15 59 13.9**	**+1.3**
PVCP	**Virac**	**4.53**	**330**	*e*P	**Pb**	**15 59 30.3**	**-0.9**
PVCP				*e*S	**Sn**	**16 00 16.1**	**+2.1**
JAY	**Jayapura**	**18.63**	**130**	LR	LR	16 10 06.1	
	comp=Z,22nm,18.8s,baz=314,slow=38						
WRA	**Warramunga Arr**	**30.41**	**165**	P	**P**	**16 04 25.1**	**+0.2**
	0.4nm,0.6s,baz=347,slow=8.5,SNR=6.9						
ASAR	**Alice Springs**	**33.90**	**168**	P	**P**	**16 04 56.0**	**+0.5**
	0.2nm,0.3s,baz=350,slow=7.0,SNR=25						
H11S3	**WAKE ISLAND Hy**	**39.91**	**73**	T	T	16 48 43.4	
	baz=262,slow=70,SNR=10.0						
H11S1	**WAKE ISLAND Hy**	**39.92**	**73**	T	T	16 48 48.6	
	baz=262,slow=70,SNR=9.2						
H11S2	**WAKE ISLAND Hy**	**39.92**	**73**	T	T	16 48 47.2	
	baz=262,slow=70,SNR=9.8						
H11N1	**WAKE ISLAND Hy**	**40.26**	**71**	T	T	16 49 08.0	
	baz=262,slow=74,SNR=21						
H11N2	**WAKE ISLAND Hy**	**40.27**	**71**	T	T	16 49 08.6	
	baz=262,slow=74,SNR=12						
H11N3	**WAKE ISLAND Hy**	**40.28**	**71**	T	T	16 49 12.2	
	baz=262,slow=74,SNR=16						
PETK	**Petropavlovsk-**	**50.12**	**24**	P	**P**	**16 07 10.7**	**+3.1**
	0.3nm,0.5s,baz=214,slow=6.2						
MKAR	**Makanchi Array**	**52.64**	**323**	P	**P**	**16 07 25.9**	**-0.7**
	0.4nm,0.6s,baz=124,slow=7.7,SNR=3.6						
KURBB	**Kurchatov Arra**	**56.69**	**326**	P	**P**	**16 07 55.1**	**-0.8**
	0.4nm,0.3s,baz=123,slow=6.9,SNR=6.7						
ARCES	**ARCESS Array B**	**84.84**	**340**	P	**P**	**16 10 47.0**	**0.0**
	1.4nm,0.8s,baz=65,slow=6.0,SNR=4.9						
FINES	**FINESS Array B**	**86.53**	**332**	P	**P**	**16 10 54.6**	**-0.8**
	1.1nm,0.6s,baz=94,slow=11,SNR=3.4						

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*ISCJB **10** 16:16:39.6±0.7, 29°.1S±0°.2×74°.9E±0°.1, h10^{km}, mb4.0/12, MS3.3/5, Error ellipse: s-maj=23.0km s-min=17.5km az=24.4*
*IDC **10** 16:16:39.5±0.8, 29°.07S×74°.75E, h0^{km}, mb3.8/10, mb1 4.0/10, mb1mx3.8/60, mbtmp3.8/10, MS3.3/5, Ms1 3.3/5, ms1mx2.9/53, Error ellipse: s-maj=29.2km s-min=22.7km az=44.0*
*NEIC **10** 16:16:41.1±0.6, 29°.03S×74°.86E, h10^{km}, mb4.3/1, Error ellipse: s-maj=20.4km s-min=15.5km az=205.0*

ISC 10 16:16:41.2±0.9, 29°.1S±0°.2×74°.9E±0°.2, h10^{km}, n24, σ0^s.90/13, mb3.8/12, MS3.2/5, 1D, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**21.41**	**354**	T	T	16 43 37.9	
	baz=175,slow=76,SNR=14						
H08S1	**Diego Carcia H**	**21.41**	**354**	T	T	16 43 32.8	
	baz=175,slow=76,SNR=4.2						
H08S3	**Diego Garcia H**	**21.43**	**354**	T	T	16 43 39.3	
	baz=175,slow=76,SNR=30						
COCO	**West Island**	**26.46**	**55**	*e*P	**P**	**16 22 16.6**	**-1.9**
	188nm,0.5s						
H01W2	**Cape Leeuwin H**	**33.66**	**110**	T	T	16 58 45.4	
	baz=269,slow=75,SNR=3.8						
H01W3	**Cape Leeuwin H**	**33.67**	**110**	T	T	16 58 45.8	
	baz=269,slow=75,SNR=4.2						
H01W1	**Cape Leeuwin H**	**33.68**	**110**	T	T	16 58 45.8	
	baz=269,slow=75,SNR=3.4						
LEM	**Lembang**	**37.98**	**61**	LR	LR	16 36 32.1	
	comp=Z,62nm,19.2s,baz=38,slow=31						
BOSA	**Boshof**	**43.20**	**258**	LR	LR	16 39 01.7	
	comp=Z,100nm,18.8s,baz=107,slow=31						
SYO	**Syowa Base**	**44.91**	**197**	⇓*e*P	P	16 25 10.0	+14
CMAR	**Chiang Mai Arr**	**52.65**	**29**	P	**P**	**16 25 56.7**	**+1.0**
	0.7nm,0.8s,baz=212,slow=7.0,SNR=7.0						
CMAR				LR	LR	16 45 43.0	
	comp=Z,16nm,18.9s,baz=195,slow=33						
ASAR	**Alice Springs**	**52.71**	**99**	P	**P**	**16 25 56.1**	**-0.3**
	2.0nm,1.1s,baz=232,slow=7.0,SNR=6.4						
WRA	**Warramunga Arr**	**54.40**	**95**	P	**P**	**16 26 09.3**	**+0.6**
	2.6nm,1.0s,baz=250,slow=6.8,SNR=9.1						
WRAB	**Tennant Creek**	**54.41**	**95**	*e*P	**P**	**16 26 09.1**	**+0.3**
	3.3nm,1.0s						
QSPA	**South Pole Qui**	**61.09**	**180**	P	**P**	**16 26 55.5**	**+0.2**
	4.6nm,1.0s,baz=271,slow=2.2,SNR=6.0						
AAK	**Ala-Archa**	**71.33**	**360**	LR	LR	16 56 17.1	
	comp=Z,11nm,18.6s,baz=192,slow=33						
BRTR	**Keskin Array B**	**78.44**	**329**	P	**P**	**16 28 41.3**	**-1.1**
	0.3nm,0.4s,baz=113,slow=1.9,SNR=2.6						
JNU	**Nakatsue**	**81.49**	**45**	LR	LR	17 03 30.0	
	comp=Z,11nm,18.6s,baz=124,slow=34						
SONM	**Songino Array**	**81.61**	**21**	P	**P**	**16 29 00.4**	**+1.1**
	0.3nm,0.3s,baz=221,slow=5.7,SNR=2.3						
BVAR	**Borovoye Array**	**81.82**	**357**	P	**P**	**16 28 60.0**	**-0.1**
	0.3nm,0.6s,baz=155,slow=4.8,SNR=3.2						
TORD	**Torodi Ar. Bea**	**82.08**	**290**	P	**P**	**16 29 02.0**	**-0.3**
	0.8nm,1.1s,baz=155,slow=7.5						
MLR	**Muntele Rosu**	**86.48**	**328**	P	**P**	**16 29 24.5**	**+0.3**
	0.5nm,0.8s,baz=63,slow=4.5,SNR=3.0						
AKASG	**Malin Array Be**	**89.06**	**333**	P	**P**	**16 29 35.9**	**-0.2**
	0.2nm,0.3s,baz=111,slow=5.1,SNR=3.3						
YKA	**Yellowknife Ar**	**145.98**	**8**	PKPbc	**PKPdf**	**16 36 19.3**	**-0.4**
	1.5nm,1.0s,baz=339,slow=3.6,SNR=9.5						

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*DDA **10** 16:48:23.9, 41°.73N×43°.35E, h7^{km}, Ml2.5*
*ISCJB **10** 16:48:24.7±0.9, 41°.69N±0°.04×43°.27E±0°.05, h9^{km}±7^{km}, Error ellipse: s-maj=7.1km s-min=6.2km az=147.3*
*CSEM **10** 16:48:24.6±0.2, 41°.69N×43°.33E, h10^{km}, ML1.8, Error ellipse: s-maj=4.8km s-min=4.0km az=118.0*
*TIF **10** 16:48:24.3, 41°.73N×43°.38E, h7^{km}±3^{km}*

ISC 10 16:48:24.9±1.1, 41°.69N±0°.04×43°.34E±0°.03, h14^{km}±9^{km}, n17, σ0^s.81/30, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKH	**Akhalkalaki**	**0.30**	**158**	P	**Pg**	**16 48 31.1**	**-0.2**
AKH				S	**Sg**	**16 48 36.1**	**+0.6**
AKH	**Akhalkalaki**	**0.30**	**158**	P	**Pg**	**16 48 31.0**	**-0.2**
AKH				S	**Sg**	**16 48 36.1**	**+0.6**
BGD	**Bogdanovka**	**0.47**	**156**	P	**Pb**	**16 48 34.8**	**-0.2**
BGD				S	**Sg**	**16 48 41.0**	**+0.5**
BGD	**Bogdanovka**	**0.47**	**156**	P	**Pb**	**16 48 34.8**	**-0.2**
BGD				S	**Sg**	**16 48 41.0**	**+0.5**
EPOS	**Posof**	**0.50**	**248**	*i* P	**Pg**	**16 48 34.5**	**-0.3**
EPOS	**Posof**	**0.50**	**248**	P	**Pg**	**16 48 34.5**	**-0.3**
ONI	**Oni**	**0.90**	**5**	P	**Pg**	**16 48 41.2**	**-1.2**
ONI				S	**Sb**	**16 48 54.5**	**+0.1**
EAK	**Akyaka**	**1.02**	**169**	*i* P	**Pg**	**16 48 43.6**	**-1.0**
EAK				*i* S	**Sg**	**16 48 57.0**	**-1.0**
EAK	**Akyaka**	**1.02**	**169**	P	**Pg**	**16 48 43.6**	**-1.0**
EAK				S	**Sg**	**16 48 57.0**	**-1.0**
TBLG	**Delisi**	**1.04**	**87**	P	**Pg**	**16 48 44.1**	**-0.9**
TBLG				S	**Sn**	**16 48 59.7**	**+0.1**
TBLG	**Delisi**	**1.04**	**87**	P	**Pg**	**16 48 44.1**	**-0.9**
TBLG				S	**Sn**	**16 48 59.7**	**+0.1**
DUS	**Dusheti**	**1.09**	**68**	P	**Pn**	**16 48 45.8**	**-0.1**
DUS				S	**Sn**	**16 49 01.2**	**+0.4**
DUS	**Dusheti**	**1.09**	**68**	P	**Pn**	**16 48 45.8**	**-0.1**
DUS				S	**Sn**	**16 49 01.2**	**+0.4**
DBAD	**Bademkaya**	**1.41**	**242**	*i* P	**Pn**	**16 48 50.9**	**+0.6**
DBAD	**Bademkaya**	**1.41**	**242**	P	**Pn**	**16 48 50.9**	**+0.6**
DGRG	**David-gareji**	**1.54**	**98**	P	**Pb**	**16 48 53.1**	**-0.1**
DGRG				S	**Sg**	**16 49 16.5**	**+2.0**
DGRG	**David-gareji**	**1.54**	**98**	P	**Pb**	**16 48 53.1**	**-0.1**
DGRG				S	**Sg**	**16 49 16.2**	**+1.7**

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*ISCJB **10** 16:59:43.5±0.4, 30°.03N±0°.04×138°.52E±0°.07, h443^{km}, mb3.3/7, Error ellipse: s-maj=8.3km s-min=4.8km az=177.7*
*JMA **10** 16:59:44.5±0.5, 30°.30N×138°.84E, h487^{km}, M3.7*
*IDC **10** 16:59:44.6±0.7, 30°.03N×138°.50E, h450^{km}±11^{km}, mb3.0/7, mb1 3.2/15, mb1mx3.0/64, mbtmp4.1/15, Error ellipse: s-maj=19.5km s-min=10.7km az=73.0*

ISC 10 16:59:43.9±0.6, 30°.10N±0°.06×138°.63E±0°.09, h443^{km}, n32, σ2^s.02/42, mb3.2/7, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	**3.13**	**18**	P	**P**	**17 00 54.1**	**+2.8**
JHJ	**Hachijo jima 2**	**3.17**	**18**	P	**P**	**17 00 54.4**	**+2.8**
	26nm,0.3s,baz=344,slow=17,SNR=73						
JHJ				S	**S**	**17 01 49.7**	**+3.0**
	38nm,0.3s,baz=69,slow=23,SNR=9.0						
JHJ2	**Mitsune**	**3.17**	**18**	P	**P**	**17 00 55.4**	**+3.8**
JHJ2				*e*S	**S**	**17 01 49.9**	**+3.2**
JMKN	**Mikurajimanish**	**3.87**	**12**	P	**P**	**17 00 59.6**	**+2.3**
CBIJ	**Chichi jima**	**4.33**	**133**	*e*S	**S**	**17 02 04.1**	**-0.7**
JCJ	**Chichijima**	**4.33**	**133**	P	**P**	**17 01 02.2**	**+0.5**
	baz=283,slow=19						
JCJ				S	**S**	**17 02 03.4**	**-1.5**
	baz=287,slow=19						
BSO3	**Boso 3**	**4.95**	**18**	*e*S	**S**	**17 02 16.0**	**+1.1**
BSO1	**Boso 1**	**4.96**	**23**	*e*S	**S**	**17 02 15.8**	**+1.3**
JAO	**Obara**	**5.28**	**348**	P	**P**	**17 01 13.7**	**+3.1**
JNY	**Yasuok**	**5.29**	**353**	P	**P**	**17 01 13.5**	**+2.8**
JHU	**Hanno**	**5.76**	**5**	P	**P**	**17 01 16.6**	**+1.2**
JHU				*e*S	**S**	**17 02 26.6**	**-3.6**
JRY	**Ryogami san**	**5.91**	**2**	P	**P**	**17 01 18.6**	**+1.7**
JRY				*e*S	**S**	**17 02 32.4**	**-0.6**
JYT	**Yasato**	**6.25**	**12**	P	**P**	**17 01 20.8**	**+0.4**
JYT				*e*S	**S**	**17 02 35.3**	**-4.1**
JAG	**Ashikaga**	**6.35**	**6**	P	**P**	**17 01 21.8**	**+0.4**
JAG				*e*S	**S**	**17 02 37.6**	**-3.7**
MJAR	**Matsushiro Arr**	**6.43**	**357**	P	**P**	**17 01 23.2**	**+0.9**
	3.6nm,0.3s,baz=178,slow=11,SNR=48						
MJAR				S	**S**	**17 02 42.2**	**-0.8**
	0.5nm,0.3s,baz=295,slow=33,SNR=5.2						
MAT	**Matsushiro**	**6.44**	**357**	P	**P**	**17 01 23.4**	**+1.0**
MAT				S	**S**	**17 02 41.7**	**-1.3**
JHO	**Hitachi**	**6.69**	**13**	P	**P**	**17 01 25.9**	**+0.8**
JHS	**Saijyo**	**6.75**	**318**	P	**P**	**17 01 27.9**	**+2.1**
JNU	**Nakatsue**	**7.27**	**296**	P	**P**	**17 01 33.1**	**+1.8**
	0.9nm,0.3s,baz=55,slow=3.8,SNR=9.4						
JOW	**Kunigami**	**9.68**	**253**	P	**P**	**17 01 58.5**	**+0.9**
	2.7nm,0.3s,baz=73,slow=19,SNR=3.1						
ASAJ	**Asahikawa**	**14.34**	**12**	P	**P**	**17 02 50.8**	**+2.8**
	0.4nm,0.3s,baz=204,slow=9.5,SNR=7.8						
ASAJ				S	**S**	**17 05 18.1**	**-1.9**
	0.1nm,0.3s,baz=52,slow=19,SNR=2.0						
USRK	**Ussuriysk Ar.**	**15.03**	**341**	P	**P**	**17 02 56.3**	**+1.0**
	baz=154,slow=8.6						
GUMO	**Guam**	**17.41**	**159**	P	**P**	**17 03 21.4**	**+0.5**
	3.0nm,0.3s,baz=9.6,slow=19,SNR=3.1						
KLR	**Kul'dur**	**19.81**	**347**	P	**P**	**17 03 45.0**	**+1.3**
	0.0nm,0.3s,baz=171,slow=6.3,SNR=6.6						
CMAR	**Chiang Mai Arr**	**37.81**	**261**	P	**P**	**17 06 20.6**	**-0.6**
	1.2nm,0.6s,baz=68,slow=5.4,SNR=13						
PSI	**Prapat**	**46.36**	**242**	P	**P**	**17 07 27.8**	**-1.3**
	2.3nm,0.4s,baz=0.0,slow=0.0,SNR=3.0						
KURBB	**Kurchatov Arra**	**48.72**	**313**	P	**P**	**17 07 45.5**	**-0.8**
	0.1nm,0.3s,baz=94,slow=8.3,SNR=3.3						
WRA	**Warramunga Arr**	**49.92**	**185**	P	**P**	**17 07 55.1**	**-0.5**
	0.5nm,0.4s,baz=0.8,slow=7.8,SNR=27						
ASAR	**Alice Springs**	**53.65**	**185**	P	**P**	**17 08 22.4**	**-0.2**
	0.3nm,0.3s,baz=360,slow=6.2,SNR=27						
BVAR	**Borovoye Array**	**53.72**	**316**	P	**P**	**17 08 22.6**	**-0.3**
	0.3nm,0.4s,baz=85,slow=9.1,SNR=2.7						
NWAO	**Narrogin (SRO)**	**65.88**	**200**	P	**P**	**17 09 43.4**	**-1.1**
	9.9nm,1.1s,baz=44,slow=18,SNR=3.7						
NNA	**Nana**	**142.52**	**69**	PKhKP	PKPpre	17 18 21.8	
	24nm,0.6s,baz=225,slow=4.3,SNR=3.8						
NNA				PKP	**PKPdf**	**17 18 26.6**	**+0.4**
	24nm,0.6s,baz=163,slow=2.6,SNR=12						

MAN 10 17:16:38.6, 9°.58N×126°.30E, h17^{km}, mb4.4, ML3.2, MS3.0, 2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.83**	**284**	⇓*e*P	Pb	17 16 53.6	-1.0
SCPH				*e*S	Sb	17 17 04.4	-1.0
BUTP	**Butuan**	**0.91**	**228**	*e*P	Pb	17 16 55.6	-0.3
BUTP				*e*S	Sg	17 17 08.4	+0.2
MSLP	**Maasin**	**1.52**	**291**	*e*P	Pn	17 17 05.3	+0.1
MSLP				*e*S	Sn	17 17 24.7	+0.1
PLP	**Palo**	**2.04**	**321**	⇓*e*P	Pn	17 17 12.2	-0.1
PLP				*e*S	Sn	17 17 36.0	-1.4
BUKP	**Musuan**	**2.09**	**216**	*e*P	Pb	17 17 14.6	-1.6
BUKP				*e*S	Sn	17 17 39.9	+1.3
BESP	**Borongan**	**2.18**	**337**	*e*P	Pn	17 17 14.2	0.0
BESP				*e*S	Sn	17 17 42.0	+1.2
TBP	**Tagbilaran**	**2.41**	**273**	*e*P	Pb	17 17 19.5	-2.1
MATI	**Mati**	**2.62**	**181**	*e*P	Pn	17 17 20.4	+0.2
MATI				*e*S	Sn	17 17 52.9	+1.3

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*JSO **10** 17:34:59.8±1.0, 33°.35N×35°.33E, h0^{km}±11^{km}, MD3.4*
*GII **10** 17:34:59.5±0.0, 33°.32N×35°.35E, h2^{km}, MD3.7/4*
*ISCJB **10** 17:35:00.2±0.4, 33°.33N±0°.01×35°.30E±0°.04, h9^{km}±3^{km}, Error ellipse: s-maj=5.2km s-min=2.4km az=8.0*
*CSEM **10** 17:35:01.0±0.1, 33°.33N×35°.34E, h10^{km}, ML3.5, Error ellipse: s-maj=4.3km s-min=2.4km az=101.0*
*GRAL **10** 17:35:01.7±0.3, 33°.30N×35°.36E, h0^{km}±2^{km}, MD3.5*
*DDA **10** 17:35:39.5, 33°.30N×35°.31E, h13^{km}, Ml3.5*

ISC 10 17:35:00.7±0.8, 33°.32N±0°.01×35°.34E±0°.03, h16^{km}±6^{km}, n63, σ0^s.98/91, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATL	**Matarih**	**0.17**	**357**	*e*P	**Pg**	**17 35 05.2**	**+0.1**
MATL	**Matarih**	**0.17**	**357**	*e*P	**Pg**	**17 35 05.2**	**+0.1**
HNTI	**Hanita**	**0.27**	**211**	Pg	**Pg**	**17 35 06.2**	**-0.4**
KSDI	**Kefar Szold**	**0.29**	**115**	Pg	**Pg**	**17 35 06.5**	**-0.5**
MMA0B	**Mount Meron ar**	**0.30**	**170**	Pg	**Pg**	**17 35 06.6**	**-0.6**
MMA0B				Sg	**Sg**	**17 35 11.8**	**+0.2**
NATI	**Neve Ativ**	**0.34**	**99**	Pg	**Pg**	**17 35 07.3**	**-0.4**
NATI				Sg	**Sg**	**17 35 12.2**	**-0.3**
SHBL	**Chebaa**	**0.34**	**84**	*e*P	**Pg**	**17 35 07.5**	**-0.4**
SHBL	**Chebaa**	**0.34**	**84**	*e*P	**Pg**	**17 35 07.5**	**-0.4**
QRWL	**Qaraoun**	**0.37**	**51**	*e*P	**Pg**	**17 35 08.2**	**-0.1**
QRWL	**Qaraoun**	**0.37**	**51**	*e*P	**Pg**	**17 35 08.2**	**-0.1**
DQRL	**Deir Qamar**	**0.43**	**26**	*e*P	**Pg**	**17 35 09.5**	**0.0**
DQRL				*e*S	**Sg**	**17 35 15.6**	**+0.1**
DQRL	**Deir Qamar**	**0.43**	**26**	*e*P	**Pg**	**17 35 09.5**	**0.0**
DQRL				*e*S	**Sg**	**17 35 15.6**	**+0.1**
RCY	**Rachaya**	**0.45**	**66**	*e*P	**Pg**	**17 35 09.7**	**-0.2**
KSHT	**Keshet**	**0.52**	**130**	Pg	**Pg**	**17 35 11.1**	**+0.1**
BEYL	**Beirut**	**0.57**	**13**	*e*P	**Pb**	**17 35 12.1**	**-0.1**
BEYL				*e*S	**Sg**	**17 35 19.8**	**+0.2**
BEYL	**Beirut**	**0.57**	**13**	*e*P	**Pb**	**17 35 12.1**	**-0.1**
BLGI	**Bet Lehem HaGe**	**0.59**	**192**	Pg	**Pg**	**17 35 12.2**	**-0.2**
BLGI				Sg	**Sb**	**17 35 22.0**	**+1.2**
BHL	**Bhannes**	**0.64**	**24**	*e*P	**Pg**	**17 35 13.3**	**-0.1**
BHL				*e*S	**Sg**	**17 35 21.9**	**-0.1**
BHL	**Bhannes**	**0.64**	**24**	*e*P	**Pg**	**17 35 13.3**	**-0.1**
BHL				*e*S	**Sg**	**17 35 21.9**	**-0.1**
SHMJ	**Saham**	**0.69**	**149**	*i* P	**Pg**	**17 35 13.9**	**-0.2**
SHMJ				*e*S	**Sb**	**17 35 23.6**	**+0.2**
OFRI	**'Ofer**	**0.76**	**204**	Pg	**Pb**	**17 35 15.1**	**-0.3**
OFRI				Sg	**Sb**	**17 35 26.4**	**+0.9**
MMLI	**Mount Malkishu**	**0.88**	**176**	Pg	**Pb**	**17 35 17.0**	**-0.5**
AJLJ	**Ajlon**	**1.04**	**162**	*i* P	**Pb**	**17 35 19.9**	**-0.4**
HMDT	**Nahal Hemdat**	**1.07**	**172**	Pg	**Pb**	**17 35 20.2**	**-0.6**
HWQ	**Hawqa**	**1.08**	**28**	*e*P	**Pn**	**17 35 21.3**	**0.0**
HWQ				*e*S	**Sg**	**17 35 35.7**	**-0.2**
HWQ	**Hawqa**	**1.08**	**28**	*e*P	**Pn**	**17 35 21.3**	**0.0**
HWQ				*e*S	**Sg**	**17 35 35.7**	**-0.2**
SLTI	**Sal'it**	**1.10**	**193**	Pg	**Pb**	**17 35 21.0**	**-0.3**
SLTI				Sg	**Sg**	**17 35 36.7**	**+0.3**
FKH	**Fakeheh**	**1.28**	**44**	*e*P	**Pb**	**17 35 24.7**	**+0.2**
ASF	**Jabal al Asfar**	**1.74**	**131**	*i* P	**Pb**	**17 35 31.6**	**-0.6**
ASF				*e*S	**Sb**	**17 35 54.6**	**+0.8**
DSI	**Dead Sea**	**1.74**	**179**	Pn	**Pn**	**17 35 30.9**	**+0.7**
WALJ	**Wala**	**1.79**	**167**	*i* P	**Pn**	**17 35 31.7**	**+0.8**
WALJ				*e*S	**Sg**	**17 35 57.5**	**-1.0**
AMAZ	**Amatzia**	**1.81**	**192**	Pn	**Pb**	**17 35 32.7**	**-0.8**
AMAZ				Sn	**Sg**	**17 35 59.0**	**-0.1**
YTIR	**Yattir**	**1.96**	**186**	Pn	**Pb**	**17 35 34.9**	**-1.1**
MZDA	**Masada**	**2.00**	**179**	Pn	**Pn**	**17 35 34.9**	**+1.2**
MZDA				Sn	**Sb**	**17 36 02.3**	**+1.1**
MZDA	**Masada**	**2.00**	**179**	Pn	**Pn**	**17 35 34.9**	**+1.2**
MZDA				Sn	**Sb**	**17 36 02.3**	**+1.1**

LISJ	El Lisan	2.07	177	*i* P	Pb	17 35 37.4	-0.4
SWQJ	Swaqa	2.15	163	*i* P	Pn	17 35 35.0	-0.9
SWQJ				*e*S	Sn	17 36 02.6	+0.2
CSS	Mathiatis	2.34	315	Pn	Pn	17 35 39.5	+1.0
CSS	Mathiatis	2.34	315	Pn	Pn	17 35 39.5	+1.0
JDRJ	Daraweish	2.59	174	*i* P	Pn	17 35 43.4	+1.3
RMNI	Mount Ramon	2.75	190	Pn	Pn	17 35 46.0	+1.8
RMNI	Mount Ramon	2.75	190	Pn	Pn	17 35 46.0	+1.8
ZFRI	Zfri	2.76	183	Pn	Pn	17 35 45.4	+1.3
ZFRI	Zfri	2.76	183	Pn	Pn	17 35 45.4	+1.3
YAYL	Yayladag	2.79	13	*i* P	Pn	17 35 46.6	+1.9
YAYL				*i* S	Sb	17 36 22.5	-1.5
YAYL	Yayladag	2.79	13	P	Pn	17 35 46.6	+1.9
YAYL				S	Sb	17 36 22.5	-1.5
BYRJ	Bayer	2.84	159	*i* P	Pn	17 35 47.1	+1.7
PRNI	Paran	2.97	186	Pn	Pn	17 35 48.3	+1.2
GULN	MERSIN_Gulnar	3.22	333	*i* P	Pn	17 35 50.8	+0.2
GULN				*i* S	Sn	17 36 26.5	-2.1
GULN	MERSIN_Gulnar	3.22	333	P	Pn	17 35 50.8	+0.2
GULN				S	Sn	17 36 26.5	-2.1
HRFI	Mount Harif	3.28	185	Pn	Pn	17 35 52.3	+0.9
HRFI	Mount Harif	3.28	185	Pn	Pn	17 35 52.3	+0.9
KIZK	Mersin	3.31	343	*i* P	Pn	17 35 52.4	+0.7
KIZK				*i* S	Sn	17 36 29.8	-0.9
KIZK	Mersin	3.31	343	P	Pn	17 35 52.4	+0.7
KIZK				S	Sn	17 36 29.8	-0.9
YURE	YUREGIR	3.51	4	*i* P	Pn	17 35 56.0	+1.5
YURE	YUREGIR	3.51	4	P	Pn	17 35 56.0	+1.5
MBRI	Mt Berech	3.53	186	Pn	Pn	17 35 56.1	+1.2
MBRI	Mt Berech	3.53	186	Pn	Pn	17 35 56.1	+1.2
AQBJ	Aqaba	3.58	184	*i* P	Pb	17 36 03.5	-0.2
AQBJ				*e*S	Sg	17 36 53.1	-2.7
HITJ	Hittiya	3.59	173	*i* P	Pn	17 35 57.9	+2.2
KERG	Konya-Eregli	4.21	347	*i* P	Pn	17 36 06.0	+1.7
KERG				*i* S	Sn	17 36 53.7	+0.5
KERG	Konya-Eregli	4.21	347	P	Pn	17 36 05.9	+1.7
KERG				S	Sn	17 36 53.7	+0.5
JLOS		4.57	178	P	Pn	17 36 09.3	0.0

GII **10** *17:37:45.9±0.0, 33°.28N×35°.37E, h5km, MD1.6/3*
CSEM **10** *17:37:47.4, 33°.32N×35°.37E, h3km, ML2.7*
GRAL **10** *17:37:47.4±0.3, 33°.32N×35°.37E, h4km±3km, MD2.7*
ISC 10 17:37:46.1±1.0, **33°.31N**±0°.03×**35°.35E**±0°.05, **h15**km±9km, **n18, σ0ˢ.31**/30, **Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNTI	Hanita	0.27	213	Pg	Pg	17 37 51.9	0.0
HNTI				Sg	Sb	17 37 56.7	-0.4
KSDI	Kefar Szold	0.28	115	Pg	Pg	17 37 52.0	-0.1
KSDI				Sg	Sg	17 37 56.5	+0.3
MMA0B	Mount Meron ar	0.30	171	Pg	Pg	17 37 52.1	-0.3
MMA0B				Sg	Sg	17 37 57.2	+0.5
NATI	Neve Ativ	0.33	98	Pg	Pg	17 37 52.8	-0.1
NATI				Sg	Sg	17 37 57.7	+0.2
QRWL	Qaraoun	0.36	50	*e*P	Pg	17 37 53.7	+0.1
QRWL				*e*S	Sg	17 37 58.4	-0.3
QRWL	Qaraoun	0.36	50	*e*P	Pg	17 37 53.7	+0.1
QRWL				*e*S	Sg	17 37 58.4	-0.3
DQRL	Deir Qamar	0.43	25	*e*P	Pg	17 37 55.0	+0.1
DQRL				*e*S	Sg	17 38 00.6	-0.2
DQRL	Deir Qamar	0.43	25	*e*P	Pg	17 37 55.0	+0.1
DQRL				*e*S	Sg	17 38 00.6	-0.2
RCY	Rachaya	0.45	65	*e*P	Pg	17 37 55.2	+0.1
RCY				*e*S	Sg	17 38 00.9	-0.2
KSHT	Keshet	0.51	130	Pg	Pb	17 37 56.7	-0.1
BHL	Bhannes	0.64	23	*e*P	Pg	17 37 58.8	0.0
BHL	Bhannes	0.64	23	*e*P	Pg	17 37 58.8	0.0
OFRI	‘Ofer	0.75	204	Pg	Pg	17 38 00.7	-0.1
OFRI				Sg	Sb	17 38 12.1	+1.0
MMLI	Mount Malkishu	0.87	176	Pg	Pb	17 38 02.5	-0.5
HMDT	Nahal Hemdat	1.07	172	Pg	Pb	17 38 06.1	-0.2
HMDT				Sg	Sn	17 38 21.1	0.0
HWQ	Hawqa	1.08	27	*e*P	Pb	17 38 06.6	-0.1
HWQ	Hawqa	1.08	27	*e*P	Pb	17 38 06.6	-0.1
SLTI	Sal’it	1.10	194	Pg	Pb	17 38 06.7	-0.1
SLTI				Sg	Sg	17 38 21.8	+0.1

CNRM **10** *17:44:02.5, 36°.06N×8°.60W, h0km, ML3.5*
CSEM **10** *17:44:06.8±0.2, 36°.24N×8°.44W, h30km, ML3.5, Error ellipse: s-maj=5.3km s-min=3.0km az=56.0*
ISCJB **10** *17:44:07.5±0.5, 36°.34N±0°.03×8°.26W±0°.03, h35km, Error ellipse: s-maj=4.8km s-min=2.4km az=39.6*
MDD **10** *17:44:07.9±0.9, 36°.22N×8°.48W, h40km±26km, mb4.3/27, Error ellipse: s-maj=10.4km s-min=4.9km az=48.0, PRXIMO*
IGIL **10** *17:44:08.1, 36°.30N×8°.45W, h11km, ML3.3*
INMG **10** *17:44:08.2±1.7, 36°.29N×8°.42W, h15km±7km, MD3.2, ML3.2, Error ellipse: s-maj=7.5km s-min=2.3km az=47.0*
SFS **10** *17:44:08.0, 36°.39N×8°.53W, h0km, ML3.7*
LDG **10** *17:44:09.1±0.2, 36°.30N×8°.42W, h40km, Ml3.6/6, Error ellipse: s-maj=3.7km s-min=2.4km az=36.0*
ISC 10 17:44:06.7±1.2, **36°.27N**±0°.04×**8°.37W**±0°.04, **h35**km, **n191, σ1ˢ.86**/319, **8C-9D, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PFVI	Vila Bisbo	0.94	337	⇓*e*P	Pn	17 44 23.9	+0.5
PFVI				*e*S	Sn	17 44 36.2	+0.7
PFVI				A	A	17 44 36.8	
	483nm,0.1s						
PFVI	Vila Bisbo	0.94	337	⇓P	Pn	17 44 23.9	+0.5
	50nm,0.2s,SNR=18						
PFVI				S	Sn	17 44 35.8	+0.2
	2µm,0.1s,SNR=13						
PFVI	Vila Bisbo	0.94	337	P	Pn	17 44 23.9	+0.5
	50nm,0.2s,SNR=18						
PFVI				S	Sn	17 44 36.3	+0.7
PBDV	Barranco-do-Ve	1.03	20	*e*P	Pn	17 44 26.6	+1.8
PBDV				*e*S	Sn	17 44 40.8	+2.8
PBDV				A	A	17 44 44.3	
	87nm,0.1s						
PBDV	Barranco-do-Ve	1.03	20	P	Pn	17 44 26.6	+1.8
PBDV				S	Sn	17 44 40.8	+2.8
	87nm,0.1s						
PBDV	Barranco-do-Ve	1.03	20	*e*P	Pn	17 44 26.6	+1.8
PBDV				S	Sn	17 44 40.8	+2.8
	87nm,0.1s						
MORF	Marmelete	1.06	348	*e*P	Pn	17 44 25.9	+0.7
MORF				*e*S	Sn	17 44 39.2	+0.5
MORF				AML	AML	17 44 40.5	
	comp=N,683nm,0.1s						
MORF	Marmelete	1.06	348	⇓*i*P	Pn	17 44 25.9	+0.7
MORF				*e*S	Sn	17 44 39.5	+0.8
MORF				A	A	17 44 44.0	
	comp=N,695nm,0.1s						
MORF	Marmelete	1.06	348	P	Pn	17 44 25.9	+0.7
MORF				S	Sn	17 44 39.2	+0.5
	comp=N,683nm,0.1s						
MORF	Marmelete	1.06	348	⇓*i*P	Pn	17 44 25.9	+0.7
MORF				*e*S	Sn	17 44 39.5	+0.8
PVAQ	Vaqueiros	1.25	25	*e*P	Pn	17 44 29.5	+1.8
PVAQ				*e*S	Sn	17 44 45.7	+2.5
PVAQ				A	A	17 44 48.7	
	comp=N,131nm,0.3s						
PVAQ	Vaqueiros	1.25	25	P	Pn	17 44 29.5	+1.8
PVAQ				S	Sn	17 44 45.7	+2.5
	comp=N,131nm,0.3s						
PVAQ	Vaqueiros	1.25	25	*e*P	Pn	17 44 29.5	+1.8
PVAQ				S	Sn	17 44 45.7	+2.5
	comp=N,131nm,0.3s						
PTEO	Sao Teotonio	1.31	348	⇓*i*P	Pn	17 44 29.3	+0.8
PTEO				*e*S	Sn	17 44 45.8	+1.1
PTEO				A	A	17 44 51.2	
	comp=N,150nm,0.3s						
PTEO	Sao Teotonio	1.31	348	P	Pn	17 44 29.3	+0.8
PTEO				S	Sn	17 44 45.8	+1.1
	comp=N,75nm,0.3s						
PTEO	Sao Teotonio	1.31	348	⇓*i*P	Pn	17 44 29.3	+0.8
PTEO				S	Sn	17 44 45.8	+1.1
	comp=N,75nm,0.3s						
PCVE	Castro Verde	1.39	11	⇑*e*P	Pn	17 44 31.5	+1.9
PCVE				*e*S	Sn	17 44 48.7	+2.0
PCVE				A	A	17 44 52.0	
	comp=N,150nm,0.1s						
PCVE	Castro Verde	1.39	11	P	Pn	17 44 31.5	+1.9
PCVE				S	Sn	17 44 48.7	+2.0
	comp=N,150nm,0.1s						
PCVE	Castro Verde	1.39	11	⇑*e*P	Pn	17 44 31.5	+1.9
PCVE				S	Sn	17 44 48.7	+2.0
	comp=N,150nm,0.1s						
EGRO	El Granado	1.45	29	⇑P	Pn	17 44 32.6	+2.2
	comp=N,42nm,0.2s,SNR=18						
EGRO				S	Sn	17 44 49.4	+1.2
	comp=N,226nm,0.1s,SNR=22						
EGRO	El Granado	1.45	29	P	Pn	17 44 32.6	+2.2
	comp=N,42nm,0.2s,SNR=18						
EGRO				S	Sn	17 44 49.4	+1.2
	comp=N,226nm,0.1s,SNR=22						
MESJ	Messejana	1.57	4	*e*P	Pn	17 44 33.8	+1.7
MESJ				*e*S	Sn	17 44 52.6	+1.4
MESJ				AML	AML	17 44 53.9	
	comp=E,239nm,0.2s						
MESJ	Messejana	1.57	4	*e*P	Pn	17 44 33.8	+1.7
MESJ				*e*S	Sn	17 44 53.0	+1.7
MESJ				A	A	17 44 54.2	
	comp=E,167nm,0.5s						
MESJ	Messejana	1.57	4	P	Pn	17 44 33.8	+1.7
MESJ				S	Sn	17 44 52.6	+1.4
	comp=E,239nm,0.2s						
MESJ	Messejana	1.57	4	*e*P	Pn	17 44 33.8	+1.7
MESJ				*e*S	Sn	17 44 53.0	+1.7
PBEJ	Beja	1.80	13	*e*Pn	Pn	17 44 37.8	+2.5
PBEJ				*e*Sn	Sn	17 44 59.6	+2.7
PBEJ				A	A	17 45 01.6	
	comp=E,90nm,0.1s						
PBEJ	Beja	1.80	13	P	Pn	17 44 37.8	+2.5
PBEJ				S	Sn	17 44 59.6	+2.7
	comp=E,45nm,0.1s						
PBEJ	Beja	1.80	13	P	Pn	17 44 37.8	+2.5
PBEJ				S	Sn	17 44 59.6	+2.7
	comp=E,45nm,0.1s						
PNCL	Nicolau / Gran	1.84	356	*e*Pn	Pn	17 44 36.9	+1.0
PNCL				*e*Sn	Sn	17 44 58.8	+0.9
PNCL				A	A	17 45 01.5	
	comp=E,130nm,0.1s						
PNCL	Nicolau / Gran	1.84	356	*e*Pn	Pn	17 44 36.9	+1.0
PNCL				*e*Sn	Sn	17 44 58.8	+0.9
EMIN	Mina Concepcio	2.02	42	⇑P	Pn	17 44 40.1	+1.8
	comp=E,4.3nm,0.3s,SNR=18						
EMIN				S	Sn	17 45 02.7	+0.4
	comp=E,78nm,0.1s,SNR=24						
EMIN	Mina Concepcio	2.02	42	P	Pn	17 44 40.1	+1.8
	comp=E,4.3nm,0.3s,SNR=18						
EMIN				S	Sn	17 45 02.7	+0.4
	comp=E,78nm,0.1s,SNR=24						
PBAR	Barrancos	2.18	29	*e*Pn	Pn	17 44 42.3	+1.8
PBAR				*e*Sn	Sn	17 45 08.2	+2.0
PBAR				A	A	17 45 11.4	
	comp=E,103nm,0.2s						
PBAR	Barrancos	2.18	29	P	Pn	17 44 42.3	+1.8
PBAR				S	Sn	17 45 08.2	+2.0
	comp=E,103nm,0.2s						
PBAR	Barrancos	2.18	29	P	Pn	17 44 42.3	+1.8
PBAR				S	Sn	17 45 08.2	+2.0
	comp=E,103nm,0.2s						
EVO	Evora	2.28	7	*e*Pn	Pn	17 44 43.5	+1.7
EVO				*e*Sn	Sn	17 45 09.9	+1.3
EVO				A	A	17 45 11.8	
	comp=E,170nm,0.1s						
EVO	Evora	2.28	7	Pn	Pn	17 44 43.5	+1.7
EVO				Sn	Sn	17 45 09.9	+1.3
	comp=E,170nm,0.1s						
EVO	Evora	2.28	7	*e*Pn	Pn	17 44 43.5	+1.7
EVO	Evora	2.28	7	*i* P	Pn	17 44 44.0	+2.2
EVO				*i* S	Sn	17 45 10.0	+1.3
ECEU	Ceuta	2.45	98	⇓P	Pn	17 44 46.2	+2.0
	comp=E,25nm,0.3s,SNR=18						
ECEU				S	Sn	17 45 15.0	+2.0
	comp=E,24nm,0.2s,SNR=5.0						
ECEU	Ceuta	2.45	98	P	Pn	17 44 46.2	+2.0
	comp=E,25nm,0.3s,SNR=18						
ECEU				S	Sn	17 45 15.0	+2.0
	comp=E,24nm,0.2s,SNR=5.0						
CEU	Ceuta	2.46	98	P	Pn	17 44 46.8	+2.6
CEU				S	Sn	17 45 17.9	+5.0
CEU	Ceuta	2.46	98	*i* P	Pn	17 44 46.8	+2.6
CEU				*e*S	Sn	17 45 18.0	+5.0
CEUT	Ceuta	2.50	98	P	Pn	17 44 46.5	+1.7
CEUT	Ceuta	2.50	98	P	Pn	17 44 46.5	+1.7
LIS	Lisbon	2.52	346	*e*Sn	Sn	17 45 16.0	+1.4
LIS	Lisbon	2.52	346	S	Sn	17 45 16.0	+1.4
PMST	Lisbon--Monsan	2.55	346	*e*Pn	Pn	17 44 46.6	+1.1
PMST				*e*Sn	Sn	17 45 15.9	+0.6
PMST				A	A	17 45 20.7	
	comp=E,121nm,0.3s						
PMST	Lisbon--Monsan	2.55	346	*e*Pn	Pn	17 44 46.6	+1.1
PMST				*e*Sn	Sn	17 45 15.9	+0.6
PESTR	Estremoz	2.67	13	*e*Pn	Pn	17 44 48.5	+1.3
PESTR				*e*Sn	Sn	17 45 19.4	+1.1
PESTR				A	A	17 45 21.8	
	comp=E,24nm,0.3s						
PESTR	Estremoz	2.67	13	*e*Pn	Pn	17 44 48.5	+1.3
PESTR				*e*Sn	Sn	17 45 19.4	+1.1
EBAD	Badajoz	2.71	23	⇓P	Pn	17 44 49.2	+1.5
	comp=E,18nm,0.2s,SNR=18						
EBAD				S	Sn	17 45 19.8	+0.6
	comp=E,44nm,0.1s,SNR=5.0						
EBAD	Badajoz	2.71	23	P	Pn	17 44 49.2	+1.5
	comp=E,18nm,0.2s,SNR=18						
EBAD				S	Sn	17 45 19.8	+0.6
	comp=E,44nm,0.1s,SNR=5.0						
PMAFR	Mafra	2.78	345	*e*Pn	Pn	17 44 49.7	+1.0
PMAFR				*e*Sn	Sn	17 45 21.7	+0.7
PMAFR				A	A	17 45 25.8	
	comp=E,157nm,0.2s						
PMAFR	Mafra	2.78	345	P	Pn	17 44 49.7	+1.0
	comp=E,20nm,0.3s,SNR=19						
PMAFR				S	Sn	17 45 20.5	-0.5
	comp=E,213nm,0.2s,SNR=5.0						
PMAFR	Mafra	2.78	345	P	Pn	17 44 49.7	+1.0
	comp=E,20nm,0.3s,SNR=19						
PMAFR				S	Sn	17 45 20.5	-0.5
	comp=E,213nm,0.2s,SNR=5.0						
PMAFR				*e*Sn	Sn	17 45 21.7	+0.7
PMTG	Montargil	2.80	2	*e*Pn	Pn	17 44 50.1	+1.1
PMTG				*e*Sn	Sn	17 45 21.7	+0.2
PMTG				A	A	17 45 24.9	
	comp=E,124nm,0.2s						
PMTG	Montargil	2.80	2	*e*Pn	Pn	17 44 50.1	+1.1
PMTG				*e*Sn	Sn	17 45 21.7	+0.2
ALMR	Almeirim	2.89	357	*e*P	Pn	17 44 51.5	+1.3
ALMR				*e*S	Sn	17 45 23.7	0.0
ALMR				AML	AML	17 45 27.4	
	comp=N,117nm,0.2s						
ALMR	Almeirim	2.89	357	*e*Pn	Pn	17 44 51.5	+1.3
ALMR				*e*Sn	Sn	17 45 25.1	+1.4
ALMR				A	A	17 45 26.3	
	comp=N,74nm,0.2s						
ALMR	Almeirim	2.89	357	P	Pn	17 44 51.5	+1.3
ALMR				S	Sn	17 45 23.7	0.0
	comp=N,59nm,0.2s						
ALMR	Almeirim	2.89	357	P	Pn	17 44 51.5	+1.3
ALMR				S	Sn	17 45 23.7	0.0
	comp=N,59nm,0.2s						
ALMR				*e*Sn	Sn	17 45 25.1	+1.4
EMIJ	Mijas	2.92	83	⇑P	Pn	17 44 49.8	-0.8
	comp=N,7.2nm,0.4s,SNR=18						
EMIJ				S	Sn	17 45 22.0	-2.5
	comp=N,24nm,0.2s,SNR=10						
EMIJ	Mijas	2.92	83	P	Pn	17 44 49.8	-0.8
	comp=N,7.2nm,0.4s,SNR=18						
HORN	Hornachuelos	2.94	57	P	Pn	17 44 52.5	+1.5
ECAB	El Cabril	2.97	52	⇓P	Pn	17 44 53.4	+2.0
	comp=N,10nm,0.3s,SNR=18						
ECAB				S	Sn	17 45 25.5	-0.2
	comp=N,45nm,0.2s,SNR=5.0						
ECAB	El Cabril	2.97	52	P	Pn	17 44 53.4	+2.0
	comp=N,10nm,0.3s,SNR=18						
ECAB				S	Sn	17 45 25.5	-0.2
	comp=N,45nm,0.2s,SNR=5.0						
AVE	Averroes	3.07	165	*e*P	Pn	17 44 53.2	+0.5
AVE				*e*S	Sn	17 45 23.9	-4.2
EMAL	Malaga-Limoner	3.21	80	*i* P	Pn	17 44 56.7	+2.1
EMAL				*e*S	Sn	17 45 33.8	+2.1
PMRV	Marv??o	3.25	13	*e*Pn	Pn	17 44 56.6	+1.4
PMRV				*e*Sn	Sn	17 45 33.8	+1.2
PMRV				A	A	17 45 35.0	
	comp=N,37nm,0.6s						
PMRV	Marv??o	3.25	13	P	Pn	17 44 56.6	+1.4
PMRV				S	Sn	17 45 33.8	+1.2
	comp=N,37nm,0.6s						
PMRV	Marv??o	3.25	13	P	Pn	17 44 56.6	+1.4
PMRV				S	Sn	17 45 33.8	+1.2
	comp=N,37nm,0.6s						
PTOM	Tomar	3.34	359	*e*Pn	Pn	17 44 57.8	+1.3
PTOM				*e*Sn	Sn	17 45 34.7	-0.2
PTOM				A	A	17 45 37.0	
	comp=N,128nm,0.3s						
PTOM	Tomar	3.34	359	P	Pn	17 44 57.8	+1.3
PTOM				S	Sn	17 45 34.7	-0.2
	comp=N,64nm,0.3s						
PTOM	Tomar	3.34	359	P	Pn	17 44 57.8	+1.3
PTOM				S	Sn	17 45 34.7	-0.2
	comp=N,64nm,0.3s						
EGOR	Sierra Gorda,	3.52	75	P	Pn	17 45 01.3	+2.2
	comp=N,5.5nm,0.1s,SNR=7.9						
EGOR				S	Sn	17 45 40.5	+0.9
	comp=N,49nm,0.3s,SNR=7.9						
EGOR	Sierra Gorda,	3.52	75	P	Pn	17 45 01.3	+2.2
	comp=N,5.5nm,0.1s,SNR=7.9						
EGOR				S	Sn	17 45 40.5	+0.9
	comp=N,49nm,0.3s,SNR=7.9						
EADA	Adamuz	3.57	57	⇑P	Pn	17 45 01.6	+2.0
	comp=N,28nm,0.2s,SNR=18						
EADA				S	Sn	17 45 40.5	-0.1
	comp=N,102nm,0.1s,SNR=20						
EADA	Adamuz	3.57	57	P	Pn	17 45 01.6	+2.0
	comp=N,28nm,0.2s,SNR=18						
EADA				S	Sn	17 45 40.5	-0.1
	comp=N,102nm,0.1s,SNR=20						
PCBR	Castelo Branco	3.63	11	*e*Pn	Pn	17 45 02.1	+1.6
PCBR				*e*Sn	Sn	17 45 42.6	+0.5
PCBR				A	A	17 45 45.9	
	comp=N,66nm,0.3s						
PCBR	Castelo Branco	3.63	11	P	Pn	17 45 02.1	+1.6
PCBR				S	Sn	17 45 42.6	+0.5
	comp=N,33nm,0.3s						
PCBR	Castelo Branco	3.63	11	P	Pn	17 45 02.1	+1.6
PCBR				S	Sn	17 45 42.6	+0.5
	comp=N,33nm,0.3s						
PCAS	Casmilo, Conde	3.78	358	*e*Pn	Pn	17 45 03.9	+1.4
PCAS				*e*Sn	Sn	17 45 45.8	+0.1
PCAS				A	A	17 45 48.5	
	comp=N,29nm,0.3s						
PCAS	Casmilo, Conde	3.78	358	*e*Pn	Pn	17 45 03.9	+1.4
PCAS				*e*Sn	Sn	17 45 45.8	+0.1
ELGU	Los Guajares,	3.86	80	P	Pn	17 45 04.8	+1.1
	comp=N,1.8nm,0.2s,SNR=7.9						
ELGU				S	Sn	17 45 48.0	+0.1
	comp=N,62nm,0.3s,SNR=7.9						
ELGU	Los Guajares,	3.86	80	P	Pn	17 45 04.8	+1.1
	comp=N,1.8nm,0.2s,SNR=7.9						
ELGU				S	Sn	17 45 48.0	+0.1
	comp=N,62nm,0.3s,SNR=7.9						
EQUE	Quentar	4.07	75	⇑P	Pn	17 45 08.9	+2.4
	comp=N,4.3nm,0.3s,SNR=18						
EQUE				S	Sn	17 45 53.1	+0.1
	comp=N,24nm,0.3s						
EQUE	Quentar	4.07	75	P	Pn	17 45 08.9	+2.4
	comp=N,4.3nm,0.3s,SNR=18						
EQUE				S	Sn	17 45 53.1	+0.1
	comp=N,24nm,0.3s						
MTE	Manteigas	4.17	9	*e*Pn	Pn	17 45 09.5	+1.5
MTE				*e*Sn	Sn	17 45 55.3	-0.3
MTE				A	A	17 45 57.3	
	comp=N,49nm,0.2s						
MTE	Manteigas	4.17	9	P	Pn	17 45 09.5	+1.5
MTE				S	Sn	17 45 55.3	-0.3
	comp=N,24nm,0.2s						
MTE	Manteigas	4.17	9	P	Pn	17 45 09.5	+1.5
MTE				S	Sn	17 45 55.3	-0.3
	comp=N,24nm,0.2s						
EPLA	Plasencia	4.20	25	P	Pn	17 45 09.7	+1.4
	comp=N,3.7nm,0.3s,SNR=43						
EPLA				S	Sn	17 45 56.0	-0.1
	comp=N,19nm,0.1s						
EPLA	Plasencia	4.20	25	P	Pn	17 45 09.7	+1.4
	comp=N,3.7nm,0.3s,SNR=43						
EPLA				S	Sn	17 45 56.0	-0.1
	comp=N,19nm,0.1s						
CZD	Col de Zad	4.24	139	P	Pn	17 45 08.3	-0.7
CZD	Col de Zad	4.24	139	P	Pn	17 45 09.0	0.0
CZD				S	Sn	17 45 54.0	-3.4
GORA	Gorafe	4.44	73	S	Sn	17 46 03.6	+1.5
	comp=N,74nm,0.2s,SNR=7.9						
GORA	Gorafe	4.44	73	S	Sn	17 46 03.6	+1.5
	comp=N,74nm,0.2s,SNR=7.9						
EBER	Berja	4.45	80	P	Pn	17 45 14.4	+2.5
	comp=N,4.5nm,0.6s,SNR=7.2						
EBER				S	Sn	17 46 01.4	-1.2
	comp=N,10nm,0.3s						
EBER	Berja	4.45	80	P	Pn	17 45 14.4	+2.5
	comp=N,4.5nm,0.6s,SNR=7.2						
EBER				S	Sn	17 46 01.4	-1.2
	comp=N,10nm,0.3s						
PVIS	Viseu	4.46	5	*e*Pn	Pn	17 45 13.4	+1.6
PVIS				*e*Sn	Sn	17 46 01.7	-0.8
PVIS				A	A	17 46 06.0	
	comp=N,23nm,0.2s						
PVIS	Viseu	4.46	5	P	Pn	17 45 13.4	+1.6
PVIS				S	Sn	17 46 01.7	-0.8
	comp=N,12nm,0.2s						
PVIS	Viseu	4.46	5	P	Pn	17 45 13.4	+1.6
PVIS				S	Sn	17 46 01.7	-0.8
	comp=N,12nm,0.2s						
EQES	Quesada	4.51	69	P	Pn	17 45 14.2	+1.6
	comp=N,1.5nm,0.3s,SNR=20						
EQES				S	Sn	17 46 03.5	-0.3
	comp=N,14nm,0.2s						
EQES	Quesada	4.51	69	P	Pn	17 45 14.2	+1.6
	comp=N,1.5nm,0.3s,SNR=20						
EQES				S	Sn	17 46 03.5	-0.3
	comp=N,14nm,0.2s						
PAB	San Pablo	4.56	43	P	Pn	17 45 14.9	+1.6
	comp=N,1.3nm,0.2s,SNR=7.9						
PAB				S	Sn	17 46 03.2	-1.9
	comp=N,14nm,0.1s,SNR=7.9						
PAB	San Pablo	4.56	43	P	Pn	17 45 14.9	+1.6
	comp=N,1.3nm,0.2s,SNR=7.9						
ESDC	Sonseca Array	4.87	44	P	Pn	17 45 19.1	+1.6
	comp=N,1.5nm,0.3s,baz=230,slow=13,SNR=25						
ESDC				S	Sn	17 46 09.3	-3.3
	comp=N,2.7nm,0.3s,baz=228,slow=23,SNR=7.2						
ESDC	Sonseca Array	4.87	44	P	Pn	17 45 19.1	+1.6
	comp=N,1.5nm,0.3s,SNR=25						
PTO	Porto	4.87	358	*e*Sn	Sn	17 46 11.1	-1.3
PTO	Porto	4.87	358	S	Sn	17 46 11.1	-1.3
PTO	Porto	4.87	358	S	Sn	17 46 11.1	-1.3
MVO	Moncorvo	5.00	12	*e*Pn	Pn	17 45 20.7	+1.4
MVO				*e*Sn	Sn	17 46 14.4	-1.5
MVO				A	A	17 46 17.8	
	comp=N,25nm,0.3s						
MVO	Moncorvo	5.00	12	P	Pn	17 45 20.2	+0.9
	comp=N,5.3nm,0.2s,SNR=24						
MVO				S	Sn	17 46 14.4	-1.5
	comp=N,31nm,0.2s,SNR=12						
MVO	Moncorvo	5.00	12	P	Pn	17 45 20.2	+0.9
	comp=N,5.3nm,0.2s,SNR=24						
MVO	Moncorvo	5.00	12	*e*Pn	Pn	17 45 20.7	+1.4
MVO				S	Sn	17 46 14.4	-1.5
	comp=N,31nm,0.2s,SNR=12						
SESP	Santiago Espad	5.00	67	P	Pn	17 45 21.3	+1.9
	comp=N,1.5nm,0.1s,SNR=7.9						
SESP				S	Sn	17 46 15.2	-0.9
	comp=N,48nm,0.2s,SNR=7.9						
SESP	Santiago Espad	5.00	67	P	Pn	17 45 21.4	+1.9
SESP				S	Sn	17 46 15.2	-0.9
	comp=N,48nm,0.2s,SNR=7.9						
ENIJ	Nijar	5.01	80	S	Sn	17 46 14.6	-1.4
	comp=N,23nm,0.4s,SNR=7.9						
ENIJ	Nijar	5.01	80	S	Sn	17 46 14.6	-1.4
	comp=N,23nm,0.4s,SNR=7.9						
PVRL	Vila Real	5.03	6	*e*Pn	Pn	17 45 21.0	+1.4
PVRL				*e*Sn	Sn	17 46 14.9	-1.6
PVRL				A	A	17 46 19.7	
	comp=N,34nm,0.1s						
PVRL	Vila Real	5.03	6	P	Pn	17 45 21.0	+1.4
PVRL				S	Sn	17 46 14.9	-1.6
	comp=N,17nm,0.1s						
PVRL	Vila Real	5.03	6	P	Pn	17 45 21.0	+1.4
PVRL				S	Sn	17 46 14.9	-1.6
	comp=N,17nm,0.1s						
OUK	Oukaimeden	5.06	175	P	Pn	17 45 18.6	-1.8
OUK				S	Sn	17 46 12.0	-5.9
POLO	Lamas de Olo	5.12	5	*e*Pn	Pn	17 45 22.3	+1.4
POLO				*e*Sn	Sn	17 46 16.9	-1.9
POLO				A	A	17 46 20.4	
	comp=N,8.9nm,0.3s						

POLO	Lamas de Olo	5.12	5	ePn	Pn	17 45 22.3	+1.4
PCAB	Cabril	5.44	3	ePn	Pn	17 45 26.6	+1.3
PCAB				eSn	Sn	17 46 24.2	-2.5
PCAB				A	A	17 46 28.4	
	comp=N,20nm,0.1s						
PCAB	Cabril	5.44	3	P	Pn	17 45 26.6	+1.3
PCAB				S	Sn	17 46 24.2	-2.5
	comp=N,9.9nm,0.1s						
PCAB	Cabril	5.44	3	P	Pn	17 45 26.6	+1.3
ELOB	Lobios	5.60	2	P	Pn	17 45 28.5	+1.0
	comp=N,4.3nm,0.3s,SNR=30						
ELOB				S	Sn	17 46 28.2	-2.4
	comp=N,20nm,0.1s,SNR=15						
ELOB	Lobios	5.60	2	P	Pn	17 45 28.5	+1.0
	comp=N,4.3nm,0.3s,SNR=30						
PBRG	Braganca	5.67	12	ePn	Pn	17 45 29.9	+1.4
PBRG				eSn	Sn	17 46 30.7	-1.7
PBRG				A	A	17 46 34.4	
	comp=N,13nm,0.2s						
PBRG	Braganca	5.67	12	P	Pn	17 45 29.9	+1.4
PBRG				S	Sn	17 46 30.7	-1.7
	comp=N,6.7nm,0.2s						
PBRG	Braganca	5.67	12	P	Pn	17 45 29.9	+1.4
PGAV	Gavieira, Arco	5.69	1	ePn	Pn	17 45 29.7	+0.9
PGAV				eSn	Sn	17 46 30.6	-2.3
PGAV				A	A	17 46 34.0	
	comp=N,13nm,0.6s						
PGAV	Gavieira, Arco	5.69	1	ePn	Pn	17 45 29.7	+0.9
UCM	Universidad Co	5.70	43	i P	Pn	17 45 31.5	+2.6
EMUR	La Murta	5.91	72	S	Sn	17 46 36.3	-2.1
	comp=N,12nm,0.4s,SNR=5.6						
ETOB	Tobarra	5.92	64	⇑P	Pn	17 45 32.9	+0.9
	comp=N,1.5nm,0.1s,SNR=18						
ETOB				S	Sn	17 46 37.2	-1.4
	comp=N,13nm,0.1s,SNR=10						
ETOB	Tobarra	5.92	64	P	Pn	17 45 32.9	+0.9
	comp=N,1.5nm,0.1s,SNR=18						
EAGO	Agolada(Pontev	6.53	2	P	Pn	17 45 40.7	+0.4
	comp=N,1.2nm,0.1s,SNR=7.9						
EAGO				S	Sn	17 46 49.3	-4.1
	comp=N,9.8nm,0.1s,SNR=7.9						
EAGO	Agolada(Pontev	6.53	2	P	Pn	17 45 40.7	+0.4
	comp=N,1.2nm,0.1s,SNR=7.9						
EMAZ	Mazaricos	6.69	356	P	Pn	17 45 43.3	+0.9
	comp=N,1.1nm,0.2s,SNR=7.9						
EMAZ				S	Sn	17 46 52.9	-4.5
	comp=N,7.9nm,0.1s,SNR=7.9						
EMAZ	Mazaricos	6.69	356	P	Pn	17 45 43.3	+0.9
	comp=N,1.1nm,0.2s,SNR=7.9						
ETOR	Torete	6.72	46	P	Pn	17 45 45.2	+2.3
	comp=N,5.8nm,0.4s,SNR=6.5						
ETOR				S	Sn	17 46 54.6	-3.6
	comp=N,21nm,0.3s,SNR=7.0						
ETOR	Torete	6.72	46	P	Pn	17 45 45.2	+2.3
	comp=N,5.8nm,0.4s,SNR=6.5						
ECHE	Chera	6.72	58	P	Pn	17 45 44.4	+1.5
	comp=N,0.6nm,0.2s,SNR=7.9						
ECHE				S	Sn	17 46 55.3	-3.0
	comp=N,7.4nm,0.6s,SNR=7.9						
ECHE	Chera	6.72	58	P	Pn	17 45 44.4	+1.5
	comp=N,0.6nm,0.2s,SNR=7.9						
EBEN2	Beniarda presa	6.93	67	S	Sn	17 47 00.5	-3.0
	comp=N,13nm,0.2s,SNR=7.9						
EPON	Pontenova	7.11	7	S	Sn	17 47 04.7	-3.1
	comp=N,2.5nm,0.3s,SNR=7.9						
EARI	Arriondas	7.43	18	P	Pn	17 45 53.2	+0.5
	comp=N,0.3nm,0.2s,SNR=4.0						
EARI				S	Sn	17 47 12.8	-2.9
	comp=N,1.7nm,0.4s,SNR=7.9						
EARI	Arriondas	7.43	18	P	Pn	17 45 53.2	+0.5
	comp=N,0.3nm,0.2s,SNR=4.0						
EMOS	Mosqueruela	7.43	54	P	Pn	17 45 54.5	+1.7
	comp=N,0.3nm,0.1s,SNR=4.0						
EMOS				S	Sn	17 47 12.8	-3.2
	comp=N,2.3nm,0.1s,SNR=7.9						
EMOS	Mosqueruela	7.43	54	P	Pn	17 45 54.5	+1.7
	comp=N,0.3nm,0.1s,SNR=4.0						
ELAN	Lanestosa	7.92	27	P	Pn	17 46 00.2	+0.8
	comp=N,3.1nm,0.7s,SNR=7.1						
ELAN				S	Sn	17 47 25.2	-2.6
	comp=N,2.5nm,0.2s,SNR=7.9						
ELAN	Lanestosa	7.92	27	P	Pn	17 46 00.2	+0.8
	comp=N,3.1nm,0.7s,SNR=7.1						
EIBI	Ibiza	8.18	67	P	Pn	17 46 04.2	+1.3
	comp=N,0.1nm,0.1s,SNR=4.0						
EIBI				S	Sn	17 47 29.5	-4.6
	comp=N,4.4nm,0.3s,SNR=7.9						
EIBI	Ibiza	8.18	67	P	Pn	17 46 04.2	+1.3
	comp=N,0.1nm,0.1s,SNR=4.0						
ESAC	San Caprasio	8.21	46	S	Sn	17 47 30.3	-4.6
	comp=N,29nm,0.4s,SNR=7.9						
IELO	Elcoad	8.57	38	P	Pn	17 46 11.0	+2.7
	comp=N,1.1nm,0.2s,SNR=7.9						
IELO				S	Sn	17 47 39.6	-4.1
	comp=N,4.0nm,0.2s,SNR=7.9						
IELO	Elcoad	8.57	38	P	Pn	17 46 11.0	+2.7
	comp=N,1.1nm,0.2s,SNR=7.9						
EORO	Oroz-Betelu	8.57	37	P	Pn	17 46 11.2	+2.9
	comp=N,0.3nm,0.1s,SNR=6.3						
EORO				S	Sn	17 47 39.3	-4.4
	comp=N,11nm,0.6s,SNR=7.9						
EORO	Oroz-Betelu	8.57	37	P	Pn	17 46 11.2	+2.9
	comp=N,0.3nm,0.1s,SNR=6.3						
EALK	Alkurruntz	8.72	35	P	Pn	17 46 12.7	+2.3
	comp=N,1.2nm,0.1s,SNR=7.9						
EALK				S	Sn	17 47 42.0	-5.5
	comp=N,6.7nm,0.4s,SNR=7.9						
EALK	Alkurruntz	8.72	35	P	Pn	17 46 12.7	+2.3
	comp=N,1.2nm,0.1s,SNR=7.9						
SJPF	Ste Jean	8.77	37	ePn	Pn	17 46 13.2	+2.2
SJPF				eSn	Sn	17 47 44.7	-4.0
	comp=N,5.0nm,0.4s						
SJPF	Ste Jean	8.77	37	ePn	Pn	17 46 13.2	+2.2
EPOB	Poblet	8.95	53	P	Pn	17 46 15.4	+1.9
	comp=N,0.2nm,0.2s,SNR=4.0						
EPOB				S	Sn	17 47 47.7	-5.4
	comp=N,3.2nm,0.7s,SNR=7.9						
EPOB	Poblet	8.95	53	P	Pn	17 46 15.4	+1.9
	comp=N,0.2nm,0.2s,SNR=4.0						
ETSF	Etsaut	8.95	40	ePn	Pn	17 46 15.2	+1.7
ETSF				eSn	Sn	17 47 48.2	-4.9
	comp=N,5.0nm,0.3s						
ETSF	Etsaut	8.95	40	ePn	Pn	17 46 15.2	+1.7
ECHI	Chisagues Biel	9.20	43	P	Pn	17 46 19.0	+2.1
	comp=N,0.6nm,0.2s,SNR=7.9						
ECHI				S	Sn	17 47 54.2	-5.0
	comp=N,4.4nm,0.6s,SNR=7.9						
ECHI	Chisagues Biel	9.20	43	P	Pn	17 46 19.0	+2.1
	comp=N,0.6nm,0.2s,SNR=7.9						
EPF	Esparros	9.52	42	ePn	Pn	17 46 22.5	+1.2
EPF				eSn	Sn	17 48 02.4	-4.6
	comp=N,2.7nm,0.2s						
EPF	Esparros	9.52	42	ePn	Pn	17 46 22.5	+1.2
CLLI	Llivia	10.12	49	P	Pn	17 46 32.2	+2.5
	comp=N,0.7nm,0.2s,SNR=7.9						
CLLI				S	Sn	17 48 16.0	-6.0
	comp=N,2.1nm,0.5s,SNR=5.8						
CLLI	Llivia	10.12	49	P	Pn	17 46 32.2	+2.5
	comp=N,0.7nm,0.2s,SNR=7.9						
RJF	Les Rejaudoux	11.72	37	ePn	Pn	17 46 50.7	-0.7
RJF				eSn	Sn	17 48 54.8	-6.1
	comp=N,1.4nm,0.4s						
CAF	Calviac	11.72	39	ePn	Pn	17 46 51.9	+0.5
CAF				eSn	Sn	17 48 54.3	-6.7
	comp=N,1.2nm,0.3s						
CAF	Calviac	11.72	39	ePn	Pn	17 46 51.9	+0.5
MFF	Saint Martin d	12.02	28	ePn	Pn	17 46 54.8	-0.6
MFF				eSn	Sn	17 49 01.5	-6.6
	comp=N,2.0nm,0.4s						
MFF	Saint Martin d	12.02	28	ePn	Pn	17 46 54.8	-0.6
QUIF	Quistinic	12.26	17	ePn	Pn	17 46 58.3	-0.4
QUIF	Quistinic	12.26	17	ePn	Pn	17 46 58.3	-0.4
SGMF	Saint Gilles	12.72	18	ePn	Pn	17 47 04.9	-0.1
SGMF	Saint Gilles	12.72	18	ePn	Pn	17 47 04.9	-0.1
AVF	Avril sur Loir	13.68	36	ePn	Pn	17 47 18.0	-0.1
AVF	Avril sur Loir	13.68	36	ePn	Pn	17 47 18.0	-0.1
SMF	Signal de Mont	13.81	38	ePn	Pn	17 47 20.4	+0.5
SMF	Signal de Mont	13.81	38	ePn	Pn	17 47 20.4	+0.5
BAIF	Baives	16.52	30	ePn	Pn	17 47 56.9	+1.3
BAIF	Baives	16.52	30	ePn	Pn	17 47 56.9	+1.3

MEX 10 17:44:36.2±0.4, 16°.31N×98°.30W, h7^{km}±4^{km}, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.18	64	i P	Pg	17 44 39.5	-0.4
PNIG				eS	Sg	17 44 42.4	-0.1
TLIG	Tlapa	1.27	348	eP	Pn	17 44 56.7	-3.8
TLIG				i S	Sb	17 45 12.7	-4.4
VHO	Vista Hermosa	1.68	63	eP	Pn	17 45 03.0	-3.2
VHO				i S	Sn	17 45 22.9	-5.1

MAN 10 17:54:37.5, 6°.97N×123°.70E, h22^{km}, mb4.4, ML3.3, MS3.1, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTBH	Cotabato--PC H	0.60	65	⇓iP	Pb	17 54 49.2	-0.2
CTBH				i S	Sb	17 54 56.5	-0.9
PAGZ	Pagadian	0.93	340	eP	Pb	17 54 54.0	-0.9
PAGZ				eS	Sn	17 55 08.3	+0.5
SKMP	Bagumbayan, Su	0.95	118	eP	Pn	17 54 55.5	-0.1
SKMP				eS	Sn	17 55 08.3	-0.2
BUKP	Musuan	1.63	56	eP	Pn	17 55 05.7	+0.8
BUKP				eS	Sn	17 55 25.8	+0.6

MAN 10 17:54:54.9, 13°.76N×124°.09E, h8^{km}, mb4.1, ML2.9, MS2.5, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PVCP	Virac	0.17	158	eP	Pg	17 54 59.4	+0.8
PVCP				eS	Sg	17 55 03.6	+2.7
CNP	Catarman	1.36	156	eP	Pn	17 55 19.5	-0.7
CNP				eS	Sg	17 55 38.8	+0.1
BALP	Baler	3.13	309	eP	Pn	17 55 45.4	+0.8

BJI ***10*** *18:06:04.5, 5°.10S×103°.40E, h65^{km}, mb4.4/23, mB4.8/12, Ms4.6/1*

ISCJB ***10*** *18:06:08.5±0.3, 4°.94S±0°.05×103°.59E±0°.05, h100^{km}, mb4.4/39, Error ellipse: s-maj=8.7km s-min=3.6km az=43.1*

NEIC ***10*** *18:06:10.4±1.0, 4°.97S×103°.48E, h107^{km}±7^{km}, mb4.5/20, Error ellipse: s-maj=13.3km s-min=5.1km az=50.0*

DJA ***10*** *18:06:10.6±0.4, 5°S±4°×10°4E±°, h59^{km}±8^{km}, M4.4/9, mb4.5/1, MLv4.3/9*

IDC ***10*** *18:06:10.4±2.7, 4°.82S×103°.62E, h98^{km}±23^{km}, mb4.0/19, mb1 4.0/20, mb1mx3.8/66, mbtmp4.3/20, MS2.8/2, Ms1 3.0/2, ms1mx2.5/56, Error ellipse: s-maj=26.4km s-min=11.0km az=56.0*

ISC 10 18:06:10.1±0.5, **5°.01S**±0°.06×**103°.51E**±0°.06, **h100^{km}, n97,** σ1^{s}**73**/101, **mb4.4**/39, **1C, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LWLI	Liwa	0.55	91	P	Pn	18 06 23.9	-2.5
LWLI				S	Sn	18 06 34.3	-4.3
MDSI	Maura Dua	0.84	52	P	Pn	18 06 26.5	-2.4
KASI	Kota Agung	1.11	118	P	Pn	18 06 30.3	-1.4
KASI				S	Sn	18 06 44.4	-3.6
KLI	Kotabumi	1.35	84	P	Pn	18 06 33.1	-1.4
KLI				S	Sn	18 06 50.0	-3.0
BLSI	Bandar Lampung	1.76	102	P	Pn	18 06 38.7	-1.0
MASI	Maura Aman, Be	2.25	326	P	Pn	18 06 48.0	+2.0
PMBI	Palembang	2.42	31	P	Pn	18 06 47.1	-1.1
CGJI	Cibinong	2.69	126	P	Pn	18 06 50.0	-1.8
DBJI	Dramaga	3.57	116	P	Pn	18 07 04.4	+0.8
PPSI	Pulau Pagai	4.14	302	P	Pn	18 07 10.1	-1.2
LEM	Lembang	4.47	114	P	Pn	18 07 17.2	+1.4
	3.7nm,0.3s,baz=330,slow=16,SNR=7.6						
LEM				S	Sn	18 08 11.1	+4.3
	3.4nm,0.3s,baz=330,slow=20,SNR=3.6						
LEM				LR	LR	18 08 57.2	
	comp=Z,126nm,18.4s,baz=188,slow=38						
CISI	Cisompet, Garu	4.97	121	ePn	Pn	18 07 21.6	-1.0
CISI				eSn	Sn	18 08 11.8	-7.1
TPRI	Tanjung Pinang	5.97	10	P	Pn	18 07 36.0	-0.1
MYKOM	Kota Tinggi	6.76	3	ePn	Pn	18 07 47.8	+1.0
UGM	Wanagama	7.54	113	ePn	Pn	18 07 58.4	+0.9
UGM				eSn	Sn	18 09 20.3	-1.1
GSI	Gunungsitoli	8.63	316	ePn	Pn	18 08 12.9	+0.7
GSI				eSn	Sn	18 09 42.0	-5.9
KULM	Kulim	10.62	344	ePn	Pn	18 08 38.4	-0.9
JAGI	Jajag, Banyuwa	11.11	109	ePn	Pn	18 08 44.5	-1.6
SBUM	Sibu	11.43	50	ePn	Pn	18 08 53.4	+3.2
KKM	Kota Kinabalu	16.77	49	ePn	P	18 10 01.5	+1.8
	29nm,1.2s						
MYLDM	Lahad Datu	18.07	56	eP	Pn	18 10 16.2	+1.4
	16nm,1.0s						
MMRI	Maumere	18.94	102	eP	P	18 10 22.4	-1.0
	25nm,1.0s						
LUWI	Luwuk	19.63	79	eP	P	18 10 30.6	-0.4
	30nm,1.0s						
BATI	Baumata	20.63	106	P	P	18 10 41.8	+0.1
	30nm,0.5s,baz=302,slow=7.1,SNR=9.8						
BATI				S	S	18 14 13.3	-14
	6.4nm,0.5s,baz=330,slow=20,SNR=2.2						
SOEI	Soe	21.11	104	eP	P	18 10 44.5	-2.6
	20nm,0.9s						
CM01	Chiang Mai Arr	23.71	349	eP	P	18 11 11.1	-2.0
CM31	Chiang Mai Arr	23.75	349	eP	P	18 11 13.0	-0.5
CMAR	Chiang Mai Arr	23.75	349	P	P	18 11 12.0	-1.4
	1.5nm,0.8s,baz=184,slow=8.5,SNR=17						
CMAR				ScP	ScP	18 18 25.0	+0.7
	0.4nm,0.6s,baz=207,slow=3.8,SNR=4.8						
CMAR				LR	LR	18 20 35.6	
	comp=Z,23nm,19.4s,baz=186,slow=37						
CMMT	Chiang Mai	24.09	349	P	P	18 11 16.8	+0.3
CHTO	Chiang Mai	24.09	349	eP	P	18 11 15.6	-0.9
	3.4nm,0.9s						
CHTO	Chiang Mai	24.09	349	P	P	18 11 17.0	+0.5
	20nm,0.9s						
FITZ	Fitzroy Crossi	25.24	123	eP	P	18 11 26.9	-0.1
	8.3nm,1.2s						
MTN	Manton Dam	28.35	108	eP	P	18 11 53.9	-1.2
	13nm,1.3s						
FAKI	Fak Fak	28.74	87	eP	P	18 11 57.3	-1.2
	11nm,1.1s						
KMI	Kunming	29.96	359	P	P	18 12 12.6	+3.3
KMI				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KMI				pmax	pmax		
	comp=Z,72nm,5.0s						
NWAO	Narrogin (SRO)	30.59	157	P	P	18 12 16.2	+1.6
	31nm,1.2s,baz=329,slow=5.9,SNR=2.7						
H08S2	Diego Garcia H	30.93	264	T	T	18 44 55.6	
	baz=86,slow=74						
H08S3	Diego Garcia H	30.94	264	T	T	18 44 56.0	
	baz=86,slow=74						
H08S1	Diego Carcia H	30.95	264	T	T	18 44 58.1	
	baz=86						
H01W3	Cape Leeuwin H	31.32	163	T	T	18 45 31.7	
	baz=340,slow=76,SNR=11						
H01W2	Cape Leeuwin H	31.33	163	T	T	18 45 31.7	
	baz=340,slow=76,SNR=13						
H01W1	Cape Leeuwin H	31.33	163	T	T	18 45 31.7	
	baz=340,slow=76,SNR=11						
GYA	Guiyang	31.43	5	eP	P	18 12 24.6	+2.5
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
WRA	Warramunga Arr	33.47	119	P	P	18 12 39.9	-0.2
	2.9nm,0.8s,baz=300,slow=11,SNR=33						
WR1	Warramunga Arr	33.47	119	eP	P	18 12 39.9	-0.2
	5.5nm,0.8s						
WRAB	Tennant Creek	33.47	119	eP	P	18 12 40.2	+0.1
	19nm,1.5s						
WB2	Warramunga Arr	33.48	119	eP	P	18 12 40.1	0.0
	4.4nm,0.8s						
AS31	Alice Springs	34.66	125	eP	P	18 12 51.1	+0.7
	1.8nm,0.5s						
ASAR	Alice Springs	34.66	125	P	P	18 12 50.9	+0.5
	2.7nm,0.8s,baz=303,slow=8.1,SNR=24						
ASAR				PcP	PcP	18 15 22.8	+0.3
	0.4nm,0.9s,baz=303,slow=1.9,SNR=3.1						
AS01	Alice Springs	34.70	125	eP	P	18 12 51.6	+0.9
NJ2	Nanjing	39.64	21	eP	P	18 13 35.9	+3.7
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
COEN	Coen	40.06	106	eP	P	18 13 35.4	-0.6
	28nm,1.4s						
BBOO	Buckleboo	41.07	136	eP	P	18 13 44.3	+0.3
	62nm,1.8s						
CTA	Charters Tower	44.17	114	P	P	18 14 08.8	-0.5
	9.0nm,0.9s,baz=300,slow=7.9,SNR=6.8						
CTAO	Charters Tower	44.17	114	eP	P	18 14 09.7	+0.4
	104nm,0.6s						
GTA	Gaotai	44.33	356	eP	P	18 14 10.5	+0.1
GTA				pP	pP	18 14 27.2	-6.7
GTA				sP	sP	18 14 34.0	-11
GTA				PcP	PP	18 15 56.6	+0.8
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
STKA	Stephens Creek	44.55	132	P	P	18 14 13.5	+1.3
	3.3nm,0.8s,baz=303,slow=8.9,SNR=9.2						
STKA	Stephens Creek	44.55	132	eP	P	18 14 13.8	+1.6
HHC	Hu-ho-hao-te	46.23	8	eP	P	18 14 28.1	+2.7
HHC				pmax	pmax		
	comp=Z,11nm,1.0s						
HHC				pmax	pmax		
	comp=Z,22nm,4.9s						
WMQ	Urumqi	50.66	345	P	P	18 15 00.8	+1.5
KSH	Kashi	51.07	333	eP	P	18 15 03.3	+0.8
KSH				ePcP	PcP	18 16 20.1	+3.0
KSH				pmax	pmax		
	comp=Z,4.0nm,0.8s						
JHJ2	Mitsune	51.19	40	eP	P	18 15 03.0	-0.4
	390nm,1.9s						
MAJO	Matsushiro	52.54	35	eP	P	18 15 12.1	-1.3
MJAR	Matsushiro Arr	52.54	35	P	P	18 15 12.1	-1.3
	1.0nm,0.7s,baz=214,slow=8.3,SNR=4.5						
SONA0	Songino Array	52.68	2	eP	P	18 15 14.3	0.0
SONM	Songino Array	52.68	2	P	P	18 15 14.3	0.0
	7.3nm,0.7s,baz=182,slow=8.9,SNR=28						
SONA1	Songino Array	52.69	2	eP	P	18 15 14.7	+0.3
MK01	Makanchi Array	54.87	342	eP	P	18 15 27.9	-2.3
MK31	Makanchi Array	54.89	342	eP	P	18 15 30.1	-0.3
MK32	Makanchi Array	54.89	342	eP	P	18 15 29.9	-0.4
MKAR	Makanchi Array	54.89	342	P	P	18 15 29.9	-0.4
	2.9nm,0.6s,baz=144,slow=8.0,SNR=26						
MKAR	Makanchi Array	54.89	342	eP	P	18 15 29.7	-0.7
	22nm,0.6s						
USA0B	Ussuriysk Arra	55.28	25	eP	P	18 15 31.6	-1.5
	6.2nm,0.8s						
USRK	Ussuriysk Ar.	55.28	25	P	P	18 15 32.8	-0.3
	5.1nm,0.7s,baz=216,slow=6.5						
KLR	Kul'dur	59.34	21	P	P	18 15 59.9	-1.8
	0.3nm,0.6s,baz=229,slow=4.6,SNR=15						
KURBB	Kurchatov Arra	59.44	342	P	P	18 16 01.5	-0.8
	2.1nm,0.8s,baz=161,slow=6.6,SNR=15						
KURBB				PcP	PcP	18 16 49.4	+0.5
	0.7nm,0.7s,baz=156,slow=3.8,SNR=4.7						
KURK	Kurchatov	59.50	342	eP	P	18 16 01.5	-1.2
KURK				ePcP	PcP	18 16 49.4	+0.3
ASAJ	Asahikawa	60.21	32	P	P	18 16 07.0	-0.6
	4.5nm,0.7s,baz=232,slow=8.7,SNR=11						
ASAJ	Asahikawa	60.21	32	eP	P	18 16 07.5	-0.2
	5.8nm,0.8s						
ZAA0	Zalesovo Array	60.80	347	eP	P	18 16 10.9	-0.5
	7.2nm,0.8s						
ZALV	Zalesovo Beam	60.80	347	P	P	18 16 10.4	-1.1
	4.9nm,0.5s,baz=157,slow=5.3,SNR=10						
ZALV	Zalesovo Beam	60.80	347	eP	P	18 16 10.1	-1.3
ZAA1	Zalesovo Array	60.80	347	eP	P	18 16 10.4	-1.1
BVAR	Borovoye Array	64.22	338	P	P	18 16 33.5	-0.8
	2.5nm,0.6s,baz=137,slow=7.3,SNR=16						
BRVK	Borovoye	64.29	338	eP	P	18 16 32.8	-1.9
	2.7nm,0.6s						
ABKAR	Akbulak array	65.95	330	eP	P	18 16 44.8	-0.8
KBZ	Khabaz	72.86	319	P	P	18 17 29.4	+1.2
	2.5nm,0.7s,baz=120,slow=7.6,SNR=3.9						
SYO	Syowa Base	76.19	199	⇑eP	P	18 17 48.8	+1.8
SEY	Seymchan	77.13	21	P	P	18 17 51.8	-0.6
	0.4nm,0.3s,baz=222,slow=9.5,SNR=4.2						
BR101	Keskin Array S	77.92	312	eP	P	18 17 57.9	+0.3
BRTR	Keskin Array B	77.92	312	P	P	18 17 57.9	+0.3
	1.5nm,0.8s,baz=124,slow=6.7,SNR=8.2						
BUR04	Bucovina Ar. S	85.82	318	eP	P	18 18 40.3	+1.6
TXAR	Lajitas Array	144.70	44	PKP	PKPbc	18 25 35.1	0.0
	0.7nm,0.8s,baz=17,slow=1.2,SNR=3.8						
JCT	Junction City	146.47	38	ePKPdf	PKPbc	18 25 40.1	-0.4
WVT	Waverly	147.31	17	ePKPbc	PKPbc	18 25 41.9	-0.7
TKL	Tuckaleechee C	148.76	11	ePKPbc	PKPbc	18 25 46.2	-0.3
GO02	Mina Guanaco	149.27	192	ePKPdf	PKPdf	18 25 41.9	-2.2

BJI ***10*** *18:09:40.9, 23°.23S×179°.11W, h539^{km}, mb4.9/49, mB4.8/32*

MOS ***10*** *18:09:41.0±0.9, 23°.35S×179°.84W, h520^{km}, mb5.1/19, Error ellipse: s-maj=10.1km s-min=9.3km az=84.2*

WEL ***10*** *18:09:42.0, 23°.55S×179°.78W, h540^{km}*

NEIC ***10*** *18:09:42.8±0.1, 23°.55S×179°.78W, mb4.9/148, Error ellipse: s-maj=5.1km s-min=3.6km az=133.0*

ISCJB ***10*** *18:09:42.0±0.4, 23°.47S±0°.03×179°.88W±0°.03, h536^{km}±6^{km}, mb4.8/190, Error ellipse: s-maj=4.7km s-min=3.6km az=44.5*

IDC ***10*** *18:09:43.5±0.8, 23°.43S×179°.81W, h542^{km}±8^{km}, mb4.3/34, mb1 4.3/37, mb1mx4.3/47, mbtmp5.2/37, Error ellipse: s-maj=8.6km s-min=8.0km az=120.0*

ISC 10 18:09:43.1±0.4, **23°.50S**±0°.04×**179°.67W**±0°.05, **h546^{km}**±3^{km}, **h547^{km}:pP-P, n656,** σ1^{s}**44**/791, **mb4.9**/189, **27C-28D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	Raoul Island	5.93	165	P	P	18 11 21.8	+1.1
RIZ				S	S	18 12 42.9	+2.2
RAO	Raoul Island	5.94	165	P	P	18 11 22.0	+1.2
	259nm,0.3s,baz=61,slow=6.3,SNR=14						
RAO				S	S	18 12 38.1	-2.8
	175nm,0.3s,baz=90,slow=20,SNR=8.6						
RAO	Raoul Island	5.94	165	eP	P	18 11 20.5	-0.3
RAO				eS	S	18 12 36.6	-4.3
RAO	Raoul Island	5.94	165	eP	P	18 11 20.5	-0.3
RAO				eS	S	18 12 36.6	-4.3
GLKZ	Green Lake	5.95	165	P	P	18 11 22.4	+1.5
GLKZ				S	S	18 12 41.6	+0.6
AFI	Afiamalu	12.11	39	P	P	18 12 19.5	-3.4
	5.7nm,0.3s,baz=207,slow=2.3,SNR=5.5						
AFI				S	S	18 14 26.3	-8.2
	1.7nm,0.3s,baz=225,slow=20,SNR=2.9						
AFI	Afiamalu	12.11	39	eP	P	18 12 19.8	-3.1
AFI				eS	S	18 14 28.4	-6.1
AFI	Afiamalu	12.11	39	eP	P	18 12 19.8	-3.1
AFI				eS	S	18 14 28.4	-6.1
DZM	Mont Dzumac	12.89	274	P	P	18 12 32.0	+1.0
	2.6nm,0.3s,baz=80,slow=18,SNR=23						
DZM	Mont Dzumac	12.89	274	eP	P	18 12 34.7	+3.7
	80nm,0.8s						
OUZ	Omahuta	13.07	205	eP	P	18 12 34.5	+2.0
OUZ	Omahuta	13.07	205	P	P	18 12 34.4	+1.9
GRZ	Great Barrier	13.39	197	P	P	18 12 36.9	+1.1
KUZ	Kuaotunu	13.79	196	P	P	18 12 40.8	+0.9
MXZ	Matakaoa Point	14.13	187	eP	P	18 12 41.6	-1.8
MXZ	Matakaoa Point	14.13	187	P	P	18 12 42.4	-1.0
MKAZ	Moumakai	14.28	197	P	P	18 12 45.9	+1.0
HAZ	Te Kaha	14.38	188	P	P	18 12 45.0	-1.0
PKGZ	Pakihiroa	14.48	187	P	P	18 12 44.8	-2.3
WHRZ	Whale Island	14.60	191	P	P	18 12 51.2	+2.9
RUGZ	Raukumara Rang	14.60	188	P	P	18 12 47.4	-1.0
RUGZ				S	S	18 15 16.4	-4.9
TGRZ	Tauranga	14.61	193	P	P	18 12 49.9	+1.5
PUZ	Puketiti	14.64	186	P	P	18 12 46.3	-2.5
OPRZ	Ohinepanea	14.66	192	P	P	18 12 48.5	-0.5
TOZ	Tahuroa Road	14.78	195	P	P	18 12 51.2	+1.0
KMRZ	Kaimai	14.79	194	P	P	18 12 51.6	+1.3
URZ	Urewera	14.97	190	P	P	18 12 49.4	-2.7
	13nm,0.3s,baz=276,slow=3.5,SNR=30						
URZ				S	S	18 15 21.8	-6.1
	2.4nm,0.3s,baz=183,slow=22,SNR=10						
URZ	Urewera	14.97	190	P	P	18 12 49.5	-2.7
URZ				S	S	18 15 23.7	-4.2
MWZ	Matawai	14.98	189	P	P	18 12 49.6	-2.7
MWZ				S	S	18 15 25.9	-2.3
MUGZ	Murupara	15.24	191	P	P	18 12 52.4	-2.6
MUGZ				S	S	18 15 28.7	-4.0
TLZ	Tolley Road	15.34	194	P	P	18 12 55.7	-0.4
MRHZ	Matea Rd	15.65	191	P	P	18 12 56.9	-2.3
MRHZ				S	S	18 15 37.9	-1.9
WATZ	Wairara	15.66	193	P	P	18 12 59.5	+0.2
HIZ	Hauiti	15.68	196	eP	P	18 12 59.9	+0.5
	52nm,0.5s						
HIZ	Hauiti	15.68	196	P	P	18 13 00.3	+0.9
RATZ	Rangitukua	15.81	193	P	P	18 12 59.4	-1.3
RITZ	Rihia Road	15.90	193	P	P	18 13 00.7	-0.8
BKZ	Black Stump Fm	15.96	191	eP	P	18 12 58.9	-3.4
	29nm,0.4s						
BKZ				eS	S	18 15 40.5	-4.6
BKZ	Black Stump Fm	15.96	191	P	P	18 12 58.8	-3.4

BKZ				S	S	18 15 41.7	-3.3
TWVZ	Taurewa	16.08	194	P	P	18 13 03.0	-0.4
WTVZ	West Tongariro	16.09	193	P	P	18 13 02.9	-0.6
NGZ	Ngauruhoe	16.14	193	P	P	18 13 03.2	-0.9
COVZ	Chateau Observ	16.18	193	P	P	18 13 04.1	-0.3
MCHZ	McNeill Hill	16.20	190	P	P	18 13 01.9	-2.6
MCHZ				S	S	18 15 45.6	-3.2
TUVZ	Tukino	16.22	193	P	P	18 13 02.9	-1.9
KWHZ	Kaweka Forest	16.22	191	P	P	18 13 03.6	-1.2
WHVZ	Whangaehu Hut	16.25	193	P	P	18 13 02.5	-2.6
TRVZ	Turoa	16.27	193	P	P	18 13 05.1	-0.3
VRZ	Vera Road	16.29	196	P	P	18 13 06.1	+0.9
PKVZ	Pokaka	16.30	194	P	P	18 13 03.2	-2.4
MOVZ	Moawhango	16.33	193	P	P	18 13 03.7	-2.1
BHHZ	Black Hill Sta	16.35	192	P	P	18 13 02.4	-3.6
MHEZ	Mangahewa	16.35	197	P	P	18 13 09.6	+3.7
KRHZ	Kereru	16.45	191	P	P	18 13 03.8	-2.9
KAHZ	Kahuranaki	16.51	189	P	P	18 13 05.5	-1.9
PKE	Pukeiti	16.55	198	P	P	18 13 10.7	+2.9
KHEZ	Kahui Hut	16.64	197	P	P	18 13 11.3	+2.7
LREZ	Lake Rotokare	16.69	196	P	P	18 13 09.9	+0.9
PNHZ	Pukenui	16.74	191	P	P	18 13 07.4	-2.0
PXZ	Pawanui	16.75	189	P	P	18 13 07.4	-2.1
NMEZ	Namu Road	16.79	198	P	P	18 13 12.2	+2.3
WAZ	Wanganui	16.83	194	P	P	18 13 10.6	+0.3
WPHZ	Waipukurau	16.84	190	P	P	18 13 10.1	-0.3
TSZ	Takapari Road	16.92	192	P	P	18 13 09.0	-2.1
PRHZ	Porangahau	17.01	190	P	P	18 13 10.6	-1.3
DVHZ	Dannevirke	17.12	191	P	P	18 13 11.5	-1.4
ANWZ	Angora Road	17.23	190	P	P	18 13 13.0	-0.8
BFZ	Birch Farm	17.48	190	eP	P	18 13 13.7	-2.4
	50nm,0.5s						
BFZ	Birch Farm	17.48	190	P	P	18 13 14.2	-2.0
MRZ	Mangatainoka R	17.58	192	P	P	18 13 14.6	-2.5
SNZO	South Karori	18.38	194	eP	P	18 13 23.1	-1.3
	164nm,1.3s						
RAR	Rarotonga	18.54	87	P	P	18 13 27.6	+1.4
	2.4nm,0.3s,baz=222,slow=10,SNR=4.5						
RAR	Rarotonga	18.54	87	eP	P	18 13 26.9	+0.7
	150nm,1.5s						
RAR	Rarotonga	18.54	87	eP	P	18 13 26.9	+0.7
RAR				pmax	pmax		
	comp=Z,150nm,1.5s						
THZ	Tophouse	19.25	197	eP	P	18 13 32.4	+0.1
	comp=Z,36nm,0.9s						
THZ				eS	S	18 16 34.7	-3.9
KHZ	Kahutara	19.70	195	eP	P	18 13 34.7	-1.7
	comp=Z,30nm,0.6s						
KHZ				eS	S	18 16 39.7	-6.0
LTZ	Lake Taylor	20.36	197	eP	P	18 13 41.4	-1.1
	comp=Z,81nm,0.6s						
LTZ				eS	S	18 16 55.0	-1.4
OXZ	Oxford	20.93	197	eP	P	18 13 46.7	-0.9
	comp=Z,105nm,0.7s						
OXZ				eS	S	18 16 60.0	-5.4
MQZ	McQueen's Vall	21.13	196	eP	P	18 13 47.7	-1.6
	comp=Z,45nm,1.3s						
MQZ				eS	S	18 17 06.4	-1.9
RPZ	Rata Peaks	21.57	199	P	P	18 13 52.6	-0.7
	comp=Z,44nm,0.5s,baz=40,slow=15,SNR=46						
RPZ				S	S	18 17 13.7	-1.7
	comp=Z,4.7nm,0.6s,baz=356,slow=19,SNR=2.6						
RPZ	Rata Peaks	21.57	199	eP	P	18 13 52.5	-0.8
	comp=Z,45nm,0.6s						
RPZ				eS	S	18 17 13.7	-1.7
FOZ	Fox Glacier	21.79	201	eP	P	18 13 53.9	-1.3
	comp=Z,21nm,0.6s						
KNTN	Kanton	21.99	22	eP	P	18 13 56.8	-0.6
	comp=Z,412nm,1.8s						
LBZ	Lake Benmore	22.44	199	eP	P	18 13 59.5	-1.6
	comp=Z,68nm,1.7s						
ODZ	Otahua Downs	22.90	198	eP	P	18 14 03.9	-1.3
	comp=Z,56nm,1.8s						
WKZ	Wanaka	23.20	201	eP	P	18 14 06.8	-1.2
	comp=Z,102nm,1.7s						
MLZ	Mavora Lakes	23.98	202	eP	P	18 14 15.5	+0.7
	comp=Z,46nm,1.3s						
HNR	Honiara	23.99	302	eP	P	18 14 13.8	-1.5
	comp=Z,137nm,0.8s						
HNR	Honiara	23.99	302	eP	P	18 14 13.8	-1.5
HNR				pmax	pmax		
	comp=Z,137nm,0.8s						
WHZ	Wether Hill Ro	24.50	201	eP	P	18 14 19.2	-0.2
	comp=Z,41nm,1.1s						
TARA	Tarawa	25.73	343	eP	P	18 14 30.4	-0.3
	comp=Z,167nm,1.3s						
ARMA	Armidale	26.45	249	eP	P	18 14 38.3	+1.3
	comp=Z,36nm,1.2s						
EIDS	Eidsvold	26.68	260	eP	P	18 14 39.0	+0.1
TBI	Tubuai	27.70	96	eP	P	18 14 50.0	+2.2
	comp=Z,149nm,1.0s						
PAE	Paea	28.73	84	eP	P	18 14 58.2	+1.3
	comp=Z,13nm,1.1s						
PPT2	Papeete2	28.75	84	eP	P	18 14 58.6	+1.4
	comp=Z,66nm,1.1s						
PPT	Papeete	28.75	84	P	P	18 14 58.0	+0.8
	comp=Z,47nm,0.7s,baz=166,slow=4.2,SNR=5.6						
PPTF	Pamatai, Papee	28.76	84	eP	P	18 14 57.5	+0.3
	comp=Z,161nm,1.3s						
TIAR	Tiarei	28.97	84	eP	P	18 15 01.0	+2.0
	comp=Z,18nm,0.9s						
TVO	Taravao	28.99	84	eP	P	18 15 00.8	+1.5
CAN	Canberra	29.61	239	eP	P	18 15 05.0	+0.6
	comp=Z,38nm,0.9s						
CAN	Canberra	29.61	239	eP	P	18 15 05.0	+0.6
CAN				pmax	pmax		
	comp=Z,38nm,0.9s						
PMOR	Pomariorio Ree	31.11	80	eP	P	18 15 19.0	+1.6
	comp=Z,80nm,1.0s						
VAH	Vaihoa	31.27	81	eP	P	18 15 20.0	+1.2
	comp=Z,44nm,1.1s						
CTA	Charters Tower	31.78	269	P	P	18 15 23.6	+0.4
	comp=Z,104nm,0.4s,baz=95,slow=11,SNR=217						
CTA				PcP	sP	18 17 58.0	+0.6
	comp=Z,4.8nm,0.7s,baz=104,slow=4.4,SNR=4.0						
CTAO	Charters Tower	31.78	269	eP	P	18 15 23.6	+0.4
	comp=Z,104nm,0.6s						
CTAO	Charters Tower	31.78	269	eP	P	18 15 23.6	+0.4
CTAO				pmax	pmax		
	comp=Z,104nm,0.6s						
RABL	Rabaul	33.28	301	eP	P	18 15 36.6	+0.7
	comp=Z,41nm,0.8s						
XMAS	Kiritimati	33.35	43	eP	P	18 15 38.0	+1.4
	comp=Z,259nm,1.5s						
TAU	Tasmania Unive	33.43	227	eP	P	18 15 37.6	+0.8
	comp=Z,47nm,1.1s						
TAU	Tasmania Unive	33.43	227	eP	P	18 15 37.6	+0.8
TAU				pmax	pmax		
	comp=Z,47nm,1.1s						
STKA	Stephens Creek	35.16	248	P	P	18 15 51.7	+0.3
	comp=Z,25nm,0.6s,baz=94,slow=11,SNR=59						
STKA				PcP	PcP	18 18 08.6	+1.2
	comp=Z,6.5nm,0.5s,baz=90,slow=3.0,SNR=4.0						
STKA	Stephens Creek	35.16	248	eP	P	18 15 51.9	+0.4
	comp=Z,5.8nm,0.6s						
STKA				ePcP	PcP	18 18 08.6	+1.2
STKA	Stephens Creek	35.16	248	eP	P	18 15 51.9	+0.4
STKA				e		18 18 08.6	
STKA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
COEN	Coen	36.35	278	eP	P	18 16 01.8	+0.2
	comp=Z,15nm,0.8s						
BBOO	Buckleboo	39.88	246	eP	P	18 16 29.4	-0.7
	comp=Z,64nm,1.3s						
BBOO				ePP	PcP	18 18 22.9	+0.7
AS01	Alice Springs	42.36	260	eP	P	18 16 49.4	-0.5
AS01				epP	PcP	18 18 30.8	+0.1
AS31	Alice Springs	42.40	260	eP	P	18 16 49.8	-0.4
	comp=Z,21nm,1.0s						
AS31				eS	S	18 22 30.3	-2.4
ASAR	Alice Springs	42.40	260	P	P	18 16 50.0	-0.3
	comp=Z,59nm,0.8s,baz=94,slow=7.3,SNR=504						
ASAR				PcP	PcP	18 18 31.1	+0.3
	comp=Z,7.7nm,0.9s,baz=95,slow=4.3,SNR=7.2						
ASAR				ScP	ScP	18 21 31.8	+2.0
	comp=Z,2.3nm,0.9s,baz=110,slow=4.2,SNR=5.0						
ASAR				S	S	18 22 29.9	-2.8
	comp=Z,5.6nm,0.7s,baz=97,slow=14,SNR=20						
WB2	Warramunga Arr	42.73	266	eP	P	18 16 52.1	-0.7
	comp=Z,74nm,0.7s						
WB2				eS	S	18 22 32.1	-5.2
WRAB	Tennant Creek	42.73	266	eP	P	18 16 51.8	-1.0
	comp=Z,68nm,0.8s						
WRAB				eS	S	18 22 30.4	-6.9
WRAB	Tennant Creek	42.73	266	eP	P	18 16 51.8	-1.0
WRAB				eS	S	18 22 30.5	-6.9
WRAB				pmax	pmax		
	comp=Z,67nm,0.8s						
WR1	Warramunga Arr	42.74	266	eP	P	18 16 51.8	-1.1
	comp=Z,98nm,0.8s						
WR1				epP	PcP	18 18 31.6	-0.4
WR1				eScP	ScP	18 21 31.4	+0.3
WR1				eS	S	18 22 31.8	-5.7
WR1				e		18 25 33.0	
WRA	Warramunga Arr	42.74	266	P	P	18 16 51.8	-1.1
	comp=Z,40nm,0.4s,baz=93,slow=8.5,SNR=548						
WRA				PcP	PcP	18 18 31.6	-0.4
	comp=Z,7.5nm,0.6s,baz=100,slow=3.5,SNR=7.8						
WRA				ScP	ScP	18 21 31.4	+0.3
	comp=Z,2.3nm,0.8s,baz=97,slow=4.1,SNR=5.0						
WRA				S	S	18 22 31.8	-5.7
	comp=Z,9.8nm,1.0s,baz=104,slow=14,SNR=16						
WRA				PKiKP	PKiKP	18 25 33.0	-1.3
	comp=Z,0.6nm,0.6s,baz=80,slow=0.5,SNR=5.0						
JAY	Jayapura	43.64	293	P	P	18 16 59.4	-0.5
GENI	Genyem	44.05	292	P	P	18 17 02.7	-0.4
WAKE	Wake Island	44.56	341	eP	P	18 17 06.3	-0.5
	comp=Z,257nm,1.4s						
FORT	Forrest	46.74	249	eP	P	18 17 22.7	-0.7
	comp=Z,166nm,0.6s						
FORT				ePcP	PcP	18 18 44.5	-1.3
WRKA	Warakurna	47.22	257	P	P	18 17 26.9	-0.3
	baz=47,SNR=532						
MTN	Manton Dam	47.73	274	P	P	18 17 29.7	-1.3
	baz=48,SNR=85						
MTN	Manton Dam	47.73	274	eP	P	18 17 30.0	-1.1
	comp=Z,31nm,0.6s						
MTN				ePcP	PcP	18 18 50.0	+0.4
SRPI	Serui, Papua	47.79	290	P	P	18 17 31.3	-0.2
KHU	Kahuku	48.53	31	eP	P	18 17 38.5	+1.3
	comp=Z,292nm,1.5s						
KHU	Kahuku	48.53	31	eP	P	18 17 38.5	+1.3
KHU				pmax	pmax		
	comp=Z,292nm,1.5s						
KNRA	Kununurra	48.99	269	P	P	18 17 40.2	-0.3
	baz=49,SNR=63						
RKPI	Ransiki, Papua	49.75	289	P	P	18 17 43.8	-2.2
GUMO	Guam	50.62	313	P	P	18 17 51.6	-0.7
	comp=Z,127nm,0.7s,baz=150,slow=7.8,SNR=17						
FAKI	Fak Fak	50.76	286	P	P	18 17 52.4	-1.0
FAKI	Fak Fak	50.76	286	eP	P	18 17 52.5	-1.0
	comp=Z,65nm,1.2s						
FITZ	Fitzroy Crossi	51.16	265	P	P	18 17 55.9	-0.4
	baz=51,SNR=91						
FITZ	Fitzroy Crossi	51.16	265	eP	P	18 17 56.1	-0.2
	comp=Z,47nm,0.8s						
KMBL	Kambalda	51.96	248	P	P	18 18 01.1	-0.8
	baz=52,SNR=8.4						
AAI	Ambon	54.01	283	P	P	18 18 14.9	-1.8
PALU	Palau	54.28	299	P	P	18 18 18.2	-0.4
	baz=54,SNR=8.4						
SBA	Scott Base	54.80	183	eP	P	18 18 24.8	+3.6
	comp=Z,16nm,1.3s						
SBA				ePcP	PcP	18 19 17.4	+2.3
SBA	Scott Base	54.80	183	eP	P	18 18 24.8	+3.6
SBA				e		18 19 17.4	
SBA				pmax	pmax		
	comp=Z,16nm,1.3s						
VNDA	Vanda	54.81	185	P	P	18 18 23.4	+2.1
	comp=Z,2.2nm,0.4s,baz=16,slow=7.6,SNR=27						
VNDA				PcP	PcP	18 19 16.3	+1.1
	comp=Z,4.3nm,0.6s,baz=350,slow=5.8,SNR=11						
VNDA				ScP	ScP	18 22 22.4	+0.9
	comp=Z,2.7nm,0.8s,baz=357,slow=4.1,SNR=9.4						
VNDA	Vanda	54.81	185	eP	P	18 18 23.5	+2.3
VNDA				ePcP	PcP	18 19 16.9	+1.7
VNDA				eScP	ScP	18 22 22.7	+1.2
VNDA	Vanda	54.81	185	eP	P	18 18 23.5	+2.3
VNDA				e		18 19 16.9	
SOEI	Soe	55.12	274	P	P	18 18 25.7	+1.1
SOEI	Soe	55.12	274	eP	P	18 18 25.5	+1.0
	comp=Z,172nm,0.9s						
NLAI	Namlea	55.19	283	P	P	18 18 24.6	-0.3
KLBR	Kellerberrin	55.43	247	P	P	18 18 26.1	-0.2
	baz=55,SNR=17						
BATI	Baumata	55.50	274	P	P	18 18 27.9	+0.7
	comp=Z,108nm,0.5s,baz=153,slow=4.5,SNR=33						
BATI	Baumata	55.50	274	P	P	18 18 26.4	-0.8
MEEK	Meekatharra	55.52	253	P	P	18 18 26.2	-0.9
	baz=56,SNR=44						
NWAO	Narrogin (SRO)	55.68	245	P	P	18 18 27.9	-0.2
	baz=56,SNR=32						
NWAO	Narrogin (SRO)	55.68	245	P	P	18 18 27.9	-0.2
	comp=Z,18nm,0.4s,baz=27,slow=6.8,SNR=50						
RKGY	Rocky Gully	55.69	243	P	P	18 18 28.3	+0.1
	baz=56,SNR=19						
MBWA	Marble Bar	55.74	260	eP	P	18 18 27.7	-1.0
	comp=Z,76nm,0.8s						
LBMI	Labuha	56.01	286	P	P	18 18 30.3	-0.4
BLDU	Ballidu	56.46	248	P	P	18 18 33.2	-0.4
	baz=56,SNR=180						
MUN	Mundaring	56.67	246	P	P	18 18 35.0	0.0
	baz=57,SNR=13						
SANI	Sanana	56.71	284	P	P	18 18 34.6	-0.9
TNTI	Ternate	56.80	287	P	P	18 18 35.5	-0.6
TNTI	Ternate	56.80	287	eP	P	18 18 35.5	-0.6
	comp=Z,58nm,1.0s						
MORW	Morawa	57.30	250	P	P	18 18 39.0	-0.3
	baz=57,SNR=26						
MMRI	Maumere	57.39	275	P	P	18 18 39.6	-0.5
MMRI	Maumere	57.39	275	eP	P	18 18 39.2	-0.9
	comp=Z,102nm,1.0s						
EDFI	Ende, Flores	57.85	274	P	P	18 18 42.5	-0.9
BASI	Baing, Sumba	58.33	272	P	P	18 18 46.9	+0.4
WSI	Waingapu	58.78	273	P	P	18 18 49.6	+0.1
	comp=Z,570nm,0.8s,comp=Z,30µm						
WBSI	Waikabubak, Su	59.63	272	P	P	18 18 54.4	-0.8
KMSI	Cibinong	59.69	285	P	P	18 18 54.8	-0.8
LUWI	Luwuk	60.03	283	P	P	18 18 57.2	-0.6
LUWI	Luwuk	60.03	283	eP	P	18 18 57.3	-0.6
	comp=Z,104nm,1.0s						
GIRL	Giralia	60.30	256	P	P	18 19 00.1	+0.5
	baz=60,SNR=12						
CASY	Casey	60.61	206	eP	P	18 19 01.0	+0.3
	comp=Z,17nm,0.8s						
BKSI	Bulukumba	60.61	277	P	P	18 19 01.0	-0.7
APSI	Ampana	61.09	283	P	P	18 19 05.1	+0.2
PLAI	Plampang	61.41	273	P	P	18 19 06.2	-0.7
MRSI	Marisa	61.45	284	P	P	18 19 05.6	-1.6
DAV	Davao City (W)	61.49	293	eP	P	18 19 05.9	-1.5
	comp=Z,192nm,0.5s						
SPSI	Sidrap Palu	61.49	279	P	P	18 19 06.1	-1.4
TTSI	Tana Toraja	61.83	280	P	P	18 19 09.1	-0.6
CBIJ	Chichi jima	62.35	322	eP	P	18 19 12.6	-0.2
	comp=Z,58nm,0.6s						
JCJ	Chichijima	62.35	322	P	P	18 19 12.2	-0.5
	comp=Z,55nm,0.6s,baz=176,slow=19						
JAGI	Jajag, Banyuwa	64.86	272	eP	P	18 19 27.7	-1.5
	comp=Z,145nm,1.6s						
QSPA	South Pole Qui	66.59	180	P	P	18 19 40.8	+1.7
	comp=Z,15nm,0.8s,baz=0.0,slow=8.1,SNR=33						
MYLDM	Lahad Datu	66.67	287	eP	P	18 19 42.3	+1.9
	comp=Z,33nm,1.1s						
JHJ2	Mitsune	68.27	324	eP	P	18 19 50.1	+0.4
	comp=Z,414nm,1.8s						
JHJ	Hachijo jima 2	68.29	324	P	P	18 19 49.1	-0.8
	comp=Z,39nm,0.5s,baz=72,slow=19,SNR=9.0						
UGM	Wanagama	68.40	271	eP	P	18 19 50.5	-0.5
	comp=Z,298nm,1.5s						
SMRI	Semarang	68.80	271	eP	P	18 19 53.8	+0.3
	comp=Z,307nm,1.8s						
KKM	Kota Kinabalu	69.08	287	eP	P	18 19 55.2	0.0
	comp=Z,108nm,1.5s						
JOW	Kunigami	70.95	312	P	P	18 20 06.1	+0.2
	comp=Z,54nm,0.7s,baz=131,slow=4.6,SNR=7.9						
JOW	Kunigami	70.95	312	eP	P	18 20 06.7	+0.8
	comp=Z,66nm,0.9s						
CISI	Cisompet, Garu	71.02	270	eP	P	18 20 05.5	-1.2
	comp=Z,137nm,1.5s						
SBUM	Sibu	71.03	281	eP	P	18 20 06.7	0.0
	comp=Z,10nm,0.9s						
INU	Inuyama	71.47	324	eP	P	18 20 09.4	+0.7
	comp=Z,15nm,0.8s						
LEM	Lembang	71.48	271	P	P	18 20 09.6	+0.1
	comp=Z,96nm,0.8s,baz=100,slow=7.3,SNR=10.0						
MJAR	Matsushiro Arr	71.74	325	P	P	18 20 10.0	-0.3
	comp=Z,12nm,0.8s,baz=169,slow=6.0,SNR=42						
MAJO	Matsushiro	71.74	325	eP	P	18 20 10.2	-0.1
	comp=Z,20nm,0.9s						
MAJO	Matsushiro	71.74	325	d iP	P	18 20 10.0	-0.3
MAJO				pmax	pmax		
	comp=Z,23nm,0.9s						
MAT	Matsushiro	71.74	325	P	P	18 20 10.2	-0.1
MJB9	Matsu-Tunnel	71.74	325	eP	P	18 20 10.6	+0.2
	comp=Z,20nm,0.9s						
KSM	Kuching	72.34	280	eP	P	18 20 14.1	-0.2
	comp=Z,50nm,0.8s						
YOJ	Yonaguni jima	73.23	307	eP	P	18 20 19.1	0.0
	comp=Z,126nm,1.1s						
YOJ	Yonaguni jima	73.23	307	eP	P	18 20 19.1	0.0
YOJ				pmax	pmax		
	comp=Z,126nm,1.1s						
JNU	Nakatsue	73.43	318	P	P	18 20 19.7	-0.4
	comp=Z,24nm,1.1s,baz=122,slow=4.9,SNR=6.9						
JNU	Nakatsue	73.43	318	eP	P	18 20 20.3	+0.2
	comp=Z,52nm,1.4s						
ERM	Erimo	73.69	332	eP	P	18 20 21.1	-0.2
	comp=Z,14nm,0.8s						
ERM	Erimo	73.69	332	eP	P	18 20 21.1	-0.2
ERM				pmax	pmax		
	comp=Z,14nm,0.8s						
TWG	Pinlang	73.73	304	eP	P	18 20 20.7	-1.3
	comp=Z,54nm,0.5s						
YULB	Yu-li	73.89	305	eP	P	18 20 22.1	-0.9
	comp=Z,10nm,0.8s						
NACB	Ninganchiao	74.11	306	eP	P	18 20 23.2	-1.0
	comp=Z,61nm,1.0s						
TPUB	Ta-pu	74.34	304	eP	P	18 20 24.1	-1.4
	comp=Z,33nm,0.8s						
SSLB	Suanglung	74.37	305	eP	P	18 20 24.4	-1.3
	comp=Z,28nm,0.8s						
YHNB	Yeheng	74.56	306	eP	P	18 20 26.4	-0.4
	comp=Z,39nm,0.9s						
TATO	Taipei	74.66	306	eP	P	18 20 26.6	-0.6
	comp=Z,81nm,0.8s						
KIWB	Kanaga Island	75.05	2	eP	P	18 20 28.1	-0.7
GSTR	Great Sitkin T	75.33	2	eP	P	18 20 29.8	-0.6
ATKA	Atka Island	75.52	3	eP	P	18 20 31.3	-0.1
	comp=Z,72nm,0.8s						
ASAJ	Asahikawa	75.64	333	P	P	18 20 33.8	+1.6
	comp=Z,27nm,0.8s,baz=177,slow=9.2,SNR=69						
ASAJ	Asahikawa	75.64	333	eP	P	18 20 33.9	+1.6
	comp=Z,34nm,0.8s						
NIKH	Nikolski High	76.72	7	eP	P	18 20 38.4	+0.4
	comp=Z,120nm,0.7s						
SKR	Severo-Kuril's	76.89	344	⇑eP	P	18 20 39.7	+0.8
TJN	Taejon	77.75	319	ceP	P	18 20 45.5	+1.5
UNV	Unalaska Valle	77.86	8	eP	P	18 20 44.1	0.0
	comp=Z,176nm,1.8s						
YSS	Yuzh-Sakhalins	77.90	335	eP	P	18 20 46.3	+1.8
	comp=Z,37nm,0.7s						
YSS	Yuzh-Sakhalins	77.90	335	⇓iP	P	18 20 46.0	+1.5
YSS				pmax	pmax		
	comp=Z,40nm,0.8s						
KS15	Wonju Array Si	78.15	320	eP	P	18 20 46.9	+0.8
KS01	Wonju Array Si	78.17	320	eP	P	18 20 47.5	+1.4
MAW	Mawson	78.23	200	P	P	18 20 47.6	+1.5
	baz=78,SNR=12						
MAW	Mawson	78.23	200	P	P	18 20 47.3	+1.2
	comp=Z,11nm,0.6s,baz=139,slow=6.1,SNR=33						
MAW	Mawson	78.23	200	eP	P	18 20 47.3	+1.2
	comp=Z,6.0nm,1.2s						
AKUT	Akutan	78.23	8	eP	P	18 20 46.2	+0.1
MYKOM	Kota Tinggi	78.34	277	eP	P	18 20 47.7	0.0
	comp=Z,22nm,0.8s						
PET	Petropavlovsk	78.50	347	eP	P	18 20 47.2	-0.3
	comp=Z,13nm,0.7s						
PET	Petropavlovsk	78.50	347	⇑iP	P	18 20 47.8	+0.3
PET				pmax	pmax		
	comp=Z,21nm,0.6s						
PEA0B	Petropavlovsk-	78.78	346	eP	P	18 20 50.2	+1.1
	comp=Z,39nm,0.9s						
PETK	Petropavlovsk-	78.78	346	P	P	18 20 49.4	+0.3
	comp=Z,26nm,0.7s,baz=125,slow=7.4						
PETK	Petropavlovsk-	78.78	346	eP	P	18 20 49.7	+0.6
PETK	Petropavlovsk-	78.78	346	eP	P	18 20 49.7	+0.6
PEA1	Petropavlovsk-	78.78	346	eP	P	18 20 49.4	+0.3
MSHR	Mys Shultsa	79.86	325	i P	P	18 20 55.6	+0.6
USA0B	Ussuriysk Arra	80.59	327	eP	P	18 21 00.1	+1.3
	comp=Z,33nm,1.1s						
USRK	Ussuriysk Ar.	80.59	327	P	P	18 20 59.9	+1.1
	comp=Z,20nm,0.9s,baz=137,slow=4.2						
NJ2	Nanjing	80.63	311	eP	P	18 21 00.4	+1.1
NJ2				pmax	pmax		
	comp=Z,32nm,0.6s						
SBI	Santa Barbara	80.88	48	eP	P	18 21 03.6	+3.1
TYV	Tymovskoe	81.15	337	eP	P	18 21 02.8	+1.3
TYV				pmax	pmax		
	comp=E,500nm,2.0s						
TYV				pmax	pmax		
	comp=Z,368nm,1.2s						
TYV				pmax	pmax		
	comp=Z,100nm,2.0s						
TYV				pmax	pmax		
	comp=Z,31nm,1.1s						
CHGN	Chignik	81.50	12	eP	P	18 21 03.9	+0.8
IPM	Ipoh	82.01	278	eP	P	18 21 07.3	+0.4
	comp=Z,32nm,0.7s						
DPP	Dos Picos Cty	82.03	49	eP	P	18 21 05.0	-1.6
MDJ	Mudanjiang	82.10	326	P	P	18 21 05.4	-1.1
MDJ				pmax	pmax		
	comp=Z,40nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,160nm,4.9s						
MDJ	Mudanjiang	82.10	326	eP	P	18 21 07.8	+1.3
	comp=Z,33nm,0.9s						
ISA	Isabella, Lake	82.52	46	eP	P	18 21 11.2	+2.2
	comp=Z,6.8nm,0.8s						
ISA	Isabella, Lake	82.52	46	eP	P	18 21 11.2	+2.2
ISA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CMB	Columbia Colle	82.70	43	eP	P	18 21 11.4	+1.5
	comp=Z,44nm,0.3s						
AFDM	Forest Hills D	82.89	42	eP	P	18 21 12.7	+2.0
	comp=Z,6.8nm,1.0s						
ORV	Oroville	82.94	41	eP	P	18 21 12.8	+1.9
	comp=Z,6.5nm,1.0s						
WDC	Whiskeytown Da	82.95	40	eP	P	18 21 12.9	+1.9
	comp=Z,9.4nm,1.1s						
WHN	Wuhan	83.00	307	⇓iP	P	18 21 12.3	+0.9
WHN				pmax	pmax		
	comp=Z,42nm,0.7s						
PSI	Prapat	83.24	276	P	P	18 21 11.8	-1.3
	comp=Z,16nm,0.8s,baz=181,slow=5.9,SNR=9.0						
PSI	Prapat	83.24	276	eP	P	18 21 11.4	-1.8
	comp=Z,17nm,0.8s						
PSI	Prapat	83.24	276	eP	P	18 21 11.4	-1.8
PSI				pmax	pmax		
	comp=Z,17nm,0.8s						
GSC	Goldstone, Bar	83.43	47	eP	P	18 21 15.0	+1.4
	comp=Z,4.3nm,0.8s						
GSC	Goldstone, Bar	83.43	47	eP	P	18 21 15.0	+1.4
GSC				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GRNR	Gornyy	83.47	334	eP	P	18 21 17.0	+3.7
GRNR				pmax	pmax		
	comp=Z,84nm,1.0s						
SYO	Syowa Base	83.47	193	⇑eP	P	18 21 13.0	-0.1
SYO	Syowa Base	83.47	193	⇓ePcP	PcP	18 21 16.4	+0.3
WAKR	Walker	83.58	43	eP	P	18 21 16.8	+2.5
	comp=Z,11nm,1.0s						
YBH	Yreka Blue Hor	83.58	39	P	P	18 21 15.2	+1.0
	comp=Z,3.4nm,0.8s,baz=207,slow=6.8,SNR=7.4						
YBH	Yreka Blue Hor	83.58	39	eP	P	18 21 16.6	+2.4
	comp=Z,5.8nm,1.0s						
YBH	Yreka Blue Hor	83.58	39	eP	P	18 21 16.6	+2.4
YBH				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CN2	Changchun	83.75	323	eP	P	18 21 15.7	+0.9
CN2				pmax	pmax		
	comp=Z,30nm,1.0s						
PNTR	Pine Nut	83.83	43	eP	P	18 21 17.5	+1.9
	comp=Z,11nm,0.9s						
TIA	Tai'an	84.17	313	P	P	18 21 18.1	+1.0
TIA				pmax	pmax		
	comp=Z,45nm,0.9s						
NV01	Mina Array Sit	84.25	44	eP	P	18 21 19.2	+1.5
NV01				epP	pP	18 23 16.3	+0.5
NVAR	Mina Array Bea	84.25	44	P	P	18 21 19.1	+1.3
	comp=Z,2.8nm,0.9s,baz=220,slow=7.7,SNR=16						
NVAR				pP	pP	18 23 17.4	+1.5
	comp=Z,0.1nm,0.3s,baz=230,slow=5.6,SNR=2.3						
PAHR	Pah Rah Range	84.33	42	eP	P	18 21 19.7	+1.7
	comp=Z,6.5nm,1.0s						
KLR	Kul'dur	84.33	330	P	P	18 21 18.3	+0.7
	comp=Z,0.6nm,0.9s,baz=116,slow=3.1,SNR=18						
NV11	Mina Array Sit	84.35	44	eP	P	18 21 19.6	+1.4
	comp=Z,0.3nm,1.1s						

KVN	Kaiserville	84.74	43	eP	P	18 21 20.9	+0.8
	comp=Z,18nm,1.9s						
SNAA	Sanae	85.06	179	P	P	18 21 21.1	+0.1
SNAA				S	S	18 31 04.3	-0.5
SNAA	Sanae	85.06	179	pP	pP	18 23 21.4	+2.2
SNAA	Sanae	85.06	179	P	P	18 21 21.2	+0.1
	comp=Z,4.0nm,0.5s,baz=214,slow=6.7,SNR=116						
SNAA	Sanae	85.06	179	eP	P	18 21 20.6	-0.4
	comp=Z,4.7nm,0.5s						
SNAA	Sanae	85.06	179	eP	P	18 21 20.6	-0.4
SNAA				pmax	pmax		
	comp=Z,5.0nm,0.5s						
K05A	Summer Lake	85.25	39	eP	P	18 21 23.7	+1.2
	comp=Z,14nm,1.0s						
VNA3	Neumayer Olymp	85.26	177	P	P	18 21 22.1	+0.2
VNA3				S	S	18 31 07.7	+1.2
VNA3	Neumayer Olymp	85.26	177	pP	pP	18 23 21.3	+1.1
W13A	Hualapai Mount	85.30	49	eP	P	18 21 25.0	+2.1
	comp=Z,3.1nm,0.9s						
NVL	N’lazarevskaya	85.65	184	⇑iP	P	18 21 24.3	+0.6
NVL				pmax	pmax		
	comp=Z,14nm,0.8s						
PINE	Pine Mountain	85.89	38	eP	P	18 21 27.5	+2.0
	comp=Z,35nm,1.6s						
VNA1	Neumayer--Stat	85.92	177	P	P	18 21 25.3	+0.3
VNA1	Neumayer--Stat	85.92	177	pP	pP	18 23 25.6	+2.1
CNPM	China Poot	85.96	14	eP	P	18 21 26.1	+0.9
	comp=Z,20nm,0.8s						
BRLK	Bradley Lake	86.25	14	eP	P	18 21 26.9	+0.3
	comp=Z,20nm,1.1s						
MA2	Magadan	86.26	345	P	P	18 21 26.8	+0.1
	comp=Z,27nm,0.8s,baz=142,slow=4.8,SNR=39						
MA2	Magadan	86.26	345	eP	P	18 21 26.5	-0.1
	comp=Z,34nm,0.8s						
MA2	Magadan	86.26	345	eP	P	18 21 26.5	-0.1
MA2				pmax	pmax		
	comp=Z,34nm,0.8s						
HOOD	Mount Hood Mea	86.44	37	eP	P	18 21 28.1	+0.1
ENH	Enshi	86.46	305	eP	P	18 21 28.9	+0.6
	comp=Z,44nm,0.8s						
LCMT	Little Creek M	86.77	47	eP	P	18 21 32.0	+2.2
	comp=Z,3.9nm,0.9s						
GYA	Guiyang	86.81	301	eP	P	18 21 31.0	+0.8
GYA				pP	pP	18 23 29.6	+0.5
GYA				sP	sP	18 24 22.0	-2.2
GYA				PP	PP	18 25 05.5	+2.3
GYA				SKS	SKSac	18 31 05.2	-0.3
GYA				S	S	18 31 22.3	-0.5
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,5.6s						
I07A	Izee	86.88	39	eP	P	18 21 32.5	+2.4
	comp=Z,6.9nm,0.8s						
BJT	Baijiatuau	86.94	316	eP	P	18 21 30.7	+0.4
	comp=Z,17nm,0.8s						
BJT	Baijiatuau	86.94	316	eP	P	18 21 30.7	+0.4
BJT				pmax	pmax		
	comp=Z,17nm,0.8s						
BJI	Beijing	86.95	316	⇓iP	P	18 21 31.1	+0.8
BJI				pmax	pmax		
	comp=Z,28nm,0.7s						
CCUT	Cedar City	86.98	47	eP	P	18 21 33.3	+2.4
	comp=Z,3.8nm,1.0s						
CCUT				epP	pP	18 23 32.6	+2.6
J08A	Circle Bar Ran	87.05	40	eP	P	18 21 32.8	+1.9
	comp=Z,19nm,1.3s						
U15A	North Rim	87.11	48	eP	P	18 21 34.0	+2.5
	comp=Z,8.7nm,0.9s						
U15A				epP	pP	18 23 32.9	+2.2
PSUT	Pine Spring	87.19	46	eP	P	18 21 33.7	+1.9
	comp=Z,2.2nm,0.9s						
PSUT				epP	pP	18 23 34.0	+3.0
D05A	Enumclaw	87.43	35	eP	P	18 21 34.5	+2.1
	comp=Z,39nm,1.1s						
G08A	Pilot Rock	87.92	38	eP	P	18 21 36.8	+1.9
	comp=Z,12nm,0.9s						
MTPU	Mount Pierson	88.03	47	eP	P	18 21 38.5	+2.5
	comp=Z,4.3nm,0.8s						
SKT	Skwentna	88.12	13	eP	P	18 21 34.9	-0.4
	comp=Z,6.6nm,0.8s						
LTY	Liberty	88.17	36	eP	P	18 21 34.5	-1.5
	comp=Z,8.9nm,1.0s						
PMR	Palmer	88.28	14	eP	P	18 21 36.4	+0.4
	comp=Z,19nm,0.9s						
PMR	Palmer	88.28	14	eP	P	18 21 36.4	+0.4
PMR				pmax	pmax		
	comp=Z,19nm,0.9s						
GHO	Glory Hole Cre	88.49	14	eP	P	18 21 37.3	+0.2
	comp=Z,42nm,0.8s						
BMO	Blue Mountains	88.61	39	eP	P	18 21 39.4	+1.2
	comp=Z,9.3nm,1.4s						
MFID	Camas Ranch	88.66	41	eP	P	18 21 40.3	+1.9
	comp=Z,11nm,1.0s						
DIV	Divide	88.67	16	eP	P	18 21 38.7	+0.8
	comp=Z,19nm,1.0s						
XAN	Xi’an	88.73	308	P	P	18 21 40.1	+1.2
XAN				pmax	pmax		
	comp=Z,36nm,0.8s						
XAN				pmax	pmax		
	comp=Z,80nm,4.7s						
SCM	Sheep Creek Mo	88.91	15	eP	P	18 21 39.7	+0.6
	comp=Z,28nm,0.8s						
SCM	Sheep Creek Mo	88.91	15	eP	P	18 21 39.7	+0.6
SCM				pmax	pmax		
	comp=Z,28nm,0.8s						
SEY	Seymchan	88.94	348	P	P	18 21 39.3	+0.3
	comp=Z,20nm,0.8s,baz=159,slow=5.2,SNR=117						
SEY	Seymchan	88.94	348	deP	P	18 21 39.6	+0.5
KLU	Klutina	88.95	15	eP	P	18 21 39.8	+0.5
	comp=Z,16nm,1.3s						
LAMP	Lampang	89.11	291	P	P	18 21 42.9	+2.0
	comp=Z,17nm,0.9s,comp=Z,127nm						
TGL	Tana Glacier	89.11	17	eP	P	18 21 40.7	+0.6
	comp=Z,17nm,0.9s						
Q16A	Castle Valley	89.17	47	eP	P	18 21 43.1	+2.1
	comp=Z,4.1nm,0.9s						
F10A	Beach Ranch, E	89.31	38	eP	P	18 21 42.3	+1.0
	comp=Z,10nm,1.1s						
CAST	Castle Rocks	89.31	12	eP	P	18 21 40.1	-0.8
	comp=Z,18nm,0.8s						
TMUT	Trail Mountain	89.34	46	eP	P	18 21 44.3	+2.4
	comp=Z,12nm,0.8s						
KMI	Kunming	89.35	298	P	P	18 21 43.0	+0.8
KMI				pmax	pmax		
	comp=Z,22nm,1.0s						
KMI				pmax	pmax		
	comp=Z,93nm,4.8s						
ZEA	Zeya	89.50	332	eP	P	18 21 43.0	+1.1
ZEA				pmax	pmax		
	comp=N,20nm,0.7s						
ZEA				pmax	pmax		
	comp=Z,28nm,0.8s						
HLID	Hailey	89.59	41	eP	P	18 21 44.6	+1.8
	comp=Z,7.2nm,1.0s						
HVU	Hansel Valley	89.64	43	eP	P	18 21 44.8	+1.8
	comp=Z,6.9nm,0.9s						
HVU	Hansel Valley	89.64	43	eP	P	18 21 44.8	+1.8
HVU				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CM01	Chiang Mai Arr	89.64	290	eP	P	18 21 44.7	+1.3
CM31	Chiang Mai Arr	89.67	290	eP	P	18 21 45.1	+1.6
CMAR	Chiang Mai Arr	89.67	290	P	P	18 21 45.2	+1.7
	comp=Z,17nm,0.9s,baz=137,slow=3.2,SNR=101						
CMAR				pP	pP	18 23 42.4	-0.9
	comp=Z,0.2nm,0.3s,baz=107,slow=3.1,SNR=0.8						
TRF	Thorofare Moun	89.69	13	eP	P	18 21 42.4	-0.4
	comp=Z,18nm,0.8s						
SRU	San Rafael Swe	89.70	47	eP	P	18 21 45.1	+1.7
	comp=Z,9.7nm,0.9s						
CTU	Camp Tracy	89.72	45	eP	P	18 21 45.5	+2.0
	comp=Z,5.4nm,0.9s						
CMMT	Chiang Mai	89.82	291	P	P	18 21 45.3	+1.1
	comp=Z,35nm,1.0s,comp=Z,358nm						
CHTO	Chiang Mai	89.82	291	eP	P	18 21 45.5	+1.2
	comp=Z,30nm,0.9s						
CHTO	Chiang Mai	89.82	291	P	P	18 21 45.4	+1.2
	comp=Z,154nm,1.2s,comp=Z,2µm						
TX31	Lajitas Ar. Si	89.96	58	eP	P	18 21 46.7	+1.9
TXAR	Lajitas Array	89.96	58	P	P	18 21 47.3	+2.6
	comp=Z,2.0nm,0.7s,baz=212,slow=6.8,SNR=13						
TXAR				pP	pP	18 23 45.5	+0.9
	comp=Z,0.3nm,0.5s,baz=246,slow=6.5,SNR=2.7						
TXAR				PKKPbc	PKKPbc	18 39 13.6	+0.4
	comp=Z,0.6nm,0.7s,baz=72,slow=2.9,SNR=4.7						
BNM	Barren Site	89.97	52	eP	P	18 21 43.8	-1.1
P18A	Preston Nutter	90.15	46	eP	P	18 21 47.4	+1.7
	comp=Z,3.3nm,0.8s						
TCUT	Toone Canyon	90.16	45	eP	P	18 21 47.7	+2.1
	comp=Z,14nm,0.8s						
CMAI	Chiengmai2	90.20	292	P	P	18 21 47.6	+1.4
	comp=Z,9.1nm,1.0s						
MCK	McKinley	90.22	13	eP	P	18 21 45.0	-0.1
	comp=Z,10nm,1.1s						
MCK	McKinley	90.22	13	eP	P	18 21 45.0	-0.1
MCK				pmax	pmax		
	comp=Z,11nm,1.1s						
HWUT	Hardware Ranch	90.31	44	eP	P	18 21 47.5	+1.3
	comp=Z,3.8nm,0.7s						
HHC	Hu-ho-hao-te	90.35	315	eP	P	18 21 47.5	+1.2
HHC				sP	sP	18 24 41.2	+0.2
HHC				S	S	18 31 54.9	+0.2
HHC				SS	SS	18 38 15.4	+3.3
HHC				pmax	pmax		
	comp=Z,33nm,1.1s						
HHC				pmax	pmax		
	comp=Z,62nm,5.1s						
ANMO	Albuquerque	90.47	52	P	P	18 21 48.9	+1.8
	comp=Z,1.2nm,0.6s,baz=236,slow=7.6,SNR=3.2						
ANMO	Albuquerque	90.47	52	eP	P	18 21 48.3	+1.2
	comp=Z,2.4nm,0.9s						
ANMO	Albuquerque	90.47	52	i P	P	18 21 47.8	+0.7
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.1s						
MLY	Manley	91.02	12	eP	P	18 21 48.1	-0.6
	comp=Z,4.9nm,1.2s						
MCMT	McKenzie Canyo	91.22	41	eP	P	18 21 52.2	+1.7
HDA	Harding Lake	91.24	14	eP	P	18 21 49.5	-0.2
	comp=Z,7.1nm,0.8s						
CCB	Clear Creek Bu	91.27	13	eP	P	18 21 49.2	-0.5
	comp=Z,5.8nm,0.9s						
MDM	Murphy Dome	91.45	13	eP	P	18 21 50.2	-0.5
	comp=Z,5.0nm,0.9s						
S22A	4UR Ranch, Cre	91.54	49	eP	P	18 21 53.7	+1.5
	comp=Z,6.4nm,1.1s						
ILAR	Eielson Array	91.57	13	P	P	18 21 50.8	-0.4
	comp=Z,1.9nm,0.8s,baz=226,slow=5.4,SNR=18						
ILB	Eielson Array	91.57	13	eP	P	18 21 50.4	-0.8
IL1	Eielson Array	91.57	13	eP	P	18 21 50.2	-1.0
YPP	Pitchstone Pla	92.17	42	eP	P	18 21 54.6	-0.3
	comp=Z,6.7nm,1.1s						
PD31	Pinedale Array	92.19	44	eP	P	18 21 56.8	+1.8
PD31				ePKKPdf	PKKPbc	18 39 07.6	-0.8
PDAR	Pinedale Array	92.19	44	P	P	18 21 55.9	+0.9
	comp=Z,1.7nm,0.8s,baz=216,slow=4.8,SNR=14						
PDAR				PKKPbc	PKKPbc	18 39 07.6	-0.8
	comp=Z,0.3nm,0.6s,baz=90,slow=8.0,SNR=3.5						
PDAR	Pinedale Array	92.19	44	eP	P	18 21 55.5	+0.6
PDAR				PKKPbc	PKKPbc	18 39 07.6	-0.8
SDCO	Great Sand Dun	92.47	50	eP	P	18 21 57.5	+1.1
	comp=Z,3.1nm,0.9s						
DAWY	Dawson	92.75	17	eP	P	18 21 57.5	+0.7
	comp=Z,6.1nm,0.8s						
EGAK	Eagle	92.89	15	eP	P	18 21 57.4	+0.1
	comp=Z,8.3nm,0.8s						
LZH	Lanzhou	93.37	308	eP	P	18 22 01.1	+0.7
LZH				pP	pP	18 24 00.0	-0.6
LZH				sP	sP	18 24 54.9	-0.3
LZH				pmax	pmax		
	comp=Z,40nm,1.2s						
LZH				pmax	pmax		
	comp=Z,190nm,4.3s						
YAK	Yakutsk	94.31	339	eP	P	18 22 02.5	-1.3
YAK				pmax	pmax		
	comp=Z,15nm,0.9s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.9s						
ULN	Ulaanbaatar	96.62	320	ceP	P	18 22 14.8	0.0
ULN				pmax	pmax		
	comp=Z,6.0nm,1.6s						
SONA0	Songino Array	97.00	319	eP	P	18 22 15.8	-0.7
SONA0				ePP	PP	18 26 20.1	-1.6
SONA0				ePKKPbc	PKKPbc	18 38 55.4	-0.3
SONA1	Songino Array	97.00	319	eP	P	18 22 15.8	-0.7
SONM	Songino Array	97.00	319	P	P	18 22 15.8	-0.7
	comp=Z,0.7nm,0.5s,baz=142,slow=7.4,SNR=5.7						
SONM				PP	PP	18 26 20.1	-1.6
	comp=Z,0.4nm,0.4s,baz=110,slow=8.1,SNR=3.8						
SONM				PKKPbc	PKKPbc	18 38 55.4	-0.3
	comp=Z,0.2nm,0.5s,baz=282,slow=2.9,SNR=3.8						
GTA	Gaotai	97.67	310	P	P	18 22 20.6	+0.9
GTA				pP	pP	18 24 20.1	-0.2
GTA				sP	sP	18 25 13.5	-1.4
GTA				pmax	pmax		
	comp=Z,4.0nm,1.3s						
YKA	Yellowknife Ar	99.87	25	P	Pdif	18 22 29.3	+0.6
	comp=Z,0.2nm,0.6s,baz=250,slow=4.8,SNR=3.6						
YKA				PKiKP	PKiKP	18 26 54.5	+1.2
	comp=Z,0.3nm,0.6s,baz=256,slow=1.2,SNR=4.1						
YKA				PKKPbc	PKKPbc	18 38 46.0	-2.1
	comp=Z,0.1nm,0.4s,baz=36,slow=2.2,SNR=4.6						
CPUP	Villa Florida	105.42	128	PKKPbc	PKKPbc	18 38 29.1	-2.0
	comp=Z,2.5nm,0.9s,baz=140,slow=9.4,SNR=2.9						
SIV	San Ignacio	108.31	117	PKKPbc	PKKPbc	18 38 21.6	-0.5
	comp=Z,1.2nm,0.6s,baz=82,slow=7.1,SNR=6.5						
ZALV	Zalesovo Beam	111.83	321	PKiKP	PKiKP	18 27 14.8	-1.0
	comp=Z,1.9nm,0.4s,baz=192,slow=0.2,SNR=11						
ZAA1	Zalesovo Array	111.83	321	ePKiKP	PKiKP	18 27 14.8	-1.0
MK32	Makanchi Array	112.10	313	ePdif	Pdif	18 23 24.7	+1.2
MK32				ePKiKP	PKiKP	18 27 16.0	-0.6
MK32				eSKPdf	SKiKP	18 30 00.7	+0.2
MKAR	Makanchi Array	112.10	313	Pdiff	Pdif	18 23 24.7	+1.2
	comp=Z,0.6nm,0.6s,baz=94,slow=6.0,SNR=5.1						
MKAR				PKiKP	PKiKP	18 27 16.0	-0.6
	comp=Z,3.2nm,0.6s,baz=146,slow=0.6,SNR=35						
MKAR				SKP		18 30 00.7	
	comp=Z,0.9nm,0.7s,baz=54,slow=2.5,SNR=5.2						
NVS	Novosibirsk	112.89	321	ePKIKP	PKiKP	18 27 16.0	-1.7
KURK	Kurchatov	115.12	317	ePKPdf	PKPdf	18 27 21.5	-0.7
KURK	Kurchatov	115.12	317	c iPKIKP	PKPdf	18 27 21.2	-1.0
KURK				pmax	pmax		
	comp=Z,12nm,1.7s						
KURBB	Kurchatov Arra	115.16	316	PKP	PKPdf	18 27 21.5	-0.8
	comp=Z,5.9nm,0.7s,baz=98,slow=1.8,SNR=29						
KSH	Kashi	115.30	304	ePKP	PKPdf	18 27 21.1	-2.0
KSH				PP	PP	18 28 38.5	+4.0
KSH				PKS	PKSdf	18 30 58.2	-1.6
KSH				AMB	AMB		
	comp=Z,90nm,5.2s						
OPO	Ambohidratompo	118.04	232	PKP	PKPdf	18 27 28.6	-0.5
	comp=Z,2.3nm,0.6s,baz=229,slow=2.7,SNR=5.9						
KK31	Karatay Array	119.86	307	ePKPdf	PKPdf	18 27 31.0	-0.6
KK31	Karatay Array	119.86	307	ePKIKP	PKPdf	18 27 31.0	-0.6
KKAR	Karatay Array	119.86	307	ePKPdf	PKPdf	18 27 31.0	-0.6
KKAR	Karatay Array	119.86	307	ePKIKP	PKPdf	18 27 31.0	-0.6
KBL	Kabul	119.93	297	ePKPdf	PKPdf	18 27 32.2	0.0
BVAR	Borovoye Array	120.34	319	PKP	PKPdf	18 27 31.5	-0.6
	comp=Z,7.9nm,0.5s,baz=100,slow=1.8,SNR=46						
BVAR				SKP		18 30 17.0	
	baz=92,slow=4.3						
BRVK	Borovoye	120.40	319	ePKPdf	PKPdf	18 27 31.9	-0.4
BRVK	Borovoye	120.40	319	c iPKIKP	PKPdf	18 27 31.8	-0.5
BRVK				pmax	pmax		
	comp=Z,9.0nm,1.0s						
BOSA	Boshof	122.90	206	PKP	PKPdf	18 27 38.4	+0.2
	comp=Z,3.9nm,0.8s,baz=127,slow=3.8,SNR=7.1						
SPA0	Spitsbergen Ar	124.74	356	ePKPdf	PKPdf	18 27 39.8	-0.1
SPITS	Spitsbergen Ar	124.74	356	PKP	PKPdf	18 27 39.9	-0.1
	comp=Z,20nm,0.7s,baz=25,slow=3.8,SNR=16						
SVE	Sverdlovsk	125.53	324	ePKIKP	PKPdf	18 27 42.3	+0.3
SVE				pmax	pmax		
	comp=Z,21nm,1.0s						
DAG	Danmarks Havn	125.85	5	ePKIKP	PKPdf	18 27 41.5	-0.6
DAG				pmax	pmax		
	comp=Z,7.0nm,0.8s						
SUMG	Summit	126.41	14	ePKPdf	PKPdf	18 27 43.7	-0.1
SUMG	Summit	126.41	14	i PKIKP	PKPdf	18 27 44.6	+0.8
SUMG				pmax	pmax		
	comp=Z,13nm,1.1s						
ARU	Arti	126.74	324	ePKPdf	PKPdf	18 27 43.6	-0.7
ARU	Arti	126.74	324	i PKIKP	PKPdf	18 27 44.3	0.0
ARU						18 29 48.7	
ARU						18 34 03.0	
ABKAR	Akbulak array	127.14	315	ePKPdf	PKPdf	18 27 45.5	+0.2
AKTO	Aktyubinsk	128.22	317	PKP	PKPdf	18 27 47.1	-0.2
	comp=Z,7.8nm,0.7s,baz=113,slow=3.3,SNR=22						
GEYT	Alibeck	129.03	301	PKP	PKPdf	18 27 50.3	+1.0
	comp=Z,4.3nm,0.7s,baz=79,slow=7.5,SNR=12						
GYA0B	ALIBECK ARRAY	129.03	301	ePKPdf	PKPdf	18 27 49.4	0.0
PRGR	Permogore	131.05	333	ePKIKP	PKPdf	18 27 51.2	-1.1
PRGR				e		18 30 25.6	
PRGR				pmax	pmax		
	comp=Z,12nm,1.0s						
ARA0	ARCESS Array S	131.55	348	ePKPpre	PKPpre	18 27 43.3	
ARA0				ePKPdf	PKPdf	18 27 52.9	-0.2
ARA0				eSKPbc	SKPab	18 30 29.1	+0.1
ARCES	ARCESS Array B	131.55	348	PKhKP	PKPpre	18 27 43.3	
	comp=Z,1.1nm,0.6s,baz=346,slow=0.4,SNR=8.6						
ARCES				PKP	PKPdf	18 27 52.9	-0.3
	comp=Z,8.6nm,0.6s,baz=29,slow=1.2,SNR=38						
ARCES				SKPbc	SKPab	18 30 29.1	+0.1
	comp=Z,3.4nm,0.8s,baz=24,slow=3.1,SNR=4.2						
ARE0	ARCESS Array S	131.55	348	ePKPdf	PKPdf	18 27 53.1	-0.1
ARE0	ARCESS Array S	131.55	348	ePKPdf	PKPdf	18 27 52.9	-0.2
ARE0				IAmb	IAmb	18 27 53.4	
	comp=Z,16nm,0.8s						
TRO	Tromso	132.53	351	ePKPdf	PKPdf	18 27 55.6	+0.7
TRO				IAmb	IAmb	18 27 59.1	
	comp=Z,15nm,1.1s						
KLMR	Klimovskoe	133.95	335	ePKHKP	PKPpre	18 27 49.3	
KLMR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KLMR	Klimovskoe	133.95	335	ePKPdf	PKPpre	18 27 49.3	
KLMR				AMP		18 27 58.8	
	comp=Z,6.0nm,0.8s						
STEI	Steigen	134.61	352	e	PKPpre	18 27 52.1	
AKT	Akhty	136.76	306	i PKIKP	PKPdf	18 28 02.1	-1.8
AKT				e		18 30 52.2	
AKT				pmax	pmax		
	comp=Z,12nm,1.0s						
FIA0	FINESS Array S	138.16	342	ePKPpre	PKPpre	18 27 54.6	
FIA0				ePKPdf	PKPdf	18 28 06.2	+0.7
FIA0				eSKPbc	SKPbc	18 30 48.3	-0.3
FIA0	FINESS Array S	138.16	342	ePKHKP	PKPpre	18 27 54.7	
FIA0				e		18 28 06.3	
FINES	FINESS Array B	138.16	342	PKhKP	PKPpre	18 27 54.6	
	comp=Z,1.8nm,0.4s,baz=51,slow=3.9,SNR=9.9						
FINES				PKP	PKPdf	18 28 06.2	+0.7
	comp=Z,4.5nm,0.6s,baz=47,slow=1.8,SNR=13						
FINES				SKPbc	SKPbc	18 30 48.3	-0.3
	comp=Z,2.7nm,0.5s,baz=30,slow=5.0,SNR=6.9						
OBN	Obninsk	138.58	329	⇓ePKIKP	PKPdf	18 28 07.4	+0.9
OBN				e		18 31 09.7	
OBN				pmax	pmax		
	comp=Z,17nm,0.7s						
RAYN	Ar Rayn	138.71	279	ePKPdf	PKPdf	18 28 08.6	+0.7
RAYN	Ar Rayn	138.71	279	ePKIKP	PKPdf	18 28 08.6	+0.7
TBLG	Delisi	138.92	307	ePKPdf	PKPdf	18 28 08.8	+1.1
TBLG	Delisi	138.92	307	ePKIKP	PKPdf	18 28 08.8	+1.1
VSR	Storozhevoye	139.29	323	ePKIKP	PKPdf	18 28 09.2	+1.2
VSR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
ZEI	Tsey	139.29	309	i PKIKP	PKPdf	18 28 10.9	+2.3
KBZ	Khabaz	139.75	311	PKhKP	PKPpre	18 28 01.2	
	comp=Z,1.1nm,0.5s,baz=45,slow=4.3,SNR=2.9						
KBZ				PKP	PKiKP	18 28 10.5	-1.1
	comp=Z,2.1nm,0.8s,baz=94,slow=12,SNR=4.5						
KIV	Kislovodsk	139.84	311	ePKIKP	PKPdf	18 28 07.1	-2.3
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
NEY	Neytrino	140.00	310	i PKIKP	PKPdf	18 28 07.5	-2.3
NEY				pmax	pmax		
	comp=Z,1.0nm,0.9s						
NC303	NORSAR Array S	141.53	351	ePKPpre	PKPpre	18 28 06.0	
NC303	NORSAR Array S	141.53	351	ePKPdf	PKPpre	18 28 06.5	
NC303				IAmb	IAmb	18 28 07.9	
	comp=Z,45nm,0.8s						
NC405	NORSAR Array S	141.59	351	ePKPpre	PKPpre	18 28 06.8	
NB201	NORSAR Array S	141.71	351	ePKPpre	PKPpre	18 28 07.3	
NB2	NORSAR Subarra	141.73	351	PKP	PKPpre	18 28 07.9	
	comp=Z,8.0nm,0.5s,baz=23,slow=3.7						
NBO00	NORSAR Array S	141.80	352	ePKPpre	PKPpre	18 28 08.9	
NAO01	NORSAR Array S	141.96	352	ePKPpre	PKPpre	18 28 08.4	
NC602	NORSAR Array S	141.98	351	ePKPpre	PKPpre	18 28 08.4	
HFS	Hagfors	142.21	349	PKhKP	PKPpre	18 28 09.1	
	comp=Z,38nm,0.3s,baz=22,slow=1.6,SNR=410						
HFS				SKPbc	SKPbc	18 30 58.5	-0.8
	comp=Z,4.2nm,0.8s,baz=343,slow=4.5,SNR=4.5						
SUE	Sulen	142.34	356	e	PKPdf	18 28 10.2	-2.9
SUE				IAmb	IAmb	18 28 10.7	
	comp=Z,28nm,0.7s						
MNK	Minsk	142.82	333	ePKIKP	PKPdf	18 28 12.0	-2.2
OSL	Oslo	142.86	351	eP	PKPdf	18 28 11.8	-2.3
OSL				IAmb	IAmb	18 28 12.1	
	comp=Z,31nm,0.7s						
ASK	Askoy	142.88	356	ePKPdf	PKPdf	18 28 11.7	-2.4
ASK				IAmb	IAmb	18 28 12.5	
	comp=Z,26nm,0.7s						
BER	Bergen	142.97	356	ePKPdf	PKPdf	18 28 12.3	-1.9
BER				IAmb	IAmb	18 28 12.8	
	comp=Z,50nm,0.7s						
ANN	Anapa	143.10	314	d iPKHKP	PKPpre	18 28 12.5	
ANN				pmax	pmax		
	comp=Z,131nm,0.9s						
KONO	Kongsberg	143.29	352	ePKPpre	PKPab	18 28 12.9	0.0
KONO	Kongsberg	143.29	352	d iPKIKP	PKPab	18 28 13.0	+0.1
KONO				pmax	pmax		
	comp=Z,77nm,1.0s						
KONO	Kongsberg	143.29	352	ePKPbc	PKPab	18 28 13.0	+0.1
KONO				IAmb	IAmb	18 28 13.8	
	comp=Z,80nm,0.8s						
ODD1	Odda	143.34	355	ePKPab	PKPbc	18 28 13.5	0.0
ODD1				IAmb	IAmb	18 28 13.9	
	comp=Z,34nm,0.9s						
LRW	Lerwick	143.37	1	eP	PKPab	18 28 13.1	-0.1
BLS5	Blasjo	143.84	355	ePKPab	PKPab	18 28 15.3	+0.2
BLS5				IAmb	IAmb	18 28 15.6	
	comp=Z,25nm,0.8s						
STAV	Stavanger	144.38	355	ePKPab	PKPab	18 28 17.4	+0.3
STAV				IAmb	IAmb	18 28 18.1	
	comp=Z,49nm,1.1s						
AKASG	Malin Array Be	144.79	328	PKP	PKPdf	18 28 17.7	0.0
	comp=Z,38nm,0.7s,baz=44,slow=4.2,SNR=157						
AKASG				SKPbc	SKPbc	18 31 05.4	-0.3
	comp=Z,6.1nm,0.8s,baz=41,slow=2.3,SNR=9.0						
AKBB	Malin Array Si	144.79	328	ePKPdf	PKPdf	18 28 17.3	-0.4
AKBB				eSKPbc	SKiKP	18 31 06.3	0.0
AKBB	Malin Array Si	144.79	328	ePKIKP	PKPdf	18 28 17.3	-0.4
AKBB				e		18 31 06.3	
KIEV	Kiev	144.81	328	ePKPdf	PKPdf	18 28 17.3	-0.5
KIEV	Kiev	144.81	328	i PKIKP	PKPdf	18 28 17.6	-0.1
AK11	Malin Array Si	144.84	328	ePKPdf	PKPdf	18 28 17.5	-0.3
SNART	Snartemo	144.84	354	ePKPbc	PKPab	18 28 18.6	-0.3
SNART				IAmb	IAmb	18 28 19.0	
	comp=Z,22nm,0.9s						
BIGH	Upper Bighouse	144.90	4	eP	PKPbc	18 28 18.4	+0.1
SUW	Suwalki	145.02	336	ePKPdf	PKPbc	18 28 18.8	0.0
SUW	Suwalki	145.02	336	ePKPdf	PKPbc	18 28 18.5	-0.3
SUW	Suwalki	145.02	336	⇓ePKIKP	PKPbc	18 28 18.8	0.0
MCD	Coleburn Disti	145.85	3	eP	PKPbc	18 28 20.8	-0.3
KPL	Plockton	145.91	6	eP	PKPbc	18 28 21.4	+0.2
MME1	Meikle Cairn	146.13	3	eP	PKPbc	18 28 21.4	-0.5
MUD	Monsted U’grnd	146.44	351	ePKIKP	PKPbc	18 28 22.7	0.0
MUD				pmax	pmax		
	comp=Z,29nm,0.9s						
DRUM	Mains of Drumt	146.56	3	eP	PKPbc	18 28 22.9	-0.2
BSD	Bornholm Skovb	146.61	345	i PKIKP	PKPbc	18 28 23.2	0.0
BSD				pmax	pmax		
	comp=Z,36nm,0.6s						
ASF	Jabal al Asfar	146.66	293	PKPbc	PKPbc	18 28 25.1	+0.9
	comp=Z,20nm,0.7s,baz=70,slow=3.6,SNR=40						
SORM	Soroca	146.85	325	⇓PKP2	PKPbc	18 28 24.1	0.0
INVG	Invergeldie, C	146.95	4	eP	PKPbc	18 28 24.3	+0.2
LLD	Lille Linde	147.00	348	ePKIKP	PKPdf	18 28 21.8	+0.5
ILGA	Ilgaz	147.05	310	ePKPbc	PKPbc	18 28 25.6	+0.4
EAB	Aberfoyle	147.16	5	eP	PKPbc	18 28 24.9	+0.2
PGBU	Glenifferbraes	147.53	5	eP	PKPbc	18 28 25.8	+0.1
ESY	Stoneypath	147.54	3	eP	PKPbc	18 28 25.8	+0.1
BR101	Keskin Array S	147.57	308	ePKPdf	PKPdf	18 28 22.9	-0.1
BR101				ePKPbc	PKPbc	18 28 26.4	-0.1
BR131	Keskin Array S	147.57	308	ePKPdf	PKPdf	18 28 22.8	-0.2
BR131				ePKPbc	PKPbc	18 28 26.4	-0.1
BRTR	Keskin Array B	147.57	308	PKP	PKPdf	18 28 22.9	-0.1
	comp=Z,9.1nm,0.7s,baz=113,slow=2.8,SNR=26						
BRTR				PKPbc	PKPbc	18 28 26.4	-0.1
	comp=Z,14nm,0.6s,baz=141,slow=4.0,SNR=48						
GKP	Gorka Klasztor	147.62	341	ePKPdf	PKPbc	18 28 26.5	+0.5
GKP	Gorka Klasztor	147.62	341	⇓ePKP2	PKPbc	18 28 26.5	+0.5
BEL	Belsk	147.63	336	ePKPdf	PKPbc	18 28 26.9	+0.9
BEL	Belsk	147.63	336	⇓ePKP2	PKPbc	18 28 26.9	+0.9
MMAI	Mount Meron Ar	147.81	295	PKPbc	PKPbc	18 28 28.2	+0.9
	comp=Z,62nm,0.6s,baz=72,slow=4.7,SNR=81						
LVV	L’vov	147.84	331	ePKIKP	PKPbc	18 28 26.5	-0.2
ESK	Eskdalemuir	148.11	4	ePKPbc	PKPbc	18 28 27.1	-0.1
ESK	Eskdalemuir	148.11	4	eP	PKPbc	18 28 26.9	-0.3

ANTO	Ankara	148.13	309	ePKPdf	PKPdf	18 28 24.1	+0.3
ANTO				ePKPbc	PKPbc	18 28 28.0	+0.2
BR231	Keskin MP Arra	148.16	308	ePKPdf	PKPdf	18 28 24.0	+0.1
BR231				ePKPbc	PKPbc	18 28 28.2	+0.2
TLCR		148.31	320	⇑PKP2	PKPbc	18 28 28.6	+0.6
KWP	Kalwaria Pacla	148.56	332	ePKPdf	PKPbc	18 28 29.1	+0.6
KWP	Kalwaria Pacla	148.56	332	ePKPbc	PKPbc	18 28 28.7	+0.2
KWP	Kalwaria Pacla	148.56	332	⇓ePKP2	PKPbc	18 28 29.1	+0.6
EDMD	Edmundbyers	148.66	3	eP	PKPbc	18 28 28.6	+0.1
CFR	Carcaliu	148.72	321	⇓PKHKP	PKPpre	18 28 29.2	
BUR08	Bucovina Ar. S	148.79	327	ePKPdf	PKPbc	18 28 26.9	-2.4
BUR08				ePKPbc	PKiKP	18 28 30.2	-0.1
BUR04	Bucovina Ar. S	148.80	327	ePKPdf	PKPdf	18 28 24.8	+0.1
BUR04				ePKPbc	PKiKP	18 28 30.2	-0.1
BURAR	Bucovina Array	148.80	327	⇓PKP2	PKPbc	18 28 30.2	+0.9
KESW	Keswick, Cumbr	148.84	4	eP	PKPbc	18 28 29.3	+0.3
TIRR	Tirgusor	148.95	319	ePKPdf	PKPbc	18 28 28.3	-1.3
IOMK	Kirk Michael	149.06	6	eP	PKPbc	18 28 29.7	+0.2
GDLE	Glaisdale, N Y	149.10	1	eP	PKPbc	18 28 29.9	+0.3
TLB	Topalu	149.10	320	⇓PKHKP	PKPpre	18 28 30.6	
HARR	Harsova	149.11	320	⇓PKHKP	PKPpre	18 28 30.5	
VRI	Vrincioaia	149.12	323	⇑PKHKP	PKPpre	18 28 29.9	
CSS	Mathiatis	149.15	299	ePKPdf	PKPdf	18 28 24.8	-0.7
CSS				ePKPbc	PKPbc	18 28 30.4	-0.1
WIM	Isle of Man	149.16	6	eP	PKPbc	18 28 30.0	+0.2
PLOR	Plostina	149.17	323	⇓PKHKP	PKPpre	18 28 30.2	
OJC	Ojcow	149.30	335	ePKPdf	PKPbc	18 28 30.8	+0.5
OJC	Ojcow	149.30	335	ePKPdf	PKPdf	18 28 25.4	+0.2
OJC				ePKPbc	PKPbc	18 28 30.5	+0.2
UZH	Uzhgorod	149.48	331	c iPKHKP	PKPpre	18 28 30.8	
UZH				e		18 28 37.0	
HPK	Haverah Park	149.54	2	eP	PKPbc	18 28 31.1	+0.4
BMR	Baia Mare	149.61	328	⇑PKHKP	PKPpre	18 28 31.1	
CRVS	Cervenica-Dubn	149.65	332	ePKP	PKPbc	18 28 31.8	+0.6
NIE	Niedzica	149.74	334	ePKPdf	PKPbc	18 28 32.5	+1.1
NIE	Niedzica	149.74	334	⇓ePKHKP	PKPpre	18 28 32.5	
MLR	Muntele Rosu	149.78	323	PKPbc	PKPbc	18 28 31.3	-0.5
	comp=Z,2.6nm,0.6s,baz=0.4,slow=2.6,SNR=17						
MLR	Muntele Rosu	149.78	323	ePKPdf	PKPdf	18 28 25.8	-0.5
MLR				ePKPbc	PKPbc	18 28 31.3	-0.5
MLR				ePKPbc	PKiKP	18 28 31.6	-0.8
MLR	Muntele Rosu	149.78	323	ePKIKP	PKPdf	18 28 25.8	-0.5
WPS	Cemaes, Angles	149.91	6	eP	PKPbc	18 28 31.1	-0.4
WME	Myndd Eilian	149.94	6	eP	PKPbc	18 28 31.6	0.0
KSP	Ksiaz	150.02	340	ePKPdf	PKPbc	18 28 32.9	+1.0
WLF1	Llynfaes	150.03	6	eP	PKPbc	18 28 31.7	-0.2
LMK	Market Rasen	150.08	1	eP	PKPbc	18 28 32.0	+0.1
LBWR	Ladybower, Pea	150.10	2	eP	PKPbc	18 28 32.1	+0.1
WPM1	Penmaenmawr	150.11	5	eP	PKPbc	18 28 32.0	-0.1
CJR	Cluj-Napoca	150.23	327	⇓PKIKP	PKPbc	18 28 33.2	+0.6
OKC	Ostrava-Krasne	150.23	336	⇑ePKP	PKPbc	18 28 32.7	+0.2
OKC	Ostrava-Krasne	150.23	336	ePKIKP	PKPbc	18 28 32.7	+0.2
LANS	Liptovska Anna	150.28	334	ePKIKP	PKPbc	18 28 34.0	+1.3
LANS	Liptovska Anna	150.28	334	ePKP	PKPbc	18 28 34.0	+1.3
VOIR		150.31	324	⇓PKIKP	PKPbc	18 28 32.0	-0.9
UPC	Upice	150.40	340	⇑ePKP	PKPbc	18 28 33.7	+0.9
UPC	Upice	150.40	340	ePKIKP	PKPbc	18 28 33.7	+0.9
DPC	Dobruska-Polom	150.43	339	⇑ePKP	PKPbc	18 28 33.9	+0.9
DPC				ePKPAB	PKPab	18 28 43.1	+1.2
DPC	Dobruska-Polom	150.43	339	ePKIKP	PKPbc	18 28 33.9	+0.9
DPC				e		18 28 43.1	
MORC	Moravsky Berou	150.50	337	ePKPdf	PKPdf	18 28 27.0	-0.2
MORC				ePKPbc	PKPbc	18 28 33.7	+0.5
MORC				ePKPab	PKPab	18 28 43.0	+0.7
MORC	Moravsky Berou	150.50	337	ePKIKP	PKPdf	18 28 27.0	-0.2
MORC				e		18 28 43.0	
MORC	Moravsky Berou	150.50	337	ePKP	PKPbc	18 28 33.7	+0.5
MORC				e		18 28 43.0	
KRLC	Kraliky	150.51	338	⇑ePKP	PKPbc	18 28 33.9	+0.7
KRLC				ePKPAB	PKPab	18 28 43.4	+1.1
KRLC	Kraliky	150.51	338	ePKIKP	PKPbc	18 28 33.9	+0.7
KRLC				e		18 28 43.4	
ISP	Isparta	150.52	306	⇓PKIKP	PKPbc	18 28 33.1	-0.6
FOEL	Foel Wylfa	150.53	4	eP	PKPbc	18 28 32.9	-0.2
LLW	Llanuwychllyn	150.53	5	eP	PKPbc	18 28 32.8	-0.2
CLL	Collm	150.56	344	ePKPdf	PKPdf	18 28 28.0	+0.9
	comp=Z,7.0nm,1.2s						
CLL				⇓iPKPbc	PKiKP	18 28 33.7	+0.1
	comp=Z,73nm,0.8s						
CLL				i PKPab	PKPab	18 28 42.6	+0.3
	comp=Z,32nm,0.9s						
CLL				i pPKPab	pPKPab	18 30 44.8	+0.4
	comp=Z,13nm,1.1s						
CLL	Collm	150.56	344	ePKPdf	PKPdf	18 28 27.4	+0.3
CLL				ePKPbc	PKPbc	18 28 33.2	+0.1
CLL				ePKPab	PKPab	18 28 42.8	+0.4
CLL	Collm	150.56	344	⇓ePKIKP	PKPdf	18 28 28.0	+0.9
CLL				i		18 28 42.6	
CLL				pmax	pmax		
	comp=Z,7.0nm,1.2s						
CLL				pmax	pmax		
	comp=Z,73nm,0.8s						
CLL				pmax	pmax		
	comp=Z,32nm,0.9s						
DRGR		150.61	328	⇓PKIKP	PKPbc	18 28 33.8	+0.2
BRG	Berggiesshubel	150.70	342	ePKP	PKPdf	18 28 28.2	+0.8
	comp=Z,5.7nm,1.0s						
BRG	Berggiesshubel	150.70	342	i PKP	PKPbc	18 28 34.2	+0.7
	comp=Z,46nm,0.6s						
BRG	Berggiesshubel	150.70	342	i PKP	PKPab	18 28 43.6	+0.6
	comp=Z,16nm,0.8s						
BRG				epPKP	pPKPab	18 30 45.5	+0.5
	comp=Z,14nm,1.2s						
BRG	Berggiesshubel	150.70	342	ePKIKP	PKPdf	18 28 28.2	+0.8
BRG				i		18 28 43.6	
BRG				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BRG				pmax	pmax		
	comp=Z,46nm,0.6s						
BRG				pmax	pmax		
	comp=Z,16nm,0.9s						
BRG				pmax	pmax		
	comp=Z,14nm,1.3s						
CWF	Charnwood Fore	150.78	2	eP	PKPbc	18 28 33.6	0.0
WACR	West Acre	150.81	360	eP	PKPbc	18 28 33.5	-0.2
PVCC	Panska Ves	150.82	341	ePKPAB	PKPab	18 28 44.8	+1.3
HLM1	Long Mynd	150.92	4	eP	PKPbc	18 28 34.0	+0.1
VYHS	Vyhne	151.06	334	ePKIKP	PKPbc	18 28 34.7	+0.3
VYHS				e		18 28 45.5	
VYHS	Vyhne	151.06	334	ePKP	PKPbc	18 28 34.7	+0.3
VYHS				e		18 28 45.5	
PSZ	Piszkesteto	151.07	332	ePKPdf	PKPdf	18 28 27.3	-0.8
PSZ				ePKPbc	PKPbc	18 28 34.3	-0.3
PSZ				ePKPab	PKPab	18 28 45.7	+1.0
PSZ	Piszkesteto	151.07	332	ePKIKP	PKPdf	18 28 27.3	-0.8
PSZ				e		18 28 45.7	
WTSB	Winterswijk	151.14	352	ePKPbc	PKPbc	18 28 34.9	+0.4
	comp=Z,72nm,0.5s						
WTSB				ePKPab	PKPab	18 28 45.0	+0.2
	comp=Z,29nm,0.9s						
JAVC	Velka Javorina	151.22	336	ePKP	PKPbc	18 28 36.4	+1.6
JAVC				e		18 28 47.1	
ZIMR		151.22	320	PKIKP	PKPbc	18 28 35.4	+0.5
VRAC	Vranov	151.23	338	⇓PKIKP	PKPbc	18 28 35.5	+0.7
VRAC	Vranov	151.23	338	ePKP	PKPbc	18 28 35.2	+0.4
VRAC				e		18 28 46.3	
PRA	Prague	151.27	341	⇑ePKP	PKPbc	18 28 35.6	+0.8
PRA	Prague	151.27	341	ePKIKP	PKPbc	18 28 35.6	+0.8
GOPC	GO Pecny, Ondr	151.30	340	⇑ePKP	PKPbc	18 28 35.5	+0.5
GOPC	GO Pecny, Ondr	151.30	340	ePKIKP	PKPbc	18 28 35.5	+0.5
PRU	Pruhonice	151.31	341	⇑ePKP	PKPbc	18 28 35.5	+0.6
PRU				ePKPAB	PKPab	18 28 46.4	+0.8
PRU	Pruhonice	151.31	341	ePKIKP	PKPbc	18 28 35.5	+0.6
PRU				e		18 28 46.4	
MCH1	Michaelchurch	151.43	4	eP	PKPbc	18 28 35.0	-0.2
KRUC	Moravsky	151.51	338	ePKP	PKPbc	18 28 35.7	+0.3
KRUC				e		18 28 47.2	
MONM	Monmouth	151.60	4	eP	PKPbc	18 28 35.5	0.0
NKC	Novy Kostel	151.68	343	⇑ePKP	PKPbc	18 28 36.8	+1.0
NKC				ePKPAB	PKPab	18 28 47.9	+0.7
NKC	Novy Kostel	151.68	343	ePKIKP	PKPbc	18 28 36.8	+1.0
NKC				e		18 28 47.9	
MANT	Manisa	151.70	308	ePKPdf	PKPdf	18 28 28.7	-0.9
MANT				ePKPbc	PKiKP	18 28 36.7	0.0
MANT				ePKPab	PKPab	18 28 47.9	-0.1
MODS	Modra-Piesok	151.76	336	ePKIKP	PKPbc	18 28 36.6	+0.6
MODS				e		18 28 48.8	
MODS	Modra-Piesok	151.76	336	ePKP	PKPbc	18 28 36.6	+0.6
MODS				e		18 28 48.8	
HGH	Gray Hill	151.80	4	eP	PKPbc	18 28 35.7	-0.2
BZS	Buzias	151.98	327	⇓PKIKP	PKPbc	18 28 36.7	+0.1
ALN	Alexandroupoli	152.32	315	ePKPdf	PKPdf	18 28 30.1	+0.1
ALN				ePKPbc	PKPbc	18 28 36.8	-0.6
ALN				ePKPab	PKPab	18 28 50.3	+0.1
KHC	Kasperske Hory	152.36	341	ePKPDF	PKPdf	18 28 29.5	-0.5
KHC				⇑ePKP	PKiKP	18 28 37.9	+0.4
KHC				ePKPAB	PKPab	18 28 50.8	+0.7
KHC				epPKP	pPKPab	18 30 49.0	-2.9
KHC	Kasperske Hory	152.36	341	ePKPdf	PKPdf	18 28 29.9	0.0
KHC				ePKPbc	PKiKP	18 28 37.7	+0.2
KHC				ePKPab	PKPab	18 28 50.8	+0.7
KHC	Kasperske Hory	152.36	341	ePKIKP	PKPdf	18 28 29.5	-0.5
KHC				e		18 28 50.8	
HGN	Heimansgroeve	152.43	352	ePKPbc	PKPbc	18 28 37.9	+0.5
	comp=Z,15nm,0.9s						
HGN				ePKPab	PKPab	18 28 49.7	-0.5
	comp=Z,33nm,1.0s						
GRFO	Grafenberg	152.49	345	ePKPdf	PKPdf	18 28 30.8	+0.7
GRFO				ePKPbc	PKiKP	18 28 37.8	+0.1
GRFO				ePKPab	PKPab	18 28 51.1	+0.5
MEM	Membach	152.58	352	⇑PKPbc	PKPbc	18 28 36.8	-0.9
MEM				⇑PKPab	PKPab	18 28 50.9	0.0
GEC2	GERESS Array S	152.58	341	ePKPdf	PKPdf	18 28 29.6	-0.8
GEC2				ePKPbc	PKiKP	18 28 38.1	+0.1
GEC2				ePKPab	PKPab	18 28 51.9	+0.8
GEC2	GERESS Array S	152.58	341	ePKIKP	PKPdf	18 28 29.6	-0.8
GEC2				e		18 28 51.9	
GERES	GERESS Array B	152.58	341	PKP	PKPdf	18 28 30.4	0.0
	comp=Z,0.9nm,0.7s,baz=338,slow=1.4,SNR=7.2						
GERES				PKPbc	PKPbc	18 28 37.9	0.0
	comp=Z,5.0nm,0.8s,baz=15,slow=1.5,SNR=30						
GERES				PKPab	PKPab	18 28 51.0	-0.1
	comp=Z,2.1nm,0.6s,baz=35,slow=3.6,SNR=6.9						
GEA0	GERESS Array S	152.59	341	ePKPdf	PKPdf	18 28 29.6	-0.8
GEA0				ePKPbc	PKPbc	18 28 37.5	-0.4
GEA0				ePKPab	PKPab	18 28 51.2	+0.1
CONA	Conrad Observa	152.66	337	ePKiKP	PKiKP	18 28 38.6	+0.4
	comp=Z,10nm,0.8s						
CONA				ePKPab	PKPab	18 28 52.6	+1.1
	comp=Z,16nm,0.7s						
VTS	Vitosha	153.12	321	ePKPdf	PKPdf	18 28 30.9	-0.6
VTS				ePKPbc	PKPbc	18 28 39.3	-0.1
VTS				ePKPab	PKPab	18 28 54.8	+1.1
VTS	Vitosha	153.12	321	ePKIKP	PKPdf	18 28 30.9	-0.6
VTS				e		18 28 39.3	
DOU	Dourbes	153.24	354	⇑PKPbc	PKPbc	18 28 39.3	+0.2
DOU				⇑PKPab	PKPab	18 28 53.7	0.0
MOA	Molln	153.28	339	ePKPbc	PKPbc	18 28 39.1	-0.2
	comp=Z,2.1nm,0.5s						
MOA				ePKPab	PKPab	18 28 55.1	+1.0
	comp=Z,9.6nm,1.1s						
ARSA	Arzberg	153.35	337	ePKPbc	PKPbc	18 28 39.6	+0.1
	comp=Z,3.8nm,1.1s						
ARSA				ePKPab	PKPab	18 28 55.1	+0.7
	comp=Z,7.9nm,0.7s						
WLF	Walferdange	153.48	352	⇑PKPbc	PKPbc	18 28 39.5	-0.2
WLF				⇑PKPab	PKPab	18 28 55.0	+0.2
WLF	Walferdange	153.48	352	ePKPdf	PKPdf	18 28 31.1	-0.3
WLF				ePKPbc	PKiKP	18 28 40.3	+0.5
WLF				ePKPab	PKPab	18 28 54.7	-0.1
WLF	Walferdange	153.48	352	ePKIKP	PKPdf	18 28 31.2	-0.3
WLF				e		18 28 54.7	
DIVS	Divibare	153.87	327	ePKPdf	PKPdf	18 28 32.4	0.0
DIVS				ePKPbc	PKiKP	18 28 41.2	+0.4
DIVS				ePKPab	PKPab	18 28 56.7	-0.1
SOKA	Soboth	154.02	336	ePKPbc	PKPbc	18 28 40.8	-0.2
	comp=Z,6.0nm,1.0s						
SOKA				ePKPab	PKPab	18 28 57.8	+0.5
	comp=Z,6.5nm,0.6s,SNR=5.2						
KBA	Koelnbreinsper	154.25	339	ePKPbc	PKPbc	18 28 41.5	-0.2
	comp=Z,3.1nm,0.7s						
KBA				ePKPab	PKPab	18 28 59.0	+0.6
	comp=Z,3.0nm,0.5s						
OBKA	Obir	154.34	337	ePKPbc	PKPbc	18 28 41.1	-0.6
	comp=Z,4.5nm,0.9s						
OBKA				ePKPab	PKPab	18 28 59.1	+0.4
	comp=Z,7.6nm,0.7s						
BFO	Black Forest	154.41	348	ePKPdf	PKPdf	18 28 32.6	-0.3
BFO				ePKPbc	PKPbc	18 28 42.0	+0.2
BFO				ePKPab	PKPab	18 28 58.5	-0.4
BFO	Black Forest	154.41	348	ePKIKP	PKPdf	18 28 32.6	-0.3
BFO				e		18 28 58.5	
MYKA	Terra Mystica	154.55	338	ePKPbc	PKPbc	18 28 41.6	-0.6
	comp=Z,2.7nm,0.7s						
MYKA				ePKPab	PKPab	18 28 59.5	-0.1
	comp=Z,5.7nm,0.7s						
WATA	Walderalm	154.56	342	ePKPab	PKPab	18 29 01.3	+1.6
	comp=Z,3.9nm,0.4s						
WTTA	Wattenberg	154.61	342	ePKiKP	PKPbc	18 28 42.4	0.0
	comp=Z,1.9nm,0.5s						
WTTA				ePKPab	PKPab	18 29 00.4	+0.4
	comp=Z,12nm,0.6s						
RETA	Reutte	154.65	343	ePKPab	PKPab	18 29 00.8	+0.8
	comp=Z,12nm,0.6s,SNR=8.2						
MOTA	Moosalm	154.69	343	ePKPdf	PKPdf	18 28 34.4	+0.9
	comp=Z,2.6nm,0.6s						
MOTA				i PKPab	PKPab	18 29 01.3	+1.1
	comp=Z,21nm,1.0s						
ECH	Echery	154.74	349	ePKPdf	PKPdf	18 28 33.5	+0.1
ECH				ePKPab	PKPab	18 29 00.0	-0.3
ECH	Echery	154.74	349	ePKIKP	PKPdf	18 28 33.5	+0.1
ECH				e		18 29 00.0	
LJU	Ljubljana	154.74	336	ePKPdf	PKPdf	18 28 33.7	+0.3
LJU				i		18 28 42.5	
LJU				i PKPab	PKPab	18 29 00.4	+0.1
ABTA	Abfaltersbach	154.81	340	ePKPdf	PKPdf	18 28 33.2	-0.4
	comp=Z,4.8nm,0.8s						
ABTA				ePKPab	PKPab	18 29 00.8	+0.1
BOJS	Bojanci	154.92	335	i PKPdf	PKPdf	18 28 33.5	-0.1
BOJS				i		18 28 43.2	
BOJS				i PKPab	PKPab	18 29 01.2	+0.1
DAVA	Damuels	155.06	344	i PKPab	PKPab	18 29 02.6	+0.7
	comp=Z,14nm,0.6s,SNR=6.4						
FETA	Feichten	155.08	343	ePKPdf	PKPdf	18 28 34.2	+0.1
	comp=Z,7.0nm,0.9s						
FETA				ePKPab	PKPab	18 29 02.8	+0.8
	comp=Z,8.4nm,1.0s						
FNA	Florina	155.31	319	ePKPdif	PKPdf	18 28 43.3	+8.9
FNA				ePKPab	PKPab	18 29 03.1	0.0
TTG	Podgorica	155.43	325	ePKPdf	PKPdf	18 28 33.8	-0.6
TTG				ePKPab	PKPab	18 29 03.2	-0.2
DAVOX	Davos/Dischmat	155.53	344	PKPbc	PKPbc	18 28 44.8	
	baz=326,slow=3.6						
DAVOX				PKPab	PKPab	18 29 04.3	+0.4
	comp=Z,16nm,0.6s,baz=27,slow=4.5,SNR=16						
AGG	Agios Georgios	155.74	315	ePKPdf	PKPdf	18 28 33.8	-1.2
AGG				ePKPab	PKPab	18 29 04.0	-0.9
AGG	Agios Georgios	155.74	315	ePKIKP	PKPdf	18 28 33.8	-1.2
AGG				e		18 29 04.0	
SENIN	Lac Senin/Sane	156.50	348	ePKPdf	PKPdf	18 28 35.2	-0.7
SENIN				ePKPab	PKPab	18 29 08.3	+0.2
BNI	Bardonecchia	157.88	348	ePKPdf	PKPdf	18 28 37.8	+0.2
BNI				ePKPab	PKPab	18 29 14.4	+0.3
BNI	Bardonecchia	157.88	348	ePKIKP	PKPdf	18 28 37.8	+0.2
BNI				e		18 29 14.4	
DBIC	Dimbokro	162.54	163	PKP	PKPdf	18 28 43.9	+0.4
	comp=Z,7.1nm,0.9s,baz=127,slow=4.8,SNR=4.7						
ES19	SONSECA Array	163.45	12	ePKPdf	PKPdf	18 28 43.3	-0.3
ES19				ePKPab	PKPab	18 29 38.5	0.0
ESDC	Sonseca Array	163.46	12	PKP	PKPdf	18 28 44.2	+0.5
	comp=Z,0.4nm,0.3s,baz=356,slow=3.3,SNR=3.2						
ESDC				PKPab	PKPab	18 29 37.2	-1.4
	comp=Z,3.2nm,0.8s,baz=345,slow=4.3,SNR=15						
ESLA	Sonseca Array	163.46	12	ePKPab	PKPab	18 29 38.9	+0.3
KEST	Kesra	165.51	329	PKPab	PKPab	18 29 47.4	-0.4
	comp=Z,10nm,0.9s,baz=72,slow=6.4,SNR=12						
KEST	Kesra	165.51	329	ePKPdf	PKPdf	18 28 45.2	-0.4
KEST				ePKPab	PKPab	18 29 48.0	+0.2
THTN	Thala	165.96	331	ePKPab	PKPab	18 29 51.3	+1.5
TOA0	Torodi Ar. Sit	169.63	187	ePKPdf	PKPdf	18 28 47.0	-1.8
TOA0				ePKPdf	PKPdf	18 28 48.4	-0.5
TOA0				ePKPab	PKPab	18 30 05.7	-0.5
TOA0				ePKPab	PKPab	18 30 06.5	+0.4
TORD	Torodi Ar. Bea	169.63	187	PKP	PKPdf	18 28 47.5	-1.4
	comp=Z,5.3nm,1.1s,baz=107,slow=1.5						
TORD				PKPab	PKPab	18 30 06.2	0.0
	baz=166,slow=5.6						
TOA1	Torodi Ar. Sit	169.63	187	ePKPdf	PKPdf	18 28 47.5	-1.4
TOA1				ePKPab	PKPab	18 30 06.2	-0.1
MDT	Midelt	169.74	24	PKP	PKPdf	18 28 49.3	+0.7
	comp=Z,4.1nm,0.8s,baz=253,slow=1.5,SNR=7.1						
KOWA	Kowa	170.15	155	PKP	PKPdf	18 28 48.7	-0.5
	comp=Z,1.3nm,0.6s,baz=152,slow=1.8,SNR=3.3						
TAM	Tamanrasset	175.17	263	ePKPdf	PKPdf	18 28 52.0	+0.7
TAM				ePKPab	PKPab	18 30 32.3	+0.9
TAM	Tamanrasset	175.17	263	ePKIKP	PKPdf	18 28 52.0	+0.7
TAM				e		18 30 32.3	

JMA 10 18:15:09.8, 35°.25N×136°.56E, h6^{km}±1^{km}, M2.6, Western Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JEG	Eigenji	0.18	231	P	Pg	18 15 13.4	0.0
JEG				S	Sg	18 15 16.0	+0.2
TSUJ	Tsu 2	0.55	192	P	Pg	18 15 20.5	+0.1
TSUJ				S	Sg	18 15 28.0	+0.4
MAT	Matsushiro	1.86	46	P	Pn	18 15 43.0	+0.8
MAT				S	Sb	18 16 07.9	+0.2

IDC 10 18:21:27.0±4.5**, 3°.05S×100°.60E, h0^{km}, mb3.5**/4**, mb1 3.5**/4**, mb1mx3.2**/63**, mbtmp3.5**/4**, Error ellipse: s-maj=193.8km s-min=27.8km az=57.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S2	Diego Garcia H	28.34	260	T	T	18 56 32.1	
	baz=82,slow=75,SNR=26						
H08S3	Diego Garcia H	28.35	260	T	T	18 56 39.8	
	baz=82,slow=75,SNR=91						
H08S1	Diego Carcia H	28.36	260	T	T	18 56 33.0	
	baz=82,slow=75,SNR=9.9						
H01W3	Cape Leeuwin H	34.08	160	T	T	19 04 00.8	
	baz=333,slow=76,SNR=4.4						
H01W2	Cape Leeuwin H	34.10	160	T	T	19 04 02.7	
	baz=333,slow=76,SNR=4.4						
H01W1	Cape Leeuwin H	34.10	160	T	T	19 04 01.9	
	baz=333,slow=76,SNR=3.5						
ASAR	Alice Springs	38.16	125	P	P	18 28 48.4	-0.1
	0.1nm,0.4s,baz=300,slow=7.6,SNR=3.6						
SONM	Songino Array	50.93	5	P	P	18 30 30.4	+0.2
	1.3nm,0.9s,baz=183,slow=8.5,SNR=4.7						
MKAR	Makanchi Array	52.19	344	P	P	18 30 40.0	+0.4
	0.3nm,0.5s,baz=164,slow=8.4,SNR=3.2						
ZALV	Zalesovo Beam	58.30	349	P	P	18 31 22.6	-0.9
	0.6nm,0.5s,baz=153,slow=8.0,SNR=3.6						

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*IDC **10** 18:22:11.3±1.6, 26°.95N×143°.87E, h0^{km}, mb3.5/7, mb1 3.7/9, mb1mx3.5/63, mbtmp3.6/9, ML3.8/2, Error ellipse: s-maj=44.0km s-min=19.1km az=76.0*

*NEIC **10** 18:22:13.8±0.4, 26°.98N×143°.83E, h15^{km}, mb4.8/7, Error ellipse: s-maj=11.4km s-min=6.6km az=76.0*

*ISCJB **10** 18:22:14.6±0.5, 27°.04N±0°.06×143°.78E±0°.06, h33^{km}, mb4.1/13, Error ellipse: s-maj=8.2km s-min=7.2km az=16.1*

ISC 10 18:22:17.3±0.9**, 27°.13N**±0°.08×**143°.72E**±0°.09**, h35^{km}, n29, σ1^s.58**/33**, mb4.2**/13**, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	Chichi jima	1.36	269	ePn	Pn	18 22 38.6	-1.3
CBIJ				eSn	Sn	18 22 56.4	-0.3
JCJ	Chichijima	1.36	269	Pn	Pn	18 22 39.4	-0.5
	13nm,0.3s,baz=108,slow=20,SNR=25						
JCJ				Sn	Sn	18 22 56.1	-0.6
	66nm,0.3s,baz=270,slow=20,SNR=28						
JHJ2	Mitsune	6.85	331	ePn	Pn	18 23 55.2	0.0
JHJ2				eSn	Sn	18 25 08.9	-3.1
JHJ	Hachijo jima 2	6.87	331	Pn	Pn	18 23 55.2	-0.3
	2.7nm,0.3s,baz=264,slow=23,SNR=7.2						
JHJ				Sn	Sn	18 25 08.7	-3.7
	2.3nm,0.3s,baz=66,slow=20,SNR=2.3						
MJAR	Matsushiro Arr	10.48	335	Pn	Pn	18 24 45.2	+0.1
	1.6nm,0.3s,baz=165,slow=12,SNR=13						
MAJO	Matsushiro	10.48	335	ePn	Pn	18 24 45.0	-0.1
MJB9	Matsu-Tunnel	10.49	335	ePn	Pn	18 24 45.0	-0.1
KLR	Kul’dur	23.93	340	P	P	18 27 28.8	+0.9
	0.2nm,0.6s,baz=144,slow=8.0,SNR=6.5						
SONA0	Songino Array	35.64	315	eP	P	18 29 13.2	+1.2
SONM	Songino Array	35.64	315	P	P	18 29 13.2	+1.2
	0.3nm,0.4s,baz=108,slow=9.3,SNR=2.7						
TIXI	Tiksi	45.32	353	eP	P	18 30 33.0	+1.6
	5.3nm,1.4s						
WRAB	Tennant Creek	47.66	192	eP	P	18 30 48.3	-2.1
	12nm,1.4s						
WB2	Warramunga Arr	47.67	192	eP	P	18 30 48.2	-2.2
	22nm,1.8s						
WR1	Warramunga Arr	47.67	192	eP	P	18 30 48.6	-1.8
	27nm,1.8s						
WRA	Warramunga Arr	47.67	192	P	P	18 30 48.6	-1.8
	1.1nm,0.7s,baz=11,slow=8.6,SNR=6.6						
FITZ	Fitzroy Crossi	48.26	203	eP	P	18 30 54.5	-0.4
	14nm,1.6s						
ASAR	Alice Springs	51.38	192	P	P	18 31 16.4	-2.3
	0.4nm,0.9s,baz=18,slow=6.2,SNR=6.5						
MK01	Makanchi Array	51.50	310	eP	P	18 31 21.3	+1.9
MK31	Makanchi Array	51.50	310	eP	P	18 31 21.1	+1.6
MK32	Makanchi Array	51.50	310	eP	P	18 31 20.3	+0.8
MKAR	Makanchi Array	51.50	310	P	P	18 31 20.3	+0.8
	0.4nm,0.5s,baz=85,slow=9.0,SNR=5.4						
MKAR	Makanchi Array	51.50	310	eP	P	18 31 21.1	+1.6
	14nm,1.3s						
KURK	Kurchatov	53.93	314	eP	P	18 31 39.0	+1.7
KURBB	Kurchatov Arra	53.99	314	P	P	18 31 39.0	+1.3
	0.7nm,0.3s,baz=86,slow=7.7,SNR=3.1						
CAST	Castle Rocks	54.58	30	eP	P	18 31 43.0	+1.2
	14nm,1.8s						
BVAR	Borovoye Array	58.94	318	P	P	18 32 14.1	+1.2
	0.4nm,0.3s,baz=85,slow=5.3,SNR=4.9						
WBSM	Bird Springs	80.82	55	eP	P	18 34 26.9	-1.0
PLM	Palomar	82.75	56	eP	P	18 34 37.0	-1.1
GMRC	Granite Mounta	82.97	55	eP	P	18 34 37.8	-1.5

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*NIC **10** 18:40:55.3±0.2, 35°.20N×31°.63E, h12^{km}, ML2.9*

*CSEM **10** 18:41:07.1, 35°.41N×32°.76E, h6^{km}, ML1.5*

*ISK **10** 18:41:07.1, 35°.41N×32°.76E, h6^{km}, ML1.5/7*

ISC 10 18:40:58.1±2.5**, 35°.31N**±0°.07×**32°.0E**±0°.1**, h10^{km}, n16, σ2^s.59**/21**, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKMC	Akamas	0.42	133	P	Pg	18 41 06.8	+0.4
	baz=287						
PPCY	Paphos	0.53	143	P	Pg	18 41 08.4	-0.1
	baz=298						
ALFC	Alefka	0.55	106	P	Pg	18 41 10.8	+2.0
	baz=273						
ALFC				S	Sb	18 41 21.7	+3.9
LEF	Lefka	0.79	104	PG	Pg	18 41 13.6	+0.3
LEF	Lefka	0.79	104	ePg	Pg	18 41 13.6	+0.3
CSS	Mathiatis	1.18	107	PG	Pn	18 41 19.7	-1.0
CSS	Mathiatis	1.18	107	ePg	Pn	18 41 19.7	-1.0
TEKE	Tekeli-Mersin	1.25	48	PG	Pn	18 41 22.7	+1.0
TEKE				SG	Sn	18 41 33.9	-4.7
TEKE	Tekeli-Mersin	1.25	48	ePg	Pn	18 41 22.7	+1.0
TEKE				eSg	Sn	18 41 33.9	-4.7
AKKU	Akkuyu-Mersin	1.55	57	PG	Pn	18 41 26.4	+0.7
AKKU				SG	Sn	18 41 40.9	-5.0
AKKU	Akkuyu-Mersin	1.55	57	ePg	Pn	18 41 26.4	+0.7
AKKU				eSg	Sn	18 41 40.9	-5.0
IKL	Isikli	1.68	56	PN	Pn	18 41 29.1	+1.5
IKL				SN	Sn	18 41 44.7	-4.5
IKL	Isikli	1.68	56	ePn	Pn	18 41 29.1	+1.5
IKL				eSn	Sn	18 41 44.7	-4.5
KEBE	Keben-Mersin	1.82	51	PN	Pb	18 41 32.4	+0.8
KEBE	Keben-Mersin	1.82	51	ePn	Pb	18 41 32.4	+0.8
KIZK	Mersin	2.12	56	PN	Pn	18 41 35.9	+2.2

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*ISCJB **10** 18:42:21.7±0.7, 15°.0S±0°.1×72°.48W±0°.07, h114^{km}, mb3.8/5, Error ellipse: s-maj=17.0km s-min=7.0km az=26.6*

*IDC **10** 18:42:23.0±1.4, 15°.00S×72°.46W, h117^{km}±14^{km}, mb3.7/5, mb1 3.8/9, mb1mx3.5/42, mbtmp4.1/9, Error ellipse: s-maj=20.3km s-min=11.3km az=27.0*

ISC 10 18:42:22.9±0.8**, 15°.0S**±0°.1×**72°.43W**±0°.09**, h114^{km}, n10, σ0^s.89**/12**, mb3.9**/5**, Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPAZ	La Paz	4.35	108	P	Pn	18 43 29.1	+1.5
	5.2nm,0.3s,baz=288,slow=11,SNR=67						

LPAZ				S	Sn	18 44 18.6	+0.9
	baz=36,slow=19,SNR=2.5						
NNA	Nana	5.21	304	P	Pn	18 43 39.3	+0.7
	18nm,0.3s,baz=125,slow=11,SNR=18						
NNA				S	Sn	18 44 37.6	0.0
	16nm,0.3s,baz=9.9,slow=13,SNR=17						
SIV	San Ignacio	11.00	97	P	Pn	18 44 55.8	-1.3
	0.9nm,0.3s,baz=288,slow=12,SNR=24						
PTGA	Pitinga	18.75	42	P	Pn	18 46 34.5	-0.3
	0.7nm,0.3s,baz=226,slow=13,SNR=5.4						
PLCA	Paso Flores	25.74	177	P	P	18 47 43.3	+0.5
	5.1nm,0.9s,baz=1.2,slow=12,SNR=6.5						
SNAA	Sanae	69.52	162	P	P	18 53 18.1	-0.8
	1.3nm,0.6s,baz=272,slow=8.4,SNR=15						
QSPA	South Pole Qui	75.20	180	P	P	18 53 52.3	-0.6
	1.9nm,0.9s,baz=131,slow=5.9						
TORD	Torodi Ar. Bea	78.49	73	P	P	18 54 11.7	-0.4
	1.6nm,0.9s,baz=237,slow=5.4						
ESDC	Sonseca Array	83.64	46	P	P	18 54 39.6	+0.7
	0.2nm,0.3s,baz=264,slow=5.4,SNR=6.8						
WRA	Warramunga Arr	136.46	218	PKP	PKPdf	19 01 32.0	-0.4
	0.5nm,0.9s,baz=152,slow=2.5,SNR=3.6						

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*IDC **10** 19:03:24.3±1.0, 1°.11N×126°.78E, h0^{km}, mb3.6/5, mb1 3.7/5, mb1mx3.5/53, mbtmp3.6/5, Error ellipse: s-maj=57.8km s-min=19.8km az=72.0*

*ISCJB **10** 19:03:31.8±0.6, 1°.15N±0°.06×126°.83E±0°.06, h72^{km}, mb3.8/6, Error ellipse: s-maj=9.4km s-min=6.7km az=40.3*

*DJA **10** 19:03:33.5±0.6, 1°N±4°×12°7E±°, h54^{km}±11^{km}, M3.6/7, MLv3.6/7*

ISC 10 19:03:33.4±0.9, 1°.10N±0°.08×126°.84E±0°.06, h72^{km}, n12, σ0^{s}.78/15, mb4.0/6, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	0.62	122	P	Pn	19 03 47.3	-0.2
TNTI				S	Sn	19 03 58.5	+0.5
LBMI	Labuha	1.84	159	P	Pn	19 04 04.0	+1.0
LBMI				S	Sn	19 04 27.3	+1.8
KMSI	Cibinong	2.91	260	P	Pn	19 04 17.8	+0.5
KMSI				S	Sn	19 04 51.8	+0.6
SANI	Sanana	3.24	195	P	Pn	19 04 21.1	-0.8
NLAI	Namlea	4.31	177	S	Sn	19 05 25.0	-0.6
APSI	Ampana	5.56	249	P	Pn	19 04 53.8	+0.2
WRA	Warramunga Arr	22.16	161	P	P	19 08 22.8	-0.7
	0.3nm,0.3s,baz=338,slow=11,SNR=13						
ASAR	Alice Springs	25.55	165	P	P	19 08 55.0	-0.7
	0.2nm,0.3s,baz=348,slow=8.7,SNR=5.3						
SONM	Songino Array	49.82	342	P	P	19 12 19.3	+0.1
	0.6nm,0.5s,baz=151,slow=6.3,SNR=4.8						
PETK	Petropavlovsk-	57.82	21	P	P	19 13 17.1	-0.2
	1.4nm,0.9s,baz=208,slow=5.9						
MKAR	Makanchi Array	59.78	326	P	P	19 13 31.0	-0.1
	1.2nm,0.6s,baz=116,slow=8.5,SNR=10						
KURBB	Kurchatov Arra	64.01	328	P	P	19 13 59.4	+0.1
	3.8nm,0.2s,baz=127,slow=6.1,SNR=4.6						

IDC 10 19:40:39.9±3.2, 33°.96N×89°.82E, h0^{km}, mb3.5/3, mb1 3.8/5, mb1mx3.3/75, mbtmp3.5/5, ML0.9/1, MS2.7/1, Ms1 2.7/1, ms1mx2.1/54, Error ellipse: s-maj=218.6km s-min=24.8km az=65.0, Xizang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	Ala-Archa	14.82	310	LR	LR	19 51 02.0	
	comp=Z,30nm,20.1s,baz=172,slow=42						
CMAR	Chiang Mai Arr	17.45	150	P	P	19 44 45.6	-0.5
	0.2nm,0.3s,baz=331,slow=13,SNR=4.9						
KURBB	Kurchatov Arra	18.60	337	P	P	19 44 58.0	-0.5
	0.0nm,0.3s,baz=150,slow=12,SNR=4.8						
ZALV	Zalesovo Beam	20.30	351	P	P	19 45 17.7	+0.6
	0.5nm,0.4s,baz=166,slow=8.9,SNR=3.0						
WRA	Warramunga Arr	68.34	135	P	P	19 51 43.2	0.0
	0.5nm,0.7s,baz=328,slow=6.4,SNR=7.8						
ASAR	Alice Springs	71.00	138	P	P	19 51 59.4	-0.2
	0.5nm,0.8s,baz=320,slow=6.7,SNR=4.4						

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*IDC **10** 19:43:43.3±1.4, 26°.92N×143°.62E, h0^{km}, mb3.4/6, mb1 3.6/8, mb1mx3.4/72, mbtmp3.5/8, ML3.7/2, MS3.0/1, Ms1 3.0/1, ms1mx2.1/28, Error ellipse: s-maj=31.0km s-min=19.1km az=68.0*

*ISCJB **10** 19:43:45.3±1.0, 27°.07N±0°.10×143°.8E±0°.1, h33^{km}, mb3.4/6, MS3.0/1, Error ellipse: s-maj=14.3km s-min=13.3km az=21.7*

ISC 10 19:43:48.3±1.4, 27°.11N±0°.09×143°.6E±0°.1, h35^{km}, n10, σ1^{s}.78/11, mb3.5/6, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	Chichijima	1.30	270	Pn	Pn	19 44 09.8	-0.1
	11nm,0.3s,baz=88,slow=24,SNR=29						
JCJ				Sn	Sn	19 44 26.1	0.0
	28nm,0.3s,baz=287,slow=20,SNR=15						
JHJ	Hachijo jima 2	6.85	332	Pn	Pn	19 45 26.1	-0.2
	2.0nm,0.3s,baz=254,slow=21,SNR=7.3						
JHJ				Sn	Sn	19 46 40.0	-3.1
	1.7nm,0.3s,baz=73,slow=19,SNR=2.9						
MJAR	Matsushiro Arr	10.47	335	Pn	Pn	19 46 15.3	-0.6
	1.0nm,0.3s,baz=164,slow=12,SNR=11						
KLR	Kul'dur	23.92	341	P	P	19 49 00.8	+1.9
	0.1nm,0.5s,baz=174,slow=10,SNR=4.2						
HNR	Honiara	39.62	154	LR	LR	20 07 27.5	
	comp=Z,20nm,19.4s,baz=150,slow=36						
WRA	Warramunga Arr	47.64	192	P	P	19 52 19.1	-2.1
	0.6nm,0.9s,baz=9.4,slow=8.5,SNR=5.3						
ASAR	Alice Springs	51.35	191	P	P	19 52 48.2	-1.3
	0.2nm,0.7s,baz=356,slow=5.6,SNR=3.4						
MKAR	Makanchi Array	51.46	310	P	P	19 52 51.7	+1.5
	0.3nm,0.6s,baz=88,slow=8.6,SNR=5.1						
KURBB	Kurchatov Arra	53.95	314	P	P	19 53 09.2	+0.7
	0.6nm,0.4s,baz=91,slow=7.9,SNR=8.4						
BVAR	Borovoye Array	58.91	318	P	P	19 53 45.5	+1.7
	0.3nm,0.4s,baz=86,slow=7.4,SNR=4.8						

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*ISCJB **10** 19:45:49.5±0.6, 50°.36N±0°.04×18°.78E±0°.03, h0^{km}, Error ellipse: s-maj=5.7km s-min=2.6km az=13.4*

*CSEM **10** 19:45:50.1±0.4, 50°.37N×18°.83E, h1^{km}, ML2.5/5, Error ellipse: s-maj=8.6km s-min=4.1km az=13.0*

*PRU **10** 19:45:51.3, 50°.35N×18°.82E, h0^{km}*

*WAR **10** 19:45:51.3, 50°.36N×18°.92E, h1^{km}, Mw2.4*

ISC 10 19:45:50.9±0.9, 50°.31N±0°.05×18°.81E±0°.02, h0^{km}, n32, σ0^{s}.71/54, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHZP	Chorzow	0.12	100	*e*Pg	Pg	19 45 53.1	0.0
CHZP				*e*Sg	Sg	19 45 54.9	+0.3
CHZP	Chorzow	0.12	100	*e*Pg	Pg	19 45 53.1	0.0
CHZP				*e*Sg	Sg	19 45 54.9	+0.3
OKC	Ostrava-Krasne	0.64	222	*e*PG	Pb	19 46 04.6	-0.3
OKC				*e*SG	Sb	19 46 14.0	-0.4
	comp=Z,13nm,0.3s						
OKC	Ostrava-Krasne	0.64	222	Pg	Pb	19 46 04.6	-0.3
OKC				Sg	Sb	19 46 14.0	-0.4
	13nm,0.3s						
OJC	Ojcow	0.64	98	*e*Pg	Pg	19 46 02.3	-0.8
OJC				*e*Sg	Sg	19 46 11.0	-0.4
OJC	Ojcow	0.64	98	*e*Pg	Pg	19 46 02.3	-0.8
OJC				*e*Sg	Sg	19 46 11.0	-0.4
OJC	Ojcow	0.64	98	*e*Pg	Pg	19 46 02.3	-0.8
OJC				*e*Sg	Sg	19 46 11.0	-0.4
MORC	Moravsky Berou	0.98	237	*e*Pg	Pb	19 46 10.3	-0.4
MORC				*e*Sg	Sb	19 46 24.4	+0.2
MORC	Moravsky Berou	0.98	237	*e*PG	Pb	19 46 10.3	-0.4
MORC				*e*SG	Sb	19 46 24.4	+0.2
LANS	Liptovska Anna	1.24	160	*e*PG	Pb	19 46 15.1	0.0
LANS				*e*SG	Sb	19 46 32.0	+0.4
LANS	Liptovska Anna	1.24	160	*e*Pg	Pb	19 46 15.1	0.0
LANS				*e*Sg	Sb	19 46 32.0	+0.4
NIE	Niedzica	1.31	132	*e*Pg	Pn	19 46 16.6	+0.1
NIE				*e*Sg	Sn	19 46 35.4	+0.7
NIE	Niedzica	1.31	132	*e*Pg	Pn	19 46 16.6	+0.1
NIE				*e*Sg	Sn	19 46 35.4	+0.7
NIE	Niedzica	1.31	132	*e*Pg	Pn	19 46 16.7	+0.1
NIE				*e*Sg	Sn	19 46 35.4	+0.7
DPC	Dobruska-Polom	1.60	272	*e*PG	Pn	19 46 19.8	-0.6
DPC				*e*SG	Sg	19 46 42.8	+0.7
	comp=Z,6.8nm,0.6s						
DPC	Dobruska-Polom	1.60	272	Pg	Pn	19 46 19.8	-0.6
DPC				Sg	Sg	19 46 42.8	+0.7
	6.8nm,0.6s						
KSP	Ksiaz	1.69	289	*e*Pg	Pg	19 46 22.8	-0.5
KSP				*e*Sg	Sg	19 46 46.2	+1.0
KSP	Ksiaz	1.69	289	*e*Pg	Pg	19 46 22.8	-0.5
KSP				*e*Sg	Sg	19 46 46.2	+1.0
KSP	Ksiaz	1.69	289	*e*Pg	Pg	19 46 22.8	-0.5
KSP				*e*Sg	Sg	19 46 46.2	+1.0
VRAC	Vranov	1.75	236	*e*Sg	Sg	19 46 48.0	+0.9
VRAC	Vranov	1.75	236	*e*SG	Sg	19 46 48.0	+0.9
VYHS	Vyhne	1.82	179	*e*PN	Pn	19 46 24.0	+0.6
VYHS				*e*SN	Sn	19 46 46.8	-0.4
VYHS				*e*LG	Lg	19 46 54.6	
VYHS	Vyhne	1.82	179	*e*Pg	Pn	19 46 24.0	+0.6
KRUC	Moravsky	2.01	232	*e*Sg	Sb	19 46 54.7	+1.0
KRUC	Moravsky	2.01	232	*e*SG	Sb	19 46 54.7	+1.0
GOPC	GO Pecny, Ondr	2.62	263	*e*SG	Sg	19 47 14.6	-0.4
	comp=Z,4.0nm,0.6s						
GOPC	GO Pecny, Ondr	2.62	263	Sg	Sg	19 47 14.6	-0.4
	4.0nm,0.6s						
PRU	Pruhonice	2.77	265	*e*SG	Sg	19 47 18.6	-1.1
	comp=Z,1.9nm,0.3s						
PRU	Pruhonice	2.77	265	Sg	Sg	19 47 18.6	-1.1
	1.9nm,0.3s						
KHC	Kasperske Hory	3.59	253	*e*PG	Pg	19 46 59.3	-0.5
KHC				*e*SG	Sg	19 47 45.6	-0.7
	comp=Z,3.1nm,0.4s						
KHC	Kasperske Hory	3.59	253	Pg	Pg	19 46 59.3	-0.5
KHC				Sg	Sg	19 47 45.6	-0.7
	3.1nm,0.4s						
CLL	Collm	3.82	287	*e*Sg	Sg	19 47 56.0	+2.6

IDC 10 19:58:02.5±0.8, 29°.18S×74°.88E, h0^{km}, mb3.7/9, mb1 3.9/9, mb1mx3.6/61, mbtmp3.7/9, MS3.3/4, Ms1 3.3/4, ms1mx2.8/52, Error ellipse: s-maj=30.4km s-min=23.3km az=78.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S2	Diego Garcia H	21.54	354	T	T	20 25 01.5	
	baz=174,slow=76,SNR=28						
H08S1	Diego Carcia H	21.54	354	T	T	20 25 07.3	
	baz=174,slow=76,SNR=5.2						
H08S3	Diego Garcia H	21.56	354	T	T	20 25 02.6	
	baz=174,slow=76,SNR=38						
H01W2	Cape Leeuwin H	33.61	110	T	T	20 40 05.9	
	baz=269,slow=74,SNR=16						
H01W3	Cape Leeuwin H	33.61	110	T	T	20 40 06.1	
	baz=269,slow=74,SNR=15						
H01W1	Cape Leeuwin H	33.62	110	T	T	20 40 07.2	
	baz=269,slow=74,SNR=15						
LEM	Lembang	38.03	61	LR	LR	20 18 30.0	
	comp=Z,56nm,18.8s,baz=236,slow=32						
MAW	Mawson	39.12	187	LR	LR	20 18 58.2	
	comp=Z,34nm,20.7s,baz=62,slow=32						
ASAR	Alice Springs	52.68	99	P	P	20 07 18.5	-0.6
	0.4nm,0.5s,baz=252,slow=6.1,SNR=4.8						
CMAR	Chiang Mai Arr	52.75	29	P	P	20 07 20.7	+1.3
	0.2nm,0.3s,baz=219,slow=7.1,SNR=2.8						
CMAR				LR	LR	20 27 08.0	
	comp=Z,17nm,19.4s,baz=198,slow=33						
WRA	Warramunga Arr	54.37	95	P	P	20 07 30.9	-0.7
	1.5nm,0.8s,baz=251,slow=7.0,SNR=8.1						
QSPA	South Pole Qui	60.96	180	P	P	20 08 17.8	+0.5
	2.4nm,1.0s,baz=261,slow=1.8,SNR=3.3						
VNDA	Vanda	61.09	166	P	P	20 08 18.2	+0.4
	1.0nm,0.9s,baz=260,slow=6.1,SNR=4.3						
MKAR	Makanchi Array	75.92	5	LR	LR	20 41 59.4	
	comp=Z,17nm,19.1s,baz=14,slow=35						
KURBB	Kurchatov Arra	79.52	2	P	P	20 10 12.1	+1.4
	0.3nm,0.7s,baz=178,slow=5.4,SNR=3.4						
SONM	Songino Array	81.73	21	P	P	20 10 22.8	-0.1
	0.4nm,0.7s,baz=215,slow=4.8,SNR=3.2						
BVAR	Borovoye Array	81.95	357	P	P	20 10 22.9	-0.9
	0.2nm,0.5s,baz=134,slow=4.2,SNR=3.3						
TORD	Torodi Ar. Bea	82.14	290	P	P	20 10 25.0	-0.6
	0.6nm,0.8s,baz=116,slow=3.4						
YKA	Yellowknife Ar	146.11	8	PKPbc	PKPdf	20 17 42.4	-0.6
	0.2nm,0.5s,baz=342,slow=3.7,SNR=5.7						

IDC 10 20:02:10.5±3.4, 18°.39S×178°.02W, h641^{km}±40^{km}, mb3.3/5, mb1 3.5/5, mb1mx2.8/45, mbtmp4.3/5, Error ellipse: s-maj=84.2km s-min=25.2km az=150.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	33.74	261	P	P	20 08 02.1	+0.3
	5.6nm,0.4s,baz=81,slow=7.9,SNR=8.5						
STKA	Stephens Creek	38.73	242	P	P	20 08 42.6	+0.1
	1.2nm,0.4s,baz=87,slow=8.4,SNR=4.9						
WRA	Warramunga Arr	44.91	260	P	P	20 09 30.8	-0.1
	3.3nm,0.4s,baz=98,slow=6.9,SNR=169						
ASAR	Alice Springs	45.02	255	P	P	20 09 31.6	-0.1
	6.8nm,0.8s,baz=87,slow=8.1,SNR=90						
ASAR				PcP	PcP	20 10 58.5	+0.1
	0.5nm,0.7s,baz=100,slow=3.9,SNR=4.0						
ASAR				S	S	20 15 26.5	+0.6
	0.8nm,0.8s,baz=88,slow=16,SNR=5.0						
ILAR	Eielson Array	86.27	13	P	P	20 13 45.5	-0.1
	0.2nm,0.4s,baz=225,slow=4.7,SNR=3.4						

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*NIED **10** 20:15:00, 37°.90N×142°.50E, h26^{km}, Mw3.6 Best double couple: M$_0$2.73000×10^{14} NP1:φ$_s$30.00000°, δ42.00000°, λ101.00000°. NP2:φ$_s$195.00000°, δ49.00000°, λ80.00000°.*

*IDC **10** 20:15:14.6±1.0, 37°.82N×142°.47E, h0^{km}, mb3.6/7, mb1 3.8/10, mb1mx3.6/66, mbtmp3.8/10, ML3.5/3, Error ellipse: s-maj=34.5km s-min=16.5km az=90.0*

*JMA **10** 20:15:17.1±0.1, 37°.89N×142°.48E, h37^{km}±3^{km}, M3.8*

ISC 10 20:15:14.6±1.9, 37°.88N±0°.04×142°.49E±0°.06, h4^{km}±12^{km}, n31, σ1^{s}.52/37, mb3.8/7, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIO	Ouri	1.07	303	P	Pg	20 15 35.8	+0.7
JIO				S	Sg	20 15 49.2	+0.3
JMM	Marumori	1.34	270	P	Pn	20 15 40.1	0.0
JMM				S	Sb	20 15 56.0	-1.8
OFUJ	Ofunato	1.36	332	P	Pn	20 15 39.9	-0.5
OFUJ				S	Sb	20 15 57.8	-0.6
JFK	Kawauchi	1.38	249	P	Pn	20 15 40.6	-0.1
JFK				S	Sb	20 15 56.9	-2.1
JMK	Ichinoseki	1.47	317	P	Pn	20 15 41.8	0.0
JMK				S	Sn	20 15 59.5	-1.9
JOU	Okura	1.52	289	P	Pn	20 15 43.2	+0.6
JOU				S	Sn	20 16 00.8	-2.0
JFT	Otama	1.75	259	P	Pb	20 15 46.8	-0.4
JFT				S	Sn	20 16 08.2	-0.2
JOM	Ohasama	1.85	330	P	Pn	20 15 47.4	+0.3
JOM				S	Sn	20 16 10.8	-0.1
JYS	Shirataka	1.94	281	P	Pn	20 15 49.1	+0.7
JYK	Kaneyama	1.97	302	P	Pn	20 15 49.6	+0.9
JYK				S	Sn	20 16 12.8	-1.1
JANG	Nango	2.60	343	P	Pn	20 15 57.9	+0.4
JAG	Ashikaga	2.83	240	P	Pn	20 16 01.8	+1.3
MJAR	Matsushiro Arr	3.67	250	Pn	Pn	20 16 15.7	+3.6
	2.2nm,0.3s,baz=57,slow=9.8,SNR=17						
MJAR				Sn	Sn	20 16 58.1	+2.3
	1.1nm,0.3s,baz=165,slow=25,SNR=5.1						
MAT	Matsushiro	3.67	250	P	Pb	20 16 16.5	-3.5
JHJ	Hachijo jima 2	5.24	206	Pn	Pn	20 16 34.5	+0.9
	4.7nm,0.3s,baz=331,slow=22,SNR=19						
JHJ				Sn	Sn	20 17 31.6	-2.9
	15nm,0.3s,baz=81,slow=22,SNR=6.6						
ASAJ	Asahikawa	6.23	1	Pn	Pn	20 16 47.6	+0.3
	0.8nm,0.3s,baz=203,slow=14,SNR=11						
ASAJ				Sn	Sn	20 17 56.4	-2.6
	0.4nm,0.3s,baz=110,slow=29,SNR=4.0						
JCJ	Chichijima	10.76	181	Pn	Pn	20 17 48.2	-1.2
	1.1nm,0.3s,baz=18,slow=20,SNR=3.2						
JCJ				Sn	Sn	20 19 41.3	-8.9
	1.5nm,0.3s,baz=53,slow=20,SNR=2.7						
KLR	Kul'dur	13.74	329	Pn	Pn	20 18 31.0	+0.9
	0.0nm,0.3s,baz=126,slow=14,SNR=3.0						
SEY	Seymchan	25.80	10	P	P	20 20 48.2	+1.8
	1.1nm,0.4s,baz=184,slow=8.7,SNR=5.2						
H11N2	WAKE ISLAND Hy	27.87	124	T	T	20 50 14.5	
	baz=316,slow=75,SNR=63						
H11N1	WAKE ISLAND Hy	27.88	124	T	T	20 50 18.3	
	baz=316,slow=75,SNR=41						
H11N3	WAKE ISLAND Hy	27.89	124	T	T	20 50 17.3	
	baz=316,slow=75,SNR=38						
H11S1	WAKE ISLAND Hy	28.63	126	T	T	20 51 10.5	
	baz=317,slow=76,SNR=18						
H11S3	WAKE ISLAND Hy	28.63	126	T	T	20 51 10.8	
	baz=317,slow=76,SNR=20						
H11S2	WAKE ISLAND Hy	28.64	126	T	T	20 51 12.6	
	baz=317,slow=76,SNR=19						
MKAR	Makanchi Array	44.40	302	P	P	20 23 27.5	+1.2
	0.6nm,0.8s,baz=79,slow=7.5,SNR=3.1						
KURBB	Kurchatov Arra	46.16	307	P	P	20 23 40.3	+0.2
	1.0nm,0.5s,baz=82,slow=8.0,SNR=8.3						
ILAR	Eielson Array	48.32	33	P	P	20 23 57.8	+1.0
	0.3nm,0.9s,baz=240,slow=7.1,SNR=3.3						
BVAR	Borovoye Array	50.64	312	P	P	20 24 15.2	+0.5
	0.2nm,0.6s,baz=74,slow=6.2,SNR=2.9						
WRA	Warramunga Arr	58.02	189	P	P	20 25 08.7	+0.1
	1.3nm,0.8s,baz=7.1,slow=7.3,SNR=14						
ASAR	Alice Springs	61.75	189	P	P	20 25 34.4	+0.1
	0.5nm,0.8s,baz=10.0,slow=5.8,SNR=5.2						

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*NIED **10** 20:19:00, 40°.20N×142°.00E, h5^{km}, Mw3.7 Best double couple: M$_0$4.11000×10^{14} NP1:φ$_s$85.00000°, δ31.00000°, λ-106.00000°. NP2:φ$_s$284.00000°, δ60.00000°, λ-80.00000°.*

*ISCJB **10** 20:19:48.2±0.8, 40°.18N±0°.03×141°.98E±0°.08, h23^{km}±6^{km}, mb3.7/7, MS2.5/1, Error ellipse: s-maj=10.4km s-min=5.0km az=174.4*

*JMA **10** 20:19:48.1, 40°.20N×141°.99E, h12^{km}±1^{km}, M3.7*

JMA Felt I J1.

*IDC **10** 20:19:53.4±2.0, 40°.19N×141°.99E, h57^{km}±21^{km}, mb3.5/7, mb1 3.5/10, mb1mx3.3/66, mbtmp3.7/10, ML3.2/3, MS2.7/2, Ms1 2.7/2, ms1mx2.2/49, Error ellipse: s-maj=32.7km s-min=13.0km az=95.0*

ISC 10 20:19:48.1±1.7, 40°.20N±0°.03×142°.01E±0°.08, h7^{km}±11^{km}, n25, σ1^{s}.38/26, mb3.7/7, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	Tanohata	0.28	203	P	Pg	20 19 54.0	+0.3
JTH				S	Sb	20 19 58.4	-2.1
JANG	Nango	0.41	295	P	Pg	20 19 56.1	0.0
JANG				S	Sg	20 20 01.6	0.0
JKZ	Kuzumaki	0.56	248	P	Pg	20 19 58.8	-0.2
JKZ				S	Sg	20 20 06.4	+0.1
JOM	Ohasama	0.91	217	P	Pg	20 20 04.8	-0.8
JOM				S	Sg	20 20 16.8	-0.6
JTM	Tenmabayashi	0.93	310	P	Pg	20 20 05.4	-0.5
JTM				S	Sg	20 20 17.5	-0.4
JARK	Aomorirokkasho	0.94	329	P	Pg	20 20 05.1	-1.1
JARK				S	Sg	20 20 17.5	-0.9
JAH	Hinai	1.05	270	P	Pg	20 20 07.5	-0.8
JAH				S	Sg	20 20 21.4	-0.5
OFUJ	Ofunato	1.15	193	P	Pg	20 20 08.7	-1.4
ASAJ	Asahikawa	3.94	6	P	Pn	20 20 50.8	+1.8
	1.7nm,0.3s,baz=241,slow=11,SNR=18						
ASAJ				S	Sn	20 21 36.8	+1.4
	1.5nm,0.3s,baz=148,slow=32,SNR=6.2						
ASAJ				LR	LR	20 22 40.8	
	comp=Z,102nm,21.6s,baz=174,slow=42						
MJAR	Matsushiro Arr	4.72	220	P	Pn	20 21 02.9	+3.2
	0.6nm,0.3s,baz=30,slow=13,SNR=5.8						
MJAR				Lg	Lg	20 22 15.9	
	0.2nm,0.3s,baz=18,slow=26,SNR=9.1						
JHJ	Hachijo jima 2	7.29	195	P	Pn	20 21 36.9	+1.9
	0.9nm,0.3s,baz=49,slow=10,SNR=1.9						
MA2	Magadan	20.17	13	LR	LR	20 31 55.4	
	comp=Z,22nm,20.9s,baz=267,slow=36						
SEY	Seymchan	23.60	12	P	P	20 25 00.1	+0.8
	0.3nm,0.2s,baz=232,slow=17,SNR=3.3						
H11N2	WAKE ISLAND Hy	29.51	126	T	T	20 56 45.5	
	baz=320,slow=75,SNR=256						
H11N1	WAKE ISLAND Hy	29.52	126	T	T	20 56 50.9	
	baz=320,slow=75,SNR=222						
H11N3	WAKE ISLAND Hy	29.53	126	T	T	20 56 51.5	
	baz=320,slow=75,SNR=199						
H11S1	WAKE ISLAND Hy	30.32	128	T	T	20 57 44.2	
	baz=321,slow=76,SNR=35						
H11S3	WAKE ISLAND Hy	30.32	128	T	T	20 57 46.6	
	baz=321,slow=76,SNR=15						
H11S2	WAKE ISLAND Hy	30.34	128	T	T	20 57 53.3	
	baz=321,slow=76,SNR=13						
ZALV	Zalesovo Beam	40.19	310	P	P	20 27 23.4	-1.3
	1.3nm,0.6s,baz=81,slow=7.6,SNR=4.4						
MKAR	Makanchi Array	42.90	299	P	P	20 27 46.4	-0.8
	0.9nm,0.9s,baz=72,slow=8.3,SNR=3.2						
KURBB	Kurchatov Arra	44.48	306	P	P	20 27 58.4	-1.4
	3.7nm,0.5s,baz=79,slow=8.5,SNR=29						
BVAR	Borovoye Array	48.83	310	P	P	20 28 32.9	-1.0
	1.0nm,0.6s,baz=69,slow=8.6,SNR=10.0						
WRA	Warramunga Arr	60.26	188	P	P	20 29 55.2	-1.9
	0.6nm,1.0s,baz=5.8,slow=6.9,SNR=4.9						
ASAR	Alice Springs	63.98	188	P	P	20 30 20.7	-1.4
	0.2nm,0.7s,baz=2.2,slow=4.7,SNR=3.8						

KRSC 10 20:22:04.0±1.9, 49°.42N×156°.81E, h7^{km}±29^{km}, ML3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	1.34	341	*e*P	Pn	20 22 26.7	-2.5
SKR				*e*S	Sb	20 22 45.2	-1.7
PAU	Pauzhetka	2.05	360	*e*P	Pb	20 22 40.6	-1.0
PAU				*e*S	Sb	20 23 07.2	-0.1
KDTR	Khodutka, Kamc	2.53	18	*e*P	Pb	20 22 47.6	-2.1
KDTR				*e*S	Sb	20 23 19.3	-1.7
ASAK	Asacha	3.05	13	*e*P	Pb	20 22 56.3	-2.3
MTVR	Mutnovka	3.19	15	*e*P	Pb	20 22 58.0	-3.1
MTVR				*e*S	Sb	20 23 37.7	-2.5
RUS	Russkaya	3.21	19	*e*P	Pn	20 22 57.3	+2.5
RUS				*e*S	Sn	20 23 36.7	+3.5
UGLR	Uglovaya	4.00	18	*e*P	Pb	20 23 10.4	-4.5
AVH	Avacha	4.04	17	*e*P	Pn	20 23 10.9	+4.6
KOK	Koryaka	4.05	16	*e*P	Pn	20 23 09.8	+3.4
SDLR	Sedlovina	4.08	18	*e*P	Pn	20 23 10.2	+3.3
KRX	Arik	4.11	16	*e*P	Pn	20 23 12.0	+4.6
SPN	Mys Shipunski	4.20	27	*e*P	Pn	20 23 11.9	+3.4
SPN				*e*S	Sn	20 24 02.8	+5.0
GNL	Ganaly	4.34	9	*e*P	Pn	20 23 15.2	+4.7

NEIC 10 21:08:05.6±0.0, 37°.43S×177°.45E, h5^{km}, ML4.1(WEL), After WEL., Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WIZ	White Island	0.23	244	Pg	Pg	21 08 10.7	+0.7
MXZ	Matakaoa Point	0.70	101	*e*Pg	Pg	21 08 18.7	-0.3
MXZ				*e*Sg	Sg	21 08 29.0	+0.9
TWGZ	Tauwhareparae	0.86	151	P*	Pb	21 08 22.9	-0.1
WMGZ	Waiomatatini S	0.86	117	P*	Pb	21 08 23.5	+0.5
URZ	Urewera	0.87	198	*e*Pg	Pg	21 08 21.7	-0.6
MWZ	Matawai	0.91	176	*e*Pg	Pg	21 08 22.2	-0.8
BKZ	Black Stump Fm	1.89	203	*e*Pn	Pn	21 08 38.0	-0.7

IDC 10 21:21:57.3±3.9, 17°.41S×176°.10W, h0^{km}, mb4.1/3, mb1 4.3/3, mb1mx3.7/47, mbtmp4.1/3, Error ellipse: s-maj=168.0km s-min=79.8km az=156.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	40.80	241	P	P	21 29 40.7	+0.1
	1.4nm,0.7s,baz=56,slow=11,SNR=5.0						
WRA	Warramunga Arr	46.88	259	P	P	21 30 29.6	-0.2
	0.5nm,0.4s,baz=95,slow=7.5,SNR=31						
WRA				PcP	PcP	21 32 02.6	-0.2
	0.4nm,0.9s,baz=103,slow=3.2,SNR=2.8						
ASAR	Alice Springs	47.04	254	P	P	21 30 30.8	-0.2
	5.0nm,0.5s,baz=89,slow=8.4,SNR=105						
ASAR				PcP	PcP	21 32 02.8	-0.5
	0.3nm,0.7s,baz=102,slow=3.9,SNR=3.2						

MEX 10 21:38:39.8±0.5, 15°.01N×92°.51W, h117^{km}±6^{km}, MD3.6, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		0.26	113	*e*P	Pn	21 38 54.8	-1.4
THIG				*e*S	Sn	21 39 06.7	-1.8
PCIG		0.97	315	*e*P	Pn	21 39 00.2	-1.0

PCIG				eS	Sn	21 39 15.7	-1.8
TGIG		1.85	342	i P	Pn	21 39 09.6	-1.7
TGIG				i S	Sn	21 39 33.3	-2.1

*NIED **10** 21:51:00, 25°.90N×125°.00E, h140km, Mw4.5 Best double couple: M0 6.59000×10^15 NP1:φs290.00000°, δ35.00000°, λ174.00000°. NP2:φs25.00000°, δ86.00000°, λ55.00000°.*

*ISCJB **10** 21:51:45.9±0.4, 25°.8N±0°.1×125°.07E±0°.08, h122km±9km, mb3.5/4, Error ellipse: s-maj=19.7km s-min=4.0km az=146.9*

*JMA **10** 21:51:47.0±0.1, 25°.86N×125°.01E, h109km, M3.6*

*IDC **10** 21:51:48.5±6.3, 26°.20N×125°.17E, h116km±28km, mb3.3/4, mb1 3.5/5, mb1mx2.9/67, mbtmp3.7/5, Error ellipse: s-maj=149.5km s-min=28.1km az=2.0*

ISC 10 21:51:46.7±0.9**, 25°.8N**±0°.1×**125°.10E**±0°.08**, h123**km±13km**, n25,** σ**0s.76**/41**, mb3.4**/4**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIKM	Ikemajima	0.86	171	P	Pn	21 52 08.3	+0.6
JIKM				eS	Sn	21 52 23.6	0.0
JIRB	Irabujima	0.94	176	P	Pn	21 52 08.7	+0.2
JIRB				S	Sn	21 52 24.2	-0.8
JMJ	Miyako jima 2	0.97	170	P	Pn	21 52 09.3	+0.5
JMJ				eS	Sn	21 52 25.2	-0.2
JOGS	Gusukube	1.05	165	P	Pn	21 52 10.3	+0.8
JOGS				S	Sn	21 52 26.8	+0.1
JTJ	Tarama	1.18	198	P	Pn	21 52 11.1	+0.2
JTJ				S	Sn	21 52 28.5	-0.7
JISG	Ishigakijimahi	1.38	211	P	Pn	21 52 12.8	-0.2
JISG				S	Sn	21 52 32.0	-1.0
JKE	Kume jima 2	1.61	70	P	Pn	21 52 16.2	+0.5
JKE				eS	Sn	21 52 38.0	+0.3
JIJ	Ishigaki jima	1.65	212	P	Pn	21 52 16.0	-0.1
JIJ				S	Sn	21 52 36.5	-2.0
JKRS	Kuro-shima	1.82	213	P	Pn	21 52 18.2	0.0
JKRS				S	Sn	21 52 41.5	-0.6
IRIF	Iriomote-Funau	1.90	221	P	Pn	21 52 19.2	+0.1
IRIF				S	Sn	21 52 43.3	-0.4
HATJ	Hateruma jima	2.08	215	P	Pn	21 52 21.4	+0.1
HATJ				S	Sn	21 52 47.0	-0.7
JAGN	Aguni-jima	2.09	67	P	Pn	21 52 22.0	+0.6
JAGN				S	Sn	21 52 47.7	-0.3
YOJ	Yonaguni jima	2.30	236	P	Pn	21 52 25.1	+1.0
YOJ				eS	Sn	21 52 52.3	-0.4
JYNG	Yonagunijimaku	2.35	236	P	Pn	21 52 25.7	+0.9
JJT3	Tamagusuku3	2.44	81	P	Pn	21 52 26.7	+0.8
JJT3				S	Sn	21 52 55.7	-0.3
JNTH	Nagotoyohara	2.73	74	P	Pn	21 52 29.6	0.0
JIH	Iheya	2.86	63	P	Pn	21 52 31.5	+0.2
JIH				S	Sn	21 53 05.5	-0.1
JOW	Kunigami	3.04	69	P	Pn	21 52 33.5	-0.1
	23nm,0.3s,baz=264,slow=19,SNR=123						
JOW				S	Sn	21 53 07.0	-2.8
	3.6nm,0.3s,baz=180,slow=20,SNR=2.6						
JOW	Kunigami	3.04	69	P	Pn	21 52 33.6	0.0
JYRO	Yoronjima	3.25	67	P	Pn	21 52 36.2	-0.2
JOKE	Okinoerabujima	3.49	62	P	Pn	21 52 39.0	-0.5
MKAR	Makanchi Array	39.76	313	P	P	21 59 06.9	-0.5
	0.2nm,0.5s,baz=102,slow=8.8,SNR=5.9						
ZALV	Zalesovo Beam	40.94	324	P	P	21 59 16.8	-0.1
	1.0nm,0.4s,baz=112,slow=10.0,SNR=3.9						
ILAR	Eielson Array	66.16	28	P	P	22 02 20.9	+0.2
	0.1nm,0.4s,baz=274,slow=6.6,SNR=2.7						
YKA	Yellowknife Ar	80.11	24	P	P	22 03 43.5	+0.8
	0.8nm,0.7s,baz=303,slow=6.3,SNR=4.3						

*NEIC **10** 22:09:18.1±0.0, 14°.67N×93°.50W, h20km, MD4.0(MEX), After MEX.*

MEX 10 22:09:18.6±0.5**, 14°.70N×93°.49W, h15**km**, MD4.0, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.04	15	eP	Pb	22 09 34.3	-3.9
PCIG				eS	Sb	22 09 47.4	-4.3
PCIG		1.04	15	eP	Pb	22 09 34.3	-3.9
PCIG				eS	Sb	22 09 47.4	-4.3
THIG		1.20	80	eP	Pn	22 09 37.2	-3.7
THIG				i S	Sb	22 09 51.9	-4.5
THIG		1.20	80	eP	Pn	22 09 37.2	-3.7
TGIG		2.10	10	eP	Pn	22 09 50.7	-2.6
TGIG				i S	Sn	22 10 15.1	-4.2
TGIG		2.10	10	eP	Pn	22 09 50.7	-2.6
TGIG				eS	Sn	22 10 15.8	-3.5

*IDC **10** 22:13:32.9±2.5, 8°.57S×115°.15E, h0km, mb3.0/3, mb1 3.3/3, mb1mx3.1/52, mbtmp3.1/3, Error ellipse: s-maj=151.3km s-min=25.6km az=49.0*

*ISCJB **10** 22:13:47.1±0.6, 8°.7S±0°.2×115°.37E±0°.06, h135km±7km, mb3.0/3, Error ellipse: s-maj=31.0km s-min=7.5km az=10.5*

*DJA **10** 22:13:49.3±0.5, 9°S±10°×11°5E±°, h107km±6km, M3.3/11, MLv3.3/11*

ISC 10 22:13:47.5±1.1**, 8°.9S**±0°.2×**115°.37E**±0°.06**, h131**km±9km**, n13,** σ**1s.27**/16**, mb2.9**/3**, Bali region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGBI	Denpasar	0.23	286	P	Pn	22 14 06.0	+0.5
DNP	Denpasar	0.26	322	P	Pn	22 14 05.1	-0.5
SRBI	Singaraja	0.81	349	P	Pn	22 14 08.8	0.0
JAGI	Jajag, Banyuwa	1.27	289	P	Pn	22 14 13.4	+0.2
JAGI				S	Sn	22 14 31.5	-1.2
TWSI	Taliwang, Sumb	1.50	85	P	Pn	22 14 15.8	+0.2
GMJI	Gumukmas	2.00	287	P	Pn	22 14 21.9	+0.4
GMJI				S	Sn	22 14 46.7	-0.8
BLJI	Banyuglugur	2.09	303	P	Pn	22 14 23.4	+0.8
PLAI	Plampang	2.38	89	P	Pn	22 14 27.1	+0.9
PLAI				S	Sn	22 14 56.7	+0.8
PWJI	Pagerwojo	3.63	283	P	Pn	22 14 42.3	-0.1
WBSI	Waikabubak, Su	4.04	101	P	Pn	22 14 45.4	-2.5
WRA	Warramunga Arr	21.39	123	P	P	22 18 25.6	+0.8
	0.2nm,0.4s,baz=298,slow=12,SNR=7.3						
ASAR	Alice Springs	23.04	132	P	P	22 18 44.0	+2.5
	0.3nm,0.5s,baz=307,slow=8.7,SNR=5.4						
MKAR	Makanchi Array	62.78	335	P	P	22 23 57.8	-1.1
	0.1nm,0.3s,baz=144,slow=7.0,SNR=3.1						

*IDC **10** 22:23:27.1±6.4, 1°.32S×99°.49E, h0km, mb3.6/4, mb1 3.8/4, mb1mx3.4/59, mbtmp3.6/4, Error ellipse: s-maj=314.6km s-min=24.8km az=54.0*

*DJA **10** 22:23:30.2±0.5, 1°S±7°×9°9E±°, h10km, M3.5/4, MLv3.5/4*

ISC 10 22:23:30.6±1.0**, 1°.51S**±0°.07×**99°.26E**±0°.09**, h30**km**, n15,** σ**1s.06**/10**, mb3.7**/4**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SISI	Saibi	0.24	317	P	Pb	22 23 36.3	-1.1
SISI				S	Sb	22 23 41.6	-0.3
PPSI	Pulau Pagai	1.46	149	P	Pb	22 23 56.1	-1.0
KRJI	Kerinci	2.28	105	P	Pn	22 24 07.4	+1.1
MNSI	Mandailing Nat	2.31	8	P	Pn	22 24 08.0	+1.4
BKNI	Bangkinang	2.55	44	P	Pb	22 24 14.3	-1.4
H08S2	Diego Garcia H	27.35	256	T	T	22 57 13.8	
	baz=78,slow=75,SNR=11						
H08S3	Diego Garcia H	27.36	256	T	T	22 57 08.8	
	baz=78,slow=75,SNR=48						
H08S1	Diego Carcia H	27.37	256	T	T	22 57 12.6	
	baz=78,slow=75,SNR=4.6						
H01W3	Cape Leeuwin H	35.99	159	T	T	23 08 18.2	
	baz=335,slow=76,SNR=8.6						
H01W2	Cape Leeuwin H	36.00	159	T	T	23 08 19.9	
	baz=335,slow=76,SNR=11						
H01W1	Cape Leeuwin H	36.00	159	T	T	23 08 19.3	
	baz=335,slow=76,SNR=10.0						
WRA	Warramunga Arr	38.88	121	P	P	22 30 53.3	-0.4
	1.2nm,0.7s,baz=297,slow=8.8,SNR=8.6						
ASAR	Alice Springs	40.14	126	P	P	22 31 04.8	+0.5
	0.2nm,0.2s,baz=301,slow=8.3,SNR=4.3						
MKAR	Makanchi Array	50.36	345	P	P	22 32 24.7	-0.2
	0.3nm,0.5s,baz=158,slow=8.7,SNR=5.1						
ZALV	Zalesovo Beam	56.55	350	P	P	22 33 10.6	+0.4
	0.7nm,0.5s,baz=162,slow=6.1,SNR=2.6						

GUC 10 22:23:53.0±0.4**, 23°.97S×67°.25W, h208**km±10km**, ML4.1, 4C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO02	Mina Guanaco	2.44	240	⇑iP	Pn	22 24 38.8	+1.7
GO02				i S	S	22 25 13.8	+2.8
PB06	IPOC Station P	2.48	300	i P	Pn	22 24 38.9	+1.5
PB06				i S	S	22 25 13.8	+2.3
PB06				IAML		22 25 16.1	
	comp=E,385nm,0.1s						
PB14	IPOC Station P	2.95	257	⇑iP	Pn	22 24 44.7	+1.9
PB14				i S	S	22 25 24.2	+2.9
PB14				IAML		22 25 28.0	
	comp=E,174nm,0.4s						
PB03	IPOC Station P	3.00	309	⇑iP	Pn	22 24 44.7	+1.4
PB03				i S	S	22 25 23.9	+1.9
PB10	IPOC Station P	3.06	278	i P	Pn	22 24 45.8	+2.0
PB10				i S	S	22 25 25.7	+2.6
PB07	IPOC Station P	3.30	312	⇑iP	Pn	22 24 48.1	+1.2
PB07				i S	S	22 25 29.5	+1.0
PB08	IPOC Station P	4.20	335	i P	Pn	22 24 58.5	+0.5
PB08				i S	S	22 25 49.3	+0.7
PB08				IAML		22 25 53.0	
	comp=E,74nm,0.2s						
GO03	Copiap	4.50	216	⇓iP	Pn	22 25 01.2	-0.2
GO03				i S	S	22 25 54.5	-0.4
MNMC	Minye Minye	5.29	335	i P	Pn	22 25 12.5	+0.9
MNMC				i S	S	22 26 12.1	-1.3

*ISCJB **10** 22:31:09.3±0.6, 3°.43S±0°.06×128°.60E±0°.05, h100km, mb3.5/2, Error ellipse: s-maj=9.3km s-min=6.3km az=10.9*

*DJA **10** 22:31:09.5±0.7, 4°S±6°×12°9E±°, h97km±8km, M4.0/8, MLv4.0/8*

*IDC **10** 22:31:11.0±7.8, 3°.59S×129°.01E, h154km±94km, mb3.3/3, mb1 3.6/5, mb1mx3.2/53, mbtmp4.0/5, Error ellipse: s-maj=121.1km s-min=17.5km az=84.0*

ISC 10 22:31:07.9±0.9**, 3°.55S**±0°.07×**128°.58E**±0°.05**, h100**km**, n12,** σ**2s.34**/16**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.40	59	P	Pn	22 31 25.6	+2.6
AAI	Ambon	0.41	251	P	Pn	22 31 25.7	+2.6
AAI				S	Sn	22 31 37.9	+3.5
NLAI	Namlea	1.51	282	P	Pn	22 31 36.2	+1.9
BNDI	Bandanaira	1.63	126	P	Pn	22 31 38.2	+2.4
BNDI				S	Sn	22 31 59.1	+2.1
SANI	Sanana	2.99	300	P	Pn	22 31 54.3	+0.8
SANI				S	Sn	22 32 28.6	-0.1
LBMI	Labuha	3.09	339	P	Pn	22 31 57.8	+2.9
FAKI	Fak Fak	3.71	80	P	Pn	22 32 04.6	+1.4
SIJI	Sorong	3.78	45	P	Pn	22 32 05.8	+1.7
	28nm,0.3s,baz=200,slow=18,SNR=169						
SIJI				S	Sn	22 32 47.4	-0.3
	25nm,0.3s,baz=180,slow=20,SNR=28						
WRA	Warramunga Arr	17.23	161	P	Pn	22 34 59.2	-3.2
	1.2nm,0.3s,baz=333,slow=12,SNR=90						
WRA				S	Sn	22 38 02.7	-12
	0.1nm,0.3s,baz=343,slow=23,SNR=2.7						
ASAR	Alice Springs	20.65	166	P	P	22 35 37.5	-2.2
	3.3nm,0.4s,baz=348,slow=11,SNR=42						
ASAR				S	S	22 39 14.8	-10
	0.6nm,0.5s,baz=358,slow=23,SNR=4.3						
MKAR	Makanchi Array	64.59	327	P	P	22 41 33.3	-1.3
	0.3nm,0.4s,baz=112,slow=8.0,SNR=7.2						
KURBB	Kurchatov Arra	68.85	328	P	P	22 42 00.9	-0.7
	0.4nm,0.5s,baz=130,slow=5.9,SNR=5.3						

*IDC **10** 22:34:25.3±1.9, 4°.08N×92°.58E, h0km, mb3.6/4, mb1 3.8/6, mb1mx3.4/63, mbtmp3.7/6, ML4.1/2, MS3.6/1, Ms1 3.6/1, ms1mx2.4/59, Error ellipse: s-maj=49.6km s-min=29.5km az=50.0*

*NEIC **10** 22:34:26.0±0.7, 4°.07N×92°.54E, h10km, mb4.0/1, Error ellipse: s-maj=15.1km s-min=9.5km az=214.0*

*ISCJB **10** 22:34:27.4±0.7, 4°.11N±0°.09×92°.61E±0°.06, h33km, mb3.6/5, MS3.6/1, Error ellipse: s-maj=13.2km s-min=8.0km az=17.2*

ISC 10 22:34:29.2±1.0**, 4°.1N**±0°.1×**92°.59E**±0°.08**, h35**km**, n22,** σ**1s.46**/19**, mb3.8**/5**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LHMI	Lhok Sumawe	4.49	75	ePn	Pn	22 35 35.3	+0.6
LHMI				eSn	Sn	22 36 24.9	-0.9
GSI	Gunungsitoli	5.71	119	ePn	Pn	22 35 52.0	+0.5
KULM	Kulim	8.12	81	ePn	Pn	22 36 25.4	+0.6
PALK	Pallekele	12.24	285	Pn	Pn	22 37 21.1	0.0
	1.1nm,0.3s,baz=114,slow=12,SNR=5.9						
PALK				Sn	Sn	22 39 24.5	-12
	0.9nm,0.3s,baz=117,slow=14,SNR=3.5						
CM31	Chiang Mai Arr	15.57	23	ePn	Pn	22 38 05.3	-0.8
CMAR	Chiang Mai Arr	15.57	23	Pn	Pn	22 38 05.3	-0.8
	0.2nm,0.3s,baz=214,slow=13,SNR=5.7						
H08S3	Diego Garcia H	23.19	240	T	T	23 05 03.6	
	baz=60,slow=74						
H08S2	Diego Garcia H	23.20	240	T	T	23 05 02.4	
	baz=60,slow=74						
H08S1	Diego Carcia H	23.21	240	T	T	23 05 04.7	
	baz=60						
JOW	Kunigami	40.91	53	LR	LR	22 59 18.3	
	comp=Z,79nm,20.9s,baz=226,slow=36						
MK32	Makanchi Array	43.46	350	eP	P	22 42 29.9	+1.1
MKAR	Makanchi Array	43.46	350	P	P	22 42 29.9	+1.1
	0.2nm,0.7s,baz=164,slow=7.5,SNR=2.7						
SONA0	Songino Array	45.16	13	eP	P	22 42 44.1	+1.5
SONM	Songino Array	45.16	13	P	P	22 42 44.1	+1.5
	0.6nm,0.5s,baz=188,slow=8.4,SNR=3.2						
SONA1	Songino Array	45.18	13	eP	P	22 42 40.0	-2.8
GYA0B	ALIBECK ARRAY	46.07	322	eP	P	22 42 48.6	-1.2
	1.9nm,1.1s						
WR1	Warramunga Arr	47.47	122	eP	P	22 43 02.3	+1.2
WRA	Warramunga Arr	47.47	122	P	P	22 43 02.3	+1.2
	0.3nm,0.6s,baz=296,slow=8.8,SNR=4.7						
AS01	Alice Springs	48.85	126	eP	P	22 43 09.1	-2.5
ZALV	Zalesovo Beam	50.10	354	P	P	22 43 22.2	+1.6
	0.9nm,0.4s,baz=184,slow=7.7,SNR=4.4						
ZALV	Zalesovo Beam	50.10	354	eP	P	22 43 21.4	+0.8
ZAA1	Zalesovo Array	50.10	354	eP	P	22 43 22.2	+1.6

*NIED **10** 22:40:00, 37°.20N×143°.60E, h5km, Mw3.2 Best double couple: M0 6.50000×10^13 NP1:φs343.00000°, δ41.00000°, λ-160.00000°. NP2:φs237.00000°, δ77.00000°, λ-51.00000°.*

JMA 10 22:40:54.1±0.2**, 37°.18N×143°.63E, h29**km**, M3.5, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	2.21	276	S	Sn	22 41 56.3	+1.2
JIO	Ouri	2.21	306	P	Pn	22 41 30.4	+1.6
JIO				eS	Sn	22 41 56.8	+1.7
ONAJ	Iwakimizuishiy	2.26	269	eS	Sn	22 41 57.7	+1.1
JMM	Marumori	2.36	288	eS	Sn	22 42 00.6	+1.8
JMK	Ichinoseki	2.60	314	P	Pn	22 41 35.9	+1.8
JMK				eS	Sn	22 42 06.6	+1.9
JFT	Otama	2.65	278	eS	Sn	22 42 08.3	+2.3
JOM	Ohasama	2.94	322	eS	Sn	22 42 14.9	+1.8
JYK	Kaneyama	3.11	305	P	Pn	22 41 43.5	+2.3
JANG	Nango	3.59	333	P	Pn	22 41 49.9	+2.1
JRY	Ryogami san	3.98	254	eS	Sn	22 42 38.5	-0.3
MAT	Matsushiro	4.39	263	P	Pn	22 42 02.7	+3.8
JOT	Ohata	4.65	335	P	Pn	22 42 05.0	+2.7
JCH	Churui	5.43	358	eS	Sn	22 43 11.9	-2.7

*NIED **10** 22:58:00, 38°.20N×142°.30E, h29km, Mw3.5 Best double couple: M0 2.31000×10^14 NP1:φs78.00000°, δ9.00000°, λ-33.00000°. NP2:φs201.00000°, δ85.00000°, λ-98.00000°.*

*JMA **10** 22:58:50.0±0.2, 38°.21N×142°.34E, h37km±2km, M3.8*

JMA Felt I J1.

*IDC **10** 22:58:52.6±3.7, 38°.14N×142°.63E, h64km±27km, mb3.4/4, mb1 3.4/7, mb1mx3.2/67, mbtmp3.6/7, ML3.0/2, MS2.5/3, Ms1 2.5/3, ms1mx2.3/37, Error ellipse: s-maj=35.6km s-min=19.7km az=115.0*

ISC 10 22:58:46.9±1.9**, 38°.10N**±0°.05×**142°.27E**±0°.07**, h10**km±10km**, n27,** σ**1s.37**/30**, mb3.6**/4**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIO	Ouri	0.81	296	P	Pn	22 59 05.3	+0.9
JIO				S	Sn	22 59 15.8	-0.6
OFUJ	Ofunato	1.09	334	P	Pg	22 59 08.1	+0.3
OFUJ				S	Sg	22 59 20.8	-1.1
JMK	Ichinoseki	1.19	316	P	Pg	22 59 10.3	+0.6
JMM	Marumori	1.19	259	P	Pn	22 59 11.3	+1.7
JMM				S	Sn	22 59 26.6	+0.7
JOU	Okura	1.29	282	P	Pg	22 59 13.2	+1.5
JOU				S	Sn	22 59 29.9	+1.4
JFK	Kawauchi	1.33	237	P	Pg	22 59 13.1	+0.8
JFK				S	Sn	22 59 29.6	+0.3
JOM	Ohasama	1.57	331	P	Pn	22 59 15.8	+0.9
JOM				S	Sn	22 59 34.8	-0.5
JFT	Otama	1.64	250	P	Pg	22 59 18.8	+0.5
JFT				S	Sg	22 59 39.6	+0.1
JYK	Kaneyama	1.71	299	P	Pb	22 59 18.4	0.0
JYS	Shirataka	1.74	275	P	Pg	22 59 20.0	-0.3
JYS				S	Sg	22 59 41.6	-1.3
JRG	Rokugo	1.82	316	P	Pb	22 59 20.2	-0.1
JYA	Atsumi	2.07	285	P	Pb	22 59 25.0	+0.4
MJAR	Matsushiro Arr	3.59	246	P	Pb	22 59 49.1	-1.5
	1.3nm,0.3s,baz=70,slow=11,SNR=11						
MJAR				S	Sb	23 00 34.0	-0.2
	1.3nm,0.3s,baz=96,slow=11,SNR=4.5						
MJAR				LR	LR	23 01 26.5	
	comp=Z,93nm,18.2s,baz=55,slow=40						
MAT	Matsushiro	3.59	246	P	Pb	22 59 48.7	-1.8
MAT				eS	Sb	23 00 30.5	-3.7
ASAJ	Asahikawa	6.02	2	P	Pn	23 00 18.0	+2.0
	0.3nm,0.3s,baz=225,slow=19,SNR=3.3						
ASAJ				S	Sn	23 01 21.8	-3.2
	0.7nm,0.3s,baz=150,slow=20,SNR=3.2						
ASAJ				LR	LR	23 02 49.8	
	comp=Z,12nm,21.9s,baz=134,slow=40						
USRK	Ussuriysk Ar.	9.86	311	P	Pn	23 01 15.2	+6.5
	baz=119,slow=15						
KSRS	Korea Array	11.38	271	LR	LR	23 05 38.3	
	comp=Z,42nm,19.3s,baz=75,slow=35						
H11N2	WAKE ISLAND Hy	28.14	124	T	T	23 34 56.9	
	baz=316,slow=75,SNR=48						
H11N1	WAKE ISLAND Hy	28.15	124	T	T	23 34 52.5	
	baz=316,slow=75,SNR=25						
H11N3	WAKE ISLAND Hy	28.16	124	T	T	23 35 10.4	
	baz=316,slow=75,SNR=25						
H11S1	WAKE ISLAND Hy	28.90	126	T	T	23 35 56.9	
	baz=318,slow=76,SNR=8.8						
H11S3	WAKE ISLAND Hy	28.90	126	T	T	23 35 57.0	
	baz=318,slow=76,SNR=8.8						
H11S2	WAKE ISLAND Hy	28.91	126	T	T	23 35 58.5	
	baz=318,slow=76,SNR=5.1						
MKAR	Makanchi Array	44.14	301	P	P	23 06 56.4	+0.8
	0.4nm,0.6s,baz=79,slow=8.3,SNR=4.7						
KURBB	Kurchatov Arra	45.89	307	P	P	23 07 09.7	+0.3
	1.9nm,0.5s,baz=80,slow=8.1,SNR=14						
BVAR	Borovoye Array	50.37	312	P	P	23 07 44.2	+0.2
	0.5nm,0.5s,baz=76,slow=7.7,SNR=6.2						
WRA	Warramunga Arr	58.21	189	P	P	23 08 41.0	-0.3
	0.3nm,0.7s,baz=7.8,slow=6.8,SNR=2.7						

MEX 10 23:04:09.8±0.4**, 13°.83N×92°.86W, h14**km±168km**, MD3.7, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		1.22	28	i P	Pn	23 04 29.5	-3.0
THIG				i S	Sb	23 04 43.4	-4.9
PCIG		1.90	350	i P	Pn	23 04 38.8	-3.0
PCIG				i S	Sn	23 05 00.8	-4.8
TGIG		2.95	355	i P	Pn	23 04 52.8	-3.5
TGIG				i S	Sn	23 05 28.3	-3.2

*CSEM **10** 23:19:46.5±0.1, 67°.84N×20°.26E, h0km±2km, ML1.5, Error ellipse: s-maj=3.4km s-min=2.8km az=153.0, Mining explosion.*

HEL 10 23:19:47.4±0.0**, 67°.85N×20°.20E, h0**km**, ML1.5, ML1.4**(UPP)**, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.12	25	i P	Pg	23 19 49.4	-0.3
KUA				i S	Sg	23 19 51.2	-0.1
KUA	Kurravaara	0.12	25	i P	Pg	23 19 49.4	-0.3
KUA				i S	Sg	23 19 51.2	-0.1
RATU	Laukkuluspa	0.23	265	i P	Pg	23 19 51.4	-0.5
RATU				i S	Sg	23 19 54.6	-0.2
RATU	Laukkuluspa	0.23	265	i P	Pg	23 19 51.4	-0.4
RATU				i S	Sg	23 19 54.6	-0.2
NIKU	Nikkaluokta	0.44	273	i P	Pg	23 19 55.4	-0.5
NIKU				i S	Sg	23 20 01.3	-0.3
NIKU	Nikkaluokta	0.44	273	i P	Pg	23 19 55.3	-0.6
NIKU				i S	Sg	23 20 01.3	-0.3
LANU	Lannavaara	0.70	72	eP	Pg	23 20 00.0	-0.9
LANU				eS	Sg	23 20 09.3	-0.7
LANU	Lannavaara	0.70	72	eP	Pg	23 20 00.0	-0.9
LANU				eS	Sg	23 20 09.3	-0.7
DUNU	Dundret	0.74	169	i P	Pg	23 20 00.5	-1.1
DUNU				i S	Sg	23 20 10.3	-0.8
DUNU	Dundret	0.74	169	i P	Pg	23 20 00.5	-1.0
DUNU				i S	Sg	23 20 10.3	-0.8
SALU	Saltoluokta	0.80	235	i P	Pg	23 20 01.9	-0.8
SALU	Saltoluokta	0.80	235	i P	Pg	23 20 01.9	-0.8
KIF	Kilpisjarvi	1.19	11	ePB	Pg	23 20 09.5	-0.6
	baz=192						
KIF				MSG		23 20 24.8	
	comp=Z,4.5nm,0.2s						
KIF				eSB	Sg	23 20 25.7	+0.3
KIF	Kilpisjarvi	1.19	11	ePb	Pg	23 20 09.5	-0.6
KIF				eSb	Sg	23 20 25.7	+0.3
KIF	Kilpisjarvi	1.19	11	eP	Pg	23 20 10.2	+0.1
PAJU	Pajala	1.39	125	eP	Pg	23 20 12.3	-1.7
PAJU				eS	Sg	23 20 30.5	-1.5
PAJU	Pajala	1.39	125	eP	Pg	23 20 12.3	-1.8
PAJU				eS	Sg	23 20 30.5	-1.6
HEF	Hetta	1.41	65	ePG	Pn	23 20 12.9	-1.5
	baz=248						
HEF				MSG		23 20 30.0	
	comp=Z,3.1nm,0.2s						
HEF				eSB	Sg	23 20 31.4	-1.3
HEF	Hetta	1.41	65	ePg	Pn	23 20 12.9	-1.5
HEF				eSb	Sg	23 20 31.4	-1.3
HEF	Hetta	1.41	65	eP	Pn	23 20 13.4	-0.9
ERTU	Ertsjaerv	1.51	148	eP	Pn	23 20 14.1	-1.5
	baz=321						
ERTU				eSN	Sn	23 20 38.0	+2.0
ERTU	Ertsjaerv	1.51	148	P	Pn	23 20 14.2	-1.5
KALU	Kalix	2.35	147	eP	Pn	23 20 27.5	+0.4
	baz=320						
KALU	Kalix	2.35	147	eP	Pn	23 20 27.5	+0.3
TOF	Tornio	2.40	136	ePB	Pn	23 20 28.7	+0.8
TOF				MSG		23 20 58.2	
	comp=Z,2.9nm,0.2s						
TOF				eSG	Sb	23 21 01.1	-0.4
TOF	Tornio	2.40	136	eSg	Sb	23 21 01.1	-0.4
	comp=Z,2.9nm,0.2s						
SGF	Sodankyl	2.45	97	eSG	Sb	23 21 02.8	-0.2
SGF	Sodankyl	2.45	97	eSg	Sb	23 21 02.8	-0.2
ARE0	ARCESS Array S	2.58	46	ePB	Pn	23 20 31.4	+1.1
	baz=224						
ARE0				e		23 20 57.2	
RNF	Rovaniemi	2.58	116	ePB	Pn	23 20 32.1	+1.7
RNF				eSG	Sb	23 21 05.7	-0.9

*CSEM **10** 23:19:56.1, 67°.84N×20°.19E, h0km, ML1.6, Mining explosion.*

UPP 10 23:19:56.1±0.1**, 67°.84N×20°.19E, h0**km**, ML1.6, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.13	25	P	Pg	23 19 58.9	+0.3
KUA				S	Sg	23 20 00.7	+0.3
KUA	Kurravaara	0.13	25	P	Pg	23 19 58.9	+0.3
KUA				S	Sg	23 20 00.7	+0.4
RATU	Laukkuluspa	0.23	267	P	Pg	23 20 00.7	+0.3
RATU				S	Sg	23 20 04.0	+0.6
RATU	Laukkuluspa	0.23	267	P	Pg	23 20 00.7	+0.3

RATU				S	Sg	23 20 04.0	+0.7
NIKU	Nikkaluokta	0.44	275	P	Pg	23 20 04.5	0.0
NIKU				S	Sg	23 20 10.7	+0.6
NIKU	Nikkaluokta	0.44	275	P	Pg	23 20 04.5	0.0
NIKU				S	Sg	23 20 10.7	+0.6
LANU	Lannavaara	0.71	72	S	Sg	23 20 19.4	+0.5
LANU	Lannavaara	0.71	72	S	Sg	23 20 19.4	+0.4

UPP 10 23:20:10.6±0.2**, 67°.86N×20°.13E, h0^{km}, ML1.9, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	Kurravaara	0.12	39	P	Pg	23 20 13.1	+0.2
KUA				S	Sg	23 20 15.0	+0.5
RATU	Laukkuluspa	0.21	260	P	Pg	23 20 14.8	+0.2
HARU	Harads	1.74	169	P	Pn	23 20 42.3	+0.3

IDC 10 23:21:49.5±1.9**, 25°.18N×109°.40W, h0^{km}, mb1 3.5**/5**, mb1mx3.4**/53**, mbtmp3.2**/5**, ML3.5**/4**, Error ellipse: s-maj=36.9km s-min=17.5km az=119.0, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPIG	La Paz	1.36	218	Pn	Pb	23 22 16.0	+0.2
	191nm,0.3s,baz=2.8,slow=3.4,SNR=22						
LPIG				Sn	Sg	23 22 29.4	-3.7
	227nm,0.3s,baz=336,slow=20,SNR=38						
TXAR	Lajitas Array	6.56	50	Pn	Pn	23 23 27.1	-0.3
	0.1nm,0.3s,baz=230,slow=15,SNR=3.7						
TXAR				Sn	Sn	23 24 44.6	+1.6
	0.1nm,0.3s,baz=230,slow=29,SNR=2.9						
TXAR				Lg	Lg	23 25 28.6	
	0.4nm,0.3s,baz=216,slow=27,SNR=3.7						
ANMO	Albuquerque	10.06	14	Pn	Pn	23 24 15.3	-0.1
	0.1nm,0.3s,baz=208,slow=15,SNR=1.5						
ANMO				Lg	Lg	23 27 11.6	
	0.1nm,0.3s,baz=359,slow=19,SNR=1.3						
NVAR	Mina Array Bea	15.21	332	Pn	Pn	23 25 28.4	+2.5
	baz=154,slow=11,SNR=6.2						
ELK	Elko	16.27	344	Pn	P	23 25 42.4	-0.4
	0.1nm,0.3s,baz=157,slow=12,SNR=2.0						
PDAR	Pinedale Array	17.54	360	Pn	P	23 25 57.9	+1.0
	0.1nm,0.3s,baz=179,slow=14,SNR=5.3						

*BJI **10** 23:26:02.4, 6°.02S×155°.24E, h213^{km}, mb4.8/43, mB4.7/25*

*ISCJB **10** 23:26:03.4±0.2, 5°.93S±0°.03×154°.88E±0°.03, h200^{km}, mb4.5/77, Error ellipse: s-maj=5.3km s-min=3.5km az=138.7*

*IDC **10** 23:26:03.6±0.8, 5°.92S×154°.90E, h190^{km}±7^{km}, mb4.3/23, mb1 4.3/26, mb1mx4.2/52, mbtmp4.8/26, MS3.3/1, Ms1 3.3/1, ms1mx2.5/39, Error ellipse: s-maj=12.3km s-min=8.2km az=76.0*

*NEIC **10** 23:26:05.6±0.8, 5°.92S×154°.87E, h208^{km}±7^{km}, mb4.6/37, Error ellipse: s-maj=7.1km s-min=5.1km az=72.0*

*DJA **10** 23:26:17.8±2.1, 6°S±7°×15°4E±1°5, h278^{km}±15^{km}, M5.0/35, mb5.2/35, mB5.5/17, Mw(mB)5.0/17*

ISC 10 23:26:04.7±0.4**, 5°.93S**±0°.06×**154°.90E**±0°.07**, h200^{km}, n177, σ1^{s}31**/183**, mb4.6**/77**, 1C, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	3.22	302	ePn	Pn	23 26 57.8	+0.8
HNR	Honiara	6.09	125	P	Pn	23 27 32.8	-0.4
	28nm,0.3s,baz=233,slow=7.6,SNR=3.6						
MANU	Manus Island	8.45	297	ePn	Pn	23 28 05.1	+1.3
COEN	Coen	14.03	234	ePn	P	23 29 19.0	+2.2
JAY	Jayapura	14.55	283	P	Pn	23 29 22.2	+0.6
	9.3nm,0.3s,baz=5.2,slow=2.0,SNR=33						
JAY	Jayapura	14.55	283	P	P	23 29 22.5	-0.3
	1µm,1.2s,11µm						
GENI	Genyem	15.06	282	P	P	23 29 29.1	+0.8
CTA	Charters Tower	16.39	210	P	Pn	23 29 45.4	+1.7
	2.8nm,0.3s,baz=28,slow=13,SNR=23						
CTAO	Charters Tower	16.39	210	eP	Pn	23 29 46.1	+2.3
SRPI	Serui, Papua	19.04	281	P	Pn	23 30 16.9	+1.8
BAKI	Biak	19.33	283	P	Pn	23 30 17.0	-1.6
DZM	Mont Dzumac	19.55	146	P	P	23 30 17.7	+0.2
	3.2nm,0.3s,baz=274,slow=8.6,SNR=22						
DZM	Mont Dzumac	19.55	146	eP	P	23 30 17.3	-0.1
	65nm,0.8s						
DZM	Mont Dzumac	19.55	146	eP	P	23 30 17.6	+0.2
	32nm,0.6s						
EIDS	Eidsvold	19.67	190	eP	P	23 30 20.2	+1.6
	16nm,1.0s						
RKPI	Ransiki, Papua	21.13	281	P	P	23 30 35.8	+1.5
FAKI	Fak Fak	22.77	277	P	P	23 30 50.1	-0.1
	190nm,0.9s,2µm						
SIJI	Sorong	24.11	281	P	P	23 31 02.1	-0.3
	61nm,0.6s,baz=96,slow=7.2,SNR=24						
WRAB	Tennant Creek	24.34	233	eP	P	23 31 05.1	+0.7
WB2	Warramunga Arr	24.35	233	eP	P	23 31 04.0	-0.5
WRA	Warramunga Arr	24.36	233	P	P	23 31 05.5	+1.0
	19nm,0.5s,baz=58,slow=9.7,SNR=168						
WRA				pP	pP	23 31 40.1	-2.9
	11nm,0.7s,baz=58,slow=10,SNR=4.2						
WRA				S	S	23 35 06.3	-3.0
	3.1nm,0.9s,baz=53,slow=14,SNR=4.7						
WRA				ScP	ScP	23 37 57.7	-0.8
	0.9nm,0.8s,baz=59,slow=3.4,SNR=3.5						
MTN	Manton Dam	24.42	252	eP	P	23 31 05.7	+0.6
	36nm,0.8s						
ARMA	Armidale	24.55	187	eP	P	23 31 07.1	+0.8
	16nm,0.7s						
AS01	Alice Springs	26.78	227	eP	P	23 31 26.1	-0.2
AS31	Alice Springs	26.81	227	eP	P	23 31 26.3	-0.4
	2.3nm,0.7s						
ASAR	Alice Springs	26.81	227	P	P	23 31 26.8	+0.2
	4.7nm,0.6s,baz=58,slow=8.7,SNR=56						
ASAR				pP	pP	23 32 03.5	-3.5
	9.1nm,0.8s,baz=60,slow=9.3,SNR=9.7						
ASAR				PcP	PcP	23 34 43.9	-0.3
	1.1nm,0.7s,baz=64,slow=3.2,SNR=4.1						
ASAR				S	S	23 35 46.3	-1.8
	6.5nm,0.7s,baz=56,slow=15,SNR=17						
ASAR				ScP	ScP	23 38 04.4	-1.1
	0.8nm,0.6s,baz=62,slow=2.6,SNR=5.4						
H11S3	WAKE ISLAND Hy	26.91	25	T	T	00 00 31.8	
	baz=202,slow=76,SNR=42						
H11S2	WAKE ISLAND Hy	26.92	25	T	T	00 00 31.6	
	baz=202,slow=76,SNR=37						
H11S1	WAKE ISLAND Hy	26.93	25	T	T	00 00 29.1	
	baz=202,slow=76,SNR=27						
NLAI	Namlea	27.83	274	P	P	23 31 36.2	+0.4
LBMI	Labuha	27.84	280	P	P	23 31 38.1	+2.2
H11N1	WAKE ISLAND Hy	28.08	25	T	T	00 02 00.3	
	baz=205,slow=76						
H11N3	WAKE ISLAND Hy	28.10	25	T	T	00 02 06.9	
	baz=205,slow=76						
H11N2	WAKE ISLAND Hy	28.10	25	T	T	00 02 05.6	
	baz=205,slow=76						
STKA	Stephens Creek	28.66	204	P	P	23 31 43.1	+0.3
	4.1nm,0.6s,baz=9.6,slow=8.7,SNR=12						
STKA	Stephens Creek	28.66	204	eP	P	23 31 43.1	+0.3
	0.9nm,0.6s						
SANI	Sanana	29.09	276	P	P	23 31 46.8	-0.1
SOEI	Soe	30.57	261	P	P	23 32 02.3	+2.2
FITZ	Fitzroy Crossi	31.00	244	eP	P	23 32 03.1	-0.6
	17nm,0.8s						
BATI	Baumata	31.20	260	P	P	23 32 07.1	+1.5
	29nm,0.4s,baz=39,slow=0.4,SNR=6.2						
BATI	Baumata	31.20	260	P	P	23 32 07.7	+2.1
BBOO	Buckleboo	31.99	211	eP	P	23 32 12.2	+0.1
	28nm,1.3s						
LUWI	Luwuk	32.42	277	P	P	23 32 17.5	+1.3
MMRI	Maumere	32.50	263	P	P	23 32 17.4	+0.5
EDFI	Ende, Flores	33.05	263	P	P	23 32 21.2	-0.5
APSI	Ampana	33.55	277	P	P	23 32 27.5	+1.6
OUZ	Omahuta	33.86	152	eP	P	23 32 29.2	+0.8
	23nm,1.3s						
OUZ	Omahuta	33.86	152	P	P	23 32 29.1	+0.8
BASI	Baing, Sumba	34.23	261	P	P	23 32 33.4	+1.6
BKSI	Bulukumba	34.61	269	P	P	23 32 35.4	+0.3
WCZ	Waipu Caves	34.80	152	P	P	23 32 37.6	+1.2
SPSI	Sidrap Palu	35.05	272	P	P	23 32 38.5	-0.3
TTSI	Tana Toraja	35.08	273	P	P	23 32 40.1	+1.0
FORT	Forrest	35.30	222	eP	P	23 32 40.7	0.0
	25nm,1.0s						
PCI	Palu	35.34	277	P	P	23 32 43.2	+1.9
WBSI	Waikabubak, Su	35.36	262	P	P	23 32 41.8	+0.3
MPSI	Mapaga	35.49	279	P	P	23 32 41.7	-0.9
KUZ	Kuaotunu	36.11	151	P	P	23 32 47.2	-0.3
MKAZ	Moumakai	36.13	152	P	P	23 32 53.4	+5.7
TOZ	Tahuroa Road	36.80	152	P	P	23 32 54.3	+1.0
PLAI	Plampang	36.91	263	P	P	23 32 53.0	-1.7
MBWA	Marble Bar	37.27	243	eP	P	23 32 56.6	-0.9
TWSI	Taliwang, Sumb	37.80	263	P	P	23 33 00.5	-1.6
HAZ	Te Kaha	37.91	150	P	P	23 33 03.1	+0.4
URZ	Urewera	37.98	151	P	P	23 33 03.2	0.0
	7.9nm,0.3s,baz=280,slow=0.8,SNR=22						
URZ	Urewera	37.98	151	eP	P	23 33 03.6	+0.4
	16nm,0.9s						
URZ	Urewera	37.98	151	P	P	23 33 03.7	+0.5
MUGZ	Murupara	37.99	152	P	P	23 33 04.3	+1.0
MXZ	Matakaoa Point	38.03	149	P	P	23 33 04.0	+0.3
PKGZ	Pakihiroa	38.16	150	P	P	23 33 05.6	+0.7
MWZ	Matawai	38.24	151	P	P	23 33 06.4	+0.9
WMGZ	Waiomatatini S	38.28	149	P	P	23 33 05.9	+0.2
RAGZ	Rawiri	38.31	151	P	P	23 33 07.2	+1.1
MTHZ	Maungataniwha	38.32	152	P	P	23 33 06.9	+0.7
TWGZ	Tauwhareparae	38.34	150	P	P	23 33 07.0	+0.7
PUZ	Puketiti	38.40	150	P	P	23 33 06.7	0.0
BKZ	Black Stump Fm	38.41	153	eP	P	23 33 07.3	+0.3
	8.8nm,0.6s						
BKZ	Black Stump Fm	38.41	153	P	P	23 33 06.9	-0.1
TKGZ	Te Karaka	38.48	151	P	P	23 33 07.9	+0.5
SNGZ	Shannon Statio	38.50	151	P	P	23 33 08.2	+0.6
RIGZ	Rimuhau	38.64	151	P	P	23 33 07.3	-1.5
CNGZ	Carnagh Statio	38.69	150	P	P	23 33 09.4	+0.2
NNZ	Nelson	38.82	158	P	P	23 33 11.9	+1.6
KNZ	Kokohu	38.85	151	P	P	23 33 10.3	-0.2
PRGZ	Paritu Road	38.87	151	P	P	23 33 12.9	+2.2
MHGZ	Mahia Peninsul	39.06	151	P	P	23 33 12.2	-0.1
KAHZ	Kahuranaki	39.09	153	P	P	23 33 13.0	+0.4
THZ	Tophouse	39.12	158	eP	P	23 33 12.8	+0.1
	22nm,0.8s						
THZ	Tophouse	39.12	158	P	P	23 33 12.4	-0.3
IGBI	Denpasar	39.51	263	P	P	23 33 15.0	-1.3
	267nm,0.5s,5µm						
BFZ	Birch Farm	39.54	154	eP	P	23 33 14.3	-1.9
	45nm,1.4s						
LTZ	Lake Taylor	39.79	160	eP	P	23 33 18.9	+0.6
	13nm,0.9s						
KHZ	Kahutara	39.92	158	eP	P	23 33 18.7	-0.6
	11nm,0.7s						
RPZ	Rata Peaks	40.23	162	P	P	23 33 22.0	+0.2
	31nm,1.0s,baz=1.3,slow=0.9,SNR=14						
RPZ	Rata Peaks	40.23	162	eP	P	23 33 22.3	+0.4
	37nm,1.1s						
JAGI	Jajag, Banyuwa	40.49	264	P	P	23 33 22.4	-2.0
	81nm,0.9s						
PWJI	Pagerwojo	42.81	265	P	P	23 33 42.4	-0.8
	135nm,0.8s						
PCJI	Pacitan	43.43	264	P	P	23 33 47.9	-0.3
	191nm,1.1s,2µm						
WOJI	Wonogiri, Jawa	43.68	265	P	P	23 33 51.3	+1.1
	56nm,0.6s						
UGM	Wanagama	44.08	265	P	P	23 33 54.9	+1.5
	155nm,1.5s						
TPUB	Ta-pu	44.32	312	eP	P	23 33 54.8	-0.3
	21nm,0.7s						
SSLB	Suanglung	44.38	313	eP	P	23 33 55.8	+0.2
	21nm,1.1s						
JNU	Nakatsue	45.04	331	P	P	23 33 59.7	-1.0
	21nm,0.8s,baz=90,slow=3.9,SNR=11						
JNU	Nakatsue	45.04	331	eP	P	23 33 59.6	-1.0
	23nm,0.8s						
MJAR	Matsushiro Arr	45.05	341	P	P	23 33 59.8	-0.8
	8.0nm,0.7s,baz=172,slow=8.2,SNR=25						
MAJO	Matsushiro	45.05	341	eP	P	23 33 59.9	-0.8
	14nm,0.7s						
MAT	Matsushiro	45.05	341	P	P	23 33 59.6	-1.1
MJB9	Matsu-Tunnel	45.05	341	eP	P	23 33 59.8	-1.0
	14nm,0.7s						
KPJI	Karang Pucung	45.66	266	P	P	23 34 06.2	+0.3
	117nm,0.7s						
CISI	Cisompet, Garu	46.77	265	P	P	23 34 13.3	-1.2
	228nm,0.6s,2µm						
LEM	Lembang	46.98	266	LR	LR	23 57 32.6	
	comp=Z,35nm,18.5s,baz=159,slow=40						
KS01	Wonju Array Si	49.99	332	eP	P	23 34 38.4	-0.2
ASAJ	Asahikawa	51.04	349	P	P	23 34 47.5	+1.1
	18nm,0.6s,baz=206,slow=9.4,SNR=22						
NJ2	Nanjing	51.04	320	eP	P	23 34 47.8	+1.2
NJ2				pmax	pmax		
	comp=Z,16nm,0.7s						
WHN	Wuhan	53.12	315	⇑iP	P	23 35 02.9	+1.0
WHN				pmax	pmax		
	comp=Z,58nm,1.2s						
USRK	Ussuriysk Ar.	54.01	340	P	P	23 35 08.1	0.0
	11nm,0.7s,baz=166,slow=6.7						
CN2	Changchun	56.19	335	eP	P	23 35 23.9	+0.1
CN2				pmax	pmax		
	comp=Z,10.0nm,1.4s						
NONG	Nongkai	56.34	296	P	P	23 35 26.8	+1.5
	0.4nm,1.0s						
ENH	Enshi	56.45	312	eP	P	23 35 25.5	-0.4
	7.0nm,0.4s						
PBKT	Sadao Pong	57.82	294	P	P	23 35 37.1	+1.4
	11nm,1.6s						
NANT	Nan	58.78	296	P	P	23 35 43.7	+1.4
	3.6nm,0.9s						
PET	Petropavlovsk	58.82	3	eP	P	23 35 42.5	+0.7
	21nm,0.6s						
PEA0B	Petropavlovsk-	58.86	2	eP	P	23 35 43.1	+0.8
	44nm,1.0s						
PETK	Petropavlovsk-	58.86	2	P	P	23 35 43.3	+1.1
	24nm,0.8s,baz=167,slow=6.7						
PETK	Petropavlovsk-	58.86	2	eP	P	23 35 43.1	+0.9
SRDT	SRDT	58.87	291	P	P	23 35 44.8	+1.8
	24nm,1.4s,2µm						
XAN	Xi’an	58.88	316	P	P	23 35 42.4	-0.4
XAN				pmax	pmax		
	comp=Z,19nm,0.8s						
XAN				pmax	pmax		
	comp=Z,49nm,4.7s						
UTHA	Uthaitani	58.91	292	P	P	23 35 44.2	+0.9
	4.7nm,0.7s						
KMI	Kunming	59.34	304	P	P	23 35 47.8	+1.4
KMI				pmax	pmax		
	comp=Z,13nm,0.7s						
KMI				pmax	pmax		
	comp=Z,70nm,4.1s						
CM01	Chiang Mai Arr	60.22	295	eP	P	23 35 52.1	-0.1
CMAR	Chiang Mai Arr	60.24	295	P	P	23 35 53.1	+0.8
	1.3nm,0.4s,baz=118,slow=5.1,SNR=14						
CMMT	Chiang Mai	60.35	295	P	P	23 35 55.2	+2.1
CHTO	Chiang Mai	60.35	295	eP	P	23 35 53.0	-0.1
	1.8nm,0.4s						
HHC	Hu-ho-hao-te	61.18	324	eP	P	23 36 01.8	+3.4
HHC				sP	sP	23 37 05.8	-0.4
HHC				S	S	23 44 04.4	+2.2
HHC				pmax	pmax		
	comp=Z,24nm,1.0s						
HHC				pmax	pmax		
	comp=Z,66nm,5.2s						
LZH	Lanzhou	63.49	315	eP	P	23 36 15.1	+1.2
LZH				sP	sP	23 37 32.2	+10
LZH				PP	PP	23 38 35.4	-0.9
LZH				S	S	23 44 23.7	-7.6
LZH				sS	sS	23 45 53.8	+1.7
LZH				pmax	pmax		
	comp=Z,34nm,1.2s						
LZH				pmax	pmax		
	comp=Z,51nm,4.2s						
MA2	Magadan	65.38	358	eP	P	23 36 25.6	+0.2
CASY	Casey	67.57	198	eP	P	23 36 38.8	-0.4
	3.3nm,0.8s						
GTA	Gaotai	67.90	317	P	P	23 36 42.8	+0.8
GTA				pP	pP	23 37 28.8	-0.1
GTA				sP	sP	23 37 52.2	+1.8
GTA				pmax	pmax		
	comp=Z,13nm,1.2s						
ULN	Ulaanbaatar	68.06	327	eP	P	23 36 43.8	+1.0
	21nm,1.3s						
SONM	Songino Array	68.39	327	P	P	23 36 45.5	+0.7
	6.1nm,0.4s,baz=143,slow=5.3,SNR=51						
SONA1	Songino Array	68.40	327	eP	P	23 36 45.5	+0.6
VNDA	Vanda	71.64	178	P	P	23 37 03.6	-0.3
	0.6nm,0.6s,baz=322,slow=9.0,SNR=4.7						
TLY	Talaya	72.10	329	eP	P	23 37 07.4	+0.3
	8.3nm,1.2s						
ODAN	Odare	72.91	300	eP	P	23 37 12.6	-0.1
	18nm,0.6s						
RAMN	Ramite	73.61	300	eP	P	23 37 16.9	0.0
	8.2nm,0.6s						
JIRN	Jiri	74.16	301	eP	P	23 37 19.9	-0.2
GUN	Gumba	74.49	301	eP	P	23 37 21.7	-0.3
	29nm,0.6s						
KKN	Kakani	74.97	301	eP	P	23 37 24.6	0.0
	10.0nm,0.5s						
DMN	Daman	75.07	300	eP	P	23 37 25.1	-0.2
	23nm,0.8s						
GKN	Gorkha	75.57	301	eP	P	23 37 27.5	-0.5
KOLN	Koldanda	76.40	300	eP	P	23 37 31.9	-0.8
	7.3nm,0.6s						
WMQ	Urumqi	77.98	317	P	P	23 37 42.0	+1.0
WMQ				PcP	PcP	23 37 50.0	0.0
WMQ				pmax	pmax		
	comp=Z,14nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,140nm,3.7s						
ILAR	Eielson Array	82.43	22	P	P	23 38 03.3	-0.9
	0.8nm,0.5s,baz=240,slow=5.1,SNR=4.9						
ILAR				pP	pP	23 38 50.2	-2.7
	0.7nm,0.8s,baz=242,slow=4.7,SNR=2.8						
MK01	Makanchi Array	82.53	319	eP	P	23 38 04.8	-0.4
MK31	Makanchi Array	82.55	319	eP	P	23 38 04.6	-0.6
MKAR	Makanchi Array	82.55	319	P	P	23 38 05.1	-0.2
	10nm,0.8s,baz=104,slow=5.5,SNR=79						
ZAA0	Zalesovo Array	83.25	326	eP	P	23 38 07.9	-0.7
	5.6nm,0.8s						
ZALV	Zalesovo Beam	83.25	326	P	P	23 38 07.6	-1.0
	5.6nm,0.7s,baz=111,slow=5.0,SNR=18						
ZALV	Zalesovo Beam	83.25	326	eP	P	23 38 06.9	-1.7
QSPA	South Pole Qui	84.04	180	P	P	23 38 11.8	-0.8
	2.4nm,0.5s,baz=191,slow=1.5,SNR=16						
KSH	Kashi	85.25	310	eP	P	23 38 20.9	+1.7
KSH				pP	pP	23 39 11.8	+3.6
KSH				SKS	SKSac	23 48 23.4	-1.9
KSH				S	S	23 48 32.9	+0.1
KSH				pmax	pmax		
	comp=Z,12nm,1.6s						
MAW	Mawson	85.33	203	P	P	23 38 17.6	-1.3
	1.7nm,0.5s,baz=88,slow=7.3,SNR=4.0						
KURK	Kurchatov	85.94	322	eP	P	23 38 21.5	-0.7
KURBB	Kurchatov Arra	85.97	322	P	P	23 38 21.0	-1.4
	1.2nm,0.5s,baz=104,slow=4.5,SNR=11						
I07A	Izee	90.92	46	eP	P	23 38 48.6	+2.5
	1.6nm,0.7s						
RYN	Ryan	90.99	51	eP	P	23 38 48.4	+1.8
	3.9nm,0.9s						
NV01	Mina Array Sit	91.14	52	eP	P	23 38 48.4	+1.0
NVAR	Mina Array Bea	91.14	52	P	P	23 38 48.6	+1.3
	4.1nm,0.9s,baz=252,slow=7.0,SNR=22						
KVN	Kaiserville	91.37	51	eP	P	23 38 49.6	+1.3
	2.9nm,0.8s						
BVAR	Borovoye Array	91.39	323	P	P	23 38 46.1	-1.8
	2.3nm,0.7s,baz=100,slow=5.9,SNR=18						
BRVK	Borovoye	91.46	323	eP	P	23 38 46.6	-1.6
	1.9nm,0.7s						
CCCA	Chr Cany lake	91.57	55	eP	P	23 38 51.3	+2.1
BORC	Borrego Spring	92.12	57	eP	P	23 38 50.6	-1.1
R11A	Troy Canyon, C	93.26	52	eP	P	23 38 58.3	+1.2
	2.6nm,1.0s						
SHPR	Sheep Range	93.44	54	eP	P	23 38 59.9	+2.0
	4.1nm,1.1s						
GERES	GERESS Array B	126.09	329	PKP	PKPdf	23 44 41.5	-1.9
	0.5nm,0.7s,baz=343,slow=1.4,SNR=6.1						
LPAZ	La Paz	132.05	118	PKP	PKPdf	23 44 56.5	+0.3
	0.7nm,0.6s,baz=269,slow=3.6,SNR=4.5						

*ISCJB **11** 00:01:42.7±0.7, 22°.5S±0°.2×179°.8W±0°.1, h550^{km}, mb3.6/7, Error ellipse: s-maj=25.8km s-min=13.5km az=161.7*

*IDC **11** 00:01:47.5±2.7, 22°.86S×179°.75W, h607^{km}±39^{km}, mb3.1/7, mb1 3.4/10, mb1mx3.1/45, mbtmp4.2/10, Error ellipse: s-maj=48.6km s-min=15.1km az=171.0*

ISC 11 00:01:43.3±0.8**, 22°.6S**±0°.2×**179°.8W**±0°.1**, h550^{km}, n14, σ1^{s}13**/11**, mb3.6**/7**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	12.78	270	P	P	00 04 34.6	+4.6
	0.5nm,0.3s,baz=73,slow=19,SNR=3.5						
URZ	Urewera	15.84	189	P	P	00 04 59.9	-1.1
	0.5nm,0.3s,baz=14,slow=8.3,SNR=3.2						
RAR	Rarotonga	18.60	90	P	P	00 05 28.7	+2.1
	3.3nm,0.3s,baz=215,slow=20,SNR=3.8						
CTA	Charters Tower	31.71	268	P	P	00 07 23.8	+1.2
	7.1nm,0.5s,baz=97,slow=13,SNR=13						
STKA	Stephens Creek	35.43	246	P	P	00 07 54.0	+0.3
	0.7nm,0.5s,baz=88,slow=11,SNR=5.7						
ASAR	Alice Springs	42.48	259	P	P	00 08 51.0	+0.2
	2.3nm,0.7s,baz=98,slow=7.4,SNR=17						
WRA	Warramunga Arr	42.73	265	P	P	00 08 52.4	-0.3
	1.6nm,0.6s,baz=96,slow=8.4,SNR=56						
NVAR	Mina Array Bea	83.67	44	P	P	00 13 14.4	-0.2
	0.5nm,0.8s,baz=226,slow=9.1,SNR=4.5						
TXAR	Lajitas Array	89.56	58	P	P	00 13 42.7	-0.1
	0.5nm,0.9s,baz=231,slow=7.9,SNR=3.8						
PDAR	Pinedale Array	91.61	44	P	P	00 13 51.0	-1.0
	0.1nm,0.4s,baz=214,slow=6.3,SNR=2.8						
HFS	Hagfors	141.32	349	PKhKP	PKPpre	00 20 05.6	
	4.6nm,1.1s,baz=57,slow=4.1,SNR=7.3						
AKASG	Malin Array Be	143.99	328	PKP	PKPab	00 20 13.8	-1.9
	0.3nm,0.2s,baz=39,slow=3.4,SNR=3.2						
BRTR	Keskin Array B	146.95	309	PKPbc	PKPbc	00 20 24.1	-0.7
	0.2nm,0.5s,baz=107,slow=1.5,SNR=2.7						
EKA	Eskdalemuir Ar	147.21	4	PKPbc	PKPbc	00 20 23.4	-1.2
	0.3nm,0.4s,baz=350,slow=2.4,SNR=4.1						

*NIED **11** 00:06:00, 45°.40N×151°.50E, h11^{km}, Mw3.9 Best double couple: M$_0$7.05000×10^{14} NP1:ϕ_s209.00000°, δ21.00000°, λ71.00000°. NP2:ϕ_s49.00000°, δ70.00000°, λ97.00000°.*

*JMA **11** 00:06:27.5±0.8, 45°.45N×151°.47E, h30^{km}, M4.3*

*MOS **11** 00:06:28.7±1.7, 45°.42N×151°.52E, h40^{km}, mb4.1/5, Error ellipse: s-maj=18.7km s-min=15.6km az=146.8*

*SKHL **11** 00:06:29.6±0.4, 45°.12N×151°.46E, h40^{km}, mb4.2/2*

*IDC **11** 00:06:32.0±7.2, 46°.35N×150°.70E, h0^{km}, mb3.9/8, mb1 4.0/10, mb1mx3.6/74, mbtmp3.8/10, ML3.6/1, MS2.7/2, Ms1 2.7/2, ms1mx2.4/72, Error ellipse: s-maj=169.3km s-min=32.0km az=145.0*

ISC 11 00:06:27.8±1.3**, 44°.8N**±0°.1×**151°.6E**±0°.1**, h36^{km}, n39, σ2^{s}16**/39**, mb3.9**/9**, 1D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril’sk	2.71	280	eP	Pn	00 07 08.0	-0.7
KUR				AMB	AMB	00 07 13.0	
	63nm,0.3s						
KUR				AMB	AMB	00 07 13.0	
	39nm,0.3s						
KUR				AMB	AMB	00 07 13.0	
	38nm,0.3s						
KUR				eS	Sn	00 07 37.0	-3.2
KUR				A	A	00 07 45.0	
	357nm,0.3s						
KUR				A	A	00 07 45.0	
	36nm,0.3s						
KUR	Kuril’sk	2.71	280	d iPN	Pn	00 07 09.1	+0.4
KUR				i S	Sn	00 07 38.3	-1.9
KUR				pmax	pmax		
	comp=Z,67nm,0.2s						
KUR				pmax	pmax		
	comp=N,19nm,0.1s						
KUR				pmax	pmax		
	comp=E,37nm,0.3s						
KUR				smax	smax		
	comp=N,356nm,0.3s						
KUR				smax	smax		
	comp=E,37nm,0.3s						
SHO	Shikotan	3.57	257	eP	Pn	00 07 22.0	+1.5
SHO				AMB	AMB	00 07 30.0	
	comp=E,13nm,0.2s						
SHO				AMB	AMB	00 07 30.0	
	comp=E,38nm,0.2s						
SHO				AMB	AMB	00 07 30.0	
	comp=E,11nm,0.2s						
SHO				eS	Sn	00 08 01.0	-0.5
SHO				A	A	00 08 10.0	
	comp=E,104nm,0.2s						
SHO				A	A	00 08 10.0	
	comp=E,52nm,0.2s						
SHO	Shikotan	3.57	257	ePN	Pn	00 07 22.1	+1.5
SHO				pmax	pmax		
	comp=Z,11nm,0.2s						
SHO				pmax	pmax		
	comp=E,38nm,0.3s						

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SHO                                    pmax   pmax
      comp=N,13nm,0.2s
YUK   Yuzh-Kuril'sk       4.21 262   eP     Pn       00 07 32.0 +2.7
YUK                                  eS     Sn       00 08 19.0 +1.9
YUK                                   A     A        00 08 25.0
      comp=N,294nm,0.4s
YUK                                   A     A        00 08 25.0
      comp=N,243nm,0.4s
YUK   Yuzh-Kuril'sk       4.21 262    PN    Pn       00 07 33.8 +4.5
YUK                                  eS     Sn       00 08 21.9 +4.8
YUK                                   smax  smax
      comp=N,294nm,0.3s
YUK                                   smax  smax
      comp=E,243nm,0.3s
NEM2  Nemuro 2            4.48 253    P     Pn       00 07 34.1 +1.0
NEM2                                 eS     Sn       00 08 23.0 -0.9
JRA   Rausu               4.75 262    P     Pn       00 07 39.5 +2.7
JNK   Nakash              5.12 259    P     Pn       00 07 43.7 +1.8
JNK                                  eS     Sn       00 08 40.4 +0.7
JAK   Akkeshi             5.33 253    P     Pn       00 07 45.5 +0.8
JTKR  Abashiri--Toko      5.60 264    P     Pn       00 07 50.6 +2.2
JAR   Ashorobuto          5.86 258    P     Pn       00 07 54.2 +2.1
JAR                                  eS     Sn       00 08 58.0  0.0
JOB   Onbets              5.95 254    P     Pn       00 07 55.3 +2.0
JOB                                  eS     Sn       00 08 59.5 -0.6
JCH   Churui              6.38 253   eS     Sn       00 09 10.2 -0.5
JKK2  Kamakawa 2          6.44 265    P     Pn       00 08 03.1 +3.1
ASAJ  Asahikawa           6.50 267    Pn    Pn       00 08 04.0 +3.1
      comp=E,1.3nm,0.3s,baz=83,slow=17,SNR=3.5
ASAJ                                  Sn    Sn       00 09 26.1  +12
      comp=E,0.4nm,0.3s,baz=119,slow=10,SNR=1.8
ASAJ                                  LR    LR       00 09 53.5
      comp=E,18nm,21.9s,baz=210,slow=33
JNBK  Urakawa-nobuka      6.93 252   eS     Sn       00 09 22.4 -1.8
JBT2  Biratori 2          7.01 256    P     Pn       00 08 09.3 +1.5
JKB   Kayabe              8.26 253   eS     Sn       00 09 53.1 -3.8
JANG  Nango               8.68 243   eS     Sn       00 10 00.8 -6.4
PETK  Petropavlovsk-      9.22  23    Pn    Pn       00 08 31.7 -6.4
      baz=196,slow=15
H11N2 WAKE ISLAND Hy     28.04 148    T     T        00 44 12.4
      baz=337,slow=76,SNR=3.3
H11N1 WAKE ISLAND Hy     28.05 148    T     T        00 44 13.4
      baz=337,slow=76,SNR=21
H11N3 WAKE ISLAND Hy     28.05 148    T     T        00 44 11.6
      baz=337,slow=76,SNR=18
H11S1 WAKE ISLAND Hy     29.08 150    T     T        00 45 25.3
      baz=338,slow=76,SNR=24
H11S3 WAKE ISLAND Hy     29.09 150    T     T        00 45 22.9
      baz=338,slow=76,SNR=15
H11S2 WAKE ISLAND Hy     29.10 150    T     T        00 45 26.1
      baz=338,slow=76,SNR=3.8
TLY   Talaya             32.20 300    LR    LR       00 26 45.0
      comp=E,41nm,18.3s,baz=32,slow=39
MKAR  Makanchi Array     46.94 298    P     P        00 14 54.1 -0.6
      comp=E,0.5nm,0.6s,baz=63,slow=6.4,SNR=2.7
KURK  Kurchatov          47.60 305    P     P        00 14 58.9 -0.9
KURBB Kurchatov Arra     47.69 304    P     P        00 14 58.9 -1.6
      comp=E,0.4nm,0.4s,baz=68,slow=8.0,SNR=3.3
FINES FINESS Array B     65.36 335    P     P        00 17 04.6 -1.3
      comp=E,0.7nm,0.5s,baz=48,slow=5.6,SNR=10
NB2   NORSAR Subarra     69.73 341    P     P        00 17 33.2 -0.4
      comp=Z,0.6nm,0.5s,baz=27,slow=6.9
HFS   Hagfors            69.91 339    P     P        00 17 33.9 -0.8
      comp=Z,2.4nm,0.5s,baz=35,slow=5.4,SNR=12
KBZ   Khabaz             71.46 314    P     P        00 17 45.2 +0.9
      comp=Z,1.1nm,0.6s,baz=27,slow=6.8,SNR=4.1
AKASG Malin Array Be     72.58 326    P     P        00 17 50.4 -0.5
      comp=Z,1.1nm,0.4s,baz=38,slow=6.6,SNR=4.5
EKA   Eskdalemuir Ar     77.98 346    P     P        00 18 22.3 +0.4
      comp=Z,0.4nm,0.5s,baz=27,slow=4.8,SNR=4.9
MLR   Muntele Rosu       78.05 324    P     P        00 18 23.5 +0.8
      comp=Z,0.2nm,0.7s,baz=47,slow=3.0,SNR=5.5
MLR   Muntele Rosu       78.05 324    P     P        00 18 23.5 +0.8
MLR                                   pmax  pmax
      comp=Z,1.0nm,0.8s
```

IDC 11 00:07:23.8±4.8**, 14°.98S**×**175°.54W, h0^{km}, mb4.5**/3**, mb1 4.7**/3**, mb1mx3.8**/49**, mbtmp4.5**/3**, MS4.6**/9**, Ms1 4.6**/9**, ms1mx3.7**/46**, Error ellipse: s-maj=196.8km s-min=78.9km az=143.0, Samoa Islands region**

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Code  Station Name         Δ°   AZ°    Phase ID              Time     Res
                                      Op    ISC           h  m  s    ISC
RPZ   Rata Peaks         30.85 199    LR    LR       00 26 14.4
      comp=Z,73nm,18.4s,baz=172,slow=37
STKA  Stephens Creek     42.47 239    P     P        00 15 20.7 -0.1
      1.1nm,0.4s,baz=98,slow=10,SNR=4.9
STKA                                  LR    LR       00 32 40.2
      comp=Z,1µm,18.8s,baz=28,slow=36
WRA   Warramunga Arr     47.93 257    P     P        00 16 03.9 -0.5
      1.7nm,0.6s,baz=90,slow=6.9,SNR=48
ASAR  Alice Springs      48.28 252    P     P        00 16 07.3 +0.2
      26nm,0.4s,baz=86,slow=7.8,SNR=357
NWAO  Narrogin (SRO)     63.02 240    LR    LR       00 42 14.7
      comp=Z,1µm,21.2s,baz=298,slow=33
JHJ   Hachijo jima 2     64.08 319    LR    LR       00 39 44.1
      comp=Z,450nm,21.5s,baz=96,slow=30
MJAR  Matsushiro Arr     67.29 321    LR    LR       00 45 10.9
      comp=Z,147nm,19.9s,baz=175,slow=34
JNU   Nakatsue           70.01 314    LR    LR       00 43 15.6
      comp=Z,300nm,22.0s,baz=122,slow=31
ASAJ  Asahikawa          70.10 329    LR    LR       00 46 24.3
      comp=Z,717nm,19.9s,baz=171,slow=33
KSRS  Korea Array        74.42 316    LR    LR       00 48 10.9
      comp=Z,296nm,19.6s,baz=142,slow=33
USRK  Ussuriysk Ar.      75.81 324    LR    LR       00 47 34.2
      comp=Z,200nm,21.7s,baz=142,slow=32
SONM  Songino Array      93.16 319    LR    LR       00 58 45.6
      comp=Z,290nm,20.9s,baz=110,slow=33
BRTR  Keskin Array B    144.51 320    PKP   PKPdf    00 27 02.2 -0.6
      0.3nm,0.4s,baz=37,slow=3.6,SNR=3.3
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*BJI **11** 00:16:08.1, 8°.12S×156°.60E, h5^{km}, mb5.1/65, mB5.3/49, Ms5.0/58, Ms7 4.7/56*

*IDC **11** 00:16:08.0±0.4, 8°.46S×156°.44E, h0^{km}, mb4.9/31, mb1 5.0/35, mb1mx4.9/47, mbtmp4.9/35, ML4.1/4, MS4.6/32, Ms1 4.6/32, ms1mx4.5/36, Error ellipse: s-maj=11.5km s-min=10.2km az=105.0*

*ISCJB **11** 00:16:08.8±0.1, 8°.47S±0°.03×156°.29E±0°.02, h10^{km}, mb5.2/165, MS4.7/64, Error ellipse: s-maj=3.9km s-min=3.3km az=151.2*

*GCMT **11** 00:16:10.0±0.1, 8°.53S×156°.41E, h13^{km}, MW5.3/117, Moment Tensor Solution. s105,c175; s117,c224; Duration: 1^{s}.1 Moment tensor: Scale 10^{17}Nm; M_{rr}0.17±.02; $M_{\theta\theta}$0.99±.02; $M_{\phi\phi}$-1.16±.02; $M_{r\theta}$0.10±.04; $M_{\theta\phi}$0.60±.02; $M_{\phi r}$-0.40±.05; Best double couple: $M_0$1.28500×10^{17} NP1:ϕ_s31.00000°, δ80.00000°, λ-169.00000°. NP2:ϕ_s299.00000°, δ80.00000°, λ-10.00000°. Principal axes: T 1.1460, Plg0.0000°, Azm165.0000°; N 0.2760, Plg75.0000°, Azm74.0000°; P -1.4240, Plg15.0000°, Azm255.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **11** 00:16:10.0±0.2, 8°.44S×156°.28E, h10^{km}, mb5.2/88, MW5.3 Error ellipse: s-maj=5.6km s-min=5.1km az=123.0, Moment Tensor Solution. s23 Moment tensor: Scale 10^{17}Nm; M_{rr}0.25; $M_{\theta\theta}$0.79; $M_{\phi\phi}$-1.04; $M_{r\theta}$0.22; $M_{\theta\phi}$0.74; $M_{\phi r}$0.05; Best double couple: $M_0$1.20000×10^{17} NP1: ϕ_s117.00000°, δ80.00000°, λ11.00000°. NP2:ϕ_s25.00000°, δ79.00000°, λ170.00000°. Principal axes: T 1.1100, Plg15.0000°, Azm341.0000°; N 0.1900, Plg75.0000°, Azm157.0000°; P -1.3000, Plg1.0000°, Azm251.0000°;*

NEIC Felt at Honiara.

*MOS **11** 00:16:12.5±1.3, 8°.39S×156°.22E, h33^{km}, mb5.4/40, MS4.7/9 Error ellipse: s-maj=7.9km s-min=6.4km az=95.5*

*DJA **11** 00:16:17.6±5.6, 9°S±15°×15°6E±4°1, h55^{km}±29^{km}, M5.5/19, mb5.6/19, mB5.9/15, Mw(mB)5.5/15*

ISC 11 00:16:10.6±0.8**, 8°.46S**±0°.04×**156°.43E**±0°.04**, h13**^{km}±4^{km}**, n474, σ1^{s}.65**/502**, mb5.2**/161**, MS4.7**/67**, 25C-8D, Bougainville-Solomon Islands region**

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Code  Station Name         Δ°   AZ°    Phase ID              Time     Res
                                      Op    ISC           h  m  s    ISC
HNR   Honiara             3.61 106    Pn    Pn       00 17 03.8 -2.4
      47nm,0.3s,baz=204,slow=10.0,SNR=3.7
HNR                                   Sn    Sn       00 17 48.1 -0.5
      100nm,0.3s,baz=237,slow=21,SNR=5.6
RABL  Rabaul              5.99 315   ePn    Pn       00 17 35.1 -3.9
PMG   Port Moresby        9.21 263    Pn    Pn       00 18 25.8 +2.7
      3.5nm,0.3s,baz=69,slow=8.5,SNR=19
PMG                                   LR    LR       00 21 52.9
      comp=Z,13µm,18.5s,baz=82,slow=37
MANU  Manus Island       11.04 305   ePn    Pn       00 18 46.2 -2.1
COEN  Coen               14.10 246    P     Pn       00 19 32.1 +1.9
      baz=14,SNR=8.0
COEN  Coen               14.10 246   ePn    Pn       00 19 33.2 +3.1
CTA   Charters Tower     15.19 219    Pn    Pn       00 19 45.1 +0.2
      0.2nm,0.3s,baz=50,slow=14,SNR=5.4
CTA                                   LR    LR       00 25 06.2
      comp=Z,3µm,19.1s,baz=38,slow=35
CTAO  Charters Tower     15.19 219   ePn    Pn       00 19 42.7 -2.2
CTAO  Charters Tower     15.19 219   eP     Pn       00 19 42.7 -2.2
MTSU  Mount Surprise     15.21 230    P     Pn       00 19 45.0 -0.1
      baz=15,SNR=17
DZM   Mont Dzumac        16.62 146    Pn    Pn       00 20 02.9 -0.6
      0.5nm,0.3s,baz=339,slow=11,SNR=8.9
DZM                                   LR    LR       00 25 34.2
      comp=Z,2µm,18.9s,baz=334,slow=34
DZM   Mont Dzumac        16.62 146   ePn    Pn       00 20 03.8 +0.4
      274nm,1.5s
DZM                                  eLQ    LQ       00 23 16.8
      6µm,27.4s
DZM                                  eLR    LR       00 24 01.6
      6µm,27.5s
DZM   Mont Dzumac        16.62 146   ePn    P        00 20 05.4 -0.5
      409nm,1.9s
JAY   Jayapura           16.72 290    Pn    Pn       00 20 03.1 -1.6
      1.2nm,0.3s,baz=120,slow=8.8,SNR=27
JAY   Jayapura           16.72 290    P     Pn       00 20 04.2 -0.5
EIDS  Eidsvold           17.57 196    P     P        00 20 17.1 +0.8
      baz=18,SNR=5.5
EIDS  Eidsvold           17.57 196   ePn    P        00 20 17.5 +1.1
      171nm,1.5s
TARA  Tarawa             19.11  60   eP     Pn       00 20 37.4 +3.1
      610nm,1.5s
RMQ   Roma               19.36 201    P     Pn       00 20 37.1 +0.1
      baz=20,SNR=15
QIS   Mount Isa          20.22 232    P     P        00 20 46.1 +0.7
      baz=20,SNR=190
QLP   Quilpie            21.42 211    P     P        00 20 58.6 +0.3
      baz=22,SNR=80
BAKI  Biak               21.48 289    P     P        00 21 02.0 +2.8
      188nm,1.3s,2µm
ARMA  Armidale           22.31 191   eP     P        00 21 04.6 -3.4
      64nm,1.2s
KMPI  Kaimana, Papua     23.09 281    P     P        00 21 16.7 +0.5
RKPI  Ransiki, Papua     23.20 286    P     P        00 21 18.6 +1.2
KDU   Kakadu             23.91 258    P     P        00 21 23.6 -0.8
      baz=24,SNR=31
WR0   Warramunga Arr     24.07 239    P     P        00 21 25.1 -0.7
      baz=24
WRAB  Tennant Creek      24.22 240   eP     P        00 21 25.9 -1.4
WRAB  Tennant Creek      24.22 240c eP     P        00 21 26.4 -0.8
WRAB                                  pmax  pmax
      comp=Z,451nm,0.8s
WRA   Warramunga Arr     24.23 240    P     P        00 21 26.9 -0.5
      comp=Z,472nm,0.9s,baz=66,slow=10,SNR=180
WRA                                   PcP   PcP      00 25 07.7 -0.1
      comp=Z,8.3nm,0.7s,baz=65,slow=2.7,SNR=8.6
WRA                                   S     S        00 25 48.5 +2.8
      comp=Z,1.1nm,0.9s,baz=60,slow=18,SNR=2.0
WRA                                   LR    LR       00 30 39.2
      comp=Z,3µm,18.2s,baz=65,slow=36
FAKI  Fak Fak            24.67 281    P     P        00 21 31.9 +0.5
GUMO  Guam               24.73 332    P     P        00 21 30.6 -1.2
      comp=Z,78nm,0.9s,baz=192,slow=14,SNR=7.0
GUMO                                  LR    LR       00 30 04.1
      comp=Z,1µm,21.9s,baz=150,slow=34
GUMO  Guam               24.73 332   eP     P        00 21 30.8 -1.0
GUMO  Guam               24.73 332   eP     P        00 21 30.8 -1.0
CMSA  Cobar Meteorol     25.05 202    P     P        00 21 33.8 -0.8
      baz=25,SNR=74
MGCD  Mangrove Creek     25.12 191    P     P        00 21 34.9 -0.3
      baz=25,SNR=4.3
MTN   Manton Dam         25.23 258    P     P        00 21 36.4  0.0
      baz=25,SNR=4.5
SIJI  Sorong             26.17 285    P     P        00 21 44.5 -0.5
      comp=Z,32nm,0.7s,baz=91,slow=8.0,SNR=26
SIJI                                  LR    LR       00 32 00.5
      comp=Z,1µm,19.6s,baz=103,slow=36
AS01  Alice Springs      26.30 232   eP     P        00 21 44.0 -2.1
AS31  Alice Springs      26.34 232   eP     P        00 21 44.8 -1.7
      comp=Z,12nm,0.8s
ASAR  Alice Springs      26.34 232    P     P        00 21 45.0 -1.5
      comp=Z,17nm,0.8s,baz=61,slow=8.8,SNR=94
ASAR                                  PcP   PcP      00 25 12.3 -0.2
      comp=Z,2.3nm,0.6s,baz=56,slow=2.5,SNR=4.8
ASAR                                  LR    LR       00 31 13.9
      comp=Z,2µm,21.9s,baz=58,slow=34
ASAR                                  P3KPbc         00 54 36.7
      comp=Z,0.5nm,0.8s,baz=222,slow=1.7,SNR=4.4
STKA  Stephens Creek     27.08 209    P     P        00 21 53.0  0.0
      baz=27,SNR=37
STKA  Stephens Creek     27.08 209    P     P        00 21 53.0  0.0
      comp=Z,78nm,0.9s,baz=20,slow=11,SNR=91
STKA  Stephens Creek     27.08 209   eP     P        00 21 52.8 -0.2
      comp=Z,20nm,0.9s
STKA  Stephens Creek     27.08 209   eP     P        00 21 52.8 -0.2
STKA                                  pmax  pmax
      comp=Z,20nm,0.9s
MSAI  Masohi             27.81 279    P     P        00 22 00.1 +0.3
KNRA  Kununurra          27.97 252    P     P        00 22 00.6 -0.5
      baz=28,SNR=28
NLAI  Namlea             29.62 278    P     P        00 22 16.8 +0.9
HTT   Hallett            29.65 211    P     P        00 22 15.1 -0.9
      baz=30,SNR=4.8
LBMI  Labuha             29.84 284    P     P        00 22 19.0 +1.2
      comp=Z,332nm,1.2s,comp=Z,4µm
TNTI  Ternate            30.38 286    P     P        00 22 24.8 +2.2
BBOO  Buckleboo          30.71 215   eP     P        00 22 23.8 -1.5
      comp=Z,88nm,1.6s
SANI  Sanana             30.96 280    P     P        00 22 26.0 -1.7
FITZ  Fitzroy Crossi     31.41 249    P     P        00 22 30.2 -1.4
      baz=32,SNR=41
FITZ  Fitzroy Crossi     31.41 249   eP     P        00 22 30.3 -1.4
      comp=Z,106nm,1.6s
WRKA  Warakurna          31.48 235    P     P        00 22 30.1 -2.1
      baz=32,SNR=31
AFI   Afiamalu           31.64 103    P     P        00 22 32.7 -1.0
      comp=Z,112nm,1.0s,baz=1.8,slow=2.1,SNR=6.1
AFI                                   LR    LR       00 33 12.7
      comp=Z,761nm,21.4s,baz=278,slow=32
AFI   Afiamalu           31.64 103   eP     P        00 22 34.8 +1.0
AFI   Afiamalu           31.64 103   eP     P        00 22 34.8 +1.0
BATI  Baumata            32.37 264    P     P        00 22 40.0 -0.2
      comp=Z,32nm,0.3s,baz=165,slow=2.4,SNR=12
BATI                                  LR    LR       00 37 04.5
      comp=Z,3µm,19.1s,baz=120,slow=39
KMSI  Cibinong           33.56 284    P     P        00 22 54.7 +4.2
MMRI  Maumere            33.80 267    P     P        00 22 51.4 -1.3
      comp=Z,180nm,1.1s
EDFI  Ende, Flores       34.34 267    P     P        00 22 55.0 -2.5
      comp=Z,78nm,1.3s,comp=Z,804nm
DAV   Davao City (W)     34.40 296    LR    LR       00 37 33.5
      comp=Z,821nm,18.3s,baz=104,slow=37
FORT  Forrest            34.56 226    P     P        00 22 57.9 -1.1
      baz=35,SNR=6.3
TAU   Tasmania Unive     35.24 192   eP     P        00 23 07.1 +2.4
      comp=Z,91nm,1.3s
TAU   Tasmania Unive     35.24 192   eP     P        00 23 07.1 +2.4
TAU                                   pmax  pmax
      comp=Z,91nm,1.3s
BASI  Baing, Sumba       35.41 264    P     P        00 23 05.8 -0.8
      comp=Z,166nm,1.1s,comp=Z,2µm
APSI  Ampana             35.44 280    P     P        00 23 18.2  +11
MRSI  Marisa             35.49 283    P     P        00 23 04.8 -2.5
      comp=Z,34nm,1.3s
BKSI  Bulukumba          36.17 273    P     P        00 23 08.3 -4.8
THZ   Tophouse           36.23 159   eP     P        00 23 12.7 -0.7
      comp=Z,51nm,1.1s
WBSI  Waikabubak, Su     36.58 265    P     P        00 23 15.1 -1.6
      comp=Z,75nm,0.9s,comp=Z,845nm
SPSI  Sidrap Palu        36.70 275    P     P        00 23 16.4 -1.2
      comp=Z,14nm,0.8s
TTSI  Tana Toraja        36.80 276    P     P        00 23 24.3 +5.8
FOZ   Fox Glacier        36.85 164   eP     P        00 23 21.0 +2.5
      comp=Z,74nm,1.2s
PCI   Palu               37.20 280    P     P        00 23 25.2 +3.3
OXZ   Oxford             37.33 161   eP     P        00 23 21.2 -1.3
      comp=Z,53nm,1.1s
RPZ   Rata Peaks         37.38 162    P     P        00 23 23.0  0.0
      comp=Z,25nm,0.9s,baz=19,slow=5.6,SNR=15
RPZ   Rata Peaks         37.38 162   eP     P        00 23 23.0  0.0
      comp=Z,51nm,1.0s
MPSI  Mapaga             37.43 282    P     P        00 23 22.3 -1.6
      comp=Z,33nm,0.8s,comp=Z,371nm
MBWA  Marble Bar         37.55 246   eP     P        00 23 22.9 -1.9
LBZ   Lake Benmore       37.74 164   eP     P        00 23 29.1 +3.0
      comp=Z,97nm,1.7s
MQZ   McQueen's Vall     37.87 161   eP     P        00 23 25.3 -1.8
      comp=Z,88nm,1.4s
PLAI  Plampang           38.20 266    P     P        00 23 28.3 -2.1
      comp=Z,89nm,1.1s,comp=Z,1µm
ODZ   Otahua Downs       38.48 164   eP     P        00 23 31.1 -1.2
      comp=Z,32nm,1.3s
KMBL  Kambalda           39.41 230    P     P        00 23 39.1 -1.2
      baz=40,SNR=11
MEEK  Meekatharra        40.12 238    P     P        00 23 45.0 -1.4
      baz=40,SNR=9.3
MYLDM Lahad Datu         40.17 288   eP     P        00 23 46.3 -0.6
      comp=Z,50nm,1.0s
TGY   Tagaytay City      41.74 302    P     P        00 23 59.3 -0.5
      comp=Z,152nm,0.4s,baz=161,slow=18,SNR=3.9
TGY                                   LR    LR       00 39 34.0
      comp=Z,922nm,21.7s,baz=147,slow=34
KKM   Kota Kinabalu      42.61 288   eP     P        00 24 06.7 -0.3
      comp=Z,50nm,0.8s
KLBR  Kellerberrin       42.67 232    P     P        00 24 05.6 -1.6
      baz=43,SNR=16
NWAO  Narrogin (SRO)     43.63 230    P     P        00 24 13.5 -1.4
      comp=Z,11nm,0.6s,baz=69,slow=8.6,SNR=8.3
RAR   Rarotonga          44.05 112    LR    LR       00 39 17.6
      comp=Z,306nm,21.2s,baz=282,slow=32
PWJI  Pagerwojo          44.15 267    P     P        00 24 20.3 +1.0
JOW   Kunigami           44.45 323    LR    LR       00 39 26.8
      comp=Z,567nm,22.0s,baz=158,slow=32
PCJI  Pacitan            44.76 267    P     P        00 24 23.8 -0.4
UGM   Wanagama           45.42 267    P     P        00 24 29.5  0.0
KSM   Kuching            47.02 280   eP     P        00 24 41.7 -0.4
      comp=Z,25nm,0.8s
KPJI  Karang Pucung      47.04 268    P     P        00 24 41.9 -0.3
SSLB  Suanglung          47.20 314   eP     P        00 24 44.5 +1.2
      comp=Z,93nm,2.0s
MJAR  Matsushiro Arr     47.92 340    P     P        00 24 47.2 -1.5
      comp=Z,5.1nm,0.5s,baz=172,slow=8.6,SNR=19
MJAR                                  PcP   PcP      00 26 17.0 -0.1
      comp=Z,2.6nm,0.7s,baz=171,slow=4.7,SNR=3.0
MAJO  Matsushiro         47.92 340   eP     P        00 24 47.3 -1.4
      comp=Z,25nm,0.9s
MAJO  Matsushiro         47.92 340   i P    P        00 24 47.1 -1.6
MAJO                                  pmax  pmax
      comp=Z,10.0nm,0.6s
MAT   Matsushiro         47.92 340    P     P        00 24 47.0 -1.7
MAT                                   S     S        00 31 43.2 -2.8
MJB9  Matsu-Tunnel       47.93 340   eP     P        00 24 47.7 -1.1
      comp=Z,25nm,0.9s
JNU   Nakatsue           47.97 331    P     P        00 24 49.0 -0.1
      comp=Z,46nm,0.8s,baz=100,slow=5.5,SNR=19
JNU   Nakatsue           47.97 331   eP     P        00 24 49.0 -0.1
      comp=Z,96nm,1.0s
CISI  Cisompet, Garu     48.12 267   eP     P        00 24 49.7 -1.1
      comp=Z,241nm,0.8s
LEM   Lembang            48.38 268    P     P        00 24 52.6 -0.3
      comp=Z,250nm,1.0s,baz=78,slow=7.0,SNR=28
LEM                                   LR    LR       00 48 07.9
      comp=Z,733nm,19.5s,baz=101,slow=40
LEM   Lembang            48.38 268    P     P        00 24 53.4 +0.5
QZH   Quanzhou           49.61 313⇑iP   P        00 25 01.7 -0.1
QZH                                   S     S        00 32 11.4 +1.4
QZH                                   LR    LR
      comp=Z,250nm,18.0s
QZH                                   LR    LR
      comp=Z,360nm,20.2s
QZH                                   LR    LR
      comp=Z,430nm,17.5s
SSE   Sheshan            51.83 321    P     P        00 25 20.6 +2.1
SSE                                   S     S        00 32 45.4 +4.8
SSE                                   pmax  pmax
      comp=Z,14nm,0.8s
SSE                                   pmax  pmax
      comp=Z,140nm,5.0s
SSE                                   LR    LR
      comp=Z,240nm,21.5s
SSE                                   LR    LR
      comp=Z,220nm,19.7s
TJN   Taejon             52.30 330c iP    P        00 25 21.3 -0.6
KS01  Wonju Array Si     52.92 332   eP     P        00 25 24.4 -2.1
KS01                                 esP    P        00 25 25.7 -0.8
YUK   Yuzh-Kuril'sk      53.11 350   eP     P        00 25 21.0 -6.8
YUK                                  e               00 27 27.4
YUK                                  ePPP   PPP      00 28 28.5
YUK                                  eS     S        00 32 45.7  -12
YUK                                  eSS    SS       00 36 36.2 -1.4
YUK                                  eSSS   SSS      00 38 24.4
PPT   Papeete            53.23 106    LR    LR       00 43 09.0
      comp=Z,510nm,21.2s,baz=274,slow=30
PPT2  Papeete2           53.23 106   eS     S        00 33 04.1 +3.6
      comp=Z,541nm,27.0s
PPT2                                 eLQ    LQ       00 38 47.7
      comp=Z,2µm,26.5s
PPT2                                 eLR    LR       00 41 02.0
      comp=Z,1µm,23.5s,baz=271
MYKOM Kota Tinggi        53.39 279   eP     P        00 25 30.3 -0.2
      comp=Z,29nm,1.1s
QIZ   Qiongzhong         53.43 301    P     P        00 25 31.1 +0.5
QIZ                                   S     S        00 33 06.4 +3.5
QIZ                                   LR    LR
      comp=Z,250nm,12.9s
QIZ                                   LR    LR
      comp=Z,270nm,19.6s
QIZ                                   LR    LR
      comp=Z,480nm,19.1s
TBI   Tubuai             53.80 113   eS     S        00 33 11.6 +3.6
      comp=Z,579nm,27.5s
TBI                                  eLQ    LQ       00 38 55.0
      comp=Z,3µm,34.2s
TBI                                  eLR    LR       00 41 18.0
      comp=Z,1µm,32.0s,baz=290
ASAJ  Asahikawa          53.80 348    P     P        00 25 33.0 +0.2
      comp=Z,6.5nm,0.5s,baz=212,slow=12,SNR=8.4
ASAJ  Asahikawa          53.80 348   eP     P        00 25 32.4 -0.4
      comp=Z,48nm,1.3s
NJ2   Nanjing            53.94 320   eP     P        00 25 36.7 +2.6
NJ2                                   S     S        00 33 13.5 +4.1
NJ2                                   pmax  pmax
      comp=Z,20nm,0.6s
NJ2                                   pmax  pmax
      comp=Z,180nm,3.5s
NJ2                                   LR    LR
      comp=Z,750nm,19.0s
NJ2                                   LR    LR
      comp=Z,460nm,17.9s
NJ2                                   LR    LR
      comp=Z,1µm,21.7s
KUR   Kuril'sk           53.99 353d iP    P        00 25 36.3 +2.1
KUR                                  i S    S        00 33 13.4 +3.7
KUR                                   pmax  pmax
      comp=N,57nm,1.3s
KUR                                   pmax  pmax
      comp=E,45nm,1.3s
KUR                                   pmax  pmax
      comp=Z,85nm,1.3s
KUR                                   pmax  pmax
      comp=Z,350nm,3.9s
KUR                                   MLR   MLR
      comp=Z,422nm,14.0s
KUR                                   MLR   MLR
      comp=N,507nm,13.0s
KUR                                   MLR   MLR
      comp=E,190nm,13.0s
PMOR  Pomariorio Ree     54.79 102   eP     P        00 25 43.5 +2.9
      comp=E,203nm,1.4s
VAH   Vaihoa             55.05 103   eP     P        00 25 45.0 +2.6
      comp=E,69nm,1.2s
MSHR  Mys Shultsa        55.79 338c eP     P        00 25 46.1 -1.2
WHN   Wuhan              55.97 316⇓iP   P        00 25 49.4 +0.6
WHN                                   S     S        00 33 37.6 +0.8
WHN                                   LR    LR
      comp=E,440nm,13.4s
WHN                                   LR    LR
      comp=E,720nm,13.3s
WHN                                   LR    LR
      comp=E,1µm,19.3s
YSS   Yuzh-Sakhalins     56.49 349   eP     P        00 25 52.5 +0.3
YSS   Yuzh-Sakhalins     56.49 349⇑eP   P        00 25 51.6 -0.6
YSS                                   pmax  pmax
      comp=Z,50nm,0.9s
YSS                                   pmax  pmax
      comp=Z,300nm,9.0s
YSS                                   MLR   MLR
      comp=Z,600nm,17.0s
USRK  Ussuriysk Ar.      56.89 339    P     P        00 25 54.9 -0.2
      comp=Z,20nm,0.9s,baz=142,slow=7.3
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TIA	**Tai'an**	**57.78**	**323**	P	**P**	**00 26 02.6**	**+1.0**
TIA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MDJ	**Mudanjiang**	**58.12**	**338**	P	**P**	**00 26 01.5**	**-2.3**
MDJ				pP	pP	00 26 04.2	-3.9
MDJ				PcP	**PcP**	**00 26 52.7**	**-2.7**
MDJ				PP	**PP**	**00 28 10.7**	**-2.0**
MDJ				S	**S**	**00 34 04.2**	**-0.4**
MDJ				ScS	**ScS**	**00 35 51.0**	**-2.2**
MDJ				SS	**SS**	**00 37 57.6**	**+1.1**
MDJ				pmax	pmax		
	comp=Z,140nm,1.6s						
MDJ				LR	LR		
	comp=Z,410nm,15.1s						
MDJ				LR	LR		
	comp=Z,360nm,18.3s						
MDJ				LR	LR		
	comp=Z,790nm,28.7s						
MDJ	**Mudanjiang**	**58.12**	**338**	*e*P	**P**	**00 26 03.9**	**+0.1**
PSI	**Prapat**	**58.41**	**279**	P	**P**	**00 26 05.0**	**-1.6**
	comp=Z,4.2nm,0.6s,baz=180,slow=7.1,SNR=3.8						
PSI				LR	LR	00 52 43.8	
	comp=Z,424nm,21.7s,baz=91,slow=38						
PSI	**Prapat**	**58.41**	**279**	*e*P	**P**	**00 26 04.3**	**-2.3**
	comp=Z,46nm,1.5s						
PSI	**Prapat**	**58.41**	**279**	*e*P	**P**	**00 26 04.3**	**-2.3**
PSI				pmax	pmax		
	comp=Z,47nm,1.5s						
TRTT	**Trang**	**58.81**	**284**	P	P	00 26 18.9	+10
NONG	**Nongkai**	**58.83**	**297**	P	**P**	**00 26 09.6**	**+0.4**
	comp=Z,1.2nm,1.2s,comp=Z,51nm						
SKR	**Severo-Kuril's**	**58.89**	**360**	*e*P	**P**	**00 26 08.1**	**-0.9**
SKR				pmax	pmax		
	comp=Z,36nm,1.6s						
SKR				pmax	pmax		
	comp=Z,100nm,7.2s						
SKR				pmax	pmax		
	comp=Z,300nm,10.5s						
CN2	**Changchun**	**59.11**	**334**	*e*P	**P**	**00 26 10.6**	**-0.1**
CN2				*e*pP	sP	00 26 15.1	-1.6
CN2				PcP	**PcP**	**00 26 58.7**	**-0.6**
CN2				*e*S	**S**	**00 34 16.5**	**-1.1**
CN2				pmax	pmax		
	comp=Z,20nm,0.9s						
CN2				pmax	pmax		
	comp=Z,200nm,6.0s						
CN2				LR	LR		
	comp=Z,500nm,22.0s						
CN2				LR	LR		
	comp=Z,500nm,22.0s						
CN2				LR	LR		
	comp=Z,550nm,24.0s						
ENH	**Enshi**	**59.27**	**313**	*e*P	**P**	**00 26 10.8**	**-1.3**
	comp=Z,34nm,1.3s						
GYA	**Guiyang**	**59.46**	**307**	P	**P**	**00 26 15.4**	**+1.7**
GYA				PP	**PP**	**00 28 28.0**	**+2.9**
GYA				S	**S**	**00 34 23.2**	**+0.2**
GYA				SS	**SS**	**00 38 19.0**	**+0.5**
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,5.4s						
GYA				LR	LR		
	comp=Z,510nm,18.7s						
GYA				LR	LR		
	comp=Z,530nm,18.2s						
GYA				LR	LR		
	comp=Z,540nm,18.6s						
PBKT	**Sadao Pong**	**60.23**	**294**	P	**P**	**00 26 19.7**	**+0.8**
	comp=Z,17nm,1.7s						
TYV	**Tymovskoe**	**60.27**	**350**	*e*P	**P**	**00 26 18.6**	**+0.1**
TYV				*e*		00 34 42.6	
TYV				pmax	pmax		
	comp=Z,34nm,1.3s						
TYV				pmax	pmax		
	comp=Z,281nm,8.6s						
PHET	**Kaeng Krachan**	**60.28**	**290**	P	**P**	**00 26 20.6**	**+1.3**
	comp=Z,10nm,0.8s						
BJI	**Beijing**	**60.92**	**325**	⇑P	**P**	**00 26 24.5**	**+1.3**
BJI				S	**S**	**00 34 38.2**	**-2.8**
BJI				pmax	pmax		
	comp=Z,11nm,1.4s						
BJI				LR	LR		
	comp=Z,600nm,16.1s						
BJI				LR	LR		
	comp=Z,480nm,14.2s						
BJI				LR	LR		
	comp=Z,1µm,35.8s						
PHIT	**Phitsanulok**	**60.94**	**295**	P	P	00 26 33.1	+9.3
SRDT	**SRDT**	**61.19**	**291**	P	**P**	**00 26 26.5**	**+1.0**
	comp=Z,23nm,1.5s						
NANT	**Nan**	**61.25**	**297**	P	**P**	**00 26 26.6**	**+0.7**
	comp=Z,16nm,1.1s						
PET	**Petropavlovsk**	**61.27**	**2**	*e*P	**P**	**00 26 26.6**	**+1.3**
PET				*e*S	**S**	**00 34 44.3**	**-0.6**
PET				*e*PS	**PnS**	**00 35 02.5**	**+3.2**
PET				pmax	pmax		
	comp=Z,200nm,11.3s						
UTHA	**Uthaitani**	**61.27**	**293**	P	**P**	**00 26 26.8**	**+0.7**
	comp=Z,5.7nm,0.9s,comp=Z,66nm						
PEA0B	**Petropavlovsk-**	**61.33**	**1**	*e*P	**P**	**00 26 23.1**	**-2.6**
	comp=Z,16nm,0.8s						
PETK	**Petropavlovsk-**	**61.33**	**1**	P	**P**	**00 26 25.1**	**-0.6**
	comp=Z,11nm,0.8s,baz=157,slow=6.2						
PETK				LR	LR	00 49 32.3	
	comp=Z,1µm,21.2s,baz=180,slow=33						
PETK	**Petropavlovsk-**	**61.33**	**1**	*e*P	**P**	**00 26 24.7**	**-1.1**
PETK	**Petropavlovsk-**	**61.33**	**1**	*e*P	**P**	**00 26 24.7**	**-1.1**
KLR	**Kul'dur**	**61.38**	**342**	P	**P**	**00 26 26.6**	**+0.5**
	comp=Z,3.3nm,1.2s,baz=152,slow=4.6,SNR=37						
KLR	**Kul'dur**	**61.38**	**342**	*c i*P	**P**	**00 26 25.9**	**-0.3**
GRNR	**Gornyy**	**61.48**	**346**	*e*P	**P**	**00 26 29.1**	**+2.3**
GRNR				pmax	pmax		
	comp=Z,84nm,1.0s						
XAN	**Xi'an**	**61.74**	**316**	P	**P**	**00 26 29.5**	**+0.6**
XAN				S	**S**	**00 34 50.5**	**-1.2**
XAN				SS	**SS**	**00 38 55.6**	**+1.8**
XAN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,230nm,6.1s						
XAN				LR	LR		
	comp=Z,380nm,17.3s						
XAN				LR	LR		
	comp=Z,250nm,21.6s						
XAN				LR	LR		
	comp=Z,560nm,24.0s						
KMI	**Kunming**	**62.01**	**304**	P	**P**	**00 26 32.0**	**+0.8**
KMI				pP	sP	00 26 38.1	+1.0
KMI				sP	pP	00 26 40.3	+4.8
KMI				PP	**PP**	**00 28 55.0**	**+7.2**
KMI				S	**S**	**00 34 59.1**	**+3.3**
KMI				sS	sS	00 35 09.1	+6.1
KMI				SKS	**ScS**	**00 36 24.5**	**+1.0**
KMI				pmax	pmax		
	comp=Z,29nm,1.3s						
KMI				pmax	pmax		
	comp=Z,120nm,3.1s						
KMI				LR	LR		
	comp=Z,300nm,23.6s						
KMI				LR	LR		
	comp=Z,340nm,22.2s						
KMI				LR	LR		
	comp=Z,500nm,26.0s						
UMPA	**Umpang Tak**	**62.02**	**293**	P	P	00 26 39.5	+8.4
LAMP	**Lampang**	**62.10**	**296**	P	**P**	**00 26 32.7**	**+1.1**
	comp=Z,6.8nm,0.7s,comp=Z,91nm						
TAOE	**Nuku Hiva Isla**	**62.63**	**96**	*e*LR	LR	00 45 17.0	
	comp=Z,2µm,27.6s,baz=268						
CM01	**Chiang Mai Arr**	**62.67**	**296**	*e*P	**P**	**00 26 35.5**	**+0.1**
CMAR	**Chiang Mai Arr**	**62.69**	**296**	P	**P**	**00 26 36.3**	**+0.7**
	comp=Z,9.9nm,0.9s,baz=118,slow=4.9,SNR=44						
CMAR				LR	LR	00 50 17.1	
	comp=Z,166nm,21.8s,baz=110,slow=33						
CMAR				PKP2bc		00 55 47.2	
	comp=Z,0.6nm,0.3s,baz=275,slow=4.1,SNR=6.0						
CMMT	**Chiang Mai**	**62.81**	**296**	P	**P**	**00 26 36.8**	**+0.4**
	comp=Z,32nm,1.6s,comp=Z,433nm						
CHTO	**Chiang Mai**	**62.81**	**296**	*e*P	**P**	**00 26 36.0**	**-0.4**
CHTO	**Chiang Mai**	**62.81**	**296**	*e*P	**P**	**00 26 36.0**	**-0.4**
CHTO	**Chiang Mai**	**62.81**	**296**	P	**P**	**00 26 36.8**	**+0.4**
	comp=Z,142nm,1.6s,comp=Z,2µm						
NKL	**Nikolayevsk**	**62.81**	**349**	*e*P	**P**	**00 26 32.0**	**-3.6**
NKL				*e*		00 35 07.0	
NKL				*e*		00 36 30.0	
NKL				pmax	pmax		
	comp=Z,55nm,1.1s						
NKL				pmax	pmax		
	comp=Z,500nm,7.0s						
CMAI	**Chiengmai2**	**63.12**	**297**	P	**P**	**00 26 40.4**	**+1.8**
	comp=Z,5.5nm,1.5s						
CD2	**Chengdu**	**63.84**	**310**	⇑P	**P**	**00 26 43.1**	**+0.1**
CD2				pP	pP	00 26 46.3	-1.1
CD2				PP	**PP**	**00 29 03.4**	**-0.2**
CD2				S	**S**	**00 35 19.0**	**+0.8**
CD2				sS	sS	00 35 24.5	-0.9
CD2				SS	**SS**	**00 39 28.3**	**+1.5**
CD2				pmax	pmax		
	comp=Z,40nm,0.6s						
CD2				pmax	pmax		
	comp=Z,250nm,5.6s						
CD2				LR	LR		
	comp=Z,650nm,18.4s						
CD2				LR	LR		
	comp=Z,590nm,18.4s						
CD2				LR	LR		
	comp=Z,690nm,21.9s						
HHC	**Hu-ho-hao-te**	**64.10**	**323**	*e*P	P	00 26 34.2	-10
HHC				sP	pP	00 26 44.3	-4.7
HHC				S	S	00 35 05.4	-16
HHC				sS	pS	00 35 13.8	-13
HHC	**Hu-ho-hao-te**	**64.10**	**323**	SS	SS	00 39 07.0	-24
HHC				pmax	pmax		
	comp=Z,25nm,1.0s						
HHC				pmax	pmax		
	comp=Z,210nm,7.8s						
HHC				LR	LR		
	comp=N,400nm,16.4s						
HHC				LR	LR		
	comp=E,380nm,17.3s						
HHC				LR	LR		
	comp=Z,570nm,18.1s						
CASY	**Casey**	**65.66**	**199**	*e*P	**P**	**00 26 52.4**	**-1.8**
	comp=Z,10nm,0.9s						
HIA	**Hailar**	**65.84**	**335**	*e*P	**P**	**00 26 55.6**	**-0.1**
HIA	**Hailar**	**65.84**	**335**	*i* P	**P**	**00 26 55.5**	**-0.2**
HIA				pmax	pmax		
	comp=Z,37nm,1.2s						
LZH	**Lanzhou**	**66.35**	**315**	⇓P	**P**	**00 27 00.2**	**+0.8**
LZH				pP	sP	00 27 04.9	-0.5
LZH				sP	pP	00 27 08.8	+5.0
LZH				PP	**PP**	**00 29 27.9**	**+2.2**
LZH				S	**S**	**00 35 44.8**	**-4.3**
LZH				sS	pS	00 35 54.0	-0.5
LZH				SS	**SS**	**00 40 06.9**	**+1.0**
LZH				pmax	pmax		
	comp=Z,29nm,1.1s						
LZH				pmax	pmax		
	comp=Z,450nm,7.9s						
LZH				LR	LR		
	comp=Z,570nm,17.3s						
LZH				LR	LR		
	comp=Z,550nm,18.1s						
LZH				LR	LR		
	comp=Z,920nm,18.6s						
ZEA	**Zeya**	**66.70**	**342**	*e*P	**P**	**00 27 00.5**	**-0.5**
ZEA				*e*S	**S**	**00 35 53.0**	**+0.7**
ZEA				pmax	pmax		
	comp=N,94nm,1.0s						
ZEA				pmax	pmax		
	comp=E,35nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,130nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,400nm,6.0s						
ZEA				smax	smax		
	comp=N,200nm,12.0s						
RKT	**Rikitea**	**67.08**	**111**	*e*LR	LR	00 47 26.0	
	comp=N,1µm,25.2s						
MA2	**Magadan**	**67.96**	**357**	*e*P	**P**	**00 27 08.0**	**-0.9**
MA2	**Magadan**	**67.96**	**357**	*e*P	**P**	**00 27 08.0**	**-0.9**
VNDA	**Vanda**	**69.09**	**179**	P	**P**	**00 27 15.7**	**-0.2**
	comp=N,6.3nm,1.1s,baz=340,slow=6.8,SNR=9.1						
VNDA				LR	LR	00 51 44.7	
	comp=N,775nm,21.9s,baz=3.5,slow=31						
VNDA	**Vanda**	**69.09**	**179**	*e*P	**P**	**00 27 15.7**	**-0.2**
	comp=N,12nm,1.1s						
VNDA	**Vanda**	**69.09**	**179**	*e*P	**P**	**00 27 15.7**	**-0.2**
VNDA				pmax	pmax		
	comp=Z,12nm,1.1s						
SBA	**Scott Base**	**69.58**	**178**	*e*P	**P**	**00 27 19.2**	**+0.4**
	comp=Z,29nm,1.5s						
SBA	**Scott Base**	**69.58**	**178**	*e*P	**P**	**00 27 19.2**	**+0.4**
SBA				pmax	pmax		
	comp=Z,29nm,1.5s						
CLNS	**Chul'man**	**70.04**	**342**	*e*P	**P**	**00 27 23.1**	**+1.2**
CLNS				pmax	pmax		
	comp=Z,24nm,1.1s						
CLNS				pmax	pmax		
	comp=E,17nm,1.1s						
CLNS				pmax	pmax		
	comp=N,20nm,1.3s						
GTA	**Gaotai**	**70.77**	**317**	*e*P	**P**	**00 27 27.4**	**+0.5**
GTA				pP	sP	00 27 33.2	+0.2
GTA				sP	pP	00 27 36.6	+5.3
GTA				S	**S**	**00 36 41.3**	**-0.3**
GTA				sS	sS	00 36 48.1	-0.8
GTA				SS	**SS**	**00 41 15.4**	**+1.3**
GTA				pmax	pmax		
	comp=N,10.0nm,1.5s						
GTA				pmax	pmax		
	comp=N,250nm,5.6s						
GTA				LR	LR		
	comp=N,300nm,20.6s						
GTA				LR	LR		
	comp=N,340nm,20.3s						
GTA				LR	LR		
	comp=N,640nm,23.7s						
ULN	**Ulaanbaatar**	**70.99**	**327**	*e*P	**P**	**00 27 28.7**	**+0.6**
	comp=N,63nm,1.6s						
ULN	**Ulaanbaatar**	**70.99**	**327**	*ce*P	**P**	**00 27 28.7**	**+0.6**
ULN				pmax	pmax		
	comp=Z,28nm,1.4s						
SEY	**Seymchan**	**71.24**	**358**	*ce*P	**P**	**00 27 28.1**	**-1.0**
SHL	**Shillong**	**71.26**	**301**	*e*P	**P**	**00 27 32.0**	**+1.8**
SONM	**Songino Array**	**71.33**	**327**	P	**P**	**00 27 30.4**	**+0.3**
	comp=Z,9.3nm,0.9s,baz=138,slow=5.8,SNR=39						
SONA1	**Songino Array**	**71.33**	**327**	*e*P	**P**	**00 27 29.8**	**-0.3**
MIR	**Mirnyy**	**71.88**	**202**	⇑*i*P	**P**	**00 27 35.0**	**+2.1**
MIR				*i*		00 27 49.0	
MIR				pmax	pmax		
	comp=Z,81nm,1.5s						
LSA	**Lhasa**	**73.26**	**304**	P	**P**	**00 27 43.3**	**+0.8**
LSA				pmax	pmax		
	comp=Z,23nm,1.3s						
LSA	**Lhasa**	**73.26**	**304**	*e*P	**P**	**00 27 43.1**	**+0.6**
	comp=Z,48nm,1.1s						
LSA	**Lhasa**	**73.26**	**304**	*e*P	**P**	**00 27 43.1**	**+0.6**
LSA				pmax	pmax		
	comp=Z,48nm,1.1s						
YAK	**Yakutsk**	**73.28**	**347**	*e*P	**P**	**00 27 39.7**	**-1.6**
YAK				*e**PP	**sP**	**00 27 49.0**	**+1.7**
YAK				*e*		00 27 54.2	
YAK				*e*S	**S**	**00 37 06.3**	**-2.9**
YAK				*e*		00 37 39.5	
YAK				pmax	pmax		
	comp=Z,41nm,1.0s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,110nm,3.7s						
YAK				pmax	pmax		
	comp=E,45nm,3.1s						
YAK				smax	smax		
	comp=N,139nm,3.5s						
YAK				smax	smax		
	comp=E,69nm,1.8s						
YAK				MLR	MLR		
	comp=Z,252nm,18.0s						
YAK				MLR	MLR		
	comp=N,272nm,17.0s						
YAK				MLR	MLR		
	comp=E,69nm,16.0s						
ZAK	**Zakamensk**	**74.48**	**328**	*e*P	**P**	**00 27 48.2**	**-0.5**
ZAK				pmax	pmax		
	comp=Z,19nm,1.3s						
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.6s						
BOD	**Bodaibo**	**74.49**	**338**	*e*P	**P**	**00 27 46.7**	**-1.8**
BOD				pmax	pmax		
	comp=Z,18nm,1.3s						
TLY	**Talaya**	**75.04**	**329**	*e*P	**P**	**00 27 51.8**	**0.0**
	comp=Z,22nm,1.2s						
TLY	**Talaya**	**75.04**	**329**	*e*P	**P**	**00 27 52.3**	**+0.5**
TLY				*e*S	**S**	**00 37 33.5**	**+4.0**
TLY				pmax	pmax		
	comp=Z,24nm,1.3s						
TLY				MLR	MLR		
	comp=Z,149nm,14.0s						
TAPN	**Taplejung**	**75.37**	**301**	*e*P	**P**	**00 27 55.1**	**+0.5**
	comp=Z,252nm,1.3s						
ODAN	**Odare**	**75.49**	**300**	*e*P	**P**	**00 27 55.4**	**+0.1**
	comp=Z,262nm,1.2s						
RAMN	**Ramite**	**76.19**	**300**	*e*P	**P**	**00 27 59.2**	**-0.1**
MOY	**Mondy**	**76.39**	**328**	*e*P	**P**	**00 28 00.4**	**+0.7**
MOY				pmax	pmax		
	comp=Z,33nm,1.5s						
JIRN	**Jiri**	**76.75**	**301**	*e*P	**P**	**00 28 02.4**	**-0.2**
	comp=Z,208nm,1.3s						
PALK	**Pallekele**	**77.08**	**279**	LR	LR	01 03 03.1	
	comp=Z,235nm,21.9s,baz=96,slow=36						
GUN	**Gumba**	**77.08**	**301**	*e*P	**P**	**00 28 04.4**	**0.0**
	comp=Z,200nm,1.2s						
PKIN	**Phulchoki**	**77.40**	**301**	*e*P	**P**	**00 28 05.7**	**-0.4**
	comp=Z,185nm,1.5s						
KKN	**Kakani**	**77.56**	**301**	*e*P	**P**	**00 28 06.6**	**-0.3**
	comp=Z,195nm,1.5s						
DMN	**Daman**	**77.66**	**301**	*e*P	**P**	**00 28 07.5**	**0.0**
	comp=Z,391nm,1.3s						
KNGR	**Kungurtug, Tuv**	**77.71**	**326**	*i* P	**P**	**00 28 07.0**	**-0.1**
KDAK	**Kodiak Island**	**77.86**	**25**	*i* P	**P**	**00 28 08.4**	**+0.8**
GKN	**Gorkha**	**78.16**	**301**	*e*P	**P**	**00 28 10.1**	**-0.1**
	comp=Z,334nm,1.3s						
KOLN	**Koldanda**	**78.98**	**300**	*e*P	**P**	**00 28 14.4**	**-0.4**
	comp=Z,124nm,1.0s						
DANN	**Dangsing**	**79.00**	**301**	*e*P	**P**	**00 28 14.5**	**-0.5**
	comp=Z,292nm,1.4s						
PYUN	**Piuthan**	**79.59**	**301**	*e*P	**P**	**00 28 17.4**	**-0.7**
	comp=Z,228nm,1.1s						
WMQ	**Urumqi**	**80.86**	**317**	P	**P**	**00 28 24.8**	**+0.4**
WMQ				pP	PcP	00 28 30.2	-0.8
WMQ				sP	sP	00 28 35.0	+4.5
WMQ				S	**S**	**00 38 34.2**	**+1.5**
WMQ				SKS	**SKSac**	**00 38 39.4**	**-3.5**
WMQ				SS	**SS**	**00 43 48.2**	**+1.4**
WMQ				pmax	pmax		
	comp=Z,26nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,250nm,3.6s						
WMQ				LR	LR		
	comp=Z,430nm,23.7s						
WMQ				LR	LR		
	comp=Z,660nm,28.7s						
WMQ				LR	LR		
	comp=Z,810nm,28.7s						
PPLA	**Purkeypile**	**81.20**	**21**	*e*P	**P**	**00 28 25.7**	**-0.3**
	comp=Z,59nm,2.0s						
QSPA	**South Pole Qui**	**81.53**	**180**	P	**P**	**00 28 27.2**	**-0.5**
	comp=Z,17nm,0.8s,baz=11,slow=2.6,SNR=43						
QSPA				LR	LR	00 58 33.6	
	comp=Z,333nm,21.7s,baz=58,slow=31						
QSPA	**South Pole Qui**	**81.53**	**180**	*e*P	**P**	**00 28 26.7**	**-1.0**
PMR	**Palmer**	**81.56**	**23**	*e*P	**P**	**00 28 26.9**	**-0.7**
	comp=Z,18nm,0.9s						
PMR	**Palmer**	**81.56**	**23**	*e*P	**P**	**00 28 26.9**	**-0.7**
PMR				pmax	pmax		
	comp=Z,18nm,0.9s						
RDOG	**Red Dog Mine**	**81.56**	**14**	*e*P	**P**	**00 28 28.2**	**+0.6**
	comp=Z,17nm,0.8s						
CAST	**Castle Rocks**	**81.57**	**21**	*e*P	**P**	**00 28 26.6**	**-1.1**
	comp=Z,12nm,0.6s						
SML	**Sawmill**	**81.99**	**23**	*e*P	**P**	**00 28 29.8**	**-0.2**
	comp=Z,55nm,1.1s						
SML	**Sawmill**	**81.99**	**23**	*e*P	**P**	**00 28 29.8**	**-0.2**
SML				pmax	pmax		
	comp=Z,55nm,1.1s						
TIXI	**Tiksi**	**82.00**	**351**	P	**P**	**00 28 28.5**	**-1.3**
	comp=Z,3.5nm,0.5s,baz=130,slow=6.4,SNR=4.7						
TIXI	**Tiksi**	**82.00**	**351**	*i* P	**P**	**00 28 30.0**	**+0.3**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TRF	**Thorofare Moun**	**82.23**	**21**	*e*P	**P**	**00 28 30.1**	**-1.2**
	comp=Z,17nm,1.0s						
BPAW	**Bear Paw Mtn.**	**82.37**	**21**	*e*P	**P**	**00 28 30.9**	**-1.1**
	comp=Z,5.2nm,0.8s						
DIV	**Divide**	**82.64**	**24**	*e*P	**P**	**00 28 33.8**	**+0.3**
	comp=Z,20nm,1.1s						
BWN	**Browne**	**82.95**	**21**	*e*P	**P**	**00 28 35.1**	**+0.2**
MLY	**Manley**	**83.03**	**20**	*e*P	**P**	**00 28 34.7**	**-0.7**
	comp=Z,13nm,1.2s						
DGZ	**Jazzator, Alta**	**83.16**	**322**	*i* P	**P**	**00 28 35.4**	**-1.1**
DGZ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MAW	**Mawson**	**83.60**	**203**	P	**P**	**00 28 38.1**	**-0.2**
	baz=84,SNR=6.5						
MAW	**Mawson**	**83.60**	**203**	P	**P**	**00 28 37.7**	**-0.6**
	comp=Z,6.5nm,0.8s,baz=84,slow=5.6,SNR=8.3						
MAW				LR	LR	01 02 44.7	
	comp=Z,202nm,19.9s,baz=72,slow=34						
MAW	**Mawson**	**83.60**	**203**	*e*P	**P**	**00 28 38.1**	**-0.2**
	comp=Z,11nm,1.5s						
MAW	**Mawson**	**83.60**	**203**	*e*P	**P**	**00 28 38.1**	**-0.2**
MAW				pmax	pmax		
	comp=Z,11nm,1.5s						
TGL	**Tana Glacier**	**83.67**	**26**	*e*P	**P**	**00 28 39.8**	**+1.0**
	comp=Z,22nm,1.1s						
CCB	**Clear Creek Bu**	**83.81**	**21**	*e*P	**P**	**00 28 37.9**	**-1.5**
	comp=Z,7.7nm,0.8s						
MDM	**Murphy Dome**	**83.84**	**21**	*e*P	**P**	**00 28 38.5**	**-1.1**
	comp=Z,14nm,1.1s						
HDA	**Harding Lake**	**83.98**	**21**	*e*P	**P**	**00 28 39.8**	**-0.4**
	comp=Z,14nm,1.1s						
IL1	**Eielson Array**	**84.21**	**21**	*e*P	**P**	**00 28 39.2**	**-2.1**
ILAR	**Eielson Array**	**84.21**	**21**	P	**P**	**00 28 39.6**	**-1.7**
	comp=Z,3.9nm,0.8s,baz=262,slow=4.9,SNR=21						
ILAR				LR	LR	01 01 02.3	
	comp=Z,215nm,21.7s,baz=255,slow=32						
ILB	**Eielson Array**	**84.21**	**21**	*e*P	**P**	**00 28 40.0**	**-1.4**
MK01	**Makanchi Array**	**85.42**	**318**	*e*P	**P**	**00 28 46.9**	**-1.0**
MK31	**Makanchi Array**	**85.43**	**318**	*e*P	**P**	**00 28 48.0**	**0.0**
MK31	**Makanchi Array**	**85.43**	**318**	*e*P	**P**	**00 28 48.0**	**0.0**
MKAR	**Makanchi Array**	**85.43**	**318**	P	**P**	**00 28 47.9**	**-0.1**
	comp=Z,14nm,1.0s,baz=104,slow=5.8,SNR=51						
MKAR				LR	LR	01 05 21.8	
	comp=Z,222nm,21.9s,baz=97,slow=35						
TOLK	**Toolik Lake Re**	**85.58**	**17**	P	**P**	**00 28 48.5**	**+0.3**
	baz=234						
ZAA0	**Zalesovo Array**	**86.18**	**326**	*e*P	**P**	**00 28 50.2**	**-1.2**
ZALV	**Zalesovo Beam**	**86.18**	**326**	P	**P**	**00 28 50.0**	**-1.4**
	comp=Z,5.9nm,0.7s,baz=117,slow=5.9,SNR=17						
ZALV				PKPPKP	P'P'df	00 55 07.4	+12
	comp=Z,1.3nm,0.5s,baz=305,slow=5.1,SNR=2.9						
ZALV				LR	LR	01 08 59.5	
	comp=Z,159nm,18.9s,baz=74,slow=37						
EGAK	**Eagle**	**86.31**	**22**	*e*P	**P**	**00 28 51.1**	**-0.7**
	comp=Z,13nm,1.1s						
DAWY	**Dawson**	**86.66**	**23**	*e*P	**P**	**00 28 53.5**	**-0.2**
	comp=Z,17nm,1.3s						
NVS	**Novosibirsk**	**87.35**	**326**	*e*P	**P**	**00 28 55.5**	**-1.6**
NVS				*e*S	**S**	**00 39 34.3**	**-2.8**
NVS				pmax	pmax		
	comp=Z,27nm,1.8s						
NVS				pmax	pmax		
	comp=N,5.0nm,1.5s						
NVS				pmax	pmax		
	comp=E,13nm,1.4s						
NVS				smax	smax		
	comp=E,22nm,2.1s						
KSH	**Kashi**	**88.03**	**310**	P	**P**	**00 29 03.1**	**+2.1**
KSH				sP	sP	00 29 10.0	+2.9
KSH				PP	**PP**	**00 32 32.0**	**+4.3**
KSH				SKS	**SKSac**	**00 39 29.3**	**-0.2**
KSH				S	**S**	**00 39 45.6**	**+0.9**
KSH				SS	**SS**	**00 45 37.3**	**+4.2**
KSH				pmax	pmax		
	comp=E,31nm,1.2s						
KSH				pmax	pmax		
	comp=E,220nm,8.3s						
KSH				LR	LR		
	comp=E,270nm,17.3s						
KSH				LR	LR		
	comp=E,96nm,10.3s						
KSH				LR	LR		
	comp=E,220nm,15.2s						
M02C	**Callahan**	**88.63**	**48**	P	**P**	**00 29 04.4**	**+0.7**
	baz=258						
N02D	**Trinity Center**	**88.66**	**48**	P	**P**	**00 29 04.5**	**+0.7**

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       baz=258
I03D   Drain, OR          88.78  46   P        P        00 29 05.0 +0.8
       baz=257
YBH    Yreka Blue Hor     88.81  48   P        P        00 29 05.1 +0.5
       comp=E,3.4nm,0.8s,baz=274,slow=14,SNR=3.5
YBH                                   LR       LR       01 00 59.2
       comp=E,386nm,21.7s,baz=257,slow=30
YBH    Yreka Blue Hor     88.81  48  eP        P        00 29 07.1 +2.6
       comp=E,9.7nm,0.9s
YBH    Yreka Blue Hor     88.81  48  eP        P        00 29 07.1 +2.6
YBH                                   pmax     pmax
       comp=Z,10.0nm,0.9s
HUMO   Hull Mountain      88.82  47  eP        P        00 29 05.6 +1.1
       comp=Z,40nm,1.8s
KURK   Kurchatov          88.85 322  eP        P        00 29 02.8 -1.6
KURK   Kurchatov          88.85 322ceP         P        00 29 02.9 -1.5
KURK                                  pmax     pmax
       comp=Z,10.0nm,1.3s
KURBB  Kurchatov Arra     88.88 321   P        P        00 29 03.6 -1.0
       comp=Z,1.2nm,0.6s,baz=104,slow=3.9,SNR=11
NIL    Nilore             89.00 304  eP        P        00 29 04.6 -0.9
NIL    Nilore             89.00 304  eP        P        00 29 04.6 -0.9
KZA    Kyzart             89.12 313   P        P        00 29 08.4 +2.0
       SNR=7.5
O03D   Paynes Creek       89.19  49   P        P        00 29 07.9 +1.6
       baz=258
M04C   Macdoel            89.46  48   P        P        00 29 08.8 +1.1
       baz=258
AFDM   Forest Hills D     89.55  51  eP        P        00 29 09.8 +1.8
       comp=Z,22nm,1.4s
CHMS   Chumysh            89.67 313   P        P        00 29 10.3 +1.8
       SNR=6.3
UCH    Uchtor             89.68 313   P        P        00 29 11.1 +2.0
       SNR=11
PKM    Mcpherson Peak     89.70  55   P        P        00 29 10.0 +1.0
       baz=260
FRU    Bishkek            89.73 313  eP        P        00 29 09.5 +0.7
FRU                                  e                  00 29 15.0
USP    Ospenovka          89.90 314   P        P        00 29 10.7 +1.1
       SNR=7.5
RPN    Rapa Nui           89.94 117   LR       LR       01 02 32.0
       comp=Z,144nm,20.9s,baz=278,slow=31
J05D   Fort Rock, OR      90.20  46   P        P        00 29 11.3 +0.2
       baz=259
AML    Almayashu          90.26 312   P        P        00 29 13.6 +1.8
       SNR=6.7
EKS2   Erkin-Say          90.30 313   P        P        00 29 13.2 +1.7
       SNR=7.1
I05D   Terrebonne, OR     90.33  45   P        P        00 29 12.1 +0.5
       baz=259
K05A   Summer Lake        90.33  47  eP        P        00 29 12.8 +0.9
       comp=Z,29nm,1.3s
PINE   Pine Mountain      90.51  46  eP        P        00 29 14.8 +2.2
       comp=Z,23nm,1.3s
ARVC   Arvin              90.54  55   P        P        00 29 13.6 +1.0
       baz=260
MOD    Modoc Plateau      90.61  48  eP        P        00 29 12.7 -0.3
       comp=Z,18nm,1.4s
B05A   Bryant             90.61  41   P        P        00 29 13.2 +0.6
       baz=258
WAKR   Walker             90.64  51  eP        P        00 29 15.5 +2.2
       comp=Z,30nm,1.6s
OMMB   Old Mammoth Mi     90.83  52  eP        P        00 29 17.1 +2.7
       comp=Z,22nm,1.7s
YERR   Yerington          90.88  51  eP        P        00 29 16.5 +2.1
       comp=Z,27nm,1.6s
PAHR   Pah Rah Range      90.90  50  eP        P        00 29 15.9 +1.4
       comp=Z,22nm,1.4s
ISA    Isabella, Lake     90.91  54   P        P        00 29 15.0 +0.4
       baz=260
ISA    Isabella, Lake     90.91  54  eP        P        00 29 17.2 +2.7
       comp=Z,14nm,1.1s
ISA    Isabella, Lake     90.91  54  eP        P        00 29 17.2 +2.7
ISA                                   pmax     pmax
       comp=Z,14nm,1.1s
EDW2   Edwards Air Fo     91.17  55   P        P        00 29 16.9 +1.1
       baz=261
BFSC   Mount Baldy Ra     91.34  56   P        P        00 29 17.6 +1.0
       baz=261
CWC    Cottonwood Cre     91.36  54   P        P        00 29 17.3 +0.6
       baz=261
RYN    Ryan               91.37  51  eP        P        00 29 18.0 +1.3
       comp=Z,23nm,1.3s
SYO    Syowa Base         91.41 199⇑eP         P        00 29 14.0 -2.0
SYO    Syowa Base         91.41 199⇑iPcP       P        00 29 16.0  0.0
SYO    Syowa Base         91.41 199⇑ipP        pP       00 29 20.0 -0.5
NV01   Mina Array Sit     91.51  52  eP        P        00 29 18.0 +0.6
NVAR   Mina Array Bea     91.51  52   P        P        00 29 18.3 +0.9
       comp=Z,8.6nm,1.0s,baz=243,slow=6.0,SNR=20
NVAR                                  LR       LR       01 04 04.3
       comp=Z,247nm,19.7s,baz=91,slow=31
NV11   Mina Array Sit     91.62  52  eP        P        00 29 19.0 +1.2
       comp=Z,2.7nm,1.3s
DAC    Darwin (Calif)     91.72  54  eP        P        00 29 19.7 +1.3
       comp=Z,28nm,1.3s
KVN    Kaiserville        91.77  51  eP        P        00 29 19.7 +1.1
       comp=Z,20nm,1.1s
KVN    Kaiserville        91.77  51  eP        P        00 29 19.7 +1.1
KVN                                   pmax     pmax
       comp=Z,20nm,1.1s
MPMC   Manual Prospec     91.77  54   P        P        00 29 18.8 +0.1
       baz=261
WVOR   Wild Horse Val     91.92  48  eP        P        00 29 20.1 +1.0
       comp=Z,15nm,0.9s
WVOR   Wild Horse Val     91.92  48  eP        P        00 29 20.1 +1.0
WVOR                                  pmax     pmax
       comp=Z,15nm,0.9s
GRAC   Grapevine Rang     92.01  53   P        P        00 29 20.6 +1.0
       baz=261
MONP2  Monument Peak      92.15  57   P        P        00 29 21.2 +0.7
       baz=261
G08A   Pilot Rock         92.17  45  eP        P        00 29 21.0 +0.8
       comp=Z,4.7nm,0.9s
J08A   Circle Bar Ran     92.19  47  eP        P        00 29 20.5 +0.2
       comp=Z,15nm,1.1s
GSC    Goldstone, Bar     92.20  55   P        P        00 29 22.6 +2.1
       baz=261
GSC    Goldstone, Bar     92.20  55  eP        P        00 29 23.2 +2.7
       comp=Z,28nm,1.6s
GSC    Goldstone, Bar     92.20  55  eP        P        00 29 23.2 +2.7
GSC                                   pmax     pmax
       comp=Z,28nm,1.6s
FURC   Furnace Creek,     92.33  54   P        P        00 29 21.6 +0.7
       baz=261
B08A   Colville Reser     92.44  42  eP        P        00 29 20.9 -0.3
       comp=Z,32nm,2.0s
BMN    Battle Mountai     92.65  50  eP        P        00 29 23.9 +1.3
       comp=Z,17nm,1.4s
BMN    Battle Mountai     92.65  50  eP        P        00 29 23.9 +1.3
BMN                                   pmax     pmax
       comp=Z,17nm,1.4s
BELC   Belle Mtn. Jos     92.67  56   P        P        00 29 24.2 +1.4
       baz=262
SHOC   Shoshone, Teco     92.72  54   P        P        00 29 24.8 +2.0
       baz=262
KK31   Karatay Array      92.74 313  eP        P        00 29 23.4 +0.7
KK31   Karatay Array      92.74 313  eP        P        00 29 23.5 +0.7
TPNV   Topopah Spring     92.89  53   P        P        00 29 24.2 +0.4
       baz=262
TPNV   Topopah Spring     92.89  53  eP        P        00 29 24.9 +1.2
       comp=Z,13nm,0.9s
TPNV   Topopah Spring     92.89  53  eP        P        00 29 25.0 +1.2
TPNV                                  pmax     pmax
       comp=Z,13nm,0.9s
TUQ    Turquoise Moun     92.93  55   P        P        00 29 25.0 +1.0
       baz=262
GMRC   Granite Mounta     93.06  55   P        P        00 29 24.7 +0.1
       baz=262
BMO    Blue Mountains     93.26  45  eP        P        00 29 25.0 -0.2
       comp=Z,4.6nm,1.0s
BMO    Blue Mountains     93.26  45  eP        P        00 29 25.0 -0.2
BMO                                   pmax     pmax
       comp=Z,5.0nm,1.0s
IRM    Iron Mountain      93.39  56   P        P        00 29 25.6 -0.3
       baz=262
LDFC   Landfair           93.54  55  eP        P        00 29 29.1 +2.4
       comp=Z,38nm,1.4s
R11A   Troy Canyon, C     93.61  52   P        P        00 29 27.9 +0.8
       baz=262
R11A   Troy Canyon, C     93.61  52  eP        P        00 29 28.1 +1.1
       comp=Z,11nm,1.1s
SHPR   Sheep Range        93.69  54  eP        P        00 29 29.3 +1.8
       comp=Z,7.1nm,0.9s
NEW    Newport            93.88  42   P        P        00 29 28.1 +0.2
       baz=262
MFID   Camas Ranch        94.11  47  eP        P        00 29 29.8 +0.7
       comp=Z,17nm,1.6s
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BVAR   Borovoye Array     94.31 323   P        P        00 29 28.2 -1.5
       comp=Z,3.4nm,0.8s,baz=108,slow=5.7,SNR=13
BVAR                                  LR       LR       01 09 59.9
       comp=Z,160nm,21.3s,baz=94,slow=34
BRVK   Borovoye           94.38 323  eP        P        00 29 29.0 -1.0
       comp=Z,8.4nm,0.9s
BRVK   Borovoye           94.38 323ceP         P        00 29 29.4 -0.6
BRVK                                  pmax     pmax
       comp=Z,11nm,1.3s
PSUT   Pine Spring        94.98  52  eP        P        00 29 35.2 +1.8
       comp=Z,13nm,1.3s
HLID   Hailey             95.15  47   P        P        00 29 34.2 +0.2
       baz=263
HLID   Hailey             95.15  47  eP        P        00 29 34.8 +0.8
       comp=Z,22nm,1.9s
CCUT   Cedar City         95.25  53  eP        P        00 29 37.9 +3.2
       comp=Z,6.0nm,1.0s
DUG    Dugway, Tooele     95.97  50  eP        P        00 29 38.2 +0.4
       comp=Z,10nm,1.6s
DUG    Dugway, Tooele     95.97  50  eP        P        00 29 38.2 +0.4
DUG                                   pmax     pmax
       comp=Z,10.0nm,1.6s
WALA   Waterton Lakes     96.09  41  eP        P        00 29 40.4 +2.3
       comp=Z,8.1nm,1.3s
MTPU   Mount Pierson      96.23  53  eP        P        00 29 42.0 +2.6
LPIG   La Paz             96.36  67   LR       LR       01 07 48.1
       comp=Z,297nm,18.2s,baz=236,slow=32
YKA    Yellowknife Ar     96.95  28   P        P        00 29 41.1 -0.4
       comp=Z,3.3nm,0.6s,baz=265,slow=4.7,SNR=22
YKA                                   LR       LR       01 08 00.2
       comp=Z,20nm,20.9s,baz=282,slow=32
YKW3   Yellowknife Ar     96.96  28  eP        P        00 29 41.1 -0.4
P17A   Butcher Ranch,     97.49  51  eP        Pdif     00 29 44.9 +0.1
       comp=Z,5.5nm,1.0s
FXWY   Fox Creek          97.61  47  eP        Pdif     00 29 45.8 +0.5
       comp=Z,2.8nm,0.9s
MOOW   Moose Ponds        97.82  47  eP        Pdif     00 29 49.4 +3.2
       comp=Z,13nm,1.9s
BW06   Boulder Array      98.62  48   P        Pdif     00 29 49.8  0.0
       baz=267
BW06   Boulder Array      98.62  48  eP        P        00 29 49.6 -0.2
       comp=Z,3.3nm,1.0s
PD31   Pinedale Array     98.62  48  eP        P        00 29 48.2 -1.6
PDAR   Pinedale Array     98.62  48   P        Pdif     00 29 49.8  0.0
       comp=Z,1.2nm,0.8s,baz=141,slow=0.9,SNR=9.1
PDAR                                  LR       LR       01 11 45.6
       comp=Z,124nm,18.4s,baz=278,slow=34
PDAR   Pinedale Array     98.62  48  eP        P        00 29 49.0 -0.8
SNAA   Sanae              98.87 187   Pdiff    Pdif     00 29 51.2 +1.0
SNAA   Sanae              98.87 187   P        P        00 29 47.6 -2.5
       comp=Z,1.2nm,0.9s,baz=168,slow=19,SNR=5.5
SNAA                                  LR       LR       01 13 13.5
       comp=Z,370nm,18.3s,baz=130,slow=35
RLMT   Red Lodge          98.96  46   P        P        00 29 50.2 -1.0
       baz=267
O20A   White River Ci     99.45  51   P        Pdif     00 29 54.7 +1.1
       baz=267
VNA3   Neumayer Olymp     99.93 185   PKiKP    PKiKP    00 34 23.5 +0.7
VNA3   Neumayer Olymp     99.93 185   Pdiff    Pdif     00 29 53.7 -1.1
ARU    Arti              101.34 326  ePdif     Pdif     00 30 01.1 -0.2
       comp=Z,4.4nm,1.0s
ARU    Arti              101.34 326d iP        Pdif     00 30 00.5 -0.8
ARU                                                     00 34 10.8
ARU                                   S        SKSac    00 40 39.9 -0.3
ARU                                   SP       SP       00 43 08.8 -2.8
ARU                                   PS       PS       00 43 16.2 +2.2
ARU                                   SS       SS       00 48 34.0 -7.3
ARU                                   pmax     pmax
       comp=Z,13nm,2.5s
ARU                                   MLR      MLR
       comp=Z,289nm,22.0s
TXAR   Lajitas Array     102.70  62   P        Pdif     00 30 12.7 +4.6
       comp=Z,0.3nm,0.9s,baz=255,slow=3.5,SNR=3.3
TXAR                                  PP       PP       00 34 22.1 +0.2
       comp=Z,1.6nm,1.1s,baz=258,slow=4.5,SNR=4.6
TXAR                                  PKKPbc   PKKPbc   00 46 06.6 -1.2
       comp=Z,0.7nm,1.0s,baz=113,slow=3.3,SNR=3.7
PRGR   Permogore         107.22 332  eP        Pdif     00 30 30.6 +3.3
PRGR                                  pmax     pmax
       comp=Z,10.0nm,1.1s
KLMR   Klimovskoe        110.28 332  eP        Pdif     00 30 38.8 -2.1
KLMR                                  pmax     pmax
       comp=Z,9.0nm,1.3s
KLMR   Klimovskoe        110.28 332  ePdif     Pdif     00 30 38.8 -2.1
KLMR                                  AMP               00 30 41.6
       comp=Z,9.0nm,1.3s
ARCES  ARCESS Array B    111.39 343   PKiKP    PKiKP    00 34 43.7 -0.2
       comp=Z,1.5nm,0.8s,baz=73,slow=3.1,SNR=3.6
OBN    Obninsk           113.74 327  i PKIKP   PKiKP    00 34 50.2 +1.5
OBN                                  i PS      PS       00 45 07.6  -11
OBN                                  i SS      SS       00 51 39.9  +11
OBN                                   pmax     pmax
       comp=Z,2.0nm,0.9s
OBN                                   MLR      MLR
       comp=Z,308nm,22.0s
FINES  FINESS Array B    115.84 336   PKP      PKPdf    00 34 52.2 -0.4
       comp=Z,1.4nm,0.8s,baz=38,slow=7.0,SNR=3.4
FINES                                 PP       PP       00 35 59.9 +4.0
       comp=Z,9.5nm,1.2s,baz=62,slow=3.3,SNR=5.0
ANN    Anapa             116.36 316  i PKIKP   PKPdf    00 34 57.6 +3.5
ANN                                  e                  00 36 01.8
ANN                                  e                  00 38 27.8
ANN                                  eSP       SP       00 45 38.0 -2.3
ANN                                   pmax     pmax
       comp=Z,30nm,1.4s
ANN                                   MLR      MLR
       comp=Z,184nm,20.0s
AKASG  Malin Array Be    119.55 324   PKP      PKPdf    00 34 59.6 -0.5
       comp=Z,0.7nm,0.4s,baz=53,slow=1.8,SNR=7.6
KIEV   Kiev              119.56 324  i PKIKP   PKPdf    00 34 59.4 -0.7
BOSA   Boshof            120.20 230   PKP      PKPdf    00 35 00.3 -1.9
       comp=Z,3.3nm,1.0s,baz=120,slow=5.0,SNR=6.1
BRTR   Keskin Array B    120.41 311   PKP      PKPdf    00 35 01.2 -1.1
       comp=Z,1.0nm,0.7s,baz=108,slow=2.7,SNR=8.5
BRTR                                  PP       PP       00 36 37.1 +8.5
       comp=Z,1.3nm,1.0s,baz=114,slow=6.6,SNR=4.4
BRTR                                  PKKPbc   PKKPab   00 45 11.2 +1.4
       comp=Z,0.6nm,0.8s,baz=242,slow=2.7,SNR=4.7
ANTO   Ankara            121.00 312  ePKPdf    PKPdf    00 35 02.9 -0.4
SORM   Soroca            121.14 322⇑iP         PKPdf    00 35 02.6 -0.6
SORM   Soroca            121.14 322 ⇑PKIKP     PKPdf    00 35 02.6 -0.6
HFS    Hagfors           121.37 339   PKP      PKPdf    00 35 02.6 -0.7
       comp=Z,1.7nm,0.7s,baz=92,slow=4.5,SNR=4.8
NB2    NORSAR Subarra    121.54 341   PKPdf    PKPdf    00 35 03.7  0.0
       comp=Z,10nm,1.4s,baz=42,slow=2.0
NB2    NORSAR Subarra    121.54 341   PKPdf    PKPdf    00 35 03.7  0.0
       baz=42,slow=2.0
BIZ    Bicaz             123.03 321⇓iP         PKPdf    00 35 07.2 +0.3
BURAR  Bucovina Array    123.27 323⇓iP         PKPdf    00 35 09.0 +1.5
BURAR  Bucovina Array    123.27 323 ⇓PKIKP     PKPdf    00 35 09.0 +1.5
LSZ    Lusaka            123.55 245  ePKPdf    PKPdf    00 35 08.7 -0.2
MLR    Muntele Rosu      123.75 320   PKP      PKPdf    00 35 07.6 -0.9
       comp=Z,0.7nm,0.9s,baz=76,slow=6.7,SNR=4.4
MLR    Muntele Rosu      123.75 320⇑iP         PKPdf    00 35 08.0 -0.5
MLR    Muntele Rosu      123.75 320 ⇑PKIKP     PKPdf    00 35 08.0 -0.5
TRPA   Tarpa             124.60 324⇑iP         PKPdf    00 35 10.3 +0.5
OKC    Ostrava-Krasne    126.12 328   AMS      AMS      01 35 10.0
       comp=Z,200nm,17.0s
BZS    Buzias            126.40 322⇓iP         PKPdf    00 35 13.9 +0.5
MORC   Moravsky Berou    126.47 328⇑iP         PKPdf    00 35 14.7 +1.2
MORC   Moravsky Berou    126.47 328 ⇑PKIKP     PKPdf    00 35 14.7 +1.2
MORC   Moravsky Berou    126.47 328  ePKP      PKPdf    00 35 13.5  0.0
MDVR   Moldovita         126.74 321⇑iP         PKPdf    00 35 13.8 -0.4
DPC    Dobruska-Polom    126.76 329  ePP       PP       00 37 00.3  -10
DPC                                   AMS      AMS      01 31 00.0
       comp=Z,400nm,22.0s
VTS    Vitosha           126.78 318⇑iP         PKPdf    00 35 12.1 -2.3
UPC    Upice             126.82 329  ePP       PP       00 37 09.2 -1.7
UPC                                   AMS      AMS      01 30 40.0
       comp=Z,500nm,24.0s
JAVC   Velka Javorina    126.94 327  ePKP      PKPdf    00 35 16.5 +2.1
VRAC   Vranov            127.25 328  ePKP      PKPdf    00 35 16.8 +1.9
KRUC   Moravsky          127.50 328  ePKP      PKPdf    00 35 15.6 +0.2
PVCC   Panska Ves        127.52 330  ePP       PP       00 37 17.1 +1.6
PVCC                                  AMS      AMS      01 29 10.0
       comp=Z,300nm,23.5s
BRG    Berggiesshubel    127.60 331  ePKP      PKPdf    00 35 15.9 +0.4
       comp=Z,10.0nm,1.4s
       comp=N,226nm,18.7s
       comp=E,237nm,20.5s
       comp=Z,345nm,17.9s
BRG    Berggiesshubel    127.60 331  ePKIKP    PKPdf    00 35 15.9 +0.4
BRG                                   pmax     pmax
       comp=Z,10.0nm,1.4s
BRG                                   MLR      MLR
       comp=N,226nm,18.7s
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BRG                                   MLR      MLR
       comp=E,237nm,20.5s
BRG                                   MLR      MLR
       comp=Z,345nm,17.9s
CLL    Collm             127.76 332  i PKPdf   PKPdf    00 35 16.3 +0.5
       comp=Z,7.0nm,1.0s
CLL                                  ePP       PP       00 37 17.0  0.0
CLL                                  ePS       PS       00 47 24.0 +0.3
CLL                                  eSS       SS       00 54 30.0 +1.6
CLL                                   L        L        01 32 00.0
       comp=Z,200nm,21.1s
CLL    Collm             127.76 332  i PKIKP   PKPdf    00 35 16.3 +0.5
CLL                                   pmax     pmax
       comp=Z,7.0nm,1.0s
GOPC   GO Pecny, Ondr    127.80 329  ePP       PP       00 37 15.3 -2.1
GOPC                                  AMS      AMS      01 37 10.0
       comp=Z,300nm,23.1s
PRU    Pruhonice         127.88 330  ePP       PP       00 37 16.9 -0.9
PRU                                   AMS      AMS      01 34 20.0
       comp=Z,300nm,17.4s
PRA    Prague            127.88 330   AMS      AMS      01 34 30.0
       comp=Z,400nm,25.9s
NKC    Novy Kostel       128.74 331   AMS      AMS      01 32 30.0
       comp=Z,300nm,18.8s
KHC    Kasperske Hory    128.91 329  ePKP      PKPdf    00 35 19.3 +1.2
KHC                                  ePP       PP       00 37 17.6 -7.1
KHC                                   AMS      AMS      01 32 30.0
       comp=Z,400nm,22.5s
KHC    Kasperske Hory    128.91 329  ePKIKP    PKPdf    00 35 19.3 +1.2
KHC                                   MLR      MLR
       comp=Z,400nm,22.5s
GERES  GERESS Array B    129.03 329   PKP      PKPdf    00 35 19.3 +0.9
       comp=Z,1.1nm,0.6s,baz=112,slow=1.4,SNR=9.6
LPAZ   La Paz            129.51 119   PKP      PKPdf    00 35 21.1 +0.2
       comp=Z,5.6nm,1.0s,baz=337,slow=2.0,SNR=11
EKA    Eskdalemuir Ar    130.51 345   PKP      PKPdf    00 35 20.2 -0.8
       comp=Z,0.6nm,0.5s,baz=12,slow=3.6,SNR=4.5
DAVOX  Davos/Dischmat    132.33 329   PKP      PKPdf    00 35 25.6 +0.7
       comp=Z,3.7nm,0.8s,baz=76,slow=6.0,SNR=5.8
CPUP   Villa Florida     132.35 138   PKP      PKPdf    00 35 24.0 -1.3
       comp=Z,4.5nm,1.0s,baz=210,slow=14,SNR=2.6
CPUP   Villa Florida     132.35 138   PKIKP    PKPdf    00 35 24.0 -1.3
SDV    Santo Domingo     133.50  86   PKP      PKPdf    00 35 28.1 +0.1
       comp=Z,4.9nm,0.3s,baz=309,slow=14,SNR=4.1
SIV    San Ignacio       135.63 123   PKhKP    PKPpre   00 35 22.1
       comp=Z,2.7nm,1.2s,baz=310,slow=0.7,SNR=2.9
SAML   Samuel            136.92 113  ePKPdf    PKPdf    00 35 34.2  0.0
SAML   Samuel            136.92 113  ePKIKP    PKPdf    00 35 34.2  0.0
KEST   Kesra             139.52 317   PKhKP    PKPpre   00 35 35.1
       comp=Z,1.8nm,0.8s,baz=353,slow=8.1,SNR=2.7
PTGA   Pitinga           142.60 102   PKhKP    PKPpre   00 35 40.9
       baz=287,slow=20
PBRG   Braganca          143.60 339  ePKP      PKPdf    00 35 44.8 -0.8
MVO    Moncorvo          144.27 338  ePKP      PKPbc    00 35 45.6 +0.6
ESDC   Sonseca Array     144.30 334   PKP      PKPbc    00 35 45.4 +0.3
       comp=Z,3.5nm,0.9s,baz=28,slow=3.4,SNR=20
POLO   Lamas de Olo      144.36 339  ePKP      PKPab    00 35 44.7 -0.3
PVRL   Vila Real         144.42 339  ePKP      PKPdf    00 35 46.4 -0.6
PAB    San Pablo         144.58 334  ePKPdf    PKPab    00 35 45.5 -0.3
PAB    San Pablo         144.58 334  ePKIKP    PKPab    00 35 45.5 -0.3
PVIS   Viseu             144.98 339  ePKP      PKPdf    00 35 47.7 -0.3
MTE    Manteigas         145.13 338  ePKP      PKPdf    00 35 48.0 -0.3
PCBR   Castelo Branco    145.59 338  ePKP      PKPab    00 35 49.5 +0.1
COI    Coimbra           145.61 339  ePKP      PKPab    00 35 49.9 +0.5
PCAS   Casmilo, Conde    145.78 339  ePKP      PKPab    00 35 51.5 +1.4
PMRV   Marv??o           145.92 337  ePKP      PKPab    00 35 50.8 +0.1
PTOM   Tomar             146.13 339  ePKP      PKPab    00 35 52.1 +0.7
PESTR  Estremoz          146.48 337  ePKP      PKPab    00 35 52.6 -0.2
PMTG   Montargil         146.55 338  ePKP      PKPbc    00 35 52.2 +0.1
ALMR   Almeirim          146.60 339  ePKP      PKPdf    00 35 49.7 -1.0
ALMR   Almeirim          146.60 339  ePKP      PKPdf    00 35 50.6 -0.1
ALMR   Almeirim          146.60 339  ePKIKP    PKPdf    00 35 49.7 -1.0
PBAR   Barrancos         146.86 336  ePKP      PKPab    00 35 54.2 -0.1
EVO    Evora             146.94 337  ePKP      PKPdf    00 35 51.4 +0.1
LIS    Lisbon            147.19 339  ePKP      PKPdf    00 35 50.6 -1.1
LIS    Lisbon            147.19 339  ePKIKP    PKPdf    00 35 50.6 -1.1
PBEJ   Beja              147.32 337  ePKP      PKPab    00 35 56.1  0.0
PNCL   Nicolau / Gran    147.50 338  ePKP      PKPbc    00 35 55.3 +0.5
MESJ   Messejana         147.62 337  ePKP      PKPdf    00 35 51.4 -1.1
MESJ                                  AMS      AMS      01 41 30.4
       comp=Z,217nm,19.6s
MESJ   Messejana         147.62 337  ePKP      PKPbc    00 35 56.1 +1.0
MESJ   Messejana         147.62 337  ePKIKP    PKPdf    00 35 51.4 -1.1
PCVE   Castro Verde      147.73 337  ePKP      PKPbc    00 35 54.1 -1.3
PVAQ   Vaqueiros         147.80 336  ePKP      PKPbc    00 35 55.9 +0.3
PBDV   Barranco-do-Ve    148.02 336  ePKP      PKPdf    00 35 53.7 +0.5
PTEO   Sao Teotonio      148.07 337  ePKP      PKPbc    00 35 57.0 +0.7
MORF   Marmelete         148.25 337  ePKP      PKPdf    00 35 52.5 -1.2
MORF                                  AMS      AMS      01 45 06.4
       comp=N,297nm,19.8s
MORF   Marmelete         148.25 337  ePKP      PKPbc    00 35 57.7 +0.8
MORF   Marmelete         148.25 337  ePKIKP    PKPdf    00 35 52.4 -1.2
MDT    Midelt            150.07 327   PKPbc    PKPbc    00 36 02.5 +0.8
       comp=N,16nm,1.2s,baz=66,slow=2.9,SNR=11
KOWA   Kowa              159.93 289   PKP      PKPdf    00 36 10.4 -0.1
       comp=N,2.2nm,0.8s,baz=349,slow=5.2,SNR=3.0
KOWA                                  PKPab    PKPab    00 36 49.3 -0.6
       comp=N,6.8nm,0.9s,baz=39,slow=4.8,SNR=5.5
DBIC   Dimbokro          161.36 266   PKPab    PKPab    00 36 54.0 -2.1
       comp=N,2.9nm,0.6s,baz=104,slow=5.4,SNR=4.6
```

ISCJB ***11*** *00:35:04.1±1.2, 29°.66S±0°.04×71°.67W±0°.07, h25^{km}±7^{km},*
Error ellipse: s-maj=10.1km s-min=5.7km az=13.7
GUC ***11*** *00:35:05.8±0.7, 29°.67S×71°.45W, h40^{km}±3^{km}, ML4.1*
SJA ***11*** *00:35:05.3±0.7, 29°.76S×71°.35W, h9^{km}±6^{km}, ML3.9, MW3.7*

ISC 11 00:35:02.1±2.1**, 29°.62S**±0°.04×**71°.72W**±0°.09**, h11**^{km}±11^{km}**,**
n24, σ1^s.56/35**, 7C, Near coast of central Chile**

```
Code   Station Name        Δ°   AZ°     Phase ID          Time       Res
                                      Op       ISC      h  m  s     ISC
TLL    Tololo Astrono     0.96 124⇑iP          Pg       00 35 21.1 +0.3
TLL                                  i S       Sg       00 35 32.2 -1.1
TLL                                   IAML              00 35 33.2
       comp=E,7µm,0.6s
GO04   Tololo Observa     0.97 125⇑iP          Pg       00 35 20.9 +0.1
GO04                                 i S       Sg       00 35 32.1 -1.5
GO04                                  IAML              00 35 33.4
       comp=N,20µm,0.5s
LCO    Las Campanas       1.08  56   eP        Pn       00 35 23.8 +0.4
LCO                                  eS        Sb       00 35 36.9 -0.2
LCO    Las Campanas       1.08  56⇑iP          Pg       00 35 23.6 +0.7
LCO                                  i S       Sb       00 35 36.5 -0.6
LCO                                   IAML              00 35 37.3
       comp=E,5µm,0.3s
AROD   Rodeo              2.03 106   eP        Pn       00 35 37.4 +0.9
AROD                                 eS        Sn       00 36 01.1 -0.9
ACDV   Cuesta del Vie     2.33 104   eP        Pn       00 35 41.6 +1.1
ACDV                                 eS        Sn       00 36 08.7 -0.4
ACDV                                  IAML              00 36 12.3
       comp=Z,1µm,0.8s
GO03   Copiap             2.41  33⇑iP          Pn       00 35 41.5 +0.1
GO03                                 i S       Sn       00 36 09.4 -1.6
GO03                                  IAML              00 36 27.8
       comp=E,492nm,0.4s
AGUA   GUANDACOL          2.82  88   eP        Pn       00 35 49.5 +2.3
RTLS   Leoncito           3.01 137   eP        Pn       00 35 51.9 +1.9
RTLS                                  IAML              00 36 28.1
       comp=Z,404nm,0.3s
AMOG   MOGNA              3.09 116   eP        Pn       00 35 52.2 +1.4
VCA    Vinchina           3.20  75   eP        Pn       00 35 55.4 +2.9
VCA    Vinchina           3.20  75⇑iP          Pn       00 35 55.6 +3.1
VCA                                  i S       Sn       00 36 31.3 +0.6
VCA                                   IAML              00 36 33.7
       comp=N,1µm,0.9s
AUSP   Uspallata          3.28 143   eP        Pn       00 35 55.9 +2.2
RTLL   Cerro Villicun     3.28 122   eP        Pn       00 35 54.5 +1.0
RTLL                                 eS        Sn       00 36 31.3 -1.2
ROC1   El Roble           3.40 170   eP        Pn       00 35 55.2  0.0
RTCV   Cerro Valdivia     3.53 130   eP        Pn       00 35 58.5 +1.6
ASAL   Salagasta          3.86 141   eP        Pn       00 36 03.2 +1.8
FCH    Farellones         3.89 162⇑iP          Pn       00 36 03.5 +1.4
FCH                                  i S       Sn       00 36 47.0 -1.0
FCH                                   IAML              00 36 49.5
       comp=E,300nm,0.2s
ARCO   CERRO ARCO         4.00 144   eP        Pn       00 36 06.2 +2.7
AAGR   Agrelo             4.25 145   eP        Pn       00 36 09.7 +2.8
LMEL   Las Melosas        4.41 163⇑iP          Pn       00 36 10.4 +1.3
LMEL                                 i S       Sn       00 36 58.9 -1.5
LMEL                                  IAML              00 37 01.9
       comp=N,374nm,0.2s
ACAN   Cantantal          4.71 125   eP        Pn       00 36 13.5 +0.4
```

CYA	**Choya**	**5.32**	**79**	*e*P	**Pn**	**00 36 21.4**	**-0.1**
MRA	**San Martin**	**5.86**	**120**	*e*P	**Pn**	**00 36 28.2**	**-0.8**

MEX 11 00:35:10.9±0.6**,16°.28N×98°.23W,h12^{km}**±4^{km}**,MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.15**	**41**	*i* P	Pg	00 35 13.7	-0.7
PNIG				*i* S	Sg	00 35 16.5	-0.4
TLIG	**Tlapa**	**1.31**	**346**	*i* P	Pn	00 35 31.5	-3.8
TLIG				*e*S	Sb	00 35 47.5	-5.1
VHO	**Vista Hermosa**	**1.64**	**61**	*e*P	Pn	00 35 36.0	-3.7
VHO				*i* S	Sn	00 35 55.9	-4.9

*ISCJB **11** 00:44:07.8±0.9, 24°.2S±0°.1×179°.6E±0°.2, h531^{km}, mb3.8/5, Error ellipse: s-maj=20.8km s-min=13.9km az=6.3*

*IDC **11** 00:44:14.6±5.8, 24°.64S×179°.56E, h619^{km}±74^{km}, mb3.2/5, mb1 3.5/6, mb1mx3.0/43, mbtmp4.2/6, Error ellipse: s-maj=51.9km s-min=28.9km az=15.0*

ISC 11 00:44:07.7±0.9**,24°.3S**±0°.1×**179°.7E**±0°.2**,h531^{km},n9, σ1^{s}.70**/10**,mb3.8**/5**,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**14.13**	**188**	P	**P**	**00 47 09.6**	**+1.5**
	0.5nm,0.3s,baz=207,slow=9.0,SNR=3.2						
URZ				S	**S**	**00 49 35.3**	**-1.7**
	0.3nm,0.3s,baz=40,slow=17,SNR=2.3						
CTA	**Charters Tower**	**31.22**	**271**	P	**P**	**00 49 44.8**	**+0.9**
	7.7nm,0.3s,baz=94,slow=13,SNR=13						
ASAR	**Alice Springs**	**41.72**	**261**	P	**P**	**00 51 10.7**	**+0.3**
	1.1nm,0.4s,baz=95,slow=7.2,SNR=16						
WRA	**Warramunga Arr**	**42.13**	**267**	P	**P**	**00 51 13.2**	**-0.4**
	3.4nm,0.6s,baz=105,slow=8.4,SNR=50						
NVAR	**Mina Array Bea**	**85.19**	**44**	P	**P**	**00 55 48.6**	**+0.3**
	0.4nm,0.7s,baz=225,slow=7.5,SNR=2.8						
TXAR	**Lajitas Array**	**90.84**	**58**	P	**P**	**00 56 16.1**	**+1.3**
	0.5nm,0.7s,baz=221,slow=5.0,SNR=5.7						
ARCES	**ARCESS Array B**	**132.19**	**348**	PKP	**PKPdf**	**01 02 19.6**	**-0.8**
	1.3nm,0.9s,baz=7.6,slow=3.7,SNR=3.7						
HFS	**Hagfors**	**142.85**	**348**	PKP	**PKPdf**	**01 02 36.8**	**-3.4**
	1.9nm,0.6s,baz=48,slow=2.4,SNR=11						
EKA	**Eskdalemuir Ar**	**148.89**	**3**	PKPbc	**PKPbc**	**01 02 54.5**	**-0.7**
	0.2nm,0.3s,baz=354,slow=2.9,SNR=4.3						

*IDC **11** 00:51:33.2±1.2, 2°.02S×127°.28E, h0^{km}, mb3.5/3, mb1 3.8/5, mb1mx3.5/53, mbtmp3.6/5, ML3.8/2, Error ellipse: s-maj=43.0km s-min=22.4km az=64.0*

*ISCJB **11** 00:51:34.4±0.6, 1°.86S±0°.07×127°.34E±0°.05, h10^{km}, mb3.6/3, Error ellipse: s-maj=10.6km s-min=7.2km az=1.9*

*DJA **11** 00:51:36.7±0.4, 2°S±4°×12°7E±°, h10^{km}, M3.8/7, mB4.7/1, mb4.2/3, MLv3.6/7, Mw(mB)3.9/1*

ISC 11 00:51:35.6±0.9**,2°.03S**±0°.06×**127°.32E**±0°.07**,h10^{km},n13, σ1^{s}.55**/14**,mb3.8**/3**,Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NLAI	**Namlea**	**1.22**	**190**	P	**Pn**	**00 51 59.9**	**+1.1**
SANI	**Sanana**	**1.33**	**269**	P	**Pn**	**00 51 59.4**	**-0.9**
LBMI	**Labuha**	**1.39**	**7**	P	**Pn**	**00 52 01.8**	**+0.7**
AAI	**Ambon**	**1.86**	**152**	P	**Pn**	**00 52 10.0**	**+2.4**
MSAI	**Masohi**	**2.07**	**129**	P	**Pn**	**00 52 12.2**	**+1.8**
TNTI	**Ternate**	**2.78**	**1**	P	**Pg**	**00 52 30.4**	**+1.5**
SIJI	**Sorong**	**4.11**	**74**	Pn	**Pn**	**00 52 38.9**	**+0.4**
	4.9nm,0.3s,baz=252,slow=20,SNR=9.4						
SIJI				Sn	**Sn**	**00 53 25.0**	**-1.7**
	2.4nm,0.3s,baz=225,slow=19,SNR=2.5						
APSI	**Ampana**	**5.78**	**281**	P	**Pn**	**00 53 02.1**	**+0.6**
	34nm,0.6s,581nm						
MPSI	**Mapaga**	**7.79**	**287**	P	**Pn**	**00 53 31.2**	**+2.2**
WRA	**Warramunga Arr**	**19.08**	**159**	P	**P**	**00 55 57.1**	**-1.4**
	0.4nm,0.3s,baz=340,slow=11,SNR=21						
ASAR	**Alice Springs**	**22.44**	**164**	P	**P**	**00 56 34.1**	**-0.7**
	0.7nm,0.4s,baz=344,slow=11,SNR=14						
MKAR	**Makanchi Array**	**62.63**	**327**	P	**P**	**01 01 59.8**	**-0.6**
	0.3nm,0.5s,baz=130,slow=7.6,SNR=4.4						
KURBB	**Kurchatov Arra**	**66.90**	**329**	P	**P**	**01 02 26.6**	**-1.4**
	0.3nm,0.4s,baz=133,slow=6.6,SNR=5.8						

IDC 11 01:07:17.3±6.9**,15°.85S×173°.75W,h0^{km},mb3.8**/2**, mb1 4.0**/3**,mb1mx3.6**/49**,mbtmp3.8**/3**,ML3.3**/1**,Error ellipse: s-maj=349.2km s-min=28.7km az=143.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.71**	**45**	Pn	Pn	01 08 00.5	-1.8
	4.9nm,0.3s,baz=343,slow=19,SNR=2.4						
AFI				Sn	Sn	01 08 32.0	-3.8
	41nm,0.3s,baz=221,slow=20,SNR=12						
ASAR	**Alice Springs**	**49.66**	**252**	P	P	01 16 10.4	-0.8
	1.5nm,0.7s,baz=82,slow=8.8,SNR=11						
ILAR	**Eielson Array**	**82.95**	**11**	P	P	01 19 44.3	+0.5
	0.4nm,0.6s,baz=188,slow=6.1,SNR=4.4						
BRTR	**Keskin Array B**	**146.29**	**320**	PKPbc	PKPbc	01 27 00.1	-0.3
	0.8nm,0.9s,baz=64,slow=6.6,SNR=2.5						
GERES	**GERESS Array B**	**146.53**	**351**	PKPbc	PKPbc	01 27 00.9	+0.1
	0.3nm,0.6s,baz=31,slow=4.6,SNR=3.0						

*BJI **11** 01:11:32.0, 2°.38S×127°.94E, h24^{km}, mb4.9/32, mB5.0/19, Ms4.3/9, Ms7 4.0/9*

*IDC **11** 01:11:35.2±0.4, 1°.90S×127°.37E, h0^{km}, mb4.6/22, mb1 4.6/25, mb1mx4.4/55, mbtmp4.6/25, ML4.5/3, MS3.9/23, Ms1 3.9/23, ms1mx3.6/55, Error ellipse: s-maj=17.6km s-min=11.5km az=61.0*

*NEIC **11** 01:11:37.8±2.7, 2°.02S×127°.38E, h18^{km}±17^{km}, mb5.0/45, Error ellipse: s-maj=6.9km s-min=4.2km az=59.0*

*GCMT **11** 01:11:37.8±0.3, 1°.92S×127°.23E, h21^{km}±1^{km}, MW4.9/68, Moment Tensor Solution. s28,c32; s68,c95; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.10±.15; M$_{\theta\theta}$-2.17±.09; M$_{\phi\phi}$0.06±.11; M$_{r\theta}$0.57±.14; M$_{\theta\phi}$0.66±.07; M$_{\phi r}$-1.44±.24; Best double couple: M$_0$2.70800×10^{16} NP1:φ$_s$130.00000°, δ62.00000°, λ117.00000°. NP2: φ$_s$263.00000°, δ38.00000°, λ50.00000°. Principal axes: T 2.8550, Plg63.0000°, Azm85.0000°; N -0.2960, Plg23.0000°, Azm297.0000°; P -2.5600, Plg13.0000°, Azm201.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*MOS **11** 01:11:37.7±1.4, 1°.98S×127°.39E, h31^{km}, mb4.9/39 Error ellipse: s-maj=12.3km s-min=6.3km az=117.4*

*DJA **11** 01:11:38.7±1.1, 2°S±2°×12°7E±°, h10^{km}±9^{km}, M4.7/22, mb4.8/22, mB5.2/12, MLv4.9/16, Mw(mB)4.6/12, Mwp5.6/1*

*ISCJB **11** 01:11:38.9±0.4, 2°.02S±0°.02×127°.41E±0°.02, h38^{km}±4^{km}, mb4.8/91, MS3.8/23, Error ellipse: s-maj=4.3km s-min=3.3km az=144.7*

ISC 11 01:11:39.6±1.3**,2°.03S**±0°.04×**127°.40E**±0°.04**,h28^{km}**±9^{km}**, n235,σ1^{s}.70**/239**,mb4.8**/91**,MS3.9**/23**,7C-1D,Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NLAI	**Namlea**	**1.24**	**194**	P	**Pn**	**01 12 01.1**	**0.0**
LBMI	**Labuha**	**1.38**	**4**	P	**Pn**	**01 12 01.9**	**-1.2**
LBMI				S	**Sn**	**01 12 20.7**	**+0.2**
SANI	**Sanana**	**1.41**	**269**	P	**Pn**	**01 12 00.7**	**-2.7**
AAI	**Ambon**	**1.83**	**154**	P	**Pb**	**01 12 11.0**	**-1.5**
MSAI	**Masohi**	**2.01**	**131**	P	**Pb**	**01 12 13.9**	**-1.7**
TNTI	**Ternate**	**2.78**	**359**	P	**Pn**	**01 12 22.0**	**-0.3**
TNTI	**Ternate**	**2.78**	**359**	*e*Pn	**Pn**	**01 12 22.9**	**+0.5**
TNTI				*e*Sn	**Sn**	**01 12 55.4**	**+0.4**
SIJI	**Sorong**	**4.04**	**73**	Pn	**Pn**	**01 12 39.6**	**0.0**
	45nm,0.3s,baz=257,slow=9.3,SNR=36						
SIJI				Sn	**Sn**	**01 13 27.8**	**+1.8**
	27nm,0.3s,baz=210,slow=20,SNR=12						
SIJI				LR	LR	01 14 51.8	
	comp=Z,2µm,20.1s,baz=267,slow=49						
KMSI	**Cibinong**	**4.28**	**307**	P	**Pn**	**01 12 42.9**	**-0.1**
LUWI	**Luwuk**	**4.73**	**282**	P	**Pn**	**01 12 48.5**	**-0.6**
LUWI	**Luwuk**	**4.73**	**282**	*e*Pn	**Pn**	**01 12 45.2**	**-3.9**
LUWI				*e*Sn	**Sn**	**01 13 41.7**	**-1.3**
FAKI	**Fak Fak**	**4.93**	**100**	P	**Pn**	**01 12 52.4**	**+0.5**
FAKI	**Fak Fak**	**4.93**	**100**	*e*Pn	**Pn**	**01 12 50.7**	**-1.2**
FAKI				*e*Sn	**Sn**	**01 13 46.1**	**-1.9**
KDI	**Kendari**	**5.14**	**248**	P	**Pn**	**01 12 57.3**	**+2.5**
APSI	**Ampana**	**5.85**	**281**	P	**Pn**	**01 13 04.3**	**-0.3**
	531nm,0.7s,5µm						
MRSI	**Marisa**	**6.00**	**294**	P	**Pn**	**01 13 05.7**	**-0.9**
	111nm,0.6s,1µm						
RKPI	**Ransiki, Papua**	**6.80**	**86**	P	**Pn**	**01 13 20.1**	**+2.5**
TTSI	**Tana Toraja**	**7.64**	**262**	P	**Pn**	**01 13 31.8**	**+2.7**
PCI	**Palu**	**7.64**	**278**	P	**Pn**	**01 13 30.2**	**+1.0**
MPSI	**Mapaga**	**7.86**	**287**	P	**Pn**	**01 13 32.3**	**+0.2**
SPSI	**Sidrap Palu**	**7.86**	**256**	P	**Pn**	**01 13 34.9**	**+2.8**
BKSI	**Bulukumba**	**7.96**	**246**	P	**Pn**	**01 13 37.1**	**+3.5**
SOEI	**Soe**	**8.29**	**202**	*e*Pn	**Pn**	**01 13 35.7**	**-2.4**
BAKI	**Biak**	**8.75**	**85**	P	Pn	01 13 52.9	+8.5
EDFI	**Ende, Flores**	**8.77**	**220**	P	**Pn**	**01 13 46.8**	**+2.1**
BATI	**Baumata**	**8.93**	**204**	LR	LR	01 17 30.0	
	comp=Z,3µm,19.0s,baz=10,slow=39						
WBSI	**Waikabubak, Su**	**10.98**	**226**	P	Pn	01 14 29.9	+15
MTN	**Manton Dam**	**11.37**	**161**	*e*Pn	**Pn**	**01 14 21.7**	**+1.4**
MTN				*e*Sn	**Sn**	**01 16 27.6**	**+1.1**
MYLDM	**Lahad Datu**	**11.41**	**309**	*e*Pn	**Pn**	**01 14 18.5**	**-2.5**
MYLDM				*e*Sn	Sn	01 16 38.4	+11
PLAI	**Plampang**	**11.72**	**234**	P	Pn	01 14 30.6	+5.5
MTKI	**Muara Teweh, K**	**12.54**	**275**	P	P	01 14 53.0	+5.3
GENI	**Genyem**	**12.77**	**93**	P	**Pn**	**01 14 41.4**	**+1.9**
JAY	**Jayapura**	**13.31**	**92**	Pn	**Pn**	**01 14 47.9**	**+1.0**
	0.4nm,0.3s,baz=180,slow=20,SNR=2.1						
KKM	**Kota Kinabalu**	**13.75**	**306**	*e*Pn	Pn	01 14 47.5	-5.4
JAGI	**Jajag, Banyuwa**	**14.65**	**244**	*e*Pn	**Pn**	**01 15 02.7**	**-2.6**
GMJI	**Gumukmas**	**15.21**	**245**	P	**P**	**01 15 21.1**	**+3.7**
SBUM	**Sibu**	**15.81**	**286**	*e*Pn	Pn	01 15 12.1	-8.4
	9.3nm,1.0s						
FITZ	**Fitzroy Crossi**	**16.07**	**186**	*e*Pn	**Pn**	**01 15 24.3**	**+0.6**
	24nm,1.3s						
PWJI	**Pagerwojo**	**16.63**	**248**	P	**P**	**01 15 34.0**	**+0.9**
TGY	**Tagaytay City**	**17.26**	**338**	LR	LR	01 23 38.9	
	comp=Z,322nm,18.2s,baz=12,slow=42						
KSM	**Kuching**	**17.44**	**281**	*e*Pn	**Pn**	**01 15 39.6**	**-1.5**
	57nm,1.2s						
WRAB	**Tennant Creek**	**19.05**	**160**	*e*P	**P**	**01 15 57.2**	**-2.7**
WRAB				*e*Pn	**Pn**	**01 15 59.6**	**-1.2**
WRAB	**Tennant Creek**	**19.05**	**160**	*ce*P	**P**	**01 16 00.4**	**+0.5**
WRAB				pmax	pmax		
	comp=Z,33nm,1.3s						
WRA	**Warramunga Arr**	**19.05**	**160**	P	**P**	**01 15 59.1**	**-0.8**
	comp=Z,2.9nm,0.3s,baz=340,slow=11,SNR=89						
WRA				S	**Sn**	**01 19 27.9**	**-5.7**
	comp=Z,0.2nm,0.3s,baz=342,slow=21,SNR=6.8						
WRA				PcP	**PcP**	**01 20 25.5**	**+1.1**
	baz=319,slow=2.6,SNR=2.8						
WRA				LR	LR	01 24 02.5	
	comp=Z,422nm,18.1s,baz=340,slow=39						
WR1	**Warramunga Arr**	**19.06**	**160**	*e*P	**P**	**01 15 59.1**	**-0.8**
	comp=Z,19nm,0.8s						
WR1				*e*Sn	**Sn**	**01 19 27.9**	**-5.7**
WR1				*e*PcP	**PcP**	**01 20 25.5**	**+1.1**
WB2	**Warramunga Arr**	**19.06**	**160**	*e*P	**P**	**01 15 59.2**	**-0.7**
WB2				*e*Sn	**Sn**	**01 19 34.1**	**+0.4**
KPJI	**Karang Pucung**	**19.14**	**253**	P	**Pn**	**01 16 05.2**	**+3.4**
COEN	**Coen**	**19.59**	**128**	*e*P	**P**	**01 16 06.5**	**+0.7**
	comp=Z,103nm,1.3s						
LEM	**Lembang**	**20.28**	**256**	LR	LR	01 25 12.6	
	comp=Z,480nm,20.2s,baz=71,slow=40						
MBWA	**Marble Bar**	**20.43**	**201**	*e*P	**P**	**01 16 14.5**	**-0.4**
	comp=Z,22nm,1.0s						
AS31	**Alice Springs**	**22.41**	**164**	*e*P	**P**	**01 16 35.2**	**-1.1**
	comp=Z,6.9nm,0.6s						
AS31				*e*S	**S**	**01 20 37.5**	**-3.5**
ASAR	**Alice Springs**	**22.42**	**164**	P	**P**	**01 16 35.3**	**-1.0**
	comp=Z,17nm,0.7s,baz=344,slow=9.9,SNR=71						
ASAR				PcP	**PcP**	**01 20 31.6**	**+0.9**
	comp=Z,1.4nm,0.7s,baz=348,slow=1.8,SNR=4.2						
ASAR				S	**S**	**01 20 37.4**	**-3.7**
	comp=Z,9.1nm,1.0s,baz=345,slow=22,SNR=18						
ASAR				LR	LR	01 26 04.5	
	comp=Z,290nm,19.9s,baz=359,slow=39						
AS01	**Alice Springs**	**22.43**	**164**	*e*P	**P**	**01 16 34.6**	**-1.8**
AS01				*e*PcP	**PcP**	**01 20 32.0**	**+1.3**
KASI	**Kota Agung**	**23.11**	**261**	P	**P**	**01 16 44.7**	**+1.1**
GUMO	**Guam**	**23.26**	**48**	LR	LR	01 25 01.2	
	comp=Z,296nm,21.5s,baz=234,slow=35						
MDSI	**Maura Dua**	**23.31**	**263**	P	**P**	**01 16 47.1**	**+1.5**
RABL	**Rabaul**	**24.82**	**96**	*e*P	**P**	**01 17 00.9**	**+1.1**
	comp=Z,127nm,0.4s						
MASI	**Maura Aman, Be**	**25.16**	**267**	P	**P**	**01 17 09.4**	**+6.5**
CTA	**Charters Tower**	**25.72**	**136**	P	**P**	**01 17 10.5**	**+2.6**
	comp=Z,8.7nm,0.9s,baz=304,slow=12,SNR=2.2						
YULB	**Yu-li**	**25.95**	**347**	*e*P	**P**	**01 17 10.4**	**+0.4**
	comp=Z,17nm,1.0s						
TPUB	**Ta-pu**	**26.02**	**346**	*e*P	**P**	**01 17 10.0**	**-0.6**
	comp=Z,48nm,1.0s						
SSLB	**Suanglung**	**26.41**	**347**	*e*P	**P**	**01 17 13.6**	**-0.5**
	comp=Z,21nm,0.8s						
BKNI	**Bangkinang**	**26.46**	**275**	P	P	01 17 21.9	+7.3
IPM	**Ipoh**	**27.13**	**284**	*e*P	**P**	**01 17 18.6**	**-2.1**
	comp=Z,32nm,1.0s						
YHNB	**Yeheng**	**27.17**	**348**	*e*P	**P**	**01 17 20.9**	**-0.1**
	comp=Z,46nm,1.0s						
JOW	**Kunigami**	**28.70**	**2**	LR	LR	01 28 33.7	
	comp=Z,225nm,21.0s,baz=174,slow=36						
PSI	**Prapat**	**28.86**	**279**	P	**P**	**01 17 36.9**	**+0.6**
	comp=Z,4.2nm,0.5s,baz=180,slow=2.6,SNR=3.9						
GSI	**Gunungsitoli**	**30.00**	**276**	*e*P	P	01 17 41.6	-4.6
	comp=Z,52nm,1.1s						
NONG	**Nongkai**	**31.13**	**311**	P	**P**	**01 17 57.4**	**+1.3**
	comp=Z,0.1nm,0.6s						
BBOO	**Buckleboo**	**31.68**	**166**	*e*P	**P**	**01 18 00.7**	**-0.2**
	comp=Z,23nm,1.3s						
PBKT	**Sadao Pong**	**31.97**	**306**	P	**P**	**01 18 05.6**	**+2.0**
	comp=Z,6.9nm,1.6s						
NWAO	**Narrogin (SRO)**	**32.19**	**196**	LR	LR	01 33 19.6	
	comp=Z,141nm,18.3s,baz=56,slow=40						
STKA	**Stephens Creek**	**32.57**	**157**	P	**P**	**01 18 06.8**	**-1.9**
	comp=Z,1.2nm,0.5s,baz=295,slow=9.0,SNR=3.2						
STKA				LR	LR	01 31 48.6	
	comp=Z,235nm,20.3s,baz=346,slow=37						
UTHA	**Uthaitani**	**32.70**	**303**	P	**P**	**01 18 12.2**	**+2.2**
	comp=Z,3.3nm,1.1s						
HNR	**Honiara**	**33.19**	**104**	*e*P	**P**	**01 18 13.6**	**-0.7**
	comp=Z,256nm,1.1s						
HNR	**Honiara**	**33.19**	**104**	*e*P	**P**	**01 18 13.6**	**-0.7**
HNR				pmax	pmax		
	comp=Z,256nm,1.1s						
NANT	**Nan**	**33.43**	**309**	P	**P**	**01 18 18.1**	**+1.7**
	comp=Z,4.9nm,0.7s						
CM01	**Chiang Mai Arr**	**34.59**	**307**	*e*P	**P**	**01 18 23.6**	**-2.8**
CM31	**Chiang Mai Arr**	**34.62**	**307**	*e*P	**P**	**01 18 26.9**	**+0.2**
CMAR	**Chiang Mai Arr**	**34.62**	**307**	P	**P**	**01 18 26.9**	**+0.2**
	comp=Z,2.7nm,0.7s,baz=141,slow=7.9,SNR=22						
CMAR				LR	LR	01 33 53.9	
	comp=Z,71nm,19.8s,baz=100,slow=39						
WHN	**Wuhan**	**34.70**	**340**	⇑P	**P**	**01 18 25.4**	**-1.8**
CMMT	**Chiang Mai**	**34.81**	**308**	P	**P**	**01 18 29.4**	**+1.1**
	comp=Z,18nm,1.4s						
CHTO	**Chiang Mai**	**34.81**	**308**	*e*P	**P**	**01 18 29.0**	**+0.6**
	comp=Z,15nm,0.8s						
CHTO	**Chiang Mai**	**34.81**	**308**	*e*P	**P**	**01 18 29.0**	**+0.6**
CHTO				pmax	pmax		
	comp=Z,15nm,0.8s						
CHTO	**Chiang Mai**	**34.81**	**308**	P	**P**	**01 18 29.4**	**+1.0**
	comp=Z,80nm,1.4s						
JNU	**Nakatsue**	**35.11**	**5**	LR	LR	01 31 22.2	
	comp=Z,235nm,20.3s,baz=123,slow=34						
CMAI	**Chiengmai2**	**35.36**	**309**	P	**P**	**01 18 35.3**	**+2.1**
	comp=Z,3.4nm,1.1s						
KMI	**Kunming**	**36.05**	**320**	P	**P**	**01 18 40.4**	**+1.2**
KMI				pmax	pmax		
	comp=Z,30nm,1.5s						
ENH	**Enshi**	**36.38**	**333**	*e*P	**P**	**01 18 41.6**	**-0.1**
	comp=Z,24nm,0.7s						
JHJ	**Hachijo jima 2**	**36.86**	**17**	LR	LR	01 34 22.6	
	comp=Z,153nm,18.1s,baz=88,slow=37						
MJAR	**Matsushiro Arr**	**39.67**	**14**	P	**P**	**01 19 06.8**	**-2.6**
	comp=Z,0.8nm,0.3s,baz=193,slow=10,SNR=4.8						
MJAR				PcP	**PcP**	**01 21 16.2**	**+0.3**
	comp=Z,0.9nm,0.3s,baz=194,slow=2.7,SNR=5.0						
MJAR				LR	LR	01 32 34.5	
	comp=Z,167nm,21.2s,baz=205,slow=32						
MAJO	**Matsushiro**	**39.67**	**14**	*e*P	**P**	**01 19 06.8**	**-2.6**
MAJO				*e*PcP	**PcP**	**01 21 16.2**	**+0.3**
MAJO	**Matsushiro**	**39.67**	**14**	*e*P	**P**	**01 19 06.8**	**-2.6**
MAJO				*e*		01 21 16.2	
MJB9	**Matsu-Tunnel**	**39.67**	**14**	*e*P	**P**	**01 19 05.8**	**-3.6**
	comp=Z,18nm,1.4s						
XAN	**Xi'an**	**39.87**	**336**	P	**P**	**01 19 09.9**	**-1.2**
XAN				PcP	**PcP**	**01 21 15.9**	**-0.7**
XAN				ScS	ScS	01 29 10.3	-6.6
XAN				pmax	pmax		
	comp=Z,16nm,1.3s						
XAN				pmax	pmax		
	comp=Z,74nm,3.0s						
XAN				LR	LR		
	comp=Z,140nm,15.7s						
XAN				LR	LR		
	comp=Z,140nm,20.1s						
LZH	**Lanzhou**	**43.83**	**332**	*e*P	**P**	**01 19 44.0**	**+0.5**
LZH				pP	pP	01 19 50.7	-1.3
LZH				sP	sP	01 19 53.0	-2.4
LZH				pmax	pmax		
	comp=Z,28nm,1.4s						
SHL	**Shillong**	**43.97**	**311**	*e*P	**P**	**01 19 44.3**	**-0.6**
	comp=Z,36nm,0.8s						
SHL	**Shillong**	**43.97**	**311**	*e*P	**P**	**01 19 44.3**	**-0.6**
SHL				pmax	pmax		
	comp=Z,36nm,0.8s						
HHC	**Hu-ho-hao-te**	**45.05**	**343**	*e*P	**P**	**01 19 55.6**	**+2.4**
HHC				pP	sP	01 20 06.3	+1.2
HHC				S	**S**	**01 26 35.2**	**+4.7**
HHC				pmax	pmax		
	comp=Z,23nm,0.9s						
HHC				pmax	pmax		
	comp=Z,130nm,5.5s						
HHC				LR	LR		
	comp=Z,150nm,14.7s						
HHC				LR	LR		
	comp=Z,120nm,15.5s						
HHC				LR	LR		
	comp=Z,76nm,16.1s						
CN2	**Changchun**	**45.66**	**358**	*e*P	P	01 20 05.2	+7.4
CN2				SS	SS	01 29 59.6	-3.9
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
USRK	**Ussuriysk Ar.**	**46.20**	**5**	P	**P**	**01 20 00.7**	**-1.4**
	comp=Z,4.1nm,0.5s,baz=180,slow=6.6						
USRK				LR	LR	01 39 16.0	
	comp=Z,119nm,20.3s,baz=147,slow=36						
LSA	**Lhasa**	**46.85**	**315**	P	**P**	**01 20 08.4**	**+0.4**
LSA				pmax	pmax		
	comp=Z,34nm,1.2s						
LSA	**Lhasa**	**46.85**	**315**	*e*P	**P**	**01 20 09.6**	**+1.6**
	comp=Z,34nm,0.8s						
LSA	**Lhasa**	**46.85**	**315**	*e*P	**P**	**01 20 09.6**	**+1.6**
LSA				pmax	pmax		
	comp=Z,34nm,0.8s						
ASAJ	**Asahikawa**	**47.91**	**15**	P	**P**	**01 20 14.6**	**-0.8**
	comp=Z,2.5nm,0.4s,baz=232,slow=11,SNR=5.2						
ASAJ				LR	LR	01 39 07.3	
	comp=Z,108nm,20.1s,baz=177,slow=35						
ASAJ	**Asahikawa**	**47.91**	**15**	*e*P	**P**	**01 20 15.0**	**-0.5**
	comp=Z,24nm,1.3s						
ODAN	**Odare**	**48.08**	**309**	*e*P	**P**	**01 20 18.3**	**+0.9**
	comp=Z,48nm,0.7s						
TAPN	**Taplejung**	**48.09**	**310**	*e*P	**P**	**01 20 18.3**	**+0.8**
	comp=Z,43nm,0.8s						
GTA	**Gaotai**	**48.39**	**331**	*e*P	**P**	**01 20 19.1**	**-0.3**
GTA				pP	pP	01 20 25.5	-2.5
GTA				sP	sP	01 20 29.0	-2.4
GTA				pmax	pmax		
	comp=Z,13nm,1.4s						
RAMN	**Ramite**	**48.74**	**309**	*e*P	**P**	**01 20 23.1**	**+0.6**
	comp=Z,78nm,0.6s						
JIRN	**Jiri**	**49.41**	**310**	*e*P	**P**	**01 20 28.2**	**+0.5**
GUN	**Gumba**	**49.77**	**310**	*e*P	**P**	**01 20 31.3**	**+0.8**
PKIN	**Phulchoki**	**49.98**	**309**	*e*P	**P**	**01 20 32.3**	**+0.3**
	comp=Z,7.7nm,0.4s						
KKN	**Kakani**	**50.17**	**309**	*e*P	**P**	**01 20 34.0**	**+0.6**
DMN	**Daman**	**50.22**	**309**	*e*P	**P**	**01 20 34.5**	**+0.7**
	comp=Z,37nm,0.9s						
GKN	**Gorkha**	**50.77**	**309**	*e*P	**P**	**01 20 38.0**	**+0.2**
KLR	**Kul'dur**	**51.19**	**4**	*i* P	**P**	**01 20 38.8**	**-1.6**
KOLN	**Koldanda**	**51.47**	**308**	*e*P	**P**	**01 20 43.5**	**+0.4**
	comp=Z,68nm,0.7s						
DANN	**Dangsing**	**51.62**	**309**	*e*P	**P**	**01 20 45.1**	**+0.8**
	comp=Z,105nm,0.7s						
PYUN	**Piuthan**	**52.10**	**308**	*e*P	**P**	**01 20 48.8**	**+1.0**
	comp=Z,42nm,0.7s						
ULN	**Ulaanbaatar**	**52.77**	**343**	*e*P	**P**	**01 20 50.7**	**-1.7**
	comp=Z,8.4nm,1.0s						
ULN	**Ulaanbaatar**	**52.77**	**343**	*ce*P	**P**	**01 20 49.6**	**-2.8**
ULN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SONA0	**Songino Array**	**52.94**	**342**	*e*P	**P**	**01 20 52.4**	**-1.2**
SONM	**Songino Array**	**52.94**	**342**	P	**P**	**01 20 52.4**	**-1.2**
	comp=Z,3.2nm,0.8s,baz=159,slow=6.8,SNR=11						
SONM				LR	LR	01 44 18.6	
	comp=Z,70nm,20.1s,baz=70,slow=37						
SONA1	**Songino Array**	**52.95**	**342**	*e*P	**P**	**01 20 52.2**	**-1.4**
THZ	**Tophouse**	**56.82**	**140**	*e*P	**P**	**01 21 22.1**	**+0.4**
	comp=Z,26nm,1.4s						
TLY	**Talaya**	**57.18**	**343**	*e*P	**P**	**01 21 23.8**	**-0.2**
TLY				pmax	pmax		
	comp=Z,11nm,2.0s						
WMQ	**Urumqi**	**57.84**	**327**	*e*P	**P**	**01 21 29.8**	**+0.9**
WMQ				pP	pP	01 21 38.0	+0.4
WMQ				pmax	pmax		
	comp=Z,62nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,250nm,3.8s						
WMQ				LR	LR		
	comp=Z,230nm,23.7s						
WMQ				LR	LR		
	comp=Z,97nm,22.5s						
WMQ				LR	LR		
	comp=Z,190nm,24.9s						
BKZ	**Black Stump Fm**	**57.94**	**136**	*e*P	**P**	**01 21 29.7**	**0.0**
	comp=Z,12nm,1.0s						
URZ	**Urewera**	**57.97**	**135**	P	**P**	**01 21 29.4**	**-0.5**
	comp=Z,4.9nm,0.6s,baz=360,slow=22,SNR=5.6						
MOY	**Mondy**	**57.99**	**341**	*e*P	**P**	**01 21 29.6**	**-0.3**
MOY				pmax	pmax		
	comp=Z,17nm,1.9s						
HVS	**Khovu-Aksy**	**60.23**	**336**	*i* P	**P**	**01 21 46.2**	**+0.9**
HVS				pmax	pmax		
	comp=Z,9.0nm,0.9s						
PETK	**Petropavlovsk-**	**60.52**	**20**	P	**P**	**01 21 47.0**	**-0.1**
	comp=Z,7.7nm,0.7s,baz=181,slow=5.2						
PEA1	**Petropavlovsk-**	**60.52**	**20**	*e*P	**P**	**01 21 47.0**	**-0.1**
BOD	**Bodaibo**	**60.62**	**352**	*e*P	P	01 21 41.6	-6.1
PET	**Petropavlovsk**	**60.79**	**21**	*e*P	**P**	**01 21 50.5**	**+1.6**
PET				pmax	pmax		
	comp=Z,14nm,0.8s						
DGZ	**Jazzator, Alta**	**61.92**	**332**	*i* P	**P**	**01 21 55.8**	**-1.2**
DGZ				pmax	pmax		
	comp=Z,6.0nm,1.4s						
NIL	**Nilore**	**62.04**	**310**	*e*P	**P**	**01 21 57.7**	**-0.2**
	comp=Z,33nm,1.4s						
NIL	**Nilore**	**62.04**	**310**	*e*P	**P**	**01 21 57.7**	**-0.2**
NIL				pmax	pmax		
	comp=Z,33nm,1.4s						
KSH	**Kashi**	**62.63**	**317**	P	**P**	**01 22 03.2**	**+1.3**
KSH				*e*PcP	**PcP**	**01 22 41.1**	**+0.5**
KSH				*e*PP	**PP**	**01 24 23.5**	**+3.6**
KSH				S	**S**	**01 30 21.3**	**-7.2**
KSH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MK01	**Makanchi Array**	**62.65**	**327**	*e*P	**P**	**01 22 00.7**	**-1.0**
MK31	**Makanchi Array**	**62.67**	**327**	*e*P	**P**	**01 22 01.2**	**-0.6**
MK31	**Makanchi Array**	**62.67**	**327**	*e*P	**P**	**01 22 00.7**	**-1.2**
MK31				pmax	pmax		
	comp=Z,15nm,0.8s						
MK32	**Makanchi Array**	**62.67**	**327**	*e*P	**P**	**01 22 01.3**	**-0.5**
MKAR	**Makanchi Array**	**62.67**	**327**	P	**P**	**01 22 01.3**	**-0.6**
	comp=Z,12nm,0.6s,baz=120,slow=8.6,SNR=115						
MKAR				LR	LR	01 50 03.4	
	comp=Z,76nm,20.8s,baz=64,slow=37						
MKAR	**Makanchi Array**	**62.67**	**327**	*e*P	**P**	**01 22 01.2**	**-0.6**
	comp=Z,68nm,0.8s						
MKAR	**Makanchi Array**	**62.67**	**327**	P	**P**	**01 22 01.3**	**-0.6**
MKAR				pmax	pmax		
	comp=Z,13nm,0.6s						
MKAR				MLR	MLR		
	comp=Z,76nm,20.8s						
MAKZ	**Makanchi**	**62.85**	**327**	*e*P	**P**	**01 22 02.4**	**-0.7**
	comp=Z,11nm,0.8s						
MAKZ	**Makanchi**	**62.85**	**327**	P	**P**	**01 22 01.3**	**-1.8**
MAKZ				pmax	pmax		
	comp=Z,12nm,0.8s						
YAK	**Yakutsk**	**63.91**	**1**	*e*P	**P**	**01 22 09.2**	**-0.5**
YAK				*e*		01 22 41.4	
YAK				*e*		01 24 37.4	
YAK				*e*S	**S**	**01 30 43.2**	**-0.1**
YAK				*e**SS	sS	01 30 59.8	+2.0
YAK				pmax	pmax		
	comp=Z,15nm,0.9s						
YAK				pmax	pmax		

	comp=N,2.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,92nm,3.4s						
YAK				pmax	pmax		
	comp=N,34nm,3.0s						
YAK				pmax	pmax		
	comp=E,32nm,2.8s						
YAK				smax	smax		
	comp=N,26nm,3.3s						
YAK				smax	smax		
	comp=E,34nm,3.2s						
YAK				MLR	MLR		
	comp=Z,86nm,18.0s						
YAK				MLR	MLR		
	comp=E,16nm,17.0s						
YAK				MLR	MLR		
	comp=N,72nm,18.0s						
MA2	**Magadan**	**64.11**	**13**	*e*P	**P**	**01 22 11.5**	**+0.4**
MA2				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KZA	**Kyzart**	**64.34**	**319**	P	**P**	**01 22 14.1**	**+0.6**
	SNR=7.4						
TKM2	**Tokmak 2**	**64.52**	**320**	P	**P**	**01 22 14.2**	**-0.2**
	SNR=15						
UCH	**Uchtor**	**64.89**	**319**	P	**P**	**01 22 17.2**	**+0.1**
	SNR=9.6						
AAK	**Ala-Archa**	**65.10**	**320**	*e*P	**P**	**01 22 19.1**	**+1.0**
	comp=Z,13nm,1.3s						
AAK	**Ala-Archa**	**65.10**	**320**	*e*P	**P**	**01 22 19.1**	**+1.0**
AAK				pmax	pmax		
	comp=Z,13nm,1.3s						
USP	**Ospenovka**	**65.39**	**320**	P	**P**	**01 22 19.5**	**-0.4**
	SNR=12						
EKS2	**Erkin-Say**	**65.57**	**319**	P	**P**	**01 22 21.5**	**+0.4**
	SNR=8.6						
KBL	**Kabul**	**65.61**	**309**	*e*P	**P**	**01 22 21.9**	**+0.3**
	comp=Z,8.9nm,0.6s						
KBL	**Kabul**	**65.61**	**309**	*e*P	**P**	**01 22 21.9**	**+0.3**
KBL				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ZAA0	**Zalesovo Array**	**66.00**	**334**	*e*P	**P**	**01 22 21.5**	**-2.0**
	comp=Z,6.0nm,1.0s						
ZALV	**Zalesovo Beam**	**66.00**	**334**	P	**P**	**01 22 21.6**	**-1.9**
	comp=Z,3.2nm,0.8s,baz=119,slow=5.2,SNR=7.8						
ZALV				LR	LR	01 53 56.3	
	comp=Z,38nm,18.0s,baz=64,slow=39						
ZALV	**Zalesovo Beam**	**66.00**	**334**	*e*P	**P**	**01 22 21.9**	**-1.6**
ZAA1	**Zalesovo Array**	**66.01**	**334**	*e*P	**P**	**01 22 21.6**	**-1.9**
KURBB	**Kurchatov Arra**	**66.94**	**329**	P	**P**	**01 22 28.4**	**-1.2**
	comp=Z,13nm,0.5s,baz=131,slow=6.1,SNR=73						
KURK	**Kurchatov**	**66.95**	**329**	*e*P	**P**	**01 22 28.7**	**-0.9**
	comp=Z,17nm,0.7s						
KURK	**Kurchatov**	**66.95**	**329**	*e*P	**P**	**01 22 28.7**	**-0.9**
KURK				pmax	pmax		
	comp=Z,17nm,0.7s						
NVS	**Novosibirsk**	**67.29**	**334**	*e*P	**P**	**01 22 29.9**	**-1.8**
SEY	**Seymchan**	**67.47**	**12**	*ce*P	**P**	**01 22 33.6**	**+0.9**
KK31	**Karatay Array**	**67.92**	**319**	*e*P	**P**	**01 22 36.2**	**+0.3**
KK31	**Karatay Array**	**67.92**	**319**	*i* P	**P**	**01 22 35.2**	**-0.7**
KK31				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KKAR	**Karatay Array**	**67.92**	**319**	*e*P	**P**	**01 22 36.2**	**+0.3**
KKAR	**Karatay Array**	**67.92**	**319**	*e*P	**P**	**01 22 36.2**	**+0.3**
WSAR	**Wadi Sarin**	**71.39**	**295**	P	**P**	**01 22 57.4**	**-0.3**
	comp=Z,3.3nm,0.7s,baz=89,slow=9.0,SNR=3.6						
BVA0	**Borovoye Array**	**72.50**	**328**	P	**P**	**01 23 01.2**	**-2.6**
BVA0				pmax	pmax		
	comp=Z,15nm,1.4s						
BVAR	**Borovoye Array**	**72.50**	**328**	P	**P**	**01 23 02.3**	**-1.5**
	comp=Z,4.9nm,0.8s,baz=126,slow=9.3,SNR=27						
BVAR	**Borovoye Array**	**72.50**	**328**	P	**P**	**01 23 02.3**	**-1.5**
BVAR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BRVK	**Borovoye**	**72.57**	**328**	*e*P	**P**	**01 23 03.2**	**-1.0**
	comp=Z,11nm,1.0s						
BRVK	**Borovoye**	**72.57**	**328**	*ce*P	**P**	**01 23 03.1**	**-1.1**
BRVK				pmax	pmax		
	comp=Z,15nm,1.3s						
TIXI	**Tiksi**	**73.55**	**0**	*e*P	**P**	**01 23 10.4**	**+0.8**
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GEYT	**Alibeck**	**75.04**	**310**	P	**P**	**01 23 18.6**	**-0.5**
	comp=Z,1.3nm,0.6s,baz=103,slow=11,SNR=6.5						
AB31	**Akbulak array**	**77.03**	**322**	*i* P	**P**	**01 23 28.4**	**-1.7**
AB31				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ABKAR	**Akbulak array**	**77.03**	**322**	*e*P	**P**	**01 23 28.8**	**-1.2**
VNDA	**Vanda**	**77.67**	**173**	P	**P**	**01 23 32.8**	**-0.4**
	comp=Z,2.7nm,0.9s,baz=321,slow=5.1,SNR=8.5						
VNDA				LR	LR	01 58 32.3	
	comp=Z,87nm,18.2s,baz=318,slow=36						
VNDA	**Vanda**	**77.67**	**173**	*e*P	**P**	**01 23 34.7**	**+1.6**
	comp=Z,5.4nm,1.0s						
AKTO	**Aktyubinsk**	**78.58**	**322**	P	**P**	**01 23 37.6**	**-1.1**
	comp=Z,7.2nm,0.7s,baz=91,slow=8.3,SNR=20						
AKTO				LR	LR	02 01 18.6	
	comp=Z,81nm,20.0s,baz=80,slow=38						
MAW	**Mawson**	**78.63**	**201**	LR	LR	01 57 24.9	
	comp=Z,95nm,18.6s,baz=50,slow=35						
OPO	**Ambohidratompo**	**80.08**	**252**	P	**P**	**01 23 48.9**	**+1.2**
	comp=Z,4.7nm,0.8s,baz=80,slow=6.1,SNR=4.1						
ARU	**Arti**	**80.14**	**328**	*c i*P	**P**	**01 23 45.1**	**-2.0**
ARU						01 26 44.0	
ARU				S	**S**	**01 33 50.2**	**+0.3**
ARU				pmax	pmax		
	comp=Z,10.0nm,1.7s						
RAYN	**Ar Rayn**	**83.37**	**294**	*e*P	**P**	**01 24 04.8**	**-0.1**
	comp=Z,8.4nm,1.1s						
RAYN	**Ar Rayn**	**83.37**	**294**	*e*P	**P**	**01 24 04.8**	**-0.1**
RAYN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
OHAK	**Old Harbor**	**85.91**	**32**	*e*P	**P**	**01 24 17.2**	**+0.4**
KDAK	**Kodiak Island**	**86.38**	**32**	*e*P	**P**	**01 24 20.5**	**+1.3**
	comp=Z,26nm,0.9s						
KDAK	**Kodiak Island**	**86.38**	**32**	*e*P	**P**	**01 24 20.5**	**+1.3**
KDAK				pmax	pmax		
	comp=Z,26nm,0.9s						
SYO	**Syowa Base**	**87.33**	**201**	⇑*e*P	**P**	**01 24 24.6**	**+1.0**
SYO	**Syowa Base**	**87.33**	**201**	⇓*e*pP	pP	01 24 33.2	+0.5
CAST	**Castle Rocks**	**87.56**	**26**	*e*P	**P**	**01 24 25.2**	**+0.3**
	comp=Z,10nm,1.5s						
KIV	**Kislovodsk**	**87.58**	**314**	*e*P	**P**	**01 24 27.1**	**+1.6**
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
QSPA	**South Pole Qui**	**87.92**	**180**	P	**P**	**01 24 27.2**	**+0.5**
	comp=Z,14nm,1.0s,baz=359,slow=3.6,SNR=16						
QSPA	**South Pole Qui**	**87.92**	**180**	*e*P	**P**	**01 24 27.7**	**+1.0**
	comp=Z,27nm,1.3s						
BPAW	**Bear Paw Mtn.**	**88.14**	**26**	*e*P	**P**	**01 24 27.7**	**0.0**
	comp=Z,6.6nm,1.2s						
MLY	**Manley**	**88.38**	**25**	*e*P	**P**	**01 24 29.2**	**+0.4**
	comp=Z,3.8nm,0.7s						
COLD	**Coldfoot**	**88.91**	**23**	*e*P	**P**	**01 24 31.3**	**+0.1**
	comp=Z,4.9nm,0.8s						
MCK	**McKinley**	**88.99**	**26**	*e*P	**P**	**01 24 31.5**	**-0.2**
	comp=Z,9.3nm,1.1s						
MCK	**McKinley**	**88.99**	**26**	*e*P	**P**	**01 24 31.5**	**-0.2**
MCK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
MDM	**Murphy Dome**	**89.43**	**25**	*e*P	**P**	**01 24 34.1**	**+0.4**
	comp=Z,2.7nm,1.0s						
CCB	**Clear Creek Bu**	**89.58**	**25**	*e*P	**P**	**01 24 33.4**	**-1.0**
	comp=Z,14nm,1.2s						
HDA	**Harding Lake**	**89.93**	**26**	*e*P	**P**	**01 24 34.5**	**-1.5**
ILAR	**Eielson Array**	**89.98**	**25**	P	**P**	**01 24 34.9**	**-1.3**
	comp=Z,1.9nm,0.7s,baz=272,slow=4.6,SNR=15						
ILAR				LR	LR	01 58 46.3	
	comp=Z,32nm,21.3s,baz=34,slow=32						
ILB	**Eielson Array**	**89.98**	**25**	*e*P	**P**	**01 24 34.8**	**-1.5**
IL1	**Eielson Array**	**89.99**	**25**	*e*P	**P**	**01 24 33.3**	**-2.9**
DIV	**Divide**	**90.22**	**29**	*e*P	**P**	**01 24 38.5**	**+1.0**
	comp=Z,11nm,1.0s						
KLMR	**Klimovskoe**	**90.72**	**331**	*e*P	P	01 24 35.6	-4.1
KLMR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KLMR	**Klimovskoe**	**90.72**	**331**	*e*P	**P**	**01 24 35.7**	**-4.0**
KLMR				AMP		01 24 37.6	
	comp=Z,6.0nm,1.0s						
OBN	**Obninsk**	**92.12**	**325**	*i* P	**P**	**01 24 46.5**	**+0.2**
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
EGAK	**Eagle**	**92.44**	**25**	*e*P	**P**	**01 24 48.1**	**+0.4**
	comp=Z,6.2nm,0.9s						
DAWY	**Dawson**	**93.22**	**26**	*e*P	**P**	**01 24 51.4**	**+0.1**
	comp=Z,17nm,1.2s						
ARA0	**ARCESS Array S**	**96.05**	**340**	*e*P	**P**	**01 25 01.6**	**-2.5**
ARCES	**ARCESS Array B**	**96.05**	**340**	P	**P**	**01 25 01.6**	**-2.5**
	comp=Z,1.4nm,0.7s,baz=54,slow=4.8,SNR=6.6						
VSU	**Vasula**	**97.30**	**329**	*i* P	Pdif	01 25 11.8	+1.7
VSU				pmax	pmax		
	comp=Z,29nm,1.0s						
BUR04	**Bucovina Ar. S**	**99.70**	**318**	*e*Pdif	**Pdif**	**01 25 21.0**	**-0.2**
YKA	**Yellowknife Ar**	**104.41**	**25**	Pdiff	**Pdif**	**01 25 41.5**	**-0.2**
	comp=Z,0.7nm,0.8s,baz=304,slow=4.6,SNR=3.1						
YKB5	**Yellowknife Ar**	**104.41**	**25**	*e*Pdif	**Pdif**	**01 25 41.5**	**-0.2**
PDAR	**Pinedale Array**	**115.16**	**43**	PKP	**PKPdf**	**01 30 17.9**	**-1.1**
	comp=Z,0.1nm,0.5s,baz=48,slow=1.3,SNR=2.7						
LTX	**Lajitas**	**124.44**	**55**	*e*PKPdf	**PKPdf**	**01 30 39.0**	**+1.9**
LTX	**Lajitas**	**124.44**	**55**	*e*PKIKP	**PKPdf**	**01 30 39.0**	**+1.9**
TXAR	**Lajitas Array**	**124.44**	**55**	PKP	**PKPdf**	**01 30 39.0**	**+1.9**
	comp=Z,0.3nm,0.9s,baz=316,slow=2.5,SNR=2.7						
TXAR	**Lajitas Array**	**124.44**	**55**	PKIKP	**PKPdf**	**01 30 39.0**	**+1.9**
PLCA	**Paso Flores**	**134.40**	**161**	PKP	**PKPdf**	**01 30 58.0**	**+2.3**
	comp=Z,2.9nm,1.0s,baz=263,slow=12,SNR=2.9						
PLCA	**Paso Flores**	**134.40**	**161**	PKIKP	**PKPdf**	**01 30 58.0**	**+2.3**
PLCA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
TKL	**Tuckaleechee C**	**135.79**	**37**	PKP	**PKPdf**	**01 30 59.7**	**+1.4**
	comp=Z,2.0nm,0.6s,baz=297,slow=18,SNR=3.4						
CPUP	**Villa Florida**	**151.44**	**171**	PKPbc	**PKPbc**	**01 31 32.2**	**+0.5**
	comp=Z,18nm,1.1s,baz=184,slow=2.0,SNR=12						
CPUP	**Villa Florida**	**151.44**	**171**	*e*PKPbc	**PKPbc**	**01 31 34.1**	**+2.3**
MNMC	**Minye Minye**	**153.15**	**142**	*e*PKPbc	**PKPbc**	**01 31 38.6**	**+2.5**
LPAZ	**La Paz**	**156.20**	**140**	PKP	**PKPdf**	**01 31 35.2**	**+1.8**
	comp=Z,0.4nm,0.4s,baz=283,slow=4.8,SNR=3.8						
LPAZ				PKPab	**PKPab**	**01 32 02.0**	**+0.9**
	comp=Z,1.2nm,0.8s,baz=175,slow=7.4,SNR=2.6						

IDC 11 01:24:32.2±1.2**,1°.96S**×**127°.33E,h0^{km},mb3.6**/3**, mb1 3.8**/5**,mb1mx3.5**/54**,mbtmp3.6**/5**,ML3.6**/2**,Error ellipse: s-maj=33.6km s-min=22.0km az=59.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.08**	**75**	Pn	Pn	01 25 37.7	+1.6
	3.8nm,0.3s,baz=246,slow=20,SNR=6.7						
SIJI				Sn	Sn	01 26 24.0	-0.6
	1.8nm,0.3s,baz=163,slow=19,SNR=2.5						
WRA	**Warramunga Arr**	**19.14**	**159**	P	P	01 28 56.8	-0.4
	0.2nm,0.3s,baz=340,slow=11,SNR=11						
ASAR	**Alice Springs**	**22.50**	**164**	P	P	01 29 33.6	0.0
	0.9nm,0.6s,baz=346,slow=11,SNR=12						
MKAR	**Makanchi Array**	**62.58**	**327**	P	P	01 34 58.2	-0.1
	0.5nm,0.5s,baz=116,slow=8.0,SNR=5.8						
KURBB	**Kurchatov Arra**	**66.85**	**329**	P	P	01 35 25.9	-0.1
	0.6nm,0.6s,baz=133,slow=5.9,SNR=6.1						

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*IDC **11** 01:27:53.0±2.7,22°.59S×179°.46W,h513^{km}±29^{km}, mb3.2/10,mb1 3.4/10,mb1mx3.2/43,mbtmp4.0/10,Error ellipse: s-maj=26.7km s-min=17.6km az=145.0*

*ISCJB **11** 01:27:57.3±0.7,22°.8S±0°.2×179°.6W±0°.2,h579^{km}, mb3.7/10,Error ellipse: s-maj=27.9km s-min=14.4km az=144.9*

ISC 11 01:27:58.7±0.8**,22°.7S**±0°.2×**179°.6W**±0°.2**,h579^{km},n20,** σ**1^{s}95**/21**,mb3.5**/10**,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
RPZ	**Rata Peaks**	**22.31**	**198**	P	**P**	**01 32 13.4**	**-0.5**
	9.5nm,0.4s,baz=31,slow=2.3,SNR=11						
CTA	**Charters Tower**	**31.90**	**268**	P	**P**	**01 33 37.9**	**0.0**
	3.3nm,0.6s,baz=95,slow=11,SNR=4.6						
STKA	**Stephens Creek**	**35.54**	**247**	P	**P**	**01 34 07.2**	**-1.1**
	2.9nm,0.8s,baz=58,slow=8.1,SNR=3.9						
ASAR	**Alice Springs**	**42.64**	**259**	P	**P**	**01 35 05.3**	**-0.1**
	0.9nm,0.7s,baz=94,slow=8.3,SNR=7.4						
ASAR				PcP	**PcP**	**01 36 44.6**	**+0.6**
	0.6nm,0.8s,baz=120,slow=5.5,SNR=3.1						
WRA	**Warramunga Arr**	**42.90**	**265**	P	**P**	**01 35 06.6**	**-0.9**
	0.5nm,0.7s,baz=97,slow=8.3,SNR=8.5						
WRA				ScP	**ScP**	**01 39 49.1**	**+7.7**
	0.5nm,0.8s,baz=98,slow=5.1,SNR=3.1						
PETK	**Petropavlovsk-**	**78.08**	**346**	P	**P**	**01 38 57.8**	**-0.2**
	2.3nm,0.6s,baz=134,slow=4.2						
NVAR	**Mina Array Bea**	**83.64**	**44**	P	**P**	**01 39 27.4**	**0.0**
	0.7nm,0.8s,baz=236,slow=7.1,SNR=4.9						
TXAR	**Lajitas Array**	**89.48**	**58**	P	**P**	**01 39 55.4**	**+0.2**
	0.1nm,0.3s,baz=201,slow=6.7,SNR=4.1						
ILAR	**Eielson Array**	**90.82**	**13**	P	**P**	**01 39 59.7**	**-0.6**
	0.5nm,0.8s,baz=229,slow=6.3,SNR=6.3						
PDAR	**Pinedale Array**	**91.58**	**44**	P	**P**	**01 40 04.6**	**-0.1**
	0.3nm,0.8s,baz=197,slow=2.8,SNR=3.2						
ARCES	**ARCESS Array B**	**130.84**	**349**	PKP	**PKPdf**	**01 46 03.1**	**-1.0**
	1.8nm,1.0s,baz=341,slow=1.9,SNR=5.1						
HFS	**Hagfors**	**141.49**	**349**	PKhKP	PKPpre	01 46 19.5	
	1.3nm,0.3s,baz=56,slow=3.6,SNR=22						
AKASG	**Malin Array Be**	**144.21**	**328**	PKP	**PKPdf**	**01 46 28.5**	**-0.6**
	0.4nm,0.3s,baz=45,slow=4.0						
ASF	**Jabal al Asfar**	**146.45**	**294**	PKPbc	**PKPbc**	**01 46 37.0**	**+0.9**
	1.3nm,0.7s,baz=101,slow=10,SNR=4.0						
BRTR	**Keskin Array B**	**147.19**	**309**	PKPbc	**PKPbc**	**01 46 38.3**	**+0.4**
	0.8nm,0.7s,baz=136,slow=5.3,SNR=5.7						
EKA	**Eskdalemuir Ar**	**147.34**	**4**	PKPbc	**PKPbc**	**01 46 37.4**	**-0.1**
	0.4nm,0.4s,baz=354,slow=2.1,SNR=7.0						
MMAI	**Mount Meron Ar**	**147.58**	**296**	PKPbc	**PKPbc**	**01 46 39.3**	**+0.3**
	1.0nm,0.3s,baz=73,slow=6.3,SNR=5.9						
CLL	**Collm**	**149.87**	**344**	*e*PKP	**PKPbc**	**01 46 44.0**	**+0.1**
	comp=Z,5.0nm,0.8s						
CLL				*i*		01 46 51.5	
BRG	**Berggiesshubel**	**150.01**	**343**	*i* PKP	**PKPbc**	**01 46 45.1**	**+0.8**
	comp=Z,3.4nm,0.6s						
GERES	**GERESS Array B**	**151.91**	**341**	PKPbc	**PKPbc**	**01 46 47.2**	**-1.6**
	comp=Z,0.5nm,0.7s,baz=338,slow=1.1,SNR=5.1						

MEX 11 02:10:13.5±0.7**,16°.27N**×**98°.28W,h5^{km},MD3.5,Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.19**	**50**	*i* P	Pg	02 10 16.7	-0.6
PNIG				*i* S	Sg	02 10 19.7	-0.1
TLIG	**Tlapa**	**1.31**	**348**	*e*P	Pn	02 10 34.7	-3.9
TLIG				*i* S	Sg	02 10 50.9	-4.9
VHO	**Vista Hermosa**	**1.68**	**61**	*e*P	Pn	02 10 40.1	-3.7
VHO				*e*S	Sn	02 11 01.6	-4.2

IDC 11 02:14:20.0±3.2**,53°.53N**×**87°.74E,h0^{km},mb1 2.7**/2**, mb1mx2.7**/65**,mbtmp2.7**/2**,ML2.5**/2**,Error ellipse: s-maj=25.2km s-min=15.2km az=63.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ZALV	**Zalesovo Beam**	**1.78**	**285**	Pg	Pn	02 14 51.2	-0.8
	2.6nm,0.3s,baz=105,slow=16,SNR=15						
ZALV				Lg	Lg	02 15 17.4	
	3.6nm,0.3s,baz=106,slow=22,SNR=12						
I46RU	**ZALESOVO INFRA**	**1.79**	**285**	*i*		02 26 09.6	
	baz=105,slow=337,SNR=1.9						
KURBB	**Kurchatov Arra**	**6.38**	**247**	Pn	Pn	02 15 55.7	+0.6
	0.1nm,0.3s,baz=63,slow=14,SNR=4.6						
KURBB				Sn	Sn	02 17 07.0	-1.6
	0.0nm,0.3s,baz=52,slow=32,SNR=1.4						
KURBB				Lg	Lg	02 17 44.6	
	0.1nm,0.3s,baz=66,slow=31,SNR=5.1						
MKAR	**Makanchi Array**	**7.59**	**210**	Pn	Pn	02 16 13.1	+1.3
	0.1nm,0.3s,baz=32,slow=15,SNR=2.2						
MKAR				Sn	Sn	02 17 38.8	+0.3
	0.1nm,0.3s,baz=22,slow=17,SNR=1.5						
MKAR				Lg	Lg	02 18 22.1	
	baz=25,slow=27,SNR=2.6						

MEX 11 02:15:17.3±0.3**,15°.23N**×**93°.65W,h52^{km}**±9^{km}**,MD3.6, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PCIG		**0.63**	**41**	*e*P	Pn	02 15 28.8	-1.4
PCIG				*e*S	Sn	02 15 37.7	-1.9
THIG		**1.38**	**103**	*e*P	Pn	02 15 38.7	-1.4
THIG				*i* S	Sn	02 15 55.2	-2.0
TGIG		**1.62**	**18**	*e*P	Pn	02 15 41.8	-1.7
TGIG				*i* S	Sn	02 16 01.4	-1.9

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*NIED **11** 02:31:00,45°.40N×152°.00E,h26^{km},Mw5.7   Best double couple: $M_0$4.27000×10^{17} NP1:ϕ_s348.00000°,δ52.00000°, λ37.00000°.   NP2:ϕ_s234.00000°,δ62.00000°,λ136.00000°.*

*ISCJB **11** 02:31:14.7±0.5,45°.28N±0°.02×151°.62E±0°.01,h13^{km}±3^{km}, mb5.5/594,MS5.6/725,Error ellipse: s-maj=3.2km s-min=1.4km az=161.8*

*JMA **11** 02:31:14.0±0.7,45°.37N×152°.02E,h30^{km},M5.8*

*BJI **11** 02:31:14.7,45°.44N×151°.44E,h11^{km},mb5.7/82,mB5.9/70, Ms6.0/94,Ms7 5.9/83*

*IDC **11** 02:31:14.4±0.3,45°.35N×151°.54E,h0^{km},mb5.2/49, mb1 5.3/54,mb1mx5.2/67,mbtmp5.2/54,ML4.0/2,MS5.6/67, Ms1 5.6/67,ms1mx5.5/78,Error ellipse: s-maj=10.7km s-min=8.7km az=128.0*

*SKHL **11** 02:31:15.8±0.2,45°.02N×151°.88E,h40^{km}±7^{km},mb6.3/11, Ms6.1/9,msh6.1/9*

*NEIC **11** 02:31:16.7±0.1,45°.40N×151°.42E,h10^{km},mb5.6/297, MS5.5/298,MW5.7,MW5.7,Error ellipse: s-maj=3.7km s-min=2.1km az=160.0,Moment Tensor Solution.   s50 Moment tensor: Scale 10^{17}Nm; M_{rr}2.14; $M_{\theta\theta}$-2.09; $M_{\phi\phi}$-0.05; $M_{r\theta}$1.69; $M_{\theta\phi}$-1.92; $M_{\phi r}$2.18;   Best double couple: $M_0$4.00000×10^{17} NP1:ϕ_s265.00000°,δ28.00000°, λ131.00000°.   NP2:ϕ_s40.00000°,δ70.00000°,λ71.00000°. Principal axes: T 3.5300, Plg61.0000°, Azm282.0000°; N 0.7700, Plg18.0000°, Azm47.0000°; P -4.3000, Plg22.0000°, Azm145.0000°;*

*GCMT **11** 02:31:16.7±0.1,45°.29N×151°.83E,h19^{km},MW5.7/129, Moment Tensor Solution.   s110,c219;   s129,c340; Duration: 1^{s}7   Moment tensor: Scale 10^{17}Nm; M_{rr}3.25±.05; $M_{\theta\theta}$-1.37±.03; $M_{\phi\phi}$-1.88±.03; $M_{r\theta}$1.16±.08; $M_{\theta\phi}$-1.81±.02; $M_{\phi r}$2.35±.09;   Best double couple: $M_0$4.25700×10^{17} NP1:ϕ_s32.00000°,δ64.00000°, λ82.00000°.   NP2:ϕ_s231.00000°,δ27.00000°,λ107.00000°.   Principal axes: T 4.2000, Plg70.0000°, Azm284.0000°; N 0.1130, Plg8.0000°, Azm36.0000°; P -4.3130, Plg19.0000°, Azm128.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*NEIC **11** 02:31:17.0±0.0,45°.51N×151°.47E,h23^{km},Moment Tensor Solution.   s33   Moment tensor: Scale 10^{17}Nm; M_{rr}1.51; $M_{\theta\theta}$-0.74; $M_{\phi\phi}$-0.77; $M_{r\theta}$2.17; $M_{\theta\phi}$-0.66; $M_{\phi r}$3.15; Best double couple: $M_0$4.10000×10^{17} NP1:ϕ_s35.00000°, δ80.00000°,λ87.00000°.   NP2:ϕ_s231.00000°,δ11.00000°, λ105.00000°.   Principal axes: T 4.1500, Plg55.0000°, Azm301.0000°; N -0.1300, Plg2.0000°, Azm35.0000°; P -4.0200, Plg34.0000°, Azm127.0000°;*

*MOS **11** 02:31:18.5±1.2,45°.36N×151°.49E,h37^{km},mb5.7/105, MS5.7/104 Error ellipse: s-maj=5.2km s-min=3.9km az=104.1*

ISC 11 02:31:19.0±0.3**,45°.36N**±0°.03×**151°.46E**±0°.03**,h26^{km}**±1^{km}**, h26^{km}:pP-P,n2240,**σ**1^{s}70**/2196**,mb5.6**/652**,MS5.6**/771**, 167C-24D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.54**	**268**	*i* P	**Pn**	**02 31 59.9**	**+1.4**
KUR				AMB	AMB	02 32 07.0	
	589nm,0.4s						
KUR				AMB	AMB	02 32 07.0	
	323nm,0.4s						
KUR				AMB	AMB	02 32 07.0	
	2μm,0.4s						
KUR				AMB	AMB	02 32 08.0	
	10μm,3.0s						
KUR				*i* S	**Sb**	**02 32 33.0**	**-1.5**
KUR				A	A	02 32 41.0	
	4μm,0.5s						
KUR				A	A	02 32 41.0	
	5μm,0.5s						
KUR				A	A	02 33 05.0	
	27μm,2.0s						
KUR				AMS	AMS	02 33 44.0	
	164μm,5.0s						
KUR	**Kuril'sk**	**2.54**	**268**	*c i*PN	**Pn**	**02 31 59.6**	**+1.1**
KUR				*i* S	**Sb**	**02 32 35.3**	**+0.8**
KUR				pmax	pmax		
	comp=N,589nm,0.6s						
KUR				pmax	pmax		
	comp=Z,2μm,0.6s						
KUR				pmax	pmax		
	comp=E,323nm,0.3s						
KUR				pmax	pmax		
	comp=Z,10μm,2.8s						
KUR				smax	smax		
	comp=E,5μm,0.6s						
KUR				smax	smax		
	comp=N,4μm,0.5s						
KUR				pmax	pmax		
	comp=N,27μm,1.8s						
KUR				pmax	pmax		
	comp=E,20μm,1.9s						
SHO	**Shikotan**	**3.62**	**247**	*i* P	**Pn**	**02 32 13.0**	**-0.4**
SHO				AMB	AMB	02 32 25.0	
	comp=E,291nm,0.3s						
SHO				AMB	AMB	02 32 25.0	
	comp=E,590nm,0.3s						
SHO				AMB	AMB	02 32 26.0	
	comp=E,3μm,3.0s						
SHO				*i* S	**Sn**	**02 32 55.7**	**+0.4**
SHO				A	A	02 32 59.0	
	comp=E,2μm,0.4s						
SHO				A	A	02 32 59.0	
	comp=E,2μm,0.4s						
SHO				A	A	02 33 24.0	
	comp=E,7μm,3.0s						
SHO				AMS	AMS	02 33 54.0	
	comp=E,94μm,16.0s						
SHO				AMS	AMS	02 33 54.0	
	comp=E,84μm,16.0s						
SHO				AMS	AMS	02 33 54.0	
	comp=E,58μm,16.0s						
SHO	**Shikotan**	**3.62**	**247**	*c i*PN	**Pn**	**02 32 13.4**	**0.0**
SHO				*i* S	**Sn**	**02 32 57.8**	**+2.5**
SHO				pmax	pmax		
	comp=E,291nm,0.3s						
SHO				pmax	pmax		
	comp=Z,590nm,0.3s						
SHO				pmax	pmax		
	comp=Z,3μm,2.6s						
SHO				smax	smax		
	comp=E,2μm,0.8s						
SHO				smax	smax		
	comp=N,2μm,0.4s						
SHO				pmax	pmax		
	comp=N,7μm,3.0s						
SHO				pmax	pmax		
	comp=E,10μm,2.4s						
YUK	**Yuzh-Kuril'sk**	**4.20**	**254**	*i* P	**Pn**	**02 32 22.0**	**+0.6**
YUK				AMB	AMB	02 32 29.0	
	comp=E,216nm,0.5s						
YUK				AMB	AMB	02 32 29.0	
	comp=E,472nm,0.5s						
YUK				AMB	AMB	02 32 29.0	
	comp=E,1μm,0.5s						
YUK				AMB	AMB	02 32 29.0	
	comp=E,4μm,1.6s						
YUK				*i* S	**Sn**	**02 33 11.8**	**+2.2**
YUK				A	A	02 33 35.0	
	comp=E,19μm,2.0s						
YUK				A	A	02 33 38.0	
	comp=E,6μm,0.6s						
YUK				A	A	02 33 38.0	
	comp=E,4μm,0.6s						
YUK				AMS	AMS	02 35 57.0	
	comp=E,81μm,9.0s						
YUK				AMS	AMS	02 35 57.0	
	comp=E,66μm,9.0s						
YUK				AMS	AMS	02 35 57.0	
	comp=E,67μm,9.0s						
YUK	**Yuzh-Kuril'sk**	**4.20**	**254**	*c i*PN	**Pn**	**02 32 21.7**	**+0.3**
YUK				*i* S	**Sn**	**02 33 15.0**	**+5.4**
YUK				pmax	pmax		
	comp=Z,1μm,0.9s						
YUK				pmax	pmax		
	comp=N,216nm,0.2s						
YUK				pmax	pmax		
	comp=E,472nm,0.5s						
YUK				pmax	pmax		
	comp=Z,4μm,1.6s						
YUK				smax	smax		
	comp=E,4μm,0.9s						

YUK				smax	smax		
	comp=N,6µm,0.6s						
YUK				pmax	pmax		
	comp=N,19µm,1.7s						
YUK				pmax	pmax		
	comp=E,11µm,1.5s						
LAGR	**Lagunnoye**	**4.25**	**254**	*i* P	**Pn**	**02 32 21.0**	**-1.0**
LAGR				AMB	AMB	02 32 28.0	
	comp=E,3µm,2.0s						
LAGR				AMB	AMB	02 32 36.0	
	comp=E,227nm,0.4s						
LAGR				AMB	AMB	02 32 36.0	
	comp=E,2µm,0.4s						
LAGR				AMB	AMB	02 32 36.0	
	comp=E,1µm,0.4s						
LAGR				*i* S	**Sn**	**02 33 13.0**	**+2.3**
LAGR				A	A	02 33 32.0	
	comp=E,16µm,2.1s						
LAGR				A	A	02 33 32.0	
	comp=E,105µm,2.1s						
LAGR				A	A	02 33 40.0	
	comp=E,13µm,0.7s						
LAGR				A	A	02 33 40.0	
	comp=E,9µm,0.7s						
LAGR	**Lagunnoye**	**4.25**	**254**	*d i*PN	**Pn**	**02 32 21.9**	**-0.1**
LAGR				*i* S	**Sn**	**02 33 13.4**	**+2.7**
LAGR				pmax	pmax		
	comp=Z,3µm,1.9s						
LAGR				pmax	pmax		
	comp=Z,1µm,0.4s						
LAGR				pmax	pmax		
	comp=N,227nm,0.2s						
LAGR				pmax	pmax		
	comp=E,2µm,0.9s						
LAGR				smax	smax		
	comp=E,9µm,0.8s						
LAGR				smax	smax		
	comp=N,13µm,0.7s						
LAGR				pmax	pmax		
	comp=N,16µm,2.1s						
LAGR				pmax	pmax		
	comp=E,105µm,1.1s						
GRPR	**Tuman**	**4.28**	**253**	*i* P	**Pn**	**02 32 22.0**	**-0.4**
GRPR				*i* S	**Sn**	**02 33 14.0**	**+2.5**
GRPR	**Tuman**	**4.28**	**253**	*d i*PN	**Pn**	**02 32 22.0**	**-0.4**
GRPR				*i* S	**Sn**	**02 33 14.8**	**+3.3**
GLVR	**Golovnino**	**4.54**	**251**	*i* P	**Pn**	**02 32 25.0**	**-1.0**
GLVR				AMB	AMB	02 32 34.0	
	comp=E,742nm,0.4s						
GLVR				AMB	AMB	02 32 34.0	
	comp=E,446nm,0.4s						
GLVR				AMB	AMB	02 32 34.0	
	comp=E,2µm,0.4s						
GLVR				AMB	AMB	02 32 37.0	
	comp=E,3µm,2.5s						
GLVR				*e*S	**Sn**	**02 33 20.0**	**+2.1**
GLVR				A	A	02 33 34.0	
	comp=E,12µm,2.1s						
GLVR				A	A	02 33 34.0	
	comp=E,16µm,2.1s						
GLVR				A	A	02 33 36.0	
	comp=E,4µm,0.4s						
GLVR				A	A	02 33 36.0	
	comp=E,2µm,0.4s						
GLVR	**Golovnino**	**4.54**	**251**	*d i*PN	**Pn**	**02 32 25.6**	**-0.4**
GLVR				*i*		02 33 24.7	
GLVR				pmax	pmax		
	comp=E,446nm,0.4s						
GLVR				pmax	pmax		
	comp=Z,2µm,0.4s						
GLVR				pmax	pmax		
	comp=N,742nm,0.2s						
GLVR				pmax	pmax		
	comp=Z,3µm,2.5s						
GLVR				pmax	pmax		
	comp=E,16µm,2.3s						
GLVR				pmax	pmax		
	comp=N,12µm,2.1s						
NEM2	**Nemuro 2**	**4.55**	**246**	⇑P	**Pn**	**02 32 25.0**	**-1.2**
NEM2				*e*S	**Sn**	**02 33 18.6**	**+0.3**
JRA	**Rausu**	**4.74**	**255**	⇑P	**Pn**	**02 32 30.1**	**+1.4**
JNK	**Nakash**	**5.14**	**252**	P	**Pn**	**02 32 34.8**	**+0.6**
JNK				*e*S	**Sn**	**02 33 34.4**	**+1.8**
JAK	**Akkeshi**	**5.40**	**246**	P	**Pn**	**02 32 36.9**	**-1.0**
JAK				*e*S	**Sn**	**02 33 39.4**	**+0.2**
JTKR	**Abashiri--Toko**	**5.56**	**258**	⇑P	**Pn**	**02 32 41.7**	**+1.7**
JAR	**Ashorobuto**	**5.88**	**252**	⇑P	**Pn**	**02 32 45.2**	**+0.7**
JAR				*e*S	**Sn**	**02 33 53.1**	**+2.0**
JMP	**Maruseppu**	**5.93**	**260**	P	**Pn**	**02 32 47.3**	**+2.2**
JOB	**Onbets**	**6.01**	**249**	P	**Pn**	**02 32 45.9**	**-0.3**
JOB				*e*S	**Sn**	**02 33 55.1**	**+1.0**
SKR	**Severo-Kuril’s**	**6.18**	**29**	*e*P	**Pn**	**02 32 48.0**	**-0.5**
SKR				AMB	AMB	02 32 51.0	
	comp=N,3µm,6.1s						
SKR				AMB	AMB	02 33 00.0	
	comp=N,3µm,0.9s						
SKR				*e*S	**Sn**	**02 33 57.0**	**-1.2**
SKR				A	A	02 34 30.0	
	comp=N,4µm,0.9s						
SKR				A	A	02 34 30.0	
	comp=N,5µm,0.9s						
SKR				AMS	AMS	02 35 45.0	
	comp=N,81µm,18.0s						
SKR				AMS	AMS	02 35 45.0	
	comp=N,42µm,18.0s						
SKR				AMS	AMS	02 35 45.0	
	comp=N,104µm,18.0s						
SKR	**Severo-Kuril’s**	**6.18**	**29**	*e*PN	**Pn**	**02 32 48.3**	**-0.2**
SKR				pmax	pmax		
	comp=Z,3µm,6.1s						
SKR				pmax	pmax		
	comp=Z,1µm,3.6s						
SKR				pmax	pmax		
	comp=Z,3µm,0.9s						
SKR				MLR	MLR		
	comp=Z,104µm,14.0s						
SKR				MLR	MLR		
	comp=E,42µm,15.0s						
YSS	**Yuzh-Sakhalins**	**6.25**	**288**	*e*P	**Pn**	**02 32 53.0**	**+3.5**
YSS				AMB	AMB	02 32 55.0	
	comp=E,5µm,5.0s						
YSS				AMB	AMB	02 33 01.3	
	comp=E,300nm,1.0s						
YSS				AMS	AMS	02 35 19.6	
	comp=E,33µm,17.0s						
YSS				AMS	AMS	02 35 19.6	
	comp=E,75µm,17.0s						
YSS				AMS	AMS	02 35 19.6	
	comp=E,80µm,17.0s						
YSS	**Yuzh-Sakhalins**	**6.25**	**288**	*e*Pn	**Pn**	**02 32 53.2**	**+3.7**
YSS				*e*Sn	**Sn**	**02 33 59.6**	**-0.4**
YSS	**Yuzh-Sakhalins**	**6.25**	**288**	*αe*PN	**Pn**	**02 32 53.0**	**+3.5**
YSS				pmax	pmax		
	comp=N,1µm,5.0s						
YSS				pmax	pmax		
	comp=Z,5µm,5.0s						
YSS				pmax	pmax		
	comp=E,5µm,6.0s						
JKK2	**Kamakawa 2**	**6.39**	**260**	⇑P	**Pn**	**02 32 53.7**	**+2.2**
ASAJ	**Asahikawa**	**6.43**	**262**	Pn	**Pn**	**02 32 53.8**	**+1.8**
	comp=E,8.4nm,0.3s,baz=86,slow=14,SNR=121						
ASAJ				Sn	**Sn**	**02 34 08.1**	**+3.5**
	comp=E,1.7nm,0.3s,baz=258,slow=6.9,SNR=3.6						
ASAJ				LR	LR	02 35 51.5	
	comp=E,95µm,18.8s,baz=83,slow=43						
ASAJ	**Asahikawa**	**6.43**	**262**	*e*Pn	**Pn**	**02 32 54.2**	**+2.2**
ASAJ				*e*Sn	**Sn**	**02 33 59.1**	**-5.4**
ASAJ	**Asahikawa**	**6.43**	**262**	P	**Pn**	**02 32 54.7**	**+2.7**
JCH	**Churui**	**6.45**	**248**	P	**Pn**	**02 32 52.4**	**+0.1**
JCH				*e*S	**Sn**	**02 34 04.8**	**-0.2**
JFR	**Furan**	**6.73**	**254**	P	**Pn**	**02 32 57.5**	**+1.4**
JWK2	**Keihoku**	**6.74**	**273**	P	Pn	02 33 01.1	+4.9
JAB	**Ashibetsu**	**6.86**	**258**	P	**Pn**	**02 33 00.6**	**+2.6**
JEM	**Erimo**	**6.88**	**244**	P	**Pn**	**02 32 58.4**	**+0.2**
ERM	**Erimo**	**6.88**	**244**	*e*P	**Pn**	**02 32 59.0**	**+0.8**
ERM	**Erimo**	**6.88**	**244**	*e*Pn	**Pn**	**02 32 59.0**	**+0.8**
ERM				*e*Sn	**Sn**	**02 34 16.9**	**+1.3**
ERM	**Erimo**	**6.88**	**244**	*de*PN	**Pn**	**02 32 57.6**	**-0.6**
ERM				pmax	pmax		
	comp=Z,582nm,1.7s						
JNBK	**Urakawa-nobuka**	**7.00**	**247**	P	**Pn**	**02 32 58.5**	**-1.4**
JBT2	**Biratori 2**	**7.04**	**252**	P	**Pn**	**02 33 00.3**	**0.0**
PAU	**Pauzhetka**	**7.08**	**28**	*e*P	**Pn**	**02 33 01.1**	**+0.3**
PAU				AMB	AMB	02 33 04.2	
	comp=Z,2µm,4.0s						
PAU				AMB	AMB	02 33 04.7	
	comp=Z,360nm,0.6s						
PAU				*e*S	**Sn**	**02 34 17.2**	**-3.1**
PAU				A	A	02 34 27.0	
	comp=Z,16µm,9.0s						
PAU				A	A	02 34 46.4	
	comp=Z,3µm,1.0s						
PAU				AMS	AMS	02 36 10.2	
	comp=Z,56µm,14.0s						
PAU				AMS	AMS	02 36 10.2	
	comp=Z,50µm,14.0s						
PAU				AMS	AMS	02 36 10.2	
	comp=Z,61µm,14.0s						
JHR	**Hokuryu**	**7.14**	**260**	P	**Pn**	**02 33 04.6**	**+2.9**
UGL	**Uglegorsk**	**7.40**	**304**	*e*P	**Pn**	**02 33 09.3**	**+4.1**
UGL				AMB	AMB	02 33 11.5	
	comp=Z,7µm,6.0s						
UGL				AMB	AMB	02 33 12.3	
	comp=Z,300nm,1.0s						
UGL				*e*S	**Sn**	**02 34 33.5**	**+5.3**
UGL				A	A	02 34 47.7	
	comp=Z,400nm,1.0s						
UGL				A	A	02 34 57.4	
	comp=Z,7µm,3.0s						
UGL				AMS	AMS	02 36 15.8	
	comp=Z,61µm,17.0s						
UGL				AMS	AMS	02 36 15.8	
	comp=Z,83µm,17.0s						
UGL				AMS	AMS	02 36 15.8	
	comp=Z,90µm,17.0s						
JEW	**Eniwo**	**7.63**	**254**	P	**Pn**	**02 33 09.9**	**+1.4**
JNB	**Noboribetsu**	**8.06**	**253**	P	**Pn**	**02 33 14.1**	**-0.2**
JNB				*e*S	**Sn**	**02 34 43.6**	**-0.9**
TYV	**Tymovskoe**	**8.06**	**316**	*e*P	**Pn**	**02 33 18.4**	**+4.1**
TYV				AMB	AMB	02 33 19.8	
	comp=Z,258nm,1.1s						
TYV				AMB	AMB	02 33 21.1	
	comp=Z,6µm,4.5s						
TYV				*e*S	**Sn**	**02 34 48.4**	**+3.8**
TYV				A	A	02 34 49.6	
	comp=Z,1µm,2.9s						
TYV				A	A	02 34 51.3	
	comp=Z,147nm,1.0s						
TYV				AMS	AMS	02 36 30.0	
	comp=Z,45µm,17.0s						
TYV				AMS	AMS	02 36 30.0	
	comp=Z,107µm,17.0s						
TYV				AMS	AMS	02 36 30.0	
	comp=Z,101µm,17.0s						
TYV	**Tymovskoe**	**8.06**	**316**	*e*PN	**Pn**	**02 33 18.4**	**+4.1**
TYV				pmax	pmax		
	comp=Z,258nm,1.1s						
TYV				pmax	pmax		
	comp=Z,6µm,4.5s						
JSK	**Shakotan**	**8.12**	**260**	P	**Pn**	**02 33 19.8**	**+4.6**
JKB	**Kayabe**	**8.32**	**249**	P	**Pn**	**02 33 16.9**	**-1.0**
JKB				*e*S	**Sn**	**02 34 45.3**	**-5.6**
JYM2	**Yakumo 2**	**8.65**	**252**	P	**Pn**	**02 33 21.8**	**-0.7**
JSH	**Shimam**	**8.66**	**256**	P	**Pn**	**02 33 24.2**	**+1.6**
PEA0B	**Petropavlovsk-**	**8.76**	**25**	*e*Pn	**Pn**	**02 33 23.2**	**-0.8**
PEA0B				*e*Sn	**Sn**	**02 34 59.1**	**-2.7**
PETK	**Petropavlovsk-**	**8.76**	**25**	Pn	**Pn**	**02 33 22.5**	**-1.5**
	baz=186,slow=11						
PETK				Sn	**Sn**	**02 35 01.9**	**+0.1**
	baz=219,slow=27						
PETK	**Petropavlovsk-**	**8.76**	**25**	*e*Pn	**Pn**	**02 33 22.5**	**-1.5**
PETK				*e*Sn	**Sn**	**02 34 57.3**	**-4.5**
PEA1	**Petropavlovsk-**	**8.77**	**25**	*e*Pn	**Pn**	**02 33 22.5**	**-1.5**
PEA1				*e*Sn	**Sn**	**02 35 01.9**	**0.0**
JANG	**Nango**	**8.83**	**239**	P	**Pn**	**02 33 21.4**	**-3.6**
JANG				*e*S	**Sn**	**02 34 54.9**	**-8.8**
JTM	**Tenmabayashi**	**8.87**	**243**	P	**Pn**	**02 33 23.2**	**-2.2**
JTM				*e*S	**Sn**	**02 34 57.7**	**-6.7**
JSR	**Shiriuchi**	**8.89**	**248**	P	**Pn**	**02 33 25.1**	**-0.7**
JTH	**Tanohata**	**8.90**	**236**	P	**Pn**	**02 33 22.5**	**-3.4**
JTH				*e*S	Sn	02 34 54.4	-11
PET	**Petropavlovsk**	**9.00**	**29**	*e*P	**Pn**	**02 33 28.0**	**+0.8**
PET				AMB	AMB	02 33 32.9	
	comp=Z,900nm,4.0s						
PET				AMB	AMB	02 33 35.7	
	comp=Z,100nm,1.0s						
PET				*e*S	**Sn**	**02 35 03.5**	**-4.1**
PET				A	A	02 35 26.0	
	comp=Z,6µm,5.0s						
PET				A	A	02 35 37.1	
	comp=Z,1µm,1.0s						
PET				AMS	AMS	02 37 36.3	
	comp=Z,21µm,15.0s						
PET				AMS	AMS	02 37 36.3	
	comp=Z,74µm,15.0s						
PET				AMS	AMS	02 37 36.3	
	comp=Z,79µm,15.0s						
PET	**Petropavlovsk**	**9.00**	**29**	*e*Pn	**Pn**	**02 33 30.6**	**+3.4**
PET				*e*Sn	**Sn**	**02 35 05.8**	**-1.8**
PET	**Petropavlovsk**	**9.00**	**29**	*e*PN	**Pn**	**02 33 26.1**	**-1.1**
PET				pmax	pmax		
	comp=Z,271nm,1.1s						
PET				MLR	MLR		
	comp=Z,53µm,15.0s						
PET				MLR	MLR		
	comp=Z,54µm,15.0s						
JOSM	**Okushiri--Mats**	**9.27**	**254**	P	**Pn**	**02 33 30.5**	**-0.5**
OFUJ	**Ofunato**	**9.59**	**233**	P	**Pn**	**02 33 30.9**	**-4.4**
OKH	**Okha**	**9.89**	**329**	*i* P	Pn	02 33 44.4	+5.0
OKH				AMB	AMB	02 33 47.4	
	comp=Z,16µm,3.5s						
OKH				*e*S	**Sn**	**02 35 36.1**	**+6.6**
OKH				AMS	AMS	02 38 34.1	
	comp=Z,60µm,15.0s						
OKH				AMS	AMS	02 38 34.1	
	comp=Z,76µm,15.0s						
OKH				AMS	AMS	02 38 34.1	
	comp=Z,45µm,15.0s						
OKH	**Okha**	**9.89**	**329**	⇑*i*PN	Pn	02 33 44.4	+5.0
OKH				*e*S	Sn	02 35 41.2	+12
OKH				pmax	pmax		
	comp=Z,19µm,10.4s						
OKH				smax	smax		
	comp=N,8µm,10.0s						
OKH				MLR	MLR		
	comp=Z,45µm,15.0s						
JRG	**Rokugo**	**9.97**	**237**	P	**Pn**	**02 33 37.6**	**-3.0**
JIO	**Ouri**	**10.21**	**231**	P	Pn	02 33 38.8	-5.0
TEY	**Ternei**	**10.49**	**274**	⇑*e*PN	**Pn**	**02 33 51.6**	**+3.9**
TEY				pmax	pmax		
	comp=E,10µm,9.9s						
TEY				pmax	pmax		
	comp=Z,10µm,9.9s						
TEY				pmax	pmax		
	comp=E,340nm,1.7s						
TEY				pmax	pmax		
	comp=Z,330nm,1.6s						
TEY				pmax	pmax		
	comp=N,50nm,1.0s						
NKL	**Nikolayevsk**	**10.50**	**322**	*i* PN	**Pn**	**02 33 51.0**	**+3.3**
NKL				pmax	pmax		
	comp=N,6µm,8.0s						
NKL				pmax	pmax		
	comp=E,7µm,8.0s						
NKL				pmax	pmax		
	comp=Z,8µm,8.0s						
NKL				pmax	pmax		
	comp=N,130nm,1.5s						
NKL				pmax	pmax		
	comp=E,130nm,1.5s						
NKL				pmax	pmax		
	comp=Z,1µm,1.5s						
NKL				MLR	MLR		
	comp=N,40µm,14.0s						
NKL				MLR	MLR		
	comp=E,42µm,14.0s						
NKL				MLR	MLR		
	comp=Z,77µm,15.0s						
GRNR	**Gornyy**	**11.42**	**304**	⇑*i*PN	Pn	02 34 07.2	+6.9
GRNR				pmax	pmax		
	comp=Z,200nm,1.1s						
JFY	**Yanaizu**	**11.86**	**232**	P	**Pn**	**02 34 03.5**	**-3.0**
JSD	**Sado**	**12.27**	**238**	P	**Pn**	**02 34 09.0**	**-3.0**
JHK	**Hiroka**	**12.36**	**233**	P	**Pn**	**02 34 11.1**	**-2.2**
JJN	**Nakama**	**12.95**	**235**	P	**Pn**	**02 34 20.2**	**-1.1**
JSZ	**Suzu**	**13.19**	**238**	P	**Pn**	**02 34 21.9**	**-2.7**
MAJO	**Matsushiro**	**13.32**	**233**	*e*Pn	**Pn**	**02 34 24.8**	**-1.6**
MAJO				*e*Sn	**Sn**	**02 36 56.6**	**+3.1**
MAJO	**Matsushiro**	**13.32**	**233**	*c i*PN	**Pn**	**02 34 23.8**	**-2.6**
MAT	**Matsushiro**	**13.32**	**233**	P	**Pn**	**02 34 23.9**	**-2.5**
MAT				S	**Sn**	**02 36 57.8**	**+4.2**
MJAR	**Matsushiro Arr**	**13.32**	**233**	Pn	**Pn**	**02 34 23.2**	**-3.2**
	comp=Z,1.6nm,0.3s,baz=28,slow=12,SNR=70						
MJAR				LR	LR	02 41 23.9	
	comp=Z,14µm,19.4s,baz=45,slow=46						
MJB9	**Matsu-Tunnel**	**13.32**	**233**	*e*Pn	**Pn**	**02 34 22.7**	**-3.7**
USA0B	**Ussuriysk Arra**	**13.88**	**272**	*e*Pn	**Pn**	**02 34 34.7**	**+0.8**
USRK	**Ussuriysk Ar.**	**13.88**	**272**	Pn	**Pn**	**02 34 34.4**	**+0.4**
	baz=70,slow=12						
USRK				LR	LR	02 40 13.0	
	comp=Z,39µm,19.0s,baz=74,slow=39						
KLR	**Kul’dur**	**13.92**	**293**	Pn	**Pn**	**02 34 37.6**	**+3.2**
	comp=Z,0.0nm,0.3s,baz=100,slow=15,SNR=75						
KLR				LR	LR	02 40 29.5	
	comp=Z,5µm,18.9s,baz=97,slow=40						
KLR	**Kul’dur**	**13.92**	**293**	*c i*P	**Pn**	**02 34 37.2**	**+2.8**
MA2	**Magadan**	**14.25**	**359**	Pn	**Pn**	**02 34 37.8**	**-1.1**
	comp=Z,1.5nm,0.3s,baz=156,slow=9.1,SNR=12						
MA2				Sn	**Sn**	**02 37 19.5**	**+3.5**
	comp=Z,1.5nm,0.3s,baz=179,slow=18,SNR=1.7						
MA2				LR	LR	02 40 41.9	
	comp=Z,25µm,18.1s,baz=182,slow=40						
MA2	**Magadan**	**14.25**	**359**	*e*Pn	**Pn**	**02 34 39.8**	**+0.8**
MA2				*e*Sn	**Sn**	**02 37 19.5**	**+3.5**
MA2	**Magadan**	**14.25**	**359**	P	**Pn**	**02 34 37.8**	**-1.1**
MA2						02 37 19.5	
MA2				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MA2				smax	smax		
	comp=N,2.0nm,0.3s						
MA2				MLR	MLR		
	comp=Z,25µm,18.1s						
INU	**Inuyama**	**14.85**	**233**	*e*Pn	**Pn**	**02 34 44.4**	**-2.8**
MSHR	**Mys Shultsa**	**14.88**	**266**	*ce*P	**Pn**	**02 34 46.2**	**-1.3**
JHJ	**Hachijo jima 2**	**15.18**	**220**	LR	LR	02 44 21.4	
	comp=Z,10µm,18.0s,baz=77,slow=52						
MDJ	**Mudanjiang**	**15.48**	**275**	*e*Pn	**Pn**	**02 34 57.1**	**+1.5**
	comp=Z,438nm,1.0s						
SMY	**Shemya**	**16.53**	**55**	*e*Pn	**P**	**02 35 12.1**	**+0.8**
SMY	**Shemya**	**16.53**	**55**	*e*P	**P**	**02 35 12.1**	**+0.8**
SEY	**Seymchan**	**17.62**	**1**	P	**Pn**	**02 35 20.7**	**-1.8**
	comp=Z,0.3nm,0.3s,baz=174,slow=9.0,SNR=28						
SEY				S	**Sn**	**02 38 40.2**	**+2.5**
	comp=Z,0.1nm,0.3s,baz=182,slow=23,SNR=0.9						
SEY				LR	LR	02 42 49.9	
	comp=Z,27µm,18.1s,baz=178,slow=40						
ZEA	**Zeya**	**17.74**	**307**	*ce*P	**P**	**02 35 25.0**	**+0.4**
ZEA				*e*S	**S**	**02 38 45.0**	**-2.3**
ZEA				pmax	pmax		
	comp=E,370nm,1.2s						
ZEA				pmax	pmax		
	comp=N,220nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,500nm,1.4s						
ZEA				pmax	pmax		
	comp=E,5µm,10.0s						
ZEA				pmax	pmax		
	comp=Z,8µm,10.0s						
ZEA				pmax	pmax		
	comp=N,2µm,9.0s						
ZEA				smax	smax		
	comp=E,2µm,10.0s						
ZEA				smax	smax		
	comp=N,4µm,12.0s						
CN2	**Changchun**	**18.57**	**274**	⇓*i*P	**P**	**02 35 33.1**	**-0.8**
CN2				*e*sP	pP	02 35 39.9	-1.0
CN2				PP	**PnPn**	**02 35 48.3**	**+2.2**
CN2				*e*S	**Sn**	**02 38 55.7**	**-5.3**
CN2				pmax	pmax		
	comp=N,230nm,0.9s						
CN2				LR	LR		
	comp=N,35µm,15.0s						
CN2				LR	LR		
	comp=N,31µm,15.0s						
CN2				LR	LR		
	comp=N,39µm,17.0s						
KSRS	**Korea Array**	**19.29**	**254**	LR	LR	02 42 51.0	
	comp=N,13µm,19.3s,baz=65,slow=36						
KS01	**Wonju Array Si**	**19.30**	**254**	*e*P	**P**	**02 35 41.4**	**-0.5**
KS15	**Wonju Array Si**	**19.32**	**254**	*e*P	**Pn**	**02 35 43.4**	**+0.1**
CBIJ	**Chichi jima**	**19.67**	**205**	*e*P	**P**	**02 35 45.6**	**-0.5**
	comp=N,435nm,1.4s						
CBIJ				*e*S	S	02 39 07.8	-19
JCJ	**Chichijima**	**19.67**	**205**	P	**P**	**02 35 45.1**	**-1.0**
	baz=14,slow=19						
JCJ				S	S	02 39 07.8	-19
	comp=N,4.4nm,0.3s,baz=313,slow=23,SNR=3.1						
JNU	**Nakatsue**	**20.02**	**240**	P	**P**	**02 35 50.2**	**+0.4**
	comp=N,88nm,1.0s,baz=34,slow=8.1,SNR=10						
JNU				S	Sn	02 39 36.5	+0.4
	comp=N,16nm,1.1s,baz=326,slow=18,SNR=1.9						
JNU				LR	LR	02 45 18.2	
	comp=N,23µm,18.5s,baz=37,slow=42						
JNU	**Nakatsue**	**20.02**	**240**	*e*P	Pn	02 35 51.4	-0.2
	comp=N,268nm,1.3s						
JNU				*e*S	Sn	02 39 36.5	+0.4
JNU				LR	LR		
	comp=Z,20µm,19.0s						
CLNS	**Chul’man**	**20.11**	**314**	*e*P	**P**	**02 35 51.0**	**+0.3**
CLNS				*e*		02 36 06.5	
CLNS				*e*S	**S**	**02 39 33.9**	**-1.2**
CLNS				*e*		02 40 04.4	
CLNS				*e*SS	SnSn	02 40 13.6	+21
CLNS				pmax	pmax		
	comp=Z,150nm,0.9s						
CLNS				pmax	pmax		
	comp=E,87nm,1.0s						
CLNS				pmax	pmax		
	comp=N,75nm,0.9s						
CLNS				pmax	pmax		
	comp=N,93nm,1.0s						
CLNS				pmax	pmax		
	comp=Z,214nm,1.2s						
CLNS				pmax	pmax		
	comp=E,130nm,1.1s						
CLNS				smax	smax		
	comp=N,554nm,11.3s						
CLNS				smax	smax		
	comp=E,900nm,13.5s						
CLNS				MLR	MLR		
	comp=E,17µm,14.0s						
CLNS				MLR	MLR		
	comp=Z,39µm,19.0s						
CLNS				MLR	MLR		
	comp=N,16µm,15.0s						
INCN	**Inchon**	**20.15**	**256**	*e*P	Pn	02 35 53.3	+0.1
	comp=N,162nm,1.2s						
INCN				LR	LR		
	comp=Z,14µm,20.0s						
INCN	**Inchon**	**20.15**	**256**	*e*P	Pn	02 35 53.3	+0.1
INCN				pmax	pmax		
	comp=Z,162nm,1.2s						
INCN				MLR	MLR		
	comp=Z,14µm,20.0s						
TJN	**Taejon**	**20.25**	**252**	*ce*P	**P**	**02 35 52.9**	**+0.7**
YAK	**Yakutsk**	**20.92**	**331**	P	**P**	**02 35 57.5**	**-1.8**
	comp=Z,244nm,0.8s,baz=199,slow=2.4,SNR=39						
YAK				S	**S**	**02 39 49.4**	**-1.6**
	comp=Z,17nm,0.4s,baz=39,slow=3.2,SNR=1.1						
YAK				LR	LR	02 44 15.8	
	comp=Z,12µm,19.4s,baz=94,slow=37						
YAK	**Yakutsk**	**20.92**	**331**	*e*P	**P**	**02 36 00.0**	**+0.7**
	comp=Z,2µm,1.3s						
YAK				*e*S	**S**	**02 39 49.4**	**-1.6**
YAK				LR	LR		
	comp=Z,12µm,19.0s						
YAK	**Yakutsk**	**20.92**	**331**	*e*P	**P**	**02 35 59.9**	**+0.6**
YAK				*e*		02 36 20.2	
YAK				*e*S	**S**	**02 39 49.0**	**-2.0**
YAK				*e*SS	**SnSn**	**02 40 09.7**	**-2.4**
YAK				*e*SSS	SSS	02 40 23.2	
YAK				pmax	pmax		
	comp=Z,307nm,0.9s						
YAK				pmax	pmax		
	comp=N,60nm,1.0s						
YAK				pmax	pmax		
	comp=E,45nm,0.9s						
YAK				pmax	pmax		
	comp=Z,1µm,1.8s						
YAK				pmax	pmax		
	comp=N,852nm,1.5s						
YAK				pmax	pmax		
	comp=E,358nm,1.2s						
YAK				smax	smax		
	comp=N,602nm,1.7s						
YAK				smax	smax		
	comp=E,284nm,1.8s						

YAK				MLR	MLR			comp=Z,12µm,18.0s
YAK				MLR	MLR			comp=N,31µm,16.0s
YAK				MLR	MLR			comp=E,19µm,15.0s
KIWB	**Kanaga Island**	**21.64**	**61**	*e*P	**P**	**02 36 04.2**	**-2.9**	
HIA	**Hailar**	**21.77**	**292**	*e*P	**P**	**02 36 07.7**	**-0.9**	comp=E,88nm,1.2s
HIA				LR	LR			comp=Z,44µm,18.0s
HIA	**Hailar**	**21.77**	**292**	*i* P	**P**	**02 36 06.9**	**-1.7**	
HIA				pmax	pmax			comp=Z,84nm,1.2s
DL2	**Dalian**	**22.96**	**264**	⇑*i*P	**P**	**02 36 20.6**	**-0.7**	
DL2				S	**S**	**02 40 31.9**	**+2.1**	
DL2				pmax	pmax			comp=Z,120nm,1.4s
DL2				pmax	pmax			comp=Z,4µm,7.2s
DL2				LR	LR			comp=Z,7µm,16.5s
DL2				LR	LR			comp=Z,9µm,18.6s
DL2				LR	LR			comp=Z,10µm,18.8s
ATKA	**Atka Island**	**23.48**	**61**	PFAKE		02 36 40.0	+14	
ATKA				LR	LR			comp=Z,11µm,19.0s
CIT	**Chita**	**25.67**	**299**	*e*P	**P**	**02 36 46.3**	**-0.3**	
CIT				*e*		02 36 57.1		
CIT				*e*		02 37 04.7		
CIT				*e*		02 37 26.6		
CIT				pmax	pmax			comp=Z,89nm,1.7s
BOD	**Bodaibo**	**26.03**	**312**	*e*P	**P**	**02 36 46.7**	**-3.0**	
BOD				pmax	pmax			comp=Z,52nm,1.4s
JOW	**Kunigami**	**26.16**	**233**	P	**P**	**02 36 50.0**	**-1.3**	comp=Z,102nm,0.9s,baz=54,slow=7.1,SNR=12
JOW				S	**S**	**02 41 20.2**	**-1.3**	comp=Z,7.7nm,0.5s,baz=292,slow=19,SNR=2.7
JOW	**Kunigami**	**26.16**	**233**	*e*P	**P**	**02 36 51.0**	**-0.3**	comp=Z,441nm,1.3s
JOW				*e*S	**S**	**02 41 20.2**	**-1.3**	
BJI	**Beijing**	**26.33**	**271**	P	**P**	**02 36 52.6**	**0.0**	
BJI				pmax	pmax			comp=Z,250nm,1.4s
BJI				LR	LR			comp=Z,9µm,16.7s
BJI				LR	LR			comp=Z,7µm,20.0s
BJT	**Baijiatuau**	**26.34**	**271**	*e*P	**P**	**02 36 53.9**	**+1.2**	
BJT	**Baijiatuau**	**26.34**	**271**	*e*P	**P**	**02 36 53.9**	**+1.2**	comp=Z,283nm,1.1s
BJT				LR	LR			comp=Z,31µm,19.0s
BJT	**Baijiatuau**	**26.34**	**271**	*e*P	**P**	**02 36 53.9**	**+1.2**	
BJT				pmax	pmax			comp=Z,283nm,1.1s
BJT				MLR	MLR			comp=Z,31µm,19.0s
NIKH	**Nikolski High**	**26.76**	**59**	PFAKE		02 37 10.0	+14	
NIKH				LR	LR			comp=Z,10µm,21.0s
TIA	**Tai'an**	**27.38**	**263**	P	**P**	**02 37 01.4**	**-0.8**	
TIA				pP	**pP**	**02 37 07.8**	**-1.9**	
TIA				S	**S**	**02 41 46.1**	**+5.5**	
TIA				sS	**pS**	**02 41 50.3**	**+1.1**	
TIA				pmax	pmax			comp=Z,51nm,1.8s
TIA				pmax	pmax			comp=Z,2µm,5.8s
TIA				LR	LR			comp=Z,9µm,16.9s
TIA				LR	LR			comp=Z,8µm,20.0s
TIA				LR	LR			comp=Z,10µm,18.8s
SSE	**Sheshan**	**27.52**	**249**	P	**P**	**02 37 03.9**	**+0.5**	
SSE				S	**S**	**02 41 46.8**	**+3.9**	
SSE				pmax	pmax			comp=Z,72nm,1.9s
SSE				pmax	pmax			comp=Z,1.0nm,2.9s
SSE				LR	LR			comp=Z,7µm,17.9s
SSE				LR	LR			comp=Z,7µm,17.8s
NJ2	**Nanjing**	**28.49**	**254**	*e*P	**P**	**02 37 12.3**	**+0.2**	
NJ2				sP	**pP**	**02 37 17.8**	**-1.9**	
NJ2				S	**S**	**02 42 02.8**	**+4.7**	
NJ2				pmax	pmax			comp=Z,24nm,0.6s
NJ2				pmax	pmax			comp=Z,2µm,6.5s
NJ2				LR	LR			comp=Z,24µm,18.4s
NJ2				LR	LR			comp=Z,23µm,18.4s
NJ2				LR	LR			comp=Z,13µm,15.2s
TIXI	**Tiksi**	**28.50**	**345**	P	**P**	**02 37 09.1**	**-2.7**	comp=Z,8.0nm,0.4s,baz=135,slow=11,SNR=17
TIXI				S	**S**	**02 42 03.2**	**+5.6**	comp=Z,8.2nm,1.0s,baz=87,slow=17,SNR=2.4
TIXI				LR	LR	02 48 49.4		comp=Z,13µm,19.5s,baz=140,slow=37
TIXI	**Tiksi**	**28.50**	**345**	*e*P	**P**	**02 37 08.5**	**-3.3**	comp=Z,57nm,1.3s
TIXI				*e*S	**S**	**02 42 03.2**	**+5.6**	
TIXI	**Tiksi**	**28.50**	**345**	*c i*P	**P**	**02 37 09.5**	**-2.3**	
TIXI				pmax	pmax			comp=Z,53nm,1.3s
H11N2	**WAKE ISLAND Hy**	**28.57**	**148**	T	T	03 07 60.0		baz=338,slow=75,SNR=1263
H11N1	**WAKE ISLAND Hy**	**28.59**	**148**	T	T	03 07 59.4		baz=338,slow=75,SNR=1054
H11N3	**WAKE ISLAND Hy**	**28.59**	**148**	T	T	03 07 59.6		baz=338,slow=75,SNR=734
AKUT	**Akutan**	**28.61**	**57**	PFAKE		02 37 20.0	+7.1	
AKUT				LR	LR			comp=Z,6µm,18.0s
WAKE	**Wake Island**	**28.90**	**149**	PFAKE		02 37 30.0	+14	
WAKE				LR	LR			comp=Z,16µm,19.0s
HHC	**Hu-ho-hao-te**	**29.26**	**275**	*e*P	**P**	**02 37 20.0**	**+1.0**	
HHC				sP	pP	02 37 27.6	+1.0	
HHC				S	**S**	**02 42 10.3**	**0.0**	
HHC				SS	**SnSn**	**02 43 39.1**	**+2.7**	
HHC				pmax	pmax			comp=Z,270nm,1.1s
HHC				pmax	pmax			comp=Z,3µm,5.0s
HHC				LR	LR			comp=Z,35µm,16.4s
HHC				LR	LR			comp=Z,33µm,17.3s
HHC				LR	LR			comp=Z,36µm,15.9s
H11S1	**WAKE ISLAND Hy**	**29.63**	**150**	T	T	03 09 18.6		baz=338,slow=76,SNR=492
H11S3	**WAKE ISLAND Hy**	**29.63**	**150**	T	T	03 09 16.8		baz=338,slow=76,SNR=654
H11S2	**WAKE ISLAND Hy**	**29.64**	**150**	T	T	03 09 17.6		baz=338,slow=76,SNR=434
TIY	**Taiyuan**	**29.96**	**269**	*e*P	**P**	**02 37 25.2**	**0.0**	
TIY				S	**S**	**02 42 24.9**	**+3.6**	
TIY				SS	**SnSn**	**02 43 56.7**	**+3.2**	
TIY				pmax	pmax			comp=Z,90nm,1.0s
TIY				pmax	pmax			comp=Z,1µm,5.1s
TIY				LR	LR			comp=Z,5µm,15.4s
TIY				LR	LR			comp=Z,11µm,16.2s
TIY				LR	LR			comp=Z,14µm,19.7s
FALS	**False Pass**	**29.98**	**55**	PFAKE		02 37 40.0	+15	
FALS				LR	LR			comp=Z,11µm,20.0s
MIDW	**Midway**	**30.02**	**114**	PFAKE		02 37 40.0	+14	
MIDW				LR	LR			comp=Z,8µm,20.0s
BTO	**Baotou**	**30.43**	**276**	*e*P	**P**	**02 37 29.6**	**+0.2**	
BTO				pmax	pmax			comp=Z,32nm,1.6s
ANM	**Nome**	**30.50**	**36**	PFAKE		02 37 40.0	+10	
ANM				LR	LR			comp=Z,8µm,19.0s
SONA1	**Songino Array**	**30.72**	**291**	*e*P	**P**	**02 37 32.3**	**+0.4**	
SONA0	**Songino Array**	**30.73**	**291**	*e*P	**P**	**02 37 30.7**	**-1.3**	
SONA0				*e*PcP	**PcP**	**02 40 29.3**	**+0.2**	
SONM	**Songino Array**	**30.73**	**291**	P	**P**	**02 37 30.7**	**-1.3**	comp=Z,32nm,1.0s,baz=73,slow=5.9,SNR=49
SONM				PcP	**PcP**	**02 40 29.3**	**+0.2**	comp=Z,8.2nm,1.1s,baz=96,slow=3.0,SNR=3.7
SONM				LR	LR	02 51 04.3		comp=Z,26µm,18.8s,baz=84,slow=39
YOJ	**Yonaguni jima**	**31.02**	**237**	PFAKE		02 37 50.0	+15	
YOJ				LR	LR			comp=Z,7µm,22.0s
TATO	**Taipei**	**31.56**	**240**	PFAKE		02 37 50.0	+11	
TATO				LR	LR			comp=Z,25µm,20.0s
SDPT	**Sand Point**	**31.66**	**54**	PFAKE		02 37 50.0	+10	
SDPT				LR	LR			comp=Z,8µm,19.0s
TLY	**Talaya**	**31.82**	**299**	LR	LR	02 51 49.8		comp=Z,38µm,18.3s,baz=80,slow=39
TLY	**Talaya**	**31.82**	**299**	*e*P	**P**	**02 37 41.3**	**0.0**	comp=Z,53nm,1.2s
TLY				LR	LR			comp=Z,38µm,18.0s
TLY	**Talaya**	**31.82**	**299**	P	**P**	**02 37 42.6**	**+1.3**	SNR=23
TLY	**Talaya**	**31.82**	**299**	*c i*P	**P**	**02 37 39.6**	**-1.8**	
TLY				*e*		02 38 49.8		
TLY				*e*PPP	PPP	02 39 08.5		
TLY				pmax	pmax			comp=Z,54nm,1.3s
TLY				MLR	MLR			comp=Z,36µm,19.0s
YHNB	**Yeheng**	**31.85**	**240**	PFAKE		02 37 50.0	+8.1	
YHNB				LR	LR			comp=Z,29µm,20.0s
NACB	**Ninganchiao**	**32.09**	**239**	PFAKE		02 38 00.0	+16	
NACB				LR	LR			comp=Z,17µm,20.0s
GUMO	**Guam**	**32.15**	**192**	LR	LR	02 50 51.1		comp=Z,10µm,19.9s,baz=22,slow=37
ZAK	**Zakamensk**	**32.24**	**297**	*e*P	**P**	**02 37 44.7**	**-0.5**	
ZAK				*e*		02 40 28.4		
ZAK				pmax	pmax			comp=Z,48nm,1.5s
WHN	**Wuhan**	**32.47**	**256**	⇑*i*P	**P**	**02 37 46.6**	**-0.6**	
WHN				S	**S**	**02 43 02.4**	**+2.0**	
WHN				LR	LR			comp=Z,50µm,20.2s
WHN				LR	LR			comp=Z,16µm,19.5s
WHN				LR	LR			comp=Z,30µm,17.1s
RDOG	**Red Dog Mine**	**32.60**	**30**	*e*P	**P**	**02 37 48.3**	**+0.3**	comp=Z,58nm,1.3s
RDOG				LR	LR			comp=Z,8µm,20.0s
SSLB	**Suanglung**	**32.76**	**239**	*e*P	**P**	**02 37 50.7**	**+0.8**	comp=Z,40nm,1.1s
SSLB				LR	LR			comp=Z,24µm,20.0s
CHGN	**Chignik**	**32.79**	**52**	PFAKE		02 38 00.0	+10	
CHGN				LR	LR			comp=Z,8µm,19.0s
YULB	**Yu-li**	**32.85**	**238**	*e*P	**P**	**02 37 53.4**	**+2.8**	comp=Z,55nm,1.2s
YULB				LR	LR			comp=Z,8µm,19.0s
TPUB	**Ta-pu**	**33.32**	**239**	*e*P	**P**	**02 37 55.0**	**+0.2**	comp=Z,87nm,1.0s
TPUB				LR	LR			comp=Z,20µm,20.0s
QZH	**Quanzhou**	**33.38**	**244**	⇑*i*P	**P**	**02 37 55.6**	**+0.4**	
QZH				S	**S**	**02 43 18.5**	**+3.9**	
QZH				pmax	pmax			comp=Z,2µm,3.6s
QZH				LR	LR			comp=Z,4µm,18.2s
QZH				LR	LR			comp=Z,9µm,15.7s
QZH				LR	LR			comp=Z,8µm,16.6s
TWG	**Pinlang**	**33.42**	**238**	*e*P	**P**	**02 37 56.1**	**+0.5**	comp=Z,361nm,0.9s
TWG				LR	LR			comp=Z,23µm,19.0s
MOY	**Mondy**	**33.45**	**299**	*e*P	**P**	**02 37 54.9**	**-0.9**	
MOY				pmax	pmax			comp=Z,76nm,2.5s
XAN	**Xi'an**	**34.25**	**266**	P	**P**	**02 38 02.7**	**-0.1**	
XAN				S	**S**	**02 43 26.5**	**-1.7**	
XAN				PcS	**PcS**	**02 44 26.7**	**+1.4**	
XAN				SS	**SnSn**	**02 45 38.8**	**+0.9**	
XAN				pmax	pmax			comp=Z,61nm,1.6s
XAN				pmax	pmax			comp=Z,1µm,5.9s
XAN				LR	LR			comp=Z,9µm,16.7s
XAN				LR	LR			comp=Z,10µm,16.7s
XAN				LR	LR			comp=Z,14µm,17.2s
SVW2	**Sparrevohn**	**34.30**	**43**	PFAKE		02 38 10.0	+7.1	
SVW2				LR	LR			comp=Z,4µm,22.0s
OHAK	**Old Harbor**	**35.55**	**50**	*e*P	**P**	**02 38 12.7**	**-0.9**	comp=Z,242nm,1.2s
KNGR	**Kungurtug, Tuv**	**35.81**	**298**	*i* P	**P**	**02 38 16.3**	**+0.2**	
KDAK	**Kodiak Island**	**35.88**	**49**	*e*P	**P**	**02 38 16.0**	**-0.5**	comp=Z,167nm,1.1s
KDAK				LR	LR			comp=Z,14µm,19.0s
KDAK	**Kodiak Island**	**35.88**	**49**	*ce*P	**P**	**02 38 15.7**	**-0.8**	
PPLA	**Purkeypile**	**35.97**	**40**	*e*P	**P**	**02 38 18.5**	**+1.1**	comp=Z,296nm,1.4s
PPLA				LR	LR			comp=Z,9µm,20.0s
ENH	**Enshi**	**35.98**	**260**	*e*P	**P**	**02 38 17.6**	**-0.1**	comp=Z,179nm,1.3s
ENH				LR	LR			comp=Z,6µm,19.0s
CAST	**Castle Rocks**	**36.04**	**40**	*e*P	**P**	**02 38 18.1**	**+0.2**	comp=Z,90nm,1.2s
CAST				LR	LR			comp=Z,5µm,20.0s
HOM	**Homer**	**36.25**	**46**	PFAKE		02 38 30.0	+10	
HOM				LR	LR			comp=Z,4µm,20.0s
SKT	**Skwentna**	**36.26**	**42**	*e*P	**P**	**02 38 20.0**	**+0.2**	comp=Z,76nm,1.4s
SKT				LR	LR			comp=Z,9µm,20.0s
CNPM	**China Poot**	**36.47**	**46**	*e*P	**P**	**02 38 22.3**	**+0.8**	comp=Z,187nm,1.1s
CNPM				LR	LR			comp=Z,7µm,20.0s
BPAW	**Bear Paw Mtn.**	**36.56**	**38**	*e*P	**P**	**02 38 22.3**	**0.0**	comp=Z,85nm,1.2s
BPAW				LR	LR			comp=Z,8µm,18.0s
BRLK	**Bradley Lake**	**36.63**	**46**	*e*P	**P**	**02 38 23.5**	**+0.5**	comp=Z,47nm,1.0s
BRLK				LR	LR			comp=Z,7µm,20.0s
SUA	**Susitna One**	**36.64**	**43**	PFAKE		02 38 30.0	+6.9	
SUA				LR	LR			comp=Z,6µm,18.0s
MLY	**Manley**	**36.72**	**37**	*e*P	**P**	**02 38 23.9**	**+0.2**	comp=Z,84nm,1.1s
MLY				LR	LR			comp=Z,7µm,19.0s
LZH	**Lanzhou**	**36.79**	**273**	⇑P	**P**	**02 38 25.7**	**+1.0**	
LZH				pP	pP	02 38 28.9	-3.5	
LZH				sP	sP	02 38 31.3	-4.3	
LZH				PP	**PnPn**	**02 39 49.8**	**+1.2**	
LZH				S	**S**	**02 44 06.8**	**-0.5**	
LZH				sS	pS	02 44 16.3	+0.3	
LZH				SS	**SnSn**	**02 46 34.3**	**-5.0**	
LZH				pmax	pmax			comp=Z,590nm,1.6s
LZH				pmax	pmax			comp=Z,3µm,8.1s
LZH				LR	LR			comp=Z,14µm,15.2s
LZH				LR	LR			comp=Z,18µm,16.3s
LZH				LR	LR			comp=Z,24µm,17.3s
TRF	**Thorofare Moun**	**36.85**	**40**	*e*P	**P**	**02 38 24.7**	**-0.2**	comp=Z,76nm,1.3s
TRF				LR	LR			comp=Z,6µm,20.0s
COLD	**Coldfoot**	**37.13**	**33**	*e*P	**P**	**02 38 26.9**	**-0.2**	comp=Z,51nm,1.1s
COLD				LR	LR			comp=Z,8µm,19.0s
RC01	**Rabbit Creek A**	**37.13**	**44**	*e*P	**P**	**02 38 27.6**	**+0.4**	comp=Z,65nm,1.1s
RC01				LR	LR			comp=Z,6µm,20.0s
BWN	**Browne**	**37.23**	**38**	*e*P	**P**	**02 38 27.6**	**-0.4**	comp=Z,770nm,1.2s
BWN				LR	LR			comp=Z,8µm,19.0s
PMR	**Palmer**	**37.41**	**43**	*e*P	**P**	**02 38 26.6**	**-2.8**	comp=Z,57nm,1.2s
PMR	**Palmer**	**37.41**	**43**	*e*P	**P**	**02 38 26.6**	**-2.8**	
PMR				pmax	pmax			comp=Z,57nm,1.2s
MCK	**McKinley**	**37.46**	**39**	*e*P	**P**	**02 38 29.9**	**-0.1**	comp=Z,98nm,1.1s
MCK				LR	LR			comp=Z,9µm,19.0s
MCK	**McKinley**	**37.46**	**39**	*e*P	**P**	**02 38 29.9**	**-0.1**	
MCK				pmax	pmax			comp=Z,98nm,1.1s
MCK				MLR	MLR			comp=Z,9µm,19.0s
GHO	**Glory Hole Cre**	**37.50**	**42**	PFAKE		02 38 40.0	+10	
GHO				LR	LR			comp=Z,7µm,21.0s
KRAR	**Krasnoyarsk**	**37.52**	**308**	*i* P	**P**	**02 38 30.4**	**-0.1**	
TOLK	**Toolik Lake Re**	**37.54**	**31**	P	**P**	**02 38 30.2**	**-0.3**	baz=263,SNR=7.9
TOLK	**Toolik Lake Re**	**37.54**	**31**	*e*P	**P**	**02 38 31.2**	**+0.7**	comp=Z,101nm,1.2s
TOLK				LR	LR			comp=Z,9µm,19.0s
SML	**Sawmill**	**37.78**	**42**	PFAKE		02 38 40.0	+7.3	
SML				LR	LR			comp=Z,10µm,18.0s
MDM	**Murphy Dome**	**37.78**	**37**	*e*P	**P**	**02 38 32.5**	**-0.2**	comp=Z,113nm,1.1s
MDM				LR	LR			comp=Z,8µm,19.0s
WRH	**Wood River Hil**	**37.84**	**38**	*e*P	**P**	**02 38 32.7**	**-0.4**	comp=Z,163nm,1.4s
WRH				LR	LR			comp=Z,8µm,18.0s
COLA	**College**	**37.95**	**37**	*e*P	**P**	**02 38 34.2**	**+0.3**	comp=Z,197nm,1.2s
COLA				LR	LR			comp=Z,9µm,19.0s
COLA	**College**	**37.95**	**37**	*e*P	**P**	**02 38 34.2**	**+0.3**	
COLA				pmax	pmax			comp=Z,197nm,1.2s
COLA				MLR	MLR			comp=Z,9µm,19.0s
CCB	**Clear Creek Bu**	**37.96**	**38**	*e*P	**P**	**02 38 33.6**	**-0.5**	comp=Z,90nm,1.4s
CCB				LR	LR			comp=Z,10µm,18.0s
HVS	**Khovu-Aksy**	**38.03**	**300**	*i* P	**P**	**02 38 37.0**	**+2.0**	
HVS				pmax	pmax			comp=Z,74nm,1.0s
GTA	**Gaotai**	**38.06**	**280**	⇑P	**P**	**02 38 36.5**	**+1.1**	
GTA				pP	pP	02 38 44.4	+1.3	
GTA				sP	sP	02 38 49.5	+3.2	
GTA				PP	**PnPn**	**02 40 06.4**	**+2.4**	
GTA				S	**S**	**02 44 28.6**	**+2.1**	
GTA				ScP	**ScP**	**02 44 32.5**	**-3.6**	
GTA				PcS	**PcS**	**02 44 41.2**	**+1.9**	
GTA				ScS	**ScS**	**02 48 46.8**	**+1.2**	
GTA				pmax	pmax			comp=Z,270nm,1.7s
GTA				pmax	pmax			comp=Z,2µm,8.0s
GTA				LR	LR			comp=Z,9µm,17.2s
GTA				LR	LR			comp=Z,12µm,14.1s
GTA				LR	LR			comp=Z,16µm,16.8s
GZH	**Guangzhou**	**38.06**	**247**	P	**P**	**02 38 30.8**	**-4.6**	
GZH				PP	**PP**	**02 40 01.8**	**-0.7**	
GZH				PcP	**PcP**	**02 40 48.5**	**-1.8**	
GZH				S	**S**	**02 44 20.4**	**-6.0**	
GZH				LR	LR			comp=Z,15µm,17.1s
GZH				LR	LR			comp=Z,12µm,17.1s
DHY	**Denali Highway**	**38.17**	**40**	*e*P	**P**	**02 38 35.8**	**-0.4**	comp=Z,166nm,1.4s
DHY				LR	LR			comp=Z,7µm,20.0s
SCM	**Sheep Creek Mo**	**38.25**	**42**	PFAKE		02 38 50.0	+13	
SCM				LR	LR			comp=Z,7µm,19.0s
HDA	**Harding Lake**	**38.33**	**38**	*e*P	**P**	**02 38 36.8**	**-0.4**	comp=Z,68nm,1.0s
HDA				LR	LR			comp=Z,10µm,18.0s
IL1	**Eielson Array**	**38.36**	**37**	*e*P	**P**	**02 38 35.1**	**-2.4**	
ILAR	**Eielson Array**	**38.36**	**37**	P	**P**	**02 38 36.5**	**-1.0**	comp=Z,81nm,1.2s,baz=261,slow=6.7,SNR=166
ILAR				S	**S**	**02 44 29.8**	**-0.4**	comp=Z,0.4nm,1.0s,baz=277,slow=9.7,SNR=2.4
ILAR				LR	LR	02 55 37.7		comp=Z,6µm,21.2s,baz=285,slow=38
ILB	**Eielson Array**	**38.36**	**37**	*e*P	**P**	**02 38 36.7**	**-0.7**	
PATS	**Pohnpei**	**38.83**	**169**	PFAKE		02 38 50.0	+8.1	
PATS				LR	LR			comp=Z,6µm,20.0s
KLU	**Klutina**	**38.95**	**43**	PFAKE		02 38 50.0	+7.5	
KLU				LR	LR			comp=Z,7µm,18.0s
PAX	**Paxson**	**39.04**	**40**	*e*P	**P**	**02 38 45.4**	**+2.0**	comp=Z,45nm,1.1s
PAX				LR	LR			comp=Z,6µm,20.0s
PAX	**Paxson**	**39.04**	**40**	*e*P	**P**	**02 38 45.4**	**+2.0**	
PAX				pmax	pmax			comp=Z,45nm,1.1s
PAX				MLR	MLR			comp=Z,6µm,20.0s
FYU	**Fort Yukon**	**39.05**	**35**	*e*P	**P**	**02 38 44.0**	**+0.8**	comp=Z,389nm,1.4s
FYU				LR	LR			comp=Z,5µm,19.0s
DIV	**Divide**	**39.05**	**43**	*e*P	**P**	**02 38 39.7**	**-3.7**	comp=Z,109nm,1.3s
DIV				LR	LR			comp=Z,7µm,19.0s
HARP	**HAARP**	**39.23**	**41**	*e*P	**P**	**02 38 46.3**	**+1.5**	comp=Z,125nm,1.1s
HARP				LR	LR			comp=Z,8µm,20.0s
CD2	**Chengdu**	**39.62**	**266**	⇑*i*P	**P**	**02 38 48.7**	**+0.3**	
CD2				pP	pP	02 38 52.3	-3.9	
CD2				sP	sP	02 38 53.8	-5.5	
CD2				PP	**PP**	**02 40 19.6**	**+0.1**	
CD2				S	**S**	**02 44 51.9**	**+2.0**	
CD2				sS	pS	02 44 58.0	-0.8	
CD2				pmax	pmax			comp=Z,260nm,0.7s
CD2				pmax	pmax			comp=Z,2µm,5.4s
CD2				LR	LR			comp=Z,12µm,18.4s
CD2				LR	LR			comp=Z,12µm,15.9s
CD2				LR	LR			comp=Z,13µm,17.9s
BMRM	**Bremner River**	**39.63**	**43**	*e*P	**P**	**02 38 48.7**	**+0.4**	comp=Z,112nm,1.0s
RAGM	**Ragged Mountai**	**39.67**	**44**	*e*P	**P**	**02 38 50.1**	**+1.6**	comp=Z,199nm,1.2s

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RAGM                             LR     LR
      comp=Z,8µm,19.0s
GYA   Guiyang           40.29 258⇑iP     P       02 38 53.8 -0.3
GYA                              pP     pP       02 38 59.0 -2.9
GYA                              PP     PnPn     02 40 32.4 +1.7
GYA                              PcP    PcP      02 41 00.6 +3.1
GYA                              ScP    ScP      02 44 47.0 +2.2
GYA                              S      S        02 45 01.8 +1.6
GYA                              SS     SS       02 47 53.3 -5.6
GYA                              pmax   pmax
      comp=Z,50nm,0.9s
GYA                              LR     LR
      comp=Z,8µm,16.1s
GYA                              LR     LR
      comp=Z,8µm,15.5s
GYA                              LR     LR
      comp=Z,10µm,19.5s
CRQM  Cirque            40.37  44 eP     P       02 38 55.0 +0.5
      comp=Z,262nm,1.0s
CRQM                             LR     LR
      comp=Z,8µm,19.0s
TGY   Tagaytay City     40.45 229  P     P       02 38 54.3 -1.1
      comp=Z,137nm,0.3s,baz=350,slow=6.1,SNR=6.1
TGL   Tana Glacier      40.52  44 eP     P       02 38 56.7 +1.0
      comp=Z,106nm,1.0s
TGL                              LR     LR
      comp=Z,9µm,19.0s
BALM  Baldy             40.72  43  PFAKE         02 39 10.0  +13
BALM                             LR     LR
      comp=Z,5µm,19.0s
EGAK  Eagle             40.81  37 eP     P       02 38 57.2 -0.6
      comp=Z,202nm,1.2s
EGAK                             LR     LR
      comp=Z,6µm,19.0s
PLP   Palo              40.91 222⇓eP     P       02 38 57.1 -2.1
DAWY  Dawson            41.65  38 eP     P       02 39 05.1 +0.2
      comp=Z,133nm,1.5s
DAWY                             LR     LR
      comp=Z,7µm,20.0s
DGZ   Jazzator, Alta    42.28 300 i P    P       02 39 10.6 +0.3
DGZ                              pmax   pmax
      comp=Z,11nm,1.0s
ZAA1  Zalesovo Array    42.50 307 eP     P       02 39 10.3 -1.5
ZAA1                            ePcP    PcP      02 41 04.4 +0.3
ZAA0  Zalesovo Array    42.50 307 eP     P       02 39 11.1 -0.7
      comp=Z,15nm,0.9s
ZALV  Zalesovo Beam     42.50 307  P     P       02 39 10.3 -1.5
      comp=Z,16nm,1.0s,baz=76,slow=6.3,SNR=21
ZALV                             PcP    PcP      02 41 04.4 +0.3
      comp=Z,33nm,0.9s,baz=86,slow=2.1,SNR=16
ZALV                             LR     LR       02 58 08.6
      comp=Z,32µm,18.3s,baz=68,slow=38
ZALV  Zalesovo Beam     42.50 307 eP     P       02 39 10.6 -1.2
ZALV  Zalesovo Beam     42.50 307 eP     P       02 39 10.6 -1.2
NVS   Novosibirsk       43.13 308 eP     P       02 39 16.0 -0.9
NVS                             e                02 41 05.0
NVS                             e                02 49 14.8
NVS                              pmax   pmax
      comp=Z,70nm,2.0s
NVS                              pmax   pmax
      comp=E,45nm,2.2s
QIZ   Qiongzhong        43.24 247  P     P       02 39 19.5 +1.3
QIZ                              S      S        02 45 46.0 +2.3
QIZ                              sS     pS       02 45 52.0 -0.8
QIZ                              pmax   pmax
      comp=E,1µm,4.7s
QIZ                              LR     LR
      comp=E,9µm,18.1s
QIZ                              LR     LR
      comp=E,7µm,15.2s
QIZ                              LR     LR
      comp=E,9µm,14.7s
QIZ   Qiongzhong        43.24 247 eP     P       02 39 18.7 +0.5
      comp=E,74nm,1.6s
QIZ                              LR     LR
      comp=Z,7µm,20.0s
JOHN  Johnston Islan    43.30 118  PFAKE         02 39 30.0  +11
JOHN                             LR     LR
      comp=Z,8µm,20.0s
INK   Inuvik            43.45  31  LR     LR       03 00 47.1
      comp=Z,5µm,18.3s,baz=284,slow=41
INK   Inuvik            43.45  31 eP     P       02 39 19.6 +0.3
      comp=Z,121nm,1.0s
INK   Inuvik            43.45  31 eP     P       02 39 19.6 +0.3
INK                              pmax   pmax
      comp=Z,121nm,1.0s
KMI   Kunming           43.85 259  P     P       02 39 23.5 +0.1
KMI                              PP     PcP      02 41 10.6 +1.2
KMI                              S      S        02 45 53.4 +0.4
KMI                              pmax   pmax
      comp=Z,55nm,1.9s
KMI                              pmax   pmax
      comp=Z,1µm,7.6s
KMI                              LR     LR
      comp=Z,11µm,19.4s
KMI                              LR     LR
      comp=Z,5µm,18.0s
KMI                              LR     LR
      comp=Z,10µm,17.5s
DAV   Davao City (W)    44.25 218⇑eP     P       02 39 25.2 -1.1
WMQ   Urumqi            44.36 292  P     P       02 39 28.8 +1.7
WMQ                              pP     pP       02 39 33.1 -1.8
WMQ                              sP     sP       02 39 35.2 -2.8
WMQ                              S      S        02 46 04.5 +4.7
WMQ                              SS     SS       02 49 10.3 -8.3
WMQ                              pmax   pmax
      comp=Z,210nm,1.3s
WMQ                              pmax   pmax
      comp=Z,5µm,6.1s
WMQ                              LR     LR
      comp=Z,42µm,16.5s
WMQ                              LR     LR
      comp=Z,29µm,14.7s
WMQ                              LR     LR
      comp=Z,23µm,19.1s
SKAG  Skagway           44.47  44  PFAKE         02 39 40.0  +12
SKAG                             LR     LR
      comp=Z,4µm,19.0s
ZSN   Zaisan            44.69 298 i P    P       02 39 30.9 +1.3
      comp=Z,3.4nm,1.1s
ZSN                              LR     LR       02 58 59.6
      comp=Z,3µm,16.1s
BESE  Bessie Mountai    44.95  45 eP     P       02 39 34.4 +2.8
      comp=Z,216nm,1.4s
BESE                             LR     LR
      comp=Z,7µm,20.0s
SIT   Sitka             45.16  48  PFAKE         02 39 40.0 +6.9
SIT                              LR     LR
      comp=Z,100nm,19.0s
JIS   Juneau Island     45.27  46 eP     P       02 39 36.2 +2.3
      comp=Z,124nm,1.2s
JIS                              LR     LR
      comp=Z,7µm,20.0s
KEKH  Kekaha            46.00 104  PFAKE         02 39 50.0  +10
KEKH                             LR     LR
      comp=Z,4µm,20.0s
SEM   Semipalatinsk     46.34 303 eP     P       02 39 45.0 +2.1
      comp=Z,23nm,1.1s
SEM                             eS      S        02 46 30.4 +1.9
SEM                              LR     LR       02 59 47.3
      comp=Z,4µm,17.1s
MK31  Makanchi Array    46.56 298 eP     P       02 39 43.9 -0.5
MK31                            ePcP    PcP      02 41 16.7 -1.6
MK31  Makanchi Array    46.56 298 i P    P       02 39 44.6 +0.2
MK31                             pmax   pmax
      comp=Z,39nm,0.8s
MK32  Makanchi Array    46.56 298 eP     P       02 39 43.7 -0.7
MK32                            ePcP    PcP      02 41 18.2 -0.1
MKAR  Makanchi Array    46.56 298  P     P       02 39 43.7 -0.7
      comp=Z,33nm,0.9s,baz=73,slow=7.6,SNR=85
MKAR                             PcP    PcP      02 41 18.2 -0.1
      comp=Z,10nm,0.7s,baz=50,slow=0.9,SNR=5.2
MKAR                             LR     LR       03 00 35.4
      comp=Z,36µm,18.6s,baz=66,slow=38
MKAR  Makanchi Array    46.56 298 eP     P       02 39 43.9 -0.6
      comp=Z,258nm,0.9s
MKAR                             LR     LR
      comp=Z,8µm,18.0s
MK01  Makanchi Array    46.57 298 eP     P       02 39 43.6 -0.9
MK01                            ePcP    PcP      02 41 18.2  0.0
MAKZ  Makanchi          46.75 298 eP     P       02 39 46.0 +0.1
      comp=Z,48nm,1.0s
MAKZ                             LR     LR
      comp=Z,38µm,18.0s
MAKZ  Makanchi          46.75 298  P     P       02 39 46.0 +0.1
MAKZ                             pmax   pmax
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      comp=Z,67nm,1.4s
CRAG  Craig             46.84  49 eP     P       02 39 49.4 +3.0
      comp=Z,153nm,1.4s
CRAG                             LR     LR
      comp=Z,5µm,18.0s
WRAK  Wrangell Islan    46.92  48 eP     P       02 39 50.1 +3.1
      comp=Z,172nm,1.4s
WRAK                             LR     LR
      comp=Z,3µm,18.0s
KURK  Kurchatov         47.18 304 eP     P       02 39 47.7 -1.4
      comp=Z,48nm,0.9s
KURK                            ePcP    PcP      02 41 20.4 +0.1
KURK                            eS      S        02 46 43.2 +3.2
KURK                             LR     LR
      comp=Z,7µm,18.0s
KURK  Kurchatov         47.18 304  P     P       02 39 48.1 -1.1
      SNR=25
KURK  Kurchatov         47.18 304ceP     P       02 39 47.3 -1.8
KURK                             pmax   pmax
      comp=Z,76nm,1.3s
KURBB Kurchatov Arra    47.27 304  P     P       02 39 48.4 -1.4
      comp=Z,66nm,1.1s,baz=72,slow=8.7,SNR=100
KURBB                            PcP    PcP      02 41 20.3 -0.3
      comp=Z,19nm,0.9s,baz=70,slow=3.2,SNR=7.8
KURBB                            S      S        02 46 43.2 +1.9
      comp=Z,0.3nm,0.3s,baz=71,slow=15,SNR=6.5
LKP   Lekhapani         47.30 267 eP     P       02 39 51.6 +1.3
MANU  Manus Island      47.33 186 eP     P       02 39 51.6 +0.9
      comp=Z,75nm,1.3s
MANU                             LR     LR
      comp=Z,5µm,18.0s
OPA   Opana             47.36 103  PFAKE         02 40 00.0 +9.1
OPA                              LR     LR
      comp=Z,5µm,19.0s
DLBC  Dease Lake        47.40  44 eP     P       02 39 52.4 +1.6
      comp=Z,156nm,1.3s
DLBC                             LR     LR
      comp=Z,5µm,18.0s
KIP   Kipapa            47.54 103  PFAKE         02 40 00.0 +7.8
KIP                              LR     LR
      comp=Z,4µm,19.0s
KIP   Kipapa            47.54 103ceP     P       02 39 54.3 +2.1
KIP                              pmax   pmax
      comp=Z,1µm,2.5s
HON   Honolulu          47.61 103  PFAKE         02 40 00.0 +7.2
HON                              LR     LR
      comp=Z,4µm,20.0s
TARA  Tarawa            47.73 150  PFAKE         02 40 10.0  +16
TARA                             LR     LR
      comp=Z,13µm,20.0s
DIBR  DIBRUGARH         47.88 268 eP     P       02 39 55.0 +0.2
DIB   Dawson Inlet,     48.04  52 eP     P       02 39 57.8 +2.0
      comp=Z,70nm,1.2s
DIB                              LR     LR
      comp=Z,4µm,20.0s
ZIRO  ZIRO              48.59 269 eP     P       02 40 01.2 +0.7
JORH  JORHAT            48.78 268 eP     P       02 40 01.7 -0.1
MOKO  MOKOCHONG         48.86 267 eP     P       02 40 02.3 -0.3
ITAN  ITANAGAR          48.91 269 eP     P       02 40 03.8 +1.0
LSA   Lhasa             49.20 273  P     P       02 40 06.7 +1.2
LSA                              PP     PP       02 41 54.2 -5.1
LSA                              S      S        02 47 03.6 -6.4
LSA                              pmax   pmax
      comp=Z,2µm,9.0s
LSA                              LR     LR
      comp=Z,2µm,27.0s
LSA                              LR     LR
      comp=Z,2µm,21.0s
LSA                              LR     LR
      comp=Z,7µm,24.0s
LSA   Lhasa             49.20 273 eP     P       02 40 07.3 +1.8
      comp=Z,111nm,1.0s
LSA                              LR     LR
      comp=Z,9µm,19.0s
LSA   Lhasa             49.20 273  P     P       02 40 07.0 +1.5
LSA   Lhasa             49.20 273 eP     P       02 40 07.3 +1.8
LSA                              pmax   pmax
      comp=Z,111nm,1.0s
LSA                              MLR    MLR
      comp=Z,9µm,19.0s
HLK   Haleakala         49.20 102  PFAKE         02 40 20.0  +15
HLK                              LR     LR
      comp=Z,3µm,20.0s
TNTI  Ternate           49.22 213  PFAKE         02 40 20.0  +15
TNTI                             LR     LR
      comp=Z,2µm,19.0s
MYLDM Lahad Datu        49.24 226 eP     P       02 40 07.8 +2.4
      comp=Z,57nm,1.3s
RABL  Rabaul            49.33 179  PFAKE         02 40 20.0  +14
RABL                             LR     LR
      comp=Z,5µm,19.0s
KOHI  KOHIMA            49.52 267 eP     P       02 40 07.8 +0.2
KKM   Kota Kinabalu     49.69 229  PFAKE         02 40 20.0  +11
KKM                              LR     LR
      comp=Z,5µm,20.0s
TDK   Taldyqorghan      49.79 297 eP     P       02 40 09.4 +0.1
      comp=Z,151nm,1.1s
TDK                             eS      S        02 47 17.1  0.0
TDK                              LR     LR       03 02 02.4
      comp=Z,26µm,16.7s
CMAI  Chiengmai2        49.84 257  P     P       02 40 11.9 +1.8
      comp=Z,16nm,1.2s,comp=Z,710nm
TEZP  TEZPUR            49.88 269 eP     P       02 40 09.7 -0.6
TEZP                             IAmb   IAmb     02 40 12.1
      comp=Z,63nm,0.6s
SHLS  Shalkode          50.00 295 eP     P       02 40 09.6 -1.5
      comp=Z,84nm,2.1s
SHLS                            eS      S        02 47 16.7 -3.6
SHLS                             LR     LR       03 02 14.6
      comp=Z,2µm,15.2s
HPAH  Hawaii Prepara    50.07 102  PFAKE         02 40 20.0 +8.2
HPAH                             LR     LR
      comp=Z,3µm,20.0s
HUH   Hualalai          50.21 103  PFAKE         02 40 30.0  +17
HUH                              LR     LR
      comp=Z,4µm,21.0s
UZB   Uzynbulak         50.28 295⇑iP     P       02 40 13.5 +0.2
      comp=Z,71nm,1.2s
UZB                             eS      S        02 47 24.1 -0.1
UZB                              LR     LR       03 02 31.1
      comp=Z,2µm,16.1s
KPKS  Kokpek            50.35 295⇑iP     P       02 40 14.3 +0.6
      comp=Z,99nm,1.1s
KPKS                            eS      S        02 47 25.6 +0.5
KPKS                             LR     LR       03 02 34.2
      comp=Z,6µm,16.2s
POHA  Pohakuloa         50.37 102  PFAKE         02 40 30.0  +16
POHA                             LR     LR
      comp=Z,3µm,20.0s
LAMP  Lampang           50.40 255  P     P       02 40 16.1 +1.9
      comp=Z,21nm,0.9s,comp=Z,198nm
MLOA  Mauna Loa Obse    50.49 103  PFAKE         02 40 30.0  +15
MLOA                             LR     LR
      comp=Z,4µm,19.0s
HMH   Humu‘ula Sheep    50.51 102  PFAKE         02 40 30.0  +15
HMH                              LR     LR
      comp=Z,4µm,19.0s
MWH   Moku‘aweowe       50.51 103  PFAKE         02 40 30.0  +14
MWH                              LR     LR
      comp=Z,4µm,19.0s
MLH   Mauna Loa         50.65 102  PFAKE         02 40 30.0  +14
MLH                              LR     LR
      comp=Z,4µm,19.0s
ZHN   Zhinishke         50.65 295 i P    P       02 40 16.8 +0.7
      comp=Z,74nm,1.3s
ZHN                              LR     LR       03 02 46.4
      comp=Z,3µm,15.7s
CMMT  Chiang Mai        50.67 256  P     P       02 40 17.4 +1.1
      comp=Z,91nm,1.5s,comp=Z,2µm
CHTO  Chiang Mai        50.67 256 eP     P       02 40 16.9 +0.6
      comp=Z,88nm,1.1s
CHTO                             LR     LR
      comp=Z,6µm,20.0s
CHTO  Chiang Mai        50.67 256  P     P       02 40 17.1 +0.8
      SNR=24
CHTO  Chiang Mai        50.67 256  P     P       02 40 17.5 +1.2
      comp=Z,412nm,1.6s,comp=Z,8µm
AIN   Ainahou           50.68 103  PFAKE         02 40 30.0  +13
AIN                              LR     LR
      comp=Z,5µm,19.0s
SATY  Saty              50.72 295⇑iP     P       02 40 17.2 +0.7
      comp=Z,147nm,1.3s
SATY                            eS      S        02 47 30.8 +0.5
SATY                             LR     LR       03 02 47.6
      comp=Z,3µm,15.6s
UWE   Uwekahuna         50.76 102  PFAKE         02 40 30.0  +13
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UWE                              LR     LR
      comp=Z,4µm,19.0s
UWB   Uwekahuna B       50.77 102  PFAKE         02 40 30.0  +13
UWB                              LR     LR
      comp=Z,6µm,22.0s
OBL   Observatory Le    50.77 102  PFAKE         02 40 30.0  +13
OBL                              LR     LR
      comp=Z,4µm,22.0s
NPH   North Pit         50.78 102  PFAKE         02 40 30.0  +13
NPH                              LR     LR
      comp=Z,6µm,22.0s
HATHI Halema‘uma‘u T    50.78 102  PFAKE         02 40 30.0  +13
HATHI                            LR     LR
      comp=Z,4µm,18.0s
SDHHI Sand Hill         50.78 103  PFAKE         02 40 30.0  +13
SDHHI                            LR     LR
      comp=Z,4µm,19.0s
RIM   Rim               50.79 102  PFAKE         02 40 30.0  +13
RIM                              LR     LR
      comp=Z,4µm,19.0s
PHIT  Phitsanulok       50.80 254  P     P       02 40 19.3 +2.1
      comp=Z,31nm,1.0s
KKO   Keanakako‘i       50.80 102  PFAKE         02 40 30.0  +13
KKO                              LR     LR
      comp=Z,4µm,20.0s
HLP   Hilina Pali       50.84 103  PFAKE         02 40 30.0  +12
HLP                              LR     LR
      comp=Z,4µm,18.0s
BVA0  Borovoye Array    50.86 310 i P    P       02 40 16.9 -0.4
BVA0                             pmax   pmax
      comp=Z,34nm,1.2s
BVAR  Borovoye Array    50.86 310  P     P       02 40 16.4 -0.9
      comp=Z,14nm,0.9s,baz=52,slow=9.3,SNR=42
BVAR                             PcP    PcP      02 41 33.6 -0.1
      comp=Z,16nm,0.8s,baz=72,slow=1.8,SNR=6.0
BVAR                             LR     LR       03 03 47.5
      comp=Z,20µm,18.3s,baz=59,slow=38
PBKT  Sadao Pong        50.86 253  P     P       02 40 19.1 +1.4
      comp=Z,31nm,1.5s,comp=Z,1µm
BBB   Bella Bella       50.88  51  PFAKE         02 40 30.0  +13
BBB                              LR     LR
      comp=Z,3µm,19.0s
BRVK  Borovoye          50.90 310 eP     P       02 40 17.0 -0.5
      comp=Z,29nm,0.9s
BRVK                             LR     LR
      comp=Z,21µm,19.0s
BRVK  Borovoye          50.90 310  P     P       02 40 16.4 -1.2
      SNR=22
BRVK  Borovoye          50.90 310ceP     P       02 40 15.7 -1.9
BRVK                             pmax   pmax
      comp=Z,59nm,1.7s
STCH  Steam Cracks      50.90 102  PFAKE         02 40 30.0  +12
STCH                             LR     LR
      comp=Z,4µm,18.0s
CMAR  Chiang Mai Arr    50.92 256  P     P       02 40 18.2 +0.1
      comp=Z,11nm,0.9s,baz=38,slow=7.7,SNR=44
CMAR                             PcP    PcP      02 41 35.5 +1.2
      comp=Z,12nm,0.9s,baz=20,slow=3.7,SNR=5.3
CMAR                             LR     LR       03 03 45.6
      comp=Z,6µm,18.9s,baz=47,slow=38
GUWA  GUWAHATI          50.93 269 eP     P       02 40 17.9 -0.3
CM01  Chiang Mai Arr    50.93 256 eP     P       02 40 16.9 -1.3
BRZS  Berezniki         50.94 305⇑iP     P       02 40 16.6 -1.4
      comp=Z,13nm,0.7s
BRZS                             LR     LR       03 02 43.4
      comp=Z,4µm,14.7s
HULD  Heiheiahulu Di    50.99 102  PFAKE         02 40 30.0  +11
HULD                             LR     LR
      comp=Z,4µm,22.0s
PRZ   Przheval’sk       51.01 294 eP     P       02 40 20.9 +2.0
      comp=Z,286nm,1.2s
PRZ                              LR     LR
      comp=Z,13µm,18.0s
FAKI  Fak Fak           51.02 205  P     P       02 40 18.5 -0.3
FAKI  Fak Fak           51.02 205 eP     P       02 40 19.1 +0.2
      comp=Z,96nm,1.2s
FAKI                             LR     LR
      comp=Z,6µm,19.0s
SILR  SILCHAR           51.02 267 eP     P       02 40 19.5 +0.7
SHL   Shillong          51.18 268 eP     P       02 40 20.3  0.0
      comp=Z,388nm,1.1s
SHL                              LR     LR
      comp=Z,7µm,19.0s
SHL   Shillong          51.18 268 eP     P       02 40 19.1 -1.1
SHL   Shillong          51.18 268⇑iP     P       02 40 22.0 +1.7
SHL                             eS      PcP      02 41 37.0 +1.5
SHL   Shillong          51.18 268 eP     P       02 40 20.3  0.0
SHL                              pmax   pmax
      comp=Z,388nm,1.1s
SHL                              MLR    MLR
      comp=Z,7µm,19.0s
MDOK  Medeo             51.53 296 i P    P       02 40 23.4 +0.7
      comp=Z,1µm,1.0s
MDOK                            eS      S        02 47 42.1 +0.5
MDOK                             LR     LR       03 02 57.4
      comp=Z,9µm,16.6s
AAA   Alma-Ata          51.60 296 eP     P       02 40 23.8 +0.8
      comp=Z,129nm,1.2s
AAA                              LR     LR       03 03 05.4
      comp=Z,8µm,16.9s
AAA   Alma-Ata          51.60 296 eP     P       02 40 24.6 +1.5
AAA                             eS      S        02 47 45.5 +3.2
AAA                              pmax   pmax
      comp=Z,900nm,4.3s
AAA                              smax   smax
      comp=N,800nm,14.5s
AAA                              MLR    MLR
      comp=Z,11µm,16.0s
KUU   Kurty             51.62 297 eP     P       02 40 22.7 -0.5
      comp=Z,134nm,1.8s
KUU                              LR     LR       03 03 07.2
      comp=Z,13µm,15.8s
TARG  Taragay, Kyrgy    51.77 294 eP     P       02 40 26.2 +1.4
      comp=Z,148nm,1.1s
TARG                            ePcP    PcP      02 41 39.5 +1.8
TARG                             LR     LR
      comp=Z,21µm,18.0s
SRAK  Srakaew           51.98 249  P     P       02 40 24.9 -1.2
      comp=Z,204nm,1.1s,comp=Z,2µm
TURI  Tura              52.28 269 eP     P       02 40 28.3  0.0
GTK   Tadong            52.41 272 eP     P       02 40 29.6 +0.2
GTK                              IAmb   IAmb     02 40 32.5
BTLS  Baital            52.48 299⇑iP     P       02 40 29.2 -0.3
      comp=Z,20nm,1.1s
BTLS                             LR     LR       03 04 02.2
      comp=Z,3µm,14.7s
ULHL  Ulahol            52.51 295  P     P       02 40 31.4 +1.3
      SNR=18
RES   Resolute Bay      52.52  18 eP     P       02 40 29.6 +0.3
RES   Resolute Bay      52.52  18 eP     P       02 40 29.6 +0.3
      comp=Z,47nm,1.0s
RES                              LR     LR
      comp=Z,6µm,20.0s
RES   Resolute Bay      52.52  18 eP     P       02 40 29.6 +0.3
RES                              pmax   pmax
      comp=Z,47nm,1.0s
RES                              MLR    MLR
      comp=Z,6µm,20.0s
UMPA  Umpang Tak        52.54 254  P     P       02 40 33.3 +3.0
      comp=Z,24nm,1.0s
TKM2  Tokmak 2          52.58 296  P     P       02 40 31.6 +1.1
      SNR=98
UTHA  Uthaitani         52.60 253  P     P       02 40 32.7 +2.0
      comp=Z,16nm,0.9s,comp=Z,136nm
AGT   Agartala          52.69 267 eP     P       02 40 31.3 +0.1
YKW3  Yellowknife Ar    52.69  36 eP     P       02 40 30.8  0.0
      comp=Z,84nm,1.1s
YKW3                             LR     LR
      comp=Z,4µm,19.0s
CHBT  CHBT              52.72 248  P     P       02 40 34.2 +2.6
      comp=Z,71nm,1.2s,comp=Z,562µm
LUWI  Luwuk             52.73 217  PFAKE         02 40 40.0 +8.4
LUWI                             LR     LR
      comp=Z,2µm,20.0s
YKA   Yellowknife Ar    52.73  36  P     P       02 40 31.1  0.0
      comp=Z,20nm,1.0s,baz=298,slow=7.5,SNR=28
YKA                              S      S        02 47 57.5 +0.5
      comp=Z,0.8nm,0.8s,baz=302,slow=16,SNR=2.7
YKA                              LR     LR       03 06 35.6
      comp=Z,356nm,18.4s,baz=307,slow=40
MPSI  Mapaga            52.77 221  P     P       02 40 31.7 -0.2
BELO  BELONIA           52.95 266 eP     P       02 40 34.4 +1.2
TAPN  Taplejung         53.02 273 eP     P       02 40 35.3 +1.2
      comp=Z,384nm,1.2s
CHMS  Chumysh           53.07 297  P     P       02 40 36.2 +2.2
      SNR=37
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USP	**Ospenovka**	53.09	297	P	P	02 40 35.2	+1.0
	SNR=122						
APSI	**Ampana**	53.09	218	P	P	02 40 33.7	-0.6
	comp=Z,84nm,1.1s,comp=Z,1µm						
KBK	**Karagaybulak**	53.12	296	P	P	02 40 35.6	+1.1
	SNR=66						
BRDH	**Bariadhala**	53.18	266	P	P	02 40 35.4	+0.4
	comp=Z,104nm,0.6s,baz=60,slow=11,SNR=4.7						
KZA	**Kyzart**	53.23	296	P	P	02 40 37.4	+1.8
	SNR=79						
FRU	**Bishkek**	53.24	297	⇑*e*P	P	02 40 35.0	-0.2
FRU				*e*		02 41 40.0	
FRU				*e*S	S	02 48 04.0	-0.7
FRU				*e*		02 50 16.0	
FRU				pmax	pmax		
	comp=Z,780nm,2.3s						
FRU1	**Bishkek**	53.24	297	PFAKE		02 40 50.0	+15
FRU1				LR	LR		
	comp=Z,18µm,19.0s						
AAK	**Ala-Archa**	53.42	296	P	P	02 40 37.4	+0.8
	SNR=60						
AAK	**Ala-Archa**	53.42	296	*e*P	P	02 40 37.6	+0.9
AAK	**Ala-Archa**	53.42	296	*e*P	P	02 40 37.6	+0.9
	comp=Z,114nm,0.9s						
AAK				LR	LR		
	comp=Z,17µm,18.0s						
ODAN	**Odare**	53.55	273	*e*P	P	02 40 38.8	+0.9
	comp=Z,687nm,1.5s						
UCH	**Uchtor**	53.62	296	P	P	02 40 39.8	+1.2
	SNR=9.5						
SRDT	**SRDT**	53.69	252	P	P	02 40 40.5	+1.8
	comp=Z,40nm,2.1s,comp=Z,3µm						
KBS	**Kingsbay**	53.70	351	*e*P	P	02 40 37.9	-0.1
	comp=Z,159nm,1.0s						
KBS				LR	LR		
	comp=Z,6µm,18.0s						
KBS	**Kingsbay**	53.70	351	*e*P	P	02 40 37.0	-1.0
KBS				IAmb	IAmb	02 40 39.6	
	comp=Z,160nm,1.0s						
KBS				IAMs_20	IAMs_20	03 04 53.9	
	comp=Z,6µm,18.4s						
SPA0	**Spitsbergen Ar**	53.78	350	*e*P	P	02 40 39.1	+0.4
SPA0	**Spitsbergen Ar**	53.78	350	*e*P	P	02 40 38.5	-0.1
SPA0				IAMs_20	IAMs_20	03 04 58.5	
	comp=Z,7µm,18.4s						
SPITS	**Spitsbergen Ar**	53.78	350	P	P	02 40 37.5	-1.2
	comp=Z,30nm,0.7s,baz=23,slow=16,SNR=38						
SPITS				LR	LR	03 05 13.1	
	comp=Z,6µm,19.0s,baz=10.0,slow=38						
EKS2	**Erkin-Say**	53.86	297	P	P	02 40 40.9	+1.1
	SNR=113						
JIRN	**Jiri**	53.90	274	*e*P	P	02 40 41.7	+1.0
	comp=Z,952nm,1.2s						
GUN	**Gumba**	53.97	275	*e*P	P	02 40 42.0	+0.9
	comp=Z,822nm,1.2s						
RAMN	**Ramite**	54.05	273	*e*P	P	02 40 42.3	+0.7
	comp=Z,633nm,1.0s						
SVE	**Sverdlovsk**	54.07	317	*de*P	P	02 40 39.8	-1.2
SVE				pmax	pmax		
	comp=Z,83nm,0.9s						
SVE				MLR	MLR		
	comp=Z,8µm,16.0s						
KSH	**Kashi**	54.12	292	P	P	02 40 46.4	+4.6
KSH				sP	sP	02 40 53.3	+0.4
KSH				*e*PcP	PcP	02 41 49.4	+3.1
KSH				PcS	PcS	02 45 48.0	+2.2
KSH				S	S	02 48 22.7	+5.9
KSH				ScS	ScS	02 50 31.8	+2.4
KSH				pmax	pmax		
	comp=Z,280nm,1.3s						
KSH				pmax	pmax		
	comp=Z,1µm,5.3s						
KSH				LR	LR		
	comp=Z,16µm,16.7s						
KSH				LR	LR		
	comp=Z,10µm,16.2s						
KSH				LR	LR		
	comp=Z,18µm,17.7s						
AML	**Almayashu**	54.19	296	P	P	02 40 44.0	+1.4
	SNR=13						
PHET	**Kaeng Krachan**	54.38	251	P	P	02 40 46.0	+2.2
	comp=Z,31nm,1.0s,comp=Z,241nm						
KKN	**Kakani**	54.46	275	*e*P	P	02 40 45.5	+0.9
	comp=Z,522nm,1.2s						
PKIN	**Phulchoki**	54.51	275	*e*P	P	02 40 45.5	+0.5
	comp=Z,605nm,1.4s						
PMG	**Port Moresby**	54.65	185	P	P	02 40 44.5	-1.1
	comp=Z,3.9nm,0.3s,baz=174,slow=9.2,SNR=3.6						
PMG				LR	LR	03 00 52.8	
	comp=Z,2µm,21.9s,baz=326,slow=32						
DMN	**Daman**	54.70	275	*e*P	P	02 40 47.3	+1.0
	comp=Z,1µm,1.5s						
GKN	**Gorkha**	54.79	276	*e*P	P	02 40 47.7	+0.9
	comp=Z,1µm,1.2s						
HSPB	**Hornsund (broa**	54.83	349	*e*P	P	02 40 44.8	-1.4
HSPB				*e*S	S	02 48 24.4	-0.7
SBUM	**Sibu**	54.85	231	PFAKE		02 41 00.0	+13
SBUM				LR	LR		
	comp=Z,8µm,20.0s						
LLLB	**Lillooet**	55.06	51	*e*P	P	02 40 48.4	0.0
	comp=Z,73nm,1.3s						
LLLB				LR	LR		
	comp=Z,3µm,20.0s						
HNR	**Honiara**	55.07	170	LR	LR	03 03 09.4	
	comp=Z,5µm,20.2s,baz=333,slow=35						
DANN	**Dangsing**	55.19	277	*e*P	P	02 40 51.0	+1.1
	comp=Z,855nm,1.2s						
PGC	**Sidney**	55.20	54	PFAKE		02 41 00.0	+11
PGC				LR	LR		
	comp=Z,3µm,21.0s						
ARU	**Arti**	55.26	318	*e*P	P	02 40 48.5	-1.2
	comp=Z,72nm,1.1s						
ARU				LR	LR		
	comp=Z,8µm,18.0s						
ARU	**Arti**	55.26	318	*c i*P	P	02 40 47.7	-1.9
ARU				*e*		02 41 46.5	
ARU						02 42 51.8	
ARU				PPP	PPP	02 44 02.6	
ARU				*e*S	S	02 48 29.3	-2.1
ARU				*e*		02 50 33.2	
ARU				SS	SS	02 52 16.5	+1.4
ARU				SSS	SSS	02 54 23.4	
ARU				pmax	pmax		
	comp=Z,92nm,1.2s						
ARU				MLR	MLR		
	comp=Z,14µm,17.0s						
DZA	**Taraz**	55.27	298	*e*P	P	02 40 50.6	+0.7
	comp=Z,99nm,1.0s						
DZA				LR	LR	03 05 39.4	
	comp=Z,12µm,14.1s						
A04D	**Lummi Island**	55.58	53	P	P	02 40 50.5	-1.5
	baz=302						
NLWA	**Neilton Lookou**	55.61	55	*e*P	P	02 40 52.5	+0.2
	comp=Z,82nm,1.1s						
NLWA				LR	LR		
	comp=Z,4µm,21.0s						
KOLN	**Koldanda**	55.66	276	*e*P	P	02 40 54.0	+0.8
	comp=Z,378nm,1.2s						
KK31	**Karatay Array**	55.66	299	*e*P	P	02 40 53.0	+0.2
KK31				*e*PP	PP	02 42 53.1	-3.7
KK31	**Karatay Array**	55.66	299	*i* P	P	02 40 53.0	+0.2
KK31				pmax	pmax		
	comp=Z,142nm,1.0s						
KKAR	**Karatay Array**	55.66	299	*e*P	P	02 40 53.0	+0.2
KKAR				*e*PP	PP	02 42 53.0	-3.8
KKAR	**Karatay Array**	55.66	299	*e*P	P	02 40 53.0	+0.2
KKAR				*e*		02 42 53.0	
TULEG	**Thule**	55.71	11	*e*P	P	02 40 52.2	-0.3
	comp=Z,123nm,1.2s						
TULEG				LR	LR		
	comp=Z,14µm,19.0s						
PYUN	**Piuthan**	55.88	277	*e*P	P	02 40 55.7	+0.9
	comp=Z,553nm,1.1s						
B05A	**Bryant**	56.17	53	P	P	02 40 55.4	-0.9
	baz=302,SNR=10.0						
E03A	**Lebam**	56.24	56	*e*P	P	02 40 58.6	+1.8
	comp=Z,59nm,1.0s						
E03A				LR	LR		
	comp=Z,2µm,19.0s						
B06A	**Marblemount**	56.38	53	*e*P	P	02 40 58.8	+1.0
	comp=Z,71nm,1.2s						
B06A				LR	LR		
	comp=Z,3µm,20.0s						
IUG	**Iuzhnay**	56.48	298	⇑*i*P	P	02 40 59.6	+0.9
	comp=Z,137nm,0.9s						
IUG				*e*S	S	02 48 48.9	+0.7
IUG				LR	LR	03 05 51.0	
	comp=Z,6µm,17.6s						
BOK	**Bokaro**	56.52	271	*e*P	P	02 40 58.5	-0.6
F03A	**Seaside**	56.57	56	PFAKE		02 41 10.0	+11
F03A				LR	LR		
	comp=Z,2µm,21.0s						
SPSI	**Sidrap Palu**	56.64	219	P	P	02 40 59.8	-0.2
KSM	**Kuching**	56.71	232	*e*P	P	02 41 01.7	+1.2
	comp=Z,52nm,1.0s						
KSM				LR	LR		
	comp=Z,3µm,20.0s						
D05A	**Enumclaw**	56.80	54	*e*P	P	02 41 02.3	+1.5
	comp=Z,86nm,1.1s						
D05A				LR	LR		
	comp=Z,2µm,20.0s						
F04D	**Rainier, OR**	56.81	56	P	P	02 40 59.5	-1.4
	baz=303						
C06D	**Leavenworth**	57.03	53	P	P	02 41 01.2	-1.3
	baz=303						
WRW	**Wenatchee Ridg**	57.07	53	*e*P	P	02 41 02.3	-0.6
G03D	**McMinnville, O**	57.14	57	P	P	02 41 01.6	-1.6
	baz=303						
LON	**Longmire**	57.15	55	*e*P	P	02 41 04.7	+1.3
	comp=Z,21nm,1.1s						
LON				LR	LR		
	comp=Z,2µm,20.0s						
LON	**Longmire**	57.15	55	*e*P	P	02 41 04.7	+1.3
LON				pmax	pmax		
	comp=Z,21nm,1.1s						
LON				MLR	MLR		
	comp=Z,2µm,20.0s						
COR	**Corvallis**	57.46	58	*e*P	P	02 41 05.7	+0.2
	comp=Z,121nm,1.0s						
COR				LR	LR		
	comp=Z,3µm,20.0s						
COR	**Corvallis**	57.46	58	*e*P	P	02 41 05.7	+0.2
COR				pmax	pmax		
	comp=Z,121nm,1.0s						
COR				MLR	MLR		
	comp=Z,3µm,20.0s						
LTY	**Liberty**	57.52	54	*e*P	P	02 41 05.9	-0.1
	comp=Z,63nm,1.3s						
LTY				LR	LR		
	comp=Z,3µm,21.0s						
KAPI	**Kappang**	57.59	218	PFAKE		02 41 20.0	+13
KAPI				LR	LR		
	comp=Z,2µm,20.0s						
B08A	**Colville Reser**	57.67	52	*e*P	P	02 41 06.1	-0.8
	comp=Z,88nm,1.3s						
B08A				LR	LR		
	comp=Z,4µm,20.0s						
BKSI	**Bulukumba**	57.70	218	P	P	02 41 07.3	-0.1
KEBM	**Edson Butte**	57.79	60	*e*P	P	02 41 12.6	+4.7
	comp=Z,100nm,1.1s						
KEBM				LR	LR		
	comp=Z,3µm,21.0s						
PRGR	**Permogore**	57.91	327	*e*P	P	02 41 06.8	-1.6
PRGR				*e*S	S	02 49 03.2	-3.1
PRGR				pmax	pmax		
	comp=Z,95nm,1.0s						
I03D	**Drain, OR**	57.93	59	P	P	02 41 08.9	+0.1
	baz=304,SNR=8.0						
DDI	**Dehra Dun**	57.97	282	*e*P	P	02 41 10.2	+0.9
DAG	**Danmarks Havn**	57.99	357	⇑*i*P	P	02 41 07.8	-0.9
	comp=Z,219nm,1.2s						
	comp=Z,5µm,17.0s						
DAG	**Danmarks Havn**	57.99	357	⇑*i*P	P	02 41 07.8	-0.9
DAG				pmax	pmax		
	comp=Z,220nm,1.2s						
DAG				MLR	MLR		
	comp=Z,5µm,17.0s						
SKLT	**Songkhla**	58.01	245	P	P	02 41 12.3	+2.6
	comp=Z,87nm,1.1s,comp=Z,2µm						
DHRM	**DHARAMSHALA**	58.02	285	*e*P	P	02 41 11.3	+1.4
KNTN	**Kanton**	58.02	135	PFAKE		02 41 20.0	+10
KNTN				LR	LR		
	comp=Z,8µm,19.0s						
H04A	**Detroit Lake**	58.07	57	*e*P	P	02 41 10.0	+0.2
	comp=Z,120nm,1.0s						
H04A				LR	LR		
	comp=Z,2µm,19.0s						
SMLA	**Simla**	58.09	283	*e*P	P	02 41 10.6	+0.5
SMLA				IAmb	IAmb	02 41 13.2	
TRTT	**Trang**	58.10	246	P	P	02 41 12.7	+2.4
	comp=Z,23nm,1.5s,comp=Z,599nm						
APA	**Apatity**	58.16	337	⇑*i*P	P	02 41 09.0	-1.0
APA				*i*		02 42 01.0	
APA				*i* PPP	PPP	02 44 41.0	
APA				*i* S	S	02 49 09.0	-0.4
APA				*i* PS	PnS	02 49 20.0	-2.4
APA				*i*		02 50 54.0	
APA				pmax	pmax		
	comp=Z,24nm,1.0s						
KBO	**Bosley Butte**	58.23	60	PFAKE		02 41 20.0	+9.0
KBO				LR	LR		
	comp=Z,2µm,18.0s						
G05D	**Wamic, OR**	58.27	56	P	P	02 41 11.1	-0.1
	baz=304,SNR=12						
KEV	**Kevo**	58.27	340	*e*P	P	02 41 09.7	-1.0
KEV	**Kevo**	58.27	340	*e*P	P	02 41 09.7	-1.0
	comp=Z,45nm,0.9s						
KEV				LR	LR		
	comp=Z,3µm,19.0s						
KEV	**Kevo**	58.27	340	*e*P	P	02 41 09.7	-1.0
KEV				pmax	pmax		
	comp=Z,45nm,0.9s						
KEV				MLR	MLR		
	comp=Z,3µm,19.0s						
HAMF	**Hammerfest**	58.36	342	*e*P	P	02 41 11.0	-0.4
HAMF				IAmb	IAmb	02 41 12.2	
	comp=Z,70nm,1.0s						
E07A	**Sunnyside**	58.37	54	PFAKE		02 41 20.0	+8.1
E07A				LR	LR		
	comp=Z,2µm,21.0s						
AB31	**Akbulak array**	58.43	310	P	P	02 41 12.2	0.0
AB31				pmax	pmax		
	comp=Z,15nm,0.5s						
ABKAR	**Akbulak array**	58.43	310	*e*P	P	02 41 11.7	-0.6
I04A	**Tendick Farm,**	58.43	58	P	P	02 41 11.9	-0.5
	baz=304,SNR=12						
I04A				S	S	02 49 14.9	+1.1
	baz=304						
C09A	**Chrisman Ranch**	58.57	52	*e*P	P	02 41 12.8	-0.4
	comp=Z,62nm,1.0s						
C09A				LR	LR		
	comp=Z,3µm,18.0s						
D08A	**Wollman Farm,**	58.62	53	*e*P	P	02 41 13.9	+0.3
	comp=Z,48nm,1.3s						
D08A				LR	LR		
	comp=Z,3µm,20.0s						
L02D	**Cave Junction,**	58.64	60	P	P	02 41 11.6	-2.2
	baz=305						
HAWA	**Hanford**	58.65	54	*e*P	P	02 41 14.6	+0.7
	comp=Z,90nm,1.3s						
HAWA				LR	LR		
	comp=Z,2µm,20.0s						
G06A	**Carlson Farm,**	58.67	56	*e*P	P	02 41 14.1	0.0
	comp=Z,105nm,1.3s						
G06A				LR	LR		
	comp=Z,2µm,20.0s						
F07A	**Phinny Hill Vi**	58.71	55	*e*P	P	02 41 16.1	+1.9
	comp=Z,91nm,0.9s						
F07A				LR	LR		
	comp=Z,3µm,20.0s						
I05D	**Terrebonne, OR**	58.76	57	P	P	02 41 13.9	-0.8
	baz=305,SNR=11						
HUMO	**Hull Mountain**	58.78	59	*e*P	P	02 41 14.6	-0.2
	comp=Z,34nm,1.4s						
HUMO				LR	LR		
	comp=Z,2µm,20.0s						
ARA0	**ARCESS Array S**	58.78	341	*e*P	P	02 41 13.8	-0.7
ARCES	**ARCESS Array B**	58.78	341	P	P	02 41 13.8	-0.6
	comp=Z,54nm,0.9s,baz=44,slow=5.4,SNR=74						
ARCES				LR	LR	03 09 53.2	
	comp=Z,4µm,19.7s,baz=26,slow=39						
ARCES	**ARCESS Array B**	58.78	341	P	P	02 41 13.8	-0.6
ARCES				pmax	pmax		
	comp=Z,54nm,0.9s						
ARCES				MLR	MLR		
	comp=Z,4µm,19.7s						
ARE0	**ARCESS Array S**	58.78	341	*e*P	P	02 41 14.7	+0.2
	comp=Z,84nm,1.0s						
ARE0				LR	LR		
	comp=Z,4µm,18.0s						
ARE0	**ARCESS Array S**	58.78	341	*e*P	P	02 41 12.7	-1.7
ARE0				IAmb	IAmb	02 41 16.5	
	comp=Z,70nm,0.9s						
ARE0				IAMs_20	IAMs_20	03 12 45.5	
	comp=Z,5µm,20.4s						
AKTO	**Aktyubinsk**	58.79	312	P	P	02 41 13.6	-1.1
	comp=Z,7.5nm,0.5s,baz=51,slow=9.3,SNR=31						
AKTO				PcP	PcP	02 42 05.1	+1.0
	comp=Z,25nm,0.9s,baz=31,slow=2.1,SNR=5.1						
AKTO				LR	LR	03 09 11.2	
	comp=Z,34µm,18.3s,baz=49,slow=39						
KULLO	**Kullorsuaq**	58.82	9	*i* P	P	02 41 13.5	-1.0
	comp=Z,168nm,1.1s						
KULLO	**Kullorsuaq**	58.82	9	*i* P	P	02 41 13.5	-1.0
KULLO				pmax	pmax		
	comp=Z,170nm,1.1s						
BWNR	**Bhubaneshwar**	58.84	268	*e*P	P	02 41 16.6	+1.1
E08A	**Dider Farm, El**	58.87	54	*e*P	P	02 41 16.7	+1.4
	comp=Z,55nm,1.1s						
E08A				LR	LR		
	comp=Z,2µm,21.0s						
J04D	**Umpqua Nationa**	58.93	58	P	P	02 41 13.8	-2.3
	baz=305						
PKDT	**Phuket**	58.94	248	P	P	02 41 20.0	+3.8
	comp=Z,37nm,1.9s						
NEW	**Newport**	58.94	51	LR	LR	03 06 53.6	
	comp=Z,2µm,19.0s,baz=328,slow=36						
NEW	**Newport**	58.94	51	P	P	02 41 13.3	-2.6
	baz=305,SNR=16						
NEW	**Newport**	58.94	51	*e*P	P	02 41 15.3	-0.6
	comp=Z,73nm,1.3s						
NEW				LR	LR		
	comp=Z,3µm,21.0s						
NEW	**Newport**	58.94	51	*e*P	P	02 41 15.3	-0.6
NEW				pmax	pmax		
	comp=Z,73nm,1.3s						
NEW				MLR	MLR		
	comp=Z,3µm,21.0s						
JCC	**Jacoby Creek,**	59.14	62	PFAKE		02 41 30.0	+13
JCC				LR	LR		
	comp=Z,2µm,20.0s						
NIL	**Nilore**	59.25	288	*e*P	P	02 41 19.5	+1.3
	comp=Z,269nm,0.9s						
NIL				LR	LR		
	comp=Z,6µm,21.0s						
NIL	**Nilore**	59.25	288	*e*P	P	02 41 19.5	+1.3
NIL				pmax	pmax		
	comp=Z,269nm,0.9s						
NIL				MLR	MLR		
	comp=Z,6µm,21.0s						
KHMM	**Horse Mountain**	59.30	61	*e*P	P	02 41 20.4	+1.9
	comp=Z,106nm,1.2s						
PINE	**Pine Mountain**	59.31	57	*e*P	P	02 41 18.8	+0.1
	comp=Z,53nm,0.8s						
PINE				LR	LR		
	comp=Z,3µm,19.0s						
E09A	**Wood Farm, Sta**	59.37	53	*e*P	P	02 41 18.4	-0.5
	comp=Z,95nm,1.2s						
E09A				LR	LR		
	comp=Z,2µm,20.0s						
KULM	**Kulim**	59.43	244	*e*P	P	02 41 20.1	+0.6
	comp=Z,118nm,1.2s						
KULM				LR	LR		
	comp=Z,3µm,21.0s						
J05D	**Fort Rock, OR**	59.43	58	P	P	02 41 17.4	-2.1
	baz=305						
YBH	**Yreka Blue Hor**	59.43	60	P	P	02 41 19.3	-0.1
	comp=Z,12nm,1.0s,baz=318,slow=5.8,SNR=10						
YBH				LR	LR	03 03 37.9	
	comp=Z,2µm,21.2s,baz=308,slow=33						
YBH	**Yreka Blue Hor**	59.43	60	*e*P	P	02 41 20.5	+1.1
	comp=Z,66nm,1.3s						
YBH				LR	LR		
	comp=Z,2µm,21.0s						
K04D	**Chiloquin, OR**	59.50	59	P	P	02 41 17.3	-2.6
	baz=305						
COEN	**Coen**	59.51	189	*e*P	P	02 41 23.9	+4.0
	comp=Z,28nm,1.1s						
COEN				LR	LR		
	comp=Z,2µm,20.0s						
M02C	**Callahan**	59.54	61	P	P	02 41 17.3	-2.8
	baz=306,SNR=7.6						
G08A	**Pilot Rock**	59.61	55	*e*P	P	02 41 21.3	+0.6
	comp=Z,46nm,1.1s						
G08A				LR	LR		
	comp=Z,2µm,20.0s						
KTK1	**Kautokeino**	59.71	341	*e*P	P	02 41 20.7	-0.1
IPM	**Ipoh**	59.81	243	PFAKE		02 41 30.0	+7.8
IPM				LR	LR		
	comp=Z,3µm,19.0s						
N02D	**Trinity Center**	59.87	61	P	P	02 41 19.9	-2.5
	baz=306,SNR=14						
PBA	**Port Blair**	59.93	255	PFAKE		02 41 40.0	+17
PBA				LR	LR		
	comp=Z,7µm,20.0s						
M04C	**Macdoel**	59.93	60	P	P	02 41 20.3	-2.6
	baz=306,SNR=9.9						
K05A	**Summer Lake**	59.95	58	*e*P	P	02 41 23.9	+0.7
	comp=Z,59nm,1.0s						
K05A				LR	LR		
	comp=Z,3µm,20.0s						
I07A	**Izee**	59.99	56	*e*P	P	02 41 24.2	+0.9
	comp=Z,35nm,1.4s						
SOEI	**Soe**	60.08	211	P	P	02 41 23.8	-0.3
SOEI	**Soe**	60.08	211	*e*P	P	02 41 23.4	-0.6
	comp=Z,119nm,1.2s						
KCPM	**Cahto Peak**	60.08	62	PFAKE		02 41 40.0	+16
KCPM				LR	LR		
	comp=Z,3µm,19.0s						
EDFI	**Ende, Flores**	60.14	214	P	P	02 41 23.3	-1.2
	comp=Z,34nm,1.5s,comp=Z,1µm						
TRO	**Tromso**	60.17	343	*e*P	P	02 41 22.7	-1.2
TRO				IAmb	IAmb	02 41 25.2	
	comp=Z,225nm,1.0s						
MYKOM	**Kota Tinggi**	60.19	238	*e*P	P	02 41 27.0	+2.2
	comp=Z,66nm,1.2s						
MYKOM				LR	LR		
	comp=Z,4µm,20.0s						
WDC	**Whiskeytown Da**	60.20	61	*e*P	P	02 41 25.2	+0.6
	comp=Z,59nm,1.1s						
WDC				LR	LR		
	comp=Z,2µm,19.0s						
WDC	**Whiskeytown Da**	60.20	61	*e*P	P	02 41 25.2	+0.6
WDC				pmax	pmax		
	comp=Z,59nm,1.1s						
WDC				MLR	MLR		
	comp=Z,2µm,19.0s						
F10A	**Beach Ranch, E**	60.20	53	*e*P	P	02 41 24.6	-0.1
	comp=Z,44nm,0.9s						
F10A				LR	LR		
	comp=Z,3µm,19.0s						
WALA	**Waterton Lakes**	60.22	49	*e*P	P	02 41 24.5	-0.3
	comp=Z,93nm,1.2s						
WALA				LR	LR		
	comp=Z,4µm,20.0s						
KLMR	**Klimovskoe**	60.70	329	*e*P	P	02 41 25.4	-2.2
KLMR				*e*S	S	02 49 39.5	-2.8
KLMR				pmax	pmax		
	comp=Z,57nm,1.0s						
KLMR				MLR	MLR		
	comp=Z,4µm,16.0s						
KLMR	**Klimovskoe**	60.70	329	*e*P	P	02 41 25.5	-2.2
KLMR				AMP		02 41 29.1	
	comp=Z,57nm,1.0s						
KLMR				*e*PP	PP	02 43 36.0	-5.0
KLMR				*e*S	S	02 49 39.6	-2.8
KLMR				*e*S	S	02 49 39.6	-2.8
KLMR				LQ	LQ	03 03 04.0	
KLMR				LQ	LQ	03 03 04.0	
KLMR				LR	LR	03 06 47.6	
KLMR				AMP		03 12 03.8	
	comp=Z,4µm,16.2s						
BATI	**Baumata**	60.72	212	P	P	02 41 27.3	-1.0
	comp=Z,15nm,0.3s,baz=56,slow=3.6,SNR=3.8						
MTN	**Manton Dam**	60.78	203	*e*P	P	02 41 28.8	+0.2
	comp=Z,130nm,1.3s						
MOD	**Modoc Plateau**	60.79	59	*e*P	P	02 41 28.8	0.0
	comp=Z,93nm,1.4s						
MOD				LR	LR		
	comp=Z,3µm,20.0s						
JTMT	**Jette**	60.80	50	*e*P	P	02 41 28.8	+0.1
	comp=Z,58nm,1.4s						
JTMT				LR	LR		
	comp=Z,3µm,20.0s						
HOPS	**Hopland Field**	60.81	63	PFAKE		02 41 40.0	+11
HOPS				LR	LR		
	comp=Z,3µm,19.0s						
BMO	**Blue Mountains**	60.82	55	*e*P	P	02 41 28.1	-0.8
	comp=Z,52nm,1.3s						
BMO				LR	LR		

	comp=Z,2µm,21.0s						
BMO	**Blue Mountains**	**60.82**	**55**	*e*P	**P**	**02 41 28.1**	**-0.8**
BMO				pmax	pmax		
	comp=Z,52nm,1.3s						
BMO				MLR	MLR		
	comp=Z,2µm,21.0s						
O03D	**Paynes Creek**	**60.83**	**61**	P	**P**	**02 41 26.9**	**-2.1**
	baz=306,SNR=24						
O03D	**Paynes Creek**	**60.83**	**61**	*e*P	**P**	**02 41 28.6**	**-0.3**
J08A	**Circle Bar Ran**	**61.02**	**56**	*e*P	**P**	**02 41 30.5**	**+0.2**
	comp=Z,71nm,1.3s						
J08A				LR	LR		
	comp=Z,2µm,20.0s						
GDXM	**Geysers**	**61.09**	**63**	PFAKE		02 41 40.0	+9.2
GDXM				LR	LR		
	comp=Z,4µm,19.0s						
CHLP	**Challavanipeta**	**61.26**	**268**	*e*P	**P**	**02 41 32.5**	**+0.5**
CHLP				IAmb	IAmb	02 41 34.4	
	comp=Z,171nm,1.3s						
CHLP				IVMs_BB	IVMs_BB	03 15 02.0	
	comp=Z,1µm,16.3s						
MCCM	**Marconi Confer**	**61.43**	**64**	PFAKE		02 41 50.0	+17
MCCM				LR	LR		
	comp=Z,2µm,20.0s						
ORV	**Oroville**	**61.45**	**62**	*e*P	**P**	**02 41 33.1**	**0.0**
	comp=Z,48nm,1.3s						
ORV				LR	LR		
	comp=Z,2µm,19.0s						
ORV	**Oroville**	**61.45**	**62**	*e*P	**P**	**02 41 33.1**	**0.0**
ORV				pmax	pmax		
	comp=Z,48nm,1.3s						
ORV				MLR	MLR		
	comp=Z,2µm,19.0s						
WVOR	**Wild Horse Val**	**61.47**	**57**	*e*P	**P**	**02 41 33.9**	**+0.5**
	comp=Z,42nm,1.0s						
WVOR				LR	LR		
	comp=Z,2µm,20.0s						
WVOR	**Wild Horse Val**	**61.47**	**57**	*e*P	**P**	**02 41 33.9**	**+0.5**
WVOR				pmax	pmax		
	comp=Z,42nm,1.0s						
WVOR				MLR	MLR		
	comp=Z,2µm,20.0s						
KBL	**Kabul**	**61.50**	**291**	*e*P	**P**	**02 41 33.4**	**-0.4**
	comp=Z,151nm,1.1s						
KBL				LR	LR		
	comp=Z,14µm,20.0s						
KBL	**Kabul**	**61.50**	**291**	*e*P	**P**	**02 41 33.4**	**-0.4**
KBL				pmax	pmax		
	comp=Z,151nm,1.1s						
KBL				MLR	MLR		
	comp=Z,14µm,20.0s						
MSO	**Missoula**	**61.53**	**51**	P	**P**	**02 41 31.1**	**-2.5**
	baz=307,SNR=35						
MSO	**Missoula**	**61.53**	**51**	*e*P	**P**	**02 41 33.4**	**-0.3**
	comp=Z,96nm,1.3s						
MSO				LR	LR		
	comp=Z,2µm,19.0s						
LHMI	**Lhok Sumawe**	**61.84**	**247**	PFAKE		02 41 50.0	+14
LHMI				LR	LR		
	comp=Z,5µm,20.0s						
BEKR	**Beckworth**	**61.97**	**61**	*e*P	**P**	**02 41 36.9**	**+0.1**
	comp=Z,58nm,1.1s						
BEKR				LR	LR		
	comp=Z,2µm,20.0s						
XMAS	**Kiritimati**	**62.12**	**118**	PFAKE		02 41 50.0	+12
XMAS				LR	LR		
	comp=Z,5µm,20.0s						
AFDM	**Forest Hills D**	**62.14**	**62**	*e*P	**P**	**02 41 38.1**	**+0.3**
	comp=Z,59nm,1.3s						
AFDM				LR	LR		
	comp=Z,2µm,20.0s						
SUMG	**Summit**	**62.16**	**3**	*e*P	**P**	**02 41 38.0**	**+0.2**
	comp=Z,387nm,1.2s						
SUMG				LR	LR		
	comp=Z,8µm,20.0s						
SUMG	**Summit**	**62.16**	**3**	⇑*i*P	**P**	**02 41 38.1**	**+0.2**
	comp=Z,391nm,1.2s						
SUMG	**Summit**	**62.16**	**3**	⇑*i*P	**P**	**02 41 38.1**	**+0.2**
SUMG				pmax	pmax		
	comp=Z,390nm,1.2s						
STEI	**Steigen**	**62.34**	**343**	*e*P	**P**	**02 41 38.2**	**-0.5**
STEI				IAmb	IAmb	02 41 39.3	
	comp=Z,98nm,1.1s						
STEI				IAMs_20	IAMs_20	03 12 54.4	
	comp=Z,5µm,18.1s						
PSI	**Prapat**	**62.43**	**243**	P	**P**	**02 41 40.7**	**+0.6**
	comp=Z,36nm,0.9s,baz=360,slow=2.9,SNR=22						
PSI				LR	LR	03 12 25.4	
	comp=Z,2µm,18.1s,baz=89,slow=40						
PSI	**Prapat**	**62.43**	**243**	*e*P	**P**	**02 41 41.1**	**+1.0**
	comp=Z,50nm,1.0s						
LOF	**Lofoten**	**62.52**	**344**	*e*P	**P**	**02 41 39.4**	**-0.4**
LOF				IAmb	IAmb	02 41 41.2	
	comp=Z,220nm,1.0s						
LOF				IAMs_20	IAMs_20	03 11 15.3	
	comp=Z,4µm,20.1s						
MFID	**Camas Ranch**	**62.53**	**55**	*e*P	**P**	**02 41 39.9**	**-0.6**
	comp=Z,26nm,1.0s						
MFID				LR	LR		
	comp=Z,2µm,20.0s						
FFC	**Flin Flon**	**62.55**	**39**	*e*P	**P**	**02 41 39.8**	**-0.4**
	comp=Z,141nm,1.5s						
FFC				LR	LR		
	comp=Z,4µm,20.0s						
FFC	**Flin Flon**	**62.55**	**39**	*e*P	**P**	**02 41 39.8**	**-0.4**
FFC				pmax	pmax		
	comp=Z,141nm,1.5s						
FFC				MLR	MLR		
	comp=Z,4µm,20.0s						
RUBR	**Rubicon Trail**	**62.59**	**61**	PFAKE		02 41 50.0	+8.9
RUBR				LR	LR		
	comp=Z,2µm,19.0s						
PAHR	**Pah Rah Range**	**62.66**	**60**	*e*P	**P**	**02 41 41.2**	**-0.2**
	comp=Z,90nm,1.3s						
PAHR				LR	LR		
	comp=Z,2µm,20.0s						
VCNR	**Virginia City**	**62.75**	**61**	*e*P	**P**	**02 41 42.8**	**+0.7**
	comp=Z,62nm,1.2s						
VCNR				LR	LR		
	comp=Z,2µm,18.0s						
HRY	**Holter Researc**	**62.75**	**50**	*e*P	**P**	**02 41 42.9**	**+1.0**
BHPL	**Bhopal**	**62.83**	**276**	*e*P	**P**	**02 41 41.1**	**-1.5**
PNTR	**Pine Nut**	**62.91**	**61**	*e*P	**P**	**02 41 43.9**	**+0.7**
	comp=Z,47nm,0.9s						
LRM	**Limekiln Ridge**	**62.96**	**51**	*e*P	**P**	**02 41 43.2**	**-0.2**
NGP	**Nagpur**	**63.04**	**273**	*e*S	**P**	**02 41 45.2**	**+1.1**
BKNI	**Bangkinang**	**63.05**	**240**	PFAKE		02 42 00.0	+16
BKNI				LR	LR		
	comp=Z,3µm,20.0s						
EGMT	**Eagleton**	**63.05**	**48**	P	**P**	**02 41 41.5**	**-2.2**
	baz=309,SNR=16						
EGMT	**Eagleton**	**63.05**	**48**	*e*P	**P**	**02 41 43.6**	**-0.2**
	comp=Z,113nm,1.2s						
EGMT				LR	LR		
	comp=Z,4µm,18.0s						
FCC	**Fort Churchill**	**63.06**	**32**	*e*P	**P**	**02 41 43.5**	**0.0**
	comp=Z,93nm,1.5s						
FCC				LR	LR		
	comp=Z,4µm,19.0s						
FCC	**Fort Churchill**	**63.06**	**32**	*e*P	**P**	**02 41 43.5**	**0.0**
FCC				pmax	pmax		
	comp=Z,93nm,1.5s						
FCC				MLR	MLR		
	comp=Z,4µm,19.0s						
CMB	**Columbia Colle**	**63.06**	**62**	*e*P	**P**	**02 41 43.9**	**-0.1**
	comp=Z,108nm,1.4s						
CMB				LR	LR		
	comp=Z,2µm,20.0s						
CMB	**Columbia Colle**	**63.06**	**62**	*e*P	**P**	**02 41 43.9**	**-0.1**
CMB				pmax	pmax		
	comp=Z,108nm,1.4s						
CMB				MLR	MLR		
	comp=Z,2µm,20.0s						
DLMT	**Dillon**	**63.17**	**52**	*e*P	**P**	**02 41 45.2**	**+0.5**
	comp=Z,17nm,0.9s						
DLMT				LR	LR		
	comp=Z,2µm,21.0s						
SAO	**San Andreas Ge**	**63.17**	**64**	*e*P	**P**	**02 41 44.9**	**+0.2**
	comp=Z,121nm,1.9s						
SAO	**San Andreas Ge**	**63.17**	**64**	*e*P	**P**	**02 41 44.9**	**+0.2**
SAO				pmax	pmax		
	comp=Z,121nm,1.9s						
YERR	**Yerington**	**63.19**	**61**	*e*P	**P**	**02 41 45.6**	**+0.5**
	comp=Z,170nm,1.5s						
HLID	**Hailey**	**63.25**	**54**	P	**P**	**02 41 43.2**	**-2.1**
	baz=308,SNR=33						
HLID	**Hailey**	**63.25**	**54**	*e*P	**P**	**02 41 45.3**	**0.0**
	comp=Z,40nm,1.3s						
HLID				LR	LR		
	comp=Z,3µm,18.0s						
MCMT	**McKenzie Canyo**	**63.36**	**52**	*e*P	**P**	**02 41 46.3**	**+0.2**
WAKR	**Walker**	**63.37**	**61**	*e*P	**P**	**02 41 46.9**	**+0.7**
	comp=Z,79nm,1.3s						
WAKR				LR	LR		
	comp=Z,2µm,20.0s						
BMN	**Battle Mountai**	**63.53**	**58**	*e*P	**P**	**02 41 47.3**	**+0.1**
	comp=Z,62nm,1.3s						
BMN				LR	LR		
	comp=Z,3µm,18.0s						
BMN	**Battle Mountai**	**63.53**	**58**	*e*P	**P**	**02 41 47.3**	**+0.1**
BMN				pmax	pmax		
	comp=Z,62nm,1.3s						
BMN				MLR	MLR		
	comp=Z,3µm,18.0s						
BOZ	**Bozeman (W)**	**63.55**	**51**	P	**P**	**02 41 45.2**	**-2.1**
	baz=309,SNR=34						
BOZ	**Bozeman (W)**	**63.55**	**51**	*e*P	**P**	**02 41 46.0**	**-1.3**
	comp=Z,97nm,1.4s						
BOZ				LR	LR		
	comp=Z,3µm,19.0s						
BOZ	**Bozeman (W)**	**63.55**	**51**	*e*P	**P**	**02 41 46.0**	**-1.3**
BOZ				pmax	pmax		
	comp=Z,97nm,1.4s						
BOZ				MLR	MLR		
	comp=Z,3µm,19.0s						
SMRI	**Semarang**	**63.80**	**227**	PFAKE		02 42 00.0	+11
SMRI				LR	LR		
	comp=Z,3µm,20.0s						
PVM	**Polavaram**	**63.81**	**268**	*e*P	**P**	**02 41 49.2**	**+0.1**
PVM				IAmb	IAmb	02 41 51.2	
	comp=Z,141nm,1.0s						
PVM				IVMs_BB	IVMs_BB	03 13 21.6	
	comp=Z,692nm,16.6s						
KVN	**Kaiserville**	**63.85**	**60**	*e*P	**P**	**02 41 49.2**	**-0.2**
	comp=Z,86nm,1.2s						
KVN				LR	LR		
	comp=Z,2µm,19.0s						
KVN	**Kaiserville**	**63.85**	**60**	*e*P	**P**	**02 41 49.2**	**-0.2**
KVN				pmax	pmax		
	comp=Z,86nm,1.2s						
KVN				MLR	MLR		
	comp=Z,2µm,19.0s						
RYN	**Ryan**	**63.85**	**61**	*e*P	**P**	**02 41 49.5**	**+0.1**
	comp=Z,72nm,1.2s						
RYN				LR	LR		
	comp=Z,2µm,20.0s						
PMPB	**Monarch Peak**	**63.92**	**64**	PFAKE		02 42 00.0	+10
PMPB				LR	LR		
	comp=Z,2µm,18.0s						
PWJI	**Pagerwojo**	**63.94**	**225**	P	**P**	**02 41 49.7**	**-0.2**
	comp=Z,254nm,1.1s,comp=Z,2µm						
MOR8	**Moi Rana**	**64.00**	**342**	*e*P	**P**	**02 41 47.5**	**-2.1**
MOR8				IAmb	IAmb	02 41 49.9	
	comp=Z,236nm,0.9s						
KONS	**Konsvik**	**64.00**	**343**	*e*P	**P**	**02 41 49.9**	**+0.3**
KONS				IAmb	IAmb	02 41 50.4	
	comp=Z,54nm,1.0s						
NV01	**Mina Array Sit**	**64.11**	**61**	*e*P	**P**	**02 41 49.8**	**-1.4**
NVAR	**Mina Array Bea**	**64.11**	**61**	P	**P**	**02 41 50.9**	**-0.3**
	comp=Z,5.5nm,0.6s,baz=297,slow=6.2,SNR=31						
NVAR				LR	LR	03 06 54.1	
	comp=Z,2µm,20.0s,baz=54,slow=33						
MDPB	**Devils Postpil**	**64.13**	**62**	*e*P	**P**	**02 41 52.6**	**+1.3**
	comp=Z,65nm,1.3s						
MDPB				LR	LR		
	comp=Z,2µm,19.0s						
QLMT	**Earthquake Lak**	**64.14**	**52**	*e*P	**P**	**02 41 52.2**	**+0.9**
OMMB	**Old Mammoth Mi**	**64.19**	**62**	*e*P	**P**	**02 41 53.1**	**+1.3**
	comp=Z,45nm,1.3s						
NV11	**Mina Array Sit**	**64.20**	**61**	*e*P	**P**	**02 41 51.4**	**-0.2**
	comp=Z,7.2nm,1.4s						
NV11				LR	LR		
	comp=Z,200nm,20.0s						
MLAC	**Mammoth, Mammo**	**64.28**	**62**	P	**P**	**02 41 49.6**	**-2.7**
	baz=309						
YHB	**Horse Butte**	**64.32**	**52**	*e*P	**P**	**02 41 54.1**	**+1.7**
	comp=Z,35nm,0.9s						
YHB				LR	LR		
	comp=Z,3µm,20.0s						
RPR	**Rampur**	**64.38**	**271**	*e*P	**P**	**02 41 52.8**	**0.0**
RPR				IAmb	IAmb	02 41 54.6	
	comp=Z,85nm,1.0s						
RPR				IVMs_BB	IVMs_BB	03 15 37.3	
	comp=Z,1µm,19.6s						
GSI	**Gunungsitoli**	**64.43**	**244**	PFAKE		02 42 10.0	+17
GSI				LR	LR		
	comp=Z,4µm,22.0s						
UGM	**Wanagama**	**64.49**	**226**	PFAKE		02 42 10.0	+16
UGM				LR	LR		
	comp=Z,3µm,20.0s						
YMR	**Madison River**	**64.50**	**52**	PFAKE		02 42 10.0	+16
YMR				LR	LR		
	comp=Z,3µm,19.0s						
ELK	**Elko**	**64.52**	**57**	LR	LR	03 09 42.9	
	comp=Z,2µm,19.2s,baz=6.5,slow=36						
ILULI	**Ilulissat**	**64.53**	**9**	*e*P	**P**	**02 41 53.5**	**+0.4**
	comp=Z,88nm,1.0s						
ILULI				LR	LR		
	comp=Z,6µm,20.0s						
ILULI	**Ilulissat**	**64.53**	**9**	*i* P	**P**	**02 41 52.3**	**-0.8**
	comp=Z,94nm,1.0s						
	comp=Z,6µm,18.0s						
ILULI	**Ilulissat**	**64.53**	**9**	*i* P	**P**	**02 41 52.3**	**-0.8**
ILULI				pmax	pmax		
	comp=Z,94nm,1.0s						
ILULI				MLR	MLR		
	comp=Z,6µm,18.0s						
PAGB	**Antelope Grade**	**64.57**	**64**	*e*P	**P**	**02 41 56.2**	**+2.2**
	comp=Z,157nm,1.4s						
KRJI	**Kerinci**	**64.70**	**238**	P	**P**	**02 41 56.1**	**+1.0**
YFT	**Old Faithful**	**64.71**	**52**	*e*P	**P**	**02 41 57.2**	**+2.2**
	comp=Z,34nm,0.9s						
YFT				LR	LR		
	comp=Z,5µm,18.0s						
PUL	**Pulkovo**	**64.72**	**331**	*e*P	**P**	**02 41 55.6**	**+1.2**
PUL	**Pulkovo**	**64.72**	**331**	*ce*P	**P**	**02 41 55.6**	**+1.2**
PUL				pmax	pmax		
	comp=Z,132nm,0.8s						
FIA1	**FINESS Array S**	**64.80**	**334**	*e*P	**P**	**02 41 54.6**	**-0.3**
FIA0	**FINESS Array S**	**64.80**	**334**	*e*P	**P**	**02 41 54.6**	**-0.3**
FIA0	**FINESS Array S**	**64.80**	**334**	*e*P	**P**	**02 41 54.6**	**-0.3**
FINES	**FINESS Array B**	**64.80**	**334**	P	**P**	**02 41 54.6**	**-0.3**
	comp=Z,102nm,0.9s,baz=35,slow=5.8,SNR=198						
FINES				LR	LR	03 13 05.3	
	comp=Z,6µm,19.6s,baz=30,slow=39						
YPP	**Pitchstone Pla**	**64.84**	**52**	*e*P	**P**	**02 41 57.8**	**+1.8**
	comp=Z,28nm,1.5s						
YPP				LR	LR		
	comp=Z,2µm,19.0s						
H17A	**Grant Village**	**64.89**	**52**	P	**P**	**02 41 53.9**	**-2.3**
	baz=310						
H17A	**Grant Village**	**64.89**	**52**	*e*P	**P**	**02 41 58.0**	**+1.8**
	comp=Z,64nm,1.2s						
H17A				LR	LR		
	comp=Z,4µm,19.0s						
MOS	**Moscow**	**64.93**	**325**	*e*P	**P**	**02 41 55.3**	**-0.6**
MOS				*e*		02 42 28.8	
MOS				*e*		02 44 16.6	
MOS				*e*PPP	PPP	02 45 50.4	
MOS				*e*S	**S**	**02 50 34.6**	**-0.9**
MOS				*e*		02 51 47.5	
MOS				*e*SS	**SS**	**02 54 44.9**	**-1.6**
MOS				pmax	pmax		
	comp=Z,400nm,2.5s						
MOS				MLR	MLR		
	comp=N,6µm,16.0s						
MOS				MLR	MLR		
	comp=Z,7µm,16.0s						
SMMC	**Simmler**	**65.00**	**64**	P	**P**	**02 41 55.4**	**-1.3**
	baz=309						
SRSP	**Sriramsagar**	**65.00**	**272**	*e*P	**P**	**02 41 56.4**	**-0.6**
SRSP				IAmb	IAmb	02 41 58.2	
	comp=Z,145nm,1.0s						
SRSP				IVMs_BB	IVMs_BB	03 14 00.9	
	comp=Z,1µm,15.5s						
IMW	**Indian Meadow**	**65.01**	**52**	*e*P	**P**	**02 41 57.6**	**+0.6**
	comp=Z,45nm,1.0s						
IMW				LR	LR		
	comp=Z,2µm,18.0s						
TIN	**Tinemaha, Big**	**65.02**	**62**	P	**P**	**02 41 55.8**	**-1.2**
	baz=309						
FLWY	**Flagg Ranch**	**65.02**	**52**	*e*P	**P**	**02 41 58.6**	**+1.6**
	comp=Z,76nm,1.4s						
FLWY				LR	LR		
	comp=Z,2µm,18.0s						
MDSI	**Maura Dua**	**65.05**	**234**	P	**P**	**02 41 56.2**	**-1.0**
	comp=Z,27nm,1.5s,comp=Z,1µm						
FXWY	**Fox Creek**	**65.12**	**53**	*e*P	**P**	**02 41 58.0**	**+0.3**
	comp=Z,21nm,0.9s						
RLMT	**Red Lodge**	**65.14**	**50**	P	**P**	**02 41 56.9**	**-0.9**
	baz=310,SNR=13						
RLMT	**Red Lodge**	**65.14**	**50**	*e*P	**P**	**02 41 57.3**	**-0.4**
	comp=Z,60nm,1.1s						
RLMT				LR	LR		
	comp=Z,3µm,19.0s						
GATR	**Gnd/Air Tx Cnt**	**65.15**	**65**	*e*P	**P**	**02 41 54.6**	**-3.1**
MOOW	**Moose Ponds**	**65.21**	**52**	*e*P	**P**	**02 41 59.6**	**+1.4**
	comp=Z,25nm,0.9s						
MOOW				LR	LR		
	comp=Z,2µm,18.0s						
VES	**Vestal, Richgr**	**65.24**	**63**	P	**P**	**02 41 57.4**	**-0.8**
	baz=309,SNR=7.1						
TPAW	**Teton Pass**	**65.26**	**53**	*e*P	**P**	**02 41 59.3**	**+0.6**
	comp=Z,48nm,0.9s						
TPAW				LR	LR		
	comp=Z,2µm,20.0s						
CTA	**Charters Tower**	**65.30**	**185**	LR	LR	03 09 13.9	
	comp=Z,3µm,20.1s,baz=348,slow=35						
CTAO	**Charters Tower**	**65.30**	**185**	PFAKE		02 42 10.0	+11
CTAO				LR	LR		
	comp=Z,3µm,20.0s						
HVU	**Hansel Valley**	**65.31**	**55**	*e*P	**P**	**02 41 59.9**	**+1.1**
	comp=Z,38nm,1.0s						
HVU	**Hansel Valley**	**65.31**	**55**	*e*P	**P**	**02 41 59.9**	**+1.1**
HVU				pmax	pmax		
	comp=Z,38nm,1.0s						
LOHW	**Long Hollow**	**65.38**	**52**	*e*P	**P**	**02 41 59.6**	**+0.2**
	comp=Z,85nm,1.5s						
LOHW				LR	LR		
	comp=Z,2µm,20.0s						
PKM	**Mcpherson Peak**	**65.38**	**65**	P	**P**	**02 41 57.9**	**-1.5**
	baz=309						
SNOW	**Snow King Moun**	**65.39**	**53**	*e*P	**P**	**02 42 00.8**	**+1.4**
	comp=Z,70nm,1.3s						
SNOW				LR	LR		
	comp=Z,2µm,19.0s						
REDW	**Red Top Meadow**	**65.40**	**53**	*e*P	**P**	**02 41 59.7**	**+0.3**
	comp=Z,108nm,1.4s						
REDW				LR	LR		
	comp=Z,2µm,19.0s						
CWC	**Cottonwood Cre**	**65.50**	**62**	P	**P**	**02 41 58.5**	**-1.7**
	baz=309						
GRAC	**Grapevine Rang**	**65.59**	**62**	P	**P**	**02 41 59.9**	**-0.7**
	baz=309,SNR=10						
AHID	**Auburn Hatcher**	**65.64**	**53**	*e*P	**P**	**02 42 01.8**	**+0.8**
	comp=Z,29nm,1.0s						
AHID				LR	LR		
	comp=Z,4µm,20.0s						
MNAI	**Manna**	**65.65**	**235**	PFAKE		02 42 10.0	+8.9
MNAI				LR	LR		
	comp=Z,2µm,20.0s						
BGU	**Big Grassy Mou**	**65.71**	**56**	*e*P	**P**	**02 42 02.9**	**+1.5**
	comp=Z,14nm,1.1s						
BGU				LR	LR		
	comp=Z,2µm,18.0s						
SBC	**Santa Barbara**	**65.72**	**65**	P	**P**	**02 41 59.4**	**-2.0**
	baz=310						
ISA	**Isabella, Lake**	**65.74**	**63**	P	**P**	**02 41 59.5**	**-2.1**
	baz=310						
ISA	**Isabella, Lake**	**65.74**	**63**	*e*P	**P**	**02 42 01.0**	**-0.6**
	comp=Z,49nm,1.4s						
ISA				LR	LR		
	comp=Z,2µm,20.0s						
ISA	**Isabella, Lake**	**65.74**	**63**	*e*P	**P**	**02 42 01.0**	**-0.6**
ISA				pmax	pmax		
	comp=Z,49nm,1.4s						
ISA				MLR	MLR		
	comp=Z,2µm,20.0s						
LAO	**LASA Array**	**65.75**	**48**	P	**P**	**02 42 00.9**	**-0.6**
	baz=311,SNR=11						
LAO	**LASA Array**	**65.75**	**48**	*e*P	**P**	**02 42 01.8**	**+0.3**
	comp=Z,77nm,1.1s						
LAO				LR	LR		
	comp=Z,4µm,20.0s						
OBN	**Obninsk**	**65.80**	**325**	*e*P	**P**	**02 42 00.8**	**-0.7**
OBN	**Obninsk**	**65.80**	**325**	*e*P	**P**	**02 42 00.8**	**-0.7**
	comp=Z,68nm,1.3s						
OBN				LR	LR		
	comp=Z,7µm,18.0s						
OBN	**Obninsk**	**65.80**	**325**	*c i*P	**P**	**02 42 00.8**	**-0.7**
OBN				*i*		02 42 31.5	
OBN				*i* S	**S**	**02 50 43.3**	**-2.8**
OBN				pmax	pmax		
	comp=Z,21nm,0.9s						
OBN				MLR	MLR		
	comp=Z,8µm,16.0s						
SPUT	**South Promonto**	**65.80**	**55**	PFAKE		02 42 10.0	+8.0
SPUT				LR	LR		
	comp=Z,3µm,19.0s						
R11A	**Troy Canyon, C**	**65.82**	**59**	P	**P**	**02 42 01.2**	**-1.1**
	baz=310,SNR=33						
R11A	**Troy Canyon, C**	**65.82**	**59**	*e*P	**P**	**02 42 01.8**	**-0.5**
	comp=Z,67nm,1.4s						
R11A				LR	LR		
	comp=Z,2µm,19.0s						
ARVC	**Arvin**	**65.85**	**64**	P	**P**	**02 42 00.8**	**-1.4**
	baz=310						
HYB	**Hyderabad**	**65.87**	**271**	*i* P	**P**	**02 42 02.0**	**-0.6**
HYB	**Hyderabad**	**65.87**	**271**	*e*P	**P**	**02 42 00.8**	**-1.7**
HYB				IAmb	IAmb	02 42 05.1	
	comp=Z,39nm,0.7s						
HYBB	**Hyderabad (bro**	**65.87**	**271**	*e*P	**P**	**02 42 02.3**	**-0.3**
HYBB				IAmb	IAmb	02 42 03.8	
	comp=Z,78nm,1.0s						
HYBB				IVMs_BB	IVMs_BB	03 19 11.0	
	comp=Z,1µm,13.3s						
DAC	**Darwin (Calif)**	**65.90**	**62**	*e*P	**P**	**02 42 02.6**	**-0.2**
	comp=Z,57nm,1.4s						
DAC				LR	LR		
	comp=Z,2µm,22.0s						
DAC	**Darwin (Calif)**	**65.90**	**62**	*e*P	**P**	**02 42 02.6**	**-0.2**
DAC				pmax	pmax		
	comp=Z,57nm,1.4s						
DAC				MLR	MLR		
	comp=Z,2µm,22.0s						
NJS	**Nagarjunasagar**	**65.92**	**269**	*e*P	**P**	**02 42 02.4**	**-0.5**
NJS				IAmb	IAmb	02 42 04.3	
	comp=Z,76nm,1.0s						
NJS				IVMs_BB	IVMs_BB	03 21 31.6	
	comp=Z,1µm,17.2s						
NSS	**Namsos**	**65.94**	**342**	*e*P	**P**	**02 42 01.4**	**-0.9**
NSS				IAmb	IAmb	02 42 03.1	
	comp=Z,92nm,1.0s						
NSS				IAMs_20	IAMs_20	03 14 06.2	
	comp=Z,6µm,18.9s						
SCZ2	**Santa Cruz Isl**	**66.06**	**65**	P	**P**	**02 42 01.3**	**-2.3**
	baz=310						
MPMC	**Manual Prospec**	**66.11**	**62**	P	**P**	**02 42 03.1**	**-1.0**
	baz=310,SNR=14						
HWUT	**Hardware Ranch**	**66.12**	**54**	*e*P	**P**	**02 42 04.0**	**0.0**
	comp=Z,52nm,1.1s						
HWUT				LR	LR		
	comp=Z,3µm,18.0s						
FURC	**Furnace Creek,**	**66.24**	**62**	P	**P**	**02 42 04.0**	**-0.7**
	baz=310,SNR=20						
OSI	**Osito Audit: C**	**66.25**	**64**	P	**P**	**02 42 03.2**	**-1.6**
	baz=310						
OSI	**Osito Audit: C**	**66.25**	**64**	PFAKE		02 42 20.0	+15
OSI				LR	LR		
	comp=Z,2µm,19.0s						
DUG	**Dugway, Tooele**	**66.30**	**56**	P	**P**	**02 42 04.4**	**-0.8**
	baz=310,SNR=22						
DUG	**Dugway, Tooele**	**66.30**	**56**	*e*P	**P**	**02 42 04.8**	**-0.5**
	comp=Z,53nm,1.2s						
DUG				LR	LR		
	comp=Z,2µm,20.0s						
DUG	**Dugway, Tooele**	**66.30**	**56**	*e*P	**P**	**02 42 04.8**	**-0.5**
DUG				pmax	pmax		
	comp=Z,53nm,1.2s						
DUG				MLR	MLR		
	comp=Z,2µm,20.0s						
TPNV	**Topopah Spring**	**66.31**	**61**	P	**P**	**02 42 04.4**	**-0.9**
	baz=310,SNR=32						
TPNV	**Topopah Spring**	**66.31**	**61**	*e*P	**P**	**02 42 04.8**	**-0.5**
	comp=Z,123nm,1.3s						
TPNV				LR	LR		
	comp=Z,2µm,20.0s						
TPNV	**Topopah Spring**	**66.31**	**61**	*e*P	**P**	**02 42 04.8**	**-0.5**
TPNV				pmax	pmax		
	comp=Z,123nm,1.3s						
TPNV				MLR	MLR		

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       comp=Z,2µm,20.0s
GEYT   Alibeck          66.32 300 P        P        02 42 05.0 -0.3
       comp=Z,85nm,1.0s,baz=43,slow=6.7,SNR=100
GEYT                              LR       LR       03 13 36.1
       comp=Z,9µm,18.8s,baz=275,slow=38
GYA0B  ALIBECK ARRAY    66.32 300 eP       P        02 42 06.1 +0.9
       comp=Z,198nm,1.1s
GYA0B                             LR       LR
       comp=Z,10µm,18.0s
BLG    Laguna Peak, P   66.35  65 P        P        02 42 02.8 -2.7
       baz=310
LRMC   Laurel Mtn Rad   66.35  63 P        P        02 42 03.0 -2.6
       baz=310
BW06   Boulder Array    66.50  52 P        P        02 42 05.4 -1.3
       baz=311,SNR=14
BW06   Boulder Array    66.50  52 eP       P        02 42 06.2 -0.4
       comp=Z,54nm,1.4s
BW06                              LR       LR
       comp=Z,3µm,18.0s
PD31   Pinedale Array   66.51  52 eP       P        02 42 06.7  0.0
PDAR   Pinedale Array   66.51  52 P        P        02 42 05.6 -1.0
       comp=Z,7.8nm,1.1s,baz=294,slow=1.5,SNR=40
PDAR                              LR       LR       03 09 25.0
       comp=Z,1µm,20.9s,baz=345,slow=34
PDAR                              PKPPKP   P'P'df   03 10 38.4 -5.3
       comp=Z,0.2nm,0.5s,baz=120,slow=5.3,SNR=3.9
PDAR   Pinedale Array   66.51  52 eP       P        02 42 05.4 -1.2
SRLM   Srisailam        66.51 269 eP       P        02 42 06.3 -0.4
SRLM                              IAmb     IAmb     02 42 07.9
       comp=Z,104nm,1.1s
SRLM                              IVMs_BB  IVMs_BB  03 13 33.8
       comp=Z,1µm,23.4s
TCUT   Toone Canyon     66.52  55 eP       P        02 42 07.4 +0.7
       comp=Z,41nm,1.0s
TCUT                              LR       LR
       comp=Z,3µm,19.0s
EDW2   Edwards Air Fo   66.54  64 P        P        02 42 05.7 -1.0
       baz=310,SNR=8.4
CTU    Camp Tracy       66.60  55 eP       P        02 42 07.7 +0.5
       comp=Z,45nm,1.2s
CTU                               LR       LR
       comp=Z,2µm,20.0s
SNCC   San Nicolas Is   66.61  66 P        P        02 42 05.7 -1.4
       baz=310
SNCC   San Nicolas Is   66.61  66 PFAKE             02 42 20.0 +13
SNCC                              LR       LR
       comp=Z,3µm,19.0s
WB0    Warramunga Arr   66.65 198 PFAKE             02 42 20.0 +13
WB0                               LR       LR
       comp=Z,3µm,20.0s
WB9    Warramunga Arr   66.67 198 PFAKE             02 42 20.0 +13
WB9                               LR       LR
       comp=Z,6µm,20.0s
WB8    Warramunga Arr   66.69 198 PFAKE             02 42 20.0 +12
WB8                               LR       LR
       comp=Z,3µm,21.0s
SFJD   Kangerlussuaq    66.72   9 P        P        02 42 06.4 -0.8
       comp=Z,30nm,0.7s,baz=350,slow=9.0,SNR=6.4
SFJD                              LR       LR       03 13 19.6
       comp=Z,6µm,20.2s,baz=342,slow=38
DECC   Green Verdugo    66.72  64 P        P        02 42 06.3 -1.6
       baz=310
WB6    Warramunga Arr   66.74 198 PFAKE             02 42 20.0 +12
WB6                               LR       LR
       comp=Z,3µm,21.0s
PSUT   Pine Spring      66.75  58 eP       P        02 42 08.5 +0.3
       comp=Z,39nm,1.3s
PSUT                              LR       LR
       comp=Z,3µm,20.0s
WB5    Warramunga Arr   66.76 198 PFAKE             02 42 20.0 +12
WB5                               LR       LR
       comp=Z,3µm,21.0s
WB4    Warramunga Arr   66.79 198 PFAKE             02 42 20.0 +12
WB4                               LR       LR
       comp=Z,3µm,21.0s
WR0    Warramunga Arr   66.80 197 PFAKE             02 42 20.0 +12
WR0                               LR       LR
       comp=Z,3µm,20.0s
WB3    Warramunga Arr   66.81 198 PFAKE             02 42 20.0 +12
WB3                               LR       LR
       comp=Z,3µm,20.0s
WR9    Warramunga Arr   66.81 197 PFAKE             02 42 20.0 +12
WR9                               LR       LR
       comp=Z,3µm,20.0s
WR8    Warramunga Arr   66.81 197 PFAKE             02 42 20.0 +12
WR8                               LR       LR
       comp=Z,3µm,20.0s
KLRI   Killari          66.81 273 eP       P        02 42 07.9 -0.7
KLRI                              IAmb     IAmb     02 42 09.6
       comp=Z,146nm,1.1s
KLRI                              IVMs_BB  IVMs_BB  03 14 42.3
       comp=Z,2µm,19.5s
WC1    Warramunga Arr   66.81 198 PFAKE             02 42 20.0 +12
WC1                               LR       LR
       comp=Z,2µm,22.0s
WR7    Warramunga Arr   66.81 197 PFAKE             02 42 20.0 +12
WR7                               LR       LR
       comp=Z,3µm,21.0s
WR6    Warramunga Arr   66.81 197 PFAKE             02 42 20.0 +12
WR6                               LR       LR
       comp=Z,3µm,21.0s
WRAB   Tennant Creek    66.82 198 eP       P        02 42 09.0 +0.6
       comp=Z,32nm,1.2s
WRAB                              LR       LR
       comp=Z,3µm,21.0s
WRAB   Tennant Creek    66.82 198ceP       P        02 42 08.8 +0.4
WRAB                              pmax     pmax
       comp=Z,36nm,1.7s
WR5    Warramunga Arr   66.82 197 PFAKE             02 42 20.0 +12
WR5                               LR       LR
       comp=Z,3µm,20.0s
WR4    Warramunga Arr   66.82 197 PFAKE             02 42 20.0 +12
WR4                               LR       LR
       comp=Z,3µm,21.0s
WR3    Warramunga Arr   66.82 197 PFAKE             02 42 20.0 +12
WR3                               LR       LR
       comp=Z,3µm,20.0s
WB2    Warramunga Arr   66.83 198 eP       P        02 42 08.3 -0.1
       comp=Z,33nm,1.3s
WB2                               LR       LR
       comp=Z,3µm,21.0s
WR2    Warramunga Arr   66.83 198 PFAKE             02 42 20.0 +12
WR2                               LR       LR
       comp=Z,3µm,20.0s
WR1    Warramunga Arr   66.83 198 eP       P        02 42 06.6 -1.8
       comp=Z,32nm,1.3s
WRA    Warramunga Arr   66.83 198 P        P        02 42 06.6 -1.8
       comp=Z,15nm,1.2s,baz=14,slow=6.5,SNR=25
WRA                               LR       LR       03 09 33.9
       comp=Z,3µm,21.7s,baz=25,slow=34
WRA                               PKP2bc            03 10 40.5
       comp=Z,1.3nm,1.0s,baz=202,slow=3.0,SNR=4.6
JLU    Jordanelle       66.83  55 eP       P        02 42 09.6 +0.9
       comp=Z,24nm,1.2s
JLU                               LR       LR
       comp=Z,2µm,20.0s
WC4    Warramunga Arr   66.85 198 PFAKE             02 42 20.0 +11
WC4                               LR       LR
       comp=Z,3µm,21.0s
CHFC   Chilao Flat St   66.87  64 eP       P        02 42 05.9 -3.1
PASC   Pasadena Art C   66.87  64 PFAKE             02 42 20.0 +11
PASC                              LR       LR
       comp=Z,3µm,20.0s
NLU    North Lily Min   66.89  56 eP       P        02 42 09.8 +0.7
       comp=Z,48nm,1.1s
VSU    Vasula           66.91 332ceP       P        02 42 09.4 +0.8
VSU                               pmax     pmax
       comp=Z,372nm,1.3s
MWC    Mount Wilson     66.92  64 eP       P        02 42 10.1 +0.8
       comp=Z,127nm,1.4s
MWC                               LR       LR
       comp=Z,2µm,19.0s
SHOC   Shoshone, Teco   66.96  62 P        P        02 42 07.5 -1.9
       baz=310
GSC    Goldstone, Bar   67.02  63 P        P        02 42 08.6 -1.2
       baz=310,SNR=6.9
GSC    Goldstone, Bar   67.02  63 eP       P        02 42 09.9 +0.1
       comp=Z,70nm,1.5s
GSC                               LR       LR
       comp=Z,2µm,19.0s
GSC    Goldstone, Bar   67.02  63 eP       P        02 42 09.9 +0.1
GSC                               pmax     pmax
       comp=Z,70nm,1.5s
GSC                               MLR      MLR
       comp=Z,2µm,19.0s
FMP    Fort Macarthur   67.10  65 P        P        02 42 08.0 -2.2
       baz=310
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MPU    Maple Canyon     67.11  56 eP       P        02 42 11.8 +1.3
       comp=Z,44nm,1.3s
MPU                               LR       LR
       comp=Z,3µm,19.0s
VORR   Voronezh         67.13 321 P        P        02 42 08.0 -2.1
VORR                              pmax     pmax
       comp=Z,250nm,1.6s
BFSC   Mount Baldy Ra   67.16  64 P        P        02 42 08.8 -2.0
       baz=310
PSRC   Puddingstone R   67.16  64 eP       P        02 42 13.3 +2.7
RRX    Edison Barstow   67.17  63 P        P        02 42 09.4 -1.3
       baz=310
CIS    Catalina Islan   67.22  65 P        P        02 42 08.2 -2.9
       baz=310
SHPR   Sheep Range      67.26  61 eP       P        02 42 11.4  0.0
       comp=Z,69nm,1.4s
SHPR                              LR       LR
       comp=Z,2µm,20.0s
FITZ   Fitzroy Crossi   67.37 207 eP       P        02 42 11.4 -0.5
       comp=Z,38nm,1.1s
SCI2   San Clemente I   67.41  66 P        P        02 42 09.2 -2.9
       baz=310
VSR    Storozhevoye     67.47 321 eP       P        02 42 11.0 -1.3
VSR                               eS       S        02 51 01.1 -5.5
VSR                               eSS      SS       02 55 30.5 +4.4
VSR                               pmax     pmax
       comp=Z,80nm,0.9s
VSR                               pmax     pmax
       comp=Z,300nm,1.5s
VSR                               smax     smax
       comp=N,50nm,1.5s
VSR                               MLR      MLR
       comp=Z,17µm,18.0s
TUQ    Turquoise Moun   67.48  62 P        P        02 42 11.5 -1.3
       baz=310,SNR=12
TCRU   Three Creeks R   67.54  57 PFAKE             02 42 30.0 +17
TCRU                              LR       LR
       comp=Z,2µm,20.0s
SKHT   Srikalahasti     67.54 267 eP       P        02 42 13.7 +0.5
SKHT                              IAmb     IAmb     02 42 15.4
       comp=Z,110nm,1.0s
SKHT                              IVMs_BB  IVMs_BB  03 16 42.3
       comp=Z,2µm,13.8s
VORD   Divnogorie       67.59 321 eP       P        02 42 12.1 -0.9
VORD                              pmax     pmax
       comp=Z,80nm,1.1s
VORD                              pmax     pmax
       comp=Z,160nm,1.6s
VORD                              MLR      MLR
       comp=Z,7µm,14.0s
BBRC   Big Bear Solar   67.61  64 P        P        02 42 11.2 -2.6
       baz=310
HEC    Hector,Ludlow    67.62  63 P        P        02 42 11.2 -2.4
       baz=310
CCUT   Cedar City       67.68  59 eP       P        02 42 14.0 -0.1
       comp=Z,28nm,1.1s
CCUT                              LR       LR
       comp=Z,2µm,21.0s
AFI    Afiamalu         67.72 141 LR       LR       03 08 57.7
       comp=Z,5µm,19.3s,baz=330,slow=33
MSU    Marysvale        67.77  57 eP       P        02 42 14.8 +0.1
MSU    Marysvale        67.77  57 eP       P        02 42 14.8 +0.1
SZCU   Shurtz Canyon    67.82  59 eP       P        02 42 14.6 -0.4
       comp=Z,62nm,1.4s
SZCU                              LR       LR
       comp=Z,2µm,20.0s
TMUT   Trail Mountain   67.82  56 eP       P        02 42 15.5 +0.4
       comp=Z,31nm,1.2s
TMUT                              LR       LR
       comp=Z,2µm,19.0s
MURC   Murrieta         67.87  64 P        P        02 42 13.1 -2.0
       baz=311
P17A   Butcher Ranch,   67.98  56 eP       P        02 42 16.5 +0.5
       comp=Z,70nm,1.3s
P17A                              LR       LR
       comp=Z,2µm,19.0s
GMRC   Granite Mounta   68.07  62 P        P        02 42 15.3 -1.2
       baz=311,SNR=12
MTPU   Mount Pierson    68.07  58 eP       P        02 42 17.1 +0.3
       comp=Z,49nm,1.4s
MTPU                              LR       LR
       comp=Z,3µm,20.0s
Q16A   Castle Valley    68.09  56 eP       P        02 42 16.6 -0.1
       comp=Z,64nm,1.4s
Q16A                              LR       LR
       comp=Z,2µm,19.0s
LCMT   Little Creek M   68.11  59 eP       P        02 42 16.7  0.0
       comp=Z,81nm,1.3s
LCMT                              LR       LR
       comp=Z,2µm,19.0s
P18A   Preston Nutter   68.17  55 eP       P        02 42 17.1 -0.2
       comp=Z,38nm,1.2s
P18A                              LR       LR
       comp=Z,3µm,18.0s
LDFC   Landfair         68.22  62 eP       P        02 42 18.3 +0.8
       comp=Z,183nm,1.4s
LDFC                              LR       LR
       comp=Z,2µm,19.0s
BHJ    Bhuj             68.23 281 eP       P        02 42 17.5  0.0
K22A   Casper           68.26  51 P        P        02 42 14.8 -2.9
       baz=312
K22A   Casper           68.26  51 eP       P        02 42 17.8 +0.2
       comp=Z,51nm,1.1s
K22A                              LR       LR
       comp=Z,3µm,18.0s
MDND   Maddock          68.29  43 P        P        02 42 15.1 -2.4
       baz=314
MDND   Maddock          68.29  43 eP       P        02 42 18.1 +0.6
       comp=Z,151nm,1.4s
MDND                              LR       LR
       comp=Z,4µm,20.0s
PFO    Pinyon Flats O   68.33  64 P        P        02 42 15.1 -3.0
       baz=311
PFO    Pinyon Flats O   68.33  64 eP       P        02 42 18.6 +0.5
       comp=Z,19nm,1.3s
PFO                               epP      sP       02 42 31.2 +1.9
PFO                               LR       LR
       comp=Z,2µm,20.0s
XPFO   Piæon Flat       68.33  64 eP       P        02 42 18.6 +0.5
       comp=Z,21nm,1.3s
XPFO                              epP      sP       02 42 31.2 +1.9
XPFO                              LR       LR
       comp=Z,2µm,20.0s
ULM    Lac du Bonnet    68.33  40 P        P        02 42 15.9 -1.8
       comp=Z,6.4nm,0.9s,baz=316,slow=4.9,SNR=7.1
ULM                               LR       LR       03 12 59.8
       comp=Z,2µm,21.0s,baz=332,slow=37
ULM    Lac du Bonnet    68.33  40 eP       P        02 42 16.7 -1.0
       comp=Z,52nm,1.3s
ULM                               LR       LR
       comp=Z,4µm,20.0s
ULM    Lac du Bonnet    68.33  40 P        P        02 42 15.9 -1.8
ULM                               pmax     pmax
       comp=Z,6.0nm,0.9s
ULM                               MLR      MLR
       comp=Z,2µm,21.0s
SRU    San Rafael Swe   68.35  56 eP       P        02 42 17.9 -0.4
       comp=Z,38nm,1.0s
SRU                               LR       LR
       comp=Z,3µm,19.0s
SRU    San Rafael Swe   68.35  56 eP       P        02 42 17.9 -0.4
SRU                               pmax     pmax
       comp=Z,38nm,1.0s
SRU                               MLR      MLR
       comp=Z,3µm,19.0s
BELC   Belle Mtn. Jos   68.36  63 P        P        02 42 15.7 -2.7
       baz=311
PKCU   Pink Cliffs      68.38  58 eP       P        02 42 19.0 +0.3
       comp=Z,93nm,1.5s
PKCU                              LR       LR
       comp=Z,2µm,21.0s
109C   Camp Elliot, M   68.39  65 P        P        02 42 16.0 -2.4
       baz=311
CPE    Camp Elliot      68.39  65 PFAKE             02 42 30.0 +12
CPE                               LR       LR
       comp=Z,2µm,21.0s
POO    Poona            68.43 275 eP       P        02 42 18.4 -0.4
URV    Uravakonda       68.45 270 eP       P        02 42 18.6 -0.3
URV                               IAmb     IAmb     02 42 20.1
       comp=Z,76nm,1.1s
URV                               IVMs_BB  IVMs_BB  03 20 58.5
       comp=Z,1µm,12.6s
DZM    Mont Dzumac      68.48 165 LR       LR       03 09 45.5
       comp=Z,7µm,19.7s,baz=3.0,slow=34
DZM    Mont Dzumac      68.48 165 eP       P        02 42 26.4 +7.5
       comp=Z,104nm,1.2s
DZM                               eS       S        02 51 26.1 +6.9
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       comp=Z,2µm,27.4s
DZM                               eLQ      LQ       02 59 59.5
       comp=Z,3µm,28.6s
DZM                               eLR      LR       03 03 22.7
       comp=Z,6µm,20.2s
RWWY   Rawlins          68.53  52 eP       P        02 42 20.2 +0.8
       comp=Z,35nm,1.0s
BORC   Borrego Spring   68.58  64 eP       P        02 42 24.0 +4.4
RSSD   Black Hills      68.61  48 P        P        02 42 16.9 -2.9
       baz=313
RSSD   Black Hills      68.61  48 eP       P        02 42 18.5 -1.3
       comp=Z,63nm,1.3s
RSSD                              LR       LR
       comp=Z,3µm,18.0s
RSSD   Black Hills      68.61  48 eP       P        02 42 18.5 -1.3
RSSD                              pmax     pmax
       comp=Z,63nm,1.3s
RSSD                              MLR      MLR
       comp=Z,3µm,18.0s
NEE2   Needles Airpor   68.73  62 P        P        02 42 18.5 -2.0
       baz=311
DOMB   Dombas           68.76 342 eP       P        02 42 19.5 -0.8
DOMB                              IAmb     IAmb     02 42 21.2
       comp=Z,160nm,1.1s
DOMB                              IAMs_20  IAMs_20  03 13 52.2
       comp=Z,6µm,19.7s
IRM    Iron Mountain    68.80  63 P        P        02 42 19.7 -1.2
       baz=311,SNR=12
BAR    Barrett          68.80  65 eP       P        02 42 21.6 +0.7
       comp=Z,52nm,1.2s
BAR                               epP      sP       02 42 33.7 +1.5
BAR                               LR       LR
       comp=Z,2µm,20.0s
MONP2  Monument Peak    68.82  64 P        P        02 42 18.8 -2.5
       baz=311
BC3    Big Chuckawall   68.93  63 P        P        02 42 20.4 -1.5
       baz=311
W13A   Hualapai Mount   68.96  61 eP       P        02 42 21.7 -0.5
       comp=Z,59nm,1.4s
W13A                              LR       LR
       comp=Z,1µm,19.0s
NC303  NORSAR Array S   68.97 341 eP       P        02 42 21.6 +0.1
NC303  NORSAR Array S   68.97 341 eP       P        02 42 20.7 -0.8
NC303                             IAmb     IAmb     02 42 22.8
       comp=Z,300nm,1.2s
NC303                             IAMs_20  IAMs_20  03 16 14.0
       comp=Z,70µm,19.2s
NC405  NORSAR Array S   68.98 340 eP       P        02 42 21.6  0.0
O20A   White River Ci   68.98  54 P        P        02 42 21.0 -1.2
       baz=312
O20A   White River Ci   68.98  54 eP       P        02 42 21.6 -0.6
       comp=Z,24nm,1.1s
O20A                              LR       LR
       comp=Z,2µm,20.0s
NC204  NORSAR Array S   69.06 341 eP       P        02 42 22.4 +0.2
U15A   North Rim        69.06  59 eP       P        02 42 22.4 -0.5
       comp=Z,98nm,1.4s
U15A                              LR       LR
       comp=Z,2µm,20.0s
AKN    Aaknes           69.08 343 eP       P        02 42 24.4 +2.2
AKN                               IAmb     IAmb     02 42 24.6
       comp=Z,240nm,1.3s
AKN                               IAMs_20  IAMs_20  03 15 13.6
       comp=Z,4µm,18.4s
MAK    Makhachkala      69.10 310c iP      P        02 42 22.6  0.0
MAK                               eS       S        02 51 27.0 +0.8
MAK                               pmax     pmax
       comp=Z,294nm,1.1s
MAK                               MLR      MLR
       comp=Z,9µm,17.0s
NB201  NORSAR Array S   69.14 341 eP       P        02 42 22.6  0.0
NB201  NORSAR Array S   69.14 341 eP       P        02 42 21.9 -0.6
NB201                             IAmb     IAmb     02 42 23.9
       comp=Z,504nm,1.1s
NB201                             IAMs_20  IAMs_20  03 13 57.1
       comp=Z,62µm,21.9s
ANGG   Ammassalik, Gr   69.14   4 eP       P        02 42 22.4  0.0
       comp=Z,82nm,1.1s
ANGG                              LR       LR
       comp=Z,7µm,19.0s
NB2    NORSAR Subarra   69.17 341 P        P        02 42 22.5 -0.3
       comp=Z,483nm,1.4s,baz=30,slow=6.5
NB2    NORSAR Subarra   69.17 341 P        P        02 42 22.5 -0.3
       baz=30,slow=6.5
NOA    NORSAR Array B   69.17 341 LR       LR       03 16 42.3
       comp=Z,4µm,19.8s,baz=30,slow=39
IKP    In-Ko-Pah, Jac   69.18  64 P        P        02 42 21.1 -2.3
       baz=311
SWSC   Sam W. Stewart   69.18  64 P        P        02 42 20.6 -2.7
       baz=311
NBO00  NORSAR Array S   69.28 341 eP       P        02 42 23.6 +0.1
PDMCI  Parker Dam,Lak   69.33  62 P        P        02 42 22.9 -1.2
       baz=312,SNR=10.0
HFS    Hagfors          69.35 339 P        P        02 42 23.0 -0.9
       comp=Z,113nm,0.8s,baz=33,slow=8.6,SNR=145
HFS                               LR       LR       03 15 31.7
       comp=Z,5µm,21.2s,baz=22,slow=38
HFS    Hagfors          69.35 339 P        P        02 42 23.0 -0.9
HFS                               pmax     pmax
       comp=Z,112nm,0.8s
HFS                               MLR      MLR
       comp=Z,5µm,21.2s
NC602  NORSAR Array S   69.36 340 eP       P        02 42 23.6 -0.3
NAO01  NORSAR Array S   69.41 341 eP       P        02 42 24.2 -0.1
Y12C   Blythe           69.45  63 P        P        02 42 22.9 -2.1
       baz=312
Y12C   Blythe           69.45  63 eP       P        02 42 25.0 +0.1
       comp=Z,88nm,1.3s
Y12C                              LR       LR
       comp=Z,1µm,21.0s
A33A   Warroad          69.49  40 P        P        02 42 23.7 -1.2
       baz=316,SNR=18
PV09   Paradox Valley   69.56  56 eP       P        02 42 26.4 +0.4
MICGM  Minsk            69.60 329⇓iP       P        02 42 25.0 -0.5
MICGM                             PM                02 42 27.0
       comp=Z,0.5nm,1.0s
MICGM                             ePP      PP       02 44 51.0 -7.9
MICGM                             ePPP     PPP      02 46 40.0
MICGM                             eS       S        02 51 28.0 -3.7
MICGM                             ePS      PnS      02 51 55.0 -4.0
MICGM                             eLQ      LQ       03 05 40.0
MICGM                             eLR      LR       03 10 07.0
MICGM                             LRM      MLR      03 10 21.0
       comp=Z,7.8nm,16.0s
MICGM                             LRM      MLR      03 16 21.0
       comp=E,6.8nm,18.0s
MICGM                             LRM      MLR      03 16 25.0
       comp=Z,13nm,16.0s
MNK    Minsk            69.60 329⇓iP       P        02 42 25.0 -0.5
MNK                               eS       S        02 51 28.0 -3.7
MNK                               pmax     pmax
       comp=Z,460nm,1.0s
MNK                               MLR      MLR
       comp=Z,13µm,16.0s
PV21   Cone Mtn., Par   69.61  56 eP       P        02 42 25.4 -0.8
       comp=Z,29nm,1.1s
PV21                              LR       LR
       comp=Z,2µm,22.0s
PV23   Carpenter Ridg   69.67  56 eP       P        02 42 26.3 -0.2
       comp=Z,90nm,1.4s
NACGM  Naroch           69.68 330 eP       P        02 42 26.0  0.0
NACGM                             PM                02 42 28.0
       comp=Z,0.3nm,0.8s
NACGM                             ePP      PP       02 45 22.0 +22
NACGM                             eS       S        02 51 26.0 -6.7
NACGM                             eScS     SKSac    02 52 22.0 -2.6
NACGM                             eSS      SS       02 56 20.0 +20
NACGM                             eSSS     SSS      02 59 26.0
NACGM                             eLR      LR       03 09 34.0
NACGM                             LRM      MLR      03 15 31.0
       comp=Z,3.7nm,20.0s
PV14   Lion Creek, Pa   69.71  56 eP       P        02 42 27.1 +0.3
       comp=Z,93nm,1.4s
GLA    Glamis           69.72  63 P        P        02 42 24.9 -1.9
       baz=312
GLA    Glamis           69.72  63 eP       P        02 42 27.0 +0.3
       comp=Z,90nm,1.4s
GLA                               LR       LR
       comp=Z,2µm,20.0s
GLA    Glamis           69.72  63 eP       P        02 42 27.0 +0.3
GLA                               pmax     pmax
       comp=Z,91nm,1.4s
GLA                               MLR      MLR
       comp=Z,2µm,20.0s
AGMN   Agassiz Nation   69.74  41 P        P        02 42 24.9 -1.6
       baz=316,SNR=14
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AGMN	Agassiz Nation	69.74	41	*e*P	P	02 42 25.4	-1.1
	comp=Z,95nm,1.4s						
AGMN				LR	LR		
	comp=Z,4µm,20.0s						
PV22	Blue Mesa, Par	69.74	55	*e*P	P	02 42 27.1	+0.2
	comp=Z,78nm,1.4s						
PHWY	Pilot Hill	69.76	51	*e*P	P	02 42 27.2	+0.1
	comp=Z,20nm,1.4s						
PHWY				LR	LR		
	comp=Z,2µm,19.0s						
PV20	West Nyswonger	69.77	56	*e*P	P	02 42 27.4	+0.3
	comp=Z,94nm,1.4s						
PV20				LR	LR		
	comp=Z,3µm,19.0s						
PV19	Morning Glory	69.78	56	*e*P	P	02 42 27.3	+0.1
	comp=Z,108nm,1.5s						
PV17	East Wray Mesa	69.81	56	*e*P	P	02 42 27.6	+0.2
	comp=Z,85nm,1.2s						
PV17				LR	LR		
	comp=Z,3µm,19.0s						
PV16	Nyswonger Mesa	69.82	56	*e*P	P	02 42 27.8	+0.3
	comp=Z,94nm,1.4s						
PV16				LR	LR		
	comp=Z,2µm,19.0s						
GROC	Groznyy	69.84	311	*e*P	P	02 42 27.1	-0.1
GROC				*e*		02 42 48.6	
GROC				*e*S	S	02 51 36.5	+1.5
GROC				pmax	pmax		
	comp=Z,156nm,1.0s						
PV11	David Mesa, Pa	69.85	56	*e*P	P	02 42 28.0	+0.4
	comp=Z,104nm,1.3s						
PV18	Skein Mesa, Pa	69.86	56	*e*P	P	02 42 28.0	+0.3
	comp=Z,97nm,1.3s						
PV18				LR	LR		
	comp=Z,2µm,20.0s						
PV12	Saucer Basin,	69.88	56	*e*P	P	02 42 27.3	-0.5
	comp=Z,86nm,1.4s						
PV12				LR	LR		
	comp=Z,3µm,20.0s						
PV03	Paradox Valley	69.89	56	*e*P	P	02 42 27.4	-0.5
PV13	Radium Mtn., P	69.97	56	*e*P	P	02 42 28.0	-0.4
	comp=Z,55nm,1.2s						
PV13				LR	LR		
	comp=Z,2µm,19.0s						
AKT	Akhty	69.99	309⇑	*i*P	P	02 42 29.0	+0.7
AKT				*e*		02 42 49.4	
AKT				*e*S	S	02 51 37.0	0.0
AKT				*e*		02 52 27.8	
AKT				pmax	pmax		
	comp=Z,478nm,1.0s						
PV02	Paradox Valley	69.99	56	*e*P	P	02 42 28.9	+0.4
	comp=Z,38nm,1.3s						
BORG	Borgarnes	70.09	357	*e*P	P	02 42 30.5	+2.2
	comp=Z,150nm,1.2s						
BORG				LR	LR		
	comp=Z,2µm,18.0s						
BORG	Borgarnes	70.09	357	*e*P	P	02 42 30.5	+2.2
BORG				pmax	pmax		
	comp=Z,150nm,1.2s						
BORG				MLR	MLR		
	comp=Z,2µm,18.0s						
PV01	Paradox Valley	70.14	56	*e*P	P	02 42 29.8	+0.4
B34A	Aery, Baudette	70.16	40	P	P	02 42 27.4	-1.7
	baz=317,SNR=6.4						
HYA	Hoyanger	70.16	343	*e*P	P	02 42 28.8	0.0
HYA				IAmb	IAmb	02 42 30.9	
	comp=Z,177nm,1.0s						
C33A	Trail	70.17	41	P	P	02 42 27.3	-1.9
	baz=316						
WUAZ	Wupatki	70.22	59	P	P	02 42 29.0	-0.9
	baz=312,SNR=13						
WUAZ	Wupatki	70.22	59	*e*P	P	02 42 29.8	-0.1
	comp=Z,104nm,1.5s						
WUAZ				LR	LR		
	comp=Z,2µm,20.0s						
OSL	Oslo	70.25	340	*e*P	P	02 42 29.1	-0.2
OSL				IAmb	IAmb	02 42 30.8	
	comp=Z,254nm,1.2s						
OSL				IAMs_20	IAMs_20	03 19 30.5	
	comp=Z,6µm,17.1s						
Y14A	Wickenburg	70.28	62	*e*P	P	02 42 30.3	+0.2
	comp=Z,70nm,1.4s						
Y14A				LR	LR		
	comp=Z,1µm,19.0s						
SMCO	Snowmass	70.35	54	*e*P	P	02 42 31.9	+1.0
	comp=Z,18nm,1.0s						
SMCO				LR	LR		
	comp=Z,2µm,20.0s						
EIDS	Eidsvold	70.39	180	PFAKE		02 42 40.0	+9.5
EIDS				LR	LR		
	comp=Z,2µm,21.0s						
AS01	Alice Springs	70.52	197	*e*P	P	02 42 30.6	-0.8
AS31	Alice Springs	70.53	197	*e*P	P	02 42 32.3	+0.8
	comp=Z,3.3nm,0.9s						
ASAR	Alice Springs	70.53	197	P	P	02 42 30.9	-0.7
	comp=Z,9.5nm,1.1s,baz=12,slow=4.8,SNR=37						
ASAR				LR	LR	03 11 49.8	
	comp=Z,2µm,21.5s,baz=20,slow=34						
113A	Mohawk Valley,	70.58	63	*e*P	P	02 42 31.8	-0.1
	comp=Z,34nm,1.4s						
113A				LR	LR		
	comp=Z,2µm,19.0s						
C34A	RKJ Ranch, Bem	70.65	41	P	P	02 42 30.2	-1.9
	baz=317						
B35A	Bob, Littlefor	70.67	40	P	P	02 42 30.8	-1.4
	baz=317						
B35A	Bob, Littlefor	70.67	40	*e*P	P	02 42 32.0	-0.2
	comp=Z,57nm,1.4s						
B35A				LR	LR		
	comp=Z,3µm,19.0s						
ISCO	Idaho Springs	70.70	53	P	P	02 42 32.1	-0.9
	baz=313,SNR=18						
ISCO	Idaho Springs	70.70	53	*e*P	P	02 42 33.0	+0.1
	comp=Z,44nm,1.4s						
ISCO				LR	LR		
	comp=Z,4µm,21.0s						
ISCO	Idaho Springs	70.70	53	*e*P	P	02 42 33.0	+0.1
ISCO				pmax	pmax		
	comp=Z,44nm,1.4s						
ISCO				MLR	MLR		
	comp=Z,4µm,21.0s						
KONO	Kongsberg	70.77	341	*e*P	P	02 42 33.1	+0.5
	comp=Z,173nm,1.3s						
KONO				LR	LR		
	comp=Z,3µm,19.0s						
KONO	Kongsberg	70.77	341	*ce*P	P	02 42 33.8	+1.2
KONO				pmax	pmax		
	comp=Z,136nm,1.3s						
MVCO	Mesa Verde	70.80	56	P	P	02 42 32.4	-1.1
	baz=313,SNR=6.8						
MVCO	Mesa Verde	70.80	56	*e*P	P	02 42 33.1	-0.4
	comp=Z,63nm,1.4s						
MVCO				LR	LR		
	comp=Z,2µm,20.0s						
F32A	Veblen	70.89	44	P	P	02 42 32.2	-1.4
	baz=316						
X16A	Lo Mia Camp, P	70.92	60	*e*P	P	02 42 34.1	-0.1
	comp=Z,50nm,1.1s						
X16A				LR	LR		
	comp=Z,2µm,20.0s						
KIV	Kislovodsk	70.93	314	*e*P	P	02 42 34.8	+0.8
KIV	Kislovodsk	70.93	314	*e*P	P	02 42 35.2	+1.2
	comp=Z,449nm,1.1s						
KIV				LR	LR		
	comp=Z,15µm,18.0s						
KIV	Kislovodsk	70.93	314	P	P	02 42 34.5	+0.4
	SNR=94						
KIV	Kislovodsk	70.93	314	*i* P	P	02 42 34.4	+0.4
	SNR=68						
KIV	Kislovodsk	70.93	314	*e*P	P	02 42 34.8	+0.8
KIV				*e*PPP	PPP	02 46 54.9	
KIV				*e*S	S	02 51 48.2	+0.3
KIV				*e*SS	SS	02 56 22.6	+2.6
KIV				pmax	pmax		
	comp=Z,528nm,4.1s						
KIV				pmax	pmax		
	comp=Z,398nm,1.0s						
KIV				MLR	MLR		
	comp=Z,13µm,18.0s						
KBZ	Khabaz	70.99	313	P	P	02 42 35.2	+1.1
	comp=Z,334nm,1.0s,baz=46,slow=3.3,SNR=189						
KBZ				LR	LR	03 17 50.1	
	comp=Z,21µm,19.2s,baz=42,slow=39						
ASK	Askoy	70.99	343	*e*P	P	02 42 34.3	+0.4
ASK				IAmb	IAmb	02 42 35.6	
	comp=Z,271nm,1.2s						
ASK				IAMs_20	IAMs_20	03 18 01.7	
	comp=Z,11µm,21.9s						
SUSD	Miller	71.00	46	P	P	02 42 32.3	-2.0
	baz=316						
C35A	Jirik Farms, M	71.04	41	P	P	02 42 32.8	-1.7
	baz=317,SNR=9.6						
BER	Bergen	71.05	343	*e*P	P	02 42 35.5	+1.3
BER				IAmb	IAmb	02 42 35.9	
	comp=Z,240nm,1.2s						
BER				IAMs_20	IAMs_20	03 19 23.1	
	comp=Z,4µm,18.1s						
ZEI	Tsey	71.13	312	*e*P	P	02 42 31.2	-4.2
ZEI				pmax	pmax		
	comp=Z,175nm,0.9s						
G32A	Webster	71.15	44	P	P	02 42 32.8	-2.4
	baz=316						
G32A	Webster	71.15	44	*e*P	P	02 42 35.1	-0.1
	comp=Z,67nm,1.0s						
G32A				LR	LR		
	comp=Z,5µm,20.0s						
PALK	Pallekele	71.35	261	P	P	02 42 37.7	+0.9
	comp=Z,27nm,0.9s,baz=112,slow=1.2,SNR=4.5						
PALK				LR	LR	03 15 55.5	
	comp=Z,2µm,21.8s,baz=202,slow=38						
PALK	Pallekele	71.35	261	*e*P	P	02 42 37.7	+0.9
	comp=Z,70nm,1.1s						
PALK	Pallekele	71.35	261	P	P	02 42 38.0	+1.2
PALK	Pallekele	71.35	261	*i* P	P	02 42 38.8	+2.0
E34A	Wadena	71.36	42	P	P	02 42 34.4	-2.0
	baz=317						
S22A	4UR Ranch, Cre	71.41	55	P	P	02 42 36.2	-1.1
	baz=313,SNR=18						
S22A	4UR Ranch, Cre	71.41	55	*e*P	P	02 42 36.6	-0.6
	comp=Z,30nm,1.3s						
S22A				LR	LR		
	comp=Z,2µm,20.0s						
NEY	Neytrino	71.42	313	*c i*P	P	02 42 38.2	+1.2
NEY				pmax	pmax		
	comp=Z,39nm,1.1s						
TBLG	Delisi	71.43	311	*e*P	P	02 42 38.3	+1.4
	comp=Z,597nm,1.1s						
D35A	Remer	71.46	41	P	P	02 42 35.3	-1.7
	baz=318,SNR=5.8						
W18A	Petrified Fore	71.48	59	P	P	02 42 36.0	-1.5
	baz=313						
W18A	Petrified Fore	71.48	59	PFAKE		02 42 50.0	+12
W18A				LR	LR		
	comp=Z,2µm,21.0s						
C36A	Pine Crest Far	71.52	40	P	P	02 42 36.0	-1.3
	baz=318,SNR=7.4						
Q24A	Divide	71.53	53	P	P	02 42 35.5	-2.5
	baz=314						
Q24A	Divide	71.53	53	PFAKE		02 42 50.0	+12
Q24A				LR	LR		
	comp=Z,2µm,21.0s						
SUW	Suwalki	71.66	331	*e*P	P	02 42 37.2	-0.8
SUW				LMZ	LR	03 20 25.4	
	comp=Z,6µm,17.1s						
SUW	Suwalki	71.66	331	*e*P	P	02 42 37.7	-0.3
	comp=Z,231nm,1.0s						
SUW				LR	LR		
	comp=Z,5µm,18.0s						
SUW	Suwalki	71.66	331⇑	*e*P	P	02 42 37.2	-0.8
E35A	Pequot Lakes	71.68	42	P	P	02 42 36.2	-2.1
	baz=318						
BLS5	Blasjo	71.69	342	*e*P	P	02 42 38.3	+0.1
BLS5				IAmb	IAmb	02 42 39.8	
	comp=Z,164nm,1.3s						
BLS5				IAMs_20	IAMs_20	03 17 22.8	
	comp=Z,5µm,20.3s						
G33A	Ortonville	71.71	44	P	P	02 42 37.0	-1.5
	baz=317						
H32A	Carlson Farm,	71.72	45	P	P	02 42 36.5	-2.1
	baz=316						
214A	Organ Pipe Nat	71.72	63	P	P	02 42 37.9	-1.0
	baz=313						
X18A	Snowflake	71.75	59	*e*P	P	02 42 39.1	-0.1
	comp=Z,88nm,1.5s						
X18A				LR	LR		
	comp=Z,2µm,19.0s						
D36A	Goodland	71.80	40	P	P	02 42 37.1	-1.9
	baz=318,SNR=5.9						
D36A	Goodland	71.80	40	*e*P	P	02 42 38.6	-0.5
	comp=Z,53nm,1.3s						
D36A				LR	LR		
	comp=Z,3µm,20.0s						
C37A	Embarrass	71.83	40	P	P	02 42 37.6	-1.7
	baz=318,SNR=7.1						
F34A	Alexandria	71.84	43	P	P	02 42 37.9	-1.4
	baz=317						
OGNE	Ogallala	71.87	50	P	P	02 42 38.5	-1.2
	baz=315,SNR=7.7						
OGNE	Ogallala	71.87	50	*e*P	P	02 42 40.0	+0.3
	comp=Z,100nm,1.2s						
OGNE				LR	LR		
	comp=Z,4µm,19.0s						
EYMN	Ely	71.98	39	P	P	02 42 38.8	-1.3
	baz=319,SNR=14						
EYMN	Ely	71.98	39	*e*P	P	02 42 39.2	-0.9
	comp=Z,111nm,1.4s						
EYMN				LR	LR		
	comp=Z,3µm,18.0s						
AKASG	Malin Array Be	72.05	326	P	P	02 42 39.8	-0.6
	comp=Z,28nm,0.5s,baz=37,slow=6.7,SNR=179						
AKASG				LR	LR	03 17 05.9	
	comp=Z,11µm,18.8s,baz=35,slow=38						
AKBB	Malin Array Si	72.05	326	*e*P	P	02 42 40.1	-0.4
	comp=Z,122nm,0.9s						
G34A	Benson	72.06	43	P	P	02 42 39.3	-1.4
	baz=317						
KIEV	Kiev	72.06	326	*e*P	P	02 42 39.3	-1.2
KIEV	Kiev	72.06	326	*e*P	P	02 42 39.6	-0.9
	comp=Z,128nm,1.0s						
KIEV				LR	LR		
	comp=Z,11µm,19.0s						
KIEV	Kiev	72.06	326	*i* P	P	02 42 39.3	-1.2
	SNR=84						
KIEV	Kiev	72.06	326	*c i*P	P	02 42 39.3	-1.2
KIEV				pmax	pmax		
	comp=Z,157nm,1.0s						
AK11	Malin Array Si	72.09	326	*e*P	P	02 42 40.0	-0.7
F35A	Swanville	72.12	42	P	P	02 42 39.3	-1.7
	baz=318						
D37A	Cotton	72.15	40	P	P	02 42 39.5	-1.7
	baz=318,SNR=7.2						
KLNR	Kaliningrad	72.16	333	*d i*P	P	02 42 41.2	+0.2
KLNR				pmax	pmax		
	comp=Z,345nm,1.1s						
SDCO	Great Sand Dun	72.17	54	P	P	02 42 40.8	-1.0
	baz=314,SNR=12						
SDCO	Great Sand Dun	72.17	54	*e*P	P	02 42 41.2	-0.7
	comp=Z,16nm,1.3s						
SDCO				LR	LR		
	comp=Z,2µm,18.0s						
MBWA	Marble Bar	72.22	211	*e*P	P	02 42 41.3	-0.5
	comp=Z,68nm,1.3s						
MBWA				LR	LR		
	comp=Z,1µm,21.0s						
E36A	McGregor	72.25	41	P	P	02 42 40.3	-1.5
	baz=318,SNR=12						
C38A	Sawbill Land.	72.25	39	P	P	02 42 39.9	-1.9
	baz=319,SNR=16						
STAV	Stavanger	72.30	342	*e*P	P	02 42 41.3	-0.5
STAV				IAmb	IAmb	02 42 43.9	
	comp=Z,314nm,1.3s						
STAV				IAMs_20	IAMs_20	03 19 37.2	
	comp=Z,3µm,18.9s						
AKH	Akhalkalaki	72.32	311⇑	*i*P	P	02 42 43.8	+1.3
AKH	Akhalkalaki	72.32	311	*e*P	P	02 42 44.8	+2.3
	comp=Z,276nm,1.2s						
AKH				LR	LR		
	comp=Z,11µm,19.0s						
SNART	Snartemo	72.50	341	*e*P	P	02 42 43.9	+0.9
LRW	Lerwick	72.51	346⇑	*e*P	P	02 42 42.4	-0.6
LRW				IAmb	IAmb	02 42 44.5	
	comp=Z,181nm,1.3s						
LRW				IAMs_20	IAMs_20	03 18 41.5	
	comp=Z,3µm,18.9s						
GNI	Garni	72.54	310	P	P	02 42 45.4	+1.6
	comp=Z,213nm,1.1s,baz=56,slow=3.6,SNR=99						
GNI				LR	LR	03 18 14.9	
	comp=Z,8µm,18.7s,baz=31,slow=39						
E37A	Wrenshall	72.61	40	P	P	02 42 41.9	-2.0
	baz=319						
IVI	Ivigtut	72.61	10	*e*P	P	02 42 44.6	+1.0
	comp=Z,109nm,1.0s						
IVI				LR	LR		
	comp=Z,5µm,20.0s						
F36A	Milaca	72.61	42	P	P	02 42 42.4	-1.5
	baz=318,SNR=6.2						
F36A	Milaca	72.61	42	*e*P	P	02 42 43.0	-1.0
	comp=Z,45nm,1.4s						
F36A				LR	LR		
	comp=Z,3µm,20.0s						
G35A	Watkins	72.63	43	P	P	02 42 42.2	-1.8
	baz=318						
G35A	Watkins	72.63	43	*e*P	P	02 42 44.4	+0.3
	comp=Z,120nm,1.5s						
G35A				LR	LR		
	comp=Z,4µm,19.0s						
ECSD	EROS Data Cent	72.69	45	P	P	02 42 42.9	-1.5
	baz=317,SNR=26						
ECSD	EROS Data Cent	72.69	45	*e*P	P	02 42 43.2	-1.3
	comp=Z,62nm,1.3s						
ECSD				LR	LR		
	comp=Z,4µm,21.0s						
SOC	Sochi	72.70	315	*c i*P	P	02 42 44.5	0.0
SOC				*e**PP	pP	02 42 51.2	-1.5
SOC				*e**SP	sP	02 42 56.1	+0.4
SOC				*e*PPP	PPP	02 47 03.8	
SOC				*e*S	S	02 52 09.8	+1.8
SOC				pmax	pmax		
	comp=Z,229nm,1.1s						
TUC	Tucson	72.75	61	P	P	02 42 43.6	-1.5
	baz=313						
TUC	Tucson	72.75	61	*e*P	P	02 42 44.7	-0.4
	comp=Z,44nm,1.3s						
TUC	Tucson	72.75	61	*e*P	P	02 42 44.7	-0.4
TUC				pmax	pmax		
	comp=Z,44nm,1.3s						
H35A	Sunnyside Ranc	72.85	43	P	P	02 42 44.1	-1.3
	baz=318,SNR=13						
KSCO	Kaye Shedlock’	72.91	52	P	P	02 42 44.1	-1.9
	baz=315						
KSCO	Kaye Shedlock’	72.91	52	PFAKE		02 43 00.0	+14
KSCO				LR	LR		
	comp=Z,3µm,19.0s						
ANN	Anapa	72.92	317	*e*P	P	02 42 45.5	-0.3
ANN				*e*		02 45 29.8	
ANN				*e*S	S	02 52 12.5	+2.0
ANN				*e*		02 52 48.6	
ANN				pmax	pmax		
	comp=N,36nm,1.3s						
ANN				pmax	pmax		
	comp=Z,298nm,1.3s						
ANN				pmax	pmax		
	comp=E,31nm,1.3s						
ANN				pmax	pmax		
	comp=E,106nm,7.3s						
ANN				pmax	pmax		
	comp=N,367nm,7.3s						
ANN				pmax	pmax		
	comp=Z,1µm,7.3s						
NRS	Narsarsuaq	72.96	8	PFAKE		02 43 00.0	+14
NRS				LR	LR		
	comp=Z,9µm,19.0s						
E38A	The Farm, Brul	72.96	40	P	P	02 42 44.3	-1.6
	baz=319,SNR=11						
E38A	The Farm, Brul	72.96	40	*e*P	P	02 42 44.6	-1.4
	comp=Z,102nm,1.3s						
E38A				LR	LR		
	comp=Z,3µm,21.0s						
G36A	St. Michael	72.97	42	P	P	02 42 44.0	-2.1
	baz=318						
C40A	Isle Royale Na	73.03	38	P	P	02 42 44.6	-1.7
	baz=320						
C40A	Isle Royale Na	73.03	38	PFAKE		02 43 00.0	+14
C40A				LR	LR		
	comp=Z,5µm,18.0s						
F37A	Hinrichs Farm,	73.13	41	P	P	02 42 45.2	-1.8
	baz=319						
T25A	Trinidad	73.22	54	P	P	02 42 46.8	-1.1
	baz=315,SNR=10						
T25A	Trinidad	73.22	54	*e*P	P	02 42 47.5	-0.5
	comp=Z,44nm,1.4s						
T25A				LR	LR		
	comp=Z,2µm,20.0s						
F38A	Pierce - Schro	73.30	41	P	P	02 42 46.9	-1.1
	baz=319,SNR=19						
BSD	Bornholm Skovb	73.36	336⇑	*i*P	P	02 42 47.4	-0.7
	comp=Z,290nm,1.3s						
	comp=Z,5µm,18.0s						
BSD	Bornholm Skovb	73.36	336⇑	*i*P	P	02 42 47.4	-0.7
BSD				pmax	pmax		
	comp=Z,290nm,1.3s						
BSD				MLR	MLR		
	comp=Z,5µm,18.0s						
H36A	Jessenland, He	73.37	43	P	P	02 42 46.8	-1.7
	baz=318						
SPMN	Marine on St.	73.42	42	P	P	02 42 47.4	-1.4
	baz=319,SNR=5.8						
SPMN	Marine on St.	73.42	42	*e*P	P	02 42 47.8	-1.0
	comp=Z,72nm,1.4s						
SPMN				LR	LR		
	comp=Z,3µm,21.0s						
LAZ	Ladron	73.53	58	*e*P	P	02 42 49.9	+0.1
TASM	ASL Pad, Albuq	73.56	57	P	P	02 42 47.7	-2.3
	baz=314,SNR=8.7						
ANMO	Albuquerque	73.56	57	P	P	02 42 49.5	-0.5
	comp=Z,4.8nm,1.2s,baz=304,slow=13,SNR=14						
ANMO				LR	LR	03 11 30.0	
	comp=Z,2µm,21.3s,baz=337,slow=33						
ANMO	Albuquerque	73.56	57	P	P	02 42 47.5	-2.4
	baz=314						
ANMO	Albuquerque	73.56	57	*e*P	P	02 42 49.7	-0.2
	comp=Z,35nm,1.4s						
ANMO	Albuquerque	73.56	57	*ce*P	P	02 42 50.3	+0.3
ANMO				pmax	pmax		
	comp=Z,19nm,1.7s						
TASL	Snake Pit, Alb	73.56	57	P	P	02 42 49.0	-1.0
	baz=314,SNR=9.4						
COP	Copenhagen	73.56	337⇑	*i*P	P	02 42 49.2	-0.1
	comp=Z,223nm,1.2s						
	comp=Z,4µm,20.0s						
COP	Copenhagen	73.56	337⇑	*i*P	P	02 42 49.2	-0.1
COP				pmax	pmax		
	comp=Z,220nm,1.2s						
COP				MLR	MLR		
	comp=Z,4µm,20.0s						
E39A	Mellen	73.58	40	P	P	02 42 48.1	-1.6
	baz=320,SNR=12						
BGNE	Belgrade	73.59	47	P	P	02 42 48.2	-1.6
	baz=317						
BGNE	Belgrade	73.59	47	PFAKE		02 43 00.0	+10
BGNE				LR	LR		
	comp=Z,6µm,20.0s						
MUD	Monsted U’grnd	73.73	339⇑	*i*P	P	02 42 50.1	-0.2
	comp=Z,200nm,1.3s						
	comp=Z,5µm,17.0s						
MUD	Monsted U’grnd	73.73	339⇑	*i*P	P	02 42 50.1	-0.2
MUD				pmax	pmax		
	comp=Z,200nm,1.3s						
MUD				MLR	MLR		
	comp=Z,5µm,17.0s						
I36A	Fitzsimmons Fa	73.75	43	P	P	02 42 48.9	-1.8
	baz=318						
F39A	Loretta	73.77	40	P	P	02 42 49.3	-1.5
	baz=320,SNR=15						
LENM	Lemitar	73.79	58	*e*P	P	02 42 51.4	+0.1
E40A	Wakefield	73.83	39	P	P	02 42 50.0	-1.1
	baz=320,SNR=31						
H37A	Dierke Farm, C	73.85	42	P	P	02 42 49.3	-2.0
	baz=319						
Y22D	IRIS PASSCAL I	73.89	58	P	P	02 42 50.1	-1.8
	baz=314						
Y22D	IRIS PASSCAL I	73.89	58	PFAKE		02 43 00.0	+8.2
Y22D				LR	LR		
	comp=Z,2µm,20.0s						
Y22E	IRIS PASSCAL I	73.89	58	P	P	02 42 49.6	-2.2
	baz=314						
G38A	Ridgeland	73.91	41	P	P	02 42 49.7	-1.9
	baz=319,SNR=7.8						
LLD	Lille Linde	73.93	337	*i* P	P	02 42 52.1	+0.6
	comp=Z,288nm,1.2s						
LLD	Lille Linde	73.93	337	*i* P	P	02 42 52.1	+0.6
LLD				pmax	pmax		
	comp=Z,290nm,1.2s						
D41A	Chassel	73.94	38	P	P	02 42 50.5	-1.2
	baz=321,SNR=13						
D41A	Chassel	73.94	38	*e*P	P	02 42 51.4	-0.4
	comp=Z,130nm,1.4s						
D41A				LR	LR		
	comp=Z,4µm,18.0s						
BNM	Barren Site	74.01	58	*e*P	P	02 42 52.6	-0.1
I37A	Lemond, Waseca	74.05	43	P	P	02 42 51.2	-1.1

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      baz=319,SNR=20
I37A  Lemond, Waseca   74.05  43 eP       P        02 42 51.3 -1.1
      comp=Z,172nm,1.1s
I37A                              LR      LR
      comp=Z,5µm,20.0s
H38A  Maiden Rock      74.08  42  P       P        02 42 50.9 -1.7
      baz=319
J36A  Seneca 1, Swea   74.10  44  P       P        02 42 51.0 -1.8
      baz=318
J36A  Seneca 1, Swea   74.10  44 eP       P        02 42 52.5 -0.2
      comp=Z,47nm,1.4s
J36A                              LR      LR
      comp=Z,4µm,20.0s
F40A  Park Falls       74.13  40  P       P        02 42 51.1 -1.8
      baz=320,SNR=9.7
G39A  Holcombe         74.13  41  P       P        02 42 51.0 -1.9
      baz=320,SNR=6.6
E41A  Kenton           74.23  39  P       P        02 42 51.9 -1.6
      baz=321
GKP   Gorka Klasztor   74.24 333 eP       P        02 42 53.0 -0.3
GKP                              ePcP     sP       02 43 05.7 +1.1
GKP                               LMZ     LR       03 23 09.4
      comp=Z,8µm,17.7s
GKP   Gorka Klasztor   74.24 333⇑eP       P        02 42 53.0 -0.3
GKP                              e                 02 43 05.7
BEL   Belsk            74.28 331 eP       P        02 42 54.2 +0.6
BEL                              ePcP     PcP      02 43 06.8 -1.6
BEL                               LMZ     LR       03 19 58.1
      comp=Z,5µm,18.7s
BEL   Belsk            74.28 331 eP       P        02 42 54.2 +0.6
BEL                              e                 02 43 06.8
RGN   Rugen            74.31 336 eP       P        02 42 54.2 +0.5
      comp=Z,162nm,1.0s
319A  Douglas          74.32  61 eP       P        02 42 54.7 +0.3
      comp=Z,100nm,1.2s
319A                              LR      LR
      comp=Z,2µm,21.0s
SIM   Simferopol'      74.37 319 eP       P        02 42 54.3  0.0
SIM   Simferopol'      74.37 319c iP      P        02 42 54.6 +0.3
SIM                              e                 02 43 08.0
SIM                                                02 45 39.0
SIM                              ePPP     PPP      02 47 23.0
SIM                              eS       S        02 52 25.0 -1.9
SIM                              ePS      PnS      02 53 10.0 +7.7
SIM                              eSS      SS       02 57 12.0 -0.2
SIM                              eSSS     SSS      03 00 32.0
SIM                               pmax    pmax
      comp=Z,198nm,1.0s
SORM  Soroca           74.42 324⇑iP       P        02 42 55.0 +0.5
SORM  Soroca           74.42 324 ⇑P       P        02 42 55.0 +0.5
COWI  Conover          74.43  39 eP       P        02 42 53.2 -1.4
      comp=Z,53nm,1.3s
COWI                              LR      LR
      comp=Z,3µm,21.0s
121A  Cookes Peak, D   74.43  59  P       P        02 42 53.9 -1.2
      baz=314
J37A  Redenius Farm,   74.50  43  P       P        02 42 53.3 -1.8
      baz=319,SNR=12
BIGH  Upper Bighouse   74.52 347⇑eP       P        02 42 54.9 +0.1
BIGH                              IAmb    IAmb     02 42 56.3
      comp=Z,1µm,1.8s
BIGH                              IAMs_20 IAMs_20  03 25 30.3
      comp=Z,4µm,15.4s
I38A  Scanlan Farm,    74.54  42  P       P        02 42 53.6 -1.7
      baz=319
H39A  Augusta          74.54  41  P       P        02 42 53.6 -1.7
      baz=320
G40A  Rib Lake         74.59  40  P       P        02 42 53.9 -1.6
      baz=320,SNR=7.0
G40A  Rib Lake         74.59  40 eP       P        02 42 54.2 -1.3
      comp=Z,56nm,1.4s
G40A                              LR      LR
      comp=Z,3µm,20.0s
CBKS  Cedar Bluff      74.63  50  P       P        02 42 53.8 -2.2
      baz=316
CBKS  Cedar Bluff      74.63  50 eP       P        02 42 56.6 +0.7
      comp=Z,55nm,1.4s
CBKS                             epP      sP       02 43 07.6 +0.4
CBKS                              LR      LR
      comp=Z,3µm,19.0s
CBKS  Cedar Bluff      74.63  50 eP       P        02 42 56.6 +0.7
CBKS                             e*PP     sP       02 43 07.6 +0.4
CBKS                              pmax    pmax
      comp=Z,55nm,1.4s
CBKS                              MLR     MLR
      comp=Z,3µm,19.0s
E42A  Champion         74.71  38  P       P        02 42 54.7 -1.6
      baz=321,SNR=15
F41A  Three Lakes      74.72  39  P       P        02 42 54.1 -2.3
      baz=321,SNR=9.2
F41A  Three Lakes      74.72  39  PFAKE            02 43 10.0  +14
F41A                              LR      LR
      comp=Z,4µm,20.0s
LVV   L'vov            74.77 328 eP       P        02 42 56.6 +0.1
LVV                              ePPP     PPP      02 47 24.0
LVV                              eS       S        02 52 26.0 -5.2
LVV                               MLR     MLR
      comp=Z,4µm,18.0s
L36A  Harm Buss Farm   74.85  45  P       P        02 42 54.9 -2.2
      baz=318
K37A  Belmond          74.86  44  P       P        02 42 55.4 -1.8
      baz=319,SNR=9.1
HSIG                   74.89  64  PFAKE            02 43 10.0  +12
HSIG                              LR      LR
      comp=Z,2µm,20.0s
H40A  Chili            75.00  41  P       P        02 42 56.1 -1.8
      baz=320,SNR=5.5
J38A  Wedel Dairy, R   75.01  43  P       P        02 42 56.3 -1.8
      baz=319,SNR=6.9
SCHQ  Schefferville    75.04  22  P       P        02 42 57.5 -0.5
      comp=Z,7.3nm,0.7s,baz=350,slow=5.3,SNR=4.9
SCHQ                              LR      LR       03 19 19.2
      comp=Z,3µm,20.1s,baz=350,slow=38
SCHQ  Schefferville    75.04  22 eP       P        02 42 58.6 +0.6
      comp=Z,55nm,1.4s
I39A  Houston          75.06  42  P       P        02 42 56.3 -2.0
      baz=320,SNR=5.2
I39A  Houston          75.06  42 eP       P        02 42 57.7 -0.6
      comp=Z,47nm,1.0s
I39A                              LR      LR
      comp=Z,4µm,20.0s
G41A  Antigo           75.09  40  P       P        02 42 56.9 -1.6
      baz=321
KIS   Kishinev         75.12 323⇑iP       P        02 42 58.0 -0.6
      comp=Z,2µm,4.5s
KIS   Kishinev         75.12 323 i PcP    PcP      02 43 11.0 -1.1
KIS   Kishinev         75.12 323α iP      P        02 42 58.0 -0.6
KIS                              i                 02 43 11.0
KIS                              ePPP     PPP      02 47 40.0
KIS                              eS       S        02 52 35.0 -0.2
KIS                              ePS      PnS      02 53 10.0 -1.9
KIS                               pmax    pmax
      comp=Z,2µm,4.5s
KIS                               pmax    pmax
      comp=Z,1µm,11.0s
KIS                               smax    smax
      comp=N,2µm,12.0s
KIS                               smax    smax
      comp=E,1µm,12.0s
KIS                               MLR     MLR
      comp=Z,18µm,18.0s
F42A  Maple Grove Fa   75.14  39  P       P        02 42 57.0 -1.7
      baz=321
E43A  Lone Tree Farm   75.15  38  P       P        02 42 57.3 -1.5
      baz=322,SNR=11
E43A  Lone Tree Farm   75.15  38 eP       P        02 42 57.6 -1.2
      comp=Z,54nm,1.4s
E43A                              LR      LR
      comp=Z,4µm,19.0s
MILM  Milestii Mici    75.19 323⇓iP       P        02 42 59.8 +0.8
SRIG  Santa Rosalia    75.23  66  PFAKE            02 43 10.0  +10
SRIG                              LR      LR
      comp=Z,3µm,20.0s
M36A  Felix, Anita     75.27  45  P       P        02 42 57.8 -1.8
      baz=318
MCD   Coleburn Disti   75.28 346 eP       P        02 42 59.0 -0.4
L37A  Phoenix Point,   75.29  44  P       P        02 42 58.0 -1.7
      baz=319,SNR=6.3
H41A  Junction City    75.34  40  P       P        02 42 58.2 -1.7
      baz=320
H41A  Junction City    75.34  40 eP       P        02 42 59.5 -0.4
      comp=Z,65nm,1.4s
H41A                              LR      LR
      comp=Z,4µm,21.0s
J39A  Decorah          75.36  42  P       P        02 42 57.7 -2.4
      baz=320,SNR=11
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K38A  Parkersburg      75.38  43  P       P        02 42 58.8 -1.3
      baz=319
K38A  Parkersburg      75.38  43 eP       P        02 42 58.9 -1.3
      comp=Z,36nm,1.3s
K38A                              LR      LR
      comp=Z,4µm,20.0s
G42A  Mountain         75.41  39  P       P        02 42 58.7 -1.6
      baz=321,SNR=7.3
G42A  Mountain         75.41  39 eP       P        02 42 58.8 -1.6
      comp=Z,62nm,1.3s
G42A                              LR      LR
      comp=Z,4µm,19.0s
ARMA  Armidale         75.42 180 eP       P        02 43 03.1 +2.7
      comp=Z,74nm,1.4s
KWP   Kalwaria Pacla   75.42 328 eP       P        02 43 00.9 +0.7
KWP                              ePcP     PcP      02 43 13.8 +0.5
KWP                              eS       S        02 52 39.3 +0.9
KWP                               LMZ     LR       03 18 48.3
      comp=Z,7µm,20.2s
KWP   Kalwaria Pacla   75.42 328 eP       P        02 43 00.7 +0.4
      comp=Z,7µm,1.1s
KWP                               LR      LR
      comp=Z,65µm,19.0s
KWP   Kalwaria Pacla   75.42 328 eP       P        02 43 00.9 +0.7
KWP                              e                 02 43 13.8
KWP                              eS       S        02 52 39.3 +0.9
E44A  Grand Marais A   75.42  37  P       P        02 42 58.5 -1.8
      baz=322
E44A  Grand Marais A   75.42  37 eP       P        02 43 00.4 +0.1
      comp=Z,132nm,1.3s
E44A                              LR      LR
      comp=Z,6µm,19.0s
BANOM Banah            75.45 292  P       P        02 43 03.8 +2.9
      SNR=7.7
BANOM Banah            75.45 292 i P      P        02 43 01.4 +0.6
      SNR=12
I40A  Norwalk          75.45  41  P       P        02 42 58.8 -1.8
      baz=320
SHME  Shamm            75.47 292 i P      P        02 43 01.2 +0.3
      SNR=8.9
MME1  Meikle Cairn     75.49 346⇑eP       P        02 43 00.1 -0.4
IAS   Iasi             75.49 324⇓iP       P        02 43 02.2 +1.5
IAS   Iasi             75.49 324 ⇓P       P        02 43 02.2 +1.5
F43A  Flat Rock, Esc   75.50  38  P       P        02 42 59.3 -1.5
      baz=322,SNR=11
MDO   Dochfour         75.60 347 eP       P        02 43 00.6 -0.6
N36A  Muff Farm, Cla   75.66  46  P       P        02 42 58.9 -2.9
      baz=318
L38A  Oak Wood Farm,   75.67  44  P       P        02 43 00.3 -1.5
      baz=319,SNR=6.7
I41A  Arkdale          75.67  41  P       P        02 42 59.6 -2.2
      baz=320
I41A  Arkdale          75.67  41  PFAKE            02 43 10.0 +8.2
I41A                              LR      LR
      comp=Z,3µm,20.0s
M37A  Trindle Farm,    75.68  45  P       P        02 43 00.4 -1.5
      baz=319
F44A  Big Bay de Noc   75.71  38  P       P        02 43 00.6 -1.4
      baz=322,SNR=12
SCIA  State Center     75.72  44  P       P        02 42 59.3 -2.8
      baz=319
SCIA  State Center     75.72  44 eP       P        02 43 02.3 +0.2
      comp=Z,99nm,1.3s
SCIA                              LR      LR
      comp=Z,5µm,22.0s
G43A  Wallace          75.73  39  P       P        02 43 00.4 -1.7
      baz=322,SNR=11
G43A  Wallace          75.73  39 eP       P        02 43 02.0 -0.1
      comp=Z,68nm,1.1s
G43A                              LR      LR
      comp=Z,2µm,20.0s
WSAR  Wadi Sarin       75.74 289  P       P        02 43 02.8 +0.2
      comp=Z,23nm,1.1s,baz=60,slow=7.0,SNR=8.0
K39A  Oelwein          75.76  43  P       P        02 42 60.0 -2.4
      baz=320,SNR=7.6
J40A  Soldiers Grove   75.77  42  P       P        02 43 00.2 -2.2
      baz=320
DRUM  Mains of Drumt   75.79 346⇑eP       P        02 43 01.8 -0.4
DRUM                              IAMs_20 IAMs_20  03 19 53.6
      comp=Z,3µm,17.8s
MDH   Madha            75.88 292  P       P        02 43 03.1 -0.1
BIDO  Bidbid           75.89 289  P       P        02 43 06.0 +2.6
      SNR=8.8
PRAR  RASCA            75.90 325⇓iP       P        02 43 03.4 +0.3
MSFE  Esma-Masafi      75.93 292  P       P        02 43 03.8 +0.2
H42A  Shiocton         75.93  40  P       P        02 43 01.6 -1.7
      baz=321
H42A  Shiocton         75.93  40  PFAKE            02 43 10.0 +6.7
H42A                              LR      LR
      comp=Z,4µm,20.0s
E45A  Wooded Hills,    75.94  37  P       P        02 43 01.2 -2.1
      baz=323
OJC   Ojcow            75.97 330 eP       P        02 43 03.8 +0.4
OJC                              ePcP     PcP      02 43 16.1 +0.3
OJC                              eS       S        02 52 43.2 -1.3
OJC                               LMZ     LR       03 20 12.8
      comp=Z,9µm,18.1s
OJC   Ojcow            75.97 330 eP       P        02 43 03.6 +0.2
      comp=Z,355nm,1.1s
OJC   Ojcow            75.97 330⇑eP       P        02 43 03.8 +0.4
OJC                              e                 02 43 16.1
OJC                              eS       S        02 52 43.2 -1.3
KSU1  Kansas State U   76.08  48  P       P        02 43 02.1 -2.1
      baz=318
KSU1  Kansas State U   76.08  48  PFAKE            02 43 20.0  +16
KSU1                              LR      LR
      comp=Z,6µm,20.0s
N37A  Lee Faris, Mou   76.08  45  P       P        02 43 02.2 -2.0
      baz=319
N37A  Lee Faris, Mou   76.08  45 eP       P        02 43 04.2 -0.1
      comp=Z,49nm,1.0s
N37A                              LR      LR
      comp=Z,3µm,19.0s
BUR08 Bucovina Ar. S   76.09 326 eP       P        02 43 04.5 +0.3
MATQ  Matagami         76.09  30  P       P        02 43 02.4 -1.7
      baz=327
M38A  Pleasantville    76.09  44  P       P        02 43 02.5 -1.8
      baz=319,SNR=6.8
BUR04 Bucovina Ar. S   76.10 326 eP       P        02 43 03.5 -0.9
BURAR Bucovina Array   76.10 326⇑iP       P        02 43 04.1 -0.2
BURAR Bucovina Array   76.10 326 ⇑P       P        02 43 04.1 -0.2
K40A  Colesburg        76.12  42  P       P        02 43 02.3 -2.1
      baz=320
J41A  Loganville       76.14  41  P       P        02 43 02.4 -2.1
      baz=320
UMQ   Umm Al-Quwin     76.14 292  P       P        02 43 04.8 +0.1
L39A  Vinton           76.14  43  P       P        02 43 02.6 -1.9
      baz=320,SNR=11
UOSS  Minazif          76.18 291 eP       P        02 43 06.6 +1.5
      comp=Z,112nm,1.1s
UOSS                              LR      LR
      comp=Z,3µm,19.0s
UOSS  Minazif          76.18 291 i P      P        02 43 04.8 -0.2
      SNR=18
I42A  Draeger Farm,    76.24  40  P       P        02 43 03.0 -2.1
      baz=321
I42A  Draeger Farm,    76.24  40 eP       P        02 43 04.7 -0.3
      comp=Z,17nm,1.0s
I42A                             epP      pP       02 43 13.8 +0.5
I42A                              LR      LR
      comp=Z,3µm,20.0s
BIZ   Bicaz            76.29 325⇑iP       P        02 43 05.6 +0.3
H43A  Windswept, Lux   76.30  39  P       P        02 43 02.9 -2.5
      baz=322
H43A  Windswept, Lux   76.30  39 eP       P        02 43 05.3 -0.1
      comp=Z,62nm,1.2s
H43A                              LR      LR
      comp=Z,4µm,19.0s
HATD  Hatta, Dubai     76.31 291  P       P        02 43 08.0 +2.2
      SNR=9.7
HATD  Hatta, Dubai     76.31 291 i P      P        02 43 06.1 +0.4
      SNR=18
F45A  CMU Biological   76.33  37  P       P        02 43 03.3 -2.2
      baz=323
AMTX  Amarillo         76.38  54  P       P        02 43 04.1 -2.0
      baz=316
AMTX  Amarillo         76.38  54 eP       P        02 43 06.3 +0.2
      comp=Z,34nm,1.1s
AMTX                              LR      LR
      comp=Z,2µm,19.0s
JFWS  Jewell Farm      76.38  42  P       P        02 43 03.3 -2.5
      baz=320
UZH   Uzhgorod         76.39 328deP       P        02 43 05.7 -0.1
UZH                              i S      S        02 52 46.0 -3.1
UZH                               MLR     MLR
      comp=Z,400nm,14.0s
MSTX  Muleshoe         76.40  55  P       P        02 43 04.1 -2.2
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      baz=316
MSTX  Muleshoe         76.40  55 eP       P        02 43 06.0 -0.3
      comp=Z,45nm,1.4s
MSTX                              LR      LR
      comp=Z,2µm,19.0s
TESR  Tescani          76.42 324⇑iP       P        02 43 06.3 +0.3
ASHO  Ashiyiah         76.46 291  P       P        02 43 08.7 +2.0
      SNR=11
ASHO  Ashiyiah         76.46 291 i P      P        02 43 07.1 +0.5
      SNR=15
NIE   Niedzica         76.47 330 eP       P        02 43 06.9 +0.6
NIE                              ePcP     PcP      02 43 19.9 +1.9
NIE                              eS       S        02 52 49.0 -1.1
NIE                               LMZ     LR       03 21 25.6
      comp=Z,4µm,17.8s
NIE   Niedzica         76.47 330⇑eP       P        02 43 06.9 +0.6
NIE                              e                 02 43 19.9
NIE                              eS       S        02 52 49.0 -1.1
MNTX  Cornudas Mount   76.47  59  P       P        02 43 05.3 -1.2
      baz=315,SNR=16
MNTX  Cornudas Mount   76.47  59 eP       P        02 43 05.8 -0.8
      comp=Z,14nm,1.1s
CRVS  Cervenica-Dubn   76.48 329 eP       P        02 43 06.8 +0.5
CRVS                              pmax    pmax
      comp=Z,210nm,1.4s
CRVS  Cervenica-Dubn   76.48 329 eP       P        02 43 06.8 +0.5
CRVS                             eS       S        02 52 46.9 -3.2
CRVS                             eL       L        03 20 46.0
NAZ   Nazwa, Dubai     76.51 292  P       P        02 43 09.0 +2.1
      SNR=7.5
NAZ   Nazwa, Dubai     76.51 292 i P      P        02 43 07.0 +0.1
      SNR=7.4
INVG  Invergeldie, C   76.52 346 eP       P        02 43 06.4 +0.1
INVG                              IAMs_20 IAMs_20  03 20 49.4
      comp=Z,3µm,16.2s
N38A  Joes South For   76.55  45  P       P        02 43 04.5 -2.3
      baz=319
M39A  Webster          76.55  44  P       P        02 43 04.8 -2.1
      baz=320,SNR=8.6
O37A  Wolven Farm, M   76.56  46  P       P        02 43 04.9 -2.0
      baz=319
L40A  Anamosa          76.57  43  P       P        02 43 04.6 -2.3
      baz=320
L40A  Anamosa          76.57  43 eP       P        02 43 06.3 -0.6
      comp=Z,33nm,1.1s
L40A                              LR      LR
      comp=Z,4µm,20.0s
F46A  Macinaw City C   76.58  37  P       P        02 43 04.7 -2.2
      baz=323
K41A  Shullsburg       76.58  42  P       P        02 43 04.2 -2.8
      baz=320
J42A  Columbus         76.59  41  P       P        02 43 04.7 -2.4
      baz=321
I43A  Langenfeld Bro   76.59  40  P       P        02 43 04.4 -2.7
      baz=321
KSP   Ksiaz            76.62 333 eP       P        02 43 07.3 +0.2
KSP                              ePcP     PcP      02 43 20.4 +1.9
KSP                              eS       S        02 52 53.3 +1.7
KSP                               LMZ     LR       03 21 14.8
      comp=Z,6µm,18.3s
KSP   Ksiaz            76.62 333⇑eP       P        02 43 07.3 +0.2
KSP                              e                 02 43 20.4
KSP                              eS       S        02 52 53.3 +1.7
RAC   Raciborz         76.64 331 eP       P        02 43 07.9 +0.7
RAC                              eS       S        02 52 55.6 +3.8
TRPA  Tarpa            76.72 328⇑eP       P        02 43 08.5 +0.9
GDL2  Guadalupe Moun   76.72  58 eP       P        02 43 08.5 +0.3
ESY   Stoneypath       76.75 345⇑eP       P        02 43 07.2 -0.5
EAB   Aberfoyle        76.79 346⇑eP       P        02 43 07.8 -0.2
PETR  Petresti         76.81 323⇑iP       P        02 43 08.9 +0.7
LHI   Lord Howe Isla   76.83 173  PFAKE            02 43 20.0  +12
LHI                               LR      LR
      comp=Z,3µm,22.0s
N39A  Derby Farms, D   76.85  44  P       P        02 43 07.1 -1.5
      baz=320
N39A  Derby Farms, D   76.85  44 eP       P        02 43 08.1 -0.4
      comp=Z,32nm,1.1s
N39A                              LR      LR
      comp=Z,5µm,21.0s
EDI   Edinburgh        76.85 346⇑eP       P        02 43 07.9 -0.3
EDI                               IAMs_20 IAMs_20  03 21 51.5
      comp=Z,3µm,17.2s
CFR   Carcaliu         76.86 323⇑iP       P        02 43 08.5  0.0
CFR   Carcaliu         76.86 323 ⇑P       P        02 43 08.5  0.0
J43A  Natural Harves   76.86  40  P       P        02 43 07.1 -1.5
      baz=321
OKC   Ostrava-Krasne   76.86 331 eP       P        02 43 10.2 +1.7
OKC                              eS       S        02 52 51.7 -2.6
OKC                               AMS     AMS      03 23 20.0
      comp=Z,5µm,16.5s
OKC   Ostrava-Krasne   76.86 331 eP       P        02 43 10.2 +1.7
OKC                              eS       S        02 52 51.7 -2.6
OKC                               MLR     MLR
      comp=Z,5µm,16.5s
ARCR  ARCALIA          76.88 326⇓iP       P        02 43 09.9 +1.3
P37A  Lathrop          76.89  46  P       P        02 43 06.8 -2.0
      baz=319,SNR=6.9
K42A  Prairie Point,   76.90  41  P       P        02 43 06.0 -2.8
      baz=321
VRI   Vrincioaia       76.90 324⇑iP       P        02 43 09.2 +0.4
VRI   Vrincioaia       76.90 324 ⇑P       P        02 43 09.2 +0.4
L41A  Preston          76.90  42  P       P        02 43 06.9 -1.9
      baz=320
M40A  Post Highland    76.93  43  P       P        02 43 07.1 -1.9
      baz=320,SNR=5.7
O38A  Galt             76.93  45  P       P        02 43 07.5 -1.6
      baz=319
ASUD  Al Ashush, Dub   76.97 292  P       P        02 43 12.0 +2.5
      SNR=6.1
ASUD  Al Ashush, Dub   76.97 292 i P      P        02 43 10.0 +0.5
      SNR=10
LANS  Liptovska Anna   76.99 330 eP       P        02 43 10.4 +1.2
LANS  Liptovska Anna   76.99 330 eP       P        02 43 10.3 +1.1
UPC   Upice            77.00 333 eP       P        02 43 09.5 +0.3
UPC                              ePCP     PcP      02 43 19.1 -1.1
UPC                              eS       S        02 52 49.2 -6.6
UPC                               AMS     AMS      03 24 50.0
      comp=Z,7µm,15.9s
UPC   Upice            77.00 333 eP       P        02 43 09.5 +0.3
UPC                              e                 02 43 19.1
UPC                              eS       S        02 52 49.2 -6.6
UPC                               MLR     MLR
      comp=Z,7µm,15.9s
DPC   Dobruska-Polom   77.03 332 eP       P        02 43 10.4 +0.9
DPC                              ePCP     PcP      02 43 19.8 -0.6
DPC                              eS       S        02 52 52.6 -3.6
DPC                               AMS     AMS      03 21 00.0
      comp=Z,8µm,17.1s
DPC   Dobruska-Polom   77.03 332 eP       P        02 43 10.4 +0.9
DPC                              e                 02 43 19.8
DPC                              eS       S        02 52 52.6 -3.6
DPC                               MLR     MLR
      comp=Z,8µm,17.1s
ALNE  Al Ain           77.09 291 i P      P        02 43 10.7 +0.5
      SNR=8.2
CHGQ  Chibougamau      77.09  28  P       P        02 43 08.0 -1.8
      baz=329
KRLC  Kraliky          77.12 332 eP       P        02 43 10.3 +0.3
KRLC  Kraliky          77.12 332 eP       P        02 43 10.3 +0.3
MORC  Moravsky Berou   77.12 331⇑iP       P        02 43 10.6 +0.6
MORC  Moravsky Berou   77.12 331 eP       P        02 43 10.2 +0.2
      comp=Z,307nm,1.1s
MORC                              LR      LR
      comp=Z,4µm,19.0s
MORC  Moravsky Berou   77.12 331 ⇑P       P        02 43 10.7 +0.7
MORC  Moravsky Berou   77.12 331⇑iP       P        02 43 10.2 +0.2
MORC                             eS       S        02 52 55.1 -2.1
PGBU  Glenifferbraes   77.18 346⇑eP       P        02 43 10.1  0.0
PGBU                              IAmb    IAmb     02 43 12.9
      comp=Z,242nm,1.1s
PGBU                              IAMs_20 IAMs_20  03 26 41.2
      comp=Z,3µm,15.2s
KECS  Kecovo           77.18 329 eP       P        02 43 11.0 +0.7
KECS                              pmax    pmax
      comp=Z,58nm,1.0s
KECS  Kecovo           77.18 329 eP       P        02 43 11.0 +0.7
AJN   Ajban            77.24 292 i P      P        02 43 10.8 -0.2
      SNR=6.2
CLL   Collm            77.24 335⇑iP       P        02 43 10.4 -0.2
      comp=Z,417nm,1.3s
CLL                              ePlp              02 43 11.0
      comp=Z,1µm,11.1s
CLL                              i                 02 43 23.6
      comp=Z,215nm,1.3s
CLL                              eS       S        02 52 58.0 -0.3
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CLL				*e*SS	SS	02 58 00.0	+4.9
CLL				*e*SSS	SSS	03 01 37.0	
CLL				LmV		03 20 00.0	
	comp=Z,5µm,19.7s						
CLL	Collm	77.24	335	*e*P	P	02 43 09.9	-0.6
	comp=Z,304nm,1.1s						
CLL				LR	LR		
	comp=Z,5µm,20.0s						
CLL	Collm	77.24	335	⇑*i*P	P	02 43 10.4	-0.2
CLL				*e*S	S	02 52 58.0	-0.3
CLL				pmax	pmax		
	comp=Z,417nm,1.3s						
CLL				MLR	MLR		
	comp=Z,5µm,19.7s						
P38A	Dawn	77.28	46	P	P	02 43 08.9	-2.1
	baz=319,SNR=6.6						
P38A	Dawn	77.28	46	*e*P	P	02 43 10.7	-0.3
	comp=Z,53nm,1.4s						
P38A				LR	LR		
	comp=Z,4µm,21.0s						
N40A	Mertquake, Sal	77.29	44	P	P	02 43 09.4	-1.6
	baz=320						
O39A	Kirksville	77.30	45	P	P	02 43 09.5	-1.6
	baz=320						
TIRR	Tirgusor	77.31	322	⇑*i*P	P	02 43 11.4	+0.4
TIRR	Tirgusor	77.31	322	*e*P	P	02 43 11.9	+0.9
	comp=Z,254nm,1.4s						
TIRR				LR	LR		
	comp=Z,10µm,20.0s						
TIRR	Tirgusor	77.31	322	⇑P	P	02 43 11.4	+0.4
HARR	Harsova	77.33	322	⇑*i*P	P	02 43 12.2	+1.0
HARR	Harsova	77.33	322	P	P	02 43 12.2	+1.0
BRG	Berggiesshubel	77.34	334	*i* P	P	02 43 11.1	0.0
	comp=Z,224nm,1.4s						
BRG				*i* PCP	sP	02 43 24.1	+1.7
	comp=Z,125nm,1.4s						
BRG				*e*PP	PP	02 46 01.6	-3.1
	comp=Z,17nm,1.4s						
BRG				S	S	02 53 00.0	+0.6
BRG				SS	SS	02 58 03.0	+6.4
	comp=N,3µm,17.1s						
	comp=E,4µm,16.2s						
	comp=Z,6µm,16.3s						
BRG	Berggiesshubel	77.34	334	*i* P	P	02 43 11.1	0.0
BRG				*i*		02 43 24.1	
BRG				*e*		02 46 01.6	
BRG				S	S	02 53 00.0	+0.6
BRG				SS	SS	02 58 03.0	+6.4
BRG				pmax	pmax		
	comp=Z,224nm,1.4s						
BRG				pmax	pmax		
	comp=Z,17nm,1.5s						
BRG				MLR	MLR		
	comp=N,3µm,17.1s						
BRG				MLR	MLR		
	comp=E,4µm,16.2s						
BRG				MLR	MLR		
	comp=Z,6µm,16.3s						
L42A	Oliver, Polo	77.35	42	P	P	02 43 08.9	-2.5
	baz=321						
L42A	Oliver, Polo	77.35	42	PFAKE		02 43 20.0	+8.7
L42A				LR	LR		
	comp=Z,4µm,20.0s						
DOPR	Dopca	77.37	325	⇑*i*P	P	02 43 12.8	+1.4
Q37A	Longview Farm,	77.37	47	P	P	02 43 09.2	-2.3
	baz=319						
STKA	Stephens Creek	77.39	189	P	P	02 43 12.4	+1.0
	comp=Z,4.9nm,0.9s,baz=358,slow=7.6,SNR=5.3						
STKA				LR	LR	03 17 04.7	
	comp=Z,2µm,20.9s,baz=17,slow=36						
STKA	Stephens Creek	77.39	189	*e*P	P	02 43 12.8	+1.4
	comp=Z,7.4nm,1.3s						
STKA				LR	LR		
	comp=Z,600nm,20.0s						
EKA	Eskdalemuir Ar	77.41	345	P	P	02 43 10.9	-0.5
	comp=Z,20nm,0.7s,baz=27,slow=6.4,SNR=43						
EKA				PP	PP	02 46 03.6	-1.5
	comp=Z,6.0nm,1.1s,baz=25,slow=7.5,SNR=3.4						
EKA				LR	LR	03 22 32.7	
	comp=Z,1µm,19.3s,baz=35,slow=40						
M41A	Milan	77.42	43	P	P	02 43 09.8	-1.9
	baz=320						
K43A	Burlington	77.43	41	P	P	02 43 09.6	-2.2
	baz=322						
K43A	Burlington	77.43	41	PFAKE		02 43 20.0	+8.2
K43A				LR	LR		
	comp=Z,3µm,20.0s						
ESK	Eskdalemuir	77.43	345	*e*P	P	02 43 12.4	+0.8
	comp=Z,112nm,1.2s						
ESK				LR	LR		
	comp=Z,2µm,19.0s						
ESK	Eskdalemuir	77.43	345	⇑*e*P	P	02 43 11.5	0.0
ESK				IAmb	IAmb	02 43 16.4	
	comp=Z,110nm,1.2s						
ESK				IAMs_20	IAMs_20	03 22 25.5	
	comp=Z,2µm,17.7s						
ESK	Eskdalemuir	77.43	345	*e*P	P	02 43 12.4	+0.8
ESK				pmax	pmax		
	comp=Z,112nm,1.2s						
ESK				MLR	MLR		
	comp=Z,2µm,19.0s						
PVCC	Panska Ves	77.44	333	*e*P	P	02 43 12.6	+0.9
PVCC				*e*S	S	02 52 52.9	-7.6
PVCC				AMS	AMS	03 21 20.0	
	comp=Z,7µm,16.8s						
PVCC	Panska Ves	77.44	333	*e*P	P	02 43 12.6	+0.9
PVCC				*e*S	S	02 52 52.9	-7.6
PVCC				MLR	MLR		
	comp=Z,7µm,16.8s						
MLR	Muntele Rosu	77.53	324	P	P	02 43 12.6	+0.1
	comp=Z,21nm,1.0s,baz=22,slow=5.9,SNR=87						
MLR				LR	LR	03 20 52.7	
	comp=Z,1µm,18.1s,baz=34,slow=38						
MLR	Muntele Rosu	77.53	324	*e*P	P	02 43 12.6	+0.1
	comp=Z,217nm,1.2s						
MLR				LR	LR		
	comp=Z,7µm,19.0s						
ILGA	Ilgaz	77.54	317	*e*P	P	02 43 14.4	+1.6
	comp=Z,471nm,1.2s						
ILGA				LR	LR		
	comp=Z,4µm,18.0s						
LTVH	L˜'tav˜'rtes,	77.58	328	⇑*e*P	P	02 43 14.5	+2.0
L43A	Garden Prairie	77.64	41	P	P	02 43 10.9	-2.1
	baz=321						
BHH	Howats Hill	77.65	345	*e*P	P	02 43 12.5	-0.3
EDMD	Edmundbyers	77.67	345	⇑*e*P	P	02 43 12.8	-0.1
EDMD				IAmb	IAmb	02 43 15.4	
	comp=Z,134nm,1.2s						
EDMD				IAMs_20	IAMs_20	03 24 19.9	
	comp=Z,3µm,16.5s						
BELQ	Belleterre	77.68	32	P	P	02 43 11.2	-1.9
	baz=326						
O40A	La Belle	77.73	45	P	P	02 43 11.1	-2.4
	baz=320,SNR=9.5						
M42A	Sheffield	77.73	42	P	P	02 43 11.4	-2.0
	baz=321						
Q38A	Cooks Store, C	77.74	46	P	P	02 43 11.1	-2.5
	baz=319,SNR=5.7						
MANR	Mangalia	77.75	322	⇓*i*P	P	02 43 15.0	+1.5
DRGR		77.76	327	⇓*i*P	P	02 43 13.6	0.0
DRGR		77.76	327	⇓P	P	02 43 13.6	0.0
VYHS	Vyhne	77.77	330	*e*P	P	02 43 14.2	+0.6
VYHS				pmax	pmax		
	comp=Z,184nm,1.4s						
VYHS	Vyhne	77.77	330	*e*P	P	02 43 14.2	+0.6
VYHS				*e*S	S	02 53 00.7	-3.5
P39B	Salisbury	77.78	45	P	P	02 43 12.0	-1.7
	baz=320						
N41A	Harden Midland	77.78	44	P	P	02 43 12.1	-1.7
	baz=320,SNR=8.0						
N41A	Harden Midland	77.78	44	*e*P	P	02 43 13.3	-0.5
	comp=Z,54nm,1.1s						
N41A				LR	LR		
	comp=Z,4µm,20.0s						
VRAC	Vranov	77.84	332	⇑*i*P	P	02 43 14.3	+0.3
VRAC	Vranov	77.84	332	⇑P	P	02 43 14.3	+0.3
VRAC	Vranov	77.84	332	⇑*i*P	P	02 43 14.4	+0.4
VRAC				*e*S	S	02 53 02.8	-2.1
JAVC	Velka Javorina	77.86	331	⇑*i*P	P	02 43 15.4	+1.2
JAVC				*e*S	S	02 53 06.1	+0.8
PSZ	Piszkesteto	77.87	329	⇑*e*P	P	02 43 14.9	+0.6
PSZ	Piszkesteto	77.87	329	*e*P	P	02 43 14.8	+0.6
	comp=Z,361nm,1.4s						
PSZ				LR	LR		
	comp=Z,8µm,18.0s						
PRA	Prague	77.89	333	*e*P	P	02 43 15.7	+1.5
PRA				AMS	AMS	03 21 20.0	
	comp=Z,7µm,18.7s						
PRA	Prague	77.89	333	*e*P	P	02 43 15.7	+1.5
PRA				MLR	MLR		
	comp=Z,7µm,18.7s						
GOPC	GO Pecny, Ondr	77.91	333	*e*P	P	02 43 15.0	+0.7
GOPC				*e*PCP	sP	02 43 26.0	+0.3
GOPC				*e*S	S	02 53 03.6	-2.1
GOPC				AMS	AMS	03 26 00.0	
	comp=Z,5µm,15.1s						
GOPC	GO Pecny, Ondr	77.91	333	*e*P	P	02 43 15.0	+0.7
GOPC				*e*		02 43 26.0	
GOPC				*e*S	S	02 53 03.6	-2.1
GOPC				MLR	MLR		
	comp=Z,5µm,15.1s						
PRU	Pruhonice	77.92	333	*e*P	P	02 43 14.7	+0.3
PRU				*e*PCP	PcP	02 43 23.7	-0.5
PRU				*e*S	S	02 53 02.2	-3.5
PRU				AMS	AMS	03 21 20.0	
	comp=Z,6µm,18.6s						
PRU	Pruhonice	77.92	333	*e*P	P	02 43 14.7	+0.3
PRU				*e*		02 43 23.7	
PRU				*e*S	S	02 53 02.2	-3.5
PRU				MLR	MLR		
	comp=Z,6µm,18.6s						
Q39A	Willow Grove F	78.00	46	P	P	02 43 13.2	-1.8
	baz=320,SNR=14						
L44A	Lake County Fo	78.03	41	P	P	02 43 14.1	-1.0
	baz=322						
SULR		78.06	323	⇑*i*P	P	02 43 15.7	+0.5
N42A	Yates City	78.08	43	P	P	02 43 12.8	-2.6
	baz=321						
P40A	Paris	78.10	45	P	P	02 43 13.8	-1.8
	baz=320,SNR=11						
P40A	Paris	78.10	45	*e*P	P	02 43 14.0	-1.6
	comp=Z,40nm,1.1s						
P40A				LR	LR		
	comp=Z,4µm,22.0s						
KESW	Keswick, Cumbr	78.11	345	⇑*e*P	P	02 43 15.5	+0.2
KESW				IAmb	IAmb	02 43 20.5	
	comp=Z,327nm,1.2s						
KESW				IAMs_20	IAMs_20	03 24 28.8	
	comp=Z,3µm,17.7s						
WMOK	Wichita Mounta	78.12	52	P	P	02 43 13.9	-1.9
	baz=318,SNR=11						
WMOK	Wichita Mounta	78.12	52	*e*P	P	02 43 14.8	-1.0
	comp=Z,9.9nm,0.9s						
WMOK				LR	LR		
	comp=Z,3µm,20.0s						
WMOK	Wichita Mounta	78.12	52	*e*P	P	02 43 14.8	-1.0
WMOK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
WMOK				MLR	MLR		
	comp=Z,3µm,20.0s						
KRUC	Moravsky	78.12	332	⇑*i*P	P	02 43 15.8	+0.3
KRUC				*e*S	S	02 53 07.4	-0.5
M43A	Waltham Townsh	78.12	42	P	P	02 43 12.8	-2.9
	baz=321						
CLGH	Cloghs, Cushen	78.14	347	⇑*e*P	P	02 43 15.3	-0.2
CLGH				IAmb	IAmb	02 43 18.3	
	comp=Z,156nm,1.1s						
CLGH				IAMs_20	IAMs_20	03 22 02.1	
	comp=Z,3µm,18.2s						
ARR	Arges	78.17	325	⇑*i*P	P	02 43 17.2	+1.3
R38A	Fenwick Farm,	78.17	47	P	P	02 43 13.4	-2.6
	baz=319,SNR=6.6						
O41A	Passleys Farm,	78.22	44	P	P	02 43 14.4	-1.8
	baz=320,SNR=11						
SMOL	Smolenice	78.24	331	*e*P	P	02 43 17.7	+1.5
SMOL	Smolenice	78.24	331	*e*P	P	02 43 17.7	+1.5
NKC	Novy Kostel	78.36	335	*e*P	P	02 43 17.3	+0.5
NKC				*e*S	S	02 53 09.1	-1.4
NKC				AMS	AMS	03 22 10.0	
	comp=Z,6µm,17.5s						
NKC	Novy Kostel	78.36	335	*e*P	P	02 43 17.3	+0.5
NKC				*e*S	S	02 53 09.1	-1.4
NKC				MLR	MLR		
	comp=Z,6µm,17.5s						
TOBO	Tobermory, Bru	78.36	35	P	P	02 43 16.0	-0.9
	baz=325						
N43A	Stutzman Famil	78.41	42	P	P	02 43 14.6	-2.6
	baz=321						
MODS	Modra-Piesok	78.41	331	*e*P	P	02 43 18.0	+0.8
MODS				pmax	pmax		
	comp=Z,389nm,1.5s						
MODS	Modra-Piesok	78.41	331	*e*P	P	02 43 18.0	+0.8
MODS				*e*S	S	02 53 07.2	-3.9
MODS				*e*L	L	03 24 32.4	
HPK	Haverah Park	78.43	344	⇑*e*P	P	02 43 17.3	+0.2
HPK				IAmb	IAmb	02 43 20.6	
	comp=Z,163nm,0.9s						
HPK				IAMs_20	IAMs_20	03 24 42.8	
	comp=Z,2µm,16.9s						
P41A	Barry, Barry	78.47	44	P	P	02 43 16.0	-1.6
	baz=320,SNR=9.4						
Q40A	Laux Farm, Aux	78.49	45	P	P	02 43 15.6	-2.1
	baz=320						
R39A	Chumby, Stover	78.52	46	P	P	02 43 15.9	-2.0
	baz=320,SNR=6.7						
SRO2	Moca	78.54	330	*e*P	P	02 43 18.1	+0.3
SRO2	Moca	78.54	330	*e*P	P	02 43 18.1	+0.3
O42A	Bath	78.55	43	P	P	02 43 15.2	-2.9
	baz=321						
BUD	Budapest	78.56	329	⇑*e*P	P	02 43 18.6	+0.7
M44A	Midewin, Midew	78.59	41	P	P	02 43 15.0	-3.2
	baz=322						
M44A	Midewin, Midew	78.59	41	PFAKE		02 43 30.0	+12
M44A				LR	LR		
	comp=Z,4µm,19.0s						
S38A	Stockton	78.59	47	P	P	02 43 15.9	-2.4
	baz=319,SNR=14						
BR101	Keskin Array S	78.60	316	*e*P	P	02 43 18.9	+0.4
BR101				*e*PP	PP	02 46 16.3	+0.5
BR131	Keskin Array S	78.60	316	*e*P	P	02 43 18.9	+0.4
BRTR	Keskin Array B	78.60	316	P	P	02 43 18.9	+0.4
	comp=Z,36nm,0.9s,baz=72,slow=4.0,SNR=90						
BRTR				PP	PP	02 46 16.3	+0.5
	comp=Z,6.3nm,1.0s,baz=54,slow=5.4,SNR=5.4						
BRTR				LR	LR	03 23 23.4	
	comp=Z,7µm,19.1s,baz=50,slow=40						
BRTR	Keskin Array B	78.60	316	P	P	02 43 18.9	+0.4
BRTR						02 46 16.3	
BRTR				pmax	pmax		
	comp=Z,35nm,0.9s						
BRTR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HDIL	Hopedale	78.65	43	P	P	02 43 16.6	-2.0
	baz=321,SNR=7.4						
HDIL	Hopedale	78.65	43	*e*P	P	02 43 18.4	-0.2
	comp=Z,89nm,1.3s						
HDIL				LR	LR		
	comp=Z,3µm,20.0s						
IOMK	Kirk Michael	78.68	346	⇑*e*P	P	02 43 17.4	-1.0
IOMK				IAmb	IAmb	02 43 21.1	
	comp=Z,138nm,1.1s						
IOMK				IAMs_20	IAMs_20	03 22 54.8	
	comp=Z,3µm,18.4s						
LPIG	La Paz	78.72	67	LR	LR	03 11 17.4	
	comp=Z,1µm,21.9s,baz=322,slow=30						
PRD	Provadia	78.76	322	*i* P	P	02 43 19.9	+0.8
KLBO	Killbear Provi	78.78	34	P	P	02 43 16.4	-2.8
	baz=326						
WIM	Isle of Man	78.81	346	*e*P	P	02 43 19.7	+0.5
T38A	Diamond	78.84	48	P	P	02 43 17.6	-2.1
	baz=319,SNR=20						
S39A	Bolivar	78.85	47	P	P	02 43 17.2	-2.5
	baz=320,SNR=9.6						
S39A	Bolivar	78.85	47	*e*P	P	02 43 17.9	-1.9
	comp=Z,24nm,1.1s						
S39A				LR	LR		
	comp=Z,3µm,19.0s						
O43A	Sugar Creek Fa	78.85	43	P	P	02 43 16.2	-3.5
	baz=321						
TUL1	Leonard	78.89	50	P	P	02 43 17.6	-2.4
	baz=319						
TUL1	Leonard	78.89	50	*e*P	P	02 43 19.9	-0.1
	comp=Z,38nm,1.3s						
TUL1				LR	LR		
	comp=Z,3µm,20.0s						
P42A	Winchester	78.90	44	P	P	02 43 17.6	-2.3
	baz=321						
P42A	Winchester	78.90	44	*e*P	P	02 43 19.7	-0.2
	comp=Z,48nm,1.4s						
P42A				LR	LR		
	comp=Z,4µm,20.0s						
ANTO	Ankara	78.90	317	*e*P	P	02 43 21.0	+0.9
	comp=Z,135nm,1.1s						
ANTO				LR	LR		
	comp=Z,7µm,19.0s						
ANTO	Ankara	78.90	317	P	P	02 43 21.3	+1.2
	SNR=64						
BR231	Keskin MP Arra	78.93	317	*e*P	P	02 43 21.6	+1.4
CSKK	Csˆ‡kako	78.93	330	⇓*e*P	P	02 43 21.3	+1.3
R40A	Maddies Statio	78.93	46	P	P	02 43 17.9	-2.3
	baz=320,SNR=12						
R40A	Maddies Statio	78.93	46	*e*P	P	02 43 18.5	-1.7
	comp=Z,52nm,1.4s						
R40A				LR	LR		
	comp=Z,4µm,20.0s						
Q41A	Truxton	78.94	45	P	P	02 43 18.8	-1.4
	baz=320,SNR=14						
M45A	Boilermakers S	78.96	41	P	P	02 43 16.5	-3.8
	baz=322						
KHC	Kasperske Hory	78.98	333	*e*P	P	02 43 20.4	+0.1
KHC				*e*PCP	PcP	02 43 29.8	+1.0
KHC				*e*S	S	02 53 13.4	-3.8
KHC				AMS	AMS	03 22 20.0	
	comp=Z,9µm,16.9s						
KHC	Kasperske Hory	78.98	333	*e*P	P	02 43 19.9	-0.4
	comp=Z,102nm,1.3s						
KHC				LR	LR		
	comp=Z,4µm,18.0s						
KHC	Kasperske Hory	78.98	333	*e*P	P	02 43 20.4	+0.1
KHC				*e*		02 43 29.8	
KHC				*e*S	S	02 53 13.4	-3.8
KHC				MLR	MLR		
	comp=Z,9µm,16.9s						
LBWR	Ladybower, Pea	78.98	344	⇑*e*P	P	02 43 20.4	+0.2
LBWR				IAmb	IAmb	02 43 25.3	
	comp=Z,410nm,1.2s						
LBWR				IAMs_20	IAMs_20	03 25 08.8	
	comp=Z,3µm,17.1s						
BMRO	Meriville Lake	79.00	35	P	P	02 43 19.7	-0.8
	baz=325						
N44A	Piper City	79.02	42	P	P	02 43 18.3	-2.3
	baz=322						
BUKO	Buck Lake	79.03	34	P	P	02 43 17.7	-2.9
	baz=326						
BZS	Buzias	79.16	327	⇑*i*P	P	02 43 20.8	-0.5
BZS	Buzias	79.16	327	⇑P	P	02 43 20.8	-0.5
ABTX	Abilene, Hawle	79.18	54	P	P	02 43 19.6	-2.0
	baz=317						
ABTX	Abilene, Hawle	79.18	54	*e*P	P	02 43 21.8	+0.1
	comp=Z,17nm,1.2s						
GEC2	GERESS Array S	79.19	333	*e*P	P	02 43 21.5	0.0
	comp=Z,94nm,1.3s						
GERES	GERESS Array B	79.19	333	P	P	02 43 21.5	0.0
	comp=Z,6.8nm,0.5s,baz=35,slow=4.9,SNR=98						
GERES				LR	LR	03 22 35.8	
	comp=Z,5µm,18.3s,baz=30,slow=39						
TX31	Lajitas Ar. Si	79.19	59	*e*P	P	02 43 20.1	-1.7
LTX	Lajitas	79.19	59	*e*P	P	02 43 20.9	-1.0
LTX	Lajitas	79.19	59	*e*P	P	02 43 20.9	-1.0
TXAR	Lajitas Array	79.19	59	P	P	02 43 20.9	-1.0
	comp=Z,5.1nm,1.0s,baz=297,slow=2.6,SNR=27						
GEA0	GERESS Array S	79.20	333	*e*P	P	02 43 20.7	-0.9
BRCO	Bruce Peninsul	79.20	36	P	P	02 43 21.2	-0.3
	baz=325						
GRFO	Grafenberg	79.21	335	*e*P	P	02 43 21.9	+0.4
	comp=Z,415nm,1.5s						
GRFO				LR	LR		
	comp=Z,6µm,20.0s						
P43A	Skaggs, Pawnee	79.25	43	P	P	02 43 19.2	-2.7
	baz=321						
N45A	Kentland	79.26	41	P	P	02 43 19.2	-2.8
	baz=322						
CONA	Conrad Observa	79.28	331	*i* pP	P	02 43 22.7	+0.7
	comp=Z,198nm,1.6s,SNR=130						
BASO	Ashfield	79.30	36	P	P	02 43 21.7	-0.3
	baz=325						
RAO	Raoul Island	79.31	153	PFAKE		02 43 30.0	+7.9
RAO				LR	LR		
	comp=Z,6µm,20.0s						
Q42A	Golden Eagle	79.32	44	P	P	02 43 20.7	-1.6
	baz=321,SNR=6.0						
T39A	Clever	79.33	47	P	P	02 43 20.0	-2.4
	baz=320						
SZH	Strazhica	79.33	323	*i* P	P	02 43 22.3	0.0
S40A	Lebanon	79.34	47	P	P	02 43 20.3	-2.1
	baz=320,SNR=7.4						
M46A	Old House Fiel	79.36	40	P	P	02 43 20.7	-1.8
	baz=323						
M46A	Old House Fiel	79.36	40	PFAKE		02 43 30.0	+7.6
M46A				LR	LR		
	comp=Z,3µm,21.0s						
O44A	Mansfield	79.36	42	P	P	02 43 19.4	-3.0
	baz=322						
R41A	Rosebud	79.38	45	P	P	02 43 21.1	-1.5
	baz=320,SNR=9.4						
BWLO	Walkerton	79.43	36	P	P	02 43 22.3	-0.5
	baz=325						
HERR	Herculane	79.46	326	⇑*i*P	P	02 43 22.3	-0.6
WME	Myndd Eilian	79.46	346	*e*P	P	02 43 23.0	+0.2
CLWO	Collingwood	79.50	35	P	P	02 43 22.1	-1.1
	baz=326						
WPM1	Penmaenmawr	79.52	345	*e*P	P	02 43 22.7	-0.4
CWF	Charnwood Fore	79.52	344	⇑*e*P	P	02 43 23.0	-0.1
CWF				IAmb	IAmb	02 43 24.7	
	comp=Z,611nm,2.2s						
CWF				IAMs_20	IAMs_20	03 21 02.0	
	comp=Z,2µm,17.5s						
WLF1	Llynfaes	79.58	346	⇑*e*P	P	02 43 22.9	-0.5
WLF1				IAMs_20	IAMs_20	03 29 04.7	
	comp=Z,5µm,15.3s						
N46A	Monticello	79.59	41	P	P	02 43 21.5	-2.2
	baz=323						
HHAR	Hobbs	79.59	48	*e*P	P	02 43 22.3	-1.5
	comp=Z,26nm,1.1s						
HHAR				LR	LR		
	comp=Z,4µm,20.0s						
CCM	Cathedral Cave	79.63	45	P	P	02 43 21.4	-2.6
	baz=321						
CCM	Cathedral Cave	79.63	45	*e*P	P	02 43 24.3	+0.3
	comp=Z,37nm,1.0s						
CCM				LR	LR		
	comp=Z,4µm,21.0s						
CCM	Cathedral Cave	79.63	45	*e*P	P	02 43 24.3	+0.3
CCM				pmax	pmax		
	comp=Z,37nm,1.0s						
CCM				MLR	MLR		
	comp=Z,4µm,21.0s						
O45A	Potomac	79.64	42	P	P	02 43 22.4	-1.6
	baz=322,SNR=6.1						
PEMO	Pembroke	79.66	32	P	P	02 43 21.0	-3.0
	baz=328						
T40A	Mansfield	79.67	47	P	P	02 43 22.1	-2.2
	baz=320,SNR=7.9						
HPIG		79.68	62	*e*P	P	02 43 24.1	-0.6
	comp=Z,17nm,1.1s						
HPIG				LR	LR		
	comp=Z,2µm,19.0s						
R42A	Luebbering	79.68	45	P	P	02 43 22.5	-1.8
	baz=321,SNR=5.1						
SLM	Saint Louis	79.68	44	PFAKE		02 43 40.0	+16
SLM				LR	LR		
	comp=Z,4µm,22.0s						
YLL	Llanberis	79.68	345	⇑*e*P	P	02 43 24.2	+0.3
JMB	Yambol	79.70	322	*i* P	P	02 43 24.5	+0.2
HGN	Heimansgroeve	79.71	339	*e*P	P	02 43 24.2	+0.1
	comp=Z,706nm,1.8s						
HGN				*e*pP	sP	02 43 37.3	+1.9
HGN				*e*S	S	02 53 27.1	+2.4
Q43A	New Douglas	79.71	44	P	P	02 43 21.4	-3.0
	baz=321						
RAR	Rarotonga	79.72	135	LR	LR	03 15 07.4	
	comp=Z,4µm,19.5s,baz=320,slow=33						
S41A	Jillco Farms,	79.73	46	P	P	02 43 22.4	-2.2
	baz=320,SNR=6.2						
BEBN	Eben Emael	79.74	339	⇑P	P	02 43 24.7	+0.4
FOEL	Foel Wylfa	79.75	345	⇑*e*P	P	02 43 24.7	+0.3
FOEL				IAmb	IAmb	02 43 29.6	
	comp=Z,269nm,1.4s						
FOEL				IAMs_20	IAMs_20	03 24 21.4	
	comp=Z,3µm,19.4s						
U39A	Green Forest	79.76	48	P	P	02 43 22.7	-2.0
	baz=320,SNR=21						
MORH	Mˆ‡rˆ¡gy, Hung	79.77	329	⇑*e*P	P	02 43 24.1	-0.5
MDVR	Moldovita	79.82	326	⇑*i*P	P	02 43 24.5	-0.5
P44A	Sand Creek, Wi	79.82	43	P	P	02 43 22.3	-2.7
	baz=322,SNR=5.8						
SFIN	Lafayette	79.83	41	P	P	02 43 22.7	-2.3
	baz=322						
SFIN	Lafayette	79.83	41	*e*P	P	02 43 24.8	-0.2

	comp=Z,48nm,1.4s						
SFIN				LR	LR		
	comp=Z,4µm,19.0s						
MEM	Membach	79.83	338	⇑P	P	02 43 24.9	+0.1
	comp=Z,118nm,1.7s						
AAM	Ann Arbor	79.84	38	P	P	02 43 23.1	-1.9
	baz=324						
AAM	Ann Arbor	79.84	38	PFAKE		02 43 40.0	+15
AAM				LR	LR		
	comp=Z,2µm,20.0s						
LLW	Llanuwychllyn	79.87	345	⇑*e*P	P	02 43 25.1	+0.1
MOA	Molln	79.88	332	*e*pP	P	02 43 25.5	+0.3
	comp=Z,36nm,1.1s,SNR=35						
BANO	Bancroft	79.96	33	P	P	02 43 25.1	-0.5
	baz=327						
DSB	Dublin	79.96	347	*e*P	P	02 43 26.8	+1.4
	comp=Z,91nm,1.1s						
DSB				LR	LR		
	comp=Z,2µm,20.0s						
ARSA	Arzberg	79.98	331	*e*pP	P	02 43 26.2	+0.5
	comp=Z,111nm,1.9s,SNR=48						
HLM1	Long Mynd	80.04	344	⇑*e*P	P	02 43 25.4	-0.6
HLM1				IAmb	IAmb	02 43 29.1	
	comp=Z,100nm,1.1s						
HLM1				IAMs_20	IAMs_20	03 21 12.1	
	comp=Z,2µm,17.7s						
Q44A	Meyer Farm, Va	80.07	44	P	P	02 43 24.4	-2.0
	baz=322						
UCC	Uccle	80.07	340	⇑P	P	02 43 25.9	-0.3
	comp=Z,57nm,2.2s						
UCC	Uccle	80.07	340	*e*P	P	02 43 26.9	+0.8
	comp=Z,151nm,1.5s						
UCC				LR	LR		
	comp=Z,4µm,20.0s						
UCC	Uccle	80.07	340	*e*P	P	02 43 26.9	+0.8
UCC				pmax	pmax		
	comp=Z,151nm,1.5s						
UCC				MLR	MLR		
	comp=Z,4µm,20.0s						
S42A	Caledonia	80.08	45	P	P	02 43 24.4	-2.0
	baz=321,SNR=16						
V39A	Pettigrew	80.09	48	P	P	02 43 24.4	-2.1
	baz=320,SNR=9.1						
FVM	French Village	80.09	45	*e*P	P	02 43 27.4	+0.9
	comp=Z,32nm,1.1s						
FVM				LR	LR		
	comp=Z,3µm,19.0s						
FVM	French Village	80.09	45	*e*P	P	02 43 27.4	+0.9
FVM				pmax	pmax		
	comp=Z,32nm,1.1s						
FVM				MLR	MLR		
	comp=Z,3µm,19.0s						
U40A	Yellville	80.11	48	P	P	02 43 24.7	-1.9
	baz=320,SNR=25						
R43A	Red Bud	80.11	45	P	P	02 43 24.3	-2.3
	baz=321						
ELFO	Elginfield	80.11	36	P	P	02 43 26.2	-0.3
	baz=325						
T41A	Mountain View	80.14	46	P	P	02 43 24.4	-2.4
	baz=320						
TRQ	Mont Tremblant	80.19	30	*e*P	P	02 43 25.4	-1.5
P45A	Graceland, Par	80.19	42	P	P	02 43 23.7	-3.3
	baz=322						
P45A	Graceland, Par	80.19	42	*e*P	P	02 43 27.0	0.0
	comp=Z,33nm,1.0s						
P45A				LR	LR		
	comp=Z,3µm,20.0s						
BEHE	Becsehely	80.22	330	⇑*e*P	P	02 43 26.9	-0.1
PLVO	Plevna	80.27	33	P	P	02 43 26.9	-0.4
	baz=328						
PLVO	Plevna	80.27	33	*e*P	P	02 43 26.7	-0.6
	comp=Z,19nm,1.0s						
PLVO				LR	LR		
	comp=Z,3µm,19.0s						
ACTO	Acton	80.29	35	P	P	02 43 27.3	-0.2
	baz=326						
SNF	Seneffe	80.36	339	⇓P	P	02 43 28.7	+1.1
	comp=Z,105nm,1.9s						
O47A	Sheridan	80.37	41	P	P	02 43 25.5	-2.5
	baz=323						
P46A	Rosedale	80.38	42	P	P	02 43 26.6	-1.4
	baz=322,SNR=6.9						
PKRO	Pickering	80.39	34	P	P	02 43 27.7	-0.3
	baz=327						
KOGS	Kog	80.42	330	*e*P	P	02 43 27.6	-0.5
KOGS				*e*S	S	02 53 33.6	+1.2
Q45A	Warren Harvey,	80.50	43	P	P	02 43 27.0	-1.6
	baz=322,SNR=8.2						
T42A	Van Buren	80.50	46	P	P	02 43 26.6	-2.1
	baz=321,SNR=8.0						
T42A	Van Buren	80.50	46	*e*P	P	02 43 28.0	-0.7
	comp=Z,42nm,1.4s						
T42A				LR	LR		
	comp=Z,4µm,21.0s						
DELO	Deloro Mine	80.50	33	P	P	02 43 26.4	-2.1
	baz=327						
W39A	Magazine	80.50	49	P	P	02 43 27.1	-1.6
	baz=320,SNR=5.5						
W39A	Magazine	80.50	49	*e*P	P	02 43 28.4	-0.4
	comp=Z,28nm,1.1s						
W39A				LR	LR		
	comp=Z,4µm,20.0s						
ELSH	Elham, Standar	80.51	342	⇑*e*P	P	02 43 28.7	+0.3
ELSH				IAMs_20	IAMs_20	03 22 54.3	
	comp=Z,6µm,18.8s						
V40A	Witts Springs	80.54	48	P	P	02 43 27.3	-1.8
	baz=320,SNR=6.5						
V40A	Witts Springs	80.54	48	*e*P	P	02 43 28.0	-1.1
	comp=Z,32nm,1.4s						
V40A				LR	LR		
	comp=Z,3µm,20.0s						
R44A	Waltonville	80.55	44	P	P	02 43 27.3	-1.7
	baz=322						
MCH1	Michaelchurch	80.56	344	⇑*e*P	P	02 43 28.7	0.0
MCH1				IAmb	IAmb	02 43 31.8	
	comp=Z,280nm,1.2s						
MCH1				IAMs_20	IAMs_20	03 26 54.9	
	comp=Z,2µm,14.6s						
ALFO	Alfred	80.58	31	P	P	02 43 28.3	-0.6
	baz=329						
S43A	Fulton Ridge,	80.59	45	P	P	02 43 27.2	-1.9
	baz=321,SNR=6.3						
U41A	Viola	80.60	47	P	P	02 43 27.3	-2.0
	baz=320						
DRWO	Darlington Wes	80.61	34	P	P	02 43 28.9	-0.2
	baz=327						
STRD	Stroud	80.61	344	⇑*e*P	P	02 43 29.3	+0.3
STRD				IAmb	IAmb	02 43 32.2	
	comp=Z,445nm,1.0s						
STRD				IAMs_20	IAMs_20	03 24 52.6	
	comp=Z,2µm,16.5s						
DRCO	St. Marys Ceme	80.61	34	P	P	02 43 28.4	-0.8
	baz=327						
STU	Stuttgart	80.62	336	*e*P	P	02 43 30.4	+1.2
	comp=Z,128nm,1.1s						
STU				LR	LR		
	comp=Z,2µm,20.0s						
SOKA	Soboth	80.64	331	*e*pP	P	02 43 29.7	+0.2
	comp=Z,92nm,1.1s,SNR=118						
OLIL	Olney	80.65	43	*e*P	P	02 43 29.4	0.0
	comp=Z,35nm,1.1s						
OLIL				LR	LR		
	comp=Z,4µm,21.0s						
PERS	Pernice	80.65	331	*i* P	P	02 43 29.3	-0.1
WLF	Walferdange	80.66	338	⇓P	P	02 43 29.8	+0.5
	comp=Z,104nm,2.1s						
WLF	Walferdange	80.66	338	*e*P	P	02 43 30.5	+1.2
	comp=Z,126nm,1.3s						
WLF				LR	LR		
	comp=Z,5µm,19.0s						
JCT	Junction City	80.66	56	P	P	02 43 28.1	-1.6
	baz=318,SNR=8.7						
JCT	Junction City	80.66	56	*e*P	P	02 43 29.3	-0.4
	comp=Z,32nm,1.1s						
JCT				LR	LR		
	comp=Z,2µm,20.0s						
JCT	Junction City	80.66	56	*e*P	P	02 43 29.3	-0.4
JCT				pmax	pmax		
	comp=Z,32nm,1.1s						
JCT				MLR	MLR		
	comp=Z,2µm,20.0s						
DOU	Dourbes	80.66	339	⇑P	P	02 43 29.1	-0.3
	comp=Z,73nm,2.0s						
PGB	Panagyurishte	80.67	323	*i* P	P	02 43 29.9	+0.3
MONM	Monmouth	80.67	344	⇑*e*P	P	02 43 28.8	-0.5
MONM				IAmb	IAmb	02 43 32.5	
	comp=Z,319nm,1.2s						
MONM				IAMs_20	IAMs_20	03 28 00.0	
	comp=Z,2µm,15.4s						
WLVO	Wesleyville	80.69	34	P	P	02 43 29.1	-0.5
	baz=327						
Q46A	CEJHS Indians,	80.78	42	P	P	02 43 27.8	-2.3
	baz=322						
OLDB	Oldbury-Upon-S	80.79	344	⇑*e*P	P	02 43 30.0	+0.1
OLDB				IAMs_20	IAMs_20	03 26 13.2	
	comp=Z,3µm,16.1s						
TYNO	Tyneside	80.79	35	P	P	02 43 29.8	-0.3
	baz=326						
X39A	Fountain Ranch	80.84	50	P	P	02 43 28.9	-1.7
	baz=320,SNR=7.0						
KBA	Koelnbreinsper	80.86	332	*e*pP	P	02 43 31.5	+0.8
	comp=Z,158nm,1.1s,SNR=66						
T43A	Greenville	80.86	46	P	P	02 43 29.0	-1.7
	baz=321,SNR=7.2						
HGH	Gray Hill	80.86	344	*e*P	P	02 43 30.3	-0.1
IWEX	Carrickbyrne,	80.86	347	⇑*e*P	P	02 43 30.3	0.0
IWEX				IAmb	IAmb	02 43 33.4	
	comp=Z,178nm,1.2s						
KDZ	Kurdzhali	80.87	322	*i* P	P	02 43 31.4	+0.8
W40A	Ferguson Farm,	80.88	48	P	P	02 43 29.1	-1.7
	baz=320,SNR=5.5						
W40A	Ferguson Farm,	80.88	48	*e*P	P	02 43 30.3	-0.4
	comp=Z,44nm,1.1s						
W40A				LR	LR		
	comp=Z,4µm,20.0s						
WHTX	Lake Whitney,	80.89	53	P	P	02 43 28.8	-2.1
	baz=318						
WHTX	Lake Whitney,	80.89	53	*e*P	P	02 43 30.9	0.0
	comp=Z,30nm,1.3s						
WHTX				LR	LR		
	comp=Z,3µm,21.0s						
S44A	Carbondale	80.90	44	P	P	02 43 29.3	-1.6
	baz=322,SNR=5.1						
SIUC	Southern Illin	80.90	44	PFAKE		02 43 40.0	+9.2
SIUC				LR	LR		
	comp=Z,4µm,21.0s						
V41A	Mountainview	80.91	48	P	P	02 43 29.0	-1.9
	baz=320,SNR=9.1						
R45A	Skylar, Fairfi	80.91	43	P	P	02 43 28.6	-2.3
	baz=322						
P47A	Martinsville	80.92	41	P	P	02 43 28.9	-2.0
	baz=323,SNR=6.2						
HMNX	Herstmonceux	80.94	342	⇑*e*P	P	02 43 31.8	+1.0
HMNX				IAmb	IAmb	02 43 34.6	
	comp=Z,568nm,1.1s						
HMNX				IAMs_20	IAMs_20	03 24 05.5	
	comp=Z,4µm,17.5s						
U42A	Revenden	80.94	47	P	P	02 43 28.4	-2.7
	baz=321						
OBKA	Obir	80.95	331	*e*pP	P	02 43 31.3	+0.2
	comp=Z,40nm,0.9s,SNR=31						
PBMO	Poplar Bluff	81.03	46	*e*P	P	02 43 31.3	-0.2
	comp=Z,96nm,1.4s						
PBMO				LR	LR		
	comp=Z,4µm,20.0s						
VTS	Vitosha	81.03	324	⇑*i*P	P	02 43 31.7	0.0
VTS	Vitosha	81.03	324	*e*P	P	02 43 31.9	+0.2
	comp=Z,161nm,1.1s						
VTS				LR	LR		
	comp=Z,11µm,18.0s						
VTS	Vitosha	81.03	324	*i* P	P	02 43 31.9	+0.2
VTS	Vitosha	81.03	324	P	P	02 43 31.9	+0.2
VTS	Vitosha	81.03	324	⇑P	P	02 43 31.7	0.0
BLO	Bloomington	81.05	42	PFAKE		02 43 40.0	+8.4
BLO				LR	LR		
	comp=Z,4µm,19.0s						
DIVS	Divibare	81.06	327	*e*P	P	02 43 31.0	-0.7
	comp=Z,71nm,1.0s						
DIVS				LR	LR		
	comp=Z,7µm,18.0s						
MIAR	Mount Ida	81.11	49	P	P	02 43 30.6	-1.4
	baz=320,SNR=15						
MIAR	Mount Ida	81.11	49	*e*P	P	02 43 30.8	-1.2
	comp=Z,50nm,1.2s						
MIAR				LR	LR		
	comp=Z,4µm,20.0s						
MIAR	Mount Ida	81.11	49	*e*P	P	02 43 30.8	-1.2
MIAR				pmax	pmax		
	comp=Z,50nm,1.2s						
MIAR				MLR	MLR		
	comp=Z,4µm,20.0s						
RZN	Rozhen	81.14	323	*i* P	P	02 43 32.9	+0.6
MYKA	Terra Mystica	81.15	332	*i* P	P	02 43 31.7	-0.4
	comp=Z,53nm,1.1s,SNR=22						
WATA	Walderalm	81.19	334	*e*pP	P	02 43 33.8	+1.4
	comp=Z,29nm,0.5s,SNR=52						
T44A	Benton	81.21	45	P	P	02 43 30.5	-2.0
	baz=322						
ALN	Alexandroupoli	81.21	321	*e*P	P	02 43 33.4	+1.0
	comp=Z,87nm,1.2s						
ALN				LR	LR		
	comp=Z,3µm,20.0s						
ALN	Alexandroupoli	81.21	321	P	P	02 43 31.8	-0.6
RDO	Rodhopi	81.23	322	P	P	02 43 32.3	-0.2
RDO	Rodhopi	81.23	322	P	P	02 43 32.3	-0.2
WTTA	Wattenberg	81.24	334	*e*pP	P	02 43 33.5	+0.8
	comp=Z,131nm,1.2s,SNR=36						
S45A	Carrier Mills	81.25	44	P	P	02 43 31.6	-1.1
	baz=322						
BFO	Black Forest	81.27	336	*e*P	P	02 43 32.5	-0.2
	comp=Z,91nm,1.1s						
BFO				LR	LR		
	comp=Z,3µm,20.0s						
BFO	Black Forest	81.27	336	*i* P	P	02 43 33.1	+0.4
PMOR	Pomariorio Ree	81.28	122	*e*T	T	04 13 08.0	
	comp=Z,7.5nm,0.2s						
Q47A	Bedord North L	81.29	42	P	P	02 43 31.6	-1.3
	baz=323,SNR=7.3						
V42A	Cord	81.29	47	P	P	02 43 31.2	-1.7
	baz=321,SNR=5.6						
MEDO	Medina	81.31	34	P	P	02 43 31.7	-1.2
	baz=327						
N50A	Nevada	81.31	39	P	P	02 43 31.6	-1.4
	baz=325,SNR=5.2						
RETA	Reutte	81.31	334	*e*pP	P	02 43 33.4	+0.4
	comp=Z,116nm,1.2s,SNR=70						
W41B	Gary Mavity, V	81.33	48	P	P	02 43 31.9	-1.3
	baz=320,SNR=9.3						
W41B	Gary Mavity, V	81.33	48	*e*P	P	02 43 32.6	-0.5
	comp=Z,29nm,1.1s						
W41B				LR	LR		
	comp=Z,3µm,20.0s						
MOTA	Moosalm	81.33	334	*e*pP	P	02 43 34.6	+1.4
	comp=Z,216nm,1.3s,SNR=90						
R46A	Gibon Southern	81.34	43	P	P	02 43 31.3	-1.9
	baz=322						
U43A	Rector	81.36	46	P	P	02 43 31.8	-1.5
	baz=321						
LJU	Ljubljana	81.37	331	*e*P	P	02 43 32.7	-0.5
ABTA	Abfaltersbach	81.42	333	*e*P	P	02 43 33.0	-0.5
	comp=Z,28nm,1.0s,SNR=19						
OZLJ	Ozalj	81.42	330	P	P	02 43 32.8	-0.6
PARMO	Parma	81.46	45	PFAKE		02 43 50.0	+16
PARMO				LR	LR		
	comp=Z,4µm,20.0s						
USIN	University of	81.47	43	*e*P	P	02 43 34.6	+0.8
	comp=Z,48nm,1.1s						
USIN				LR	LR		
	comp=Z,5µm,21.0s						
CADS	Cadrg	81.47	332	*i* P	P	02 43 31.9	-1.9
TAOE	Nuku Hiva Isla	81.48	112	*e*S	S	02 53 47.1	+2.7
	comp=Z,323nm,22.1s						
TAOE	Nuku Hiva Isla	81.48	112	*e*LR	LR	03 09 02.6	
	comp=Z,4µm,23.6s,baz=322						
TAOE	Nuku Hiva Isla	81.48	112	PFAKE		02 43 50.0	+16
TAOE				LR	LR		
	comp=Z,3µm,18.0s						
X40A	Basin Creek Fa	81.55	49	P	P	02 43 32.9	-1.4
	baz=320,SNR=6.3						
X40A	Basin Creek Fa	81.55	49	*e*P	P	02 43 33.9	-0.4
	comp=Z,28nm,1.3s						
X40A				LR	LR		
	comp=Z,5µm,20.0s						
ERPA	Erie	81.56	36	P	P	02 43 32.4	-1.8
	baz=326						
ERPA	Erie	81.56	36	*e*P	P	02 43 34.4	+0.1
	comp=Z,97nm,1.4s						
ERPA				*e*pP	pP	02 43 43.7	+1.2
ERPA				LR	LR		
	comp=Z,3µm,21.0s						
LONY	Lake Ozonia	81.56	31	P	P	02 43 32.6	-1.6
	baz=329						
LONY	Lake Ozonia	81.56	31	*e*P	P	02 43 33.4	-0.8
	comp=Z,21nm,1.2s						
LONY				LR	LR		
	comp=Z,2µm,20.0s						
BLY	Banja Luka	81.56	329	⇑*i*P	P	02 43 33.9	-0.3
BLY	Banja Luka	81.56	329	*e*P	P	02 43 33.8	-0.3
	comp=Z,49nm,1.3s						
BLY				LR	LR		
	comp=Z,5µm,19.0s						
UALR	University of	81.58	48	PFAKE		02 43 50.0	+15
UALR				LR	LR		
	comp=Z,4µm,21.0s						
BOJS	Bojanci	81.59	331	*i* P	P	02 43 34.0	-0.4
HEX	Exmoor	81.60	345	*e*P	P	02 43 33.8	-0.5
ISP	Isparta	81.60	317	*e*P	P	02 43 36.8	+2.0
	comp=Z,46nm,0.9s						
ISP				LR	LR		
	comp=Z,6µm,19.0s						
ISP	Isparta	81.60	317*c*	*i*P	P	02 43 34.0	-0.7
ISP				pmax	pmax		
	comp=Z,146nm,2.5s						
O50A	Cable	81.61	39	P	P	02 43 33.3	-1.2
	baz=324,SNR=7.0						
U44A	Portageville	81.61	46	P	P	02 43 32.5	-2.1
	baz=322						
W42A	Bald Knob	81.63	47	P	P	02 43 32.4	-2.4
	baz=321						
MMB	Musomiste	81.64	323	*i* P	P	02 43 35.2	+0.4
S46A	Don Dixon Farm	81.66	44	P	P	02 43 32.6	-2.3
	baz=322						
Y40A	Okolona	81.67	49	P	P	02 43 33.1	-1.9
	baz=320						
PVMO	Portageville	81.68	46	PFAKE		02 43 50.0	+15
PVMO				LR	LR		
	comp=Z,5µm,21.0s						
KKB	Krupnik	81.69	324	*i* P	P	02 43 35.4	+0.4
ECH	Echery	81.71	337	*e*P	P	02 43 34.6	-0.3
	comp=Z,148nm,1.3s						
ECH				LR	LR		
	comp=Z,5µm,20.0s						
ECH	Echery	81.71	337	*e*P	P	02 43 34.6	-0.3
ECH				pmax	pmax		
	comp=Z,148nm,1.3s						
ECH				MLR	MLR		
	comp=Z,5µm,20.0s						
X41A	Kaden, Bauxite	81.71	49	P	P	02 43 33.0	-2.2
	baz=320						
435B	Jarrell	81.72	54	P	P	02 43 33.6	-1.7
	baz=318						
435B	Jarrell	81.72	54	PFAKE		02 43 50.0	+15
435B				LR	LR		
	comp=Z,3µm,19.0s						
T45A	Paducah	81.73	45	P	P	02 43 33.0	-2.3
	baz=322						
T45A	Paducah	81.73	45	PFAKE		02 43 50.0	+15
T45A				LR	LR		
	comp=Z,3µm,21.0s						
FETA	Feichten	81.73	334	*e*pP	P	02 43 35.3	0.0
	comp=Z,79nm,1.0s,SNR=53						
V43A	Jonesboro	81.74	47	P	P	02 43 33.2	-2.1
	baz=321						
R47A	Wooly Knot Far	81.75	42	P	P	02 43 33.9	-1.4
	baz=323,SNR=5.8						
DAVA	Damuels	81.76	335	*e*pP	P	02 43 35.7	+0.3
	comp=Z,118nm,1.1s,SNR=44						
NVR	Nevrokopi	81.79	323	P	P	02 43 34.9	-0.6
NVR	Nevrokopi	81.79	323	P	P	02 43 34.9	-0.6
HTL	Hartland	81.79	345	⇑*e*P	P	02 43 35.5	+0.2
HTL				IAmb	IAmb	02 43 38.7	
	comp=Z,81nm,1.0s						
HTL				IAMs_20	IAMs_20	03 23 18.0	
	comp=Z,1µm,19.1s						
ACSO	Alum Creek Sta	81.82	39	P	P	02 43 33.8	-1.9
	baz=325						
ACSO	Alum Creek Sta	81.82	39	*e*P	P	02 43 35.6	0.0
	comp=Z,38nm,1.1s						
ACSO				LR	LR		
	comp=Z,2µm,18.0s						
HBAR	Harrisburg	81.86	47	PFAKE		02 43 50.0	+14
HBAR				LR	LR		
	comp=Z,4µm,20.0s						
GNAR	Gosnell	81.87	46	PFAKE		02 43 50.0	+14
GNAR				LR	LR		
	comp=Z,4µm,20.0s						
ALLY	Alegheny Colle	81.88	36	*e*P	P	02 43 36.2	+0.2
	comp=Z,105nm,1.3s						
ALLY				LR	LR		
	comp=Z,4µm,19.0s						
MMNY	Mt. Morris Dam	81.89	34	*e*P	P	02 43 35.6	-0.4
	comp=Z,40nm,1.0s						
MMNY				LR	LR		
	comp=Z,3µm,19.0s						
U44B	Burton Farm, H	81.91	45	P	P	02 43 34.3	-2.0
	baz=322						
WCI	Wyandotte Cave	81.91	42	P	P	02 43 34.2	-2.0
	baz=323						
WCI	Wyandotte Cave	81.91	42	*e*P	P	02 43 36.3	+0.1
	comp=Z,43nm,1.3s						
WCI				LR	LR		
	comp=Z,3µm,20.0s						
TRI	Trieste	81.92	332	*e*P	P	02 43 36.1	0.0
	comp=Z,68nm,1.1s						
TRI				LR	LR		
	comp=Z,6µm,18.0s						
PLE	Pljevlja	81.94	327	⇑*i*P	P	02 43 35.4	-1.0
EZN	Ezine	81.96	320	P	P	02 43 37.5	+1.1
EZN	Ezine	81.96	320	P	P	02 43 37.5	+1.1
P50A	Jamestown	81.96	40	P	P	02 43 34.4	-2.1
	baz=324						
R48A	Northridge Ran	81.98	42	P	P	02 43 34.4	-2.2
	baz=323						
PQI	Presque Isle	81.99	26	*e*P	P	02 43 36.2	-0.2
	comp=Z,57nm,1.3s						
PQI				*e*pP	sP	02 43 46.7	-1.1
GLAT	Glass	82.00	45	PFAKE		02 43 50.0	+13
GLAT				LR	LR		
	comp=Z,5µm,21.0s						
MANT	Manisa	82.01	318	*e*P	P	02 43 38.3	+1.3
	comp=Z,374nm,1.1s						
V44A	Blytheville	82.04	46	P	P	02 43 34.6	-2.2
	baz=322						
T46A	Princeton	82.08	44	P	P	02 43 35.6	-1.5
	baz=322,SNR=18						
SRS	Serrai	82.09	323	P	P	02 43 36.0	-1.1
SRS	Serrai	82.09	323	P	P	02 43 36.0	-1.1
SRS	Serrai	82.09	323	P	P	02 43 36.0	-1.1
Y41A	Eaglette Beard	82.13	49	P	P	02 43 34.3	-3.0
	baz=320						
X42A	Stuttgart	82.13	48	P	P	02 43 35.2	-2.2
	baz=321						
IVA	Berane	82.14	326	⇑*i*P	P	02 43 37.3	-0.1
Z40A	Long Farm, Mag	82.18	50	P	P	02 43 36.2	-1.4
	baz=320						
M54A	Oil Creek Stat	82.20	36	P	P	02 43 36.1	-1.5
	baz=326,SNR=6.4						
M54A	Oil Creek Stat	82.20	36	*e*P	P	02 43 37.5	-0.1
	comp=Z,63nm,1.4s						
M54A				LR	LR		
	comp=Z,3µm,21.0s						
W43A	Forest City	82.20	47	P	P	02 43 35.8	-1.9
	baz=321						
U45A	Rockin P Farm,	82.20	45	P	P	02 43 35.9	-1.8
	baz=322						
STIP	Stip	82.20	324	*i* P	P	02 43 36.1	-1.5
DAVOX	Davos/Dischmat	82.21	334	P	P	02 43 37.9	+0.1
	comp=Z,50nm,0.9s,baz=8.9,slow=5.8,SNR=44						
DAVOX				LR	LR	03 23 53.2	
	comp=Z,4µm,20.5s,baz=20,slow=38						
DYA	Yadsworthy	82.23	344	⇑*e*P	P	02 43 37.3	-0.3
UPM	Unac-Piva	82.24	327	⇑*i*P	P	02 43 37.3	-0.8
NCB	Newcomb	82.24	31	*e*P	P	02 43 37.5	-0.4
	comp=Z,27nm,1.3s						
NCB				LR	LR		
	comp=Z,2µm,20.0s						
HALT	Halls	82.25	46	PFAKE		02 43 50.0	+12
HALT				LR	LR		
	comp=Z,5µm,22.0s						
UDBI	Udbina	82.26	330	P	P	02 43 37.2	-0.8
SKO	Skopje	82.28	325	P	P	02 43 38.9	+0.9
SKO	Skopje	82.28	325	P	P	02 43 38.9	+0.9
SKO	Skopje	82.28	325	*i* P	P	02 43 38.6	+0.5
PPT	Papeete	82.30	124	LR	LR	03 14 47.8	
	comp=Z,6µm,19.7s,baz=304,slow=32						
KOME	Kolasin	82.30	326	⇑*i*P	P	02 43 37.7	-0.6
PPT2	Papeete2	82.32	124	*e*S	S	02 53 56.8	+4.1
	comp=Z,2µm,27.8s						
PPT2	Papeete2	82.32	124	*e*LR	LR	03 09 33.5	
	comp=Z,7µm,21.8s,baz=325						
PPTF	Pamatai, Papee	82.32	124	PFAKE		02 43 50.0	+11

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PPTF                                  LR       LR
      comp=Z,6µm,20.0s
MAMC  Mammari            82.34 313    P        P        02 43 40.3 +1.8
PVY   Plav               82.34 326⇑iP          P        02 43 38.0 -0.5
KNT   Kendrikon          82.35 323    P        P        02 43 37.1 -1.3
KNT   Kendrikon          82.35 323    P        P        02 43 37.1 -1.3
VAY   Valandovo          82.35 324    P        P        02 43 37.0 -1.4
VAY   Valandovo          82.35 324    P        P        02 43 37.0 -1.4
VAY   Valandovo          82.35 324  i P        P        02 43 38.8 +0.3
VAY   Valandovo          82.35 324    P        P        02 43 37.0 -1.4
LIA   Limnos Island      82.41 321    P        P        02 43 38.1 -0.6
LIA   Limnos Island      82.41 321    P        P        02 43 38.1 -0.6
CSS   Mathiatis          82.44 313   eP        P        02 43 37.8 -1.3
      comp=Z,122nm,1.3s
CSS   Mathiatis          82.44 313    P        P        02 43 40.0 +1.0
CSS   Mathiatis          82.44 313    P        P        02 43 40.0 +1.0
VT1   Waterbury          82.46  30   eP        P        02 43 39.0 +0.1
      comp=Z,23nm,1.3s
S48A  Wiedeman Farm,     82.48  42    P        P        02 43 37.2 -2.0
      baz=323
U46A  Springville        82.48  45    P        P        02 43 37.5 -1.7
      baz=322
833A  Chaparral WMA,     82.48  57    P        P        02 43 37.7 -1.6
      baz=318
833A  Chaparral WMA,     82.48  57    PFAKE             02 43 50.0 +11
833A                                  LR       LR
      comp=Z,2µm,20.0s
BCI   Bajram Curri       82.49 326  i P        P        02 43 40.5 +1.3
Z41A  Richland Creek     82.50  50    P        P        02 43 37.0 -2.3
      baz=320
Z41A  Richland Creek     82.50  50    PFAKE             02 43 50.0 +11
Z41A                                  LR       LR
      comp=Z,4µm,20.0s
T47A  Sharon Grove       82.51  44    P        P        02 43 38.2 -1.1
      baz=323,SNR=7.9
T47A  Sharon Grove       82.51  44   eP        P        02 43 39.5 +0.2
      comp=Z,68nm,1.4s
T47A                                  LR       LR
      comp=Z,4µm,21.0s
N54A  Moraine State      82.51  37    P        P        02 43 38.0 -1.4
      baz=326,SNR=7.2
N54A  Moraine State      82.51  37   eP        P        02 43 38.7 -0.6
      comp=Z,69nm,1.2s
N54A                                  LR       LR
      comp=Z,5µm,20.0s
CCAR  Cane Creek         82.55  48    PFAKE             02 43 50.0 +10
CCAR                                  LR       LR
      comp=Z,4µm,20.0s
X43A  Marvell            82.55  48    P        P        02 43 37.2 -2.3
      baz=321
X43A  Marvell            82.55  48    PFAKE             02 43 50.0 +10
X43A                                  LR       LR
      comp=Z,2µm,20.0s
140A  Cam and Jess,      82.56  50    P        P        02 43 37.5 -2.1
      baz=320
140A  Cam and Jess,      82.56  50    PFAKE             02 43 50.0 +10
140A                                  LR       LR
      comp=Z,3µm,20.0s
MET   Memphis--Engin     82.57  47    PFAKE             02 43 50.0 +10
MET                                   LR       LR
      comp=Z,3µm,20.0s
V45A  Humboldt           82.58  46    P        P        02 43 37.2 -2.5
      baz=322
NKME  Niksic             82.59 327⇑iP          P        02 43 39.0 -0.7
Y42A  Garnett, Star      82.60  49    P        P        02 43 38.2 -1.6
      baz=321
W44A  Shelby Farms P     82.61  46    P        P        02 43 37.8 -2.1
      baz=322
NATX  Nacogdoches        82.63  52    P        P        02 43 38.8 -1.3
      baz=320
NATX  Nacogdoches        82.63  52   eP        P        02 43 40.6 +0.6
      comp=Z,44nm,1.0s
NATX                                  LR       LR
      comp=Z,2µm,20.0s
BRY   Bratogost          82.63 327   eP        P        02 43 38.8 -1.3
ALFC  Alefka             82.67 314    P        P        02 43 40.5 +0.3
SIGR  SIGRI              82.67 320    P        P        02 43 37.8 -2.3
SIGR  SIGRI              82.67 320    P        P        02 43 37.8 -2.3
OUZ   Omahuta            82.67 162    PFAKE             02 43 50.0 +10
OUZ                                   LR       LR
      comp=Z,5µm,20.0s
ASF   Jabal al Asfar     82.69 309    P        P        02 43 41.3 +0.9
      comp=Z,40nm,1.0s,baz=53,slow=1.1,SNR=43
ASF                                   LR       LR       03 26 15.6
      comp=Z,2µm,18.2s,baz=352,slow=40
CCA1  Carnmenellis       82.70 345⇑eP          P        02 43 40.1 +0.1
CCA1                                  IAMs_20  IAMs_20  03 37 55.6
      comp=Z,2µm,16.3s
GRG   Griva              82.73 324    P        P        02 43 38.6 -1.9
GRG   Griva              82.73 324    P        P        02 43 38.6 -1.9
GRG   Griva              82.73 324    P        P        02 43 38.6 -1.9
T48A  Bowling Green      82.76  43    P        P        02 43 38.5 -2.1
      baz=323
PDG   Podgorica          82.76 326⇓iP          P        02 43 39.7 -0.8
TTG   Podgorica          82.76 326   eP        P        02 43 39.8 -0.8
TTG   Podgorica          82.76 326   eP        P        02 43 40.0 -0.5
      comp=Z,160nm,1.1s
TTG                                   LR       LR
      comp=Z,8µm,19.0s
TTG   Podgorica          82.76 326   eP        P        02 43 40.0 -0.5
TTG                                   pmax     pmax
      comp=Z,160nm,1.1s
TTG                                   MLR      MLR
      comp=Z,8µm,19.0s
PLG   Polygyros          82.77 323    P        P        02 43 40.3 -0.4
PLG   Polygyros          82.77 323    P        P        02 43 40.3 -0.4
PLG   Polygyros          82.77 323    P        P        02 43 40.3 -0.4
CEME  Cevo               82.79 327⇑iP          P        02 43 39.8 -1.0
PKME  Peaks-Kenny Pk     82.83  28    P        P        02 43 39.1 -1.7
      baz=332
PKME  Peaks-Kenny Pk     82.83  28   eP        P        02 43 41.1 +0.3
      comp=Z,87nm,1.5s
PKME                                  LR       LR
      comp=Z,4µm,19.0s
SZAC  Souni              82.83 313    P        P        02 43 41.0 -0.1
WVT   Waverly            82.83  45    P        P        02 43 38.9 -2.1
      baz=322
WVT   Waverly            82.83  45   eP        P        02 43 40.9 -0.1
      comp=Z,36nm,1.3s
WVT                                   LR       LR
      comp=Z,3µm,21.0s
LBNH  Lisbon             82.84  30    P        P        02 43 39.6 -1.3
      baz=331
PUK   Puka               82.84 326  i P        P        02 43 42.5 +1.5
U47A  Clarksville        82.85  44    P        P        02 43 39.7 -1.4
      baz=323,SNR=7.6
MMAI  Mount Meron Ar     82.86 310    P        P        02 43 42.0 +0.7
      comp=Z,146nm,1.0s,baz=53,slow=5.8,SNR=58
MMAI                                  LR       LR       03 25 13.5
      comp=Z,10µm,20.3s,baz=10.0,slow=39
KRUS  Krusevo            82.86 325  i P        P        02 43 41.9 +0.7
AKMC  Akamas             82.90 314    P        P        02 43 41.6 +0.1
240A  Hunter Patters     82.91  51    P        P        02 43 40.2 -1.3
      baz=320
240A  Hunter Patters     82.91  51    PFAKE             02 43 50.0 +8.5
240A                                  LR       LR
      comp=Z,3µm,21.0s
W45A  Hickory Valley     82.92  46    P        P        02 43 40.0 -1.5
      baz=322
PHP   Peshkopia          82.92 325  i P        P        02 43 42.0 +0.5
X44A  Crenshaw           82.94  47    P        P        02 43 40.3 -1.3
      baz=322
Z42A  Norrel Spur, H     82.95  49    P        P        02 43 40.1 -1.6
      baz=321
141A  Papa Simpson,      82.95  50    P        P        02 43 40.8 -0.9
      baz=320
V46A  Holladay           82.95  45    P        P        02 43 39.7 -2.0
      baz=322,SNR=7.2
ACCN  Adirondack Com     82.95  31   eP        P        02 43 40.5 -1.0
      comp=Z,70nm,1.4s
ACCN                                  LR       LR
      comp=Z,2µm,20.0s
STON  Ston               82.98 328    P        P        02 43 40.2 -1.4
Y43A  Makayla and Ka     82.99  48    P        P        02 43 40.4 -1.5
      baz=321
DRME  Dracevica, Mon     82.99 326⇑iP          P        02 43 41.5 -0.3
PPCY  Paphos             83.01 314    P        P        02 43 41.5 -0.4
BUM   Brajici-Budva      83.01 327⇑iP          P        02 43 42.1 +0.2
PAIG  Paliouri           83.04 322    P        P        02 43 40.6 -1.4
PAIG  Paliouri           83.04 322    P        P        02 43 40.6 -1.4
PAIG  Paliouri           83.04 322    P        P        02 43 40.6 -1.4
HCY   Herceg Novi        83.04 327⇑iP          P        02 43 41.7 -0.3
JSA   Saint Aubin        83.07 343⇑eP          P        02 43 41.7 -0.2
JSA                                   IAmb     IAmb     02 43 45.3
      comp=Z,168nm,1.0s
JSA                                   IAMs_20  IAMs_20  03 24 51.1
      comp=Z,3µm,18.5s
BINY  Binghamton         83.09  33    P        P        02 43 40.2 -2.1
      baz=329
ULC   Ulcinj             83.16 326⇑iP          P        02 43 42.2 -0.5
U48A  Cassie Pea, Po     83.16  43    P        P        02 43 41.1 -1.7
      baz=323,SNR=6.5
T49A  Edmonton           83.17  42    P        P        02 43 40.8 -2.0
      baz=324,SNR=8.8
T49A  Edmonton           83.17  42   eP        P        02 43 42.0 -0.8
      comp=Z,29nm,1.2s
T49A                                  LR       LR
      comp=Z,3µm,20.0s
V47A  Nunnelly           83.23  45    P        P        02 43 41.4 -1.7
      baz=323,SNR=6.8
YER   Yerkesik           83.23 318    P        P        02 43 44.5 +1.4
YER   Yerkesik           83.23 318    P        P        02 43 44.5 +1.4
FETY  Fethiye            83.24 317    P        P        02 43 43.6 +0.4
FETY  Fethiye            83.24 317    P        P        02 43 43.6 +0.4
CHOS  Chios island       83.25 320    P        P        02 43 41.5 -1.8
CHOS  Chios island       83.25 320    P        P        02 43 41.5 -1.8
OHR   Ohrid              83.26 325  i P        P        02 43 42.6 -0.7
FNA   Florina            83.30 324   eP        P        02 43 43.0 -0.5
      comp=Z,79nm,1.0s
FNA                                   LR       LR
      comp=Z,10µm,18.0s
FNA   Florina            83.30 324    P        P        02 43 42.0 -1.4
OXF   Oxford             83.31  47    P        P        02 43 41.9 -1.6
      baz=322,SNR=5.6
OXF   Oxford             83.31  47   eP        P        02 43 43.3 -0.3
      comp=Z,83nm,1.3s
OXF                                   LR       LR
      comp=Z,2µm,20.0s
WVL   Waterville         83.33  28   eP        P        02 43 42.8 -0.6
      comp=Z,46nm,1.3s
Y44A  Strider, Charl     83.33  47    P        P        02 43 41.8 -1.8
      baz=322
HKT   Hockley            83.34  54   eP        P        02 43 41.5 -2.2
      comp=Z,50nm,1.6s
HKT   Hockley            83.34  54   eP        P        02 43 41.5 -2.2
HKT                                   pmax     pmax
      comp=Z,51nm,1.6s
W46A  Michie             83.35  46    P        P        02 43 42.0 -1.7
      baz=322
SENIN Lac Senin/Sane     83.35 336   eP        P        02 43 44.1 +0.3
      comp=Z,114nm,1.2s
SENIN                                 LR       LR
      comp=Z,5µm,19.0s
Z43A  Armstrong Fami     83.37  49    P        P        02 43 42.2 -1.6
      baz=321
241A  Mo Tay, Goldon     83.39  50    P        P        02 43 42.4 -1.6
      baz=320
241A  Mo Tay, Goldon     83.39  50    PFAKE             02 44 00.0 +16
241A                                  LR       LR
      comp=Z,3µm,20.0s
KSL   Kastellorizon      83.39 316    P        P        02 43 42.7 -1.2
KSL   Kastellorizon      83.39 316    P        P        02 43 42.7 -1.2
X45A  UM Field Stati     83.39  47    P        P        02 43 42.6 -1.4
      baz=322
LIT   Litokhoron         83.40 323   eP        P        02 43 44.6 +0.6
      comp=Z,90nm,1.1s
LIT                                   LR       LR
      comp=Z,7µm,18.0s
LIT   Litokhoron         83.40 323    P        P        02 43 43.7 -0.3
142A  Monroe             83.51  49    P        P        02 43 42.7 -1.9
      baz=321
TRY   Troy               83.52  32   eP        P        02 43 45.0 +0.5
      comp=Z,50nm,1.4s
TRY                                  epP       sP       02 43 54.5 -1.3
U49A  Red Boiling Sp     83.53  43    P        P        02 43 43.0 -1.7
      baz=324,SNR=9.6
KZN   Kozani             83.53 324    P        P        02 43 43.6 -1.1
KZN   Kozani             83.53 324    P        P        02 43 43.6 -1.1
KZN   Kozani             83.53 324    P        P        02 43 43.6 -1.1
T50A  Nancy              83.57  42    P        P        02 43 43.4 -1.4
      baz=324,SNR=12
AOS   Alonnisos          83.58 322    P        P        02 43 43.8 -1.0
AOS   Alonnisos          83.58 322    P        P        02 43 43.8 -1.0
FFD   Franklin Falls     83.61  30   eP        P        02 43 45.5 +0.6
      comp=Z,40nm,1.4s
PLAL  Pickwick Lake      83.62  45   eP        P        02 43 44.6 -0.5
      comp=Z,34nm,1.5s
PLAL                                  LR       LR
      comp=Z,4µm,21.0s
V48A  Smith Brothers     83.64  44    P        P        02 43 43.5 -1.7
      baz=323,SNR=6.3
V48A  Smith Brothers     83.64  44   eP        P        02 43 45.0 -0.3
      comp=Z,18nm,1.1s
V48A                                  LR       LR
      comp=Z,4µm,18.0s
W47A  Westpoint          83.65  45    P        P        02 43 43.9 -1.4
      baz=323,SNR=6.0
S51A  Beattyville        83.65  41    P        P        02 43 43.5 -1.7
      baz=325
S51A  Beattyville        83.65  41   eP        P        02 43 45.2 -0.1
      comp=Z,19nm,1.0s
S51A                                  LR       LR
      comp=Z,2µm,20.0s
MCWV  Mont Chateau       83.66  37    P        P        02 43 43.7 -1.5
      baz=326
MCWV  Mont Chateau       83.66  37    PFAKE             02 44 00.0 +15
MCWV                                  LR       LR
      comp=Z,5µm,19.0s
SSPA  Standing Stone     83.66  36    P        P        02 43 43.6 -1.7
      baz=328
SSPA  Standing Stone     83.66  36   eP        P        02 43 45.3 +0.1
      comp=Z,51nm,1.3s
SSPA                                  LR       LR
      comp=Z,3µm,20.0s
KBN   Korca              83.67 324  i P        P        02 43 46.1 +0.7
143A  Socs Landing,      83.68  49    P        P        02 43 43.3 -2.2
      baz=321
143A  Socs Landing,      83.68  49    PFAKE             02 44 00.0 +15
143A                                  LR       LR
      comp=Z,3µm,20.0s
O56A  Blue Knob Stat     83.69  36    P        P        02 43 43.4 -2.0
      baz=327
O56A  Blue Knob Stat     83.69  36   eP        P        02 43 45.5  0.0
      comp=Z,70nm,1.4s
O56A                                  LR       LR
      comp=Z,3µm,20.0s
X46A  Booneville         83.70  46    P        P        02 43 43.7 -1.8
      baz=322
XOR   Xorichti           83.71 322    P        P        02 43 43.0 -2.6
XOR   Xorichti           83.71 322    P        P        02 43 43.0 -2.6
KSPA  Keystone Colle     83.73  34   eP        P        02 43 46.0 +0.4
      comp=Z,48nm,1.3s
KSPA                                 epP       sP       02 43 56.3 -0.6
BODT  Bodrum             83.74 318    P        P        02 43 46.2 +0.5
BODT  Bodrum             83.74 318    P        P        02 43 46.2 +0.5
NEST  Nestorio           83.74 324    P        P        02 43 44.4 -1.4
Z44A  Pea Ridge, Bel     83.75  48    P        P        02 43 43.9 -1.9
      baz=321
Y45A  Yeager Farm, C     83.75  47    P        P        02 43 44.2 -1.6
      baz=322,SNR=8.5
SKIA  Skiathos           83.76 322    P        P        02 43 43.1 -2.7
242A  Grayson            83.77  50    P        P        02 43 43.9 -2.0
      baz=321
341A  Kurthwood          83.78  51    P        P        02 43 43.8 -2.1
      baz=320
341A  Kurthwood          83.78  51   eP        P        02 43 47.0 +1.0
      comp=Z,24nm,1.1s
341A                                  LR       LR
      comp=Z,3µm,21.0s
FYTO  Fytoko, Volos      83.79 322    P        P        02 43 44.4 -1.5
FYTO  Fytoko, Volos      83.79 322    P        P        02 43 44.4 -1.5
S52A  Salyersville       83.86  41    P        P        02 43 44.4 -1.9
      baz=325
NWAO  Narrogin (SRO)     83.88 208    LR       LR       03 22 32.0
      comp=Z,847nm,19.8s,baz=285,slow=37
EMMW  East Machias       83.92  27   eP        P        02 43 46.9 +0.5
      comp=Z,64nm,1.3s
EMMW                                 epP       sP       02 43 59.2 +1.4
KPRO  Kipourio           84.00 324    P        P        02 43 45.1 -2.0
ARG   Arkhangelos        84.04 317    P        P        02 43 48.0 +0.8
ARG   Arkhangelos        84.04 317    P        P        02 43 48.0 +0.8
THL   Klokotos Trika     84.05 323    P        P        02 43 47.6 +0.4
RAYN  Ar Rayn            84.06 297   eP        P        02 43 48.2 +0.6
      comp=Z,135nm,1.1s
RAYN                                  LR       LR
      comp=Z,5µm,18.0s
RAYN  Ar Rayn            84.06 297  i P        P        02 43 48.6 +1.0
      SNR=23
Z45A  Winona             84.06  47    P        P        02 43 45.8 -1.6
      baz=322
Z45A  Winona             84.06  47   eP        P        02 43 47.8 +0.4
      comp=Z,53nm,1.0s
Z45A                                  LR       LR
      comp=Z,3µm,18.0s
W48A  Pulaski            84.06  45    P        P        02 43 45.8 -1.6
      baz=323,SNR=13
V49A  McMinnville        84.07  44    P        P        02 43 46.0 -1.4
      baz=324
Y46A  Houston            84.09  47    P        P        02 43 45.8 -1.7
      baz=322,SNR=7.7
X47A  Russelville        84.09  46    P        P        02 43 45.4 -2.2
      baz=323,SNR=5.1
342A  Flagon Creek P     84.21  50    P        P        02 43 45.7 -2.4
      baz=321
342A  Flagon Creek P     84.21  50    PFAKE             02 44 00.0 +12
342A                                  LR       LR
      comp=Z,4µm,21.0s
441A  DeRidder           84.21  51    P        P        02 43 46.9 -1.3
      baz=320
144A  Alexander Plac     84.25  48    P        P        02 43 47.1 -1.3
      baz=322
KARY  Karystos           84.27 321    P        P        02 43 48.0 -0.4
243A  Waterproof         84.27  50    P        P        02 43 47.6 -0.8
      baz=321
N59A  State Game Lan     84.27  34    P        P        02 43 46.7 -1.6
      baz=329,SNR=7.1
N59A  State Game Lan     84.27  34   eP        P        02 43 47.7 -0.7
      comp=Z,64nm,1.3s
N59A                                  LR       LR
      comp=Z,4µm,20.0s
T52A  Hallie             84.36  41    P        P        02 43 47.9 -1.0
      baz=325
AGG   Agios Georgios     84.37 323   eP        P        02 43 48.2 -0.8
      comp=Z,135nm,1.0s
AGG                                   LR       LR
      comp=Z,15µm,20.0s
AGG   Agios Georgios     84.37 323    P        P        02 43 47.4 -1.5
VLC   Villacollemand     84.40 333   eP        P        02 43 48.5 -0.5
      comp=Z,142nm,1.1s
VLC                                   LR       LR
      comp=Z,7µm,20.0s
W49A  Belvidere          84.41  44    P        P        02 43 47.8 -1.3
      baz=323,SNR=12
JAN   Janina             84.46 324    P        P        02 43 47.9 -1.5
JAN   Janina             84.46 324    P        P        02 43 47.9 -1.5
JAN   Janina             84.46 324    P        P        02 43 47.9 -1.5
PAGS  Pennsylvania G     84.48  35   eP        P        02 43 49.2 -0.1
      comp=Z,37nm,1.3s
PAGS                                 epP       sP       02 44 01.7 +1.0
PAGS                                  LR       LR
      comp=Z,3µm,19.0s
HRV   Adam Dziewonsk     84.48  30    P        P        02 43 47.4 -2.0
      baz=331
HRV   Adam Dziewonsk     84.48  30   eP        P        02 43 49.7 +0.4
      comp=Z,34nm,1.1s
HRV                                  epP       sP       02 43 59.6 -1.1
HRV                                   LR       LR
      comp=Z,3µm,18.0s
SWET  Sewanee            84.49  44   eP        P        02 43 49.2 -0.4
      comp=Z,37nm,1.1s
SWET                                  LR       LR
      comp=Z,3µm,19.0s
PTL   Penteli            84.51 321    P        P        02 43 47.6 -2.0
PTL   Penteli            84.51 321    P        P        02 43 47.6 -2.0
VBMS  Vicksburg          84.52  49    P        P        02 43 47.7 -2.0
      baz=322
VBMS  Vicksburg          84.52  49    PFAKE             02 44 00.0 +10
VBMS                                  LR       LR
      comp=Z,2µm,20.0s
V50A  Pikevile           84.53  43    P        P        02 43 48.3 -1.5
      baz=324,SNR=5.5
145A  Houston Renfro     84.53  48    P        P        02 43 48.1 -1.7
      baz=322
X48A  Hartselle          84.55  45    P        P        02 43 47.5 -2.4
      baz=323
X48A  Hartselle          84.55  45   eP        P        02 43 49.3 -0.6
      comp=Z,10.0nm,0.9s
X48A                                  LR       LR
      comp=Z,3µm,22.0s
TZTN  Tazewell           84.56  42    P        P        02 43 47.7 -2.2
      baz=325
TZTN  Tazewell           84.56  42   eP        P        02 43 50.1 +0.2
      comp=Z,15nm,1.0s
TZTN                                  LR       LR
      comp=Z,2µm,19.0s
APE   Apeiranthos        84.56 319⇑iP          P        02 43 49.2 -0.8
APE   Apeiranthos        84.56 319 ⇑P          P        02 43 49.2 -0.8
244A  Avery, Jackson     84.57  49    P        P        02 43 48.4 -1.6
      baz=321
ODNJ  Ogdensburg         84.58  33   eP        P        02 43 49.7 -0.2
      comp=Z,21nm,1.2s
ODNJ                                 epP       sP       02 44 02.1 +0.9
ODNJ                                  LR       LR
      comp=Z,3µm,20.0s
Y47A  UCPARC, Winfie     84.59  46    P        P        02 43 48.5 -1.5
      baz=323,SNR=5.6
Z46A  Louisville         84.59  47    P        P        02 43 48.7 -1.3
      baz=322
AMGA  Amorgos Island     84.59 319    P        P        02 43 49.5 -0.5
ATHU  Athens Univers     84.61 321    P        P        02 43 47.8 -2.3
ATHU  Athens Univers     84.61 321    P        P        02 43 47.8 -2.3
ZAIG  Zacatecas          84.62  63   eP        P        02 43 51.2 +0.4
      comp=Z,29nm,1.3s
ZAIG                                  LR       LR
      comp=Z,3µm,21.0s
MS1   Monte Sant'Ang     84.64 328   eP        P        02 43 50.0 -0.3
VILL  Villia             84.66 321    P        P        02 43 47.6 -2.8
343A  Vidalia            84.66  50    P        P        02 43 49.5 -1.0
      baz=321
WES   Weston             84.67  30   eP        P        02 43 50.7 +0.4
      comp=Z,67nm,1.3s
EVR   Evrytania          84.68 323    P        P        02 43 48.1 -2.5
EVR   Evrytania          84.68 323    P        P        02 43 48.1 -2.5
LUPA  Lehigh Univers     84.70  34   eP        P        02 43 50.6 +0.1
      comp=Z,2.6nm,1.2s
VLY   Voula,Athens       84.70 321    P        P        02 43 49.8 -0.8
VLY   Voula,Athens       84.70 321    P        P        02 43 49.8 -0.8
BNI   Bardonecchia       84.73 336   eP        P        02 43 51.3 +0.5
      comp=Z,78nm,1.0s
BNI                                   LR       LR
      comp=Z,4µm,19.0s
541A  Lake Charles       84.74  52    P        P        02 43 49.1 -1.8
      baz=320
541A  Lake Charles       84.74  52    PFAKE             02 44 00.0 +9.1
541A                                  LR       LR
      comp=Z,3µm,18.0s
SGD   Sagiada            84.75 324    P        P        02 43 48.9 -1.9
BCX   Boston College     84.77  30   eP        P        02 43 51.0 +0.2
      comp=Z,31nm,1.2s
IGT   Igoumenitsa        84.78 324    P        P        02 43 48.7 -2.3
IGT   Igoumenitsa        84.78 324    P        P        02 43 48.7 -2.3
IGT   Igoumenitsa        84.78 324    P        P        02 43 48.7 -2.3
V51A  Loudon             84.78  42    P        P        02 43 48.9 -2.1
      baz=324
V51A  Loudon             84.78  42   eP        P        02 43 50.0 -1.1
      comp=Z,20nm,0.9s
V51A                                  LR       LR
      comp=Z,4µm,19.0s
DSF   Desfina            84.80 322    P        P        02 43 48.9 -2.2
DSF   Desfina            84.80 322    P        P        02 43 48.9 -2.2
DSL   Palaion Diasel     84.80 323    P        P        02 43 49.7 -1.4
DSL   Palaion Diasel     84.80 323    P        P        02 43 49.7 -1.4
BAI   Bari               84.81 327   eP        P        02 43 51.4 +0.4
W50A  Signal Mountai     84.81  43    P        P        02 43 48.6 -2.6
      baz=324
W50A  Signal Mountai     84.81  43   eP        P        02 43 48.0 -3.2
      comp=Z,17nm,0.9s
W50A                                  LR       LR
      comp=Z,4µm,20.0s
MVL   Millersville       84.82  35   eP        P        02 43 51.3 +0.2
      comp=Z,48nm,1.4s
MVL                                  epP       sP       02 44 01.3 -1.2
KEK   Kerkira            84.85 325    P        P        02 43 49.6 -1.7
KEK   Kerkira            84.85 325    P        P        02 43 49.6 -1.7
X49A  Woodville          84.86  45    P        P        02 43 49.8 -1.6
      baz=323,SNR=5.7
FASA  Fasano             84.88 327   eP        P        02 43 51.5 +0.1
ANX   Ano Chora          84.90 323    P        P        02 43 50.7 -1.0
PAL   Palisades          84.92  33    P        P        02 43 49.2 -2.4
      baz=330
Y48A  Jasper             84.92  45    P        P        02 43 49.4 -2.4
      baz=323
LTK   Loutraki           84.93 322    P        P        02 43 48.5 -3.2
LTK   Loutraki           84.93 322    P        P        02 43 48.5 -3.2
BRNJ  Basking Ridge      84.94  33   eP        P        02 43 51.9 +0.2
      comp=Z,31nm,1.0s
BRNJ                                  LR       LR
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	comp=Z,3µm,19.0s						
LOUT	**Loutraki**	**84.95**	**322**	P	**P**	**02 43 51.0**	**-0.8**
IOSP	**Ios island**	**84.96**	**319**	P	**P**	**02 43 49.5**	**-2.4**
146A	**Union**	**84.96**	**48**	P	**P**	**02 43 49.3**	**-2.6**
	baz=322						
146A	**Union**	**84.96**	**48**	PFAKE		02 44 00.0	+8.0
146A				LR	LR		
	comp=Z,3µm,21.0s						
CGL1	**Ceglie Messapi**	**84.97**	**327**	*e*P	**P**	**02 43 52.7**	**+0.8**
LNIG	**Linares**	**84.97**	**59**	*e*P	**P**	**02 43 51.0**	**-1.2**
	comp=Z,39nm,1.5s						
LNIG				LR	LR		
	comp=Z,2µm,19.0s						
CPCT	**Cooper Cave**	**84.99**	**43**	*e*P	**P**	**02 43 52.0**	**-0.1**
	comp=Z,23nm,1.1s						
CPCT				LR	LR		
	comp=Z,3µm,20.0s						
AQU	**L’Aquila**	**84.99**	**330**	PFAKE		02 44 00.0	+8.0
AQU				LR	LR		
	comp=Z,6µm,20.0s						
SERG	**Sergoula**	**85.00**	**322**	P	**P**	**02 43 51.1**	**-1.0**
245A	**Little AP, Sta**	**85.00**	**48**	P	**P**	**02 43 49.5**	**-2.6**
	baz=322						
BRYW	**Bryant College**	**85.00**	**31**	*e*P	**P**	**02 43 52.2**	**+0.1**
	comp=Z,36nm,1.1s						
344A	**Westbrook Farm**	**85.00**	**49**	P	**P**	**02 43 50.5**	**-1.7**
	baz=321						
YLE	**Yale**	**85.02**	**32**	PFAKE		02 44 00.0	+8.0
YLE				LR	LR		
	comp=Z,3µm,22.0s						
TRIZ	**Trizonia**	**85.03**	**322**	P	**P**	**02 43 51.0**	**-1.2**
Z47A	**Carrollton**	**85.03**	**46**	P	**P**	**02 43 49.9**	**-2.3**
	baz=323						
KARP	**Karpathos**	**85.04**	**317**	*e*P	**P**	**02 43 52.1**	**-0.3**
	comp=Z,275nm,1.4s						
KARP				LR	LR		
	comp=Z,3µm,19.0s						
KARP	**Karpathos**	**85.04**	**317**	P	**P**	**02 43 51.0**	**-1.4**
542A	**Morse**	**85.04**	**51**	P	**P**	**02 43 49.9**	**-2.5**
	baz=321						
EFP	**Efpalio**	**85.05**	**323**	P	**P**	**02 43 50.4**	**-1.9**
PVO	**Paravola**	**85.05**	**323**	P	**P**	**02 43 51.0**	**-1.3**
CPNY	**Central Park**	**85.08**	**33**	PFAKE		02 44 00.0	+7.6
CPNY				LR	LR		
	comp=Z,5µm,21.0s						
V52A	**Sevierville**	**85.11**	**42**	P	**P**	**02 43 51.3**	**-1.4**
	baz=325,SNR=5.9						
V52A	**Sevierville**	**85.11**	**42**	*e*P	**P**	**02 43 52.8**	**+0.1**
	comp=Z,37nm,1.1s						
V52A				LR	LR		
	comp=Z,3µm,20.0s						
MASS	**Massafra**	**85.11**	**327**	*e*P	**P**	**02 43 51.8**	**-0.8**
SG1	**Sgolgore (BA)**	**85.11**	**327**	*e*P	**P**	**02 43 52.2**	**-0.4**
Z48A	**Northport**	**85.15**	**46**	P	**P**	**02 43 50.5**	**-2.4**
	baz=323						
TAR1	**Taranto**	**85.15**	**327**	*e*P	**P**	**02 43 52.1**	**-0.7**
U53A	**Fall Branch**	**85.16**	**41**	P	**P**	**02 43 51.3**	**-1.7**
	baz=325,SNR=6.0						
SANT	**Santorini**	**85.17**	**319**	PFAKE		02 44 00.0	+7.0
SANT				LR	LR		
	comp=Z,4µm,18.0s						
LAKA	**Lakka**	**85.17**	**322**	P	**P**	**02 43 51.0**	**-2.0**
LAKA	**Lakka**	**85.17**	**322**	P	**P**	**02 43 51.0**	**-2.0**
TKL	**Tuckaleechee C**	**85.18**	**42**	P	**P**	**02 43 52.4**	**-0.7**
	comp=Z,13nm,1.0s,baz=313,slow=10,SNR=9.9						
TKL				LR	LR	03 21 01.5	
	comp=Z,3µm,21.6s,baz=339,slow=35						
TKL	**Tuckaleechee C**	**85.18**	**42**	*e*P	**P**	**02 43 53.1**	**+0.1**
	comp=Z,33nm,1.1s						
PDO	**Prodromos**	**85.21**	**323**	P	**P**	**02 43 52.0**	**-1.1**
DID	**Didima**	**85.24**	**321**	P	**P**	**02 43 50.2**	**-3.1**
DID	**Didima**	**85.24**	**321**	P	**P**	**02 43 50.2**	**-3.1**
X50B	**Fort Payne**	**85.24**	**44**	P	**P**	**02 43 51.1**	**-2.3**
	baz=324						
PSUB	**Penn St. - Bra**	**85.24**	**34**	*e*P	**P**	**02 43 53.6**	**+0.4**
	comp=Z,32nm,1.4s						
PSUB				*e*pP	**sP**	**02 44 04.1**	**-0.5**
PSUB				LR	LR		
	comp=Z,4µm,19.0s						
KLV	**Kalavryta, Ach**	**85.27**	**322**	P	**P**	**02 43 50.8**	**-2.7**
KLV	**Kalavryta, Ach**	**85.27**	**322**	P	**P**	**02 43 50.8**	**-2.7**
MATE	**Matera**	**85.27**	**327**	⇑*i*P	**P**	**02 43 52.8**	**-0.5**
GUR	**Goura**	**85.27**	**322**	P	**P**	**02 43 50.9**	**-2.7**
GUR	**Goura**	**85.27**	**322**	P	**P**	**02 43 50.9**	**-2.7**
LKD2	**Lefkada island**	**85.27**	**324**	P	**P**	**02 43 51.4**	**-2.1**
LKD2	**Lefkada island**	**85.27**	**324**	P	**P**	**02 43 51.4**	**-2.1**
147A	**Livingston**	**85.34**	**47**	P	**P**	**02 43 52.6**	**-1.2**
	baz=322,SNR=5.8						
147A	**Livingston**	**85.34**	**47**	*e*P	**P**	**02 43 54.0**	**+0.2**
	comp=Z,90nm,1.1s						
Y49A	**Blount Mountai**	**85.34**	**45**	P	**P**	**02 43 51.6**	**-2.3**
	baz=323						
Y49A	**Blount Mountai**	**85.34**	**45**	*e*P	**P**	**02 43 53.4**	**-0.5**
	comp=Z,19nm,1.1s						
Y49A				*e*pP	**sP**	**02 44 04.4**	**-0.9**
Y49A				LR	LR		
	comp=Z,3µm,21.0s						
246A	**Jackson Lee, B**	**85.42**	**48**	P	**P**	**02 43 52.6**	**-1.6**
	baz=322						
EVGI	**Lefkada island**	**85.42**	**323**	P	**P**	**02 43 53.2**	**-0.9**
BLA	**Blacksburg**	**85.44**	**39**	P	**P**	**02 43 52.5**	**-1.8**
	baz=326						
BLA	**Blacksburg**	**85.44**	**39**	*e*P	**P**	**02 43 54.5**	**+0.2**
BLA				LR	LR		
	comp=Z,3µm,19.0s						
BLA	**Blacksburg**	**85.44**	**39**	*e*P	**P**	**02 43 54.5**	**+0.2**
BLA				MLR	MLR		
	comp=Z,3µm,19.0s						
345A	**Thompson Farm,**	**85.49**	**49**	P	**P**	**02 43 53.6**	**-1.0**
	baz=322						
DRO	**Drossia**	**85.53**	**322**	P	**P**	**02 43 53.8**	**-1.0**
X51A	**Calhoun**	**85.54**	**44**	P	**P**	**02 43 52.4**	**-2.4**
	baz=324						
X51A	**Calhoun**	**85.54**	**44**	PFAKE		02 44 10.0	+15
X51A				LR	LR		
	comp=Z,3µm,21.0s						
RLS	**Riolos of Patr**	**85.55**	**323**	P	**P**	**02 43 53.3**	**-1.5**
RLS	**Riolos of Patr**	**85.55**	**323**	P	**P**	**02 43 53.3**	**-1.5**
W52A	**Murphy**	**85.56**	**43**	P	**P**	**02 43 53.1**	**-1.9**
	baz=325						
W52A	**Murphy**	**85.56**	**43**	*e*P	**P**	**02 43 55.0**	**0.0**
	comp=Z,24nm,1.4s						
W52A				LR	LR		
	comp=Z,4µm,19.0s						
444A	**Pine Grove**	**85.57**	**50**	P	**P**	**02 43 53.3**	**-1.7**
	baz=322						
FSK	**Fiskardo**	**85.59**	**323**	P	**P**	**02 43 52.8**	**-2.2**
V53A	**Saluda**	**85.62**	**42**	P	**P**	**02 43 53.9**	**-1.4**
	baz=325						
V53A	**Saluda**	**85.62**	**42**	*e*P	**P**	**02 43 55.4**	**+0.1**
	comp=Z,19nm,1.3s						
V53A				LR	LR		
	comp=Z,3µm,19.0s						
M65A	**Busby, Falmout**	**85.64**	**30**	P	**P**	**02 43 53.2**	**-1.9**
	baz=332						
Y50A	**Piedmont**	**85.65**	**45**	P	**P**	**02 43 53.6**	**-1.8**
	baz=324						
247A	**Quitman**	**85.66**	**48**	P	**P**	**02 43 54.0**	**-1.5**
	baz=322						
LRAL	**Lakeview Retre**	**85.70**	**46**	P	**P**	**02 43 54.0**	**-1.6**
	baz=323						
LRAL	**Lakeview Retre**	**85.70**	**46**	*e*P	**P**	**02 43 57.4**	**+1.7**
	comp=Z,8.3nm,1.0s						
LRAL				LR	LR		
	comp=Z,4µm,20.0s						
148A	**Greensboro**	**85.72**	**46**	P	**P**	**02 43 53.4**	**-2.3**
	baz=323						
VLX	**Vlachokerasia**	**85.73**	**322**	P	**P**	**02 43 53.8**	**-2.0**
VLX	**Vlachokerasia**	**85.73**	**322**	P	**P**	**02 43 53.8**	**-2.0**
346A	**Big Creek Wild**	**85.73**	**49**	P	**P**	**02 43 54.2**	**-1.6**
	baz=322						
346A	**Big Creek Wild**	**85.73**	**49**	PFAKE		02 44 10.0	+14
346A				LR	LR		
	comp=Z,2µm,20.0s						
445A	**Amite**	**85.78**	**50**	P	**P**	**02 43 54.5**	**-1.6**
	baz=322						
VTN	**Vitineika**	**85.78**	**323**	P	**P**	**02 43 57.0**	**+1.0**
KFL	**Anninata**	**85.79**	**323**	P	**P**	**02 43 55.0**	**-1.0**
Z49A	**Columbiana**	**85.81**	**45**	P	**P**	**02 43 54.3**	**-1.9**
	baz=323						
544A	**White Castle**	**85.82**	**50**	P	**P**	**02 43 54.4**	**-1.8**
	baz=321						
VLS	**Valsamata**	**85.82**	**323**	P	**P**	**02 43 54.8**	**-1.4**
VLS	**Valsamata**	**85.82**	**323**	P	**P**	**02 43 54.8**	**-1.4**
VLS	**Valsamata**	**85.82**	**323**	P	**P**	**02 43 54.8**	**-1.4**
ZKR	**Zakros**	**85.84**	**318**	P	**P**	**02 43 54.5**	**-1.8**
ZKR	**Zakros**	**85.84**	**318**	P	**P**	**02 43 54.5**	**-1.8**
CVRD	**Centerville Ro**	**85.86**	**37**	*e*P	**P**	**02 43 56.6**	**+0.2**
	comp=Z,34nm,1.0s						
CVRD				LR	LR		
	comp=Z,4µm,18.0s						
W53A	**Cullowhee**	**85.86**	**42**	P	**P**	**02 43 54.9**	**-1.7**
	baz=325,SNR=5.9						
AMT	**Artemida-Makis**	**85.88**	**322**	P	**P**	**02 43 55.0**	**-1.5**
CBN	**Corbin Frederi**	**85.92**	**36**	P	**P**	**02 43 54.5**	**-2.2**
	baz=328						
CBN	**Corbin Frederi**	**85.92**	**36**	PFAKE		02 44 10.0	+13
CBN				LR	LR		
	comp=Z,3µm,19.0s						
X52A	**Dahlonega**	**85.97**	**43**	P	**P**	**02 43 55.3**	**-1.7**
	baz=325						
Y51A	**Rockmart**	**85.98**	**44**	P	**P**	**02 43 55.5**	**-1.5**
	baz=324,SNR=5.6						
NPS	**Neapolis**	**86.00**	**318**	P	**P**	**02 43 55.7**	**-1.4**
NPS	**Neapolis**	**86.00**	**318**	P	**P**	**02 43 55.7**	**-1.4**
NPS	**Neapolis**	**86.00**	**318**	P	**P**	**02 43 55.7**	**-1.4**
MXZ	**Matakaoa Point**	**86.02**	**159**	PFAKE		02 44 10.0	+13
MXZ				LR	LR		
	comp=Z,5µm,20.0s						
VLI	**Veliai**	**86.03**	**321**	P	**P**	**02 43 53.5**	**-3.7**
VLI	**Veliai**	**86.03**	**321**	P	**P**	**02 43 53.5**	**-3.7**
Z50A	**Ashland**	**86.07**	**45**	P	**P**	**02 43 55.9**	**-1.6**
	baz=324,SNR=10						
Z50A	**Ashland**	**86.07**	**45**	*e*P	**P**	**02 43 57.2**	**-0.3**
	comp=Z,75nm,1.5s						
Z50A				LR	LR		
	comp=Z,3µm,21.0s						
ITM	**Ithomi**	**86.08**	**322**	*e*P	**P**	**02 43 56.7**	**-0.8**
	comp=Z,160nm,1.0s						
ITM	**Ithomi**	**86.08**	**322**	P	**P**	**02 43 55.1**	**-2.4**
HIZ	**Hauiti**	**86.11**	**162**	PFAKE		02 44 10.0	+13
HIZ				LR	LR		
	comp=Z,3µm,21.0s						
BG3	**Lake Jocassee**	**86.11**	**42**	*e*P	**P**	**02 43 58.1**	**+0.4**
	comp=Z,56nm,1.3s						
BG3				LR	LR		
	comp=Z,4µm,22.0s						
LAST	**Lasithi**	**86.15**	**318**	P	**P**	**02 43 57.4**	**-0.5**
LAST	**Lasithi**	**86.15**	**318**	P	**P**	**02 43 57.4**	**-0.5**
149A	**Jones**	**86.16**	**46**	P	**P**	**02 43 56.3**	**-1.6**
	baz=323						
CUC	**Castrocucco**	**86.18**	**327**	*e*P	**P**	**02 43 56.9**	**-1.0**
	comp=Z,50nm,1.1s						
CUC				LR	LR		
	comp=Z,7µm,20.0s						
347A	**Saraland**	**86.20**	**48**	P	**P**	**02 43 56.1**	**-2.0**
	baz=322						
545A	**Edgard**	**86.23**	**50**	PFAKE		02 44 10.0	+12
545A				LR	LR		
	comp=Z,6µm,19.0s						
446A	**Poplarville**	**86.25**	**49**	P	**P**	**02 43 57.0**	**-1.4**
	baz=322						
DYR	**Agios Nikonas**	**86.25**	**321**	P	**P**	**02 43 56.4**	**-2.0**
IDI	**Anoyia**	**86.32**	**319**	P	**P**	**02 43 57.6**	**-1.1**
	comp=Z,102nm,1.1s,baz=26,slow=8.6,SNR=29						
IDI				LR	LR	03 28 54.5	
	comp=Z,3µm,18.6s,baz=14,slow=40						
IDI	**Anoyia**	**86.32**	**319**	⇑*i*P	**P**	**02 43 57.1**	**-1.7**
IDI	**Anoyia**	**86.32**	**319**	*e*P	**P**	**02 43 57.8**	**-1.0**
	comp=Z,83nm,1.0s						
X53A	**Estanollee**	**86.34**	**43**	P	**P**	**02 43 57.8**	**-1.0**
	baz=325,SNR=5.5						
URVA	**University of**	**86.39**	**37**	*e*P	**P**	**02 43 57.9**	**-1.1**
PYL	**PYLOS**	**86.40**	**322**	P	**P**	**02 43 56.6**	**-2.5**
PYL	**PYLOS**	**86.40**	**322**	P	**P**	**02 43 56.6**	**-2.5**
249A	**Camden**	**86.48**	**47**	P	**P**	**02 43 58.3**	**-1.2**
	baz=323						
Y52A	**Lilburn**	**86.49**	**43**	P	**P**	**02 43 58.3**	**-1.3**
	baz=325						
Y52A	**Lilburn**	**86.49**	**43**	*e*P	**P**	**02 43 59.8**	**+0.2**
	comp=Z,20nm,1.1s						
Y52A				LR	LR		
	comp=Z,5µm,20.0s						
TIP	**Timpagrande**	**86.52**	**326**	*e*P	**P**	**02 43 59.3**	**-0.4**
	comp=Z,204nm,1.2s						
TIP				LR	LR		
	comp=Z,9µm,19.0s						
TIP	**Timpagrande**	**86.52**	**326**	P	**P**	**02 43 59.3**	**-0.4**
348A	**Jackson**	**86.53**	**47**	P	**P**	**02 43 58.4**	**-1.3**
	baz=323						
348A	**Jackson**	**86.53**	**47**	PFAKE		02 44 10.0	+10
348A				LR	LR		
	comp=Z,2µm,19.0s						
150A	**Eclectic**	**86.54**	**45**	P	**P**	**02 43 57.9**	**-1.9**
	baz=324						
VAM	**Vamos**	**86.54**	**319**	P	**P**	**02 43 58.6**	**-1.2**
VAM	**Vamos**	**86.54**	**319**	P	**P**	**02 43 58.6**	**-1.2**
VAM	**Vamos**	**86.54**	**319**	P	**P**	**02 43 58.6**	**-1.2**
ANKY	**Antikythira Is**	**86.57**	**320**	P	**P**	**02 43 59.0**	**-0.9**
ANKY	**Antikythira Is**	**86.57**	**320**	P	**P**	**02 43 59.0**	**-0.9**
SIVA	**Sivas**	**86.58**	**319**	P	**P**	**02 43 58.4**	**-1.5**
SIVA	**Sivas**	**86.58**	**319**	P	**P**	**02 43 58.4**	**-1.5**
IMMV	**Iera Moni Meta**	**86.60**	**320**	P	**P**	**02 43 59.6**	**-0.4**
447A	**Lucedale**	**86.62**	**48**	P	**P**	**02 43 58.9**	**-1.3**
	baz=322						
447A	**Lucedale**	**86.62**	**48**	PFAKE		02 44 10.0	+10
447A				LR	LR		
	comp=Z,2µm,20.0s						
NCAT	**North Carolina**	**86.67**	**39**	*e*P	**P**	**02 44 00.5**	**+0.1**
	comp=Z,29nm,1.3s						
NCAT				LR	LR		
	comp=Z,3µm,19.0s						
Y53A	**Monroe**	**86.73**	**43**	P	**P**	**02 43 59.5**	**-1.2**
	baz=325						
KMSC	**Kings Mountain**	**86.74**	**41**	P	**P**	**02 43 59.6**	**-1.1**
	baz=326						
KMSC	**Kings Mountain**	**86.74**	**41**	*e*P	**P**	**02 44 00.1**	**-0.6**
	comp=Z,44nm,1.4s						
KMSC				LR	LR		
	comp=Z,4µm,20.0s						
PAULI	**Pauline**	**86.78**	**41**	PFAKE		02 44 10.0	+9.1
PAULI				LR	LR		
	comp=Z,3µm,20.0s						
Z52A	**Williamson**	**86.87**	**44**	P	**P**	**02 44 00.0**	**-1.4**
	baz=324						
250A	**Grady**	**86.92**	**46**	P	**P**	**02 44 00.2**	**-1.5**
	baz=324						
250A	**Grady**	**86.92**	**46**	*e*P	**P**	**02 44 00.9**	**-0.7**
	comp=Z,85nm,1.3s						
250A				LR	LR		
	comp=Z,3µm,21.0s						
448A	**Bay Minette**	**86.93**	**48**	P	**P**	**02 43 59.7**	**-2.0**
	baz=323						
349A	**Repton**	**86.95**	**47**	P	**P**	**02 44 00.2**	**-1.6**
	baz=323						
646A	**Port Sulphur**	**86.95**	**50**	P	**P**	**02 44 00.0**	**-1.8**
	baz=322						
151A	**Opelika**	**86.95**	**45**	P	**P**	**02 43 59.9**	**-1.9**
	baz=324						
HODGE	**Hodges**	**87.06**	**42**	*e*P	**P**	**02 44 02.8**	**+0.5**
	comp=Z,31nm,1.3s						
HODGE				LR	LR		
	comp=Z,2µm,18.0s						
152A	**Waverly Hall**	**87.14**	**45**	P	**P**	**02 44 00.8**	**-1.9**
	baz=324						
152A	**Waverly Hall**	**87.14**	**45**	*e*P	**P**	**02 44 02.4**	**-0.3**
	comp=Z,17nm,1.1s						
152A				LR	LR		
	comp=Z,4µm,18.0s						
GOGA	**Godfrey**	**87.15**	**43**	P	**P**	**02 44 01.4**	**-1.4**
	baz=325						
GOGA	**Godfrey**	**87.15**	**43**	*e*P	**P**	**02 44 02.9**	**+0.1**
	comp=Z,27nm,1.4s						
GOGA				LR	LR		
	comp=Z,4µm,19.0s						
GOGA	**Godfrey**	**87.15**	**43**	*e*P	**P**	**02 44 02.9**	**+0.1**
GOGA				pmax	pmax		
	comp=Z,27nm,1.4s						
GOGA				MLR	MLR		
	comp=Z,4µm,19.0s						
Y54A	**Tignall**	**87.16**	**42**	P	**P**	**02 44 01.6**	**-1.2**
	baz=325,SNR=14						
BRAL	**Brewton**	**87.16**	**47**	P	**P**	**02 44 02.0**	**-0.9**
	baz=323						
BRAL	**Brewton**	**87.16**	**47**	PFAKE		02 44 10.0	+7.2
BRAL				LR	LR		
	comp=Z,2µm,19.0s						
350A	**Dozier**	**87.33**	**46**	P	**P**	**02 44 02.5**	**-1.2**
	baz=324						
449A	**Pace**	**87.40**	**47**	P	**P**	**02 44 03.0**	**-1.0**
	baz=323						
JSC	**Jenkinsville**	**87.48**	**41**	*e*P	**P**	**02 44 04.4**	**+0.1**
	comp=Z,27nm,1.3s						
JSC				*e*pP	**sP**	**02 44 15.6**	**-0.1**
JSC				LR	LR		
	comp=Z,3µm,20.0s						
JSC	**Jenkinsville**	**87.48**	**41**	*e*P	**P**	**02 44 04.4**	**+0.1**
JSC				*e**PP	**sP**	**02 44 15.6**	**-0.1**
JSC				pmax	pmax		
	comp=Z,27nm,1.3s						
JSC				MLR	MLR		
	comp=Z,3µm,20.0s						
153A	**Fort Valley**	**87.59**	**44**	P	**P**	**02 44 03.4**	**-1.5**
	baz=325						
Z54A	**Sparta**	**87.59**	**43**	P	**P**	**02 44 03.7**	**-1.2**
	baz=325						
CEL	**Celeste**	**87.65**	**327**	*e*P	**P**	**02 44 06.9**	**+1.7**
	comp=Z,62nm,1.1s						
CEL				LR	LR		
	comp=Z,5µm,20.0s						
252A	**Lumpkin**	**87.67**	**45**	P	**P**	**02 44 03.5**	**-1.8**
	baz=324						
450A	**Crestview**	**87.69**	**47**	P	**P**	**02 44 03.8**	**-1.6**
	baz=323						
MOIG	**Morelia**	**87.75**	**64**	PFAKE		02 44 20.0	+14
MOIG				LR	LR		
	comp=Z,2µm,21.0s						
351A	**Pinckard**	**87.82**	**46**	P	**P**	**02 44 04.1**	**-1.9**
	baz=324						
253A	**Americus**	**87.92**	**45**	P	**P**	**02 44 04.9**	**-1.6**
	baz=325						
253A	**Americus**	**87.92**	**45**	*e*P	**P**	**02 44 06.8**	**+0.3**
	comp=Z,72nm,1.2s						
253A				LR	LR		
	comp=Z,3µm,19.0s						
Z55A	**Blythe**	**87.94**	**42**	P	**P**	**02 44 04.5**	**-2.1**
	baz=326						
154A	**Montrose**	**87.97**	**43**	P	**P**	**02 44 05.1**	**-1.6**
	baz=325						
154A	**Montrose**	**87.97**	**43**	*e*P	**P**	**02 44 07.4**	**+0.7**
	comp=Z,96nm,1.1s						
154A				LR	LR		
	comp=Z,4µm,20.0s						
352A	**Blakely**	**88.00**	**45**	P	**P**	**02 44 04.9**	**-1.9**
	baz=324						
352A	**Blakely**	**88.00**	**45**	*e*P	**P**	**02 44 07.1**	**+0.3**
	comp=Z,67nm,1.3s						
352A				LR	LR		
	comp=Z,3µm,20.0s						
CNNC	**Cliffs of the**	**88.20**	**38**	P	**P**	**02 44 05.8**	**-2.0**
	baz=328						
CNNC	**Cliffs of the**	**88.20**	**38**	PFAKE		02 44 20.0	+12
CNNC				LR	LR		
	comp=Z,5µm,18.0s						
451A	**Vernon**	**88.28**	**46**	P	**P**	**02 44 06.6**	**-1.6**
	baz=324						
451A	**Vernon**	**88.28**	**46**	PFAKE		02 44 20.0	+12
451A				LR	LR		
	comp=Z,3µm,21.0s						
155A	**Kite**	**88.28**	**43**	P	**P**	**02 44 06.8**	**-1.4**
	baz=325						
452A	**Marianna**	**88.38**	**46**	P	**P**	**02 44 07.5**	**-1.2**
	baz=324						
254A	**Abbeville**	**88.43**	**44**	P	**P**	**02 44 07.4**	**-1.5**
	baz=325						
353A	**Camilla**	**88.46**	**45**	P	**P**	**02 44 08.0**	**-1.0**
	baz=325						
BFZ	**Birch Farm**	**88.49**	**161**	PFAKE		02 44 20.0	+11
BFZ				LR	LR		
	comp=Z,4µm,20.0s						
TIGA	**Tifton**	**88.69**	**44**	P	**P**	**02 44 08.7**	**-1.5**
	baz=325						
TIGA	**Tifton**	**88.69**	**44**	*e*P	**P**	**02 44 10.8**	**+0.6**
	comp=Z,45nm,1.1s						
TIGA				LR	LR		
	comp=Z,3µm,19.0s						
156A	**Sylvania**	**88.71**	**42**	P	**P**	**02 44 09.3**	**-0.9**
	baz=326						
SNZO	**South Karori**	**88.76**	**163**	PFAKE		02 44 20.0	+10
SNZO				LR	LR		
	comp=Z,4µm,20.0s						
453A	**Whigham**	**88.81**	**45**	P	**P**	**02 44 09.7**	**-1.0**
	baz=324						
453A	**Whigham**	**88.81**	**45**	PFAKE		02 44 20.0	+9.3
453A				LR	LR		
	comp=Z,3µm,21.0s						
THZ	**Tophouse**	**88.83**	**164**	*e*pP	**pP**	**02 44 22.3**	**+3.6**
THZ				LR	LR		
	comp=Z,5µm,20.0s						
255A	**Hazlehurst**	**88.84**	**43**	P	**P**	**02 44 10.2**	**-0.6**
	baz=325						
255A	**Hazlehurst**	**88.84**	**43**	PFAKE		02 44 20.0	+9.2
255A				LR	LR		
	comp=Z,3µm,19.0s						
552A	**Lynn Haven**	**88.89**	**46**	P	**P**	**02 44 10.2**	**-0.9**
	baz=324						
VAE	**Valguarnera**	**88.90**	**327**	LR	LR	03 28 29.8	
	comp=Z,4µm,18.1s,baz=274,slow=39						
NHSC	**New Hope**	**88.96**	**41**	PFAKE		02 44 20.0	+8.7
NHSC				LR	LR		
	comp=Z,4µm,20.0s						
256A	**Glennville**	**89.08**	**43**	P	**P**	**02 44 10.9**	**-1.1**
	baz=326						
355A	**Pearson**	**89.14**	**44**	P	**P**	**02 44 11.3**	**-0.9**
	baz=325						
454A	**Quitman**	**89.26**	**45**	P	**P**	**02 44 10.9**	**-1.9**
	baz=325						
CLTB	**Caltabellotta**	**89.27**	**328**	*e*P	**P**	**02 44 13.2**	**+0.4**
	comp=Z,41nm,1.4s						
CLTB				LR	LR		
	comp=Z,6µm,20.0s						
553A	**Crawfordville**	**89.29**	**46**	P	**P**	**02 44 12.1**	**-0.9**
	baz=324						
257A	**Skidaway Islan**	**89.50**	**42**	P	**P**	**02 44 11.8**	**-2.1**
	baz=326						
257A	**Skidaway Islan**	**89.50**	**42**	PFAKE		02 44 30.0	+16
257A				LR	LR		
	comp=Z,4µm,19.0s						
356A	**Blackshear**	**89.50**	**44**	P	**P**	**02 44 12.7**	**-1.2**
	baz=326						
455A	**Stateville**	**89.54**	**44**	P	**P**	**02 44 12.9**	**-1.2**
	baz=325						
KHZ	**Kahutara**	**89.58**	**164**	PFAKE		02 44 30.0	+16
KHZ				LR	LR		
	comp=Z,6µm,20.0s						
357A	**Townsend**	**89.73**	**43**	P	**P**	**02 44 14.1**	**-0.9**
	baz=326						
554A	**Perry**	**89.75**	**45**	P	**P**	**02 44 13.9**	**-1.2**
	baz=325						
FOZ	**Fox Glacier**	**90.00**	**167**	*e*P	**P**	**02 44 18.1**	**+2.5**
	comp=Z,97nm,1.5s						
FOZ				*e*pP	**sP**	**02 44 27.8**	**+0.8**
FOZ				LR	LR		
	comp=Z,5µm,20.0s						
456A	**Hilliard**	**90.05**	**44**	P	**P**	**02 44 15.9**	**-0.6**
	baz=326						
456A	**Hilliard**	**90.05**	**44**	PFAKE		02 44 30.0	+14
456A				LR	LR		
	comp=Z,4µm,19.0s						
555A	**McAlpin**	**90.08**	**45**	P	**P**	**02 44 16.3**	**-0.3**
	baz=325						
555A	**McAlpin**	**90.08**	**45**	PFAKE		02 44 30.0	+13
555A				LR	LR		
	comp=Z,3µm,21.0s						
OXZ	**Oxford**	**90.18**	**165**	*e*P	**P**	**02 44 18.0**	**+1.5**
	comp=Z,111nm,1.2s						
OXZ				LR	LR		
	comp=Z,4µm,20.0s						
WDD	**Wied Dalam**	**90.30**	**326**	*e*P	**P**	**02 44 17.1**	**-0.4**
	comp=Z,64nm,1.0s						
WDD				LR	LR		
	comp=Z,3µm,19.0s						
457A	**Yulee**	**90.36**	**44**	P	**P**	**02 44 16.0**	**-1.9**
	baz=326						
655A	**Horseshoe Beac**	**90.43**	**45**	P	**P**	**02 44 16.3**	**-2.0**
	baz=325						
556A	**Lake Butler**	**90.45**	**44**	P	**P**	**02 44 16.5**	**-1.9**
	baz=326						
MQZ	**McQueen’s Vall**	**90.66**	**165**	*e*P	**P**	**02 44 20.6**	**+1.9**
	comp=Z,31nm,1.3s						
MQZ				LR	LR		
	comp=Z,4µm,20.0s						
LVIG	**Laguna Verde**	**90.70**	**61**	PFAKE		02 44 30.0	+10
LVIG				LR	LR		
	comp=Z,1µm,19.0s						
557A	**Orange Park**	**90.77**	**44**	P	**P**	**02 44 17.8**	**-2.1**
	baz=326						
LBZ	**Lake Benmore**	**90.89**	**167**	*e*P	**P**	**02 44 21.5**	**+1.7**
	comp=Z,78nm,1.4s						
LBZ				LR	LR		

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           comp=Z,5µm,20.0s
656A  Willston          90.91  45  P       P        02 44 19.6  -0.9
           baz=325
656A  Willston          90.91  45  PFAKE            02 44 30.0  +9.5
656A                               LR      LR
           comp=Z,4µm,20.0s
TLIG  Tlapa             90.98  64  PFAKE            02 44 30.0  +8.8
TLIG                               LR      LR
           comp=Z,2µm,20.0s
PBRG  Braganca          91.06 344  eP      P        02 44 19.5  -1.6
           comp=Z,43nm,1.5s
657A  Interlachen       91.06  44  P       P        02 44 19.9  -1.3
           baz=326
WKZ   Wanaka            91.14 168  PFAKE            02 44 30.0  +9.0
WKZ                                LR      LR
           comp=Z,5µm,20.0s
PGAV  Gavieira, Arco    91.19 345  eP      P        02 44 20.3  -1.5
           comp=Z,58nm,1.4s
PGAV  Gavieira, Arco    91.19 345  eS      SKSac    02 54 53.7  +1.4
PGAV  Gavieira, Arco    91.19 345  eLR     LR       03 18 55.0
           comp=Z,3µm,18.0s
DAMY  Dhamar            91.32 292  eP      P        02 44 25.8  +2.8
           comp=Z,61nm,1.3s
DAMY                               LR      LR
           comp=Z,6µm,20.0s
757A  Oxford            91.49  45  P       P        02 44 20.9  -2.3
           baz=326
658A  Bunnell           91.49  44  P       P        02 44 21.6  -1.6
           baz=326
658A  Bunnell           91.49  44  PFAKE            02 44 30.0  +6.8
658A                               LR      LR
           comp=Z,3µm,19.0s
MLZ   Mavora Lakes      91.53 168  PFAKE            02 44 30.0  +7.2
MLZ                                LR      LR
           comp=Z,6µm,20.0s
ODZ   Otahua Downs      91.61 167  PFAKE            02 44 30.0  +6.9
ODZ                                LR      LR
           comp=Z,3µm,19.0s
POLO  Lamas de Olo      91.68 345  eP      P        02 44 23.0  -1.0
           comp=Z,33nm,1.1s
POLO  Lamas de Olo      91.68 345  eS      SKSac    02 54 59.4  +4.3
MVO   Moncorvo          91.73 344  eP      P        02 44 22.5  -1.8
           comp=Z,55nm,1.4s
MVO   Moncorvo          91.73 344  eS      SKSac    02 54 57.3  +2.0
MVO   Moncorvo          91.73 344  eLR     LR       03 20 33.5
           comp=Z,3µm,18.0s
758A  Lake Helen        91.90  44  P       P        02 44 23.9  -1.2
           baz=326
857A  Zephyrhills       91.96  45  P       P        02 44 23.7  -1.8
           baz=326
WHZ   Wether Hill Ro    92.03 169  PFAKE            02 44 40.0   +15
WHZ                                LR      LR
           comp=Z,5µm,20.0s
CMAH  Djebel Manchou    92.17 332  P       P        02 44 25.5  -0.9
CAEH  ’Ain El Ouahch    92.22 332  P       P        02 44 26.8  +0.3
KEST  Kesra             92.32 330  P       P        02 44 26.7  -0.4
           comp=Z,48nm,1.0s,baz=313,slow=1.0,SNR=27
KEST                               LR      LR       03 30 00.4
           comp=Z,6µm,20.2s,baz=328,slow=38
KEST  Kesra             92.32 330  eP      P        02 44 26.7  -0.4
           comp=Z,71nm,1.0s
KEST                               LR      LR
           comp=Z,6µm,20.0s
957A  Wimauma           92.45  46  P       P        02 44 26.4  -1.3
           baz=326
957A  Wimauma           92.45  46  PFAKE            02 44 40.0   +12
957A                               LR      LR
           comp=Z,3µm,21.0s
ABSA  Djebel Ababsia    92.47 332  P       P        02 44 26.1  -1.7
ES19  SONSECA Array     92.48 341  eP      P        02 44 26.8  -1.0
DWPF  Disney Wildern    92.49  45  PFAKE            02 44 40.0   +12
DWPF                               LR      LR
           comp=Z,3µm,19.0s
ESDC  Sonseca Array     92.52 341  P       P        02 44 26.5  -1.4
           comp=Z,19nm,1.2s,baz=8.5,slow=4.2,SNR=31
ESDC                               LR      LR       03 32 19.7
           comp=Z,2µm,18.4s,baz=20,slow=40
ESLA  Sonseca Array     92.52 341  eP      P        02 44 27.9  +0.1
           comp=Z,23nm,1.3s
ESLA                               LR      LR
           comp=Z,3µm,19.0s
MTE   Manteigas         92.57 344  eP      P        02 44 26.6  -1.5
           comp=Z,64nm,1.5s
MTE   Manteigas         92.57 344  eS      SKSac    02 55 01.7  +1.7
MTE   Manteigas         92.57 344  eLR     LR       03 23 16.0
           comp=Z,3µm,20.0s
MTE   Manteigas         92.57 344  PFAKE            02 44 40.0   +12
MTE                                LR      LR
           comp=Z,4µm,20.0s
CKFL  Kef-Lekhel        92.61 332  P       P        02 44 27.8  -0.7
THTN  Thala             92.70 330  eP      P        02 44 30.2  +1.3
           comp=Z,68nm,1.2s
THTN                               LR      LR
           comp=Z,5µm,18.0s
PAB   San Pablo         92.73 342  eP      P        02 44 28.9   0.0
           comp=Z,14nm,1.1s
PAB                                LR      LR
           comp=Z,2µm,19.0s
PAB   San Pablo         92.73 342  eP      P        02 44 28.9   0.0
PAB                                pmax    pmax
           comp=Z,14nm,1.1s
PAB                                MLR     MLR
           comp=Z,2µm,19.0s
859A  Kempfer Cattle    92.80  44  P       P        02 44 26.5  -2.8
           baz=326
COI   Coimbra           92.92 345  eP      P        02 44 29.3  -0.4
           comp=Z,51nm,1.0s
PCAS  Casmilo, Conde    93.09 345  eP      P        02 44 29.9  -0.6
           comp=Z,63nm,2.1s
PCAS  Casmilo, Conde    93.09 345  eS      S        02 55 29.6  -5.7
SET   Setif             93.22 333  P       P        02 44 35.0  +3.8
PMRV  Marv??o           93.48 344  eP      P        02 44 31.0  -1.3
           comp=Z,22nm,1.5s
PMRV  Marv??o           93.48 344  eS      SKSac    02 55 07.4  +2.4
PMRV  Marv??o           93.48 344  eLR     LR       03 23 51.4
           comp=Z,3µm,20.0s
059A  Moore Haven       93.58  45  PFAKE            02 44 40.0  +7.1
059A                               LR      LR
           comp=Z,3µm,20.0s
MYIG  MØrida            93.75  55  PFAKE            02 44 40.0  +6.2
MYIG                               LR      LR
           comp=Z,800nm,22.0s
CART  Cartagena         93.78 338  PFAKE            02 44 40.0  +6.4
CART                               LR      LR
           comp=Z,2µm,19.0s
060A  Indiantown        93.91  45  P       P        02 44 32.3  -2.1
           baz=326
060A  Indiantown        93.91  45  PFAKE            02 44 50.0   +16
060A                               LR      LR
           comp=Z,3µm,20.0s
ALMR  Almeirim          93.97 345  eP      P        02 44 34.7  +0.2
ALMR                               AMS     AMS      03 32 20.0
           comp=N,4µm,24.5s
ALMR  Almeirim          93.97 345  eP      P        02 44 34.3  -0.2
           comp=N,72nm,1.3s
ALMR  Almeirim          93.97 345  eP      P        02 44 34.7  +0.2
PMTG  Montargil         93.99 344  eP      P        02 44 34.3  -0.3
           comp=N,29nm,1.1s
PMTG  Montargil         93.99 344  eS      SKSac    02 55 10.2  +2.5
PESTR Estremoz          94.06 344  eP      P        02 44 33.6  -1.4
           comp=N,22nm,1.7s
PESTR Estremoz          94.06 344  eS      SKSac    02 55 14.4  +6.2
PESTR Estremoz          94.06 344  PFAKE            02 44 50.0   +15
PESTR                              LR      LR
           comp=Z,2µm,19.0s
PMAFR Mafra             94.30 345  eS      S        02 55 46.3  +0.4
060Z  West Palm Beac    94.33  45  P       P        02 44 35.7  -0.6
           baz=326
EVO   Evora             94.47 344  eP      P        02 44 35.3  -1.5
           comp=Z,25nm,1.5s
LIS   Lisbon            94.50 345  eP      P        02 44 37.1  +0.2
LIS                                AMS     AMS      03 32 38.8
           comp=N,5µm,18.2s
LIS   Lisbon            94.50 345  eP      P        02 44 37.1  +0.2
ATD   Arta Tunnel       94.57 291  P       P        02 44 39.4  +1.7
           comp=N,22nm,0.9s,baz=78,slow=10,SNR=4.0
ATD                                LR      LR       03 33 07.3
           comp=N,2µm,18.0s,baz=30,slow=39
ATD   Arta Tunnel       94.57 291  P       P        02 44 39.4  +1.7
ATD                                LR      LR
           comp=Z,3µm,18.0s
061Z  Ochoppi           94.60  46  PFAKE            02 44 50.0   +12
061Z                               LR      LR
           comp=Z,4µm,21.0s
PBAR  Barrancos         94.62 343  eP      P        02 44 36.1  -1.4
           comp=Z,55nm,1.4s
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PNCL  Nicolau / Gran    94.97 344  eP      P        02 44 39.1   0.0
PNCL  Nicolau / Gran    94.97 344  eS      SKSac    02 55 20.2  +7.2
MESJ  Messejana         95.18 344  eP      P        02 44 40.2  +0.1
MESJ                               eSKS    SKSac    02 55 15.8  +1.7
MESJ                                AMS    AMS      03 35 18.2
           comp=Z,4µm,16.1s
MESJ  Messejana         95.18 344  eP      P        02 44 38.9  -1.2
           comp=Z,32nm,3.0s
MESJ  Messejana         95.18 344  eP      P        02 44 40.1  +0.1
MESJ                               e                02 55 15.8
PCVE  Castro Verde      95.34 344  eP      P        02 44 41.3  +0.5
           comp=Z,45nm,1.5s
PCVE  Castro Verde      95.34 344  eS      S        02 55 57.2  +2.2
RKT   Rikitea           95.35 118  eS      S        02 55 58.0  +2.9
           comp=Z,1µm,26.8s
RKT   Rikitea           95.35 118  eLR     LR       03 15 22.6
           comp=Z,2µm,23.8s
PVAQ  Vaqueiros         95.50 343  eP      P        02 44 41.1  -0.4
PVAQ  Vaqueiros         95.50 343  eS      SKSac    02 55 21.3  +5.4
PVAQ  Vaqueiros         95.50 343  eLR     LR       03 21 10.4
           comp=Z,3µm,18.0s
PBDV  Barranco-do-Ve    95.70 344  eS      SKSac    02 55 24.6  +7.6
MORF  Marmelete         95.78 344  eP      P        02 44 42.9  -0.1
MORF                               eSKS    SKSac    02 55 19.1  +1.6
MORF                                AMS    AMS      03 35 48.0
           comp=Z,3µm,17.6s
MORF  Marmelete         95.78 344  eP      P        02 44 43.1  +0.2
           comp=Z,47nm,2.3s
MORF  Marmelete         95.78 344  eS      SKSac    02 55 21.9  +4.4
MORF  Marmelete         95.78 344  eP      P        02 44 42.8  -0.1
MORF                               e                02 55 19.0
CCIG  Comitan           95.94  60  PFAKE            02 45 00.0   +16
CCIG                               LR      LR
           comp=Z,2µm,22.0s
BBSR  BB Station        95.97  30  PFAKE            02 44 50.0  +6.3
BBSR                               LR      LR
           comp=Z,4µm,21.0s
PFVI  Vila Bisbo        95.98 344  PFAKE            02 44 50.0  +6.3
PFVI                               LR      LR
           comp=Z,4µm,18.0s
PGRA  Graciosa          95.99 360  eP      P        02 44 44.5  +0.7
           comp=Z,123nm,1.5s
SFS   San Fernando      96.09 342  PFAKE            02 45 00.0   +16
SFS                                LR      LR
           comp=Z,2µm,20.0s
ROSA  Rosais            96.30 360  eP      P        02 44 44.5  -0.7
           comp=Z,75nm,1.5s
ROSA  Rosais            96.30 360  PFAKE            02 45 00.0   +15
ROSA                               LR      LR
           comp=Z,3µm,18.0s
PSET  Sete Cidades      97.16 358  eP      Pdif     02 44 49.6  +0.4
           comp=Z,153nm,1.1s
BART  Pico Bartolome    97.19 357  eP      Pdif     02 44 49.6  +0.2
           comp=Z,31nm,0.9s
CMLA  Cha da Macela     97.21 358  eP      P        02 44 49.0  -0.3
           comp=Z,37nm,0.7s
CMLA  Cha da Macela     97.21 358  PFAKE            02 45 00.0   +11
CMLA                               LR      LR
           comp=Z,2µm,21.0s
MSEY  Mahe Island       97.50 271  PFAKE            02 45 00.0  +8.9
MSEY                               LR      LR
           comp=Z,2µm,18.0s
PSMN  Pico do Norte,    97.96 357  eP      P        02 44 52.2  -0.5
           comp=Z,42nm,0.9s
RTC   Rabat Centre      98.61 342  PFAKE            02 45 10.0   +14
RTC                                LR      LR
           comp=Z,9µm,19.0s
MDT   Midelt            99.22 340  LR      LR       03 35 27.5
           comp=Z,3µm,20.0s,baz=34,slow=39
FURI  Furi              99.25 293  PFAKE            02 45 10.0   +11
FURI                               LR      LR
           comp=Z,4µm,19.0s
TGUH  Tegucigalpa,Un   100.61  58  PFAKE            02 45 20.0   +15
TGUH                               LR      LR
           comp=Z,900nm,20.0s
PMOZ  Porto Moniz, M   101.51 350  eLR     LR       03 22 05.1
           comp=Z,1µm,20.0s
ESTN  Estel            101.89  57  PFAKE            02 45 20.0  +9.3
ESTN                               LR      LR
           comp=Z,600nm,21.0s
GTBY  Guantanamo Bay 102.46  44  PFAKE            02 45 20.0  +7.0
GTBY                               LR      LR
           comp=Z,3µm,18.0s
GRTK  Grand Turk       103.00  40  PFAKE            02 45 30.0   +15
GRTK                               LR      LR
           comp=Z,3µm,19.0s
TAM   Tamanrasset      105.42 328  PFAKE            02 49 50.0
TAM                                LR      LR
           comp=Z,2µm,19.0s
HDC   Heredia          105.68  58  PFAKE            02 49 50.0
HDC                                LR      LR
           comp=Z,1µm,21.0s
MPR   Mayaguez         107.67  38  PFAKE            02 50 00.0
MPR                                LR      LR
           comp=Z,1µm,18.0s
EMPR  Esperanza - Ma   107.70  38  PFAKE            02 50 00.0
EMPR                               LR      LR
           comp=Z,2µm,20.0s
CRPR  Cabo Rojo, PR    107.86  39  PFAKE            02 50 00.0
CRPR                               LR      LR
           comp=Z,4µm,20.0s
CBYP  Canovanas        108.17  37  PFAKE            02 50 00.0
CBYP                               LR      LR
           comp=Z,3µm,22.0s
SJG   San Juan         108.19  38  PFAKE            02 50 00.0
SJG                                LR      LR
           comp=Z,1µm,20.0s
HUMP  Col San Antoni   108.29  37  PFAKE            02 50 00.0
HUMP                               LR      LR
           comp=Z,2µm,20.0s
MTP   Monte Pirata     108.46  37  PFAKE            02 50 00.0
MTP                                LR      LR
           comp=Z,700nm,21.0s
BCIP  Isla Barro Col   108.85  55  PFAKE            02 50 00.0
BCIP                               LR      LR
           comp=Z,1µm,19.0s
SMRT  St. Maarten      109.53  35  PFAKE            02 50 00.0
SMRT                               LR      LR
           comp=Z,3µm,21.0s
SABA  Saba             109.84  35  PFAKE            02 50 00.0
SABA                               LR      LR
           comp=Z,3µm,21.0s
SEUS  St. Eustatius    110.07  35  PFAKE            02 50 00.0
SEUS                               LR      LR
           comp=Z,3µm,20.0s
ANWB  Willy Bob        110.38  34  PFAKE            02 50 00.0
ANWB                               LR      LR
           comp=Z,1µm,21.0s
MBAR  Mbarara          111.56 292  PFAKE            02 50 00.0
MBAR                               LR      LR
           comp=Z,4µm,19.0s
FDF   Fort de France   113.30  35  PFAKE            02 50 10.0
FDF                                LR      LR
           comp=Z,2µm,21.0s
SDV   Santo Domingo    114.09  47  PFAKE            02 50 10.0   +13
SDV                                LR      LR
           comp=Z,2µm,21.0s
SVB   Belmont          114.57  35  PFAKE            02 50 10.0   +13
SVB                                LR      LR
           comp=Z,2µm,21.0s
RUSC  La Rusia         115.32  51  PFAKE            02 50 10.0   +11
RUSC                               LR      LR
           comp=Z,600nm,21.0s
GRGR  Grenville        115.44  36  PFAKE            02 50 10.0   +11
GRGR                               LR      LR
           comp=Z,1µm,20.0s
CASY  Casey            115.66 197  PFAKE            02 50 10.0   +12
CASY                               LR      LR
           comp=Z,800nm,21.0s
KOWA  Kowa             116.42 333  PFAKE            02 50 10.0  +9.3
KOWA                               LR      LR
           comp=Z,2µm,19.0s
VNDA  Vanda            122.77 177  PKP     PKPdf    02 50 09.5  -1.5
           comp=Z,1.7nm,0.9s,baz=300,slow=3.3,SNR=7.8
SBA   Scott Base       123.30 176  PFAKE            02 50 20.0  +8.0
SBA                                LR      LR
           comp=Z,1µm,21.0s
LSZ   Lusaka           123.98 283  PFAKE            02 50 30.0   +15
LSZ                                LR      LR
           comp=Z,2µm,19.0s
DBIC  Dimbokro         124.02 331  PKP     PKPdf    02 50 14.3  -1.0
           comp=Z,8.6nm,0.9s,baz=24,slow=6.9,SNR=4.0
DBIC  Dimbokro         124.02 331  PKIKP   PKPdf    02 50 14.3  -1.0
DBIC                               pmax    pmax
           comp=Z,11nm,1.1s
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NNA   Nana             127.25  67  PFAKE            02 50 30.0  +8.5
NNA                                LR      LR
           comp=Z,1µm,20.0s
PTGA  Pitinga          127.63  41  PFAKE            02 50 30.0  +7.7
PTGA                               LR      LR
           comp=Z,1µm,20.0s
SAML  Samuel           133.06  50  ePKPdf  PKPdf    02 50 31.5  -1.0
SAML                               LR      LR
           comp=Z,2µm,20.0s
SAML  Samuel           133.06  50  ePKIKP  PKPdf    02 50 31.5  -1.0
SAML                               MLR     MLR
           comp=Z,2µm,20.0s
TSUM  Tsumeb           133.92 289  PFAKE            02 50 50.0   +16
TSUM                               LR      LR
           comp=Z,4µm,20.0s
BOSA  Boshof           134.75 273  PKP     PKPdf    02 50 33.3  -2.1
           comp=Z,5.1nm,0.9s,baz=156,slow=2.8,SNR=3.1
QSPA  South Pole Qui   135.09 180  PKP     PKPdf    02 50 32.8  -1.9
           comp=Z,6.4nm,1.0s,baz=304,slow=3.6,SNR=8.0
QSPA  South Pole Qui   135.09 180  ePKPdf  PKPdf    02 50 32.8  -1.9
QSPA                               ePKPdf  PKiKP    02 50 33.3  -3.0
QSPA                               LR      LR
           comp=Z,1µm,21.0s
LPAZ  La Paz           136.01  62  PKP     PKPdf    02 50 38.8  +0.1
           comp=Z,2.4nm,0.9s,baz=37,slow=10,SNR=9.4
MNMC  Minye Minye      137.20  66  PFAKE            02 50 50.0   +10
MNMC                               LR      LR
           comp=Z,1µm,20.0s
PB01  IPOC Station P   138.65  68  PFAKE            02 50 50.0  +7.2
PB01                               LR      LR
           comp=Z,1µm,20.0s
PB04  IPOC Station P   139.12  70  PFAKE            02 51 00.0   +16
PB04                               LR      LR
           comp=Z,2µm,19.0s
RCBR  Riachuelo        140.11  11  PFAKE            02 51 00.0   +14
RCBR                               LR      LR
           comp=Z,13µm,19.0s
GO02  Mina Guanaco     141.42  73  PFAKE            02 51 00.0   +12
GO02                               LR      LR
           comp=Z,2µm,21.0s
LCO   Las Campanas     143.13  78  PFAKE            02 51 00.0  +9.1
LCO                                LR      LR
           comp=Z,2µm,19.0s
AROD  Rodeo            144.68  79  eP      PKPbc    02 50 52.9  +0.4
ACDV  Cuesta del Vie   144.92  79  eP      PKPab    02 50 52.5  -0.6
AGUA  GUANDACOL        144.94  77  eP      PKPdf    02 50 53.7  -0.1
PEL   Peldehue         145.54  84  PFAKE            02 51 10.0   +15
PEL                                LR      LR
           comp=Z,2µm,22.0s
GO05  HualaæØ          145.65  88  PFAKE            02 51 10.0   +15
GO05                               LR      LR
           comp=Z,2µm,20.0s
RTLS  Leoncito         145.76  81  eP      PKPdf    02 50 54.8  -0.6
AMOG  MOGNA            145.81  79  eP      PKPdf    02 50 53.7  -1.5
RTLL  Cerro Villicun   146.06  80  eP      PKPab    02 51 01.2  +4.1
CYA   Choya            146.12  73⇓eP      PKPdf    02 50 55.8   0.0
AVFE  Valle Fertil     146.36  78⇑eP      PKPdf    02 50 55.8  -0.4
ASAL  Salagasta        146.53  82  eP      PKPdf    02 50 56.6  +0.2
NVL   N’lazarevskaya   147.89 204⇑iPKP2   PKPbc    02 51 01.0  +0.6
NVL                                eSS     SS       03 13 31.8  +0.1
MRA   San Martin       148.60  79  eP      PKPdf    02 50 59.8  -0.1
PLCA  Paso Flores      149.21  96  PKPbc   PKPbc    02 51 03.7  -1.1
           comp=Z,14nm,1.0s,baz=293,slow=3.5,SNR=15
CPUP  Villa Florida    150.16  60  PKPbc   PKPbc    02 51 06.5  -1.0
           comp=Z,14nm,1.1s,baz=321,slow=2.0,SNR=10
CPUP  Villa Florida    150.16  60  ePKPdf  PKPdf    02 51 02.9  +0.5
SNAA  Sanae            150.89 196  PKP     PKPdf    02 51 02.0  -0.2
SNAA                               x       x        02 51 07.5
SNAA  Sanae            150.89 196  PKPbc   PKPbc    02 51 06.5  -1.4
           comp=Z,25nm,1.1s,baz=108,slow=1.6,SNR=36
SNAA  Sanae            150.89 196  ePKPdf  PKPdf    02 51 01.6  -0.7
SNAA                               LR      LR
           comp=Z,1µm,20.0s
SNAA  Sanae            150.89 196  ePKIKP  PKPdf    02 51 01.6  -0.7
SNAA                               MLR     MLR
           comp=Z,1µm,20.0s
PMSA  Palmer Station   152.46 147  PKPbc   PKPbc    02 51 10.7  -0.9
           comp=Z,24nm,1.1s,baz=209,slow=3.8,SNR=6.1
PMSA  Palmer Station   152.46 147  ePKPbc  PKPbc    02 51 11.0  -0.5
VNA3  Neumayer Olymp 152.48 193  PKP     PKPdf    02 51 04.8  +0.2
VNA3                               x       x        02 51 10.9
VNA1  Neumayer--Stat   152.75 195  PKP     PKPdf    02 51 05.2  +0.3
VNA1                               x       x        02 51 11.5
SPB   Sao Paulo        153.41  42  PFAKE            02 51 20.0  +5.0
SPB                                LR      LR
           comp=Z,2µm,22.0s
EFI   East Falkland    159.54 119  PFAKE            02 51 30.0   +16
EFI                                LR      LR
           comp=Z,6µm,20.0s
```

ISCJB ***11*** *02:43:52.1±0.6, 36°.69N±0°.03×140°.71E±0°.06, h16^{km}±4^{km}, mb3.8/12, Error ellipse: s-maj=8.3km s-min=4.3km az=17.7*

JMA ***11*** *02:43:52.9, 36°.72N×140°.64E, h6^{km}, M3.5*

JMA Felt III J1.

IDC ***11*** *02:43:58.1±2.9, 36°.72N×140°.45E, h49^{km}±28^{km}, mb3.6/12, mb1 3.8/13, mb1mx3.5/71, mbtmp3.8/13, Error ellipse: s-maj=23.5km s-min=17.0km az=92.0*

ISC 11 02:43:52.9±0.9**, 36°.72N**±0°.03×**140°.56E**±0°.04**, h9**^{km}±6^{km}**, n30,** σ**0^{s}.57**/32**, mb3.9**/12**, 6C-1D, Near east coast of eastern Honshu**

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Code  Station Name        Δ°   AZ°    Phase ID             Time       Res
                                      Op      ISC        h  m  s     ISC
JHO   Hitachi             0.11 174 ⇑P       Pg        02 43 55.5   -0.1
JHO                                 S       Sg        02 43 57.3   -0.2
JFFD  Fukushimafurud      0.37   1  P       Pg        02 44 00.4   +0.2
JFFD                                S       Sg        02 44 05.7   +0.7
JHYU  Hitachinakayam      0.38 176  P       Pg        02 44 00.4    0.0
JHYU                                S       Sg        02 44 05.8   +0.4
ONAJ  Iwakimizuishiy      0.43  27 ⇑P       Pg        02 44 01.0   -0.2
ONAJ                                S       Sg        02 44 06.7   -0.2
JSB   Shiboa              0.57 296 ⇑P       Pb        02 44 05.6   +0.7
JYT   Yasato              0.57 211 ⇑P       Pg        02 44 04.4   +0.4
JFK   Kawauchi            0.69  22 ⇑P       Pg        02 44 05.8   -0.5
JFK                                 S       Sg        02 44 14.9   -0.4
JFT   Otama               0.81 348 ⇓P       Pb        02 44 09.0   -0.2
JFT                                 S       Sb        02 44 20.2    0.0
JAG   Ashikaga            0.94 252 ⇑P       Pg        02 44 11.0   +0.2
MJAR  Matsushiro Arr      1.90 265  P       Pb        02 44 26.7   -0.9
           21nm,0.3s,baz=83,slow=9.0,SNR=102
MJAR                                S       Sg        02 44 53.3   -0.5
           18nm,0.3s,baz=80,slow=28,SNR=11
MAT   Matsushiro          1.90 265  P       Pb        02 44 27.0   -0.6
MAT                                 S       Sg        02 44 53.3   -0.5
USRK  Ussuriysk Ar.       9.91 322  P       Pn        02 46 16.7   +1.3
           baz=123,slow=16
SEY   Seymchan           27.23  12  P       P         02 49 37.0   +0.2
           0.6nm,0.3s,baz=199,slow=11,SNR=4.0
SONM  Songino Array      27.39 305  P       P         02 49 37.7   -0.9
           1.6nm,0.9s,baz=97,slow=6.2,SNR=4.1
H11N2 WAKE ISLAND Hy 28.59 119  T       T         03 19 32.9
           baz=313,slow=75,SNR=138
H11N1 WAKE ISLAND Hy 28.60 119  T       T         03 19 33.4
           baz=313,slow=75,SNR=204
H11N3 WAKE ISLAND Hy 28.61 119  T       T         03 19 34.2
           baz=313,slow=75,SNR=153
H11S1 WAKE ISLAND Hy 29.28 121  T       T         03 20 25.7
           baz=315,slow=75,SNR=403
H11S3 WAKE ISLAND Hy 29.28 121  T       T         03 20 25.4
           baz=315,slow=75,SNR=413
H11S2 WAKE ISLAND Hy 29.29 121  T       T         03 20 26.6
           baz=315,slow=75,SNR=354
ZALV  Zalesovo Beam      41.62 313  P       P         02 51 40.3   -0.7
           1.4nm,0.5s,baz=106,slow=7.7,SNR=1.9
MKAR  Makanchi Array     43.70 302  P       P         02 51 57.0   -1.1
           0.5nm,0.8s,baz=92,slow=8.7,SNR=2.9
KURBB Kurchatov Arra     45.65 308  P       P         02 52 13.2   -0.2
           2.3nm,0.7s,baz=84,slow=8.0,SNR=18
ILAR  Eielson Array      50.12  32  P       P         02 52 48.8   +0.8
           0.8nm,0.8s,baz=269,slow=6.4,SNR=7.4
BVAR  Borovoye Array     50.27 312  P       P         02 52 49.3    0.0
           0.8nm,0.5s,baz=76,slow=8.0,SNR=4.6
WRA   Warramunga Arr     56.66 187  P       P         02 53 35.9   -0.5
           1.6nm,0.6s,baz=4.6,slow=7.4,SNR=21
ASAR  Alice Springs      60.39 187  P       P         02 54 02.5   +0.1
           1.3nm,0.8s,baz=9.9,slow=6.5,SNR=11
NVAR  Mina Array Bea     75.72  53  P       P         02 55 38.7   -0.4
           0.5nm,0.7s,baz=287,slow=5.6,SNR=3.7
PDAR  Pinedale Array     78.37  45  P       P         02 55 53.7   -0.2
           0.2nm,0.5s,baz=284,slow=3.6,SNR=3.0
TXAR  Lajitas Array      90.86  52  P       P         02 56 57.5   +0.4
           0.5nm,0.7s,baz=325,slow=4.6,SNR=2.9
```

ISCJB **11** *02:47:17.2±1.7, 44°.8N±0°.2×152°.0E±0°.1, h37^{km}, Error ellipse: s-maj=26.2km s-min=8.7km az=154.8*
SKHL **11** *02:47:17.0±1.0, 44°.73N×152°.13E, h37^{km}±7^{km}, mb4.5/4*
MOS **11** *02:47:17.0±0.9, 44°.70N×152°.10E, h37^{km}, mb4.2/1, Error ellipse: s-maj=99.9km s-min=25.6km az=173.8*
ISC 11 02:47:18.9±3.4**, 44°.7N**±0°.3×**152°.1E**±0°.2**, h37**^{km}**, n11, σ1^{s}44**/17**, 1C, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.02**	**282**	*i* P	**Pn**	**02 48 03.0**	**-1.1**
KUR				AMB	AMB	02 48 05.0	
	33nm,0.3s						
KUR				AMB	AMB	02 48 05.0	
	80nm,0.3s						
KUR				AMB	AMB	02 48 05.0	
	22nm,0.3s						
KUR				*i* S	**Sn**	**02 48 38.3**	**-0.7**
KUR				A	A	02 48 48.0	
	178nm,0.4s						
KUR				A	A	02 48 48.0	
	270nm,0.4s						
KUR	**Kuril'sk**	**3.02**	**282**	⇑*i*PN	**Pn**	**02 48 05.3**	**+1.2**
KUR				pmax	pmax		
	comp=Z,80nm,0.4s						
KUR				pmax	pmax		
	comp=E,21nm,0.3s						
KUR				pmax	pmax		
	comp=N,33nm,0.1s						
SHO	**Shikotan**	**3.84**	**259**	*i* P	**Pn**	**02 48 14.0**	**-1.4**
SHO				AMB	AMB	02 48 29.0	
	comp=N,7.0nm,0.2s						
SHO				AMB	AMB	02 48 29.0	
	comp=N,32nm,0.2s						
SHO				AMB	AMB	02 48 29.0	
	comp=N,9.0nm,0.2s						
SHO				*i* S	**Sn**	**02 48 57.0**	**-2.3**
SHO				A	A	02 49 10.0	
	comp=N,120nm,0.4s						
SHO				A	A	02 49 10.0	
	comp=N,39nm,0.4s						
SHO	**Shikotan**	**3.84**	**259**	*i* PN	**Pn**	**02 48 14.9**	**-0.5**
SHO				pmax	pmax		
	comp=Z,9.0nm,0.2s						
SHO				pmax	pmax		
	comp=E,32nm,0.4s						
SHO				pmax	pmax		
	comp=N,7.0nm,0.2s						
LAGR	**Lagunnoye**	**4.54**	**264**	*i* P	**Pn**	**02 48 26.0**	**+1.0**
LAGR				AMB	AMB	02 48 29.0	
	comp=N,256nm,0.5s						
LAGR				*i* S	**Sn**	**02 49 18.0**	**+1.5**
LAGR				A	A	02 49 35.0	
	comp=N,382nm,0.5s						
LAGR				A	A	02 49 35.0	
	comp=N,224nm,0.5s						
LAGR	**Lagunnoye**	**4.54**	**264**	*i* PN	**Pn**	**02 48 26.9**	**+1.9**
LAGR				*i* S	**Sn**	**02 49 18.7**	**+2.2**
LAGR				pmax	pmax		
	comp=Z,256nm,0.3s						
LAGR				smax	smax		
	comp=N,382nm,0.5s						
LAGR				smax	smax		
	comp=E,224nm,0.5s						
GRPR	**Tuman**	**4.56**	**263**	*i* P	**Pn**	**02 48 25.0**	**-0.3**
GRPR				*i* S	**Sn**	**02 49 15.0**	**-2.0**
GRPR				A	A	02 49 30.0	
	comp=E,145nm,0.3s						
GRPR				A	A	02 49 30.0	
	comp=E,62nm,0.3s						
GRPR	**Tuman**	**4.56**	**263**	*i* PN	**Pn**	**02 48 25.6**	**+0.3**
GLVR	**Golovnino**	**4.80**	**261**	*i* P	**Pn**	**02 48 29.0**	**+0.5**
GLVR				AMB	AMB	02 48 37.0	
	comp=E,71nm,0.5s						
GLVR				*i* S	**Sn**	**02 49 23.0**	**+0.3**
GLVR				A	A	02 49 36.0	
	comp=E,72nm,0.4s						
GLVR				A	A	02 49 36.0	
	comp=E,150nm,0.4s						
GLVR	**Golovnino**	**4.80**	**261**	*i* PN	**Pn**	**02 48 29.8**	**+1.3**
GLVR				pmax	pmax		
	comp=Z,71nm,0.5s						
SKR	**Severo-Kuril's**	**6.59**	**23**	*e*P	**Pn**	**02 48 52.6**	**-0.4**

IDC **11** *02:49:55.4±0.5, 45°.36N×151°.52E, h0^{km}, mb4.8/39, mb1 4.9/44, mb1mx4.8/76, mbtmp4.8/44, ML5.6/1, MS4.3/3, Ms1 4.3/3, ms1mx3.9/82, Error ellipse: s-maj=13.3km s-min=10.3km az=149.0*
JMA **11** *02:49:56.9±0.8, 45°.39N×151°.84E, h30^{km}, M5.1*
ISCJB **11** *02:49:57.0±0.8, 45°.32N±0°.03×151°.61E±0°.02, h21^{km}±5^{km}, mb5.0/280, Error ellipse: s-maj=4.7km s-min=2.2km az=165.1*
GCMT **11** *02:49:57.5±0.6, 45°.34N×151°.82E, h30^{km}±1^{km}, MW5.0/58, Moment Tensor Solution. s16,c17; s58,c84; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.80±.38; M$_{\theta\theta}$-1.35±.22; M$_{\phi\phi}$-2.45±.23; M$_{r\theta}$0.85±.27; M$_{\theta\phi}$-1.69±.10; M$_{\phi r}$0.59±.25; Best double couple: M$_0$3.87700×10^{16} NP1:φ$_s$41.00000°, δ52.00000°, λ96.00000°. NP2: φ$_s$211.00000°, δ38.00000°, λ82.00000°. Principal axes: T 3.9520, Plg81.0000°, Azm339.0000°; N -0.1500, Plg5.0000°, Azm217.0000°; P -3.8020, Plg7.0000°, Azm127.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
NEIC **11** *02:49:57.5±0.2, 45°.38N×151°.44E, h10^{km}, mb5.1/192 Error ellipse: s-maj=5.3km s-min=2.8km az=166.0*
SKHL **11** *02:49:58.9±0.7, 45°.17N×151°.78E, h44^{km}±7^{km}, mb5.8/2, Ms5.0/4, msh5.3/2*
MOS **11** *02:49:59.9±1.0, 45°.39N×151°.51E, h38^{km}, mb5.3/85, Error ellipse: s-maj=5.7km s-min=4.0km az=106.4*
BJI **11** *02:50:00.5, 45°.43N×151°.50E, h46^{km}, mb5.2/57, mB5.6/15, Ms5.2/24, Ms7 5.0/23*
ISC 11 02:50:01.3±0.5**, 45°.27N**±0°.05×**151°.62E**±0°.04**, h42**^{km}±3^{km}**, h42**^{km}**:pP-P, n995, σ1^{s}41**/1049**, mb5.1**/301**, 66C-15D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.65**	**270**	*e*P	**Pn**	**02 50 40.8**	**-0.7**
KUR				AMB	AMB	02 50 48.7	
	267nm,0.6s						
KUR				AMB	AMB	02 50 48.7	
	41nm,0.6s						
KUR				AMB	AMB	02 50 48.7	
	880nm,0.6s						
KUR				*i* S	**Sn**	**02 51 11.6**	**-0.9**
KUR				A	A	02 51 20.0	
	3µm,0.6s						
KUR				A	A	02 51 20.0	
	2µm,0.6s						
KUR				AMS	AMS	02 52 55.0	
	15µm,11.0s						
KUR				AMS	AMS	02 52 55.0	
	20µm,11.0s						
KUR				AMS	AMS	02 52 55.0	
	9µm,11.0s						
KUR	**Kuril'sk**	**2.65**	**270**	*c i*PN	**Pn**	**02 50 41.0**	**-0.5**
KUR				*i* S	**Sn**	**02 51 18.4**	**+5.9**
KUR				pmax	pmax		
	comp=Z,543nm,0.7s						
KUR				pmax	pmax		
	comp=N,75nm,0.2s						
KUR				pmax	pmax		
	comp=E,218nm,0.8s						
KUR				smax	smax		
	comp=E,6µm,2.2s						
KUR				smax	smax		
	comp=N,10µm,1.7s						
KUR				smax	smax		
	comp=N,2µm,0.6s						
KUR				smax	smax		
	comp=E,751nm,0.6s						
SHO	**Shikotan**	**3.70**	**249**	*i* P	**Pn**	**02 50 54.6**	**-1.3**
SHO				AMB	AMB	02 51 02.3	
	comp=E,241nm,0.5s						
SHO				AMB	AMB	02 51 02.3	
	comp=E,75nm,0.5s						
SHO				AMB	AMB	02 51 02.3	
	comp=E,270nm,0.5s						
SHO				*e*S	**Sn**	**02 51 36.7**	**-1.6**
SHO				A	A	02 51 39.6	
	comp=E,1µm,0.8s						
SHO				A	A	02 51 39.6	
	comp=E,2µm,0.8s						
SHO				AMS	AMS	02 52 50.0	
	comp=E,12µm,12.0s						
SHO				AMS	AMS	02 52 50.0	
	comp=E,12µm,12.0s						
SHO				AMS	AMS	02 52 50.0	
	comp=E,10µm,12.0s						
SHO	**Shikotan**	**3.70**	**249**	*i* PN	**Pn**	**02 50 54.6**	**-1.3**
SHO				*e*S	**Sn**	**02 51 36.7**	**-1.6**
SHO				pmax	pmax		
	comp=Z,50nm,0.3s						
SHO				pmax	pmax		
	comp=N,241nm,0.5s						
SHO				pmax	pmax		
	comp=E,75nm,0.4s						
SHO				smax	smax		
	comp=N,430nm,0.5s						
SHO				smax	smax		
	comp=E,503nm,0.6s						
YUK	**Yuzh-Kuril'sk**	**4.29**	**255**	*i* P	**Pn**	**02 51 03.2**	**-0.9**
YUK				AMB	AMB	02 51 19.5	
	comp=E,684nm,0.5s						
YUK				AMB	AMB	02 51 19.5	
	comp=E,434nm,0.5s						
YUK				AMB	AMB	02 51 19.5	
	comp=E,370nm,0.5s						
YUK				*i* S	**Sn**	**02 51 51.7**	**-1.2**
YUK				A	A	02 52 28.3	
	comp=E,2µm,0.9s						
YUK				A	A	02 52 28.3	
	comp=E,1µm,0.9s						
YUK				AMS	AMS	02 52 47.0	
	comp=E,6µm,10.0s						
YUK				AMS	AMS	02 52 47.0	
	comp=E,12µm,10.0s						
YUK				AMS	AMS	02 52 47.0	
	comp=E,7µm,10.0s						
YUK	**Yuzh-Kuril'sk**	**4.29**	**255**	*i* PN	**Pn**	**02 51 02.6**	**-1.5**
YUK				*i* S	**Sn**	**02 51 53.9**	**+1.0**
YUK				pmax	pmax		
	comp=E,434nm,0.6s						
YUK				pmax	pmax		
	comp=Z,370nm,0.6s						
YUK				pmax	pmax		
	comp=N,684nm,0.5s						
YUK				smax	smax		
	comp=E,1µm,0.8s						
YUK				smax	smax		
	comp=N,2µm,0.9s						
LAGR	**Lagunnoye**	**4.34**	**256**	*i* P	**Pn**	**02 51 05.7**	**+1.0**
LAGR				AMB	AMB	02 51 25.0	
	comp=N,240nm,0.5s						
LAGR				AMB	AMB	02 51 25.0	
	comp=N,1µm,0.5s						
LAGR				AMB	AMB	02 51 25.0	
	comp=N,811nm,0.5s						
LAGR				*e*S	**Sn**	**02 51 59.7**	**+5.7**
LAGR				A	A	02 52 26.9	
	comp=N,702nm,0.9s						
LAGR				A	A	02 52 26.9	
	comp=N,6µm,0.9s						
LAGR	**Lagunnoye**	**4.34**	**256**	*i* PN	**Pn**	**02 51 05.7**	**+1.0**
LAGR				*e*S	**Sn**	**02 51 59.7**	**+5.7**
LAGR				pmax	pmax		
	comp=Z,811nm,0.6s						
LAGR				pmax	pmax		
	comp=E,1µm,0.7s						
LAGR				pmax	pmax		
	comp=N,240nm,0.5s						
LAGR				smax	smax		
	comp=N,702nm,0.9s						
LAGR				smax	smax		
	comp=E,6µm,0.9s						
GRPR	**Tuman**	**4.37**	**255**	*i* P	**Pn**	**02 51 04.3**	**-0.8**
GRPR				AMB	AMB	02 51 16.3	
	comp=E,285nm,0.4s						
GRPR				AMB	AMB	02 51 16.3	
	comp=E,133nm,0.4s						
GRPR				AMB	AMB	02 51 16.3	
	comp=E,263nm,0.4s						
GRPR				*i* S	**Sn**	**02 51 56.8**	**+2.1**
GRPR				A	A	02 52 12.9	
	comp=E,766nm,0.5s						
GRPR				A	A	02 52 12.9	
	comp=E,262nm,0.5s						
GRPR	**Tuman**	**4.37**	**255**	*i* PN	**Pn**	**02 51 04.3**	**-0.8**
GRPR				*i* S	**Sn**	**02 51 56.8**	**+2.1**
GRPR				pmax	pmax		
	comp=E,133nm,0.5s						
GRPR				pmax	pmax		
	comp=Z,263nm,0.5s						
GRPR				pmax	pmax		
	comp=N,285nm,0.4s						
GRPR				smax	smax		
	comp=E,262nm,0.4s						
GRPR				smax	smax		
	comp=N,766nm,0.5s						
GLVR	**Golovnino**	**4.63**	**253**	*i* P	**Pn**	**02 51 07.3**	**-1.4**
GLVR				AMB	AMB	02 51 15.2	
	comp=N,159nm,0.5s						
GLVR				AMB	AMB	02 51 15.2	
	comp=N,165nm,0.5s						
GLVR				AMB	AMB	02 51 15.2	
	comp=N,404nm,0.5s						
GLVR				*i* S	**Sn**	**02 52 02.4**	**+1.3**
GLVR				A	A	02 52 22.4	
	comp=N,685nm,0.5s						
GLVR				A	A	02 52 22.4	
	comp=N,1µm,0.5s						
GLVR	**Golovnino**	**4.63**	**253**	*i* PN	**Pn**	**02 51 07.3**	**-1.4**
GLVR				*i* S	**Sn**	**02 52 02.4**	**+1.3**
GLVR				pmax	pmax		
	comp=Z,404nm,0.6s						
GLVR				pmax	pmax		
	comp=E,165nm,0.4s						
GLVR				pmax	pmax		
	comp=N,159nm,0.5s						
GLVR				smax	smax		
	comp=N,685nm,0.4s						
GLVR				smax	smax		
	comp=E,1µm,0.7s						
NEM2	**Nemuro 2**	**4.63**	**248**	P	**Pn**	**02 51 06.5**	**-2.2**
NEM2				*e*S	**Sn**	**02 51 59.7**	**-1.5**
JRA	**Rausu**	**4.83**	**256**	P	**Pn**	**02 51 11.5**	**+0.1**
JNK	**Nakash**	**5.22**	**254**	P	**Pn**	**02 51 16.1**	**-0.8**
JAK	**Akkeshi**	**5.48**	**248**	P	**Pn**	**02 51 18.2**	**-2.2**
JTKR	**Abashiri--Toko**	**5.66**	**259**	P	**Pn**	**02 51 23.3**	**+0.5**
JAR	**Ashorobuto**	**5.97**	**253**	P	**Pn**	**02 51 27.1**	**-0.1**
JMP	**Maruseppu**	**6.03**	**261**	P	**Pn**	**02 51 28.6**	**+0.6**
JOB	**Onbets**	**6.09**	**250**	P	**Pn**	**02 51 27.0**	**-1.7**
SKR	**Severo-Kuril's**	**6.20**	**28**	*i* P	**Pn**	**02 51 28.7**	**-1.4**
SKR				AMB	AMB	02 51 35.4	
	comp=E,641nm,1.1s						
SKR				*e*S	**Sn**	**02 52 33.3**	**-6.3**
SKR				A	A	02 52 46.4	
	comp=E,725nm,0.8s						
SKR				A	A	02 52 46.4	
	comp=E,181nm,0.8s						
SKR	**Severo-Kuril's**	**6.20**	**28**	⇓*i*PN	**Pn**	**02 51 28.7**	**-1.4**
SKR				pmax	pmax		
	comp=Z,641nm,1.1s						
YSS	**Yuzh-Sakhalins**	**6.39**	**288**	*e*P	**Pn**	**02 51 33.8**	**+1.0**
YSS				AMB	AMB	02 51 35.6	
	comp=Z,30nm,0.5s						
YSS				AMB	AMB	02 51 38.6	
	comp=Z,3µm,11.0s						
YSS	**Yuzh-Sakhalins**	**6.39**	**288**	*e*Pn	**Pn**	**02 51 34.3**	**+1.4**
YSS	**Yuzh-Sakhalins**	**6.39**	**288**	⇑*e*PN	**Pn**	**02 51 34.1**	**+1.3**
YSS				pmax	pmax		
	comp=Z,40nm,0.8s						
JSE	**Soyaes**	**6.41**	**270**	P	**Pn**	**02 51 34.4**	**+1.4**
JKK2	**Kamakawa 2**	**6.49**	**261**	P	**Pn**	**02 51 35.1**	**+0.8**
JCH	**Churui**	**6.53**	**249**	P	**Pn**	**02 51 33.8**	**-1.0**
ASAJ	**Asahikawa**	**6.54**	**263**	Pn	**Pn**	**02 51 36.2**	**+1.3**
	comp=Z,2.2nm,0.3s,baz=87,slow=13,SNR=26						
ASAJ				Sn	**Sn**	**02 52 55.5**	**+7.3**
	comp=Z,1.2nm,0.3s,baz=296,slow=26,SNR=1.0						
ASAJ	**Asahikawa**	**6.54**	**263**	P	**Pn**	**02 51 36.1**	**+1.2**
JFR	**Furan**	**6.82**	**255**	P	**Pn**	**02 51 38.9**	**+0.1**
JWK2	**Keihoku**	**6.86**	**274**	P	**Pn**	**02 51 42.2**	**+2.9**
ERM	**Erimo**	**6.95**	**245**	*e*P	**Pn**	**02 51 41.6**	**+1.1**
ERM	**Erimo**	**6.95**	**245**	*e*Pn	**Pn**	**02 51 41.6**	**+1.1**
ERM	**Erimo**	**6.95**	**245**	*ce*PN	**Pn**	**02 51 41.6**	**+1.1**
ERM				pmax	pmax		
	comp=Z,131nm,1.0s						
JAB	**Ashibetsu**	**6.96**	**259**	P	**Pn**	**02 51 42.5**	**+1.8**
JNBK	**Urakawa-nobuka**	**7.08**	**248**	*e*S	**Sn**	**02 53 00.5**	**-1.0**
JBT2	**Biratori 2**	**7.12**	**253**	P	**Pn**	**02 51 41.1**	**-1.8**
UGL	**Uglegorsk**	**7.54**	**304**	*e*P	**Pn**	**02 51 50.3**	**+1.7**
UGL				AMB	AMB	02 51 52.1	
	comp=Z,90nm,0.7s						
UGL				AMB	AMB	02 51 57.4	
	comp=Z,2µm,7.0s						
UGL				*e*S	**Sn**	**02 53 13.7**	**+1.0**
UGL				A	A	02 53 35.7	
	comp=Z,200nm,1.0s						
UGL				A	A	02 53 38.8	
	comp=Z,4µm,10.0s						
UGL				AMS	AMS	02 54 58.8	
	comp=Z,6µm,16.0s						
UGL				AMS	AMS	02 54 58.8	
	comp=Z,7µm,16.0s						
UGL				AMS	AMS	02 54 58.8	
	comp=Z,9µm,16.0s						
JNB	**Noboribetsu**	**8.14**	**254**	P	**Pn**	**02 51 55.8**	**-1.1**
TYV	**Tymovskoe**	**8.20**	**316**	*e*P	**Pn**	**02 51 59.3**	**+1.6**
TYV				AMB	AMB	02 52 00.1	
	comp=Z,76nm,0.8s						
TYV				*e*S	**Sn**	**02 53 29.1**	**+0.1**
TYV				A	A	02 53 34.0	
	comp=Z,44nm,1.0s						
TYV				A	A	02 53 39.1	
	comp=Z,1µm,6.0s						
TYV	**Tymovskoe**	**8.20**	**316**	*e*PN	**Pn**	**02 51 59.3**	**+1.6**
TYV				pmax	pmax		
	comp=Z,77nm,0.8s						
JKB	**Kayabe**	**8.40**	**250**	P	**Pn**	**02 51 58.6**	**-1.8**
JYM2	**Yakumo 2**	**8.74**	**253**	P	**Pn**	**02 52 03.5**	**-1.6**
JSH	**Shimam**	**8.76**	**257**	P	**Pn**	**02 52 06.6**	**+1.3**
PEA0B	**Petropavlovsk-**	**8.79**	**25**	*e*Pn	**Pn**	**02 52 04.0**	**-1.7**
PEA0B				*e*Sn	**Sn**	**02 53 38.9**	**-4.5**
PETK	**Petropavlovsk-**	**8.79**	**25**	Pn	**Pn**	**02 52 03.8**	**-2.0**
	baz=185,slow=11						
PETK				Sn	**Sn**	**02 53 41.1**	**-2.3**
	baz=200,slow=11						
PETK	**Petropavlovsk-**	**8.79**	**25**	*e*Pn	**Pn**	**02 52 03.6**	**-2.2**
PEA1	**Petropavlovsk-**	**8.79**	**25**	*e*Pn	**Pn**	**02 52 03.8**	**-2.0**
PEA1				*e*Sn	**Sn**	**02 53 41.1**	**-2.4**
JANG	**Nango**	**8.89**	**240**	P	**Pn**	**02 52 03.0**	**-4.2**
JANG				*e*S	Sn	02 53 33.3	-13
JTM	**Tenmabayashi**	**8.94**	**244**	P	**Pn**	**02 52 04.5**	**-3.2**
JTM				*e*S	**Sn**	**02 53 39.1**	**-7.9**
JSR	**Shiriuchi**	**8.97**	**249**	P	**Pn**	**02 52 06.3**	**-2.0**
PET	**Petropavlovsk**	**9.02**	**28**	*e*Pn	**Pn**	**02 52 05.7**	**-3.1**
PET	**Petropavlovsk**	**9.02**	**28**	*e*PN	**Pn**	**02 52 10.1**	**+1.3**
PET				pmax	pmax		
	comp=Z,72nm,0.8s						
JOSM	**Okushiri--Mats**	**9.36**	**254**	P	**Pn**	**02 52 11.5**	**-2.1**
OFUJ	**Ofunato**	**9.63**	**234**	P	Pn	02 52 11.5	-5.8
JRG	**Rokugo**	**10.03**	**238**	P	**Pn**	**02 52 19.5**	**-3.2**
JRG				*e*S	**Sn**	**02 54 05.7**	**-8.2**
JIO	**Ouri**	**10.25**	**232**	P	**Pn**	**02 52 21.5**	**-4.2**
JIO				*e*S	Sn	02 54 10.0	-9.2
TEY	**Ternei**	**10.62**	**274**	⇑*e*PN	**Pn**	**02 52 33.0**	**+2.3**
NKL	**Nikolayevsk**	**10.64**	**322**	*e*PN	**Pn**	**02 52 32.0**	**+1.0**
NKL				pmax	pmax		
	comp=N,130nm,1.5s						
NKL				pmax	pmax		
	comp=E,100nm,1.5s						
NKL				pmax	pmax		
	comp=Z,260nm,1.5s						
GRNR	**Gornyy**	**11.56**	**304**	*e*PN	Pn	02 52 48.9	+5.2
GRNR				pmax	pmax		
	comp=Z,42nm,1.0s						
MAJO	**Matsushiro**	**13.37**	**234**	*e*Pn	**Pn**	**02 53 05.3**	**-3.1**
MAJO	**Matsushiro**	**13.37**	**234**	*i* PN	**Pn**	**02 53 05.9**	**-2.5**
MAT	**Matsushiro**	**13.37**	**234**	P	**Pn**	**02 53 04.9**	**-3.5**
MJAR	**Matsushiro Arr**	**13.37**	**234**	Pn	**Pn**	**02 53 04.6**	**-3.8**
	comp=Z,0.2nm,0.3s,baz=30,slow=12,SNR=26						
MJB9	**Matsu-Tunnel**	**13.37**	**234**	*e*Pn	**Pn**	**02 53 05.7**	**-2.7**
USA0B	**Ussuriysk Arra**	**14.00**	**273**	*e*Pn	**Pn**	**02 53 16.0**	**-1.0**
USRK	**Ussuriysk Ar.**	**14.00**	**273**	Pn	**Pn**	**02 53 15.5**	**-1.4**
	baz=76,slow=12						
USRK				LR	LR	02 58 53.3	
	comp=Z,3µm,19.4s,baz=76,slow=39						
KLR	**Kul'dur**	**14.06**	**293**	Pn	**Pn**	**02 53 18.7**	**+1.0**
	comp=Z,0.0nm,0.3s,baz=100,slow=14,SNR=24						
KLR				LR	LR	02 58 26.4	
	comp=Z,317nm,18.3s,baz=68,slow=37						
KLR	**Kul'dur**	**14.06**	**293**	*e*P	**Pn**	**02 53 18.3**	**+0.6**
KLR	**Kul'dur**	**14.06**	**293**	⇑*i*P	**Pn**	**02 53 18.3**	**+0.6**
MA2	**Magadan**	**14.34**	**358**	Pn	**Pn**	**02 53 20.4**	**-1.0**
	comp=Z,2.4nm,0.3s,baz=158,slow=8.1,SNR=9.2						
MA2	**Magadan**	**14.34**	**358**	*e*P	**Pn**	**02 53 20.5**	**-0.9**
MA2	**Magadan**	**14.34**	**358**	*e*Pn	**Pn**	**02 53 20.9**	**-0.5**
MA2	**Magadan**	**14.34**	**358**	*e*P	**Pn**	**02 53 20.9**	**-0.5**
MSHR	**Mys Shultsa**	**14.99**	**267**	*ce*P	**Pn**	**02 53 27.7**	**-2.4**
MDJ	**Mudanjiang**	**15.61**	**275**	P	**Pn**	**02 53 34.8**	**-3.4**
MDJ				S	**Sn**	**02 56 29.1**	**-0.9**
MDJ				pmax	pmax		
	comp=Z,180nm,0.9s						
MDJ				LR	LR		
	comp=Z,4µm,12.7s						
MDJ				LR	LR		
	comp=Z,3µm,17.5s						
MDJ				LR	LR		
	comp=Z,3µm,15.5s						
MDJ	**Mudanjiang**	**15.61**	**275**	*e*Pn	**Pn**	**02 53 37.1**	**-1.2**
	comp=Z,128nm,0.9s						
SEY	**Seymchan**	**17.70**	**1**	P	**Pn**	**02 54 01.5**	**-2.8**
	comp=Z,0.7nm,0.3s,baz=163,slow=8.5,SNR=14						
ZEA	**Zeya**	**17.88**	**307**	*e*P	**Pn**	**02 54 05.6**	**-1.0**
ZEA				pmax	pmax		
	comp=N,59nm,1.0s						
ZEA				pmax	pmax		
	comp=E,47nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,64nm,1.0s						
CN2	**Changchun**	**18.70**	**275**	*e*P	**P**	**02 54 14.2**	**-1.7**
CN2				*e*pP	pP	02 54 23.1	-3.1
CN2				pmax	pmax		
	comp=Z,90nm,0.8s						
KS01	**Wonju Array Si**	**19.39**	**255**	*e*P	**Pn**	**02 54 29.4**	**+4.5**
KS15	**Wonju Array Si**	**19.41**	**255**	*e*P	**Pn**	**02 54 30.4**	**+5.2**
JNU	**Nakatsue**	**20.08**	**240**	P	**P**	**02 54 30.3**	**-0.8**
	comp=Z,7.9nm,0.7s,baz=72,slow=10,SNR=2.6						
JNU	**Nakatsue**	**20.08**	**240**	*e*P	Pn	02 54 37.9	+4.7
	comp=Z,75nm,1.3s						
CLNS	**Chul'man**	**20.25**	**314**	*e*P	**P**	**02 54 32.7**	**-0.2**
CLNS				pmax	pmax		
	comp=Z,55nm,0.9s						
CLNS				pmax	pmax		
	comp=E,28nm,0.9s						
CLNS				pmax	pmax		
	comp=N,32nm,0.9s						
TJN	**Taejon**	**20.34**	**253**	*i* P	**P**	**02 54 34.4**	**+0.6**
YAK	**Yakutsk**	**21.05**	**331**	P	**P**	**02 54 39.5**	**-1.9**
	comp=N,144nm,0.7s,baz=101,slow=0.5,SNR=19						
YAK				S	**S**	**02 58 27.9**	**-5.2**
	comp=N,22nm,0.4s,baz=346,slow=0.8,SNR=1.3						
YAK				LR	LR	03 03 12.5	
	comp=N,1µm,18.5s,baz=71,slow=38						
YAK	**Yakutsk**	**21.05**	**331**	*e*P	**P**	**02 54 39.7**	**-1.7**
	comp=N,163nm,0.7s						
YAK				*e*S	**S**	**02 58 27.9**	**-5.2**
YAK	**Yakutsk**	**21.05**	**331**	*e*P	**P**	**02 54 40.1**	**-1.3**
YAK				*e*		02 54 53.0	
YAK				*e*S	**S**	**02 58 31.6**	**-1.5**
YAK				*e**SS	Sn	02 58 43.3	+2.3
YAK				*e*SS	**SnSn**	**02 58 54.4**	**-1.8**
YAK				*e*SSS	SSS	02 59 20.5	
YAK				pmax	pmax		
	comp=Z,117nm,0.9s						
YAK				pmax	pmax		
	comp=E,7.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,14nm,0.9s						
YAK				smax	smax		
	comp=N,1µm,7.6s						
YAK				smax	smax		
	comp=E,806nm,8.1s						
YAK				MLR	MLR		
	comp=Z,3µm,12.0s						
YAK				MLR	MLR		
	comp=N,3µm,15.0s						
YAK				MLR	MLR		
	comp=E,2µm,12.0s						
HIA	**Hailar**	**21.91**	**292**	*i* P	**P**	**02 54 46.7**	**-4.0**
HIA				pmax	pmax		

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       comp=Z,15nm,0.7s
DL2    Dalian            23.07 265  P        P        02 55 02.7  -0.3
DL2                                 pmax     pmax
       comp=Z,40nm,1.2s
BOD    Bodaibo           26.17 312  eP       P        02 55 27.4  -4.0
BOD                                 pmax     pmax
       comp=Z,11nm,1.0s
JOW    Kunigami          26.21 233  P        P        02 55 31.3  -0.7
       comp=Z,52nm,0.9s,baz=334,slow=4.8,SNR=6.1
JOW    Kunigami          26.21 233  eP       P        02 55 31.3  -0.7
       comp=Z,82nm,1.1s
BJI    Beijing           26.45 271⇑iP        P        02 55 35.5  +1.4
BJT    Baijiatuau        26.46 271  eP       P        02 55 34.3  +0.1
       comp=Z,71nm,1.0s
BJT    Baijiatuau        26.46 271  eP       P        02 55 34.3  +0.1
BJT                                 pmax     pmax
       comp=Z,71nm,1.0s
TIA    Tai'an            27.49 263  P        P        02 55 44.0  +0.5
TIA                                 pmax     pmax
       comp=Z,11nm,1.2s
H11N2  WAKE ISLAND Hy    28.44 149  T        T        03 26 31.0
       baz=338,slow=75,SNR=40
H11N1  WAKE ISLAND Hy    28.45 149  T        T        03 27 00.4
       baz=338,slow=75,SNR=32
H11N3  WAKE ISLAND Hy    28.46 149  T        T        03 26 35.7
       baz=338,slow=75,SNR=40
NJ2    Nanjing           28.58 254  eP       P        02 55 53.1  -0.2
NJ2                                 pmax     pmax
       comp=Z,7.0nm,0.5s
TIXI   Tiksi             28.61 345  eP       P        02 55 54.0  +0.9
TIXI   Tiksi             28.61 345  i P      P        02 55 54.0  +0.9
HHC    Hu-ho-hao-te      29.39 276  eP       P        02 56 00.2  -0.3
HHC                                 S        S        03 00 46.4  -4.9
HHC                                 pmax     pmax
       comp=Z,42nm,1.0s
HHC                                 LR       LR
       comp=Z,2µm,14.4s
HHC                                 LR       LR
       comp=Z,3µm,13.9s
HHC                                 LR       LR
       comp=Z,3µm,14.7s
H11S1  WAKE ISLAND Hy    29.49 150  T        T        03 28 07.7
       baz=339,slow=76,SNR=73
H11S3  WAKE ISLAND Hy    29.50 150  T        T        03 27 58.1
       baz=339,slow=76,SNR=34
H11S2  WAKE ISLAND Hy    29.51 150  T        T        03 27 55.4
       baz=339,slow=76,SNR=30
SONA1  Songino Array     30.86 291  eP       P        02 56 12.4  -1.1
SONA0  Songino Array     30.87 291  eP       P        02 56 12.9  -0.7
SONA0                               ePcP     PcP      02 59 09.2  -0.3
SONM   Songino Array     30.87 291  P        P        02 56 12.9  -0.7
       comp=Z,11nm,0.9s,baz=79,slow=8.0,SNR=30
SONM                                PcP      PcP      02 59 09.2  -0.3
       comp=Z,1.0nm,0.7s,baz=103,slow=3.1,SNR=3.0
TLY    Talaya            31.96 299  eP       P        02 56 22.6  -0.4
TLY    Talaya            31.96 299  eP       P        02 56 21.9  -1.1
       comp=Z,7.8nm,0.8s
TLY    Talaya            31.96 299  eP       P        02 56 22.8  -0.2
TLY                                 pmax     pmax
       comp=Z,8.0nm,0.7s
ZAK    Zakamensk         32.39 297  eP       P        02 56 25.2  -1.7
ZAK                                 e                 02 59 13.4
ZAK                                 pmax     pmax
       comp=Z,9.0nm,0.9s
WHN    Wuhan             32.56 256  P        P        02 56 34.5  +6.1
RDOG   Red Dog Mine      32.62  30  eP       P        02 56 29.2  +0.7
       comp=Z,12nm,1.1s
TWG    Pinlang           33.48 238  eP       P        02 56 35.2  -1.3
       comp=Z,147nm,1.0s
XAN    Xi'an             34.37 266  P        P        02 56 44.0  -0.2
XAN                                 pP       pP       02 56 56.5  +0.8
XAN                                 pmax     pmax
       comp=Z,18nm,1.0s
XAN                                 LR       LR
       comp=Z,2µm,12.9s
XAN                                 LR       LR
       comp=Z,2µm,14.4s
XAN                                 LR       LR
       comp=Z,3µm,16.3s
KDAK   Kodiak Island     35.85  49  P        P        02 56 55.9  -0.6
       comp=Z,15nm,0.7s,baz=259,slow=6.1,SNR=13
KDAK   Kodiak Island     35.85  49  eP       P        02 56 56.5  -0.1
KDAK   Kodiak Island     35.85  49  eP       P        02 56 57.0  +0.4
       comp=Z,41nm,0.7s
KDAK   Kodiak Island     35.85  49ceP        P        02 56 56.5  -0.1
PPLA   Purkeypile        35.96  40  eP       P        02 56 58.9  +1.3
       comp=Z,37nm,1.2s
CAST   Castle Rocks      36.03  40  eP       P        02 56 59.1  +1.0
       comp=Z,14nm,1.0s
ENH    Enshi             36.08 260  eP       P        02 56 58.7  -0.3
       comp=Z,51nm,1.2s
CNPM   China Poot        36.44  46  eP       P        02 57 01.7  +0.1
       comp=Z,28nm,0.8s
BPAW   Bear Paw Mtn.     36.56  38  eP       P        02 57 03.2  +0.6
       comp=Z,16nm,0.9s
MLY    Manley            36.72  37  eP       P        02 57 04.7  +0.6
       comp=Z,17nm,0.8s
TRF    Thorofare Moun    36.84  40  eP       P        02 57 05.4  +0.2
       comp=Z,16nm,0.8s
LZH    Lanzhou           36.91 273 ⇑P        P        02 57 07.3  +1.2
LZH                                 pP       pP       02 57 19.1  +1.4
LZH                                 sP       sP       02 57 25.9  +3.2
LZH                                 PP       PnPn     02 58 31.4  +0.4
LZH                                 pmax     pmax
       comp=Z,200nm,1.1s
LZH                                 LR       LR
       comp=Z,5µm,14.1s
LZH                                 LR       LR
       comp=Z,5µm,13.6s
LZH                                 LR       LR
       comp=Z,5µm,14.6s
COLD   Coldfoot          37.14  33  eP       P        02 57 07.8  +0.4
       comp=Z,10nm,0.8s
BWN    Browne            37.23  38  eP       P        02 57 09.8  +1.5
       comp=Z,93nm,1.0s
MCK    McKinley          37.45  39  eP       P        02 57 10.5  +0.3
MCK    McKinley          37.45  39  eP       P        02 57 10.5  +0.3
       comp=Z,26nm,1.0s
MCK    McKinley          37.45  39  eP       P        02 57 10.5  +0.3
MCK                                 pmax     pmax
       comp=Z,26nm,1.0s
TOLK   Toolik Lake Re    37.55  31  P        P        02 57 11.0   0.0
       baz=263
SML    Sawmill           37.76  42  eP       P        02 57 13.3  +0.5
SML    Sawmill           37.76  42  eP       P        02 57 13.3  +0.5
       comp=Z,80nm,0.7s
SML    Sawmill           37.76  42  eP       P        02 57 13.3  +0.5
SML                                 pmax     pmax
       comp=Z,80nm,0.7s
MDM    Murphy Dome       37.78  37  eP       P        02 57 13.4  +0.4
       comp=Z,26nm,0.8s
WRH    Wood River Hil    37.83  38  eP       P        02 57 13.9  +0.5
       comp=Z,14nm,0.9s
COLA   College           37.94  37  eP       P        02 57 15.2  +1.0
COLA   College           37.94  37  eP       P        02 57 15.2  +1.0
       comp=Z,39nm,0.8s
COLA   College           37.94  37  eP       P        02 57 15.2  +1.0
COLA                                pmax     pmax
       comp=Z,39nm,0.8s
CCB    Clear Creek Bu    37.96  38  eP       P        02 57 14.8  +0.4
       comp=Z,8.4nm,0.8s
DHY    Denali Highway    38.16  40  eP       P        02 57 16.5  +0.1
       comp=Z,19nm,0.8s
HVS    Khovu-Aksy        38.17 300  eP       P        02 57 17.1  +0.6
HVS    Khovu-Aksy        38.17 300  i P      P        02 57 17.1  +0.6
HVS                                 pmax     pmax
       comp=Z,21nm,1.0s
GTA    Gaotai            38.19 280 ⇑P        P        02 57 17.8  +0.9
GTA                                 pP       pP       02 57 29.7  +1.2
GTA                                 sP       sP       02 57 35.8  +2.3
GTA                                 PcP      PcP      02 59 31.6  +0.9
GTA                                 pmax     pmax
       comp=Z,83nm,1.1s
SCM    Sheep Creek Mo    38.23  42  eP       P        02 57 17.4  +0.5
       comp=Z,15nm,0.8s
SCM    Sheep Creek Mo    38.23  42  eP       P        02 57 17.4  +0.5
SCM                                 pmax     pmax
       comp=Z,15nm,0.8s
HDA    Harding Lake      38.33  38  eP       P        02 57 16.2  -1.4
       comp=Z,18nm,0.8s
IL1    Eielson Array     38.35  37  eP       P        02 57 17.2  -0.6
ILAR   Eielson Array     38.35  37  P        P        02 57 17.4  -0.3
       comp=Z,13nm,1.0s,baz=260,slow=7.3,SNR=63
ILAR   Eielson Array     38.35  37  P        P        02 57 17.4  -0.3
ILAR                                pmax     pmax
       comp=Z,12nm,1.0s
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ILB    Eielson Array     38.35  37  eP       P        02 57 17.5  -0.3
KLU    Klutina           38.93  43  eP       P        02 57 23.5  +0.7
       comp=Z,23nm,0.8s
DIV    Divide            39.03  43  eP       P        02 57 24.3  +0.7
DIV    Divide            39.03  43  eP       P        02 57 24.3  +0.7
       comp=Z,23nm,0.8s
FYU    Fort Yukon        39.05  34  eP       P        02 57 24.8  +1.3
       comp=Z,57nm,1.2s
BMRM   Bremner River     39.61  43  eP       P        02 57 29.4  +1.0
       comp=Z,20nm,0.8s
CD2    Chengdu           39.73 266  P        P        02 57 29.0  -0.7
CD2                                 pmax     pmax
       comp=Z,10.0nm,0.5s
CD2                                 pmax     pmax
       comp=Z,120nm,5.4s
CRQM   Cirque            40.35  44  eP       P        02 57 36.2  +1.5
       comp=Z,33nm,0.8s
GYA    Guiyang           40.38 258⇑iP        P        02 57 34.9  -0.4
GYA                                 pP       sP       02 57 50.0  -2.0
GYA                                 PP       PnPn     02 59 13.2  +0.5
GYA                                 S        S        03 03 40.4  -0.2
GYA                                 sS       sS       03 04 02.8  +2.8
GYA                                 SS       SS       03 06 33.7  -6.8
GYA                                 pmax     pmax
       comp=Z,20nm,0.8s
GYA                                 pmax     pmax
       comp=Z,130nm,5.2s
GYA                                 LR       LR
       comp=Z,540nm,16.4s
GYA                                 LR       LR
       comp=Z,570nm,15.8s
GYA                                 LR       LR
       comp=Z,510nm,17.0s
EGAK   Eagle             40.80  37  eP       P        02 57 38.1   0.0
       comp=Z,32nm,0.9s
DAWY   Dawson            41.64  38  eP       P        02 57 45.8  +0.7
       comp=Z,9.4nm,1.0s
DGZ    Jazzator, Alta    42.43 300  i P      P        02 57 51.3  -0.5
DGZ                                 pmax     pmax
       comp=Z,4.0nm,0.8s
ZAA1   Zalesovo Array    42.65 307  eP       P        02 57 50.7  -2.6
ZAA1                                ePcP     PcP      02 59 44.9  +0.3
ZAA0   Zalesovo Array    42.65 307  eP       P        02 57 50.8  -2.5
       comp=Z,3.7nm,0.8s
ZAA0                                ePcP     PcP      02 59 45.3  +0.7
ZALV   Zalesovo Beam     42.65 307  P        P        02 57 50.7  -2.6
       comp=Z,3.9nm,0.7s,baz=83,slow=6.0,SNR=9.1
ZALV                                PcP      PcP      02 59 44.9  +0.3
       comp=Z,11nm,0.8s,baz=73,slow=2.6,SNR=12
NVS    Novosibirsk       43.28 308  eP       P        02 57 54.3  -4.1
NVS                                 e                 02 59 40.4
INK    Inuvik            43.45  31  P        P        02 57 58.7  -1.0
       comp=Z,27nm,0.8s,baz=289,slow=6.7,SNR=16
INK    Inuvik            43.45  31  eP       P        02 58 00.2  +0.6
INK    Inuvik            43.45  31  eP       P        02 58 00.2  +0.6
       comp=Z,30nm,0.9s
KMI    Kunming           43.95 260  P        P        02 58 04.7  +0.2
KMI                                 pP       pP       02 58 18.7  +2.4
KMI                                 sP       sP       02 58 24.5  +3.3
KMI                                 pmax     pmax
       comp=Z,18nm,1.3s
WMQ    Urumqi            44.50 292  P        P        02 58 09.5  +1.0
WMQ                                 pP       sP       02 58 23.3  -2.0
WMQ                                 sP       pP       02 58 30.1  +10
WMQ                                 pmax     pmax
       comp=Z,63nm,0.9s
WMQ                                 LR       LR
       comp=Z,7µm,12.9s
WMQ                                 LR       LR
       comp=Z,3µm,16.5s
WMQ                                 LR       LR
       comp=Z,2µm,15.5s
MK31   Makanchi Array    46.71 298  eP       P        02 58 25.3  -0.5
MK31                                ePcP     PcP      02 59 58.5  -0.2
MK31   Makanchi Array    46.71 298  i P      P        02 58 24.8  -1.0
MK31                                pmax     pmax
       comp=Z,15nm,0.7s
MK32   Makanchi Array    46.71 298  eP       P        02 58 25.2  -0.6
MK32                                ePcP     PcP      02 59 59.1  +0.3
MKAR   Makanchi Array    46.71 298  P        P        02 58 25.2  -0.6
       comp=Z,13nm,0.7s,baz=71,slow=6.7,SNR=60
MKAR                                PcP      PcP      02 59 59.1  +0.3
       comp=Z,3.7nm,0.7s,baz=55,slow=4.1,SNR=5.6
MKAR   Makanchi Array    46.71 298  eP       P        02 58 25.3  -0.6
       comp=Z,101nm,0.7s
MKAR                                ePcP     PcP      02 59 58.3  -0.5
MKAR   Makanchi Array    46.71 298  eP       P        02 58 25.3  -0.6
MKAR                                e                 02 59 58.3
MKAR                                pmax     pmax
       comp=Z,101nm,0.7s
MK01   Makanchi Array    46.71 298  eP       P        02 58 24.4  -1.4
MAKZ   Makanchi          46.90 298  eP       P        02 58 26.4  -0.9
       comp=Z,10nm,0.7s
MAKZ   Makanchi          46.90 298  P        P        02 58 25.8  -1.5
MAKZ                                pmax     pmax
       comp=Z,8.0nm,0.7s
KURK   Kurchatov         47.33 304  eP       P        02 58 29.0  -1.5
       comp=Z,17nm,0.8s
KURK                                ePcP     PcP      03 00 01.3  +0.5
KURK   Kurchatov         47.33 304  i P      P        02 58 28.5  -2.0
KURK                                pmax     pmax
       comp=Z,17nm,0.8s
DLBC   Dease Lake        47.37  44  eP       P        02 58 34.5  +3.6
       comp=Z,15nm,0.8s
KURBB  Kurchatov Arra    47.42 304  P        P        02 58 29.7  -1.5
       comp=Z,13nm,0.8s,baz=68,slow=8.2,SNR=55
KURBB                               PcP      PcP      03 00 01.3  +0.1
       comp=Z,5.4nm,0.9s,baz=73,slow=3.1,SNR=6.0
LSA    Lhasa             49.32 273  eP       P        02 58 48.6  +1.8
       comp=Z,32nm,0.9s
LSA    Lhasa             49.32 273  P        P        02 58 48.3  +1.6
LSA    Lhasa             49.32 273  eP       P        02 58 48.6  +1.8
LSA                                 pmax     pmax
       comp=Z,32nm,0.9s
CMAI   Chiengmai2        49.93 258  P        P        02 58 52.6  +1.4
       comp=Z,4.1nm,0.8s
LAMP   Lampang           50.49 256  P        P        02 58 56.7  +1.5
       comp=Z,11nm,0.8s,comp=Z,81nm
CMMT   Chiang Mai        50.76 257  P        P        02 58 58.2  +0.9
       comp=Z,26nm,1.0s
CHTO   Chiang Mai        50.77 257  eP       P        02 59 00.6  +3.4
       comp=Z,19nm,0.9s
CHTO   Chiang Mai        50.77 257  P        P        02 58 58.3  +1.0
       comp=Z,118nm,1.1s
PBKT   Sadao Pong        50.95 253  P        P        02 59 00.9  +2.3
       comp=Z,8.2nm,0.8s
BVAR   Borovoye Array    51.00 310  P        P        02 58 57.3  -1.3
       comp=Z,4.3nm,0.7s,baz=54,slow=11,SNR=16
BVAR                                PcP      PcP      03 00 14.9  +0.8
       comp=Z,4.7nm,0.6s,baz=58,slow=3.6,SNR=5.8
CM31   Chiang Mai Arr    51.01 256  eP       P        02 58 60.0  +0.8
CMAR   Chiang Mai Arr    51.01 256  P        P        02 58 60.0  +0.9
       comp=Z,4.5nm,0.8s,baz=39,slow=7.4,SNR=19
CMAR   Chiang Mai Arr    51.01 256  P        P        02 59 00.0  +0.9
CMAR                                pmax     pmax
       comp=Z,5.0nm,0.8s
CM01   Chiang Mai Arr    51.03 256  eP       P        02 59 00.0  +0.8
CM01                                epP      sP       02 59 14.3  -1.8
BRVK   Borovoye          51.04 310  eP       P        02 58 58.8  -0.1
BRVK   Borovoye          51.04 310ceP        P        02 58 58.8  -0.1
BRVK                                pmax     pmax
       comp=Z,11nm,0.8s
PRZ    Przheval'sk       51.15 295  eP       P        02 59 02.0  +1.9
       comp=Z,39nm,0.8s
PRZ    Przheval'sk       51.15 295  eP       P        02 59 02.1  +1.9
PRZ                                 pmax     pmax
       comp=Z,39nm,0.8s
TARG   Taragay, Kyrgy    51.91 294  eP       P        02 59 07.7  +1.6
       comp=Z,28nm,0.7s
SRAK   Srakaew           52.07 250  P        P        02 59 05.4  -1.6
       comp=Z,60nm,0.9s,comp=Z,479nm
RES    Resolute Bay      52.56  18  eP       P        02 59 10.1  +0.2
       comp=Z,12nm,0.8s
RES    Resolute Bay      52.56  18  eP       P        02 59 10.1  +0.2
RES                                 pmax     pmax
       comp=Z,12nm,0.8s
UMPA   Umpang Tak        52.63 254  P        P        02 59 14.5  +3.3
       comp=Z,8.2nm,0.8s,comp=Z,1µm
ULHL   Ulahol            52.65 295  P        P        02 59 12.4  +1.0
       SNR=25
UTHA   Uthaitani         52.69 253  P        P        02 59 13.4  +1.8
       comp=Z,7.0nm,0.9s,comp=Z,56nm
TKM2   Tokmak 2          52.72 296  P        P        02 59 12.0  +0.1
       SNR=22
YKA    Yellowknife Ar    52.73  36  P        P        02 59 11.8  +0.5
       comp=Z,6.4nm,0.8s,baz=298,slow=6.8,SNR=11
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TAPN   Taplejung         53.15 273  eP       P        02 59 16.4  +1.1
       comp=Z,29nm,0.7s
CHMS   Chumysh           53.21 297  P        P        02 59 15.2   0.0
       SNR=7.4
USP    Ospenovka         53.23 297  P        P        02 59 16.3  +0.8
       SNR=40
KBK    Karagaybulak      53.27 296  P        P        02 59 16.7  +0.9
       SNR=21
KZA    Kyzart            53.37 296  P        P        02 59 18.5  +1.6
       SNR=31
FRU    Bishkek           53.38 297  eP       P        02 59 17.0  +0.5
FRU                                 pmax     pmax
       comp=Z,47nm,1.7s
AAK    Ala-Archa         53.56 297  eP       P        02 59 18.7  +0.7
       comp=Z,41nm,0.8s
ODAN   Odare             53.67 273  eP       P        02 59 19.9  +0.9
KBS    Kingsbay          53.80 351  eP       P        02 59 19.2  +0.2
KBS    Kingsbay          53.80 351  eP       P        02 59 19.1  +0.1
       comp=Z,45nm,0.8s
KBS    Kingsbay          53.80 351  eP       P        02 59 18.6  -0.3
KBS                                 IAmb     IAmb     02 59 19.3
       comp=Z,48nm,0.8s
SPA0   Spitsbergen Ar    53.88 350  eP       P        02 59 18.6  -1.0
SPA0   Spitsbergen Ar    53.88 350  eP       P        02 59 19.1  -0.5
SPA0                                IAmb     IAmb     02 59 20.1
       comp=Z,42nm,1.2s
SPITS  Spitsbergen Ar    53.88 350  P        P        02 59 18.6  -1.0
       comp=Z,4.0nm,0.5s,baz=38,slow=9.7,SNR=16
SPITS  Spitsbergen Ar    53.88 350  P        P        02 59 18.6  -1.0
SPITS                               pmax     pmax
       comp=Z,7.0nm,0.7s
EKS2   Erkin-Say         54.00 297  P        P        02 59 21.7  +0.6
       SNR=40
JIRN   Jiri              54.03 275  eP       P        02 59 22.8  +1.0
       comp=Z,160nm,0.8s
GUN    Gumba             54.10 275  eP       P        02 59 23.4  +1.1
       comp=Z,144nm,1.1s
RAMN   Ramite            54.17 274  eP       P        02 59 23.4  +0.7
       comp=Z,146nm,0.8s
SVE    Sverdlovsk        54.21 317  eP       P        02 59 21.1  -1.2
SVE                                 pmax     pmax
       comp=Z,38nm,0.7s
KSH    Kashi             54.26 293  P        P        02 59 27.6  +4.5
KSH                                 sP       sP       02 59 45.5  +5.5
KSH                                 ePcP     PcP      03 00 30.9  +4.0
KSH                                 PP       PP       03 01 31.6  +6.7
KSH                                 S        S        03 06 59.8  +2.2
KSH                                 pmax     pmax
       comp=Z,57nm,1.2s
KSH                                 pmax     pmax
       comp=Z,400nm,7.5s
KSH                                 LR       LR
       comp=Z,1µm,11.9s
KSH                                 LR       LR
       comp=Z,3µm,17.6s
KKN    Kakani            54.59 275  eP       P        02 59 26.7  +1.0
       comp=Z,92nm,0.9s
PKIN   Phulchoki         54.64 275  eP       P        02 59 26.5  +0.4
       comp=Z,60nm,1.0s
DMN    Daman             54.82 275  eP       P        02 59 28.4  +0.9
       comp=Z,97nm,0.9s
GKN    Gorkha            54.91 276  eP       P        02 59 28.8  +0.8
       comp=Z,121nm,1.1s
HSPB   Hornsund (broa    54.93 349  eP       P        02 59 26.5  -0.7
HSPB                                IAmb     IAmb     02 59 27.4
       comp=Z,22nm,1.1s
HSPB                                IAMs_20  IAMs_20  03 05 33.7
       comp=Z,6µm,19.2s
DANN   Dangsing          55.32 277  eP       P        02 59 32.3  +1.2
       comp=Z,86nm,0.9s
ARU    Arti              55.40 318  eP       P        02 59 28.4  -2.5
       comp=Z,19nm,0.9s
ARU                                 ePcP     PcP      03 00 29.3  -1.5
ARU    Arti              55.40 318d iP       P        02 59 29.2  -1.7
ARU                                                   03 00 29.6
ARU                                 S        S        03 07 12.5  +0.4
ARU                                 SS       SS       03 10 49.7  -6.7
ARU                                 pmax     pmax
       comp=Z,19nm,0.8s
KOLN   Koldanda          55.78 276  eP       P        02 59 35.2  +0.9
       comp=Z,65nm,0.8s
KK31   Karatay Array     55.80 299  eP       P        02 59 33.6  -0.5
KK31   Karatay Array     55.80 299  i P      P        02 59 33.9  -0.1
KK31                                pmax     pmax
       comp=Z,28nm,0.7s
KKAR   Karatay Array     55.80 299  eP       P        02 59 33.6  -0.4
KKAR   Karatay Array     55.80 299  eP       P        02 59 33.6  -0.4
PYUN   Piuthan           56.01 277  eP       P        02 59 36.8  +0.9
       comp=Z,123nm,1.1s
B05A   Bryant            56.12  53  P        P        02 59 34.7  -1.5
       baz=302
G03D   McMinnville, O    57.09  57  P        P        02 59 45.1  +2.1
       baz=303
COR    Corvallis         57.41  58  eP       P        02 59 46.5  +1.2
       comp=Z,35nm,0.8s
COR    Corvallis         57.41  58  eP       P        02 59 46.5  +1.2
COR                                 pmax     pmax
       comp=Z,35nm,0.8s
LTY    Liberty           57.47  54  eP       P        02 59 47.4  +1.5
       comp=Z,8.6nm,0.8s
B08A   Colville Reser    57.62  52  eP       P        02 59 47.4  +0.5
       comp=Z,9.4nm,0.9s
I03D   Drain, OR         57.87  59  P        P        02 59 48.6   0.0
       baz=304
SAW    Saint Andrews     57.95  53  eP       P        02 59 54.1  +5.0
H04A   Detroit Lake      58.01  57  eP       P        02 59 50.9  +1.2
       comp=Z,37nm,0.8s
PRGR   Permogore         58.05 327  eP       P        02 59 47.6  -1.9
PRGR                                pmax     pmax
       comp=Z,29nm,0.9s
DAG    Danmarks Havn     58.08 357  i P      P        02 59 48.8  -0.8
       comp=Z,29nm,0.9s
DAG    Danmarks Havn     58.08 357  i P      P        02 59 48.8  -0.8
DAG                                 pmax     pmax
       comp=Z,29nm,0.9s
G05D   Wamic, OR         58.22  56  P        P        02 59 52.1  +1.1
       baz=304
APA    Apatity           58.28 337⇑iP        P        02 59 50.0  -1.1
APA                                 pmax     pmax
       comp=Z,6.0nm,0.9s
I04A   Tendick Farm,     58.38  58  P        P        02 59 52.0  -0.2
       baz=304
KEV    Kevo              58.39 340  eP       P        02 59 50.7  -1.1
       comp=Z,15nm,0.8s
KEV    Kevo              58.39 340  eP       P        02 59 50.7  -1.1
KEV                                 pmax     pmax
       comp=Z,15nm,0.8s
C09A   Chrisman Ranch    58.52  52  eP       P        02 59 53.8  +0.6
       comp=Z,12nm,0.9s
AB31   Akbulak array     58.58 310  i P      P        02 59 52.6  -0.9
AB31                                pmax     pmax
       comp=Z,10.0nm,0.5s
ABKAR  Akbulak array     58.58 310  eP       P        02 59 52.5  -0.9
I05D   Terrebonne, OR    58.71  57  P        P        02 59 52.9  -1.6
       baz=305
J04D   Umpqua Nationa    58.87  58  P        P        02 59 56.4  +0.5
       baz=305
KULLO  Kullorsuaq        58.88   9  i P      P        02 59 54.0  -1.2
       comp=Z,41nm,0.8s
KULLO  Kullorsuaq        58.88   9  i P      P        02 59 54.0  -1.2
KULLO                               pmax     pmax
       comp=Z,41nm,0.8s
NEW    Newport           58.90  51  P        P        02 59 55.9   0.0
       comp=Z,3.4nm,0.9s,baz=274,slow=4.0,SNR=5.5
NEW    Newport           58.90  51  P        P        02 59 56.0  +0.2
       baz=305
NEW    Newport           58.90  51  eP       P        02 59 56.3  +0.5
       comp=Z,10nm,1.0s
NEW    Newport           58.90  51  eP       P        02 59 56.3  +0.5
NEW                                 pmax     pmax
       comp=Z,10.0nm,1.0s
ARA0   ARCESS Array S    58.90 341  eP       P        02 59 55.0  -0.4
ARCES  ARCESS Array B    58.90 341  P        P        02 59 55.0  -0.4
       comp=Z,17nm,0.9s,baz=43,slow=7.3,SNR=35
ARCES  ARCESS Array B    58.90 341  eP       P        02 59 54.4  -1.1
ARCES  ARCESS Array B    58.90 341  eP       P        02 59 54.4  -1.1
ARE0   ARCESS Array S    58.90 341  eP       P        02 59 55.2  -0.2
       comp=Z,20nm,0.9s
ARE0   ARCESS Array S    58.90 341  eP       P        02 59 54.8  -0.6
ARE0                                IAmb     IAmb     02 59 56.2
       comp=Z,15nm,1.1s
ARE0                                IAMs_20  IAMs_20  03 12 54.4
       comp=Z,7µm,18.3s
AKTO   Aktyubinsk        58.94 312  P        P        02 59 55.0  -0.9
       comp=Z,6.5nm,0.6s,baz=69,slow=9.7,SNR=24
AKTO                                PcP      PcP      03 00 45.0  +0.3
```

	comp=Z,8.3nm,0.8s,baz=100,slow=4.3,SNR=5.0						
PINE	**Pine Mountain**	**59.26**	**57**	eP	**P**	**03 00 00.2**	**+1.6**
	comp=Z,32nm,0.8s						
E09A	**Wood Farm, Sta**	**59.33**	**53**	eP	**P**	**02 59 59.9**	**+1.2**
E09A				epP	**pP**	**03 00 12.9**	**+2.0**
YBH	**Yreka Blue Hor**	**59.37**	**60**	P	**P**	**03 00 00.8**	**+1.6**
	comp=Z,8.1nm,1.0s,baz=97,slow=2.7,SNR=5.3						
YBH	**Yreka Blue Hor**	**59.37**	**60**	eP	**P**	**03 00 01.9**	**+2.7**
	comp=Z,14nm,1.1s						
YBH	**Yreka Blue Hor**	**59.37**	**60**	P	**P**	**03 00 00.8**	**+1.6**
YBH				pmax	pmax		
	comp=Z,2.0nm,0.7s						
J05D	**Fort Rock, OR**	**59.37**	**58**	P	**P**	**02 59 59.4**	**+0.1**
	baz=305						
NIL	**Nilore**	**59.38**	**288**	eP	**P**	**03 00 00.5**	**+1.2**
	comp=Z,59nm,0.9s						
NIL	**Nilore**	**59.38**	**288**	eP	**P**	**03 00 00.5**	**+1.2**
NIL				pmax	pmax		
	comp=Z,59nm,0.9s						
M02C	**Callahan**	**59.48**	**61**	P	**P**	**03 00 01.0**	**+1.0**
	baz=306						
G08A	**Pilot Rock**	**59.56**	**55**	eP	**P**	**03 00 01.9**	**+1.4**
	comp=Z,11nm,0.9s						
N02D	**Trinity Center**	**59.81**	**61**	P	**P**	**03 00 03.4**	**+1.2**
	baz=306						
KTK1	**Kautokeino**	**59.83**	**341**	eP	**P**	**03 00 01.1**	**-0.7**
M04C	**Macdoel**	**59.87**	**60**	P	**P**	**03 00 03.4**	**+0.6**
	baz=306						
K05A	**Summer Lake**	**59.90**	**58**	eP	**P**	**03 00 05.1**	**+2.1**
	comp=Z,23nm,0.8s						
WDC	**Whiskeytown Da**	**60.14**	**61**	eP	**P**	**03 00 07.7**	**+3.3**
	comp=Z,12nm,0.8s						
WDC	**Whiskeytown Da**	**60.14**	**61**	eP	**P**	**03 00 07.7**	**+3.3**
WDC				pmax	pmax		
	comp=Z,13nm,0.8s						
F10A	**Beach Ranch, E**	**60.16**	**53**	eP	**P**	**03 00 06.6**	**+2.0**
	comp=Z,12nm,0.8s						
WALA	**Waterton Lakes**	**60.19**	**49**	eP	**P**	**03 00 05.4**	**+0.6**
	comp=Z,12nm,0.8s						
TRO	**Tromso**	**60.29**	**343**	eP	**P**	**03 00 04.0**	**-0.9**
TRO				IAmb	IAmb	03 00 05.1	
	comp=Z,67nm,0.7s						
MOD	**Modoc Plateau**	**60.73**	**59**	eP	**P**	**03 00 10.1**	**+1.5**
	comp=Z,16nm,0.9s						
MTN	**Manton Dam**	**60.74**	**203**	eP	**P**	**03 00 10.1**	**+1.4**
	comp=Z,14nm,0.9s						
JTMT	**Jette**	**60.76**	**50**	eP	**P**	**03 00 10.8**	**+2.1**
	comp=Z,5.1nm,0.7s						
O03D	**Paynes Creek**	**60.76**	**61**	P	**P**	**03 00 09.7**	**+0.9**
	baz=306						
BMO	**Blue Mountains**	**60.77**	**55**	eP	**P**	**03 00 09.8**	**+1.0**
	comp=Z,7.6nm,0.9s						
BMO	**Blue Mountains**	**60.77**	**55**	eP	**P**	**03 00 09.8**	**+1.0**
BMO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KLMR	**Klimovskoe**	**60.83**	**329**	eP	**P**	**03 00 07.0**	**-1.7**
KLMR				pmax	pmax		
	comp=Z,17nm,0.9s						
KLMR	**Klimovskoe**	**60.83**	**329**	eP	**P**	**03 00 07.1**	**-1.7**
KLMR				AMP		03 00 08.8	
	comp=Z,17nm,0.9s						
J08A	**Circle Bar Ran**	**60.97**	**57**	eP	**P**	**03 00 11.4**	**+1.3**
	comp=Z,19nm,0.9s						
WVOR	**Wild Horse Val**	**61.42**	**57**	eP	**P**	**03 00 14.4**	**+1.2**
	comp=Z,15nm,0.9s						
WVOR	**Wild Horse Val**	**61.42**	**57**	eP	**P**	**03 00 14.4**	**+1.2**
WVOR				pmax	pmax		
	comp=Z,15nm,0.9s						
MSO	**Missoula**	**61.49**	**51**	P	**P**	**03 00 13.6**	**0.0**
	baz=307						
MSO	**Missoula**	**61.49**	**51**	eP	**P**	**03 00 14.3**	**+0.7**
	comp=Z,19nm,1.0s						
KBL	**Kabul**	**61.65**	**292**	eP	**P**	**03 00 14.9**	**-0.1**
	comp=Z,35nm,0.8s						
KBL	**Kabul**	**61.65**	**292**	eP	**P**	**03 00 14.9**	**-0.1**
KBL				pmax	pmax		
	comp=Z,35nm,0.8s						
BEKR	**Beckworth**	**61.91**	**61**	eP	**P**	**03 00 17.8**	**+1.1**
	comp=Z,17nm,0.9s						
AFDM	**Forest Hills D**	**62.08**	**62**	eP	**P**	**03 00 19.4**	**+1.8**
	comp=Z,9.1nm,1.2s						
SUMG	**Summit**	**62.24**	**3**	eP	**P**	**03 00 18.7**	**+0.1**
	comp=Z,69nm,0.9s						
SUMG	**Summit**	**62.24**	**3**	i P	**P**	**03 00 19.6**	**+1.0**
	comp=Z,67nm,0.9s						
SUMG	**Summit**	**62.24**	**3**	i P	**P**	**03 00 19.6**	**+1.0**
SUMG				pmax	pmax		
	comp=Z,67nm,0.9s						
STEI	**Steigen**	**62.46**	**343**	eP	**P**	**03 00 18.8**	**-0.8**
STEI				IAmb	IAmb	03 00 19.1	
	comp=Z,20nm,0.7s						
STEI				IAMs_20	IAMs_20	03 10 41.2	
	comp=Z,5µm,18.3s						
MFID	**Camas Ranch**	**62.48**	**55**	eP	**P**	**03 00 21.2**	**+0.9**
	comp=Z,8.5nm,0.8s						
FFC	**Flin Flon**	**62.54**	**39**	eP	**P**	**03 00 21.2**	**+0.8**
FFC	**Flin Flon**	**62.54**	**39**	eP	**P**	**03 00 20.8**	**+0.4**
	comp=Z,15nm,1.0s						
FFC	**Flin Flon**	**62.54**	**39**	eP	**P**	**03 00 20.8**	**+0.4**
FFC				pmax	pmax		
	comp=Z,15nm,1.0s						
PAHR	**Pah Rah Range**	**62.60**	**60**	eP	**P**	**03 00 23.1**	**+1.8**
	comp=Z,14nm,0.9s						
LOF	**Lofoten**	**62.63**	**344**	eP	**P**	**03 00 20.3**	**-0.5**
LOF				IAmb	IAmb	03 00 21.4	
	comp=Z,94nm,1.0s						
VCNR	**Virginia City**	**62.69**	**61**	eP	**P**	**03 00 24.0**	**+2.1**
	comp=Z,11nm,0.8s						
PNTR	**Pine Nut**	**62.84**	**61**	eP	**P**	**03 00 25.0**	**+2.1**
	comp=Z,17nm,0.8s						
LRM	**Limekiln Ridge**	**62.92**	**51**	eP	**P**	**03 00 24.1**	**+0.7**
CMB	**Columbia Colle**	**63.00**	**62**	eP	**P**	**03 00 25.6**	**+1.8**
	comp=Z,24nm,1.3s						
CMB	**Columbia Colle**	**63.00**	**62**	eP	**P**	**03 00 25.6**	**+1.8**
CMB				pmax	pmax		
	comp=Z,23nm,1.3s						
EGMT	**Eagleton**	**63.01**	**48**	P	**P**	**03 00 23.4**	**-0.3**
	baz=309						
YERR	**Yerington**	**63.13**	**61**	eP	**P**	**03 00 26.8**	**+2.0**
	comp=Z,17nm,0.9s						
HLID	**Hailey**	**63.21**	**54**	P	**P**	**03 00 24.9**	**-0.3**
	baz=308						
HLID	**Hailey**	**63.21**	**54**	eP	**P**	**03 00 26.1**	**+0.8**
	comp=Z,7.0nm,0.9s						
WAKR	**Walker**	**63.30**	**61**	eP	**P**	**03 00 28.2**	**+2.2**
	comp=Z,9.3nm,0.9s						
MCMT	**McKenzie Canyo**	**63.31**	**52**	eP	**P**	**03 00 30.2**	**+4.2**
BMN	**Battle Mountai**	**63.48**	**59**	eP	**P**	**03 00 28.6**	**+1.6**
	comp=Z,13nm,0.9s						
BMN	**Battle Mountai**	**63.48**	**59**	eP	**P**	**03 00 28.6**	**+1.6**
BMN				pmax	pmax		
	comp=Z,13nm,0.9s						
BOZ	**Bozeman (W)**	**63.51**	**51**	P	**P**	**03 00 27.1**	**-0.1**
	baz=309						
BOZ	**Bozeman (W)**	**63.51**	**51**	eP	**P**	**03 00 27.6**	**+0.4**
BOZ	**Bozeman (W)**	**63.51**	**51**	eP	**P**	**03 00 27.6**	**+0.4**
	comp=Z,11nm,0.8s						
BOZ	**Bozeman (W)**	**63.51**	**51**	eP	**P**	**03 00 27.6**	**+0.4**
BOZ				pmax	pmax		
	comp=Z,11nm,0.8s						
KVN	**Kaiserville**	**63.79**	**60**	eP	**P**	**03 00 30.6**	**+1.4**
	comp=Z,13nm,1.0s						
KVN	**Kaiserville**	**63.79**	**60**	eP	**P**	**03 00 30.6**	**+1.4**
KVN				pmax	pmax		
	comp=Z,13nm,1.0s						
RYN	**Ryan**	**63.79**	**61**	eP	**P**	**03 00 31.0**	**+1.8**
	comp=Z,12nm,0.9s						
NV01	**Mina Array Sit**	**64.05**	**61**	eP	**P**	**03 00 31.8**	**+0.9**
NVAR	**Mina Array Bea**	**64.05**	**61**	P	**P**	**03 00 32.5**	**+1.5**
	comp=Z,5.3nm,0.8s,baz=291,slow=6.6,SNR=22						
MDPB	**Devils Postpil**	**64.06**	**62**	eP	**P**	**03 00 35.6**	**+4.5**
	comp=Z,15nm,1.1s						
QLMT	**Earthquake Lak**	**64.10**	**52**	eP	**P**	**03 00 32.5**	**+1.4**
MOR8	**Moi Rana**	**64.11**	**342**	eP	**P**	**03 00 28.6**	**-2.0**
NV11	**Mina Array Sit**	**64.14**	**61**	eP	**P**	**03 00 33.0**	**+1.5**
	comp=Z,0.9nm,1.1s						
ELK	**Elko**	**64.47**	**57**	P	**P**	**03 00 38.0**	**+4.4**
	comp=Z,1.6nm,0.7s,baz=321,slow=8.2,SNR=6.6						
H17A	**Grant Village**	**64.85**	**52**	P	**P**	**03 00 37.8**	**+1.7**
	baz=310						
FIA1	**FINESS Array S**	**64.93**	**334**	eP	**P**	**03 00 35.3**	**-0.6**
FIA0	**FINESS Array S**	**64.93**	**334**	eP	**P**	**03 00 34.9**	**-1.0**
FIA0	**FINESS Array S**	**64.93**	**334**	eP	**P**	**03 00 34.9**	**-1.0**
FINES	**FINESS Array B**	**64.93**	**334**	P	**P**	**03 00 34.9**	**-1.0**
	comp=Z,34nm,0.7s,baz=31,slow=8.0,SNR=84						
IMW	**Indian Meadow**	**64.96**	**52**	eP	**P**	**03 00 39.4**	**+2.5**
	comp=Z,12nm,0.9s						
FXWY	**Fox Creek**	**65.08**	**53**	eP	**P**	**03 00 38.9**	**+1.3**
	comp=Z,4.4nm,0.8s						
RLMT	**Red Lodge**	**65.11**	**50**	P	**P**	**03 00 37.7**	**0.0**
	baz=310						
RLMT	**Red Lodge**	**65.11**	**50**	eP	**P**	**03 00 38.8**	**+1.1**
	comp=Z,12nm,0.9s						
TPAW	**Teton Pass**	**65.22**	**53**	eP	**P**	**03 00 40.4**	**+1.9**
	comp=Z,15nm,0.8s						
HVU	**Hansel Valley**	**65.26**	**55**	eP	**P**	**03 00 41.9**	**+3.2**
	comp=Z,9.3nm,0.9s						
HVU	**Hansel Valley**	**65.26**	**55**	eP	**P**	**03 00 41.9**	**+3.2**
HVU				pmax	pmax		
	comp=Z,9.0nm,0.9s						
LOHW	**Long Hollow**	**65.33**	**52**	eP	**P**	**03 00 41.7**	**+2.5**
	comp=Z,6.8nm,1.0s						
REDW	**Red Top Meadow**	**65.35**	**53**	eP	**P**	**03 00 41.1**	**+1.7**
	comp=Z,12nm,0.9s						
CWC	**Cottonwood Cre**	**65.43**	**62**	P	**P**	**03 00 40.8**	**+0.9**
	baz=309						
LAO	**LASA Array**	**65.72**	**48**	eP	**P**	**03 00 43.0**	**+1.5**
	comp=Z,20nm,1.1s						
R11A	**Troy Canyon, C**	**65.76**	**59**	P	**P**	**03 00 42.1**	**0.0**
	baz=310						
R11A	**Troy Canyon, C**	**65.76**	**59**	eP	**P**	**03 00 43.0**	**+1.0**
	comp=Z,8.8nm,0.9s						
DAC	**Darwin (Calif)**	**65.84**	**62**	eP	**P**	**03 00 46.5**	**+3.9**
	comp=Z,9.8nm,1.4s						
OBN	**Obninsk**	**65.94**	**325**	eP	**P**	**03 00 42.5**	**-0.1**
OBN	**Obninsk**	**65.94**	**325**	i P	**P**	**03 00 41.7**	**-0.9**
OBN				i		03 00 54.0	
OBN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HYB	**Hyderabad**	**65.99**	**271**	i P	**P**	**03 00 44.0**	**+0.5**
MPMC	**Manual Prospec**	**66.04**	**62**	P	**P**	**03 00 43.4**	**-0.5**
	baz=310						
NSS	**Namsos**	**66.06**	**342**	eP	**P**	**03 00 42.2**	**-1.0**
NSS				IAmb	IAmb	03 00 43.7	
	comp=Z,23nm,0.9s						
HWUT	**Hardware Ranch**	**66.07**	**55**	eP	**P**	**03 00 46.0**	**+2.1**
	comp=Z,8.2nm,0.9s						
FURC	**Furnace Creek,**	**66.17**	**62**	P	**P**	**03 00 45.4**	**+1.0**
	baz=310						
TPNV	**Topopah Spring**	**66.25**	**61**	P	**P**	**03 00 45.4**	**+0.3**
	baz=310						
TPNV	**Topopah Spring**	**66.25**	**61**	eP	**P**	**03 00 46.3**	**+1.2**
	comp=Z,15nm,1.0s						
TPNV	**Topopah Spring**	**66.25**	**61**	eP	**P**	**03 00 46.3**	**+1.2**
TPNV				pmax	pmax		
	comp=Z,15nm,1.0s						
DUG	**Dugway, Tooele**	**66.25**	**56**	P	**P**	**03 00 44.0**	**-1.1**
	baz=310						
DUG	**Dugway, Tooele**	**66.25**	**56**	eP	**P**	**03 00 46.0**	**+0.9**
DUG	**Dugway, Tooele**	**66.25**	**56**	eP	**P**	**03 00 46.0**	**+0.9**
	comp=Z,9.4nm,0.9s						
DUG	**Dugway, Tooele**	**66.25**	**56**	eP	**P**	**03 00 46.0**	**+0.9**
DUG				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BW06	**Boulder Array**	**66.46**	**53**	P	**P**	**03 00 45.2**	**-1.3**
	baz=311						
BW06	**Boulder Array**	**66.46**	**53**	eP	**P**	**03 00 46.9**	**+0.4**
	comp=Z,7.5nm,0.8s						
PD31	**Pinedale Array**	**66.46**	**53**	eP	**P**	**03 00 49.3**	**+2.8**
PDAR	**Pinedale Array**	**66.46**	**53**	P	**P**	**03 00 46.6**	**+0.1**
	comp=Z,2.0nm,0.8s,baz=289,slow=1.5,SNR=11						
PDAR	**Pinedale Array**	**66.46**	**53**	eP	**P**	**03 00 46.4**	**-0.1**
GEYT	**Alibeck**	**66.47**	**301**	P	**P**	**03 00 46.6**	**+0.2**
	comp=Z,23nm,1.0s,baz=298,slow=4.2,SNR=29						
GYA0B	**ALIBECK ARRAY**	**66.47**	**301**	eP	**P**	**03 00 47.5**	**+1.2**
	comp=Z,42nm,0.9s						
EDW2	**Edwards Air Fo**	**66.47**	**64**	P	**P**	**03 00 47.1**	**+0.6**
	baz=310						
TCUT	**Toone Canyon**	**66.47**	**55**	eP	**P**	**03 00 44.4**	**-2.2**
	comp=Z,9.5nm,1.0s						
PSUT	**Pine Spring**	**66.69**	**58**	eP	**P**	**03 00 49.3**	**+1.3**
	comp=Z,4.8nm,0.8s						
WRAB	**Tennant Creek**	**66.77**	**198**	eP	**P**	**03 00 47.6**	**-0.7**
	comp=Z,5.9nm,0.6s						
WRAB	**Tennant Creek**	**66.77**	**198**	eP	**P**	**03 00 47.6**	**-0.7**
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.6s						
WR1	**Warramunga Arr**	**66.78**	**198**	eP	**P**	**03 00 48.4**	**+0.1**
	comp=Z,8.2nm,0.9s						
WRA	**Warramunga Arr**	**66.78**	**198**	P	**P**	**03 00 48.4**	**0.0**
	comp=Z,2.8nm,0.9s,baz=19,slow=7.0,SNR=12						
CHFC	**Chilao Flat St**	**66.80**	**64**	eP	**P**	**03 00 47.8**	**-0.9**
SHOC	**Shoshone, Teco**	**66.90**	**62**	P	**P**	**03 00 49.2**	**0.0**
	baz=310						
GSC	**Goldstone, Bar**	**66.95**	**63**	P	**P**	**03 00 48.5**	**-1.1**
	baz=310						
VSU	**Vasula**	**67.04**	**332**	ceP	**P**	**03 00 48.9**	**-0.7**
VSU				pmax	pmax		
	comp=Z,59nm,0.9s						
BFSC	**Mount Baldy Ra**	**67.09**	**64**	P	**P**	**03 00 51.1**	**+0.6**
	baz=310						
SHPR	**Sheep Range**	**67.20**	**61**	eP	**P**	**03 00 52.8**	**+1.5**
	comp=Z,9.4nm,1.1s						
FITZ	**Fitzroy Crossi**	**67.35**	**207**	eP	**P**	**03 00 53.1**	**+1.1**
	comp=Z,6.6nm,0.9s						
TUQ	**Turquoise Moun**	**67.42**	**62**	P	**P**	**03 00 52.1**	**-0.4**
	baz=310						
HEC	**Hector,Ludlow**	**67.55**	**63**	P	**P**	**03 00 54.4**	**+1.0**
	baz=310						
TBLU	**Trondheim**	**67.55**	**342**	eP	**P**	**03 00 51.6**	**-1.2**
VSR	**Storozhevoye**	**67.61**	**321**	eP	**P**	**03 00 52.0**	**-1.3**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CCUT	**Cedar City**	**67.62**	**59**	eP	**P**	**03 00 55.3**	**+1.4**
	comp=Z,6.5nm,1.0s						
MSU	**Marysvale**	**67.71**	**57**	eP	**P**	**03 00 57.7**	**+3.2**
MSU	**Marysvale**	**67.71**	**57**	eP	**P**	**03 00 57.7**	**+3.2**
SZCU	**Shurtz Canyon**	**67.76**	**59**	eP	**P**	**03 00 56.0**	**+1.2**
	comp=Z,6.6nm,0.9s						
TMUT	**Trail Mountain**	**67.77**	**56**	eP	**P**	**03 00 56.7**	**+1.7**
	comp=Z,5.0nm,1.0s						
P17A	**Butcher Ranch,**	**67.93**	**56**	eP	**P**	**03 00 57.6**	**+1.8**
	comp=Z,6.5nm,0.8s						
GMRC	**Granite Mounta**	**68.00**	**62**	P	**P**	**03 00 56.9**	**+0.7**
	baz=311						
MTPU	**Mount Pierson**	**68.01**	**58**	eP	**P**	**03 00 58.2**	**+1.6**
	comp=Z,6.9nm,0.9s						
Q16A	**Castle Valley**	**68.04**	**57**	eP	**P**	**03 00 57.8**	**+1.3**
	comp=Z,5.9nm,0.9s						
LCMT	**Little Creek M**	**68.05**	**59**	eP	**P**	**03 00 58.0**	**+1.5**
	comp=Z,16nm,1.0s						
P18A	**Preston Nutter**	**68.12**	**55**	eP	**P**	**03 00 59.9**	**+2.7**
	comp=Z,9.1nm,1.1s						
LDFC	**Landfair**	**68.15**	**62**	eP	**P**	**03 00 58.4**	**+1.2**
LDFC				epP	**pP**	**03 01 11.7**	**+2.1**
K22A	**Casper**	**68.22**	**51**	P	**P**	**03 00 56.9**	**-0.6**
	baz=312						
MDND	**Maddock**	**68.27**	**43**	P	**P**	**03 00 57.4**	**-0.2**
	baz=314						
SRU	**San Rafael Swe**	**68.30**	**56**	eP	**P**	**03 00 59.0**	**+0.9**
	comp=Z,13nm,1.0s						
SRU	**San Rafael Swe**	**68.30**	**56**	eP	**P**	**03 00 59.0**	**+0.9**
SRU				pmax	pmax		
	comp=Z,13nm,1.0s						
HWB	**Hans Werner Br**	**68.32**	**65**	eP	**P**	**03 00 59.2**	**+1.0**
RSSD	**Black Hills**	**68.57**	**49**	P	**P**	**03 00 59.8**	**0.0**
	baz=313						
RSSD	**Black Hills**	**68.57**	**49**	eP	**P**	**03 01 01.3**	**+1.5**
	comp=Z,8.4nm,0.8s						
RSSD	**Black Hills**	**68.57**	**49**	eP	**P**	**03 01 01.3**	**+1.5**
RSSD				pmax	pmax		
	comp=Z,8.0nm,0.8s						
DOMB	**Dombas**	**68.88**	**342**	eP	**P**	**03 01 00.9**	**-0.2**
O20A	**White River Ci**	**68.94**	**54**	eP	**P**	**03 01 03.1**	**+1.0**
	comp=Z,7.8nm,1.0s						
NC303	**NORSAR Array S**	**69.08**	**341**	eP	**P**	**03 01 02.2**	**-0.1**
NC303	**NORSAR Array S**	**69.08**	**341**	eP	**P**	**03 01 02.0**	**-0.4**
NC303				IAmb	IAmb	03 01 02.6	
	comp=Z,33nm,0.8s						
NC303				IAMs_20	IAMs_20	03 16 24.0	
	comp=Z,72µm,20.0s						
NC405	**NORSAR Array S**	**69.10**	**340**	eP	**P**	**03 01 02.0**	**-0.5**
NC204	**NORSAR Array S**	**69.18**	**341**	eP	**P**	**03 01 03.0**	**0.0**
NC204	**NORSAR Array S**	**69.18**	**341**	eP	**P**	**03 01 03.0**	**0.0**
NC204				IAmb	IAmb	03 01 03.7	
	comp=Z,86nm,0.9s						
NC204				IAMs_20	IAMs_20	03 16 18.2	
	comp=Z,59µm,19.1s						
AKN	**Aaknes**	**69.19**	**343**	eP	**P**	**03 01 04.8**	**+1.7**
AKN				IAmb	IAmb	03 01 05.5	
	comp=Z,57nm,1.1s						
ANGG	**Ammassalik, Gr**	**69.22**	**4**	eP	**P**	**03 01 04.6**	**+1.6**
	comp=Z,19nm,1.0s						
NB201	**NORSAR Array S**	**69.26**	**341**	eP	**P**	**03 01 02.6**	**-0.8**
NB2	**NORSAR Subarra**	**69.28**	**341**	P	**P**	**03 01 03.1**	**-0.6**
	comp=Z,38nm,0.8s,baz=28,slow=6.5						
NB2	**NORSAR Subarra**	**69.28**	**341**	P	**P**	**03 01 03.1**	**-0.6**
	baz=28,slow=6.5						
NBO00	**NORSAR Array S**	**69.39**	**341**	eP	**P**	**03 01 04.4**	**0.0**
HFS	**Hagfors**	**69.47**	**339**	P	**P**	**03 01 03.9**	**-0.8**
	comp=Z,54nm,0.7s,baz=54,slow=7.6,SNR=116						
NC602	**NORSAR Array S**	**69.47**	**340**	eP	**P**	**03 01 04.6**	**-0.2**
A33A	**Warroad**	**69.48**	**40**	P	**P**	**03 01 04.4**	**-0.7**
	baz=316						
NAO01	**NORSAR Array S**	**69.53**	**341**	eP	**P**	**03 01 05.2**	**0.0**
PV23	**Carpenter Ridg**	**69.62**	**56**	eP	**P**	**03 01 06.2**	**-0.3**
	comp=Z,12nm,0.9s						
AGMN	**Agassiz Nation**	**69.72**	**41**	P	**P**	**03 01 06.1**	**-0.5**
	baz=316						
AGMN	**Agassiz Nation**	**69.72**	**41**	eP	**P**	**03 01 06.3**	**-0.3**
	comp=Z,16nm,1.1s						
MICGM	**Minsk**	**69.73**	**329**	e	**P**	**03 01 06.0**	**-0.5**
MNK	**Minsk**	**69.73**	**329**	eP	**P**	**03 01 06.0**	**-0.5**
PV17	**East Wray Mesa**	**69.76**	**56**	eP	**P**	**03 01 07.7**	**+0.5**
	comp=Z,17nm,0.8s						
PV16	**Nyswonger Mesa**	**69.77**	**56**	eP	P	03 01 12.6	+5.3
	comp=Z,9.7nm,0.8s						
NACGM	**Naroch**	**69.81**	**330**	e	**P**	**03 01 07.0**	**0.0**
PV18	**Skein Mesa, Pa**	**69.81**	**56**	eP	**P**	**03 01 08.5**	**+0.9**
	comp=Z,13nm,0.9s						
PV03	**Paradox Valley**	**69.84**	**56**	eP	**P**	**03 01 09.3**	**+1.6**
PV13	**Radium Mtn., P**	**69.92**	**56**	eP	**P**	**03 01 09.3**	**+1.0**
	comp=Z,15nm,1.2s						
GROC	**Groznyy**	**69.99**	**312**	eP	**P**	**03 01 06.8**	**-1.5**
GROC				e		03 01 27.6	
GROC				eS	**S**	**03 10 15.8**	**+0.4**
GROC				pmax	pmax		
	comp=Z,48nm,1.0s						
AKT	**Akhty**	**70.13**	**309**	⇑iP	**P**	**03 01 10.3**	**+1.0**
AKT				e		03 01 30.1	
AKT				e		03 03 47.7	
AKT				eS	**S**	**03 10 18.7**	**+1.3**
AKT				e		03 11 08.3	
AKT				pmax	pmax		
	comp=Z,127nm,0.8s						
B34A	**Aery, Baudette**	**70.15**	**40**	P	**P**	**03 01 08.5**	**-0.7**
	baz=317						
BORG	**Borgarnes**	**70.18**	**357**	eP	**P**	**03 01 11.9**	**+2.9**
	comp=Z,24nm,0.8s						
BORG	**Borgarnes**	**70.18**	**357**	eP	**P**	**03 01 11.9**	**+2.9**
BORG				pmax	pmax		
	comp=Z,24nm,0.8s						
HYA	**Hoyanger**	**70.28**	**343**	eP	**P**	**03 01 10.2**	**+0.6**
SMCO	**Snowmass**	**70.31**	**54**	eP	**P**	**03 01 11.6**	**+0.8**
	comp=Z,8.2nm,1.1s						
AS01	**Alice Springs**	**70.47**	**197**	eP	**P**	**03 01 12.1**	**+0.8**
AS31	**Alice Springs**	**70.48**	**197**	eP	**P**	**03 01 12.0**	**+0.6**
	comp=Z,3.0nm,1.4s						
ASAR	**Alice Springs**	**70.48**	**197**	P	**P**	**03 01 12.0**	**+0.6**
	comp=Z,2.8nm,0.8s,baz=14,slow=6.2,SNR=23						
ASAR	**Alice Springs**	**70.48**	**197**	P	**P**	**03 01 12.0**	**+0.6**
ASAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ISCO	**Idaho Springs**	**70.65**	**53**	P	**P**	**03 01 12.7**	**-0.1**
	baz=313						
ISCO	**Idaho Springs**	**70.65**	**53**	eP	**P**	**03 01 13.9**	**+1.1**
	comp=Z,5.1nm,1.0s						
ISCO	**Idaho Springs**	**70.65**	**53**	eP	**P**	**03 01 13.9**	**+1.1**
ISCO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KONO	**Kongsberg**	**70.89**	**341**	ceP	**P**	**03 01 14.4**	**+0.9**
KONO				pmax	pmax		
	comp=Z,34nm,1.7s						
KONO	**Kongsberg**	**70.89**	**341**	eP	**P**	**03 01 13.5**	**+0.1**
NCK	**Nalchik**	**70.94**	**313**	i P	**P**	**03 01 14.9**	**+0.8**
NCK				pmax	pmax		
	comp=Z,88nm,0.8s						
C35A	**Jirik Farms, M**	**71.03**	**41**	P	**P**	**03 01 13.7**	**-0.8**
	baz=317						
KIV	**Kislovodsk**	**71.08**	**314**	eP	**P**	**03 01 15.9**	**+0.9**
KIV	**Kislovodsk**	**71.08**	**314**	eP	**P**	**03 01 14.9**	**-0.1**
	comp=Z,91nm,0.8s						
KIV	**Kislovodsk**	**71.08**	**314**	i P	**P**	**03 01 16.3**	**+1.2**
	SNR=25						
KIV	**Kislovodsk**	**71.08**	**314**	eP	**P**	**03 01 15.9**	**+0.9**
KIV				pmax	pmax		
	comp=Z,124nm,1.0s						
ASK	**Askoy**	**71.10**	**343**	eP	**P**	**03 01 15.3**	**+0.6**
ASK				IAmb	IAmb	03 01 16.3	
	comp=Z,30nm,0.9s						
G32A	**Webster**	**71.12**	**44**	P	**P**	**03 01 15.1**	**-0.1**
	baz=316						
G32A	**Webster**	**71.12**	**44**	eP	**P**	**03 01 13.8**	**-1.4**
	comp=Z,17nm,1.0s						
KBZ	**Khabaz**	**71.13**	**313**	P	**P**	**03 01 16.4**	**+1.2**
	comp=Z,98nm,0.9s,baz=69,slow=3.9,SNR=119						
ZEI	**Tsey**	**71.28**	**312**	eP	**P**	**03 01 14.4**	**-2.0**
ZEI				pmax	pmax		
	comp=Z,40nm,0.7s						
DUS	**Dusheti**	**71.34**	**311**	eP	**P**	**03 01 18.0**	**+1.4**
S22A	**4UR Ranch, Cre**	**71.36**	**55**	P	**P**	**03 01 16.6**	**-0.5**
	baz=313						
S22A	**4UR Ranch, Cre**	**71.36**	**55**	eP	**P**	**03 01 18.0**	**+0.9**
	comp=Z,5.9nm,1.2s						
DGRG	**David-gareji**	**71.43**	**310**	eP	**P**	**03 01 17.7**	**+0.6**
C36A	**Pine Crest Far**	**71.50**	**40**	P	**P**	**03 01 16.8**	**-0.7**
	baz=318						
NEY	**Neytrino**	**71.56**	**313**	i P	**P**	**03 01 18.5**	**+0.4**
NEY				pmax	pmax		
	comp=Z,9.0nm,1.0s						
TBLG	**Delisi**	**71.58**	**311**	eP	**P**	**03 01 19.4**	**+1.4**
	comp=Z,130nm,0.8s						
TBLG	**Delisi**	**71.58**	**311**	eP	**P**	**03 01 18.9**	**+0.9**
ONI	**Oni**	**71.65**	**312**	eP	**P**	**03 01 19.8**	**+1.3**
G33A	**Ortonville**	**71.69**	**44**	P	**P**	**03 01 17.6**	**-1.0**
	baz=317						
SUW	**Suwalki**	**71.79**	**331**	eP	**P**	**03 01 18.0**	**-1.0**
SUW	**Suwalki**	**71.79**	**331**	eP	**P**	**03 01 18.6**	**-0.4**
	comp=Z,55nm,1.0s						
SUW	**Suwalki**	**71.79**	**331**	eP	**P**	**03 01 18.0**	**-1.0**
C37A	**Embarrass**	**71.82**	**40**	P	**P**	**03 01 18.4**	**-1.0**
	baz=318						
OGNE	**Ogallala**	**71.83**	**50**	P	**P**	**03 01 18.5**	**-1.1**
	baz=315						
OGNE	**Ogallala**	**71.83**	**50**	eP	**P**	**03 01 18.0**	**-1.7**
	comp=Z,30nm,0.8s						
EYMN	**Ely**	**71.97**	**39**	P	**P**	**03 01 19.2**	**-1.0**
	baz=319						
EYMN	**Ely**	**71.97**	**39**	eP	**P**	**03 01 19.8**	**-0.5**
	comp=Z,10nm,1.0s						
D37A	**Cotton**	**72.14**	**40**	P	**P**	**03 01 20.6**	**-0.7**
	baz=318						
AKASG	**Malin Array Be**	**72.19**	**326**	P	**P**	**03 01 20.7**	**-0.7**
	comp=Z,23nm,0.6s,baz=37,slow=6.6,SNR=66						
AKBB	**Malin Array Si**	**72.19**	**326**	eP	**P**	**03 01 20.8**	**-0.7**
	comp=Z,33nm,0.8s						
KIEV	**Kiev**	**72.20**	**326**	eP	**P**	**03 01 20.9**	**-0.6**
KIEV	**Kiev**	**72.20**	**326**	eP	**P**	**03 01 20.7**	**-0.8**
	comp=Z,32nm,0.8s						
KIEV	**Kiev**	**72.20**	**326**	i P	**P**	**03 01 20.8**	**-0.6**
	SNR=25						
KIEV	**Kiev**	**72.20**	**326**	c iP	**P**	**03 01 20.9**	**-0.6**
KIEV				pmax	pmax		
	comp=Z,39nm,0.9s						
AK11	**Malin Array Si**	**72.23**	**326**	eP	**P**	**03 01 21.3**	**-0.4**
E36A	**McGregor**	**72.23**	**41**	P	**P**	**03 01 21.0**	**-0.8**
	baz=318						
C38A	**Sawbill Land.**	**72.24**	**39**	P	**P**	**03 01 21.0**	**-0.8**
	baz=319						
KMY	**Karmoy**	**72.26**	**343**	eP	**P**	**03 01 23.2**	**+1.5**
AKH	**Akhalkalaki**	**72.46**	**311**	⇑iP	**P**	**03 01 24.6**	**+1.1**
AKH	**Akhalkalaki**	**72.46**	**311**	eP	**P**	**03 01 25.5**	**+2.0**
	comp=Z,46nm,0.9s						
AKH	**Akhalkalaki**	**72.46**	**311**	eP	**P**	**03 01 25.1**	**+1.6**
ECSD	**EROS Data Cent**	**72.66**	**45**	P	**P**	**03 01 23.7**	**-0.7**
	baz=317						
ECSD	**EROS Data Cent**	**72.66**	**45**	eP	**P**	**03 01 24.0**	**-0.4**
	comp=Z,19nm,1.3s						
GNI	**Garni**	**72.69**	**310**	P	**P**	**03 01 27.0**	**+2.2**
	comp=Z,48nm,1.0s,baz=123,slow=4.1,SNR=21						
GNI	**Garni**	**72.69**	**310**	P	**P**	**03 01 27.0**	**+2.2**
GNI				pmax	pmax		
	comp=Z,48nm,1.0s						
H35A	**Sunnyside Ranc**	**72.83**	**43**	P	**P**	**03 01 24.8**	**-0.6**
	baz=318						
SOC	**Sochi**	**72.84**	**315**	eP	**P**	**03 01 25.7**	**+0.2**
SOC				eS	**S**	**03 10 51.1**	**+2.8**
SOC				pmax	pmax		
	comp=Z,45nm,0.7s						
E38A	**The Farm, Brul**	**72.95**	**40**	P	**P**	**03 01 25.3**	**-0.8**

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      baz=319
E38A  The Farm, Brul     72.95  40  eP         P        03 01 25.4 -0.6
      comp=Z,15nm,0.8s
ANN   Anapa              73.07 317  eP         P        03 01 26.3 -0.4
ANN                                 eS         SKiKP    03 10 55.6 +0.4
ANN                                  pmax      pmax
      comp=Z,49nm,0.7s
T25A  Trinidad           73.17  54   P         P        03 01 27.3 -0.5
      baz=315
T25A  Trinidad           73.17  54  eP         P        03 01 28.6 +0.8
      comp=Z,12nm,1.4s
F38A  Pierce - Schro     73.29  41   P         P        03 01 27.4 -0.6
      baz=319
H36A  Jessenland, He     73.36  43   P         P        03 01 28.4 -0.1
      baz=318
SPMN  Marine on St.      73.41  42   P         P        03 01 28.6 -0.1
      baz=319
BSD   Bornholm Skovb     73.48 336  i P        P        03 01 28.4 -0.6
      comp=Z,33nm,0.8s
BSD   Bornholm Skovb     73.48 336  i P        P        03 01 28.4 -0.6
BSD                                  pmax      pmax
      comp=Z,33nm,0.8s
ANMO  Albuquerque        73.50  57  i P        P        03 01 29.4 -0.4
ANMO                                 pmax      pmax
      comp=Z,2.0nm,1.0s
E39A  Mellen             73.57  40   P         P        03 01 29.1 -0.7
      baz=320
F39A  Loretta            73.76  40   P         P        03 01 29.5 -1.4
      baz=320
E40A  Wakefield          73.82  39   P         P        03 01 29.9 -1.3
      baz=320
H37A  Dierke Farm, C     73.83  42   P         P        03 01 31.2 -0.1
      baz=319
MUD   Monsted U'grnd     73.85 339  i P        P        03 01 31.6 +0.5
      comp=Z,23nm,1.1s
MUD   Monsted U'grnd     73.85 339  eP         P        03 01 31.6 +0.5
MUD                                  pmax      pmax
      comp=Z,23nm,1.1s
G38A  Ridgeland          73.89  41   P         P        03 01 30.6 -1.1
      baz=319
D41A  Chassel            73.93  38   P         P        03 01 31.6 -0.2
      baz=321
I37A  Lemond, Waseca     74.03  43   P         P        03 01 32.5  0.0
      baz=318
I37A  Lemond, Waseca     74.03  43  eP         P        03 01 32.4  0.0
      comp=Z,50nm,0.9s
LLD   Lille Linde        74.05 337  i P        P        03 01 32.3  0.0
      comp=Z,41nm,0.9s
LLD   Lille Linde        74.05 337  eP         P        03 01 32.3  0.0
LLD                                  pmax      pmax
      comp=Z,41nm,0.9s
F40A  Park Falls         74.12  40   P         P        03 01 31.9 -1.1
      baz=320
GKP   Gorka Klasztor     74.37 334  eP         P        03 01 34.3 +0.1
GKP   Gorka Klasztor     74.37 334  eP         P        03 01 34.3 +0.1
BEL   Belsk              74.41 331  eP         P        03 01 35.3 +0.8
BEL   Belsk              74.41 331  eP         P        03 01 35.3 +0.8
RGN   Rugen              74.44 336  eP         P        03 01 35.7 +1.2
      comp=Z,41nm,0.9s
SIM   Simferopol'        74.52 319c iP         P        03 01 35.5 +0.2
SIM                                 e                   03 01 49.0
SIM                                                     03 04 25.0
SIM                                  pmax      pmax
      comp=Z,55nm,0.7s
SIM                                  pmax      pmax
      comp=Z,350nm,11.7s
SORM  Soroca             74.56 324⇓iP          P        03 01 35.3 -0.1
SORM  Soroca             74.56 324 ⇓P          P        03 01 35.3 -0.1
G40A  Rib Lake           74.58  40   P         P        03 01 34.9 -0.8
      baz=320
E42A  Champion           74.70  38   P         P        03 01 35.5 -0.8
      baz=321
F41A  Three Lakes        74.71  39   P         P        03 01 35.2 -1.3
      baz=321
F41A  Three Lakes        74.71  39  eP         P        03 01 36.2 -0.3
      comp=Z,14nm,1.0s
K37A  Belmond            74.84  44   P         P        03 01 36.2 -1.0
      baz=319
H40A  Chili              74.98  41   P         P        03 01 36.9 -1.1
      baz=320
J38A  Wedel Dairy, R     74.99  43   P         P        03 01 37.1 -1.0
      baz=319
I39A  Houston            75.04  42   P         P        03 01 37.2 -1.2
      baz=320
SCHQ  Schefferville      75.07  22   P         P        03 01 39.1 +0.8
      comp=Z,5.6nm,0.7s,baz=217,slow=11,SNR=2.7
SCHQ  Schefferville      75.07  22  eP         P        03 01 39.1 +0.8
      comp=Z,12nm,0.8s
E43A  Lone Tree Farm     75.15  38   P         P        03 01 37.9 -1.0
      baz=322
KIS   Kishinev           75.26 323⇑iP          P        03 01 39.5  0.0
      comp=Z,200nm,1.8s
KIS   Kishinev           75.26 323  ePcP       PcP      03 01 53.0 +0.2
KIS   Kishinev           75.26 323⇑iP          P        03 01 39.5  0.0
KIS                                 e                   03 01 53.0
KIS                                  pmax      pmax
      comp=Z,190nm,1.8s
J39A  Decorah            75.35  42   P         P        03 01 38.0 -2.1
      baz=320
G42A  Mountain           75.40  39   P         P        03 01 39.4 -0.9
      baz=321
E44A  Grand Marais A     75.41  37   P         P        03 01 40.2 -0.2
      baz=322
F43A  Flat Rock, Esc     75.50  38   P         P        03 01 40.2 -0.6
      baz=322
KWP   Kalwaria Pacla     75.55 329  eP         P        03 01 41.8 +0.6
KWP   Kalwaria Pacla     75.55 329  eP         P        03 01 42.0 +0.8
      comp=Z,1μm,0.9s
KWP   Kalwaria Pacla     75.55 329  eP         P        03 01 41.7 +0.6
BANOM Banah              75.59 292   P         P        03 01 42.6 +0.8
SHME  Shamm              75.61 292   P         P        03 01 42.4 +0.5
F44A  Big Bay de Noc     75.71  38   P         P        03 01 41.8 -0.3
      baz=322
G43A  Wallace            75.72  39   P         P        03 01 41.5 -0.6
      baz=322
G43A  Wallace            75.72  39  eP         P        03 01 41.9 -0.2
      comp=Z,13nm,0.8s
WSAR  Wadi Sarin         75.88 289   P         P        03 01 43.7 +0.2
      comp=Z,7.8nm,1.0s,baz=84,slow=3.6,SNR=3.5
M38A  Pleasantville      76.07  45   P         P        03 01 44.1 -0.2
      baz=319
K40A  Colesburg          76.10  42   P         P        03 01 43.9 -0.5
      baz=320
OJC   Ojcow              76.10 330  eP         P        03 01 44.7 +0.4
OJC   Ojcow              76.10 330  eP         P        03 01 44.7 +0.4
OJC   Ojcow              76.10 330  eP         P        03 01 44.7 +0.4
      comp=Z,63nm,0.9s
OJC   Ojcow              76.10 330  eP         P        03 01 44.7 +0.4
L39A  Vinton             76.12  43   P         P        03 01 44.3 -0.2
      baz=320
BUR08 Bucovina Ar. S     76.22 326  eP         P        03 01 45.5 +0.4
BUR04 Bucovina Ar. S     76.24 326  eP         P        03 01 45.3 +0.1
BURAR Bucovina Array     76.24 326⇓iP          P        03 01 44.9 -0.3
BURAR Bucovina Array     76.24 326 ⇓P          P        03 01 44.9 -0.3
UOSS  Minazif            76.32 292  eP         P        03 01 46.6 +0.6
      comp=Z,24nm,0.9s
BIZ   Bicaz              76.43 325⇓iP          P        03 01 47.1 +0.9
HATD  Hatta, Dubai       76.45 292  i P        P        03 01 47.6 +0.9
      SNR=5.7
M39A  Webster            76.53  44   P         P        03 01 46.7 -0.2
      baz=320
UZH   Uzhgorod           76.53 328  eP         P        03 01 46.1 -0.6
UZH                                 i                   03 01 55.0
UZH                                 i                   03 02 05.3
UZH                                 e                   03 04 37.9
UZH                                 eS         S        03 11 27.0 -2.2
UZH                                 e                   03 19 46.7
L40A  Anamosa            76.55  43   P         P        03 01 46.1 -0.8
      baz=320
TESR  Tescani            76.55 324⇓iP          P        03 01 47.8 +0.9
F46A  Macinaw City C     76.58  37   P         P        03 01 46.2 -0.8
      baz=323
ASHO  Ashiyiah           76.60 291   P         P        03 01 48.3 +0.8
NIE   Niedzica           76.60 330  eP         P        03 01 47.9 +0.7
NIE   Niedzica           76.60 330  eP         P        03 01 47.9 +0.7
CRVS  Cervenica-Dubn     76.61 329  eP         P        03 01 47.7 +0.5
CRVS                                 pmax      pmax
      comp=Z,23nm,1.1s
CRVS  Cervenica-Dubn     76.61 329  eP         P        03 01 47.7 +0.5
TLCR                     76.70 322⇑iP          P        03 01 48.6 +0.9
TLCR                     76.70 322 ⇑P          P        03 01 48.6 +0.9
KSP   Ksiaz              76.75 333  eP         P        03 01 48.3 +0.3
KSP   Ksiaz              76.75 333  eP         P        03 01 48.3 +0.3
TRPA  Tarpa              76.85 328⇑iP          P        03 01 49.3 +0.8
P37A  Lathrop            76.86  46   P         P        03 01 48.7 -0.1
      baz=319
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L41A  Preston            76.88  43   P         P        03 01 48.2 -0.7
      baz=320
OKC   Ostrava-Krasne     77.00 331  eP         P        03 01 49.9 +0.6
OKC                                 epP        pP       03 02 02.8 +0.9
OKC   Ostrava-Krasne     77.00 331  eP         P        03 01 49.9 +0.6
OKC                                 e                   03 02 02.8
VRI   Vrincioaia         77.04 324⇑iP          P        03 01 50.0 +0.3
VRI   Vrincioaia         77.04 324 ⇑P          P        03 01 50.0 +0.3
PLOR  Plostina           77.08 324⇑iP          P        03 01 50.8 +0.8
PLOR  Plostina           77.08 324 ⇑P          P        03 01 50.8 +0.8
CHGQ  Chibougamau        77.11  28   P         P        03 01 49.0 -1.0
      baz=329
ASUD  Al Ashush, Dub     77.12 292   P         P        03 01 51.3 +0.9
LANS  Liptovska Anna     77.12 330  eP         P        03 01 51.4 +1.3
LANS  Liptovska Anna     77.12 330  eP         P        03 01 51.4 +1.3
UPC   Upice              77.13 333  eP         P        03 01 50.7 +0.6
UPC   Upice              77.13 333  eP         P        03 01 50.7 +0.6
DPC   Dobruska-Polom     77.16 332  eP         P        03 01 51.0 +0.7
DPC                                 epP        pP       03 02 04.0 +1.1
DPC   Dobruska-Polom     77.16 332  eP         P        03 01 51.0 +0.7
DPC                                 e                   03 02 04.0
KRLC  Kraliky            77.25 332  eP         P        03 01 51.4 +0.6
KRLC                                epP        pP       03 02 04.3 +0.9
KRLC  Kraliky            77.25 332  eP         P        03 01 51.4 +0.6
KRLC                                e                   03 02 04.3
MORC  Moravsky Berou     77.25 331  eP         P        03 01 50.7 -0.1
      comp=Z,48nm,0.9s
MORC  Moravsky Berou     77.25 331⇑iP          P        03 01 51.3 +0.5
MORC                                e                   03 02 03.7
P38A  Dawn               77.25  46   P         P        03 01 50.5 -0.4
      baz=319
N40A  Mertquake, Sal     77.27  44   P         P        03 01 50.4 -0.6
      baz=320
CLL   Collm              77.37 335⇑iP          P        03 01 51.1 -0.3
      comp=Z,57nm,1.0s
CLL                                 i pP       pP       03 02 03.6 -0.4
      comp=Z,43nm,0.9s
CLL   Collm              77.37 335  eP         P        03 01 50.0 -1.4
      comp=Z,68nm,1.1s
CLL   Collm              77.37 335⇑iP          P        03 01 51.1 -0.3
CLL                                 i                   03 02 03.6
CLL                                  pmax      pmax
      comp=Z,57nm,1.0s
M41A  Milan              77.40  43   P         P        03 01 50.9 -0.8
      baz=320
TIRR  Tirgusor           77.45 322  eP         P        03 01 51.8 -0.2
      comp=Z,21nm,1.0s
TIRR  Tirgusor           77.45 322  eP         P        03 01 51.8 -0.2
TIRR                                 pmax      pmax
      comp=Z,21nm,1.0s
BRG   Berggiesshubel     77.47 334  i P        P        03 01 51.8 -0.2
      comp=Z,29nm,1.2s
BRG   Berggiesshubel     77.47 334  i P        P        03 01 51.8 -0.2
BRG                                  pmax      pmax
      comp=Z,29nm,1.2s
TLB   Topalu             77.51 322⇓iP          P        03 01 52.2 -0.1
TLB   Topalu             77.51 322 ⇓P          P        03 01 52.2 -0.1
EKA   Eskdalemuir Ar     77.52 346   P         P        03 01 51.9 -0.3
      comp=Z,11nm,0.7s,baz=24,slow=5.4,SNR=30
ESK   Eskdalemuir        77.54 346  eP         P        03 01 52.8 +0.5
      comp=Z,33nm,1.3s
ESK   Eskdalemuir        77.54 346  eP         P        03 01 52.8 +0.5
ESK                                  pmax      pmax
      comp=Z,33nm,1.3s
PVCC  Panska Ves         77.57 334  eP         P        03 01 53.2 +0.7
PVCC  Panska Ves         77.57 334  eP         P        03 01 53.2 +0.7
MLR   Muntele Rosu       77.67 324   P         P        03 01 53.7 +0.3
      comp=Z,6.1nm,0.8s,baz=226,slow=7.2,SNR=48
MLR   Muntele Rosu       77.67 324⇑iP          P        03 01 53.7 +0.3
MLR   Muntele Rosu       77.67 324  eP         P        03 01 53.7 +0.3
      comp=Z,49nm,1.2s
ILGA  Ilgaz              77.68 317  eP         P        03 01 55.7 +2.1
      comp=Z,58nm,1.0s
O40A  La Belle           77.71  45   P         P        03 01 52.4 -1.1
      baz=320
Q38A  Cooks Store, C     77.71  46   P         P        03 01 52.7 -0.9
      baz=319
ISR   Istrita            77.72 324⇑iP          P        03 01 54.4 +0.9
ISR   Istrita            77.72 324 ⇑P          P        03 01 54.4 +0.9
N41A  Harden Midland     77.76  44   P         P        03 01 52.7 -1.1
      baz=320
VYHS  Vyhne              77.90 330  eP         P        03 01 55.1 +0.7
VYHS                                 pmax      pmax
      comp=Z,17nm,1.0s
VYHS  Vyhne              77.90 330  eP         P        03 01 55.1 +0.7
Q39A  Willow Grove F     77.97  46   P         P        03 01 54.7 -0.3
      baz=320
VRAC  Vranov             77.97 332⇓iP          P        03 01 55.1 +0.3
VRAC  Vranov             77.97 332 ⇓P          P        03 01 55.1 +0.3
VRAC  Vranov             77.97 332⇑iP          P        03 01 55.5 +0.7
VRAC                                e                   03 02 08.2
JAVC  Velka Javorina     77.99 331⇑iP          P        03 01 56.5 +1.5
JAVC                                e                   03 02 09.0
PSZ   Piszkesteto        78.01 329⇑iP          P        03 01 55.8 +0.7
PSZ   Piszkesteto        78.01 329⇑eP          P        03 01 55.8 +0.7
PSZ   Piszkesteto        78.01 329  eP         P        03 01 55.9 +0.7
      comp=Z,42nm,1.2s
PSZ   Piszkesteto        78.01 329 ⇑P          P        03 01 55.8 +0.7
GOPC  GO Pecny, Ondr     78.04 333  eP         P        03 01 55.6 +0.4
GOPC                                epP        pP       03 02 08.9 +1.1
GOPC  GO Pecny, Ondr     78.04 333  eP         P        03 01 55.6 +0.4
GOPC                                e                   03 02 08.9
PRU   Pruhonice          78.05 333  eP         P        03 01 55.9 +0.7
PRU                                 epP        pP       03 02 08.8 +1.0
PRU   Pruhonice          78.05 333  eP         P        03 01 55.9 +0.7
PRU                                 e                   03 02 08.8
P40A  Paris              78.07  45   P         P        03 01 54.6 -0.9
      baz=320
VOIR                     78.08 325⇑iP          P        03 01 56.6 +1.0
VOIR                     78.08 325 ⇑P          P        03 01 56.6 +1.0
R38A  Fenwick Farm,      78.14  47   P         P        03 01 54.8 -1.1
      baz=319
O41A  Passleys Farm,     78.20  44   P         P        03 01 54.9 -1.4
      baz=320
KRUC  Moravsky           78.25 332⇑iP          P        03 01 56.9 +0.6
KRUC                                e                   03 02 09.0
ARR   Arges              78.30 325⇑iP          P        03 01 58.0 +1.2
SMOL  Smolenice          78.37 331  eP         P        03 01 58.2 +1.2
SMOL  Smolenice          78.37 331  eP         P        03 01 58.2 +1.2
P41A  Barry, Barry       78.45  44   P         P        03 01 57.6  0.0
      baz=320
Q40A  Laux Farm, Aux     78.47  45   P         P        03 01 57.1 -0.6
      baz=320
NKC   Novy Kostel        78.48 335  eP         P        03 01 58.3 +0.6
NKC   Novy Kostel        78.48 335  eP         P        03 01 58.3 +0.6
R39A  Chumby, Stover     78.49  47   P         P        03 01 56.4 -1.5
      baz=320
WTSB  Winterswijk        78.51 339  eP         P        03 01 58.0 +0.3
      comp=Z,59nm,1.0s
MODS  Modra-Piesok       78.54 331  eP         P        03 01 58.9 +0.9
MODS                                 pmax      pmax
      comp=Z,70nm,1.5s
MODS  Modra-Piesok       78.54 331  eP         P        03 01 58.9 +0.9
S38A  Stockton           78.56  48   P         P        03 01 57.4 -0.8
      baz=319
SRO2  Moca               78.68 330  eP         P        03 01 58.4 -0.3
SRO2  Moca               78.68 330  eP         P        03 01 58.4 -0.3
BUD   Budapest           78.69 329⇑eP          P        03 01 59.3 +0.5
BR101 Keskin Array S     78.74 316  eP         P        03 01 60.0 +0.5
BR131 Keskin Array S     78.74 316  eP         P        03 02 00.1 +0.6
BRTR  Keskin Array B     78.74 316   P         P        03 01 60.0 +0.6
      comp=Z,9.4nm,0.8s,baz=88,slow=3.5,SNR=56
BRTR  Keskin Array B     78.74 316   P         P        03 02 00.0 +0.6
BRTR                                 pmax      pmax
      comp=Z,10.0nm,0.8s
T38A  Diamond            78.81  48   P         P        03 01 59.3 -0.4
      baz=319
S39A  Bolivar            78.82  47   P         P        03 01 58.5 -1.2
      baz=320
P42A  Winchester         78.87  44   P         P        03 01 59.5 -0.5
      baz=321
PRD   Provadia           78.90 322  i P        P        03 02 00.5 +0.5
R40A  Maddies Statio     78.91  46   P         P        03 01 59.3 -0.9
      baz=320
R40A  Maddies Statio     78.91  46  eP         P        03 01 59.9 -0.3
      comp=Z,12nm,0.9s
Q41A  Truxton            78.92  45   P         P        03 01 58.7 -1.5
      baz=320
ANTO  Ankara             79.04 317  eP         P        03 02 02.2 +1.2
      comp=Z,27nm,0.9s
CSKK  Csˆ‡kako           79.06 330  ePKKPdf    P        03 02 01.8 +0.9
BR231 Keskin MP Arra     79.07 317  eP         P        03 02 02.6 +1.4
KHC   Kasperske Hory     79.11 333  eP         P        03 02 01.6 +0.5
KHC                                 ex         x        03 02 15.3
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KHC   Kasperske Hory     79.11 333  eP         P        03 02 01.7 +0.6
KHC   Kasperske Hory     79.11 333  eP         P        03 02 01.7 +0.6
      comp=Z,11nm,0.9s
KHC   Kasperske Hory     79.11 333  eP         P        03 02 01.6 +0.5
KHC                                 e                   03 02 15.3
BZS   Buzias             79.29 327⇑iP          P        03 02 01.6 -0.5
BZS   Buzias             79.29 327 ⇑P          P        03 02 01.6 -0.5
Q42A  Golden Eagle       79.30  45   P         P        03 02 02.1 -0.1
      baz=321
S40A  Lebanon            79.31  47   P         P        03 02 01.7 -0.7
      baz=320
GEC2  GERESS Array S     79.32 333  eP         P        03 02 02.6 +0.2
      comp=Z,8.1nm,0.8s
GEC2  GERESS Array S     79.32 333  eP         P        03 02 02.6 +0.2
GEC2                                 pmax      pmax
      comp=Z,8.0nm,0.8s
GERES GERESS Array B     79.32 333   P         P        03 02 02.4 +0.1
      comp=Z,4.3nm,0.6s,baz=33,slow=5.5,SNR=48
GEA0  GERESS Array S     79.32 333  eP         P        03 02 01.5 -0.8
GRFO  Grafenberg         79.33 335  eP         P        03 02 03.1 +0.9
      comp=Z,32nm,0.8s
GRFO  Grafenberg         79.33 335  eP         P        03 02 03.2 +0.9
GRFO                                 pmax      pmax
      comp=Z,32nm,0.8s
R41A  Rosebud            79.35  46   P         P        03 02 02.0 -0.6
      baz=320
CONA  Conrad Observa     79.41 331  epP        P        03 02 03.9 +1.0
      comp=Z,27nm,1.0s,SNR=19
SZH   Strazhica          79.47 323  i P        P        03 02 03.3 +0.1
CCM   Cathedral Cave     79.60  46   P         P        03 02 04.0  0.0
      baz=321
CCM   Cathedral Cave     79.60  46  eP         P        03 02 04.7 +0.8
      comp=Z,15nm,0.9s
CCM   Cathedral Cave     79.60  46  eP         P        03 02 04.7 +0.8
CCM                                  pmax      pmax
      comp=Z,15nm,0.9s
O45A  Potomac            79.62  42   P         P        03 02 04.2 +0.2
      baz=322
T40A  Mansfield          79.64  47   P         P        03 02 02.9 -1.3
      baz=320
R42A  Luebbering         79.66  45   P         P        03 02 04.0 -0.3
      baz=321
S41A  Jillco Farms,      79.71  46   P         P        03 02 04.0 -0.6
      baz=320
U39A  Green Forest       79.73  48   P         P        03 02 04.3 -0.4
      baz=320
SFIN  Lafayette          79.81  42   P         P        03 02 04.4 -0.7
      baz=322
HGN   Heimansgroeve      79.83 339  eP         P        03 02 05.2 +0.3
      comp=Z,55nm,1.1s
MORH  Mˆ‡rˆ¡gy, Hung     79.91 329  ePKKPdf    P        03 02 04.9 -0.5
MEM   Membach            79.95 339 ⇑P          P        03 02 05.8 +0.2
      comp=Z,28nm,0.8s
BANO  Bancroft           79.96  33   P         P        03 02 04.8 -1.0
      baz=327
MOA   Molln              80.01 332  epP        P        03 02 06.4 +0.4
      comp=Z,12nm,0.8s,SNR=8.3
S42A  Caledonia          80.05  45   P         P        03 02 05.7 -0.7
      baz=321
V39A  Pettigrew          80.05  49   P         P        03 02 05.5 -1.0
      baz=320
U40A  Yellville          80.08  48   P         P        03 02 05.9 -0.7
      baz=320
ARSA  Arzberg            80.11 331  eP         P        03 02 06.4 -0.1
      comp=Z,6.1nm,0.9s,SNR=6.8
T41A  Mountain View      80.11  47   P         P        03 02 06.7 -0.1
      baz=320
P45A  Graceland, Par     80.18  42   P         P        03 02 06.5 -0.5
      baz=322
TRQ   Mont Tremblant     80.20  31  eP         P        03 02 04.9 -2.2
PLVO  Plevna             80.27  33   P         P        03 02 06.4 -1.0
      baz=328
P46A  Rosedale           80.36  42   P         P        03 02 07.8 -0.2
      baz=322
PKRO  Pickering          80.39  35   P         P        03 02 07.6 -0.5
      baz=327
T42A  Van Buren          80.47  46   P         P        03 02 08.1 -0.5
      baz=321
Q45A  Warren Harvey,     80.48  43   P         P        03 02 08.8 +0.1
      baz=322
R44A  Waltonville        80.53  44   P         P        03 02 08.8 -0.1
      baz=322
S43A  Fulton Ridge,      80.56  45   P         P        03 02 08.4 -0.7
      baz=321
U41A  Viola              80.57  47   P         P        03 02 07.9 -1.3
      baz=320
ALFO  Alfred             80.59  31   P         P        03 02 08.2 -0.9
      baz=329
JCT   Junction City      80.61  56   P         P        03 02 09.7 +0.1
      baz=318
WLVO  Wesleyville        80.70  34   P         P        03 02 09.2 -0.5
      baz=327
SOKA  Soboth             80.78 331  epP        P        03 02 10.5 +0.2
      comp=Z,14nm,0.8s,SNR=17
WLF   Walferdange        80.78 338 ⇓P          P        03 02 11.8 +1.8
WLF   Walferdange        80.78 338  eP         P        03 02 12.6 +2.5
      comp=Z,12nm,0.8s
DOU   Dourbes            80.78 339 ⇑P          P        03 02 10.1  0.0
PERS  Pernice            80.78 331  i P        P        03 02 10.4 +0.2
PGB   Panagyurishte      80.81 324  i P        P        03 02 10.6 +0.2
O48A  Farmland           80.81  40   P         P        03 02 09.3 -1.2
      baz=324
X39A  Fountain Ranch     80.81  50   P         P        03 02 09.8 -0.8
      baz=320
W40A  Ferguson Farm,     80.85  49   P         P        03 02 09.2 -1.5
      baz=320
V41A  Mountainview       80.88  48   P         P        03 02 10.0 -0.8
      baz=320
S44A  Carbondale         80.88  45   P         P        03 02 10.5 -0.3
      baz=322
P47A  Martinsville       80.91  42   P         P        03 02 10.4 -0.5
      baz=323
KBA   Koelnbreinsper     80.98 333  epP        P        03 02 12.6 +1.1
      comp=Z,23nm,0.7s,SNR=17
PBMO  Poplar Bluff       81.00  46  eP         P        03 02 11.3 -0.2
      comp=Z,14nm,1.0s
KDZ   Kurdzhali          81.01 322  i P        P        03 02 12.4 +0.9
MIAR  Mount Ida          81.07  49   P         P        03 02 11.9  0.0
      baz=320
MIAR  Mount Ida          81.07  49  eP         P        03 02 12.1 +0.2
      comp=Z,11nm,1.0s
MIAR  Mount Ida          81.07  49  eP         P        03 02 12.1 +0.2
MIAR                                 pmax      pmax
      comp=Z,11nm,1.0s
OBKA  Obir               81.08 332  epP        P        03 02 12.1 +0.2
      comp=Z,13nm,0.7s
VTS   Vitosha            81.17 324⇑iP          P        03 02 12.5  0.0
VTS   Vitosha            81.17 324  eP         P        03 02 13.0 +0.5
      comp=Z,33nm,0.8s
VTS   Vitosha            81.17 324  i P        P        03 02 12.8 +0.3
VTS   Vitosha            81.17 324   P         P        03 02 12.6  0.0
VTS   Vitosha            81.17 324 ⇑P          P        03 02 12.5  0.0
T44A  Benton             81.18  45   P         P        03 02 12.3 -0.1
      baz=322
DIVS  Divibare           81.19 327  eP         P        03 02 12.0 -0.5
      comp=Z,24nm,0.9s
S45A  Carrier Mills      81.22  44   P         P        03 02 12.5 -0.1
      baz=322
O49A  Covington          81.24  40   P         P        03 02 12.3 -0.4
      baz=324
Q47A  Bedord North L     81.27  42   P         P        03 02 12.2 -0.7
      baz=323
MYKA  Terra Mystica      81.28 332  eP         P        03 02 12.8 -0.1
      comp=Z,12nm,0.8s
RZN   Rozhen             81.28 323  i P        P        03 02 13.6 +0.4
W41B  Gary Mavity, V     81.30  48   P         P        03 02 12.3 -0.8
      baz=320
W41B  Gary Mavity, V     81.30  48  eP         P        03 02 12.5 -0.6
      comp=Z,8.8nm,0.8s
N50A  Nevada             81.30  39   P         P        03 02 12.9 -0.1
      baz=325
WATA  Walderalm          81.32 334  epP        P        03 02 14.5 +1.3
      comp=Z,19nm,0.6s,SNR=21
P48A  Milroy             81.32  41   P         P        03 02 12.2 -1.0
      baz=323
ALN   Alexandroupoli     81.35 321  eP         P        03 02 14.4 +1.2
      comp=Z,17nm,1.1s
WTTA  Wattenberg         81.36 334  epP        P        03 02 13.8 +0.3
      comp=Z,29nm,0.9s,SNR=9.3
RDO   Rodhopi            81.37 322   P         P        03 02 13.9 +0.5
RDO   Rodhopi            81.37 322   P         P        03 02 13.9 +0.5
BFO   Black Forest       81.40 336  eP         P        03 02 14.0 +0.5
      comp=Z,19nm,0.9s
BFO   Black Forest       81.40 336c eP         P        03 02 13.9 +0.5
RETA  Reutte             81.44 334  epP        P        03 02 14.6 +0.9
      comp=Z,10nm,0.8s,SNR=10
MOTA  Moosalm            81.46 334  epP        P        03 02 15.5 +1.6
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	comp=Z,23nm,0.7s,SNR=23						
X40A	Basin Creek Fa	81.51	49	P	P	03 02 13.8	-0.5
	baz=320						
ABTA	Abfaltersbach	81.55	333	*e*pP	P	03 02 14.9	+0.5
	comp=Z,6.2nm,0.8s						
P49A	Miami Univ. Ec	81.59	41	P	P	03 02 14.2	-0.4
	baz=324						
O50A	Cable	81.59	40	P	P	03 02 13.1	-1.5
	baz=324						
CADS	Cadrg	81.60	332	*i* P	P	03 02 13.6	-1.0
Y40A	Okolona	81.64	49	P	P	03 02 15.7	+0.8
	baz=320						
BLY	Banja Luka	81.69	329	⇑*i*P	P	03 02 14.7	-0.3
BLY	Banja Luka	81.69	329	*e*P	P	03 02 14.2	-0.8
	comp=Z,8.3nm,0.9s						
BOJS	Bojanci	81.72	331	*i* P	P	03 02 15.0	-0.2
R47A	Wooly Knot Far	81.73	42	P	P	03 02 14.4	-0.9
	baz=323						
MMB	Musomiste	81.78	323	*i* P	P	03 02 16.3	+0.7
KKB	Krupnik	81.82	324	*i* P	P	03 02 16.5	+0.7
ECH	Echery	81.83	337	*e*P	P	03 02 15.0	-0.7
	comp=Z,22nm,0.8s						
ECH	Echery	81.83	337	*e*P	P	03 02 15.0	-0.7
ECH				pmax	pmax		
	comp=Z,22nm,0.8s						
FETA	Feichten	81.86	334	*e*pP	P	03 02 17.0	+0.9
	comp=Z,21nm,1.0s,SNR=11						
DAVA	Damuels	81.88	335	*e*pP	P	03 02 16.9	+0.8
	comp=Z,23nm,0.8s,SNR=12						
WCI	Wyandotte Cave	81.89	42	P	P	03 02 15.7	-0.5
	baz=323						
NVR	Nevrokopi	81.92	323	P	P	03 02 16.1	-0.3
NVR	Nevrokopi	81.92	323	P	P	03 02 16.1	-0.3
Q49A	Aurora	81.93	41	P	P	03 02 15.4	-1.0
	baz=324						
P50A	Jamestown	81.95	40	P	P	03 02 15.5	-1.0
	baz=324						
T46A	Princeton	82.06	44	P	P	03 02 17.1	0.0
	baz=322						
PLE	Pljevlja	82.08	327	⇑*i*P	P	03 02 17.1	-0.1
MANT	Manisa	82.15	318	*e*P	P	03 02 18.5	+0.7
	comp=Z,68nm,0.6s						
M54A	Oil Creek Stat	82.19	36	P	P	03 02 17.2	-0.5
	baz=326						
SRS	Serrai	82.23	323	P	P	03 02 17.8	-0.1
SRS	Serrai	82.23	323	P	P	03 02 17.8	-0.1
SRS	Serrai	82.23	323	P	P	03 02 17.8	-0.1
IVA	Berane	82.27	326	⇑*i*P	P	03 02 18.1	-0.1
DAVOX	Davos/Dischmat	82.34	335	P	P	03 02 18.9	+0.3
	comp=Z,21nm,0.7s,baz=2.3,slow=13,SNR=31						
STIP	Stip	82.34	324	*i* P	P	03 02 17.4	-1.1
UPM	Unac-Piva	82.37	327	*e*P	P	03 02 18.1	-0.8
SKO	Skopje	82.41	325	*i* P	P	03 02 19.4	+0.5
KOME	Kolasin	82.44	327	⇑*i*P	P	03 02 18.5	-0.6
S48A	Wiedeman Farm,	82.46	43	P	P	03 02 18.6	-0.6
	baz=323						
PVY	Plav	82.48	326	⇑*i*P	P	03 02 19.2	-0.2
KNT	Kendrikon	82.49	324	P	P	03 02 19.7	+0.4
KNT	Kendrikon	82.49	324	P	P	03 02 19.7	+0.4
KNT	Kendrikon	82.49	324	P	P	03 02 19.7	+0.4
T47A	Sharon Grove	82.49	44	P	P	03 02 18.6	-0.8
	baz=323						
VAY	Valandovo	82.49	324	*i* P	P	03 02 19.7	+0.5
N54A	Moraine State	82.51	37	P	P	03 02 19.5	+0.1
	baz=326						
CSS	Mathiatis	82.59	313	*e*P	P	03 02 20.3	+0.4
	comp=Z,23nm,0.9s						
Q51A	Peebles	82.63	40	P	P	03 02 19.6	-0.4
	baz=325						
NKME	Niksic	82.72	327	⇑*i*P	P	03 02 20.1	-0.4
S49A	Springfield	82.73	42	P	P	03 02 20.2	-0.3
	baz=324						
T48A	Bowling Green	82.74	43	P	P	03 02 19.3	-1.4
	baz=323						
BRY	Bratogost	82.77	327	*e*P	P	03 02 19.8	-1.1
WVT	Waverly	82.81	45	P	P	03 02 20.4	-0.6
	baz=322						
U47A	Clarksville	82.83	44	P	P	03 02 20.8	-0.3
	baz=323						
ASF	Jabal al Asfar	82.83	309	P	P	03 02 21.4	0.0
	comp=Z,12nm,0.9s,baz=53,slow=2.5,SNR=16						
PDG	Podgorica	82.89	327	⇑*i*P	P	03 02 20.5	-0.8
TTG	Podgorica	82.89	327	*e*P	P	03 02 20.9	-0.4
TTG	Podgorica	82.89	327	*e*P	P	03 02 20.7	-0.6
	comp=Z,31nm,0.7s						
TTG	Podgorica	82.89	327	*e*P	P	03 02 20.7	-0.6
TTG				pmax	pmax		
	comp=Z,31nm,0.7s						
Z42A	Norrel Spur, H	82.91	49	P	P	03 02 21.6	0.0
	baz=321						
CEME	Cevo	82.93	327	⇑*i*P	P	03 02 20.7	-0.9
V46A	Holladay	82.93	45	P	P	03 02 21.4	-0.3
	baz=322						
KRUS	Krusevo	83.00	325	*i* P	P	03 02 22.2	+0.2
MMAI	Mount Meron Ar	83.00	311	P	P	03 02 23.3	+1.2
	comp=Z,32nm,0.8s,baz=38,slow=7.3,SNR=26						
R51A	Hillsboro	83.11	41	P	P	03 02 21.2	-1.3
	baz=324						
DRME	Dracevica, Mon	83.13	326	⇑*i*P	P	03 02 22.1	-0.5
U48A	Cassie Pea, Po	83.14	44	P	P	03 02 22.0	-0.8
	baz=323						
BUM	Brajici-Budva	83.14	327	⇑*i*P	P	03 02 22.3	-0.4
HCY	Herceg Novi	83.17	327	⇑*i*P	P	03 02 22.5	-0.3
V47A	Nunnelly	83.20	45	P	P	03 02 22.6	-0.4
	baz=323						
ULC	Ulcinj	83.30	326	⇑*i*P	P	03 02 22.9	-0.6
OHR	Ohrid	83.40	325	*i* P	P	03 02 23.3	-0.7
FNA	Florina	83.44	324	*e*P	P	03 02 24.2	-0.1
	comp=Z,24nm,0.8s						
FNA	Florina	83.44	324	P	P	03 02 23.6	-0.7
FNA	Florina	83.44	324	*e*P	P	03 02 24.2	-0.1
FNA				pmax	pmax		
	comp=Z,24nm,0.8s						
SENIN	Lac Senin/Sane	83.48	336	*e*P	P	03 02 24.8	+0.3
	comp=Z,20nm,0.8s						
R52A	Catlettsburg	83.50	40	P	P	03 02 24.5	-0.1
	baz=325						
U49A	Red Boiling Sp	83.51	43	P	P	03 02 23.9	-0.8
	baz=324						
T50A	Nancy	83.55	42	P	P	03 02 24.4	-0.5
	baz=324						
V48A	Smith Brothers	83.62	44	P	P	03 02 24.6	-0.6
	baz=323						
W47A	Westpoint	83.62	45	P	P	03 02 23.5	-1.8
	baz=323						
S51A	Beattyville	83.64	41	P	P	03 02 24.3	-1.0
	baz=325						
O56A	Blue Knob Stat	83.69	36	P	P	03 02 24.7	-0.9
	baz=327						
NEST	Nestorio	83.88	324	P	P	03 02 26.3	-0.3
T51A	Gray	84.02	42	P	P	03 02 26.7	-0.5
	baz=324						
U50A	Jamestown	84.04	43	P	P	03 02 25.9	-1.4
	baz=324						
W48A	Pulaski	84.04	45	P	P	03 02 26.3	-1.0
	baz=323						
V49A	McMinnville	84.05	44	P	P	03 02 25.7	-1.7
	baz=324						
RAYN	Ar Rayn	84.20	298	*e*P	P	03 02 29.3	+0.8
	comp=Z,19nm,0.9s						
RAYN	Ar Rayn	84.20	298	*i* P	P	03 02 29.3	+0.8
	SNR=11						
AGG	Agios Georgios	84.51	323	*e*P	P	03 02 29.0	-0.7
	comp=Z,37nm,0.8s						
AGG	Agios Georgios	84.51	323	*e*P	P	03 02 29.0	-0.7
AGG				pmax	pmax		
	comp=Z,37nm,0.8s						
V50A	Pikevile	84.51	43	P	P	03 02 29.1	-0.6
	baz=324						
VLC	Villacollemand	84.53	333	*e*P	P	03 02 30.5	+0.7
	comp=Z,34nm,1.0s						
Y47A	UCPARC, Winfie	84.56	46	P	P	03 02 28.7	-1.3
	baz=323						
JAN	Janina	84.60	324	P	P	03 02 30.3	+0.1
JAN	Janina	84.60	324	P	P	03 02 30.3	+0.1
JAN	Janina	84.60	324	P	P	03 02 30.3	+0.1
U52A	Thorn Hill	84.75	42	P	P	03 02 30.3	-0.7
	baz=325						
V51A	Loudon	84.77	43	P	P	03 02 30.0	-1.1
	baz=324						
W50A	Signal Mountai	84.79	44	P	P	03 02 30.1	-1.1
	baz=324						
X49A	Woodville	84.84	45	P	P	03 02 31.0	-0.4
	baz=323						
BNI	Bardonecchia	84.85	336	*e*P	P	03 02 32.3	+0.8
	comp=Z,16nm,0.9s						
SGD	Sagiada	84.89	324	P	P	03 02 31.1	-0.5
Y48A	Jasper	84.89	46	P	P	03 02 30.7	-1.0
	baz=323						
IGT	Igoumenitsa	84.92	324	P	P	03 02 31.0	-0.7
IGT	Igoumenitsa	84.92	324	P	P	03 02 31.0	-0.7
IGT	Igoumenitsa	84.92	324	P	P	03 02 31.0	-0.7
146A	Union	84.93	48	P	P	03 02 31.9	0.0
	baz=322						
DSF	Desfina	84.93	322	P	P	03 02 29.9	-2.0
DSF	Desfina	84.93	322	P	P	03 02 29.9	-2.0
DSL	Palaion Diasel	84.94	324	P	P	03 02 31.1	-0.8
DSL	Palaion Diasel	84.94	324	P	P	03 02 31.1	-0.8
KEK	Kerkira	84.98	325	P	P	03 02 31.5	-0.6
KEK	Kerkira	84.98	325	P	P	03 02 31.5	-0.6
ANX	Ano Chora	85.04	323	P	P	03 02 31.7	-0.8
W51A	Cleveland	85.09	43	P	P	03 02 32.1	-0.6
	baz=324						
V52A	Sevierville	85.09	42	P	P	03 02 32.5	-0.2
	baz=325						
SERG	Sergoula	85.14	323	P	P	03 02 31.6	-1.3
U53A	Fall Branch	85.15	41	P	P	03 02 31.8	-1.2
	baz=325						
TKL	Tuckaleechee C	85.16	42	P	P	03 02 32.9	-0.1
	comp=Z,2.0nm,0.8s,baz=220,slow=3.6,SNR=3.7						
TKL	Tuckaleechee C	85.16	42	*e*P	P	03 02 32.9	-0.1
	comp=Z,12nm,0.9s						
TKL				*e*pP	pP	03 02 46.1	+0.4
LAKA	Lakka	85.31	323	P	P	03 02 32.3	-1.5
LAKA	Lakka	85.31	323	P	P	03 02 32.3	-1.5
PDO	Prodromos	85.35	323	P	P	03 02 32.9	-1.0
DID	Didima	85.38	321	P	P	03 02 31.6	-2.5
DID	Didima	85.38	321	P	P	03 02 31.6	-2.5
KLV	Kalavryta, Ach	85.40	322	P	P	03 02 32.5	-1.8
KLV	Kalavryta, Ach	85.40	322	P	P	03 02 32.5	-1.8
MATE	Matera	85.40	327	⇑*i*P	P	03 02 33.6	-0.5
GUR	Goura	85.41	322	P	P	03 02 32.9	-1.5
GUR	Goura	85.41	322	P	P	03 02 32.9	-1.5
LKD2	Lefkada island	85.41	324	P	P	03 02 33.0	-1.2
LKD2	Lefkada island	85.41	324	P	P	03 02 33.0	-1.2
EVGI	Lefkada island	85.56	324	P	P	03 02 34.3	-0.6
RLS	Riolos of Patr	85.69	323	P	P	03 02 35.0	-0.6
RLS	Riolos of Patr	85.69	323	P	P	03 02 35.0	-0.6
FSK	Fiskardo	85.73	324	P	P	03 02 34.3	-1.5
VLX	Vlachokerasia	85.87	322	P	P	03 02 35.1	-1.5
VLX	Vlachokerasia	85.87	322	P	P	03 02 35.1	-1.5
VTN	Vitineika	85.92	323	P	P	03 02 37.4	+0.7
Y51A	Rockmart	85.95	44	P	P	03 02 36.0	-1.0
	baz=324						
VLS	Valsamata	85.96	323	P	P	03 02 35.9	-1.0
VLS	Valsamata	85.96	323	P	P	03 02 35.9	-1.0
VLS	Valsamata	85.96	323	P	P	03 02 35.9	-1.0
ZKR	Zakros	85.98	318	P	P	03 02 36.5	-0.6
ZKR	Zakros	85.98	318	P	P	03 02 36.5	-0.6
Z50A	Ashland	86.05	45	P	P	03 02 37.4	-0.1
	baz=324						
Z50A	Ashland	86.05	45	*e*P	P	03 02 37.4	-0.1
	comp=Z,12nm,0.8s						
149A	Jones	86.13	46	P	P	03 02 37.7	-0.2
	baz=323						
ITM	Ithomi	86.22	322	*e*P	P	03 02 37.7	-0.6
	comp=Z,46nm,0.7s						
ITM	Ithomi	86.22	322	P	P	03 02 36.9	-1.4
LAST	Lasithi	86.29	318	P	P	03 02 38.4	-0.3
LAST	Lasithi	86.29	318	P	P	03 02 38.4	-0.3
CUC	Castrocucco	86.31	328	*e*P	P	03 02 37.7	-1.0
	comp=Z,8.9nm,0.8s						
X53A	Estanollee	86.32	43	P	P	03 02 37.9	-0.9
	baz=325						
DYR	Agios Nikonas	86.39	321	P	P	03 02 38.4	-0.7
249A	Camden	86.46	47	P	P	03 02 40.0	+0.6
	baz=323						
IDI	Anoyia	86.46	319	P	P	03 02 38.3	-1.2
	comp=Z,23nm,1.0s,baz=36,slow=13,SNR=9.8						
IDI	Anoyia	86.46	319	*e*P	P	03 02 38.6	-1.0
	comp=Z,34nm,1.1s						
Y52A	Lilburn	86.47	44	P	P	03 02 38.7	-0.9
	baz=324						
PYL	PYLOS	86.54	322	P	P	03 02 38.4	-1.4
PYL	PYLOS	86.54	322	P	P	03 02 38.4	-1.4
TIP	Timpagrande	86.66	327	⇑*i*P	P	03 02 39.4	-1.0
TIP	Timpagrande	86.66	327	*e*P	P	03 02 40.3	-0.1
	comp=Z,29nm,0.9s						
TIP	Timpagrande	86.66	327	P	P	03 02 39.9	-0.5
Y53A	Monroe	86.71	43	P	P	03 02 40.0	-0.7
	baz=325						
SIVA	Sivas	86.72	319	P	P	03 02 40.4	-0.3
SIVA	Sivas	86.72	319	P	P	03 02 40.4	-0.3
IMMV	Iera Moni Meta	86.74	320	P	P	03 02 40.0	-0.8
250A	Grady	86.89	46	P	P	03 02 41.1	-0.5
	baz=324						
Y54A	Tignall	87.14	43	P	P	03 02 42.6	-0.1
	baz=325						
154A	Montrose	87.95	44	P	P	03 02 45.9	-0.8
	baz=325						
KEST	Kesra	92.45	330	P	P	03 03 06.7	-1.1
	comp=Z,14nm,1.0s,baz=315,slow=4.9,SNR=13						
KEST	Kesra	92.45	330	*e*P	P	03 03 08.1	+0.3
	comp=Z,14nm,0.9s						
ES19	SONSECA Array	92.60	341	*e*P	P	03 03 07.5	-0.8
ESDC	Sonseca Array	92.64	341	P	P	03 03 07.6	-0.9
	comp=Z,2.5nm,0.9s,baz=11,slow=4.1,SNR=9.7						
THTN	Thala	92.83	331	*e*P	P	03 03 10.8	+1.3
	comp=Z,19nm,1.3s						
LPAZ	La Paz	135.95	62	PKP	PKPdf	03 09 18.9	+0.3
	comp=Z,0.9nm,0.8s,baz=107,slow=2.6,SNR=3.4						
SYO	Syowa Base	139.11	211	⇑*e*Pdiff	Pdif	03 06 38.0	+3.3
SYO	Syowa Base	139.11	211	⇓*e*X	Pdif	03 06 42.2	+7.5
NVL	N'lazarevskaya	147.86	204	⇓*i*PKP2	PKPab	03 09 56.6	+14
NVL				MLR	MLR		
	comp=Z,869nm,18.0s						
PLCA	Paso Flores	149.09	97	PKPbc	PKPbc	03 09 44.5	-0.1
	comp=Z,4.9nm,0.9s,baz=311,slow=2.5,SNR=6.5						
PLCA	Paso Flores	149.09	97	*e*PKPbc	PKPbc	03 09 45.8	+1.3
CPUP	Villa Florida	150.10	61	PKPbc	PKPbc	03 09 47.1	-0.2
	comp=Z,3.4nm,1.0s,baz=328,slow=7.5,SNR=4.5						
SNAA	Sanae	150.84	196	PKP	PKPdf	03 09 42.8	+0.6
SNAA	Sanae	150.84	196	PKPbc	PKPbc	03 09 47.2	-0.6
	comp=Z,3.8nm,0.8s,baz=154,slow=4.6,SNR=14						
SNAA	Sanae	150.84	196	*e*PKPdf	PKPbc	03 09 46.0	-1.8
VNA3	Neumayer Olymp	152.42	193	PKP	PKPdf	03 09 44.8	+0.4
VNA1	Neumayer--Stat	152.70	194	PKP	PKPdf	03 09 45.5	+0.6

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*IDC **11** 02:58:14.5±1.2, 25°.12N×109°.67W, h0^{km}, mb3.7/3, mb1 4.0/7, mb1mx3.8/56, mbtmp3.6/7, ML4.5/2, MS3.6/1, Ms1 3.6/1, ms1mx3.2/55, Error ellipse: s-maj=28.8km s-min=9.7km az=118.0*

*ISCJB **11** 02:58:15.1±0.5, 25°.12N±0°.04×109°.62W±0°.05, h10^{km}, mb4.2/13, Error ellipse: s-maj=6.0km s-min=5.3km az=21.9*

*NEIC **11** 02:58:16.7±0.6, 25°.05N×109°.73W, h10^{km}, mb4.2/25, Error ellipse: s-maj=9.8km s-min=8.6km az=71.0*

ISC 11 02:58:15.7±0.7**, 25°.09N**±0°.05×**109°.79W**±0°.06**, h10**^{km}**, n73, σ2^{s}.42**/69**, mb4.3**/13**, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPIG	La Paz	1.09	206	Pg	Pn	02 58 37.9	+0.8
	276nm,0.3s,baz=332,slow=2.3,SNR=40						
LPIG				Lg	Lg	02 58 51.5	
	224nm,0.3s,baz=125,slow=12,SNR=12						
SLBS	Sierra La Lagu	1.40	186	*e*Pn	Pn	02 58 42.2	+0.7
SLBS				*e*Sn	Sb	02 58 58.3	-1.8
SRIG	Santa Rosalia	3.13	316	*e*Pn	Pn	02 59 03.3	-1.8
HSIG		4.05	345	*e*Pn	Pn	02 59 18.2	+0.4
HPIG		4.14	63	*e*Pn	Pn	02 59 18.6	-0.6
HPIG				*e*Sg	Sb	03 00 23.4	+4.5
319A	Douglas	6.28	4	*e*Pn	Pn	02 59 46.3	-2.3
319A				*e*Sn	Sn	03 01 00.1	-0.4
TX31	Lajitas Ar. Si	6.89	51	*e*Pn	Pn	02 59 55.5	-1.5
TX31				*e*Pg	Pg	03 00 23.1	-4.7
TX31				*e*Sn	Sn	03 01 23.4	+7.8
LTX	Lajitas	6.90	51	*e*Pn	Pn	02 59 55.2	-1.8
LTX				*e*Pg	Pb	03 00 22.1	+6.3
LTX				*e*Sn	Sn	03 01 12.4	-3.2
LTX				*e*Sg	Sg	03 01 49.9	-7.2
TXAR	Lajitas Array	6.90	51	Pn	Pn	02 59 55.2	-1.8
	0.6nm,0.3s,baz=226,slow=14,SNR=42						
TXAR				Pg	Pb	03 00 22.1	+6.3
	0.3nm,0.3s,baz=240,slow=15,SNR=10						
TXAR				Sn	Sn	03 01 12.4	-3.2
	0.6nm,0.3s,baz=227,slow=17,SNR=5.4						
TXAR				Lg	Lg	03 01 49.9	
	0.5nm,0.3s,baz=229,slow=29,SNR=2.7						
TXAR				LR	LR	03 02 23.2	
	comp=Z,465nm,20.5s,baz=0.0,slow=37						
TUC	Tucson	7.25	353	*e*Pn	Pn	03 00 00.2	-1.7
MNTX	Cornudas Mount	7.64	29	*e*Pn	Pn	03 00 06.3	-0.9
MNTX				*e*Sn	Sn	03 01 30.6	-3.2
113A	Mohawk Valley,	8.41	336	*e*Pn	Pn	03 00 17.7	0.0
Y14A	Wickenburg	9.25	343	*e*Pn	Pn	03 00 29.7	+0.3
X16A	Lo Mia Camp, P	9.41	352	*e*Pn	Pn	03 00 33.1	+1.5
X18A	Snowflake	9.41	359	*e*Pn	Pn	03 00 32.9	+1.3
Y12C	Blythe	9.57	336	*e*Pn	Pn	03 00 36.2	+2.7
W18A	Petrified Fore	10.00	0	*e*Pn	Pn	03 00 43.1	+3.5
ANMO	Albuquerque	10.24	16	Pn	Pn	03 00 44.1	+1.1
	0.1nm,0.3s,baz=191,slow=14,SNR=3.4						
ANMO				Lg	Lg	03 03 26.2	
	0.1nm,0.3s,baz=163,slow=23,SNR=1.4						
ANMO	Albuquerque	10.24	16	*e*Pn	Pn	03 00 45.7	+2.7
ANMO				*e*Lg	Lg	03 03 26.2	
WUAZ	Wupatki	10.48	353	*e*Pn	Pn	03 00 49.8	+3.5
W13A	Hualapai Mount	10.59	341	*e*Pn	Pn	03 00 51.1	+3.3
DGR	Domenigoni Val	10.60	325	*e*Pn	Pn	03 00 40.2	-7.6
HMTC	Hemet	10.64	325	*e*Pn	Pn	03 00 42.6	-5.8
MSTX	Muleshoe	10.75	33	*e*Pn	Pn	03 00 59.2	+9.3
BBSC	Beaumont Base	10.80	326	*e*Pn	Pn	03 00 43.0	-7.5
VTV	Victorville	11.48	327	*e*Pn	Pn	03 01 07.2	+7.3
U15A	North Rim	11.51	350	*e*Pn	Pn	03 01 02.7	+2.3
CHFC	Chilao Flat St	11.66	324	*e*Pn	Pn	03 01 02.8	+0.4
CHFC				*e*Sn	Sn	03 03 11.0	-1.9
MVCO	Mesa Verde	12.13	5	*e*Pn	Pn	03 01 10.9	+2.0
PKCU	Pink Cliffs	12.51	351	*e*Pn	Pn	03 01 10.3	-3.8
DAC	Darwin (Calif)	13.01	331	*e*Pn	Pn	03 01 24.1	+3.2
PV02	Paradox Valley	13.11	4	*e*Pn	Pn	03 01 24.2	+1.9
SDCO	Great Sand Dun	13.14	15	*e*Pn	Pn	03 01 14.8	-7.8
PV16	Nyswonger Mesa	13.21	3	*e*Pn	Pn	03 01 16.9	-6.6
WMOK	Wichita Mounta	13.54	42	*e*Pn	Pn	03 01 28.8	+0.9
MDPB	Devils Postpil	14.80	330	*e*Pn	Pn	03 01 39.4	-6.0
NLU	North Lily Min	14.95	353	*e*Pn	Pn	03 01 49.2	+1.8
NLU				*e*S	S	03 04 50.0	-1.1
O20A	White River Ci	15.06	5	*e*Pn	P	03 01 59.4	+5.2
	16nm,1.1s						
NV01	Mina Array Sit	15.13	334	*e*Pn	Pn	03 01 51.8	+2.0
NVAR	Mina Array Bea	15.13	334	Pn	Pn	03 01 51.8	+2.0
	baz=148,slow=16,SNR=2.6						
YERR	Yerington	15.99	332	*e*Pn	P	03 02 04.5	0.0
	34nm,1.5s						
ELK	Elko	16.27	345	Pn	P	03 02 10.0	+2.4
	0.1nm,0.3s,baz=268,slow=20,SNR=4.8						
BMN	Battle Mountai	16.52	340	*e*Pn	P	03 02 11.1	+0.8
	14nm,1.2s						
HWUT	Hardware Ranch	16.54	355	*e*Pn	Pn	03 02 09.1	+1.0
	8.8nm,1.0s						
BEKR	Beckworth	17.20	331	*e*Pn	P	03 02 19.6	+1.6
	19nm,1.5s						
X40A	Basin Creek Fa	17.42	54	*e*Pn	P	03 02 20.9	+0.7
	5.7nm,1.0s						
W40A	Ferguson Farm,	17.60	51	*e*Pn	P	03 02 25.2	+3.1
	13nm,0.9s						
PD31	Pinedale Array	17.64	1	*e*Pn	Pn	03 02 22.1	+0.3
PDAR	Pinedale Array	17.64	1	P	Pn	03 02 22.1	+0.3
	0.4nm,0.3s,baz=161,slow=11,SNR=3.5						
V40A	Witts Springs	18.08	50	*e*Pn	Pn	03 02 25.7	-1.4
	7.3nm,0.8s						
WVOR	Wild Horse Val	18.78	339	*e*P	P	03 02 30.8	-4.4
	24nm,1.5s						
IMW	Indian Meadow	18.79	357	*e*P	Pn	03 02 45.5	+10
	9.3nm,1.1s						
MFID	Camas Ranch	18.94	346	*e*P	P	03 02 38.0	+0.9
	9.2nm,1.3s						
J08A	Circle Bar Ran	19.57	341	*e*P	P	03 02 42.8	-1.1
	9.3nm,0.9s						
MCMT	McKenzie Canyo	19.85	354	*e*P	Pn	03 02 50.1	+1.4
BMO	Blue Mountains	20.64	345	*e*P	P	03 02 52.6	-2.9
	7.1nm,1.0s						
P40A	Paris	20.73	42	*e*P	Pn	03 02 59.2	+0.4
	40nm,1.3s						
PLAL	Pickwick Lake	21.19	57	*e*P	P	03 03 03.4	+2.0
	17nm,1.3s						
F10A	Beach Ranch, E	21.68	346	*e*P	P	03 03 08.5	+1.7
	8.6nm,1.0s						
X48A	Hartselle	21.80	59	*e*P	P	03 03 09.8	+1.9
	18nm,1.4s						
MSO	Missoula	21.95	352	*e*P	P	03 03 11.3	+1.7
	15nm,1.1s						
352A	Blakely	22.77	68	*e*P	P	03 03 26.4	+8.0
	41nm,1.1s						
W50A	Signal Mountai	23.39	59	*e*P	P	03 03 24.4	-0.3
	17nm,1.0s						
NEW	Newport	23.85	348	P	P	03 03 29.2	+0.1
	3.2nm,0.8s,baz=152,slow=13,SNR=3.5						
NEW	Newport	23.85	348	*e*P	P	03 03 30.1	+1.0
	5.8nm,1.0s						
WALA	Waterton Lakes	24.14	353	*e*P	P	03 03 31.5	-0.6
	10nm,1.1s						
V51A	Loudon	24.32	58	*e*P	P	03 03 41.0	+7.4
	42nm,1.5s						
BG3	Lake Jocassee	25.19	61	*e*P	P	03 03 51.4	+10
	16nm,1.1s						
V53A	Saluda	25.47	59	*e*P	P	03 03 44.6	+0.5
	20nm,1.3s						
YKA	Yellowknife Ar	37.53	356	P	P	03 05 29.0	-0.7
	0.7nm,0.7s,baz=171,slow=8.5,SNR=2.7						
IL1	Eielson Array	46.30	339	*e*P	P	03 06 42.2	+0.9
ILAR	Eielson Array	46.30	339	P	P	03 06 42.3	+1.0
	0.6nm,0.9s,baz=147,slow=6.7,SNR=6.9						
ILB	Eielson Array	46.30	339	*e*P	P	03 06 42.3	+1.0

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*ISCJB **11** 02:58:52.6±0.5, 35°.66N±0°.04×140°.72E±0°.06, h52^{km}±4^{km}, mb3.6/6, Error ellipse: s-maj=9.1km s-min=6.3km az=158.1*

*JMA **11** 02:58:53.2±0.1, 35°.73N×140°.69E, h47^{km}±1^{km}, M3.2*

JMA Felt I J1.

*IDC **11** 02:58:54.0±2.4, 35°.56N×140°.66E, h51^{km}±25^{km}, mb3.4/6, mb1 3.7/9, mb1mx3.4/76, mbtmp3.8/9, ML4.0/3, Error ellipse: s-maj=25.0km s-min=8.4km az=66.0*

ISC 11 02:58:53.1±0.9**, 35°.66N**±0°.05×**140°.73E**±0°.06**, h43**^{km}±8^{km}**, n27, σ1^{s}.06**/26**, mb3.6**/6**, 2C-3D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.12	68	⇓P	Pn	02 59 00.9	+0.7
CHOJ				S	Sn	02 59 06.3	+1.2
JCN	Nagara	0.49	241	⇓P	Pn	02 59 04.9	+1.0
JYT	Yasato	0.71	323	⇑P	Pn	02 59 06.1	-0.7
JYT				S	Sn	02 59 15.3	-1.3
BSO4	Boso 4	0.74	205	P	Pn	02 59 08.0	+0.9
BSO3	Boso 3	0.87	192	P	Pn	02 59 09.8	+1.0
JHO	Hitachi	0.96	352	⇑P	Pn	02 59 09.8	-0.4
BSO1	Boso 1	1.02	168	P	Pn	02 59 11.3	+0.7
JAG	Ashikaga	1.28	307	P	Pn	02 59 14.0	-0.6
JOD2	Odawara 2	1.39	254	⇓P	Pn	02 59 16.4	+0.3
JIM2	Oshima 3	1.42	229	P	Pn	02 59 15.8	-0.7
MJAR	Matsushiro Arr	2.22	294	P	Pn	02 59 28.0	+0.5
	6.4nm,0.3s,baz=98,slow=14,SNR=36						
MJAR				S	Sn	02 59 54.2	+0.5
	9.0nm,0.3s,baz=132,slow=22,SNR=7.8						
MAT	Matsushiro	2.22	294	P	Pn	02 59 28.5	+1.0
MAT				S	Sn	02 59 55.3	+1.6
JHJ	Hachijo jima 2	2.65	197	P	Pn	02 59 33.5	+0.1
	78nm,0.3s,baz=319,slow=19,SNR=14						
JHJ				S	Sn	03 00 03.2	-1.1
	89nm,0.3s,baz=78,slow=23,SNR=7.4						
ASAJ	Asahikawa	8.57	9	P	Pn	03 00 53.0	-1.6
	1.0nm,0.3s,baz=240,slow=15,SNR=4.6						
JCJ	Chichijima	8.63	171	P	Pn	03 00 53.1	-2.3
	16nm,0.3s,baz=318,slow=19,SNR=16						
JCJ				S	Sn	03 02 22.6	-8.8
	4.8nm,0.3s,baz=279,slow=23,SNR=1.7						
H11N2	WAKE ISLAND Hy	27.96	118	T	T	03 34 02.9	
	baz=309,slow=74						
H11N1	WAKE ISLAND Hy	27.97	118	T	T	03 33 56.4	
	baz=309,slow=74						
H11N3	WAKE ISLAND Hy	27.98	118	T	T	03 33 53.2	
	baz=309						
H11S1	WAKE ISLAND Hy	28.62	120	T	T	03 34 41.4	
	baz=312,slow=75,SNR=16						
H11S3	WAKE ISLAND Hy	28.62	120	T	T	03 34 40.2	
	baz=312,slow=75,SNR=10						
H11S2	WAKE ISLAND Hy	28.64	120	T	T	03 34 38.9	
	baz=312,slow=75,SNR=8.6						
MKAR	Makanchi Array	44.39	303	P	P	03 06 59.4	0.0
	0.7nm,0.8s,baz=94,slow=9.6,SNR=4.4						
KURBB	Kurchatov Arra	46.42	309	P	P	03 07 14.8	-0.6

	0.4nm,0.3s,baz=86,slow=8.2,SNR=4.7						
ILAR	Eielson Array	50.95	32	P	P	03 07 50.5	+0.5
	0.7nm,0.8s,baz=270,slow=6.0,SNR=9.1						
WRA	Warramunga Arr	55.63	187	P	P	03 08 23.8	-0.9
	0.8nm,0.4s,baz=1.1,slow=7.6,SNR=11						
NVAR	Mina Array Bea	76.26	53	P	P	03 10 38.4	+0.8
	0.4nm,0.6s,baz=308,slow=4.4,SNR=4.0						
PDAR	Pinedale Array	79.03	45	P	P	03 10 54.0	+1.0
	0.2nm,0.5s,baz=298,slow=1.9,SNR=2.7						

OTT 11 03:05:43.8±0.2,44°.90N×67°.57W,h5^{km},MN2.3/6,1D, Maine, U.S. 38km southwest from St. Stephen, Nb Northern Appalachians Seismic Zone.,Maine

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EMMW	East Machias	0.21	158	PG	Pg	03 05 48.0	+0.1
EMMW				SG	Sg	03 05 50.7	+0.1
EMMW	East Machias	0.21	158	*e*P	Pg	03 05 48.1	+0.3
	74nm,0.6s						
GGN	Saint George	0.56	67	⇓PG	Pg	03 05 54.0	-0.6
GGN				SG	Sg	03 06 01.0	-0.8
GGN				Trac		03 06 01.2	
	comp=Z,49nm,0.1s						
MCA3	McAdam 3	0.70	13	PG	Pg	03 05 57.1	-0.2
MCA3				SG	Sg	03 06 06.1	-0.4
MCA3				Trac		03 06 06.5	
	comp=Z,2.5nm,0.0s						
MCA4	McAdam 4	0.72	14	PG	Pg	03 05 57.2	-0.3
MCA4				SG	Sg	03 06 06.5	-0.4
PKME	Peaks-Kenny Pk	1.27	287	PN	Pb	03 06 08.3	+0.1
PKME				SN	Sn	03 06 25.4	-0.3
PKME				Trac		03 06 27.3	
	comp=Z,12nm,0.1s						
LMN	Caledonia Moun	2.17	63	PN	Pn	03 06 20.8	+0.3
LMN				SG	Sb	03 06 49.5	-1.1
LMN				Trac		03 06 50.5	
	comp=Z,6.7nm,0.3s						
BATG	Bathurst New B	2.60	23	PN	Pn	03 06 25.7	-0.8
BATG				PG	Pb	03 06 30.1	-0.8
BATG				SN	Sn	03 06 55.5	-2.9
BATG				LG	Lg	03 07 03.9	
BATG				Trac		03 07 07.2	
	comp=Z,2.4nm,0.1s						
LBNH	Lisbon	3.18	260	PN	Pn	03 06 35.3	+0.8
LBNH				PG	Pb	03 06 42.8	+1.9
LBNH				SN	Sn	03 07 12.7	-0.1
LBNH				LG	Lg	03 07 25.3	
LBNH				Trac		03 07 31.9	
	comp=Z,4.8nm,0.3s						

MEX 11 03:13:44.3±0.5,15°.34N×92°.29W,h157^{km}±6^{km},MD4.0, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.43	177	*e*P	Pn	03 14 04.3	-1.8
THIG				*e*S	Sn	03 14 20.7	-2.2
CCIG	Comitan	0.95	9	*i* P	Pn	03 14 08.5	-1.1
CCIG				*e*S	Sn	03 14 26.7	-2.3
PCIG		0.97	292	*i* P	Pn	03 14 08.2	-1.3
PCIG				*e*S	Sn	03 14 26.8	-1.9
TGIG		1.64	331	*e*P	Pn	03 14 14.6	-1.4
TGIG				*e*S	Sn	03 14 37.7	-2.6

DJA 11 03:34:25.8±1.5,9°S±5°×11°6E±°,h25^{km}±15^{km},M3.6/12, MLv3.6/12,Sumbawa region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWSI	Taliwang, Sumb	0.87	42	P	Pb	03 34 42.3	0.0
IGBI	Denpasar	1.27	297	P	Pn	03 34 48.2	+0.3
IGBI				S	Sb	03 35 04.7	-0.1
DNP	Denpasar	1.28	304	P	Pn	03 34 47.9	-0.2
DNP				S	Sb	03 35 05.8	+0.5
PLAI	Plampang	1.57	69	P	Pn	03 34 52.3	+0.2
SRBI	Singaraja	1.68	321	P	Pn	03 34 53.7	+0.1
JAGI	Jajag, Banyuwa	2.30	293	P	Pn	03 35 02.3	+0.1
GMJI	Gumukmas	3.02	291	P	Pn	03 35 11.4	-0.7
WBSI	Waikabubak, Su	3.07	95	P	Pn	03 35 13.2	+0.4
BLJI	Banyuglugur	3.13	301	P	Pn	03 35 13.6	+0.1
WSI	Waingapu	3.96	94	P	Pn	03 35 23.6	-1.4

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*IDC **11** 03:57:10.6±0.5, 15°.98S×174°.65W, h0^{km}, mb4.3/21, mb1 4.5/22, mb1mx4.4/51, mbtmp4.3/22, ML3.7/1, MS4.9/38, Ms1 4.9/38, ms1mx4.8/43, Error ellipse: s-maj=19.5km s-min=13.5km az=127.0*

*ISCJB **11** 03:57:11.6±0.2, 16°.13S±0°.05×174°.72W±0°.05, h10^{km}, mb4.7/140, MS4.9/49, Error ellipse: s-maj=7.8km s-min=4.8km az=137.2*

*NEIC **11** 03:57:14.4±1.0, 16°.10S×174°.68W, h19^{km}±6^{km}, mb4.8/115, Error ellipse: s-maj=10.4km s-min=5.7km az=135.0*

*BJI **11** 03:57:14.4, 16°.08S×174°.61W, h16^{km}, mb5.1/26, mB5.5/17, Ms5.1/18, Ms7 4.9/18*

*GCMT **11** 03:57:14.4±0.1, 15°.78S×174°.53W, h12^{km}, MW5.4/123, Moment Tensor Solution. s86,c127; s123,c226; Duration: 1^{s}2 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.22±.02; $M_{\theta\theta}$-1.25±.02; $M_{\phi\phi}$1.47±.03; $M_{r\theta}$-0.21±.06; $M_{\theta\phi}$-0.59±.02; $M_{\phi r}$0.65±.08; Best double couple: $M_0$1.60000×10^{17} NP1:ϕ_s302.00000°,δ80.00000°, λ164.00000°. NP2:ϕ_s35.00000°,δ74.00000°,λ10.00000°. Principal axes: T 1.8200, Plg18.0000°, Azm258.0000°; N -0.4410, Plg71.0000°, Azm92.0000°; P -1.3800, Plg4.0000°, Azm349.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 11 03:57:13.4±0.3,16°.18S±0°.08×174°.65W±0°.07,h10^{km}, n287,σ1^{s}71/251,mb4.8/140,MS4.9/49,6C-1D,Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	3.58	51	Pn	Pn	03 57 59.4	-10
	21nm,0.3s,baz=5.8,slow=4.1,SNR=20						
AFI				LR	LR	03 59 12.1	
	comp=Z,19µm,21.5s,baz=222,slow=35						
AFI	Afiamalu	3.58	51	*e*Pn	Pn	03 57 59.9	-9.2
RAO	Raoul Island	13.35	192	LR	LR	04 05 06.0	
	comp=Z,7µm,18.3s,baz=17,slow=35						
RAR	Rarotonga	14.95	112	LR	LR	04 05 03.1	
	comp=Z,4µm,20.9s,baz=292,slow=32						
RAR	Rarotonga	14.95	112	*e*Pn	Pn	04 00 44.9	0.0
	77nm,1.4s						
DZM	Mont Dzumac	18.80	249	P	P	04 01 31.7	-1.6
	0.2nm,0.3s,baz=108,slow=20,SNR=2.4						
DZM				LR	LR	04 07 39.3	
	comp=Z,7µm,20.8s,baz=74,slow=33						
DZM	Mont Dzumac	18.80	249	*e*P	Pn	04 01 35.0	+1.3
	202nm,1.4s						
DZM				*e*LR	LR	04 06 04.0	
	16µm,25.6s						
DZM	Mont Dzumac	18.80	249	*e*P	P	04 01 31.8	-1.5
	67nm,1.0s						
URZ	Urewera	23.16	197	P	P	04 02 19.5	-0.5
	49nm,1.1s,baz=23,slow=6.1,SNR=17						
URZ				LR	LR	04 10 54.0	
	comp=Z,2µm,19.7s,baz=22,slow=35						
URZ	Urewera	23.16	197	*e*P	P	04 02 19.8	-0.3
PAE	Paea	24.02	97	*e*T	T	04 27 14.3	
	9.0nm,0.3s						
PPT	Papeete	24.03	97	LR	LR	04 09 30.0	
	comp=Z,2µm,20.7s,baz=269,slow=31						
PPT	Papeete	24.03	97	*e*P	P	04 02 27.0	-1.8
PPT2	Papeete2	24.03	97	*e*LQ	LQ	04 07 14.0	
	7µm,25.5s						
PPT2				*e*LR	LR	04 08 14.4	
	8µm,26.5s,baz=254						
PPT2	Papeete2	24.03	97	*e*T	T	04 27 15.8	
	13nm,0.3s						
PPTF	Pamatai, Papee	24.04	97	*e*P	P	04 02 27.1	-1.9
	198nm,1.5s						
HIZ	Hauiti	24.09	201	*e*P	P	04 02 27.3	-1.8
	203nm,1.4s						
BKZ	Black Stump Fm	24.18	197	*e*P	P	04 02 29.7	-0.4
	15nm,1.2s						
TIAR	Tiarei	24.25	97	*e*T	T	04 27 28.5	
	6.5nm,0.3s						
TVO	Taravao	24.33	97	*e*T	T	04 27 32.9	
	3.5nm,0.3s						
XMAS	Kiritimati	24.84	45	*e*P	P	04 02 35.9	-0.3
	32nm,0.8s						
HNR	Honiara	25.65	282	LR	LR	04 11 18.6	
	comp=Z,8µm,19.2s,baz=122,slow=33						
BFZ	Birch Farm	25.66	196	*e*P	P	04 02 42.8	-0.6
	33nm,1.0s						
PMOR	Pomariorio Ree	25.79	91	*e*T	T	04 29 22.6	
	10nm,0.2s						
VAH	Vaihoa	26.02	92	*e*T	T	04 29 31.3	
	17nm,0.3s						
SNZO	South Karori	26.68	198	*e*P	P	04 02 53.7	+1.2
	41nm,1.2s						
THZ	Tophouse	27.66	200	*e*P	P	04 03 02.4	+1.0
	19nm,1.2s						
KHZ	Kahutara	28.04	199	*e*P	P	04 03 05.3	+0.5
	15nm,1.0s						
RPZ	Rata Peaks	30.02	201	LR	LR	04 15 45.4	
	comp=Z,3µm,19.5s,baz=19,slow=37						
TAOE	Nuku Hiva Isla	34.42	82	*e*LR	LR	04 12 56.0	
	7µm,27.3s						
TAOE	Nuku Hiva Isla	34.42	82	*e*T	T	04 39 43.3	
	105nm,0.2s						
CTA	Charters Tower	37.30	258	LR	LR	04 18 18.4	
	comp=Z,2µm,18.2s,baz=88,slow=34						
PMG	Port Moresby	37.80	276	P	P	04 04 28.5	-1.8
	4.0nm,0.3s,baz=246,slow=20,SNR=1.9						
PMG				LR	LR	04 19 11.3	
	comp=Z,2µm,18.4s,baz=86,slow=35						
RKT	Rikitea	37.91	107	*e*LQ	LQ	04 13 04.2	
	2µm,25.5s						
RKT				*e*LR	LR	04 14 38.6	
	4µm,27.8s						
RKT	Rikitea	37.91	107	*e*T	T	04 44 44.0	
	16nm,0.3s						
H11S2	WAKE ISLAND Hy	39.04	331	T	T	04 45 40.5	
	baz=150,slow=75,SNR=120						
H11S3	WAKE ISLAND Hy	39.05	331	T	T	04 45 41.5	
	baz=150,slow=75,SNR=109						
H11S1	WAKE ISLAND Hy	39.06	331	T	T	04 45 41.9	
	baz=150,slow=75,SNR=265						
H11N3	WAKE ISLAND Hy	40.02	332	T	T	04 46 50.4	
	baz=151,slow=76,SNR=693						
H11N1	WAKE ISLAND Hy	40.02	332	T	T	04 46 52.4	
	baz=151,slow=76,SNR=953						
H11N2	WAKE ISLAND Hy	40.03	332	T	T	04 46 51.7	
	baz=151,slow=76,SNR=536						
STKA	Stephens Creek	42.61	240	P	P	04 05 09.6	-0.4
	10nm,1.1s,baz=60,slow=8.7,SNR=8.2						
STKA				LR	LR	04 20 39.1	
	comp=Z,2µm,21.6s,baz=74,slow=33						
STKA	Stephens Creek	42.61	240	*e*P	P	04 05 11.8	+1.7
	9.6nm,1.4s						
JAY	Jayapura	45.97	282	LR	LR	04 23 09.3	
	comp=Z,1µm,21.2s,baz=132,slow=34						
WB2	Warramunga Arr	48.49	258	*e*P	P	04 05 56.2	-0.6
WR1	Warramunga Arr	48.50	258	*e*P	P	04 05 54.4	-2.5
	11nm,1.1s						
WR1				*e*PcP	PcP	04 07 22.3	-0.7
WRA	Warramunga Arr	48.50	258	P	P	04 05 54.4	-2.5
	1.9nm,1.1s,baz=98,slow=7.7,SNR=10						
WRA				PcP	PcP	04 07 22.3	-0.7
	1.6nm,1.1s,baz=79,slow=4.2,SNR=2.6						
AS01	Alice Springs	48.69	253	*e*P	P	04 05 56.1	-2.2
AS31	Alice Springs	48.73	253	*e*P	P	04 05 56.6	-2.0
	4.1nm,0.9s						
ASAR	Alice Springs	48.73	253	P	P	04 05 56.4	-2.3
	9.7nm,0.9s,baz=87,slow=8.0,SNR=22						
ASAR				LR	LR	04 24 54.3	
	comp=Z,5µm,21.1s,baz=98,slow=34						
SOEI	Soe	59.70	268	*e*P	P	04 07 17.9	-0.9
	95nm,1.1s						
RPN	Rapa Nui	61.10	112	LR	LR	04 26 45.3	
	comp=Z,897nm,21.1s,baz=268,slow=29						
SBA	Scott Base	62.38	184	*e*P	P	04 07 37.4	+1.5
	30nm,1.4s						
VNDA	Vanda	62.48	186	P	P	04 07 37.8	+1.2
	2.7nm,1.0s,baz=22,slow=7.4,SNR=7.4						
VNDA	Vanda	62.48	186	*e*P	P	04 07 37.8	+1.2
	9.4nm,1.1s						
NWAO	Narrogin (SRO)	63.19	241	LR	LR	04 33 09.3	
	comp=Z,1µm,21.8s,baz=313,slow=34						
DAV	Davao City (W)	63.50	287	LR	LR	04 34 19.6	
	comp=Z,246nm,18.2s,baz=150,slow=35						
JHJ	Hachijo jima 2	65.55	319	LR	LR	04 28 49.2	
	comp=Z,463nm,21.7s,baz=82,slow=29						
MJAR	Matsushiro Arr	68.77	321	P	P	04 08 14.1	-3.7
	0.7nm,0.3s,baz=134,slow=8.8,SNR=3.0						
MJAR				LR	LR	04 32 47.4	
	comp=Z,532nm,22.0s,baz=120,slow=31						
MAJO	Matsushiro	68.77	321	*e*P	P	04 08 14.1	-3.7
CASY	Casey	69.20	205	*e*P	P	04 08 19.0	-1.0
	21nm,1.3s						
MYLDM	Lahad Datu	69.43	282	*e*P	P	04 08 22.0	-0.4
	62nm,1.5s						
JOW	Kunigami	69.98	307	LR	LR	04 33 49.6	
	comp=Z,509nm,21.8s,baz=148,slow=32						
JNU	Nakatsue	71.46	314	P	P	04 08 32.6	-1.8
	12nm,1.2s,baz=190,slow=18,SNR=1.9						
JNU				LR	LR	04 36 47.7	
	comp=Z,232nm,18.7s,baz=119,slow=33						
JNU	Nakatsue	71.46	314	*e*P	P	04 08 32.6	-1.8
	28nm,1.2s						
ASAJ	Asahikawa	71.58	329	LR	LR	04 33 48.1	
	comp=Z,754nm,21.6s,baz=160,slow=31						
SBI	Santa Barbara	72.45	46	*e*P	P	04 08 43.5	+3.2
PEA0B	Petropavlovsk-	73.01	343	*e*P	P	04 08 42.4	-0.8
	26nm,1.1s						
PETK	Petropavlovsk-	73.01	343	P	P	04 08 42.5	-0.7
	3.3nm,0.7s,baz=116,slow=9.8						
PETK				LR	LR	04 34 15.5	
	comp=Z,659nm,21.6s,baz=155,slow=31						
PETK	Petropavlovsk-	73.01	343	*e*P	P	04 08 41.5	-1.7
PEA1	Petropavlovsk-	73.02	343	*e*P	P	04 08 42.5	-0.7
PASC	Pasadena Art C	73.42	46	*e*P	P	04 08 43.0	-3.1
QSPA	South Pole Qui	73.87	180	P	P	04 08 48.2	-0.2
	5.4nm,0.9s,baz=93,slow=1.3,SNR=8.5						
QSPA				LR	LR	04 36 16.2	
	comp=Z,1µm,21.4s,baz=100,slow=32						
ISA	Isabella, Lake	74.05	45	*e*P	P	04 08 47.5	-2.2
	20nm,1.5s						
CMB	Columbia Colle	74.14	42	*e*P	P	04 08 48.5	-1.8
	7.2nm,1.0s						
AFDM	Forest Hills D	74.31	41	*e*P	P	04 08 51.6	+0.4
	14nm,1.3s						
WDC	Whiskeytown Da	74.33	39	*e*P	P	04 08 52.4	+1.1
	12nm,1.3s						
LPIG	La Paz	74.47	59	LR	LR	04 32 54.2	
	comp=Z,1µm,21.6s,baz=226,slow=29						
CCCA	Chr Cany lake	74.72	45	*e*P	P	04 08 54.8	+1.1
MDPB	Devils Postpil	74.75	43	*e*P	P	04 08 54.5	+0.4
	10nm,1.3s						
YBH	Yreka Blue Hor	74.94	38	P	P	04 08 51.8	-3.1
	1.3nm,0.5s,baz=180,slow=5.1,SNR=4.0						
YBH				LR	LR	04 36 15.2	
	comp=Z,397nm,19.0s,baz=236,slow=31						
DAC	Darwin (Calif)	74.98	45	*e*P	P	04 08 54.2	-1.2
	6.3nm,1.4s						
GSC	Goldstone, Bar	74.99	46	*e*P	P	04 08 54.1	-1.2
	10nm,1.3s						
WAKR	Walker	75.02	42	*e*P	P	04 08 55.3	-0.3
	12nm,1.5s						
BEKR	Beckworth	75.23	40	*e*P	P	04 08 55.5	-1.2
	17nm,1.4s						
PNTR	Pine Nut	75.26	41	*e*P	P	04 08 57.2	+0.2
	12nm,1.0s						
VCNR	Virginia City	75.34	41	*e*P	P	04 08 57.9	+0.5
	14nm,1.3s						
YERR	Yerington	75.42	42	*e*P	P	04 08 57.7	-0.1
	11nm,1.2s						
GMRC	Granite Mounta	75.51	47	*e*P	P	04 08 56.7	-1.7
RYN	Ryan	75.68	42	*e*P	P	04 09 00.2	+0.9
	14nm,1.3s						
NV01	Mina Array Sit	75.71	42	*e*P	P	04 08 57.0	-2.5
NVAR	Mina Array Bea	75.71	42	P	P	04 08 56.9	-2.6
	2.3nm,0.7s,baz=230,slow=7.9,SNR=13						
NVAR				LR	LR	04 36 59.5	
	comp=Z,506nm,18.9s,baz=116,slow=32						
PAHR	Pah Rah Range	75.75	41	*e*P	P	04 09 00.0	+0.4
	18nm,1.4s						
NV11	Mina Array Sit	75.81	42	*e*P	P	04 08 58.8	-1.2
	1.8nm,1.4s						
KSRS	Korea Array	75.88	316	LR	LR	04 39 25.9	
	comp=Z,387nm,19.2s,baz=128,slow=34						
LDFC	Landfair	76.05	47	*e*P	P	04 08 59.4	-2.1
	33nm,1.4s						
KVN	Kaiserville	76.19	42	*e*P	P	04 09 00.5	-1.8
	8.2nm,1.2s						
TPNV	Topopah Spring	76.25	45	*e*P	P	04 09 01.2	-1.4
	19nm,1.5s						
MOD	Modoc Plateau	76.47	39	*e*P	P	04 09 03.5	-0.3
	5.4nm,0.9s						
SHPR	Sheep Range	76.76	45	*e*P	P	04 09 04.9	-0.6
	19nm,1.5s						
W13A	Hualapai Mount	76.92	47	*e*P	P	04 09 05.5	-1.0
	6.4nm,1.3s						
Y14A	Wickenburg	76.97	49	*e*P	P	04 09 07.4	+0.9
	8.3nm,1.3s						
PINE	Pine Mountain	77.24	37	*e*P	P	04 09 07.0	-1.1
	19nm,1.3s						
USRK	Ussuriysk Ar.	77.29	324	P	P	04 09 05.9	-2.2
	0.9nm,0.6s,baz=114,slow=3.6						
USRK				LR	LR	04 36 39.5	
	comp=Z,1µm,21.4s,baz=120,slow=31						
R11A	Troy Canyon, C	77.45	44	*e*P	P	04 09 07.8	-1.5
	7.0nm,1.4s						
BMN	Battle Mountai	77.53	41	*e*P	P	04 09 08.0	-1.7
	7.6nm,1.0s						
WVOR	Wild Horse Val	77.79	39	*e*P	P	04 09 09.1	-2.0
	8.2nm,1.1s						
TUC	Tucson	77.81	51	*e*P	P	04 09 10.4	-1.0
	6.9nm,1.3s						
SMW	South Mountain	78.13	33	*e*P	P	04 09 14.4	+1.7
X16A	Lo Mia Camp, P	78.33	49	*e*P	P	04 09 13.7	-0.7
	8.3nm,1.3s						
LCMT	Little Creek M	78.34	46	*e*P	P	04 09 14.1	-0.1
	13nm,1.4s						
J08A	Circle Bar Ran	78.42	38	*e*P	P	04 09 14.2	-0.3
	17nm,1.4s						
CCUT	Cedar City	78.53	45	*e*P	P	04 09 14.8	-0.6
	6.7nm,1.2s						
PSUT	Pine Spring	78.70	44	*e*P	P	04 09 15.3	-1.0
	5.5nm,1.1s						
U15A	North Rim	78.71	47	*e*P	P	04 09 15.8	-0.7
	21nm,1.4s						
SZCU	Shurtz Canyon	78.74	45	*e*P	P	04 09 15.8	-0.8
	9.7nm,1.2s						
WUAZ	Wupatki	78.91	48	*e*P	P	04 09 20.0	+2.6
	14nm,1.4s						
ELK	Elko	78.96	42	P	P	04 09 15.8	-2.0
	0.4nm,0.4s,baz=315,slow=5.7,SNR=2.3						
PKCU	Pink Cliffs	79.20	46	*e*P	P	04 09 18.9	-0.4
	26nm,1.5s						
X18A	Snowflake	79.47	49	*e*P	P	04 09 19.1	-1.5
	8.7nm,1.3s						
MTPU	Mount Pierson	79.58	45	*e*P	P	04 09 20.7	-0.7
	13nm,1.4s						
NJ2	Nanjing	79.68	308	*e*P	P	04 09 22.6	+1.0
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
MSU	Marysvale	79.82	45	*e*P	P	04 09 21.8	-0.7
BMO	Blue Mountains	79.97	37	*e*P	P	04 09 22.1	-0.8
	10.0nm,1.4s						
MFID	Camas Ranch	80.05	39	*e*P	P	04 09 22.3	-1.2
	6.4nm,1.3s						
PMR	Palmer	80.13	12	*e*P	P	04 09 23.9	+0.7
	16nm,1.3s						
DUG	Dugway, Tooele	80.25	43	*e*P	P	04 09 24.7	+0.1
	8.8nm,1.3s						
DIV	Divide	80.43	14	*e*P	P	04 09 23.8	-1.2
	30nm,1.5s						
F10A	Beach Ranch, E	80.66	37	*e*P	P	04 09 26.1	-0.5
	11nm,1.4s						
SCM	Sheep Creek Mo	80.72	13	*e*P	P	04 09 25.6	-1.0
	21nm,1.2s						
TMUT	Trail Mountain	80.87	45	*e*P	P	04 09 26.8	-1.4
	14nm,1.3s						
CN2	Changchun	80.92	321	*e*P	P	04 09 31.9	+3.9
CN2				LR	LR		
	comp=N,350nm,23.0s						
CN2				LR	LR		
	comp=E,380nm,23.0s						
CN2				LR	LR		
	comp=Z,370nm,25.0s						
HLID	Hailey	80.99	40	*e*P	P	04 09 27.4	-1.2
	9.4nm,1.2s						
HVU	Hansel Valley	81.08	42	*e*P	P	04 09 27.6	-1.5
	12nm,1.4s						
SRU	San Rafael Swe	81.24	45	*e*P	P	04 09 28.6	-1.5
	6.4nm,1.2s						
LAZ	Ladron	81.48	51	*e*P	P	04 09 31.4	0.0
TRF	Thorofare Moun	81.61	11	*e*P	P	04 09 30.1	-1.3
	14nm,1.2s						
TCUT	Toone Canyon	81.64	43	*e*P	P	04 09 30.6	-1.5
	27nm,1.2s						
MNTX	Cornudas Mount	81.65	54	*e*P	P	04 09 31.8	-0.4
	8.8nm,1.4s						
DHY	Denali Highway	81.83	12	*e*P	P	04 09 33.7	+1.2
	12nm,1.4s						
PV09	Paradox Valley	81.91	46	*e*P	P	04 09 32.7	-1.0
PV14	Lion Creek, Pa	81.92	46	*e*P	P	04 09 31.5	-2.3
	8.0nm,1.1s						
PV13	Radium Mtn., P	81.96	47	*e*P	P	04 09 32.0	-2.0
	12nm,1.5s						
PV16	Nyswonger Mesa	81.97	46	*e*P	P	04 09 32.9	-1.0
	12nm,1.3s						
PV03	Paradox Valley	81.99	46	*e*P	P	04 09 32.8	-1.3
PV11	David Mesa, Pa	81.99	46	*e*P	P	04 09 33.8	-0.3
	14nm,1.4s						
TX31	Lajitas Ar. Si	82.04	56	*e*P	P	04 09 34.7	+0.3
LTX	Lajitas	82.04	56	*e*P	P	04 09 32.2	-2.2
TXAR	Lajitas Array	82.04	56	P	P	04 09 32.2	-2.2
	0.5nm,0.7s,baz=231,slow=5.7,SNR=6.3						
TXAR				LR	LR	04 37 33.1	
	comp=Z,786nm,21.8s,baz=0.0,slow=30						
PV02	Paradox Valley	82.04	47	*e*P	P	04 09 36.4	+2.1
	8.1nm,1.3s						
PV21	Cone Mtn., Par	82.04	46	*e*P	P	04 09 36.6	+2.2
	8.2nm,1.1s						
BPAW	Bear Paw Mtn.	82.08	10	*e*P	P	04 09 34.4	+0.7
	3.8nm,1.2s						
MCK	McKinley	82.11	11	*e*P	P	04 09 33.4	-0.5
	16nm,1.1s						
PV01	Paradox Valley	82.13	47	*e*P	P	04 09 32.7	-2.1
PV22	Blue Mesa, Par	82.16	46	*e*P	P	04 09 37.4	+2.5
	12nm,1.3s						
ANMO	Albuquerque	82.22	50	LR	LR	04 39 41.5	
	comp=Z,793nm,18.9s,baz=240,slow=31						
ANMO	Albuquerque	82.22	50	*e*P	P	04 09 35.5	+0.1
	11nm,1.4s						
MCMT	McKenzie Canyo	82.61	39	*e*P	P	04 09 38.2	+1.0
WRH	Wood River Hil	82.94	11	*e*P	P	04 09 37.7	-0.4
	33nm,1.4s						
SEY	Seymchan	82.96	345	P	P	04 09 36.0	-2.2
	3.6nm,1.0s,baz=142,slow=7.2,SNR=6.6						
MLY	Manley	82.99	10	*e*P	P	04 09 39.3	+0.9
	12nm,1.5s						
MSO	Missoula	83.02	37	*e*P	P	04 09 39.0	-0.1
	10nm,1.4s						
DLMT	Dillon	83.04	39	*e*P	P	04 09 41.2	+1.9
	6.9nm,1.1s						
HDA	Harding Lake	83.11	12	*e*P	P	04 09 38.6	-0.4
	6.5nm,1.1s						
REDW	Red Top Meadow	83.11	41	*e*P	P	04 09 41.6	+1.8
	15nm,1.4s						
TPAW	Teton Pass	83.11	41	*e*P	P	04 09 41.9	+2.1
	17nm,1.3s						
FXWY	Fox Creek	83.14	41	*e*P	P	04 09 41.9	+1.9
	9.6nm,1.4s						
CCB	Clear Creek Bu	83.16	11	*e*P	P	04 09 38.3	-0.9
	4.9nm,1.0s						
S22A	4UR Ranch, Cre	83.18	48	*e*P	P	04 09 39.8	-0.6
	26nm,1.5s						
IMW	Indian Meadow	83.32	41	*e*P	P	04 09 42.0	+1.0
	9.3nm,1.1s						
MDM	Murphy Dome	83.36	11	*e*P	P	04 09 38.5	-1.8
	25nm,1.4s						
MOOW	Moose Ponds	83.37	41	*e*P	P	04 09 42.8	+1.7
	6.8nm,1.3s						
LRM	Limekiln Ridge	83.37	39	*e*P	P	04 09 42.8	+1.7
LOHW	Long Hollow	83.39	41	*e*P	P	04 09 42.9	+1.7
	9.1nm,1.4s						
IL1	Eielson Array	83.44	12	*e*P	P	04 09 39.6	-1.1
ILAR	Eielson Array	83.44	12	P	P	04 09 38.6	-2.1
	0.6nm,0.9s,baz=224,slow=3.8,SNR=3.5						
ILAR				LR	LR	04 38 59.5	
	comp=Z,378nm,21.8s,baz=208,slow=30						
ILB	Eielson Array	83.44	12	*e*P	P	04 09 42.6	+1.8
FLWY	Flagg Ranch	83.56	41	*e*P	P	04 09 44.6	+2.5
	16nm,1.3s						
BW06	Boulder Array	83.64	42	*e*P	P	04 09 44.0	+1.4
	10nm,1.4s						
PD31	Pinedale Array	83.64	42	*e*P	P	04 09 43.2	+0.6
PDAR	Pinedale Array	83.64	42	P	P	04 09 39.5	-3.1
	1.6nm,0.8s,baz=216,slow=4.8,SNR=12						
PDAR				LR	LR	04 40 37.1	
	comp=Z,398nm,19.6s,baz=238,slow=31						

PDAR	Pinedale Array	83.64	42	eP	P	04 09 40.4	-2.1
YMR	Madison River	83.69	40	eP	P	04 09 46.0	+3.3
	24nm,1.4s						
SMCO	Snowmass	83.71	46	eP	P	04 09 40.5	-2.7
	17nm,1.4s						
BOZ	Bozeman (W)	83.75	39	eP	P	04 09 41.9	-1.0
	12nm,1.4s						
LNIG	Linares	83.84	62	eP	P	04 09 46.0	+2.2
	10nm,1.3s						
PMSA	Palmer Station	83.95	156	LR	LR	04 39 05.4	
	comp=Z,600nm,20.7s,baz=302,slow=30						
SDCO	Great Sand Dun	84.12	48	eP	P	04 09 47.0	+1.8
	5.7nm,1.4s						
HRY	Holter Researc	84.20	38	eP	P	04 09 45.8	+0.6
DAWY	Dawson	84.47	15	eP	P	04 09 46.0	-0.1
	26nm,1.5s						
MSTX	Muleshoe	84.58	53	eP	P	04 09 48.0	+0.6
	22nm,1.4s						
EGAK	Eagle	84.66	14	eP	P	04 09 45.9	-1.0
	8.0nm,1.0s						
RWWY	Rawlins	84.68	44	eP	P	04 09 50.1	+2.2
	12nm,1.1s						
RLMT	Red Lodge	84.96	40	eP	P	04 09 51.4	+2.2
	10nm,1.5s						
GCMT	Greycliff	85.04	40	eP	P	04 09 51.7	+2.2
COLD	Coldfoot	85.10	9	eP	P	04 09 48.3	-0.8
	12nm,1.2s						
BJI	Beijing	85.14	314	⇑eP	P	04 09 50.4	+0.5
BJI				pmax	pmax		
	comp=Z,25nm,1.1s						
AMTX	Amarillo	85.77	52	eP	P	04 09 55.1	+1.8
	13nm,1.4s						
ENH	Enshi	86.33	303	eP	P	04 09 57.5	+1.4
	28nm,1.3s						
ABTX	Abilene, Hawle	86.49	55	eP	P	04 09 57.6	+0.8
	25nm,1.4s						
TOLK	Toolik Lake Re	86.50	9	eP	P	04 09 59.5	+3.5
	14nm,1.4s						
MAW	Mawson	86.67	199	P	P	04 09 57.7	+0.7
	4.6nm,0.7s,baz=172,slow=7.1,SNR=2.8						
MAW				LR	LR	04 48 00.2	
	comp=Z,618nm,18.4s,baz=117,slow=35						
GYA	Guiyang	87.35	298	eP	P	04 10 02.0	+0.7
GYA				PP	PP	04 13 28.4	+2.5
GYA				SKS	SKSac	04 20 28.0	-1.5
GYA				S	S	04 20 43.2	+0.9
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,140nm,5.9s						
XAN	Xi’an	88.12	306	P	P	04 10 05.4	+0.7
XAN				pP	sP	04 10 09.4	+0.2
XAN				pmax	pmax		
	comp=Z,19nm,1.2s						
XAN				pmax	pmax		
	comp=Z,180nm,4.9s						
XAN				LR	LR		
	comp=N,200nm,18.3s						
XAN				LR	LR		
	comp=E,320nm,15.5s						
XAN				LR	LR		
	comp=Z,380nm,21.2s						
HHC	Hu-ho-hao-te	88.68	313	eP	P	04 10 08.2	+0.9
HHC				S	S	04 20 56.2	+1.9
HHC				pmax	pmax		
	comp=Z,47nm,1.1s						
HHC				pmax	pmax		
	comp=Z,300nm,8.6s						
HHC				LR	LR		
	comp=N,220nm,16.7s						
HHC				LR	LR		
	comp=E,160nm,16.2s						
HHC				LR	LR		
	comp=Z,190nm,17.1s						
KMI	Kunming	90.28	296	P	P	04 10 17.9	+2.6
KMI				pP	sP	04 10 21.8	+2.0
KMI				sP	pP	04 10 22.8	+4.1
KMI				S	S	04 21 04.5	-5.7
KMI				pmax	pmax		
	comp=Z,13nm,0.8s						
KMI				pmax	pmax		
	comp=Z,220nm,7.6s						
KMI				LR	LR		
	comp=N,200nm,21.1s						
KMI				LR	LR		
	comp=E,290nm,24.0s						
KMI				LR	LR		
	comp=Z,380nm,19.0s						
240A	Hunter Patters	90.97	57	eP	P	04 10 19.5	+1.5
	65nm,0.7s						
CD2	Chengdu	91.20	302	eP	P	04 10 18.7	-0.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
YKA	Yellowknife Ar	91.29	24	LR	LR	04 47 37.5	
	comp=Z,27nm,18.4s,baz=203,slow=33						
CM31	Chiang Mai Arr	91.72	289	eP	P	04 10 21.0	-0.8
CMAR	Chiang Mai Arr	91.72	289	P	P	04 10 21.0	-0.8
	1.0nm,0.3s,baz=103,slow=3.0,SNR=3.4						
VNA3	Neumayer Olymp	92.19	175	P	P	04 10 24.9	+1.8
SNAA	Sanae	92.19	177	P	P	04 10 25.9	+2.8
SNAA	Sanae	92.19	177	P	P	04 10 24.5	+1.4
	2.3nm,1.0s,baz=173,slow=17,SNR=3.4						
SNAA				LR	LR	04 46 17.3	
	comp=Z,504nm,21.7s,baz=206,slow=32						
SNAA	Sanae	92.19	177	eP	P	04 10 24.5	+1.4
	9.9nm,1.4s						
LZH	Lanzhou	92.72	307	eP	P	04 10 25.9	-0.4
LZH				pP	sP	04 10 30.8	0.0
LZH				ePP	PP	04 14 13.2	+4.7
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
LZH				pmax	pmax		
	comp=Z,730nm,8.7s						
LZH				LR	LR		
	comp=N,340nm,16.7s						
LZH				LR	LR		
	comp=E,430nm,18.4s						
LZH				LR	LR		
	comp=Z,420nm,18.9s						
VNA1	Neumayer--Stat	92.88	175	P	P	04 10 26.8	+0.7
SONM	Songino Array	94.63	318	LR	LR	04 50 57.3	
	comp=Z,234nm,18.5s,baz=90,slow=34						
ULM	Lac du Bonnet	95.29	39	LR	LR	04 47 53.8	
	comp=Z,538nm,19.5s,baz=240,slow=32						
GTA	Gaotai	96.73	309	eP	P	04 10 49.1	+4.5
GTA				pP	sP	04 10 52.5	+3.4
GTA				sP	pP	04 10 55.1	+7.2
GTA				S	S	04 22 10.8	+4.2
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GTA				LR	LR		
	comp=N,200nm,22.7s						
GTA				LR	LR		
	comp=E,290nm,21.0s						
GTA				LR	LR		
	comp=Z,570nm,24.0s						
TKL	Tuckaleechee C	99.94	56	LR	LR	04 48 57.8	
	comp=Z,599nm,21.9s,baz=228,slow=31						
KSH	Kashi	114.97	306	ePKP	PKPdf	04 16 01.0	+5.9
BVAR	Borovoye Array	117.76	322	PKP	PKPdf	04 15 59.0	-0.9
	1.5nm,0.8s,baz=70,slow=2.4,SNR=3.5						
AKASG	Malin Array Be	140.58	336	PKP	PKPdf	04 16 42.5	-0.5
	0.8nm,0.7s,baz=41,slow=3.3,SNR=4.3						
AKBB	Malin Array Si	140.58	336	ePKPdf	PKPdf	04 16 42.5	-0.5
KMBO	Kilima Mbogo	144.12	244	PKP	PKPdf	04 16 58.9	+8.0
	1.1nm,0.7s,baz=0.0,slow=5.1,SNR=2.1						
CLL	Collm	144.43	352	i PKPdf	PKPdf	04 16 51.5	+1.6
	comp=Z,8.0nm,1.2s						
CLL				i pPKPdf	sPKPdf	04 16 57.3	+2.8
CLL				LmV		05 16 00.0	
	comp=Z,500nm,20.7s						
UPC	Upice	144.70	348	AMS	AMS	05 13 30.0	
	comp=Z,500nm,24.9s						
BRG	Berggiesshubel	144.71	351	ePKP	PKPab	04 16 45.1	-4.1
	comp=Z,6.3nm,1.3s						
DPC	Dobruska-Polom	144.78	348	ePKP	PKPdf	04 16 54.6	+4.0
DPC				AMS	AMS	05 17 20.0	
	comp=Z,500nm,19.9s						
CRVS	Cervenica-Dubn	144.81	341	ePKP	PKPdf	04 16 53.1	+2.4
OKC	Ostrava-Krasne	144.86	346	AMS	AMS	05 17 40.0	
	comp=Z,600nm,19.8s						
PVCC	Panska Ves	144.94	350	AMS	AMS	05 16 40.0	
	comp=Z,500nm,20.9s						
MORC	Moravsky Berou	145.06	346	ePKPbc	PKPdf	04 16 51.0	-0.2
MORC	Moravsky Berou	145.06	346	ePKP	PKPbc	04 16 50.3	-0.2
LANS	Liptovska Anna	145.16	344	ePKP	PKPdf	04 16 55.9	+4.6
PRU	Pruhonice	145.47	350	ePKP	PKPab	04 16 54.3	+2.4
PRU				AMS	AMS	05 19 30.0	
	comp=Z,400nm,19.7s						
KECS	Kecovo	145.48	342	ePKP	PKPab	04 16 54.4	+2.4
GOPC	GO Pecny, Ondr	145.50	349	ePKP	PKPab	04 16 56.7	+4.6
GOPC				AMS	AMS	05 16 30.0	
	comp=Z,600nm,23.7s						
NKC	Novy Kostel	145.55	352	AMS	AMS	05 18 30.0	
	comp=Z,500nm,24.8s						
MEM	Membach	145.65	359	⇑P	PKPbc	04 16 52.3	0.0
VRAC	Vranov	145.71	347	ePKP	PKPbc	04 16 52.5	-0.1
TIRR	Tirgusor	145.73	330	⇑iP	PKPab	04 16 53.9	+0.8
JAVC	Velka Javorina	145.89	345	ePKP	PKPab	04 16 54.2	+0.6
VYHS	Vyhne	145.93	344	e	PKPdf	04 16 52.1	-0.5
VYHS	Vyhne	145.93	344	ePKP	PKPab	04 16 57.5	+3.8
BR101	Keskin Array S	145.98	319	ePKPdf	PKPbc	04 16 53.9	-0.1
BR131	Keskin Array S	145.98	319	ePKPdf	PKPab	04 16 54.7	+0.3
BRTR	Keskin Array B	145.98	319	PKPbc	PKPbc	04 16 53.9	-0.1
	comp=Z,7.8nm,1.0s,baz=79,slow=2.1,SNR=14						
KRUC	Moravsky	145.99	347	ePKP	PKPdf	04 16 53.1	+0.4
MLR	Muntele Rosu	146.06	334	PKPbc	PKPbc	04 16 53.7	-0.2
	comp=Z,3.0nm,1.0s,baz=7.9,slow=0.9,SNR=6.5						
MLR	Muntele Rosu	146.06	334	ePKPdf	PKPab	04 16 54.3	-0.2
DOU	Dourbes	146.17	1	⇑PKP	PKPab	04 16 57.1	+2.6
MODS	Modra-Piesok	146.44	346	ePKP	PKPab	04 16 58.7	+3.0
KHC	Kasperske Hory	146.46	350	ePKP	PKPab	04 16 55.4	-0.3
KHC				ex	x	04 16 58.9	
KHC				AMS	AMS	05 21 40.0	
	comp=Z,500nm,17.2s						
KHC	Kasperske Hory	146.46	350	ePKPdf	PKPbc	04 16 55.1	+0.2
VOIR		146.47	335	⇓iP	PKPbc	04 16 55.0	-0.1
ARR	Arges	146.70	335	⇑iP	PKPab	04 16 57.0	+0.1
GEC2	GERESS Array S	146.72	350	ePKPdf	PKPbc	04 16 56.3	+0.6
GERES	GERESS Array B	146.72	350	PKPbc	PKPbc	04 16 55.3	-0.4
	comp=Z,0.5nm,0.7s,baz=28,slow=2.3,SNR=5.5						
GEA0	GERESS Array S	146.72	350	ePKPdf	PKPdf	04 16 54.9	+0.9
CONA	Conrad Observa	147.18	347	ePKiKP	PKPbc	04 16 57.6	+0.5
	comp=Z,17nm,1.2s						
MOA	Molln	147.58	349	ePKPab	PKPbc	04 16 58.3	+0.2
	comp=Z,11nm,1.1s						
BFO	Black Forest	147.85	356	ePKPbc	PKPbc	04 16 59.4	+0.6
ARSA	Arzberg	147.89	347	ePKPab	PKPbc	04 16 59.4	+0.4
	comp=Z,10.0nm,1.2s						
MMAI	Mount Meron Ar	148.10	307	PKPbc	PKPdf	04 16 58.1	+1.2
	comp=Z,1.5nm,0.3s,baz=66,slow=5.4,SNR=3.6						
MDVR	Moldovita	148.32	338	⇑iP	PKPbc	04 17 01.3	+1.1
RETA	Reutte	148.46	353	ePKiKP	PKPbc	04 17 00.4	-0.1
	comp=Z,12nm,1.2s						
KBA	Koelnbreinsper	148.49	350	ePKiKP	PKPbc	04 17 00.6	-0.1
	comp=Z,6.5nm,0.9s						
WATA	Walderalm	148.51	352	ePKiKP	PKPbc	04 17 01.3	+0.5
	comp=Z,7.3nm,1.0s						
SOKA	Soboth	148.54	347	ePKiKP	PKPbc	04 17 00.7	0.0
	comp=Z,12nm,1.2s						
MOTA	Moosalm	148.56	352	ePKiKP	PKPbc	04 17 00.3	-0.5
	comp=Z,7.6nm,1.0s						
WTTA	Wattenberg	148.57	352	ePKiKP	PKPbc	04 17 01.1	+0.2
	comp=Z,7.0nm,0.8s						
DAVA	Damuels	148.76	354	ePKPbc	PKPbc	04 16 59.8	-1.6
	comp=Z,12nm,1.1s						
OBKA	Obir	148.81	348	ePKiKP	PKPbc	04 17 00.7	-0.7
	comp=Z,7.4nm,1.3s						
MYKA	Terra Mystica	148.87	349	ePKPbc	PKPbc	04 17 00.7	-0.9
	comp=Z,12nm,1.2s						
FETA	Feichten	148.93	353	ePKiKP	PKPbc	04 17 01.7	-0.1
	comp=Z,5.0nm,1.0s						
ABTA	Abfaltersbach	148.95	350	ePKiKP	PKPbc	04 17 01.6	-0.1
	comp=Z,12nm,0.9s						
DAVOX	Davos/Dischmat	149.26	354	PKPbc	PKPdf	04 16 59.3	+0.9
	comp=Z,2.8nm,0.7s,baz=198,slow=3.2,SNR=3.3						
DIVS	Divibare	149.53	339	ePKPbc	PKPbc	04 17 02.6	-0.7
SENIN	Lac Senin/Sane	149.86	357	ePKPbc	PKPbc	04 17 04.8	+0.6
BNI	Bardonecchia	151.20	358	ePKPbc	PKPbc	04 17 08.0	+0.6
FNA	Florina	151.82	334	ePKPbc	PKPbc	04 17 09.0	+0.1
ES19	SONSECA Array	155.21	17	ePKPab	PKPab	04 17 31.1	-1.0
ESDC	Sonseca Array	155.22	17	PKPab	PKPab	04 17 29.0	-3.1
	comp=Z,0.1nm,0.3s,baz=341,slow=2.2,SNR=2.4						
TORD	Torodi Ar. Bea	175.35	130	PKP	PKPdf	04 17 21.7	-3.0
	comp=Z,1.0nm,1.1s,baz=234,slow=1.2						
TOA1	Torodi Ar. Sit	175.35	130	ePKPdf	PKPdf	04 17 21.7	-3.0

KRSC 11 04:03:54.4±2.1**, 48°.96N**×**157°.24E, h20**^{km}±33^{km}**, ML3.8, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril’s	1.87	338	eP	Pn	04 04 24.9	-0.4
SKR				eS	Sn	04 04 48.0	-0.3
KDTR	Khodutka, Kamc	2.90	10	eP	Pn	04 04 42.4	+3.0
KDTR				eS	Sb	04 05 18.7	-1.8
ASAK	Asacha	3.45	7	eP	Pn	04 04 50.7	+3.6
RUS	Russkaya	3.57	13	eP	Pn	04 04 51.6	+3.0
RUS				eS	Sb	04 05 35.2	-4.5
MTVR	Mutnovka	3.58	9	eP	Pn	04 04 52.4	+3.5
KRMR	Karymshinskiy	3.92	8	eP	Pn	04 04 56.5	+3.1
DALK	Dalny	4.19	13	eP	Pn	04 05 01.2	+4.1
UGLR	Uglovaya	4.37	13	eP	Pn	04 05 04.2	+4.5
AVH	Avacha	4.41	12	eP	Pn	04 05 05.5	+5.2
SMAR	Somma	4.42	12	eP	Pn	04 05 05.5	+5.0
KOK	Koryaka	4.43	11	eP	Pn	04 05 04.8	+4.3
SDLR	Sedlovina	4.45	13	eP	Pn	04 05 04.6	+3.8
KRX	Arik	4.49	11	eP	Pn	04 05 06.5	+5.1
SPN	Mys Shipunski	4.50	22	eP	Pn	04 05 06.1	+4.7
SPN				eS	Sn	04 05 59.1	+6.0
GNL	Ganaly	4.76	5	eP	Pn	04 05 10.4	+5.3
MKZ	Mys Kozlova	6.26	25	eP	Pn	04 05 29.6	+4.1
KBTR	Krutoberegovo	8.01	23	eP	Pn	04 05 54.4	+4.8

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*IDC **11** 04:09:53.8±0.6, 9°.78S×159°.52E, h0^{km}, mb4.4/14, mb1 4.6/14, mb1mx4.3/50, mbtmp4.4/14, Error ellipse: s-maj=17.9km s-min=10.8km az=135.0*

*ISCJB **11** 04:09:55.5±0.3, 9°.81S±0°.04×159°.44E±0°.05, h22^{km}, mb4.6/32, MS4.8/2, Error ellipse: s-maj=7.4km s-min=5.1km az=43.5*

*BJI **11** 04:09:56.8, 9°.80S×159°.50E, h20^{km}, mb4.7/12, mB5.1/6, Ms4.9/6, Ms7 4.7/5*

*NEIC **11** 04:09:58.3±1.4, 9°.78S×159°.52E, h32^{km}±5^{km}, mb4.7/19, Error ellipse: s-maj=15.2km s-min=7.4km az=136.0*

NEIC Felt at Honiara.

ISC 11 04:09:57.3±0.4**, 9°.74S**±0°.06×**159°.50E**±0°.06**, h22**^{km}**, n54,** σ**1^{s}.29**/64**, mb4.7**/32**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	0.54	56	Pn	Pn	04 10 09.5	-0.2
	6μm,0.3s,baz=212,slow=4.1,SNR=551						
HNR				Sn	Sn	04 10 17.8	-0.2
	24μm,0.3s,baz=75,slow=20,SNR=101						
HNR	Honiara	0.54	56	i P	Pn	04 10 09.0	-0.6
HNR				i S	Sn	04 10 32.0	+14
HNR	Honiara	0.54	56	ePg	Pn	04 10 09.5	-0.2
HNR				ePg	Pb	04 10 09.6	+1.5
HNR				eSg	Sn	04 10 17.4	-0.6
HNR				eSn	Sn	04 10 17.8	-0.2
DZM	Mont Dzumac	13.96	152	Pn	Pn	04 13 16.3	+2.4
	0.4nm,0.3s,baz=289,slow=16,SNR=2.8						
CTA	Charters Tower	16.41	230	Pn	P	04 13 50.7	+1.7
	0.7nm,0.3s,baz=60,slow=13,SNR=14						
CTAO	Charters Tower	16.41	230	ePn	P	04 13 51.3	+2.3
	34nm,0.8s						
PATS	Pohnpei	16.51	356	ePn	Pn	04 13 45.2	-2.4
	77nm,0.9s						
EIDS	Eidsvold	17.48	206	ePn	P	04 14 01.1	+0.2
	25nm,1.0s						
JAY	Jayapura	20.00	290	P	Pn	04 14 30.1	-0.4
	51nm,1.0s,baz=109,slow=4.1,SNR=10						
ARMA	Armidale	21.85	199	eP	P	04 14 49.0	+0.4
	16nm,0.8s						
WRAB	Tennant Creek	26.30	244	eP	P	04 15 31.3	-0.2
	13nm,0.8s						
WB2	Warramunga Arr	26.30	244	eP	P	04 15 31.2	-0.4
	14nm,0.8s						
WB2				eP	pP	04 15 34.0	-4.1
WR1	Warramunga Arr	26.31	244	eP	P	04 15 31.2	-0.5
	16nm,0.9s						
WR1				ePcP	PcP	04 18 57.7	0.0
WRA	Warramunga Arr	26.31	244	P	P	04 15 31.2	-0.5
	11nm,0.7s,baz=72,slow=10,SNR=68						
WRA				PcP	PcP	04 18 57.7	0.0
	1.2nm,0.9s,baz=67,slow=3.0,SNR=4.8						
CAN	Canberra	27.21	199	eP	P	04 15 39.0	-0.6
	34nm,1.4s						
STKA	Stephens Creek	27.58	214	P	P	04 15 42.2	-0.7
	6.0nm,0.7s,baz=61,slow=16,SNR=7.2						
STKA	Stephens Creek	27.58	214	eP	P	04 15 42.3	-0.7
	1.7nm,0.9s						
AS01	Alice Springs	28.05	237	eP	P	04 15 45.6	-1.7
AS31	Alice Springs	28.08	237	eP	P	04 15 45.9	-1.7
	2.2nm,0.6s						
AS31				ePcP	PcP	04 19 02.5	+0.5
ASAR	Alice Springs	28.09	237	P	P	04 15 46.2	-1.3
	6.4nm,0.7s,baz=67,slow=9.5,SNR=34						
ASAR				PcP	PcP	04 19 02.4	+0.5
	1.3nm,0.9s,baz=51,slow=3.0,SNR=4.0						
AFI	Afiamalu	28.41	101	eP	P	04 15 49.5	-1.1
	62nm,1.0s						
BBOO	Buckleboo	31.54	220	eP	P	04 16 17.3	-0.7
	24nm,0.8s						
BKZ	Black Stump Fm	33.01	155	eP	P	04 16 30.2	-0.8
	13nm,1.4s						
FITZ	Fitzroy Crossi	33.85	252	eP	P	04 16 37.4	-1.1
THZ	Tophouse	34.02	162	eP	P	04 16 38.8	-0.8
	10nm,0.8s						
KHZ	Kahutara	34.81	162	eP	P	04 16 45.4	-1.0
	12nm,0.9s						
FOZ	Fox Glacier	34.85	167	eP	P	04 16 45.9	-0.8
	18nm,1.1s						
RPZ	Rata Peaks	35.31	165	P	P	04 16 50.4	-0.4
	4.6nm,0.5s,baz=27,slow=7.4,SNR=5.1						
FORT	Forrest	35.96	230	eP	P	04 16 55.4	-1.1
	42nm,1.5s						
JOHN	Johnston Islan	40.38	50	eP	P	04 17 32.4	-1.4
	286nm,1.3s						
MJAR	Matsushiro Arr	50.20	338	P	P	04 18 51.0	-0.5
	2.8nm,0.7s,baz=175,slow=8.8,SNR=8.8						
MAJO	Matsushiro	50.20	338	eP	P	04 18 51.0	-0.5
KS01	Wonju Array Si	55.52	330	eP	P	04 19 31.2	+0.5
USRK	Ussuriysk Ar.	59.19	337	P	P	04 19 57.4	+0.8
	2.9nm,0.8s,baz=142,slow=7.2						
GYA	Guiyang	62.65	306	eP	P	04 20 23.2	+2.6
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN	Xi’an	64.77	315	P	P	04 20 34.7	+0.3
XAN				pP	pP	04 20 42.5	+1.0
XAN				sP	sP	04 20 45.8	+1.7
XAN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
CM31	Chiang Mai Arr	65.97	295	eP	P	04 20 43.4	+0.9
CMAR	Chiang Mai Arr	65.97	295	P	P	04 20 43.4	+0.9
	1.0nm,0.4s,baz=121,slow=5.0,SNR=2.5						
HHC	Hu-ho-hao-te	66.95	322	eP	P	04 20 51.5	+3.1
HHC				sP	sP	04 21 04.5	+6.4
HHC				S	S	04 29 43.7	+3.1
HHC				sS	sS	04 29 54.4	+2.2
HHC				SS	SS	04 33 57.6	-2.0
HHC				pmax	pmax		
	comp=Z,17nm,1.0s						
HHC				pmax	pmax		
	comp=Z,230nm,5.8s						
HHC				LR	LR		
	comp=N,240nm,13.9s						
HHC				LR	LR		
	comp=E,210nm,13.9s						
HHC				LR	LR		
	comp=Z,280nm,15.1s						
VNDA	Vanda	67.77	179	P	P	04 20 53.4	+0.5
	6.0nm,0.8s,baz=341,slow=6.3,SNR=33						
VNDA	Vanda	67.77	179	eP	P	04 20 53.3	+0.4
	6.1nm,0.8s						
GTA	Gaotai	73.78	316	eP	P	04 21 31.6	+1.4
GTA				pP	sP	04 21 39.4	-0.6
GTA				sP	PcP	04 21 44.0	-1.8
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SONA0	Songino Array	74.06	326	eP	P	04 21 32.7	+1.0
SONM	Songino Array	74.06	326	P	P	04 21 32.7	+1.0
	2.3nm,0.6s,baz=138,slow=5.8,SNR=8.6						
SONA1	Songino Array	74.06	326	eP	P	04 21 32.6	+0.8
QSPA	South Pole Qui	80.26	180	P	P	04 22 05.8	-0.4
	1.7nm,0.7s,baz=92,slow=2.2,SNR=5.9						
WMQ	Urumqi	83.86	316	P	P	04 22 24.7	-0.7
WMQ				pP	pP	04 22 33.2	+0.5
WMQ				sP	sP	04 22 35.8	+0.5
WMQ				pmax	pmax		
	comp=Z,28nm,0.7s						
WMQ				LR	LR		
	comp=N,950nm,39.3s						
WMQ				LR	LR		
	comp=E,600nm,38.7s						
WMQ				LR	LR		
	comp=Z,420nm,28.5s						
ILAR	Eielson Array	84.33	20	P	P	04 22 26.8	-0.5
	0.6nm,0.5s,baz=243,slow=5.1,SNR=14						
ILB	Eielson Array	84.33	20	eP	P	04 22 26.8	-0.5
MK01	Makanchi Array	88.39	318	eP	P	04 22 47.1	-0.5
MK32	Makanchi Array	88.40	318	eP	P	04 22 47.7	0.0
MKAR	Makanchi Array	88.40	318	P	P	04 22 47.7	0.0
	0.8nm,0.6s,baz=104,slow=5.1,SNR=5.4						
KURK	Kurchatov	91.74	321	eP	P	04 23 02.0	-1.1
KURBB	Kurchatov Arra	91.77	321	P	P	04 23 02.0	-1.3
	0.3nm,0.3s,baz=104,slow=3.9,SNR=4.1						

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*ISCJB **11** 04:18:39.6±0.4, 39°.31N±0°.03×27°.81E±0°.03, h5^{km}±5^{km}, Error ellipse: s-maj=4.8km s-min=3.5km az=10.3*

*CSEM **11** 04:18:39.9±0.1, 39°.30N×27°.82E, h5^{km}, ML2.7*

*DDA **11** 04:18:39.3, 39°.32N×27°.81E, h3^{km}, Ml2.7*

*ISK **11** 04:18:39.8, 39°.27N×27°.81E, h8^{km}, ML2.2/8*

ISC 11 04:18:39.7±1.0**, 39°.30N**±0°.03×**27°.81E**±0°.02**, h4**^{km}±10^{km}**, n30,** σ**0^{s}.55**/50**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STEP	BALIKESIR_Sava	0.10	317	i P	Pg	04 18 41.5	-0.3
STEP				i S	Sg	04 18 43.2	-0.1
STEP	BALIKESIR_Sava	0.10	317	P	Pg	04 18 41.5	-0.3
STEP				S	Sg	04 18 43.2	-0.1
AKHS	Akhisar	0.42	179	i P	Pg	04 18 48.0	+0.2
AKHS				i S	Sb	04 18 55.3	-1.1
AKHS	Akhisar	0.42	179	P	Pg	04 18 48.0	+0.2
AKHS				S	Sb	04 18 55.3	-1.1
DURS	Dursunbey	0.59	60	i P	Pg	04 18 51.2	+0.1
DURS				i S	Sg	04 19 00.1	+1.2
DURS	Dursunbey	0.59	60	P	Pg	04 18 51.2	+0.1
DURS				S	Sg	04 19 00.1	+1.2
DKL	Dikili	0.74	252	PG	Pg	04 18 54.4	+0.5
DKL				SG	Sb	04 19 04.8	-0.7
DKL	Dikili	0.74	252	ePg	Pg	04 18 54.4	+0.5
DKL				eSg	Sb	04 19 04.8	-0.7
DEMI	Demirci	0.75	110	i P	Pg	04 18 54.3	+0.2
DEMI				i S	Sb	04 19 04.9	-1.1
DEMI	Demirci	0.75	110	P	Pg	04 18 54.3	+0.2
DEMI				S	Sb	04 19 04.9	-1.1
AYVA	Ayvalik	0.87	271	i P	Pb	04 18 57.7	+0.4
AYVA				i S	Sg	04 19 08.5	+0.9
AYVA	Ayvalik	0.87	271	P	Pb	04 18 57.7	+0.4
AYVA				S	Sg	04 19 08.5	+0.9
SIMA	Simav-Kutahya	0.94	103	PG	Pb	04 18 58.4	-0.1
SIMA				SG	Sb	04 19 11.6	+0.3
SIMA	Simav-Kutahya	0.94	103	ePg	Pb	04 18 58.4	-0.1
SIMA				eSg	Sb	04 19 11.6	+0.3
MANT	Manisa	1.00	144	i P	Pg	04 18 58.8	-0.1
MANT				i S	Sg	04 19 12.3	+0.6
MANT	Manisa	1.00	144	P	Pg	04 18 58.8	-0.1
MANT				S	Sg	04 19 12.4	+0.6
KULA	Kula-Manisa	1.03	140	PG	Pg	04 18 58.9	-0.5
KULA	Kula-Manisa	1.03	140	ePg	Pg	04 18 58.9	-0.5
KCTX	Karacabey (Bur	1.05	24	PG	Pb	04 19 00.6	+0.2
KCTX	Karacabey (Bur	1.05	24	ePg	Pb	04 19 00.6	+0.2
BAYC	CANAKKALE_Bayr	1.07	295	i P	Pg	04 19 00.4	+0.2
BAYC				i S	Sg	04 19 13.9	-0.2
BAYC	CANAKKALE_Bayr	1.07	295	P	Pg	04 19 00.4	+0.2
BAYC				S	Sg	04 19 13.9	-0.2
BLCB	Balcova	1.09	213	PG	Pg	04 19 00.8	+0.1
BLCB				SG	Sb	04 19 16.0	+0.3
BLCB	Balcova	1.09	213	ePg	Pg	04 19 00.8	+0.1
BLCB				eSg	Sb	04 19 16.0	+0.3
TVSB	Tavsanli	1.29	83	PN	Pb	04 19 04.9	+0.4
TVSB	Tavsanli	1.29	83	ePn	Pb	04 19 04.9	+0.4
URLA	Izmir	1.33	226	PN	Pn	04 19 04.7	-0.4
URLA	Izmir	1.33	226	ePn	Pn	04 19 04.7	-0.4
AYDB	Zeytinkoy-Aydi	1.35	177	PN	Pn	04 19 05.2	-0.3
AYDB	Zeytinkoy-Aydi	1.35	177	ePn	Pn	04 19 05.2	-0.3

GUC 11 04:26:38.7±0.6, 20°.44S×69°.30W, h108km±5km, ML3.5, 2C-3D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB08	IPOC Station P	0.32	25	⇓eP	Pn	04 26 54.3	-0.6
PB08				i S	Sn	04 27 05.3	-1.6
PB08				IAML		04 27 06.1	
	comp=E,4µm,0.3s						
PB01	IPOC Station P	0.63	196	⇓eP	Pn	04 26 56.7	+0.2
PB01				i S	Sn	04 27 10.4	+0.7
PB01				IAML		04 27 11.6	
	comp=N,3µm,0.2s						
PB02	IPOC Station P	1.04	212	⇑eP	Pn	04 27 01.1	+0.8
PB02				i S	Sn	04 27 17.5	+0.9
PB02				IAML		04 27 22.1	
	comp=E,2µm,0.3s						
MNMC	Minye Minye	1.33	348	eP	Pn	04 27 04.0	+0.3
MNMC				i S	Sn	04 27 23.2	+0.7
MNMC				IAML		04 27 24.9	
	comp=E,1µm,0.3s						
PB09	IPOC Station P	1.36	178	⇑eP	Pn	04 27 04.6	+0.7
PB09				i S	Sn	04 27 24.1	+1.1
PB09				IAML		04 27 26.4	
	comp=N,505nm,0.2s						
PB07	IPOC Station P	1.40	203	eP	Pn	04 27 04.8	+0.5
PB07				i S	Sn	04 27 25.0	+1.2
PB07				IAML		04 27 27.6	
	comp=E,683nm,0.3s						
PB03	IPOC Station P	1.66	195	⇓eP	Pn	04 27 08.4	+0.9
PB03				i S	Sn	04 27 30.2	+0.8
PB03				IAML		04 27 31.4	
	comp=N,426nm,0.2s						

IDC 11 05:06:01.0±10.0, 16°.44S×175°.01W, h0km, mb3.7/2, mb1 4.0/2, mb1mx3.4/53, mbtmp3.7/2, MS3.8/7, Ms1 3.7/7, ms1mx3.4/50, Error ellipse: s-maj=470.9km s-min=66.9km az=141.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	4.01	52	LR	LR	05 08 00.7	
	comp=Z,721nm,20.6s,baz=234,slow=30						
RAR	Rarotonga	15.18	111	LR	LR	05 13 28.6	
	comp=Z,256nm,19.6s,baz=206,slow=30						
DZM	Mont Dzumac	18.38	249	LR	LR	05 16 23.8	
	comp=Z,234nm,20.1s,baz=185,slow=34						
HNR	Honiara	25.36	283	LR	LR	05 19 56.0	
	comp=Z,323nm,19.4s,baz=128,slow=33						
WRA	Warramunga Arr	48.10	258	P	P	05 14 44.2	+1.3
	0.6nm,0.8s,baz=93,slow=7.6,SNR=4.4						
ASAR	Alice Springs	48.32	253	P	P	05 14 43.5	-1.1
	1.7nm,0.8s,baz=84,slow=8.3,SNR=12						
RPN	Rapa Nui	61.33	112	LR	LR	05 36 22.2	
	comp=Z,54nm,19.8s,baz=274,slow=30						
LEM	Lembang	76.02	267	LR	LR	05 51 52.8	
	comp=Z,41nm,19.3s,baz=107,slow=36						
ULM	Lac du Bonnet	95.72	39	LR	LR	05 59 08.4	
	comp=Z,72nm,18.4s,baz=349,slow=33						
BRTR	Keskin Array B	145.95	319	PKPbc	PKPdf	05 25 42.1	-0.3
	1.2nm,1.0s,baz=67,slow=4.8,SNR=3.8						

IDC 11 05:27:05.7±1.9, 5°.74S×150°.78E, h0km, mb3.9/3, mb1 4.3/3, mb1mx3.6/45, mbtmp3.9/3, Error ellipse: s-maj=120.2km s-min=27.2km az=125.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	21.33	227	P	P	05 31 54.8	+0.3
	2.5nm,0.6s,baz=53,slow=11,SNR=38						
ASAR	Alice Springs	24.12	221	P	P	05 32 23.2	-0.3
	3.9nm,0.7s,baz=54,slow=9.2,SNR=41						
ILAR	Eielson Array	83.78	22	P	P	05 39 36.5	-0.2
	0.7nm,0.7s,baz=241,slow=5.2,SNR=9.0						
TORD	Torodi Ar. Bea	148.65	286	PKPbc	PKPbc	05 46 55.7	-0.4
	baz=78,slow=1.4						

ISCJB ***11*** *05:32:34.3±0.3, 3°.15N±0°.03×127°.08E±0°.05, h44km, mb4.3/37, MS3.9/7, Error ellipse: s-maj=7.4km s-min=4.3km az=160.4*

IDC ***11*** *05:32:34.5±4.0, 3°.07N×126°.87E, h31km±29km, mb4.0/16, mb1 4.1/17, mb1mx3.9/53, mbtmp4.1/17, ML4.0/1, MS3.7/6, Ms1 3.7/6, ms1mx3.2/56, Error ellipse: s-maj=33.2km s-min=10.4km az=67.0*

NEIC ***11*** *05:32:35.2±0.8, 3°.08N×127°.06E, h40km±7km, mb4.4/17, Error ellipse: s-maj=8.4km s-min=4.0km az=58.0*

DJA ***11*** *05:32:39.7±0.7, 3˚N±6˚×12˚7E±˚, h54km±7km, M4.2/13, mB4.9/6, mb4.4/13, MLv4.2/11, Mw(mB)4.2/6*

ISC 11 05:32:36.4±0.4, 3°.12N±0°.06×127°.05E±0°.08, h44km, n84, σ1s.90/88, mb4.4/37, MS4.0/7, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	2.35	172	P	Pn	05 33 13.3	+0.7
TNTI	Ternate	2.35	172	ePn	Pn	05 33 09.6	-3.0
LBMI	Labuha	3.75	173	P	Pn	05 33 32.5	+0.6
KMSI	Cibinong	3.97	231	P	Pn	05 33 37.6	+2.7
SANI	Sanana	5.24	192	P	Pn	05 33 50.6	-1.7
MRSI	Marisa	5.74	243	P	Pn	05 34 02.0	+2.8
SIJI	Sorong	5.78	133	Pn	Pn	05 34 01.4	+1.7
	3.7nm,0.3s,baz=294,slow=20,SNR=5.0						
SIJI				Sn	Sn	05 35 08.2	+3.3
	5.0nm,0.3s,baz=180,slow=20,SNR=4.5						
SIJI				LR	LR	05 36 35.0	
	comp=Z,510nm,20.9s,baz=302,slow=41						
LUWI	Luwuk	5.95	226	ePn	Pn	05 34 00.0	-1.9
NLAI	Namlea	6.31	180	P	Pn	05 34 07.8	+0.8
APSI	Ampana	6.72	234	P	Pn	05 34 18.3	+5.7
	62nm,0.6s,569nm0.2nm						
MPSI	Mapaga	7.66	249	P	Pn	05 34 29.8	+4.2
FAKI	Fak Fak	7.93	139	P	Pn	05 34 31.1	+1.8
FAKI	Fak Fak	7.93	139	ePn	Pn	05 34 28.5	-0.8
MYLDM	Lahad Datu	8.77	284	ePn	Pn	05 34 39.8	-1.0
WBSI	Waikabubak, Su	14.79	211	P	P	05 36 08.3	+0.2
SBUM	Sibu	14.83	268	ePn	Pn	05 36 02.7	-0.7
PLAI	Plampang	15.04	218	P	P	05 36 08.5	-2.3
TWSI	Taliwang, Sumb	15.54	221	P	P	05 36 15.8	-0.5
SRBI	Singaraja	16.22	227	P	P	05 36 28.5	+4.6
MTN	Manton Dam	16.36	166	ePn	Pn	05 36 21.5	-1.7
	15nm,0.5s						
KSM	Kuching	16.81	265	ePn	Pn	05 36 28.0	-0.8
	15nm,0.6s						
JAGI	Jajag, Banyuwa	17.26	228	P	P	05 36 37.0	+1.6
JAGI	Jajag, Banyuwa	17.26	228	ePn	P	05 36 35.2	-0.2
	37nm,1.1s						
FITZ	Fitzroy Crossi	21.12	184	eP	P	05 37 16.7	-1.0
	6.0nm,0.6s						
YHNB	Yeheng	22.12	346	eP	P	05 37 27.7	-0.6
	12nm,1.1s						
PMG	Port Moresby	23.59	122	LR	LR	05 47 31.5	
	comp=Z,186nm,20.8s,baz=277,slow=38						
WRAB	Tennant Creek	24.00	163	eP	P	05 37 46.0	-1.2
	17nm,1.0s						
WR1	Warramunga Arr	24.01	163	eP	P	05 37 45.7	-1.6
	20nm,1.1s						
WR1				ePcP	PcP	05 41 28.2	-0.4
WR1				eS	S	05 42 03.3	+1.8
WRA	Warramunga Arr	24.01	163	P	P	05 37 45.7	-1.6
	6.0nm,0.4s,baz=341,slow=10,SNR=80						
WRA				PcP	PcP	05 41 28.2	-0.4
	0.3nm,0.5s,baz=332,slow=2.4,SNR=3.2						
WRA				S	S	05 42 03.3	+1.8
	0.9nm,0.9s,baz=348,slow=20,SNR=4.7						
WB2	Warramunga Arr	24.01	163	eP	P	05 37 45.5	-1.8
	15nm,1.0s						
WB2				eP	P	05 37 47.9	+0.6
AS31	Alice Springs	27.44	166	eP	P	05 38 17.4	-1.1
	1.9nm,0.4s						
AS31				ePcP	PcP	05 41 37.1	+0.7
ASAR	Alice Springs	27.45	166	P	P	05 38 17.4	-1.1
	1.4nm,0.6s,baz=352,slow=7.8,SNR=25						
ASAR				PcP	PcP	05 41 37.1	+0.7
	0.4nm,0.4s,baz=343,slow=2.5,SNR=3.4						
AS01	Alice Springs	27.45	166	eP	P	05 38 16.3	-2.2
PBKT	Sadao Pong	28.91	299	P	P	05 38 35.2	+3.7
	3.2nm,1.1s						
GYA	Guiyang	30.34	322	eP	P	05 38 46.8	+2.5
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CMAR	Chiang Mai Arr	31.46	301	P	P	05 38 52.3	-1.8
	comp=Z,0.8nm,0.4s,baz=117,slow=7.3,SNR=5.6						
CMAR				LR	LR	05 52 43.4	
	comp=Z,41nm,19.6s,baz=210,slow=39						
HNR	Honiara	35.07	111	LR	LR	05 52 42.0	
	comp=Z,138nm,21.7s,baz=332,slow=34						
XAN	Xi'an	35.10	333	P	P	05 39 34.2	+8.5
XAN				pP	pP	05 39 39.3	+1.7
XAN				pmax	pmax		
	comp=Z,4.0nm,0.5s						
STKA	Stephens Creek	37.45	159	P	P	05 39 45.0	-0.7
	comp=Z,5.4nm,0.6s,baz=332,slow=10,SNR=14						
STKA	Stephens Creek	37.45	159	eP	P	05 39 44.9	-0.8
	comp=Z,1.2nm,0.7s						
BJT	Baijiatuau	38.04	346	eP	P	05 39 50.7	+0.1
	comp=Z,12nm,0.8s						
BJI	Beijing	38.05	346	P	P	05 39 50.6	-0.1
BJI				pmax	pmax		
	comp=Z,21nm,1.1s						
LZH	Lanzhou	39.19	330	eP	P	05 40 03.4	+2.9
LZH				pP	sP	05 40 15.8	-2.0
LZH				sP	pP	05 40 20.9	+8.3
LZH				ePP	PnPn	05 41 37.2	+3.3
LZH				pmax	pmax		
	comp=Z,15nm,1.0s						
LZH				pmax	pmax		
	comp=Z,240nm,5.1s						
LZH				LR	LR		
	comp=N,320nm,15.2s						
LZH				LR	LR		
	comp=E,380nm,16.5s						
LZH				LR	LR		
	comp=Z,530nm,17.8s						
HHC	Hu-ho-hao-te	40.08	342	eP	P	05 40 10.8	+3.0
HHC				pmax	pmax		
	comp=Z,19nm,1.1s						
HHC				pmax	pmax		
	comp=Z,210nm,6.9s						
USRK	Ussuriysk Ar.	41.15	5	P	P	05 40 17.3	+0.9
	comp=Z,2.3nm,0.7s,baz=149,slow=3.0						
GTA	Gaotai	43.78	329	eP	P	05 40 43.8	+5.7
GTA				pP	sP	05 40 56.5	+1.1
GTA				sP	pP	05 41 01.3	+11
GTA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KLR	Kul'dur	46.12	4	P	P	05 40 56.2	-0.1
	comp=Z,0.2nm,0.8s,baz=255,slow=3.8,SNR=7.7						
SONA0	Songino Array	47.98	341	eP	P	05 41 10.4	-0.7
SONM	Songino Array	47.98	341	P	P	05 41 10.4	-0.7
	comp=Z,0.9nm,0.6s,baz=148,slow=8.7,SNR=5.0						
SONA1	Songino Array	47.99	341	eP	P	05 41 11.0	-0.1
WMQ	Urumqi	53.41	325	P	P	05 41 52.5	+0.5
WMQ				LR	LR		
	comp=N,310nm,32.7s						
WMQ				LR	LR		
	comp=E,340nm,30.3s						
WMQ				LR	LR		
	comp=Z,170nm,21.1s						
MK01	Makanchi Array	58.22	325	eP	P	05 42 25.1	-1.3
MK31	Makanchi Array	58.24	325	eP	P	05 42 25.7	-0.8
MK32	Makanchi Array	58.24	325	eP	P	05 42 25.8	-0.7
MKAR	Makanchi Array	58.24	325	P	P	05 42 25.8	-0.7
	comp=Z,2.1nm,0.6s,baz=115,slow=7.6,SNR=18						
MKAR	Makanchi Array	58.24	325	eP	P	05 42 25.9	-0.5
	comp=Z,17nm,0.8s						
KSH	Kashi	58.70	315	eP	P	05 42 32.1	+2.1
KSH				sP	PcP	05 43 27.1	+7.6
KSH				PP	PP	05 44 46.2	+6.0
KSH				PcS	PcS	05 47 21.6	+0.2
KSH				S	S	05 50 24.1	-7.7
KSH	Kashi	58.70	315	SS	SS	05 54 22.4	-3.1
KSH				pmax	pmax		
	comp=Z,110nm,7.2s						
ZAA0	Zalesovo Array	61.28	333	eP	P	05 42 47.2	+0.1
	comp=Z,2.1nm,0.6s						
ZALV	Zalesovo Beam	61.28	333	P	P	05 42 46.1	-1.0
	comp=Z,1.7nm,0.6s,baz=116,slow=6.8,SNR=7.2						
ZAA1	Zalesovo Array	61.28	333	eP	P	05 42 46.1	-1.0
KURBB	Kurchatov Arra	62.42	327	P	P	05 42 54.5	-0.4
	comp=Z,3.1nm,0.6s,baz=127,slow=6.1,SNR=30						
KURK	Kurchatov	62.43	328	eP	P	05 42 54.4	-0.5
	comp=Z,6.1nm,0.7s						
KK31	Karatay Array	63.90	317	eP	P	05 43 03.6	-1.3
KKAR	Karatay Array	63.90	317	eP	P	05 43 03.7	-1.2
BVAR	Borovoye Array	68.01	327	P	P	05 43 30.3	-0.8
	comp=Z,1.1nm,0.5s,baz=131,slow=7.9,SNR=6.0						
ABKAR	Akbulak array	72.83	321	eP	P	05 44 00.2	-0.3
AKTO	Aktyubinsk	74.34	322	P	P	05 44 08.9	-0.6
	comp=Z,1.2nm,0.4s,baz=111,slow=8.6,SNR=7.6						
ARU	Arti	75.62	328	eP	P	05 44 16.4	-0.3
	comp=Z,8.4nm,0.7s						
VNDA	Vanda	82.78	173	P	P	05 44 55.6	+0.3
	comp=Z,1.4nm,0.8s,baz=325,slow=5.9,SNR=7.1						
KBZ	Khabaz	83.63	313	LR	LR	06 27 36.3	
	comp=Z,68nm,18.6s,baz=43,slow=40						
ATD	Arta Tunnel	83.71	281	LR	LR	06 23 32.0	
	comp=Z,54nm,18.4s,baz=347,slow=37						
MLY	Manley	83.90	25	eP	P	05 45 02.9	+1.5
	comp=Z,3.7nm,1.1s						
COLD	Coldfoot	84.33	23	eP	P	05 45 03.7	+0.2
	comp=Z,5.5nm,1.2s						
ILAR	Eielson Array	85.52	25	P	P	05 45 08.2	-1.3
	comp=Z,0.1nm,0.5s,baz=259,slow=3.6,SNR=4.2						
BR101	Keskin Array S	90.66	310	eP	P	05 45 34.6	-0.3
BRTR	Keskin Array B	90.66	310	P	P	05 45 34.6	-0.3
	comp=Z,0.7nm,0.6s,baz=20,slow=4.6,SNR=4.2						
ARA0	ARCESS Array S	91.13	340	eP	P	05 45 35.2	-1.1
ARCES	ARCESS Array B	91.13	340	P	P	05 45 35.2	-1.1
	comp=Z,1.2nm,0.7s,baz=74,slow=5.6,SNR=5.1						
SPITS	Spitsbergen Ar	91.14	349	P	P	05 45 35.1	-1.1
	comp=Z,15nm,1.1s,baz=114,slow=6.5,SNR=3.5						
AKASG	Malin Array Be	92.57	321	P	P	05 45 41.6	-1.6
	comp=Z,0.3nm,0.4s,baz=72,slow=2.9,SNR=3.1						
BUR04	Bucovina Ar. S	95.67	318	eP	P	05 45 56.5	-1.3
TORD	Torodi Ar. Bea	123.41	288	PKP	PKPdf	05 51 29.6	-0.3
	comp=Z,1.4nm,0.9s,baz=62,slow=3.4						
TOA1	Torodi Ar. Sit	123.41	288	ePKPdf	PKPdf	05 51 29.6	-0.3

ISCJB ***11*** *05:57:47.9±0.5, 39°.06N±0°.04×29°.13E±0°.03, h4km±5km, Error ellipse: s-maj=6.8km s-min=3.8km az=167.6*

ISK ***11*** *05:57:47.6, 39°.09N×29°.10E, h4km, ML2.5/8*

DDA ***11*** *05:57:47.4, 39°.10N×29°.11E, h8km, Ml2.9*

CSEM ***11*** *05:57:48.0±0.1, 39°.08N×29°.12E, h2km, ML2.5, Error ellipse: s-maj=3.1km s-min=2.1km az=158.0*

ISC 11 05:57:48.0±0.9, 39°.10N±0°.03×29°.10E±0°.02, h7km±6km, n39, σ0s.44/52, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIMA	Simav-Kutahya	0.10	261	PG	Pg	05 57 50.2	-0.1
SIMA				SG	Sg	05 57 52.0	+0.2
SIMA	Simav-Kutahya	0.10	261	ePg	Pg	05 57 50.2	-0.1
SIMA				eSg	Sg	05 57 52.0	+0.2
SMAA	Simav-Kutahya	0.10	271	PG	Pg	05 57 50.2	-0.1
SMAA	Simav-Kutahya	0.10	271	ePg	Pg	05 57 50.2	-0.1
SHAP	Saphane-Kutahy	0.12	129	PG	Pg	05 57 50.6	-0.1
SHAP	Saphane-Kutahy	0.12	129	ePg	Pg	05 57 50.6	-0.1
GEDZ	Gediz	0.24	103	PG	Pg	05 57 53.4	+0.5
GEDZ	Gediz	0.24	103	ePg	Pg	05 57 53.4	+0.5
GDZ	Gediz	0.29	92	i P	Pg	05 57 53.4	-0.5
GDZ				i S	Sg	05 57 57.7	-0.1
GDZ	Gediz	0.29	92	P	Pg	05 57 53.4	-0.5
GDZ				S	Sg	05 57 57.7	-0.1
DEMI	Demirci	0.31	260	i P	Pg	05 57 54.0	-0.1
DEMI				i S	Sg	05 57 58.6	+0.4
DEMI	Demirci	0.31	260	P	Pg	05 57 54.0	-0.1
DEMI				S	Sg	05 57 58.6	+0.4
TVSB	Tavsanli	0.45	38	PG	Pg	05 57 56.1	-0.7
TVSB	Tavsanli	0.45	38	ePg	Pg	05 57 56.1	-0.7
KULA	Kula-Manisa	0.68	211	PG	Pg	05 58 00.7	-0.4
KULA	Kula-Manisa	0.68	211	ePg	Pg	05 58 00.7	-0.4
DURS	Dursunbey	0.70	316	i P	Pg	05 58 01.2	-0.4
DURS				i S	Sn	05 58 15.6	0.0
MANT	Manisa	0.74	215	i P	Pg	05 58 02.0	-0.3
MANT				i S	Sg	05 58 11.7	-0.2
MANT	Manisa	0.74	215	P	Pg	05 58 02.0	-0.3
MANT				S	Sg	05 58 11.7	-0.2
AKHS	Akhisar	1.03	258	i P	Pg	05 58 08.0	+0.2
AKHS				i S	Sb	05 58 21.7	-0.2
AKHS	Akhisar	1.03	258	P	Pg	05 58 08.0	+0.2
AKHS				S	Sb	05 58 21.7	-0.2
STEP	BALIKESIR_Sava	1.11	285	i P	Pn	05 58 10.1	0.0
STEP				i S	Sn	05 58 26.3	+0.6
STEP	BALIKESIR_Sava	1.11	285	P	Pn	05 58 10.1	0.0
STEP				S	Sn	05 58 26.3	+0.6
CAVI	Cavuskoy	1.24	27	PN	Pb	05 58 11.7	-0.2
CAVI	Cavuskoy	1.24	27	ePn	Pb	05 58 11.7	-0.2
MDNY	Mudanya-Bursa	1.28	352	PN	Pg	05 58 12.6	0.0
MDNY	Mudanya-Bursa	1.28	352	ePn	Pg	05 58 12.6	0.0
ADVT	Abdulvahap	1.42	20	PN	Pg	05 58 15.1	-0.2
ADVT	Abdulvahap	1.42	20	ePn	Pg	05 58 15.1	-0.2
YLV	Yalova	1.48	8	PN	Pb	05 58 15.9	-0.1
YLV	Yalova	1.48	8	ePn	Pb	05 58 15.9	-0.1
SBT5	Esenkoy-Cinarc	1.54	354	PN	Pb	05 58 17.0	+0.1
SBT5	Esenkoy-Cinarc	1.54	354	ePn	Pb	05 58 17.0	+0.1
GULT	Gulveren	1.72	39	PN	Pb	05 58 19.5	-0.6
GULT	Gulveren	1.72	39	ePn	Pb	05 58 19.5	-0.6
SBT3	Marmara-Eregli	1.98	334	PN	Pb	05 58 23.2	-1.2
SBT3	Marmara-Eregli	1.98	334	ePn	Pb	05 58 23.2	-1.2
SILT	Sile	2.09	11	PN	Pn	05 58 24.5	+0.9
SILT	Sile	2.09	11	ePn	Pn	05 58 24.5	+0.9

TRN 11 06:08:46.2, 13°.03N×61°.26W, h129km, MD3.7, 8C-3D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FCV	Fort Charlotte	0.13	8	eP	Pn	06 09 05.3	+1.5
FCV				eS	Sn	06 09 18.2	+1.1
SVB	Belmont	0.24	3	eP	Pn	06 09 04.7	+0.6
SVB				eS	Sn	06 09 17.9	+0.2
SVCV	St. Vincent, C	0.27	25	⇑iP	Pn	06 09 04.9	+0.7
SVCV				eS	Sn	06 09 18.3	+0.6
SVV	Soufriere Volc	0.29	9	eP	Pn	06 09 06.1	+1.8
SVV				eS	Sn	06 09 19.3	+1.4
SSV	Crater Summit	0.31	13	eP	Pn	06 09 05.1	+0.7
SSV				eS	Sn	06 09 20.0	+1.9
MCLT	Moule a Chique	0.75	25	⇑iP	Pn	06 09 06.3	-0.5
MCLT				eS	Sn	06 09 21.3	-1.2
SLB	Belfond	0.82	15	⇓iP	Pn	06 09 09.4	+1.9
SLB				eS	Sn	06 09 25.3	+1.6
GRGR	Grenville	0.97	203	⇓iP	Pn	06 09 09.2	+0.5
GRGR				eS	Sn	06 09 26.5	+0.7
BIM	Bigot	1.49	7	eP	Pn	06 09 15.1	+0.9
BIM				eS	Sn	06 09 37.3	+1.7
TRMF	Trois Ilets	1.52	8	⇑eP	Pn	06 09 15.4	+1.0
ZAM	Aeronautique	1.55	8	eP	Pn	06 09 15.9	+1.0
MVM	Montagne Vaucl	1.56	13	eP	Pn	06 09 16.0	+1.0
LPMF	Morne Lapointe	1.57	11	⇓eP	Pn	06 09 16.0	+1.0
BBGH	Gun Hill	1.67	86	eP	Pn	06 09 17.5	+1.4
BBGH				eS	Sn	06 09 40.7	+1.8
FDF	Fort de France	1.70	4	⇑iP	Pn	06 09 17.6	+1.0
FDF				eS	Sn	06 09 39.4	-0.5
PML	Morne Lenard	1.75	3	⇑eP	Pn	06 09 18.2	+1.0
BBSP	Saint Philip	1.76	87	eP	Pn	06 09 19.0	+1.8
BBSP				eS	Sn	06 09 40.9	-0.1
GBMF	Grand Be	1.76	3	⇑eP	Pn	06 09 18.3	+1.0
CXM	Morne La Croix	1.78	3	eP	Pn	06 09 17.9	+0.3
CXM				eS	Sn	06 09 45.8	+4.2
PCM	Pelee Case Pet	1.78	2	⇑eP	Pn	06 09 18.3	+0.8
PCM	Pelee Case Pet	1.78	2	⇑eP	Pn	06 09 18.4	+0.9
BAMF	Morne Balai	1.78	4	eP	Pn	06 09 18.6	+1.0
TOSP	Speyside	1.86	157	eP	Pn	06 09 18.7	+0.3
TOSP				eS	Sn	06 09 43.4	+0.3
TCE	Chacachacare	2.36	192	eS	Sn	06 09 55.6	+1.4
TRN	Trinidad (W)	2.37	183	eP	Pn	06 09 26.0	+1.3
TRN				eS	Sn	06 09 55.0	+0.7
BBL	Barber's Block	2.49	355	eP	Pn	06 09 27.3	+1.0
TBH	Brigand Hill	2.53	176	eP	Pn	06 09 27.6	+0.8
TBH				eS	Sn	06 09 58.8	+0.8
TPP	Pointe-a-Pierr	2.70	184	eP	Pn	06 09 29.8	+0.9
TBG	Guadaloupe-3	2.83	353	eP	Pn	06 09 31.9	+1.3
TBG				eS	Sn	06 10 05.7	+0.8
MGG	Marie-Galante	2.88	359	eP	Pn	06 09 32.4	+1.2
MGG				eS	Sn	06 10 06.5	+0.7
LZG	Guadaloupe-1	3.14	351	eP	Pn	06 09 36.0	+1.4
MLYT	Lee's Yard	3.78	346	eP	Pn	06 09 43.4	+0.3
ANWB	Willy Bob	4.64	354	eS	Sn	06 10 46.6	-1.1

MEX 11 06:43:09.8±0.7, 16°.31N×98°.31W, h5km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.20	66	i P	Pg	06 43 13.2	-0.5
PNIG				i S	Sg	06 43 16.1	-0.1
TLIG	Tlapa	1.27	349	eP	Pg	06 43 30.1	-4.1
TLIG				i S	Sg	06 43 46.0	-4.6
VHO	Vista Hermosa	1.69	63	eP	Pn	06 43 37.4	-2.8
VHO				i S	Sn	06 43 57.8	-4.6

DJA ***11*** *06:47:15.7±3.7, 1˚N±9˚×9˚2E±3˚1, h10km, M4.9/11, mB5.3/2, mb4.9/11, MLv4.9/9, Mw(mB)4.7/2*

IDC ***11*** *06:47:15.6±1.2, 1°.18N×91°.93E, h0km, mb4.1/10, mb1 4.1/12, mb1mx3.9/65, mbtmp4.0/12, ML4.1/2, MS3.5/16, Ms1 3.5/16, ms1mx3.2/69, Error ellipse: s-maj=40.9km s-min=18.8km az=50.0*

NEIC ***11*** *06:47:18.4±0.6, 1°.43N×92°.05E, h10km, mb4.4/16, Error ellipse: s-maj=15.2km s-min=7.7km az=213.0*

ISCJB ***11*** *06:47:19.5±0.5, 1°.28N±0°.06×92°.06E±0°.05, h33km, mb4.4/32, MS3.6/17, Error ellipse: s-maj=9.8km s-min=4.8km az=33.4*

ISC 11 06:47:22.3±0.7, 1°.44N±0°.07×92°.05E±0°.07, h35km, n107, σ2s.08/96, mb4.5/36, MS3.6/17, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNSI	Sinabang, Aceh	4.38	77	P	Pn	06 48 26.7	+0.3
BSI	Banda Aceh	5.17	39	P	Pn	06 48 38.6	+1.3
	81nm,1.0s						
MLSI	Meulaboh, Aceh	5.18	57	P	Pn	06 48 37.8	+0.5
TPTI		5.43	70	P	Pn	06 48 41.5	+0.6
	117nm,0.5s,3µm						
GSI	Gunungsitoli	5.52	91	P	Pn	06 48 42.1	0.0
	155nm,0.8s						
GSI	Gunungsitoli	5.52	91	ePn	Pn	06 48 41.7	-0.4
KCSI	Kotacane, Aceh	6.08	70	P	Pn	06 48 51.1	+1.4
PBSI	Pulau Batu	6.40	103	P	Pn	06 48 52.8	-1.4
	166nm,0.9s						
PSI	Prapat	7.00	79	Pn	Pn	06 49 01.0	-1.5
	1.2nm,0.3s,baz=181,slow=3.1,SNR=4.7						
PSI				Sn	Sn	06 50 17.7	-3.3
	2.8nm,0.3s,baz=180,slow=18,SNR=4.1						
PSI				LR	LR	06 52 17.6	
	comp=Z,639nm,18.7s,baz=270,slow=42						
SISI	Saibi	7.55	111	P	Pn	06 49 07.9	-2.1
MNSI	Mandailing Nat	7.55	95	P	Pn	06 49 09.5	-0.5
KULM	Kulim	9.40	66	ePn	Pn	06 49 33.5	-1.8
IPM	Ipoh	9.46	71	ePn	Pn	06 49 33.0	-3.2
MASI	Maura Aman, Be	11.15	114	P	Pn	06 49 57.4	-2.0
MYKOM	Kota Tinggi	11.80	88	ePn	Pn	06 50 05.4	-2.8
MNAI	Manna	12.32	118	ePn	Pn	06 50 16.7	+1.3
PALK	Pallekele	12.71	297	Pn	Pn	06 50 13.2	-7.5
	1.0nm,0.3s,baz=115,slow=16,SNR=3.4						
PALK				Sn	Sn	06 52 23.4	-18
	2.2nm,0.3s,baz=298,slow=5.5,SNR=4.6						
PALK				LR	LR	06 54 13.6	
	comp=Z,314nm,21.2s,baz=115,slow=33						
UTHA	Uthaitani	15.82	27	P	P	06 51 08.3	+2.4
	6.6nm,1.0s						
PBKT	Sadao Pong	17.42	30	P	P	06 51 28.1	+4.5
	15nm,1.9s,974nm						
CMAR	Chiang Mai Arr	18.22	21	P	Pn	06 51 32.5	-0.1
	0.5nm,0.3s,baz=216,slow=12,SNR=7.8						
CMAR				LR	LR	06 58 56.4	
	comp=Z,60nm,18.7s,baz=221,slow=38						
KSM	Kuching	18.25	90	ePn	Pn	06 51 32.8	-0.2
	11nm,1.0s						
CHTO	Chiang Mai	18.55	21	ePn	P	06 51 34.7	-1.5
	3.0nm,0.6s						
CHTO	Chiang Mai	18.55	21	P	Pn	06 51 45.3	+8.8
	34nm,1.3s						
CMMT	Chiang Mai	18.55	21	P	Pn	06 51 45.3	+8.8
	7.7nm,1.3s,433nm						
SAIH	SAIHA	20.95	2	eP	Pn	06 52 02.9	-2.2
SAIH				IAmb	IAmb	06 52 07.9	
	comp=Z,17nm,1.4s						
BRDH	Bariadhala	21.12	359	LR	LR	07 00 38.1	
	comp=Z,109nm,19.9s,baz=113,slow=38						
H08S2	Diego Garcia H	21.49	245	T	T	07 13 41.0	
	baz=65,slow=74						

H08S3	**Diego Garcia H**	21.50	245	T	T	07 13 40.7	
	baz=65,slow=74						
H08S1	**Diego Carcia H**	21.51	245	T	T	07 13 42.0	
	baz=65						
BELO	**BELONIA**	21.69	358	*e*P	P	06 52 10.3	+0.1
BELO				IAmb	IAmb	06 52 10.5	
	comp=Z,4μm,0.2s						
AGT	**Agartala**	22.33	358	*e*P	P	06 52 17.3	+0.2
BOK	**Bokaro**	23.02	345	*e*P	P	06 52 25.5	+1.1
BOK				IAmb	IAmb	06 52 35.0	
	comp=Z,18nm,0.8s						
IMP	**Imphal**	23.33	4	*e*P	P	06 52 27.4	-0.2
IMP				IAmb	IAmb	06 52 36.6	
	comp=Z,30nm,1.5s						
SHL	**Shillong**	23.99	360	*e*P	P	06 52 32.7	-1.3
	comp=Z,6.1nm,1.0s						
SHL	**Shillong**	23.99	360	*e*P	P	06 52 33.9	-0.1
SHL				IAmb	IAmb	06 52 43.1	
	comp=Z,9.0nm,0.9s						
TURI	**Tura**	24.03	356	*e*P	P	06 52 34.6	+0.4
JAGI	**Jajag, Banyuwa**	24.13	114	*e*P	P	06 52 37.6	+2.4
	comp=Z,8.1nm,0.7s						
KOHI	**KOHIMA**	24.23	5	*e*P	P	06 52 36.1	0.0
KKM	**Kota Kinabalu**	24.54	79	*e*P	P	06 52 39.0	0.0
	comp=Z,10nm,1.0s						
MOKO	**MOKOCHONG**	24.86	5	*e*P	P	06 52 42.8	+1.0
TEZP	**TEZPUR**	25.05	2	*e*x	P	06 52 37.9	-5.4
TEZP				IAmb	IAmb	06 52 40.3	
ODAN	**Odare**	25.67	350	*e*P	P	06 52 51.5	+2.2
	comp=Z,87nm,0.8s						
KMI	**Kunming**	25.71	23	P	P	06 52 51.3	+1.6
KMI				pP	pP	06 52 56.7	-3.0
KMI				sP	sP	06 52 59.4	-4.5
KMI				S	S	06 57 19.7	+3.2
KMI				SS	SnSn	06 58 18.6	+5.5
KMI				pmax	pmax		
	comp=Z,18nm,0.8s						
KMI				pmax	pmax		
	comp=Z,74nm,5.3s						
KMI				LR	LR		
	comp=Z,170nm,14.4s						
KMI				LR	LR		
	comp=Z,110nm,15.7s						
KMI				LR	LR		
	comp=Z,160nm,15.0s						
RAMN	**Ramite**	25.90	349	*e*P	P	06 52 54.5	+3.1
	comp=Z,70nm,0.8s						
ZIRO	**ZIRO**	26.00	4	*e*P	P	06 52 52.2	0.0
JIRN	**Jiri**	26.67	348	*e*P	P	06 52 59.6	+1.1
	comp=Z,98nm,0.9s						
GUN	**Gumba**	26.98	348	*e*P	P	06 53 01.5	+0.2
	comp=Z,54nm,0.9s						
KOLN	**Koldanda**	27.41	344	*e*P	P	06 53 09.9	+4.9
	comp=Z,14nm,0.8s						
LSA	**Lhasa**	28.12	358	*e*P	P	06 53 10.9	-0.7
	comp=Z,7.4nm,0.6s						
GYA	**Guiyang**	28.57	28	*e*P	P	06 53 16.5	+1.2
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA	**Guiyang**	28.57	28	*e*P	P	06 53 16.8	+1.5
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CD2	**Chengdu**	31.34	20	*e*P	P	06 53 40.3	+0.6
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
SMLA	**Simla**	32.72	336	*e*P	P	06 53 51.8	+0.1
SMLA				IAmb	IAmb	06 54 00.1	
	comp=Z,10nm,1.0s						
BATI	**Baumata**	33.52	111	LR	LR	07 09 03.6	
	comp=Z,167nm,18.2s,baz=278,slow=39						
DHRM	**DHARAMSHALA**	34.06	336	*e*P	P	06 54 04.0	+0.4
WHN	**Wuhan**	35.85	34	P	P	06 54 17.1	-1.7
XAN	**Xi'an**	36.07	24	P	P	06 54 22.6	+1.8
XAN				pP	pP	06 54 28.6	-2.3
XAN				sP	sP	06 54 32.3	-2.9
XAN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,100nm,6.3s						
LZH	**Lanzhou**	36.17	16	*e*P	P	06 54 23.8	+2.1
LZH				pP	pP	06 54 28.6	-3.3
LZH				sP	sP	06 54 31.5	-4.6
LZH				*e*PP	PnPn	06 55 43.1	-0.7
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
LZH				pmax	pmax		
	comp=Z,150nm,4.9s						
LZH				LR	LR		
	comp=Z,350nm,14.3s						
LZH				LR	LR		
	comp=Z,370nm,16.2s						
LZH				LR	LR		
	comp=Z,440nm,16.9s						
GTA	**Gaotai**	38.45	10	*e*P	P	06 54 43.6	+2.6
GTA				pP	pP	06 54 47.0	-4.2
GTA				sP	sP	06 54 49.6	-5.8
GTA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
WSAR	**Wadi Sarin**	38.99	306	LR	LR	07 08 38.3	
	comp=Z,107nm,19.4s,baz=127,slow=33						
NJ2	**Nanjing**	39.57	37	*e*P	P	06 54 50.2	-0.1
NJ2				pmax	pmax		
	comp=Z,4.0nm,0.5s						
KSH	**Kashi**	40.64	341	*e*P	P	06 54 57.6	-1.6
KSH				sP	pP	06 55 05.3	-4.2
KSH				*e*PcP	PcP	06 57 01.6	+0.9
KSH				S	S	07 01 02.7	-4.2
KSH				SS	SS	07 03 58.4	-10
TIA	**Tai'an**	41.67	31	P	P	06 55 17.1	+9.5
TIA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
TARG	**Taragay, Kyrgy**	42.12	344	*e*P	P	06 55 11.8	+0.2
	comp=Z,7.9nm,1.1s						
WMQ	**Urumqi**	42.38	355	P	P	06 55 14.2	+0.9
WMQ				sP	pP	06 55 21.8	-1.8
WMQ				pmax	pmax		
	comp=Z,14nm,0.7s						
WMQ				LR	LR		
	comp=Z,130nm,25.9s						
WMQ				LR	LR		
	comp=Z,280nm,39.9s						
WMQ				LR	LR		
	comp=Z,95nm,23.9s						
HHC	**Hu-ho-hao-te**	43.03	22	*e*P	P	06 55 17.8	-0.9
HHC				sP	pP	06 55 28.1	-0.9
HHC				S	S	07 01 43.2	+1.1
HHC				pmax	pmax		
	comp=Z,22nm,1.1s						
HHC				pmax	pmax		
	comp=Z,110nm,6.1s						
HHC				LR	LR		
	comp=Z,92nm,15.3s						
HHC				LR	LR		
	comp=Z,130nm,14.3s						
HHC				LR	LR		
	comp=Z,71nm,15.7s						
AAK	**Ala-Archa**	43.94	341	LR	LR	07 14 14.6	
	comp=Z,51nm,18.3s,baz=145,slow=37						
KK31	**Karatay Array**	45.73	338	*e*P	P	06 55 37.4	-2.8
KKAR	**Karatay Array**	45.73	338	*e*P	P	06 55 37.4	-2.8
MK01	**Makanchi Array**	45.95	351	*e*P	P	06 55 42.7	+0.9
MK31	**Makanchi Array**	45.97	351	*e*P	P	06 55 43.5	+1.5
MK32	**Makanchi Array**	45.97	351	*e*P	P	06 55 41.7	-0.3
MKAR	**Makanchi Array**	45.97	351	P	P	06 55 41.7	-0.3
	comp=Z,1.8nm,0.7s,baz=163,slow=8.9,SNR=9.6						
MKAR	**Makanchi Array**	45.97	351	*e*P	P	06 55 43.5	+1.5
	comp=Z,34nm,0.8s						
WR1	**Warramunga Arr**	46.58	119	*e*P	P	06 55 45.0	-2.2
	comp=Z,5.2nm,1.1s						
WRA	**Warramunga Arr**	46.58	119	P	P	06 55 45.0	-2.2
	comp=Z,0.9nm,0.7s,baz=296,slow=8.6,SNR=10						
AS31	**Alice Springs**	47.72	124	*e*P	P	06 55 54.8	-1.2
	comp=Z,1.1nm,1.1s						
ASAR	**Alice Springs**	47.72	124	P	P	06 55 54.8	-1.2
	comp=Z,0.3nm,0.6s,baz=298,slow=8.1,SNR=2.7						
SONA0	**Songino Array**	47.86	13	*e*P	P	06 55 58.3	+1.4
SONM	**Songino Array**	47.86	13	P	P	06 55 58.3	+1.4
	comp=Z,3.7nm,0.6s,baz=191,slow=8.3,SNR=16						
SONA1	**Songino Array**	47.88	13	*e*P	P	06 55 57.6	+0.6
INCN	**Inchon**	47.95	37	*e*P	P	06 55 55.7	-1.9
	comp=Z,4.7nm,0.2s						
RAYN	**Ar Rayn**	50.14	300	*e*P	P	06 56 15.5	+0.9
	comp=Z,1.3nm,0.6s						
KURBB	**Kurchatov Arra**	50.33	349	P	P	06 56 16.7	+1.1
	comp=Z,1.7nm,0.6s,baz=169,slow=7.1,SNR=14						
KURK	**Kurchatov**	50.41	349	*e*P	P	06 56 16.7	+0.6
KURK				*e*P	pP	06 56 16.9	-10
ZAA0	**Zalesovo Array**	52.68	355	*e*P	P	06 56 32.5	-0.5
	comp=Z,9.6nm,0.8s						
ZALV	**Zalesovo Beam**	52.68	355	P	P	06 56 32.3	-0.8
	comp=Z,2.6nm,0.6s,baz=176,slow=8.8,SNR=11						
ZALV				LR	LR	07 20 21.4	
	comp=Z,48nm,20.7s,baz=219,slow=38						
ZALV	**Zalesovo Beam**	52.68	355	*e*P	P	06 56 32.5	-0.5
ZAA1	**Zalesovo Array**	52.68	355	*e*P	P	06 56 32.3	-0.8
GUMO	**Guam**	53.61	74	LR	LR	07 17 43.4	
	comp=Z,20nm,21.9s,baz=272,slow=34						
BVAR	**Borovoye Array**	54.48	344	P	P	06 56 46.1	-0.2
	comp=Z,1.1nm,0.8s,baz=147,slow=8.6,SNR=4.6						
BVAR				LR	LR	07 20 43.1	
	comp=Z,52nm,18.3s,baz=144,slow=37						
ABKAR	**Akbulak array**	55.00	335	*e*P	P	06 56 50.6	+0.5
MJAR	**Matsushiro Arr**	55.08	45	LR	LR	07 21 50.1	
	comp=Z,35nm,19.5s,baz=95,slow=38						
USRK	**Ussuriysk Ar.**	55.35	34	LR	LR	07 22 22.7	
	comp=Z,47nm,19.0s,baz=197,slow=38						
GNI	**Garni**	57.62	318	LR	LR	07 22 08.1	
	comp=Z,34nm,19.8s,baz=192,slow=36						
MMAI	**Mount Meron Ar**	61.62	307	LR	LR	07 24 49.2	
	comp=Z,96nm,19.2s,baz=145,slow=36						
EIDS	**Eidsvold**	62.95	119	*e*P	P	06 57 47.1	+1.3
	comp=Z,5.5nm,1.1s						
BRTR	**Keskin Array B**	65.19	314	LR	LR	07 27 11.2	
	comp=Z,32nm,20.2s,baz=136,slow=37						
MLR	**Muntele Rosu**	72.39	318	LR	LR	07 36 20.4	
	comp=Z,6.0nm,18.0s,baz=166,slow=41						
MLR	**Muntele Rosu**	72.39	318	*e*P	P	06 58 44.5	-0.6
	comp=Z,5.5nm,1.1s						
ARA0	**ARCESS Array S**	80.61	341	*e*P	P	06 59 31.9	+0.9
ARCES	**ARCESS Array B**	80.61	341	P	P	06 59 31.9	+0.9
	comp=Z,1.2nm,0.8s,baz=101,slow=4.8,SNR=3.1						
GEA0	**GERESS Array S**	81.25	319	*e*P	P	06 59 33.5	-1.5
GEC2	**GERESS Array S**	81.25	319	*e*P	P	06 59 35.0	0.0
	comp=Z,5.2nm,1.0s						
GERES	**GERESS Array B**	81.25	319	P	P	06 59 33.4	-1.6
	comp=Z,0.5nm,0.3s,baz=103,slow=6.0,SNR=9.7						
SPITS	**Spitsbergen Ar**	85.68	348	P	P	06 59 58.3	+1.2
	comp=Z,6.9nm,1.0s,baz=232,slow=7.1,SNR=2.4						
TXAR	**Lajitas Array**	145.91	25	PKPbc	PKPdf	07 06 56.1	-2.2
	comp=Z,0.3nm,0.6s,baz=24,slow=1.9,SNR=4.2						

IDC 11 06:48:51.1±3.9**, 1°.68N×92°.23E, h0^{km}, mb3.7**/5**, mb1 3.8**/5**, mb1mx3.5**/64**, mbtmp3.7**/5**, MS3.5**/3**, Ms1 3.5**/3**, ms1mx2.8**/65**, Error ellipse: s-maj=144.0km s-min=27.5km az=56.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	45.76	350	P	P	06 57 14.4	0.0
	0.6nm,0.6s,baz=170,slow=8.9,SNR=3.3						
WRA	**Warramunga Arr**	46.55	120	P	P	06 57 20.8	-0.2
	0.9nm,0.8s,baz=296,slow=8.7,SNR=2.5						
SONM	**Songino Array**	47.58	13	P	P	06 57 29.0	+0.2
	0.9nm,0.6s,baz=201,slow=7.7,SNR=2.8						
KURBB	**Kurchatov Arra**	50.13	349	P	P	06 57 47.9	-0.2
	0.6nm,0.7s,baz=172,slow=7.1,SNR=2.4						
ZALV	**Zalesovo Beam**	52.45	354	P	P	06 58 05.1	-0.4
	0.7nm,0.5s,baz=177,slow=7.3,SNR=2.2						
PMG	**Port Moresby**	55.80	102	LR	LR	07 26 41.6	
	comp=Z,62nm,18.1s,baz=28,slow=41						
HFS	**Hagfors**	82.84	330	LR	LR	07 43 32.7	
	comp=Z,26nm,18.4s,baz=169,slow=40						
NOA	**NORSAR Array B**	84.18	331	LR	LR	07 43 09.1	
	comp=Z,15nm,18.2s,baz=320,slow=39						

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*CSEM **11** 06:55:52.2, 39°.95N×29°.61W, h10^{km}, ML2.4*

PDA 11 06:55:52.2±0.4**, 39°.95N×29°.61W, h10^{km}, MD3.8, ML2.4, Error ellipse: s-maj=5.3km s-min=2.3km az=81.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCED	**Cedros**	1.50	152	*e*S	Sn	06 56 31.1	-7.7
PCED				A	A	06 56 34.6	
	14nm,0.2s						
PCED	**Cedros**	1.50	152	*e*S	Sn	06 56 31.1	-7.7
CALA	**Caldeira**	1.54	152	*e*S	Sn	06 56 32.6	-7.3
CALA	**Caldeira**	1.54	152	*e*S	Sn	06 56 32.6	-7.3
PGRA	**Graciosa**	1.56	126	*e*P	Pn	06 56 15.4	-4.6
PGRA				*e*S	Sn	06 56 32.8	-7.6
PGRA				A	A	06 56 36.7	
	24nm,0.3s						
PGRA	**Graciosa**	1.56	126	*e*P	Pn	06 56 15.4	-4.6
PGRA				*e*S	Sn	06 56 32.8	-7.6
ROSA	**Rosais**	1.63	139	*e*P	Pn	06 56 16.1	-4.8
ROSA				*e*S	Sn	06 56 34.2	-7.7
ROSA				A	A	06 56 35.0	
	14nm,0.3s						
ROSA	**Rosais**	1.63	139	*e*P	Pn	06 56 16.1	-4.8
ROSA				*e*S	Sn	06 56 34.2	-7.7
PICO	**Pico**	1.72	147	*e*P	Pn	06 56 17.7	-4.5
PICO				*e*S	Sn	06 56 36.6	-7.7
PICO				A	A	06 56 40.7	
	22nm,0.3s						
PICO	**Pico**	1.72	147	*e*P	Pn	06 56 17.7	-4.5
PICO				*e*S	Sn	06 56 36.6	-7.7
PCAN	**Candelaria**	1.73	149	*e*P	Pn	06 56 17.6	-4.7
PCAN				*e*S	Sn	06 56 36.7	-7.7
PCAN				A	A	06 56 40.3	
	27nm,0.2s						
PCAN	**Candelaria**	1.73	149	*e*P	Pn	06 56 17.6	-4.7
PCAN				*e*S	Sn	06 56 36.7	-7.7
ADH	**Angra Heroismo**	2.25	124	*e*P	Pn	06 56 25.1	-4.4
ADH	**Angra Heroismo**	2.25	124	*e*P	Pn	06 56 25.1	-4.4
PSCM	**Serra do Cume**	2.30	122	*e*P	Pn	06 56 25.5	-4.7
PSCM	**Serra do Cume**	2.30	122	*e*P	Pn	06 56 25.5	-4.7

GUC 11 07:05:21.0±0.6**, 21°.08S×68°.87W, h132^{km}**±5^{km}**, ML3.8, 3C-3D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB01	**IPOC Station P**	0.57	274⇓	*e*P	Pn	07 05 41.6	+0.8
PB01				*i* S	Sn	07 05 56.8	+0.9
PB01				IAML		07 06 01.2	
	comp=E,2μm,0.2s						
PB09	**IPOC Station P**	0.79	206⇑	*e*P	Pn	07 05 43.0	+0.5
PB09				*i* S	Sn	07 05 59.6	+0.7
PB09				IAML		07 06 00.5	
	comp=N,2μm,0.5s						
PB08	**IPOC Station P**	0.97	344⇓	*e*P	Pn	07 05 45.0	+0.7
PB08				*i* S	Sn	07 06 03.2	+1.2
PB08				IAML		07 06 04.3	
	comp=E,2μm,0.2s						
PB02	**IPOC Station P**	0.98	256⇓	*e*P	Pn	07 05 45.7	+1.6
PB02				*i* S	Sn	07 06 03.9	+2.4
PB02				IAML		07 06 08.8	
	comp=E,4μm,0.4s						
PB07	**IPOC Station P**	1.14	236⇑	*e*P	Pn	07 05 46.9	+1.3
PB07				*i* S	Sn	07 06 06.4	+2.1
PB07				IAML		07 06 07.9	
	comp=E,3μm,0.2s						
PB03	**IPOC Station P**	1.26	220⇑	*e*P	Pn	07 05 47.7	+0.8
PB03				*i* S	Sn	07 06 07.8	+1.2
PB03				IAML		07 06 08.8	
	comp=E,2μm,0.2s						
PB04	**IPOC Station P**	1.72	223	*e*P	Pn	07 05 52.7	+0.8
PB04				*i* S	Sn	07 06 16.6	+1.0
PB04				IAML		07 06 18.4	
	comp=E,1μm,0.5s						

IDC 11 07:52:58.2±2.0**, 6°.00S×131°.17E, h0^{km}, mb3.6**/1**, mb1 3.7**/4**, mb1mx3.4**/47**, mbtmp3.5**/4**, ML3.6**/3**, Error ellipse: s-maj=117.8km s-min=28.0km az=80.0, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	5.10	1	Pn	Pn	07 54 16.8	+0.8
	3.2nm,0.3s,baz=136,slow=23,SNR=7.7						
SIJI				Sn	Sn	07 55 08.3	-7.4
	4.7nm,0.3s,baz=203,slow=23,SNR=17						
WRA	**Warramunga Arr**	14.20	168	Pn	Pn	07 56 20.2	-0.6
	0.3nm,0.3s,baz=354,slow=13,SNR=17						
WRA				Sn	Sn	07 58 49.7	-9.4
	0.4nm,0.3s,baz=1.8,slow=23,SNR=12						
ASAR	**Alice Springs**	17.76	172	P	P	07 57 07.9	-0.1
	0.1nm,0.3s,baz=356,slow=9.3,SNR=5.2						
ASAR				S	Sn	08 00 17.7	-8.1
	0.1nm,0.3s,baz=0.2,slow=30,SNR=4.2						
MKAR	**Makanchi Array**	68.04	326	P	P	08 03 59.3	-0.3
	0.4nm,0.6s,baz=111,slow=7.9,SNR=3.6						

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*ISCJB **11** 08:18:04.3±1.2, 60°.95N±0°.06×29°.1E±0°.1, h0^{km}, Error ellipse: s-maj=11.3km s-min=5.4km az=140.5*

*CSEM **11** 08:18:06.3±0.6, 61°.06N×29°.02E, h1^{km}, ML2.2, Error ellipse: s-maj=12.2km s-min=6.4km az=133.0, Mining explosion.*

*HEL **11** 08:18:07.7±0.3, 60°.96N×29°.02E, h0^{km}, ML2.2, Explosion*

*MOS **11** 08:18:08.7, 60°.95N×29°.00E, M2.1, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

*NAO **11** 08:18:08.7±1.9, 60°.96N×28°.92E, ML2.5*

ISC 11 08:18:05.8±1.3**, 60°.99N**±0°.06×**29°.04E**±0°.06**, h0^{km}, n18, σ1°.10**/29**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VJF	**Virojoki**	0.86	239	*e*P	Pb	08 18 23.3	-0.2
VJF				*e*S	Sg	08 18 33.0	-0.3
VJF	**Virojoki**	0.86	239	*e*P	Pb	08 18 23.3	-0.2
VJF				*e*S	Sg	08 18 33.0	-0.3
FIA1	**FINESS Array S**	1.50	289	*e*P	Pb	08 18 34.4	-0.1
FIA1				*e*S	Sn	08 18 54.7	+0.5
FIA1	**FINESS Array S**	1.50	289	*e*P	Pb	08 18 34.4	-0.1
FIA1				*e*S	Sn	08 18 54.7	+0.5
FIA0	**FINESS Array S**	1.50	289	Pg	Pb	08 18 34.5	0.0
	baz=107,slow=16						
FIA0				Lg	Lg	08 18 55.1	
	baz=93,slow=37						
FIA0				Rg	Rg	08 19 02.0	
	baz=111,slow=37						
FIA0	**FINESS Array S**	1.50	289	Pg	Pb	08 18 34.5	0.0
	SNR=1.6						
FIA0				Lg	Lg	08 18 55.1	
	SNR=2.8						
PVF	**Pernaja**	1.62	255	*e*P	Pb	08 18 36.1	-0.4
PVF				*e*S	Sg	08 18 57.9	+0.1
PVF				MSG		08 19 00.9	
	comp=Z,24nm,0.3s						
PVF	**Pernaja**	1.62	255	*e*P	Pb	08 18 36.1	-0.4
PVF				*e*S	Sg	08 18 57.9	+0.1
JOF	**Joensuu**	2.21	28	*e*PG	Pg	08 18 47.7	-0.5
JOF				*e*S	Sb	08 19 14.5	0.0
JOF				MSG		08 19 16.9	
	comp=Z,10nm,0.4s						
JOF	**Joensuu**	2.21	28	*e*Pg	Pg	08 18 47.7	-0.5
KEF	**Keuruu**	2.32	302	*e*PB	Pb	08 18 48.1	-0.3
KEF				*e*SB	Sb	08 19 17.7	+0.2
KEF				MSG		08 19 20.8	
	comp=Z,10nm,0.3s						
KEF	**Keuruu**	2.32	302	*e*Pb	Pb	08 18 48.1	-0.3
KEF				*e*Sb	Sb	08 19 17.7	+0.2
MEF	**Metsahovi**	2.42	253	*e*SB	Sb	08 19 19.4	-1.0
HFS	**Hagfors**	7.61	270	Pn	Pn	08 19 59.2	+1.4
	baz=79,slow=14						
HFS				Sn	Sn	08 21 22.1	-2.5
	baz=79,slow=28						
HFS				Lg	Lg	08 22 02.6	
	baz=79,slow=37						
NRA0	**NORESS Array S**	8.54	276	Pn	Pn	08 20 11.3	+0.7
	baz=85,slow=12						
NB2	**NORSAR Subarra**	8.65	278	Pn	Pn	08 20 12.3	+0.1
NB2				Lg	Lg	08 22 36.6	
	baz=78,slow=28						
NB2	**NORSAR Subarra**	8.65	278	Pn	Pn	08 20 12.3	+0.1
NB2				Lg	Lg	08 22 36.7	
	SNR=3.0						
ARA0	**ARCESS Array S**	8.70	352	Pn	Pn	08 20 15.3	+2.5
	baz=181,slow=37						
ARA0				Sn	Sn	08 21 47.8	-3.7
	baz=161,slow=28						
ARA0				Lg	Lg	08 22 34.1	
	baz=175,slow=37						

MEX 11 08:21:28.6±0.6**, 17°.34N×100°.80W, h11^{km}**±5^{km}**, MD3.9, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	0.59	120	*e*P	Pg	08 21 38.4	-1.6
CAIG				*i* S	Sg	08 21 47.0	-0.7
ZIIG	**Zihuatanejo**	0.69	293	*e*P	Pg	08 21 40.2	-1.7
ZIIG				*e*S	Sg	08 21 49.5	-1.4
ACP2	**Acapulco**	0.99	118	*e*P	Pg	08 21 44.6	-3.1
ACP2				*e*S	Sg	08 21 56.9	-3.7
ACX	**Acapulco**	1.01	117	*e*P	Pg	08 21 45.7	-2.5
ACX				*e*S	Sg	08 21 58.3	-3.1
ARIG	**Puente Sto Nin**	1.03	25	*e*P	Pg	08 21 45.2	-3.2
ARIG				*e*S	Sg	08 21 57.8	-4.0
MEIG	**Mezcala**	1.27	63	*e*P	Pn	08 21 49.0	-3.4
MEIG				*e*S	Sb	08 22 03.6	-5.3
PLIG	**Platanillo**	1.62	50	*e*P	Pn	08 21 54.4	-2.8
PLIG				*e*S	Sn	08 22 13.3	-4.8
TLIG	**Tlapa**	2.14	84	*e*P	Pn	08 22 01.8	-2.7
TLIG				*i* S	Sn	08 22 26.4	-4.8

IGQ 11 08:31:44.9±1.6**, 2°S**±8°×**8°1W**±1°1**, h10^{km}, MLv4.2**/4**, Off coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MILO	**Milagro-Astudi**	1.75	104	P	Pn	08 32 13.7	-1.6
MILO				S	Sn	08 32 36.7	-0.9
COHC	**Cochancay**	2.08	107	P	Pn	08 32 19.0	-1.0
QUEV	**Quevedo**	2.12	67	P	Pn	08 32 16.7	-3.7
MAG1	**Magdalena**	2.32	40	P	Pn	08 32 21.5	-1.7
RIOE1	**Riobamba**	2.63	87	P	Pn	08 32 27.1	-0.6
ILLI	**Illinizas Sur**	2.77	66	P	Pn	08 32 28.4	-1.5
BBIL	**Ulba Tungurahu**	2.80	82	P	Pn	08 32 30.7	+0.6
BMAS	**Trigal station**	2.80	83	P	Pn	08 32 29.7	-0.4
ARRY	**Arrayan**	2.82	83	P	Pn	08 32 30.6	+0.2
POND	**Pondoa**	2.83	81	P	Pn	08 32 30.9	+0.3
BPAT	**Tungurahua Vol**	2.84	83	P	Pn	08 32 30.2	-0.6
PAST	**Pastocalle**	2.86	66	P	Pn	08 32 30.8	-0.3
RUN5	**Runtun**	2.86	81	P	Pn	08 32 31.3	+0.3
BRUN	**Tungurahua Vol**	2.88	81	P	Pn	08 32 31.1	0.0
BULB	**Ulba Tungurahu**	2.88	82	P	Pn	08 32 30.9	-0.2
PIS1	**Pisayambo**	2.98	74	P	Pn	08 32 33.4	+0.6
PISA	**Pisayambo**	2.98	74	P	Pn	08 32 32.4	-0.3
BMOR	**Cotopaxi Volca**	3.01	68	P	Pn	08 32 33.7	+0.5
NINA	**Atacazo Ninahu**	3.02	61	P	Pn	08 32 33.9	+0.7
BNAS	**Cotopaxi Volca**	3.02	67	P	Pn	08 32 33.6	+0.3
NAS2	**Nasa**	3.04	67	P	Pn	08 32 33.4	-0.1
BREF	**Cotopaxi Volca**	3.05	67	P	Pn	08 32 33.5	-0.4
BVC2	**Cotopaxi Volca**	3.08	67	P	Pn	08 32 34.4	+0.2
BTAM	**Cotopaxi Volca**	3.09	68	P	Pn	08 32 34.6	+0.3
VC1	**Cotopaxi 1**	3.10	67	P	Pn	08 32 34.8	+0.4
PITA	**Cotopaxi Volc**	3.10	65	P	Pn	08 32 34.5	+0.1
GGPC	**Guagua Pichinc**	3.14	58	P	Pn	08 32 32.8	-2.3
COV1	**Cotopaxi Volc**	3.15	68	P	Pn	08 32 34.2	-0.9
YANA	**Yana**	3.19	57	P	Pn	08 32 33.2	-2.5
ANTG	**Antisana-Guama**	3.29	66	P	Pn	08 32 36.5	-0.6
ANTM	**Antisana-La Mi**	3.31	66	P	Pn	08 32 36.9	-0.4
ANTS	**Antisana-Sarah**	3.37	66	P	Pn	08 32 39.0	+0.9
CUIC	**Cuicocha-Domo**	3.61	53	P	Pn	08 32 39.7	-1.6
IMBA	**Imbabura, San**	3.72	55	P	Pn	08 32 43.0	+0.1
URCU	**Urcuqui**	3.77	53	P	Pn	08 32 43.1	-0.5
CAYA	**Cayambe**	3.79	60	P	Pn	08 32 44.9	+1.0
YAHU	**Yahuarcocha**	3.88	55	P	Pn	08 32 44.7	-0.3
LITE1	**Lita**	3.92	48	P	Pn	08 32 44.1	-1.2

IDC 11 08:40:48.9±32.0**, 54°.75S×141°.56E, h0^{km}, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.6**/44**, mbtmp3.8**/3**, MS3.4**/4**, Ms1 3.4**/4**, ms1mx2.9**/41**, Error ellipse: s-maj=589.9km s-min=159.7km az=139.0, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	22.86	0	P	P	08 45 53.9	+0.1
	7.1nm,0.8s,baz=168,slow=12,SNR=13						
STKA				LR	LR	08 52 24.4	
	comp=Z,91nm,20.5s,baz=205,slow=30						
H01W1	**Cape Leeuwin H**	27.49	305	T	T	09 14 21.5	

	baz=142,slow=75,SNR=7.6						
H01W2	Cape Leeuwin H	27.50	305	T	T	09 14 21.5	
	baz=142,slow=75,SNR=9.2						
H01W3	Cape Leeuwin H	27.51	305	T	T	09 14 22.3	
	baz=142,slow=75,SNR=8.8						
ASAR	Alice Springs	31.57	347	P	P	08 47 13.2	+0.2
	0.6nm,0.8s,baz=166,slow=10,SNR=5.4						
WRA	Warramunga Arr	35.18	348	P	P	08 47 44.1	-0.3
	1.0nm,1.0s,baz=173,slow=7.9,SNR=4.8						
DZM	Mont Dzumac	37.60	40	LR	LR	09 02 18.7	
	comp=Z,48nm,19.0s,baz=306,slow=34						
BATI	Baumata	46.65	335	LR	LR	09 08 26.2	
	comp=Z,78nm,18.7s,baz=214,slow=36						
ASAJ	Asahikawa	98.50	1	LR	LR	09 44 35.8	
	comp=Z,9.7nm,18.8s,baz=340,slow=39						

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*NEIC **11** 08:53:35.9±0.0, 18°.34N×101°.41W, h55^{km}, MD4.2(MEX), After MEX.*

MEX 11 08:53:35.8±0.5**, 18°.33N×101°.40W, h58**^{km}±6^{km}**, MD4.2, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZIIG	Zihuatanejo	0.72	185	eP	Pn	08 53 48.5	-1.7
ZIIG				i S	Sn	08 53 59.2	-1.6
ZIIG	Zihuatanejo	0.72	185	eP	Pn	08 53 48.5	-1.7
ZIIG				i S	Sn	08 53 59.2	-1.6
ARIG	Puente Sto Nin	1.00	93	i P	Pn	08 53 52.0	-1.8
ARIG				i S	Sn	08 54 05.3	-2.0
ARIG	Puente Sto Nin	1.00	93	i P	Pn	08 53 52.0	-1.8
ARIG				i S	Sn	08 54 05.3	-2.0
MOIG	Morelia	1.35	9	eP	Pn	08 53 57.0	-1.8
MOIG				eS	Sn	08 54 14.1	-1.8
MOIG	Morelia	1.35	9	eP	Pn	08 53 57.0	-1.8
MOIG				eS	Sn	08 54 14.1	-1.8
CAIG	El Cayaco	1.67	140	eP	Pn	08 54 01.5	-1.3
CAIG				i S	Sn	08 54 21.1	-2.2
CAIG	El Cayaco	1.67	140	eP	Pn	08 54 01.5	-1.3
MEIG	Mezcala	1.74	103	eP	Pn	08 54 02.8	-1.1
MEIG				eS	Sn	08 54 22.9	-2.1
MEIG	Mezcala	1.74	103	eP	Pn	08 54 02.8	-1.1
PLIG	Platanillo	1.81	88	eP	Pn	08 54 02.9	-1.8
PLIG				i S	Sn	08 54 24.4	-2.2
PLIG	Platanillo	1.81	88	eP	Pn	08 54 02.9	-1.8
MMIG	Aquila	1.85	269	eP	Pn	08 54 03.7	-1.4
MMIG				i S	Sn	08 54 25.8	-1.7
MMIG	Aquila	1.85	269	eP	Pn	08 54 03.7	-1.4
MAVM	Malinalco, Edo	1.91	71	eP	Pn	08 54 05.4	-0.9
MAVM				i S	Sn	08 54 28.4	-1.0
YAIG	Yautepec	2.28	76	i P	Pn	08 54 10.3	-0.9
YAIG				i S	Sn	08 54 35.9	-2.3
YAIG	Yautepec	2.28	76	eP	Pn	08 54 02.5	-8.6
YAIG				eS	Sn	08 54 38.5	+0.2
PPM	Popocatepetl	2.73	74	eP	Pn	08 54 16.7	-1.0
PPM				i S	Sn	08 54 48.1	-1.7
PPM	Popocatepetl	2.73	74	eP	Pn	08 54 16.7	-1.0
TLIG	Tlapa	2.81	105	eP	Pn	08 54 17.4	-0.9
TLIG				i S	Sn	08 54 49.5	-1.7
TLIG	Tlapa	2.81	105	eP	Pn	08 54 18.2	-0.2
CJM	Chamela	3.64	289	eP	Pn	08 54 28.6	-1.0
CJM				eS	Sn	08 55 09.8	-1.5
CJM	Chamela	3.64	289	eP	Pn	08 54 28.6	-1.0

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*CSEM **11** 08:59:00.6, 40°.47N×21°.89E, h0^{km}, Suspected Mining explosion.*

ATH 11 08:59:00.6, 40°.47N×21°.89E, h0^{km}±9^{km}**, ML0.0, Error ellipse: s-maj=9.9km s-min=2.1km az=200.0, Suspected Mining explosion., Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KZN	Kozani	0.18	210	P	Pg	08 59 03.6	-0.5
KZN				S	Sg	08 59 07.5	+1.1
KZN	Kozani	0.18	210	P	Pg	08 59 03.7	-0.4
KZN	Kozani	0.18	210	P	Pg	08 59 04.0	-0.1
KZN				S	Sg	08 59 07.3	+0.9
LIT	Litokhoron	0.58	128	P	Pg	08 59 12.6	+0.8
LIT	Litokhoron	0.58	128	P	Pg	08 59 12.5	+0.8
LIT	Litokhoron	0.58	128	P	Pg	08 59 12.4	+0.6
GRG	Griva	0.63	38	P	Pg	08 59 13.2	+0.6
PENT	Pentalofos	0.64	245	P	Pb	08 59 13.8	-0.8
PENT	Pentalofos	0.64	245	P	Pb	08 59 13.7	-0.9
PENT	Pentalofos	0.64	245	P	Pg	08 59 13.4	+0.6
NEST	Nestorio	0.65	266	P	Pg	08 59 13.2	+0.3
NEST	Nestorio	0.65	266	P	Pg	08 59 13.1	+0.2
NEST	Nestorio	0.65	266	P	Pg	08 59 13.2	+0.2
KPRO	Kipourio	0.65	219	P	Pg	08 59 12.8	-0.2
THL	Klokotos Trika	0.90	174	P	Pg	08 59 17.9	0.0
THL	Klokotos Trika	0.90	174	P	Pg	08 59 17.9	0.0
THL	Klokotos Trika	0.90	174	P	Pg	08 59 18.0	+0.1
HORT	Hortiatis	0.93	81	P	Pn	08 59 20.4	-0.6
KNT	Kendrikon	1.03	47	P	Pb	08 59 20.9	-0.4

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*ISCJB **11** 09:11:19.5±0.1, 18°.80N±0°.02×69°.44W±0°.02, h101^{km}, mb4.3/109, Error ellipse: s-maj=3.1km s-min=2.1km az=137.6*

*NEIC **11** 09:11:21.5±0.2, 18°.71N×69°.37W, h107^{km}±3^{km}, mb4.5/95, Error ellipse: s-maj=4.2km s-min=2.9km az=213.0*

NEIC Felt at Santo Domingo.

*IDC **11** 09:11:21.2±1.4, 18°.71N×69°.47W, h110^{km}±14^{km}, mb3.9/28, mb1 4.1/32, mb1mx4.0/54, mbtmp4.3/32, MS3.2/3, Ms1 3.2/3, ms1mx2.6/44, Error ellipse: s-maj=11.4km s-min=9.4km az=29.0*

ISC 11 09:11:20.2±0.3**, 18°.70N**±0°.04×**69°.55W**±0°.04**, h101**^{km}**, n640,** σ1^{s}**31**/651**, mb4.4**/109**, 1C, Dominican Republic region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SDD	Santo Domingo	0.42	236	ePn	Pn	09 11 36.1	+0.5
SDD				eSn	Sn	09 11 48.3	+1.2
AGP	Aguadilla	2.30	97	ePn	Pn	09 11 56.5	-0.3
MPR	Mayaguez	2.33	102	ePn	Pn	09 11 56.9	-0.3
CRPR	Cabo Rojo, PR	2.41	106	ePn	Pn	09 11 57.5	-0.7
AOPR	Arecibo Observ	2.67	97	ePn	Pn	09 12 02.6	+0.9
OBIP	Obispado Ponce	2.87	103	ePn	Pn	09 12 03.6	-0.6
EMPR	Esperanza - Ma	2.87	94	ePn	Pn	09 12 05.1	+0.8
EMPR				eSn	Sn	09 12 42.3	+4.2
LGNH	LØogne	2.91	267	ePn	Pn	09 12 07.0	+2.2
ICMP	Isla Caja de M	2.98	105	ePn	Pn	09 12 04.6	-1.1
GRTK	Grand Turk	3.17	332	ePn	Pn	09 12 07.1	-1.2
GRTK				eSn	Sn	09 12 43.6	-1.9
SJG	San Juan	3.28	100	P	Pn	09 12 09.0	-0.7
	102nm,0.3s,baz=298,slow=7.3,SNR=67						
SJG				S	Sn	09 12 48.8	+0.9
	78nm,0.3s,baz=87,slow=22,SNR=5.0						
SJG				LR	LR	09 13 16.9	
	comp=Z,76nm,18.2s,baz=109,slow=36						
SJG	San Juan	3.28	100	ePn	Pn	09 12 10.1	+0.4
SJG				S	Sn	09 12 48.8	+0.9
SJG	San Juan	3.28	100	eP	Pn	09 12 10.5	+0.8
CBYP	Canovanas	3.53	96	ePn	Pn	09 12 12.6	-0.5
HUMP	Col San Antoni	3.55	98	ePn	Pn	09 12 13.7	+0.3
HUMP				eSn	Sn	09 12 53.8	-0.8
MTP	Monte Pirata	3.84	98	ePn	Pn	09 12 16.7	-0.6
STVI	Saint Thomas	4.37	94	ePn	Pn	09 12 23.7	-0.8
CDVI	St. Croix	4.64	101	ePn	Pn	09 12 26.9	-1.1
ABVI	Anegada Island	4.94	89	ePn	Pn	09 12 31.0	-1.1
GTBY	Guantanamo Bay	5.40	284	ePn	Pn	09 12 37.3	-1.1
SMRT	St. Maarten	6.18	95	ePn	Pn	09 12 48.1	-0.9
GWJ	Greenwich	6.85	266	i P	Pn	09 12 59.2	+0.9
HOJ	Hope	6.88	265	⇑iP	Pn	09 13 00.2	+1.8
STH	Stony Hill	6.92	266	i P	Pn	09 13 00.2	+1.0
ANWB	Willy Bob	7.45	97	ePn	Pn	09 13 05.9	-0.3
CODC	Agustˆ›n Codaz	9.49	204	eP	Pn	09 13 32.5	-1.6
SVB	Belmont	9.62	123	ePn	Pn	09 13 33.6	-2.4
PCRV	Puerto La Cruz	9.71	150	P	Pn	09 13 37.0	-0.1
	6.0nm,0.3s,baz=121,slow=1.1,SNR=22						
PCRV				S	Sn	09 15 14.2	-10
	3.3nm,0.3s,baz=344,slow=18,SNR=4.4						
SDV	Santo Domingo	9.81	186	P	Pn	09 13 40.6	+2.0
	14nm,0.3s,baz=49,slow=5.9,SNR=22						
SDV				S	Sn	09 15 23.1	-3.9
	4.1nm,0.3s,baz=334,slow=17,SNR=5.8						
SDV	Santo Domingo	9.81	186	ePn	Pn	09 13 40.3	+1.7
SDV				S	Sn	09 15 23.1	-3.9
SDV	Santo Domingo	9.81	186	eP	Pn	09 13 40.1	+1.5
GRGR	Grenville	10.02	130	ePn	Pn	09 13 38.7	-2.6
OCAC	Ocana	11.02	200	eP	Pn	09 13 55.5	+0.4
BBGH	Gun Hill	11.08	118	ePn	Pn	09 13 54.3	-1.4
PAMC	Pamplona, Colo	11.70	196	eP	Pn	09 14 06.2	+1.8
ZARC	Zaragoza, Cauc	12.28	206	eP	Pn	09 14 13.2	+1.5
TAMC	Tame, Arauca	12.38	190	eP	Pn	09 14 12.7	-0.4
BARC	Barichara	12.54	197	eP	Pn	09 14 15.7	+0.3
PTBC	PUERTO BERRIO,	13.00	202	eP	Pn	09 14 22.2	+1.0
RUSC	La Rusia	13.19	196	ePn	Pn	09 14 25.9	+1.8
RUSC	La Rusia	13.19	196	eP	Pn	09 14 27.1	+3.1
YOPC	Yopal, Colombi	13.55	192	eP	Pn	09 14 31.1	+2.6
HELC	Santa Helena	13.73	206	ePn	Pn	09 14 33.1	+2.0
HELC				eSn	Sn	09 16 59.8	-2.7
HELC	Santa Helena	13.73	206	eP	Pn	09 14 33.1	+2.0
859A	Kempfer Cattle	13.97	314	P	Pn	09 14 31.2	-2.6
	baz=129						
DWPF	Disney Wildern	14.37	313	P	Pn	09 14 36.9	-2.1
	baz=128						
DWPF	Disney Wildern	14.37	313	ePn	Pn	09 14 39.4	+0.4
ROSC	El Rosal	14.54	199	P	P	09 14 44.2	-1.1
	5.2nm,0.3s,baz=197,slow=3.1,SNR=23						
ROSC				S	Sn	09 17 21.0	-1.2
	baz=198,slow=20,SNR=2.8						
ROSC	El Rosal	14.54	199	ePn	P	09 14 45.0	-0.3
ROSC				S	Sn	09 17 21.0	-1.2
CHIC	Chingaza	14.57	197	eP	P	09 14 45.8	+0.2
758A	Lake Helen	14.76	316	P	Pn	09 14 42.4	-1.4
	baz=131						
857A	Zephyrhills	15.03	312	P	Pn	09 14 44.8	-2.5
	baz=126						
658A	Bunnell	15.10	317	P	Pn	09 14 46.1	-2.1
	baz=132						
TOLC	Tolima	15.12	203	eP	P	09 14 52.4	+0.7
757A	Oxford	15.33	314	P	Pn	09 14 47.6	-3.5
	baz=129						
657A	Interlachen	15.61	316	P	Pn	09 14 53.8	-0.7
	baz=131,SNR=8.2						
PRAC	Prado	15.78	200	ePn	P	09 15 00.6	+1.9
	21nm,0.9s						
557A	Orange Park	15.80	318	P	Pn	09 14 56.1	-0.9
	baz=133						
656A	Willston	15.91	314	P	Pn	09 14 57.6	-0.8
	baz=129,SNR=5.2						
656A	Willston	15.91	314	ePn	Pn	09 14 58.7	+0.3
	119nm,1.4s						
SJAC	San Juan de Ar	15.92	196	eP	P	09 15 03.0	+2.7
YOTC	Yotoco, Valle	16.06	205	eP	P	09 15 02.4	+0.4
457A	Yulee	16.11	320	P	Pn	09 14 59.9	-1.0
	baz=135						
556A	Lake Butler	16.23	316	P	Pn	09 15 01.4	-0.9
	baz=131						
456A	Hilliard	16.47	319	P	Pn	09 15 05.5	+0.2
	baz=134						
655A	Horseshoe Beac	16.49	313	P	Pn	09 15 05.6	0.0
	baz=128						
HORQ	Saladito	16.63	205	eP	P	09 15 09.4	+1.0
555A	McAlpin	16.68	316	P	Pn	09 15 06.5	-1.4
	baz=130						
257A	Skidaway Islan	16.79	324	P	Pn	09 15 08.9	-0.3
	baz=139						
356A	Blackshear	16.95	320	P	Pn	09 15 10.3	-0.9
	baz=135						
455A	Stateville	17.12	317	P	P	09 15 14.2	+0.8
	baz=131						
NHSC	New Hope	17.23	328	P	P	09 15 14.5	-0.1
	baz=144						
256A	Glennville	17.28	322	P	P	09 15 13.8	-1.3
	baz=137						
355A	Pearson	17.41	319	P	Pn	09 15 17.4	+0.6
	baz=133						
454A	Quitman	17.50	316	P	P	09 15 17.0	-0.6
	baz=130						
156A	Sylvania	17.56	325	P	Pn	09 15 19.4	+0.8
	baz=139						
255A	Hazlehurst	17.59	321	P	P	09 15 17.2	-1.3
	baz=135						
553A	Crawfordville	17.72	313	P	P	09 15 19.4	-0.6
	baz=127						
SOTA	Rioblanco	17.86	204	eP	Pn	09 15 24.3	+1.5
TIGA	Tifton	17.94	318	P	P	09 15 21.1	-1.3
	baz=132						
FLOC	Florencia	18.03	200	eP	Pn	09 15 25.6	+1.2
453A	Whigham	18.05	315	P	P	09 15 23.9	+0.3
	baz=129						
254A	Abbeville	18.10	319	P	P	09 15 24.2	+0.1
	baz=134,SNR=6.3						
353A	Camilla	18.29	316	P	Pn	09 15 27.5	+0.1
	baz=130						
Z55A	Blythe	18.34	325	P	Pn	09 15 27.5	-0.5
	baz=139						
154A	Montrose	18.45	321	P	P	09 15 28.8	+0.8
	baz=135						
154A	Montrose	18.45	321	eP	Pn	09 15 29.8	+0.5
	36nm,0.7s						
253A	Americus	18.70	318	P	P	09 15 29.9	-0.8
	baz=132						
JSC	Jenkinsville	18.71	328	eP	Pn	09 15 32.0	-0.3
	13nm,0.7s						
Z54A	Sparta	18.75	323	P	P	09 15 31.8	+0.5
	baz=137						
352A	Blakely	18.84	315	P	P	09 15 32.8	+0.6
	baz=129						
352A	Blakely	18.84	315	eP	Pn	09 15 36.3	+2.3
	15nm,1.0s						
252A	Lumpkin	19.05	317	P	P	09 15 35.0	+0.5
	baz=130						
Y54A	Tignall	19.13	325	P	P	09 15 36.3	+0.9
	baz=139,SNR=6.5						
351A	Pinckard	19.17	314	P	P	09 15 36.5	+0.6
	baz=127						
Z53A	Monticello	19.20	322	P	P	09 15 36.0	-0.2
	baz=136						
GOGA	Godfrey	19.23	322	P	P	09 15 36.8	+0.3
	baz=136						
GOGA	Godfrey	19.23	322	eP	Pn	09 15 38.2	-0.3
	18nm,1.1s						
KMSC	Kings Mountain	19.43	330	P	P	09 15 39.2	+0.5
	baz=144						
KMSC	Kings Mountain	19.43	330	eP	P	09 15 39.5	+0.8
	15nm,0.9s						
152A	Waverly Hall	19.48	319	P	Pn	09 15 40.5	-0.9
	baz=132,SNR=5.5						
152A	Waverly Hall	19.48	319	eP	Pn	09 15 41.4	0.0
	16nm,1.0s						
251A	Midway	19.55	316	P	Pn	09 15 41.3	-0.9
	baz=129,SNR=7.3						
Z52A	Williamson	19.64	320	P	P	09 15 41.7	+0.7
	baz=134						
151A	Opelika	19.77	317	P	Pn	09 15 43.8	-1.0
	baz=130,SNR=6.5						
X53A	Estanollee	19.94	325	P	P	09 15 45.4	+1.2
	baz=139,SNR=5.6						
250A	Grady	20.05	314	P	P	09 15 45.7	+0.3
	baz=127						
250A	Grady	20.05	314	eP	Pn	09 15 47.2	-0.8
	33nm,1.1s						
URVA	University of	20.07	341	eP	Pn	09 15 49.9	+1.7
BG3	Lake Jocassee	20.12	326	eP	Pn	09 15 47.8	-1.1
	37nm,1.4s						
BRAL	Brewton	20.12	311	P	P	09 15 47.4	+1.3
	baz=124						
Z51A	Franklin	20.19	319	P	Pn	09 15 49.3	-0.4
	baz=132						
150A	Eclectic	20.27	316	P	P	09 15 49.2	+1.4
	baz=129,SNR=5.5						
349A	Repton	20.32	312	P	P	09 15 49.6	+1.3
	baz=124						
X52A	Dahlonega	20.34	324	P	P	09 15 49.6	+1.0
	baz=138,SNR=7.1						
W53A	Cullowhee	20.37	326	P	P	09 15 50.4	+1.4
	baz=140,SNR=6.5						
Y51A	Rockmart	20.52	321	P	P	09 15 51.7	+1.2
	baz=134,SNR=7.9						
V53A	Saluda	20.58	328	P	P	09 15 52.6	+1.4
	baz=142,SNR=8.5						
V53A	Saluda	20.58	328	eP	P	09 15 52.7	+1.5
	16nm,0.8s						
CVRD	Centerville Ro	20.61	341	eP	P	09 15 52.4	+1.1
CVRD				epP	pP	09 16 02.7	-7.9
Z50A	Ashland	20.62	318	P	P	09 15 53.0	+1.4
	baz=131,SNR=8.6						
Z50A	Ashland	20.62	318	eP	Pn	09 15 53.4	-1.4
	20nm,1.0s						
249A	Camden	20.63	313	P	P	09 15 52.7	+1.0
	baz=126						
W52A	Murphy	20.73	325	P	P	09 15 54.1	+1.4
	baz=138						
W52A	Murphy	20.73	325	eP	Pn	09 15 57.2	+1.3
	7.4nm,0.7s						
BLA	Blacksburg	20.77	335	P	P	09 15 54.0	+0.8
	baz=150,SNR=5.8						
BLA	Blacksburg	20.77	335	eP	P	09 15 54.5	+1.3
	21nm,0.8s						
BLA				epP	pP	09 16 06.1	-6.4
149A	Jones	20.78	315	P	P	09 15 53.8	+0.6
	baz=128						
348A	Jackson	20.86	311	P	P	09 15 55.6	+1.5
	baz=123						
348A	Jackson	20.86	311	eP	Pn	09 15 56.5	-1.1
	30nm,0.7s						
X51A	Calhoun	20.87	322	P	P	09 15 54.2	+0.1
	baz=135						
Y50A	Piedmont	20.93	320	P	P	09 15 54.0	-0.8
	baz=132						
Z49A	Columbiana	20.97	317	P	P	09 15 55.4	+0.1
	baz=129,SNR=12						
U53A	Fall Branch	21.02	330	P	P	09 15 56.8	+1.0
	baz=144,SNR=17						
TKL	Tuckaleechee C	21.07	326	P	P	09 15 55.9	-0.5
	10.0nm,0.9s,baz=141,slow=12,SNR=12						
TKL				S	S	09 19 44.1	-1.1
	6.8nm,0.8s,baz=241,slow=7.3,SNR=4.1						
TKL	Tuckaleechee C	21.07	326	eP	P	09 15 57.6	+1.3
	12nm,0.9s						
TKL				S	S	09 19 44.1	-1.1
447A	Lucedale	21.09	308	P	P	09 15 58.3	+1.7
	baz=120						
V52A	Sevierville	21.12	327	P	P	09 15 56.9	0.0
	baz=140						
V52A	Sevierville	21.12	327	eP	P	09 15 58.5	+1.6
	25nm,1.5s						
248A	Dixon Mills	21.13	313	P	P	09 15 57.8	+0.8
	baz=125						
LRAL	Lakeview Retre	21.18	316	P	P	09 15 59.0	+1.4
	baz=128,SNR=11						
LRAL	Lakeview Retre	21.18	316	eP	P	09 15 59.1	+1.6
	17nm,1.0s						
X50B	Fort Payne	21.26	321	P	P	09 15 59.4	+0.9
	baz=134						
CPCT	Cooper Cave	21.32	325	eP	P	09 16 00.5	+1.5
	14nm,0.6s						
CPCT				eS	Sn	09 19 57.5	-6.7
347A	Saraland	21.32	310	P	P	09 16 00.1	+1.0
	baz=122						
Y49A	Blount Mountai	21.32	318	P	P	09 16 00.3	+1.2
	baz=131						
Y49A	Blount Mountai	21.32	318	eP	P	09 16 02.1	+3.0
	8.5nm,0.9s						
148A	Greensboro	21.33	314	P	P	09 15 59.3	+0.1
	baz=126						
PTGA	Pitinga	21.48	153	P	P	09 16 00.9	0.0
	1.9nm,0.4s,baz=285,slow=23,SNR=5.8						
PTGA	Pitinga	21.48	153	eP	P	09 16 01.3	+0.4
	12nm,1.3s						
V51A	Loudon	21.49	325	P	P	09 16 01.1	+0.3
	baz=139						
V51A	Loudon	21.49	325	eP	P	09 16 02.0	+1.2
	11nm,1.0s						
W50A	Signal Mountai	21.58	323	P	P	09 16 03.0	+1.2
	baz=136						
W50A	Signal Mountai	21.58	323	eP	P	09 16 03.5	+1.6
	10nm,0.8s						
TZTN	Tazewell	21.64	328	P	P	09 16 02.0	-0.4
	baz=142						
TZTN	Tazewell	21.64	328	eP	P	09 16 03.5	+1.1
	32nm,1.4s						
X49A	Woodville	21.70	320	P	P	09 16 02.5	-0.6
	baz=132						
247A	Quitman	21.72	311	P	P	09 16 02.7	-0.6
	baz=123						
Z48A	Northport	21.76	316	P	P	09 16 05.6	+1.9
	baz=128,SNR=12						
V50A	Pikevile	21.80	324	P	P	09 16 04.2	+0.1
	baz=137						
T52A	Hallie	21.81	330	P	P	09 16 03.5	-0.7
	baz=144						
147A	Livingston	21.83	313	P	P	09 16 06.1	+1.7
	baz=125,SNR=6.8						
Y48A	Jasper	21.84	317	P	P	09 16 05.8	+1.2
	baz=130						
SWET	Sewanee	21.95	322	eP	P	09 16 07.0	+1.2
	22nm,1.5s						
Z47A	Carrollton	22.00	315	P	P	09 16 08.2	+2.0
	baz=126,SNR=6.2						
MVL	Millersville	22.03	346	eP	P	09 16 08.9	+2.4
	15nm,1.2s						
MVL				eS	S	09 20 03.5	+0.3
W49A	Belvidere	22.08	321	P	P	09 16 07.6	+0.5
	baz=134						
X48A	Hartselle	22.11	319	P	P	09 16 07.7	+0.3
	baz=131						
X48A	Hartselle	22.11	319	eP	P	09 16 09.8	+2.4
	6.5nm,0.8s						
Y47A	UCPARC, Winfie	22.27	316	P	P	09 16 10.8	+1.6
	baz=128,SNR=5.5						
S52A	Salyersville	22.31	331	P	P	09 16 08.6	-0.9
	baz=144						
V49A	McMinnville	22.32	323	P	P	09 16 10.4	+0.8
	baz=135						
LUPA	Lehigh Univers	22.40	348	eP	P	09 16 12.9	+2.6
	1.0nm,0.8s						
W48A	Pulaski	22.49	320	P	P	09 16 11.8	+0.4
	baz=132						
S51A	Beattyville	22.52	330	P	P	09 16 12.0	+0.3
	baz=143						
Z46A	Louisville	22.59	314	P	P	09 16 13.9	+1.6
	baz=125						
R52A	Catlettsburg	22.66	332	P	P	09 16 13.8	+0.8
	baz=146						
T50A	Nancy	22.66	327	P	P	09 16 14.2	+1.1
	baz=140						
X47A	Russelville	22.66	318	P	P	09 16 13.7	+0.6
	baz=129,SNR=15						
MCWV	Mont Chateau	22.71	339	P	P	09 16 13.7	+0.1
	baz=154						
ODNJ	Ogdensburg	22.73	350	eP	P	09 16 15.4	+1.7
	15nm,1.1s						
ODNJ				epP	pP	09 16 29.6	-4.0
N59A	State Game Lan	22.78	348	P	P	09 16 15.9	+1.6
	baz=165						
U49A	Red Boiling Sp	22.79	324	P	P	09 16 14.1	-0.2
	baz=137						
V48A	Smith Brothers	22.84	321	P	P	09 16 15.8	+0.9
	baz=134						
V48A	Smith Brothers	22.84	321	eP	P	09 16 16.4	+1.6
	6.5nm,0.8s						
O56A	Blue Knob Stat	22.86	342	P	P	09 16 15.9	+0.7
	baz=158						
Y46A	Houston	22.93	315	P	P	09 16 16.4	+0.6
	baz=126,SNR=10						
145A	Houston Renfro	22.95	311	P	P	09 16 16.2	+0.2
	baz=122						
344A	Westbrook Farm	22.96	308	P	P	09 16 16.5	+0.4
	baz=118						
344A	Westbrook Farm	22.96	308	eP	P	09 16 18.9	+2.8
	17nm,0.9s						
W47A	Westpoint	22.97	319	P	P	09 16 17.0	+0.8
	baz=131,SNR=5.3						
SSPA	Standing Stone	23.01	344	P	P	09 16 15.8	-0.7
	baz=160						
R51A	Hillsboro	23.05	331	P	P	09 16 15.8	-1.1
	baz=144						
T49A	Edmonton	23.09	326	P	P	09 16 16.0	-1.3
	baz=138						
PLAL	Pickwick Lake	23.10	318	eP	P	09 16 18.4	+1.0
	8.4nm,1.1s						
X46A	Booneville	23.16	317	P	P	09 16 17.8	-0.1
	baz=128						
VBMS	Vicksburg	23.18	310	P	P	09 16 19.2	+1.0
	baz=120						
Z45A	Winona	23.20	313	P	P	09 16 18.9	+0.5
	baz=124						
U48A	Cassie Pea, Po	23.21	323	P	P	09 16 19.0	+0.5
	baz=135						
244A	Avery, Jackson	23.21	309	P	P	09 16 19.0	+0.5
	baz=120,SNR=6.0						
V47A	Nunnelly	23.31	321	P	P	09 16 20.3	+0.9
	baz=132,SNR=13						
Y45A	Yeager Farm, C	23.38	314	P	P	09 16 21.8	+1.7
	baz=125,SNR=9.5						
W46A	Michie	23.39	318	P	P	09 16 20.8	+0.7
	baz=130						
Q51A	Peebles	23.53	332	P	P	09 16 21.9	+0.5
	baz=146						
343A	Vidalia	23.55	306	P	P	09 16 22.8	+1.2
	baz=117						

T48A	Bowling Green baz=137	23.56	325	P	P	09 16 21.4	-0.2
U47A	Clarksville baz=134	23.59	322	P	P	09 16 22.9	+1.0
X45A	UM Field Stati baz=126,SNR=8.7	23.61	316	P	P	09 16 23.2	+1.2
V46A	Holladay baz=131	23.66	320	P	P	09 16 22.1	-0.4
OXF	Oxford baz=127,SNR=9.4	23.67	316	P	P	09 16 23.7	+1.0
OXF	Oxford 43nm,1.0s	23.67	316	*e*P	P	09 16 24.2	+1.5
WVT	Waverly baz=132	23.70	321	P	P	09 16 23.4	+0.5
WVT	Waverly 8.2nm,0.6s	23.70	321	*e*P	P	09 16 23.7	+0.8
243A	Waterproof baz=118	23.73	308	P	P	09 16 23.0	-0.1
S48A	Wiedeman Farm, baz=138	23.78	326	P	P	09 16 24.4	+0.8
HRV	Adam Dziewonsk baz=175	23.80	356	P	P	09 16 23.1	-0.6
T47A	Sharon Grove baz=135	23.87	323	P	P	09 16 24.0	-0.4
T47A	Sharon Grove 6.5nm,0.8s	23.87	323	*e*P	P	09 16 25.9	+1.6
W45A	Hickory Valley baz=128	23.92	317	P	P	09 16 25.0	+0.1
N54A	Moraine State baz=155	23.93	340	P	P	09 16 25.7	+0.7
N54A	Moraine State	23.93	340	*e*P	P	09 16 26.3	+1.4
N54A				*e*pP	pP	09 16 48.3	+1.9
BINY	Binghamton baz=165,SNR=5.4	24.06	348	P	P	09 16 27.3	+1.2
BINY	Binghamton 13nm,0.8s	24.06	348	*e*P	P	09 16 27.8	+1.7
U46A	Springville baz=132	24.06	321	P	P	09 16 26.0	-0.1
143A	Socs Landing, baz=120	24.07	310	P	P	09 16 25.9	-0.3
342A	Flagon Creek P baz=116	24.14	306	P	P	09 16 27.9	+1.1
X44A	Crenshaw baz=125	24.16	315	P	P	09 16 27.2	+0.2
P50A	Jamestown baz=145,SNR=5.5	24.21	332	P	P	09 16 28.6	+1.1
Z43A	Armstrong Fami baz=121	24.21	311	P	P	09 16 29.3	+1.8
Q49A	Aurora baz=142	24.23	330	P	P	09 16 29.1	+1.5
242A	Grayson baz=118	24.31	308	P	P	09 16 30.2	+1.8
M54A	Oil Creek Stat baz=156	24.33	341	P	P	09 16 29.0	+0.5
M54A	Oil Creek Stat 24nm,1.1s	24.33	341	*e*P	P	09 16 29.7	+1.2
M54A				*e*pP	pP	09 16 54.4	+4.0
WCI	Wyandotte Cave baz=138	24.33	327	P	P	09 16 28.9	+0.4
T46A	Princeton baz=134,SNR=7.1	24.36	322	P	P	09 16 29.9	+1.1
Y43A	Makayla and Ka baz=123	24.36	313	P	P	09 16 29.3	+0.4
ACSO	Alum Creek Sta baz=148,SNR=5.5	24.39	334	P	P	09 16 31.1	+2.1
ACSO	Alum Creek Sta 17nm,0.8s	24.39	334	*e*P	P	09 16 32.3	+3.3
142A	Monroe baz=119	24.39	309	P	P	09 16 31.4	+2.2
U45A	Rockin P Farm, baz=131	24.41	320	P	P	09 16 29.9	+0.6
R47A	Wooly Knot Far baz=138	24.50	326	P	P	09 16 31.8	+1.8
441A	DeRidder baz=114	24.55	304	P	P	09 16 32.6	+2.0
P49A	Miami Univ. Ec baz=143	24.57	331	P	P	09 16 31.7	+1.0
Q48A	North Vernon baz=141	24.57	328	P	P	09 16 32.7	+2.0
O50A	Cable baz=146	24.58	333	P	P	09 16 32.1	+1.2
X43A	Marvell baz=124	24.66	314	P	P	09 16 33.2	+1.5
X43A	Marvell 18nm,0.7s	24.66	314	*e*P	P	09 16 33.8	+2.2
S46A	Don Dixon Farm baz=135,SNR=6.0	24.70	324	P	P	09 16 33.0	+1.0
Z42A	Norrel Spur, H baz=120	24.75	310	P	P	09 16 34.6	+2.2
U44B	Burton Farm, H baz=130	24.76	319	P	P	09 16 34.5	+2.0
341A	Kurthwood baz=115	24.77	305	P	P	09 16 34.4	+1.8
341A	Kurthwood 39nm,1.2s	24.77	305	*e*P	P	09 16 35.2	+2.6
P48A	Milroy baz=142	24.84	330	P	P	09 16 34.4	+1.3
241A	Mo Tay, Goldon baz=116	24.88	307	P	P	09 16 34.0	+0.4
241A	Mo Tay, Goldon 23nm,1.0s	24.88	307	*e*P	P	09 16 36.1	+2.6
N50A	Nevada baz=148	24.91	335	P	P	09 16 34.6	+0.8
O49A	Covington baz=145	24.92	332	P	P	09 16 35.0	+1.0
Y42A	Garnett, Star baz=122,SNR=5.2	24.93	312	P	P	09 16 35.7	+1.7
Q47A	Bedord North L baz=139	24.93	328	P	P	09 16 34.6	+0.6
CCAR	Cane Creek 40nm,0.8s	24.96	312	*e*P	P	09 16 36.9	+2.6
ERPA	Erie baz=156	24.98	341	P	P	09 16 35.4	+1.0
141A	Papa Simpson, baz=118	25.13	308	P	P	09 16 35.6	-0.3
S45A	Carrier Mills baz=133	25.19	323	P	P	09 16 36.5	+0.1
X42A	Stuttgart baz=123	25.20	313	P	P	09 16 38.0	+1.5
P47A	Martinsville baz=140	25.27	329	P	P	09 16 38.1	+1.0
O48A	Farmland baz=144	25.35	331	P	P	09 16 39.0	+1.3
U43A	Rector baz=128	25.44	318	P	P	09 16 40.2	+1.5
R45A	Skylar, Fairfi baz=135,SNR=5.1	25.45	324	P	P	09 16 39.8	+1.1
W42A	Bald Knob baz=124	25.52	315	P	P	09 16 40.9	+1.5
240A	Hunter Patters baz=115	25.53	306	P	P	09 16 41.2	+1.7
SIUC	Southern Illin 13nm,0.8s	25.59	322	*e*P	P	09 16 41.7	+1.7
S44A	Carbondale baz=132	25.59	322	P	P	09 16 41.1	+1.1
140A	Cam and Jess, baz=117	25.65	307	P	P	09 16 42.5	+2.0
140A	Cam and Jess, 27nm,0.8s	25.65	307	*e*P	P	09 16 43.4	+2.8
OLIL	Olney 14nm,0.9s	25.66	325	*e*P	P	09 16 42.1	+1.5
V42A	Cord baz=126,SNR=7.7	25.74	316	P	P	09 16 42.7	+1.3
Q45A	Warren Harvey, baz=136,SNR=5.8	25.81	325	P	P	09 16 43.1	+1.2
T43A	Greenville baz=130	25.82	319	P	P	09 16 43.3	+1.3
P46A	Rosedale baz=139	25.84	327	P	P	09 16 42.8	+0.6
TYNO	Tyneside baz=157	25.84	342	P	P	09 16 43.3	+1.1
R44A	Waltonville baz=133,SNR=5.2	25.87	323	P	P	09 16 43.6	+1.1
W41B	Gary Mavity, V baz=123	25.96	314	P	P	09 16 44.4	+1.1
W41B	Gary Mavity, V	25.96	314	*e*P	P	09 16 45.0	+1.6
U42A	Revenden baz=127,SNR=6.2	25.97	317	P	P	09 16 44.6	+1.2
S43A	Fulton Ridge, baz=131	26.00	321	P	P	09 16 44.1	+0.3
X40A	Basin Creek Fa baz=121,SNR=6.5	26.00	312	P	P	09 16 45.3	+1.5
X40A	Basin Creek Fa 9.3nm,0.8s	26.00	312	*e*P	P	09 16 45.5	+1.8
P45A	Graceland, Par baz=138,SNR=5.5	26.05	327	P	P	09 16 44.3	+0.1
P45A	Graceland, Par 16nm,0.6s	26.05	327	*e*P	P	09 16 45.5	+1.4
NATX	Nacogdoches baz=114	26.10	305	P	P	09 16 45.1	+0.3
NATX	Nacogdoches 30nm,0.9s	26.10	305	*e*P	P	09 16 47.5	+2.8
LONY	Lake Ozonia baz=169	26.19	352	P	P	09 16 46.2	+0.9
V41A	Mountainview baz=124,SNR=10	26.24	315	P	P	09 16 47.1	+1.2
DRCO	St. Marys Ceme baz=160	26.26	345	P	P	09 16 46.9	+1.0
DRWO	Darlington Wes baz=160	26.26	345	P	P	09 16 47.0	+1.0
T42A	Van Buren baz=128	26.29	318	P	P	09 16 46.2	-0.1
Q44A	Meyer Farm, Va baz=134	26.29	324	P	P	09 16 47.3	+1.1
SFIN	Lafayette baz=140	26.36	329	P	P	09 16 48.7	+1.7
ELFO	Elginfield baz=154	26.37	340	P	P	09 16 48.1	+1.2
ACTO	Acton baz=157	26.37	343	P	P	09 16 48.1	+1.1
U41A	Viola baz=126	26.41	316	P	P	09 16 48.9	+1.5
P44A	Sand Creek, Wi baz=136	26.47	325	P	P	09 16 49.4	+1.5
W40A	Ferguson Farm, baz=122	26.54	313	P	P	09 16 51.0	+2.4
W40A	Ferguson Farm, 9.4nm,0.9s	26.54	313	*e*P	P	09 16 51.7	+3.1
MIAR	Mount Ida baz=120	26.56	311	P	P	09 16 49.8	+1.0
S42A	Caledonia baz=130	26.57	320	P	P	09 16 48.5	-0.4
O45A	Potomac baz=139	26.58	328	P	P	09 16 48.3	-0.6
DELO	Deloro Mine baz=163	26.62	347	P	P	09 16 49.1	-0.1
Q43A	New Douglas baz=133	26.70	323	P	P	09 16 50.6	+0.6
V40A	Witts Springs baz=124,SNR=7.3	26.70	314	P	P	09 16 51.2	+1.1
V40A	Witts Springs 4.8nm,0.8s	26.70	314	*e*P	P	09 16 51.7	+1.6
T41A	Mountain View baz=127	26.72	318	P	P	09 16 51.0	+0.8
M46A	Old House Fiel baz=143	26.81	331	P	P	09 16 50.9	-0.1
R42A	Luebbering baz=131	26.89	321	P	P	09 16 52.3	+0.6
N45A	Kentland baz=140	26.92	329	P	P	09 16 52.3	+0.4
X39A	Fountain Ranch baz=120	26.93	311	P	P	09 16 51.5	-0.6
PLVO	Plevna baz=164	27.01	348	P	P	09 16 53.7	+1.1
CCM	Cathedral Cave baz=130	27.02	320	P	P	09 16 54.2	+1.3
CCM	Cathedral Cave 9.3nm,1.1s	27.02	320	*e*P	P	09 16 54.6	+1.7
U40A	Yellville baz=124	27.03	315	P	P	09 16 54.5	+1.5
S41A	Jillco Farms, baz=128,SNR=22	27.04	319	P	P	09 16 54.0	+0.9
W39A	Magazine baz=121,SNR=5.7	27.04	312	P	P	09 16 55.1	+2.0
W39A	Magazine 12nm,1.1s	27.04	312	*e*P	P	09 16 55.5	+2.4
P43A	Skaggs, Pawnee baz=135	27.08	325	P	P	09 16 54.7	+1.3
ORIO	Orleans, Innes baz=168	27.14	351	P	P	09 16 55.0	+1.2
BWLO	Walkerton baz=155	27.15	342	P	P	09 16 54.9	+1.0
Q42A	Golden Eagle baz=132	27.16	322	P	P	09 16 54.9	+0.8
BANO	Bancroft baz=162	27.16	347	P	P	09 16 54.8	+0.7
N44A	Piper City baz=139	27.19	328	P	P	09 16 55.2	+0.8
SADO	Sadowa 3.4nm,0.6s,baz=146,slow=8.4,SNR=4.6	27.21	345	P	P	09 16 53.5	-1.0
SADO	comp=Z,45nm,19.0s,baz=136,slow=36			LR	LR	09 27 28.6	
CLWO	Collingwood baz=157	27.21	343	P	P	09 16 55.6	+1.0
R41A	Rosebud baz=130	27.26	320	P	P	09 16 55.8	+0.8
T40A	Mansfield baz=126	27.27	317	P	P	09 16 55.7	+0.5
V39A	Pettigrew baz=122,SNR=6.2	27.28	314	P	P	09 16 56.9	+1.6
U39A	Green Forest baz=124,SNR=5.2	27.46	315	P	P	09 16 58.2	+1.3
P42A	Winchester baz=133	27.50	324	P	P	09 16 57.5	+0.4
P42A	Winchester 7.7nm,0.6s	27.50	324	*e*P	P	09 16 58.2	+1.0
S40A	Lebanon baz=127	27.52	318	P	P	09 16 58.2	+0.8
Q41A	Truxton baz=131	27.59	322	P	P	09 16 58.6	+0.6
M44A	Midewin, Midew baz=140	27.59	329	P	P	09 16 58.6	+0.6
HDIL	Hopedale baz=136	27.61	326	P	P	09 16 58.7	+0.6
PEMO	Pembroke baz=164	27.66	348	P	P	09 16 59.4	+1.0
T39A	Clever baz=125,SNR=5.1	27.75	316	P	P	09 17 00.5	+1.0
O42A	Bath baz=134	27.78	325	P	P	09 16 59.5	-0.1
R40A	Maddies Statio baz=128	27.80	319	P	P	09 17 00.2	+0.3
BUKO	Buck Lake baz=160	27.90	345	P	P	09 17 01.2	+0.6
435B	Jarrell baz=109	28.08	301	P	P	09 17 03.5	+1.0
435B	Jarrell 13nm,0.6s	28.08	301	*e*P	P	09 17 04.6	+2.1
M43A	Waltham Townsh baz=138	28.09	328	P	P	09 17 01.1	-1.2
S39A	Bolivar baz=126	28.10	317	P	P	09 17 02.4	-0.1
S39A	Bolivar 3.0nm,0.8s	28.10	317	*e*P	P	09 17 03.8	+1.2
Q40A	Laux Farm, Aux baz=130	28.12	321	P	P	09 17 02.6	-0.1
O41A	Passleys Farm, baz=133	28.17	324	P	P	09 17 02.3	-0.8
SAML	Samuel 4.3nm,0.5s	28.18	167	*e*P	P	09 17 02.6	-0.7
R39A	Chumby, Stover baz=127	28.29	319	P	P	09 17 04.1	-0.1
T38A	Diamond baz=123	28.37	315	P	P	09 17 05.9	+1.0
WHTX	Lake Whitney, baz=111	28.39	303	P	P	09 17 05.7	+0.5
S38A	Stockton baz=125	28.45	317	P	P	09 17 05.5	-0.1
P40A	Paris baz=130	28.45	322	P	P	09 17 05.7	+0.1
P40A	Paris 11nm,1.2s	28.45	322	*e*P	P	09 17 06.3	+0.8
Q39A	Willow Grove F baz=128	28.70	320	P	P	09 17 08.2	+0.3
R38A	Fenwick Farm, baz=126	28.77	318	P	P	09 17 09.2	+0.8
TUL1	Leonard baz=120,SNR=8.9	28.81	312	P	P	09 17 10.1	+1.2
TUL1	Leonard 23nm,0.8s	28.81	312	*e*P	P	09 17 10.3	+1.4
P39B	Salisbury baz=129	28.84	321	P	P	09 17 09.4	+0.3
M41A	Milan baz=135	28.86	326	P	P	09 17 09.1	-0.1
L42A	Oliver, Polo baz=138	28.86	328	P	P	09 17 09.1	-0.1
833A	Chaparral WMA, baz=103	28.93	295	P	P	09 17 09.4	-0.6
Q38A	Cooks Store, C baz=127	29.04	319	P	P	09 17 10.3	-0.6
N40A	Mertquake, Sal baz=133	29.08	324	P	P	09 17 12.0	+0.8
K42A	Prairie Point, baz=139	29.28	329	P	P	09 17 12.8	-0.1
L41A	Preston baz=136	29.34	327	P	P	09 17 13.8	+0.4
P38A	Dawn baz=128	29.40	320	P	P	09 17 14.3	+0.3
I43A	Langenfeld Bro baz=142	29.58	332	P	P	09 17 15.9	+0.3
BELQ	Belleterre baz=162	29.59	347	P	P	09 17 16.4	+0.8
N39A	Derby Farms, D baz=132	29.59	323	P	P	09 17 15.4	-0.3
K41A	Shullsburg baz=137	29.63	328	P	P	09 17 15.6	-0.3
L40A	Anamosa baz=135	29.70	326	P	P	09 17 16.6	-0.1
F46A	Macinaw City C baz=150	29.80	338	P	P	09 17 17.4	-0.1
M39A	Webster baz=133	29.81	324	P	P	09 17 17.1	-0.6
JCT	Junction City baz=106	29.82	299	P	P	09 17 17.7	-0.2
JFWS	Jewell Farm baz=138	29.82	329	P	P	09 17 17.9	+0.1
JFWS	Jewell Farm 10nm,0.7s	29.82	329	*e*P	P	09 17 18.4	+0.6
P37A	Lathrop baz=127	29.87	319	P	P	09 17 18.5	+0.3
H43A	Windswept, Lux baz=144	29.88	333	P	P	09 17 19.3	+1.0
I42A	Draeger Farm, baz=141	29.93	331	P	P	09 17 19.5	+0.8
I42A	Draeger Farm, 5.7nm,0.7s	29.93	331	*e*P	P	09 17 19.4	+0.8
N38A	Joes South For baz=130	29.96	322	P	P	09 17 19.1	+0.1
F45A	CMU Biological baz=149	30.00	337	P	P	09 17 19.3	+0.1
J41A	Loganville baz=139	30.05	329	P	P	09 17 19.6	-0.1
O37A	Wolven Farm, M baz=128	30.10	321	P	P	09 17 19.9	-0.4
K40A	Colesburg baz=136	30.12	327	P	P	09 17 20.4	+0.1
L39A	Vinton baz=134	30.16	326	P	P	09 17 20.1	-0.6
M38A	Pleasantville baz=131	30.34	323	P	P	09 17 22.7	+0.3
ABTX	Abilene, Hawle baz=110,SNR=9.4	30.35	303	P	P	09 17 23.5	+0.9
ABTX	Abilene, Hawle 12nm,0.8s	30.35	303	*e*P	P	09 17 23.9	+1.4
J40A	Soldiers Grove baz=138,SNR=5.5	30.42	329	P	P	09 17 23.4	+0.4
WMOK	Wichita Mounta baz=114,SNR=15	30.47	308	P	P	09 17 23.9	+0.3
WMOK	Wichita Mounta 12nm,1.1s	30.47	308	*e*P	P	09 17 24.3	+0.7
G43A	Wallace baz=144	30.48	334	P	P	09 17 23.9	+0.3
I41A	Arkdale baz=140	30.50	330	P	P	09 17 22.2	-1.5
N37A	Lee Faris, Mou baz=129	30.51	321	P	P	09 17 24.3	+0.5
N37A	Lee Faris, Mou 11nm,0.8s	30.51	321	*e*P	P	09 17 24.6	+0.8
K39A	Oelwein baz=135	30.51	326	P	P	09 17 23.4	-0.4
F44A	Big Bay de Noc baz=147	30.58	337	P	P	09 17 25.6	+1.3
L38A	Oak Wood Farm, baz=132	30.69	325	P	P	09 17 25.5	+0.1
I40A	Norwalk baz=138	30.73	329	P	P	09 17 25.8	+0.1
F43A	Flat Rock, Esc baz=146	30.75	336	P	P	09 17 25.7	-0.1
G42A	Mountain baz=143,SNR=8.4	30.78	333	P	P	09 17 26.9	+0.8
G42A	Mountain 9.9nm,0.7s	30.78	333	*e*P	P	09 17 26.8	+0.6
H41A	Junction City baz=141	30.83	331	P	P	09 17 27.1	+0.6
J39A	Decorah baz=136	30.86	328	P	P	09 17 27.4	+0.5
K38A	Parkersburg baz=133	30.94	326	P	P	09 17 27.9	+0.3
K38A	Parkersburg 18nm,0.9s	30.94	326	*e*P	P	09 17 28.4	+0.8
N36A	Muff Farm, Cla baz=128	30.99	321	P	P	09 17 28.4	+0.3
KSU1	Kansas State U baz=123	31.03	317	P	P	09 17 28.2	-0.2
L37A	Phoenix Point, baz=131	31.12	324	P	P	09 17 27.7	-1.5
E43A	Lone Tree Farm baz=147	31.13	336	P	P	09 17 29.3	+0.1
I39A	Houston baz=137	31.14	328	P	P	09 17 28.3	-1.1
H40A	Chili baz=139	31.17	331	P	P	09 17 28.1	-1.5
J38A	Wedel Dairy, R baz=135	31.25	327	P	P	09 17 29.2	-1.1
M36A	Felix, Anita baz=129	31.29	322	P	P	09 17 31.0	+0.3
CHGQ	Chibougamau baz=171	31.38	354	P	P	09 17 32.4	+1.0
F41A	Three Lakes baz=143,SNR=5.6	31.46	333	P	P	09 17 33.0	+0.8
F41A	Three Lakes 5.9nm,0.6s	31.46	333	*e*P	P	09 17 33.4	+1.2
K37A	Belmond baz=132	31.49	325	P	P	09 17 32.0	-0.4
G40A	Rib Lake baz=140,SNR=5.4	31.58	332	P	P	09 17 33.9	+0.7
G40A	Rib Lake 5.2nm,0.6s	31.58	332	*e*P	P	09 17 34.2	+1.0
L36A	Harm Buss Farm baz=130	31.62	323	P	P	09 17 32.1	-1.5
H39A	Augusta baz=138	31.64	330	P	P	09 17 33.5	-0.2
MATQ	Matagami baz=165	31.66	350	P	P	09 17 34.7	+0.9
I38A	Scanlan Farm, baz=136,SNR=5.4	31.68	328	P	P	09 17 34.4	+0.3
COWI	Conover 6.7nm,1.1s	31.77	334	*e*P	P	09 17 35.9	+1.0
J37A	Redenius Farm, baz=133,SNR=7.6	31.81	326	P	P	09 17 36.0	+0.8
K36A	Gilmore City baz=131	31.85	324	P	P	09 17 35.0	-0.6
E41A	Kenton baz=144	31.99	334	P	P	09 17 37.3	+0.5
G39A	Holcombe baz=139	32.03	331	P	P	09 17 37.2	+0.1
F40A	Park Falls baz=141	32.05	332	P	P	09 17 37.1	-0.2
H38A	Maiden Rock baz=136	32.12	329	P	P	09 17 38.2	+0.3
I37A	Lemond, Waseca baz=134	32.21	327	P	P	09 17 38.3	-0.4
J36A	Seneca 1, Swea baz=132	32.24	325	P	P	09 17 39.3	+0.3
J36A	Seneca 1, Swea 8.0nm,1.0s	32.24	325	*e*P	P	09 17 39.4	+0.3
G38A	Ridgeland baz=138	32.27	330	P	P	09 17 39.3	+0.1
D41A	Chassel baz=145	32.31	335	P	P	09 17 40.3	+0.8
D41A	Chassel 21nm,0.9s	32.31	335	*e*P	P	09 17 41.0	+1.5
E40A	Wakefield baz=142,SNR=7.7	32.36	333	P	P	09 17 41.0	+0.9
H37A	Dierke Farm, C baz=135	32.36	328	P	P	09 17 39.9	-0.2
F39A	Loretta baz=140,SNR=7.4	32.40	332	P	P	09 17 41.1	+0.7
E39A	Mellen baz=141,SNR=7.1	32.59	333	P	P	09 17 43.0	+1.0
AMTX	Amarillo baz=111	32.73	306	P	P	09 17 44.3	+0.8
SPMN	Marine on St. baz=136	32.77	329	P	P	09 17 43.6	+0.1
TXAR	Lajitas Array 1.7nm,0.4s,baz=120,slow=7.9,SNR=41	32.81	295	P	P	09 17 45.8	+1.5
TX31	Lajitas Ar. Si	32.81	295	*e*P	P	09 17 45.7	+1.4
F38A	Pierce - Schro baz=138	32.87	331	P	P	09 17 45.0	+0.5
H36A	Jessenland, He baz=134	32.88	327	P	P	09 17 44.3	-0.2
CBKS	Cedar Bluff baz=119	32.97	314	P	P	09 17 45.7	+0.2
F37A	Hinrichs Farm,	33.05	330	P	P	09 17 46.0	0.0

	baz=137						
E38A	The Farm, Brul	33.21	332	P	P	09 17 47.2	-0.2
	baz=140						
C40A	Isle Royale Na	33.24	336	P	P	09 17 48.8	+1.2
	baz=145,SNR=5.1						
C40A	Isle Royale Na	33.24	336	*e*P	P	09 17 49.2	+1.6
	20nm,1.0s						
MSTX	Muleshoe	33.26	304	P	P	09 17 49.0	+0.8
	baz=109,SNR=9.4						
MSTX	Muleshoe	33.26	304	*e*P	P	09 17 49.2	+1.0
	13nm,1.0s						
BGNE	Belgrade	33.29	319	P	P	09 17 48.9	+0.6
	baz=124						
H35A	Sunnyside Ranc	33.43	326	P	P	09 17 49.7	+0.4
	baz=133,SNR=9.3						
F36A	Milaca	33.58	329	P	P	09 17 50.4	-0.2
	baz=136						
G35A	Watkins	33.61	327	P	P	09 17 51.1	+0.2
	baz=134						
ECSD	EROS Data Cent	33.77	324	P	P	09 17 52.6	+0.3
	baz=129,SNR=8.9						
ECSD	EROS Data Cent	33.77	324	*e*P	P	09 17 52.8	+0.5
	7.7nm,0.9s						
E36A	McGregor	33.92	330	P	P	09 17 54.3	+0.7
	baz=137						
C38A	Sawbill Land.	33.94	333	P	P	09 17 53.3	-0.5
	baz=141						
D37A	Cotton	34.02	332	P	P	09 17 55.4	+0.9
	baz=139						
F35A	Swanville	34.09	328	P	P	09 17 55.1	0.0
	baz=134						
EYMN	Ely	34.22	333	P	P	09 17 56.1	0.0
	baz=141						
G34A	Benson	34.22	326	P	P	09 17 56.2	0.0
	baz=132						
C37A	Embarrass	34.34	333	P	P	09 17 56.8	-0.5
	baz=140						
D36A	Goodland	34.37	331	P	P	09 17 57.7	+0.3
	baz=138,SNR=5.5						
D36A	Goodland	34.37	331	*e*P	P	09 17 58.3	+0.8
	36nm,1.8s						
F34A	Alexandria	34.40	327	P	P	09 17 57.9	+0.2
	baz=133						
E35A	Pequot Lakes	34.50	329	P	P	09 17 58.4	-0.2
	baz=135						
G33A	Ortonville	34.61	326	P	P	09 18 00.0	+0.5
	baz=131,SNR=6.1						
C36A	Pine Crest Far	34.65	332	P	P	09 17 59.9	0.0
	baz=139						
H32A	Carlson Farm,	34.71	324	P	P	09 18 00.8	+0.3
	baz=129,SNR=5.7						
D35A	Remer	34.71	330	P	P	09 18 00.4	0.0
	baz=136,SNR=5.8						
MNTX	Cornudas Mount	34.75	299	P	P	09 18 02.5	+1.5
	baz=103,SNR=16						
MNTX	Cornudas Mount	34.75	299	*e*P	P	09 18 02.6	+1.6
	10nm,1.1s						
LPAZ	La Paz	34.79	178	P	P	09 18 02.4	+0.3
	1.1nm,0.5s,baz=300,slow=1.4,SNR=11						
LPAZ	La Paz	34.79	178	*e*P	P	09 18 05.0	+3.0
	8.0nm,1.6s						
E34A	Wadena	34.85	328	P	P	09 18 01.6	0.0
	baz=134						
C35A	Jirik Farms, M	35.13	331	P	P	09 18 04.2	+0.2
	baz=137						
G32A	Webster	35.22	325	P	P	09 18 05.0	+0.2
	baz=130						
G32A	Webster	35.22	325	*e*P	P	09 18 05.5	+0.7
	31nm,0.9s						
F32A	Veblen	35.42	326	P	P	09 18 07.1	+0.7
	baz=131						
SIV	San Ignacio	35.46	166	P	P	09 18 06.1	-1.1
	1.2nm,0.5s,baz=340,slow=4.3,SNR=8.0						
B35A	Bob, Littlefor	35.50	332	P	P	09 18 07.3	+0.1
	baz=138,SNR=6.5						
B35A	Bob, Littlefor	35.50	332	*e*P	P	09 18 07.5	+0.3
	12nm,1.1s						
C34A	RKJ Ranch, Bem	35.53	330	P	P	09 18 07.6	+0.2
	baz=136						
T25A	Trinidad	35.60	308	P	P	09 18 07.9	-0.6
	baz=111						
B34A	Aery, Baudette	36.01	331	P	P	09 18 12.4	+0.9
	baz=137						
C33A	Trail	36.01	330	P	P	09 18 12.4	+0.9
	baz=135						
BNM	Barren Site	36.38	303	*e*P	P	09 18 17.3	+2.1
AGMN	Agassiz Nation	36.44	330	P	P	09 18 15.0	-0.1
	baz=135,SNR=5.9						
AGMN	Agassiz Nation	36.44	330	*e*P	P	09 18 15.2	0.0
	4.6nm,0.6s						
TASL	Snake Pit, Alb	36.46	304	P	P	09 18 17.0	+1.2
	baz=107						
ANMO	Albuquerque	36.46	304	P	P	09 18 16.3	+0.5
	1.8nm,0.8s,baz=117,slow=9.0,SNR=4.1						
ANMO	Albuquerque	36.46	304	P	P	09 18 17.0	+1.2
	baz=107						
TASM	ASL Pad, Albuq	36.46	304	P	P	09 18 17.3	+1.4
	baz=107						
Y22D	IRIS PASSCAL I	36.59	302	P	P	09 18 18.1	+1.3
	baz=105						
Y22E	IRIS PASSCAL I	36.59	302	P	P	09 18 18.1	+1.3
	baz=105						
SDCO	Great Sand Dun	36.63	309	P	P	09 18 18.7	+1.3
	baz=111,SNR=8.7						
SDCO	Great Sand Dun	36.63	309	*e*P	P	09 18 18.9	+1.5
	2.8nm,0.8s						
LENM	Lemitar	36.66	302	*e*P	P	09 18 19.6	+2.1
A33A	Warroad	36.67	331	P	P	09 18 18.0	+0.9
	baz=136						
Q24A	Divide	36.84	311	P	P	09 18 19.0	0.0
	baz=113						
121A	Cookes Peak, D	36.93	300	P	P	09 18 19.8	+0.1
	baz=102						
ISCO	Idaho Springs	37.49	312	P	P	09 18 26.0	+1.4
	baz=114,SNR=10.0						
ISCO	Idaho Springs	37.49	312	*e*P	P	09 18 26.3	+1.7
	6.7nm,0.8s						
S22A	4UR Ranch, Cre	37.62	308	P	P	09 18 26.1	+0.4
	baz=110						
S22A	4UR Ranch, Cre	37.62	308	*e*P	P	09 18 27.2	+1.5
	3.3nm,1.1s						
ULM	Lac du Bonnet	37.84	332	P	P	09 18 25.9	-1.1
	3.7nm,0.7s,baz=157,slow=6.7,SNR=4.2						
MDND	Maddock	37.99	327	P	P	09 18 28.5	+0.1
	baz=130						
PHWY	Pilot Hill	38.01	314	*e*P	P	09 18 30.3	+1.4
	5.9nm,0.8s						
SMCO	Snowmass	38.23	310	*e*P	P	09 18 32.6	+1.7
	6.6nm,1.2s						
PV02	Paradox Valley	39.20	308	*e*P	P	09 18 41.7	+2.9
	18nm,1.6s						
PV03	Paradox Valley	39.29	308	*e*P	P	09 18 42.2	+2.6
K22A	Casper	39.31	316	P	P	09 18 40.6	+1.0
	baz=116,SNR=5.9						
K22A	Casper	39.31	316	*e*P	P	09 18 40.5	+0.9
	8.7nm,0.8s						
TUC	Tucson	39.37	298	P	P	09 18 41.2	+1.1
	baz=100						
O20A	White River Ci	39.49	311	P	P	09 18 41.7	+0.5
	baz=111						
O20A	White River Ci	39.49	311	*e*P	P	09 18 44.2	+3.0
PV09	Paradox Valley	39.58	308	*e*P	P	09 18 44.4	+2.3
WUAZ	Wupatki	40.49	303	P	P	09 18 50.5	+0.9
	baz=103						
WUAZ	Wupatki	40.49	303	*e*P	P	09 18 51.5	+2.0
	13nm,1.5s						
P18A	Preston Nutter	40.77	310	*e*P	P	09 18 53.6	+1.8
	10nm,1.3s						
SRU	San Rafael Swe	40.81	309	*e*P	P	09 18 53.5	+1.5
	5.4nm,1.1s						
214A	Organ Pipe Nat	41.02	297	P	P	09 18 55.5	+1.8
	baz=98						
LAO	LASA Array	41.02	321	P	P	09 18 54.5	+0.9
	baz=120						
P17A	Butcher Ranch,	41.08	309	*e*P	P	09 18 56.2	+1.9
	6.6nm,0.7s						
TMUT	Trail Mountain	41.37	309	*e*P	P	09 18 58.8	+2.0
	14nm,1.2s						
BW06	Boulder Array	41.40	314	P	P	09 18 57.8	+0.9
	baz=113						
BW06	Boulder Array	41.40	314	*e*P	P	09 18 57.6	+0.7
	6.2nm,1.4s						
PD31	Pinedale Array	41.40	314	*e*P	P	09 18 57.6	+0.8
PDAR	Pinedale Array	41.40	314	P	P	09 18 57.2	+0.4
	1.0nm,0.5s,baz=109,slow=10,SNR=19						
PDAR				PcP	PcP	09 20 53.0	-0.3
	0.6nm,0.6s,baz=113,slow=6.2,SNR=3.7						
MTPU	Mount Pierson	41.75	307	*e*P	P	09 19 02.4	+2.4
	4.7nm,1.0s						
MSU	Marysvale	41.87	307	*e*P	P	09 19 02.8	+2.0
MPU	Maple Canyon	41.90	310	*e*P	P	09 19 02.8	+1.8
JLU	Jordanelle	41.95	310	*e*P	P	09 19 03.3	+1.8
RLMT	Red Lodge	42.17	318	P	P	09 19 04.0	+0.9
	baz=116,SNR=20						
RLMT	Red Lodge	42.17	318	*e*P	P	09 19 04.2	+1.0
	14nm,0.6s						
CTU	Camp Tracy	42.20	310	*e*P	P	09 19 05.6	+2.2
HWUT	Hardware Ranch	42.37	312	*e*P	P	09 19 05.2	+0.4
LOHW	Long Hollow	42.43	315	*e*P	P	09 19 06.2	+0.9
SNOW	Snow King Moun	42.47	315	*e*P	P	09 19 07.0	+1.3
REDW	Red Top Meadow	42.50	315	*e*P	P	09 19 07.1	+1.2
MOOW	Moose Ponds	42.57	315	*e*P	P	09 19 07.7	+1.2
TPAW	Teton Pass	42.61	315	*e*P	P	09 19 07.8	+0.9
GCMT	Greycliff	42.71	318	*e*P	P	09 19 08.8	+1.3
FXWY	Fox Creek	42.72	315	*e*P	P	09 19 08.7	+1.1
IMW	Indian Meadow	42.76	315	*e*P	P	09 19 09.9	+1.9
DUG	Dugway, Tooele	42.82	309	P	P	09 19 09.8	+1.4
	baz=107,SNR=6.9						
DUG	Dugway, Tooele	42.82	309	*e*P	P	09 19 10.3	+1.9
GLA	Glamis	42.85	299	P	P	09 19 10.4	+1.7
	baz=98						
PSUT	Pine Spring	43.14	307	*e*P	P	09 19 14.0	+2.8
BGU	Big Grassy Mou	43.19	310	*e*P	P	09 19 12.8	+1.4
YHB	Horse Butte	43.26	316	*e*P	P	09 19 12.5	+0.5
IRM	Iron Mountain	43.28	300	P	P	09 19 13.1	+1.0
	baz=99						
BC3	Big Chuckawall	43.46	299	P	P	09 19 14.3	+0.7
	baz=98						
SHPR	Sheep Range	43.70	304	*e*P	P	09 19 18.7	+3.1
EGMT	Eagleton	43.77	321	P	P	09 19 17.1	+1.2
	baz=118,SNR=5.3						
EGMT	Eagleton	43.77	321	*e*P	P	09 19 17.5	+1.6
BOZ	Bozeman (W)	43.88	317	P	P	09 19 18.1	+1.3
	baz=114,SNR=11						
BOZ	Bozeman (W)	43.88	317	*e*P	P	09 19 18.2	+1.3
TUQ	Turquoise Moun	44.12	302	P	P	09 19 20.5	+1.6
	baz=100						
MONP2	Monument Peak	44.16	298	P	P	09 19 21.1	+1.7
	baz=97						
HEC	Hector,Ludlow	44.35	301	P	P	09 19 22.6	+1.9
	baz=99						
MCMT	McKenzie Canyo	44.38	316	*e*P	P	09 19 22.4	+1.4
DLMT	Dillon	44.41	317	*e*P	P	09 19 22.8	+1.7
R11A	Troy Canyon, C	44.42	306	P	P	09 19 23.2	+1.8
	baz=103,SNR=8.9						
R11A	Troy Canyon, C	44.42	306	*e*P	P	09 19 23.1	+1.8
HRY	Holter Researc	44.46	319	*e*P	P	09 19 22.7	+1.2
LRM	Limekiln Ridge	44.50	317	*e*P	P	09 19 23.7	+1.8
TPNV	Topopah Spring	44.65	304	P	P	09 19 25.7	+2.6
	baz=101,SNR=9.1						
TPNV	Topopah Spring	44.65	304	*e*P	P	09 19 26.1	+2.9
GSC	Goldstone, Bar	44.81	302	P	P	09 19 25.7	+1.4
	baz=99						
MURC	Murrieta	44.89	299	P	P	09 19 25.3	+0.3
	baz=97						
HLID	Hailey	45.00	314	P	P	09 19 27.0	+1.2
	baz=109,SNR=6.6						
HLID	Hailey	45.00	314	*e*P	P	09 19 27.2	+1.4
FRB	Frobisher Bay	45.02	1	P	P	09 19 25.8	+0.4
	4.2nm,0.9s,baz=180,slow=5.5,SNR=5.1						
FURC	Furnace Creek,	45.05	303	P	P	09 19 28.1	+2.0
	baz=100						
MPMC	Manual Prospec	45.48	302	P	P	09 19 31.5	+1.7
	baz=99						
DAC	Darwin (Calif)	45.59	303	*e*P	P	09 19 33.2	+2.5
EDW2	Edwards Air Fo	45.71	301	P	P	09 19 32.9	+1.4
	baz=98						
MSO	Missoula	45.84	318	P	P	09 19 33.3	+1.0
	baz=112						
MSO	Missoula	45.84	318	*e*P	P	09 19 33.8	+1.4
CWC	Cottonwood Cre	46.01	303	P	P	09 19 35.0	+1.1
	baz=99						
BMN	Battle Mountai	46.13	308	*e*P	P	09 19 36.2	+1.4
	3.7nm,0.6s						
ISA	Isabella, Lake	46.21	302	P	P	09 19 36.1	+0.7
	baz=98						
CPUP	Villa Florida	46.30	165	P	P	09 19 36.7	+0.8
	1.2nm,0.5s,baz=162,slow=10,SNR=3.3						
JTMT	Jette	46.41	319	*e*P	P	09 19 38.8	+2.0
NV11	Mina Array Sit	46.41	306	*e*P	P	09 19 39.2	+2.1
KVN	Kaiserville	46.49	306	*e*P	P	09 19 39.9	+2.2
NV01	Mina Array Sit	46.53	306	*e*P	P	09 19 39.3	+1.3
NVAR	Mina Array Bea	46.53	306	P	P	09 19 40.0	+2.0
	5.0nm,0.7s,baz=88,slow=6.8,SNR=37						
VES	Vestal, Richgr	46.72	302	P	P	09 19 41.5	+2.2
	baz=98						
RYN	Ryan	46.73	306	*e*P	P	09 19 41.8	+2.3
OMMB	Old Mammoth Mi	46.92	304	*e*P	P	09 19 44.0	+2.8
MDPB	Devils Postpil	46.99	304	*e*P	P	09 19 44.5	+2.8
YERR	Yerington	47.35	306	*e*P	P	09 19 47.0	+2.7
WAKR	Walker	47.42	305	*e*P	P	09 19 48.4	+3.5
WVOR	Wild Horse Val	47.65	311	*e*P	P	09 19 48.0	+1.5
J08A	Circle Bar Ran	47.76	312	*e*P	P	09 19 48.5	+1.1
AFDM	Forest Hills D	48.67	306	*e*P	P	09 19 56.2	+1.8
MOD	Modoc Plateau	48.73	310	*e*P	P	09 19 55.9	+1.0
J04D	Umpqua Nationa	50.31	311	P	P	09 20 06.8	-0.2
	baz=102						
YBH	Yreka Blue Hor	50.46	309	P	P	09 20 07.6	-0.3
	3.3nm,0.9s,baz=134,slow=1.1,SNR=4.4						
I04A	Tendick Farm,	50.65	312	P	P	09 20 07.7	-1.6
	baz=102						
H04A	Detroit Lake	50.68	313	*e*P	P	09 20 10.6	+1.1
YKA	Yellowknife Ar	53.62	336	P	P	09 20 30.4	-0.5
	3.7nm,0.6s,baz=114,slow=7.6,SNR=8.2						
SUMG	Summit	56.74	11	*i* P	P	09 20 53.9	+0.2
	6.5nm,0.8s						
DLBC	Dease Lake	58.89	328	*e*P	P	09 21 09.8	+1.2
	9.0nm,1.1s						
ESDC	Sonseca Array	59.67	55	P	P	09 21 13.9	-0.3
	0.8nm,0.6s,baz=273,slow=7.1,SNR=7.1						
EKA	Eskdalemuir Ar	61.42	37	P	P	09 21 24.5	-1.2
	1.1nm,0.5s,baz=298,slow=8.0,SNR=4.7						
KOWA	Kowa	62.64	83	P	P	09 21 33.7	-0.9
	2.1nm,0.6s,baz=305,slow=8.6,SNR=4.8						
DAG	Danmarks Havn	63.40	12	*i* P	P	09 21 38.4	-0.2
	3.6nm,0.9s						
DBIC	Dimbokro	63.94	92	P	P	09 21 42.0	-1.2
	2.7nm,0.4s,baz=238,slow=2.9,SNR=3.2						
ILAR	Eielson Array	67.86	333	P	P	09 22 07.3	-0.1
	1.0nm,0.5s,baz=102,slow=4.8,SNR=13						
TORD	Torodi Ar. Bea	68.35	83	P	P	09 22 08.4	-2.9
	1.0nm,0.5s,baz=309,slow=7.0						
TOLK	Toolik Lake Re	69.11	337	P	P	09 22 15.3	+0.1
	baz=92						
KEST	Kesra	70.50	58	P	P	09 22 24.6	+0.2
	2.9nm,0.7s,baz=270,slow=4.1,SNR=5.2						
HFS	Hagfors	70.63	32	P	P	09 22 24.8	+0.2
	0.9nm,0.6s,baz=277,slow=14,SNR=2.8						
SPITS	Spitsbergen Ar	70.99	13	P	P	09 22 26.6	0.0
	1.7nm,0.5s,baz=238,slow=4.9,SNR=5.4						
GERES	GERESS Array B	71.77	44	P	P	09 22 31.2	-0.6
	0.3nm,0.2s,baz=256,slow=5.4,SNR=4.7						
ARCES	ARCESS Array B	74.40	21	P	P	09 22 46.8	-0.1
	3.5nm,0.6s,baz=283,slow=3.8,SNR=20						
FINES	FINESS Array B	76.42	29	P	P	09 22 59.1	+0.6
	2.7nm,0.6s,baz=271,slow=3.5,SNR=11						
MLR	Muntele Rosu	80.64	45	P	P	09 23 22.4	+0.2
	1.0nm,0.8s,baz=347,slow=19,SNR=5.4						
IDI	Anoyia	82.92	55	P	P	09 23 34.2	-0.1
	4.4nm,0.6s,baz=286,slow=13,SNR=4.8						
PMSA	Palmer Station	83.31	178	LR	LR	10 03 46.4	
	comp=Z,62nm,18.2s,baz=122,slow=38						
BRTR	Keskin Array B	87.93	49	P	P	09 23 58.5	-0.6
	0.9nm,0.6s,baz=267,slow=2.5,SNR=4.3						
LZH	Lanzhou	125.16	7	*e*PKP	PKPdf	09 30 08.6	-1.0
LZH				pPKP	pPKPdf	09 30 34.7	-2.6
LZH				sPKP		09 30 47.6	
STKA	Stephens Creek	149.06	239	PKPbc	PKPbc	09 30 56.2	-1.0
	1.1nm,0.6s,baz=215,slow=3.9,SNR=4.4						
ASAR	Alice Springs	157.59	253	PKPab	PKPab	09 31 37.1	-1.0
	0.7nm,0.7s,baz=115,slow=5.6,SNR=4.6						

IDC 11 09:11:27.7±3.6,**8°.34S×155°.96E,h0**^{km}**,mb3.8**/4,
mb1 3.9/4,**mb1mx3.6**/46,**mbtmp3.8**/4,**Error ellipse:**
s-maj=102.9km s-min=37.2km az=104.0,
Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.90	239	P	P	09 16 43.6	+0.2
	1.9nm,0.9s,baz=66,slow=10,SNR=9.3						
ASAR	Alice Springs	26.05	232	P	P	09 17 02.7	-0.3
	0.2nm,0.3s,baz=67,slow=10,SNR=4.3						
STKA	Stephens Creek	26.97	208	P	P	09 17 11.2	+0.1
	1.9nm,0.6s,baz=43,slow=15,SNR=8.1						
MKAR	Makanchi Array	85.04	319	P	P	09 24 05.2	-0.1
	0.2nm,0.5s,baz=110,slow=5.6,SNR=6.5						

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*ISCJB **11** 09:12:43.0±0.4,23°.46S±0°.04×179°.68W±0°.08,h536*^{km}*,*
mb4.3/12,Error ellipse: s-maj=9.3km s-min=5.1km az=2.5
*IDC **11** 09:12:43.3±1.4,23°.51S×179°.79W,h512*^{km}*±15*^{km}*,*
mb3.8/10,mb1 3.9/12,mb1mx3.4/49,mbtmp4.7/12,Error
ellipse: s-maj=19.2km s-min=14.2km az=22.0
*NEIC **11** 09:12:43.4±0.9,23°.56S×179°.75W,h522*^{km}*±12*^{km}*,mb4.6/2,*
Error ellipse: s-maj=14.9km s-min=12.8km az=135.0
*WEL **11** 09:12:43.0,23°.56S×179°.75W,h522*^{km}
ISC 11 09:12:44.0±0.6,**23°.57S**±0°.06×**179°.60W**±0°.09,**h536**^{km}**,**
n66,σ1^{s}**73**/77,**mb4.5**/12,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	5.86	165	P	P	09 14 20.3	-0.3
	72nm,0.3s,baz=260,slow=23,SNR=4.1						
RAO				S	S	09 15 38.8	-0.8
	16nm,0.3s,baz=90,slow=20,SNR=2.1						
GLKZ	Green Lake	5.87	166	P	P	09 14 22.6	+1.9
GLKZ				S	S	09 15 39.6	-0.2
AFI	Afiamalu	12.12	39	P	P	09 15 24.0	-0.1
	3.1nm,0.3s,baz=111,slow=16,SNR=4.1						
AFI				S	S	09 17 31.0	-4.7
	2.4nm,0.3s,baz=20,slow=18,SNR=3.5						
OUZ	Omahuta	13.04	205	P	P	09 15 34.9	+1.8
GRZ	Great Barrier	13.35	198	P	P	09 15 43.1	+6.7
WCZ	Waipu Caves	13.40	202	P	P	09 15 38.8	+1.8
MXZ	Matakaoa Point	14.07	187	P	P	09 15 45.2	+1.3
URZ	Urewera	14.92	190	P	P	09 15 50.3	-2.4
	7.6nm,0.3s,baz=351,slow=2.5,SNR=31						
URZ				S	S	09 18 24.1	-4.0
	1.6nm,0.3s,baz=22,slow=23,SNR=12						
HIZ	Hauiti	15.63	196	P	P	09 16 00.6	+0.5
TWVZ	Taurewa	16.02	194	P	P	09 16 04.2	0.0
WTVZ	West Tongariro	16.03	194	P	P	09 16 04.3	0.0
NGZ	Ngauruhoe	16.09	194	P	P	09 16 05.3	+0.5
TUVZ	Tukino	16.17	193	P	P	09 16 05.5	-0.1
KWHZ	Kaweka Forest	16.17	191	P	P	09 16 04.2	-1.4
KWHZ				S	S	09 18 46.9	-3.4
FWVZ	Far West T-bar	16.18	194	P	P	09 16 05.6	-0.2
WHVZ	Whangaehu Hut	16.20	194	P	P	09 16 05.3	-0.6
WHVZ				S	S	09 18 49.3	-1.8
VRZ	Vera Road	16.24	196	P	P	09 16 08.3	+2.2
PKVZ	Pokaka	16.25	194	P	P	09 16 07.1	+0.8
PKVZ				S	S	09 18 51.7	-0.1
MOVZ	Moawhango	16.28	193	P	P	09 16 06.9	+0.3
BHHZ	Black Hill Sta	16.30	192	P	P	09 16 05.5	-1.3
BHHZ				S	S	09 18 50.8	-1.7
KRHZ	Kereru	16.39	191	P	P	09 16 06.8	-0.8
KRHZ				S	S	09 18 50.7	-3.2
PKE	Pukeiti	16.51	198	P	P	09 16 11.4	+2.6
KHEZ	Kahui Hut	16.59	198	P	P	09 16 14.5	+4.9
PREZ	Palmer Road	16.60	197	P	P	09 16 13.8	+4.2
PNHZ	Pukenui	16.68	191	P	P	09 16 09.6	-0.7
PNHZ				S	S	09 18 56.5	-2.3
PXZ	Pawanui	16.69	190	P	P	09 16 09.6	-0.7
PXZ				S	S	09 18 56.7	-2.1
NMEZ	Namu Road	16.74	198	P	P	09 16 14.0	+3.1
WAZ	Wanganui	16.78	195	P	P	09 16 11.4	+0.2
WPHZ	Waipukurau	16.79	191	P	P	09 16 11.3	0.0
TSZ	Takapari Road	16.87	192	P	P	09 16 11.1	-1.0
PRHZ	Porangahau	16.95	190	P	P	09 16 12.8	-0.1
DVHZ	Dannevirke	17.06	191	P	P	09 16 13.6	-0.3
OHWZ	Ohakea	17.14	193	P	P	09 16 13.4	-1.1
ANWZ	Angora Road	17.17	190	P	P	09 16 14.6	-0.2
BFZ	Birch Farm	17.42	191	P	P	09 16 16.0	-1.1
MRZ	Mangatainoka R	17.52	192	P	P	09 16 15.9	-2.2
OGWZ	Otaki Gorge	17.76	193	P	P	09 16 18.6	-1.6
HOWZ	Holdsworth Sta	17.76	192	P	P	09 16 19.7	-0.6
KIW	Kapiti Island	17.85	194	P	P	09 16 20.8	-0.3
TMWZ	Te Maipa	17.90	191	P	P	09 16 21.0	-0.5
MTW	Mount Morrison	18.02	192	P	P	09 16 20.9	-1.7
DUWZ	D'Urville Isla	18.03	196	P	P	09 16 22.4	-0.3
CAW	Cannon Point	18.06	193	P	P	09 16 22.0	-1.0
PAWZ	Paruwai Farm	18.25	192	P	P	09 16 24.1	-0.6
SNZO	South Karori	18.33	194	*e*P	P	09 16 24.7	-0.6
	62nm,0.6s						
SNZO				*e*S	S	09 19 26.1	+0.6
TCW	Tory Channel	18.33	195	P	P	09 16 25.6	+0.2
BHW	Baring Head	18.39	193	P	P	09 16 25.3	-0.6
PLWZ	Palliser	18.46	192	P	P	09 16 25.6	-1.1
CTA	Charters Tower	31.85	270	P	P	09 18 25.2	-0.1
	36nm,0.4s,baz=93,slow=11,SNR=81						
PMG	Port Moresby	34.74	288	P	P	09 18 48.7	-1.0
	11nm,0.6s,baz=92,slow=4.2,SNR=3.7						
STKA	Stephens Creek	35.19	248	P	P	09 18 53.4	0.0
	3.9nm,0.4s,baz=91,slow=11,SNR=24						
ASAR	Alice Springs	42.46	260	P	P	09 19 51.6	-0.6
	8.6nm,0.5s,baz=102,slow=7.1,SNR=94						
ASAR				ScP	ScP	09 24 36.4	+3.7
	0.4nm,0.7s,baz=101,slow=4.8,SNR=4.4						
WRAB	Tennant Creek	42.79	266	*e*P	P	09 19 53.7	-1.2
	12nm,0.8s						
WRA	Warramunga Arr	42.80	266	P	P	09 19 53.8	-1.2
	14nm,0.5s,baz=92,slow=8.5,SNR=271						
WRA				PcP	PcP	09 21 34.8	+0.7
	0.6nm,0.6s,baz=106,slow=3.5,SNR=3.4						
JAY	Jayapura	43.73	293	P	P	09 20 01.7	-0.6
	11nm,1.0s,baz=205,slow=15,SNR=4.5						
SIJI	Sorong	52.68	288	P	P	09 21 08.1	-0.9
	18nm,0.6s,baz=81,slow=6.3,SNR=9.8						
MBWA	Marble Bar	55.80	260	*e*P	P	09 21 29.7	-1.1
	18nm,0.5s						
QSPA	South Pole Qui	66.52	180	P	P	09 22 42.1	+1.6
	2.3nm,0.7s,baz=288,slow=20,SNR=5.7						
SNAA	Sanae	84.99	179	P	P	09 24 23.6	+1.1
	0.6nm,0.4s,baz=201,slow=13,SNR=12						
PDAR	Pinedale Array	92.19	44	P	P	09 24 59.2	+2.4
	0.1nm,0.6s,baz=213,slow=5.3,SNR=2.4						
HFS	Hagfors	142.29	349	PKhKP	PKPpre	09 31 12.8	
	1.0nm,0.3s,baz=120,slow=14,SNR=15						
AKASG	Malin Array Be	144.89	328	PKP	PKPbc	09 31 20.7	+0.2
	1.4nm,0.6s,baz=51,slow=4.0,SNR=5.9						
BRTR	Keskin Array B	147.67	308	PKPbc	PKPbc	09 31 28.6	-0.1
	0.9nm,0.3s,baz=104,slow=4.1,SNR=3.3						
MMAI	Mount Meron Ar	147.90	295	PKPbc	PKPbc	09 31 29.8	+0.3
	5.0nm,0.5s,baz=66,slow=7.0,SNR=4.8						
EKA	Eskdalemuir Ar	148.16	4	PKPbc	PKPbc	09 31 30.6	+1.4
	0.3nm,0.3s,baz=348,slow=2.5,SNR=3.0						
CLL	Collm	150.64	344	*i* PKPbc	PKPbc	09 31 37.5	+2.2

NNC 11 09:18:12.4±5.5,**38°.00N×72°.59E,h242**^{km}±60^{km}**,mb2.2,**
mpv3.5,3C-2D,Error ellipse: s-maj=99.5km
s-min=47.2km az=66.0,Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	2.14	19	⇑P	Pn	09 18 55.2	-0.5
	13nm,0.4s						
SFK				⇑S	S	09 19 30.4	+0.6
	23nm,0.3s						
MNAS	Manas	4.49	359	⇓P	Pn	09 19 23.2	+1.5
	6.7nm,0.4s						
MNAS				⇑S	S	09 20 18.4	+1.6
	6.6nm,0.5s						
KK31	Karatay Array	5.34	343	P	Pn	09 19 32.2	+0.1
	1.5nm,0.3s,baz=156,slow=11,SNR=45						
KK31				⇓S	S	09 20 33.2	-2.4
	1.7nm,0.3s,baz=161,slow=22,SNR=16						

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*SKO **11** 09:21:38.6,41°.33N×19°.85E,h25*^{km}*,M1.8,ML2.3*
*ATH **11** 09:21:48.9,41°.43N×20°.91E,h15*^{km}*±3*^{km}*,ML2.3/6,Error*
ellipse: s-maj=4.7km s-min=2.1km az=131.0
*THE **11** 09:21:49.9,41°.36N×20°.92E,h1*^{km}*±1*^{km}*,ML2.3/5,Error*
ellipse: s-maj=1.4km s-min=0.4km az=283.0
*PDG **11** 09:21:50.4±0.3,41°.31N×20°.89E,h3*^{km}*,ML2.9/10,Error*
ellipse: s-maj=0.4km s-min=0.5km az=0.0
*CSEM **11** 09:21:51.2±0.1,41°.28N×20°.98E,h2*^{km}*,ML2.3,Error*
ellipse: s-maj=3.8km s-min=2.3km az=57.0
*BEO **11** 09:21:51.6±0.4,41°.17N×20°.97E,h11*^{km}*±3*^{km}*,ML2.2/7*
ISC 11 09:21:50.6±1.0,**41°.33N**±0°.01×**20°.94E**±0°.02,**h7**^{km}±8^{km}**,**
n87,σ1^{s}**23**/156,**17C-6D,Albania**

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

OHR	Ohrid	0.24	206	⇑iPg	Pg	09 21 55.0	-0.3
OHR				iSg	Sg	09 21 59.2	+0.7
OHR				eLg	Lg	09 21 59.3	
	comp=N,620nm,0.4s						
OHR				eLg	Lg	09 21 59.4	
	comp=E,758nm,0.4s						
KRUS	Krusevo	0.24	80	iPg	Pg	09 21 55.6	+0.1
KRUS				iSg	Sg	09 21 59.8	+1.1
KRUS				eLg	Lg	09 22 00.0	
	comp=E,250nm,0.3s						
KRUS				eLg	Lg	09 22 00.5	
	comp=N,344nm,0.4s						
FNA	Florina	0.64	148	P	Pg	09 22 01.5	-1.4
FNA				S	Sg	09 22 11.6	+0.4
FNA				AML	AML	09 22 14.1	
	comp=N,1288µm,0.3s						
FNA				AML	AML	09 22 14.6	
	comp=E,1342µm,0.3s						
FNA	Florina	0.64	148	P	Pg	09 22 02.3	-0.6
FNA				S	Sb	09 22 12.5	-0.7
FNA	Florina	0.64	148	P	Pg	09 22 02.3	-0.6
FNA				S	Sb	09 22 12.6	-0.7
SKO	Skopje	0.75	30	ePg	Pn	09 22 06.9	-0.8
SKO				eSg	Sn	09 22 19.9	+0.6
SKO	Skopje	0.75	30	P	Pg	09 22 04.5	-0.5
SKO				S	Sg	09 22 15.3	+0.5
SKO	Skopje	0.75	30	iPg	Pg	09 22 05.2	+0.2
SKO				iSg	Sg	09 22 15.3	+0.5
SKO				eLg	Lg	09 22 15.5	
	comp=N,37nm,0.3s						
SKO				eLg	Lg	09 22 15.5	
	comp=E,16nm,0.2s						
SKO	Skopje	0.75	30	P	Pg	09 22 04.5	-0.5
SKO	Skopje	0.75	30	ePg	Pn	09 22 06.9	-0.8
SKO				S	Sg	09 22 15.3	+0.5
SKO				eSg	Sn	09 22 19.9	+0.6
	baz=1.0						
NEST	Nestorio	0.92	175	P	Pg	09 22 06.1	-2.1
NEST				S	Sn	09 22 24.0	+0.4
NEST				AML	AML	09 22 27.4	
	comp=N,454µm,0.4s						
NEST				AML	AML	09 22 27.6	
	comp=E,500µm,0.5s						
NEST	Nestorio	0.92	175	P	Pg	09 22 07.6	-0.6
NEST				S	Sb	09 22 21.3	0.0
NEST	Nestorio	0.92	175	P	Pg	09 22 07.6	-0.6
NEST				S	Sn	09 22 23.2	-0.3
STIP	Stip	1.01	68	iPg	Pn	09 22 12.4	+1.2
STIP				iSg	Sn	09 22 29.1	+3.3
STIP				eLg	Lg	09 22 29.8	
	comp=N,23nm,0.3s						
STIP				eLg	Lg	09 22 32.4	
	comp=E,31nm,0.6s						
PENT	Pentalofos	1.14	172	P	Pg	09 22 12.2	-0.3
PENT				S	Sn	09 22 31.9	+2.8
PENT	Pentalofos	1.14	172	P	Pg	09 22 12.3	-0.2
GRG	Griva	1.17	108	P	Pg	09 22 12.8	-0.3
GRG				S	Sn	09 22 29.9	+0.2
GRG	Griva	1.17	108	P	Pg	09 22 12.3	-0.7
GRG				S	Sn	09 22 29.3	-0.4
GRG	Griva	1.17	108	P	Pg	09 22 12.4	-0.6
GRG				S	Sn	09 22 29.3	-0.4
KZN	Kozani	1.20	148	P	Pg	09 22 12.2	-1.5
KZN				S	Sn	09 22 32.6	+2.1
KZN				AML	AML	09 22 36.1	
	comp=N,145µm,0.4s						
KZN				AML	AML	09 22 38.0	
	comp=E,257µm,0.4s						
KZN	Kozani	1.20	148	P	Pg	09 22 13.0	-0.7
KZN				S	Sn	09 22 31.1	+0.6
KZN	Kozani	1.20	148	P	Pg	09 22 13.0	-0.7
KZN				S	Sn	09 22 32.1	+1.6
VAY	Valandovo	1.23	90	ePg	Pn	09 22 13.5	-0.8
VAY	Valandovo	1.23	90	P	Pn	09 22 12.8	-1.5
VAY	Valandovo	1.23	90	iPg	Pn	09 22 13.5	-0.8
VAY				iSg	Sn	09 22 30.8	-0.4
VAY				eLg	Lg	09 22 31.8	
	comp=N,49nm,0.7s						
VAY				eLg	Lg	09 22 33.9	
	comp=E,38nm,0.4s						
VAY	Valandovo	1.23	90	P	Pn	09 22 12.8	-1.5
VAY	Valandovo	1.23	90	ePg	Pn	09 22 13.5	-0.8
KPRO	Kipourio	1.41	166	P	Pb	09 22 17.1	-0.2
KPRO				S	Sg	09 22 40.3	+4.4
KPRO				AML	AML	09 22 48.2	
	comp=E,178µm,0.4s						
KPRO				AML	AML	09 22 49.3	
	comp=N,131µm,0.6s						
KPRO	Kipourio	1.41	166	P	Pb	09 22 17.2	-0.1
ULC	Ulcinj	1.42	297	⇑iPg	Pn	09 22 15.3	-1.6
ULC				eSg	Sg	09 22 37.8	+1.6
ULC	Ulcinj	1.42	297	⇑iPg	Pn	09 22 15.3	-1.6
ULC				eSg	Sg	09 22 37.8	+1.6
PVY	Plav	1.46	330	ePg	Pn	09 22 17.3	-0.3
PVY				eSg	Sg	09 22 40.0	+2.4
PVY	Plav	1.46	330	ePg	Pn	09 22 17.3	-0.3
PVY				eSg	Sg	09 22 40.0	+2.4
KNT	Kendrikon	1.49	96	P	Pb	09 22 18.5	-0.2
KNT				S	Sb	09 22 37.9	+0.1
KNT				AML	AML	09 22 42.0	
	comp=N,101µm,0.6s						
KNT				AML	AML	09 22 44.2	
	comp=E,61µm,0.4s						
KNT	Kendrikon	1.49	96	P	Pn	09 22 17.1	-0.8
KNT				S	Sg	09 22 38.2	-0.3
KNT	Kendrikon	1.49	96	P	Pn	09 22 18.0	+0.1
KNT				S	Sg	09 22 38.2	-0.3
DRME	Dracevica, Mon	1.57	304	⇑iPg	Pn	09 22 18.7	-0.2
DRME				eSg	Sg	09 22 43.2	+2.2
DRME	Dracevica, Mon	1.57	304	⇑iPg	Pn	09 22 18.7	-0.2
DRME				eSg	Sg	09 22 43.2	+2.2
BARS	Barje	1.63	23	ePg	Pg	09 22 22.9	+1.1
BARS	Barje	1.63	23	ePg	Pg	09 22 22.9	+1.1
PDG	Podgorica	1.67	312	⇓iPn	Pb	09 22 20.8	-0.9
PDG				eSn	Sg	09 22 46.5	+2.2
TTG	Podgorica	1.67	312	⇓iPn	Pb	09 22 20.8	-0.9
TTG				eSn	Sg	09 22 46.5	+2.2
LIT	Litokhoron	1.70	136	P	Pn	09 22 20.9	+0.1
LIT	Litokhoron	1.70	136	P	Pn	09 22 21.2	+0.4
BEY	Berane	1.73	334	⇑iPn	Pb	09 22 22.0	-0.8
BEY				eSn	Sg	09 22 47.6	+1.4
IVA	Berane	1.73	334	⇑iPn	Pb	09 22 22.0	-0.8
IVA				eSn	Sg	09 22 47.6	+1.4
SGD	Sagiada	1.79	198	P	Pg	09 22 25.7	+0.7
SGD	Sagiada	1.79	198	P	Pg	09 22 24.3	-0.7
BUM	Brajici-Budva	1.81	303	⇑iPn	Pb	09 22 23.7	-0.5
BUM				eSn	Sg	09 22 50.1	+1.3
BUM	Brajici-Budva	1.81	303	⇑iPn	Pb	09 22 23.7	-0.5
BUM				eSn	Sg	09 22 50.1	+1.3
KEK	Kerkira	1.83	209	P	Pb	09 22 24.4	-0.1
KEK				S	Sn	09 22 45.2	-0.7
KEK	Kerkira	1.83	209	P	Pn	09 22 22.1	-0.4
KEK	Kerkira	1.83	209	P	Pn	09 22 22.1	-0.4
KEK				S	Sb	09 22 46.8	-0.8
KOME	Kolasin	1.85	326	ePn	Pb	09 22 24.2	-0.7
KOME				eSn	Sg	09 22 51.0	+0.8
KOME	Kolasin	1.85	326	ePn	Pb	09 22 24.2	-0.7
KOME				eSn	Sg	09 22 51.0	+0.8
SELS	Selova	1.90	4	ePn	Pb	09 22 25.1	-0.5
SELS				eSn	Sg	09 22 51.5	-0.1
CEME	Cevo	1.94	310	⇑iPn	Pb	09 22 25.2	-1.1
CEME				eSn	Sg	09 22 52.8	-0.1
CEME	Cevo	1.94	310	⇑iPn	Pb	09 22 25.2	-1.1
CEME				eSn	Sg	09 22 52.8	-0.1
THL	Klokotos Trika	1.94	155	P	Pb	09 22 26.9	+0.5
THL				S	Sb	09 22 49.9	-0.9
THL				AML	AML	09 22 58.5	
	comp=N,55µm,0.7s						
THL				AML	AML	09 23 02.8	
	comp=E,55µm,0.4s						
THL	Klokotos Trika	1.94	155	P	Pb	09 22 26.0	-0.4
THL				S	Sb	09 22 50.7	-0.1
SJES	Sjenica	2.06	340	ePn	Pb	09 22 28.5	0.0
SJES				eSn	Sb	09 22 54.5	+0.1
NKME	Niksic	2.06	315	⇓iPn	Pb	09 22 27.1	-1.4
NKME				eSn	Sg	09 22 55.9	-1.0
NKME	Niksic	2.06	315	⇓iPn	Pb	09 22 27.1	-1.4
NKME				eSn	Sg	09 22 55.9	-1.0
NKY	Niksic	2.07	316	⇑iPn	Pn	09 22 26.9	+0.9
NKY				eSn	Sg	09 22 56.4	-0.8
NKY	Niksic	2.07	316	⇑iPn	Pn	09 22 26.9	+0.9
NKY				eSn	Sg	09 22 56.4	-0.8
VTS	Vitosha	2.12	53	ePn	Pb	09 22 28.1	-1.3
VTS	Vitosha	2.12	53	ePn	Pb	09 22 28.1	-1.3
HCY	Herceg Novi	2.14	302	⇑iPn	Pb	09 22 28.0	-1.7
HCY				eSn	Sg	09 22 57.7	-1.7
HCY	Herceg Novi	2.14	302	⇑iPn	Pb	09 22 28.0	-1.7
HCY				eSn	Sg	09 22 57.7	-1.7
PLE	Pljevlja	2.31	331	⇓iPn	Pb	09 22 30.7	-2.0
PLE				eSn	Sb	09 23 01.9	+0.4
PLE	Pljevlja	2.31	331	⇓iPn	Pb	09 22 30.7	-2.0
PLE				eSn	Sb	09 23 01.9	+0.4
ZAPS	Zavoj	2.32	32	ePn	Pb	09 22 31.3	-1.5
ZAPS				eSn	Sb	09 23 02.4	+0.7
IVAS	Ivanjica	2.32	346	ePn	Pb	09 22 31.6	-1.3
IVAS				eSn	Sb	09 23 02.6	+0.8
IVAS	Ivanjica	2.32	346	ePn	Pb	09 22 31.6	-1.3
IVAS				eSn	Sb	09 23 02.6	+0.8
BRY	Bratogost	2.38	312	ePn	Pn	09 22 31.7	+1.5
BRY				eSn	Sb	09 23 03.5	0.0
BRY	Bratogost	2.38	312	ePn	Pn	09 22 31.7	+1.5
BRY				eSn	Sb	09 23 03.5	0.0
UPM	Unac-Piva	2.41	322	⇑iPn	Pn	09 22 31.8	+1.2
UPM				eSn	Sb	09 23 04.1	-0.3
UPM	Unac-Piva	2.41	322	⇑iPn	Pn	09 22 31.8	+1.2
UPM				eSn	Sb	09 23 04.1	-0.3
AGG	Agios Georgios	2.54	155	P	Pn	09 22 32.1	-0.2
AGG	Agios Georgios	2.54	155	P	Pn	09 22 32.8	+0.5
GRUS	Gruza	2.57	356	ePn	Pb	09 22 35.4	-1.6
GRUS				eSn	Sb	09 23 08.5	-0.3
GRUS	Gruza	2.57	356	ePn	Pb	09 22 35.4	-1.6
GRUS				eSn	Sb	09 23 08.5	-0.3
BBLS	Lazići	2.78	337	ePn	Pb	09 22 37.9	-2.8
BBLS				eSn	Sb	09 23 13.2	-1.8
BBLS	Lazići	2.78	337	ePn	Pb	09 22 37.9	-2.8
BBLS				eSn	Sb	09 23 13.2	-1.8
DIVS	Divibare	2.86	346	ePn	Pn	09 22 39.0	+2.3
DIVS				eSn	Sb	09 23 15.2	-2.0
DIVS	Divibare	2.86	346	ePn	Pn	09 22 39.0	+2.3
DIVS				eSn	Sb	09 23 15.2	-2.0
STON	Ston	2.86	304	ePn	Pn	09 22 37.3	+0.7

MEX 11 09:26:08.8±0.6, 15°.85N×98°.45W, h15km, MD3.5, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.62	30	eP	Pg	09 26 19.2	-1.8
PNIG				eS	Sg	09 26 26.7	-2.5
TLIG	Tlapa	1.71	356	eP	Pn	09 26 34.2	-4.0
TLIG				iS	Sn	09 26 54.6	-5.2

IDC 11 09:30:08.2±3.0, 15°.36S×174°.04W, h89km±32km, mb3.3/5, mb1 3.7/6, mb1mx3.4/48, mbtmp3.7/6, Error ellipse: s-maj=153.6km s-min=20.0km az=148.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.63	57	P	Pn	09 30 48.9	+0.2
	47nm,0.3s,baz=163,slow=1.5,SNR=47						
AFI				S	Sn	09 31 15.9	-4.0
	52nm,0.3s,baz=329,slow=13,SNR=15						
WRA	Warramunga Arr	49.25	257	P	P	09 38 47.6	-0.6
	0.2nm,0.4s,baz=96,slow=6.2,SNR=11						
ASAR	Alice Springs	49.53	252	P	P	09 38 50.6	+0.2
	1.8nm,0.7s,baz=87,slow=8.2,SNR=17						
NVAR	Mina Array Bea	74.72	42	P	P	09 41 39.1	+0.3
	0.7nm,0.7s,baz=222,slow=10,SNR=5.0						
ILAR	Eielson Array	82.53	11	P	P	09 42 20.5	-0.3
	0.2nm,0.5s,baz=194,slow=5.6,SNR=5.4						
PDAR	Pinedale Array	82.65	42	P	P	09 42 21.6	-0.6
	0.3nm,0.7s,baz=191,slow=1.5,SNR=3.9						
BRTR	Keskin Array B	145.73	320	PKPbc	PKPbc	09 49 37.3	-0.2
	1.6nm,0.7s,baz=98,slow=2.3,SNR=9.2						

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*ISCJB **11** 09:34:58.7±0.9, 30°.65S±0°.06×179°.8E±0°.2, h400km, mb2.8/2, Error ellipse: s-maj=21.8km s-min=8.1km az=7.3*

*IDC **11** 09:35:02.9±8.1, 30°.96S×179°.84E, h454km±99km, mb2.6/2, mb1 2.8/3, mb1mx2.7/43, mbtmp3.5/3, Error ellipse: s-maj=96.6km s-min=39.8km az=10.0*

*WEL **11** 09:35:04.4±1.1, 31°S±21°×17°9E±6°5, h285km±54km*

ISC 11 09:34:58.0±1.1, 30°.7S±0°.1×180°.0W±0°.2, h400km, n16, σ2.09/24, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.28	52	P	Pn	09 35 56.7	+0.9
GLKZ				S	S	09 36 39.8	-2.7
WMGZ	Waiomatatini S	7.23	190	P	P	09 36 47.4	+2.8
WMGZ				S	S	09 38 09.8	-1.0
HAZ	Te Kaha	7.28	194	P	P	09 36 47.3	+2.1
HAZ				S	S	09 38 10.5	-1.4
PKGZ	Pakihiroa	7.35	192	P	P	09 36 48.1	+2.0
PKGZ				S	S	09 38 11.4	-2.1
PUZ	Puketiti	7.50	191	P	P	09 36 49.9	+2.2
PUZ				S	S	09 38 12.9	-3.6
RUGZ	Raukumara Rang	7.51	194	P	P	09 36 49.6	+1.8
RUGZ				S	S	09 38 15.2	-1.6
TWGZ	Tauwhareparae	7.65	192	P	P	09 36 52.8	+3.5
TWGZ				S	S	09 38 18.0	-1.7
LIRZ	Lichensteins R	7.88	201	P	P	09 36 52.7	+0.8
MWZ	Matawai	7.89	194	P	P	09 36 53.8	+1.7
MWZ				S	S	09 38 22.2	-2.5
URZ	Urewera	7.92	197	P	P	09 36 54.1	+1.9
	0.8nm,0.3s,baz=275,slow=5.9,SNR=10.0						
URZ				S	S	09 38 25.5	+0.3
	1.6nm,0.3s,baz=97,slow=23,SNR=18						
URZ	Urewera	7.92	197	P	Pn	09 36 52.2	+0.3
TKGZ	Te Karaka	7.93	193	P	P	09 36 53.7	+1.3
RAGZ	Rawiri	8.07	195	P	P	09 36 56.2	+2.1
ASAR	Alice Springs	41.40	268	P	P	09 42 06.4	-1.1
	0.2nm,0.8s,baz=100,slow=7.0,SNR=3.1						
WRA	Warramunga Arr	42.41	274	P	P	09 42 15.5	0.0
	0.5nm,0.5s,baz=111,slow=7.9,SNR=14						
FINES	FINESS Array B	144.82	339	PKPbc	PKPbc	09 53 46.3	-1.0
	0.9nm,0.5s,baz=35,slow=5.1,SNR=11						

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*ISCJB **11** 10:14:12.0±0.5, 39°.07N±0°.04×29°.12E±0°.03, h4km±5km, Error ellipse: s-maj=6.4km s-min=3.6km az=169.1*

*DDA **11** 10:14:11.4, 39°.06N×29°.12E, h2km, Ml2.7*

*ISK **11** 10:14:11.6, 39°.09N×29°.11E, h5km, ML2.4/4*

*CSEM **11** 10:14:12.0±0.1, 39°.08N×29°.12E, h5km, ML2.4, Error ellipse: s-maj=3.3km s-min=2.1km az=160.0*

ISC 11 10:14:12.1±0.9, 39°.10N±0°.03×29°.11E±0°.02, h8km±6km, n32, σ0.33/48, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIMA	Simav-Kutahya	0.10	262	PG	Pg	10 14 14.4	0.0
SIMA				SG	Sg	10 14 16.5	+0.4
SIMA	Simav-Kutahya	0.10	262	ePg	Pg	10 14 14.4	0.0
SIMA				eSg	Sg	10 14 16.5	+0.4
SMAA	Simav-Kutahya	0.10	272	PG	Pg	10 14 13.8	-0.6
SMAA	Simav-Kutahya	0.10	272	ePg	Pg	10 14 13.8	-0.6
SHAP	Saphane-Kutahy	0.12	129	PG	Pg	10 14 14.7	0.0
SHAP	Saphane-Kutahy	0.12	129	ePg	Pg	10 14 14.7	0.0
GDZ	Gediz	0.29	91	iP	Pg	10 14 17.9	0.0
GDZ				iS	Sg	10 14 22.1	+0.3
GDZ	Gediz	0.29	91	P	Pg	10 14 17.9	0.0
GDZ				S	Sg	10 14 22.1	+0.3
DEMI	Demirci	0.31	260	iP	Pg	10 14 17.9	-0.3
DEMI				iS	Sg	10 14 22.7	+0.4
DEMI	Demirci	0.31	260	P	Pg	10 14 17.9	-0.3
DEMI				S	Sg	10 14 22.7	+0.4
TVSB	Tavsanli	0.45	38	PG	Pg	10 14 20.5	-0.3
TVSB	Tavsanli	0.45	38	ePg	Pg	10 14 20.5	-0.3
KULA	Kula-Manisa	0.68	211	PG	Pg	10 14 25.0	-0.1
KULA	Kula-Manisa	0.68	211	ePg	Pg	10 14 25.0	-0.1
DURS	Dursunbey	0.70	316	iP	Pg	10 14 25.4	-0.2
DURS				iS	Sb	10 14 37.2	+0.6
DURS	Dursunbey	0.70	316	P	Pg	10 14 25.4	-0.2
DURS				S	Sb	10 14 37.2	+0.6
MANT	Manisa	0.74	215	iP	Pg	10 14 26.0	-0.4
MANT				iS	Sg	10 14 35.9	-0.1
MANT	Manisa	0.74	215	P	Pg	10 14 26.0	-0.4
MANT				S	Sg	10 14 35.9	-0.1
AKHS	Akhisar	1.03	258	iP	Pb	10 14 32.1	-0.1
AKHS				iS	Sb	10 14 45.9	0.0
AKHS	Akhisar	1.03	258	P	Pb	10 14 32.1	-0.1
AKHS				S	Sb	10 14 45.9	0.0
STEP	BALIKESIR_Sava	1.11	285	iP	Pg	10 14 33.2	-0.2
STEP				iS	Sn	10 14 50.1	+0.5
STEP	BALIKESIR_Sava	1.11	285	P	Pg	10 14 33.2	-0.2
STEP				S	Sn	10 14 50.1	+0.5
CAVI	Cavuskoy	1.24	27	PN	Pn	10 14 35.9	+0.1
CAVI	Cavuskoy	1.24	27	ePn	Pn	10 14 35.9	+0.1
BORA	Eskisehir	1.30	53	iP	Pn	10 14 36.2	-0.5
BORA				iS	Sb	10 14 53.8	-0.1
BORA	Eskisehir	1.30	53	P	Pn	10 14 36.2	-0.5
BORA				S	Sb	10 14 53.8	-0.1
ESKT	Eskisehir	1.42	72	iP	Pg	10 14 39.1	-0.2
SEYT	Eskypehyr	1.42	72	P	Pg	10 14 39.1	-0.2
YLV	Yalova	1.48	8	PN	Pb	10 14 39.9	-0.1
YLV	Yalova	1.48	8	ePn	Pb	10 14 39.9	-0.1
SBT5	Esenkoy-Cinarc	1.54	354	PN	Pb	10 14 40.6	-0.3
SBT5	Esenkoy-Cinarc	1.54	354	ePn	Pb	10 14 40.6	-0.3

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*BJI **11** 10:17:13.3, 23°.46S×178°.98W, h510km, mb4.8/8, mB5.1/1*

*NEIC **11** 10:17:14.4±1.6, 23°.68S×179°.37W, h506km±16km, mb4.6/19, Error ellipse: s-maj=19.2km s-min=8.7km az=56.0*

*ISCJB **11** 10:17:27.4±0.4, 24°.60S±0°.03×179°.17E±0°.07, h550km, mb4.4/41, Error ellipse: s-maj=9.0km s-min=4.1km az=166.0*

*IDC **11** 10:17:27.4±3.2, 24°.48S×179°.21E, h533km±34km, mb3.7/19, mb1 3.8/19, mb1mx3.7/43, mbtmp4.5/19, Error ellipse: s-maj=19.4km s-min=11.7km az=69.0*

*WEL **11** 10:17:28.9±1.0, 25°S±8°×18°0W±2°9, h632km±17km*

ISC 11 10:17:28.0±0.4, 24°.58S±0°.06×179°.23E±0°.08, h550km, n145, σ1.85/157, mb4.5/40, 1C-1D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	5.31	152	P	P	10 18 59.8	-0.6
GLKZ				S	S	10 20 17.8	+1.8
OUZ	Omahuta	11.67	203	eP	P	10 20 04.4	+1.5
OUZ	Omahuta	11.67	203	P	P	10 20 04.2	+1.3
DZM	Mont Dzumac	12.01	279	eP	P	10 20 06.6	-0.2
WCZ	Waipu Caves	12.08	199	P	P	10 20 09.3	+2.2
KUZ	Kuaotunu	12.49	193	P	P	10 20 12.1	+0.7
WIAZ	Waiheke Island	12.67	195	P	P	10 20 14.3	+1.1
MXZ	Matakaoa Point	12.97	183	eP	P	10 20 16.2	0.0
MXZ	Matakaoa Point	12.97	183	P	P	10 20 15.7	-0.6
HAZ	Te Kaha	13.19	185	P	P	10 20 16.1	-2.6
WMGZ	Waiomatatini S	13.22	183	P	P	10 20 18.2	-0.7
WMGZ				S	S	10 22 38.2	-1.4
PKGZ	Pakihiroa	13.30	184	P	P	10 20 17.1	-2.8
RUGZ	Raukumara Rang	13.41	185	P	P	10 20 19.4	-1.6
RUGZ				S	S	10 22 41.3	-2.2
OPRZ	Ohinepanea	13.42	189	P	P	10 20 21.7	+0.8
PUZ	Puketiti	13.48	183	P	P	10 20 21.1	-0.4
PUZ				S	S	10 22 40.4	-4.1
TOZ	Tahuroa Road	13.49	193	P	P	10 20 22.3	+0.6
KMRZ	Kaimai	13.52	191	P	P	10 20 23.1	+1.1
MARZ	Manawahe	13.54	189	P	P	10 20 22.9	+0.7
AFI	Afiamalu	13.59	40	P	P	10 20 16.5	-6.6
	6.0nm,0.3s,baz=231,slow=18,SNR=6.1						
TWGZ	Tauwhareparae	13.60	184	P	P	10 20 22.1	-0.8
TWGZ				S	S	10 22 45.5	-1.4
URZ	Urewera	13.76	187	P	P	10 20 21.4	-3.0
	5.5nm,0.3s,baz=22,slow=1.9,SNR=49						
URZ				S	S	10 22 43.8	-5.9
	1.9nm,0.3s,baz=240,slow=22,SNR=12						
URZ	Urewera	13.76	187	eP	P	10 20 21.8	-2.7
URZ	Urewera	13.76	187	P	P	10 20 21.6	-2.8
URZ				S	S	10 22 44.6	-5.1
MWZ	Matawai	13.79	186	P	P	10 20 22.7	-2.1
MWZ				S	S	10 22 46.0	-4.4
TKGZ	Te Karaka	13.87	185	P	P	10 20 23.9	-1.7
CNGZ	Carnagh Statio	13.89	183	P	P	10 20 23.9	-1.9
RAGZ	Rawiri	13.96	186	P	P	10 20 25.7	-0.9
HRRZ	Handcock Road	13.99	190	P	P	10 20 27.0	+0.1
MUGZ	Murupara	14.01	188	P	P	10 20 25.0	-2.1
TLZ	Tolley Road	14.06	192	P	P	10 20 28.3	+0.7
RTZ	Ruatahuna	14.12	187	P	P	10 20 26.1	-2.2
RIGZ	Rimuhau	14.14	185	P	P	10 20 27.6	-0.8
RIGZ				S	S	10 22 52.7	-4.4
SNGZ	Shannon Statio	14.25	186	P	P	10 20 21.5	-8.1
MTHZ	Maungataniwha	14.37	188	P	P	10 20 29.7	-1.2
HIZ	Hauiti	14.38	194	eP	P	10 20 31.4	+0.5
	62nm,1.2s						
HIZ	Hauiti	14.38	194	P	P	10 20 31.4	+0.5
RAHZ	Arahi	14.41	187	P	P	10 20 29.4	-1.8
MRHZ	Matea Rd	14.41	189	P	P	10 20 29.8	-1.4
RATZ	Rangitukua	14.54	191	P	P	10 20 31.6	-1.0
MHGZ	Mahia Peninsul	14.57	184	P	P	10 20 31.9	-1.0
NMHZ	Naumai	14.62	187	P	P	10 20 32.1	-1.3
RITZ	Rihia Road	14.63	190	P	P	10 20 32.6	-1.0
BKZ	Black Stump Fm	14.73	188	eP	P	10 20 31.9	-2.6
	11nm,0.4s						
BKZ	Black Stump Fm	14.73	188	P	P	10 20 31.4	-3.1
TWVZ	Taurewa	14.80	192	P	P	10 20 34.0	-1.3
NGZ	Ngauruhoe	14.87	191	P	P	10 20 35.9	-0.2
FWVZ	Far West T-bar	14.96	191	P	P	10 20 35.5	-1.6
MCHZ	McNeill Hill	14.97	188	P	P	10 20 34.8	-2.1
WHVZ	Whangaehu Hut	14.98	191	P	P	10 20 35.4	-1.9
VRZ	Vera Road	14.99	194	P	P	10 20 38.9	+1.8
KWHZ	Kaweka Forest	14.99	188	P	P	10 20 34.5	-2.7
BHHZ	Black Hill Sta	15.10	189	P	P	10 20 34.4	-4.0
KRHZ	Kereru	15.21	188	P	P	10 20 36.1	-3.4
PKE	Pukeiti	15.23	196	P	P	10 20 42.6	+3.0
KAHZ	Kahuranaki	15.30	187	P	P	10 20 38.4	-2.0
PNHZ	Pukenui	15.50	189	P	P	10 20 39.6	-2.8
PXZ	Pawanui	15.54	187	P	P	10 20 39.7	-3.0
WAZ	Wanganui	15.55	192	P	P	10 20 43.6	+0.8
WPHZ	Waipukurau	15.62	188	P	P	10 20 41.4	-2.1
TSZ	Takapari Road	15.68	189	P	P	10 20 41.9	-2.2
DVHZ	Dannevirke	15.88	189	P	P	10 20 43.8	-2.4
BFZ	Birch Farm	16.25	188	eP	P	10 20 47.2	-2.5
	22nm,1.1s						
BFZ	Birch Farm	16.25	188	P	P	10 20 46.9	-2.8
MRZ	Mangatainoka R	16.32	190	P	P	10 20 46.9	-3.4
SNZO	South Karori	17.11	192	eP	P	10 20 55.9	-1.5
	31nm,1.3s						
THZ	Tophouse	17.93	196	eP	P	10 21 05.0	0.0
	26nm,0.4s						
KHZ	Kahutara	18.40	193	eP	P	10 21 08.8	-0.5
	20nm,0.7s						
LTZ	Lake Taylor	19.04	196	eP	P	10 21 15.6	+0.4
	38nm,0.5s						
OXZ	Oxford	19.61	196	eP	P	10 21 20.4	+0.1
	43nm,0.6s						
MQZ	McQueen's Vall	19.83	194	eP	P	10 21 23.0	+0.8
	20nm,1.2s						
RPZ	Rata Peaks	20.23	197	P	P	10 21 26.8	+0.9
	7.3nm,0.4s,baz=13,slow=2.6,SNR=13						
RPZ	Rata Peaks	20.23	197	eP	P	10 21 26.9	+1.0
	26nm,1.4s						
FOZ	Fox Glacier	20.42	200	eP	P	10 21 27.8	+0.2
	23nm,1.1s						
LBZ	Lake Benmore	21.09	198	eP	P	10 21 33.2	-0.5
	26nm,1.3s						
ODZ	Otahua Downs	21.57	197	eP	P	10 21 38.1	+0.1
	28nm,1.6s						
WKZ	Wanaka	21.84	200	eP	P	10 21 40.3	-0.1
	54nm,1.5s						
MLZ	Mavora Lakes	22.61	201	eP	P	10 21 49.0	+1.8
	81nm,2.0s						
WHZ	Wether Hill Ro	23.13	200	eP	P	10 21 52.9	+1.0
	26nm,1.0s						
ARMA	Armidale	25.13	250	eP	P	10 22 11.8	+1.8
	16nm,1.3s						
EIDS	Eidsvold	25.51	262	eP	P	10 22 13.8	+0.5
	32nm,1.6s						
CTA	Charters Tower	30.78	272	P	P	10 23 00.1	+0.8
	7.4nm,0.6s,baz=91,slow=11,SNR=10						
CTAO	Charters Tower	30.78	272	eP	P	10 23 00.2	+0.9
	71nm,2.0s						
TAU	Tasmania Unive	31.96	227	eP	P	10 23 11.0	+2.1
	144nm,1.8s						
RABL	Rabaul	33.00	304	eP	P	10 23 11.3	-7.0
	104nm,0.4s						
STKA	Stephens Creek	33.82	249	P	P	10 23 25.8	+0.8
	2.5nm,0.4s,baz=96,slow=12,SNR=18						
STKA				PcP	PcP	10 25 49.2	+1.3
	1.4nm,0.4s,baz=62,slow=4.4,SNR=5.9						
PMG	Port Moresby	34.06	291	P	P	10 23 26.0	-1.1
	11nm,0.6s,baz=98,slow=7.4,SNR=4.9						
MANU	Manus Island	38.05	301	eP	P	10 23 59.0	-1.1
	254nm,0.1s						

AS01	Alice Springs	41.19	262	eP	P	10 24 25.2	0.0
AS31	Alice Springs	41.23	262	eP	P	10 24 25.6	0.0
	5.5nm,1.3s						
ASAR	Alice Springs	41.23	262	P	P	10 24 25.6	0.0
	2.8nm,0.3s,baz=98,slow=6.9,SNR=65						
ASAR				PcP	PcP	10 26 11.6	+0.3
	1.4nm,0.8s,baz=111,slow=3.7,SNR=6.3						
ASAR				S	S	10 30 00.3	+0.2
	1.5nm,0.7s,baz=104,slow=16,SNR=8.8						
WB2	Warramunga Arr	41.65	267	eP	P	10 24 28.4	-0.5
	13nm,0.6s						
WB2				eS	S	10 30 12.6	+6.3
WRAB	Tennant Creek	41.65	267	eP	P	10 24 28.3	-0.6
	16nm,1.0s						
WRA	Warramunga Arr	41.66	267	P	P	10 24 28.3	-0.7
	10nm,0.5s,baz=103,slow=8.1,SNR=167						
WRA				PcP	PcP	10 26 13.1	+0.3
	1.5nm,1.0s,baz=100,slow=3.6,SNR=4.4						
WRA				S	S	10 30 04.0	-2.4
	4.4nm,1.0s,baz=104,slow=14,SNR=17						
MTN	Manton Dam	46.81	275	eP	P	10 25 07.8	-0.9
	30nm,1.8s						
FITZ	Fitzroy Crossi	50.08	266	eP	P	10 25 33.4	+0.4
	9.3nm,0.7s						
VNDA	Vanda	53.65	185	P	P	10 25 59.6	+1.9
	1.0nm,0.5s,baz=3.6,slow=8.8,SNR=9.8						
BATI	Baumata	54.58	275	P	P	10 26 06.8	+1.5
	31nm,0.7s,baz=270,slow=6.1,SNR=5.1						
CASY	Casey	59.19	206	eP	P	10 26 36.4	+0.4
	6.1nm,0.6s						
QSPA	South Pole Qui	65.50	180	P	P	10 27 18.7	+1.7
	6.1nm,0.6s,baz=18,slow=3.2,SNR=19						
QSPA	South Pole Qui	65.50	180	eP	P	10 27 18.5	+1.5
	28nm,0.9s						
MJAR	Matsushiro Arr	72.06	326	P	P	10 27 56.2	-0.5
	6.1nm,0.8s,baz=166,slow=6.1,SNR=15						
MAT	Matsushiro	72.06	326	P	P	10 27 56.3	-0.4
MAW	Mawson	76.87	201	P	P	10 28 23.9	+0.7
	4.6nm,0.5s,baz=160,slow=5.1,SNR=10.0						
PETK	Petropavlovsk-	79.60	347	P	P	10 28 38.5	+0.6
	9.5nm,0.9s,baz=131,slow=6.6						
NJ2	Nanjing	80.58	312	eP	P	10 28 37.3	-6.2
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
USRK	Ussuriysk Ar.	80.95	328	P	P	10 28 46.3	+1.2
	5.7nm,0.9s,baz=112,slow=5.4						
SYO	Syowa Base	82.19	194	⇑ePcP	P	10 28 51.3	+0.1
SNAA	Sanae	84.00	179	P	P	10 29 00.7	+0.4
SNAA	Sanae	84.00	179	P	P	10 29 00.7	+0.4
	1.0nm,0.4s,baz=218,slow=5.6,SNR=29						
CN2	Changchun	84.02	324	eP	P	10 29 01.4	+0.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VNA3	Neumayer Olymp	84.24	177	P	P	10 29 02.0	+0.6
KLR	Kul'dur	84.78	331	P	P	10 29 05.7	+1.5
	comp=Z,0.2nm,0.6s,baz=151,slow=6.3,SNR=10.0						
VNA1	Neumayer--Stat	84.89	178	P	P	10 29 05.1	+0.6
NVAR	Mina Array Bea	85.73	44	P	P	10 29 10.5	+1.1
	comp=Z,0.8nm,0.8s,baz=227,slow=8.9,SNR=5.7						
GYA	Guiyang	86.49	301	eP	P	10 29 07.2	-6.0
GYA				pP	pP	10 30 59.6	-13
GYA				sP	sP	10 31 50.0	-18
GYA				PP	PP	10 32 42.2	-3.1
GYA				SKS	SKSac	10 38 45.8	-1.9
GYA				S	S	10 39 03.3	-0.7
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KMI	Kunming	88.96	298	P	P	10 29 20.1	-4.8
KMI				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HHC	Hu-ho-hao-te	90.40	315	eP	P	10 29 22.9	-8.2
HHC				pmax	pmax		
	comp=Z,28nm,1.0s						
HHC				pmax	pmax		
	comp=Z,180nm,6.7s						
TXAR	Lajitas Array	91.39	58	P	P	10 29 37.9	+2.1
	comp=Z,0.2nm,0.6s,baz=218,slow=7.0,SNR=4.1						
ILAR	Eielson Array	92.86	14	P	P	10 29 40.8	-0.9
	comp=Z,0.5nm,0.6s,baz=214,slow=5.5,SNR=7.1						
LZH	Lanzhou	93.24	308	eP	P	10 29 36.2	-8.1
LZH				pP	pP	10 31 31.4	-14
LZH				sP	sP	10 32 22.9	-17
LZH				ePP	PP	10 33 33.6	-4.4
LZH				pmax	pmax		
	comp=Z,12nm,1.3s						
PDAR	Pinedale Array	93.67	44	P	P	10 29 46.5	+0.3
	comp=Z,0.2nm,0.5s,baz=213,slow=4.8,SNR=2.9						
SONM	Songino Array	97.16	320	P	Pdif	10 30 02.2	+0.6
	comp=Z,0.8nm,0.6s,baz=127,slow=3.8,SNR=3.4						
KSH	Kashi	115.06	304	ePKP	PKPdf	10 34 59.1	-8.0
KSH				PP	PP	10 36 16.9	-0.5
KSH				PKS	PKSdf	10 38 33.7	-10
KURBB	Kurchatov Arra	115.25	316	PKP	PKPdf	10 35 06.5	-0.3
	comp=Z,1.2nm,0.7s,baz=104,slow=2.1,SNR=7.5						
BVAR	Borovoye Array	120.48	318	PKP	PKPdf	10 35 17.1	+0.2
	comp=Z,1.9nm,0.5s,baz=87,slow=2.3,SNR=9.4						
ARCES	ARCESS Array B	132.40	348	PKP	PKPdf	10 35 39.1	-0.1
	comp=Z,1.6nm,0.5s,baz=68,slow=1.7,SNR=14						
FINES	FINESS Array B	138.86	341	PKhKP	PKPpre	10 35 43.5	
	comp=Z,1.4nm,0.7s,baz=56,slow=3.4,SNR=5.1						
NB2	NORSAR Subarra	142.64	350	PKP	PKPpre	10 35 54.5	
	comp=Z,2.7nm,0.8s,baz=16,slow=3.2						
HFS	Hagfors	143.07	348	PKhKP	PKPpre	10 35 56.7	
	comp=Z,13nm,0.4s,baz=72,slow=4.7,SNR=119						
AKASG	Malin Array Be	145.15	326	PKPbc	PKPab	10 36 03.5	-1.4
	comp=Z,5.7nm,0.5s,baz=45,slow=4.5,SNR=26						
ASF	Jabal al Asfar	146.13	292	PKPbc	PKPab	10 36 08.6	-0.9
	comp=Z,3.8nm,0.5s,baz=29,slow=1.3,SNR=9.2						
MMAI	Mount Meron Ar	147.33	293	PKPbc	PKPab	10 36 12.2	-2.1
	comp=Z,12nm,0.5s,baz=77,slow=5.2,SNR=13						
BRTR	Keskin Array B	147.41	306	PKPbc	PKPbc	10 36 10.8	+0.2
	comp=Z,3.9nm,0.6s,baz=143,slow=4.9,SNR=17						
EKA	Eskdalemuir Ar	149.23	3	PKPbc	PKPbc	10 36 14.2	-0.2
	comp=Z,1.3nm,0.4s,baz=352,slow=3.1,SNR=16						
OJC	Ojcow	149.83	333	ePKP	PKPbc	10 36 16.8	+0.8
NIE	Niedzica	150.23	332	ePKP	PKPbc	10 36 18.4	+1.4
KSP	Ksiaz	150.66	338	ePKP	PKPbc	10 36 19.0	+1.1
UPC	Upice	151.03	338	ePKPAB	PKPbc	10 36 19.7	+0.9
DPC	Dobruska-Polom	151.06	337	ePKPAB	PKPbc	10 36 20.1	+1.2
DPC				ex	x	10 36 29.9	
CLL	Collm	151.29	342	i PKPdf	PKPdf	10 36 11.6	-1.1
CLL				⇓iPKPbc	PKiKP	10 36 20.0	+0.4
	comp=Z,13nm,0.7s						
CLL				i		10 36 22.7	
CLL				i PKPab	PKPab	10 36 30.2	+0.3
	comp=Z,8.0nm,0.6s						
BRG	Berggiesshubel	151.40	340	i PKP	PKPbc	10 36 20.3	+0.8
	comp=Z,8.4nm,0.5s						
BRG				e		10 36 30.9	
	comp=Z,5.3nm,0.8s						
GOPC	GO Pecny, Ondr	151.96	338	ePKPAB	PKPbc	10 36 21.6	+0.7
KHC	Kasperske Hory	153.03	339	ePKPAB	PKPbc	10 36 24.5	+1.2
KHC				ex	x	10 36 37.6	
GERES	GERESS Array B	153.24	338	PKP	PKPdf	10 36 16.0	+0.3
	comp=Z,0.2nm,0.4s,baz=350,slow=5.4,SNR=4.3						
GERES				PKPbc	PKPbc	10 36 24.2	+0.4
	comp=Z,0.5nm,0.4s,baz=101,slow=4.2,SNR=5.8						
GERES				PKPab	PKPab	10 36 38.5	+0.1
	comp=Z,0.8nm,0.6s,baz=25,slow=3.5,SNR=5.2						
TORD	Torodi Ar. Bea	168.39	192	PKPab	PKPab	10 37 45.9	+0.6
	baz=154,slow=4.4						

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*SJA **11** 10:46:22.2±0.7, 31°.80S×72°.27W, h35^{km}±14^{km}, ML4.0, MW4.3*

*GUC **11** 10:46:25.3±0.7, 31°.70S×71°.52W, h24^{km}±12^{km}, ML4.1*

ISC 11 10:46:23.0±2.7, **31°.71S**±0°.03×**71°.88W**±0°.10, **h6**^{km}±15^{km}, **n23**, σ**1^{s}10**/28, **1D**, **Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROCH	El Roble	1.46	150	eP	Pb	10 46 50.3	-0.5
ROCH				i S	Sn	10 47 09.1	-0.8
ROCH				IAML		10 47 15.6	
	comp=E,4µm,0.4s						
ROC1	El Roble	1.46	150	eP	Pb	10 46 50.4	-0.5
ROC1				eS	Sg	10 47 10.6	+0.5
PEL	Peldehue	1.76	145	eP	Pb	10 46 54.6	-1.1
PEL				i S	Sn	10 47 15.7	-1.1
GO04	Tololo Observa	1.79	32	eP	Pn	10 46 54.9	+0.2
GO04				i S	Sn	10 47 18.4	+0.5
TLL	Tololo Astrono	1.79	31	eP	Pn	10 46 55.1	+0.3
TLL				i S	Sn	10 47 17.4	-0.5
TLL				IAML		10 47 23.4	
	comp=N,5µm,0.9s						
CLCH	Cerro Calan	2.03	146	eP	Pb	10 46 58.7	-1.7
CLCH				i S	Sn	10 47 23.8	+0.1
CLCH				IAML		10 47 33.7	
	comp=E,5µm,0.6s						
FCH	Farellones	2.10	141	eP	Pn	10 46 59.8	+0.7
FCH				i S	Sn	10 47 25.0	-0.8
FCH				IAML		10 47 30.0	
	comp=E,2µm,0.7s						
ANTU	Antumapu	2.14	151	i S	Sn	10 47 25.6	-0.6
ANTU				IAML		10 47 36.3	
	comp=N,2µm,0.5s						
AUSP	Uspallata	2.18	104	eP	Pb	10 47 03.1	0.0
AUSP				eS	Sg	10 47 34.0	+0.7
RTLS	Leoncito	2.21	93	IAML		10 47 33.5	
	comp=Z,1µm,0.5s						
LMEL	Las Melosas	2.56	147	eP	Pn	10 47 06.4	+1.1
LMEL				i S	Sn	10 47 37.6	+0.7
LMEL				IAML		10 47 46.0	
	comp=N,1µm,0.2s						
AROD	Rodeo	2.58	54	eP	Pb	10 47 08.9	-1.0
AROD				eS	Sb	10 47 44.5	+2.5
ZON	Zonda	2.74	87	IAML		10 47 55.5	
	comp=Z,288nm,0.4s						
ARCO	CERRO ARCO	2.75	115	IAML		10 47 57.0	
	comp=Z,417nm,0.6s						
ACDV	Cuesta del Vie	2.83	58	eP	Pb	10 47 13.1	-0.9
ACDV				IAML		10 47 53.3	
	comp=Z,361nm,0.4s						
SJA	San Juan	2.84	87	IAML		10 48 00.8	
	comp=Z,372nm,0.3s						
RTCV	Cerro Valdivia	2.85	94	eP	Pb	10 47 12.6	-1.8
RTCV				eS	Sb	10 47 50.0	+0.4
RTLL	Cerro Villicun	2.94	84	⇓eP	Pb	10 47 14.1	-1.7
RTLL				eS	Sb	10 47 52.1	+0.1
RTLL				IAML		10 48 04.9	
	comp=Z,399nm,0.4s						
AMOG	MOGNA	3.00	76	eP	Pb	10 47 15.2	-1.7
AMOG				eS	Sb	10 47 54.3	+0.4
VCA	Vinchina	4.35	48	IAML		10 48 40.8	
	comp=Z,588nm,0.4s						
MRA	San Martin	5.28	99	IAML		10 48 54.5	
	comp=Z,97nm,0.4s						
CYA	Choya	6.19	60	IAML		10 49 39.6	
	comp=Z,57nm,0.6s						
TCA	Tanti	6.23	89	IAML		10 49 15.9	
	comp=Z,113nm,0.7s						

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*ISCJB **11** 10:48:09.5±0.8, 1°.0S±0°.2×24°.2W±0°.1, h10^{km}, mb3.7/9, MS3.7/9, Error ellipse: s-maj=29.4km s-min=14.7km az=152.1*

*IDC **11** 10:48:09.4±0.7, 0°.97S×24°.28W, h0^{km}, mb3.7/10, mb1 3.9/10, mb1mx3.7/55, mbtmp3.8/10, MS3.7/9, Ms1 3.7/9, ms1mx3.3/55, Error ellipse: s-maj=29.5km s-min=18.4km az=141.0*

ISC 11 10:48:11.0±0.8, **1°.0S**±0°.2×**24°.3W**±0°.2, **h10**^{km}, **n24**, σ**1^{s}07**/13, **mb3.9**/9, **MS3.6**/9, **Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N3	ASCENSION HYDR	11.88	125	T	T	11 03 13.3	
	baz=304,slow=74,SNR=393						
H10N2	ASCENSION HYDR	11.89	125	T	T	11 03 11.0	
	baz=304,slow=74,SNR=615						
H10N1	ASCENSION HYDR	11.90	125	T	T	11 03 12.2	
	baz=304,slow=74,SNR=419						
H10S3	ASCENSION HYDR	12.42	130	T	T	11 03 51.0	
	baz=309,slow=74,SNR=326						
H10S1	ASCENSION HYDR	12.43	130	T	T	11 03 49.9	
	baz=309,slow=74,SNR=299						
H10S2	ASCENSION HYDR	12.44	130	T	T	11 03 52.1	
	baz=309,slow=74,SNR=174						
DBIC	Dimbokro	20.80	68	P	P	10 52 52.4	-0.3
	4.1nm,0.7s,baz=283,slow=18,SNR=3.6						
DBIC				LR	LR	10 59 22.2	
	comp=Z,187nm,19.7s,baz=216,slow=32						
KOWA	Kowa	25.25	52	P	P	10 53 38.4	+0.9
	1.1nm,0.5s,baz=220,slow=9.6,SNR=3.0						
KOWA				LR	LR	11 01 54.3	
	comp=Z,155nm,21.8s,baz=220,slow=33						
TORD	Torodi Ar. Bea	29.31	61	P	P	10 54 15.0	+0.9
	0.3nm,0.6s,baz=264,slow=7.1						
TORD				LR	LR	11 04 11.7	
	comp=Z,133nm,21.4s,baz=280,slow=33						
MDT	Midelt	38.38	27	LR	LR	11 09 52.1	
	comp=Z,107nm,18.2s,baz=193,slow=34						
CPUP	Villa Florida	40.60	229	LR	LR	11 12 08.4	
	comp=Z,107nm,18.4s,baz=42,slow=36						
ESDC	Sonseca Array	44.51	22	P	P	10 56 21.1	-1.8
	0.2nm,0.3s,baz=227,slow=7.9,SNR=4.3						
LPAZ	La Paz	45.82	248	P	P	10 56 34.9	+0.5
	0.9nm,0.7s,baz=89,slow=3.4,SNR=5.6						
LPAZ				LR	LR	11 15 01.5	
	comp=Z,54nm,21.1s,baz=60,slow=35						
KEST	Kesra	48.10	37	LR	LR	11 18 21.5	
	comp=Z,161nm,18.4s,baz=289,slow=38						
ROSC	El Rosal	50.34	277	LR	LR	11 17 51.8	
	comp=Z,49nm,18.0s,baz=95,slow=35						
NNA	Nana	53.28	256	LR	LR	11 19 24.0	
	comp=Z,128nm,20.4s,baz=70,slow=35						
BRTR	Keskin Array B	66.47	45	P	P	10 59 03.2	+2.1
	0.8nm,0.7s,baz=159,slow=3.8,SNR=4.2						
AKASG	Malin Array Be	68.56	33	P	P	10 59 13.2	-0.8
	0.2nm,0.2s,baz=242,slow=7.3,SNR=2.8						
SNAA	Sanae	71.92	173	P	P	10 59 33.5	-0.8
	2.0nm,0.9s,baz=40,slow=12,SNR=7.5						
TXAR	Lajitas Array	81.24	300	P	P	11 00 28.5	+0.6
	0.4nm,0.7s,baz=111,slow=6.9,SNR=4.0						
ANMO	Albuquerque	84.15	305	P	P	11 00 42.9	-0.2
	0.7nm,0.7s,baz=87,slow=7.0,SNR=5.6						
STKA	Stephens Creek	144.70	159	PKP	PKPab	11 07 47.7	+0.2
	8.9nm,0.7s,baz=196,slow=0.7,SNR=15						
ASAR	Alice Springs	147.60	140	PKPbc	PKPbc	11 07 56.4	-0.3
	3.8nm,0.8s,baz=214,slow=2.1,SNR=26						
WRA	Warramunga Arr	150.47	136	PKPbc	PKPbc	11 08 03.6	-0.4
	3.6nm,1.2s,baz=238,slow=2.2,SNR=6.2						

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*NIED **11** 10:54:00, 35°.90N×141°.10E, h11^{km}, Mw4.1 Best double couple: M$_0$1.58000×10^{15} NP1:φ$_s$185.00000°, δ33.00000°, λ-106.00000°. NP2:φ$_s$23.00000°, δ59.00000°, λ-80.00000°.*

*IDC **11** 10:54:30.7±0.5, 35°.71N×140°.91E, h0^{km}, mb4.2/27, mb1 4.3/31, mb1mx4.2/76, mbtmp4.2/31, ML4.1/4, MS3.0/5, Ms1 3.0/5, ms1mx2.8/70, Error ellipse: s-maj=14.7km s-min=11.4km az=91.0*

*JMA **11** 10:54:32.9±0.2, 35°.80N×141°.02E, h17^{km}±1^{km}, M4.4 Broadband fault plane solution: P waves. NP1: φ$_s$197.00000°, δ73.00000°, λ-20.00000°. NP2: φ$_s$293.00000°, δ70.00000°, λ-162.00000°. Principal axes: T Plg2.0000°, Azm245.0000°; N Plg64.0000°, Azm339.0000°; P Plg26.0000°, Azm154.0000°;*

JMA Felt II J1.

*ISCJB **11** 10:54:32.3±0.6, 35°.82N±0°.03×141°.06E±0°.04, h20^{km}±3^{km}, mb4.5/50 Error ellipse: s-maj=5.9km s-min=4.2km az=6.6*

*NEIC **11** 10:54:32.7±2.5, 35°.79N×141°.00E, h12^{km}±16^{km}, mb4.6/6, Error ellipse: s-maj=7.7km s-min=5.9km az=117.0*

NEIC Felt at Mito and Tsuchiura. Recorded [2 JMA] in Chiba and Ibaraki.

*BJI **11** 10:54:33.9, 35°.93N×141°.10E, h32^{km}, mb4.6/24, mB4.9/13, Ms4.3/8, Ms7 4.0/8*

*MOS **11** 10:54:34.2±1.2, 35°.88N×140°.93E, h33^{km}, mb4.6/29, Error ellipse: s-maj=11.2km s-min=6.2km az=104.5*

ISC 11 10:54:33.0±1.1, **35°.85N**±0°.03×**141°.06E**±0°.05, **h14**^{km}±6^{km}, **n126**, σ**1^{s}55**/130, **mb4.5**/50, **6C-6D**, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.22	228	⇑P	Pg	10 54 37.1	-0.8
CHOJ				S	Sg	10 54 40.0	-1.2
JIHU	Itakohorinouch	0.45	285	P	Pg	10 54 42.3	+0.4
JHYU	Hitachinakayam	0.62	322	P	Pb	10 54 45.6	0.0
JHYU				S	Sb	10 54 54.4	+0.3
JYT	Yasato	0.80	298	⇓P	Pg	10 54 47.4	-1.1
JYT				S	Sg	10 54 57.8	-1.1
JHO	Hitachi	0.85	333	⇓P	Pb	10 54 49.0	-0.6
JHO				eS	Sb	10 55 01.1	+0.2
BSO4	Boso 4	1.04	215	P	Pb	10 54 52.1	-0.6
BSO3	Boso 3	1.14	203	P	Pn	10 54 52.6	-1.6
MJAR	Matsushiro Arr	2.41	287	Pn	Pn	10 55 10.7	-1.2
	32nm,0.3s,baz=106,slow=5.1,SNR=206						
MJAR				Sn	Sn	10 55 41.2	+0.1
	24nm,0.3s,baz=131,slow=13,SNR=8.1						
MAJO	Matsushiro	2.41	287	ePn	Pn	10 55 11.5	-0.4
MAJO	Matsushiro	2.41	287	c iP	Pn	10 55 11.3	-0.7
MAT	Matsushiro	2.41	287	P	Pn	10 55 11.4	-0.6
MAT				eS	Sn	10 55 42.9	+1.7
MJB9	Matsu-Tunnel	2.41	288	ePn	Pn	10 55 11.7	-0.4
JHJ2	Mitsune	2.92	201	ePn	Pn	10 55 19.5	+0.5
JHJ	Hachijo jima 2	2.92	201	Pn	Pn	10 55 17.5	-1.5
	20nm,0.3s,baz=107,slow=13,SNR=10.0						
JHJ				Sn	Sn	10 55 53.4	-0.5
	52nm,0.3s,baz=240,slow=22,SNR=8.3						
INU	Inuyama	3.33	263	ePn	Pn	10 55 26.8	+2.2
ERM	Erimo	6.37	14	ePn	Pn	10 56 06.6	+0.3
ERM				eSn	Sn	10 57 20.9	+2.2
ERM	Erimo	6.37	14	deP	Pn	10 56 06.1	-0.2
ASAJ	Asahikawa	8.34	8	Pn	Pn	10 56 33.0	-0.4
	3.3nm,0.3s,baz=227,slow=9.9,SNR=22						
ASAJ				Sn	Sn	10 58 05.8	-1.5
	0.3nm,0.3s,baz=175,slow=24,SNR=1.9						
ASAJ	Asahikawa	8.34	8	ePn	Pn	10 56 33.5	+0.1
ASAJ				Sn	Sn	10 58 05.8	-1.5
CBIJ	Chichi jima	8.78	173	Pn	Pn	10 56 36.2	-3.3
CBIJ				Sn	Sn	10 58 07.9	-10
JCJ	Chichijima	8.78	173	Pn	Pn	10 56 36.2	-3.3
	3.7nm,0.3s,baz=318,slow=15,SNR=4.5						
JCJ				Sn	Sn	10 58 07.9	-10
	1.8nm,0.3s,baz=152,slow=23,SNR=1.8						
SHO	Shikotan	9.15	27	i P	Pn	10 56 42.6	-1.9
SHO				pmax	pmax		
	comp=Z,3.0nm,0.4s						
SHO				pmax	pmax		
	comp=N,2.0nm,0.3s						
SHO				pmax	pmax		
	comp=E,9.0nm,0.3s						
KSRS	Korea Array	10.68	282	LR	LR	11 01 11.4	
	comp=E,118nm,18.6s,baz=88,slow=38						
KS01	Wonju Array Si	10.70	283	ePn	Pn	10 57 07.7	+1.9
KUR	Kuril'sk	10.70	27	eP	Pn	10 57 04.1	-1.6
KUR				eS	Sn	10 58 59.3	-6.0
KUR				pmax	pmax		
	comp=Z,14nm,0.6s						
KUR				pmax	pmax		
	comp=E,5.0nm,0.2s						
KUR				pmax	pmax		
	comp=N,6.0nm,0.3s						
KUR				pmax	pmax		
	comp=Z,288nm,3.3s						
KUR				pmax	pmax		
	comp=N,261nm,3.6s						
KUR				pmax	pmax		
	comp=E,79nm,3.4s						
KUR				smax	smax		
	comp=E,17nm,0.4s						
KUR				smax	smax		
	comp=N,11nm,0.3s						
KUR				smax	smax		
	comp=E,108nm,3.0s						
KUR				smax	smax		
	comp=N,330nm,3.6s						
USRK	Ussuriysk Ar.	10.85	323	Pn	Pn	10 57 10.7	+2.9
	baz=123,slow=15						
YSS	Yuzh-Sakhalins	11.16	6	ePn	Pn	10 57 12.7	+0.7
YSS	Yuzh-Sakhalins	11.16	6	eP	Pn	10 57 12.4	+0.3
YSS				pmax	pmax		
	comp=Z,20nm,0.6s						
YSS				MLR	MLR		
	comp=Z,200nm,15.0s						
JOW	Kunigami	14.14	234	ePn	Pn	10 57 55.9	+3.1
KLR	Kul'dur	15.01	336	Pn	Pn	10 58 02.6	-2.0
	comp=Z,0.0nm,0.3s,baz=165,slow=16,SNR=2.1						
KLR				LR	LR	11 03 42.7	
	comp=Z,11nm,18.3s,baz=152,slow=37						
KLR	Kul'dur	15.01	336	⇑eP	Pn	10 58 04.0	-0.6
NJ2	Nanjing	18.80	265	eP	Pn	10 58 53.0	+0.5
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
YOJ	Yonaguni jima	19.26	239	eP	P	10 58 56.1	-1.0
	comp=Z,201nm,1.4s						
YOJ	Yonaguni jima	19.26	239	eP	P	10 58 56.1	-1.0
YOJ				pmax	pmax		
	comp=Z,201nm,1.4s						
TATO	Taipei	20.02	243	eP	Pn	10 59 06.4	-0.8
	comp=Z,340nm,1.8s						
PETK	Petropavlovsk-	20.85	29	P	Pn	10 59 16.4	-0.3
	comp=Z,3.1nm,0.7s,baz=203,slow=9.5						
PETK	Petropavlovsk-	20.85	29	eP	Pn	10 59 16.6	-0.1
HHC	Hu-ho-hao-te	23.60	291	eP	P	10 59 42.0	-1.5
HHC				sP	sP	10 59 59.7	+10
HHC				S	S	11 03 52.3	-5.2
HHC				pmax	pmax		
	comp=Z,37nm,1.0s						
HHC				pmax	pmax		
	comp=Z,59nm,5.9s						
MA2	Magadan	24.57	12	P	P	10 59 53.4	+1.2
	comp=Z,8.6nm,0.6s,baz=189,slow=13,SNR=6.9						
MA2				LR	LR	11 11 27.5	
	comp=Z,30nm,18.1s,baz=284,slow=41						
MA2	Magadan	24.57	12	eP	P	10 59 52.4	+0.2
	comp=Z,8.2nm,0.7s						
MA2	Magadan	24.57	12	eP	P	10 59 52.4	+0.2
MA2				pmax	pmax		
	comp=Z,8.0nm,0.7s						
YAK	Yakutsk	27.16	348	LR	LR	11 11 06.4	
	comp=Z,76nm,19.2s,baz=190,slow=36						
YAK	Yakutsk	27.16	348	eP	P	11 00 14.1	-1.5
YAK				pmax	pmax		
	comp=Z,8.0nm,0.5s						
H11N2	WAKE ISLAND Hy	27.81	118	T	T	11 29 23.9	
	baz=311,slow=75,SNR=903						
H11N1	WAKE ISLAND Hy	27.82	118	T	T	11 29 20.8	
	baz=311,slow=75,SNR=631						
H11N3	WAKE ISLAND Hy	27.83	118	T	T	11 29 26.2	
	baz=311,slow=75,SNR=842						
SEY	Seymchan	28.00	11	P	P	11 00 24.9	+1.8
	comp=Z,1.5nm,0.6s,baz=224,slow=11,SNR=9.0						
SEY	Seymchan	28.00	11	⇑eP	P	11 00 24.5	+1.4
SONM	Songino Array	28.23	306	P	P	11 00 24.5	-1.0
	comp=Z,1.7nm,0.7s,baz=107,slow=9.5,SNR=4.7						
SONM				LR	LR	11 12 03.5	
	comp=Z,56nm,19.1s,baz=296,slow=37						
BOD	Bodaibo	28.39	329	eP	P	11 00 26.4	-0.2
BOD				pmax	pmax		
	comp=Z,5.0nm,0.8s						
H11S1	WAKE ISLAND Hy	28.48	121	T	T	11 30 13.6	
	baz=312,slow=75,SNR=1063						
H11S3	WAKE ISLAND Hy	28.48	121	T	T	11 30 07.8	
	baz=312,slow=75,SNR=702						
H11S2	WAKE ISLAND Hy	28.50	121	T	T	11 30 14.0	
	baz=312,slow=75,SNR=556						
LZH	Lanzhou	30.00	282	eP	P	11 00 42.5	+1.1
LZH				pP	sP	11 00 50.3	+2.7
LZH				sP	pP	11 00 54.6	+8.8
LZH				ePP	PnPn	11 01 40.0	+2.1
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
LZH				pmax	pmax		
	comp=Z,78nm,4.3s						
LZH				LR	LR		
	comp=Z,460nm,13.3s						
LZH				LR	LR		
	comp=Z,470nm,15.2s						
LZH				LR	LR		
	comp=Z,540nm,15.9s						
GYA	Guiyang	30.76	262	eP	P	11 00 50.0	+1.9
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TLY	Talaya	30.90	313	eP	P	11 00 47.1	-1.9
TLY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CD2	Chengdu	31.41	272	eP	P	11 00 53.0	-0.7
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
GTA	Gaotai	32.66	289	eP	P	11 01 09.5	+4.8
GTA				pP	sP	11 01 16.9	+6.0
GTA				sP	pP	11 01 21.0	+12
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KMI	Kunming	34.51	263	P	P	11 01 21.5	+0.4
KMI				pP	sP	11 01 27.0	-0.3
KMI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
DGZ	Jazzator, Alta	40.86	307	i P	P	11 02 15.7	+1.3
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						

WMQ	Urumqi	41.13	298	P	P	11 02 18.7	+2.1
WMQ				pP	sP	11 02 26.0	+3.1
WMQ				sP	pP	11 02 29.7	+8.6
WMQ				pmax	pmax		
	comp=Z,35nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,170nm,5.3s						
WMQ				LR	LR		
	comp=Z,46nm,22.3s						
WMQ				LR	LR		
	comp=Z,92nm,17.5s						
WMQ				LR	LR		
	comp=Z,53nm,21.1s						
ZAA0	Zalesovo Array	42.51	313	eP	P	11 02 27.6	-0.1
	comp=Z,29nm,1.9s						
ZALV	Zalesovo Beam	42.51	313	P	P	11 02 27.3	-0.3
	comp=Z,2.9nm,0.8s,baz=88,slow=7.3,SNR=6.8						
ZALV	Zalesovo Beam	42.51	313	eP	P	11 02 25.7	-1.9
ZALV	Zalesovo Beam	42.51	313	eP	P	11 02 25.7	-1.9
NVS	Novosibirsk	43.46	315	eP	P	11 02 33.8	-1.5
MK01	Makanchi Array	44.51	303	eP	P	11 02 44.2	+0.3
MK31	Makanchi Array	44.51	303	eP	P	11 02 43.8	-0.2
MK31	Makanchi Array	44.51	303	eP	P	11 02 43.8	-0.2
MKAR	Makanchi Array	44.51	303	P	P	11 02 44.5	+0.6
	comp=Z,4.6nm,0.8s,baz=90,slow=9.9,SNR=30						
MKAR	Makanchi Array	44.51	303	eP	P	11 02 43.9	-0.1
	comp=Z,30nm,0.8s						
MKAR	Makanchi Array	44.51	303	eP	P	11 02 43.9	-0.1
MKAR				pmax	pmax		
	comp=Z,30nm,0.8s						
KURK	Kurchatov	46.44	309	eP	P	11 02 59.4	+0.3
	comp=Z,11nm,0.8s						
KURK	Kurchatov	46.44	309	deP	P	11 02 59.0	-0.1
KURK				pmax	pmax		
	comp=Z,18nm,1.3s						
KURBB	Kurchatov Arra	46.51	309	P	P	11 02 59.5	-0.2
	comp=Z,3.8nm,0.4s,baz=84,slow=8.1,SNR=45						
BATI	Baumata	48.66	203	P	P	11 03 15.3	-1.4
	comp=Z,9.3nm,0.5s,baz=112,slow=7.2,SNR=3.2						
MDM	Murphy Dome	50.07	32	eP	P	11 03 27.6	+0.7
	comp=Z,4.4nm,0.8s						
KSH	Kashi	50.63	295	eP	P	11 03 35.2	+3.5
KSH				pP	sP	11 03 44.1	+6.0
KSH				ePcP	PcP	11 04 52.4	+3.2
ILAR	Eielson Array	50.65	32	P	P	11 03 32.7	+1.4
	comp=Z,1.8nm,0.6s,baz=266,slow=6.1,SNR=26						
ILB	Eielson Array	50.65	32	eP	P	11 03 31.7	+0.4
IL1	Eielson Array	50.65	32	eP	P	11 03 32.5	+1.2
BVAR	Borovoye Array	51.16	313	P	P	11 03 35.5	+0.1
	comp=Z,2.7nm,0.7s,baz=72,slow=9.3,SNR=15						
BRVK	Borovoye	51.22	313	eP	P	11 03 36.1	+0.4
	comp=Z,4.4nm,0.6s						
BRVK	Borovoye	51.22	313	deP	P	11 03 36.0	+0.2
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
PAX	Paxson	51.37	34	eP	P	11 03 38.6	+1.7
	comp=Z,47nm,0.5s						
PAX	Paxson	51.37	34	eP	P	11 03 38.6	+1.7
PAX				pmax	pmax		
	comp=Z,47nm,0.5s						
INK	Inuvik	55.57	27	P	P	11 04 09.4	+2.0
	comp=Z,2.2nm,0.6s,baz=315,slow=4.3,SNR=5.8						
WRAB	Tennant Creek	55.84	188	⇑eP	P	11 04 12.9	+2.9
WRAB				pmax	pmax		
	comp=Z,18nm,2.5s						
SVE	Sverdlovsk	55.85	319	eP	P	11 04 10.5	+0.8
SVE				pmax	pmax		
	comp=Z,16nm,0.8s						
WRA	Warramunga Arr	55.85	188	P	P	11 04 08.7	-1.4
	comp=Z,2.1nm,0.6s,baz=6.5,slow=7.7,SNR=26						
ARU	Arti	57.06	319	P	P	11 04 18.8	+0.5
ARU	Arti	57.06	319	eP	P	11 04 18.5	+0.2
	comp=Z,13nm,0.7s						
ARU	Arti	57.06	319	d iP	P	11 04 18.2	-0.1
ARU						11 05 11.3	
ARU						11 06 20.8	
ARU				S	S	11 12 11.1	-1.2
ARU				SS	SS	11 15 54.8	-5.7
ARU				pmax	pmax		
	comp=Z,18nm,1.0s						
ABKAR	Akbulak array	58.48	311	eP	P	11 04 28.1	-0.4
AKTO	Aktyubinsk	59.26	312	P	P	11 04 32.9	-0.9
	comp=Z,2.1nm,0.9s,baz=78,slow=11,SNR=6.4						
ASAR	Alice Springs	59.58	188	P	P	11 04 34.9	-1.4
	comp=Z,0.8nm,0.6s,baz=14,slow=14,SNR=17						
SPITS	Spitsbergen Ar	61.62	349	P	P	11 04 51.1	+1.5
	comp=Z,2.6nm,0.7s,baz=133,slow=16,SNR=3.6						
RES	Resolute Bay	63.81	14	eP	P	11 05 05.4	+1.3
	comp=Z,8.9nm,1.0s						
RES	Resolute Bay	63.81	14	eP	P	11 05 05.4	+1.3
RES				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KLMR	Klimovskoe	64.60	328	eP	P	11 05 08.7	-0.8
KLMR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KLMR	Klimovskoe	64.60	328	eP	P	11 05 08.8	-0.8
KLMR				AMP		11 05 10.2	
	comp=Z,8.0nm,0.8s						
YKA	Yellowknife Ar	64.97	30	P	P	11 05 13.2	+1.3
	comp=Z,0.7nm,0.6s,baz=280,slow=6.9,SNR=2.6						
ARCES	ARCESS Array B	65.00	340	P	P	11 05 11.6	-0.4
	comp=Z,3.3nm,0.8s,baz=44,slow=9.1,SNR=9.2						
STKA	Stephens Creek	67.38	180	P	P	11 05 26.9	-0.6
	comp=Z,1.4nm,0.4s,baz=349,slow=6.2,SNR=4.4						
STKA	Stephens Creek	67.38	180	P	P	11 05 27.0	-0.6
STKA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
OBN	Obninsk	68.87	323	i P	P	11 05 36.7	-0.1
OBN				pmax	pmax		
	comp=Z,6.0nm,0.7s						
FINES	FINESS Array B	69.72	332	P	P	11 05 42.6	+0.6
	comp=Z,8.1nm,0.8s,baz=72,slow=6.2,SNR=14						
KBZ	Khabaz	71.45	311	P	P	11 05 53.6	+0.7
	comp=Z,3.6nm,0.9s,baz=31,slow=3.3,SNR=4.8						
KIV	Kislovodsk	71.46	311	eP	P	11 05 54.8	+1.7
KIV				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HFS	Hagfors	75.05	336	P	P	11 06 14.3	+0.5
	comp=Z,1.1nm,0.6s,baz=205,slow=3.1,SNR=5.0						
AKASG	Malin Array Be	75.06	322	P	P	11 06 13.8	-0.3
	comp=Z,1.7nm,0.6s,baz=47,slow=6.0,SNR=9.9						
KIEV	Kiev	75.07	322	ceP	P	11 06 14.3	+0.2
KIEV				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NB2	NORSAR Subarra	75.16	337	P	P	11 06 14.6	+0.1
	comp=Z,1.0nm,0.6s,baz=41,slow=5.9						
NV01	Mina Array Sit	75.93	53	eP	P	11 06 20.9	+1.3
NVAR	Mina Array Bea	75.93	53	P	P	11 06 21.3	+1.7
	comp=Z,0.8nm,0.8s,baz=275,slow=5.6,SNR=9.4						
YHB	Horse Butte	76.54	44	eP	P	11 06 24.0	+1.0
	comp=Z,31nm,0.2s						
PDAR	Pinedale Array	78.70	45	P	P	11 06 36.2	+1.1
	comp=Z,0.6nm,0.6s,baz=242,slow=1.8,SNR=7.6						
BRTR	Keskin Array B	79.42	312	P	P	11 06 39.0	+0.1
	comp=Z,1.1nm,0.4s,baz=76,slow=6.5,SNR=5.1						
CLL	Collm	81.98	330	i P	P	11 06 52.7	+0.5
CLL	Collm	81.98	330	i P	P	11 06 52.7	+0.5
GERES	GERESS Array B	83.56	328	P	P	11 07 00.5	-0.1
	comp=Z,0.8nm,0.7s,baz=45,slow=4.0,SNR=7.0						
EKA	Eskdalemuir Ar	84.15	340	P	P	11 07 03.3	0.0
	comp=Z,1.3nm,0.7s,baz=39,slow=5.4,SNR=4.1						
EKA	Eskdalemuir Ar	84.15	340	P	P	11 07 03.3	0.0
EKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BFO	Black Forest	86.19	331	i P	P	11 07 15.1	+1.3
X40A	Basin Creek Fa	93.83	42	eP	P	11 07 51.0	+1.0
	comp=Z,5.3nm,0.8s						
LPAZ	La Paz	147.53	61	PKPbc	PKPbc	11 14 17.1	-0.8
	comp=Z,1.6nm,0.6s,baz=218,slow=0.2,SNR=5.2						

JMA 11 10:56:36.2±0.2, 37.°35N×141.°95E, h33^{km}±3^{km}, M3.6, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	0.86	271	P	Pn	10 56 52.1	+0.1
ONAJ	Iwakimizuishiy	0.95	255	P	Pn	10 56 53.4	+0.1
ONAJ				eS	Sn	10 57 05.3	-0.5
JMM	Marumori	1.05	300	P	Pn	10 56 54.9	+0.3
JMM				eS	Sn	10 57 07.9	-0.3
JFFD	Fukushimafurud	1.14	257	P	Pn	10 56 56.1	+0.3
JIO	Ouri	1.20	337	P	Pn	10 56 57.1	+0.4
JIO				eS	Sn	10 57 10.9	-0.9
JFT	Otama	1.29	278	P	Pb	10 56 59.4	-0.6
JHO	Hitachi	1.33	237	P	Pb	10 56 59.7	-0.9
JOU	Okura	1.44	315	P	Pb	10 57 01.3	-1.1
JOU				eS	Sb	10 57 19.1	-1.3
JMK	Ichinoseki	1.70	340	P	Pn	10 57 04.7	+1.2
JFY	Yanaizu	1.79	272	P	Pn	10 57 06.4	+1.6
JYK	Kaneyama	2.01	322	P	Pn	10 57 09.5	+1.7
MAT	Matsushiro	3.10	256	P	Pn	10 57 25.7	+2.8
MAT				S	Sb	10 58 03.8	-4.4

MAN 11 10:57:47.5, 10.°58N×126.°17E, h7^{km}, mb4.7, ML3.6, MS3.5, 2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	1.04	221	⇓eP	Pg	10 58 06.7	-0.7
SCPH				eS	Sn	10 58 23.5	+0.3
BESP	Borongan	1.25	325	eP	Pn	10 58 10.7	-0.7
BESP				eS	Sn	10 58 33.9	+5.5
PLP	Palo	1.31	297	⇓eP	Pn	10 58 10.4	-1.8
PLP				eS	Sn	10 58 30.4	+0.5
MSLP	Maasin	1.36	251	eP	Pn	10 58 12.7	-0.3
MSLP				eS	Sg	10 58 31.7	+0.3
BUTP	Butuan	1.69	199	eP	Sn	10 58 39.7	+0.5
CNP	Catarman	2.43	323	eP	Pn	10 58 25.0	-2.6

MOS ***11*** *11:12:38.1±1.0, 25.°95S×177.°39W, h81^{km}, mb5.5/49, MS4.8/13, Error ellipse: s-maj=9.7km s-min=7.4km az=74.2*

ISCJB ***11*** *11:12:39.4±0.1, 26.°46S±0.°02×177.°30W±0.°03, h103^{km}, mb5.3/269, Error ellipse: s-maj=4.0km s-min=2.3km az=39.5*

GCMT ***11*** *11:12:40.2±0.1, 26.°01S×177.°00W, h97^{km}, MW5.7/129, Moment Tensor Solution. s116,c220; s129,c315; Duration: 1^{s}8 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.57±.04; $M_{\theta\theta}$-3.39±.05; $M_{\phi\phi}$3.96±.05; $M_{r\theta}$-1.83±.04; $M_{\theta\phi}$-2.23±.05; $M_{\phi r}$-1.39±.04; Best double couple: $M_0$4.89100×10^{17} NP1:ϕ_s27.00000°, δ79.00000°, λ-26.00000°. NP2:ϕ_s122.00000°, δ64.00000°, λ-168.00000°. Principal axes: T 4.7330, Plg10.0000°, Azm77.0000°; N 0.3200, Plg62.0000°, Azm186.0000°; P -5.0490, Plg26.0000°, Azm342.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

BJI ***11*** *11:12:40.2, 25.°34S×177.°14W, h92^{km}, mb5.3/50, mB5.6/44*

WEL ***11*** *11:12:40.0, 26.°05S×177.°36W, h90^{km}*

NEIC ***11*** *11:12:40.2±0.9, 26.°05S×177.°36W, h90^{km}±8^{km}, mb5.3/216, MW5.7, MW5.7, Error ellipse: s-maj=5.3km s-min=3.3km az=157.0, Moment Tensor Solution. s48 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.01; $M_{\theta\theta}$-2.06; $M_{\phi\phi}$3.07; $M_{r\theta}$-1.73; $M_{\theta\phi}$-1.50; $M_{\phi r}$-1.31; Best double couple: $M_0$3.80000×10^{17} NP1:ϕ_s25.00000°, δ74.00000°, λ-35.00000°. NP2: ϕ_s126.00000°, δ57.00000°, λ-161.00000°. Principal axes: T 3.6400, Plg11.0000°, Azm79.0000°; N 0.2600, Plg52.0000°, Azm184.0000°; P -3.9000, Plg36.0000°, Azm340.0000°;*

NEIC ***11*** *11:12:41.0±0.0, 25.°60S×177.°15W, h100^{km}, Moment Tensor Solution. s24 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.24; $M_{\theta\theta}$-3.02; $M_{\phi\phi}$3.25; $M_{r\theta}$-2.08; $M_{\theta\phi}$-1.46; $M_{\phi r}$-1.48; Best double couple: $M_0$4.30000×10^{17} NP1: ϕ_s31.00000°, δ82.00000°, λ-33.00000°. NP2:ϕ_s126.00000°, δ57.00000°, λ-170.00000°. Principal axes: T 3.8700, Plg16.0000°, Azm83.0000°; N 0.7600, Plg55.0000°, Azm199.0000°; P -4.6300, Plg28.0000°, Azm343.0000°;*

IDC ***11*** *11:12:43.6±3.0, 25.°96S×177.°31W, h120^{km}±25^{km}, mb5.0/29, mb1 5.1/29, mb1mx4.9/42, mbtmp5.3/29, MS4.5/37, Ms1 4.5/37, ms1mx4.5/48 Error ellipse: s-maj=11.1km s-min=10.7km az=11.0*

ISC 11 11:12:40.1±0.3, 26.°06S±0.°04×177.°28W±0.°04, h93^{km}±2^{km}, h93^{km}:pP-P, n977, σ1^{s}63/986, mb5.3/268, 39C-35D, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	Raoul Island	3.22	190	P	Pn	11 13 29.7	+1.1
RIZ				S	Sn	11 14 10.4	+4.3
RAO	Raoul Island	3.23	190	P	Pn	11 13 29.1	+0.4
	1μm,0.3s,baz=102,slow=10,SNR=39						
RAO				S	Sn	11 14 10.2	+4.0
	3μm,0.3s,baz=299,slow=23,SNR=12						
RAO	Raoul Island	3.23	190	ePn	Pn	11 13 28.7	0.0
RAO				S	Sn	11 14 10.2	+4.0
RAO	Raoul Island	3.23	190	eP	Pn	11 13 28.7	0.0
RAO				S	Sn	11 14 10.2	+4.0
GLKZ	Green Lake	3.23	190	P	Pn	11 13 29.7	+0.9
OUZ	Omahuta	12.03	219	ePn	P	11 15 34.5	-2.7
OUZ	Omahuta	12.03	219	P	P	11 15 34.0	-3.3
MXZ	Matakaoa Point	12.06	197	ePn	Pn	11 15 19.0	-10
MXZ				eSn	Sn	11 17 32.3	-8.8
MXZ	Matakaoa Point	12.06	197	P	Pn	11 15 19.0	-10
MXZ				S	Sn	11 17 30.5	-11
WCZ	Waipu Caves	12.18	214	P	Pn	11 15 32.2	+2.0
KUZ	Kuaotunu	12.21	208	P	Pn	11 15 28.4	-2.1
WMGZ	Waiomatatini S	12.27	196	P	Pn	11 15 22.0	-10
WMGZ				S	Sn	11 17 35.9	-10
HAZ	Te Kaha	12.38	199	P	Pn	11 15 23.7	-9.2
HAZ				S	Sn	11 17 41.1	-8.0
PKGZ	Pakihiroa	12.43	197	P	Pn	11 15 22.9	-11
PKGZ				S	Sn	11 17 38.3	-12
PUZ	Puketiti	12.55	196	P	Pn	11 15 24.5	-11
PUZ				S	Sn	11 17 41.5	-12
RUGZ	Raukumara Rang	12.61	199	P	Pn	11 15 26.2	-10
ETAZ	East Tamaki Re	12.72	210	P	P	11 15 49.2	+4.3
TWGZ	Tauwhareparae	12.72	197	P	Pn	11 15 27.6	-10
TWGZ				S	Sn	11 17 46.8	-11
OPRZ	Ohinepanea	12.85	202	P	Pn	11 15 35.4	-3.8
WTAZ	Waiatarua	12.86	211	P	P	11 15 50.0	+3.5
AWAZ	Awhitu Peninsu	12.94	210	P	P	11 15 48.7	+1.3
CNGZ	Carnagh Statio	12.96	196	P	Pn	11 15 30.1	-10
MWZ	Matawai	12.99	198	P	Pn	11 15 31.0	-10
TKGZ	Te Karaka	13.01	197	P	Pn	11 15 32.0	-9.2
TKGZ				S	Sn	11 17 53.4	-11
URZ	Urewera	13.05	200	P	Pn	11 15 33.2	-8.6
	1.0nm,0.3s,baz=275,slow=4.7,SNR=22						
URZ				S	Sn	11 17 54.6	-11
	19nm,0.3s,baz=159,slow=19,SNR=13						
URZ	Urewera	13.05	200	ePn	Pn	11 15 32.7	-9.1
URZ				S	Sn	11 17 54.6	-11
URZ	Urewera	13.05	200	P	Pn	11 15 32.4	-9.4
TOZ	Tahuroa Road	13.14	206	P	Pn	11 15 43.9	+0.9
AFI	Afiamalu	13.15	24	P	Pn	11 15 34.3	-9.0
	22nm,0.3s,baz=173,slow=4.4,SNR=22						
AFI				S	Sn	11 17 49.2	-19
	68nm,0.3s,baz=172,slow=23,SNR=9.2						
AFI	Afiamalu	13.15	24	ePn	Pn	11 15 34.5	-8.8
AFI				eSn	Sn	11 17 46.9	-21
AFI	Afiamalu	13.15	24	eP	Pn	11 15 34.5	-8.8
RAGZ	Rawiri	13.18	199	P	Pn	11 15 34.9	-8.6
RIGZ	Rimuhau	13.28	197	P	Pn	11 15 32.7	-12
MUGZ	Murupara	13.36	201	P	Pn	11 15 36.4	-9.4
RTZ	Ruatahuna	13.42	200	P	Pn	11 15 36.8	-10
NFK	Norfolk Island	13.44	254	P	P	11 15 50.6	-2.4
	baz=14,SNR=4.2						
PRGZ	Paritu Road	13.45	196	P	Pn	11 15 38.2	-8.9
SNGZ	Shannon Statio	13.46	198	P	Pn	11 15 37.8	-9.4
TLZ	Tolley Road	13.65	205	P	Pn	11 15 47.4	-2.3
MHGZ	Mahia Peninsul	13.66	196	P	Pn	11 15 39.7	-10
RAHZ	Arahi	13.66	199	P	Pn	11 15 41.3	-8.6
MRHZ	Matea Rd	13.79	201	P	Pn	11 15 42.1	-9.4
NMHZ	Naumai	13.91	199	P	Pn	11 15 43.3	-10
BKZ	Black Stump Fm	14.07	200	ePn	Pn	11 15 45.3	-10
BKZ	Black Stump Fm	14.07	200	P	Pn	11 15 45.1	-10
HIZ	Hauiti	14.07	206	ePn	Pn	11 15 50.2	-5.0
HIZ	Hauiti	14.07	206	P	Pn	11 15 52.4	-2.8
MCHZ	McNeill Hill	14.27	199	P	Pn	11 15 49.9	-7.8
KWHZ	Kaweka Forest	14.33	200	P	Pn	11 15 48.8	-10
NGZ	Ngauruhoe	14.38	203	P	Pn	11 15 54.8	-4.4
FWVZ	Far West T-bar	14.46	203	P	Pn	11 15 54.3	-6.1
WHVZ	Whangaehu Hut	14.47	203	P	Pn	11 15 54.2	-6.3
BHHZ	Black Hill Sta	14.50	201	P	Pn	11 15 55.0	-5.8
KAHZ	Kahuranaki	14.54	198	P	Pn	11 15 50.1	-11
KRHZ	Kereru	14.55	200	P	Pn	11 15 50.9	-10
PKVZ	Pokaka	14.57	203	P	Pn	11 15 56.2	-5.3
VRZ	Vera Road	14.64	205	P	Pn	11 15 59.2	-3.3
PXZ	Pawanui	14.76	198	P	Pn	11 15 55.0	-9.0
PNHZ	Pukenui	14.85	200	P	Pn	11 15 56.2	-8.9
PRHZ	Porangahau	15.04	198	P	Pn	11 15 56.8	-11
TSZ	Takapari Road	15.05	200	P	Pn	11 15 59.5	-8.3
WAZ	Wanganui	15.11	203	P	Pn	11 16 02.3	-6.1
DVHZ	Dannevirke	15.21	199	P	Pn	11 16 02.8	-6.9
ANWZ	Angora Road	15.27	198	P	Pn	11 16 04.6	-5.9
DZM	Mont Dzumac	15.39	282	P	P	11 16 18.2	+3.5
	7.2nm,0.3s,baz=96,slow=16,SNR=43						
DZM				S	S	11 19 09.2	-3.1
	0.2nm,0.3s,baz=285,slow=20,SNR=2.0						
DZM	Mont Dzumac	15.39	282	eP	P	11 16 18.3	+3.5
	13nm,0.3s						
DZM	Mont Dzumac	15.39	282	ePn	P	11 16 20.3	+5.5
	118nm,0.7s						
DZM				S	S	11 19 09.2	-3.1
POWZ	Post Office Ro	15.42	200	P	Pn	11 16 03.8	-8.5
PRWZ	Pori Road	15.50	200	P	Pn	11 16 07.1	-6.3
BFZ	Birch Farm	15.54	199	ePn	Pn	11 16 06.2	-7.7
	53nm,0.8s						
TIWZ	Tintock	15.73	199	P	Pn	11 16 06.6	-10
HOWZ	Holdsworth Sta	15.96	200	P	Pn	11 16 09.3	-10
TMWZ	Te Maipa	16.04	199	P	Pn	11 16 12.4	-7.7
TRWZ	Traveller	16.36	199	P	Pn	11 16 19.8	-4.3
MSWZ	Moikau Station	16.51	200	P	Pn	11 16 17.8	-8.2
SNZO	South Karori	16.59	202	ePn	Pn	11 16 26.5	-0.4
	104nm,1.4s						
SNZO				eSn	Sn	11 19 14.5	-16
PLWZ	Palliser	16.65	200	P	Pn	11 16 19.4	-8.3
RAR	Rarotonga	16.75	77	P	Pn	11 16 26.0	-3.0
	19nm,0.3s,baz=236,slow=9.5,SNR=20						
RAR				S	Sn	11 19 16.3	-19
	22nm,0.3s,baz=83,slow=18,SNR=6.4						
RAR				LR	LR	11 21 41.8	
	comp=Z,2μm,18.8s,baz=249,slow=32						
RAR	Rarotonga	16.75	77	ePn	Pn	11 16 27.1	-1.9
	427nm,0.9s						
RAR				eSn	Sn	11 19 15.2	-20
RAR	Rarotonga	16.75	77	eP	Pn	11 16 27.1	-1.9
RAR				pmax	pmax		
	comp=Z,427nm,0.9s						
THZ	Tophouse	17.63	205	eP	P	11 16 31.2	-8.2
	comp=Z,71nm,1.2s						
FUNA	Funafuti	17.76	349	eP	P	11 16 40.0	-0.9
	comp=Z,208nm,1.1s						
KHZ	Kahutara	17.97	203	eP	P	11 16 34.3	-8.7
	comp=Z,61nm,0.9s						
LTZ	Lake Taylor	18.75	205	eP	P	11 16 45.8	-5.8
	comp=Z,85nm,1.4s						
OXZ	Oxford	19.30	204	eP	P	11 16 52.6	-5.0
	comp=Z,53nm,1.1s						
MQZ	McQueen's Vall	19.41	202	eP	P	11 16 52.0	-6.7
	comp=Z,24nm,1.1s						
RPZ	Rata Peaks	20.00	205	P	P	11 17 02.0	-3.2
	comp=Z,6.7nm,0.4s,baz=78,slow=1.1,SNR=12						
RPZ				S	S	11 20 26.7	-18
	comp=Z,51nm,0.7s,baz=217,slow=18,SNR=11						
RPZ				LR	LR	11 25 09.2	
	comp=Z,2μm,19.9s,baz=28,slow=37						
RPZ	Rata Peaks	20.00	205	eP	P	11 16 60.0	-5.2
	comp=Z,51nm,1.1s						
RPZ				S	S	11 20 26.7	-18
FOZ	Fox Glacier	20.35	208	eP	P	11 17 05.0	-3.9
FOZ				epP	sP	11 17 33.0	-5.8
LBZ	Lake Benmore	20.91	206	eP	P	11 17 09.7	-5.2
	comp=Z,32nm,1.1s						
ODZ	Otahua Downs	21.29	204	eP	P	11 17 14.7	-4.3
ODZ				esP	sP	11 17 44.5	-4.4
WKZ	Wanaka	21.74	207	eP	P	11 17 20.0	-3.9
WKZ				esP	sP	11 17 52.3	-1.6
WHZ	Wether Hill Ro	23.05	207	eP	P	11 17 36.9	-0.4
	comp=Z,45nm,1.0s						
KNTN	Kanton	23.77	14	eP	P	11 17 42.4	-1.7
	comp=Z,255nm,1.0s						
PAE	Paea	26.99	78	eP	P	11 18 13.3	0.0
	comp=Z,9.4nm,0.9s						
PAE	Paea	26.99	78	eT	T	11 45 36.4	
	comp=Z,25nm,0.3s						
PPT2	Papeete2	27.02	77	eP	P	11 18 13.4	-0.3
	comp=Z,85nm,1.2s						
PPT2				eLQ	LQ	11 23 54.3	
	comp=Z,2μm,27.8s						
PPT2				eLR	LR	11 24 52.5	
	comp=Z,5μm,28.5s						
PPT2	Papeete2	27.02	77	eT	T	11 45 39.3	
	comp=Z,28nm,0.4s						
PPT	Papeete	27.03	77	LR	LR	11 26 26.5	
	comp=Z,2μm,19.7s,baz=226,slow=30						
HNR	Honiara	27.20	303	LR	LR	11 26 06.5	
	comp=Z,2μm,21.9s,baz=138,slow=30						
TVO	Taravao	27.23	78	eT	T	11 45 55.7	
	comp=Z,12nm,0.4s						
TIAR	Tiarei	27.24	78	eP	P	11 18 15.2	-0.4
	comp=Z,41nm,1.0s						
TIAR	Tiarei	27.24	78	eT	T	11 45 55.0	
	comp=Z,5.3nm,0.3s						
ARMA	Armidale	27.68	254	eP	P	11 18 22.9	+3.3
ARMA				esP	sP	11 18 47.3	-4.1
EIDS	Eidsvold	28.48	264	P	P	11 18 29.4	+2.8
	baz=29,SNR=17						
EIDS	Eidsvold	28.48	264	eP	P	11 18 29.9	+3.3
	comp=Z,55nm,0.8s						
TARA	Tarawa	28.86	339	eP	P	11 18 29.1	-0.8
	comp=Z,406nm,0.9s						
CAN	Canberra	30.31	244	eP	P	11 18 44.2	+1.5
	comp=Z,42nm,1.1s						
CAN	Canberra	30.31	244	eP	P	11 18 44.2	+1.5
CAN				pmax	pmax		
	comp=Z,42nm,1.1s						
YNG	Young	30.67	246	P	P	11 18 48.8	+2.9
	baz=31,SNR=5.2						
CMSA	Cobar Meteorol	32.80	252	P	P	11 19 06.1	+1.5
	baz=33,SNR=10.0						
TAU	Tasmania Unive	33.37	231	eP	P	11 19 10.7	+1.3
	comp=Z,251nm,1.9s						
TAU	Tasmania Unive	33.37	231	eP	P	11 19 10.7	+1.3
TAU				pmax	pmax		
	comp=Z,251nm,1.9s						
TOO	Toolangi	33.45	241	P	P	11 19 11.9	+1.7
	baz=34,SNR=5.1						
CTA	Charters Tower	33.99	272	P	P	11 19 17.2	+2.1
	comp=Z,144nm,0.7s,baz=102,slow=11,SNR=121						
CTA				LR	LR	11 31 28.0	
	comp=Z,1μm,21.3s,baz=112,slow=33						
CTAO	Charters Tower	33.99	272	eP	P	11 19 17.6	+2.5
	comp=Z,164nm,0.8s						
CTAO	Charters Tower	33.99	272	eP	P	11 19 17.6	+2.5
CTAO				pmax	pmax		
	comp=Z,164nm,0.8s						
QLP	Quilpie	34.41	260	P	P	11 19 20.3	+1.7
	baz=34,SNR=15						
STKA	Stephens Creek	36.28	251	P	P	11 19 35.9	+1.3
	baz=36,SNR=17						
STKA	Stephens Creek	36.28	251	P	P	11 19 36.2	+1.6
	comp=Z,3.8nm,0.4s,baz=91,slow=13,SNR=20						
STKA	Stephens Creek	36.28	251	eP	P	11 19 35.6	+1.0
	comp=Z,5.4nm,1.0s						
STKA	Stephens Creek	36.28	251	eP	P	11 19 35.6	+1.0
STKA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MTSU	Mount Surprise	36.34	275	P	P	11 19 37.4	+2.1
	baz=36,SNR=353						
PMG	Port Moresby	37.54	290	P	P	11 19 45.1	-0.3
	comp=Z,143nm,0.7s,baz=106,slow=5.7,SNR=40						
PMG				LR	LR	11 32 02.1	
	comp=Z,583nm,19.4s,baz=114,slow=31						
RKT	Rikitea	38.46	95	eS	S	11 25 36.8	-4.9
	comp=Z,1μm,27.5s						
RKT				eLQ	LQ	11 28 42.2	
	comp=Z,2μm,29.2s						
RKT				eLR	LR	11 30 02.2	
	comp=Z,3μm,35.0s						
RKT	Rikitea	38.46	95	eT	T	12 00 03.6	
	comp=Z,18nm,0.4s						
HTT	Hallett	38.51	248	P	P	11 19 53.8	+0.4
	baz=39,SNR=12						
COEN	Coen	38.91	280	P	P	11 19 58.4	+1.4
	baz=39,SNR=68						
COEN	Coen	38.91	280	eP	P	11 19 58.5	+1.6
	comp=Z,95nm,0.8s						
QIS	Mount Isa	39.84	269	P	P	11 20 06.6	+1.9
	baz=40,SNR=23						
BBOO	Buckleboo	40.93	249	P	P	11 20 13.6	+0.1
	baz=41,SNR=5.5						
MANU	Manus Island	41.53	299	eP	P	11 20 18.6	0.0
	comp=Z,37nm,0.9s						
AS01	Alice Springs	44.11	262	eP	P	11 20 40.2	+0.7
AS31	Alice Springs	44.15	262	eP	P	11 20 39.8	0.0

	comp=Z,14nm,0.9s						
ASAR	Alice Springs	44.15	262	P	P	11 20 39.9	+0.1
	comp=Z,39nm,0.9s,baz=96,slow=7.0,SNR=179						
ASAR				S	S	11 27 04.3	-1.8
	comp=Z,2.9nm,0.9s,baz=97,slow=16,SNR=4.9						
WB2	Warramunga Arr	44.74	267	eP	P	11 20 45.3	+0.8
WB2				eS	S	11 27 15.9	+1.3
WRAB	Tennant Creek	44.74	267	eP	P	11 20 45.0	+0.5
	comp=Z,65nm,0.9s						
WRAB	Tennant Creek	44.74	267	deP	P	11 20 44.1	-0.4
WRAB				pmax	pmax		
	comp=Z,74nm,1.3s						
WRA	Warramunga Arr	44.75	267	P	P	11 20 44.7	+0.2
	comp=Z,21nm,0.4s,baz=104,slow=7.8,SNR=187						
WRA				S	S	11 27 11.6	-3.2
	comp=Z,6.1nm,0.9s,baz=98,slow=15,SNR=6.6						
WRA				LR	LR	11 37 40.7	
	comp=Z,2µm,19.9s,baz=105,slow=34						
JAY	Jayapura	46.63	293	LR	LR	11 38 20.1	
	comp=Z,563nm,19.6s,baz=108,slow=33						
JAY	Jayapura	46.63	293	P	P	11 20 58.7	-0.7
	comp=Z,472nm,1.1s,comp=Z,8µm						
GENI	Genyem	47.03	293	P	P	11 21 02.6	+0.1
FORT	Forrest	47.91	251	P	P	11 21 08.5	-0.7
	baz=48,SNR=15						
FORT	Forrest	47.91	251	eP	P	11 21 08.6	-0.5
	comp=Z,65nm,0.8s						
WRKA	Warakurna	48.80	259	P	P	11 21 15.6	-0.5
	baz=49,SNR=102						
KDU	Kakadu	48.95	276	P	P	11 21 17.6	+0.3
	baz=49,SNR=28						
HMH	Humu‘ula Sheep	50.09	27	eP	P	11 21 26.9	+0.8
	comp=Z,534nm,1.5s						
MTN	Manton Dam	50.09	275	P	P	11 21 26.1	+0.2
	baz=50,SNR=17						
MTN	Manton Dam	50.09	275	eP	P	11 21 25.0	-1.0
	comp=Z,20nm,0.6s						
HPAH	Hawaii Prepara	50.39	27	eP	P	11 21 28.3	+0.2
	comp=Z,142nm,0.9s						
MHA	Mahukona	50.45	26	eP	P	11 21 29.4	+1.0
MHA	Mahukona	50.45	26	eP	P	11 21 29.4	+1.0
KEKH	Kekaha	50.71	21	eP	P	11 21 30.4	0.0
	comp=Z,153nm,1.1s						
SRPI	Serui, Papua	50.71	291	P	P	11 21 31.5	+0.9
KIP	Kipapa	50.77	23	eP	P	11 21 32.3	+1.5
	comp=Z,294nm,1.5s						
KIP	Kipapa	50.77	23	⇑eP	P	11 21 30.0	-0.8
KIP				pmax	pmax		
	comp=Z,327nm,0.8s						
KNRA	Kununurra	51.16	270	P	P	11 21 34.3	+0.3
	baz=51,SNR=88						
BAKI	Biak	51.19	291	P	P	11 21 35.0	+0.8
SBA	Scott Base	52.39	184	eP	P	11 21 42.8	+0.6
	comp=Z,94nm,1.4s						
SBA	Scott Base	52.39	184	eP	P	11 21 42.8	+0.6
SBA				pmax	pmax		
	comp=Z,95nm,1.4s						
VNDA	Vanda	52.46	186	P	P	11 21 44.7	+2.0
	comp=Z,9.8nm,0.9s,baz=12,slow=9.2,SNR=22						
VNDA				LR	LR	11 42 46.6	
	comp=Z,490nm,18.3s,baz=41,slow=34						
VNDA	Vanda	52.46	186	eP	P	11 21 44.8	+2.0
	comp=Z,83nm,1.8s						
RKPI	Ransiki, Papua	52.65	290	P	P	11 21 45.7	+0.7
KMBL	Kambalda	53.04	249	P	P	11 21 47.6	-0.2
	baz=53,SNR=7.7						
FITZ	Fitzroy Crossi	53.14	266	P	P	11 21 48.8	+0.2
	baz=53,SNR=161						
FITZ	Fitzroy Crossi	53.14	266	eP	P	11 21 49.8	+1.2
	comp=Z,47nm,0.8s						
FAKI	Fak Fak	53.57	287	P	P	11 21 51.9	+0.1
FAKI	Fak Fak	53.57	287	eP	P	11 21 51.3	-0.6
	comp=Z,70nm,0.7s						
GUMO	Guam	53.94	312	P	P	11 21 52.8	-1.6
	comp=Z,79nm,0.8s,baz=197,slow=8.1,SNR=4.5						
GUMO				LR	LR	11 39 57.1	
	comp=Z,543nm,20.9s,baz=138,slow=30						
GUMO	Guam	53.94	312	eP	P	11 21 54.7	+0.2
	comp=Z,91nm,0.8s						
BNDI	Bandanaira	54.82	284	P	P	11 22 01.4	+0.5
MSAI	Masohi	56.23	284	P	P	11 22 11.0	-0.1
NWAO	Narrogin (SRO)	56.61	246	LR	LR	11 45 19.0	
	comp=Z,599nm,18.2s,baz=307,slow=34						
AAI	Ambon	56.71	284	P	P	11 22 14.8	+0.4
MEEK	Meekatharra	56.88	254	P	P	11 22 14.6	-0.9
	baz=57,SNR=8.3						
PALU	Palau	57.41	299	P	P	11 22 18.9	-0.4
	baz=58,SNR=6.9						
MBWA	Marble Bar	57.44	261	eP	P	11 22 17.8	-1.8
	comp=Z,248nm,1.4s						
SOEI	Soe	57.49	275	P	P	11 22 21.3	+1.2
SOEI	Soe	57.49	275	eP	P	11 22 22.0	+1.9
	comp=Z,194nm,0.9s						
BLDU	Ballidu	57.54	249	P	P	11 22 19.5	-0.6
	baz=58,SNR=11						
MUN	Mundaring	57.66	247	P	P	11 22 21.6	+0.7
	baz=58,SNR=4.0						
BATI	Baumata	57.84	274	P	P	11 22 24.0	+1.6
	comp=Z,96nm,0.7s,baz=231,slow=2.4,SNR=20						
BATI				LR	LR	11 45 39.6	
	comp=Z,1µm,20.7s,baz=138,slow=34						
BATI	Baumata	57.84	274	P	P	11 22 23.7	+1.2
NLAI	Namlea	57.88	283	P	P	11 22 22.8	+0.1
MORW	Morawa	58.47	251	P	P	11 22 26.2	-0.4
	baz=59,SNR=7.1						
LBMI	Labuha	58.81	286	P	P	11 22 29.5	+0.4
CASY	Casey	59.27	207	eP	P	11 22 31.5	0.0
	comp=Z,37nm,0.6s						
SANI	Sanana	59.43	284	P	P	11 22 32.9	-0.5
TNTI	Ternate	59.64	288	P	P	11 22 35.1	+0.3
TNTI	Ternate	59.64	288	eP	P	11 22 35.5	+0.7
	comp=Z,82nm,0.7s						
MMRI	Maumere	59.77	275	eP	P	11 22 36.1	+0.3
	comp=Z,70nm,0.8s						
RPN	Rapa Nui	60.05	108	LR	LR	11 44 12.4	
	comp=Z,287nm,18.6s,baz=264,slow=31						
EDFI	Ende, Flores	60.22	275	P	P	11 22 38.9	-0.1
GIRL	Giralia	61.83	257	P	P	11 22 50.8	+1.2
	baz=62,SNR=4.4						
WBSI	Waikabubak, Su	61.91	273	P	P	11 22 50.8	+0.5
KMSI	Cibinong	62.46	285	P	P	11 22 54.5	+0.6
LUWI	Luwuk	62.73	283	P	P	11 22 56.3	+0.6
LUWI	Luwuk	62.73	283	eP	P	11 22 56.0	+0.3
	comp=Z,102nm,0.7s						
BKSI	Bulukumba	63.10	278	P	P	11 22 57.6	-0.6
	comp=Z,100nm,0.8s,comp=Z,758nm						
PLAI	Plampang	63.70	273	P	P	11 23 02.4	+0.3
APSI	Ampana	63.77	283	P	P	11 23 02.6	0.0
QSPA	South Pole Qui	64.03	180	P	P	11 23 04.7	+1.0
	comp=Z,29nm,0.8s,baz=32,slow=3.0,SNR=44						
QSPA				LR	LR	11 50 52.0	
	comp=Z,226nm,18.0s,baz=34,slow=36						
QSPA	South Pole Qui	64.03	180	eP	P	11 23 04.7	+1.0
	comp=Z,166nm,1.3s						
DAV	Davao City (W)	64.47	292	LR	LR	11 47 34.9	
	comp=Z,219nm,21.4s,baz=126,slow=32						
CBIJ	Chichi jima	65.70	321	P	P	11 23 13.2	-1.7
JCJ	Chichijima	65.70	321	P	P	11 23 13.2	-1.7
	comp=Z,46nm,0.8s,baz=302,slow=17,SNR=3.3						
MIR	Mirnyy	66.27	206	⇑iP	P	11 23 19.5	+1.5
MIR				i		11 23 47.0	
MIR				pmax	pmax		
	comp=Z,88nm,1.2s						
JAGI	Jajag, Banyuwa	67.10	272	eP	P	11 23 23.6	-0.5
	comp=Z,105nm,0.8s						
MYLDM	Lahad Datu	69.49	287	eP	P	11 23 42.7	+3.7
	comp=Z,39nm,0.9s						
JHJ	Hachijo jima 2	71.64	323	LR	LR	11 50 09.3	
	comp=Z,181nm,20.5s,baz=84,slow=31						
KKM	Kota Kinabalu	71.89	286	eP	P	11 23 52.2	-1.5
	comp=Z,46nm,0.8s						
TGY	Tagaytay City	72.13	296	LR	LR	11 50 54.1	
	comp=Z,235nm,21.6s,baz=168,slow=32						
CISI	Cisompet, Garu	73.18	270	eP	P	11 24 01.1	-0.3
	comp=Z,83nm,0.9s						
SBUM	Sibu	73.65	281	eP	P	11 24 04.3	+0.3
	comp=Z,22nm,1.0s						
LEM	Lembang	73.67	270	P	P	11 24 04.9	+0.6
	comp=Z,150nm,0.7s,baz=116,slow=22,SNR=15						
LEM				LR	LR	11 56 33.6	
	comp=Z,536nm,20.6s,baz=147,slow=36						
JOW	Kunigami	74.27	311	LR	LR	11 53 24.7	
	comp=Z,238nm,21.9s,baz=142,slow=33						
INU	Inuyama	74.82	323	eP	P	11 24 10.0	-0.3
	comp=Z,32nm,0.9s						
KSM	Kuching	74.90	279	eP	P	11 24 10.8	-0.5
	comp=Z,75nm,0.8s						
MJAR	Matsushiro Arr	75.08	324	P	P	11 24 10.7	-1.1
	comp=Z,22nm,0.8s,baz=166,slow=5.8,SNR=30						
MJAR				LR	LR	11 51 08.5	
	comp=Z,238nm,21.9s,baz=140,slow=31						
MAJO	Matsushiro	75.08	324	eP	P	11 24 11.8	0.0
	comp=Z,26nm,0.8s						
MAJO	Matsushiro	75.08	324	deP	P	11 24 10.2	-1.6
MAJO				pmax	pmax		
	comp=Z,25nm,0.9s						
MAT	Matsushiro	75.08	324	P	P	11 24 10.0	-1.8
MAT				S	S	11 33 41.0	-1.6
MJB9	Matsu-Tunnel	75.08	324	eP	P	11 24 11.8	-0.1
	comp=Z,27nm,0.8s						
PMSA	Palmer Station	75.95	156	P	P	11 24 16.9	+0.6
	comp=Z,4.7nm,0.6s,baz=287,slow=3.6,SNR=4.2						
PMSA				LR	LR	11 50 17.4	
	comp=Z,370nm,20.2s,baz=251,slow=30						
MAW	Mawson	76.58	200	P	P	11 24 20.9	+1.0
	baz=77,SNR=16						
MAW	Mawson	76.58	200	P	P	11 24 21.1	+1.2
	comp=Z,21nm,0.8s,baz=134,slow=6.8,SNR=32						
MAW				LR	LR	11 55 26.6	
	comp=Z,408nm,21.6s,baz=108,slow=33						
MAW	Mawson	76.58	200	eP	P	11 24 21.1	+1.2
	comp=Z,8.0nm,1.1s						
JNU	Nakatsue	76.78	317	P	P	11 24 21.7	+0.2
	comp=Z,36nm,0.9s,baz=70,slow=4.1,SNR=8.8						
JNU				LR	LR	11 51 02.0	
	comp=Z,195nm,21.7s,baz=118,slow=30						
JNU	Nakatsue	76.78	317	eP	P	11 24 22.1	+0.5
	comp=Z,39nm,0.9s						
ERM	Erimo	76.98	331	eP	P	11 24 22.9	+0.6
	comp=Z,30nm,0.9s						
ERM	Erimo	76.98	331	ceP	P	11 24 23.1	+0.7
ERM				pmax	pmax		
	comp=Z,43nm,1.0s						
NACB	Ninganchiao	77.36	305	eP	P	11 24 25.3	+0.3
	comp=Z,28nm,0.9s						
TPUB	Ta-pu	77.57	304	eP	P	11 24 26.2	0.0
	comp=Z,84nm,0.4s						
KIWB	Kanaga Island	77.58	0	eP	P	11 24 25.2	-0.4
SSLB	Suanglung	77.61	304	eP	P	11 24 26.6	+0.1
	comp=Z,35nm,0.8s						
KUR	Kuril’sk	77.74	336	d iP	P	11 24 26.8	+0.2
KUR				i S	S	11 34 13.0	+1.8
KUR				pmax	pmax		
	comp=Z,114nm,1.1s						
KUR				pmax	pmax		
	comp=Z,659nm,2.5s						
KUR				MLR	MLR		
	comp=Z,359nm,17.0s						
KUR				MLR	MLR		
	comp=N,313nm,19.0s						
KUR				MLR	MLR		
	comp=E,250nm,17.0s						
GSTR	Great Sitkin T	77.83	1	eP	P	11 24 26.7	-0.2
SMY	Shemya	78.82	355	eP	P	11 24 32.7	+0.4
	comp=E,317nm,1.1s						
SMY	Shemya	78.82	355	eP	P	11 24 32.7	+0.4
SMY				pmax	pmax		
	comp=Z,317nm,1.1s						
ASAJ	Asahikawa	78.92	332	P	P	11 24 34.6	+1.5
	comp=Z,84nm,0.7s,baz=218,slow=9.7,SNR=57						
ASAJ				LR	LR	11 53 31.6	
	comp=Z,360nm,21.4s,baz=164,slow=31						
ASAJ	Asahikawa	78.92	332	eP	P	11 24 34.5	+1.4
	comp=Z,96nm,0.8s						
NIKH	Nikolski High	79.04	5	eP	P	11 24 33.5	-0.1
	comp=Z,226nm,0.9s						
SKR	Severo-Kuril’s	79.95	343	eP	P	11 24 38.1	-0.4
SKR				eS	S	11 34 33.1	-1.4
SKR				pmax	pmax		
	comp=Z,700nm,4.5s						
SKR				pmax	pmax		
	comp=Z,112nm,2.0s						
SKR				pmax	pmax		
	comp=Z,300nm,5.9s						
QZH	Quanzhou	80.03	304	⇓iP	P	11 24 39.0	-0.6
QZH				sP	sP	11 25 15.9	+1.9
QZH				S	S	11 34 35.3	-1.2
QZH				pmax	pmax		
	comp=Z,280nm,4.7s						
QZH				LR	LR		
	comp=Z,420nm,32.2s						
QZH				LR	LR		
	comp=Z,360nm,24.2s						
QZH				LR	LR		
	comp=Z,440nm,38.4s						
UNV	Unalaska Valle	80.12	6	eP	P	11 24 39.0	-0.3
	comp=Z,58nm,0.9s						
SNCC	San Nicolas Is	80.58	46	P	P	11 24 43.1	+0.7
	baz=230						
MYKOM	Kota Tinggi	80.79	277	eP	P	11 24 44.3	+0.3
	comp=Z,41nm,0.7s						
SCZ2	Santa Cruz Isl	80.98	45	P	P	11 24 45.3	+0.8
	baz=230						
SCI2	San Clemente I	81.05	47	P	P	11 24 45.1	+0.2
	baz=231						
TJN	Taejon	81.11	318	ceP	P	11 24 46.3	+1.2
YSS	Yuzh-Sakhalins	81.15	334	eP	P	11 24 46.2	+1.2
	comp=Z,109nm,0.8s						
YSS	Yuzh-Sakhalins	81.15	334	⇓iP	P	11 24 45.8	+0.8
YSS				e		11 27 52.6	
YSS				eS	S	11 34 46.3	-0.8
YSS				pmax	pmax		
	comp=Z,100nm,0.9s						
YSS				pmax	pmax		
	comp=N,30nm,0.8s						
YSS				MLR	MLR		
	comp=Z,200nm,17.0s						
SBC	Santa Barbara	81.22	45	P	P	11 24 46.4	+0.6
	baz=230						
CIS	Catalina Islan	81.40	46	P	P	11 24 47.7	+1.0
	baz=231						
BLG	Laguna Peak, P	81.42	46	P	P	11 24 47.4	+0.6
	baz=231						
PKM	Mcpherson Peak	81.44	44	P	P	11 24 48.0	+0.9
	baz=230						
SYO	Syowa Base	81.47	193	⇓eP	P	11 24 45.9	-0.6
SYO	Syowa Base	81.47	193	⇓iPcP	PcP	11 24 50.0	-2.3
KSRS	Korea Array	81.49	319	LR	LR	11 53 47.0	
	comp=Z,205nm,21.5s,baz=124,slow=30						
PET	Petropavlovsk	81.50	346	eP	P	11 24 47.3	+0.6
	comp=Z,58nm,0.9s						
PET	Petropavlovsk	81.50	346	deP	P	11 24 46.1	-0.6
PET				e*PP	pP	11 25 12.8	+1.7
PET				eS	S	11 34 47.3	-3.2
PET				pmax	pmax		
	comp=Z,700nm,2.6s						
PET				pmax	pmax		
	comp=Z,400nm,13.9s						
PET				pmax	pmax		
	comp=Z,76nm,1.0s						
KS01	Wonju Array Si	81.52	319	eP	P	11 24 47.5	+0.2
SMMC	Simmler	81.60	44	P	P	11 24 48.7	+0.9
	baz=230						
SAO	San Andreas Ge	81.65	42	eP	P	11 24 50.1	+2.1
	comp=Z,97nm,1.7s						
FMP	Fort Macarthur	81.67	46	P	P	11 24 48.6	+0.5
	baz=231						
PMPB	Monarch Peak	81.69	43	eP	P	11 24 50.0	+1.7
PAGB	Antelope Grade	81.71	44	eP	P	11 24 48.9	+0.6
	comp=Z,54nm,1.2s						
LPIG	La Paz	81.72	58	LR	LR	11 53 46.2	
	comp=Z,442nm,18.6s,baz=232,slow=30						
SLBS	Sierra La Lagu	81.77	59	eP	P	11 24 49.5	+0.5
	comp=Z,104nm,1.8s						
PEA0B	Petropavlovsk-	81.79	345	eP	P	11 24 48.8	+0.5
	comp=Z,616nm,1.9s						
PETK	Petropavlovsk-	81.79	345	P	P	11 24 48.7	+0.4
	comp=Z,68nm,0.7s,baz=124,slow=6.4						
PETK				LR	LR	11 55 18.7	
	comp=Z,371nm,21.9s,baz=148,slow=31						
109C	Camp Elliot, M	81.94	47	P	P	11 24 49.5	-0.1
	baz=232						
OSI	Osito Audit: C	81.96	45	P	P	11 24 50.4	+0.7
	baz=231						
DECC	Green Verdugo	81.98	46	P	P	11 24 49.9	+0.1
	baz=231						
PASC	Pasadena Art C	82.03	46	eP	P	11 24 51.2	+1.2
	comp=Z,42nm,1.2s						
BAR	Barrett	82.10	48	eP	P	11 24 52.1	+1.7
	comp=Z,55nm,1.7s						
MWC	Mount Wilson	82.14	46	eP	P	11 24 51.5	+0.7
	comp=Z,42nm,1.1s						
MWC	Mount Wilson	82.14	46	eP	P	11 24 51.5	+0.7
MWC				pmax	pmax		
	comp=Z,42nm,1.1s						
ARVC	Arvin	82.22	45	P	P	11 24 51.3	+0.3
	baz=231						
MURC	Murrieta	82.32	47	P	P	11 24 52.1	+0.5
	baz=232,SNR=10.0						
SDPT	Sand Point	82.35	10	eP	P	11 24 51.1	0.0
	comp=Z,107nm,1.0s						
MONP2	Monument Peak	82.40	48	P	P	11 24 52.8	+0.6
	baz=232,SNR=15						
BFSC	Mount Baldy Ra	82.41	46	P	P	11 24 52.6	+0.4
	baz=231,SNR=8.7						
SNAA	Sanae	82.45	178	P	P	11 24 51.7	-0.2
SNAA	Sanae	82.45	178	P	P	11 24 51.6	-0.2
	comp=Z,14nm,0.8s,baz=193,slow=4.6,SNR=48						
SNAA				LR	LR	12 00 49.3	
	comp=Z,242nm,19.3s,baz=211,slow=35						
SNAA	Sanae	82.45	178	eP	P	11 24 51.9	+0.1
	comp=Z,41nm,1.0s						
SNAA	Sanae	82.45	178	c iP	P	11 24 51.4	-0.4
SNAA				pmax	pmax		
	comp=Z,1µm,0.9s						
IKP	In-Ko-Pah, Jac	82.46	48	P	P	11 24 53.1	+0.7
	baz=233,SNR=7.5						
VES	Vestal, Richgr	82.51	44	P	P	11 24 53.2	+0.7
	baz=230,SNR=16						
VNA3	Neumayer Olymp	82.57	176	P	P	11 24 52.0	-0.4
EDW2	Edwards Air Fo	82.59	45	P	P	11 24 53.7	+0.7
	baz=231,SNR=20						
FRD	Ford Ranch, An	82.64	47	P	P	11 24 54.2	+0.9
	baz=232						
KMRM	Mail Ridge	82.65	38	eP	P	11 24 55.7	+2.5
	comp=Z,91nm,1.1s						
ISA	Isabella, Lake	82.78	45	P	P	11 24 54.8	+0.8
	baz=231,SNR=27						
ISA	Isabella, Lake	82.78	45	eP	P	11 24 55.2	+1.2
	comp=Z,71nm,1.4s						
ISA	Isabella, Lake	82.78	45	eP	P	11 24 55.2	+1.2
ISA				pmax	pmax		
	comp=Z,71nm,1.4s						
PFO	Pinyon Flats O	82.81	47	P	P	11 24 54.9	+0.6
	baz=232,SNR=14						
PFO	Pinyon Flats O	82.81	47	eP	P	11 24 55.3	+1.0
	comp=Z,43nm,1.4s						
PFO	Pinyon Flats O	82.81	47	eP	P	11 24 55.3	+1.0
PFO				pmax	pmax		
	comp=Z,43nm,1.4s						
XPFO	Piæon Flat	82.81	47	eP	P	11 24 55.3	+1.0
	comp=Z,39nm,1.3s						
SWSC	Sam W. Stewart	82.84	48	P	P	11 24 54.7	+0.4
	baz=233,SNR=7.3						
BBRC	Big Bear Solar	82.91	47	P	P	11 24 55.4	+0.6
	baz=232						
GZH	Guangzhou	83.03	300	P	P	11 24 55.8	+0.4
GZH				S	S	11 35 06.8	-0.6
GZH				LR	LR		
	comp=Z,260nm,19.6s						
GZH				LR	LR		
	comp=Z,230nm,19.2s						
CMB	Columbia Colle	83.12	42	eP	P	11 24 56.4	+0.8
	comp=Z,34nm,1.3s						
CMB	Columbia Colle	83.12	42	eP	P	11 24 56.4	+0.8
CMB				pmax	pmax		
	comp=Z,34nm,1.3s						
LRMC	Laurel Mtn Rad	83.17	45	P	P	11 24 56.7	+0.6
	baz=231,SNR=20						
NVL	N’lazarevskaya	83.22	183	⇓iP	P	11 24 56.2	+0.5
NVL				e*PP	pP	11 25 23.2	+3.0
NVL				eS	S	11 35 08.2	+0.2
NVL				pmax	pmax		
	comp=Z,14nm,0.8s						
RRX	Edison Barstow	83.23	46	P	P	11 24 56.3	0.0
	baz=232						
VNA1	Neumayer--Stat	83.24	176	P	P	11 24 55.8	+0.1
BELC	Belle Mtn. Jos	83.35	47	P	P	11 24 57.7	+0.6
	baz=232,SNR=30						
AFDM	Forest Hills D	83.37	41	eP	P	11 24 57.6	+0.7
	comp=Z,28nm,1.3s						
ORV	Oroville	83.46	40	eP	P	11 24 58.7	+1.4
	comp=Z,57nm,1.7s						
ORV	Oroville	83.46	40	eP	P	11 24 58.7	+1.4
ORV				pmax	pmax		
	comp=Z,57nm,1.7s						
BC3	Big Chuckawall	83.50	48	P	P	11 24 58.4	+0.5
	baz=233,SNR=23						
CWC	Cottonwood Cre	83.52	44	P	P	11 24 58.2	+0.3
	baz=231						
WDC	Whiskeytown Da	83.55	39	eP	P	11 24 58.8	+1.1
	comp=Z,56nm,1.4s						
WDC	Whiskeytown Da	83.55	39	eP	P	11 24 58.8	+1.1
WDC				pmax	pmax		
	comp=Z,56nm,1.4s						
GLA	Glamis	83.56	49	P	P	11 24 58.4	+0.4
	baz=233,SNR=9.2						
GLA	Glamis	83.56	49	eP	P	11 25 00.0	+2.0
	comp=Z,54nm,1.1s						
CHGN	Chignik	83.59	10	eP	P	11 24 57.7	+0.2
GSC	Goldstone, Bar	83.62	46	P	P	11 24 58.8	+0.4
	baz=232,SNR=23						
GSC	Goldstone, Bar	83.62	46	eP	P	11 24 59.1	+0.7
	comp=Z,67nm,1.4s						
GSC	Goldstone, Bar	83.62	46	eP	P	11 24 59.1	+0.7
GSC				pmax	pmax		
	comp=Z,67nm,1.4s						
HEC	Hector,Ludlow	83.63	46	P	P	11 24 58.6	+0.2
	baz=232,SNR=11						
MPMC	Manual Prospec	83.65	45	P	P	11 24 59.4	+0.7
	baz=231,SNR=29						
MDPB	Devils Postpil	83.65	43	eP	P	11 24 59.6	+0.9
	comp=Z,31nm,1.2s						
OMMB	Old Mammoth Mi	83.69	43	eP	P	11 25 00.2	+1.3
	comp=Z,58nm,1.8s						
DAC	Darwin (Calif)	83.72	45	eP	P	11 24 59.9	+0.9
	comp=Z,12nm,1.1s						
DAC	Darwin (Calif)	83.72	45	eP	P	11 24 59.9	+0.9
DAC				pmax	pmax		
	comp=Z,12nm,1.1s						
N02D	Trinity Center	83.72	38	P	P	11 24 59.8	+1.1
	baz=228,SNR=9.7						
QIZ	Qiongzhong	83.75	295	P	P	11 24 57.6	-1.6
QIZ				pP	pP	11 25 21.5	-2.2
QIZ				sP	sP	11 25 33.5	-0.2
QIZ				S	S	11 35 03.4	-11
QIZ				sS	sS	11 35 58.0	+1.1
QIZ				pmax	pmax		
	comp=Z,190nm,5.5s						
O03D	Paynes Creek	83.78	39	P	P	11 24 59.2	+0.2
	baz=228,SNR=14						
MLAC	Mammoth, Mammo	83.80	43	P	P	11 24 59.7	+0.3
	baz=230						
TIN	Tinemaha, Big	83.81	44	P	P	11 24 59.9	+0.6
	baz=231						
RUBR	Rubicon Trail	83.92	41	eP	P	11 25 01.4	+1.4
	comp=Z,45nm,1.1s						
USRK	Ussuriysk Ar.	83.92	326	P	P	11 24 59.8	+0.3
	comp=Z,26nm,0.8s,baz=134,slow=3.8						
USRK				LR	LR	11 56 21.5	
	comp=Z,274nm,21.6s,baz=125,slow=31						
M02C	Callahan	83.92	38	P	P	11 25 00.7	+0.9
	baz=227,SNR=10						
NJ2	Nanjing	83.94	310	eP	P	11 25 01.6	+1.7
NJ2				pmax	pmax		
	comp=Z,17nm,0.5s						
HSIG		83.95	54	eP	P	11 25 00.9	+0.9
	comp=Z,35nm,1.3s						
WAKR	Walker	83.99	42	eP	P	11 25 01.5	+1.2
	comp=Z,68nm,1.4s						
IRM	Iron Mountain	84.01	47	P	P	11 25 00.9	+0.6
	baz=233,SNR=30						
L02D	Cave Junction,	84.03	37	P	P	11 25 01.2	+1.0
	baz=227						
GMRC	Granite Mounta	84.05	47	P	P	11 25 01.4	+0.8
	baz=233,SNR=14						
113A	Mohawk Valley,	84.11	49	eP	P	11 25 02.4	+1.6
	comp=Z,56nm,1.5s						
KEBM	Edson Butte	84.14	36	eP	P	11 25 02.4	+1.7
	comp=Z,84nm,1.3s						
Y12C	Blythe	84.18	48	P	P	11 25 02.0	+0.9
	baz=233,SNR=6.4						
Y12C	Blythe	84.18	48	eP	P	11 25 02.5	+1.4
	comp=Z,50nm,1.4s						
YBH	Yreka Blue Hor	84.23	38	P	P	11 25 02.3	+0.9
	comp=Z,13nm,0.9s,baz=237,slow=1.7,SNR=15						
YBH				LR	LR	11 55 52.9	
	comp=Z,260nm,20.5s,baz=227,slow=31						
YBH	Yreka Blue Hor	84.23	38	eP	P	11 25 02.6	+1.3
	comp=Z,37nm,1.3s						
TUQ	Turquoise Moun	84.27	46	P	P	11 25 02.5	+0.8

	baz=232,SNR=14						
PNTR	Pine Nut	84.27	41	*e*P	P	11 25 02.7	+1.0
	comp=Z,46nm,1.0s						
214A	Organ Pipe Nat	84.30	50	P	P	11 25 02.2	+0.4
	baz=235						
FURC	Furnace Creek,	84.30	45	P	P	11 25 02.3	+0.7
	baz=232,SNR=11						
GRAC	Grapevine Rang	84.31	44	P	P	11 25 02.5	+0.8
	baz=231,SNR=27						
SHOC	Shoshone, Teco	84.33	46	P	P	11 25 02.5	+0.7
	baz=232,SNR=15						
BEKR	Beckworth	84.33	40	*e*P	P	11 25 02.4	+0.4
	comp=Z,51nm,1.5s						
TYV	Tymovskoe	84.36	336	*e*P	P	11 25 02.1	+0.5
TYV				*e*S	S	11 35 21.0	+1.4
TYV				pmax	pmax		
	comp=Z,63nm,1.0s						
TYV				pmax	pmax		
	comp=Z,700nm,2.5s						
TYV				smax	smax		
	comp=E,2µm,14.5s						
VCNR	Virginia City	84.38	41	*e*P	P	11 25 03.1	+0.9
	comp=E,52nm,1.6s						
YERR	Yerington	84.42	42	*e*P	P	11 25 03.2	+0.8
	comp=E,39nm,1.2s						
IPM	Ipoh	84.51	278	*e*P	P	11 25 03.1	-0.2
	comp=E,28nm,0.7s						
LDFC	Landfair	84.58	47	*e*P	P	11 25 05.0	+1.8
	comp=E,139nm,1.3s						
RYN	Ryan	84.62	42	*e*P	P	11 25 04.2	+0.8
	comp=E,41nm,1.4s						
NV01	Mina Array Sit	84.63	43	*e*P	P	11 25 03.9	+0.3
NVAR	Mina Array Bea	84.63	43	P	P	11 25 04.0	+0.4
	comp=E,18nm,0.9s,baz=222,slow=8.2,SNR=80						
HUMO	Hull Mountain	84.69	37	*e*P	P	11 25 04.9	+1.4
	comp=E,51nm,1.4s						
NEE2	Needles Airpor	84.72	47	P	P	11 25 04.5	+0.7
	baz=233						
NV11	Mina Array Sit	84.72	43	*e*P	P	11 25 04.7	+0.8
	comp=E,2.5nm,1.1s						
M04C	Macdoel	84.75	38	P	P	11 25 04.8	+0.8
	baz=228,SNR=5.9						
PDMCI	Parker Dam,Lak	84.76	48	P	P	11 25 05.1	+1.1
	baz=234,SNR=11						
PAHR	Pah Rah Range	84.80	41	*e*P	P	11 25 04.5	+0.3
	comp=E,30nm,1.1s						
TPNV	Topopah Spring	84.98	45	P	P	11 25 06.1	+0.8
	baz=232,SNR=23						
TPNV	Topopah Spring	84.98	45	*e*P	P	11 25 06.4	+1.1
	comp=E,35nm,1.2s						
TPNV	Topopah Spring	84.98	45	*e*P	P	11 25 06.4	+1.1
TPNV				pmax	pmax		
	comp=Z,35nm,1.2s						
PLCA	Paso Flores	84.99	133	P	P	11 25 06.3	+0.9
	comp=Z,9.4nm,0.9s,baz=247,slow=5.7,SNR=12						
PLCA				LR	LR	11 55 40.6	
	comp=Z,225nm,18.4s,baz=270,slow=30						
PLCA	Paso Flores	84.99	133	*e*P	P	11 25 06.7	+1.3
PLCA				*e*pP	pP	11 25 34.2	+4.3
KVN	Kaiserville	85.15	42	*e*P	P	11 25 06.5	+0.4
	comp=Z,29nm,1.1s						
KVN	Kaiserville	85.15	42	*e*P	P	11 25 06.5	+0.4
KVN				pmax	pmax		
	comp=Z,29nm,1.1s						
KULM	Kulim	85.21	278	*e*P	P	11 25 07.5	+0.7
	comp=Z,24nm,0.9s						
I03D	Drain, OR	85.22	36	P	P	11 25 07.3	+1.2
	baz=227						
Y14A	Wickenburg	85.31	49	*e*P	P	11 25 08.1	+1.2
	comp=Z,34nm,1.1s						
K04D	Chiloquin, OR	85.36	38	P	P	11 25 07.6	+0.7
	baz=228						
W13A	Hualapai Mount	85.40	47	*e*P	P	11 25 08.8	+1.3
	comp=Z,34nm,1.3s						
SHPR	Sheep Range	85.41	46	*e*P	P	11 25 08.7	+1.3
	comp=Z,54nm,1.5s						
MDJ	Mudanjiang	85.44	325	P	P	11 25 05.1	-2.0
MDJ				pP	pP	11 25 30.4	-1.3
MDJ				sP	sP	11 25 40.8	-0.9
MDJ				PP	PP	11 28 26.2	-0.8
MDJ				S	S	11 35 33.0	+2.4
MDJ				pmax	pmax		
	comp=Z,51nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,770nm,4.4s						
MDJ				LR	LR		
	comp=Z,420nm,20.7s						
MDJ				LR	LR		
	comp=Z,430nm,21.6s						
MDJ				LR	LR		
	comp=Z,540nm,23.1s						
MDJ	Mudanjiang	85.44	325	*e*P	P	11 25 08.0	+0.9
	comp=Z,41nm,0.9s						
J04D	Umpqua Nationa	85.58	37	P	P	11 25 08.8	+0.6
	baz=228,SNR=7.2						
PSI	Prapat	85.65	275	P	P	11 25 07.5	-1.6
	comp=Z,20nm,0.7s,baz=0.4,slow=3.1,SNR=12						
PSI				LR	LR	12 07 08.7	
	comp=Z,260nm,18.2s,baz=90,slow=38						
PSI	Prapat	85.65	275	*e*P	P	11 25 07.7	-1.4
	comp=Z,22nm,0.7s						
MOD	Modoc Plateau	85.69	39	*e*P	P	11 25 09.0	+0.3
	comp=Z,33nm,1.1s						
I04A	Tendick Farm,	85.79	36	P	P	11 25 10.1	+1.1
	baz=228						
K05A	Summer Lake	85.90	38	*e*P	P	11 25 10.8	+1.0
	comp=Z,51nm,1.1s						
TUC	Tucson	85.91	51	P	P	11 25 10.9	+0.9
	baz=236						
TUC	Tucson	85.91	51	*e*P	P	11 25 11.3	+1.4
	comp=Z,68nm,1.3s						
TUC	Tucson	85.91	51	*e*P	P	11 25 11.3	+1.4
TUC				pmax	pmax		
	comp=Z,68nm,1.3s						
J05D	Fort Rock, OR	86.08	37	P	P	11 25 11.6	+1.0
	baz=228,SNR=15						
GSI	Gunungsitoli	86.20	273	*e*P	P	11 25 12.5	+0.8
	comp=Z,101nm,0.8s						
DL2	Dalian	86.22	317	P	P	11 25 07.0	-4.1
DL2				pP	pP	11 25 32.9	-2.9
DL2				S	SKSac	11 35 27.9	-0.9
DL2				pmax	pmax		
	comp=Z,31nm,1.2s						
DL2				pmax	pmax		
	comp=Z,260nm,6.7s						
DL2				LR	LR		
	comp=Z,310nm,22.6s						
DL2				LR	LR		
	comp=Z,250nm,18.6s						
DL2				LR	LR		
	comp=Z,340nm,22.2s						
R11A	Troy Canyon, C	86.25	44	P	P	11 25 11.8	+0.2
	baz=232,SNR=8.6						
R11A	Troy Canyon, C	86.25	44	*e*P	P	11 25 12.5	+0.9
	comp=Z,6.8nm,1.1s						
WHN	Wuhan	86.27	307	⇓*i*P	P	11 25 11.4	-0.2
WHN				sP	sP	11 25 49.5	+3.3
WHN				S	S	11 35 35.3	-4.0
WHN				LR	LR		
	comp=Z,320nm,10.6s						
WHN				LR	LR		
	comp=Z,420nm,12.3s						
WHN				LR	LR		
	comp=Z,2µm,23.9s						
G03D	McMinnville, O	86.31	35	P	P	11 25 12.3	+0.9
	baz=227						
319A	Douglas	86.46	53	*e*P	P	11 25 13.9	+1.3
	comp=Z,55nm,1.1s						
H04A	Detroit Lake	86.51	36	*e*P	P	11 25 13.8	+1.3
	comp=Z,82nm,1.8s						
BMN	Battle Mountai	86.54	42	*e*P	P	11 25 13.5	+0.6
	comp=Z,44nm,1.4s						
BMN	Battle Mountai	86.54	42	*e*P	P	11 25 13.5	+0.6
BMN				pmax	pmax		
	comp=Z,44nm,1.4s						
PINE	Pine Mountain	86.58	37	*e*P	P	11 25 15.1	+2.0
	comp=Z,37nm,1.1s						
X16A	Lo Mia Camp, P	86.65	49	*e*P	P	11 25 14.9	+1.3
	comp=Z,39nm,1.1s						
I05D	Terrebonne, OR	86.73	37	P	P	11 25 13.9	+0.3
	baz=228						
GRNR	Gornyy	86.73	333	⇓*i*P	P	11 25 16.0	+2.6
GRNR				pmax	pmax		
	comp=E,63nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,100nm,1.0s						
HPIG		86.77	58	*e*P	P	11 25 14.7	+0.3
	comp=Z,11nm,1.3s						
GO05	HualaæØ	86.90	128	*e*P	P	11 25 15.0	+0.2
	comp=Z,33nm,1.0s						
NKL	Nikolayevsk	86.93	336	*e*P	P	11 25 12.0	-2.2
NKL				*e*		11 35 28.0	
NKL				*e*		11 36 51.0	
NKL				pmax	pmax		
	comp=Z,800nm,5.0s						
NKL				pmax	pmax		
	comp=N,20nm,0.9s						
NKL				pmax	pmax		
	comp=E,20nm,0.9s						
NKL				pmax	pmax		
	comp=Z,87nm,0.9s						
NKL				MLR	MLR		
	comp=N,300nm,18.0s						
NKL				MLR	MLR		
	comp=Z,500nm,18.0s						
LCMT	Little Creek M	86.95	46	*e*P	P	11 25 16.2	+1.2
	comp=Z,57nm,1.9s						
WVOR	Wild Horse Val	86.98	39	*e*P	P	11 25 15.5	+0.5
	comp=Z,23nm,1.3s						
WVOR	Wild Horse Val	86.98	39	*e*P	P	11 25 15.5	+0.5
WVOR				pmax	pmax		
	comp=Z,23nm,1.3s						
F04D	Rainier, OR	87.03	34	P	P	11 25 15.9	+0.9
	baz=227						
E03A	Lebam	87.07	34	*e*P	P	11 25 17.1	+2.0
	comp=Z,28nm,0.9s						
CN2	Changchun	87.09	322	*e*P	P	11 25 15.0	-0.3
CN2				*e*S	S	11 35 44.0	-2.7
CN2				pmax	pmax		
	comp=Z,40nm,1.0s						
ZAIG	Zacatecas	87.09	63	*e*P	P	11 25 17.0	+0.8
	comp=Z,16nm,1.0s						
CHBT	CHBT	87.10	286	P	P	11 25 20.1	+4.2
CCUT	Cedar City	87.19	46	*e*P	P	11 25 17.5	+1.3
	comp=Z,22nm,1.1s						
TRTT	Trang	87.19	280	P	P	11 25 18.4	+1.9
U15A	North Rim	87.23	47	*e*P	P	11 25 17.6	+1.1
	comp=Z,23nm,1.0s						
WUAZ	Wupatki	87.32	48	P	P	11 25 17.5	+0.7
	baz=235						
WUAZ	Wupatki	87.32	48	*e*P	P	11 25 18.1	+1.3
	comp=Z,30nm,1.2s						
G05D	Wamic, OR	87.34	36	P	P	11 25 17.1	+0.6
	baz=228						
SZCU	Shurtz Canyon	87.39	46	*e*P	P	11 25 18.5	+1.4
	comp=Z,55nm,1.7s						
PSUT	Pine Spring	87.45	45	*e*P	P	11 25 18.3	+0.8
	comp=Z,13nm,1.1s						
NLWA	Neilton Lookou	87.50	33	*e*P	P	11 25 19.8	+2.6
	comp=Z,41nm,1.4s						
TIA	Tai'an	87.51	313	P	P	11 25 17.9	+0.4
TIA				SKS	SKSac	11 35 34.2	-2.7
TIA				pmax	pmax		
	comp=Z,13nm,0.9s						
TIA				pmax	pmax		
	comp=Z,370nm,6.2s						
TIA				LR	LR		
	comp=Z,390nm,19.8s						
TIA				LR	LR		
	comp=Z,420nm,19.6s						
SKNT	Sakolnakorn	87.63	290	P	P	11 25 19.9	+1.4
KLR	Kul'dur	87.63	329	*d i*P	P	11 25 18.2	+0.5
J08A	Circle Bar Ran	87.66	39	*e*P	P	11 25 18.6	+0.4
J08A				*e*pP	sP	11 25 47.7	-5.2
G06A	Carlson Farm,	87.70	36	*e*P	P	11 25 20.4	+2.2
	comp=Z,108nm,1.9s						
X18A	Snowflake	87.73	50	*e*P	P	11 25 20.3	+1.4
	comp=Z,24nm,1.0s						
PKCU	Pink Cliffs	87.80	46	*e*P	P	11 25 21.1	+1.8
	comp=Z,50nm,1.3s						
TLIG	Tlapa	87.89	69	*e*P	P	11 25 21.0	+1.2
	comp=Z,36nm,1.4s						
SRAK	Srakaew	87.92	287	P	P	11 25 21.2	+1.3
CNPM	China Poot	87.94	13	*e*P	P	11 25 20.3	+1.3
	comp=Z,54nm,1.0s						
DIB	Dawson Inlet,	88.00	25	*e*P	P	11 25 21.5	+2.1
	comp=Z,43nm,1.4s						
LON	Longmire	88.09	35	*e*P	P	11 25 21.4	+1.3
	comp=Z,12nm,1.0s						
LON	Longmire	88.09	35	*e*P	P	11 25 21.4	+1.3
LON				pmax	pmax		
	comp=Z,12nm,1.0s						
121A	Cookes Peak, D	88.15	52	P	P	11 25 21.2	+0.3
	baz=237						
W18A	Petrified Fore	88.20	49	P	P	11 25 21.3	+0.3
	baz=236						
W18A	Petrified Fore	88.20	49	*e*P	P	11 25 22.8	+1.7
	comp=Z,58nm,1.4s						
MTPU	Mount Pierson	88.23	46	*e*P	P	11 25 22.8	+1.5
	comp=Z,25nm,1.1s						
BRLK	Bradley Lake	88.23	13	*e*P	P	11 25 20.6	+0.2
	comp=Z,37nm,0.8s						
D05A	Enumclaw	88.30	34	*e*P	P	11 25 22.2	+1.3
	comp=Z,320nm,1.9s						
LHMI	Lhok Sumawe	88.48	277	*e*P	P	11 25 22.8	+0.1
	comp=Z,109nm,0.8s						
MSU	Marysvale	88.51	45	*e*P	P	11 25 23.9	+1.4
MSU	Marysvale	88.51	45	*e*P	P	11 25 23.9	+1.4
G08A	Pilot Rock	88.63	37	*e*P	P	11 25 22.9	+0.2
	comp=Z,55nm,1.4s						
B05A	Bryant	88.97	33	P	P	11 25 24.6	+0.5
	baz=228,SNR=12						
A04D	Lummi Island	88.98	33	P	P	11 25 24.6	+0.5
	baz=227						
HAWA	Hanford	89.04	36	*e*P	P	11 25 26.4	+1.9
	comp=Z,63nm,1.4s						
DUG	Dugway, Tooele	89.08	44	P	P	11 25 25.2	+0.2
	baz=234						
DUG	Dugway, Tooele	89.08	44	*e*P	P	11 25 25.9	+0.9
	comp=Z,13nm,1.4s						
DUG				*e*pP	pP	11 25 54.4	+4.6
MFID	Camas Ranch	89.20	40	*e*P	P	11 25 26.0	+0.5
	comp=Z,36nm,1.5s						
BMO	Blue Mountains	89.26	38	*e*P	P	11 25 25.6	-0.1
	comp=Z,50nm,1.8s						
BMO	Blue Mountains	89.26	38	*e*P	P	11 25 25.6	-0.1
BMO				pmax	pmax		
	comp=Z,50nm,1.8s						
MA2	Magadan	89.30	344	*e*P	P	11 25 24.4	-0.9
	comp=Z,159nm,1.4s						
MA2	Magadan	89.30	344	*e*P	P	11 25 24.4	-0.9
MA2				pmax	pmax		
	comp=Z,159nm,1.4s						
E08A	Dider Farm, El	89.35	36	*e*P	P	11 25 27.6	+1.6
	comp=Z,51nm,1.4s						
BGU	Big Grassy Mou	89.38	43	*e*P	P	11 25 28.5	+2.1
	comp=Z,17nm,1.5s						
BGU				*e*pP	pP	11 25 55.7	+4.5
MNTX	Cornudas Mount	89.44	54	P	P	11 25 26.9	+0.1
	baz=239,SNR=20						
MNTX	Cornudas Mount	89.44	54	*e*P	P	11 25 27.4	+0.7
	comp=Z,29nm,1.4s						
TX31	Lajitas Ar. Si	89.51	57	*e*P	P	11 25 28.1	+0.8
TXAR	Lajitas Array	89.51	57	P	P	11 25 27.7	+0.5
	comp=Z,11nm,1.1s,baz=216,slow=6.2,SNR=40						
TXAR				LR	LR	11 58 22.7	
	comp=Z,232nm,19.4s,baz=0.0,slow=31						
PHET	Kaeng Krachan	89.51	285	P	P	11 25 29.6	+2.2
CRAG	Craig	89.53	23	*e*P	P	11 25 28.8	+2.3
	comp=Z,75nm,1.6s						
TMUT	Trail Mountain	89.58	45	*e*P	P	11 25 28.8	+1.3
	comp=Z,24nm,1.1s						
Y22D	IRIS PASSCAL I	89.59	51	P	P	11 25 27.6	+0.1
	baz=238						
Y22E	IRIS PASSCAL I	89.59	51	P	P	11 25 27.6	+0.1
	baz=238						
LENM	Lemitar	89.60	51	*e*P	P	11 25 28.8	+1.2
LAZ	Ladron	89.61	51	*e*P	P	11 25 29.1	+1.4
GAMB	Gambell	89.64	2	*e*P	P	11 25 27.9	+1.1
	comp=Z,38nm,1.0s						
RC01	Rabbit Creek A	89.68	13	*e*P	P	11 25 28.2	+1.1
	comp=Z,44nm,0.9s						
ENH	Enshi	89.70	304	*e*P	P	11 25 29.3	+1.3
	comp=Z,42nm,0.8s						
MPU	Maple Canyon	89.72	44	*e*P	P	11 25 29.4	+1.3
	comp=Z,10nm,1.0s						
D08A	Wollman Farm,	89.79	36	*e*P	P	11 25 28.8	+0.8
	comp=Z,155nm,1.9s						
SUA	Susitna One	89.82	12	*e*P	P	11 25 28.3	+0.3
	comp=Z,65nm,0.8s						
BNM	Barren Site	89.83	51	*e*P	P	11 25 29.6	+0.8
BNM				*e*pP	sP	11 25 58.9	-4.6
E09A	Wood Farm, Sta	89.85	36	*e*P	P	11 25 29.1	+0.9
	comp=Z,52nm,1.4s						
SRU	San Rafael Swe	89.91	46	*e*P	P	11 25 29.7	+0.7
	comp=Z,28nm,1.3s						
LPM	Los Pinos Moun	89.92	51	*e*P	P	11 25 30.6	+1.5
SPUT	South Promonto	89.95	43	*e*P	P	11 25 30.4	+1.3
	comp=Z,33nm,1.3s						
SPUT				*e*pP	sP	11 25 59.2	-4.6
GYA	Guiyang	89.96	300	*e*P	P	11 25 30.7	+1.3
GYA				pP	pP	11 25 56.5	+2.3
GYA				sP	sP	11 26 07.4	+3.3
GYA				PP	PP	11 29 07.0	+3.1
GYA				SKS	SKSac	11 35 50.5	-1.6
GYA				S	S	11 36 13.2	-1.6
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,6.2s						
P17A	Butcher Ranch,	89.97	45	*e*P	P	11 25 30.7	+1.5
	comp=Z,32nm,1.4s						
P17A				*e*pP	pP	11 25 51.9	-2.2
P17A				*e*sP	sP	11 25 55.9	-8.1
PBKT	Sadao Pong	90.00	288	P	P	11 25 31.7	+2.1
HVU	Hansel Valley	90.03	42	*e*P	P	11 25 30.1	+0.6
	comp=Z,39nm,1.5s						
CTU	Camp Tracy	90.03	44	*e*P	P	11 25 30.9	+1.5
	comp=Z,20nm,1.5s						
HLID	Hailey	90.11	40	P	P	11 25 30.3	+0.5
	baz=233						
HLID	Hailey	90.11	40	*e*P	P	11 25 30.7	+0.9
	comp=Z,21nm,1.3s						
SKT	Skwentna	90.15	12	*e*P	P	11 25 28.3	-1.0
	comp=Z,21nm,1.1s						
MVCO	Mesa Verde	90.19	48	P	P	11 25 30.5	+0.2
	baz=237						
MVCO	Mesa Verde	90.19	48	*e*P	P	11 25 30.8	+0.4
	comp=Z,8.3nm,1.0s						
PMR	Palmer	90.26	13	*e*P	P	11 25 29.4	-0.4
	comp=Z,33nm,1.0s						
PMR	Palmer	90.26	13	*e*P	P	11 25 29.4	-0.4
PMR				pmax	pmax		
	comp=Z,33nm,1.0s						
BJT	Baijiatuau	90.29	315	*e*P	P	11 25 31.4	+1.0
	comp=Z,204nm,2.0s						
BJI	Beijing	90.30	315	P	P	11 25 31.4	+0.9
BJI				SKS	SKSac	11 35 49.7	-3.4
BJI				S	S	11 36 16.7	-0.3
BJI				pmax	pmax		
	comp=Z,50nm,1.5s						
BJI				pmax	pmax		
	comp=Z,590nm,4.0s						
BJI				LR	LR		
	comp=Z,690nm,26.1s						
TASM	ASL Pad, Albuq	90.37	51	P	P	11 25 31.7	+0.4
	baz=238,SNR=32						
ANMO	Albuquerque	90.37	51	LR	LR	11 57 34.3	
	comp=Z,410nm,21.2s,baz=246,slow=30						
ANMO	Albuquerque	90.37	51	P	P	11 25 31.6	+0.3
	baz=238						
ANMO	Albuquerque	90.37	51	*e*P	P	11 25 31.7	+0.5
	comp=Z,31nm,1.1s						
ANMO	Albuquerque	90.37	51	⇓*e*P	P	11 25 30.5	-0.7
ANMO				pmax	pmax		
	comp=Z,32nm,1.2s						
TASL	Snake Pit, Alb	90.37	51	P	P	11 25 31.7	+0.4
	baz=238,SNR=33						
P18A	Preston Nutter	90.38	45	*e*P	P	11 25 32.3	+1.0
	comp=Z,7.9nm,1.0s						
B08A	Colville Reser	90.42	34	*e*P	P	11 25 31.0	+0.1
	comp=Z,22nm,1.2s						
PV09	Paradox Valley	90.47	47	*e*P	P	11 25 33.3	+1.5
TCUT	Toone Canyon	90.49	44	*e*P	P	11 25 33.2	+1.5
	comp=Z,75nm,1.2s						
PV03	Paradox Valley	90.52	47	*e*P	P	11 25 33.2	+1.3
WRAK	Wrangell Islan	90.54	23	*e*P	P	11 25 32.5	+1.3
	comp=Z,26nm,0.8s						
DIV	Divide	90.57	15	*e*P	P	11 25 31.6	+0.3
	comp=Z,46nm,1.0s						
PV02	Paradox Valley	90.57	47	*e*P	P	11 25 33.4	+1.2
	comp=Z,15nm,1.3s						
SRDT	SRDT	90.60	286	P	P	11 25 34.5	+2.1
LNIG	Linares	90.61	63	*e*P	P	11 25 32.1	-0.2
	comp=Z,45nm,1.3s						
LNIG				*e*pP	pP	11 26 00.5	+3.4
SML	Sawmill	90.62	13	*e*P	P	11 25 33.4	+1.9
	comp=Z,27nm,0.9s						
PV01	Paradox Valley	90.64	47	*e*P	P	11 25 33.2	+0.7
LLLB	Lillooet	90.65	32	*e*P	P	11 25 32.6	+0.7
	comp=Z,22nm,1.1s						
HWUT	Hardware Ranch	90.67	43	*e*P	P	11 25 32.5	+0.1
	comp=Z,11nm,1.2s						
BMRM	Bremner River	90.70	15	*e*P	P	11 25 32.3	+0.4
	comp=Z,43nm,1.0s						
PHIT	Phitsanulok	90.76	289	P	P	11 25 35.9	+2.8
SCM	Sheep Creek Mo	90.85	14	*e*P	P	11 25 33.1	+0.4
	comp=Z,77nm,0.8s						
SCM	Sheep Creek Mo	90.85	14	*e*P	P	11 25 33.1	+0.4
SCM				pmax	pmax		
	comp=Z,77nm,0.8s						
KLU	Klutina	90.86	14	*e*P	P	11 25 33.1	+0.4
	comp=Z,18nm,0.9s						
UTHA	Uthaitani	90.86	287	P	P	11 25 35.3	+1.7
PPLA	Purkeypile	90.88	11	*e*P	P	11 25 33.6	+0.7
	comp=Z,19nm,1.2s						
TGL	Tana Glacier	90.94	16	*e*P	P	11 25 34.3	+1.1
	comp=Z,30nm,0.9s						
CAST	Castle Rocks	91.38	11	*e*P	P	11 25 33.7	-1.3
	comp=Z,43nm,0.8s						
TIY	Taiyuan	91.47	312	*e*P	P	11 25 34.5	-1.6
TIY				SKS	SKSac	11 35 59.9	-0.3
TIY				S	ScS	11 36 31.7	+1.1
TIY				LR	LR		
	comp=Z,84nm,4.5s						
TIY				LR	LR		
	comp=Z,110nm,10.4s						
TIY				LR	LR		
	comp=Z,240nm,17.6s						
S22A	4UR Ranch, Cre	91.59	48	P	P	11 25 37.3	+0.4
	baz=238,SNR=21						
S22A	4UR Ranch, Cre	91.59	48	*e*P	P	11 25 37.9	+0.9
	comp=Z,19nm,1.1s						
AHID	Auburn Hatcher	91.61	42	*e*P	P	11 25 38.0	+1.1
	comp=Z,28nm,1.1s						
UMPA	Umpang Tak	91.65	287	P	P	11 25 39.0	+1.7
TRF	Thorofare Moun	91.73	12	*e*P	P	11 25 35.9	-0.9
	comp=Z,69nm,0.8s						
MCMT	McKenzie Canyo	91.77	40	*e*P	P	11 25 38.3	+0.7
HARP	HAARP	91.84	14	*e*P	P	11 25 39.0	+1.8
	comp=Z,25nm,1.0s						
SEY	Seymchan	91.92	347	P	P	11 25 37.1	-0.3
	comp=Z,27nm,0.8s,baz=149,slow=4.8,SNR=63						
SEY	Seymchan	91.92	347	*de*P	P	11 25 37.5	+0.1
SEY				*i* *PP	pP	11 25 59.7	-2.5
O20A	White River Ci	91.94	46	P	P	11 25 38.4	0.0
	baz=237						
O20A	White River Ci	91.94	46	*e*P	P	11 25 39.6	+1.2
	comp=Z,8.8nm,1.0s						
XAN	Xi'an	92.01	307	P	P	11 25 39.0	+0.3
XAN				sP	sP	11 26 17.9	+4.5
XAN				PP	PP	11 29 14.7	-5.2
XAN				SKS	SKSac	11 35 59.3	-4.0
XAN				S	S	11 36 31.9	-1.1
XAN				SS	SS	11 42 43.0	-1.6
XAN				pmax	pmax		
	comp=Z,32nm,0.8s						
XAN				pmax	pmax		
	comp=Z,220nm,4.8s						
XAN				LR	LR		
	comp=Z,290nm,21.2s						
XAN				LR	LR		
	comp=Z,360nm,21.1s						
XAN				LR	LR		
	comp=Z,540nm,27.5s						
LAMP	Lampang	92.02	290	P	P	11 25 41.0	+2.0
REDW	Red Top Meadow	92.10	42	*e*P	P	11 25 39.7	+0.6
	comp=Z,34nm,1.2s						
TPAW	Teton Pass	92.11	42	*e*P	P	11 25 40.0	+0.8
	comp=Z,36nm,1.4s						
FXWY	Fox Creek	92.15	42	*e*P	P	11 25 40.6	+1.2
	comp=Z,16nm,1.1s						
SNOW	Snow King Moun	92.22	42	*e*P	P	11 25 40.5	+0.8
	comp=Z,36nm,1.1s						
DLMT	Dillon	92.22	40	*e*P	P	11 25 40.2	+0.7
	comp=Z,40nm,1.4s						
MCK	McKinley	92.24	12	*e*P	P	11 25 39.2	+0.2
	comp=Z,22nm,0.9s						
MCK	McKinley	92.24	12	*e*P	P	11 25 39.2	+0.2
MCK				pmax	pmax		

	comp=Z,22nm,0.9s						
SMCO	**Snowmass**	**92.26**	**47**	*e*P	**P**	**11 25 40.6**	**+0.4**
	comp=Z,16nm,1.1s						
833A	**Chaparral WMA,**	**92.28**	**60**	P	**P**	**11 25 40.0**	**0.0**
	baz=242						
MSO	**Missoula**	**92.33**	**38**	P	**P**	**11 25 40.1**	**+0.2**
	baz=234						
MSO	**Missoula**	**92.33**	**38**	*e*P	**P**	**11 25 41.0**	**+1.1**
MSO				*e*pP	**sP**	**11 26 09.9**	**-4.7**
IMW	**Indian Meadow**	**92.35**	**42**	*e*P	**P**	**11 25 41.1**	**+0.8**
	comp=Z,29nm,1.3s						
MOOW	**Moose Ponds**	**92.38**	**42**	*e*P	**P**	**11 25 40.9**	**+0.5**
	comp=Z,22nm,1.6s						
LOHW	**Long Hollow**	**92.39**	**42**	*e*P	**P**	**11 25 40.1**	**-0.3**
	comp=Z,22nm,1.3s						
KMI	**Kunming**	**92.44**	**297**	P	**P**	**11 25 42.6**	**+1.5**
KMI				pP	pP	11 26 04.5	-1.4
KMI				sP	sP	11 26 15.4	-0.4
KMI				S	**S**	**11 36 35.7**	**-1.9**
KMI				sS	sS	11 37 22.9	+2.6
KMI				pmax	pmax		
	comp=Z,34nm,0.7s						
KMI				pmax	pmax		
	comp=Z,180nm,5.0s						
KMI				LR	LR		
	comp=Z,390nm,22.9s						
KMI				LR	LR		
	comp=Z,220nm,19.4s						
KMI				LR	LR		
	comp=Z,330nm,38.8s						
MSTX	**Muleshoe**	**92.49**	**53**	P	**P**	**11 25 40.8**	**-0.2**
	baz=240						
MSTX	**Muleshoe**	**92.49**	**53**	*e*P	**P**	**11 25 41.2**	**+0.3**
	comp=Z,18nm,1.0s						
SDCO	**Great Sand Dun**	**92.49**	**49**	P	**P**	**11 25 41.0**	**-0.1**
	baz=239,SNR=12						
SDCO	**Great Sand Dun**	**92.49**	**49**	*e*P	**P**	**11 25 41.5**	**+0.4**
	comp=Z,10nm,1.2s						
BWN	**Browne**	**92.54**	**12**	*e*P	**P**	**11 25 42.0**	**+1.7**
	comp=Z,62nm,1.0s						
CM01	**Chiang Mai Arr**	**92.55**	**289**	*e*P	**P**	**11 25 42.4**	**+0.9**
BW06	**Boulder Array**	**92.55**	**43**	P	**P**	**11 25 40.9**	**-0.3**
	baz=236,SNR=14						
BW06	**Boulder Array**	**92.55**	**43**	*e*P	**P**	**11 25 41.2**	**0.0**
	comp=Z,10nm,1.0s						
PD31	**Pinedale Array**	**92.55**	**43**	*e*P	**P**	**11 25 41.2**	**-0.1**
PDAR	**Pinedale Array**	**92.55**	**43**	P	**P**	**11 25 40.4**	**-0.8**
	comp=Z,5.0nm,0.9s,baz=204,slow=3.3,SNR=38						
PDAR				LR	LR	11 59 00.0	
	comp=Z,156nm,21.9s,baz=246,slow=30						
LRM	**Limekiln Ridge**	**92.57**	**39**	*e*P	**P**	**11 25 42.4**	**+1.2**
LRM				*e*pP	**pP**	**11 26 09.8**	**+3.8**
CM31	**Chiang Mai Arr**	**92.58**	**289**	*e*P	**P**	**11 25 44.2**	**+2.6**
CMAR	**Chiang Mai Arr**	**92.58**	**289**	P	**P**	**11 25 42.9**	**+1.3**
	comp=Z,14nm,0.8s,baz=144,slow=3.6,SNR=7.7						
CMAR				PP	**PP**	**11 29 24.4**	**-0.1**
	comp=Z,1.3nm,0.6s,baz=121,slow=5.4,SNR=4.9						
QLMT	**Earthquake Lak**	**92.59**	**41**	*e*P	**P**	**11 25 42.7**	**+1.4**
QLMT				*e*pP	**pP**	**11 26 09.6**	**+3.4**
FLWY	**Flagg Ranch**	**92.60**	**41**	*e*P	**P**	**11 25 42.4**	**+1.1**
	comp=Z,29nm,1.1s						
YPP	**Pitchstone Pla**	**92.64**	**41**	*e*P	**P**	**11 25 43.6**	**+1.9**
	comp=Z,23nm,1.5s						
YHB	**Horse Butte**	**92.68**	**41**	*e*P	**P**	**11 25 43.0**	**+1.2**
YHB				*e*pP	**sP**	**11 26 11.7**	**-4.8**
YFT	**Old Faithful**	**92.73**	**41**	*e*P	**P**	**11 25 44.9**	**+2.9**
	comp=Z,13nm,1.0s						
CMMT	**Chiang Mai**	**92.73**	**289**	P	**P**	**11 25 43.6**	**+1.3**
CHTO	**Chiang Mai**	**92.73**	**289**	*e*P	**P**	**11 25 43.7**	**+1.4**
	comp=Z,28nm,0.8s						
CHTO	**Chiang Mai**	**92.73**	**289**	P	**P**	**11 25 43.7**	**+1.4**
	comp=Z,159nm,1.3s						
YMR	**Madison River**	**92.77**	**41**	*e*P	**P**	**11 25 43.8**	**+1.6**
	comp=Z,28nm,1.2s						
ZEA	**Zeya**	**92.79**	**331**	*e*P	**P**	**11 25 42.0**	**+0.3**
ZEA				*e*S	**SKSac**	**11 36 06.0**	**-0.6**
ZEA				*e*		11 36 41.0	
ZEA				pmax	pmax		
	comp=Z,31nm,0.8s						
ZEA				smax	smax		
	comp=N,200nm,13.0s						
H17A	**Grant Village**	**92.85**	**41**	P	**P**	**11 25 42.5**	**-0.1**
	baz=236						
H17A	**Grant Village**	**92.85**	**41**	*e*P	**P**	**11 25 44.8**	**+2.2**
	comp=N,14nm,1.2s						
DLBC	**Dease Lake**	**92.90**	**23**	*e*P	**P**	**11 25 44.0**	**+1.8**
	comp=N,8.8nm,0.9s						
BOZ	**Bozeman (W)**	**92.91**	**40**	P	**P**	**11 25 43.1**	**+0.3**
	baz=235,SNR=27						
BOZ	**Bozeman (W)**	**92.91**	**40**	*e*P	**P**	**11 25 43.0**	**+0.3**
	comp=N,19nm,1.0s						
BOZ	**Bozeman (W)**	**92.91**	**40**	*e*P	**P**	**11 25 43.0**	**+0.3**
BOZ				pmax	pmax		
	comp=Z,19nm,1.0s						
T25A	**Trinidad**	**92.92**	**50**	P	**P**	**11 25 42.9**	**-0.1**
	baz=239,SNR=5.8						
T25A	**Trinidad**	**92.92**	**50**	*e*P	**P**	**11 25 43.9**	**+0.8**
	comp=Z,9.8nm,1.1s						
JCT	**Junction City**	**92.99**	**58**	P	**P**	**11 25 43.4**	**+0.1**
	baz=242						
JCT	**Junction City**	**92.99**	**58**	*e*P	**P**	**11 25 43.6**	**+0.3**
	comp=Z,27nm,1.4s						
JCT	**Junction City**	**92.99**	**58**	*e*P	**P**	**11 25 43.6**	**+0.3**
JCT				pmax	pmax		
	comp=Z,27nm,1.4s						
WRH	**Wood River Hil**	**93.07**	**12**	*e*P	**P**	**11 25 42.4**	**-0.4**
	comp=Z,29nm,1.2s						
MLY	**Manley**	**93.10**	**11**	*e*P	**P**	**11 25 42.0**	**-1.0**
	comp=Z,11nm,1.0s						
CMAI	**Chiengmai2**	**93.14**	**291**	P	**P**	**11 25 45.4**	**+1.0**
HDA	**Harding Lake**	**93.24**	**13**	*e*P	**P**	**11 25 43.2**	**-0.4**
	comp=Z,15nm,0.8s						
CCB	**Clear Creek Bu**	**93.28**	**12**	*e*P	**P**	**11 25 42.7**	**-1.0**
	comp=Z,22nm,1.3s						
Q24A	**Divide**	**93.36**	**48**	P	**P**	**11 25 45.0**	**-0.1**
	baz=239						
HRY	**Holter Researc**	**93.44**	**39**	*e*P	**P**	**11 25 46.5**	**+1.5**
RWWY	**Rawlins**	**93.44**	**45**	*e*P	**P**	**11 25 46.9**	**+1.6**
RWWY				*e*pP	**sP**	**11 26 15.9**	**-4.1**
ISCO	**Idaho Springs**	**93.48**	**47**	P	**P**	**11 25 45.4**	**-0.3**
	baz=239						
ISCO	**Idaho Springs**	**93.48**	**47**	*e*P	**P**	**11 25 46.5**	**+0.9**
	comp=Z,5.6nm,1.1s						
COLA	**College**	**93.48**	**12**	*e*P	**P**	**11 25 44.0**	**-0.5**
	comp=Z,21nm,0.8s						
MDM	**Murphy Dome**	**93.48**	**12**	*e*P	**P**	**11 25 43.9**	**-0.8**
	comp=Z,56nm,1.8s						
ILAR	**Eielson Array**	**93.57**	**13**	P	**P**	**11 25 44.0**	**-1.1**
	comp=Z,7.8nm,1.0s,baz=220,slow=5.4,SNR=48						
ILAR				PP	**PP**	**11 29 28.5**	**-2.9**
	comp=Z,4.0nm,1.1s,baz=216,slow=7.5,SNR=5.2						
ILB	**Eielson Array**	**93.57**	**13**	*e*P	**P**	**11 25 44.3**	**-0.8**
IL1	**Eielson Array**	**93.57**	**13**	*e*P	**P**	**11 25 42.6**	**-2.4**
GO02	**Mina Guanaco**	**93.61**	**120**	*e*P	**P**	**11 25 47.9**	**+1.2**
	comp=Z,23nm,1.0s						
HHC	**Hu-ho-hao-te**	**93.69**	**314**	*e*P	**P**	**11 25 47.7**	**+1.4**
HHC				SKS	**SKSac**	**11 36 10.4**	**-2.1**
HHC				pmax	pmax		
	comp=Z,18nm,0.9s						
HHC				pmax	pmax		
	comp=Z,180nm,4.8s						
HHC				LR	LR		
	comp=Z,440nm,18.1s						
HHC				LR	LR		
	comp=Z,380nm,18.1s						
HHC				LR	LR		
	comp=Z,410nm,19.6s						
AMTX	**Amarillo**	**93.72**	**53**	P	**P**	**11 25 46.2**	**-0.4**
	baz=241						
AMTX	**Amarillo**	**93.72**	**53**	*e*P	**P**	**11 25 47.0**	**+0.4**
	comp=Z,13nm,1.1s						
NNA	**Nana**	**93.97**	**105**	LR	LR	12 00 54.0	
	comp=Z,239nm,18.1s,baz=252,slow=31						
RLMT	**Red Lodge**	**94.03**	**41**	P	**P**	**11 25 48.2**	**+0.3**
	baz=237						
RLMT	**Red Lodge**	**94.03**	**41**	*e*P	**P**	**11 25 49.6**	**+1.6**
RLMT				*e*pP	**pP**	**11 26 17.3**	**+4.5**
ABTX	**Abilene, Hawle**	**94.13**	**56**	P	**P**	**11 25 48.2**	**-0.3**
	baz=242						
ABTX	**Abilene, Hawle**	**94.13**	**56**	*e*P	**P**	**11 25 48.9**	**+0.4**
	comp=Z,43nm,1.3s						
ABTX				*e*pP	**pP**	**11 26 17.6**	**+4.3**
CD2	**Chengdu**	**94.32**	**302**	*e*P	**P**	**11 25 50.0**	**+0.6**
CD2				pP	pP	11 26 12.9	-1.3
CD2				sP	sP	11 26 22.3	-1.9
CD2				PP	**PP**	**11 29 38.2**	**+0.2**
CD2				S	**S**	**11 36 54.8**	**+1.3**
CD2				sS	sS	11 37 34.8	-1.6
CD2				SS	**SS**	**11 43 20.0**	**+2.2**
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,220nm,5.0s						
CD2				LR	LR		
	comp=Z,630nm,20.9s						
CD2				LR	LR		
	comp=Z,380nm,19.9s						
K22A	**Casper**	**94.38**	**44**	P	**P**	**11 25 49.8**	**+0.3**
	baz=238						
K22A	**Casper**	**94.38**	**44**	*e*P	**P**	**11 25 50.6**	**+1.0**
	comp=Z,12nm,1.0s						
RDOG	**Red Dog Mine**	**94.44**	**5**	*e*P	**P**	**11 25 49.9**	**+0.9**
	comp=Z,20nm,1.1s						
DAWY	**Dawson**	**94.61**	**16**	*e*P	**P**	**11 25 50.9**	**+1.0**
	comp=Z,11nm,0.8s						
EGAK	**Eagle**	**94.79**	**15**	*e*P	**P**	**11 25 50.9**	**+0.3**
	comp=Z,20nm,0.8s						
435B	**Jarrell**	**94.82**	**58**	P	**P**	**11 25 51.4**	**-0.2**
	baz=243						
KSCO	**Kaye Shedlock’**	**95.08**	**49**	P	**P**	**11 25 52.8**	**0.0**
	baz=240						
KSCO	**Kaye Shedlock’**	**95.08**	**49**	*e*P	**P**	**11 25 55.7**	**+2.9**
	comp=Z,11nm,1.0s						
COLD	**Coldfoot**	**95.21**	**10**	*e*P	**P**	**11 25 54.2**	**+1.7**
	comp=Z,9.8nm,1.0s						
WHTX	**Lake Whitney,**	**95.47**	**57**	P	**P**	**11 25 54.5**	**-0.1**
	baz=243						
WMOK	**Wichita Mounta**	**95.75**	**54**	P	**P**	**11 25 55.6**	**-0.2**
	baz=242						
WMOK	**Wichita Mounta**	**95.75**	**54**	*e*P	**P**	**11 25 56.1**	**+0.3**
	comp=Z,6.0nm,1.3s						
WMOK	**Wichita Mounta**	**95.75**	**54**	*e*P	**P**	**11 25 56.1**	**+0.3**
WMOK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
OGNE	**Ogallala**	**96.42**	**47**	P	**P**	**11 25 59.0**	**+0.2**
	baz=241						
TOLK	**Toolik Lake Re**	**96.60**	**10**	P	**P**	**11 25 59.5**	**+0.6**
	baz=205						
TOLK	**Toolik Lake Re**	**96.60**	**10**	*e*P	**P**	**11 26 01.5**	**+2.6**
	comp=Z,7.6nm,1.1s						
LZH	**Lanzhou**	**96.64**	**307**	*e*P	**P**	**11 26 01.9**	**+1.9**
LZH				pP	pP	11 26 25.0	+0.1
LZH				sP	sP	11 26 37.1	+2.3
LZH				*e*PP	**PP**	**11 29 58.4**	**+2.3**
LZH				S	**S**	**11 37 10.0**	**-3.6**
LZH				sS	sS	11 37 56.2	-0.4
LZH				pmax	pmax		
	comp=Z,25nm,1.0s						
LZH				pmax	pmax		
	comp=Z,220nm,4.3s						
LZH				LR	LR		
	comp=Z,360nm,18.5s						
LZH				LR	LR		
	comp=Z,540nm,19.1s						
LZH				LR	LR		
	comp=Z,860nm,19.1s						
LAO	**LASA Array**	**96.66**	**41**	P	**P**	**11 25 59.6**	**-0.1**
	baz=239						
MNMC	**Minye Minye**	**96.66**	**115**	*e*P	**P**	**11 26 01.8**	**+1.1**
	comp=Z,10.0nm,0.9s						
RSSD	**Black Hills**	**96.69**	**44**	P	**P**	**11 25 59.8**	**-0.3**
	baz=240						
RSSD	**Black Hills**	**96.69**	**44**	*e*P	**P**	**11 26 00.1**	**0.0**
RSSD				*e*pP	**pP**	**11 26 28.6**	**+3.7**
RSSD	**Black Hills**	**96.69**	**44**	*e*P	**P**	**11 26 00.1**	**0.0**
RSSD				*e**PP	**pP**	**11 26 28.6**	**+3.7**
YAK	**Yakutsk**	**97.49**	**338**	*e*P	**P**	**11 26 02.3**	**-0.6**
	comp=Z,27nm,0.7s						
YAK	**Yakutsk**	**97.49**	**338**	*e*P	**P**	**11 26 01.8**	**-1.1**
YAK				*e*		11 36 24.8	
YAK				pmax	pmax		
	comp=Z,21nm,0.9s						
YAK				pmax	pmax		
	comp=N,2.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,46nm,2.8s						
YAK				pmax	pmax		
	comp=N,112nm,2.5s						
541A	**Lake Charles**	**97.91**	**61**	P	Pdif	11 26 06.1	+0.4
	baz=244						
LPAZ	**La Paz**	**99.30**	**113**	P	**Pdif**	**11 26 14.1**	**+1.1**
	comp=N,2.6nm,0.8s,baz=202,slow=2.9,SNR=10.0						
LPAZ				LR	LR	12 00 34.4	
	comp=N,134nm,19.0s,baz=246,slow=29						
LPAZ	**La Paz**	**99.30**	**113**	*e*Pdif	**Pdif**	**11 26 14.8**	**+1.9**
	comp=N,3.8nm,0.9s						
LPAZ	**La Paz**	**99.30**	**113**	*e*P	**Pdif**	**11 26 14.9**	**+1.9**
LPAZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SONM	**Songino Array**	**100.35**	**318**	P	**Pdif**	**11 26 15.5**	**-0.8**
	comp=Z,0.8nm,0.5s,baz=134,slow=6.2,SNR=4.1						
SONA1	**Songino Array**	**100.35**	**318**	*e*Pdif	**Pdif**	**11 26 16.3**	**0.0**
V40A	**Witts Springs**	**100.60**	**55**	P	**Pdif**	**11 26 18.0**	**+0.5**
	baz=246						
GTA	**Gaotai**	**100.97**	**308**	*e*P	**Pdif**	**11 26 21.5**	**+2.3**
GTA				pP	pP	11 26 48.0	+3.7
GTA				sP	sP	11 26 57.7	+3.5
GTA				PP	**PP**	**11 30 34.2**	**+5.3**
GTA				SKS		11 36 46.7	
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,82nm,5.3s						
GTA				LR	LR		
	comp=Z,170nm,20.6s						
GTA				LR	LR		
	comp=Z,270nm,22.0s						
GTA				LR	LR		
	comp=Z,390nm,21.0s						
R39A	**Chumby, Stover**	**101.47**	**53**	P	**Pdif**	**11 26 21.3**	**0.0**
	baz=246						
S40A	**Lebanon**	**101.57**	**54**	P	**Pdif**	**11 26 22.5**	**+0.8**
	baz=246						
Q39A	**Willow Grove F**	**101.81**	**52**	P	**Pdif**	**11 26 24.0**	**+1.1**
	baz=246						
T41A	**Mountain View**	**101.88**	**55**	P	**Pdif**	**11 26 23.9**	**+0.7**
	baz=246						
P39B	**Salisbury**	**102.15**	**52**	P	**Pdif**	**11 26 25.1**	**+0.8**
	baz=246						
WMQ	**Urumqi**	**111.01**	**309**	PKP	**PKiKP**	**11 31 02.6**	**0.0**
WMQ				LR	LR		
	comp=Z,140nm,26.3s						
WMQ				LR	LR		
	comp=Z,160nm,35.5s						
WMQ				LR	LR		
	comp=Z,270nm,21.1s						
ZALV	**Zalesovo Beam**	**115.19**	**320**	PKP	**PKPdf**	**11 31 08.9**	**-1.2**
	comp=Z,3.5nm,0.6s,baz=161,slow=2.5,SNR=13						
MK01	**Makanchi Array**	**115.42**	**312**	*e*PKPdf	**PKPdf**	**11 31 09.6**	**-1.3**
MK31	**Makanchi Array**	**115.43**	**312**	*e*PKPdf	**PKPdf**	**11 31 10.1**	**-0.8**
MKAR	**Makanchi Array**	**115.43**	**312**	PKP	**PKPdf**	**11 31 10.1**	**-0.7**
	comp=Z,7.4nm,0.9s,baz=77,slow=2.6,SNR=28						
MAKZ	**Makanchi**	**115.64**	**312**	*e*PKPdf	**PKPdf**	**11 31 09.8**	**-1.5**
MAKZ	**Makanchi**	**115.64**	**312**	*e*PKIKP	**PKPdf**	**11 31 09.8**	**-1.5**
OPO	**Ambohidratompo**	**118.07**	**229**	PKP	**PKPdf**	**11 31 17.8**	**+0.8**
	comp=Z,2.8nm,0.6s,baz=51,slow=1.0,SNR=2.1						
KURK	**Kurchatov**	**118.47**	**315**	*e*PKPdf	**PKPdf**	**11 31 15.5**	**-1.0**
KURK	**Kurchatov**	**118.47**	**315**	*c i*PKIKP	**PKPdf**	**11 31 15.3**	**-1.2**
KURK				pmax	pmax		
	comp=Z,16nm,1.3s						
KURBB	**Kurchatov Arra**	**118.51**	**315**	PKP	**PKPdf**	**11 31 15.4**	**-1.2**
	comp=Z,8.5nm,0.9s,baz=111,slow=1.8,SNR=26						
KSH	**Kashi**	**118.52**	**303**	*e*PKP	**PKPdf**	**11 31 18.5**	**+1.3**
KSH				sPKP		11 31 55.4	
KSH				*e*PP	**PP**	**11 32 42.4**	**+6.6**
BOSA	**Boshof**	**121.48**	**203**	PKP	**PKPdf**	**11 31 23.2**	**-0.1**
	comp=Z,1.9nm,0.5s,baz=141,slow=3.5,SNR=5.6						
KBL	**Kabul**	**123.01**	**296**	*e*PKPdf	**PKPdf**	**11 31 26.6**	**+0.5**
KK31	**Karatay Array**	**123.13**	**306**	*e*PKPdf	**PKPdf**	**11 31 24.4**	**-1.4**
KK31	**Karatay Array**	**123.13**	**306**	*e*PKIKP	**PKPdf**	**11 31 24.4**	**-1.4**
KKAR	**Karatay Array**	**123.13**	**306**	*e*PKPdf	**PKPdf**	**11 31 24.4**	**-1.4**
KKAR	**Karatay Array**	**123.13**	**306**	*e*PKIKP	**PKPdf**	**11 31 24.4**	**-1.4**
BVAR	**Borovoye Array**	**123.69**	**318**	PKP	**PKPdf**	**11 31 26.3**	**-0.2**
	comp=Z,12nm,0.8s,baz=126,slow=1.9,SNR=33						
BRVK	**Borovoye**	**123.75**	**318**	*e*PKPdf	**PKPdf**	**11 31 26.2**	**-0.4**
BRVK	**Borovoye**	**123.75**	**318**	*d i*PKIKP	**PKPdf**	**11 31 25.5**	**-1.1**
BRVK				pmax	pmax		
	comp=Z,21nm,1.3s						
SPA0	**Spitsbergen Ar**	**127.43**	**356**	*e*PKPdf	**PKPdf**	**11 31 34.0**	**+0.9**
SPITS	**Spitsbergen Ar**	**127.43**	**356**	PKP	**PKPdf**	**11 31 32.8**	**-0.3**
	comp=Z,23nm,0.9s,baz=64,slow=9.5,SNR=11						
DAG	**Danmarks Havn**	**128.18**	**6**	*i* P	**PP**	**11 33 33.6**	**-5.7**
	comp=Z,27nm,1.5s						
SUMG	**Summit**	**128.37**	**15**	*e*PKPdf	**PKPdf**	**11 31 35.8**	**+0.4**
SUMG	**Summit**	**128.37**	**15**	*e*PKIKP	**PKPdf**	**11 31 35.8**	**+0.4**
SVE	**Sverdlovsk**	**128.88**	**323**	*e*PKIKP	**PKPdf**	**11 31 37.2**	**+0.9**
SVE				pmax	pmax		
	comp=Z,20nm,1.1s						
ARU	**Arti**	**130.09**	**323**	*e*PKPdf	**PKPdf**	**11 31 38.3**	**-0.3**
ARU	**Arti**	**130.09**	**323**	*i* PKIKP	**PKPdf**	**11 31 38.9**	**+0.3**
ARU						11 33 52.2	
ARU				SS	SS	11 51 09.8	-0.9
ARU				MLR	MLR		
	comp=Z,301nm,21.0s						
ABKAR	**Akbulak array**	**130.48**	**314**	*e*PKPdf	**PKPdf**	**11 31 40.3**	**+0.7**
AKTO	**Aktyubinsk**	**131.56**	**315**	PKP	**PKPdf**	**11 31 41.6**	**0.0**
	comp=Z,4.9nm,0.7s,baz=10,slow=1.4,SNR=10						
GEYT	**Alibeck**	**132.18**	**299**	PKP	**PKPdf**	**11 31 43.3**	**0.0**
	comp=Z,3.4nm,0.4s,baz=273,slow=28,SNR=1.7						
PRGR	**Permogore**	**134.31**	**333**	*e*PKIKP	**PKPdf**	**11 31 46.4**	**0.0**
PRGR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
ARCES	**ARCESS Array B**	**134.49**	**349**	PKhKP	PKPpre	11 31 35.9	
	comp=Z,5.0nm,0.8s,baz=52,slow=1.4,SNR=7.9						
ARCES				PKP	**PKPdf**	**11 31 46.5**	**-0.1**
	comp=Z,14nm,0.7s,baz=35,slow=0.6,SNR=25						
ARCES	**ARCESS Array B**	**134.49**	**349**	PKPpre	PKPpre	11 31 35.9	
ARCES				*e*PKPpre	PKPpre	11 31 41.1	
ARCES				PKP	**PKPdf**	**11 31 46.5**	**-0.1**
ARE0	**ARCESS Array S**	**134.49**	**349**	*e*PKPdf	**PKPdf**	**11 31 46.5**	**-0.1**
KLMR	**Klimovskoe**	**137.19**	**334**	*e*PKIKP	PKPpre	11 31 48.2	
KLMR				pmax	pmax		
	comp=Z,18nm,1.2s						
KLMR	**Klimovskoe**	**137.19**	**334**	*e*PKPdf	PKPpre	11 31 48.3	
KLMR				AMP		11 31 54.8	
	comp=Z,18nm,1.2s						
KLMR				*e*SKP		11 35 14.0	
GROC	**Groznyy**	**141.12**	**307**	*e*PKIKP	**PKPdf**	**11 31 58.0**	**-1.6**
GROC				*e*		11 32 21.1	
GROC				*e*		11 32 29.3	
GROC				*e*		11 39 00.2	
GROC				pmax	pmax		
	comp=Z,33nm,1.0s						
RAYN	**Ar Rayn**	**141.20**	**276**	*e*PKPpre	PKPpre	11 31 55.5	
FIA1	**FINESS Array S**	**141.26**	**342**	*e*PKPpre	PKPpre	11 31 53.5	
FINES	**FINESS Array B**	**141.26**	**342**	PKhKP	PKPpre	11 31 52.8	
	comp=Z,7.4nm,0.7s,baz=70,slow=2.3,SNR=18						
OBN	**Obninsk**	**141.89**	**329**	*i* PKIKP	**PKPdf**	**11 31 57.8**	**-2.7**
OBN				*i*		11 35 02.0	
OBN				pmax	pmax		
	comp=Z,15nm,1.0s						
ZEI	**Tsey**	**142.57**	**307**	*i* PKIKP	PKPpre	11 31 58.7	
ZEI				pmax	pmax		
	comp=Z,20nm,0.9s						
NCK	**Nalchik**	**142.62**	**308**	*i* PKIKP	**PKPdf**	**11 32 00.1**	**-2.2**
VSR	**Storozhevoye**	**142.64**	**322**	*e*PKHKP	PKPpre	11 31 56.9	
VSR				pmax	pmax		
	comp=Z,20nm,0.9s						
VORD	**Divnogorie**	**142.68**	**322**	*e*PKHKP	PKPpre	11 31 57.3	
VORD				pmax	pmax		
	comp=Z,20nm,1.1s						
IGDI	**IGDIR**	**143.00**	**302**	*i* P	**PKPdf**	**11 31 59.8**	**-3.3**
KBZ	**Khabaz**	**143.05**	**309**	PKhKP	PKPpre	11 31 59.2	
	comp=Z,7.5nm,0.9s,baz=115,slow=3.4,SNR=10						
KIV	**Kislovodsk**	**143.14**	**309**	*e*PKPdf	**PKPdf**	**11 32 04.0**	**+0.8**
KIV	**Kislovodsk**	**143.14**	**309**	*e*PKIKP	**PKPdf**	**11 32 02.2**	**-1.1**
KIV				pmax	pmax		
	comp=Z,22nm,1.0s						
AKH	**Akhalkalaki**	**143.16**	**305**	⇑*i*P	PKPbc	11 32 02.1	+1.4
AKH	**Akhalkalaki**	**143.16**	**305**	*e*PKPpre	PKPbc	11 32 01.6	+0.9
AKH	**Akhalkalaki**	**143.16**	**305**	*e*PKIKP	PKPbc	11 32 01.6	+0.9
CLDR	**Caldiran**	**143.23**	**301**	*e*P	PKPab	11 31 59.9	+0.2
NEY	**Neytrino**	**143.30**	**308**	*i* PKIKP	PKPbc	11 32 02.3	+1.3
VSU	**Vasula**	**143.48**	**339**	*de*PKIKP	PKPbc	11 32 00.8	+0.1
HAKT	**HAKKARI**	**143.59**	**299**	*i* P	PKPbc	11 32 02.2	+0.1
CUKT	**Cukurca**	**143.71**	**298**	*e*P	PKPab	11 32 00.5	-1.0
VANB	**Van**	**143.72**	**300**	*e*P	PKPab	11 32 01.1	-0.4
AGRB	**Hanur-Agry**	**143.87**	**302**	*e*P	PKPab	11 32 01.1	-1.0
TUTA	**Tutak**	**144.04**	**302**	*i* P	PKPbc	11 32 04.3	+1.0
EATA	**Eleskirt**	**144.20**	**303**	*i* P	PKPbc	11 32 04.4	+0.4
ARTV	**Artvin**	**144.36**	**305**	*i* P	PKPbc	11 32 04.8	+0.5
DAGI	**Agillar**	**144.39**	**305**	*i* P	PKPbc	11 32 04.3	0.0
DBOC	**Borcka**	**144.52**	**305**	*i* P	PKPbc	11 32 04.6	+0.1
BCA	**Borcka**	**144.53**	**306**	*e*P	**PKPab**	**11 32 03.9**	**-0.4**
DDEM	**Demirkent**	**144.56**	**305**	*i* P	**PKPdf**	**11 32 05.5**	**-0.3**
NB2	**NORSAR Subarra**	**144.56**	**353**	PKP	**PKPab**	**11 32 02.9**	**-0.9**
	comp=Z,265nm,2.0s,baz=16,slow=3.2						
NB2	**NORSAR Subarra**	**144.56**	**353**	PKP	**PKPab**	**11 32 02.9**	**-0.9**
	baz=16,slow=3.2						
DBAD	**Bademkaya**	**144.57**	**305**	*i* P	**PKPab**	**11 32 04.7**	**+0.1**
SIRT	**Sirnak**	**144.60**	**299**	*e*P	**PKPab**	**11 32 04.8**	**0.0**
HOMI	**Horasan**	**144.61**	**303**	*i* P	**PKPdf**	**11 32 06.1**	**0.0**
EKAR	**Karacoban**	**144.63**	**302**	*i* P	PKPbc	11 32 05.7	+0.4
GURO	**Guroymak-BITLI**	**144.77**	**301**	*e*P	**PKPab**	**11 32 03.4**	**-2.1**
SRTM	**Siirt_Merkez**	**144.94**	**300**	*i* P	PKPbc	11 32 05.1	-1.0
ERZM	**Erzurum**	**145.04**	**303**	*i* P	**PKPdf**	**11 32 07.4**	**+0.4**
HFS	**Hagfors**	**145.11**	**350**	PKPbc	**PKPbc**	**11 32 05.1**	**-0.6**
	comp=Z,128nm,0.8s,baz=29,slow=3.4,SNR=158						
VRTB	**Varto-Mus**	**145.12**	**302**	*e*P	**PKPbc**	**11 32 06.6**	**-0.1**
CHOM	**Cayeli-Rize**	**145.24**	**305**	*e*P	**PKPbc**	**11 32 06.2**	**-0.6**
SOC	**Sochi**	**145.31**	**310**	*i* PKP2	**PKPbc**	**11 32 05.9**	**-1.0**
SOC				*e*SS	SS	11 54 14.4	+2.8
SOC				*e*SSS	SSS	11 59 40.8	
SOC				pmax	pmax		
	comp=Z,56nm,0.6s						
SOC				MLR	MLR		
	comp=Z,238nm,17.0s						
BNGL	**BINGOL**	**145.39**	**301**	*i* P	**PKPab**	**11 32 08.6**	**+0.7**
BTMN	**Batman**	**145.47**	**300**	*i* P	**PKPdf**	**11 32 07.1**	**-0.4**
SVAN	**Silvan-Diyarba**	**145.48**	**300**	*e*P	**PKPdf**	**11 32 07.0**	**-0.5**
KOPT	**Kop Dagi**	**145.68**	**303**	*i* P	**PKPab**	**11 32 09.6**	**+0.6**
BNGB	**Bingˆ¶l**	**145.74**	**302**	*e*P	**PKPab**	**11 32 08.9**	**-0.2**
BGOL	**Bingol**	**145.75**	**302**	*i* P	**PKPab**	**11 32 09.6**	**+0.5**
IZAR	**Zarasai**	**145.76**	**336**	*e*P	**PKPbc**	**11 32 08.0**	**+0.1**
IZAR				IAmb	IAmb	11 32 10.8	
	comp=Z,158nm,0.8s						
IDID	**Didziasalis**	**145.91**	**335**	*e*P	**PKPbc**	**11 32 08.4**	**0.0**
IDID				IAmb	IAmb	11 32 11.2	
	comp=Z,148nm,1.1s						
MARD	**Mardin**	**145.94**	**299**	*i* P	**PKPbc**	**11 32 09.4**	**+0.1**
ISAL	**Salakas**	**145.94**	**336**	*e*P	**PKPbc**	**11 32 08.5**	**+0.1**
ISAL				IAmb	IAmb	11 32 11.4	
	comp=Z,158nm,1.1s						
HANI	**Diyarbakir_Han**	**146.06**	**301**	*i* P	**PKPab**	**11 32 10.0**	**-0.3**
IIGN	**Ignalina**	**146.08**	**336**	*e*P	**PKPbc**	**11 32 09.1**	**+0.2**
IIGN				IAmb	IAmb	11 32 11.8	
	comp=Z,135nm,0.8s						
KONO	**Kongsberg**	**146.09**	**354**	*e*PKPdf	**PKPbc**	**11 32 08.5**	**-0.2**
KONO	**Kongsberg**	**146.09**	**354**	*ce*PKP2	**PKPbc**	**11 32 08.4**	**-0.4**
KONO				pmax	pmax		
	comp=Z,131nm,0.8s						
MAZI	**Mazidag**	**146.18**	**299**	*e*P	**PKPbc**	**11 32 10.3**	**+0.4**
NACGM	**Naroch**	**146.21**	**335**	*e*P	**PKPbc**	**11 32 09.0**	**-0.3**
NACGM				PM		11 32 12.0	
	comp=Z,1.4nm,1.0s						
DYBB	**Diyarbakir**	**146.34**	**300**	*e*P	**PKPbc**	**11 32 10.1**	**-0.2**
ERZN	**Erzincan**	**146.35**	**303**	*e*P	**PKPab**	**11 32 11.5**	**+0.1**
ANN	**Anapa**	**146.44**	**313**	*e*PKP2	**PKPbc**	**11 32 09.9**	**-0.4**
ANN				pmax	pmax		
	comp=Z,146nm,0.9s						
ANN				pmax	pmax		
	comp=Z,141nm,0.9s						
KELT	**Kelkit**	**146.57**	**304**	*i* P	**PKPdf**	**11 32 09.7**	**+0.2**
TNCL	**Tunceli-Merkez**	**146.59**	**302**	*i* P	**PKPab**	**11 32 13.0**	**+0.7**
PTK	**Pertek**	**146.75**	**302**	*e*P	**PKPbc**	**11 32 11.7**	**0.0**
ESPY	**Espiye-Giresun**	**146.78**	**306**	*e*P	**PKPbc**	**11 32 10.6**	**-0.8**
SVRC	**Sivrice-ELAZID**	**146.91**	**301**	*e*P	**PKPab**	**11 32 13.1**	**-0.6**
GRSN	**GIRESUNGRSN**	**147.11**	**306**	*i* P	**PKPbc**	**11 32 11.8**	**-0.6**
ELZG	**Elazig**	**147.14**	**301**	*i* P	**PKPbc**	**11 32 13.7**	**+1.0**
SUSE	**Susehri**	**147.34**	**305**	*i* P	**PKPbc**	**11 32 13.3**	**+0.1**
KEMA	**Kemaliye**	**147.35**	**303**	*i* P	**PKPdf**	**11 32 12.0**	**+1.3**
SANL	**SANLIURFA_Merk**	**147.37**	**299**	*i* P	**PKPbc**	**11 32 13.5**	**+0.3**
ORDU	**Ordu-Boztepe**	**147.39**	**306**	*i* P	**PKPbc**	**11 32 13.5**	**+0.4**
URFA	**Urfa**	**147.46**	**299**	*e*P	**PKPbc**	**11 32 12.7**	**-0.8**
MALT	**Malatya**	**147.60**	**301**	*e*P	**PKPbc**	**11 32 14.8**	**+0.9**
CUZAR	**Zara_SIVAS**	**147.75**	**304**	*i* P	**PKPbc**	**11 32 15.2**	**+0.9**
HEKM	**Malatya_Hekimh**	**147.84**	**302**	*i* P	**PKPbc**	**11 32 16.0**	**+1.3**
RSDY	**Resadiye-TOKAT**	**147.94**	**305**	*e*P	**PKPbc**	**11 32 13.6**	**-1.1**
CUKAN	**kangal_SIVAS**	**148.11**	**303**	*i* P	**PKPbc**	**11 32 16.6**	**+1.2**
AKASG	**Malin Array Be**	**148.12**	**328**	PKPbc	**PKPbc**	**11 32 13.8**	**-0.9**
	comp=Z,48nm,0.7s,baz=44,slow=4.1,SNR=67						
AKBB	**Malin Array Si**	**148.12**	**328**	*e*PKPdf	**PKPbc**	**11 32 13.6**	**-1.1**
KIEV	**Kiev**	**148.13**	**328**	*e*PKPdf	**PKPbc**	**11 32 13.6**	**-1.1**
KIEV	**Kiev**	**148.13**	**328**	*i* PKIKP	**PKPdf**	**11 32 11.2**	**-0.2**
AK11	**Malin Array Si**	**148.16**	**328**	*e*PKPdf	**PKPdf**	**11 32 11.0**	**-0.5**

SUW	Suwalki	148.23	337	ePKP	PKPbc	11 32 14.3	-0.6
SUW	Suwalki	148.23	337	ePKPbc	PKPbc	11 32 14.8	0.0
SUW	Suwalki	148.23	337	ePKP2	PKPbc	11 32 14.3	-0.6
SCER	sogukcermik	148.23	304	i P	PKPbc	11 32 16.7	+1.1
DARE	Darende-Malaty	148.27	302	eP	PKPbc	11 32 14.2	-1.5
SIM	Simferopol’	148.53	315	d iPKP2	PKPbc	11 32 16.0	0.0
SIM				pmax	pmax		
	comp=Z,67nm,0.6s						
SIM				pmax	pmax		
	comp=Z,49µm,10.9s						
TOKT	Tokat	148.54	305	eP	PKPdf	11 32 13.3	+0.8
KVT	Kavak	148.67	307	eP	PKPdf	11 32 13.6	+0.9
GAZ	Gaziantep	148.77	299	eP	PKPbc	11 32 16.2	-0.8
HAVZ	Havza	148.91	307	i P	PKPbc	11 32 17.7	+0.6
KMRS	Kahramanmaras	148.95	300	eP	PKPbc	11 32 16.5	-0.9
KUZU	Kuzuini	148.95	299	i P	PKPbc	11 32 18.7	+1.3
SINO	SINOP_Merkez	148.96	309	i P	PKPbc	11 32 17.1	0.0
CUSAR	Sarkisla-SIVAS	149.00	304	i P	PKPbc	11 32 17.2	-0.4
DIKM	Dikmen	149.05	308	eP	PKPdf	11 32 15.1	+1.9
SARI	SarD1z-Kayseri	149.12	302	eP	PKPbc	11 32 16.2	-1.8
ANDN	Andirin	149.36	300	i P	PKPbc	11 32 19.3	+0.8
BNN	Bunyan	149.45	303	eP	PKPdf	11 32 15.6	+1.5
ASF	Jabal al Asfar	149.61	290	PKPbc	PKPbc	11 32 19.9	+0.6
	comp=Z,20nm,0.9s,baz=31,slow=1.1,SNR=12						
BSD	Bornholm Skovb	149.63	346	⇓iP	PKPbc	11 32 17.5	-0.9
	comp=Z,43nm,0.8s						
YOZ	Yozgat	149.63	305	eP	PKPdf	11 32 16.5	+2.1
COAL	Corum-Alaca	149.69	306	i P	PKPbc	11 32 19.6	+0.4
CTAK	Corum_Osmancik	149.71	307	i P	PKPbc	11 32 19.7	+0.4
YURE	YUREGIR	150.07	299	i P	PKPbc	11 32 19.4	-0.7
SORM	Soroca	150.19	324	⇑iP	PKPbc	11 32 19.8	-0.2
SORM	Soroca	150.19	324	⇑PKIKP	PKPbc	11 32 19.8	-0.2
ILGA	Ilgaz	150.34	308	i P	PKPbc	11 32 21.6	+0.7
ILGA	Ilgaz	150.34	308	ePKPdf	PKPdf	11 32 17.0	+1.4
EKA	Eskdalemuir Ar	150.44	7	PKPbc	PKPbc	11 32 19.2	-1.1
	comp=Z,4.4nm,0.6s,baz=314,slow=1.4,SNR=11						
ESK	Eskdalemuir	150.46	7	ePKPbc	PKPbc	11 32 20.7	+0.3
KIS	Kishinev	150.63	322	ePKP	PKPbc	11 32 21.0	-0.1
KIS				LRM	MLR	12 37 00.0	
	comp=Z,700nm,24.0s						
KIS	Kishinev	150.63	322	ePKIKP	PKPbc	11 32 21.0	-0.1
KIS				i		11 32 28.0	
KIS				e		11 32 55.0	
KIS				e		11 36 00.0	
GULE	Gulek	150.65	300	i P	PKPbc	11 32 21.8	+0.1
GKP	Gorka Klasztor	150.74	342	ePKP	PKPbc	11 32 21.2	+0.1
GKP	Gorka Klasztor	150.74	342	ePKIKP	PKPbc	11 32 21.2	+0.1
ELDT	Eldivan	150.75	307	i P	PKPbc	11 32 21.3	-0.5
MMAI	Mount Meron Ar	150.81	292	PKPbc	PKPbc	11 32 23.3	+1.3
	comp=Z,49nm,0.7s,baz=84,slow=7.9,SNR=16						
BEL	Belsk	150.84	337	ePKP	PKPbc	11 32 21.7	+0.3
BEL	Belsk	150.84	337	ePKIKP	PKPbc	11 32 21.7	+0.3
BR131	Keskin Array S	150.84	306	ePKPdf	PKPdf	11 32 17.4	+1.0
BRTR	Keskin Array B	150.84	306	PKP	PKPdf	11 32 15.1	-1.2
	comp=Z,3.1nm,0.8s,baz=130,slow=1.9,SNR=10						
BRTR				PKPbc	PKPbc	11 32 21.4	-0.6
	comp=Z,30nm,0.9s,baz=116,slow=2.9,SNR=43						
BRTR				PKPab	PKPab	11 32 29.6	0.0
	comp=Z,29nm,0.7s,baz=110,slow=3.9,SNR=16						
AKSY	AKSARAY - Alti	151.07	303	i P	PKPbc	11 32 22.0	-0.5
ANTO	Ankara	151.41	306	⇓iP	PKPbc	11 32 22.9	-0.3
ANTO	Ankara	151.41	306	ePKPdf	PKPdf	11 32 18.3	+1.2
ANTO	Ankara	151.41	306	⇓PKIKP	PKPbc	11 32 22.9	-0.3
BR231	Keskin MP Arra	151.43	306	ePKPbc	PKPbc	11 32 24.6	+1.2
TLCR		151.67	319	⇑iP	PKPbc	11 32 23.8	+0.3
TLCR		151.67	319	⇑PKIKP	PKPbc	11 32 23.8	+0.3
KWP	Kalwaria Pacla	151.84	332	ePKP	PKPbc	11 32 23.8	0.0
KWP	Kalwaria Pacla	151.84	332	ePKPbc	PKPbc	11 32 23.8	0.0
KWP	Kalwaria Pacla	151.84	332	ePKIKP	PKPbc	11 32 23.8	0.0
CFR	Carcaliu	152.07	320	⇓iP	PKPbc	11 32 24.5	+0.1
CFR	Carcaliu	152.07	320	⇓PKIKP	PKPbc	11 32 24.5	+0.1
TESR	Tescani	152.11	323	⇓iP	PKPbc	11 32 24.6	+0.1
BUR08	Bucovina Ar. S	152.12	326	ePKPdf	PKPdf	11 32 19.2	+1.2
BIZ	Bicaz	152.13	324	⇓iP	PKPbc	11 32 25.4	+0.8
BUR04	Bucovina Ar. S	152.13	326	ePKPdf	PKPdf	11 32 19.3	+1.3
BURAR	Bucovina Array	152.13	326	⇑iP	PKPbc	11 32 25.8	+1.1
BURAR	Bucovina Array	152.13	326	⇑PKIKP	PKPbc	11 32 25.8	+1.1
CSS	Mathiatis	152.26	296	ePKPbc	PKPbc	11 32 24.8	-0.5
PETR	Petresti	152.27	321	⇓iP	PKPab	11 32 36.2	+1.1
TIRR	Tirgusor	152.31	318	⇑iP	PKPbc	11 32 26.0	+1.0
TIRR	Tirgusor	152.31	318	ePKPbc	PKPbc	11 32 25.1	+0.1
TIRR	Tirgusor	152.31	318	⇑PKIKP	PKPbc	11 32 26.0	+1.0
ODBI	Odobesti	152.35	322	⇓iP	PKPab	11 32 31.5	-3.9
HARR	Harsova	152.47	319	⇓iP	PKPbc	11 32 26.4	+1.1
HARR	Harsova	152.47	319	⇓PKIKP	PKPbc	11 32 26.4	+1.1
VRI	Vrincioaia	152.47	322	⇑iP	PKPbc	11 32 26.1	+0.7
VRI	Vrincioaia	152.47	322	⇑PKIKP	PKPbc	11 32 26.1	+0.7
OJC	Ojcow	152.53	336	ePKP	PKPbc	11 32 25.3	0.0
OJC	Ojcow	152.53	336	ePKPdf	PKPdf	11 32 19.4	+1.1
OJC	Ojcow	152.53	336	ePKIKP	PKPdf	11 32 19.4	+1.1
UZH	Uzhgorod	152.78	331	ePKIKP	PKPdf	11 32 19.1	+0.4
UZH				e		11 32 43.7	
CRVS	Cervenica-Dubn	152.92	332	ePKIKP	PKPdf	11 32 19.8	+0.8
CRVS				e		11 32 37.6	
CRVS	Cervenica-Dubn	152.92	332	ePKP	PKPdf	11 32 19.8	+0.8
CRVS				e		11 32 27.0	
CRVS				e		11 32 37.6	
NIE	Niedzica	152.99	334	ePKP	PKPbc	11 32 27.0	+0.6
NIE	Niedzica	152.99	334	ePKIKP	PKPbc	11 32 27.0	+0.6
ISR	Istrita	153.02	321	⇑iP	PKPbc	11 32 27.6	+0.9
ISR	Istrita	153.02	321	⇑PKIKP	PKPbc	11 32 27.6	+0.9
TRPA	Tarpa	153.04	330	⇓iP	PKPbc	11 32 27.3	+0.8
TRPA	Tarpa	153.04	330	ePKPdf	PKPab	11 32 39.0	+0.8
MLR	Muntele Rosu	153.13	322	PKPbc	PKPbc	11 32 27.7	+0.7
	comp=Z,1.9nm,0.7s,baz=22,slow=4.0,SNR=8.3						
MLR	Muntele Rosu	153.13	322	⇑iP	PKPbc	11 32 27.4	+0.4
MLR	Muntele Rosu	153.13	322	ePKPdf	PKPdf	11 32 20.0	+0.5
MLR				PKPbc	PKPbc	11 32 27.7	+0.7
MLR	Muntele Rosu	153.13	322	⇑PKIKP	PKPbc	11 32 27.4	+0.4
DOPR	Dopca	153.13	324	⇓iP	PKPbc	11 32 28.1	+1.3
KSP	Ksiaz	153.16	341	ePKP	PKPbc	11 32 26.8	+0.1
KSP	Ksiaz	153.16	341	ePKIKP	PKPbc	11 32 26.8	+0.1
OKC	Ostrava-Krasne	153.44	337	ePP	PP	11 36 08.6	-5.0
OKC				AMS	AMS	12 42 50.0	
	comp=Z,300nm,25.0s						
LANS	Liptovska Anna	153.53	335	ePKIKP	PKPdf	11 32 21.0	+1.1
LANS				e		11 32 42.1	
LANS	Liptovska Anna	153.53	335	ePKP	PKPdf	11 32 21.0	+1.1
LANS				e		11 32 29.5	
LANS				e		11 32 42.1	
UPC	Upice	153.54	341	⇑ePKP	PKPbc	11 32 28.6	+1.0
UPC				ex	x	11 32 31.4	
UPC				ePKPAB	PKPab	11 32 41.2	+0.9
UPC				ePP	PP	11 36 08.8	-5.3
UPC				AMS	AMS	12 35 10.0	
	comp=Z,300nm,20.6s						
UPC	Upice	153.54	341	ePKIKP	PKPbc	11 32 28.6	+1.0
UPC				MLR	MLR		
	comp=Z,300nm,20.6s						
DPC	Dobruska-Polom	153.59	340	⇑ePKP	PKPbc	11 32 28.2	+0.5
DPC				ex	x	11 32 31.4	
DPC				ePKPAB	PKPab	11 32 41.2	+0.7
DPC				ePP	PP	11 36 10.4	-4.0
DPC	Dobruska-Polom	153.59	340	ePKIKP	PKPbc	11 32 28.2	+0.5
DPC				e		11 36 10.4	
CLL	Collm	153.60	345	ePKPdf	PKPdf	11 32 20.0	+0.2
CLL				⇑iPKPbc	PKPbc	11 32 27.8	+0.2
	comp=Z,38nm,0.8s						
CLL				i		11 32 30.9	
	comp=Z,44nm,0.9s						
CLL				i PKPab	PKPab	11 32 40.2	-0.2
	comp=Z,45nm,0.9s						
CLL				ePP	PP	11 36 12.0	-2.3
CLL				eSKKSac	SKKSac	11 42 52.0	-4.0
CLL				e		11 46 06.0	
CLL				ePPS	PPS	11 49 14.0	
CLL				eSS	SS	11 55 42.0	0.0
CLL				e		12 06 24.0	
CLL				L	L	12 39 00.0	
	comp=Z,200nm,21.4s						
CLL	Collm	153.60	345	⇑iPKIKP	PKPbc	11 32 27.8	+0.2
CLL				i		11 32 40.2	
CLL				pmax	pmax		
	comp=Z,38nm,0.8s						
CLL				pmax	pmax		
	comp=Z,45nm,0.9s						
CLL				MLR	MLR		
	comp=Z,300nm,21.0s						
PRD	Provadia	153.60	317	P	PKPbc	11 32 27.8	-0.1
VOIR		153.65	323	⇑iP	PKPbc	11 32 29.2	+1.1
VOIR		153.65	323	⇑PKIKP	PKPbc	11 32 29.2	+1.1
MORC	Moravsky Berou	153.69	338	⇓iP	PKPbc	11 32 29.3	+1.3
MORC	Moravsky Berou	153.69	338	ePKPdf	PKPdf	11 32 20.6	+0.5
MORC				ePKPbc	PKiKP	11 32 28.3	+0.2
MORC	Moravsky Berou	153.69	338	ePKIKP	PKPdf	11 32 20.6	+0.5
MORC	Moravsky Berou	153.69	338	ePKP	PKPdf	11 32 19.9	-0.2
MORC				e		11 32 29.0	
MORC				e		11 32 42.2	
BRG	Berggiesshubel	153.78	344	ePKP	PKPdf	11 32 20.8	+0.7
	comp=Z,16nm,1.3s						
BRG	Berggiesshubel	153.78	344	i PKP	PKPbc	11 32 28.1	+0.1
	comp=Z,26nm,0.8s						
BRG	Berggiesshubel	153.78	344	i PKP	PKPab	11 32 40.7	-0.5
	comp=Z,53nm,1.1s						
BRG	Berggiesshubel	153.78	344	ePKIKP	PKPdf	11 32 20.8	+0.7
BRG				i		11 32 40.7	
BRG				pmax	pmax		
	comp=Z,16nm,1.3s						
BRG				pmax	pmax		
	comp=Z,53nm,1.1s						
LTVH	L^'tav^'rtes,	153.88	330	ePKPdf	PKPab	11 32 43.8	+2.0
ARR	Arges	153.92	323	⇑iP	PKPbc	11 32 30.3	+1.7
PVCC	Panska Ves	153.93	343	⇑ePKP	PKPbc	11 32 29.3	+0.9
PVCC				ex	x	11 32 32.3	
PVCC				ePKPAB	PKPab	11 32 42.3	+0.4
PVCC				ePP	PP	11 36 10.2	-6.0
PVCC	Panska Ves	153.93	343	ePKIKP	PKPbc	11 32 29.3	+0.9
VYHS	Vyhne	154.30	335	ePKP	PKPbc	11 32 30.2	+0.9
VYHS				e		11 32 43.9	
PSZ	Piszkesteto	154.34	333	ePKPdf	PKPab	11 32 44.0	+0.1
VRAC	Vranov	154.41	339	⇓iP	PKPab	11 32 44.7	+0.7
VRAC	Vranov	154.41	339	⇓PKP2	PKPab	11 32 44.7	+0.7
VRAC	Vranov	154.41	339	ePKP	PKPdf	11 32 21.0	-0.1
VRAC				e		11 32 30.4	
GOPC	GO Pecny, Ondr	154.43	342	ePKPAB	PKPab	11 32 43.2	-0.9
GOPC				ePP	PP	11 36 13.8	-5.3
GOPC				AMS	AMS	12 37 10.0	
	comp=Z,300nm,23.1s						
GOPC	GO Pecny, Ondr	154.43	342	ePKP2	PKPab	11 32 43.2	-0.9
GOPC				MLR	MLR		
	comp=Z,300nm,23.1s						
PRU	Pruhonice	154.43	342	ePKPAB	PKPab	11 32 43.8	-0.2
PRU				ePP	PP	11 36 14.1	-4.9
PRU				AMS	AMS	12 35 50.0	
	comp=Z,300nm,22.7s						
PRU	Pruhonice	154.43	342	ePKP2	PKPab	11 32 43.8	-0.2
PRU				e		11 36 14.1	
PRU				MLR	MLR		
	comp=Z,300nm,22.7s						
JAVC	Velka Javorina	154.43	337	ePKP	PKPdf	11 32 22.2	+1.0
JAVC				e		11 32 31.6	
JAVC				e		11 32 45.4	
JMB	Yambol	154.50	316	P	PKPbc	11 32 30.7	+0.8
KRUC	Moravsky	154.69	339	ePKP	PKPdf	11 32 21.1	-0.3
KRUC				e		11 32 30.8	
KRUC				e		11 32 45.3	
NKC	Novy Kostel	154.73	345	ePKPAB	PKPab	11 32 45.4	+0.1
NKC				epPKP	pPKPdf	11 32 50.5	+3.1
NKC				ex	x	11 32 57.4	
NKC				ePP	PP	11 36 12.8	-7.9
NKC				AMS	AMS	12 34 20.0	
	comp=Z,400nm,23.0s						
NKC	Novy Kostel	154.73	345	ePKP2	PKPab	11 32 45.4	+0.1
NKC				MLR	MLR		
	comp=Z,400nm,23.0s						
MODS	Modra-Piesok	154.98	337	ePKIKP	PKPbc	11 32 31.5	+0.8
MODS	Modra-Piesok	154.98	337	ePKP	PKPbc	11 32 31.5	+0.8
MODS				e		11 32 47.4	
BUD	Budapest	155.05	333	ePKPdf	PKPab	11 32 46.8	0.0
BZS	Buzias	155.31	327	⇓iP	PKPdf	11 32 30.4	+8.0
BZS	Buzias	155.31	327	⇓PKIKP	PKPdf	11 32 30.4	+8.0
MEM	Membach	155.36	355	⇑PKP	PKPab	11 32 48.3	+0.4
CSKK	Csˆ‡kako	155.45	334	ePKPdf	PKPab	11 32 45.6	-2.9
KHC	Kasperske Hory	155.47	343	ex	x	11 32 32.5	
KHC				ex	x	11 32 35.5	
KHC				ePKPAB	PKPab	11 32 49.3	+0.7
KHC				epPKP	pPKPab	11 33 17.8	+4.2
KHC				ePP	PP	11 36 15.7	-9.2
KHC				AMS	AMS	12 35 40.0	
	comp=Z,300nm,23.3s						
KHC	Kasperske Hory	155.47	343	ePKPdf	PKPdf	11 32 22.7	+0.1
KHC				ePKPdif	pPKPdf	11 32 32.5	-16
KHC				ePKPab	PKPab	11 32 48.9	+0.3
KHC	Kasperske Hory	155.47	343	ePKIKP	PKPdf	11 32 32.5	+10
KHC				MLR	MLR		
	comp=Z,300nm,23.3s						
GRFO	Grafenberg	155.51	347	ePKPab	PKPab	11 32 48.8	+0.2
BCLA	Clavier	155.60	356	⇑PKP	PKPab	11 32 48.4	-0.6
ALN	Alexandroupoli	155.66	313	ePKPab	PKPab	11 32 49.5	-0.2
KDZ	Kurdzhali	155.67	315	P	PKPdf	11 32 33.8	+11
GEC2	GERESS Array S	155.70	342	ePKPab	PKPab	11 32 49.6	0.0
GERES	GERESS Array B	155.70	342	PKP	PKPdf	11 32 22.1	-0.8
	comp=Z,0.2nm,0.3s,baz=194,slow=1.1,SNR=7.0						
GERES				PKPab	pPKPdf	11 32 48.8	-0.1
	comp=Z,9.5nm,0.9s,baz=62,slow=3.2,SNR=16						
GEA0	GERESS Array S	155.70	342	ePKPdf	PKPdf	11 32 22.8	-0.2
MDVR	Moldovita	155.85	325	⇑iP	PKPab	11 32 50.1	-0.3
CONA	Conrad Observa	155.85	338	ePKPab	PKPab	11 32 51.1	+0.7
	comp=Z,29nm,1.0s,SNR=7.1						
PGB	Panagyurishte	155.93	319	P	PKPdf	11 32 32.2	+8.8
DOU	Dourbes	155.96	357	⇑PKP	PKPab	11 32 49.9	-0.6
MORH	Mˆ‡rˆ¡gy, Hung	156.22	332	⇑ePKPdf	PKPab	11 32 51.5	-0.3
WLF	Walferdange	156.29	354	⇑PKP	PKPab	11 32 52.5	+0.5
MOA	Molln	156.43	340	ePKPab	PKPab	11 32 53.2	+0.5
	comp=Z,16nm,1.0s,SNR=9.0						
VTS	Vitosha	156.47	320	⇑iP	PKPab	11 32 53.5	+0.2
VTS	Vitosha	156.47	320	ePKPab	PKPab	11 32 54.0	+0.8
VTS	Vitosha	156.47	320	⇑PKP2	PKPab	11 32 53.5	+0.2
ARSA	Arzberg	156.55	338	ePKPab	PKPab	11 32 53.6	+0.3
	comp=Z,12nm,0.8s,SNR=7.4						
BEHE	Becsehely	156.76	335	ePKPdf	PKPab	11 32 54.3	+0.1
DIVS	Divibare	157.20	326	ePKPdf	PKPdf	11 32 24.4	-0.6
SOKA	Soboth	157.22	338	ePKPab	PKPab	11 32 56.3	+0.1
	comp=Z,47nm,1.8s,SNR=9.8						
PERS	Pernice	157.22	338	ePKPdf	PKPdf	11 32 22.2	-2.7
PERS				ePKPab	PKPab	11 32 55.9	-0.3
GROS	Grobnik	157.24	337	ePKPdf	PKPdf	11 32 25.0	0.0
GROS				i PKPab	PKPab	11 32 55.9	-0.4
GROS				ePP	PP	11 36 34.7	-0.2
KBA	Koelnbreinsper	157.40	341	ePKPab	PKPab	11 32 56.5	-0.6
	comp=Z,8.1nm,0.5s,SNR=5.9						
OBKA	Obir	157.53	338	ePKPab	PKPab	11 32 56.8	-0.8
	comp=Z,7.5nm,1.1s						
ECH	Echery	157.62	352	ePKPab	PKPab	11 32 57.0	-0.7
VAY	Valandovo	157.62	318	i P	PKPab	11 32 58.3	+0.3
STIP	Stip	157.62	319	i P	PKPab	11 32 56.9	-1.2
WATA	Walderalm	157.64	344	ePKPab	PKPab	11 32 59.0	+0.9
	comp=Z,15nm,0.8s						
RETA	Reutte	157.69	346	ePKPab	PKPab	11 32 58.3	+0.1
	comp=Z,28nm,1.1s,SNR=7.9						
WTTA	Wattenberg	157.69	344	ePKPab	PKPab	11 32 58.7	+0.3
	comp=Z,22nm,0.8s,SNR=7.5						
MYKA	Terra Mystica	157.71	340	ePKPab	PKPab	11 32 57.6	-0.7
	comp=Z,20nm,0.9s,SNR=5.9						
MOTA	Moosalm	157.75	345	ePKPab	PKPab	11 32 59.6	+1.0
	comp=Z,13nm,0.7s,SNR=7.4						
SKO	Skopje	157.88	321	i P	PKPab	11 33 00.1	+0.9
ABTA	Abfaltersbach	157.94	342	ePKPab	PKPab	11 32 58.6	-0.7
	comp=Z,19nm,1.0s						
DAVA	Damuels	158.07	347	ePKPab	PKPab	11 32 59.8	-0.2
	comp=Z,16nm,0.8s,SNR=6.3						
FETA	Feichten	158.14	345	ePKPab	PKPab	11 32 59.8	-0.5
	comp=Z,18nm,1.1s						
BOJS	Bojanci	158.15	336	ePKPdf	PKPdf	11 32 25.5	-0.5
BOJS				ePKPab	PKPab	11 32 59.6	-0.5
KRUS	Krusevo	158.38	320	i P	PKPab	11 33 01.5	+0.1
LIT	Litokhoron	158.38	315	ePKPab	PKPab	11 33 01.2	-0.2
DAVOX	Davos/Dischmat	158.56	346	PKPab	PKPab	11 33 01.7	-0.4
	baz=21,slow=9.6						
FNA	Florina	158.66	318	ePKPdf	PKPdf	11 32 26.5	-0.4
FNA	Florina	158.66	318	ePKIKP	PKPdf	11 32 26.5	-0.4
TTG	Podgorica	158.77	324	ePKPab	PKPab	11 33 02.8	-0.2
OHR	Ohrid	158.80	320	i P	PKPab	11 33 03.2	-0.1
AGG	Agios Georgios	159.07	313	ePKPab	PKPab	11 33 03.5	-1.0
SENIN	Lac Senin/Sane	159.41	351	ePKPab	PKPab	11 33 05.9	0.0
ITM	Ithomi	160.28	309	ePKPab	PKPab	11 33 10.2	+0.3
BNI	Bardonecchia	160.79	351	ePKPab	PKPab	11 33 12.2	+0.4
VLC	Villacollemand	160.91	343	ePKPab	PKPab	11 33 11.8	-0.4
MATE	Matera	161.38	325	⇑iP	PKPab	11 33 12.7	-1.7
AQU	L’Aquila	161.53	334	ePKPdf	PKPdf	11 32 30.1	+0.1
AQU				ePKPab	PKPab	11 33 15.9	+0.8
AQU	L’Aquila	161.53	334	ePKIKP	PKPdf	11 32 30.1	+0.1
TIP	Timpagrande	162.40	321	ePKPdf	PKPdf	11 32 31.6	+0.5
TIP				ePKPab	PKPab	11 33 18.8	-0.2
CEL	Celeste	163.52	321	ePKPab	PKPab	11 33 24.5	+0.5
PAB	San Pablo	165.31	22	ePKPdf	PKPdf	11 32 34.1	+0.4
PAB				ePKPab	PKPab	11 33 33.5	+1.7
PAB	San Pablo	165.31	22	ePKIKP	PKPdf	11 32 34.1	+0.4
ES19	SONSECA Array	165.32	21	ePKPdf	PKPdf	11 32 34.9	+1.2
ES19				ePKPab	PKPab	11 33 32.8	+1.0
ESDC	Sonseca Array	165.32	21	PKP	PKPdf	11 32 34.0	+0.3
	comp=Z,0.2nm,0.3s,baz=351,slow=4.1,SNR=8.8						
ESDC				PKPab	PKPab	11 33 31.8	0.0
	comp=Z,1.3nm,0.4s,baz=332,slow=4.5,SNR=14						
ESLA	Sonseca Array	165.32	21	ePKPab	PKPab	11 33 33.3	+1.6
TOA0	Torodi Ar. Sit	167.11	176	ePKPdf	PKPdf	11 32 35.0	-0.7
TOA0				ePKPab	PKPab	11 33 41.9	+1.8
TORD	Torodi Ar. Bea	167.11	176	PKP	PKPdf	11 32 34.6	-1.1
	comp=Z,3.0nm,1.1s,baz=336,slow=3.2						
TORD				PKPab	PKPab	11 33 40.3	+0.3
	baz=194,slow=2.4						
KEST	Kesra	168.81	331	PKP	PKPdf	11 32 37.0	+0.6
	comp=Z,4.7nm,1.1s,baz=277,slow=12,SNR=2.8						
KEST				PKPab	PKPab	11 33 45.7	-1.6
	comp=Z,12nm,0.9s,baz=337,slow=2.1,SNR=8.2						
KEST	Kesra	168.81	331	PKP	PKPdf	11 32 37.0	+0.6
KEST				ePKPab	PKPab	11 33 47.0	-0.3
THTN	Thala	169.24	333	ePKPab	PKPab	11 33 51.0	+1.7

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*IDC **11** 11:22:05.7±2.5, 32°.13N×141°.68E, h0km, mb3.4/4, mb1 3.5/6, mb1mx3.4/67, mbtmp3.4/6, ML3.4/2, MS3.7/1, Ms1 3.7/1, ms1mx2.6/41, Error ellipse: s-maj=79.8km s-min=17.4km az=62.0*

*JMA **11** 11:22:06.5±0.3, 32°.24N×142°.04E, h97km, M3.3*

*ISCJB **11** 11:22:07.3±0.9, 32°.27N±0°.05×142°.0E±0°.1, h35km, mb3.5/4, MS3.6/1, Error ellipse: s-maj=14.3km s-min=6.6km az=164.1*

ISC 11 11:22:08.4±1.1**, 32°.18N**±0°.06×**142°.0E**±0°.1**, h35km, n14,** σ1°.**96**/16**, mb3.4**/4**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	1.90	279	P	Pn	11 22 38.8	+0.5
JHJ2	Mitsune	2.05	298	P	Pn	11 22 40.0	-0.3
JHJ	Hachijo jima 2	2.08	297	Pn	Pn	11 22 39.4	-1.3
	15nm,0.3s,baz=6.0,slow=19,SNR=23						
JHJ				Sn	Sn	11 23 02.5	-2.9
	9.9nm,0.3s,baz=107,slow=19,SNR=3.9						
BSO1	Boso 1	2.61	341	S	Sn	11 23 17.8	+0.1
BSO3	Boso 3	2.89	335	P	Pn	11 22 51.1	-0.6
JHO	Hitachi	4.57	346	P	Pn	11 23 14.0	-1.0
JHO				S	Sn	11 24 04.0	-2.9
JAG	Ashikaga	4.72	334	eS	Sn	11 24 09.9	-0.8
JCJ	Chichijima	5.07	178	Pn	Pn	11 23 23.1	+1.2
	3.9nm,0.3s,baz=270,slow=20,SNR=8.1						
JCJ				Sn	Sn	11 24 15.0	-4.2
	3.6nm,0.3s,baz=270,slow=20,SNR=2.1						
MJAR	Matsushiro Arr	5.35	325	Pn	Pn	11 23 26.9	+1.1
	0.5nm,0.3s,baz=157,slow=11,SNR=5.8						
SONM	Songino Array	31.10	311	LR	LR	11 40 57.6	
	comp=Z,124nm,19.5s,baz=116,slow=37						
MKAR	Makanchi Array	47.23	306	P	P	11 30 38.8	+0.9
	0.2nm,0.4s,baz=99,slow=9.6,SNR=3.0						
KURBB	Kurchatov Arra	49.46	311	P	P	11 30 55.7	+0.8
	0.5nm,0.5s,baz=87,slow=7.1,SNR=3.5						
WRA	Warramunga Arr	52.34	189	P	P	11 31 18.7	+1.8
	0.2nm,0.5s,baz=8.1,slow=7.3,SNR=7.3						
ASAR	Alice Springs	56.07	189	P	P	11 31 45.9	+1.9
	0.3nm,0.9s,baz=7.8,slow=7.5,SNR=3.3						

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*ISK **11** 11:28:17.7, 38°.22N×26°.83E, h19km±4km, ML2.5/3*

*ISCJB **11** 11:28:18.1±0.7, 38°.19N±0°.04×26°.78E±0°.05, h12km±4km, Error ellipse: s-maj=8.3km s-min=4.9km az=140.9*

*DDA **11** 11:28:18.4, 38°.19N×26°.82E, h7km, Ml2.4*

*CSEM **11** 11:28:18.1±0.3, 38°.19N×26°.77E, h12km, ML2.5, Error ellipse: s-maj=7.6km s-min=4.7km az=22.0*

ISC 11 11:28:17.8±1.0**, 38°.18N**±0°.04×**26°.79E**±0°.03**, h16**km±6km**, n18,** σ0°.**30**/32**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGB	˜zmir	0.15	152	i P	Pg	11 28 21.9	0.0
DGB				i S	Sg	11 28 24.2	-0.3
URLA	Izmir	0.23	319	PG	Pg	11 28 23.6	+0.4
URLA				SG	Sb	11 28 27.8	+0.1
URLA	Izmir	0.23	319	i P	Pg	11 28 23.6	+0.4
URLA				i S	Sb	11 28 27.8	+0.1
URLA	Izmir	0.23	319	P	Pg	11 28 23.5	+0.4
URLA				S	Sb	11 28 27.8	+0.1
BLCB	Balcova	0.28	44	PG	Pg	11 28 23.8	-0.1
BLCB				SG	Sg	11 28 27.7	-0.3
BLCB	Balcova	0.28	44	ePg	Pg	11 28 23.8	-0.1
BLCB				eSg	Sg	11 28 27.7	-0.3
KRBN	Karaburun	0.45	335	PG	Pg	11 28 26.8	-0.1
KRBN	Karaburun	0.45	335	ePg	Pg	11 28 26.8	-0.1
CHOS	Chios island	0.61	289	PG	Pg	11 28 30.0	0.0
CHOS	Chios island	0.61	289	ePg	Pg	11 28 30.0	0.0
AYDN	Tasoluk	1.00	121	i P	Pg	11 28 37.5	+0.2
AYDN				i S	Sg	11 28 50.5	0.0
AYDN	Tasoluk	1.00	121	P	Pg	11 28 37.5	+0.2
AYDN				S	Sg	11 28 50.5	0.0
STEP	BALIKESIR_Sava	1.39	31	i P	Pb	11 28 43.8	+0.3
STEP				i S	Sg	11 29 03.4	+0.6
STEP	BALIKESIR_Sava	1.39	31	P	Pb	11 28 43.8	+0.3
STEP				S	Sg	11 29 03.4	+0.6
MANT	Manisa	1.42	77	i P	Pg	11 28 45.3	+0.1
MANT				i S	Sn	11 29 01.9	+0.2
MANT	Manisa	1.42	77	P	Pg	11 28 45.3	+0.1
MANT				S	Sn	11 29 01.9	+0.2
BAYC	CANAKKALE_Bayr	1.57	353	i P	Pn	11 28 44.6	-0.4
BAYC				i S	Sn	11 29 04.6	-0.4
BAYC	CANAKKALE_Bayr	1.57	353	P	Pn	11 28 44.6	-0.4
BAYC				S	Sn	11 29 04.6	-0.4

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*CSEM **11** 11:29:50.3±0.2, 37°.93N×21°.69E, h20km, ML1.4, Error ellipse: s-maj=4.5km s-min=3.4km az=9.0*

*ATH **11** 11:29:50.5, 37°.94N×21°.70E, h21km±3km, ML1.6/6, Error ellipse: s-maj=3.6km s-min=1.1km az=201.0*

THE 11 11:29:51.1, 37°.98N×21°.70E, h19km±1km**, ML1.4**/6**, Error ellipse: s-maj=1.2km s-min=0.4km az=217.0, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRO	Drossia	0.03	161	P	Pg	11 29 54.3	-0.1
DRO				S	Sg	11 29 56.7	0.0
DRO	Drossia	0.03	161	P	Pg	11 29 54.3	-0.1
DRO				S	Sg	11 29 56.7	0.0
RLS	Riolos of Patr	0.20	293	P	Pg	11 29 56.0	-0.2
RLS				S	Sg	11 29 59.7	+0.1
RLS				AML	AML	11 30 06.2	
	comp=E,466µm,0.5s						
RLS				AML	AML	11 30 06.7	
	comp=N,723µm,0.7s						
RLS	Riolos of Patr	0.20	293	P	Pg	11 29 56.0	-0.1
RLS				S	Sg	11 29 59.9	+0.4
RLS	Riolos of Patr	0.20	293	P	Pg	11 29 56.0	-0.1
RLS				S	Sg	11 29 59.9	+0.4
LAKA	Lakka	0.34	40	P	Pg	11 29 57.4	-1.0
LAKA				S	Sb	11 30 04.4	+0.6
LAKA	Lakka	0.34	40	P	Pg	11 29 58.3	-0.1
LAKA				S	Sg	11 30 03.6	+0.2
LAKA	Lakka	0.34	40	P	Pg	11 29 58.3	-0.1
LAKA				S	Sg	11 30 03.6	+0.2
KLV	Kalavryta, Ach	0.36	79	P	Pg	11 29 58.7	-0.1
KLV				S	Sb	11 30 05.2	+0.8
KLV	Kalavryta, Ach	0.36	79	P	Pg	11 29 58.6	-0.2
KLV				S	Sb	11 30 04.4	-0.1
KLV	Kalavryta, Ach	0.36	79	P	Pg	11 29 58.6	-0.2
KLV				S	Sb	11 30 04.4	-0.1
EFP	Efpalio	0.48	20	P	Pg	11 30 00.1	-0.7
EFP				S	Sb	11 30 07.9	+0.3
EFP				AML	AML	11 30 14.3	
	comp=E,75µm,0.7s						
EFP				AML	AML	11 30 14.9	
	comp=N,77µm,0.4s						
EFP	Efpalio	0.48	20	P	Pg	11 30 00.3	-0.5
EFP				S	Sb	11 30 08.0	+0.4
EFP	Efpalio	0.48	20	P	Pg	11 30 00.3	-0.5
EFP				S	Sb	11 30 08.0	+0.4
TRIZ	Trizonia	0.49	37	P	Pg	11 29 60.0	-1.0

TRIZ				S	Sb	11 30 09.4	+1.6
TRIZ	Trizonia	0.49	37	P	Pg	11 30 00.4	-0.6
TRIZ	Trizonia	0.49	37	P	Pg	11 30 00.4	-0.6
TRIZ				S	Sb	11 30 09.0	+1.1
GUR	Goura	0.51	95	P	Pn	11 30 02.7	-0.8
GUR				S	Sg	11 30 07.8	-0.6
GUR				AML	AML	11 30 16.2	
	comp=N,228μm,0.4s						
GUR				AML	AML	11 30 18.3	
	comp=E,160μm,0.5s						
GUR	Goura	0.51	95	P	Pg	11 30 01.1	-0.3
GUR				S	Sb	11 30 09.0	+0.4
GUR	Goura	0.51	95	P	Pg	11 30 01.1	-0.3
GUR				S	Sb	11 30 09.0	+0.4
SERG	Sergoula	0.52	33	P	Pg	11 30 00.5	-1.1
SERG				S	Sb	11 30 10.3	+1.5
SERG				AML	AML	11 30 11.7	
	comp=N,72μm,0.5s						
SERG				AML	AML	11 30 13.7	
	comp=E,96μm,0.3s						
SERG	Sergoula	0.52	33	P	Pg	11 30 01.1	-0.5
SERG				S	Sb	11 30 09.2	+0.5
SERG	Sergoula	0.52	33	P	Pg	11 30 01.1	-0.5
SERG				S	Sb	11 30 09.2	+0.5
ANX	Ano Chora	0.64	16	P	Pb	11 30 03.4	-0.2
ANX				S	Sn	11 30 14.2	-0.8
ANX				AML	AML	11 30 17.7	
	comp=E,57μm,0.5s						
ANX				AML	AML	11 30 19.5	
	comp=N,104μm,0.5s						
ANX	Ano Chora	0.64	16	P	Pb	11 30 03.6	-0.1
ANX				S	Sn	11 30 13.9	-1.1
PVO	Paravola	0.65	348	P	Pg	11 30 04.2	+0.2
PVO	Paravola	0.65	348	P	Pg	11 30 04.1	+0.1
PDO	Prodromos	0.74	327	P	Pn	11 30 06.3	-0.3
PDO				S	Sn	11 30 17.0	-0.3
PDO				AML	AML	11 30 18.6	
	comp=E,186μm,0.4s						
PDO				AML	AML	11 30 18.9	
	comp=N,344μm,0.4s						
PDO	Prodromos	0.74	327	P	Pg	11 30 05.9	+0.2

DDA 11 11:30:51.0, 39°.10N × 29°.11E, h13^{km}, Ml2.3, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GDZ	Gediz	0.29	93	*i* P	Pg	11 30 57.0	-0.1
GDZ				*i* S	Sg	11 31 00.8	-0.4
DEMI	Demirci	0.31	259	*i* P	Pg	11 30 52.8	-4.8
DEMI				*i* S	Sg	11 31 00.6	-1.3
DURS	Dursunbey	0.70	315	*i* P	Pb	11 31 05.4	+0.2
DURS				*i* S	Sb	11 31 14.4	-0.3
MANT	Manisa	0.75	215	*i* P	Pb	11 31 06.2	+0.2
MANT				*i* S	Sb	11 31 15.9	-0.3

DDA 11 11:31:10.0, 39°.08N × 29°.16E, h7^{km}, Ml2.3, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GDZ	Gediz	0.25	88	*i* P	Pb	11 31 16.1	-0.9
GDZ				*i* S	Sg	11 31 19.3	+0.8
DEMI	Demirci	0.34	264	*i* P	Pg	11 31 16.1	-0.6
DEMI				*i* S	Sg	11 31 22.4	+1.1
MANT	Manisa	0.75	219	*i* P	Pb	11 31 25.2	-0.3
MANT				*i* S	Sg	11 31 34.6	+0.4

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*IDC **11** 11:32:52.2±3.6, 14°.53N × 92°.42W, h0^{km}, mb3.4/4, mb1 3.8/6, mb1mx3.6/47, mbtmp3.5/6, ML3.5/2, MS3.8/3, Ms1 3.7/3, ms1mx3.1/27, Error ellipse: s-maj=124.9km s-min=53.8km az=44.0*

*MEX **11** 11:32:53.0±0.5, 13°.97N × 93°.07W, h17^{km}±221^{km}, MD3.8*

ISC 11 11:32:53.4±1.6, 14°.2N±0°.1 × 92°.96W±0°.09, h10^{km}, n13, σ1^{s}.24/14, mb3.5/4, MS4.0/3, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.96	44	*e*P	Pn	11 33 12.0	-0.9
THIG				*e*S	Sb	11 33 25.9	+1.1
PCIG		1.50	350	*e*P	Pn	11 33 18.8	-1.5
PCIG				*i* S	Sn	11 33 39.5	-0.5
TGIG		2.55	356	*e*P	Pn	11 33 34.4	-0.5
TGIG				*i* S	Sn	11 34 06.8	+0.8
CMIG	Matias Romero	3.41	327	Pn	Pn	11 33 46.4	-0.3
	3.9nm,0.3s,baz=135,slow=12,SNR=48						
CMIG				Sn	Sn	11 34 26.0	-1.1
	7.0nm,0.3s,baz=92,slow=12,SNR=6.9						
TXAR	Lajitas Array	18.02	328	P	Pn	11 37 04.1	0.0
	0.0nm,0.3s,baz=158,slow=14,SNR=6.1						
ANMO	Albuquerque	23.96	332	P	P	11 38 09.7	+1.5
	0.6nm,0.6s,baz=168,slow=13,SNR=3.9						
PDAR	Pinedale Array	31.84	336	P	P	11 39 17.6	-1.2
	0.1nm,0.3s,baz=156,slow=9.6,SNR=2.2						
NVAR	Mina Array Bea	32.92	322	P	P	11 39 30.5	+2.2
	0.9nm,0.7s,baz=134,slow=8.9,SNR=8.8						
YKA	Yellowknife Ar	50.60	347	LR	LR	12 08 19.8	
	comp=Z,17nm,18.7s,baz=241,slow=42						
CPUP	Villa Florida	53.15	139	LR	LR	12 04 50.1	
	comp=Z,143nm,20.8s,baz=240,slow=36						
ILAR	Eielson Array	62.28	337	P	P	11 43 14.6	-0.7
	0.4nm,0.8s,baz=111,slow=4.3,SNR=4.2						
SPITS	Spitsbergen Ar	80.06	11	LR	LR	12 20 20.3	
	comp=Z,166nm,21.8s,baz=40,slow=36						
CMAR	Chiang Mai Arr	145.48	340	PKPbc	PKPdf	11 52 31.8	-1.0
	0.4nm,0.4s,baz=355,slow=3.6,SNR=4.2						

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*ISCJB **11** 11:59:18.7±0.4, 24°.46N±0°.02 × 122°.32E±0°.02, h65^{km}±5^{km}, Error ellipse: s-maj=3.5km s-min=2.2km az=164.0*

*JMA **11** 11:59:18.3±0.1, 24°.40N × 122°.27E, h71^{km}±2^{km}, M2.3*

*TAP **11** 11:59:18.4, 24°.46N × 122°.33E, h62^{km}±1^{km}, ML3.5, D*

ISC 11 11:59:19.4±1.2, 24°.46N±0°.03 × 122°.31E±0°.02, h61^{km}±8^{km}, n76, σ0^{s}.74/134, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWC	Suao	0.45	290	P	Pn	11 59 30.7	-0.2
	baz=288						
TWC				*e*S	Sn	11 59 39.5	+0.2
	baz=288						
NANB	Nanao	0.51	267	P	Pn	11 59 31.6	0.0
	baz=266						
NANB				*e*S	Sn	11 59 40.8	+0.4
	baz=266						
EGS		0.52	319	*e*P	Pn	11 59 31.4	-0.2
	baz=316						
EGS				S	Sn	11 59 40.5	0.0
	baz=316						
ENA	Nanau	0.52	267	P	Pn	11 59 31.5	-0.2
	baz=265						
ENA				*e*S	Sn	11 59 40.8	+0.3
	baz=265						
JYNG	Yonagunijimaku	0.58	90	P	Pn	11 59 32.6	+0.3
JYNG				*e*S	Sn	11 59 42.7	+1.0
NTC	Toucheng	0.59	312	P	Pn	11 59 32.0	-0.4
	baz=310						
NTC				*e*S	Sn	11 59 42.2	+0.3
	baz=310						
ILA	Ilan	0.60	301	*e*S	Sn	11 59 42.5	+0.4
	baz=299						
TWB1	Santiao Chiao	0.62	332	P	Pn	11 59 32.1	-0.7
	baz=330						
YOJ	Yonaguni jima	0.64	89	P	Pn	11 59 33.2	+0.2
YOJ				S	Sn	11 59 43.5	+0.6
TWE	Neicheng	0.64	294	P	Pn	11 59 33.0	0.0
	baz=293						
TWE				*e*S	Sn	11 59 43.1	+0.1
	baz=293						
TIPB	Shuangxi	0.68	320	P	Pn	11 59 32.9	-0.6
	baz=317						
TIPB				*e*S	Sn	11 59 44.0	+0.2
	baz=317						
SLBB	Yuanshan	0.68	296	P	Pn	11 59 33.6	0.0
	baz=294						
SLBB				S	Sn	11 59 44.1	+0.2
	baz=294						
ENTT	Nioudou	0.70	285	P	Pn	11 59 34.0	+0.2
	baz=284						
ENTT				*e*S	Sn	11 59 44.5	+0.2
	baz=284						
NACB	Ninganchiao	0.71	247	P	Pn	11 59 33.0	-0.8
	baz=246						
NACB				*e*S	Sn	11 59 44.9	+0.5
	baz=246						
TWD	Chiawan	0.75	240	P	Pn	11 59 33.8	-0.6
	baz=240						
TWD				*e*S	Sn	11 59 45.6	+0.3
	baz=240						
NWF	Wu-fen Shan	0.78	322	P	Pn	11 59 34.2	-0.6
	baz=320						
NWF				S	Sn	11 59 45.4	-0.6
	baz=320						
WFSB	Wu-fen Shan	0.78	322	P	Pn	11 59 34.2	-0.5
	baz=320						
WFSB				*e*S	Sn	11 59 46.2	+0.3
	baz=320						
HWA	Hwalien	0.80	234	P	Pn	11 59 34.7	-0.2
	baz=233						
HWA				*e*S	Sn	11 59 47.4	+1.0
	baz=233						
NWLT	Wulai	0.80	294	P	Pn	11 59 35.0	0.0
	baz=292						
NWLT				*e*S	Sn	11 59 46.8	+0.3
	baz=292						
NNSB	Datong	0.84	268	P	Pn	11 59 35.3	-0.3
	baz=267						
NNSB				*e*S	Sn	11 59 47.8	+0.3
	baz=267						
NNSH	Datong	0.84	268	P	Pn	11 59 35.2	-0.4
	baz=267						
NNSH				S	Sn	11 59 47.3	-0.3
	baz=267						
ENLB	Shoufeng	0.85	230	P	Pn	11 59 35.1	-0.5
	baz=230						
ENLB				*e*S	Sn	11 59 47.9	+0.4
	baz=230						
NNS	Nan Shan	0.85	269	P	Pn	11 59 35.5	-0.3
	baz=268						
NNS				*e*S	Sn	11 59 47.8	+0.1
	baz=268						
YHNB	Yeheng	0.88	284	P	Pn	11 59 35.9	-0.1
	baz=283						
YHNB				*e*S	Sn	11 59 48.5	+0.3
	baz=283						
NSK	Sanguang	0.89	284	P	Pn	11 59 36.1	-0.1
	baz=283						
NSK				*e*S	Sn	11 59 48.7	+0.1
	baz=283						
YM07	YM07	0.95	319	P	Pn	11 59 36.1	-0.8
	baz=317						
YM07				*e*S	Sn	11 59 48.7	-1.1
	baz=317						
YM11	YM11	0.97	317	P	Pn	11 59 37.4	+0.2
	baz=315						
YM11				*e*S	Sn	11 59 50.5	+0.1
	baz=315						
YM10	YM10	0.97	316	*e*P	Pn	11 59 35.7	-1.5
	baz=314						
YM10				*e*S	Sn	11 59 48.9	-1.5
	baz=314						
YM04	YM04	0.99	315	*e*P	Pn	11 59 36.7	-0.7
	baz=313						
YM04				*e*S	Sn	11 59 49.5	-1.1
	baz=313						
WHF	Hehuan Shan	1.00	252	*e*P	Pn	11 59 37.5	-0.4
	baz=251						
WHF				*e*S	Sn	11 59 51.2	-0.3
	baz=251						
ESL	Shilin	1.02	232	*e*P	Pn	11 59 36.9	-1.0
	baz=231						
ESL				*e*S	Sn	11 59 50.4	-1.0
	baz=231						
TWS1	Kuangyinshan	1.03	309	P	Pn	11 59 37.5	-0.4
	baz=307						
TWS1				*e*S	Sn	11 59 51.9	+0.2
	baz=307						
TWY	Chenhua	1.04	322	*e*P	Pn	11 59 37.0	-1.0
	baz=320						
TWY				*e*S	Sn	11 59 52.2	+0.4
	baz=320						
NTST	Danshui	1.05	312	*e*S	Sn	11 59 51.3	-0.8
	baz=311						
TWT	Tachien	1.05	259	P	Pn	11 59 38.7	+0.3
	baz=258						
TWT				*e*S	Sn	11 59 52.9	+0.5
	baz=258						
TDCB	Techi	1.07	259	P	Pn	11 59 38.7	+0.2
	baz=258						
TDCB				*e*S	Sn	11 59 52.9	+0.2
	baz=258						
CHGB	Renai	1.11	249	P	Pn	11 59 39.0	-0.2
	baz=249						
CHGB				*e*S	Sn	11 59 53.8	+0.1
	baz=249						
EGFH	Guangfu	1.12	226	*e*P	Pn	11 59 38.8	-0.3
	baz=226						
EGFH				*e*S	Sn	11 59 52.9	-0.9
	baz=226						
NCU	National Centr	1.14	297	*e*S	Sn	11 59 54.5	+0.2
	baz=295						
NCUH	Zhongli	1.14	297	*e*S	Sn	11 59 54.5	+0.2
	baz=295						
LIOB	Emei	1.19	279	P	Pn	11 59 40.1	+0.1
	baz=278						
LIOB				*e*S	Sn	11 59 55.8	+0.3
	baz=278						
NSTT	Nanjuang	1.21	279	P	Pn	11 59 40.5	+0.3
	baz=277						
NSTT				*e*S	Sn	11 59 55.9	+0.2
	baz=277						
HGSD	Ruisui	1.25	220	P	Pn	11 59 40.2	-0.7
	baz=220						
HGSD				*e*S	Sn	11 59 57.2	+0.3
	baz=220						
IRIF	Iriomote-Funau	1.30	95	P	Pn	11 59 41.3	-0.1
IRIF				S	Sn	11 59 58.0	+0.1
EHY	Hungye	1.31	224	P	Pn	11 59 41.4	-0.2
	baz=223						
SSLB	Suanglung	1.41	242	P	Pn	11 59 43.1	+0.2
	baz=241						
SSLB				*e*S	Sn	12 00 00.8	+0.2
	baz=241						
YULB	Yu-li	1.41	221	*e*P	Pn	11 59 41.5	-1.4
	baz=221						
SMLT	Sun Moon Lake	1.41	246	P	Pn	11 59 43.2	+0.2
	baz=245						
SMLT				*e*S	Sn	12 00 01.6	+1.0
	baz=245						
HATJ	Hateruma jima	1.42	106	P	Pn	11 59 42.5	-0.6
HATJ				*e*S	Sn	12 00 00.3	-0.5
TYC	Yuchr	1.44	248	*e*P	Pn	11 59 44.0	+0.7
	baz=247						
TYC				*e*S	Sn	12 00 02.0	+0.9
	baz=247						
TWF1	Yuli	1.44	220	*e*P	Pn	11 59 41.7	-1.6
	baz=220						
TWF1				*e*S	Sn	11 59 59.9	-1.3
	baz=220						
FULB	Fuli	1.56	217	*e*P	Pn	11 59 44.8	-0.2
	baz=217						
FULB				*e*S	Sn	12 00 03.6	-0.6
	baz=217						
JKRS	Kuro-shima	1.56	98	P	Pn	11 59 45.3	+0.3
JKRS				S	Sn	12 00 05.1	+0.8
YUS	Yu-Shan	1.57	233	*e*P	Pn	11 59 45.3	-0.2
	baz=232						
YUS				*e*S	Sn	12 00 04.8	-0.4
	baz=232						
WJS	Zhushan	1.58	247	*e*P	Pn	11 59 45.9	+0.7
	baz=246						
WJS				*e*S	Sn	12 00 05.9	+1.3
	baz=246						
CHKT	Chengkung	1.60	213	*e*P	Pn	11 59 44.3	-1.3
	baz=212						
JIJ	Ishigaki jima	1.67	93	P	Pn	11 59 46.3	-0.2
JIJ				S	Sn	12 00 06.1	-0.8
CHN5	Tsauling	1.72	241	*e*P	Pn	11 59 47.9	+0.8
	baz=240						
CHN5				*e*S	Sn	12 00 09.8	+1.6
	baz=240						
ELDTW	Lidau	1.73	223	*e*S	Sn	12 00 06.7	-1.8
	baz=223						
WDLH	Douliu	1.79	245	*e*S	Sn	12 00 11.5	+1.8
	baz=244						
JISG	Ishigakijimahi	1.83	85	P	Pn	11 59 48.3	-0.2
JISG				S	Sn	12 00 10.4	-0.2
RLNB	Erlin	1.87	253	*e*S	Sn	12 00 12.8	+1.2
	baz=252						
TWH	Lutao	1.90	204	*e*P	Pn	11 59 48.5	-1.0
	baz=203						
STYT	Tauyuan	1.92	228	*e*P	Pn	11 59 50.3	+0.5
	baz=227						
STYT				*e*S	Sn	12 00 12.8	-0.2
	baz=227						
WTP	Ta-pu	1.96	233	*e*P	Pn	11 59 51.3	+0.8
	baz=232						
TWGBT	Beinan	1.98	215	*e*P	Pn	11 59 49.8	-0.9
	baz=214						
TWG	Pinlang	1.98	215	*e*P	Pn	11 59 49.7	-1.0
	baz=215						
TWK	Hsinying	2.04	235	*e*P	Pn	11 59 52.0	+0.4
	baz=234						
TWK				*e*S	Sn	12 00 17.4	+1.4
	baz=234						
CHN1	Nanshi	2.06	233	*e*P	Pn	11 59 52.6	+0.8
	baz=232						
CHN1				*e*S	Sn	12 00 17.9	+1.4
	baz=232						
SGST	Jiashian	2.09	230	*e*S	Sn	12 00 17.8	+0.7
	baz=229						
SLGT	Liugui	2.11	227	*e*P	Pn	11 59 53.5	+1.1
	baz=226						
SLGT				*e*S	Sn	12 00 18.4	+0.9
	baz=226						
JTJ	Tarama	2.19	85	P	Pn	11 59 54.0	+0.6
JTJ				S	Sn	12 00 19.4	0.0
ECL	Taimali	2.23	214	*e*P	Pn	11 59 52.3	-1.7
	baz=214						
ECL				*e*S	Sn	12 00 18.2	-2.2
	baz=214						
SSD	Sandimen	2.29	222	*e*S	Sn	12 00 23.6	+1.6
	baz=222						
JIRB	Irabujima	2.63	81	P	Pn	11 59 59.7	+0.2
JIRB				*e*S	Sn	12 00 30.7	+0.4
JIKM	Ikemajima	2.71	79	S	Sn	12 00 32.9	+0.6

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*ISCJB **11** 12:03:02.5±0.5, 16°.1S±0°.1 × 174°.5W±0°.1, h200^{km}, mb4.2/20, Error ellipse: s-maj=16.8km s-min=12.6km az=140.2*

*IDC **11** 12:03:06.7±1.1, 16°.10S × 174°.54W, h224^{km}±11^{km}, mb4.1/18, mb1 4.2/20, mb1mx3.9/47, mbtmp4.6/20, Error ellipse: s-maj=15.4km s-min=10.1km az=138.0*

*NEIC **11** 12:03:07.5±1.0, 16°.17S × 174°.52W, h235^{km}±9^{km}, mb4.5/1, Error ellipse: s-maj=13.6km s-min=8.7km az=138.0*

ISC 11 12:03:04.7±0.5, 16°.2S±0°.1 × 174°.7W±0°.1, h200^{km}, n40, σ1^{s}.86/44, mb4.4/20, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	3.59	51	P	Pn	12 04 04.5	+2.9
	135nm,0.3s,baz=187,slow=3.6,SNR=372						
AFI				S	Sn	12 04 46.9	+0.8
	144nm,0.3s,baz=48,slow=21,SNR=8.0						
AFI	Afiamalu	3.59	51	*e*Pn	Pn	12 04 04.8	+3.2
AFI				S	Sn	12 04 46.9	+0.8
AFI				*e*Sn	Sn	12 04 47.1	+0.9
DZM	Mont Dzumac	18.77	249	P	P	12 07 11.5	+2.4
	0.3nm,0.3s,baz=73,slow=20,SNR=2.3						
RPZ	Rata Peaks	30.01	201	P	P	12 08 52.5	-2.2
	5.5nm,0.6s,baz=0.0,slow=6.1,SNR=4.4						
CTA	Charters Tower	37.28	258	P	P	12 09 57.5	-0.3
	3.8nm,0.5s,baz=92,slow=8.7,SNR=10						
STKA	Stephens Creek	42.59	240	P	P	12 10 42.1	+0.9
	15nm,0.5s,baz=90,slow=9.2,SNR=24						
WRAB	Tennant Creek	48.47	258	*e*P	P	12 11 27.5	0.0
	14nm,0.6s						
WRA	Warramunga Arr	48.48	258	P	P	12 11 28.0	+0.4
	10nm,0.5s,baz=91,slow=6.7,SNR=320						
WRA				PcP	PcP	12 12 50.0	-0.6
	1.2nm,0.5s,baz=96,slow=3.6,SNR=4.6						
ASAR	Alice Springs	48.71	253	P	P	12 11 29.9	+0.5
	33nm,0.5s,baz=87,slow=8.0,SNR=782						
ASAR				PcP	PcP	12 12 51.0	-0.4
	1.1nm,0.5s,baz=100,slow=4.0,SNR=3.7						
BATI	Baumata	60.15	267	P	P	12 12 53.2	+1.3
	7.2nm,0.5s,baz=100,slow=3.6,SNR=3.3						
VNDA	Vanda	62.48	186	P	P	12 13 07.0	+0.7
	4.7nm,1.1s,baz=5.5,slow=6.9,SNR=15						
NWAO	Narrogin (SRO)	63.17	241	P	P	12 13 11.7	0.0
	10nm,1.0s,baz=158,slow=4.5,SNR=6.7						
MJAR	Matsushiro Arr	68.75	321	P	P	12 13 46.4	-0.7
	0.8nm,0.5s,baz=162,slow=6.3,SNR=5.7						
JNU	Nakatsue	71.45	314	P	P	12 14 02.9	-0.7
	6.7nm,0.7s,baz=72,slow=3.2,SNR=4.2						
PETK	Petropavlovsk-	73.00	343	P	P	12 14 11.6	-0.7
	3.6nm,0.7s,baz=124,slow=7.4						
QSPA	South Pole Qui	73.87	180	P	P	12 14 17.4	-0.1
	7.5nm,0.8s,baz=44,slow=3.3,SNR=18						
NVAR	Mina Array Bea	75.72	42	P	P	12 14 27.2	-1.4
	0.6nm,0.8s,baz=227,slow=10,SNR=5.1						
ILAR	Eielson Array	83.45	12	P	P	12 15 07.6	-1.8
	0.7nm,0.4s,baz=229,slow=5.9,SNR=22						
PDAR	Pinedale Array	83.66	42	P	P	12 15 09.3	-2.0
	0.5nm,0.5s,baz=206,slow=3.8,SNR=6.3						
MAW	Mawson	86.67	199	P	P	12 15 25.1	-0.3
	4.1nm,0.7s,baz=130,slow=6.7,SNR=8.1						
CMAR	Chiang Mai Arr	91.70	289	P	P	12 15 50.9	+0.9
	1.0nm,0.4s,baz=120,slow=2.7,SNR=7.8						
SNAA	Sanae	92.19	177	P	P	12 15 50.0	-1.3
	1.0nm,0.8s,baz=161,slow=8.6,SNR=9.3						
NNA	Nana	94.07	104	P	P	12 15 59.2	-1.8
	3.8nm,0.3s,baz=257,slow=7.9,SNR=2.2						
MKAR	Makanchi Array	110.50	314	PKiKP	PKiKP	12 21 11.0	-2.3
	0.2nm,0.4s,baz=102,slow=1.0,SNR=4.2						
MKAR	Makanchi Array	110.50	314	PKiKP	PKiKP	12 21 11.0	-2.3
BVAR	Borovoye Array	117.74	322	PKP	PKPdf	12 21 25.3	-1.6
	0.9nm,0.5s,baz=90,slow=2.9,SNR=7.1						
ARCES	ARCESS Array B	125.20	351	PKP	PKPdf	12 21 39.2	-1.6
	1.0nm,0.5s,baz=318,slow=1.6,SNR=12						
ARCES				PP	PP	12 23 31.0	-1.9
	1.2nm,0.8s,baz=342,slow=5.7,SNR=2.7						
FINES	FINESS Array B	132.43	347	PKP	PKPdf	12 21 52.4	-2.4
	0.6nm,0.4s,baz=24,slow=2.3,SNR=5.8						
BRTR	Keskin Array B	145.97	319	PKPbc	PKPdf	12 22 20.4	+0.1
	6.7nm,1.0s,baz=114,slow=1.5,SNR=18						
GERES	GERESS Array B	146.71	350	PKPbc	PKPdf	12 22 22.5	+1.4
	0.3nm,0.3s,baz=46,slow=3.9,SNR=5.8						
CONA	Conrad Observa	147.17	347	*e*PKPab	PKPdf	12 22 23.3	+1.4
	8.4nm,1.5s						
MOA	Molln	147.57	349	*e*PKiKP	PKPdf	12 22 25.6	+3.2
	3.1nm,1.1s						
MMAI	Mount Meron Ar	148.09	307	PKPbc	PKPdf	12 22 27.4	+3.5
	2.8nm,0.4s,baz=73,slow=5.0,SNR=6.3						
WATA	Walderalm	148.50	352	*e*PKPab	PKPbc	12 22 30.0	+2.0
	4.2nm,0.6s						
SOKA	Soboth	148.54	347	*e*PKiKP	PKPdf	12 22 27.1	+2.9
	4.3nm,1.1s						
DAVA	Damuels	148.75	354	*e*PKiKP	PKPdf	12 22 27.5	+2.9
	7.4nm,1.2s						
OBKA	Obir	148.80	348	*e*PKPbc	PKPdf	12 22 26.8	+2.2
	2.3nm,0.4s						
MYKA	Terra Mystica	148.86	349	*e*PKPdf	PKPdf	12 22 23.0	-1.7
	0.9nm,0.4s						
FETA	Feichten	148.92	353	*e*PKiKP	PKPdf	12 22 28.1	+3.2
	5.7nm,1.0s						
ABTA	Abfaltersbach	148.94	350	*e*PKPbc	PKPdf	12 22 27.1	+2.2
	3.6nm,0.6s						

IDC 11 12:16:49.8±7.0, 29°.22S × 74°.98E, h0^{km}, mb3.8/4, mb1 4.0/4, mb1mx3.5/63, mbtmp3.8/4, Error ellipse: s-maj=182.8km s-min=41.1km az=55.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	33.51	110	T	T	12 58 56.0	
	baz=269,slow=75,SNR=5.7						
H01W3	Cape Leeuwin H	33.51	110	T	T	12 58 52.9	
	baz=269,slow=75,SNR=4.2						
H01W1	Cape Leeuwin H	33.53	110	T	T	12 58 54.6	
	baz=269,slow=75,SNR=5.6						
ASAR	Alice Springs	52.58	99	P	P	12 26 05.6	0.0
	0.4nm,0.7s,baz=245,slow=5.6,SNR=4.3						
CMAR	Chiang Mai Arr	52.74	29	P	P	12 26 06.5	-0.1
	1.0nm,0.4s,baz=203,slow=8.8,SNR=4.6						
WRA	Warramunga Arr	54.28	94	P	P	12 26 17.8	-0.2
	0.9nm,0.7s,baz=250,slow=6.8,SNR=8.4						
SONM	Songino Array	81.73	21	P	P	12 29 10.2	+0.1
	0.3nm,0.3s,baz=212,slow=5.1,SNR=3.2						

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*NEIC **11** 12:19:49.2±0.0, 16°.04N × 98°.54W, h12^{km}, MD4.0(MEX), After MEX.*

MEX 11 12:19:49.2±0.4, 16°.04N × 98°.54W, h12^{km}±13^{km}, MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.53**	**49**	*i* P	Pg	12 19 58.6	-1.0
PNIG				*i* S	Sg	12 20 05.5	-1.1
PNIG	**Pinotepa**	**0.53**	**49**	*i* P	Pg	12 19 58.6	-1.0
PNIG				*i* S	Sg	12 20 05.5	-1.1
TLIG	**Tlapa**	**1.51**	**359**	*e*P	Pn	12 20 12.4	-3.8
TLIG				*i* S	Sn	12 20 31.0	-4.9
TLIG	**Tlapa**	**1.51**	**359**	*e*P	Pn	12 20 12.4	-3.8
TLIG				*i* S	Sn	12 20 31.0	-4.9
VHO	**Vista Hermosa**	**2.01**	**59**	*e*P	Pn	12 20 19.7	-3.5
VHO				*e*S	Sn	12 20 44.1	-4.3
VHO	**Vista Hermosa**	**2.01**	**59**	*e*P	Pn	12 20 19.7	-3.5
VHO				*e*S	Sn	12 20 44.1	-4.3
HUIG	**Huatulco**	**2.36**	**96**	*e*P	Pn	12 20 24.7	-3.0
HUIG				*e*S	Sn	12 20 52.5	-4.1
HUIG	**Huatulco**	**2.36**	**96**	*e*P	Pn	12 20 24.7	-3.0
HUIG				*e*S	Sn	12 20 52.5	-4.1

NIED ***11*** *12:40:00, 45°.40N×151°.90E, h14^{km}, Mw3.8 Best double couple: M$_0$5.78000×10^{14} NP1:φ$_s$215.00000°, δ35.00000°, λ117.00000°. NP2:φ$_s$3.00000°, δ60.00000°, λ72.00000°.*
MOS ***11*** *12:40:03.4±1.5, 44°.84N×152°.33E, h35^{km}, mb4.4/5, Error ellipse: s-maj=13.3km s-min=13.0km az=114.7*
JMA ***11*** *12:40:05.4±0.7, 45°.37N×151°.91E, h30^{km}, M4.1*
SKHL ***11*** *12:40:06.1±0.1, 45°.10N×151°.97E, h40^{km}, mb4.6/3*
IDC ***11*** *12:40:17.5±2.1, 47°.06N×149°.59E, h0^{km}, mb4.0/8, mb1 4.0/10, mb1mx3.7/70, mbtmp3.9/10, ML3.4/1, MS3.4/4, Ms1 3.4/4, ms1mx2.7/75, Error ellipse: s-maj=53.2km s-min=25.2km az=159.0*
ISC 11 12:40:05.3±1.4**, 44°.7N**±0°.1×**152°.1E**±0°.1**, h41^{km}, n51, σ2^{s}14**/55**, mb4.2**/9**, MS3.6**/4**, 3C-1D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.03**	**281**	*e*P	**Pn**	**12 40 50.0**	**-0.7**
KUR				AMB	AMB	12 40 54.0	
	41nm,0.3s						
KUR				AMB	AMB	12 40 54.0	
	47nm,0.3s						
KUR				AMB	AMB	12 40 54.0	
	73nm,0.3s						
KUR				*e*S	**Sn**	**12 41 23.0**	**-2.7**
KUR				A	A	12 41 32.0	
	263nm,0.4s						
KUR				A	A	12 41 32.0	
	138nm,0.4s						
KUR	**Kuril'sk**	**3.03**	**281**	*c i*PN	**Pn**	**12 40 50.6**	**-0.1**
KUR				pmax	pmax		
	comp=Z,73nm,0.4s						
KUR				pmax	pmax		
	comp=N,41nm,0.2s						
KUR				pmax	pmax		
	comp=E,47nm,0.2s						
SHO	**Shikotan**	**3.87**	**259**	*i* P	**Pn**	**12 41 04.1**	**+1.9**
SHO				AMB	AMB	12 41 12.0	
	comp=E,11nm,0.3s						
SHO				AMB	AMB	12 41 12.0	
	comp=E,13nm,0.3s						
SHO				AMB	AMB	12 41 12.0	
	comp=E,23nm,0.3s						
SHO				*e*S	**Sn**	**12 41 47.5**	**+1.1**
SHO				A	A	12 41 54.0	
	comp=E,63nm,0.3s						
SHO				A	A	12 41 54.0	
	comp=E,80nm,0.3s						
SHO	**Shikotan**	**3.87**	**259**	*c i*PN	**Pn**	**12 41 03.9**	**+1.7**
SHO				pmax	pmax		
	comp=Z,23nm,0.4s						
SHO				pmax	pmax		
	comp=N,11nm,0.2s						
SHO				pmax	pmax		
	comp=E,13nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**4.51**	**263**	*i* P	**Pn**	**12 41 12.0**	**+0.9**
YUK				AMB	AMB	12 41 18.0	
	comp=E,37nm,0.3s						
YUK				AMB	AMB	12 41 18.0	
	comp=E,36nm,0.3s						
YUK				AMB	AMB	12 41 18.0	
	comp=E,64nm,0.3s						
YUK				*e*S	**Sn**	**12 42 03.0**	**+0.8**
YUK				A	A	12 42 18.0	
	comp=E,97nm,0.3s						
YUK				A	A	12 42 18.0	
	comp=E,150nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**4.51**	**263**	*c i*PN	**Pn**	**12 41 12.7**	**+1.6**
YUK				pmax	pmax		
	comp=Z,76nm,0.2s						
YUK				pmax	pmax		
	comp=N,37nm,0.3s						
YUK				pmax	pmax		
	comp=E,36nm,0.2s						
NEM2	**Nemuro 2**	**4.77**	**255**	P	**Pn**	**12 41 15.6**	**+1.0**
NEM2				*e*S	**Sn**	**12 42 07.4**	**-1.2**
JRA	**Rausu**	**5.05**	**263**	P	**Pn**	**12 41 20.9**	**+2.4**
JNK	**Nakash**	**5.42**	**260**	P	**Pn**	**12 41 25.0**	**+1.5**
JAK	**Akkeshi**	**5.62**	**254**	P	**Pn**	**12 41 27.3**	**+1.1**
JTKR	**Abashiri--Toko**	**5.91**	**265**	P	**Pn**	**12 41 32.4**	**+2.2**
JAR	**Ashorobuto**	**6.16**	**259**	P	**Pn**	**12 41 36.0**	**+2.3**
JAR				*e*S	**Sn**	**12 42 43.7**	**+0.8**
JOB	**Onbets**	**6.24**	**256**	P	**Pn**	**12 41 36.4**	**+1.6**
JOB				*e*S	**Sn**	**12 42 44.2**	**-0.6**
JMP	**Maruseppu**	**6.29**	**266**	P	**Pn**	**12 41 38.0**	**+2.5**
SKR	**Severo-Kuril's**	**6.54**	**23**	*e*PN	**Pn**	**12 41 37.0**	**-1.8**
JCH	**Churui**	**6.67**	**254**	P	**Pn**	**12 41 41.9**	**+1.2**
JCH				*e*S	**Sn**	**12 42 53.8**	**-1.5**
JKK2	**Kamakawa 2**	**6.75**	**266**	P	**Pn**	**12 41 46.5**	**+4.7**
ASAJ	**Asahikawa**	**6.82**	**268**	Pn	**Pn**	**12 41 44.8**	**+2.1**
	comp=E,1.0nm,0.3s,baz=64,slow=12,SNR=10						
ASAJ				Sn	**Sn**	**12 43 02.2**	**+3.2**
	comp=E,0.4nm,0.3s,baz=307,slow=20,SNR=2.6						
ASAJ	**Asahikawa**	**6.82**	**268**	PN	**Pn**	**12 41 44.8**	**+2.1**
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
JFR	**Furan**	**7.03**	**260**	P	**Pn**	**12 41 48.4**	**+2.8**
JEM	**Erimo**	**7.05**	**250**	P	**Pn**	**12 41 49.9**	**+4.0**
ERM	**Erimo**	**7.05**	**250**	*de*PN	Pn	12 41 52.1	+6.2
JNBK	**Urakawa-nobuka**	**7.21**	**253**	P	**Pn**	**12 41 49.4**	**+1.3**
JNBK				*e*S	**Sn**	**12 43 06.1**	**-2.6**
JBT2	**Biratori 2**	**7.30**	**258**	P	**Pn**	**12 41 50.9**	**+1.5**
JNB	**Noboribetsu**	**8.33**	**258**	P	**Pn**	**12 42 06.2**	**+2.8**
JNB				*e*S	**Sn**	**12 43 34.2**	**-1.9**
JKB	**Kayabe**	**8.54**	**254**	P	**Pn**	**12 42 07.7**	**+1.3**
JKB				*e*S	**Sn**	**12 43 36.5**	**-4.9**
JANG	**Nango**	**8.93**	**244**	P	**Pn**	**12 42 12.5**	**+0.8**
PETK	**Petropavlovsk-**	**9.15**	**22**	Pn	**Pn**	**12 42 14.4**	**-0.2**
	baz=207,slow=10						
PETK	**Petropavlovsk-**	**9.15**	**22**	PN	**Pn**	**12 42 14.4**	**-0.2**
KLR	**Kul'dur**	**14.57**	**295**	Pn	Pn	12 43 15.7	-13
	comp=Z,0.0nm,0.3s,baz=75,slow=20,SNR=2.3						
KLR	**Kul'dur**	**14.57**	**295**	*i* P	**P**	**12 43 32.9**	**-1.5**
ZEA	**Zeya**	**18.46**	**308**	*e*P	**Pn**	**12 44 20.8**	**+3.1**
YAK	**Yakutsk**	**21.67**	**331**	*e*P	**P**	**12 44 50.0**	**-2.1**
YAK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
GUMO	**Guam**	**31.65**	**193**	LR	LR	13 01 20.4	
	comp=Z,18nm,18.6s,baz=70,slow=38						
MKAR	**Makanchi Array**	**47.24**	**299**	P	**P**	**12 48 29.8**	**-4.4**
	comp=Z,0.2nm,0.5s,baz=70,slow=8.6,SNR=3.2						
MKAR	**Makanchi Array**	**47.24**	**299**	P	**P**	**12 48 29.8**	**-4.4**
ARU	**Arti**	**56.01**	**318**	LR	LR	13 13 35.3	
	comp=Z,36nm,20.2s,baz=254,slow=38						
ARCES	**ARCESS Array B**	**59.51**	**341**	P	**P**	**12 50 03.8**	**+0.1**
	comp=Z,0.5nm,0.7s,baz=12,slow=6.6,SNR=3.6						
ARCES	**ARCESS Array B**	**59.51**	**341**	P	**P**	**12 50 03.8**	**+0.1**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NVAR	**Mina Array Bea**	**64.03**	**61**	P	P	12 50 55.3	+20
	comp=Z,0.2nm,0.5s,baz=299,slow=5.8,SNR=4.0						
FINES	**FINESS Array B**	**65.55**	**335**	P	**P**	**12 50 43.8**	**-0.3**
	comp=Z,1.0nm,0.4s,baz=39,slow=9.8,SNR=8.2						
FINES	**FINESS Array B**	**65.55**	**335**	P	**P**	**12 50 43.8**	**-0.3**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
GEYT	**Alibeck**	**67.01**	**301**	P	**P**	**12 50 54.6**	**+0.6**
	comp=Z,2.1nm,0.3s,baz=38,slow=7.3,SNR=5.2						
HFS	**Hagfors**	**70.08**	**339**	P	**P**	**12 51 13.1**	**+0.5**
	comp=Z,1.8nm,0.5s,baz=25,slow=3.9,SNR=7.1						
HFS	**Hagfors**	**70.08**	**339**	P	**P**	**12 51 13.1**	**+0.4**
HFS				pmax	pmax		
	comp=Z,2.0nm,0.5s						
PALK	**Pallekele**	**71.70**	**262**	LR	LR	13 27 00.0	
	comp=Z,47nm,18.2s,baz=254,slow=40						
KBZ	**Khabaz**	**71.73**	**314**	P	**P**	**12 51 25.3**	**+2.4**
	comp=Z,3.0nm,0.8s,baz=27,slow=1.6,SNR=6.4						
KBZ	**Khabaz**	**71.73**	**314**	P	**P**	**12 51 25.3**	**+2.4**
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AKASG	**Malin Array Be**	**72.81**	**326**	P	**P**	**12 51 29.9**	**+0.6**
	comp=Z,0.8nm,0.4s,baz=40,slow=6.2,SNR=4.0						
AKASG	**Malin Array Be**	**72.81**	**326**	P	**P**	**12 51 29.9**	**+0.6**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
TXAR	**Lajitas Array**	**79.12**	**60**	LR	LR	13 24 21.7	
	comp=Z,37nm,20.8s,baz=0.0,slow=33						

MEX 11 13:00:08.4±0.4**, 16°.03N×98°.54W, h16^{km}**±56^{km}**, MD3.7, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.54**	**48**	*e*P	Pg	13 00 17.4	-1.8
PNIG				*e*S	Sg	13 00 24.2	-2.2
TLIG	**Tlapa**	**1.53**	**359**	*e*P	Pn	13 00 31.5	-3.7
TLIG				*i* S	Sn	13 00 48.9	-5.9

NEIC ***11*** *13:01:57.3±0.0, 16°.34N×98°.28W, h7^{km}, MD4.0(MEX), After MEX.*
MEX 11 13:01:57.0±0.5**, 16°.33N×98°.29W, h6^{km}**±3^{km}**, MD4.0, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.17**	**68**	*i* P	Pg	13 02 00.0	-0.5
PNIG				*i* S	Sg	13 02 03.0	+0.1
PNIG	**Pinotepa**	**0.17**	**68**	*i* P	Pg	13 02 00.0	-0.5
PNIG				*i* S	Sg	13 02 02.7	-0.1
TLIG	**Tlapa**	**1.25**	**348**	*e*P	Pg	13 02 17.6	-3.5
TLIG				*i* S	Sg	13 02 33.4	-4.1
TLIG	**Tlapa**	**1.25**	**348**	*e*P	Pg	13 02 17.6	-3.5
TLIG				*i* S	Sg	13 02 33.4	-4.1
VHO	**Vista Hermosa**	**1.67**	**63**	*e*P	Pn	13 02 23.1	-3.8
VHO				*e*S	Sn	13 02 44.7	-4.1
VHO	**Vista Hermosa**	**1.67**	**63**	*e*P	Pn	13 02 23.1	-3.8
VHO				*e*S	Sn	13 02 44.7	-4.1
CAIG	**El Cayaco**	**2.02**	**291**	*e*P	Pn	13 02 28.4	-3.3
CAIG				*i* S	Sn	13 02 52.2	-5.0
CAIG	**El Cayaco**	**2.02**	**291**	*e*P	Pn	13 02 30.0	-1.6
MEIG	**Mezcala**	**2.03**	**322**	*e*P	Pn	13 02 28.3	-3.6
MEIG				*i* S	Sn	13 02 53.0	-4.6
MEIG	**Mezcala**	**2.03**	**322**	*e*P	Pn	13 02 31.6	-0.3
HUIG	**Huatulco**	**2.17**	**105**	*e*P	Pn	13 02 30.1	-3.6
HUIG				*i* S	Sn	13 02 56.9	-4.1
HUIG	**Huatulco**	**2.17**	**105**	*e*P	Pn	13 02 30.1	-3.6
MAVM	**Malinalco, Edo**	**2.85**	**337**	*i* P	Pn	13 02 41.1	-2.2
MAVM				*i* S	Sn	13 03 14.2	-3.9

IDC ***11*** *14:10:00.6±2.1, 36°.73N×142°.20E, h0^{km}, mb3.4/3, mb1 3.5/5, mb1mx3.3/61, mbtmp3.5/5, ML3.2/2, MS2.3/1, Ms1 2.3/1, ms1mx1.9/39, Error ellipse: s-maj=43.8km s-min=26.6km az=54.0*
JMA ***11*** *14:10:03.4±0.2, 36°.97N×141°.98E, h47^{km}±5^{km}, M3.3*
ISC 11 14:09:59.3±2.3**, 36°.90N**±0°.05×**142°.10E**±0°.09**, h0^{km}**±12^{km}**, n24, σ2^{s}26**/22**, mb3.2**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**1.06**	**281**	P	**Pg**	**14 10 20.4**	**+0.7**
JFK	**Kawauchi**	**1.08**	**296**	P	**Pg**	**14 10 20.5**	**+0.4**
JFK				S	**Sg**	**14 10 32.9**	**-1.3**
JFFD	**Fukushimafurud**	**1.25**	**279**	P	**Pg**	**14 10 23.2**	**-0.1**
JFFD				S	**Sg**	**14 10 38.0**	**-1.4**
JHO	**Hitachi**	**1.27**	**257**	P	**Pg**	**14 10 23.6**	**0.0**
JHO				S	**Sg**	**14 10 38.8**	**-1.2**
JMM	**Marumori**	**1.42**	**313**	P	Pn	14 10 25.4	-0.9
JFT	**Otama**	**1.54**	**294**	P	Pn	14 10 28.1	+0.1
JIO	**Ouri**	**1.66**	**339**	P	Pn	14 10 28.5	-1.1
JIO				*e*S	**Sn**	**14 10 47.5**	**-4.1**
JOU	**Okura**	**1.85**	**322**	P	Pn	14 10 32.6	+0.3
JOU				S	**Sn**	**14 10 54.1**	**-2.4**
JFY	**Yanaizu**	**1.98**	**285**	P	Pn	14 10 34.9	+0.8
JFY				*e*S	**Sn**	**14 10 58.2**	**-1.4**
JYS	**Shirataka**	**2.08**	**310**	P	**Pn**	**14 10 36.4**	**+0.9**
JYS				*e*S	**Sn**	**14 10 59.2**	**-3.0**
JMK	**Ichinoseki**	**2.16**	**341**	P	**Pn**	**14 10 37.3**	**+0.8**
JAG	**Ashikaga**	**2.18**	**258**	P	Pn	14 10 37.3	+0.4
MJAR	**Matsushiro Arr**	**3.15**	**265**	Pn	**Pn**	**14 10 51.9**	**+1.7**
	3.5nm,0.3s,baz=90,slow=15,SNR=29						
MJAR				Sn	**Sn**	**14 11 31.4**	**+3.0**
	2.1nm,0.3s,baz=111,slow=7.6,SNR=5.6						
MJAR				LR	LR	14 12 21.1	
	comp=Z,46nm,18.6s,baz=30,slow=44						
MAT	**Matsushiro**	**3.15**	**265**	P	**Pn**	**14 10 51.5**	**+1.3**
MAT				*e*S	**Sn**	**14 11 25.8**	**-2.7**
JHJ	**Hachijo jima 2**	**4.23**	**207**	Pn	**Pn**	**14 11 05.3**	**+0.4**
	2.6nm,0.3s,baz=35,slow=19,SNR=3.2						
JHJ				Sn	**Sn**	**14 11 50.1**	**-4.9**
	2.7nm,0.3s,baz=90,slow=20,SNR=3.3						
H11N2	**WAKE ISLAND Hy**	**27.61**	**122**	T	T	14 44 50.9	
	baz=314,slow=75,SNR=7.1						
H11N1	**WAKE ISLAND Hy**	**27.62**	**122**	T	T	14 44 53.1	
	baz=314,slow=75,SNR=6.8						
H11N3	**WAKE ISLAND Hy**	**27.63**	**122**	T	T	14 44 50.9	
	baz=314,slow=75,SNR=6.2						
H11S1	**WAKE ISLAND Hy**	**28.33**	**124**	T	T	14 45 48.5	
	baz=316,slow=76,SNR=6.0						
H11S3	**WAKE ISLAND Hy**	**28.33**	**124**	T	T	14 45 48.3	
	baz=316,slow=76,SNR=4.9						
H11S2	**WAKE ISLAND Hy**	**28.34**	**124**	T	T	14 45 49.9	
	baz=316,slow=76,SNR=4.8						
KURBB	**Kurchatov Arra**	**46.52**	**308**	P	**P**	**14 18 30.7**	**+2.5**
	0.4nm,0.2s,baz=76,slow=7.0,SNR=2.5						
WRA	**Warramunga Arr**	**57.01**	**189**	P	**P**	**14 19 46.6**	**-0.2**
	0.1nm,0.5s,baz=6.2,slow=7.3,SNR=5.6						
ASAR	**Alice Springs**	**60.74**	**189**	P	**P**	**14 20 13.1**	**+0.4**
	0.2nm,0.9s,baz=8.9,slow=6.6,SNR=3.0						

IDC ***11*** *14:34:23.9±0.9, 1°.56N×90°.92W, h0^{km}, mb4.0/10, mb1 4.3/10, mb1mx4.0/41, mbtmp4.1/10, MS3.4/8, Ms1 3.4/8, ms1mx3.1/38, Error ellipse: s-maj=39.7km s-min=15.8km az=50.0*
ISCJB ***11*** *14:34:24.3±0.5, 1°.77N±0°.07×90°.71W±0°.09, h10^{km}, mb4.2/26, MS3.4/6, Error ellipse: s-maj=15.4km s-min=7.6km az=147.0*
NEIC ***11*** *14:34:25.5±0.4, 1°.69N×90°.77W, h10^{km}, mb4.4/19, Error ellipse: s-maj=11.8km s-min=6.0km az=57.0*
ISC 11 14:34:24.8±0.7**, 1°.60N**±0°.09×**90°.9W**±0°.1**, h10^{km}, n47, σ0^{s}89**/34**, mb4.3**/26**, MS3.5**/6**, Galapagos Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAYG	**Puerto Ayora**	**2.32**	**166**	*e*Pn	**Pb**	**14 35 05.7**	**-1.2**
ROSC	**El Rosal**	**16.81**	**79**	LR	LR	14 43 56.1	
	comp=Z,159nm,19.8s,baz=258,slow=34						
RUSC	**La Rusia**	**18.23**	**76**	*e*Pn	**Pn**	**14 38 36.8**	**-1.9**
	12nm,1.2s						
MYIG	**MØrida**	**19.27**	**3**	*e*P	**P**	**14 38 48.6**	**-1.2**
	76nm,1.1s						
NNA	**Nana**	**19.38**	**134**	LR	LR	14 44 49.1	
	comp=Z,30nm,19.5s,baz=341,slow=32						
SDV	**Santo Domingo**	**21.38**	**69**	P	**P**	**14 39 14.2**	**+1.2**
	11nm,0.5s,baz=312,slow=6.1,SNR=3.1						
LPAZ	**La Paz**	**28.62**	**129**	P	**P**	**14 40 24.1**	**+1.7**
	2.9nm,1.0s,baz=323,slow=10,SNR=7.2						
LPAZ				LR	LR	14 52 06.0	
	comp=Z,44nm,18.1s,baz=291,slow=37						
LPAZ	**La Paz**	**28.62**	**129**	*e*P	**P**	**14 40 22.6**	**+0.2**
	3.0nm,0.9s						
SJG	**San Juan**	**29.27**	**54**	LR	LR	14 50 35.2	
	comp=Z,97nm,19.2s,baz=228,slow=33						
TXAR	**Lajitas Array**	**30.16**	**337**	P	**P**	**14 40 36.2**	**+0.8**
	0.6nm,0.9s,baz=162,slow=9.2,SNR=3.6						
TXAR				LR	LR	14 51 21.7	
	comp=Z,28nm,20.1s,baz=0.0,slow=34						
PTGA	**Pitinga**	**30.96**	**94**	LR	LR	14 52 22.8	
	comp=Z,122nm,18.3s,baz=281,slow=35						
PTGA	**Pitinga**	**30.96**	**94**	*e*P	**P**	**14 40 42.7**	**+0.1**
	7.1nm,0.9s						
WMOK	**Wichita Mounta**	**33.79**	**348**	*e*P	**P**	**14 41 07.0**	**-0.1**
	24nm,1.9s						
SIV	**San Ignacio**	**34.22**	**122**	P	**P**	**14 41 12.0**	**+0.9**
	2.1nm,0.8s,baz=311,slow=11,SNR=9.4						
S39A	**Bolivar**	**35.99**	**357**	*e*P	**P**	**14 41 26.2**	**+0.2**
	6.8nm,1.0s						
CCM	**Cathedral Cave**	**36.28**	**359**	*e*P	**P**	**14 41 29.0**	**+0.5**
	14nm,0.8s						
R40A	**Maddies Statio**	**36.54**	**358**	*e*P	**P**	**14 41 30.9**	**+0.2**
	4.4nm,0.9s						
P40A	**Paris**	**37.77**	**358**	*e*P	**P**	**14 41 41.2**	**0.0**
	6.9nm,0.8s						
SDCO	**Great Sand Dun**	**38.42**	**341**	*e*P	**P**	**14 41 47.7**	**+0.7**
	3.3nm,1.1s						
WUAZ	**Wupatki**	**38.77**	**333**	*e*P	**P**	**14 41 50.4**	**+0.6**
	9.9nm,1.4s						
ISCO	**Idaho Springs**	**40.33**	**342**	*e*P	**P**	**14 42 03.3**	**+0.3**
	11nm,1.4s						
K38A	**Parkersburg**	**40.91**	**358**	*e*P	**P**	**14 42 06.9**	**-0.4**
	13nm,0.9s						
ECSD	**EROS Data Cent**	**42.27**	**354**	*e*P	**P**	**14 42 17.6**	**-0.9**
	4.1nm,1.0s						
CPUP	**Villa Florida**	**42.63**	**133**	P	**P**	**14 42 22.8**	**+1.1**
	2.8nm,1.0s,baz=342,slow=9.6,SNR=2.5						
TCUT	**Toone Canyon**	**43.51**	**337**	*e*P	**P**	**14 42 27.8**	**-1.1**
	13nm,1.1s						
SADO	**Sadowa**	**44.22**	**12**	*e*P	**P**	**14 42 33.4**	**-0.8**
	16nm,1.1s						
PDAR	**Pinedale Array**	**44.28**	**340**	P	**P**	**14 42 35.8**	**+0.8**
	0.8nm,1.0s,baz=152,slow=5.8,SNR=4.5						
NV01	**Mina Array Sit**	**44.45**	**329**	*e*P	**P**	**14 42 36.5**	**0.0**
NVAR	**Mina Array Bea**	**44.45**	**329**	P	**P**	**14 42 38.6**	**+2.1**
	1.7nm,0.8s,baz=155,slow=9.8,SNR=12						
NVAR				PcP	**PP**	**14 44 20.7**	**+0.4**
	1.4nm,0.8s,baz=165,slow=3.8,SNR=6.2						
KVN	**Kaiserville**	**44.82**	**330**	*e*P	**P**	**14 42 40.1**	**+0.8**
	2.3nm,0.9s						
FXWY	**Fox Creek**	**45.55**	**339**	*e*P	**P**	**14 42 45.1**	**0.0**
	2.7nm,1.0s						
HLID	**Hailey**	**46.76**	**336**	*e*P	**P**	**14 42 55.0**	**+0.4**
	3.3nm,1.0s						
RKT	**Rikitea**	**49.48**	**237**	*e*T	T	15 36 23.0	
	1.2nm,0.2s						
SCHQ	**Schefferville**	**56.57**	**16**	LR	LR	15 06 37.7	
	comp=Z,51nm,22.0s,baz=104,slow=34						
PPT	**Papeete**	**60.88**	**249**	LR	LR	15 04 57.7	
	comp=Z,44nm,19.8s,baz=82,slow=30						
PPT2	**Papeete2**	**60.88**	**249**	*e*LR	LR	15 02 56.6	
	90nm,27.8s						
IL1	**Eielson Array**	**74.67**	**338**	*e*P	**P**	**14 46 03.9**	**-0.5**
ILAR	**Eielson Array**	**74.67**	**338**	P	**P**	**14 46 04.2**	**-0.1**
	1.3nm,0.8s,baz=140,slow=4.0,SNR=14						
ESDC	**Sonseca Array**	**86.59**	**51**	P	**P**	**14 47 08.9**	**+0.1**
	0.9nm,0.6s,baz=280,slow=5.3,SNR=5.2						
SNAA	**Sanae**	**90.88**	**162**	P	**P**	**14 47 28.5**	**0.0**
	1.3nm,0.8s,baz=285,slow=4.0,SNR=6.6						
H11N3	**WAKE ISLAND Hy**	**100.98**	**290**	T	T	16 40 48.1	
	baz=85						
H11N2	**WAKE ISLAND Hy**	**100.99**	**290**	T	T	16 40 49.0	
	baz=85						
H11N1	**WAKE ISLAND Hy**	**101.00**	**290**	T	T	16 40 49.5	
	baz=85						
H11S2	**WAKE ISLAND Hy**	**101.29**	**289**	T	T	16 41 09.8	
	baz=85,slow=75,SNR=196						
H11S1	**WAKE ISLAND Hy**	**101.29**	**289**	T	T	16 41 10.1	
	baz=85,slow=75,SNR=133						
H11S3	**WAKE ISLAND Hy**	**101.31**	**289**	T	T	16 41 09.0	
	baz=85,slow=75,SNR=114						
WRA	**Warramunga Arr**	**132.24**	**244**	PKP	**PKPdf**	**14 53 39.2**	**-0.9**
	0.3nm,0.8s,baz=91,slow=2.3,SNR=2.9						

NNC 11 14:35:16.6±3.3**, 37°.10N×70°.77E, h0^{km}, mb3.7, mpv3.3, 1C-5D, Error ellipse: s-maj=24.8km s-min=22.2km az=167.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**3.62**	**36**	⇓Pn	Pn	14 36 14.1	0.0
	3.9nm,0.2s						
SFK				⇑Sn	Sn	14 36 59.1	+1.4
	5.3nm,0.2s						
MNAS	**Manas**	**5.55**	**13**	⇓Pn	Pn	14 36 40.3	-0.3
	1.2nm,0.4s						
MNAS				⇓Sn	Sn	14 37 45.3	+0.2
	11nm,0.7s						
KK31	**Karatay Array**	**6.00**	**358**	⇓Pn	Pn	14 36 47.3	+0.5
	0.9nm,0.3s,baz=188,slow=12,SNR=17						
KK31				⇓Sn	Sn	14 37 58.1	+2.0
	1.6nm,0.3s,baz=187,slow=26,SNR=6.9						

IDC ***11*** *14:48:23.4±0.8, 35°.28N×76°.23E, h0^{km}, mb3.9/12, mb1 4.0/17, mb1mx3.8/60, mbtmp3.9/17, ML3.2/4, MS3.2/14, Ms1 3.2/14, ms1mx3.0/67, Error ellipse: s-maj=22.5km s-min=14.0km az=54.0*
ISCJB ***11*** *14:48:24.1±0.4, 35°.48N±0°.04×76°.39E±0°.07, h10^{km}, mb4.2/17, MS3.2/11, Error ellipse: s-maj=8.9km s-min=3.8km az=148.6*
BJI ***11*** *14:48:27.0, 35°.61N×76°.43E, h7^{km}, mb4.3/10, mB4.3/7, ML4.2/3, Ms3.9/2*
NEIC ***11*** *14:48:32.8±1.2, 35°.62N×76°.51E, h68^{km}±11^{km}, mb4.2/5, Error ellipse: s-maj=11.9km s-min=9.7km az=181.0*
NNC ***11*** *14:48:35.9±2.0, 36°.13N×76°.50E, h0^{km}, mb4.1, mpv3.9, Error ellipse: s-maj=17.7km s-min=11.8km az=16.0*
ISC 11 14:48:26.0±0.6**, 35°.53N**±0°.06×**76°.39E**±0°.07**, h10^{km}, n62, σ1^{s}92**/59**, mb4.0**/17**, MS3.2**/10**, 3C-2D, Eastern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	**Kashi**	**4.00**	**355**	Pn	**Pn**	**14 49 23.7**	**-3.7**
KSH				Sn	**Sn**	**14 50 12.6**	**-1.7**
KBL	**Kabul**	**6.11**	**263**	*e*Pn	Pn	14 50 03.6	+7.2
TARG	**Taragay, Kyrgy**	**6.29**	**10**	*e*Pn	**Pn**	**14 50 01.1**	**+2.0**
AAK	**Ala-Archa**	**7.25**	**349**	Pn	Pn	14 50 18.9	+6.8
	0.2nm,0.3s,baz=130,slow=7.9,SNR=2.6						
AAK				Sn	Sn	14 51 43.0	+8.5
	0.5nm,0.3s,baz=61,slow=19,SNR=2.4						
AAK				Lg	Lg	14 52 16.5	
	0.8nm,0.3s,baz=300,slow=20,SNR=2.9						
AAK				LR	LR	14 53 19.9	
	comp=Z,116nm,20.3s,baz=160,slow=40						
AAK	**Ala-Archa**	**7.25**	**349**	*e*Pn	Pn	14 50 17.6	+5.5
AAK				Sn	Sn	14 51 43.0	+8.4
AAK				Lg	Lg	14 52 16.5	
MNAS	**Manas**	**7.58**	**338**	⇓Pn	**Pn**	**14 50 20.8**	**+4.2**
	10nm,0.8s						
MNAS				⇓Sn	**Sn**	**14 51 43.8**	**+1.3**
	11nm,0.7s						
KK31	**Karatay Array**	**8.83**	**331**	⇑Pn	Pn	14 50 38.7	+5.1
	1.6nm,0.4s,baz=144,slow=12,SNR=17						
KK31				⇑Sn	**Sn**	**14 52 13.8**	**+0.7**
	7.0nm,0.7s,baz=168,slow=22,SNR=5.6						
KK31	**Karatay Array**	**8.83**	**331**	*e*Pn	**Pn**	**14 50 36.3**	**+2.7**
KKAR	**Karatay Array**	**8.83**	**331**	*e*Pn	**Pn**	**14 50 36.4**	**+2.9**
PYUN	**Piuthan**	**9.29**	**141**	*e*P	**Pn**	**14 50 42.2**	**+2.0**
DANN	**Dangsing**	**9.51**	**137**	*e*P	**Pn**	**14 50 44.5**	**+1.3**
	46nm,0.4s						
KOLN	**Koldanda**	**9.88**	**140**	*e*P	**Pn**	**14 50 49.6**	**+1.4**
	16nm,0.4s						
GKN	**Gorkha**	**10.27**	**135**	*e*P	**Pn**	**14 50 54.9**	**+1.3**
	15nm,0.4s						
KKN	**Kakani**	**10.81**	**133**	*e*P	**Pn**	**14 51 01.3**	**+0.3**
	16nm,0.5s						
DMN	**Daman**	**10.84**	**134**	*e*P	**Pn**	**14 51 01.4**	**-0.1**
	12nm,0.4s						
PKIN	**Phulchoki**	**11.04**	**133**	*e*P	**Pn**	**14 51 03.2**	**-0.9**
	19nm,0.6s						
JIRN	**Jiri**	**11.46**	**131**	*e*P	**Pn**	**14 51 08.9**	**-1.1**
	46nm,0.4s						
WMQ	**Urumqi**	**12.01**	**43**	P	**Pn**	**14 51 21.1**	**+3.9**
MAKZ	**Makanchi**	**12.03**	**19**	*e*Pn	**Pn**	**14 51 18.7**	**+1.3**
MK01	**Makanchi Array**	**12.08**	**20**	*e*Pn	**Pn**	**14 51 19.5**	**+1.4**
MK31	**Makanchi Array**	**12.10**	**20**	Pn	**Pn**	**14 51 21.2**	**+2.9**
	0.8nm,0.5s,baz=204,slow=12,SNR=13						
MK31				⇑Sn	**Sn**	**14 53 31.9**	**-1.3**
	3.6nm,0.9s,baz=194,slow=23,SNR=4.6						
MK31	**Makanchi Array**	**12.10**	**20**	*e*Pn	**Pn**	**14 51 20.7**	**+2.4**
MKAR	**Makanchi Array**	**12.10**	**20**	Pn	**Pn**	**14 51 21.1**	**+2.8**
	0.2nm,0.3s,baz=204,slow=11,SNR=14						
MKAR				Sn	**Sn**	**14 53 31.6**	**-1.7**
	0.1nm,0.3s,baz=197,slow=22,SNR=3.5						
MKAR	**Makanchi Array**	**12.10**	**20**	*e*Pn	**Pn**	**14 51 20.5**	**+2.1**
MKAR				Sn	**Sn**	**14 53 31.6**	**-1.7**
RAMN	**Ramite**	**12.22**	**132**	*e*P	**Pn**	**14 51 18.5**	**-1.8**
	21nm,0.8s						
ODAN	**Odare**	**12.77**	**130**	*e*P	**Pn**	**14 51 26.0**	**-1.9**
	14nm,0.6s						

GEYT	Alibeck	14.85	285	LR	LR	14 59 07.2	
	comp=Z,88nm,19.6s,baz=240,slow=44						
KURBB	Kurchatov Arra	15.17	5	Pn	Pn	14 52 00.1	0.0
	baz=192,slow=11,SNR=6.5						
KURBB				Lg	Lg	14 56 23.7	
	0.0nm,0.3s,baz=193,slow=28,SNR=3.7						
KURK	Kurchatov	15.27	5	ePn	Pn	14 52 01.9	+0.5
	9.2nm,1.1s						
KURK				Lg	Lg	14 56 23.7	
BVAR	Borovoye Array	18.00	348	P	P	14 52 38.6	+2.0
	0.1nm,0.3s,baz=145,slow=8.0,SNR=8.6						
BVAR				LR	LR	15 00 13.4	
	comp=Z,53nm,18.8s,baz=198,slow=39						
BRVK	Borovoye	18.05	348	eP	P	14 52 37.6	+0.4
	8.1nm,0.8s						
ABKAR	Akbulak array	18.27	324	eP	Pn	14 52 39.2	-0.2
GTA	Gaotai	18.98	71	eP	Pn	14 52 48.8	+0.5
ZAA0	Zalesovo Array	19.34	15	eP	P	14 52 51.6	+0.3
	2.6nm,0.7s						
ZALV	Zalesovo Beam	19.34	15	P	Pn	14 52 52.4	0.0
	0.2nm,0.3s,baz=207,slow=13,SNR=6.2						
ZALV	Zalesovo Beam	19.34	15	eP	P	14 52 50.1	-1.2
AKTO	Aktyubinsk	19.98	324	P	Pn	14 52 59.8	-0.3
	4.1nm,0.4s,baz=119,slow=13,SNR=15						
AKTO				LR	LR	15 01 31.3	
	comp=Z,100nm,18.9s,baz=132,slow=39						
LZH	Lanzhou	22.25	80	eP	P	14 53 24.1	+0.9
LZH				ePP	PnPn	14 53 51.7	+6.2
LZH				pmax	pmax		
	comp=Z,16nm,1.3s						
LZH				pmax	pmax		
	comp=Z,81nm,4.3s						
ARU	Arti	24.16	335	P	P	14 53 43.2	+1.1
	1.7nm,0.5s,baz=173,slow=7.5,SNR=4.1						
ARU				LR	LR	15 03 48.4	
	comp=Z,35nm,19.9s,baz=186,slow=38						
SONM	Songino Array	25.39	52	P	P	14 53 54.8	+1.3
	3.5nm,0.8s,baz=251,slow=10.0,SNR=14						
SONA1	Songino Array	25.40	52	eP	P	14 53 53.2	-0.4
CMAR	Chiang Mai Arr	26.23	125	P	P	14 54 00.3	-0.8
	4.8nm,0.8s,baz=311,slow=9.6,SNR=33						
CMAR				LR	LR	15 06 11.5	
	comp=Z,54nm,19.0s,baz=235,slow=41						
CM01	Chiang Mai Arr	26.26	125	eP	P	14 54 01.5	0.0
KBZ	Khabaz	26.92	298	LR	LR	15 06 49.9	
	comp=Z,57nm,19.4s,baz=84,slow=41						
KVAR	Kislovodsk Arr	27.09	298	LR	LR	15 07 05.0	
	comp=Z,53nm,19.0s,baz=242,slow=41						
HHC	Hu-ho-hao-te	28.03	68	eP	P	14 54 16.8	-0.6
ILGA	Ilgaz	33.69	292	eP	P	14 55 07.5	+0.1
	9.2nm,0.5s						
BRTR	Keskin Array B	33.88	290	P	P	14 55 10.7	+1.8
	0.6nm,0.5s,baz=102,slow=12,SNR=3.7						
AKASG	Malin Array Be	36.95	309	P	P	14 55 34.4	-0.6
	0.2nm,0.3s,baz=88,slow=7.8,SNR=4.8						
AKASG				LR	LR	15 13 23.5	
	comp=Z,46nm,19.3s,baz=40,slow=40						
MLR	Muntele Rosu	39.05	301	LR	LR	15 15 15.6	
	comp=Z,17nm,18.6s,baz=164,slow=41						
FINES	FINESS Array B	40.74	325	P	P	14 56 06.0	-0.7
	1.1nm,0.3s,baz=102,slow=8.4,SNR=15						
FINES				LR	LR	15 14 01.4	
	comp=Z,49nm,20.4s,baz=254,slow=38						
ARCES	ARCESS Array B	43.73	337	P	P	14 56 33.1	+2.1
	1.3nm,0.7s,baz=109,slow=10,SNR=4.8						
HFS	Hagfors	46.52	322	P	P	14 56 53.9	+0.7
	3.2nm,0.6s,baz=101,slow=6.6,SNR=10						
HFS				LR	LR	15 17 31.7	
	comp=Z,33nm,21.6s,baz=148,slow=38						
NB2	NORSAR Subarra	47.77	323	P	P	14 57 03.4	+0.3
	comp=Z,1.2nm,0.6s,baz=91,slow=7.9						
NOA	NORSAR Array B	47.77	323	LR	LR	15 18 09.4	
	comp=Z,47nm,19.3s,baz=85,slow=37						
SPITS	Spitsbergen Ar	49.45	346	LR	LR	15 21 00.5	
	comp=Z,24nm,19.4s,baz=215,slow=39						
KBS	Kingsbay	50.53	347	eP	P	14 57 21.3	-2.6
	comp=Z,21nm,1.3s						
TORD	Torodi Ar. Bea	70.09	272	P	P	14 59 35.8	-2.9
	comp=Z,1.0nm,0.8s,baz=23,slow=5.2						
ILAR	Eielson Array	74.44	18	P	P	15 00 03.7	-0.3
	comp=Z,0.4nm,0.8s,baz=323,slow=3.8,SNR=3.8						
WRA	Warramunga Arr	77.82	125	P	P	15 00 23.0	-0.8
	comp=Z,0.9nm,0.8s,baz=322,slow=5.4,SNR=6.0						
ASAR	Alice Springs	80.17	128	P	P	15 00 35.9	-0.7
	comp=Z,0.4nm,0.6s,baz=308,slow=5.4,SNR=3.7						
SIT	Sitka	83.95	17	eP	P	15 00 53.7	-2.3
	comp=Z,752nm,0.8s						

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*ISK **11** 14:50:08.7, 39°.46N×31°.01E, h3^{km}, ML2.5/2*

*ISCJB **11** 14:50:09.5±0.6, 39°.47N±0°.04×30°.99E±0°.04, h10^{km}±9^{km}, Error ellipse: s-maj=6.5km s-min=5.0km az=29.3*

*CSEM **11** 14:50:09.5±0.1, 39°.47N×30°.99E, h8^{km}, ML2.5, Error ellipse: s-maj=3.5km s-min=2.9km az=33.0*

*DDA **11** 14:50:09.4, 39°.48N×31°.02E, h7^{km}, Md2.4*

ISC 11 14:50:09.5±1.0, **39°.47N**±0°.03×**31°.00E**±0°.03, **h7**^{km}±9^{km}, **n21**, σ**0^{s}30**/32, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESKT	Eskisehir	0.13	295	PG	Pg	14 50 12.2	-0.2
ESKT				SG	Sg	14 50 14.5	+0.1
ESKT	Eskisehir	0.13	295	i P	Pg	14 50 12.5	+0.1
ESKT	Eskisehir	0.13	295	ePg	Pg	14 50 12.2	-0.2
ESKT				eSg	Sg	14 50 14.5	+0.1
SEYT	Eskypehyr	0.13	295	P	Pg	14 50 12.5	+0.1
AUSIV	SIVRIHISAR	0.42	93	PG	Pg	14 50 17.5	-0.2
AUSIV				SG	Sg	14 50 23.8	+0.6
AUSIV	SIVRIHISAR	0.42	93	i P	Pg	14 50 17.4	-0.3
AUSIV				i S	Sg	14 50 23.8	+0.6
AUSIV	SIVRIHISAR	0.42	93	ePg	Pg	14 50 17.5	-0.2
AUSIV				S	Sg	14 50 23.8	+0.6
AUMIH	MIHALICIK	0.55	43	PG	Pg	14 50 20.4	+0.2
AUMIH	MIHALICIK	0.55	43	i P	Pg	14 50 20.1	-0.1
AUMIH				i S	Sb	14 50 29.7	0.0
AUMIH	MIHALICIK	0.55	43	P	Pg	14 50 20.1	-0.1
AUMIH	MIHALICIK	0.55	43	ePg	Pg	14 50 20.4	+0.2
AUMIH				S	Sb	14 50 29.7	0.0
BORA	Eskisehir	0.59	315	PG	Pg	14 50 21.4	+0.4
BORA	Eskisehir	0.59	315	ePg	Pg	14 50 21.4	+0.4
BOLV	Bolvadin	0.75	183	i P	Pg	14 50 24.2	+0.3
BOLV				i S	Sb	14 50 35.3	0.0
BOLV	Bolvadin	0.75	183	P	Pg	14 50 24.2	+0.3
BOLV				S	Sb	14 50 35.3	0.0
KIZT	Kizilcal	0.90	130	PG	Pb	14 50 27.1	-0.4
KIZT				SG	Sb	14 50 39.9	+0.2
KIZT	Kizilcal	0.90	130	ePg	Pb	14 50 27.1	-0.4
KIZT				eSg	Sb	14 50 39.9	+0.2
GULT	Gulveren	1.03	339	PG	Pb	14 50 29.5	-0.3
GULT	Gulveren	1.03	339	ePg	Pb	14 50 29.5	-0.3
TVSB	Tavsanli	1.19	270	PN	Pg	14 50 32.3	-0.1
TVSB	Tavsanli	1.19	270	ePn	Pg	14 50 32.3	-0.1

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*ISCJB **11** 15:15:45.9±0.2, 1°.66N±0°.03×90°.83W±0°.02, h10^{km}, mb5.0/199, MS4.7/45, Error ellipse: s-maj=4.6km s-min=2.9km az=29.6*

*MOS **11** 15:15:46.6±1.1, 1°.80N×90°.68W, h10^{km}, mb5.2/29, Error ellipse: s-maj=16.6km s-min=6.2km az=108.5*

*IDC **11** 15:15:46.3±0.5, 1°.65N×90°.84W, h0^{km}, mb4.5/23, mb1 4.6/23, mb1mx4.5/43, mbtmp4.5/23, MS4.5/32, Ms1 4.5/32, ms1mx4.5/35, Error ellipse: s-maj=20.9km s-min=10.9km az=54.0*

*NEIC **11** 15:15:47.0±0.2, 1°.58N×90°.86W, h10^{km}, mb5.1/191, Error ellipse: s-maj=5.8km s-min=3.6km az=49.0*

*BJI **11** 15:15:47.4, 1°.60N×90°.90W, h10^{km}, mB5.4/5, Ms5.2/10, Ms7 4.9/10*

*GCMT **11** 15:15:47.0±0.2, 1°.71N×90°.92W, h12^{km}, MW5.3/106, Moment Tensor Solution. s65,c90; s106,c182; Duration: 1^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.54±.01; M$_{\theta\theta}$0.18±.01; M$_{\phi\phi}$0.35±.02; M$_{r\theta}$-0.04±.04; M$_{\theta\phi}$-0.82±.01; M$_{\phi r}$-0.30±.04; Best double couple: M$_0$0.95400×10^{17} NP1:ϕ_s352.00000°, δ66.00000°, λ-40.00000°. NP2:ϕ_s101.00000°, δ54.00000°, λ-150.00000°. Principal axes: T 1.1220, Plg7.0000°, Azm49.0000°; N -0.3350, Plg45.0000°, Azm146.0000°; P -0.7870, Plg45.0000°, Azm312.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*IGQ **11** 15:15:55.4±0.8, 2°N±4°×9°1W±°, h82^{km}±11^{km}, mB5.3/2, mb4.7/2, MLv5.0/1, Mw(mB)4.8/2*

ISC 11 15:15:47.3±0.3, **1°.67N**±0°.05×**90°.84W**±0°.06, **h10**^{km}, **n855**, σ**1^{s}14**/832, **mb5.1**/199, **MS4.7**/46, **3C-3D**, **Galapagos Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAYG	Puerto Ayora	2.39	167	ePn	Pn	15 16 24.3	-2.3
PAYG	Puerto Ayora	2.39	167	P	Pg	15 16 32.2	-1.0
COHC	Cochancay	12.29	109	P	Pn	15 18 52.3	+10
ESPN	Las Esperanzas	12.31	32	P	Pn	15 18 46.0	+3.2
CUIC	Cuicocha-Domo	12.55	96	P	Pn	15 18 47.2	+0.6
BNAS	Cotopaxi Volca	12.58	101	P	Pn	15 18 51.1	+4.2
BMOR	Cotopaxi Volca	12.61	101	P	Pn	15 18 49.2	+1.7
BREF	Cotopaxi Volca	12.62	100	P	Pn	15 18 45.6	-2.0
BVC2	Cotopaxi Volca	12.64	100	P	Pn	15 18 38.1	-10
URCU	Urcuqui	12.64	95	P	Pn	15 18 48.4	+0.6
BTAM	Cotopaxi Volca	12.66	100	P	Pn	15 18 44.8	-3.3
IMBA	Imbabura, San	12.72	96	P	Pn	15 18 50.8	+1.9
BMAS	Trigal station	12.76	104	P	Pn	15 19 01.0	+12
ANTG	Antisana-Guama	12.77	100	P	Pn	15 18 51.1	+1.5
BPAT	Tungurahua Vol	12.80	104	P	Pn	15 18 51.1	+1.1
ANTM	Antisana-La Mi	12.81	100	P	Pn	15 18 52.3	+2.2
BULB	Ulba Tungurahu	12.81	104	P	Pn	15 18 49.6	-0.4
TGUH	Tegucigalpa,Un	12.81	16	ePn	Pn	15 18 52.4	+2.7
TGUH	Tegucigalpa,Un	12.81	16	P	Pn	15 18 51.5	+1.9
ANTS	Antisana-Sarah	12.85	100	P	Pn	15 18 50.0	-0.8
BCIP	Isla Barro Col	13.24	55	P	Pn	15 18 56.7	+1.1
SOTA	Rioblanco	14.23	88	eP	Pn	15 19 10.7	+1.1
CCIG	Comitan	14.58	355	ePn	Pn	15 19 16.7	+2.6
YOTC	Yotoco, Valle	14.66	81	eP	Pn	15 19 10.7	-4.4
PRVC	Isla de Provid	14.95	38	eP	Pn	15 19 17.9	-1.0
FLOC	Florencia	15.18	90	eP	Pn	15 19 20.8	-1.3
CMIG	Matias Romero	15.84	346	Pn	P	15 19 34.7	+0.3
	0.1nm,0.3s,baz=161,slow=4.8,SNR=7.5						
HELC	Santa Helena	15.92	73	ePn	Pn	15 19 32.9	+0.9
	127nm,1.7s						
HELC	Santa Helena	15.92	73	eP	Pn	15 19 32.3	+0.2
PRAC	Prado	16.07	82	ePn	Pn	15 19 32.6	-1.0
	18nm,0.9s						
PRAC	Prado	16.07	82	eP	P	15 19 40.2	+3.2
ROSC	El Rosal	16.79	79	Pn	P	15 19 47.6	+2.2
	0.6nm,0.3s,baz=258,slow=20,SNR=3.1						
ROSC				LR	LR	15 25 22.0	
	comp=Z,4µm,20.8s,baz=264,slow=34						
ROSC	El Rosal	16.79	79	ePn	Pn	15 19 43.5	+0.3
	95nm,1.8s						
ZARC	Zaragoza, Cauc	16.95	70	eP	Pn	15 19 36.6	-8.2
PTBC	PUERTO BERRIO,	17.04	73	eP	Pn	15 19 42.4	-3.6
TLIG	Tlapa	17.53	335	ePn	P	15 19 53.6	+0.4
	70nm,1.5s						
BRRC	Barranca, Sant	17.91	72	eP	Pn	15 19 53.9	-2.9
RUSC	La Rusia	18.21	76	eP	Pn	15 20 01.3	+0.3
	82nm,1.5s						
RUSC	La Rusia	18.21	76	eP	P	15 20 01.8	+0.6
BARC	Barichara	18.28	74	eP	P	15 20 02.5	+0.8
CODC	Agustˆ›n Codaz	19.15	64	eP	Pn	15 20 12.6	+0.7
NNA	Nana	19.43	135	LR	LR	15 26 22.3	
	comp=Z,992nm,19.6s,baz=304,slow=33						
NNA	Nana	19.43	135	P	Pn	15 20 15.8	+0.5
TAMC	Tame, Arauca	19.58	75	eP	P	15 20 16.2	+0.4
URIC	Uribia, Colomb	21.19	61	eP	P	15 20 32.0	-1.2
SDV	Santo Domingo	21.35	70	P	P	15 20 36.4	+1.2
	18nm,0.6s,baz=241,slow=12,SNR=7.9						
SDV	Santo Domingo	21.35	70	eP	P	15 20 35.8	+0.6
	99nm,1.2s						
SDV	Santo Domingo	21.35	70	eP	P	15 20 33.5	-1.7
SDV	Santo Domingo	21.35	70	P	P	15 20 30.0	-5.2
ZAIG	Zacatecas	23.87	332	eP	P	15 21 02.5	+1.0
	69nm,1.7s						
LNIG	Linares	24.55	341	eP	P	15 21 08.8	+1.3
	12nm,1.0s						
H06E1	SOCORRO T-PHAS	26.02	312	T	T	15 48 28.3	
060Z	West Palm Beac	26.51	21	P	P	15 21 26.3	+1.1
	baz=203						
PCRV	Puerto La Cruz	27.38	71	P	P	15 21 33.9	+0.6
	16nm,0.9s,baz=299,slow=8.7,SNR=4.7						
857A	Zephyrhills	27.70	17	P	P	15 21 36.8	+0.9
	baz=199						
833A	Chaparral WMA,	27.74	344	P	P	15 21 37.4	+1.2
	baz=162						
LPAZ	La Paz	28.66	129	P	P	15 21 46.6	+1.3
	3.9nm,0.8s,baz=329,slow=9.5,SNR=12						
LPAZ				PcP	PcP	15 24 57.3	+1.0
	1.6nm,0.9s,baz=342,slow=4.2,SNR=4.1						
LPAZ				LR	LR	15 32 51.7	
	comp=Z,530nm,21.1s,baz=324,slow=36						
LPAZ	La Paz	28.66	129	eP	P	15 21 45.9	+0.6
	45nm,1.5s						
LPAZ				PcP	PcP	15 24 57.3	+1.0
LPAZ	La Paz	28.66	129	eP	P	15 21 45.8	+0.6
552A	Lynn Haven	28.80	10	P	P	15 21 47.4	+1.7
	baz=192						
HPIG		28.87	332	eP	P	15 21 46.5	-0.1
	46nm,1.7s						
445A	Amite	28.91	1	P	P	15 21 48.4	+1.8
	baz=181						
441A	DeRidder	29.01	356	P	P	15 21 49.0	+1.4
	baz=175						
553A	Crawfordville	29.01	11	P	P	15 21 49.3	+1.7
	baz=193						
554A	Perry	29.07	13	P	P	15 21 49.1	+1.1
	baz=195						
449A	Pace	29.14	6	P	P	15 21 48.9	+0.2
	baz=187						
LPIG	La Paz	29.19	321	LR	LR	15 30 36.0	
	comp=Z,641nm,21.9s,baz=159,slow=30						
SJG	San Juan	29.23	54	LR	LR	15 32 09.6	
	comp=Z,2µm,19.6s,baz=242,slow=34						
555A	McAlpin	29.27	14	P	P	15 21 50.2	+0.3
	baz=196						
556A	Lake Butler	29.30	15	P	P	15 21 50.2	+0.2
	baz=197						
MNMC	Minye Minye	29.38	136	eP	P	15 21 52.2	+0.9
	27nm,1.2s						
343A	Vidalia	29.47	359	P	P	15 21 50.8	-0.7
	baz=178						
SAML	Samuel	29.51	111	eP	P	15 21 51.1	-1.1
	46nm,1.6s						
SAML	Samuel	29.51	111	eP	P	15 21 51.1	-1.1
SAML				pmax	pmax		
	comp=Z,46nm,1.6s						
452A	Marianna	29.52	10	P	P	15 21 52.1	+0.1
	baz=192						
BRAL	Brewton	29.56	7	P	P	15 21 53.2	+0.8
	baz=188						
341A	Kurthwood	29.59	356	P	P	15 21 52.9	+0.2
	baz=175						
346A	Big Creek Wild	29.59	2	P	P	15 21 52.9	+0.3
	baz=183						
344A	Westbrook Farm	29.63	0	P	P	15 21 54.0	+1.0
	baz=180						
347A	Saraland	29.66	4	P	P	15 21 53.7	+0.4
	baz=185						
435B	Jarrell	29.66	348	P	P	15 21 53.9	+0.6
	baz=166						
453A	Whigham	29.68	11	P	P	15 21 53.8	+0.4
	baz=193						
454A	Quitman	29.69	13	P	P	15 21 53.9	+0.4
	baz=195						
349A	Repton	29.73	6	P	P	15 21 54.0	+0.2
	baz=187						
455A	Stateville	29.85	14	P	P	15 21 55.1	+0.1
	baz=196						
JCT	Junction City	29.89	344	P	P	15 21 55.3	-0.1
	baz=162						
JCT	Junction City	29.89	344	eP	P	15 21 55.5	+0.2
	comp=Z,45nm,1.6s						
JCT	Junction City	29.89	344	eP	P	15 21 55.6	+0.2
JCT				pmax	pmax		
	comp=Z,45nm,1.6s						
243A	Waterproof	30.06	359	P	P	15 21 56.6	-0.2
	baz=179						
TXAR	Lajitas Array	30.10	337	P	P	15 21 59.1	+1.7
	comp=Z,0.7nm,0.7s,baz=152,slow=11,SNR=7.4						
TXAR				PcP	PcP	15 24 60.0	+0.9
	comp=Z,0.6nm,0.7s,baz=174,slow=3.6,SNR=4.8						
TXAR				LR	LR	15 33 07.0	
	comp=Z,834nm,18.2s,baz=0.0,slow=35						
TX31	Lajitas Ar. Si	30.11	337	eP	P	15 21 57.4	0.0
NATX	Nacogdoches	30.15	354	P	P	15 21 57.6	0.0
	baz=172						
352A	Blakely	30.18	10	P	P	15 21 58.6	+0.7
	baz=192						
353A	Camilla	30.18	11	P	P	15 21 59.1	+1.2
	baz=193						
244A	Avery, Jackson	30.21	0	P	P	15 21 59.5	+1.3
	baz=180						
246A	Jackson Lee, B	30.23	3	P	P	15 21 58.4	+0.1
	baz=183						
242A	Grayson	30.26	358	P	P	15 22 00.4	+1.8
	baz=177						
247A	Quitman	30.30	4	P	P	15 22 00.4	+1.5
	baz=184						
240A	Hunter Patters	30.34	355	P	P	15 22 00.5	+1.3
	baz=174						
249A	Camden	30.35	6	P	P	15 22 00.8	+1.5
	baz=187						
250A	Grady	30.46	8	P	P	15 22 00.9	+0.6
	baz=189						
355A	Pearson	30.47	14	P	P	15 22 00.6	+0.2
	baz=196						
356A	Blackshear	30.63	15	P	P	15 22 02.4	+0.5
	baz=197						
251A	Midway	30.70	9	P	P	15 22 03.2	+0.7
	baz=191						
145A	Houston Renfro	30.79	2	P	P	15 22 03.7	+0.5
	baz=182						
WHTX	Lake Whitney,	30.80	349	P	P	15 22 03.4	0.0
	baz=167						
WHTX	Lake Whitney,	30.80	349	eP	P	15 22 04.3	+0.9
	comp=Z,143nm,1.4s						
141A	Papa Simpson,	30.84	357	P	P	15 22 05.1	+1.5
	baz=176						
146A	Union	30.85	3	P	P	15 22 04.3	+0.5
	baz=184						
143A	Socs Landing,	30.88	359	P	P	15 22 04.7	+0.6
	baz=179						
253A	Americus	30.89	11	P	P	15 22 04.7	+0.6
	baz=193						
140A	Cam and Jess,	30.92	356	P	P	15 22 05.7	+1.3
	baz=175						
147A	Livingston	30.94	4	P	P	15 22 05.5	+1.0
	baz=185						
254A	Abbeville	30.95	13	P	P	15 22 05.4	+0.7
	baz=195						
PTGA	Pitinga	30.96	94	P	P	15 22 06.0	+0.9
	comp=Z,8.6nm,0.8s,baz=272,slow=9.5,SNR=12						
PTGA				LR	LR	15 33 47.2	
	comp=Z,2µm,18.3s,baz=276,slow=35						
PTGA	Pitinga	30.96	94	eP	P	15 22 05.2	+0.1
	comp=Z,19nm,1.1s						
148A	Greensboro	30.97	5	P	P	15 22 05.3	+0.5
	baz=186						
149A	Jones	31.00	7	P	P	15 22 05.9	+0.8
	baz=188						
150A	Eclectic	31.11	8	P	P	15 22 06.5	+0.4
	baz=189						
255A	Hazlehurst	31.12	14	P	P	15 22 06.5	+0.4
	baz=196						
151A	Opelika	31.13	9	P	P	15 22 06.9	+0.6
	baz=191						
256A	Glennville	31.31	15	P	P	15 22 09.2	+1.4
	baz=197						
Z43A	Armstrong Fami	31.38	359	P	P	15 22 10.1	+1.6
	baz=179						
Z44A	Pea Ridge, Bel	31.45	1	P	P	15 22 10.2	+1.1
	baz=181						
Z42A	Norrel Spur, H	31.46	358	P	P	15 22 10.1	+1.0
	baz=178						
Z41A	Richland Creek	31.48	357	P	P	15 22 10.3	+1.0
	baz=176						
Z40A	Long Farm, Mag	31.52	356	P	P	15 22 11.6	+2.0
	baz=175						
Z45A	Winona	31.56	2	P	P	15 22 10.6	+0.6
	baz=182						
Z49A	Columbiana	31.62	7	P	P	15 22 11.5	+0.9
	baz=188						
154A	Montrose	31.63	13	P	P	15 22 10.7	0.0
	baz=195						
Z50A	Ashland	31.76	8	P	P	15 22 12.2	+0.4
	baz=189						
155A	Kite	31.79	13	P	P	15 22 11.9	-0.1
	baz=196						
ABTX	Abilene, Hawle	31.89	346	P	P	15 22 13.2	+0.2
	baz=163						
ABTX	Abilene, Hawle	31.89	346	eP	P	15 22 13.9	+1.0
	comp=Z,77nm,1.8s						
Z51A	Franklin	31.93	9	P	P	15 22 13.9	+0.6
	baz=191						
Z52A	Williamson	31.93	10	P	P	15 22 14.0	+0.6
	baz=192						
Y42A	Garnett, Star	32.02	359	P	P	15 22 14.8	+0.8
	baz=178						
156A	Sylvania	32.05	15	P	P	15 22 14.7	+0.4
	baz=198						
Y45A	Yeager Farm, C	32.06	2	P	P	15 22 14.3	0.0
	baz=182						
Y43A	Makayla and Ka	32.08	360	P	P	15 22 15.6	+1.0
	baz=180						
Y41A	Eaglette Beard	32.09	357	P	P	15 22 14.5	-0.2
	baz=177						
Y46A	Houston	32.10	3	P	P	15 22 12.9	-1.9
	baz=184						
Z53A	Monticello	32.18	11	P	P	15 22 15.2	-0.3
	baz=194						
Y47A	UCPARC, Winfie	32.19	5	P	P	15 22 15.2	-0.4
	baz=186						
Y40A	Okolona	32.26	356	P	P	15 22 15.6	-0.6
	baz=176						
Y48A	Jasper	32.26	6	P	P	15 22 15.7	-0.6
	baz=187						
Z54A	Sparta	32.29	13	P	P	15 22 17.0	+0.5
	baz=195						
Y49A	Blount Mountai	32.29	7	P	P	15 22 16.6	+0.1
	baz=188						
GOGA	Godfrey	32.33	12	P	P	15 22 16.9	+0.1
	baz=194						
Y50A	Piedmont	32.41	8	P	P	15 22 17.1	-0.4
	baz=190						
Y51A	Rockmart	32.52	9	P	P	15 22 18.0	-0.5
	baz=191						
Y52A	Lilburn	32.66	10	P	P	15 22 19.7	0.0
	baz=193						
X44A	Crenshaw	32.67	1	P	P	15 22 20.4	+0.6
	baz=181						
X43A	Marvell	32.68	360	P	P	15 22 20.2	+0.3
	baz=180						
OXF	Oxford	32.70	2	P	P	15 22 20.0	0.0
	baz=183						
X42A	Stuttgart	32.73	359	P	P	15 22 20.9	+0.6
	baz=179						
X46A	Booneville	32.79	3	P	P	15 22 21.8	+1.0
	baz=184						
X47A	Russelville	32.80	5	P	P	15 22 22.1	+1.1
	baz=186						
X48A	Hartselle	32.81	6	P	P	15 22 21.6	+0.6
	baz=187						
X48A	Hartselle	32.81	6	eP	P	15 22 22.7	+1.7
	comp=Z,43nm,1.7s						
MIAR	Mount Ida	32.81	356	P	P	15 22 22.7	+1.6
	baz=175,SNR=7.6						
MIAR	Mount Ida	32.81	356	eP	P	15 22 22.1	+1.1
	comp=Z,62nm,1.6s						
MIAR	Mount Ida	32.81	356	eP	P	15 22 22.1	+1.1
MIAR				pmax	pmax		
	comp=Z,62nm,1.6s						
X39A	Fountain Ranch	32.82	355	P	P	15 22 22.9	+1.8
	baz=174,SNR=9.2						
MNTX	Cornudas Mount	32.88	337	P	P	15 22 22.0	+0.3
	baz=153						
MNTX	Cornudas Mount	32.88	337	eP	P	15 22 21.9	+0.2
	comp=Z,7.2nm,1.0s						
Y54A	Tignall	32.93	13	P	P	15 22 23.3	+1.3
	baz=195						
X49A	Woodville	32.95	7	P	P	15 22 23.0	+0.8
	baz=188						
UALR	University of	32.97	358	eP	P	15 22 22.8	+0.4
	comp=Z,130nm,2.0s						
X50B	Fort Payne	32.99	8	P	P	15 22 23.0	+0.4
	baz=190						
X51A	Calhoun	33.20	9	P	P	15 22 25.9	+1.4
	baz=191						
X51A	Calhoun	33.20	9	eP	P	15 22 26.1	+1.6
	comp=Z,44nm,1.5s						
W41B	Gary Mavity, V	33.36	358	P	P	15 22 27.1	+1.3
	baz=178						
W41B	Gary Mavity, V	33.36	358	eP	P	15 22 27.0	+1.2
	comp=Z,47nm,2.0s						
X52A	Dahlonega	33.41	10	P	P	15 22 26.8	+0.5
	baz=193						
X53A	Estanollee	33.42	11	P	P	15 22 27.1	+0.7
	baz=194						
W40A	Ferguson Farm,	33.42	357	P	P	15 22 26.7	+0.3

	baz=176						
W40A	Ferguson Farm,	33.42	357	*e*P	P	15 22 27.4	+1.1
	comp=Z,112nm,1.8s						
W42A	Bald Knob	33.44	359	P	P	15 22 27.5	+1.0
	baz=179						
W39A	Magazine	33.47	356	P	P	15 22 27.8	+1.0
	baz=175,SNR=9.5						
W39A	Magazine	33.47	356	*e*P	P	15 22 28.2	+1.4
	comp=Z,98nm,1.6s						
W48A	Pulaski	33.50	6	P	P	15 22 27.8	+0.8
	baz=187						
W49A	Belvidere	33.56	7	P	P	15 22 27.9	+0.4
	baz=188						
JSC	Jenkinsville	33.66	14	*e*P	P	15 22 29.7	+1.2
	comp=Z,45nm,1.6s						
SWET	Sewanee	33.69	7	*e*P	P	15 22 28.5	-0.2
	comp=Z,53nm,1.6s						
RPN	Rapa Nui	33.72	211	LR	LR	15 32 21.5	
	comp=Z,3µm,21.5s,baz=38,slow=30						
WMOK	Wichita Mounta	33.73	348	P	P	15 22 30.4	+1.3
	baz=166,SNR=17						
WMOK	Wichita Mounta	33.73	348	*e*P	P	15 22 28.2	-0.9
	comp=Z,71nm,1.5s						
WMOK	Wichita Mounta	33.73	348	*e*P	P	15 22 28.2	-0.9
WMOK				pmax	pmax		
	comp=Z,71nm,1.5s						
W50A	Signal Mountai	33.76	8	P	P	15 22 29.4	0.0
	baz=190						
W52A	Murphy	33.88	10	P	P	15 22 30.7	+0.3
	baz=192						
V45A	Humboldt	33.95	3	P	P	15 22 31.2	+0.3
	baz=183						
V43A	Jonesboro	33.95	0	P	P	15 22 31.2	+0.3
	baz=181						
BG3	Lake Jocassee	33.97	12	*e*P	P	15 22 32.3	+1.1
	comp=Z,36nm,1.5s						
V41A	Mountainview	33.97	358	P	P	15 22 31.5	+0.4
	baz=178						
V42A	Cord	33.97	359	P	P	15 22 31.4	+0.3
	baz=179						
V44A	Blytheville	34.00	1	P	P	15 22 32.0	+0.6
	baz=182						
V40A	Witts Springs	34.02	357	P	P	15 22 31.8	+0.2
	baz=176						
V40A	Witts Springs	34.02	357	*e*P	P	15 22 31.2	-0.3
	comp=Z,43nm,1.8s						
MSTX	Muleshoe	34.02	342	P	P	15 22 33.1	+1.4
	baz=158,SNR=9.7						
MSTX	Muleshoe	34.02	342	*e*P	P	15 22 31.0	-0.7
	comp=Z,52nm,1.2s						
V46A	Holladay	34.06	4	P	P	15 22 32.8	+0.9
	baz=185						
W53A	Cullowhee	34.09	11	P	P	15 22 32.5	+0.1
	baz=194						
V39A	Pettigrew	34.10	356	P	P	15 22 33.1	+0.7
	baz=175						
V48A	Smith Brothers	34.11	6	P	P	15 22 32.9	+0.6
	baz=187						
V48A	Smith Brothers	34.11	6	*e*P	P	15 22 32.3	0.0
	comp=Z,39nm,1.4s						
V47A	Nunnelly	34.13	5	P	P	15 22 32.6	+0.1
	baz=186						
V49A	McMinnville	34.24	7	P	P	15 22 33.9	+0.5
	baz=189						
SIV	San Ignacio	34.25	122	P	P	15 22 34.3	+0.4
	comp=Z,3.4nm,0.7s,baz=310,slow=11,SNR=7.9						
SIV				PcP	PcP	15 25 10.6	0.0
	comp=Z,1.6nm,0.8s,baz=331,slow=2.0,SNR=4.6						
SIV				LR	LR	15 36 03.5	
	comp=Z,861nm,20.8s,baz=322,slow=36						
V50A	Pikevile	34.25	8	P	P	15 22 34.3	+0.7
	baz=190						
TUL1	Leonard	34.38	353	P	P	15 22 35.7	+1.0
	baz=171						
WVT	Waverly	34.41	4	P	P	15 22 36.0	+1.1
	baz=185						
WVT	Waverly	34.41	4	*e*P	P	15 22 35.1	+0.2
	comp=Z,21nm,1.3s						
WVT	Waverly	34.41	4	*e*P	P	15 22 35.1	+0.2
WVT				pmax	pmax		
	comp=Z,21nm,1.3s						
TKL	Tuckaleechee C	34.45	10	P	P	15 22 36.5	+1.2
	comp=Z,5.9nm,0.9s,baz=166,slow=5.4,SNR=5.8						
TKL				LR	LR	15 36 07.4	
	comp=Z,428nm,20.5s,baz=190,slow=35						
TKL	Tuckaleechee C	34.45	10	*e*P	P	15 22 36.4	+1.0
	comp=Z,31nm,1.4s						
TKL	Tuckaleechee C	34.45	10	*e*P	P	15 22 36.4	+1.0
TKL				pmax	pmax		
	comp=Z,31nm,1.4s						
KMSC	Kings Mountain	34.46	14	P	P	15 22 36.2	+0.8
	baz=197						
KMSC	Kings Mountain	34.46	14	*e*P	P	15 22 36.0	+0.6
	comp=Z,32nm,1.4s						
V51A	Loudon	34.50	9	P	P	15 22 36.6	+0.9
	baz=192						
V51A	Loudon	34.50	9	*e*P	P	15 22 36.2	+0.5
	comp=Z,23nm,1.1s						
U42A	Revenden	34.52	359	P	P	15 22 37.0	+1.2
	baz=179,SNR=7.6						
U41A	Viola	34.52	358	P	P	15 22 36.1	+0.2
	baz=178						
U44B	Burton Farm, H	34.53	2	P	P	15 22 36.6	+0.6
	baz=183						
U43A	Rector	34.53	1	P	P	15 22 36.6	+0.6
	baz=181						
AMTX	Amarillo	34.56	344	P	P	15 22 37.3	+0.9
	baz=161						
AMTX	Amarillo	34.56	344	*e*P	P	15 22 36.7	+0.3
	comp=Z,111nm,1.5s						
U45A	Rockin P Farm,	34.56	3	P	P	15 22 37.4	+1.1
	baz=184						
U40A	Yellville	34.57	357	P	P	15 22 37.2	+0.9
	baz=176						
121A	Cookes Peak, D	34.60	334	P	P	15 22 36.4	-0.5
	baz=149						
U46A	Springville	34.61	4	P	P	15 22 37.2	+0.6
	baz=185						
U39A	Green Forest	34.63	356	P	P	15 22 37.2	+0.4
	baz=175						
V53A	Saluda	34.65	12	P	P	15 22 37.9	+0.8
	baz=194						
V52A	Sevierville	34.66	10	P	P	15 22 37.9	+0.7
	baz=193						
U47A	Clarksville	34.76	5	P	P	15 22 38.3	+0.3
	baz=186						
U48A	Cassie Pea, Po	34.90	6	P	P	15 22 39.0	-0.2
	baz=188						
T42A	Van Buren	35.19	360	P	P	15 22 42.2	+0.5
	baz=180						
T42A	Van Buren	35.19	360	*e*P	P	15 22 42.4	+0.7
	comp=Z,64nm,1.8s						
T41A	Mountain View	35.21	359	P	P	15 22 43.2	+1.3
	baz=178,SNR=14						
T45A	Paducah	35.24	3	P	P	15 22 42.5	+0.4
	baz=184						
T39A	Clever	35.26	356	P	P	15 22 43.4	+1.1
	baz=176						
T44A	Benton	35.27	2	P	P	15 22 42.9	+0.6
	baz=182						
T46A	Princeton	35.31	4	P	P	15 22 43.6	+0.9
	baz=185						
T47A	Sharon Grove	35.32	5	P	P	15 22 43.2	+0.5
	baz=186						
T47A	Sharon Grove	35.32	5	*e*P	P	15 22 43.4	+0.6
	comp=Z,79nm,1.7s						
T38A	Diamond	35.34	355	P	P	15 22 44.0	+1.1
	baz=174						
T40A	Mansfield	35.34	358	P	P	15 22 44.3	+1.3
	baz=177,SNR=7.8						
TZTN	Tazewell	35.36	10	P	P	15 22 44.1	+1.0
	baz=193						
U53A	Fall Branch	35.37	12	P	P	15 22 43.4	+0.2
	baz=194,SNR=6.0						
T48A	Bowling Green	35.51	6	P	P	15 22 45.0	+0.6
	baz=188						
BNM	Barren Site	35.53	337	*e*P	P	15 22 45.4	+0.4
T49A	Edmonton	35.60	7	P	P	15 22 45.5	+0.2
	baz=189						
T49A	Edmonton	35.60	7	*e*P	P	15 22 45.5	+0.2
	comp=Z,29nm,1.4s						
T50A	Nancy	35.62	8	P	P	15 22 45.9	+0.6
	baz=190						
LENM	Lemitar	35.68	337	*e*P	P	15 22 47.5	+1.4
S43A	Fulton Ridge,	35.74	1	P	P	15 22 47.0	+0.6
	baz=181						
NCAT	North Carolina	35.75	15	*e*P	P	15 22 46.1	-0.4
	comp=Z,42nm,1.4s						
S41A	Jillco Farms,	35.76	359	P	P	15 22 47.5	+1.0
	baz=178,SNR=10						
S40A	Lebanon	35.79	358	P	P	15 22 47.2	+0.4
	baz=177						
TUC	Tucson	35.80	330	P	P	15 22 48.7	+1.5
	baz=145						
TUC	Tucson	35.80	330	*e*P	P	15 22 46.5	-0.6
	comp=Z,11nm,1.1s						
TUC	Tucson	35.80	330	*e*P	P	15 22 46.5	-0.6
TUC				pmax	pmax		
	comp=Z,11nm,1.1s						
S44A	Carbondale	35.88	2	P	P	15 22 48.7	+1.1
	baz=183						
S45A	Carrier Mills	35.90	3	P	P	15 22 48.8	+1.1
	baz=184						
S38A	Stockton	35.90	356	P	P	15 22 49.0	+1.2
	baz=175,SNR=12						
SIUC	Southern Illin	35.91	2	*e*P	P	15 22 47.5	-0.3
	comp=Z,61nm,1.3s						
S39A	Bolivar	35.92	357	P	P	15 22 49.1	+1.2
	baz=176,SNR=18						
S39A	Bolivar	35.92	357	*e*P	P	15 22 48.5	+0.5
	comp=Z,71nm,1.4s						
S42A	Caledonia	35.93	0	P	P	15 22 48.9	+0.8
	baz=180,SNR=7.9						
LAZ	Ladron	35.95	337	*e*P	P	15 22 46.2	-2.3
S46A	Don Dixon Farm	35.96	4	P	P	15 22 49.2	+0.9
	baz=185						
T52A	Hallie	36.01	11	P	P	15 22 50.7	+2.0
	baz=193						
S48A	Wiedeman Farm,	36.09	6	P	P	15 22 51.6	+2.3
	baz=188						
TASL	Snake Pit, Alb	36.16	338	P	P	15 22 52.4	+2.1
	baz=153,SNR=7.0						
ANMO	Albuquerque	36.17	338	P	P	15 22 52.7	+2.4
	comp=Z,4.9nm,1.1s,baz=146,slow=9.0,SNR=9.1						
ANMO				LR	LR	15 36 56.0	
	comp=Z,745nm,19.3s,baz=156,slow=35						
ANMO	Albuquerque	36.17	338	P	P	15 22 52.3	+2.0
	baz=153						
ANMO	Albuquerque	36.17	338	*e*P	P	15 22 50.8	+0.4
	comp=Z,12nm,1.3s						
ANMO	Albuquerque	36.17	338	*d i*P	P	15 22 52.5	+2.2
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TASM	ASL Pad, Albuq	36.17	338	P	P	15 22 52.5	+2.1
	baz=153,SNR=6.7						
CCM	Cathedral Cave	36.22	359	P	P	15 22 51.6	+1.1
	baz=179						
CCM	Cathedral Cave	36.22	359	*e*P	P	15 22 51.6	+1.1
	comp=Z,260nm,1.8s						
CCM	Cathedral Cave	36.22	359	*e*P	P	15 22 51.6	+1.1
CCM				pmax	pmax		
	comp=Z,260nm,1.8s						
S51A	Beattyville	36.41	10	P	P	15 22 52.7	+0.5
	baz=192						
R42A	Luebbering	36.44	0	P	P	15 22 53.0	+0.6
	baz=180						
R44A	Waltonville	36.44	2	P	P	15 22 54.0	+1.6
	baz=183						
R43A	Red Bud	36.44	1	P	P	15 22 53.7	+1.3
	baz=182						
R38A	Fenwick Farm,	36.45	356	P	P	15 22 53.9	+1.4
	baz=175,SNR=13						
R41A	Rosebud	36.46	359	P	P	15 22 53.5	+0.9
	baz=179						
R40A	Maddies Statio	36.47	358	P	P	15 22 54.0	+1.3
	baz=178,SNR=12						
R40A	Maddies Statio	36.47	358	*e*P	P	15 22 53.3	+0.6
	comp=Z,128nm,1.7s						
R46A	Gibon Southern	36.50	4	P	P	15 22 53.8	+0.9
	baz=186						
R45A	Skylar, Fairfi	36.53	3	P	P	15 22 54.4	+1.3
	baz=184						
R39A	Chumby, Stover	36.53	357	P	P	15 22 53.4	+0.3
	baz=176,SNR=12						
S52A	Salyersville	36.54	10	P	P	15 22 54.3	+1.0
	baz=193						
214A	Organ Pipe Nat	36.56	328	P	P	15 22 54.0	+0.5
	baz=141						
WCI	Wyandotte Cave	36.63	6	P	P	15 22 54.2	+0.2
	baz=188						
BLA	Blacksburg	36.66	14	P	P	15 22 54.4	+0.1
	baz=198						
BLA	Blacksburg	36.66	14	*e*P	P	15 22 55.2	+0.9
	comp=Z,78nm,1.5s						
BLA	Blacksburg	36.66	14	*e*P	P	15 22 55.2	+0.9
BLA				pmax	pmax		
	comp=Z,78nm,1.5s						
R47A	Wooly Knot Far	36.67	6	P	P	15 22 54.7	+0.4
	baz=187						
R48A	Northridge Ran	36.84	7	P	P	15 22 56.7	+0.9
	baz=188						
OLIL	Olney	36.98	4	*e*P	P	15 22 58.1	+1.2
	comp=Z,133nm,1.5s						
R51A	Hillsboro	37.06	9	P	P	15 22 58.6	+0.9
	baz=192						
Q44A	Meyer Farm, Va	37.10	2	P	P	15 22 58.4	+0.4
	baz=183						
Q41A	Truxton	37.11	359	P	P	15 22 59.4	+1.3
	baz=179						
Q43A	New Douglas	37.11	1	P	P	15 22 59.2	+1.1
	baz=182						
Q45A	Warren Harvey,	37.13	3	P	P	15 22 59.4	+1.1
	baz=184,SNR=6.2						
Q40A	Laux Farm, Aux	37.17	358	P	P	15 22 59.2	+0.6
	baz=178						
Q37A	Longview Farm,	37.18	355	P	P	15 22 59.6	+0.9
	baz=174						
Q38A	Cooks Store, C	37.20	356	P	P	15 22 59.6	+0.7
	baz=176						
X18A	Snowflake	37.24	333	*e*P	P	15 22 59.8	+0.3
	comp=Z,33nm,1.5s						
Q39A	Willow Grove F	37.25	357	P	P	15 23 00.6	+1.3
	baz=176,SNR=8.4						
R52A	Catlettsburg	37.26	11	P	P	15 22 59.6	+0.2
	baz=194						
Q47A	Bedord North L	37.31	6	P	P	15 23 00.4	+0.6
	baz=187						
Q46A	CEJHS Indians,	37.32	4	P	P	15 23 00.3	+0.5
	baz=186						
Q48A	North Vernon	37.38	7	P	P	15 23 00.6	+0.2
	baz=188						
T25A	Trinidad	37.45	342	P	P	15 23 03.2	+1.9
	baz=158,SNR=11						
T25A	Trinidad	37.45	342	*e*P	P	15 23 03.5	+2.2
	comp=Z,61nm,1.4s						
Q50A	Georgetown	37.53	9	P	P	15 23 01.7	0.0
	baz=191						
Q49A	Aurora	37.56	8	P	P	15 23 02.3	+0.4
	baz=190						
KSU1	Kansas State U	37.63	353	P	P	15 23 04.0	+1.5
	baz=171						
KSU1	Kansas State U	37.63	353	*e*P	P	15 23 01.8	-0.7
W18A	Petrified Fore	37.64	334	P	P	15 23 03.8	+0.9
	baz=148						
P44A	Sand Creek, Wi	37.68	3	P	P	15 23 04.0	+1.1
	baz=184						
P39B	Salisbury	37.69	358	P	P	15 23 03.7	+0.7
	baz=177						
P40A	Paris	37.70	358	P	P	15 23 03.9	+0.8
	baz=178,SNR=10						
P40A	Paris	37.70	358	*e*P	P	15 23 03.9	+0.8
	comp=Z,167nm,1.8s						
P42A	Winchester	37.74	1	P	P	15 23 03.1	-0.3
	baz=181						
P42A	Winchester	37.74	1	*e*P	P	15 23 03.9	+0.4
	comp=Z,81nm,1.5s						
P45A	Graceland, Par	37.79	4	P	P	15 23 04.9	+1.1
	baz=185						
P45A	Graceland, Par	37.79	4	*e*P	P	15 23 03.9	+0.1
	comp=Z,140nm,1.5s						
Q51A	Peebles	37.81	10	P	P	15 23 04.4	+0.4
	baz=192						
P43A	Skaggs, Pawnee	37.82	2	P	P	15 23 05.0	+0.9
	baz=182						
P41A	Barry, Barry	37.83	360	P	P	15 23 04.9	+0.8
	baz=180						
X16A	Lo Mia Camp, P	37.84	332	*e*P	P	15 23 05.4	+0.9
	comp=Z,10nm,1.1s						
CBKS	Cedar Bluff	37.86	349	P	P	15 23 05.6	+1.1
	baz=166						
CBKS	Cedar Bluff	37.86	349	*e*P	P	15 23 05.8	+1.3
	comp=Z,181nm,1.9s						
CBKS	Cedar Bluff	37.86	349	*e*P	P	15 23 05.8	+1.3
CBKS				pmax	pmax		
	comp=Z,181nm,1.9s						
P38A	Dawn	37.86	357	P	P	15 23 05.5	+1.1
	baz=176						
P38A	Dawn	37.86	357	*e*P	P	15 23 05.5	+1.1
	comp=Z,94nm,1.8s						
P47A	Martinsville	37.87	6	P	P	15 23 05.1	+0.6
	baz=187						
P37A	Lathrop	37.88	356	P	P	15 23 05.5	+0.9
	baz=174						
P48A	Milroy	37.94	7	P	P	15 23 05.1	0.0
	baz=189						
P49A	Miami Univ. Ec	38.10	8	P	P	15 23 07.2	+0.7
	baz=190						
Y14A	Wickenburg	38.22	330	*e*P	P	15 23 09.3	+1.7
	comp=Z,8.9nm,0.8s						
O41A	Passleys Farm,	38.27	360	P	P	15 23 08.3	+0.4
	baz=180						
O40A	La Belle	38.29	359	P	P	15 23 09.1	+1.1
	baz=178,SNR=12						
P50A	Jamestown	38.31	9	P	P	15 23 09.2	+1.0
	baz=191						
O38A	Galt	38.35	357	P	P	15 23 09.8	+1.2
	baz=176						
SDCO	Great Sand Dun	38.35	341	P	P	15 23 10.1	+1.1
	baz=156,SNR=28						
SDCO	Great Sand Dun	38.35	341	*e*P	P	15 23 10.1	+1.1
	comp=Z,88nm,1.9s						
O42A	Bath	38.36	1	P	P	15 23 09.9	+1.3
	baz=181						
O44A	Mansfield	38.37	3	P	P	15 23 10.1	+1.4
	baz=184						
CBN	Corbin Frederi	38.41	17	P	P	15 23 10.7	+1.6
O37A	Wolven Farm, M	38.44	356	P	P	15 23 09.6	+0.3
	baz=175						
O39A	Kirksville	38.44	358	P	P	15 23 10.2	+0.9
	baz=177						
O43A	Sugar Creek Fa	38.47	2	P	P	15 23 10.3	+0.8
	baz=182						
GLA	Glamis	38.49	327	P	P	15 23 11.3	+1.4
	baz=140						
O45A	Potomac	38.51	4	P	P	15 23 09.6	-0.3
	baz=185						
O47A	Sheridan	38.63	6	P	P	15 23 11.0	+0.1
	baz=188						
SFIN	Lafayette	38.68	5	P	P	15 23 12.1	+0.8
	baz=186						
SFIN	Lafayette	38.68	5	*e*P	P	15 23 11.3	0.0
	comp=Z,46nm,1.4s						
KSCO	Kaye Shedlock’	38.70	345	P	P	15 23 12.7	+1.1
	baz=161						
WUAZ	Wupatki	38.71	333	P	P	15 23 13.0	+1.2
	baz=146,SNR=10						
WUAZ	Wupatki	38.71	333	*e*P	P	15 23 13.1	+1.2
	comp=Z,35nm,1.3s						
HDIL	Hopedale	38.74	2	P	P	15 23 12.4	+0.6
	baz=182						
HDIL	Hopedale	38.74	2	*e*P	P	15 23 12.5	+0.7
O48A	Farmland	38.76	7	P	P	15 23 12.4	+0.4
	baz=189						
O49A	Covington	38.80	8	P	P	15 23 12.9	+0.5
	baz=190						
S22A	4UR Ranch, Cre	38.80	340	P	P	15 23 12.8	+0.1
	baz=154,SNR=21						
S22A	4UR Ranch, Cre	38.80	340	*e*P	P	15 23 14.7	+2.0
	comp=Z,44nm,1.5s						
O50A	Cable	38.86	9	P	P	15 23 13.6	+0.7
	baz=192						
Y12C	Blythe	38.86	328	P	P	15 23 13.6	+0.7
	baz=140						
N41A	Harden Midland	38.86	360	P	P	15 23 13.6	+0.7
	baz=180						
N41A	Harden Midland	38.86	360	*e*P	P	15 23 13.6	+0.7
	comp=Z,191nm,1.7s						
IKP	In-Ko-Pah, Jac	38.91	325	P	P	15 23 13.1	-0.4
	baz=137						
MVCO	Mesa Verde	38.94	337	P	P	15 23 13.9	+0.1
	baz=151						
MVCO	Mesa Verde	38.94	337	*e*P	P	15 23 14.2	+0.3
	comp=Z,52nm,1.7s						
SWSC	Sam W. Stewart	38.95	326	P	P	15 23 13.1	-0.6
	baz=138						
N42A	Yates City	38.99	1	P	P	15 23 14.7	+0.8
	baz=181						
N38A	Joes South For	39.01	357	P	P	15 23 15.0	+0.9
	baz=176						
N44A	Piper City	39.03	3	P	P	15 23 14.8	+0.6
	baz=184						
N37A	Lee Faris, Mou	39.03	356	P	P	15 23 14.8	+0.5
	baz=175						
N40A	Mertquake, Sal	39.05	359	P	P	15 23 15.3	+0.9
	baz=179						
ACSO	Alum Creek Sta	39.05	10	P	P	15 23 15.1	+0.7
	baz=192						
N39A	Derby Farms, D	39.06	358	P	P	15 23 15.4	+0.9
	baz=177						
N39A	Derby Farms, D	39.06	358	*e*P	P	15 23 15.3	+0.8
	comp=Z,99nm,1.7s						
PDMCI	Parker Dam,Lak	39.09	329	P	P	15 23 15.9	+1.1
	baz=141						
MCWV	Mont Chateau	39.12	13	P	P	15 23 15.8	+0.8
	baz=198						
N45A	Kentland	39.12	4	P	P	15 23 15.7	+0.8
	baz=185						
N43A	Stutzman Famil	39.12	2	P	P	15 23 15.8	+0.8
	baz=183						
N36A	Muff Farm, Cla	39.15	355	P	P	15 23 16.6	+1.4
	baz=174						
N46A	Monticello	39.23	5	P	P	15 23 16.1	+0.2
	baz=186						
MONP2	Monument Peak	39.27	325	P	P	15 23 17.4	+0.8
	baz=137						
BC3	Big Chuckawall	39.29	327	P	P	15 23 18.5	+1.8
	baz=139,SNR=5.3						
Q24A	Divide	39.36	342	P	P	15 23 18.2	+0.8
	baz=157						
IRM	Iron Mountain	39.50	328	P	P	15 23 19.7	+1.3
	baz=140						
M41A	Milan	39.53	0	P	P	15 23 19.0	+0.6
	baz=180						
N50A	Nevada	39.55	9	P	P	15 23 19.1	+0.5
	baz=192						
W13A	Hualapai Mount	39.58	330	*e*P	P	15 23 21.1	+1.9
	comp=Z,30nm,1.7s						
M42A	Sheffield	39.62	1	P	P	15 23 21.1	+1.9
	baz=182						
M44A	Midewin, Midew	39.62	3	P	P	15 23 19.9	+0.8
	baz=184						
M38A	Pleasantville	39.63	357	P	P	15 23 20.0	+0.7
	baz=176						
M39A	Webster	39.65	358	P	P	15 23 20.2	+0.7
	baz=178						
109C	Camp Elliot, M	39.66	324	P	P	15 23 20.9	+1.2
	baz=136						
M37A	Trindle Farm,	39.66	356	P	P	15 23 19.6	0.0
	baz=175						
NEE2	Needles Airpor	39.69	329	P	P	15 23 20.6	+0.7
	baz=141						
M36A	Felix, Anita	39.77	355	P	P	15 23 20.8	+0.4
	baz=174						
M46A	Old House Fiel	39.77	5	P	P	15 23 20.4	0.0
	baz=187						
PV01	Paradox Valley	39.77	338	*e*P	P	15 23 22.6	+1.7
FRD	Ford Ranch, An	39.81	325	P	P	15 23 21.5	+0.4
	baz=138						
PFO	Pinyon Flats O	39.82	326	P	P	15 23 21.5	+0.4
	baz=138						
BELC	Belle Mtn. Jos	39.85	327	P	P	15 23 21.1	-0.2
	baz=139						
U15A	North Rim	39.88	333	*e*P	P	15 23 23.7	+1.9
	comp=Z,76nm,2.0s						
PV02	Paradox Valley	39.90	338	*e*P	P	15 23 22.8	+1.0
	comp=Z,40nm,1.4s						
PV03	Paradox Valley	39.98	338	*e*P	P	15 23 22.9	+0.4
BGNE	Belgrade	40.11	351	P	P	15 23 23.2	-0.1
	baz=169						
SCIA	State Center	40.12	357	P	P	15 23 24.0	+0.7
	baz=176						
SMCO	Snowmass	40.14	340	*e*P	P	15 23 25.2	+1.2
	comp=Z,32nm,1.6s						
L42A	Oliver, Polo	40.17	1	P	P	15 23 24.3	+0.6
	baz=182						
L42A	Oliver, Polo	40.17	1	*e*P	P	15 23 24.1	+0.4
	comp=Z,94nm,1.4s						
L40A	Anamosa	40.22	360	P	P	15 23 24.5	+0.4
	baz=179						
L40A	Anamosa	40.22	360	*e*P	P	15 23 24.9	+0.8
	comp=Z,94nm,1.5s						
MURC	Murrieta	40.23	325	P	P	15 23 23.7	-0.7
	baz=137						
L41A	Preston	40.23	0	P	P	15 23 24.6	+0.4

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      baz=181
GMRC  Granite Mounta    40.26 328  P       P       15 23 24.4 -0.4
      baz=140
ISCO  Idaho Springs     40.27 342  P       P       15 23 26.8 +1.8
      baz=157,SNR=14
ISCO  Idaho Springs     40.27 342  eP      P       15 23 25.8 +0.8
      comp=Z,76nm,1.5s
ISCO  Idaho Springs     40.27 342  eP      P       15 23 25.8 +0.8
ISCO                                pmax    pmax
      comp=Z,75nm,1.5s
L39A  Vinton            40.29 359  P       P       15 23 25.3 +0.6
      baz=178
PV09  Paradox Valley    40.31 338  eP      P       15 23 26.5 +1.2
N54A  Moraine State     40.33  13  P       P       15 23 26.2 +1.1
      baz=197
L38A  Oak Wood Farm,    40.34 358  P       P       15 23 25.4 +0.2
      baz=177
L37A  Phoenix Point,    40.36 357  P       P       15 23 25.7 +0.4
      baz=176
MVL   Millersville      40.37  17  eP      P       15 23 29.6 +4.2
      comp=Z,19nm,0.8s
L43A  Garden Prairie    40.38   2  P       P       15 23 25.4 -0.1
      baz=183
OGNE  Ogallala          40.39 347  P       P       15 23 26.5 +0.8
      baz=163
L36A  Harm Buss Farm    40.40 356  P       P       15 23 25.5 -0.1
      baz=174
L44A  Lake County Fo    40.42   3  P       P       15 23 26.2 +0.4
      baz=184
SSPA  Standing Stone    40.53  15  P       P       15 23 28.5 +1.8
      baz=200
BBRC  Big Bear Solar    40.56 326  P       P       15 23 26.8 -0.6
      baz=138
SCI2  San Clemente I    40.58 323  P       P       15 23 26.7 -0.6
      baz=135
HEC   Hector,Ludlow     40.65 327  P       P       15 23 29.2 +1.2
      baz=139
PKCU  Pink Cliffs       40.72 333  eP      P       15 23 30.4 +1.6
      comp=Z,53nm,1.4s
K41A  Shullsburg        40.76   1  P       P       15 23 28.2 -0.5
      baz=181
LCMT  Little Creek M    40.80 332  eP      P       15 23 29.2 +0.1
      comp=Z,40nm,2.0s
CIS   Catalina Islan    40.80 324  P       P       15 23 28.9 -0.2
      baz=135
K38A  Parkersburg       40.84 358  P       P       15 23 30.0 +0.7
      baz=177
K38A  Parkersburg       40.84 358  eP      P       15 23 29.4 +0.2
      comp=Z,155nm,1.5s
K40A  Colesburg         40.85 360  P       P       15 23 30.1 +0.7
      baz=180
K39A  Oelwein           40.87 359  P       P       15 23 29.9 +0.4
      baz=178
TUQ   Turquoise Moun    40.89 328  P       P       15 23 31.2 +1.2
      baz=140
K36A  Gilmore City      40.92 356  P       P       15 23 29.0 -1.0
      baz=174
K43A  Burlington        40.92   3  P       P       15 23 29.7 -0.3
      baz=184
M54A  Oil Creek Stat    40.92  13  P       P       15 23 29.6 -0.5
      baz=197
FMP   Fort Macarthur    40.95 324  P       P       15 23 28.6 -1.7
      baz=136
BFSC  Mount Baldy Ra    40.95 325  P       P       15 23 29.8 -0.7
      baz=137
K42A  Prairie Point,    40.95   2  P       P       15 23 30.3 +0.1
      baz=182
AAM   Ann Arbor         40.97   8  eP      P       15 23 28.4 -1.8
AAM   Ann Arbor         40.97   8  eP      P       15 23 28.5 -1.8
K37A  Belmond           41.00 357  P       P       15 23 30.4 -0.1
      baz=176
RPV   Rancho Palos V    41.03 324  eP      P       15 23 33.1 +2.1
JFWS  Jewell Farm       41.07   1  P       P       15 23 31.1 -0.1
      baz=181
JFWS  Jewell Farm       41.07   1  eP      P       15 23 31.2  0.0
      comp=Z,125nm,1.9s
JFWS  Jewell Farm       41.07   1  eP      P       15 23 31.2  0.0
JFWS                                pmax    pmax
      comp=Z,125nm,1.9s
MTPU  Mount Pierson     41.16 334  eP      P       15 23 32.9 +0.4
      comp=Z,30nm,1.9s
SZCU  Shurtz Canyon     41.20 333  eP      P       15 23 33.7 +1.1
      comp=Z,54nm,1.9s
GSC   Goldstone, Bar    41.26 327  P       P       15 23 33.2 +0.2
      baz=139
GSC   Goldstone, Bar    41.26 327  eP      P       15 23 34.3 +1.3
      comp=Z,6.6nm,0.6s
CCUT  Cedar City        41.29 333  eP      P       15 23 34.1 +0.8
      comp=Z,18nm,1.5s
SHPR  Sheep Range       41.32 330  eP      P       15 23 34.1 +0.6
      comp=Z,22nm,1.6s
DECC  Green Verdugo     41.35 325  P       P       15 23 34.2 +0.5
      baz=136
SNCC  San Nicolas Is    41.36 323  P       P       15 23 33.1 -0.6
      baz=134
SRU   San Rafael Swe    41.38 337  eP      P       15 23 34.0  0.0
      comp=Z,11nm,1.2s
SRU   San Rafael Swe    41.38 337  eP      P       15 23 34.0  0.0
SRU                                 pmax    pmax
      comp=Z,11nm,1.2s
O20A  White River Ci    41.43 340  P       P       15 23 36.5 +2.1
      baz=153,SNR=6.7
O20A  White River Ci    41.43 340  eP      P       15 23 35.0 +0.6
      comp=Z,126nm,2.0s
SHOC  Shoshone, Teco    41.43 328  P       P       15 23 35.4 +1.1
      baz=140
ERPA  Erie              41.44  12  P       P       15 23 33.8 -0.4
      baz=196
J39A  Decorah           41.50 359  P       P       15 23 34.9 +0.2
      baz=179
J42A  Columbus          41.50   2  P       P       15 23 35.6 +0.9
      baz=183
J41A  Loganville        41.53   1  P       P       15 23 35.6 +0.7
      baz=181
J37A  Redenius Farm,    41.53 357  P       P       15 23 35.4 +0.4
      baz=176
MSU   Marysvale         41.55 335  eP      P       15 23 36.5 +1.0
MSU   Marysvale         41.55 335  eP      P       15 23 36.5 +1.0
J43A  Natural Harves    41.59   3  P       P       15 23 35.7 +0.3
      baz=184
J36A  Seneca 1, Swea    41.60 356  P       P       15 23 35.4 -0.1
      baz=175
J36A  Seneca 1, Swea    41.60 356  eP      P       15 23 39.6 +4.0
      comp=Z,69nm,1.7s
EDW2  Edwards Air Fo    41.61 326  P       P       15 23 35.1 -0.7
      baz=137
BLG   Laguna Peak, P    41.68 324  P       P       15 23 35.1 -1.2
      baz=135
P18A  Preston Nutter    41.71 337  eP      P       15 23 37.7 +0.8
      comp=Z,32nm,1.5s
P17A  Butcher Ranch,    41.77 337  eP      P       15 23 38.3 +1.0
      comp=Z,26nm,1.4s
TMUT  Trail Mountain    41.81 336  eP      P       15 23 38.1 +0.4
      comp=Z,13nm,1.3s
OSI   Osito Audit: C    41.84 325  P       P       15 23 35.9 -1.8
      baz=136
LRMC  Laurel Mtn Rad    41.87 326  P       P       15 23 39.8 +1.8
      baz=138
SCZ2  Santa Cruz Isl    41.94 323  P       P       15 23 38.6 +0.1
      baz=134
I39A  Houston           42.01 359  P       P       15 23 39.4 +0.5
      baz=179
I40A  Norwalk           42.05   0  P       P       15 23 39.7 +0.5
      baz=180
PAL   Palisades         42.05  19  P       P       15 23 39.6 +0.4
      baz=206
I42A  Draeger Farm,     42.08   2  P       P       15 23 39.6 +0.2
      baz=183
I42A  Draeger Farm,     42.08   2  eP      P       15 23 39.9 +0.5
      comp=Z,46nm,1.3s
I43A  Langenfeld Bro    42.11   3  P       P       15 23 40.2 +0.6
      baz=184
MPMC  Manual Prospec    42.20 327  P       P       15 23 41.8 +1.0
      baz=138
ECSD  EROS Data Cent    42.20 354  P       P       15 23 40.9 +0.4
      baz=172,SNR=12
ECSD  EROS Data Cent    42.20 354  eP      P       15 23 40.3 -0.1
      comp=Z,51nm,1.4s
ELFO  Elginfield        42.21  10  P       P       15 23 43.5 +2.9
      baz=194
I38A  Scanlan Farm,     42.21 358  P       P       15 23 40.3 -0.2
      baz=178,SNR=7.2
TPNV  Topopah Spring    42.22 329  P       P       15 23 41.6 +0.7
      baz=140
TPNV  Topopah Spring    42.22 329  eP      P       15 23 41.0 +0.1
      comp=Z,37nm,1.7s
TPNV  Topopah Spring    42.22 329  eP      P       15 23 41.0 +0.1
TPNV                                pmax    pmax
      comp=Z,37nm,1.7s
I37A  Lemond, Waseca    42.23 357  P       P       15 23 40.0 -0.7
      baz=176
I37A  Lemond, Waseca    42.23 357  eP      P       15 23 40.4 -0.2
      comp=Z,113nm,1.6s
ARVC  Arvin             42.26 325  P       P       15 23 39.9 -1.2
      baz=136
I36A  Fitzsimmons Fa    42.27 357  P       P       15 23 40.8 -0.1
      baz=175
PSUT  Pine Spring       42.31 333  eP      P       15 23 42.8 +1.1
      comp=Z,48nm,1.9s
DAC   Darwin (Calif)    42.41 327  eP      P       15 23 43.6 +1.1
      comp=Z,19nm,1.6s
ISA   Isabella, Lake    42.45 326  P       P       15 23 43.5 +0.8
      baz=137
ISA   Isabella, Lake    42.45 326  eP      P       15 23 43.6 +0.9
      comp=Z,36nm,1.8s
ISA   Isabella, Lake    42.45 326  eP      P       15 23 43.6 +0.9
ISA                                 pmax    pmax
      comp=Z,36nm,1.8s
BINY  Binghamton        42.50  16  P       P       15 23 43.3 +0.4
      baz=202
MPU   Maple Canyon      42.59 336  eP      P       15 23 43.5 -0.5
      comp=Z,12nm,1.3s
PKM   Mcpherson Peak    42.66 324  P       P       15 23 44.5 -0.1
      baz=135
CPUP  Villa Florida     42.68 133  P       P       15 23 45.0 +0.5
      comp=Z,3.2nm,0.6s,baz=328,slow=8.5,SNR=7.6
CPUP                                LR      LR      15 42 01.1
      comp=Z,416nm,20.1s,baz=332,slow=37
CPUP  Villa Florida     42.68 133  eP      P       15 23 43.9 -0.7
      comp=Z,62nm,1.6s
CPUP  Villa Florida     42.68 133  eP      P       15 23 43.9 -0.7
CPUP                                pmax    pmax
      comp=Z,62nm,1.6s
H43A  Windswept, Lux    42.71   3  P       P       15 23 45.5 +0.9
      baz=184
H42A  Shiocton          42.71   2  P       P       15 23 46.1 +1.6
      baz=183
H40A  Chili             42.78   0  P       P       15 23 45.5 +0.4
      baz=181
H41A  Junction City     42.78   1  P       P       15 23 45.4 +0.2
      baz=182
H41A  Junction City     42.78   1  eP      P       15 23 44.7 -0.5
      comp=Z,47nm,1.4s
CWC   Cottonwood Cre    42.80 327  P       P       15 23 46.4 +0.7
      baz=138
H36A  Jessenland, He    42.82 357  P       P       15 23 46.2 +0.8
      baz=176
BASO  Ashfield          42.95  10  P       P       15 23 47.5 +1.0
      baz=194
R11A  Troy Canyon, C    42.98 331  P       P       15 23 48.0 +0.9
      baz=142,SNR=7.7
R11A  Troy Canyon, C    42.98 331  eP      P       15 23 47.3 +0.3
      comp=Z,25nm,1.8s
H35A  Sunnyside Ranc    43.00 356  P       P       15 23 46.6 -0.3
      baz=174
JLU   Jordanelle        43.02 337  eP      P       15 23 48.5 +1.1
      comp=Z,32nm,1.6s
H32A  Carlson Farm,     43.06 353  P       P       15 23 47.4 -0.1
      baz=170
SMMC  Simmler           43.07 324  P       P       15 23 46.6 -1.1
      baz=135
BWLO  Walkerton         43.14  10  P       P       15 23 49.3 +1.2
      baz=194
K22A  Casper            43.16 343  P       P       15 23 49.2 +0.8
      baz=157
K22A  Casper            43.16 343  eP      P       15 23 49.2 +0.8
      comp=Z,27nm,1.5s
SUSD  Miller            43.20 352  P       P       15 23 49.2 +0.6
      baz=168
CTU   Camp Tracy        43.22 337  eP      P       15 23 50.2 +1.3
      comp=Z,22nm,1.3s
DUG   Dugway, Tooele    43.23 335  P       P       15 23 49.8 +0.7
      baz=147
DUG   Dugway, Tooele    43.23 335  eP      P       15 23 49.8 +0.7
DUG   Dugway, Tooele    43.23 335  eP      P       15 23 49.8 +0.7
DRWO  Darlington Wes    43.38  13  P       P       15 23 53.5 +3.5
      baz=198
DRCO  St. Marys Ceme    43.40  13  P       P       15 23 53.3 +3.2
      baz=198
SPMN  Marine on St.     43.41 358  P       P       15 23 50.8 +0.5
      baz=177
G40A  Rib Lake          43.42   1  P       P       15 23 50.7 +0.3
      baz=181
G40A  Rib Lake          43.42   1  eP      P       15 23 50.4 +0.1
      comp=Z,85nm,1.8s
G39A  Holcombe          43.44 360  P       P       15 23 50.1 -0.4
      baz=180,SNR=13
G42A  Mountain          43.45   2  P       P       15 23 49.3 -1.2
      baz=184
G42A  Mountain          43.45   2  eP      P       15 23 50.3 -0.2
      comp=Z,35nm,1.3s
TCUT  Toone Canyon      43.45 337  eP      P       15 23 51.9 +1.0
      comp=Z,112nm,1.3s
G36A  St. Michael       43.46 357  P       P       15 23 50.9 +0.3
      baz=176
G35A  Watkins           43.49 356  P       P       15 23 51.2 +0.3
      baz=175
G43A  Wallace           43.50   3  P       P       15 23 51.0  0.0
      baz=185
G43A  Wallace           43.50   3  eP      P       15 23 50.8 -0.1
      comp=Z,40nm,1.4s
BMRO  Meriville Lake    43.59  10  P       P       15 23 52.3 +0.6
      baz=194
G34A  Benson            43.60 355  P       P       15 23 51.8 +0.1
      baz=173
CLWO  Collingwood       43.62  11  P       P       15 23 52.8 +0.9
      baz=195
G33A  Ortonville        43.63 354  P       P       15 23 51.4 -0.6
      baz=172
RSSD  Black Hills       43.87 346  P       P       15 23 55.1 +0.9
      baz=161
F37A  Hinrichs Farm,    43.91 358  P       P       15 23 54.1 -0.1
      baz=178
F41A  Three Lakes       43.92   2  P       P       15 23 54.4 +0.1
      baz=182
F41A  Three Lakes       43.92   2  eP      P       15 23 54.2 -0.1
      comp=Z,28nm,1.4s
HWUT  Hardware Ranch    43.93 338  eP      P       15 23 54.6 -0.1
      comp=Z,61nm,1.8s
BGU   Big Grassy Mou    43.93 336  eP      P       15 23 55.2 +0.5
      comp=Z,45nm,1.7s
F42A  Maple Grove Fa    43.98   3  P       P       15 23 54.1 -0.7
      baz=184
F39A  Loretta           44.07 360  P       P       15 23 55.4 -0.2
      baz=180
F40A  Park Falls        44.08   1  P       P       15 23 55.9 +0.3
      baz=181
F36A  Milaca            44.08 357  P       P       15 23 55.3 -0.3
      baz=176
F36A  Milaca            44.08 357  eP      P       15 23 55.3 -0.3
      comp=Z,65nm,1.8s
MLAC  Mammoth, Mammo44.08 328      P       P       15 23 54.9 -1.2
      baz=138
F45A  CMU Biological    44.09   5  P       P       15 23 55.0 -0.6
      baz=188
F43A  Flat Rock, Esc    44.10   4  P       P       15 23 56.1 +0.4
      baz=185
F34A  Alexandria        44.12 356  P       P       15 23 56.3 +0.3
      baz=174
F38A  Pierce - Schro    44.12 359  P       P       15 23 55.6 -0.3
      baz=178
F35A  Swanville         44.13 356  P       P       15 23 55.7 -0.3
      baz=175
TOBO  Tobermory, Bru    44.15   9  P       P       15 23 57.1 +0.9
      baz=193
SADO  Sadowa            44.15  12  P       P       15 23 56.8 +0.6
      comp=Z,16nm,0.9s,baz=227,slow=7.5,SNR=14
SADO  Sadowa            44.15  12  eP      P       15 23 55.3 -0.9
      comp=Z,106nm,1.5s
OMMB  Old Mammoth Mi    44.16 327  eP      P       15 23 57.9 +1.1
      comp=Z,25nm,1.3s
HRV   Adam Dziewonsk    44.18  21  P       P       15 23 55.4 -1.1
      baz=208
BW06  Boulder Array     44.22 340  P       P       15 23 56.5 -0.5
      baz=153
BW06  Boulder Array     44.22 340  eP      P       15 23 57.3 +0.2
      comp=Z,25nm,1.5s
PD31  Pinedale Array    44.22 340  eP      P       15 23 57.3 +0.2
PDAR  Pinedale Array    44.22 340  P       P       15 23 58.0 +0.9
      comp=Z,3.5nm,1.1s,baz=145,slow=5.4,SNR=14
PDAR                                PcP     PcP     15 25 42.1 +0.4
      comp=Z,0.8nm,0.8s,baz=180,slow=3.6,SNR=3.0
PDAR                                LR      LR      15 42 05.0
      comp=Z,666nm,18.9s,baz=161,slow=36
PDAR  Pinedale Array    44.22 340  eP      P       15 23 57.3 +0.2
PDAR                                PcP     PcP     15 25 42.1 +0.4
F46A  Macinaw City C    44.25   6  P       P       15 23 57.2 +0.2
      baz=189
ACCN  Adirondack Com    44.27  18  eP      P       15 23 56.4 -0.8
      comp=Z,11nm,0.9s
COWI  Conover           44.28   2  eP      P       15 23 57.7 +0.5
      comp=Z,24nm,1.5s
F44A  Big Bay de Noc    44.30   4  P       P       15 23 57.5 +0.2
      baz=186
NV11  Mina Array Sit    44.32 329  eP      P       15 23 59.0 +1.1
      comp=Z,6.9nm,1.9s
F32A  Veblen            44.37 354  P       P       15 23 57.9  0.0
      baz=171
NV01  Mina Array Sit    44.40 329  eP      P       15 23 59.7 +1.2
NVAR  Mina Array Bea    44.40 329  P       P       15 24 01.0 +2.5
      comp=Z,5.2nm,0.8s,baz=161,slow=8.9,SNR=44
NVAR                                PcP     PcP     15 25 43.9 +1.4
      comp=Z,4.3nm,0.8s,baz=138,slow=4.3,SNR=13
NVAR                                LR      LR      15 40 35.2
      comp=Z,201nm,19.0s,baz=236,slow=34
KLBO  Killbear Provi    44.51  11  P       P       15 23 58.7 -0.3
      baz=195
E39A  Mellen            44.53   0  P       P       15 23 59.7 +0.5
      baz=180,SNR=9.5
HVU   Hansel Valley     44.55 337  eP      P       15 23 59.8 +0.2
      comp=Z,31nm,1.4s
HVU   Hansel Valley     44.55 337  eP      P       15 23 59.8 +0.2
HVU                                 pmax    pmax
      comp=Z,31nm,1.4s
E40A  Wakefield         44.61   1  P       P       15 24 00.1 +0.3
      baz=181,SNR=9.0
E41A  Kenton            44.65   2  P       P       15 24 00.8 +0.7
      baz=183
E43A  Lone Tree Farm    44.66   4  P       P       15 24 00.4 +0.2
      baz=186
E43A  Lone Tree Farm    44.66   4  eP      P       15 23 59.3 -0.9
      comp=Z,50nm,1.6s
E42A  Champion          44.66   3  P       P       15 24 00.1 -0.2
      baz=184
RYN   Ryan              44.66 329  eP      P       15 23 58.9 -1.7
      comp=Z,14nm,1.3s
E36A  McGregor          44.72 358  P       P       15 24 00.6 -0.2
      baz=177
BUKO  Buck Lake         44.75  11  P       P       15 24 01.7 +0.8
      baz=196
E38A  The Farm, Brul    44.76 359  P       P       15 24 00.9 -0.2
      baz=179
E38A  The Farm, Brul    44.76 359  eP      P       15 24 00.7 -0.4
      comp=Z,110nm,2.0s
KVN   Kaiserville       44.76 330  eP      P       15 24 02.2 +0.7
      comp=Z,12nm,1.0s
KVN   Kaiserville       44.76 330  eP      P       15 24 02.2 +0.7
KVN                                 pmax    pmax
      comp=Z,12nm,1.0s
E45A  Wooded Hills,     44.78   6  P       P       15 24 01.2  0.0
      baz=188
E35A  Pequot Lakes      44.82 357  P       P       15 24 01.1 -0.4
      baz=175
E34A  Wadena            44.83 356  P       P       15 24 01.6  0.0
      baz=174
PLVO  Plevna            44.87  14  P       P       15 24 04.4 +2.4
      baz=200
PLVO  Plevna            44.87  14  eP      P       15 24 02.9 +1.0
      comp=Z,52nm,1.5s
E44A  Grand Marais A    44.98   5  P       P       15 24 02.3 -0.5
      baz=187
WAKR  Walker            45.05 328  eP      P       15 24 04.5 +0.8
      comp=Z,9.9nm,1.1s
LONY  Lake Ozonia       45.13  16  P       P       15 24 04.4 +0.3
      baz=203,SNR=6.7
LONY  Lake Ozonia       45.13  16  eP      P       15 24 04.5 +0.5
      comp=Z,61nm,1.6s
REDW  Red Top Meadow    45.19 339  eP      P       15 24 05.4 +0.6
      comp=Z,78nm,1.6s
CMB   Columbia Colle    45.22 327  eP      P       15 24 05.9 +1.0
      comp=Z,33nm,0.9s
SNOW  Snow King Moun    45.24 340  eP      P       15 24 05.5 +0.2
      comp=Z,119nm,1.8s
D41A  Chassel           45.26   2  P       P       15 24 05.2 +0.2
      baz=183
YERR  Yerington         45.30 329  eP      P       15 24 06.7 +1.0
      comp=Z,70nm,1.9s
D35A  Remer             45.32 357  P       P       15 24 04.6 -0.9
      baz=176
LOHW  Long Hollow       45.32 340  eP      P       15 24 06.8 +0.9
      comp=Z,77nm,1.9s
D37A  Cotton            45.33 358  P       P       15 24 05.2 -0.3
      baz=178
TPAW  Teton Pass        45.34 339  eP      P       15 24 06.4 +0.3
      comp=Z,82nm,1.9s
D36A  Goodland          45.38 358  P       P       15 24 04.7 -1.2
      baz=177
BMN   Battle Mountai    45.40 332  eP      P       15 24 05.8 -0.6
      comp=Z,37nm,1.7s
BMN   Battle Mountai    45.40 332  eP      P       15 24 05.8 -0.6
BMN                                 pmax    pmax
      comp=Z,37nm,1.7s
MOOW  Moose Ponds       45.49 340  eP      P       15 24 07.3 +0.1
      comp=Z,19nm,1.4s
FXWY  Fox Creek         45.49 339  eP      P       15 24 07.7 +0.4
      comp=Z,27nm,1.4s
PNTR  Pine Nut          45.56 328  eP      P       15 24 07.2 -0.7
      comp=Z,89nm,2.0s
LBNH  Lisbon            45.59  19  P       P       15 24 07.5 -0.2
      baz=207
IMW   Indian Meadow     45.69 340  eP      P       15 24 09.2 +0.4
      comp=Z,36nm,1.8s
FLWY  Flagg Ranch       45.77 340  eP      P       15 24 09.2 -0.1
      comp=Z,15nm,1.3s
C38A  Sawbill Land.     45.87 360  P       P       15 24 09.7 -0.2
      baz=179
C37A  Embarrass         45.90 359  P       P       15 24 09.7 -0.4
      baz=178
PAHR  Pah Rah Range     45.91 329  eP      P       15 24 11.5 +1.0
      comp=Z,47nm,1.9s
C35A  Jirik Farms, M    45.94 357  P       P       15 24 10.0 -0.4
      baz=176
C34A  RKJ Ranch, Bem    45.94 356  P       P       15 24 09.9 -0.5
      baz=174
C36A  Pine Crest Far    45.94 358  P       P       15 24 10.4  0.0
      baz=177
YPP   Pitchstone Pla    45.97 340  eP      P       15 24 11.2 +0.2
      comp=Z,23nm,1.7s
ALFO  Alfred            45.98  16  P       P       15 24 13.6 +3.0
      baz=202
PLCA  Paso Flores       46.08 159  P       P       15 24 12.6 +0.9
      comp=Z,11nm,1.0s,baz=355,slow=9.6,SNR=8.7
PLCA                                LR      LR      15 39 42.0
      comp=Z,374nm,18.4s,baz=356,slow=31
PLCA  Paso Flores       46.08 159  eP      P       15 24 12.3 +0.6
      comp=Z,121nm,1.6s
PLCA  Paso Flores       46.08 159  eP      P       15 24 12.3 +0.6
PLCA                                pmax    pmax
      comp=Z,121nm,1.6s
C40A  Isle Royale Na    46.09   2  P       P       15 24 11.8 +0.2
      baz=182
EYMN  Ely               46.10 359  P       P       15 24 11.5 -0.2
      baz=179
EYMN  Ely               46.10 359  eP      P       15 24 10.8 -0.9
      comp=Z,40nm,1.5s
C33A  Trail             46.11 355  P       P       15 24 10.9 -0.9
      baz=173
YFT   Old Faithful      46.14 340  eP      P       15 24 17.6 +5.2
      comp=Z,8.3nm,0.9s
AFDM  Forest Hills D    46.19 327  eP      P       15 24 10.8 -1.7
      comp=Z,46nm,2.0s
RLMT  Red Lodge         46.23 342  P       P       15 24 12.3 -0.8
      baz=154
RLMT  Red Lodge         46.23 342  eP      P       15 24 12.2 -0.8
      comp=Z,34nm,1.8s
YHB   Horse Butte       46.53 340  eP      P       15 24 14.5 -0.8
      comp=Z,51nm,2.0s
BEKR  Beckworth         46.53 329  eP      P       15 24 14.4 -1.0
      comp=Z,54nm,1.9s
B35A  Bob, Littlefor    46.58 357  P       P       15 24 16.2 +0.8
      baz=176
B35A  Bob, Littlefor    46.58 357  eP      P       15 24 14.4 -1.0
      comp=Z,99nm,2.0s
MDND  Maddock           46.62 352  P       P       15 24 16.5 +0.8
      baz=168
MDND  Maddock           46.62 352  eP      P       15 24 15.6 -0.2
      comp=Z,138nm,1.2s
AGMN  Agassiz Nation    46.65 355  P       P       15 24 16.3 +0.3
      baz=173,SNR=8.2
AGMN  Agassiz Nation    46.65 355  eP      P       15 24 15.7 -0.3
      comp=Z,63nm,1.4s
QLMT  Earthquake Lak    46.68 340  eP      P       15 24 16.8 +0.3
HLID  Hailey            46.70 336  P       P       15 24 18.2 +1.6
      baz=147,SNR=18
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Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
HLID	Hailey	46.70	336	*e*P	P	15 24 17.3	+0.6
	comp=Z,74nm,1.9s						
B34A	Aery, Baudette	46.76	357	P	P	15 24 17.2	+0.4
	baz=175						
BELQ	Belleterre	46.76	11	P	P	15 24 19.3	+2.5
	baz=197						
LAO	LASA Array	46.81	345	P	P	15 24 18.2	+0.9
	baz=159						
LAO	LASA Array	46.81	345	*e*P	P	15 24 15.7	-1.6
	comp=Z,60nm,1.8s						
GCMT	Greycliff	46.95	342	*e*P	P	15 24 17.9	-0.6
MFID	Camas Ranch	47.16	335	*e*P	P	15 24 19.7	-0.5
	comp=Z,43nm,1.8s						
MCMT	McKenzie Canyo	47.17	339	*e*P	P	15 24 19.7	-0.8
PKME	Peaks-Kenny Pk	47.39	21	P	P	15 24 22.7	+0.9
	baz=210						
PKME	Peaks-Kenny Pk	47.39	21	*e*P	P	15 24 21.8	+0.1
	comp=Z,25nm,1.3s						
BOZ	Bozeman (W)	47.41	340	P	P	15 24 23.4	+1.2
	baz=151,SNR=9.5						
BOZ	Bozeman (W)	47.41	340	*e*P	P	15 24 21.9	-0.3
	comp=Z,21nm,1.5s						
BOZ	Bozeman (W)	47.41	340	*e*P	P	15 24 21.9	-0.3
BOZ				pmax	pmax		
	comp=Z,21nm,1.5s						
DLMT	Dillon	47.55	339	*e*P	P	15 24 25.0	+1.8
	comp=Z,29nm,1.8s						
O03D	Paynes Creek	47.61	328	P	P	15 24 23.8	+0.1
	baz=136						
WVOR	Wild Horse Val	47.62	332	*e*P	P	15 24 22.9	-0.9
	comp=Z,40nm,1.7s						
WVOR	Wild Horse Val	47.62	332	*e*P	P	15 24 22.9	-0.9
WVOR				pmax	pmax		
	comp=Z,40nm,1.7s						
LRM	Limekiln Ridge	47.89	340	*e*P	P	15 24 25.7	-0.3
MOD	Modoc Plateau	48.02	330	*e*P	P	15 24 26.8	-0.1
	comp=Z,56nm,1.8s						
J08A	Circle Bar Ran	48.27	333	*e*P	P	15 24 29.4	+0.6
	comp=Z,31nm,1.8s						
HRY	Holter Researc	48.46	341	*e*P	P	15 24 30.3	0.0
N02D	Trinity Center	48.57	328	P	P	15 24 30.4	-0.7
	baz=135						
ULM	Lac du Bonnet	48.59	356	P	P	15 24 30.1	-0.9
	comp=Z,5.8nm,0.8s,baz=157,slow=6.9,SNR=8.2						
ULM				PcP	PcP	15 25 56.5	-0.1
	comp=Z,3.5nm,0.7s,baz=210,slow=3.3,SNR=3.2						
ULM	Lac du Bonnet	48.59	356	*e*P	P	15 24 30.1	-0.9
	comp=Z,63nm,1.4s						
ULM				PcP	PcP	15 25 56.5	-0.1
ULM	Lac du Bonnet	48.59	356	*e*P	P	15 24 30.1	-0.9
ULM						15 25 56.5	
ULM				pmax	pmax		
	comp=Z,63nm,1.4s						
M04C	Macdoel	48.70	329	P	P	15 24 31.3	-0.9
	baz=137						
K05A	Summer Lake	48.92	331	*e*P	P	15 24 33.5	-0.5
	comp=Z,41nm,1.5s						
BMO	Blue Mountains	48.95	335	*e*P	P	15 24 33.0	-1.0
	comp=Z,16nm,1.7s						
BMO	Blue Mountains	48.95	335	*e*P	P	15 24 33.0	-1.0
BMO				pmax	pmax		
	comp=Z,16nm,1.7s						
M02C	Callahan	48.95	328	P	P	15 24 33.3	-0.7
	baz=136						
EGMT	Eagleton	48.99	343	P	P	15 24 34.4	+0.1
	baz=155						
PQI	Presque Isle	49.05	21	*e*P	P	15 24 37.6	+3.0
	comp=Z,72nm,1.9s						
YBH	Yreka Blue Hor	49.12	328	P	P	15 24 35.4	+0.1
	comp=Z,1.4nm,0.5s,baz=135,slow=7.1,SNR=4.5						
K04D	Chiloquin, OR	49.27	330	P	P	15 24 35.2	-1.4
	baz=138						
MSO	Missoula	49.28	339	P	P	15 24 36.0	-0.6
	baz=149						
J05D	Fort Rock, OR	49.51	331	P	P	15 24 37.0	-1.4
	baz=138						
RKT	Rikitea	49.52	237	*e*S	S	15 31 46.7	+0.2
	comp=Z,462nm,29.2s						
RKT				*e*LR	LR	15 38 41.4	
	comp=Z,2µm,28.0s						
RKT	Rikitea	49.52	237	*e*T	T	16 17 40.7	
	comp=Z,2.4nm,0.2s						
PINE	Pine Mountain	49.75	332	*e*P	P	15 24 38.5	-1.7
	comp=Z,19nm,1.1s						
F10A	Beach Ranch, E	49.82	336	*e*P	P	15 24 41.8	+1.2
	comp=Z,11nm,1.1s						
L02D	Cave Junction,	49.89	328	P	P	15 24 40.1	-1.0
	baz=135						
J04D	Umpqua Nationa	49.90	330	P	P	15 24 42.2	+0.8
	baz=138,SNR=6.9						
G08A	Pilot Rock	50.00	334	*e*P	P	15 24 40.0	-2.0
	comp=Z,43nm,2.0s						
CHGQ	Chibougamau	50.08	14	P	P	15 24 42.5	+0.1
	baz=202						
TAOE	Nuku Hiva Isla	50.23	257	*e*S	S	15 31 57.1	+0.1
	comp=Z,348nm,25.3s						
TAOE				*e*LR	LR	15 39 00.7	
	comp=Z,2µm,25.5s						
TAOE	Nuku Hiva Isla	50.23	257	*e*T	T	16 18 30.9	
	comp=Z,36nm,0.2s						
I05D	Terrebonne, OR	50.35	332	P	P	15 24 44.4	-0.2
	baz=139						
I04A	Tendick Farm,	50.46	331	P	P	15 24 44.9	-0.5
	baz=137						
E09A	Wood Farm, Sta	50.63	336	*e*P	P	15 24 45.4	-1.3
	comp=Z,56nm,1.9s						
G06A	Carlson Farm,	50.70	333	*e*P	P	15 24 46.4	-0.9
	comp=Z,90nm,1.9s						
I03D	Drain, OR	50.85	330	P	P	15 24 47.8	-0.5
	baz=136						
G05D	Wamic, OR	51.02	333	P	P	15 24 49.0	-0.7
	baz=139						
WALA	Waterton Lakes	51.19	341	*e*P	P	15 24 51.3	+0.3
	comp=Z,40nm,1.8s						
C09A	Chrisman Ranch	51.72	337	*e*P	P	15 24 54.8	0.0
	comp=Z,37nm,1.8s						
G03D	McMinnville, O	51.91	331	P	P	15 24 55.9	-0.3
	baz=137						
B08A	Colville Reser	52.59	336	*e*P	P	15 25 00.7	-0.7
	comp=Z,41nm,1.8s						
B05A	Bryant	53.67	335	P	P	15 25 08.6	-0.6
	baz=140						
FFC	Flin Flon	53.67	352	*e*P	P	15 25 08.0	-1.1
	comp=Z,68nm,2.0s						
FFC	Flin Flon	53.67	352	*e*P	P	15 25 08.0	-1.1
FFC				pmax	pmax		
	comp=Z,68nm,2.0s						
A04D	Lummi Island	54.28	334	P	P	15 25 11.9	-1.7
	baz=140						
RCBR	Riachuelo	55.37	98	P	P	15 25 23.5	+1.3
	comp=Z,83nm,0.8s,baz=256,slow=0.5,SNR=3.5						
SCHQ	Schefferville	56.51	16	LR	LR	15 49 20.0	
	comp=Z,650nm,21.2s,baz=216,slow=36						
EFI	East Falkland	59.95	157⇑	*e*P	P	15 25 55.0	+1.3
EFI				pmax	pmax		
	comp=Z,15nm,0.8s						
PPT	Papeete	60.91	249	LR	LR	15 46 09.8	
	comp=Z,838nm,18.7s,baz=84,slow=30						
PPT2	Papeete2	60.91	249	*e*S	S	15 34 19.9	+0.3
	comp=Z,496nm,28.2s						
PPT2				*e*LQ	LQ	15 41 22.8	
	comp=Z,870nm,34.2s						
PPT2				*e*LR	LR	15 43 59.4	
	comp=Z,2µm,25.8s,baz=68						
YKA	Yellowknife Ar	63.23	348	P	P	15 26 15.9	+0.2
	comp=Z,3.4nm,0.9s,baz=147,slow=6.5,SNR=9.4						
WRAK	Wrangell Islan	63.90	336	*e*P	P	15 26 18.8	-1.4
	comp=Z,68nm,1.8s						
DLBC	Dease Lake	64.40	338	*e*P	P	15 26 21.2	-2.3
	comp=Z,61nm,1.9s						
PMSA	Palmer Station	69.13	168	LR	LR	15 49 04.3	
	comp=Z,165nm,20.8s,baz=354,slow=29						
SFJD	Kangerlussuaq	70.94	16	LR	LR	15 56 12.3	
	comp=Z,498nm,21.6s,baz=220,slow=34						
RAR	Rarotonga	71.04	247	LR	LR	15 51 00.6	
	comp=Z,629nm,18.1s,baz=92,slow=30						
DAWY	Dawson	71.52	340	*e*P	P	15 27 06.7	-1.6
	comp=Z,60nm,2.0s						
BMRM	Bremner River	71.73	336	*e*P	P	15 27 12.1	+2.5
	comp=Z,45nm,1.3s						
INK	Inuvik	72.54	345	P	P	15 27 15.3	+1.1
	comp=Z,2.7nm,0.6s,baz=130,slow=7.6,SNR=6.5						
INK	Inuvik	72.54	345	*e*P	P	15 27 14.3	+0.1
	comp=Z,70nm,1.9s						
INK	Inuvik	72.54	345	*e*P	P	15 27 14.3	+0.1
INK				pmax	pmax		
	comp=Z,70nm,1.9s						
EGAK	Eagle	72.57	340	*e*P	P	15 27 14.4	-0.1
	comp=Z,43nm,1.9s						
SML	Sawmill	73.71	335	*e*P	P	15 27 21.3	0.0
	comp=Z,38nm,1.3s						
SML	Sawmill	73.71	335	*e*P	P	15 27 21.3	0.0
SML				pmax	pmax		
	comp=Z,39nm,1.3s						
HDA	Harding Lake	74.45	338	*e*P	P	15 27 25.6	0.0
	comp=Z,28nm,1.4s						
IL1	Eielson Array	74.61	338	*e*P	P	15 27 25.5	-1.0
ILAR	Eielson Array	74.61	338	P	P	15 27 26.9	+0.4
	comp=Z,4.7nm,0.6s,baz=135,slow=4.3,SNR=80						
ILAR				LR	LR	16 01 11.0	
	comp=Z,328nm,18.8s,baz=123,slow=36						
ILB	Eielson Array	74.61	338	*e*P	P	15 27 25.3	-1.2
SKT	Skwentna	75.14	335	*e*P	P	15 27 29.6	+0.1
	comp=Z,52nm,1.6s						
MDM	Murphy Dome	75.20	338	*e*P	P	15 27 29.5	-0.4
	comp=Z,27nm,1.7s						
TRF	Thorofare Moun	75.28	336	*e*P	P	15 27 30.1	-0.5
	comp=Z,28nm,1.4s						
PPLA	Purkeypile	75.81	336	*e*P	P	15 27 33.4	-0.2
	comp=Z,137nm,1.8s						
BPAW	Bear Paw Mtn.	75.85	337	*e*P	P	15 27 33.0	-0.7
	comp=Z,37nm,1.6s						
CAST	Castle Rocks	75.99	336	*e*P	P	15 27 33.8	-0.6
	comp=Z,55nm,1.6s						
MLY	Manley	76.17	338	*e*P	P	15 27 35.0	-0.5
	comp=Z,14nm,1.1s						
COLD	Coldfoot	77.00	340	*e*P	P	15 27 39.8	-0.3
	comp=Z,38nm,1.5s						
TOLK	Toolik Lake Re	77.47	341	P	P	15 27 41.4	-1.4
	baz=119						
TOLK	Toolik Lake Re	77.47	341	*e*P	P	15 27 42.6	-0.2
	comp=Z,48nm,2.0s						
SUMG	Summit	77.80	14	*e*P	P	15 27 43.8	-1.2
	comp=Z,50nm,1.7s						
SUMG	Summit	77.80	14	*e*P	P	15 27 43.8	-1.2
SUMG				pmax	pmax		
	comp=Z,50nm,1.7s						
RDOG	Red Dog Mine	81.81	339	*e*P	P	15 28 06.6	+0.3
	comp=Z,41nm,1.6s						
MORF	Marmelete	82.78	53	*e*P	P	15 28 11.6	-0.5
MORF				*e*S	S	15 38 30.9	+0.2
MORF				AMS	AMS	15 57 51.2	
	comp=Z,586nm,23.5s						
MORF	Marmelete	82.78	53	*e*P	P	15 28 11.6	-0.5
MORF				*e*S	S	15 38 30.8	+0.2
MESJ	Messejana	83.15	52	*e*P	P	15 28 13.5	-0.4
MESJ				*e*S	S	15 38 34.6	+0.3
MESJ				AMS	AMS	15 58 15.6	
	comp=Z,472nm,27.0s						
MESJ	Messejana	83.15	52	*e*P	P	15 28 13.5	-0.4
MESJ				*e*S	S	15 38 34.5	+0.3
DBIC	Dimbokro	85.82	83	LR	LR	16 04 22.2	
	comp=Z,238nm,19.1s,baz=249,slow=34						
MDT	Midelt	85.93	57	LR	LR	15 59 45.6	
	comp=Z,205nm,21.8s,baz=298,slow=31						
KOWA	Kowa	86.52	76	P	P	15 28 31.4	0.0
	comp=Z,3.6nm,0.8s,baz=273,slow=8.0,SNR=4.8						
KOWA				LR	LR	16 04 41.2	
	comp=Z,202nm,20.5s,baz=224,slow=34						
KOWA	Kowa	86.52	76	*e*P	P	15 28 29.2	-2.1
	comp=Z,113nm,2.0s						
ESDC	Sonseca Array	86.54	51	P	P	15 28 31.4	+0.3
	comp=Z,2.0nm,0.7s,baz=277,slow=4.8,SNR=11						
ESLA	Sonseca Array	86.54	51	*e*P	P	15 28 30.0	-1.1
	comp=Z,57nm,2.0s						
ES19	SONSECA Array	86.59	51	*e*P	P	15 28 30.1	-1.2
EKA	Eskdalemuir Ar	87.32	35	P	P	15 28 33.1	-1.3
	comp=Z,0.9nm,0.6s,baz=298,slow=1.5,SNR=3.1						
EKA				LR	LR	16 02 06.9	
	comp=Z,187nm,20.8s,baz=270,slow=32						
VNA3	Neumayer Olymp	88.72	161	P	P	15 28 41.0	+0.1
VNA1	Neumayer--Stat	89.09	161	P	P	15 28 43.0	+0.5
SNAA	Sanae	90.94	162	P	P	15 28 51.3	0.0
SNAA	Sanae	90.94	162	P	P	15 28 51.1	-0.2
	comp=Z,3.8nm,0.8s,baz=251,slow=5.2,SNR=23						
SNAA				LR	LR	16 04 09.9	
	comp=Z,115nm,18.6s,baz=322,slow=32						
SNAA	Sanae	90.94	162	*e*P	P	15 28 50.6	-0.6
	comp=Z,18nm,1.4s						
SNAA	Sanae	90.94	162⇓	*e*P	P	15 28 51.0	-0.2
SNAA				pmax	pmax		
	comp=Z,210nm,0.9s						
QSPA	South Pole Qui	91.69	180	P	P	15 28 56.0	+1.1
	comp=Z,4.1nm,0.7s,baz=144,slow=3.0,SNR=10						
QSPA				LR	LR	16 03 19.2	
	comp=Z,301nm,19.0s,baz=133,slow=31						
NOA	NORSAR Array B	94.38	29	LR	LR	16 09 09.4	
	comp=Z,118nm,20.0s,baz=285,slow=34						
VNDA	Vanda	95.33	192	LR	LR	16 01 57.5	
	comp=Z,279nm,21.2s,baz=110,slow=29						
DAVOX	Davos/Dischmat	96.13	43	LR	LR	16 07 42.3	
	comp=Z,330nm,19.7s,slow=32						
CLL	Collm	97.33	38	*e*PP	PP	15 33 18.0	+0.6
CLL				*e*SP	SP	15 42 08.0	+1.6
CLL				*e*SS	SS	15 47 18.0	-4.9
CLL				*e*SSS	SSS	15 51 06.0	
CLL				L	L	16 10 00.0	
	comp=Z,300nm,21.0s						
ARCES	ARCESS Array B	97.41	19	LR	LR	16 12 04.5	
	comp=Z,171nm,19.0s,baz=296,slow=35						
KHC	Kasperske Hory	98.15	40	*e*SP	SP	15 42 17.7	+2.3
KHC				*e*SS	SS	15 47 26.3	-8.3
KHC				AMS	AMS	16 07 40.0	
	comp=Z,700nm,21.9s						
GERES	GERESS Array B	98.29	40	LR	LR	16 08 53.0	
	comp=Z,540nm,20.2s,baz=271,slow=32						
PVCC	Panska Ves	98.47	38	AMS	AMS	16 08 10.0	
	comp=Z,400nm,18.9s						
PRU	Pruhonice	98.58	39	*e*SP	SP	15 42 19.6	-0.3
PRU				*e*SS	SS	15 47 36.0	-4.4
PRU				AMS	AMS	16 08 20.0	
	comp=Z,700nm,21.3s						
GOPC	GO Pecny, Ondr	98.75	39	*e*SP	SP	15 42 23.0	+1.2
GOPC				AMS	AMS	16 08 20.0	
	comp=Z,700nm,20.4s						
UPC	Upice	99.37	38	*e*SP	SP	15 42 27.5	-1.0
UPC				AMS	AMS	16 08 20.0	
	comp=Z,400nm,21.9s						
DPC	Dobruska-Polom	99.60	38	*e*SP	SP	15 42 34.2	+3.2
DPC				AMS	AMS	16 08 50.0	
	comp=Z,400nm,23.6s						
SEY	Seymchan	100.39	335⇑	*e*P	Pdif	15 29 36.3	+2.0
OKC	Ostrava-Krasne	100.87	39	*e*SP	SP	15 42 45.0	+0.4
OKC				AMS	AMS	16 09 40.0	
	comp=Z,500nm,20.2s						
H11N3	WAKE ISLAND Hy	100.96	290	T	T	17 22 11.0	
	baz=86						
H11N2	WAKE ISLAND Hy	100.97	290	T	T	17 22 09.5	
	baz=86						
H11N1	WAKE ISLAND Hy	100.98	290	T	T	17 22 12.6	
	baz=86						
H11S2	WAKE ISLAND Hy	101.27	289	T	T	17 22 32.2	
	baz=85,slow=74,SNR=334						
H11S1	WAKE ISLAND Hy	101.27	289	T	T	17 22 32.2	
	baz=85,slow=74,SNR=215						
H11S3	WAKE ISLAND Hy	101.29	289	T	T	17 22 33.4	
	baz=85,slow=74,SNR=243						
DZM	Mont Dzumac	102.41	248	*e*LR	LR	16 03 13.7	
	comp=Z,377nm,29.8s						
ANTO	Ankara	114.06	45	*e*PKiKP	PKPdf	15 34 27.3	-0.1
ANTO	Ankara	114.06	45	*e*PKIKP	PKPdf	15 34 27.3	-0.1
ANN	Anapa	114.87	38	*e*P	Pdif	15 30 33.3	-5.8
ANN				*e*PPP	PPP	15 37 47.7	
ANN				pmax	pmax		
	comp=Z,64nm,1.4s						
KIV	Kislovodsk	118.50	37	*i* PKIKP	PKPdf	15 34 34.7	-1.2
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,161nm,21.0s						
BVAR	Borovoye Array	123.28	13	PKP	PKPdf	15 34 44.4	-0.2
	comp=Z,1.0nm,0.6s,baz=17,slow=1.5,SNR=5.8						
ABKAR	Akbulak array	123.35	23	*e*PKPdf	PKPdf	15 34 44.7	-0.2
ZAA0	Zalesovo Array	124.46	3	*e*PKPdf	PKPdf	15 34 45.8	-1.1
ZALV	Zalesovo Beam	124.46	3	PKP	PKPdf	15 34 46.2	-0.6
	comp=Z,3.3nm,0.6s,baz=274,slow=2.4,SNR=11						
ZALV	Zalesovo Beam	124.46	3	*e*PKPdf	PKPdf	15 34 45.8	-1.0
KURK	Kurchatov	127.05	8	*e*PKPdf	PKPdf	15 34 51.5	-0.4
KURK	Kurchatov	127.05	8*d*	*i*PKIKP	PKPdf	15 34 51.4	-0.5
KSRS	Korea Array	127.07	321	PKP	PKPdf	15 34 53.5	+1.1
	comp=Z,2.1nm,0.8s,baz=18,slow=2.4,SNR=6.2						
KS01	Wonju Array Si	127.07	321	*e*PKPdf	PKPdf	15 34 52.1	-0.3
KSAR	Wonju Array Be	127.10	321	PKP	PKPdf	15 34 53.5	+1.1
KSAR	Wonju Array Be	127.10	321	PKIKP	PKPdf	15 34 53.5	+1.1
KURBB	Kurchatov Arra	127.12	8	PKP	PKPdf	15 34 51.7	-0.3
	comp=Z,3.1nm,0.8s,baz=350,slow=2.0,SNR=28						
ULN	Ulaanbaatar	128.25	345⇑	*i*PKIKP	PKPdf	15 34 54.8	+0.3
SONA1	Songino Array	128.44	345	*e*PKPdf	PKPdf	15 34 54.5	-0.3
SONM	Songino Array	128.45	345	PKP	PKPdf	15 34 54.9	0.0
	comp=Z,1.4nm,0.8s,baz=28,slow=0.6,SNR=7.0						
DGZ	Jazzator, Alta	128.81	1	*i* PKIKP	PKPdf	15 34 55.6	+0.1
GEYT	Alibeck	131.27	33	PKP	PKPdf	15 34 59.5	-0.9
	comp=Z,1.2nm,0.8s,baz=245,slow=3.1,SNR=4.8						
MAKZ	Makanchi	131.32	7	*e*PKPdf	PKPdf	15 34 59.0	-1.2
MAKZ	Makanchi	131.32	7	*e*PKIKP	PKPdf	15 34 59.0	-1.2
MKAR	Makanchi Array	131.37	6	PKP	PKPdf	15 34 59.2	-1.1
	comp=Z,1.4nm,0.9s,baz=343,slow=3.8,SNR=4.9						
MK01	Makanchi Array	131.39	6	*e*PKPdf	PKPdf	15 34 59.1	-1.2
AS01	Alice Springs	131.45	240	*e*PKPdf	PKPdf	15 35 00.5	-0.6
ASAR	Alice Springs	131.49	240	PKP	PKPdf	15 35 00.6	-0.6
	comp=Z,0.9nm,0.9s,baz=115,slow=1.8,SNR=5.9						
WB2	Warramunga Arr	132.26	244	*e*PKPdf	PKPdf	15 35 02.6	-0.1
WRA	Warramunga Arr	132.27	244	PKP	PKPdf	15 35 03.0	+0.2
	comp=Z,1.2nm,0.8s,baz=102,slow=1.7,SNR=13						
HHC	Hu-ho-hao-te	133.02	337	*e*PKP	PKPdf	15 35 01.4	-2.3
HHC				SKKS		15 44 18.0	
HHC				AMB	AMB		
	comp=Z,94nm,9.8s						
HHC				LR	LR		
	comp=Z,230nm,18.2s						
HHC				LR	LR		
	comp=Z,130nm,19.2s						
HHC				LR	LR		
	comp=Z,220nm,19.6s						
FRU	Bishkek	133.80	15	*e*PKIKP	PKPdf	15 35 06.0	+0.9
WMQ	Urumqi	134.70	1	PKP	PKPdf	15 35 06.4	-0.3
WMQ				LR	LR		
	comp=Z,410nm,29.7s						
WMQ				LR	LR		
	comp=Z,480nm,25.1s						
WMQ				LR	LR		
	comp=Z,500nm,29.7s						
NJ2	Nanjing	136.23	323	*e*PKP	PKPdf	15 35 07.9	-1.9
KSH	Kashi	137.27	15	*e*PKP	PKPdf	15 35 10.5	-1.2
KSH				PP	PP	15 37 58.8	+3.8
XAN	Xi'an	139.91	334	PKP	PKPdf	15 35 15.9	-0.7
XAN				LR	LR		
	comp=Z,230nm,22.6s						
XAN				LR	LR		
	comp=Z,190nm,21.2s						
LZH	Lanzhou	140.02	341	*e*PKP	PKPdf	15 35 11.4	-5.5
LZH				sPKP		15 35 26.3	
LZH				LR	LR		
	comp=Z,49nm,18.0s						
LZH				LR	LR		
	comp=Z,53nm,18.1s						
LZH				LR	LR		
	comp=Z,67nm,20.2s						
FITZ	Fitzroy Crossi	140.66	243	PKhKP	PKPpre	15 35 12.1	
	comp=Z,0.8nm,0.7s,baz=135,slow=4.3,SNR=4.7						
ENH	Enshi	142.79	330	*e*PKPpre	PKPpre	15 35 19.4	
CD2	Chengdu	144.75	338	PKP	PKPab	15 35 22.5	-1.5
GYA	Guiyang	147.33	330	*e*PKPbc	PKPdf	15 35 28.0	-1.9
GYA				PKPab	PKPab	15 35 34.2	+0.2
GYA				PP	PP	15 38 59.7	+3.2
GYA				AMB	AMB		
	comp=Z,120nm,8.2s						
LSA	Lhasa	148.75	357	*e*PKPdf	PKPdf	15 35 33.6	+1.0
LSA	Lhasa	148.75	357	*e*PKIKP	PKPdf	15 35 33.6	+1.0
MYLDM	Lahad Datu	149.91	283	*e*PKPbc	PKPbc	15 35 40.3	+1.2
KMI	Kunming	150.29	335	PKPbc	PKPdf	15 35 36.3	+1.4
KMI				pPKP	PKiKP	15 35 40.9	0.0
KMI				sPKP		15 35 43.2	
KMI				SS	SS	15 58 35.3	+3.5
KMI				LR	LR		
	comp=Z,160nm,20.2s						
KMI				LR	LR		
	comp=Z,120nm,20.6s						
KMI				LR	LR		
	comp=Z,170nm,21.4s						
CHTO	Chiang Mai	157.49	335	*e*PKPdf	PKPdf	15 35 44.1	-0.9
CHTO	Chiang Mai	157.49	335	*e*PKIKP	PKPdf	15 35 44.1	-0.9
CMAR	Chiang Mai Arr	157.81	335	PKP	PKPdf	15 35 45.5	+0.2
	comp=Z,1.0nm,0.5s,baz=298,slow=1.8,SNR=9.4						
CMAR				PKPab	PKPab	15 36 16.4	-1.4
	comp=Z,2.8nm,0.8s,baz=2.8,slow=4.2,SNR=12						
CM01	Chiang Mai Arr	157.83	335	*e*PKPdf	PKPdf	15 35 44.4	-1.0
CM01				*e*PKPab	PKPab	15 36 16.6	-1.2

KRSC **11** *15:18:28.8±0.8, 54.°99N×162.°39E, h44km±17km, ML4.5*
ISCJB **11** *15:18:29.7±0.8, 55.°02N±0.°02×162.°40E±0.°05, h28km±6km, mb3.7/11, MS2.9/1, Error ellipse: s-maj=5.5km s-min=2.8km az=28.7*
MOS **11** *15:18:30.5±1.0, 55.°06N×162.°30E, h46km, mb4.1/5, Error ellipse: s-maj=8.2km s-min=4.8km az=83.4*
IDC **11** *15:18:36.1±2.3, 55.°26N×161.°76E, h82km±24km, mb3.5/10, mb1 3.7/11, mb1mx3.4/79, mbtmp3.7/11, MS3.0/4, Ms1 3.0/4, ms1mx2.6/54, Error ellipse: s-maj=23.9km s-min=15.2km az=138.0*
ISC 11 15:18:30.1±1.1**, 55.°05N**±0.°03×**162.°32E**±0.°03**, h26**km±9km**, n98, σ1.°37**/138**, mb3.9**/11**, 1D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKZ	Mys Kozlova	0.60	215	*e*P	Pb	15 18 41.6	-0.4
MKZ				*e*S	Sb	15 18 49.8	-0.3
MKZ	Mys Kozlova	0.60	215	PN	Pb	15 18 41.6	-0.4
MKZ				S	Sb	15 18 49.8	-0.3
TUMD	Tumrok D	1.12	279	*e*P	Pn	15 18 49.3	-0.7
KBTR	Krutoberegovo	1.19	13	*e*P	Pn	15 18 50.8	-0.2
KBTR				*e*S	Sb	15 19 07.5	+0.5
KBTR	Krutoberegovo	1.19	13	PN	Pn	15 18 50.8	-0.2
KBTR				S	Sb	15 19 07.5	+0.5
KBG	Krutoberegovo	1.23	10	*e*P	Pb	15 18 52.3	-0.2
KBG				*e*S	Sb	15 19 08.6	+0.7
KBG	Krutoberegovo	1.23	10	PN	Pb	15 18 52.3	-0.2
KBG				S	Sb	15 19 08.6	+0.7
TUMR	Tumrok	1.27	281	*e*P	Pn	15 18 52.1	-0.1
TUMR	Tumrok	1.27	281	PN	Pn	15 18 49.3	-2.9
BZGR	Bezymyannyi-Gr	1.28	315	*e*P	Pn	15 18 52.6	+0.2
BZGR				*e*S	Sb	15 19 10.5	+0.7
BZGR	Bezymyannyi-Gr	1.28	315	PN	Pn	15 18 52.6	+0.2
BZGR				S	Sb	15 19 10.5	+0.7
ZLN	Zelenaya	1.30	319	*e*P	Pn	15 18 53.1	+0.5
ZLN	Zelenaya	1.30	319	PN	Pn	15 18 53.1	+0.5
BZMR	Bezymyannaya	1.37	311	*e*P	Pn	15 18 53.6	0.0
BZMR	Bezymyannaya	1.37	311	PN	Pn	15 18 53.6	0.0
KMNR	Kamenistaya	1.38	302	*e*P	Pn	15 18 53.9	+0.1
KMNR	Kamenistaya	1.38	302	PN	Pn	15 18 53.9	+0.1
BZWR	Bezymyannyi-We	1.39	312	*e*P	Pn	15 18 54.1	+0.3
BZWR	Bezymyannyi-We	1.39	312	PN	Pn	15 18 54.1	+0.3
LGNR	Loginova	1.39	319	*e*P	Pn	15 18 54.7	+0.7
LGNR	Loginova	1.39	319	PN	Pn	15 18 54.7	+0.7
CIRR	Tsirk	1.39	321	*e*P	Pn	15 18 54.3	+0.4
CIRR	Tsirk	1.39	321	PN	Pn	15 18 54.3	+0.4
KIRR	Kirishev	1.45	310	*e*P	Pn	15 18 55.3	+0.7
KIRR	Kirishev	1.45	310	PN	Pn	15 18 55.3	+0.7
KPT	Kopyto	1.51	308	*e*P	Pn	15 18 55.6	+0.2
KPT	Kopyto	1.51	308	PN	Pn	15 18 55.6	+0.2
KRSR	Krestovskiy	1.54	320	*e*P	Pn	15 18 55.9	+0.1
KRSR	Krestovskiy	1.54	320	PN	Pn	15 18 55.9	+0.1
KLY	Klyuchi	1.58	324	*e*P	Pn	15 18 55.1	-1.2
KLY	Klyuchi	1.58	324	PN	Pn	15 18 55.1	-1.2
SMKR	Semkarok	1.61	343	*e*P	Pn	15 18 57.5	+0.7
SMKR				*e*S	Sb	15 19 18.7	-0.3
SMKR	Semkarok	1.61	343	PN	Pn	15 18 57.5	+0.7
SMKR				S	Sb	15 19 18.7	-0.3
BDR	Baidarnaya	1.65	338	*e*P	Pn	15 18 58.3	+1.0
BDR				*e*S	Sb	15 19 19.8	-0.3
BDR	Baidarnaya	1.65	338	PN	Pn	15 18 58.3	+1.0
BDR				S	Sb	15 19 19.8	-0.3
KOZ	Kozyrevsk	1.72	307	*e*P	Pn	15 18 59.0	+0.7
KOZ	Kozyrevsk	1.72	307	PN	Pn	15 18 59.0	+0.7
SRKR	Sorokina	1.73	338	*e*P	Pn	15 18 59.4	+0.9
SRKR	Sorokina	1.73	338	PN	Pn	15 18 59.4	+0.9
KII	Karymskiy	1.96	240	*e*P	Pn	15 19 01.6	0.0
KII				*e*S	Sn	15 19 26.9	+1.5
KII	Karymskiy	1.96	240	PN	Pn	15 19 01.6	0.0
KII				S	Sn	15 19 26.9	+1.5
BKI	Bering	2.10	84	*e*P	Pn	15 19 04.4	+0.9
BKI				*e*S	Sn	15 19 29.0	+0.3
BKI	Bering	2.10	84	PN	Pn	15 19 04.4	+0.9
BKI				S	Sn	15 19 29.0	+0.3

ESO	Esso	2.24	294	eP	Pn	15 19 05.2	-0.2
ESO	Esso	2.24	294	PN	Pn	15 19 05.2	-0.2
SPN	Mys Shipunski	2.38	216	eP	Pn	15 19 05.7	-1.6
SPN				eS	Sn	15 19 32.4	-3.2
SPN	Mys Shipunski	2.38	216	PN	Pn	15 19 05.7	-1.6
SPN				S	Sn	15 19 32.4	-3.2
NLC	Nalytchevo	2.57	224	eP	Pn	15 19 11.1	+1.1
NLC				eS	Sn	15 19 41.1	+0.7
NLC	Nalytchevo	2.57	224	PN	Pn	15 19 11.1	+1.1
NLC				S	Sn	15 19 41.1	+0.7
SDLR	Sedlovina	2.69	230	eP	Pn	15 19 12.5	+0.8
SDLR				eS	Sn	15 19 45.0	+1.5
SDLR	Sedlovina	2.69	230	PN	Pn	15 19 12.5	+0.8
SDLR				S	Sn	15 19 45.0	+1.5
SMAR	Somma	2.74	231	eP	Pn	15 19 13.0	+0.5
SMAR				eS	Sn	15 19 46.1	+1.3
SMAR	Somma	2.74	231	PN	Pn	15 19 13.0	+0.5
SMAR				S	Sn	15 19 46.1	+1.3
KRX	Arik	2.74	233	eP	Pn	15 19 14.2	+1.7
KRX				eS	Sn	15 19 46.3	+1.5
KRX	Arik	2.74	233	PN	Pn	15 19 14.2	+1.7
KRX				S	Sn	15 19 46.3	+1.5
AVH	Avacha	2.77	231	eP	Pn	15 19 14.2	+1.5
AVH				eS	Sn	15 19 47.4	+2.1
AVH	Avacha	2.77	231	PN	Pn	15 19 14.2	+1.5
AVH				S	Sn	15 19 47.4	+2.1
UGLR	Uglovaya	2.77	230	eP	Pn	15 19 13.4	+0.7
UGLR				eS	Sn	15 19 46.8	+1.5
UGLR	Uglovaya	2.77	230	PN	Pn	15 19 13.4	+0.7
UGLR				S	Sn	15 19 46.8	+1.5
KOK	Koryaka	2.79	232	eP	Pn	15 19 15.4	+2.3
KOK	Koryaka	2.79	232	PN	Pn	15 19 15.4	+2.3
GNL	Ganaly	2.90	244	eP	Pn	15 19 15.5	+0.9
GNL	Ganaly	2.90	244	PN	Pn	15 19 15.5	+0.9
DALK	Dalny	2.92	228	eP	Pn	15 19 15.3	+0.6
DALK				eS	Sn	15 19 49.5	+0.6
DALK	Dalny	2.92	228	PN	Pn	15 19 15.3	+0.6
DALK				S	Sn	15 19 49.5	+0.6
PET	Petropavlovsk	2.97	228	eP	Pn	15 19 16.6	+1.2
PET				eS	Sn	15 19 51.5	+1.4
PET	Petropavlovsk	2.97	228	⇓iPN	Pn	15 19 16.5	+1.2
PET				iS	Sn	15 19 48.3	-1.8
PET				pmax	pmax		
	comp=Z,88nm,0.4s						
PET				smax	smax		
	comp=E,517nm,0.5s						
PET				smax	smax		
	comp=N,400nm,0.9s						
PET				smax	smax		
	comp=N,586nm,0.5s						
PET				MLR	MLR		
	comp=Z,200nm,19.0s						
KRMR	Karymshinskiy	3.33	230	eP	Pn	15 19 22.2	+1.8
KRMR				eS	Sn	15 20 01.2	+2.2
KRMR	Karymshinskiy	3.33	230	PN	Pn	15 19 22.2	+1.8
KRMR				S	Sn	15 20 01.2	+2.2
PETK	Petropavlovsk-	3.35	236	P	Pn	15 19 22.6	+2.0
	baz=70,slow=17						
PETK				S	Sn	15 20 02.8	+3.2
	baz=44,slow=27						
PETK				LR	LR	15 20 50.0	
	comp=Z,166nm,20.6s,baz=58,slow=42						
RUS	Russkaya	3.46	222	eP	Pn	15 19 22.4	+0.2
RUS				eS	Sn	15 20 01.6	-0.7
RUS	Russkaya	3.46	222	PN	Pn	15 19 22.4	+0.2
RUS				S	Sn	15 20 01.6	-0.7
MTVR	Mutnovka	3.56	225	eP	Pn	15 19 25.2	+1.5
MTVR				eS	Sn	15 20 06.6	+1.7
MTVR	Mutnovka	3.56	225	PN	Pn	15 19 25.2	+1.5
MTVR				S	Sn	15 20 06.6	+1.7
APC	Apacha	3.72	237	eP	Pn	15 19 28.3	+2.6
APC				eS	Sn	15 20 12.0	+3.4
APC	Apacha	3.72	237	PN	Pn	15 19 28.3	+2.6
APC				S	Sn	15 20 12.0	+3.4
ASAK	Asacha	3.75	226	eP	Pn	15 19 28.3	+2.1
ASAK				eS	Sn	15 20 11.0	+1.5
ASAK	Asacha	3.75	226	PN	Pn	15 19 28.3	+2.1
ASAK				S	Sn	15 20 11.0	+1.5
KDTR	Khodutka, Kamc	4.12	220	eP	Pn	15 19 32.0	+0.7
KDTR				eS	Sn	15 20 18.9	+0.3
MA2	Magadan	7.72	311	LR	LR	15 23 32.0	
	comp=Z,98nm,21.5s,baz=105,slow=40						
YAK	Yakutsk	18.25	306	LR	LR	15 30 14.8	
	comp=Z,53nm,19.1s,baz=74,slow=39						
TIXI	Tiksi	21.91	332	LR	LR	15 32 25.0	
	comp=Z,53nm,21.4s,baz=284,slow=38						
ILAR	Eielson Array	26.51	48	P	P	15 24 05.0	0.0
	comp=Z,0.6nm,0.9s,baz=270,slow=8.1,SNR=6.9						
H11N2	WAKE ISLAND Hy	35.43	173	T	T	16 02 44.9	
	baz=355,slow=76,SNR=66						
H11N3	WAKE ISLAND Hy	35.45	173	T	T	16 02 47.4	
	baz=355,slow=76,SNR=51						
H11N1	WAKE ISLAND Hy	35.45	173	T	T	16 02 47.6	
	baz=355,slow=76,SNR=64						
YKA	Yellowknife Ar	40.84	45	P	P	15 26 09.6	+0.7
	comp=Z,1.4nm,0.6s,baz=301,slow=8.3,SNR=3.3						
SPITS	Spitsbergen Ar	45.41	351	P	P	15 26 44.4	-1.4
	comp=Z,3.1nm,0.8s,baz=24,slow=8.4,SNR=3.3						
KURK	Kurchatov	47.82	301	P	P	15 27 02.4	-2.5
KURK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURBB	Kurchatov Arra	47.92	301	P	P	15 27 02.4	-3.3
	comp=Z,0.9nm,0.7s,baz=56,slow=8.1,SNR=1.9						
NVAR	Mina Array Bea	53.87	73	P	P	15 27 54.4	+3.4
	comp=Z,0.1nm,0.3s,baz=301,slow=5.7,SNR=2.1						
PDAR	Pinedale Array	55.44	63	P	P	15 28 03.3	+1.0
	comp=Z,0.5nm,0.6s,baz=316,slow=3.8,SNR=4.1						
FINES	FINESS Array B	58.83	337	P	P	15 28 23.4	-2.2
	comp=Z,1.2nm,0.8s,baz=14,slow=6.2,SNR=3.5						
FINES	FINESS Array B	58.83	337	eP	P	15 28 25.6	0.0
FINES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TXAR	Lajitas Array	68.69	69	P	P	15 29 32.0	+0.8
	comp=Z,0.6nm,0.6s,baz=311,slow=4.7,SNR=4.9						
WRA	Warramunga Arr	78.42	207	P	P	15 30 27.1	-1.1
	comp=Z,0.4nm,0.5s,baz=22,slow=5.9,SNR=5.1						
WRA	Warramunga Arr	78.42	207	eP	P	15 30 27.9	-0.3
ASAR	Alice Springs	82.09	206	P	P	15 30 47.7	-0.2
	comp=Z,0.8nm,0.8s,baz=15,slow=4.6,SNR=13						

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*IDC **11** 15:19:00.5±1.6, 9°.02S×113°.32E, h0^{km}, mb3.4/3, mb1 3.7/5, mb1mx3.4/63, mbtmp3.6/5, ML3.4/2, Error ellipse: s-maj=79.8km s-min=23.3km az=43.0*

*ISCJB **11** 15:19:03.1±0.6, 9°.35S±0°.06×113°.30E±0°.04, h10^{km}, mb3.3/3, Error ellipse: s-maj=8.2km s-min=5.2km az=7.0*

*DJA **11** 15:19:05.7±1.1, 9°S±5°×11°3E±°, h10^{km}±7^{km}, M4.3/19, mb4.7/2, mB5.1/1, MLv4.0/19, Mw(mB)4.4/1*

ISC 11 15:19:02.7±0.9**, 9°.31S**±0°.06×**113°.33E**±0°.06**, h10**^{km}**, n22, σ1^{s}95**/26**, mb3.3**/3**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GMJI	Gumukmas	1.03	6	P	Pg	15 19 22.4	-0.1
GMJI				S	Sg	15 19 34.1	-1.9
JAGI	Jajag, Banyuwa	1.16	44	P	Pb	15 19 26.3	+1.5
JAGI				S	Sb	15 19 40.2	+0.2
BLJI	Banyuglugur	1.57	10	P	Pb	15 19 32.6	+0.7
IGBI	Denpasar	1.86	75	P	Pn	15 19 36.5	+2.0
DNP	Denpasar	1.96	72	P	Pn	15 19 38.1	+2.1
PWJI	Pagerwojo	1.98	310	P	Pn	15 19 36.8	+0.6
SRBI	Singaraja	2.22	57	P	Pn	15 19 41.9	+2.3
PCJI	Pacitan	2.40	297	P	Pn	15 19 42.7	+0.7
GRJI	Gresik	2.52	340	P	Pn	15 19 45.8	+2.1
NGJI	Ngawi	2.67	316	P	Pn	15 19 47.8	+2.0
WOJI	Wonogiri, Jawa	2.79	301	P	Pn	15 19 48.9	+1.5
UGM	Wanagama	3.10	296	P	Pn	15 19 53.3	+1.6
TWSI	Taliwang, Sumb	3.55	81	P	Pn	15 20 00.8	+2.9
SMRI	Semarang	3.64	308	P	Pn	15 20 01.4	+2.3
PLAI	Plampang	4.42	84	P	Pn	15 20 13.0	+3.2
KPJI	Karang Pucung	4.78	294	P	Pn	15 20 16.2	+1.5
CMJI	Cimerak	5.06	287	P	Pn	15 20 19.2	+0.6
BATI	Baumata	10.22	96	Pn	Pn	15 21 29.3	-0.3
	0.9nm,0.3s,baz=255,slow=12,SNR=2.0						
BATI				Sn	Sn	15 23 20.1	-4.3
	0.5nm,0.3s,baz=240,slow=20,SNR=2.9						
FITZ	Fitzroy Crossi	14.80	127	Pn	Pn	15 22 32.8	+0.6
	0.1nm,0.3s,baz=315,slow=11,SNR=3.5						
WRA	Warramunga Arr	22.88	120	P	P	15 24 07.3	+0.7
	0.2nm,0.4s,baz=296,slow=11,SNR=10						
ASAR	Alice Springs	24.30	128	P	P	15 24 21.9	+1.3
	0.5nm,0.6s,baz=303,slow=8.8,SNR=9.8						
ASAR				PcP	PcP	15 28 00.2	-0.4
	0.1nm,0.6s,baz=298,slow=2.0,SNR=2.6						
MKAR	Makanchi Array	62.34	336	P	P	15 29 23.0	-2.3
	1.2nm,0.9s,baz=141,slow=7.5,SNR=2.9						

NNC 11 15:20:40.8±2.4**, 37°.03N×70°.93E, h0**^{km}**, mb3.6, mpv3.2, 6D, Error ellipse: s-maj=19.3km s-min=16.9km az=157.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.60	33	⇓Pn	Pn	15 21 38.0	-0.1
	4.0nm,0.3s						
SFK				⇓Sn	Sn	15 22 22.8	+1.4
	1.4nm,0.2s						
MNAS	Manas	5.58	12	⇓Pn	Pn	15 22 05.2	0.0
	1.1nm,0.5s						
MNAS				⇓Sn	Sn	15 23 11.5	+1.3
	2.3nm,0.6s						
KK31	Karatay Array	6.07	357	⇓Pn	Pn	15 22 12.1	+0.2
	0.7nm,0.5s,baz=173,slow=12,SNR=6.3						
KK31				⇓Sn	Sn	15 23 23.0	+0.8
	0.3nm,0.3s,baz=193,slow=41,SNR=4.2						

IDC 11 15:21:23.2±9.6**, 1°.29N×90°.11W, h0**^{km}**, mb3.4**/3**, mb1 3.8**/3**, mb1mx3.5**/43**, mbtmp3.4**/3**, Error ellipse: s-maj=323.5km s-min=183.4km az=51.0, Galapagos Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDAR	Pinedale Array	44.82	340	P	P	15 29 39.2	-0.1
	0.1nm,0.4s,baz=146,slow=5.5,SNR=2.3						
NVAR	Mina Array Bea	45.10	328	P	P	15 29 41.5	-0.1
	0.5nm,0.8s,baz=157,slow=9.5,SNR=4.1						
ILAR	Eielson Array	75.23	338	P	P	15 33 07.5	0.0
	0.3nm,0.6s,baz=141,slow=5.8,SNR=5.3						

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*NIED **11** 15:22:00, 37°.20N×142°.30E, h17^{km}, Mw3.9 Best double couple: $M_0$9.15000×10^{14} NP1:ϕ_s318.00000°, δ17.00000°, λ-135.00000°. NP2:ϕ_s185.00000°, δ78.00000°, λ-78.00000°.*

*ISCJB **11** 15:22:06.9±1.2, 37°.21N±0°.04×142°.35E±0°.05, h19^{km}±8^{km}, mb3.8/5, MS3.5/4, Error ellipse: s-maj=7.2km s-min=6.4km az=39.7*

*IDC **11** 15:22:06.1±1.0, 37°.11N×142°.44E, h0^{km}, mb3.8/5, mb1 3.8/8, mb1mx3.6/70, mbtmp3.8/8, ML3.4/3, MS3.3/7, Ms1 3.4/7, ms1mx2.9/70, Error ellipse: s-maj=28.3km s-min=19.8km az=98.0*

*JMA **11** 15:22:07.8±0.3, 37°.24N×142°.32E, h25^{km}±5^{km}, M4.1*

ISC 11 15:22:05.9±2.1**, 37°.20N**±0°.05×**142°.32E**±0°.06**, h3**^{km}±12^{km}**, n34, σ1^{s}32**/36**, mb3.9**/5**, MS3.6**/4**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	1.17	279	P	Pg	15 22 28.4	+0.2
JFK				S	Sg	15 22 42.3	-1.0
ONAJ	Iwakimizuishiy	1.22	266	P	Pg	15 22 29.4	+0.1
ONAJ				eS	Sg	15 22 45.1	0.0
JMM	Marumori	1.38	299	P	Pn	15 22 31.4	-0.7
JMM				eS	Sb	15 22 50.0	-0.5
JFFD	Fukushimafurud	1.41	266	P	Pn	15 22 31.9	-0.6
JFFD				S	Sb	15 22 51.0	-0.3
JIO	Ouri	1.47	329	P	Pn	15 22 32.6	-0.7
JIO				S	Sn	15 22 50.1	-2.9
JHO	Hitachi	1.52	248	P	Pn	15 22 33.4	-0.6
JHO				eS	Sn	15 22 54.4	0.0
JFT	Otama	1.61	282	P	Pn	15 22 35.7	+0.4
JFT				S	Sn	15 22 55.1	-1.5
JOU	Okura	1.75	312	P	Pn	15 22 37.7	+0.5
JOU				S	Sn	15 22 58.4	-1.7
JMK	Ichinoseki	1.95	334	P	Pn	15 22 40.4	+0.5
JMK				S	Sn	15 23 03.7	-1.2
JYS	Shirataka	2.06	300	P	Pb	15 22 43.3	-0.6
JYS				eS	Sn	15 23 07.6	0.0
JFY	Yanaizu	2.10	276	P	Pn	15 22 43.2	+1.3
JFY				eS	Sn	15 23 08.5	-0.1
JYK	Kaneyama	2.31	318	P	Pn	15 22 45.2	+0.3
MJAR	Matsushiro Arr	3.36	260	Pn	Pn	15 23 01.3	+2.0
	3.3nm,0.3s,baz=90,slow=14,SNR=25						
MJAR				Sn	Sn	15 23 40.5	+0.7
	2.9nm,0.3s,baz=92,slow=29,SNR=5.9						
MJAR				LR	LR	15 24 26.4	
	comp=Z,200nm,21.5s,baz=80,slow=41						
MAT	Matsushiro	3.36	260	P	Pn	15 23 01.3	+1.9
MAT				eS	Sn	15 23 38.7	-1.2
JHJ	Hachijo jima 2	4.57	208	Pn	Pn	15 23 16.1	+0.1
	5.7nm,0.3s,baz=69,slow=18,SNR=4.3						
JHJ				Sn	Sn	15 24 05.8	-3.9
	18nm,0.3s,baz=107,slow=19,SNR=6.5						
ASAJ	Asahikawa	6.91	2	Pn	Pn	15 23 49.6	+1.5
	0.6nm,0.3s,baz=226,slow=9.9,SNR=10						
JNU	Nakatsue	10.21	250	LR	LR	15 28 34.1	
	comp=Z,78nm,19.0s,baz=120,slow=38						
KSRS	Korea Array	11.47	276	LR	LR	15 29 18.3	
	comp=Z,103nm,18.9s,baz=70,slow=37						
MA2	Magadan	23.04	11	LR	LR	15 38 01.6	
	comp=Z,27nm,18.2s,baz=278,slow=41						
H11N2	WAKE ISLAND Hy	27.62	122	T	T	15 56 46.1	
	baz=315,slow=75,SNR=51						
H11N1	WAKE ISLAND Hy	27.62	122	T	T	15 56 48.9	
	baz=315,slow=75,SNR=32						
H11N3	WAKE ISLAND Hy	27.64	122	T	T	15 56 48.2	
	baz=315,slow=75,SNR=37						
H11S1	WAKE ISLAND Hy	28.35	124	T	T	15 57 47.8	
	baz=317,slow=76,SNR=29						
H11S3	WAKE ISLAND Hy	28.35	124	T	T	15 57 43.5	
	baz=317,slow=76,SNR=28						
H11S2	WAKE ISLAND Hy	28.36	124	T	T	15 57 44.6	
	baz=317,slow=76,SNR=31						
CMAR	Chiang Mai Arr	42.24	256	LR	LR	15 49 40.9	
	comp=Z,26nm,18.3s,baz=195,slow=39						
MKAR	Makanchi Array	44.64	302	P	P	15 30 22.4	+2.7
	1.2nm,0.8s,baz=86,slow=7.7,SNR=2.4						
KURBB	Kurchatov Arra	46.47	308	P	P	15 30 33.9	-0.1
	0.8nm,0.5s,baz=79,slow=9.5,SNR=5.3						
ILAR	Eielson Array	48.96	32	P	P	15 30 53.6	+0.4
	0.5nm,0.8s,baz=283,slow=7.0,SNR=5.7						
WRA	Warramunga Arr	57.33	189	P	P	15 31 55.0	-0.3
	1.2nm,0.7s,baz=6.1,slow=7.4,SNR=15						
ASAR	Alice Springs	61.06	189	P	P	15 32 21.1	0.0
	0.9nm,0.9s,baz=2.3,slow=4.3,SNR=5.9						
MLR	Muntele Rosu	79.72	320	LR	LR	16 14 29.6	
	comp=Z,82nm,20.4s,baz=287,slow=39						
IDI	Anoyia	87.40	313	LR	LR	16 16 45.7	
	comp=Z,115nm,21.5s,baz=277,slow=38						
LPAZ	La Paz	145.98	60	PKPbc	PKPab	15 41 49.0	+0.3
	1.0nm,0.8s,baz=326,slow=3.6,SNR=3.3						

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*IDC **11** 15:22:22.7±0.7, 35°.35N×76°.38E, h0^{km}, mb4.0/16, mb1 4.1/21, mb1mx3.9/69, mbtmp4.0/21, ML3.6/4, MS3.0/8, Ms1 3.0/8, ms1mx2.8/63, Error ellipse: s-maj=17.9km s-min=13.6km az=34.0*

*ISCJB **11** 15:22:23.4±0.3, 35°.50N±0°.03×76°.46E±0°.06, h10^{km}, mb3.9/22, MS3.6/5, Error ellipse: s-maj=7.2km s-min=3.7km az=154.4*

*BJI **11** 15:22:26.6, 35°.57N×76°.53E, h8^{km}, mb4.4/12, mB4.5/7, ML4.3/4, Ms3.9/4, Ms7 3.9/3*

*NEIC **11** 15:22:31.3±1.1, 35°.54N×76°.53E, h65^{km}±10^{km}, mb4.1/5, Error ellipse: s-maj=10.5km s-min=8.2km az=211.0*

*NNC **11** 15:22:34.0±8.9, 36°.10N×76°.75E, h0^{km}, mb4.4, mpv4.1, Error ellipse: s-maj=79.8km s-min=56.8km az=25.0*

ISC 11 15:22:25.7±0.4**, 35°.57N**±0°.05×**76°.53E**±0°.06**, h10**^{km}**, n73, σ2^{s}15**/73**, mb4.0**/22**, MS3.3**/5**, 5C-3D, Eastern Kashmir**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	Kashi	3.97	354	Pn	Pn	15 23 28.6	+1.9
KSH				Sn	Sn	15 24 14.9	+1.5
KSH				smax	smax		
	comp=N,1μm,1.2s						
KSH				smax	smax		
	comp=E,600nm,0.5s						
SFK	Sufi-Kurgan	5.04	333	⇑Pn	Pn	15 23 45.4	+3.8
	77nm,1.0s						
SFK				⇓Sn	Sn	15 24 45.0	+5.0
	115nm,1.0s						
KBL	Kabul	6.23	263	ePn	Pn	15 23 60.0	+2.1
TARG	Taragay, Kyrgy	6.23	9	ePn	Pn	15 24 02.4	+4.3
KDJ	Kajisay	6.57	4	ePn	Pn	15 24 07.4	+4.9
NDI	New Delhi	6.89	175	eP	Pb	15 24 25.0	-0.5
AAK	Ala-Archa	7.24	348	Pn	Pn	15 24 17.2	+5.6
	0.9nm,0.3s,baz=153,slow=15,SNR=3.5						
AAK				Lg	Lg	15 26 11.6	
	0.3nm,0.3s,baz=112,slow=19,SNR=2.2						
AAK				LR	LR	15 27 18.4	
	comp=Z,114nm,20.0s,baz=154,slow=40						
TKM2	Tokmak 2	7.38	355	⇑Pn	Pn	15 24 18.8	+5.2
	9.0nm,1.1s						
TKM2				⇑Lg	Lg	15 26 11.0	
	74nm,1.4s						
MNAS	Manas	7.59	337	⇑Pn	Pn	15 24 19.2	+2.7
	7.9nm,0.6s						
MNAS				⇑Sn	Sn	15 25 41.9	-0.6
	20nm,1.0s						
KK31	Karatay Array	8.85	330	⇓Pn	Pn	15 24 35.2	+1.5
	2.1nm,0.5s,baz=139,slow=12,SNR=20						
KK31				⇓Sn	Sn	15 26 11.2	-2.2
	10nm,0.8s,baz=135,slow=24,SNR=3.4						
KK31	Karatay Array	8.85	330	ePn	Pn	15 24 34.0	+0.3
KKAR	Karatay Array	8.85	330	ePn	Pn	15 24 33.5	-0.2
PYUN	Piuthan	9.25	142	eP	Pn	15 24 40.9	+1.6
	63nm,0.4s						
DANN	Dangsing	9.46	138	eP	Pn	15 24 44.4	+2.2
	42nm,0.3s						
KOLN	Koldanda	9.83	140	eP	Pn	15 24 48.4	+1.1
	34nm,0.6s						
GKN	Gorkha	10.21	135	eP	Pn	15 24 53.3	+0.8
	27nm,0.5s						
KKN	Kakani	10.75	134	eP	Pn	15 25 00.0	+0.1
	32nm,0.6s						
DMN	Daman	10.78	135	eP	Pn	15 25 00.6	+0.2
	21nm,0.4s						
PKIN	Phulchoki	10.98	134	eP	Pn	15 25 02.7	-0.4
	21nm,0.7s						
JIRN	Jiri	11.39	131	eP	Pn	15 25 08.3	-0.5
	66nm,0.4s						
WMQ	Urumqi	11.90	43	P	Pn	15 25 20.7	+5.2
MAKZ	Makanchi	11.95	18	ePn	Pn	15 25 18.3	+2.2
MK01	Makanchi Array	12.00	19	ePn	Pn	15 25 19.1	+2.3
MK31	Makanchi Array	12.02	19	Pn	Pn	15 25 19.1	+2.0
	4.4nm,0.8s,baz=209,slow=14,SNR=25						
MK31				Sn	Sn	15 27 33.0	+1.9
	2.7nm,0.7s,baz=187,slow=22,SNR=5.3						
MK31	Makanchi Array	12.02	19	ePn	Pn	15 25 19.6	+2.6
MKAR	Makanchi Array	12.02	19	Pn	Pn	15 25 19.5	+2.5
	0.5nm,0.3s,baz=210,slow=14,SNR=16						
MKAR				Sn	Sn	15 27 31.6	+0.4
	0.2nm,0.3s,baz=187,slow=22,SNR=5.0						
MKAR				LR	LR	15 29 32.4	
	comp=Z,34nm,20.4s,baz=202,slow=35						
MKAR	Makanchi Array	12.02	19	ePn	Pn	15 25 19.0	+2.0
MKAR				Sn	Sn	15 27 31.6	+0.4
RAMN	Ramite	12.16	132	eP	Pn	15 25 17.0	-2.2
	19nm,0.4s						
ODAN	Odare	12.71	130	eP	Pn	15 25 23.8	-2.9
	13nm,0.5s						
GEYT	Alibeck	14.95	284	LR	LR	15 33 06.0	
	comp=Z,89nm,20.0s,baz=235,slow=43						
KURBB	Kurchatov Arra	15.12	5	Pn	Pn	15 25 59.4	+0.2
	0.0nm,0.3s,baz=195,slow=12,SNR=9.6						
KURBB				Lg	Lg	15 30 24.5	
	0.0nm,0.3s,baz=193,slow=29,SNR=4.0						
KURK	Kurchatov	15.22	5	ePn	Pn	15 26 01.6	+1.2
	11nm,0.6s						
KURK				Lg	Lg	15 30 24.5	
SHL	Shillong	16.54	123	ePn	Pn	15 26 20.2	+2.2
	19nm,1.4s						
BVAR	Borovoye Array	17.99	348	P	P	15 26 37.1	+0.9
	0.6nm,0.3s,baz=156,slow=11,SNR=10						
BVAR				LR	LR	15 34 13.5	
	comp=Z,44nm,19.4s,baz=130,slow=39						
BRVK	Borovoye	18.04	348	eP	Pn	15 26 34.0	-2.3
	12nm,0.8s						
HYB	Hyderabad	18.17	174	iP	Pn	15 26 38.0	-0.2
HYB				eS	S	15 30 15.0	+8.4
ABKAR	Akbulak array	18.30	323	eP	Pn	15 26 34.8	-4.8
GTA	Gaotai	18.86	71	eP	Pn	15 26 48.7	+2.1
GTA				pP	sP	15 26 52.9	+2.7
GTA				sP	pP	15 26 55.7	+6.8
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
ZAA0	Zalesovo Array	19.27	15	eP	P	15 26 48.2	-2.1
	6.4nm,1.3s						
ZALV	Zalesovo Beam	19.27	15	P	P	15 26 50.8	+0.5
	0.3nm,0.3s,baz=219,slow=10,SNR=8.9						
ZALV				LR	LR	15 35 38.5	
	comp=Z,11nm,19.7s,baz=250,slow=41						
ZALV	Zalesovo Beam	19.27	15	eP	P	15 26 49.0	-1.2
AKTO	Aktyubinsk	20.02	324	P	P	15 26 58.2	-0.3
	10nm,0.7s,baz=117,slow=13,SNR=19						
AKTO				S	S	15 30 32.8	-11
	0.6nm,0.6s,baz=72,slow=20,SNR=2.8						
AKTO				LR	LR	15 35 29.9	
	comp=Z,94nm,19.1s,baz=134,slow=39						
LZH	Lanzhou	22.13	81	eP	P	15 27 22.5	+0.9
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
ARU	Arti	24.17	335	P	P	15 27 41.7	-0.3
	1.8nm,0.3s,baz=160,slow=5.1,SNR=6.6						
SONM	Songino Array	25.27	52	P	P	15 27 53.5	+1.4
	4.2nm,0.8s,baz=249,slow=9.6,SNR=16						
SONA1	Songino Array	25.28	52	eP	P	15 27 52.6	+0.3
CHTO	Chiang Mai	25.90	124	eP	P	15 27 56.8	-1.2
	17nm,1.9s						
CM31	Chiang Mai Arr	26.15	125	eP	P	15 27 59.4	-0.8
CMAR	Chiang Mai Arr	26.15	125	P	P	15 27 58.7	-1.5
	4.2nm,0.8s,baz=308,slow=11,SNR=33						
CMAR				LR	LR	15 40 31.7	
	comp=Z,26nm,19.4s,baz=210,slow=42						
CM01	Chiang Mai Arr	26.19	125	eP	P	15 27 59.4	-1.1
HHC	Hu-ho-hao-te	27.90	69	eP	P	15 28 15.6	-0.4
HHC				pmax	pmax		
	comp=Z,19nm,1.0s						
HHC				pmax	pmax		
	comp=Z,140nm,6.8s						
PALK	Pallekele	28.42	171	LR	LR	15 40 20.2	
	comp=Z,72nm,18.9s,baz=300,slow=38						
BRTR	Keskin Array B	33.98	290	P	P	15 29 08.0	-1.6
	0.6nm,0.6s,baz=112,slow=9.9,SNR=4.0						
MLR	Muntele Rosu	39.13	301	P	P	15 29 54.1	+0.7
	1.1nm,0.6s,baz=84,slow=9.2,SNR=3.7						
FINES	FINESS Array B	40.78	325	P	P	15 30 05.9	-0.8
	1.1nm,0.4s,baz=120,slow=11,SNR=7.8						
KS01	Wonju Array Si	40.90	72	eP	P	15 30 06.9	-1.2
KS15	Wonju Array Si	40.90	72	eP	P	15 30 04.6	-3.5
KLR	Kul'dur	42.08	53	P	P	15 30 18.1	+0.5
	0.1nm,0.5s,baz=306,slow=6.4,SNR=5.3						
ARCES	ARCESS Array B	43.74	337	P	P	15 30 31.5	+0.7
	1.3nm,0.6s,baz=113,slow=8.9,SNR=5.2						
JNU	Nakatsue	44.46	77	LR	LR	15 51 04.7	
	comp=Z,481nm,19.5s,baz=292,slow=39						
HFS	Hagfors	46.56	322	P	P	15 30 52.3	-1.0
	3.0nm,0.6s,baz=103,slow=10,SNR=9.5						
NB2	NORSAR Subarra	47.81	323	P	P	15 31 01.8	-1.3
	comp=Z,1.2nm,0.6s,baz=91,slow=7.9						
MJAR	Matsushiro Arr	49.09	70	P	P	15 31 13.4	0.0
	comp=Z,1.6nm,0.8s,baz=290,slow=10,SNR=5.0						
ESDC	Sonseca Array	61.83	300	P	P	15 32 44.0	-1.0
	comp=Z,0.2nm,0.4s,baz=50,slow=9.7,SNR=2.8						
TORD	Torodi Ar. Bea	70.21	272	P	P	15 33 35.7	-3.5
	comp=Z,1.0nm,0.8s,baz=50,slow=5.7						
KOWA	Kowa	74.12	277	P	P	15 34 01.7	-0.9
	comp=Z,1.7nm,0.6s,baz=50,slow=8.6,SNR=4.6						
IL1	Eielson Array	74.37	18	eP	P	15 33 59.5	-3.8
ILAR	Eielson Array	74.37	18	P	P	15 34 01.4	-1.9
	comp=Z,0.5nm,0.7s,baz=310,slow=4.2,SNR=4.1						
WRA	Warramunga Arr	77.74	125	P	P	15 34 21.8	-1.3
	comp=Z,0.7nm,0.7s,baz=312,slow=4.7,SNR=9.4						
KDAK	Kodiak Island	78.28	24	P	P	15 34 26.3	+0.8
	comp=Z,14nm,0.9s,baz=14,slow=4.2,SNR=3.1						
ASAR	Alice Springs	80.10	128	P	P	15 34 34.6	-1.4
	comp=Z,0.5nm,0.9s,baz=320,slow=5.6,SNR=5.3						
YKA	Yellowknife Ar	81.87	5	P	P	15 34 44.1	-0.7
	comp=Z,0.5nm,0.6s,baz=345,slow=5.6,SNR=3.1						
STKA	Stephens Creek	90.68	130	LR	LR	16 22 11.1	
	comp=Z,189nm,18.5s,baz=70,slow=40						

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*ISCJB **11** 15:22:33.6±0.6, 1°.65N±0°.10×90°.8W±0°.2, h10^{km}, mb4.0/15, Error ellipse: s-maj=25.9km s-min=9.3km az=153.2*

*IDC **11** 15:22:33.4±0.8, 1°.58N×90°.86W, h0^{km}, mb4.0/11, mb1 4.2/11, mb1mx4.0/43, mbtmp4.0/11, Error ellipse:*

s-maj=38.9km s-min=15.8km az=51.0
*NEIC **11** 15:22:34.6±0.4, 1°.56N×90°.89W, h10km, mb4.0/3, Error ellipse: s-maj=20.4km s-min=8.0km az=63.0*
ISC 11 15:22:34.6±0.7, **1°.6N**±0°.1×**90°.9W**±0°.2, **h10**km, **n27**, σ**0ˢ.91**/22, **mb4.1**/15, **Galapagos Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAYG	Puerto Ayora	2.30	165	*e*Pn	Pn	15 23 12.0	-0.7
LPAZ	La Paz	28.62	129	P	P	15 28 33.6	+1.3
	1.8nm,0.9s,baz=319,slow=11,SNR=3.6						
TXAR	Lajitas Array	30.18	337	P	P	15 28 46.3	+0.9
	0.3nm,0.4s,baz=135,slow=9.0,SNR=3.8						
PTGA	Pitinga	30.99	94	P	P	15 28 53.0	+0.3
	2.9nm,0.8s,baz=273,slow=10,SNR=5.9						
SIV	San Ignacio	34.23	122	P	P	15 29 21.3	+0.4
	1.8nm,0.7s,baz=311,slow=10.0,SNR=6.8						
CCM	Cathedral Cave	36.31	360	*e*P	P	15 29 38.1	-0.5
	110nm,1.1s						
ISCO	Idaho Springs	40.35	342	*e*P	P	15 30 13.4	+0.5
	2.2nm,0.9s						
ECSD	EROS Data Cent	42.29	354	*e*P	P	15 30 27.0	-1.6
	2.9nm,0.8s						
CPUP	Villa Florida	42.64	133	P	P	15 30 32.4	+0.9
	4.2nm,1.1s,baz=299,slow=10,SNR=3.2						
SADO	Sadowa	44.26	12	P	P	15 30 43.8	-0.5
	2.1nm,0.5s,baz=246,slow=8.8,SNR=3.9						
PDAR	Pinedale Array	44.30	340	P	P	15 30 45.8	+0.8
	0.2nm,0.4s,baz=137,slow=8.5,SNR=3.1						
NVAR	Mina Array Bea	44.46	329	P	P	15 30 48.1	+1.8
	2.0nm,0.9s,baz=163,slow=9.4,SNR=9.3						
NVAR				PcP	PP	15 32 30.8	+0.6
	1.3nm,0.8s,baz=152,slow=4.2,SNR=6.7						
HLID	Hailey	46.77	337	*e*P	P	15 31 05.2	+0.6
	2.1nm,0.9s						
ILAR	Eielson Array	74.69	338	P	P	15 34 13.9	-0.4
	1.2nm,0.7s,baz=136,slow=4.0,SNR=9.2						
ESDC	Sonseca Array	86.63	51	P	P	15 35 17.7	-1.1
	0.4nm,0.5s,baz=292,slow=4.0,SNR=4.0						
SNAA	Sanae	90.86	162	P	P	15 35 38.2	0.0
	1.4nm,0.8s,baz=273,slow=5.2,SNR=6.2						
H11N3	WAKE ISLAND Hy	100.96	290	T	T	17 28 55.5	
	baz=88						
H11N2	WAKE ISLAND Hy	100.97	290	T	T	17 28 57.0	
	baz=88						
H11N1	WAKE ISLAND Hy	100.98	290	T	T	17 28 58.9	
	baz=88						
H11S2	WAKE ISLAND Hy	101.27	289	T	T	17 29 17.9	
	baz=84						
H11S1	WAKE ISLAND Hy	101.27	289	T	T	17 29 18.2	
	baz=84						
H11S3	WAKE ISLAND Hy	101.29	289	T	T	17 29 19.2	
	baz=84						
KURK	Kurchatov	127.15	8	PKP	PKPdf	15 41 38.8	-0.6
KURBB	Kurchatov Arra	127.22	8	PKP	PKPdf	15 41 38.8	-0.7
	0.8nm,0.8s,baz=344,slow=2.5,SNR=7.9						
ASAR	Alice Springs	131.41	239	PKP	PKPdf	15 41 47.0	-1.3
	0.4nm,1.0s,baz=90,slow=1.8,SNR=2.8						
WRA	Warramunga Arr	132.20	244	PKP	PKPdf	15 41 49.9	0.0
	0.3nm,0.8s,baz=107,slow=1.8,SNR=4.3						
CMAR	Chiang Mai Arr	157.88	335	PKPab	PKPab	15 43 05.0	-0.3
	0.6nm,0.7s,baz=4.9,slow=4.8,SNR=4.4						

IDC 11 15:23:38.1±25.0, **28°.98S**×**76°.85E**, **h0**km, **mb3.6**/3, **mb1 3.9**/3, **mb1mx3.4**/60, **mbtmp3.6**/3, **Error ellipse: s-maj=598.2km s-min=47.8km az=62.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S2	Diego Garcia H	21.62	348	T	T	15 50 26.3	
	baz=175,slow=74						
H08S1	Diego Carcia H	21.62	348	T	T	15 50 37.3	
	baz=175						
H08S3	Diego Garcia H	21.64	348	T	T	15 50 23.8	
	baz=175,slow=74						
ASAR	Alice Springs	51.00	98	P	P	15 32 42.1	-0.1
	0.7nm,0.9s,baz=255,slow=6.5,SNR=7.0						
CMAR	Chiang Mai Arr	51.77	27	P	P	15 32 47.7	0.0
	0.5nm,0.9s,baz=206,slow=6.0,SNR=4.2						
WRA	Warramunga Arr	52.67	94	P	P	15 32 54.4	-0.2
	1.0nm,0.7s,baz=250,slow=6.9,SNR=6.2						

NDI 11 15:28:48.7±3.2, **27°.01N**×**92°.11E**, **h14**km±12km, **ML3.1**, **Eastern Xizang-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TEZP	TEZPUR	0.73	123	*e*P	Pg	15 29 02.4	-0.6
TEZP				*e*S	Sn	15 29 14.5	-1.1
GUWA	GUWAHATI	0.90	205	*e*P	Pb	15 29 04.8	-1.2
GUWA				*e*S	Sg	15 29 18.1	+0.2
GUWA				IAML		15 29 19.1	
	comp=E,176nm,0.2s						
GUWA				IAML		15 29 19.4	
	comp=N,140nm,0.1s						
ITAN	ITANAGAR	1.44	84	*e*P	Pn	15 29 14.7	+0.3
ITAN				*e*S	Sg	15 29 34.8	-0.5
ITAN				*e*S	Sb	15 29 34.8	+1.2
ITAN				IAML		15 29 38.5	
	comp=N,701nm,0.2s						
ITAN				IAML		15 29 38.8	
	comp=E,644nm,0.2s						
SHL	Shillong	1.46	188	*e*P	Pn	15 29 15.1	+0.4
SHL				*e*S	Sg	15 29 36.3	+0.6
SHL				IAML		15 29 37.0	
	comp=E,518nm,0.4s						
SHL				IAML		15 29 37.2	
	comp=N,332nm,0.2s						
ZIRO	ZIRO	1.63	71	*e*P	Pn	15 29 16.6	-0.6
ZIRO				*e*S	Sn	15 29 37.9	-0.2
TURI	Tura	2.16	228	*e*P	Pb	15 29 26.8	-0.8
TURI				*e*S	Sb	15 29 54.8	+0.5
TURI				IAML		15 29 57.4	
	comp=E,154nm,0.4s						
TURI				IAML		15 29 57.5	
	comp=N,111nm,0.1s						
KOHI	KOHIMA	2.21	125	*e*P	Pg	15 29 30.6	-0.5
KOHI				*e*x	x	15 29 57.2	
KOHI				IAML		15 30 03.4	
	comp=N,62nm,0.0s						
KOHI				IAML		15 30 03.9	
	comp=E,54nm,0.4s						
GTK	Tadong	3.14	276	*e*S	Sn	15 30 14.2	-1.0
AGT	Agartala	3.21	194	*e*S	Sn	15 30 12.4	-4.3

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*ISK **11** 15:34:17.9, 39°.45N×32°.42E, h14km, ML2.6/1*
*DDA **11** 15:34:20.8, 39°.91N×32°.37E, h7km, Ml2.5*
*ISCJB **11** 15:34:21.9±0.7, 39°.98N±0°.04×32°.30E±0°.04, h4km±7km, Error ellipse: s-maj=6.4km s-min=5.1km az=3.9*
*CSEM **11** 15:34:21.8±0.3, 40°.00N×32°.32E, h8km, ML2.6, Error ellipse: s-maj=7.3km s-min=5.5km az=15.0*
ISC 11 15:34:21.5±1.3, **39°.96N**±0°.03×**32°.35E**±0°.03, **h2**km±11km, **n20**, σ**1ˢ.15**/31, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LOD	Lodumlu	0.32	103	PG	Pg	15 34 28.3	+0.5
LOD	Lodumlu	0.32	103	*e*Pg	Pg	15 34 28.3	+0.5
ANTO	Ankara	0.35	106	PG	Pg	15 34 28.7	+0.4
ANTO				SG	Sb	15 34 36.0	-0.5
ANTO	Ankara	0.35	106	*e*Pg	Pg	15 34 28.7	+0.4
ANTO				*e*Sg	Sb	15 34 36.0	-0.5
CMDR	Camlidere-ANKA	0.54	10	*i* P	Pg	15 34 31.3	-0.6
CMDR				*i* S	Sb	15 34 41.5	-0.5
CMDR	Camlidere-ANKA	0.54	10	P	Pg	15 34 31.3	-0.6
CMDR				S	Sb	15 34 41.5	-0.5
AUMIH	MIHALICIK	0.68	262	PG	Pg	15 34 34.6	+0.1
AUMIH	MIHALICIK	0.68	262	*i* P	Pg	15 34 34.6	+0.1
AUMIH				*i* S	Sg	15 34 43.8	+0.5
AUMIH	MIHALICIK	0.68	262	P	Pg	15 34 34.6	+0.1
AUMIH				S	Sg	15 34 43.8	+0.5
BCAM	Yenicaga	0.88	346	*i* P	Pb	15 34 38.8	-0.8
BCAM				*i* S	Sn	15 34 56.2	+1.8
BCAM	Yenicaga	0.88	346	P	Pb	15 34 38.8	-0.8
KKUL	Konya-Kulu	0.90	151	*i* P	Pb	15 34 40.4	+0.4
KKUL				*i* S	Sn	15 34 54.5	-0.5
KKUL	Konya-Kulu	0.90	151	P	Pb	15 34 40.4	+0.4
KKUL				S	Sn	15 34 54.5	-0.5
ELDT	Eldivan	0.97	57	*i* P	Pg	15 34 40.7	+0.5
ELDT				*i* S	Sb	15 34 54.4	-0.2
ELDT	Eldivan	0.97	57	P	Pg	15 34 40.7	+0.5
ELDT				S	Sb	15 34 54.4	-0.2
MDUB	Mudurnu	1.02	300	PN	Pn	15 34 43.3	+0.4
MDUB				SN	Sn	15 35 01.9	+4.0
MDUB	Mudurnu	1.02	300	*e*Pn	Pn	15 34 43.3	+0.4
KULU	Kulu	1.05	151	PG	Pg	15 34 30.3	-11
BORA	Eskisehir	1.46	267	PN	Pn	15 34 46.8	-2.2
BORA	Eskisehir	1.46	267	*e*Pn	Pn	15 34 46.8	-2.2

IDC 11 15:44:27.1±7.4, **0°.22N**×**91°.01W**, **h0**km, **mb3.5**/3, **mb1 4.0**/3, **mb1mx3.6**/36, **mbtmp3.5**/3, **Error ellipse: s-maj=372.6km s-min=142.8km az=60.0, Galapagos Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TXAR	Lajitas Array	31.37	338	P	P	15 50 49.8	-0.1
	0.6nm,1.1s,baz=164,slow=10,SNR=2.6						
NVAR	Mina Array Bea	45.55	330	P	P	15 52 49.1	0.0
	0.5nm,0.7s,baz=155,slow=9.3,SNR=4.5						
ILAR	Eielson Array	75.88	339	P	P	15 56 15.3	0.0
	0.5nm,0.8s,baz=148,slow=4.3,SNR=4.0						

MAN 11 16:17:23.2, 6°.22N×125°.78E, h174km, mb4.9, ML3.8, MS3.8, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSPH	General Santos	0.84	261	⇑*i*P	Pn	16 17 48.4	-0.9
MATI	Mati	0.86	33	*e*P	Pn	16 17 49.9	+0.6
MATI				*e*S	Sn	16 18 10.7	+1.2
DMPH	Davao City--Mi	0.90	342	⇑*e*P	Pn	16 17 51.5	+1.9
DMPH				*e*S	Sn	16 18 16.1	+6.1
SKMP	Bagumbayan, Su	1.27	284	*e*P	Pn	16 17 53.4	+0.9
SKMP				*e*S	Sn	16 18 16.1	+1.1

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*ISCJB **11** 16:19:32.1±0.3, 81°.19N±0°.04×3°.6W±0°.2, h10km, mb4.1/35, MS3.5/20, Error ellipse: s-maj=6.8km s-min=4.9km az=26.3*
*IDC **11** 16:19:32.6±0.5, 81°.32N×3°.62W, h0km, mb3.9/22, mb1 4.1/24, mb1mx3.9/68, mbtmp3.9/24, ML4.1/3, MS3.6/23, Ms1 3.6/23, ms1mx3.3/79, Error ellipse: s-maj=15.7km s-min=11.0km az=26.0*
*CSEM **11** 16:19:33.4±0.1, 81°.27N×3°.28W, h10km, mb4.4/8, Error ellipse: s-maj=8.2km s-min=4.7km az=32.0*
*NEIC **11** 16:19:33.8±0.3, 81°.22N×3°.48W, h10km, mb4.4/10, Error ellipse: s-maj=9.2km s-min=5.6km az=27.0*
*BER **11** 16:19:34.9±3.8, 81°.70N×0°.83W, h16km±202km, ML2.8, ML4.0(NAO)*
ISC 11 16:19:33.7±0.4, **81°.19N**±0°.06×**3°.50W**±0°.04, **h10**km, **n100**, σ**2ˢ.33**/95, **mb4.0**/35, **MS3.6**/20, **North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	Kingsbay	3.50	123	Pn	Pn	16 20 26.9	-1.2
KBS				Sn	Sn	16 21 04.3	-5.1
KBS	Kingsbay	3.50	123	*e*Pn	Pn	16 20 26.2	-1.8
KBS	Kingsbay	3.50	123	Pn	Pn	16 20 26.9	-1.2
KBS	Kingsbay	3.50	123	*i* Pg	Pn	16 20 27.8	-0.2
	SNR=92						
KBS	Kingsbay	3.50	123	*e*P	Pn	16 20 26.7	-1.4
KBS				*e*S	Sn	16 21 03.5	-5.9
KBS				IAML		16 21 10.4	
	comp=Z,83nm,0.3s						
SPA0	Spitsbergen Ar	4.65	120	Pn	Pn	16 20 42.7	-1.1
	baz=344,slow=14						
SPA0				Sn	Sn	16 21 32.0	-5.8
	baz=335,slow=14						
SPA0	Spitsbergen Ar	4.65	120	*e*Pn	Pn	16 20 42.5	-1.3
SPA0	Spitsbergen Ar	4.65	120	Pn	Pn	16 20 42.7	-1.1
	baz=344,slow=14						
SPA0				Sn	Sn	16 21 32.4	-5.3
	baz=335,slow=14						
SPA0				IAML		16 21 44.9	
	comp=Z,30nm,0.4s						
SPITS	Spitsbergen Ar	4.65	120	Pn	Pn	16 20 42.5	-1.3
	baz=337,slow=14,SNR=261						
SPITS				Sn	Sn	16 21 31.8	-5.9
	baz=308,slow=27,SNR=3.3						
SPITS				LR	LR	16 22 25.4	
	comp=Z,884nm,20.1s,baz=330,slow=36						
DAG	Danmarks Havn	5.28	221	*i* P	Pn	16 20 53.1	+0.7
DAG				*i* S	Sn	16 21 50.1	-3.1
DAG	Danmarks Havn	5.28	221	*i* P	Pn	16 20 53.1	+0.7
HSP	Hornsund	5.50	130	Pn	Pn	16 20 55.2	-0.3
HSP				Sn	Sn	16 21 55.6	-3.1
HSPB	Hornsund (broa	5.50	130	Pn	Pn	16 20 55.2	-0.3
HSPB	Hornsund (broa	5.50	130	*e*Pg	Pn	16 20 55.5	0.0
HSPB				Sn	Sn	16 21 55.6	-3.1
HSPB	Hornsund (broa	5.50	130	*e*P	Pn	16 20 55.7	+0.2
HSPB				*e*S	Sn	16 21 55.6	-3.1
HSPB				IAML		16 22 01.0	
	comp=Z,16nm,0.3s						
BJO1	Bjornoya	8.13	133	Pn	Pn	16 21 32.5	+1.1
JNW	Jan Mayen West	10.28	189	*e*P	Pn	16 22 04.7	+3.8
JNE	Jan Mayen East	10.32	189	*e*P	Pn	16 22 04.1	+2.6
JMIC	Jan Mayen	10.32	189	Pn	Pn	16 22 03.6	+2.0
	comp=Z,14nm,0.3s,baz=39,slow=2.2,SNR=20						
JMIC				Sn	Sn	16 23 53.2	-3.9
	comp=Z,2.2nm,0.3s,baz=87,slow=17,SNR=4.0						
JMIC	Jan Mayen	10.32	189	*e*P	Pn	16 22 03.4	+1.9
SUMG	Summit	11.42	241	*e*Pn	Pn	16 22 14.9	-1.9
TULEG	Thule	12.68	284	*e*Pn	Pn	16 22 27.4	-6.2
KEV	Kevo	13.47	131	*e*Pn	Pn	16 22 43.5	-1.0
ARA0	ARCESS Array S	13.51	133	P	Pn	16 22 45.6	+0.6
	baz=331,slow=9.3						
ARA0	ARCESS Array S	13.51	133	P	Pn	16 22 45.6	+0.6
	baz=331,slow=9.3						
ARCES	ARCESS Array B	13.51	133	Pn	Pn	16 22 44.8	-0.2
	comp=Z,0.3nm,0.3s,baz=341,slow=11,SNR=6.6						
ARCES				Sn	Sn	16 25 06.7	-8.1
	comp=Z,0.1nm,0.3s,baz=350,slow=21,SNR=2.5						
ARCES				LR	LR	16 27 46.9	
	comp=Z,121nm,19.1s,baz=343,slow=36						
ARE0	ARCESS Array S	13.51	133	*e*Pn	Pn	16 22 44.8	-0.2
RES	Resolute Bay	17.91	300	P	Pn	16 23 36.4	-6.0
	comp=Z,1.0nm,0.3s,baz=33,slow=17,SNR=19						
RES	Resolute Bay	17.91	300	*e*Pn	Pn	16 23 36.0	-6.4
	comp=Z,30nm,1.4s						
SFJD	Kangerlussuaq	18.24	247	LR	LR	16 30 57.8	
	comp=Z,247nm,20.3s,baz=17,slow=38						
NB2	NORSAR Subarra	20.66	159	P	Pn	16 24 16.7	+1.2
	baz=355,slow=10						
NB2	NORSAR Subarra	20.66	159	P	Pn	16 24 15.2	-0.2
	comp=Z,15nm,1.2s,baz=354,slow=11						
NB2	NORSAR Subarra	20.66	159	P	Pn	16 24 16.7	+1.2
	baz=355,slow=10						
NOA	NORSAR Array B	20.66	159	LR	LR	16 31 05.4	
	comp=Z,58nm,18.2s,baz=155,slow=33						
NC602	NORSAR Array S	20.98	159	*e*P	P	16 24 14.8	-1.7
NRA0	NORESS Array S	20.98	159	P	Pn	16 24 19.1	0.0
	baz=347,slow=12						
NRA0	NORESS Array S	20.98	159	P	Pn	16 24 19.1	0.0
	baz=347,slow=12						
FIA0	FINESS Array S	21.42	140	P	P	16 24 23.1	+1.9
	baz=5.7,slow=14						
FIA0	FINESS Array S	21.42	140	P	P	16 24 23.1	+1.9
	baz=27,slow=10						
FINES	FINESS Array B	21.42	140	P	P	16 24 23.1	+1.9
	comp=Z,6.1nm,0.9s,baz=2.1,slow=15,SNR=9.9						
FINES				LR	LR	16 32 12.6	
	comp=Z,108nm,21.6s,baz=6.5,slow=35						
HFS	Hagfors	21.70	156	P	P	16 24 26.5	+2.2
	baz=346,slow=8.6						
HFS	Hagfors	21.70	156	P	P	16 24 26.5	+2.2
	comp=Z,6.3nm,0.7s,baz=0.0,slow=13,SNR=12						
HFS				LR	LR	16 31 55.9	
	comp=Z,111nm,18.6s,baz=310,slow=34						
HFS	Hagfors	21.70	156	P	P	16 24 26.5	+2.2
	baz=346,slow=8.6						
KLMR	Klimovskoe	23.55	123	*e*P	P	16 24 43.4	-0.2
KLMR				AMP		16 24 56.8	
	comp=Z,7.0nm,1.0s						
FRB	Frobisher Bay	23.95	263	P	P	16 24 48.2	+0.7
	comp=Z,11nm,0.9s,baz=7.6,slow=11,SNR=5.3						
FRB				LR	LR	16 34 36.2	
	comp=Z,132nm,18.6s,baz=357,slow=38						
EKA	Eskdalemuir Ar	25.98	180	P	P	16 25 07.5	+1.5
	comp=Z,1.6nm,0.8s,baz=17,slow=8.5,SNR=3.3						
INK	Inuvik	28.31	323	LR	LR	16 40 14.1	
	comp=Z,45nm,18.7s,baz=38,slow=44						
YKA	Yellowknife Ar	31.86	305	LR	LR	16 38 14.0	
	comp=Z,18nm,19.9s,baz=18,slow=35						
SCHQ	Schefferville	32.23	256	LR	LR	16 39 05.6	
	comp=Z,147nm,19.6s,baz=63,slow=36						
AKASG	Malin Array Be	32.33	140	P	P	16 26 03.3	+0.9
	comp=Z,0.2nm,0.3s,baz=340,slow=9.2,SNR=4.1						
AKASG				LR	LR	16 41 27.6	
	comp=Z,42nm,18.1s,baz=70,slow=40						
KWP	Kalwaria Pacla	32.80	148	*e*P	P	16 26 07.0	+0.5
	comp=Z,206nm,0.6s						
IL1	Eielson Array	32.90	332	*e*P	P	16 26 07.4	+0.1
ILAR	Eielson Array	32.90	332	P	P	16 26 06.8	-0.4
	comp=Z,0.5nm,0.6s,baz=5.2,slow=6.2,SNR=5.6						
BVAR	Borovoye Array	35.58	94	P	P	16 26 32.8	+2.1
	comp=Z,1.0nm,0.9s,baz=324,slow=7.1,SNR=4.2						
AKTO	Aktyubinsk	36.23	108	P	P	16 26 37.6	+1.4
	comp=Z,1.0nm,0.6s,baz=349,slow=8.9,SNR=4.2						
AKTO				LR	LR	16 44 28.8	
	comp=Z,107nm,18.2s,baz=332,slow=41						
ZALV	Zalesovo Beam	36.91	80	P	P	16 26 42.2	+0.2
	comp=Z,0.5nm,0.5s,baz=347,slow=5.9,SNR=2.2						
MLR	Muntele Rosu	37.18	145	LR	LR	16 42 07.0	
	comp=Z,22nm,19.9s,baz=12,slow=36						
KURK	Kurchatov	39.09	87	*e*P	P	16 27 00.9	+0.6
	comp=Z,3.8nm,1.0s						
KURBB	Kurchatov Arra	39.17	87	P	P	16 27 01.6	+0.6
	comp=Z,1.0nm,0.7s,baz=346,slow=7.7,SNR=13						
PQI	Presque Isle	40.35	254	*e*P	P	16 27 08.6	-2.3
	comp=Z,6.3nm,0.6s						
KBZ	Khabaz	40.74	126	P	P	16 27 16.2	+2.1
	comp=Z,3.0nm,0.8s,baz=346,slow=4.2,SNR=5.0						
ULM	Lac du Bonnet	41.11	283	P	P	16 27 17.4	+0.3
	comp=Z,3.1nm,0.7s,baz=346,slow=8.3,SNR=3.2						
ULM				LR	LR	16 43 42.1	
	comp=Z,122nm,18.7s,baz=348,slow=35						
FNA	Florina	41.49	151	*e*P	P	16 27 20.5	+0.1
	comp=Z,6.4nm,0.9s						
ESDC	Sonseca Array	41.65	181	P	P	16 27 23.4	+1.7
	comp=Z,0.7nm,0.6s,baz=1.6,slow=9.0,SNR=6.8						
MAKZ	Makanchi	43.41	85	*e*P	P	16 27 37.1	+1.1
	comp=Z,3.1nm,1.0s						
MK31	Makanchi Array	43.47	85	*e*P	P	16 27 36.6	+0.1
MKAR	Makanchi Array	43.47	85	P	P	16 27 37.2	+0.7
	comp=Z,0.8nm,0.6s,baz=336,slow=6.8,SNR=8.0						
MKAR	Makanchi Array	43.47	85	*e*P	P	16 27 36.7	+0.2
	comp=Z,13nm,0.8s						
MK01	Makanchi Array	43.50	85	*e*P	P	16 27 36.2	-0.5
BRTR	Keskin Array B	43.64	138	P	P	16 27 40.2	+2.3
	comp=Z,1.1nm,0.8s,baz=328,slow=4.5,SNR=6.5						
KEST	Kesra	45.83	165	P	P	16 27 58.1	+2.6
	comp=Z,2.4nm,0.6s,baz=4.9,slow=4.7,SNR=2.9						
SONM	Songino Array	45.99	62	P	P	16 27 56.9	+0.3
	comp=Z,0.3nm,0.4s,baz=344,slow=4.8,SNR=3.0						
SONM				LR	LR	16 48 45.8	
	comp=Z,118nm,18.4s,baz=332,slow=38						
WMQ	Urumqi	47.20	80	P	P	16 28 09.6	+3.5
ECSD	EROS Data Cent	47.58	281	*e*P	P	16 28 09.7	+0.7
	comp=Z,19nm,1.5s						
PDAR	Pinedale Array	50.43	293	LR	LR	16 49 56.1	
	comp=Z,170nm,19.4s,baz=14,slow=36						
S39A	Bolivar	52.99	277	*e*P	P	16 28 49.9	-0.1
	comp=Z,7.9nm,1.3s						
YBH	Yreka Blue Hor	53.21	305	LR	LR	16 50 44.9	
	comp=Z,71nm,20.3s,baz=7.0,slow=35						
GTA	Gaotai	53.33	70	*e*P	P	16 28 52.8	+0.2
GTA				pP	sP	16 28 57.2	+0.2
GTA				sP	pP	16 28 59.8	+4.1
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
TKL	Tuckaleechee C	53.51	267	LR	LR	16 51 53.8	
	comp=Z,52nm,18.2s,baz=66,slow=36						
HHC	Hu-ho-hao-te	53.54	59	*e*P	P	16 28 54.8	+0.7
HHC				pmax	pmax		
	comp=Z,29nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,7.9s						
SMCO	Snowmass	53.58	290	*e*P	P	16 28 55.3	+0.5
	comp=Z,2.2nm,0.9s						
MSU	Marysvale	54.97	295	*e*P	P	16 29 05.0	+0.3
NVAR	Mina Array Bea	55.89	301	P	P	16 29 11.8	+0.5
	comp=Z,0.4nm,0.6s,baz=26,slow=5.3,SNR=4.3						
NVAR				LR	LR	16 53 23.8	
	comp=Z,106nm,18.6s,baz=290,slow=36						
LZH	Lanzhou	57.17	67	*e*P	P	16 29 21.5	+1.2
LZH				pP	sP	16 29 26.8	+2.0
LZH				sP	pP	16 29 29.5	+6.0
LZH				*e*PP	PP	16 31 26.7	-0.2
LZH				pmax	pmax		
	comp=Z,24nm,1.2s						
LZH				pmax	pmax		
	comp=Z,99nm,4.9s						
ANMO	Albuquerque	57.66	289	P	P	16 29 24.6	+0.7
	comp=Z,0.4nm,0.3s,baz=9.5,slow=6.1,SNR=3.0						
ANMO				LR	LR	16 54 30.9	
	comp=Z,99nm,18.0s,baz=30,slow=36						
JCT	Junction City	61.05	281	*e*P	P	16 29 47.7	+0.5
	comp=Z,6.9nm,1.0s						
SNCC	San Nicolas Is	61.15	301	*e*P	P	16 29 47.6	-0.2
TX31	Lajitas Ar. Si	62.75	285	*e*P	P	16 29 58.5	-0.2
TXAR	Lajitas Array	62.75	285	P	P	16 29 58.8	+0.1
	comp=Z,1.4nm,0.7s,baz=43,slow=3.3,SNR=10						
TXAR				LR	LR	16 57 56.6	
	comp=Z,84nm,20.4s,baz=0.0,slow=37						
GYA	Guiyang	67.03	66	*e*P	P	16 30 28.3	+1.7
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TOA0	Torodi Ar. Sit	68.11	175	*e*P	P	16 30 32.3	-1.0
TORD	Torodi Ar. Bea	68.11	175	P	P	16 30 33.0	-0.3
	comp=Z,1.2nm,0.6s,baz=5.5,slow=5.6						
LPIG	La Paz	68.87	290	LR	LR	17 01 41.8	
	comp=Z,66nm,18.9s,baz=36,slow=37						
CMAR	Chiang Mai Arr	73.78	75	P	P	16 31 07.4	-0.4
	comp=Z,0.3nm,0.3s,baz=335,slow=4.8,SNR=4.9						
CM01	Chiang Mai Arr	73.81	75	*e*P	P	16 31 06.6	-1.4
NNA	Nana	99.25	252	LR	LR	17 20 31.2	
	comp=Z,17nm,19.1s,baz=16,slow=37						
WRA	Warramunga Arr	116.26	45	PKP	PKPdf	16 38 15.4	-1.1
	comp=Z,0.3nm,0.8s,baz=339,slow=2.3,SNR=4.5						
ASAR	Alice Springs	119.90	46	PKP	PKPdf	16 38 21.7	-1.8
	comp=Z,0.6nm,0.7s,baz=4.3,slow=2.2,SNR=11						
SNAA	Sanae	152.69	180	PKPbc	PKPbc	16 39 28.7	+0.4
	comp=Z,2.8nm,1.0s,baz=66,slow=4.4,SNR=8.3						
MAW	Mawson	152.74	130	PKPbc	PKPbc	16 39 28.3	-0.1
	comp=Z,1.1nm,0.6s,baz=20,slow=4.5,SNR=3.6						

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*ISCJB **11** 16:26:00.8±0.9, 38°.85N±0°.04×43°.60E±0°.07, h11km±6km, Error ellipse: s-maj=9.8km s-min=7.3km az=11.6*
*CSEM **11** 16:26:00.7±0.3, 38°.87N×43°.58E, h10km, ML2.7, Error ellipse: s-maj=6.7km s-min=5.4km az=127.0*
*ISK **11** 16:26:00.1, 38°.85N×43°.56E, h13km, ML2.6/4*
*DDA **11** 16:26:01.1, 38°.89N×43°.57E, h14km, Ml2.7*
ISC 11 16:26:00.4±1.1, **38°.84N**±0°.05×**43°.58E**±0°.04, **h13**km±7km, **n17**, σ**0ˢ.42**/31, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VMUR	Van-Muradiye	0.15	357	*i* P	Pg	16 26 03.7	-0.5
VMUR				*i* S	Sg	16 26 07.1	+0.3
VMUR	Van-Muradiye	0.15	357	P	Pg	16 26 03.7	-0.5
VMUR				S	Sg	16 26 07.1	+0.3
VANB	Van	0.29	211	PG	Pb	16 26 07.9	+0.4
VANB	Van	0.29	211	*e*Pg	Pb	16 26 07.9	+0.4
CLDR	Caldiran	0.40	41	PG	Pg	16 26 08.4	0.0
CLDR				SG	Sb	16 26 14.9	-0.7
CLDR	Caldiran	0.40	41	*i* P	Pg	16 26 08.5	0.0
CLDR				*i* S	Sb	16 26 15.1	-0.5
CLDR	Caldiran	0.40	41	P	Pg	16 26 08.5	0.0
CLDR				*e*Sg	Sb	16 26 14.9	-0.7
ADCV	BITLIS_Adilcev	0.67	267	*i* P	Pb	16 26 14.6	+0.5
ADCV				*i* S	Sn	16 26 25.9	-0.3
ADCV	BITLIS_Adilcev	0.67	267	P	Pb	16 26 14.6	+0.5
TUTA	Tutak	0.82	313	*i* P	Pg	16 26 15.5	-0.7
TUTA				*i* S	Sb	16 26 27.5	-0.1
TUTA	Tutak	0.82	313	P	Pg	16 26 15.5	-0.7
TUTA				S	Sb	16 26 27.5	-0.1
AGRB	Hanur-Agry	0.86	328	PG	Pg	16 26 16.9	-0.2
AGRB				SG	Sb	16 26 29.3	+0.4
AGRB	Hanur-Agry	0.86	328	*e*Pg	Pg	16 26 16.9	-0.2
AGRB				*e*Sg	Sb	16 26 29.3	+0.4
GURO	Guroymak-BITLI	1.25	257	PN	Pn	16 26 23.6	0.0
GURO				SN	Sg	16 26 40.7	+0.1
GURO	Guroymak-BITLI	1.25	257	*e*Pn	Pn	16 26 23.6	0.0
GURO				*e*Sn	Sg	16 26 40.7	+0.1
EATA	Eleskirt	1.32	321	*i* P	Pg	16 26 25.5	-0.3
EATA				*i* S	Sg	16 26 43.4	+0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
EATA	Eleskirt	1.32	321	P	Pg	16 26 25.5	-0.3
EATA				S	Sg	16 26 43.4	+0.3

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*NIED **11** 16:37:00,37°.30N×142°.20E,h17^{km},Mw3.8 Best double couple: M$_0$4.88000×10^{14} NP1:φ$_s$297.00000°,δ42.00000°, λ-108.00000°. NP2:φ$_s$141.00000°,δ51.00000°, λ-74.00000°.*

*IDC **11** 16:37:28.7±1.9,37°.05N×142°.72E,h0^{km},mb3.5/4, mb1 3.7/8,mb1mx3.4/73,mbtmp3.7/8,ML3.2/3,Error ellipse: s-maj=45.9km s-min=20.8km az=79.0*

*JMA **11** 16:37:32.6±0.2,37°.25N×142°.25E,h27^{km}±4^{km},M3.8*

ISC 11 16:37:29.1±2.0,**37°.13N**±0°.04×**142°.32E**±0°.06,**h6**^{km}±12^{km}, **n26**,σ**2^{s}45**/33,**mb3.5**/4,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	1.18	282	P	Pn	16 37 52.4	+0.2
JFK				S	Sg	16 38 06.1	-0.9
ONAJ	Iwakimizuishiy	1.22	269	P	Pn	16 37 53.2	+0.5
JFFD	Fukushimafurud	1.41	269	P	Pg	16 37 56.1	0.0
JMM	Marumori	1.42	302	P	Pn	16 37 55.4	-0.1
JMM				S	Sb	16 38 11.7	-2.7
JIO	Ouri	1.54	330	P	Pn	16 37 56.6	-0.4
JFT	Otama	1.63	285	P	Pb	16 37 59.8	+0.2
JFT				eS	Sn	16 38 18.7	-0.9
JOU	Okura	1.81	314	P	Pn	16 38 01.4	+0.7
JOU				eS	Sn	16 38 22.4	-1.6
JMK	Ichinoseki	2.02	335	P	Pn	16 38 04.3	+0.6
JMK				eS	Sn	16 38 27.6	-1.6
JYS	Shirataka	2.10	302	P	Pn	16 38 06.7	+1.9
JYS				eS	Sn	16 38 31.6	+0.4
JYK	Kaneyama	2.37	320	P	Pn	16 38 09.2	+0.7
JYK				eS	Sn	16 38 37.3	-0.5
JOM	Ohasama	2.48	341	P	Pn	16 38 10.8	+0.8
JOM				S	Sn	16 38 39.4	-1.2
MJAR	Matsushiro Arr	3.35	261	Pn	Pn	16 38 25.2	+3.3
	3.6nm,0.3s,baz=85,slow=14,SNR=32						
MJAR				Sn	Sn	16 39 04.7	+2.6
	2.2nm,0.3s,baz=73,slow=20,SNR=6.1						
MAT	Matsushiro	3.35	261	P	Pb	16 38 26.1	-2.8
MAT				S	Sb	16 39 06.7	-3.2
JHJ	Hachijo jima 2	4.51	208	Pn	Pn	16 38 41.0	+3.1
	11nm,0.3s,baz=83,slow=22,SNR=7.2						
JHJ				Sn	Sn	16 39 29.6	-0.9
	17nm,0.3s,baz=62,slow=23,SNR=6.4						
ASAJ	Asahikawa	6.99	2	Pn	Pn	16 39 13.8	+1.9
	0.2nm,0.3s,baz=217,slow=13,SNR=6.3						
ASAJ				Sn	Sn	16 40 29.4	-2.3
	0.3nm,0.3s,baz=222,slow=18,SNR=2.4						
JCJ	Chichijima	10.00	181	Pn	Pn	16 39 54.0	+0.8
	baz=288,slow=20						
JCJ				Sn	Sn	16 41 37.7	-8.2
	1.0nm,0.3s,baz=287,slow=19,SNR=2.8						
H11N2	WAKE ISLAND Hy	27.57	122	T	T	17 12 19.5	
	baz=315,slow=75,SNR=36						
H11N1	WAKE ISLAND Hy	27.58	122	T	T	17 12 17.9	
	baz=315,slow=75,SNR=29						
H11N3	WAKE ISLAND Hy	27.59	122	T	T	17 12 10.5	
	baz=315,slow=75,SNR=22						
H11S1	WAKE ISLAND Hy	28.30	124	T	T	17 13 29.9	
	baz=317,slow=75,SNR=20						
H11S3	WAKE ISLAND Hy	28.30	124	T	T	17 13 30.6	
	baz=317,slow=75,SNR=21						
H11S2	WAKE ISLAND Hy	28.32	124	T	T	17 13 08.4	
	baz=317,slow=75,SNR=20						
SONM	Songino Array	28.34	304	P	P	16 43 26.2	+2.5
	0.2nm,0.4s,baz=90,slow=7.2,SNR=2.8						
MKAR	Makanchi Array	44.69	302	P	P	16 45 46.8	+4.1
	0.4nm,0.7s,baz=72,slow=9.2,SNR=3.0						
KURBB	Kurchatov Arra	46.52	308	P	P	16 45 59.6	+2.5
	0.5nm,0.4s,baz=82,slow=8.5,SNR=5.2						
WRA	Warramunga Arr	57.26	189	P	P	16 47 16.9	-0.5
	0.3nm,0.6s,baz=6.8,slow=7.4,SNR=7.0						

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*JMA **11** 16:42:54.6±0.3,24°.96N×122°.78E,h0^{km},M2.0*

*ISCJB **11** 16:43:00.4±1.4,24°.8N±0°.1×122°.90E±0°.03,h30^{km}±7^{km}, Error ellipse: s-maj=19.9km s-min=4.8km az=4.9*

*TAP **11** 16:43:01.6,24°.72N×122°.84E,h30^{km},ML2.6,D*

ISC 11 16:43:00.4±1.5,**24°.7N**±0°.1×**122°.89E**±0°.04,**h25**^{km}±11^{km}, **n14**,σ**1^{s}38**/22,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.28	170	P	Pb	16 43 05.4	-1.8
YOJ	Yonaguni jima	0.29	158	P	Pb	16 43 09.2	+2.0
	baz=149						
YOJ				S	Sn	16 43 14.9	+0.4
	baz=149						
YOJ	Yonaguni jima	0.29	158	P	Pb	16 43 05.3	-1.9
YOJ				eS	Sb	16 43 13.1	+1.2
EOS1	EOS1	0.72	256	eP	Pn	16 43 15.1	+0.2
	baz=255						
EOS1				eS	Sn	16 43 24.9	-0.1
	baz=255						
IRIF	Iriomote-Funau	0.86	117	P	Pn	16 43 15.4	-1.5
IRIF				eS	Sb	16 43 30.7	+2.9
TWC	Suao	0.96	263	eP	Pn	16 43 18.4	+0.2
	baz=262						
TWC				S	Sb	16 43 31.0	+0.5
	baz=262						
NANB	Nanao	1.08	254	eP	Pb	16 43 20.8	+0.4
	baz=253						
NANB				eS	Sb	16 43 34.0	-0.1
	baz=253						
TWE	Neicheng	1.11	270	eS	Sb	16 43 34.9	-0.2
	baz=269						
JKRS	Kuro-shima	1.13	115	S	Sb	16 43 37.8	+2.3
JIJ	Ishigaki jima	1.20	107	P	Pn	16 43 20.8	-0.7
ENTT	Nioudou	1.21	266	eP	Pb	16 43 23.1	+0.5
	baz=265						
ENTT				eS	Sb	16 43 37.3	-0.5
	baz=265						
JISG	Ishigakijimahi	1.30	96	P	Pn	16 43 21.0	-1.9
NACB	Ninganchiao	1.30	245	eP	Pb	16 43 23.9	-0.3
	baz=244						
NACB				S	Sb	16 43 39.9	-0.7
	baz=244						
YHNB	Yeheng	1.38	268	eP	Pn	16 43 24.7	+0.6
	baz=267						

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*IDC **11** 16:50:33.4±2.7,11°.56N×124°.37E,h0^{km},mb3.4/4, mb1 3.6/4,mb1mx3.3/62,mbtmp3.4/4,Error ellipse: s-maj=255.3km s-min=21.9km az=65.0*

ISC 11 16:50:33.6±1.8,**11°.64N**±0°.07×**124°.38E**±0°.06,**h7**^{km}±13^{km}, **n9**,σ**1^{s}25**/14,**mb3.5**/4,**4C-1D,Leyte**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLP	Palo	0.76	129⇓	iP	Pn	16 50 50.0	-0.7
PLP				eS	Sn	16 51 00.9	-1.6
MMPH	Masbate	1.02	314⇑	eP	Pg	16 50 52.9	-0.4
MMPH				eS	Sg	16 51 06.9	+0.3
LLP	Lapu-Lapu	1.38	197⇑	eP	Pn	16 50 59.0	-0.3
LLP				eS	Sn	16 51 18.5	+0.7
RCP	Roxas	1.60	267⇑	eP	Pn	16 51 01.9	-0.5
RCP				eS	Sn	16 51 20.6	-2.8
JAP	San Jose, Anti	2.54	250⇑	eP	Pb	16 51 20.1	+0.4
JAP				eS	Sg	16 51 55.4	0.0
WRA	Warramunga Arr	32.88	163	P	P	16 57 08.3	-0.3
	0.5nm,1.0s,baz=342,slow=9.2,SNR=3.4						
ASAR	Alice Springs	36.31	165	P	P	16 57 38.8	+0.6
	0.3nm,0.7s,baz=345,slow=7.2,SNR=6.8						
MKAR	Makanchi Array	49.82	323	P	P	16 59 28.9	+1.5
	0.6nm,0.8s,baz=133,slow=6.9,SNR=5.1						
KURBB	Kurchatov Arra	53.90	326	P	P	16 59 58.6	+0.9
	0.5nm,0.7s,baz=122,slow=7.0,SNR=5.0						

MAN 11 16:57:48.7,11°.36N×124°.57E,h17^{km}**,mb3.8,ML2.5, MS2.0,1D,Leyte**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OCLP	Ormoc	0.31	173	eP	Pb	16 57 56.1	+0.4
OCLP				eS	Sn	16 58 05.8	+1.2
PLP	Palo	0.44	116⇓	eP	Pb	16 57 58.4	+0.4
PLP				eS	Sn	16 58 08.8	+0.9
MSLP	Maasin	1.25	167	eP	Pn	16 58 11.2	-0.2

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*ISCJB **11** 16:59:01.4±0.5,6°.17S±0°.05×128°.01E±0°.08,h400^{km}, mb3.3/5,Error ellipse: s-maj=10.9km s-min=7.0km az=17.7*

*IDC **11** 16:59:02.7±1.3,6°.19S×127°.90E,h394^{km}±16^{km},mb3.1/5, mb1 3.1/11,mb1mx3.0/52,mbtmp3.9/11,Error ellipse: s-maj=24.8km s-min=15.3km az=77.0*

ISC 11 16:59:02.3±0.7,**6°.19S**±0°.07×**128°.02E**±0°.09,**h400**^{km},**n11**, σ**1^{s}50**/16,**mb3.5**/5,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	5.88	227	P	Pn	17 00 33.1	-0.6
	6.9nm,0.3s,baz=104,slow=3.7,SNR=22						
BATI				S	S	17 01 46.2	-1.9
	2.0nm,0.3s,baz=45,slow=20,SNR=2.6						
SIJI	Sorong	6.20	32	P	Pn	17 00 37.1	-0.1
	2.8nm,0.3s,baz=214,slow=21,SNR=21						
SIJI				S	S	17 01 50.7	-3.8
	3.9nm,0.3s,baz=211,slow=19,SNR=12						
FITZ	Fitzroy Crossi	12.07	191	P	Pn	17 01 43.5	-0.8
	0.1nm,0.3s,baz=22,slow=10,SNR=5.5						
JAY	Jayapura	13.16	74	P	Pn	17 01 57.8	+0.7
	0.2nm,0.3s,baz=261,slow=13,SNR=4.6						
WRA	Warramunga Arr	14.99	156	P	P	17 02 15.9	+1.1
	0.4nm,0.3s,baz=334,slow=11,SNR=26						
WRA				S	S	17 04 52.6	-1.5
	0.2nm,0.3s,baz=338,slow=21,SNR=3.9						
ASAR	Alice Springs	18.28	163	P	P	17 02 51.0	+1.0
	0.5nm,0.3s,baz=343,slow=12,SNR=66						
ASAR				S	S	17 05 58.6	+0.8
	0.1nm,0.3s,baz=338,slow=21,SNR=6.0						
ASAR				ScP	ScP	17 09 59.0	+0.7
	0.0nm,0.3s,baz=338,slow=2.5,SNR=4.2						
CMAR	Chiang Mai Arr	37.71	311	P	P	17 05 42.0	+0.1
	0.6nm,0.5s,baz=143,slow=7.1,SNR=6.4						
SONM	Songino Array	57.07	343	P	P	17 08 10.5	+1.9
	0.3nm,0.5s,baz=180,slow=6.1,SNR=3.3						
MKAR	Makanchi Array	66.48	328	P	P	17 09 10.9	+0.4
	0.6nm,0.4s,baz=115,slow=8.3,SNR=16						
ZALV	Zalesovo Beam	70.00	334	P	P	17 09 31.8	0.0
	0.4nm,0.3s,baz=153,slow=9.7,SNR=2.5						
KURBB	Kurchatov Arra	70.80	329	P	P	17 09 37.0	+0.3
	0.8nm,0.5s,baz=128,slow=5.1,SNR=13						

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*IDC **11** 17:10:59.4±1.0,1°.58S×127°.39E,h0^{km},mb3.6/5, mb1 3.8/8,mb1mx3.6/54,mbtmp3.6/8,ML3.6/3,MS2.8/1, Ms1 2.8/1,ms1mx2.3/46,Error ellipse: s-maj=30.5km s-min=18.3km az=59.0*

*ISCJB **11** 17:11:02.4±0.4,1°.45S±0°.04×127°.38E±0°.04,h25^{km}, mb3.6/5,Error ellipse: s-maj=6.2km s-min=4.9km az=41.3*

*DJA **11** 17:11:02.4±0.3,1°S±2°×12°7E±°,h11^{km}±3^{km},M4.2/14, mB4.8/5,mb4.8/6,MLv4.1/14,Mw(mB)4.0/5*

ISC 11 17:11:03.4±0.7,**1°.48S**±0°.04×**127°.43E**±0°.05,**h25**^{km},**n22**, σ**1^{s}65**/27,**mb3.7**/5,**Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBMI	Labuha	0.84	5	P	Pb	17 11 18.7	-0.7
SANI	Sanana	1.55	249	P	Pn	17 11 28.7	-0.8
NLAI	Namlea	1.78	191	P	Pn	17 11 33.1	+0.5
NLAI				S	Sn	17 11 55.0	+0.5
NLAI				Sg	Sb	17 12 02.4	+5.1
TNTI	Ternate	2.24	358	P	Pn	17 11 39.9	+1.0
AAI	Ambon	2.32	161	P	Pn	17 11 41.3	+1.2
AAI				S	Sb	17 12 10.1	-2.8
MSAI	Masohi	2.38	141	P	Pn	17 11 43.0	+2.1
MSAI				S	Sb	17 12 12.2	-2.4
MSAI				Sg	Sn	17 12 22.6	+13
SIJI	Sorong	3.88	81	Pn	Pn	17 12 02.8	+1.3
	7.0nm,0.3s,baz=254,slow=11,SNR=26						
SIJI				Sn	Sn	17 12 48.4	+2.1
	3.1nm,0.3s,baz=85,slow=20,SNR=11						
SIJI				LR	LR	17 14 07.9	
	comp=Z,112nm,18.1s,baz=314,slow=48						
BNDI	Bandanaira	3.90	141	P	Pn	17 12 02.4	+0.6
KMSI	Cibinong	4.01	301	P	Pn	17 12 03.0	-0.3
LUWI	Luwuk	4.68	275	P	Pn	17 12 12.8	+0.3
FAKI	Fak Fak	5.02	107	P	Pn	17 12 17.2	0.0
	43nm,1.0s						
KDI	Kendari	5.40	243	P	Pn	17 12 23.3	+0.8
	69nm,0.5s,968nm						
APSI	Ampana	5.81	276	P	Pn	17 12 29.7	+1.6
	137nm,0.5s,2µm						
MRSI	Marisa	5.83	289	P	Pn	17 12 28.6	+0.3
	22nm,0.5s,409nm						
PCI	Palu	7.62	274	P	Pn	17 12 52.8	-0.1
FITZ	Fitzroy Crossi	16.61	186	Pn	Pn	17 14 54.0	-0.7
	0.1nm,0.3s,baz=6.8,slow=13,SNR=7.3						
WRA	Warramunga Arr	19.55	160	P	P	17 15 27.9	-1.7
	0.2nm,0.3s,baz=344,slow=13,SNR=15						
ASAR	Alice Springs	22.93	165	P	P	17 16 04.0	-1.9
	1.0nm,0.6s,baz=346,slow=12,SNR=26						
CMAR	Chiang Mai Arr	34.32	307	P	P	17 17 48.9	+0.6
	0.2nm,0.4s,baz=143,slow=7.9,SNR=4.5						
SONM	Songino Array	52.43	342	P	P	17 20 14.3	+0.2
	1.1nm,1.0s,baz=161,slow=9.3,SNR=5.2						
MKAR	Makanchi Array	62.24	327	P	P	17 21 23.7	+0.5
	0.5nm,0.7s,baz=130,slow=7.8,SNR=5.3						
KURBB	Kurchatov Arra	66.50	328	P	P	17 21 50.5	-0.4
	0.7nm,0.8s,baz=127,slow=5.8,SNR=6.1						

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*CSEM **11** 17:12:00.1,38°.78N×23°.53E,h14^{km},ML1.6/12*

ATH 11 17:12:00.1,38°.78N×23°.53E,h14^{km}±6^{km}**,ML1.6**/12**,Error ellipse: s-maj=6.9km s-min=0.7km az=297.0,Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMIA	Simia	0.26	291	P	Pg	17 12 05.4	-0.4
SMIA				S	Sg	17 12 09.6	0.0
SMIA				AML	AML	17 12 13.7	
	comp=E,536µm,0.4s						
SMIA				AML	AML	17 12 16.6	
	comp=N,574µm,0.7s						
SMIA	Simia	0.26	291	P	Pg	17 12 05.1	-0.7
SMIA				S	Sg	17 12 09.3	-0.3
SMIA				AML	AML	17 12 13.7	
	comp=E,536µm,0.4s						
SMIA				AML	AML	17 12 14.0	
	comp=N,487µm,0.6s						
SMIA	Simia	0.26	291	P	Pg	17 12 05.4	-0.4
SMIA				S	Sg	17 12 09.6	-0.1
SKIA	Skiathos	0.39	353	P	Pg	17 12 08.1	+0.1
SKIA				S	Sg	17 12 13.7	+0.4
SKIA				AML	AML	17 12 14.4	
	comp=E,417µm,0.2s						
SKIA				AML	AML	17 12 16.7	
	comp=N,194µm,0.6s						
SKIA	Skiathos	0.39	353	P	Pg	17 12 08.1	+0.2
SKIA				S	Sg	17 12 13.7	+0.4
SKIA				AML	AML	17 12 14.3	
	comp=N,275µm,0.6s						
SKIA				AML	AML	17 12 14.4	
	comp=E,417µm,0.2s						
SKIA	Skiathos	0.39	353	P	Pg	17 12 08.0	+0.1
SKIA				S	Sg	17 12 13.6	+0.4
LKR	Lokris	0.43	252	P	Pg	17 12 08.1	-0.7
LKR				S	Sg	17 12 15.1	+0.5
LKR				AML	AML	17 12 16.1	
	comp=N,201µm,0.1s						
LKR				AML	AML	17 12 16.7	
	comp=E,183µm,0.1s						
LKR	Lokris	0.43	252	P	Pg	17 12 07.8	-0.9
LKR				S	Sb	17 12 15.6	-0.2
LKR				AML	AML	17 12 16.0	
	comp=N,201µm,0.1s						
LKR				AML	AML	17 12 16.6	
	comp=E,183µm,0.1s						
LKR	Lokris	0.43	252	P	Pg	17 12 08.3	-0.5
LKR				S	Sb	17 12 15.3	-0.6
AOS	Alonnisos	0.47	36	P	Pg	17 12 08.3	-1.2
AOS				S	Sb	17 12 16.6	-0.5
AOS				AML	AML	17 12 17.8	
	comp=E,98µm,0.3s						
AOS				AML	AML	17 12 20.8	
	comp=N,62µm,0.3s						
AOS	Alonnisos	0.47	36	P	Pg	17 12 08.9	-0.7
AOS				S	Sg	17 12 16.4	+0.4
NEO	Neokhori	0.57	336	P	Pg	17 12 11.1	-0.4
NEO				S	Sg	17 12 18.9	-0.1
NEO				AML	AML	17 12 20.7	
	comp=E,125µm,0.3s						
NEO				AML	AML	17 12 22.4	
	comp=N,182µm,0.2s						
NEO	Neokhori	0.57	336	P	Pb	17 12 12.3	+0.3
NEO				S	Sg	17 12 18.0	-1.0
NEO				AML	AML	17 12 20.5	
	comp=E,125µm,0.3s						
NEO				AML	AML	17 12 22.3	
	comp=N,182µm,0.2s						
NEO	Neokhori	0.57	336	P	Pb	17 12 11.8	-0.2
NEO				S	Sg	17 12 18.7	-0.4
VIL2	Platees	0.61	200	P	Pg	17 12 10.9	-1.1
VIL2				S	Sb	17 12 21.1	+0.2
VIL2	Platees	0.61	200	P	Pg	17 12 11.8	-0.3
VIL2				S	Sb	17 12 22.3	+1.4
VIL2				AML	AML	17 12 24.1	
	comp=E,94µm,0.3s						
VIL2				AML	AML	17 12 26.3	
	comp=N,128µm,0.4s						
XOR	Xorichti	0.64	336	P	Pb	17 12 13.5	+0.5
XOR				S	Sg	17 12 20.7	-0.3
XOR				AML	AML	17 12 26.1	
	comp=E,70µm,0.4s						
XOR				AML	AML	17 12 26.6	
	comp=N,116µm,0.4s						
XOR	Xorichti	0.64	336	P	Pb	17 12 13.0	-0.1
XOR				S	Sg	17 12 21.1	0.0
VILL	Villia	0.64	195	P	Pg	17 12 12.1	-0.6
VILL				S	Sb	17 12 21.9	0.0
DION	Dionisos Attik	0.77	155	P	Pg	17 12 14.8	-0.4
DION				S	Sg	17 12 25.1	-0.2
DION				AML	AML	17 12 28.3	
	comp=N,235µm,0.3s						
DION				AML	AML	17 12 29.7	
	comp=E,100µm,0.4s						
DION	Dionisos Attik	0.77	155	P	Pg	17 12 14.4	-0.8
DION				S	Sg	17 12 25.5	+0.1
DION				AML	AML	17 12 28.2	
	comp=N,235µm,0.3s						
DION				AML	AML	17 12 29.7	
	comp=E,100µm,0.4s						
DION	Dionisos Attik	0.77	155	P	Pg	17 12 14.7	-0.5
DION				S	Sb	17 12 25.6	-0.1
PTL	Penteli	0.78	160	P	Pb	17 12 16.0	+0.5
SKY	Skiros Island	0.81	83	P	Pg	17 12 15.4	-0.4
SKY				AML	AML	17 12 29.8	
	comp=E,338µm,0.2s						
SKY				AML	AML	17 12 30.4	
	comp=N,314µm,0.3s						
ATHU	Athens Univers	0.84	166	P	Pn	17 12 17.4	-0.1
ATHU	Athens Univers	0.84	166	P	Pb	17 12 16.8	+0.3
LTK	Loutraki	0.88	210	P	Pb	17 12 17.1	0.0
LTK				S	Sb	17 12 29.5	+0.8
LTK				AML	AML	17 12 33.0	
	comp=E,117µm,0.4s						
LTK				AML	AML	17 12 33.0	
	comp=N,73µm,0.4s						
LTK	Loutraki	0.88	210	P	Pb	17 12 17.0	-0.1
LTK				S	Sb	17 12 29.2	+0.5
LOUT	Loutraki	0.91	209	P	Pn	17 12 18.3	-0.1
LOUT	Loutraki	0.91	209	P	Pg	17 12 17.8	+0.1
VLY	Voula,Athens	0.95	167	P	Pb	17 12 17.2	-1.2
VLY				S	Sb	17 12 29.5	-1.4
VLY	Voula,Athens	0.95	167	P	Pb	17 12 17.6	-0.8
VLY				S	Sg	17 12 31.2	+0.1
VLY				AML	AML	17 12 33.8	
	comp=N,253µm,0.6s						
VLY				AML	AML	17 12 34.8	
	comp=E,238µm,1.0s						
VLY	Voula,Athens	0.95	167	P	Pb	17 12 17.9	-0.5
VLY				S	Sg	17 12 31.3	+0.2
KARY	Karystos	1.04	136	P	Pb	17 12 19.7	-0.2
KARY	Karystos	1.04	136	P	Pn	17 12 21.3	+1.0
KARY				S	Sg	17 12 34.1	+0.4
KARY				AML	AML	17 12 35.6	
	comp=E,64µm,0.6s						
KARY				AML	AML	17 12 35.8	
	comp=N,65µm,0.3s						
KARY	Karystos	1.04	136	P	Pn	17 12 20.5	+0.3
KARY				S	Sg	17 12 34.1	+0.4
DID	Didima	1.29	190	P	Pn	17 12 23.3	-0.5
DID				S	Sg	17 12 41.9	-0.1
DID				AML	AML	17 12 43.1	
	comp=N,66µm,0.4s						
DID				AML	AML	17 12 43.2	
	comp=E,54µm,0.3s						
DID	Didima	1.29	190	P	Pn	17 12 23.9	+0.1
DID				S	Sg	17 12 42.1	+0.2

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*IDC **11** 17:23:24.4±0.7,29°.36N×81°.31E,h0^{km},mb3.8/18, mb1 4.0/21,mb1mx3.8/71,mbtmp3.9/21,ML4.0/3,MS3.2/5, Ms1 3.2/5,ms1mx2.7/65,Error ellipse: s-maj=21.5km s-min=13.6km az=44.0*

*ISCJB **11** 17:23:27.2±0.2,29°.50N±0°.04×81°.30E±0°.02,h27^{km}, mb3.8/20,MS3.2/4,Error ellipse: s-maj=5.4km s-min=2.4km az=20.3*

*NDI **11** 17:23:28.8±2.4,29°.40N×81°.38E,h13^{km}±11^{km},ML4.0, mb4.1(NEIC)*

*DMN **11** 17:23:28.6±0.0,29°.44N×81°.02E,h60^{km},Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*

*NEIC **11** 17:23:30.1±0.9,29°.44N×81°.29E,h37^{km}±9^{km},mb4.1/2, Error ellipse: s-maj=10.0km s-min=5.7km az=214.0*

ISC 11 17:23:28.8±0.5,**29°.46N**±0°.05×**81°.33E**±0°.04,**h27**^{km},**n66**, σ**2^{s}15**/84,**mb3.9**/21,**MS3.4**/4,**Nepal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOSI	Joshimath	1.88	306	eP	Pb	17 24 01.9	-0.6
JOSI				eS	Sb	17 24 26.1	+0.3
JOSI				IAML		17 24 30.4	
	comp=N,7µm,0.6s						
JOSI				IAML		17 24 31.7	
	comp=E,7µm,0.6s						
PYUN	Piuthan	1.99	132	ePg	Pn	17 24 03.1	+2.2
PYUN				eSg	Sb	17 24 28.9	-0.1
	comp=E,3µm,0.7s						
DANN	Dangsing	2.41	117	ePn	Pn	17 24 09.2	+2.6
KOLN	Koldanda	2.62	130	ePn	Pn	17 24 11.9	+2.4
KOLN				eSn	Sn	17 24 43.2	+2.8
	comp=E,1µm,0.4s						
GKN	Gorkha	3.25	116	ePn	Pn	17 24 20.3	+2.1
GKN				eSn	Sn	17 24 58.6	+2.5
	comp=E,2µm,0.4s						
NDI	New Delhi	3.68	259	eP	Pn	17 24 26.0	+2.1
NDI				ex	x	17 25 38.0	
DMN	Daman	3.80	118	ePn	Pn	17 24 27.7	+1.8
DMN				eSn	Sn	17 25 11.7	+1.8
	comp=E,458nm,0.4s						
KKN	Kakani	3.85	115	ePn	Pn	17 24 28.3	+1.8
KKN				eSn	Sn	17 25 12.9	+1.8
	comp=E,1µm,0.7s						
BHGR	Bahadurgarh	3.92	260	eS	Sn	17 25 13.6	+1.4
KKR	Kurukshetra	3.95	278	eS	Sn	17 25 14.6	+1.5
PKIN	Phulchoki	4.04	117	ePn	Pn	17 24 30.7	+1.5
PKIN				eSn	Sn	17 25 17.3	+1.5
	comp=E,512nm,0.4s						
GUN	Gumba	4.29	110	ePn	Pn	17 24 34.8	+2.2
GUN				eSn	Sn	17 25 24.2	+2.2
	comp=E,968nm,0.6s						
KUDL	Kundal	4.44	254	eP	Pn	17 24 37.3	+2.9
KUDL				eS	Sn	17 25 24.6	-0.6
JIRN	Jiri	4.64	112	ePn	Pn	17 24 39.3	+1.8
JIRN				eSn	Sn	17 25 31.8	+1.2
	comp=E,408nm,0.2s						
KHET	Khetri	5.04	255	eP	Pn	17 24 43.9	+1.3
KHET				eS	Sn	17 25 41.9	+1.9
KHET				AML	AML	17 26 09.7	
	comp=N,90nm,0.6s						
KHET				AML	AML	17 26 10.0	
	comp=E,68nm,0.8s						
RAMN	Ramite	5.28	117	ePn	Pn	17 24 47.5	+1.3
RAMN				eSn	Sn	17 25 46.7	+0.3
	comp=E,599nm,0.3s						
ODAN	Odare	5.95	114	ePn	Pn	17 24 56.9	+1.6
ODAN				eSn	Sn	17 26 02.6	-0.1
	comp=E,371nm,0.4s						
TAPN	Taplejung	6.00	109	ePn	Pn	17 24 58.1	+2.0
TAPN				eSn	Sn	17 26 04.5	+0.3
	comp=E,153nm,0.3s						
SARP	Sargodha	7.84	290	P	Pn	17 25 20.7	-0.4
CHCP	Chirah Chowk	8.05	303	P	Pn	17 25 24.5	+0.5
NIL	Nilore	8.05	303	ePn	Pn	17 25 24.2	+0.2
	comp=E,206nm,0.4s						

NGP	Nagpur	8.53	194	*e*x	Pn	17 25 28.2	-2.3
NGP				*e*S	Sn	17 26 59.2	-6.7
LSA	Lhasa	8.56	86	*e*Pn	Pn	17 25 33.4	+2.0
	comp=E,11nm,0.6s						
THW	Thamme Wali	8.86	294	P	Pn	17 25 34.5	-0.6
THW				S	Sn	17 27 12.0	-2.0
THW	Thamme Wali	8.86	294	P	Sn	17 27 12.3	-1.7
TURI	Tura	8.89	114	*e*P	Pn	17 25 34.2	-1.4
TURI				*e*S	Sn	17 27 06.8	-8.2
CEP	Cherat	9.13	301	P	Pn	17 25 38.4	-0.4
GUWA	GUWAHATI	9.74	107	*e*P	Pn	17 25 47.0	-0.1
GUWA				*e*S	Sn	17 27 28.2	-7.4
SHL	Shillong	10.14	110	*e*P	Pn	17 25 54.0	+1.2
TEZP	TEZPUR	10.53	103	*e*P	Pn	17 25 56.8	-1.1
TEZP				*e*S	Sn	17 27 47.5	-7.4
ITAN	ITANAGAR	11.17	99	*e*P	Pn	17 26 06.4	-0.2
ZIRO	ZIRO	11.19	97	*e*P	Pn	17 26 06.5	-0.6
ZIRO				*e*S	Sn	17 28 00.6	-11
MOKO	MOKOCHONG	12.08	102	*e*P	Pn	17 26 18.8	-0.6
MOKO				*e*S	Sn	17 28 23.1	-10
HYB	Hyderabad	12.26	193	*i* P	Pn	17 26 22.0	+0.3
HYB				*e*S	Sn	17 28 37.5	0.0
SAIH	SAIHA	12.57	121	*e*P	Pn	17 26 24.9	-1.2
SAIH				*e*S	Sn	17 28 34.5	-11
POO	Poona	12.84	214	*e*P	Pn	17 26 30.0	+0.3
AAK	Ala-Archa	14.25	339	Pn	Pn	17 26 48.7	-0.2
	comp=E,0.7nm,0.3s,baz=174,slow=12,SNR=3.2						
MKAR	Makanchi Array	17.32	2	P	P	17 27 29.1	-0.7
	comp=E,0.5nm,0.3s,baz=189,slow=11,SNR=16						
CHTO	Chiang Mai	19.23	120	*e*P	P	17 27 51.2	+0.1
	comp=E,1.4nm,0.7s						
CHTO	Chiang Mai	19.23	120	P	Pn	17 27 54.0	+1.9
	comp=E,9.9nm,0.8s						
CMMT	Chiang Mai	19.24	119	P	Pn	17 27 53.9	+1.7
	comp=E,2.1nm,0.8s						
CMAR	Chiang Mai Arr	19.45	120	P	P	17 27 53.6	+0.3
	comp=E,0.2nm,0.3s,baz=302,slow=12,SNR=30						
CMAR				LR	LR	17 37 25.2	
	comp=E,23nm,21.2s,baz=258,slow=43						
NANT	Nan	20.59	117	P	Pn	17 28 08.0	-0.2
	comp=E,3.5nm,0.8s						
GEYT	Alibeck	21.04	300	P	P	17 28 10.8	+0.3
	comp=E,1.1nm,0.5s,baz=118,slow=12,SNR=5.7						
KURBB	Kurchatov Arra	21.24	355	P	P	17 28 12.8	+0.2
	comp=E,2.6nm,0.7s,baz=182,slow=10,SNR=44						
WSAR	Wadi Sarin	21.24	258	P	P	17 28 13.5	+0.6
	comp=E,5.7nm,1.0s,baz=107,slow=11,SNR=4.9						
WSAR				LR	LR	17 37 35.0	
	comp=E,22nm,18.5s,baz=218,slow=40						
KURK	Kurchatov	21.33	355	*e*P	P	17 28 13.1	-0.3
	comp=E,41nm,0.7s						
UTHA	Uthaitani	21.68	126	P	P	17 28 19.8	+2.3
	comp=E,2.0nm,0.6s						
PBKT	Sadao Pong	22.13	121	P	P	17 28 25.6	+3.3
ZALV	Zalesovo Beam	24.60	5	P	P	17 28 47.2	+0.7
	comp=E,1.9nm,0.4s,baz=193,slow=9.3,SNR=11						
BVAR	Borovoye Array	24.88	344	P	P	17 28 49.8	+0.7
	comp=E,2.2nm,0.5s,baz=154,slow=10,SNR=11						
SONM	Songino Array	26.64	40	P	P	17 29 06.4	+1.1
	comp=E,0.3nm,0.5s,baz=226,slow=9.2,SNR=3.1						
AKTO	Aktyubinsk	27.33	327	P	P	17 29 12.2	+0.9
	comp=E,0.7nm,0.4s,baz=107,slow=9.4,SNR=2.6						
AKTO				LR	LR	17 41 04.7	
	comp=E,106nm,19.8s,baz=155,slow=39						
AKASG	Malin Array Be	44.09	314	P	P	17 31 34.0	-0.4
	comp=E,0.4nm,0.4s,baz=79,slow=7.6,SNR=5.1						
MLR	Muntele Rosu	45.87	306	P	P	17 31 48.2	-0.7
	comp=E,0.9nm,0.7s,baz=177,slow=6.2,SNR=7.1						
FINES	FINESS Array B	48.09	328	P	P	17 32 05.8	+0.1
	comp=E,1.1nm,0.4s,baz=131,slow=9.6,SNR=15						
FINES				LR	LR	17 54 08.4	
	comp=E,40nm,20.6s,baz=70,slow=38						
ARCES	ARCESS Array B	50.92	338	P	P	17 32 27.5	+0.3
	comp=E,1.4nm,0.7s,baz=96,slow=7.0,SNR=7.0						
HFS	Hagfors	53.86	325	P	P	17 32 49.6	+0.4
	comp=E,1.5nm,0.7s,baz=120,slow=5.8,SNR=5.3						
GERES	GERESS Array B	54.08	311	P	P	17 32 52.0	+0.9
	comp=E,0.5nm,0.4s,baz=76,slow=7.0,SNR=6.0						
NB2	NORSAR Subarra	55.12	326	P	P	17 32 58.3	-0.1
	comp=Z,0.6nm,0.6s,baz=92,slow=7.4						
NOA	NORSAR Array B	55.12	326	LR	LR	17 57 53.6	
	comp=Z,45nm,19.7s,baz=90,slow=38						
EKA	Eskdalemuir Ar	63.29	320	P	P	17 33 54.7	-0.2
	comp=Z,0.7nm,0.5s,baz=85,slow=7.9,SNR=5.9						
ESDC	Sonseca Array	68.50	304	P	P	17 34 28.0	-0.9
	comp=Z,0.2nm,0.4s,baz=71,slow=7.7,SNR=2.8						
WRA	Warramunga Arr	70.87	127	P	P	17 34 42.9	-0.7
	comp=Z,0.8nm,0.4s,baz=321,slow=6.2,SNR=29						
ASAR	Alice Springs	73.11	130	P	P	17 34 56.3	-0.6
	comp=Z,0.4nm,0.3s,baz=315,slow=6.2,SNR=30						
TORD	Torodi Ar. Bea	74.72	277	P	P	17 35 07.2	+0.5
	comp=Z,0.5nm,0.5s,baz=100,slow=7.5						

NIED ***11*** *17:31:00, 38°.10N×143°.40E, h17^{km}, Mw3.5 Best double couple: M$_0$1.87000×10^{14} NP1:φ$_s$173.00000°, δ47.00000°, λ-173.00000°. NP2:φ$_s$78.00000°, δ85.00000°, λ-44.00000°.*

IDC ***11*** *17:31:48.5±1.5, 38°.05N×143°.50E, h0^{km}, mb3.6/7, mb1 3.6/10, mb1mx3.4/73, mbtmp3.6/10, ML3.3/3, MS2.7/3, Ms1 2.7/3, ms1mx2.2/65, Error ellipse: s-maj=33.3km s-min=19.3km az=101.0*

ISCJB ***11*** *17:31:49.9±0.9, 38°.06N±0°.06×143°.34E±0°.09, h19^{km}, mb3.5/7, MS2.9/2, Error ellipse: s-maj=11.9km s-min=6.0km az=32.0*

JMA ***11*** *17:31:49.9±0.3, 38°.09N×143°.44E, h37^{km}, M3.5*

ISC 11 17:31:51.3±1.1**, 38°.04N**±0°.07×**143°.4E**±0°.1**, h19^{km}, n26, σ1^{s}.88**/24**, mb3.6**/7**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIO	Ouri	1.66	285	P	Pn	17 32 17.8	-1.5
OFUJ	Ofunato	1.71	308	P	Pn	17 32 18.0	-2.0
JMK	Ichinoseki	1.93	299	P	Pn	17 32 21.6	-1.5
JOM	Ohasama	2.18	312	P	Pn	17 32 25.2	-1.3
JFT	Otama	2.48	259	P	Pn	17 32 30.5	-0.1
JFT				*e*S	Sn	17 32 59.0	-1.3
JYK	Kaneyama	2.54	291	P	Pn	17 32 30.7	-0.7
JAG	Ashikaga	3.53	244	*e*S	Sn	17 33 24.9	-1.4
JRY	Ryogami san	4.12	242	P	Pn	17 32 53.6	+0.4
JRY				*e*S	Sn	17 33 37.5	-3.4
JNBK	Urakawa-nobuka	4.27	354	P	Pn	17 32 54.6	-0.6
MJAR	Matsushiro Arr	4.39	252	Pn	Pn	17 32 58.2	+1.2
	0.5nm,0.3s,baz=66,slow=15,SNR=5.9						
MJAR				Sn	Sn	17 33 51.8	+4.2
	0.4nm,0.3s,baz=72,slow=18,SNR=2.8						
JHJ	Hachijo jima 2	5.72	212	Pn	Pn	17 33 15.4	+0.2
	5.8nm,0.3s,baz=47,slow=19,SNR=3.1						
JHJ				Sn	Sn	17 34 15.2	-5.1
	7.6nm,0.3s,baz=54,slow=19,SNR=2.8						
ASAJ	Asahikawa	6.11	355	Pn	Pn	17 33 20.3	-0.1
	0.6nm,0.3s,baz=236,slow=12,SNR=7.3						
ASAJ				Sn	Sn	17 34 30.2	+0.5
	0.2nm,0.3s,baz=252,slow=20,SNR=2.0						
ASAJ				LR	LR	17 36 06.0	
	comp=Z,27nm,21.8s,baz=194,slow=42						
MA2	Magadan	22.07	10	LR	LR	17 46 10.3	
	comp=Z,22nm,20.1s,baz=221,slow=39						
SEY	Seymchan	25.52	10	P	P	17 37 19.1	+0.8
	0.9nm,0.6s,baz=169,slow=10,SNR=5.0						
H11N2	WAKE ISLAND Hy	27.37	125	T	T	18 06 30.6	
	baz=317,slow=74,SNR=24						
H11N1	WAKE ISLAND Hy	27.38	125	T	T	18 06 26.7	
	baz=317,slow=74,SNR=15						
H11N3	WAKE ISLAND Hy	27.39	125	T	T	18 06 30.7	
	baz=317,slow=74,SNR=23						
H11S1	WAKE ISLAND Hy	28.15	127	T	T	18 07 23.2	
	baz=319						
H11S3	WAKE ISLAND Hy	28.15	127	T	T	18 07 25.2	
	baz=319						
H11S2	WAKE ISLAND Hy	28.16	127	T	T	18 07 26.9	
	baz=319						
SONM	Songino Array	28.56	302	P	P	17 37 46.6	+0.7
	0.2nm,0.3s,baz=107,slow=9.2,SNR=2.5						
ZALV	Zalesovo Beam	42.41	312	P	P	17 39 44.5	+0.2
	0.5nm,0.6s,baz=76,slow=7.6,SNR=2.0						
MKAR	Makanchi Array	44.93	302	P	P	17 40 06.0	+1.3
	0.2nm,0.6s,baz=84,slow=9.8,SNR=4.5						
KURBB	Kurchatov Arra	46.63	308	P	P	17 40 18.2	+0.1
	0.9nm,0.5s,baz=81,slow=8.3,SNR=12						
WRA	Warramunga Arr	58.29	190	P	P	17 41 45.1	+0.3
	0.4nm,0.7s,baz=8.5,slow=7.0,SNR=6.1						
WRA				LR	LR	18 07 50.0	
	comp=Z,22nm,20.3s,baz=240,slow=37						
HFS	Hagfors	73.81	336	P	P	17 43 24.3	+0.2
	1.6nm,0.9s,baz=50,slow=4.5,SNR=3.8						

GUC 11 17:33:36.4±0.6**, 24°.20S**×**67°.67W, h218^{km}**±10^{km}**, ML3.7, 4C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB15	IPOC Station P	1.93	301	⇑*i*P	Pn	17 34 17.5	+1.7
PB15				*i* S	S	17 34 48.5	+2.2
GO02	Mina Guanaco	1.99	241	⇑*e*P	Pn	17 34 17.6	+1.1
GO02				*e*S	S	17 34 49.8	+2.2
PB06	IPOC Station P	2.30	310	⇑*i*P	Pn	17 34 21.2	+1.8
PB06				*i* S	S	17 34 54.9	+2.0
PB06				IAML		17 34 56.8	
	comp=E,313nm,0.1s						
PB14	IPOC Station P	2.53	260	*e*P	Pn	17 34 24.0	+2.0
PB14				*e*S	S	17 35 00.2	+2.7
PB14				IAML		17 35 01.7	
	comp=E,133nm,0.5s						
PB05	IPOC Station P	2.69	300	*e*P	Pn	17 34 25.7	+2.1
PB05				*e*S	S	17 35 02.3	+2.1
PB05				IAML		17 35 04.5	
	comp=E,85nm,0.1s						
PB10	IPOC Station P	2.73	284	*e*P	Pn	17 34 26.7	+2.7
PB10				*e*S	S	17 35 04.1	+3.3
PB09	IPOC Station P	2.80	328	⇓*e*P	Pn	17 34 26.8	+1.8
PB09				*e*S	S	17 35 04.7	+2.0
PB09				IAML		17 35 06.6	
	comp=N,58nm,0.3s						
PB03	IPOC Station P	2.88	318	⇑*e*P	Pn	17 34 27.4	+1.5
PB03				*e*S	S	17 35 06.0	+1.8
PB03				IAML		17 35 10.2	
	comp=N,133nm,0.3s						
PB04	IPOC Station P	2.94	309	*e*P	Pn	17 34 28.6	+2.0
PB04				*e*S	S	17 35 07.9	+2.4
PB04				IAML		17 35 10.5	
	comp=N,167nm,0.1s						
PB07	IPOC Station P	3.20	320	*e*P	Pn	17 34 31.0	+1.5
PB07				*e*S	S	17 35 12.0	+1.1
PB02	IPOC Station P	3.53	324	*e*P	Pn	17 34 34.6	+1.3

ISCJB ***11*** *17:43:29.7±0.3, 1°.46S±0°.04×127°.45E±0°.03, h25^{km}, mb4.2/15, MS4.5/1, Error ellipse: s-maj=5.4km s-min=4.1km az=32.3*

DJA ***11*** *17:43:30.4±0.2, 1°S±2°×12°7E±°, h10^{km}, M4.2/18, mB4.8/6, mb4.6/8, MLv4.2/18, Mw(mB)4.1/6*

IDC ***11*** *17:43:32.9±2.7, 1°.59S×127°.46E, h52^{km}±25^{km}, mb3.7/11, mb1 3.9/15, mb1mx3.7/53, mbtmp4.0/15, ML3.8/4, MS3.6/2, Ms1 3.6/2, ms1mx2.6/52, Error ellipse: s-maj=19.6km s-min=9.2km az=67.0*

NEIC ***11*** *17:43:34.6±2.3, 1°.58S×127°.63E, h68^{km}±24^{km}, mb4.6/3, Error ellipse: s-maj=18.7km s-min=9.8km az=90.0*

ISC 11 17:43:30.9±0.5**, 1°.61S**±0°.04×**127°.47E**±0°.05**, h25^{km}, n50, σ1^{s}.60**/52**, mb4.2**/15**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBMI	Labuha	0.97	2	P	Pn	17 43 45.4	-3.5
SANI	Sanana	1.55	254	P	Pn	17 43 56.0	-0.9
NLAI	Namlea	1.66	193	P	Pb	17 43 59.9	-0.9
AAI	Ambon	2.18	161	P	Pb	17 44 08.7	-1.0
AAI				S	Sb	17 44 37.9	+1.5
MSAI	Masohi	2.25	140	P	Pb	17 44 10.0	-1.0
MSAI				S	Sb	17 44 41.0	+2.6
TNTI	Ternate	2.37	357	P	Pn	17 44 08.4	+0.2
TNTI				Sg	Sb	17 44 45.8	+4.0
BNDI	Bandanaira	3.78	140	P	Pn	17 44 30.8	+3.3
SIJI	Sorong	3.86	79	P	Pn	17 44 29.3	+0.5
	17nm,0.3s,baz=266,slow=9.8,SNR=36						
SIJI				S	Sn	17 45 15.4	+2.0
	8.3nm,0.3s,baz=92,slow=21,SNR=13						
KMSI	Cibinong	4.11	302	P	Pn	17 44 32.9	+0.7
LUWI	Luwuk	4.73	277	P	Pn	17 44 40.8	+0.1
FAKI	Fak Fak	4.95	105	P	Pn	17 44 44.4	+0.7
	87nm,0.6s,900nm0.4nm						
KDI	Kendari	5.38	244	P	Pn	17 44 50.8	+1.2
APSI	Ampana	5.86	277	P	Pn	17 44 57.1	+0.8
MRSI	Marisa	5.91	291	P	Pn	17 44 57.8	+0.9
	22nm,0.6s,424nm0.1nm						
KMPI	Kaimana, Papua	6.55	108	P	Pn	17 45 08.3	+2.6
PCI	Palu	7.67	275	P	Pn	17 45 23.0	+1.9
	49nm,1.4s,0.3nm						
TTSI	Tana Toraja	7.78	259	P	Pn	17 45 23.3	+0.7
MPSI	Mapaga	7.82	284	P	Pn	17 45 22.9	-0.2
SPSI	Sidrap Palu	8.04	253	P	Pn	17 45 28.1	+1.9
BKSI	Bulukumba	8.21	243	P	Pn	17 45 36.8	+8.3
DAV	Davao City (W)	8.83	348	LR	LR	17 49 49.2	
	comp=Z,46nm,18.6s,baz=230,slow=43						
EDFI	Ende, Flores	9.13	219	P	Pn	17 45 50.8	+10
GENI	Genyem	12.72	95	P	Pn	17 46 31.7	+1.3
JAY	Jayapura	13.25	94	P	Pn	17 46 38.3	+0.6
	0.3nm,0.3s,baz=217,slow=15,SNR=2.8						
FITZ	Fitzroy Crossi	16.48	186	P	P	17 47 22.4	-0.7
	0.1nm,0.3s,baz=16,slow=11,SNR=6.5						
WRAB	Tennant Creek	19.41	160	*e*P	P	17 47 55.2	-0.2
	3.8nm,0.6s						
WRA	Warramunga Arr	19.42	160	P	P	17 47 54.4	-1.1
	0.4nm,0.3s,baz=344,slow=12,SNR=21						
WRA				S	S	17 51 32.4	-1.4
	0.1nm,0.3s,baz=336,slow=18,SNR=4.9						
ASAR	Alice Springs	22.79	165	P	P	17 48 31.1	-0.8
	2.5nm,0.5s,baz=345,slow=11,SNR=37						
ASAR				S	S	17 52 38.7	-1.0
	1.4nm,1.0s,baz=350,slow=20,SNR=6.9						
CMAR	Chiang Mai Arr	34.43	307	P	P	17 50 16.5	-0.2
	0.7nm,0.9s,baz=129,slow=6.6,SNR=7.0						
MJAR	Matsushiro Arr	39.25	14	P	P	17 50 55.7	-1.8
	2.5nm,0.9s,baz=190,slow=9.1,SNR=4.6						
XAN	Xi'an	39.52	335	P	P	17 51 01.8	+2.0
XAN				pP	sP	17 51 10.4	-0.1
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
USRK	Ussuriysk Ar.	45.79	5	P	P	17 51 48.3	-2.1
	comp=Z,2.0nm,0.5s,baz=182,slow=7.9						
LSA	Lhasa	46.61	315	*e*P	P	17 51 59.3	+1.5
	comp=Z,4.3nm,0.6s						
ODAN	Odare	47.88	309	*e*P	P	17 52 08.3	+0.8
	comp=Z,23nm,0.9s						
GTA	Gaotai	48.07	331	*e*P	P	17 52 11.4	+2.8
GTA				pP	pP	17 52 15.0	-1.3
GTA				sP	sP	17 52 17.4	-1.9
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
RAMN	Ramite	48.54	309	*e*P	P	17 52 13.5	+0.9
	comp=Z,24nm,0.7s						
JIRN	Jiri	49.20	309	*e*P	P	17 52 18.6	+0.8
DMN	Daman	50.02	309	*e*P	P	17 52 24.5	+0.6
	comp=Z,13nm,0.9s						
KOLN	Koldanda	51.27	308	*e*P	P	17 52 33.9	+0.6
	comp=Z,17nm,0.7s						
DANN	Dangsing	51.42	309	*e*P	P	17 52 35.0	+0.5
	comp=Z,35nm,0.7s						
PYUN	Piuthan	51.91	308	*e*P	P	17 52 38.8	+0.8
SONM	Songino Array	52.57	342	P	P	17 52 41.3	-1.2
	comp=Z,2.1nm,0.8s,baz=149,slow=8.5,SNR=10						
RAO	Raoul Island	58.70	124	LR	LR	18 17 50.2	
	comp=Z,395nm,19.4s,baz=128,slow=35						
PETK	Petropavlovsk-	60.10	20	P	P	17 53 34.5	-1.5
	comp=Z,3.0nm,1.1s,baz=185,slow=8.5						
MKAR	Makanchi Array	62.37	327	P	P	17 53 50.1	-1.4
	comp=Z,1.2nm,0.7s,baz=124,slow=8.4,SNR=13						
ZALV	Zalesovo Beam	65.67	334	P	P	17 54 11.6	-1.4
	comp=Z,0.4nm,0.3s,baz=168,slow=7.6,SNR=3.7						
KURBB	Kurchatov Arra	66.63	328	P	P	17 54 17.4	-1.8
	comp=Z,1.8nm,0.8s,baz=129,slow=6.0,SNR=9.1						
KURK	Kurchatov	66.64	329	*e*P	P	17 54 17.9	-1.4
	comp=Z,25nm,0.8s						
BVAR	Borovoye Array	72.19	328	P	P	17 54 51.4	-2.2
	comp=Z,1.0nm,0.8s,baz=141,slow=4.8,SNR=2.7						
VNDA	Vanda	78.07	173	P	P	17 55 27.0	-0.1
	comp=Z,0.5nm,0.8s,baz=333,slow=5.4,SNR=4.3						

CSEM ***11*** *17:53:18.1, 37°.99N×26°.34W, h4^{km}, ML2.6*

PDA 11 17:53:18.1±0.5**, 37°.99N**×**26°.34W, h4^{km}**±3^{km}**, MD3.6, ML2.6, Error ellipse: s-maj=2.2km s-min=1.8km az=32.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSET	Sete Cidades	0.52	109	*e*P	Pg	17 53 27.1	-0.9
PSET				*e*S	Sg	17 53 33.9	-0.8
PSET				A	A	17 53 35.6	
	209nm,0.2s						
PSET	Sete Cidades	0.52	109	*e*P	Pg	17 53 27.1	-0.9
PSET				*e*S	Sg	17 53 33.9	-0.8
PDA	Ponta Delgada	0.59	114	*e*P	Pg	17 53 28.0	-1.3
PDA				*e*S	Sg	17 53 35.6	-1.3
PDA				A	A	17 53 36.9	
	169nm,0.1s						
PDA	Ponta Delgada	0.59	114	*e*P	Pg	17 53 28.0	-1.3
PDA				*e*S	Sg	17 53 35.6	-1.3
GRON	Grota Negra	0.67	109	*e*S	Sg	17 53 40.8	+1.0
GRON				A	A	17 53 42.9	
	33nm,0.1s						
CMLA	Cha da Macela	0.68	109	*e*P	Pg	17 53 29.7	-1.5
CMLA				*e*S	Sg	17 53 38.3	-1.7
CMLA				A	A	17 53 40.7	
	180nm,0.2s						
CMLA	Cha da Macela	0.68	109	*e*P	Pg	17 53 29.7	-1.5
CMLA				*e*S	Sg	17 53 38.3	-1.7
PSCM	Serra do Cume	0.94	319	*e*P	Pg	17 53 33.1	-3.0
PSCM				*e*S	Sg	17 53 44.5	-3.7
PSCM				A	A	17 53 47.8	
	105nm,0.2s						
PSCM	Serra do Cume	0.94	319	*e*P	Pg	17 53 33.1	-3.0
PSCM				*e*S	Sg	17 53 44.5	-3.7
BART	Pico Bartolome	0.95	103	*e*P	Pg	17 53 33.3	-3.0
BART				*e*S	Sg	17 53 44.8	-3.8
BART				A	A	17 53 47.1	
	43nm,0.2s						
BART	Pico Bartolome	0.95	103	*e*P	Pg	17 53 33.3	-3.0
BART				*e*S	Sg	17 53 44.8	-3.8
ADH	Angra Heroismo	0.97	313	*e*P	Pg	17 53 33.5	-3.2
ADH				*e*S	Sg	17 53 45.1	-4.1
ADH				A	A	17 53 46.4	
	84nm,0.3s						
ADH	Angra Heroismo	0.97	313	*e*P	Pg	17 53 33.5	-3.2
ADH				*e*S	Sg	17 53 45.1	-4.1
PSMA	Santa Maria	1.38	136	*e*S	Sg	17 53 55.4	-7.1
PSMA				A	A	17 53 57.2	
	20nm,0.1s						
PSMN	Pico do Norte,	1.41	134	*e*P	Pn	17 53 39.8	-4.8
PSMN				*e*S	Sb	17 53 55.9	-7.5
PSMN				A	A	17 53 56.8	
	12nm,0.2s						
PSMN	Pico do Norte,	1.41	134	*e*P	Pn	17 53 39.8	-4.8
PSMN				*e*S	Sb	17 53 55.9	-7.5
PGRA	Graciosa	1.66	309	*e*P	Pn	17 53 43.1	-4.9
PGRA				*e*S	Sn	17 54 01.9	-7.8
PGRA				A	A	17 54 03.5	
	11nm,0.1s						
PGRA	Graciosa	1.66	309	*e*P	Pn	17 53 43.1	-4.9
PGRA				*e*S	Sn	17 54 01.9	-7.8
ROSA	Rosais	1.67	296	*e*P	Pn	17 53 43.5	-4.6
ROSA				*e*S	Sn	17 54 01.8	-8.2
ROSA				A	A	17 54 03.4	
	23nm,0.1s						
ROSA	Rosais	1.67	296	*e*P	Pn	17 53 43.5	-4.6
ROSA				*e*S	Sn	17 54 01.8	-8.2
PICO	Pico	1.72	288	*e*P	Pn	17 53 44.0	-5.0
PICO				*e*S	Sn	17 54 03.6	-7.9
PICO				A	A	17 54 04.3	
	54nm,0.1s						
PICO	Pico	1.72	288	*e*P	Pn	17 53 44.0	-5.0
PICO				*e*S	Sn	17 54 03.6	-7.9
PCAN	Candelaria	1.76	286	*e*S	Sn	17 54 04.5	-7.8
PCAN				A	A	17 54 06.3	
	39nm,0.1s						
PCAN	Candelaria	1.76	286	*e*S	Sn	17 54 04.5	-7.8
CALA	Caldeira	1.95	288	*e*S	Sn	17 54 09.3	-7.9
CALA	Caldeira	1.95	288	*e*S	Sn	17 54 09.3	-7.9
PCED	Cedros	1.97	290	*e*S	Sn	17 54 09.4	-8.0
PCED				A	A	17 54 11.0	
	15nm,0.1s						
PCED	Cedros	1.97	290	*e*S	Sn	17 54 09.4	-8.0

IDC ***11*** *18:00:05.4±2.4, 43°.50N×105°.25W, h0^{km}, mb1 3.9/2, mb1mx3.3/58, mbtmp3.7/2, ML3.6/2, Error ellipse: s-maj=57.2km s-min=9.8km az=153.0*

ISCJB ***11*** *18:00:06.3±0.5, 43°.93N±0°.04×105°.24W±0°.06, h0^{km}, Error ellipse: s-maj=6.5km s-min=5.1km az=18.0*

NEIC ***11*** *18:00:07.2±0.5, 43°.84N×105°.20W, h0^{km}, ML3.2, Error ellipse: s-maj=8.2km s-min=7.4km az=159.0, Suspected Mining explosion.*

NEIC 55 km [34 miles] SSE of Gillette.

ISC 11 18:00:08.0±1.0**, 43°.86N**±0°.04×**105°.24W**±0°.05**, h0^{km}, n22, σ1^{s}.30**/24**, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	0.91	73	P	Pb	18 00 25.9	-0.8
	baz=252						
RSSD	Black Hills	0.91	73	*e*Pn	Pg	18 00 25.8	+0.4
K22A	Casper	1.53	218	P	Pn	18 00 33.9	-2.7
	baz=38						
LAO	LASA Array	2.92	347	*e*Pn	Pn	18 00 55.9	+0.2
RLMT	Red Lodge	3.15	295	P	Pn	18 00 59.1	+0.1
	baz=112						
RLMT	Red Lodge	3.15	295	*e*Pn	Pn	18 00 58.6	-0.4
BW06	Boulder Array	3.33	252	P	Pn	18 01 00.9	-0.7
	baz=70						
BW06	Boulder Array	3.33	252	*e*Pn	Pn	18 01 00.7	-0.8
PDAR	Pinedale Array	3.33	252	Pn	Pn	18 01 01.1	-0.4
	6.6nm,0.3s,baz=72,slow=15,SNR=40						
PDAR				Lg	Lg	18 01 45.9	
	17nm,0.3s,baz=84,slow=29,SNR=6.7						
OGNE	Ogallala	3.75	140	P	Pn	18 01 07.2	0.0
	baz=322						
OGNE	Ogallala	3.75	140	*e*Pn	Pn	18 01 06.9	-0.3
H17A	Grant Village	3.88	280	P	Pn	18 01 09.7	+0.6
	baz=96						
ISCO	Idaho Springs	4.06	184	P	Pn	18 01 10.6	-1.0
	baz=4.2						
ISCO				Sb	Sb	18 02 11.9	+1.6
	baz=4.2						
ISCO	Idaho Springs	4.06	184	*e*Pn	Pn	18 01 10.6	-1.0
O20A	White River Ci	4.34	212	P	Pn	18 01 14.1	-1.3
	baz=30						
O20A				Sb	Sb	18 02 21.1	+3.0
	baz=30						
Q24A	Divide	4.89	179	Pb	Pb	18 01 33.6	-1.0
	baz=360						
Q24A				Sb	Sb	18 02 36.3	+2.3
	baz=360						
HWUT	Hardware Ranch	5.17	246	*e*P	Pn	18 01 25.5	-1.2
	7.1nm,0.3s						
EGMT	Eagleton	5.22	325	P	Pn	18 01 26.4	-0.9
	baz=141						
EGMT	Eagleton	5.22	325	*e*P	Pn	18 01 26.4	-0.9
	12nm,0.3s						
H32A	Carlson Farm,	5.65	81	P	Pn	18 01 33.3	+0.1
	baz=266						
ULM	Lac du Bonnet	9.04	42	Pn	Pn	18 02 18.6	-1.0
	1.1nm,0.3s,baz=231,slow=12,SNR=5.6						
ULM				Lg	Lg	18 04 50.4	
	0.5nm,0.3s,baz=125,slow=19,SNR=1.8						
I56US	NEWPORT INFRAS	9.36	302	*i*		18 57 00.0	
	baz=116,slow=312,SNR=2.6						

IDC ***11*** *18:02:51.6±2.2, 17°.72S×71°.88W, h94^{km}±21^{km}, mb3.9/4, mb1 4.0/9, mb1mx3.6/43, mbtmp4.3/9, MS2.8/4, Ms1 2.8/4, ms1mx2.7/37, Error ellipse: s-maj=23.4km s-min=13.0km az=23.0*

GUC ***11*** *18:02:51.0±0.4, 17°.72S×72°.02W, h41^{km}±148^{km}, ML4.4*

NEIC ***11*** *18:02:51.1±1.2, 17°.75S×71°.83W, h87^{km}±14^{km}, mb4.1/1, ML4.5(ARE), Error ellipse: s-maj=17.3km s-min=10.2km az=218.0*

NEIC Felt [III] at Mollendo and [II] at Arequipa and Camana.

ISCJB ***11*** *18:02:52.4±0.5, 17°.66S±0°.04×71°.85W±0°.05, h111^{km}±7^{km}, mb3.8/3, Error ellipse: s-maj=8.6km s-min=6.1km az=143.7*

ISC 11 18:02:53.1±0.9**, 17°.64S**±0°.06×**71°.82W**±0°.07**, h105^{km}**±11^{km}**, n35, σ1^{s}.24**/37**, mb3.9**/3**, 8C, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARCH	Arica	1.68	121	*e*P	Pn	18 03 20.9	-0.9
ARCH				*e*S	Sn	18 03 44.1	+0.5
ARCH				IAML		18 03 53.0	

	comp=E,14μm,0.3s						
PB12	**IPOC Station P**	**1.72**	**125**	⇑iP	**Pn**	**18 03 21.8**	**-0.6**
PB12				iS	**Sn**	**18 03 45.0**	**+0.3**
PB12				IAML		18 03 53.0	
	comp=E,4μm,0.5s						
PB16	**IPOC Station P**	**2.30**	**108**	⇑eP	**Pn**	**18 03 29.9**	**-0.5**
PB16				eS	**Sn**	**18 04 01.7**	**+2.9**
PB16				IAML		18 04 10.7	
	comp=E,1μm,0.7s						
PSGC	**Pisagua**	**2.53**	**141**	eP	**Pn**	**18 03 32.6**	**-0.2**
PSGC				eS	**Sn**	**18 04 03.7**	**+0.4**
PSGC				IAML		18 04 32.0	
	comp=E,845nm,0.5s						
MNMC	**Minye Minye**	**2.58**	**126**	⇑iP	**Pn**	**18 03 34.0**	**+0.3**
MNMC				iS	**Sn**	**18 04 06.6**	**+1.7**
MNMC				IAML		18 04 23.3	
	comp=N,3μm,0.7s						
PB08	**IPOC Station P**	**3.54**	**135**	eP	**Pn**	**18 03 47.0**	**+0.4**
LPAZ	**La Paz**	**3.77**	**70**	P	**Pn**	**18 03 49.8**	**-0.1**
	comp=N,7.1nm,0.3s,baz=253,slow=9.2,SNR=97						
LPAZ				S	**Sn**	**18 04 35.2**	**+1.5**
	comp=N,2.8nm,0.3s,baz=332,slow=23,SNR=4.0						
LPAZ				LR	LR	18 05 15.4	
	comp=N,34nm,19.5s,baz=245,slow=37						
LPAZ	**La Paz**	**3.77**	**70**	⇑eP	**Pn**	**18 03 50.3**	**+0.4**
PB01	**IPOC Station P**	**4.04**	**147**	eP	**Pn**	**18 03 53.1**	**+0.1**
PB02	**IPOC Station P**	**4.09**	**154**	⇑eP	**Pn**	**18 03 54.5**	**+0.8**
PB07	**IPOC Station P**	**4.46**	**156**	eP	**Pn**	**18 03 59.4**	**+0.7**
PB09	**IPOC Station P**	**4.80**	**150**	⇑eP	**Pn**	**18 04 04.9**	**+1.6**
PB03	**IPOC Station P**	**4.80**	**156**	⇑eP	**Pn**	**18 04 04.1**	**+0.8**
PB04	**IPOC Station P**	**4.93**	**162**	eP	**Pn**	**18 04 05.4**	**+0.3**
PB05	**IPOC Station P**	**5.41**	**164**	⇑eP	**Pn**	**18 04 11.7**	**+0.2**
NNA	**Nana**	**7.43**	**318**	P	**Pn**	**18 04 37.8**	**-1.1**
	comp=N,8.4nm,0.3s,baz=168,slow=8.8,SNR=21						
NNA				S	**Sn**	**18 06 02.2**	**+0.6**
	comp=N,13nm,0.3s,baz=244,slow=18,SNR=16						
NNA				LR	LR	18 07 38.9	
	comp=N,96nm,19.0s,baz=177,slow=39						
SIV	**San Ignacio**	**10.42**	**83**	P	**Pn**	**18 05 17.4**	**-2.2**
	comp=N,2.3nm,0.3s,baz=279,slow=10,SNR=29						
SIV				S	**Sn**	**18 07 15.7**	**+1.3**
	baz=346,slow=19,SNR=3.9						
SIV				LR	LR	18 10 13.6	
	comp=N,65nm,19.6s,baz=254,slow=42						
SAML	**Samuel**	**12.04**	**45**	ePn	Pn	18 05 35.9	-5.5
	comp=N,10nm,0.7s						
ATAH	**Atahualpa**	**12.25**	**328**	P	**Pn**	**18 05 43.9**	**-0.6**
	comp=N,0.4nm,0.3s,baz=173,slow=8.1,SNR=2.3						
ATAH				S	**Sn**	**18 08 00.8**	**+1.3**
	comp=N,0.2nm,0.3s,baz=27,slow=11,SNR=2.4						
CPUP	**Villa Florida**	**15.97**	**125**	P	**Pn**	**18 06 29.3**	**-2.4**
	comp=N,0.2nm,0.3s,baz=317,slow=14,SNR=2.0						
CPUP				LR	LR	18 13 21.1	
	comp=N,74nm,19.3s,baz=248,slow=39						
SOTA	**Rioblanco**	**20.21**	**346**	eP	**P**	**18 07 20.5**	**+0.2**
PTGA	**Pitinga**	**20.45**	**36**	P	**P**	**18 07 21.5**	**-0.8**
	comp=N,4.7nm,0.3s,baz=212,slow=12,SNR=18						
PRAC	**Prado**	**21.43**	**352**	eP	**P**	**18 07 35.1**	**+2.2**
PLCA	**Paso Flores**	**23.04**	**178**	P	**P**	**18 07 48.2**	**-1.2**
	comp=N,1.8nm,0.9s,baz=356,slow=12,SNR=2.5						
RUSC	**La Rusia**	**23.41**	**357**	eP	**P**	**18 07 51.8**	**-1.7**
BARC	**Barichara**	**24.11**	**357**	eP	**P**	**18 08 00.4**	**+0.9**
SDV	**Santo Domingo**	**26.38**	**3**	P	**P**	**18 08 19.6**	**-0.4**
	comp=N,5.8nm,0.5s,baz=248,slow=8.2,SNR=5.6						
SDV	**Santo Domingo**	**26.38**	**3**	eP	**P**	**18 08 21.2**	**+1.2**
	comp=N,2.5nm,0.3s						
TORD	**Torodi Ar. Bea**	**78.72**	**72**	P	**P**	**18 14 45.7**	**+1.2**
	comp=N,1.0nm,0.5s,baz=251,slow=5.4						
H11N3	**WAKE ISLAND Hy**	**124.57**	**282**	T	T	20 38 27.5	
	baz=99,slow=75,SNR=15						
H11S2	**WAKE ISLAND Hy**	**124.58**	**281**	T	T	20 38 35.2	
	baz=99,slow=75,SNR=20						
H11N2	**WAKE ISLAND Hy**	**124.58**	**282**	T	T	20 38 31.5	
	baz=99,slow=75,SNR=19						
H11S1	**WAKE ISLAND Hy**	**124.58**	**281**	T	T	20 38 30.4	
	baz=99,slow=75,SNR=18						
H11N1	**WAKE ISLAND Hy**	**124.58**	**282**	T	T	20 38 29.0	
	baz=99,slow=75,SNR=10						
H11S3	**WAKE ISLAND Hy**	**124.59**	**281**	T	T	20 38 36.0	
	baz=99,slow=75,SNR=13						

*IDC **11** 18:15:17.9±2.2, 24˚.43S×179˚.90W, h492km±21km, mb3.4/9, mb1 3.6/11, mb1mx3.3/46, mbtmp4.3/11, Error ellipse: s-maj=29.3km s-min=18.9km az=173.0*

*ISCJB **11** 18:15:18.1±0.8, 24˚.5S±0˚.2×179˚.9E±0˚.1, h500km, mb3.8/9, Error ellipse: s-maj=21.1km s-min=13.1km az=10.1*

ISC 11 18:15:19.0±0.9**, 24˚.5S**±0˚.2×**179˚.9E**±0˚.1**, h500km, n11, σ1s.90**/14**, mb3.9**/9**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**12.63**	**278**	P	**P**	**18 18 06.6**	**+2.1**
	0.5nm,0.3s,baz=102,slow=20,SNR=5.9						
DZM				S	**S**	**18 20 15.7**	**-5.1**
	0.1nm,0.3s,baz=127,slow=18,SNR=3.4						
URZ	**Urewera**	**13.97**	**189**	P	**P**	**18 18 17.7**	**-0.6**
	0.6nm,0.3s,baz=101,slow=3.7,SNR=5.3						
CTA	**Charters Tower**	**31.43**	**271**	P	**P**	**18 21 00.0**	**+1.1**
	9.5nm,0.4s,baz=96,slow=10,SNR=48						
STKA	**Stephens Creek**	**34.47**	**249**	P	**P**	**18 21 25.6**	**+1.1**
	2.2nm,0.6s,baz=96,slow=11,SNR=9.0						
PMG	**Port Moresby**	**34.62**	**290**	P	**P**	**18 21 26.5**	**+0.5**
	8.2nm,0.7s,baz=101,slow=6.5,SNR=5.1						
ASAR	**Alice Springs**	**41.89**	**261**	P	**P**	**18 22 25.6**	**+0.3**
	1.5nm,0.5s,baz=92,slow=6.7,SNR=86						
ASAR				ScP	**ScP**	**18 27 12.9**	**+0.9**
	0.3nm,0.8s,baz=106,slow=4.5,SNR=4.2						
WRA	**Warramunga Arr**	**42.32**	**267**	P	**P**	**18 22 28.4**	**-0.2**
	4.5nm,0.5s,baz=98,slow=8.3,SNR=174						
WRA				ScP	**ScP**	**18 27 15.1**	**+1.3**
	2.3nm,1.0s,baz=102,slow=4.0,SNR=12						
FITZ	**Fitzroy Crossi**	**50.73**	**266**	P	**P**	**18 23 32.6**	**+0.2**
	3.4nm,0.6s,baz=94,slow=9.6,SNR=18						
SNAA	**Sanae**	**84.12**	**179**	P	**P**	**18 26 55.5**	**-1.0**
	1.0nm,0.9s,baz=200,slow=14,SNR=5.3						
NVAR	**Mina Array Bea**	**85.19**	**44**	P	**P**	**18 27 00.7**	**-1.7**
	0.2nm,0.5s,baz=235,slow=7.6,SNR=3.0						
TXAR	**Lajitas Array**	**90.77**	**58**	P	**P**	**18 27 29.0**	**+0.3**
	0.8nm,0.8s,baz=219,slow=7.7,SNR=5.7						

*ISCJB **11** 18:36:27.7±0.5, 1˚.95N±0˚.05×127˚.19E±0˚.06, h63km, mb4.0/9, Error ellipse: s-maj=8.3km s-min=7.5km az=14.8*

*IDC **11** 18:36:30.4±4.0, 1˚.79N×127˚.16E, h75km±39km, mb3.6/9, mb1 3.7/11, mb1mx3.5/54, mbtmp3.9/11, ML3.5/2, MS2.8/1, Ms1 2.8/1, ms1mx2.2/50, Error ellipse: s-maj=38.1km s-min=14.3km az=79.0*

*DJA **11** 18:36:30.6±1.0, 2˚N±8˚×12˚7E±˚, h18km±15km, M4.1/11, mB4.4/2, mb4.4/4, MLv4.0/11, Mw(mB)3.5/2*

ISC 11 18:36:29.3±0.7**, 1˚.88N**±0˚.07×**127˚.19E**±0˚.07**, h63km, n21, σ1s.17**/24**, mb3.9**/9**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.11**	**171**	P	**Pn**	**18 36 49.4**	**+0.5**
LBMI	**Labuha**	**2.52**	**173**	P	**Pn**	**18 37 09.7**	**+1.8**
KMSI	**Cibinong**	**3.46**	**248**	P	**Pn**	**18 37 21.2**	**+0.5**
SANI	**Sanana**	**4.08**	**197**	P	**Pn**	**18 37 29.6**	**+0.3**
SIJI	**Sorong**	**4.90**	**124**	P	**Pn**	**18 37 42.2**	**+1.7**
	1.4nm,0.3s,baz=297,slow=11,SNR=13						
NLAI	**Namlea**	**5.08**	**181**	P	**Pn**	**18 37 44.7**	**+1.7**
NLAI				S	**Sn**	**18 38 38.7**	**-1.7**
LUWI	**Luwuk**	**5.28**	**237**	P	**Pn**	**18 37 46.5**	**+0.8**
LUWI				S	**Sn**	**18 38 47.2**	**+1.9**
MRSI	**Marisa**	**5.43**	**255**	P	**Pn**	**18 37 48.1**	**+0.4**
AAI	**Ambon**	**5.62**	**170**	P	**Pn**	**18 37 52.4**	**+2.1**
APSI	**Ampana**	**6.19**	**243**	P	**Pn**	**18 37 59.1**	**+0.9**
BATI	**Baumata**	**12.51**	**196**	LR	LR	18 45 08.1	
	comp=Z,46nm,19.1s,baz=234,slow=42						
FITZ	**Fitzroy Crossi**	**19.91**	**184**	P	**P**	**18 40 54.9**	**-1.0**
	0.1nm,0.3s,baz=34,slow=13,SNR=5.7						
WRA	**Warramunga Arr**	**22.79**	**162**	P	**P**	**18 41 25.5**	**-1.4**
	3.9nm,0.6s,baz=339,slow=11,SNR=48						
WRA				PcP	**PcP**	**18 45 15.9**	**-0.8**
	0.5nm,0.8s,baz=318,slow=2.6,SNR=5.4						
ASAR	**Alice Springs**	**26.22**	**166**	P	**P**	**18 41 57.6**	**-0.8**
	0.6nm,0.6s,baz=349,slow=6.7,SNR=14						
ASAR				PcP	**PcP**	**18 45 23.1**	**-1.0**
	0.5nm,1.0s,baz=352,slow=1.9,SNR=4.2						
MJAR	**Matsushiro Arr**	**35.97**	**15**	P	**P**	**18 43 23.3**	**-0.8**
	1.1nm,0.7s,baz=170,slow=7.4,SNR=4.2						
STKA	**Stephens Creek**	**36.24**	**159**	P	**P**	**18 43 26.1**	**-0.4**
	3.0nm,0.8s,baz=330,slow=10.0,SNR=4.4						
SONM	**Songino Array**	**49.19**	**342**	P	**P**	**18 45 11.8**	**+0.6**
	0.6nm,0.8s,baz=151,slow=7.7,SNR=4.6						
PETK	**Petropavlovsk-**	**56.97**	**21**	P	**P**	**18 46 08.9**	**+0.7**
	0.9nm,0.7s,baz=184,slow=6.9						
MKAR	**Makanchi Array**	**59.33**	**326**	P	**P**	**18 46 24.9**	**0.0**
	1.0nm,0.4s,baz=118,slow=7.5,SNR=16						
KURBB	**Kurchatov Arra**	**63.54**	**328**	P	**P**	**18 46 53.4**	**+0.3**
	1.7nm,0.6s,baz=130,slow=6.5,SNR=28						
BVAR	**Borovoye Array**	**69.12**	**327**	P	**P**	**18 47 28.8**	**0.0**
	0.6nm,0.4s,baz=140,slow=9.4,SNR=4.2						

IDC 11 18:47:09.5±1.4**, 2˚.58N×125˚.53E, h0km, mb3.5**/6**, mb1 3.7**/6**, mb1mx3.4**/53**, mbtmp3.5**/6**, MS3.5**/2**, Ms1 3.5**/2**, ms1mx2.6**/36**, Error ellipse: s-maj=113.6km s-min=18.6km az=68.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**20.55**	**180**	P	P	18 51 50.0	+0.3
	0.8nm,0.8s,baz=0.0,slow=10,SNR=2.3						
WRA	**Warramunga Arr**	**24.00**	**159**	P	P	18 52 25.9	-0.2
	1.9nm,0.4s,baz=336,slow=11,SNR=43						
ASAR	**Alice Springs**	**27.33**	**163**	P	P	18 52 56.3	0.0
	0.5nm,0.8s,baz=354,slow=7.8,SNR=3.7						
NWAO	**Narrogin (SRO)**	**36.18**	**192**	LR	LR	19 12 20.7	
	comp=Z,88nm,18.2s,baz=188,slow=42						
MKAR	**Makanchi Array**	**57.82**	**326**	P	P	18 57 02.9	0.0
	0.2nm,0.6s,baz=124,slow=7.2,SNR=3.9						
KURBB	**Kurchatov Arra**	**62.06**	**328**	P	P	18 57 31.5	-0.4
	0.3nm,0.6s,baz=133,slow=6.4,SNR=4.3						
VNDA	**Vanda**	**82.45**	**173**	P	P	18 59 33.7	+0.4
	0.2nm,0.5s,baz=308,slow=5.6,SNR=3.9						
SPITS	**Spitsbergen Ar**	**91.37**	**349**	LR	LR	19 46 09.6	
	comp=Z,15nm,19.7s,baz=320,slow=39						

*ISCJB **11** 19:02:35.9±1.0, 43˚.05N±0˚.07×146˚.70E±0˚.07, h67km±14km, Error ellipse: s-maj=12.3km s-min=6.0km az=147.9*

*SKHL **11** 19:02:35.9±0.8, 42˚.98N×146˚.73E, h66km±3km, mb4.3/6*

*JMA **11** 19:02:36.3±0.1, 42˚.98N×146˚.68E, h59km±2km, M3.2*

ISC 11 19:02:36.7±1.9**, 43˚.05N**±0˚.09×**146˚.72E**±0˚.08**, h59km**±23km**, n18, σ0s.65**/33**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**0.78**	**294**	P	**Pn**	**19 02 51.7**	**-0.1**
NEM2				eS	**Sn**	**19 03 02.9**	**0.0**
SHO	**Shikotan**	**0.82**	**6**	iP	**Pn**	**19 02 53.0**	**+0.6**
SHO				AMB	AMB	19 02 54.0	
	53nm,0.3s						
SHO				AMB	AMB	19 02 54.0	
	103nm,0.3s						
SHO				iS	**Sn**	**19 03 05.0**	**+1.1**
SHO				A	A	19 03 06.0	
	387nm,0.2s						
SHO				A	A	19 03 06.0	
	384nm,0.2s						
GLVR	**Golovnino**	**1.11**	**309**	eP	**Pn**	**19 02 56.0**	**-0.1**
GLVR				AMB	AMB	19 02 56.0	
	133nm,0.3s						
GLVR				AMB	AMB	19 02 56.0	
	43nm,0.3s						
GLVR				iS	**Sn**	**19 03 11.0**	**+0.4**
GLVR				A	A	19 03 12.0	
	1μm,0.3s						
GLVR				A	A	19 03 12.0	
	538nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**1.16**	**328**	iP	**Pn**	**19 02 56.0**	**-0.8**
YUK				AMB	AMB	19 02 58.0	
	103nm,0.2s						
YUK				AMB	AMB	19 02 58.0	
	236nm,0.2s						
YUK				iS	**Sn**	**19 03 11.2**	**-0.6**
YUK				A	A	19 03 15.0	
	322nm,0.1s						
YUK				A	A	19 03 15.0	
	610nm,0.1s						
GRPR	**Tuman**	**1.17**	**324**	eP	**Pn**	**19 02 56.0**	**-0.9**
GRPR				AMB	AMB	19 02 57.0	
	92nm,0.2s						
GRPR				AMB	AMB	19 02 57.0	
	126nm,0.2s						
GRPR				AMB	AMB	19 02 57.0	
	142nm,0.2s						
GRPR				iS	**Sn**	**19 03 11.0**	**-0.9**
GRPR				A	A	19 03 12.0	
	711nm,0.2s						
GRPR				A	A	19 03 12.0	
	723nm,0.2s						
LAGR	**Lagunnoye**	**1.21**	**326**	eP	**Pn**	**19 02 57.0**	**-0.4**
LAGR				AMB	AMB	19 03 01.0	
	104nm,0.2s						
LAGR				AMB	AMB	19 03 01.0	
	149nm,0.2s						
LAGR				iS	**Sn**	**19 03 13.0**	**+0.1**
LAGR				A	A	19 03 14.0	
	621nm,0.2s						
LAGR				A	A	19 03 14.0	
	516nm,0.2s						
JRA	**Rausu**	**1.46**	**308**	P	**Pn**	**19 03 01.1**	**+0.3**
JRA				eS	**Sn**	**19 03 19.4**	**+0.5**
JAK	**Akkeshi**	**1.48**	**269**	P	**Pn**	**19 03 00.7**	**-0.4**
JAK				eS	**Sn**	**19 03 18.7**	**-0.7**
JNK	**Nakash**	**1.55**	**291**	P	**Pn**	**19 03 01.7**	**-0.3**
JNK				eS	**Sn**	**19 03 20.6**	**-0.6**
JOB	**Onbets**	**2.12**	**267**	P	**Pn**	**19 03 09.5**	**-0.2**
JOB				eS	**Sn**	**19 03 34.5**	**-0.4**
JAR	**Ashorobuto**	**2.17**	**278**	P	**Pn**	**19 03 10.7**	**+0.3**
JAR				eS	**Sn**	**19 03 36.0**	**-0.2**
JTKR	**Abashiri--Toko**	**2.24**	**295**	P	**Pn**	**19 03 12.3**	**+0.9**
JTKR				eS	**Sn**	**19 03 39.1**	**+1.2**
KUR	**Kuril'sk**	**2.33**	**20**	eP	**Pn**	**19 03 12.0**	**-0.6**
KUR				AMB	AMB	19 03 15.0	
	8.0nm,0.1s						
KUR				AMB	AMB	19 03 15.0	
	3.0nm,0.1s						
KUR				iS	**Sn**	**19 03 40.0**	**-0.1**
KUR				A	A	19 03 43.0	
	49nm,0.2s						
KUR				A	A	19 03 43.0	
	78nm,0.2s						
JCH	**Churui**	**2.50**	**261**	P	**Pn**	**19 03 14.6**	**-0.4**
JCH				eS	**Sn**	**19 03 43.7**	**-0.6**
JMP	**Maruseppu**	**2.62**	**293**	P	**Pn**	**19 03 17.5**	**+0.9**
JEM	**Erimo**	**2.83**	**250**	P	**Pn**	**19 03 20.5**	**+1.1**
JFR	**Furan**	**3.02**	**274**	P	**Pn**	**19 03 22.7**	**+0.6**
JFR				eS	**Sn**	**19 03 56.7**	**-0.3**
JNBK	**Urakawa-nobuka**	**3.02**	**257**	P	**Pn**	**19 03 21.9**	**-0.1**

MAN 11 19:12:14.8, 9˚.67N×125˚.69E, h22km, mb3.6, ML2.4, MS1.8, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.23**	**300**	⇑eP	Pb	19 12 21.8	+1.2
SCPH				eS	Sb	19 12 29.6	+5.0
BUTP	**Butuan**	**0.70**	**185**	eP	Pb	19 12 28.5	+0.2
BUTP				eS	Sn	19 12 40.2	+0.8
MSLP	**Maasin**	**0.94**	**300**	eP	Pb	19 12 31.6	-0.8

*NEIC **11** 19:20:20.5±0.0, 32˚.25N×115˚.25W, h5km, ML2.4(PAS), ML2.6(ECX), After ECX.*

ECX 11 19:20:20.7±0.7**, 32˚.24N×115˚.27W, h5km, MD2.6, ML2.8, 4C-2D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPBX	**Cerro Prieto**	**0.18**	**350**	eP	Pg	19 20 23.6	-0.8
CPBX				eS	Sg	19 20 27.0	+0.2
CPBX				⇑e		19 20 29.7	
CPBX				IAML		19 20 29.7	
	comp=E,4μm,0.3s						
EMSC	**East Mesa**	**0.55**	**25**	ePg	Pg	19 20 31.7	+0.4
ERPC	**Ernies Place**	**0.61**	**326**	ePg	Pg	19 20 32.2	-0.1
WESC	**Westside Schoo**	**0.65**	**323**	eP	Pg	19 20 32.8	-0.5
WESC	**Westside Schoo**	**0.65**	**323**	ePg	Pg	19 20 32.9	-0.4
WESC				eSg	Sg	19 20 42.8	+1.1
YMD	**Yuma Desert**	**0.69**	**62**	⇑iP	Pg	19 20 33.0	-0.9
YUH	**Yuha Desert**	**0.69**	**307**	⇓iP	Pg	19 20 32.7	-1.2
YUH	**Yuha Desert**	**0.69**	**307**	ePg	Pg	19 20 32.8	-1.2
COK	**Cook Ranch**	**0.72**	**328**	⇑iP	Pg	19 20 33.8	-0.8
RMX	**La Rumorosa**	**0.78**	**298**	eP	Pg	19 20 33.6	-2.1
RMX				eS	Sg	19 20 43.0	-2.8
ECBX	**El Chinero**	**0.79**	**166**	eP	Pg	19 20 34.6	-1.2
ECBX				eS	Sg	19 20 45.3	-0.6
ECBX				⇑e		19 20 46.6	
ECBX				IAML		19 20 46.6	
	comp=E,309nm,0.3s						
IKP	**In-Ko-Pah, Jac**	**0.82**	**300**	eP	Pg	19 20 35.0	-1.5
CRR	**Carrizo Plain**	**0.88**	**318**	ePg	Pg	19 20 36.3	-1.3
GLA	**Glamis**	**0.89**	**24**	ePg	Pg	19 20 36.0	-1.8
GLA				eSg	Sg	19 20 47.2	-2.2
CBKC	**Canebrake**	**1.06**	**309**	ePg	Pg	19 20 39.9	-1.2
CBX	**Cerro Bola**	**1.19**	**274**	eP	Pg	19 20 41.4	-2.0
CBX				eS	Sg	19 20 57.4	-1.5
CBX				IAML		19 20 57.9	
	comp=N,284nm,0.5s						
CBX				⇓e		19 20 57.9	
SPIG	**San Pedro Mart**	**1.20**	**188**	eP	Pg	19 20 41.3	-2.4
SPX	**San Pedro Mart**	**1.20**	**188**	eP	Pg	19 20 41.5	-2.3
BAR	**Barrett**	**1.27**	**291**	ePg	Pg	19 20 43.7	-1.3
BAR				eSn	Sg	19 20 59.2	-2.3
113A	**Mohawk Valley,**	**1.37**	**67**	ePn	Pn	19 20 43.4	-3.1
EML	**El Monte Cty P**	**1.48**	**296**	eSn	Sn	19 21 05.4	-2.5
SDRC	**San Diego Road**	**1.50**	**290**	eP	Pn	19 20 46.4	-1.9
DPP	**Dos Picos Cty**	**1.60**	**299**	eSn	Sn	19 21 09.5	-1.3
HWB	**Hans Werner Br**	**1.63**	**299**	eSn	Sn	19 21 09.8	-1.7
Y12C	**Blythe**	**1.63**	**22**	ePn	Pn	19 20 46.1	-4.0
CPE	**Camp Elliot**	**1.68**	**293**	ePn	Pn	19 20 48.9	-1.9
CPE				eSn	Sn	19 21 11.4	-1.3
XPFO	**Piæon Flat**	**1.69**	**324**	ePn	Pn	19 20 47.3	-3.8
PFO	**Pinyon Flats O**	**1.70**	**324**	ePn	Pn	19 20 47.1	-4.0
SNDA	**J Saunders Pla**	**1.73**	**320**	eSn	Sb	19 21 14.9	-0.3
PLM	**Palomar**	**1.75**	**310**	ePn	Pn	19 20 48.8	-3.0
BBRC	**Big Bear Solar**	**2.45**	**326**	ePn	Pn	19 20 58.0	-3.6
BBRC				eSn	Sn	19 21 19.4	-13
LDFC	**Landfair**	**2.84**	**3**	ePn	Pn	19 21 02.7	-4.1
CIAC	**Catalina I. Ai**	**2.89**	**294**	ePn	Pb	19 21 10.9	-1.9
CIAC				eSn	Sn	19 21 42.7	0.0
CHFC	**Chilao Flat St**	**3.12**	**313**	ePn	Pn	19 21 12.5	+1.8
CHFC				eSn	Sn	19 21 49.9	+1.5
CHFC				eSg	Sg	19 22 04.2	+3.4
PASC	**Pasadena Art C**	**3.12**	**309**	ePn	Pn	19 21 05.5	-5.0
SBI	**Santa Barbara**	**3.40**	**292**	ePn	Pn	19 21 06.6	-7.8
SBI				ePg	Pb	19 21 20.4	-1.0
CLC	**China Lake**	**4.06**	**332**	ePg	Pb	19 21 33.3	+0.6
CLC				eSn	Sn	19 22 08.9	-2.6

*IDC **11** 19:35:20.2±1.2, 15˚.00S×168˚.21E, h0km, mb4.2/8, mb1 4.4/9, mb1mx4.0/48, mbtmp4.2/9, ML4.3/1, MS3.3/4, Ms1 3.3/4, ms1mx2.8/48, Error ellipse: s-maj=44.8km s-min=21.0km az=137.0*

*ISCJB **11** 19:35:24.0±0.9, 15˚.21S±0˚.08×168˚.2E±0˚.2, h36km, mb4.1/8, MS3.4/2, Error ellipse: s-maj=25.0km s-min=10.9km az=12.7*

ISC 11 19:35:25.5±1.0**, 15˚.15S**±0˚.09×**168˚.2E**±0˚.2**, h36km, n13, σ1s.27**/13**, mb4.1**/8**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.10**	**194**	Pn	**Pn**	**19 37 08.5**	**+1.5**
	5.3nm,0.3s,baz=40,slow=17,SNR=35						
DZM				Sn	**Sn**	**19 38 26.7**	**+0.3**
	0.2nm,0.3s,baz=107,slow=19,SNR=1.8						
DZM				LR	LR	19 39 37.2	
	comp=Z,151nm,20.8s,baz=51,slow=36						
DZM	**Mont Dzumac**	**7.10**	**194**	ePn	**Pn**	**19 37 08.2**	**+1.2**
	13nm,0.2s						
DZM				eSn	**Sn**	**19 38 23.7**	**-2.7**
	4.1nm,0.3s						
HNR	**Honiara**	**9.89**	**304**	LR	LR	19 41 21.3	
	comp=Z,80nm,18.1s,baz=114,slow=37						
STKA	**Stephens Creek**	**29.45**	**231**	P	**P**	**19 41 25.3**	**-0.8**
	3.2nm,0.7s,baz=52,slow=12,SNR=9.8						
STKA				LR	LR	19 52 07.6	
	comp=Z,96nm,18.2s,baz=47,slow=34						
WRA	**Warramunga Arr**	**32.64**	**257**	P	**P**	**19 41 53.8**	**-0.5**
	1.2nm,0.5s,baz=83,slow=7.8,SNR=32						
ASAR	**Alice Springs**	**33.41**	**250**	P	**P**	**19 42 01.1**	**+0.1**
	3.5nm,0.4s,baz=75,slow=9.2,SNR=104						
ASAR				LR	LR	19 54 55.4	
	comp=Z,69nm,20.3s,baz=114,slow=35						
PPT2	**Papeete2**	**40.49**	**99**	eLR	LR	19 54 16.9	
	60nm,24.8s						
FITZ	**Fitzroy Crossi**	**40.86**	**260**	P	**P**	**19 43 04.8**	**+0.5**
	3.4nm,0.6s,baz=98,slow=7.5,SNR=17						
SONM	**Songino Array**	**83.39**	**323**	P	**P**	**19 47 49.3**	**+0.2**
	0.4nm,0.6s,baz=134,slow=6.2,SNR=4.4						
ILAR	**Eielson Array**	**86.63**	**18**	P	**P**	**19 48 03.2**	**-1.7**
	0.6nm,0.8s,baz=235,slow=5.5,SNR=5.7						
NVAR	**Mina Array Bea**	**86.83**	**49**	P	**P**	**19 48 07.3**	**+0.5**
	0.8nm,0.7s,baz=234,slow=8.6,SNR=5.7						
MKAR	**Makanchi Array**	**98.15**	**316**	P	**P**	**19 48 58.9**	**+0.2**
	0.5nm,0.6s,baz=86,slow=5.2,SNR=4.9						
ARCES	**ARCESS Array B**	**120.89**	**346**	PKP	**PKPdf**	**19 54 14.1**	**+0.7**
	1.8nm,0.8s,baz=59,slow=4.7,SNR=4.6						

*IDC **11** 19:41:11.3±1.3, 14˚.91S×168˚.17E, h0km, mb4.0/8, mb1 4.2/9, mb1mx3.9/47, mbtmp3.9/9, ML3.7/1, MS3.0/1, Ms1 3.0/1, ms1mx2.5/45, Error ellipse: s-maj=45.5km s-min=21.8km az=134.0*

*ISCJB **11** 19:41:14.9±0.9, 15˚.15S±0˚.08×168˚.2E±0˚.2, h35km, mb3.9/8, MS3.0/1, Error ellipse: s-maj=25.5km s-min=10.4km az=11.0*

ISC 11 19:41:16.3±1.0**, 15˚.1S**±0˚.1×**168˚.3E**±0˚.2**, h35km, n10, σ1s.03**/10**, mb3.9**/8**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.17**	**194**	Pn	**Pn**	**19 42 58.6**	**-0.1**
	1.2nm,0.3s,baz=95,slow=13,SNR=16						
DZM				Sn	**Sn**	**19 44 18.4**	**-0.6**
	0.3nm,0.3s,baz=120,slow=20,SNR=2.0						
STKA	**Stephens Creek**	**29.50**	**231**	P	**P**	**19 47 18.9**	**+1.5**
	2.5nm,1.1s,baz=33,slow=11,SNR=4.8						
WRA	**Warramunga Arr**	**32.66**	**257**	P	**P**	**19 47 44.1**	**-1.3**
	1.5nm,0.8s,baz=83,slow=8.1,SNR=15						
ASAR	**Alice Springs**	**33.44**	**250**	P	**P**	**19 47 51.8**	**-0.4**
	2.3nm,0.6s,baz=77,slow=9.1,SNR=40						
GUMO	**Guam**	**36.69**	**320**	LR	LR	20 02 28.7	
	comp=Z,23nm,18.2s,baz=130,slow=35						
FITZ	**Fitzroy Crossi**	**40.88**	**260**	P	**P**	**19 48 55.3**	**-0.1**
	3.2nm,0.7s,baz=97,slow=5.6,SNR=14						
SONM	**Songino Array**	**83.34**	**323**	P	**P**	**19 53 40.3**	**+0.5**
	0.4nm,0.8s,baz=153,slow=1.6,SNR=3.2						
ILAR	**Eielson Array**	**86.56**	**18**	P	**P**	**19 53 54.3**	**-1.1**
	0.5nm,0.8s,baz=249,slow=3.8,SNR=3.7						
NVAR	**Mina Array Bea**	**86.78**	**49**	P	**P**	**19 53 58.4**	**+0.9**
	0.5nm,0.8s,baz=230,slow=7.9,SNR=3.9						
MKAR	**Makanchi Array**	**98.11**	**316**	P	**P**	**19 54 48.8**	**-0.7**
	0.2nm,0.7s,baz=64,slow=6.6,SNR=2.8						

*ISCJB **11** 19:57:35.0±0.4, 36˚.37N±0˚.05×69˚.44E±0˚.05, h150km, mb3.5/12, Error ellipse: s-maj=7.1km s-min=5.3km az=24.1*

*IDC **11** 19:57:35.9±2.8, 36˚.25N×69˚.63E, h163km±27km, mb3.3/12, mb1 3.4/18, mb1mx3.2/69, mbtmp3.8/18, MS2.7/1, Ms1 2.7/1, ms1mx2.1/45, Error ellipse: s-maj=20.0km s-min=12.8km az=13.0*

ISC 11 19:57:34.9±0.7**, 36˚.32N**±0˚.08×**69˚.50E**±0˚.06**, h150km, n37, σ1s.48**/33**, mb3.4**/12**, 1C, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	**Cherat**	**3.18**	**141**	⇑P	Pn	19 58 32.4	+7.6
CEP				S	Sn	19 59 12.0	+8.7
CEP	**Cherat**	**3.18**	**141**	P	Sn	19 59 12.5	+9.2
THW	**Thamme Wali**	**3.98**	**152**	P	Pn	19 58 41.7	+6.8
CHCP	**Chirah Chowk**	**4.08**	**130**	P	Pn	19 58 43.2	+6.9
AML	**Almayashu**	**6.66**	**28**	P	**Pn**	**19 59 12.3**	**+1.6**
	SNR=8.3						
UCH	**Uchtor**	**7.07**	**32**	P	**Pn**	**19 59 18.2**	**+1.9**
	SNR=12						
KZA	**Kyzart**	**7.28**	**36**	P	**Pn**	**19 59 20.8**	**+1.7**
	SNR=7.2						
AAK	**Ala-Archa**	**7.40**	**30**	P	**Pn**	**19 59 22.1**	**+1.7**
	1.9nm,0.3s,baz=222,slow=6.4,SNR=5.8						
AAK				S	**Sn**	**20 00 41.0**	**-2.1**
	1.9nm,0.3s,baz=115,slow=22,SNR=8.0						
KBK	**Karagaybulak**	**7.60**	**32**	P	**Pn**	**19 59 25.5**	**+2.4**
	SNR=6.3						
TKM2	**Tokmak 2**	**8.10**	**34**	P	**Pn**	**19 59 31.1**	**+1.3**

	SNR=14						
GEYT	**Alibeck**	**9.23**	**283**	P	**Pn**	**19 59 46.0**	**+1.3**
	0.7nm,0.3s,baz=96,slow=9.6,SNR=14						
GEYT				S	**Sn**	**20 01 26.4**	**-0.6**
	0.2nm,0.3s,baz=99,slow=8.9,SNR=2.4						
GEYT				LR	LR	20 04 03.5	
	comp=Z,45nm,21.7s,baz=255,slow=42						
PYUN	**Piuthan**	**14.05**	**122**	*e*P	**P**	**20 00 49.4**	**-1.4**
MKAR	**Makanchi Array**	**14.17**	**38**	P	**P**	**20 00 49.1**	**-2.6**
	0.1nm,0.3s,baz=221,slow=13,SNR=8.1						
GKN	**Gorkha**	**15.26**	**119**	*e*P	**P**	**20 01 04.5**	**+0.3**
	35nm,0.4s						
KURBB	**Kurchatov Arra**	**15.71**	**22**	P	**Pn**	**20 01 06.6**	**-1.3**
	0.2nm,0.3s,baz=211,slow=10,SNR=11						
DMN	**Daman**	**15.83**	**119**	*e*P	**P**	**20 01 11.1**	**+0.5**
	17nm,0.6s						
KKN	**Kakani**	**15.84**	**118**	*e*P	**P**	**20 01 12.3**	**+1.6**
	28nm,0.6s						
PKIN	**Phulchoki**	**16.05**	**118**	*e*P	**P**	**20 01 14.3**	**+1.2**
	14nm,0.4s						
AKTO	**Aktyubinsk**	**16.36**	**333**	P	**P**	**20 01 17.3**	**+1.3**
	0.7nm,0.3s,baz=153,slow=11,SNR=16						
JIRN	**Jiri**	**16.57**	**117**	*e*P	**Pn**	**20 01 21.3**	**+2.3**
	53nm,0.6s						
BVAR	**Borovoye Array**	**16.71**	**2**	P	**Pn**	**20 01 20.1**	**0.0**
	1.2nm,0.3s,baz=162,slow=12,SNR=18						
RAMN	**Ramite**	**17.28**	**118**	*e*P	**Pn**	**20 01 29.1**	**+1.6**
	22nm,0.6s						
ODAN	**Odare**	**17.90**	**117**	*e*P	**Pn**	**20 01 36.8**	**+1.9**
	26nm,0.8s						
GNI	**Garni**	**19.80**	**289**	P	**Pn**	**20 01 55.2**	**-1.6**
	0.4nm,0.3s,baz=95,slow=18,SNR=2.2						
ZALV	**Zalesovo Beam**	**20.60**	**26**	P	**P**	**20 02 02.1**	**+0.1**
	4.5nm,0.6s,baz=221,slow=12,SNR=15						
ARU	**Arti**	**21.43**	**343**	P	**P**	**20 02 11.9**	**+1.0**
	1.8nm,0.5s,baz=129,slow=6.4,SNR=7.2						
BRTR	**Keskin Array B**	**28.33**	**288**	P	P	20 03 17.2	+2.5
	0.5nm,0.7s,baz=97,slow=5.7,SNR=3.1						
SONM	**Songino Array**	**29.44**	**55**	P	**P**	**20 03 24.5**	**+0.1**
	0.2nm,0.5s,baz=249,slow=7.6,SNR=2.7						
CMAR	**Chiang Mai Arr**	**31.45**	**117**	P	**P**	**20 03 41.7**	**-0.6**
	0.5nm,0.7s,baz=296,slow=8.6,SNR=5.6						
MLR	**Muntele Rosu**	**33.81**	**299**	P	P	20 04 04.9	+2.2
	0.4nm,0.9s,baz=126,slow=8.7,SNR=3.5						
FINES	**FINESS Array B**	**36.96**	**327**	P	**P**	**20 04 29.5**	**+0.3**
	2.7nm,0.8s,baz=125,slow=15,SNR=4.4						
ARCES	**ARCESS Array B**	**40.85**	**338**	P	**P**	**20 05 02.0**	**+0.4**
	1.8nm,0.7s,baz=108,slow=7.8,SNR=8.6						
HFS	**Hagfors**	**42.46**	**322**	P	**P**	**20 05 15.1**	**+0.3**
	2.2nm,0.5s,baz=101,slow=7.5,SNR=13						
NB2	**NORSAR Subarra**	**43.80**	**323**	P	**P**	**20 05 25.5**	**0.0**
	comp=Z,1.1nm,0.5s,baz=99,slow=7.9						
TORD	**Torodi Ar. Bea**	**64.50**	**268**	P	**P**	**20 07 55.6**	**-0.3**
	comp=Z,0.5nm,0.9s,baz=56,slow=5.6						
WRA	**Warramunga Arr**	**82.93**	**121**	P	**P**	**20 09 41.8**	**-1.4**
	comp=Z,0.3nm,0.6s,baz=330,slow=4.8,SNR=6.4						
ASAR	**Alice Springs**	**85.16**	**124**	P	**P**	**20 09 52.3**	**-2.1**
	comp=Z,0.2nm,0.7s,baz=324,slow=4.6,SNR=5.1						

IDC 11 20:04:30.6±4.7**, 0°.70N×91°.17E, h0^{km}, mb3.5**/5**, mb1 3.6**/5**, mb1mx3.3**/63**, mbtmp3.5**/5**, Error ellipse: s-maj=169.7km s-min=32.5km az=56.0, North Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S2	**Diego Garcia H**	**20.39**	**246**	T	T	20 30 52.7	
	baz=69,slow=74,SNR=10						
H08S3	**Diego Garcia H**	**20.39**	**246**	T	T	20 30 53.0	
	baz=69,slow=74,SNR=56						
H08S1	**Diego Carcia H**	**20.41**	**246**	T	T	20 30 54.3	
	baz=69,slow=74,SNR=4.4						
MKAR	**Makanchi Array**	**46.56**	**352**	P	P	20 13 00.5	+0.3
	0.4nm,0.7s,baz=182,slow=8.5,SNR=4.4						
WRA	**Warramunga Arr**	**47.00**	**118**	P	P	20 13 03.8	-0.2
	0.7nm,1.1s,baz=297,slow=8.3,SNR=2.2						
SONM	**Songino Array**	**48.77**	**14**	P	P	20 13 17.5	+0.1
	0.5nm,0.7s,baz=198,slow=9.0,SNR=4.3						
KURBB	**Kurchatov Arra**	**50.89**	**350**	P	P	20 13 32.8	-0.5
	0.2nm,0.5s,baz=172,slow=7.1,SNR=2.6						
ZALV	**Zalesovo Beam**	**53.33**	**355**	P	P	20 13 51.3	-0.1
	0.5nm,0.5s,baz=178,slow=8.7,SNR=2.7						

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*ISK **11** 20:08:10.2, 38°.74N×43°.15E, h5^{km}, ML2.3/5*
*DDA **11** 20:08:11.2, 38°.75N×43°.15E, h7^{km}, Ml2.6*
*CSEM **11** 20:08:11.1±0.2, 38°.75N×43°.13E, h5^{km}, ML2.3, Error ellipse: s-maj=4.3km s-min=3.4km az=76.0*

ISC 11 20:08:11.5±1.0**, 38°.75N**±0°.02×**43°.13E**±0°.02**, h9**^{km}±9^{km}**, n22, σ0^{s}.77**/42**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	**Van**	**0.26**	**127**	PG	**Pg**	**20 08 16.7**	**0.0**
VANB				SG	**Sg**	**20 08 21.6**	**+1.4**
VANB	**Van**	**0.26**	**127**	*e*Pg	**Pg**	**20 08 16.7**	**0.0**
VANB				*e*Sg	**Sg**	**20 08 21.6**	**+1.4**
ADCV	**BITLIS_Adilcev**	**0.32**	**281**	*i* P	**Pb**	**20 08 19.1**	**-0.4**
ADCV				*i* S	**Sb**	**20 08 25.8**	**+0.9**
ADCV	**BITLIS_Adilcev**	**0.32**	**281**	P	**Pb**	**20 08 19.1**	**-0.4**
ADCV				S	**Sb**	**20 08 25.8**	**+0.9**
VMUR	**Van-Muradiye**	**0.42**	**55**	*i* P	**Pg**	**20 08 19.1**	**-0.7**
VMUR				*i* S	**Sg**	**20 08 26.0**	**+0.6**
VMUR	**Van-Muradiye**	**0.42**	**55**	P	**Pg**	**20 08 19.1**	**-0.7**
VMUR				S	**Sg**	**20 08 26.0**	**+0.6**
GEVA	**Gevas**	**0.44**	**187**	*i* P	**Pg**	**20 08 19.2**	**-0.9**
GEVA				*i* S	**Sg**	**20 08 26.4**	**+0.4**
GEVA	**Gevas**	**0.44**	**187**	P	**Pg**	**20 08 19.2**	**-0.9**
GEVA				S	**Sg**	**20 08 26.4**	**+0.4**
TUTA	**Tutak**	**0.69**	**340**	*i* P	**Pg**	**20 08 24.8**	**-0.2**
TUTA				*i* S	**Sg**	**20 08 34.3**	**+0.2**
TUTA	**Tutak**	**0.69**	**340**	P	**Pg**	**20 08 24.8**	**-0.2**
TUTA				S	**Sg**	**20 08 34.3**	**+0.2**
CLDR	**Caldiran**	**0.73**	**57**	PG	**Pg**	**20 08 25.3**	**-0.3**
CLDR				SG	**Sg**	**20 08 35.1**	**-0.1**
CLDR	**Caldiran**	**0.73**	**57**	*e*Pg	**Pg**	**20 08 25.3**	**-0.3**
CLDR				*e*Sg	**Sg**	**20 08 35.1**	**-0.1**
AGRB	**Hanur-Agry**	**0.83**	**353**	PG	**Pg**	**20 08 26.9**	**-0.6**
AGRB				SG	**Sb**	**20 08 39.0**	**-0.6**
AGRB	**Hanur-Agry**	**0.83**	**353**	*e*Pg	**Pg**	**20 08 26.9**	**-0.6**
AGRB				*e*Sg	**Sb**	**20 08 39.0**	**-0.6**
GURO	**Guroymak-BITLI**	**0.88**	**257**	PG	**Pg**	**20 08 27.9**	**-0.6**
GURO				SG	**Sg**	**20 08 40.5**	**+0.6**
GURO	**Guroymak-BITLI**	**0.88**	**257**	*e*Pg	**Pg**	**20 08 27.9**	**-0.6**
GURO				*e*Sg	**Sg**	**20 08 40.5**	**+0.6**
EATA	**Eleskirt**	**1.22**	**336**	*i* P	**Pg**	**20 08 34.4**	**-0.5**
EATA				*i* S	**Sn**	**20 08 52.8**	**+1.1**
EATA	**Eleskirt**	**1.22**	**336**	P	**Pg**	**20 08 34.4**	**-0.5**
EATA				S	**Sn**	**20 08 52.8**	**+1.1**
HAKT	**HAKKARI**	**1.27**	**159**	*i* P	**Pg**	**20 08 34.6**	**-1.4**
HAKT				*i* S	**Sn**	**20 08 54.2**	**+1.1**
HAKT	**HAKKARI**	**1.27**	**159**	P	**Pg**	**20 08 34.6**	**-1.4**
HAKT				S	**Sn**	**20 08 54.2**	**+1.1**
CUKT	**Cukurca**	**1.55**	**166**	PN	**Pn**	**20 08 38.9**	**-0.5**
CUKT	**Cukurca**	**1.55**	**166**	*e*Pn	**Pn**	**20 08 38.9**	**-0.5**

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*SOME **11** 20:21:48.2, 40°.87N×77°.93E, h5^{km}*
*KRNET **11** 20:21:48.1±0.1, 40°.83N×77°.99E, h24^{km}, mb2.8*
*NNC **11** 20:21:54.5±4.0, 40°.98N×78°.05E, h0^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=33.4km s-min=17.9km az=149.0*
*KNET **11** 20:22:14.0±1.3, 41°.81N×76°.37E, h0^{km}, ml2.5, Error ellipse: s-maj=11.7km s-min=1.9km az=136.0*

ISC 11 20:21:50.8±1.4**, 40°.82N**±0°.05×**77°.97E**±0°.04**, h6**^{km}±7^{km}**, n52, σ2^{s}.17**/85**, 41C-18D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TARG	**Taragay, Kyrgy**	**0.91**	**352**	⇓*i*P	**Pg**	**20 22 05.2**	**-3.2**
	baz=51						
TARG				⇓*i*S	**Sg**	**20 22 17.6**	**-2.6**
	baz=51						
PRZ	**Przheval'sk**	**1.69**	**11**	⇑*i*P	**Pn**	**20 22 18.6**	**-2.5**
	baz=11						
PRZ				⇑*i*S	**Sn**	**20 22 40.9**	**-2.3**
	baz=11						
ULHL	**Ulahol**	**1.93**	**318**	⇓P	**Pn**	**20 22 22.8**	**-1.6**
	2.5nm,0.2s,SNR=43						
ULHL	**Ulahol**	**1.93**	**318**	⇑*i*P	**Pn**	**20 22 22.3**	**-2.1**
	baz=18						
ULHL				⇑*i*S	**Sn**	**20 22 47.5**	**-1.6**
	baz=18						
SATY	**Saty**	**2.26**	**8**	⇑*i*P	**Pn**	**20 22 30.1**	**+1.2**
	168nm,0.6s						
SATY				⇓*i*S	**Sg**	**20 23 00.6**	**-2.7**
	163nm,0.6s						
BOOM	**Boomskoye usch**	**2.26**	**318**	⇓*i*P	**Pn**	**20 22 27.1**	**-1.8**
	baz=18						
BOOM				⇓*i*S	**Sn**	**20 22 55.6**	**-1.6**
	baz=18						
TNSS	**Tian-Shan**	**2.34**	**341**	*e*P	**Pn**	**20 22 30.4**	**+0.2**
	128nm,0.6s						
TNSS				*e*S	**Sb**	**20 23 01.2**	**-1.8**
	76nm,0.4s						
ZHN	**Zhinishke**	**2.37**	**8**	*e*P	**Pn**	**20 22 30.6**	**+0.2**
	86nm,0.4s						
ZHN				*e*S	**Sb**	**20 23 01.2**	**-2.2**
	199nm,0.4s						
KZA	**Kyzart**	**2.40**	**302**	⇓P	**Pn**	**20 22 31.3**	**+0.2**
	18nm,0.3s,SNR=64						
KZA	**Kyzart**	**2.40**	**302**	⇑*e*P	**Pn**	**20 22 29.3**	**-1.8**
	baz=2.0						
KZA				⇑*i*S	**Sn**	**20 22 59.4**	**-1.6**
	baz=2.0						
IZV	**Izvestkoviy**	**2.43**	**336**	*e*P	**Pn**	**20 22 31.9**	**+0.6**
	35nm,0.3s						
IZV				*e*S	**Sn**	**20 23 03.0**	**+1.5**
	119nm,0.4s						
MDOK	**Medeo**	**2.44**	**344**	Pn	**Pn**	**20 22 31.2**	**-0.1**
	58nm,0.4s						
MDOK				Sn	**Sn**	**20 23 02.3**	**+0.8**
	54nm,0.6s						
MDOK	**Medeo**	**2.44**	**344**	*e*P	**Pn**	**20 22 32.3**	**+1.0**
	90nm,0.4s						
MDOK				*e*S	**Sb**	**20 23 04.3**	**-1.3**
	129nm,0.6s						
UZB	**Uzynbulak**	**2.45**	**18**	⇓*i*P	**Pn**	**20 22 31.9**	**+0.3**
	20nm,0.3s						
UZB				*e*S	**Sb**	**20 23 03.8**	**-2.1**
	132nm,0.6s						
KOTS	**Kotyrbulak**	**2.49**	**345**	*e*P	**Pn**	**20 22 33.3**	**+1.2**
	42nm,0.4s						
KOTS				*e*S	**Sb**	**20 23 06.1**	**-1.0**
	218nm,0.5s						
MTBS	**Maitube**	**2.58**	**334**	⇑*i*P	**Pn**	**20 22 33.0**	**-0.2**
	31nm,0.2s						
MTBS				⇑*i*S	**Sn**	**20 23 05.3**	**+0.4**
	78nm,0.4s						
SHLS	**Shalkode**	**2.58**	**25**	*e*P	**Pb**	**20 22 37.2**	**-0.4**
	27nm,0.5s						
SHLS				*e*S	**Sg**	**20 23 12.1**	**-1.7**
	240nm,0.7s						
KURS	**Kuram**	**2.67**	**3**	*e*P	**Pn**	**20 22 36.7**	**+2.3**
	37nm,0.6s						
KURS				*e*S	**Sb**	**20 23 11.5**	**-0.5**
	112nm,0.5s						
KST	**Kastek**	**2.68**	**327**	*e*P	**Pn**	**20 22 36.2**	**+1.6**
	25nm,0.4s						
KST				*e*S	**Sb**	**20 23 11.6**	**-0.9**
	94nm,0.6s						
KPKS	**Kokpek**	**2.69**	**11**	*e*P	**Pn**	**20 22 36.7**	**+1.9**
	66nm,0.4s						
KPKS				*e*S	**Sb**	**20 23 11.4**	**-1.4**
	145nm,0.5s						
PDGK	**Podgornoye**	**2.75**	**24**	⇑Pn	**Pn**	**20 22 36.6**	**+1.1**
	23nm,0.6s						
PDGK				⇓Sn	**Sb**	**20 23 14.4**	**0.0**
	140nm,0.8s						
PDGK	**Podgornoye**	**2.75**	**24**	⇑*i*P	**Pn**	**20 22 33.6**	**-2.0**
	baz=24						
PDGK				⇑*i*S	**Sn**	**20 23 06.9**	**-2.2**
	baz=24						
TKM2	**Tokmak 2**	**2.75**	**320**	⇑Pn	**Pn**	**20 22 36.4**	**+0.7**
	9.0nm,0.7s						
TKM2				⇑Sn	**Sn**	**20 23 12.3**	**+3.1**
	72nm,0.6s						
TKM2	**Tokmak 2**	**2.75**	**320**	⇑P	**Pn**	**20 22 37.8**	**+2.1**
	5.0nm,0.2s,SNR=13						
TKM2	**Tokmak 2**	**2.75**	**320**	⇑*i*P	**Pn**	**20 22 34.0**	**-1.6**
	baz=20						
TKM2				⇑*i*S	**Sn**	**20 23 07.0**	**-2.3**
	baz=20						
KBK	**Karagaybulak**	**2.91**	**310**	⇑P	**Pn**	**20 22 40.2**	**+2.3**
	10.0nm,0.2s,SNR=20						
KBK	**Karagaybulak**	**2.91**	**310**	⇑*e*P	**Pn**	**20 22 36.2**	**-1.7**
	baz=10.0						
KBK				⇑*i*S	**Sn**	**20 23 11.0**	**-2.3**
	baz=10.0						
UCH	**Uchtor**	**2.95**	**299**	⇑P	**Pn**	**20 22 41.6**	**+2.9**
	15nm,0.3s,SNR=7.8						
KTBS	**Karatobe**	**3.04**	**342**	*e*P	**Pn**	**20 22 42.8**	**+3.2**
	1.1nm,0.1s						
KTBS				*e*S	**Sb**	**20 23 22.2**	**-0.6**
	111nm,0.3s						
CHKK	**Chushkaly**	**3.12**	**347**	*e*P	**Pn**	**20 22 44.1**	**+3.5**
	27nm,0.4s						
CHKK				*e*S	**Sb**	**20 23 24.2**	**-0.7**
	221nm,0.3s						
AAK	**Ala-Archa**	**3.17**	**306**	⇓Pn	**Pn**	**20 22 45.0**	**+3.6**
	7.9nm,0.3s						
AAK				⇓Sn	**Sb**	**20 23 25.3**	**-1.4**
	31nm,0.8s						
AAK	**Ala-Archa**	**3.17**	**306**	⇑P	**Pn**	**20 22 45.4**	**+3.9**
	9.5nm,0.2s,SNR=12						
AAK	**Ala-Archa**	**3.17**	**306**	⇑*i*P	**Pn**	**20 22 39.7**	**-1.8**
	baz=6.0						
AAK				⇑*i*S	**Sn**	**20 23 17.2**	**-2.5**
	baz=6.0						
FRU1	**Bishkek**	**3.19**	**310**	⇑*e*P	**Pn**	**20 22 40.1**	**-1.5**
	baz=9.0						
FRU1				⇑*i*S	**Sn**	**20 23 17.7**	**-2.4**
	baz=9.0						
KUU	**Kurty**	**3.30**	**339**	*e*P	**Pn**	**20 22 47.0**	**+4.0**
	12nm,0.5s						
KUU				*e*S	**Sb**	**20 23 28.8**	**-1.4**
	50nm,0.6s						
ARXS	**Arharly**	**3.39**	**358**	*e*P	Pn	20 22 48.7	+4.4
	20nm,0.3s						
ARXS				*e*S	**Sb**	**20 23 32.8**	**0.0**
	79nm,0.4s						
AML	**Almayashu**	**3.47**	**293**	⇓P	Pn	20 22 51.1	+5.3
	18nm,0.3s,SNR=16						
AML	**Almayashu**	**3.47**	**293**	⇑*i*P	**Pn**	**20 22 44.3**	**-1.5**
	baz=93						
AML				⇑*i*S	**Sn**	**20 23 24.9**	**-2.5**
	baz=93						
SFK	**Sufi-Kurgan**	**3.51**	**258**	⇓Pn	Pn	20 22 51.3	+5.2
	4.8nm,0.5s						
SFK				⇓Sn	**Sn**	**20 23 36.7**	**+8.6**
	16nm,0.4s						
SFK	**Sufi-Kurgan**	**3.51**	**258**	⇓*i*P	Pn	20 22 44.2	-1.9
	baz=58						
SFK				⇓*i*S	**Sn**	**20 23 25.3**	**-2.8**
	baz=58						
USP	**Ospenovka**	**3.56**	**314**	⇓P	Pn	20 22 51.6	+5.0
	5.2nm,0.2s,SNR=15						
USP	**Ospenovka**	**3.56**	**314**	⇑*i*P	**Pn**	**20 22 45.2**	**-1.4**
	baz=14						
USP				⇑*i*S	**Sn**	**20 23 26.8**	**-2.2**
	baz=14						
EKS2	**Erkin-Say**	**3.64**	**302**	⇓P	Pn	20 22 53.5	+5.7
	6.6nm,0.6s,SNR=19						
EKS2	**Erkin-Say**	**3.64**	**302**	⇑*e*P	**Pn**	**20 22 46.1**	**-1.7**
	baz=2.0						
EKS2				⇑*i*S	**Sn**	**20 23 28.7**	**-2.4**
	baz=2.0						
DJR	**Jarkent**	**3.75**	**20**	⇑*i*P	**Pb**	**20 22 56.6**	**-1.0**
	9.6nm,0.5s						
DJR				*e*S	**Sb**	**20 23 45.7**	**+2.4**
	18nm,0.4s						
MRKS	**Merke**	**4.04**	**300**	⇑*i*P	Pn	20 23 00.4	+7.1
	26nm,0.3s						
MRKS				*e*S	**Sb**	**20 23 51.9**	**+0.5**
	10nm,0.5s						
TDK	**Taldyqorghan**	**4.19**	**4**	*e*P	**Pb**	**20 23 03.4**	**-1.5**
	42nm,0.6s						
TDK				*e*S	**Sb**	**20 23 57.4**	**+1.6**
	52nm,0.4s						
MNAS	**Manas**	**4.42**	**294**	⇑Pn	Pb	20 23 07.0	-2.0
	9.7nm,0.7s						
MNAS				⇑Sn	**Sb**	**20 24 02.7**	**0.0**
	13nm,0.7s						
MNAS	**Manas**	**4.42**	**294**	⇑*i*P	**Pn**	**20 22 57.0**	**-1.6**
	baz=94						
MNAS				⇑*i*S	**Sn**	**20 23 47.1**	**-3.4**
	baz=94						
KAPS	**Kapalarasan**	**4.57**	**12**	*e*P	**Pb**	**20 23 10.8**	**-0.7**
	9.0nm,0.7s						
KAPS				*e*S	**Sb**	**20 24 09.7**	**+2.8**
	15nm,0.8s						
KK31	**Karatay Array**	**6.01**	**295**	Pg	**Pb**	**20 23 35.1**	**-0.8**
	1.0nm,0.4s,baz=107,slow=15,SNR=22						
KK31				⇑Lg	Lg	20 24 51.2	
	11nm,0.9s						
MK31	**Makanchi Array**	**6.73**	**26**	⇑Pn	**Pn**	**20 23 28.7**	**-1.5**
	0.4nm,0.6s,baz=202,slow=15,SNR=8.4						
MK31				⇑Lg	Lg	20 25 11.9	
	3.1nm,0.7s,baz=203,slow=29,SNR=5.0						

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*ISCJB **11** 20:23:11.9±1.3, 1°.3N±0°.2×91°.6E±0°.1, h10^{km}, mb3.8/7, Error ellipse: s-maj=27.2km s-min=18.7km az=26.0*
*IDC **11** 20:23:12.3±1.8, 1°.21N×91°.68E, h0^{km}, mb3.8/7, mb1 3.9/9, mb1mx3.5/73, mbtmp3.8/9, ML3.9/2, Error ellipse: s-maj=46.0km s-min=29.8km az=45.0*

ISC 11 20:23:13.6±1.4**, 1°.3N**±0°.2×**91°.6E**±0°.2**, h10**^{km}**, n12, σ1^{s}.30**/9**, mb3.9**/7**, North Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	**Pallekele**	**12.43**	**299**	Pn	**Pn**	**20 26 09.8**	**-0.9**
	0.4nm,0.3s,baz=116,slow=13,SNR=2.7						
PALK				Sn	Sn	20 28 19.9	-10
	1.1nm,0.3s,baz=114,slow=11,SNR=4.6						
CMAR	**Chiang Mai Arr**	**18.55**	**22**	P	**P**	**20 27 29.0**	**-1.6**
	0.2nm,0.3s,baz=214,slow=14,SNR=6.5						
H08S2	**Diego Garcia H**	**21.03**	**245**	T	T	20 49 42.0	
	baz=78,slow=74						
H08S3	**Diego Garcia H**	**21.04**	**245**	T	T	20 49 37.1	
	baz=78,slow=74						
H08S1	**Diego Carcia H**	**21.05**	**245**	T	T	20 49 43.8	
	baz=78						
MKAR	**Makanchi Array**	**46.09**	**351**	P	**P**	**20 31 37.7**	**-0.2**
	1.1nm,0.8s,baz=167,slow=8.2,SNR=9.8						
WRA	**Warramunga Arr**	**46.86**	**119**	P	**P**	**20 31 44.0**	**-0.4**
	0.4nm,0.9s,baz=296,slow=9.0,SNR=2.2						
SONM	**Songino Array**	**48.14**	**13**	P	**P**	**20 31 54.1**	**+0.1**
	1.4nm,0.7s,baz=191,slow=8.7,SNR=13						
KURBB	**Kurchatov Arra**	**50.44**	**349**	P	**P**	**20 32 13.0**	**+1.7**
	0.8nm,0.8s,baz=172,slow=7.7,SNR=8.1						
ZALV	**Zalesovo Beam**	**52.83**	**355**	P	**P**	**20 32 30.8**	**+1.6**
	1.6nm,0.5s,baz=167,slow=5.4,SNR=5.7						
BVAR	**Borovoye Array**	**54.54**	**344**	P	**P**	**20 32 42.5**	**+0.8**
	0.5nm,0.8s,baz=173,slow=12,SNR=3.0						
GERES	**GERESS Array B**	**81.12**	**319**	P	**P**	**20 35 29.8**	**+0.4**
	0.9nm,0.7s,baz=115,slow=4.4,SNR=7.5						

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*IDC **11** 20:27:25.7±3.0, 1°.18N×91°.62E, h0^{km}, mb3.9/6, mb1 3.9/8, mb1mx3.6/69, mbtmp3.8/8, ML3.7/1, MS3.2/5, Ms1 3.3/5, ms1mx2.8/69, Error ellipse: s-maj=63.4km s-min=44.1km az=162.0*

ISC 11 20:27:30.3±2.4**, 1°.7N**±0°.3×**91°.3E**±0°.1**, h10**^{km}**, n15, σ1^{s}.81**/10**, mb3.9**/6**, North Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	**Prapat**	**7.67**	**81**	LR	LR	20 32 28.1	
	comp=Z,213nm,18.3s,baz=272,slow=41						
PALK	**Pallekele**	**11.98**	**298**	Pn	**Pn**	**20 30 22.9**	**+1.6**
	0.4nm,0.3s,baz=114,slow=10,SNR=3.6						
PALK				Sn	**Sn**	**20 32 32.8**	**-2.3**
	0.5nm,0.3s,baz=117,slow=4.5,SNR=2.5						
PALK				LR	LR	20 34 44.8	
	comp=Z,97nm,18.9s,baz=116,slow=35						
CMAR	**Chiang Mai Arr**	**18.29**	**24**	P	**P**	**20 31 43.1**	**-1.4**
	baz=214,slow=13,SNR=7.8						
CMAR				LR	LR	20 38 38.8	
	comp=Z,54nm,18.4s,baz=216,slow=36						
LEM	**Lembang**	**18.30**	**118**	LR	LR	20 37 21.7	
	comp=Z,57nm,21.0s,baz=281,slow=33						
H08S2	**Diego Garcia H**	**20.94**	**244**	T	T	20 53 51.0	
	baz=64						
H08S3	**Diego Garcia H**	**20.94**	**244**	T	T	20 53 50.8	
	baz=64						
H08S1	**Diego Carcia H**	**20.96**	**244**	T	T	20 54 02.4	
	baz=64						
BATI	**Baumata**	**34.27**	**111**	LR	LR	20 49 02.8	
	comp=Z,70nm,18.7s,baz=262,slow=38						
MKAR	**Makanchi Array**	**45.65**	**351**	P	**P**	**20 35 51.2**	**+0.1**
	1.0nm,0.8s,baz=161,slow=7.7,SNR=8.4						
SONM	**Songino Array**	**47.82**	**14**	P	**P**	**20 36 08.6**	**+0.4**
	0.5nm,0.5s,baz=200,slow=6.7,SNR=4.0						
KURBB	**Kurchatov Arra**	**49.99**	**349**	P	**P**	**20 36 25.3**	**+0.7**
	0.9nm,0.8s,baz=171,slow=6.5,SNR=5.9						
ZALV	**Zalesovo Beam**	**52.40**	**355**	P	**P**	**20 36 44.1**	**+1.5**
	0.7nm,0.4s,baz=187,slow=7.7,SNR=4.2						
BVAR	**Borovoye Array**	**54.08**	**345**	P	**P**	**20 36 56.7**	**+1.7**
	0.2nm,0.3s,baz=152,slow=9.5,SNR=2.4						
GERES	**GERESS Array B**	**80.62**	**319**	P	**P**	**20 39 43.5**	**0.0**
	1.1nm,0.8s,baz=94,slow=4.4,SNR=8.5						
TXAR	**Lajitas Array**	**146.01**	**24**	PKPbc	**PKPdf**	**20 47 07.9**	**-2.7**
	0.1nm,0.5s,baz=274,slow=1.4,SNR=2.7						

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*ISCJB **11** 20:27:48.6±0.9, 34°.63S±0°.05×179°.3W±0°.1, h35^{km}, mb4.0/2, MS3.1/2, Error ellipse: s-maj=15.5km s-min=6.6km az=13.9*
*WEL **11** 20:27:50.8±0.8, 35°S±6°×17°9W±1°0, h33^{km}, ML4.7/28*
*IDC **11** 20:27:55.9±6.6, 35°.06S×179°.56W, h86^{km}±53^{km}, mb3.8/2, mb1 4.1/4, mb1mx3.5/47, mbtmp4.2/4, ML4.1/2, MS3.4/3, Ms1 3.4/3, ms1mx2.9/47, Error ellipse: s-maj=50.5km s-min=35.4km az=38.0*

ISC 11 20:27:49.6±1.1**, 34°.64S**±0°.08×**179°.3W**±0°.1**, h35**^{km}**, n48, σ1^{s}.36**/51**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**3.51**	**213**	P	**Pn**	**20 28 41.8**	**+0.1**
MXZ				S	**Sn**	**20 29 23.7**	**+1.7**
WMGZ	**Waiomatatini S**	**3.68**	**210**	P	**Pn**	**20 28 45.9**	**+1.9**
WMGZ				S	**Sn**	**20 29 28.3**	**+2.1**
PKGZ	**Pakihiroa**	**3.88**	**213**	P	**Pn**	**20 28 48.2**	**+1.4**
PKGZ				S	**Sn**	**20 29 32.7**	**+1.5**
HAZ	**Te Kaha**	**3.92**	**217**	P	**Pn**	**20 28 47.8**	**+0.6**
PUZ	**Puketiti**	**3.96**	**209**	P	**Pn**	**20 28 48.9**	**+1.0**
WIZ	**White Island**	**4.06**	**224**	P	**Pn**	**20 28 49.6**	**+0.4**
RUGZ	**Raukumara Rang**	**4.13**	**216**	P	**Pn**	**20 28 51.0**	**+0.7**
TWGZ	**Tauwhareparae**	**4.17**	**211**	P	**Pn**	**20 28 51.5**	**+0.8**
TWGZ				S	**Sn**	**20 29 39.4**	**+1.2**
CNGZ	**Carnagh Statio**	**4.34**	**207**	P	**Pn**	**20 28 54.5**	**+1.4**
WHRZ	**Whale Island**	**4.41**	**222**	P	**Pn**	**20 28 56.4**	**+2.3**
TKGZ	**Te Karaka**	**4.44**	**211**	P	**Pn**	**20 28 55.1**	**+0.6**
MWZ	**Matawai**	**4.50**	**214**	P	**Pn**	**20 28 55.5**	**+0.2**
KUZ	**Kuaotunu**	**4.58**	**241**	P	**Pn**	**20 28 56.8**	**+0.5**
GRZ	**Great Barrier**	**4.59**	**248**	P	**Pn**	**20 28 56.6**	**+0.1**
URZ	**Urewera**	**4.64**	**218**	P	**Pn**	**20 28 57.6**	**+0.5**
	21nm,0.3s,baz=274,slow=2.4,SNR=105						
URZ				S	**Sn**	**20 29 44.7**	**-5.1**
	3.8nm,0.3s,baz=346,slow=17,SNR=2.0						
URZ	**Urewera**	**4.64**	**218**	P	**Pn**	**20 28 57.7**	**+0.5**
OPRZ	**Ohinepanea**	**4.64**	**225**	P	**Pn**	**20 28 58.8**	**+1.5**
RAGZ	**Rawiri**	**4.68**	**214**	P	**Pn**	**20 28 58.4**	**+0.6**
RIGZ	**Rimuhau**	**4.71**	**209**	P	**Pn**	**20 28 59.1**	**+1.0**
RIGZ				S	**Sn**	**20 29 51.1**	**-0.4**
TGRZ	**Tauranga**	**4.75**	**228**	P	**Pn**	**20 28 59.7**	**+1.0**
PRGZ	**Paritu Road**	**4.84**	**207**	P	**Pn**	**20 28 60.0**	**0.0**
OMRZ	**Omania**	**4.93**	**224**	P	**Pn**	**20 29 01.9**	**+0.7**
SNGZ	**Shannon Statio**	**4.95**	**212**	P	**Pn**	**20 29 02.1**	**+0.6**
MUGZ	**Murupara**	**4.98**	**219**	P	**Pn**	**20 29 02.0**	**+0.2**
KNZ	**Kokohu**	**5.01**	**208**	P	**Pn**	**20 29 02.0**	**-0.3**
WIAZ	**Waiheke Island**	**5.03**	**243**	P	**Pn**	**20 29 03.6**	**+1.1**
MHGZ	**Mahia Peninsul**	**5.04**	**206**	P	**Pn**	**20 29 02.4**	**-0.3**
MKAZ	**Moumakai**	**5.14**	**240**	P	**Pn**	**20 29 05.4**	**+1.3**
RAHZ	**Arahi**	**5.17**	**213**	P	**Pn**	**20 29 05.8**	**+1.3**
ABAZ	**Army Bay**	**5.18**	**246**	P	**Pn**	**20 29 06.2**	**+1.6**
TOZ	**Tahuroa Road**	**5.23**	**232**	P	**Pn**	**20 29 06.7**	**+1.4**
WHHZ	**Waihua**	**5.24**	**211**	P	**Pn**	**20 29 06.4**	**+1.0**
GLKZ	**Green Lake**	**5.48**	**13**	P	**Pn**	**20 29 11.5**	**+2.7**
TLZ	**Tolley Road**	**5.57**	**227**	P	**Pn**	**20 29 11.3**	**+1.3**
MCHZ	**McNeill Hill**	**5.78**	**213**	P	**Pn**	**20 29 13.8**	**+1.0**
CKHZ	**Cape Kidnapper**	**5.79**	**209**	P	**Pn**	**20 29 12.5**	**-0.5**
OUZ	**Omahuta**	**5.88**	**262**	P	**Pn**	**20 29 13.9**	**-0.3**
RPZ	**Rata Peaks**	**11.76**	**217**	P	**Pn**	**20 30 34.1**	**-0.7**
	0.6nm,0.3s,baz=7.6,slow=15,SNR=2.0						
RPZ				S	Sn	20 32 31.9	-13
	0.5nm,0.3s,baz=212,slow=19,SNR=2.4						
DZM	**Mont Dzumac**	**17.71**	**311**	LR	LR	20 37 21.0	
	comp=Z,183nm,18.6s,baz=112,slow=32						
RAR	**Rarotonga**	**21.76**	**57**	LR	LR	20 39 02.7	
	comp=Z,40nm,21.5s,baz=298,slow=30						
PMG	**Port Moresby**	**39.66**	**301**	LR	LR	20 50 54.2	
	comp=Z,63nm,18.2s,baz=144,slow=35						
ASAR	**Alice Springs**	**41.99**	**272**	P	**P**	**20 35 37.8**	**+0.1**

	2.5nm,0.7s,baz=111,slow=7.6,SNR=18						
WRA	Warramunga Arr	43.37	277	P	P	20 35 47.4	-1.4
	2.1nm,0.7s,baz=119,slow=7.6,SNR=16						
KURBB	Kurchatov Arra	123.17	312	PKP	PKPdf	20 46 41.7	-0.3
	0.5nm,0.9s,baz=113,slow=2.0,SNR=4.3						
FINES	FINESS Array B	148.68	337	PKPbc	PKPbc	20 47 32.4	+0.2
	1.4nm,0.8s,baz=35,slow=5.1,SNR=6.5						
HFS	Hagfors	153.12	346	PKPbc	PKPbc	20 47 43.4	+0.6
	1.1nm,0.6s,baz=48,slow=2.1,SNR=4.4						
BRTR	Keskin Array B	153.38	291	PKPbc	PKPbc	20 47 44.6	+0.4
	0.2nm,0.4s,baz=46,slow=4.2,SNR=2.9						
TORD	Torodi Ar. Bea	158.59	183	PKPab	PKPab	20 48 16.5	-2.5
	baz=166,slow=1.6						

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*NIED **11** 20:46:00, 37°.80N×142°.10E, h41km, Mw3.8 Best double couple: M$_0$4.96000×10^{14} NP1:φ$_s$193.00000°, δ44.00000°, λ-89.00000°. NP2:φ$_s$12.00000°, δ46.00000°, λ-91.00000°.*

*ISCJB **11** 20:46:29.1±0.9, 37°.82N±0°.04×142°.11E±0°.07, h42km±8km, mb3.7/10, MS4.0/1, Error ellipse: s-maj=9.6km s-min=5.5km az=18.8*

*JMA **11** 20:46:29.1±0.1, 37°.83N×142°.07E, h37km±2km, M3.9*

*IDC **11** 20:46:31.7±2.3, 37°.82N×142°.10E, h49km±21km, mb3.5/10, mb1 3.6/14, mb1mx3.4/75, mbtmp3.7/14, ML3.3/3, MS2.6/4, Ms1 2.6/4, ms1mx2.4/56, Error ellipse: s-maj=26.8km s-min=15.6km az=87.0*

ISC 11 20:46:28.9±3.4, **37°.82N**±0°.05×**142°.07E**±0°.09, **h25**km±24km, **n34,** σ**1^{s}27**/41, **mb3.6**/10, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIO	Ouri	0.85	318	P	Pn	20 46 44.9	-0.4
JIO				S	Sn	20 46 55.5	-1.5
JMM	Marumori	1.01	273	P	Pn	20 46 47.2	-0.4
JMM				S	Sn	20 46 58.7	-2.3
JFK	Kawauchi	1.05	245	P	Pn	20 46 47.6	-0.6
JFK				S	Sn	20 47 00.8	-1.3
JOU	Okura	1.23	297	P	Pn	20 46 50.9	+0.2
JOU				S	Sn	20 47 06.4	-0.2
JMK	Ichinoseki	1.31	330	P	Pn	20 46 51.4	-0.3
JMK				S	Sn	20 47 07.5	-0.9
JFT	Otama	1.41	258	P	Pn	20 46 53.8	+0.8
JFT				S	Sn	20 47 10.7	-0.1
JYS	Shirataka	1.63	285	P	Pn	20 46 56.6	+0.5
JYS				*e*S	Sn	20 47 17.5	+1.2
JYK	Kaneyama	1.73	310	P	Pn	20 46 57.8	+0.3
JYK				*e*S	Sn	20 47 19.3	+0.5
JOM	Ohasama	1.76	340	P	Pn	20 46 57.8	-0.1
JOM				S	Sn	20 47 18.8	-0.7
JFY	Yanaizu	1.92	258	P	Pn	20 47 01.2	+1.1
JRG	Rokugo	1.93	325	P	Pn	20 47 01.1	+0.8
JYA	Atsumi	2.01	293	P	Pn	20 47 02.0	+0.7
JYA				S	Sn	20 47 26.7	+1.1
MJAR	Matsushiro Arr	3.34	249	P	Pn	20 47 23.0	+3.4
	2.2nm,0.3s,baz=167,slow=28,SNR=18						
MJAR				S	Sb	20 48 06.2	-1.4
	1.8nm,0.3s,baz=194,slow=18,SNR=4.1						
MJAR				LR	LR	20 49 07.9	
	comp=Z,82nm,18.7s,baz=60,slow=47						
MAT	Matsushiro	3.34	249	P	Pn	20 47 22.5	+2.9
MAT				*e*S	Sn	20 47 58.9	+0.4
JHJ	Hachijo jima 2	5.05	202	P	Pn	20 47 43.6	+0.5
	2.3nm,0.3s,baz=53,slow=20,SNR=2.4						
JHJ				S	Sn	20 48 38.0	-2.6
	9.0nm,0.3s,baz=75,slow=20,SNR=2.6						
JHJ				LR	LR	20 49 36.9	
	comp=Z,217nm,21.3s,baz=39,slow=37						
ASAJ	Asahikawa	6.30	3	P	Pn	20 48 00.7	+0.4
	0.8nm,0.3s,baz=204,slow=14,SNR=10						
ASAJ				S	Sn	20 49 12.9	+1.4
	0.9nm,0.3s,baz=15,slow=20,SNR=2.9						
ASAJ				LR	LR	20 50 15.3	
	comp=Z,25nm,18.1s,baz=146,slow=36						
USRK	Ussuriysk Ar.	9.93	313	P	Pn	20 48 52.7	+2.8
	baz=121,slow=15						
KSRS	Korea Array	11.22	272	LR	LR	20 53 24.0	
	comp=Z,22nm,18.9s,baz=120,slow=36						
SONM	Songino Array	27.79	303	P	P	20 52 16.2	+0.2
	0.6nm,0.7s,baz=105,slow=8.4,SNR=3.2						
H11N2	WAKE ISLAND Hy	28.12	123	T	T	21 22 37.7	
	baz=316,slow=75,SNR=38						
H11N1	WAKE ISLAND Hy	28.13	123	T	T	21 22 40.9	
	baz=316,slow=75,SNR=32						
H11N3	WAKE ISLAND Hy	28.14	123	T	T	21 22 37.4	
	baz=316,slow=75,SNR=28						
H11S1	WAKE ISLAND Hy	28.87	125	T	T	21 23 40.0	
	baz=318,slow=76,SNR=16						
H11S3	WAKE ISLAND Hy	28.87	125	T	T	21 23 38.0	
	baz=318,slow=76,SNR=16						
H11S2	WAKE ISLAND Hy	28.88	125	T	T	21 23 41.4	
	baz=318,slow=76,SNR=12						
ZALV	Zalesovo Beam	41.77	312	P	P	20 54 15.5	-0.6
	0.4nm,0.4s,baz=72,slow=9.3,SNR=2.3						
MKAR	Makanchi Array	44.15	302	P	P	20 54 36.5	+1.1
	0.4nm,0.7s,baz=67,slow=11,SNR=2.8						
MKAR				LR	LR	21 12 31.8	
	comp=Z,157nm,18.6s,baz=238,slow=35						
KURBB	Kurchatov Arra	45.93	307	P	P	20 54 48.9	-0.7
	0.9nm,0.6s,baz=82,slow=8.3,SNR=9.0						
ILAR	Eielson Array	48.55	33	P	P	20 55 10.0	+0.2
	0.4nm,0.7s,baz=270,slow=6.3,SNR=3.8						
FITZ	Fitzroy Crossi	57.73	199	P	P	20 56 17.6	-0.1
	1.8nm,1.1s,baz=49,slow=11,SNR=2.4						
WRA	Warramunga Arr	57.91	189	P	P	20 56 18.2	-0.8
	1.3nm,0.6s,baz=5.8,slow=7.2,SNR=30						
ASAR	Alice Springs	61.64	189	P	P	20 56 44.5	-0.1
	0.4nm,0.7s,baz=14,slow=6.9,SNR=5.7						
FINES	FINESS Array B	68.36	332	P	P	20 57 27.1	-0.8
	1.8nm,0.9s,baz=52,slow=18,SNR=3.4						
TXAR	Lajitas Array	89.23	53	P	P	20 59 23.4	+0.3
	0.2nm,0.6s,baz=321,slow=2.6,SNR=3.4						

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*ISCJB **11** 20:50:53.7±1.3, 1°.3N±0°.2×91°.4E±0°.1, h10km, mb3.6/6, Error ellipse: s-maj=26.7km s-min=18.4km az=24.6*

*IDC **11** 20:50:54.8±1.7, 1°.32N×91°.53E, h0km, mb3.6/6, mb1 3.7/8, mb1mx3.5/73, mbtmp3.6/8, ML3.7/2, MS3.0/1, Ms1 3.0/1, ms1mx2.5/59, Error ellipse: s-maj=47.2km s-min=29.0km az=47.0*

ISC 11 20:50:55.8±1.4, **1°.3N**±0°.2×**91°.5E**±0°.2, **h10**km, **n13,** σ**1^{s}00**/9, **mb3.6**/6, **North Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	7.59	78	LR	LR	20 55 23.8	
	comp=Z,98nm,19.7s,baz=86,slow=36						
PALK	Pallekele	12.28	299	Pn	Pn	20 53 50.2	-0.8
	0.2nm,0.3s,baz=115,slow=8.7,SNR=2.7						
PALK				Sn	Sn	20 55 56.9	-11
	0.2nm,0.3s,baz=103,slow=17,SNR=1.9						
CMAR	Chiang Mai Arr	18.57	23	P	Pn	20 55 12.7	-0.7
	0.1nm,0.3s,baz=218,slow=12,SNR=6.2						
H08S2	Diego Garcia H	20.91	245	T	T	21 17 17.8	
	baz=62						
H08S3	Diego Garcia H	20.91	245	T	T	21 17 17.8	
	baz=62						
H08S1	Diego Carcia H	20.93	245	T	T	21 17 23.2	
	baz=62						
MKAR	Makanchi Array	46.03	351	P	P	20 59 18.4	-1.3
	0.5nm,0.6s,baz=171,slow=8.9,SNR=6.5						
WRA	Warramunga Arr	47.01	119	P	P	20 59 27.0	-0.7
	0.3nm,0.7s,baz=297,slow=8.6,SNR=3.5						
SONM	Songino Array	48.14	13	P	P	20 59 36.8	+0.6
	0.8nm,0.7s,baz=199,slow=9.8,SNR=6.3						
KURBB	Kurchatov Arra	50.37	349	P	P	20 59 53.4	+0.3
	0.3nm,0.6s,baz=172,slow=6.7,SNR=4.4						
ZALV	Zalesovo Beam	52.78	355	P	P	21 00 11.3	+0.3
	0.7nm,0.5s,baz=193,slow=5.9,SNR=3.1						
GERES	GERESS Array B	80.99	319	P	P	21 03 12.3	+1.3
	0.2nm,0.3s,baz=94,slow=6.9,SNR=5.0						
TXAR	Lajitas Array	146.29	24	PKPbc	PKPab	21 10 39.1	+0.8
	0.2nm,0.7s,baz=338,slow=2.1,SNR=2.7						

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*IDC **11** 20:52:34.3±0.4, 15°.30S×75°.35W, h0km, mb4.4/27, mb1 4.6/30, mb1mx4.5/53, mbtmp4.4/30, ML3.8/3, MS5.0/39, Ms1 5.0/39, ms1mx4.9/45, Error ellipse: s-maj=17.9km s-min=10.9km az=67.0*

*NEIC **11** 20:52:37.0±2.0, 15°.28S×75°.29W, h14km±12km, mb5.1/117, MW5.4, ML4.9(ARE), Error ellipse: s-maj=7.3km s-min=3.6km az=70.0, Moment Tensor Solution. s58 Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.11; M$_{\theta\theta}$0.05; M$_{\phi\phi}$-1.16; M$_{r\theta}$-0.12; M$_{\theta\phi}$0.78; M$_{\phi r}$-1.19; Best double couple: M$_0$1.80000×10^{17} NP1:φ$_s$177.00000°, δ68.00000°, λ114.00000°. NP2:φ$_s$308.00000°, δ32.00000°, λ45.00000°. Principal axes: T 1.7400, Plg60.0000°, Azm121.0000°; N 0.1700, Plg22.0000°, Azm348.0000°; P -1.9100, Plg20.0000°, Azm249.0000°;*

NEIC Felt [II] at Ica, Nazca and Palpa.

*ISCJB **11** 20:52:37.2±0.2, 15°.25S±0°.03×75°.71W±0°.04, h33km, mb5.0/158, MS5.1/57 Error ellipse: s-maj=6.5km s-min=3.4km az=151.9*

*GCMT **11** 20:52:37.0±0.2, 15°.39S×75°.67W, h21km, MW5.5/111, Moment Tensor Solution. s85,c150; s111,c239; Duration: 1^{s}4 Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.69±.03; M$_{\theta\theta}$-0.04±.02; M$_{\phi\phi}$-1.65±.03; M$_{r\theta}$0.26±.04; M$_{\theta\phi}$0.66±.02; M$_{\phi r}$-1.74±.07; Best double couple: M$_0$2.50900×10^{17} NP1:φ$_s$169.00000°, δ67.00000°, λ97.00000°. NP2:φ$_s$331.00000°, δ24.00000°, λ74.00000°. Principal axes: T 2.4320, Plg67.0000°, Azm91.0000°; N 0.1550, Plg6.0000°, Azm346.0000°; P -2.5860, Plg22.0000°, Azm253.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*MOS **11** 20:52:38.7±1.3, 15°.22S×75°.33W, h35km, mb5.2/27, MS5.1/4 Error ellipse: s-maj=13.7km s-min=6.4km az=107.4*

*BJI **11** 20:52:39.5, 15°.30S×75°.40W, h25km, mB5.3/20, Ms5.5/23, Ms7 5.3/22*

ISC 11 20:52:39.0±0.3, **15°.43S**±0°.04×**75°.55W**±0°.04, **h26**km, **n844,** σ**2^{s}38**/818, **mb5.1**/158, **MS5.2**/58, **6C-6D, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	3.65	340	Pn	Pn	20 53 32.5	-1.3
	14nm,0.3s,baz=136,slow=13,SNR=17						
NNA				Sn	Sb	20 54 25.0	-1.6
	288nm,0.3s,baz=142,slow=10.0,SNR=7.3						
NNA				LR	LR	20 55 10.1	
	comp=Z,19µm,19.1s,baz=105,slow=43						
NNA	Nana	3.65	340	*e*Pn	Pn	20 53 31.9	-1.9
NNA				Sn	Sb	20 54 25.0	-1.6
NNA	Nana	3.65	340	*e*P	Pn	20 53 31.8	-1.9
MNMC	Minye Minye	6.77	124	*e*Pn	Pn	20 54 14.5	-2.5
LPAZ	La Paz	7.19	98	Pn	Pn	20 54 26.4	+3.4
	45nm,0.3s,baz=284,slow=9.5,SNR=415						
LPAZ				Sn	Sn	20 55 39.2	-4.9
	baz=330,slow=2.8,SNR=1.7						
LPAZ				LR	LR	20 57 18.8	
	comp=Z,13µm,19.8s,baz=280,slow=40						
LPAZ	La Paz	7.19	98	*e*Pn	Pn	20 54 25.3	+2.3
LPAZ				Sn	Sn	20 55 39.2	-4.9
LPAZ	La Paz	7.19	98	*e*P	Pn	20 54 25.3	+2.3
LPAZ						20 55 39.2	
PB01	IPOC Station P	8.02	135	*e*Pn	Pn	20 54 32.1	-1.9
PB04	IPOC Station P	8.56	144	*e*Pn	Pn	20 54 39.4	-2.0
ATAH	Atahualpa	8.70	341	Pn	Pn	20 54 41.4	-2.2
	0.5nm,0.3s,baz=348,slow=19,SNR=1.9						
ATAH				Sn	Sn	20 56 22.5	+1.4
	0.6nm,0.3s,baz=190,slow=18,SNR=2.0						
ATAH				LR	LR	20 58 39.5	
	comp=Z,7µm,18.4s,baz=191,slow=42						
GO02	Mina Guanaco	11.18	151	*e*Pn	Pn	20 55 15.7	-1.7
GO03	Copiap	13.07	159	*e*Pn	Pn	20 55 44.7	+1.6
GO03				*e*Sn	Sn	20 57 58.8	-9.0
SAML	Samuel	13.69	63	*e*Pn	Pn	20 55 47.1	-4.4
SAML	Samuel	13.69	63	*e*P	Pn	20 55 47.1	-4.4
SIV	San Ignacio	13.95	94	Pn	Pn	20 55 50.3	-4.8
	1.2nm,0.3s,baz=282,slow=13,SNR=26						
SIV				Lg	Lg	20 59 50.7	
	0.4nm,0.3s,baz=234,slow=18,SNR=1.7						
LCO	Las Campanas	14.24	162	*e*Pn	Pn	20 56 00.5	+1.3
LCO	Las Campanas	14.24	162	*e*P	Pn	20 56 00.5	+1.3
GO04	Tololo Observa	15.31	164	*e*Pn	Pn	20 56 14.7	+1.1
	100nm,0.9s						
GCUF	Volcan Galeras	16.64	354	*e*P	P	20 56 37.4	+4.1
FLOC	Florencia	16.90	360	*e*P	P	20 56 38.3	+2.6
CRUC	La Cruz	16.94	355	*e*P	P	20 56 40.8	+4.2
SOTA	Rioblanco	17.48	356	*e*P	P	20 56 43.5	+0.8
PCON	Cinco Dias	17.66	357	*e*P	P	20 56 49.3	+4.6
POPC	Popayan, Colom	17.89	356	*e*P	P	20 56 46.5	-0.4
ROC1	El Roble	17.95	168	*e*Pn	P	20 56 48.0	+0.6
	35nm,0.8s						
MARP	Paez Belalcaza	18.16	359	*e*P	P	20 56 50.3	+0.4
PEL	Peldehue	18.18	167	*e*Pn	P	20 56 50.2	+0.4
	57nm,0.9s						
PEL	Peldehue	18.18	167	*e*P	P	20 56 50.2	+0.4
PEL				pmax	pmax		
	comp=Z,57nm,0.9s						
PRAC	Prado	19.03	2	*e*P	Pn	20 56 58.4	-1.7
PRAC				*e*pP	pP	20 57 03.5	-2.8
PRAC	Prado	19.03	2	*e*P	Pn	20 57 01.8	+1.8
YOTC	Yotoco, Valle	19.30	358	*e*P	Pn	20 57 06.8	+3.4
VILC	Villavicencio,	19.50	6	*e*P	Pn	20 57 08.1	+2.3
GO05	HualaæØ	19.77	171	*e*P	P	20 57 06.3	-0.8
	comp=Z,51nm,1.1s						
ANIL	Santa Ana	19.79	0	*e*P	Pn	20 57 17.6	+8.1
CPUP	Villa Florida	20.16	126	P	P	20 57 10.9	-0.5
	comp=Z,13nm,0.8s,baz=297,slow=11,SNR=13						
CPUP				LR	LR	21 06 27.9	
	comp=Z,4µm,18.8s,baz=302,slow=42						
CPUP	Villa Florida	20.16	126	*e*P	P	20 57 11.3	-0.1
	comp=Z,63nm,1.3s						
CPUP	Villa Florida	20.16	126	*e*P	P	20 57 11.3	-0.1
CPUP				pmax	pmax		
	comp=Z,63nm,1.3s						
ROSC	El Rosal	20.17	4	P	P	20 57 11.1	-0.9
	comp=Z,4.1nm,0.4s,baz=198,slow=20,SNR=2.2						
ROSC				S	Sn	21 01 02.9	+2.2
	comp=Z,5.5nm,0.4s,baz=246,slow=20,SNR=2.1						
ROSC				LR	LR	21 06 52.2	
	comp=Z,11µm,19.0s,baz=211,slow=43						
ROSC	El Rosal	20.17	4	*e*P	Pn	20 57 13.0	-1.0
	comp=Z,38nm,0.9s						
ROSC				S	Sn	21 01 02.9	+2.2
ROSC	El Rosal	20.17	4	*e*P	Pn	20 57 11.8	-2.2
PLMC	San Jos˜' del	20.21	358	*e*P	P	20 57 06.7	-5.5
YOPC	Yopal, Colombi	20.88	9	*e*P	Pn	20 57 24.0	+2.0
PTGA	Pitinga	21.21	48	P	P	20 57 20.6	-2.3
	comp=Z,7.7nm,0.5s,baz=223,slow=14,SNR=14						
PTGA				S	S	21 01 16.3	-1.3
	comp=Z,3.8nm,0.6s,baz=342,slow=13,SNR=1.8						
PTGA	Pitinga	21.21	48	*e*P	P	20 57 20.3	-2.6
	comp=Z,62nm,1.2s						
PTGA				S	S	21 01 16.3	-1.3
RUSC	La Rusia	21.32	7	*e*P	P	20 57 24.4	-0.2
	comp=Z,197nm,1.6s						
RUSC	La Rusia	21.32	7	*e*P	P	20 57 23.4	-1.1
HELC	Santa Helena	21.48	0	*e*P	P	20 57 24.3	-1.9
	comp=Z,74nm,1.0s						
HELC	Santa Helena	21.48	0	*e*P	P	20 57 24.6	-1.5
PTBC	PUERTO BERRIO,	21.85	3	*e*P	P	20 57 28.3	-1.5
BARC	Barichara	22.00	6	*e*P	P	20 57 33.5	+1.9
TAMC	Tame, Arauca	22.04	10	*e*P	P	20 57 34.8	+3.0
BRRC	Barranca, Sant	22.46	5	*e*P	P	20 57 37.0	+0.7
ZARC	Zaragoza, Cauc	22.78	2	*e*P	P	20 57 38.0	-1.7
PAMC	Pamplona, Colo	22.80	7	*e*P	P	20 57 43.1	+2.7
OCAC	Ocana	23.62	6	*e*P	P	20 57 46.5	-1.8
CAPC	Capurgana	23.97	356	*e*P	P	20 57 39.6	-12
SDV	Santo Domingo	24.64	12	P	P	20 57 56.2	-1.7
	comp=Z,5.5nm,0.3s,baz=168,slow=13,SNR=4.1						
SDV				S	S	21 02 19.6	+1.6
	comp=Z,6.4nm,0.5s,baz=320,slow=11,SNR=1.9						
SDV				LR	LR	21 08 28.6	
	comp=Z,8µm,19.3s,baz=196,slow=39						
SDV	Santo Domingo	24.64	12	*e*P	P	20 57 55.0	-2.8
	comp=Z,43nm,0.8s						
SDV				S	S	21 02 19.6	+1.6
SDV	Santo Domingo	24.64	12	*e*P	P	20 57 55.7	-2.2
LPA	La Plata	25.03	144	*ce*P	P	20 58 02.0	+1.0
LPA				S	S	21 02 28.0	+4.3
LPA				PS		21 02 38.0	
LPA				SSS	SSS	21 05 07.0	
LPA				PKIKS		21 12 50.0	
TRQA	Tornquist	25.53	155	*e*P	P	20 58 04.9	-0.6
	comp=Z,108nm,1.5s						
TRQA	Tornquist	25.53	155	*e*P	P	20 58 04.9	-0.6
TRQA				pmax	pmax		
	comp=Z,108nm,1.5s						
PLCA	Paso Flores	25.59	171	P	P	20 58 06.5	+0.5
	comp=Z,13nm,0.8s,baz=9.2,slow=10,SNR=24						
PLCA				LR	LR	21 06 28.3	
	comp=Z,878nm,18.6s,baz=2.5,slow=32						
PLCA	Paso Flores	25.59	171	*e*P	P	20 58 06.2	+0.1
	comp=Z,44nm,1.1s						
PLCA	Paso Flores	25.59	171	*e*P	P	20 58 06.2	+0.1
PLCA				pmax	pmax		
	comp=Z,44nm,1.1s						
PCRV	Puerto La Cruz	27.64	24	LR	LR	21 09 28.8	
	comp=Z,3µm,21.7s,baz=198,slow=37						
RPN	Rapa Nui	33.46	244	LR	LR	21 09 19.7	
	comp=Z,4µm,21.4s,baz=96,slow=30						
CMIG	Matias Romero	37.52	329	P	P	20 59 51.9	+0.9
	comp=Z,1.3nm,0.6s,baz=110,slow=12,SNR=1.4						
CMIG				LR	LR	21 13 22.5	
	comp=Z,2µm,19.2s,baz=143,slow=33						
062Z	Marathon	40.27	352	P	P	21 00 14.2	+0.3
	baz=171						
061Z	Ochoppi	41.38	353	P	P	21 00 22.7	-0.3
	baz=172						
059A	Moore Haven	42.49	353	P	P	21 00 32.3	+0.2
	baz=172						
957A	Wimauma	43.33	351	P	P	21 00 38.8	-0.1
	baz=170						
859A	Kempfer Cattle	43.54	353	P	P	21 00 40.5	-0.1
	baz=172						
DWPF	Disney Wildern	43.65	352	P	P	21 00 40.6	-0.9
	baz=171						
857A	Zephyrhills	43.92	351	P	P	21 00 42.9	-0.7
	baz=170						
758A	Lake Helen	44.47	353	P	P	21 00 47.8	-0.2
	baz=172						
757A	Oxford	44.56	352	P	P	21 00 48.4	-0.4
	baz=171						
656A	Willston	45.04	351	P	P	21 00 51.1	-1.6
	baz=170						
657A	Interlachen	45.16	352	P	P	21 00 53.4	-0.2
	baz=171						
655A	Horseshoe Beac	45.29	351	P	P	21 00 54.7	+0.2
	baz=169						
556A	Lake Butler	45.65	352	P	P	21 00 55.2	-2.2
	baz=170						
554A	Perry	45.92	350	P	P	21 00 59.2	-0.3
	baz=169						
553A	Crawfordville	46.15	349	P	P	21 01 01.2	-0.2
	baz=168						
552A	Lynn Haven	46.26	348	P	P	21 01 02.6	+0.4
	baz=167						
456A	Hilliard	46.31	352	P	P	21 01 02.1	-0.5
	baz=171						
LNIG	Linares	46.38	329	*e*P	P	21 01 02.7	-0.6
	comp=Z,19nm,1.3s						
455A	Stateville	46.46	351	P	P	21 01 03.2	-0.7
	baz=170						
454A	Quitman	46.53	350	P	P	21 01 02.3	-2.0
	baz=169						
453A	Whigham	46.78	350	P	P	21 01 05.3	-1.0
	baz=168						
451A	Vernon	46.82	348	P	P	21 01 05.1	-1.5
	baz=166						
356A	Blackshear	46.91	352	P	P	21 01 05.5	-1.9
	baz=171						
452A	Marianna	46.93	349	P	P	21 01 05.9	-1.7
	baz=167						
TIGA	Tifton	47.23	351	P	P	21 01 09.0	-0.8
	baz=169						
449A	Pace	47.27	346	P	P	21 01 10.1	-0.1
	baz=164						
351A	Pinckard	47.43	348	P	P	21 01 10.1	-1.3
	baz=166						
352A	Blakely	47.50	349	P	P	21 01 11.3	-0.6
	baz=167						
256A	Glennville	47.53	353	P	P	21 01 11.1	-1.0
	baz=171						
255A	Hazlehurst	47.55	352	P	P	21 01 11.3	-1.0
	baz=171						
448A	Bay Minette	47.59	346	P	P	21 01 11.0	-1.6
	baz=164						
447A	Lucedale	47.66	345	P	P	21 01 12.9	-0.3
	baz=162						
254A	Abbeville	47.69	351	P	P	21 01 12.0	-1.3
	baz=170						
544A	White Castle	47.71	342	P	P	21 01 11.8	-1.8
	baz=159						
350A	Dozier	47.72	348	P	P	21 01 12.0	-1.6
	baz=166						
349A	Repton	47.84	347	P	P	21 01 12.7	-1.8
	baz=164						
446A	Poplarville	47.84	344	P	P	21 01 11.4	-3.1
	baz=162						
543A	St. Martinvill	47.90	341	P	P	21 01 12.1	-3.0
	baz=158						
253A	Americus	47.93	350	P	P	21 01 12.2	-3.0
	baz=168						
252A	Lumpkin	47.97	349	P	P	21 01 13.2	-2.3
	baz=168						
445A	Amite	48.05	343	P	P	21 01 15.3	-0.9
	baz=160						
251A	Midway	48.19	349	P	P	21 01 14.2	-3.0
	baz=167						
347A	Saraland	48.20	345	P	P	21 01 14.4	-3.0
	baz=163						
155A	Kite	48.23	352	P	P	21 01 14.2	-3.4
	baz=171						
250A	Grady	48.24	348	P	P	21 01 15.7	-2.0
	baz=166						
346A	Big Creek Wild	48.43	344	P	P	21 01 18.2	-0.9
	baz=162						
153A	Fort Valley	48.46	351	P	P	21 01 18.8	-0.6
	baz=169						
345A	Thompson Farm,	48.51	343	P	P	21 01 19.6	-0.1
	baz=161						
443A	Delano Plantat	48.51	341	P	P	21 01 20.0	+0.3
	baz=159						
151A	Opelika	48.59	349	P	P	21 01 20.3	-0.1
	baz=167						
152A	Waverly Hall	48.62	350	*e*P	P	21 01 18.8	-1.8
	comp=Z,12nm,0.9s						
248A	Dixon Mills	48.67	346	P	P	21 01 18.7	-2.3
	baz=164						
Z55A	Blythe	48.78	353	P	P	21 01 19.6	-2.2
	baz=171						
150A	Eclectic	48.80	348	P	P	21 01 20.0	-2.0
	baz=166						
344A	Westbrook Farm	48.84	343	P	P	21 01 20.7	-1.6
	baz=160						
247A	Quitman	48.84	345	P	P	21 01 20.7	-1.6
	baz=163						
Z54A	Sparta	48.89	352	P	P	21 01 21.3	-1.3
	baz=170						
441A	DeRidder	48.95	340	P	P	21 01 21.5	-1.6
	baz=157						
149A	Jones	48.95	347	P	P	21 01 21.3	-1.8
	baz=165						
Z53A	Monticello	49.04	351	P	P	21 01 22.1	-1.6
	baz=169						
Z52A	Williamson	49.08	350	P	P	21 01 22.3	-1.8
	baz=168						
GOGA	Godfrey	49.15	351	P	P	21 01 22.0	-2.7
	baz=170						
GOGA	Godfrey	49.15	351	*e*P	P	21 01 22.5	-2.1
	comp=Z,16nm,1.2s						
GOGA	Godfrey	49.15	351	*e*P	P	21 01 22.5	-2.1
GOGA				pmax	pmax		
	comp=Z,16nm,1.2s						
245A	Little AP, Sta	49.15	344	P	P	21 01 22.2	-2.4
	baz=161						
148A	Greensboro	49.17	347	P	P	21 01 22.7	-2.1
	baz=164						
HKT	Hockley	49.17	337	*e*P	P	21 01 24.3	-0.5
	comp=Z,33nm,1.4s						
HKT	Hockley	49.17	337	*e*P	P	21 01 24.3	-0.5
HKT				pmax	pmax		
	comp=Z,33nm,1.4s						
833A	Chaparral WMA,	49.24	332	P	P	21 01 22.9	-2.5
	baz=149						
342A	Flagon Creek P	49.25	341	P	P	21 01 24.1	-1.2
	baz=158						
Z51A	Franklin	49.33	349	P	P	21 01 24.8	-1.3
	baz=167						
147A	Livingston	49.35	346	P	P	21 01 24.8	-1.4
	baz=163						
244A	Avery, Jackson	49.38	343	P	P	21 01 25.5	-0.9
	baz=160						
Z50A	Ashland	49.41	349	P	P	21 01 22.7	-4.0
	baz=166,SNR=5.5						
Z50A	Ashland	49.41	349	*e*P	P	21 01 24.4	-2.3
	comp=Z,22nm,1.0s						
LRAL	Lakeview Retre	49.42	347	P	P	21 01 23.7	-3.0
	baz=165,SNR=6.2						
LRAL	Lakeview Retre	49.42	347	*e*P	P	21 01 24.9	-1.8

	comp=Z,17nm,0.9s						
243A	Waterproof	49.46	342	P	P	21 01 24.4	-2.6
	baz=159						
Z49A	Columbiana	49.47	348	P	P	21 01 24.7	-2.5
	baz=166						
341A	Kurthwood	49.48	340	P	P	21 01 25.2	-1.9
	baz=157						
Y54A	Tignall	49.48	352	P	P	21 01 24.9	-2.3
	baz=171						
Y53A	Monroe	49.60	351	P	P	21 01 25.1	-3.0
	baz=170						
Y52A	Lilburn	49.68	351	P	P	21 01 24.9	-3.9
	baz=169						
Y52A	Lilburn	49.68	351	*e*P	P	21 01 26.7	-2.0
	comp=Z,24nm,1.3s						
Z47A	Carrollton	49.81	346	P	P	21 01 27.1	-2.6
	baz=164						
242A	Grayson	49.83	341	P	P	21 01 27.8	-2.1
	baz=159						
144A	Alexander Plac	49.86	344	P	P	21 01 28.0	-2.1
	baz=161						
Z48A	Northport	49.87	347	P	P	21 01 27.3	-2.8
	baz=164,SNR=6.6						
Y51A	Rockmart	49.88	350	P	P	21 01 27.6	-2.7
	baz=168,SNR=6.4						
Y50A	Piedmont	49.99	349	P	P	21 01 30.0	-1.1
	baz=167						
Z46A	Louisville	50.01	345	P	P	21 01 30.3	-0.9
	baz=163						
Y49A	Blount Mountai	50.09	348	P	P	21 01 30.9	-1.0
	baz=166						
Y49A	Blount Mountai	50.09	348	*e*P	P	21 01 29.6	-2.2
	comp=Z,9.3nm,0.8s						
X53A	Estanollee	50.20	352	P	P	21 01 30.1	-2.5
	baz=170						
142A	Monroe	50.22	342	P	P	21 01 30.0	-2.8
	baz=159						
Y48A	Jasper	50.30	347	P	P	21 01 30.3	-3.1
	baz=165						
240A	Hunter Patters	50.32	340	P	P	21 01 30.3	-3.3
	baz=157						
Z45A	Winona	50.37	345	P	P	21 01 31.5	-2.4
	baz=162						
NATX	Nacogdoches	50.38	339	P	P	21 01 32.2	-1.8
	baz=156						
X52A	Dahlonega	50.38	351	P	P	21 01 32.0	-2.0
	baz=169						
Y47A	UCPARC, Winfie	50.44	347	P	P	21 01 31.8	-2.6
	baz=164,SNR=11						
Z44A	Pea Ridge, Bel	50.48	344	P	P	21 01 30.9	-3.8
	baz=161						
X51A	Calhoun	50.50	350	P	P	21 01 31.9	-3.0
	baz=168						
X50B	Fort Payne	50.53	349	P	P	21 01 31.5	-3.7
	baz=167,SNR=6.2						
141A	Papa Simpson,	50.57	341	P	P	21 01 32.5	-2.9
	baz=158						
KMSC	Kings Mountain	50.59	354	P	P	21 01 32.7	-2.8
	baz=172						
435B	Jarrell	50.60	335	P	P	21 01 32.9	-2.8
	baz=152						
Z43A	Armstrong Fami	50.64	343	P	P	21 01 33.2	-2.7
	baz=160						
Y46A	Houston	50.65	346	P	P	21 01 33.4	-2.6
	baz=163						
X49A	Woodville	50.71	348	P	P	21 01 34.4	-2.1
	baz=166						
X48A	Hartselle	50.80	348	P	P	21 01 34.7	-2.4
	baz=165						
X48A	Hartselle	50.80	348	*e*P	P	21 01 34.8	-2.4
	comp=Z,10nm,0.8s						
Y45A	Yeager Farm, C	50.80	345	P	P	21 01 33.2	-3.9
	baz=162						
140A	Cam and Jess,	50.81	340	P	P	21 01 33.5	-3.8
	baz=157						
W53A	Cullowhee	50.84	352	P	P	21 01 33.8	-3.8
	baz=170						
W52A	Murphy	50.87	351	P	P	21 01 34.2	-3.5
	baz=169						
Z42A	Norrel Spur, H	50.90	342	P	P	21 01 34.3	-3.6
	baz=159						
X47A	Russelville	51.03	347	P	P	21 01 35.8	-3.1
	baz=164						
Y44A	Strider, Charl	51.06	344	P	P	21 01 36.2	-2.9
	baz=161						
Z41A	Richland Creek	51.14	341	P	P	21 01 37.0	-2.7
	baz=158						
W50A	Signal Mountai	51.20	350	P	P	21 01 37.8	-2.3
	baz=168						
Y43A	Makayla and Ka	51.21	344	P	P	21 01 38.3	-1.9
	baz=161						
JCT	Junction City	51.27	333	P	P	21 01 38.8	-2.0
	baz=149						
HPIG		51.27	325	*e*P	P	21 01 41.6	+0.5
	comp=Z,30nm,1.4s						
V53A	Saluda	51.28	352	P	P	21 01 38.8	-2.0
	baz=171						
W49A	Belvidere	51.29	349	P	P	21 01 38.4	-2.4
	baz=166						
X45A	UM Field Stati	51.30	345	P	P	21 01 38.0	-2.9
	baz=162						
Z40A	Long Farm, Mag	51.33	341	P	P	21 01 38.4	-2.7
	baz=158						
Y42A	Garnett, Star	51.38	343	P	P	21 01 38.9	-2.6
	baz=160						
OXF	Oxford	51.38	345	P	P	21 01 39.3	-2.2
	baz=162						
TKL	Tuckaleechee C	51.40	351	P	P	21 01 39.6	-2.0
	comp=Z,3.0nm,0.5s,baz=166,slow=4.2,SNR=3.6						
TKL				LR	LR	21 24 31.7	
	comp=Z,1μm,19.2s,baz=163,slow=37						
TKL	Tuckaleechee C	51.40	351	*e*P	P	21 01 39.1	-2.6
	comp=Z,16nm,0.5s						
TKL	Tuckaleechee C	51.40	351	*e*P	P	21 01 39.1	-2.6
TKL				pmax	pmax		
	comp=Z,16nm,0.5s						
W48A	Pulaski	51.44	348	P	P	21 01 39.8	-2.1
	baz=166						
PLAL	Pickwick Lake	51.52	347	*e*P	P	21 01 40.1	-2.5
	comp=Z,13nm,1.1s						
V52A	Sevierville	51.55	352	P	P	21 01 40.5	-2.3
	baz=170						
V52A	Sevierville	51.55	352	*e*P	P	21 01 40.7	-2.1
	comp=Z,57nm,1.4s						
WHTX	Lake Whitney,	51.62	336	P	P	21 01 41.8	-1.6
	baz=152						
V50A	Pikevile	51.62	350	P	P	21 01 40.8	-2.4
	baz=168						
V51A	Loudon	51.63	351	P	P	21 01 41.4	-1.9
	baz=169						
Y41A	Eaglette Beard	51.66	342	P	P	21 01 41.6	-2.1
	baz=159						
W47A	Westpoint	51.68	347	P	P	21 01 41.5	-2.3
	baz=165						
W46A	Michie	51.74	347	P	P	21 01 41.4	-2.7
	baz=164						
X43A	Marvell	51.77	344	P	P	21 01 42.5	-1.9
	baz=161						
V49A	McMinnville	51.85	349	P	P	21 01 43.6	-1.4
	baz=167						
LPIG	La Paz	51.93	319	LR	LR	21 19 10.8	
	comp=Z,663nm,20.5s,baz=102,slow=31						
U53A	Fall Branch	51.94	353	P	P	21 01 44.0	-1.7
	baz=171						
W45A	Hickory Valley	51.95	346	P	P	21 01 44.5	-1.2
	baz=163						
Y40A	Okolona	51.99	341	P	P	21 01 43.4	-2.7
	baz=158						
V48A	Smith Brothers	52.00	348	P	P	21 01 43.9	-2.3
	baz=166						
X42A	Stuttgart	52.00	343	P	P	21 01 45.1	-1.0
	baz=160						
TX31	Lajitas Ar. Si	52.13	329	*e*P	P	21 01 46.1	-1.3
TXAR	Lajitas Array	52.13	329	P	P	21 01 46.3	-1.0
	comp=Z,2.2nm,0.8s,baz=146,slow=9.2,SNR=19						
TXAR				LR	LR	21 22 27.3	
	comp=Z,2μm,18.1s,baz=0.0,slow=34						
TZTN	Tazewell	52.24	352	P	P	21 01 45.8	-2.1
	baz=170						
X40A	Basin Creek Fa	52.29	342	P	P	21 01 45.3	-3.0
	baz=158						
V46A	Holladay	52.32	347	P	P	21 01 45.4	-3.1
	baz=164						
V45A	Humboldt	52.45	346	P	P	21 01 46.1	-3.4
	baz=163						
BLA	Blacksburg	52.56	355	P	P	21 01 47.3	-3.0
	baz=174						
U49A	Red Boiling Sp	52.56	350	P	P	21 01 47.1	-3.1
	baz=167						
MIAR	Mount Ida	52.57	341	P	P	21 01 47.8	-2.6
	baz=158,SNR=7.7						
MIAR	Mount Ida	52.57	341	*e*P	P	21 01 49.5	-0.9
	comp=Z,75nm,1.8s						
MIAR	Mount Ida	52.57	341	*e*P	P	21 01 49.5	-0.9
MIAR				pmax	pmax		
	comp=Z,75nm,1.8s						
WVT	Waverly	52.58	347	P	P	21 01 47.2	-3.2
	baz=165						
WVT	Waverly	52.58	347	*e*P	P	21 01 47.7	-2.7
	comp=Z,39nm,1.6s						
WVT	Waverly	52.58	347	*e*P	P	21 01 47.7	-2.7
WVT				pmax	pmax		
	comp=Z,39nm,1.6s						
W42A	Bald Knob	52.65	344	P	P	21 01 48.1	-2.9
	baz=160						
U48A	Cassie Pea, Po	52.69	349	P	P	21 01 48.3	-2.9
	baz=166						
X39A	Fountain Ranch	52.71	341	P	P	21 01 49.9	-1.6
	baz=157						
T52A	Hallie	52.72	353	P	P	21 01 48.8	-2.6
	baz=171						
V44A	Blytheville	52.76	345	P	P	21 01 49.3	-2.4
	baz=162						
W41B	Gary Mavity, V	52.76	343	P	P	21 01 49.2	-2.6
	baz=159,SNR=5.9						
W41B	Gary Mavity, V	52.76	343	*e*P	P	21 01 50.2	-1.6
	comp=Z,36nm,1.5s						
U47A	Clarksville	52.77	348	P	P	21 01 48.9	-2.9
	baz=165						
T50A	Nancy	52.90	351	P	P	21 01 48.9	-3.9
	baz=168						
U45A	Rockin P Farm,	52.99	347	P	P	21 01 49.9	-3.5
	baz=164						
W40A	Ferguson Farm,	53.02	342	P	P	21 01 52.3	-1.4
	baz=158						
W40A	Ferguson Farm,	53.02	342	*e*P	P	21 01 53.2	-0.4
	comp=Z,41nm,1.1s						
ABTX	Abilene, Hawle	53.05	334	P	P	21 01 51.3	-2.8
	baz=150						
ABTX	Abilene, Hawle	53.05	334	*e*P	P	21 01 53.6	-0.5
	comp=Z,126nm,1.8s						
T49A	Edmonton	53.09	350	P	P	21 01 51.8	-2.4
	baz=168						
U44B	Burton Farm, H	53.11	346	P	P	21 01 50.8	-3.6
	baz=163						
V42A	Cord	53.12	344	P	P	21 01 51.0	-3.4
	baz=160						
W39A	Magazine	53.24	341	P	P	21 01 52.2	-3.1
	baz=158						
W39A	Magazine	53.24	341	*e*P	P	21 01 54.9	-0.4
	comp=Z,56nm,1.4s						
T48A	Bowling Green	53.24	349	P	P	21 01 51.6	-3.8
	baz=167						
T47A	Sharon Grove	53.26	348	P	P	21 01 51.5	-3.9
	baz=166						
S52A	Salyersville	53.30	353	P	P	21 01 52.1	-3.6
	baz=171						
V41A	Mountainview	53.31	343	P	P	21 01 52.2	-3.6
	baz=160						
S51A	Beattyville	53.32	352	P	P	21 01 52.6	-3.3
	baz=170						
U44A	Portageville	53.35	346	P	P	21 01 53.7	-2.4
	baz=163						
U43A	Rector	53.40	345	P	P	21 01 53.6	-2.9
	baz=162						
T46A	Princeton	53.47	348	P	P	21 01 54.6	-2.4
	baz=165						
V40A	Witts Springs	53.52	343	P	P	21 01 54.8	-2.6
	baz=159,SNR=6.7						
V40A	Witts Springs	53.52	343	*e*P	P	21 01 56.1	-1.3
	comp=Z,60nm,1.5s						
U42A	Revenden	53.59	344	P	P	21 01 54.7	-3.2
	baz=161,SNR=7.2						
S48A	Wiedeman Farm,	53.72	350	P	P	21 01 55.8	-3.0
	baz=167						
U41A	Viola	53.77	344	P	P	21 01 56.5	-2.7
	baz=160						
V39A	Pettigrew	53.79	342	P	P	21 01 58.0	-1.4
	baz=158						
T44A	Benton	53.88	346	P	P	21 01 59.3	-0.7
	baz=163						
R52A	Catlettsburg	53.89	353	P	P	21 01 59.0	-1.1
	baz=171						
R51A	Hillsboro	53.97	352	P	P	21 01 58.5	-2.1
	baz=170						
U40A	Yellville	54.04	343	P	P	21 01 58.9	-2.3
	baz=159,SNR=9.5						
S46A	Don Dixon Farm	54.05	348	P	P	21 01 58.0	-3.2
	baz=165						
T42A	Van Buren	54.20	345	P	P	21 01 59.9	-2.4
	baz=161						
T42A	Van Buren	54.20	345	*e*P	P	21 02 00.2	-2.1
	comp=Z,43nm,1.8s						
HHAR	Hobbs	54.29	342	*e*P	P	21 02 01.9	-1.1
	comp=Z,35nm,1.4s						
WCI	Wyandotte Cave	54.32	350	P	P	21 01 59.1	-4.1
	baz=167						
WCI	Wyandotte Cave	54.32	350	*e*P	P	21 02 00.3	-2.8
	comp=Z,24nm,0.7s						
WCI	Wyandotte Cave	54.32	350	*e*P	P	21 02 00.3	-2.8
WCI				pmax	pmax		
	comp=Z,24nm,0.7s						
T41A	Mountain View	54.38	344	P	P	21 02 00.8	-2.9
	baz=160,SNR=7.3						
S44A	Carbondale	54.39	347	P	P	21 02 00.6	-3.0
	baz=163						
SIUC	Southern Illin	54.40	347	*e*P	P	21 02 00.8	-2.9
	comp=Z,22nm,0.9s						
R48A	Northridge Ran	54.41	350	P	P	21 01 59.6	-4.3
	baz=167						
R47A	Wooly Knot Far	54.42	349	P	P	21 01 59.7	-4.2
	baz=167						
S43A	Fulton Ridge,	54.46	346	P	P	21 02 00.3	-3.9
	baz=162						
R46A	Gibon Southern	54.52	348	P	P	21 02 00.6	-4.1
	baz=166						
TUL1	Leonard	54.54	340	P	P	21 02 01.8	-3.0
	baz=156,SNR=6.0						
TUL1	Leonard	54.54	340	*e*P	P	21 02 03.8	-1.0
	comp=Z,45nm,1.0s						
WMOK	Wichita Mounta	54.56	336	P	P	21 02 01.9	-3.1
	baz=152						
WMOK	Wichita Mounta	54.56	336	*e*P	P	21 02 04.3	-0.7
	comp=Z,9.8nm,1.0s						
WMOK	Wichita Mounta	54.56	336	*e*P	P	21 02 04.3	-0.7
WMOK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
Q50A	Georgetown	54.56	352	P	P	21 02 01.8	-3.1
	baz=170						
Q51A	Peebles	54.66	353	P	P	21 02 02.2	-3.4
	baz=170						
T40A	Mansfield	54.69	343	P	P	21 02 02.8	-3.1
	baz=160						
R45A	Skylar, Fairfi	54.76	348	P	P	21 02 02.5	-3.8
	baz=165						
T39A	Clever	54.81	343	P	P	21 02 03.7	-3.1
	baz=159						
S42A	Caledonia	54.82	345	P	P	21 02 04.3	-2.5
	baz=162						
Q49A	Aurora	54.85	351	P	P	21 02 04.1	-2.9
	baz=169						
R44A	Waltonville	54.88	347	P	P	21 02 03.9	-3.4
	baz=164						
S41A	Jillco Farms,	54.89	344	P	P	21 02 04.6	-2.7
	baz=160,SNR=11						
Q48A	North Vernon	54.91	350	P	P	21 02 04.5	-2.9
	baz=168,SNR=5.6						
MNTX	Cornudas Mount	54.91	329	P	P	21 02 03.9	-3.7
	baz=144						
MNTX	Cornudas Mount	54.91	329	*e*P	P	21 02 06.6	-1.1
	comp=Z,21nm,1.6s						
MCWV	Mont Chateau	54.95	356	P	P	21 02 03.9	-3.8
	baz=175						
Q47A	Bedord North L	55.03	350	P	P	21 02 05.1	-3.2
	baz=167						
PSUB	Penn St. - Bra	55.07	0	*e*P	P	21 02 07.0	-1.5
	comp=Z,15nm,0.9s						
T38A	Diamond	55.09	342	P	P	21 02 06.7	-2.1
	baz=158,SNR=7.4						
R43A	Red Bud	55.10	346	P	P	21 02 06.5	-2.3
	baz=163						
S40A	Lebanon	55.10	344	P	P	21 02 06.5	-2.4
	baz=160,SNR=7.7						
MVL	Millersville	55.14	359	*e*P	P	21 02 08.9	-0.2
	comp=Z,25nm,1.2s						
OLIL	Olney	55.14	348	*e*P	P	21 02 07.1	-2.0
	comp=Z,26nm,0.9s						
CCM	Cathedral Cave	55.20	345	P	P	21 02 06.6	-3.0
	baz=161						
CCM	Cathedral Cave	55.20	345	*e*P	P	21 02 08.8	-0.8
	comp=Z,31nm,1.5s						
CCM	Cathedral Cave	55.20	345	*e*P	P	21 02 08.8	-0.8
CCM				pmax	pmax		
	comp=Z,31nm,1.5s						
Q46A	CEJHS Indians,	55.28	349	P	P	21 02 07.4	-2.7
	baz=166						
P50A	Jamestown	55.29	352	P	P	21 02 07.4	-2.7
	baz=170						
R42A	Luebbering	55.31	345	P	P	21 02 07.6	-2.7
	baz=162						
Q45A	Warren Harvey,	55.31	348	P	P	21 02 08.3	-2.0
	baz=165						
P49A	Miami Univ. Ec	55.34	351	P	P	21 02 07.6	-3.0
	baz=169						
P48A	Milroy	55.38	351	P	P	21 02 07.0	-3.8
	baz=168						
S39A	Bolivar	55.42	343	P	P	21 02 07.9	-3.2
	baz=159,SNR=10						
S39A	Bolivar	55.42	343	*e*P	P	21 02 09.4	-1.7
	comp=Z,24nm,1.0s						
R41A	Rosebud	55.47	345	P	P	21 02 08.3	-3.2
	baz=161						
O56A	Blue Knob Stat	55.48	357	P	P	21 02 08.1	-3.5
	baz=176						
Q44A	Meyer Farm, Va	55.50	347	P	P	21 02 08.6	-3.0
	baz=164						
S38A	Stockton	55.53	342	P	P	21 02 09.3	-2.7
	baz=158						
P47A	Martinsville	55.54	350	P	P	21 02 08.6	-3.4
	baz=167						
Q43A	New Douglas	55.68	347	P	P	21 02 09.0	-4.0
	baz=163						
R40A	Maddies Statio	55.69	344	P	P	21 02 10.5	-2.5
	baz=160,SNR=7.9						
R40A	Maddies Statio	55.69	344	*e*P	P	21 02 11.0	-2.1
	comp=Z,22nm,1.0s						
LUPA	Lehigh Univers	55.74	0	*e*P	P	21 02 13.1	-0.3
	comp=Z,3.9nm,1.5s						
SSPA	Standing Stone	55.82	358	P	P	21 02 12.2	-1.8
	baz=177						
SSPA	Standing Stone	55.82	358	*e*P	P	21 02 12.7	-1.3
	comp=Z,17nm,1.1s						
P45A	Graceland, Par	55.84	349	P	P	21 02 11.8	-2.3
	baz=166						
Q42A	Golden Eagle	55.84	346	P	P	21 02 11.2	-3.0
	baz=162						
AMTX	Amarillo	55.85	334	P	P	21 02 12.1	-2.4
	baz=149						
AMTX	Amarillo	55.85	334	*e*P	P	21 02 12.7	-1.8
	comp=Z,36nm,1.7s						
R39A	Chumby, Stover	55.92	343	P	P	21 02 13.1	-1.7
	baz=159						
P44A	Sand Creek, Wi	55.96	348	P	P	21 02 11.8	-3.2
	baz=164						
R38A	Fenwick Farm,	56.05	343	P	P	21 02 13.2	-2.4
	baz=158,SNR=6.3						
Q41A	Truxton	56.05	345	P	P	21 02 12.6	-3.0
	baz=161						
N59A	State Game Lan	56.06	360	P	P	21 02 13.2	-2.5
	baz=179,SNR=5.9						
N59A	State Game Lan	56.06	360	*e*P	P	21 02 14.3	-1.4
	comp=Z,39nm,1.1s						
O48A	Farmland	56.11	351	P	P	21 02 12.3	-3.8
	baz=168						
PAL	Palisades	56.16	1	P	P	21 02 13.6	-2.8
	baz=182						
N54A	Moraine State	56.25	356	P	P	21 02 13.8	-3.3
	baz=175						
O47A	Sheridan	56.25	350	P	P	21 02 13.9	-3.2
	baz=167						
Q40A	Laux Farm, Aux	56.30	345	P	P	21 02 14.1	-3.4
	baz=160						
RKT	Rikitea	56.30	252	*e*S	S	21 10 10.6	+3.8
	comp=Z,3μm,26.5s						
RKT				*e*LR	LR	21 18 48.3	
	comp=Z,3μm,27.0s						
RKT	Rikitea	56.30	252	*e*T	T	22 03 08.4	
	comp=Z,17nm,0.2s						
P43A	Skaggs, Pawnee	56.31	347	P	P	21 02 14.2	-3.3
	baz=164						
N50A	Nevada	56.35	353	P	P	21 02 14.0	-3.7
	baz=171						
P42A	Winchester	56.44	346	P	P	21 02 14.7	-3.7
	baz=162						
O45A	Potomac	56.54	349	P	P	21 02 15.6	-3.5
	baz=166						
SFIN	Lafayette	56.55	349	P	P	21 02 15.8	-3.3
	baz=166						
O44A	Mansfield	56.59	348	P	P	21 02 16.3	-3.2
	baz=165						
Q39A	Willow Grove F	56.59	344	P	P	21 02 17.1	-2.3
	baz=160						
Q38A	Cooks Store, C	56.69	343	P	P	21 02 17.8	-2.4
	baz=159,SNR=11						
KSPA	Keystone Colle	56.70	360	*e*P	P	21 02 19.8	-0.4
	comp=Z,19nm,0.9s						
P41A	Barry, Barry	56.70	346	P	P	21 02 17.4	-2.8
	baz=162						
319A	Douglas	56.70	325	*e*P	P	21 02 21.7	+1.1
	comp=Z,18nm,0.9s						
M54A	Oil Creek Stat	56.77	356	P	P	21 02 18.5	-2.3
	baz=175						
121A	Cookes Peak, D	56.80	327	P	P	21 02 18.3	-3.0
	baz=142						
P40A	Paris	56.80	345	P	P	21 02 18.8	-2.2
	baz=161						
Q37A	Longview Farm,	56.84	342	P	P	21 02 19.5	-1.8
	baz=158						
M65A	Busby, Falmout	56.88	4	P	P	21 02 17.8	-3.7
	baz=185						
P39B	Salisbury	56.94	344	P	P	21 02 20.3	-1.6
	baz=160						
O41A	Passleys Farm,	57.07	346	P	P	21 02 20.7	-2.1
	baz=162						
N45A	Kentland	57.08	349	P	P	21 02 20.9	-2.0
	baz=166						
HDIL	Hopedale	57.14	348	P	P	21 02 20.5	-2.9
	baz=164						
N44A	Piper City	57.14	349	P	P	21 02 21.4	-2.0
	baz=165						
BRYW	Bryant College	57.18	4	*e*P	P	21 02 22.9	-0.7
	comp=Z,62nm,1.4s						
P38A	Dawn	57.28	344	P	P	21 02 21.5	-2.9
	baz=159						
P38A	Dawn	57.28	344	*e*P	P	21 02 23.0	-1.4
	comp=Z,23nm,1.2s						
BINY	Binghamton	57.34	360	P	P	21 02 21.7	-3.1
	baz=179						
BINY	Binghamton	57.34	360	*e*P	P	21 02 24.0	-0.8
	comp=Z,29nm,1.0s						
ERPA	Erie	57.40	356	P	P	21 02 22.3	-2.9
	baz=175						
M46A	Old House Fiel	57.42	350	P	P	21 02 22.7	-2.7
	baz=167						
P37A	Lathrop	57.47	343	P	P	21 02 22.6	-3.2
	baz=158						
N43A	Stutzman Famil	57.49	348	P	P	21 02 22.5	-3.3
	baz=164						
BNM	Barren Site	57.50	329	*e*P	P	21 02 27.4	+1.1
N42A	Yates City	57.56	347	P	P	21 02 23.5	-2.8
	baz=163						
Y22E	IRIS PASSCAL I	57.59	329	P	P	21 02 22.9	-4.0
	baz=143						
O39A	Kirksville	57.61	345	P	P	21 02 24.4	-2.3
	baz=160						
N41A	Harden Midland	57.63	346	P	P	21 02 25.2	-1.6
	baz=162						
M44A	Midewin, Midew	57.70	349	P	P	21 02 26.5	-0.8
	baz=165						
KSU1	Kansas State U	57.71	341	P	P	21 02 26.3	-1.1
	baz=156						
O38A	Galt	57.73	344	P	P	21 02 26.1	-1.5
	baz=159						
HRV	Adam Dziewonsk	57.76	3	P	P	21 02 25.9	-1.8
	baz=184						
HRV	Adam Dziewonsk	57.76	3	*e*P	P	21 02 26.8	-0.9
	comp=Z,27nm,1.3s						
HRV	Adam Dziewonsk	57.76	3	*e*P	P	21 02 26.8	-0.9
HRV				pmax	pmax		
	comp=Z,27nm,1.3s						
TRY	Troy	57.89	2	*e*P	P	21 02 28.1	-0.5
	comp=Z,31nm,1.0s						
M43A	Waltham Townsh	57.92	348	P	P	21 02 24.8	-4.0
	baz=164						

O37A	Wolven Farm, M	57.95	343	P	P	21 02 25.1	-4.0
	baz=158						
LAZ	Ladron	57.96	329	*e*P	P	21 02 29.8	+0.3
N40A	Mertquake, Sal	57.97	346	P	P	21 02 27.7	-1.5
	baz=161						
TASL	Snake Pit, Alb	58.06	330	P	P	21 02 28.7	-1.5
	baz=144						
ANMO	Albuquerque	58.06	330	P	P	21 02 29.4	-0.9
	comp=Z,2.8nm,0.9s,baz=144,slow=15,SNR=7.6						
ANMO				LR	LR	21 26 04.3	
	comp=Z,1µm,19.2s,baz=130,slow=35						
ANMO	Albuquerque	58.06	330	P	P	21 02 29.1	-1.2
	baz=144						
ANMO	Albuquerque	58.06	330	*e*P	P	21 02 29.9	-0.4
	comp=Z,7.7nm,1.0s						
ANMO	Albuquerque	58.06	330⇓	*e*P	P	21 02 29.7	-0.5
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.2s						
TASM	ASL Pad, Albuq	58.06	330	P	P	21 02 29.1	-1.2
	baz=144						
N39A	Derby Farms, D	58.19	345	P	P	21 02 29.1	-1.6
	baz=160						
N39A	Derby Farms, D	58.19	345	*e*P	P	21 02 31.4	+0.7
	comp=Z,54nm,1.6s						
TUC	Tucson	58.24	325	P	P	21 02 28.8	-2.6
	baz=139						
TUC	Tucson	58.24	325	*e*P	P	21 02 32.1	+0.7
	comp=Z,27nm,1.8s						
TUC	Tucson	58.24	325	*e*P	P	21 02 32.1	+0.7
TUC				pmax	pmax		
	comp=Z,27nm,1.8s						
N38A	Joes South For	58.29	344	P	P	21 02 29.9	-1.6
	baz=160						
L44A	Lake County Fo	58.44	349	P	P	21 02 31.7	-0.8
	baz=166						
M40A	Post Highland	58.45	346	P	P	21 02 32.8	+0.2
	baz=162						
CBKS	Cedar Bluff	58.52	338	P	P	21 02 32.2	-1.0
	baz=152						
N37A	Lee Faris, Mou	58.52	343	P	P	21 02 32.1	-1.0
	baz=158						
ACCN	Adirondack Com	58.55	2	*e*P	P	21 02 32.5	-0.6
	comp=Z,29nm,1.3s						
L43A	Garden Prairie	58.60	349	P	P	21 02 30.4	-3.2
	baz=165						
L42A	Oliver, Polo	58.61	348	P	P	21 02 31.1	-2.6
	baz=164						
M39A	Webster	58.67	345	P	P	21 02 32.6	-1.5
	baz=161						
N36A	Muff Farm, Cla	58.79	343	P	P	21 02 33.1	-1.8
	baz=158						
L41A	Preston	58.85	347	P	P	21 02 32.8	-2.6
	baz=163						
M38A	Pleasantville	58.87	345	P	P	21 02 33.5	-2.0
	baz=160						
T25A	Trinidad	58.94	333	P	P	21 02 34.0	-2.3
	baz=147						
T25A	Trinidad	58.94	333	*e*P	P	21 02 36.0	-0.3
	comp=Z,12nm,1.0s						
L40A	Anamosa	59.00	346	P	P	21 02 34.4	-2.0
	baz=162						
K43A	Burlington	59.03	349	P	P	21 02 32.8	-3.7
	baz=165						
M37A	Trindle Farm,	59.08	344	P	P	21 02 34.5	-2.5
	baz=159						
NCB	Newcomb	59.12	1	*e*P	P	21 02 36.0	-1.2
	comp=Z,10nm,0.8s						
214A	Organ Pipe Nat	59.12	323	P	P	21 02 34.9	-2.6
	baz=137						
L39A	Vinton	59.24	346	P	P	21 02 35.9	-2.1
	baz=161						
K42A	Prairie Point,	59.29	348	P	P	21 02 35.2	-3.2
	baz=164						
K41A	Shullsburg	59.32	347	P	P	21 02 35.8	-2.8
	baz=163						
SCIA	State Center	59.34	345	P	P	21 02 36.6	-2.1
	baz=160						
LBNH	Lisbon	59.47	3	P	P	21 02 37.4	-2.2
	baz=184						
L38A	Oak Wood Farm,	59.49	345	P	P	21 02 35.6	-4.2
	baz=160						
K40A	Colesburg	59.59	347	P	P	21 02 34.4	-6.0
	baz=162						
JFWS	Jewell Farm	59.60	348	P	P	21 02 34.0	-6.6
	baz=163						
L37A	Phoenix Point,	59.68	344	P	P	21 02 35.6	-5.4
	baz=159						
DELO	Deloro Mine	59.68	358	P	P	21 02 38.2	-2.8
	baz=177						
J43A	Natural Harves	59.70	349	P	P	21 02 36.0	-5.2
	baz=165						
LONY	Lake Ozonia	59.76	1	P	P	21 02 37.4	-4.2
	baz=181,SNR=9.3						
LONY	Lake Ozonia	59.76	1	*e*P	P	21 02 40.3	-1.4
	comp=Z,58nm,1.7s						
K39A	Oelwein	59.77	346	P	P	21 02 37.8	-3.8
	baz=161						
J42A	Columbus	59.77	349	P	P	21 02 37.4	-4.3
	baz=164						
KSCO	Kaye Shedlock'	59.78	336	P	P	21 02 37.5	-4.5
	baz=149						
W18A	Petrified Fore	59.83	328	P	P	21 02 37.0	-5.5
	baz=141						
W18A	Petrified Fore	59.83	328	*e*P	P	21 02 43.5	+1.0
	comp=Z,31nm,1.3s						
L36A	Harm Buss Farm	59.90	344	P	P	21 02 37.7	-4.9
	baz=158						
SDCO	Great Sand Dun	59.92	333	P	P	21 02 38.1	-5.0
	baz=146,SNR=11						
SDCO	Great Sand Dun	59.92	333	*e*P	P	21 02 42.5	-0.7
	comp=Z,28nm,1.3s						
K38A	Parkersburg	59.92	345	P	P	21 02 35.6	-7.1
	baz=160						
J41A	Loganville	59.99	348	P	P	21 02 38.9	-4.3
	baz=164						
SADO	Sadowa	60.00	357	P	P	21 02 40.9	-2.3
	comp=Z,6.0nm,0.6s,baz=189,slow=7.9,SNR=7.0						
SADO	Sadowa	60.00	357	*e*P	P	21 02 41.0	-2.1
	comp=Z,16nm,1.0s						
I43A	Langenfeld Bro	60.14	350	P	P	21 02 39.9	-4.3
	baz=166						
J40A	Soldiers Grove	60.17	347	P	P	21 02 42.0	-2.5
	baz=163						
X16A	Lo Mia Camp, P	60.19	326	*e*P	P	21 02 45.7	+0.7
PLVO	Plevna	60.19	359	P	P	21 02 42.8	-1.7
	baz=178						
PLVO	Plevna	60.19	359	*e*P	P	21 02 43.2	-1.3
	comp=Z,13nm,1.0s						
BANO	Bancroft	60.20	358	P	P	21 02 42.7	-1.9
	baz=177						
K37A	Belmond	60.25	345	P	P	21 02 40.4	-4.6
	baz=160						
I42A	Draeger Farm,	60.28	349	P	P	21 02 41.9	-3.3
	baz=165						
BGNE	Belgrade	60.30	341	P	P	21 02 41.0	-4.4
	baz=154						
J39A	Decorah	60.32	346	P	P	21 02 40.6	-4.9
	baz=162						
K36A	Gilmore City	60.34	344	P	P	21 02 40.6	-5.0
	baz=159						
J38A	Wedel Dairy, R	60.48	346	P	P	21 02 41.4	-5.2
	baz=161						
S22A	4UR Ranch, Cre	60.52	332	P	P	21 02 42.3	-5.0
	baz=145						
S22A	4UR Ranch, Cre	60.52	332	*e*P	P	21 02 47.0	-0.2
	comp=Z,41nm,1.9s						
I40A	Norwalk	60.62	348	P	P	21 02 41.8	-5.7
	baz=163						
I41A	Arkdale	60.63	348	P	P	21 02 40.4	-7.1
	baz=164						
H43A	Windswept, Lux	60.64	350	P	P	21 02 41.3	-6.3
	baz=166						
KLBO	Killbear Provi	60.64	356	P	P	21 02 44.2	-3.4
	baz=175						
PKME	Peaks-Kenny Pk	60.67	5	P	P	21 02 41.0	-6.8
	baz=187						
PKME	Peaks-Kenny Pk	60.67	5	*e*P	P	21 02 46.8	-0.9
	comp=Z,70nm,1.8s						
BUKO	Buck Lake	60.68	357	P	P	21 02 45.5	-2.3
	baz=176						
Y14A	Wickenburg	60.69	325	*e*P	P	21 02 48.7	+0.5
J37A	Redenius Farm,	60.74	345	P	P	21 02 43.4	-4.9
	baz=160						
ALFO	Alfred	60.77	1	P	P	21 02 47.0	-1.4
	baz=180						
I39A	Houston	60.78	347	P	P	21 02 44.3	-4.3
	baz=162						
I39A	Houston	60.78	347	*e*P	P	21 02 47.4	-1.2
	comp=Z,12nm,0.6s						
Q24A	Divide	60.78	334	P	P	21 02 44.3	-4.8
	baz=147						
H42A	Shiocton	60.81	349	P	P	21 02 44.2	-4.6
	baz=165						
MVCO	Mesa Verde	60.86	330	P	P	21 02 45.4	-4.1
	baz=143						
MVCO	Mesa Verde	60.86	330	*e*P	P	21 02 48.5	-1.0
	comp=Z,50nm,1.8s						
WUAZ	Wupatki	60.99	327	P	P	21 02 46.9	-3.5
	baz=140						
WUAZ	Wupatki	60.99	327	*e*P	P	21 02 51.0	+0.6
	comp=Z,16nm,1.1s						
GLA	Glamis	61.09	323	P	P	21 02 48.4	-2.6
	baz=136						
H41A	Junction City	61.12	349	P	P	21 02 49.4	-1.4
	baz=164						
I38A	Scanlan Farm,	61.13	346	P	P	21 02 47.5	-3.4
	baz=161						
OGNE	Ogallala	61.23	337	P	P	21 02 48.5	-3.3
	baz=150						
H40A	Chili	61.27	348	P	P	21 02 49.3	-2.6
	baz=163						
I37A	Lemond, Waseca	61.36	345	P	P	21 02 49.1	-3.4
	baz=160						
TRQ	Mont Tremblant	61.37	1	*e*P	P	21 02 51.3	-1.3
G43A	Wallace	61.39	350	P	P	21 02 49.5	-3.1
	baz=166						
Y12C	Blythe	61.41	323	P	P	21 02 50.3	-2.8
	baz=136						
F46A	Macinaw City C	61.48	353	P	P	21 02 50.4	-2.9
	baz=170						
F45A	CMU Biological	61.49	352	P	P	21 02 50.7	-2.6
	baz=169						
G42A	Mountain	61.50	350	P	P	21 02 51.7	-1.7
	baz=166						
PDMCI	Parker Dam,Lak	61.60	324	P	P	21 02 52.7	-1.6
	baz=137						
G41A	Antigo	61.61	349	P	P	21 02 53.1	-1.1
	baz=165						
ISCO	Idaho Springs	61.68	334	P	P	21 02 51.9	-3.2
	baz=146						
H38A	Maiden Rock	61.73	347	P	P	21 02 52.7	-2.3
	baz=161						
SMCO	Snowmass	61.75	333	*e*P	P	21 02 56.6	+0.8
	comp=Z,11nm,1.0s						
PV02	Paradox Valley	61.77	331	*e*P	P	21 02 54.8	-0.9
	comp=Z,59nm,2.0s						
H37A	Dierke Farm, C	61.78	346	P	P	21 02 55.1	-0.2
	baz=161						
G40A	Rib Lake	61.85	348	P	P	21 02 54.6	-1.3
	baz=164						
F43A	Flat Rock, Esc	61.87	351	P	P	21 02 54.5	-1.4
	baz=167						
BC3	Big Chuckawall	61.89	323	P	P	21 02 54.4	-2.0
	baz=135						
F44A	Big Bay de Noc	61.90	351	P	P	21 02 54.5	-1.6
	baz=168						
ECSD	EROS Data Cent	61.95	343	P	P	21 02 53.9	-2.6
	baz=157						
ECSD	EROS Data Cent	61.95	343	*e*P	P	21 02 55.0	-1.5
	comp=Z,45nm,1.7s						
H36A	Jessenland, He	62.02	345	P	P	21 02 55.2	-1.8
	baz=160						
IRM	Iron Mountain	62.06	323	P	P	21 02 56.7	-0.9
	baz=136,SNR=7.4						
G39A	Holcombe	62.07	348	P	P	21 02 55.7	-1.6
	baz=163						
G38A	Ridgeland	62.10	347	P	P	21 02 55.5	-1.9
	baz=162						
F41A	Three Lakes	62.10	349	P	P	21 02 55.7	-1.8
	baz=165						
F41A	Three Lakes	62.10	349	*e*P	P	21 02 57.3	-0.2
	comp=Z,23nm,1.5s						
U15A	North Rim	62.16	327	*e*P	P	21 02 58.7	+0.2
PQI	Presque Isle	62.18	6	*e*P	P	21 02 57.4	-0.5
	comp=Z,16nm,1.0s						
NEE2	Needles Airpor	62.20	324	P	P	21 02 55.6	-2.8
	baz=136						
109C	Camp Elliot, M	62.34	321	P	P	21 02 56.9	-2.4
	baz=134						
H35A	Sunnyside Ranc	62.36	345	P	P	21 02 55.5	-3.7
	baz=159						
E43A	Lone Tree Farm	62.38	351	P	P	21 02 57.5	-1.8
	baz=167						
XPFO	Piæon Flat	62.45	322	*e*P	P	21 03 01.1	+0.9
	comp=Z,14nm,1.0s						
PFO	Pinyon Flats O	62.45	322	P	P	21 02 57.2	-3.0
	baz=134						
PFO	Pinyon Flats O	62.45	322	*e*P	P	21 03 01.2	+1.0
	comp=Z,16nm,1.1s						
PFO	Pinyon Flats O	62.45	322	*e*P	P	21 03 01.2	+1.0
PFO				pmax	pmax		
	comp=Z,16nm,1.1s						
BELC	Belle Mtn. Jos	62.45	323	P	P	21 02 57.8	-2.4
	baz=135						
FRD	Ford Ranch, An	62.45	322	P	P	21 02 57.5	-2.7
	baz=134						
E44A	Grand Marais A	62.46	352	P	P	21 02 56.1	-3.7
	baz=168						
F40A	Park Falls	62.47	349	P	P	21 02 58.1	-1.8
	baz=164						
E42A	Champion	62.57	350	P	P	21 02 58.1	-2.5
	baz=166						
G36A	St. Michael	62.60	346	P	P	21 02 58.0	-2.8
	baz=160						
BELQ	Belleterre	62.60	358	P	P	21 02 58.8	-2.0
	baz=176						
F39A	Loretta	62.62	348	P	P	21 02 59.0	-1.9
	baz=163						
E41A	Kenton	62.78	350	P	P	21 02 58.6	-3.4
	baz=165						
F37A	Hinrichs Farm,	62.80	347	P	P	21 03 00.4	-1.7
	baz=161						
GMRC	Granite Mounta	62.81	323	P	P	21 02 59.9	-2.7
	baz=136						
F38A	Pierce - Schro	62.86	347	P	P	21 03 00.6	-1.9
	baz=162						
MURC	Murrieta	62.88	321	P	P	21 02 58.7	-4.3
	baz=134						
H32A	Carlson Farm,	62.89	343	P	P	21 03 00.2	-2.6
	baz=156						
E40A	Wakefield	62.93	349	P	P	21 03 01.7	-1.3
	baz=164						
E39A	Mellen	62.99	348	P	P	21 03 02.0	-1.4
	baz=164						
G34A	Benson	63.08	344	P	P	21 03 02.6	-1.4
	baz=158						
O20A	White River Ci	63.10	332	P	P	21 03 00.2	-4.3
	baz=144						
LCMT	Little Creek M	63.10	327	*e*P	P	21 03 05.2	+0.7
	comp=Z,11nm,1.3s						
F36A	Milaca	63.13	346	P	P	21 03 00.1	-4.3
	baz=160,SNR=7.6						
F36A	Milaca	63.13	346	*e*P	P	21 03 02.8	-1.6
	comp=Z,42nm,1.4s						
HEC	Hector,Ludlow	63.23	323	P	P	21 03 01.0	-4.3
	baz=135						
G33A	Ortonville	63.25	344	P	P	21 03 01.7	-3.4
	baz=157						
D41A	Chassel	63.29	350	P	P	21 03 03.8	-1.6
	baz=166						
TAOE	Nuku Hiva Isla	63.31	268	*e*S	S	21 11 44.8	+7.3
	comp=Z,844nm,26.6s						
TAOE	Nuku Hiva Isla	63.31	268	*e*LR	LR	21 21 59.0	
	comp=Z,4µm,24.6s						
SRU	San Rafael Swe	63.34	330	*e*P	P	21 03 06.8	+0.7
	comp=Z,21nm,1.3s						
SRU	San Rafael Swe	63.34	330	*e*P	P	21 03 06.8	+0.7
SRU				pmax	pmax		
	comp=Z,21nm,1.3s						
F35A	Swanville	63.38	345	P	P	21 03 02.9	-3.1
	baz=159						
F34A	Alexandria	63.49	345	P	P	21 03 04.2	-2.6
	baz=158						
CCUT	Cedar City	63.57	327	*e*P	P	21 03 08.0	+0.2
	comp=Z,8.8nm,1.1s						
G32A	Webster	63.60	343	P	P	21 03 03.5	-4.0
	baz=156						
BFSC	Mount Baldy Ra	63.60	322	P	P	21 03 06.9	-1.0
	baz=134						
P18A	Preston Nutter	63.61	331	*e*P	P	21 03 07.3	-0.7
	comp=Z,32nm,1.5s						
E36A	McGregor	63.69	346	P	P	21 03 04.6	-3.4
	baz=161,SNR=5.5						
MSU	Marysvale	63.69	329	*e*P	P	21 03 09.0	+0.5
MSU	Marysvale	63.69	329	*e*P	P	21 03 09.0	+0.5
P17A	Butcher Ranch,	63.73	330	*e*P	P	21 03 07.5	-1.2
	comp=Z,27nm,1.3s						
SHPR	Sheep Range	63.77	325	*e*P	P	21 03 09.6	+0.6
	comp=Z,10nm,1.1s						
GSC	Goldstone, Bar	63.84	323	P	P	21 03 06.4	-2.9
	baz=135						
E35A	Pequot Lakes	63.99	346	P	P	21 03 08.0	-2.0
	baz=160						
SNCC	San Nicolas Is	64.07	320	P	P	21 03 07.7	-3.2
	baz=132						
D37A	Cotton	64.12	347	P	P	21 03 07.4	-3.4
	baz=162						
E34A	Wadena	64.14	345	P	P	21 03 08.1	-2.9
	baz=159						
C40A	Isle Royale Na	64.22	350	P	P	21 03 08.0	-3.4
	baz=165						
EDW2	Edwards Air Fo	64.24	322	P	P	21 03 08.8	-3.2
	baz=134						
D36A	Goodland	64.29	347	P	P	21 03 08.9	-3.1
	baz=161						
BLG	Laguna Peak, P	64.36	321	P	P	21 03 09.7	-3.1
	baz=132						
D35A	Remer	64.40	346	P	P	21 03 10.8	-1.9
	baz=160						
C38A	Sawbill Land.	64.41	348	P	P	21 03 10.2	-2.6
	baz=163						
K22A	Casper	64.43	335	P	P	21 03 11.2	-2.0
	baz=146						
PSUT	Pine Spring	64.56	327	*e*P	P	21 03 14.9	+0.6
	comp=Z,7.7nm,0.9s						
C37A	Embarrass	64.61	348	P	P	21 03 10.9	-3.1
	baz=162						
SCZ2	Santa Cruz Isl	64.64	320	P	P	21 03 11.6	-2.9
	baz=132						
EYMN	Ely	64.68	348	P	P	21 03 12.4	-2.1
	baz=163						
EYMN	Ely	64.68	348	*e*P	P	21 03 12.9	-1.6
	comp=Z,17nm,1.2s						
TPNV	Topopah Spring	64.69	325	P	P	21 03 12.9	-2.2
	baz=136						
TPNV	Topopah Spring	64.69	325	*e*P	P	21 03 15.9	+0.9
	comp=Z,12nm,1.1s						
TPNV	Topopah Spring	64.69	325	*e*P	P	21 03 16.0	+0.9
TPNV				pmax	pmax		
	comp=Z,12nm,1.1s						
RSSD	Black Hills	64.72	338	P	P	21 03 12.0	-3.2
	baz=149						
C36A	Pine Crest Far	64.77	347	P	P	21 03 11.4	-3.7
	baz=161,SNR=5.2						
ARVC	Arvin	64.91	322	P	P	21 03 13.4	-2.8
	baz=133						
MATQ	Matagami	64.92	359	P	P	21 03 14.4	-1.7
	baz=178						
JLU	Jordanelle	64.95	330	*e*P	P	21 03 17.6	+0.8
	comp=Z,44nm,1.6s						
C35A	Jirik Farms, M	64.97	346	P	P	21 03 15.3	-1.1
	baz=160						
DAC	Darwin (Calif)	64.98	323	*e*P	P	21 03 17.3	+0.4
	comp=Z,6.1nm,1.0s						
DAC	Darwin (Calif)	64.98	323	*e*P	P	21 03 17.3	+0.4
DAC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SBC	Santa Barbara	64.98	321	P	P	21 03 15.6	-1.2
	baz=132						
ISA	Isabella, Lake	65.06	322	P	P	21 03 16.5	-0.9
	baz=133						
C34A	RKJ Ranch, Bem	65.14	346	P	P	21 03 16.3	-1.2
	baz=159						
DUG	Dugway, Tooele	65.30	329	P	P	21 03 15.9	-2.9
	baz=140						
DUG	Dugway, Tooele	65.30	329	*e*P	P	21 03 19.4	+0.6
	comp=Z,33nm,1.4s						
DUG	Dugway, Tooele	65.30	329	*e*P	P	21 03 19.4	+0.6
DUG				pmax	pmax		
	comp=Z,33nm,1.4s						
TCUT	Toone Canyon	65.33	331	*e*P	P	21 03 20.1	+0.8
	comp=Z,19nm,0.7s						
R11A	Troy Canyon, C	65.34	326	P	P	21 03 15.4	-3.8
	baz=137						
R11A	Troy Canyon, C	65.34	326	*e*P	P	21 03 16.3	-3.0
	comp=Z,20nm,1.5s						
PKM	Mcpherson Peak	65.34	321	P	P	21 03 16.2	-3.1
	baz=132						
CWC	Cottonwood Cre	65.37	323	P	P	21 03 15.6	-3.9
	baz=134						
C33A	Trail	65.45	345	P	P	21 03 17.5	-2.0
	baz=158						
B35A	Bob, Littlefor	65.54	347	P	P	21 03 18.6	-1.4
	baz=160						
B35A	Bob, Littlefor	65.54	347	*e*P	P	21 03 18.4	-1.6
	comp=Z,18nm,1.2s						
SMMC	Simmler	65.74	321	P	P	21 03 20.1	-1.6
	baz=132						
BW06	Boulder Array	65.81	333	P	P	21 03 20.1	-2.1
	baz=144						
PDAR	Pinedale Array	65.81	333	P	P	21 03 21.5	-0.7
	comp=Z,1.1nm,0.8s,baz=170,slow=5.9,SNR=1.3						
PDAR				LR	LR	21 32 09.0	
	comp=Z,768nm,21.6s,baz=154,slow=36						
B34A	Aery, Baudette	65.86	346	P	P	21 03 20.9	-1.2
	baz=160						
TIN	Tinemaha, Big	65.89	324	P	P	21 03 20.7	-2.0
	baz=134						
AGMN	Agassiz Nation	65.97	345	P	P	21 03 22.2	-0.7
	baz=158						
AGMN	Agassiz Nation	65.97	345	*e*P	P	21 03 21.5	-1.4
	comp=Z,36nm,1.6s						
A33A	Warroad	66.46	346	P	P	21 03 24.4	-1.6
	baz=159						
HVU	Hansel Valley	66.49	330	*e*P	P	21 03 26.4	-0.2
	comp=Z,15nm,1.2s						
HVU	Hansel Valley	66.49	330	*e*P	P	21 03 26.4	-0.2
HVU				pmax	pmax		
	comp=Z,15nm,1.2s						
MLAC	Mammoth, Mammo	66.63	324	P	P	21 03 25.7	-2.0
	baz=134						
OMMB	Old Mammoth Mi	66.72	324	*e*P	P	21 03 28.9	+0.6
	comp=Z,16nm,1.1s						
NV11	Mina Array Sit	66.81	325	*e*P	P	21 03 29.3	+0.6
	comp=Z,1.0nm,1.2s						
NV01	Mina Array Sit	66.89	325	*e*P	P	21 03 29.5	+0.3
NVAR	Mina Array Bea	66.89	325	P	P	21 03 29.6	+0.3
	comp=Z,1.7nm,0.8s,baz=150,slow=5.5,SNR=3.8						
NVAR				LR	LR	21 32 08.0	
	comp=Z,965nm,18.8s,baz=237,slow=36						
ELK	Elko	66.92	328	P	P	21 03 29.5	+0.1
	comp=Z,0.9nm,0.7s,baz=172,slow=6.5,SNR=3.8						
KVN	Kaiserville	67.21	325	*e*P	P	21 03 31.8	+0.5
	comp=Z,20nm,1.7s						
H17A	Grant Village	67.55	334	P	P	21 03 31.9	-1.5
	baz=143						
RLMT	Red Lodge	67.59	335	P	P	21 03 32.6	-0.9
	baz=144						
LAO	LASA Array	67.71	338	P	P	21 03 33.4	-0.7
	baz=148						
ULM	Lac du Bonnet	67.80	346	P	P	21 03 32.5	-1.9
	comp=Z,6.5nm,0.8s,baz=150,slow=6.3,SNR=6.4						
ULM				LR	LR	21 37 15.2	
	comp=Z,1µm,18.5s,baz=150,slow=40						
ULM	Lac du Bonnet	67.80	346	*e*P	P	21 03 33.1	-1.3
	comp=Z,28nm,1.3s						
YERR	Yerington	67.80	324	*e*P	P	21 03 36.5	+1.5
	comp=Z,19nm,1.4s						
CMB	Columbia Colle	67.80	323	*e*P	P	21 03 31.7	-3.1
	comp=Z,8.1nm,1.2s						
CMB	Columbia Colle	67.80	323	*e*P	P	21 03 31.7	-3.1
CMB				pmax	pmax		
	comp=Z,8.0nm,1.2s						
VNA3	Neumayer Olymp	67.81	161	P	P	21 03 34.4	0.0
VNA1	Neumayer--Stat	68.08	161	P	P	21 03 36.7	+0.7
PAHR	Pah Rah Range	68.38	325	*e*P	P	21 03 38.7	+0.2
	comp=Z,24nm,1.2s						
HLID	Hailey	68.64	331	P	P	21 03 39.3	-0.7
	baz=139,SNR=5.1						
HLID	Hailey	68.64	331	*e*P	P	21 03 40.6	+0.5
	comp=Z,6.0nm,0.9s						
AFDM	Forest Hills D	68.76	323	*e*P	P	21 03 41.3	+0.5
	comp=Z,13nm,1.3s						
MCMT	McKenzie Canyo	68.89	332	*e*P	P	21 03 42.8	+1.0
BOZ	Bozeman (W)	68.96	334	P	P	21 03 41.3	-0.8
	baz=142						
DLMT	Dillon	69.20	333	*e*P	P	21 03 44.2	+0.7
	comp=Z,42nm,1.9s						
MFID	Camas Ranch	69.20	330	*e*P	P	21 03 44.1	+0.5
	comp=Z,25nm,1.3s						
ORV	Oroville	69.47	324	*e*P	P	21 03 46.0	+0.9
	comp=Z,35nm,1.1s						
ORV	Oroville	69.47	324	*e*P	P	21 03 46.0	+0.9
ORV				pmax	pmax		

	comp=Z,35nm,1.1s						
TBI	Tubuai	69.53	250	eT	T	22 19 39.6	
	comp=Z,16nm,0.2s						
ROSA	Rosais	69.70	38	eP	P	21 03 46.4	-0.2
	comp=Z,26nm,0.5s						
SNAA	Sanae	70.03	161	P	P	21 03 48.4	+0.2
SNAA	Sanae	70.03	161	P	P	21 03 48.1	-0.1
	comp=Z,9.1nm,0.7s,baz=279,slow=5.0,SNR=69						
SNAA				LR	LR	21 31 01.5	
	comp=Z,381nm,21.1s,baz=289,slow=33						
SNAA	Sanae	70.03	161	eP	P	21 03 48.3	+0.1
	comp=Z,14nm,0.9s						
SNAA	Sanae	70.03	161	c iP	P	21 03 48.2	-0.1
SNAA				pmax	pmax		
	comp=Z,794nm,1.0s						
PGRA	Graciosa	70.06	38	eP	P	21 03 49.8	+1.0
	comp=Z,16nm,0.5s						
O03D	Paynes Creek	70.14	324	P	P	21 03 48.6	-0.7
	baz=132						
EGMT	Eagleton	70.16	336	P	P	21 03 48.4	-0.9
	baz=145						
TVO	Taravao	70.24	256	eT	T	22 20 32.1	
	comp=Z,1.4nm,0.2s						
TIAR	Tiarei	70.37	257	eT	T	22 20 41.0	
	comp=Z,6.6nm,0.2s						
SCHQ	Schefferville	70.37	5	LR	LR	21 36 45.2	
	comp=Z,582nm,19.2s,baz=198,slow=38						
MOD	Modoc Plateau	70.41	326	eP	P	21 03 52.2	+1.2
	comp=Z,18nm,1.4s						
PSMN	Pico do Norte,	70.56	41	eP	P	21 03 52.6	+0.7
	comp=Z,69nm,1.2s						
PPT2	Papeete2	70.58	256	eS	S	21 13 08.0	+2.8
	comp=Z,3µm,26.0s						
PPT2	Papeete2	70.58	256	eLR	LR	21 25 25.9	
	comp=Z,1µm,24.0s,baz=97						
PPT	Papeete	70.58	257	LR	LR	21 28 15.9	
	comp=Z,469nm,18.2s,baz=112,slow=30						
PSET	Sete Cidades	70.65	40	eP	P	21 03 54.4	+1.9
	comp=Z,42nm,0.4s						
CMLA	Cha da Macela	70.74	40	eP	P	21 03 53.8	+0.8
	comp=Z,26nm,0.4s						
MSO	Missoula	70.93	333	P	P	21 03 53.7	-0.3
	baz=140						
MSO	Missoula	70.93	333	eP	P	21 03 54.7	+0.7
	comp=Z,18nm,1.3s						
BMO	Blue Mountains	70.98	330	eP	P	21 03 54.1	-0.2
BMO				ePcP	pP	21 04 01.9	-0.8
BMO	Blue Mountains	70.98	330	eP	P	21 03 54.2	-0.2
BMO				e		21 04 01.9	
M04C	Macdoel	71.16	325	P	P	21 03 54.1	-1.5
	baz=132						
M02C	Callahan	71.47	324	P	P	21 03 55.8	-1.6
	baz=131						
YBH	Yreka Blue Hor	71.61	325	P	P	21 03 56.3	-2.0
	comp=Z,1.3nm,0.6s,baz=127,slow=5.1,SNR=2.9						
YBH				LR	LR	21 35 05.0	
	comp=Z,799nm,18.9s,baz=138,slow=36						
K04D	Chiloquin, OR	71.69	326	P	P	21 03 57.3	-1.4
	baz=133						
J05D	Fort Rock, OR	71.86	327	P	P	21 03 59.0	-0.8
	baz=133						
PINE	Pine Mountain	72.05	327	eP	P	21 04 01.9	+0.9
PINE				ePcP	sP	21 04 09.9	-2.4
L02D	Cave Junction,	72.39	325	P	P	21 04 02.2	-0.7
	baz=131						
I05D	Terrebonne, OR	72.64	327	P	P	21 04 03.7	-0.7
	baz=133						
WALA	Waterton Lakes	72.65	335	eP	P	21 04 04.4	0.0
	comp=Z,30nm,1.6s						
I04A	Tendick Farm,	72.83	326	P	P	21 04 05.3	-0.2
	baz=132						
DBIC	Dimbokro	73.36	78	P	P	21 04 07.5	-1.7
	comp=Z,4.8nm,0.8s,baz=230,slow=8.8,SNR=6.5						
DBIC				LR	LR	21 34 38.3	
	comp=Z,5µm,19.4s,baz=220,slow=34						
FFC	Flin Flon	73.40	344	eP	P	21 04 07.8	-0.7
	comp=Z,34nm,1.9s						
FFC	Flin Flon	73.40	344	eP	P	21 04 07.8	-0.7
FFC				pmax	pmax		
	comp=Z,34nm,1.9s						
PMOZ	Porto Moniz, M	73.53	48	eP	P	21 04 11.5	+1.6
PMOZ	Porto Moniz, M	73.53	48	eLR	LR	21 31 10.8	
	comp=Z,726nm,20.0s						
B08A	Colville Reser	74.49	331	eP	P	21 04 14.2	-0.9
	comp=Z,13nm,1.3s						
NVL	N’lazarevskaya	74.69	160	⇓iP	P	21 04 17.3	+1.4
NVL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
QSPA	South Pole Qui	74.73	180	P	P	21 04 17.0	+0.6
	comp=Z,9.5nm,0.7s,baz=146,slow=2.3,SNR=24						
QSPA				LR	LR	21 33 50.1	
	comp=Z,286nm,18.0s,baz=169,slow=33						
FCC	Fort Churchill	75.47	350	eP	P	21 04 19.5	-0.9
	comp=Z,22nm,1.2s						
FCC	Fort Churchill	75.47	350	eP	P	21 04 19.5	-0.9
FCC				pmax	pmax		
	comp=Z,22nm,1.2s						
NLWA	Neilton Lookou	76.01	328	eP	P	21 04 25.0	+1.2
	comp=Z,19nm,1.0s						
KOWA	Kowa	76.69	71	P	P	21 04 26.8	-1.5
	comp=Z,5.2nm,0.7s,baz=254,slow=5.1,SNR=6.3						
KOWA				LR	LR	21 37 07.8	
	comp=Z,5µm,19.3s,baz=240,slow=35						
FRB	Frobisher Bay	79.11	3	LR	LR	21 39 34.4	
	comp=Z,893nm,21.4s,baz=186,slow=36						
RAR	Rarotonga	79.30	251	LR	LR	21 31 21.6	
	comp=Z,1µm,18.6s,baz=109,slow=29						
SBA	Scott Base	80.59	191	eP	P	21 04 50.8	+2.0
	comp=Z,42nm,1.8s						
SBA	Scott Base	80.59	191	eP	P	21 04 50.8	+2.0
SBA				pmax	pmax		
	comp=Z,42nm,1.8s						
TORD	Torodi Ar. Bea	81.50	74	P	P	21 04 51.7	-3.0
	comp=Z,16nm,0.8s,baz=265,slow=5.1						
TORD				LR	LR	21 39 22.4	
	comp=Z,4µm,20.0s,baz=285,slow=34						
PFVI	Vila Bisbo	81.62	48	eP	P	21 04 55.1	+0.2
	comp=Z,102nm,2.0s						
VNDA	Vanda	81.66	191	P	P	21 04 55.1	+0.6
	comp=Z,3.1nm,0.9s,baz=139,slow=4.0,SNR=16						
VNDA				LR	LR	21 35 17.2	
	comp=Z,999nm,18.5s,baz=124,slow=31						
VNDA	Vanda	81.66	191	eP	P	21 04 56.4	+1.9
VNDA	Vanda	81.66	191	eP	P	21 04 56.4	+1.9
MORF	Marmelete	81.82	48	eP	P	21 04 55.2	-0.8
MORF				eS	S	21 15 07.2	-0.7
MORF				AMS	AMS	21 39 55.8	
	comp=Z,1µm,19.7s						
MORF	Marmelete	81.82	48	eP	P	21 04 58.1	+2.1
	comp=Z,76nm,2.1s						
MORF	Marmelete	81.82	48	eS	S	21 15 12.6	+4.7
MORF	Marmelete	81.82	48	eP	P	21 04 55.2	-0.8
MORF				eS	S	21 15 07.2	-0.7
PTEO	Sao Teotonio	81.88	48	eP	P	21 04 55.3	-0.9
	comp=Z,98nm,1.7s						
PMST	Lisbon--Monsan	82.09	46	eP	P	21 04 56.2	-1.1
LIS	Lisbon	82.10	46	eP	P	21 04 56.6	-0.7
LIS				AMS	AMS	21 38 40.2	
	comp=Z,2µm,19.9s						
LIS	Lisbon	82.10	46	eP	P	21 04 59.9	+2.6
LIS	Lisbon	82.10	46	eP	P	21 04 56.6	-0.7
PMAFR	Mafra	82.12	46	eP	P	21 04 58.7	+1.2
PMAFR	Mafra	82.12	46	eS	S	21 15 23.0	+12
PNCL	Nicolau / Gran	82.27	47	eP	P	21 04 58.3	+0.1
	comp=Z,38nm,1.5s						
PNCL	Nicolau / Gran	82.27	47	eS	S	21 15 18.6	+6.3
PBDV	Barranco-do-Ve	82.31	48	eP	P	21 04 51.6	-6.9
PBDV	Barranco-do-Ve	82.31	48	eP	P	21 05 00.5	+2.0
PBDV	Barranco-do-Ve	82.31	48	eS	S	21 15 19.4	+6.5
MESJ	Messejana	82.37	47	eP	P	21 04 58.0	-0.8
MESJ				AMS	AMS	21 40 22.9	
	comp=Z,889nm,16.5s						
MESJ	Messejana	82.37	47	eP	P	21 04 59.9	+1.1
	comp=Z,45nm,1.5s						
MESJ	Messejana	82.37	47	eP	P	21 04 57.9	-0.8
PCVE	Castro Verde	82.40	48	eP	P	21 04 59.0	0.0
	comp=Z,43nm,1.5s						
PCVE	Castro Verde	82.40	48	eS	S	21 15 21.0	+7.2
PVAQ	Vaqueiros	82.53	48	eP	P	21 04 59.9	+0.2
	comp=Z,32nm,0.8s						
PVAQ	Vaqueiros	82.53	48	eS	S	21 15 14.6	-0.5
PVAQ	Vaqueiros	82.53	48	eLR	LR	21 35 03.9	
	comp=Z,1µm,20.0s						
ALMR	Almeirim	82.70	46	eP	P	21 04 59.7	-0.8
ALMR				AMS	AMS	21 38 14.9	
	comp=E,2µm,21.7s						
ALMR	Almeirim	82.70	46	eP	P	21 05 00.4	-0.1
	comp=E,104nm,1.8s						
ALMR	Almeirim	82.70	46	eP	P	21 04 59.7	-0.8
PBEJ	Beja	82.70	47	eP	P	21 05 01.5	+1.0
	comp=E,32nm,1.6s						
EVO	Evora	82.82	47	eP	P	21 04 59.7	-1.4
	comp=E,24nm,1.8s						
PMTG	Montargil	82.90	46	eP	P	21 05 01.1	-0.4
	comp=E,47nm,1.5s						
PMTG	Montargil	82.90	46	eS	S	21 15 18.1	-0.7
MDT	Midelt	82.95	53	LR	LR	21 41 48.8	
	comp=E,1µm,18.4s,baz=268,slow=36						
PTOM	Tomar	83.02	46	eP	P	21 05 02.0	-0.1
	comp=E,44nm,1.5s						
PCAS	Casmilo, Conde	83.15	45	eP	P	21 05 02.5	-0.3
	comp=E,47nm,1.6s						
PCAS	Casmilo, Conde	83.15	45	eS	S	21 15 28.1	+6.8
PESTR	Estremoz	83.26	47	eP	P	21 05 03.4	0.0
	comp=E,28nm,1.8s						
PESTR	Estremoz	83.26	47	eS	S	21 15 29.9	+7.4
COI	Coimbra	83.28	45	eP	P	21 05 04.2	+0.7
	comp=E,73nm,1.6s						
YKA	Yellowknife Ar	83.48	343	P	P	21 05 02.7	-1.2
	comp=E,3.9nm,0.9s,baz=137,slow=4.7,SNR=11						
YKA				LR	LR	21 46 44.4	
	comp=E,100nm,18.5s,baz=130,slow=39						
PMRV	Marv??o	83.64	46	eP	P	21 05 04.6	-0.8
	comp=E,20nm,1.4s						
PMRV	Marv??o	83.64	46	eS	S	21 15 27.3	+1.0
PMRV	Marv??o	83.64	46	eLR	LR	21 34 05.4	
	comp=E,1µm,20.0s						
PCBR	Castelo Branco	83.76	46	eP	P	21 05 05.1	-0.8
	comp=E,26nm,1.7s						
PVIS	Viseu	83.86	45	eP	P	21 05 06.9	+0.4
	comp=E,48nm,1.6s						
MTE	Manteigas	83.96	45	eP	P	21 05 06.1	-1.0
	comp=E,33nm,1.5s						
MTE	Manteigas	83.96	45	eS	S	21 15 32.3	+2.7
MTE	Manteigas	83.96	45	eLR	LR	21 34 51.7	
	comp=E,1µm,22.0s						
PGAV	Gavieira, Arco	84.16	44	eP	P	21 05 07.3	-0.8
	comp=E,33nm,1.7s						
PGAV	Gavieira, Arco	84.16	44	eS	S	21 15 34.3	+2.7
PGAV	Gavieira, Arco	84.16	44	eLR	LR	21 34 16.5	
	comp=E,1µm,20.0s						
POLO	Lamas de Olo	84.22	44	eP	P	21 05 09.3	+0.9
	comp=E,17nm,1.6s						
POLO	Lamas de Olo	84.22	44	eS	S	21 15 37.2	+5.0
SFJD	Kangerlussuaq	84.22	10	LR	LR	21 44 46.4	
	comp=E,364nm,19.0s,baz=210,slow=37						
SYO	Syowa Base	84.32	161	⇑eP	P	21 05 07.0	-1.3
SYO	Syowa Base	84.32	161	⇓epP	pP	21 05 13.6	-3.1
MVO	Moncorvo	84.64	45	eP	P	21 05 09.8	-0.7
	comp=E,30nm,1.6s						
MVO	Moncorvo	84.64	45	eS	S	21 15 38.9	+2.5
MVO	Moncorvo	84.64	45	eLR	LR	21 35 02.2	
	comp=E,955nm,20.0s						
PBRG	Braganca	85.12	44	eP	P	21 05 12.2	-0.6
	comp=E,28nm,1.7s						
PBRG	Braganca	85.12	44	eS	S	21 15 47.5	+6.5
PAB	San Pablo	85.83	47	eP	P	21 05 16.2	-0.3
PAB	San Pablo	85.83	47	eP	P	21 05 16.2	-0.3
DLBC	Dease Lake	85.99	335	P	P	21 05 16.1	-0.7
	comp=E,3.3nm,0.6s,baz=142,slow=4.6,SNR=5.9						
DLBC	Dease Lake	85.99	335	eP	P	21 05 17.5	+0.7
ESDC	Sonseca Array	86.16	47	P	P	21 05 17.4	-0.6
	comp=E,1.3nm,0.7s,baz=257,slow=5.3,SNR=8.9						
ESDC				LR	LR	21 42 13.2	
	comp=E,1µm,18.4s,baz=250,slow=35						
ES19	SONSECA Array	86.21	47	eP	P	21 05 17.8	-0.5
TSUM	Tsumeb	87.90	109	eP	P	21 05 26.8	-0.3
TAM	Tamanrasset	87.92	66	eP	P	21 05 27.5	+0.4
TAM	Tamanrasset	87.92	66	eP	P	21 05 27.5	+0.4
SUMG	Summit	91.16	10	eP	P	21 05 41.1	-0.5
SUMG	Summit	91.16	10	i P	P	21 05 39.4	-2.1
SUMG	Summit	91.16	10	i P	P	21 05 39.4	-2.1
MAW	Mawson	91.85	165	P	P	21 05 44.2	-0.3
	comp=E,1.8nm,0.7s,baz=4.7,slow=2.6,SNR=3.9						
MAW				LR	LR	21 44 46.9	
	comp=E,849nm,20.5s,baz=231,slow=34						
BOSA	Boshof	91.89	120	LR	LR	21 43 37.7	
	comp=E,1µm,20.7s,baz=252,slow=33						
AFI	Afiamalu	92.21	255	LR	LR	21 38 53.7	
	comp=E,714nm,18.4s,baz=110,slow=30						
EKA	Eskdalemuir Ar	92.88	33	LR	LR	21 42 58.1	
	comp=E,310nm,21.3s,baz=200,slow=33						
INK	Inuvik	93.17	342	P	P	21 05 48.4	-1.9
	comp=E,3.3nm,0.8s,baz=160,slow=4.6,SNR=3.5						
INK	Inuvik	93.17	342	eP	P	21 05 49.7	-0.6
INK	Inuvik	93.17	342	eP	P	21 05 49.7	-0.6
KEST	Kesra	94.81	54	LR	LR	21 49 24.0	
	comp=E,1µm,19.1s,baz=186,slow=36						
ILAR	Eielson Array	96.12	336	P	P	21 06 05.0	+1.0
	comp=E,0.5nm,0.9s,baz=156,slow=7.4,SNR=3.5						
ILAR				PP	PP	21 10 01.1	+4.0
	comp=E,0.6nm,0.9s,baz=98,slow=6.5,SNR=4.9						
ILAR				LR	LR	21 55 32.9	
	comp=E,575nm,18.2s,baz=116,slow=39						
MDM	Murphy Dome	96.72	336	eP	P	21 06 07.6	+0.8
DAG	Danmarks Havn	97.81	11	i P	P	21 06 09.8	-1.6
DAG	Danmarks Havn	97.81	11	eP	P	21 06 09.8	-1.6
DAVOX	Davos/Dischmat	98.00	44	P	P	21 06 11.5	-1.6
	baz=319,slow=9.3,SNR=4.1						
DAVOX				LR	LR	21 48 37.5	
	comp=E,944nm,19.6s,slow=34						
NKC	Novy Kostel	100.42	41	ePP	PP	21 10 27.4	-3.2
NKC				AMS	AMS	21 49 40.0	
	comp=E,500nm,20.7s						
KHC	Kasperske Hory	100.93	42	ePP	PP	21 10 30.8	-3.7
KHC				eSKS		21 17 04.4	
KHC				ePS	PS	21 19 38.0	+1.3
KHC				AMS	AMS	21 52 20.0	
	comp=E,700nm,17.1s						
GERES	GERESS Array B	100.96	42	P	Pdif	21 06 24.6	-1.6
	comp=E,0.3nm,0.3s,baz=251,slow=4.1,SNR=5.6						
CLL	Collm	100.98	40	epPdif	Pdif	21 06 29.0	+2.9
CLL				ePP	PP	21 10 34.0	-0.7
CLL				ePPP	PPP	21 12 42.0	
CLL				eSKSac	SKSac	21 17 08.0	+4.5
CLL				eSdif	Sdif	21 18 00.0	-2.8
CLL				ePS	PS	21 19 39.0	+2.0
CLL				ePPS	PPS	21 20 24.0	
CLL				eSS	SS	21 25 06.0	+4.0
CLL				eSSS	SSS	21 28 48.0	
CLL				LmV		21 52 00.0	
	comp=Z,700nm,18.2s						
CLL	Collm	100.98	40	i P	Pdif	21 06 34.8	+8.7
CLL				MLR	MLR		
	comp=Z,700nm,18.2s						
BRG	Berggiesshubel	101.48	40	ePDIFF	Pdif	21 06 34.7	+6.4
	comp=Z,6.1nm,1.4s						
BRG	Berggiesshubel	101.48	40	eP	Pdif	21 06 34.7	+6.4
BRG				pmax	pmax		
	comp=Z,6.0nm,1.5s						
PRU	Pruhonice	101.70	41	ePP	PP	21 10 37.7	-2.5
PRU				eSKS		21 17 11.9	
PRU				ePS	PS	21 19 48.0	+3.2
PRU				AMS	AMS	21 53 20.0	
	comp=Z,500nm,15.9s						
PVCC	Panska Ves	101.81	41	ePP	PP	21 10 38.4	-2.6
PVCC				AMS	AMS	21 50 20.0	
	comp=Z,600nm,22.0s						
GOPC	GO Pecny, Ondr	101.85	41	ePP	PP	21 10 38.6	-2.7
GOPC				eSKS		21 17 12.0	
GOPC				ePS	PS	21 19 49.7	+3.3
GOPC				AMS	AMS	21 57 20.0	
	comp=Z,500nm,17.5s						
UPC	Upice	102.72	41	ePP	PP	21 10 45.3	-2.5
UPC				eSKS		21 17 17.1	
UPC				ePS	PS	21 19 57.9	+2.3
UPC				AMS	AMS	21 51 10.0	
	comp=Z,700nm,22.0s						
DPC	Dobruska-Polom	102.89	41	AMS	AMS	21 50 40.0	
	comp=Z,800nm,21.3s						
OKC	Ostrava-Krasne	103.99	42	eSKS	SKSac	21 17 23.8	+6.1
OKC				ePS	PS	21 20 07.2	-1.7
OKC				AMS	AMS	21 55 00.0	
	comp=Z,600nm,16.3s						
DZM	Mont Dzumac	108.75	240	ePS	PS	21 21 01.8	+2.9
	comp=Z,247nm,25.9s						
DZM	Mont Dzumac	108.75	240	eLR	LR	21 43 06.5	
	comp=Z,1µm,23.4s						
KIS	Kishinev	110.89	45	ePKP	PKiKP	21 11 05.0	-4.8
KIS	Kishinev	110.89	45	ePP	PP	21 11 48.0	+0.1
KIS				eSKKS		21 48 22.0	
KIS				LRM	MLR	21 56 00.0	
	comp=Z,700nm,22.0s						
KIS	Kishinev	110.89	45	ePKIKP	PKiKP	21 11 05.0	-4.8
KIS				e		21 11 48.0	
KIS				MLR	MLR		
	comp=Z,600nm,20.0s						
KIS				MLR	MLR		
	comp=Z,700nm,22.0s						
ANN	Anapa	116.98	47	eP	Pdif	21 07 38.1	+0.7
ANN				eSP	SP	21 22 12.2	+1.1
ANN				MLR	MLR		
	comp=N,596nm,21.0s						
ANN				MLR	MLR		
	comp=Z,448nm,21.0s						
H11N3	WAKE ISLAND Hy	120.58	284	T	T	23 23 40.4	
	baz=98,slow=74,SNR=107						
H11N2	WAKE ISLAND Hy	120.60	284	T	T	23 23 33.2	
	baz=98,slow=74,SNR=114						
H11N1	WAKE ISLAND Hy	120.60	284	T	T	23 23 28.6	
	baz=98,slow=74,SNR=83						
H11S2	WAKE ISLAND Hy	120.63	283	T	T	23 23 30.2	
	baz=98,slow=75,SNR=178						
H11S1	WAKE ISLAND Hy	120.64	283	T	T	23 23 31.3	
	baz=98,slow=75,SNR=365						
H11S3	WAKE ISLAND Hy	120.65	283	T	T	23 23 32.1	
	baz=98,slow=75,SNR=304						
SEY	Seymchan	122.05	336	⇑iPKIKP	PKPdf	21 11 30.2	-0.5
ARU	Arti	126.35	30	i PKIKP	PKPdf	21 11 39.0	-0.2
ARU						21 13 34.0	
ARU						21 18 49.0	
ARU				SP	SP	21 23 28.9	-4.5
ARU				PS	PS	21 23 39.8	+2.0
ARU				SS	SS	21 30 33.0	-3.2
ARU				MLR	MLR		
	comp=Z,417nm,20.0s						
AKTO	Aktyubinsk	128.92	37	PKP	PKPdf	21 11 44.5	+0.2
	comp=Z,0.6nm,0.4s,baz=352,slow=3.4,SNR=5.7						
ASAR	Alice Springs	131.64	217	PKP	PKPdf	21 11 49.9	-0.6
	comp=Z,1.8nm,0.6s,baz=126,slow=2.0,SNR=21						
BRVK	Borovoye	133.82	28	⇑iPKIKP	PKPdf	21 11 54.5	+1.0
WRA	Warramunga Arr	134.19	221	PKP	PKPdf	21 11 54.9	-0.4
	comp=Z,2.9nm,0.8s,baz=138,slow=1.8,SNR=33						
WRAB	Tennant Creek	134.19	221	⇓iPKIKP	PKPdf	21 11 55.4	+0.2
NVS	Novosibirsk	137.37	18	ePKIKP	PKPdf	21 12 01.5	+1.5
NVS				e		21 14 52.0	
ZALV	Zalesovo Beam	138.60	17	PKP	PKPdf	21 12 01.8	-0.5
	comp=Z,1.8nm,0.6s,baz=309,slow=4.6,SNR=8.7						
KURK	Kurchatov	139.10	25	PKP	PKPdf	21 12 00.5	-2.8
KURK	Kurchatov	139.10	25	⇑iPKIKP	PKPdf	21 12 04.0	+0.7
KURBB	Kurchatov Arra	139.14	25	PKP	PKPdf	21 12 00.5	-2.9
	comp=Z,1.4nm,1.0s,baz=307,slow=2.7,SNR=5.7						
KLR	Kul’dur	139.59	332	⇓iPKIKP	PKPdf	21 12 06.7	+2.4
FITZ	Fitzroy Crossi	140.69	213	PKhKP	PKPpre	21 12 00.9	
	comp=Z,1.0nm,0.7s,baz=142,slow=3.4,SNR=4.0						
FRU	Bishkek	142.60	37	ePKIKP	PKPdf	21 12 13.0	+3.0
DGZ	Jazzator, Alta	143.11	18	ePKIKP	PKPdf	21 12 11.0	+0.2
MJAR	Matsushiro Arr	143.37	311	PKhKP	PKPpre	21 12 05.6	
	comp=Z,0.7nm,0.5s,baz=96,slow=2.0,SNR=2.9						
MKAR	Makanchi Array	143.68	26	PKhKP	PKPpre	21 12 07.7	
	comp=Z,1.1nm,0.8s,baz=19,slow=4.1,SNR=7.8						
TLY	Talaya	143.83	1	ePKIKP	PKPdf	21 12 10.0	-1.8
TLY				e		21 15 21.6	
TLY				eSS	SS	21 34 02.8	-2.2
TLY				pmax	pmax		
	comp=Z,15nm,1.4s						
KNGR	Kungurtug, Tuv	144.47	8	ePKIKP	PKPbc	21 12 11.4	-0.2
ZAK	Zakamensk	145.12	1	ePKIKP	PKPdf	21 12 13.3	-0.9
ZAK				pmax	pmax		
	comp=Z,29nm,1.5s						
KSH	Kashi	145.41	41	ePKPbc	PKPab	21 12 14.9	-0.3
KSH				PP	PP	21 15 37.4	+2.7
KSH				PKS	PKSdf	21 15 50.1	-0.6
KSH				SKKS		21 22 27.1	
KSH				SS	SS	21 34 27.2	+2.1
KSH				AMB	AMB		
	comp=Z,130nm,10.6s						
KSH				LR	LR		
	comp=Z,230nm,14.7s						
KSH				LR	LR		
	comp=Z,120nm,11.7s						
CN2	Changchun	146.54	332	ePKPbc	PKPdf	21 12 15.2	-1.5
CN2				PP	PP	21 15 43.2	+2.5
CN2				AMB	AMB		
	comp=Z,200nm,7.0s						
CN2				LR	LR		
	comp=Z,370nm,18.0s						
CN2				LR	LR		
	comp=Z,490nm,18.0s						
CN2				LR	LR		
	comp=Z,520nm,21.0s						
ULN	Ulaanbaatar	147.58	357	⇓ePKP2	PKPdf	21 12 18.9	+0.3
SONM	Songino Array	147.65	358	PKPbc	PKPdf	21 12 17.5	-1.2
	comp=Z,3.4nm,0.8s,baz=112,slow=6.6,SNR=27						
SONM				PP	PP	21 15 44.8	-2.1
	comp=Z,1.1nm,1.1s,baz=343,slow=4.5,SNR=3.6						
BATI	Baumata	148.21	218	PKPbc	PKPbc	21 12 23.8	+0.1
	comp=Z,8.1nm,0.6s,baz=194,slow=4.2,SNR=2.6						
WMQ	Urumqi	148.30	23	PKPbc	PKPdf	21 12 20.3	+0.5
WMQ				PKPab	PKPab	21 12 25.6	-0.6
WMQ				PP	PP	21 15 56.2	+5.2
WMQ				AMB	AMB		
	comp=Z,200nm,11.7s						
WMQ				LR	LR		
	comp=Z,700nm,26.1s						
WMQ				LR	LR		
	comp=Z,570nm,24.1s						
WMQ				LR	LR		
	comp=Z,650nm,24.1s						
KSRS	Korea Array	149.78	321	PKPbc	PKPbc	21 12 26.7	-0.2
	comp=Z,5.4nm,1.1s,baz=43,slow=0.6,SNR=14						
KSAR	Wonju Array Be	149.81	321	PKPbc	PKPbc	21 12 26.7	-0.3
KSAR	Wonju Array Be	149.81	321	PKP2	PKPbc	21 12 26.7	-0.3
HHC	Hu-ho-hao-te	153.93	348	ePKPbc	PKPdf	21 12 23.8	-4.7
HHC				SKKS		21 23 12.4	
HHC				SS	SS	21 35 59.9	+1.5
HHC				AMB	AMB		
	comp=Z,140nm,9.8s						
HHC				LR	LR		
	comp=Z,390nm,19.6s						
HHC				LR	LR		
	comp=Z,350nm,19.0s						
HHC				LR	LR		
	comp=Z,390nm,20.0s						
GTA	Gaotai	155.76	9	PKP	PKPdf	21 12 31.5	+0.4
GTA				pPKP	pPKPdf	21 12 38.0	-1.9
GTA				sPKP		21 12 40.9	
GTA				PKPab	pPKPab	21 13 01.4	-4.6
GTA				PP	PP	21 16 39.2	+5.9
GTA				SKKS		21 23 23.9	
GTA				SS	SS	21 36 22.6	+4.3
GTA				AMB	AMB		
	comp=Z,140nm,7.6s						
GTA				LR	LR		
	comp=Z,370nm,23.4s						
GTA				LR	LR		
	comp=Z,310nm,21.0s						
GTA				LR	LR		
	comp=Z,560nm,23.0s						
NJ2	Nanjing	158.88	324	ePKP	PKPdf	21 12 34.9	-0.2
LZH	Lanzhou	159.42	1	ePKP	PKPdf	21 12 32.8	-3.0
LZH				pPKP	pPKPdf	21 12 42.9	-1.7
LZH				sPKP		21 12 48.0	
LZH				LR	LR		
	comp=Z,49nm,19.0s						
LZH				LR	LR		
	comp=Z,53nm,19.1s						
LZH				LR	LR		
	comp=Z,67nm,20.2s						
XAN	Xi’an	161.03	349	PKP	PKPdf	21 12 35.1	-2.4
XAN				pPKP	pPKPdf	21 12 41.3	-5.0
XAN				AMB	AMB		
	comp=Z,160nm,6.9s						
XAN				LR	LR		
	comp=Z,310nm,21.2s						
XAN				LR	LR		
	comp=Z,300nm,18.3s						
XAN				LR	LR		
	comp=Z,420nm,23.5s						
CD2	Chengdu	164.57	2	PKP	PKPdf	21 12 39.0	-2.1
GYA	Guiyang	168.83	350	ePKP	PKPdf	21 12 43.2	-1.3
GYA				PKPab	PKPab	21 13 55.5	+0.6
GYA				PKS	PKSdf	21 16 14.0	-3.3
GYA				PP	PP	21 17 45.4	+2.6
GYA				AMB	AMB		
	comp=Z,120nm,8.0s						

KMI	Kunming	170.22	9	PKP	PKPdf	21 12 43.5	-2.0
KMI				pPKP	pPKPdf	21 12 48.5	-5.8
KMI				PP	PP	21 17 47.6	-2.3
KMI				SS	SS	21 38 43.4	-4.7
KMI				AMB	AMB		
	comp=Z,270nm,10.7s						
KMI				LR	LR		
	comp=Z,310nm,17.1s						
KMI				LR	LR		
	comp=Z,470nm,19.2s						
KMI				LR	LR		
	comp=Z,520nm,19.6s						
QIZ	Qiongzhong	173.73	306	PKP	PKPdf	21 12 47.3	+0.3
QIZ				PP	PP	21 18 10.2	+1.6
QIZ				AMB	AMB		
	comp=Z,130nm,5.1s						
QIZ				LR	LR		
	comp=Z,130nm,6.1s						
QIZ				LR	LR		
	comp=Z,240nm,6.7s						
QIZ				LR	LR		
	comp=Z,460nm,18.6s						
CMAR	Chiang Mai Arr	173.93	59	PKP	PKPdf	21 12 45.6	-1.5
	comp=Z,0.3nm,0.3s,baz=300,slow=2.0,SNR=4.2						
CMAR				PKPab	PKPab	21 14 16.6	-1.2
	comp=Z,0.3nm,0.4s,baz=292,slow=7.3,SNR=4.2						
CMAR				PP	PP	21 18 10.4	+0.6
	comp=Z,0.4nm,0.8s,baz=291,slow=4.7,SNR=4.4						

NNC 11 21:05:51.9±1.7**, 37°.13N×70°.46E, h0^{km}, mb3.7, mpv3.3, 2C-2D, Error ellipse: s-maj=13.2km s-min=10.8km az=178.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.74	39	⇓Pn	Pn	21 06 50.9	-0.3
	1.9nm,0.4s						
SFK				Sn	Sn	21 07 37.5	+1.5
	7.0nm,0.4s						
MNAS	Manas	5.58	16	⇑Pn	Pn	21 07 16.3	0.0
	2.2nm,0.6s						
MNAS				⇓Sn	Sn	21 08 21.9	+0.7
	5.2nm,0.5s						
KK31	Karatay Array	5.97	0	Pn	Pn	21 07 22.2	+0.7
	1.2nm,0.3s,baz=182,slow=12,SNR=33						
KK31				⇑Sn	Sn	21 08 32.0	+1.4
	4.3nm,0.6s,baz=180,slow=23,SNR=9.8						

BUC 11 21:06:45.0±0.3**, 45°.53N×27°.04E, h17^{km}**±2^{km}**, MD2.6**/3**, 16C-18D, Error ellipse: s-maj=3.1km s-min=2.2km az=35.0, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GRER		0.16	196	S	Sb	21 06 53.6	+1.2
GRER		0.16	196	iS	Sb	21 06 53.6	+1.2
ODBI	Odobesti	0.23	3	⇓iP	Pb	21 06 51.2	+0.4
ODBI	Odobesti	0.23	3	⇓iP	Pb	21 06 51.2	+0.4
ODBI				iS	Sb	21 06 55.0	+0.3
PETR	Petresti	0.24	35	⇓iP	Pb	21 06 51.1	+0.3
PETR	Petresti	0.24	35	⇓iP	Pb	21 06 51.1	+0.3
PETR				iS	Sb	21 06 54.6	-0.1
VRI	Vrincioaia	0.40	327	⇓iP	Pb	21 06 53.7	0.0
VRI	Vrincioaia	0.40	327	⇓iP	Pb	21 06 53.7	0.0
VRI				iS	Sb	21 07 00.1	+0.6
PLOR	Plostina	0.42	320	⇓iP	Pb	21 06 54.0	0.0
PLOR	Plostina	0.42	320	⇓iP	Pb	21 06 54.0	0.0
PLOR				iS	Sb	21 07 00.7	+0.6
ISR	Istrita	0.54	220	⇑iP	Pn	21 06 57.2	-0.8
ISR	Istrita	0.54	220	⇑iP	Pn	21 06 57.2	-0.8
ISR				iS	Sn	21 07 05.1	-1.5
MLR	Muntele Rosu	0.77	267	⇑iP	Pg	21 07 00.5	+0.5
MLR	Muntele Rosu	0.77	267	⇑iP	Pg	21 07 00.5	+0.5
MLR				iS	Sn	21 07 12.1	-0.3
MLR	Muntele Rosu	0.77	267	ePdif	Pg	21 07 00.5	+0.4
MLR	Muntele Rosu	0.77	267	eP	Pg	21 07 00.5	+0.5
CFR	Carcaliu	0.85	114	⇑iP	Pn	21 07 01.9	-0.3
CFR	Carcaliu	0.85	114	⇑iP	Pn	21 07 01.9	-0.3
CFR				iS	Sn	21 07 13.7	-0.5
PLAR	PLOIESTI	0.94	230	S	Sn	21 07 17.3	+0.8
PLAR	PLOIESTI	0.94	230	iS	Sn	21 07 17.3	+0.8
AMRR	Amara	0.94	167	⇓iP	Pn	21 07 03.7	+0.3
AMRR	Amara	0.94	167	⇓iP	Pn	21 07 03.7	+0.3
AMRR				iS	Sn	21 07 17.0	+0.5
SULR		1.02	213	⇓iP	Pg	21 07 05.1	+0.4
SULR		1.02	213	⇓iP	Pg	21 07 05.1	+0.4
SULR				iS	Sn	21 07 19.5	+1.2
TESR	Tescani	1.02	345	⇑iP	Pg	21 07 05.0	+0.3
TESR	Tescani	1.02	345	⇑iP	Pg	21 07 05.0	+0.3
TESR				iS	Sn	21 07 18.9	+0.5
HARR	Harsova	1.05	143	⇓iP	Pg	21 07 05.4	0.0
HARR	Harsova	1.05	143	⇓iP	Pg	21 07 05.4	0.0
TLB	Topalu	1.18	143	⇑iP	Pb	21 07 07.2	+0.2
TLB	Topalu	1.18	143	⇑iP	Pb	21 07 07.2	+0.2
TLB				iS	Sg	21 07 23.8	+0.5
TLCR		1.30	105	⇓iP	Pb	21 07 09.0	+0.1
TLCR		1.30	105	⇓iP	Pb	21 07 09.0	+0.1
TLCR				iS	Sg	21 07 26.5	-0.5
VOIR		1.40	267	⇑iP	Pb	21 07 10.9	+0.2
VOIR		1.40	267	⇑iP	Pb	21 07 10.9	+0.2
VOIR				iS	Sg	21 07 29.7	-0.6
TIRR	Tirgusor	1.45	137	⇑iP	Pb	21 07 11.1	-0.4
TIRR	Tirgusor	1.45	137	⇑iP	Pb	21 07 11.1	-0.4
TIRR				iS	Sb	21 07 30.5	+0.9
SGRR	Singureni	1.51	210	⇓iP	Pb	21 07 12.2	-0.3
SGRR	Singureni	1.51	210	⇓iP	Pb	21 07 12.2	-0.3
SGRR				iS	Sb	21 07 32.1	+0.7
ICOR	Ion Corvin	1.51	159	⇑iP	Pb	21 07 12.4	-0.2
ICOR	Ion Corvin	1.51	159	⇑iP	Pb	21 07 12.4	-0.2
ICOR				iS	Sb	21 07 32.0	+0.5
MILM	Milestii Mici	1.86	41	S	Sn	21 07 40.0	+0.9
MILM	Milestii Mici	1.86	41	iS	Sn	21 07 40.0	+0.9

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*IDC **11** 21:12:09.6±3.2, 32°.28S×179°.83E, h380^{km}±29^{km}, mb3.3/6, mb1 3.5/7, mb1mx3.2/45, mbtmp4.1/7, Error ellipse: s-maj=32.9km s-min=19.0km az=44.0*

*WEL **11** 21:12:15.8±0.8, 32°S±8°×18°0E±1°8, h309^{km}±14^{km}*

ISC 11 21:12:10.8±0.7**, 32°.32S**±0°.07×**179°.9E**±0°.1**, h400^{km}, n37,** σ1^{s}.**92**/47**, mb3.7**/6**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.57	32	P	Pn	21 13 21.0	+2.1
GLKZ				S	S	21 14 08.8	-5.3
MXZ	Matakaoa Point	5.40	194	P	Pn	21 13 37.6	+0.8
MXZ				S	S	21 14 43.6	-3.2
WMGZ	Waiomatatini S	5.62	192	P	Pn	21 13 41.0	+1.9
WMGZ				S	S	21 14 50.1	-1.2
HAZ	Te Kaha	5.70	197	P	Pn	21 13 40.5	+0.6
HAZ				S	S	21 14 50.8	-1.9
PKGZ	Pakihiroa	5.76	195	P	Pn	21 13 39.9	-0.8
PUZ	Puketiti	5.90	193	P	Pn	21 13 44.9	+2.8
RUGZ	Raukumara Rang	5.92	197	P	Pn	21 13 42.8	+0.2
RUGZ				S	S	21 14 51.3	-6.1
OUZ	Omahuta	6.01	240	P	Pn	21 13 45.0	+1.6
TWGZ	Tauwhareparae	6.06	195	P	Pn	21 13 44.9	+1.0
TWGZ				S	S	21 14 58.7	-1.2
OPRZ	Ohinepanea	6.16	206	P	Pn	21 13 48.8	+3.8
CNGZ	Carnagh Statio	6.31	192	P	Pn	21 13 48.4	+1.8
MWZ	Matawai	6.31	197	P	Pn	21 13 47.9	+1.2
MWZ				S	S	21 15 02.4	-2.6
TKGZ	Te Karaka	6.34	195	P	Pn	21 13 48.1	+1.2
URZ	Urewera	6.36	200	P	Pn	21 13 45.6	-1.5
	7.2nm,0.3s,baz=272,slow=4.4,SNR=45						
URZ				S	S	21 15 02.7	-3.1
	8.1nm,0.3s,baz=204,slow=22,SNR=16						
URZ	Urewera	6.36	200	P	Pn	21 13 47.3	+0.2
URZ				S	S	21 15 02.5	-3.2
RAGZ	Rawiri	6.49	198	P	P	21 13 49.8	+1.1
RIGZ	Rimuhau	6.61	195	P	P	21 13 50.4	-0.1
RIGZ				S	S	21 15 10.4	-0.6
RRRZ	Republican Roa	6.62	204	P	P	21 13 56.6	+5.9
MUGZ	Murupara	6.66	202	P	P	21 13 52.5	+1.4
RTZ	Ruatahuna	6.72	200	P	P	21 13 51.7	-0.1
SNGZ	Shannon Statio	6.78	197	P	P	21 13 53.0	+0.5
RAHZ	Arahi	6.97	199	P	P	21 13 55.6	+1.0
MTHZ	Maungataniwha	6.98	200	P	P	21 13 55.3	+0.6
WHHZ	Waihua	7.09	197	P	P	21 13 58.5	+2.6
MRHZ	Matea Rd	7.10	203	P	P	21 13 56.1	0.0
CTA	Charters Tower	32.44	284	P	P	21 18 06.1	+0.3
	1.6nm,0.3s,baz=138,slow=14,SNR=3.7						
ASAR	Alice Springs	41.28	270	P	P	21 19 19.3	0.0
	0.6nm,0.5s,baz=106,slow=7.4,SNR=17						
WRA	Warramunga Arr	42.45	275	P	P	21 19 27.9	-0.7
	2.4nm,0.4s,baz=113,slow=7.9,SNR=73						
FITZ	Fitzroy Crossi	50.62	273	P	P	21 20 30.6	-0.6
	0.9nm,0.8s,baz=113,slow=7.7,SNR=3.3						
SNAA	Sanae	76.28	179	P	P	21 23 18.6	+2.4
	1.7nm,1.1s,baz=180,slow=8.1,SNR=6.8						
PETK	Petropavlovsk-	87.25	347	P	P	21 24 14.1	+1.4
	1.9nm,0.7s,baz=126,slow=7.3						
KURBB	Kurchatov Arra	121.11	313	PKP	PKPdf	21 30 15.4	-0.8
	0.3nm,0.6s,baz=119,slow=1.9,SNR=4.5						
BVAR	Borovoye Array	126.52	315	PKP	PKPdf	21 30 26.7	+0.2
	0.3nm,0.4s,baz=90,slow=1.4,SNR=3.5						
FINES	FINESS Array B	146.29	338	PKPbc	PKPab	21 31 04.5	-1.7
	2.2nm,0.5s,baz=78,slow=3.6,SNR=23						
HFS	Hagfors	150.72	346	PKPbc	PKPbc	21 31 15.7	0.0
	0.6nm,0.5s,baz=79,slow=2.2,SNR=3.6						
HFS				PKPab	PKPab	21 31 24.4	0.0
	0.5nm,0.5s,baz=101,slow=7.5,SNR=3.7						
BRTR	Keskin Array B	151.87	295	PKPbc	PKPbc	21 31 19.1	-0.1
	0.5nm,0.5s,baz=146,slow=5.1,SNR=4.5						
TORD	Torodi Ar. Bea	160.85	185	PKP	PKPdf	21 31 24.5	+0.2
	0.6nm,1.0s,baz=191,slow=1.5						
TORD				PKPab	PKPab	21 32 08.9	-0.1
	baz=161,slow=5.1						

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*IDC **11** 21:41:47.4±0.5, 15°.31S×75°.44W, h0^{km}, mb4.4/21, mb1 4.5/23, mb1mx4.5/38, mbtmp4.4/23, ML3.9/2, MS4.3/31, Ms1 4.3/31, ms1mx4.2/47, Error ellipse: s-maj=20.0km s-min=12.1km az=68.0*

*ISCJB **11** 21:41:50.0±0.2, 15°.26S±0°.04×75°.35W±0°.05, h26^{km}, mb4.8/113, MS4.4/31, Error ellipse: s-maj=7.6km s-min=4.1km az=146.3*

*NEIC **11** 21:41:53.2±0.8, 15°.27S×75°.27W, h35^{km}±7^{km}, mb4.9/104, ML4.7(ARE), Error ellipse: s-maj=8.5km s-min=4.5km az=60.0*

NEIC Felt [II] at Ica and Nazca.

*GCMT **11** 21:41:53.2±0.4, 15°.42S×75°.58W, h23^{km}±1^{km}, MW5.1/67, Moment Tensor Solution. s34,c41; s67,c92; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.38±.25; $M_{\theta\theta}$-0.56±.13; $M_{\phi\phi}$-3.82±.17; $M_{r\theta}$1.07±.19; $M_{\theta\phi}$1.42±.08; $M_{\phi r}$-2.69±.23; Best double couple: $M_0$5.23900×10^{16} NP1:ϕ_s159.00000°, δ62.00000°, λ89.00000°. NP2: ϕ_s340.00000°, δ28.00000°, λ91.00000°. Principal axes: T 5.2530, Plg73.0000°, Azm67.0000°; N -0.0330, Plg1.0000°, Azm159.0000°; P -5.2250, Plg17.0000°, Azm249.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*BJI **11** 21:41:54.3, 15°.30S×75°.30W, h35^{km}, mB5.2/5, Ms5.1/5, Ms7 4.8/5*

ISC 11 21:41:52.0±0.3**, 15°.29S**±0°.05×**75°.30W**±0°.07**, h26^{km}, n220,** σ1^{s}.**49**/202**, mb4.9**/113**, MS4.4**/32**, 1C, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	Nana	3.60	335	Pn	Pn	21 42 44.4	-1.9
	7.2nm,0.3s,baz=184,slow=13,SNR=3.9						
NNA				Sn	Sn	21 43 27.1	-0.9
	73nm,0.3s,baz=159,slow=6.4,SNR=4.8						
NNA				LR	LR	21 44 00.3	
	comp=Z,1μm,21.3s,baz=112,slow=37						
NNA	Nana	3.60	335	ePn	Pn	21 42 46.5	+0.3
NNA				eSn	Sn	21 43 28.1	+0.1
LPAZ	La Paz	6.98	99	Pn	Pn	21 43 39.4	+6.3
	18nm,0.3s,baz=283,slow=10,SNR=143						
LPAZ				Sn	Sn	21 44 55.6	+3.6
	baz=198,slow=20,SNR=1.8						
LPAZ				LR	LR	21 46 32.6	
	comp=Z,2μm,19.6s,baz=282,slow=40						
PB01	IPOC Station P	7.96	137	ePn	Pn	21 43 46.4	+0.3
ATAH	Atahualpa	8.65	339	Pn	Pn	21 43 59.2	+3.3
	0.9nm,0.3s,baz=3.0,slow=8.7,SNR=3.9						
ATAH				Sn	Sn	21 45 32.1	-0.8
	1.6nm,0.3s,baz=126,slow=19,SNR=2.9						
ATAH				LR	LR	21 46 57.8	
	comp=Z,934nm,19.4s,baz=190,slow=36						
SAML	Samuel	13.42	63	ePn	Pn	21 45 00.2	-0.6
SIV	San Ignacio	13.72	95	Pn	Pn	21 45 03.6	-1.5
	1.0nm,0.3s,baz=284,slow=13,SNR=16						
SIV				LR	LR	21 50 13.1	
	comp=Z,598nm,21.9s,baz=287,slow=36						
LCO	Las Campanas	14.30	163	ePn	Pn	21 45 13.4	+0.3
GCUF	Volcan Galeras	16.53	353	eP	P	21 45 49.8	+4.7
FLOC	Florencia	16.77	359	eP	P	21 45 55.2	+8.0
SOTA	Rioblanco	17.36	356	eP	P	21 45 56.2	+1.9
HORQ	Saladito	18.69	356	eP	Pn	21 46 09.4	+0.1
PRAC	Prado	18.88	1	eP	Pn	21 46 10.4	-0.9
	86nm,1.4s						
YOTC	Yotoco, Valle	19.17	357	eP	Pn	21 46 22.9	+8.0
VILC	Villavicencio,	19.34	5	eP	Pn	21 46 24.7	+7.8
ANIL	Santa Ana	19.65	360	eP	Pn	21 46 31.9	+11
TOLC	Tolima	19.74	360	eP	Pn	21 46 25.8	+3.9
CHIC	Chingaza	19.85	5	eP	Pn	21 46 32.7	+9.5
ROSC	El Rosal	20.02	3	P	Pn	21 46 30.6	+5.4
	4.8nm,0.4s,baz=120,slow=20,SNR=5.3						
ROSC				LR	LR	21 55 53.6	
	comp=Z,2μm,18.1s,baz=210,slow=42						
ROSC	El Rosal	20.02	3	eP	Pn	21 46 39.5	+14
CPUP	Villa Florida	20.05	126	P	Pn	21 46 24.4	-0.8
	12nm,1.1s,baz=293,slow=11,SNR=8.7						
CPUP				LR	LR	21 55 50.2	
	comp=Z,552nm,20.2s,baz=300,slow=42						
CPUP	Villa Florida	20.05	126	eP	P	21 46 22.5	-0.8
	50nm,1.4s						
GUYC	Guyana, Colomb	20.38	360	eP	Pn	21 46 30.1	+0.5
YOPC	Yopal, Colombi	20.70	8	eP	P	21 46 30.4	-0.2
PTGA	Pitinga	20.94	48	P	P	21 46 33.1	+0.1
	18nm,1.0s,baz=236,slow=12,SNR=12						
PTGA	Pitinga	20.94	48	eP	Pn	21 46 33.7	-2.0
	40nm,1.0s						
RUSC	La Rusia	21.16	6	eP	P	21 46 37.4	+1.6
RUSC	La Rusia	21.16	6	eP	P	21 46 37.0	+1.2
HELC	Santa Helena	21.34	359	eP	P	21 46 38.9	+1.2
	57nm,1.0s						
PTBC	PUERTO BERRIO,	21.70	2	eP	P	21 46 39.5	-1.7
BARC	Barichara	21.84	6	eP	P	21 46 44.9	+2.0
TAMC	Tame, Arauca	21.86	9	eP	P	21 46 48.3	+5.4
BRRC	Barranca, Sant	22.30	4	eP	P	21 46 48.7	+1.1
ZARC	Zaragoza, Cauc	22.64	1	eP	P	21 46 51.6	+0.4
SDV	Santo Domingo	24.46	11	P	P	21 47 08.6	-0.6
	6.2nm,0.5s,baz=216,slow=7.7,SNR=6.4						
SDV	Santo Domingo	24.46	11	eP	P	21 47 08.0	-1.2
	45nm,1.0s						
SDV	Santo Domingo	24.46	11	eP	P	21 47 08.6	-0.6
SJCC	San Jacinto, C	25.02	0	eP	P	21 47 21.3	+7.1
TRQA	Tornquist	25.56	155	eP	P	21 47 17.5	-1.3
	33nm,1.3s						
PLCA	Paso Flores	25.69	172	P	P	21 47 19.4	-0.6
	10nm,1.0s,baz=3.0,slow=11,SNR=10						
PLCA	Paso Flores	25.69	172	eP	P	21 47 19.1	-0.9
	16nm,1.0s						
PCRV	Puerto La Cruz	27.42	23	LR	LR	21 58 40.9	
	comp=Z,640nm,20.9s,baz=194,slow=37						
RPN	Rapa Nui	33.73	244	LR	LR	21 58 50.9	
	comp=Z,395nm,19.8s,baz=100,slow=30						
CMIG	Matias Romero	37.53	328	P	P	21 49 02.3	-1.7
	0.8nm,0.3s,baz=143,slow=13,SNR=2.6						
CMIG				LR	LR	22 02 23.7	
	comp=Z,448nm,19.4s,baz=142,slow=33						
LNIG	Linares	46.38	329	eP	P	21 50 18.6	+2.3
	7.4nm,0.8s						
154A	Montrose	48.21	351	eP	P	21 50 31.9	+1.4
	29nm,0.9s						
152A	Waverly Hall	48.53	349	eP	P	21 50 31.9	-1.0
	11nm,0.9s						
GOGA	Godfrey	49.05	351	eP	P	21 50 35.5	-1.4
	11nm,1.1s						
HKT	Hockley	49.14	336	eP	P	21 50 38.1	+0.5
	16nm,1.1s						
Z50A	Ashland	49.32	348	eP	P	21 50 37.9	-1.1
	12nm,0.9s						
LRAL	Lakeview Retre	49.33	347	eP	P	21 50 37.9	-1.2
	18nm,0.9s						
X51A	Calhoun	50.40	350	eP	P	21 50 47.7	+0.5
	23nm,1.3s						
X48A	Hartselle	50.71	347	eP	P	21 50 48.1	-1.3
	13nm,1.1s						
W52A	Murphy	50.77	351	eP	P	21 50 49.0	-0.9
	7.2nm,0.8s						
W50A	Signal Mountai	51.10	349	eP	P	21 50 51.2	-1.3
	22nm,1.1s						
CPCT	Cooper Cave	51.21	350	eP	P	21 50 52.5	-0.7
	17nm,1.5s						
SWET	Sewanee	51.23	349	eP	P	21 50 52.2	-1.3
	13nm,0.9s						
TKL	Tuckaleechee C	51.30	351	LR	LR	22 14 52.3	
	comp=Z,268nm,18.3s,baz=150,slow=39						
V52A	Sevierville	51.45	351	eP	P	21 50 54.0	-1.1
	14nm,1.0s						
V51A	Loudon	51.53	351	eP	P	21 50 54.9	-0.7
	14nm,1.0s						
LPIG	La Paz	51.98	318	LR	LR	22 08 21.0	
	comp=Z,108nm,18.2s,baz=100,slow=31						
TX31	Lajitas Ar. Si	52.13	328	eP	P	21 50 60.0	-0.5
TXAR	Lajitas Array	52.13	328	P	P	21 50 59.9	-0.5
	1.7nm,0.7s,baz=145,slow=8.6,SNR=18						
TXAR				LR	LR	22 11 11.2	
	comp=Z,260nm,19.4s,baz=0.0,slow=34						
MIAR	Mount Ida	52.52	341	eP	P	21 51 02.5	-0.5
	10nm,0.9s						
W41B	Gary Mavity, V	52.70	343	eP	P	21 51 03.7	-0.6
	13nm,1.0s						
T49A	Edmonton	52.99	350	eP	P	21 51 05.2	-1.4
	16nm,1.1s						
W39A	Magazine	53.18	341	eP	P	21 51 07.9	0.0
	16nm,1.0s						
V40A	Witts Springs	53.45	342	eP	P	21 51 08.8	-1.1
	18nm,1.0s						
WCI	Wyandotte Cave	54.22	349	eP	P	21 51 13.7	-1.8
TUL1	Leonard	54.49	340	eP	P	21 51 16.9	-0.6
	32nm,1.0s						
WMOK	Wichita Mounta	54.52	336	eP	P	21 51 16.5	-1.3
	24nm,1.7s						
MNTX	Cornudas Mount	54.91	329	eP	P	21 51 18.7	-1.9
	31nm,1.9s						
MVL	Millersville	55.01	359	eP	P	21 51 22.3	+1.2
	29nm,1.3s						
MSTX	Muleshoe	55.54	332	eP	P	21 51 24.7	-0.6
	9.3nm,0.8s						
LUPA	Lehigh Univers	55.60	360	eP	P	21 51 26.6	+1.2
R40A	Maddies Statio	55.62	344	eP	P	21 51 24.0	-1.6
	17nm,0.9s						
N59A	State Game Lan	55.92	360	eP	P	21 51 28.5	+0.8
	19nm,1.0s						
RKT	Rikitea	56.57	252	eS	S	21 59 29.4	+6.1
	407nm,26.2s						
RKT				eLR	LR	22 08 14.3	
	391nm,26.0s						
RKT	Rikitea	56.57	252	eT	T	22 52 22.4	
	14nm,0.3s						
BNM	Barren Site	57.50	329	eP	P	21 51 39.1	-0.3
LAZ	Ladron	57.96	329	eP	P	21 51 42.8	+0.3
ANMO	Albuquerque	58.06	330	P	P	21 51 42.7	-0.5
	2.1nm,0.8s,baz=151,slow=9.9,SNR=6.8						
ANMO	Albuquerque	58.06	330	eP	P	21 51 42.2	-1.1
	6.9nm,1.0s						
TUC	Tucson	58.26	325	eP	P	21 51 43.8	-0.7
	6.2nm,1.0s						
T25A	Trinidad	58.92	333	eP	P	21 51 48.9	-0.3
	7.4nm,0.8s						
NCB	Newcomb	58.98	1	eP	P	21 51 49.5	+0.3
	8.6nm,0.9s						
LONY	Lake Ozonia	59.62	1	eP	P	21 51 53.2	-0.4
	15nm,1.0s						
W18A	Petrified Fore	59.84	328	eP	P	21 51 54.2	-1.4
	19nm,1.0s						
SADO	Sadowa	59.87	357	eP	P	21 51 54.1	-1.2
	8.2nm,0.9s						
SDCO	Great Sand Dun	59.90	333	eP	P	21 51 55.9	-0.2
	14nm,1.0s						
PLVO	Plevna	60.06	359	eP	P	21 51 56.2	-0.4
	30nm,1.6s						
X16A	Lo Mia Camp, P	60.20	326	eP	P	21 51 58.5	+0.4
	11nm,1.0s						
PKME	Peaks-Kenny Pk	60.51	5	eP	P	21 51 59.5	-0.2
	12nm,1.0s						
MVCO	Mesa Verde	60.86	330	eP	P	21 52 02.4	-0.2
	12nm,1.1s						
WUAZ	Wupatki	61.00	327	eP	P	21 52 03.3	-0.2
	20nm,1.2s						
TRQ	Mont Tremblant	61.22	1	eP	P	21 52 04.6	0.0
G43A	Wallace	61.30	350	eP	P	21 52 03.6	-1.4
	8.3nm,1.0s						
PV01	Paradox Valley	61.63	331	eP	P	21 52 07.5	-0.3
ISCO	Idaho Springs	61.65	334	eP	P	21 52 07.3	-0.7
	7.0nm,1.1s						
SMCO	Snowmass	61.73	332	eP	P	21 52 08.7	+0.1
	12nm,1.2s						
PV02	Paradox Valley	61.77	330	eP	P	21 52 07.8	-0.9
	7.5nm,1.0s						
PV03	Paradox Valley	61.86	330	eP	P	21 52 09.4	+0.1
ECSD	EROS Data Cent	61.89	343	eP	P	21 52 07.0	-2.1
	8.8nm,1.1s						
PQI	Presque Isle	62.02	6	eP	P	21 52 10.6	+0.8
	14nm,1.0s						
W13A	Hualapai Mount	62.06	325	eP	P	21 52 10.6	-0.1
	6.8nm,1.3s						
U15A	North Rim	62.17	327	eP	P	21 52 12.1	+0.6
	16nm,1.4s						
XPFO	Piæon Flat	62.48	322	eP	P	21 52 14.1	+0.6
	15nm,1.2s						
PFO	Pinyon Flats O	62.48	322	eP	P	21 52 14.1	+0.6
	15nm,1.2s						
F36A	Milaca	63.05	346	eP	P	21 52 15.9	-0.9
	10.0nm,0.9s						
LCMT	Little Creek M	63.12	327	eP	P	21 52 18.5	+0.8
	10nm,1.3s						
SRU	San Rafael Swe	63.34	330	eP	P	21 52 18.6	-0.5
	13nm,1.2s						
MTPU	Mount Pierson	63.34	328	eP	P	21 52 19.6	+0.3
	4.3nm,0.9s						
TAOE	Nuku Hiva Isla	63.55	268	eLR	LR	22 11 28.0	
	635nm,24.1s						
CCUT	Cedar City	63.58	327	eP	P	21 52 21.7	+0.9
	7.1nm,0.9s						
P18A	Preston Nutter	63.61	330	eP	P	21 52 22.4	+1.4
	17nm,1.4s						
MSU	Marysvale	63.69	328	eP	P	21 52 22.0	+0.4
SHPR	Sheep Range	63.79	325	eP	P	21 52 23.1	+0.9
	5.2nm,0.9s						
SNCC	San Nicolas Is	64.11	319	eP	P	21 52 24.8	+0.7
PSUT	Pine Spring	64.57	327	eP	P	21 52 28.2	+0.9
	5.8nm,0.9s						
TPNV	Topopah Spring	64.71	325	eP	P	21 52 29.3	+1.1
	6.3nm,0.9s						
JLU	Jordanelle	64.94	330	eP	P	21 52 30.5	+0.7
	11nm,1.0s						
DAC	Darwin (Calif)	65.01	323	eP	P	21 52 29.9	-0.2
	4.6nm,1.0s						
DUG	Dugway, Tooele	65.30	329	eP	P	21 52 32.2	+0.3
	12nm,0.9s						
R11A	Troy Canyon, C	65.36	326	eP	P	21 52 32.6	+0.3
	31nm,1.9s						
B35A	Bob, Littlefor	65.45	347	eP	P	21 52 31.6	-1.0
	11nm,1.0s						
HWUT	Hardware Ranch	65.78	331	eP	P	21 52 34.0	-1.0
	10nm,0.9s						
PDAR	Pinedale Array	65.79	333	P	P	21 52 34.1	-1.0
	0.4nm,0.5s,baz=124,slow=7.9,SNR=5.1						
PDAR				LR	LR	22 21 09.2	
	comp=Z,130nm,21.5s,baz=128,slow=36						
PDAR	Pinedale Array	65.79	333	eP	P	21 52 33.6	-1.5
AGMN	Agassiz Nation	65.90	345	eP	P	21 52 33.7	-1.7
	6.9nm,0.8s						
HVU	Hansel Valley	66.49	330	eP	P	21 52 39.2	-0.4
	7.4nm,1.0s						
OMMB	Old Mammoth Mi	66.74	323	eP	P	21 52 41.9	+0.4
	15nm,1.2s						
NV01	Mina Array Sit	66.91	324	eP	P	21 52 42.7	+0.3
NVAR	Mina Array Bea	66.91	324	P	P	21 52 43.0	+0.6
	0.9nm,0.8s,baz=140,slow=7.1,SNR=5.7						
NVAR				LR	LR	22 21 11.0	
	comp=Z,166nm,18.2s,baz=262,slow=35						
LOHW	Long Hollow	66.92	333	eP	P	21 52 43.6	+1.2
	3.4nm,0.9s						
MOOW	Moose Ponds	67.09	333	eP	P	21 52 43.2	-0.2
	6.6nm,1.3s						
FXWY	Fox Creek	67.13	333	eP	P	21 52 43.5	-0.2
	5.6nm,1.0s						
KVN	Kaiserville	67.23	325	eP	P	21 52 45.0	+0.6
	17nm,1.9s						
FLWY	Flagg Ranch	67.34	333	eP	P	21 52 45.6	+0.7
	17nm,0.9s						
RLMT	Red Lodge	67.56	335	eP	P	21 52 46.2	-0.1
	14nm,1.3s						
ULM	Lac du Bonnet	67.72	346	P	P	21 52 45.2	-1.7
	4.3nm,0.8s,baz=154,slow=6.8,SNR=4.4						

ULM				LR	LR	22 26 08.1	
	comp=Z,188nm,18.2s,baz=88,slow=39						
ULM	Lac du Bonnet	67.72	346	eP	P	21 52 46.0	-0.9
	11nm,0.9s						
YERR	Yerington	67.82	324	eP	P	21 52 50.8	+2.7
	11nm,1.2s						
VNA3	Neumayer Olymp	67.87	161	P	P	21 52 48.1	+0.3
VNA1	Neumayer--Stat	68.13	161	P	P	21 52 50.3	+1.0
PAHR	Pah Rah Range	68.40	325	eP	P	21 52 52.3	+0.6
	11nm,0.9s						
HLID	Hailey	68.63	330	eP	P	21 52 53.9	+0.8
	4.3nm,0.9s						
MCMT	McKenzie Canyo	68.88	332	eP	P	21 52 55.1	+0.4
BOZ	Bozeman (W)	68.94	334	eP	P	21 52 54.6	-0.3
	6.7nm,1.1s						
BEKR	Beckworth	69.06	324	eP	P	21 52 56.9	+1.1
	6.3nm,1.1s						
MFID	Camas Ranch	69.20	330	eP	P	21 52 57.0	+0.5
	14nm,1.0s						
ORV	Oroville	69.50	323	eP	P	21 52 59.6	+1.3
	14nm,0.9s						
TBI	Tubuai	69.80	250	eLR	LR	22 14 13.4	
	325nm,28.8s						
TBI	Tubuai	69.80	250	eT	T	23 08 54.3	
	12nm,0.3s						
SNAA	Sanae	70.09	161	P	P	21 53 01.4	-0.2
SNAA	Sanae	70.09	161	P	P	21 53 00.9	-0.7
	7.2nm,0.6s,baz=282,slow=6.4,SNR=118						
SNAA	Sanae	70.09	161	eP	P	21 53 01.6	0.0
	12nm,0.9s						
SCHQ	Schefferville	70.21	5	LR	LR	22 25 58.6	
	comp=Z,106nm,19.1s,baz=356,slow=38						
MOD	Modoc Plateau	70.42	326	eP	P	21 53 04.3	+0.2
	9.8nm,1.1s						
PPT2	Papeete2	70.84	256	eS	S	22 02 25.0	+3.8
	465nm,25.2s						
PPT2	Papeete2	70.84	256	eLR	LR	22 14 47.7	
	200nm,23.2s						
PPT	Papeete	70.84	256	LR	LR	22 17 55.6	
	comp=Z,165nm,18.3s,baz=148,slow=31						
MSO	Missoula	70.91	333	eP	P	21 53 07.5	+0.5
	12nm,1.2s						
BMO	Blue Mountains	70.98	330	eP	P	21 53 07.1	-0.3
	12nm,1.1s						
YBH	Yreka Blue Hor	71.63	325	P	P	21 53 09.5	-2.0
	2.4nm,0.8s,baz=186,slow=6.1,SNR=3.8						
YBH				LR	LR	22 23 46.4	
	comp=Z,185nm,19.4s,baz=123,slow=35						
PINE	Pine Mountain	72.06	327	eP	P	21 53 14.8	+0.7
	11nm,1.0s						
WALA	Waterton Lakes	72.62	335	eP	P	21 53 17.3	+0.1
	7.6nm,1.0s						
DBIC	Dimbokro	73.11	78	P	P	21 53 20.7	0.0
	5.4nm,0.8s,baz=216,slow=7.2,SNR=4.6						
DBIC				LR	LR	22 24 01.1	
	comp=Z,784nm,18.6s,baz=224,slow=35						
DBIC	Dimbokro	73.11	78	eP	P	21 53 21.5	+0.8
	52nm,1.8s						
QSPA	South Pole Qui	74.87	180	P	P	21 53 30.3	0.0
	8.5nm,0.9s,baz=144,slow=5.4,SNR=12						
FCC	Fort Churchill	75.37	350	eP	P	21 53 31.9	-1.0
	16nm,1.0s						
NLWA	Neilton Lookou	76.02	328	eP	P	21 53 37.2	+0.3
	14nm,0.9s						
KOWA	Kowa	76.42	71	P	P	21 53 40.5	+0.6
	7.5nm,0.8s,baz=261,slow=3.2,SNR=12						
KOWA				LR	LR	22 26 20.9	
	comp=Z,851nm,19.4s,baz=232,slow=35						
RAR	Rarotonga	79.57	251	LR	LR	22 20 13.1	
	comp=Z,192nm,18.0s,baz=108,slow=29						
SBA	Scott Base	80.78	191	eP	P	21 54 05.4	+2.6
	9.3nm,1.1s						
TOA0	Torodi Ar. Sit	81.24	74	eP	P	21 54 07.0	+0.7
TORD	Torodi Ar. Bea	81.24	74	P	P	21 54 06.1	-0.3
	19nm,0.9s,baz=270,slow=4.8						
TORD				LR	LR	22 28 36.1	
	comp=Z,709nm,20.0s,baz=275,slow=34						
VNDA	Vanda	81.84	191	P	P	21 54 06.5	-1.9
	2.3nm,0.9s,baz=121,slow=3.9,SNR=12						
VNDA				LR	LR	22 24 18.6	
	comp=Z,155nm,19.7s,baz=150,slow=31						
VNDA	Vanda	81.84	191	eP	P	21 54 08.7	+0.3
	9.4nm,1.2s						
MDT	Midelt	82.68	53	LR	LR	22 31 01.7	
	comp=Z,262nm,18.5s,baz=248,slow=36						
YKA	Yellowknife Ar	83.42	343	P	P	21 54 15.8	-0.8
	4.3nm,0.8s,baz=136,slow=5.0,SNR=11						
YKA				LR	LR	22 35 46.9	
	comp=Z,19nm,18.3s,baz=124,slow=39						
SFJD	Kangerlussuaq	84.05	9	LR	LR	22 33 48.7	
	comp=Z,69nm,19.1s,baz=186,slow=37						
SYO	Syowa Base	84.38	161⇑	eP	P	21 54 21.4	-0.2
PAB	San Pablo	85.56	47	eP	P	21 54 29.6	+1.4
	14nm,1.4s						
ESDC	Sonseca Array	85.89	47	P	P	21 54 31.1	+1.3
	2.0nm,0.8s,baz=254,slow=5.2,SNR=11						
ESDC				LR	LR	22 31 08.1	
	comp=Z,188nm,18.6s,baz=250,slow=34						
ES19	SONSECA Array	85.94	47	eP	P	21 54 31.1	+1.0
DLBC	Dease Lake	85.97	335	eP	P	21 54 29.8	+0.1
	8.5nm,0.8s						
TAM	Tamanrasset	87.65	66	eP	P	21 54 41.2	+2.3
	10.0nm,1.3s						
TSUM	Tsumeb	87.72	109	eP	P	21 54 39.5	+0.1
	6.9nm,1.0s						
BOSA	Boshof	91.76	120	LR	LR	22 32 19.6	
	comp=Z,222nm,19.9s,baz=262,slow=33						
MAW	Mawson	91.92	165	P	P	21 54 58.1	+0.2
	1.8nm,0.8s,baz=184,slow=12,SNR=3.5						
MAW				LR	LR	22 35 46.5	
	comp=Z,166nm,18.5s,baz=249,slow=35						
KEST	Kesra	94.54	54	LR	LR	22 37 57.8	
	comp=Z,214nm,19.3s,baz=252,slow=36						
ILAR	Eielson Array	96.09	336	P	P	21 55 15.5	-1.4
	0.5nm,0.8s,baz=178,slow=4.4,SNR=3.3						
ILAR				PP	PP	21 59 15.4	+5.4
	0.4nm,0.6s,baz=96,slow=6.6,SNR=4.1						
ILAR				LR	LR	22 41 14.7	
	comp=Z,105nm,20.0s,baz=112,slow=37						
KHC	Kasperske Hory	100.67	42	ePP	PP	21 59 44.6	-0.9
KHC				AMS	AMS	22 45 00.0	
	comp=Z,100nm,14.7s						
BRG	Berggiesshubel	101.22	40	eP	Pdif	21 55 41.5	+1.3
	6.8nm,1.2s						
PRU	Pruhonice	101.44	41	AMS	AMS	22 42 30.0	
OKC	Ostrava-Krasne	103.72	42	AMS	AMS	22 44 30.0	
	comp=Z,200nm,16.4s						
DZM	Mont Dzumac	109.02	240	eLR	LR	22 32 36.8	
	216nm,24.8s						
AKTO	Aktyubinsk	128.67	37	PKP	PKPdf	22 00 57.4	+0.5
	1.0nm,0.7s,baz=352,slow=2.2,SNR=3.9						
ASAR	Alice Springs	131.90	217	PKP	PKPdf	22 01 03.0	-0.9
	2.5nm,1.0s,baz=148,slow=2.9,SNR=11						
BVAR	Borovoye Array	133.66	28	PKP	PKPdf	22 01 06.8	+0.6
	0.2nm,0.4s,baz=0.0,slow=0.3,SNR=3.6						
WRA	Warramunga Arr	134.45	221	PKP	PKPdf	22 01 08.7	-0.1
	2.6nm,0.7s,baz=140,slow=1.8,SNR=31						
WRAB	Tennant Creek	134.45	221	ePKPdf	PKPdf	22 01 08.1	-0.6
ZALV	Zalesovo Beam	138.40	18	PKP	PKPdf	22 01 14.3	-0.6
	3.5nm,0.8s,baz=318,slow=2.0,SNR=9.8						
KURK	Kurchatov	138.88	25	ePKPdf	PKPdf	22 01 15.5	-0.4
KURBB	Kurchatov Arra	138.91	25	PKP	PKPdf	22 01 16.4	+0.4
	1.0nm,0.8s,baz=314,slow=2.5,SNR=6.7						
FITZ	Fitzroy Crossi	140.93	213	PKP	PKPdf	22 01 19.4	-1.2
	4.0nm,0.9s,baz=175,slow=2.4,SNR=4.1						
MKAR	Makanchi Array	143.45	26	PKP	PKPdf	22 01 21.9	-2.5
	1.0nm,0.8s,baz=294,slow=1.2,SNR=8.3						
KSH	Kashi	145.15	41	ePKPbc	PKPdf	22 01 28.3	+0.6
KSH				PP	PP	22 04 50.4	+4.2
KSH				PKS	PKSdf	22 05 02.5	-0.8
KSH				AMB	AMB		
	comp=Z,83nm,4.5s						
NIL	Nilore	146.23	52	ePKPbc	PKPab	22 01 30.5	-0.9
ULN	Ulaanbaatar	147.46	357	ePKPbc	PKPab	22 01 34.3	-1.5
SONM	Songino Array	147.51	358	PKPbc	PKPbc	22 01 32.2	-1.8
	6.6nm,0.9s,baz=320,slow=1.7,SNR=20						
WMQ	Urumqi	148.08	24	PKPbc	PKPdf	22 01 31.8	-0.6
WMQ				LR	LR		
	comp=N,130nm,21.1s						
WMQ				LR	LR		
	comp=E,74nm,22.1s						
WMQ				LR	LR		
	comp=Z,140nm,24.3s						
KSRS	Korea Array	149.82	321	PKP	PKPdf	22 01 34.2	-1.1
	1.0nm,0.8s,baz=18,slow=1.9,SNR=3.6						
KSRS				PKPbc	PKiKP	22 01 40.5	-0.6
	3.2nm,1.0s,baz=10,slow=1.7,SNR=9.4						
KSAR	Wonju Array Be	149.85	321	PKP	PKPdf	22 01 34.2	-1.1
KSAR				PKPbc	PKiKP	22 01 40.5	-0.7
HHC	Hu-ho-hao-te	153.84	348	ePKPbc	PKPdf	22 01 36.6	-4.8
HHC				SKS	SKSdf	22 08 43.5	-3.3
HHC				SS	SS	22 25 11.3	+0.8
HHC				AMB	AMB		
	comp=Z,100nm,7.8s						
HHC				LR	LR		
	comp=N,130nm,16.7s						
HHC				LR	LR		
	comp=E,110nm,17.7s						
HHC				LR	LR		
	comp=Z,120nm,17.9s						
GTA	Gaotai	155.59	9	ePKP	PKPdf	22 01 45.0	+1.1
GTA				PKPab	pPKPab	22 02 15.5	-2.8
NJ2	Nanjing	158.91	325	ePKP	PKPdf	22 01 47.0	-1.1
LZH	Lanzhou	159.27	2	ePKP	PKPdf	22 01 45.4	-3.3
LZH				sPKP		22 01 58.3	
LZH				LR	LR		
	comp=N,39nm,18.0s						
LZH				LR	LR		
	comp=E,43nm,19.1s						
LZH				LR	LR		
	comp=Z,57nm,20.2s						
GYA	Guiyang	168.73	351	ePKP	PKPdf	22 01 55.8	-1.7
GYA				PKPab	PKPab	22 03 08.0	+0.6
GYA				PKS	PKSdf	22 05 27.2	-3.1
GYA				PP	PP	22 06 58.5	+3.2
GYA				AMB	AMB		
	comp=Z,120nm,8.0s						
CMAR	Chiang Mai Arr	173.65	59	PKP	PKPdf	22 02 00.1	+0.1
	0.6nm,0.3s,baz=178,slow=3.2,SNR=3.7						

ISCJB ***11*** *21:44:15.7±0.6, 37°.79N±0°.03×26°.78E±0°.04, h12^{km}±5^{km},*
Error ellipse: s-maj=6.7km s-min=3.6km az=144.1
DDA ***11*** *21:44:15.9, 37°.80N×26°.80E, h7^{km}, Ml2.6*
ISK ***11*** *21:44:15.6, 37°.81N×26°.79E, h15^{km}, ML2.4/7*
CSEM ***11*** *21:44:16.1±0.2, 37°.80N×26°.80E, h19^{km}±2^{km}, ML2.4,*
Error ellipse: s-maj=4.9km s-min=2.7km az=49.0
ISC 11 21:44:16.0±1.1**, 37°.81N**±0°.04×**26°.82E**±0°.03**, h16**^{km}±8^{km}**,**
n29, σ0^{s}.56/45**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGB	˜zmir	0.25	13	i P	Pg	21 44 21.3	-0.3
DGB				i S	Sg	21 44 25.5	+0.1
URLA	Izmir	0.58	343	PG	Pg	21 44 27.4	-0.1
URLA				SG	Sb	21 44 35.8	+0.1
URLA	Izmir	0.58	343	i P	Pb	21 44 27.9	+0.2
URLA				i S	Sb	21 44 35.7	+0.1
URLA	Izmir	0.58	343	ePg	Pg	21 44 27.4	-0.1
URLA	Izmir	0.58	343	P	Pb	21 44 27.9	+0.2
URLA				eSg	Sb	21 44 35.8	+0.1
BLCB	Balcova	0.60	17	PG	Pg	21 44 28.0	+0.1
BLCB				SG	Sb	21 44 36.9	+0.5
BLCB	Balcova	0.60	17	ePg	Pg	21 44 28.0	+0.1
BLCB				eSg	Sb	21 44 36.9	+0.5
KRBN	Karaburun	0.81	345	PG	Pb	21 44 31.9	+0.2
KRBN	Karaburun	0.81	345	ePg	Pb	21 44 31.9	+0.2
CHOS	Chios island	0.83	314	PG	Pb	21 44 32.4	+0.3
CHOS				SG	Sb	21 44 43.7	+0.6
CHOS	Chios island	0.83	314	ePg	Pb	21 44 32.4	+0.3
CHOS				eSg	Sb	21 44 43.7	+0.6
BODT	Bodrum	0.84	152	PG	Pb	21 44 32.7	+0.4
BODT				SG	Sn	21 44 44.6	-0.7
BODT	Bodrum	0.84	152	ePg	Pb	21 44 32.7	+0.4
BODT				eSg	Sn	21 44 44.6	-0.7
AYDN	Tasoluk	0.86	100	i P	Pb	21 44 32.5	-0.1
AYDN				i S	Sb	21 44 44.9	+1.1
AYDN	Tasoluk	0.86	100	P	Pb	21 44 32.5	-0.1
AYDN				S	Sb	21 44 44.9	+1.1
AYDB	Zeytinkoy-Aydi	0.86	81	PG	Pb	21 44 33.3	+0.6
AYDB				SG	Sn	21 44 45.9	0.0
AYDB	Zeytinkoy-Aydi	0.86	81	ePg	Pb	21 44 33.3	+0.6
AYDB				eSg	Sn	21 44 45.9	0.0
MLSB	Milas	0.92	124	PG	Pn	21 44 34.3	0.0
MLSB				SG	Sn	21 44 47.6	+0.4
MLSB	Milas	0.92	124	ePg	Pn	21 44 34.3	0.0
MLSB				eSg	Sn	21 44 47.6	+0.4
DAT	Datca	1.24	150	PN	Pn	21 44 38.5	-0.3
DAT	Datca	1.24	150	ePn	Pn	21 44 38.5	-0.3
DKL	Dikili	1.26	3	PN	Pb	21 44 39.5	+0.1
DKL	Dikili	1.26	3	ePn	Pb	21 44 39.5	+0.1
APE	Apeiranthos	1.26	234	PN	Pn	21 44 38.9	-0.1
APE	Apeiranthos	1.26	234	ePn	Pn	21 44 38.9	-0.1
YER	Yerkesik	1.35	120	PN	Pb	21 44 40.9	0.0
YER	Yerkesik	1.35	120	ePn	Pb	21 44 40.9	0.0
TURN	Turunc	1.71	123	PN	Pn	21 44 43.3	-1.8
TURN	Turunc	1.71	123	ePn	Pn	21 44 43.3	-1.8

GUC 11 21:44:22.9±0.3**, 23°.11S**×**67°.22W, h251**^{km}±7^{km}**, ML4.1,**
11C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB15	IPOC Station P	2.08	267⇑	iP	Pn	21 45 08.0	+1.6
PB15				i S	S	21 45 42.6	+1.9
PB06	IPOC Station P	2.21	280⇑	iP	Pn	21 45 09.4	+1.9
PB06				i S	S	21 45 44.7	+1.9
PB09	IPOC Station P	2.29	305⇑	iP	Pn	21 45 10.3	+2.0
PB03	IPOC Station P	2.57	294⇑	iP	Pn	21 45 13.1	+1.9
PB03				i S	S	21 45 51.3	+2.1
PB05	IPOC Station P	2.76	275⇑	iP	Pn	21 45 15.2	+2.1
PB05				i S	S	21 45 55.2	+2.5
PB05				IAML		21 45 59.0	
	comp=E,158nm,0.2s						
PB04	IPOC Station P	2.82	285⇑	iP	Pn	21 45 15.9	+2.2
PB04				i S	S	21 45 56.4	+2.6
PB04				IAML		21 45 58.2	
	comp=N,328nm,0.3s						
PB07	IPOC Station P	2.83	299⇑	iP	Pn	21 45 15.9	+2.0
PB07				i S	S	21 45 56.4	+2.3
PB01	IPOC Station P	2.95	314⇑	iP	Pn	21 45 17.2	+2.2
PB01				i S	S	21 45 58.4	+2.2
PB01				IAML		21 45 59.9	
	comp=E,262nm,0.3s						
PB10	IPOC Station P	3.09	262⇑	iP	Pn	21 45 18.6	+2.1
PB10				i S	S	21 46 00.7	+1.8
PB10				IAML		21 46 04.6	
	comp=N,161nm,0.3s						
PB08	IPOC Station P	3.46	328⇑	iP	Pn	21 45 24.1	+3.0
PB08				i S	S	21 46 09.9	+2.8
MNMC	Minye Minye	4.54	330⇑	iP	Pn	21 45 36.8	+3.2

ISCJB ***11*** *21:45:11.9±0.3, 24°.69N±0°.02×122°.36E±0°.01, h6^{km}±2^{km},*
Error ellipse: s-maj=2.9km s-min=2.0km az=15.9
TAP ***11*** *21:45:11.8, 24°.69N×122°.28E, h3^{km}, ML3.4, C*
JMA ***11*** *21:45:13.0, 24°.63N×122°.31E, h35^{km}±4^{km}, M3.3*
ISC 11 21:45:10.8±1.1**, 24°.72N**±0°.02×**122°.39E**±0°.02**, h8**^{km}±9^{km}**,**
n76, σ0^{s}.73/144**, 1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1	0.29	235	P	Pb	21 45 17.8	-0.5
	baz=224						
EOS1				eS	Sg	21 45 21.2	+0.7
	baz=224						
EGS		0.44	287⇓	iP	Pb	21 45 19.9	-0.9
	baz=296						
EGS				S	Sb	21 45 26.0	-1.5
	baz=296						
TWB1	Santiao Chiao	0.47	308	P	Pb	21 45 21.2	-0.1
	baz=321						
TWB1				S	Sg	21 45 26.5	+0.5
	baz=321						
TWC	Suao	0.51	258	i P	Pg	21 45 20.5	-0.1
	baz=258						
TWC				S	Sg	21 45 27.7	+0.5
	baz=258						
NTC	Toucheng	0.53	285	P	Pb	21 45 21.7	-0.7
	baz=292						
NTC				S	Sb	21 45 29.0	-1.2
	baz=292						
JYNG	Yonagunijimaku	0.57	118	P	Pn	21 45 24.9	-0.3
JYNG				eS	Sn	21 45 33.6	-1.2
TIPB	Shuangxi	0.57	296	i P	Pb	21 45 22.9	-0.2
	baz=304						
TIPB				S	Sb	21 45 31.4	-0.1
	baz=304						
ILA	Ilan	0.59	275	eP	Pb	21 45 22.7	-0.7
	baz=279						
ILA				eS	Sb	21 45 30.7	-1.1
	baz=279						
YOJ	Yonaguni jima	0.62	114	P	Pn	21 45 25.9	0.0
	baz=108						
YOJ				S	Sn	21 45 37.2	+1.1
	baz=108						
YOJ	Yonaguni jima	0.62	114	P	Pn	21 45 25.9	0.0
YOJ				eS	Sn	21 45 35.2	-0.8
NANB	Nanao	0.65	244	P	Pg	21 45 23.4	+0.1
	baz=241						
NANB				S	Sg	21 45 32.4	+0.5
	baz=241						
NWF	Wu-fen Shan	0.66	302	P	Pn	21 45 26.1	-0.5
	baz=310						
NWF				S	Sb	21 45 34.8	+0.8
	baz=310						
WFSB	Wu-fen Shan	0.66	302	P	Pb	21 45 25.0	+0.4
	baz=310						
WFSB				S	Sb	21 45 34.9	+1.0
	baz=310						
TWE	Neicheng	0.66	270	i P	Pg	21 45 23.5	0.0
	baz=273						
TWE				S	Sg	21 45 32.3	+0.1
	baz=273						
ENA	Nanau	0.66	244	eP	Pg	21 45 23.7	+0.2
	baz=241						
ENA				eS	Sg	21 45 32.2	0.0
	baz=241						
ENTT	Nioudou	0.76	264	eP	Pg	21 45 25.6	+0.2
	baz=265						
ENTT				S	Sb	21 45 35.7	-1.0
	baz=265						
TWA	Mucha	0.78	290	eP	Pb	21 45 26.8	+0.1
	baz=294						
TWA				S	Sb	21 45 36.9	-0.5
	baz=294						
NWLT	Wulai	0.81	274	eP	Pg	21 45 26.4	0.0
	baz=277						
NWLT				eS	Sg	21 45 37.4	+0.4
	baz=277						
YM07	YM07	0.83	303	P	Pn	21 45 28.5	-0.4
	baz=309						
YM07				S	Sb	21 45 39.6	+0.5
	baz=309						
TATO	Taipei	0.86	287	P	Pb	21 45 28.2	+0.2
	baz=291						
TATO				S	Sb	21 45 39.8	0.0
	baz=291						
YM11	YM11	0.87	301	eP	Pn	21 45 30.2	+0.8
	baz=306						
YM11				eS	Sn	21 45 41.2	-1.1
	baz=306						
YM10	YM10	0.87	300	P	Pn	21 45 29.2	-0.2
	baz=305						
YM10				S	Sb	21 45 40.5	+0.4
	baz=305						
YM04	YM04	0.89	299	eP	Pn	21 45 29.4	-0.3
	baz=304						
YM04				S	Sb	21 45 40.8	+0.2
	baz=304						
TWY	Chenhua	0.91	308	eP	Pn	21 45 30.1	+0.2
	baz=313						
TWY				eS	Sn	21 45 42.0	-1.2
	baz=313						
NACB	Ninganchiao	0.91	233	P	Pg	21 45 27.9	-0.4
	baz=230						
YHNB	Yeheng	0.93	267	eP	Pg	21 45 28.2	-0.4
	baz=268						
YHNB				eS	Sb	21 45 41.3	-0.4
	baz=268						
NSK	Sanguang	0.94	268	eP	Pg	21 45 28.6	-0.3
	baz=269						
NSK				S	Sb	21 45 41.6	-0.6
	baz=269						
TWS1	Kuangyinshan	0.96	293	eP	Pn	21 45 31.0	+0.4
	baz=297						
TWS1				S	Sb	21 45 43.2	+0.5
	baz=297						
NTST	Danshui	0.96	297	eP	Pn	21 45 30.6	-0.1
	baz=302						
NTST				eS	Sn	21 45 44.1	-0.5
	baz=302						
NNSB	Datong	0.96	253	P	Pg	21 45 28.8	-0.6
	baz=252						
NNSB				S	Sg	21 45 41.6	-0.3
	baz=252						
NNSH	Datong	0.96	253	eP	Pg	21 45 28.7	-0.6
	baz=252						
NNSH				S	Sg	21 45 41.8	-0.1
	baz=252						
TWD	Chiawan	0.97	229	eP	Pb	21 45 29.7	-0.2
	baz=225						
TWD				eS	Sb	21 45 43.6	+0.9
	baz=225						
NNS	Nan Shan	0.97	253	P	Pb	21 45 29.7	-0.2
	baz=253						
NNS				eS	Sb	21 45 42.5	-0.5
	baz=253						
ENLB	Shoufeng	1.09	222	eP	Pn	21 45 33.0	+0.6
	baz=218						
ENLB				eS	Sn	21 45 47.4	-0.3
	baz=218						
NCU	National Centr	1.12	283	eP	Pb	21 45 32.2	-0.3
	baz=285						
NCU				eS	Sb	21 45 47.7	+0.4
	baz=285						
TWT	Tachien	1.20	248	eP	Pn	21 45 34.4	+0.3
	baz=246						
TWT				eS	Sb	21 45 49.9	+0.1
	baz=246						
TDCB	Techi	1.22	248	eP	Pb	21 45 34.1	-0.1
	baz=246						
TDCB				eS	Sn	21 45 50.8	-0.3
	baz=246						
LIOB	Emei	1.25	267	eP	Pn	21 45 35.6	+0.9
	baz=267						
LIOB				eS	Sn	21 45 52.0	+0.1
	baz=267						
ESL	Shilin	1.26	224	eP	Pg	21 45 35.1	+0.1
	baz=221						
ESL				eS	Sn	21 45 52.1	+0.2
	baz=221						
NSTT	Nanjuang	1.27	266	eP	Pg	21 45 35.8	+0.7
	baz=267						
NSTT				S	Sb	21 45 51.7	+0.2
	baz=267						
IRIF	Iriomote-Funau	1.28	107	P	Pg	21 45 35.8	+0.5
IRIF				S	Sn	21 45 53.0	+0.7
SBCB	Hsinchu	1.28	273	eP	Pg	21 45 36.9	+1.6
	baz=275						
SBCB				eS	Sn	21 45 52.2	-0.2
	baz=275						
CHGB	Renai	1.29	240	eP	Pb	21 45 35.4	-0.1
	baz=238						
CHGB				eS	Sg	21 45 51.7	-0.7
	baz=238						
HSN	Hsinchu	1.30	274	eP	Pn	21 45 34.7	-0.6
	baz=276						
HSN				eS	Sb	21 45 52.1	-0.2
	baz=276						
EGFH	Guangfu	1.37	220	eP	Pn	21 45 36.3	0.0
	baz=217						
EGFH				eS	Sn	21 45 55.7	+1.1
	baz=217						
HATJ	Hateruma jima	1.45	117	P	Pg	21 45 38.6	+0.1
HATJ				eS	Sn	21 45 56.3	-0.2
NMLH	Miaoli	1.47	263	eS	Sg	21 45 58.0	-0.1
	baz=263						
DPDB	Guoxing	1.50	243	eP	Pg	21 45 39.8	+0.2
	baz=242						
DPDB				eS	Sg	21 45 58.7	-0.4
	baz=242						
HGSD	Ruisui	1.51	216	eP	Pb	21 45 38.9	-0.2
	baz=213						
HGSD				eS	Sn	21 45 58.3	+0.2
	baz=213						
NSY	Sanyi	1.52	259	eS	Sg	21 45 59.1	-0.4
	baz=258						
JKRS	Kuro-shima	1.55	108	P	Pb	21 45 40.1	+0.4
JKRS				eS	Sg	21 46 00.3	-0.3
SMLT	Sun Moon Lake	1.60	239	eP	Pg	21 45 41.2	-0.2
	baz=237						
SMLT				eS	Sb	21 46 01.1	+0.1
	baz=237						
SSLB	Suanglung	1.61	235	eP	Pb	21 45 40.7	-0.1
	baz=233						

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
SSLB				eS	Sb	21 46 01.2	-0.1
	baz=233						
TYC	Yuchr	1.62	240	eP	Pg	21 45 41.6	-0.3
	baz=238						
TYC				eS	Sb	21 46 01.4	-0.2
	baz=238						
JIJ	Ishigaki jima	1.63	102	P	Pb	21 45 40.8	-0.4
JIJ				S	Sb	21 46 01.8	-0.2
YULB	Yu-li	1.66	217	P	Pn	21 45 40.0	-0.3
	baz=214						
YULB				eS	Sn	21 46 02.3	+0.5
	baz=214						
TCU	Taichung	1.67	250	eP	Pb	21 45 41.1	-0.7
	baz=249						
TCU				eS	Sn	21 46 01.7	-0.2
	baz=249						
TWF1	Yuli	1.69	217	eP	Pn	21 45 40.9	+0.2
	baz=213						
TWF1				eS	Sb	21 46 04.0	+0.3
	baz=213						
JISG	Ishigakijimahi	1.75	94	P	Pb	21 45 42.5	-0.7
WJS	Zhushan	1.76	240	eP	Pb	21 45 43.1	-0.3
	baz=238						
WJS				eS	Sb	21 46 05.2	-0.6
	baz=238						
YUS	Yu-Shan	1.80	227	eP	Pb	21 45 43.9	-0.5
	baz=225						
YUS				eS	Sn	21 46 06.3	+0.4
	baz=225						
FULB	Fuli	1.82	214	eP	Pn	21 45 42.4	0.0
	baz=211						
FULB				eS	Sb	21 46 07.0	-0.4
	baz=211						
CHKT	Chengkung	1.87	210	eP	Pb	21 45 44.3	-0.9
	baz=207						
CHKT				eS	Sb	21 46 08.3	-0.5
	baz=207						
ALS	Alishan	1.89	231	eS	Sb	21 46 09.1	-0.5
	baz=228						
CHN5	Tsauling	1.93	235	eP	Pb	21 45 46.7	+0.4
	baz=233						
JTJ	Tarama	2.10	92	P	Pb	21 45 48.8	-0.4
TPUB	Ta-pu	2.14	229	eP	Pb	21 45 48.8	-1.1
	baz=227						
TPUB				eS	Sn	21 46 14.9	+1.1
	baz=227						
WTP	Ta-pu	2.19	228	eP	Pb	21 45 49.9	-0.9
	baz=226						
WTP				eS	Sn	21 46 15.4	+0.4
	baz=226						
TWK	Hsinying	2.27	231	eP	Pb	21 45 50.9	-1.1
	baz=228						
TWK				eS	Sn	21 46 16.6	-0.2
	baz=228						
WLGB	Puzi	2.28	238	eP	Pn	21 45 49.3	+0.6
	baz=236						
WLGB				eS	Sn	21 46 17.7	+0.6
	baz=236						
SGST	Jiashian	2.33	226	eP	Pb	21 45 51.5	-1.5
	baz=223						
SGST				eS	Sn	21 46 17.1	-1.1
	baz=223						
SLGT	Liugui	2.35	223	eS	Sn	21 46 20.3	+1.5
	baz=221						
SSD	Sandimen	2.54	220	eP	Pb	21 45 55.0	-1.8
	baz=217						
SSD				eS	Sn	21 46 25.6	+2.0
	baz=217						
MASBT	Mashibuluo	2.65	218	eP	Pn	21 45 55.7	+1.8
	baz=216						
MASBT				eS	Sn	21 46 27.9	+1.7
	baz=216						
EAST	Anshuo	2.73	212	eP	Pb	21 45 57.4	-2.4
	baz=209						
EAST				eS	Sn	21 46 28.8	+0.6
	baz=209						
SCZT	Fangliau	2.85	215	eP	Pn	21 45 59.0	+2.4
	baz=213						
SCZT				eS	Sn	21 46 32.3	+1.2
	baz=213						

MEX 11 21:48:38.5±0.5, 14°.28N×92°.48W, h52^{km}±28^{km}, MD3.9, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
THIG		0.65	18	eP	Pn	21 48 49.9	-1.9
THIG				i S	Sn	21 48 59.7	-1.7
PCIG		1.58	333	i P	Pn	21 49 02.8	-1.4
PCIG				eS	Sn	21 49 21.3	-2.2
TGIG		2.56	346	eP	Pn	21 49 17.1	-0.4
TGIG				i S	Sn	21 49 45.5	-2.0

IDC 11 22:11:18.2±2.2, 7°.54N×136°.42E, h0^{km}, mb3.7/6, mb1 3.8/6, mb1mx3.5/57, mbtmp3.7/6, Error ellipse: s-maj=87.1km s-min=21.5km az=75.0, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
WRA	Warramunga Arr	27.39	184	P	P	22 17 06.2	+0.7
	0.6nm,0.9s,baz=3.7,slow=10,SNR=8.4						
ASAR	Alice Springs	31.12	184	P	P	22 17 37.8	-0.8
	0.3nm,0.8s,baz=18,slow=10,SNR=3.3						
H11S3	WAKE ISLAND Hy	31.38	67	T	T	22 50 40.2	
	baz=253						
H11S2	WAKE ISLAND Hy	31.39	67	T	T	22 50 41.0	
	baz=253						
H11S1	WAKE ISLAND Hy	31.39	67	T	T	22 50 44.4	
	baz=253						
CMAR	Chiang Mai Arr	38.01	290	P	P	22 18 38.4	0.0
	0.4nm,0.3s,baz=102,slow=7.8,SNR=3.6						
SONM	Songino Array	47.57	333	P	P	22 19 56.5	+0.7
	1.0nm,0.7s,baz=142,slow=7.2,SNR=5.9						
MKAR	Makanchi Array	60.40	320	P	P	22 21 29.4	-0.1
	1.1nm,0.7s,baz=112,slow=8.7,SNR=15						
KURBB	Kurchatov Arra	64.14	323	P	P	22 21 53.6	-0.8
	0.4nm,0.5s,baz=114,slow=5.8,SNR=4.7						

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*DDA **11** 22:22:18.9, 38°.76N×43°.28E, h7^{km}, Ml2.7*
*ISK **11** 22:22:18.2, 38°.76N×43°.23E, h21^{km}, ML2.4/4*
*ISCJB **11** 22:22:20.0±0.5, 38°.77N±0°.03×43°.26E±0°.04, h20^{km}±6^{km}, Error ellipse: s-maj=5.3km s-min=4.2km az=12.4*
*CSEM **11** 22:22:19.2±0.2, 38°.77N×43°.27E, h20^{km}, ML2.4, Error ellipse: s-maj=4.6km s-min=3.8km az=126.0*

ISC 11 22:22:19.9±1.0, 38°.77N±0°.02×43°.25E±0°.02, h19^{km}±2^{km}, n28, σ1^s.36/54, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
VANB	Van	0.21	148	PG	Pg	22 22 25.1	0.0
VANB				SG	Sg	22 22 30.1	+1.4
VANB	Van	0.21	148	ePg	Pg	22 22 25.1	0.0
VANB				eSg	Sg	22 22 30.1	+1.4
ERCV	ERCIS-VAN	0.26	16	PG	Pb	22 22 24.9	-1.0
ERCV				SG	Sb	22 22 29.6	-0.3
ERCV	ERCIS-VAN	0.26	16	ePg	Pb	22 22 24.9	-1.0
ERCV				eSg	Sb	22 22 29.6	-0.3
VMUR	Van-Muradiye	0.33	49	i P	Pb	22 22 26.5	-0.8
VMUR				i S	Sb	22 22 32.7	+0.4
VMUR	Van-Muradiye	0.33	49	P	Pb	22 22 26.5	-0.8
VMUR				S	Sb	22 22 32.7	+0.4
ADCV	BITLIS_Adilcev	0.41	275	i P	Pb	22 22 27.8	-1.0
ADCV				i S	Sb	22 22 34.9	+0.1
ADCV	BITLIS_Adilcev	0.41	275	P	Pb	22 22 27.8	-1.0
ADCV				S	Sb	22 22 34.9	+0.1
GEVA	Gevas	0.48	198	i P	Pb	22 22 28.1	-1.8
GEVA				i S	Sb	22 22 36.0	-0.7
GEVA	Gevas	0.48	198	P	Pb	22 22 28.1	-1.8
GEVA				S	Sb	22 22 36.0	-0.7
CLDR	Caldiran	0.64	54	PG	Pb	22 22 31.6	-0.9
CLDR				SG	Sb	22 22 41.4	+0.3
CLDR	Caldiran	0.64	54	i P	Pg	22 22 30.7	-1.9
CLDR				i S	Sb	22 22 41.2	+0.1
CLDR	Caldiran	0.64	54	P	Pg	22 22 30.7	-1.9
CLDR	Caldiran	0.64	54	ePg	Pb	22 22 31.6	-0.9
CLDR				S	Sb	22 22 41.2	+0.1
TUTA	Tutak	0.71	332	i P	Pb	22 22 32.8	-1.0
TUTA				i S	Sb	22 22 43.1	-0.3
TUTA	Tutak	0.71	332	P	Pb	22 22 32.8	-1.0
TUTA				S	Sb	22 22 43.1	-0.3
AGRB	Hanur-Agry	0.83	346	PG	Pb	22 22 35.0	-0.8
AGRB				SG	Sb	22 22 46.9	+0.3
AGRB	Hanur-Agry	0.83	346	ePg	Pb	22 22 35.0	-0.8
AGRB				eSg	Sb	22 22 46.9	+0.3
GURO	Guroymak-BITLI	0.98	257	PG	Pb	22 22 37.1	-1.2
GURO				SG	Sb	22 22 50.4	-0.5
GURO	Guroymak-BITLI	0.98	257	ePg	Pb	22 22 37.1	-1.2
GURO				eSg	Sb	22 22 50.4	-0.5
EKAR	Karacoban	1.04	298	i P	Pn	22 22 40.0	+0.3
EKAR				i S	Sn	22 22 57.5	+3.6
EKAR	Karacoban	1.04	298	P	Pn	22 22 40.0	+0.3
EATA	Eleskirt	1.24	332	i P	Pg	22 22 42.4	-1.6
EATA				i S	Sn	22 23 00.8	+2.0
EATA	Eleskirt	1.24	332	P	Pg	22 22 42.3	-1.6
EATA				S	Sn	22 23 00.8	+2.0
HAKT	HAKKARI	1.27	163	i P	Pn	22 22 41.8	-1.0
HAKT				i S	Sn	22 23 01.7	+2.3
HAKT	HAKKARI	1.27	163	P	Pn	22 22 41.8	-1.0
HAKT				S	Sn	22 23 01.7	+2.3
SRTM	Siirt_Merkez	1.30	234	i P	Pg	22 22 44.0	-1.1
SRTM				i S	Sn	22 23 03.1	+3.0
SRTM	Siirt_Merkez	1.30	234	P	Pg	22 22 44.0	-1.1
SRTM				S	Sn	22 23 03.1	+3.0

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*ISCJB **11** 22:26:15.7±0.6, 19°.0S±0°.1×176°.8W±0°.1, h200^{km}, mb3.5/7, Error ellipse: s-maj=20.5km s-min=7.7km az=38.4*
*IDC **11** 22:26:16.9±2.1, 18°.88S×176°.81W, h198^{km}±23^{km}, mb3.5/8, mb1 3.6/9, mb1mx3.3/55, mbtmp4.0/9, MS3.5/2, Ms1 3.7/2, ms1mx3.1/30, Error ellipse: s-maj=35.8km s-min=13.0km az=137.0*

ISC 11 22:26:16.3±0.8, 19°.1S±0°.1×176°.6W±0°.2, h200^{km}, n14, σ1^s.46/13, mb3.5/7, Fiji Islands region

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
AFI	Afiamalu	6.96	43	P	Pn	22 27 55.7	-0.5
	1.6nm,0.3s,baz=212,slow=15,SNR=2.0						
AFI				S	Sn	22 29 15.0	-0.4
	1.6nm,0.3s,baz=187,slow=8.1,SNR=2.2						
URZ	Urewera	19.84	195	P	P	22 30 34.2	+2.3
	2.4nm,0.3s,baz=349,slow=19,SNR=5.7						
URZ				S	S	22 34 01.2	-3.1
	5.6nm,0.7s,baz=355,slow=19,SNR=8.8						
HNR	Honiara	24.62	290	LR	LR	22 39 45.1	
	comp=Z,140nm,20.9s,baz=118,slow=33						
STKA	Stephens Creek	39.56	243	P	P	22 33 28.8	+0.6
	1.7nm,0.7s,baz=95,slow=12,SNR=3.6						
WRA	Warramunga Arr	46.09	260	P	P	22 34 20.4	-0.3
	0.5nm,0.3s,baz=97,slow=6.8,SNR=40						
ASAR	Alice Springs	46.10	255	P	P	22 34 21.1	+0.2
	4.4nm,0.6s,baz=91,slow=8.4,SNR=80						
FITZ	Fitzroy Crossi	54.50	261	P	P	22 35 23.4	-0.4
	0.6nm,0.7s,baz=90,slow=6.1,SNR=2.2						
NVAR	Mina Array Bea	79.14	43	P	P	22 38 00.9	+1.7
	0.8nm,0.7s,baz=221,slow=8.9,SNR=5.2						
SEY	Seymchan	85.33	346	P	P	22 38 29.8	-0.6
	1.6nm,0.7s,baz=68,slow=22,SNR=4.0						
ILAR	Eielson Array	86.69	12	P	P	22 38 37.0	0.0
	0.3nm,0.5s,baz=226,slow=3.6,SNR=4.3						
CMAR	Chiang Mai Arr	90.87	289	LR	LR	23 17 58.4	
	comp=Z,24nm,20.1s,baz=190,slow=34						
EKA	Eskdalemuir Ar	143.50	6	PKhKP	PKPpre	22 45 22.5	
	0.7nm,0.6s,baz=348,slow=2.3,SNR=4.9						
BRTR	Keskin Array B	146.82	315	PKPbc	PKPdf	22 45 32.6	-0.6
	0.5nm,0.6s,baz=128,slow=5.6,SNR=4.6						
GERES	GERESS Array B	149.19	347	PKPbc	PKPbc	22 45 39.9	-1.3
	0.3nm,0.5s,baz=25,slow=4.4,SNR=3.9						

IDC 11 22:33:16.5±1.0, 29°.03S×74°.85E, h0^{km}, mb3.8/8, mb1 4.0/8, mb1mx3.6/59, mbtmp3.8/8, MS4.0/2, Ms1 3.9/2, ms1mx3.1/57, Error ellipse: s-maj=43.6km s-min=22.5km az=85.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
MAW	Mawson	39.26	187	LR	LR	22 53 50.7	
	comp=Z,117nm,19.7s,baz=298,slow=31						
CMAR	Chiang Mai Arr	52.64	29	P	P	22 42 32.3	-0.3
	0.3nm,0.3s,baz=219,slow=6.9,SNR=5.5						
WRA	Warramunga Arr	54.41	95	P	P	22 42 45.7	-0.1
	1.7nm,0.9s,baz=252,slow=6.7,SNR=6.1						
QSPA	South Pole Qui	61.10	180	P	P	22 43 32.1	-0.2
	1.2nm,0.5s,baz=359,slow=1.6,SNR=3.8						
VNDA	Vanda	61.23	166	P	P	22 43 32.9	0.0
	2.9nm,1.2s,baz=266,slow=8.7,SNR=6.2						
RPZ	Rata Peaks	74.70	132	LR	LR	23 09 50.6	
	comp=Z,168nm,18.2s,baz=278,slow=29						
MKAR	Makanchi Array	75.77	5	P	P	22 45 03.6	-0.4
	0.5nm,0.7s,baz=191,slow=6.8,SNR=4.7						
KURBB	Kurchatov Arra	79.37	2	P	P	22 45 24.3	+0.4
	0.3nm,0.7s,baz=194,slow=6.7,SNR=4.2						
SONM	Songino Array	81.60	21	P	P	22 45 36.3	+0.1
	0.2nm,0.4s,baz=182,slow=5.2,SNR=3.2						
MLR	Muntele Rosu	86.46	328	P	P	22 46 01.2	+0.2
	0.6nm,1.0s,baz=188,slow=15,SNR=4.3						

IDC 11 22:36:03.8±1.6, 3°.24N×127°.14E, h0^{km}, mb3.4/5, mb1 3.6/5, mb1mx3.4/62, mbtmp3.5/5, Error ellipse: s-maj=108.0km s-min=19.6km az=70.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
FITZ	Fitzroy Crossi	21.25	184	P	P	22 40 51.2	-0.5
	1.1nm,0.8s,baz=6.2,slow=9.9,SNR=3.6						
WRA	Warramunga Arr	24.09	163	P	P	22 41 21.4	+0.1
	0.8nm,0.5s,baz=343,slow=10,SNR=16						
ASAR	Alice Springs	27.54	166	P	P	22 41 52.6	+0.1
	0.2nm,0.3s,baz=347,slow=7.0,SNR=2.9						
MKAR	Makanchi Array	58.19	325	P	P	22 46 01.0	+1.2
	0.2nm,0.5s,baz=127,slow=7.6,SNR=5.0						
KURBB	Kurchatov Arra	62.37	327	P	P	22 46 27.4	-0.9
	0.4nm,0.7s,baz=129,slow=6.3,SNR=4.1						

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*ISK **11** 22:43:45.8, 38°.93N×43°.47E, h7^{km}, ML2.3/5*
*ISCJB **11** 22:43:47.0±0.6, 38°.90N±0°.06×43°.57E±0°.05, h16^{km}±7^{km}, Error ellipse: s-maj=9.6km s-min=6.8km az=165.7*
*CSEM **11** 22:43:46.4±0.3, 38°.93N×43°.52E, h10^{km}, ML2.6, Error ellipse: s-maj=9.0km s-min=7.0km az=143.0*
*DDA **11** 22:43:46.0, 38°.84N×43°.60E, h8^{km}, Ml2.6*

ISC 11 22:43:46.1±0.9, 38°.96N±0°.03×43°.57E±0°.03, h18^{km}±4^{km}, n22, σ0^s.89/33, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
VMUR	Van-Muradiye	0.03	0	i P	Pg	22 43 49.4	-0.2
VMUR				i S	Sg	22 43 52.7	+0.8
VMUR	Van-Muradiye	0.03	0	P	Pg	22 43 49.4	-0.2
VMUR				S	Sg	22 43 52.7	+0.8
CLDR	Caldiran	0.33	55	PG	Pb	22 43 54.5	+0.9
CLDR	Caldiran	0.33	55	i P	Pb	22 43 54.3	+0.7
CLDR				i S	Sn	22 44 01.2	-1.4
CLDR	Caldiran	0.33	55	P	Pb	22 43 54.3	+0.7
CLDR	Caldiran	0.33	55	ePg	Pb	22 43 54.5	+0.9
CLDR				S	Sn	22 44 01.2	-1.4
VANB	Van	0.39	202	PG	Pg	22 43 54.3	+0.1
VANB	Van	0.39	202	ePg	Pg	22 43 54.3	+0.1
ADCV	BITLIS_Adilcev	0.68	257	i P	Pb	22 43 59.1	-0.4
ADCV				i S	Sg	22 44 09.5	+0.9
ADCV	BITLIS_Adilcev	0.68	257	P	Pb	22 43 59.1	-0.4
ADCV				S	Sg	22 44 09.5	+0.9
TUTA	Tutak	0.74	307	i P	Pg	22 44 00.7	0.0
TUTA				i S	Sn	22 44 13.8	+1.1
TUTA	Tutak	0.74	307	P	Pg	22 44 00.6	0.0
AGRB	Hanur-Agry	0.76	324	PG	Pb	22 44 00.4	-0.6
AGRB	Hanur-Agry	0.76	324	ePg	Pb	22 44 00.4	-0.6
GURO	Guroymak-BITLI	1.27	252	PN	Pn	22 44 08.9	-0.2
GURO				SN	Sn	22 44 25.8	+0.1
GURO	Guroymak-BITLI	1.27	252	ePn	Pn	22 44 08.9	-0.2
GURO				eSn	Sn	22 44 25.8	+0.1
HAKT	HAKKARI	1.40	176	i P	Pn	22 44 09.8	-1.2
HAKT				i S	Sg	22 44 34.0	+2.5
HAKT	HAKKARI	1.40	176	P	Pn	22 44 09.8	-1.2
SRTM	Siirt_Merkez	1.61	234	i P	Pb	22 44 16.2	+0.8
SRTM				i S	Sg	22 44 38.4	+0.2
SRTM	Siirt_Merkez	1.61	234	P	Pb	22 44 16.2	+0.8
CUKT	Cukurca	1.71	179	PN	Pb	22 44 16.4	-0.6
CUKT	Cukurca	1.71	179	ePn	Pb	22 44 16.4	-0.6

MEX 11 22:50:03.9±0.6, 17°.85N×101°.35W, h52^{km}±6^{km}, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
ZIIG	Zihuatanejo	0.27	205	eP	Pn	22 50 11.2	-1.7
ZIIG				eS	Sn	22 50 17.9	-1.4
ARIG	Puente Sto Nin	1.04	66	eP	Pn	22 50 20.4	-1.9
ARIG				eS	Sn	22 50 33.8	-2.1
CAIG	El Cayaco	1.30	128	eP	Pn	22 50 24.1	-1.7
CAIG				i S	Sn	22 50 40.2	-1.9
MEIG	Mezcala	1.65	87	eP	Pn	22 50 29.4	-1.2
MEIG				i S	Sn	22 50 48.4	-2.2
PLIG	Platanillo	1.83	73	eP	Pn	22 50 32.2	-0.9
PLIG				i S	Sn	22 50 53.0	-2.3
MMIG	Aquila	1.95	283	eP	Pn	22 50 33.4	-1.2
MMIG				eS	Sn	22 50 56.5	-1.4
MAVM	Malinalco, Edo	2.08	58	i P	Pn	22 50 34.5	-2.1
MAVM				i S	Sn	22 51 00.3	-1.0

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*ISK **11** 22:50:46.9, 38°.87N×43°.49E, h13^{km}, ML2.3/4*
*ISCJB **11** 22:50:48.0±0.6, 38°.88N±0°.03×43°.53E±0°.05, h8^{km}±5^{km}, Error ellipse: s-maj=6.0km s-min=5.2km az=162.2*
*DDA **11** 22:50:47.4, 38°.87N×43°.55E, h7^{km}, Ml2.6*
*CSEM **11** 22:50:47.4±0.3, 38°.89N×43°.54E, h10^{km}, ML2.6, Error ellipse: s-maj=5.4km s-min=4.9km az=149.0*

ISC 11 22:50:47.6±0.9, 38°.89N±0°.03×43°.55E±0°.03, h10^{km}±6^{km}, n24, σ0^s.73/43, Turkey

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
VMUR	Van-Muradiye	0.10	11	i P	Pg	22 50 50.1	-0.3
VMUR				i S	Sg	22 50 53.6	+1.1
VMUR	Van-Muradiye	0.10	11	P	Pg	22 50 50.1	-0.3
VMUR				S	Sg	22 50 53.6	+1.1
ERCV	ERCIS-VAN	0.21	309	PG	Pg	22 50 51.6	-0.5
ERCV	ERCIS-VAN	0.21	309	ePg	Pg	22 50 51.6	-0.5
VANB	Van	0.32	203	PG	Pb	22 50 54.9	-0.5
VANB	Van	0.32	203	ePg	Pb	22 50 54.9	-0.5
CLDR	Caldiran	0.38	49	PG	Pg	22 50 55.4	+0.2
CLDR				SG	Sb	22 51 02.7	+0.1
CLDR	Caldiran	0.38	49	i P	Pg	22 50 55.0	-0.3
CLDR				i S	Sb	22 51 02.2	-0.5
CLDR	Caldiran	0.38	49	P	Pg	22 50 55.0	-0.3
CLDR	Caldiran	0.38	49	ePg	Pg	22 50 55.4	+0.2
CLDR				S	Sb	22 51 02.2	-0.5
ADCV	BITLIS_Adilcev	0.65	263	i P	Pg	22 50 60.0	-0.2
ADCV				i S	Sb	22 51 10.2	0.0
ADCV	BITLIS_Adilcev	0.65	263	P	Pg	22 51 00.0	-0.2
ADCV				S	Sb	22 51 10.2	0.0
TUTA	Tutak	0.77	312	i P	Pg	22 51 01.8	-0.6
TUTA				i S	Sg	22 51 12.5	0.0
TUTA	Tutak	0.77	312	P	Pg	22 51 01.8	-0.6
TUTA				S	Sg	22 51 12.5	0.0
AGRB	Hanur-Agry	0.81	328	PG	Pg	22 51 02.8	-0.4
AGRB				SG	Sb	22 51 14.9	0.0
AGRB	Hanur-Agry	0.81	328	ePg	Pg	22 51 02.8	-0.4
AGRB				eSg	Sb	22 51 14.9	0.0
EKAR	Karacoban	1.21	288	i P	Pg	22 51 12.2	+1.3
EKAR				i S	Sn	22 51 28.2	+0.9
EKAR	Karacoban	1.21	288	P	Pg	22 51 12.2	+1.3
EKAR				S	Sn	22 51 28.2	+0.9
GURO	Guroymak-BITLI	1.23	255	PN	Pn	22 51 09.7	-1.2
GURO				SN	Sb	22 51 26.5	-0.5
GURO	Guroymak-BITLI	1.23	255	ePn	Pn	22 51 09.7	-1.2
GURO				eSn	Sb	22 51 26.5	-0.5
EATA	Eleskirt	1.27	320	i P	Pn	22 51 11.2	-0.4
EATA				i S	Sn	22 51 30.2	+1.3
EATA	Eleskirt	1.27	320	P	Pn	22 51 11.2	-0.4
EATA				S	Sn	22 51 30.2	+1.3
HAKT	HAKKARI	1.34	175	i P	Pn	22 51 11.8	-0.7
HAKT				i S	Sg	22 51 31.6	+1.0
HAKT	HAKKARI	1.34	175	P	Pn	22 51 11.8	-0.7
HAKT				S	Sg	22 51 31.6	+1.0

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*NEIC **11** 22:54:31.8±0.0, 41°.11S×174°.91E, h28^{km}, ML3.8(WEL), After WEL.*
NEIC Felt in the southern part of the North Island.

WEL 11 22:54:31.4, 41°.1S±0°.6×174°.9E±0°.8, h29^{km}, ML3.8/24, Cook Strait

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
CAW	Cannon Point	0.15	94	P*	Pn	22 54 37.5	-0.2
CAW	Cannon Point	0.15	94	P	Pn	22 54 37.5	-0.2
WEL	Wellington	0.20	203	P*	Pn	22 54 38.1	-0.4
KIW	Kapiti Island	0.24	7	P*	Pb	22 54 38.3	+0.3
KIW	Kapiti Island	0.24	7	P	Pb	22 54 38.3	+0.3
KIW				S	Sb	22 54 43.0	+0.5
BHW	Baring Head	0.31	180	P*	Pb	22 54 39.3	+0.4
BHW	Baring Head	0.31	180	P	Pb	22 54 39.3	+0.4
BHW				S	Sb	22 54 44.7	+0.6
OGWZ	Otaki Gorge	0.36	39	P*	Pb	22 54 39.8	+0.2
OGWZ	Otaki Gorge	0.36	39	P	Pb	22 54 39.8	+0.2
MSWZ	Moikau Station	0.43	138	P*	Pn	22 54 41.3	-0.3
MSWZ	Moikau Station	0.43	138	P	Pn	22 54 41.3	-0.3
TCW	Tory Channel	0.46	256	P*	Pb	22 54 41.4	+0.2
TCW				P*	Pn	22 54 41.6	-0.5
TCW	Tory Channel	0.46	256	P	Pb	22 54 41.6	+0.4
MTW	Mount Morrison	0.48	97	P*	Pn	22 54 41.9	-0.3
MTW	Mount Morrison	0.48	97	P	Pn	22 54 42.0	-0.3
PAWZ	Paruwai Farm	0.51	124	P*	Pn	22 54 42.4	-0.3
PAWZ	Paruwai Farm	0.51	124	P	Pn	22 54 42.4	-0.3
HOWZ	Holdsworth Sta	0.53	68	P*	Pb	22 54 42.4	+0.1
HOWZ	Holdsworth Sta	0.53	68	P	Pb	22 54 42.4	+0.1
PLWZ	Palliser	0.55	149	P*	Pn	22 54 43.1	-0.3
PLWZ	Palliser	0.55	149	P	Pn	22 54 43.1	-0.2
TRWZ	Traveller	0.68	116	P*	Pb	22 54 44.7	-0.1
TRWZ	Traveller	0.68	116	P	Pb	22 54 44.8	-0.1
MRZ	Mangatainoka R	0.69	51	P*	Pb	22 54 44.8	-0.1
MRZ	Mangatainoka R	0.69	51	P	Pb	22 54 45.0	0.0
TMWZ	Te Maipa	0.77	91	P*	Pb	22 54 45.9	-0.3
TMWZ	Te Maipa	0.77	91	P	Pb	22 54 45.9	-0.3
TUWZ	Tuamarina	0.78	244	P*	Pn	22 54 46.1	-0.3
TUWZ	Tuamarina	0.78	244	P	Pn	22 54 46.1	-0.2
DUWZ	D'Urville Isla	0.78	292	P*	Pb	22 54 46.6	+0.2
DUWZ	D'Urville Isla	0.78	292	P	Pb	22 54 46.7	+0.2
CMWZ	Cape Campbell	0.82	217	P	Pb	22 54 48.3	+1.2
TIWZ	Tintock	0.83	68	P*	Pn	22 54 47.0	-0.2
TIWZ	Tintock	0.83	68	P	Pn	22 54 47.0	-0.1
BSWZ	Blackbirch Sta	0.97	230	P*	Pb	22 54 49.5	-0.1
BSWZ	Blackbirch Sta	0.97	230	P	Pb	22 54 49.5	-0.1
POWZ	Post Office Ro	0.98	44	P*	Pn	22 54 49.3	+0.2
POWZ	Post Office Ro	0.98	44	P	Pn	22 54 49.3	+0.2
PRWZ	Pori Road	0.99	57	P*	Pn	22 54 49.4	+0.1
PRWZ	Pori Road	0.99	57	P	Pn	22 54 49.4	+0.1
CPWZ	Castlepoint	1.02	80	P*	Pn	22 54 49.9	+0.1
CPWZ	Castlepoint	1.02	80	P	Pn	22 54 49.9	+0.2
BFZ	Birch Farm	1.12	69	P*	Pn	22 54 50.4	-0.7
BFZ	Birch Farm	1.12	69	P	Pn	22 54 50.6	-0.5
NNZ	Nelson	1.13	263	Pn	Pb	22 54 51.9	-0.5
NNZ	Nelson	1.13	263	P	Pb	22 54 51.9	-0.5
DVHZ	Dannevirke	1.27	51	P*	Pn	22 54 52.5	-0.6
DVHZ	Dannevirke	1.27	51	P	Pn	22 54 52.6	-0.5
TSZ	Takapari Road	1.33	39	P*	Pn	22 54 54.0	0.0
TSZ	Takapari Road	1.33	39	P	Pn	22 54 54.0	0.0
WAZ	Wanganui	1.34	4	Pn	Pb	22 54 56.2	+0.3
WAZ	Wanganui	1.34	4	P	Pb	22 54 56.3	+0.4
ANWZ	Angora Road	1.37	63	P	Pn	22 54 53.9	-0.6
PNHZ	Pukenui	1.56	41	Pn	Pn	22 54 56.6	-0.5
PNHZ	Pukenui	1.56	41	P	Pn	22 54 56.8	-0.3
PRHZ	Porangahau	1.58	59	Pn	Pn	22 54 56.4	-1.0
PRHZ	Porangahau	1.58	59	P	Pn	22 54 56.4	-1.0
THZ	Tophouse	1.62	245	Pn	Pn	22 54 58.2	+0.2
THZ	Tophouse	1.62	245	P	Pn	22 54 58.3	+0.3
KHZ	Kahutara	1.65	217	Pn	Pn	22 54 58.1	-0.3
KHZ	Kahutara	1.65	217	P	Pn	22 54 58.1	-0.3
LREZ	Lake Rotokare	1.67	347	P	Pb	22 55 01.3	-0.2
MTVZ	Mangateitei	1.77	15	P	Pb	22 55 01.8	-1.4
QRZ	Quartz Range	1.79	278	Pn	Pn	22 55 01.2	+0.9
QRZ	Quartz Range	1.79	278	P	Pn	22 55 01.3	+1.0
MOVZ	Moawhango	1.82	22	P	Pn	22 55 01.8	+1.1
PREZ	Palmer Road	1.84	342	Pn	Pb	22 55 03.6	-0.8
PREZ	Palmer Road	1.84	342	P	Pb	22 55 03.7	-0.6
PKVZ	Pokaka	1.84	12	P	Pn	22 55 02.6	+1.6
BHHZ	Black Hill Sta	1.85	30	Pn	Pn	22 55 01.7	+0.6
BHHZ	Black Hill Sta	1.85	30	P	Pn	22 55 01.9	+0.7
NMEZ	Namu Road	1.85	335	Pn	Pb	22 55 03.5	-0.9
NMEZ	Namu Road	1.85	335	P	Pb	22 55 03.6	-0.8

KRHZ	**Kereru**	**1.85**	**39**	P	Pn	22 55 00.8	-0.4
PXZ	**Pawanui**	**1.85**	**56**	P	Pn	22 55 00.2	-0.9
WHVZ	**Whangaehu Hut**	**1.89**	**17**	P	Pn	22 55 03.3	+1.4
DRZ	**Dome Shelter**	**1.90**	**16**	P	Pb	22 55 03.9	-1.6
KHEZ	**Kahui Hut**	**1.92**	**340**	Pn	Pb	22 55 04.5	-1.3
KHEZ	**Kahui Hut**	**1.92**	**340**	P	Pb	22 55 04.6	-1.1
TUVZ	**Tukino**	**1.92**	**18**	Pn	Pn	22 55 03.5	+1.3
TUVZ	**Tukino**	**1.92**	**18**	P	Pn	22 55 03.7	+1.4
COVZ	**Chateau Observ**	**1.96**	**15**	P	Pn	22 55 04.1	+1.3
VRZ	**Vera Road**	**1.97**	**357**	Pn	Pn	22 55 04.0	+1.2
VRZ	**Vera Road**	**1.97**	**357**	P	Pb	22 55 04.8	-1.8
NGZ	**Ngauruhoe**	**2.00**	**16**	Pn	Pn	22 55 04.7	+1.4
NGZ	**Ngauruhoe**	**2.00**	**16**	P	Pn	22 55 04.8	+1.5
KAHZ	**Kahuranaki**	**2.01**	**50**	Pn	Pn	22 55 02.3	-1.1
KAHZ	**Kahuranaki**	**2.01**	**50**	P	Pn	22 55 02.4	-0.9
PKE	**Pukeiti**	**2.02**	**340**	Pn	Pb	22 55 05.7	-1.7
PKE	**Pukeiti**	**2.02**	**340**	P	Pb	22 55 05.8	-1.6
OTVZ	**Oturere**	**2.02**	**18**	Pn	Pn	22 55 04.9	+1.2
KWHZ	**Kaweka Forest**	**2.05**	**36**	P	Pn	22 55 03.4	-0.5
WTVZ	**West Tongariro**	**2.06**	**16**	P	Pn	22 55 05.8	+1.8
TWVZ	**Taurewa**	**2.07**	**12**	P	Pn	22 55 05.3	+1.1
KRVZ	**Karewarewa**	**2.09**	**17**	Pn	Pb	22 55 07.0	-1.6
KRVZ	**Karewarewa**	**2.09**	**17**	P	Pn	22 55 05.9	+1.4
KATZ	**Kakaramea**	**2.21**	**17**	P	Pb	22 55 10.2	-0.6
RITZ	**Rihia Road**	**2.25**	**20**	P	Pb	22 55 09.5	-1.8
BKZ	**Black Stump Fm**	**2.29**	**33**	P	Pn	22 55 07.5	+0.2
RATZ	**Rangitukua**	**2.33**	**18**	P	Pb	22 55 12.0	-0.8
DSZ	**Denniston Nort**	**2.40**	**253**	P	Pn	22 55 09.1	+0.4
WATZ	**Wairara**	**2.48**	**16**	P	Pb	22 55 14.6	-0.6
LTZ	**Lake Taylor**	**2.57**	**228**	P	Pn	22 55 10.9	-0.1
HIZ	**Hauiti**	**2.58**	**360**	P	Pn	22 55 12.9	+1.7
MTHZ	**Maungataniwha**	**2.71**	**35**	P	Pn	22 55 13.0	+0.1
TLZ	**Tolley Road**	**2.81**	**11**	P	Pb	22 55 18.3	-2.6
OKCZ	**Okains Bay**	**2.95**	**206**	P	Pn	22 55 14.5	-1.7
INZ	**Inchbonnie**	**3.03**	**236**	P	Pn	22 55 16.9	-0.4
MQZ	**McQueen's Vall**	**3.08**	**211**	Pn	Pn	22 55 15.9	-2.1
MQZ	**McQueen's Vall**	**3.08**	**211**	P	Pn	22 55 17.0	-1.0
AKCZ	**Akaroa Harbour**	**3.13**	**207**	P	Pn	22 55 17.1	-1.7
URZ	**Urewera**	**3.32**	**32**	P	Pn	22 55 20.9	-0.4
TOZ	**Tahuroa Road**	**3.40**	**8**	P	Pn	22 55 25.1	+2.7
TWGZ	**Tauwhareparae**	**3.78**	**40**	P	Pn	22 55 27.0	-0.6
RUGZ	**Raukumara Rang**	**3.81**	**36**	P	Pn	22 55 28.6	+0.4
AWAZ	**Awhitu Peninsu**	**4.03**	**357**	P	Pn	22 55 32.9	+1.8
FOZ	**Fox Glacier**	**4.47**	**235**	P	Pn	22 55 38.3	+1.2
LBZ	**Lake Benmore**	**4.77**	**225**	P	Pn	22 55 40.8	-0.5
ODZ	**Otahua Downs**	**5.01**	**217**	Pn	Pn	22 55 43.6	-1.0
ODZ	**Otahua Downs**	**5.01**	**217**	P	Pn	22 55 43.7	-0.9
JCZ	**Jackson Bay**	**5.39**	**234**	P	Pn	22 55 49.7	-0.1
CTZ	**Chatham Island**	**6.83**	**116**	Pn	Pn	22 56 07.7	-1.8

MAN 11 23:03:51.6, 9°.90N×123°.19E, h16km, mb4.3, ML3.1, MS2.9, 1C, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBP	**Tagbilaran**	**0.69**	**108**	*e*P	Pb	23 04 05.8	+0.4
LLP	**Lapu-Lapu**	**0.87**	**62**	*e*P	Pb	23 04 07.7	-0.7
LLP				*e*S	Sn	23 04 22.0	+0.5
GUIM	**Jordan**	**0.93**	**321**	*e*P	Pb	23 04 05.2	-4.2
GUIM				*e*S	Sb	23 04 17.5	-4.0
RCP	**Roxas**	**1.70**	**345**⇑	*e*P	Pn	23 04 19.7	-1.0
RCP				*e*S	Sb	23 04 43.5	-0.2

HEL 11 23:20:08.7, 67°.82N×20°.17E, h0km, ML1.6, Explosion
CSEM 11 23:20:08.6±0.2, 67°.81N×20°.21E, h2km, ML1.6, Error ellipse: s-maj=4.0km s-min=3.9km az=12.0, Mining explosion.
UPP 11 23:20:08.5±0.0, 67°.82N×20°.21E, h0km, ML1.6, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.14**	**21**	P	Pg	23 20 11.4	+0.2
KUA				S	Sg	23 20 13.5	+0.5
KUA	**Kurravaara**	**0.14**	**21**	*i* P	Pg	23 20 11.4	+0.2
KUA				*i* S	Sg	23 20 13.5	+0.5
KUA	**Kurravaara**	**0.14**	**21**	*i* P	Pg	23 20 11.4	+0.2
KUA				*i* S	Sg	23 20 13.5	+0.5
RATU	**Laukkuluspa**	**0.23**	**270**	P	Pg	23 20 13.0	+0.1
RATU				S	Sg	23 20 16.3	+0.4
RATU	**Laukkuluspa**	**0.23**	**270**	*i* P	Pg	23 20 13.0	+0.1
RATU				*i* S	Sg	23 20 16.3	+0.4
RATU	**Laukkuluspa**	**0.23**	**270**	*i* P	Pg	23 20 13.0	+0.1
RATU				*i* S	Sg	23 20 16.3	+0.4
NIKU	**Nikkaluokta**	**0.45**	**276**	P	Pg	23 20 17.1	+0.1
NIKU				S	Sg	23 20 23.1	+0.3
NIKU	**Nikkaluokta**	**0.45**	**276**	*i* P	Pg	23 20 17.1	+0.1
NIKU				*i* S	Sg	23 20 23.1	+0.3
NIKU	**Nikkaluokta**	**0.45**	**276**	*i* P	Pg	23 20 17.1	+0.1
NIKU				*i* S	Sg	23 20 23.0	+0.2
LANU	**Lannavaara**	**0.71**	**71**	P	Pg	23 20 21.8	-0.3
LANU				S	Sg	23 20 31.2	0.0
LANU	**Lannavaara**	**0.71**	**71**	*e*P	Pg	23 20 21.8	-0.3
LANU				*e*S	Sg	23 20 31.5	+0.3
LANU	**Lannavaara**	**0.71**	**71**	*e*P	Pg	23 20 21.8	-0.3
LANU				S	Sg	23 20 31.2	-0.1
DUNU	**Dundret**	**0.72**	**169**	P	Pg	23 20 22.0	-0.2
DUNU				S	Sg	23 20 31.7	+0.1
DUNU	**Dundret**	**0.72**	**169**	*i* P	Pg	23 20 22.0	-0.2
DUNU				*i* S	Sg	23 20 31.7	+0.1
DUNU	**Dundret**	**0.72**	**169**	*i* P	Pg	23 20 22.0	-0.2
DUNU				*i* S	Sg	23 20 31.7	+0.2
SALU	**Saltoluokta**	**0.79**	**236**	P	Pg	23 20 23.5	0.0
SALU	**Saltoluokta**	**0.79**	**236**	*i* P	Pg	23 20 23.5	0.0
SALU	**Saltoluokta**	**0.79**	**236**	*i* P	Pg	23 20 23.5	-0.1
KIF	**Kilpisjarvi**	**1.21**	**10**	*e*PB	Pg	23 20 31.6	+0.1
	baz=186						
KIF				MSG		23 20 46.8	
	comp=Z,7.7nm,0.2s						
KIF				*e*S	Sg	23 20 47.5	+0.3
KIF	**Kilpisjarvi**	**1.21**	**10**	*e*Pb	Pg	23 20 31.6	0.0
KIF				*e*S	Sg	23 20 47.5	+0.3
KIF	**Kilpisjarvi**	**1.21**	**10**	*e*P	Pb	23 20 32.3	+0.2
PAJU	**Pajala**	**1.38**	**124**	P	Pg	23 20 33.7	-1.2
PAJU				S	Sg	23 20 52.0	-0.8
PAJU	**Pajala**	**1.38**	**124**	*e*P	Pg	23 20 33.7	-1.2
PAJU				*e*S	Sg	23 20 52.0	-0.8
PAJU	**Pajala**	**1.38**	**124**	*e*P	Pg	23 20 33.7	-1.2
PAJU				*e*S	Sg	23 20 52.0	-0.8
HEF	**Hetta**	**1.42**	**64**	*e*P	Pn	23 20 34.5	-1.1
HEF				MSG		23 20 52.0	
	comp=Z,3.1nm,0.2s						
HEF				*e*SN	Sn	23 20 57.1	+2.2
HEF	**Hetta**	**1.42**	**64**	*e*P	Pn	23 20 34.5	-1.0
HEF	**Hetta**	**1.42**	**64**	*e*P	Pn	23 20 34.6	-0.9
ERTU	**Ertsjaerv**	**1.49**	**148**	P	Pn	23 20 35.6	-0.9
ERTU				S	Sg	23 20 55.5	-0.9
ERTU	**Ertsjaerv**	**1.49**	**148**	*e*P	Pn	23 20 35.6	-0.9
ERTU				*e*S	Sg	23 20 55.5	-0.9
ERTU	**Ertsjaerv**	**1.49**	**148**	*e*P	Pn	23 20 35.6	-0.9
ERTU				*e*S	Sg	23 20 55.5	-0.8
HARU	**Harads**	**1.69**	**169**	P	Pn	23 20 39.2	0.0
HARU				S	Sn	23 21 01.4	-0.2
HARU	**Harads**	**1.69**	**169**	*e*P	Pn	23 20 39.2	0.0
HARU				*e*S	Sn	23 21 01.4	-0.2
HARU	**Harads**	**1.69**	**169**	*e*P	Pn	23 20 39.2	-0.1
HARU				*e*S	Sn	23 21 01.4	-0.2
KALU	**Kalix**	**2.33**	**146**	*e*P	Pn	23 20 49.0	+1.0
KALU				*e*SG	Sb	23 21 20.5	-0.1
KALU	**Kalix**	**2.33**	**146**	*e*P	Pn	23 20 49.0	+1.0
KALU				*e*Sg	Sb	23 21 20.5	-0.1
TOF	**Tornio**	**2.39**	**135**	*e*P	Pn	23 20 49.9	+1.2
TOF				MSG		23 21 19.4	
	comp=Z,2.4nm,0.2s						
TOF				*e*SB	Sb	23 21 21.6	-0.5
TOF	**Tornio**	**2.39**	**135**	*e*P	Pn	23 20 49.9	+1.2
SGF	**Sodankyl**	**2.45**	**96**	*e*P	Pn	23 20 50.9	+1.3
	baz=281						
SGF				*e*SG	Sb	23 21 25.3	+1.3
SGF	**Sodankyl**	**2.45**	**96**	*e*P	Pn	23 20 50.9	+1.3
SGF				*e*Sg	Sb	23 21 25.3	+1.3
ARE0	**ARCESS Array S**	**2.59**	**46**	*e*P	Pn	23 20 52.7	+1.1
	baz=230						
ARE0				*e*SB	Sb	23 21 26.8	-1.2
ARE0	**ARCESS Array S**	**2.59**	**46**	*e*P	Pn	23 20 52.7	+1.1
KEV	**Kevo**	**3.14**	**49**	*e*S	Sn	23 21 39.4	+2.1
KEV				MSG		23 21 41.5	
	comp=Z,1.1nm,0.2s						
KEV	**Kevo**	**3.14**	**49**	*e*S	Sn	23 21 39.4	+2.1

CSEM 11 23:20:54.4, 67°.86N×20°.20E, h0km, ML1.8, Mining explosion.
UPP 11 23:20:54.4±0.1, 67°.86N×20°.20E, h0km, ML1.8, Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUA	**Kurravaara**	**0.11**	**28**	P	Pg	23 20 56.9	+0.3
	baz=210						
KUA				S	Sg	23 20 58.4	+0.4
KUA	**Kurravaara**	**0.11**	**28**	P	Pg	23 20 56.8	+0.3
KUA				S	Sg	23 20 58.4	+0.4
SALU	**Saltoluokta**	**0.81**	**234**	P	Pg	23 21 09.5	-0.3
SALU	**Saltoluokta**	**0.81**	**234**	P	Pg	23 21 09.5	-0.3
PAJU	**Pajala**	**1.40**	**125**	P	Pn	23 21 20.0	-1.1
PAJU				S	Sg	23 21 39.1	-0.2
PAJU	**Pajala**	**1.40**	**125**	P	Pn	23 21 20.0	-1.2
PAJU				S	Sg	23 21 39.1	-0.2
ERTU	**Ertsjaerv**	**1.52**	**148**	P	Pn	23 21 22.6	-0.1
ERTU				S	Sg	23 21 43.1	-0.1
ERTU	**Ertsjaerv**	**1.52**	**148**	P	Pn	23 21 22.6	-0.2
ERTU				S	Sg	23 21 43.1	0.0
HARU	**Harads**	**1.73**	**169**	P	Pb	23 21 26.5	-0.4
HARU				S	Sn	23 21 48.5	+0.2
HARU	**Harads**	**1.73**	**169**	P	Pb	23 21 26.5	-0.4
HARU				S	Sn	23 21 48.5	+0.2
TRO	**Tromso**	**1.84**	**346**	*e*S	Sb	23 21 53.0	+0.5
STEI	**Steigen**	**1.88**	**275**	*e*S	Sg	23 21 55.3	+0.6

IDC 11 23:34:13.6±1.8, 7°.16S×101°.65E, h0km, mb3.5/6, mb1 3.7/7, mb1mx3.5/63, mbtmp3.6/7, ML4.2/1, Error ellipse: s-maj=58.1km s-min=19.2km az=43.0
ISCJB 11 23:34:16.4±1.2, 7°.1S±0°.2×101°.72E±0°.10, h33km, mb3.7/6, Error ellipse: s-maj=29.2km s-min=11.1km az=18.8
ISC 11 23:34:18.6±1.6, 7°.2S±0°.3×101°.7E±0°.1, h35km, n8, σ1s.06/9, mb3.6/6, Southwest of Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LEM	**Lembang**	**5.89**	**87**	Pn	**Pn**	**23 35 43.3**	**-0.3**
	6.7nm,0.3s,baz=308,slow=19,SNR=3.6						
LEM				Sn	**Sn**	**23 36 50.0**	**0.0**
	4.2nm,0.3s,baz=287,slow=20,SNR=1.8						
WRA	**Warramunga Arr**	**34.08**	**115**	P	**P**	**23 41 01.1**	**+1.0**
	0.5nm,0.8s,baz=281,slow=8.8,SNR=4.2						
ASAR	**Alice Springs**	**34.97**	**121**	P	**P**	**23 41 07.6**	**-0.1**
	0.2nm,0.4s,baz=296,slow=7.8,SNR=4.0						
SONM	**Songino Array**	**54.96**	**4**	P	**P**	**23 43 47.5**	**+1.3**
	0.5nm,0.8s,baz=175,slow=7.2,SNR=3.4						
MKAR	**Makanchi Array**	**56.47**	**344**	P	**P**	**23 43 57.1**	**+0.1**
	0.5nm,0.6s,baz=144,slow=8.5,SNR=5.0						
KURBB	**Kurchatov Arra**	**60.99**	**343**	P	**P**	**23 44 28.1**	**-0.2**
	0.6nm,0.6s,baz=171,slow=6.6,SNR=3.5						
ZALV	**Zalesovo Beam**	**62.57**	**349**	P	**P**	**23 44 37.1**	**-1.7**
	0.6nm,0.6s,baz=145,slow=5.3,SNR=3.5						
TXAR	**Lajitas Array**	**147.52**	**44**	PKPbc	**PKPab**	**23 54 01.0**	**-1.0**
	0.6nm,0.8s,baz=180,slow=0.9,SNR=3.3						

ISCJB 12 00:07:43.2±0.8, 15°.32S±0°.09×75°.75W±0°.08, h35km, mb3.9/5, Error ellipse: s-maj=14.3km s-min=9.2km az=39.9
IDC 12 00:07:45.7±3.5, 15°.31S×75°.66W, h37km±31km, mb3.7/6, mb1 3.9/9, mb1mx3.6/41, mbtmp3.9/9, ML3.6/3, MS2.8/3, Ms1 2.9/3, ms1mx2.7/38, Error ellipse: s-maj=28.6km s-min=20.5km az=66.0
ISC 12 00:07:45.1±0.9, 15°.3S±0°.1×75°.8W±0°.1, h35km, n18, σ1s.00/12, mb4.1/5, Near coast of Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	**Nana**	**3.46**	**342**	Pn	**Pn**	**00 08 37.5**	**+1.0**
	1.2nm,0.3s,baz=153,slow=11,SNR=2.8						
NNA				Sn	Sn	00 09 24.5	+8.1
	22nm,0.3s,baz=194,slow=20,SNR=4.7						
NNA				LR	LR	00 10 13.4	
	comp=Z,171nm,20.8s,baz=156,slow=42						
LPAZ	**La Paz**	**7.42**	**99**	Pn	**Pn**	**00 09 31.9**	**+0.5**
	4.0nm,0.3s,baz=288,slow=9.2,SNR=88						
LPAZ				Sn	**Sn**	**00 10 55.5**	**+0.7**
	baz=272,slow=17,SNR=1.1						
LPAZ				LR	LR	00 13 04.0	
	comp=Z,64nm,18.6s,baz=276,slow=44						
ATAH	**Atahualpa**	**8.52**	**342**	Pn	**Pn**	**00 09 46.4**	**0.0**
	0.2nm,0.3s,baz=199,slow=16,SNR=2.3						
ATAH				Sn	Sn	00 11 32.0	+10
	0.4nm,0.3s,baz=117,slow=16,SNR=1.8						
ATAH				LR	LR	00 12 53.2	
	comp=Z,76nm,21.1s,baz=189,slow=36						
SIV	**San Ignacio**	**14.18**	**95**	Pn	Pn	00 10 56.6	-6.9
	0.2nm,0.3s,baz=267,slow=17,SNR=4.6						
CPUP	**Villa Florida**	**20.41**	**125**	P	**P**	**00 12 18.5**	**-0.6**
	1.9nm,0.8s,baz=284,slow=12,SNR=3.3						
PTGA	**Pitinga**	**21.30**	**49**	P	**P**	**00 12 28.9**	**0.0**
	1.4nm,0.3s,baz=294,slow=20,SNR=3.5						
PLCA	**Paso Flores**	**25.74**	**171**	P	**P**	**00 13 11.8**	**-0.6**
	1.6nm,0.7s,baz=347,slow=9.1,SNR=3.9						
SNAA	**Sanae**	**70.22**	**161**	P	**P**	**00 18 54.2**	**0.0**
	1.2nm,0.6s,baz=281,slow=10,SNR=24						
QSPA	**South Pole Qui**	**74.84**	**180**	P	**P**	**00 19 23.1**	**+1.2**
	1.7nm,0.8s,baz=145,slow=2.0,SNR=3.6						
TORD	**Torodi Ar. Bea**	**81.68**	**74**	P	**P**	**00 19 58.9**	**-1.6**
	1.9nm,0.9s,baz=262,slow=5.0						
H11N3	**WAKE ISLAND Hy**	**120.34**	**284**	T	T	02 38 42.2	
	baz=103						
H11N2	**WAKE ISLAND Hy**	**120.36**	**284**	T	T	02 38 38.3	
	baz=103						
H11N1	**WAKE ISLAND Hy**	**120.36**	**284**	T	T	02 38 37.5	
	baz=103						
H11S2	**WAKE ISLAND Hy**	**120.39**	**283**	T	T	02 38 51.3	
	baz=96						
H11S1	**WAKE ISLAND Hy**	**120.39**	**283**	T	T	02 38 51.7	
	baz=96						
H11S3	**WAKE ISLAND Hy**	**120.41**	**283**	T	T	02 38 52.4	
	baz=96						
WRA	**Warramunga Arr**	**134.13**	**221**	PKP	**PKPdf**	**00 27 00.7**	**+0.8**
	0.5nm,0.7s,baz=134,slow=1.9,SNR=5.9						
SONM	**Songino Array**	**147.52**	**357**	PKPbc	**PKPab**	**00 27 26.5**	**-1.3**
	0.3nm,0.5s,baz=336,slow=3.8,SNR=3.5						

IDC 12 00:09:21.0±0.4, 17°.19N×121°.04E, h0km, mb4.2/33, mb1 4.3/33, mb1mx4.2/64, mbtmp4.2/33, MS3.3/18, Ms1 3.4/18, ms1mx3.2/62, Error ellipse: s-maj=17.4km s-min=9.5km az=77.0
ISCJB 12 00:09:24.8±0.5, 17°.29N±0°.02×120°.93E±0°.03, h27km±4km, mb4.4/55, MS3.5/17, Error ellipse: s-maj=5.0km s-min=3.6km az=7.0
MAN 12 00:09:24.4, 17°.39N×120°.76E, h14km, mb5.1, ML4.0, MS4.1
BJI 12 00:09:27.9, 17°.23N×120°.97E, h56km, mb4.4/39, mB4.7/23, Ms4.0/24, Ms7 3.7/21
NEIC 12 00:09:28.2±0.6, 17°.23N×121°.05E, h51km±5km, mb4.6/22, Error ellipse: s-maj=7.5km s-min=4.8km az=82.0
NEIC Felt [IV PIVS] at Balbalan, Bontoc, Bucloc, Lagangilang, Lagawe and San Juan; [III PIVS] at Baguio City and Candon. Also felt at Santa Lucia.
ISC 12 00:09:26.5±0.9, 17°.34N±0°.03×120°.93E±0°.03, h28km±6km, n149, σ2s.15/171, mb4.5/54, MS3.4/17, 11C-11D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ABRA	**Dolores**	**0.37**	**326**	*e*P	**Pb**	**00 09 32.0**	**-2.7**
ABRA				*e*S	**Sb**	**00 09 37.9**	**-2.4**
APYP	**Conner**	**0.60**	**30**	*e*P	**Pb**	**00 09 36.5**	**-1.9**
APYP				*e*S	**Sb**	**00 09 46.2**	**-0.4**
CVP	**Callao Caves**	**0.93**	**67**⇑	*i*P	**Pn**	**00 09 42.8**	**-0.9**
CVP				*i* S	**Sb**	**00 09 54.1**	**-1.8**
CAUP	**Cauayan**	**0.95**	**115**	*e*P	**Pb**	**00 09 45.2**	**+1.0**
CAUP				*e*S	**Sn**	**00 10 02.3**	**+5.8**
BOLP	**Bolinao**	**1.36**	**226**	*e*P	**Pn**	**00 09 47.5**	**-2.2**
BOLP				*e*S	**Sb**	**00 10 11.8**	**+3.5**
SGCP	**Mt. Cagua**	**1.39**	**50**	*e*P	**Pn**	**00 09 49.8**	**-0.3**
SGCP				*e*S	**Sn**	**00 10 08.5**	**+0.9**
SCZP	**Santa Cruz**	**1.84**	**212**	*e*P	**Pn**	**00 09 54.9**	**-1.3**
SCZP				*e*S	**Sn**	**00 10 19.1**	**+0.6**
QVPH	**Quezon City--P**	**2.68**	**177**	*e*P	**Pn**	**00 10 08.4**	**+0.6**
QVPH				*e*S	**Sb**	**00 10 44.0**	**-2.3**
TGY	**Tagaytay City**	**3.22**	**180**	Pg	**Pn**	**00 10 17.9**	**+2.5**
	314nm,0.3s,baz=1.1,slow=0.6,SNR=15						
TGY				Lg	Lg	00 10 58.3	
	126nm,0.3s,baz=312,slow=7.7,SNR=4.3						
TGY				LR	LR	00 12 00.1	
	comp=Z,945nm,18.6s,baz=209,slow=52						
TGY	**Tagaytay City**	**3.22**	**180**⇓	*i*P	**Pn**	**00 10 18.1**	**+2.8**
BBP	**Basco**	**3.23**	**18**⇑	*e*P	**Pn**	**00 10 16.2**	**+0.7**
BBP				*e*S	**Sn**	**00 10 54.8**	**+1.7**
LQP	**Lukban**	**3.27**	**169**	*e*P	**Pn**	**00 10 13.2**	**-2.9**
LUBP	**Lubang**	**3.65**	**190**	*e*P	**Pn**	**00 10 20.6**	**-0.6**
LUBP				*e*S	**Sn**	**00 11 02.6**	**-0.7**
GQP	**Guinayangan**	**3.72**	**157**⇑	*e*P	**Pb**	**00 10 34.7**	**+3.2**
GQP				*e*S	**Sb**	**00 11 18.5**	**+2.3**
BOAC	**Boac**	**3.96**	**167**	*e*P	**Pn**	**00 10 25.3**	**-0.1**
SJMP	**San Jose**	**4.86**	**178**	*e*P	**Pn**	**00 10 39.8**	**+2.0**
OTRP	**Odiongan**	**5.06**	**168**	*e*P	**Pn**	**00 10 42.2**	**+1.6**
BUSP	**Coron**	**5.36**	**188**	*e*P	**Pn**	**00 10 44.0**	**-0.6**
TWG	**Pinlang**	**5.45**	**1**	*e*Pn	**Pn**	**00 10 47.4**	**+1.4**
TPUB	**Ta-pu**	**5.93**	**357**	*e*Pn	**Pn**	**00 10 54.4**	**+1.8**
YULB	**Yu-li**	**6.03**	**3**	*e*Pn	**Pn**	**00 10 55.8**	**+1.9**
ENPP	**El Nido**	**6.27**	**194**	*e*P	**Pn**	**00 10 55.7**	**-1.5**
SSLB	**Suanglung**	**6.41**	**0**	*e*Pn	**Pn**	**00 11 00.9**	**+1.7**
NACB	**Ninganchiao**	**6.83**	**5**	*e*Pn	**Pn**	**00 11 07.0**	**+2.2**
YHNB	**Yeheng**	**7.30**	**3**	*e*Pn	**Pn**	**00 11 14.5**	**+3.0**
QZH	**Quanzhou**	**7.87**	**344**	*e*P	Pn	00 11 24.1	+5.0
QZH				S	**Sn**	**00 12 55.7**	**+8.4**
QZH				LR	LR		
	comp=Z,280nm,17.5s						
GZH	**Guangzhou**	**9.13**	**310**	P	**Pn**	**00 11 36.4**	**0.0**
GZH				S	**Sn**	**00 13 20.9**	**+2.7**
GZH				LR	LR		
	comp=N,200nm,10.8s						
GZH				LR	LR		
	comp=E,260nm,10.2s						
DAV	**Davao City (W)**	**11.18**	**155**	LR	LR	00 16 01.7	
	comp=Z,70nm,20.6s,baz=140,slow=36						
JOW	**Kunigami**	**11.64**	**35**	LR	LR	00 16 15.3	
	comp=Z,37nm,19.6s,baz=158,slow=35						
NJ2	**Nanjing**	**14.77**	**353**	*e*P	**P**	**00 12 57.3**	**-1.9**
NJ2				pmax	pmax		
	comp=Z,17nm,0.6s						
GYA	**Guiyang**	**16.03**	**307**	*e*P	**P**	**00 13 11.5**	**-2.0**
GYA				pP	sP	00 13 25.0	+0.6
GYA				sP	pP	00 13 33.0	+12
GYA				S	**Sn**	**00 16 08.9**	**+1.6**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ENH	**Enshi**	**16.57**	**323**	*e*Pn	**P**	**00 13 18.6**	**-0.8**
	18nm,1.0s						
JNU	**Nakatsue**	**18.09**	**28**	P	**P**	**00 13 38.2**	**+2.1**
	1.1nm,0.3s,baz=341,slow=22,SNR=6.0						
JNU				LR	LR	00 21 12.3	
	comp=Z,97nm,19.2s,baz=304,slow=39						
JNU	**Nakatsue**	**18.09**	**28**	*e*P	**P**	**00 13 40.0**	**+3.9**
	87nm,1.3s						
KMI	**Kunming**	**18.62**	**298**	P	**Pn**	**00 13 45.9**	**+3.3**
KMI				pP	sP	00 13 55.6	+2.4
KMI				sP	pP	00 14 02.1	+12
KMI				pmax	pmax		
	comp=Z,13nm,1.2s						
KMI				pmax	pmax		
	comp=Z,72nm,3.4s						
KMI				LR	LR		
	comp=N,91nm,11.6s						
KMI				LR	LR		
	comp=E,220nm,13.2s						
KMI				LR	LR		
	comp=Z,190nm,14.6s						
NANT	**Nan**	**19.28**	**277**	P	**Pn**	**00 13 53.9**	**+3.5**
XAN	**Xi'an**	**19.81**	**329**	P	**Pn**	**00 13 57.4**	**+0.8**
XAN				pP	sP	00 14 09.1	+3.2
XAN				sP	pP	00 14 18.5	+16
XAN				pmax	pmax		
	comp=Z,11nm,0.7s						
XAN				pmax	pmax		
	comp=Z,79nm,8.8s						
XAN				LR	LR		
	comp=E,170nm,16.7s						
XAN				LR	LR		
	comp=Z,190nm,16.7s						
CD2	**Chengdu**	**20.65**	**314**	*e*P	Pn	00 14 06.0	-0.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
SIJI	**Sorong**	**20.77**	**150**	P	**P**	**00 14 03.4**	**-2.0**
	3.1nm,0.3s,baz=0.0,slow=20,SNR=2.1						
KSAR	**Wonju Array Be**	**20.94**	**16**	P	**P**	**00 14 07.0**	**-0.1**
CMMT	**Chiang Mai**	**20.94**	**277**	P	Pn	00 14 10.5	+0.5
	10nm,1.4s						
CHTO	**Chiang Mai**	**20.95**	**277**	*e*P	**P**	**00 14 07.3**	**-0.1**
	12nm,1.2s						
CHTO	**Chiang Mai**	**20.95**	**277**	P	Pn	00 14 10.6	+0.5
	46nm,1.4s						
CMAR	**Chiang Mai Arr**	**20.95**	**276**	P	Pn	00 14 08.9	-1.2
	2.7nm,0.3s,baz=89,slow=8.6,SNR=26						
CMAR				PcP	**PcP**	**00 18 15.1**	**+0.4**
	0.9nm,0.4s,baz=354,slow=2.7,SNR=6.1						
CMAR				LR	LR	00 22 51.9	
	comp=Z,41nm,20.0s,baz=96,slow=38						
KSRS	**Korea Array**	**20.96**	**16**	P	**P**	**00 14 07.0**	**-0.4**
	6.6nm,0.8s,baz=198,slow=10,SNR=16						
KSRS				LR	LR	00 22 40.9	
	comp=Z,61nm,20.4s,baz=205,slow=38						
BJT	**Baijiatuau**	**22.97**	**351**	*e*P	**P**	**00 14 29.7**	**+0.9**
	38nm,1.2s						
BJI	**Beijing**	**22.99**	**351**⇑	*e*P	**P**	**00 14 29.6**	**+0.6**
BJI				pmax	pmax		
	comp=Z,23nm,1.5s						
GUMO	**Guam**	**23.37**	**96**	LR	LR	00 21 41.5	
	comp=Z,66nm,21.1s,baz=57,slow=32						
LZH	**Lanzhou**	**24.04**	**324**	⇑P	**P**	**00 14 41.5**	**+2.0**
LZH				pP	sP	00 14 54.0	+3.0
LZH				sP	pP	00 15 02.3	+15
LZH				PP	**PnPn**	**00 15 17.3**	**+8.4**
LZH				*e*S	**S**	**00 18 54.0**	**-1.3**
LZH				sS	sS	00 19 15.8	+7.3
LZH				SS	**SnSn**	**00 19 46.7**	**+10**
LZH				pmax	pmax		
	comp=Z,29nm,1.0s						
LZH				pmax	pmax		
	comp=Z,280nm,4.9s						
LZH				LR	LR		
	comp=N,310nm,10.1s						
LZH				LR	LR		
	comp=E,300nm,10.6s						
LZH				LR	LR		
	comp=Z,350nm,11.3s						
HHC	**Hu-ho-hao-te**	**24.78**	**343**	*e*P	**P**	**00 14 48.2**	**+2.1**
HHC				pP	sP	00 14 59.1	+1.5
HHC				S	**S**	**00 19 10.8**	**+3.9**
HHC				sS	sS	00 19 23.0	+2.8
HHC				pmax	pmax		
	comp=Z,20nm,0.9s						
HHC				pmax	pmax		
	comp=Z,260nm,6.1s						
HHC				LR	LR		
	comp=N,150nm,8.8s						
HHC				LR	LR		
	comp=E,150nm,7.7s						
HHC				LR	LR		
	comp=Z,92nm,7.8s						
BRDH	**Bariadhala**	**28.00**	**286**	LR	LR	00 26 08.5	
	comp=Z,141nm,19.9s,baz=135,slow=36						
GTA	**Gaotai**	**28.65**	**324**	*e*P	**P**	**00 15 23.1**	**+2.1**
GTA				pP	sP	00 15 36.2	+3.7
GTA				sP	pP	00 15 43.3	+14
GTA				S	**S**	**00 20 06.3**	**-1.9**
GTA				sS	sS	00 20 32.5	+11
GTA				SS	**SnSn**	**00 21 35.0**	**+5.6**
GTA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,82nm,5.3s						
GTA				LR	LR		
	comp=N,98nm,15.8s						
GTA				LR	LR		
	comp=E,83nm,13.1s						
GTA				LR	LR		
	comp=Z,120nm,15.8s						
ASAJ	**Asahikawa**	**32.35**	**30**	LR	LR	00 29 19.9	
	comp=Z,52nm,19.4s,baz=327,slow=37						
ODAN	**Odare**	**32.40**	**293**	*e*P	**P**	**00 15 54.6**	**+0.2**
	14nm,0.7s						
ULN	**Ulaanbaatar**	**32.50**	**343**	*e*P	**P**	**00 15 55.9**	**+0.9**
	3.8nm,0.8s						
ULN				*e*PcP	**PcP**	**00 18 41.4**	**-0.1**
SONM	**Songino Array**	**32.66**	**342**	P	**P**	**00 15 57.6**	**+1.2**
	2.1nm,0.7s,baz=155,slow=9.6,SNR=13						

SONM				PcP	PcP	00 18 41.4	-0.5
	0.7nm,0.6s,baz=142,slow=1.4,SNR=4.5						
SONM				LR	LR	00 29 44.5	
	comp=Z,77nm,19.4s,baz=161,slow=37						
SONA1	Songino Array	32.67	342	eP	P	00 15 57.2	+0.8
KLR	Kul'dur	33.00	13	P	P	00 15 59.5	+0.4
	0.9nm,0.7s,baz=218,slow=7.0,SNR=33						
KLR				PcP	PcP	00 18 42.5	-0.1
	0.3nm,0.5s,baz=178,slow=2.7,SNR=11						
RAMN	Ramite	33.11	293	eP	P	00 16 01.0	+0.3
	18nm,0.6s						
JIRN	Jiri	33.59	294	eP	P	00 16 05.4	+0.4
GUN	Gumba	33.91	294	eP	P	00 16 08.1	+0.4
	34nm,0.6s						
PKIN	Phulchoki	34.27	294	eP	P	00 16 11.1	+0.3
	11nm,0.6s						
KKN	Kakani	34.41	294	eP	P	00 16 11.8	-0.1
DMN	Daman	34.53	294	eP	P	00 16 12.7	-0.3
GKN	Gorkha	35.00	294	eP	P	00 16 16.6	-0.4
	25nm,0.9s						
FITZ	Fitzroy Crossi	35.52	172	P	P	00 16 18.8	-2.5
	0.9nm,0.8s,baz=354,slow=9.2,SNR=2.9						
KOLN	Koldanda	35.87	294	eP	P	00 16 24.4	-0.1
	13nm,0.8s						
TLY	Talaya	36.90	342	eP	P	00 16 33.8	+1.0
	3.6nm,0.7s						
WMQ	Urumqi	38.49	320	P	P	00 16 48.8	+2.4
WMQ				LR	LR		
	comp=N,160nm,17.3s						
WMQ				LR	LR		
	comp=E,130nm,19.3s						
WMQ				LR	LR		
	comp=Z,120nm,21.1s						
WRAB	Tennant Creek	39.32	160	eP	P	00 16 51.0	-2.4
WRA	Warramunga Arr	39.33	160	P	P	00 16 49.8	-3.6
	1.1nm,0.6s,baz=341,slow=9.1,SNR=12						
WRA				PcP	PcP	00 19 01.2	-0.7
	1.6nm,0.6s,baz=342,slow=3.2,SNR=12						
ASAR	Alice Springs	42.69	162	P	P	00 17 18.0	-3.1
	1.2nm,0.6s,baz=341,slow=6.7,SNR=14						
ASAR				PcP	PcP	00 19 12.0	-0.8
	0.4nm,0.5s,baz=341,slow=3.2,SNR=2.7						
MK01	Makanchi Array	43.27	321	eP	P	00 17 26.4	+0.7
MK31	Makanchi Array	43.29	321	eP	P	00 17 27.1	+1.2
MKAR	Makanchi Array	43.29	321	P	P	00 17 26.8	+0.9
	6.6nm,0.8s,baz=118,slow=9.0,SNR=50						
MKAR				PcP	PcP	00 19 14.1	-0.5
	3.0nm,0.7s,baz=102,slow=3.7,SNR=9.2						
MAKZ	Makanchi	43.49	321	eP	P	00 17 28.6	+1.2
	5.1nm,0.9s						
KSH	Kashi	44.72	309	eP	P	00 17 40.5	+3.0
KSH				epP	sP	00 17 56.0	+6.8
KSH				ePcP	PP	00 19 21.6	-0.5
KSH				S	S	00 24 12.2	-0.5
KSH				SS	SS	00 27 25.7	-8.0
KSH				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,87nm,4.5s						
YAK	Yakutsk	45.06	6	P	P	00 17 39.4	-0.4
	23nm,0.4s,baz=189,slow=1.3,SNR=1.9						
NIL	Nilore	45.58	300	eP	P	00 17 44.0	-0.4
PETK	Petropavlovsk-	45.77	30	P	P	00 17 45.1	-0.4
	1.1nm,0.6s,baz=228,slow=5.5						
ZALV	Zalesovo Beam	45.97	331	P	P	00 17 46.8	-0.2
	1.4nm,0.6s,baz=100,slow=8.0,SNR=6.5						
ZALV				PcP	PcP	00 19 22.4	-1.1
	1.2nm,0.5s,baz=124,slow=3.8,SNR=4.1						
ZALV				LR	LR	00 37 03.2	
	comp=Z,36nm,20.0s,baz=74,slow=36						
KURK	Kurchatov	47.33	324	eP	P	00 17 58.4	+0.6
KURK				PcP	PcP	00 19 28.0	-0.3
KURBB	Kurchatov Arra	47.34	324	P	P	00 17 58.5	+0.7
	11nm,0.8s,baz=121,slow=8.4,SNR=74						
KURBB				PcP	PcP	00 19 28.0	-0.4
	1.1nm,0.7s,baz=122,slow=3.0,SNR=2.7						
KBL	Kabul	49.16	301	eP	P	00 18 13.5	+1.1
	6.9nm,0.8s						
KK31	Karatay Array	49.65	312	eP	P	00 18 16.4	+0.6
KKAR	Karatay Array	49.65	312	eP	P	00 18 15.5	-0.3
SEY	Seymchan	50.49	18	P	P	00 18 21.7	-0.2
	3.2nm,0.7s,baz=210,slow=14,SNR=9.7						
STKA	Stephens Creek	52.80	158	P	P	00 18 35.5	-3.9
	1.9nm,0.7s,baz=312,slow=10,SNR=4.0						
BVAR	Borovoye Array	52.93	324	P	P	00 18 40.7	+0.5
	1.9nm,0.6s,baz=114,slow=8.6,SNR=19						
BVAR				PcP	PcP	00 19 48.5	-0.4
	1.5nm,0.7s,baz=101,slow=5.1,SNR=3.6						
BRVK	Borovoye	53.00	324	eP	P	00 18 41.2	+0.5
	6.5nm,0.8s						
ABKAR	Akbulak array	58.17	318	eP	P	00 19 17.5	-0.4
GEYT	Alibeck	58.23	304	P	P	00 19 19.5	+0.9
	3.8nm,0.8s,baz=213,slow=4.6,SNR=9.4						
GYA0B	ALIBECK ARRAY	58.23	304	eP	P	00 19 18.4	-0.2
	10nm,0.8s						
AKTO	Aktyubinsk	59.61	319	P	P	00 19 28.0	+0.1
	2.1nm,0.6s,baz=102,slow=12,SNR=12						
AKTO				LR	LR	00 44 49.6	
	comp=Z,28nm,18.8s,baz=125,slow=36						
ARU	Arti	60.50	326	eP	P	00 19 33.4	-0.5
	8.1nm,1.0s						
GNI	Garni	68.59	307	P	P	00 20 26.2	-1.0
	2.7nm,0.5s,baz=101,slow=16,SNR=4.2						
GNI				LR	LR	00 53 10.3	
	comp=Z,47nm,19.6s,baz=114,slow=38						
KBZ	Khabaz	69.65	311	P	P	00 20 33.2	-0.3
	3.0nm,0.8s,baz=90,slow=2.0,SNR=6.0						
KIV	Kislovodsk	69.79	311	eP	P	00 20 35.1	+0.6
	10nm,0.7s						
RAYN	Ar Rayn	70.23	289	eP	P	00 20 36.9	-0.7
	8.0nm,0.9s						
CAST	Castle Rocks	73.31	28	eP	P	00 20 55.7	+0.4
	9.7nm,1.0s						
TOLK	Toolik Lake Re	73.82	22	eP	P	00 20 59.3	+1.1
	3.9nm,0.8s						
ILAR	Eielson Array	75.40	26	P	P	00 21 06.9	-0.6
	0.5nm,0.6s,baz=277,slow=3.9,SNR=8.7						
ARCES	ARCESS Array B	75.78	339	P	P	00 21 09.5	0.0
	3.1nm,0.8s,baz=72,slow=7.8,SNR=6.5						
ASF	Jabal al Asfar	76.04	300	P	P	00 21 12.1	+0.2
	1.1nm,0.5s,baz=63,slow=9.0,SNR=4.2						
SPITS	Spitsbergen Ar	76.09	348	P	P	00 21 11.5	+0.3
	4.1nm,0.8s,baz=89,slow=9.1,SNR=3.6						
SPITS				LR	LR	00 59 12.2	
	comp=Z,18nm,18.7s,baz=270,slow=39						
BRTR	Keskin Array B	77.09	308	P	P	00 21 17.0	-0.7
	0.6nm,0.7s,baz=107,slow=4.5,SNR=5.2						
MMAI	Mount Meron Ar	77.10	301	LR	LR	00 58 24.3	
	comp=Z,32nm,18.8s,baz=230,slow=38						
FINES	FINESS Array B	77.23	331	P	P	00 21 16.6	-1.2
	2.3nm,0.8s,baz=53,slow=7.4,SNR=10						
AKASG	Malin Array Be	77.84	319	P	P	00 21 20.2	-1.3
	1.7nm,0.7s,baz=62,slow=6.4,SNR=6.6						
KIEV	Kiev	77.85	319	eP	P	00 21 20.6	-0.9
	4.0nm,0.7s						
CSS	Mathiatis	78.35	303	eP	P	00 21 24.4	-0.3
	14nm,0.9s						
INK	Inuvik	79.64	21	P	P	00 21 30.9	-0.1
	2.1nm,0.7s,baz=321,slow=6.5,SNR=2.8						
INK	Inuvik	79.64	21	eP	P	00 21 30.6	-0.5
	2.8nm,0.8s						
CFR	Carcaliu	79.83	314	⇑iP	P	00 21 32.3	-0.2
TESR	Tescani	80.50	316	⇓iP	P	00 21 34.5	-1.7
PRAR	RASCA	80.56	317	⇓iP	P	00 21 40.9	+4.5
VRI	Vrincioaia	80.61	315	⇑iP	P	00 21 37.6	+0.8
PLOR	Plostina	80.67	315	⇓iP	P	00 21 37.5	+0.4
BIZ	Bicaz	80.75	316	⇑iP	P	00 21 37.7	+0.2
OPO	Ambohidratompo	80.80	247	P	P	00 21 38.2	-0.1
	5.3nm,0.8s,baz=60,slow=5.6,SNR=5.3						
BURAR	Bucovina Array	81.15	317	⇓iP	P	00 21 39.4	-0.3
BUR04	Bucovina Ar. S	81.15	317	eP	P	00 21 39.5	-0.3
BUR08	Bucovina Ar. S	81.15	317	eP	P	00 21 40.2	+0.4
MLR	Muntele Rosu	81.24	315	P	P	00 21 40.2	-0.1
	0.4nm,0.8s,baz=90,slow=14,SNR=5.6						
MLR				LR	LR	00 59 46.1	
	comp=Z,15nm,20.8s,baz=123,slow=37						
MLR	Muntele Rosu	81.24	315	⇓iP	P	00 21 39.3	-1.0
MLR	Muntele Rosu	81.24	315	eP	P	00 21 40.0	-0.3
	3.5nm,0.8s						
PLAR	PLOIESTI	81.34	314	⇑iP	P	00 21 43.4	+2.7
ARCR	ARCALIA	81.86	317	⇓iP	P	00 21 47.9	+4.5
VOIR		81.86	315	⇓iP	P	00 21 47.6	+4.1
ARR	Arges	82.16	315	⇓iP	P	00 21 45.0	-0.1
CJR	Cluj-Napoca	82.46	316	⇓iP	P	00 21 47.7	+1.1
DRGR		83.02	317	⇓iP	P	00 21 47.2	-2.3
HFS	Hagfors	83.40	331	P	P	00 21 51.0	-0.1
	2.2nm,0.6s,baz=80,slow=3.2,SNR=7.1						
HFS				LR	LR	01 01 41.0	
	comp=Z,29nm,18.5s,baz=314,slow=38						
VTS	Vitosha	83.97	313	⇑iP	P	00 21 53.8	-0.8
VTS	Vitosha	83.97	313	eP	P	00 21 53.7	-0.8
	7.5nm,1.2s						
NB2	NORSAR Subarra	84.14	333	P	P	00 21 53.3	-1.7
	comp=Z,4.8nm,1.1s,baz=62,slow=5.3						
NOA	NORSAR Array B	84.14	333	LR	LR	01 03 31.4	
	comp=Z,35nm,18.3s,baz=50,slow=38						
MDVR	Moldovita	84.31	315	⇑iP	P	00 21 55.3	-0.9
IDI	Anoyia	84.94	305	P	P	00 21 58.8	-0.7
	comp=Z,4.3nm,0.9s,baz=21,slow=17,SNR=3.3						
DIVS	Divibare	85.70	315	eP	P	00 22 03.2	0.0
	comp=Z,15nm,1.8s						
FNA	Florina	85.84	311	eP	P	00 22 02.2	-1.8
	comp=Z,5.2nm,0.9s						
CLL	Collm	87.36	323	eP	P	00 22 11.0	0.0
GERES	GERESS Array B	87.96	321	P	P	00 22 14.2	+0.1
	comp=Z,0.9nm,0.8s,baz=95,slow=4.3,SNR=4.0						
DAVOX	Davos/Dischmat	91.17	320	P	P	00 22 28.1	-1.2
	baz=61,slow=13,SNR=3.5						
EKA	Eskdalemuir Ar	93.59	332	P	P	00 22 38.7	-1.3
	comp=Z,1.0nm,0.8s,baz=105,slow=8.4,SNR=3.4						
TORD	Torodi Ar. Bea	112.79	293	PKiKP	PKiKP	00 27 59.9	-1.7
	baz=77,slow=3.4						
SDV	Santo Domingo	151.54	25	PKPbc	PKPbc	00 29 18.0	-1.4
	comp=Z,21nm,0.7s,baz=46,slow=3.6,SNR=8.9						
SDV	Santo Domingo	151.54	25	ePKPbc	PKPbc	00 29 18.8	-0.6
PCRV	Puerto La Cruz	152.11	12	PKPbc	PKPbc	00 29 18.8	-1.6
	comp=Z,8.1nm,0.6s,baz=220,slow=3.2,SNR=5.1						

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*ATH **12** 00:13:56.2, 36°.51N×26°.76E, h133^{km}±6^{km}, ML2.5/3, Error ellipse: s-maj=6.6km s-min=2.3km az=81.0*

*ISCJB **12** 00:13:57.3±1.0, 36°.49N±0°.07×26°.77E±0°.05, h120^{km}±13^{km}, Error ellipse: s-maj=11.6km s-min=5.2km az=162.5*

*CSEM **12** 00:13:57.9±0.3, 36°.50N×26°.76E, h115^{km}±4^{km}, ML2.5, Error ellipse: s-maj=5.6km s-min=2.8km az=167.0*

*DDA **12** 00:14:24.5, 36°.49N×26°.95E, h46^{km}, Ml2.7*

ISC 12 00:13:57.6±1.7**, 36°.52N**±0°.05×**26°.78E**±0°.04**, h116**^{km}±14^{km}**, n44, σ1^{s}26**/52**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AMGA	Amorgos Island	0.78	294	P	Pn	00 14 18.1	+0.8
AMGA	Amorgos Island	0.78	294	P	Pn	00 14 18.0	+0.8
KARP	Karpathos	1.02	162	P	Pn	00 14 20.6	+1.1
KARP	Karpathos	1.02	162	P	Pn	00 14 20.3	+0.8
THR3	Thira Island,	1.12	265	P	Pn	00 14 20.6	+0.2
THR3	Thira Island,	1.12	265	P	Pn	00 14 20.8	+0.3
ARG	Arkhangelos	1.12	105	P	Pn	00 14 21.1	+0.6
ARG				AML	AML	00 14 41.2	
	comp=E,260µm,0.3s						
ARG				AML	AML	00 14 43.6	
	comp=N,117µm,0.2s						
ARG	Arkhangelos	1.12	105	P	Pn	00 14 21.1	+0.6
THR6	Thira Island,	1.13	262	P	Pn	00 14 22.0	+1.4
THR6	Thira Island,	1.13	262	P	Pn	00 14 21.5	+0.9
SAP1	Santorini-Akro	1.13	262	P	Pn	00 14 21.9	+1.3
APE	Apeiranthos	1.15	299	P	Pn	00 14 21.2	+0.4
APE	Apeiranthos	1.15	299	P	Pn	00 14 21.3	+0.4
SMG	Samos	1.19	2	P	Pn	00 14 21.4	+0.2
SMG	Samos	1.19	2	P	Pn	00 14 21.6	+0.4
IOSP	Ios island	1.22	280	P	Pn	00 14 21.6	0.0
IOSP	Ios island	1.22	280	P	Pn	00 14 21.7	+0.1
TURN	Turunc	1.50	76	iP	Pn	00 14 22.1	-2.7
TURN				iS	Sn	00 14 40.2	-5.3
TURN	Turunc	1.50	76	P	Pn	00 14 22.1	-2.7
DALY	Dalyan (Mu˜la	1.53	78	iP	Pn	00 14 26.8	+1.7
DALY				iS	Sn	00 14 47.4	+1.4
DALY	Dalyan (Mu˜la	1.53	78	P	Pn	00 14 26.8	+1.7
DALY				S	Sn	00 14 47.4	+1.4
NPS	Neapolis	1.58	217	P	Pn	00 14 25.2	-0.5
NPS				S	Sn	00 14 46.7	-0.3
NPS				AML	AML	00 14 48.4	
	comp=E,250µm,0.2s						
NPS				AML	AML	00 14 48.7	
	comp=N,244µm,0.3s						
NPS	Neapolis	1.58	217	P	Pn	00 14 25.5	-0.2
NPS				S	Sn	00 14 47.1	+0.1
LAST	Lasithi	1.72	218	P	Pn	00 14 27.6	+0.1
LAST				S	Sn	00 14 49.6	-0.7
LAST				AML	AML	00 14 50.6	
	comp=E,80µm,0.4s						
LAST				AML	AML	00 14 51.0	
	comp=N,86µm,0.3s						
LAST	Lasithi	1.72	218	P	Pn	00 14 27.6	+0.1
LAST				S	Sn	00 14 50.0	-0.3
FETY	Fethiye	1.85	86	P	Pn	00 14 29.5	+0.5
FETY				S	Sn	00 14 52.3	-0.8
TAVA	DENIZLI_Tavas	1.95	60	iP	Pn	00 14 31.1	+0.9
TAVA	DENIZLI_Tavas	1.95	60	P	Pn	00 14 31.1	+0.9
AKAS	Kas	2.29	96	iP	Pn	00 14 35.5	+0.8
AKAS	Kas	2.29	96	P	Pn	00 14 35.5	+0.8
GOLH	Golhisar	2.34	71	iP	Pn	00 14 36.4	+1.2
GOLH	Golhisar	2.34	71	P	Pn	00 14 36.4	+1.2
VAM	Vamos	2.37	243	P	Pn	00 14 35.7	+0.1
VAM	Vamos	2.37	243	P	Pn	00 14 35.7	+0.1
IMMV	Iera Moni Meta	2.51	246	P	Pn	00 14 37.4	+0.1
IMMV	Iera Moni Meta	2.51	246	P	Pn	00 14 37.4	+0.1
ANKY	Antikythira Is	2.89	258	P	Pn	00 14 41.6	-0.7
ANKY	Antikythira Is	2.89	258	P	Pn	00 14 42.0	-0.3
KYTH	Kithira	3.03	266	P	Pn	00 14 44.2	+0.1
KYTH	Kithira	3.03	266	P	Pn	00 14 44.3	+0.2
VLI	Veliai	3.10	275	P	Pn	00 14 44.1	-0.9
VLI	Veliai	3.10	275	P	Pn	00 14 44.6	-0.4
DYR	Agios Nikonas	3.59	275	P	Pn	00 14 53.7	+2.2
DYR	Agios Nikonas	3.59	275	P	Pn	00 14 52.8	+1.3

DJA 12 00:32:18.1±0.9**, 0°N**±7°×**12°3E**±°**, h170**^{km}±11^{km}**, M3.5**/6**, MLv3.5**/6**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUWI	Luwuk	1.16	193	P	Pn	00 32 46.1	0.0
MRSI	Marisa	1.17	289	P	Pn	00 32 46.9	+0.8
MRSI				S	Sn	00 33 06.8	-0.9
APSI	Ampana	1.71	234	P	Pn	00 32 51.4	0.0
MPSI	Mapaga	3.15	274	P	Pn	00 33 07.9	-0.3
SANI	Sanana	3.63	126	P	Pn	00 33 13.9	-0.3
LBMI	Labuha	4.52	99	P	Pn	00 33 25.7	+0.1

MEX 12 00:36:14.3±0.4**, 16°.69N**×**99°.67W, h11**^{km}±3^{km}**, MD3.5, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ACX	Acapulco	0.25	314	iP	Pg	00 36 19.4	-0.1
ACX				eS	Sg	00 36 23.4	+0.3
ACP2	Acapulco	0.28	311	eP	Pg	00 36 19.5	-0.5
ACP2				eS	Sg	00 36 23.8	+0.1
CAIG	El Cayaco	0.67	302	eP	Pg	00 36 25.8	-1.5
CAIG				iS	Sg	00 36 34.8	-1.4
MEIG	Mezcala	1.23	2	iP	Pn	00 36 33.5	-4.0
MEIG				iS	Sb	00 36 48.6	-5.0

IDC 12 00:58:05.8±19.0**, 22°.36S**×**175°.30W, h0**^{km}**, mb4.0**/5**, mb1 4.2**/5**, mb1mx3.7**/49**, mbtmp4.0**/5**, Error ellipse: s-maj=351.8km s-min=144.7km az=81.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	35.85	266	P	P	01 05 08.8	+1.3
	1.7nm,0.3s,baz=93,slow=14,SNR=3.5						
STKA	Stephens Creek	39.31	247	P	P	01 05 35.1	-1.6
	2.0nm,0.6s,baz=93,slow=10.0,SNR=3.6						
ASAR	Alice Springs	46.58	258	P	P	01 06 35.0	-0.8
	0.4nm,0.3s,baz=93,slow=7.6,SNR=7.0						
WRA	Warramunga Arr	46.86	263	P	P	01 06 37.8	-0.2
	0.8nm,0.3s,baz=98,slow=8.4,SNR=60						
FITZ	Fitzroy Crossi	55.29	263	P	P	01 07 42.1	+0.7
	0.7nm,0.4s,baz=105,slow=7.6,SNR=3.6						

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*CSEM **12** 01:09:22.9, 38°.85N×23°.13E, h10^{km}, ML1.4/2*

ATH 12 01:09:22.9, 38°.85N×**23°.13E, h10**^{km}±3^{km}**, ML1.4**/2**, Error ellipse: s-maj=3.0km s-min=0.9km az=101.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMIA	Simia	0.07	67	P	Pg	01 09 24.8	-0.2
SMIA				S	Sg	01 09 26.5	-0.1
SMIA				AML	AML	01 09 26.6	
	comp=E,1801µm,0.1s						
SMIA				AML	AML	01 09 26.9	
	comp=N,3506µm,0.3s						
SMIA	Simia	0.07	67	P	Pg	01 09 24.9	-0.1
SMIA				S	Sg	01 09 26.5	-0.1
LKR	Lokris	0.23	207	P	Pg	01 09 27.9	+0.5
LKR				S	Sg	01 09 30.9	+0.3
LKR	Lokris	0.23	207	P	Pg	01 09 27.7	+0.2
LKR				S	Sg	01 09 30.9	+0.3
SKIA	Skiathos	0.41	40	P	Pg	01 09 31.4	+0.4
SKIA				S	Sg	01 09 37.3	+1.0
SKIA	Skiathos	0.41	40	P	Pg	01 09 31.1	+0.2
SKIA				S	Sg	01 09 37.0	+0.6
NEO	Neokhori	0.46	9	P	Pg	01 09 31.5	-0.3
NEO	Neokhori	0.46	9	P	Pg	01 09 31.6	-0.3
XOR	Xorichti	0.52	6	P	Pg	01 09 32.9	0.0
XOR				S	Sg	01 09 39.5	-0.3
XOR				AML	AML	01 09 39.9	
	comp=N,41µm,0.4s						
XOR				AML	AML	01 09 40.8	
	comp=E,27µm,0.2s						
XOR	Xorichti	0.52	6	P	Pg	01 09 32.8	-0.1
XOR				S	Sg	01 09 39.8	+0.1
FYTO	Fytoko, Volos	0.57	345	P	Pg	01 09 34.2	+0.2
FYTO	Fytoko, Volos	0.57	345	P	Pg	01 09 34.0	0.0
DSF	Desfina	0.64	227	P	Pg	01 09 35.2	-0.1
DSF	Desfina	0.64	227	P	Pg	01 09 35.2	-0.1
AGG	Agios Georgios	0.65	286	P	Pg	01 09 34.6	-0.7
AGG				S	Sg	01 09 43.8	0.0
AGG	Agios Georgios	0.65	286	P	Pg	01 09 34.8	-0.5
AGG				S	Sg	01 09 43.9	+0.1
AOS	Alonnisos	0.67	61	P	Pg	01 09 36.0	+0.2
AOS				S	Sg	01 09 44.7	+0.2
AOS	Alonnisos	0.67	61	P	Pg	01 09 35.8	+0.1
AOS				S	Sg	01 09 44.8	+0.3
ATHU	Athens Univers	1.02	150	P	Pg	01 09 41.2	-1.3
ATHU	Athens Univers	1.02	150	P	Pg	01 09 41.7	-0.8

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*ISCJB **12** 01:22:14.9±0.3, 49°.38S±0°.04×121°.42E±0°.07, h10^{km}, mb4.9/55, MS4.3/39, Error ellipse: s-maj=6.6km s-min=5.4km az=15.4*

*IDC **12** 01:22:15.0±0.5, 49°.42S×121°.44E, h0^{km}, mb4.6/20, mb1 4.7/21, mb1mx4.6/45, mbtmp4.7/21, ML3.5/1, MS4.3/35, Ms1 4.3/35, ms1mx4.2/44, Error ellipse: s-maj=20.8km s-min=12.0km az=108.0*

*NEIC **12** 01:22:16.4±2.1, 49°.40S×121°.45E, h10^{km}±2^{km}, mb4.9/34, Error ellipse: s-maj=15.8km s-min=12.4km az=117.0*

*GCMT **12** 01:22:16.4±0.1, 49°.37S×121°.51E, h20^{km}, MW5.2/101, Moment Tensor Solution. s59,c88; s101,c177; Duration: 1^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.15±.02; M$_{\theta\theta}$-0.40±.02; M$_{\phi\phi}$0.55±.02; M$_{r\theta}$-0.21±.03; M$_{\theta\phi}$-0.73±.01; M$_{\phi r}$0.09±.03; Best double couple: M$_0$0.89800×10^{17} NP1:φ$_s$107.00000°, δ88.00000°, λ-165.00000°. NP2:φ$_s$17.00000°, δ75.00000°, λ-2.00000°. Principal axes: T 0.9740, Plg9.0000°, Azm241.0000°; N -0.1520, Plg75.0000°, Azm115.0000°; P -0.8220, Plg12.0000°, Azm333.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*BJI **12** 01:22:16.0, 49°.40S×121°.50E, h6^{km}, mb5.0/29, mB5.2/21, Ms4.8/11, Ms7 4.5/13*

ISC 12 01:22:16.9±0.3**, 49°.47S**±0°.05×**121°.57E**±0°.07**, h10**^{km}**, n206, σ1^{s}49**/179**, mb4.9**/55**, MS4.4**/39**, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RKGY	Rocky Gully	15.23	345	P	Pn	01 25 50.0	-1.9
	baz=16,SNR=25						
H01W1	Cape Leeuwin H	15.56	337	T	T	01 41 42.8	
	baz=161,slow=74,SNR=194						
H01W2	Cape Leeuwin H	15.56	337	T	T	01 41 43.1	
	baz=161,slow=74,SNR=277						
H01W3	Cape Leeuwin H	15.57	337	T	T	01 41 43.8	
	baz=161,slow=74,SNR=202						
NWAO	Narrogin (SRO)	16.84	347	P	Pn	01 26 12.1	-0.6
	baz=18,SNR=18						
NWAO	Narrogin (SRO)	16.84	347	Pn	Pn	01 26 13.1	+0.4
	8.6nm,0.3s,baz=35,slow=9.6,SNR=35						
NWAO				LR	LR	01 31 09.9	
	comp=Z,1µm,20.5s,baz=28,slow=32						
NWAO	Narrogin (SRO)	16.84	347	ePn	Pn	01 26 13.1	+0.4
NWAO				ePn	Pn	01 26 13.8	+1.1
CASY	Casey	17.79	195	ePn	Pn	01 26 24.3	+0.1
	26nm,0.9s						
MUN	Mundaring	17.93	345	P	Pn	01 26 23.7	-2.5
	baz=19,SNR=4.9						
KMBL	Kambalda	18.09	1	P	Pn	01 26 27.9	-0.3
	baz=20,SNR=5.9						
KLBR	Kellerberrin	18.09	349	P	Pn	01 26 24.8	-3.4
	baz=19,SNR=4.9						
TAU	Tasmania Unive	18.94	80	eP	Pn	01 26 39.0	+0.6
	44nm,0.8s						
MOO	Moorlands	19.09	78	P	Pn	01 26 41.4	+1.1
	baz=21,SNR=7.6						
BLDU	Ballidu	19.19	347	P	P	01 26 37.4	-3.3
	baz=20,SNR=8.9						
FORT	Forrest	19.31	17	P	P	01 26 42.0	+0.1
	baz=21						
FORT	Forrest	19.31	17	eP	P	01 26 39.9	-2.0
	43nm,0.8s						
ARPS	Mount Arapiles	19.42	57	P	Pn	01 26 44.3	0.0
	baz=22,SNR=5.6						
BBOO	Buckleboo	19.85	38	P	P	01 26 47.6	-0.2
	baz=22,SNR=11						
BBOO	Buckleboo	19.85	38	eP	P	01 26 47.6	-0.2
	55nm,1.0s						
MORW	Morawa	20.81	346	P	P	01 26 54.6	-3.7
	baz=22,SNR=10						
TOO	Toolangi	20.93	64	P	Pn	01 27 01.5	-0.7
	baz=23,SNR=39						
MEEK	Meekatharra	22.91	353	P	P	01 27 17.8	-3.0
	baz=24,SNR=14						
STKA	Stephens Creek	23.11	48	P	P	01 27 22.7	-0.1
	baz=25,SNR=5.8						
STKA	Stephens Creek	23.11	48	P	P	01 27 22.2	-0.6
	14nm,0.8s,baz=205,slow=10,SNR=14						
STKA				LR	LR	01 34 43.6	
	comp=Z,2µm,20.9s,baz=203,slow=32						
STKA	Stephens Creek	23.11	48	eP	P	01 27 22.8	-0.1
	14nm,0.8s						
MILA	Mila	23.47	68	P	P	01 27 26.4	-0.1
	baz=25,SNR=6.3						
CAN	Canberra	24.53	65	eP	P	01 27 37.1	+0.5
	71nm,1.5s						
YNG	Young	24.90	63	P	P	01 27 40.7	+0.8
	baz=27,SNR=6.7						
WRKA	Warakurna	24.95	15	P	P	01 27 39.4	-0.9
	baz=27,SNR=17						
CMSA	Cobar Meteorol	25.46	54	P	P	01 27 45.1	+0.2
	baz=28,SNR=67						
ASAR	Alice Springs	27.52	25	P	P	01 28 02.3	-1.3
	18nm,0.9s,baz=194,slow=9.0,SNR=70						
ASAR				LR	LR	01 37 51.9	
	comp=Z,700nm,20.8s,baz=200,slow=34						
AS31	Alice Springs	27.52	25	eP	P	01 28 02.6	-1.0
	4.0nm,0.8s						
AS01	Alice Springs	27.54	25	eP	P	01 28 02.1	-1.6
QLP	Quilpie	28.79	46	P	P	01 28 15.5	+0.6
	baz=31,SNR=5.9						
ARMA	Armidale	29.59	61	P	P	01 28 22.9	+0.8
	baz=32,SNR=4.0						
ARMA	Armidale	29.59	61	eP	P	01 28 23.4	+1.3
	14nm,0.9s						
RMQ	Roma	31.10	52	P	P	01 28 36.0	+0.7
	baz=33						
WC4	Warramunga Arr	31.17	24	P	P	01 28 34.2	-1.7
	baz=33						
WR1	Warramunga Arr	31.19	24	eP	P	01 28 34.5	-1.6
	14nm,1.0s						
WRA	Warramunga Arr	31.19	24	P	P	01 28 34.5	-1.6
	7.0nm,0.8s,baz=198,slow=8.0,SNR=37						
WRA				LR	LR	01 40 08.2	
	comp=Z,599nm,20.8s,baz=190,slow=34						
WB2	Warramunga Arr	31.19	24	eP	P	01 28 35.0	-1.2
	14nm,1.0s						

WRAB	Tennant Creek	31.20	24	eP	P	01 28 35.0	-1.2
	12nm,1.0s						
FITZ	Fitzroy Crossi	31.47	7	P	P	01 28 37.5	-1.0
	baz=33,SNR=22						
FITZ	Fitzroy Crossi	31.47	7	P	P	01 28 38.3	-0.3
	13nm,0.9s,baz=184,slow=12,SNR=26						
FITZ				LR	LR	01 40 30.3	
	comp=Z,275nm,20.5s,baz=188,slow=35						
FITZ	Fitzroy Crossi	31.47	7	eP	P	01 28 38.2	-0.4
	13nm,0.9s						
VNDA	Vanda	32.00	165	P	P	01 28 43.4	+0.7
	2.6nm,0.4s,baz=300,slow=10,SNR=9.8						
VNDA				LR	LR	01 40 40.1	
	comp=Z,1µm,20.2s,baz=318,slow=34						
VNDA	Vanda	32.00	165	eP	P	01 28 43.4	+0.7
	17nm,1.1s						
QIS	Mount Isa	32.24	33	P	P	01 28 44.6	-0.8
	baz=34,SNR=10						
SBA	Scott Base	33.06	164	eP	P	01 28 53.8	+1.9
	28nm,1.4s						
EIDS	Eidsvold	33.23	54	eP	P	01 28 52.5	-1.5
	17nm,1.0s						
MAW	Mawson	33.91	216	P	P	01 28 58.6	-0.8
	3.5nm,0.7s,baz=87,slow=5.8,SNR=8.6						
MAW	Mawson	33.91	216	eP	P	01 28 58.8	-0.6
	4.0nm,1.4s						
RPZ	Rata Peaks	33.98	99	LR	LR	01 39 58.8	
	comp=Z,712nm,20.2s,baz=244,slow=31						
CTA	Charters Tower	35.33	43	P	P	01 29 11.0	-1.2
	3.0nm,0.6s,baz=207,slow=16,SNR=2.5						
CTA				LR	LR	01 43 56.3	
	comp=Z,995nm,18.0s,baz=205,slow=37						
THZ	Tophouse	36.12	98	eP	P	01 29 19.5	+0.6
	23nm,1.1s						
MTN	Manton Dam	37.37	15	P	P	01 29 28.6	-1.1
	baz=39,SNR=4.6						
MTN	Manton Dam	37.37	15	eP	P	01 29 28.8	-0.8
	16nm,0.8s						
KDU	Kakadu	37.77	18	P	P	01 29 31.9	-1.1
	baz=40,SNR=3.7						
BATI	Baumata	39.18	3	P	P	01 29 45.4	+0.5
	20nm,0.5s,baz=146,slow=3.6,SNR=4.1						
BATI				LR	LR	01 46 16.1	
	comp=Z,500nm,19.3s,baz=197,slow=37						
BATI	Baumata	39.18	3	P	P	01 29 43.9	-1.1
	17nm,1.0s						
COEN	Coen	39.60	34	eP	P	01 29 48.1	-0.4
	13nm,0.9s						
SOEI	Soe	39.66	4	P	P	01 29 49.9	+0.9
	32nm,0.7s						
WSI	Waingapu	39.69	358	P	P	01 29 50.3	+1.1
	654nm,0.4s						
EDFI	Ende, Flores	40.59	0	P	P	01 29 57.6	+0.8
	12nm,1.0s						
QSPA	South Pole Qui	40.65	180	P	P	01 29 57.5	+0.6
	7.0nm,0.9s,baz=350,slow=3.8,SNR=10						
QSPA				LR	LR	01 46 24.7	
	comp=Z,463nm,18.8s,baz=339,slow=36						
QSPA	South Pole Qui	40.65	180	eP	P	01 29 57.0	+0.2
	10nm,0.8s						
QSPA				eP	P	01 29 57.5	+0.6
URZ	Urewera	40.72	96	P	P	01 29 57.2	-0.3
	5.9nm,0.8s,baz=214,slow=14,SNR=2.2						
LEM	Lembang	44.10	340	LR	LR	01 46 03.1	
	comp=Z,207nm,20.1s,baz=179,slow=32						
DZM	Mont Dzumac	44.61	69	LR	LR	01 45 54.5	
	comp=Z,610nm,20.4s,baz=202,slow=32						
DZM	Mont Dzumac	44.61	69	eS	S	01 37 04.7	-0.7
	277nm,27.4s						
DZM				eLR	LR	01 43 02.6	
	878nm,22.2s						
PMG	Port Moresby	45.28	37	P	P	01 30 34.7	0.0
	6.9nm,0.4s,baz=218,slow=12,SNR=4.0						
PMG				LR	LR	01 50 25.7	
	comp=Z,562nm,18.6s,baz=192,slow=37						
SPSI	Sidrap Palu	45.37	357	P	P	01 30 35.2	-0.1
	21nm,1.3s						
KASI	Kota Agung	46.12	336	P	P	01 30 40.7	-0.5
	34nm,1.2s						
FAKI	Fak Fak	47.27	15	eP	P	01 30 49.0	-1.3
	36nm,0.8s						
LBMI	Labuha	48.91	8	P	P	01 31 02.5	-0.5
SIJI	Sorong	49.13	13	LR	LR	01 53 14.1	
	comp=Z,123nm,20.0s,baz=247,slow=38						
JAY	Jayapura	49.55	25	LR	LR	01 51 04.6	
	comp=Z,428nm,21.6s,baz=92,slow=35						
HNR	Honiara	51.10	52	LR	LR	01 51 26.9	
	comp=Z,613nm,19.4s,baz=206,slow=34						
RABL	Rabaul	52.04	40	eP	P	01 31 22.6	-4.1
	249nm,0.4s						
SBUM	Sibu	52.35	348	eP	P	01 31 28.6	-0.3
	26nm,1.2s						
SNAA	Sanae	52.96	199	P	P	01 31 32.6	-0.4
SNAA	Sanae	52.96	199	P	P	01 31 32.6	-0.4
	24nm,1.0s,baz=144,slow=9.8,SNR=64						
SNAA				LR	LR	01 53 05.8	
	comp=Z,787nm,18.2s,baz=128,slow=35						
SNAA	Sanae	52.96	199	eP	P	01 31 32.5	-0.4
	45nm,1.0s						
MNSI	Mandailing Nat	53.53	332	P	P	01 31 37.4	-0.2
	44nm,0.8s,2µm						
GSI	Gunungsitoli	54.64	330	P	P	01 31 46.0	+0.2
	53nm,1.0s						
GSI	Gunungsitoli	54.64	330	eP	P	01 31 45.9	+0.2
	44nm,0.9s						
VNA3	Neumayer Olymp	54.68	197	P	P	01 31 44.8	-0.7
VNA1	Neumayer--Stat	54.88	198	P	P	01 31 46.6	-0.2
PSI	Prapat	55.63	332	P	P	01 31 50.5	-2.5
	6.2nm,0.4s,baz=180,slow=11,SNR=4.8						
PSI				LR	LR	01 53 33.7	
	comp=Z,122nm,19.1s,baz=91,slow=34						
PSI	Prapat	55.63	332	eP	P	01 31 50.8	-2.3
	15nm,0.8s						
IPM	Ipoh	56.62	335	eP	P	01 31 58.2	-1.8
	27nm,1.0s						
KCSI	Kotacane, Aceh	56.67	331	P	P	01 31 59.5	-0.8
	25nm,1.2s						
KULM	Kulim	57.50	335	eP	P	01 32 04.6	-1.5
	39nm,1.2s						
H08S2	Diego Garcia H	58.42	298	T	T	02 35 15.0	
	baz=142,slow=76						
H08S1	Diego Carcia H	58.43	298	T	T	02 35 17.8	
	baz=142						
H08S3	Diego Garcia H	58.44	298	T	T	02 35 16.3	
	baz=142,slow=76						
AFI	Afiamalu	64.40	81	LR	LR	01 55 25.7	
	comp=Z,246nm,21.2s,baz=187,slow=31						
AFI	Afiamalu	64.40	81	eP	P	01 32 52.4	-0.9
	95nm,1.4s						
PMSA	Palmer Station	66.01	177	LR	LR	02 00 50.4	
	comp=Z,164nm,20.9s,baz=186,slow=35						
OPO	Ambohidratompo	66.01	269	P	P	01 33 03.5	-0.3
	5.2nm,1.0s,baz=121,slow=5.9,SNR=2.9						
OPO				LR	LR	01 56 08.3	
	comp=Z,356nm,20.9s,baz=167,slow=31						
GUMO	Guam	66.07	25	LR	LR	02 02 19.1	
	comp=Z,109nm,19.1s,baz=202,slow=36						
PALK	Pallekele	66.79	315	LR	LR	01 56 22.3	
	comp=Z,362nm,20.7s,baz=96,slow=31						
RAR	Rarotonga	66.90	96	LR	LR	01 56 13.0	
	comp=Z,96nm,21.8s,baz=234,slow=30						
CM01	Chiang Mai Arr	70.51	337	eP	P	01 33 30.4	-1.2
CM31	Chiang Mai Arr	70.55	337	eP	P	01 33 30.9	-1.0
CM31				ePP	PP	01 36 07.0	-1.4
CMAR	Chiang Mai Arr	70.55	337	P	P	01 33 30.9	-1.0
	7.8nm,0.9s,baz=187,slow=5.1,SNR=21						
CMAR				PP	PP	01 36 07.0	-1.4
	0.7nm,0.3s,baz=132,slow=7.9,SNR=4.9						
CMAR				LR	LR	02 02 01.2	
	comp=Z,107nm,21.3s,baz=178,slow=34						
SUR	Sutherland	72.49	241	eP	P	01 33 42.8	-1.0
	41nm,1.2s						
BOSA	Boshof	72.66	246	P	P	01 33 42.8	-2.0
	8.0nm,1.1s,baz=122,slow=9.5,SNR=3.1						
BOSA				LR	LR	01 59 54.3	
	comp=Z,373nm,20.0s,baz=127,slow=31						
PPT2	Papeete2	76.11	101	eLQ	LQ	01 54 29.1	
	438nm,28.0s						
PPT2				eLR	LR	01 57 40.3	
	147nm,21.2s						
PPT	Papeete	76.12	101	LR	LR	02 01 49.3	
	comp=Z,202nm,18.6s,baz=216,slow=31						
KMI	Kunming	76.13	342	P	P	01 34 11.1	+6.2
KMI				pP	PcP	01 34 14.1	-2.9
KMI				sP	sP	01 34 16.7	+7.3
KMI				S	S	01 43 55.7	+6.9
KMI				pmax	pmax		
	comp=Z,13nm,0.7s						
KMI				pmax	pmax		
	comp=Z,100nm,3.1s						
KMI				LR	LR		
	comp=N,240nm,18.6s						
KMI				LR	LR		
	comp=E,160nm,21.4s						
KMI				LR	LR		
	comp=Z,340nm,24.3s						
BRDH	Bariadhala	76.61	332	LR	LR	02 05 14.5	
	comp=Z,291nm,20.0s,baz=183,slow=34						
GYA	Guiyang	76.75	346	eP	P	01 34 11.4	+3.1
GYA				PP	PP	01 37 05.6	+4.3
GYA				S	S	01 43 58.5	+3.2
GYA				SKS	SKSac	01 44 19.0	-1.1
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,5.4s						
LSZ	Lusaka	80.72	257	eP	P	01 34 30.4	-0.2
	9.3nm,1.0s						
NJ2	Nanjing	81.20	358	eP	P	01 34 35.8	+3.4
NJ2				pmax	pmax		
	comp=Z,14nm,0.7s						
CD2	Chengdu	81.58	345	eP	P	01 34 36.0	+1.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
XAN	Xi'an	83.90	349	P	P	01 34 53.6	+7.1
XAN				pmax	pmax		
	comp=Z,10.0nm,1.3s						
XAN				pmax	pmax		
	comp=Z,82nm,4.9s						
XAN				LR	LR		
	comp=N,180nm,18.7s						
XAN				LR	LR		
	comp=Z,200nm,18.7s						
KMBO	Kilima Mbogo	85.45	274	LR	LR	02 06 58.5	
	comp=Z,116nm,18.2s,baz=146,slow=31						
LZH	Lanzhou	86.63	346	eP	P	01 35 02.3	+2.0
LZH				pP	sP	01 35 05.5	+0.7
LZH				sP	pP	01 35 08.8	+5.2
LZH				ePP	PP	01 38 27.9	+5.1
LZH				pmax	pmax		
	comp=Z,27nm,1.1s						
LZH				pmax	pmax		
	comp=Z,140nm,5.4s						
LZH				LR	LR		
	comp=E,320nm,18.4s						
LZH				LR	LR		
	comp=Z,420nm,18.9s						
KSRS	Korea Array	86.73	5	P	P	01 35 00.6	+0.1
	0.8nm,0.5s,baz=188,slow=5.7,SNR=5.5						
KSRS				LR	LR	02 15 02.8	
	comp=Z,29nm,19.9s,baz=180,slow=36						
MJAR	Matsushiro Arr	86.90	13	P	P	01 35 02.3	+0.9
	1.1nm,0.3s,baz=212,slow=5.9,SNR=4.4						
MAJO	Matsushiro	86.91	13	eP	P	01 35 02.3	+0.9
TAOE	Nuku Hiva Isla	88.68	102	eLR	LR	02 03 32.9	
	162nm,22.2s						
PLCA	Paso Flores	89.54	171	P	P	01 35 14.8	+0.4
	2.9nm,0.9s,baz=227,slow=6.2,SNR=3.9						
PLCA				LR	LR	02 13 38.7	
	comp=Z,78nm,19.6s,baz=202,slow=34						
PLCA	Paso Flores	89.54	171	eP	P	01 35 14.4	0.0
	22nm,1.0s						
HHC	Hu-ho-hao-te	90.37	352	eP	P	01 35 19.6	+1.8
HHC				SKS	SKSac	01 45 50.8	+2.1
HHC				S	ScS	01 46 19.0	+3.2
HHC				sS	sS	01 46 25.5	+7.9
HHC				SS	SS	01 52 14.2	+0.9
HHC				pmax	pmax		
	comp=Z,29nm,1.1s						
HHC				pmax	pmax		
	comp=Z,210nm,6.1s						
HHC				LR	LR		
	comp=N,170nm,16.9s						
HHC				LR	LR		
	comp=E,160nm,17.1s						
HHC				LR	LR		
	comp=Z,98nm,15.0s						
GTA	Gaotai	90.57	343	P	P	01 35 18.0	-0.8
GTA				pP	sP	01 35 23.0	-0.3
GTA				sP	pP	01 35 26.0	+3.8
GTA				S	S	01 46 12.3	-1.7
GTA				SS	SS	01 52 18.3	+2.1
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,80nm,4.6s						
GTA				LR	LR		
	comp=N,110nm,20.3s						
GTA				LR	LR		
	comp=E,86nm,20.3s						
GTA				LR	LR		
	comp=Z,210nm,22.7s						
RPN	Rapa Nui	91.31	136	LR	LR	02 08 12.7	
	comp=Z,86nm,20.2s,baz=151,slow=30						
WSAR	Wadi Sarin	91.40	305	LR	LR	02 08 08.3	
	comp=Z,334nm,20.6s,baz=158,slow=30						
USRK	Ussuriysk Ar.	93.73	7	LR	LR	02 18 03.8	
	comp=Z,34nm,21.2s,baz=140,slow=36						
KSH	Kashi	97.31	326	eP	Pdif	01 35 51.2	+1.3
KSH				sP	sP	01 35 57.7	+3.4
KSH				pmax	pmax		
	comp=Z,110nm,3.2s						
WMQ	Urumqi	97.52	336	P	Pdif	01 35 52.0	+1.4
WMQ				pP	sP	01 35 55.4	+0.3
WMQ				sP	pP	01 35 59.0	+5.1
WMQ				pmax	pmax		
	comp=Z,230nm,5.1s						
SONA0	Songino Array	97.81	350	eP	P	01 35 51.0	-0.9
SONM	Songino Array	97.81	350	P	P	01 35 51.0	-0.9
	1.0nm,1.0s,baz=160,slow=4.7,SNR=5.6						
SONM				LR	LR	02 20 26.2	
	comp=Z,63nm,21.7s,baz=174,slow=36						
SONA1	Songino Array	97.82	350	eP	Pdif	01 35 52.0	0.0
MK32	Makanchi Array	101.76	334	ePdif	Pdif	01 36 09.6	+0.3
MKAR	Makanchi Array	101.76	334	P	Pdif	01 36 09.6	+0.2
	0.2nm,0.5s,baz=174,slow=2.9,SNR=2.6						
H10S2	ASCENSION HYDR	110.36	227	T	T	03 41 26.8	
	baz=149,slow=75,SNR=27						
H10S3	ASCENSION HYDR	110.38	227	T	T	03 41 28.5	
	baz=149,slow=75,SNR=34						
H10S1	ASCENSION HYDR	110.38	227	T	T	03 41 24.9	
	baz=149,slow=75,SNR=20						
BR101	Keskin Array S	117.67	300	ePKPdf	PKPdf	01 41 00.6	-2.2
BRTR	Keskin Array B	117.67	300	PKP	PKPdf	01 41 00.6	-2.2
	0.3nm,0.7s,baz=15,slow=6.0,SNR=3.5						
TORD	Torodi Ar. Bea	119.20	255	PKP	PKPdf	01 41 05.1	-1.1
	0.7nm,0.9s,baz=127,slow=1.1						
TOA1	Torodi Ar. Sit	119.20	255	ePKPdf	PKPdf	01 41 05.1	-1.1
IDI	Anoyia	119.86	290	PKP	PKPdf	01 41 05.8	-1.2
	4.3nm,1.0s,baz=166,slow=1.9,SNR=2.5						
MLR	Muntele Rosu	125.71	300	PKP	PKPdf	01 41 16.5	-1.4
	0.2nm,0.7s,baz=219,slow=6.5,SNR=2.9						
AKASG	Malin Array Be	127.01	307	PKP	PKPdf	01 41 20.8	+0.7
	0.1nm,0.3s,baz=103,slow=0.9,SNR=2.8						
AKBB	Malin Array Si	127.01	307	ePKPdf	PKPdf	01 41 20.8	+0.7
ILAR	Eielson Array	133.82	36	PKP	PKPdf	01 41 31.8	-0.8
	0.2nm,0.7s,baz=270,slow=3.6,SNR=2.5						
ILB	Eielson Array	133.82	36	ePKPdf	PKPdf	01 41 31.8	-0.8
FIA0	FINESS Array S	134.00	318	ePKPdf	PKPdf	01 41 33.4	+0.4
FINES	FINESS Array B	134.00	318	PKP	PKPdf	01 41 33.4	+0.4
	1.1nm,0.6s,baz=129,slow=5.2,SNR=5.6						
HWB	Hans Werner Br	134.21	88	ePKPpre	PKPpre	01 41 24.7	
HWB				ePKPdf	PKPdf	01 41 34.6	+0.2
GEC2	GERESS Array S	134.53	298	ePKPdf	PKPdf	01 41 35.2	+0.6
GERES	GERESS Array B	134.53	298	PKP	PKPdf	01 41 35.2	+0.6
	0.1nm,0.3s,baz=245,slow=2.1,SNR=2.9						
GSC	Goldstone, Bar	135.71	86	ePKPdf	PKPdf	01 41 36.7	-0.5
CLL	Collm	136.09	301	ePKPdf	PKPdf	01 41 38.0	+0.8
NV01	Mina Array Sit	136.58	81	ePKPpre	PKPpre	01 41 30.5	
NVAR	Mina Array Bea	136.58	81	PKhKP	PKPpre	01 41 30.5	
	0.1nm,0.5s,baz=142,slow=4.6,SNR=2.5						
ARA0	ARCESS Array S	137.20	329	ePKPdf	PKPdf	01 41 36.0	-2.8
ARCES	ARCESS Array B	137.20	329	PKP	PKPdf	01 41 36.0	-2.8
	3.1nm,1.1s,baz=90,slow=2.7,SNR=3.2						
HFS	Hagfors	139.15	313	PKP	PKPdf	01 41 41.7	-0.9
	1.5nm,0.8s,baz=159,slow=6.0,SNR=3.0						
NAC	Naches	139.30	69	ePKPdf	PKPdf	01 41 43.7	+0.3
F07A	Phinny Hill Vi	139.45	71	ePKPpre	PKPpre	01 41 35.8	
LTX	Lajitas	140.40	103	ePKPdf	PKPdf	01 41 48.0	+1.9
TXAR	Lajitas Array	140.40	103	PKP	PKPdf	01 41 48.0	+1.9
	1.1nm,0.8s,baz=197,slow=3.9,SNR=4.9						
ESDC	Sonseca Array	140.76	277	PKhKP	PKPpre	01 41 40.9	
	0.1nm,0.3s,baz=75,slow=1.7,SNR=2.7						
SPA0	Spitsbergen Ar	140.98	342	ePKPdf	PKPdf	01 41 46.3	+0.8
SPITS	Spitsbergen Ar	140.98	342	PKP	PKPdf	01 41 46.3	+0.8
	4.1nm,0.9s,baz=348,slow=3.4,SNR=3.1						
ANMO	Albuquerque	142.24	94	PKP	PKPdf	01 41 46.5	-2.8
	0.7nm,0.7s,baz=315,slow=2.9,SNR=2.0						
REDW	Red Top Meadow	143.97	79	ePKPdf	PKPbc	01 41 50.8	+0.8
FXWY	Fox Creek	143.99	79	ePKPdf	PKPdf	01 41 51.5	-0.6
MSTX	Muleshoe	144.03	99	ePKPdf	PKPdf	01 41 53.2	+0.8
IMW	Indian Meadow	144.17	78	ePKPdf	PKPbc	01 41 51.3	+0.6
MOOW	Moose Ponds	144.22	79	ePKPdf	PKPbc	01 41 51.2	+0.4
LOHW	Long Hollow	144.25	79	ePKPdf	PKPdf	01 41 51.7	-0.9
FLWY	Flagg Ranch	144.41	78	ePKPdf	PKPdf	01 41 54.9	+2.1
WALA	Waterton Lakes	144.49	69	ePKPdf	PKPdf	01 41 52.6	-0.2
BOZ	Bozeman (W)	144.50	75	ePKPdf	PKPdf	01 41 52.7	-0.2
BW06	Boulder Array	144.51	81	ePKPdf	PKPbc	01 41 52.0	+0.2
PD31	Pinedale Array	144.51	81	ePKPdf	PKPbc	01 41 51.9	+0.1
PDAR	Pinedale Array	144.51	81	PKP	PKPab	01 41 51.5	0.0
	1.2nm,0.6s,baz=171,slow=2.0,SNR=12						
PDAR	Pinedale Array	144.51	81	ePKPdf	PKPab	01 41 51.0	-0.6
HRY	Holter Researc	144.84	74	ePKPdf	PKPdf	01 41 53.8	+0.4
T25A	Trinidad	144.88	93	ePKPdf	PKPab	01 41 52.9	-0.2
ABTX	Abilene, Hawle	145.16	103	ePKPbc	PKPdf	01 41 54.4	+0.1
ISCO	Idaho Springs	145.57	88	ePKPdf	PKPab	01 41 56.0	+0.3
GCMT	Greycliff	145.82	76	ePKPdf	PKPab	01 41 57.5	+1.4
EKA	Eskdalemuir Ar	146.55	302	PKPbc	PKPdf	01 41 56.3	+0.5
	3.4nm,0.8s,baz=107,slow=6.0,SNR=5.6						
WMOK	Wichita Mounta	147.07	101	ePKPbc	PKPbc	01 41 59.9	+0.3
YKA	Yellowknife Ar	147.13	45	PKPbc	PKPbc	01 41 59.0	+0.2
	3.1nm,0.5s,baz=268,slow=2.8,SNR=13						
YKB5	Yellowknife Ar	147.13	45	ePKPbc	PKPbc	01 41 59.0	+0.2
LAO	LASA Array	148.37	76	ePKPbc	PKPbc	01 42 04.0	+1.2
RSSD	Black Hills	148.71	82	ePKPbc	PKPbc	01 42 03.7	-0.2
TUL1	Leonard	149.71	102	ePKPbc	PKPbc	01 42 07.0	+0.6
KSU1	Kansas State U	151.06	96	ePKPbc	PKPbc	01 42 10.6	+1.1
HHAR	Hobbs	151.12	104	ePKPbc	PKPbc	01 42 09.9	+0.2
W41B	Gary Mavity, V	151.48	107	ePKPbc	PKPbc	01 42 11.6	+1.0
V40A	Witts Springs	151.52	106	ePKPbc	PKPbc	01 42 12.1	+1.3
S39A	Bolivar	152.37	102	ePKPbc	PKPbc	01 42 12.2	-0.3
OXF	Oxford	152.79	112	ePKPbc	PKPbc	01 42 13.8	+0.2
MDND	Maddock	152.99	78	ePKPdf	PKPdf	01 42 04.2	-2.1
P38A	Dawn	153.34	98	ePKPbc	PKPbc	01 42 14.6	0.0
ECSD	EROS Data Cent	153.36	88	ePKPbc	PKPbc	01 42 13.9	-0.7
PLAL	Pickwick Lake	153.91	113	ePKPbc	PKPbc	01 42 15.4	-0.6
Z50A	Ashland	153.97	118	ePKPab	PKPab	01 42 30.9	+1.3

ISCJB ***12*** *01:36:52.3±0.4, 40.°01N±0.°02×20.°46E±0.°03, h9^{km}±3^{km}, Error ellipse: s-maj=3.8km s-min=2.6km az=9.1*

CSEM ***12*** *01:36:52.6±0.1, 40.°00N×20.°50E, h5^{km}, ML2.7, Error ellipse: s-maj=2.5km s-min=1.8km az=109.0*

ATH ***12*** *01:36:52.3, 39.°99N×20.°52E, h19^{km}, ML2.6/12, Error ellipse: s-maj=1.0km s-min=0.6km az=316.0*

THE ***12*** *01:36:52.7, 39.°98N×20.°53E, h2^{km}±1^{km}, ML2.7/18, Error ellipse: s-maj=1.3km s-min=0.6km az=321.0*

ISC 12 01:36:52.8±1.0**, 39.°99N**±0.°02×**20.°51E**±0.°02**, h10**^{km}±8^{km}**,**
n120, σ0^{s}.91/171**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAN	Janina	0.42	141	P	Pg	01 37 01.0	-0.1
JAN				S	Sg	01 37 07.6	+0.8
JAN				AML	AML	01 37 08.7	
	comp=E,7686µm,0.3s						
JAN				AML	AML	01 37 09.2	
	comp=N,7221µm,0.3s						
JAN	Janina	0.42	141	P	Pg	01 37 01.0	-0.1
JAN				S	Sg	01 37 06.6	-0.2
JAN	Janina	0.42	141	P	Pg	01 37 01.0	-0.1
JAN				S	Sg	01 37 06.6	-0.2
SGD	Sagiada	0.43	209	P	Pg	01 37 01.4	+0.2
SGD	Sagiada	0.43	209	P	Pg	01 37 01.0	-0.2
SGD	Sagiada	0.43	209	P	Pg	01 37 01.0	-0.2
IGT	Igoumenitsa	0.48	196	P	Pg	01 37 02.2	0.0
IGT				S	Sg	01 37 08.9	+0.6
IGT				AML	AML	01 37 11.1	
	comp=E,1530µm,0.4s						
IGT				AML	AML	01 37 14.7	
	comp=N,1443µm,0.5s						
IGT	Igoumenitsa	0.48	196	P	Pg	01 37 02.1	0.0
IGT				S	Sb	01 37 09.5	-0.8
IGT	Igoumenitsa	0.48	196	P	Pg	01 37 02.1	0.0
IGT				S	Sg	01 37 09.0	+0.6
KASA	Kassiopi	0.50	241	P	Pb	01 37 04.2	+0.5
KASA	Kassiopi	0.50	241	P	Pb	01 37 03.3	-0.4
NEST	Nestorio	0.59	44	P	Pb	01 37 05.0	-0.3
NEST				S	Sb	01 37 13.0	-0.8
NEST				AML	AML	01 37 15.4	
	comp=N,712µm,0.5s						
NEST				AML	AML	01 37 15.8	
	comp=E,1009µm,0.4s						
NEST	Nestorio	0.59	44	P	Pg	01 37 04.6	+0.2
NEST				S	Sg	01 37 12.4	+0.2
NEST	Nestorio	0.59	44	P	Pg	01 37 04.5	+0.2
NEST				S	Sg	01 37 12.4	+0.2
KEK	Kerkira	0.61	243	P	Pg	01 37 04.3	-0.3
KEK				S	Sg	01 37 12.7	0.0
KEK				AML	AML	01 37 17.4	
	comp=E,1078µm,0.4s						
KEK				AML	AML	01 37 17.7	
	comp=N,1121µm,0.4s						
KEK	Kerkira	0.61	243	P	Pg	01 37 04.3	-0.3
KEK				S	Sg	01 37 13.3	+0.6
KEK	Kerkira	0.61	243	P	Pg	01 37 04.4	-0.3
KEK				S	Sg	01 37 13.0	+0.3
KPRO	Kipourio	0.66	93	P	Pg	01 37 04.9	-0.6
KPRO				S	Sg	01 37 13.9	-0.3
KPRO				AML	AML	01 37 16.2	
	comp=E,2194µm,0.4s						
KPRO				AML	AML	01 37 16.7	
	comp=N,1433µm,0.4s						
KPRO	Kipourio	0.66	93	P	Pg	01 37 05.0	-0.6
KPRO				S	Sb	01 37 14.9	-0.7
KPRO	Kipourio	0.66	93	P	Pg	01 37 05.0	-0.6
KPRO				S	Sg	01 37 14.1	-0.1
DSL	Palaion Diasel	0.97	152	P	Pg	01 37 09.9	-1.6
DSL				S	Sb	01 37 25.2	+0.7
DSL				AML	AML	01 37 28.1	
	comp=N,1382µm,0.5s						
DSL				AML	AML	01 37 28.1	
	comp=E,979µm,0.5s						
DSL	Palaion Diasel	0.97	152	P	Pg	01 37 10.3	-1.1
DSL				S	Sb	01 37 24.3	-0.2
DSL	Palaion Diasel	0.97	152	P	Pg	01 37 10.3	-1.1
DSL				S	Sb	01 37 24.3	-0.2
KZN	Kozani	1.02	71	P	Pg	01 37 11.2	-1.2
KZN				S	Sb	01 37 26.1	0.0
KZN				AML	AML	01 37 29.9	
	comp=N,477µm,0.4s						
KZN				AML	AML	01 37 32.5	
	comp=E,520µm,0.3s						
KZN	Kozani	1.02	71	P	Pg	01 37 11.2	-1.2
KZN				S	Sg	01 37 25.7	0.0
KZN	Kozani	1.02	71	P	Pg	01 37 11.5	-0.9
KZN				S	Sg	01 37 25.7	0.0
FNA	Florina	1.03	40	P	Pg	01 37 11.9	-0.8
FNA				S	Sb	01 37 26.9	+0.5
FNA				AML	AML	01 37 31.5	
	comp=E,1113µm,0.5s						
FNA				AML	AML	01 37 33.0	
	comp=N,525µm,0.6s						
FNA	Florina	1.03	40	P	Pg	01 37 11.9	-0.8
FNA				S	Sb	01 37 26.9	+0.5
FNA	Florina	1.03	40	P	Pg	01 37 12.0	-0.8
FNA				S	Sb	01 37 26.6	+0.1
OHR	Ohrid	1.14	11	i Pg	Pn	01 37 15.3	+0.5
OHR				i Sg	Sn	01 37 34.6	+4.0
LKD2	Lefkada island	1.21	174	P	Pg	01 37 14.9	-1.0
LKD2				S	Sb	01 37 31.8	+0.5
LKD2				AML	AML	01 37 34.0	
	comp=E,592µm,0.5s						
LKD2				AML	AML	01 37 37.7	
	comp=N,478µm,0.3s						
LKD2	Lefkada island	1.21	174	P	Pg	01 37 14.4	-1.5
LKD2				S	Sb	01 37 31.9	+0.6
LKD2	Lefkada island	1.21	174	P	Pg	01 37 15.0	-1.0
LKD2				S	Sb	01 37 31.9	+0.6
THL	Klokotos Trika	1.24	110	P	Pg	01 37 14.6	-2.0
THL				S	Sg	01 37 32.1	-0.5
THL				AML	AML	01 37 36.3	
	comp=E,250µm,0.4s						
THL				AML	AML	01 37 37.1	
	comp=N,296µm,0.5s						
THL	Klokotos Trika	1.24	110	P	Pg	01 37 14.7	-1.8

THL				S	Sn	01 37 33.4	+0.6
THL	Klokotos Trika	1.24	110	P	Pg	01 37 15.1	-1.4
THL				S	Sb	01 37 32.4	+0.2
MGNA	Meganis¸„	1.35	171	P	Pg	01 37 18.8	+0.1
MGNA	Meganis¸„	1.35	171	P	Pb	01 37 18.3	+0.2
EVGI	Lefkada island	1.37	175	P	Pn	01 37 17.1	-0.8
EVGI	Lefkada island	1.37	175	P	Pn	01 37 17.4	-0.5
EVGI	Lefkada island	1.37	175	P	Pn	01 37 17.7	-0.2
EVR	Evrytania	1.47	136	P	Pb	01 37 20.3	+0.1
EVR				S	Sb	01 37 39.1	+0.1
EVR				AML	AML	01 37 43.3	
	comp=N,409µm,0.5s						
EVR				AML	AML	01 37 44.3	
	comp=E,359µm,0.4s						
EVR	Evrytania	1.47	136	P	Pn	01 37 19.1	-0.3
EVR				S	Sg	01 37 40.4	+0.3
EVR	Evrytania	1.47	136	P	Pb	01 37 20.1	-0.2
EVR				S	Sg	01 37 39.6	-0.5
PDO	Prodromos	1.48	159	P	Pn	01 37 19.4	-0.1
PDO	Prodromos	1.48	159	P	Pn	01 37 19.8	+0.3
PDO				S	Sb	01 37 39.9	+0.6
PDO	Prodromos	1.48	159	P	Pn	01 37 19.8	+0.3
PDO				S	Sb	01 37 39.9	+0.6
LRSO	Larissa Observ	1.49	102	P	Pb	01 37 20.6	+0.2
LRSO	Larissa Observ	1.49	102	P	Pb	01 37 20.3	-0.1
KRUS	Krusevo	1.49	22	*i* Pn	Pb	01 37 20.5	-0.1
KRUS				*i* Sn	Sg	01 37 42.3	+1.6
LIT	Litokhoron	1.53	85	P	Pn	01 37 20.7	+0.5
LIT	Litokhoron	1.53	85	P	Pn	01 37 20.4	+0.3
LIT				S	Sg	01 37 41.3	-0.6
LIT	Litokhoron	1.53	85	P	Pn	01 37 20.6	+0.5
LIT				S	Sg	01 37 41.3	-0.6
FSK	Fiskardo	1.53	178	P	Pb	01 37 21.4	+0.2
FSK	Fiskardo	1.53	178	P	Pn	01 37 19.5	-0.6
FSK				S	Sn	01 37 40.6	+0.6
PVO	Paravola	1.58	150	P	Pb	01 37 22.2	+0.1
PVO				S	Sb	01 37 42.8	+0.7
PVO				AML	AML	01 37 50.9	
	comp=E,304µm,0.3s						
PVO				AML	AML	01 37 52.2	
	comp=N,507µm,0.6s						
PVO	Paravola	1.58	150	P	Pn	01 37 21.7	+0.9
PVO				S	Sb	01 37 42.8	+0.7
PVO	Paravola	1.58	150	P	Pn	01 37 21.8	+0.9
PVO				S	Sb	01 37 42.8	+0.7
AGG	Agios Georgios	1.71	124	P	Pb	01 37 23.9	-0.4
AGG	Agios Georgios	1.71	124	P	Pn	01 37 23.2	+0.6
AGG				S	Sn	01 37 45.4	+0.9
AGG	Agios Georgios	1.71	124	P	Pn	01 37 23.6	+1.0
AGG				S	Sn	01 37 45.4	+0.9
GRG	Griva	1.74	56	P	Pn	01 37 22.7	-0.3
GRG	Griva	1.74	56	P	Pn	01 37 23.2	+0.2
ANX	Ano Chora	1.77	141	P	Pb	01 37 25.1	-0.3
ANX	Ano Chora	1.77	141	P	Pn	01 37 24.6	+1.0
ANX				S	Sn	01 37 47.1	+0.9
ANX	Ano Chora	1.77	141	P	Pn	01 37 24.6	+1.0
ANX				S	Sn	01 37 47.1	+0.9
VLS	Valsamata	1.81	178	P	Pn	01 37 24.8	+0.8
VLS	Valsamata	1.81	178	P	Pn	01 37 22.9	-1.1
VLS				S	Sb	01 37 48.8	+0.1
VLS	Valsamata	1.81	178	P	Pn	01 37 24.8	+0.8
VLS				S	Sb	01 37 48.8	+0.1
EFP	Efpalio	1.90	145	P	Pb	01 37 26.7	-0.8
EFP	Efpalio	1.90	145	P	Pn	01 37 26.3	+1.1
VAY	Valandovo	2.06	49	*i* Pn	Pb	01 37 30.6	+0.4
VAY				*i* Sn	Sn	01 37 54.3	+1.2
RLS	Riolos of Patr	2.07	159	P	Pn	01 37 27.7	+0.1
RLS	Riolos of Patr	2.07	159	P	Pn	01 37 28.0	+0.5
HORT	Hortiatis	2.07	72	P	Pn	01 37 28.4	+0.7
HORT	Hortiatis	2.07	72	P	Pn	01 37 28.4	+0.7
SKO	Skopje	2.10	19	*e*Pn	Pn	01 37 28.3	+0.2
STIP	Stip	2.13	36	*i* Pn	Pb	01 37 30.8	-0.6
XOR	Xorichti	2.16	106	P	Pn	01 37 30.0	+1.1
XOR	Xorichti	2.16	106	P	Pn	01 37 29.8	+0.9
KNT	Kendrikon	2.17	56	P	Pn	01 37 29.2	+0.3
KNT	Kendrikon	2.17	56	P	Pn	01 37 29.4	+0.5
NEO	Neokhori	2.21	107	P	Pn	01 37 30.6	+1.2
NEO	Neokhori	2.21	107	P	Pn	01 37 30.4	+1.0
DSF	Desfina	2.22	134	P	Pn	01 37 30.9	+1.2
DSF	Desfina	2.22	134	P	Pn	01 37 30.7	+1.0
PLG	Polygyros	2.28	79	P	Pn	01 37 30.3	-0.3
PLG	Polygyros	2.28	79	P	Pn	01 37 30.8	+0.3
KLV	Kalavryta, Ach	2.33	146	P	Pn	01 37 32.7	+1.6
KLV	Kalavryta, Ach	2.33	146	P	Pn	01 37 32.3	+1.2
SOH	Sokhos	2.33	68	P	Pn	01 37 31.8	+0.7
SOH	Sokhos	2.33	68	P	Pn	01 37 31.9	+0.8
LKR	Lokris	2.35	124	P	Pn	01 37 32.4	+1.0
LKR	Lokris	2.35	124	P	Pn	01 37 32.3	+0.9
PAIG	Paliouri	2.44	90	P	Pn	01 37 31.4	-1.2
PAIG	Paliouri	2.44	90	P	Pn	01 37 32.4	-0.2
GUR	Goura	2.50	145	P	Pn	01 37 34.3	+0.7
GUR	Goura	2.50	145	P	Pn	01 37 34.3	+0.7
SRS	Serrai	2.61	63	P	Pn	01 37 35.5	+0.5
SRS	Serrai	2.61	63	P	Pn	01 37 35.6	+0.7
AMT	Artemida-Makis	2.63	159	P	Pn	01 37 34.7	-0.6
AMT	Artemida-Makis	2.63	159	P	Pn	01 37 35.4	+0.2
OUR	Ouranopolis	2.69	82	P	Pn	01 37 32.9	-3.1
OUR	Ouranopolis	2.69	82	P	Pn	01 37 34.9	-1.1
AOS	Alonnisos	2.73	106	P	Pn	01 37 36.7	+0.1
AOS	Alonnisos	2.73	106	P	Pn	01 37 37.2	+0.5
BARS	Barje	2.99	19	*e*Pn	Pn	01 37 41.6	+1.4
TIP	Timpagrande	3.01	256	P	Pn	01 37 39.2	-1.3
TIP	Timpagrande	3.01	256	P	Pn	01 37 39.2	-1.3
THAS	Thassos island	3.28	78	P	Pn	01 37 44.4	+0.3
THAS	Thassos island	3.28	78	P	Pn	01 37 44.9	+0.7
SJES	Sjenica	3.29	353	*e*Pn	Pn	01 37 45.4	+0.9
STON	Ston	3.57	325	*i* Pn	Pn	01 37 47.5	-0.6
STON				Sn	Sn	01 38 28.0	-2.3
BOVS	Bovan	3.75	13	*e*Pn	Pn	01 37 51.2	+0.5
GRUS	Gruza	3.90	2	*e*Pn	Pn	01 37 52.2	-0.5
BBLS	Lazići	3.96	348	*e*Pn	Pn	01 37 57.3	+3.7
DIVS	Divibare	4.12	355	*e*Pn	Pn	01 37 51.3	-4.6
KUBS	Kucevo	4.50	11	*e*Pn	Pn	01 38 01.4	+0.4
TEKS	Tekeris	4.61	351	*e*Pn	Pn	01 38 02.5	0.0
UDBI	Udbina	5.74	324	*e*Pn	Pn	01 38 18.2	+0.2
UDBI				Sn	Sn	01 39 20.8	-3.1

CASC ***12*** *01:43:00.1±2.0, 15°.59N×90°.16W, h200^{km}±16^{km}, MD4.7, ML4.6, mb5.4(NEIC)*

GCMT ***12*** *01:43:01.6±0.3, 14°.93N×91°.07W, h204^{km}±2^{km}, MW5.2/95, Moment Tensor Solution. s48,c64; s95,c152; Duration: 1^{s}0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.89±.19; M$_{\theta\theta}$-2.27±.22; M$_{\phi\phi}$1.38±.23; M$_{r\theta}$5.80±.17; M$_{\theta\phi}$-0.53±.22; M$_{\phi r}$-4.77±.17; Best double couple: M$_0$7.77100×10^{16} NP1:ϕ_s127.00000°,δ87.00000°,λ104.00000°. NP2: ϕ_s227.00000°,δ14.00000°,λ10.00000°. Principal axes: T 8.0320, Plg46.0000°, Azm52.0000°; N -0.5200, Plg14.0000°, Azm307.0000°; P -7.5110, Plg41.0000°, Azm204.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISCJB ***12*** *01:43:01.9±0.2, 14°.83N±0°.01×90°.91W±0°.02, h219^{km}±2^{km}, mb4.9/389 Error ellipse: s-maj=3.0km s-min=1.9km az=141.9*

NEIC ***12*** *01:43:01.6±0.2, 14°.75N×90°.94W, mb5.4/276, MW5.2, MD4.8(SNET), MD5.1(MEX), Error ellipse: s-maj=3.6km s-min=2.6km az=209.0, Moment Tensor Solution. s20 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.13; M$_{\theta\theta}$0.12; M$_{\phi\phi}$-1.25; M$_{r\theta}$4.62; M$_{\theta\phi}$1.05; M$_{\phi r}$-5.35; Best double couple: M$_0$7.30000×10^{16} NP1:ϕ_s139.00000°,δ84.00000°, λ86.00000°. NP2:ϕ_s355.00000°,δ7.00000°,λ126.00000°. Principal axes: T 6.9400, Plg51.0000°, Azm44.0000°; N 0.5800, Plg4.0000°, Azm139.0000°; P -7.5200, Plg39.0000°, Azm233.0000°;*

NEIC Felt at Fraijanes, Guatemala, Lanquin, Mazatenango and Mixco. Felt [II] at San Salvador, El Salvador.

MEX ***12*** *01:43:02.0±0.8, 14°.81N×91°.16W, h204^{km}±9^{km}, MD5.1*

IDC ***12*** *01:43:02.1±0.4, 14°.96N×90°.73W, h204^{km}±3^{km}, mb4.4/35, mb1 4.6/37, mb1mx4.5/43, mbtmp4.9/37, Error ellipse: s-maj=10.9km s-min=6.3km az=52.0*

MOS ***12*** *01:43:03.6±0.8, 14°.97N×90°.77W, h230^{km}, mb4.9/41, Error ellipse: s-maj=8.6km s-min=4.5km az=102.2*

BJI ***12*** *01:43:03.0, 14°.90N×90°.90W, h215^{km}, mB5.3/1*

ISC 12 01:43:01.2±0.3**, 14°.84N**±0°.04×**90°.99W**±0°.03**, h202**^{km}±2^{km}**, h202**^{km}**:pP-P, n1390, σ1^{s}40**/1762**, mb4.9**/411**, 33C-26D,**

Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
THIG		1.23	273	*i* P	Pn	01 43 31.3	-1.5
THIG				*i* S	S	01 43 54.4	-2.6
THIG		1.23	273	*e*Pn	Pn	01 43 31.3	-1.5
THIG				*e*Sn	S	01 43 54.4	-2.6
MRL	Marmol	1.27	80	*e*P	Pn	01 43 27.4	-5.9
RTR	El Retiro	1.61	126	⇓*e*P	Pn	01 43 36.2	0.0
SNJE	San Jose	1.66	126	⇓*e*P	Pn	01 43 36.6	-0.1
SBLS	San Blas	1.66	127	*e*P	Pn	01 43 36.6	-0.2
CCIG	Comitan	1.81	322	*i* P	Pn	01 43 38.0	-0.1
CCIG				*i* S	S	01 44 04.3	-2.0
CCIG	Comitan	1.81	322	*e*Pn	Pn	01 43 38.0	-0.1
CCIG				*e*Sn	S	01 44 04.3	-2.0
CCIG				*e*Sn	S	01 44 04.7	-1.7
CEDA	San Andres	1.86	124	*e*P	Pn	01 43 38.1	-0.4
CEDA				*e*S	S	01 44 09.1	+2.2
BOQS	Boqueron	1.99	123	*e*P	Pn	01 43 39.7	-0.3
COLS	Colinas	2.02	125	*e*P	Pn	01 43 39.8	-0.3
UEES	San Salvador	2.02	123	*e*P	Pn	01 43 40.0	-0.3
UEES				IAML		01 44 23.7	
	comp=Z,4µm,0.2s						
SNET	Serv Nac Est T	2.06	124	*e*P	Pn	01 43 40.3	-0.3
SNET				*e*S	S	01 44 12.3	+1.8
SNET				IAML		01 44 18.5	
	comp=Z,6µm,0.2s						
OPAM	San Salvador	2.06	123	IAML		01 44 20.7	
	comp=Z,5µm,0.2s						
LFU	La Fuente	2.12	121	*e*P	Pn	01 43 40.5	-0.7
LOMA	San Marcos	2.12	124	*e*P	Pn	01 43 40.9	-0.2
LOMA				*e*S	S	01 44 15.0	+3.4
LBRS	Las Brisas	2.18	120	*e*P	Pn	01 43 41.0	-0.9
LFRS	El Faro	2.23	123	*e*P	Pn	01 43 42.0	-0.4
PCIG		2.31	292	*i* P	Pn	01 43 41.7	-1.5
PCIG				*i* S	S	01 44 11.6	-3.6
PCIG		2.31	292	*e*Pn	Pn	01 43 41.7	-1.5
PCIG				*e*Sn	S	01 44 10.8	-4.4
TECA	Tecapa	2.76	119	*e*P	Pn	01 43 48.1	-0.3
TGIG		2.81	313	*i* P	Pn	01 43 47.6	-1.2
TGIG				*e*S	S	01 44 22.5	-2.9
TGIG		2.81	313	*e*Pn	Pn	01 43 47.6	-1.2
TGIG				*e*Sn	S	01 44 20.5	-4.9
LCY	Lacayo	2.97	118	*e*P	Pn	01 43 50.8	0.0
TGUH	Tegucigalpa,Un	3.69	102	*e*Pn	Pn	01 44 00.1	+1.0
TGUH				*e*Sn	S	01 44 42.8	-1.1
CMIG	Matias Romero	4.36	301	P	Pn	01 44 05.9	-1.6
	comp=Z,375nm,0.3s,baz=107,slow=8.5,SNR=2512						
CMIG				S	S	01 44 53.4	-5.9
	comp=Z,563nm,0.3s,baz=117,slow=16,SNR=19						
ESTN	Estel	4.81	111	*e*Pn	Pn	01 44 13.4	+0.1
HUIG	Huatulco	5.02	281	*i* P	Pn	01 44 13.1	-2.9
HUIG				*i* S	S	01 45 09.9	-4.5
HUIG	Huatulco	5.02	281	*e*Pn	Pn	01 44 13.0	-2.9
BOAB	BOACO BROADBAN	5.70	114	*e*Pn	Pn	01 44 24.9	+0.3
VHO	Vista Hermosa	5.95	293	*i* P	Pn	01 44 27.5	-0.6
VHO				*i* S	S	01 45 31.9	-4.6
VHO	Vista Hermosa	5.95	293	*e*Pn	Pn	01 44 27.5	-0.6
VHO				*e*Sn	S	01 45 28.1	-8.4
MYIG	MØrida	6.20	11	*e*Pn	Pn	01 44 31.2	+0.2
MYIG				*e*Sn	S	01 45 43.8	+1.9
CRZ1	La Cruz	6.42	125	*e*P	Pn	01 44 34.4	+0.4
MESS	Mesas	6.97	125	⇑*i*P	Pn	01 44 41.3	+0.1
VCR	Vista de Mar	7.03	131	⇑*e*P	Pn	01 44 43.0	+1.0
CUI	Cuipilapa	7.04	126	⇑*i*P	Pn	01 44 43.0	+0.9
LVIG	Laguna Verde	7.10	314	*e*Pn	Pn	01 44 41.6	-1.2
LVIG				*e*Sn	S	01 45 56.6	-6.7
JTS	JuntasAbangare	7.43	127	P	Pn	01 44 47.6	+0.5
	comp=Z,101nm,0.3s,baz=18,slow=17,SNR=252						
JTS				S	S	01 46 04.5	-6.7
	baz=346,slow=19,SNR=2.4						
JTS	JuntasAbangare	7.43	127	⇑*i*P	Pn	01 44 47.2	+0.1
TLIG	Tlapa	7.76	291	*e*Pn	Pn	01 44 51.8	+0.3
TLIG				*e*Sn	S	01 46 09.2	-10
SRA1	San Ramˆ‡n	7.92	126	*e*P	Pn	01 44 54.1	+0.4
CGA2	Cerro Gallo 2	7.98	126	⇑*e*P	Pn	01 44 54.9	+0.5
HDC	Heredia	8.26	125	*e*Pn	Pn	01 44 59.2	+1.1
HDC				*e*Sn	S	01 46 31.6	+0.4
HDC	Heredia	8.26	125	⇑*i*P	Pn	01 44 58.3	+0.2
LCR2	La Lucha 2	8.50	126	⇑*i*P	Pn	01 45 01.7	+0.4
LCR2				*e*S	S	01 46 35.6	-1.5
URSC	Urasca	8.63	124	⇓*e*P	Pn	01 45 04.3	+1.5
URSC				*e*S	S	01 46 39.0	-1.0
BUS	Buena Vista	8.81	126	*e*P	Pn	01 45 06.7	+1.2
BUS				*e*S	S	01 46 42.3	-2.4
EDDO	Dominical	8.91	128	*e*P	Pn	01 45 04.2	-2.2
EDLM	Las Mercedes	9.11	127	*e*P	Pn	01 45 09.6	+0.5
DRK0	Durika	9.39	125	⇑*i*P	Pn	01 45 13.0	+0.2
EDBA	Buenos Aires	9.42	126	*e*P	Pn	01 45 13.4	+0.3
ICCO	Coco Island	10.02	157	*e*P	P	01 45 30.5	+1.8
WBCY	West Bay, Gran	10.22	62	*e*Pn	Pn	01 45 25.4	+2.2
WBCY				*e*Sn	S	01 47 13.0	-4.9
FSCY	Frank Sound, G	10.38	63	*e*Pn	Pn	01 45 26.8	+1.5
MOIG	Morelia	10.86	298	*e*Pn	Pn	01 45 33.9	+2.1
LCCY	Blossom Villag	11.47	64	*e*Pn	Pn	01 45 41.5	+2.1
CBCY	The Bluff, Cay	11.78	64	*e*Pn	Pn	01 45 44.8	+1.6
AZU	Azuero	12.63	123	*e*P	P	01 45 56.2	-1.6
AZU	Azuero	12.63	123	*e*P	Pn	01 45 54.8	+0.7
LNIG	Linares	12.79	323	*e*Pn	P	01 45 58.7	-0.8
MCJ	Malvern	13.13	75	*i* P	P	01 46 06.6	+3.2
ZAIG	Zacatecas	13.49	307	*e*Pn	P	01 46 08.2	+0.5
062Z	Marathon	13.56	42	P	Pn	01 46 06.4	+0.7
	baz=225,SNR=6.7						
PCJ	Portland Cotta	13.59	76	*i* P	Pn	01 46 06.4	+0.3
BBJ	Bamboo Saint A	13.62	73	⇓*i*P	P	01 46 10.6	+1.8
BNJ	Bonny Gate	13.89	74	⇓*i*P	Pn	01 45 59.8	-10
STH	Stony Hill	13.98	75	⇓*i*P	P	01 46 12.5	-0.3
GWJ	Greenwich	14.05	75	⇑*i*P	P	01 46 14.0	+0.3
KVTX	Kingsville	14.18	334	*e*Pn	P	01 46 16.6	+1.8
061Z	Ochoppi	14.47	39	P	P	01 46 17.7	-0.5
	baz=222,SNR=57						
061Z	Ochoppi	14.47	39	*e*Pn	P	01 46 17.6	-0.5
059Z	Ave Maria	14.51	36	P	P	01 46 18.3	-0.2
	baz=219,SNR=25						
645A	Chauvin	14.55	1	P	P	01 46 20.6	+1.6
	baz=181						
646A	Port Sulphur	14.71	4	P	P	01 46 22.7	+1.9
	baz=184						
058A	Arcadia	14.87	34	P	P	01 46 22.6	+0.1
	baz=216,SNR=17						
058A				ScP	ScP	01 54 32.9	+0.4
	baz=216						
060Z	West Palm Beac	15.08	39	P	P	01 46 25.2	+0.3
	baz=222,SNR=15						
060Z				ScP	ScP	01 54 33.2	+0.3
	baz=222						
545A	Edgard	15.14	2	P	P	01 46 26.5	+1.0
	baz=182						
957A	Wimauma	15.14	31	P	P	01 46 25.9	+0.4
	baz=214						
957A	Wimauma	15.14	31	*e*Pn	Pn	01 46 25.0	-0.1
	comp=Z,180nm,1.0s						
059A	Moore Haven	15.16	36	P	P	01 46 26.3	+0.5
	baz=219,SNR=12						
059A	Moore Haven	15.16	36	*e*Pn	P	01 46 26.8	+1.1
	comp=Z,264nm,0.8s						
543A	St. Martinvill	15.19	357	P	P	01 46 28.9	+2.8
	baz=177						
544A	White Castle	15.20	359	P	P	01 46 28.1	+2.0
	baz=179						
542A	Morse	15.28	355	P	P	01 46 29.9	+2.8
	baz=174						
541A	Lake Charles	15.28	353	P	P	01 46 29.8	+2.8
	baz=172						
958A	Wauchula	15.32	33	P	P	01 46 28.2	+0.7
	baz=216						
546A	Slidell	15.36	4	P	P	01 46 30.3	+2.4
	baz=184						
PAYG	Puerto Ayora	15.43	177	*e*Pn	P	01 46 32.2	+3.3
	comp=Z,231nm,1.4s						
833A	Chaparral WMA,	15.52	331	P	P	01 46 30.6	+0.9
	baz=148,SNR=16						
833A				ScP	ScP	01 54 35.7	+2.0
	baz=148						
833A	Chaparral WMA,	15.52	331	*e*P	P	01 46 31.2	+1.5
	comp=Z,230nm,0.9s						
857A	Zephyrhills	15.64	30	P	Pn	01 46 31.7	+0.6
	baz=213,SNR=13						
857A				ScP	ScP	01 54 33.6	-0.3
	baz=213						
060A	Indiantown	15.66	38	P	Pn	01 46 32.8	+1.4
	baz=221,SNR=13						
060A	Indiantown	15.66	38	*e*P	Pn	01 46 32.6	+1.2
	comp=Z,535nm,0.7s						
HKT	Hockley	15.68	344	*e*P	Pn	01 46 33.1	+1.5
	comp=Z,43nm,0.9s						
HKT	Hockley	15.68	344	*e*P	Pn	01 46 33.1	+1.5
HKT				pmax	pmax		
	comp=Z,43nm,0.9s						
959A	Okeechobee	15.74	35	P	Pn	01 46 32.9	+0.6
	baz=218						
444A	Pine Grove	15.80	1	P	Pn	01 46 35.4	+2.4
	baz=181						
445A	Amite	15.82	2	P	Pn	01 46 35.9	+2.5
	baz=182,SNR=6.4						
442A	Mamou	15.85	355	P	Pn	01 46 35.8	+2.2
	baz=175						
443A	Delano Plantat	15.86	358	P	Pn	01 46 35.9	+2.1
	baz=177						
DWPF	Disney Wildern	15.91	32	P	Pn	01 46 35.3	+1.0
	baz=215						
DWPF	Disney Wildern	15.91	32	*e*P	Pn	01 46 35.7	+1.4
	comp=Z,174nm,1.0s						
446A	Poplarville	15.95	5	P	Pn	01 46 37.6	+2.8
	baz=186,SNR=21						
441A	DeRidder	15.96	353	P	Pn	01 46 37.1	+2.1
	baz=172,SNR=23						
GTBY	Guantanamo Bay	15.97	69	*e*P	Pn	01 46 37.6	+2.4
	comp=Z,1µm,1.4s						
447A	Lucedale	16.02	7	P	Pn	01 46 39.2	+3.5
	baz=188,SNR=31						
447A	Lucedale	16.02	7	*e*P	Pn	01 46 39.1	+3.5
	comp=Z,683nm,0.8s						
858A	St. Cloud	16.03	32	P	Pn	01 46 36.9	+1.2
	baz=215						
552A	Lynn Haven	16.10	18	P	Pn	01 46 39.4	+2.8
	baz=200,SNR=11						
859A	Kempfer Cattle	16.15	34	P	Pn	01 46 38.2	+0.9
	baz=217,SNR=11						
MOTC	Monteria, Cord	16.16	110	*e*P	Pn	01 46 37.4	-0.1
449A	Pace	16.22	12	P	Pn	01 46 40.7	+2.7
	baz=193,SNR=15						
655A	Horseshoe Beac	16.25	25	P	Pn	01 46 39.7	+1.3
	baz=207,SNR=16						
448A	Bay Minette	16.27	10	P	Pn	01 46 41.2	+2.6
	baz=191,SNR=12						
757A	Oxford	16.28	29	P	Pn	01 46 39.7	+0.9
	baz=212,SNR=18						
343A	Vidalia	16.38	358	P	Pn	01 46 41.5	+1.6
	baz=178,SNR=11						
343A				S	S	01 49 41.9	+1.5
	baz=178						
450A	Crestview	16.39	14	P	Pn	01 46 42.5	+2.4
	baz=195,SNR=13						
345A	Thompson Farm,	16.41	3	P	Pn	01 46 42.7	+2.3
	baz=183,SNR=7.1						
451A	Vernon	16.42	16	P	Pn	01 46 42.7	+2.2
	baz=198,SNR=11						
451A	Vernon	16.42	16	*e*P	Pn	01 46 42.7	+2.2
	comp=Z,222nm,0.9s						
553A	Crawfordville	16.42	20	P	Pn	01 46 43.3	+2.7
	baz=203,SNR=36						
553A				ScP	ScP	01 54 36.0	+0.6
	baz=203						
656A	Willston	16.43	27	P	Pn	01 46 42.1	+1.5
	baz=210,SNR=61						
656A				ScP	ScP	01 54 35.0	-0.4
	baz=210						
656A	Willston	16.43	27	*e*P	Pn	01 46 42.3	+1.6
	comp=Z,500nm,0.8s						
342A	Flagon Creek P	16.50	356	P	Pn	01 46 43.2	+1.7
	baz=175,SNR=55						
342A	Flagon Creek P	16.50	356	*e*P	Pn	01 46 43.3	+1.9
	comp=Z,447nm,1.0s						
346A	Big Creek Wild	16.53	5	P	Pn	01 46 43.7	+2.0
	baz=185						
346A	Big Creek Wild	16.53	5	*e*P	Pn	01 46 44.5	+2.7
	comp=Z,255nm,0.8s						
341A	Kurthwood	16.54	353	P	Pn	01 46 43.0	+1.2
	baz=172,SNR=32						
341A				ScP	ScP	01 54 37.0	+1.4
	baz=172						
341A	Kurthwood	16.54	353	*e*P	Pn	01 46 43.0	+1.2
	comp=Z,203nm,0.8s						
344A	Westbrook Farm	16.54	1	P	Pn	01 46 43.8	+2.0
	baz=181,SNR=32						
344A				ScP	ScP	01 54 37.6	+2.0
	baz=181						
344A	Westbrook Farm	16.54	1	*e*P	Pn	01 46 44.0	+2.2
	comp=Z,312nm,1.1s						
554A	Perry	16.59	23	P	Pn	01 46 44.3	+1.7
	baz=205,SNR=20						
554A				ScP	ScP	01 54 36.0	+0.3
	baz=205						
347A	Saraland	16.64	7	P	Pn	01 46 45.3	+2.2
	baz=188,SNR=71						
347A				ScP	ScP	01 54 36.6	+0.8
	baz=188						
BRAL	Brewton	16.65	12	P	Pn	01 46 45.2	+2.0
	baz=193						
BRAL	Brewton	16.65	12	*e*P	Pn	01 46 45.3	+2.0
	comp=Z,228nm,0.8s						
758A	Lake Helen	16.72	31	P	Pn	01 46 44.9	+0.9
	baz=214,SNR=10						
758A				ScP	ScP	01 54 35.9	-0.1
	baz=214						
348A	Jackson	16.73	9	P	Pn	01 46 46.6	+2.4
	baz=190,SNR=44						
348A	Jackson	16.73	9	*e*P	Pn	01 46 46.7	+2.5
	comp=Z,506nm,0.7s						
349A	Repton	16.80	11	P	Pn	01 46 46.9	+2.0
	baz=192,SNR=17						
349A				ScP	ScP	01 54 37.4	+1.3
	baz=192						
452A	Marianna	16.80	18	P	Pn	01 46 47.2	+2.1
	baz=199,SNR=38						
452A				ScP	ScP	01 54 36.8	+0.6
	baz=199						
555A	McAlpin	16.91	25	P	Pn	01 46 47.6	+1.4
	baz=207,SNR=41						
555A				ScP	ScP	01 54 35.9	-0.5
	baz=207						
555A	McAlpin	16.91	25	*e*P	Pn	01 46 47.6	+1.4
	comp=Z,665nm,1.0s						
657A	Interlachen	16.92	28	P	Pn	01 46 47.0	+0.6
	baz=211,SNR=32						
657A				ScP	ScP	01 54 36.2	-0.2
	baz=211						
243A	Waterproof	16.97	359	P	Pn	01 46 48.0	+1.1
	baz=178,SNR=20						
243A				ScP	ScP	01 54 38.0	+1.6
	baz=178						
435B	Jarrell	16.98	340	P	Pn	01 46 46.9	-0.3
	baz=158,SNR=17						
435B	Jarrell	16.98	340	*e*P	Pn	01 46 47.3	+0.1
	comp=Z,173nm,0.8s						
556A	Lake Butler	17.03	26	P	Pn	01 46 48.5	+0.7
	baz=209,SNR=22						
556A				ScP	ScP	01 54 35.9	-0.7
	baz=209						
350A	Dozier	17.04	14	P	Pn	01 46 49.3	+1.4
	baz=195,SNR=12						
658A	Bunnell	17.07	30	P	Pn	01 46 48.2	+0.1
	baz=213,SNR=5.8						
658A	Bunnell	17.07	30	*e*P	Pn	01 46 48.0	-0.2
	comp=Z,188nm,0.8s						
453A	Whigham	17.07	20	P	Pn	01 46 50.2	+2.0
	baz=202,SNR=68						
453A				ScP	ScP	01 54 36.9	+0.2
	baz=202						
453A	Whigham	17.07	20	*e*P	Pn	01 46 50.4	+2.2
	comp=Z,876nm,1.0s						
351A	Pinckard	17.09	16	P	Pn	01 46 49.8	+1.4
	baz=198,SNR=48						
351A				ScP	ScP	01 54 37.1	+0.4
	baz=198						
244A	Avery, Jackson	17.12	1	P	Pn	01 46 49.9	+1.1
	baz=181,SNR=32						
244A				ScP	ScP	01 54 38.0	+1.3
	baz=181						
245A	Little AP, Sta	17.14	3	P	Pn	01 46 50.4	+1.4
	baz=183,SNR=44						
NATX	Nacogdoches	17.17	349	P	Pn	01 46 49.5	+0.1
	baz=168,SNR=48						
NATX	Nacogdoches	17.17	349	*e*P	Pn	01 46 49.5	+0.1
242A	Grayson	17.17	357	P	Pn	01 46 50.6	+1.2
	baz=176,SNR=51						
242A				ScP	ScP	01 54 38.3	+1.4
	baz=176						
246A	Jackson Lee, B	17.18	5	P	Pn	01 46 50.6	+1.1
	baz=186						

454A	Quitman	17.18	22	P	Pn	01 46 51.5	+2.0
	baz=204,SNR=154						
241A	Mo Tay, Goldon	17.19	354	P	Pn	01 46 50.7	+1.1
	baz=174,SNR=146						
241A	Mo Tay, Goldon	17.19	354	*e*P	Pn	01 46 50.7	+1.1
	comp=Z,938nm,0.7s						
247A	Quitman	17.27	7	P	Pn	01 46 52.0	+1.5
	baz=188,SNR=59						
VBMS	Vicksburg	17.30	1	P	Pn	01 46 51.9	+0.9
	baz=181,SNR=8.3						
VBMS	Vicksburg	17.30	1	*e*P	Pn	01 46 52.1	+1.2
	comp=Z,292nm,0.7s						
240A	Hunter Patters	17.30	352	P	Pn	01 46 51.2	+0.3
	baz=171,SNR=44						
240A				ScP	ScP	01 54 38.2	+1.0
	baz=171						
240A	Hunter Patters	17.30	352	*e*P	Pn	01 46 51.4	+0.4
	comp=Z,553nm,0.7s						
557A	Orange Park	17.34	28	P	Pn	01 46 51.6	+0.1
	baz=211,SNR=9.5						
249A	Camden	17.42	11	P	Pn	01 46 53.6	+1.4
	baz=192,SNR=146						
249A				ScP	ScP	01 54 37.2	-0.2
	baz=192						
248A	Dixon Mills	17.43	9	P	Pn	01 46 53.6	+1.2
	baz=190,SNR=77						
248A				ScP	ScP	01 54 37.6	+0.2
	baz=190						
455A	Stateville	17.43	23	P	Pn	01 46 53.3	+0.9
	baz=206,SNR=101						
352A	Blakely	17.47	17	P	Pn	01 46 54.2	+1.4
	baz=200,SNR=148						
352A				ScP	ScP	01 54 37.7	+0.2
	baz=200						
352A	Blakely	17.47	17	*e*P	Pn	01 46 54.3	+1.4
	comp=Z,687nm,0.8s						
JCT	Junction City	17.55	334	P	Pn	01 46 53.3	-0.5
	baz=151,SNR=10						
JCT				ScP	ScP	01 54 38.9	+1.2
	baz=151						
JCT	Junction City	17.55	334	*e*P	Pn	01 46 53.8	-0.1
	comp=Z,57nm,0.9s						
JCT	Junction City	17.55	334	*e*P	Pn	01 46 53.8	-0.1
JCT				pmax	pmax		
	comp=Z,57nm,0.9s						
353A	Camilla	17.56	20	P	Pn	01 46 55.1	+1.1
	baz=202,SNR=184						
353A				ScP	ScP	01 54 37.4	-0.3
	baz=202						
250A	Grady	17.59	13	P	Pn	01 46 54.9	+0.6
	baz=195,SNR=70						
250A				ScP	ScP	01 54 37.6	-0.2
	baz=195						
250A	Grady	17.59	13	*e*P	Pn	01 46 55.0	+0.7
	comp=Z,262nm,0.9s						
142A	Monroe	17.65	357	P	Pn	01 46 55.6	+0.6
	baz=177,SNR=8.2						
142A				ScP	ScP	01 54 39.9	+2.0
	baz=177						
145A	Houston Renfro	17.71	3	P	Pn	01 46 56.3	+0.6
	baz=183,SNR=24						
144A	Alexander Plac	17.72	2	P	Pn	01 46 56.2	+0.4
	baz=182,SNR=9.5						
141A	Papa Simpson,	17.77	355	P	Pn	01 46 57.0	+0.6
	baz=174,SNR=6.6						
143A	Socs Landing,	17.79	359	P	Pn	01 46 56.4	-0.1
	baz=178,SNR=11						
143A				ScP	ScP	01 54 39.0	+0.9
	baz=178						
143A	Socs Landing,	17.79	359	*e*P	Pn	01 46 56.6	0.0
	comp=Z,296nm,0.7s						
146A	Union	17.80	5	P	Pn	01 46 57.3	+0.6
	baz=186,SNR=17						
146A	Union	17.80	5	*e*P	Pn	01 46 57.4	+0.6
	comp=Z,243nm,0.8s						
CODC	Agustˆ›n Codaz	17.82	104	*e*P	P	01 46 54.0	-1.0
456A	Hilliard	17.82	26	P	Pn	01 46 57.0	-0.1
	baz=209,SNR=14						
456A	Hilliard	17.82	26	*e*P	Pn	01 46 57.8	+0.8
	comp=Z,334nm,0.9s						
TIGA	Tifton	17.86	21	P	Pn	01 46 58.2	+0.8
	baz=204,SNR=356						
TIGA				ScP	ScP	01 54 38.3	0.0
	baz=204						
TIGA	Tifton	17.86	21	*e*P	Pn	01 46 58.3	+0.8
	comp=Z,2µm,0.7s						
140A	Cam and Jess,	17.87	353	P	Pn	01 46 57.8	+0.2
	baz=172,SNR=44						
140A	Cam and Jess,	17.87	353	*e*P	Pn	01 46 57.9	+0.3
	comp=Z,726nm,0.7s						
251A	Midway	17.91	16	P	Pn	01 46 58.7	+0.6
	baz=198,SNR=136						
251A				ScP	ScP	01 54 38.7	+0.3
	baz=198						
147A	Livingston	17.92	7	P	Pn	01 46 59.0	+0.8
	baz=188,SNR=35						
147A	Livingston	17.92	7	*e*P	Pn	01 46 59.0	+0.8
	comp=Z,440nm,1.0s						
457A	Yulee	17.94	27	P	Pn	01 46 58.2	-0.2
	baz=211						
LGNH	LØogne	17.98	76	*e*P	Pn	01 46 59.5	+0.4
	comp=Z,221nm,1.1s						
148A	Greensboro	18.00	9	P	Pn	01 46 59.8	+0.7
	baz=190,SNR=113						
252A	Lumpkin	18.01	17	P	Pn	01 46 59.8	+0.6
	baz=200,SNR=71						
355A	Pearson	18.04	23	P	Pn	01 46 59.2	-0.3
	baz=206,SNR=41						
WHTX	Lake Whitney,	18.06	342	P	P	01 46 58.6	+1.0
	baz=160,SNR=30						
WHTX	Lake Whitney,	18.06	342	*e*P	P	01 46 58.6	+1.0
	comp=Z,157nm,0.8s						
GUYC	Guyana, Colomb	18.08	120	*e*P	Pn	01 47 00.0	-0.7
149A	Jones	18.09	11	P	Pn	01 47 00.8	+0.7
	baz=193,SNR=255						
149A				ScP	ScP	01 54 38.5	-0.3
	baz=193						
HORQ	Saladito	18.11	127	*e*P	Pn	01 47 00.0	-0.9
PTBC	PUERTO BERRIO,	18.21	115	*e*P	P	01 46 58.7	-0.7
HPIG		18.22	314	*e*P	Pn	01 47 00.8	-1.2
	comp=Z,33nm,1.0s						
253A	Americus	18.25	19	P	Pn	01 47 02.0	0.0
	baz=201,SNR=106						
253A				ScP	ScP	01 54 38.6	-0.5
	baz=201						
253A	Americus	18.25	19	*e*P	Pn	01 47 02.0	0.0
	comp=Z,754nm,1.0s						
150A	Eclectic	18.25	13	P	Pn	01 47 02.9	+0.8
	baz=195,SNR=621						
150A				ScP	ScP	01 54 38.9	-0.2
	baz=195						
Z43A	Armstrong Fami	18.29	359	P	Pn	01 47 01.9	-0.6
	baz=179,SNR=13						
356A	Blackshear	18.30	25	P	Pn	01 47 02.5	-0.2
	baz=208,SNR=96						
356A				ScP	ScP	01 54 39.0	-0.2
	baz=208						
151A	Opelika	18.35	15	P	Pn	01 47 03.8	+0.6
	baz=197,SNR=922						
151A				ScP	ScP	01 54 39.1	-0.3
	baz=197,SNR=15						
Z44A	Pea Ridge, Bel	18.36	1	P	Pn	01 47 03.0	-0.3
	baz=182,SNR=14						
Z44A				ScP	ScP	01 54 40.2	+0.9
	baz=182						
Z46A	Louisville	18.36	5	P	Pn	01 47 03.6	+0.2
	baz=186,SNR=50						
Z42A	Norrel Spur, H	18.37	357	P	Pn	01 47 02.8	-0.6
	baz=177,SNR=22						
Z41A	Richland Creek	18.41	355	P	Pn	01 47 03.3	-0.6
	baz=174,SNR=94						
Z41A	Richland Creek	18.41	355	*e*P	Pn	01 47 03.2	-0.6
	comp=Z,573nm,0.8s						
254A	Abbeville	18.42	21	P	Pn	01 47 03.8	-0.3
	baz=204,SNR=290						
254A				ScP	ScP	01 54 39.2	-0.3
	baz=204						
Z40A	Long Farm, Mag	18.46	354	P	Pn	01 47 04.4	-0.1
	baz=172,SNR=283						
Z47A	Carrollton	18.47	8	P	Pn	01 47 04.6	0.0
	baz=189,SNR=184						
Z47A				ScP	ScP	01 54 39.0	-0.6
	baz=189,SNR=8.6						
LRAL	Lakeview Retre	18.47	11	P	Pn	01 47 04.9	+0.2
	baz=192,SNR=193						
LRAL				ScP	ScP	01 54 39.4	-0.3
	baz=192						
LRAL	Lakeview Retre	18.47	11	*e*P	Pn	01 47 04.8	+0.2
	comp=Z,333nm,0.9s						
Z45A	Winona	18.48	3	P	Pn	01 47 04.4	-0.4
	baz=184,SNR=35						
Z45A				ScP	ScP	01 54 39.8	+0.1
	baz=184						
Z45A	Winona	18.48	3	*e*P	Pn	01 47 04.4	-0.4
	comp=Z,360nm,0.8s						
OCAC	Ocana	18.51	109	*e*P	P	01 47 02.6	-0.1
LTX	Lajitas	18.58	323	*e*P	Pn	01 47 06.0	0.0
LTX				*e*PcP	PcP	01 51 24.5	+1.0
LTX	Lajitas	18.58	323	*e*P	Pn	01 47 06.0	0.0
TXAR	Lajitas Array	18.58	323	P	Pn	01 47 06.0	0.0
	comp=Z,4.7nm,0.3s,baz=148,slow=11,SNR=220						
TXAR				PcP	PcP	01 51 24.5	+1.0
	comp=Z,0.2nm,0.3s,baz=35,slow=3.1,SNR=3.7						
TXAR				ScP	ScP	01 54 41.9	+1.8
	comp=Z,0.3nm,0.3s,baz=149,slow=5.1,SNR=24						
TXAR	Lajitas Array	18.58	323	P	Pn	01 47 06.0	0.0
TX31	Lajitas Ar. Si	18.58	323	*e*P	Pn	01 47 05.0	-1.1
BRRC	Barranca, Sant	18.61	113	*e*P	P	01 47 04.7	+0.9
152A	Waverly Hall	18.64	17	P	Pn	01 47 06.7	+0.1
	baz=199,SNR=162						
152A				ScP	ScP	01 54 39.8	-0.2
	baz=199						
152A	Waverly Hall	18.64	17	*e*P	Pn	01 47 06.7	+0.1
	comp=Z,432nm,0.8s						
357A	Townsend	18.66	26	P	Pn	01 47 06.1	-0.7
	baz=210,SNR=6.2						
POPC	Popayan, Colom	18.68	130	*e*P	P	01 47 06.0	+1.3
255A	Hazlehurst	18.70	23	P	Pn	01 47 06.5	-0.8
	baz=206,SNR=151						
255A	Hazlehurst	18.70	23	*e*P	Pn	01 47 06.5	-0.8
	comp=Z,547nm,0.6s						
Z48A	Northport	18.71	9	P	Pn	01 47 07.1	-0.4
	baz=190,SNR=154						
Z48A				ScP	ScP	01 54 40.1	-0.1
	baz=190,SNR=5.7						
Z49A	Columbiana	18.71	12	P	Pn	01 47 07.6	+0.1
	baz=193,SNR=241						
Z49A				ScP	ScP	01 54 40.2	+0.1
	baz=193						
153A	Fort Valley	18.89	19	P	Pn	01 47 08.9	-0.6
	baz=202,SNR=78						
Z50A	Ashland	18.90	13	P	Pn	01 47 09.3	-0.4
	baz=195,SNR=302						
Z50A				ScP	ScP	01 54 40.6	0.0
	baz=195						
Z50A	Ashland	18.90	13	*e*P	Pn	01 47 09.3	-0.4
	comp=Z,389nm,0.8s						
Y42A	Garnett, Star	18.93	358	P	Pn	01 47 08.5	-1.4
	baz=178,SNR=14						
Y42A				ScP	ScP	01 54 40.3	-0.2
	baz=178						
256A	Glennville	18.98	24	P	Pn	01 47 09.7	-0.9
	baz=208,SNR=75						
256A				ScP	ScP	01 54 40.4	-0.3
	baz=208						
Y45A	Yeager Farm, C	18.99	4	P	Pn	01 47 09.8	-0.8
	baz=184,SNR=86						
Y45A				ScP	ScP	01 54 41.3	+0.6
	baz=184						
Y43A	Makayla and Ka	18.99	0	P	P	01 47 09.1	+1.5
	baz=180,SNR=9.2						
CCAR	Cane Creek	19.00	358	*e*P	Pn	01 47 09.8	-1.1
	comp=Z,147nm,0.9s						
Y41A	Eaglette Beard	19.01	356	P	Pn	01 47 09.6	-1.4
	baz=175,SNR=18						
PCON	Cinco Dias	19.03	129	*e*P	Pn	01 47 11.3	-0.7
MARP	Paez Belalcaza	19.03	127	*e*P	Pn	01 47 11.3	-0.4
Y44A	Strider, Charl	19.05	2	P	Pn	01 47 09.9	-1.5
	baz=182,SNR=28						
Y44A				ScP	ScP	01 54 41.3	+0.5
	baz=182						
Y46A	Houston	19.05	5	P	Pn	01 47 10.1	-1.4
	baz=186,SNR=141						
Y46A				ScP	ScP	01 54 40.6	-0.3
	baz=186						
OTAV	Otavalo	19.09	138	*e*P	Pn	01 47 12.0	-0.6
	comp=Z,42nm,0.9s						
OTAV	Otavalo	19.09	138	*e*P	Pn	01 47 12.0	-0.6
OTAV				pmax	pmax		
	comp=Z,42nm,0.9s						
154A	Montrose	19.09	21	P	Pn	01 47 11.0	-0.9
	baz=204,SNR=76						
154A	Montrose	19.09	21	*e*P	Pn	01 47 11.1	-0.9
	comp=Z,2µm,0.8s						
GCUF	Volcan Galeras	19.10	134	*e*P	Pn	01 47 12.0	-0.8
Z51A	Franklin	19.14	15	P	Pn	01 47 11.7	-0.8
	baz=197,SNR=257						
Z51A				ScP	ScP	01 54 40.6	-0.5
	baz=197						
CRUC	La Cruz	19.14	132	*e*P	P	01 47 10.6	+0.9
ROSC	El Rosal	19.18	120	P	Pn	01 47 12.1	-1.6
	comp=Z,2.6nm,0.3s,baz=203,slow=4.8,SNR=20						
ROSC	El Rosal	19.18	120	*e*P	Pn	01 47 12.2	-1.4
	comp=Z,34nm,0.9s						
ROSC	El Rosal	19.18	120	*e*P	P	01 47 09.3	-1.0
Y47A	UCPARC, Winfie	19.19	8	P	Pn	01 47 11.9	-1.2
	baz=189,SNR=100						
Y47A				ScP	ScP	01 54 40.5	-0.7
	baz=189						
Y40A	Okolona	19.20	354	P	Pn	01 47 11.6	-1.6
	baz=173,SNR=122						
Y40A				ScP	ScP	01 54 42.0	+0.8
	baz=173						
Z52A	Williamson	19.22	17	P	Pn	01 47 12.7	-0.7
	baz=199,SNR=194						
Z52A				ScP	ScP	01 54 40.7	-0.6
	baz=199,SNR=6.7						
Y48A	Jasper	19.30	10	P	Pn	01 47 13.2	-1.2
	baz=191,SNR=62						
Y48A				ScP	ScP	01 54 41.1	-0.3
	baz=191,SNR=6.9						
BARC	Barichara	19.31	113	*e*P	P	01 47 11.3	-0.2
155A	Kite	19.33	22	P	Pn	01 47 13.5	-1.3
	baz=205,SNR=166						
155A				ScP	ScP	01 54 40.8	-0.8
	baz=205						
257A	Skidaway Islan	19.33	26	P	Pn	01 47 13.3	-1.5
	baz=210						
257A	Skidaway Islan	19.33	26	*e*P	Pn	01 47 13.8	-1.0
	comp=Z,326nm,0.6s						
PRAC	Prado	19.34	123	*e*P	P	01 47 12.4	+0.8
	comp=Z,145nm,0.8s						
ABTX	Abilene, Hawle	19.38	338	P	P	01 47 12.3	+0.5
	baz=154,SNR=62						
ABTX				ScP	ScP	01 54 42.0	+0.3
	baz=154						
ABTX	Abilene, Hawle	19.38	338	*e*P	P	01 47 12.3	+0.5
	comp=Z,88nm,0.9s						
Y49A	Blount Mountai	19.38	12	P	Pn	01 47 14.4	-1.0
	baz=193,SNR=258						
Y49A				ScP	ScP	01 54 41.5	-0.2
	baz=193,SNR=5.3						
Y49A	Blount Mountai	19.38	12	*e*P	Pn	01 47 14.4	-1.0
	comp=Z,444nm,0.8s						
PAMC	Pamplona, Colo	19.43	111	*e*P	P	01 47 13.3	+0.3
BETC	Betania	19.53	127	*e*P	Pn	01 47 15.9	-1.5
X45A	UM Field Stati	19.55	4	P	P	01 47 14.7	+1.1
	baz=184,SNR=50						
X45A				ScP	ScP	01 54 41.6	-0.4
	baz=184						
Y50A	Piedmont	19.55	13	P	Pn	01 47 15.9	-1.6
	baz=195,SNR=162						
Y50A				ScP	ScP	01 54 41.4	-0.6
	baz=195						
Z53A	Monticello	19.55	19	P	Pn	01 47 15.8	-1.7
	baz=202,SNR=327						
Z53A				ScP	ScP	01 54 41.5	-0.5
	baz=202						
X44A	Crenshaw	19.59	2	P	P	01 47 14.9	+0.8
	baz=182,SNR=16						
X44A				ScP	ScP	01 54 42.1	0.0
	baz=182						
X43A	Marvell	19.59	0	P	P	01 47 15.3	+1.3
	baz=180,SNR=16						
X43A	Marvell	19.59	0	*e*P	P	01 47 15.7	+1.6
	comp=Z,119nm,0.8s						
X41A	Kaden, Bauxite	19.62	356	P	P	01 47 15.6	+1.3
	baz=176,SNR=16						
X40A	Basin Creek Fa	19.63	355	P	P	01 47 15.5	+1.1
	baz=175,SNR=57						
X40A	Basin Creek Fa	19.63	355	*e*P	P	01 47 15.6	+1.1
	comp=Z,132nm,0.9s						
X42A	Stuttgart	19.64	358	P	P	01 47 15.9	+1.3
	baz=178,SNR=13						
OXF	Oxford	19.64	4	P	P	01 47 15.3	+0.8
	baz=184,SNR=50						
OXF				ScP	ScP	01 54 41.7	-0.5
	baz=184						
OXF	Oxford	19.64	4	*e*P	P	01 47 15.3	+0.8
	comp=Z,256nm,1.0s						
OXF	Oxford	19.64	4	*e*P	P	01 47 15.3	+0.8
OXF				pmax	pmax		
	comp=Z,256nm,1.0s						
GOGA	Godfrey	19.71	19	P	Pn	01 47 17.3	-2.0
	baz=202,SNR=377						
GOGA				ScP	ScP	01 54 41.9	-0.5
	baz=202						
GOGA	Godfrey	19.71	19	*e*P	Pn	01 47 17.4	-2.0
	comp=Z,540nm,0.9s						
RUSC	La Rusia	19.72	115	*e*P	P	01 47 15.9	-0.2
Y51A	Rockmart	19.72	15	P	Pn	01 47 17.9	-1.6
	baz=197,SNR=383						
Y51A				ScP	ScP	01 54 41.8	-0.6
	baz=197,SNR=5.8						
156A	Sylvania	19.73	24	P	Pn	01 47 17.5	-2.0
	baz=208,SNR=43						
X46A	Booneville	19.75	6	P	P	01 47 17.0	+1.2
	baz=187,SNR=61						
X46A				ScP	ScP	01 54 42.0	-0.4
	baz=187						
Z54A	Sparta	19.75	21	P	P	01 47 17.6	+1.8
	baz=204,SNR=122						
Z54A				ScP	ScP	01 54 42.0	-0.5
	baz=204						
MIAR	Mount Ida	19.76	354	P	P	01 47 17.0	+1.1
	baz=172,SNR=251						
MIAR				ScP	ScP	01 54 41.8	-0.7
	baz=172						
MIAR	Mount Ida	19.76	354	*e*P	P	01 47 16.9	+1.1
	comp=Z,278nm,0.8s						
MIAR	Mount Ida	19.76	354	*e*P	P	01 47 16.9	+1.1
MIAR				pmax	pmax		
	comp=Z,278nm,0.8s						
X39A	Fountain Ranch	19.79	352	P	P	01 47 17.0	+0.8
	baz=171,SNR=165						
CHIC	Chingaza	19.79	119	*e*P	P	01 47 17.9	+1.1
X47A	Russelville	19.79	8	P	P	01 47 17.6	+1.4
	baz=189,SNR=199						
X47A				ScP	ScP	01 54 41.9	-0.7
	baz=189						
X48A	Hartselle	19.85	10	P	P	01 47 18.5	+1.7
	baz=191,SNR=105						
X48A				ScP	ScP	01 54 42.2	-0.5
	baz=191						
X48A	Hartselle	19.85	10	*e*P	P	01 47 18.6	+1.8
	comp=Z,113nm,0.6s						
UALR	University of	19.89	357	*e*P	P	01 47 18.5	+1.3
	comp=Z,290nm,0.9s						
SLBS	Sierra La Lagu	19.92	299	*e*P	Pn	01 47 23.9	+1.8
	comp=Z,34nm,1.1s						
Y52A	Lilburn	19.95	17	P	Pn	01 47 20.2	-2.1
	baz=200,SNR=240						
Y52A				ScP	ScP	01 54 42.6	-0.4
	baz=200,SNR=7.6						
Y52A	Lilburn	19.95	17	*e*P	P	01 47 20.1	+2.2
	comp=Z,657nm,1.1s						
Z55A	Blythe	19.99	22	P	P	01 47 20.1	+1.8
	baz=206,SNR=48						
GRTK	Grand Turk	19.99	68	*e*P	Pn	01 47 21.6	-1.3
	comp=Z,456nm,0.8s						
X49A	Woodville	20.03	11	P	P	01 47 20.7	+1.9
	baz=193,SNR=111						
X49A				ScP	ScP	01 54 42.5	-0.7
	baz=193						
FLOC	Florencia	20.07	130	*e*P	P	01 47 21.3	+1.8
Y53A	Monroe	20.08	18	P	P	01 47 21.4	+2.0
	baz=201,SNR=349						
Y53A				ScP	ScP	01 54 42.0	-1.2
	baz=201,SNR=6.4						
X50B	Fort Payne	20.12	13	P	P	01 47 21.8	+2.1
	baz=195,SNR=171						
X50B				ScP	ScP	01 54 43.0	-0.5
	baz=195						
W43A	Forest City	20.16	1	P	P	01 47 20.6	+0.4
	baz=181						
PLAL	Pickwick Lake	20.23	7	*e*P	P	01 47 21.5	+0.7
W44A	Shelby Farms P	20.24	3	P	P	01 47 21.1	+0.1
	baz=183						
W41B	Gary Mavity, V	20.28	357	P	P	01 47 22.3	+0.9
	baz=176,SNR=98						
W41B				ScP	ScP	01 54 43.6	-0.1
	baz=176						
W41B	Gary Mavity, V	20.28	357	*e*P	P	01 47 22.2	+0.9
	comp=Z,110nm,0.8s						
W45A	Hickory Valley	20.29	4	P	P	01 47 21.7	+0.1
	baz=185,SNR=14						
W45A				ScP	ScP	01 54 43.9	+0.1
	baz=185						
W46A	Michie	20.34	6	P	P	01 47 22.6	+0.5
	baz=187,SNR=25						
W46A				ScP	ScP	01 54 43.2	-0.6
	baz=187						
W40A	Ferguson Farm,	20.35	355	P	P	01 47 23.3	+1.2
	baz=174,SNR=136						
W40A				ScP	ScP	01 54 43.4	-0.4
	baz=174						
W40A	Ferguson Farm,	20.35	355	*e*P	P	01 47 23.4	+1.2
	comp=Z,379nm,1.0s						
W42A	Bald Knob	20.35	359	P	P	01 47 22.9	+0.8
	baz=178						
Y54A	Tignall	20.37	20	P	P	01 47 24.0	+1.5
	baz=203,SNR=169						
Y54A				ScP	ScP	01 54 43.1	-0.9
	baz=203						
LPIG	La Paz	20.39	300	pP	pP	01 48 01.5	+5.2
	comp=Z,22nm,0.3s,baz=168,slow=6.7,SNR=3.8						
X51A	Calhoun	20.40	15	P	P	01 47 24.3	+1.5
	baz=197,SNR=58						
X51A				ScP	ScP	01 54 43.5	-0.5
	baz=197						
X51A	Calhoun	20.40	15	*e*P	P	01 47 24.2	+1.5
	comp=Z,169nm,0.9s						
W39A	Magazine	20.42	353	P	P	01 47 24.1	+1.1
	baz=172,SNR=172						
W39A				ScP	ScP	01 54 44.0	0.0
	baz=172						
W39A	Magazine	20.42	353	*e*P	P	01 47 24.1	+1.1
	comp=Z,238nm,0.9s						
RGRS	Roger Stewart	20.49	27	*e*P	P	01 47 25.6	+1.9
	comp=Z,4µm,0.6s						
W48A	Pulaski	20.54	10	P	P	01 47 25.6	+1.4
	baz=191,SNR=110						
W48A				ScP	ScP	01 54 43.6	-0.8
	baz=191						
W47A	Westpoint	20.55	8	P	P	01 47 25.3	+0.9
	baz=189,SNR=68						
W47A				ScP	ScP	01 54 43.8	-0.6
	baz=189						
CSU	Charleston Sou	20.61	27	*e*P	P	01 47 26.6	+1.6
HBAR	Harrisburg	20.63	1	*e*P	P	01 47 26.4	+1.3
	comp=Z,264nm,0.8s						
W49A	Belvidere	20.63	11	P	P	01 47 26.9	+1.7
	baz=193,SNR=168						
W49A				ScP	ScP	01 54 44.0	-0.6
	baz=193						
NHSC	New Hope	20.67	26	P	P	01 47 27.4	+1.8
	baz=211,SNR=74						
NHSC	New Hope	20.67	26	*e*P	P	01 47 27.4	+1.8
	comp=Z,1µm,1.0s						
X52A	Dahlonega	20.69	17	P	P	01 47 27.5	+1.7
	baz=200,SNR=390						
X52A				ScP	ScP	01 54 44.3	-0.5
	baz=200,SNR=5.9						
X53A	Estanollee	20.77	18	P	P	01 47 28.2	+1.5
	baz=201,SNR=207						
X53A				ScP	ScP	01 54 44.4	-0.6
	baz=201,SNR=7.5						
SDV	Santo Domingo	20.77	104	P	P	01 47 26.3	-0.8
	comp=Z,128nm,0.6s,baz=296,slow=5.7,SNR=33						
SDV				ScP	ScP	01 54 46.4	+0.9
	comp=Z,5.6nm,0.4s,baz=337,slow=7.7,SNR=6.9						
SDV	Santo Domingo	20.77	104	*e*P	P	01 47 26.1	-1.0
	comp=Z,164nm,0.6s						
SDV				*e*ScP	ScP	01 54 46.4	+0.9
SDV	Santo Domingo	20.77	104	*e*P	P	01 47 25.9	-1.2
SWET	Sewanee	20.79	12	*e*P	P	01 47 28.5	+1.6
	comp=Z,416nm,0.8s						
HODGE	Hodges	20.86	21	*e*P	P	01 47 29.2	+1.7
	comp=Z,66nm,0.9s						
V43A	Jonesboro	20.86	1	P	P	01 47 28.1	+0.5
	baz=181,SNR=5.8						
V42A	Cord	20.88	359	P	P	01 47 27.9	+0.1
	baz=179,SNR=70						
V41A	Mountainview	20.88	357	P	P	01 47 28.3	+0.4

	baz=177,SNR=214						
V45A	Humboldt	20.89	5	P	P	01 47 27.7	-0.2
	baz=185,SNR=12						
V45A				ScP	ScP	01 54 44.5	-0.7
	baz=185						
W50A	Signal Mountai	20.91	13	P	P	01 47 29.3	+1.2
	baz=195,SNR=118						
W50A				ScP	ScP	01 54 44.4	-0.9
	baz=195,SNR=5.7						
W50A	Signal Mountai	20.91	13	eP	P	01 47 29.4	+1.2
	comp=Z,163nm,0.6s						
V44A	Blytheville	20.92	2	P	P	01 47 28.7	+0.5
	baz=183,SNR=6.1						
V40A	Witts Springs	20.94	356	P	P	01 47 29.1	+0.6
	baz=175,SNR=396						
V40A	Witts Springs	20.94	356	eP	P	01 47 29.0	+0.5
	comp=Z,517nm,0.9s						
WMOK	Wichita Mounta	21.02	342	P	P	01 47 28.1	-1.1
	baz=159,SNR=62						
WMOK				ScP	ScP	01 54 45.4	-0.1
	baz=159						
WMOK	Wichita Mounta	21.02	342	eP	P	01 47 28.2	-1.1
	comp=Z,64nm,1.0s						
WMOK	Wichita Mounta	21.02	342	eP	P	01 47 28.2	-1.1
WMOK				pmax	pmax		
	comp=Z,64nm,1.0s						
V46A	Holladay	21.03	7	P	P	01 47 29.2	-0.1
	baz=188,SNR=112						
V46A				ScP	ScP	01 54 44.9	-0.6
	baz=188						
HALT	Halls	21.03	4	eP	P	01 47 29.8	+0.5
	comp=Z,331nm,1.3s						
V39A	Pettigrew	21.04	354	P	P	01 47 30.2	+0.6
	baz=173,SNR=564						
GNAR	Gosnell	21.05	2	eP	P	01 47 30.5	+0.9
	comp=Z,140nm,0.8s						
V47A	Nunnelly	21.13	8	P	P	01 47 30.9	+0.5
	baz=189,SNR=115						
V47A				ScP	ScP	01 54 45.4	-0.4
	baz=189						
V48A	Smith Brothers	21.14	9	P	P	01 47 31.6	+1.0
	baz=191,SNR=155						
V48A				ScP	ScP	01 54 44.9	-1.0
	baz=191						
V48A	Smith Brothers	21.14	9	eP	P	01 47 31.8	+1.2
	comp=Z,238nm,0.9s						
W52A	Murphy	21.14	16	P	P	01 47 32.3	+1.7
	baz=199,SNR=43						
W52A				ScP	ScP	01 54 45.7	-0.2
	baz=199						
W52A	Murphy	21.14	16	eP	P	01 47 32.3	+1.7
	comp=Z,228nm,0.8s						
GDL2	Guadalupe Moun	21.15	327	eP	P	01 47 32.2	+1.3
JSC	Jenkinsville	21.26	23	eP	P	01 47 33.0	+1.3
	comp=Z,296nm,1.0s						
MNTX	Cornudas Mount	21.32	324	P	P	01 47 32.2	-0.3
	baz=139,SNR=19						
MNTX				ScP	ScP	01 54 46.3	0.0
	baz=139						
MNTX	Cornudas Mount	21.32	324	eP	P	01 47 32.6	+0.1
	comp=Z,21nm,1.0s						
CPCT	Cooper Cave	21.33	15	eP	P	01 47 34.0	+1.5
	comp=Z,180nm,1.0s						
V49A	McMinnville	21.33	11	P	P	01 47 33.5	+1.0
	baz=193,SNR=260						
BG3	Lake Jocassee	21.34	18	eP	P	01 47 34.2	+1.6
	comp=Z,236nm,0.8s						
WVT	Waverly	21.39	7	P	P	01 47 33.0	-0.2
	baz=188						
WVT				ScP	ScP	01 54 45.5	-0.9
	baz=188						
WVT	Waverly	21.39	7	eP	P	01 47 32.9	-0.2
	comp=Z,140nm,0.8s						
WVT	Waverly	21.39	7	eP	P	01 47 32.9	-0.2
WVT				pmax	pmax		
	comp=Z,140nm,0.8s						
GLAT	Glass	21.39	4	eP	P	01 47 34.1	+1.0
	comp=Z,277nm,0.9s						
V50A	Pikevile	21.40	13	P	P	01 47 34.5	+1.2
	baz=196,SNR=102						
TUL1	Leonard	21.42	349	P	P	01 47 32.7	-0.7
	baz=167,SNR=76						
TUL1				ScP	ScP	01 54 46.4	-0.1
	baz=167						
TUL1	Leonard	21.42	349	eP	P	01 47 32.8	-0.7
	comp=Z,334nm,1.2s						
U42A	Revenden	21.42	359	P	P	01 47 33.3	-0.1
	baz=179,SNR=125						
U42A				ScP	ScP	01 54 45.8	-0.7
	baz=179						
U41A	Viola	21.43	358	P	P	01 47 33.7	+0.1
	baz=177,SNR=71						
W53A	Cullowhee	21.43	18	P	P	01 47 35.4	+1.7
	baz=201,SNR=81						
W53A				ScP	ScP	01 54 46.6	-0.1
	baz=201						
U43A	Rector	21.45	1	P	P	01 47 33.8	+0.1
	baz=181,SNR=28						
U43A				ScP	ScP	01 54 46.2	-0.3
	baz=181						
U44B	Burton Farm, H	21.46	4	P	P	01 47 34.1	+0.3
	baz=184,SNR=23						
U40A	Yellville	21.49	356	P	P	01 47 34.7	+0.5
	baz=175,SNR=277						
U40A				ScP	ScP	01 54 44.9	-1.8
	baz=175						
UTMT	University of	21.50	5	eP	P	01 47 34.8	+0.6
	comp=Z,232nm,0.9s						
U45A	Rockin P Farm,	21.51	5	P	P	01 47 34.4	+0.1
	baz=186,SNR=16						
HHAR	Hobbs	21.51	353	eP	P	01 47 34.6	+0.2
	comp=Z,290nm,0.8s						
PAULI	Pauline	21.54	21	eP	P	01 47 36.2	+1.5
	comp=Z,49nm,0.9s						
U39A	Green Forest	21.57	355	P	P	01 47 35.2	+0.3
	baz=173,SNR=154						
U46A	Springville	21.57	6	P	P	01 47 35.3	+0.3
	baz=187,SNR=51						
U44A	Portageville	21.61	3	P	P	01 47 35.4	+0.1
	baz=183,SNR=6.2						
V51A	Loudon	21.70	15	P	P	01 47 37.9	+1.6
	baz=197,SNR=94						
V51A				ScP	ScP	01 54 46.5	-0.7
	baz=197						
V51A	Loudon	21.70	15	eP	P	01 47 37.9	+1.6
	comp=Z,249nm,0.9s						
TKL	Tuckaleechee C	21.72	16	P	P	01 47 38.3	+1.8
	comp=Z,380nm,0.7s,baz=189,slow=9.4,SNR=476						
TKL				ScP	ScP	01 54 46.9	-0.4
	comp=Z,6.4nm,0.7s,baz=153,slow=3.3,SNR=3.6						
TKL	Tuckaleechee C	21.72	16	eP	P	01 47 38.2	+1.7
	comp=Z,505nm,0.8s						
TKL				eScP	ScP	01 54 46.9	-0.4
TKL	Tuckaleechee C	21.72	16	eP	P	01 47 38.2	+1.7
TKL				pmax	pmax		
	comp=Z,505nm,0.8s						
PARMO	Parma	21.76	3	eP	P	01 47 37.7	+0.8
	comp=Z,321nm,0.6s						
U47A	Clarksville	21.76	8	P	P	01 47 36.8	-0.1
	baz=190,SNR=148						
U47A				ScP	ScP	01 54 45.6	-1.7
	baz=190						
MSTX	Muleshoe	21.82	333	P	P	01 47 36.5	-1.2
	baz=148,SNR=23						
MSTX				ScP	ScP	01 54 46.9	-0.8
	baz=148						
MSTX	Muleshoe	21.82	333	eP	P	01 47 36.9	-0.8
	comp=Z,42nm,0.9s						
PBMO	Poplar Bluff	21.85	1	eP	P	01 47 37.8	0.0
	comp=Z,115nm,0.6s						
V52A	Sevierville	21.94	16	P	P	01 47 40.2	+1.6
	baz=199,SNR=134						
V52A	Sevierville	21.94	16	eP	P	01 47 40.2	+1.6
	comp=Z,482nm,1.3s						
U48A	Cassie Pea, Po	21.94	10	P	P	01 47 39.5	+0.8
	baz=191,SNR=124						
U48A				ScP	ScP	01 54 46.3	-1.5
	baz=191						
V53A	Saluda	22.00	18	P	P	01 47 41.2	+1.9
	baz=201,SNR=201						
V53A	Saluda	22.00	18	eP	P	01 47 41.2	+1.9
	comp=Z,326nm,0.8s						
KMSC	Kings Mountain	22.00	22	P	P	01 47 40.9	+1.6
	baz=205,SNR=189						
KMSC				ScP	ScP	01 54 46.6	-1.3
	baz=205						
KMSC	Kings Mountain	22.00	22	eP	P	01 47 40.9	+1.6
	comp=Z,486nm,0.9s						
U49A	Red Boiling Sp	22.08	11	P	P	01 47 41.1	+1.1
	baz=193,SNR=287						
T42A	Van Buren	22.10	360	P	P	01 47 40.0	-0.1
	baz=180,SNR=73						
T42A				ScP	ScP	01 54 47.5	-0.7
	baz=180						
T42A	Van Buren	22.10	360	eP	P	01 47 40.0	-0.1
	comp=Z,60nm,0.6s						
T41A	Mountain View	22.12	358	P	P	01 47 40.7	+0.3
	baz=178,SNR=124						
T41A				ScP	ScP	01 54 47.5	-0.8
	baz=178						
AMTX	Amarillo	22.16	336	P	P	01 47 40.4	-0.4
	baz=152						
AMTX				ScP	ScP	01 54 49.7	+1.2
	baz=152						
AMTX	Amarillo	22.16	336	eP	P	01 47 40.5	-0.4
	comp=Z,66nm,1.1s						
T43A	Greenville	22.16	1	P	P	01 47 40.7	0.0
	baz=182,SNR=74						
T43A				ScP	ScP	01 54 47.8	-0.5
	baz=182						
T45A	Paducah	22.19	5	P	P	01 47 41.6	+0.6
	baz=186,SNR=21						
T45A	Paducah	22.19	5	eP	P	01 47 41.6	+0.6
	comp=Z,270nm,0.6s						
T44A	Benton	22.19	3	P	P	01 47 41.3	+0.3
	baz=183,SNR=14						
T39A	Clever	22.19	355	P	P	01 47 41.5	+0.4
	baz=174,SNR=342						
T39A				ScP	ScP	01 54 47.6	-0.9
	baz=174						
T40A	Mansfield	22.26	357	P	P	01 47 42.1	+0.4
	baz=176,SNR=283						
T40A				ScP	ScP	01 54 47.9	-0.8
	baz=176						
T46A	Princeton	22.28	7	P	P	01 47 42.4	+0.6
	baz=188,SNR=26						
T46A				ScP	ScP	01 54 47.5	-1.2
	baz=188						
T38A	Diamond	22.30	353	P	P	01 47 42.3	+0.2
	baz=172,SNR=285						
T38A				ScP	ScP	01 54 47.8	-0.9
	baz=172						
T47A	Sharon Grove	22.33	8	P	P	01 47 43.2	+0.9
	baz=190,SNR=294						
T47A				ScP	ScP	01 54 48.3	-0.4
	baz=190						
T47A	Sharon Grove	22.33	8	eP	P	01 47 43.2	+0.9
	comp=Z,605nm,0.6s						
T48A	Bowling Green	22.55	10	P	P	01 47 44.7	+0.4
	baz=191,SNR=85						
T48A				ScP	ScP	01 54 48.1	-1.2
	baz=191						
TZTN	Tazewell	22.61	16	P	P	01 47 46.4	+1.6
	baz=199,SNR=138						
TZTN	Tazewell	22.61	16	eP	P	01 47 46.5	+1.6
S43A	Fulton Ridge,	22.65	2	P	P	01 47 45.0	-0.3
	baz=182,SNR=25						
S43A				ScP	ScP	01 54 48.9	-0.8
	baz=182						
S41A	Jillco Farms,	22.66	358	P	P	01 47 45.5	+0.1
	baz=178,SNR=126						
S41A				ScP	ScP	01 54 49.2	-0.4
	baz=178						
T49A	Edmonton	22.70	11	P	P	01 47 46.8	+1.1
	baz=194,SNR=234						
T49A	Edmonton	22.70	11	eP	P	01 47 46.8	+1.1
	comp=Z,246nm,0.6s						
S40A	Lebanon	22.70	357	P	P	01 47 46.0	+0.2
	baz=176,SNR=133						
S40A				ScP	ScP	01 54 49.4	-0.3
	baz=176						
U53A	Fall Branch	22.71	18	P	P	01 47 47.4	+1.6
	baz=201,SNR=223						
T50A	Nancy	22.76	13	P	P	01 47 47.3	+1.1
	baz=195,SNR=74						
T50A				ScP	ScP	01 54 49.6	-0.3
	baz=195						
S44A	Carbondale	22.81	4	P	P	01 47 47.3	+0.6
	baz=184,SNR=67						
S44A				ScP	ScP	01 54 49.5	-0.6
	baz=184						
SIUC	Southern Illin	22.84	4	eP	P	01 47 47.6	+0.8
	comp=Z,187nm,0.7s						
S42A	Caledonia	22.84	0	P	P	01 47 46.6	-0.3
	baz=180,SNR=23						
S42A				ScP	ScP	01 54 49.5	-0.6
	baz=180						
S38A	Stockton	22.84	354	P	P	01 47 47.3	+0.4
	baz=173,SNR=608						
S38A				ScP	ScP	01 54 49.7	-0.4
	baz=173						
S45A	Carrier Mills	22.84	5	P	P	01 47 47.1	+0.2
	baz=186,SNR=13						
S39A	Bolivar	22.85	355	P	P	01 47 47.4	+0.4
	baz=174,SNR=698						
S39A				ScP	ScP	01 54 49.5	-0.6
	baz=174						
S39A	Bolivar	22.85	355	eP	P	01 47 47.4	+0.4
	comp=Z,668nm,0.8s						
S46A	Don Dixon Farm	22.94	7	P	P	01 47 48.5	+0.7
	baz=188,SNR=30						
S46A				ScP	ScP	01 54 49.5	-0.8
	baz=188						
FVM	French Village	23.05	1	eP	P	01 47 49.5	+0.6
	comp=Z,21nm,0.6s						
FVM	French Village	23.05	1	eP	P	01 47 49.5	+0.6
FVM				pmax	pmax		
	comp=Z,21nm,0.6s						
CRPR	Cabo Rojo, PR	23.12	79	eP	P	01 47 51.5	+1.9
	comp=Z,118nm,1.1s						
CCM	Cathedral Cave	23.12	359	P	P	01 47 50.4	+1.0
	baz=179						
CCM				ScP	ScP	01 54 50.6	-0.3
	baz=179						
CCM	Cathedral Cave	23.12	359	eP	P	01 47 50.5	+1.0
	comp=Z,71nm,0.6s						
CCM	Cathedral Cave	23.12	359	eP	P	01 47 50.5	+1.0
CCM				pmax	pmax		
	comp=Z,71nm,0.6s						
S48A	Wiedeman Farm,	23.14	10	P	P	01 47 50.2	+0.6
	baz=192,SNR=98						
S48A				ScP	ScP	01 54 50.2	-0.7
	baz=192						
USIN	University of	23.22	7	eP	P	01 47 51.3	+1.0
	comp=Z,202nm,0.8s						
HSIG		23.23	311	eP	P	01 47 53.8	+3.2
	comp=Z,26nm,0.9s						
T52A	Hallie	23.29	16	P	P	01 47 52.6	+1.5
	baz=200,SNR=57						
T52A				ScP	ScP	01 54 51.2	-0.2
	baz=200						
121A	Cookes Peak, D	23.32	322	P	P	01 47 53.9	+2.3
	baz=135,SNR=17						
121A				ScP	ScP	01 54 53.4	+1.6
	baz=135						
R42A	Luebbering	23.35	0	P	P	01 47 51.6	+0.2
	baz=180,SNR=26						
R42A				ScP	ScP	01 54 50.9	-0.5
	baz=180,SNR=5.0						
R43A	Red Bud	23.36	2	P	P	01 47 52.1	+0.5
	baz=182,SNR=34						
R41A	Rosebud	23.37	359	P	P	01 47 51.6	0.0
	baz=179,SNR=92						
R41A				ScP	ScP	01 54 50.4	-1.1
	baz=179						
R44A	Waltonville	23.37	4	P	P	01 47 52.3	+0.5
	baz=184,SNR=9.1						
R40A	Maddies Statio	23.38	357	P	P	01 47 51.9	+0.1
	baz=177,SNR=66						
R40A				ScP	ScP	01 54 50.4	-1.1
	baz=177						
R40A	Maddies Statio	23.38	357	eP	P	01 47 51.9	+0.1
	comp=Z,139nm,1.3s						
R38A	Fenwick Farm,	23.39	354	P	P	01 47 52.1	+0.2
	baz=173,SNR=347						
R38A				ScP	ScP	01 54 50.4	-1.1
	baz=173						
NCAT	North Carolina	23.41	23	eP	P	01 47 53.4	+1.3
	comp=Z,243nm,0.8s						
R39A	Chumby, Stover	23.45	356	P	P	01 47 52.7	+0.3
	baz=175,SNR=134						
R39A				ScP	ScP	01 54 50.6	-1.1
	baz=175						
319A	Douglas	23.47	318	eP	P	01 47 55.5	+2.6
	comp=Z,43nm,1.0s						
CNNC	Cliffs of the	23.48	28	P	P	01 47 54.2	+1.5
	baz=213,SNR=71						
CNNC	Cliffs of the	23.48	28	eP	P	01 47 54.2	+1.5
	comp=Z,772nm,0.7s						
AOPR	Arecibo Observ	23.48	78	eP	P	01 47 54.7	+1.7
	comp=Z,43nm,0.6s						
R45A	Skylar, Fairfi	23.48	5	P	P	01 47 53.6	+0.9
	baz=186,SNR=58						
R46A	Gibon Southern	23.48	7	P	P	01 47 53.6	+0.9
	baz=188,SNR=36						
OBIP	Obispado Ponce	23.60	79	eP	P	01 47 54.9	+0.9
	comp=Z,38nm,0.8s						
S51A	Beattyville	23.64	15	P	P	01 47 55.5	+1.3
	baz=198,SNR=67						
S51A				ScP	ScP	01 54 51.0	-1.2
	baz=198						
S51A	Beattyville	23.64	15	eP	P	01 47 55.5	+1.3
	comp=Z,165nm,0.8s						
WCI	Wyandotte Cave	23.66	9	P	P	01 47 55.3	+0.9
	baz=191						
WCI				ScP	ScP	01 54 51.4	-0.8
	baz=191						
WCI	Wyandotte Cave	23.66	9	eP	P	01 47 55.3	+0.9
	comp=Z,482nm,0.8s						
R47A	Wooly Knot Far	23.69	9	P	P	01 47 55.5	+0.9
	baz=191,SNR=135						
R47A				ScP	ScP	01 54 51.7	-0.6
	baz=191						
SLM	Saint Louis	23.71	1	eP	P	01 47 55.1	+0.4
	comp=Z,100nm,0.6s						
SLM	Saint Louis	23.71	1	eP	P	01 47 55.2	+0.4
SLM				pmax	pmax		
	comp=Z,100nm,0.6s						
S52A	Salyersville	23.80	16	P	P	01 47 57.2	+1.5
	baz=199,SNR=12						
BNM	Barren Site	23.86	326	eP	P	01 47 58.2	+1.7
R48A	Northridge Ran	23.90	10	P	P	01 47 57.3	+0.8
	baz=192,SNR=63						
OLIL	Olney	23.93	6	eP	P	01 47 57.7	+0.9
	comp=Z,148nm,0.8s						
Y22D	IRIS PASSCAL I	23.96	326	P	P	01 47 58.7	+1.4
	baz=139						
Y22D	IRIS PASSCAL I	23.96	326	eP	P	01 47 58.2	+0.9
	comp=Z,47nm,0.5s						
Q42A	Golden Eagle	23.98	1	P	P	01 47 57.7	+0.5
	baz=181,SNR=16						
Q41A	Truxton	24.02	360	P	P	01 47 57.9	+0.3
	baz=179,SNR=35						
Q41A				ScP	ScP	01 54 52.5	-0.8
	baz=179						
Q44A	Meyer Farm, Va	24.03	4	P	P	01 47 58.1	+0.4
	baz=184,SNR=22						
Q44A				ScP	ScP	01 54 52.5	-0.8
	baz=184						
Q43A	New Douglas	24.03	2	P	P	01 47 58.1	+0.3
	baz=183,SNR=23						
Q43A				ScP	ScP	01 54 52.4	-0.8
	baz=183						
SJG	San Juan	24.04	79	P	P	01 47 57.5	-0.5
	comp=Z,33nm,0.7s,baz=269,slow=8.0,SNR=11						
SJG				ScP	ScP	01 54 53.2	-0.5
	comp=Z,6.2nm,0.6s,baz=275,slow=12,SNR=3.2						
SJG	San Juan	24.04	79	eP	P	01 47 57.8	-0.2
LENM	Lemitar	24.06	326	eP	P	01 48 00.0	+1.8
Q40A	Laux Farm, Aux	24.08	358	P	P	01 47 58.0	-0.2
	baz=177,SNR=24						
Q40A				ScP	ScP	01 54 52.7	-0.7
	baz=177,SNR=5.2						
Q45A	Warren Harvey,	24.09	5	P	P	01 47 58.8	+0.6
	baz=187,SNR=26						
Q45A				ScP	ScP	01 54 52.3	-1.2
	baz=187						
Q37A	Longview Farm,	24.14	353	P	P	01 47 58.6	-0.1
	baz=172,SNR=25						
Q38A	Cooks Store, C	24.14	355	P	P	01 47 59.2	+0.5
	baz=174,SNR=225						
Q38A				ScP	ScP	01 54 52.3	-1.3
	baz=174,SNR=5.0						
Q39A	Willow Grove F	24.17	356	P	P	01 47 59.1	+0.1
	baz=175,SNR=59						
BLA	Blacksburg	24.18	21	P	P	01 48 00.7	+1.5
	baz=205,SNR=28						
BLA	Blacksburg	24.18	21	eP	P	01 48 00.8	+1.5
	comp=Z,130nm,0.8s						
BLA	Blacksburg	24.18	21	eP	P	01 48 00.8	+1.6
BLA				pmax	pmax		
	comp=Z,130nm,0.8s						
R51A	Hillsboro	24.27	14	P	P	01 48 01.2	+1.3
	baz=197,SNR=23						
Q46A	CEJHS Indians,	24.30	7	P	P	01 48 00.8	+0.7
	baz=188						
HUMP	Col San Antoni	24.32	79	eP	P	01 47 59.4	-1.2
	comp=Z,52nm,1.0s						
LAZ	Ladron	24.32	326	eP	P	01 48 02.8	+2.1
CBYP	Canovanas	24.32	78	eP	P	01 47 59.9	-0.8
	comp=Z,44nm,0.8s						
Q47A	Bedord North L	24.34	9	P	P	01 48 01.3	+0.8
	baz=191,SNR=62						
VWCC	Virginia Weste	24.37	22	eP	P	01 48 02.5	+1.7
TASL	Snake Pit, Alb	24.38	328	P	P	01 48 02.1	+0.9
	baz=142,SNR=9.6						
TASL				ScP	ScP	01 54 55.3	+0.6
	baz=142						
ANMO	Albuquerque	24.38	328	P	P	01 48 02.0	+0.8
	comp=Z,3.6nm,0.8s,baz=146,slow=12,SNR=16						
ANMO				pP	pP	01 48 42.9	+2.9
	comp=Z,12nm,0.8s,baz=154,slow=12,SNR=8.6						
ANMO				ScP	ScP	01 54 54.9	+0.3
	comp=Z,5.4nm,0.9s,baz=138,slow=5.0,SNR=7.6						
ANMO	Albuquerque	24.38	328	P	P	01 48 02.3	+1.1
	baz=142						
ANMO				ScP	ScP	01 54 55.5	+0.9
	baz=142						
ANMO	Albuquerque	24.38	328	eP	P	01 48 02.3	+1.1
	comp=Z,3.9nm,0.8s						
ANMO				eScP	ScP	01 54 55.8	+1.1
ANMO	Albuquerque	24.38	328⇓	eP	P	01 48 02.0	+0.8
ANMO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
TASM	ASL Pad, Albuq	24.38	328	P	P	01 48 02.2	+1.0
	baz=142,SNR=9.3						
TASM				ScP	ScP	01 54 55.4	+0.8
	baz=142						
Q48A	North Vernon	24.44	10	P	P	01 48 02.1	+0.7
	baz=192,SNR=74						
R52A	Catlettsburg	24.54	16	P	P	01 48 03.4	+1.1
	baz=200,SNR=28						
BLO	Bloomington	24.55	8	eP	P	01 48 03.3	+0.9
	comp=Z,135nm,0.6s						
BLO	Bloomington	24.55	8	eP	P	01 48 03.3	+0.9
BLO				pmax	pmax		
	comp=Z,135nm,0.6s						
P39B	Salisbury	24.60	357	P	P	01 48 02.8	-0.1
	baz=176,SNR=19						
P39B				ScP	ScP	01 54 54.1	-0.7
	baz=176						
MTP	Monte Pirata	24.60	79	eP	P	01 48 02.7	-0.5
	comp=Z,66nm,0.7s						
P40A	Paris	24.61	358	P	P	01 48 02.9	-0.1
	baz=177,SNR=75						
P40A				ScP	ScP	01 54 52.7	-2.1
	baz=177						
P40A	Paris	24.61	358	eP	P	01 48 02.9	-0.1
	comp=Z,79nm,0.6s						
P44A	Sand Creek, Wi	24.62	4	P	P	01 48 03.3	+0.3
	baz=185,SNR=11						
P44A				ScP	ScP	01 54 54.2	-0.7
	baz=185						
P42A	Winchester	24.66	1	P	P	01 48 03.4	0.0
	baz=181,SNR=17						
P42A	Winchester	24.66	1	eP	P	01 48 03.3	0.0
	comp=Z,46nm,0.9s						
Q49A	Aurora	24.66	11	P	P	01 48 04.2	+0.7
	baz=194,SNR=44						
KSU1	Kansas State U	24.67	349	P	P	01 48 03.2	-0.2
	baz=167,SNR=28						
KSU1	Kansas State U	24.67	349	eP	P	01 48 03.5	0.0
	comp=Z,153nm,0.8s						
Q50A	Georgetown	24.70	13	P	P	01 48 04.5	+0.8
	baz=196,SNR=30						
P43A	Skaggs, Pawnee	24.74	3	P	P	01 48 04.4	+0.3
	baz=183,SNR=9.6						
P41A	Barry, Barry	24.74	360	P	P	01 48 04.2	+0.1
	baz=180,SNR=8.2						
P45A	Graceland, Par	24.76	6	P	P	01 48 04.7	+0.4
	baz=187,SNR=34						
P45A				ScP	ScP	01 54 53.8	-1.5
	baz=187						
P45A	Graceland, Par	24.76	6	eP	P	01 48 04.9	+0.6

	comp=Z,125nm,0.7s						
P38A	**Dawn** baz=174,SNR=45	24.79	355	P	P	01 48 04.4	-0.1
P38A	baz=174			ScP	ScP	01 54 54.4	-1.0
P38A	**Dawn** comp=Z,89nm,0.9s	24.79	355	*e*P	P	01 48 04.6	0.0
P37A	**Lathrop** baz=172,SNR=41	24.83	354	P	P	01 48 05.0	0.0
P47A	**Martinsville** baz=191,SNR=39	24.90	9	P	P	01 48 06.1	+0.5
P46A	**Rosedale** baz=188,SNR=17	24.90	7	P	P	01 48 06.4	+0.8
P46A	baz=188			ScP	ScP	01 54 55.0	-0.7
P48A	**Milroy** baz=193,SNR=88	25.01	10	P	P	01 48 06.9	+0.3
Q51A	**Peebles** baz=198,SNR=137	25.01	14	P	P	01 48 08.0	+1.3
Q51A	baz=198			ScP	ScP	01 54 55.9	-0.2
TUC	**Tucson** baz=130	25.05	317	P	P	01 48 08.9	+1.7
TUC	baz=130			ScP	ScP	01 54 56.6	+0.2
TUC	**Tucson** comp=Z,30nm,0.9s	25.05	317	*e*P	P	01 48 09.5	+2.3
CBKS	**Cedar Bluff** baz=160,SNR=10.0	25.09	344	P	P	01 48 07.3	-0.1
CBKS	baz=160			ScP	ScP	01 54 56.6	+0.3
CBKS	**Cedar Bluff** comp=Z,58nm,1.1s	25.09	344	*e*P	P	01 48 07.8	+0.4
CBKS	**Cedar Bluff**	25.09	344	*e*P	P	01 48 07.8	+0.4
CBKS	comp=Z,58nm,1.1s			pmax	pmax		
ATAH	**Atahualpa** comp=Z,14nm,0.8s,baz=335,slow=3.7,SNR=4.6	25.16	149	PcP	PcP	01 51 39.7	+2.5
ATAH	comp=Z,11nm,0.8s,baz=348,slow=2.0,SNR=7.9			ScP	ScP	01 55 00.8	+3.5
O41A	**Passleys Farm,** baz=180,SNR=16	25.18	0	P	P	01 48 07.7	-0.4
STVI	**Saint Thomas** comp=Z,93nm,0.9s	25.19	78	*e*P	P	01 48 08.3	-0.1
O40A	**La Belle** baz=178,SNR=25	25.20	358	P	P	01 48 08.3	0.0
O40A	baz=178			ScP	ScP	01 54 56.0	-0.5
P49A	**Miami Univ. Ec** baz=194,SNR=32	25.21	11	P	P	01 48 08.5	+0.1
T25A	**Trinidad** baz=148,SNR=17	25.21	334	P	P	01 48 10.0	+1.3
T25A	baz=148			ScP	ScP	01 54 57.8	+0.8
T25A	**Trinidad** comp=Z,21nm,1.0s	25.21	334	*e*P	P	01 48 10.4	+1.7
O42A	**Bath** baz=182	25.27	2	P	P	01 48 08.7	-0.2
O38A	**Galt** baz=174,SNR=12	25.28	356	P	P	01 48 08.9	-0.1
O44A	**Mansfield** baz=186,SNR=22	25.31	5	P	P	01 48 09.5	+0.2
O44A	baz=186			ScP	ScP	01 54 56.5	-0.4
O39A	**Kirksville** baz=176	25.35	357	P	P	01 48 09.5	-0.2
O37A	**Wolven Farm, M** baz=173,SNR=21	25.38	354	P	P	01 48 09.9	0.0
O43A	**Sugar Creek Fa** baz=184,SNR=5.8	25.39	3	P	P	01 48 10.1	+0.1
P50A	**Jamestown** baz=196,SNR=42	25.47	13	P	P	01 48 11.3	+0.6
O45A	**Potomac** baz=187,SNR=46	25.47	6	P	P	01 48 11.2	+0.4
URVA	**University of**	25.59	25	*e*P	P	01 48 13.2	+1.3
O47A	**Sheridan** baz=191,SNR=82	25.65	9	P	P	01 48 12.5	+0.2
HDIL	**Hopedale** baz=184,SNR=14	25.66	3	P	P	01 48 12.6	+0.1
HDIL	baz=184			ScP	ScP	01 54 57.2	-0.6
HDIL	**Hopedale** comp=Z,84nm,0.9s	25.66	3	*e*P	P	01 48 11.8	-0.6
SFIN	**Lafayette** baz=189,SNR=43	25.67	7	P	P	01 48 12.7	+0.2
SFIN	baz=189			ScP	ScP	01 54 57.2	-0.6
SFIN	**Lafayette** comp=Z,115nm,0.8s	25.67	7	*e*P	P	01 48 12.7	+0.2
N41A	**Harden Midland** baz=180	25.77	0	P	P	01 48 13.3	-0.1
O48A	**Farmland** baz=193,SNR=46	25.83	10	P	P	01 48 14.2	+0.2
O48A	baz=193			ScP	ScP	01 54 56.5	-1.9
N42A	**Yates City** baz=182,SNR=9.6	25.91	2	P	P	01 48 14.5	-0.1
CVRD	**Centerville Ro** comp=Z,56nm,0.9s	25.91	24	*e*P	P	01 48 16.0	+1.3
O49A	**Covington** baz=195,SNR=17	25.91	12	P	P	01 48 15.0	+0.3
O49A	baz=195			ScP	ScP	01 54 57.8	-0.7
N38A	**Joes South For** baz=175	25.93	356	P	P	01 48 14.9	0.0
N40A	**Mertquake, Sal** baz=179,SNR=12	25.95	359	P	P	01 48 15.0	0.0
N37A	**Lee Faris, Mou** baz=173	25.97	354	P	P	01 48 15.3	0.0
N37A	**Lee Faris, Mou** comp=Z,147nm,0.8s	25.97	354	*e*P	P	01 48 15.1	-0.2
N39A	**Derby Farms, D** baz=177,SNR=17	25.97	357	P	P	01 48 15.1	-0.2
N39A	**Derby Farms, D** comp=Z,47nm,0.6s	25.97	357	*e*P	P	01 48 15.6	+0.3
N44A	**Piper City** baz=186,SNR=31	25.98	5	P	P	01 48 15.2	-0.1
X18A	**Snowflake** comp=Z,9.4nm,0.9s	26.01	322	*e*P	P	01 48 18.5	+2.6
X18A				*e*pP	pP	01 49 00.3	+3.9
O50A	**Cable** baz=196,SNR=40	26.02	13	P	P	01 48 16.3	+0.6
PTRD	**Partlow Road** comp=Z,85nm,1.0s	26.03	25	*e*P	P	01 48 16.5	+0.8
N43A	**Stutzman Famil** baz=184,SNR=22	26.05	3	P	P	01 48 16.3	+0.3
N45A	**Kentland** baz=188,SNR=13	26.09	6	P	P	01 48 16.3	+0.1
N36A	**Muff Farm, Cla** baz=171,SNR=5.0	26.11	353	P	P	01 48 16.4	-0.1
PCRV	**Puerto La Cruz** comp=Z,5.3nm,0.5s,baz=315,slow=7.1,SNR=3.5	26.13	97	P	P	01 48 16.6	-0.5
KSCO	**Kaye Shedlock’** baz=154,SNR=6.1	26.17	339	P	P	01 48 17.4	+0.3
SDCO	**Great Sand Dun** baz=147,SNR=8.9	26.19	333	P	P	01 48 18.6	+1.1
SDCO	baz=147,SNR=5.7			ScP	ScP	01 55 00.1	+0.2
SDCO	**Great Sand Dun** comp=Z,4.2nm,0.9s	26.19	333	*e*P	P	01 48 18.9	+1.3
CBN	**Corbin Frederi** baz=211,SNR=22	26.20	25	P	P	01 48 18.9	+1.6
CBN	**Corbin Frederi** comp=Z,218nm,0.9s	26.20	25	*e*P	P	01 48 19.1	+1.8
214A	**Organ Pipe Nat** baz=126,SNR=13	26.20	314	P	P	01 48 19.5	+2.0
N46A	**Monticello** baz=189,SNR=13	26.22	7	P	P	01 48 17.5	+0.1
ACSO	**Alum Creek Sta** baz=198,SNR=76	26.25	14	P	P	01 48 18.8	+1.1
ACSO	**Alum Creek Sta** comp=Z,188nm,0.6s	26.25	14	*e*P	P	01 48 18.9	+1.1
W18A	**Petrified Fore** baz=136	26.30	324	P	P	01 48 20.6	+2.1
M41A	**Milan** baz=181,SNR=13	26.44	1	P	P	01 48 19.5	+0.1
M40A	**Post Highland** baz=179,SNR=8.7	26.47	359	P	P	01 48 19.7	0.0
M42A	**Sheffield** baz=182	26.54	2	P	P	01 48 20.1	-0.2
M38A	**Pleasantville** baz=175,SNR=35	26.55	356	P	P	01 48 20.0	-0.4
M43A	**Waltham Townsh** baz=184,SNR=16	26.56	3	P	P	01 48 20.6	+0.2
M39A	**Webster** baz=177,SNR=20	26.56	358	P	P	01 48 20.3	-0.2
M44A	**Midewin, Midew** baz=186,SNR=8.6	26.57	5	P	P	01 48 20.6	0.0
M44A	**Midewin, Midew** comp=Z,81nm,0.8s	26.57	5	*e*P	P	01 48 20.4	-0.2
MCWV	**Mont Chateau** baz=204,SNR=8.3	26.59	19	P	P	01 48 21.9	+1.2
MCWV	**Mont Chateau** comp=Z,49nm,0.6s	26.59	19	*e*P	P	01 48 22.0	+1.3
M37A	**Trindle Farm,** baz=173,SNR=38	26.60	355	P	P	01 48 21.2	+0.3
M45A	**Boilermakers S** baz=188	26.65	6	P	P	01 48 21.4	+0.1
M36A	**Felix, Anita** baz=172	26.72	354	P	P	01 48 21.8	-0.2
N50A	**Nevada** baz=197,SNR=8.9	26.72	13	P	P	01 48 22.5	+0.6
M46A	**Old House Fiel** baz=190,SNR=6.3	26.77	8	P	P	01 48 22.2	-0.2
M46A	**Old House Fiel** comp=Z,50nm,0.9s	26.77	8	*e*P	P	01 48 22.6	+0.2
S22A	**4UR Ranch, Cre** baz=144,SNR=14	26.79	331	P	P	01 48 24.0	+1.0
S22A	baz=144,SNR=11			ScP	ScP	01 55 02.2	+0.6
S22A	**4UR Ranch, Cre** comp=Z,14nm,1.4s	26.79	331	*e*P	P	01 48 24.6	+1.6
X16A	**Lo Mia Camp, P** comp=Z,10nm,0.8s	26.84	320	*e*P	P	01 48 25.6	+2.4
SCIA	**State Center** baz=175	27.04	356	P	P	01 48 24.7	0.0
SCIA	**State Center** comp=Z,32nm,0.7s	27.04	356	*e*P	P	01 48 25.2	+0.5
Q24A	**Divide** baz=149,SNR=7.4	27.07	335	P	P	01 48 25.4	-0.1
L42A	**Oliver, Polo** baz=183,SNR=11	27.09	2	P	P	01 48 25.0	-0.2
L42A	**Oliver, Polo** comp=Z,138nm,1.4s	27.09	2	*e*P	P	01 48 25.4	+0.2
L40A	**Anamosa** baz=179,SNR=25	27.12	360	P	P	01 48 25.6	+0.1
L40A	**Anamosa** comp=Z,52nm,0.9s	27.12	360	*e*P	P	01 48 25.6	+0.1
L41A	**Preston** baz=181,SNR=27	27.14	1	P	P	01 48 25.4	-0.3
MVCO	**Mesa Verde** baz=141	27.18	328	P	P	01 48 27.5	+1.1
MVCO	**Mesa Verde** comp=Z,8.3nm,0.6s	27.18	328	*e*P	P	01 48 28.6	+2.3
BGNE	**Belgrade** baz=165	27.19	348	P	P	01 48 26.1	0.0
BGNE	**Belgrade** comp=Z,40nm,0.8s	27.19	348	*e*P	P	01 48 28.3	+2.2
L39A	**Vinton** baz=178,SNR=11	27.20	358	P	P	01 48 25.9	-0.2
L38A	**Oak Wood Farm,** baz=176,SNR=15	27.25	357	P	P	01 48 26.4	-0.3
L37A	**Phoenix Point,** baz=174	27.29	356	P	P	01 48 26.9	-0.1
L43A	**Garden Prairie** baz=185	27.31	4	P	P	01 48 27.0	-0.2
113A	**Mohawk Valley,** comp=Z,17nm,1.2s	27.33	315	*e*P	P	01 48 29.8	+2.3
L36A	**Harm Buss Farm** baz=172	27.35	354	P	P	01 48 27.4	-0.1
L44A	**Lake County Fo** baz=186,SNR=5.5	27.37	5	P	P	01 48 27.6	-0.1
Y14A	**Wickenburg** comp=Z,8.8nm,0.9s	27.52	318	*e*P	P	01 48 31.5	+2.2
WUAZ	**Wupatki** baz=133,SNR=8.3	27.53	322	P	P	01 48 31.5	+2.0
WUAZ	baz=133,SNR=9.2			ScP	ScP	01 55 04.5	+0.7
WUAZ	**Wupatki** comp=Z,21nm,1.3s	27.53	322	*e*P	P	01 48 31.9	+2.5
O56A	**Blue Knob Stat** baz=206,SNR=40	27.56	21	P	P	01 48 30.8	+1.3
O56A	**Blue Knob Stat** comp=Z,155nm,1.1s	27.56	21	*e*P	P	01 48 31.0	+1.5
K41A	**Shullsburg** baz=181,SNR=20	27.67	1	P	P	01 48 30.2	-0.2
OGNE	**Ogallala** baz=157	27.73	342	P	P	01 48 31.4	+0.4
OGNE	**Ogallala** comp=Z,16nm,0.8s	27.73	342	*e*P	P	01 48 31.8	+0.8
N54A	**Moraine State** baz=203,SNR=46	27.73	18	P	P	01 48 32.0	+1.0
N54A	**Moraine State** comp=Z,151nm,0.8s	27.73	18	*e*P	P	01 48 32.1	+1.2
K38A	**Parkersburg** baz=176	27.75	357	P	P	01 48 30.9	-0.2
K38A	**Parkersburg** comp=Z,30nm,0.8s	27.75	357	*e*P	P	01 48 30.9	-0.2
K40A	**Colesburg** baz=180,SNR=10	27.76	360	P	P	01 48 31.1	0.0
K39A	**Oelwein** baz=178,SNR=30	27.78	359	P	P	01 48 31.0	-0.3
K36A	**Gilmore City** baz=173	27.86	355	P	P	01 48 31.7	-0.3
K43A	**Burlington** baz=185,SNR=7.5	27.86	4	P	P	01 48 31.9	-0.1
K43A	**Burlington** comp=Z,53nm,0.8s	27.86	4	*e*P	P	01 48 32.3	+0.3
K42A	**Prairie Point,** baz=183,SNR=8.8	27.88	3	P	P	01 48 32.1	-0.1
K37A	**Belmond** baz=174,SNR=25	27.92	356	P	P	01 48 32.1	-0.5
ISCO	**Idaho Springs** baz=149,SNR=9.4	27.97	336	P	P	01 48 35.0	+1.5
ISCO	baz=149,SNR=11			ScP	ScP	01 55 05.8	+0.5
ISCO	**Idaho Springs** comp=Z,6.3nm,1.0s	27.97	336	*e*P	P	01 48 34.6	+1.1
ISCO	**Idaho Springs**	27.97	336	*e*P	P	01 48 34.6	+1.1
ISCO	comp=Z,6.0nm,1.0s			pmax	pmax		
JFWS	**Jewell Farm** baz=181,SNR=14	27.98	1	P	P	01 48 33.2	+0.1
JFWS	**Jewell Farm** comp=Z,36nm,0.6s	27.98	1	*e*P	P	01 48 33.6	+0.5
JFWS	**Jewell Farm**	27.98	1	*e*P	P	01 48 33.6	+0.5
JFWS	comp=Z,36nm,0.6s			pmax	pmax		
SMCO	**Snowmass** comp=Z,21nm,1.5s	28.02	333	*e*P	P	01 48 35.0	+0.9
PV02	**Paradox Valley** comp=Z,5.5nm,0.9s	28.07	329	*e*P	P	01 48 36.8	+2.6
PV13	**Radium Mtn., P** comp=Z,7.4nm,0.6s	28.07	329	*e*P	P	01 48 36.2	+1.9
AAM	**Ann Arbor** baz=195,SNR=6.5	28.09	12	P	P	01 48 34.2	+0.1
AAM	**Ann Arbor** comp=Z,149nm,1.3s	28.09	12	*e*P	P	01 48 34.7	+0.7
AAM	**Ann Arbor**	28.09	12	*e*P	P	01 48 34.7	+0.7
AAM	comp=Z,149nm,1.3s			pmax	pmax		
SSPA	**Standing Stone** baz=207	28.12	21	P	P	01 48 35.7	+1.2
SSPA	**Standing Stone** comp=Z,89nm,0.6s	28.12	21	*e*P	P	01 48 35.8	+1.3
MVL	**Millersville** comp=Z,106nm,0.9s	28.15	24	*e*P	P	01 48 36.2	+1.6
PV03	**Paradox Valley**	28.16	329	*e*P	P	01 48 36.8	+1.7
PV18	**Skein Mesa, Pa** comp=Z,14nm,0.6s	28.18	329	*e*P	P	01 48 37.0	+1.7
PV12	**Saucer Basin,** comp=Z,34nm,0.7s	28.19	329	*e*P	P	01 48 37.2	+2.0
PAGS	**Pennsylvania G** comp=Z,37nm,0.7s	28.20	24	*e*P	P	01 48 36.3	+1.2
PV11	**David Mesa, Pa** comp=Z,18nm,0.6s	28.21	329	*e*P	P	01 48 37.4	+2.0
GLA	**Glamis** baz=124,SNR=6.0	28.23	314	P	P	01 48 37.6	+2.1
GLA	**Glamis** comp=Z,29nm,1.1s	28.23	314	*e*P	P	01 48 38.2	+2.7
GLA	**Glamis**	28.23	314	*e*P	P	01 48 38.2	+2.7
GLA	comp=Z,29nm,1.1s			pmax	pmax		
PV17	**East Wray Mesa** comp=Z,18nm,0.6s	28.24	329	*e*P	P	01 48 37.6	+1.9
PV16	**Nyswonger Mesa** comp=Z,12nm,0.6s	28.24	329	*e*P	P	01 48 37.5	+1.8
PV19	**Morning Glory** comp=Z,11nm,0.6s	28.27	329	*e*P	P	01 48 37.9	+1.9
PV20	**West Nyswonger** comp=Z,8.9nm,0.7s	28.29	329	*e*P	P	01 48 38.2	+2.1
ALLY	**Alegheny Colle** comp=Z,115nm,1.0s	28.32	17	*e*P	P	01 48 37.0	+0.9
M54A	**Oil Creek Stat** baz=203,SNR=25	28.33	18	P	P	01 48 36.9	+0.7
M54A	**Oil Creek Stat** comp=Z,68nm,1.0s	28.33	18	*e*P	P	01 48 37.3	+1.0
PV14	**Lion Creek, Pa** comp=Z,12nm,0.7s	28.34	329	*e*P	P	01 48 38.4	+1.8
PV22	**Blue Mesa, Par** comp=Z,13nm,0.7s	28.35	330	*e*P	P	01 48 38.4	+1.7
PV23	**Carpenter Ridg** comp=Z,21nm,0.7s	28.39	329	*e*P	P	01 48 38.9	+1.7
J39A	**Decorah** baz=178,SNR=14	28.40	359	P	P	01 48 36.5	-0.4
J38A	**Wedel Dairy, R** baz=177,SNR=9.5	28.41	358	P	P	01 48 36.7	-0.2
Y12C	**Blythe** baz=126	28.42	316	P	P	01 48 39.1	+2.0
Y12C	baz=126			ScP	ScP	01 55 06.4	0.0
Y12C	**Blythe** comp=Z,7.4nm,0.9s	28.42	316	*e*P	P	01 48 39.7	+2.6
J42A	**Columbus** baz=184,SNR=14	28.42	3	P	P	01 48 36.9	-0.1
J41A	**Loganville** baz=182,SNR=33	28.44	1	P	P	01 48 37.1	-0.1
PSUB	**Penn St. - Bra** comp=Z,81nm,1.1s	28.45	26	*e*P	P	01 48 38.4	+1.0
J37A	**Redenius Farm,** baz=175,SNR=27	28.46	356	P	P	01 48 37.1	-0.3
J40A	**Soldiers Grove** baz=180	28.46	0	P	P	01 48 36.9	-0.4
PV21	**Cone Mtn., Par** comp=Z,5.2nm,0.8s	28.46	329	*e*P	P	01 48 39.2	+1.5
PDMCI	**Parker Dam,Lak** baz=127,SNR=13	28.49	317	P	P	01 48 39.5	+1.7
PDMCI	baz=127			ScP	ScP	01 55 07.0	+0.5
PV09	**Paradox Valley**	28.49	329	*e*P	P	01 48 40.2	+2.2
J43A	**Natural Harves** baz=185,SNR=26	28.53	4	P	P	01 48 37.8	-0.2
J36A	**Seneca 1, Swea** baz=173,SNR=8.0	28.54	355	P	P	01 48 37.3	-0.8
J36A	**Seneca 1, Swea** comp=Z,38nm,0.8s	28.54	355	*e*P	P	01 48 37.5	-0.6
U15A	**North Rim** comp=Z,4.4nm,0.8s	28.70	322	*e*P	P	01 48 42.4	+2.4
ERPA	**Erie** baz=202,SNR=18	28.79	17	P	P	01 48 41.1	+0.8
ERPA	**Erie** comp=Z,155nm,1.0s	28.79	17	*e*P	P	01 48 41.1	+0.8
W13A	**Hualapai Mount** comp=Z,11nm,0.9s	28.81	319	*e*P	P	01 48 43.4	+2.5
SWSC	**Sam W. Stewart** baz=123,SNR=8.5	28.85	313	P	P	01 48 43.2	+2.2
IKP	**In-Ko-Pah, Jac** baz=122,SNR=12	28.91	312	P	P	01 48 44.0	+2.4
I39A	**Houston** baz=179,SNR=20	28.92	359	P	P	01 48 41.3	-0.1
I39A	**Houston** comp=Z,26nm,0.6s	28.92	359	*e*P	P	01 48 41.3	-0.1
I40A	**Norwalk** baz=181	28.95	1	P	P	01 48 41.2	-0.5
BC3	**Big Chuckawall** baz=124,SNR=21	29.00	315	P	P	01 48 44.7	+2.3
BC3	baz=124			ScP	ScP	01 55 09.5	+1.2
I42A	**Draeger Farm,** baz=184,SNR=24	29.00	3	P	P	01 48 42.2	+0.1
I42A	**Draeger Farm,** comp=Z,46nm,0.7s	29.00	3	*e*P	P	01 48 42.3	+0.1
I43A	**Langenfeld Bro** baz=186,SNR=51	29.05	4	P	P	01 48 42.6	+0.1
LUPA	**Lehigh Univers** comp=Z,18nm,0.8s	29.05	25	*e*P	P	01 48 44.2	+1.6
IRM	**Iron Mountain** baz=126,SNR=11	29.07	316	P	P	01 48 45.2	+2.2
IRM	baz=126			ScP	ScP	01 55 10.0	+1.5
NEE2	**Needles Airpor** baz=127	29.09	317	P	P	01 48 42.9	-0.1
I38A	**Scanlan Farm,** baz=177,SNR=39	29.12	358	P	P	01 48 43.3	0.0
I41A	**Arkdale** baz=182,SNR=19	29.14	2	P	P	01 48 43.1	-0.2
I41A	**Arkdale** comp=Z,48nm,0.6s	29.14	2	*e*P	P	01 48 43.3	0.0
I37A	**Lemond, Waseca** baz=175,SNR=10	29.15	356	P	P	01 48 43.1	-0.3
I37A	**Lemond, Waseca** comp=Z,27nm,0.8s	29.15	356	*e*P	P	01 48 43.6	+0.2
N59A	**State Game Lan** baz=211,SNR=27	29.16	24	P	P	01 48 45.1	+1.5
N59A	**State Game Lan** comp=Z,57nm,0.8s	29.16	24	*e*P	P	01 48 45.1	+1.5
ECSD	**EROS Data Cent** baz=169,SNR=39	29.19	352	P	P	01 48 43.3	-0.5
ECSD	**EROS Data Cent** comp=Z,21nm,0.8s	29.19	352	*e*P	P	01 48 43.4	-0.5
I36A	**Fitzsimmons Fa** baz=174	29.19	356	P	P	01 48 43.2	-0.6
PHWY	**Pilot Hill** comp=Z,11nm,0.9s	29.20	337	*e*P	P	01 48 45.4	+1.0
MONP2	**Monument Peak** baz=122,SNR=13	29.26	312	P	P	01 48 47.2	+2.3
BAR	**Barrett** comp=Z,13nm,1.1s	29.33	312	*e*P	P	01 48 47.7	+2.5
O20A	**White River Ci** baz=144,SNR=6.8	29.37	332	P	P	01 48 46.9	+1.2
O20A	baz=144,SNR=15			ScP	ScP	01 55 10.0	+0.5
O20A	**White River Ci** comp=Z,7.8nm,0.7s	29.37	332	*e*P	P	01 48 47.4	+1.7
PKCU	**Pink Cliffs** comp=Z,24nm,1.1s	29.41	324	*e*P	P	01 48 49.3	+3.1
ELFO	**Elginfield** baz=199	29.45	14	P	P	01 48 46.0	-0.1
BRNJ	**Basking Ridge** comp=Z,219nm,0.8s	29.46	26	*e*P	P	01 48 47.6	+1.5
BELC	**Belle Mtn. Jos** baz=124,SNR=11	29.57	315	P	P	01 48 49.6	+2.1
BELC	baz=124			ScP	ScP	01 55 11.3	+1.1
BBSR	**BB Station** comp=Z,204nm,1.1s	29.62	49	*e*P	P	01 48 49.3	+1.5
H42A	**Shiocton** baz=185,SNR=12	29.64	4	P	P	01 48 47.6	-0.2
H42A	**Shiocton** comp=Z,40nm,0.8s	29.64	4	*e*P	P	01 48 48.1	+0.3
H43A	**Windswept, Lux** baz=186,SNR=11	29.66	5	P	P	01 48 47.7	-0.2
H43A	**Windswept, Lux** comp=Z,50nm,1.0s	29.66	5	*e*P	P	01 48 48.1	+0.2
XPFO	**Piæon Flat** comp=Z,15nm,1.0s	29.67	314	*e*P	P	01 48 51.1	+2.8
PFO	**Pinyon Flats O** comp=Z,1.8nm,0.6s,baz=180,slow=1.0,SNR=2.4	29.67	314	P	P	01 48 49.4	+1.0
PFO	**Pinyon Flats O** baz=123,SNR=9.1	29.67	314	P	P	01 48 50.3	+1.9
PFO	baz=123			ScP	ScP	01 55 11.9	+1.4
PFO	**Pinyon Flats O** comp=Z,14nm,1.0s	29.67	314	*e*P	P	01 48 51.1	+2.7
PFO	**Pinyon Flats O**	29.67	314	*e*P	P	01 48 51.1	+2.7
PFO	comp=Z,14nm,1.0s			pmax	pmax		
H37A	**Dierke Farm, C** baz=176,SNR=21	29.69	357	P	P	01 48 48.5	+0.3
H40A	**Chili** baz=181,SNR=15	29.69	1	P	P	01 48 47.7	-0.5
H41A	**Junction City** baz=182,SNR=8.5	29.70	2	P	P	01 48 48.1	-0.2
H41A	**Junction City** comp=Z,24nm,0.9s	29.70	2	*e*P	P	01 48 48.1	-0.2
KSPA	**Keystone Colle** comp=Z,43nm,0.8s	29.71	23	*e*P	P	01 48 49.6	+1.1
FRD	**Ford Ranch, An** baz=123,SNR=6.2	29.71	313	P	P	01 48 50.1	+1.5
TYNO	**Tyneside** baz=202	29.73	17	P	P	01 48 49.1	+0.5
H39A	**Augusta** baz=179,SNR=10	29.74	360	P	P	01 48 48.2	-0.4
H36A	**Jessenland, He** baz=174,SNR=30	29.74	356	P	P	01 48 48.8	+0.1
109C	**Camp Elliot, M** baz=121	29.75	312	P	P	01 48 50.7	+1.8
CPE	**Camp Elliot** comp=Z,22nm,1.0s	29.75	312	*e*P	P	01 48 51.6	+2.7
H38A	**Maiden Rock** baz=177,SNR=30	29.76	358	P	P	01 48 48.9	+0.1
MTPU	**Mount Pierson** comp=Z,11nm,0.7s	29.76	325	*e*P	P	01 48 51.8	+2.5
ODNJ	**Ogdensburg**	29.77	25	*e*P	P	01 48 50.1	+1.2

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      comp=Z,132nm,1.2s
GMRC Granite Mounta    29.79 316  P      P      01 48 51.7 +2.3
      baz=126,SNR=12
GMRC                              ScP    ScP    01 55 12.1 +1.2
      baz=126
CRY  Cary Ranch        29.84 313  eP     P      01 48 46.0 -3.9
P18A Preston Nutter    29.91 329  eP     P      01 48 52.3 +1.7
      comp=Z,5.5nm,0.9s
H35A Sunnyside Ranc    29.94 355  P      P      01 48 49.5 -0.9
      baz=172,SNR=9.5
SZCU Shurtz Canyon     29.96 323  eP     P      01 48 53.7 +2.7
      comp=Z,8.8nm,0.9s
MMNY Mt. Morris Dam    29.99  19  eP     P      01 48 51.8 +1.0
      comp=Z,142nm,1.1s
PAL  Palisades         30.00  26  P      P      01 48 52.0 +1.1
      baz=214,SNR=26
PAL  Palisades         30.00  26  eP     P      01 48 52.2 +1.2
      comp=Z,173nm,0.9s
PAL  Palisades         30.00  26  eP     P      01 48 52.2 +1.2
PAL                               pmax   pmax
      comp=Z,173nm,0.9s
STCO Saint Catharin    30.03  17  P      P      01 48 52.4 +1.1
      baz=203
P17A Butcher Ranch,    30.04 329  eP     P      01 48 53.3 +1.7
      comp=Z,9.3nm,0.7s
H32A Carlson Farm,     30.07 351  P      P      01 48 50.9 -0.7
      baz=168,SNR=13
CCUT Cedar City        30.09 323  eP     P      01 48 54.9 +2.7
      comp=Z,19nm,1.5s
MSU  Marysvale         30.09 326  eP     P      01 48 54.5 +2.4
MSU                               epP    pP     01 49 36.7 +3.5
MSU  Marysvale         30.09 326  eP     P      01 48 54.5 +2.4
MSU                               e*PP   pP     01 49 36.7 +3.5
NNA  Nana              30.12 152  P      P      01 48 53.0 +0.7
      comp=Z,14nm,0.7s,baz=325,slow=14,SNR=5.2
NNA                               PcP    PcP    01 51 49.8 +0.9
      comp=Z,14nm,0.7s,baz=6.7,slow=4.6,SNR=5.3
BASO Ashfield          30.14  13  P      P      01 48 52.7 +0.5
      baz=198
TMUT Trail Mountain    30.15 328  eP     P      01 48 55.0 +2.3
      comp=Z,4.7nm,1.0s
TMUT                              epP    pP     01 49 37.3 +3.5
ACTO Acton             30.16  16  P      P      01 48 53.0 +0.7
      baz=201
BINY Binghamton        30.18  22  P      P      01 48 53.8 +1.2
      baz=210,SNR=55
BINY Binghamton        30.18  22  eP     P      01 48 53.8 +1.2
      comp=Z,146nm,0.8s
MURC Murrieta          30.19 313  P      P      01 48 55.0 +2.2
      baz=122,SNR=6.0
MEDO Medina            30.20  18  P      P      01 48 53.6 +0.8
      baz=204
RWWY Rawlins           30.21 335  eP     P      01 48 54.7 +1.5
      comp=Z,18nm,0.8s
RWWY                              epP    pP     01 49 34.7 +0.4
G38A Ridgeland         30.24 359  P      P      01 48 52.7 -0.3
      baz=178,SNR=23
HEC  Hector,Ludlow     30.27 316  P      P      01 48 55.7 +2.2
      baz=125,SNR=9.3
HEC                               ScP    ScP    01 55 12.7 +0.4
      baz=125
G41A Antigo            30.31   3  P      P      01 48 52.9 -0.8
      baz=183
SPMN Marine on St.     30.32 357  P      P      01 48 53.6 -0.2
      baz=176,SNR=49
SPMN Marine on St.     30.32 357  eP     P      01 48 53.8  0.0
      comp=Z,120nm,0.8s
G40A Rib Lake          30.34   1  P      P      01 48 53.6 -0.4
      baz=181,SNR=8.1
G40A Rib Lake          30.34   1  eP     P      01 48 53.5 -0.4
      comp=Z,33nm,1.4s
TUQ  Turquoise Moun    30.34 317  P      P      01 48 55.5 +1.3
      baz=126
G39A Holcombe          30.35 360  P      P      01 48 53.6 -0.4
      baz=180,SNR=22
BWLO Walkerton         30.36  14  P      P      01 48 54.7 +0.6
      baz=199
G42A Mountain          30.38   4  P      P      01 48 53.8 -0.4
      baz=185,SNR=18
G42A Mountain          30.38   4  eP     P      01 48 53.9 -0.4
      comp=Z,66nm,1.3s
G36A St. Michael       30.38 356  P      P      01 48 54.2 -0.1
      baz=175,SNR=8.6
BRCO Bruce Peninsul    30.41  14  P      P      01 48 55.4 +0.8
      baz=198
G43A Wallace           30.45   5  P      P      01 48 54.4 -0.4
      baz=186,SNR=23
G43A Wallace           30.45   5  eP     P      01 48 54.5 -0.3
      comp=Z,66nm,0.9s
SHPR Sheep Range       30.50 319  eP     P      01 48 58.3 +2.7
      comp=Z,8.5nm,0.9s
G34A Benson            30.56 354  P      P      01 48 55.2 -0.7
      baz=171,SNR=12
G33A Ortonville        30.60 352  P      P      01 48 55.6 -0.6
      baz=170,SNR=9.0
YLE  Yale              30.68  27  eP     P      01 48 59.1 +2.2
      comp=Z,134nm,0.8s
PKRO Pickering         30.76  17  P      P      01 48 58.3 +0.7
      baz=203
DRWO Darlington Wes    30.77  17  P      P      01 48 58.6 +0.9
      baz=203
K22A Casper            30.77 337  P      P      01 48 57.8 -0.1
      baz=150,SNR=11
K22A Casper            30.77 337  eP     P      01 48 58.6 +0.6
      comp=Z,16nm,0.8s
K22A                              epP    pP     01 49 41.5 +2.4
DRCO St. Marys Ceme    30.78  18  P      P      01 48 58.9 +1.1
      baz=204
BMRO Meriville Lake    30.80  14  P      P      01 48 58.2 +0.3
      baz=198
G32A Webster           30.81 351  P      P      01 48 57.5 -0.6
      baz=168,SNR=7.2
G32A Webster           30.81 351  eP     P      01 48 58.1  0.0
      comp=Z,130nm,0.9s
F37A Hinrichs Farm,    30.82 358  P      P      01 48 57.7 -0.4
      baz=177,SNR=8.4
F41A Three Lakes       30.84   3  P      P      01 48 57.7 -0.6
      baz=183,SNR=17
F41A Three Lakes       30.84   3  eP     P      01 48 57.8 -0.6
      comp=Z,21nm,0.9s
SHOC Shoshone, Teco    30.85 317  P      P      01 49 00.4 +1.8
      baz=126
BFSC Mount Baldy Ra    30.85 314  P      P      01 49 00.3 +1.6
      baz=122,SNR=8.8
GSC  Goldstone, Bar    30.85 316  P      P      01 49 00.6 +1.9
      baz=125,SNR=5.9
GSC                               ScP    ScP    01 55 14.9 +0.6
      baz=125
GSC  Goldstone, Bar    30.85 316  eP     P      01 49 01.3 +2.6
      comp=Z,17nm,1.4s
GSC  Goldstone, Bar    30.85 316  eP     P      01 49 01.3 +2.6
GSC                               pmax   pmax
      comp=Z,17nm,1.4s
CLWO Collingwood       30.88  15  P      P      01 48 59.3 +0.6
      baz=200
MPU  Maple Canyon      30.90 328  eP     P      01 48 59.7 +0.5
      comp=Z,20nm,1.4s
MPU                               epP    pP     01 49 41.9 +1.6
F42A Maple Grove Fa    30.91   4  P      P      01 48 58.5 -0.4
      baz=185
WLVO Wesleyville       30.91  18  P      P      01 48 60.0 +1.1
      baz=204
CIS  Catalina Islan    30.96 312  P      P      01 49 01.0 +1.4
      baz=120
F39A Loretta           30.98   0  P      P      01 48 58.9 -0.7
      baz=180,SNR=12
F40A Park Falls        30.99   1  P      P      01 48 59.3 -0.3
      baz=182,SNR=34
F36A Milaca            31.00 357  P      P      01 48 59.1 -0.6
      baz=175,SNR=16
F36A Milaca            31.00 357  eP     P      01 48 59.4 -0.3
      comp=Z,27nm,1.1s
F38A Pierce - Schro    31.03 359  P      P      01 48 59.5 -0.4
      baz=178,SNR=52
PSUT Pine Spring       31.04 324  eP     P      01 49 03.1 +2.7
      comp=Z,9.7nm,0.7s
PSUT                              epP    pP     01 49 41.9 +0.2
F43A Flat Rock, Esc    31.06   5  P      P      01 48 59.7 -0.6
      baz=187,SNR=39
F34A Alexandria        31.07 354  P      P      01 48 59.8 -0.5
      baz=172
F35A Swanville         31.07 355  P      P      01 49 00.1 -0.2
      baz=173,SNR=11
F45A CMU Biological    31.09   7  P      P      01 49 00.3 -0.2
      baz=190,SNR=26
MWC  Mount Wilson      31.12 313  eP     P      01 49 04.0 +2.8
      comp=Z,25nm,0.9s
PASC Pasadena Art C    31.19 313  eP     P      01 49 02.0 +0.5
PASC                              epP    pP     01 49 40.2 -2.5
COWI Conover           31.20   2  eP     P      01 49 01.1 -0.3
      comp=Z,53nm,0.6s
COWI                              epP    pP     01 49 42.3 -0.4
RSSD Black Hills       31.23 342  P      P      01 49 02.5 +0.5
      baz=155
RSSD Black Hills       31.23 342  eP     P      01 49 03.0 +1.0
      comp=Z,8.2nm,0.6s
RSSD                              epP    pP     01 49 44.0 +0.7
RSSD Black Hills       31.23 342  eP     P      01 49 03.0 +1.0
RSSD                              pmax   pmax
      comp=Z,8.0nm,0.6s
JLU  Jordanelle        31.25 329  eP     P      01 49 04.1 +1.8
      comp=Z,4.3nm,0.8s
F44A Big Bay de Noc    31.27   6  P      P      01 49 01.9 -0.2
      baz=188,SNR=46
F46A Macinaw City C    31.28   8  P      P      01 49 02.1  0.0
      baz=192,SNR=15
TOBO Tobermory, Bru    31.33  13  P      P      01 49 02.5 -0.1
      baz=198
DECC Green Verdugo     31.34 313  P      P      01 49 05.1 +2.2
      baz=122
EDW2 Edwards Air Fo    31.43 314  P      P      01 49 05.7 +2.0
      baz=123,SNR=9.3
EDW2                              ScP    ScP    01 55 16.0 -0.2
      baz=123
E39A Mellen            31.44   1  P      P      01 49 03.3 -0.2
      baz=181,SNR=23
TPNV Topopah Spring    31.46 319  P      P      01 49 06.7 +2.6
      baz=128,SNR=10
TPNV                              ScP    ScP    01 55 17.1 +0.7
      baz=128,SNR=7.8
TPNV Topopah Spring    31.46 319  eP     P      01 49 06.9 +2.8
      comp=Z,15nm,1.1s
TPNV                              epP    pP     01 49 51.0 +5.7
TPNV Topopah Spring    31.46 319  eP     P      01 49 06.9 +2.8
TPNV                              e*PP   pP     01 49 51.0 +5.7
TPNV                              pmax   pmax
      comp=Z,15nm,1.1s
CTU  Camp Tracy        31.47 329  eP     P      01 49 06.0 +1.9
      comp=Z,8.7nm,1.0s
SADO Sadowa            31.48  16  P      P      01 49 04.2 +0.3
      comp=Z,87nm,0.7s,baz=220,slow=9.0,SNR=74
SADO                              ScP    ScP    01 55 13.7 -2.3
      comp=Z,3.3nm,0.5s,baz=270,slow=2.3,SNR=4.9
SADO Sadowa            31.48  16  eP     P      01 49 04.3 +0.3
      comp=Z,100nm,0.8s
SADO                              eScP   ScP    01 55 13.7 -2.3
E40A Wakefield         31.52   1  P      P      01 49 04.2 -0.1
      baz=182,SNR=72
TRY  Troy              31.53  25  eP     P      01 49 05.6 +1.2
      comp=Z,202nm,0.8s
LRMC Laurel Mtn Rad    31.54 316  P      P      01 49 06.9 +2.2
      baz=124,SNR=16
LRMC                              ScP    ScP    01 55 16.8 +0.2
      baz=124
FURC Furnace Creek,    31.57 318  P      P      01 49 07.1 +2.3
      baz=126,SNR=7.8
E41A Kenton            31.57   3  P      P      01 49 04.0 -0.7
      baz=184,SNR=14
E42A Champion          31.60   4  P      P      01 49 04.5 -0.4
      baz=186,SNR=23
E43A Lone Tree Farm    31.61   5  P      P      01 49 04.8 -0.3
      baz=187,SNR=63
E43A Lone Tree Farm    31.61   5  eP     P      01 49 04.7 -0.3
      comp=Z,115nm,0.8s
TCUT Toone Canyon      31.62 330  eP     P      01 49 07.6 +2.0
      comp=Z,11nm,0.7s
E36A McGregor          31.64 357  P      P      01 49 04.9 -0.4
      baz=176,SNR=39
DUG  Dugway, Tooele    31.64 327  P      P      01 49 07.3 +1.7
      baz=137
DUG                               ScP    ScP    01 55 17.4 +0.5
      baz=137,SNR=8.9
DUG  Dugway, Tooele    31.64 327  eP     P      01 49 07.7 +2.1
      comp=Z,3.2nm,0.8s
DUG                               epP    pP     01 49 50.0 +3.1
DUG  Dugway, Tooele    31.64 327  eP     P      01 49 07.7 +2.1
DUG                               e*PP   pP     01 49 50.0 +3.1
DUG                               pmax   pmax
      comp=Z,3.0nm,0.8s
E37A Wrenshall         31.65 358  P      P      01 49 05.1 -0.3
      baz=177,SNR=5.4
E38A The Farm, Brul    31.67 359  P      P      01 49 05.2 -0.3
      baz=179,SNR=38
E38A The Farm, Brul    31.67 359  eP     P      01 49 05.4 -0.2
      comp=Z,92nm,0.8s
E38A                              epP    pP     01 49 46.2 -0.7
DELO Deloro Mine       31.69  18  P      P      01 49 05.4 -0.3
      baz=205
QUA2 Belchertown       31.72  27  eP     P      01 49 07.0 +1.0
      comp=Z,154nm,0.8s
MPMC Manual Prospec    31.74 317  P      P      01 49 08.6 +2.0
      baz=125,SNR=17
MPMC                              ScP    ScP    01 55 18.2 +0.8
      baz=125,SNR=10.0
E35A Pequot Lakes      31.75 356  P      P      01 49 06.5 +0.3
      baz=174,SNR=19
KLBO Killbear Provi    31.75  15  P      P      01 49 05.4 -0.9
      baz=200
E34A Wadena            31.77 355  P      P      01 49 06.6 +0.2
      baz=172,SNR=40
BLG  Laguna Peak, P    31.78 312  P      P      01 49 09.0 +2.3
      baz=120
BRYW Bryant College    31.79  28  eP     P      01 49 07.8 +1.1
      comp=Z,116nm,0.8s
E45A Wooded Hills,     31.79   8  P      P      01 49 06.8 +0.1
      baz=191,SNR=15
M65A Busby, Falmout    31.93  30  P      P      01 49 08.9 +1.0
      baz=219
DAC  Darwin (Calif)    31.93 317  eP     P      01 49 10.7 +2.4
      comp=Z,10nm,1.1s
DAC                               epP    pP     01 49 51.9 +2.3
DAC  Darwin (Calif)    31.93 317  eP     P      01 49 10.7 +2.4
DAC                               pmax   pmax
      comp=Z,10.0nm,1.1s
R11A Troy Canyon, C    31.93 322  P      P      01 49 10.6 +2.4
      baz=131,SNR=10
R11A Troy Canyon, C    31.93 322  eP     P      01 49 10.8 +2.6
      comp=Z,20nm,1.4s
R11A                              epP    pP     01 49 53.3 +3.8
E44A Grand Marais A    31.96   7  P      P      01 49 08.8 +0.7
      baz=189,SNR=14
E44A Grand Marais A    31.96   7  eP     P      01 49 08.9 +0.7
      comp=Z,184nm,0.9s
BUKO Buck Lake         32.03  15  P      P      01 49 09.4 +0.6
      baz=201
BANO Bancroft          32.05  18  P      P      01 49 09.4 +0.4
      baz=204
HWUT Hardware Ranch    32.07 330  eP     P      01 49 10.8 +1.4
      comp=Z,9.5nm,0.8s
ACCN Adirondack Com    32.08  24  eP     P      01 49 10.2 +0.9
      comp=Z,92nm,0.9s
BW06 Boulder Array     32.08 334  P      P      01 49 09.7 +0.1
      baz=145
BW06 Boulder Array     32.08 334  eP     P      01 49 09.9 +0.4
      comp=Z,3.0nm,0.8s
PD31 Pinedale Array    32.08 334  eP     P      01 49 09.9 +0.4
PD31                              epP    pP     01 49 53.5 +2.6
PD31                              esP    sP     01 50 13.8 -0.3
PD31                              ePcP   PcP    01 51 52.8 -1.2
PD31                              eScP   ScP    01 55 18.5  0.0
PDAR Pinedale Array    32.08 334  P      P      01 49 10.0 +0.5
      comp=Z,2.0nm,0.5s,baz=146,slow=9.1,SNR=19
PDAR                              pP     pP     01 49 53.5 +2.6
      comp=Z,2.2nm,0.7s,baz=132,slow=8.2,SNR=4.6
PDAR                              sP     sP     01 50 13.8 -0.3
      comp=Z,7.5nm,1.1s,baz=126,slow=7.7,SNR=4.1
PDAR                              PcP    PcP    01 51 52.8 -1.2
      comp=Z,0.9nm,0.4s,baz=133,slow=5.7,SNR=5.1
PDAR                              ScP    ScP    01 55 18.2 -0.3
      comp=Z,5.9nm,0.9s,baz=136,slow=4.6,SNR=19
PDAR Pinedale Array    32.08 334  eP     P      01 49 08.7 -0.8
SCZ2 Santa Cruz Isl    32.14 312  P      P      01 49 12.1 +2.3
      baz=120
ARVC Arvin             32.14 314  P      P      01 49 12.1 +2.2
      baz=122,SNR=6.3
ISA  Isabella, Lake    32.18 315  P      P      01 49 11.5 +1.2
      baz=123
ISA  Isabella, Lake    32.18 315  eP     P      01 49 13.2 +2.9
      comp=Z,17nm,1.2s
D41A Chassel           32.19   3  P      P      01 49 09.8 -0.3
      baz=184,SNR=14
D41A Chassel           32.19   3  eP     P      01 49 09.7 -0.4
      comp=Z,38nm,0.8s
GRAC Grapevine Rang    32.20 318  P      P      01 49 13.2 +2.7
      baz=126,SNR=7.5
D37A Cotton            32.24 358  P      P      01 49 09.8 -0.7
      baz=177,SNR=13
D35A Remer             32.24 356  P      P      01 49 09.9 -0.7
      baz=174,SNR=14
HRV  Adam Dziewonsk    32.25  27  P      P      01 49 11.7 +1.0
      baz=217
HRV  Adam Dziewonsk    32.25  27  eP     P      01 49 11.7 +1.0
      comp=Z,159nm,0.8s
HRV  Adam Dziewonsk    32.25  27  eP     P      01 49 11.7 +1.0
HRV                               pmax   pmax
      comp=Z,159nm,0.8s
WES  Weston            32.26  28  eP     P      01 49 11.9 +1.2
      comp=Z,269nm,1.4s
WES  Weston            32.26  28  eP     P      01 49 12.0 +1.2
WES                               pmax   pmax
      comp=Z,269nm,1.4s
BCX  Boston College    32.29  28  eP     P      01 49 12.3 +1.3
      comp=Z,150nm,0.9s
D36A Goodland          32.29 357  P      P      01 49 10.2 -0.7
      baz=176,SNR=22
D36A Goodland          32.29 357  eP     P      01 49 10.3 -0.6
      comp=Z,44nm,0.8s
BGU  Big Grassy Mou    32.29 328  eP     P      01 49 13.1 +1.8
      comp=Z,6.8nm,0.8s
BGU                               epP    pP     01 49 55.4 +2.8
PLVO Plevna            32.33  19  P      P      01 49 11.8 +0.5
      baz=206
PLVO Plevna            32.33  19  eP     P      01 49 11.9 +0.6
      comp=Z,156nm,1.3s
CWC  Cottonwood Cre    32.35 317  P      P      01 49 13.8 +1.9
      baz=125
NCB  Newcomb           32.36  23  eP     P      01 49 12.4 +0.7
      comp=Z,125nm,1.1s
SBC  Santa Barbara     32.41 312  P      P      01 49 12.7 +0.5
      baz=120
BAKC Calstate          32.45 314  eP     P      01 49 17.4 +4.9
BAKC                              ePcP   PcP    01 51 53.9 -0.9
BAKC                              eS     S      01 54 12.3 +0.2
VES  Vestal, Richgr    32.70 315  P      P      01 49 17.3 +2.6
      baz=123,SNR=17
PKM  Mcpherson Peak    32.71 313  P      P      01 49 17.3 +2.2
      baz=120,SNR=9.2
AHID Auburn Hatcher    32.76 332  eP     P      01 49 16.4 +1.1
      comp=Z,9.6nm,0.9s
AHID                              epP    pP     01 49 58.4 +1.6
C38A Sawbill Land.     32.78 360  P      P      01 49 14.3 -1.0
      baz=179,SNR=25
LONY Lake Ozonia       32.79  22  P      P      01 49 16.3 +0.9
      baz=210,SNR=82
LONY Lake Ozonia       32.79  22  eP     P      01 49 16.2 +0.9
      comp=Z,349nm,1.4s
HVU  Hansel Valley     32.80 329  eP     P      01 49 17.2 +1.6
      comp=Z,11nm,0.8s
HVU                               epP    pP     01 49 58.0 +0.9
HVU  Hansel Valley     32.80 329  eP     P      01 49 17.2 +1.6
HVU                               pmax   pmax
      comp=Z,11nm,0.8s
C37A Embarrass         32.80 359  P      P      01 49 14.8 -0.6
      baz=178,SNR=9.9
PEMO Pembroke          32.85  18  P      P      01 49 16.2 +0.4
      baz=205
C35A Jirik Farms, M    32.85 356  P      P      01 49 15.6 -0.3
      baz=175,SNR=71
C36A Pine Crest Far    32.85 358  P      P      01 49 15.3 -0.6
      baz=177,SNR=59
C34A RKJ Ranch, Bem    32.87 355  P      P      01 49 15.5 -0.6
      baz=173,SNR=8.3
FFD  Franklin Falls    32.98  26  eP     P      01 49 18.3 +1.3
      comp=Z,71nm,0.9s
EYMN Ely               33.01 359  P      P      01 49 16.6 -0.6
      baz=179,SNR=23
EYMN Ely               33.01 359  eP     P      01 49 16.9 -0.3
      comp=Z,50nm,0.8s
C40A Isle Royale Na    33.01   2  P      P      01 49 16.6 -0.6
      baz=183,SNR=6.7
C40A Isle Royale Na    33.01   2  eP     P      01 49 17.2  0.0
      comp=Z,50nm,0.8s
GATR Gnd/Air Tx Cnt    33.03 312  epP    pP     01 50 02.5 +3.4
GATR                              ePcP   PcP    01 51 56.4 -0.1
SMMC Simmler           33.05 313  P      P      01 49 20.1 +2.3
      baz=121
C33A Trail             33.06 354  P      P      01 49 16.5 -1.2
      baz=171
REDW Red Top Meadow    33.12 333  eP     P      01 49 19.6 +1.0
      comp=Z,40nm,1.1s
SNOW Snow King Moun    33.16 333  eP     P      01 49 20.2 +1.3
      comp=Z,30nm,0.6s
SNOW                              epP    pP     01 50 02.1 +1.7
ORIO Orleans, Innes    33.19  20  P      P      01 49 19.5 +0.7
      baz=208
LOHW Long Hollow       33.22 334  eP     P      01 49 20.2 +0.9
      comp=Z,9.9nm,0.6s
VT1  Waterbury         33.24  24  eP     P      01 49 19.7 +0.4
      comp=Z,68nm,1.0s
TPAW Teton Pass        33.27 333  eP     P      01 49 20.8 +1.0
      comp=Z,12nm,0.8s
ELK  Elko              33.34 325  P      P      01 49 26.2 +5.8
      comp=Z,10nm,0.8s,baz=184,slow=6.3,SNR=47
ELK                               PcP    PcP    01 52 01.7 +4.2
      comp=Z,2.2nm,0.6s,baz=136,slow=3.2,SNR=3.1
ELK                               ScP    ScP    01 55 27.5 +4.6
      comp=Z,11nm,0.9s,baz=154,slow=1.5,SNR=31
MOOW Moose Ponds       33.38 334  eP     P      01 49 21.8 +1.0
      comp=Z,6.3nm,1.0s
MOOW                              epP    pP     01 50 03.6 +1.3
MOOW                              esP    sP     01 50 25.2 -0.4
FXWY Fox Creek         33.42 333  eP     P      01 49 22.2 +1.1
      comp=Z,4.0nm,0.8s
FXWY                              epP    pP     01 50 03.9 +1.3
PAGB Antelope Grade    33.44 314  eP     P      01 49 24.2 +3.0
      comp=Z,40nm,1.0s
LBNH Lisbon            33.49  25  P      P      01 49 22.5 +1.0
      baz=215,SNR=20
LBNH Lisbon            33.49  25  eP     P      01 49 22.5 +1.0
LBNH Lisbon            33.49  25  eP     P      01 49 22.5 +1.0
B35A Bob, Littlefor    33.50 357  P      P      01 49 20.9 -0.5
      baz=175,SNR=45
B35A Bob, Littlefor    33.50 357  eP     P      01 49 20.9 -0.5
      comp=Z,114nm,1.3s
MLAC Mammoth, Mammo33.52 318  P      P      01 49 23.4 +1.3
      baz=125
ALFO Alfred            33.56  21  P      P      01 49 22.7 +0.8
      baz=209
NV11 Mina Array Sit    33.56 320  eP     P      01 49 25.0 +2.7
      comp=Z,3.0nm,1.4s
NV11                              epP    pP     01 50 07.2 +3.3
IMW  Indian Meadow     33.59 334  eP     P      01 49 23.7 +1.0
      comp=Z,5.8nm,0.6s
IMW                               epP    pP     01 50 05.8 +1.7
AGMN Agassiz Nation    33.60 354  P      P      01 49 22.1 -0.2
      baz=171,SNR=67
AGMN Agassiz Nation    33.60 354  eP     P      01 49 22.2 -0.2
      comp=Z,70nm,0.8s
OMMB Old Mammoth Mi    33.62 318  eP     P      01 49 25.9 +2.8
      comp=Z,16nm,1.3s
FLWY Flagg Ranch       33.63 334  eP     P      01 49 24.3 +1.4
      comp=Z,13nm,1.4s
FLWY                              epP    pP     01 50 06.3 +1.8
NV01 Mina Array Sit    33.65 319  eP     P      01 49 25.1 +2.0
NV01                              epP    pP     01 50 07.0 +2.3
NV01                              esP    sP     01 50 29.0 +1.1
NV01                              ePcP   PcP    01 51 59.4 +1.0
NV01                              eScP   ScP    01 55 24.6 +0.6
NVAR Mina Array Bea    33.65 319  P      P      01 49 25.9 +2.8
      comp=Z,25nm,1.0s,baz=136,slow=8.2,SNR=101
NVAR                              pP     pP     01 50 07.0 +2.3
      comp=Z,12nm,0.9s,baz=134,slow=8.7,SNR=4.5
NVAR                              sP     sP     01 50 29.0 +1.1
      comp=Z,12nm,1.1s,baz=128,slow=7.9,SNR=2.3
NVAR                              PcP    PcP    01 51 59.4 +1.0
      comp=Z,4.9nm,0.7s,baz=130,slow=3.1,SNR=8.9
NVAR                              ScP    ScP    01 55 24.9 +0.9
      comp=Z,4.0nm,0.7s,baz=127,slow=4.1,SNR=18
MDND Maddock           33.68 350  P      P      01 49 23.3 +0.3
      baz=165,SNR=20
MDND Maddock           33.68 350  eP     P      01 49 23.4 +0.4
      comp=Z,156nm,0.8s
B34A Aery, Baudette    33.68 356  P      P      01 49 22.8 -0.2
      baz=174,SNR=37
MDPB Devils Postpil    33.68 318  eP     P      01 49 26.4 +2.9
      comp=Z,21nm,1.0s
MDPB                              epP    pP     01 50 07.9 +2.9
YPP  Pitchstone Pla    33.83 334  eP     P      01 49 27.0 +2.3
      comp=Z,3.3nm,1.1s
KVN  Kaiserville       33.90 320  eP     P      01 49 27.7 +2.4
      comp=Z,13nm,0.8s
KVN  Kaiserville       33.90 320  eP     P      01 49 27.7 +2.4
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KVN				pmax	pmax		
	comp=Z,13nm,0.8s						
RYN	**Ryan**	33.91	320	*e*P	P	01 49 28.2	+2.9
	comp=Z,17nm,1.2s						
RLMT	**Red Lodge**	33.91	337	P	P	01 49 25.7	+0.4
	baz=147,SNR=7.8						
RLMT	**Red Lodge**	33.91	337	*e*P	P	01 49 26.1	+0.8
	comp=Z,5.3nm,0.8s						
BELQ	**Belleterre**	34.04	15	P	P	01 49 26.1	+0.1
	baz=201						
PMPB	**Monarch Peak**	34.08	314	*e*P	P	01 49 29.1	+2.4
	comp=Z,28nm,0.8s						
TRQ	**Mont Tremblant**	34.19	20	*e*P	P	01 49 28.3	+0.8
A33A	**Warroad**	34.19	355	P	P	01 49 27.4	+0.1
	baz=172,SNR=113						
LAO	**LASA Array**	34.21	341	P	P	01 49 27.9	+0.2
	baz=153						
LAO	**LASA Array**	34.21	341	*e*P	P	01 49 29.7	+2.0
	comp=Z,10nm,1.1s						
LAO				*e*pP	pP	01 50 11.1	+1.8
PTGA	**Pitinga**	34.37	114	*e*P	P	01 49 27.7	-1.6
	comp=Z,28nm,0.7s						
WAKR	**Walker**	34.41	319	*e*P	P	01 49 32.9	+3.2
	comp=Z,31nm,1.4s						
QLMT	**Earthquake Lak**	34.55	334	*e*P	P	01 49 33.0	+2.2
QLMT				*e*pP	pP	01 50 14.7	+2.2
YERR	**Yerington**	34.57	319	*e*P	P	01 49 33.7	+2.7
	comp=Z,31nm,1.4s						
GCMT	**Greycliff**	34.63	337	*e*P	P	01 49 32.1	+0.7
WVL	**Waterville**	34.72	27	*e*P	P	01 49 33.3	+1.4
	comp=Z,147nm,1.0s						
CMB	**Columbia Colle**	34.77	317	*e*P	P	01 49 34.8	+2.2
	comp=Z,12nm,1.0s						
CMB				*e*pP	pP	01 50 16.9	+2.6
CMB	**Columbia Colle**	34.77	317	*e*P	P	01 49 34.8	+2.2
CMB				pmax	pmax		
	comp=Z,12nm,1.0s						
PNTR	**Pine Nut**	34.86	319	*e*P	P	01 49 36.5	+3.0
	comp=Z,38nm,1.4s						
HLID	**Hailey**	34.93	330	P	P	01 49 35.1	+1.1
	baz=138,SNR=23						
HLID	**Hailey**	34.93	330	*e*P	P	01 49 35.6	+1.6
	comp=Z,7.2nm,0.8s						
PAHR	**Pah Rah Range**	35.09	320	*e*P	P	01 49 38.1	+2.6
	comp=Z,8.6nm,0.9s						
MCMT	**McKenzie Canyo**	35.16	333	*e*P	P	01 49 38.0	+1.9
BOZ	**Bozeman (W)**	35.25	335	P	P	01 49 37.8	+1.1
	baz=144,SNR=18						
BOZ	**Bozeman (W)**	35.25	335	*e*P	P	01 49 37.8	+1.1
	comp=Z,10nm,0.7s						
BOZ				*e*pP	pP	01 50 18.6	+0.1
BOZ				*e*sP	sP	01 50 42.4	+0.7
BOZ	**Bozeman (W)**	35.25	335	*e*P	P	01 49 37.8	+1.1
BOZ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PKME	**Peaks-Kenny Pk**	35.43	27	P	P	01 49 39.0	+1.0
	baz=218,SNR=62						
PKME	**Peaks-Kenny Pk**	35.43	27	*e*P	P	01 49 39.0	+1.0
	comp=Z,225nm,1.1s						
DLMT	**Dillon**	35.47	333	*e*P	P	01 49 40.1	+1.5
	comp=Z,18nm,1.0s						
DLMT				*e*pP	pP	01 50 22.6	+2.2
MFID	**Camas Ranch**	35.53	328	*e*P	P	01 49 40.5	+1.4
	comp=Z,15nm,1.0s						
ULM	**Lac du Bonnet**	35.54	355	P	P	01 49 38.2	-0.6
	comp=Z,70nm,0.7s,baz=174,slow=9.2,SNR=88						
ULM				PcP	PcP	01 52 02.2	-1.2
	comp=Z,5.0nm,0.6s,baz=143,slow=5.1,SNR=3.2						
ULM				ScP	ScP	01 55 29.1	-1.1
	comp=Z,3.6nm,0.5s,baz=220,slow=2.6,SNR=5.1						
ULM	**Lac du Bonnet**	35.54	355	*e*P	P	01 49 38.3	-0.6
	comp=Z,86nm,0.8s						
ULM				*e*S	S	01 55 00.7	+1.5
ULM	**Lac du Bonnet**	35.54	355	*e*P	P	01 49 38.3	-0.6
ULM				*e*S	S	01 55 00.7	+1.5
ULM				pmax	pmax		
	comp=Z,86nm,0.8s						
AFDM	**Forest Hills D**	35.65	318	*e*P	P	01 49 42.9	+2.8
	comp=Z,16nm,1.5s						
LRM	**Limekiln Ridge**	35.77	334	*e*P	P	01 49 42.5	+1.2
BEKR	**Beckworth**	35.79	320	*e*P	P	01 49 43.9	+2.5
	comp=Z,27nm,1.2s						
BEKR				*e*pP	pP	01 50 26.2	+2.9
EMMW	**East Machias**	35.84	29	*e*P	P	01 49 42.6	+1.1
	comp=Z,108nm,0.6s						
HRY	**Holter Researc**	36.23	336	*e*P	P	01 49 46.3	+1.3
SAML	**Samuel**	36.31	129	*e*P	P	01 49 44.3	-1.6
	comp=Z,68nm,0.7s						
SAML	**Samuel**	36.31	129	*e*P	P	01 49 44.3	-1.6
SAML				pmax	pmax		
	comp=Z,68nm,0.7s						
ORV	**Oroville**	36.33	319	*e*P	P	01 49 48.8	+3.0
	comp=Z,33nm,1.4s						
WVOR	**Wild Horse Val**	36.36	325	*e*P	P	01 49 48.0	+1.9
	comp=Z,36nm,1.3s						
WVOR	**Wild Horse Val**	36.36	325	*e*P	P	01 49 48.0	+1.9
WVOR				pmax	pmax		
	comp=Z,36nm,1.3s						
MATQ	**Matagami**	36.49	15	P	P	01 49 47.2	+0.2
	baz=202						
EGMT	**Eagleton**	36.55	339	P	P	01 49 48.3	+0.7
	baz=149,SNR=17						
EGMT	**Eagleton**	36.55	339	*e*P	P	01 49 48.5	+0.9
	comp=Z,18nm,0.7s						
EGMT				*e*pP	pP	01 50 29.0	-0.6
EGMT				*e*sP	sP	01 50 51.9	-0.9
J08A	**Circle Bar Ran**	36.88	326	*e*P	P	01 49 52.0	+1.4
	comp=Z,36nm,0.6s						
O03D	**Paynes Creek**	36.94	319	P	P	01 49 52.1	+1.0
	baz=125,SNR=7.9						
MOD	**Modoc Plateau**	36.98	323	*e*P	P	01 49 52.6	+1.1
	comp=Z,6.8nm,0.8s						
PQI	**Presque Isle**	37.09	26	*e*P	P	01 49 52.9	+0.8
	comp=Z,105nm,0.9s						
MSO	**Missoula**	37.20	334	P	P	01 49 53.8	+0.6
	baz=142,SNR=6.5						
MSO	**Missoula**	37.20	334	*e*P	P	01 49 54.3	+1.1
	comp=Z,20nm,1.2s						
BMO	**Blue Mountains**	37.30	329	*e*P	P	01 49 54.2	+0.2
	comp=Z,13nm,0.9s						
BMO	**Blue Mountains**	37.30	329	*e*P	P	01 49 54.2	+0.2
BMO				pmax	pmax		
	comp=Z,13nm,0.9s						
CHGQ	**Chibougamau**	37.50	18	P	P	01 49 55.7	+0.2
	baz=207						
KCPM	**Cahto Peak**	37.76	317	*e*P	P	01 50 01.5	+3.6
	comp=Z,108nm,1.3s						
M04C	**Macdoel**	37.82	321	P	P	01 49 59.9	+1.4
	baz=126,SNR=7.2						
I07A	**Izee**	37.92	326	*e*P	P	01 50 00.3	+1.1
	comp=Z,10.0nm,0.9s						
F10A	**Beach Ranch, E**	38.06	330	*e*P	P	01 50 00.8	+0.5
	comp=Z,65nm,0.7s						
F10A				*e*S	S	01 55 40.9	+3.1
JTMT	**Jette**	38.07	334	*e*P	P	01 50 01.4	+1.0
	comp=Z,12nm,0.8s						
JTMT				*e*S	S	01 55 40.7	+2.8
KMRM	**Mail Ridge**	38.12	318	*e*P	P	01 50 04.1	+3.2
	comp=Z,43nm,0.9s						
M02C	**Callahan**	38.22	320	P	P	01 50 01.6	-0.1
	baz=124						
K04D	**Chiloquin, OR**	38.27	322	P	P	01 50 02.9	+0.7
	baz=127						
LPAZ	**La Paz**	38.30	143	P	P	01 50 04.0	+0.8
	comp=Z,14nm,0.7s,baz=338,slow=7.4,SNR=38						
LPAZ				PcP	PcP	01 52 13.8	+0.7
	comp=Z,3.7nm,1.0s,baz=326,slow=9.0,SNR=3.8						
LPAZ				ScP	S	01 55 43.2	+0.4
	comp=Z,4.5nm,1.0s,baz=4.4,slow=7.1,SNR=9.4						
LPAZ	**La Paz**	38.30	143	*e*P	P	01 50 03.1	-0.1
LPAZ				*e*PcP	PcP	01 52 13.8	+0.7
LPAZ				*e*S	S	01 55 43.8	+0.9
YBH	**Yreka Blue Hor**	38.32	321	P	P	01 50 02.7	+0.1
	comp=Z,4.3nm,0.6s,baz=130,slow=3.2,SNR=17						
YBH				ScP	ScP	01 55 40.8	-0.2
	comp=Z,2.1nm,0.7s,baz=115,slow=6.9,SNR=4.1						
YBH	**Yreka Blue Hor**	38.32	321	*e*P	P	01 50 02.7	+0.1
	comp=Z,4.6nm,0.7s						
YBH	**Yreka Blue Hor**	38.32	321	*e*P	P	01 50 02.7	+0.1
YBH				pmax	pmax		
	comp=Z,5.0nm,0.7s						
J05D	**Fort Rock, OR**	38.37	324	P	P	01 50 03.6	+0.6
	baz=128						
KHMM	**Horse Mountain**	38.48	319	*e*P	P	01 50 06.7	+2.7
	comp=Z,30nm,0.8s						
PINE	**Pine Mountain**	38.52	325	*e*P	P	01 50 05.3	+0.9
	comp=Z,22nm,0.7s						
PINE				*e*pP	pP	01 50 48.4	+1.6
J04D	**Umpqua Nationa**	38.85	323	P	P	01 50 08.1	+0.9
	baz=127,SNR=12						
E09A	**Wood Farm, Sta**	38.89	330	*e*P	P	01 50 07.7	+0.6
	comp=Z,10nm,0.9s						
WALA	**Waterton Lakes**	38.96	336	*e*P	P	01 50 09.2	+1.3
	comp=Z,9.7nm,0.9s						
I05D	**Terrebonne, OR**	39.09	325	P	P	01 50 09.8	+0.9
	baz=129,SNR=5.8						
E08A	**Dider Farm, El**	39.32	329	*e*P	P	01 50 10.9	+0.2
	comp=Z,8.1nm,0.6s						
I04A	**Tendick Farm,**	39.36	323	P	P	01 50 11.8	+0.7
	baz=128,SNR=9.3						
KBO	**Bosley Butte**	39.53	320	*e*P	P	01 50 15.6	+3.0
	comp=Z,86nm,1.0s						
D08A	**Wollman Farm,**	39.65	330	*e*P	P	01 50 14.4	+1.0
	comp=Z,16nm,0.8s						
G05D	**Wamic, OR**	39.66	326	P	P	01 50 15.5	+1.9
	baz=130,SNR=12						
H04A	**Detroit Lake**	39.78	325	*e*P	P	01 50 15.7	+1.1
	comp=Z,59nm,0.7s						
H04A				*e*pP	pP	01 50 58.4	+1.2
MNMC	**Minye Minye**	39.79	147	*e*P	P	01 50 17.0	+1.8
	comp=Z,53nm,0.7s						
MNMC				*e*PcP	PcP	01 52 19.1	+1.7
I03D	**Drain, OR**	39.85	323	P	P	01 50 16.0	+0.9
	baz=126,SNR=9.2						
C09A	**Chrisman Ranch**	39.88	331	*e*P	P	01 50 15.5	+0.2
C09A				*e*pP	pP	01 50 59.0	+1.1
KEBM	**Edson Butte**	39.96	321	*e*P	P	01 50 18.8	+2.6
	comp=Z,98nm,1.1s						
LTY	**Liberty**	40.65	329	*e*P	P	01 50 23.0	+1.2
	comp=Z,11nm,0.6s						
FFC	**Flin Flon**	40.71	350	*e*P	P	01 50 22.6	+0.6
	comp=Z,45nm,0.8s						
FFC	**Flin Flon**	40.71	350	*e*P	P	01 50 22.6	+0.6
FFC				pmax	pmax		
	comp=Z,45nm,0.8s						
G03D	**McMinnville, O**	40.71	325	P	P	01 50 23.4	+1.3
	baz=128,SNR=6.7						
B08A	**Colville Reser**	40.77	331	*e*P	P	01 50 23.4	+0.8
	comp=Z,10nm,0.8s						
LON	**Longmire**	40.90	327	*e*P	P	01 50 24.8	+1.1
	comp=Z,16nm,0.8s						
LON	**Longmire**	40.90	327	*e*P	P	01 50 24.8	+1.1
LON				pmax	pmax		
	comp=Z,16nm,0.8s						
F04D	**Rainier, OR**	41.11	326	P	P	01 50 26.5	+1.2
	baz=129						
D05A	**Enumclaw**	41.28	328	*e*P	P	01 50 28.1	+1.4
	comp=Z,17nm,0.8s						
F03A	**Seaside**	41.31	325	*e*P	P	01 50 29.6	+2.5
	comp=Z,48nm,0.8s						
PB01	**IPOC Station P**	41.45	149	*e*P	P	01 50 29.6	+1.1
	comp=Z,19nm,0.6s						
PB01				*e*PcP	PcP	01 52 23.7	+1.2
E03A	**Lebam**	41.70	326	*e*P	P	01 50 31.4	+1.2
	comp=Z,45nm,0.8s						
B06A	**Marblemount**	41.91	330	*e*P	P	01 50 32.4	+0.6
	comp=Z,36nm,0.8s						
B05A	**Bryant**	42.04	329	P	P	01 50 32.8	-0.1
	baz=132,SNR=7.3						
NLWA	**Neilton Lookou**	42.39	327	*e*P	P	01 50 37.5	+1.7
A04D	**Lummi Island**	42.65	329	P	P	01 50 38.4	+0.6
	baz=132,SNR=6.1						
PGC	**Sidney**	42.98	329	*e*P	P	01 50 41.7	+1.3
	comp=Z,14nm,0.8s						
LLLB	**Lillooet**	43.53	332	*e*P	P	01 50 46.4	+1.4
	comp=Z,41nm,1.4s						
FCC	**Fort Churchill**	43.90	358	*e*P	P	01 50 47.5	-0.1
	comp=Z,90nm,0.9s						
FCC	**Fort Churchill**	43.90	358	*e*P	P	01 50 47.5	-0.1
FCC				pmax	pmax		
	comp=Z,90nm,0.9s						
SCHQ	**Schefferville**	44.10	20	P	P	01 50 49.5	+0.2
	comp=Z,146nm,0.8s,baz=220,slow=6.8,SNR=59						
SCHQ	**Schefferville**	44.10	20	*e*P	P	01 50 49.5	+0.2
	comp=Z,261nm,1.1s						
GO02	**Mina Guanaco**	44.90	152	*e*P	P	01 50 57.9	+1.5
	comp=Z,35nm,0.8s						
GO02				*e*PcP	PcP	01 52 36.1	+1.7
LCO	**Las Campanas**	47.80	156	*e*PcP	PcP	01 52 46.1	+1.6
VCA	**Vinchina**	48.61	153⇓	*e*P	P	01 51 26.8	+2.0
AROD	**Rodeo**	49.32	155	*e*P	P	01 51 32.8	+2.3
CYA	**Choya**	49.45	150⇓	*e*P	P	01 51 31.8	+0.7
ACDV	**Cuesta del Vie**	49.47	155⇓	*e*P	P	01 51 33.3	+1.9
DIB	**Dawson Inlet,**	50.27	329	*e*P	P	01 51 39.1	+2.2
	comp=Z,30nm,1.3s						
YKA	**Yellowknife Ar**	50.44	346	P	P	01 51 38.1	+0.1
	comp=Z,19nm,0.7s,baz=147,slow=7.6,SNR=36						
YKA				pP	pP	01 52 23.3	+0.7
	comp=Z,13nm,0.8s,baz=145,slow=7.5,SNR=4.9						
YKA				sP	sP	01 52 45.2	+0.2
	comp=Z,6.4nm,0.8s,baz=142,slow=7.6,SNR=2.2						
YKA				ScP	ScP	01 56 28.5	-1.5
	comp=Z,3.5nm,0.8s,baz=157,slow=3.9,SNR=6.2						
YKW3	**Yellowknife Ar**	50.50	346	*e*P	P	01 51 38.1	-0.4
	comp=Z,29nm,1.0s						
YKW3				*e*pP	pP	01 52 24.8	+1.8
RTLS	**Leoncito**	50.83	156	*e*P	P	01 51 43.4	+1.7
AUSP	**Uspallata**	51.17	156⇓	*e*P	P	01 51 46.2	+1.9
RTCV	**Cerro Valdivia**	51.19	155	*e*P	P	01 51 45.4	+1.3
ROC1	**El Roble**	51.24	158	*e*P	P	01 51 45.6	+0.9
	comp=Z,31nm,1.0s						
ROC1	**El Roble**	51.24	158⇓	*e*P	P	01 51 45.4	+0.7
ASAL	**Salagasta**	51.71	156	*e*P	P	01 51 49.8	+1.8
ARCO	**CERRO ARCO**	51.90	156⇓	*e*P	P	01 51 51.0	+1.6
ACAN	**Cantantal**	52.10	154	*e*P	P	01 51 51.6	+0.8
AAGR	**Agrelo**	52.15	156	*e*P	P	01 51 52.9	+1.6
DLBC	**Dease Lake**	52.30	335	*e*P	P	01 51 53.8	+1.8
	comp=Z,31nm,0.8s						
CPUP	**Villa Florida**	52.41	141	P	P	01 51 52.1	-1.0
	comp=Z,22nm,0.9s,baz=329,slow=8.2,SNR=41						
CPUP				PcP	PcP	01 53 01.5	+0.4
	comp=Z,7.1nm,0.8s,baz=323,slow=2.6,SNR=5.7						
CPUP				ScP	ScP	01 56 40.7	+1.6
	comp=Z,8.7nm,1.1s,baz=335,slow=6.6,SNR=5.7						
CPUP	**Villa Florida**	52.41	141	*e*P	P	01 51 52.0	-1.0
	comp=Z,27nm,0.9s						
CPUP				*e*sP	PcP	01 53 01.5	+0.4
CPUP				*e*ScP	ScP	01 56 41.9	+2.8
CPUP	**Villa Florida**	52.41	141	*e*P	P	01 51 52.1	-1.0
CPUP				*e**SP	PcP	01 53 01.5	+0.4
CPUP				pmax	pmax		
	comp=Z,27nm,0.9s						
TCA	**Tanti**	52.45	151	*e*P	P	01 51 53.8	+0.3
GO05	**HualaæØ**	52.78	160	*e*P	P	01 51 56.5	+0.8
	comp=Z,42nm,0.8s						
MRA	**San Martin**	52.86	153⇓	*e*P	P	01 51 56.9	+0.4
BESE	**Bessie Mountai**	54.40	333	*e*P	P	01 52 09.2	+1.9
	comp=Z,6.5nm,0.8s						
IVI	**Ivigtut**	55.52	24	*e*P	P	01 52 14.2	-0.9
	comp=Z,50nm,1.1s						
SPB	**Sao Paulo**	57.21	131	*e*P	P	01 52 26.8	-0.8
	comp=Z,56nm,1.0s						
RCBR	**Riachuelo**	58.34	107	*e*P	P	01 52 34.8	-0.9
	comp=Z,37nm,1.2s						
RCBR	**Riachuelo**	58.34	107	*e*P	P	01 52 34.8	-0.9
RCBR				pmax	pmax		
	comp=Z,37nm,1.2s						
SFJD	**Kangerlussuaq**	58.42	17	P	P	01 52 34.9	-0.5
	comp=Z,20nm,0.6s,baz=184,slow=8.0,SNR=3.8						
PLCA	**Paso Flores**	58.46	162	P	P	01 52 37.0	+0.9
	comp=Z,24nm,0.9s,baz=344,slow=8.5,SNR=38						
PLCA				PcP	PcP	01 53 25.9	+1.5
	comp=Z,9.2nm,0.9s,baz=338,slow=7.8,SNR=5.7						
PLCA	**Paso Flores**	58.46	162	*e*P	P	01 52 37.0	+0.9
	comp=Z,35nm,1.0s						
PLCA				*e*pP	PcP	01 53 25.9	+1.5
TGL	**Tana Glacier**	58.99	333	*e*P	P	01 52 41.5	+1.9
	comp=Z,21nm,1.0s						
DAWY	**Dawson**	59.27	338	*e*P	P	01 52 41.2	-0.1
	comp=Z,4.3nm,0.8s						
ILULI	**Ilulissat**	59.82	15	*e*P	P	01 52 44.1	-0.8
	comp=Z,34nm,0.7s						
ILULI	**Ilulissat**	59.82	15⇑	*i*P	P	01 52 44.3	-0.6
	comp=Z,32nm,0.7s						
ILULI	**Ilulissat**	59.82	15⇑	*i*P	P	01 52 44.3	-0.6
ILULI				pmax	pmax		
	comp=Z,32nm,0.7s						
BMRM	**Bremner River**	59.86	333	*e*P	P	01 52 46.9	+1.5
	comp=Z,15nm,0.8s						
RES	**Resolute Bay**	59.88	359	P	P	01 52 44.6	-0.6
	comp=Z,26nm,0.7s,baz=180,slow=9.7,SNR=42						
RES	**Resolute Bay**	59.88	359	*e*P	P	01 52 45.1	-0.2
	comp=Z,27nm,0.8s						
RES	**Resolute Bay**	59.88	359	*e*P	P	01 52 45.1	-0.2
RES				pmax	pmax		
	comp=Z,27nm,0.8s						
INK	**Inuvik**	59.92	343	P	P	01 52 45.7	+0.1
	comp=Z,21nm,0.7s,baz=118,slow=7.7,SNR=26						
INK				pP	pP	01 53 33.6	+2.0
	comp=Z,8.2nm,0.9s,baz=109,slow=5.6,SNR=3.4						
INK				ScP	ScP	01 57 10.8	-0.6
	comp=Z,4.4nm,0.9s,baz=78,slow=6.5,SNR=3.4						
EGAK	**Eagle**	60.30	338	*e*P	P	01 52 48.1	-0.2
	comp=Z,6.6nm,0.8s						
KLU	**Klutina**	60.66	333	*e*P	P	01 52 52.2	+1.3
	comp=Z,19nm,0.9s						
ANGG	**Ammassalik, Gr**	61.89	22	*e*P	P	01 52 57.9	-1.0
	comp=Z,31nm,0.6s						
IL1	**Eielson Array**	62.46	336	*e*P	P	01 53 02.4	-0.4
ILAR	**Eielson Array**	62.46	336	P	P	01 53 02.6	-0.2
	comp=Z,10nm,0.9s,baz=123,slow=4.7,SNR=64						
ILAR				PP	PP	01 55 24.9	+2.3
	comp=Z,4.4nm,1.0s,baz=109,slow=7.2,SNR=6.0						
ILAR				ScP	ScP	01 57 21.6	-1.2
	comp=Z,1.0nm,0.8s,baz=154,slow=3.1,SNR=4.7						
ILB	**Eielson Array**	62.46	336	*e*P	P	01 53 02.6	-0.2
ILB				*e*PP	PP	01 55 24.9	+2.3
ILB				*e*ScP	ScP	01 57 21.6	-1.2
KDAK	**Kodiak Island**	62.52	328	*i* P	P	01 53 03.9	+0.6
KULLO	**Kullorsuaq**	62.59	10⇑	*i*P	P	01 53 03.2	-0.2
	comp=Z,25nm,0.7s						
KULLO	**Kullorsuaq**	62.59	10⇑	*i*P	P	01 53 03.2	-0.2
KULLO				pmax	pmax		
	comp=Z,25nm,0.7s						
CCB	**Clear Creek Bu**	62.76	336	*e*P	P	01 53 04.5	-0.3
	comp=Z,4.7nm,0.7s						
TULEG	**Thule**	62.79	6	*e*P	P	01 53 04.0	-0.7
	comp=Z,30nm,0.8s						
WRH	**Wood River Hil**	62.80	336	*e*P	P	01 53 04.8	-0.2
	comp=Z,5.6nm,0.7s						
MCK	**McKinley**	62.85	335	*e*P	P	01 53 05.9	+0.5
	comp=Z,14nm,1.0s						
COLA	**College**	62.88	336	*e*P	P	01 53 05.6	+0.1
	comp=Z,17nm,0.8s						
COLA	**College**	62.88	336	*e*P	P	01 53 05.6	+0.1
COLA				pmax	pmax		
	comp=Z,17nm,0.8s						
MDM	**Murphy Dome**	63.06	336	*e*P	P	01 53 06.7	0.0
	comp=Z,5.5nm,0.8s						
BWN	**Browne**	63.23	335	*e*P	P	01 53 08.2	+0.3
	comp=Z,140nm,1.1s						
TRF	**Thorofare Moun**	63.30	334	*e*P	P	01 53 09.1	+0.5
	comp=Z,19nm,0.7s						
SKT	**Skwentna**	63.32	333	*e*P	P	01 53 09.0	+0.5
	comp=Z,15nm,0.8s						
BPAW	**Bear Paw Mtn.**	63.83	335	*e*P	P	01 53 11.6	-0.2
	comp=Z,17nm,0.8s						
CAST	**Castle Rocks**	64.05	334	*e*P	P	01 53 12.9	-0.3
	comp=Z,11nm,0.8s						
MLY	**Manley**	64.07	336	*e*P	P	01 53 13.4	0.0
	comp=Z,28nm,0.8s						
COLD	**Coldfoot**	64.71	338	*e*P	P	01 53 18.6	+1.1
	comp=Z,9.0nm,0.9s						
TOLK	**Toolik Lake Re**	65.07	340	P	P	01 53 20.2	+0.4
	baz=114,SNR=9.8						
TOLK	**Toolik Lake Re**	65.07	340	*e*P	P	01 53 20.3	+0.5
	comp=Z,11nm,0.8s						
SUMG	**Summit**	65.17	15	*e*P	P	01 53 20.9	+0.2
	comp=Z,55nm,0.6s						
SUMG				*e*pP	pP	01 54 06.5	-1.1
SUMG	**Summit**	65.17	15⇑	*i*P	P	01 53 21.0	+0.2
	comp=Z,53nm,0.7s						
SUMG	**Summit**	65.17	15⇑	*i*P	P	01 53 21.0	+0.2
SUMG				pmax	pmax		
	comp=Z,53nm,0.7s						
CHGN	**Chignik**	65.27	325	*e*P	P	01 53 21.5	+0.3
	comp=Z,28nm,0.7s						
BORG	**Borgarnes**	68.03	26	*e*P	P	01 53 39.5	+1.0
	comp=Z,9.2nm,0.8s						
BORG				*e*pP	pP	01 54 26.7	+1.0
BORG	**Borgarnes**	68.03	26	*e*P	P	01 53 39.5	+1.0
BORG				pmax	pmax		
	comp=Z,9.0nm,0.8s						
DAG	**Danmarks Havn**	71.62	13⇑	*i*P	P	01 53 59.6	-0.6
	comp=Z,60nm,0.5s						
DAG	**Danmarks Havn**	71.62	13⇑	*i*P	P	01 53 59.6	-0.6
DAG				pmax	pmax		
	comp=Z,60nm,0.5s						
JMIC	**Jan Mayen**	73.62	20	*e*P	P	01 54 12.9	+0.8
JMIC				IAmb	IAmb	01 54 13.9	
	comp=Z,27nm,0.6s						
PGAV	**Gavieira, Arco**	74.87	50	*e*P	P	01 54 18.8	-1.2
	comp=Z,25nm,1.6s						
PCAS	**Casmilo, Conde**	74.92	52	*e*P	P	01 54 19.6	-0.6
	comp=Z,38nm,1.4s						
ALMR	**Almeirim**	74.97	53	*e*P	P	01 54 19.6	-0.9
ALMR				AMb	AMB	01 54 22.2	
	comp=Z,50nm,1.0s						
ALMR	**Almeirim**	74.97	53	*e*P	P	01 54 19.4	-1.1
	comp=Z,54nm,1.0s						
PTOM	**Tomar**	75.04	52	*e*P	P	01 54 20.4	-0.5
	comp=Z,45nm,1.6s						
PCAB	**Cabril**	75.08	50	*e*P	P	01 54 21.1	0.0
	comp=Z,31nm,1.6s						
MORF	**Marmelete**	75.14	55	*e*P	P	01 54 21.1	-0.5
MORF	**Marmelete**	75.14	55	*e*P	P	01 54 21.1	-0.5
	comp=Z,55nm,1.8s						
PMTG	**Montargil**	75.25	53	*e*P	P	01 54 21.0	-1.1
	comp=Z,31nm,1.4s						
PVIS	**Viseu**	75.30	51	*e*P	P	01 54 21.5	-0.9
	comp=Z,26nm,1.8s						
MESJ	**Messejana**	75.41	54	*e*P	P	01 54 22.4	-0.6
MESJ				AMb	AMB	01 54 23.5	
	comp=Z,29nm,1.5s						
MESJ	**Messejana**	75.41	54	*e*P	P	01 54 22.4	-0.6
	comp=Z,30nm,1.9s						
MTE	**Manteigas**	75.60	52	*e*P	P	01 54 23.1	-1.1
	comp=Z,16nm,0.8s						
MTE	**Manteigas**	75.60	52	*e*P	P	01 54 23.1	-1.1
	comp=Z,13nm,0.7s						
MTE				*e*PcP	PcP	01 54 26.8	-9.3
PBEJ	**Beja**	75.67	54	*e*P	P	01 54 24.5	0.0
	comp=Z,18nm,1.8s						
PBDV	**Barranco-do-Ve**	75.72	55	*e*P	P	01 54 24.5	-0.4
	comp=Z,48nm,1.6s						
PCBR	**Castelo Branco**	75.73	52	*e*P	P	01 54 23.9	-0.9
	comp=Z,13nm,1.3s						
PESTR	**Estremoz**	75.77	53	*e*P	P	01 54 24.3	-0.8
	comp=Z,20nm,1.7s						
PMRV	**Marv??o**	75.85	53	*e*P	P	01 54 24.3	-1.2
	comp=Z,19nm,1.4s						
PVAQ	**Vaqueiros**	75.87	55	*e*P	P	01 54 25.4	-0.2
	comp=Z,27nm,1.4s						
MVO	**Moncorvo**	75.89	51	*e*P	P	01 54 24.6	-1.2
	comp=Z,21nm,0.7s						
PBRG	**Braganca**	76.03	50	*e*P	P	01 54 25.4	-1.1
	comp=Z,22nm,1.9s						
PBAR	**Barrancos**	76.29	54	*e*P	P	01 54 26.9	-1.1
	comp=Z,21nm,1.4s						
ESK	**Eskdalemuir**	76.69	36	*e*P	P	01 54 29.2	-0.7
	comp=Z,63nm,0.7s						
ESK	**Eskdalemuir**	76.69	36	*e*P	P	01 54 29.2	-0.7
ESK				pmax	pmax		
	comp=Z,63nm,0.7s						
EKA	**Eskdalemuir Ar**	76.71	36	P	P	01 54 29.4	-0.7
	comp=Z,42nm,0.6s,baz=273,slow=5.7,SNR=204						
KBS	**Kingsbay**	78.00	11	*e*P	P	01 54 38.3	+1.5
	comp=Z,22nm,0.8s						
KBS	**Kingsbay**	78.00	11	*e*P	P	01 54 37.7	+1.0
KBS				IAmb	IAmb	01 54 38.7	
	comp=Z,22nm,0.8s						
PAB	**San Pablo**	78.16	52	*e*P	P	01 54 37.5	-1.0
	comp=Z,10nm,1.0s						
PAB	**San Pablo**	78.16	52	*e*P	P	01 54 37.5	-1.0
PAB				pmax	pmax		
	comp=Z,11nm,1.0s						
ESDC	**Sonseca Array**	78.43	52	P	P	01 54 38.8	-1.2
	comp=Z,11nm,0.7s,baz=287,slow=5.5,SNR=68						
ESDC				pP	pP	01 55 26.8	-1.7
	comp=Z,3.9nm,0.7s,baz=291,slow=4.8,SNR=4.8						
ESDC				PP	PP	01 57 36.6	-3.4
	comp=Z,2.5nm,0.9s,baz=284,slow=8.3,SNR=4.1						
ESLA	**Sonseca Array**	78.43	52	*e*P	P	01 54 39.0	-1.0
	comp=Z,10nm,0.7s						
ES19	**SONSECA Array**	78.47	52	*e*P	P	01 54 38.8	-1.4
ES19				*e*pP	pP	01 55 27.5	-1.2
SPA0	**Spitsbergen Ar**	79.07	12	*e*P	P	01 54 43.2	+0.5
SPA0	**Spitsbergen Ar**	79.07	12	*e*P	P	01 54 42.8	+0.1
SPA0				IAmb	IAmb	01 54 43.2	
	comp=Z,12nm,0.7s						

SPITS	Spitsbergen Ar	79.07	12	P	P	01 54 42.5	-0.2
	comp=Z,7.8nm,0.5s,baz=310,slow=4.9,SNR=43						
MDT	Midelt	79.12	59	P	P	01 54 43.0	-0.9
	comp=Z,6.5nm,0.7s,baz=288,slow=3.2,SNR=17						
MDT				pP	pP	01 55 31.9	-0.6
	comp=Z,5.6nm,0.8s,baz=288,slow=6.9,SNR=4.3						
HSPB	Hornsund (broa	79.30	13	eP	P	01 54 45.0	+1.1
HSPB				IAmb	IAmb	01 54 45.4	
	comp=Z,20nm,0.8s						
SUE	Sulen	79.91	29	eP	P	01 54 47.5	+0.1
SUE				IAmb	IAmb	01 54 48.6	
	comp=Z,38nm,1.2s						
BER	Bergen	80.33	30	eP	P	01 54 49.6	0.0
BER				IAmb	IAmb	01 54 52.1	
	comp=Z,134nm,1.5s						
AKN	Aaknes	80.69	28	eP	P	01 54 52.4	+0.8
AKN				IAmb	IAmb	01 54 53.8	
	comp=Z,11nm,0.9s						
STAV	Stavanger	80.84	31	eP	P	01 54 52.6	+0.2
STAV				IAmb	IAmb	01 54 56.5	
	comp=Z,29nm,1.2s						
BLS5	Blasjo	81.10	31	eP	P	01 54 54.3	+0.5
BLS5				IAmb	IAmb	01 54 54.6	
	comp=Z,14nm,0.7s						
DOMB	Dombas	81.67	28	eP	P	01 54 56.8	+0.1
DOMB				IAmb	IAmb	01 54 57.7	
	comp=Z,13nm,0.7s						
SNART	Snartemo	81.75	32	eP	P	01 54 57.4	+0.2
SNART				IAmb	IAmb	01 54 57.5	
	comp=Z,6.9nm,0.6s						
UCC	Uccle	81.98	40	⇑P	P	01 54 57.2	-1.4
NSS	Namsos	82.20	25	eP	P	01 54 59.5	+0.1
NSS				IAmb	IAmb	01 55 00.5	
	comp=Z,22nm,1.2s						
DOU	Dourbes	82.29	40	⇑P	P	01 54 59.1	-1.1
STEI	Steigen	82.33	21	eP	P	01 55 00.1	+0.1
STEI				IAmb	IAmb	01 55 01.2	
	comp=Z,20nm,0.9s						
HOMB	Homborsund	82.43	32	eP	P	01 55 00.7	0.0
HOMB				IAmb	IAmb	01 55 01.0	
	comp=Z,17nm,1.1s						
KONO	Kongsberg	82.58	30	⇑eP	P	01 55 00.9	-0.6
KONO				pmax	pmax		
	comp=Z,12nm,1.5s						
BCLA	Clavier	82.66	40	⇑P	P	01 55 01.2	-0.9
	comp=Z,16nm,0.8s						
NBO00	NORSAR Array S	82.74	29	eP	P	01 55 03.0	+0.7
BEBN	Eben Emael	82.79	39	⇑P	P	01 55 01.8	-0.9
NAO01	NORSAR Array S	82.85	29	eP	P	01 55 03.5	+0.7
TRO	Tromso	82.93	19	eP	P	01 55 04.0	+0.9
TRO				IAmb	IAmb	01 55 04.8	
	comp=Z,15nm,0.7s						
NB2	NORSAR Subarra	82.94	29	P	P	01 55 03.5	+0.1
	comp=Z,6.8nm,0.7s,baz=289,slow=5.3						
NB2	NORSAR Subarra	82.94	29	P	P	01 55 03.5	+0.1
	baz=289,slow=5.3						
HGN	Heimansgroeve	82.96	39	eP	P	01 55 02.7	-1.0
	comp=Z,20nm,0.7s						
NC303	NORSAR Array S	82.96	28	eP	P	01 55 03.9	+0.4
MEM	Membach	83.04	40	⇑P	P	01 55 03.0	-1.0
	comp=Z,8.2nm,0.8s						
OSL	Oslo	83.04	30	eP	P	01 55 04.2	+0.3
OSL				IAmb	IAmb	01 55 04.7	
	comp=Z,12nm,0.7s						
NC405	NORSAR Array S	83.15	28	eP	P	01 55 05.0	+0.6
WTSB	Winterswijk	83.17	38	eP	P	01 55 04.2	-0.4
	comp=Z,13nm,0.6s						
NC602	NORSAR Array S	83.19	29	eP	P	01 55 05.4	+0.8
NC602	NORSAR Array S	83.19	29	eP	P	01 55 05.0	+0.4
NC602				IAmb	IAmb	01 55 05.4	
	comp=Z,122nm,0.8s						
WLF	Walferdange	83.38	40	⇑P	P	01 55 04.9	-0.9
	comp=Z,12nm,0.8s						
WLF	Walferdange	83.38	40	eP	P	01 55 05.3	-0.5
	comp=Z,13nm,0.6s						
WLF	Walferdange	83.38	40	eP	P	01 55 05.3	-0.5
WLF				pmax	pmax		
	comp=Z,13nm,0.6s						
KOWA	Kowa	83.53	77	P	P	01 55 05.9	-1.3
	comp=Z,8.0nm,0.7s,baz=271,slow=6.4,SNR=28						
KOWA				pP	pP	01 55 56.5	+0.2
	comp=Z,15nm,0.8s,baz=292,slow=9.2,SNR=9.7						
HFS	Hagfors	84.39	29	P	P	01 55 10.3	-0.5
	comp=Z,12nm,0.6s,baz=273,slow=2.5,SNR=55						
HFS				pP	pP	01 55 59.7	-0.2
	comp=Z,3.5nm,0.7s,baz=247,slow=7.7,SNR=3.1						
HFS				PP	PP	01 58 27.0	-1.2
	comp=Z,4.4nm,0.9s,baz=186,slow=3.0,SNR=4.1						
TIC	Toumodi	84.45	85	ePKIKP	P	01 55 07.6	-4.3
LIC	Lamto	84.54	85	ePKIKP	P	01 55 08.1	-4.3
	comp=Z,84nm,1.5s						
DBIC	Dimbokro	84.60	85	P	P	01 55 10.8	-1.8
	comp=Z,5.9nm,0.8s,baz=280,slow=6.0,SNR=5.8						
DBIC				pP	pP	01 56 01.8	-0.1
	comp=Z,10nm,0.8s,baz=260,slow=5.1,SNR=5.4						
DBIC	Dimbokro	84.60	85	eP	P	01 55 10.8	-1.8
	comp=Z,17nm,1.1s						
DBIC				epP	pP	01 56 01.8	-0.1
DBIC	Dimbokro	84.60	85	eP	P	01 55 10.9	-1.8
DBIC				e*PP	pP	01 56 01.8	-0.1
DBIC				pmax	pmax		
	comp=Z,17nm,1.1s						
KIC	Kosan Boka	84.78	85	ePKIKP	P	01 55 07.6	-6.0
	comp=Z,28nm,1.0s						
SENIN	Lac Senin/Sane	85.00	43	eP	P	01 55 14.2	-0.1
	comp=Z,15nm,0.8s						
ARA0	ARCESS Array S	85.03	18	eP	P	01 55 13.2	-0.5
ARA0				epP	pP	01 56 02.7	-0.4
ARA0				ePP	PP	01 58 32.0	-1.2
ARCES	ARCESS Array B	85.03	18	P	P	01 55 13.2	-0.5
	comp=Z,5.4nm,0.5s,baz=288,slow=4.6,SNR=53						
ARCES				pP	pP	01 56 02.7	-0.4
	comp=Z,6.8nm,0.8s,baz=302,slow=7.0,SNR=3.6						
ARCES				PP	PP	01 58 32.0	-1.2
	comp=Z,5.2nm,0.8s,baz=310,slow=7.5,SNR=6.7						
ARCES	ARCESS Array B	85.03	18	eP	P	01 55 12.9	-0.9
ARCES	ARCESS Array B	85.03	18	eP	P	01 55 12.9	-0.9
ARE0	ARCESS Array S	85.03	18	eP	P	01 55 13.6	-0.2
ARE0				IAmb	IAmb	01 55 14.8	
	comp=Z,7.3nm,0.9s						
BFO	Black Forest	85.12	41	i P	P	01 55 14.1	-0.6
DAVA	Damuels	86.43	42	eP	P	01 55 20.4	-0.9
	comp=Z,19nm,0.9s,SNR=9.1						
DAVA				epP	pP	01 56 11.1	+0.4
	comp=Z,25nm,1.2s						
DAVOX	Davos/Dischmat	86.58	43	P	P	01 55 21.7	-0.4
	baz=314,slow=12						
RETA	Reutte	86.94	42	eP	P	01 55 23.0	-0.6
	comp=Z,11nm,0.6s,SNR=12						
RETA				epP	pP	01 56 12.2	-0.9
	comp=Z,19nm,0.8s,SNR=5.4						
CLL	Collm	87.06	38	⇓iP	P	01 55 24.1	+0.1
	comp=Z,7.0nm,0.7s						
CLL				i pP	pP	01 56 13.3	-0.2
CLL				i sP	sP	01 56 33.9	-0.7
CLL				ePP	PP	01 58 49.0	-0.9
CLL				e(SKKSac)		02 05 37.0	
CLL				LmV		02 41 00.0	
	comp=Z,100nm,21.3s						
CLL	Collm	87.06	38	eP	P	01 55 23.5	-0.5
	comp=Z,6.5nm,0.7s						
CLL				epP	pP	01 56 12.7	-0.8
CLL	Collm	87.06	38	⇓iP	P	01 55 24.1	+0.1
CLL				eS	S	02 05 37.0	-8.7
CLL				pmax	pmax		
	comp=Z,7.0nm,0.7s						
FETA	Feichten	87.06	42	eP	P	01 55 23.5	-0.8
	comp=Z,6.7nm,0.6s,SNR=7.2						
FETA				i pP	pP	01 56 14.1	+0.3
	comp=Z,15nm,0.9s						
NKC	Novy Kostel	87.09	39	eP	P	01 55 27.7	+3.5
NKC				epP	pP	01 56 13.3	-0.4
NKC	Novy Kostel	87.09	39	eP	P	01 55 27.7	+3.5
MOTA	Moosalm	87.20	42	ePcP	P	01 55 25.4	+0.4
	comp=Z,10nm,1.0s,SNR=5.8						
MOTA				i pP	pP	01 56 15.4	+0.9
	comp=Z,13nm,0.8s,SNR=6.8						
WATA	Walderalm	87.51	42	ePcP	PcP	01 55 27.8	-0.4
	comp=Z,1.9nm,0.4s						
BRG	Berggiesshubel	87.76	38	eP	P	01 55 26.3	-1.1
	comp=Z,33nm,2.4s						
BRG				i pP	pP	01 56 16.9	-0.1
	comp=Z,26nm,1.3s						
BRG				esP	sP	01 56 37.9	-0.2
	comp=Z,18nm,1.4s						
BRG				ePP	PP	01 58 53.4	-2.2
	comp=Z,5.6nm,1.1s						
BRG	Berggiesshubel	87.76	38	eP	P	01 55 26.3	-1.1
BRG				e		01 58 53.4	
BRG				pmax	pmax		
	comp=Z,33nm,2.4s						
BRG				pmax	pmax		
	comp=Z,26nm,1.3s						
BRG				pmax	pmax		
	comp=N,18nm,1.4s						
BRG				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BRG				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KHC	Kasperske Hory	88.16	39	eP	P	01 55 28.7	-0.7
KHC				epP	pP	01 56 18.3	-0.7
KHC				ePP	PP	01 59 05.8	+6.9
KHC				eS	S	02 05 56.5	+0.1
KHC				ex	x	02 07 03.2	
KHC	Kasperske Hory	88.16	39	eP	P	01 55 28.6	-0.7
	comp=Z,2.1nm,1.2s						
KHC				epP	pP	01 56 18.8	-0.2
KHC	Kasperske Hory	88.16	39	eP	P	01 55 28.7	-0.7
KHC				e		01 59 05.8	
KHC				eS	S	02 05 56.5	+0.1
KHC				e		02 07 03.2	
PVCC	Panska Ves	88.26	38	eP	P	01 55 28.9	-0.8
PVCC				epP	pP	01 56 19.2	-0.2
PVCC	Panska Ves	88.26	38	eP	P	01 55 28.9	-0.8
GEC2	GERESS Array S	88.33	40	eP	P	01 55 29.9	-0.3
	comp=Z,2.9nm,0.8s						
GEC2				epP	pP	01 56 19.8	-0.2
GEC2	GERESS Array S	88.33	40	eP	P	01 55 29.9	-0.3
GEC2				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GERES	GERESS Array B	88.33	40	P	P	01 55 29.6	-0.7
	comp=Z,2.0nm,0.7s,baz=298,slow=2.9,SNR=18						
GERES				pP	pP	01 56 19.6	-0.3
	comp=Z,6.3nm,0.8s,baz=298,slow=2.9,SNR=14						
GERES				PP	PP	01 59 05.4	+5.1
	comp=Z,1.6nm,0.8s,baz=317,slow=7.3,SNR=4.6						
GEA0	GERESS Array S	88.34	40	eP	P	01 55 29.4	-0.8
GEA0				epP	pP	01 56 19.6	-0.3
SEY	Seymchan	88.39	336	⇓eP	P	01 55 30.2	+0.1
PRU	Pruhonice	88.44	38	eP	P	01 55 29.2	-1.4
PRU				epP	pP	01 56 20.2	0.0
PRU				ePP	PP	01 59 06.5	+5.5
PRU				eS	S	02 05 56.2	-2.7
PRU				eSP	SP	02 07 05.6	+3.0
PRU	Pruhonice	88.44	38	eP	P	01 55 29.2	-1.4
PRU				e		01 59 06.5	
PRU				eS	S	02 05 56.2	-2.7
PRU				e		02 07 05.6	
PRU				MLR	MLR		
	comp=Z,200nm,14.1s						
KBA	Koelnbreinsper	88.73	41	ePcP	P	01 55 32.0	-0.2
	comp=Z,3.4nm,0.6s						
KBA				epP	pP	01 56 22.1	+0.2
	comp=Z,15nm,1.0s						
MOA	Molln	89.04	41	eP	P	01 55 32.5	-1.0
	comp=Z,3.7nm,0.6s,SNR=6.5						
MOA				epP	pP	01 56 22.5	-0.7
	comp=Z,13nm,1.3s						
MYKA	Terra Mystica	89.08	42	ePcP	P	01 55 33.6	-0.2
	comp=Z,2.7nm,0.6s						
MYKA				epP	pP	01 56 23.5	+0.1
	comp=Z,11nm,1.0s						
UPC	Upice	89.12	38	eP	P	01 55 33.2	-0.6
UPC				ePP	PP	01 59 06.5	+0.1
UPC	Upice	89.12	38	eP	P	01 55 33.2	-0.6
UPC				e		01 59 06.5	
THTN	Thala	89.15	53	eP	P	01 55 34.7	+0.4
	comp=Z,10nm,0.8s						
TOA1	Torodi Ar. Sit	89.23	77	eP	P	01 55 32.4	-2.6
TORD	Torodi Ar. Bea	89.23	77	P	P	01 55 32.3	-2.6
	comp=Z,1.1nm,0.7s,baz=288,slow=5.1						
FIA0	FINESS Array S	89.32	25	eP	P	01 55 33.5	-1.0
FIA0				epP	pP	01 56 24.0	-0.1
FIA0				ePP	PP	01 59 08.8	+1.1
FIA0	FINESS Array S	89.32	25	eP	P	01 55 33.5	-1.0
FIA0				e		01 59 08.8	
FINES	FINESS Array B	89.32	25	P	P	01 55 33.5	-1.0
	comp=Z,3.2nm,0.7s,baz=249,slow=1.6,SNR=11						
FINES				pP	pP	01 56 24.0	-0.1
	comp=Z,3.9nm,0.8s,baz=321,slow=5.2,SNR=3.4						
FINES				PP	PP	01 59 08.8	+1.1
	comp=Z,3.6nm,0.8s,baz=347,slow=7.8,SNR=4.7						
DPC	Dobruska-Polom	89.36	38	eP	P	01 55 34.7	-0.3
DPC				epP	pP	01 56 24.6	-0.1
DPC				ePP	PP	01 59 08.8	+0.4
DPC	Dobruska-Polom	89.36	38	eP	P	01 55 34.7	-0.3
DPC				e		01 59 08.8	
KEST	Kesra	89.61	53	P	P	01 55 35.6	-0.9
	comp=Z,6.9nm,0.7s,baz=350,slow=2.6,SNR=9.6						
KEST	Kesra	89.61	53	eP	P	01 55 35.1	-1.3
	comp=Z,9.3nm,0.9s						
OBKA	Obir	89.70	42	ePcP	P	01 55 36.5	-0.2
	comp=Z,3.2nm,0.9s						
OBKA				epP	pP	01 56 25.0	-1.5
	comp=Z,28nm,1.6s						
KRUC	Moravsky	89.90	39	eP	P	01 55 36.5	-1.0
KRUC				epP	pP	01 56 26.6	-0.6
VRAC	Vranov	89.93	39	⇓iP	pP	01 56 27.5	+0.2
VRAC	Vranov	89.93	39	eP	P	01 55 36.9	-0.7
VRAC				epP	pP	01 56 27.0	-0.3
SOKA	Soboth	89.95	41	eP	P	01 55 36.7	-1.2
	comp=Z,3.2nm,0.6s						
SOKA				epP	pP	01 56 27.2	-0.4
	comp=Z,6.8nm,0.8s						
CONA	Conrad Observa	90.01	40	ePcP	P	01 55 37.4	-0.6
	comp=Z,1.8nm,0.6s						
CONA				epP	pP	01 56 27.4	-0.5
	comp=Z,8.4nm,1.1s						
ARSA	Arzberg	90.05	41	epP	pP	01 56 27.3	-0.7
	comp=Z,7.0nm,1.1s						
MORC	Moravsky Berou	90.31	38	⇑iP	pP	01 56 29.0	-0.2
MORC	Moravsky Berou	90.31	38	eP	P	01 55 38.9	-0.5
MORC				epP	pP	01 56 29.0	-0.2
PEA1	Petropavlovsk-	90.50	326	eP	P	01 55 40.6	+0.5
PETK	Petropavlovsk-	90.50	326	P	P	01 55 40.6	+0.5
	comp=Z,2.9nm,0.8s,baz=100,slow=7.6						
OKC	Ostrava-Krasne	90.65	38	ePP	PP	01 59 03.3	-15
OKC				eS	S	02 06 18.2	-1.1
OKC				eXS	sS	02 07 47.1	+0.7
MA2	Magadan	90.79	333	eP	P	01 55 41.9	+0.6
MA2				pmax	pmax		
	comp=Z,8.0nm,1.0s						
OJC	Ojcow	91.45	37	eP	pP	01 56 34.6	+0.1
OJC				e		01 59 23.9	
VYHS	Vyhne	91.61	39	eP	P	01 55 44.9	-0.5
VYHS				e		01 59 25.7	
VYHS				pmax	pmax		
	comp=Z,5.0nm,1.9s						
VYHS	Vyhne	91.61	39	eP	P	01 55 44.9	-0.5
VYHS				epP	pP	01 56 35.7	+0.5
VYHS				ePP	PP	01 59 25.7	-0.5
SUW	Suwalki	91.62	33	eP	pP	01 56 34.3	-0.7
SUW				e		01 59 25.2	
NIE	Niedzica	92.09	38	eP	pP	01 56 38.1	+0.7
PSZ	Piszkesteto	92.50	39	⇑iP	pP	01 56 40.9	+1.5
CUC	Castrocucco	92.97	47	eP	P	01 55 50.7	-1.2
	comp=Z,3.3nm,0.7s						
CUC				epP	pP	01 56 40.5	-1.2
MATE	Matera	93.35	47	⇑iP	pP	01 56 42.9	-0.5
KWP	Kalwaria Pacla	93.40	37	eP	pP	01 56 43.9	+0.5
UZH	Uzhgorod	93.62	38	eP	P	01 55 54.2	-0.4
TRPA	Tarpa	93.99	38	⇓iP	pP	01 56 46.4	+0.2
DIVS	Divibare	94.18	42	eP	P	01 55 56.8	-0.7
	comp=Z,5.4nm,1.2s						
DIVS				epP	pP	01 56 47.3	0.0
PDG	Podgorica	94.39	44	⇓iP	pP	01 56 48.2	+0.1
BZS	Buzias	94.56	41	⇑iP	pP	01 56 48.6	-0.3
DRGR		94.71	39	⇑iP	pP	01 56 48.9	-0.7
KLMR	Klimovskoe	94.91	22	eP	P	01 55 56.7	-3.5
KLMR				e		01 59 46.6	
KLMR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KLMR	Klimovskoe	94.91	22	eP	P	01 55 56.8	-3.5
KLMR				AMP		01 55 59.4	
	comp=Z,6.0nm,1.0s						
KLMR				epP	pP	01 56 45.9	-4.2
KLMR				ePP	PP	01 59 46.6	-4.7
CJR	Cluj-Napoca	95.29	39	⇓iP	pP	01 56 51.7	-0.6
BUR04	Bucovina Ar. S	95.82	38	eP	P	01 56 03.9	-0.9
BUR04				epP	pP	01 56 54.4	-0.3
BURAR	Bucovina Array	95.83	38	⇑iP	pP	01 56 55.2	+0.4
PRGR	Permogore	96.43	19	eP	P	01 56 05.8	-1.3
PRGR				e		02 00 00.4	
PRGR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
AKASG	Malin Array Be	96.49	34	P	P	01 56 05.6	-2.1
	comp=Z,1.4nm,0.6s,baz=296,slow=4.5,SNR=5.2						
AKASG				PP	PP	02 00 00.6	-3.2
	comp=Z,3.3nm,0.8s,baz=306,slow=6.8,SNR=4.1						
AKBB	Malin Array Si	96.49	34	eP	P	01 56 05.6	-2.0
	comp=Z,2.7nm,0.8s						
AKBB				ePP	PP	01 59 60.0	-3.9
AKBB	Malin Array Si	96.49	34	eP	P	01 56 05.6	-2.0
AKBB				e		02 00 00.0	
AKBB				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ARR	Arges	96.56	40	⇑iP	pP	01 56 57.4	-0.7
BIZ	Bicaz	96.69	38	⇑iP	pP	01 56 58.3	-0.3
VOIR		96.78	40	⇓iP	pP	01 56 58.7	-0.5
VTS	Vitosha	96.95	43	⇓iP	pP	01 56 59.8	-0.3
YAK	Yakutsk	96.97	342	eP	P	01 56 09.1	-0.4
YAK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MLR	Muntele Rosu	97.31	39	P	P	01 56 10.5	-1.1
	comp=Z,0.4nm,0.6s,baz=243,slow=4.5,SNR=3.6						
MLR				pP	pP	01 57 01.3	-0.3
	comp=Z,1.8nm,1.0s,baz=342,slow=3.2,SNR=6.1						
MLR				PP	PP	02 00 10.4	-0.1
	comp=Z,1.0nm,1.0s,baz=323,slow=12,SNR=3.6						
MLR	Muntele Rosu	97.31	39	eP	P	01 56 10.5	-1.1
	comp=Z,5.2nm,1.0s						
MLR	Muntele Rosu	97.31	39	eP	P	01 56 10.5	-1.1
MLR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
OBN	Obninsk	97.49	27	⇑eP	P	01 56 11.5	-0.5
OBN				e		02 00 08.9	
OBN				i S	SKSac	02 06 31.4	+1.5
OBN				e		02 09 55.2	
OBN				SS	SS	02 13 56.0	-5.6
OBN				pmax	pmax		
	comp=Z,5.0nm,0.5s						
OBN				MLR	MLR		
	comp=Z,67nm,19.0s						
CFR	Carcaliu	98.80	39	⇓iP	pP	01 57 07.4	-0.7
VNA3	Neumayer Olymp	101.17	161	Pdiff	Pdif	01 56 28.9	+0.9
SNAA	Sanae	103.39	161	Pdiff	Pdif	01 56 39.1	+1.1
SNAA	Sanae	103.39	161	Pdiff	Pdif	01 56 38.4	+0.4
	comp=Z,0.8nm,0.9s,baz=256,slow=4.2,SNR=5.9						
SNAA				PKiKP	PKiKP	02 00 55.4	-0.3
	comp=Z,1.2nm,0.9s,baz=298,slow=7.2,SNR=3.7						
BR101	Keskin Array S	105.18	41	ePKiKP	PKiKP	02 00 58.9	-1.2
BRTR	Keskin Array B	105.18	41	PKiKP	PKiKP	02 00 58.9	-1.2
	comp=Z,0.4nm,0.7s,baz=297,slow=6.1,SNR=2.8						
BVAR	Borovoye Array	110.53	12	PKiKP	PKiKP	02 01 08.9	-0.7
	comp=Z,0.5nm,0.5s,baz=294,slow=1.5,SNR=4.2						
BVAR				PP	PP	02 01 43.7	-3.9
	comp=Z,2.2nm,0.9s,baz=297,slow=4.6,SNR=4.6						
ZAA1	Zalesovo Array	111.39	3	ePKiKP	PKiKP	02 01 10.2	-1.0
ZALV	Zalesovo Beam	111.39	3	PKiKP	PKiKP	02 01 10.2	-1.0
	comp=Z,1.0nm,0.4s,baz=300,slow=3.2,SNR=3.6						
KURK	Kurchatov	114.09	7	ePKiKP	PKPdf	02 01 15.7	-0.8
KURK	Kurchatov	114.09	7	ePKIKP	PKiKP	02 01 15.7	-0.7
KURBB	Kurchatov Arra	114.17	7	PKP	PKPdf	02 01 15.6	-0.9
	comp=Z,1.3nm,0.5s,baz=353,slow=1.8,SNR=8.7						
ULN	Ulaanbaatar	115.53	347	⇓iPKIKP	PKPdf	02 01 18.8	-0.7
SONA0	Songino Array	115.70	347	ePKPdf	PKPdf	02 01 19.0	-0.8
SONA0				ePP	PP	02 02 26.6	+2.2
SONA0				ePKKPbc	PKKPbc	02 11 53.1	-1.2
SONM	Songino Array	115.70	347	PKP	PKPdf	02 01 19.0	-0.8
	comp=Z,0.6nm,0.5s,baz=309,slow=0.7,SNR=5.6						
SONM				PP	PP	02 02 26.6	+2.2
	comp=Z,0.7nm,0.7s,baz=7.6,slow=4.5,SNR=3.8						
SONM				PKKPbc	PKKPbc	02 11 53.1	-1.2
	comp=Z,2.6nm,0.5s,baz=199,slow=3.8,SNR=19						
SONM	Songino Array	115.70	347	PKIKP	PKPdf	02 01 19.0	-0.8
KSRS	Korea Array	116.40	326	PKP	PKPdf	02 01 21.0	-0.2
	comp=Z,1.7nm,0.7s,baz=19,slow=1.9,SNR=7.0						
KS15	Wonju Array Si	116.43	326	ePKPdf	PKPdf	02 01 21.0	-0.3
KSAR	Wonju Array Be	116.43	326	PKP	PKPdf	02 01 21.0	-0.3
KSAR	Wonju Array Be	116.43	326	PKIKP	PKPdf	02 01 21.0	-0.3
MK32	Makanchi Array	118.35	5	ePKPdf	PKPdf	02 01 23.1	-1.7
MK32				ePP	PP	02 02 40.0	-2.6
MKAR	Makanchi Array	118.35	5	PKP	PKPdf	02 01 23.1	-1.7
	comp=Z,0.7nm,0.5s,baz=297,slow=3.6,SNR=8.7						
MKAR				PP	PP	02 02 40.0	-2.6
	comp=Z,1.6nm,0.9s,baz=15,slow=2.8,SNR=4.0						
BOSA	Boshof	119.82	115	PKP	PKPdf	02 01 27.4	-0.8
	comp=Z,6.2nm,0.7s,baz=258,slow=1.6,SNR=13						
GEYT	Alibeck	120.03	28	PKP	PKPdf	02 01 26.6	-1.7
	comp=Z,1.6nm,0.5s,baz=329,slow=2.6,SNR=4.1						
HHC	Hu-ho-hao-te	120.77	340	ePKP	PKPdf	02 01 27.9	-1.9
WMQ	Urumqi	121.61	1	PKP	PKPdf	02 01 32.0	+0.8
WMQ				LR	LR		
	comp=Z,360nm,28.9s						
WMQ				LR	LR		
	comp=Z,270nm,28.9s						
WMQ				LR	LR		
	comp=Z,320nm,23.7s						
KSH	Kashi	124.57	12	ePKP	PKPdf	02 01 36.8	-0.3
KSH				PP	PP	02 03 28.4	+3.4
KSH				PKS	PKSdf	02 05 11.4	-2.5
MAW	Mawson	124.60	168	PKP	PKPdf	02 01 36.4	+0.4
	comp=Z,14nm,0.6s,baz=176,slow=3.0,SNR=42						
MAW	Mawson	124.60	168	ePKPdf	PKPdf	02 01 36.2	+0.2
MAW	Mawson	124.60	168	ePKIKP	PKPdf	02 01 36.2	+0.2
NJ2	Nanjing	125.30	329	ePKP	PKPdf	02 01 39.1	+0.6
CTA	Charters Tower	125.36	256	PKP	PKPdf	02 01 39.9	+0.9
	comp=Z,8.1nm,0.7s,baz=93,slow=6.0,SNR=7.4						
JAY	Jayapura	127.59	278	PKP	PKPdf	02 01 43.4	0.0
	comp=Z,17nm,0.3s,baz=97,slow=8.1,SNR=13						
STKA	Stephens Creek	129.32	241	PKP	PKPdf	02 01 47.6	+1.4
	comp=Z,7.1nm,0.8s,baz=92,slow=2.9,SNR=7.4						
STKA				SKPbc	SKPbc	02 04 51.2	+2.7
	comp=Z,6.0nm,0.9s,baz=92,slow=6.9,SNR=6.4						
STKA	Stephens Creek	129.32	241	ePKIKP	PKPdf	02 01 47.4	+1.3
WSAR	Wadi Sarin	131.88	39	PKP	PKPdf	02 01 50.3	-1.0
	comp=Z,3.4nm,0.5s,baz=269,slow=5.5,SNR=6.3						
WSAR				SKPbc	SKPbc	02 04 56.0	-2.5
	comp=Z,4.7nm,0.6s,baz=314,slow=6.4,SNR=8.1						
CD2	Chengdu	132.35	343	PKP	PKPdf	02 01 51.0	-1.1
WB2	Warramunga Arr	136.53	257	ePKPpre	PKPpre	02 01 51.4	
WB2				ePKPpre	PKPpre	02 01 52.6	
WRAB	Tennant Creek	136.53	257	ePKPdf	PKPdf	02 02 01.1	+1.0
WRAB	Tennant Creek	136.53	257	d iPKIKP	PKPdf	02 02 01.4	+1.4
WRAB				pmax	pmax		
	comp=Z,20nm,0.8s						
WR1	Warramunga Arr	136.54	257	ePKPpre	PKPpre	02 01 47.8	
WR1				ePKPdf	PKiKP	02 02 01.2	-0.7
WRA	Warramunga Arr	136.54	257	PKhKP	PKPpre	02 01 47.8	
	comp=Z,1.4nm,0.6s,baz=90,slow=3.2,SNR=19						
WRA				PKP	PKiKP	02 02 01.2	-0.7
	comp=Z,17nm,0.8s,baz=88,slow=2.6,SNR=65						
WRA				SKP		02 05 15.3	
	comp=Z,7.0nm,0.8s,baz=88,slow=2.4,SNR=17						
WRA				SKKPbc	SKKPbc	02 14 10.6	+1.8
	comp=Z,1.5nm,1.0s,baz=283,slow=3.3,SNR=5.6						
AS01	Alice Springs	136.82	251	ePKPpre	PKPpre	02 01 52.3	
AS31	Alice Springs	136.86	251	ePKPpre	PKPpre	02 01 53.0	
AS31				ePKPdf	PKiKP	02 02 01.8	-0.7
ASAR	Alice Springs	136.87	251	PKhKP	PKPpre	02 01 52.8	
	comp=Z,2.1nm,0.6s,baz=100,slow=3.4,SNR=19						
ASAR				PKP	PKiKP	02 02 01.8	-0.7
	comp=Z,5.7nm,0.7s,baz=105,slow=1.9,SNR=27						
ASAR				SKP		02 05 16.2	
	comp=Z,8.1nm,0.9s,baz=99,slow=3.2,SNR=19						
ASAR				SKKPbc	SKKPbc	02 14 10.8	+3.0
	comp=Z,1.8nm,0.9s,baz=279,slow=4.4,SNR=9.2						
MTN	Manton Dam	139.09	267	ePKPdf	PKPdf	02 02 06.3	+1.5
LUWI	Luwuk	143.94	289	ePKPdf	PKPdf	02 02 13.1	-0.5
MYLDM	Lahad Datu	144.64	302	ePKPbc	PKPdf	02 02 16.1	+1.2
FITZ	Fitzroy Crossi	144.76	260	PKPbc	PKPdf	02 02 15.5	+0.7
	comp=Z,12nm,0.5s,baz=56,slow=2.0,SNR=70						
FITZ				SKPbc	SKiKP	02 05 37.5	+1.8
	comp=Z,9.4nm,1.0s,baz=147,slow=3.5,SNR=8.0						
CHTO	Chiang Mai	145.15	343	ePKPdf	PKPbc	02 02 14.3	-1.2
CHTO	Chiang Mai	145.15	343	ePKIKP	PKPbc	02 02 14.3	-1.2
CM31	Chiang Mai Arr	145.49	343	ePKPdf	PKPdf	02 02 15.9	-0.2
CM31				eSKPbc	SKiKP	02 05 37.5	0.0
CMAR	Chiang Mai Arr	145.49	343	PKPbc	PKPdf	02 02 15.9	-0.2
	comp=Z,16nm,0.6s,baz=343,slow=4.0,SNR=38						
CMAR				SKPbc	SKiKP	02 05 37.5	0.0
	comp=Z,1.9nm,0.5s,baz=345,slow=3.4,SNR=5.1						
CMAR	Chiang Mai Arr	145.49	343	PKP2	PKPdf	02 02 16.0	-0.2
CM01	Chiang Mai Arr	145.52	343	ePKPdf	PKPdf	02 02 15.8	-0.4
BATI	Baumata	145.88	274	PKPbc	PKPab	02 02 18.9	+0.2

	comp=Z,18nm,0.3s,baz=122,slow=0.5,SNR=8.0						
KKM	Kota Kinabalu	145.97	306	ePKPdf	PKPab	02 02 19.3	+0.2
HYB	Hyderabad	146.33	18	i PKP	PKPdf	02 02 18.0	+0.4
NWAO	Narrogin (SRO)	148.69	230	PKPbc	PKPdf	02 02 22.4	+1.3
	comp=Z,14nm,0.9s,baz=340,slow=6.0,SNR=4.6						
MBWA	Marble Bar	150.15	253	ePKPdf	PKPdf	02 02 24.8	+1.1
SBUM	Sibu	151.30	305	ePKPbc	PKPbc	02 02 32.4	+0.5
KSM	Kuching	153.41	306	ePKPab	PKPab	02 02 50.8	+1.3
PBA	Port Blair	153.41	352	ePKPbc	PKPbc	02 02 36.5	0.0

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*IDC **12** 02:11:29.5±1.0, 19.°38N×64.°31W, h0^{km}, mb3.6/6, mb1 4.0/8, mb1mx3.7/54, mbtmp3.8/8, ML3.5/2, Error ellipse: s-maj=28.7km s-min=20.8km az=60.0*

*ISCJB **12** 02:11:35.2±0.5, 19.°27N±0.°04×65.°00W±0.°02, h25^{km}, mb3.5/6, Error ellipse: s-maj=5.9km s-min=3.1km az=3.1*

*TRN **12** 02:11:35.5, 19.°14N×65.°04W, h23^{km}*

*NEIC **12** 02:11:36.7±0.0, 19.°28N×64.°94W, h14^{km}, MD3.8(RSPR), After RSPR.*

*RSPR **12** 02:11:36.7, 19.°28N×64.°94W, h14^{km}±4^{km}, MD3.8/14*

ISC 12 02:11:36.8±0.8, **19.°21N**±0.°05×**65.°03W**±0.°03, **h25^{km}, n85, σ0.^{s}99**/111, **mb3.6**/6, **34C-15D, Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABV	Anegada	0.81	126	⇓eP	Pb	02 11 50.6	-1.6
ABV	Anegada	0.81	126	⇓eP	Pb	02 11 50.6	-1.6
ABVI	Anegada Island	0.81	126	⇓eP	Pb	02 11 50.6	-1.6
STVI	Saint Thomas	0.85	175	⇓eP	Pb	02 11 52.0	-0.9
STVI	Saint Thomas	0.85	175	⇓eP	Pb	02 11 52.1	-0.9
STVI				eS	Sb	02 12 04.3	+0.3
STVI	Saint Thomas	0.85	175	eS	Sb	02 12 03.9	-0.1
STVI	Saint Thomas	0.85	175	⇓eP	Pb	02 11 52.0	-0.9
STVI				eS	Sb	02 12 03.9	-0.1
STVI	Saint Thomas	0.85	175	⇓eP	Pb	02 11 52.0	-0.9
STVI				eS	Sb	02 12 03.9	-0.1
TBVI	Tortola	0.88	154	⇑iP	Pb	02 11 51.8	-1.5
TBVI	Tortola	0.88	154	i Pu	Pb	02 11 51.8	-1.5
TBVI	Tortola	0.88	154	⇑iP	Pb	02 11 51.8	-1.5
MTP	Monte Pirata	1.21	204	⇑eP	Pn	02 11 58.0	-0.1
MTP	Monte Pirata	1.21	204	eS	Sn	02 12 13.9	+0.2
MTP	Monte Pirata	1.21	204	⇑eP	Pn	02 11 58.0	-0.1
MTP				eS	Sn	02 12 13.9	+0.2
MTP	Monte Pirata	1.21	204	⇑eP	Pn	02 11 58.0	-0.1
MTP				eS	Sn	02 12 13.9	+0.2
CBYP	Canovanas	1.22	220	⇑eP	Pn	02 11 57.5	-0.8
CBYP	Canovanas	1.22	220	⇑eP	Pn	02 11 57.9	-0.4
CBYP	Canovanas	1.22	220	eS	Sb	02 12 14.5	0.0
CBYP	Canovanas	1.22	220	⇑eP	Pn	02 11 57.9	-0.4
CBYP				eS	Sb	02 12 14.5	0.0
CBYP	Canovanas	1.22	220	⇑eP	Pn	02 11 57.5	-0.8
CBYP				eS	Sb	02 12 14.5	0.0
HUMP	Col San Antoni	1.32	216	⇓eP	Pn	02 11 59.4	-0.2
HUMP	Col San Antoni	1.32	216	⇓eP	Pn	02 11 58.8	-0.8
HUMP	Col San Antoni	1.32	216	eS	Sn	02 12 16.5	+0.2
HUMP	Col San Antoni	1.32	216	⇓eP	Pn	02 11 59.4	-0.2
HUMP				eS	Sn	02 12 16.5	+0.2
HUMP	Col San Antoni	1.32	216	⇓eP	Pn	02 11 58.8	-0.8
HUMP				eS	Sn	02 12 16.5	+0.2
CDVI	St. Croix	1.47	170	⇑eP	Pn	02 12 02.3	+0.7
CDVI	St. Croix	1.47	170	⇑eP	Pn	02 12 02.4	+0.7
CDVI	St. Croix	1.47	170	⇑eP	Pn	02 12 02.3	+0.7
CDVI	St. Croix	1.47	170	⇑eP	Pn	02 12 02.3	+0.7
SJG	San Juan	1.52	225	⇑eP	Pn	02 12 02.1	-0.3
SJG	San Juan	1.52	225	⇑eP	Pn	02 12 02.1	-0.3
SJG	San Juan	1.52	225	⇑eP	Pn	02 12 02.1	-0.3
AOPR	Arecibo Observ	1.85	243	eS	Sn	02 12 29.8	+0.4
AOPR	Arecibo Observ	1.85	243	⇓eP	Pn	02 12 06.7	-0.2
AOPR	Arecibo Observ	1.85	243	⇓eP	Pn	02 12 06.9	0.0
AOPR	Arecibo Observ	1.85	243	⇓eP	Pn	02 12 06.9	0.0
AOPR				eS	Sn	02 12 29.8	+0.4
AOPR	Arecibo Observ	1.85	243	⇓eP	Pn	02 12 06.7	-0.2
AOPR				eS	Sn	02 12 29.8	+0.4
OBIP	Obispado Ponce	1.89	233	eS	Sn	02 12 31.6	+1.0
OBIP	Obispado Ponce	1.89	233	⇑eP	Pn	02 12 07.3	-0.3
OBIP	Obispado Ponce	1.89	233	⇑eP	Pn	02 12 07.3	-0.3
OBIP				eS	Sn	02 12 31.6	+1.0
OBIP	Obispado Ponce	1.89	233	⇑eP	Pn	02 12 07.3	-0.3
OBIP				eS	Sn	02 12 31.6	+1.0
ICMP	Isla Caja de M	1.94	228	eS	Sn	02 12 32.7	+1.0
ICMP	Isla Caja de M	1.94	228	⇑eP	Pn	02 12 08.2	+0.1
ICMP	Isla Caja de M	1.94	228	⇑eP	Pn	02 12 08.2	+0.1
ICMP				eS	Sn	02 12 32.7	+1.0
AGPR	Aguadilla, PR	2.11	250	⇑eP	Pn	02 12 10.4	-0.1
AGPR	Aguadilla, PR	2.11	250	eS	Sn	02 12 36.1	+0.3
AGPR	Aguadilla, PR	2.11	250	⇑eP	Pn	02 12 10.4	-0.1
AGPR				eS	Sn	02 12 36.1	+0.3
AGPR	Aguadilla, PR	2.11	250	⇑eP	Pn	02 12 10.4	-0.1
AGPR				eS	Sn	02 12 36.1	+0.3
SMRT	St. Maarten	2.18	122	eP	Pn	02 12 12.6	+1.1
SMRT				eS	Sn	02 12 37.7	0.0
SMRT	St. Maarten	2.18	122	eP	Pn	02 12 12.6	+1.1
SMRT				eS	Sn	02 12 37.7	0.0
LSP	Las Mesas	2.21	243	⇑eP	Pn	02 12 11.6	-0.2
LSP	Las Mesas	2.21	243	⇑eP	Pn	02 12 11.6	-0.2
LSP	Las Mesas	2.21	243	⇑eP	Pn	02 12 11.6	-0.2
CRPR	Cabo Rojo, PR	2.31	239	⇑eP	Pn	02 12 13.6	+0.3
CRPR	Cabo Rojo, PR	2.31	239	eS	Sn	02 12 41.8	+1.0
CRPR	Cabo Rojo, PR	2.31	239	⇑eP	Pn	02 12 13.6	+0.3
CRPR				eS	Sn	02 12 41.8	+1.0
CRPR	Cabo Rojo, PR	2.31	239	⇑eP	Pn	02 12 13.6	+0.3
CRPR				eS	Sn	02 12 41.8	+1.0
SABA	Saba	2.31	133	eP	Pn	02 12 14.9	+1.5
SABA				eS	Sn	02 12 42.4	+1.4
SABA	Saba	2.31	133	eP	Pn	02 12 14.9	+1.5
SABA				eS	Sn	02 12 42.4	+1.4
IDE	Isla Desecheo	2.46	251	⇑eP	Pn	02 12 15.1	-0.2
IDE	Isla Desecheo	2.46	251	⇑eP	Pn	02 12 15.1	-0.2
IDE	Isla Desecheo	2.46	251	⇑eP	Pn	02 12 15.1	-0.2
ANWB	Willy Bob	3.44	116	eP	Pn	02 12 29.1	+0.4
ANWB				eS	Sn	02 13 08.4	-0.3
ANWB	Willy Bob	3.44	116	eP	Pn	02 12 29.1	+0.4
ANWB				eS	Sn	02 13 08.4	-0.3
MLYT	Lee's Yard	3.66	132	eP	Pn	02 12 32.7	+0.8
MLYT				eS	Sn	02 13 13.3	-1.0
DR12	Loma Pena Alta	4.14	265	⇑eP	Pn	02 12 38.9	+0.4
DR12	Loma Pena Alta	4.14	265	⇑eP	Pn	02 12 38.9	+0.4
TBG	Guadaloupe-3	4.64	135	eP	Pn	02 12 45.8	+0.5
DEG	La Desirade	4.75	127	eP	Pn	02 12 47.4	+0.5
DEG	La Desirade	4.75	127	eP	Pn	02 12 47.4	+0.5
MGG	Marie-Galante	4.82	132	eP	Pn	02 12 47.8	0.0
MGG	Marie-Galante	4.82	132	eP	Pn	02 12 47.8	0.0
MDPO	Dominica; Chan	4.97	136	eP	Pn	02 12 51.1	+1.2
MDVC	Dominica, Viel	4.97	135	eP	Pn	02 12 50.8	+0.9
BBL	Barber's Block	4.99	137	eP	Pn	02 12 51.1	+0.9
BBL	Barber's Block	4.99	137	eP	Pn	02 12 51.1	+0.9
PCRV	Puerto La Cruz	8.99	178	Pn	Pn	02 13 44.9	-0.2
	1.0nm,0.3s,baz=3.2,slow=6.0,SNR=3.3						
PCRV				Sn	Sn	02 15 23.8	-1.8
	0.6nm,0.3s,baz=216,slow=17,SNR=2.2						
SDV	Santo Domingo	11.61	209	Pn	Pn	02 14 23.8	+2.6
	1.2nm,0.3s,baz=39,slow=11,SNR=2.3						
SDV				Sn	Sn	02 16 27.1	-3.1
	1.0nm,0.3s,baz=7.4,slow=19,SNR=2.3						
ROSC	El Rosal	16.91	214	P	P	02 15 39.2	+5.0
	0.8nm,0.3s,baz=246,slow=20,SNR=2.2						
LPAZ	La Paz	35.41	185	P	P	02 18 29.3	-2.2
	0.3nm,0.4s,baz=34,slow=11,SNR=1.9						
TXAR	Lajitas Array	36.49	294	P	P	02 18 40.8	+0.4
	0.6nm,0.7s,baz=104,slow=11,SNR=4.5						
ANMO	Albuquerque	39.78	302	P	P	02 19 08.6	+0.6
	0.5nm,0.6s,baz=57,slow=11,SNR=3.2						
PDAR	Pinedale Array	44.16	312	P	P	02 19 43.5	-0.4
	0.5nm,0.5s,baz=109,slow=11,SNR=5.8						
KOWA	Kowa	58.34	85	P	P	02 21 21.9	-8.4
	0.9nm,0.8s,baz=97,slow=6.2,SNR=1.9						
ILAR	Eielson Array	69.34	333	P	P	02 22 40.2	-1.8
	0.4nm,0.8s,baz=107,slow=4.5,SNR=5.0						

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*IDC **12** 02:12:13.1±0.9, 1.°47S×127.°61E, h0^{km}, mb3.8/6, mb1 3.9/8, mb1mx3.7/56, mbtmp3.8/8, ML3.6/2, MS3.6/2, Ms1 3.6/2, ms1mx2.6/51, Error ellipse: s-maj=63.4km s-min=16.5km az=65.0*

*ISCJB **12** 02:12:16.3±0.6, 1.°50S±0.°04×127.°51E±0.°06, h25^{km}, mb3.8/6, MS3.6/2, Error ellipse: s-maj=9.5km s-min=5.6km az=167.7*

*DJA **12** 02:12:17.6±0.2, 1°S±2°×12°8E±°, h10^{km}, M4.2/10, mb4.7/7, mB4.8/4, MLv4.0/10, Mw(mB)4.0/4*

ISC 12 02:12:16.9±0.7, **1.°55S**±0.°04×**127.°55E**±0.°08, **h25^{km}, n22, σ1.^{s}77**/24, **mb3.9**/6, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBMI	Labuha	0.90	357	P	Pb	02 12 33.1	-0.9
LBMI				S	Sb	02 12 45.0	-0.6
SANI	Sanana	1.64	252	P	Pn	02 12 43.0	-1.1
NLAI	Namlea	1.74	195	P	Pb	02 12 47.4	-0.8
AAI	Ambon	2.22	163	P	Pb	02 12 55.6	-0.9
AAI				S	Sb	02 13 24.3	+0.7
MSAI	Masohi	2.26	142	P	Pb	02 12 57.2	+0.1
MSAI				S	Sb	02 13 27.0	+2.4
TNTI	Ternate	2.31	356	P	Pb	02 12 58.6	+0.7
TNTI				S	Pb	02 12 58.4	+0.5
APSI	Ampana	5.93	276	P	Pn	02 13 43.9	+0.7
MRSI	Marisa	5.95	290	P	Pn	02 13 45.2	+1.7
TTSI	Tana Toraja	7.86	259	P	Pn	02 14 15.9	+6.1
MPSI	Mapaga	7.87	284	P	Pn	02 14 11.1	+1.2
	5.2nm,0.5s						
SPSI	Sidrap Palu	8.13	253	P	Pn	02 14 16.1	+2.6
BKSI	Bulukumba	8.30	243	P	Pn	02 14 20.4	+4.6
FITZ	Fitzroy Crossi	16.55	186	Pn	Pn	02 16 06.3	-1.3
	0.0nm,0.3s,baz=12,slow=10,SNR=2.3						
WRA	Warramunga Arr	19.45	160	P	P	02 16 40.5	-1.5
	0.4nm,0.3s,baz=344,slow=12,SNR=20						
WRA				S	S	02 20 16.7	-3.9
	0.1nm,0.3s,baz=245,slow=12,SNR=3.3						
ASAR	Alice Springs	22.84	165	P	P	02 17 18.2	-0.2
	2.2nm,0.5s,baz=346,slow=11,SNR=12						
CTA	Charters Tower	25.96	136	P	P	02 17 49.4	+1.6
	1.5nm,0.7s,baz=252,slow=6.4,SNR=1.9						
DZM	Mont Dzumac	42.98	121	LR	LR	02 37 17.0	
	comp=Z,21nm,20.4s,baz=22,slow=35						
SONM	Songino Array	52.53	342	P	P	02 21 28.1	-0.2
	1.1nm,0.8s,baz=154,slow=7.6,SNR=6.8						
MKAR	Makanchi Array	62.35	327	P	P	02 22 36.6	-0.9
	0.6nm,0.5s,baz=118,slow=8.6,SNR=6.3						
KURBB	Kurchatov Arra	66.61	328	P	P	02 23 05.2	0.0
	0.6nm,0.4s,baz=132,slow=5.7,SNR=8.3						
BVAR	Borovoye Array	72.17	328	P	P	02 23 39.8	+0.2
	0.4nm,0.5s,baz=157,slow=4.1,SNR=3.2						
ASF	Jabal al Asfar	91.36	302	LR	LR	03 14 56.8	
	comp=Z,85nm,18.5s,baz=132,slow=41						

IDC 12 02:13:33.5±1.9, **1.°74N**×**125.°19E, h0^{km}, mb3.6**/3, **mb1 3.8**/4, **mb1mx3.5**/58, **mbtmp3.6**/4, **ML3.5**/1, **Error ellipse: s-maj=141.2km s-min=23.1km az=67.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	19.72	179	P	P	02 18 04.8	0.0
	0.1nm,0.3s,baz=9.0,slow=9.9,SNR=5.8						
WRA	Warramunga Arr	23.35	158	P	P	02 18 43.8	+0.1
	1.3nm,0.3s,baz=336,slow=9.9,SNR=9.6						
ASAR	Alice Springs	26.64	162	P	P	02 19 13.4	-0.7
	0.4nm,0.5s,baz=338,slow=7.2,SNR=3.1						
MKAR	Makanchi Array	58.33	327	P	P	02 23 30.9	+0.5
	0.3nm,0.5s,baz=124,slow=7.5,SNR=2.2						

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*SIGU **12** 02:20:22.5±1.0, 45.°7N±0.°8×26.°6E±0.°8, h124^{km}±1^{km}, mb4.0/13*

*MOS **12** 02:20:22.6±1.0, 45.°71N×26.°59E, h104^{km}, mb4.1/15, Error ellipse: s-maj=5.9km s-min=4.6km az=103.1*

*ISCJB **12** 02:20:22.8±0.1, 45.°70N±0.°01×26.°55E±0.°02, h118^{km}±1^{km}, mb4.0/27, Error ellipse: s-maj=1.9km s-min=1.6km az=144.6*

*IDC **12** 02:20:24.0±0.4, 45.°67N×26.°42E, h107^{km}±3^{km}, mb3.7/18, mb1 3.7/23, mb1mx3.6/63, mbtmp4.0/23, Error ellipse: s-maj=14.1km s-min=10.0km az=152.0*

*CSEM **12** 02:20:23.8±0.1, 45.°70N×26.°54E, h111^{km}±1^{km}, mb4.1/19, Ms2.9, Error ellipse: s-maj=2.2km s-min=1.9km az=26.0*

*NEIC **12** 02:20:23.9±0.0, 45.°72N×26.°53E, h120^{km}, mb4.3/6, ML4.3(BUC), After BUC.*

*BUC **12** 02:20:24.1±0.6, 45.°71N×26.°54E, h116^{km}±6^{km}, MD4.6/9, Error ellipse: s-maj=4.1km s-min=3.7km az=85.0*

*BEO **12** 02:20:26.9±1.3, 45.°59N×26.°38E, h70^{km}, ML3.7/12*

*DDA **12** 02:20:54.5, 45.°85N×26.°79E, h41^{km}, Ml4.4*

ISC 12 02:20:24.0±0.5, **45.°70N**±0.°03×**26.°52E**±0.°02, **h115^{km}**±4^{km}, **n593, σ1.^{s}92**/763, **mb4.1**/27, **114C-112D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLOR	Plostina	0.18	31	⇑iP	Pn	02 20 39.9	-0.1
PLOR	Plostina	0.18	31	⇑iP	Pn	02 20 39.9	-0.1
PLOR				i S	Sn	02 20 51.8	-0.2
PLOR	Plostina	0.18	31	⇑iP	Pn	02 20 39.8	-0.2
PLOR				⇓eS	Sn	02 20 51.4	-0.6
VRI	Vrincioaia	0.23	41	⇑iP	Pn	02 20 40.1	0.0
VRI	Vrincioaia	0.23	41	⇑iP	Pn	02 20 40.1	0.0
VRI				i S	Sn	02 20 51.5	-0.7
VRI	Vrincioaia	0.23	41	⇑iP	Pn	02 20 40.1	0.0
ODBI	Odobesti	0.38	80	⇑iP	Pn	02 20 41.6	+0.9
ODBI	Odobesti	0.38	80	⇑iP	Pn	02 20 41.6	+0.9
ODBI				i S	Sn	02 20 54.5	+1.3
ODBI	Odobesti	0.38	80	⇑iP	Pn	02 20 41.6	+0.9
ODBI				i S	Sn	02 20 54.5	+1.3
GRER		0.45	134	⇑iP	Pn	02 20 42.2	+1.1
GRER		0.45	134	⇑iP	Pn	02 20 42.2	+1.1
GRER				i S	Sn	02 20 55.5	+1.6
GRER		0.45	134	⇑iP	Pn	02 20 42.2	+1.1
GRER				i S	Sn	02 20 55.5	+1.6
MLR	Muntele Rosu	0.45	243	P	Pn	02 20 41.4	+0.2
	358nm,0.3s,baz=346,slow=6.0						
MLR				S	Sn	02 20 53.6	-0.5
	372nm,0.3s,baz=252,slow=20,SNR=40						
MLR	Muntele Rosu	0.45	243	⇑iP	Pn	02 20 41.7	+0.5
MLR	Muntele Rosu	0.45	243	⇑iP	Pn	02 20 41.7	+0.5
MLR				i S	Sn	02 20 54.0	-0.2
MLR	Muntele Rosu	0.45	243	ePn	Pn	02 20 40.8	-0.4
MLR				eSn	Sn	02 20 52.8	-1.4
MLR	Muntele Rosu	0.45	243	eP	Pn	02 20 40.8	-0.4
MLR				e		02 20 52.8	
MLR	Muntele Rosu	0.45	243	⇑iS	Sn	02 20 53.9	-0.2
MLR	Muntele Rosu	0.45	243	eP	Pn	02 20 40.8	-0.4
MLR				eSn	Sn	02 20 52.8	-1.4
PETR	Petresti	0.50	87	⇑iP	Pn	02 20 41.9	+0.6
PETR	Petresti	0.50	87	⇑iP	Pn	02 20 41.9	+0.6
PETR				i S	Sn	02 20 54.7	+0.3
PETR	Petresti	0.50	87	⇑iP	Pn	02 20 41.9	+0.6
PETR				⇓iS	Sn	02 20 54.7	+0.3
ISR	Istrita	0.58	178	⇑iP	Pn	02 20 42.5	+0.5
ISR	Istrita	0.58	178	⇑iP	Pn	02 20 42.5	+0.5
ISR				i S	Sn	02 20 56.2	+0.8
ISR	Istrita	0.58	178	⇑iP	Pn	02 20 42.5	+0.5
ISR				i S	Sn	02 20 56.2	+0.8
SECR		0.73	206	⇑iP	Pn	02 20 44.2	+1.1
SECR		0.73	206	⇑iP	Pn	02 20 44.2	+1.1
SECR				i S	Sn	02 20 59.0	+1.5
SECR		0.73	206	⇑iP	Pn	02 20 44.2	+1.1
SECR				i S	Sn	02 20 59.0	+1.5
TESR	Tescani	0.82	6	⇑iP	Pn	02 20 43.8	-0.1
TESR	Tescani	0.82	6	⇑iP	Pn	02 20 43.8	-0.1
TESR				i S	Sn	02 20 57.2	-1.7
TESR	Tescani	0.82	6	⇑iP	Pn	02 20 43.7	-0.1
TESR				S	Sn	02 20 57.6	-1.3
DOPR	Dopca	0.83	289	⇑iP	Pn	02 20 44.2	+0.2
DOPR	Dopca	0.83	289	⇑iP	Pn	02 20 44.2	+0.2
DOPR				i S	Sn	02 20 58.7	-0.4
DOPR	Dopca	0.83	289	⇑iP	Pn	02 20 44.2	+0.2
DOPR				i S	Sn	02 20 58.7	-0.4
PGOR	Pogoanele	0.85	157	S	Sn	02 21 00.6	+1.3
PGOR	Pogoanele	0.85	157	S	Sn	02 21 00.6	+1.3
PGOR	Pogoanele	0.85	157	i S	Sn	02 21 00.6	+1.3
PGOR				i S	Sn	02 21 00.6	+1.3
PGOR	Pogoanele	0.85	157	i S	Sn	02 21 00.6	+1.3
PLAR	PLOIESTI	0.85	204	⇑iP	Pn	02 20 45.1	+0.9
PLAR	PLOIESTI	0.85	204	⇑iP	Pn	02 20 45.1	+0.9
PLAR				i S	Sn	02 21 01.2	+1.9
PLAR	PLOIESTI	0.85	204	⇑iP	Pn	02 20 45.1	+0.9
PLAR				i S	Sn	02 21 01.2	+1.9
SULR		1.03	190	⇑iP	Pn	02 20 46.7	+0.8
SULR		1.03	190	⇑iP	Pn	02 20 46.7	+0.8
SULR				i S	Sn	02 21 03.5	+1.1
SULR		1.03	190	⇑iP	Pn	02 20 46.7	+0.8
SULR				i S	Sn	02 21 03.5	+1.1
VOIR		1.06	256	⇑iP	Pn	02 20 46.4	+0.1
VOIR		1.06	256	⇑iP	Pn	02 20 46.4	+0.1
VOIR				i S	Sn	02 21 02.2	-1.0
VOIR		1.06	256	⇑iP	Pn	02 20 46.4	+0.1
VOIR				i S	Sn	02 21 02.2	-1.0
MTUR	Matau	1.13	246	⇓iP	Pn	02 20 48.0	+1.0
MTUR	Matau	1.13	246	⇓iP	Pn	02 20 48.0	+1.0
MTUR	Matau	1.13	246	⇓iP	Pn	02 20 48.0	+1.0
GIUM	Giurgiulesti	1.21	99	⇑iP	Pn	02 20 48.2	+0.5
GIUM	Giurgiulesti	1.21	99	⇑iP	Pn	02 20 48.2	+0.5
GIUM				i S	Sn	02 21 06.4	+0.8
GIUM	Giurgiulesti	1.21	99	P	Pn	02 20 48.1	+0.4
GIUM				S	Sn	02 21 06.3	+0.7
GIUM	Giurgiulesti	1.21	99	⇓iP	Pn	02 20 48.1	+0.4
GIUM				⇓iS	Sn	02 21 05.8	+0.2
JOSR	Joseni	1.23	326	⇑iP	Pn	02 20 47.7	-0.3
JOSR	Joseni	1.23	326	⇑iP	Pn	02 20 47.7	-0.3
JOSR	Joseni	1.23	326	⇑iP	Pn	02 20 47.7	-0.3
AMRR	Amara	1.23	152	⇓iP	Pn	02 20 48.5	+0.5
AMRR	Amara	1.23	152	⇓iP	Pn	02 20 48.5	+0.5
AMRR				i S	Sn	02 21 06.2	+0.1
AMRR	Amara	1.23	152	⇓iP	Pn	02 20 48.5	+0.5
AMRR				i S	Sn	02 21 06.2	+0.1
CFR	Carcaliu	1.25	114	⇓iP	Pn	02 20 47.9	-0.3
CFR	Carcaliu	1.25	114	⇓iP	Pn	02 20 47.9	-0.3
CFR				i S	Sn	02 21 04.6	-1.9
CFR	Carcaliu	1.25	114	⇓iP	Pn	02 20 47.9	-0.3
CFR				i S	Sn	02 21 04.6	-1.9
GIRR	Girov	1.26	359	⇑iP	Pn	02 20 48.6	+0.3
GIRR	Girov	1.26	359	⇑iP	Pn	02 20 48.6	+0.3
GIRR	Girov	1.26	359	⇑iP	Pn	02 20 48.6	+0.3
BIZ	Bicaz	1.28	347	⇑iP	Pn	02 20 49.4	+0.9
BIZ	Bicaz	1.28	347	⇑iP	Pn	02 20 49.4	+0.9
BIZ				i S	Sn	02 21 07.4	+0.2
BIZ	Bicaz	1.28	347	⇑iP	Pn	02 20 49.4	+0.9
BIZ				i S	Sn	02 21 07.4	+0.2
ARR	Arges	1.36	257	⇓iP	Pn	02 20 50.2	+0.6
ARR	Arges	1.36	257	⇓iP	Pn	02 20 50.2	+0.6
ARR				i S	Sn	02 21 10.0	+1.0
ARR	Arges	1.36	257	⇓iP	Pn	02 20 50.2	+0.6
ARR				i S	Sn	02 21 10.0	+1.0
BUC1	Bucharest	1.39	195	⇑iP	Pn	02 20 49.7	-0.1
BUC1	Bucharest	1.39	195	⇑iP	Pn	02 20 49.7	-0.1
BUC1				i S	Sn	02 21 09.6	+0.2
BUC1	Bucharest	1.39	195	⇓iS	Sn	02 21 09.5	+0.2
BUC1	Bucharest	1.39	195	⇑iP	Pn	02 20 49.7	-0.1
GOLR		1.39	233	⇑iP	Pn	02 20 50.5	+0.7
GOLR		1.39	233	⇑iP	Pn	02 20 50.5	+0.7
GOLR				i S	Sn	02 21 10.3	+0.9
GOLR		1.39	233	⇑iP	Pn	02 20 50.5	+0.7
GOLR				i S	Sn	02 21 10.3	+0.9
HARR	Harsova	1.42	135	⇓iP	Pn	02 20 50.3	+0.2
HARR	Harsova	1.42	135	⇓iP	Pn	02 20 50.3	+0.2
HARR	Harsova	1.42	135	⇓iP	Pn	02 20 50.3	+0.2
LEOM	Leova	1.43	56	⇓iP	Pn	02 20 50.5	+0.2
LEOM				⇓iS	Sn	02 21 09.4	-0.8
SGRR	Singureni	1.52	195	⇑iP	Pn	02 20 51.7	+0.4
SGRR	Singureni	1.52	195	⇑iP	Pn	02 20 51.7	+0.4
SGRR				i S	Sn	02 21 11.8	-0.3
SGRR	Singureni	1.52	195	⇑iP	Pn	02 20 51.7	+0.4
SGRR				i S	Sn	02 21 11.8	-0.3
TLB	Topalu	1.55	135	⇓iP	Pn	02 20 51.8	+0.2
TLB	Topalu	1.55	135	⇓iP	Pn	02 20 51.8	+0.2
TLB				i S	Sn	02 21 11.1	-1.5
TLB	Topalu	1.55	135	⇓iP	Pn	02 20 51.8	+0.2
TLB				i S	Sn	02 21 11.1	-1.5
HUMR	Humele	1.60	224	⇑iP	Pn	02 20 52.5	+0.3
HUMR	Humele	1.60	224	⇑iP	Pn	02 20 52.5	+0.3
HUMR				i S	Sn	02 21 13.3	-0.4
HUMR	Humele	1.60	224	⇑iP	Pn	02 20 52.5	+0.3
HUMR				i S	Sn	02 21 13.3	-0.4
IAS	Iasi	1.66	25	⇓iP	Pn	02 20 53.0	0.0
IAS	Iasi	1.66	25	⇓iP	Pn	02 20 53.0	0.0
IAS				i S	Sn	02 21 13.4	-1.7
IAS	Iasi	1.66	25	⇓iP	Pn	02 20 53.0	0.0
IAS				⇓iS	Sn	02 21 13.4	-1.7
PRAR	RASCA	1.68	353	⇑iP	Pn	02 20 53.8	+0.6
PRAR	RASCA	1.68	353	⇑iP	Pn	02 20 53.8	+0.6
PRAR	RASCA	1.68	353	⇑iP	Pn	02 20 53.8	+0.6
TLCR		1.70	107	⇓iP	Pn	02 20 53.2	-0.2
TLCR		1.70	107	⇓iP	Pn	02 20 53.2	-0.2
TLCR				i S	Sn	02 21 14.9	-0.9
TLCR		1.70	107	⇓eP	Pn	02 20 53.2	-0.2
CVDA	Cernavoda	1.74	141	⇓iP	Pn	02 20 54.3	+0.4
CVDA	Cernavoda	1.74	141	⇓iP	Pn	02 20 54.3	+0.4
CVDA				i S	Sn	02 21 16.0	-0.7
CVDA	Cernavoda	1.74	141	⇓iP	Pn	02 20 54.3	+0.4
CVDA				i S	Sn	02 21 16.0	-0.7
ICOR	Ion Corvin	1.82	150	⇓iP	Pn	02 20 55.7	+0.7
ICOR	Ion Corvin	1.82	150	⇓iP	Pn	02 20 55.7	+0.7
ICOR				i S	Sn	02 21 17.6	-1.0
ICOR	Ion Corvin	1.82	150	⇓iP	Pn	02 20 55.7	+0.7
ICOR				i S	Sn	02 21 17.6	-1.0
TIRR	Tirgusor	1.83	132	⇓iP	Pn	02 20 55.1	+0.1
TIRR	Tirgusor	1.83	132	⇓iP	Pn	02 20 55.1	+0.1
TIRR				i S	Sn	02 21 17.3	-1.3
TIRR	Tirgusor	1.83	132	ePn	Pn	02 20 54.7	-0.3
TIRR				eSn	Sn	02 21 15.7	-2.9
TIRR	Tirgusor	1.83	132	eP	Pn	02 20 54.7	-0.3
TIRR				e		02 21 15.7	
TIRR	Tirgusor	1.83	132	eP	Pn	02 20 54.7	-0.3
TIRR				i S	Sn	02 21 17.3	-1.3
LOT	Lotru	1.95	264	⇓iP	Pn	02 20 56.8	+0.2
LOT	Lotru	1.95	264	⇓iP	Pn	02 20 56.8	+0.2
LOT				i S	Sn	02 21 21.5	0.0
LOT	Lotru	1.95	264	⇓iP	Pn	02 20 56.8	+0.2
LOT				i S	Sn	02 21 21.5	0.0
MILM	Milestii Mici	2.01	52	⇓iP	Pn	02 20 57.2	0.0
MILM	Milestii Mici	2.01	52	⇓iP	Pn	02 20 57.2	0.0
MILM				i S	Sn	02 21 20.7	-2.0
MILM	Milestii Mici	2.01	52	⇓iP	Pn	02 20 57.2	0.0
ARCR	ARCALIA	2.04	314	⇓iP	Pn	02 20 57.9	+0.2
ARCR	ARCALIA	2.04	314	⇓iP	Pn	02 20 57.9	+0.2
ARCR	ARCALIA	2.04	314	⇓iP	Pn	02 20 57.9	+0.2
ARCR				eS	Sn	02 21 22.4	-1.1
KIS	Kishinev	2.06	50	⇓iP	Pn	02 20 58.0	+0.1
	700nm,0.5s						
KIS				i S	Sn	02 21 22.0	-1.8
	8µm,0.5s						
KIS	Kishinev	2.06	50	⇓iP	Pn	02 20 57.9	+0.1
KIS	Kishinev	2.06	50	⇓iP	Pn	02 20 57.9	+0.1
KIS				i S	Sn	02 21 22.2	-1.6
KIS	Kishinev	2.06	50	i P	Pn	02 20 58.0	+0.1
KIS				Pm		02 20 58.5	
KIS				i S	Sn	02 21 22.0	-1.8
KIS				Sm		02 21 22.5	
KIS	Kishinev	2.06	50	⇓iP	Pn	02 20 58.0	+0.1
KIS				i S	Sn	02 21 22.0	-1.8
KIS				pmax	pmax		
	comp=Z,700nm,0.5s						
KIS				smax	smax		
	comp=N,8µm,0.5s						
KIS				smax	smax		
	comp=E,9µm,0.5s						
KIS	Kishinev	2.06	50	⇓iP	Pn	02 20 57.9	+0.1
	comp=E,700nm,0.5s						
BURAR	Bucovina Array	2.12	335	⇓iP	Pn	02 21 00.3	+1.5
BURAR	Bucovina Array	2.12	335	⇓iP	Pn	02 21 00.3	+1.5
BURAR	Bucovina Array	2.12	335	⇓iP	Pn	02 21 00.3	+1.5
BUR04	Bucovina Ar. S	2.12	335	ePn	Pn	02 20 59.2	+0.4
BUR04				eSn	Sn	02 21 25.9	+0.4
BUR04	Bucovina Ar. S	2.12	335	ePn	Pn	02 20 59.2	+0.4
BUR04				eSn	Sn	02 21 25.9	+0.4
BUR08	Bucovina Ar. S	2.15	336	ePn	Pn	02 21 00.3	+1.1
BUR08	Bucovina Ar. S	2.15	336	ePn	Pn	02 21 00.3	+1.1
ZIMR		2.20	202	⇑iP	Pn	02 20 59.8	+0.1
ZIMR		2.20	202	⇑iP	Pn	02 20 59.8	+0.1
ZIMR				i S	Sn	02 21 26.2	-0.8
EFOR	EFORIE	2.21	136	⇓iP	Pn	02 21 00.3	+0.5
EFOR	EFORIE	2.21	136	⇓iP	Pn	02 21 00.3	+0.5
EFOR				i S	Sn	02 21 26.5	-0.7
EFOR	EFORIE	2.21	136	⇓eP	Pn	02 21 00.2	+0.5
CJR	Cluj-Napoca	2.27	298	⇑iP	Pn	02 21 00.8	+0.2
CJR	Cluj-Napoca	2.27	298	⇑iP	Pn	02 21 00.8	+0.2
CJR	Cluj-Napoca	2.27	298	⇑iP	Pn	02 21 00.8	+0.2
CRAR	CRAIOVA	2.37	236	⇓iP	Pn	02 21 01.9	+0.1
CRAR	CRAIOVA	2.37	236	⇓iP	Pn	02 21 01.9	+0.1
CRAR				i S	Sn	02 21 30.8	0.0
CRAR	CRAIOVA	2.37	236	⇓iP	Pn	02 21 01.9	+0.1
CRAR				i S	Sn	02 21 30.8	0.0
MANR	Mangalia	2.39	141	⇓iP	Pn	02 21 02.5	+0.4
MANR	Mangalia	2.39	141	⇓iP	Pn	02 21 02.5	+0.4

MANR	Mangalia	2.39	141	⇓iP	Pn	02 21 02.5	+0.4
DEV	Deva	2.54	276	⇓iP	Pn	02 21 05.0	+1.0
DEV	Deva	2.54	276	⇓iP	Pn	02 21 05.0	+1.0
DEV				i S	Sn	02 21 35.4	+0.6
DEV	Deva	2.54	276	⇓iP	Pn	02 21 05.0	+1.0
DEV				i S	Sn	02 21 35.4	+0.6
SRE	Strehaia	2.56	247	⇓iP	Pn	02 21 04.5	+0.1
SRE	Strehaia	2.56	247	⇓iP	Pn	02 21 04.5	+0.1
SRE				i S	Sn	02 21 34.3	-1.1
SRE	Strehaia	2.56	247	⇓iP	Pn	02 21 04.5	+0.1
SRE				i S	Sn	02 21 34.3	-1.1
CHRU	Chernivtsi	2.63	351	P	Pn	02 21 03.9	-1.4
CHRU				Pm		02 21 06.2	
CHRU				i S	Sn	02 21 35.8	-1.3
CHRU				Sm		02 21 36.7	
SORM	Soroca	2.75	27	⇓iP	Pn	02 21 06.1	-0.6
SORM	Soroca	2.75	27	⇓iP	Pn	02 21 06.1	-0.7
SORM				i S	Sn	02 21 36.4	-3.2
SORM	Soroca	2.75	27	P	Pn	02 21 06.0	-0.7
SORM	Soroca	2.75	27	⇓eP	Pn	02 21 06.1	-0.7
KSV	Kosov	2.80	340	P	Pn	02 21 07.7	+0.2
KSV				Pm		02 21 09.1	
KSV				eS	Sn	02 21 41.3	+0.3
KSV				Sm		02 21 42.3	
RAKU	Rahkiv	2.83	326	P	Pn	02 21 07.8	-0.1
RAKU				Pm		02 21 09.4	
RAKU				eS	Sn	02 21 41.3	-0.5
RAKU				Sm		02 21 50.2	
DRGR		2.86	294	⇓iPn	Pn	02 21 08.0	-0.3
DRGR		2.86	294	⇑iP	Pn	02 21 07.8	-0.5
DRGR		2.86	294	⇑iP	Pn	02 21 07.8	-0.5
DRGR				i S	Sn	02 21 41.3	-1.2
DRGR		2.86	294	⇓iPn	Pn	02 21 08.0	-0.3
	baz=7.0						
DRGR				i S	Sn	02 21 41.3	-1.2
KMPD	K-Podol’skiy	2.87	359	P	Pn	02 21 06.8	-1.6
KMPD				i S	Sn	02 21 38.7	-3.8
BMR	Baia Mare	2.87	315	⇑iP	Pn	02 21 09.2	+0.8
BMR	Baia Mare	2.87	315	⇑iP	Pn	02 21 09.2	+0.8
BMR	Baia Mare	2.87	315	⇑iP	Pn	02 21 09.2	+0.8
NSLU	Nyzhne Selyshc	2.87	331	⇑iP	Pn	02 21 14.2	+5.8
NSLU				Pm		02 21 14.7	
NSLU				eS	Sn	02 21 52.9	+10
NSLU				Sm		02 22 09.8	
NDNU	Novodnistrovsk	2.96	11	⇑iP	Pn	02 21 09.2	-0.3
NDNU				Pm		02 21 10.0	
NDNU				i S	Sn	02 21 41.4	-3.2
NDNU				Sm		02 21 41.8	
HERR	Herculane	3.01	256	⇑iP	Pn	02 21 10.0	-0.2
HERR	Herculane	3.01	256	⇑iP	Pn	02 21 10.0	-0.2
HERR				i S	Sn	02 21 43.3	-2.5
HERR	Herculane	3.01	256	⇑iP	Pn	02 21 10.0	-0.2
HERR				i S	Sn	02 21 43.3	-2.5
DJES	Djerdap	3.01	251	eSn	Sn	02 21 38.8	-7.1
STNU	Starunia	3.31	336	P	Pn	02 21 13.8	-0.5
STNU				i S	Sn	02 21 52.7	-0.4
KORU	Korolevo	3.38	318	⇓iP	Pn	02 21 15.6	+0.5
KORU				Pm		02 21 16.8	
KORU				eS	Sn	02 21 54.3	-0.3
KORU				Sm		02 22 18.8	
BZS	Buzias	3.44	270	⇓iPn	Pn	02 21 16.1	+0.2
BZS				eSn	Sn	02 21 49.8	-6.2
BZS	Buzias	3.44	270	⇓iP	Pn	02 21 16.1	+0.2
BZS	Buzias	3.44	270	⇓iP	Pn	02 21 16.1	+0.2
BZS	Buzias	3.44	270	⇓iP	Pn	02 21 16.1	+0.2
MEZ	Mezhgor’ye	3.49	325	⇑iP	Pn	02 21 17.0	+0.4
MEZ				eS	Sn	02 21 57.7	+0.5
MDVR	Moldovita	3.52	257	⇓iP	Pn	02 21 16.8	-0.2
MDVR	Moldovita	3.52	257	⇓iP	Pn	02 21 16.8	-0.2
MDVR				i S	Sn	02 21 56.2	-1.7
MDVR	Moldovita	3.52	257	⇓iP	Pn	02 21 16.8	-0.2
MDVR				i S	Sn	02 21 56.2	-1.7
HORU	Horodok	3.52	359	P	Pn	02 21 15.7	-1.3
HORU				eS	Sn	02 21 56.0	-2.0
BRIU	Brid	3.56	319	⇓iP	Pn	02 21 17.9	+0.3
ZAGS	Zajecar	3.59	240	⇑iPn	Pn	02 21 17.1	-0.8
ZAGS				eSn	Sn	02 21 51.0	-8.5
ZAGS	Zajecar	3.59	240	⇑iPn	Pn	02 21 17.1	-0.8
	baz=2.0						
LTVH	L˘'tav˘'rtes,	3.61	300	ePn	Pn	02 21 19.1	+1.0
LTVH				ex	x	02 22 21.4	
TRPA	Tarpa	3.66	313	⇓iP	Pn	02 21 19.2	+0.4
TRPA	Tarpa	3.66	313	⇓iP	Pn	02 21 19.2	+0.4
TRPA	Tarpa	3.66	313	⇓iP	Pn	02 21 19.2	+0.4
KUBS	Kucevo	3.66	251	⇑iPn	Pn	02 21 16.9	-2.0
KUBS				eSn	Sn	02 21 54.5	-6.9
KUBS	Kucevo	3.66	251	⇑iPn	Pn	02 21 16.9	-2.0
	baz=6.0						
BERU	Beregovo	3.67	315	P	Pn	02 21 19.0	0.0
BERU				eS	Sn	02 22 00.0	-1.5
ZAPS	Zavoj	3.69	230	⇓iPn	Pn	02 21 19.1	-0.2
ZAPS				eSn	Sn	02 21 54.6	-7.4
ZAPS	Zavoj	3.69	230	⇓iPn	Pn	02 21 19.1	-0.2
	baz=5.0						
MUKU	Mukachevo	3.80	318	⇑iP	Pn	02 21 21.4	+0.7
PLD	Plovdiv	3.82	201	ePn	Pn	02 21 21.0	0.0
PLD	Plovdiv	3.82	201	ePn	Pn	02 21 21.0	0.0
	baz=4.0						
EDRB	Edirne	3.85	177	eP	Pn	02 21 21.5	+0.1
VTS	Vitosha	3.91	219	⇓iPn	Pn	02 21 22.2	-0.2
VTS	Vitosha	3.91	219	⇑iP	Pn	02 21 22.5	+0.1
VTS	Vitosha	3.91	219	⇑iP	Pn	02 21 22.5	+0.1
VTS				i S	Sn	02 22 05.3	-2.3
VTS	Vitosha	3.91	219	ePn	Pn	02 21 22.2	-0.2
VTS				eSn	Sn	02 21 58.7	-8.9
VTS	Vitosha	3.91	219	P	Pn	02 21 22.0	-0.4
VTS	Vitosha	3.91	219	eP	Pn	02 21 22.2	-0.2
VTS				e		02 21 58.7	
VTS	Vitosha	3.91	219	⇓iPn	Pn	02 21 22.2	-0.2
	baz=5.0						
VTS	Vitosha	3.91	219	⇑iP	Pn	02 21 22.5	+0.1
VTS				i S	Sn	02 22 05.3	-2.3
BOVS	Bovan	4.00	241	⇑iPn	Pn	02 21 23.0	-0.5
BOVS				eSn	Sn	02 22 02.1	-7.4
BOVS	Bovan	4.00	241	⇑iPn	Pn	02 21 23.0	-0.5
SVIS	Svilajnac	4.03	251	eSn	Sn	02 22 02.9	-7.1
UZH	Uzhgorod	4.11	317	⇓iP	Pn	02 21 24.9	0.0
UZH	Uzhgorod	4.11	317	eP	Pn	02 21 25.3	+0.4
UZH				eS	Sn	02 22 12.1	0.0
UZH	Uzhgorod	4.11	317	eP	Pn	02 21 25.3	+0.4
UZH				eS	Sn	02 22 12.1	0.0
PHSR	Pinarhisar	4.13	169	eP	Pn	02 21 26.1	+0.9
SHIU	Shidnytsya	4.13	330	⇓iP	Pn	02 21 26.3	+1.2
STZU	Stuzhytsa	4.25	323	P	Pn	02 21 27.3	+0.6
CTYL	Yalikoy Yolu	4.41	162	eP	Pn	02 21 28.9	0.0
BARS	Barje	4.44	231	⇑iPn	Pn	02 21 29.6	+0.3
BARS				eSn	Sn	02 22 11.3	-8.7
BARS	Barje	4.44	231	⇑iPn	Pn	02 21 29.6	+0.3
	baz=9.0						
LVV	L’vov	4.45	339	eS	Sn	02 22 19.5	-0.8
LVV	L’vov	4.45	339	eP	Pn	02 21 29.4	-0.1
LVV				eS	Sn	02 22 20.2	-0.1
LVV	L’vov	4.45	339	eP	Pn	02 21 29.4	-0.1
LVV				eS	Sn	02 22 20.2	-0.1
GRUS	Gruza	4.51	248	⇑iPn	Pn	02 21 30.0	-0.2
GRUS				eSn	Sn	02 22 13.3	-8.3
GRUS	Gruza	4.51	248	⇑iPn	Pn	02 21 30.0	-0.2
	baz=1.0						
TRUS	Trudelj	4.58	253	⇑iPn	Pn	02 21 31.0	-0.2
TRUS				eSn	Sn	02 22 15.9	-7.5
TRUS	Trudelj	4.58	253	⇑iPn	Pn	02 21 31.0	-0.2
	baz=1.0						
SELS	Selova	4.59	239	⇑iPn	Pn	02 21 30.8	-0.6
SELS				eSn	Sn	02 22 15.0	-8.7
SELS	Selova	4.59	239	⇑iPn	Pn	02 21 30.8	-0.6
	baz=1.0						
RDO	Rodhopi	4.60	189	P	Pn	02 21 31.4	-0.1
RDO	Rodhopi	4.60	189	P	Pn	02 21 31.4	-0.1
RDO	Rodhopi	4.60	189	P	Pn	02 21 31.4	-0.1
SLVT	Silivri	4.63	164	eP	Pn	02 21 31.7	-0.2
CRLT	Corlu	4.65	169	eP	Pn	02 21 32.7	+0.5
CTKS	Kestanelik-??a	4.69	161	eP	Pn	02 21 32.2	-0.4
CRVS	Cervenica-Dubn	4.70	315	eP	Pn	02 21 33.5	+0.7
CRVS	Cervenica-Dubn	4.70	315	ePN	Pn	02 21 33.5	+0.7
CRVS	Cervenica-Dubn	4.70	315	eP	Pn	02 21 33.5	+0.7
KWP	Kalwaria Pacla	4.70	328	eP	Pn	02 21 34.3	+1.4
KWP	Kalwaria Pacla	4.70	328	ePn	Pn	02 21 34.1	+1.3
KWP	Kalwaria Pacla	4.70	328	eP	Pn	02 21 34.1	+1.3
KWP	Kalwaria Pacla	4.70	328	eP	Pn	02 21 34.1	+1.3
FGSL	Fruska Gora	4.75	266	⇑iPn	Pn	02 21 33.7	+0.2
	baz=2.0						
FRGS	Fruska Gora	4.75	266	⇑iPn	Pn	02 21 33.7	+0.2
FRGS	Fruska Gora	4.75	266	ePn	Pn	02 21 33.4	-0.1
NVR	Nevrokopi	4.75	205	P	Pn	02 21 33.8	+0.2
NVR	Nevrokopi	4.75	205	P	Pn	02 21 33.8	+0.2
NVR	Nevrokopi	4.75	205	P	Pn	02 21 33.8	+0.2
ELBA	Catalca	4.75	162	i P	Pn	02 21 32.9	-0.7
ELBA	Catalca	4.75	162	P	Pn	02 21 32.9	-0.7
KLYT	Kilyos	4.80	157	eP	Pn	02 21 33.7	-0.5
ALN	Alexandroupoli	4.81	184	eP	Pn	02 21 34.6	+0.3
ALN	Alexandroupoli	4.81	184	ePn	Pn	02 21 34.6	+0.4
ALN	Alexandroupoli	4.81	184	P	Pn	02 21 34.2	-0.1
ALN	Alexandroupoli	4.81	184	eP	Pn	02 21 34.7	+0.4
ALN	Alexandroupoli	4.81	184	P	Pn	02 21 34.2	-0.1
KESN	Edirne-Kesan	4.87	179	i P	Pn	02 21 34.9	-0.5
KESN				i S	Sn	02 22 27.4	-3.5
KESN	Edirne-Kesan	4.87	179	P	Pn	02 21 34.9	-0.5
DIVS	Divibare	4.90	253	⇓iPn	Pn	02 21 35.0	-0.6
DIVS				eSn	Sn	02 22 24.1	-7.2
DIVS	Divibare	4.90	253	ePn	Pn	02 21 35.0	-0.6
DIVS				eSn	Sn	02 22 25.2	-6.1
DIVS	Divibare	4.90	253	⇓iPn	Pn	02 21 35.0	-0.6
	baz=3.0						
SBT3	Marmara-Eregli	4.92	167	eP	Pn	02 21 36.3	+0.6
ENEZ	Enez	4.96	183	eP	Pn	02 21 36.7	+0.3
ISK	Istanbul-Kandi	4.98	157	eP	Pn	02 21 36.5	-0.2
KAVV	Kandilli-Istan	4.99	157	eP	Pn	02 21 36.4	-0.3
IVAS	Ivanjica	5.01	247	⇑iPn	Pn	02 21 36.5	-0.6
IVAS				eSn	Sn	02 22 25.4	-8.5
IVAS	Ivanjica	5.01	247	⇑iPn	Pn	02 21 36.5	-0.6
	baz=2.0						
ERIK	Erikli-Kesan	5.02	180	eP	Pn	02 21 36.9	-0.3
SART	Tekirdag	5.03	174	i P	Pn	02 21 37.1	-0.2
SART	Tekirdag	5.03	174	P	Pn	02 21 37.1	-0.2
RKY	Sarkoy-Tekirda	5.03	174	eP	Pn	02 21 36.8	-0.5
SRS	Serrai	5.05	206	P	Pn	02 21 37.2	-0.3
SRS	Serrai	5.05	206	P	Pn	02 21 37.2	-0.3
SRS	Serrai	5.05	206	P	Pn	02 21 37.2	-0.3
SRS	Serrai	5.05	206	P	Pn	02 21 37.2	-0.3
PSZ	Piszkesteto	5.06	298	⇓iP	Pn	02 21 36.7	-1.0
PSZ	Piszkesteto	5.06	298	⇓iP	Pn	02 21 36.7	-1.0
PSZ	Piszkesteto	5.06	298	ePKPPKPdf	Pn	02 21 37.1	-0.6
PSZ	Piszkesteto	5.06	298	ePn	Pn	02 21 36.4	-1.3
PSZ	Piszkesteto	5.06	298	eP	Pn	02 21 36.4	-1.3
PSZ	Piszkesteto	5.06	298	ePn	Pn	02 21 36.4	-1.3
PSZ	Piszkesteto	5.06	298	⇓iP	Pn	02 21 36.7	-1.0
TEKS	Tekeris	5.08	259	⇓iPn	Pn	02 21 37.8	-0.1
TEKS	Tekeris	5.08	259	⇓iPn	Pn	02 21 37.8	-0.1
SILT	Sile	5.08	152	eP	Pn	02 21 37.4	-0.5
STIP	Stip	5.08	220	⇓iPn	Pn	02 21 35.2	-2.8
SEV	Sevastopol’	5.19	100	eP	Pn	02 21 38.5	-0.9
SEV				Pm		02 21 39.3	
SEV				eS	Sn	02 22 36.0	-2.0
SEV				Sm		02 22 37.3	
SEV	Sevastopol’	5.19	100	eP	Pn	02 21 38.5	-0.9
SEV				eS	Sn	02 22 36.0	-2.0
SEV				pmax	pmax		
	comp=Z,216nm,0.4s						
SEV				smax	smax		
	comp=N,60nm,0.4s						
SEV				smax	smax		
	comp=E,100nm,0.4s						
SEV	Sevastopol’	5.19	100	eP	Pn	02 21 38.5	-0.9
	comp=E,216nm,0.4s						
SEV				eS	Sn	02 22 36.0	-2.0
BUY	Buyukada	5.20	158	eP	Pn	02 21 38.9	-0.7
VAY	Valandovo	5.23	215	ePn	Pn	02 21 39.0	-1.0
VAY	Valandovo	5.23	215	i Pn	Pn	02 21 41.5	+1.5
VAY	Valandovo	5.23	215	ePn	Pn	02 21 39.0	-1.0
	baz=4.0						
KNT	Kendrikon	5.24	211	P	Pn	02 21 40.6	+0.4
KNT	Kendrikon	5.24	211	P	Pn	02 21 40.6	+0.4
KNT	Kendrikon	5.24	211	P	Pn	02 21 40.6	+0.4
THAS	Thassos island	5.25	195	P	Pn	02 21 39.5	-0.8
THAS	Thassos island	5.25	195	P	Pn	02 21 39.5	-0.8
SMTH	Samothraki Isl	5.27	188	P	Pn	02 21 40.7	+0.1
SMTH	Samothraki Isl	5.27	188	P	Pn	02 21 40.7	+0.1
SMTH	Samothraki Isl	5.27	188	P	Pn	02 21 40.7	+0.1
SJES	Sjenica	5.28	245	⇑iPn	Pn	02 21 40.5	-0.2
SJES				eSn	Sn	02 22 32.7	-7.7
AK11	Malin Array Si	5.29	19	ePn	Pn	02 21 39.9	-0.8
AK11				eSn	Sn	02 22 35.4	-5.1
AK11	Malin Array Si	5.29	19	ePn	Pn	02 21 39.9	-0.8
AK11				eSn	Sn	02 22 35.4	-5.1
GELI	Tayfur-Gelibol	5.29	180	eP	Pn	02 21 40.6	-0.2
KIEV	Kiev	5.32	19	ePn	Pn	02 21 40.3	-0.7
KIEV				eSn	Sn	02 22 35.5	-5.5
KIEV	Kiev	5.32	19	⇓eP	Pn	02 21 39.9	-1.1
KIEV	Kiev	5.32	19	eP	Pn	02 21 39.9	-1.1
KIEV	Kiev	5.32	19	ePn	Pn	02 21 40.3	-0.7
KIEV				eSn	Sn	02 22 35.5	-5.5
KAND	Kocaeli-Kandir	5.32	149	i P	Pn	02 21 40.5	-0.7
KAND				i S	Sn	02 22 37.6	-3.7
KAND	Kocaeli-Kandir	5.32	149	P	Pn	02 21 40.5	-0.7
LPK	Lapseki	5.32	178	eP	Pn	02 21 41.4	+0.2
AKASG	Malin Array Be	5.33	19	P	Pn	02 21 40.1	-1.1
	comp=E,5.1nm,0.3s,baz=205,slow=12,SNR=13						
AKASG				S	Sn	02 22 35.8	-5.5
	comp=E,47nm,0.3s,baz=200,slow=21,SNR=13						
AKBB	Malin Array Si	5.33	19	ePn	Pn	02 21 40.3	-0.9
AKBB				eSn	Sn	02 22 35.8	-5.5
AKBB	Malin Array Si	5.33	19	eP	Pn	02 21 40.3	-0.9
AKBB				e		02 22 35.8	
AKBB	Malin Array Si	5.33	19	eP	Pn	02 21 40.3	-0.9
AKBB				eS	Sn	02 22 35.8	-5.5
SBT5	Esenkoy-Cinarc	5.35	160	eP	Pn	02 21 41.4	-0.1
BBLS	Lazići	5.38	253	⇑iPn	Pn	02 21 42.1	0.0
BBLS				eSn	Sn	02 22 35.7	-7.2
BBLS	Lazići	5.38	253	⇑iPn	Pn	02 21 42.1	0.0
	baz=4.0						
HRT	Hereke	5.39	154	eP	Pn	02 21 42.1	0.0
SIM	Simferopol’	5.41	95	eP	Pn	02 21 40.2	-2.2
SIM				Pm		02 21 42.9	
SIM				eS	Sn	02 22 40.5	-2.9
SIM				Sm		02 22 44.2	
SIM	Simferopol’	5.41	95	eP	Pn	02 21 39.9	-2.5
SIM				eS	Sn	02 22 40.0	-3.4
SIM				pmax	pmax		
	comp=Z,217nm,0.3s						
SIM				smax	smax		
	comp=E,77nm,0.3s						
SIM	Simferopol’	5.41	95	eP	Pn	02 21 39.9	-2.5
	comp=E,217nm,0.3s						
SIM				eS	Sn	02 22 40.0	-3.4
EDC	Edincik	5.44	169	eP	Pn	02 21 42.6	-0.2
MORH	M˘‡r˘¡gy, Hung	5.51	278	⇑ePKPPKPdf	Pn	02 21 44.3	+0.5
MORH	M˘‡r˘¡gy, Hung	5.51	278	ePn	Pn	02 21 44.1	+0.3
GADA	Gvkgeada	5.52	185	eP	Pn	02 21 44.2	+0.4
GADA	Gvkgeada	5.52	185	P	Pn	02 21 44.3	+0.4
GADA	Gvkgeada	5.52	185	P	Pn	02 21 44.3	+0.4
GADA	Gvkgeada	5.52	185	P	Pn	02 21 44.3	+0.4
YLV	Yalova	5.54	157	eP	Pn	02 21 44.0	-0.2
YAL	Yalta	5.54	100	⇑iP	Pn	02 21 43.8	-0.3
YAL				Pm		02 21 44.2	
YAL				eS	Sn	02 22 45.1	-1.4
YAL				Sm		02 22 48.3	
YAL	Yalta	5.54	100	⇑iP	Pn	02 21 43.8	-0.3
YAL				eS	Sn	02 22 45.1	-1.4
YAL				pmax	pmax		
	comp=Z,60nm,0.2s						
YAL				smax	smax		
	comp=E,65nm,0.2s						
YAL				smax	smax		
	comp=N,63nm,0.3s						
YAL	Yalta	5.54	100	i P	Pn	02 21 43.8	-0.3
	comp=N,60nm,0.2s						
YAL				eS	Sn	02 22 45.1	-1.4
	comp=N,63nm,0.3s						
KCTX	Karacabey (Bur	5.59	165	eP	Pn	02 21 45.3	+0.4
HAPS	Han Pijesak,BI	5.61	256	ePn	Pn	02 21 43.8	-1.4
NIE	Niedzica	5.62	314	eP	Pn	02 21 46.1	+0.9
NIE	Niedzica	5.62	314	eP	Pn	02 21 46.1	+0.9
NIE	Niedzica	5.62	314	eP	Pn	02 21 46.1	+0.9
KDZE	Karadeniz Ereo	5.66	139	eP	Pn	02 21 45.9	+0.1
ALU	Alushta	5.67	97	⇑eP	Pn	02 21 45.0	-0.8
ALU				Pm		02 21 45.4	
ALU				eS	Sn	02 22 47.8	-1.7
ALU				Sm		02 22 52.8	
ALU	Alushta	5.67	97	⇓eP	Pn	02 21 45.0	-0.8
ALU				eS	Sn	02 22 47.8	-1.7
ALU				pmax	pmax		
	comp=Z,55nm,0.4s						
ALU				smax	smax		
	comp=N,43nm,0.3s						
ALU				smax	smax		
	comp=E,163nm,0.3s						
ALU	Alushta	5.67	97	eP	Pn	02 21 45.0	-0.8
	comp=E,55nm,0.4s						
ALU				eS	Sn	02 22 47.8	-1.7
OUR	Ouranopolis	5.67	200	P	Pn	02 21 44.4	-1.5
OUR	Ouranopolis	5.67	200	P	Pn	02 21 44.4	-1.5
OUR	Ouranopolis	5.67	200	P	Pn	02 21 44.4	-1.5
OUR	Ouranopolis	5.67	200	P	Pn	02 21 44.4	-1.5
SAUV	Serdivan-Sakar	5.68	149	eP	Pn	02 21 45.3	-0.8
SPNC	Sapanca-Adapaz	5.72	150	eP	Pn	02 21 48.3	+1.7
ADVT	Abdulvahap	5.76	155	eP	Pn	02 21 47.1	-0.1
KRUS	Krusevo	5.78	223	i Pn	Pn	02 21 47.7	+0.3
SAHE	Sakarya_HENDEK	5.78	145	i P	Pn	02 21 46.4	-1.1
SAHE				i S	Sn	02 22 46.9	-5.7
SAHE	Sakarya_HENDEK	5.78	145	P	Pn	02 21 46.4	-1.1
BTIN	Bart˜–n	5.81	132	i P	Pn	02 21 45.5	-2.3
BTIN				i S	Sn	02 22 48.2	-4.8
BTIN	Bart˜–n	5.81	132	P	Pn	02 21 45.5	-2.3
BOZC	Bozcaada	5.86	184	eP	Pn	02 21 49.3	+0.8
BOZC	Bozcaada	5.86	184	i P	Pn	02 21 48.5	0.0
BOZC				i S	Sn	02 22 52.6	-1.8
EZN	Ezine	5.87	181	eP	Pn	02 21 48.8	+0.2
EZN	Ezine	5.87	181	P	Pn	02 21 48.6	0.0
EZN	Ezine	5.87	181	P	Pn	02 21 48.6	0.0
EZN	Ezine	5.87	181	P	Pn	02 21 48.6	0.0
LIA	Limnos Island	5.88	190	P	Pn	02 21 48.3	-0.4
LIA	Limnos Island	5.88	190	P	Pn	02 21 48.3	-0.4
LIA	Limnos Island	5.88	190	P	Pn	02 21 48.3	-0.4
GEYV	SAKARYA_Geyve	5.90	151	i P	Pn	02 21 49.0	0.0
GEYV				i S	Sn	02 22 51.4	-3.9
GEYV	SAKARYA_Geyve	5.90	151	P	Pn	02 21 49.0	0.0
LANS	Liptovska Anna	5.90	308	eP	Pn	02 21 50.3	+1.3
LANS	Liptovska Anna	5.90	308	ePN	Pn	02 21 50.3	+1.3
LANS	Liptovska Anna	5.90	308	eP	Pn	02 21 50.3	+1.3
VYHS	Vyhne	5.95	301	eP	Pn	02 21 49.7	+0.1
VYHS	Vyhne	5.95	301	ePN	Pn	02 21 49.7	+0.1
VYHS				ePG		02 22 14.6	
VYHS	Vyhne	5.95	301	eP	Pn	02 21 49.7	+0.1
BAYC	CANAKKALE_Bayr	5.95	180	i P	Pn	02 21 49.5	-0.3
BAYC				i S	Sn	02 22 53.3	-3.3
BAYC	CANAKKALE_Bayr	5.95	180	P	Pn	02 21 49.5	-0.3
UPM	Unac-Piva	5.99	248	ePn	Pn	02 21 50.5	+0.1
GULT	Gulveren	6.02	150	eP	Pn	02 21 51.1	+0.4
SUDU	Sudak	6.04	95	⇓eP	Pn	02 21 50.0	-0.8
SUDU				Pm		02 21 51.4	
SUDU				eS	Sn	02 22 56.3	-2.3
SUDU				Sm		02 23 00.7	
SUDU	Sudak	6.04	95	⇓iP	Pn	02 21 50.0	-0.8
SUDU				eS	Sn	02 22 56.3	-2.3
SUDU				pmax	pmax		
	comp=Z,90nm,0.4s						
SUDU				smax	smax		
	comp=E,123nm,0.4s						
SUDU				smax	smax		
	comp=N,26nm,0.4s						
SUDU	Sudak	6.04	95	i P	Pn	02 21 50.0	-0.8
	comp=N,90nm,0.4s						
SUDU				eS	Sn	02 22 56.3	-2.3
	comp=N,26nm,0.4s						
BTAS	Taskesti	6.08	146	i P	Pn	02 21 51.8	+0.3
BTAS	Taskesti	6.08	146	P	Pn	02 21 51.8	+0.3
PAIG	Paliouri	6.13	201	P	Pn	02 21 51.6	-0.5
PAIG	Paliouri	6.13	201	P	Pn	02 21 51.6	-0.5
PAIG	Paliouri	6.13	201	P	Pn	02 21 51.6	-0.5
PDG	Podgorica	6.17	241	ePn	Pn	02 21 53.0	+0.4
TTG	Podgorica	6.17	241	ePn	Pn	02 21 48.3	-4.3
TTG				eSn	Sn	02 22 58.1	-3.6
TTG	Podgorica	6.17	241	eP	Pn	02 21 48.3	-4.3
TTG				e		02 22 58.1	
FNA	Florina	6.18	219	ePn	Pn	02 21 53.7	+0.8
FNA	Florina	6.18	219	eP	Pn	02 21 53.7	+0.8
FNA	Florina	6.18	219	eP	Pn	02 21 53.7	+0.8
MDUB	Mudurnu	6.24	145	eP	Pn	02 21 53.9	+0.1
DURS	Dursunbey	6.26	166	i P	Pn	02 21 53.3	-0.7
DURS				i S	Sn	02 23 02.1	-2.0
DURS	Dursunbey	6.26	166	P	Pn	02 21 53.3	-0.7
FEO	Feodosiya	6.29	93	⇓eP	Pn	02 21 53.7	-0.5
FEO				Pm		02 21 57.2	
FEO				eS	Sn	02 23 04.3	-0.3
FEO				Sm		02 23 05.6	
FEO	Feodosiya	6.29	93	⇓eP	Pn	02 21 53.7	-0.5
FEO				eS	Sn	02 23 04.3	-0.3
FEO				pmax	pmax		
	comp=Z,31nm,0.2s						
FEO				smax	smax		
	comp=N,44nm,0.2s						
FEO				smax	smax		
	comp=E,31nm,0.3s						
FEO	Feodosiya	6.29	93	eP	Pn	02 21 53.7	-0.5
	comp=E,31nm,0.2s						
FEO				eS	Sn	02 23 04.3	-0.3
	comp=E,44nm,0.2s						
BCAM	Yenicaga	6.34	138	i P	Pn	02 21 54.5	-0.6
BCAM				i S	Sn	02 23 01.0	-5.1
BCAM	Yenicaga	6.34	138	P	Pn	02 21 54.5	-0.6
DRME	Dracevica, Mon	6.35	239	ePn	Pn	02 21 56.4	+1.3
STEP	BALIKESIR_Sava	6.38	172	i P	Pn	02 21 54.6	-0.9
STEP				i S	Sn	02 23 03.6	-3.3
STEP	BALIKESIR_Sava	6.38	172	P	Pn	02 21 54.6	-0.9
OJC	Ojcow	6.39	318	eP	Pn	02 21 55.4	-0.2
OJC	Ojcow	6.39	318	ePn	Pn	02 21 54.8	-0.8
OJC	Ojcow	6.39	318	eP	Pn	02 21 54.8	-0.8
OJC	Ojcow	6.39	318	eP	Pn	02 21 54.8	-0.8
BORA	Eskisehir	6.49	152	eP	Pn	02 21 57.3	+0.2
BORA	Eskisehir	6.49	152	i P	Pn	02 21 56.8	-0.3
BORA				i S	Sn	02 23 05.1	-4.7
BORA	Eskisehir	6.49	152	P	Pn	02 21 56.8	-0.3
SIGR	SIGRI	6.50	185	eP	Pn	02 21 55.9	-1.2
BZK	Bozkurt	6.58	122	eP	Pn	02 21 56.2	-1.9
TREB	Trebinje	6.58	246	ePn	Pn	02 22 00.0	+1.8
DKL	Dikili	6.63	177	eP	Pn	02 22 00.2	+1.4
CMDR	Camlidere-ANKA	6.78	138	i P	Pn	02 22 00.2	-0.9
CMDR				i S	Sn	02 23 11.7	-5.3
CMDR	Camlidere-ANKA	6.78	138	P	Pn	02 22 00.2	-0.9
XOR	Xorichti	6.79	202	P	Pn	02 22 00.2	-0.8
XOR	Xorichti	6.79	202	P	Pn	02 22 00.2	-0.8
XOR	Xorichti	6.79	202	P	Pn	02 22 00.2	-0.8
JAVC	Velka Javorina	6.80	301	ePn	Pn	02 22 02.2	+1.0
JAVC	Velka Javorina	6.80	301	ePN	Pn	02 22 02.2	+1.0
AOS	Alonnisos	6.81	198	P	Pn	02 21 59.9	-1.4
AOS	Alonnisos	6.81	198	P	Pn	02 21 59.9	-1.4
AOS	Alonnisos	6.81	198	P	Pn	02 21 59.9	-1.4
SIMA	Simav-Kutahya	6.85	164	eP	Pn	02 22 01.9	-0.1
AUMIH	MIHALICIK	6.87	146	eP	Pn	02 22 02.4	+0.1
AUMIH	MIHALICIK	6.87	146	i P	Pn	02 22 01.9	-0.4
AUMIH	MIHALICIK	6.87	146	P	Pn	02 22 01.9	-0.4
STON	Ston	6.93	249	ePn	Pn	02 22 02.7	-0.2
STON				Sn	Sn	02 23 18.6	-1.5
STON	Ston	6.93	249	ePn	Pn	02 22 04.1	+1.2
ESKT	Eskisehir	6.95	151	i P	Pn	02 22 02.9	-0.4
SEYT	Eskypehyr	6.95	151	P	Pn	02 22 02.9	-0.4
ILGA	Ilgaz	7.00	129	ePn	Pn	02 22 03.3	-0.8
ILGA	Ilgaz	7.00	129	ePn	Pn	02 22 03.3	-0.8
SINO	SINOP_Merkez	7.27	117	i P	Pn	02 22 03.2	-4.4
SINO				i S	Sn	02 23 20.9	-7.6
MORC	Moravsky Berou	7.30	307	ePn	Pn	02 22 07.4	-0.5
MORC	Moravsky Berou	7.30	307	ePn	Pn	02 22 06.7	-1.2
MORC	Moravsky Berou	7.30	307	ePN	Pn	02 22 06.7	-1.2
CHOS	Chios island	7.31	183	eP	Pn	02 22 08.5	+0.3
AGG	Agios Georgios	7.35	206	ePn	Pn	02 22 07.9	-0.8
AGG	Agios Georgios	7.35	206	ePn	Pn	02 22 07.9	-0.8
ANTO	Ankara	7.43	139	ePn	Pn	02 22 06.6	-3.2
ANTO	Ankara	7.43	139	eP	Pn	02 22 06.6	-3.2
ANTO	Ankara	7.43	139	eP	Pn	02 22 06.6	-3.2
BOYT	Boyabat	7.44	122	i P	Pn	02 22 08.9	-1.0
BOYT	Boyabat	7.44	122	P	Pn	02 22 08.9	-1.0
DIKM	Dikmen	7.51	119	eP	Pn	02 22 08.9	-2.0
VRAC	Vranov	7.63	302	P	Pn	02 22 12.3	-0.1
	comp=E,0.5nm,0.3s,baz=110,slow=12,SNR=18						
VRAC	Vranov	7.63	302	ePN	Pn	02 22 12.5	+0.1
CONA	Conrad Observa	7.64	291	ePn	Pn	02 22 13.4	+0.7
	comp=E,0.8nm,0.4s						
CONA	Conrad Observa	7.64	291	Pn	Pn	02 22 13.4	+0.7
	comp=E,0.8nm,0.4s						
KRUC	Moravsky	7.65	300	ePn	Pn	02 22 12.8	+0.1
KRUC	Moravsky	7.65	300	ePN	Pn	02 22 12.8	+0.1
CRES	Cresnjev	7.74	275	ePn	Pn	02 22 14.9	+1.0

ARSA	Arzberg	7.75	286	*e*Pn	Pn	02 22 12.1	-1.9
	comp=E,0.7nm,0.3s						
ARSA	Arzberg	7.75	286	Pn	Pn	02 22 12.1	-1.9
	comp=E,0.7nm,0.3s						
ANN	Anapa	7.76	93	*e*P	Pn	02 22 11.1	-3.0
ANN				*e*S	Sn	02 23 35.9	-4.3
ANN				pmax	pmax		
	comp=Z,65nm,1.6s						
ANN	Anapa	7.76	93	*e*P	Pn	02 22 11.1	-3.0
	comp=Z,65nm,1.6s						
ANN				*e*S	Sn	02 23 35.9	-4.3
AYDB	Zeytinkoy-Aydi	7.81	172	*e*P	Pn	02 22 11.8	-3.2
BR131	Keskin Array S	7.94	136	*e*Pn	Pn	02 22 16.0	-0.7
BR131	Keskin Array S	7.94	136	*e*Pn	Pn	02 22 16.0	-0.7
BRTR	Keskin Array B	7.94	136	P	Pn	02 22 16.1	-0.8
	comp=Z,0.7nm,0.3s,baz=319,slow=11,SNR=26						
SOKA	Soboth	8.03	281	*e*Pn	Pn	02 22 17.2	-0.7
	comp=Z,1.9nm,0.5s						
SOKA	Soboth	8.03	281	Pn	Pn	02 22 17.2	-0.7
	comp=Z,1.9nm,0.5s						
CORM	Corum	8.11	130	*e*P	Pn	02 22 18.7	-0.4
HAVZ	Havza	8.14	121	*i* P	Pn	02 22 17.9	-1.4
HAVZ				*i* S	Sn	02 23 47.9	-1.7
HAVZ	Havza	8.14	121	P	Pn	02 22 17.9	-1.4
HAVZ				S	Sn	02 23 47.9	-1.7
SAMS	Samsun-Alacam	8.25	118	*i* P	Pn	02 22 17.9	-3.0
SAMS				*i* S	Sn	02 23 47.6	-4.8
SAMS	Samsun-Alacam	8.25	118	P	Pn	02 22 17.9	-3.0
DPC	Dobruska-Polom	8.27	308	*e*P	Pn	02 22 22.7	+1.7
DPC	Dobruska-Polom	8.27	308	*e*P	Pn	02 22 22.7	+1.7
DPC	Dobruska-Polom	8.27	308	*e*P	Pn	02 22 22.7	+1.7
OBKA	Obir	8.36	280	*e*Pn	Pn	02 22 21.1	-1.2
	comp=Z,1.6nm,0.4s						
OBKA	Obir	8.36	280	Pn	Pn	02 22 21.1	-1.2
	comp=Z,1.6nm,0.4s						
SUW	Suwalki	8.60	347	*e*P	Pn	02 22 23.9	-1.6
SUW	Suwalki	8.60	347	*e*Pn	Pn	02 22 23.9	-1.5
SUW	Suwalki	8.60	347	*e*P	Pn	02 22 23.9	-1.5
SUW	Suwalki	8.60	347	*e*Pn	Pn	02 22 23.9	-1.5
SUW	Suwalki	8.60	347	*e*P	Pn	02 22 24.5	-0.9
	SNR=95						
MOA	Molln	8.68	289	*e*Pn	Pn	02 22 26.6	0.0
	comp=Z,0.5nm,0.4s						
MOA	Molln	8.68	289	Pn	Pn	02 22 26.6	0.0
	comp=Z,0.5nm,0.4s						
GOPC	GO Pecny, Ondr	8.95	302	*e*P	Pn	02 22 30.5	+0.2
GOPC	GO Pecny, Ondr	8.95	302	*e*P	Pn	02 22 30.5	+0.2
GOPC	GO Pecny, Ondr	8.95	302	*e*P	Pn	02 22 30.5	+0.2
MYKA	Terra Mystica	8.99	281	*e*Pn	Pn	02 22 28.9	-1.9
	comp=Z,1.4nm,0.4s						
MYKA	Terra Mystica	8.99	281	Pn	Pn	02 22 28.9	-1.9
	comp=Z,1.4nm,0.4s						
NACGM	Naroch	9.22	1	*e*P	Pn	02 22 31.0	-2.8
NACGM				*e*S	Sn	02 24 12.0	-3.6
GEA0	GERESS Array S	9.26	294	*e*Pn	Pn	02 22 35.9	+1.3
GEA0	GERESS Array S	9.26	294	*e*Pn	Pn	02 22 35.8	+1.3
GEC2	GERESS Array S	9.27	294	*e*Pn	Pn	02 22 37.1	+2.5
GEC2	GERESS Array S	9.27	294	*e*P	Pn	02 22 37.1	+2.5
GEC2	GERESS Array S	9.27	294	*e*P	Pn	02 22 37.1	+2.5
GERES	GERESS Array B	9.27	294	P	Pn	02 22 35.1	+0.5
	comp=Z,0.2nm,0.3s,baz=105,slow=14,SNR=20						
KHC	Kasperske Hory	9.42	296	*e*P	Pn	02 22 38.0	+1.4
KHC	Kasperske Hory	9.42	296	*e*Pn	Pn	02 22 37.7	+1.1
KHC	Kasperske Hory	9.42	296	*e*P	Pn	02 22 37.7	+1.1
KHC	Kasperske Hory	9.42	296	*e*P	Pn	02 22 37.7	+1.1
IDID	Didziasalis	9.63	1	*e*P	Pn	02 22 36.9	-2.5
IDID				IAmb	IAmb	02 22 38.6	
	comp=Z,5.3nm,0.8s						
IDID	Didziasalis	9.63	1	*e*P	Pn	02 22 36.9	-2.5
IIGN	Ignalina	9.67	359	*e*P	Pn	02 22 37.0	-2.9
IIGN				IAmb	IAmb	02 22 38.1	
	comp=Z,5.6nm,0.5s						
IIGN	Ignalina	9.67	359	*e*P	Pn	02 22 37.0	-2.9
TIP	Timpagrande	9.71	231	*e*Pn	Pn	02 22 41.0	+0.3
TIP	Timpagrande	9.71	231	*e*Pn	Pn	02 22 41.0	+0.3
ISAL	Salakas	9.89	359	*e*P	Pn	02 22 39.4	-3.5
ISAL				IAmb	IAmb	02 22 43.1	
	comp=Z,7.3nm,0.8s						
ISAL	Salakas	9.89	359	*e*P	Pn	02 22 39.4	-3.5
VORD	Divnogorie	10.01	54	*e*P	Pn	02 22 42.9	-1.5
VORD				*e*S	Sn	02 24 28.1	-6.6
VORD				pmax	pmax		
	comp=Z,20nm,0.8s						
VORD				smax	smax		
	comp=E,60nm,0.6s						
VORD	Divnogorie	10.01	54	*e*P	Pn	02 22 42.9	-1.5
	comp=E,20nm,0.8s						
VORD				*e*S	Sn	02 24 28.1	-6.6
VSR	Storozhevoye	10.05	52	*e*P	Pn	02 22 43.4	-1.7
VSR				*e*S	Sn	02 24 28.9	-6.9
VSR				pmax	pmax		
	comp=Z,10.0nm,0.4s						
VSR				smax	smax		
	comp=N,140nm,1.0s						
VSR	Storozhevoye	10.05	52	*e*P	Pn	02 22 43.4	-1.7
	comp=N,10.0nm,0.4s						
VSR				*e*S	Sn	02 24 28.9	-6.9
	comp=N,140nm,1.0s						
IZAR	Zarasai	10.07	359	*e*P	Pn	02 22 41.7	-3.6
IZAR				IAmb	IAmb	02 22 44.3	
	comp=Z,9.1nm,0.4s						
WTTA	Wattenberg	10.39	284	*i* Pn	Pn	02 22 50.1	+0.2
WTTA	Wattenberg	10.39	284	Pn	Pn	02 22 50.1	+0.2
IDI	Anoyia	10.47	187	P	Pn	02 22 52.0	+1.1
	comp=Z,0.1nm,0.3s,baz=198,slow=20,SNR=2.2						
PBUR	Paburg˜	10.74	346	*e*P	Pn	02 22 52.4	-1.9
	SNR=94						
MOTA	Moosalm	10.75	284	*i* Pn	Pn	02 22 55.1	+0.3
MOTA	Moosalm	10.75	284	Pn	Pn	02 22 55.1	+0.3
RETA	Reutte	10.99	285	*i* Pn	Pn	02 22 59.0	+1.1
RETA	Reutte	10.99	285	Pn	Pn	02 22 59.0	+1.1
OBN	Obninsk	11.39	31	⇑*e*P	Pn	02 23 02.8	-0.2
OBN	Obninsk	11.39	31	*e*P	Pn	02 23 02.8	-0.2
DAVOX	Davos/Dischmat	11.58	281	P	Pn	02 23 08.2	+2.4
	baz=156,slow=10.0						
KIV	Kislovodsk	11.62	93	*e*P	Pn	02 23 05.9	-0.4
KIV				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KIV	Kislovodsk	11.62	93	*e*P	Pn	02 23 05.9	-0.4
	comp=Z,8.0nm,0.9s						
KVAR	Kislovodsk Arr	11.62	93	P	Pn	02 23 00.8	-5.5
	baz=63,slow=4.5,SNR=3.3						
NCK	Nalchik	12.37	94	⇓*e*P	Pn	02 23 15.3	-0.9
NCK	Nalchik	12.37	94	*e*P	Pn	02 23 15.3	-0.9
VSU	Vasula	12.79	1	*i* P	Pn	02 23 17.3	-4.1
MTSE	Matsula	13.14	354	*e*P	Pn	02 23 22.4	-3.6
	SNR=93						
FINES	FINESS Array B	15.78	359	P	Pn	02 23 54.6	-4.9
	comp=Z,0.3nm,0.3s,baz=178,slow=14,SNR=12						
FINES				S	S	02 27 00.3	+0.2
	comp=Z,0.5nm,0.3s,baz=175,slow=20,SNR=3.9						
FIA1	FINESS Array S	15.78	359	*e*Pn	Pn	02 23 54.2	-5.3
AKT	Akhty	15.93	98	*e*P	P	02 24 05.0	+2.0
AKT				*e*S	Sn	02 26 59.9	+1.8
AKT				pmax	pmax		
	comp=Z,5.0nm,0.7s						
AKT				smax	smax		
	comp=N,4.0nm,0.4s						
AKT				smax	smax		
	comp=E,3.0nm,0.3s						
AKT	Akhty	15.93	98	*e*P	P	02 24 05.0	+2.0
	comp=E,5.0nm,0.7s						
HFS	Hagfors	16.35	337	P	Pn	02 24 03.9	-2.7
	comp=E,0.3nm,0.3s,baz=140,slow=15,SNR=9.0						
KLMR	Klimovskoe	17.00	22	*e*P	Pn	02 24 10.3	-4.2
KLMR				*e*		02 27 19.0	
KLMR				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KLMR	Klimovskoe	17.00	22	*e*Pn	Pn	02 24 10.3	-4.2
KLMR				AMP		02 24 25.1	
	comp=Z,7.0nm,1.1s						
KLMR				*e*Sn	Sn	02 27 19.0	-4.5
KONO	Kongsberg	17.26	330	⇑*e*P	P	02 24 17.1	-0.2
NC403	NORSAR Array S	17.68	336	*e*P	P	02 24 22.1	+0.1
NC405	NORSAR Array S	17.71	336	*e*P	P	02 24 21.3	-1.1
NAO03	NORSAR Array S	17.72	334	*e*P	P	02 24 19.3	-3.1
NB2	NORSAR Subarra	17.80	335	P	P	02 24 22.2	-1.2
	comp=Z,0.7nm,0.5s,baz=143,slow=11						
NB204	NORSAR Array S	17.83	335	*e*P	P	02 24 22.0	-1.7
NC203	NORSAR Array S	18.08	335	*e*P	P	02 24 25.7	-0.7
PRGR	Permogore	19.45	28	*e*P	P	02 24 41.3	+0.1
PRGR				pmax	pmax		
	comp=Z,8.0nm,0.5s						
EKA	Eskdalemuir Ar	21.04	308	P	P	02 24 57.5	-0.9
	comp=Z,2.7nm,1.0s,baz=109,slow=8.9,SNR=4.2						
AKTO	Aktyubinsk	21.48	66	P	P	02 25 04.7	+1.5
	comp=Z,3.9nm,0.5s,baz=268,slow=9.2,SNR=10						
ARU	Arti	22.61	50	P	P	02 25 15.0	+0.2
	comp=Z,2.7nm,0.4s,baz=262,slow=8.9,SNR=10						
ARU	Arti	22.61	50	*e*P	P	02 25 15.1	+0.2
	comp=Z,4.7nm,0.6s						
ARU	Arti	22.61	50	*c* *i*P	P	02 25 14.7	-0.2
ARU						02 25 37.9	
ARU				S	S	02 29 16.4	+2.5
ARU				SS	SnSn	02 29 55.4	-0.8
ARU				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ABKAR	Akbulak array	22.76	69	*e*P	P	02 25 16.7	+0.2
ES19	SONSECA Array	23.06	266	*e*P	P	02 25 19.1	-0.3
ES19	SONSECA Array	23.06	266	*e*P	P	02 25 19.1	-0.3
ESDC	Sonseca Array	23.11	266	P	P	02 25 19.4	-0.6
	comp=Z,0.6nm,0.5s,baz=65,slow=9.1,SNR=9.7						
ARCES	ARCESS Array B	23.91	359	P	P	02 25 27.7	+0.9
	comp=Z,0.8nm,0.4s,baz=176,slow=13,SNR=12						
GEYT	Alibeck	24.68	97	P	P	02 25 35.6	+1.5
	comp=Z,2.7nm,0.7s,baz=135,slow=55,SNR=5.4						
BRVK	Borovoye	29.05	59	*d i*P	P	02 26 15.1	+2.0
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
BVAR	Borovoye Array	29.11	59	P	P	02 26 15.6	+1.9
	comp=Z,0.6nm,0.5s,baz=266,slow=13,SNR=5.4						
KK31	Karatay Array	31.25	79	*e*P	P	02 26 35.2	+2.5
KK31	Karatay Array	31.25	79	*e*P	P	02 26 35.2	+2.5
KKAR	Karatay Array	31.25	79	*e*P	P	02 26 35.2	+2.5
KKAR	Karatay Array	31.25	79	*e*P	P	02 26 35.2	+2.5
SPITS	Spitsbergen Ar	32.84	356	P	P	02 26 47.7	+1.5
	comp=Z,1.3nm,0.6s,baz=147,slow=8.2,SNR=3.8						
KURBB	Kurchatov Arra	34.45	63	P	P	02 27 01.9	+1.5
	comp=Z,1.4nm,0.4s,baz=293,slow=9.3,SNR=3.8						
KURK	Kurchatov	34.48	62	P	P	02 27 01.9	+1.2
KURK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ZALV	Zalesovo Beam	37.53	56	P	P	02 27 28.2	+1.6
	comp=Z,3.1nm,0.5s,baz=276,slow=8.9,SNR=7.4						
ZALV				pP	pP	02 27 52.8	+0.5
	comp=Z,2.0nm,0.6s,baz=282,slow=7.4,SNR=3.8						
MK31	Makanchi Array	37.90	68	*e*P	P	02 27 31.3	+1.5
MK31	Makanchi Array	37.90	68	*e*P	P	02 27 31.3	+1.5
MKAR	Makanchi Array	37.90	68	P	P	02 27 31.6	+1.7
	comp=Z,2.0nm,0.4s,baz=271,slow=8.1,SNR=33						
MKAR				pP	pP	02 27 56.2	+0.7
	comp=Z,0.5nm,0.5s,baz=286,slow=7.3,SNR=2.2						
MKAR	Makanchi Array	37.90	68	*e*P	P	02 27 31.5	+1.7
	comp=Z,27nm,0.3s						
MK01	Makanchi Array	37.91	68	*e*P	P	02 27 31.7	+1.8
TOA0	Torodi Ar. Sit	38.66	221	*e*P	P	02 27 37.0	+0.6
TORD	Torodi Ar. Bea	38.66	221	P	P	02 27 36.6	+0.1
	comp=Z,1.4nm,0.4s,baz=34,slow=7.8						
DGZ	Jazzator, Alta	40.21	62	*e*P	P	02 27 51.4	+2.2
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KOWA	Kowa	40.35	229	P	P	02 27 50.8	+0.4
	comp=Z,1.4nm,0.3s,baz=29,slow=9.9,SNR=7.3						
KOWA	Kowa	40.35	229	*e*P	P	02 27 50.9	+0.4
	comp=Z,4.2nm,0.9s						
KOWA	Kowa	40.35	229	*e*P	P	02 27 50.8	+0.4
	comp=Z,4.2nm,0.9s						
DBIC	Dimbokro	47.41	225	P	P	02 28 47.0	+0.1
	comp=Z,4.2nm,0.4s,baz=16,slow=9.0,SNR=24						
DBIC	Dimbokro	47.41	225	*e*P	P	02 28 47.0	+0.1
	comp=Z,27nm,1.5s						
TLY	Talaya	49.05	53	*e*P	P	02 28 58.7	-0.4
TLY				pmax	pmax		
	comp=Z,2.0nm,0.6s						
TIXI	Tiksi	51.02	23	⇓*e*P	P	02 29 15.3	+1.7
TIXI				pmax	pmax		
	comp=Z,15nm,1.8s						
SONA1	Songino Array	52.40	57	*e*P	P	02 29 26.6	+2.1
SONM	Songino Array	52.40	57	P	P	02 29 26.3	+1.8
	comp=Z,2.4nm,0.8s,baz=294,slow=7.2,SNR=13						
ULN	Ulaanbaatar	52.77	57	⇑*e*P	P	02 29 28.7	+1.5
ULN				pmax	pmax		
	comp=Z,1.0nm,1.0s						
LSZ	Lusaka	60.70	178	*e*P	P	02 30 25.4	+2.0
	comp=Z,5.4nm,1.3s						
LSZ	Lusaka	60.70	178	*e*P	P	02 30 25.4	+2.0
LSZ				pmax	pmax		
	comp=Z,5.0nm,1.3s						
CMAR	Chiang Mai Arr	64.83	89	P	P	02 30 50.6	-0.2
	comp=Z,1.4nm,0.2s,baz=299,slow=7.6,SNR=6.1						
ILAR	Eielson Array	69.75	357	P	P	02 31 22.2	+1.1
	comp=Z,0.3nm,0.7s,baz=358,slow=5.8,SNR=5.6						
DAWY	Dawson	70.02	353	*e*P	P	02 31 24.4	+1.6
	comp=Z,3.3nm,0.6s						
PDAR	Pinedale Array	83.64	329	P	P	02 32 40.2	+0.4
	comp=Z,0.3nm,0.5s,baz=51,slow=5.6,SNR=4.5						
BMO	Blue Mountains	84.32	335	*e*P	P	02 32 43.4	+0.3
	comp=Z,2.6nm,0.6s						
BMO	Blue Mountains	84.32	335	*e*P	P	02 32 43.4	+0.3
BMO				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MFID	Camas Ranch	85.17	333	*e*P	P	02 32 48.5	+1.1
DEVC	Devers	93.99	330	*e*P	P	02 33 28.2	-0.8
WRA	Warramunga Arr	116.34	92	PKP	PKPdf	02 38 53.8	-0.3
	comp=Z,0.2nm,0.8s,baz=318,slow=1.8,SNR=3.2						

TIF **12** *02:22:33.8, 42.°54N×43.°45E, h12$^{km}\pm1^{km}$*
NORS **12** *02:22:34.2±0.0, 42.°56N×43.°37E, h6$^{km}\pm1^{km}$*
CSEM **12** *02:22:34.7±0.5, 42.°51N×43.°37E, h2^{km}, ML1.6, Error ellipse: s-maj=12.6km s-min=9.4km az=146.0*
MOS **12** *02:22:34.4±0.0, 42.°56N×43.°39E, h11^{km}, MPVA2.8*
DDA **12** *02:23:23.1, 42.°92N×43.°75E, h5^{km}, Ml3.0*
ISC 12 02:22:33.7±0.8**, 42.°54N**±0.°02×**43.°44E**±0.°03**, h13**$^{km}\pm5^{km}$,
n24, σ**0.^{s}56**/44**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONI	Oni	0.05	9	P	Pg	02 22 36.4	+0.1
ONI				S	Sg	02 22 38.1	-0.1
ONI	Oni	0.05	9	*i* Pg	Pg	02 22 36.4	+0.1
ONI				*e*Sg	Sg	02 22 38.1	-0.1
DIGR	Digorskoe uzhe	0.37	16	*e*Pg	Pg	02 22 41.5	+0.2
DIGR				*e*Sg	Sg	02 22 47.0	+0.6
ZEI	Tsey	0.42	54	*e*Pg	Pg	02 22 41.2	-0.9
ZEI				*i* Sg	Sg	02 22 47.9	+0.1
KORR	Kora	0.71	40	*e*Pg	Pn	02 22 49.5	0.0
KORR				*e*Sg	Sn	02 22 58.9	-1.4
LSNR	Lesken	0.79	21	*e*Pg	Pn	02 22 49.9	-0.6
LSNR				*e*Sg	Sn	02 23 01.6	-0.6
NEY	Neytrino	0.88	323	*e*Pg	Pb	02 22 51.0	0.0
NEY				*e*Sg	Sb	02 23 02.6	-0.1
ARNR	Ardon	0.89	44	*e*Pg	Pn	02 22 53.2	+1.3
ARNR				*e*Sg	Sn	02 23 06.0	+1.4
EPOS	Posof	1.17	207	*i* P	Pb	02 22 55.3	-0.5
EPOS				*i* S	Sn	02 23 12.3	+0.6
EPOS	Posof	1.17	207	P	Pb	02 22 55.3	-0.5
EPOS				S	Sn	02 23 12.3	+0.6
BGD	Bogdanovka	1.28	175	P	Pb	02 22 57.6	-0.2
BGD				S	Sg	02 23 15.2	+0.1
BGD	Bogdanovka	1.28	175	P	Pb	02 22 57.6	-0.2
BGD				S	Sg	02 23 15.2	+0.1
SHA1	Shidzhatmaz	1.33	335	*e*Pg	Pg	02 22 59.7	+0.4
SHA1				*e*Sg	Sn	02 23 15.5	-0.2
KIV	Kislovodsk	1.52	339	*e*Pg	Pb	02 23 01.4	-0.3
KIV				*e*Sg	Sb	02 23 20.8	-0.1
ARTV	Artvin	1.77	220	*i* P	Pb	02 23 06.6	+0.5
ARTV	Artvin	1.77	220	P	Pb	02 23 06.6	+0.5
DBOC	Borcka	1.79	229	*i* P	Pb	02 23 06.0	-0.3
DBOC				*i* S	Sg	02 23 30.5	-0.6
DBOC	Borcka	1.79	229	P	Pb	02 23 05.9	-0.3
DBOC				S	Sg	02 23 30.5	-0.6
DGRG	David-gareji	1.81	127	P	Pg	02 23 08.1	-0.3
DGRG				S	Sg	02 23 32.4	+0.6
DGRG	David-gareji	1.81	127	P	Pg	02 23 08.1	-0.3
DGRG				S	Sg	02 23 32.4	+0.6
DBAD	Bademkaya	2.01	221	*i* P	Pn	02 23 07.7	+0.3
DBAD				*i* S	Sb	02 23 34.9	-0.2
DBAD	Bademkaya	2.01	221	P	Pn	02 23 07.7	+0.3
DBAD				S	Sb	02 23 34.8	-0.2
DDEM	Demirkent	2.08	218	*i* P	Pb	02 23 10.8	-0.5
DDEM	Demirkent	2.08	218	P	Pb	02 23 10.8	-0.5

NEIC 12 02:34:57.6±2.8**, 13.°83N**×**90.°49W, h101**$^{km}\pm17^{km}$,
MD3.8(SNET)**, Error ellipse: s-maj=69.4km**
s-min=12.5km az=204.0, Near coast of Guatemala

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCIG	Comitan	2.91	327	*e*Pn	Pn	02 35 42.3	-0.1
CCIG				*e*Sn	Sn	02 36 16.5	-0.3
TGUH	Tegucigalpa,Un	3.13	86	*e*Pn	Pn	02 35 45.6	+0.4
TGUH				*e*Sn	Sn	02 36 22.9	+1.0
ESTN	Estel	4.07	100	*e*Pn	Pn	02 35 57.6	-0.3
ESTN				*e*Sn	Sn	02 36 46.9	+2.2
BOAB	BOACO BROADBAN	4.89	106	*e*Pn	Pn	02 36 04.8	-4.2
BANI	BANI	19.86	74	*e*P	P	02 39 20.9	-0.1
PLM	Palomar	30.86	314	P	P	02 41 15.2	+11
PLM				*e*pP	pP	02 41 19.6	-7.6
CIAC	Catalina I. Ai	31.99	312	*e*P	P	02 41 15.8	+1.4
CHFC	Chilao Flat St	32.20	314	*e*P	P	02 41 15.2	-1.2
CHFC				*e*S	S	02 46 26.1	+3.7

SOME **12** *03:04:30.1, 39.°35N×77.°08E, h15^{km}*
KRNET **12** *03:04:33.8±0.1, 39.°35N×76.°88E, mb3.9*
BJI **12** *03:04:33.0, 39.°42N×77.°28E, h7^{km}, ML3.7/7*
NNC **12** *03:04:43.8±4.5, 39.°81N×76.°85E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=42.5km s-min=18.9km az=147.0*
ISC 12 03:04:34.5±1.0**, 39.°50N**±0.°04×**76.°98E**±0.°04**, h10**^{km}**, n53,**
σ**2.^{s}79**/87**, 37C-16D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSH	Kashi	0.78	272	Pg	Pn	03 04 55.8	+4.2
KSH				Sg	Sn	03 05 10.6	+7.2
KSH				smax	smax		
	comp=N,890nm,0.4s						
KSH				smax	smax		
	comp=E,2µm,0.6s						
SFK	Sufi-Kurgan	2.73	282	⇓Pn	Pb	03 05 21.6	-1.9
	18nm,0.4s						
SFK				⇑Sn	Sg	03 06 01.6	-0.5
	64nm,0.3s						
SFK	Sufi-Kurgan	2.73	282	⇑*i*P	Pn	03 05 20.8	+2.3
	baz=86						
SFK				⇑*i*S	Sb	03 05 55.3	-1.7
	baz=86						
ULHL	Ulahol	2.80	349	P	Pb	03 05 23.0	-1.8
	SNR=45						
ULHL	Ulahol	2.80	349	⇑*i*P	Pb	03 05 24.0	-0.8
	baz=51						
ULHL				⇑*i*S	Sb	03 06 00.6	+1.4
	baz=51						
KZA	Kyzart	2.89	334	P	Pb	03 05 23.9	-2.5
	SNR=19						
KZA	Kyzart	2.89	334	⇓*i*P	Pb	03 05 25.3	-1.1
	baz=36						
KZA				⇓*i*S	Sb	03 06 02.9	+0.9
	baz=36						
BOOM	Boomskoye usch	3.09	346	⇑*i*P	Pb	03 05 28.2	-1.5
	baz=48						
BOOM				⇑*i*S	Sb	03 06 07.7	+0.2
	baz=48						
UCH	Uchtor	3.31	326	P	Pb	03 05 33.4	-0.1
	SNR=10.0						
UCH	Uchtor	3.31	326	⇑*i*P	Pb	03 05 30.5	-3.0
	baz=29						
UCH				⇑*i*S	Sb	03 06 12.1	-1.8
	baz=29						
KBK	Karagaybulak	3.51	335	P	Pb	03 05 36.9	+0.1
	SNR=18						
KBK	Karagaybulak	3.51	335	⇑*i*P	Pb	03 05 33.5	-3.3
	baz=37						
KBK				⇑*i*S	Sb	03 06 17.3	-2.2
	baz=37						
TNSS	Tian-Shan	3.54	360	*e*P	Pb	03 05 38.3	+0.9
	34nm,0.6s						
TNSS				*e*S	Sg	03 06 27.6	-0.5
	108nm,0.4s						
IZV	Izvestkoviy	3.54	356	*e*P	Pb	03 05 38.2	+0.8
	25nm,0.4s						
IZV				*e*S	Sg	03 06 27.3	-1.1
	88nm,0.4s						
ARSB	Arslanbob	3.55	302	⇓*i*P	Pn	03 05 32.9	+3.1
	baz=5.0						
ARSB				⇓*i*S	Sn	03 06 15.9	+3.9
	baz=5.0						
TKM2	Tokmak 2	3.57	344	⇓Pg	Pb	03 05 36.8	-1.1
	8.8nm,0.4s						
TKM2				⇑Lg	Lg	03 06 26.9	
	37nm,0.6s						
TKM2	Tokmak 2	3.57	344	P	Pn	03 05 33.6	+3.4
	SNR=27						
TKM2	Tokmak 2	3.57	344	⇑*i*P	Pb	03 05 34.7	-3.2
	baz=45						
TKM2				⇑*i*S	Sb	03 06 18.9	-2.5
	baz=45						
AML	Almayashu	3.62	318	⇑*i*P	Pn	03 05 34.5	+3.5
	baz=20						
AML				⇑*i*S	Sb	03 06 19.1	-3.9
	baz=20						
KST	Kastek	3.62	348	*e*P	Pb	03 05 39.0	+0.3
	22nm,0.7s						
KST				*e*S	Sg	03 06 28.7	-2.1
	47nm,0.7s						
AAK	Ala-Archa	3.65	330	⇑Pn	Pb	03 05 39.2	-0.1
	16nm,0.5s						
AAK				⇑Lg	Lg	03 06 29.9	
	95nm,0.7s						
AAK	Ala-Archa	3.65	330	P	Pb	03 05 40.8	+1.5
	SNR=7.4						
AAK	Ala-Archa	3.65	330	⇑*i*P	Pb	03 05 35.3	-4.0
	baz=32						
AAK				⇑*i*S	Sb	03 06 20.7	-3.0
	baz=32						
MDOK	Medeo	3.66	1	⇑Pn	Pb	03 05 38.2	-1.2
	23nm,0.6s						
MDOK				⇑Lg	Lg	03 06 29.5	
	41nm,0.6s						
MDOK	Medeo	3.66	1	*e*P	Pb	03 05 39.2	-0.1
	26nm,0.5s						
MDOK				*e*S	Sg	03 06 29.3	-2.8
	101nm,0.8s						
KNDC	Almaty	3.72	360	⇑Pn	Pb	03 05 40.5	+0.2
	35nm,0.6s						
KNDC				⇓Lg	Lg	03 06 31.9	
	86nm,0.5s						
SATY	Saty	3.72	16	*e*P	Pb	03 05 39.9	-0.4
	32nm,0.4s						
SATY				*e*S	Sg	03 06 30.4	-3.5
	92nm,0.5s						
KOTS	Kotyrbulak	3.73	2	*e*P	Pb	03 05 41.5	+0.9
	24nm,0.2s						
KOTS				*e*S	Sg	03 06 33.0	-1.4
	114nm,0.5s						
CHMS	Chumysh	3.88	335	⇓*i*P	Pn	03 05 38.3	+4.1
	baz=37						
CHMS				⇓*i*S	Sb	03 06 25.6	-4.4
	baz=37						
UZB	Uzynbulak	3.96	22	*e*P	Pb	03 05 40.7	-3.7
	6.7nm,0.4s						
UZB				*e*S	Sb	03 06 30.8	-1.6
	67nm,0.7s						
EKS2	Erkin-Say	3.98	324	P	Pg	03 05 48.0	-2.7
	SNR=15						
EKS2	Erkin-Say	3.98	324	⇑*i*P	Pn	03 05 39.3	+3.6
	baz=26						
EKS2				⇑*i*S	Sn	03 06 27.4	+5.0
	baz=26						
KURS	Kuram	4.09	12	*e*P	Pb	03 05 46.2	-0.4
	16nm,0.8s						
KURS				⇓*i*S	Sg	03 06 41.4	-4.3
	39nm,0.5s						
SHLS	Shalkode	4.11	26	*e*P	Pb	03 05 48.7	+1.8
	21nm,0.5s						
SHLS				*e*S	Sg	03 06 44.3	-2.1
	102nm,0.5s						
USP	Ospenovka	4.20	334	⇑*e*P	Pn	03 05 43.2	+4.6
	baz=36						
USP				⇑*i*S	Sn	03 06 33.2	+5.4
	baz=36						
KTBS	Karatobe	4.22	357	*e*P	Pb	03 05 49.3	+0.5
KTBS				*e*S	Sg	03 06 46.8	-3.0
PDGK	Podgornoye	4.27	25	⇓Pn	Pb	03 05 48.6	-1.1
	6.8nm,0.6s						
PDGK				⇑Lg	Lg	03 06 45.0	
	69nm,0.6s						
PDGK	Podgornoye	4.27	25	⇓*i*P	Pn	03 05 44.8	+5.1
	baz=25						
PDGK				⇓*i*S	Sb	03 06 36.7	-4.6
	baz=25						
MRKS	Merke	4.31	320	*e*P	Pb	03 05 51.4	+1.1
	19nm,0.3s						

MRKS				eS	Sg	03 06 50.2	-2.6
	36nm,0.6s						
CHKK	Chushkaly	4.35	0	eP	Pb	03 05 52.5	+1.4
	18nm,0.4s						
CHKK				eS	Sg	03 06 52.0	-2.2
	108nm,0.3s						
KUU	Kurty	4.42	354	⇓iP	Pb	03 05 52.9	+0.7
	8.4nm,0.3s						
KUU				⇑iS	Sg	03 06 52.5	-3.8
	60nm,0.3s						
ARK	Arkit	4.45	303	⇑iP	Pn	03 05 45.1	+2.9
	baz=5.0						
ARK				⇑iS	Sn	03 06 36.6	+2.5
	baz=5.0						
MNAS	Manas	4.51	313	⇑Pn	Pb	03 05 55.0	+1.1
	6.9nm,0.6s						
MNAS				⇑Lg	Lg	03 06 57.5	
	36nm,0.7s						
MNAS	Manas	4.51	313	⇑iP	Pn	03 05 46.5	+3.5
	baz=15						
MNAS				⇑iS	Sn	03 06 39.3	+3.7
	baz=15						
ARXS	Arharly	4.75	7	eP	Pb	03 05 58.5	+0.5
	13nm,0.5s						
ARXS				eS	Sg	03 07 02.5	-4.7
	39nm,0.4s						
DJR	Jarkent	5.27	23	eP	Pb	03 06 06.7	0.0
	5.6nm,0.6s						
DJR				eS	Sb	03 07 16.4	+6.4
	23nm,0.2s						
TDK	Taldyqorghan	5.60	10	eP	Pg	03 06 17.7	-4.1
	77nm,0.3s						
TDK				eS	Sg	03 07 35.1	+0.8
	134nm,0.6s						
KAPS	Kapalarasan	6.05	16	eP	Pb	03 06 24.7	+4.8
	3.8nm,0.6s						
KAPS				eS	Sg	03 07 47.4	-1.1
	24nm,0.6s						
KK31	Karatay Array	6.05	309	⇓Pg	Pg	03 06 25.1	-5.3
	1.3nm,0.5s,baz=121,slow=15,SNR=12						
KK31				⇑Lg	Lg	03 07 45.0	
	9.5nm,0.6s,baz=119,slow=23,SNR=6.2						
CEP	Cherat	6.97	217	P	Pn	03 06 18.1	+1.3
CEP				S	Sn	03 07 36.0	-0.3
CEP	Cherat	6.97	217	P	Sn	03 07 35.8	-0.5
MK31	Makanchi Array	8.26	26	⇑Pg	Pg	03 07 11.4	-1.2
	1.3nm,0.7s,baz=216,slow=14,SNR=5.2						
MK31				⇓Lg	Lg	03 08 56.8	
	2.6nm,0.6s						
WMQ	Urumqi	9.11	58	P	Pn	03 06 44.6	-1.5
WMQ				smax	smax		
	comp=N,43nm,0.9s						
WMQ				smax	smax		
	comp=E,33nm,0.7s						

NIED ***12*** *03:08:00, 24°.30N×122°.10E, h38^{km}, Mw3.8 Best double couple: $M_0$5.42000×10^{14} NP1:ϕ_s59.00000°, δ43.00000°, λ-158.00000°. NP2:ϕ_s312.00000°, δ75.00000°, λ-50.00000°.*

ISCJB ***12*** *03:08:42.8±0.2, 24°.36N±0°.02×122°.17E±0°.01, h60^{km}±3^{km}, mb3.4/6, Error ellipse: s-maj=2.9km s-min=2.0km az=156.1*

JMA ***12*** *03:08:42.4±0.2, 24°.28N×122°.14E, h62^{km}±3^{km}, M4.0*

TAP ***12*** *03:08:43.2, 24°.37N×122°.12E, h59^{km}, ML4.4, B*

IDC ***12*** *03:08:43.9±5.2, 24°.46N×122°.28E, h56^{km}±51^{km}, mb3.2/6, mb1 3.5/7, mb1mx3.2/62, mbtmp3.6/7, ML3.4/1, MS2.5/2, Ms1 2.5/2, ms1mx2.2/29, Error ellipse: s-maj=32.4km s-min=19.3km az=65.0*

ISC 12 03:08:44.0±0.8**, 24°.37N**±0°.03×**122°.16E**±0°.02**, h56**^{km}±5^{km}**, n122, σ1ˢ.16**/185**, mb3.4**/6**, 27C-5D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1	0.19	350	⇑P	Pn	03 08 52.7	-0.2
	baz=11						
EOS1				S	Sn	03 08 59.9	+0.6
	baz=11						
TWC	Suao	0.38	310	⇑iP	Pn	03 08 53.8	-0.6
	baz=316						
TWC				S	Sn	03 09 01.2	-0.7
	baz=316						
NANB	Nanao	0.38	279	⇑P	Pn	03 08 53.8	-0.6
	baz=280						
NANB				S	Sn	03 09 01.6	-0.4
	baz=280						
ENA	Nanau	0.39	279	⇑iP	Pn	03 08 54.0	-0.6
	baz=280						
ENA				i S	Sn	03 09 01.7	-0.5
	baz=280						
EGS		0.52	336	eP	Pn	03 08 55.0	-0.9
	baz=349						
ILA	Ilan	0.55	316	⇑P	Pn	03 08 56.2	0.0
	baz=326						
ILA				S	Sn	03 09 05.8	+0.7
	baz=326						
NACB	Ninganchiao	0.55	250	⇑P	Pn	03 08 55.1	-1.1
	baz=242						
NACB				S	Sn	03 09 04.4	-0.8
	baz=242						
NTC	Toucheng	0.57	328	eP	Pn	03 08 56.1	-0.4
	baz=339						
TWD	Chiawan	0.59	241	⇑iP	Pn	03 08 55.7	-1.0
	baz=231						
TWD				S	Sn	03 09 05.1	-0.9
	baz=231						
ENTT	Nioudou	0.61	297	⇑iP	Pn	03 08 56.6	-0.3
	baz=294						
ENTT				S	Sn	03 09 06.0	-0.4
	baz=294						
SLBB	Yuanshan	0.62	309	⇑iP	Pn	03 08 57.1	0.0
	baz=312						
SLBB				eS	Sn	03 09 06.7	+0.1
	baz=312						
HWA	Hwalien	0.64	233	eP	Pn	03 08 56.7	-0.6
	baz=223						
HWA				eS	Sn	03 09 07.1	+0.2
	baz=223						
TWB1	Santiao Chiao	0.66	346	eP	Pn	03 08 56.6	-1.0
	baz=350						
TWB1				S	Sn	03 09 05.6	-1.8
	baz=350						
TIPB	Shuangxi	0.68	333	eP	Pn	03 08 57.0	-0.8
	baz=346						
ENLB	Shoufeng	0.69	228	⇑P	Pn	03 08 57.2	-0.7
	baz=219						
ENLB				S	Sn	03 09 08.1	0.0
	baz=219						
NNSB	Datong	0.71	275	⇑P	Pn	03 08 57.6	-0.7
	baz=275						
NNSB				eS	Sn	03 09 07.6	-1.2
	baz=275						
NNSH	Datong	0.71	275	eP	Pn	03 08 57.5	-0.8
	baz=275						
NNSH				eS	Sn	03 09 07.6	-1.2
	baz=275						
JYNG	Yonagunijimaku	0.72	83	S	Sn	03 09 08.2	-0.4
NNS	Nan Shan	0.72	276	⇑iP	Pn	03 08 57.7	-0.8
	baz=276						
NNS				S	Sn	03 09 07.8	-1.2
	baz=276						
NWLT	Wulai	0.73	304	eP	Pn	03 08 58.4	0.0
	baz=299						
NWLT				eS	Sn	03 09 08.3	-0.6
	baz=299						
YOJ	Yonaguni jima	0.78	83	⇓iP	Pn	03 08 58.5	-0.5
	baz=83						
YOJ				eS	Sn	03 09 09.6	-0.4
	baz=83						
YOJ	Yonaguni jima	0.78	83	P	Pn	03 08 58.5	-0.5
YOJ				eS	Sn	03 09 09.5	-0.4
YHNB	Yeheng	0.78	293	⇑iP	Pn	03 08 58.8	-0.3
	baz=287						
YHNB				S	Sn	03 09 09.3	-0.9
	baz=287						
NWF	Wu-fen Shan	0.78	334	eP	Pn	03 08 58.4	-0.8
	baz=346						
NWF				eS	Sn	03 09 08.2	-2.1
	baz=346						
WFSB	Wu-fen Shan	0.78	334	eP	Pn	03 08 58.3	-0.8
	baz=346						
WFSB				eS	Sn	03 09 08.7	-1.5
	baz=346						
NSK	Sanguang	0.80	293	⇑P	Pn	03 08 59.0	-0.3
	baz=288						
NSK				S	Sn	03 09 09.7	-0.9
	baz=288						
WHF	Hehuan Shan	0.85	255	⇑P	Pn	03 08 59.5	-0.8
	baz=254						
WHF				S	Sn	03 09 11.2	-1.1
	baz=254						
ESL	Shilin	0.86	231	⇑P	Pn	03 08 59.0	-1.2
	baz=238						
ESL				eS	Sn	03 09 10.3	-1.7
	baz=238						
TATO	Taipei	0.86	315	P	Pn	03 08 59.5	-0.6
	baz=317						
TATO				S	Sn	03 09 11.4	-0.5
	baz=317						
TAP	Taipei	0.90	318	eP	Pn	03 09 00.4	-0.2
	baz=321						
TWT	Tachien	0.91	263	⇑P	Pn	03 09 00.8	-0.1
	baz=263						
TWT				S	Sn	03 09 13.0	-0.3
	baz=263						
TDCB	Techi	0.93	263	⇑P	Pn	03 09 00.8	-0.2
	baz=263						
TDCB				S	Sn	03 09 12.8	-0.8
	baz=263						
YM07	YM07	0.95	329	eP	Pn	03 09 00.1	-1.1
	baz=331						
CHGB	Renai	0.95	252	⇑P	Pn	03 09 01.0	-0.5
	baz=243						
CHGB				S	Sn	03 09 13.4	-1.0
	baz=243						
YM11	YM11	0.96	326	⇓P	Pn	03 09 01.4	-0.1
	baz=338						
YM11				eS	Sn	03 09 13.6	-0.8
	baz=338						
EGFH	Guangfu	0.97	224	eP	Pn	03 09 00.5	-1.0
	baz=216						
YM04	YM04	0.97	324	eP	Pn	03 09 00.2	-1.3
	baz=337						
YM04				eS	Sn	03 09 12.9	-1.6
	baz=337						
YM03	YM03	0.99	325	eP	Pn	03 09 00.0	-1.8
	baz=328						
TWS1	Kuangyinshan	1.00	317	⇑eP	Pn	03 09 01.5	-0.4
	baz=328						
TWS1				eS	Sn	03 09 14.9	-0.2
	baz=328						
NTST	Danshui	1.03	321	eP	Pn	03 09 01.8	-0.4
	baz=332						
NCU	National Centr	1.07	304	eP	Pn	03 09 02.5	-0.3
	baz=306						
NCU				S	Sn	03 09 16.7	-0.1
	baz=306						
NCUH	Zhongli	1.07	304	eP	Pn	03 09 02.2	-0.6
	baz=306						
LIOB	Emei	1.08	285	P	Pn	03 09 03.0	0.0
	baz=286						
LIOB				S	Sn	03 09 17.2	+0.1
	baz=286						
NSTT	Nanjuang	1.09	284	eP	Pn	03 09 02.8	-0.3
	baz=285						
NSTT				eS	Sn	03 09 17.1	-0.2
	baz=285						
HGSD	Ruisui	1.10	218	⇑P	Pn	03 09 02.2	-1.1
	baz=208						
HGSD				eS	Sn	03 09 19.0	+1.5
	baz=208						
EHY	Hungye	1.15	222	⇑iP	Pn	03 09 02.5	-1.5
	baz=228						
SBCB	Hsinchu	1.16	292	eP	Pn	03 09 03.9	-0.1
	baz=304						
HSN	Hsinchu	1.17	292	eP	Pn	03 09 02.5	-1.7
	baz=295						
DPDB	Guoxing	1.18	254	P	Pn	03 09 04.4	+0.1
	baz=249						
DPDB				eS	Sn	03 09 19.6	+0.1
	baz=249						
SSLB	Suanglung	1.25	243	⇑P	Pn	03 09 04.7	-0.5
	baz=236						
SSLB				eS	Sn	03 09 19.6	-1.4
	baz=236						
SMLT	Sun Moon Lake	1.25	248	eP	Pn	03 09 05.2	-0.1
	baz=240						
SMLT				eS	Sn	03 09 20.7	-0.6
	baz=240						
YULB	Yu-li	1.25	220	⇑P	Pn	03 09 03.7	-1.6
	baz=217						
YULB				eS	Sn	03 09 18.4	-2.8
	baz=217						
NMLH	Miaoli	1.26	278	eP	Pn	03 09 05.5	+0.1
	baz=279						
TYC	Yuchr	1.28	249	eP	Pn	03 09 05.6	0.0
	baz=242						
TYC				eS	Sn	03 09 22.1	+0.3
	baz=242						
NSY	Sanyi	1.28	273	eP	Pn	03 09 05.9	+0.3
	baz=273						
NSY				eS	Sn	03 09 22.3	+0.5
	baz=273						
TWF1	Yuli	1.28	218	⇑iP	Pn	03 09 04.3	-1.3
	baz=224						
TWF1				S	Sn	03 09 19.6	-2.3
	baz=224						
FULB	Fuli	1.41	215	eP	Pn	03 09 06.2	-1.2
	baz=205						
YUS	Yu-Shan	1.41	232	eP	Pn	03 09 07.5	-0.3
	baz=230						
WJS	Zhushan	1.42	248	eP	Pn	03 09 08.4	+0.9
	baz=237						
WJS				S	Sn	03 09 26.9	+1.7
	baz=237						
IRIF	Iriomote-Funau	1.43	91	P	Pn	03 09 06.8	-0.8
IRIF				S	Sn	03 09 24.6	-0.7
WNT	Mingjian	1.44	251	eP	Pn	03 09 08.7	+0.9
	baz=249						
WNT				eS	Sn	03 09 27.5	+1.9
	baz=249						
CHKT	Chengkung	1.46	210	⇑eP	Pn	03 09 06.3	-1.7
	baz=199						
CHKT				eS	Sn	03 09 23.2	-2.9
	baz=199						
WCHH	Zhanghua	1.49	259	eP	Pn	03 09 08.6	+0.1
	baz=258						
HATJ	Hateruma jima	1.53	101	P	Pn	03 09 09.1	+0.1
HATJ				S	Sn	03 09 28.2	+0.4
CHN5	Tsauling	1.56	241	eP	Pn	03 09 09.8	+0.3
	baz=239						
ELDTW	Lidau	1.57	222	eP	Pn	03 09 08.3	-1.4
	baz=214						
WGK	Gukeng	1.61	246	eP	Pn	03 09 11.1	+0.9
	baz=244						
WDLH	Douliu	1.63	246	eP	Pn	03 09 10.8	+0.4
	baz=235						
JKRS	Kuro-shima	1.69	94	P	Pn	03 09 11.1	0.0
JKRS				S	Sn	03 09 31.4	-0.3
RLNB	Erlin	1.71	254	eP	Pn	03 09 11.6	+0.1
	baz=264						
CHN2	Minshiung	1.75	242	eP	Pn	03 09 13.3	+1.3
	baz=232						
CHN2				eS	Sn	03 09 36.5	+3.2
	baz=232						
STYT	Tauyuan	1.76	227	⇑P	Pn	03 09 12.1	-0.1
	baz=218						
STYT				eS	Sn	03 09 33.5	0.0
	baz=218						
TPUB	Ta-pu	1.76	233	eP	Pn	03 09 12.7	+0.6
	baz=223						
TPUB				eS	Sn	03 09 34.4	+0.9
	baz=223						
TWH	Lutao	1.76	201	eP	Pn	03 09 10.6	-1.6
	baz=199						
JIJ	Ishigaki jima	1.80	90	P	Pn	03 09 11.8	-0.9
JIJ				S	Sn	03 09 33.4	-1.1
WTP	Ta-pu	1.81	232	eP	Pn	03 09 13.2	+0.4
	baz=222						
WTP				eS	Sn	03 09 35.4	+0.8
	baz=222						
CHY	Chiayi	1.81	242	eP	Pn	03 09 14.9	+2.1
	baz=240						
TWGBT	Beinan	1.83	213	eP	Pn	03 09 11.0	-2.1
	baz=211						
TWGBT				eS	Sn	03 09 32.6	-2.6
	baz=211						
TWG	Pinlang	1.83	213	eP	Pn	03 09 11.2	-1.9
	baz=211						
TWG				eS	Sn	03 09 32.6	-2.7
	baz=211						
TWK	Hsinying	1.89	235	⇓P	Pn	03 09 14.5	+0.6
	baz=232						
TWK				S	Sn	03 09 37.9	+1.3
	baz=232						
CHN1	Nanshi	1.91	232	eP	Pn	03 09 14.3	+0.2
	baz=230						
CHN1				eS	Sn	03 09 38.1	+1.1
	baz=230						
WSF	Szhu	1.92	248	eP	Pn	03 09 14.0	-0.2
	baz=247						
WLGB	Puzi	1.92	243	eP	Pn	03 09 14.7	+0.3
	baz=241						
SGST	Jiashian	1.93	229	eP	Pn	03 09 15.4	+0.9
	baz=218						
SGST				S	Sn	03 09 38.0	+0.3
	baz=218						
SLGT	Liugui	1.95	226	eP	Pn	03 09 15.1	+0.4
	baz=224						
JISG	Ishigakijimahi	1.97	83	P	Pn	03 09 14.1	-0.8
JISG				S	Sn	03 09 37.2	-1.3
CHN8	Yiju	2.06	241	eP	Pn	03 09 16.2	0.0
	baz=239						
ECL	Taimali	2.08	213	eP	Pn	03 09 14.6	-1.9
	baz=211						
SSD	Sandimen	2.14	221	eP	Pn	03 09 17.4	+0.1
	baz=219						
MASBT	Mashibuluo	2.24	219	eP	Pn	03 09 18.6	-0.1
	baz=209						
MASBT				eS	Sn	03 09 45.1	-0.1
	baz=209						
JTJ	Tarama	2.33	83	P	Pn	03 09 19.8	0.0
JTJ				S	Sn	03 09 46.9	-0.4
PNG	Penghu	2.52	252	eP	Pn	03 09 21.1	-1.4
	baz=250						
PHUB	P'eng-hu	2.52	251	eP	Pn	03 09 21.2	-1.2
	baz=249						
PHUB				eS	Sn	03 09 49.5	-2.5
	baz=249						
WDGT	Dungji	2.54	245	eP	Pn	03 09 22.3	-0.6
	baz=243						
WDGT				eS	Sn	03 09 50.6	-2.0
	baz=243						
VWUC	VWUC	2.55	285	eP	Pn	03 09 21.5	-1.3
	baz=286						
MATB	Ma-tsu	2.68	312	⇓eP	Pn	03 09 23.1	-1.6
	baz=313						
TWKBT	Hengchun	2.71	208	eP	Pn	03 09 23.6	-1.6
	baz=200						
TWKBT				eS	Sn	03 09 55.0	-1.9
	baz=200						
TSEB	Hengchuen, Pin	2.72	206	eP	Pn	03 09 25.8	+0.7
	baz=200						
TWK1	Hengchun	2.72	208	eP	Pn	03 09 24.7	-0.5
	baz=200						
VCHM	Qimei	2.76	246	eP	Pn	03 09 24.9	-0.9
	baz=244						
JIRB	Irabujima	2.78	80	P	Pn	03 09 25.5	-0.5
JIRB				eS	Sn	03 09 58.2	-0.1
JIKM	Ikemajima	2.86	78	P	Pn	03 09 26.9	-0.2
JIKM				eS	Sn	03 10 01.0	+0.6
JMJ	Miyako jima 2	2.88	80	eS	Sn	03 10 01.2	+0.3
JOGS	Gusukube	2.98	82	P	Pn	03 09 28.5	-0.2
JOGS				eS	Sn	03 10 03.1	-0.2
QZH	Quanzhou	3.30	281	⇓iPn	Pn	03 09 31.6	-1.6
QZH				Sn	Sn	03 10 06.4	-4.8
QZH				smax	smax		
	comp=N,150nm,0.5s						
QZH				smax	smax		
	comp=E,100nm,0.3s						
KNM	Kinmen	3.40	272	eP	Pn	03 09 34.8	+0.2
	baz=270						
KNMB	Chin-men Tao	3.44	272	eP	Pn	03 09 33.6	-1.5
	baz=272						
JOW	Kunigami	6.04	65	P	Pn	03 10 09.4	-1.3
	comp=E,2.4nm,0.3s,baz=138,slow=28,SNR=7.8						
JOW				S	Sn	03 11 15.6	-2.9
	comp=E,2.2nm,0.3s,baz=122,slow=19,SNR=2.9						
JOW				LR	LR	03 12 40.9	
	comp=E,46nm,18.6s,baz=285,slow=40						
KSRS	Korea Array	13.95	19	P	Pn	03 11 59.9	+1.2
	comp=E,0.2nm,0.3s,baz=197,slow=11,SNR=3.7						
KSRS				LR	LR	03 17 53.9	
	comp=E,14nm,18.0s,baz=235,slow=40						
SONM	Songino Array	26.56	336	P	P	03 14 15.7	-0.9
	comp=E,0.6nm,0.5s,baz=144,slow=10,SNR=6.1						
WMQ	Urumqi	34.18	313	eP	P	03 15 27.4	+3.4
MKAR	Makanchi Array	38.83	315	P	P	03 16 03.8	+0.3
	comp=E,0.3nm,0.5s,baz=102,slow=12,SNR=4.3						
H11N1	WAKE ISLAND Hy	41.58	87	T	T	04 02 08.9	
	baz=276						
H11N2	WAKE ISLAND Hy	41.59	87	T	T	04 01 49.6	
	baz=276						
H11N3	WAKE ISLAND Hy	41.60	87	T	T	04 02 14.7	
	baz=276						
H11S3	WAKE ISLAND Hy	41.72	89	T	T	04 02 17.0	
	baz=289						
H11S1	WAKE ISLAND Hy	41.73	89	T	T	04 02 17.9	
	baz=289						
H11S2	WAKE ISLAND Hy	41.74	89	T	T	04 02 16.5	
	baz=289						
KURBB	Kurchatov Arra	42.55	319	P	P	03 16 33.7	-0.3
	comp=E,0.2nm,0.2s,baz=108,slow=9.6,SNR=2.6						
WRA	Warramunga Arr	45.61	164	P	P	03 16 58.3	-0.5
	comp=E,0.8nm,0.4s,baz=346,slow=8.6,SNR=9.0						
ASAR	Alice Springs	49.09	166	P	P	03 17 27.4	+1.5
	comp=E,0.2nm,0.5s,baz=358,slow=6.8,SNR=3.2						
ILAR	Eielson Array	68.64	27	P	P	03 19 40.4	-0.6
	comp=E,0.3nm,1.0s,baz=296,slow=8.9,SNR=6.3						

IDC 12 03:08:59.1±18.0**, 19°.93S**×**178°.32W, h533**^{km}±207^{km}**, mb3.2**/7**, mb1 3.5**/7**, mb1mx3.0**/46**, mbtmp4.1**/7**, Error ellipse: s-maj=180.9km s-min=49.3km az=151.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	33.26	264	P	P	03 14 52.5	0.0
	4.9nm,0.8s,baz=83,slow=10,SNR=5.7						
ASAR	Alice Springs	44.36	256	P	P	03 16 22.2	-0.2
	3.8nm,0.5s,baz=95,slow=7.6,SNR=56						
WRA	Warramunga Arr	44.39	262	P	P	03 16 22.4	-0.2
	1.7nm,0.3s,baz=96,slow=7.5,SNR=70						
FITZ	Fitzroy Crossi	52.81	262	P	P	03 17 25.1	0.0
	0.8nm,0.5s,baz=111,slow=6.9,SNR=10.0						
NVAR	Mina Array Bea	80.81	44	P	P	03 20 18.1	+0.4
	0.7nm,0.8s,baz=232,slow=10,SNR=4.2						
TXAR	Lajitas Array	87.00	57	P	P	03 20 47.5	-0.7
	0.2nm,0.7s,baz=224,slow=5.0,SNR=3.9						
PDAR	Pinedale Array	88.75	43	P	P	03 20 56.4	+0.1
	0.2nm,0.5s,baz=204,slow=3.6,SNR=3.6						

NORS ***12*** *03:18:01.8±0.0, 42°.55N×43°.41E, h8^{km}*

MOS ***12*** *03:18:02.2±0.0, 42°.56N×43°.34E, h8^{km}, MPVA3.4*

TIF ***12*** *03:18:02.4, 42°.56N×43°.44E, h10^{km}±1^{km}*

CSEM ***12*** *03:18:03.3±0.5, 42°.56N×43°.38E, h2^{km}, ML2.2, Error ellipse: s-maj=12.7km s-min=9.0km az=158.0*

DDA ***12*** *03:18:25.9, 42°.73N×43°.35E, h6^{km}, Ml3.1*

ISC 12 03:18:03.2±0.8**, 42°.56N**±0°.02×**43°.42E**±0°.03**, h8**^{km}±4^{km}**, n32, σ0ˢ.74**/64**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONI	Oni	0.04	31	P	Pg	03 18 04.7	-0.3
ONI				S	Sg	03 18 06.3	0.0
ONI	Oni	0.04	31	P	Pg	03 18 04.7	-0.3
ONI				S	Sg	03 18 06.3	0.0
ONI	Oni	0.04	31	i Pg	Pg	03 18 04.7	-0.3
ONI				eSg	Sg	03 18 06.3	0.0
DIGR	Digorskoe uzhe	0.36	18	i Pg	Pg	03 18 09.2	-1.2
DIGR				eSg	Sg	03 18 14.6	-0.6
ZEI	Tsey	0.42	56	ePg	Pg	03 18 10.3	-1.2
ZEI				eSg	Sg	03 18 15.8	-1.3
KORR	Kora	0.71	42	ePg	Pg	03 18 16.2	-0.7
KORR				eSg	Sg	03 18 26.8	+0.6
LSNR	Lesken	0.78	22	ePg	Pg	03 18 17.4	-0.8
LSNR				eSg	Sg	03 18 29.1	+0.7
NEY	Neytrino	0.86	324	ePg	Pg	03 18 19.8	-0.1
NEY				eSg	Sg	03 18 29.5	-1.6
ARNR	Ardon	0.89	45	ePg	Pg	03 18 20.5	+0.2
ARNR				eSg	Sb	03 18 33.3	+0.4
STDR	Stavd-Durt	0.94	30	ePg	Pg	03 18 21.0	-0.3
STDR				eSg	Sb	03 18 35.8	+1.5
NCK	Nalchik	0.95	8	ePg	Pg	03 18 20.6	-0.8
NCK				eSg	Sb	03 18 34.3	-0.3
VLKR	Vladikavkaz	1.04	62	ePg	Pg	03 18 23.0	-0.3
VLKR				eSg	Sb	03 18 38.5	+1.1

AKH	**Akhalkalaki**	1.15	177	*e*PG	Pg	03 18 24.3	-1.0
AKH				*e*SG	Sg	03 18 40.2	+0.1
AKH	**Akhalkalaki**	1.15	177	P	Pg	03 18 24.2	-1.0
AKH				S	Sg	03 18 40.5	+0.5
AKH	**Akhalkalaki**	1.15	177	P	Pg	03 18 24.2	-1.0
AKH				S	Sg	03 18 40.5	+0.5
AKH	**Akhalkalaki**	1.15	177	*e*Pg	Pg	03 18 24.2	-1.0
AKH				*e*Sg	Sg	03 18 40.5	+0.5
TBLG	**Delisi**	1.28	130	*e*PG	Pn	03 18 26.6	-0.8
TBLG				*e*SG	Sb	03 18 44.3	+0.2
SHA1	**Shidzhatmaz**	1.31	335	*e*Pg	Pg	03 18 28.0	-0.4
SHA1				*e*Sg	Sg	03 18 44.3	-1.0
KIV	**Kislovodsk**	1.50	339	*e*Pg	Pg	03 18 33.8	+1.8
KIV				*e*Sg	Sn	03 18 50.2	0.0
BCA	**Borcka**	1.74	231	PG	Pn	03 18 33.9	+0.2
BCA				SG	Sg	03 18 58.2	-1.0
ARTV	**Artvin**	1.77	220	*i* P	Pn	03 18 34.7	+0.4
ARTV				*i* S	Sb	03 18 58.7	+0.4
ARTV	**Artvin**	1.77	220	P	Pn	03 18 34.7	+0.4
ARTV				S	Sb	03 18 58.7	+0.4
DBOC	**Borcka**	1.78	228	*i* P	Pn	03 18 34.4	+0.1
DBOC				*i* S	Sb	03 18 58.1	-0.5
DBOC	**Borcka**	1.78	228	P	Pn	03 18 34.4	+0.1
DBOC				S	Sb	03 18 58.1	-0.5
DGRG	**David-gareji**	1.82	127	P	Pb	03 18 36.7	-0.1
DGRG				S	Sg	03 19 02.3	+0.5
DGRG	**David-gareji**	1.82	127	P	Pb	03 18 36.7	-0.1
DGRG				S	Sg	03 19 02.3	+0.5
DGRG	**David-gareji**	1.82	127	*e*Pg	Pb	03 18 36.7	-0.1
DGRG				*e*Sg	Sg	03 19 02.3	+0.5
DAGI	**Agillar**	1.86	218	*i* P	Pn	03 18 35.6	+0.2
DAGI				*i* S	Sb	03 19 01.0	+0.2
DBAD	**Bademkaya**	2.01	221	*i* P	Pn	03 18 38.0	+0.5
DBAD				*i* S	Sb	03 19 05.9	+0.7
DBAD	**Bademkaya**	2.01	221	P	Pn	03 18 38.0	+0.5
DBAD				S	Sb	03 19 05.9	+0.7
DDEM	**Demirkent**	2.08	218	*i* P	Pn	03 18 39.7	+1.2
DDEM				*i* S	Sb	03 19 08.0	+0.7
DDEM	**Demirkent**	2.08	218	P	Pn	03 18 39.7	+1.2
DDEM				S	Sb	03 19 08.0	+0.7

JMA 12 03:31:03.5±0.1**, 35°.48N**×**138°.99E, h21**^{km}±1^{km}**, M2.8, 2C-2D Broadband fault plane solution: P waves. NP1:**ϕ_s75.00000°**,**δ74.00000°**,**λ118.00000°. **NP2:** ϕ_s193.00000°**,**δ32.00000°**,**λ32.00000°. **Principal axes:** T Plg53.0000°, Azm18.0000°**;** N Plg26.0000°, Azm247.0000°**;** P Plg24.0000°, Azm144.0000°; **Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOD2	**Odawara 2**	0.23	160	⇑P	Pb	03 31 09.0	-0.5
JOD2				S	Sb	03 31 13.0	-0.7
JYN	**Shimob**	0.36	273	⇓P	Pb	03 31 11.0	-0.2
JYN				S	Sb	03 31 16.8	+0.3
JRY	**Ryogami san**	0.54	352	⇓P	Pb	03 31 14.0	-0.4
JRY				S	Sb	03 31 21.3	-0.5
SHZ3	**Shizuoka 3**	0.76	237	⇑P	Pb	03 31 18.0	-0.1
SHZ3				S	Sb	03 31 28.9	+0.9
JIZS	**Izushimoda**	0.77	187	P	Pb	03 31 17.3	-0.8
JIZS				S	Sb	03 31 27.3	-0.8
MAT	**Matsushiro**	1.24	329	P	Pn	03 31 25.7	+0.1
MAT				S	Sn	03 31 41.6	0.0

MEX 12 03:47:39.3±0.4**, 16°.33N**×**97°.97W, h5**^{km}**, MD3.7, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	0.17	292	*i* P	Pg	03 47 42.5	-0.1
PNIG				*i* S	Sg	03 47 44.7	-0.1
TLIG	**Tlapa**	1.35	335	*e*P	Pn	03 48 01.5	-3.5
TLIG				*e*S	Sg	03 48 17.9	-4.9

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*ISCJB **12** 03:52:45.6±0.2, 16°.10N±0°.02×84°.91W±0°.02, h10*^{km}*, mb4.3/51, MS3.6/9, Error ellipse: s-maj=3.4km s-min=2.9km az=5.0*

*NEIC **12** 03:52:49.8±1.1, 16°.08N×84°.95W, h25*^{km}*±8*^{km}*, mb4.3/99, Error ellipse: s-maj=4.5km s-min=3.5km az=73.0*

*IDC **12** 03:52:50.9±3.4, 15°.94N×84°.98W, h37*^{km}*±31*^{km}*, mb3.8/15, mb1 4.0/20, mb1mx3.8/50, mbtmp4.0/20, ML3.7/5, MS3.6/13, Ms1 3.6/13, ms1mx3.4/42, Error ellipse: s-maj=23.8km s-min=13.5km az=50.0*

*CASC **12** 03:52:58.2±2.8, 16°.59N×85°.08W, h25*^{km}*, ML3.9, mb4.3(NEIC)*

ISC 12 03:52:48.0±0.4**, 16°.17N**±0°.03×**84°.96W**±0°.04**, h10**^{km}**, n415,** σ**1**^{s}**.59**/418**, mb4.4**/51**, MS3.6**/9**, North of Honduras**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGUH	**Tegucigalpa,Un**	3.06	227	*e*Pn	Pn	03 53 34.0	-2.5
TGUH				*e*Sn	Sn	03 54 11.3	-1.9
TGUH	**Tegucigalpa,Un**	3.06	227	*e*P	Pn	03 53 41.0	+4.5
TGUH				*e*S	Sb	03 54 20.4	+0.3
ESTN	**Estel**	3.34	204	*e*Pn	Pn	03 53 42.8	+2.4
ESTN				*e*Sn	Sn	03 54 17.2	-3.0
BOAB	**BOACO BROADBAN**	3.76	191	*e*Pn	Pn	03 53 46.8	+0.7
BOAB				*e*Sn	Sn	03 54 28.9	-1.6
CNCH	**Conchagua**	4.00	224	*e*P	Pb	03 53 59.4	+0.7
CNCH				*e*S	Sb	03 54 49.0	+1.8
ESPN	**Las Esperanzas**	4.00	171	*e*Pn	Pn	03 53 47.9	-1.5
ESPN				*e*Sn	Sn	03 54 34.0	-2.4
LCND	**La Caˆ–ada**	4.01	225	*e*P	Pb	03 54 00.1	+1.3
LCND				*e*S	Sb	03 54 49.4	+1.9
LCND				IAML		03 54 54.0	
	comp=Z,1µm,0.3s						
VSM	**San Miguel**	4.21	230	*e*P	Pb	03 54 04.2	+1.9
VSM				*e*S	Sb	03 54 56.5	+3.2
PACA	**Pacayal**	4.21	231	*e*P	Pb	03 54 03.6	+1.2
LCY	**Lacayo**	4.22	230	*e*P	Pb	03 54 03.5	+1.0
LCY				*e*S	Sb	03 54 55.9	+2.3
LLGN	**La Laguna**	4.33	243	IAML		03 55 09.3	
	comp=Z,355nm,0.5s						
WBCY	**West Bay, Gran**	4.66	46	*e*Pn	Pn	03 53 58.2	-0.2
WBCY				*e*Sn	Sn	03 54 51.6	-1.0
LFU	**La Fuente**	4.68	240	*e*P	Pb	03 54 11.2	+1.0
LFRS	**El Faro**	4.70	238	*e*P	Pb	03 54 11.3	+0.6
LFRS				*e*S	Sb	03 55 09.5	+2.1
FSCY	**Frank Sound, G**	4.77	48	*e*Pn	Pn	03 53 59.9	-0.1
FSCY				*e*Sn	Sn	03 54 56.3	+0.9
LOMA	**San Marcos**	4.78	239	IAML		03 55 30.9	
	comp=Z,196nm,0.4s						
UEES	**San Salvador**	4.80	240	IAML		03 55 23.7	
	comp=Z,221nm,0.4s						
SNET	**Serv Nac Est T**	4.81	240	IAML		03 55 26.6	
	comp=Z,194nm,0.3s						
CEDA	**San Andres**	4.89	242	IAML		03 55 40.0	
	comp=Z,460nm,0.6s						
SNJE	**San Jose**	5.04	244	*e*P	Pb	03 54 16.0	-0.4
LCCY	**Blossom Villag**	5.80	52	*e*Pn	Pn	03 54 14.6	+0.4
LCCY				*e*Sn	Sn	03 55 20.1	-0.8
JTS	**JuntasAbangare**	5.84	180	Pn	Pn	03 54 13.2	-1.5
	comp=Z,1.5nm,0.3s,baz=187,slow=11,SNR=12						
JTS				Lg	Lg	03 55 40.1	
	comp=Z,8.7nm,0.3s,baz=219,slow=23,SNR=11						
JTS	**JuntasAbangare**	5.84	180	*e*Pn	Pn	03 54 13.3	-1.5
JTS				*e*Sn	Sn	03 55 18.8	-3.1
SRA1	**San Ramˆ‡n**	6.07	175	*e*S	Sb	03 55 47.6	+0.8
CBCY	**The Bluff, Cay**	6.09	54	*e*Pn	Pn	03 54 17.3	-0.9
CBCY				*e*Pb	Pn	03 54 22.1	+4.0
HDC	**Heredia**	6.19	172	*e*Pb	Pb	03 54 38.8	+2.8
SJS	**Escuela Geolog**	6.26	172	*e*S	Sb	03 55 57.6	+5.4
LCR2	**La Lucha 2**	6.46	172	*e*S	Sb	03 55 57.4	-0.6
MYIG	**MØrida**	6.57	317	*e*Pn	Pn	03 54 21.5	-3.3
BUS	**Buena Vista**	6.68	170	*e*S	Sb	03 56 04.1	-0.5
CCIG	**Comitan**	6.89	272	*e*Pn	Pn	03 54 27.5	-1.8
MTDJ	**Mount Denham**	7.39	73	*e*Pn	Pn	03 54 34.8	-1.3
	comp=Z,37nm,0.5s						
BBJ	**Bamboo Saint A**	7.67	72	*i* P	Pn	03 54 39.0	-1.0
STH	**Stony Hill**	8.02	75	*i* P	Pn	03 54 43.3	-1.4
HOJ	**Hope**	8.06	76	*i* P	Pn	03 54 43.6	-1.6
GWJ	**Greenwich**	8.10	75	*i* P	Pn	03 54 44.3	-1.6
CMIG	**Matias Romero**	9.55	277	Pn	Pn	03 55 06.6	+0.9
	comp=Z,0.3nm,0.3s,baz=98,slow=9.6,SNR=4.4						
CMIG				Lg	Lg	03 58 03.7	
	comp=Z,0.1nm,0.3s,baz=311,slow=20,SNR=2.0						
CMIG				LR	LR	03 58 59.8	
	comp=Z,559nm,18.4s,baz=96,slow=39						
GTBY	**Guantanamo Bay**	10.09	67	*e*Pn	Pn	03 55 11.8	-1.2
061Z	**Ochoppi**	10.36	21	P	Pn	03 55 17.0	+0.3
	baz=202						
061Z	**Ochoppi**	10.36	21	*e*Pn	Pn	03 55 17.1	+0.3
059Z	**Ave Maria**	10.63	17	P	Pn	03 55 21.1	+0.6
	baz=198						
060Z	**West Palm Beac**	10.98	21	P	Pn	03 55 25.9	+0.6
	baz=202						
058A	**Arcadia**	11.22	15	P	Pn	03 55 28.8	+0.2
	baz=196						
059A	**Moore Haven**	11.31	18	P	Pn	03 55 29.7	-0.1
	baz=199						
059A	**Moore Haven**	11.31	18	*e*Pn	Pn	03 55 29.2	-0.6
DWPF	**Disney Wildern**	12.32	15	P	Pn	03 55 44.0	+0.4
	baz=196						
859A	**Kempfer Cattle**	12.41	17	P	Pn	03 55 45.4	+0.6
	baz=198						
757A	**Oxford**	12.99	11	P	Pn	03 55 53.2	+0.5
	baz=192						
758A	**Lake Helen**	13.20	15	P	Pn	03 55 56.5	+0.9
	baz=196						
656A	**Willston**	13.33	9	P	Pn	03 55 57.2	-0.1
	baz=190						
655A	**Horseshoe Beac**	13.37	6	P	Pn	03 55 58.2	+0.3
	baz=187						
658A	**Bunnell**	13.62	14	P	Pn	03 56 01.5	+0.2
	baz=195						
657A	**Interlachen**	13.65	12	P	Pn	03 56 03.4	+1.6
	baz=192						
556A	**Lake Butler**	13.97	9	P	Pn	03 56 05.7	-0.3
	baz=190						
555A	**McAlpin**	14.01	7	P	Pn	03 56 07.5	+0.9
	baz=188						
555A	**McAlpin**	14.01	7	*e*Pn	Pn	03 56 05.9	-0.7
555A				*e*Sn	Sn	03 58 38.8	-3.4
557A	**Orange Park**	14.10	12	P	Pn	03 56 08.5	+0.7
	baz=193						
451A	**Vernon**	14.40	357	P	Pn	03 56 10.5	-1.5
	baz=177						
454A	**Quitman**	14.53	5	P	Pn	03 56 13.7	0.0
	baz=185						
452A	**Marianna**	14.61	359	P	Pn	03 56 15.3	+0.4
	baz=179						
455A	**Stateville**	14.61	7	P	Pn	03 56 14.6	-0.3
	baz=187						
352A	**Blakely**	15.24	0	*e*Pn	Pn	03 56 24.8	+1.5
	comp=Z,31nm,1.4s						
349A	**Repton**	15.25	353	P	Pn	03 56 24.7	+1.3
	baz=172						
TIGA	**Tifton**	15.25	4	*e*Pn	Pn	03 56 25.6	+2.1
	comp=Z,15nm,0.9s						
TIGA				*e*Sn	Sn	03 59 07.3	-5.2
356A	**Blackshear**	15.31	9	P	Pn	03 56 24.1	-0.1
	baz=190						
ROSC	**El Rosal**	15.36	136	Pn	Pn	03 56 28.9	+3.5
	comp=Z,0.8nm,0.3s,baz=217,slow=20,SNR=3.4						
ROSC				LR	LR	04 04 23.3	
	comp=Z,56nm,18.2s,baz=18,slow=46						
ROSC	**El Rosal**	15.36	136	*e*Pn	Pn	03 56 28.9	+3.5
	comp=Z,9.9nm,1.3s						
347A	**Saraland**	15.51	348	P	Pn	03 56 27.2	+0.3
	baz=167						
SDV	**Santo Domingo**	15.74	116	Pn	Pn	03 56 28.4	-1.9
	comp=Z,1.2nm,0.3s,baz=332,slow=2.7,SNR=8.8						
SDV	**Santo Domingo**	15.74	116	*e*P	Pn	03 56 31.5	+1.3
	comp=Z,14nm,0.7s						
252A	**Lumpkin**	15.76	1	P	Pn	03 56 31.2	+1.1
	baz=181						
254A	**Abbeville**	15.78	5	P	Pn	03 56 31.0	+0.6
	baz=186						
250A	**Grady**	15.78	356	*e*Pn	Pn	03 56 30.9	+0.4
	comp=Z,16nm,0.8s						
253A	**Americus**	15.84	3	P	Pn	03 56 32.0	+0.8
	baz=183						
255A	**Hazlehurst**	15.85	8	P	Pn	03 56 32.8	+1.5
	baz=189						
255A	**Hazlehurst**	15.85	8	*e*Pn	Pn	03 56 33.6	+2.3
	comp=Z,23nm,0.9s						
PRAC	**Prado**	15.86	140	*e*Pn	Pn	03 56 32.3	+0.8
	comp=Z,43nm,1.3s						
249A	**Camden**	15.86	353	P	Pn	03 56 32.5	+1.2
	baz=172						
251A	**Midway**	15.86	359	P	Pn	03 56 30.3	-1.1
	baz=178						
LNIG	**Linares**	16.11	305	*e*Pn	Pn	03 56 35.3	+0.5
	comp=Z,12nm,1.1s						
247A	**Quitman**	16.16	349	P	Pn	03 56 37.4	+2.1
	baz=167						
150A	**Eclectic**	16.39	357	P	Pn	03 56 38.8	+0.5
	baz=176						
152A	**Waverly Hall**	16.43	1	P	Pn	03 56 39.8	+1.0
	baz=181						
152A	**Waverly Hall**	16.43	1	*e*Pn	Pn	03 56 40.1	+1.4
	comp=Z,4.9nm,0.6s						
152A				*e*Sn	Sn	03 59 30.1	-11
149A	**Jones**	16.44	355	P	Pn	03 56 39.9	+1.0
	baz=174						
155A	**Kite**	16.54	7	P	Pn	03 56 40.5	+0.5
	baz=188						
244A	**Avery, Jackson**	16.64	343	P	Pn	03 56 41.8	+0.4
	baz=161						
147A	**Livingston**	16.70	350	P	Pn	03 56 42.4	+0.2
	baz=169						
147A	**Livingston**	16.70	350	*e*Pn	Pn	03 56 44.4	+2.2
	comp=Z,34nm,1.0s						
VBMS	**Vicksburg**	16.75	343	*e*Pn	Pn	03 56 43.8	+0.9
	comp=Z,23nm,0.8s						
146A	**Union**	16.81	348	*e*Pn	Pn	03 56 44.5	+1.0
	comp=Z,19nm,0.7s						
341A	**Kurthwood**	16.85	335	P	Pn	03 56 44.2	+0.1
	baz=152						
341A	**Kurthwood**	16.85	335	*e*Pn	Pn	03 56 45.0	+1.0
	comp=Z,19nm,1.0s						
LRAL	**Lakeview Retre**	16.89	354	P	Pn	03 56 44.9	+0.3
	baz=173						
LRAL	**Lakeview Retre**	16.89	354	*e*Pn	Pn	03 56 45.9	+1.3
	comp=Z,13nm,1.0s						
HKT	**Hockley**	16.96	326	*e*Pn	Pn	03 56 45.7	+0.3
	comp=Z,12nm,1.0s						
Z49A	**Columbiana**	17.01	356	P	Pn	03 56 47.6	+1.5
	baz=175						
Z50A	**Ashland**	17.03	357	*e*Pn	Pn	03 56 48.1	+1.7
	comp=Z,12nm,0.9s						
Z53A	**Monticello**	17.08	4	P	Pn	03 56 46.9	-0.1
	baz=184						
OTAV	**Otavalo**	17.09	157	*e*Pn	Pn	03 56 49.1	+1.5
	comp=Z,7.7nm,1.2s						
Z54A	**Sparta**	17.10	6	P	Pn	03 56 47.6	+0.4
	baz=187						
Z47A	**Carrollton**	17.19	351	P	Pn	03 56 49.0	+0.7
	baz=170						
RGRS	**Roger Stewart**	17.21	14	*e*Pn	Pn	03 56 49.7	+1.1
	comp=Z,149nm,0.7s						
GOGA	**Godfrey**	17.22	4	P	Pn	03 56 49.3	+0.6
	baz=185						
GOGA	**Godfrey**	17.22	4	*e*Pn	Pn	03 56 47.5	-1.2
Z48A	**Northport**	17.29	353	P	Pn	03 56 50.6	+1.0
	baz=172						
Z46A	**Louisville**	17.33	349	P	Pn	03 56 51.1	+1.1
	baz=167						
241A	**Mo Tay, Goldon**	17.36	337	P	Pn	03 56 50.7	+0.2
	baz=154						
241A	**Mo Tay, Goldon**	17.36	337	*e*Pn	Pn	03 56 49.8	-0.7
	comp=Z,14nm,1.0s						
NHSC	**New Hope**	17.41	14	P	Pn	03 56 52.3	+1.2
	baz=195						
143A	**Socs Landing,**	17.46	342	P	Pn	03 56 53.4	+1.7
	baz=159						
143A	**Socs Landing,**	17.46	342	*e*Pn	Pn	03 56 52.3	+0.5
	comp=Z,21nm,0.9s						
Y52A	**Lilburn**	17.64	2	P	Pn	03 56 54.5	+0.6
	baz=183						
Z45A	**Winona**	17.65	347	*e*Pn	Pn	03 56 54.1	0.0
	comp=Z,20nm,0.9s						
Y51A	**Rockmart**	17.65	360	P	Pn	03 56 55.5	+1.3
	baz=180						
Y53A	**Monroe**	17.65	4	P	Pn	03 56 55.5	+1.4
	baz=184						
Y50A	**Piedmont**	17.66	358	P	Pn	03 56 55.4	+1.2
	baz=178						
Y49A	**Blount Mountai**	17.66	356	P	Pn	03 56 55.9	+1.7
	baz=175						
Y49A	**Blount Mountai**	17.66	356	*e*Pn	Pn	03 56 55.4	+1.1
	comp=Z,12nm,0.8s						
240A	**Hunter Patters**	17.71	335	*e*Pn	Pn	03 56 55.8	+1.1
	comp=Z,40nm,0.7s						
Y54A	**Tignall**	17.74	6	P	Pn	03 56 56.3	+1.1
	baz=187						
Z44A	**Pea Ridge, Bel**	17.74	345	P	Pn	03 56 55.9	+0.7
	baz=163						
Y48A	**Jasper**	17.78	354	P	Pn	03 56 56.7	+1.0
	baz=173						
ZAIG	**Zacatecas**	17.84	294	*e*Pn	Pn	03 56 56.7	-0.1
	comp=Z,11nm,1.2s						
Y47A	**UCPARC, Winfie**	17.85	352	P	Pn	03 56 57.3	+0.8
	baz=171						
Y46A	**Houston**	17.98	349	P	Pn	03 56 58.9	+0.8
	baz=168,SNR=6.1						
833A	**Chaparral WMA,**	18.00	315	P	Pn	03 56 56.4	-2.0
	baz=130,SNR=5.8						
833A	**Chaparral WMA,**	18.00	315	*e*Pn	Pn	03 56 58.9	+0.5
	comp=Z,28nm,0.8s						
833A				*e*Sn	Sn	04 00 12.3	-7.0
SJG	**San Juan**	18.08	81	P	Pn	03 56 59.4	-0.1
	comp=Z,0.8nm,0.3s,baz=279,slow=19,SNR=2.5						
SJG				S	Sn	04 00 14.5	-7.0
	comp=Z,2.0nm,0.3s,baz=318,slow=22,SNR=9.0						
SJG				LR	LR	04 03 56.6	
	comp=Z,249nm,18.9s,baz=276,slow=37						
Y45A	**Yeager Farm, C**	18.10	348	P	Pn	03 56 59.9	+0.4
	baz=166						
140A	**Cam and Jess,**	18.16	336	P	Pn	03 57 00.2	-0.2
	baz=153						
140A	**Cam and Jess,**	18.16	336	*e*Pn	Pn	03 57 02.1	+1.8
	comp=Z,19nm,0.8s						
X50B	**Fort Payne**	18.23	358	P	Pn	03 57 01.6	+0.4
	baz=178						
X48A	**Hartselle**	18.30	355	P	Pn	03 57 03.2	+1.2
	baz=174						
X48A	**Hartselle**	18.30	355	*e*Pn	Pn	03 57 02.8	+0.7
	comp=Z,8.4nm,0.8s						
X49A	**Woodville**	18.31	356	P	Pn	03 57 03.2	+1.1
	baz=176						
X53A	**Estanollee**	18.32	4	P	Pn	03 57 04.4	+2.1
	baz=185						
X51A	**Calhoun**	18.32	0	P	Pn	03 57 02.7	+0.4
	baz=180						
Y44A	**Strider, Charl**	18.34	346	P	Pn	03 57 02.5	0.0
	baz=164						
JSC	**Jenkinsville**	18.34	10	*e*P	Pn	03 57 03.8	+1.3
	comp=Z,14nm,1.1s						
X52A	**Dahlonega**	18.38	3	P	P	03 57 04.7	+1.5
	baz=183						
Z41A	**Richland Creek**	18.43	339	*e*P	P	03 57 05.3	+1.7
	comp=Z,9.0nm,0.6s						
X47A	**Russelville**	18.45	352	P	P	03 57 04.8	+0.9
	baz=171						
435B	**Jarrell**	18.57	324	*e*P	P	03 57 05.3	+0.1
	comp=Z,14nm,0.8s						
X46A	**Booneville**	18.60	351	P	P	03 57 06.3	+0.8
	baz=169						
X45A	**UM Field Stati**	18.61	348	P	P	03 57 06.8	+1.2
	baz=167						
OXF	**Oxford**	18.70	348	P	P	03 57 07.3	+0.7
	baz=167						
OXF	**Oxford**	18.70	348	*e*P	P	03 57 07.9	+1.4
	comp=Z,31nm,0.9s						
CCAR	**Cane Creek**	18.71	342	*e*P	P	03 57 07.8	+1.1
	comp=Z,21nm,1.1s						
BG3	**Lake Jocassee**	18.83	5	*e*P	P	03 57 10.2	+2.1
	comp=Z,11nm,1.1s						
W52A	**Murphy**	18.87	3	P	P	03 57 09.6	+1.2
	baz=183						
W52A	**Murphy**	18.87	3	*e*P	Pn	03 57 12.0	+3.0
	comp=Z,8.9nm,1.0s						
W49A	**Belvidere**	18.91	357	P	P	03 57 09.4	+0.5
	baz=176						
WLAR	**White Oak Lake**	18.93	339	*e*P	P	03 57 10.1	+1.0
	comp=Z,12nm,0.9s						
PLAL	**Pickwick Lake**	18.94	352	*e*P	P	03 57 10.6	+1.4
	comp=Z,3.4nm,0.6s						
W50A	**Signal Mountai**	18.95	359	P	P	03 57 10.5	+1.1
	baz=179						
W50A	**Signal Mountai**	18.95	359	*e*P	Pn	03 57 15.1	+5.0
	comp=Z,14nm,1.0s						
W50A				*e*Sn	Sn	04 00 46.7	+4.3
W48A	**Pulaski**	18.97	355	P	P	03 57 10.4	+0.8
	baz=174						
SWET	**Sewanee**	18.99	358	*e*P	P	03 57 10.8	+1.0
	comp=Z,5.8nm,0.8s						
W53A	**Cullowhee**	18.99	5	P	P	03 57 11.2	+1.3
	baz=185						
X43A	**Marvell**	19.03	345	P	P	03 57 10.8	+0.7
	baz=162						
X43A	**Marvell**	19.03	345	*e*P	P	03 57 12.7	+2.5
	comp=Z,25nm,1.0s						
W46A	**Michie**	19.13	351	P	P	03 57 12.0	+0.7
	baz=170						
W47A	**Westpoint**	19.15	353	P	P	03 57 12.5	+1.0
	baz=172						
KMSC	**Kings Mountain**	19.17	9	P	P	03 57 13.2	+1.5
	baz=190						
KMSC	**Kings Mountain**	19.17	9	*e*P	Pn	03 57 16.4	+3.7
	comp=Z,9.8nm,0.9s						
CPCT	**Cooper Cave**	19.20	1	*e*P	P	03 57 14.3	+2.2
	comp=Z,14nm,1.3s						
CPCT				*e*Sn	Sn	04 00 49.8	+1.4
WHTX	**Lake Whitney,**	19.42	326	*e*P	P	03 57 15.6	+1.1
	comp=Z,26nm,1.0s						
V50A	**Pikevile**	19.42	360	P	P	03 57 14.7	+0.2
	baz=180						
TKL	**Tuckaleechee C**	19.44	3	P	P	03 57 17.4	+2.8
	comp=Z,0.3nm,0.3s,baz=179,slow=14,SNR=7.4						
TKL				S	Sn	04 00 40.6	-13
	comp=Z,0.2nm,0.3s,baz=46,slow=4.3,SNR=3.0						
TKL				LR	LR	04 04 37.8	
	comp=Z,110nm,18.7s,baz=195,slow=36						
TKL	**Tuckaleechee C**	19.44	3	*e*P	Pn	03 57 21.0	+5.1
	comp=Z,9.8nm,1.0s						
TKL				*e*Sn	Sn	04 00 40.6	-13
V53A	**Saluda**	19.52	5	P	P	03 57 16.8	+1.2
	baz=186						
V49A	**McMinnville**	19.54	358	P	P	03 57 15.1	-0.6
	baz=177						
V48A	**Smith Brothers**	19.56	355	P	P	03 57 16.8	+0.8
	baz=175,SNR=13						
V48A	**Smith Brothers**	19.56	355	*e*P	P	03 57 16.9	+0.9
	comp=Z,17nm,0.8s						
V51A	**Loudon**	19.56	1	P	P	03 57 17.4	+1.4
	baz=182						
V51A	**Loudon**	19.56	1	*e*P	P	03 57 17.4	+1.4
	comp=Z,13nm,0.9s						
X40A	**Basin Creek Fa**	19.56	340	P	P	03 57 15.4	-0.6
	baz=157						
X40A	**Basin Creek Fa**	19.56	340	*e*P	P	03 57 17.4	+1.3
	comp=Z,12nm,1.4s						
V52A	**Sevierville**	19.63	3	P	P	03 57 18.4	+1.6
	baz=184						
V52A	**Sevierville**	19.63	3	*e*P	P	03 57 19.3	+2.5
	comp=Z,13nm,1.2s						
UALR	**University of**	19.68	342	*e*P	P	03 57 17.9	+0.7
	comp=Z,8.9nm,0.9s						
JCT	**Junction City**	19.68	319	*e*P	P	03 57 17.8	+0.4
	comp=Z,11nm,1.1s						
V47A	**Nunnelly**	19.71	354	P	P	03 57 18.2	+0.5
	baz=173,SNR=14						
V46A	**Holladay**	19.75	352	P	P	03 57 18.9	+0.8
	baz=171						
MIAR	**Mount Ida**	19.87	339	P	P	03 57 19.6	+0.3
	baz=155						
MIAR	**Mount Ida**	19.87	339	*e*P	P	03 57 20.1	+0.7
	comp=Z,7.7nm,0.9s						
W41B	**Gary Mavity, V**	20.02	342	P	P	03 57 21.3	+0.3
	baz=159						
W41B	**Gary Mavity, V**	20.02	342	*e*P	P	03 57 22.2	+1.2
	comp=Z,7.8nm,1.0s						
CNNC	**Cliffs of the**	20.02	17	*e*P	P	03 57 22.2	+1.2
	comp=Z,10nm,0.4s						
X39A	**Fountain Ranch**	20.03	337	P	P	03 57 21.2	+0.1
	baz=154						
WVT	**Waverly**	20.04	353	P	P	03 57 22.0	+0.8
	baz=172						
WVT	**Waverly**	20.04	353	*e*P	P	03 57 22.1	+0.8
	comp=Z,8.0nm,1.0s						
HALT	**Halls**	20.04	350	*e*P	P	03 57 22.6	+1.4
	comp=Z,89nm,1.5s						
U53A	**Fall Branch**	20.23	6	P	P	03 57 24.1	+0.8
	baz=186						
U49A	**Red Boiling Sp**	20.27	358	P	P	03 57 24.6	+0.8
	baz=178						
U47A	**Clarksville**	20.30	355	P	P	03 57 24.8	+0.8
	baz=174						
U48A	**Cassie Pea, Po**	20.31	356	P	P	03 57 25.4	+1.2
	baz=176						
U46A	**Springville**	20.31	353	P	P	03 57 25.0	+0.8
	baz=171						

TZTN	Tazewell	20.33	3	P	P	03 57 25.8	+1.4
	baz=184						
U45A	Rockin P Farm,	20.38	351	P	P	03 57 25.6	+0.6
	baz=170						
V42A	Cord	20.38	345	P	P	03 57 25.3	+0.3
	baz=162						
GLAT	Glass	20.39	350	*e*P	P	03 57 25.5	+0.5
	comp=Z,36nm,1.0s						
UTMT	University of	20.39	351	*e*P	P	03 57 25.5	+0.5
	comp=Z,40nm,1.0s						
U44B	Burton Farm, H	20.46	350	P	P	03 57 26.8	+0.9
	baz=168						
W39A	Magazine	20.53	339	P	P	03 57 26.9	+0.4
	baz=155						
W39A	Magazine	20.53	339	*e*P	P	03 57 27.3	+0.8
	comp=Z,9.3nm,1.2s						
V41A	Mountainview	20.56	343	P	P	03 57 26.9	-0.1
	baz=160						
U43A	Rector	20.69	347	P	P	03 57 29.1	+0.8
	baz=165						
T50A	Nancy	20.77	0	P	P	03 57 30.5	+1.3
	baz=180						
V40A	Witts Springs	20.77	342	P	P	03 57 29.6	+0.3
	baz=158						
V40A	Witts Springs	20.77	342	*e*P	P	03 57 30.0	+0.8
	comp=Z,5.4nm,0.8s						
T47A	Sharon Grove	20.82	355	P	P	03 57 30.3	+0.6
	baz=174,SNR=18						
T47A	Sharon Grove	20.82	355	*e*P	P	03 57 30.4	+0.6
	comp=Z,35nm,0.8s						
PARMO	Parma	20.85	349	*e*P	P	03 57 30.4	+0.4
	comp=Z,33nm,0.8s						
T49A	Edmonton	20.86	359	P	P	03 57 32.2	+2.1
	baz=178,SNR=10.0						
T49A	Edmonton	20.86	359	*e*P	P	03 57 32.7	+2.6
	comp=Z,14nm,0.8s						
U42A	Revenden	20.86	346	P	P	03 57 30.9	+0.8
	baz=163,SNR=16						
T48A	Bowling Green	20.89	357	P	P	03 57 31.6	+1.1
	baz=176,SNR=8.4						
T52A	Hallie	20.93	4	P	P	03 57 31.6	+0.7
	baz=185						
T46A	Princeton	20.95	353	P	P	03 57 31.7	+0.6
	baz=172						
U41A	Viola	21.02	344	P	P	03 57 32.4	+0.4
	baz=161						
V39A	Pettigrew	21.06	340	P	P	03 57 32.7	+0.2
	baz=156						
PBMO	Poplar Bluff	21.09	348	*e*P	P	03 57 33.3	+0.7
	comp=Z,23nm,0.8s						
ABTX	Abilene, Hawle	21.10	324	P	P	03 57 31.8	-1.1
	baz=138						
ABTX	Abilene, Hawle	21.10	324	*e*P	P	03 57 33.3	+0.5
	comp=Z,14nm,1.1s						
U40A	Yellville	21.30	342	P	P	03 57 35.2	+0.4
	baz=159,SNR=8.1						
BLA	Blacksburg	21.34	10	*e*P	P	03 57 36.6	+1.2
	comp=Z,35nm,1.1s						
T43A	Greenville	21.36	348	P	P	03 57 36.0	+0.5
	baz=166,SNR=21						
S51A	Beattyville	21.42	3	P	P	03 57 37.2	+1.0
	baz=184						
S51A	Beattyville	21.42	3	*e*P	P	03 57 36.4	+0.2
	comp=Z,18nm,0.9s						
S48A	Wiedeman Farm,	21.43	358	P	P	03 57 37.2	+0.9
	baz=177,SNR=8.5						
T42A	Van Buren	21.48	347	P	P	03 57 36.9	+0.2
	baz=164,SNR=11						
T42A	Van Buren	21.48	347	*e*P	P	03 57 37.6	+0.9
	comp=Z,23nm,0.9s						
U39A	Green Forest	21.51	341	P	P	03 57 37.7	+0.5
	baz=157,SNR=9.1						
HHAR	Hobbs	21.57	340	*e*P	P	03 57 38.5	+0.8
	comp=Z,6.6nm,0.9s						
S46A	Don Dixon Farm	21.57	354	P	P	03 57 38.1	+0.4
	baz=173						
LTX	Lajitas	21.62	311	*e*P	P	03 57 39.3	+0.8
TXAR	Lajitas Array	21.62	311	P	P	03 57 39.3	+0.8
	comp=Z,2.0nm,0.8s,baz=125,slow=7.8,SNR=11						
TXAR				S	S	04 01 37.8	-0.3
	comp=Z,0.3nm,0.7s,baz=110,slow=18,SNR=2.8						
TX31	Lajitas Ar. Si	21.62	311	*e*P	P	03 57 39.7	+1.2
T41A	Mountain View	21.65	345	P	P	03 57 39.2	+0.6
	baz=162,SNR=39						
S44A	Carbondale	21.77	351	P	P	03 57 40.5	+0.6
	baz=169						
SIUC	Southern Illin	21.79	351	*e*P	P	03 57 43.8	+3.7
	comp=Z,12nm,0.8s						
S43A	Fulton Ridge,	21.79	349	P	P	03 57 40.7	+0.5
	baz=167						
USIN	University of	21.84	354	*e*P	P	03 57 44.7	+4.0
	comp=Z,26nm,0.9s						
TUL1	Leonard	21.90	336	P	P	03 57 40.7	-0.7
	baz=151						
TUL1	Leonard	21.90	336	*e*P	P	03 57 42.4	+1.0
	comp=Z,9.7nm,0.9s						
T40A	Mansfield	21.94	344	P	P	03 57 41.6	-0.3
	baz=160,SNR=8.0						
HPIG		22.00	303	*e*P	P	03 57 42.7	0.0
	comp=Z,20nm,1.2s						
WCI	Wyandotte Cave	22.01	357	P	P	03 57 43.4	+0.9
	baz=177						
WCI	Wyandotte Cave	22.01	357	*e*P	P	03 57 42.7	+0.3
	comp=Z,25nm,1.0s						
T39A	Clever	22.07	342	P	P	03 57 42.4	-0.8
	baz=158,SNR=7.6						
R51A	Hillsboro	22.08	3	P	P	03 57 44.4	+1.1
	baz=184						
R47A	Wooly Knot Far	22.08	357	P	P	03 57 44.1	+0.8
	baz=176,SNR=8.2						
S42A	Caledonia	22.12	348	P	P	03 57 44.1	+0.4
	baz=165						
S41A	Jillco Farms,	22.16	346	P	P	03 57 44.4	+0.3
	baz=163						
R45A	Skylar, Fairfi	22.23	353	P	P	03 57 45.2	+0.4
	baz=172						
FVM	French Village	22.26	349	*e*P	P	03 57 51.5	+6.3
	comp=Z,13nm,0.9s						
WMOK	Wichita Mounta	22.26	329	P	P	03 57 44.6	-0.7
	baz=143,SNR=20						
WMOK	Wichita Mounta	22.26	329	*e*P	P	03 57 44.9	-0.3
	comp=Z,9.9nm,0.8s						
R44A	Waltonville	22.29	351	P	P	03 57 45.8	+0.3
	baz=170						
URVA	University of	22.31	16	*e*P	P	03 57 50.4	+4.7
S40A	Lebanon	22.36	344	P	P	03 57 46.6	+0.3
	baz=161,SNR=8.0						
T38A	Diamond	22.37	340	P	P	03 57 45.8	-0.5
	baz=156,SNR=7.4						
CCM	Cathedral Cave	22.49	347	P	P	03 57 47.9	+0.2
	baz=164						
CCM	Cathedral Cave	22.49	347	*e*P	P	03 57 50.1	+2.4
	comp=Z,18nm,0.8s						
R42A	Luebbering	22.62	348	P	P	03 57 49.8	+0.8
	baz=165						
S39A	Bolivar	22.67	343	P	P	03 57 49.2	-0.4
	baz=159,SNR=6.7						
S39A	Bolivar	22.67	343	*e*P	P	03 57 50.9	+1.3
	comp=Z,16nm,1.0s						
Q48A	North Vernon	22.68	358	P	P	03 57 49.9	+0.2
	baz=178						
Q47A	Bedord North L	22.72	357	P	P	03 57 50.9	+0.8
	baz=176						
Q49A	Aurora	22.75	0	P	P	03 57 51.5	+1.1
	baz=180						
R41A	Rosebud	22.75	347	P	P	03 57 50.0	-0.5
	baz=164,SNR=10						
S38A	Stockton	22.79	341	P	P	03 57 50.7	-0.2
	baz=157						
Q45A	Warren Harvey,	22.81	354	P	P	03 57 51.4	+0.3
	baz=172						
Q51A	Peebles	22.82	3	P	P	03 57 52.1	+1.0
	baz=184,SNR=6.1						
R40A	Maddies Statio	22.95	345	P	P	03 57 52.4	-0.2
	baz=162,SNR=14						
R40A	Maddies Statio	22.95	345	*e*P	P	03 57 53.7	+1.1
	comp=Z,17nm,0.8s						
R39A	Chumby, Stover	23.18	344	P	P	03 57 54.5	-0.3
	baz=160						
Q42A	Golden Eagle	23.18	349	P	P	03 57 54.8	0.0
	baz=166						
P48A	Milroy	23.21	359	P	P	03 57 54.8	-0.3
	baz=179						
P49A	Miami Univ. Ec	23.28	0	P	P	03 57 56.2	+0.4
	baz=181						
R38A	Fenwick Farm,	23.30	342	P	P	03 57 55.1	-1.0
	baz=158,SNR=5.9						
Q41A	Truxton	23.36	348	P	P	03 57 56.1	-0.5
	baz=165,SNR=6.0						
P45A	Graceland, Par	23.40	355	P	P	03 57 55.8	-1.2
	baz=173						
P45A	Graceland, Par	23.40	355	*e*P	P	03 58 00.6	+3.6
	comp=Z,32nm,1.4s						
P46A	Rosedale	23.44	356	P	P	03 57 55.5	-2.0
	baz=175						
Q40A	Laux Farm, Aux	23.58	346	P	P	03 57 57.7	-1.2
	baz=163,SNR=7.9						
P43A	Skaggs, Pawnee	23.72	351	P	P	03 57 59.8	-0.4
	baz=169						
P42A	Winchester	23.80	350	P	P	03 58 00.8	-0.2
	baz=167						
MCWV	Mont Chateau	23.82	10	*e*P	P	03 58 06.0	+4.7
	comp=Z,14nm,0.8s						
Q39A	Willow Grove F	23.85	344	P	P	03 58 01.0	-0.5
	baz=161						
MSTX	Muleshoe	23.90	321	P	P	03 57 59.4	-2.7
	baz=134,SNR=5.2						
MSTX	Muleshoe	23.90	321	*e*P	P	03 58 00.9	-1.2
	comp=Z,7.7nm,0.9s						
AMTX	Amarillo	23.91	324	P	P	03 58 00.3	-1.9
	baz=137						
AMTX	Amarillo	23.91	324	*e*P	P	03 58 00.9	-1.3
	comp=Z,8.0nm,0.8s						
O50A	Cable	23.92	3	P	P	03 58 02.0	-0.1
	baz=183						
Q38A	Cooks Store, C	23.94	343	P	P	03 58 01.6	-0.8
	baz=159						
O48A	Farmland	24.00	360	P	P	03 58 03.3	+0.4
	baz=180						
ATAH	Atahualpa	24.05	164	P	P	03 58 00.9	-3.2
	comp=Z,2.7nm,0.4s,baz=51,slow=13,SNR=1.9						
ATAH				LR	LR	04 06 15.6	
	comp=Z,71nm,19.4s,baz=319,slow=34						
P40A	Paris	24.08	346	P	P	03 58 03.1	-0.5
	baz=163						
P40A	Paris	24.08	346	*e*P	P	03 58 05.1	+1.4
	comp=Z,8.6nm,0.9s						
MNTX	Cornudas Mount	24.17	313	P	P	03 58 02.3	-2.3
	baz=125,SNR=7.9						
MNTX	Cornudas Mount	24.17	313	*e*P	P	03 58 03.5	-1.0
	comp=Z,5.6nm,1.0s						
SFIN	Lafayette	24.19	356	P	P	03 58 04.8	+0.1
	baz=175						
P39B	Salisbury	24.21	345	P	P	03 58 04.1	-0.7
	baz=162						
P38A	Dawn	24.54	344	P	P	03 58 07.1	-0.8
	baz=160						
P38A	Dawn	24.54	344	*e*P	P	03 58 08.8	+1.0
	comp=Z,14nm,0.8s						
HDIL	Hopedale	24.59	352	P	P	03 58 07.7	-0.6
	baz=170						
O40A	La Belle	24.61	347	P	P	03 58 07.7	-0.8
	baz=164						
P37A	Lathrop	24.73	342	P	P	03 58 08.2	-1.4
	baz=158						
N42A	Yates City	24.96	351	P	P	03 58 10.9	-0.7
	baz=168						
N41A	Harden Midland	24.98	349	P	P	03 58 10.7	-1.1
	baz=166						
N41A	Harden Midland	24.98	349	*e*P	P	03 58 12.2	+0.3
	comp=Z,10nm,0.8s						
PAGS	Pennsylvania G	25.02	15	*e*P	P	03 58 16.5	+4.3
	comp=Z,17nm,0.9s						
LPIG	La Paz	25.04	292	LR	LR	04 08 42.0	
	comp=Z,184nm,18.1s,baz=81,slow=38						
SSPA	Standing Stone	25.14	13	P	P	03 58 13.7	+0.4
	baz=196						
SSPA	Standing Stone	25.14	13	*e*P	P	03 58 13.8	+0.5
	comp=Z,6.7nm,0.8s						
O37A	Wolven Farm, M	25.21	343	P	P	03 58 13.0	-1.0
	baz=159						
N39A	Derby Farms, D	25.47	347	P	P	03 58 15.9	-0.3
	baz=163						
N39A	Derby Farms, D	25.47	347	*e*P	P	03 58 16.6	+0.3
	comp=Z,9.1nm,1.0s						
M41A	Milan	25.57	350	P	P	03 58 16.4	-0.8
	baz=168						
M40A	Post Highland	25.78	349	P	P	03 58 18.3	-0.8
	baz=166						
N37A	Lee Faris, Mou	25.78	344	*e*P	P	03 58 21.4	+2.3
	comp=Z,22nm,0.8s						
N59A	State Game Lan	25.91	16	P	P	03 58 21.0	+0.7
	baz=200						
N59A	State Game Lan	25.91	16	*e*P	P	03 58 24.6	+4.3
	comp=Z,10nm,0.8s						
M39A	Webster	25.98	348	P	P	03 58 20.1	-0.8
	baz=164						
L42A	Oliver, Polo	26.06	352	P	P	03 58 21.4	-0.2
	baz=170						
L43A	Garden Prairie	26.13	354	P	P	03 58 22.2	0.0
	baz=172						
M38A	Pleasantville	26.14	346	P	P	03 58 22.7	+0.3
	baz=162						
L41A	Preston	26.25	351	P	P	03 58 22.1	-1.2
	baz=168						
L40A	Anamosa	26.36	349	P	P	03 58 24.0	-0.3
	baz=166						
L40A	Anamosa	26.36	349	*e*P	P	03 58 27.5	+3.2
	comp=Z,12nm,1.1s						
K41A	Shullsburg	26.74	351	P	P	03 58 27.3	-0.5
	baz=169						
K42A	Prairie Point,	26.78	353	P	P	03 58 27.4	-0.8
	baz=171						
TASL	Snake Pit, Alb	26.83	318	P	P	03 58 26.5	-2.4
	baz=129						
ANMO	Albuquerque	26.83	318	P	P	03 58 29.4	+0.5
	comp=Z,1.6nm,0.9s,baz=142,slow=10,SNR=5.0						
ANMO	Albuquerque	26.83	318	P	P	03 58 26.6	-2.3
	baz=129						
ANMO	Albuquerque	26.83	318	*e*P	P	03 58 29.2	+0.3
	comp=Z,3.9nm,1.3s						
TASM	ASL Pad, Albuq	26.83	318	P	P	03 58 26.3	-2.7
	baz=129						
JFWS	Jewell Farm	27.04	351	P	P	03 58 29.7	-0.7
	baz=169						
BINY	Binghamton	27.06	15	P	P	03 58 30.1	-0.6
	baz=199						
T25A	Trinidad	27.07	324	P	P	03 58 28.0	-3.0
	baz=136						
K39A	Oelwein	27.10	349	P	P	03 58 30.0	-1.0
	baz=165						
J41A	Loganville	27.45	352	P	P	03 58 33.2	-0.9
	baz=169						
J40A	Soldiers Grove	27.58	351	P	P	03 58 34.7	-0.6
	baz=168						
I43A	Langenfeld Bro	27.76	355	P	P	03 58 34.5	-2.3
	baz=173						
I42A	Draeger Farm,	27.83	354	P	P	03 58 37.2	-0.4
	baz=172						
I40A	Norwalk	28.05	351	P	P	03 58 38.3	-1.2
	baz=168						
SDCO	Great Sand Dun	28.11	324	P	P	03 58 37.7	-2.8
	baz=134						
I41A	Arkdale	28.11	352	P	P	03 58 38.9	-1.1
	baz=170						
I39A	Houston	28.15	350	P	P	03 58 39.2	-1.2
	baz=167						
J36A	Seneca 1, Swea	28.23	345	P	P	03 58 39.9	-1.2
	baz=161						
H43A	Windswept, Lux	28.31	356	P	P	03 58 40.8	-1.0
	baz=174						
H43A	Windswept, Lux	28.31	356	*e*P	P	03 58 41.8	-0.1
	comp=Z,13nm,0.8s						
TUC	Tucson	28.39	309	P	P	03 58 38.2	-4.7
	baz=119						
H40A	Chili	28.73	352	P	P	03 58 44.9	-0.7
	baz=169						
SADO	Sadowa	28.93	9	P	P	03 58 47.4	0.0
	comp=Z,4.8nm,0.9s,baz=239,slow=8.2,SNR=7.2						
SADO				LR	LR	04 10 15.6	
	comp=Z,137nm,18.7s,baz=204,slow=36						
SADO	Sadowa	28.93	9	*e*P	P	03 58 47.0	-0.4
	comp=Z,7.3nm,1.1s						
G43A	Wallace	29.09	356	P	P	03 58 48.2	-0.5
	baz=175						
G42A	Mountain	29.13	355	P	P	03 58 48.3	-0.7
	baz=173						
G40A	Rib Lake	29.34	352	P	P	03 58 50.1	-0.9
	baz=170						
G39A	Holcombe	29.49	351	P	P	03 58 51.6	-0.8
	baz=168						
F46A	Macinaw City C	29.51	0	P	P	03 58 52.1	-0.4
	baz=180						
LONY	Lake Ozonia	29.69	15	P	P	03 58 53.9	-0.1
	baz=200						
LONY	Lake Ozonia	29.69	15	*e*P	P	03 58 57.8	+3.7
	comp=Z,6.9nm,0.9s						
F39A	Loretta	30.07	352	P	P	03 58 56.7	-0.8
	baz=169						
H32A	Carlson Farm,	30.15	342	P	P	03 58 57.1	-1.1
	baz=156						
E43A	Lone Tree Farm	30.16	357	P	P	03 58 57.3	-0.9
	baz=176						
F38A	Pierce - Schro	30.26	350	P	P	03 58 58.0	-1.1
	baz=167						
WUAZ	Wupatki	30.44	314	P	P	03 58 57.4	-3.7
	baz=123						
E40A	Wakefield	30.46	353	P	P	03 59 00.1	-0.8
	baz=171						
E39A	Mellen	30.48	352	P	P	03 59 00.2	-0.8
	baz=169						
E38A	The Farm, Brul	30.84	351	P	P	03 59 03.2	-1.0
	baz=168						
D37A	Cotton	31.51	350	P	P	03 59 09.1	-1.0
	baz=166						
PDMCI	Parker Dam,Lak	31.81	310	P	P	03 59 10.9	-2.0
	baz=118						
PKME	Peaks-Kenny Pk	31.86	21	P	P	03 59 14.9	+1.8
	baz=209						
PKME	Peaks-Kenny Pk	31.86	21	*e*P	P	03 59 17.8	+4.6
	comp=Z,7.1nm,0.8s						
C36A	Pine Crest Far	32.16	350	P	P	03 59 14.6	-1.2
	baz=166						
BELC	Belle Mtn. Jos	33.06	308	P	P	03 59 20.9	-3.2
	baz=115						
PD31	Pinedale Array	33.83	327	*e*P	P	03 59 30.4	-0.4
PDAR	Pinedale Array	33.83	327	P	P	03 59 30.4	-0.4
	comp=Z,0.3nm,0.7s,baz=145,slow=11,SNR=3.2						
PDAR				LR	LR	04 16 07.5	
	comp=Z,49nm,18.4s,baz=126,slow=41						
REDW	Red Top Meadow	34.93	326	*e*P	P	03 59 40.3	0.0
	comp=Z,8.9nm,1.3s						
NV01	Mina Array Sit	36.70	314	*e*P	P	03 59 56.3	+0.8
NVAR	Mina Array Bea	36.70	314	P	P	03 59 55.8	+0.3
	comp=Z,1.2nm,0.9s,baz=126,slow=8.0,SNR=6.6						
NVAR				LR	LR	04 18 36.2	
	comp=Z,65nm,18.4s,baz=237,slow=42						
BOZ	Bozeman (W)	36.87	328	P	P	03 59 55.1	-1.7
	baz=134						
MCMT	McKenzie Canyo	36.98	326	*e*P	P	03 59 59.0	+1.1
SIV	San Ignacio	39.71	142	P	P	04 00 18.0	-2.9
	comp=Z,3.3nm,0.9s,baz=332,slow=9.7,SNR=18						
SCHQ	Schefferville	41.05	16	P	P	04 00 33.1	+1.5
	comp=Z,3.8nm,0.7s,baz=220,slow=12,SNR=3.6						
SCHQ				LR	LR	04 17 55.2	
	comp=Z,95nm,18.3s,baz=33,slow=36						
SCHQ	Schefferville	41.05	16	*e*P	P	04 00 33.1	+1.5
	comp=Z,5.3nm,1.0s						
YBH	Yreka Blue Hor	41.21	316	LR	LR	04 21 15.2	
	comp=Z,43nm,18.2s,baz=141,slow=41						
SFJD	Kangerlussuaq	55.51	16	LR	LR	04 26 08.9	
	comp=Z,93nm,19.5s,baz=173,slow=36						
RAGM	Ragged Mountai	61.25	331	*e*P	P	04 03 07.0	+3.7
	comp=Z,362nm,1.4s						
IL1	Eielson Array	63.65	335	*e*P	P	04 03 18.5	-0.6
ILAR	Eielson Array	63.65	335	P	P	04 03 18.9	-0.2
	comp=Z,3.8nm,0.8s,baz=119,slow=5.2,SNR=43						
ILB	Eielson Array	63.65	335	*e*P	P	04 03 19.0	-0.2
BPAW	Bear Paw Mtn.	65.16	334	*e*P	P	04 03 28.9	-0.1
	comp=Z,6.3nm,0.8s						
TOLK	Toolik Lake Re	65.89	339	P	P	04 03 32.4	-1.4
	baz=108						
EKA	Eskdalemuir Ar	72.22	36	P	P	04 04 14.3	+1.1
	comp=Z,1.5nm,0.8s,baz=279,slow=7.7,SNR=3.4						
ESDC	Sonseca Array	73.02	53	P	P	04 04 18.4	0.0
	comp=Z,1.0nm,0.7s,baz=292,slow=5.1,SNR=7.0						
ES19	SONSECA Array	73.07	53	*e*P	P	04 04 21.9	+3.2
KOWA	Kowa	77.57	78	P	P	04 04 44.7	-0.2
	comp=Z,1.3nm,0.7s,baz=0.0,slow=0.0,SNR=4.1						
DAVOX	Davos/Dischmat	81.65	44	LR	LR	04 38 03.5	
	comp=Z,135nm,18.1s,slow=33						
ARA0	ARCESS Array S	81.90	19	*e*P	P	04 05 07.5	0.0
ARCES	ARCESS Array B	81.90	19	P	P	04 05 07.5	0.0
	comp=Z,1.8nm,0.9s,baz=311,slow=4.7,SNR=4.0						
TOA1	Torodi Ar. Sit	83.27	78	*e*P	P	04 05 13.3	-2.3
TORD	Torodi Ar. Bea	83.27	78	P	P	04 05 13.3	-2.3
	comp=Z,0.5nm,0.9s,baz=288,slow=4.2						
FIA0	FINESS Array S	85.59	27	*e*P	P	04 05 26.8	+0.4
FINES	FINESS Array B	85.59	27	P	P	04 05 26.8	+0.4
	comp=Z,1.6nm,0.8s,baz=290,slow=4.1,SNR=5.6						
WR1	Warramunga Arr	142.50	258	*e*PKPdf	PKPdf	04 12 20.0	-2.1
WRA	Warramunga Arr	142.50	258	PKP	PKPdf	04 12 20.0	-2.1
	comp=Z,0.8nm,1.1s,baz=93,slow=2.3,SNR=3.4						
AS31	Alice Springs	142.79	252	*e*PKPdf	PKPdf	04 12 20.8	-1.8
ASAR	Alice Springs	142.79	252	PKP	PKPdf	04 12 20.8	-1.8
	comp=Z,0.4nm,0.7s,baz=94,slow=2.5,SNR=3.1						
CM31	Chiang Mai Arr	145.38	353	*e*PKPbc	PKPbc	04 12 26.6	-0.4
CMAR	Chiang Mai Arr	145.38	353	PKPbc	PKPbc	04 12 26.6	-0.4
	comp=Z,1.5nm,0.5s,baz=352,slow=4.6,SNR=2.0						

ISCJB **12** *04:00:01.8±0.4, 35°.82N±0°.07×137°.58E±0°.08, h236^{km}, mb3.5/8, Error ellipse: s-maj=11.0km s-min=8.2km az=39.3*

JMA **12** *04:00:02.6±0.2, 35°.86N×137°.70E, h236^{km}±2^{km}, M2.9*

IDC **12** *04:00:02.4±1.2, 35°.70N×137°.22E, h222^{km}±43^{km}, mb3.3/8, mb1 3.4/10, mb1mx3.1/72, mbtmp3.9/10, Error ellipse: s-maj=119.7km s-min=8.9km az=65.0*

ISC 12 04:00:02.5±0.8**, 35°.89N**±0°.07×**137°.67E**±0°.08**, h236**^{km}**, n23,** $\sigma 0^{s}$**92**/28**, mb3.5**/8**, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JGF	Kuroka	0.38	221	*e*S	S	04 00 57.3	-0.5
MAT	Matsushiro	0.78	34	P	Pn	04 00 35.3	+0.5
MAT				S	S	04 01 00.7	+0.4
MAT	Matsushiro	0.78	34	P	Pn	04 00 35.3	+0.5
MAT				S	S	04 01 00.4	+0.1
MJAR	Matsushiro Arr	0.78	34	P	Pn	04 00 35.4	+0.6
	14nm,0.3s,baz=225,slow=6.9,SNR=99						
MJAR				S	S	04 01 00.8	+0.4
	baz=193,slow=21,SNR=4.1						
JYN	Shimob	0.82	119	P	Pn	04 00 35.3	+0.2
JRY	Ryogami san	1.01	83	P	Pn	04 00 36.6	+0.5
JRY				S	S	04 01 03.0	+0.6
JKG	Kaga	1.15	290	P	Pn	04 00 37.4	+0.6
JOD2	Odawara 2	1.32	118	P	Pn	04 00 38.6	+0.5
JAG	Ashikaga	1.54	69	P	Pn	04 00 39.5	-0.2
JSZ	Suzu	1.57	351	P	Pn	04 00 40.2	+0.3
JWT	Wachi	1.94	252	P	Pn	04 00 43.9	+0.7
JSD	Sado	2.19	12	P	Pn	04 00 45.9	+0.4
BSO1	Boso 1	2.98	114	P	Pn	04 00 52.9	-0.4
JHJ	Hachijo jima 2	3.27	147	P	Pn	04 00 57.4	+0.2
	12nm,0.3s,baz=249,slow=22,SNR=3.3						
JHJ				S	S	04 01 43.3	+3.0
	11nm,0.3s,baz=118,slow=22,SNR=3.2						
USRK	Ussuriysk Ar.	9.37	334	P	Pn	04 02 14.0	+1.0
	baz=148,slow=14						
SONM	Songino Array	25.98	307	P	P	04 05 13.1	-0.6
	0.4nm,0.5s,baz=107,slow=11,SNR=3.3						
ZALV	Zalesovo Beam	40.48	313	P	P	04 07 18.6	+0.6
	0.8nm,0.4s,baz=98,slow=10,SNR=2.8						
MKAR	Makanchi Array	42.18	303	P	P	04 07 32.4	+0.4
	0.9nm,0.7s,baz=91,slow=10,SNR=5.0						
KURBB	Kurchatov Arra	44.33	309	P	P	04 07 49.3	+0.2
	1.0nm,0.4s,baz=85,slow=7.6,SNR=15						
BVAR	Borovoye Array	49.11	313	P	P	04 08 27.2	+1.2
	0.9nm,0.5s,baz=86,slow=8.2,SNR=5.0						
FITZ	Fitzroy Crossi	54.89	194	P	P	04 09 06.5	-2.2
	1.8nm,1.0s,baz=356,slow=13,SNR=2.9						
WRA	Warramunga Arr	55.62	184	P	P	04 09 13.3	-0.6
	1.0nm,0.3s,baz=0.0,slow=7.5,SNR=31						
ASAR	Alice Springs	59.34	184	P	P	04 09 39.5	-0.4
	0.4nm,0.3s,baz=8.9,slow=6.6,SNR=6.1						

MOS **12** *04:04:11.1±0.9, 0°.35S×19°.74W, h10^{km}, mb5.1/44, MS4.3/6, Error ellipse: s-maj=11.2km s-min=5.0km az=56.3*

ISCJB **12** *04:04:11.9±0.2, 0°.48S±0°.04×19°.81W±0°.02, h19^{km}, mb4.8/183, MS4.4/49, Error ellipse: s-maj=5.7km s-min=2.7km az=166.2*

IDC **12** *04:04:11.5±0.4, 0°.42S×19°.76W, h0^{km}, mb4.5/42, mb1 4.6/43, mb1mx4.5/62, mbtmp4.5/43, ML4.9/1, MS4.3/36, Ms1 4.3/36, ms1mx4.1/53, Error ellipse: s-maj=12.8km s-min=10.2km az=150.0*

GCMT **12** *04:04:12.9±0.2, 0°.35S×19°.76W, h25^{km}, MW5.2/107, Moment Tensor Solution. s67,c106; s107,c182; Duration: 1^{s}0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.47±.16; $M_{\theta\theta}$2.11±.14; $M_{\phi\phi}$-1.63±.14; $M_{r\theta}$2.34±.31;*

$M_{\theta\phi}$-6.96±.12; $M_{\phi r}$-1.30±.30; Best double couple: $M_0$7.62200×10^{16} NP1:ϕ_s81.00000°,δ81.00000°, λ165.00000°. NP2:ϕ_s174.00000°,δ75.00000°,λ9.00000°. Principal axes: T 8.2510, Plg17.0000°, Azm37.0000°; N -1.2520, Plg73.0000°, Azm230.0000°; P -6.9920, Plg4.0000°, Azm128.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.

*NEIC **12** 04:04:12.9±0.1, 0.°43S×19.°78W, h10^{km}, mb4.9/108 Error ellipse: s-maj=4.6km s-min=3.0km az=169.0*

*BJI **12** 04:04:12.0, 0.°50S×19.°80W, h10^{km}, mb5.4/2, mB5.5/5, Ms5.0/6, Ms7 4.7/5*

ISC 12 04:04:14.0±0.3, **0.°42S**±0.°05×**19.°80W**±0.°05, **h19^{km}, n726**, σ**1.^{s}31**/723, **mb4.9**/183, **MS4.3**/49, **27C-32D, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10N2	ASCENSION HYDR	9.06	144	T	T	04 15 35.4	
	baz=322,slow=74,SNR=2792						
H10N3	ASCENSION HYDR	9.06	145	T	T	04 15 38.0	
	baz=322,slow=74,SNR=3220						
H10N1	ASCENSION HYDR	9.08	144	T	T	04 15 38.2	
	baz=322,slow=74,SNR=4102						
ASCN	Ascension	9.22	144	*e*Pn	Pn	04 06 25.4	-0.7
ASCN				*e*Sn	Sn	04 08 06.9	-2.5
H10S1	ASCENSION HYDR	9.89	149	T	T	04 16 42.2	
	baz=326,slow=76,SNR=132						
H10S3	ASCENSION HYDR	9.90	149	T	T	04 16 42.2	
	baz=326,slow=76,SNR=84						
H10S2	ASCENSION HYDR	9.91	149	T	T	04 16 42.2	
	baz=326,slow=76,SNR=139						
SACV	Santiago Islan	15.75	346	*e*Pn	Pn	04 07 54.0	-1.0
	28nm,0.8s						
SACV				*e*Sn	Sn	04 10 39.0	-10
LIC	Lamto	16.15	66	*e*P	P	04 08 01.8	-1.5
	294nm,1.4s						
TIC	Toumodi	16.33	64	*e*P	Pn	04 08 02.5	0.0
KIC	Kosan Boka	16.47	66	*e*P	Pn	04 08 04.7	+0.5
	213nm,1.3s						
DBIC	Dimbokro	16.49	64	Pn	Pn	04 08 03.6	-0.9
	4.1nm,0.3s,baz=225,slow=13,SNR=40						
DBIC				Sn	Sn	04 10 51.5	-16
	2.4nm,0.3s,baz=334,slow=8.6,SNR=5.6						
DBIC				LR	LR	04 13 15.1	
	comp=Z,2μm,19.4s,baz=224,slow=33						
DBIC	Dimbokro	16.49	64	*e*Pn	Pn	04 08 03.8	-0.7
	78nm,1.1s						
DBIC				*e*Sn	Sn	04 10 53.5	-14
RCBR	Riachuelo	16.95	251	Pn	Pn	04 08 07.2	-3.1
	10nm,0.3s,baz=151,slow=0.8,SNR=44						
RCBR				Sn	Sn	04 11 02.8	-16
	16nm,0.3s,baz=171,slow=1.7,SNR=14						
RCBR	Riachuelo	16.95	251	*e*Pn	Pn	04 08 07.2	-3.1
	21nm,0.4s						
RCBR				*e*Sn	Sn	04 11 02.8	-16
RCBR	Riachuelo	16.95	251	*e*P	Pn	04 08 07.2	-3.1
RCBR				pmax	pmax		
	comp=Z,21nm,0.4s						
KOWA	Kowa	21.53	46	P	P	04 09 02.0	-0.2
	comp=Z,168nm,0.9s,baz=227,slow=8.2,SNR=176						
KOWA				S	S	04 12 52.1	-8.4
	comp=Z,11nm,0.6s,baz=138,slow=20,SNR=3.6						
KOWA				LR	LR	04 16 34.9	
	comp=Z,2μm,19.9s,baz=223,slow=35						
KOWA	Kowa	21.53	46	*e*P	P	04 09 02.4	+0.1
KOWA				*e*S	S	04 12 52.1	-8.4
TOA0	Torodi Ar. Sit	25.21	57	*e*P	P	04 09 38.8	-0.1
TOA1	Torodi Ar. Sit	25.21	57	*e*P	P	04 09 38.0	-0.9
TOA1				*e*S	S	04 14 18.2	+15
TORD	Torodi Ar. Bea	25.21	57	P	P	04 09 38.0	-0.9
	comp=Z,28nm,1.0s,baz=238,slow=10						
TORD				S	S	04 14 18.3	+15
	baz=242,slow=21						
TORD				LR	LR	04 18 32.5	
	comp=Z,371nm,18.7s,baz=270,slow=34						
TAM	Tamanrasset	33.76	45	*e*P	P	04 10 55.5	+0.6
	comp=Z,48nm,1.2s						
TAM	Tamanrasset	33.76	45	*e*P	P	04 10 55.6	+0.6
TAM				pmax	pmax		
	comp=Z,48nm,1.2s						
MDT	Midelt	36.03	22	P	P	04 11 15.3	+1.0
	comp=Z,22nm,1.2s,baz=225,slow=6.9,SNR=14						
MDT				LR	LR	04 26 10.5	
	comp=Z,717nm,18.9s,baz=229,slow=37						
MORF	Marmelete	38.93	14	*e*P	P	04 11 39.2	+0.4
MORF				AMb	AMB	04 11 42.5	
	comp=Z,56nm,1.3s						
MORF	Marmelete	38.93	14	*e*S	S	04 17 49.1	+13
MORF	Marmelete	38.93	14	*e*P	P	04 11 39.2	+0.4
PBDV	Barranco-do-Ve	39.05	15	*e*S	S	04 17 42.9	+4.6
PTEO	Sao Teotonio	39.14	14	*e*P	P	04 11 41.8	+1.3
	comp=Z,77nm,1.4s						
PVAQ	Vaqueiros	39.26	15	*e*P	P	04 11 43.5	+2.0
	comp=Z,76nm,1.6s						
PVAQ				*e*S	S	04 17 44.9	+3.6
PVAQ				*e*LR	LR	04 23 15.2	
	comp=Z,236nm,20.0s						
PCVE	Castro Verde	39.40	15	*e*P	P	04 11 44.3	+1.7
	comp=Z,58nm,1.9s						
MESJ	Messejana	39.55	14	*e*P	P	04 11 44.6	+0.7
MESJ				AMb	AMB	04 11 48.3	
	comp=Z,56nm,1.3s						
MESJ				*e*S	S	04 17 48.9	+3.3
MESJ	Messejana	39.55	14	*e*P	P	04 11 45.7	+1.8
	comp=Z,54nm,1.4s						
MESJ	Messejana	39.55	14	*e*P	P	04 11 44.5	+0.7
MESJ				*e*S	S	04 17 48.8	+3.3
PNCL	Nicolau / Gran	39.73	14	*e*S	S	04 17 57.9	+10
PBEJ	Beja	39.81	15	*e*P	P	04 11 48.9	+2.8
	comp=Z,30nm,2.0s						
PBAR	Barrancos	40.17	16	*e*P	P	04 11 50.4	+1.4
	comp=Z,46nm,1.8s						
PTGA	Pitinga	40.17	269	P	P	04 11 49.6	+0.2
	comp=Z,1.1nm,0.4s,baz=104,slow=13,SNR=4.2						
PTGA	Pitinga	40.17	269	*e*P	P	04 11 48.9	-0.6
	comp=Z,8.7nm,1.1s						
EVO	Evora	40.25	14	*e*P	P	04 11 51.6	+1.9
	comp=Z,54nm,1.6s						
PMAFR	Mafra	40.36	13	*e*S	S	04 18 06.0	+8.2
PESTR	Estremoz	40.68	15	*e*S	S	04 18 08.9	+6.4
ALMR	Almeirim	40.71	13	*e*P	P	04 11 54.1	+0.6
ALMR				AMb	AMB	04 11 58.3	
	comp=Z,85nm,1.5s						
ALMR	Almeirim	40.71	13	*e*P	P	04 11 54.1	+0.6
PMTG	Montargil	40.71	14	*e*P	P	04 11 55.2	+1.7
	comp=Z,28nm,1.5s						
PMTG				*e*S	S	04 18 03.3	+0.3
TSUM	Tsumeb	41.12	119	P	P	04 11 56.8	-0.5
	comp=Z,5.8nm,1.1s,baz=300,slow=7.6,SNR=3.1						
PMRV	Marv??o	41.26	15	*e*P	P	04 12 00.4	+2.4
	comp=Z,37nm,1.6s						
PMRV				*e*S	S	04 18 18.3	+7.2
PMRV				*e*LR	LR	04 24 06.6	
	comp=Z,332nm,18.0s						
PCAS	Casmilo, Conde	41.58	13	*e*S	S	04 18 25.6	+10
CART	Cartagena	41.62	23	*e*P	P	04 12 01.8	+0.8
	comp=Z,28nm,0.9s						
MTE	Manteigas	42.14	14	*e*P	P	04 12 06.8	+1.5
	comp=Z,38nm,1.4s						
MTE				*e*S	S	04 18 30.1	+5.9
MTE				*e*LR	LR	04 24 28.7	
	comp=Z,399nm,18.0s						
PAB	San Pablo	42.22	18	*e*P	P	04 12 07.3	+1.3
	comp=Z,36nm,1.3s						
PAB	San Pablo	42.22	18	*e*P	P	04 12 07.3	+1.3
PAB				pmax	pmax		
	comp=Z,36nm,1.3s						
ESDC	Sonseca Array	42.45	18	P	P	04 12 08.9	+1.0
	comp=Z,8.5nm,1.0s,baz=207,slow=8.2,SNR=34						
ESDC				PP	PP	04 13 46.6	+0.1
	comp=Z,6.1nm,1.1s,baz=203,slow=11,SNR=6.9						
ESLA	Sonseca Array	42.45	18	*e*P	P	04 12 08.6	+0.7
	comp=Z,42nm,1.4s						
ES19	SONSECA Array	42.50	18	*e*P	P	04 12 08.5	+0.3
MVO	Moncorvo	42.99	14	*e*P	P	04 12 13.6	+1.4
	comp=Z,34nm,1.7s						
MVO				*e*S	S	04 18 41.9	+5.2
MVO				*e*LR	LR	04 24 50.7	
	comp=Z,357nm,16.0s						
POLO	Lamas de Olo	43.00	13	*e*P	P	04 12 13.3	+0.9
	comp=Z,12nm,1.9s						
POLO				*e*S	S	04 18 42.0	+5.0
CKHR	Kef el Ahmar	43.23	30	P	P	04 12 16.3	+2.0
SET	Setif	43.32	30	P	P	04 12 17.0	+2.0
PGAV	Gavieira, Arco	43.46	13	*e*S	S	04 18 50.4	+6.7
PGAV				*e*LR	LR	04 25 05.4	
	comp=Z,282nm,16.0s						
SIV	San Ignacio	43.55	247	P	P	04 12 18.0	+0.9
	comp=Z,5.2nm,0.8s,baz=95,slow=9.7,SNR=30						
PBRG	Braganca	43.66	14	*e*P	P	04 12 19.4	+1.8
	comp=Z,24nm,1.9s						
CTEI	Djebel Teioual	43.73	31	P	P	04 12 19.2	+0.9
SAML	Samuel	44.02	258	*e*P	P	04 12 20.3	-0.6
	comp=Z,13nm,1.2s						
SAML	Samuel	44.02	258	*e*P	P	04 12 20.3	-0.6
SAML				pmax	pmax		
	comp=Z,13nm,1.2s						
CKFL	Kef-Lekhel	44.15	31	P	P	04 12 22.7	+1.0
CPUP	Villa Florida	44.37	231	P	P	04 12 24.4	+0.9
	comp=Z,2.9nm,1.1s,baz=29,slow=7.2,SNR=2.6						
CPUP				LR	LR	04 29 43.6	
	comp=Z,482nm,19.5s,baz=62,slow=34						
CPUP	Villa Florida	44.37	231	*e*P	P	04 12 24.4	+0.9
	comp=Z,15nm,1.5s						
CPUP	Villa Florida	44.37	231	*e*P	P	04 12 24.4	+0.9
CPUP				pmax	pmax		
	comp=Z,15nm,1.5s						
THTN	Thala	44.57	34	*e*P	P	04 12 26.6	+1.5
	comp=Z,34nm,1.2s						
KEST	Kesra	45.06	34	P	P	04 12 28.9	-0.1
	comp=Z,8.7nm,0.9s,baz=194,slow=4.5,SNR=7.1						
KEST				LR	LR	04 33 00.8	
	comp=Z,2μm,18.1s,baz=180,slow=38						
KEST	Kesra	45.06	34	*e*P	P	04 12 28.9	-0.1
	comp=Z,12nm,1.0s						
PCRV	Puerto La Cruz	45.83	285	P	P	04 12 35.6	+0.2
	comp=Z,15nm,1.2s,baz=344,slow=22,SNR=3.9						
PCRV				LR	LR	04 29 25.4	
	comp=Z,279nm,21.8s,baz=102,slow=33						
CLTB	Caltabellotta	48.57	35	*e*P	P	04 12 57.8	+1.4
	comp=Z,26nm,1.1s						
VAE	Valguarnera	49.20	36	LR	LR	04 33 46.8	
	comp=Z,528nm,19.1s,baz=148,slow=36						
LSZ	Lusaka	49.62	110	P	P	04 13 05.0	+0.2
	comp=Z,5.2nm,0.9s,baz=263,slow=3.5,SNR=7.8						
LSZ				LR	LR	04 31 50.8	
	comp=Z,278nm,19.6s,baz=268,slow=34						
SUR	Sutherland	49.74	134	P	P	04 13 06.1	+0.5
	comp=Z,6.8nm,0.8s,baz=310,slow=6.8,SNR=3.7						
SUR	Sutherland	49.74	134	*e*P	P	04 13 06.1	+0.5
	comp=Z,22nm,1.1s						
LPAZ	La Paz	50.17	249	P	P	04 13 09.5	-0.2
	comp=Z,4.0nm,0.6s,baz=68,slow=6.2,SNR=17						
LPAZ				LR	LR	04 34 11.5	
	comp=Z,519nm,18.1s,baz=88,slow=36						
LPAZ	La Paz	50.17	249	*e*P	P	04 13 08.5	-1.1
	comp=Z,15nm,1.0s						
LPAZ	La Paz	50.17	249	*e*P	P	04 13 08.5	-1.1
LPAZ				pmax	pmax		
	comp=Z,15nm,1.0s						
LBTB	Lobatse	50.19	123	P	P	04 13 09.2	+0.1
	comp=Z,6.3nm,0.9s,baz=296,slow=12,SNR=6.0						
LBTB	Lobatse	50.19	123	*e*P	P	04 13 08.6	-0.5
	comp=Z,20nm,1.1s						
LBTB	Lobatse	50.19	123	P	P	04 13 09.2	+0.1
LBTB				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MBAR	Mbarara	50.53	90	*e*P	P	04 13 12.9	+1.0
	comp=Z,14nm,1.2s						
MBAR	Mbarara	50.53	90	*e*P	P	04 13 12.9	+1.0
MBAR				pmax	pmax		
	comp=Z,14nm,1.2s						
BNI	Bardonecchia	51.00	24	*e*P	P	04 13 15.6	+0.7
	comp=Z,27nm,1.2s						
BNI	Bardonecchia	51.00	24	*e*P	P	04 13 15.6	+0.7
BNI				pmax	pmax		
	comp=Z,27nm,1.2s						
BOSA	Boshof	51.35	127	P	P	04 13 17.9	+0.2
	comp=Z,7.8nm,0.8s,baz=298,slow=7.7,SNR=7.7						
BOSA				LR	LR	04 31 36.9	
	comp=Z,246nm,19.2s,baz=284,slow=32						
BOSA	Boshof	51.35	127	*e*P	P	04 13 18.0	+0.2
SDV	Santo Domingo	51.47	282	P	P	04 13 20.0	+1.0
	comp=Z,2.0nm,0.3s,baz=153,slow=20,SNR=2.5						
CUC	Castrocucco	51.69	35	*e*P	P	04 13 19.9	-0.2
	comp=Z,9.4nm,1.2s						
TIP	Timpagrande	51.70	36	*e*P	P	04 13 20.1	0.0
	comp=Z,41nm,1.3s						
AQU	L'Aquila	52.02	31	*e*P	P	04 13 22.9	+0.5
	comp=Z,42nm,1.2s						
AQU	L'Aquila	52.02	31	*e*P	P	04 13 22.9	+0.5
AQU				pmax	pmax		
	comp=Z,42nm,1.2s						
MNMC	Minye Minye	52.22	246	*e*P	P	04 13 23.9	-0.7
	comp=Z,10nm,0.9s						
SENIN	Lac Senin/Sane	52.32	23	*e*P	P	04 13 25.5	+0.7
	comp=Z,16nm,1.3s						
RUSC	La Rusia	53.56	278	*e*P	P	04 13 34.1	-0.8
	comp=Z,13nm,1.4s						
DAVOX	Davos/Dischmat	53.72	25	P	P	04 13 35.3	+0.2
	baz=197,slow=7.8,SNR=11						
ITM	Ithomi	53.72	41	*e*P	P	04 13 35.5	+0.4
	comp=Z,19nm,1.0s						
ECH	Echery	53.79	22	*e*P	P	04 13 35.2	-0.2
	comp=Z,16nm,1.2s						
ECH	Echery	53.79	22	*e*P	P	04 13 35.2	-0.2
ECH				pmax	pmax		
	comp=Z,16nm,1.2s						
DAVA	Damuels	54.12	25	*e*P	P	04 13 38.3	+0.3
	comp=Z,41nm,1.1s,SNR=9.4						
FETA	Feichten	54.27	25	*e*P	P	04 13 39.2	+0.2
	comp=Z,23nm,1.1s,SNR=8.0						
BFO	Black Forest	54.33	23	*e*P	P	04 13 39.2	-0.2
	comp=Z,26nm,1.2s						
BFO	Black Forest	54.33	23	*i* P	P	04 13 40.6	+1.3
DOU	Dourbes	54.48	19	⇑P	P	04 13 40.8	+0.5
	comp=Z,14nm,1.4s						
WLF	Walferdange	54.64	20	⇓P	P	04 13 43.3	+1.8
RETA	Reutte	54.65	25	*e*P	P	04 13 41.9	+0.2
	comp=Z,15nm,1.0s,SNR=5.3						
MOTA	Moosalm	54.68	25	*e*P	P	04 13 42.3	+0.3
	comp=Z,22nm,1.3s						
ROSC	El Rosal	54.71	276	P	P	04 13 43.7	+0.6
	comp=Z,3.3nm,0.4s,baz=111,slow=16,SNR=8.3						
ROSC				LR	LR	04 35 28.0	
	comp=Z,344nm,19.2s,baz=106,slow=34						
ROSC	El Rosal	54.71	276	*e*P	P	04 13 42.7	-0.4
	comp=Z,14nm,1.1s						
IDI	Anoyia	54.73	45	P	P	04 13 43.3	+0.8
	comp=Z,12nm,1.0s,baz=201,slow=12,SNR=4.1						
IDI	Anoyia	54.73	45	*e*P	P	04 13 43.3	+0.8
	comp=Z,43nm,1.5s						
WTTA	Wattenberg	54.85	26	*e*P	P	04 13 43.7	+0.4
	comp=Z,12nm,1.1s						
WATA	Walderalm	54.88	26	*e*P	P	04 13 44.8	+1.4
	comp=Z,17nm,1.2s						
JAVS	Javornik	54.92	28	*e*P	P	04 13 44.5	+0.7
BCLA	Clavier	54.99	19	⇑P	P	04 13 45.3	+1.2
AGG	Agios Georgios	55.03	40	*e*P	P	04 13 44.7	+0.1
	comp=Z,34nm,1.4s						
AGG	Agios Georgios	55.03	40	*e*P	P	04 13 44.7	+0.1
AGG				pmax	pmax		
	comp=Z,34nm,1.4s						
GORS	Gorjuse	55.20	28	*e*P	P	04 13 46.6	+0.8
TTG	Podgorica	55.25	35	*e*P	P	04 13 46.4	+0.4
	comp=Z,35nm,1.3s						
TTG	Podgorica	55.25	35	*e*P	P	04 13 46.4	+0.4
TTG				pmax	pmax		
	comp=Z,35nm,1.3s						
MYKA	Terra Mystica	55.27	28	*e*P	P	04 13 48.2	+2.1
	comp=Z,22nm,1.7s						
OHR	Ohrid	55.32	37	*e*P	P	04 13 57.8	+11
MEM	Membach	55.39	20	⇓P	P	04 13 48.2	+1.3
	comp=Z,15nm,1.7s						
BEBN	Eben Emael	55.44	19	⇓P	P	04 13 48.5	+1.3
KBA	Koelnbreinsper	55.47	27	*e*P	P	04 13 48.5	+0.8
	comp=Z,12nm,1.6s						
OBKA	Obir	55.60	28	*e*P	P	04 13 49.0	+0.4
	comp=Z,11nm,1.1s						
KRUS	Krusevo	55.75	37	*i* P	P	04 13 50.5	+0.7
LIT	Litokhoron	55.76	39	*e*P	P	04 13 49.7	-0.1
	comp=Z,16nm,0.9s						
LIT	Litokhoron	55.76	39	*e*P	P	04 13 49.7	-0.1
LIT				pmax	pmax		
	comp=Z,16nm,0.9s						
SOKA	Soboth	55.95	28	*e*P	P	04 13 52.2	+1.1
	comp=Z,27nm,1.4s,SNR=6.9						
SKO	Skopje	56.23	36	*i* P	P	04 13 54.2	+1.1
MOA	Molln	56.46	27	*e*P	P	04 13 54.3	-0.4
	comp=Z,11nm,1.4s						
STIP	Stip	56.51	37	*i* P	P	04 13 56.4	+1.3
VAY	Valandovo	56.52	37	*e*P	P	04 13 54.2	-0.9
ARSA	Arzberg	56.60	28	*e*P	P	04 13 56.1	+0.5
	comp=Z,9.3nm,1.1s						
BEHE	Becsehely	56.65	30	*e*P	P	04 13 57.1	+1.1
DIVS	Divibare	56.73	33	*e*P	P	04 13 56.9	+0.2
	comp=Z,22nm,1.2s						
GEA0	GERESS Array S	56.94	26	*e*P	P	04 13 58.0	-0.2
GEC2	GERESS Array S	56.95	26	*e*P	P	04 13 57.9	-0.3
	comp=Z,16nm,1.3s						
GEC2	GERESS Array S	56.95	26	*e*P	P	04 13 57.9	-0.3
GEC2				pmax	pmax		
	comp=Z,16nm,1.3s						
GERES	GERESS Array B	56.95	26	P	P	04 13 58.5	+0.3
	comp=Z,2.5nm,0.8s,baz=216,slow=6.6,SNR=22						
KMBO	Kilima Mbogo	57.05	91	LR	LR	04 36 53.7	
	comp=Z,940nm,18.2s,baz=261,slow=34						
KHC	Kasperske Hory	57.11	25	*e*P	P	04 14 00.7	+1.4
KHC				*e*S	S	04 21 55.6	+2.1
KHC				AMS	AMS	04 44 30.0	
	comp=Z,300nm,10.2s						
KHC	Kasperske Hory	57.11	25	*e*P	P	04 13 58.9	-0.4
	comp=Z,6.0nm,1.3s						
KHC	Kasperske Hory	57.11	25	*e*P	P	04 13 58.9	-0.4
KHC				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KKB	Krupnik	57.15	37	P	P	04 14 00.5	+0.8
EKA	Eskdalemuir Ar	57.22	11	P	P	04 14 04.8	+4.9
	comp=Z,2.4nm,0.8s,baz=180,slow=5.7,SNR=4.1						
EKA				LR	LR	04 38 21.0	
	comp=Z,52nm,18.2s,baz=175,slow=36						
EKA	Eskdalemuir Ar	57.22	11	P	P	04 14 04.8	+5.0
EKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
EKA				MLR	MLR		
	comp=Z,52nm,18.2s						
CONA	Conrad Observa	57.25	28	*e*P	P	04 14 00.8	+0.4
	comp=Z,12nm,1.3s,SNR=6.8						
MORH	Mˆ‡rˆ¡gy, Hung	57.41	31	⇑*e*P	P	04 14 02.2	+0.8
VTS	Vitosha	57.65	37	⇓*i*P	P	04 14 05.2	+1.8
VTS	Vitosha	57.65	37	*e*P	P	04 14 03.3	-0.1
	comp=Z,19nm,1.2s						
VTS	Vitosha	57.65	37	P	P	04 14 03.0	-0.4
VTS	Vitosha	57.65	37	⇓P	P	04 14 05.2	+1.8
NNA	Nana	57.74	256	LR	LR	04 38 15.9	
	comp=Z,736nm,18.5s,baz=71,slow=35						
CSKK	Csˆ‡kako	58.00	30	*e*P	P	04 14 06.2	+0.7
MDVR	Moldovita	58.12	34	⇓*i*P	P	04 14 07.4	+0.9
PRU	Pruhonice	58.17	25	*e*S	S	04 22 12.1	+4.8
PRU				AMS	AMS	04 45 50.0	
	comp=Z,200nm,14.1s						
GOPC	GO Pecny, Ondr	58.22	26	*e*S	S	04 22 09.8	+1.8
GOPC				AMS	AMS	04 46 50.0	
	comp=Z,200nm,14.4s						
MODS	Modra-Piesok	58.23	28	*e*P	P	04 14 07.5	+0.3
MODS				pmax	pmax		
	comp=Z,28nm,1.4s						
MODS	Modra-Piesok	58.23	28	*e*P	P	04 14 07.4	+0.3
KRUC	Moravsky	58.31	27	*e*P	P	04 14 07.2	-0.5
ALN	Alexandroupoli	58.45	40	*e*P	P	04 14 09.7	+1.0
	comp=Z,6.7nm,1.1s						
ALN	Alexandroupoli	58.45	40	*e*P	P	04 14 09.7	+1.0
ALN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BUD	Budapest	58.46	30	*e*P	P	04 14 10.4	+1.7
CLL	Collm	58.54	23	⇓*i*P	P	04 14 07.8	-1.4
CLL				*i*		04 14 09.8	
	comp=Z,22nm,1.6s						
CLL				*e*PP	PP	04 16 16.0	-2.9
CLL				*e*S	S	04 22 12.0	0.0
CLL				*e*SSSS		04 29 00.0	
CLL	Collm	58.54	23	⇓*i*P	P	04 14 07.8	-1.4
CLL				*e*S	S	04 22 12.0	0.0
CLL				pmax	pmax		
	comp=Z,22nm,1.6s						
HERR	Herculane	58.57	34	⇑*i*P	P	04 14 09.7	+0.1
VRAC	Vranov	58.58	27	LR	LR	04 41 25.3	
	comp=Z,94nm,18.6s,baz=230,slow=38						
VRAC	Vranov	58.58	27	⇓*i*P	P	04 14 10.1	+0.5
VRAC	Vranov	58.58	27	⇓P	P	04 14 10.1	+0.5
VRAC	Vranov	58.58	27	*e*P	P	04 14 09.3	-0.3
BRG	Berggiesshubel	58.59	24	*e*P	P	04 14 09.4	-0.2
	comp=Z,16nm,1.4s						
BRG				*e*PP	PP	04 16 17.2	-2.1
	comp=Z,23nm,1.4s						
BRG				S	S	04 22 15.0	+2.4
BRG	Berggiesshubel	58.59	24	*e*P	P	04 14 09.4	-0.2
BRG				*e*		04 16 17.2	
BRG				S	S	04 22 15.0	+2.4
BRG				pmax	pmax		
	comp=Z,16nm,1.4s						
BRG				pmax	pmax		
	comp=Z,23nm,1.4s						
PVCC	Panska Ves	58.59	25	AMS	AMS	04 45 20.0	
	comp=Z,200nm,15.3s						
JAVC	Velka Javorina	58.76	28	*e*P	P	04 14 11.3	+0.4
VYHS	Vyhne	59.06	29	*e*P	P	04 14 13.1	+0.2
VYHS				pmax	pmax		
	comp=Z,19nm,1.5s						
VYHS	Vyhne	59.06	29	*e*P	P	04 14 13.1	+0.2
PSZ	Piszkesteto	59.19	30	⇓*i*P	P	04 14 15.4	+1.5
PSZ	Piszkesteto	59.19	30	⇑*e*P	P	04 14 14.6	+0.7
PSZ	Piszkesteto	59.19	30	⇓P	P	04 14 15.4	+1.5
UPC	Upice	59.19	26	*e*S	S	04 21 58.4	-22
DPC	Dobruska-Polom	59.21	26	*e*P	P	04 14 14.7	+0.7
DPC				*e*S	S	04 22 24.6	+3.7
DPC				AMS	AMS	04 46 40.0	
	comp=Z,200nm,14.6s						
DPC	Dobruska-Polom	59.21	26	*e*P	P	04 14 14.7	+0.7
DPC				*e*S	S	04 22 24.6	+3.7
DPC				MLR	MLR		
	comp=Z,200nm,14.6s						
MORC	Moravsky Berou	59.35	27	⇑*i*P	P	04 14 15.1	+0.2
MORC	Moravsky Berou	59.35	27	*e*P	P	04 14 15.2	+0.3
	comp=Z,10nm,1.1s						
MORC	Moravsky Berou	59.35	27	⇑P	P	04 14 15.1	+0.2
MORC	Moravsky Berou	59.35	27	*e*P	P	04 14 15.1	+0.2
KSP	Ksiaz	59.56	26	*e*P	P	04 14 17.2	+0.9
KSP	Ksiaz	59.56	26	*e*P	P	04 14 17.2	+0.9
OKC	Ostrava-Krasne	59.67	27	*e*S	S	04 22 25.8	-0.9
OKC				AMS	AMS	04 46 50.0	
	comp=Z,400nm,21.3s						
SZH	Strazhica	59.68	37	P	P	04 14 17.0	-0.3
LOT	Lotru	59.68	34	⇑*i*P	P	04 14 18.0	+0.6
LTVH	Lˆ'tavˆ'rtes,	59.87	32	⇑*e*P	P	04 14 20.9	+2.4
DRGR		59.92	32	⇓*i*P	P	04 14 19.2	+0.2
DRGR		59.92	32	⇓P	P	04 14 19.2	+0.2
EIL	Elat	60.09	55	LR	LR	04 41 47.3	
	comp=Z,439nm,18.7s,baz=246,slow=38						
NIE	Niedzica	60.40	29	*e*P	P	04 14 23.4	+1.3
NIE	Niedzica	60.40	29	*e*P	P	04 14 23.4	+1.3
VOIR		60.40	35	⇓*i*P	P	04 14 22.8	+0.5
VOIR		60.40	35	⇓P	P	04 14 22.8	+0.5
TRPA	Tarpa	60.67	31	⇑*e*P	P	04 14 24.4	+0.4
OJC	Ojcow	60.70	28	*e*P	P	04 14 24.9	+0.8
OJC	Ojcow	60.70	28	*e*P	P	04 14 24.6	+0.5
	comp=Z,15nm,1.2s						
OJC	Ojcow	60.70	28	*e*P	P	04 14 24.6	+0.5
OJC				pmax	pmax		
	comp=Z,15nm,1.2s						
UZH	Uzhgorod	60.87	31	*e*P	P	04 14 24.5	-0.8
MLR	Muntele Rosu	60.94	35	P	P	04 14 26.5	+0.4
	comp=Z,7.5nm,1.3s,baz=251,slow=3.4,SNR=21						
MLR				LR	LR	04 42 52.1	
	comp=Z,79nm,19.1s,baz=210,slow=38						
MLR	Muntele Rosu	60.94	35	⇓*i*P	P	04 14 26.7	+0.7
MLR	Muntele Rosu	60.94	35	*e*P	P	04 14 26.1	0.0
	comp=Z,60nm,1.5s						
MLR	Muntele Rosu	60.94	35	*e*P	P	04 14 26.1	0.0
MLR				pmax	pmax		
	comp=Z,60nm,1.5s						
PLCA	Paso Flores	60.95	222	LR	LR	04 37 59.2	
	comp=Z,160nm,21.3s,baz=94,slow=33						
ISR	Istrita	61.08	36	⇑*i*P	P	04 14 27.4	+0.5
ISR	Istrita	61.08	36	⇑P	P	04 14 27.4	+0.5
PLOR	Plostina	61.55	35	⇓*i*P	P	04 14 30.0	-0.1
PLOR	Plostina	61.55	35	⇓P	P	04 14 30.0	-0.1
MMAI	Mount Meron Ar	61.61	52	LR	LR	04 42 40.7	
	comp=Z,191nm,20.6s,baz=155,slow=38						
VRI	Vrincioaia	61.61	35	⇑*i*P	P	04 14 30.1	-0.3
VRI	Vrincioaia	61.61	35	⇑P	P	04 14 30.2	-0.2
HARR	Harsova	61.66	37	⇓*i*P	P	04 14 30.0	-0.8
HARR	Harsova	61.66	37	⇓P	P	04 14 30.0	-0.8
TLB	Topalu	61.67	37	⇑*i*P	P	04 14 30.6	-0.2
TLB	Topalu	61.67	37	⇑P	P	04 14 30.6	-0.2
KWP	Kalwaria Pacla	61.72	30	*e*P	P	04 14 31.8	+0.7

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KWP    Kalwaria Pacla    61.72  30  eP     P      04 14 30.7 -0.4
       comp=Z,130nm,1.2s
KWP    Kalwaria Pacla    61.72  30  eP     P      04 14 30.7 -0.4
KWP                                 pmax   pmax
       comp=Z,130nm,1.2s
BUR04  Bucovina Ar. S    61.78  33  eP     P      04 14 32.0 +0.4
BURAR  Bucovina Array    61.78  33⇓iP     P      04 14 30.8 -0.8
BURAR  Bucovina Array    61.78  33 ⇓P     P      04 14 30.8 -0.8
BUR08  Bucovina Ar. S    61.79  33  eP     P      04 14 32.0 +0.3
TIRR   Tirgusor          61.83  37⇓iP     P      04 14 32.3 +0.4
TIRR   Tirgusor          61.83  37  eP     P      04 14 31.0 -0.9
       comp=Z,20nm,1.5s
TIRR   Tirgusor          61.83  37 ⇓P     P      04 14 32.3 +0.4
BIZ    Bicaz             61.87  34⇑iP     P      04 14 32.8 +0.7
TESR   Tescani           61.93  35⇓iP     P      04 14 33.1 +0.6
CFR    Carcaliu          62.05  36⇑iP     P      04 14 33.0 -0.3
CFR    Carcaliu          62.05  36 ⇑P     P      04 14 33.0 -0.3
ANTO   Ankara            62.43  44⇓iP     P      04 14 35.0 -1.1
ANTO   Ankara            62.43  44  eP     P      04 14 36.2 +0.1
       comp=Z,19nm,1.0s
ANTO   Ankara            62.43  44 ⇓P     P      04 14 35.0 -1.1
ASF    Jabal al Asfar    62.50  53   P     P      04 14 38.0 +1.2
       comp=Z,4.8nm,0.8s,baz=216,slow=5.1,SNR=9.4
ASF    Jabal al Asfar    62.50  53  eP     P      04 14 38.0 +1.2
LVV    L'vov             62.50  30  eP     P      04 14 36.2 -0.1
LVV                                 MLR    MLR
       comp=E,70nm,14.0s
LVV                                 MLR    MLR
       comp=N,50nm,15.0s
LVV                                 MLR    MLR
       comp=Z,80nm,15.0s
BR101  Keskin Array S    62.95  44  eP     P      04 14 39.9 +0.2
BR131  Keskin Array S    62.95  44  eP     P      04 14 40.0 +0.3
BRTR   Keskin Array B    62.95  44   P     P      04 14 39.9 +0.2
       comp=Z,5.8nm,1.1s,baz=233,slow=5.9,SNR=28
BRTR                                LR     LR     04 44 07.8
       comp=Z,100nm,19.8s,baz=205,slow=38
HRV    Adam Dziewonsk    63.08 319   P     P      04 14 41.1 +0.8
       baz=118
ATD    Arta Tunnel       63.33  77  LR     LR     04 42 20.5
       comp=Z,114nm,18.6s,baz=288,slow=36
KIS    Kishinev          63.44  35  eP     P      04 14 40.0 -2.6
KIS                                 LRM    MLR    04 45 16.0
       comp=Z,300nm,16.0s
KIS    Kishinev          63.44  35  eP     P      04 14 40.0 -2.6
KIS                                 MLR    MLR
       comp=Z,300nm,16.0s
ILGA   Ilgaz             63.58  43  eP     P      04 14 43.5 -0.5
       comp=Z,27nm,1.3s
SORM   Soroca            63.80  34⇑iP     P      04 14 43.9 -1.0
SORM   Soroca            63.80  34 ⇑P     P      04 14 43.9 -1.0
KLNR   Kaliningrad       63.92  25⇑eP     P      04 14 47.5 +2.0
KLNR                                pmax   pmax
       comp=Z,53nm,0.8s
LBNH   Lisbon            64.14 321   P     P      04 14 48.3 +1.0
       baz=119
060A   Indiantown        64.21 300   P     P      04 14 47.3 -0.8
       baz=105
060Z   West Palm Beac    64.22 300   P     P      04 14 47.3 -0.9
       baz=104
SUW    Suwalki           64.79  26  eP     P      04 14 51.5 +0.2
SUW    Suwalki           64.79  26  eP     P      04 14 51.5 +0.2
059Z   Ave Maria         64.98 299   P     P      04 14 52.7 -0.4
       baz=104
N59A   State Game Lan    65.21 316   P     P      04 14 55.0 +0.6
       baz=114
758A   Lake Helen        65.42 302   P     P      04 14 56.3 +0.3
       baz=105
JTS    JuntasAbangare    65.66 281  LR     LR     04 43 00.9
       comp=Z,172nm,20.8s,baz=165,slow=36
AK11   Malin Array Si    65.67  32  eP     P      04 14 55.8 -1.3
KIEV   Kiev              65.70  32  eP     P      04 14 56.5 -0.8
       comp=Z,20nm,1.0s
KIEV   Kiev              65.70  32c iP     P      04 14 56.2 -1.1
KIEV                                pmax   pmax
       comp=Z,18nm,1.0s
AKASG  Malin Array Be    65.71  32   P     P      04 14 56.9 -0.5
       comp=Z,8.2nm,0.9s,baz=236,slow=6.2,SNR=28
AKBB   Malin Array Si    65.71  32  eP     P      04 14 56.6 -0.7
       comp=Z,21nm,1.0s
AKBB   Malin Array Si    65.71  32  eP     P      04 14 56.6 -0.7
AKBB                                pmax   pmax
       comp=Z,21nm,1.0s
HFS    Hagfors           65.73  18   P     P      04 14 58.1 +0.9
       comp=Z,2.2nm,0.6s,baz=207,slow=9.0,SNR=6.3
HFS                                 LR     LR     04 46 21.9
       comp=Z,175nm,18.2s,baz=215,slow=38
NHSC   New Hope          65.74 307   P     P      04 14 58.5 +0.6
       baz=108
NB2    NORSAR Subarra    65.75  16   P     P      04 14 57.5  0.0
       comp=Z,12nm,1.2s,baz=214,slow=6.5
NOA    NORSAR Array B    65.75  16  LR     LR     04 45 33.8
       comp=Z,157nm,19.2s,baz=215,slow=38
BINY   Binghamton        65.89 317   P     P      04 14 59.8 +1.0
       baz=114
BINY   Binghamton        65.89 317  eP     P      04 14 59.3 +0.6
       comp=Z,20nm,1.3s
957A   Wimauma           65.99 301   P     P      04 14 59.1 -0.5
       baz=104
857A   Zephyrhills       66.12 301   P     P      04 15 00.7 +0.2
       baz=104
557A   Orange Park       66.14 303   P     P      04 15 00.9 +0.3
       baz=105
657A   Interlachen       66.15 303   P     P      04 15 01.1 +0.5
       baz=105
757A   Oxford            66.16 302   P     P      04 15 01.0 +0.3
       baz=105
457A   Yulee             66.16 304   P     P      04 15 01.4 +0.7
       baz=106
357A   Townsend          66.32 305   P     P      04 15 02.5 +0.8
       baz=106
SSPA   Standing Stone    66.58 315   P     P      04 15 04.1 +0.9
       baz=112
ALFO   Alfred            66.65 321   P     P      04 15 03.0 -0.4
       baz=117
656A   Willston          66.66 302   P     P      04 15 03.6 -0.3
       baz=105
156A   Sylvania          66.67 306   P     P      04 15 04.6 +0.7
       baz=107
556A   Lake Butler       66.71 303   P     P      04 15 04.5 +0.3
       baz=105
TRQ    Mont Tremblant    66.71 322  eP     P      04 15 04.4 +0.4
256A   Glennville        66.80 305   P     P      04 15 05.3 +0.6
       baz=106
O56A   Blue Knob Stat    66.92 315   P     P      04 15 06.3 +0.8
       baz=112
O56A   Blue Knob Stat    66.92 315  eP     P      04 15 06.5 +1.0
       comp=Z,27nm,1.4s
ORIO   Orleans, Innes    66.96 321   P     P      04 15 06.1 +0.6
       baz=116
SCHQ   Schefferville     67.15 333   P     P      04 15 08.2 +1.7
       comp=Z,2.8nm,0.8s,baz=104,slow=7.8,SNR=3.6
SCHQ   Schefferville     67.15 333  eP     P      04 15 08.2 +1.7
       comp=Z,7.1nm,1.0s
BLA    Blacksburg        67.22 311   P     P      04 15 08.2 +0.8
       baz=109
255A   Hazlehurst        67.27 305   P     P      04 15 08.0 +0.3
       baz=106
KMSC   Kings Mountain    67.27 309   P     P      04 15 08.4 +0.7
       baz=108
455A   Stateville        67.42 304   P     P      04 15 09.6 +1.0
       baz=105
155A   Kite              67.45 306   P     P      04 15 09.9 +1.1
       baz=106
MCWV   Mont Chateau      67.62 314   P     P      04 15 11.0 +1.2
       baz=110
RAYN   Ar Rayn           67.63  64  eP     P      04 15 10.6 +0.4
       comp=Z,7.1nm,1.0s
RAYN   Ar Rayn           67.63  64  eP     P      04 15 10.6 +0.4
RAYN                                pmax   pmax
       comp=Z,7.0nm,1.0s
554A   Perry             67.80 303   P     P      04 15 12.4 +1.3
       baz=104
454A   Quitman           67.91 303   P     P      04 15 12.8 +1.0
       baz=104
Z54A   Sparta            67.92 306   P     P      04 15 12.9 +1.1
       baz=106
DELO   Deloro Mine       67.92 319   P     P      04 15 11.8 +0.2
       baz=114
254A   Abbeville         67.94 305   P     P      04 15 12.8 +0.9
       baz=105
154A   Montrose          67.97 306   P     P      04 15 12.9 +0.8
       baz=106
Y54A   Tignall           67.97 307   P     P      04 15 12.6 +0.5
       baz=106
TIGA   Tifton            68.06 304   P     P      04 15 12.5 -0.2
       baz=105
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OPO    Ambohidratompo    68.09 110   P     P      04 15 14.9 +1.5
       comp=Z,4.9nm,0.8s,baz=106,slow=22,SNR=3.0
M54A   Oil Creek Stat    68.15 316   P     P      04 15 13.4 +0.2
       baz=111
PEMO   Pembroke          68.16 320   P     P      04 15 14.0 +0.9
       baz=115
N54A   Moraine State     68.18 315   P     P      04 15 13.8 +0.5
       baz=111
BANO   Bancroft          68.33 320   P     P      04 15 13.1 -1.1
       baz=114
CHGQ   Chibougamau       68.34 325   P     P      04 15 14.3 +0.2
       baz=119
DRCO   St. Marys Ceme    68.38 318   P     P      04 15 15.0 +0.5
       baz=113
DRWO   Darlington Wes    68.40 318   P     P      04 15 14.7 +0.1
       baz=113
553A   Crawfordville     68.45 303   P     P      04 15 16.5 +1.3
       baz=104
GOGA   Godfrey           68.47 306   P     P      04 15 15.9 +0.6
       baz=106
353A   Camilla           68.56 304   P     P      04 15 16.8 +1.0
       baz=104
153A   Fort Valley       68.57 305   P     P      04 15 15.2 -0.7
       baz=105
V53A   Saluda            68.58 309   P     P      04 15 16.3 +0.4
       baz=107
V53A   Saluda            68.58 309  eP     P      04 15 15.8 -0.2
       comp=Z,7.3nm,1.0s
ERPA   Erie              68.60 316   P     P      04 15 15.2 -0.7
       baz=111
U53A   Fall Branch       68.60 310   P     P      04 15 16.6 +0.5
       baz=107
X53A   Estanollee        68.64 307   P     P      04 15 17.1 +0.8
       baz=106
PKRO   Pickering         68.66 318   P     P      04 15 16.5 +0.3
       baz=113
Y53A   Monroe            68.69 307   P     P      04 15 17.5 +0.9
       baz=106
W53A   Cullowhee         68.71 308   P     P      04 15 17.2 +0.2
       baz=106
TYNO   Tyneside          68.87 317   P     P      04 15 18.2 +0.6
       baz=112
Y52A   Lilburn           69.07 307   P     P      04 15 19.2 +0.2
       baz=105
Y52A   Lilburn           69.07 307  eP     P      04 15 19.1 +0.1
       comp=Z,15nm,1.3s
T52A   Hallie            69.13 310   P     P      04 15 19.3 -0.1
       baz=107
X52A   Dahlonega         69.13 307   P     P      04 15 20.3 +0.8
       baz=106
252A   Lumpkin           69.14 305   P     P      04 15 20.4 +0.9
       baz=104
552A   Lynn Haven        69.17 302   P     P      04 15 19.8 +0.2
       baz=103
352A   Blakely           69.18 304   P     P      04 15 20.8 +1.1
       baz=104
Z52A   Williamson        69.18 306   P     P      04 15 20.5 +0.7
       baz=105
VSU    Vasula            69.18  24deP     P      04 15 19.1  0.0
VSU                                 pmax   pmax
       comp=Z,24nm,0.9s
ACTO   Acton             69.19 318   P     P      04 15 19.6 +0.1
       baz=112
452A   Marianna          69.24 303   P     P      04 15 20.9 +0.9
       baz=104
V52A   Sevierville       69.24 309   P     P      04 15 20.6 +0.6
       baz=106
R52A   Catlettsburg      69.25 312   P     P      04 15 20.4 +0.3
       baz=108
W52A   Murphy            69.29 308   P     P      04 15 21.0 +0.6
       baz=106
152A   Waverly Hall      69.30 305   P     P      04 15 21.0 +0.6
       baz=104
TKL    Tuckaleechee C    69.33 309   P     P      04 15 21.7 +1.1
       comp=Z,3.0nm,0.8s,baz=141,slow=3.4,SNR=4.1
TKL                                 LR     LR     04 39 20.4
       comp=Z,186nm,20.4s,baz=142,slow=30
TKL    Tuckaleechee C    69.33 309  eP     P      04 15 21.7 +1.1
       comp=Z,9.3nm,1.1s
TKL    Tuckaleechee C    69.33 309  eP     P      04 15 21.7 +1.1
TKL                                 pmax   pmax
       comp=Z,9.0nm,1.1s
TZTN   Tazewell          69.40 310   P     P      04 15 21.6 +0.6
       baz=107
BUKO   Buck Lake         69.45 320   P     P      04 15 20.7 -0.4
       baz=113
CLWO   Collingwood       69.67 318   P     P      04 15 23.1 +0.6
       baz=112
351A   Pinckard          69.69 304   P     P      04 15 23.5 +0.6
       baz=104
251A   Midway            69.72 304   P     P      04 15 23.4 +0.4
       baz=104,SNR=6.8
S51A   Beattyville       69.75 311   P     P      04 15 23.9 +0.8
       baz=107
S51A   Beattyville       69.75 311  eP     P      04 15 23.4 +0.2
       comp=Z,11nm,1.0s
151A   Opelika           69.76 305   P     P      04 15 23.7 +0.4
       baz=104
BELQ   Belleterre        69.78 322   P     P      04 15 23.0 -0.1
       baz=114
V51A   Loudon            69.82 309   P     P      04 15 24.1 +0.5
       baz=106
V51A   Loudon            69.82 309  eP     P      04 15 23.7 +0.1
       comp=Z,12nm,1.0s
Z51A   Franklin          69.83 306   P     P      04 15 24.4 +0.7
       baz=104
CPCT   Cooper Cave       69.86 308  eP     P      04 15 24.2 +0.4
       comp=Z,16nm,1.3s
Y51A   Rockmart          69.89 306   P     P      04 15 24.4 +0.3
       baz=105
X51A   Calhoun           69.89 307   P     P      04 15 25.0 +0.9
       baz=105
X51A   Calhoun           69.89 307  eP     P      04 15 24.3 +0.2
       comp=Z,33nm,1.4s
ELFO   Elginfield        69.89 317   P     P      04 15 23.2 -0.7
       baz=111
R51A   Hillsboro         69.94 311   P     P      04 15 24.9 +0.6
       baz=107
Q51A   Peebles           69.98 312   P     P      04 15 24.7 +0.1
       baz=108
ACSO   Alum Creek Sta    70.08 313   P     P      04 15 25.3 +0.2
       baz=108
ACSO   Alum Creek Sta    70.08 313  eP     P      04 15 25.7 +0.5
       comp=Z,21nm,1.1s
BMRO   Meriville Lake    70.33 318   P     P      04 15 27.9 +1.3
       baz=111
150A   Eclectic          70.35 305   P     P      04 15 27.6 +0.7
       baz=104,SNR=7.3
V50A   Pikevile          70.37 308   P     P      04 15 27.7 +0.7
       baz=105
N50A   Nevada            70.38 314   P     P      04 15 27.2 +0.3
       baz=108
Q50A   Georgetown        70.40 312   P     P      04 15 28.2 +1.1
       baz=107
250A   Grady             70.40 304   P     P      04 15 27.2  0.0
       baz=103,SNR=5.2
250A   Grady             70.40 304  eP     P      04 15 27.6 +0.3
       comp=Z,23nm,1.0s
450A   Crestview         70.41 303   P     P      04 15 27.9 +0.7
       baz=103
W50A   Signal Mountai    70.42 308   P     P      04 15 27.9 +0.5
       baz=105
W50A   Signal Mountai    70.42 308  eP     P      04 15 27.7 +0.3
       comp=Z,12nm,0.6s
Z50A   Ashland           70.42 306   P     P      04 15 27.8 +0.4
       baz=104,SNR=5.2
Z50A   Ashland           70.42 306  eP     P      04 15 27.4  0.0
       comp=Z,20nm,1.3s
Y50A   Piedmont          70.42 306   P     P      04 15 28.0 +0.7
       baz=104
P50A   Jamestown         70.49 313   P     P      04 15 28.8 +1.1
       baz=108
X50B   Fort Payne        70.50 307   P     P      04 15 28.4 +0.6
       baz=105
O50A   Cable             70.52 313   P     P      04 15 28.0 +0.2
       baz=108
T50A   Nancy             70.53 310   P     P      04 15 28.5 +0.6
       baz=106
NEY    Neytrino          70.60  43⇓eP     P      04 15 29.0 +0.5
NEY                                 pmax   pmax
       comp=Z,2.0nm,0.9s
TOBO   Tobermory, Bru    70.76 319   P     P      04 15 28.9 -0.2
       baz=111
KIV    Kislovodsk        70.82  43  eP     P      04 15 29.6 -0.1
KIV                                 eS     S      04 24 45.1 +1.2
KIV                                 pmax   pmax
       comp=Z,22nm,1.0s
FIA0   FINESS Array S    70.85  21  eP     P      04 15 29.9 +0.7
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FIA0   FINESS Array S    70.85  21  eP     P      04 15 30.0 +0.7
FINES  FINESS Array B    70.85  21   P     P      04 15 29.9 +0.7
       comp=Z,5.9nm,0.9s,baz=253,slow=2.0,SNR=12
FINES                               LR     LR     04 48 29.4
       comp=Z,170nm,18.7s,baz=232,slow=38
FINES  FINESS Array B    70.85  21   P     P      04 15 30.0 +0.7
FIA1   FINESS Array S    70.85  21  eP     P      04 15 29.4 +0.1
       comp=Z,15nm,1.0s
BRAL   Brewton           70.88 303   P     P      04 15 30.5 +0.4
       baz=103
KBZ    Khabaz            70.88  43   P     P      04 15 30.3 +0.4
       comp=Z,15nm,1.0s,baz=247,slow=4.4,SNR=21
KBZ                                 LR     LR     04 48 30.9
       comp=Z,80nm,20.2s,baz=274,slow=38
Z49A   Columbiana        70.90 305   P     P      04 15 30.6 +0.3
       baz=104
SWET   Sewanee           70.91 308  eP     P      04 15 30.1 -0.2
       comp=Z,15nm,1.3s
449A   Pace              70.92 303   P     P      04 15 31.0 +0.6
       baz=102
Y49A   Blount Mountai    70.96 306   P     P      04 15 30.0 -0.7
       baz=104
149A   Jones             70.98 305   P     P      04 15 31.1 +0.4
       baz=103
V49A   McMinnville       71.03 308   P     P      04 15 31.2 +0.2
       baz=105
349A   Repton            71.03 303   P     P      04 15 32.0 +0.9
       baz=103
GNI    Garni             71.05  47  LR     LR     04 50 10.5
       comp=Z,45nm,18.6s,baz=274,slow=39
X49A   Woodville         71.05 307   P     P      04 15 31.4 +0.2
       baz=104
O49A   Covington         71.06 313   P     P      04 15 31.6 +0.5
       baz=107
T49A   Edmonton          71.09 310   P     P      04 15 31.8 +0.5
       baz=106
T49A   Edmonton          71.09 310  eP     P      04 15 31.6 +0.3
       comp=Z,8.5nm,1.0s
249A   Camden            71.11 304   P     P      04 15 31.7 +0.2
       baz=103
U49A   Red Boiling Sp    71.12 309   P     P      04 15 32.0 +0.4
       baz=105
Q49A   Aurora            71.13 312   P     P      04 15 32.0 +0.5
       baz=107
P49A   Miami Univ. Ec    71.15 312   P     P      04 15 30.9 -0.8
       baz=107
W49A   Belvidere         71.15 307   P     P      04 15 31.8 +0.1
       baz=104
LRAL   Lakeview Retre    71.25 305   P     P      04 15 32.2 -0.1
       baz=103
LRAL   Lakeview Retre    71.25 305  eP     P      04 15 32.5 +0.2
       comp=Z,7.9nm,1.1s
ZEI    Tsey              71.26  44  eP     P      04 15 31.4 -1.1
ZEI                                 pmax   pmax
       comp=Z,26nm,1.6s
NCK    Nalchik           71.28  43⇑eP     P      04 15 32.9 +0.5
NCK                                 pmax   pmax
       comp=Z,16nm,1.1s
VSR    Storozhevoye      71.42  35  eP     P      04 15 32.5 -0.5
VSR                                 pmax   pmax
       comp=Z,10.0nm,0.6s
VSR                                 MLR    MLR
       comp=Z,440nm,25.0s
Y48A   Jasper            71.59 306   P     P      04 15 34.4  0.0
       baz=103
X48A   Hartselle         71.61 307   P     P      04 15 34.4 -0.1
       baz=104
X48A   Hartselle         71.61 307  eP     P      04 15 34.6 +0.1
       comp=Z,14nm,1.2s
148A   Greensboro        71.63 305   P     P      04 15 34.9 +0.2
       baz=103
S48A   Wiedeman Farm,    71.64 310   P     P      04 15 34.7 +0.1
       baz=105
348A   Jackson           71.64 303   P     P      04 15 35.2 +0.4
       baz=102
P48A   Milroy            71.65 312   P     P      04 15 34.7  0.0
       baz=106
O48A   Farmland          71.68 313   P     P      04 15 34.9 +0.1
       baz=107
W48A   Pulaski           71.69 307   P     P      04 15 35.1 +0.1
       baz=104
U48A   Cassie Pea, Po    71.71 309   P     P      04 15 35.2 +0.1
       baz=105
PMSA   Palmer Station    71.73 198  LR     LR     04 40 23.9
       comp=Z,362nm,20.0s,baz=48,slow=30
V48A   Smith Brothers    71.74 308   P     P      04 15 35.1 -0.2
       baz=104,SNR=6.3
V48A   Smith Brothers    71.74 308  eP     P      04 15 34.6 -0.7
       comp=Z,15nm,1.1s
T48A   Bowling Green     71.75 309   P     P      04 15 35.5 +0.1
       baz=105
Z48A   Northport         71.78 305   P     P      04 15 35.5 -0.1
       baz=103
OBN    Obninsk           71.81  30⇓eP     P      04 15 34.8 -0.4
OBN                                 e             04 15 40.4
OBN                                               04 15 54.0
OBN                                 e             04 18 22.5
OBN                                 iS     S      04 24 57.3 +2.6
OBN                                 pmax   pmax
       comp=Z,11nm,1.2s
OBN                                 MLR    MLR
       comp=Z,138nm,17.0s
SNAA   Sanae             71.97 174   P     P      04 15 36.2 +0.2
       comp=Z,1.4nm,0.8s,baz=333,slow=4.2,SNR=8.4
SNAA   Sanae             71.97 174  eP     P      04 15 36.2 +0.2
       comp=Z,8.8nm,1.2s
SNAA   Sanae             71.97 174⇑eP     P      04 15 36.7 +0.7
SNAA                                pmax   pmax
       comp=Z,102nm,1.0s
WCI    Wyandotte Cave    71.97 311   P     P      04 15 36.7 +0.1
       baz=105
Y47A   UCPARC, Winfie    72.14 306   P     P      04 15 37.7  0.0
       baz=103
Z47A   Carrollton        72.16 305   P     P      04 15 37.8  0.0
       baz=103,SNR=6.4
R47A   Wooly Knot Far    72.16 311   P     P      04 15 37.8  0.0
       baz=105
347A   Saraland          72.17 303   P     P      04 15 38.5 +0.5
       baz=102
147A   Livingston        72.21 305   P     P      04 15 38.1  0.0
       baz=102
W47A   Westpoint         72.24 307   P     P      04 15 38.0 -0.4
       baz=104,SNR=5.2
Q47A   Bedord North L    72.26 311   P     P      04 15 38.2 -0.1
       baz=106
T47A   Sharon Grove      72.27 309   P     P      04 15 38.4  0.0
       baz=104
T47A   Sharon Grove      72.27 309  eP     P      04 15 38.6 +0.2
       comp=Z,24nm,1.4s
X47A   Russelville       72.28 306   P     P      04 15 38.2 -0.4
       baz=103
U47A   Clarksville       72.28 309   P     P      04 15 38.5  0.0
       baz=104
P47A   Martinsville      72.29 312   P     P      04 15 38.9 +0.4
       baz=106
V47A   Nunnelly          72.32 308   P     P      04 15 38.4 -0.4
       baz=104,SNR=5.1
O47A   Sheridan          72.42 313   P     P      04 15 39.5 +0.2
       baz=106
PLAL   Pickwick Lake     72.56 307  eP     P      04 15 40.3 +0.1
       comp=Z,12nm,1.3s
WVT    Waverly           72.63 308   P     P      04 15 40.4 -0.2
       baz=104
WVT    Waverly           72.63 308  eP     P      04 15 39.9 -0.7
       comp=Z,12nm,1.3s
WVT    Waverly           72.63 308  eP     P      04 15 39.9 -0.7
WVT                                 pmax   pmax
       comp=Z,12nm,1.3s
MOS    Moscow            72.63  30  eP     P      04 15 31.7 -8.5
MOS                                 e             04 15 40.5
MOS                                 e             04 18 16.9
GROC   Groznyy           72.71  44  eP     P      04 15 38.9 -2.0
GROC                                e             04 15 56.9
GROC                                eS     S      04 25 05.1 -0.5
GROC                                pmax   pmax
       comp=Z,16nm,0.4s
V46A   Holladay          72.78 308   P     P      04 15 40.9 -0.6
       baz=103,SNR=10.0
Z46A   Louisville        72.87 305   P     P      04 15 42.0 -0.1
       baz=102
T46A   Princeton         72.90 309   P     P      04 15 41.9 -0.3
       baz=104
S46A   Don Dixon Farm    72.92 310   P     P      04 15 41.9 -0.4
       baz=104
346A   Big Creek Wild    72.94 303   P     P      04 15 42.6  0.0
       baz=101
Y46A   Houston           72.95 306   P     P      04 15 41.8 -0.7
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	baz=102						
U46A	Springville	72.96	308	P	P	04 15 42.4	-0.1
	baz=104						
Q46A	CEJHS Indians,	72.98	311	P	P	04 15 42.5	-0.1
	baz=105						
N46A	Monticello	73.01	313	P	P	04 15 43.0	+0.3
	baz=106						
P46A	Rosedale	73.02	312	P	P	04 15 42.5	-0.3
	baz=105						
F46A	Macinaw City C	73.08	318	P	P	04 15 43.2	+0.1
	baz=109						
SFIN	Lafayette	73.14	313	P	P	04 15 43.5	-0.1
	baz=106						
OLIL	Olney	73.47	311	eP	P	04 15 45.8	+0.3
	comp=Z,23nm,1.0s						
W45A	Hickory Valley	73.49	307	P	P	04 15 45.0	-0.7
	baz=103						
R45A	Skylar, Fairfi	73.50	310	P	P	04 15 44.8	-0.9
	baz=104						
X45A	UM Field Stati	73.50	306	P	P	04 15 45.2	-0.5
	baz=102						
Y45A	Yeager Farm, C	73.50	305	P	P	04 15 45.3	-0.6
	baz=102						
Q45A	Warren Harvey,	73.55	311	P	P	04 15 45.3	-0.6
	baz=104						
N45A	Kentland	73.57	313	P	P	04 15 45.8	-0.2
	baz=105						
O45A	Potomac	73.57	312	P	P	04 15 45.2	-0.9
	baz=105						
AKT	Akhty	73.60	46	eP	P	04 15 46.0	-0.4
AKT				e		04 16 00.3	
AKT				e		04 18 30.4	
AKT				pmax	pmax		
	comp=Z,11nm,1.4s						
N44A	Piper City	74.01	313	P	P	04 15 48.7	0.0
	baz=105						
P44A	Sand Creek, Wi	74.04	311	P	P	04 15 49.2	+0.3
	baz=104						
Y44A	Strider, Charl	74.07	305	P	P	04 15 48.5	-0.6
	baz=102						
SIUC	Southern Illin	74.08	309	eP	P	04 15 49.4	+0.3
	comp=Z,13nm,1.0s						
244A	Avery, Jackson	74.09	303	P	P	04 15 48.7	-0.6
	baz=101						
O44A	Mansfield	74.09	312	P	P	04 15 48.0	-1.1
	baz=104						
R44A	Waltonville	74.10	310	P	P	04 15 48.2	-1.1
	baz=104						
S44A	Carbondale	74.11	309	P	P	04 15 48.1	-1.1
	baz=103						
Z44A	Pea Ridge, Bel	74.11	305	P	P	04 15 48.9	-0.5
	baz=101						
S43A	Fulton Ridge,	74.71	309	P	P	04 15 51.8	-1.1
	baz=103						
U43A	Rector	74.71	308	P	P	04 15 51.9	-0.9
	baz=102						
X43A	Marvell	74.72	306	P	P	04 15 52.6	-0.3
	baz=101						
X43A	Marvell	74.72	306	eP	P	04 15 53.9	+1.0
	comp=Z,31nm,0.9s						
Q43A	New Douglas	74.73	311	P	P	04 15 51.8	-1.1
	baz=103						
P43A	Skaggs, Pawnee	74.76	311	P	P	04 15 51.9	-1.1
	baz=104						
T43A	Greenville	74.77	309	P	P	04 15 52.2	-1.0
	baz=102						
HDIL	Hopedale	74.81	312	P	P	04 15 52.6	-0.7
	baz=104						
143A	Socs Landing,	74.81	304	P	P	04 15 53.1	-0.4
	baz=100						
143A	Socs Landing,	74.81	304	eP	P	04 15 54.6	+1.1
	comp=Z,38nm,1.2s						
I43A	Langenfeld Bro	74.83	316	P	P	04 15 53.2	-0.2
	baz=106						
FVM	French Village	75.07	310	eP	P	04 15 56.1	+1.3
	comp=Z,8.7nm,0.9s						
FVM	French Village	75.07	310	eP	P	04 15 56.2	+1.3
FVM				pmax	pmax		
	comp=Z,9.0nm,0.9s						
H42A	Shiocton	75.26	316	eP	P	04 15 56.6	+0.8
	comp=Z,12nm,0.8s						
S42A	Caledonia	75.31	309	P	P	04 15 56.2	-0.1
	baz=102						
X42A	Stuttgart	75.33	306	P	P	04 15 56.2	-0.2
	baz=101						
342A	Flagon Creek P	75.34	303	P	P	04 15 56.6	+0.1
	baz=100						
P42A	Winchester	75.36	311	P	P	04 15 55.5	-1.0
	baz=103						
I42A	Draeger Farm,	75.37	316	P	P	04 15 55.9	-0.6
	baz=105						
I42A	Draeger Farm,	75.37	316	eP	P	04 15 57.1	+0.7
	comp=Z,17nm,1.3s						
J42A	Columbus	75.37	315	P	P	04 15 55.7	-0.8
	baz=105						
U42A	Revenden	75.37	308	P	P	04 15 55.5	-1.1
	baz=102,SNR=6.0						
E42A	Champion	75.38	318	P	P	04 15 55.8	-0.7
	baz=106						
V42A	Cord	75.38	307	P	P	04 15 55.4	-1.3
	baz=101						
K42A	Prairie Point,	75.39	315	P	P	04 15 56.1	-0.5
	baz=104						
G42A	Mountain	75.39	317	P	P	04 15 56.2	-0.3
	baz=106						
G42A	Mountain	75.39	317	eP	P	04 15 56.8	+0.2
	comp=Z,14nm,1.2s						
T42A	Van Buren	75.39	308	P	P	04 15 55.7	-1.1
	baz=102						
R42A	Luebbering	75.42	310	P	P	04 15 56.8	-0.1
	baz=102						
L42A	Oliver, Polo	75.43	314	P	P	04 15 55.8	-1.0
	baz=104						
CCM	Cathedral Cave	75.72	309	P	P	04 15 57.7	-1.0
	baz=102						
CCM	Cathedral Cave	75.72	309	eP	P	04 15 59.3	+0.7
	comp=Z,11nm,0.9s						
CCM	Cathedral Cave	75.72	309	eP	P	04 15 59.3	+0.7
CCM				pmax	pmax		
	comp=Z,11nm,0.9s						
R41A	Rosebud	75.87	310	P	P	04 15 58.5	-1.0
	baz=102						
O41A	Passleys Farm,	75.89	312	P	P	04 15 58.4	-1.1
	baz=103						
Q41A	Truxton	75.90	310	P	P	04 15 58.6	-1.0
	baz=102						
U41A	Viola	75.91	308	P	P	04 15 58.8	-1.0
	baz=101						
KLMR	Klimovskoe	75.91	26	eP	P	04 15 57.6	-1.6
KLMR				e		04 18 47.0	
KLMR				pmax	pmax		
	comp=Z,20nm,1.3s						
KLMR	Klimovskoe	75.91	26	eP	P	04 15 57.7	-1.5
KLMR				AMP		04 16 12.3	
	comp=Z,20nm,1.3s						
KLMR				ePP	PP	04 18 47.0	-2.6
M41A	Milan	75.92	313	P	P	04 15 59.2	-0.4
	baz=103						
T41A	Mountain View	75.92	308	P	P	04 15 58.9	-0.9
	baz=101						
P41A	Barry, Barry	75.92	311	P	P	04 15 58.7	-1.1
	baz=102						
W41B	Gary Mavity, V	75.95	306	P	P	04 15 59.4	-0.6
	baz=101						
241A	Mo Tay, Goldon	75.95	303	P	P	04 15 59.3	-0.7
	baz=100						
D41A	Chassel	75.98	319	P	P	04 15 59.6	-0.3
	baz=106						
V41A	Mountainview	75.99	307	P	P	04 15 59.1	-1.1
	baz=101						
N41A	Harden Midland	76.00	312	P	P	04 15 58.9	-1.2
	baz=103						
J41A	Loganville	76.01	315	P	P	04 15 59.5	-0.6
	baz=104						
Y41A	Eaglette Beard	76.01	305	P	P	04 15 59.4	-1.0
	baz=100						
S41A	Jillco Farms,	76.01	309	P	P	04 15 59.7	-0.6
	baz=102						
K41A	Shullsburg	76.03	314	P	P	04 15 59.6	-0.7
	baz=104						
X41A	Kaden, Bauxite	76.04	306	P	P	04 15 59.7	-0.9
	baz=100						
L41A	Preston	76.05	314	P	P	04 15 59.4	-1.0
	baz=104						
341A	Kurthwood	76.05	302	P	P	04 16 00.2	-0.5
	baz=99						
341A	Kurthwood	76.05	302	eP	P	04 16 01.1	+0.4
	comp=Z,17nm,1.2s						
Z41A	Richland Creek	76.06	304	P	P	04 16 00.1	-0.5
	baz=100						
JFWS	Jewell Farm	76.06	314	P	P	04 15 59.7	-0.8
	baz=104						
H41A	Junction City	76.07	316	P	P	04 15 59.9	-0.6
	baz=105						
I41A	Arkdale	76.08	316	P	P	04 16 00.1	-0.4
	baz=104						
E41A	Kenton	76.08	318	P	P	04 15 60.0	-0.5
	baz=106						
ARA0	ARCESS Array S	76.08	15	eP	P	04 16 00.3	+0.3
ARCES	ARCESS Array B	76.08	15	P	P	04 16 00.3	+0.3
	comp=Z,1.2nm,0.9s,baz=251,slow=3.7,SNR=5.7						
X40A	Basin Creek Fa	76.30	306	P	P	04 16 01.1	-0.9
	baz=100						
X40A	Basin Creek Fa	76.30	306	eP	P	04 16 02.5	+0.6
	comp=Z,4.7nm,0.9s						
V40A	Witts Springs	76.53	307	P	P	04 16 02.3	-1.0
	baz=100						
V40A	Witts Springs	76.53	307	eP	P	04 16 03.3	0.0
	comp=Z,13nm,1.3s						
J40A	Soldiers Grove	76.53	315	P	P	04 16 02.3	-0.8
	baz=104						
T40A	Mansfield	76.53	308	P	P	04 16 02.5	-0.8
	baz=101						
Q40A	Laux Farm, Aux	76.55	310	P	P	04 16 02.4	-0.9
	baz=102,SNR=7.6						
R40A	Maddies Statio	76.56	310	P	P	04 16 02.4	-1.0
	baz=101						
R40A	Maddies Statio	76.56	310	eP	P	04 16 03.7	+0.3
	comp=Z,8.3nm,1.0s						
I40A	Norwalk	76.56	315	P	P	04 16 02.8	-0.5
	baz=104						
L40A	Anamosa	76.57	313	P	P	04 16 02.1	-1.3
	baz=103						
N40A	Mertquake, Sal	76.57	312	P	P	04 16 02.3	-1.1
	baz=102						
H40A	Chili	76.58	316	P	P	04 16 02.7	-0.6
	baz=104						
S40A	Lebanon	76.61	309	P	P	04 16 03.1	-0.6
	baz=101,SNR=9.5						
W40A	Ferguson Farm,	76.61	306	P	P	04 16 02.9	-0.8
	baz=100						
M40A	Post Highland	76.63	313	P	P	04 16 02.7	-1.1
	baz=103						
P40A	Paris	76.64	311	P	P	04 16 02.9	-0.9
	baz=102						
U40A	Yellville	76.65	307	P	P	04 16 02.6	-1.4
	baz=101,SNR=9.2						
K40A	Colesburg	76.65	314	P	P	04 16 03.2	-0.6
	baz=103						
E40A	Wakefield	76.70	318	P	P	04 16 03.3	-0.7
	baz=105						
F40A	Park Falls	76.72	318	P	P	04 16 03.6	-0.5
	baz=105						
MIAR	Mount Ida	76.91	306	P	P	04 16 04.5	-0.9
	baz=100						
E39A	Mellen	77.12	318	P	P	04 16 05.3	-1.1
	baz=104						
M39A	Webster	77.14	313	P	P	04 16 05.2	-1.4
	baz=102						
L39A	Vinton	77.15	313	P	P	04 16 06.4	-0.2
	baz=102						
U39A	Green Forest	77.15	307	P	P	04 16 05.7	-1.1
	baz=100						
R39A	Chumby, Stover	77.16	309	P	P	04 16 06.2	-0.6
	baz=101,SNR=7.2						
O39A	Kirksville	77.16	311	P	P	04 16 05.8	-1.0
	baz=102						
P39B	Salisbury	77.17	311	P	P	04 16 06.0	-0.8
	baz=101						
T39A	Clever	77.18	308	P	P	04 16 06.1	-0.8
	baz=100						
I39A	Houston	77.19	315	P	P	04 16 06.2	-0.7
	baz=103						
V39A	Pettigrew	77.19	307	P	P	04 16 06.0	-1.1
	baz=100						
K39A	Oelwein	77.19	314	P	P	04 16 05.9	-0.9
	baz=103						
W39A	Magazine	77.19	306	P	P	04 16 06.3	-0.7
	baz=100						
W39A	Magazine	77.19	306	eP	P	04 16 07.6	+0.6
	comp=Z,11nm,1.2s						
J39A	Decorah	77.20	315	P	P	04 16 05.9	-1.0
	baz=103,SNR=7.8						
H39A	Augusta	77.21	316	P	P	04 16 06.3	-0.6
	baz=104						
Q39A	Willow Grove F	77.25	310	P	P	04 16 06.4	-0.9
	baz=101						
N39A	Derby Farms, D	77.25	312	P	P	04 16 06.3	-1.0
	baz=102						
F39A	Loretta	77.25	317	P	P	04 16 06.3	-0.8
	baz=104						
S39A	Bolivar	77.26	309	P	P	04 16 06.6	-0.8
	baz=101,SNR=6.1						
S39A	Bolivar	77.26	309	eP	P	04 16 07.1	-0.3
	comp=Z,8.5nm,1.0s						
G39A	Holcombe	77.28	317	P	P	04 16 06.4	-0.8
	baz=104						
X39A	Fountain Ranch	77.34	305	P	P	04 16 07.6	-0.4
	baz=99						
NATX	Nacogdoches	77.38	303	P	P	04 16 07.6	-0.5
	baz=98						
S38A	Stockton	77.71	309	P	P	04 16 09.7	-0.1
	baz=100						
G38A	Ridgeland	77.72	316	P	P	04 16 09.1	-0.6
	baz=103						
Q38A	Cooks Store, C	77.72	310	P	P	04 16 09.3	-0.6
	baz=101,SNR=5.6						
J38A	Wedel Dairy, R	77.74	315	P	P	04 16 09.0	-1.0
	baz=102						
P38A	Dawn	77.78	311	P	P	04 16 09.7	-0.6
	baz=101						
P38A	Dawn	77.78	311	eP	P	04 16 10.1	-0.2
	comp=Z,18nm,1.1s						
N38A	Joes South For	77.78	312	P	P	04 16 09.5	-0.7
	baz=101						
I38A	Scanlan Farm,	77.80	315	P	P	04 16 09.8	-0.5
	baz=103						
R38A	Fenwick Farm,	77.81	309	P	P	04 16 09.4	-1.0
	baz=100						
K38A	Parkersburg	77.81	314	P	P	04 16 09.8	-0.6
	baz=102						
E38A	The Farm, Brul	77.85	318	P	P	04 16 09.8	-0.7
	baz=104						
M38A	Pleasantville	77.88	313	P	P	04 16 10.1	-0.7
	baz=102						
T38A	Diamond	77.91	308	P	P	04 16 10.3	-0.7
	baz=100						
F38A	Pierce - Schro	77.92	317	P	P	04 16 10.1	-0.8
	baz=103						
H37A	Dierke Farm, C	78.33	316	P	P	04 16 12.3	-0.9
	baz=102						
O37A	Wolven Farm, M	78.35	311	P	P	04 16 12.4	-0.9
	baz=100						
SPMN	Marine on St.	78.38	316	P	P	04 16 13.0	-0.4
	baz=102						
P37A	Lathrop	78.39	311	P	P	04 16 13.1	-0.6
	baz=100						
J37A	Redenius Farm,	78.51	314	P	P	04 16 13.4	-0.8
	baz=102						
C37A	Embarrass	78.53	319	P	P	04 16 13.8	-0.5
	baz=104						
I37A	Lemond, Waseca	78.55	315	P	P	04 16 13.8	-0.6
	baz=102						
I37A	Lemond, Waseca	78.55	315	eP	P	04 16 14.7	+0.3
	comp=Z,24nm,1.3s						
D37A	Cotton	78.56	318	P	P	04 16 14.1	-0.3
	baz=103						
PRGR	Permogore	78.92	26	eP	P	04 16 13.4	-2.6
PRGR				pmax	pmax		
	comp=Z,15nm,1.3s						
TUL1	Leonard	78.92	307	P	P	04 16 16.0	-0.6
	baz=99						
TUL1	Leonard	78.92	307	eP	P	04 16 17.0	+0.4
	comp=Z,11nm,1.1s						
C36A	Pine Crest Far	78.97	319	P	P	04 16 16.2	-0.4
	baz=103						
E36A	McGregor	78.97	318	P	P	04 16 16.0	-0.7
	baz=102						
I36A	Fitzsimmons Fa	78.98	315	P	P	04 16 15.9	-0.8
	baz=101						
F36A	Milaca	79.02	317	P	P	04 16 16.0	-0.9
	baz=102						
K36A	Gilmore City	79.03	314	P	P	04 16 16.5	-0.6
	baz=101						
D36A	Goodland	79.05	318	P	P	04 16 16.3	-0.8
	baz=103						
D36A	Goodland	79.05	318	eP	P	04 16 17.2	+0.1
	comp=Z,13nm,1.3s						
J36A	Seneca 1, Swea	79.08	314	P	P	04 16 16.6	-0.7
	baz=101						
WSAR	Wadi Sarin	79.53	66	P	P	04 16 20.1	-0.1
	comp=Z,8.3nm,0.9s,baz=264,slow=5.9,SNR=3.2						
WSAR				LR	LR	04 51 48.8	
	comp=Z,91nm,19.1s,baz=290,slow=36						
B35A	Bob, Littlefor	79.68	319	P	P	04 16 19.6	-0.9
	baz=102,SNR=5.8						
B35A	Bob, Littlefor	79.68	319	eP	P	04 16 20.4	0.0
	comp=Z,11nm,1.0s						
C35A	Jirik Farms, M	79.70	319	P	P	04 16 20.0	-0.7
	baz=102						
WHTX	Lake Whitney,	79.76	302	P	P	04 16 20.9	-0.4
	baz=97						
GEYT	Alibeck	80.73	52	P	P	04 16 26.2	-0.3
	comp=Z,2.8nm,0.3s,baz=68,slow=9.5,SNR=2.0						
GEYT				LR	LR	04 55 09.3	
	comp=Z,137nm,19.7s,baz=25,slow=38						
ECSD	EROS Data Cent	80.78	314	P	P	04 16 26.0	-0.6
	baz=100,SNR=6.7						
ECSD	EROS Data Cent	80.78	314	eP	P	04 16 26.4	-0.1
	comp=Z,5.5nm,0.8s						
A33A	Warroad	80.88	320	P	P	04 16 26.6	-0.4
	baz=101						
G33A	Ortonville	80.90	316	P	P	04 16 26.5	-0.7
	baz=100						
C33A	Trail	80.90	318	P	P	04 16 26.7	-0.4
	baz=101						
833A	Chaparral WMA,	81.04	299	P	P	04 16 28.0	-0.2
	baz=95						
833A	Chaparral WMA,	81.04	299	eP	P	04 16 29.1	+0.9
	comp=Z,22nm,1.2s						
AGMN	Agassiz Nation	81.06	319	P	P	04 16 27.5	-0.5
	baz=101						
AGMN	Agassiz Nation	81.06	319	eP	P	04 16 28.1	+0.1
	comp=Z,5.3nm,0.8s						
WMOK	Wichita Mounta	81.19	305	P	P	04 16 28.2	-0.7
	baz=97						
WMOK	Wichita Mounta	81.19	305	eP	P	04 16 28.9	0.0
	comp=Z,14nm,1.5s						
WMOK	Wichita Mounta	81.19	305	eP	P	04 16 28.9	0.0
WMOK				pmax	pmax		
	comp=Z,14nm,1.5s						
ULM	Lac du Bonnet	81.44	321	P	P	04 16 30.2	+0.3
	comp=Z,2.8nm,0.7s,baz=128,slow=6.7,SNR=2.7						
ULM				LR	LR	04 48 24.3	
	comp=Z,153nm,18.9s,baz=100,slow=33						
H32A	Carlson Farm,	81.49	315	P	P	04 16 30.0	-0.3
	baz=99						
BGNE	Belgrade	81.55	312	P	P	04 16 31.0	+0.3
	baz=98						
JCT	Junction City	81.60	301	P	P	04 16 31.0	-0.2
	baz=96						
JCT	Junction City	81.60	301	eP	P	04 16 31.6	+0.4
	comp=Z,8.5nm,0.8s						
JCT	Junction City	81.60	301	eP	P	04 16 31.6	+0.4
JCT				pmax	pmax		
	comp=Z,9.0nm,0.8s						
ABTX	Abilene, Hawle	81.67	303	P	P	04 16 31.5	-0.1
	baz=96						
ABTX	Abilene, Hawle	81.67	303	eP	P	04 16 32.0	+0.5
	comp=Z,13nm,1.3s						
AKTO	Aktyubinsk	82.57	39	P	P	04 16 36.2	+0.3
	comp=Z,2.4nm,0.5s,baz=259,slow=5.4,SNR=14						
ABKAR	Akbulak array	83.62	40	eP	P	04 16 41.5	+0.3
MSTX	Muleshoe	84.40	304	P	P	04 16 45.8	0.0
	baz=94						
MSTX	Muleshoe	84.40	304	eP	P	04 16 46.6	+0.8
	comp=Z,18nm,1.2s						
KSCO	Kaye Shedlock'	84.69	309	P	P	04 16 47.1	0.0
	baz=95						
LTX	Lajitas	84.86	299	eP	P	04 16 48.9	+0.8
LTX	Lajitas	84.86	299	eP	P	04 16 48.9	+0.8
TXAR	Lajitas Array	84.86	299	P	P	04 16 48.9	+0.8
	comp=Z,1.5nm,0.7s,baz=100,slow=6.5,SNR=9.2						
TX31	Lajitas Ar. Si	84.86	299	eP	P	04 16 48.7	+0.6
T25A	Trinidad	85.95	307	P	P	04 16 53.7	+0.1
	baz=94						
T25A	Trinidad	85.95	307	eP	P	04 16 57.0	+3.4
	comp=Z,5.6nm,1.2s						
MNTX	Cornudas Mount	86.46	302	P	P	04 16 55.7	-0.3
	baz=93						
MAW	Mawson	86.81	158	P	P	04 16 58.9	+2.0
	comp=Z,1.3nm,0.8s,baz=316,slow=15,SNR=2.3						
SDCO	Great Sand Dun	86.85	308	P	P	04 16 57.8	-0.4
	baz=93						
SDCO	Great Sand Dun	86.85	308	eP	P	04 16 59.1	+0.9
	comp=Z,5.4nm,0.9s						
ISCO	Idaho Springs	87.05	310	P	P	04 16 58.8	-0.3
	baz=93						
ANMO	Albuquerque	87.50	305	P	P	04 17 02.3	+1.1
	comp=Z,1.3nm,0.7s,baz=138,slow=11,SNR=7.8						
ANMO	Albuquerque	87.50	305	P	P	04 17 00.7	-0.5
	baz=92						
ANMO	Albuquerque	87.50	305	eP	P	04 17 02.2	+1.1
	comp=Z,4.1nm,1.1s						
ANMO	Albuquerque	87.50	305⇑	eP	P	04 17 01.9	+0.7
ANMO				pmax	pmax		
	comp=Z,13nm,2.6s						
TASL	Snake Pit, Alb	87.50	305	P	P	04 17 00.8	-0.4
	baz=92						
TASM	ASL Pad, Albuq	87.50	305	P	P	04 17 00.7	-0.5
	baz=92						
LAO	LASA Array	87.85	317	P	P	04 17 02.8	+0.4
	baz=93						
LAO	LASA Array	87.85	317	eP	P	04 17 03.2	+0.7
	comp=Z,12nm,1.1s						
K22A	Casper	87.87	313	P	P	04 17 03.2	+0.4
	baz=92						
S22A	4UR Ranch, Cre	87.91	308	P	P	04 17 03.5	+0.3
	baz=92						
LAZ	Ladron	88.04	304	eP	P	04 17 05.5	+1.6
SMCO	Snowmass	88.07	309	eP	P	04 17 05.8	+1.7
	comp=Z,7.8nm,1.2s						
O20A	White River Ci	89.08	310	P	P	04 17 08.9	+0.4
	baz=91						
O20A	White River Ci	89.08	310	eP	P	04 17 10.0	+1.4
	comp=Z,13nm,1.3s						
MVCO	Mesa Verde	89.22	307	P	P	04 17 09.9	+0.5
	baz=91						
MVCO	Mesa Verde	89.22	307	eP	P	04 17 11.2	+1.8
	comp=Z,14nm,1.4s						
RPN	Rapa Nui	89.40	243	LR	LR	04 53 31.9	
	comp=Z,182nm,20.3s,baz=80,slow=33						
PV13	Radium Mtn., P	89.49	308	eP	P	04 17 12.4	+1.8
	comp=Z,7.7nm,0.9s						
PV21	Cone Mtn., Par	89.62	308	eP	P	04 17 12.9	+1.7
	comp=Z,7.0nm,1.1s						
QSPA	South Pole Qui	89.65	180	P	P	04 17 11.2	+0.7
	comp=Z,3.4nm,0.7s,baz=151,slow=2.8,SNR=7.4						
QSPA				LR	LR	04 52 28.8	
	comp=Z,86nm,18.8s,baz=94,slow=32						
RLMT	Red Lodge	89.92	315	P	P	04 17 12.1	-0.3
	baz=91						
PD31	Pinedale Array	90.11	313	eP	P	04 17 13.2	-0.2
PDAR	Pinedale Array	90.11	313	P	P	04 17 13.2	-0.2
	comp=Z,0.6nm,0.8s,baz=97,slow=6.5,SNR=3.6						
BRVK	Borovoye	90.38	37	deP	P	04 17 15.1	+1.0
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BVAR	Borovoye Array	90.45	37	P	P	04 17 14.7	+0.3
	comp=Z,1.3nm,0.9s,baz=296,slow=4.8,SNR=7.4						
WUAZ	Wupatki	91.53	305	P	P	04 17 20.0	-0.1
	baz=89						
DUG	Dugway, Tooele	92.58	310	P	P	04 17 24.8	0.0
	baz=88						
HLID	Hailey	93.64	313	P	P	04 17 29.3	-0.4
	baz=87						
KSH	Kashi	94.73	51	eP	P	04 17 34.2	-0.5
KSH				sP	pP	04 17 41.1	+0.1
KSH				PP	PP	04 21 25.5	+2.4
KSH				SKS	SKSac	04 28 06.0	-3.6
KSH				S	S	04 28 41.7	-5.9
KSH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KSH				pmax	pmax		
	comp=Z,80nm,4.5s						
KSH				LR	LR		
	comp=Z,1μm,14.1s						
KSH				LR	LR		
	comp=Z,750nm,14.6s						
KURBB	Kurchatov Arra	95.62	39	P	P	04 17 38.5	+0.2
	comp=Z,0.3nm,0.7s,baz=270,slow=5.6,SNR=5.1						
KURK	Kurchatov	95.66	39	eP	P	04 17 38.5	0.0
KURK	Kurchatov	95.66	39	eP	P	04 17 38.5	0.0

EML	El Monte Cty P	96.16	303	eP	P	04 17 41.4	+0.3
B08A	Colville Reser	96.66	319	eP	P	04 17 41.7	-1.4
	comp=Z,4.9nm,1.4s						
MWC	Mount Wilson	97.08	304	eP	Pdif	04 17 48.2	+2.5
MWC	Mount Wilson	97.08	304	eP	Pdif	04 17 48.2	+2.5
PASC	Pasadena Art C	97.18	304	eP	Pdif	04 17 49.1	+3.2
ISA	Isabella, Lake	97.30	306	P	Pdif	04 17 46.8	+0.3
	baz=85						
ARVC	Arvin	97.64	305	eP	Pdif	04 17 48.0	+0.1
BAKC	Calstate	97.84	305	eP	Pdif	04 17 50.2	+1.4
YBH	Yreka Blue Hor	99.91	312	LR	LR	04 58 41.3	
	comp=Z,158nm,20.6s,baz=80,slow=33						
WMQ	Urumqi	102.86	45	P	Pdif	04 18 12.8	+1.8
WMQ				pP	pPdif	04 18 17.7	+0.3
WMQ				pmax	pmax		
	comp=Z,250nm,4.7s						
WMQ				LR	LR		
	comp=Z,260nm,21.3s						
WMQ				LR	LR		
	comp=Z,280nm,22.9s						
WMQ				LR	LR		
	comp=Z,340nm,25.5s						
LZH	Lanzhou	116.94	49	ePKP	PKPdf	04 22 56.3	-2.0
LZH				LR	LR		
	comp=Z,49nm,18.0s						
LZH				LR	LR		
	comp=Z,53nm,18.1s						
LZH				LR	LR		
	comp=Z,67nm,20.0s						
SEY	Seymchan	117.37	4	c iPKIKP	PKPdf	04 22 58.9	+0.8
CD2	Chengdu	118.61	55	PKP	PKPdf	04 23 00.5	-1.0
HHC	Hu-ho-hao-te	120.40	41	ePKP	PKPdf	04 23 05.4	+0.7
HHC				PP	PP	04 24 32.5	+1.8
HHC				AMB	AMB		
	comp=Z,60nm,8.4s						
HHC				LR	LR		
	comp=Z,160nm,19.8s						
HHC				LR	LR		
	comp=Z,120nm,18.6s						
HHC				LR	LR		
	comp=Z,170nm,18.1s						
GYA	Guiyang	122.41	59	ePdif	Pdif	04 19 38.2	-0.2
GYA				PKP	PKPdf	04 23 08.4	-0.6
GYA				PP	PP	04 24 49.0	+3.9
GYA				AMB	AMB		
	comp=Z,120nm,7.8s						
NJ2	Nanjing	129.89	47	ePKP	PKPdf	04 23 21.4	-1.6
ASAR	Alice Springs	144.99	135	PKP	PKPab	04 23 50.1	-0.2
	comp=Z,20nm,0.8s,baz=226,slow=2.6,SNR=50						
AS31	Alice Springs	144.99	135	ePKPbc	PKPab	04 23 48.4	-1.9
WR1	Warramunga Arr	147.57	130	ePKPbc	PKPbc	04 23 58.3	+0.2
WRA	Warramunga Arr	147.57	130	PKPbc	PKPbc	04 23 58.3	+0.2
	comp=Z,6.8nm,1.3s,baz=84,slow=3.6,SNR=5.7						

IDC ***12*** *04:07:13.4±0.5, 20°.30S×174°.07W, h0^{km}, mb4.4/22, mb1 4.5/24, mb1mx4.4/49, mbtmp4.4/24, ML4.2/2, MS3.6/1, Ms1 3.6/1, ms1mx2.9/45, Error ellipse: s-maj=18.6km s-min=13.6km az=145.0*

ISCJB ***12*** *04:07:16.5±0.3, 20°.34S±0°.06×174°.24W±0°.06, h27^{km}, mb4.7/49, Error ellipse: s-maj=10.5km s-min=6.0km az=139.4*

NEIC ***12*** *04:07:22.0±3.2, 20°.33S×174°.23W, h61^{km}±28^{km}, mb4.7/32, Error ellipse: s-maj=11.3km s-min=8.6km az=159.0*

ISC 12 04:07:17.9±0.5**, 20°.3S**±0°.1×**174°.12W**±0°.10**, h27**^{km}**, n91,** σ**1^{s}.29**/94**, mb4.7**/49**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAR	Rarotonga	13.46	96	LR	LR	04 15 04.8	
	comp=Z,255nm,18.8s,baz=262,slow=35						
DZM	Mont Dzumac	18.21	261	P	P	04 11 30.3	+1.2
	0.6nm,0.3s,baz=143,slow=24,SNR=4.7						
DZM	Mont Dzumac	18.21	261	eP	P	04 11 30.3	+1.2
	24nm,1.0s						
URZ	Urewera	19.46	201	P	P	04 11 41.7	-0.8
	0.8nm,0.3s,baz=14,slow=8.0,SNR=4.3						
URZ	Urewera	19.46	201	eP	P	04 11 42.1	-0.4
HIZ	Hauiti	20.52	205	eP	P	04 11 53.7	-0.4
	104nm,1.5s						
BFZ	Birch Farm	21.94	200	eP	P	04 12 07.8	-1.4
	20nm,0.9s						
KHZ	Kahutara	24.40	203	eP	P	04 12 32.1	-1.9
	135nm,1.9s						
RPZ	Rata Peaks	26.45	205	P	P	04 12 51.8	-0.8
	8.8nm,0.8s,baz=55,slow=16,SNR=1.9						
FOZ	Fox Glacier	26.80	207	eP	P	04 12 57.7	+2.0
	35nm,1.0s						
CAN	Canberra	35.67	237	eP	P	04 14 13.7	-0.3
	13nm,1.0s						
CTA	Charters Tower	37.13	263	P	P	04 14 26.4	-0.2
	2.3nm,0.5s,baz=88,slow=11,SNR=4.2						
CTAO	Charters Tower	37.13	263	eP	P	04 14 26.0	-0.5
	48nm,1.8s						
PMG	Port Moresby	38.86	280	P	P	04 14 41.4	+0.2
	7.9nm,0.5s,baz=30,slow=2.8,SNR=3.6						
STKA	Stephens Creek	41.16	244	P	P	04 14 59.6	-0.6
	5.6nm,0.8s,baz=87,slow=7.4,SNR=5.0						
STKA	Stephens Creek	41.16	244	eP	P	04 14 59.6	-0.6
	11nm,2.0s						
COEN	Coen	41.21	272	eP	P	04 15 01.6	+0.9
	100nm,0.9s						
HPAH	Hawaii Prepara	43.93	25	eP	P	04 15 22.7	0.0
	60nm,0.7s						
JAY	Jayapura	47.45	286	P	P	04 15 51.6	+0.8
	26nm,0.7s,baz=101,slow=2.7,SNR=14						
AS01	Alice Springs	48.06	256	eP	P	04 15 53.8	-1.6
AS01				ePcP	PcP	04 17 23.1	+0.1
AS31	Alice Springs	48.11	256	eP	P	04 15 55.3	-0.5
AS31				ePcP	PcP	04 17 23.4	+0.2
ASAR	Alice Springs	48.11	256	P	P	04 15 54.9	-0.8
	6.9nm,0.8s,baz=87,slow=8.3,SNR=40						
ASAR				PcP	PcP	04 17 23.4	+0.2
	3.4nm,0.9s,baz=104,slow=3.8,SNR=9.1						
WB2	Warramunga Arr	48.22	261	eP	P	04 15 55.9	-0.7
WRAB	Tennant Creek	48.22	261	eP	P	04 15 55.7	-0.9
	161nm,1.3s						
WR1	Warramunga Arr	48.23	261	eP	P	04 15 55.5	-1.1
	193nm,1.4s						
WRA	Warramunga Arr	48.23	261	P	P	04 15 55.5	-1.2
	4.9nm,0.9s,baz=97,slow=6.8,SNR=28						
FORT	Forrest	52.72	246	eP	P	04 16 29.6	-0.9
	63nm,1.1s						
FITZ	Fitzroy Crossi	56.66	261	P	P	04 16 58.7	-0.5
	2.6nm,1.0s,baz=126,slow=10.0,SNR=3.6						
FITZ	Fitzroy Crossi	56.66	261	eP	P	04 16 58.7	-0.5
	162nm,0.6s						
SIJI	Sorong	56.72	283	P	P	04 16 59.9	+0.2
	30nm,0.9s,baz=111,slow=4.8,SNR=9.6						
SBA	Scott Base	58.36	185	eP	P	04 17 13.0	+2.7
	20nm,1.4s						
VNDA	Vanda	58.48	186	P	P	04 17 11.4	+0.3
	1.9nm,1.0s,baz=357,slow=6.5,SNR=9.6						
VNDA	Vanda	58.48	186	eP	P	04 17 13.4	+2.3
	6.8nm,1.3s						
MJAR	Matsushiro Arr	72.25	321	P	P	04 18 41.1	+0.3
	1.8nm,0.4s,baz=154,slow=5.2,SNR=6.8						
MAJO	Matsushiro	72.25	321	eP	P	04 18 41.1	+0.2
SBI	Santa Barbara	74.94	45	eP	P	04 18 58.6	+2.0
PASC	Pasadena Art C	75.92	45	eP	P	04 18 58.7	-3.5
DPP	Dos Picos Cty	76.06	47	eP	P	04 19 03.8	+0.6
PETK	Petropavlovsk-	77.06	343	P	P	04 19 08.9	+0.6
	2.3nm,0.9s,baz=179,slow=10						
PEA1	Petropavlovsk-	77.06	343	eP	P	04 19 08.9	+0.6
NV01	Mina Array Sit	78.41	42	eP	P	04 19 15.2	-1.2
NVAR	Mina Array Bea	78.41	42	P	P	04 19 15.2	-1.2
	3.7nm,1.0s,baz=223,slow=8.7,SNR=12						
NV11	Mina Array Sit	78.50	42	eP	P	04 19 16.9	0.0
	0.5nm,1.3s						
TPNV	Topopah Spring	78.83	44	eP	P	04 19 18.1	-0.7
	8.4nm,1.3s						
KSRS	Korea Array	79.18	317	P	P	04 19 20.7	+0.3
	1.2nm,0.7s,baz=138,slow=6.8,SNR=5.2						
KS15	Wonju Array Si	79.20	317	eP	P	04 19 20.7	+0.2
KSAR	Wonju Array Be	79.20	317	P	P	04 19 20.7	+0.2
CCUT	Cedar City	81.06	45	eP	P	04 19 31.2	+0.3
	2.9nm,1.0s						
U15A	North Rim	81.16	46	eP	P	04 19 34.6	+3.1
	21nm,2.0s						
PKCU	Pink Cliffs	81.70	45	eP	P	04 19 37.9	+3.6
	22nm,1.6s						
MTPU	Mount Pierson	82.11	45	eP	P	04 19 40.1	+3.6
	17nm,1.6s						
MSU	Marysvale	82.37	44	eP	P	04 19 40.4	+2.6
MAW	Mawson	82.98	199	P	P	04 19 40.3	+0.1
	1.1nm,0.7s,baz=111,slow=8.6,SNR=2.6						
MAW	Mawson	82.98	199	eP	P	04 19 40.3	+0.1
	1.9nm,1.4s						
TMUT	Trail Mountain	83.43	44	eP	P	04 19 43.6	+0.2
	5.5nm,0.9s						
E09A	Wood Farm, Sta	83.48	35	eP	P	04 19 40.0	-3.1
	27nm,2.0s						
MNTX	Cornudas Mount	83.68	53	eP	P	04 19 46.0	+1.5
	8.8nm,1.8s						
SRU	San Rafael Swe	83.78	45	eP	P	04 19 47.4	+2.4
	6.9nm,1.0s						
HLID	Hailey	83.82	39	eP	P	04 19 45.3	+0.2
	6.5nm,1.4s						
P17A	Butcher Ranch,	83.83	44	eP	P	04 19 45.6	+0.4
	8.8nm,1.2s						
LTX	Lajitas	83.90	56	eP	P	04 19 44.6	-1.1
TXAR	Lajitas Array	83.90	56	P	P	04 19 44.6	-1.1
	0.7nm,1.0s,baz=197,slow=2.8,SNR=3.5						
ANMO	Albuquerque	84.45	50	P	P	04 19 49.6	+1.1
	1.5nm,0.8s,baz=214,slow=6.1,SNR=6.1						
ANMO	Albuquerque	84.45	50	eP	P	04 19 49.0	+0.4
	6.0nm,1.3s						
MCMT	McKenzie Canyo	85.47	39	eP	P	04 19 53.6	+0.1
S22A	4UR Ranch, Cre	85.57	47	eP	P	04 19 56.5	+2.3
	4.3nm,1.2s						
PD31	Pinedale Array	86.34	42	eP	P	04 19 58.1	+0.2
PDAR	Pinedale Array	86.34	42	P	P	04 19 58.1	+0.2
	0.7nm,0.9s,baz=191,slow=6.0,SNR=4.0						
BOZ	Bozeman (W)	86.61	39	eP	P	04 20 01.4	+2.5
	5.3nm,1.3s						
MSTX	Muleshoe	86.68	52	eP	P	04 20 00.6	+1.0
	18nm,1.5s						
WRH	Wood River Hil	86.85	11	eP	P	04 19 59.3	-0.2
	8.0nm,1.0s						
ILAR	Eielson Array	87.34	11	P	P	04 20 00.6	-1.3
	1.0nm,0.7s,baz=221,slow=5.6,SNR=12						
ILB	Eielson Array	87.34	11	eP	P	04 20 00.6	-1.3
SNAA	Sanae	88.09	177	P	P	04 20 04.4	-1.3
	1.1nm,0.9s,baz=296,slow=3.6,SNR=3.3						
SNAA	Sanae	88.09	177	eP	P	04 20 04.4	-1.3
	18nm,1.9s						
JTS	JuntasAbangare	92.73	80	P	P	04 20 29.6	+1.3
	4.4nm,1.0s,baz=272,slow=9.2,SNR=2.5						
CM31	Chiang Mai Arr	93.49	288	eP	P	04 20 30.8	-0.9
CMAR	Chiang Mai Arr	93.49	288	P	P	04 20 30.8	-0.9
	0.7nm,0.4s,baz=116,slow=2.1,SNR=2.7						
ECSD	EROS Data Cent	95.17	45	eP	P	04 20 40.3	+1.4
	10nm,1.4s						
AKASG	Malin Array Be	144.49	334	PKP	PKPab	04 26 49.4	-0.5
	4.4nm,0.8s,baz=39,slow=4.3,SNR=12						
AKBB	Malin Array Si	144.49	334	ePKPdf	PKPab	04 26 49.8	-0.1
KIEV	Kiev	144.50	334	ePKPdf	PKPab	04 26 49.5	-0.5
AK11	Malin Array Si	144.53	334	ePKPdf	PKPab	04 26 49.8	-0.3
BUR08	Bucovina Ar. S	148.53	335	ePKPbc	PKPbc	04 27 03.2	+0.9
CLL	Collm	148.53	351	ePKPbc	PKPab	04 27 05.0	-0.4
CLL				i PKPab	pPKPdf	04 27 08.3	+0.9
	comp=Z,6.0nm,0.8s						
BR101	Keskin Array S	149.32	315	ePKPbc	PKPbc	04 27 04.3	-0.3
BRTR	Keskin Array B	149.32	315	PKPbc	PKPbc	04 27 04.3	-0.3
	comp=Z,0.6nm,0.8s,baz=160,slow=5.0,SNR=4.9						
ASF	Jabal al Asfar	149.87	299	PKPbc	PKPbc	04 27 06.4	+0.3
	comp=Z,0.8nm,0.3s,baz=74,slow=8.5,SNR=3.5						
MLR	Muntele Rosu	149.90	331	PKPbc	PKPbc	04 27 05.6	-0.2
	comp=Z,0.9nm,0.9s,baz=321,slow=2.9,SNR=4.9						
GEC2	GERESS Array S	150.81	349	ePKPbc	PKPbc	04 27 07.5	-0.3
GERES	GERESS Array B	150.81	349	PKPbc	PKPbc	04 27 07.5	-0.3
	comp=Z,0.3nm,0.5s,baz=42,slow=2.2,SNR=5.0						

ISCJB ***12*** *04:11:12.4±1.0, 10°.77S±0°.02×165°.97E±0°.02, h107^{km}±9^{km}, mb5.3/308, Error ellipse: s-maj=4.0km s-min=3.3km az=27.6*

IDC ***12*** *04:11:13.2±0.5, 10°.74S×166°.13E, h105^{km}±4^{km}, mb5.1/40, mb1 5.1/43, mb1mx5.0/50, mbtmp5.4/43, MS4.0/18, Ms1 4.0/18, ms1mx3.8/37, Error ellipse: s-maj=8.6km s-min=7.6km az=68.0*

GCMT ***12*** *04:11:16.0±0.1, 10°.70S×165°.79E, h102^{km}±1^{km}, MW5.3/112, Moment Tensor Solution. s93,c130; s112,c191; Duration: 1^{s}.1 Moment tensor: Scale 10^{17} Nm; M$_{rr}$0.97±.02; M$_{\theta\theta}$-0.52±.03; M$_{\phi\phi}$-0.44±.02; M$_{r\theta}$0.26±.02; M$_{\theta\phi}$-0.78±.02; M$_{\phi r}$0.29±.02; Best double couple: M$_{0}$1.18300×10^{17} NP1:φ$_{s}$44.00000°, δ55.00000°, λ87.00000°. NP2:φ$_{s}$229.00000°, δ35.00000°, λ94.00000°. Principal axes: T 1.0350, Plg80.0000°, Azm303.0000°; N 0.2960, Plg2.0000°, Azm46.0000°; P -1.3310, Plg10.0000°, Azm136.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

WEL ***12*** *04:11:16.0, 10°.75S×165°.98E, h128^{km}*

MOS ***12*** *04:11:16.9±1.1, 10°.67S×165°.91E, h144^{km}, mb5.3/56, Error ellipse: s-maj=7.2km s-min=6.8km az=83.9*

NEIC ***12*** *04:11:16.0±0.7, 10°.75S×165°.98E, h128^{km}±6^{km}, mb5.2/235, Error ellipse: s-maj=3.4km s-min=2.7km az=157.0*

BJI ***12*** *04:11:19.9, 10°.19S×165°.98E, h159^{km}, mb5.3/67, mB5.3/39*

ISC 12 04:11:13.2±0.3**, 10°.77S**±0°.04×**166°.11E**±0°.04**, h108**^{km}±2^{km}**, h108**^{km}**:pP-P, n834,** σ**1^{s}.35**/944**, mb5.3**/308**, 20C-5D, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	6.21	282	P	Pn	04 12 43.0	+0.6
	342nm,0.3s,baz=152,slow=2.5,SNR=38						
HNR				S	Sn	04 13 53.8	+1.8
	128nm,0.3s,baz=197,slow=20,SNR=5.0						
HNR				LR	LR	04 14 39.6	
	comp=Z,2µm,19.3s,baz=117,slow=33						
HNR	Honiara	6.21	282	eP	Pn	04 12 42.0	-0.3
HNR				eS	Sn	04 13 53.0	+1.0
HNR	Honiara	6.21	282	ePn	Pn	04 12 43.0	+0.6
HNR				eSn	Sn	04 13 50.5	-1.4
DZM	Mont Dzumac	11.25	178	P	Pn	04 13 51.9	+1.1
	37nm,0.3s,baz=117,slow=22,SNR=213						
DZM				S	Sn	04 15 50.9	-3.7
	5.6nm,0.3s,baz=318,slow=22,SNR=5.3						
DZM	Mont Dzumac	11.25	178	ePn	Pn	04 13 51.5	+0.7
	74nm,0.2s						
DZM				eSn	Sn	04 15 47.5	-7.1
	39nm,0.3s						
DZM				eLQ	LQ	04 15 54.8	
	3µm,30.9s						
DZM				eLR	LR	04 16 24.5	
	4µm,28.9s						
DZM	Mont Dzumac	11.25	178	ePn	Pn	04 13 51.2	+0.5
DZM				eSn	Sn	04 15 50.9	-3.7
NFK	Norfolk Island	18.27	175	P	Pn	04 15 22.4	+2.8
	baz=18,SNR=3.6						
PMG	Port Moresby	18.70	272	P	Pn	04 15 24.7	-0.2
	1.1nm,0.3s,baz=98,slow=8.3,SNR=7.4						
PATS	Pohnpei	19.13	336	P	Pn	04 15 29.9	0.0
	baz=19,SNR=7.3						
PATS	Pohnpei	19.13	336	eP	Pn	04 15 30.1	+0.2
	344nm,1.2s						
EIDS	Eidsvold	20.34	222	P	Pn	04 15 42.7	-1.3
	baz=20,SNR=46						
EIDS	Eidsvold	20.34	222	eP	Pn	04 15 42.7	-1.3
	121nm,0.7s						
MANU	Manus Island	20.52	294	eP	P	04 15 43.8	+0.8
	86nm,0.9s						
CTA	Charters Tower	21.24	242	P	P	04 15 52.1	+1.3
	137nm,1.0s,baz=73,slow=12,SNR=56						
CTAO	Charters Tower	21.24	242	eP	P	04 15 51.9	+1.2
	204nm,1.1s						
CTAO	Charters Tower	21.24	242	eP	P	04 15 51.9	+1.2
CTAO				pmax	pmax		
	comp=Z,204nm,1.1s						
AFI	Afiamalu	21.83	101	LR	LR	04 22 33.4	
	comp=Z,993nm,19.6s,baz=272,slow=31						
MTSU	Mount Surprise	22.32	248	P	P	04 16 02.9	+0.8
	baz=22,SNR=132						
COEN	Coen	22.62	260	P	P	04 16 05.1	-0.1
	baz=23,SNR=33						
COEN	Coen	22.62	260	eP	P	04 16 05.1	-0.1
	comp=Z,100nm,0.9s						
COEN				ePcP	PcP	04 19 49.9	-4.8
RMQ	Roma	22.64	224	P	P	04 16 06.2	+0.8
	baz=23,SNR=36						
ARMA	Armidale	23.74	212	P	P	04 16 17.4	+1.7
	baz=24,SNR=25						
ARMA	Armidale	23.74	212	eP	P	04 16 17.4	+1.7
	comp=Z,213nm,1.1s						
OUZ	Omahuta	25.28	166	eP	P	04 16 31.9	+2.4
	comp=Z,34nm,0.9s						
OUZ	Omahuta	25.28	166	P	P	04 16 31.2	+1.7
QLP	Quilpie	25.95	230	P	P	04 16 36.7	+1.1
	baz=26,SNR=4.9						
MGCD	Mangrove Creek	26.25	209	P	P	04 16 40.2	+2.0
	baz=26,SNR=8.8						
QIS	Mount Isa	27.27	246	P	P	04 16 47.8	+0.2
	baz=27,SNR=25						
KUZ	Kuaotunu	27.29	163	P	P	04 17 00.5	+13
MKAZ	Moumakai	27.47	164	P	P	04 16 50.5	+1.3
CMSA	Cobar Meteorol	28.00	219	P	P	04 16 54.8	+0.8
	baz=28,SNR=22						
YNG	Young	28.47	212	P	P	04 17 00.0	+1.8
	baz=29,SNR=28						
OMRZ	Omania	28.74	163	P	P	04 17 02.2	+1.6
CNB	Canberra Magne	28.80	209	P	P	04 17 02.6	+1.5
	baz=29,SNR=19						
HAZ	Te Kaha	28.85	161	P	P	04 17 03.1	+1.7
CAN	Canberra	28.98	210	eP	P	04 17 03.0	+0.3
	comp=Z,41nm,0.9s						
CAN	Canberra	28.98	210	eP	P	04 17 03.0	+0.3
CAN				pmax	pmax		
	comp=Z,41nm,0.9s						
RUGZ	Raukumara Rang	29.01	161	P	P	04 17 03.9	+0.9
PKGZ	Pakihiroa	29.07	160	P	P	04 17 04.0	+0.5
URZ	Urewera	29.10	162	P	P	04 17 04.3	+0.7
	comp=Z,34nm,0.8s,baz=343,slow=2.9,SNR=22						
URZ				S	S	04 21 46.6	-1.0
	comp=Z,5.4nm,0.8s,baz=20,slow=23,SNR=6.5						
URZ	Urewera	29.10	162	P	P	04 17 04.2	+0.6
WMGZ	Waiomatatini S	29.12	160	P	P	04 17 04.3	+0.4
MUGZ	Murupara	29.20	163	P	P	04 17 06.1	+1.5
PUZ	Puketiti	29.29	160	P	P	04 17 05.3	-0.1
MWZ	Matawai	29.30	161	P	P	04 17 06.0	+0.6
TWGZ	Tauwhareparae	29.30	161	P	P	04 17 06.1	+0.6
RTZ	Ruatahuna	29.39	162	P	P	04 17 06.9	+0.6
TWVZ	Taurewa	29.39	165	P	P	04 17 11.1	+4.8
RAGZ	Rawiri	29.41	162	P	P	04 17 07.4	+0.9
MRHZ	Matea Rd	29.43	163	P	P	04 17 08.2	+1.5
WTVZ	West Tongariro	29.47	165	P	P	04 17 09.6	+2.5
NGZ	Ngauruhoe	29.53	165	P	P	04 17 09.7	+2.0
MTHZ	Maungataniwha	29.57	163	P	P	04 17 08.8	+0.9
WHVZ	Whangaehu Hut	29.63	165	P	P	04 17 10.6	+2.0
TUVZ	Tukino	29.63	165	P	P	04 17 11.9	+3.3
CNGZ	Carnagh Statio	29.65	161	P	P	04 17 09.0	+0.5
RAHZ	Arahi	29.70	163	P	P	04 17 09.9	+0.9
RIGZ	Rimuhau	29.71	161	P	P	04 17 09.8	+0.7
BKZ	Black Stump Fm	29.76	164	eP	P	04 17 10.4	+0.8
	comp=Z,56nm,0.7s						
BKZ				ePcP	PcP	04 20 07.9	-2.9
BKZ				eS	S	04 21 53.8	-4.3
BKZ	Black Stump Fm	29.76	164	P	P	04 17 10.4	+0.8
NMHZ	Naumai	29.79	163	P	P	04 17 11.3	+1.4
MOVZ	Moawhango	29.79	165	P	P	04 17 11.7	+1.9
WHHZ	Waihua	29.89	162	P	P	04 17 11.0	+0.4
WAZ	Wanganui	29.93	166	P	P	04 17 14.4	+3.4
BHHZ	Black Hill Sta	29.95	164	P	P	04 17 12.9	+1.6
KWHZ	Kaweka Forest	29.98	164	P	P	04 17 12.5	+0.9
MCHZ	McNeill Hill	30.08	164	P	P	04 17 13.2	+0.9
MHGZ	Mahia Peninsul	30.16	162	P	P	04 17 12.8	-0.3
KRHZ	Kereru	30.17	164	P	P	04 17 13.7	+0.5
MILA	Mila	30.31	208	P	P	04 17 15.8	+1.3
	baz=30,SNR=5.5						
PNHZ	Pukenui	30.38	165	P	P	04 17 15.7	+0.7
CKHZ	Cape Kidnapper	30.38	163	P	P	04 17 15.3	+0.3
KAHZ	Kahuranaki	30.45	163	P	P	04 17 16.1	+0.4
QRZ	Quartz Range	30.47	170	P	P	04 17 17.4	+1.6
STKA	Stephens Creek	30.89	223	P	P	04 17 20.7	+1.2
	baz=31,SNR=47						
STKA	Stephens Creek	30.89	223	P	P	04 17 20.7	+1.2
	comp=Z,66nm,0.8s,baz=42,slow=9.1,SNR=62						
STKA				PcP	PcP	04 20 14.4	+0.5
	comp=Z,18nm,0.8s,baz=317,slow=1.3,SNR=4.8						
NNZ	Nelson	31.00	169	P	P	04 17 22.2	+1.8
BFZ	Birch Farm	31.12	165	eP	P	04 17 21.9	+0.4
	comp=Z,48nm,0.7s						
BFZ				eS	S	04 22 20.0	+0.8
THZ	Tophouse	31.45	170	eP	P	04 17 25.9	+1.5
	comp=Z,31nm,0.8s						
THZ	Tophouse	31.45	170	P	P	04 17 24.8	+0.4
WRAB	Tennant Creek	31.90	250	eP	P	04 17 28.5	-0.2
	comp=Z,159nm,1.3s						
WRAB	Tennant Creek	31.90	250	c iP	P	04 17 28.3	-0.3
WRAB				pmax	pmax		
	comp=Z,143nm,1.3s						
WB2	Warramunga Arr	31.90	250	eP	P	04 17 28.6	-0.1
WR1	Warramunga Arr	31.91	250	eP	P	04 17 28.5	-0.2
	comp=Z,193nm,1.4s						
WR1				epP	pP	04 17 53.7	+1.0
WR1				ePcP	PcP	04 20 17.2	+0.3
WRA	Warramunga Arr	31.91	250	P	P	04 17 28.5	-0.2
	comp=Z,40nm,0.7s,baz=82,slow=9.2,SNR=184						
WRA				pP	pP	04 17 53.7	+1.0
	comp=Z,21nm,0.9s,baz=78,slow=9.0,SNR=4.2						
WRA				PcP	PcP	04 20 17.2	+0.3
	comp=Z,24nm,0.8s,baz=79,slow=3.2,SNR=19						
WRA				LR	LR	04 31 06.4	
	comp=Z,249nm,18.4s,baz=65,slow=37						
GUMO	Guam	32.09	318	P	P	04 17 29.8	-0.4
	comp=Z,23nm,0.5s,baz=274,slow=2.8,SNR=5.6						
GUMO				LR	LR	04 30 47.3	
	comp=Z,137nm,18.1s,baz=133,slow=37						
GUMO	Guam	32.09	318	eP	P	04 17 30.0	-0.2
LTZ	Lake Taylor	32.35	172	eP	P	04 17 33.3	+1.1
	comp=Z,38nm,0.7s						
TOO	Toolangi	32.49	211	P	P	04 17 34.9	+1.3
	baz=33,SNR=29						
OXZ	Oxford	32.85	172	eP	P	04 17 38.6	+2.0
	comp=Z,45nm,0.7s						
KDU	Kakadu	32.97	263	P	P	04 17 37.6	-0.4
	baz=33,SNR=61						
RPZ	Rata Peaks	33.11	173	P	P	04 17 39.4	+0.6
	comp=Z,24nm,0.7s,baz=3.6,slow=2.7,SNR=9.3						
RPZ	Rata Peaks	33.11	173	eP	P	04 17 39.4	+0.6
	comp=Z,35nm,0.9s						
AS01	Alice Springs	33.19	243	eP	P	04 17 38.6	-1.3
AS01				ePcP	PcP	04 20 19.0	-1.4
AS31	Alice Springs	33.23	243	eP	P	04 17 39.6	-0.6
	comp=Z,33nm,0.8s						
AS31				ePcP	PcP	04 20 21.0	+0.5
ASAR	Alice Springs	33.23	243	P	P	04 17 40.1	-0.2
	comp=Z,125nm,0.8s,baz=70,slow=9.9,SNR=224						
ASAR				PcP	PcP	04 20 21.0	+0.5
	comp=Z,27nm,0.8s,baz=75,slow=2.8,SNR=21						
ASAR				LR	LR	04 31 03.4	
	comp=Z,265nm,18.2s,baz=69,slow=36						
MQZ	McQueen's Vall	33.31	171	eP	P	04 17 41.7	+1.2
	comp=Z,36nm,0.9s						
HTT	Hallett	33.62	224	P	P	04 17 44.6	+1.1
	baz=34,SNR=59						
ARPS	Mount Arapiles	33.91	216	P	P	04 17 47.2	+1.4
	baz=34,SNR=23						
MTN	Manton Dam	34.28	263	P	P	04 17 48.9	-0.5
	baz=34,SNR=6.2						
MTN	Manton Dam	34.28	263	eP	P	04 17 49.2	-0.1
	comp=Z,115nm,0.9s						
MTN				ePcP	PcP	04 20 24.0	+0.4
RAR	Rarotonga	34.33	112	P	P	04 17 50.1	+0.3
	comp=Z,7.9nm,0.5s,baz=223,slow=7.5,SNR=2.5						
RAR				PcP	PcP	04 20 25.4	+1.8
	comp=Z,7.2nm,0.4s,baz=209,slow=7.6,SNR=3.5						
RAR				LR	LR	04 29 10.2	
	comp=Z,232nm,20.1s,baz=284,slow=31						
RAR	Rarotonga	34.33	112	eP	P	04 17 50.1	+0.3
	comp=Z,14nm,0.8s						
RAR				ePcP	PcP	04 20 25.4	+1.8
BBOO	Buckleboo	35.28	227	P	P	04 17 58.2	+0.5
	baz=35,SNR=58						
BBOO	Buckleboo	35.28	227	eP	P	04 17 58.3	+0.5
	comp=Z,146nm,0.8s						
TAU	Tasmania Unive	35.97	204	eP	P	04 18 03.8	+0.4
TAU	Tasmania Unive	35.97	204	eP	P	04 18 03.8	+0.4
SIJI	Sorong	35.98	284	P	P	04 18 03.5	-0.5
	comp=Z,42nm,0.9s,baz=92,slow=7.4,SNR=12						
SIJI				PcP	PcP	04 20 29.4	+0.8
	comp=Z,10nm,0.6s,baz=119,slow=19,SNR=3.8						
BNDI	Bandanaira	36.39	277	P	P	04 18 08.6	+1.2
KNRA	Kununurra	36.64	258	P	P	04 18 09.8	+0.2
	baz=37,SNR=19						
WRKA	Warakurna	38.52	243	P	P	04 18 25.4	0.0
	baz=39,SNR=34						
NLAI	Namlea	39.39	278	P	P	04 18 33.3	+0.6
	comp=Z,203nm,1.2s,comp=Z,2µm						
LBMI	Labuha	39.66	282	P	P	04 18 35.9	+1.0
	comp=Z,230nm,0.9s,comp=Z,2µm						
FITZ	Fitzroy Crossi	39.79	255	P	P	04 18 35.9	-0.1

	baz=40,SNR=268						
FITZ	**Fitzroy Crossi**	**39.79**	**255**	P	**P**	**04 18 36.0**	**-0.1**
	comp=Z,139nm,0.6s,baz=80,slow=6.8,SNR=523						
FITZ				pP	**pP**	**04 19 01.6**	**+1.0**
	comp=Z,24nm,0.7s,baz=62,slow=16,SNR=2.4						
FITZ				PcP	**PcP**	**04 20 41.1**	**+0.8**
	comp=Z,29nm,0.8s,baz=118,slow=3.1,SNR=5.9						
FITZ				LR	LR	04 35 06.4	
	comp=Z,145nm,21.1s,baz=78,slow=36						
FITZ	**Fitzroy Crossi**	**39.79**	**255**	*e*P	**P**	**04 18 36.0**	**-0.1**
	comp=Z,162nm,0.6s						
FITZ				*e*pP	**pP**	**04 19 01.6**	**+1.0**
FITZ				*e*PcP	**PcP**	**04 20 41.1**	**+0.8**
TNTI	**Ternate**	**40.19**	**284**	P	P	04 18 47.5	+8.2
FORT	**Forrest**	**40.49**	**235**	P	**P**	**04 18 42.3**	**+0.7**
	baz=41,SNR=24						
FORT	**Forrest**	**40.49**	**235**	*e*P	**P**	**04 18 42.4**	**+0.7**
	comp=Z,263nm,0.8s						
SANI	**Sanana**	**40.75**	**279**	P	**P**	**04 18 43.5**	**-0.5**
	comp=Z,82nm,0.9s,comp=Z,992nm						
SOEI	**Soe**	**41.16**	**267**	P	**P**	**04 18 47.4**	**-0.1**
	comp=Z,126nm,0.9s,comp=Z,1µm						
SOEI	**Soe**	**41.16**	**267**	*e*P	**P**	**04 18 47.9**	**+0.4**
	comp=Z,89nm,0.9s						
BATI	**Baumata**	**41.71**	**267**	P	**P**	**04 18 53.4**	**+1.5**
	comp=Z,223nm,0.6s,baz=176,slow=1.4,SNR=30						
BATI	**Baumata**	**41.71**	**267**	P	**P**	**04 18 53.2**	**+1.3**
	comp=Z,156nm,0.8s,comp=Z,1µm						
MMRI	**Maumere**	**43.27**	**269**	P	**P**	**04 19 03.9**	**-0.5**
	comp=Z,354nm,1.0s						
MMRI	**Maumere**	**43.27**	**269**	*e*P	**P**	**04 19 03.2**	**-1.3**
	comp=Z,460nm,1.2s						
KMSI	**Cibinong**	**43.37**	**282**	P	**P**	**04 19 05.6**	**+0.3**
	comp=Z,318nm,1.1s						
PPT	**Papeete**	**43.42**	**104**	LR	LR	04 33 23.7	
	comp=Z,320nm,20.3s,baz=276,slow=31						
PPT2	**Papeete2**	**43.42**	**104**	*e*S	**S**	**04 25 19.9**	**-6.4**
	comp=Z,175nm,24.2s						
PPT2				*e*LQ	LQ	04 29 25.7	
	comp=Z,769nm,33.0s						
PPT2				*e*LR	LR	04 31 25.3	
	comp=Z,424nm,23.0s						
EDFI	**Ende, Flores**	**43.79**	**269**	P	**P**	**04 19 07.8**	**-1.0**
	comp=Z,99nm,0.9s,comp=Z,1µm						
DAV	**Davao City (W)**	**44.06**	**292**	LR	LR	04 36 40.7	
	comp=Z,48nm,21.6s,baz=154,slow=35						
TBI	**Tubuai**	**44.11**	**112**	*e*LQ	LQ	04 29 51.1	
	comp=Z,2µm,28.0s						
TBI				*e*LR	LR	04 31 45.8	
	comp=Z,1µm,33.0s						
LUWI	**Luwuk**	**44.11**	**280**	P	**P**	**04 19 12.1**	**+0.9**
LUWI	**Luwuk**	**44.11**	**280**	*e*P	**P**	**04 19 09.3**	**-1.9**
	comp=Z,299nm,1.1s						
CBIJ	**Chichi jima**	**44.22**	**329**	*e*P	**P**	**04 19 10.9**	**-0.9**
	comp=Z,75nm,0.9s						
JCJ	**Chichijima**	**44.22**	**329**	P	**P**	**04 19 10.9**	**-0.9**
	comp=Z,72nm,0.8s,baz=303,slow=18,SNR=3.6						
BASI	**Baing, Sumba**	**44.74**	**266**	P	**P**	**04 19 16.0**	**-0.2**
	comp=Z,133nm,0.8s,comp=Z,2µm						
APSI	**Ampana**	**45.23**	**279**	P	**P**	**04 19 20.6**	**+0.5**
	comp=Z,108nm,0.9s,comp=Z,1µm						
MRSI	**Marisa**	**45.31**	**281**	P	**P**	**04 19 19.6**	**-1.1**
MBWA	**Marble Bar**	**45.62**	**251**	*e*P	**P**	**04 19 23.9**	**+0.8**
	comp=Z,172nm,1.0s						
KMBL	**Kambalda**	**45.70**	**236**	P	**P**	**04 19 24.2**	**+0.7**
	baz=46,SNR=19						
BKSI	**Bulukumba**	**45.81**	**273**	P	**P**	**04 19 24.1**	**-0.6**
	comp=Z,22nm,0.7s,comp=Z,517nm						
WBSI	**Waikabubak, Su**	**45.96**	**267**	P	**P**	**04 19 25.7**	**-0.2**
	comp=Z,145nm,0.8s,comp=Z,1µm						
SPSI	**Sidrap Palu**	**46.40**	**275**	P	**P**	**04 19 28.5**	**-0.8**
TTSI	**Tana Toraja**	**46.54**	**276**	P	**P**	**04 19 31.2**	**+0.8**
	comp=Z,41nm,1.2s						
PCI	**Palu**	**46.99**	**279**	P	**P**	**04 19 35.3**	**+1.4**
	comp=Z,262nm,1.0s,comp=Z,3µm						
MPSI	**Mapaga**	**47.24**	**281**	P	**P**	**04 19 35.4**	**-0.4**
	comp=Z,53nm,1.0s,comp=Z,490nm						
MEEK	**Meekatharra**	**47.39**	**244**	P	**P**	**04 19 37.9**	**+1.0**
	baz=47,SNR=130						
KIP	**Kipapa**	**47.59**	**48**	⇑*e*P	**P**	**04 19 39.9**	**+1.5**
KIP				pmax	pmax		
	comp=Z,394nm,1.0s						
PLAI	**Plampang**	**47.63**	**268**	P	**P**	**04 19 38.0**	**-0.8**
	comp=Z,172nm,1.3s,comp=Z,2µm						
OPA	**Opana**	**47.76**	**47**	*e*P	**P**	**04 19 41.8**	**+2.1**
	comp=Z,262nm,0.9s						
OPA	**Opana**	**47.76**	**47**	*e*P	**P**	**04 19 41.8**	**+2.1**
OPA				pmax	pmax		
	comp=Z,262nm,0.9s						
AIN	**Ainahou**	**48.28**	**52**	*e*P	**P**	**04 19 46.5**	**+2.5**
	comp=Z,239nm,1.0s						
HMH	**Humu‘ula Sheep**	**48.40**	**52**	*e*P	**P**	**04 19 47.4**	**+2.4**
	comp=Z,267nm,1.0s						
KHLH	**Kahului Airpor**	**48.44**	**49**	*e*P	**P**	**04 19 47.7**	**+2.7**
	comp=Z,254nm,1.2s						
POHA	**Pohakuloa**	**48.45**	**51**	*e*P	**P**	**04 19 47.3**	**+2.0**
	comp=Z,187nm,0.9s						
HPAH	**Hawaii Prepara**	**48.48**	**51**	*e*P	**P**	**04 19 47.3**	**+2.0**
	comp=Z,223nm,1.3s						
TWSI	**Taliwang, Sumb**	**48.52**	**268**	P	**P**	**04 19 44.9**	**-0.8**
	comp=Z,70nm,0.8s,comp=Z,1µm						
KLBR	**Kellerberrin**	**49.16**	**237**	P	**P**	**04 19 50.3**	**0.0**
	baz=49,SNR=23						
SMKI	**Samarinda**	**49.65**	**279**	P	**P**	**04 19 57.8**	**+3.4**
BLDU	**Ballidu**	**49.81**	**239**	P	**P**	**04 19 55.8**	**+0.5**
	baz=50,SNR=11						
NWAO	**Narrogin (SRO)**	**49.91**	**236**	P	**P**	**04 19 56.6**	**+0.5**
	baz=50,SNR=23						
NWAO	**Narrogin (SRO)**	**49.91**	**236**	P	**P**	**04 19 56.5**	**+0.5**
	comp=Z,131nm,1.0s,baz=311,slow=7.4,SNR=30						
MYLDM	**Lahad Datu**	**49.97**	**286**	*e*P	**P**	**04 19 58.4**	**+1.6**
	comp=Z,93nm,1.2s						
MORW	**Morawa**	**50.07**	**241**	P	**P**	**04 19 57.9**	**+0.6**
	baz=50,SNR=26						
IGBI	**Denpasar**	**50.21**	**267**	P	**P**	**04 19 58.5**	**-0.1**
SRBI	**Singaraja**	**50.23**	**268**	P	**P**	**04 19 58.9**	**+0.2**
JHJ	**Hachijo jima 2**	**50.34**	**331**	LR	LR	04 41 46.7	
	comp=Z,151nm,18.9s,baz=56,slow=36						
MUN	**Mundaring**	**50.53**	**237**	P	**P**	**04 20 01.6**	**+0.9**
	baz=51,SNR=4.4						
RKGY	**Rocky Gully**	**50.56**	**234**	P	**P**	**04 20 02.2**	**+1.3**
	baz=51,SNR=6.8						
TGY	**Tagaytay City**	**51.15**	**298**	P	**P**	**04 20 06.0**	**+0.4**
	comp=Z,216nm,0.3s,baz=184,slow=1.9,SNR=4.3						
JAGI	**Jajag, Banyuwa**	**51.23**	**268**	P	**P**	**04 20 04.7**	**-1.5**
JAGI	**Jajag, Banyuwa**	**51.23**	**268**	*e*P	**P**	**04 20 04.6**	**-1.7**
	comp=Z,198nm,0.9s						
BLJI	**Banyuglugur**	**51.87**	**269**	P	**P**	**04 20 10.5**	**-0.5**
GMJI	**Gumukmas**	**51.95**	**268**	P	**P**	**04 20 10.7**	**-0.9**
JOW	**Kunigami**	**52.40**	**316**	P	**P**	**04 20 15.3**	**+0.6**
	comp=Z,89nm,0.8s,baz=150,slow=9.2,SNR=9.1						
JOW	**Kunigami**	**52.40**	**316**	*e*P	**P**	**04 20 15.9**	**+1.2**
	comp=Z,96nm,0.8s						
KKM	**Kota Kinabalu**	**52.40**	**286**	*e*P	**P**	**04 20 15.2**	**+0.1**
	comp=Z,103nm,1.0s						
TAOE	**Nuku Hiva Isla**	**52.94**	**93**	*e*LR	LR	04 35 47.4	
	comp=Z,203nm,23.4s						
PWJI	**Pagerwojo**	**53.59**	**268**	P	**P**	**04 20 23.3**	**-0.4**
MJAR	**Matsushiro Arr**	**53.89**	**332**	P	**P**	**04 20 24.6**	**-0.8**
	comp=Z,18nm,0.8s,baz=168,slow=7.9,SNR=24						
MJAR				PcP	**PcP**	**04 21 30.5**	**+0.8**
	comp=Z,4.0nm,0.8s,baz=161,slow=4.3,SNR=2.2						
MAJO	**Matsushiro**	**53.89**	**332**	*e*P	**P**	**04 20 24.8**	**-0.6**
	comp=Z,52nm,1.1s						
MAJO				*e*PcP	**PcP**	**04 21 30.5**	**+0.8**
MAJO	**Matsushiro**	**53.89**	**332**	*c i*P	**P**	**04 20 24.7**	**-0.7**
MAJO				pmax	pmax		
	comp=Z,37nm,1.1s						
MAT	**Matsushiro**	**53.89**	**332**	P	**P**	**04 20 24.6**	**-0.8**
MAT				S	**S**	**04 27 50.2**	**-2.3**
MJB9	**Matsu-Tunnel**	**53.89**	**332**	*e*P	**P**	**04 20 25.2**	**-0.3**
	comp=Z,53nm,1.1s						
NGJI	**Ngawi**	**54.01**	**269**	P	**P**	**04 20 30.1**	**+3.4**
PCJI	**Pacitan**	**54.18**	**268**	P	**P**	**04 20 28.1**	**+0.1**
UGM	**Wanagama**	**54.86**	**268**	P	**P**	**04 20 34.2**	**+1.3**
UGM	**Wanagama**	**54.86**	**268**	*e*P	**P**	**04 20 32.3**	**-0.6**
	comp=Z,226nm,1.2s						
SMRI	**Semarang**	**55.06**	**269**	P	**P**	**04 20 35.2**	**+0.9**
SMRI	**Semarang**	**55.06**	**269**	*e*P	**P**	**04 20 35.3**	**+0.9**
	comp=Z,190nm,0.9s						
JNU	**Nakatsue**	**55.06**	**324**	P	**P**	**04 20 33.9**	**-0.1**
	comp=Z,55nm,0.9s,baz=101,slow=4.2,SNR=12						
JNU	**Nakatsue**	**55.06**	**324**	*e*P	**P**	**04 20 34.3**	**+0.3**
	comp=Z,78nm,1.0s						
SBUM	**Sibu**	**55.20**	**281**	*e*P	**P**	**04 20 35.5**	**+0.2**
	comp=Z,38nm,1.0s						
STKI	**Sintang**	**55.35**	**278**	P	**P**	**04 20 37.3**	**+0.9**
YULB	**Yu-li**	**55.44**	**308**	*e*P	**P**	**04 20 36.1**	**-0.8**
	comp=Z,24nm,1.0s						
NACB	**Ninganchiao**	**55.64**	**309**	*e*P	**P**	**04 20 38.1**	**-0.2**
	comp=Z,46nm,0.9s						
TPUB	**Ta-pu**	**55.91**	**308**	*e*P	**P**	**04 20 39.5**	**-0.7**
	comp=Z,84nm,1.1s						
SSLB	**Suanglung**	**55.92**	**308**	*e*P	**P**	**04 20 39.7**	**-0.6**
	comp=Z,18nm,0.8s						
YHNB	**Yeheng**	**56.08**	**310**	*e*P	**P**	**04 20 41.6**	**+0.1**
	comp=Z,74nm,0.9s						
TATO	**Taipei**	**56.16**	**310**	*e*P	**P**	**04 20 41.7**	**-0.3**
	comp=Z,134nm,1.1s						
KSM	**Kuching**	**56.81**	**279**	*e*P	**P**	**04 20 46.4**	**-0.5**
	comp=Z,23nm,0.8s						
RKT	**Rikitea**	**57.35**	**111**	*e*LQ	LQ	04 35 28.4	
	comp=Z,527nm,29.8s						
RKT				*e*LR	LR	04 37 50.3	
	comp=Z,898nm,29.0s						
CISI	**Cisompet, Garu**	**57.57**	**268**	P	**P**	**04 20 51.2**	**-1.0**
LEM	**Lembang**	**57.87**	**269**	P	**P**	**04 20 54.9**	**+0.4**
	comp=Z,175nm,0.8s,baz=49,slow=5.6,SNR=18						
QZH	**Quanzhou**	**58.35**	**308**	*e*P	**P**	**04 20 59.2**	**+1.8**
ASAJ	**Asahikawa**	**58.65**	**340**	P	**P**	**04 20 59.1**	**+0.1**
	comp=Z,40nm,0.8s,baz=224,slow=10,SNR=14						
ASAJ				LR	LR	04 42 26.8	
	comp=Z,156nm,21.0s,baz=146,slow=32						
ASAJ	**Asahikawa**	**58.65**	**340**	*e*P	**P**	**04 20 59.1**	**+0.1**
	comp=Z,46nm,0.8s						
TJN	**Taejon**	**59.41**	**324**	⇓*e*P	**P**	**04 21 04.6**	**+0.1**
KSRS	**Korea Array**	**59.85**	**325**	P	**P**	**04 21 07.7**	**+0.2**
	comp=Z,9.1nm,0.8s,baz=138,slow=7.1,SNR=30						
KSRS				PcP	**PcP**	**04 21 53.8**	**+0.9**
	comp=Z,6.4nm,0.9s,baz=152,slow=4.7,SNR=5.0						
KS15	**Wonju Array Si**	**59.86**	**325**	*e*P	**P**	**04 21 07.7**	**+0.1**
KS15				*e*PcP	**PcP**	**04 21 53.8**	**+0.8**
KSAR	**Wonju Array Be**	**59.86**	**325**	P	**P**	**04 21 07.7**	**+0.1**
KSAR	**Wonju Array Be**	**59.86**	**325**	P	**P**	**04 21 07.7**	**+0.1**
KS01	**Wonju Array Si**	**59.88**	**325**	*e*P	**P**	**04 21 06.4**	**-1.3**
YSS	**Yuzh-Sakhalins**	**61.13**	**342**	*e*P	**P**	**04 21 17.0**	**+1.1**
	comp=Z,152nm,1.3s						
YSS	**Yuzh-Sakhalins**	**61.13**	**342**	α*e*P	**P**	**04 21 17.1**	**+1.1**
YSS				*e*		04 22 04.6	
YSS				pmax	pmax		
	comp=Z,70nm,1.1s						
SKR	**Severo-Kuril’s**	**61.81**	**353**	*e*P	**P**	**04 21 17.5**	**-2.9**
SKR				*e**PP	PcP	04 22 08.5	+8.0
SKR				*e*S	**S**	**04 29 37.1**	**+1.9**
SKR				*e**SS	**sS**	**04 30 16.9**	**-3.8**
SKR				pmax	pmax		
	comp=Z,200nm,2.1s						
SKR				pmax	pmax		
	comp=Z,50nm,1.1s						
SKR				MLR	MLR		
	comp=Z,100nm,17.0s						
MSHR	**Mys Shultsa**	**61.98**	**331**	⇑*e*P	**P**	**04 21 23.3**	**+1.5**
NJ2	**Nanjing**	**62.07**	**315**	*e*P	**P**	**04 21 23.0**	**+0.4**
NJ2				pmax	pmax		
	comp=Z,59nm,0.8s						
USRK	**Ussuriysk Ar.**	**62.86**	**333**	P	**P**	**04 21 28.7**	**+1.1**
	comp=Z,52nm,1.1s						
USRK				pP	**pP**	**04 21 54.9**	**+0.7**
	baz=133,slow=6.3						
USRK				PcP	**PcP**	**04 22 05.2**	**+0.3**
	baz=131,slow=4.4						
USA0B	**Ussuriysk Arra**	**62.86**	**333**	*e*P	**P**	**04 21 27.5**	**-0.1**
	comp=Z,104nm,1.3s						
MYKOM	**Kota Tinggi**	**63.16**	**278**	*e*P	**P**	**04 21 30.1**	**-0.2**
	comp=Z,58nm,1.0s						
SMY	**Shemya**	**63.61**	**5**	*e*P	**P**	**04 21 33.6**	**+1.2**
	comp=Z,105nm,1.0s						
SMY	**Shemya**	**63.61**	**5**	*e*P	**P**	**04 21 33.6**	**+1.2**
SMY				pmax	pmax		
	comp=Z,105nm,1.0s						
PET	**Petropavlovsk**	**63.85**	**355**	*e*P	**P**	**04 21 37.3**	**+3.3**
PET				*e**SP	sP	04 22 30.9	+19
PET				*e*S	**S**	**04 29 57.1**	**-3.6**
PET				*e*SP	**SPn**	**04 30 18.5**	**+1.8**
PET				*e*SS	**SS**	**04 34 06.7**	**-4.5**
PET				pmax	pmax		
	comp=Z,100nm,12.2s						
PET				MLR	MLR		
	comp=Z,200nm,14.0s						
PET				MLR	MLR		
	comp=Z,300nm,13.0s						
KIWB	**Kanaga Island**	**64.02**	**11**	*e*P	**P**	**04 21 35.7**	**+0.6**
PEA0B	**Petropavlovsk-**	**64.03**	**354**	*e*P	**P**	**04 21 36.3**	**+1.1**
	comp=Z,35nm,1.1s						
PETK	**Petropavlovsk-**	**64.03**	**354**	P	**P**	**04 21 36.0**	**+0.9**
	comp=Z,16nm,0.9s						
PETK				LR	LR	04 43 07.5	
	comp=Z,135nm,21.5s,baz=157,slow=30						
PETK	**Petropavlovsk-**	**64.03**	**354**	*e*P	**P**	**04 21 35.7**	**+0.6**
PEA1	**Petropavlovsk-**	**64.03**	**354**	*e*P	**P**	**04 21 36.0**	**+0.9**
MDJ	**Mudanjiang**	**64.27**	**332**	P	**P**	**04 21 34.8**	**-2.1**
MDJ				pP	PcP	04 22 10.5	-0.3
MDJ				sP	sP	04 22 29.7	+14
MDJ				pmax	pmax		
	comp=Z,61nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,290nm,3.9s						
MDJ	**Mudanjiang**	**64.27**	**332**	*e*P	**P**	**04 21 37.9**	**+1.0**
	comp=Z,48nm,0.9s						
TYV	**Tymovskoe**	**64.68**	**344**	*e*P	**P**	**04 21 39.7**	**+0.3**
TYV				pmax	pmax		
	comp=Z,20nm,1.3s						
TYV				pmax	pmax		
	comp=Z,200nm,3.4s						
BKNI	**Bangkinang**	**65.59**	**275**	*e*P	**P**	**04 21 46.8**	**+0.7**
	comp=Z,287nm,0.9s						
CN2	**Changchun**	**65.69**	**329**	*e*P	**P**	**04 21 46.4**	**+0.3**
CN2				pmax	pmax		
	comp=Z,60nm,0.8s						
GRNR	**Gornyy**	**66.50**	**340**	*e*P	**P**	**04 21 54.4**	**+3.2**
GRNR				pmax	pmax		
	comp=Z,84nm,1.0s						
IPM	**Ipoh**	**66.52**	**280**	*e*P	**P**	**04 21 52.2**	**+0.1**
	comp=Z,138nm,1.1s						
CASY	**Casey**	**66.77**	**201**	*e*P	**P**	**04 21 53.3**	**+0.6**
	comp=Z,78nm,1.0s						
VNDA	**Vanda**	**66.78**	**181**	P	**P**	**04 21 53.3**	**+0.7**
	comp=Z,9.8nm,1.0s,baz=0.3,slow=6.4,SNR=31						
VNDA				pP	**pP**	**04 22 19.3**	**-0.1**
	comp=Z,12nm,1.0s,baz=337,slow=5.5,SNR=7.0						
VNDA				LR	LR	04 48 39.6	
	comp=Z,137nm,18.2s,baz=68,slow=34						
VNDA	**Vanda**	**66.78**	**181**	*e*P	**P**	**04 21 53.2**	**+0.7**
	comp=Z,26nm,1.2s						
VNDA				pP	**pP**	**04 22 19.3**	**-0.1**
VNDA	**Vanda**	**66.78**	**181**	*e*P	**P**	**04 21 53.2**	**+0.7**
VNDA				*PP	**pP**	**04 22 19.3**	**-0.1**
VNDA				pmax	pmax		
	comp=Z,26nm,1.2s						
KLR	**Kul’dur**	**66.94**	**336**	*ce*P	**P**	**04 21 54.6**	**+0.6**
NIKH	**Nikolski High**	**67.01**	**16**	*e*P	**P**	**04 21 55.0**	**+0.7**
	comp=Z,173nm,1.0s						
SBA	**Scott Base**	**67.08**	**180**	*e*P	**P**	**04 21 56.0**	**+1.5**
	comp=Z,28nm,0.9s						
SBA	**Scott Base**	**67.08**	**180**	*e*P	**P**	**04 21 56.0**	**+1.5**
SBA				pmax	pmax		
	comp=Z,28nm,0.9s						
KULM	**Kulim**	**67.08**	**280**	*e*P	**P**	**04 21 55.2**	**-0.5**
	comp=Z,24nm,0.8s						
NKL	**Nikolayevsk**	**67.27**	**344**	*i* P	**P**	**04 21 56.0**	**+0.1**
NKL				*e*		04 22 22.7	
NKL				pmax	pmax		
	comp=N,26nm,1.0s						
NKL				pmax	pmax		
	comp=Z,65nm,1.0s						
SKNT	**Sakolnakorn**	**67.31**	**294**	P	**P**	**04 21 57.1**	**+0.1**
	comp=Z,54nm,1.2s,comp=Z,617nm						
SKLT	**Songkhla**	**67.57**	**282**	P	**P**	**04 22 00.2**	**+1.5**
	comp=Z,46nm,1.3s,comp=Z,729nm						
ENH	**Enshi**	**68.00**	**309**	*e*P	**P**	**04 22 00.6**	**-0.5**
	comp=Z,58nm,0.9s						
PSI	**Prapat**	**68.18**	**277**	P	**P**	**04 22 01.6**	**-1.1**
	comp=Z,39nm,0.8s,baz=178,slow=3.0,SNR=17						
PSI	**Prapat**	**68.18**	**277**	*e*P	**P**	**04 22 01.8**	**-1.0**
	comp=Z,66nm,1.0s						
BJT	**Baijiatuau**	**68.48**	**321**	*e*P	**P**	**04 22 04.2**	**+0.3**
	comp=Z,46nm,1.1s						
BJT	**Baijiatuau**	**68.48**	**321**	*e*P	**P**	**04 22 04.2**	**+0.3**
BJT				pmax	pmax		
	comp=Z,45nm,1.1s						
BJI	**Beijing**	**68.49**	**321**	⇑*i*P	**P**	**04 22 04.1**	**+0.2**
BJI				pmax	pmax		
	comp=Z,49nm,1.2s						
BJI				LR	LR		
	comp=Z,430nm,19.3s						
BJI				LR	LR		
	comp=Z,340nm,14.5s						
BJI				LR	LR		
	comp=Z,700nm,41.2s						
GYA	**Guiyang**	**68.56**	**304**	⇑*i*P	**P**	**04 22 04.5**	**-0.3**
GYA				pP	sP	04 22 45.4	+2.0
GYA				sP	pP	04 23 03.0	+31
GYA				PP	**PP**	**04 24 42.0**	**+4.4**
GYA				S	**S**	**04 30 54.3**	**-4.7**
GYA				SKS	**SKiKP**	**04 31 46.6**	**-1.1**
GYA				pmax	pmax		
	comp=Z,30nm,0.8s						
GYA				pmax	pmax		
	comp=Z,140nm,5.4s						
TRTT	**Trang**	**68.63**	**283**	P	**P**	**04 22 06.1**	**+0.8**
	comp=Z,18nm,1.5s,comp=Z,1µm						
GSI	**Gunungsitoli**	**69.18**	**276**	*e*P	**P**	**04 22 08.4**	**-0.4**
	comp=Z,133nm,0.7s						
PBKT	**Sadao Pong**	**69.90**	**292**	P	**P**	**04 22 13.8**	**+0.7**
	comp=Z,60nm,1.1s,comp=Z,938nm						
PHET	**Kaeng Krachan**	**70.05**	**288**	P	**P**	**04 22 15.2**	**+1.2**
	comp=Z,14nm,0.9s,comp=Z,136nm						
XAN	**Xi’an**	**70.20**	**312**	P	**P**	**04 22 14.8**	**+0.1**
XAN				S	**S**	**04 31 17.6**	**-0.3**
XAN				pmax	pmax		
	comp=Z,71nm,0.8s						
XAN				pmax	pmax		
	comp=Z,260nm,2.9s						
XAN				LR	LR		
	comp=Z,170nm,21.6s						
XAN				LR	LR		
	comp=Z,290nm,25.9s						
SRDT	**SRDT**	**70.93**	**289**	P	**P**	**04 22 20.5**	**+1.1**
	comp=Z,47nm,1.0s,comp=Z,3µm						
UTHA	**Uthaitani**	**70.99**	**291**	P	**P**	**04 22 20.5**	**+0.8**
	comp=Z,19nm,0.9s,comp=Z,162nm						
KMI	**Kunming**	**71.28**	**301**	P	**P**	**04 22 22.7**	**+1.1**
KMI				PP	**PP**	**04 24 59.6**	**-1.6**
KMI				S	**S**	**04 31 28.4**	**-2.7**
KMI				pmax	pmax		
	comp=Z,62nm,1.5s						
KMI				pmax	pmax		
	comp=Z,260nm,4.8s						
KMI				LR	LR		
	comp=Z,200nm,19.0s						
KMI				LR	LR		
	comp=Z,130nm,17.9s						
UMPA	**Umpang Tak**	**71.72**	**291**	P	**P**	**04 22 24.7**	**+0.5**
	comp=Z,9.6nm,1.0s,comp=Z,1µm						
HHC	**Hu-ho-hao-te**	**71.85**	**319**	*e*P	**P**	**04 22 25.9**	**+1.3**
HHC				pP	sP	04 23 03.8	+0.4
HHC				PP	**PP**	**04 25 09.4**	**+3.7**
HHC				S	**S**	**04 31 31.1**	**-5.7**
HHC				pmax	pmax		
	comp=Z,75nm,1.1s						
HHC				pmax	pmax		
	comp=Z,200nm,5.7s						
ZEA	**Zeya**	**72.22**	**337**	*e*P	**P**	**04 22 27.8**	**+1.4**
ZEA				pmax	pmax		
	comp=N,59nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,110nm,1.2s						
CM01	**Chiang Mai Arr**	**72.30**	**293**	*e*P	**P**	**04 22 28.4**	**+0.8**
CM31	**Chiang Mai Arr**	**72.33**	**293**	*e*P	**P**	**04 22 25.5**	**-2.3**
CM31				*e*pP	**pP**	**04 22 54.4**	**-0.5**
CMAR	**Chiang Mai Arr**	**72.33**	**293**	P	**P**	**04 22 28.6**	**+0.9**
	comp=Z,33nm,0.8s,baz=115,slow=4.4,SNR=86						
CMAR				pP	**pP**	**04 22 54.4**	**-0.5**
	comp=Z,8.0nm,0.7s,baz=112,slow=3.9,SNR=3.4						
CMMT	**Chiang Mai**	**72.43**	**294**	P	**P**	**04 22 28.8**	**+0.4**
	comp=Z,48nm,1.2s,comp=Z,548nm						
CHTO	**Chiang Mai**	**72.44**	**294**	*e*P	**P**	**04 22 28.9**	**+0.5**
	comp=Z,69nm,1.3s						
CHTO	**Chiang Mai**	**72.44**	**294**	*e*P	**P**	**04 22 28.9**	**+0.5**
CHTO				pmax	pmax		
	comp=Z,69nm,1.3s						
CHTO	**Chiang Mai**	**72.44**	**294**	P	**P**	**04 22 28.8**	**+0.4**
	comp=Z,214nm,1.2s,comp=Z,2µm						
CMAI	**Chiengmai2**	**72.70**	**295**	P	**P**	**04 22 30.6**	**+0.5**
	comp=Z,7.0nm,1.2s,comp=Z,94nm						
CD2	**Chengdu**	**72.72**	**307**	P	**P**	**04 22 30.0**	**+0.1**
CD2				S	**S**	**04 31 42.7**	**-4.3**
CD2				pmax	pmax		
	comp=Z,110nm,0.7s						
CD2				LR	LR		
	comp=Z,660nm,28.9s						
CD2				LR	LR		
	comp=Z,280nm,24.9s						
MIR	**Mirnyy**	**73.47**	**204**	⇓*i*P	**P**	**04 22 37.0**	**+3.4**
MIR				*i*		04 22 47.0	
MIR				pmax	pmax		
	comp=Z,156nm,1.2s						
SEY	**Seymchan**	**74.24**	**354**	*ce*P	**P**	**04 22 38.2**	**+0.2**
LZH	**Lanzhou**	**74.83**	**312**	⇑P	**P**	**04 22 43.7**	**+1.4**
LZH				pP	sP	04 23 23.2	+2.0
LZH				sP	pP	04 23 40.4	+31
LZH				*e*PP	**PP**	**04 25 34.4**	**+3.2**
LZH				S	**S**	**04 32 07.4**	**-3.4**
LZH				SS	**SS**	**04 36 55.7**	**-5.7**
LZH				pmax	pmax		
	comp=Z,130nm,1.1s						
LZH				pmax	pmax		
	comp=Z,200nm,5.4s						
LZH				LR	LR		
	comp=Z,210nm,16.2s						
LZH				LR	LR		
	comp=Z,480nm,17.3s						
LZH				LR	LR		
	comp=Z,550nm,19.0s						
CLNS	**Chul’man**	**75.45**	**338**	*e*P	**P**	**04 22 45.9**	**+0.7**
CLNS				pmax	pmax		
	comp=Z,31nm,0.9s						
CLNS				pmax	pmax		
	comp=E,6.0nm,1.0s						
CLNS				pmax	pmax		
	comp=N,18nm,1.1s						
YAK	**Yakutsk**	**77.93**	**343**	*e*P	**P**	**04 22 58.8**	**-0.1**
YAK				*e*		04 23 07.4	
YAK				*e*		04 25 53.5	
YAK				*e*PPP	PPP	04 27 43.0	
YAK				*e*S	**S**	**04 32 44.2**	**+1.0**
YAK				*e**SS	**sS**	**04 33 27.7**	**-2.8**
YAK				*e*SS	**SS**	**04 37 43.7**	**-3.0**
YAK				pmax	pmax		
	comp=Z,85nm,1.1s						
YAK				pmax	pmax		
	comp=N,25nm,1.1s						
YAK				pmax	pmax		
	comp=E,15nm,1.1s						
YAK				pmax	pmax		
	comp=Z,75nm,2.8s						
YAK				pmax	pmax		
	comp=N,20nm,2.7s						
YAK				pmax	pmax		
	comp=E,49nm,3.0s						
YAK				smax	smax		
	comp=N,13nm,2.4s						
YAK				smax	smax		
	comp=E,18nm,2.0s						
RSO	**Redoubt South**	**78.14**	**19**	*e*P	**P**	**04 23 00.4**	**0.0**
ULN	**Ulaanbaatar**	**78.28**	**324**	*e*P	**P**	**04 23 02.0**	**+0.5**
	comp=E,48nm,0.8s						
ULN	**Ulaanbaatar**	**78.28**	**324**	*c i*P	**P**	**04 23 02.0**	**+0.5**
ULN				pmax	pmax		
	comp=Z,81nm,1.3s						
SONA0	**Songino Array**	**78.65**	**324**	*e*P	**P**	**04 23 03.7**	**+0.3**
SONA0				*e*PKKPbc	**PKKPbc**	**04 41 59.0**	**-1.5**
SONM	**Songino Array**	**78.65**	**324**	P	**P**	**04 23 03.7**	**+0.3**
	comp=Z,17nm,0.8s,baz=136,slow=6.0,SNR=84						
SONM				PKKPbc	**PKKPbc**	**04 41 59.0**	**-1.5**
	comp=Z,0.1nm,0.4s,baz=235,slow=3.3,SNR=4.8						
SONA1	**Songino Array**	**78.65**	**324**	*e*P	**P**	**04 23 03.9**	**+0.4**
GTA	**Gaotai**	**79.12**	**314**	⇑P	**P**	**04 23 07.2**	**+1.0**
GTA				pP	sP	04 23 47.2	+1.8
GTA				sP	pP	04 24 04.8	+31
GTA				S	**S**	**04 32 52.3**	**-4.9**
GTA				SKS	**S**	**04 32 59.3**	**+2.1**
GTA				sS	sS	04 34 01.4	+17
GTA				pmax	pmax		
	comp=Z,59nm,1.4s						
GTA				pmax	pmax		
	comp=Z,220nm,4.7s						
GTA				LR	LR		
	comp=Z,110nm,16.5s						

GTA				LR	LR		
	comp=Z,130nm,16.8s						
GTA				LR	LR		
	comp=Z,240nm,19.6s						
QSPA	South Pole Qui	79.24	180	P	P	04 23 06.9	+0.5
	comp=Z,66nm,1.0s,baz=14,slow=2.1,SNR=75						
QSPA	South Pole Qui	79.24	180	*e*P	P	04 23 06.9	+0.5
	comp=Z,63nm,0.9s						
SUA	Susitna One	79.55	20	*e*P	P	04 23 08.2	+0.3
	comp=Z,75nm,1.4s						
RC01	Rabbit Creek A	79.61	20	*e*P	P	04 23 08.8	+0.6
	comp=Z,20nm,0.8s						
BRDH	Bariadhala	80.10	295	P	P	04 23 13.6	+1.9
	comp=Z,53nm,0.4s,baz=135,slow=18,SNR=4.0						
BRDH				LR	LR	04 59 46.1	
	comp=Z,38nm,18.7s,baz=193,slow=36						
PMR	Palmer	80.17	20	*e*P	P	04 23 11.7	+0.6
	comp=Z,38nm,1.2s						
RPN	Rapa Nui	80.38	116	P	P	04 23 14.7	+1.5
	comp=Z,28nm,0.3s,baz=112,slow=6.5,SNR=2.6						
BOD	Bodaibo	80.43	335	*e*P	P	04 23 11.9	-0.8
BOD				pmax	pmax		
	comp=Z,32nm,1.5s						
CAST	Castle Rocks	80.58	18	*e*P	P	04 23 12.9	-0.5
	comp=Z,31nm,0.8s						
SML	Sawmill	80.60	20	*e*P	P	04 23 14.4	+0.8
	comp=Z,68nm,1.2s						
SHL	Shillong	80.70	298	*e*P	P	04 23 15.7	+0.6
	comp=Z,70nm,1.0s						
SCM	Sheep Creek Mo	80.95	20	*e*P	P	04 23 16.1	+0.6
	comp=Z,64nm,1.0s						
DIV	Divide	81.02	21	*e*P	P	04 23 16.7	+0.8
	comp=Z,54nm,0.8s						
TRF	Thorofare Moun	81.14	18	*e*P	P	04 23 18.4	+1.9
	comp=Z,18nm,0.8s						
KLU	Klutina	81.21	21	*e*P	P	04 23 17.5	+0.6
	comp=Z,51nm,1.0s						
BMRM	Bremner River	81.34	22	*e*P	P	04 23 18.4	+0.8
	comp=Z,56nm,1.0s						
BPAW	Bear Paw Mtn.	81.41	18	*e*P	P	04 23 17.3	-0.5
	comp=Z,15nm,1.1s						
RDOG	Red Dog Mine	81.68	11	*e*P	P	04 23 20.3	+1.1
	comp=Z,79nm,1.1s						
CRQM	Cirque	81.75	23	*e*P	P	04 23 20.6	+0.7
	comp=Z,67nm,1.0s						
MCK	McKinley	81.77	19	*e*P	P	04 23 19.8	+0.1
	comp=Z,92nm,1.4s						
TGL	Tana Glacier	81.86	23	*e*P	P	04 23 21.4	+1.1
	comp=Z,40nm,0.9s						
BWN	Browne	81.92	18	*e*P	P	04 23 21.3	+0.9
	comp=Z,224nm,1.0s						
HARP	HAARP	82.10	21	*e*P	P	04 23 22.6	+1.2
	comp=Z,77nm,0.9s						
MLY	Manley	82.17	17	*e*P	P	04 23 22.1	+0.3
	comp=Z,44nm,1.4s						
KMRM	Mail Ridge	82.20	47	*e*P	P	04 23 24.7	+2.1
	comp=Z,66nm,1.1s						
DIB	Dawson Inlet,	82.27	32	*e*P	P	04 23 21.8	-0.7
	comp=Z,42nm,1.5s						
GDXM	Geysers	82.37	48	*e*P	P	04 23 25.4	+2.0
	comp=Z,32nm,1.1s						
KHMM	Horse Mountain	82.42	46	*e*P	P	04 23 25.9	+2.1
	comp=Z,71nm,1.2s						
LSA	Lhasa	82.50	302	*e*P	P	04 23 26.3	+1.4
	comp=Z,17nm,0.9s						
WRH	Wood River Hil	82.56	18	*e*P	P	04 23 23.3	-0.4
	comp=Z,39nm,0.9s						
SAO	San Andreas Ge	82.68	51	*e*P	P	04 23 26.6	+1.6
	comp=Z,46nm,1.2s						
GATR	Gnd/Air Tx Cnt	82.70	53	*e*P	P	04 23 23.7	-1.5
CCB	Clear Creek Bu	82.77	18	*e*P	P	04 23 24.2	-0.6
	comp=Z,20nm,0.7s						
MDM	Murphy Dome	82.86	18	*e*P	P	04 23 24.9	-0.4
	comp=Z,39nm,0.8s						
COLA	College	82.91	18	*e*P	P	04 23 25.7	+0.1
	comp=Z,54nm,0.8s						
L02D	Cave Junction,	82.98	45	P	P	04 23 27.9	+1.4
	baz=249						
PMPB	Monarch Peak	83.00	51	*e*P	P	04 23 28.9	+2.2
	comp=Z,68nm,1.3s						
SNCC	San Nicolas Is	83.08	54	P	P	04 23 28.5	+1.4
	baz=252						
IL1	Eielson Array	83.14	18	*e*P	P	04 23 26.6	-0.1
ILAR	Eielson Array	83.14	18	P	P	04 23 26.7	-0.1
	comp=Z,22nm,0.8s,baz=229,slow=5.3,SNR=171						
ILAR				pP	pP	04 23 53.3	-1.3
	comp=Z,2.8nm,0.7s,baz=230,slow=6.1,SNR=2.7						
ILAR				PKKPbc	PKKPbc	04 41 47.4	-3.5
	comp=Z,0.8nm,0.9s,baz=6.8,slow=1.8,SNR=5.7						
ILAR				LR	LR	04 57 26.7	
	comp=Z,41nm,18.6s,baz=219,slow=33						
ILB	Eielson Array	83.14	18	*e*P	P	04 23 26.3	-0.4
ILB				*e*pP	pP	04 23 53.3	-1.3
ILB				*e*PKKPbc	PKKPbc	04 41 47.4	-3.5
WDC	Whiskeytown Da	83.16	47	*e*P	P	04 23 29.0	+1.6
	comp=Z,60nm,1.4s						
N02D	Trinity Center	83.18	46	P	P	04 23 29.1	+1.5
	baz=250,SNR=8.9						
SCZ2	Santa Cruz Isl	83.21	54	P	P	04 23 28.7	+0.8
	baz=252						
M02C	Callahan	83.23	46	P	P	04 23 29.3	+1.5
	baz=249,SNR=8.3						
PAGB	Antelope Grade	83.27	52	*e*P	P	04 23 29.9	+1.8
	comp=Z,29nm,1.2s						
SBC	Santa Barbara	83.29	53	P	P	04 23 29.8	+1.6
	baz=252						
SMMC	Simmler	83.33	52	P	P	04 23 29.8	+1.3
	baz=252						
PKM	Mcpherson Peak	83.34	53	P	P	04 23 30.1	+1.3
	baz=252						
YBH	Yreka Blue Hor	83.45	45	P	P	04 23 29.2	+0.2
	comp=Z,24nm,1.0s,baz=182,slow=0.7,SNR=26						
YBH	Yreka Blue Hor	83.45	45	*e*P	P	04 23 30.7	+1.8
	comp=Z,43nm,1.1s						
MOY	Mondy	83.55	325	*e*P	P	04 23 29.1	-0.2
MOY				pmax	pmax		
	comp=Z,56nm,2.9s						
ORV	Oroville	83.56	48	*e*P	P	04 23 30.7	+1.2
	comp=Z,36nm,1.1s						
HUMO	Hull Mountain	83.58	45	*e*P	P	04 23 31.1	+1.5
	comp=Z,37nm,1.0s						
O03D	Paynes Creek	83.60	47	P	P	04 23 30.3	+0.6
	baz=250,SNR=21						
BLG	Laguna Peak, P	83.70	54	P	P	04 23 31.0	+0.6
	baz=253						
I03D	Drain, OR	83.71	43	P	P	04 23 31.2	+1.1
	baz=249						
AFDM	Forest Hills D	83.75	49	*e*P	P	04 23 31.4	+0.8
	comp=Z,56nm,1.1s						
SCI2	San Clemente I	83.78	55	P	P	04 23 31.5	+0.7
	baz=253						
BESE	Bessie Mountai	83.87	27	*e*P	P	04 23 31.8	+1.1
	comp=Z,74nm,1.5s						
CMB	Columbia Colle	83.89	50	*e*P	P	04 23 31.9	+0.6
	comp=Z,27nm,1.1s						
JIS	Juneau Island	83.92	27	*e*P	P	04 23 31.9	+1.1
	comp=Z,24nm,1.2s						
WRAK	Wrangell Islan	83.92	29	*e*P	P	04 23 31.9	+1.0
	comp=Z,39nm,0.9s						
COLD	Coldfoot	83.94	16	*e*P	P	04 23 32.0	+1.2
	comp=Z,23nm,1.0s						
CIS	Catalina Islan	84.01	55	P	P	04 23 32.6	+0.7
	baz=253						
M04C	Macdoel	84.08	46	P	P	04 23 33.1	+0.9
	baz=250,SNR=12						
OSI	Osito Audit: C	84.12	53	P	P	04 23 33.3	+0.8
	baz=253						
SKAG	Skagway	84.14	26	*e*P	P	04 23 33.1	+1.2
	comp=Z,44nm,1.2s						
ARVC	Arvin	84.19	53	P	P	04 23 33.9	+1.1
	baz=253						
FMP	Fort Macarthur	84.19	54	P	P	04 23 33.7	+0.9
	baz=253						
VES	Vestal, Richgr	84.20	52	P	P	04 23 33.6	+0.7
	baz=252						
DECC	Green Verdugo	84.32	54	P	P	04 23 33.9	+0.4
	baz=253						
I04A	Tendick Farm,	84.38	44	P	P	04 23 34.2	+0.6
	baz=250,SNR=7.8						
RUBR	Rubicon Trail	84.39	49	*e*P	P	04 23 35.5	+1.6
	comp=Z,83nm,1.4s						
J04D	Umpqua Nationa	84.39	44	P	P	04 23 34.7	+0.8
	baz=250,SNR=10						
PASC	Pasadena Art C	84.41	54	*e*P	P	04 23 38.7	+4.7
K04D	Chiloquin, OR	84.42	45	P	P	04 23 34.9	+1.0
	baz=250						
BEKR	Beckworth	84.50	48	*e*P	P	04 23 35.4	+0.9
	comp=Z,39nm,1.2s						
MWC	Mount Wilson	84.53	54	*e*P	P	04 23 35.9	+1.1
	comp=Z,60nm,1.4s						
MWC	Mount Wilson	84.53	54	*e*P	P	04 23 35.9	+1.1
MWC				pmax	pmax		
	comp=Z,60nm,1.4s						
E03A	Lebam	84.61	41	*e*P	P	04 23 35.8	+1.2
	comp=Z,79nm,0.9s						
ISA	Isabella, Lake	84.62	52	P	P	04 23 35.9	+0.9
	baz=253,SNR=16						
ISA	Isabella, Lake	84.62	52	*e*P	P	04 23 36.0	+0.9
	comp=Z,37nm,1.3s						
ISA	Isabella, Lake	84.62	52	*e*P	P	04 23 36.0	+0.9
ISA				pmax	pmax		
	comp=Z,37nm,1.3s						
NLWA	Neilton Lookou	84.73	40	*e*P	P	04 23 36.8	+1.6
	comp=Z,27nm,1.1s						
WAKR	Walker	84.75	49	*e*P	P	04 23 37.1	+1.3
	comp=Z,72nm,1.3s						
MDPB	Devils Postpil	84.75	50	*e*P	P	04 23 36.9	+1.0
	comp=Z,54nm,1.2s						
EDW2	Edwards Air Fo	84.77	53	P	P	04 23 36.8	+1.0
	baz=253,SNR=18						
F04D	Rainier, OR	84.79	41	P	P	04 23 36.7	+1.2
	baz=249						
OMMB	Old Mammoth Mi	84.80	50	*e*P	P	04 23 37.5	+1.3
	comp=Z,45nm,1.3s						
PNTR	Pine Nut	84.81	49	*e*P	P	04 23 37.6	+1.5
	comp=Z,62nm,1.3s						
VCNR	Virginia City	84.84	49	*e*P	P	04 23 37.7	+1.4
	comp=Z,34nm,1.4s						
H04A	Detroit Lake	84.84	43	*e*P	P	04 23 36.4	+0.5
	comp=Z,35nm,1.1s						
BFSC	Mount Baldy Ra	84.85	54	P	P	04 23 36.8	+0.4
	baz=253,SNR=11						
FYU	Fort Yukon	84.87	18	*e*P	P	04 23 36.8	+1.4
	comp=Z,53nm,1.4s						
109C	Camp Elliot, M	84.91	55	P	P	04 23 37.3	+0.8
	baz=254						
CPE	Camp Elliot	84.91	55	*e*P	P	04 23 37.8	+1.4
	comp=Z,45nm,1.4s						
ODAN	Odare	84.93	298	*e*P	P	04 23 37.2	+0.2
	comp=Z,166nm,0.8s						
MLAC	Mammoth, Mammo	84.93	50	P	P	04 23 37.9	+1.1
	baz=252						
EGAK	Eagle	85.00	20	*e*P	P	04 23 36.8	+0.6
	comp=Z,86nm,0.9s						
J05D	Fort Rock, OR	85.00	44	P	P	04 23 38.1	+1.2
	baz=250,SNR=21						
RVR	Riverside	85.01	54	*e*P	P	04 23 36.1	-0.8
RVR	Riverside	85.01	54	*e*P	P	04 23 36.1	-0.8
MURC	Murrieta	85.04	55	P	P	04 23 37.9	+0.7
	baz=254						
YERR	Yerington	85.04	49	*e*P	P	04 23 38.1	+0.9
	comp=Z,44nm,1.4s						
YERR				*e*pP	pP	04 24 08.1	+2.8
K05A	Summer Lake	85.05	45	*e*P	P	04 23 38.4	+1.2
	comp=Z,59nm,1.1s						
MAW	Mawson	85.11	202	P	P	04 23 37.8	+1.1
	baz=85,SNR=37						
MAW	Mawson	85.11	202	P	P	04 23 37.9	+1.1
	comp=Z,83nm,1.1s,baz=110,slow=5.9,SNR=76						
MAW	Mawson	85.11	202	*e*P	P	04 23 37.9	+1.1
	comp=Z,33nm,1.3s						
TOLK	Toolik Lake Re	85.13	15	P	P	04 23 38.0	+1.1
	baz=224						
TOLK	Toolik Lake Re	85.13	15	*e*P	P	04 23 38.2	+1.4
	comp=Z,39nm,1.5s						
CWC	Cottonwood Cre	85.16	52	P	P	04 23 38.7	+0.9
	baz=253						
CWC	Cottonwood Cre	85.16	52	*e*P	P	04 23 36.7	-1.2
CWC				*e*PcP	PcP	04 23 43.4	+2.5
PAHR	Pah Rah Range	85.16	48	*e*P	P	04 23 38.4	+0.7
	comp=Z,56nm,1.3s						
DAWY	Dawson	85.17	21	*e*P	P	04 23 37.6	+0.5
	comp=Z,34nm,0.9s						
LRMC	Laurel Mtn Rad	85.19	53	P	P	04 23 38.8	+0.8
	baz=253,SNR=14						
MOD	Modoc Plateau	85.20	46	*e*P	P	04 23 38.7	+0.8
	comp=Z,24nm,1.0s						
BAR	Barrett	85.21	56	*e*P	P	04 23 39.2	+1.2
	comp=Z,18nm,1.2s						
TIN	Tinemaha, Big	85.22	51	P	P	04 23 39.2	+1.2
	baz=253						
I05D	Terrebonne, OR	85.29	43	P	P	04 23 39.0	+0.9
	baz=250						
PINE	Pine Mountain	85.38	44	*e*P	P	04 23 40.0	+1.2
	comp=Z,39nm,1.0s						
BBRC	Big Bear Solar	85.44	54	P	P	04 23 39.9	+0.5
	baz=254						
PGC	Sidney	85.46	39	*e*P	P	04 23 39.7	+1.0
	comp=Z,53nm,1.0s						
MONP2	Monument Peak	85.47	55	P	P	04 23 40.4	+0.9
	baz=254,SNR=13						
DAC	Darwin (Calif)	85.48	52	*e*P	P	04 23 40.4	+0.9
	comp=Z,40nm,1.4s						
FRD	Ford Ranch, An	85.49	55	P	P	04 23 40.2	+0.7
	baz=254,SNR=9.2						
MPMC	Manual Prospec	85.50	52	P	P	04 23 40.6	+1.0
	baz=253,SNR=19						
RRX	Edison Barstow	85.56	53	P	P	04 23 40.5	+0.8
	baz=254						
NV01	Mina Array Sit	85.57	50	*e*P	P	04 23 39.5	-0.4
NV01				*e*pP	pP	04 24 08.7	+0.8
NV01				*e*PKKPbc	PKKPbc	04 41 40.9	-3.2
NVAR	Mina Array Bea	85.57	50	P	P	04 23 40.8	+0.8
	comp=Z,22nm,1.1s,baz=235,slow=6.8,SNR=75						
NVAR				pP	pP	04 24 06.8	-1.1
	comp=Z,3.9nm,0.9s,baz=230,slow=7.7,SNR=2.8						
NVAR				PKKPbc	PKKPbc	04 41 40.9	-3.2
	comp=Z,0.7nm,0.7s,baz=45,slow=4.5,SNR=4.2						
NVAR				LR	LR	04 55 30.3	
	comp=Z,44nm,18.7s,baz=90,slow=31						
G05D	Wamic, OR	85.61	43	P	P	04 23 40.6	+0.8
	baz=250						
PFO	Pinyon Flats O	85.63	55	P	P	04 23 41.0	+0.8
	baz=254,SNR=7.3						
PFO	Pinyon Flats O	85.63	55	*e*P	P	04 23 41.4	+1.2
	comp=Z,22nm,1.3s						
RAMN	Ramite	85.64	298	*e*P	P	04 23 40.5	0.0
XPFO	Piæon Flat	85.64	55	*e*P	P	04 23 41.4	+1.2
	comp=Z,25nm,1.3s						
IKP	In-Ko-Pah, Jac	85.66	56	P	P	04 23 41.4	+1.1
	baz=254,SNR=7.9						
NV11	Mina Array Sit	85.69	50	*e*P	P	04 23 41.2	+0.8
	comp=Z,4.3nm,1.3s						
LON	Longmire	85.81	41	*e*P	P	04 23 41.3	+0.6
	comp=Z,11nm,1.2s						
LON	Longmire	85.81	41	*e*P	P	04 23 41.3	+0.6
LON				pmax	pmax		
	comp=Z,11nm,1.2s						
GSC	Goldstone, Bar	85.82	53	P	P	04 23 41.9	+0.8
	baz=254,SNR=9.8						
GSC	Goldstone, Bar	85.82	53	*e*P	P	04 23 42.0	+0.9
	comp=Z,38nm,1.4s						
GSC	Goldstone, Bar	85.82	53	*e*P	P	04 23 42.0	+0.9
GSC				pmax	pmax		
	comp=Z,38nm,1.4s						
D05A	Enumclaw	85.85	41	*e*P	P	04 23 42.4	+1.6
	comp=Z,86nm,1.3s						
GRAC	Grapevine Rang	85.87	51	P	P	04 23 42.2	+1.0
	baz=253,SNR=27						
TIXI	Tiksi	85.89	349	*e*P	P	04 23 40.3	-0.1
	comp=Z,74nm,1.4s						
TIXI	Tiksi	85.89	349*c*	*i*P	P	04 23 39.9	-0.5
TIXI				pmax	pmax		
	comp=Z,61nm,1.7s						
KVN	Kaiserville	85.91	49	*e*P	P	04 23 42.3	+0.7
	comp=Z,38nm,1.2s						
KVN	Kaiserville	85.91	49	*e*P	P	04 23 42.3	+0.7
KVN				pmax	pmax		
	comp=Z,38nm,1.2s						
A04D	Lummi Island	85.94	39	P	P	04 23 42.4	+1.2
	baz=249						
SWSC	Sam W. Stewart	85.99	56	P	P	04 23 42.9	+1.1
	baz=255,SNR=11						
WESC	Westside Schoo	85.99	56	*e*P	P	04 23 46.4	+4.6
DLBC	Dease Lake	86.00	28	*e*P	P	04 23 42.0	+0.6
	comp=Z,13nm,1.0s						
G06A	Carlson Farm,	86.06	43	*e*P	P	04 23 42.8	+0.8
	comp=Z,18nm,1.3s						
HEC	Hector,Ludlow	86.06	54	P	P	04 23 43.0	+0.7
	baz=254						
FURC	Furnace Creek,	86.11	52	P	P	04 23 43.2	+1.0
	baz=254,SNR=21						
BELC	Belle Mtn. Jos	86.11	55	P	P	04 23 43.5	+1.0
	baz=254,SNR=24						
B05A	Bryant	86.16	40	P	P	04 23 43.0	+0.7
	baz=249,SNR=9.2						
JIRN	Jiri	86.16	299	*e*P	P	04 23 43.4	+0.1
SHOC	Shoshone, Teco	86.40	53	P	P	04 23 44.8	+1.0
	baz=254						
I07A	Izee	86.45	44	*e*P	P	04 23 45.0	+1.0
	comp=Z,16nm,1.0s						
BC3	Big Chuckawall	86.45	55	P	P	04 23 45.3	+1.1
	baz=255,SNR=13						
GUN	Gumba	86.49	299	*e*P	P	04 23 45.2	+0.4
	comp=Z,146nm,1.1s						
WVOR	Wild Horse Val	86.54	46	*e*P	P	04 23 45.1	+0.6
	comp=Z,52nm,1.3s						
WVOR	Wild Horse Val	86.54	46	*e*P	P	04 23 45.1	+0.6
WVOR				pmax	pmax		
	comp=Z,52nm,1.3s						
TUQ	Turquoise Moun	86.55	53	P	P	04 23 45.6	+0.9
	baz=254						
GMRC	Granite Mounta	86.59	54	P	P	04 23 45.8	+0.9
	baz=254,SNR=17						
TPNV	Topopah Spring	86.71	52	P	P	04 23 46.3	+0.7
	baz=254,SNR=13						
TPNV	Topopah Spring	86.71	52	*e*P	P	04 23 46.2	+0.7
	comp=Z,30nm,1.4s						
TPNV	Topopah Spring	86.71	52	*e*P	P	04 23 46.2	+0.7
TPNV				pmax	pmax		
	comp=Z,30nm,1.4s						
C06D	Leavenworth	86.80	40	P	P	04 23 46.0	+0.6
	baz=250						
GLA	Glamis	86.80	56	P	P	04 23 47.4	+1.5
	baz=255,SNR=9.9						
GLA	Glamis	86.80	56	*e*P	P	04 23 47.4	+1.5
	comp=Z,74nm,1.4s						
GLA	Glamis	86.80	56	*e*P	P	04 23 47.4	+1.5
GLA				pmax	pmax		
	comp=Z,74nm,1.4s						
PKIN	Phulchoki	86.83	299	*e*P	P	04 23 46.8	+0.4
	comp=Z,39nm,0.8s						
IRM	Iron Mountain	86.83	55	P	P	04 23 47.1	+1.1
	baz=255,SNR=32						
PALK	Pallekele	86.86	278	P	P	04 23 47.7	+1.2
	comp=Z,31nm,0.9s,baz=116,slow=4.4,SNR=7.5						
PALK	Pallekele	86.86	278	*e*P	P	04 23 47.8	+1.2
	comp=Z,32nm,0.8s						
PALK	Pallekele	86.86	278	*i* P	P	04 23 48.2	+1.7
J08A	Circle Bar Ran	86.94	45	*e*P	P	04 23 47.2	+0.9
	comp=Z,36nm,1.1s						
J08A				*e*pP	pP	04 24 13.7	-0.7
KKN	Kakani	86.98	299	*e*P	P	04 23 46.9	-0.2
	comp=Z,97nm,1.0s						
DMN	Daman	87.08	299	*e*P	P	04 23 47.6	0.0
	comp=Z,259nm,1.1s						
LDFC	Landfair	87.10	54	*e*P	P	04 23 48.5	+1.2
	comp=Z,122nm,1.4s						
LLLB	Lillooet	87.12	37	*e*P	P	04 23 47.9	+0.9
	comp=Z,11nm,0.9s						
HAWA	Hanford	87.17	42	*e*P	P	04 23 48.6	+1.3
	comp=Z,35nm,1.1s						
G08A	Pilot Rock	87.20	43	*e*P	P	04 23 48.4	+0.8
	comp=Z,45nm,1.2s						
G08A				*e*pP	pP	04 24 16.1	+0.4
Y12C	Blythe	87.23	55	P	P	04 23 48.9	+1.1
	baz=255,SNR=14						
Y12C	Blythe	87.23	55	*e*P	P	04 23 49.1	+1.3
	comp=Z,64nm,1.4s						
NEE2	Needles Airpor	87.41	54	P	P	04 23 49.9	+1.2
	baz=255						
SHPR	Sheep Range	87.44	52	*e*P	P	04 23 50.2	+1.2
	comp=Z,54nm,1.5s						
E08A	Dider Farm, El	87.51	42	*e*P	P	04 23 50.3	+1.4
	comp=Z,51nm,1.1s						
GKN	Gorkha	87.58	299	*e*P	P	04 23 49.3	-0.6
	comp=Z,169nm,1.1s						
113A	Mohawk Valley,	87.59	56	*e*P	P	04 23 50.9	+1.3
	comp=Z,44nm,1.5s						
R11A	Troy Canyon, C	87.60	50	P	P	04 23 50.4	+0.7
	baz=254,SNR=21						
R11A	Troy Canyon, C	87.60	50	*e*P	P	04 23 50.5	+0.7
	comp=Z,30nm,1.4s						
PDMCI	Parker Dam,Lak	87.67	55	P	P	04 23 51.1	+1.1
	baz=255,SNR=12						
D08A	Wollman Farm,	87.78	41	*e*P	P	04 23 51.4	+1.2
	comp=Z,26nm,1.1s						
B08A	Colville Reser	87.93	40	*e*P	P	04 23 51.6	+0.8
	comp=Z,25nm,1.2s						
W13A	Hualapai Mount	88.08	54	*e*P	P	04 23 53.4	+1.2
	comp=Z,48nm,1.4s						
W13A				*e*pP	pP	04 24 20.8	+0.5
E09A	Wood Farm, Sta	88.12	42	*e*P	P	04 23 52.9	+1.1
	comp=Z,28nm,1.2s						
214A	Organ Pipe Nat	88.18	57	P	P	04 23 54.1	+1.6
	baz=256,SNR=18						
BMO	Blue Mountains	88.19	44	*e*P	P	04 23 52.8	+0.5
	comp=Z,16nm,1.1s						
BMO	Blue Mountains	88.19	44	*e*P	P	04 23 52.8	+0.5
BMO				pmax	pmax		
	comp=Z,16nm,1.1s						
DANN	Dangsing	88.41	299	*e*P	P	04 23 53.2	-0.8
	comp=Z,131nm,0.9s						
KOLN	Koldanda	88.42	298	*e*P	P	04 23 53.0	-0.9
	comp=Z,56nm,0.9s						
C09A	Chrisman Ranch	88.43	41	*e*P	P	04 23 54.2	+0.9
	comp=Z,14nm,1.1s						
Y14A	Wickenburg	88.50	55	*e*P	P	04 23 55.0	+1.1
	comp=Z,26nm,1.4s						
F10A	Beach Ranch, E	88.57	43	*e*P	P	04 23 54.5	+0.4
	comp=Z,42nm,1.4s						
LPIG	La Paz	88.57	65	LR	LR	04 57 18.0	
	comp=Z,49nm,18.1s,baz=347,slow=31						
MFID	Camas Ranch	88.80	45	*e*P	P	04 23 56.1	+0.9
	comp=Z,23nm,1.3s						
MFID				*e*pP	pP	04 24 26.0	+2.6
PSUT	Pine Spring	88.96	51	*e*P	P	04 23 57.3	+1.1
	comp=Z,16nm,1.1s						
PYUN	Piuthan	89.02	299	*e*P	P	04 23 55.6	-1.1
	comp=Z,118nm,0.9s						
LCMT	Little Creek M	89.05	52	*e*P	P	04 23 57.9	+1.3
	comp=Z,44nm,1.3s						
CCUT	Cedar City	89.09	52	*e*P	P	04 23 58.4	+1.5
	comp=Z,45nm,1.3s						
WMQ	Urumqi	89.15	315	P	P	04 23 56.9	+0.1
WMQ				pP	sP	04 24 37.9	+1.5
WMQ				sP	pP	04 24 54.8	+30
WMQ				pmax	pmax		
	comp=Z,110nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,460nm,5.3s						
WMQ				LR	LR		
	comp=Z,270nm,24.9s						
WMQ				LR	LR		
	comp=Z,260nm,23.3s						
WMQ				LR	LR		
	comp=Z,280nm,26.7s						
SZCU	Shurtz Canyon	89.31	52	*e*P	P	04 23 59.4	+1.5
	comp=Z,56nm,1.4s						
SZCU				*e*pP	pP	04 24 27.3	+1.2
INK	Inuvik	89.52	19	*e*P	P	04 23 58.2	+0.4
	comp=Z,8.2nm,1.0s						
INK	Inuvik	89.52	19	*e*P	P	04 23 58.2	+0.4
INK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
U15A	North Rim	89.66	53	*e*P	P	04 24 01.0	+1.4
	comp=Z,48nm,1.2s						
HLID	Hailey	89.83	46	P	P	04 24 01.3	+1.1
	baz=255						
HLID	Hailey	89.83	46	*e*P	P	04 24 01.3	+1.1
	comp=Z,23nm,1.3s						
HLID				*e*pP	pP	04 24 28.0	-0.3
X16A	Lo Mia Camp, P	89.87	55	*e*P	P	04 24 02.2	+1.6
	comp=Z,20nm,1.1s						
X16A				*e*pP	pP	04 24 28.7	0.0
PKCU	Pink Cliffs	89.88	52	*e*P	P	04 24 02.8	+2.1
	comp=Z,70nm,1.3s						
TUC	Tucson	89.94	57	P	P	04 24 02.1	+1.3
	baz=257						
TUC	Tucson	89.94	57	*e*P	P	04 24 01.8	+1.0
	comp=Z,27nm,1.4s						
TUC	Tucson	89.94	57	*e*P	P	04 24 01.8	+1.0
TUC				pmax	pmax		
	comp=Z,27nm,1.4s						
MTPU	Mount Pierson	90.12	51	*e*P	P	04 24 03.7	+1.9
	comp=Z,42nm,1.3s						
MTPU				*e*pP	pP	04 24 29.4	-0.6
DUG	Dugway, Tooele	90.15	49	P	P	04 24 02.7	+1.0
	baz=256						
DUG	Dugway, Tooele	90.15	49	*e*P	P	04 24 02.6	+1.0
	comp=Z,12nm,1.1s						
DUG	Dugway, Tooele	90.15	49	*e*P	P	04 24 02.6	+1.0
DUG				pmax	pmax		

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      comp=Z,13nm,1.1s
BGU   Big Grassy Mou   90.17  48 eP        P        04 24 03.1 +1.4
      comp=Z,33nm,1.4s
WUAZ  Wupatki          90.17  54  P        P        04 24 03.3 +1.4
      baz=257
WUAZ  Wupatki          90.17  54 eP        P        04 24 03.2 +1.4
      comp=Z,32nm,1.2s
MSU   Marysvale        90.23  51 eP        P        04 24 03.9 +1.7
MSU   Marysvale        90.23  51 eP        P        04 24 03.9 +1.7
HVU   Hansel Valley    90.56  48 eP        P        04 24 04.7 +1.2
      comp=Z,54nm,1.2s
HVU   Hansel Valley    90.56  48 eP        P        04 24 04.7 +1.2
HVU                               pmax     pmax
      comp=Z,54nm,1.2s
NLU   North Lily Min   90.64  50 eP        P        04 24 05.6 +1.5
MSO   Missoula         90.99  43  P        P        04 24 05.2 -0.2
      baz=256
MSO   Missoula         90.99  43 eP        P        04 24 05.6 +0.2
      comp=Z,11nm,1.2s
MPU   Maple Canyon     90.99  50 eP        P        04 24 07.2 +1.5
      comp=Z,33nm,1.4s
319A  Douglas          90.99  58 eP        P        04 24 05.5 -0.2
      comp=Z,21nm,1.1s
JTMT  Jette            91.00  42 eP        P        04 24 05.8 +0.4
      comp=Z,16nm,1.1s
CTU   Camp Tracy       91.06  49 eP        P        04 24 07.2 +1.3
      comp=Z,23nm,1.2s
CTU                              epP       pP       04 24 36.9 +2.8
X18A  Snowflake        91.10  55 eP        P        04 24 07.7 +1.4
      comp=Z,17nm,1.1s
MCMT  McKenzie Canyo   91.23  45 eP        P        04 24 07.8 +1.0
MCMT                             epP       pP       04 24 34.5 -0.4
JLU   Jordanelle       91.26  49 eP        P        04 24 08.4 +1.4
      comp=Z,30nm,1.3s
W18A  Petrified Fore   91.39  55  P        P        04 24 08.8 +1.2
      baz=258
W18A  Petrified Fore   91.39  55 eP        P        04 24 09.2 +1.6
      comp=Z,25nm,1.3s
W18A                             epP       pP       04 24 33.4 -2.4
HWUT  Hardware Ranch   91.40  48 eP        P        04 24 08.0 +0.5
      comp=Z,15nm,1.2s
HWUT                             epP       pP       04 24 33.4 -2.3
DLMT  Dillon           91.54  44 eP        P        04 24 09.1 +1.1
      comp=Z,48nm,1.2s
P17A  Butcher Ranch,   91.54  50 eP        P        04 24 09.7 +1.5
      comp=Z,16nm,1.4s
WALA  Waterton Lakes   91.57  40 eP        P        04 24 08.9 +0.9
      comp=Z,34nm,1.1s
WALA                             epP       pP       04 24 34.5 -1.7
LRM   Limekiln Ridge   91.74  44 eP        P        04 24 09.6 +0.6
P18A  Preston Nutter   91.94  50 eP        P        04 24 11.7 +1.5
      comp=Z,17nm,1.5s
SYO   Syowa Base       92.15 197⇓eP        P        04 24 09.8 -0.4
QLMT  Earthquake Lak   92.22  45 eP        P        04 24 13.1 +1.9
FXWY  Fox Creek        92.24  46 eP        P        04 24 12.7 +1.3
      comp=Z,7.5nm,1.0s
BOZ   Bozeman (W)      92.25  44  P        P        04 24 12.3 +1.0
      baz=257
BOZ   Bozeman (W)      92.25  44 eP        P        04 24 11.6 +0.3
      comp=Z,31nm,1.3s
BOZ   Bozeman (W)      92.25  44 eP        P        04 24 11.6 +0.3
BOZ                               pmax     pmax
      comp=Z,31nm,1.3s
TPAW  Teton Pass       92.26  46 eP        P        04 24 12.5 +0.9
      comp=Z,5.8nm,0.9s
REDW  Red Top Meadow   92.30  46 eP        P        04 24 13.0 +1.3
      comp=Z,18nm,1.4s
IMW   Indian Meadow    92.36  46 eP        P        04 24 13.3 +1.3
      comp=Z,12nm,1.1s
YHB   Horse Butte      92.36  45 eP        P        04 24 13.9 +2.0
      comp=Z,10nm,1.0s
HRY   Holter Researc   92.37  43 eP        P        04 24 12.9 +1.2
SNOW  Snow King Moun   92.39  46 eP        P        04 24 13.6 +1.4
      comp=Z,7.1nm,0.9s
121A  Cookes Peak, D   92.47  58  P        P        04 24 13.8 +1.2
      baz=259
YMR   Madison River    92.51  45 eP        P        04 24 14.7 +2.1
      comp=Z,8.2nm,0.9s
LOHW  Long Hollow      92.53  46 eP        P        04 24 13.8 +1.1
      comp=Z,9.0nm,1.3s
PV09  Paradox Valley   92.56  51 eP        P        04 24 14.5 +1.4
PV09                             epP       pP       04 24 39.4 -1.9
PV14  Lion Creek, Pa   92.62  52 eP        P        04 24 15.2 +1.9
      comp=Z,7.3nm,1.1s
PV19  Morning Glory    92.64  52 eP        P        04 24 15.4 +2.0
      comp=Z,7.5nm,1.0s
PV23  Carpenter Ridg   92.64  52 eP        P        04 24 15.3 +1.9
      comp=Z,7.2nm,0.9s
PV17  East Wray Mesa   92.65  52 eP        P        04 24 15.3 +1.9
      comp=Z,13nm,1.1s
PV18  Skein Mesa, Pa   92.68  52 eP        P        04 24 15.5 +2.0
      comp=Z,11nm,1.3s
PV21  Cone Mtn., Par   92.69  51 eP        P        04 24 14.9 +1.3
      comp=Z,10nm,1.1s
H17A  Grant Village    92.72  45  P        P        04 24 15.5 +1.9
      baz=258
PV11  David Mesa, Pa   92.72  52 eP        P        04 24 15.6 +1.9
      comp=Z,5.3nm,0.8s
PV12  Saucer Basin,    92.78  52 eP        P        04 24 15.3 +1.3
      comp=Z,7.2nm,0.9s
MVCO  Mesa Verde       92.80  53  P        P        04 24 14.8 +0.6
      baz=259
PV22  Blue Mesa, Par   92.83  51 eP        P        04 24 16.1 +1.9
      comp=Z,5.0nm,0.9s
BW06  Boulder Array    93.10  47  P        P        04 24 15.5 +0.1
      baz=258
BW06  Boulder Array    93.10  47 eP        P        04 24 15.6 +0.1
      comp=Z,8.7nm,1.1s
PD31  Pinedale Array   93.10  47 eP        P        04 24 15.9 +0.5
PD31                             ePKKPdf   PKKPdf   04 41 22.2 -1.6
PDAR  Pinedale Array   93.10  47  P        P        04 24 15.6 +0.2
      comp=Z,4.9nm,1.0s,baz=247,slow=3.1,SNR=21
PDAR                              PKKPbc   PKKPdf   04 41 22.2 -1.6
      comp=Z,1.2nm,0.8s,baz=90,slow=5.9,SNR=8.0
PDAR  Pinedale Array   93.10  47 eP        P        04 24 14.9 -0.5
ZAA0  Zalesovo Array   93.54 324 eP        P        04 24 15.7 -1.1
      comp=Z,31nm,1.0s
ZALV  Zalesovo Beam    93.54 324  P        P        04 24 15.7 -1.1
      comp=Z,25nm,1.0s,baz=108,slow=4.8,SNR=41
ZALV  Zalesovo Beam    93.54 324 eP        P        04 24 15.4 -1.4
ZALV  Zalesovo Beam    93.54 324 eP        P        04 24 15.4 -1.4
ZAA1  Zalesovo Array   93.54 324 eP        P        04 24 15.7 -1.1
MK01  Makanchi Array   93.55 317 eP        P        04 24 16.2 -0.9
O20A  White River Ci   93.56  50  P        P        04 24 18.1 +0.6
      baz=259
MK31  Makanchi Array   93.56 317 eP        P        04 24 17.1  0.0
MK31  Makanchi Array   93.56 317 eP        P        04 24 17.1  0.0
MK32  Makanchi Array   93.56 317 eP        P        04 24 17.1 -0.1
MK32                             epP       pP       04 24 43.9 -1.4
MK32                             ePKKPdf   PKKPdf   04 41 21.7 -1.2
MKAR  Makanchi Array   93.56 317  P        P        04 24 17.1 -0.1
      comp=Z,38nm,0.8s,baz=98,slow=6.1,SNR=192
MKAR                              pP       pP       04 24 43.9 -1.4
      comp=Z,7.3nm,1.0s,baz=120,slow=7.2,SNR=2.0
MKAR                              PKKPbc   PKKPdf   04 41 21.7 -1.1
      comp=Z,2.8nm,0.7s,baz=279,slow=3.2,SNR=21
MKAR  Makanchi Array   93.56 317 eP        P        04 24 17.1 -0.1
      comp=Z,215nm,0.8s
MKAR                              pP       pP       04 24 43.9 -1.4
GCMT  Greycliff        93.64  44 eP        P        04 24 19.3 +1.7
MAKZ  Makanchi         93.77 317 eP        P        04 24 17.9 -0.2
      comp=Z,56nm,1.0s
MAKZ                             epP       pP       04 24 46.5 +0.1
MAKZ  Makanchi         93.77 317 eP        P        04 24 17.9 -0.2
MAKZ                              pmax     pmax
      comp=Z,57nm,1.0s
RLMT  Red Lodge        93.78  45  P        P        04 24 19.5 +1.1
      baz=259
RLMT  Red Lodge        93.78  45 eP        P        04 24 19.9 +1.5
      comp=Z,7.2nm,1.3s
TASM  ASL Pad, Albuq   94.00  55  P        P        04 24 20.1 +0.5
      baz=260
ANMO  Albuquerque      94.00  55  P        P        04 24 20.5 +0.9
      comp=Z,2.3nm,0.9s,baz=243,slow=5.8,SNR=8.4
ANMO                              PKKPbc   PKKPdf   04 41 21.1 -0.8
      comp=Z,0.4nm,0.3s,baz=134,slow=6.9,SNR=4.5
ANMO  Albuquerque      94.00  55  P        P        04 24 20.2 +0.5
      baz=260
ANMO  Albuquerque      94.00  55 eP        P        04 24 20.5 +0.9
      comp=Z,3.3nm,1.0s
ANMO                             ePKKPdf   PKKPdf   04 41 21.1 -0.8
ANMO  Albuquerque      94.00  55ceP        P        04 24 20.6 +0.9
ANMO                              pmax     pmax
      comp=Z,9.0nm,2.5s
TASL  Snake Pit, Alb   94.00  55  P        P        04 24 20.1 +0.5
      baz=260
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EGMT  Eagleton         94.03  42  P        P        04 24 19.9 +0.6
      baz=259
EGMT  Eagleton         94.03  42 eP        P        04 24 19.9 +0.6
      comp=Z,23nm,1.1s
S22A  4UR Ranch, Cre   94.20  53  P        P        04 24 20.9 +0.3
      baz=260
S22A  4UR Ranch, Cre   94.20  53 eP        P        04 24 21.6 +1.0
      comp=Z,8.8nm,1.4s
MNTX  Cornudas Mount   94.32  59  P        P        04 24 21.6 +0.7
      baz=260
MNTX  Cornudas Mount   94.32  59 eP        P        04 24 21.8 +0.8
      comp=Z,3.6nm,0.9s
SMCO  Snowmass         94.34  51 eP        P        04 24 22.5 +1.1
      comp=Z,6.0nm,1.4s
YKA   Yellowknife Ar   94.56  27  P        P        04 24 20.4 -0.9
      comp=Z,4.1nm,0.8s,baz=254,slow=4.4,SNR=9.7
YKA                               LR       LR       05 00 17.1
      comp=Z,5.7nm,19.7s,baz=213,slow=31
YKB5  Yellowknife Ar   94.56  27 eP        P        04 24 20.4 -0.9
RWWY  Rawlins          94.61  49 eP        P        04 24 23.6 +1.2
      comp=Z,11nm,1.3s
NVS   Novosibirsk      94.64 325⇓iP        P        04 24 21.2 -0.6
NVS                              e                  04 25 09.3
NVS                               pmax     pmax
      comp=Z,30nm,1.3s
NVS                               pmax     pmax
      comp=N,9.0nm,1.4s
NVS                               pmax     pmax
      comp=E,19nm,1.4s
SDCO  Great Sand Dun   95.24  53  P        P        04 24 25.9 +0.5
      baz=261
K22A  Casper           95.28  48  P        P        04 24 25.6 +0.3
      baz=260
TX31  Lajitas Ar. Si   95.39  61 eP        P        04 24 26.9 +0.8
LTX   Lajitas          95.39  61 eP        P        04 24 26.2 +0.2
LTX   Lajitas          95.39  61 eP        P        04 24 26.2 +0.2
TXAR  Lajitas Array    95.39  61  P        P        04 24 26.2 +0.2
      comp=E,0.7nm,0.8s,baz=243,slow=4.9,SNR=5.4
TXAR                              PP       PP       04 28 18.1 +0.1
      comp=E,6.9nm,1.2s,baz=246,slow=5.2,SNR=14
TXAR                              PKKP     PKKPdf   04 41 19.4 +0.3
      comp=E,1.0nm,0.6s,baz=112,slow=4.3,SNR=9.5
TARG  Taragay, Kyrgy   95.81 311 eP        P        04 24 28.6 +0.5
      comp=E,5.7nm,0.9s
PMSA  Palmer Station   95.86 161  PKKPbc   PKKPbc   04 41 16.9 -1.4
      comp=E,20nm,1.0s,baz=133,slow=9.2,SNR=2.7
PMSA                              LR       LR       05 02 11.5
      comp=E,76nm,18.4s,baz=236,slow=32
T25A  Trinidad         96.00  53  P        P        04 24 29.0 +0.2
      baz=261
LAO   LASA Array       96.15  44  P        P        04 24 29.9 +0.9
      baz=261
KURK  Kurchatov        96.65 320 eP        P        04 24 30.0 -1.1
      comp=E,28nm,1.4s
KURK                             ePKKPbc   PKKPbc   04 41 14.2 -1.8
KURK  Kurchatov        96.65 320c iP       P        04 24 29.5 -1.6
KURK                              pmax     pmax
      comp=Z,22nm,1.3s
KURBB Kurchatov Arra   96.69 320  P        P        04 24 30.2 -1.1
      comp=Z,2.0nm,0.7s,baz=96,slow=4.4,SNR=23
KURBB                             PKKPbc   PKKPbc   04 41 14.2 -1.7
      comp=Z,1.8nm,0.8s,baz=280,slow=3.1,SNR=12
NVL   N'lazarevskaya   96.79 188⇓iP        P        04 24 31.7 +0.3
NVL                               pmax     pmax
      comp=Z,6.0nm,0.7s
KSH   Kashi            96.86 309  P        P        04 24 33.9 +1.4
KSH                               sP       sP       04 25 31.7  +20
KSH                               PP       PP       04 28 35.0 +5.8
KSH                               pmax     pmax
      comp=Z,9.0nm,1.0s
KSH                               pmax     pmax
      comp=Z,74nm,4.9s
RSSD  Black Hills      97.30  47  P        Pdif     04 24 34.7 +0.1
      baz=262
SNAA  Sanae            97.42 184  P        P        04 24 33.8 -0.4
SNAA                              SKS      SKSac    04 34 55.0 -6.5
SNAA  Sanae            97.42 184  P        P        04 24 33.9 -0.4
      comp=Z,6.2nm,1.0s,baz=197,slow=5.7,SNR=26
SNAA  Sanae            97.42 184 eP        P        04 24 34.0 -0.4
      comp=Z,8.3nm,1.0s
SNAA  Sanae            97.42 184⇑eP        Pdif     04 24 34.4  0.0
VNA3  Neumayer Olymp   98.13 181  PKiKP    PKiKP    04 29 09.7 -0.1
VNA3  Neumayer Olymp   98.13 181  Pdiff    P        04 24 37.5  0.0
VNA3                              SKS      SKSac    04 35 06.9 +1.8
AAK   Ala-Archa        98.37 312 eP        P        04 24 39.3  0.0
      comp=Z,8.8nm,1.0s
AAK   Ala-Archa        98.37 312 eP        Pdif     04 24 39.3  0.0
AAK                               pmax     pmax
      comp=Z,9.0nm,1.0s
FFC   Flin Flon        99.80  36 ePdif     Pdif     04 24 44.6 -0.5
      comp=Z,9.3nm,1.1s
FFC   Flin Flon        99.80  36 eP        Pdif     04 24 44.6 -0.5
FFC                               pmax     pmax
      comp=Z,9.0nm,1.1s
KK31  Karatay Array   101.33 312 ePdif     Pdif     04 24 51.8 -0.5
KK31  Karatay Array   101.33 312 eP        Pdif     04 24 51.8 -0.5
KKAR  Karatay Array   101.33 312 ePdif     Pdif     04 24 51.8 -0.5
KKAR  Karatay Array   101.33 312 eP        Pdif     04 24 51.8 -0.5
BVAR  Borovoye Array  101.95 322  P        Pdif     04 24 54.0 -0.7
      comp=Z,4.2nm,0.8s,baz=99,slow=4.7,SNR=21
BVAR  Borovoye Array  101.95 322  P        Pdif     04 24 54.0 -0.7
BVAR                              pmax     pmax
      comp=Z,4.0nm,0.9s
BRVK  Borovoye        102.01 322 ePdif     Pdif     04 24 54.5 -0.5
BRVK  Borovoye        102.01 322ceP        Pdif     04 24 54.0 -1.0
BRAL  Brewton         109.86  61 eP        Pdif     04 25 31.9 +1.5
U53A  Fall Branch     113.45  55  PKiKP    PKiKP    04 29 38.5 -0.5
      baz=274
060A  Indiantown      115.71  65  PKiKP    PKPdf    04 29 43.2 -0.3
      baz=271
ARA0  ARCESS Array S  116.15 346 ePKPdf    PKPdf    04 29 42.8 -0.4
ARA0                             epPKPdf   pPKPdf   04 30 11.2 -1.4
ARA0                             ePKKPbc   PKKPbc   04 40 12.9 -3.3
ARCES ARCESS Array B  116.15 346  PKP      PKPdf    04 29 42.8 -0.4
      comp=Z,3.7nm,0.6s,baz=71,slow=1.8,SNR=29
ARCES                             pPKP     pPKPdf   04 30 11.2 -1.4
      comp=Z,1.6nm,0.6s,baz=85,slow=1.3,SNR=2.4
ARCES                             PKKPbc   PKKPbc   04 40 12.9 -3.3
      comp=Z,4.0nm,0.8s,baz=204,slow=2.7,SNR=9.3
O56A  Blue Knob Stat  116.18  50  PKiKP    PKPdf    04 29 44.1 -0.1
      baz=278
KLMR  Klimovskoe      116.65 334 ePKIKP    PKPdf    04 29 41.6 -2.7
KLMR                              pmax     pmax
      comp=Z,5.0nm,1.0s
KLMR  Klimovskoe      116.65 334 ePKPdf    PKPdf    04 29 41.7 -2.6
KLMR                              AMP               04 29 43.8
      comp=Z,5.0nm,1.0s
BINY  Binghamton      117.77  48  PKiKP    PKPdf    04 29 47.1 -0.1
      baz=281
N59A  State Game Lan  118.17  49  PKiKP    PKPdf    04 29 47.9 -0.1
      baz=281
AKT   Akhty           118.25 311 ePKIKP    PKPdf    04 29 48.8 +0.6
AKT                              e                  04 31 03.0
AKT                               pmax     pmax
      comp=Z,9.0nm,1.0s
PAL   Palisades       119.54  49  PKiKP    PKPdf    04 29 50.0 -0.5
      baz=282
SCHQ  Schefferville   119.60  32  PKP      PKPdf    04 29 50.3  0.0
      comp=Z,2.0nm,0.6s,baz=209,slow=7.9,SNR=3.3
SCHQ                              PKKPbc   PKKPab   04 40 03.1  0.0
      comp=Z,2.9nm,0.5s,baz=226,slow=14,SNR=4.9
ROSC  El Rosal        119.92  91  PKP      PKPdf    04 29 52.5 -0.1
      comp=Z,3.2nm,0.4s,baz=230,slow=22,SNR=2.9
LPAZ  La Paz          119.99 116  PKP      PKPdf    04 29 52.9  0.0
      comp=Z,3.0nm,0.8s,baz=354,slow=0.9,SNR=9.9
LPAZ                              PKKPbc   PKKPbc   04 40 01.0 -0.7
      comp=Z,2.0nm,0.8s,baz=97,slow=10.0,SNR=6.7
LPAZ  La Paz          119.99 116 ePKPdf    PKPdf    04 29 50.1 -2.8
LPAZ                             ePKKPbc   PKKPbc   04 40 01.0 -0.7
LPAZ  La Paz          119.99 116 ePKIKP    PKPdf    04 29 50.1 -2.8
ZEI   Tsey            120.74 314 i PKIKP   PKPdf    04 29 52.4 -0.7
ZEI                               pmax     pmax
      comp=Z,7.0nm,0.8s
GNI   Garni           120.74 310  PKP      PKPdf    04 29 52.9 -0.2
      comp=Z,5.2nm,0.5s,baz=159,slow=2.5,SNR=3.9
HRV   Adam Dziewonsk  120.90  47  PKiKP    PKPdf    04 29 52.8 -0.3
      baz=285
VSR   Storozhevoye    121.04 324 ePKIKP    PKPdf    04 29 52.6 -0.5
VSR                               pmax     pmax
      comp=Z,20nm,1.0s
VORD  Divnogorie      121.07 324 ePKIKP    PKPdf    04 29 52.7 -0.4
VORD                              pmax     pmax
      comp=Z,7.0nm,0.8s
KBZ   Khabaz          121.20 315  PKP      PKPdf    04 29 53.6  0.0
      comp=Z,1.8nm,0.7s,baz=110,slow=0.6,SNR=4.2
FIA1  FINESS Array S  121.64 339 ePKPdf    PKPdf    04 29 53.1 -0.8
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FIA1                             ePKPdf    PKiKP    04 29 53.6 -0.5
FIA0  FINESS Array S  121.64 339 ePKPdf    PKPdf    04 29 53.5 -0.5
FIA0                             ePKKPbc   PKKPab   04 39 54.6 +0.5
FIA0  FINESS Array S  121.64 339 ePKIKP    PKPdf    04 29 53.5 -0.5
FINES FINESS Array B  121.64 339  PKP      PKPdf    04 29 53.5 -0.5
      comp=Z,6.0nm,1.0s,baz=142,slow=7.2,SNR=10
FINES                             PKKPbc   PKKPab   04 39 54.6 +0.5
      comp=Z,2.3nm,0.9s,baz=153,slow=13,SNR=4.2
PKME  Peaks-Kenny Pk  121.70  43  PKiKP    PKiKP    04 29 54.6  0.0
      baz=288
RAYN  Ar Rayn         122.19 291 ePKPdf    PKPdf    04 29 56.6 +0.4
RAYN  Ar Rayn         122.19 291 ePKIKP    PKPdf    04 29 56.6 +0.4
DAMY  Dhamar          123.13 280 ePKPdf    PKPdf    04 30 00.6 +2.1
CPUP  Villa Florida   123.95 132  PKP      PKPdf    04 29 59.5  0.0
      comp=Z,5.2nm,0.8s,baz=275,slow=1.9,SNR=12
CPUP  Villa Florida   123.95 132 ePKPdf    PKPdf    04 29 59.3 -0.2
SDV   Santo Domingo   124.13  87  PKP      PKPdf    04 30 00.0 -0.3
      comp=Z,14nm,0.7s,baz=254,slow=1.8,SNR=12
SDV   Santo Domingo   124.13  87 eP        PKPdf    04 29 50.6  -10
SDV                              ePKPdf    PKiKP    04 30 00.1 -0.5
ATD   Arta Tunnel     124.40 277  PKP      PKPdf    04 30 01.8 +1.1
      comp=Z,10.0nm,0.7s,baz=311,slow=12,SNR=3.0
BOSA  Boshof          125.56 223  PKP      PKPdf    04 30 03.5 +0.8
      comp=Z,24nm,0.8s,baz=126,slow=1.4,SNR=30
NB2   NORSAR Subarra  126.52 345  PKPdf    PKPdf    04 30 02.6 -0.8
      comp=Z,9.8nm,1.2s,baz=31,slow=1.9
NB2   NORSAR Subarra  126.52 345  PKPdf    PKPdf    04 30 02.6 -0.8
      baz=31,slow=1.9
HFS   Hagfors         126.62 343  PKP      PKPdf    04 30 02.9 -0.7
      comp=Z,3.5nm,0.8s,baz=176,slow=5.9,SNR=6.0
AKASG Malin Array Be  126.82 327  PKP      PKPdf    04 30 03.7 -0.5
      comp=Z,5.4nm,1.0s,baz=52,slow=2.6,SNR=13
AKBB  Malin Array Si  126.82 327 ePKPdf    PKPdf    04 30 04.1 -0.1
KIEV  Kiev            126.83 327 ePKPdf    PKPdf    04 30 04.1 -0.1
KIEV  Kiev            126.83 327c iPKIKP   PKPdf    04 30 03.3 -0.9
AK11  Malin Array Si  126.86 327 ePKPdf    PKPdf    04 30 04.1 -0.2
SAML  Samuel          127.20 110 ePKPdf    PKPdf    04 30 05.6 -0.4
SAML  Samuel          127.20 110 ePKIKP    PKPdf    04 30 05.6 -0.4
LBTB  Lobatse         127.59 227 ePKPdf    PKPdf    04 30 07.3 +0.7
LBTB  Lobatse         127.59 227 ePKIKP    PKPdf    04 30 07.3 +0.7
ILGA  Ilgaz           128.49 314 ePKPdf    PKPdf    04 30 09.3 +1.3
ASF   Jabal al Asfar  128.69 303  PKP      PKPdf    04 30 09.2 +0.8
      comp=Z,6.5nm,1.1s,baz=141,slow=1.0,SNR=9.1
SJG   San Juan        129.01  75 ePKPdf    PKPdf    04 30 09.4 +0.1
SJG   San Juan        129.01  75 ePKIKP    PKPdf    04 30 09.4 +0.1
BR101 Keskin Array S  129.03 313 ePKPdf    PKPdf    04 30 08.9 -0.1
BR101                            ePP       PP       04 32 14.2 -3.5
BR131 Keskin Array S  129.03 313 ePKPdf    PKPdf    04 30 09.0  0.0
BRTR  Keskin Array B  129.03 313  PKP      PKPdf    04 30 08.9  0.0
      comp=Z,3.8nm,0.9s,baz=110,slow=1.4,SNR=17
BRTR                              PP       PP       04 32 14.2 -3.5
      comp=Z,1.5nm,0.8s,baz=115,slow=5.6,SNR=4.4
HUMP  Col San Antoni  129.29  75 ePKPdf    PKPdf    04 30 09.9 +0.1
ANTO  Ankara          129.59 313 ePKPdf    PKPdf    04 30 11.1 +1.2
ANTO  Ankara          129.59 313 ePKIKP    PKPdf    04 30 11.1 +1.2
MMAI  Mount Meron Ar  129.72 304  PKP      PKPdf    04 30 12.4 +2.0
      comp=Z,0.7nm,0.3s,baz=85,slow=10,SNR=5.1
BUR08 Bucovina Ar. S  130.72 326 ePKPdf    PKPdf    04 30 14.7 +2.8
BUR04 Bucovina Ar. S  130.73 326 ePdif     Pdif     04 27 02.6 -0.4
BUR04                            ePKPdf    PKiKP    04 30 12.5 -0.3
LSZ   Lusaka          130.94 239  PKP      PKPdf    04 30 13.6 +0.3
      comp=Z,16nm,0.7s,baz=117,slow=1.6,SNR=30
LSZ   Lusaka          130.94 239 ePKPdf    PKPdf    04 30 14.2 +1.0
MLR   Muntele Rosu    131.50 323  PKP      PKPdf    04 30 14.4 +0.9
      comp=Z,0.7nm,0.8s,baz=320,slow=0.8,SNR=8.8
MLR   Muntele Rosu    131.50 323 ePKPdf    PKPdf    04 30 13.5  0.0
UZH   Uzhgorod        131.68 328⇑iPKIKP    PKPdf    04 30 14.0 +0.5
OJC   Ojcow           131.87 331 ePKP      PKPdf    04 30 14.0 +0.2
OJC   Ojcow           131.87 331 ePKIKP    PKPdf    04 30 14.0 +0.2
NIE   Niedzica        132.17 330 ePKP      PKPdf    04 30 15.2 +0.7
NIE   Niedzica        132.17 330 ePKIKP    PKPdf    04 30 15.2 +0.7
PTGA  Pitinga         132.79 101 ePKPdf    PKPdf    04 30 16.7  0.0
KSP   Ksiaz           133.00 334 ePKP      PKPdf    04 30 17.4 +1.5
KSP   Ksiaz           133.00 334 ePKIKP    PKPdf    04 30 17.4 +1.5
MORC  Moravsky Berou  133.22 332 ePKP      PKPdf    04 30 16.3 -0.2
JAVC  Velka Javorina  133.81 331 ePKP      PKPdf    04 30 18.8 +1.2
BRG   Berggiesshubel  133.96 336 ePKP      PKPdf    04 30 19.3 +1.6
      comp=Z,9.6nm,1.2s
BRG   Berggiesshubel  133.96 336 ePKIKP    PKPdf    04 30 19.3 +1.6
BRG                               pmax     pmax
      comp=Z,10.0nm,1.2s
CLL   Collm           133.99 337 ePKPdf    PKPdf    04 30 18.0 +0.2
      comp=Z,13nm,1.3s
CLL                               LmV               05 30 00.0
      comp=Z,100nm,21.7s
CLL   Collm           133.99 337 ePKIKP    PKPdf    04 30 18.0 +0.2
CLL                               pmax     pmax
      comp=Z,13nm,1.3s
MBAR  Mbarara         134.21 259 ePKPdf    PKPdf    04 30 21.8 +2.3
KRUC  Moravsky        134.26 332 ePKP      PKPdf    04 30 18.5 +0.1
MODS  Modra-Piesok    134.34 331 ePKIKP    PKPdf    04 30 20.9 +2.3
MODS  Modra-Piesok    134.34 331 ePKP      PKPdf    04 30 20.9 +2.3
VTS   Vitosha         134.74 321 ePKPdf    PKPdf    04 30 19.9 +0.2
VTS   Vitosha         134.74 321 ePKIKP    PKPdf    04 30 19.9 +0.2
EKA   Eskdalemuir Ar  134.74 351  PKP      PKPdf    04 30 20.2 +1.1
      comp=Z,5.8nm,1.1s,baz=10,slow=5.1,SNR=3.1
CONA  Conrad Observa  135.32 332 ePKPdf    PKPdf    04 30 20.7 +0.1
      comp=Z,4.9nm,0.8s
KHC   Kasperske Hory  135.44 334 ePKPdf    PKPdf    04 30 21.2 +0.6
GEC2  GERESS Array S  135.61 334 ePKPdf    PKPdf    04 30 21.5 +0.5
GEC2  GERESS Array S  135.61 334 ePKIKP    PKPdf    04 30 21.5 +0.5
GERES GERESS Array B  135.61 334  PKP      PKPdf    04 30 20.7 -0.3
      comp=Z,2.7nm,0.8s,baz=48,slow=2.0,SNR=12
GEA0  GERESS Array S  135.62 334 ePKPdf    PKPdf    04 30 20.9 -0.1
DIVS  Divibare        135.76 325 ePKPdf    PKPdf    04 30 21.5 +0.1
ARSA  Arzberg         135.97 331 ePKPdf    PKPdf    04 30 19.8 -1.9
      comp=Z,5.7nm,1.4s
MOA   Molln           136.11 333 ePKiKP    PKPdf    04 30 22.7 +0.8
      comp=Z,4.8nm,1.1s
FNA   Florina         136.88 320 ePKPdf    PKPdf    04 30 23.6 +0.1
FNA   Florina         136.88 320 ePKIKP    PKPdf    04 30 23.7 +0.1
TSUM  Tsumeb          137.00 226  PKP      PKPdf    04 30 25.2 +0.7
      comp=Z,9.4nm,0.8s,baz=160,slow=3.1,SNR=8.5
KBA   Koelnbreinsper  137.10 333 ePKPdf    PKPdf    04 30 21.3 -2.7
      comp=Z,6.6nm,1.0s
IDI   Anoyia          137.17 311  PKP      PKPdf    04 30 23.4 -0.9
      comp=Z,10nm,0.8s,baz=80,slow=3.7,SNR=6.0
TTG   Podgorica       137.21 323 ePKPdf    PKPdf    04 30 24.5 +0.5
TTG   Podgorica       137.21 323 ePKIKP    PKPdf    04 30 24.5 +0.5
AGG   Agios Georgios  137.21 317 ePKPdf    PKPdf    04 30 24.2  0.0
AGG   Agios Georgios  137.21 317 ePKIKP    PKPdf    04 30 24.2  0.0
WTTA  Wattenberg      137.71 334  PKPdf    PKPdf    04 30 24.0 -1.1
      comp=Z,11nm,1.1s
MOTA  Moosalm         137.88 335  PKPdf    PKPdf    04 30 23.6 -1.7
      comp=Z,10nm,1.1s
RETA  Reutte          137.91 335  PKPdf    PKPdf    04 30 25.3  0.0
      comp=Z,2.1nm,0.6s
FETA  Feichten        138.29 335  PKPdf    PKPdf    04 30 24.8 -1.3
      comp=Z,4.5nm,1.0s
DAVA  Damuels         138.43 336 ePKiKP    PKPdf    04 30 27.2 +0.8
      comp=Z,13nm,1.6s
DAVOX Davos/Dischmat  138.83 335  PKP      PKPdf    04 30 26.7 -0.4
      comp=Z,7.4nm,0.9s,baz=245,slow=5.2,SNR=6.9
BNI   Bardonecchia    141.54 336 ePKPpre   PKPpre   04 30 28.1
BNI   Bardonecchia    141.54 336 ePKIKP    PKPpre   04 30 28.1
CLTB  Caltabellotta   143.86 322 ePKPpre   PKPpre   04 30 34.0
H07N1 FLORES T-PHASE147.38  25 ePKP        PKPab    04 30 46.2 -0.6
KEST  Kesra           147.41 323  PKPbc    PKPbc    04 30 44.9 -0.1
      comp=Z,54nm,0.9s,baz=244,slow=0.8,SNR=43
KEST  Kesra           147.41 323 ePKPdf    PKPbc    04 30 44.6 -0.4
CMAH  Djebel Manchou  147.85 327  P        PKPbc    04 30 46.2  0.0
THTN  Thala           147.91 324 ePKPbc    PKPbc    04 30 46.4  0.0
ABSA  Djebel Ababsia  148.08 326  P        PKPbc    04 30 47.3 +0.5
CKFL  Kef-Lekhel      148.39 327  P        PKPbc    04 30 47.9 +0.2
PBRG  Braganca        148.45 350 ePKPbc    PKPbc    04 30 47.7 +0.1
PGAV  Gavieira, Arco  148.53 352 ePKPdf    PKPdf    04 30 44.5 +0.4
PGAV  Gavieira, Arco  148.53 352 ePKPbc    PKPbc    04 30 48.2 +0.4
DFRA  Djebel Bou Aff  148.72 328  P        PKPbc    04 30 49.5 +1.0
PCAB  Cabril          148.75 352 ePKPbc    PKPbc    04 30 48.5 +0.2
CTEI  Djebel Teioual  148.81 327  P        PKPbc    04 30 49.3 +0.5
POLO  Lamas de Olo    149.04 351 ePKPbc    PKPbc    04 30 49.7 +0.6
MVO   Moncorvo        149.12 350 ePKPbc    PKPbc    04 30 49.5 +0.2
PVRL  Vila Real       149.13 351 ePKPbc    PKPbc    04 30 49.7 +0.4
PGRA  Graciosa        149.17  22 ePKP      PKPbc    04 30 50.5 +1.1
PCED  Cedros          149.26  23 ePKP      PKPbc    04 30 49.9 +0.3
CKHR  Kef el Ahmar    149.32 328  P        PKPbc    04 30 50.5 +0.4
ROSA  Rosais          149.35  22 ePKP      PKPbc    04 30 50.5 +0.6
HOR   Horta           149.37  23 ePKP      PKPbc    04 30 51.6 +1.7
PTO   Porto           149.39 352 ePKPbc    PKPbc    04 30 50.2 +0.3
PICO  Pico            149.47  23 ePKP      PKPbc    04 30 50.8 +0.5
PCAN  Candelaria      149.48  23 ePKP      PKPbc    04 30 50.5 +0.3
PVIS  Viseu           149.70 351 ePKPbc    PKPbc    04 30 51.0 +0.3
ADH   Angra Heroismo  149.77  21 ePKP      PKPbc    04 30 52.1 +1.2
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PSCM	Serra do Cume	149.77	21	ePKP	PKPbc	04 30 51.8	+0.9
ES19	SONSECA Array	149.84	345	ePKPdf	PKPdf	04 30 46.8	+0.6
ESDC	Sonseca Array	149.88	345	PKP	PKPdf	04 30 46.8	+0.5
	comp=Z,6.2nm,0.8s,baz=349,slow=3.6,SNR=5.3						
ESDC				PKPbc	PKPbc	04 30 51.2	-0.1
	comp=Z,6.1nm,0.8s,baz=22,slow=2.3,SNR=34						
ESDC				PKPab	PKPab	04 30 57.7	+0.7
	comp=Z,6.2nm,0.7s,baz=16,slow=3.9,SNR=19						
ESLA	Sonseca Array	149.88	345	ePKPbc	PKPbc	04 30 51.5	+0.3
MTE	Manteigas	149.95	350	ePKPbc	PKPbc	04 30 51.9	+0.5
MTE	Manteigas	149.95	350	ePKPbc	PKPbc	04 30 51.6	+0.2
PAB	San Pablo	150.10	345	ePKPbc	PKPbc	04 30 52.3	+0.5
PAB	San Pablo	150.10	345	ePKP2	PKPbc	04 30 52.3	+0.5
COI	Coimbra	150.28	352	ePKPbc	PKPbc	04 30 51.7	-0.3
COI	Coimbra	150.28	352	ePKPab	PKPab	04 30 58.6	+0.1
EMHD	Djebel Mahouad	150.44	332	P	PKPbc	04 30 53.5	+0.7
PCAS	Casmilo, Conde	150.44	352	ePKPbc	PKPbc	04 30 52.8	+0.3
PCAS	Casmilo, Conde	150.44	352	ePKPab	PKPab	04 31 00.2	+1.0
PCBR	Castelo Branco	150.49	350	ePKPbc	PKPbc	04 30 52.9	+0.3
PTOM	Tomar	150.85	351	ePKPbc	PKPbc	04 30 53.9	+0.5
PMRV	Marv??o	150.87	350	ePKPbc	PKPbc	04 30 54.0	+0.5
CART	Cartagena	150.88	339	ePKPbc	PKPbc	04 30 53.5	-0.1
EBNR	Beni Rached	151.00	334	P	PKPbc	04 30 54.4	+0.4
PSET	Sete Cidades	151.04	20	ePKP	PKPbc	04 30 55.0	+1.0
PDA	Ponta Delgada	151.13	20	ePKP	PKPbc	04 30 55.1	+1.0
CMLA	Cha da Macela	151.16	19	ePKP	PKPbc	04 30 55.4	+1.2
CMLA	Cha da Macela	151.16	19	ePKPbc	PKPbc	04 30 55.8	+1.6
CMLA	Cha da Macela	151.16	19	i PKIKP	PKPbc	04 30 57.0	+2.8
BART	Pico Bartolome	151.26	19	ePKP	PKPbc	04 30 55.1	+0.5
ALMR	Almeirim	151.33	351	ePKPbc	PKPbc	04 30 55.1	+0.5
ALMR	Almeirim	151.33	351	ePKPab	PKPab	04 31 04.2	+1.3
PMTG	Montargil	151.36	351	ePKPbc	PKPbc	04 30 54.8	+0.2
PMTG	Montargil	151.36	351	ePKPab	PKPab	04 31 04.9	+1.9
PESTR	Estremoz	151.45	350	ePKPbc	PKPbc	04 30 55.2	+0.3
PESTR	Estremoz	151.45	350	ePKPab	PKPab	04 31 04.8	+1.4
PESTR	Estremoz	151.45	350	ePKPbc	PKPbc	04 30 55.3	+0.3
PESTR				ePKPab	PKPab	04 31 04.4	+1.0
EANR	’Ain N’Sour	151.48	334	P	PKPbc	04 30 55.5	+0.4
PMAFR	Mafra	151.63	352	ePKPab	PKPab	04 31 06.0	+1.9
EVO	Evora	151.85	350	ePKPbc	PKPbc	04 30 56.1	+0.3
ETRT	Tiaret	151.86	333	P	PKPbc	04 30 56.8	+0.7
PSMN	Pico do Norte,	152.00	19	ePKP	PKPdf	04 30 51.1	+1.5
PBAR	Barrancos	152.02	348	ePKPbc	PKPbc	04 30 56.5	+0.3
PBAR	Barrancos	152.02	348	ePKPab	PKPab	04 31 07.2	+1.4
PBEJ	Beja	152.32	350	ePKPbc	PKPbc	04 30 57.2	+0.3
PBEJ	Beja	152.32	350	ePKPab	PKPab	04 31 09.7	+2.7
PNCL	Nicolau / Gran	152.35	351	ePKPbc	PKPbc	04 30 57.2	+0.3
MESJ	Messejana	152.56	350	ePKPdf	PKPdf	04 30 50.2	-0.2
MESJ	Messejana	152.56	350	ePKPbc	PKPbc	04 30 57.9	+0.5
PCVE	Castro Verde	152.74	350	ePKPbc	PKPbc	04 30 58.2	+0.4
MDT	Midelt	156.45	340	PKP	PKPdf	04 30 56.6	+0.5
	comp=Z,2.1nm,0.9s,baz=42,slow=7.3,SNR=2.6						
MDT				PKPab	PKPab	04 31 23.9	-1.0
	comp=Z,4.1nm,1.1s,baz=120,slow=0.9,SNR=4.8						
TOA0	Torodi Ar. Sit	164.56	280	ePKPdf	PKPdf	04 31 03.9	-1.4
TOA0				ePKPdf	PKPdf	04 31 05.4	+0.2
TOA0				ePKPab	PKPab	04 31 59.3	-1.6
TOA0				ePKPab	PKPab	04 32 00.9	0.0
TORD	Torodi Ar. Bea	164.56	280	PKP	PKPdf	04 31 04.9	-0.3
	comp=Z,4.9nm,1.0s						
TORD				PKPab	PKPab	04 31 59.9	-1.0
	baz=75,slow=3.8						
TOA1	Torodi Ar. Sit	164.57	280	ePKPdf	PKPdf	04 31 04.9	-0.3
TOA1				ePKPab	PKPab	04 31 59.9	-1.0
KOWA	Kowa	169.67	292	PKP	PKPdf	04 31 08.7	-0.3
	comp=Z,8.3nm,1.1s,baz=181,slow=0.3,SNR=5.3						
KOWA				PKPab	PKPab	04 32 22.9	-0.5
	comp=Z,18nm,0.8s,baz=59,slow=3.3,SNR=22						
KOWA	Kowa	169.67	292	ePKPdf	PKPdf	04 31 08.7	-0.3
KOWA				ePKPab	PKPab	04 32 22.9	-0.5
KOWA				ePKPab	PKPab	04 32 23.2	-0.2
DBIC	Dimbokro	170.18	246	PKP	PKPdf	04 31 09.3	0.0
	comp=Z,9.9nm,1.1s,baz=82,slow=2.0,SNR=3.9						
DBIC				PKPab	PKPab	04 32 25.9	+0.2
	comp=Z,6.2nm,0.9s,baz=102,slow=5.9,SNR=4.3						
DBIC	Dimbokro	170.18	246	ePKPdf	PKPdf	04 31 10.0	+0.6
DBIC				ePKPab	PKPab	04 32 25.9	+0.2

NIED ***12*** *04:54:00, 36°.10N×139°.90E, h59^{km}, Mw4.3 Best double couple: M$_0$3.22000×10^{15} NP1:φ$_s$234.00000°, δ20.00000°, λ94.00000°. NP2:φ$_s$51.00000°, δ70.00000°, λ89.00000°.*

BJI ***12*** *04:54:44.5, 36°.10N×139°.90E, h43^{km}, mb4.6/26, mB4.8/10, Ms4.4/5, Ms7 4.1/4*

ISCJB ***12*** *04:54:46.0±0.3, 36°.07N±0°.03×139°.87E±0°.03, h57^{km}±2^{km}, mb4.4/82, Error ellipse: s-maj=4.6km s-min=4.3km az=157.3*

JMA ***12*** *04:54:47.0±0.1, 36°.08N×139°.89E, h46^{km}±1^{km}, M4.2 Broadband fault plane solution: P waves. NP1: φ$_s$45.00000°, δ70.00000°, λ86.00000°. NP2:φ$_s$236.00000°, δ20.00000°, λ100.00000°. Principal axes: T Plg65.0000°, Azm309.0000°; N Plg3.0000°, Azm46.0000°; P Plg25.0000°, Azm138.0000°;*

JMA Felt III J1.

MOS ***12*** *04:54:47.6±0.9, 36°.30N×139°.70E, h63^{km}, mb4.6/40 Error ellipse: s-maj=9.8km s-min=5.9km az=108.9*

NEIC ***12*** *04:54:48.0±0.4, 36°.08N×139°.73E, h60^{km}±3^{km}, mb4.5/33, Error ellipse: s-maj=4.6km s-min=3.7km az=155.0*

NEIC Felt [II] at Tokyo. Felt widely in southeastern Honshu. Recorded [3 JMA] in Ibaraki, Saitama and Tochigi.

IDC ***12*** *04:54:48.3±1.0, 35°.98N×139°.81E, h67^{km}±9^{km}, mb4.0/29, mb1 4.1/32, mb1mx4.0/74, mbtmp4.3/32, MS3.2/5, Ms1 3.2/5, ms1mx2.8/67, Error ellipse: s-maj=11.7km s-min=7.0km az=67.0*

ISC 12 04:54:46.8±0.6**, 36°.11N**±0°.04×**139°.88E**±0°.04**, h48**^{km}±5^{km}**, n190, σ1^{s}58**/209**, mb4.4**/81**, 8C-10D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYT	Yasato	0.28	65	⇑P	Pn	04 54 55.6	+0.1
JYT				S	Sn	04 55 01.4	-0.3
JAG	Ashikaga	0.47	313	⇓P	Pn	04 54 57.8	+0.3
JAG				S	Sn	04 55 05.7	+0.5
JRY	Ryogami san	0.80	264	⇓P	Pn	04 55 01.7	-0.1
JRY				S	Sn	04 55 12.3	-0.4
JKT	Katashina	0.83	322	⇓P	Pn	04 55 02.4	+0.1
JOD2	Odawara 2	1.06	218	P	Pn	04 55 05.4	+0.1
JOD2				S	Sn	04 55 19.0	0.0
JYN	Shimob	1.25	241	P	Pn	04 55 08.8	+0.9
MJAR	Matsushiro Arr	1.42	288	P	Pn	04 55 10.6	+0.4
	188nm,0.3s,baz=103,slow=8.0,SNR=801						
MJAR				S	Sn	04 55 29.8	+2.1
	101nm,0.3s,baz=74,slow=20,SNR=12						
MJAR				LR	LR	04 55 57.0	
	comp=Z,654nm,19.5s,baz=120,slow=50						
MAJO	Matsushiro	1.42	288	ePn	Pn	04 55 10.2	+0.1
MAJO				eSn	Sn	04 55 27.0	-0.7
MAJO	Matsushiro	1.42	288	d iP	Pn	04 55 11.0	+0.8
MAT	Matsushiro	1.42	288	P	Pn	04 55 10.9	+0.7
MAT				eS	Sn	04 55 27.2	-0.5
MJB9	Matsu-Tunnel	1.42	288	ePn	Pn	04 55 10.3	+0.1
MJB9				eSn	Sn	04 55 29.1	+1.2
INU	Inuyama	2.45	253	ePn	Pn	04 55 25.9	+1.6
INU				eSn	Sn	04 55 48.9	-4.1
JHJ	Hachijo jima 2	2.98	182	P	Pn	04 55 31.3	-0.3
	254nm,0.3s,baz=227,slow=20,SNR=14						
JHJ				S	Sn	04 56 04.2	-1.9
	377nm,0.3s,baz=90,slow=21,SNR=7.3						
JHJ2	Mitsune	2.99	181	ePn	Pn	04 55 31.3	-0.3
JHJ2				eSn	Sn	04 56 04.7	-1.6
ERM	Erimo	6.42	22	ePn	Pn	04 56 18.4	-0.3
ERM				eSn	Sn	04 57 29.8	-1.0
ERM	Erimo	6.42	22	⇓eP	Pn	04 56 19.7	+1.0
JNU	Nakatsue	8.00	251	P	Pn	04 56 40.7	+0.3
	0.1nm,0.3s,baz=50,slow=17,SNR=1.9						
JNU				LR	LR	05 00 06.5	
	comp=Z,144nm,19.6s,baz=120,slow=40						
ASAJ	Asahikawa	8.26	14	P	Pn	04 56 45.9	+1.9
	2.8nm,0.3s,baz=223,slow=18,SNR=5.7						
ASAJ				LR	LR	05 00 07.0	
	comp=Z,117nm,19.3s,baz=176,slow=38						
CBIJ	Chichi jima	9.20	167	ePn	Pn	04 56 52.9	-3.9
CBIJ				eSn	Sn	04 58 29.6	-9.3
JCJ	Chichijima	9.20	167	P	Pn	04 56 53.4	-3.5
	16nm,0.3s,baz=269,slow=22,SNR=15						
KSRS	Korea Array	9.69	282	P	Pn	04 57 07.7	+4.3
	1.1nm,0.3s,baz=93,slow=14,SNR=8.5						
KSRS				LR	LR	05 00 43.3	
	comp=Z,166nm,20.2s,baz=89,slow=37						
KS15	Wonju Array Si	9.72	281	ePn	Pn	04 57 07.7	+3.8
KSAR	Wonju Array Be	9.72	281	P	Pn	04 57 07.7	+3.8
KSAR	Wonju Array Be	9.72	281	P	Pn	04 57 07.7	+3.8
USRK	Ussuriysk Ar.	10.09	326	P	Pn	04 57 14.4	+5.5
	baz=143,slow=14						
USRK				LR	LR	05 01 08.2	
	comp=Z,89nm,19.2s,baz=167,slow=37						
KUR	Kuril’sk	10.94	31	eP	Pn	04 57 20.7	+0.1
MDJ	Mudanjiang	11.56	320	P	Pn	04 57 25.4	-3.6
MDJ				sP		04 57 39.4	
MDJ				S	Sn	04 59 29.1	-7.5
MDJ				ScP	ScP	05 06 47.8	+1.8
MDJ				PcS	PcS	05 06 52.4	+1.3
MDJ				pmax	pmax		
	comp=Z,16nm,1.5s						
MDJ				pmax	pmax		
	comp=Z,450nm,4.1s						
MDJ				LR	LR		
	comp=N,750nm,4.5s						
MDJ				LR	LR		
	comp=E,290nm,3.8s						
MDJ				LR	LR		
	comp=Z,480nm,4.4s						
KLR	Kul’dur	14.40	338	P	Pn	04 58 08.7	+1.1
	0.0nm,0.3s,baz=148,slow=10,SNR=4.5						
KLR	Kul’dur	14.40	338	⇓eP	Pn	04 58 06.5	-1.2
NJ2	Nanjing	17.88	263	eP	P	04 58 53.7	+1.6
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ZEA	Zeya	19.71	337	eP	P	04 59 09.8	-2.2
ZEA				pmax	pmax		
	comp=Z,15nm,0.8s						
PETK	Petropavlovsk-	21.11	31	P	P	04 59 28.6	+1.4
	comp=Z,2.6nm,0.7s						
PEA1	Petropavlovsk-	21.11	31	eP	P	04 59 28.6	+1.4
HHC	Hu-ho-hao-te	22.62	291	eP	P	04 59 43.7	+0.1
HHC				pmax	pmax		
	comp=Z,13nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,5.5s						
MA2	Magadan	24.53	13	P	P	05 00 01.9	+0.4
	comp=Z,5.1nm,0.4s,baz=199,slow=11,SNR=2.9						
YAK	Yakutsk	26.73	349	eP	P	05 00 20.8	-0.6
YAK				e*PP	pP	05 00 35.9	+2.1
YAK				e		05 01 02.1	
YAK				e		05 03 42.1	
YAK				eS	S	05 04 50.2	-3.2
YAK				e*SS	sS	05 05 15.7	+1.3
YAK				eSS	SnSn	05 05 55.5	-4.8
YAK				e		05 11 12.5	
YAK				pmax	pmax		
	comp=Z,13nm,0.9s						
YAK				pmax	pmax		
	comp=N,3.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,4.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,43nm,2.3s						
YAK				pmax	pmax		
	comp=N,29nm,2.3s						
YAK				pmax	pmax		
	comp=E,35nm,2.5s						
YAK				smax	smax		
	comp=N,15nm,2.0s						
YAK				smax	smax		
	comp=E,12nm,1.6s						
ULN	Ulaanbaatar	26.88	306	⇑eP	P	05 00 24.1	+1.0
ULN				pmax	pmax		
	comp=Z,3.0nm,1.3s						
SONA1	Songino Array	27.30	306	eP	P	05 00 26.1	-0.8
SONA0	Songino Array	27.30	306	eP	P	05 00 26.2	-0.7
SONM	Songino Array	27.30	306	P	P	05 00 26.2	-0.7
	comp=Z,2.0nm,0.7s,baz=109,slow=8.6,SNR=12						
BOD	Bodaibo	27.68	330	eP	P	05 00 27.0	-3.0
BOD				pmax	pmax		
	comp=Z,6.0nm,1.4s						
SEY	Seymchan	27.95	12	P	P	05 00 32.9	+0.6
	comp=Z,2.2nm,0.6s,baz=196,slow=14,SNR=4.2						
SEY	Seymchan	27.95	12	⇑eP	P	05 00 34.7	+2.4
H11N2	WAKE ISLAND Hy	28.78	117	T	T	05 30 51.3	
	baz=313,slow=75,SNR=63						
H11N1	WAKE ISLAND Hy	28.79	117	T	T	05 30 51.6	
	baz=313,slow=75,SNR=55						
H11N3	WAKE ISLAND Hy	28.80	117	T	T	05 30 50.4	
	baz=313,slow=75,SNR=48						
LZH	Lanzhou	29.02	281	eP	P	05 00 44.7	+2.4
LZH				pP	pP	05 00 54.4	-0.4
LZH				sP	sP	05 01 01.7	+1.1
LZH				ePP	PnPn	05 01 37.8	+1.8
LZH				eS	S	05 05 30.4	0.0
LZH				sS	sS	05 05 50.6	-0.8
LZH				SS	SnSn	05 07 01.1	+4.2
LZH				pmax	pmax		
	comp=Z,29nm,1.2s						
LZH				pmax	pmax		
	comp=Z,130nm,4.9s						
LZH				LR	LR		
	comp=Z,250nm,13.0s						
LZH				LR	LR		
	comp=Z,250nm,13.2s						
LZH				LR	LR		
	comp=Z,280nm,14.0s						
H11S1	WAKE ISLAND Hy	29.44	119	T	T	05 31 39.3	
	baz=314,slow=76,SNR=9.0						
H11S3	WAKE ISLAND Hy	29.44	119	T	T	05 31 42.4	
	baz=314,slow=76,SNR=8.5						
H11S2	WAKE ISLAND Hy	29.45	119	T	T	05 31 40.8	
	baz=314,slow=76,SNR=2.9						
GYA	Guiyang	29.85	261	eP	P	05 00 51.8	+2.0
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
GTA	Gaotai	31.67	288	eP	P	05 01 07.9	+2.2
GTA				pP	pP	05 01 18.4	+0.2
GTA				sP	sP	05 01 22.7	-1.2
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KMI	Kunming	33.60	261	P	P	05 01 25.2	+2.3
KMI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
DGZ	Jazzator, Alta	39.94	307	eP	P	05 02 16.7	+0.3
DGZ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
WMQ	Urumqi	40.16	298	P	P	05 02 20.8	+2.6
WMQ				sP	sP	05 02 37.9	+1.2
WMQ				pmax	pmax		
	comp=Z,26nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,340nm,5.1s						
ZAA0	Zalesovo Array	41.64	313	eP	P	05 02 29.4	-0.7
	comp=Z,14nm,0.7s						
ZAA1	Zalesovo Array	41.64	313	eP	P	05 02 29.6	-0.4
ZAA1				ePcP	PcP	05 04 24.9	-1.3
ZALV	Zalesovo Beam	41.64	313	P	P	05 02 29.6	-0.4
	comp=Z,14nm,0.6s,baz=92,slow=6.2,SNR=43						
ZALV				PcP	PcP	05 04 24.9	-1.3
	comp=Z,2.0nm,0.6s,baz=94,slow=3.0,SNR=4.2						
ZALV	Zalesovo Beam	41.64	313	eP	P	05 02 29.2	-0.9
ZALV	Zalesovo Beam	41.64	313	eP	P	05 02 29.2	-0.9
NVS	Novosibirsk	42.60	314	⇓iP	P	05 02 37.4	-0.5
NVS				pmax	pmax		
	comp=Z,14nm,0.8s						
NVS				pmax	pmax		
	comp=N,4.0nm,0.8s						
NVS				pmax	pmax		
	comp=E,11nm,0.8s						
MK01	Makanchi Array	43.57	303	eP	P	05 02 45.0	-1.0
MK31	Makanchi Array	43.57	303	eP	P	05 02 45.5	-0.5
MK31	Makanchi Array	43.57	303	i P	P	05 02 44.6	-1.4
MK31				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MK32	Makanchi Array	43.57	303	eP	P	05 02 45.2	-0.7
MK32				ePP	PcP	05 04 32.1	-0.8
MKAR	Makanchi Array	43.57	303	P	P	05 02 45.2	-0.7
	comp=Z,3.5nm,0.6s,baz=88,slow=9.6,SNR=28						
MKAR				PcP	PcP	05 04 32.1	-0.8
	comp=Z,0.3nm,0.3s,baz=46,slow=4.2,SNR=2.8						
MKAR	Makanchi Array	43.57	303	eP	P	05 02 45.5	-0.5
	comp=Z,30nm,0.8s						
MKAR				ePP	PP	05 04 23.1	-4.7
MAKZ	Makanchi	43.78	303	eP	P	05 02 47.3	-0.3
	comp=Z,4.9nm,0.9s						
MAKZ	Makanchi	43.78	303	eP	P	05 02 47.3	-0.3
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KURK	Kurchatov	45.54	309	eP	P	05 03 00.5	-1.0
	comp=Z,18nm,0.8s						
KURK				ePcP	PcP	05 04 38.7	-0.8
KURK	Kurchatov	45.54	309	c iP	P	05 03 00.3	-1.2
KURK				pmax	pmax		
	comp=Z,28nm,1.3s						
KURBB	Kurchatov Arra	45.60	309	P	P	05 03 01.4	-0.7
	comp=Z,11nm,0.5s,baz=84,slow=8.4,SNR=116						
KURBB				PcP	PcP	05 04 38.7	-1.0
	comp=Z,0.3nm,0.3s,baz=90,slow=1.9,SNR=3.0						
PDGK	Podgornoye	46.12	298	P	P	05 03 04.3	-2.1
PDGK				pmax	pmax		
	comp=Z,8.0nm,0.6s						
GKN	Gorkha	46.98	276	eP	P	05 03 12.5	-0.9
	comp=Z,47nm,0.8s						
DANN	Dangsing	47.54	277	eP	P	05 03 17.5	-0.4
	comp=Z,76nm,0.7s						
TARG	Taragay, Kyrgy	47.71	297	eP	P	05 03 19.1	0.0
	comp=Z,8.2nm,0.8s						
KOLN	Koldanda	47.91	277	eP	P	05 03 19.6	-1.1
	comp=Z,13nm,0.8s						
PYUN	Piuthan	48.27	277	eP	P	05 03 22.6	-0.8
	comp=Z,93nm,1.1s						
KDAK	Kodiak Island	48.61	41	P	P	05 03 26.4	+1.1
	comp=Z,8.5nm,0.8s,baz=6.9,slow=0.2,SNR=4.6						
KDAK	Kodiak Island	48.61	41	eP	P	05 03 26.4	+1.1
	comp=Z,34nm,1.2s						
KDAK	Kodiak Island	48.61	41	i P	P	05 03 28.9	+3.6
CAST	Castle Rocks	48.68	34	eP	P	05 03 26.8	+0.9
	comp=Z,3.4nm,1.3s						
TKM2	Tokmak 2	48.99	299	P	P	05 03 28.3	-0.5
TKM2				pmax	pmax		
	comp=Z,6.0nm,0.6s						
COLD	Coldfoot	49.56	29	eP	P	05 03 33.3	+0.8
	comp=Z,2.1nm,0.7s						
KSH	Kashi	49.66	294	eP	P	05 03 36.7	+2.9
KSH				ePcP	PcP	05 04 55.4	+0.8
KSH				PP	PP	05 05 32.9	+4.5
KSH				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BVAR	Borovoye Array	50.29	313	P	P	05 03 37.9	-0.3
	comp=Z,1.4nm,0.4s,baz=89,slow=6.4,SNR=6.0						
BVAR				PcP	PcP	05 04 55.8	-0.6
	comp=Z,1.1nm,0.5s,baz=260,slow=41,SNR=2.3						
BRVK	Borovoye	50.34	313	eP	P	05 03 37.6	-1.0
	comp=Z,4.0nm,0.6s						
BRVK	Borovoye	50.34	313	deP	P	05 03 38.3	-0.3
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MDM	Murphy Dome	50.35	32	eP	P	05 03 40.0	+1.4
	comp=Z,6.1nm,0.7s						
WRH	Wood River Hil	50.43	32	eP	P	05 03 39.5	+0.4
	comp=Z,6.3nm,1.1s						
CCB	Clear Creek Bu	50.54	32	eP	P	05 03 41.0	+1.0
	comp=Z,4.8nm,1.5s						
ILAR	Eielson Array	50.93	32	P	P	05 03 43.1	+0.2
	comp=Z,3.1nm,0.6s,baz=271,slow=6.2,SNR=44						
ILB	Eielson Array	50.93	32	eP	P	05 03 43.2	+0.2
IL1	Eielson Array	50.93	32	eP	P	05 03 42.7	-0.2
SCM	Sheep Creek Mo	50.94	36	eP	P	05 03 43.5	+0.4
	comp=Z,14nm,1.0s						
SCM	Sheep Creek Mo	50.94	36	eP	P	05 03 43.5	+0.4
SCM				pmax	pmax		
	comp=Z,14nm,1.0s						
MNAS	Manas	51.30	299	P	P	05 03 45.9	-0.3
MNAS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SFK	Sufi-Kurgan	51.32	296	P	P	05 03 45.9	-0.6
SFK				pmax	pmax		
	comp=Z,4.0nm,0.5s						
KK31	Karatay Array	52.52	300	eP	P	05 03 54.9	-0.2
KK31	Karatay Array	52.52	300	eP	P	05 03 54.9	-0.2
KKAR	Karatay Array	52.52	300	eP	P	05 03 54.9	-0.2
KKAR	Karatay Array	52.52	300	eP	P	05 03 54.9	-0.2
FITZ	Fitzroy Crossi	55.57	196	P	P	05 04 17.4	0.0
	comp=Z,2.1nm,0.5s,baz=20,slow=8.3,SNR=12						
FITZ	Fitzroy Crossi	55.57	196	eP	P	05 04 17.6	+0.2
	comp=Z,1.8nm,0.6s						
INK	Inuvik	55.77	27	P	P	05 04 19.1	+0.8
	comp=Z,2.7nm,0.6s,baz=287,slow=8.5,SNR=7.6						
WRAB	Tennant Creek	55.98	186	⇑eP	P	05 04 21.5	+1.1
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.9s						
WR1	Warramunga Arr	55.99	186	eP	P	05 04 19.1	-1.3
	comp=Z,16nm,1.4s						
WRA	Warramunga Arr	55.99	186	P	P	05 04 19.2	-1.3
	comp=Z,1.8nm,0.4s,baz=1.2,slow=7.7,SNR=35						
AB31	Akbulak array	57.59	310	P	P	05 04 30.3	-1.3
AB31				pmax	pmax		
	comp=Z,3.0nm,0.5s						
ABKAR	Akbulak array	57.59	310	eP	P	05 04 30.9	-0.7
AKTO	Aktyubinsk	58.38	312	P	P	05 04 36.3	-0.7
	comp=Z,2.6nm,0.6s,baz=68,slow=11,SNR=9.6						
AS31	Alice Springs	59.72	186	eP	P	05 04 45.6	-1.0
	comp=Z,2.9nm,1.4s						
ASAR	Alice Springs	59.72	186	P	P	05 04 45.6	-1.0
	comp=Z,1.1nm,0.6s,baz=359,slow=5.5,SNR=6.7						
SPA0	Spitsbergen Ar	61.19	349	eP	P	05 04 55.9	0.0
SPITS	Spitsbergen Ar	61.19	349	P	P	05 04 55.9	0.0
	comp=Z,1.2nm,0.5s,baz=26,slow=5.9,SNR=6.9						
KLMR	Klimovskoe	63.88	328	eP	P	05 05 11.7	-2.4
KLMR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KLMR	Klimovskoe	63.88	328	eP	P	05 05 11.7	-2.4
KLMR				AMP		05 05 13.4	
	comp=Z,5.0nm,0.7s						
ARA0	ARCESS Array S	64.42	339	eP	P	05 05 17.0	-0.6
ARCES	ARCESS Array B	64.42	339	P	P	05 05 17.0	-0.6
	comp=Z,1.3nm,0.8s,baz=39,slow=7.0,SNR=7.7						
ARCES	ARCESS Array B	64.42	339	P	P	05 05 17.0	-0.6
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
YKA	Yellowknife Ar	65.22	30	P	P	05 05 23.2	+0.4
	comp=Z,1.0nm,0.6s,baz=305,slow=7.5,SNR=3.2						
OBN	Obninsk	68.09	323	⇑eP	P	05 05 40.4	-0.8
OBN				e		05 06 07.3	
OBN				eS	S	05 14 59.6	+22
OBN				pmax	pmax		
	comp=Z,9.0nm,0.4s						
OBN				MLR	MLR		
	comp=Z,39nm,15.0s						
FIA0	FINESS Array S	69.05	332	eP	P	05 05 46.2	-0.9
FIA0	FINESS Array S	69.05	332	eP	P	05 05 46.2	-0.9
FINES	FINESS Array B	69.05	332	P	P	05 05 46.2	-0.9
	comp=Z,4.0nm,0.8s,baz=60,slow=9.1,SNR=11						
KBZ	Khabaz	70.56	310	P	P	05 05 56.6	-0.1
	comp=Z,4.2nm,0.8s,baz=62,slow=3.6,SNR=8.7						
KIV	Kislovodsk	70.58	311	eP	P	05 05 57.1	+0.2
KIV				pmax	pmax		
	comp=Z,14nm,1.1s						
SUMG	Summit	71.60	359	eP	P	05 06 03.7	+0.7
	comp=Z,7.1nm,0.8s						
SUMG	Summit	71.60	359	eP	P	05 06 03.7	+0.7
SUMG				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BMO	Blue Mountains	73.46	46	eP	P	05 06 15.3	+1.1
	comp=Z,1.9nm,1.1s						
BMO	Blue Mountains	73.46	46	eP	P	05 06 15.3	+1.1
BMO				pmax	pmax		
	comp=Z,2.0nm,1.1s						
AKASG	Malin Array Be	74.27	322	P	P	05 06 17.4	-1.2
	comp=Z,1.1nm,0.3s,baz=48,slow=6.2,SNR=11						
AKBB	Malin Array Si	74.27	322	eP	P	05 06 17.5	-1.2
	comp=Z,5.4nm,0.8s						
AKBB	Malin Array Si	74.27	322	eP	P	05 06 17.5	-1.2
AKBB				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KIEV	Kiev	74.28	322	eP	P	05 06 17.5	-1.2
	comp=Z,4.9nm,0.8s						
KIEV	Kiev	74.28	322	ceP	P	05 06 17.5	-1.2
KIEV				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BEKR	Beckworth	74.40	52	eP	P	05 06 21.1	+1.2
	comp=Z,4.4nm,1.0s						
HFS	Hagfors	74.42	335	P	P	05 06 18.6	-0.7
	comp=Z,1.8nm,0.5s,baz=35,slow=5.3,SNR=8.9						
NB2	NORSAR Subarra	74.56	337	P	P	05 06 19.1	-1.1
	comp=Z,1.3nm,0.5s,baz=42,slow=5.9						
WENL	Wente Vineyard	74.74	55	eP	P	05 06 23.8	+2.2
YERR	Yerington	75.61	52	eP	P	05 06 28.5	+1.6
	comp=Z,3.4nm,0.9s						
LRM	Limekiln Ridge	75.67	43	eP	P	05 06 28.1	+1.0
DLMT	Dillon	75.86	44	eP	P	05 06 29.5	+1.3
	comp=Z,2.4nm,0.8s						
KONO	Kongsberg	76.14	336	ceP	P	05 06 32.6	+3.3
KONO				pmax	pmax		
	comp=Z,27nm,1.6s						

KVN	Kaiserville	76.30	52	eP	P	05 06 32.1	+1.3
	comp=Z,4.6nm,1.1s						
KVN	Kaiserville	76.30	52	eP	P	05 06 32.1	+1.3
KVN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
NV01	Mina Array Sit	76.53	52	eP	P	05 06 33.3	+1.1
NVAR	Mina Array Bea	76.53	52	P	P	05 06 33.2	+1.0
	comp=Z,1.6nm,0.7s,baz=288,slow=5.7,SNR=15						
KWP	Kalwaria Pacla	78.15	324	eP	P	05 06 40.2	-0.6
	comp=Z,63nm,0.7s						
KWP	Kalwaria Pacla	78.15	324	eP	P	05 06 40.2	-0.6
KWP				pmax	pmax		
	comp=Z,63nm,0.7s						
BUR08	Bucovina Ar. S	78.25	321	eP	P	05 06 41.0	-0.5
BUR04	Bucovina Ar. S	78.26	321	eP	P	05 06 40.8	-0.7
BR101	Keskin Array S	78.53	311	eP	P	05 06 42.8	-0.4
BRTR	Keskin Array B	78.53	311	P	P	05 06 42.8	-0.4
	comp=Z,0.7nm,0.5s,baz=157,slow=3.8,SNR=4.7						
DUG	Dugway, Tooele	78.89	48	eP	P	05 06 46.5	+1.3
DUG	Dugway, Tooele	78.89	48	eP	P	05 06 46.5	+1.3
PASC	Pasadena Art C	79.09	56	eP	P	05 06 46.4	+0.1
PD31	Pinedale Array	79.19	45	eP	P	05 06 47.2	+0.3
PDAR	Pinedale Array	79.19	45	P	P	05 06 47.2	+0.3
	comp=Z,0.5nm,0.7s,baz=278,slow=1.4,SNR=6.7						
LCMT	Little Creek M	80.59	51	eP	P	05 06 56.4	+1.9
	comp=Z,1.4nm,0.8s						
P17A	Butcher Ranch,	80.59	48	eP	P	05 06 53.8	-0.7
	comp=Z,3.4nm,0.7s						
MTPU	Mount Pierson	80.61	50	eP	P	05 06 56.9	+2.1
	comp=Z,1.9nm,0.9s						
BRG	Berggiesshubel	81.21	329	eP	P	05 07 03.8	+6.5
	comp=Z,34nm,2.3s						
BRG	Berggiesshubel	81.21	329	eP	P	05 07 03.8	+6.5
BRG				pmax	pmax		
	comp=Z,34nm,2.3s						
CLL	Collm	81.28	329	⇓iP	P	05 06 57.0	-0.6
CLL	Collm	81.28	329	⇓iP	P	05 06 57.0	-0.6
U15A	North Rim	81.55	51	eP	P	05 07 01.1	+1.3
	comp=Z,3.8nm,1.1s						
GEC2	GERESS Array S	82.84	327	eP	P	05 07 05.5	-0.6
	comp=Z,1.0nm,0.8s						
GEC2	GERESS Array S	82.84	327	eP	P	05 07 05.5	-0.6
GEC2				pmax	pmax		
	comp=Z,1.0nm,0.8s						
GERES	GERESS Array B	82.84	327	P	P	05 07 05.5	-0.6
	comp=Z,0.4nm,0.3s,baz=45,slow=7.7,SNR=4.5						
X16A	Lo Mia Camp, P	83.35	52	eP	P	05 07 10.9	+1.8
	comp=Z,3.3nm,1.0s						
EKA	Eskdalemuir Ar	83.58	340	P	P	05 07 09.3	-0.3
	comp=Z,0.4nm,0.4s,baz=34,slow=5.2,SNR=4.2						
TTG	Podgorica	84.89	320	eP	P	05 07 16.0	-0.5
	comp=Z,13nm,1.2s						
TTG	Podgorica	84.89	320	eP	P	05 07 16.0	-0.5
TTG				pmax	pmax		
	comp=Z,13nm,1.2s						
PPT	Papeete	85.34	116	LR	LR	05 36 13.1	
	comp=Z,29nm,21.1s,baz=302,slow=29						
PPT2	Papeete2	85.35	116	eLR	LR	05 07 29.2	
	comp=Z,230nm,24.5s						
LTX	Lajitas	91.66	51	eP	P	05 07 49.8	+0.6
LTX	Lajitas	91.66	51	eP	P	05 07 49.8	+0.6
TX31	Lajitas Ar. Si	91.66	51	eP	P	05 07 49.7	+0.4
TXAR	Lajitas Array	91.66	51	P	P	05 07 49.8	+0.5
	comp=Z,0.7nm,0.6s,baz=297,slow=2.9,SNR=11						
TKL	Tuckaleechee C	97.85	35	P	Pdif	05 08 17.3	0.0
	comp=Z,0.9nm,0.5s,baz=162,slow=5.7,SNR=3.7						
TKL	Tuckaleechee C	97.85	35	eP	Pdif	05 08 17.3	0.0
	comp=Z,12nm,1.5s						
TOA1	Torodi Ar. Sit	117.08	313	ePKPdf	PKPdf	05 13 25.6	-1.4
TORD	Torodi Ar. Bea	117.09	313	PKP	PKPdf	05 13 25.6	-1.4
	comp=Z,0.3nm,0.8s,baz=8.3,slow=1.8						
KOWA	Kowa	119.19	319	PKP	PKPdf	05 13 30.2	-0.9
	comp=Z,1.4nm,0.6s,baz=66,slow=3.8,SNR=5.0						
SNAA	Sanae	139.50	197	PKhKP	PKPpre	05 13 59.8	
	comp=Z,0.3nm,0.5s,baz=214,slow=6.3,SNR=7.5						
LPAZ	La Paz	148.22	59	PKPbc	PKPbc	05 14 28.8	+0.1
	comp=Z,1.0nm,0.5s,baz=227,slow=3.0,SNR=4.4						
LPAZ	La Paz	148.22	59	ePKPdf	PKPdf	05 14 24.4	-1.0
LPAZ				PKPbc	PKPbc	05 14 28.8	+0.1
LPAZ	La Paz	148.22	59	ePKIKP	PKPdf	05 14 24.4	-1.0
LPAZ						05 14 28.8	
SIV	San Ignacio	152.62	48	PKPbc	PKPbc	05 14 38.3	-0.3
	comp=Z,1.1nm,0.4s,baz=274,slow=2.7,SNR=6.3						

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*ISCJB **12** 04:55:32.2±1.2, 6.°6S±0.°2×155.°0E±0.°2, h35^{km}, mb3.9/9, Error ellipse: s-maj=41.3km s-min=16.3km az=39.8*

*IDC **12** 04:55:46.1±7.0, 6.°86S×155.°04E, h151^{km}±65^{km}, mb3.5/9, mb1 3.8/10, mb1mx3.4/55, mbtmp4.0/10, MS3.1/3, Ms1 3.1/3, ms1mx2.8/37, Error ellipse: s-maj=36.4km s-min=21.9km az=132.0*

ISC 12 04:55:34.0±1.1, **6.°6S**±0.°2×**155.°1E**±0.°2, **h35**^{km}**, n15, σ1.ˢ16**/13, **mb3.8**/9, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	5.59	121	LR	LR	04 58 52.7	
	comp=Z,231nm,18.2s,baz=306,slow=34						
PMG	Port Moresby	8.31	250	LR	LR	05 00 58.9	
	comp=Z,108nm,18.2s,baz=336,slow=38						
JAY	Jayapura	14.88	285	LR	LR	05 05 16.0	
	comp=Z,48nm,18.9s,baz=342,slow=38						
CTA	Charters Tower	15.90	212	P	P	04 59 20.3	+1.6
	0.2nm,0.3s,baz=25,slow=13,SNR=6.1						
WRA	Warramunga Arr	24.10	235	P	P	05 00 46.5	-0.1
	1.2nm,0.5s,baz=59,slow=9.6,SNR=24						
ASAR	Alice Springs	26.49	228	P	P	05 01 07.6	-0.7
	1.3nm,0.6s,baz=62,slow=8.8,SNR=14						
FITZ	Fitzroy Crossi	30.88	246	P	P	05 01 47.0	-0.4
	1.2nm,0.7s,baz=43,slow=8.7,SNR=6.3						
PETK	Petropavlovsk-	59.52	2	P	P	05 05 35.8	+2.2
	1.1nm,0.4s,baz=153,slow=7.3						
CMAR	Chiang Mai Arr	60.68	295	P	P	05 05 42.8	+0.5
	4.2nm,0.8s,baz=118,slow=5.0,SNR=18						
SONM	Songino Array	69.04	327	P	P	05 06 36.5	+0.1
	0.6nm,0.6s,baz=137,slow=5.0,SNR=4.6						
ILAR	Eielson Array	82.98	21	P	P	05 07 54.1	-1.1
	0.5nm,0.4s,baz=252,slow=5.4,SNR=10						
MKAR	Makanchi Array	83.16	319	P	P	05 07 55.5	-1.0
	0.4nm,0.6s,baz=100,slow=6.3,SNR=3.6						
NVAR	Mina Array Bea	91.42	52	P	P	05 08 37.0	-0.1
	0.3nm,0.7s,baz=240,slow=7.2,SNR=3.5						
TORD	Torodi Ar. Bea	152.99	286	PKPbc	PKPbc	05 15 27.3	-1.5
	baz=83,slow=1.9						
TORD				PKPab	sPKPdf	05 15 37.5	+0.6
	baz=97,slow=3.8						
KOWA	Kowa	158.01	293	PKPab	PKPab	05 16 01.0	-0.6
	1.3nm,0.5s,baz=65,slow=4.1,SNR=8.9						

CASC 12 04:57:39.1±1.3, **12.°83N**×**89.°06W, h28**^{km}±3^{km}**, MD3.9, ML3.7, 3D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UESV	Ojushtada	0.61	26	eP	Pn	04 57 54.9	+2.9
LFRS	El Faro	0.79	0	⇓eP	Pb	04 57 54.3	-0.1
LOMA	San Marcos	0.83	353	eP	Pn	04 57 54.7	-0.2
COLS	Colinas	0.86	345	eP	Pn	04 57 55.5	-0.1
COLS				eS	Sn	04 58 07.9	+0.6
SNET	Serv Nac Est T	0.87	349	eP	Pn	04 57 55.1	-0.5
SNET				eS	Sb	04 58 07.0	0.0
SNET				IAML		04 58 10.5	
	comp=Z,4µm,0.2s						
UESS	San Salvador	0.88	351	eS	Sn	04 58 08.3	+0.6
OPAM	San Salvador	0.90	351	eP	Pn	04 57 55.8	-0.2
OPAM				eS	Sn	04 58 08.2	+0.3
UDBS	Soyapango	0.90	354	eP	Pn	04 57 55.8	-0.2
UDBS				eS	Sb	04 58 07.7	-0.1
UDBS				IAML		04 58 09.0	
	comp=Z,3µm,0.2s						
LBRS	Las Brisas	0.91	1	eP	Pn	04 57 56.1	0.0
UEES	San Salvador	0.91	349	eP	Pn	04 57 55.9	-0.3
LFU	La Fuente	0.92	357	⇓eP	Pn	04 57 56.4	+0.1
LFU				eS	Sn	04 58 09.0	+0.5
BOQS	Boqueron	0.93	347	eP	Pn	04 57 56.5	0.0
BOQS				eS	Sn	04 58 09.4	+0.5
LCY	Lacayo	0.96	52	eP	Pn	04 57 56.8	0.0
LCY				eS	Sn	04 58 10.3	+0.7
PACA	Pacayal	0.96	48	eP	Pb	04 57 57.3	0.0
PACA				eS	Sb	04 58 11.0	+1.2
VSM	San Miguel	0.97	52	eP	Pn	04 57 57.2	+0.1
VSM				eP	Pb	04 57 57.3	-0.3
CEDA	San Andres	1.02	342	⇓eP	Pn	04 57 57.7	+0.1
CEDA				eS	Sb	04 58 11.3	0.0
CEDA				IAML		04 58 15.4	
	comp=Z,3µm,0.3s						
SBLS	San Blas	1.15	332	eP	Pn	04 57 59.5	0.0
SBLS				eS	Sb	04 58 15.3	+0.3
SNJE	San Jose	1.16	333	eP	Pn	04 57 59.6	-0.1
RTR	El Retiro	1.21	332	eP	Pn	04 58 00.6	+0.3
RTR				eS	Sb	04 58 17.8	+1.1
LCND	La Caˆ–ada	1.24	67	eP	Pn	04 58 00.4	-0.2
LCND				eS	Sn	04 58 16.0	-0.4
LCND				IAML		04 58 19.9	
	comp=Z,3µm,0.3s						
CNCH	Conchagua	1.28	69	eP	Pb	04 58 02.4	-0.3
CNCH				eS	Sb	04 58 19.1	+0.4
LLGN	La Laguna	1.34	5	eP	Pn	04 58 02.4	+0.4
LLGN				IAML		04 58 21.9	
	comp=Z,385nm,0.5s						
MTO3	Montecristo	1.59	350	eP	Pn	04 58 06.0	+0.4
IXG	Ixpaco	1.90	315	eP	Pn	04 58 09.7	-0.2
CNGN	Cerro Negro	2.33	98	eP	Pn	04 58 15.4	-0.3
CNGN				eS	Sn	04 58 44.5	+1.1
COPN	Copaltepe	2.50	105	eP	Pn	04 58 16.9	-1.0
MOMN	Momotombo	2.50	99	eP	Pn	04 58 17.1	-0.8
MOMN				eP	Pb	04 58 17.4	-5.9
ESTN	Estel	2.64	84	eP	Pn	04 58 19.7	-0.2
MATN	Matagalpa	3.06	88	eP	Pn	04 58 25.3	-0.4

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*ISCJB **12** 05:05:31.1±0.7, 14.°0S±0.°1×73.°02W±0.°08, h86^{km}, mb3.7/3, Error ellipse: s-maj=19.4km s-min=5.5km az=33.1*

*IDC **12** 05:05:32.1±1.4, 14.°05S×73.°01W, h72^{km}±14^{km}, mb3.5/3, mb1 4.0/9, mb1mx3.6/47, mbtmp4.1/9, MS2.8/1, Ms1 2.8/1, ms1mx2.4/26, Error ellipse: s-maj=28.4km s-min=9.4km az=32.0*

ISC 12 05:05:33.0±0.7, **14.°0S**±0.°1×**72.°98W**±0.°10, **h86**^{km}**, n14, σ1.ˢ08**/17, **mb3.6**/3, **Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	4.26	297	P	Pn	05 06 34.5	-1.1
	23nm,0.3s,baz=127,slow=9.7,SNR=41						
NNA				S	Sn	05 07 23.8	-0.3
	12nm,0.3s,baz=119,slow=8.6,SNR=3.7						
LPAZ	La Paz	5.21	117	P	Pn	05 06 47.9	-1.2
	6.8nm,0.3s,baz=293,slow=9.3,SNR=174						
LPAZ				S	Sn	05 07 49.3	+1.1
	baz=194,slow=23,SNR=1.9						
ATAH	Atahualpa	8.64	321	P	Pn	05 07 35.1	-0.6
	0.8nm,0.3s,baz=195,slow=4.1,SNR=5.7						
ATAH				S	Sn	05 09 10.8	-0.9
	0.4nm,0.3s,baz=263,slow=15,SNR=3.8						
SIV	San Ignacio	11.68	101	P	Pn	05 08 14.4	-2.3
	2.2nm,0.3s,baz=285,slow=13,SNR=48						
SIV				LR	LR	05 13 34.9	
	comp=Z,48nm,20.3s,baz=295,slow=41						
PTGA	Pitinga	18.42	45	P	Pn	05 09 43.6	+0.9
	1.2nm,0.3s,baz=226,slow=18,SNR=10						
CPUP	Villa Florida	19.12	132	P	P	05 09 49.2	0.0
	0.3nm,0.3s,baz=316,slow=9.4,SNR=9.6						
TXAR	Lajitas Array	52.27	326	P	P	05 14 37.6	+1.7
	0.4nm,0.8s,baz=141,slow=5.8,SNR=3.5						
SNAA	Sanae	70.60	162	P	P	05 16 38.9	+0.2
	1.4nm,0.7s,baz=270,slow=9.1,SNR=14						
TORD	Torodi Ar. Bea	78.72	73	P	P	05 17 26.3	-0.3
	0.9nm,1.0s,baz=257,slow=10						
ASAR	Alice Springs	134.27	215	PKP	PKPdf	05 24 42.0	+0.3
	0.2nm,0.3s,baz=315,slow=29,SNR=3.3						
ZALV	Zalesovo Beam	136.47	19	PKP	PKPdf	05 24 45.0	+0.2
	1.4nm,0.6s,baz=236,slow=1.6,SNR=3.7						
KURBB	Kurchatov Arra	136.77	26	PKP	PKPdf	05 24 46.8	+1.4
	0.2nm,0.3s,baz=329,slow=1.1,SNR=2.6						
WRA	Warramunga Arr	136.88	219	PKP	PKPdf	05 24 46.8	+0.2
	0.5nm,0.7s,baz=133,slow=1.7,SNR=4.0						
SONM	Songino Array	146.25	1	PKPbc	PKPab	05 25 05.0	+0.4
	0.6nm,0.6s,baz=329,slow=2.5,SNR=5.4						

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*IDC **12** 05:06:52.0±0.8, 33.°72S×179.°21W, h0^{km}, mb4.0/7, mb1 4.2/8, mb1mx3.9/48, mbtmp4.1/8, ML4.4/1, MS3.2/1, Ms1 3.2/1, ms1mx2.6/44, Error ellipse: s-maj=25.1km s-min=23.9km az=24.0*

*ISCJB **12** 05:06:56.1±0.7, 34.°06S±0.°05×179.°0W±0.°1, h50^{km}, mb4.0/8, MS3.2/1, Error ellipse: s-maj=14.6km s-min=5.0km az=19.9*

*WEL **12** 05:06:56.0±0.6, 34°S±5°×17°9W±1°1, h33^{km}, ML4.9/49*

*NEIC **12** 05:06:57.5±0.5, 33.°79S×179.°28W, h35^{km}, mb4.2/1, Error ellipse: s-maj=15.0km s-min=13.0km az=122.0*

ISC 12 05:06:58.1±0.7, **34.°06S**±0.°07×**178.°9W**±0.°1, **h50**^{km}**, n92, σ1.ˢ72**/101, **mb4.1**/8, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.17	212	P	Pn	05 07 58.6	-0.6
MXZ				S	Sn	05 08 47.0	+0.2
WMGZ	Waiomatatini S	4.34	210	P	Pn	05 08 01.8	+0.2
WMGZ				S	Sn	05 08 52.9	+1.9
PKGZ	Pakihiroa	4.55	212	P	Pn	05 08 03.9	-0.5
PKGZ				S	Sn	05 08 54.7	-1.3
HAZ	Te Kaha	4.58	215	P	Pn	05 08 04.7	-0.1
HAZ				S	Sn	05 08 58.4	+1.9
PUZ	Puketiti	4.62	209	P	Pn	05 08 04.6	-0.9
PUZ				S	Sn	05 08 58.9	+1.0
RUGZ	Raukumara Rang	4.79	215	P	Pn	05 08 06.8	-1.1
TWGZ	Tauwhareparae	4.83	211	P	Pn	05 08 07.3	-1.0
TWGZ				S	Sn	05 09 02.5	-0.4
GLKZ	Green Lake	4.85	10	P	Pn	05 08 07.7	-0.9
GLKZ				S	Sn	05 08 59.6	-3.8
WHRZ	Whale Island	5.06	220	P	Pn	05 08 12.9	+1.4
TKGZ	Te Karaka	5.11	210	P	Pn	05 08 12.7	+0.7
KUZ	Kuaotunu	5.16	237	P	Pn	05 08 12.5	-0.2
MWZ	Matawai	5.16	213	P	Pn	05 08 12.9	+0.1
MWZ				S	Sn	05 09 08.8	-2.3
OPRZ	Ohinepanea	5.29	223	P	Pn	05 08 15.1	+0.6
URZ	Urewera	5.30	217	Pn	Pn	05 08 14.1	-0.5
	13nm,0.3s,baz=287,slow=1.3,SNR=62						
URZ				Sn	Sn	05 09 10.7	-3.6
	5.9nm,0.3s,baz=270,slow=3.7,SNR=4.1						
URZ	Urewera	5.30	217	P	Pn	05 08 13.3	-1.4
URZ				S	Sn	05 09 11.5	-2.9
MARZ	Manawahe	5.32	221	P	Pn	05 08 14.1	-0.9
RAGZ	Rawiri	5.34	213	P	Pn	05 08 14.9	-0.4
RAGZ				S	Sn	05 09 14.2	-1.4
RIGZ	Rimuhau	5.37	209	P	Pn	05 08 15.0	-0.7
EDRZ	Edgecumbe	5.37	220	P	Pn	05 08 16.9	+1.2
PRGZ	Paritu Road	5.51	207	P	Pn	05 08 16.9	-0.7
MKRZ	Makatiti	5.54	221	P	Pn	05 08 20.8	+2.7
TARZ	Mount Tarawera	5.59	220	P	Pn	05 08 19.8	+1.0
SNGZ	Shannon Statio	5.61	212	P	Pn	05 08 20.0	+1.0
MUGZ	Murupara	5.63	217	P	Pn	05 08 17.0	-2.3
MUGZ				S	Sn	05 09 20.8	-1.9
RTZ	Ruatahuna	5.64	215	P	Pn	05 08 19.0	-0.5
KMRZ	Kaimai	5.65	227	P	Pn	05 08 21.6	+2.1
KNZ	Kokohu	5.67	208	P	Pn	05 08 19.3	-0.5
MHGZ	Mahia Peninsul	5.70	206	P	Pn	05 08 18.1	-2.1
MKAZ	Moumakai	5.72	236	P	Pn	05 08 22.1	+1.6
RAHZ	Arahi	5.83	213	P	Pn	05 08 22.6	+0.6
PRRZ	Plateau Road	5.85	219	P	Pn	05 08 24.0	+1.8
TOZ	Tahuroa Road	5.85	230	P	Pn	05 08 23.5	+1.3
WCZ	Waipu Caves	5.87	249	P	Pn	05 08 22.0	-0.5
MTHZ	Maungataniwha	5.89	215	P	Pn	05 08 22.3	-0.6
WHHZ	Waihua	5.90	211	P	Pn	05 08 24.0	+1.0
ALRZ	Allen Road	5.92	219	P	Pn	05 08 22.8	-0.4
AWAZ	Awhitu Peninsu	6.07	239	P	Pn	05 08 27.7	+2.5
MRHZ	Matea Rd	6.09	217	P	Pn	05 08 24.5	-1.1
NMHZ	Naumai	6.11	213	P	Pn	05 08 25.9	+0.1
ARHZ	Aropaoanui	6.16	211	P	Pn	05 08 26.2	-0.2
BKZ	Black Stump Fm	6.31	215	P	Pn	05 08 27.4	-1.2
MCHZ	McNeill Hill	6.44	212	P	Pn	05 08 29.4	-0.9
CKHZ	Cape Kidnapper	6.46	209	P	Pn	05 08 29.2	-1.4
KWHZ	Kaweka Forest	6.55	214	P	Pn	05 08 30.2	-1.7
KATZ	Kakaramea	6.57	220	P	Pn	05 08 33.8	+1.7
KAHZ	Kahuranaki	6.65	209	P	Pn	05 08 30.6	-2.7
KRVZ	Karewarewa	6.68	220	P	Pn	05 08 33.9	+0.1
WTVZ	West Tongariro	6.72	220	P	Pn	05 08 34.4	+0.1
HIZ	Hauiti	6.73	227	P	Pn	05 08 35.9	+1.6
KRHZ	Kereru	6.75	213	P	Pn	05 08 32.0	-2.6
NGZ	Ngauruhoe	6.76	219	P	Pn	05 08 34.9	0.0
BHHZ	Black Hill Sta	6.77	215	P	Pn	05 08 33.0	-1.8
TWVZ	Taurewa	6.77	221	P	Pn	05 08 35.5	+0.5
TUVZ	Tukino	6.80	219	P	Pn	05 08 35.9	+0.4
FWVZ	Far West T-bar	6.85	219	P	Pn	05 08 35.0	-1.1
WHVZ	Whangaehu Hut	6.85	219	P	Pn	05 08 34.8	-1.3
MOVZ	Moawhango	6.86	217	P	Pn	05 08 35.3	-0.8
PXZ	Pawanui	6.86	208	P	Pn	05 08 35.6	-0.5
TRVZ	Turoa	6.88	219	P	Pn	05 08 36.2	-0.4
PNHZ	Pukenui	7.04	213	P	Pn	05 08 36.2	-2.4
PRHZ	Porangahau	7.15	209	P	Pn	05 08 38.3	-1.8
ANWZ	Angora Road	7.38	209	P	Pn	05 08 42.2	-1.0
WAZ	Wanganui	7.51	219	P	Pn	05 08 43.7	-1.3
BFZ	Birch Farm	7.66	209	P	Pn	05 08 43.8	-3.3
MRZ	Mangatainoka R	7.93	212	P	Pn	05 08 47.1	-3.6
TMWZ	Te Maipa	8.16	209	P	Pn	05 08 50.2	-3.8
OGWZ	Otaki Gorge	8.24	213	P	Pn	05 08 51.4	-3.5
MTW	Mount Morrison	8.37	210	P	Pn	05 08 52.6	-4.1
CTA	Charters Tower	33.84	285	P	P	05 13 34.9	-0.9
	1.5nm,0.3s,baz=108,slow=10,SNR=4.5						
ASAR	Alice Springs	42.30	271	P	P	05 14 45.1	-2.0
	1.3nm,0.6s,baz=112,slow=7.4,SNR=15						
WRAB	Tennant Creek	43.62	276	eP	P	05 14 55.7	-2.1
	8.1nm,1.5s						
WRA	Warramunga Arr	43.62	276	P	P	05 14 55.6	-2.2
	1.7nm,0.5s,baz=117,slow=8.0,SNR=34						
WRA				PcP	PcP	05 16 43.2	-1.4
	0.3nm,0.5s,baz=114,slow=3.3,SNR=3.9						
FITZ	Fitzroy Crossi	51.71	273	P	P	05 15 58.6	-1.8
	0.7nm,0.2s,baz=131,slow=5.6,SNR=20						
RPN	Rapa Nui	59.25	104	LR	LR	05 37 30.6	
	comp=Z,20nm,21.4s,baz=50,slow=31						
MAW	Mawson	68.63	201	P	P	05 17 58.1	+2.6
	1.4nm,0.5s,baz=139,slow=10,SNR=3.6						
SNAA	Sanae	74.53	179	P	P	05 18 33.5	+2.4
SNAA	Sanae	74.53	179	S	SKSac	05 28 51.4	+17
SNAA	Sanae	74.53	179	P	P	05 18 34.0	+2.9
	1.2nm,0.8s,baz=187,slow=9.2,SNR=9.8						
VNA3	Neumayer Olymp	74.71	176	P	P	05 18 34.2	+2.1
VNA1	Neumayer--Stat	75.37	177	P	P	05 18 40.8	+5.0
NVAR	Mina Array Bea	91.42	43	P	P	05 20 00.4	+1.5
	0.1nm,0.5s,baz=192,slow=8.0,SNR=2.3						
KURK	Kurchatov	122.99	312	PKP	PKPdf	05 25 47.6	-0.7
KURBB	Kurchatov Arra	123.02	312	PKP	PKPdf	05 25 47.6	-0.7
	0.5nm,0.5s,baz=101,slow=1.9,SNR=4.7						
KBS	Kingsbay	134.80	357	ePKPdf	PKPdf	05 26 11.7	+1.6
SPITS	Spitsbergen Ar	135.29	356	PKP	PKPdf	05 26 13.6	+2.6
	1.9nm,0.6s,baz=20,slow=4.6,SNR=5.8						
ARCES	ARCESS Array B	141.98	346	PKhKP	PKPpre	05 26 22.4	
	3.2nm,1.1s,baz=62,slow=1.0,SNR=5.5						
FINES	FINESS Array B	148.27	337	PKPbc	PKPbc	05 26 37.6	-0.3
	2.4nm,0.5s,baz=53,slow=3.8,SNR=15						
NB2	NORSAR Subarra	152.22	349	PKP	PKPbc	05 26 47.6	+0.1
	comp=Z,1.7nm,0.7s,baz=18,slow=2.6						
HFS	Hagfors	152.64	346	PKPbc	PKPbc	05 26 49.0	+0.6
	comp=Z,2.8nm,0.7s,baz=48,slow=2.1,SNR=6.7						
BRTR	Keskin Array B	153.47	292	PKPbc	PKPbc	05 26 50.6	-0.4
	comp=Z,0.4nm,0.6s,baz=203,slow=35,SNR=3.0						
AKASG	Malin Array Be	153.62	318	PKPbc	PKPbc	05 26 50.5	-0.3
	comp=Z,0.2nm,0.3s,baz=57,slow=2.6,SNR=3.0						
TORD	Torodi Ar. Bea	159.18	182	PKPab	PKPab	05 27 31.1	+2.9
	baz=165,slow=4.2						

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*ISCJB **12** 05:10:20.5±0.6, 35.°70N±0.°04×139.°64E±0.°08, h99^{km}±5^{km}, mb3.5/4, Error ellipse: s-maj=11.1km s-min=5.5km az=159.6*

*JMA **12** 05:10:22.0±0.1, 35.°71N×139.°70E, h85^{km}±2^{km}, M3.4 Broadband fault plane solution: P waves.   NP1: ϕ_s227.00000°, δ70.00000°, λ-96.00000°.   NP2: ϕ_s64.00000°, δ20.00000°, λ-74.00000°.   Principal axes: T Plg25.0000°, Azm322.0000°; N Plg6.0000°, Azm229.0000°; P Plg64.0000°, Azm128.0000°;*

JMA   Felt I J1.

*IDC **12** 05:10:23.1±1.1, 35.°62N×139.°34E, h107^{km}±9^{km}, mb3.1/4, mb1 3.4/5, mb1mx3.0/66, mbtmp3.6/5 Error ellipse: s-maj=32.2km s-min=7.1km az=68.0*

ISC 12 05:10:21.5±0.9, **35.°70N**±0.°04×**139.°63E**±0.°07, **h92**^{km}±7^{km}**, n15, σ0.ˢ94**/26, **mb3.5**/4, **6D, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHU	Hanno	0.32	298	⇓P	Pn	05 10 35.7	+0.5
JHU				S	Sn	05 10 45.7	+0.3
JOD2	Odawara 2	0.62	225	⇓P	Pn	05 10 37.3	-0.1
JOD2				S	Sn	05 10 48.8	-0.5
JRY	Ryogami san	0.67	298	⇓P	Pn	05 10 38.6	+0.7
JRY				S	Sn	05 10 50.8	+0.7
JAG	Ashikaga	0.73	349	⇓P	Pn	05 10 38.6	+0.1
JAG				S	Sn	05 10 50.5	-0.7
JYN	Shimob	0.91	257	⇓P	Pn	05 10 40.8	+0.5
JYN				S	Sn	05 10 55.2	+0.8
JIM2	Oshima 3	1.00	189	P	Pn	05 10 41.0	-0.3
JIM2				S	Sn	05 10 55.1	-1.0
JKT	Katashina	1.10	344	⇓P	Pn	05 10 42.8	+0.2
JKT				S	Sn	05 10 58.3	-0.2
BSO3	Boso 3	1.15	141	P	Pn	05 10 42.9	+0.1
BSO3				eS	Sn	05 10 59.4	+0.5
MJAR	Matsushiro Arr	1.42	307	P	Pn	05 10 46.8	+0.5
	14nm,0.3s,baz=124,slow=12,SNR=52						
MJAR				S	Sn	05 11 05.2	+0.1
	13nm,0.3s,baz=161,slow=21,SNR=14						
MAT	Matsushiro	1.42	307	P	Pn	05 10 47.0	+0.7
MAT				S	Sn	05 11 06.3	+1.1
JHJ	Hachijo jima 2	2.58	177	P	Pn	05 11 02.6	+1.2
	120nm,0.3s,baz=327,slow=20,SNR=44						
JHJ				S	Sn	05 11 34.0	+1.9
	110nm,0.3s,baz=264,slow=22,SNR=11						
KURBB	Kurchatov Arra	45.70	309	P	P	05 18 31.5	-1.5
	0.2nm,0.3s,baz=89,slow=8.4,SNR=3.8						
ILAR	Eielson Array	51.39	32	P	P	05 19 18.1	+1.7
	0.2nm,0.5s,baz=275,slow=6.3,SNR=4.4						
FITZ	Fitzroy Crossi	55.12	196	P	P	05 19 42.5	-1.7
	0.5nm,0.8s,baz=353,slow=8.1,SNR=2.2						
WRA	Warramunga Arr	55.57	186	P	P	05 19 47.2	-0.2
	0.4nm,0.5s,baz=1.3,slow=7.6,SNR=11						

IDC 12 05:13:57.1±1.0, **39.°48S**×**78.°91E, h0**^{km}**, mb3.8**/8, **mb1 4.0**/8, **mb1mx3.7**/63, **mbtmp3.8**/8, **MS3.8**/16, **Ms1 3.8**/16, **ms1mx3.4**/57, **Error ellipse: s-maj=38.3km s-min=21.8km az=102.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	28.32	92	T	T	05 50 02.3	
	baz=250,slow=74,SNR=168						
H01W3	Cape Leeuwin H	28.33	92	T	T	05 50 01.8	
	baz=250,slow=74,SNR=140						
H01W1	Cape Leeuwin H	28.34	92	T	T	05 50 04.0	
	baz=250,slow=74,SNR=114						
MAW	Mawson	29.55	192	LR	LR	05 28 59.5	
	comp=Z,221nm,20.5s,baz=37,slow=30						
H08S2	Diego Garcia H	32.22	348	T	T	05 53 56.8	
	baz=166,slow=74,SNR=12						
H08S1	Diego Carcia H	32.22	348	T	T	05 53 55.8	
	baz=166						
H08S3	Diego Garcia H	32.23	348	T	T	05 53 57.0	
	baz=166,slow=74,SNR=23						
OPO	Ambohidratompo	34.41	298	LR	LR	05 31 16.1	
	comp=Z,80nm,21.1s,baz=162,slow=30						
LEM	Lembang	41.51	46	LR	LR	05 35 53.4	
	comp=Z,145nm,19.2s,baz=170,slow=32						
FITZ	Fitzroy Crossi	45.57	76	LR	LR	05 37 08.7	
	comp=Z,84nm,19.5s,baz=214,slow=30						
PSI	Prapat	45.93	28	LR	LR	05 38 30.7	
	comp=Z,161nm,18.9s,baz=258,slow=32						
PALK	Pallekele	46.55	2	LR	LR	05 37 47.8	
	comp=Z,128nm,20.0s,baz=93,slow=31						
ASAR	Alice Springs	48.72	88	P	P	05 22 43.2	-0.3
	0.5nm,0.8s,baz=238,slow=5.3,SNR=3.1						
VNDA	Vanda	50.30	164	P	P	05 22 53.7	-1.2
	0.8nm,0.8s,baz=266,slow=7.3,SNR=5.0						
SNAA	Sanae	50.51	204	P	P	05 22 57.1	+0.5
	1.1nm,1.0s,baz=92,slow=3.8,SNR=3.7						
SNAA				LR	LR	05 40 36.6	
	comp=Z,98nm,20.6s,baz=88,slow=32						
STKA	Stephens Creek	50.59	102	LR	LR	05 41 13.2	
	comp=Z,60nm,19.0s,baz=30,slow=32						
QSPA	South Pole Qui	50.68	180	P	P	05 22 57.8	-0.3
	4.4nm,1.0s,baz=290,slow=4.1,SNR=5.9						
WRA	Warramunga Arr	51.11	84	P	P	05 23 03.0	+1.2
	0.9nm,0.7s,baz=235,slow=7.5,SNR=6.8						
CMAR	Chiang Mai Arr	60.60	22	P	P	05 24 07.9	-1.7
	0.3nm,0.3s,baz=200,slow=7.7,SNR=3.2						
CMAR				LR	LR	05 45 46.7	
	comp=Z,78nm,21.9s,baz=208,slow=32						
BRDH	Bariadhala	62.97	13	LR	LR	05 49 16.7	
	comp=Z,137nm,18.9s,baz=174,slow=34						

DAV	**Davao City (W)**	63.28	54	LR	LR	05 49 00.4	
	comp=Z,42nm,22.0s,baz=46,slow=33						
PMSA	**Palmer Station**	72.09	196	LR	LR	05 55 37.8	
	comp=Z,93nm,18.7s,baz=158,slow=35						
GNI	**Garni**	85.17	334	LR	LR	06 02 59.2	
	comp=Z,34nm,18.7s,baz=178,slow=34						
MKAR	**Makanchi Array**	85.94	2	P	P	05 26 38.8	+0.2
	1.2nm,0.9s,baz=165,slow=6.0,SNR=3.7						
MKAR				LR	LR	06 04 29.3	
	comp=Z,26nm,18.0s,baz=185,slow=35						
KURBB	**Kurchatov Arra**	89.72	360	P	P	05 26 58.2	+1.6
	0.7nm,0.8s,baz=189,slow=4.9,SNR=4.3						
SONM	**Songino Array**	90.31	18	LR	LR	06 07 32.8	
	comp=Z,57nm,18.0s,baz=92,slow=36						
PLCA	**Paso Flores**	95.45	203	LR	LR	06 08 00.7	
	comp=Z,43nm,18.2s,baz=168,slow=34						

IDC 12 05:20:23.2±4.9**, 28°.27S**×**176°.54W, h0^{km}, mb3.7**/2**, mb1 3.9**/2**, mb1mx3.5**/46**, mbtmp3.7**/2**, Error ellipse: s-maj=118.8km s-min=35.8km az=126.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	1.56	231	Pn	Pn	05 20 52.0	-0.1
	54nm,0.3s,baz=78,slow=12,SNR=4.6						
RAO				Sn	Sg	05 21 13.9	+0.6
	362nm,0.3s,baz=88,slow=21,SNR=9.2						
ASAR	**Alice Springs**	44.55	264	P	P	05 28 36.5	-0.6
	0.6nm,0.9s,baz=108,slow=8.5,SNR=3.8						
WRA	**Warramunga Arr**	45.35	269	P	P	05 28 43.9	+0.4
	1.3nm,0.7s,baz=110,slow=7.8,SNR=13						
FINES	**FINESS Array B**	143.56	342	PKP	PKPdf	05 39 58.4	-0.9
	0.6nm,0.5s,baz=352,slow=2.8,SNR=4.5						

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*SOME **12** 05:35:42.8, 39°.08N×74°.22E, h10^{km}*
*ISCJB **12** 05:35:43.3±0.2, 38°.10N±0°.02×74°.85E±0°.05, h100^{km}, mb4.0/17, Error ellipse: s-maj=5.4km s-min=2.6km az=177.9*
*NEIC **12** 05:35:46.2±0.8, 38°.29N×74°.65E, h96^{km}±9^{km}, mb4.0/1, Error ellipse: s-maj=9.9km s-min=7.7km az=104.0*
*IDC **12** 05:35:46.2±2.6, 38°.21N×74°.69E, h99^{km}±22^{km}, mb3.8/17, mb1 3.8/22, mb1mx3.6/70, mbtmp4.1/22, MS2.7/2, Ms1 2.7/2, ms1mx2.3/68, Error ellipse: s-maj=18.8km s-min=14.0km az=149.0*
*NNC **12** 05:35:47.0±3.2, 38°.37N×74°.50E, h152^{km}±26^{km}, mb3.4, mpv4.4, Error ellipse: s-maj=29.0km s-min=20.4km az=157.0*
ISC 12 05:35:45.3±0.5**, 38°.13N**±0°.04×**74°.71E**±0°.05**, h100^{km}, n77,** σ**2^{s}.07**/90**, mb4.0**/18**, 7C-9D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	1.71	35	Pg	Pn	05 36 10.0	-4.2
KSH				Sg	Sn	05 36 25.7	-11
KSH				smax	smax		
	comp=N,10µm,0.4s						
KSH				smax	smax		
	comp=E,12µm,0.2s						
SFK	**Sufi-Kurgan**	2.10	334	⇑P	Pn	05 36 19.0	-0.4
	comp=E,177nm,0.4s						
SFK				⇓S	Sn	05 36 47.1	+1.6
	comp=E,530nm,0.4s						
KZA	**Kyzart**	3.97	6	P	Pn	05 36 44.7	+0.3
	SNR=191						
AML	**Almayashu**	4.08	349	P	Pn	05 36 45.4	-0.4
	SNR=77						
UCH	**Uchtor**	4.10	358	P	Pn	05 36 46.5	+0.3
	SNR=26						
ULHL	**Ulahol**	4.28	15	P	Pn	05 36 48.7	+0.3
	SNR=35						
AAK	**Ala-Archa**	4.51	358	P	Pn	05 36 51.5	+0.1
	comp=E,8.4nm,0.3s,baz=169,slow=9.2,SNR=38						
AAK				S	Sn	05 37 43.1	+0.2
	comp=E,6.5nm,0.3s,baz=15,slow=22,SNR=3.8						
AAK				LR	LR	05 38 52.5	
	comp=E,27nm,21.7s,baz=203,slow=42						
AAK	**Ala-Archa**	4.51	358	⇓P	Pn	05 36 51.7	+0.2
	comp=E,20nm,0.5s						
AAK				S	Sn	05 37 41.0	-1.8
	comp=E,18nm,0.6s						
AAK	**Ala-Archa**	4.51	358	P	Pn	05 36 52.1	+0.6
	SNR=27						
KBK	**Karagaybulak**	4.53	2	P	Pn	05 36 52.5	+0.8
	SNR=36						
EKS2	**Erkin-Say**	4.59	351	P	Pn	05 36 52.6	+0.1
	SNR=83						
CHCP	**Chirah Chowk**	4.61	195	P	Pn	05 36 56.2	+3.5
NIL	**Nilore**	4.62	195	*e*Pn	Pn	05 36 56.0	+3.2
NIL				*e*Sn	Sn	05 37 43.3	-2.0
MNAS	**Manas**	4.67	340	⇓P	Pn	05 36 53.0	-0.7
	comp=E,43nm,0.2s						
MNAS				⇑S	Sn	05 37 43.5	-3.3
	comp=E,39nm,0.4s						
MRKS	**Merke**	4.75	347	⇓*i*P	Pn	05 36 54.4	-0.2
	comp=E,239nm,0.2s						
MRKS				*e*S	Sn	05 37 45.3	-3.3
	comp=E,133nm,0.3s						
TKM2	**Tokmak 2**	4.84	8	⇑P	Pn	05 36 56.5	+0.6
	comp=E,31nm,0.3s						
TKM2				⇓S	Sn	05 37 48.7	-2.2
	comp=E,86nm,0.7s						
TKM2	**Tokmak 2**	4.84	8	P	Pn	05 36 56.5	+0.6
	SNR=123						
CEP	**Cherat**	4.85	209	P	Pn	05 36 58.4	+2.2
CEP				S	Sn	05 37 51.0	-0.2
CEP	**Cherat**	4.85	209	P	Sn	05 37 50.6	-0.7
CHMS	**Chumysh**	4.87	0	P	Pn	05 36 56.8	+0.6
	SNR=46						
KST	**Kastek**	5.00	11	⇓*i*P	Pn	05 36 59.0	+0.9
	comp=E,75nm,0.5s						
KST				⇓*i*S	Sn	05 37 54.2	-0.6
	comp=E,90nm,1.3s						
USP	**Ospenovka**	5.14	358	P	Pn	05 36 59.7	-0.1
	SNR=10						
TNSS	**Tian-Shan**	5.20	18	*e*P	Pn	05 37 01.4	+0.4
	comp=E,16nm,0.3s						
TNSS				*e*S	Sn	05 37 57.8	-2.0
IUG	**Iuzhnay**	5.38	320	*e*P	Pn	05 37 01.9	-1.4
	comp=E,102nm,0.2s						
IUG				*e*S	Sn	05 37 58.8	-5.1
	comp=E,176nm,0.2s						
KUU	**Kurty**	5.89	12	*e*P	Pn	05 37 10.5	+0.4
	comp=E,8.6nm,0.5s						
KUU				*e*S	Sn	05 38 14.5	-1.7
	comp=E,10nm,0.7s						
KK31	**Karatay Array**	5.91	329	⇓P	Pn	05 37 08.8	-1.5
	comp=E,8.8nm,0.2s,baz=142,slow=13						
KK31				⇑S	Sn	05 38 11.3	-5.3
	comp=E,10nm,0.3s,baz=154,slow=24,SNR=8.3						
KURS	**Kuram**	5.97	25	*e*P	Pn	05 37 12.4	+1.3
CHKK	**Chushkaly**	5.98	16	*e*P	Pn	05 37 11.6	+0.3
	comp=E,5.2nm,0.3s						
CHKK				*e*S	Sn	05 38 16.3	-2.0
	comp=E,10.0nm,0.2s						
DHRM	**DHARAMSHALA**	6.00	167	*e*P	Pn	05 37 12.5	+0.6
DHRM				*e*S	Sn	05 38 15.9	-3.4
DHRM				IAML		05 38 23.0	
	comp=Z,116nm,0.1s						
DHRM				IAML		05 38 23.2	
	comp=E,391nm,0.1s						
BRLS	**Borolday**	6.14	324	*e*P	Pn	05 37 09.5	-4.0
BRLS				*e*S	Sn	05 38 12.4	-10
PDGK	**Podgornoye**	6.34	33	⇑P	Pn	05 37 16.7	+0.5
	comp=E,6.8nm,0.7s						
PDGK				⇑S	Sn	05 38 26.1	-1.2
	comp=E,30nm,0.8s						
SARP	**Sargodha**	6.41	196	P	Pn	05 37 18.1	+1.0
SMLA	**Simla**	7.27	163	*e*P	Pn	05 37 30.3	+1.5
SMLA				*e*S	Sn	05 38 45.2	-4.5
SMLA				IAML		05 38 50.8	
	comp=E,184nm,0.3s						
DDI	**Dehra Dun**	8.26	159	*e*P	Pn	05 37 43.1	+0.7
BHGR	**Bahadurgarh**	9.60	168	*e*S	Sn	05 39 40.2	-6.2
NDI	**New Delhi**	9.65	167	*e*P	Pn	05 37 59.0	-2.2
NDI				*e*P		05 38 00.0	
NDI				*e*S	Sn	05 39 42.0	-5.7
KHET	**Khetri**	10.07	174	*e*P	Pn	05 38 04.6	-2.3
KHET				*e*S	Sn	05 39 47.6	-10
MKAR	**Makanchi Array**	10.31	30	P	Pn	05 38 09.9	-0.2
	comp=E,0.2nm,0.3s,baz=208,slow=15,SNR=6.7						
WMQ	**Urumqi**	11.35	56	P	Pn	05 38 26.7	+2.5
WMQ				smax	smax		
	comp=N,260nm,0.7s						
WMQ				smax	smax		
	comp=E,170nm,0.7s						
PYUN	**Piuthan**	12.17	143	*e*P	Pn	05 38 31.5	-3.9
	comp=E,82nm,0.4s						
DANN	**Dangsing**	12.34	140	*e*P	Pn	05 38 33.8	-3.9
	comp=E,29nm,0.2s						
KOLN	**Koldanda**	12.74	142	*e*P	Pn	05 38 39.8	-3.1
	comp=E,47nm,0.4s						
KURBB	**Kurchatov Arra**	12.79	11	P	Pn	05 38 41.3	-1.9
	comp=E,0.1nm,0.3s,baz=199,slow=12,SNR=6.4						
KURK	**Kurchatov**	12.89	11	P	Pn	05 38 41.3	-3.3
GKN	**Gorkha**	13.08	138	*e*P	Pn	05 38 44.2	-3.1
	comp=E,25nm,0.3s						
KKN	**Kakani**	13.59	136	*e*P	Pn	05 38 50.7	-3.4
	comp=E,42nm,0.4s						
DMN	**Daman**	13.64	137	*e*P	Pn	05 38 51.9	-2.9
	comp=E,19nm,0.3s						
PKIN	**Phulchoki**	13.82	136	*e*P	Pn	05 38 54.7	-2.5
	comp=E,27nm,0.5s						
JIRN	**Jiri**	14.20	134	*e*P	Pn	05 38 59.9	-2.2
	comp=E,66nm,0.3s						
RAMN	**Ramite**	14.98	135	*e*P	Pn	05 39 09.2	-2.8
	comp=E,22nm,0.4s						
BVAR	**Borovoye Array**	15.20	350	P	Pn	05 39 12.2	-2.1
	comp=E,1.1nm,0.3s,baz=159,slow=16,SNR=8.2						
AB31	**Akbulak array**	15.39	321	⇓P	Pn	05 39 13.2	-3.6
	comp=E,3.4nm,0.7s,baz=130,slow=13,SNR=20						
ODAN	**Odare**	15.50	133	*e*P	Pn	05 39 16.7	-1.8
	comp=E,32nm,0.6s						
LSA	**Lhasa**	16.01	117	*e*Pn	P	05 39 27.6	+0.8
	comp=E,3.4nm,0.3s						
AKTO	**Aktyubinsk**	17.10	321	P	Pn	05 39 35.9	-2.1
	comp=E,0.4nm,0.3s,baz=122,slow=11,SNR=7.3						
AKTO	**Aktyubinsk**	17.10	321	⇑P	Pn	05 39 35.0	-3.0
	comp=E,1.6nm,0.5s						
ZALV	**Zalesovo Beam**	17.28	20	P	Pn	05 39 39.4	-0.6
	comp=E,0.5nm,0.3s,baz=206,slow=11,SNR=4.8						
WSAR	**Wadi Sarin**	20.23	227	P	P	05 40 14.1	+1.6
	comp=E,9.1nm,0.5s,baz=72,slow=8.0,SNR=13						
SONM	**Songino Array**	24.98	57	P	P	05 41 01.5	+1.9
	comp=E,1.2nm,0.7s,baz=259,slow=11,SNR=8.0						
SONM				PP	PnPn	05 41 41.4	+2.6
	comp=E,0.3nm,0.4s,baz=255,slow=9.4,SNR=3.3						
BRTR	**Keskin Array B**	31.79	286	P	P	05 42 01.0	+0.6
	comp=E,0.6nm,0.3s,baz=93,slow=7.4,SNR=6.4						
MMAI	**Mount Meron Ar**	32.20	273	LR	LR	05 58 36.1	
	comp=E,42nm,19.2s,baz=310,slow=43						
AKASG	**Malin Array Be**	34.30	306	P	P	05 42 21.4	-0.3
	comp=E,0.5nm,0.4s,baz=83,slow=7.4,SNR=3.4						
MLR	**Muntele Rosu**	36.61	298	P	P	05 42 43.5	+1.6
	comp=E,0.5nm,0.7s,baz=72,slow=3.2,SNR=3.5						
FINES	**FINESS Array B**	37.85	324	P	P	05 42 52.1	+0.3
	comp=E,2.0nm,0.4s,baz=112,slow=9.8,SNR=20						
ATD	**Arta Tunnel**	38.87	236	P	P	05 43 03.6	+2.6
	comp=E,7.6nm,0.8s,baz=338,slow=12,SNR=2.0						
IDI	**Anoyia**	39.66	282	P	P	05 43 09.4	+1.9
	comp=E,4.4nm,0.7s,baz=12,slow=5.4,SNR=2.6						
ARCES	**ARCESS Array B**	40.82	336	P	P	05 43 17.1	+0.6
	comp=E,3.2nm,0.3s,baz=111,slow=9.0,SNR=73						
HFS	**Hagfors**	43.65	321	P	P	05 43 39.8	+0.3
	comp=E,4.1nm,0.5s,baz=104,slow=9.1,SNR=21						
NB2	**NORSAR Subarra**	44.89	322	P	P	05 43 48.9	-0.6
	comp=Z,1.3nm,0.5s,baz=91,slow=7.9						
SPITS	**Spitsbergen Ar**	46.61	346	P	P	05 44 03.9	+1.1
	comp=Z,0.6nm,0.3s,baz=125,slow=7.6,SNR=7.6						
EKA	**Eskdalemuir Ar**	53.18	316	P	P	05 44 52.7	0.0
	comp=Z,0.8nm,0.5s,baz=79,slow=7.5,SNR=5.1						
TORD	**Torodi Ar. Bea**	68.69	270	P	P	05 46 37.7	-0.6
	comp=Z,1.8nm,0.5s,baz=46,slow=5.4						
TORD				pP	PcP	05 47 03.4	+0.9
	baz=47,slow=5.5						
INK	**Inuvik**	71.80	11	P	P	05 46 57.4	+1.1
	comp=Z,2.4nm,0.5s,baz=339,slow=2.9,SNR=7.2						
ILAR	**Eielson Array**	72.38	17	P	P	05 47 00.2	+0.2
	comp=Z,0.9nm,0.8s,baz=316,slow=5.5,SNR=9.7						
YKA	**Yellowknife Ar**	79.45	4	P	P	05 47 40.5	+0.4
	comp=Z,2.0nm,0.4s,baz=347,slow=5.7,SNR=14						
WRA	**Warramunga Arr**	80.41	125	P	P	05 47 46.8	+0.8
	comp=Z,0.3nm,0.4s,baz=314,slow=4.1,SNR=6.8						
WRA				pP	pP	05 48 14.0	+2.2
	comp=Z,0.4nm,0.6s,baz=325,slow=5.2,SNR=4.4						
ASAR	**Alice Springs**	82.83	127	pP	pP	05 48 26.7	+2.1
	comp=Z,0.5nm,0.6s,baz=313,slow=5.2,SNR=3.6						

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*ISCJB **12** 05:53:08.8±1.0, 35°.31N±0°.05×141°.4E±0°.1, h10^{km}, mb3.5/6, Error ellipse: s-maj=12.9km s-min=5.6km az=156.7*
*JMA **12** 05:53:10.7±0.1, 35°.30N×141°.28E, h19^{km}±2^{km}, M3.3*
*IDC **12** 05:53:17.8±1.1, 34°.15N×138°.56E, h0^{km}, mb3.5/6, mb1 3.7/7, mb1mx3.4/66, mbtmp3.4/7, ML2.8/1, Error ellipse: s-maj=44.1km s-min=19.3km az=75.0*
ISC 12 05:53:11.0±1.0**, 35°.29N**±0°.04×**141°.18E**±0°.08**, h10^{km}, n15,** σ**1^{s}.10**/19**, mb3.6**/6**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOJ	**Chosi**	0.49	327	P	Pg	05 53 21.0	+0.5
CHOJ				*e*S	Sg	05 53 28.8	+1.8
BSO1	**Boso 1**	0.66	195	P	Pg	05 53 23.8	+0.2
BSO3	**Boso 3**	0.74	229	P	Pg	05 53 25.8	+0.6
BSO4	**Boso 4**	0.75	247	P	Pg	05 53 26.6	+1.1
JIHU	**Itakohorinouch**	0.86	322	P	Pg	05 53 28.1	+0.5
JYT	**Yasato**	1.23	320	P	Pn	05 53 34.0	-0.3
JYT				S	Sb	05 53 50.1	-0.2
JHO	**Hitachi**	1.41	339	P	Pn	05 53 36.5	-0.2
JHO				S	Sn	05 53 55.0	-0.3
MJAR	**Matsushiro Arr**	2.72	298	Pn	Pb	05 54 00.3	+0.6
	2.2nm,0.3s,baz=138,slow=13,SNR=13						
MJAR				Sn	Sg	05 54 37.4	-0.8
	1.0nm,0.3s,baz=168,slow=17,SNR=4.6						
MAT	**Matsushiro**	2.72	298	P	Pb	05 53 58.7	-1.0
MAT				*e*S	Sb	05 54 32.9	-0.2
MKAR	**Makanchi Array**	44.90	304	P	P	06 01 24.9	-0.9
	0.2nm,0.5s,baz=82,slow=9.5,SNR=3.3						
KURBB	**Kurchatov Arra**	46.94	309	P	P	06 01 41.2	-0.5
	0.1nm,0.3s,baz=86,slow=8.0,SNR=4.2						
CTA	**Charters Tower**	55.28	174	P	P	06 02 46.9	+2.3
	0.8nm,0.4s,baz=232,slow=6.2,SNR=1.5						
WRA	**Warramunga Arr**	55.31	188	P	P	06 02 42.6	-2.3
	0.5nm,0.7s,baz=4.4,slow=7.6,SNR=8.0						
ASAR	**Alice Springs**	59.04	188	P	P	06 03 11.0	-0.2
	0.3nm,0.5s,baz=18,slow=12,SNR=2.8						
TXAR	**Lajitas Array**	91.33	52	P	P	06 06 36.0	+19
	0.2nm,0.9s,baz=316,slow=2.5,SNR=3.5						

MEX 12 06:00:16.1±0.4**, 16°.51N**×**98°.43W, h26^{km}**±24^{km}**, MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	0.31	112	*e*P	Pb	06 00 21.9	-1.4
PNIG				*e*S	Sb	06 00 26.8	-1.4
TLIG	**Tlapa**	1.06	353	*e*P	Pn	06 00 32.8	-2.6
TLIG				*e*S	Sb	06 00 45.4	-4.0

IDC 12 06:15:20.1±2.8**, 30°.33S**×**138°.29E, h0^{km}, mb1 3.5**/4**, mb1mx3.3**/44**, mbtmp3.3**/4**, ML3.2**/4**, Error ellipse: s-maj=67.9km s-min=14.9km az=42.0, South Australia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	3.22	119	Pn	Pn	06 16 11.9	-0.1
	0.8nm,0.3s,baz=295,slow=11,SNR=7.8						
STKA				Pg	Pb	06 16 19.1	+0.9
	3.6nm,0.3s,baz=295,slow=12,SNR=19						
STKA				Sn	Sn	06 16 49.5	-1.7
	4.5nm,0.3s,baz=96,slow=19,SNR=6.2						
STKA				Lg	Lg	06 17 02.2	
	8.9nm,0.3s,baz=237,slow=22,SNR=7.5						
ASAR	**Alice Springs**	7.71	328	Pn	Pn	06 17 15.4	+1.7
	0.3nm,0.3s,baz=150,slow=12,SNR=12						
ASAR				Sn	Sn	06 18 41.6	-0.2
	0.3nm,0.3s,baz=150,slow=22,SNR=5.4						
WRA	**Warramunga Arr**	10.95	340	Pn	Pn	06 17 59.0	+0.9
	0.2nm,0.3s,baz=153,slow=11,SNR=17						
WRA				Sn	Sn	06 19 59.9	-1.5
	0.2nm,0.3s,baz=161,slow=24,SNR=5.2						
FITZ	**Fitzroy Crossi**	16.76	314	Pn	Pn	06 19 14.6	-1.8
	0.2nm,0.3s,baz=114,slow=11,SNR=6.3						

JMA 12 06:55:03.9, 37°.04N×**140°.65E, h7^{km}**±1^{km}**, M2.6, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFFD	**Fukushimafurud**	0.09	306	P	Pg	06 55 06.0	0.0
JFFD				S	Sg	06 55 07.2	-0.3
ONAJ	**Iwakimizuishiy**	0.13	63	P	Pg	06 55 07.0	+0.2
ONAJ				S	Sg	06 55 09.3	+0.6
JFK	**Kawauchi**	0.37	29	P	Pg	06 55 11.3	+0.1
JFK				S	Sg	06 55 16.4	+0.3
JHO	**Hitachi**	0.43	189	P	Pg	06 55 12.3	0.0
JFT	**Otama**	0.54	332	P	Pg	06 55 14.5	+0.2
JFT				S	Sg	06 55 21.7	+0.3
JMM	**Marumori**	0.83	8	P	Pg	06 55 19.5	-0.4
JMM				S	Sg	06 55 30.4	-0.3
JFY	**Yanaizu**	0.84	296	P	Pg	06 55 20.0	0.0
JFY				S	Sg	06 55 30.6	-0.3
MAT	**Matsushiro**	2.02	257	P	Pb	06 55 41.4	+0.4
MAT				S	Sb	06 56 06.3	-0.1

GUC 12 06:58:23.8±0.7**, 23°.04S**×**68°.70W, h119^{km}**±9^{km}**, ML3.5, 5C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB06	**IPOC Station P**	0.87	292	⇑*e*P	Pn	06 58 45.3	+0.6
PB06				*i* S	Sn	06 59 01.3	+0.8
PB06				IAML		06 59 03.6	
	comp=N,2µm,0.1s						
PB03	**IPOC Station P**	1.39	315	⇑*e*P	Pn	06 58 50.8	+0.8
PB03				*i* S	Sn	06 59 11.0	+1.1
PB05	**IPOC Station P**	1.40	277	⇑*e*P	Pn	06 58 50.5	+0.4
PB05				*i* S	Sn	06 59 10.9	+0.8
PB05				IAML		06 59 20.8	
	comp=N,439nm,0.5s						
PB04	**IPOC Station P**	1.51	297	⇑*e*P	Pn	06 58 52.2	+0.7
PB04				*i* S	Sn	06 59 14.3	+1.8
PB04				IAML		06 59 19.0	
	comp=N,701nm,0.3s						
PB07	**IPOC Station P**	1.71	320	*e*P	Pn	06 58 54.9	+1.1
PB07				*i* S	Sn	06 59 17.9	+1.3
PB07				IAML		06 59 22.8	
	comp=E,412nm,0.3s						
PB02	**IPOC Station P**	2.04	327	*e*P	Pn	06 58 58.3	+0.5
PB02				*i* S	Sn	06 59 24.9	+1.2
PB02				IAML		06 59 35.0	
	comp=N,491nm,0.2s						
PB01	**IPOC Station P**	2.12	340	⇑*e*P	Pn	06 58 59.6	+0.8
PB01				⇓*i*S	Sn	06 59 26.0	+0.5
PB01				IAML		06 59 30.6	
	comp=E,340nm,0.2s						
PB08	**IPOC Station P**	2.91	352	*e*P	Pn	06 59 10.1	+0.8
PB08				*i* S	Sn	06 59 42.6	-1.7

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*IDC **12** 07:05:28.7±0.6, 36°.05S×179°.57W, h0^{km}, mb4.5/13, mb1 4.6/16, mb1mx4.4/46, mbtmp4.5/16, ML4.1/3, MS3.4/15, Ms1 3.4/15, ms1mx3.2/48, Error ellipse: s-maj=20.1km s-min=16.8km az=80.0*
*WEL **12** 07:05:31.2±0.9, 36°S±7°×17°9W±1°0, h33^{km}, ML5.0/38*
*NEIC **12** 07:05:34.2±1.8, 36°.12S×179°.60W, h37^{km}±14^{km}, mb4.7/13, Error ellipse: s-maj=15.3km s-min=10.0km az=57.0*
*BJI **12** 07:05:35.4, 36°.49S×178°.98W, h69^{km}, mb5.2/7, mB5.5/2, Ms5.0/2, Ms7 4.8/2*
*ISCJB **12** 07:05:36.6±0.9, 36°.54S±0°.05×179°.70W±0°.08, h73^{km}±6^{km}, mb4.6/23, Error ellipse: s-maj=11.4km s-min=7.6km az=176.3*
ISC 12 07:05:37.4±1.5**, 36°.46S**±0°.07×**179°.58W**±0°.08**, h62^{km}**±11^{km}**, n185,** σ**2^{s}.23**/205**, mb4.8**/23**, 2C, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MXZ	**Matakaoa Point**	2.02	236	*e*Pn	Pn	07 06 07.9	-1.2
MXZ				*e*Sn	Sn	07 06 32.5	-0.7
PKGZ	**Pakihiroa**	2.35	232	P	Pn	07 06 13.5	-0.2
PKGZ				S	Sn	07 06 45.6	+4.1
PUZ	**Puketiti**	2.36	226	P	Pn	07 06 13.3	-0.5
PUZ				S	Sn	07 06 45.4	+3.8
HAZ	**Te Kaha**	2.47	238	P	Pn	07 06 14.7	-0.6
TWGZ	**Tauwhareparae**	2.59	228	P	Pn	07 06 16.7	-0.3
TWGZ				S	Sn	07 06 52.3	+5.0
RUGZ	**Raukumara Rang**	2.66	235	P	Pn	07 06 17.8	-0.1
CNGZ	**Carnagh Statio**	2.68	220	P	Pn	07 06 18.0	-0.1
TKGZ	**Te Karaka**	2.84	225	P	Pn	07 06 19.8	-0.6
TKGZ				S	Sn	07 06 57.4	+4.0
MWZ	**Matawai**	2.97	230	P	Pn	07 06 21.2	-0.8
MWZ				S	Sn	07 06 59.9	+3.4
RIGZ	**Rimuhau**	3.08	223	P	Pn	07 06 22.7	-0.9
RIGZ				S	Sn	07 07 03.7	+4.4
WHRZ	**Whale Island**	3.08	242	P	Pn	07 06 23.3	-0.4
RAGZ	**Rawiri**	3.14	229	P	Pn	07 06 23.6	-0.8
PRGZ	**Paritu Road**	3.18	219	P	Pn	07 06 23.9	-1.0
PRGZ				S	Sn	07 07 06.0	+4.4
URZ	**Urewera**	3.19	235	Pn	Pn	07 06 24.4	-0.7
	22nm,0.3s,baz=34,slow=11,SNR=157						
URZ				Sn	Sn	07 07 05.2	+3.3
	78nm,0.3s,baz=180,slow=21,SNR=15						
URZ	**Urewera**	3.19	235	*e*Pn	Pn	07 06 24.1	-0.9
URZ				*e*Sn	Sn	07 07 05.2	+3.3
URZ	**Urewera**	3.19	235	P	Pn	07 06 24.4	-0.7
URZ				S	Sn	07 07 05.7	+3.8
MHGZ	**Mahia Peninsul**	3.34	216	P	Pn	07 06 26.1	-1.1
MARZ	**Manawahe**	3.35	242	P	Pn	07 06 26.6	-0.7
KNZ	**Kokohu**	3.36	220	P	Pn	07 06 26.0	-1.3
EDRZ	**Edgecumbe**	3.36	240	P	Pn	07 06 26.8	-0.7
SNGZ	**Shannon Statio**	3.37	226	P	Pn	07 06 26.6	-1.0
SNGZ				S	Sn	07 07 09.7	+3.3
OPRZ	**Ohinepanea**	3.38	245	P	Pn	07 06 26.5	-1.2
RTZ	**Ruatahuna**	3.48	231	P	Pn	07 06 28.6	-0.6
MUGZ	**Murupara**	3.53	234	P	Pn	07 06 28.7	-1.1
TGRZ	**Tauranga**	3.56	248	P	Pn	07 06 29.0	-1.1
MKRZ	**Makatiti**	3.57	241	P	Pn	07 06 30.0	-0.3
TARZ	**Mount Tarawera**	3.59	239	P	Pn	07 06 30.3	-0.4
RAHZ	**Arahi**	3.61	226	P	Pn	07 06 29.9	-0.9
OMRZ	**Omania**	3.62	242	P	Pn	07 06 30.6	-0.4
RRRZ	**Republican Roa**	3.63	238	P	Pn	07 06 30.7	-0.5
WHHZ	**Waihua**	3.63	223	P	Pn	07 06 30.2	-0.9
KARZ	**Kaharoa**	3.68	244	P	Pn	07 06 31.0	-0.7
HLRZ	**Highlands Stat**	3.70	240	P	Pn	07 06 31.8	-0.3
MTHZ	**Maungataniwha**	3.71	229	P	Pn	07 06 31.5	-0.7
KUZ	**Kuaotunu**	3.79	264	P	Pn	07 06 31.2	-2.1
PRRZ	**Plateau Road**	3.79	236	P	Pn	07 06 32.3	-1.0
HSRZ	**Hossack Road**	3.80	240	P	Pn	07 06 33.6	+0.1
HRRZ	**Handcock Road**	3.81	238	P	Pn	07 06 33.3	-0.4
KMRZ	**Kaimai**	3.84	248	P	Pn	07 06 32.8	-1.2
ALRZ	**Allen Road**	3.86	236	P	Pn	07 06 33.2	-1.1
NMHZ	**Naumai**	3.89	226	P	Pn	07 06 33.8	-0.9
ARHZ	**Aropaoanui**	3.89	223	P	Pn	07 06 33.8	-0.9
GRRZ	**Galatos Road**	3.92	240	P	Pn	07 06 34.9	-0.2
WPRZ	**Whakapapatarin**	3.96	237	P	Pn	07 06 35.6	-0.1
MRHZ	**Matea Rd**	3.96	232	P	Pn	07 06 34.8	-0.9
GRZ	**Great Barrier**	4.01	272	P	Pn	07 06 34.7	-1.6
BKZ	**Black Stump Fm**	4.12	228	*e*Pn	Pn	07 06 36.5	-1.3
BKZ	**Black Stump Fm**	4.12	228	P	Pn	07 06 36.5	-1.3
TOZ	**Tahuroa Road**	4.13	251	P	Pn	07 06 36.9	-1.0
CKHZ	**Cape Kidnapper**	4.14	219	P	Pn	07 06 36.5	-1.6
KUTZ	**Kaahu Road**	4.18	240	P	Pn	07 06 38.2	-0.4
MCHZ	**McNeill Hill**	4.19	224	P	Pn	07 06 37.4	-1.3
WIAZ	**Waiheke Island**	4.26	264	P	Pn	07 06 38.5	-1.3
MKAZ	**Moumakai**	4.27	260	P	Pn	07 06 38.7	-1.2
TLZ	**Tolley Road**	4.31	243	P	Pn	07 06 39.7	-0.8
KWHZ	**Kaweka Forest**	4.33	226	P	Pn	07 06 39.0	-1.8
KAHZ	**Kahuranaki**	4.34	219	P	Pn	07 06 39.0	-2.0
RATZ	**Rangitukua**	4.40	236	P	Pn	07 06 41.3	-0.4
RITZ	**Rihia Road**	4.40	234	P	Pn	07 06 42.5	+0.7
ETAZ	**East Tamaki Re**	4.44	262	P	Pn	07 06 41.3	-0.8
KBAZ	**Karaka Road Bo**	4.49	260	P	Pn	07 06 42.8	0.0
ABAZ	**Army Bay**	4.50	267	P	Pn	07 06 42.1	-0.9
KRHZ	**Kereru**	4.51	224	P	Pn	07 06 41.3	-1.9
KATZ	**Kakaramea**	4.51	235	P	Pn	07 06 43.9	+0.6
PXZ	**Pawanui**	4.53	217	P	Pn	07 06 40.9	-2.5
BHHZ	**Black Hill Sta**	4.58	227	P	Pn	07 06 42.5	-1.7
KRVZ	**Karewarewa**	4.61	234	P	Pn	07 06 43.8	-0.8
WTVZ	**West Tongariro**	4.65	234	P	Pn	07 06 44.9	-0.3
AWAZ	**Awhitu Peninsu**	4.68	261	P	Pn	07 06 45.2	-0.2
NGZ	**Ngauruhoe**	4.68	233	P	Pn	07 06 44.7	-0.9
TUVZ	**Tukino**	4.70	232	P	Pn	07 06 45.6	-0.2

RVAZ	Riverhead Bore	4.71	265	P	Pn	07 06 45.6	-0.3
MOVZ	Moawhango	4.72	230	P	Pn	07 06 45.5	-0.6
WTAZ	Waiatarua	4.72	263	P	Pn	07 06 45.9	-0.1
COVZ	Chateau Observ	4.73	233	P	Pn	07 06 46.5	+0.2
WHVZ	Whangaehu Hut	4.75	232	P	Pn	07 06 45.6	-1.0
FWVZ	Far West T-bar	4.75	233	P	Pn	07 06 46.3	-0.5
WPHZ	Waipukurau	4.77	220	P	Pn	07 06 44.4	-2.3
TRVZ	Turoa	4.78	232	P	Pn	07 06 46.1	-1.0
PNHZ	Pukenui	4.79	223	P	Pn	07 06 44.3	-2.7
PRHZ	Porangahau	4.83	217	P	Pn	07 06 44.6	-2.9
HIZ	Hauiti	4.88	244	*e*Pn	Pn	07 06 48.1	-0.1
HIZ	Hauiti	4.88	244	P	Pn	07 06 47.8	-0.3
WCZ	Waipu Caves	4.94	274	P	Pn	07 06 47.7	-1.4
TSZ	Takapari Road	5.02	223	P	Pn	07 06 47.0	-3.1
BFZ	Birch Farm	5.33	217	*e*Pn	Pn	07 06 50.8	-3.6
BFZ				*e*Sn	Sn	07 07 55.0	+0.5
OUZ	Omahuta	5.68	281	*e*Pn	Pn	07 06 57.3	-1.9
SNZO	South Karori	6.58	221	*e*Pn	Pn	07 07 06.6	-4.9
SNZO				*e*Sn	Sn	07 08 22.8	-2.2
THZ	Tophouse	7.88	226	*e*Pn	Pn	07 07 25.3	-4.0
THZ				*e*Sn	Sn	07 08 54.2	-2.8
KHZ	Kahutara	7.98	220	*e*Pn	Pn	07 07 28.1	-2.4
KHZ				*e*Sn	Sn	07 08 54.6	-4.7
LTZ	Lake Taylor	8.91	222	*e*Pn	Pn	07 07 40.2	-3.1
LTZ				*e*Sn	Sn	07 09 19.9	-2.2
MQZ	McQueen's Vall	9.37	217	*e*Pn	Pn	07 07 46.0	-3.5
MQZ				*e*Sn	Sn	07 09 27.3	-5.9
OXZ	Oxford	9.40	221	*e*Pn	Pn	07 07 47.3	-2.8
OXZ				*e*Sn	Sn	07 09 27.1	-7.1
RPZ	Rata Peaks	10.19	222	Pn	Pn	07 07 59.5	-1.4
	1.4nm,0.3s,baz=202,slow=2.8,SNR=6.7						
RPZ				Sn	Sn	07 09 46.3	-7.2
	5.4nm,0.3s,baz=303,slow=23,SNR=12						
RPZ	Rata Peaks	10.19	222	*e*Pn	Pn	07 07 57.5	-3.4
RPZ				*e*Sn	Sn	07 09 46.1	-7.4
RPZ				*e*Sn	Sn	07 09 46.3	-7.2
FOZ	Fox Glacier	10.77	226	*e*Pn	Pn	07 08 04.9	-3.7
FOZ				*e*Sn	Sn	07 10 00.6	-6.8
ODZ	Otahua Downs	11.33	218	*e*Pn	Pn	07 08 12.1	-4.2
ODZ				*e*Sn	Sn	07 10 15.1	-6.1
WKZ	Wanaka	12.03	222	*e*Pn	Pn	07 08 23.6	-2.2
WKZ				*e*Sn	Sn	07 10 30.8	-7.4
MLZ	Mavora Lakes	12.86	222	*e*Pn	Pn	07 08 33.6	-3.7
DZM	Mont Dzumac	18.79	316	P	P	07 09 48.2	-3.7
	0.4nm,0.3s,baz=140,slow=17,SNR=4.2						
DZM				LR	LR	07 15 20.7	
	comp=Z,131nm,20.6s,baz=196,slow=32						
DZM	Mont Dzumac	18.79	316	*e*LR	LR	07 14 05.9	
	334nm,28.4s						
DZM	Mont Dzumac	18.79	316	*e*P	P	07 09 49.9	-1.9
	21nm,0.9s						
RAR	Rarotonga	22.99	54	LR	LR	07 17 59.6	
	comp=Z,68nm,19.7s,baz=232,slow=33						
TBI	Tubuai	29.07	72	*e*T	T	07 41 48.2	
	3.0nm,0.2s						
STKA	Stephens Creek	32.30	267	P	P	07 11 59.9	-0.5
	11nm,0.9s,baz=98,slow=10,SNR=9.6						
STKA				LR	LR	07 24 12.2	
	comp=Z,80nm,18.8s,baz=45,slow=35						
STKA	Stephens Creek	32.30	267	*e*P	P	07 11 59.9	-0.5
	3.3nm,1.1s						
PPT2	Papeete2	32.48	63	*e*LR	LR	07 20 32.2	
	141nm,24.2s						
PPT	Papeete	32.49	63	LR	LR	07 21 12.2	
	comp=Z,71nm,21.7s,baz=254,slow=29						
CTA	Charters Tower	34.01	289	P	P	07 12 14.1	-1.3
	10nm,0.7s,baz=143,slow=11,SNR=12						
PMG	Port Moresby	40.43	303	LR	LR	07 28 11.6	
	comp=Z,100nm,18.1s,baz=118,slow=34						
AS01	Alice Springs	41.82	274	*e*P	P	07 13 20.4	-0.9
AS31	Alice Springs	41.86	274	*e*P	P	07 13 21.3	-0.2
	2.6nm,0.8s						
AS31				*e*PcP	PcP	07 15 15.5	-0.9
AS31				*e*S	S	07 19 35.7	+0.6
ASAR	Alice Springs	41.86	274	P	P	07 13 20.6	-0.9
	6.3nm,0.7s,baz=115,slow=7.5,SNR=61						
ASAR				PcP	PcP	07 15 15.5	-0.9
	0.7nm,0.6s,baz=124,slow=3.6,SNR=2.6						
ASAR				S	S	07 19 35.7	+0.6
	0.3nm,0.7s,baz=116,slow=15,SNR=2.9						
ASAR				LR	LR	07 29 34.9	
	comp=Z,53nm,20.7s,baz=140,slow=35						
VNDA	Vanda	41.95	186	P	P	07 13 24.8	+3.3
	0.7nm,0.7s,baz=13,slow=7.9,SNR=4.6						
WC3	Warramunga Arr	43.36	279	*e*P	P	07 13 32.5	-1.2
	18nm,0.8s						
WB2	Warramunga Arr	43.38	279	*e*P	P	07 13 32.7	-1.2
	16nm,0.8s						
WRAB	Tennant Creek	43.39	279	*e*P	P	07 13 32.0	-1.9
	15nm,0.8s						
WR1	Warramunga Arr	43.39	279	*e*P	P	07 13 32.1	-1.9
	16nm,0.7s						
WR1				*e*PP	PcP	07 15 21.6	0.0
WR1				*e*S	S	07 19 59.7	+2.0
WRA	Warramunga Arr	43.39	279	P	P	07 13 32.1	-1.9
	14nm,0.7s,baz=121,slow=7.6,SNR=128						
WRA				PcP	PcP	07 15 21.6	0.0
	2.9nm,0.8s,baz=122,slow=3.4,SNR=8.0						
WRA				S	S	07 19 59.7	+2.0
	0.8nm,0.9s,baz=128,slow=14,SNR=2.6						
FORT	Forrest	43.53	262	*e*P	P	07 13 35.1	+0.1
	49nm,0.8s						
TAOE	Nuku Hiva Isla	45.10	62	*e*LR	LR	07 26 23.3	
	108nm,25.9s						
FITZ	Fitzroy Crossi	51.33	276	P	P	07 14 33.8	-1.8
	11nm,0.9s,baz=134,slow=8.9,SNR=18						
FITZ				LR	LR	07 37 08.9	
	comp=Z,79nm,18.4s,baz=128,slow=37						
FITZ	Fitzroy Crossi	51.33	276	*e*P	P	07 14 35.2	-0.4
	14nm,1.0s						
QSPA	South Pole Qui	53.66	180	P	P	07 14 56.5	+4.1
	4.3nm,0.8s,baz=58,slow=4.7,SNR=12						
QSPA	South Pole Qui	53.66	180	*e*P	P	07 14 56.4	+3.9
	4.8nm,0.8s						
MBWA	Marble Bar	54.50	269	*e*P	P	07 14 57.1	-1.9
	17nm,0.8s						
RPN	Rapa Nui	59.26	103	LR	LR	07 36 01.1	
	comp=Z,31nm,19.0s,baz=206,slow=31						
MAW	Mawson	66.19	202	P	P	07 16 19.3	+1.3
	5.0nm,1.1s,baz=107,slow=5.2,SNR=5.1						
MAW	Mawson	66.19	202	*e*P	P	07 16 20.4	+2.4
	1.0nm,1.1s						
SYO	Syowa Base	70.93	194	⇑*e*X	P	07 16 49.4	+1.9
SYO	Syowa Base	70.93	194	⇑*e*P	P	07 16 54.4	+6.9
SNAA	Sanae	72.14	179	P	P	07 16 57.0	+2.1
SNAA	Sanae	72.14	179	P	P	07 16 56.8	+1.9
	3.3nm,1.0s,baz=237,slow=4.7,SNR=10.0						
SNAA				LR	LR	07 48 42.1	
	comp=Z,28nm,18.1s,baz=108,slow=36						
SNAA	Sanae	72.14	179	*e*P	P	07 16 56.8	+1.9
	4.5nm,1.1s						
VNA3	Neumayer Olymp	72.36	177	P	P	07 16 58.1	+2.0
VNA1	Neumayer--Stat	73.01	177	P	P	07 17 02.1	+2.2
PLCA	Paso Flores	79.35	133	LR	LR	07 45 05.7	
	comp=Z,27nm,18.7s,baz=252,slow=30						
ASAJ	Asahikawa	87.24	334	LR	LR	07 50 49.7	
	comp=Z,26nm,21.1s,baz=331,slow=31						
KSRS	Korea Array	88.15	321	P	P	07 18 20.2	-0.9
	0.9nm,0.5s,baz=132,slow=5.4,SNR=4.6						
KSRS				LR	LR	07 55 30.7	
	comp=Z,6.5nm,18.8s,baz=155,slow=34						
KS15	Wonju Array Si	88.16	321	*e*P	P	07 18 20.2	-1.0
KSAR	Wonju Array Be	88.16	321	P	P	07 18 20.2	-1.0
KS01	Wonju Array Si	88.18	321	*e*P	P	07 18 19.2	-2.1
NJ2	Nanjing	89.23	312	*e*P	P	07 18 26.5	+0.1
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
PETK	Petropavlovsk-	91.36	347	P	P	07 18 34.7	-1.1
	9.7nm,0.8s,baz=123,slow=5.3						
PETK	Petropavlovsk-	91.36	347	*e*P	P	07 18 35.1	-0.6
PEA1	Petropavlovsk-	91.37	347	*e*P	P	07 18 34.7	-1.1
GYA	Guiyang	93.44	300	*e*P	P	07 18 47.4	+1.1
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NV01	Mina Array Sit	93.55	44	*e*P	P	07 18 45.4	-1.2
NVAR	Mina Array Bea	93.55	44	P	P	07 18 45.4	-1.2
	0.7nm,0.8s,baz=221,slow=8.1,SNR=3.6						
YBH	Yreka Blue Hor	93.59	39	LR	LR	07 53 55.7	
	comp=Z,19nm,19.2s,baz=178,slow=31						
CM31	Chiang Mai Arr	94.17	290	*e*P	P	07 18 49.3	-0.4
CMAR	Chiang Mai Arr	94.17	290	P	P	07 18 49.3	-0.4
	0.7nm,0.3s,baz=134,slow=2.6,SNR=4.2						
CMAR				LR	LR	08 04 34.2	
	comp=Z,7.1nm,19.0s,baz=300,slow=38						
KMI	Kunming	95.39	297	P	P	07 18 58.0	+2.7
KMI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TXAR	Lajitas Array	96.72	59	LR	LR	07 56 14.0	
	comp=Z,19nm,18.5s,baz=0.0,slow=32						
HHC	Hu-ho-hao-te	99.49	314	*e*P	Pdif	07 19 14.5	+1.2
HHC				PP	PP	07 23 16.7	-1.4
HHC				SKS	SKSac	07 29 42.2	-4.0
HHC				S	S	07 30 45.4	+4.6
HHC				pmax	pmax		
	comp=Z,80nm,5.1s						
HHC				LR	LR		
	comp=N,100nm,17.3s						
HHC				LR	LR		
	comp=E,99nm,18.1s						
HHC				LR	LR		
	comp=Z,110nm,18.2s						
LZH	Lanzhou	101.27	307	*e*P	Pdif	07 19 24.0	+2.6
LZH				pP	sPdif	07 19 40.6	-5.2
LZH				sP	pP	07 19 46.4	+7.3
WMQ	Urumqi	115.85	307	PKP	PKPdf	07 24 12.2	-0.4
MK32	Makanchi Array	120.55	308	*e*PKPdf	PKPdf	07 24 19.7	-1.8
MKAR	Makanchi Array	120.55	308	PKP	PKPdf	07 24 19.7	-1.8
	0.5nm,0.7s,baz=72,slow=4.7,SNR=3.3						
KSH	Kashi	122.04	298	*e*PKP	PKPdf	07 24 26.4	+1.6
KSH				PP	PP	07 26 06.6	+6.1
KURK	Kurchatov	124.16	311	*e*PKPdf	PKPdf	07 24 26.9	-1.4
KURBB	Kurchatov Arra	124.19	311	PKP	PKPdf	07 24 26.9	-1.5
	1.2nm,0.7s,baz=112,slow=1.4,SNR=8.8						
BVAR	Borovoye Array	129.67	313	PKP	PKPdf	07 24 38.4	-0.3
	0.3nm,0.4s,baz=83,slow=3.6,SNR=4.2						
ARA0	ARCESS Array S	144.16	345	*e*PKPpre	PKPbc	07 25 02.3	-1.0
ARCES	ARCESS Array B	144.16	345	PKP	PKPab	07 25 02.3	-0.6
	4.7nm,0.8s,baz=33,slow=1.5,SNR=11						
GNI	Garni	145.30	290	PKPbc	PKPbc	07 25 07.8	-0.2
	4.2nm,0.3s,baz=39,slow=13,SNR=4.1						
AKH	Akhalkalaki	146.39	292	*e*PKPdf	PKPdf	07 25 09.2	-0.7
KBZ	Khabaz	146.99	296	PKPbc	PKPbc	07 25 12.1	-0.6
	7.9nm,0.8s,baz=132,slow=2.0,SNR=18						
ASF	Jabal al Asfar	149.69	273	PKPbc	PKPbc	07 25 20.5	+0.3
	1.5nm,0.7s,baz=83,slow=8.1,SNR=2.5						
FIA1	FINESS Array S	150.24	335	*e*PKPbc	PKPbc	07 25 19.6	-0.9
FIA0	FINESS Array S	150.24	335	*e*PKPbc	PKPbc	07 25 20.1	-0.3
FINES	FINESS Array B	150.24	335	PKPbc	PKPbc	07 25 20.1	-0.3
	12nm,1.0s,baz=29,slow=4.4,SNR=19						
MMAI	Mount Meron Ar	151.14	274	PKPbc	PKPbc	07 25 24.7	+1.1
	1.6nm,0.4s,baz=98,slow=2.9,SNR=4.5						
ILGA	Ilgaz	153.73	290	*e*PKPbc	PKPbc	07 25 31.1	+1.8
BR101	Keskin Array S	153.74	287	*e*PKPbc	PKPbc	07 25 29.2	-0.1
BRTR	Keskin Array B	153.74	287	PKPbc	PKPbc	07 25 29.2	-0.1
	2.3nm,0.9s,baz=120,slow=3.7,SNR=7.3						
NB2	NORSAR Subarra	154.46	348	PKPdf	PKPbc	07 25 29.4	-0.6
	comp=Z,14nm,2.5s,baz=31,slow=1.9						
NB2	NORSAR Subarra	154.46	348	PKPdf	PKPbc	07 25 29.4	-0.6
	baz=31,slow=1.9						
HFS	Hagfors	154.82	344	PKPbc	PKPbc	07 25 29.8	-0.9
	comp=Z,2.0nm,0.8s,baz=26,slow=3.7,SNR=5.9						
AKASG	Malin Array Be	154.94	314	PKPab	PKPab	07 25 44.0	-3.0
	comp=Z,1.2nm,0.7s,baz=47,slow=3.3,SNR=5.0						
AKBB	Malin Array Si	154.94	314	*e*PKPab	PKPab	07 25 44.0	-3.0
TOA0	Torodi Ar. Sit	156.76	183	*e*PKPab	PKPab	07 25 57.3	+1.8
TORD	Torodi Ar. Bea	156.76	183	PKPab	PKPab	07 25 56.1	+0.5
	baz=176,slow=3.0						
TOA1	Torodi Ar. Sit	156.76	183	*e*PKPab	PKPab	07 25 56.1	+0.5
BUR04	Bucovina Ar. S	158.57	309	*e*PKPab	PKPab	07 26 01.8	-1.1

NNC 12 07:12:11.2±12.0**, 36°.70N×70°.48E, h0^{km}, mb3.6, mpv3.2, 6C, Error ellipse: s-maj=96.1km s-min=87.0km az=170.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	4.08	35	⇑P	Pn	07 13 15.1	+0.1
	4.4nm,0.3s						
SFK				⇑S	Sn	07 14 07.4	+3.8
	1.3nm,0.2s						
MNAS	Manas	5.99	14	⇑P	Pn	07 13 39.3	-2.0
	1.0nm,0.6s						
MNAS				⇑S	Sn	07 14 49.0	-1.7
	1.0nm,0.5s						
KK31	Karatay Array	6.40	0	⇑P	Pn	07 13 47.5	+0.7
	0.5nm,0.3s,baz=174,slow=12,SNR=13						
KK31				⇑S	Sn	07 15 01.8	+1.3
	0.6nm,0.5s,baz=172,slow=24						

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*NORS **12** 07:12:41.7±0.0, 42°.57N×43°.44E, h15^{km}*
*ISCJB **12** 07:12:42.9±0.5, 42°.60N±0°.03×43°.42E±0°.04, h6^{km}±4^{km}, Error ellipse: s-maj=5.2km s-min=4.4km az=11.5*
*MOS **12** 07:12:42.6±0.0, 42°.58N×43°.41E, h10^{km}, MPVA2.9*
*DDA **12** 07:13:03.5, 42°.59N×42°.44E, h16^{km}, Ml2.8*
ISC 12 07:12:42.9±0.8**, 42°.59N**±0°.03×**43°.44E**±0°.03**, h9**^{km}±4^{km}**, n16, σ0^s.47**/32**, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONI	Oni	0.01	86	P	Pg	07 12 44.5	-0.1
ONI				S	Sg	07 12 46.1	+0.3
ONI	Oni	0.01	86	*i* Pg	Pg	07 12 44.5	-0.1
ONI				*i* Sg	Sg	07 12 46.1	+0.3
DIGR	Digorskoe uzhe	0.33	19	*i* Pg	Pg	07 12 49.0	-0.5
DIGR				*e*Sg	Sg	07 12 54.4	+0.5
ZEI	Tsey	0.40	60	*e*Pg	Pg	07 12 50.3	-0.5
ZEI				*e*Sg	Sg	07 12 55.6	-0.3
KORR	Kora	0.68	43	*e*Pg	Pg	07 12 56.0	-0.1
KORR				*e*Sg	Sb	07 13 06.5	0.0
LSNR	Lesken	0.74	22	*e*Pg	Pg	07 12 57.0	-0.3
LSNR				*e*Sg	Sg	07 13 07.6	+0.6
NEY	Neytrino	0.84	322	*e*Pg	Pg	07 12 58.6	-0.6
NEY				*e*Sg	Sg	07 13 10.5	+0.3
ARNR	Ardon	0.86	46	*e*Pg	Pb	07 12 60.0	0.0
ARNR				*e*Sg	Sb	07 13 12.2	+0.6
STDR	Stavd-Durt	0.90	30	*e*Pg	Pn	07 13 01.6	-0.2
STDR				*e*Sg	Sn	07 13 15.8	+0.8
SHA1	Shidzhatmaz	1.28	334	*e*Pg	Pg	07 13 07.5	0.0
SHA1				*e*Sg	Sn	07 13 24.6	0.0
ARTV	Artvin	1.80	219	*i* P	Pn	07 13 14.3	-0.1
ARTV				*i* S	Sb	07 13 38.8	-0.1
DBOC	Borcka	1.81	227	*i* P	Pn	07 13 14.0	-0.3
DBOC				*i* S	Sn	07 13 38.0	+0.5
DGRG	David-gareji	1.84	128	P	Pb	07 13 15.9	-0.8
DGRG				S	Sg	07 13 42.6	+0.7
DGRG	David-gareji	1.84	128	*e*Pg	Pb	07 13 15.9	-0.8
DGRG				*e*Sg	Sg	07 13 42.6	+0.7
DAGI	Agillar	1.89	218	*i* P	Pn	07 13 15.8	+0.3
DAGI				*i* S	Sb	07 13 41.7	+0.3
DBAD	Bademkaya	2.04	220	*i* P	Pn	07 13 18.1	+0.5
DBAD				*i* S	Sb	07 13 45.8	0.0

KRSC 12 07:20:55.4±1.6**, 55°.57N×162°.85E, h5**^{km}±23^{km}**, ML3.9, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.64	358	*e*P	Pb	07 21 08.8	-0.3
KBTR				*e*S	Sb	07 21 18.1	-0.3
MKZ	Mys Kozlova	1.20	213	*e*P	Pg	07 21 18.4	+0.1
MKZ				*e*S	Sb	07 21 34.7	+0.3
ZLN	Zelenaya	1.24	292	*e*P	Pg	07 21 19.0	-0.1
BZGR	Bezymyannyi-Gr	1.27	288	*e*P	Pg	07 21 18.9	-0.8
BZGR				*e*S	Sg	07 21 36.3	+0.1
LGNR	Loginova	1.32	294	*e*P	Pg	07 21 20.3	-0.4
BDR	Baidarnaya	1.36	318	*e*P	Pn	07 21 20.6	-0.5
BDR				*e*S	Sg	07 21 38.8	-0.3
BZMR	Bezymyannaya	1.38	286	*e*P	Pn	07 21 21.0	-0.5
BZWR	Bezymyannyi-We	1.39	288	*e*P	Pn	07 21 21.2	-0.4
SRKR	Sorokina	1.44	320	*e*P	Pn	07 21 21.9	-0.3
KRSR	Krestovskiy	1.44	298	*e*P	Pn	07 21 21.4	-0.8
TUMD	Tumrok D	1.45	256	*e*P	Pn	07 21 22.3	+0.1
TUMD				*e*S	Sb	07 21 40.6	-0.9
KIRR	Kirishev	1.47	286	*e*P	Pb	07 21 23.2	-0.1
KMNR	Kamenistaya	1.49	278	*e*P	Pb	07 21 23.6	0.0
KMNR				*e*S	Sg	07 21 44.1	+0.8
KPT	Kopyto	1.54	286	*e*P	Pn	07 21 23.6	+0.1
KPT				*e*S	Sn	07 21 44.0	0.0
TUMR	Tumrok	1.57	261	*e*P	Pb	07 21 24.7	-0.2
TUMR				*e*S	Sn	07 21 44.8	+0.1
KOZ	Kozyrevsk	1.75	288	*e*P	Pb	07 21 27.4	-0.6
KOZ				*e*S	Sg	07 21 51.4	-0.1
BKI	Bering	1.82	100	*e*P	Pb	07 21 29.3	+0.2
BKI				*e*S	Sg	07 21 53.4	-0.3
ESO	Esso	2.37	280	*e*P	Pn	07 21 36.3	+1.3
KII	Karymskiy	2.50	233	*e*P	Pn	07 21 37.7	+1.0
SDLR	Sedlovina	3.26	227	*e*P	Pn	07 21 48.5	+1.3
KRX	Arik	3.30	230	*e*P	Pb	07 21 53.6	-0.9
SMAR	Somma	3.31	227	*e*P	Pn	07 21 51.1	+3.1
AVH	Avacha	3.33	228	*e*P	Pn	07 21 51.4	+3.2
UGLR	Uglovaya	3.34	227	*e*P	Pn	07 21 49.8	+1.5
GNL	Ganaly	3.41	239	*e*P	Pn	07 21 51.2	+1.9
DALK	Dalny	3.50	225	*e*P	Pb	07 21 54.9	-2.8
KRMR	Karymshinskiy	3.90	227	*e*P	Pb	07 22 00.3	-4.2
RUS	Russkaya	4.05	221	*e*P	Pn	07 22 01.9	+3.9
KDTR	Khodutka, Kamc	4.71	219	*e*P	Pn	07 22 10.2	+3.1

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*IDC **12** 07:25:02.6±0.7, 30°.23S×177°.83W, h0^{km}, mb4.3/9, mb1 4.4/11, mb1mx4.1/46, mbtmp4.3/11, ML3.9/2, MS3.4/6, Ms1 3.4/6, ms1mx2.9/47, Error ellipse: s-maj=20.9km s-min=16.0km az=87.0*
*NEIC **12** 07:25:03.1±0.5, 30°.41S×177°.75W, h10^{km}, mb4.4/8, Error ellipse: s-maj=14.3km s-min=7.9km az=104.0*
ISC 12 07:25:08.9±0.6**, 30°.29S**±0°.06×**178°.0W**±0°.1**, h50**^{km}**, n56, σ2^s.14**/48**, mb4.3**/14**, MS3.5**/3**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.03	2	Pn	Pn	07 25 24.8	-2.2
	659nm,0.3s,baz=176,slow=19,SNR=74						
RAO				Sn	Sn	07 25 36.8	-3.6
	4µm,0.3s,baz=270,slow=20,SNR=29						
RAO	Raoul Island	1.03	2	*e*Pn	Pn	07 25 24.7	-2.3
RAO				*e*Sn	Sn	07 25 36.4	-4.1
MXZ	Matakaoa Point	7.89	202	*e*Pn	Pn	07 26 56.3	-4.7
URZ	Urewera	8.94	206	Pn	Pn	07 27 12.3	-3.0
	0.6nm,0.3s,baz=276,slow=3.5,SNR=12						
URZ				Sn	Sn	07 28 53.3	-1.1
	7.9nm,0.3s,baz=224,slow=21,SNR=22						
URZ	Urewera	8.94	206	*e*Pn	Pn	07 27 11.9	-3.3
URZ				*e*Sn	Sn	07 28 53.2	-1.3
BKZ	Black Stump Fm	9.96	206	*e*Pn	Pn	07 27 25.8	-3.6
BKZ				*e*Sn	Sn	07 29 16.4	-3.4
BFZ	Birch Farm	11.39	203	*e*Pn	Pn	07 27 43.7	-5.2
BFZ				*e*Sn	Sn	07 29 47.8	-6.9
KHZ	Kahutara	13.90	207	*e*Pn	Pn	07 28 18.1	-5.0
RPZ	Rata Peaks	16.00	210	Pn	Pn	07 28 48.4	-2.1
	0.7nm,0.3s,baz=9.5,slow=6.1,SNR=3.1						
RPZ				Sn	Sn	07 31 32.4	-14
	0.7nm,0.3s,baz=9.0,slow=19,SNR=4.3						
RPZ				LR	LR	07 34 26.6	
	comp=Z,106nm,19.8s,baz=316,slow=35						
DZM	Mont Dzumac	16.21	297	LR	LR	07 33 53.4	
	comp=Z,119nm,19.0s,baz=126,slow=33						
DZM	Mont Dzumac	16.21	297	*e*LR	LR	07 32 51.6	
	178nm,25.2s						
RAR	Rarotonga	18.69	65	LR	LR	07 37 18.1	
	comp=Z,55nm,18.0s,baz=229,slow=40						
TBI	Tubuai	26.31	82	*e*T	T	07 57 23.8	
	16nm,0.3s						
PAE	Paea	28.72	71	*e*T	T	08 00 32.3	
	5.2nm,0.3s						
PPT2	Papeete2	28.76	70	*e*LR	LR	07 38 16.6	
	129nm,28.0s						
PPT2	Papeete2	28.76	70	*e*T	T	08 00 37.4	
	3.1nm,0.3s						
TVO	Taravao	28.93	71	*e*T	T	08 00 48.5	
	1.4nm,0.3s						
VAH	Vaihoa	31.60	68	*e*T	T	08 04 10.7	
	26nm,0.2s						
CTA	Charters Tower	33.82	279	P	P	07 31 49.0	+2.6
	4.2nm,0.3s,baz=99,slow=10,SNR=13						
CTAO	Charters Tower	33.82	279	*e*P	P	07 31 49.5	+3.0
	11nm,1.1s						
STKA	Stephens Creek	34.54	257	P	P	07 31 55.2	+2.6
	5.2nm,0.8s,baz=94,slow=11,SNR=7.4						
STKA	Stephens Creek	34.54	257	*e*P	P	07 31 55.2	+2.6
	2.2nm,1.1s						
AS31	Alice Springs	43.15	267	*e*P	P	07 33 04.9	+0.1
	2.1nm,1.2s						
ASAR	Alice Springs	43.15	267	P	P	07 33 05.5	+0.7
	1.8nm,0.4s,baz=105,slow=6.9,SNR=33						
ASAR				LR	LR	07 50 07.2	
	comp=Z,66nm,19.7s,baz=136,slow=35						
WB2	Warramunga Arr	44.12	272	*e*P	P	07 33 12.5	-0.1
	6.5nm,0.4s						
WRAB	Tennant Creek	44.13	272	*e*P	P	07 33 13.8	+1.1
	4.8nm,1.0s						
WR1	Warramunga Arr	44.13	272	*e*P	P	07 33 13.4	+0.7
	14nm,0.3s						
WRA	Warramunga Arr	44.13	272	P	P	07 33 13.4	+0.7
	3.9nm,0.3s,baz=110,slow=8.1,SNR=231						
VNDA	Vanda	48.21	186	P	P	07 33 45.4	+1.4
	0.4nm,0.7s,baz=32,slow=9.5,SNR=2.7						
VNDA	Vanda	48.21	186	*e*P	P	07 33 42.0	-2.0
FITZ	Fitzroy Crossi	52.40	270	P	P	07 34 17.6	+1.2
	0.9nm,0.6s,baz=124,slow=7.3,SNR=3.5						
FITZ	Fitzroy Crossi	52.40	270	*e*P	P	07 34 15.3	-1.1
	1.7nm,0.8s						
CASY	Casey	55.26	208	*e*P	P	07 34 37.4	+0.8
	4.9nm,0.8s						
QSPA	South Pole Qui	59.82	180	P	P	07 35 10.4	+1.5
	1.5nm,0.8s,baz=32,slow=3.4,SNR=3.7						
QSPA	South Pole Qui	59.82	180	*e*P	P	07 35 10.2	+1.3
	5.4nm,0.9s						
PMSA	Palmer Station	72.35	156	P	P	07 36 31.9	+2.9
	12nm,0.8s,baz=272,slow=6.1,SNR=4.1						
TGY	Tagaytay City	73.50	298	LR	LR	08 06 37.0	
	comp=Z,95nm,22.0s,baz=16,slow=34						
MJAR	Matsushiro Arr	78.17	325	LR	LR	08 05 57.0	
	comp=Z,9.6nm,21.8s,baz=260,slow=31						
NV01	Mina Array Sit	88.13	43	*e*P	P	07 37 54.9	+0.5
NVAR	Mina Array Bea	88.13	43	P	P	07 37 54.4	0.0
	0.7nm,0.7s,baz=219,slow=10,SNR=5.2						
MK32	Makanchi Array	117.73	310	*e*PKPdf	PKPdf	07 43 51.1	+1.9
MKAR	Makanchi Array	117.73	310	PKP	PKPdf	07 43 51.1	+1.9
	0.2nm,0.3s,baz=113,slow=1.5,SNR=4.4						
BVAR	Borovoye Array	126.35	316	PKP	PKPdf	07 44 06.3	+0.7
	0.6nm,0.4s,baz=103,slow=1.9,SNR=4.1						
FIA1	FINESS Array S	145.05	340	*e*PKPbc	PKPbc	07 44 38.7	-0.6
FIA0	FINESS Array S	145.05	340	*e*PKPbc	PKPbc	07 44 38.8	-0.6
FINES	FINESS Array B	145.05	340	PKPbc	PKPbc	07 44 38.8	-0.6
	2.8nm,0.5s,baz=44,slow=4.6,SNR=22						
NB2	NORSAR Subarra	148.65	351	PKP	PKPbc	07 44 49.1	-0.7
	comp=Z,0.6nm,0.6s,baz=12,slow=2.7						
HFS	Hagfors	149.14	349	PKPbc	PKPbc	07 44 50.4	-0.6
	comp=Z,2.8nm,0.8s,baz=46,slow=4.2,SNR=4.1						
AKASG	Malin Array Be	151.24	323	PKPbc	PKPbc	07 44 56.0	-0.3
	comp=Z,0.7nm,0.3s,baz=48,slow=3.1,SNR=5.7						
AKASG	Malin Array Be	151.24	323	PKPbc	PKPbc	07 44 56.0	-0.3
AKBB	Malin Array Si	151.24	323	*e*PKPbc	PKPbc	07 44 56.0	-0.3
AK11	Malin Array Si	151.28	323	*e*PKPbc	PKPbc	07 44 55.5	-0.9
BR101	Keskin Array S	152.58	299	*e*PKPbc	PKPbc	07 45 00.8	+0.9
BRTR	Keskin Array B	152.58	299	PKPbc	PKPbc	07 45 00.8	+0.9
	comp=Z,0.5nm,0.4s,baz=107,slow=5.0,SNR=3.6						
TORD	Torodi Ar. Bea	162.94	179	PKPab	PKPab	07 45 55.5	0.0
	baz=177,slow=4.9						
TOA1	Torodi Ar. Sit	162.94	179	*e*PKPab	PKPab	07 45 55.5	0.0

MEX 12 07:26:42.5±0.3**, 16°.24N×98°.16W, h7**^{km}±2^{km}**, MD3.7, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.16	12	*e*P	Pg	07 26 45.5	-0.3
PNIG				*i* S	Sg	07 26 48.0	-0.1
TLIG	Tlapa	1.38	344	*e*P	Pn	07 27 04.5	-3.7
TLIG				*e*S	Sb	07 27 21.7	-4.8

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*ISCJB **12** 07:36:56.9±0.3, 24°.71N±0°.02×122°.19E±0°.02, h81^{km}±3^{km}, Error ellipse: s-maj=3.6km s-min=2.3km az=164.4*
*TAP **12** 07:36:57.0, 24°.69N×122°.17E, h82^{km}, ML3.8, B*
*JMA **12** 07:36:57.0±0.2, 24°.65N×122°.15E, h81^{km}±3^{km}, M2.9*
ISC 12 07:36:57.3±1.2**, 24°.70N**±0°.03×**122°.18E**±0°.02**, h81**^{km}±6^{km}**, n92, σ0^s.85**/170**, 12C-2D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1	0.15	196	*e*P	Pn	07 37 09.3	+0.4
	baz=194						
EOS1				*e*S	Sn	07 37 18.3	+0.8
	baz=194						
EGS		0.27	304	*e*P	Pn	07 37 09.9	+0.5
	baz=297						
TWC	Suao	0.31	254	*e*P	Pn	07 37 09.6	-0.1
	baz=253						
TWC				*e*S	Sn	07 37 18.4	-0.4

	baz=253						
NTC	**Toucheng**	**0.35**	**297**	P	**Pn**	**07 37 09.8**	**-0.2**
	baz=298						
NTC				*e*S	**Sn**	**07 37 18.6**	**-0.7**
	baz=298						
TWB1	**Santiao Chiao**	**0.35**	**331**	⇓P	**Pn**	**07 37 09.9**	**-0.1**
	baz=332						
TWB1				S	**Sn**	**07 37 18.9**	**-0.5**
	baz=332						
ILA	**Ilan**	**0.39**	**280**	P	**Pn**	**07 37 10.4**	**+0.2**
	baz=287						
ILA				*e*S	**Sn**	**07 37 20.2**	**+0.3**
	baz=287						
TIPB	**Shuangxi**	**0.42**	**311**	⇑P	**Pn**	**07 37 10.5**	**-0.1**
	baz=311						
TIPB				S	**Sn**	**07 37 19.7**	**-0.6**
	baz=311						
TWE	**Neicheng**	**0.46**	**273**	⇑P	**Pn**	**07 37 10.9**	**+0.1**
	baz=279						
TWE				*e*S	**Sn**	**07 37 20.8**	**+0.1**
	baz=279						
NANB	**Nanao**	**0.47**	**235**	⇑P	**Pn**	**07 37 10.9**	**+0.1**
	baz=235						
NANB				*e*S	**Sn**	**07 37 21.2**	**+0.3**
	baz=235						
ENA	**Nanau**	**0.48**	**236**	P	**Pn**	**07 37 11.0**	**+0.1**
	baz=235						
ENA				*e*S	**Sn**	**07 37 21.4**	**+0.4**
	baz=235						
NWF	**Wu-fen Shan**	**0.52**	**316**	⇑P	**Pn**	**07 37 11.4**	**0.0**
	baz=309						
NWF				*e*S	**Sn**	**07 37 21.6**	**-0.2**
	baz=309						
WFSB	**Wu-fen Shan**	**0.52**	**316**	⇑P	**Pn**	**07 37 11.4**	**+0.1**
	baz=309						
WFSB				*e*S	**Sn**	**07 37 21.6**	**0.0**
	baz=309						
ENTT	**Nioudou**	**0.56**	**264**	P	**Pn**	**07 37 12.3**	**+0.7**
	baz=267						
ENTT				*e*S	**Sn**	**07 37 22.7**	**+0.4**
	baz=267						
NWLT	**Wulai**	**0.62**	**278**	P	**Pn**	**07 37 12.2**	**0.0**
	baz=286						
NWLT				*e*S	**Sn**	**07 37 23.6**	**+0.3**
	baz=286						
TAP1	**Taipei**	**0.68**	**300**	*e*P	**Pn**	**07 37 12.7**	**-0.1**
	baz=300						
TAP1				*e*S	**Sn**	**07 37 23.8**	**-0.5**
	baz=300						
TATO	**Taipei**	**0.68**	**294**	⇑P	**Pn**	**07 37 12.6**	**-0.2**
	baz=295						
TATO				*e*S	**Sn**	**07 37 23.4**	**-1.0**
	baz=295						
YM07	**YM07**	**0.69**	**314**	⇑*e*P	**Pn**	**07 37 12.8**	**-0.2**
	baz=306						
YM07				*e*S	**Sn**	**07 37 24.4**	**-0.2**
	baz=306						
YM11	**YM11**	**0.72**	**311**	*e*P	**Pn**	**07 37 14.1**	**+0.8**
	baz=304						
YM11				*e*S	**Sn**	**07 37 25.6**	**+0.4**
	baz=304						
YM10	**YM10**	**0.72**	**309**	P	**Pn**	**07 37 13.1**	**-0.2**
	baz=302						
YM10				S	**Sn**	**07 37 24.6**	**-0.6**
	baz=302						
YHNB	**Yeheng**	**0.73**	**268**	⇑P	**Pn**	**07 37 13.7**	**+0.3**
	baz=277						
YHNB				S	**Sn**	**07 37 25.6**	**+0.3**
	baz=277						
YM04	**YM04**	**0.74**	**308**	⇑P	**Pn**	**07 37 13.1**	**-0.3**
	baz=303						
YM04				*e*S	**Sn**	**07 37 24.6**	**-0.9**
	baz=303						
NACB	**Ninganchiao**	**0.74**	**226**	P	**Pn**	**07 37 12.8**	**-0.7**
	baz=219						
NACB				*e*S	**Sn**	**07 37 25.3**	**-0.2**
	baz=219						
JYNG	**Yonagunijimaku**	**0.74**	**109**	P	**Pn**	**07 37 13.6**	**+0.2**
JYNG				S	**Sn**	**07 37 25.1**	**-0.4**
NSK	**Sanguang**	**0.74**	**269**	⇑*i*P	**Pn**	**07 37 13.8**	**+0.2**
	baz=277						
NSK				*e*S	**Sn**	**07 37 25.9**	**+0.3**
	baz=277						
YM03	**YM03**	**0.75**	**310**	*e*P	**Pn**	**07 37 13.6**	**-0.1**
	baz=303						
YM03				*e*S	**Sn**	**07 37 25.4**	**-0.3**
	baz=303						
NNSB	**Datong**	**0.77**	**250**	P	**Pn**	**07 37 14.0**	**+0.1**
	baz=243						
NNSB				*e*S	**Sn**	**07 37 26.4**	**+0.2**
	baz=243						
NNSH	**Datong**	**0.77**	**250**	⇑P	**Pn**	**07 37 13.9**	**0.0**
	baz=244						
NNSH				*e*S	**Sn**	**07 37 26.3**	**+0.1**
	baz=244						
NNS	**Nan Shan**	**0.77**	**251**	P	**Pn**	**07 37 14.2**	**+0.2**
	baz=244						
NNS				*e*S	**Sn**	**07 37 26.3**	**0.0**
	baz=244						
TWY	**Chenhua**	**0.78**	**318**	*e*P	**Pn**	**07 37 14.0**	**+0.2**
	baz=312						
TWY				*e*S	**Sn**	**07 37 26.4**	**+0.3**
	baz=312						
YOJ	**Yonaguni jima**	**0.80**	**107**	P	**Pn**	**07 37 14.1**	**+0.1**
	baz=110						
YOJ				*e*S	**Sn**	**07 37 26.5**	**0.0**
	baz=110						
YOJ	**Yonaguni jima**	**0.80**	**107**	P	**Pn**	**07 37 14.1**	**+0.1**
YOJ				S	**Sn**	**07 37 25.9**	**-0.6**
TWS1	**Kuangyinshan**	**0.80**	**300**	P	**Pn**	**07 37 14.1**	**+0.1**
	baz=307						
TWS1				*e*S	**Sn**	**07 37 26.4**	**-0.1**
	baz=307						
NTST	**Danshui**	**0.81**	**305**	P	**Pn**	**07 37 14.2**	**0.0**
	baz=305						
NTST				*e*S	**Sn**	**07 37 26.3**	**-0.4**
	baz=305						
TWD	**Chiawan**	**0.81**	**221**	*e*P	**Pn**	**07 37 13.9**	**-0.3**
	baz=216						
TWD				*e*S	**Sn**	**07 37 26.7**	**-0.1**
	baz=216						
HWA	**Hwalien**	**0.89**	**216**	*e*P	**Pn**	**07 37 15.0**	**-0.1**
	baz=208						
NCU	**National Centr**	**0.94**	**287**	P	**Pn**	**07 37 16.1**	**+0.5**
	baz=279						
NCU				*e*S	**Sn**	**07 37 30.6**	**+1.2**
	baz=279						
NCUH	**Zhongli**	**0.94**	**287**	P	**Pn**	**07 37 16.0**	**+0.4**
	baz=279						
NCUH				*e*S	**Sn**	**07 37 30.1**	**+0.7**
	baz=279						
ENLB	**Shoufeng**	**0.95**	**214**	⇓P	**Pn**	**07 37 15.6**	**-0.2**
	baz=214						
ENLB				*e*S	**Sn**	**07 37 29.6**	**+0.1**
	baz=214						
WHF	**Hehuan Shan**	**0.99**	**237**	P	**Pn**	**07 37 16.6**	**-0.2**
	baz=237						
WHF				*e*S	**Sn**	**07 37 30.9**	**-0.4**
	baz=237						
TWT	**Tachien**	**1.01**	**244**	P	**Pn**	**07 37 17.4**	**+0.7**
	baz=238						
TWT				*e*S	**Sn**	**07 37 31.5**	**+0.3**
	baz=238						
TDCB	**Techi**	**1.03**	**245**	P	**Pn**	**07 37 17.4**	**+0.5**
	baz=238						
TDCB				*e*S	**Sn**	**07 37 31.3**	**-0.1**
	baz=238						
LIOB	**Emei**	**1.06**	**267**	P	**Pn**	**07 37 17.3**	**+0.2**
	baz=268						
LIOB				*e*S	**Sn**	**07 37 32.2**	**+0.3**
	baz=268						
NSTT	**Nanjuang**	**1.07**	**267**	P	**Pn**	**07 37 17.4**	**+0.1**
	baz=267						
NSTT				*e*S	**Sn**	**07 37 32.1**	**0.0**
	baz=267						
SBCB	**Hsinchu**	**1.09**	**275**	*e*P	**Pn**	**07 37 17.8**	**+0.3**
	baz=275						
HSN	**Hsinchu**	**1.10**	**276**	*e*P	**Pn**	**07 37 17.5**	**-0.1**
	baz=277						
CHGB	**Renai**	**1.11**	**235**	⇑P	**Pn**	**07 37 18.1**	**+0.2**
	baz=228						
CHGB				*e*S	**Sn**	**07 37 33.1**	**-0.3**
	baz=228						
EGFH	**Guangfu**	**1.23**	**214**	*e*P	**Pn**	**07 37 18.4**	**-0.8**
	baz=214						
NMLH	**Miaoli**	**1.27**	**263**	P	**Pn**	**07 37 20.0**	**+0.3**
	baz=263						
NMLH				*e*S	**Sn**	**07 37 36.6**	**+0.1**
	baz=263						
DPDB	**Guoxing**	**1.32**	**240**	*e*P	**Pn**	**07 37 21.4**	**+1.0**
	baz=234						
DPDB				*e*S	**Sn**	**07 37 38.9**	**+1.2**
	baz=234						
NSY	**Sanyi**	**1.32**	**258**	P	**Pn**	**07 37 21.0**	**+0.6**
	baz=258						
NSY				*e*S	**Sn**	**07 37 38.3**	**+0.6**
	baz=258						
PTSB	**Yuanli**	**1.36**	**260**	*e*P	**Pn**	**07 37 21.3**	**+0.4**
	baz=260						
PTSB				*e*S	**Sn**	**07 37 38.9**	**+0.2**
	baz=260						
HGSD	**Ruisui**	**1.38**	**210**	*e*P	**Pn**	**07 37 21.6**	**+0.5**
	baz=220						
HGSD				*e*S	**Sn**	**07 37 39.3**	**+0.3**
	baz=220						
SMLT	**Sun Moon Lake**	**1.42**	**235**	P	**Pn**	**07 37 22.4**	**+0.7**
	baz=235						
SMLT				*e*S	**Sn**	**07 37 41.5**	**+1.4**
	baz=235						
SSLB	**Suanglung**	**1.44**	**231**	*e*P	**Pn**	**07 37 22.1**	**+0.2**
	baz=226						
SSLB				*e*S	**Sn**	**07 37 41.2**	**+0.8**
	baz=226						
IRIF	**Iriomote-Funau**	**1.46**	**104**	P	**Pn**	**07 37 22.0**	**-0.1**
IRIF				S	**Sn**	**07 37 40.1**	**-0.8**
YULB	**Yu-li**	**1.53**	**212**	*e*P	**Pn**	**07 37 21.7**	**-1.3**
	baz=219						
TWF1	**Yuli**	**1.56**	**211**	*e*P	**Pn**	**07 37 22.2**	**-1.3**
	baz=219						
WJS	**Zhushan**	**1.58**	**237**	*e*P	**Pn**	**07 37 25.1**	**+1.4**
	baz=247						
WJS				*e*S	**Sn**	**07 37 44.6**	**+0.9**
	baz=247						
HATJ	**Hateruma jima**	**1.62**	**113**	P	**Pn**	**07 37 24.5**	**+0.3**
HATJ				S	**Sn**	**07 37 44.7**	**+0.2**
FULB	**Fuli**	**1.69**	**209**	*e*P	**Pn**	**07 37 25.3**	**0.0**
	baz=216						
ALS	**Alishan**	**1.72**	**227**	*e*P	**Pn**	**07 37 27.3**	**+1.5**
	baz=220						
ALS				*e*S	**Sn**	**07 37 49.2**	**+1.8**
	baz=220						
JKRS	**Kuro-shima**	**1.73**	**105**	P	**Pn**	**07 37 26.2**	**+0.5**
JKRS				*e*S	**Sn**	**07 37 47.5**	**+0.3**
CHN5	**Tsauling**	**1.75**	**232**	*e*P	**Pn**	**07 37 26.6**	**+0.6**
	baz=241						
WGK	**Gukeng**	**1.78**	**236**	*e*P	**Pn**	**07 37 27.2**	**+0.8**
	baz=244						
WGK				*e*S	**Sn**	**07 37 50.0**	**+1.5**
	baz=244						
WDLH	**Douliu**	**1.80**	**236**	*e*P	**Pn**	**07 37 27.3**	**+0.7**
	baz=246						
WDLH				*e*S	**Sn**	**07 37 49.5**	**+0.7**
	baz=246						
JIJ	**Ishigaki jima**	**1.82**	**100**	P	**Pn**	**07 37 26.8**	**-0.1**
JIJ				S	**Sn**	**07 37 48.3**	**-1.0**
ELDTW	**Lidau**	**1.84**	**215**	*e*P	**Pn**	**07 37 27.6**	**+0.4**
	baz=216						
ELDTW				*e*S	**Sn**	**07 37 48.1**	**-1.7**
	baz=216						
RLNB	**Erlin**	**1.84**	**245**	*e*P	**Pn**	**07 37 27.3**	**+0.2**
	baz=252						
RLNB				*e*S	**Sn**	**07 37 49.9**	**+0.1**
	baz=252						
JISG	**Ishigakijimahi**	**1.95**	**93**	P	**Pn**	**07 37 28.9**	**+0.4**
JISG				S	**Sn**	**07 37 52.0**	**-0.2**
TPUB	**Ta-pu**	**1.98**	**226**	*e*P	**Pn**	**07 37 30.2**	**+1.2**
	baz=236						
TPUB				*e*S	**Sn**	**07 37 54.3**	**+1.1**
	baz=236						
STYT	**Tauyuan**	**2.00**	**221**	*e*P	**Pn**	**07 37 30.5**	**+1.1**
	baz=220						
STYT				*e*S	**Sn**	**07 37 55.1**	**+1.4**
	baz=220						
WTP	**Ta-pu**	**2.03**	**225**	*e*P	**Pn**	**07 37 30.5**	**+0.8**
	baz=236						
WTP				*e*S	**Sn**	**07 37 56.2**	**+1.8**
	baz=236						
TWH	**Lutao**	**2.08**	**198**	*e*P	**Pn**	**07 37 29.1**	**-1.1**
	baz=198						
TWH				*e*S	**Sn**	**07 37 52.7**	**-2.7**
	baz=198						
TWK	**Hsinying**	**2.10**	**228**	*e*P	**Pn**	**07 37 31.1**	**+0.5**
	baz=217						
TWK				*e*S	**Sn**	**07 37 56.9**	**+0.9**
	baz=217						
TWG	**Pinlang**	**2.12**	**209**	*e*P	**Pn**	**07 37 30.8**	**-0.1**
	baz=204						
TWG				*e*S	**Sn**	**07 37 53.8**	**-2.7**
	baz=204						
TWGBT	**Beinan**	**2.12**	**208**	*e*P	**Pn**	**07 37 30.8**	**0.0**
	baz=204						
TWGBT				*e*S	**Sn**	**07 37 53.6**	**-2.9**
	baz=204						
CHN1	**Nanshi**	**2.13**	**225**	*e*P	**Pn**	**07 37 31.6**	**+0.6**
	baz=225						
CHN1				*e*S	**Sn**	**07 37 57.5**	**+0.8**
	baz=225						
SGST	**Jiashian**	**2.17**	**223**	*e*P	**Pn**	**07 37 33.1**	**+1.6**
	baz=222						
SGST				*e*S	**Sn**	**07 37 58.8**	**+1.2**
	baz=222						
SLGT	**Liugui**	**2.20**	**220**	*e*P	**Pn**	**07 37 33.2**	**+1.3**
	baz=219						
SLGT				*e*S	**Sn**	**07 37 59.9**	**+1.6**
	baz=219						
JTJ	**Tarama**	**2.30**	**91**	P	**Pn**	**07 37 33.5**	**+0.3**
JTJ				*e*S	**Sn**	**07 38 01.3**	**+0.6**
MATB	**Ma-tsu**	**2.48**	**306**	*e*P	**Pn**	**07 37 35.1**	**-0.5**
	baz=305						
VWUC	**VWUC**	**2.49**	**277**	*e*P	**Pn**	**07 37 35.3**	**-0.5**
	baz=276						
MASBT	**Mashibuluo**	**2.51**	**215**	*e*P	**Pn**	**07 37 36.8**	**+0.7**
	baz=214						
MASBT				*e*S	**Sn**	**07 38 06.7**	**+0.9**
	baz=214						
EAST	**Anshuo**	**2.60**	**208**	*e*P	**Pn**	**07 37 38.6**	**+1.2**
	baz=207						
PNG	**Penghu**	**2.64**	**245**	*e*P	**Pn**	**07 37 36.7**	**-1.1**
	baz=244						
PNG				*e*S	**Sn**	**07 38 07.3**	**-1.7**
	baz=244						
PHUB	**P'eng-hu**	**2.65**	**244**	*e*P	**Pn**	**07 37 36.5**	**-1.4**
	baz=244						
PHUB				*e*S	**Sn**	**07 38 07.4**	**-1.8**
	baz=244						
WDGT	**Dungji**	**2.71**	**239**	*e*P	**Pn**	**07 37 38.3**	**-0.4**
	baz=238						
WDGT				*e*S	**Sn**	**07 38 08.1**	**-2.5**
	baz=238						
JIRB	**Irabujima**	**2.73**	**87**	P	**Pn**	**07 37 39.6**	**+0.6**
JIRB				S	**Sn**	**07 38 11.2**	**+0.2**
JIKM	**Ikemajima**	**2.80**	**85**	P	**Pn**	**07 37 41.4**	**+1.4**
JIKM				*e*S	**Sn**	**07 38 13.8**	**+1.0**
VCHM	**Qimei**	**2.92**	**240**	*e*P	**Pn**	**07 37 40.5**	**-1.0**
	baz=239						
VCHM				*e*S	**Sn**	**07 38 13.2**	**-2.4**
	baz=239						
KNM	**Kinmen**	**3.42**	**266**	*e*P	**Pn**	**07 37 50.1**	**+1.8**
	baz=265						
JOW	**Kunigami**	**5.90**	**68**	*e*P	**Pn**	**07 38 21.9**	**-0.2**
	baz=72						

*IDC **12** 08:00:21.2±1.1, 15°.31S×75°.30W, h0km, mb3.7/3, mb1 3.8/5, mb1mx3.5/42, mbtmp3.6/5, ML2.9/2, MS3.0/4, Ms1 3.0/4, ms1mx2.7/41, Error ellipse: s-maj=47.5km s-min=26.3km az=58.0*

ISC 12 08:00:24.9±1.1**, 15°.2S**±0°.2×**75°.4W**±0°.1**, h26km, n16, σ1s.50**/9**, mb3.8**/3**, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	**Nana**	**3.46**	**336**	Pn	**Pn**	**08 01 17.4**	**+0.2**
	0.7nm,0.3s,baz=148,slow=15,SNR=3.2						
NNA				Pg	**Pb**	**08 01 24.4**	**-1.2**
	8.7nm,0.3s,baz=137,slow=12,SNR=15						
NNA				Lg	Lg	08 02 07.5	
	28nm,0.3s,baz=144,slow=19,SNR=5.2						
NNA				LR	LR	08 03 03.7	
	comp=Z,68nm,19.0s,baz=116,slow=45						
LPAZ	**La Paz**	**7.07**	**100**	Pn	Pn	08 02 13.7	+6.4
	2.9nm,0.3s,baz=287,slow=10.0,SNR=80						
LPAZ				Sn	**Sn**	**08 03 29.0**	**+1.8**
	baz=281,slow=2.8,SNR=1.3						
LPAZ				LR	LR	08 05 06.3	
	comp=Z,49nm,20.5s,baz=308,slow=41						
ATAH	**Atahualpa**	**8.51**	**339**	Sn	Sn	08 04 15.0	+13
	0.5nm,0.3s,baz=291,slow=21,SNR=1.9						
SIV	**San Ignacio**	**13.81**	**95**	Pn	**Pn**	**08 03 37.4**	**-1.8**
	0.1nm,0.3s,baz=265,slow=14,SNR=4.8						
SIV				LR	LR	08 09 20.8	
	comp=Z,60nm,18.6s,baz=118,slow=39						
TXAR	**Lajitas Array**	**51.99**	**328**	P	**P**	**08 09 34.3**	**+2.0**
	0.4nm,0.7s,baz=145,slow=10.0,SNR=3.3						
SNAA	**Sanae**	**70.23**	**161**	P	**P**	**08 11 34.8**	**-0.6**
	0.4nm,0.5s,baz=271,slow=8.5,SNR=12						
KOWA	**Kowa**	**76.45**	**71**	LR	LR	08 44 03.6	
	comp=Z,55nm,18.0s,baz=106,slow=34						
TORD	**Torodi Ar. Bea**	**81.28**	**74**	P	**P**	**08 12 39.7**	**+0.3**
	1.2nm,0.7s,baz=263,slow=5.3						
H11N3	**WAKE ISLAND Hy**	**120.68**	**284**	T	T	10 31 11.5	
	baz=97,slow=74,SNR=4.9						
H11N2	**WAKE ISLAND Hy**	**120.69**	**284**	T	T	10 31 13.8	
	baz=97,slow=74,SNR=6.0						
H11N1	**WAKE ISLAND Hy**	**120.69**	**284**	T	T	10 31 10.4	
	baz=97,slow=74,SNR=4.0						
H11S2	**WAKE ISLAND Hy**	**120.73**	**283**	T	T	10 31 12.9	
	baz=97,slow=74,SNR=14						
H11S1	**WAKE ISLAND Hy**	**120.74**	**283**	T	T	10 31 15.6	
	baz=97,slow=74,SNR=10						
H11S3	**WAKE ISLAND Hy**	**120.75**	**283**	T	T	10 31 14.4	
	baz=97,slow=74,SNR=11						
WRA	**Warramunga Arr**	**134.49**	**221**	PKP	**PKPdf**	**08 19 41.1**	**-0.6**
	0.4nm,0.9s,baz=152,slow=1.9,SNR=3.4						
SONM	**Songino Array**	**147.39**	**358**	PKPbc	**PKPbc**	**08 20 07.3**	**+0.7**
	0.4nm,0.8s,baz=5.7,slow=1.4,SNR=3.7						

IDC 12 08:03:33.6±1.8**, 2°.72N**×**127°.13E, h0km, mb3.6**/4**, mb1 3.7**/4**, mb1mx3.4**/57**, mbtmp3.6**/4**, Error ellipse: s-maj=154.2km s-min=21.4km az=67.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.60**	**163**	P	P	08 08 45.4	-1.0
	0.8nm,0.4s,baz=342,slow=10,SNR=25						
ASAR	**Alice Springs**	**27.04**	**166**	P	P	08 09 18.4	+0.6
	0.3nm,0.3s,baz=346,slow=11,SNR=7.5						
MKAR	**Makanchi Array**	**58.61**	**325**	P	P	08 13 32.5	0.0
	0.5nm,0.4s,baz=124,slow=8.0,SNR=7.8						
KURBB	**Kurchatov Arra**	**62.80**	**328**	P	P	08 14 01.2	+0.2
	0.4nm,0.7s,baz=129,slow=6.2,SNR=3.5						

*IDC **12** 08:11:44.3±1.2, 15°.14S×75°.30W, h0km, mb3.8/3, mb1 3.7/5, mb1mx3.5/41, mbtmp3.7/5, ML3.2/2, MS2.8/4, Ms1 2.9/4, ms1mx2.7/41, Error ellipse: s-maj=37.5km s-min=16.9km az=63.0*

*ISCJB **12** 08:11:46.7±0.9, 15°.28S±0°.10×75°.3W±0°.1, h28km, mb4.1/3, Error ellipse: s-maj=19.5km s-min=12.4km az=156.8*

*NEIC **12** 08:11:49.3±0.6, 15°.20S×75°.31W, h35km, mb4.3/2, Error ellipse: s-maj=15.7km s-min=10.4km az=53.0*

ISC 12 08:11:47.7±0.8**, 15°.19S**±0°.09×**75°.52W**±0°.10**, h28km, n26, σ1s.74**/20**, mb4.1**/4**, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	**Nana**	**3.44**	**338**	Pn	**Pn**	**08 12 41.0**	**+1.5**
	2.7nm,0.3s,baz=148,slow=12,SNR=8.0						
NNA				Pg	**Pb**	**08 12 47.4**	**-0.5**
	18nm,0.3s,baz=151,slow=11,SNR=20						
NNA				Lg	Lg	08 13 32.3	
	67nm,0.3s,baz=242,slow=14,SNR=7.1						
NNA				LR	LR	08 14 18.8	
	comp=Z,132nm,19.9s,baz=136,slow=44						
MNMC	**Minye Minye**	**6.88**	**126**	*e*Pn	**Pn**	**08 13 26.5**	**-0.5**
LPAZ	**La Paz**	**7.20**	**100**	Pn	Pn	08 13 36.3	+4.7
	3.7nm,0.3s,baz=277,slow=10,SNR=91						
LPAZ				Sn	**Sn**	**08 14 56.9**	**+4.1**
	baz=294,slow=14,SNR=1.1						
LPAZ				LR	LR	08 16 58.3	
	comp=Z,90nm,19.7s,baz=261,slow=45						
PB01	**IPOC Station P**	**8.17**	**136**	*e*Pn	**Pn**	**08 13 42.9**	**-1.6**
ATAH	**Atahualpa**	**8.49**	**340**	Pn	Pn	08 14 00.6	+11
	0.6nm,0.3s,baz=167,slow=5.8,SNR=3.0						
ATAH				Sn	Sn	08 15 49.7	+25
	0.7nm,0.3s,baz=313,slow=23,SNR=1.9						
ATAH				LR	LR	08 17 37.8	
	comp=Z,30nm,20.6s,baz=210,slow=42						
PB04	**IPOC Station P**	**8.73**	**145**	*e*Pn	**Pn**	**08 13 49.8**	**-2.6**
SAML	**Samuel**	**13.56**	**64**	*e*Pn	**Pn**	**08 14 58.5**	**+0.2**
SIV	**San Ignacio**	**13.94**	**95**	Pn	**Pn**	**08 14 59.9**	**-3.6**
	0.1nm,0.3s,baz=276,slow=16,SNR=4.1						
SIV				LR	LR	08 21 23.8	
	comp=Z,87nm,19.9s,baz=292,slow=42						
PTGA	**Pitinga**	**21.03**	**48**	P	**P**	**08 16 27.3**	**-2.2**
	0.6nm,0.3s,baz=249,slow=17,SNR=2.2						
TX31	**Lajitas Ar. Si**	**51.95**	**328**	*e*P	**P**	**08 20 53.6**	**-0.8**
SNAA	**Sanae**	**70.25**	**161**	P	**P**	**08 22 58.4**	**+0.4**
	0.7nm,0.5s,baz=276,slow=10,SNR=14						
SNAA	**Sanae**	**70.25**	**161**	*e*P	**P**	**08 22 58.4**	**+0.4**
	3.7nm,1.2s						
QSPA	**South Pole Qui**	**74.96**	**180**	*e*P	**P**	**08 23 27.4**	**+1.1**
	5.2nm,1.3s						
TOA1	**Torodi Ar. Sit**	**81.41**	**74**	*e*P	**P**	**08 24 03.0**	**+0.3**
TOA0	**Torodi Ar. Sit**	**81.41**	**74**	*e*P	**P**	**08 24 02.8**	**+0.1**
TORD	**Torodi Ar. Bea**	**81.41**	**74**	P	**P**	**08 24 03.0**	**+0.3**
	1.5nm,0.9s,baz=250,slow=5.4						
H11N3	**WAKE ISLAND Hy**	**120.56**	**284**	T	T	10 42 38.4	
	baz=97,slow=74,SNR=22						
H11N2	**WAKE ISLAND Hy**	**120.57**	**284**	T	T	10 42 42.0	
	baz=97,slow=74,SNR=43						
H11N1	**WAKE ISLAND Hy**	**120.57**	**284**	T	T	10 42 39.8	
	baz=97,slow=74,SNR=18						
H11S2	**WAKE ISLAND Hy**	**120.61**	**283**	T	T	10 42 48.1	
	baz=97,slow=75,SNR=30						
H11S1	**WAKE ISLAND Hy**	**120.61**	**283**	T	T	10 42 41.0	
	baz=97,slow=75,SNR=41						
H11S3	**WAKE ISLAND Hy**	**120.62**	**283**	T	T	10 42 42.3	
	baz=97,slow=75,SNR=34						
WR1	**Warramunga Arr**	**134.38**	**221**	*e*PKPdf	**PKPdf**	**08 31 05.0**	**+1.0**
WRA	**Warramunga Arr**	**134.38**	**221**	PKP	**PKPdf**	**08 31 05.0**	**+1.0**
	0.4nm,0.5s,baz=142,slow=1.7,SNR=5.3						
SONA0	**Songino Array**	**147.41**	**358**	*e*PKPbc	**PKPab**	**08 31 31.0**	**0.0**
SONM	**Songino Array**	**147.41**	**358**	PKPbc	**PKPab**	**08 31 31.0**	**0.0**
	0.5nm,0.6s,baz=358,slow=2.0,SNR=4.3						

*IDC **12** 08:25:10.5±1.5, 1°.17N×127°.01E, h0km, mb3.4/4, mb1 3.5/4, mb1mx3.3/59, mbtmp3.4/4, Error ellipse: s-maj=152.9km s-min=23.7km az=70.0*

*ISCJB **12** 08:25:17.7±0.9, 1°.09N±0°.10×126°.8E±0°.2, h72km, mb3.4/4, Error ellipse: s-maj=26.4km s-min=13.0km az=165.9*

*DJA **12** 08:25:20.7±0.6, 1°N±5°×12°7E±°, h38km±15km, M3.5/7, MLv3.5/7*

ISC 12 08:25:19.3±1.1**, 1°.1N**±0°.1×**126°.9E**±0°.2**, h72km, n8, σ0s.51**/8**, mb3.4**/4**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**0.58**	**121**	P	**Pn**	**08 25 32.6**	**-0.5**
LBMI	**Labuha**	**1.81**	**160**	P	**Pn**	**08 25 49.1**	**+0.6**
SANI	**Sanana**	**3.23**	**196**	P	**Pn**	**08 26 07.2**	**-0.4**
NLAI	**Namlea**	**4.29**	**177**	P	**Pn**	**08 26 22.3**	**+0.1**
NLAI				S	Sn	08 26 48.9	-22
WRA	**Warramunga Arr**	**22.13**	**161**	P	**P**	**08 30 09.2**	**0.0**
	0.3nm,0.4s,baz=341,slow=11,SNR=11						
ASAR	**Alice Springs**	**25.52**	**165**	P	**P**	**08 30 40.8**	**-0.6**
	0.2nm,0.4s,baz=347,slow=12,SNR=1.4						
SONM	**Songino Array**	**49.85**	**342**	P	**P**	**08 34 05.7**	**+0.4**
	0.5nm,0.8s,baz=167,slow=6.8,SNR=3.0						
KURBB	**Kurchatov Arra**	**64.05**	**328**	P	**P**	**08 35 45.5**	**0.0**
	1.4nm,0.7s,baz=120,slow=5.5,SNR=2.9						

*ASRS **12** 08:30:25.6, 53°.59N×87°.66E, M3.0, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

*NNC **12** 08:30:33.1±2.5, 53°.41N×87°.44E, h0km, mb4.1, mpv3.7, Error ellipse: s-maj=22.0km s-min=15.5km az=1.0, Suspected Mining explosion.*

IDC 12 08:30:31.4±2.0**, 53°.49N**×**87°.55E, h0km, mb1 3.5**/4**, mb1mx3.2**/73**, mbtmp3.5**/4**, ML3.4**/3**, 3C-5D, Error ellipse: s-maj=18.1km s-min=11.9km az=54.0, Southwestern Siberia**

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

I46RU	**ZALESOVO INFRA**	1.69	287	*i*		08 41 44.1	
	baz=104,slow=330,SNR=3.4						
ZALV	**Zalesovo Beam**	1.69	287	Pg	Pn	08 31 01.0	-1.1
	13nm,0.3s,baz=102,slow=14,SNR=70						
ZALV				Lg	Lg	08 31 24.2	
	19nm,0.3s,baz=103,slow=21,SNR=16						
KURK	**Kurchatov**	6.16	247	⇑Pn	Pn	08 32 03.5	-0.1
	4.2nm,0.6s						
KURK				⇓Sn	Sn	08 33 16.1	+1.4
	3.1nm,0.6s						
KURK				⇓Lg	Lg	08 33 45.1	
	20nm,0.7s						
KURBB	**Kurchatov Arra**	6.26	246	Pn	Pn	08 32 05.8	+0.9
	0.4nm,0.3s,baz=62,slow=14,SNR=20						
KURBB				Sn	Sn	08 33 16.5	-0.5
	0.1nm,0.3s,baz=64,slow=24,SNR=4.7						
KURBB				Lg	Lg	08 33 47.5	
	0.1nm,0.3s,baz=61,slow=30,SNR=4.3						
KURBB	**Kurchatov Arra**	6.26	246	⇓Pn	Pn	08 32 05.4	+0.5
	9.0nm,0.7s						
KURBB				⇑Sn	Sn	08 33 17.0	-0.1
	14nm,0.7s						
KURBB				⇓Lg	Lg	08 33 48.8	
	28nm,0.8s						
MK31	**Makanchi Array**	7.50	209	⇑Pn	Pn	08 32 23.0	+1.0
	2.3nm,0.6s,baz=30,slow=13,SNR=30						
MK31				⇓Sn	Sn	08 33 47.0	-0.8
	2.7nm,0.6s,baz=29,slow=27,SNR=6.4						
MK31				Lg	Lg	08 34 31.1	
	8.9nm,0.8s,baz=30,slow=31,SNR=6.8						
MKAR	**Makanchi Array**	7.50	209	Pn	Pn	08 32 23.4	+1.4
	0.8nm,0.3s,baz=27,slow=12,SNR=32						
MKAR				Sn	Sn	08 33 47.5	-0.3
	0.5nm,0.3s,baz=29,slow=28,SNR=11						
MKAR				Lg	Lg	08 34 26.8	
	0.5nm,0.3s,baz=23,slow=32,SNR=9.2						
BVAR	**Borovoye Array**	10.29	274	Pn	Pn	08 32 59.2	-1.1
	0.4nm,0.3s,baz=78,slow=11,SNR=5.1						
BVAR				Sn	Sn	08 34 52.3	-3.9
	0.5nm,0.3s,baz=82,slow=22,SNR=9.2						
SONM	**Songino Array**	13.21	108	Pn	Pn	08 33 38.8	-1.4
	baz=299,slow=15,SNR=1.8						
SONM				Lg	Lg	08 37 21.6	
	baz=298,slow=24,SNR=3.7						

ISCJB ***12*** *08:49:44.5±0.3, 32°.21N±0°.02×115°.24W±0°.02, h19^{km}±3^{km}, Error ellipse: s-maj=3.1km s-min=2.5km az=1.0*

ECX ***12*** *08:49:45.7±0.6, 32°.21N×115°.30W, h6^{km}, MD3.3, ML3.6*

MEX ***12*** *08:49:45.7±0.5, 32°.38N×115°.12W, h29^{km}±5^{km}, MD3.7*

NEIC ***12*** *08:49:45.7±0.0, 32°.21N×115°.30W, h6^{km}, ML3.3(ECX), ML3.4(PAS), After ECX.*

ISC 12 08:49:44.8±0.9**, 32°.22N**±0°.02×**115°.30W**±0°.02**, h18**^{km}±2^{km}**, n91, σ1**^{s}**.10**/125**, 4C-6D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPBX	**Cerro Prieto**	0.20	358	*e*P	Pb	08 49 48.8	-0.6
CPBX				*e*S	Sb	08 49 52.9	+0.5
CPBX				IAML		08 49 53.7	
	comp=E,45μm,0.1s						
CPBX				⇓*e*		08 49 53.7	
MBIG	**Mexicali**	0.21	23	*e*P	Pg	08 49 50.0	+0.2
MBIG	**Mexicali**	0.21	23	*e*P	Pb	08 49 49.8	+0.3
MBIG				*e*S	Sb	08 49 52.2	-0.4
MBIG	**Mexicali**	0.21	23	*e*Pg	Pg	08 49 50.0	+0.2
DREC	**Desert Rsrch C**	0.60	348	*e*P	Pb	08 49 56.5	-0.2
DREC	**Desert Rsrch C**	0.60	348	*e*Pg	Pg	08 49 57.3	+0.6
DREC				*e*Sg	Sn	08 50 07.1	-0.5
ERPC	**Ernies Place**	0.61	329	*e*Pg	Pg	08 49 57.2	+0.3
WESC	**Westside Schoo**	0.66	326	⇓*i*P	Pb	08 49 57.8	+0.2
WESC	**Westside Schoo**	0.66	326	*e*Pg	Pg	08 49 57.9	+0.2
YUH	**Yuha Desert**	0.68	309	⇓*i*P	Pb	08 49 57.7	-0.4
YUH	**Yuha Desert**	0.68	309	*e*Pg	Pb	08 49 57.7	-0.4
YMD	**Yuma Desert**	0.72	62	⇑*i*P	Pb	08 49 58.5	-0.2
COK	**Cook Ranch**	0.73	330	*e*P	Pb	08 49 58.7	-0.2
RMX	**La Rumorosa**	0.77	300	⇓*e*P	Pb	08 49 58.3	-1.3
RMX				*e*S	Sb	08 50 07.5	-2.3
RMX				IAML		08 50 08.1	
	comp=N,2μm,0.2s						
RMX				*e*		08 50 08.1	
BTCC	**Brunts Corner**	0.80	5	*e*Sg	Sb	08 50 10.4	0.0
IKP	**In-Ko-Pah, Jac**	0.81	302	P	Pb	08 50 00.1	-0.3
	baz=123,SNR=129						
IKP				S	Sb	08 50 10.6	-0.5
	baz=123						
IKP	**In-Ko-Pah, Jac**	0.81	302	⇓*i*P	Pb	08 50 00.1	-0.3
SWSC	**Sam W. Stewart**	0.84	330	P	Pb	08 50 00.1	-0.8
	baz=150,SNR=55						
SWSC				S	Sb	08 50 11.4	-0.4
	baz=150						
CRR	**Carrizo Plain**	0.88	320	*e*Pg	Pb	08 50 00.9	-0.6
GLA	**Glamis**	0.92	25	P	Pb	08 50 01.4	-0.9
	baz=205,SNR=183						
GLA				S	Sb	08 50 13.2	-0.9
	baz=205						
GLA	**Glamis**	0.92	25	*e*Pg	Pb	08 50 01.3	-0.9
GLA				*e*Sg	Sb	08 50 13.4	-0.7
ZAX	**El Zacaton**	1.09	230	*e*P	Pb	08 50 04.6	-0.5
ZAX				*e*S	Sn	08 50 19.3	-0.5
CBX	**Cerro Bola**	1.16	275	⇑*e*P	Pn	08 50 05.9	-0.3
CBX				*e*S	Sn	08 50 21.5	-0.2
CBX				IAML		08 50 26.6	
	comp=E,1μm,0.4s						
CBX				⇑*e*		08 50 26.6	
CBX	**Cerro Bola**	1.16	275	*e*P	Pn	08 50 06.0	-0.3
CBX				*e*S	Sn	08 50 21.5	-0.2
CBX	**Cerro Bola**	1.16	275	*e*Pn	Pn	08 50 06.0	-0.3
CBX				*e*Sn	Sn	08 50 21.5	-0.2
MONP2	**Monument Peak**	1.17	306	P	Pn	08 50 05.4	-1.0
	baz=126,SNR=131						
MONP2				S	Sb	08 50 20.9	-0.4
	baz=126						
SPIG	**San Pedro Mart**	1.18	187	*e*P	Pn	08 50 06.4	-0.2
SPIG	**San Pedro Mart**	1.18	187	*e*P	Pn	08 50 06.4	-0.2
SPIG				*i* S	Sg	08 50 23.5	+0.4
SPIG	**San Pedro Mart**	1.18	187	*e*Pg	Pn	08 50 06.4	-0.2
SPIG				*e*Sn	Sn	08 50 22.1	-0.2
SPX	**San Pedro Mart**	1.18	187	*e*P	Pn	08 50 06.4	-0.2
SPX				IAML		08 50 25.0	
	comp=E,878nm,0.3s						
SPX				⇓*e*		08 50 25.0	
SPX	**San Pedro Mart**	1.18	187	*e*Pg	Pn	08 50 06.4	-0.2
SPX				*e*Sg	Sb	08 50 21.4	-0.3
TJIG	**Tijuana**	1.19	281	⇑*e*P	Pn	08 50 06.1	-0.3
TJIG	**Tijuana**	1.19	281	*e*P	Pn	08 50 06.1	-0.3
TJIG				*e*S	Sb	08 50 21.5	-0.3
ECNX	**Esteban Cantu**	1.24	244	*e*P	Pb	08 50 07.2	-0.5
ECNX				*e*P	Pn	08 50 06.9	-0.3
BAR	**Barrett**	1.25	292	*e*P	Pn	08 50 07.2	-0.1
BAR	**Barrett**	1.25	292	*e*Pn	Pn	08 50 07.2	-0.1
BAR				*e*Sn	Sn	08 50 23.9	+0.1
PBX	**Punta Banda**	1.30	249	*e*P	Pn	08 50 07.9	-0.2
113A	**Mohawk Valley,**	1.40	67	*e*Pn	Pn	08 50 08.9	-0.4
BORC	**Borrego Spring**	1.41	318	*e*Pn	Pb	08 50 10.6	+0.1
BC3	**Big Chuckawall**	1.44	355	P	Pn	08 50 08.9	-1.1
	baz=174,SNR=44						
BC3				S	Sn	08 50 26.3	-2.3
	baz=174						
EML	**El Monte Cty P**	1.47	298	*e*Pn	Pb	08 50 11.4	-0.1
EML				*e*Sn	Sb	08 50 30.4	+0.4
SDRC	**San Diego Road**	1.49	291	*e*P	Pn	08 50 11.1	+0.6
DPP	**Dos Picos Cty**	1.59	300	*e*Pn	Pb	08 50 13.8	+0.1
DPP				*e*Sn	Sb	08 50 34.1	+0.6
HWB	**Hans Werner Br**	1.62	300	*e*Pn	Pb	08 50 14.0	-0.1
HWB				*e*Sn	Sg	08 50 36.0	-1.1
Y12C	**Blythe**	1.66	23	*e*Pn	Pn	08 50 13.8	+0.9
109C	**Camp Elliot, M**	1.67	294	Pb	Pb	08 50 14.7	-0.2
	baz=114,SNR=41						
109C				Sb	Sb	08 50 36.4	+0.8
	baz=114						
CPE	**Camp Elliot**	1.67	294	*e*Pn	Pn	08 50 13.4	+0.4
CPE				*e*Sn	Sb	08 50 36.2	+0.6
FRD	**Ford Ranch, An**	1.68	320	P	Pn	08 50 12.3	-1.0
	baz=139,SNR=41						
FRD				Sb	Sb	08 50 36.9	+0.8
	baz=139						
FRD	**Ford Ranch, An**	1.68	320	*e*Sn	Sb	08 50 37.7	+1.5
XPFO	**Piæon Flat**	1.70	325	*e*Pn	Pn	08 50 12.5	-1.1
PFO	**Pinyon Flats O**	1.70	325	P	Pn	08 50 12.5	-1.2
	baz=145,SNR=32						
PFO				S	Sn	08 50 32.7	-2.3
	baz=145						
PFO	**Pinyon Flats O**	1.70	325	*e*Pn	Pn	08 50 12.4	-1.2
SNDA	**J Saunders Pla**	1.73	321	*e*Pn	Pn	08 50 13.4	-0.7
SNDA				*e*Pg	Pb	08 50 16.8	+0.7
SNDA				*e*Sn	Sg	08 50 40.1	-0.6
PLM	**Palomar**	1.74	311	*e*Pn	Pn	08 50 14.0	-0.2
PLM				*e*Sn	Sg	08 50 39.6	-1.3
CRY	**Cary Ranch**	1.81	318	*e*Pn	Pb	08 50 17.4	-0.1
IRM	**Iron Mountain**	1.94	4	P	Pn	08 50 16.2	-0.6
	baz=184,SNR=41						
IRM				S	Sn	08 50 38.8	-1.9
	baz=184						
MURC	**Murrieta**	2.11	311	Sb	Sb	08 50 50.7	+2.3
	baz=131						
214A	**Organ Pipe Nat**	2.12	96	P	Pn	08 50 18.5	-0.9
	baz=277,SNR=5.4						
214A				S	Sn	08 50 45.5	+0.3
	baz=277						
PDMCI	**Parker Dam,Lak**	2.29	25	Sb	Sb	08 50 54.9	+1.3
	baz=205						
RVR	**Riverside**	2.49	316	*e*Pn	Pb	08 50 26.8	-2.1
Y14A	**Wickenburg**	2.58	48	*e*Pn	Pn	08 50 25.8	+0.2
NEE2	**Needles Airpor**	2.61	12	S	Sn	08 50 56.3	-0.8
	baz=192						
BFSC	**Mount Baldy Ra**	2.83	316	Sb	Sb	08 51 10.8	+1.7
	baz=135						
SCI2	**San Clemente I**	2.85	286	Sb	Sb	08 51 11.8	+2.2
	baz=105						
LDFC	**Landfair**	2.86	3	*e*Pn	Pn	08 50 30.7	+1.2
CIS	**Catalina Islan**	2.88	295	Sb	Sb	08 51 12.2	+1.6
	baz=114						
FMP	**Fort Macarthur**	2.93	301	Sb	Sb	08 51 13.5	+1.6
	baz=120						
MWC	**Mount Wilson**	3.06	312	*e*Pg	Pb	08 50 39.9	+1.1
W13A	**Hualapai Mount**	3.11	22	*e*Pn	Pn	08 50 33.0	0.0
DECC	**Green Verdugo**	3.26	309	Sb	Sb	08 51 23.8	+2.4
	baz=128						
TUC	**Tucson**	3.82	87	P	Pn	08 50 42.5	-0.2
	baz=270						
TUC	**Tucson**	3.82	87	*e*Pn	Pn	08 50 42.7	0.0
TUC				*e*Sn	Sn	08 51 25.5	-1.8
X16A	**Lo Mia Camp, P**	3.90	55	*e*Pn	Pn	08 50 45.0	+1.0
SHPR	**Sheep Range**	4.28	1	*e*Pn	Pn	08 50 50.3	+1.2
WUAZ	**Wupatki**	4.63	44	P	Pn	08 50 55.9	+1.9
	baz=226,SNR=18						
WUAZ	**Wupatki**	4.63	44	*e*Pn	Pn	08 50 56.1	+2.1
TPNV	**Topopah Spring**	4.79	351	*e*Pn	Pn	08 50 58.2	+2.1
U15A	**North Rim**	4.88	30	*e*Pn	Pn	08 50 59.4	+1.9
X18A	**Snowflake**	5.03	61	*e*Pn	Pn	08 51 00.7	+1.2
LCMT	**Little Creek M**	5.07	19	*e*Pn	Pn	08 51 01.7	+1.7
319A	**Douglas**	5.19	98	*e*Pn	Pn	08 51 01.4	-0.2
W18A	**Petrified Fore**	5.46	57	P	Pn	08 51 07.3	+1.9
	baz=239,SNR=5.3						
W18A	**Petrified Fore**	5.46	57	*e*Pn	Pn	08 51 07.7	+2.2
CCUT	**Cedar City**	5.55	16	*e*Pn	Pn	08 51 08.5	+1.8
SZCU	**Shurtz Canyon**	5.66	18	*e*Pn	Pn	08 51 09.9	+1.8
PKCU	**Pink Cliffs**	5.76	24	*e*Pn	Pn	08 51 11.9	+2.3
121A	**Cookes Peak, D**	6.36	85	P	Pn	08 51 18.2	+0.4
	baz=269						
121A				S	Sn	08 52 28.2	-1.8
	baz=269						
NV11	**Mina Array Sit**	6.63	340	*e*Pn	Pn	08 51 20.2	-1.1
LENM	**Lemitar**	7.24	72	*e*Pn	Pn	08 51 31.2	+1.4
MVCO	**Mesa Verde**	7.49	46	*e*Pn	Pn	08 51 36.3	+3.0
PV17	**East Wray Mesa**	7.96	39	*e*Pn	Pn	08 51 38.4	-1.4

IDC 12 08:52:33.6±20.0**, 1°.24N**×**126°.71E, h376**^{km}±232^{km}**, mb3.0**/5**, mb1 3.1**/6**, mb1mx2.8**/54**, mbtmp3.7**/6**, Error ellipse: s-maj=152.2km s-min=26.0km az=52.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	19.25	183	P	P	08 56 32.5	+0.1
	0.1nm,0.3s,baz=5.8,slow=7.9,SNR=6.3						
WRA	**Warramunga Arr**	22.34	161	P	P	08 57 00.6	-0.6
	0.5nm,0.3s,baz=338,slow=9.1,SNR=45						
ASAR	**Alice Springs**	25.73	165	P	P	08 57 32.1	+0.5
	0.4nm,0.4s,baz=352,slow=7.8,SNR=12						
STKA	**Stephens Creek**	35.83	158	P	P	08 58 59.0	-0.2
	4.2nm,1.0s,baz=354,slow=7.5,SNR=6.9						
MKAR	**Makanchi Array**	59.59	326	P	P	09 01 59.3	+0.1
	0.2nm,0.5s,baz=122,slow=7.9,SNR=4.7						
KURBB	**Kurchatov Arra**	63.82	328	P	P	09 02 26.8	-0.1
	0.3nm,0.4s,baz=122,slow=6.9,SNR=3.1						

ISCJB ***12*** *09:11:05.8±0.7, 33°.31N±0°.03×35°.36E±0°.05, h10^{km}±9^{km}, Error ellipse: s-maj=8.3km s-min=3.5km az=36.1*

GII ***12*** *09:11:05.8±0.0, 33°.27N×35°.38E, h5^{km}, MD1.4/4*

CSEM ***12*** *09:11:08.1, 33°.34N×35°.42E, h1^{km}, ML2.5*

GRAL ***12*** *09:11:08.1±0.3, 33°.34N×35°.42E, h2^{km}±46^{km}, MD2.5*

ISC 12 09:11:05.6±1.1**, 33°.32N**±0°.03×**35°.36E**±0°.04**, h20**^{km}±3^{km}**, n18, σ0**^{s}**.43**/28**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNTI	**Hanita**	0.28	214	Pg	Pb	09 11 11.7	-0.3
HNTI				Sg	Sb	09 11 15.9	-0.4
KSDI	**Kefar Szold**	0.28	116	Pg	Pb	09 11 11.8	-0.2
KSDI				Sg	Sb	09 11 16.2	-0.1
MMA0B	**Mount Meron ar**	0.30	173	Pg	Pg	09 11 12.1	-0.3
MMA0B				Sg	Sb	09 11 16.8	-0.2
NATI	**Neve Ativ**	0.32	100	Pg	Pg	09 11 12.6	0.0
NATI				Sg	Sg	09 11 17.4	0.0
QRWL	**Qaraoun**	0.35	50	*e*P	Pb	09 11 13.5	+0.2
QRWL				*e*S	Sg	09 11 17.6	-0.9
QRWL	**Qaraoun**	0.35	50	*e*P	Pb	09 11 13.5	+0.2
QRWL				*e*S	Sg	09 11 17.6	-0.9
DQRL	**Deir Qamar**	0.42	24	*e*P	Pb	09 11 15.1	+0.5
DQRL	**Deir Qamar**	0.42	24	*e*P	Pb	09 11 15.1	+0.5
RCY	**Rachaya**	0.44	66	*e*P	Pb	09 11 15.0	+0.3
RCY				*e*S	Sg	09 11 20.1	-0.8
KSHT	**Keshet**	0.51	131	Pg	Pg	09 11 16.7	+0.8
BLGI	**Bet Lehem HaGe**	0.60	194	Pg	Pb	09 11 17.4	0.0
BLGI				Sg	Sg	09 11 26.1	+0.4
OFRI	**‘Ofer**	0.76	204	Pg	Pb	09 11 20.4	+0.1
OFRI				Sg	Sn	09 11 31.8	-0.5
MMLI	**Mount Malkishu**	0.88	177	Pg	Pb	09 11 22.4	+0.2
HMDT	**Nahal Hemdat**	1.07	172	Pg	Pn	09 11 25.8	+0.3
HMDT				Sg	Sg	09 11 40.7	+0.2
HWQ	**Hawqa**	1.07	27	*e*P	Pg	09 11 26.7	+0.1
HWQ	**Hawqa**	1.07	27	*e*P	Pg	09 11 26.7	+0.1
SLTI	**Sal’it**	1.11	194	Sg	Sg	09 11 42.0	+0.3
DSI	**Dead Sea**	1.74	179	Pn	Pb	09 11 36.8	-0.2

LDG ***12*** *09:39:20.3±0.8, 36°.35N×9°.59W, h10^{km}, Ml3.6/3, Error ellipse: s-maj=16.3km s-min=12.8km az=52.0*

ISCJB ***12*** *09:39:20.2±0.6, 36°.39N±0°.03×9°.78W±0°.04, h30^{km}, Error ellipse: s-maj=4.8km s-min=3.1km az=149.9*

INMG ***12*** *09:39:21.9±1.4, 36°.27N×9°.90W, h31^{km}, MD3.2, ML3.4, Error ellipse: s-maj=3.8km s-min=2.2km az=78.0*

SFS ***12*** *09:39:21.0, 36°.42N×9°.88W, h0^{km}, ML3.3*

MDD ***12*** *09:39:21.5±1.1, 36°.35N×9°.93W, h26^{km}±23^{km}, mbLg3.4/51, Error ellipse: s-maj=23.1km s-min=6.7km az=51.0, PRXIMO*

IGIL ***12*** *09:39:22.1, 36°.27N×9°.89W, h31^{km}, ML3.6*

CSEM ***12*** *09:39:22.0±0.3, 36°.40N×9°.82W, h30^{km}, ML3.4, Error ellipse: s-maj=5.9km s-min=3.3km az=55.0*

CNRM ***12*** *09:39:23.7, 35°.71N×9°.79W, h50^{km}, ML3.9*

ISC 12 09:39:18.9±1.4**, 36°.31N**±0°.05×**9°.92W**±0°.06**, h30**^{km}**, n171, σ2**^{s}**.05**/314**, 12C-7D, West of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PFVI	**Vila Bisbo**	1.20	46	⇓*e*P	Pb	09 39 41.5	+0.5
PFVI				*e*S	Sn	09 39 55.6	+0.7
PFVI				A	A	09 39 57.7	
	276nm,0.2s						
PFVI	**Vila Bisbo**	1.20	46	⇓P	Pb	09 39 41.6	+0.5
	36nm,0.1s,SNR=18						
PFVI				S	Sn	09 39 55.6	+0.7
	629nm,0.1s,SNR=32						
PFVI	**Vila Bisbo**	1.20	46	⇓*e*P	Pb	09 39 41.5	+0.5
PFVI				*e*S	Sn	09 39 55.6	+0.7
MORF	**Marmelete**	1.42	45	*e*P	Pb	09 39 44.6	-0.2
MORF				*e*S	Sn	09 40 01.2	+0.8
MORF				AML	AML	09 40 03.0	
	comp=N,688nm,0.2s						
MORF	**Marmelete**	1.42	45	⇓*e*P	Pb	09 39 44.6	-0.2
MORF				*e*S	Sn	09 40 01.2	+0.8
MORF				A	A	09 40 03.0	
	comp=N,367nm,0.2s						
MORF	**Marmelete**	1.42	45	P	Pb	09 39 44.6	-0.2
MORF				S	Sn	09 40 01.2	+0.8
	comp=N,688nm,0.2s						
MORF	**Marmelete**	1.42	45	⇓*e*P	Pb	09 39 44.6	-0.2
MORF				*e*S	Sn	09 40 01.2	+0.8
PTEO	**Sao Teotonio**	1.56	37	*e*P	Pb	09 39 46.5	-0.6
PTEO				*e*S	Sn	09 40 04.8	+1.0
PTEO				A	A	09 40 06.1	
	comp=N,215nm,0.7s						
PTEO	**Sao Teotonio**	1.56	37	P	Pb	09 39 46.5	-0.6
PTEO				S	Sn	09 40 04.8	+1.0
	comp=N,107nm,0.7s						
PTEO	**Sao Teotonio**	1.56	37	*e*P	Pb	09 39 46.5	-0.6
PTEO				*e*S	Sn	09 40 04.8	+1.0
PBDV	**Barranco-do-Ve**	1.84	59	*e*Pn	Pn	09 39 50.5	+2.0
PBDV				*e*Sn	Sn	09 40 10.9	0.0
PBDV				A	A	09 40 13.4	
	comp=N,58nm,0.3s						
PBDV	**Barranco-do-Ve**	1.84	59	P	Pn	09 39 50.5	+2.0
PBDV				S	Sn	09 40 10.9	0.0
	comp=N,58nm,0.3s						
PBDV	**Barranco-do-Ve**	1.84	59	*e*Pn	Pn	09 39 50.5	+2.0
PBDV				*e*Sn	Sn	09 40 10.9	0.0
PCVE	**Castro Verde**	2.00	48	*e*Pn	Pn	09 39 52.8	+2.2
PCVE				*e*Sn	Sn	09 40 15.1	+0.4
PCVE				A	A	09 40 17.0	
	comp=N,91nm,0.2s						
PCVE	**Castro Verde**	2.00	48	P	Pn	09 39 52.8	+2.2
PCVE				S	Sn	09 40 15.1	+0.4
	comp=N,91nm,0.2s						
PCVE	**Castro Verde**	2.00	48	*e*Pn	Pn	09 39 52.8	+2.2
PCVE				*e*Sn	Sn	09 40 15.1	+0.4
MESJ	**Messejana**	2.04	41	*e*P	Pn	09 39 53.2	+2.0
MESJ				*e*S	Sn	09 40 16.1	+0.4
MESJ				AML	AML	09 40 18.4	
	comp=N,207nm,0.3s						
MESJ	**Messejana**	2.04	41	*e*Pn	Pn	09 39 53.1	+1.9
MESJ				*e*Sn	Sn	09 40 16.3	+0.6
MESJ				A	A	09 40 19.6	
	comp=N,118nm,0.3s						
MESJ	**Messejana**	2.04	41	P	Pn	09 39 53.2	+2.0
MESJ				S	Sn	09 40 16.1	+0.4
	comp=N,207nm,0.3s						
MESJ	**Messejana**	2.04	41	*e*Pn	Pn	09 39 53.1	+1.9
MESJ				*e*Sn	Sn	09 40 16.3	+0.6
PVAQ	**Vaqueiros**	2.07	58	*e*Pn	Pn	09 39 53.5	+1.9
PVAQ				*e*Sn	Sn	09 40 16.5	0.0
PVAQ				A	A	09 40 18.4	
	comp=N,96nm,0.1s						
PVAQ	**Vaqueiros**	2.07	58	P	Pn	09 39 53.5	+1.9
PVAQ				S	Sn	09 40 16.5	0.0
	comp=N,96nm,0.1s						
PVAQ	**Vaqueiros**	2.07	58	*e*Pn	Pn	09 39 53.5	+1.9
PVAQ	**Vaqueiros**	2.07	58	P	Pb	09 39 56.5	+0.6
PVAQ				*e*Sn	Sn	09 40 16.5	0.0
PNCL	**Nicolau / Gran**	2.11	31	*e*Pn	Pn	09 39 53.9	+1.7
PNCL				*e*Sn	Sn	09 40 17.8	+0.4
PNCL				A	A	09 40 19.8	
	comp=N,235nm,0.1s						
PNCL	**Nicolau / Gran**	2.11	31	*e*Pn	Pn	09 39 53.9	+1.7
PNCL				*e*Sn	Sn	09 40 17.8	+0.4
EGRO	**El Granado**	2.30	57	⇑P	Pn	09 39 56.6	+1.9
	comp=N,1.1nm,0.1s,SNR=18						
EGRO				S	Sn	09 40 21.8	-0.3
	comp=N,47nm,0.1s,SNR=5.2						
EGRO	**El Granado**	2.30	57	P	Pn	09 39 56.6	+1.9
	comp=N,1.1nm,0.1s,SNR=18						
EGRO				S	Sn	09 40 21.8	-0.3
	comp=N,47nm,0.1s,SNR=5.2						
PBEJ	**Beja**	2.37	43	*e*Pn	Pn	09 39 58.4	+2.7
PBEJ				*e*Sn	Sn	09 40 24.6	+0.8
PBEJ				A	A	09 40 26.3	
	comp=N,82nm,0.2s						
PBEJ	**Beja**	2.37	43	P	Pn	09 39 58.4	+2.7
PBEJ				S	Sn	09 40 24.6	+0.8
	comp=N,41nm,0.2s						
PBEJ	**Beja**	2.37	43	*e*Pn	Pn	09 39 58.4	+2.7
PBEJ				*e*Sn	Sn	09 40 24.6	+0.8
LIS	**Lisbon**	2.48	14	*e*S	Sn	09 40 27.1	+0.6
LIS				AML	AML	09 40 28.7	
	comp=E,356nm,0.2s						
LIS	**Lisbon**	2.48	14	S	Sn	09 40 27.1	+0.6
	comp=E,356nm,0.2s						
PMST	**Lisbon--Monsan**	2.49	13	*e*Pn	Pn	09 39 59.6	+2.2
PMST				*e*Sn	Sn	09 40 27.5	+0.7
PMST				A	A	09 40 29.7	
	comp=E,225nm,0.4s						
PMST	**Lisbon--Monsan**	2.49	13	*e*Pn	Pn	09 39 59.6	+2.2
PMST				*e*Sn	Sn	09 40 27.5	+0.7
EVO	**Evora**	2.69	34	*e*Pn	Pn	09 40 01.7	+1.6
EVO				*e*Sn	Sn	09 40 31.6	0.0
EVO				A	A	09 40 32.9	
	comp=E,215nm,0.1s						
EVO	**Evora**	2.69	34	⇑P	Pn	09 40 01.6	+1.6
EVO				S	Sn	09 40 31.3	-0.3
EVO	**Evora**	2.69	34	*e*Pn	Pn	09 40 01.7	+1.6
EVO				*e*S	Sn	09 40 31.3	-0.3
PMAFR	**Mafra**	2.69	11	*e*Pn	Pn	09 40 01.8	+1.7
PMAFR				*e*Sn	Sn	09 40 32.0	+0.4
PMAFR				A	A	09 40 34.6	
	comp=E,347nm,0.2s						
PMAFR	**Mafra**	2.69	11	P	Pn	09 40 01.8	+1.7
	comp=E,58nm,0.2s,SNR=33						
PMAFR				S	Sn	09 40 31.3	-0.3
	comp=E,278nm,0.3s,SNR=9.6						
PMAFR	**Mafra**	2.69	11	*e*Pn	Pn	09 40 01.8	+1.7
PMAFR				S	Sn	09 40 31.3	-0.3
	comp=E,278nm,0.3s,SNR=9.6						
PMAFR				*e*Sn	Sn	09 40 32.0	+0.4
PBAR	**Barrancos**	2.96	50	*e*Pn	Pn	09 40 05.5	+1.7
PBAR				*e*Sn	Sn	09 40 38.4	+0.2
PBAR				A	A	09 40 40.4	
	comp=E,94nm,0.2s						
PBAR	**Barrancos**	2.96	50	P	Pn	09 40 05.5	+1.7
PBAR				S	Sn	09 40 38.4	+0.2
	comp=E,94nm,0.2s						
PBAR	**Barrancos**	2.96	50	*e*Pn	Pn	09 40 05.5	+1.7
PBAR				*e*Sn	Sn	09 40 38.4	+0.2
EMIN	**Mina Concepcio**	2.97	60	⇓P	Pn	09 40 05.6	+1.6
	comp=E,4.4nm,0.1s,SNR=18						
EMIN				S	Sn	09 40 38.3	-0.4
	comp=E,9.8nm,0.1s						
EMIN	**Mina Concepcio**	2.97	60	P	Pn	09 40 05.6	+1.6
	comp=E,4.4nm,0.1s,SNR=18						
EMIN				S	Sn	09 40 38.3	-0.4
	comp=E,9.8nm,0.1s						
ALMR	**Almeirim**	3.03	20	*e*P	Pn	09 40 07.1	+2.3
ALMR				*e*S	Sn	09 40 40.1	0.0
ALMR				AML	AML	09 40 42.8	
	comp=E,245nm,0.3s						
ALMR	**Almeirim**	3.03	20	*e*Pn	Pn	09 40 06.8	+2.0
ALMR				*e*Sn	Sn	09 40 40.1	0.0
ALMR				A	A	09 40 44.1	
	comp=E,122nm,0.4s						
ALMR	**Almeirim**	3.03	20	P	Pn	09 40 07.1	+2.3
ALMR				S	Sn	09 40 40.1	0.0
	comp=E,123nm,0.3s						
ALMR	**Almeirim**	3.03	20	*e*Pn	Pn	09 40 06.8	+2.0
ALMR	**Almeirim**	3.03	20	P	Pn	09 40 07.1	+2.3
ALMR				*e*Sn	Sn	09 40 40.1	0.0
PMTG	**Montargil**	3.06	25	*e*Pn	Pn	09 40 07.1	+1.8
PMTG				*e*Sn	Sn	09 40 40.6	-0.3
PMTG				A	A	09 40 42.1	
	comp=E,78nm,0.1s						
PMTG	**Montargil**	3.06	25	*e*Pn	Pn	09 40 07.1	+1.8
PMTG				*e*Sn	Sn	09 40 40.6	-0.3
PESTR	**Estremoz**	3.15	35	*e*Pn	Pn	09 40 07.7	+1.2
PESTR				*e*Sn	Sn	09 40 42.9	-0.2
PESTR				A	A	09 40 45.0	
	comp=E,47nm,0.5s						
PESTR	**Estremoz**	3.15	35	*e*Pn	Pn	09 40 07.7	+1.2
PESTR	**Estremoz**	3.15	35	P	Pb	09 40 15.8	+1.6
PESTR				*e*Sn	Sn	09 40 42.9	-0.2
EBAD	**Badajoz**	3.36	43	⇑P	Pn	09 40 10.7	+1.4
	comp=E,19nm,0.1s,SNR=18						
EBAD				S	Sn	09 40 47.4	-0.8
	comp=E,46nm,0.1s,SNR=4.7						
EBAD	**Badajoz**	3.36	43	P	Pn	09 40 10.7	+1.4
	comp=E,19nm,0.1s,SNR=18						
EBAD				S	Sn	09 40 47.4	-0.8
	comp=E,46nm,0.1s,SNR=4.7						

PTOM	**Tomar**	**3.51**	**19**	⇑ePn	**Pn**	**09 40 13.4**	**+2.0**
PTOM				eSn	**Sn**	**09 40 51.4**	**-0.5**
PTOM				A	A	09 40 53.3	
	comp=E,81nm,0.2s						
PTOM	**Tomar**	**3.51**	**19**	P	**Pn**	**09 40 13.4**	**+2.0**
PTOM				S	**Sn**	**09 40 51.4**	**-0.5**
	comp=E,40nm,0.2s						
PTOM	**Tomar**	**3.51**	**19**	⇑ePn	**Pn**	**09 40 13.4**	**+2.0**
PTOM				eSn	**Sn**	**09 40 51.4**	**-0.5**
RSA	**Sarsar**	**3.62**	**112**	P	**Pn**	**09 40 13.2**	**+0.2**
RSA				S	**Sn**	**09 40 50.0**	**-4.9**
RSA	**Sarsar**	**3.62**	**112**	P	**Pn**	**09 40 13.3**	**+0.2**
RSA				S	**Sn**	**09 40 50.0**	**-4.9**
AVE	**Averroes**	**3.64**	**145**	eP	**Pn**	**09 40 13.7**	**+0.5**
AVE				eS	**Sn**	**09 40 52.8**	**-2.4**
ECEU	**Ceuta**	**3.70**	**95**	S	**Sn**	**09 40 57.6**	**+1.0**
	comp=E,4.3nm,0.2s,SNR=4.0						
ECEU	**Ceuta**	**3.70**	**95**	S	**Sn**	**09 40 57.6**	**+1.0**
	comp=E,4.3nm,0.2s,SNR=4.0						
PMRV	**Marv??o**	**3.70**	**32**	⇑ePn	**Pn**	**09 40 15.7**	**+1.7**
PMRV				eSn	**Sn**	**09 40 55.7**	**-0.9**
PMRV				A	A	09 40 58.1	
	comp=E,73nm,0.5s						
PMRV	**Marv??o**	**3.70**	**32**	P	**Pn**	**09 40 15.7**	**+1.7**
PMRV				S	**Sn**	**09 40 55.7**	**-0.9**
	comp=E,73nm,0.5s						
PMRV	**Marv??o**	**3.70**	**32**	⇑ePn	**Pn**	**09 40 15.7**	**+1.7**
PMRV				eSn	**Sn**	**09 40 55.7**	**-0.9**
CEU	**Ceuta**	**3.70**	**95**	P	**Pn**	**09 40 16.5**	**+2.5**
CEU				S	**Sn**	**09 40 57.6**	**+1.0**
CEU	**Ceuta**	**3.70**	**95**	eP	**Pn**	**09 40 16.5**	**+2.5**
CEU				eS	**Sn**	**09 40 57.6**	**+1.0**
CEUT	**Ceuta**	**3.74**	**95**	P	**Pn**	**09 40 15.2**	**+0.6**
CEUT				S	**Sn**	**09 41 00.5**	**+2.8**
CEUT	**Ceuta**	**3.74**	**95**	P	**Pn**	**09 40 15.2**	**+0.6**
CEUT				S	**Sn**	**09 41 00.4**	**+2.8**
PCAS	**Casmilo, Conde**	**3.90**	**16**	⇑ePn	**Pn**	**09 40 18.5**	**+1.7**
PCAS				eSn	**Sn**	**09 41 01.1**	**-0.4**
PCAS				A	A	09 41 04.3	
	comp=E,44nm,0.2s						
PCAS	**Casmilo, Conde**	**3.90**	**16**	⇑ePn	**Pn**	**09 40 18.5**	**+1.7**
PCAS				eSn	**Sn**	**09 41 01.1**	**-0.4**
CHEFC	**Chefchaouen**	**3.91**	**106**	P	**Pn**	**09 40 18.1**	**+1.1**
CHEFC				S	**Sn**	**09 41 01.7**	**-0.2**
ECAB	**El Cabril**	**4.00**	**63**	⇑P	**Pn**	**09 40 19.6**	**+1.4**
	comp=E,2.8nm,0.4s,SNR=18						
ECAB				S	**Sn**	**09 41 02.9**	**-1.1**
	comp=E,9.7nm,0.1s						
ECAB	**El Cabril**	**4.00**	**63**	P	**Pn**	**09 40 19.6**	**+1.4**
	comp=E,2.8nm,0.4s,SNR=18						
ECAB				S	**Sn**	**09 41 02.9**	**-1.1**
	comp=E,9.7nm,0.1s						
PCBR	**Castelo Branco**	**4.01**	**28**	ePn	**Pn**	**09 40 20.1**	**+1.8**
PCBR				eSn	**Sn**	**09 41 04.0**	**-0.3**
PCBR				A	A	09 41 06.2	
	comp=E,40nm,0.2s						
PCBR	**Castelo Branco**	**4.01**	**28**	P	**Pn**	**09 40 20.1**	**+1.8**
PCBR				S	**Sn**	**09 41 04.0**	**-0.3**
	comp=E,20nm,0.2s						
PCBR	**Castelo Branco**	**4.01**	**28**	ePn	**Pn**	**09 40 20.1**	**+1.8**
PCBR				eSn	**Sn**	**09 41 04.0**	**-0.3**
HORN	**Hornachuelos**	**4.03**	**66**	P	Pn	09 40 23.5	+5.0
HORN				S	**Sb**	**09 41 15.8**	**-1.6**
COI	**Coimbra**	**4.07**	**16**	eSn	**Sn**	**09 41 04.6**	**-1.0**
COI				A	A	09 41 10.6	
	comp=E,68nm,0.7s						
COI	**Coimbra**	**4.07**	**16**	S	**Sn**	**09 41 04.6**	**-1.0**
	comp=E,34nm,0.7s						
COI	**Coimbra**	**4.07**	**16**	eSn	**Sn**	**09 41 04.6**	**-1.0**
EMIJ	**Mijas**	**4.15**	**85**	P	**Pn**	**09 40 22.4**	**+2.1**
	comp=E,2.4nm,0.2s,SNR=7.9						
EMIJ				S	**Sn**	**09 41 05.8**	**-2.1**
	comp=E,11nm,0.4s,SNR=4.0						
EMIJ	**Mijas**	**4.15**	**85**	P	**Pn**	**09 40 22.4**	**+2.1**
	comp=E,2.4nm,0.2s,SNR=7.9						
EMIJ				S	**Sn**	**09 41 05.8**	**-2.1**
	comp=E,11nm,0.4s,SNR=4.0						
MTE	**Manteigas**	**4.49**	**24**	ePn	**Pn**	**09 40 26.7**	**+1.8**
MTE				eSn	**Sn**	**09 41 14.8**	**-1.3**
MTE				A	A	09 41 18.4	
	comp=E,49nm,0.3s						
MTE	**Manteigas**	**4.49**	**24**	P	**Pn**	**09 40 26.7**	**+1.8**
MTE				S	**Sn**	**09 41 14.8**	**-1.3**
	comp=E,24nm,0.3s						
MTE	**Manteigas**	**4.49**	**24**	ePn	**Pn**	**09 40 26.7**	**+1.8**
MTE				eSn	**Sn**	**09 41 14.8**	**-1.3**
EADA	**Adamuz**	**4.64**	**65**	P	**Pn**	**09 40 28.7**	**+1.7**
	comp=E,0.7nm,0.1s,SNR=12						
EADA				S	**Sn**	**09 41 18.4**	**-1.6**
	comp=E,3.6nm,0.2s						
EADA	**Adamuz**	**4.64**	**65**	P	**Pn**	**09 40 28.7**	**+1.7**
	comp=E,0.7nm,0.1s,SNR=12						
EADA				S	**Sn**	**09 41 18.4**	**-1.6**
	comp=E,3.6nm,0.2s						
PVIS	**Viseu**	**4.67**	**19**	⇑ePn	**Pn**	**09 40 28.8**	**+1.3**
PVIS				eSn	**Sn**	**09 41 19.4**	**-1.3**
PVIS				A	A	09 41 22.0	
	comp=E,26nm,0.5s						
PVIS	**Viseu**	**4.67**	**19**	P	**Pn**	**09 40 28.8**	**+1.3**
PVIS				S	**Sn**	**09 41 19.4**	**-1.3**
	comp=E,13nm,0.5s						
PVIS	**Viseu**	**4.67**	**19**	⇑ePn	**Pn**	**09 40 28.8**	**+1.3**
PVIS				eSn	**Sn**	**09 41 19.4**	**-1.3**
EGOR	**Sierra Gorda,**	**4.73**	**79**	P	**Pn**	**09 40 31.6**	**+3.3**
	comp=E,0.1nm,0.1s,SNR=4.0						
EGOR				S	**Sn**	**09 41 22.8**	**+0.5**
	comp=E,5.9nm,0.2s,SNR=7.9						
EGOR	**Sierra Gorda,**	**4.73**	**79**	P	**Pn**	**09 40 31.6**	**+3.3**
	comp=E,0.1nm,0.1s,SNR=4.0						
EGOR				S	**Sn**	**09 41 22.8**	**+0.5**
	comp=E,5.9nm,0.2s,SNR=7.9						
EPLA	**Plasencia**	**4.81**	**38**	⇓P	**Pn**	**09 40 30.6**	**+1.3**
	comp=E,3.3nm,0.2s,SNR=18						
EPLA				S	**Sn**	**09 41 22.4**	**-1.7**
	comp=E,49nm,0.2s,SNR=12						
EPLA	**Plasencia**	**4.81**	**38**	P	**Pn**	**09 40 30.6**	**+1.3**
	comp=E,3.3nm,0.2s,SNR=18						
EPLA				S	**Sn**	**09 41 22.4**	**-1.7**
	comp=E,49nm,0.2s,SNR=12						
PTO	**Porto**	**4.93**	**12**	ePn	**Pn**	**09 40 32.3**	**+1.4**
PTO				eSn	**Sn**	**09 41 25.1**	**-1.8**
PTO	**Porto**	**4.93**	**12**	P	**Pn**	**09 40 32.3**	**+1.4**
PTO				S	**Sn**	**09 41 25.1**	**-1.8**
PTO	**Porto**	**4.93**	**12**	ePn	**Pn**	**09 40 32.3**	**+1.4**
PTO				eSn	**Sn**	**09 41 25.1**	**-1.8**
ELGU	**Los Guajares,**	**5.09**	**82**	P	**Pn**	**09 40 36.9**	**+3.7**
	comp=E,5.1nm,0.5s,SNR=7.9						
ELGU				S	**Sn**	**09 41 27.8**	**-3.2**
	comp=E,14nm,0.4s,SNR=7.9						
ELGU	**Los Guajares,**	**5.09**	**82**	P	**Pn**	**09 40 36.9**	**+3.7**
	comp=E,5.1nm,0.5s,SNR=7.9						
ELGU				S	**Sn**	**09 41 27.8**	**-3.2**
	comp=E,14nm,0.4s,SNR=7.9						
CZD	**Col de Zad**	**5.18**	**128**	P	**Pn**	**09 40 34.5**	**-0.1**
CZD				S	**Sn**	**09 41 29.5**	**-4.0**
CZD	**Col de Zad**	**5.18**	**128**	P	**Pn**	**09 40 34.5**	**-0.1**
CZD				S	**Sn**	**09 41 29.5**	**-4.0**
PVRL	**Vila Real**	**5.25**	**18**	ePn	**Pn**	**09 40 36.9**	**+1.6**
PVRL				eSn	**Sn**	**09 41 32.8**	**-2.0**
PVRL				A	A	09 41 36.1	
	comp=E,81nm,0.2s						
PVRL	**Vila Real**	**5.25**	**18**	P	**Pn**	**09 40 36.9**	**+1.6**
PVRL				S	**Sn**	**09 41 32.8**	**-2.0**
	comp=E,40nm,0.2s						
PVRL	**Vila Real**	**5.25**	**18**	ePn	**Pn**	**09 40 36.9**	**+1.6**
PVRL				eSn	**Sn**	**09 41 32.8**	**-2.0**
EQUE	**Quentar**	**5.28**	**78**	P	**Pn**	**09 40 38.2**	**+2.5**
	comp=E,1.1nm,0.2s,SNR=6.2						
EQUE				S	**Sn**	**09 41 34.7**	**-0.9**
	comp=E,1.3nm,0.2s,SNR=7.9						
EQUE	**Quentar**	**5.28**	**78**	P	**Pn**	**09 40 38.2**	**+2.5**
	comp=E,1.1nm,0.2s,SNR=6.2						
EQUE				S	**Sn**	**09 41 34.7**	**-0.9**
	comp=E,1.3nm,0.2s,SNR=7.9						
POLO	**Lamas de Olo**	**5.32**	**17**	ePn	**Pn**	**09 40 37.4**	**+1.0**
POLO				eSn	**Sn**	**09 41 34.5**	**-2.2**
POLO				A	A	09 41 37.7	
	comp=E,15nm,0.6s						
POLO	**Lamas de Olo**	**5.32**	**17**	ePn	**Pn**	**09 40 37.4**	**+1.0**
POLO				eSn	**Sn**	**09 41 34.5**	**-2.2**
MVO	**Moncorvo**	**5.35**	**24**	ePn	**Pn**	**09 40 37.9**	**+1.2**
MVO				eSn	**Sn**	**09 41 35.4**	**-1.9**
MVO				A	A	09 41 38.1	
	comp=E,35nm,0.4s						
MVO	**Moncorvo**	**5.35**	**24**	P	**Pn**	**09 40 37.7**	**+1.0**
	comp=E,2.0nm,0.4s,SNR=23						
MVO				S	**Sn**	**09 41 35.3**	**-1.9**
	comp=E,22nm,0.1s,SNR=11						
MVO	**Moncorvo**	**5.35**	**24**	ePn	**Pn**	**09 40 37.9**	**+1.2**
MVO				eSn	**Sn**	**09 41 35.4**	**-1.9**
OUK	**Oukaimeden**	**5.37**	**161**	P	**Pn**	**09 40 37.0**	**-0.3**
OUK	**Oukaimeden**	**5.37**	**161**	P	**Pn**	**09 40 37.0**	**-0.3**
PAB	**San Pablo**	**5.46**	**52**	P	**Pn**	**09 40 39.9**	**+1.7**
	comp=E,2.3nm,0.2s,SNR=7.9						
PAB				S	**Sn**	**09 41 36.9**	**-3.2**
	comp=E,3.3nm,0.1s,SNR=7.9						
PAB	**San Pablo**	**5.46**	**52**	P	**Pn**	**09 40 39.9**	**+1.7**
	comp=E,2.3nm,0.2s,SNR=7.9						
PAB				S	**Sn**	**09 41 36.9**	**-3.2**
	comp=E,3.3nm,0.1s,SNR=7.9						
EALB	**Alboran**	**5.58**	**92**	S	**Sn**	**09 41 38.7**	**-4.3**
	comp=E,8.5nm,0.3s,SNR=7.9						
EALB	**Alboran**	**5.58**	**92**	S	**Sn**	**09 41 38.7**	**-4.3**
	comp=E,8.5nm,0.3s,SNR=7.9						
PCAB	**Cabril**	**5.59**	**15**	ePn	**Pn**	**09 40 41.3**	**+1.3**
PCAB				eSn	**Sn**	**09 41 40.4**	**-2.8**
PCAB				A	A	09 41 44.1	
	comp=E,29nm,0.4s						
PCAB	**Cabril**	**5.59**	**15**	P	**Pn**	**09 40 41.3**	**+1.3**
PCAB				S	**Sn**	**09 41 40.4**	**-2.8**
	comp=E,14nm,0.4s						
PCAB	**Cabril**	**5.59**	**15**	ePn	**Pn**	**09 40 41.3**	**+1.3**
PCAB				eSn	**Sn**	**09 41 40.4**	**-2.8**
EQES	**Quesada**	**5.67**	**73**	P	**Pn**	**09 40 43.7**	**+2.5**
	comp=E,2.6nm,0.3s,SNR=7.9						
EQES				S	**Sn**	**09 41 44.0**	**-1.4**
	comp=E,7.5nm,0.2s,SNR=5.1						
EQES	**Quesada**	**5.67**	**73**	P	**Pn**	**09 40 43.7**	**+2.5**
	comp=E,2.6nm,0.3s,SNR=7.9						
EQES				S	**Sn**	**09 41 44.0**	**-1.4**
	comp=E,7.5nm,0.2s,SNR=5.1						
EBER	**Berja**	**5.68**	**82**	P	Pn	09 40 46.3	+4.9
	comp=E,0.5nm,0.2s,SNR=4.0						
EBER				S	**Sn**	**09 41 45.3**	**-0.4**
	comp=E,5.2nm,0.4s,SNR=4.0						
EBER	**Berja**	**5.68**	**82**	P	Pn	09 40 46.3	+4.9
	comp=E,0.5nm,0.2s,SNR=4.0						
EBER				S	**Sn**	**09 41 45.3**	**-0.4**
	comp=E,5.2nm,0.4s,SNR=4.0						
ELOB	**Lobios**	**5.73**	**14**	P	**Pn**	**09 40 42.9**	**+0.9**
	comp=E,6.9nm,0.3s,SNR=28						
ELOB				S	**Sn**	**09 41 43.6**	**-3.2**
	comp=E,15nm,0.3s,SNR=12						
ELOB	**Lobios**	**5.73**	**14**	P	**Pn**	**09 40 42.9**	**+0.9**
	comp=E,6.9nm,0.3s,SNR=28						
ELOB				S	**Sn**	**09 41 43.6**	**-3.2**
	comp=E,15nm,0.3s,SNR=12						
ESDC	**Sonseca Array**	**5.78**	**53**	P	**Pn**	**09 40 44.2**	**+1.6**
	comp=E,20nm,0.2s,baz=241,slow=13,SNR=34						
ESDC				S	**Sn**	**09 41 45.9**	**-2.0**
	comp=E,0.4nm,0.6s,baz=242,slow=24,SNR=28						
ESDC	**Sonseca Array**	**5.78**	**53**	P	**Pn**	**09 40 44.2**	**+1.6**
	comp=E,20nm,0.2s,SNR=34						
ESDC				S	**Sn**	**09 41 45.9**	**-2.0**
	comp=E,0.4nm,0.6s,SNR=28						
PGAV	**Gavieira, Arco**	**5.79**	**12**	ePn	**Pn**	**09 40 44.0**	**+1.2**
PGAV				eSn	**Sn**	**09 41 45.6**	**-2.6**
PGAV				A	A	09 41 50.3	
	comp=E,31nm,0.6s						
PGAV	**Gavieira, Arco**	**5.79**	**12**	ePn	**Pn**	**09 40 44.0**	**+1.2**
PGAV				eSn	**Sn**	**09 41 45.6**	**-2.6**
TTIG	**Tnine Tigouga,**	**5.88**	**167**	P	Pn	09 40 39.5	-4.6
TTIG				S	Sn	09 41 39.5	-11
PBRG	**Braganca**	**6.02**	**23**	ePn	**Pn**	**09 40 46.9**	**+1.0**
PBRG				eSn	**Sn**	**09 41 51.5**	**-2.2**
PBRG				A	A	09 41 54.7	
	comp=E,16nm,0.7s						
PBRG	**Braganca**	**6.02**	**23**	P	**Pn**	**09 40 46.9**	**+1.0**
PBRG				S	**Sn**	**09 41 51.5**	**-2.2**
	comp=E,8.1nm,0.7s						
PBRG	**Braganca**	**6.02**	**23**	ePn	**Pn**	**09 40 46.9**	**+1.0**
PBRG				eSn	**Sn**	**09 41 51.5**	**-2.2**
SESP	**Santiago Espad**	**6.15**	**71**	P	**Pn**	**09 40 49.6**	**+1.7**
	comp=E,0.7nm,0.1s,SNR=7.9						
SESP				S	**Sn**	**09 41 55.1**	**-2.2**
	comp=E,4.3nm,0.1s,SNR=7.9						
SESP	**Santiago Espad**	**6.15**	**71**	P	**Pn**	**09 40 49.6**	**+1.7**
	comp=E,0.7nm,0.1s,SNR=7.9						
SESP				S	**Sn**	**09 41 55.1**	**-2.2**
	comp=E,4.3nm,0.1s,SNR=7.9						
EAGO	**Agolada(Pontev**	**6.63**	**12**	P	**Pn**	**09 40 55.4**	**+1.0**
	comp=E,6.0nm,0.2s,SNR=7.9						
EAGO				S	**Sn**	**09 42 05.2**	**-3.7**
	comp=E,4.6nm,0.3s,SNR=7.9						
EAGO	**Agolada(Pontev**	**6.63**	**12**	P	**Pn**	**09 40 55.4**	**+1.0**
	comp=E,6.0nm,0.2s,SNR=7.9						
EAGO				S	**Sn**	**09 42 05.2**	**-3.7**
	comp=E,4.6nm,0.3s,SNR=7.9						
EMAZ	**Mazaricos**	**6.67**	**6**	P	**Pn**	**09 40 55.2**	**+0.4**
	comp=E,7.5nm,0.1s,SNR=7.9						
EMAZ				S	**Sn**	**09 42 04.6**	**-5.2**
	comp=E,43nm,0.2s,SNR=7.9						
EMAZ	**Mazaricos**	**6.67**	**6**	P	**Pn**	**09 40 55.2**	**+0.4**
	comp=E,7.5nm,0.1s,SNR=7.9						
EMAZ				S	**Sn**	**09 42 04.6**	**-5.2**
	comp=E,43nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**7.05**	**68**	P	**Pn**	**09 41 02.0**	**+1.9**
	comp=E,0.0nm,0.2s,SNR=6.1						
ETOB				S	**Sn**	**09 42 16.4**	**-2.8**
	comp=E,3.0nm,0.2s						
ETOB	**Tobarra**	**7.05**	**68**	P	**Pn**	**09 41 02.0**	**+1.9**
	SNR=6.1						
ETOB				S	**Sn**	**09 42 16.4**	**-2.8**
	comp=E,3.0nm,0.2s						
EPON	**Pontenova**	**7.32**	**16**	P	**Pn**	**09 41 05.0**	**+1.2**
	comp=E,0.8nm,0.1s,SNR=6.2						
EPON				S	**Sn**	**09 42 21.7**	**-4.1**
	comp=E,6.7nm,0.2s						
EPON	**Pontenova**	**7.32**	**16**	P	**Pn**	**09 41 05.0**	**+1.2**
	comp=E,0.8nm,0.1s,SNR=6.2						
EPON				S	**Sn**	**09 42 21.7**	**-4.1**
	comp=E,6.7nm,0.2s						
ETOR	**Torete**	**7.63**	**51**	P	**Pn**	**09 41 09.6**	**+1.6**
	comp=E,6.2nm,0.2s,SNR=7.0						
ETOR				S	**Sn**	**09 42 28.9**	**-4.5**
	comp=E,6.3nm,0.3s						
ETOR	**Torete**	**7.63**	**51**	P	**Pn**	**09 41 09.6**	**+1.6**
	comp=E,6.2nm,0.2s,SNR=7.0						
ETOR				S	**Sn**	**09 42 28.9**	**-4.5**
	comp=E,6.3nm,0.3s						
EARI	**Arriondas**	**7.86**	**26**	P	**Pn**	**09 41 14.1**	**+2.9**
	comp=E,0.5nm,0.1s,SNR=9.7						
EARI				S	**Sn**	**09 42 35.9**	**-3.3**
	comp=E,7.0nm,0.7s						
EARI	**Arriondas**	**7.86**	**26**	P	**Pn**	**09 41 14.1**	**+2.9**
	comp=E,0.5nm,0.1s,SNR=9.7						
EARI				S	**Sn**	**09 42 35.9**	**-3.3**
	comp=E,7.0nm,0.7s						
EMOS	**Mosqueruela**	**8.45**	**59**	P	**Pn**	**09 41 22.9**	**+3.5**
	comp=E,0.1nm,0.1s,SNR=7.9						
EMOS				S	**Sn**	**09 42 51.5**	**-2.3**
	comp=E,4.1nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	**8.45**	**59**	P	**Pn**	**09 41 22.9**	**+3.5**
	comp=E,0.1nm,0.1s,SNR=7.9						
EMOS				S	**Sn**	**09 42 51.5**	**-2.3**
	comp=E,4.1nm,0.3s,SNR=7.9						
ELAN	**Lanestosa**	**8.52**	**34**	P	**Pn**	**09 41 22.5**	**+2.2**
	comp=E,1.7nm,0.3s,SNR=4.0						
ELAN				S	**Sn**	**09 42 53.4**	**-2.0**
	comp=E,3.4nm,0.3s,SNR=7.9						
ELAN	**Lanestosa**	**8.52**	**34**	P	**Pn**	**09 41 22.5**	**+2.2**
	comp=E,1.7nm,0.3s,SNR=4.0						
ELAN				S	**Sn**	**09 42 53.4**	**-2.0**
	comp=E,3.4nm,0.3s,SNR=7.9						
EORO	**Oroz-Betelu**	**9.34**	**43**	P	**Pn**	**09 41 34.0**	**+2.5**
	comp=E,0.8nm,0.1s,SNR=7.9						
EORO				S	**Sn**	**09 43 08.6**	**-6.9**
	comp=E,4.3nm,0.5s,SNR=7.9						
EORO	**Oroz-Betelu**	**9.34**	**43**	P	**Pn**	**09 41 34.0**	**+2.5**
	comp=E,0.8nm,0.1s,SNR=7.9						
EORO				S	**Sn**	**09 43 08.6**	**-6.9**
	comp=E,4.3nm,0.5s,SNR=7.9						
IELO	**Elcoad**	**9.35**	**43**	P	**Pn**	**09 41 33.3**	**+1.7**
	comp=E,0.2nm,0.2s,SNR=7.9						
IELO				S	**Sn**	**09 43 11.5**	**-4.2**
	comp=E,2.3nm,0.3s,SNR=7.9						
IELO	**Elcoad**	**9.35**	**43**	P	**Pn**	**09 41 33.3**	**+1.7**
	comp=E,0.2nm,0.2s,SNR=7.9						
IELO				S	**Sn**	**09 43 11.5**	**-4.2**
	comp=E,2.3nm,0.3s,SNR=7.9						
EALK	**Alkurruntz**	**9.46**	**41**	P	**Pn**	**09 41 35.0**	**+1.9**
	comp=E,0.9nm,0.2s,SNR=4.0						
EALK				S	**Sn**	**09 43 12.5**	**-5.9**
	comp=E,28nm,1.1s,SNR=7.9						
EALK	**Alkurruntz**	**9.46**	**41**	P	**Pn**	**09 41 35.0**	**+1.9**
	comp=E,0.9nm,0.2s,SNR=4.0						
EALK				S	**Sn**	**09 43 12.5**	**-5.9**
	comp=E,28nm,1.1s,SNR=7.9						
SJPF	**Ste Jean**	**9.53**	**42**	ePn	**Pn**	**09 41 32.9**	**-1.2**
SJPF				eSn	Sn	09 43 10.6	-10
	comp=E,3.4nm,0.4s						
SJPF	**Ste Jean**	**9.53**	**42**	ePn	**Pn**	**09 41 32.9**	**-1.2**
SJPF				eSn	Sn	09 43 10.6	-10
	comp=E,1.7nm,0.4s						
ETSF	**Etsaut**	**9.76**	**45**	ePn	**Pn**	**09 41 36.1**	**-1.2**
ETSF				eSn	Sn	09 43 16.1	-10
	comp=E,1.7nm,0.3s						
ETSF	**Etsaut**	**9.76**	**45**	ePn	**Pn**	**09 41 36.1**	**-1.2**
ETSF				eSn	Sn	09 43 16.1	-10
	comp=E,0.9nm,0.3s						
ECHI	**Chisagues Biel**	**10.06**	**48**	S	**Sn**	**09 43 28.6**	**-4.7**
	comp=E,2.2nm,0.2s,SNR=7.9						
ECHI	**Chisagues Biel**	**10.06**	**48**	S	**Sn**	**09 43 28.6**	**-4.7**
	comp=E,2.2nm,0.2s,SNR=7.9						
EPF	**Esparros**	**10.36**	**47**	eSn	Sn	09 43 30.3	-10
	comp=E,2.0nm,0.2s						
EPF	**Esparros**	**10.36**	**47**	eSn	Sn	09 43 30.3	-10
	comp=E,1.0nm,0.2s						

IDC 12 09:40:18.4±3.3, 53°.68N×88°.10E, h0^{km}, mb1 3.0/2, mb1mx3.0/68, mbtmp3.0/2, ML2.6/2, Error ellipse: s-maj=29.3km s-min=18.5km az=54.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	**1.96**	**279**	*i*		09 52 49.7	
	baz=96,slow=328,SNR=1.1						
ZALV	**Zalesovo Beam**	**1.96**	**279**	Pg	Pn	09 40 53.8	+0.9
	1.7nm,0.3s,baz=92,slow=12,SNR=15						
ZALV				Lg	Lg	09 41 21.1	
	4.0nm,0.3s,baz=99,slow=25,SNR=13						
KURBB	**Kurchatov Arra**	**6.64**	**246**	Pn	Pn	09 41 57.2	+0.2
	0.2nm,0.3s,baz=63,slow=14,SNR=7.5						
KURBB				Lg	Lg	09 43 49.6	
	0.0nm,0.3s,baz=64,slow=36,SNR=2.1						
MKAR	**Makanchi Array**	**7.83**	**211**	Pn	Pn	09 42 15.2	+1.6
	0.1nm,0.3s,baz=30,slow=13,SNR=1.5						
MKAR				Lg	Lg	09 44 26.6	
	0.1nm,0.3s,baz=24,slow=28,SNR=3.6						

IDC 12 09:45:35.1±2.8, 48°.86S×121°.22E, h0^{km}, mb3.8/4, mb1 4.0/4, mb1mx3.7/41, mbtmp3.8/4, MS3.6/17, Ms1 3.6/17, ms1mx3.4/40, Error ellipse: s-maj=149.4km s-min=25.7km az=93.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W1	**Cape Leeuwin H**	**14.91**	**337**	T	T	10 04 32.7	
	baz=163						
H01W2	**Cape Leeuwin H**	**14.91**	**337**	T	T	10 04 32.9	
	baz=163						
H01W3	**Cape Leeuwin H**	**14.92**	**337**	T	T	10 04 42.2	
	baz=163						
NWAO	**Narrogin (SRO)**	**16.20**	**348**	LR	LR	09 54 15.4	
	comp=Z,287nm,19.7s,baz=32,slow=32						
STKA	**Stephens Creek**	**22.88**	**50**	LR	LR	09 58 33.7	
	comp=Z,112nm,18.1s,baz=205,slow=34						
ASAR	**Alice Springs**	**27.07**	**26**	P	P	09 51 19.4	0.0
	1.2nm,0.8s,baz=207,slow=9.1,SNR=11						
ASAR				LR	LR	10 00 46.8	
	comp=Z,203nm,20.4s,baz=214,slow=34						
WRA	**Warramunga Arr**	**30.72**	**25**	P	P	09 51 51.3	-0.5
	1.0nm,0.9s,baz=200,slow=8.3,SNR=5.6						
WRA				LR	LR	10 02 27.6	
	comp=Z,125nm,21.6s,baz=205,slow=33						
FITZ	**Fitzroy Crossi**	**30.90**	**8**	P	P	09 51 53.8	+0.5
	1.2nm,0.8s,baz=198,slow=9.6,SNR=4.6						
FITZ				LR	LR	10 03 13.3	
	comp=Z,119nm,20.2s,baz=226,slow=34						
VNDA	**Vanda**	**32.65**	**165**	P	P	09 52 08.2	0.0
	0.7nm,0.8s,baz=293,slow=7.0,SNR=4.4						
VNDA				LR	LR	10 04 41.1	
	comp=Z,147nm,18.1s,baz=308,slow=35						
BATI	**Baumata**	**38.59**	**4**	LR	LR	10 09 28.9	
	comp=Z,126nm,18.3s,baz=193,slow=37						
QSPA	**South Pole Qui**	**41.26**	**180**	LR	LR	10 09 16.0	
	comp=Z,124nm,19.7s,baz=330,slow=34						
LEM	**Lembang**	**43.44**	**340**	LR	LR	10 11 00.1	
	comp=Z,45nm,20.0s,baz=189,slow=35						
DZM	**Mont Dzumac**	**44.60**	**70**	LR	LR	10 09 41.2	
	comp=Z,36nm,20.5s,baz=221,slow=32						
PMG	**Port Moresby**	**44.94**	**38**	LR	LR	10 12 17.4	
	comp=Z,58nm,19.2s,baz=202,slow=36						
JAY	**Jayapura**	**49.10**	**26**	LR	LR	10 14 51.5	
	comp=Z,92nm,19.9s,baz=150,slow=36						
SNAA	**Sanae**	**53.46**	**199**	LR	LR	10 16 29.5	
	comp=Z,137nm,18.6s,baz=115,slow=35						
GUMO	**Guam**	**65.61**	**25**	LR	LR	10 25 35.9	
	comp=Z,18nm,18.7s,baz=183,slow=37						
CMAR	**Chiang Mai Arr**	**69.89**	**337**	LR	LR	10 28 30.8	
	comp=Z,16nm,18.3s,baz=198,slow=37						
MJAR	**Matsushiro Arr**	**86.36**	**14**	LR	LR	10 35 06.6	
	comp=Z,12nm,21.1s,baz=140,slow=34						
PLCA	**Paso Flores**	**90.18**	**171**	LR	LR	10 36 14.7	
	comp=Z,19nm,20.2s,baz=259,slow=34						
PDAR	**Pinedale Array**	**144.64**	**80**	PKP	PKPdf	10 05 13.1	-0.2
	0.2nm,0.5s,baz=172,slow=2.5,SNR=3.1						
YKA	**Yellowknife Ar**	**146.86**	**45**	PKPbc	PKPdf	10 05 16.9	+0.7
	0.8nm,0.6s,baz=271,slow=2.9,SNR=5.3						

IDC 12 10:05:24.1±3.0, 18°.18S×178°.31W, h365^{km}±36^{km}, mb3.1/5, mb1 3.3/6, mb1mx2.9/58, mbtmp3.9/6, Error ellipse: s-maj=123.3km s-min=22.2km az=156.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.58**	**57**	P	P	10 07 15.0	+0.2
	2.6nm,0.3s,baz=233,slow=10,SNR=4.7						
AFI				S	S	10 08 41.7	-1.3
	1.4nm,0.3s,baz=198,slow=20,SNR=2.4						
STKA	**Stephens Creek**	**38.59**	**241**	P	P	10 12 13.4	0.0
	0.9nm,0.4s,baz=82,slow=16,SNR=3.1						
WRA	**Warramunga Arr**	**44.68**	**260**	P	P	10 13 01.9	-0.5
	0.2nm,0.4s,baz=96,slow=8.5,SNR=6.8						
ASAR	**Alice Springs**	**44.81**	**254**	P	P	10 13 03.2	-0.2
	2.9nm,0.5s,baz=90,slow=8.5,SNR=56						
FITZ	**Fitzroy Crossi**	**53.08**	**261**	P	P	10 14 05.6	+0.1
	0.8nm,0.6s,baz=144,slow=19,SNR=4.1						
TXAR	**Lajitas Array**	**86.06**	**58**	P	P	10 17 24.9	0.0
	0.4nm,0.7s,baz=227,slow=4.8,SNR=3.6						

IDC 12 10:06:06.7±1.1, 2°.01S×127°.30E, h0^{km}, mb3.7/3, mb1 3.7/5, mb1mx3.4/68, mbtmp3.6/5, ML3.5/2, Error ellipse: s-maj=33.2km s-min=21.1km az=58.0, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**4.12**	**74**	Pn	Pn	10 07 12.4	+1.4
	1.7nm,0.3s,baz=270,slow=18,SNR=11						
SIJI				Sn	Sn	10 08 00.4	+0.4
	0.7nm,0.3s,baz=0.0,slow=20,SNR=3.4						
WRA	**Warramunga Arr**	**19.10**	**159**	P	P	10 10 31.1	-0.2
	0.2nm,0.3s,baz=341,slow=12,SNR=18						
ASAR	**Alice Springs**	**22.46**	**164**	P	P	10 11 07.7	0.0
	0.6nm,0.5s,baz=346,slow=11,SNR=16						
MKAR	**Makanchi Array**	**62.61**	**327**	P	P	10 16 33.1	+0.2
	0.5nm,0.4s,baz=118,slow=8.2,SNR=12						
KURBB	**Kurchatov Arra**	**66.88**	**329**	P	P	10 17 00.2	-0.4
	0.5nm,0.4s,baz=132,slow=6.1,SNR=11						

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*ISCJB **12** 10:19:34.6±0.8, 44°.04N±0°.06×128°.57W±0°.07, h13^{km}, mb3.2/3, MS3.0/5, Error ellipse: s-maj=9.8km s-min=6.3km az=35.8*

*IDC **12** 10:19:34.6±1.9, 44°.11N×128°.54W, h0^{km}, mb3.2/4, mb1 3.6/8, mb1mx3.4/72, mbtmp3.4/8, ML2.7/4, MS3.1/7, Ms1 3.1/7, ms1mx2.7/23, Error ellipse: s-maj=53.5km s-min=15.5km az=47.0*

*NEIC **12** 10:19:36.6±1.1, 44°.13N×128°.55W, h10^{km}, ML3.0, Error ellipse: s-maj=13.9km s-min=10.4km az=56.0*

ISC 12 10:19:36.2±1.1,**44°.03N**±0°.07×**128°.59W**±0°.09,**h13**^{km},**n46**, σ**1**^{s}**86**/37,**mb3.4**/3,**MS3.0**/5,**Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I03D	Drain, OR	3.81	93	P	Pn	10 20 31.9	-2.5
	baz=278,SNR=9.7						
I03D				S	Sn	10 21 18.8	-0.2
	baz=278						
COR	Corvallis	3.84	80	*e*Pn	Pn	10 20 34.1	-0.8
G03D	McMinnville, O	3.98	71	P	Pn	10 20 35.0	-1.9
	baz=256,SNR=11						
G03D				S	Sn	10 21 24.6	+1.2
	baz=256						
MEGW	Megler CREST B	4.02	54	*e*Sn	Sn	10 21 18.6	-5.6
HUMO	Hull Mountain	4.35	107	*e*Pn	Pn	10 20 41.8	-0.1
E03A	Lebam	4.35	53	*e*Pn	Pn	10 20 42.0	+0.1
I04A	Tendick Farm,	4.47	91	P	Pn	10 20 41.6	-2.1
	baz=276						
H04A	Detroit Lake	4.64	80	*e*Pn	Pn	10 20 45.7	-0.2
NLWA	Neilton Lookou	4.72	43	*e*Pn	Pn	10 20 47.4	+0.3
YBH	Yreka Blue Hor	4.89	116	Pn	Pn	10 20 49.6	+0.2
	0.1nm,0.3s,baz=296,slow=13,SNR=3.8						
YBH				Sn	Sn	10 21 45.7	-0.2
	0.1nm,0.3s,baz=67,slow=14,SNR=2.0						
MTMW	Mount Mitchell	4.94	64	*e*Pn	Pn	10 20 50.3	+0.1
M02C	Callahan	4.98	120	S	Sn	10 21 43.4	-4.7
	baz=305						
TDL	Tradedollar La	5.07	61	*e*Pn	Pn	10 20 52.0	0.0
J05D	Fort Rock, OR	5.39	95	S	Sn	10 21 58.7	+0.4
	baz=282						
LON	Longmire	5.50	58	*e*Pn	Pn	10 20 57.9	+0.2
PINE	Pine Mountain	5.53	90	*e*Pn	Pn	10 20 57.9	-0.5
D05A	Enumclaw	5.61	53	*e*Pn	Pn	10 20 58.9	-0.3
G08A	Pilot Rock	6.98	76	*e*Pn	Pn	10 21 17.9	-0.4
J08A	Circle Bar Ran	7.36	92	*e*Pn	Pn	10 21 26.8	+3.4
D08A	Wollman Farm,	7.43	63	*e*Pn	Pn	10 21 26.0	+1.7
LOY	Loyalton	7.61	122	*e*Pn	Pn	10 21 26.5	-0.4
BABR	Babbit Peak	7.72	122	*e*Pn	Pn	10 21 26.3	-2.3
BBB	Bella Bella	8.17	2	Pn	Pn	10 21 32.7	-1.6
	0.2nm,0.3s,baz=180,slow=5.1,SNR=3.5						
BBB				LR	LR	10 24 11.2	
	comp=Z,66nm,19.1s,baz=110,slow=34						
F10A	Beach Ranch, E	8.29	72	*e*Pn	Pn	10 21 38.7	+2.7
NVAR	Mina Array Bea	9.55	122	Pn	Pn	10 21 55.0	+1.5
	0.0nm,0.3s,baz=299,slow=9.4,SNR=5.3						
LKWY	Lake	13.05	81	*e*Pn	Pn	10 22 43.6	+2.3
PDAR	Pinedale Array	13.90	89	LR	LR	10 28 26.9	
	comp=Z,80nm,20.8s,baz=266,slow=38						
SRU	San Rafael Swe	14.38	104	*e*P	P	10 23 08.8	+2.2
PV01	Paradox Valley	16.19	104	*e*Pn	P	10 23 25.3	-1.3
ANMO	Albuquerque	19.30	110	P	Pn	10 24 02.8	+0.8
	0.1nm,0.3s,baz=306,slow=11,SNR=4.2						
YKA	Yellowknife Ar	20.22	19	P	P	10 24 09.9	-0.6
	0.6nm,0.6s,baz=211,slow=11,SNR=2.7						
FFC	Flin Flon	20.24	49	*e*P	Pn	10 24 12.5	-0.4
	11nm,0.8s						
ULM	Lac du Bonnet	22.98	63	LR	LR	10 34 01.9	
	comp=Z,39nm,18.3s,baz=342,slow=38						
ILAR	Eielson Array	23.18	340	P	P	10 24 41.1	-1.1
	0.3nm,0.7s,baz=139,slow=8.4,SNR=2.7						
ILAR				LR	LR	10 32 10.3	
	comp=Z,45nm,18.7s,baz=120,slow=33						
TXAR	Lajitas Array	24.66	118	P	P	10 24 57.7	+1.0
	0.7nm,0.8s,baz=293,slow=9.4,SNR=6.9						
LPIG	La Paz	24.89	137	LR	LR	10 34 26.9	
	comp=Z,16nm,18.2s,baz=209,slow=36						
TKL	Tuckaleechee C	35.05	88	LR	LR	10 41 31.5	
	comp=Z,67nm,18.2s,baz=7.5,slow=38						
SCHQ	Schefferville	40.33	52	LR	LR	10 44 29.1	
	comp=Z,38nm,18.5s,baz=330,slow=37						
H11N3	WAKE ISLAND Hy	58.34	267	T	T	11 32 18.2	
	baz=49,slow=75,SNR=717						
H11N2	WAKE ISLAND Hy	58.34	267	T	T	11 32 24.2	
	baz=49,slow=75,SNR=597						
H11N1	WAKE ISLAND Hy	58.36	267	T	T	11 32 23.4	
	baz=49,slow=75,SNR=515						
H11S1	WAKE ISLAND Hy	59.27	266	T	T	11 33 28.3	
	baz=50,slow=75,SNR=119						
H11S2	WAKE ISLAND Hy	59.28	266	T	T	11 33 28.9	
	baz=50,slow=75,SNR=95						
H11S3	WAKE ISLAND Hy	59.29	266	T	T	11 33 29.8	
	baz=50,slow=75,SNR=49						
SONA0	Songino Array	76.53	325	*e*P	P	10 31 26.2	+0.3
SONM	Songino Array	76.53	325	P	P	10 31 26.3	+0.3
	0.7nm,0.8s,baz=35,slow=3.6,SNR=5.0						

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*ISCJB **12** 10:39:06.6±0.2, 40°.74N±0°.01×123°.74W±0°.03, h41^{km}±4^{km}, mb4.0/1, Error ellipse: s-maj=3.8km s-min=1.9km az=170.1*

*IDC **12** 10:39:06.2±2.2, 40°.77N×123°.41W, h0^{km}, mb1 3.6/6, mb1mx3.4/69, mbtmp3.4/6, ML3.3/6, Error ellipse: s-maj=25.1km s-min=9.9km az=65.0*

*NEIC **12** 10:39:07.5±0.0, 40°.75N×123°.68W, h30^{km}, mb4.1/5, MW4.0(BRK), After NCEDC.*

NEIC Felt [III] at Blue Lake and Rio Dell; [II] at Arcata, Bayside, Burnt Ranch, Eureka, Fortuna, McKinleyville, Salyer and Willow Creek. Also felt at Carlotta, Crescent City, Ferndale, Hayfork, Hoopa, Hyampom, Hydesville, Kneeland, Mount Shasta, Scotia and Trinidad.

ISC 12 10:39:07.6±0.8,**40°.75N**±0°.03×**123°.75W**±0°.04,**h31**^{km}±6^{km}, **n201**,σ**1**^{s}**23**/218,**Northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHMM	Horse Mountain	0.13	7	*e*Pg	Pb	10 39 13.2	-0.4
KHMM				*e*Sg	Sb	10 39 17.7	+0.1
JCC	Jacoby Creek,	0.22	288	*e*Pg	Pb	10 39 14.1	-0.1
JCC				*e*Sg	Sb	10 39 19.1	+0.3
KCSM	Cold Springs	0.28	139	*e*Pg	Pb	10 39 14.5	-0.6
KCRM	Chalk Rock	0.33	189	*e*Pg	Pb	10 39 15.5	-0.2
KCTM	Capetown	0.52	239	*e*Pg	Pb	10 39 18.5	0.0
KMRM	Mail Ridge	0.53	177	*e*Pg	Pb	10 39 18.3	-0.3
KOMM	Orleans Mounta	0.58	23	*e*Pg	Pb	10 39 18.2	-1.3
KSMM	Slide Mountain	0.65	210	*e*Pn	Pb	10 39 20.0	-0.6
KJJM	Johnny Jack Ri	0.66	220	*e*Pn	Pb	10 39 20.2	-0.5
KKPM	Kettenpom Peak	0.68	152	*e*Pn	Pb	10 39 19.7	-1.5
LGPM	Granite Peak	0.72	77	*e*Pn	Pn	10 39 19.9	-1.9
N02D	Trinity Center	0.82	74	P	Pn	10 39 21.4	-1.8
	baz=254,SNR=1000						
N02D				S	Sn	10 39 31.5	-2.8
	baz=254						
M02C	Callahan	0.93	46	P	Pn	10 39 23.1	-1.6
	baz=225,SNR=1000						
M02C				S	Sn	10 39 35.2	-1.8
	baz=225						
WDC	Whiskeytown Da	0.94	100	*e*Pn	Pn	10 39 23.1	-1.6
WDC				*e*Sn	Sn	10 39 35.5	-1.5
KBNM	Bluenose Ridge	0.95	153	*e*Pn	Pn	10 39 24.1	-0.9
KIPM	Iron Peak	0.96	168	*e*Pn	Pn	10 39 24.1	-1.0
KCPM	Cahto Peak	1.07	173	*e*Pn	Pn	10 39 25.6	-1.0
KCPM				*e*Sn	Sn	10 39 40.0	-0.5
KFPM	Farley Peak	1.14	167	*e*Pn	Pn	10 39 26.3	-1.2
KTRM	Thompson Ridge	1.19	14	*e*Pn	Pn	10 39 27.0	-1.3
YBH	Yreka Blue Hor	1.26	38	Pg	Pn	10 39 27.9	-1.3
	65nm,0.3s,baz=255,slow=11,SNR=1402						
YBH				Lg	Lg	10 39 44.0	
	336nm,0.3s,baz=114,slow=20,SNR=28						
YBH	Yreka Blue Hor	1.26	38	*e*Pn	Pn	10 39 28.1	-1.1
YBH				*e*Sn	Sn	10 39 45.1	0.0
KRKM	Rackout Spring	1.26	160	*e*Pn	Pn	10 39 28.2	-1.1
LGBM	Gray Butte	1.32	63	*e*Pn	Pn	10 39 29.5	-0.7
GASB	Alder Springs	1.35	144	*e*Pn	Pn	10 39 29.8	-0.6
GTC	Three Chop Rid	1.36	174	*e*Pn	Pn	10 39 29.0	-1.5
GHMM	Hull Mountain	1.40	153	*e*Pn	Pn	10 39 30.1	-1.1
LMPM	Military Pass	1.41	58	*e*Pn	Pn	10 39 31.4	0.0
L02D	Cave Junction,	1.41	4	P	Pn	10 39 30.2	-1.1
	baz=183,SNR=1000						
L02D				S	Sn	10 39 47.8	-0.9
	baz=183						
B040	Montague	1.47	42	*e*Pn	Pn	10 39 31.7	-0.4
KBO	Bosley Butte	1.50	346	*e*Pn	Pn	10 39 31.4	-1.2
KBO				*e*Sn	Sn	10 39 50.1	-1.1
LBFM	Black Fox Moun	1.53	66	*e*Pn	Pn	10 39 32.5	-0.5
GNAM	Navarro Ridge	1.55	177	*e*Pn	Pn	10 39 31.5	-1.6
O03D	Paynes Creek	1.55	106	P	Pn	10 39 31.2	-2.0
	baz=288,SNR=893						
O03D				S	Sn	10 39 50.2	-2.1
	baz=288						
O03D	Paynes Creek	1.55	106	*e*Pn	Pn	10 39 31.4	-1.8
LGMM	Garner Mountai	1.68	59	*e*Pn	Pn	10 39 34.6	-0.3
GHOM	Hamilton Openi	1.71	174	*e*Pn	Pn	10 39 33.6	-1.7
LTIM	Timbered Crate	1.77	75	*e*Pn	Pn	10 39 35.3	-0.9
LRDM	Redding Peak	1.77	99	*e*Pn	Pn	10 39 35.4	-0.7
M04C	Macdoel	1.77	54	P	Pn	10 39 35.8	-0.5
	baz=234,SNR=441						
LBCM	Butte Creek Ri	1.82	86	*e*Pn	Pn	10 39 36.1	-1.0
HOPS	Hopland Field	1.83	163	*e*Pn	Pn	10 39 35.9	-1.1
HOPS				*e*Sn	Sn	10 39 56.6	-2.5
GSNM	Snow Mountain	1.86	166	*e*Pn	Pn	10 39 36.4	-1.0
GGUM	Gualala	1.90	174	*e*Pn	Pn	10 39 36.1	-1.9
MGL	Magalia	1.92	118	*e*Pn	Pn	10 39 37.4	-0.9
HUMO	Hull Mountain	1.95	17	*e*Pn	Pn	10 39 38.1	-0.5
GDXM	Geysers	2.07	159	*e*Pn	Pn	10 39 39.9	-0.5
OSUM	Sutter Buttes	2.08	135	*e*Pn	Pn	10 39 38.4	-1.8
ORV	Oroville	2.10	124	*e*Pn	Pn	10 39 40.2	-0.4
ORV				*e*Sn	Sn	10 40 04.0	-1.7
SKG	Skaggs Springs	2.12	164	*e*Pn	Pn	10 39 39.7	-1.2
KEBM	Edson Butte	2.17	349	*e*Pn	Pn	10 39 40.9	-0.8
NMCNC	Mill Creek, So	2.25	163	*e*Pn	Pn	10 39 41.8	-0.9
FTR	Fort Ross	2.27	168	*e*Pn	Pn	10 39 42.1	-0.9
K04D	Chiloquin, OR	2.40	38	P	Pn	10 39 45.1	+0.2
	baz=218,SNR=35						
K04D				S	Sn	10 40 13.0	-0.3
	baz=218						
DBO	Dodson Butte	2.40	9	*e*Pn	Pn	10 39 44.8	-0.1
UMPQ	Umpqua Communi	2.56	7	*e*Pn	Pn	10 39 47.1	+0.1
NBRB	Beebe Ranch Br	2.65	159	*e*Pn	Pn	10 39 48.5	+0.3
MCCM	Marconi Confer	2.69	165	*e*Pn	Pn	10 39 47.9	-0.8
BEKR	Beckworth	2.74	108	*e*Pn	Pn	10 39 48.8	-0.8
J04D	Umpqua Nationa	2.77	26	P	Pn	10 39 50.7	+0.6
	baz=206,SNR=42						
AFDM	Forest Hills D	2.79	129	*e*Pn	Pn	10 39 49.8	-0.4
AFDM				*e*Sn	Sn	10 40 21.7	-1.2
MOD	Modoc Plateau	2.84	65	*e*Pn	Pn	10 39 49.7	-1.3
LOY	Loyalton	2.90	111	*e*Pn	Pn	10 39 53.0	+1.1
K05A	Summer Lake	2.91	46	*e*Pn	Pn	10 39 51.9	-0.1
IND	Independence	2.96	115	*e*Pn	Pn	10 39 53.0	+0.3
I03D	Drain, OR	2.96	6	P	Pn	10 39 52.5	0.0
	baz=185,SNR=480						
CPMM	Point Molate	2.98	159	*e*Pn	Pn	10 39 52.5	-0.2
KBF	Kyburz Flat	2.98	113	*e*Pn	Pn	10 39 53.0	0.0
BABR	Babbit Peak	3.02	111	*e*Pn	Pn	10 39 52.8	-0.8
CVPM	Vollmer Peak	3.10	157	*e*Pn	Pn	10 39 55.2	+0.8
PEAR	Peavine Mounta	3.12	110	*e*Pn	Pn	10 39 54.4	-0.5
J05D	Fort Rock, OR	3.15	36	P	Pn	10 39 55.6	+0.4
	baz=217,SNR=20						
J05D				S	Sn	10 40 30.7	-1.2
	baz=217						
TAHR	Tahoe	3.19	119	*e*Pn	Pn	10 39 56.5	+0.7
I04A	Tendick Farm,	3.20	18	P	Pn	10 39 56.0	+0.1
	baz=198,SNR=150						
I04A				S	Sn	10 40 32.3	-0.6
	baz=198						
JSBM	San Bruno Moun	3.24	161	*e*Pn	Pn	10 39 56.2	-0.1
RUBR	Rubicon Trail	3.24	120	*e*Pn	Pn	10 39 57.3	+0.7
EMB	Emerald Bay	3.32	121	*e*Pn	Pn	10 39 58.2	+0.5
IRO	Indian Ridge	3.44	18	*e*Pn	Pn	10 39 59.6	+0.4
VCNR	Virginia City	3.47	113	*e*Pn	Pn	10 39 59.4	-0.2
PAHR	Pah Rah Range	3.50	106	*e*Pn	Pn	10 39 59.2	-0.9
JSFB	Stanford Teles	3.56	159	*e*Pn	Pn	10 40 00.6	-0.1
JFP	Foothills Park	3.59	160	*e*Pn	Pn	10 40 00.5	-0.7
PNTR	Pine Nut	3.60	116	*e*Pn	Pn	10 40 01.4	-0.1
WIFE	Three Sisters-	3.60	23	*e*Pn	Pn	10 40 02.3	+0.8
SJH	Saint Joseph S	3.65	159	*e*Pn	Pn	10 40 02.0	+0.1
JPC	Peters Creek,	3.67	160	*e*Pn	Pn	10 40 01.7	-0.6
PINE	Pine Mountain	3.69	34	*e*Pn	Pn	10 40 03.4	+0.8
PRLK	Prince Lake	3.70	20	*e*Pn	Pn	10 40 03.5	+0.7
CMB	Columbia Colle	3.76	135	*e*Pn	Pn	10 40 04.0	+0.4
COR	Corvallis	3.85	5	*e*Pn	Pn	10 40 05.4	+0.7
YERR	Yerington	3.89	115	*e*Pn	Pn	10 40 05.0	-0.5
I05D	Terrebonne, OR	4.00	26	P	Pn	10 40 07.5	+0.6
	baz=207,SNR=8.1						
WAKR	Walker	4.01	123	*e*Pn	Pn	10 40 07.8	+0.7
H04A	Detroit Lake	4.10	16	*e*Pn	Pn	10 40 08.6	+0.5
JELB	Ellicott, Sant	4.10	158	*e*Pn	Pn	10 40 08.0	-0.1
WVOR	Wild Horse Val	4.19	65	*e*Pn	Pn	10 40 07.9	-1.6
SAO	San Andreas Ge	4.37	155	*e*Pn	Pn	10 40 11.2	-0.6
G03D	McMinnville, O	4.47	4	P	Pn	10 40 14.3	+1.0
	baz=184,SNR=102						
BPCNC	Pine Canyon	4.49	158	*e*Pn	Pn	10 40 12.7	-0.8
RYN	Ryan	4.55	116	*e*Pn	Pn	10 40 14.3	-0.3
I07A	Izee	4.58	42	*e*Pn	Pn	10 40 15.4	+0.6
KVN	Kaiserville	4.67	109	*e*Pn	Pn	10 40 15.7	-0.4
J08A	Circle Bar Ran	4.71	55	*e*Pn	Pn	10 40 16.1	-0.6
J08A				*e*Sn	Sn	10 41 10.1	-0.2
TDH	Tom, Dick, Har	4.76	17	*e*Pn	Pn	10 40 20.1	+2.7
MDPB	Devils Postpil	4.78	129	*e*Pn	Pn	10 40 19.7	+1.9
NV01	Mina Array Sit	4.80	117	*e*Pn	Pn	10 40 18.0	-0.1
NV01				*e*Lg	Lg	10 41 30.4	
NVAR	Mina Array Bea	4.80	117	Pn	Pn	10 40 17.7	-0.3
	1.5nm,0.3s,baz=298,slow=14,SNR=40						
NVAR				Sn	Sn	10 41 11.0	-1.7
	2.5nm,0.3s,baz=292,slow=24,SNR=5.5						
NVAR				Lg	Lg	10 41 30.4	
	1.7nm,0.3s,baz=292,slow=30,SNR=4.1						
G05D	Wamic, OR	4.83	21	P	Pn	10 40 19.4	+1.1
	baz=202,SNR=25						
OMMB	Old Mammoth Mi	4.84	129	*e*Pn	Pn	10 40 20.6	+2.0
NV11	Mina Array Sit	4.90	116	*e*Pn	Pn	10 40 19.1	-0.2
G06A	Carlson Farm,	5.03	26	*e*Pn	Pn	10 40 22.7	+1.7
PCCM	Crazy Canyon	5.08	156	*e*Pn	Pn	10 40 21.2	-0.4
MLNR	Milner Canyon	5.25	125	*e*Pg	Pb	10 40 42.2	+3.4
F04D	Rainier, OR	5.36	6	P	Pn	10 40 26.9	+1.5
	baz=186						
B023	Clatskanie	5.38	5	*e*Pn	Pn	10 40 26.9	+1.2
MTMW	Mount Mitchell	5.39	11	*e*Pn	Pn	10 40 26.6	+0.6
B203	Quarry, Mount	5.51	10	*e*Pn	Pn	10 40 28.4	+0.8
SHW	Mount Saint He	5.55	11	*e*Pn	Pn	10 40 29.5	+1.3
ESD	East Dome	5.57	12	*e*Pn	Pn	10 40 30.0	+1.5
SOSW	Source of Smit	5.62	12	*e*Pn	Pn	10 40 30.3	+1.2
ERK	Elk Rock	5.65	10	*e*Pn	Pn	10 40 30.4	+0.9
B201	Coldwater, Mou	5.66	11	*e*Pn	Pn	10 40 30.7	+1.2
TDL	Tradedollar La	5.71	11	*e*Pn	Pn	10 40 31.4	+1.1
PAGB	Antelope Grade	5.72	150	*e*Pn	Pn	10 40 31.7	+1.3
BMW	Boistfort Moun	5.74	4	*e*Pn	Pn	10 40 31.1	+0.4
G08A	Pilot Rock	5.74	36	*e*Pn	Pn	10 40 32.7	+1.9
E03A	Lebam	5.80	1	*e*Pn	Pn	10 40 31.8	+0.4
F07A	Phinny Hill Vi	5.85	27	*e*Pn	Pn	10 40 32.2	+0.1
B019	Raymond	5.90	1	*e*Pn	Pn	10 40 33.9	+1.0
GLK	Glacier Lake	6.02	14	*e*Pn	Pn	10 40 35.9	+1.3
WPW	White Pass	6.16	14	*e*Pn	Pn	10 40 38.1	+1.6
LON	Longmire	6.16	13	*e*Pn	Pn	10 40 37.1	+0.6
LON				*e*Pn	Pn	10 40 38.0	+1.5
B017	Montesano	6.25	1	*e*Pn	Pn	10 40 38.5	+1.0
BMO	Blue Mountains	6.27	47	*e*Pn	Pn	10 40 38.1	+0.1
OBSR	Observation Ro	6.31	12	*e*Pn	Pn	10 40 40.0	+1.4
B941	Kapowsin	6.33	10	*e*Pn	Pn	10 40 40.0	+1.3
HAWA	Hanford	6.42	27	*e*Pn	Pn	10 40 39.8	-0.2
ELK	Elko	6.46	87	Pn	Pn	10 40 42.4	+1.5
	0.2nm,0.3s,baz=312,slow=15,SNR=3.4						
ELK				Lg	Lg	10 42 24.7	
	0.1nm,0.3s,baz=262,slow=12,SNR=2.5						
MFID	Camas Ranch	6.47	63	*e*Pn	Pn	10 40 41.0	+0.2
ISA	Isabella, Lake	6.56	139	*e*Pn	Pn	10 40 42.9	+0.9
D05A	Enumclaw	6.56	11	*e*Pn	Pn	10 40 41.7	-0.2
SMW	South Mountain	6.58	2	*e*Pn	Pn	10 40 43.2	+1.1
NLWA	Neilton Lookou	6.64	359	*e*Pn	Pn	10 40 43.1	0.0
E08A	Dider Farm, El	6.67	29	*e*Pn	Pn	10 40 44.0	+0.5
R11A	Troy Canyon, C	6.75	108	P	Pn	10 40 44.8	+0.1
	baz=294						
R11A	Troy Canyon, C	6.75	108	*e*Pn	Pn	10 40 45.3	+0.6
TBM	Table Mountain	6.81	18	*e*Pn	Pn	10 40 47.9	+2.5
GMW	Gold Mountain	6.83	6	*e*Pn	Pn	10 40 46.4	+0.7
GNW	Green Mountain	6.85	5	*e*Pn	Pn	10 40 46.5	+0.7
LTY	Liberty	6.88	18	*e*Pn	Pn	10 40 48.3	+2.0
HDW	Hoodsport	6.92	4	*e*Pn	Pn	10 40 47.6	+0.7
E09A	Wood Farm, Sta	7.05	33	*e*Pn	Pn	10 40 50.7	+2.0
F10A	Beach Ranch, E	7.06	40	*e*Pn	Pn	10 40 51.4	+2.5
C05A	Tolt Reservoir	7.10	11	*e*Pn	Pn	10 40 50.9	+1.6
HTW	Haystack Looko	7.20	11	*e*Pn	Pn	10 40 52.0	+1.4
D08A	Wollman Farm,	7.21	27	*e*Pn	Pn	10 40 51.1	+0.3
HLID	Hailey	7.49	65	P	Pn	10 40 56.1	+1.3
	baz=251						
HLID	Hailey	7.49	65	*e*Pn	Pn	10 40 56.7	+1.9
JCW	Jim Creek	7.56	9	*e*Pn	Pn	10 40 56.7	+1.1
B05A	Bryant	7.61	8	P	Pn	10 40 56.4	+0.1
	baz=189,SNR=31						
PGC	Sidney	7.90	1	*e*Pn	Pn	10 41 00.9	+0.7
B06A	Marblemount	7.94	11	*e*Pn	Pn	10 41 01.5	+0.8
PSUT	Pine Spring	7.95	103	*e*Pn	Pn	10 41 02.1	+0.8
MCW	Mount Constitu	7.96	4	*e*Pn	Pn	10 41 02.1	+1.0
VTV	Victorville	8.00	138	*e*Pn	Pn	10 41 01.8	0.0
A04D	Lummi Island	8.01	5	P	Pn	10 41 02.3	+0.6
	baz=185						
BGU	Big Grassy Mou	8.13	85	*e*Pn	Pn	10 41 04.3	+0.7
MBW	Mount Baker	8.14	9	*e*Pn	Pn	10 41 05.1	+1.3
SBI	Santa Barbara	8.17	151	*e*Sn	Sn	10 42 35.9	+0.5
HVU	Hansel Valley	8.33	79	*e*Pn	Pn	10 41 08.0	+1.6
DUG	Dugway, Tooele	8.36	90	P	Pn	10 41 06.7	0.0
	baz=277						
DUG	Dugway, Tooele	8.36	90	*e*Pn	Pn	10 41 08.4	+1.7
SVD	Seven Oaks Dam	8.48	139	*e*Sn	Sn	10 42 38.2	-4.8
NLU	North Lily Min	8.95	91	*e*Pn	Pn	10 41 16.5	+1.6
TCRU	Three Creeks R	8.97	100	*e*Pn	Pn	10 41 16.2	+0.9
MCMT	McKenzie Canyo	8.99	59	*e*Pn	Pn	10 41 17.0	+1.5
CRY	Cary Ranch	9.09	140	*e*Sn	Sn	10 42 48.2	-10
MSU	Marysvale	9.21	100	*e*Pn	Pn	10 41 20.6	+2.2
FRD	Ford Ranch, An	9.22	140	*e*Sn	Sn	10 43 04.0	+2.9
HWUT	Hardware Ranch	9.23	81	*e*Pn	Pn	10 41 20.6	+1.9
MSO	Missoula	9.34	46	*e*Pn	Pn	10 41 20.7	+0.6
DLMT	Dillon	9.38	57	*e*Pn	Pn	10 41 21.8	+1.1
PKCU	Pink Cliffs	9.48	107	*e*Pn	Pn	10 41 25.7	+3.4
AHID	Auburn Hatcher	9.67	74	*e*Pn	Pn	10 41 25.2	+0.5
LLLB	Lillooet	9.95	7	*e*Pn	Pn	10 41 27.1	-1.3
IMW	Indian Meadow	10.00	67	*e*Pn	Pn	10 41 31.6	+2.3
P17A	Butcher Ranch,	10.05	93	*e*Pn	Pn	10 41 30.7	+0.8
SRU	San Rafael Swe	10.29	95	*e*Pn	Pn	10 41 35.7	+2.5
PDAR	Pinedale Array	10.79	75	Pn	Pn	10 41 41.4	+1.2
	0.0nm,0.3s,baz=258,slow=13,SNR=3.8						
PV09	Paradox Valley	11.50	97	*e*Pn	Pn	10 41 51.7	+1.8
PV03	Paradox Valley	11.78	97	*e*Pn	Pn	10 41 47.9	-5.7
BBB	Bella Bella	11.82	347	Pn	Pn	10 41 57.3	+3.3
	0.2nm,0.3s,baz=153,slow=6.8,SNR=4.7						
PV01	Paradox Valley	12.03	98	*e*Pn	Pn	10 41 58.6	+1.5
SDCO	Great Sand Dun	14.46	96	*e*Pn	Pn	10 42 30.8	+0.6
ANMO	Albuquerque	14.83	107	Pn	Pn	10 42 35.6	+0.3
	0.1nm,0.3s,baz=305,slow=11,SNR=3.7						
T25A	Trinidad	15.47	97	*e*Pn	Pn	10 42 44.8	+1.0
	6.7nm,1.1s						
KSCO	Kaye Shedlock’	16.31	89	*e*Pn	P	10 42 56.4	-0.7
	14nm,0.5s						
LTX	Lajitas	19.95	119	*e*P	P	10 43 37.1	-0.1
TXAR	Lajitas Array	19.95	119	P	P	10 43 37.1	-0.1
	0.0nm,0.3s,baz=297,slow=10.0,SNR=3.7						
FFC	Flin Flon	20.13	39	*e*P	P	10 43 36.6	-2.3
	4.9nm,1.4s						
KSU1	Kansas State U	20.85	86	*e*P	P	10 43 46.8	-0.1
	9.2nm,0.6s						
AGMN	Agassiz Nation	21.19	60	*e*P	P	10 43 49.9	-0.5
	5.0nm,0.6s						

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*ISN **12** 10:50:30.6±4.9, 38°.86N×43°.04E, h0^{km}±101^{km}, ML3.6*

*ISK **12** 10:50:37.4, 38°.62N×43°.15E, h3^{km}, ML3.7/18*

*CSEM **12** 10:50:38.7±0.1, 38°.61N×43°.12E, h2^{km}, ML3.7, Error ellipse: s-maj=3.2km s-min=2.6km az=150.0*

*DDA **12** 10:50:38.6, 38°.63N×43°.19E, h7^{km}, Ml3.6*

*ISCJB **12** 10:50:38.6±0.4, 38°.64N±0°.02×43°.13E±0°.02, h2^{km}±3^{km}, Error ellipse: s-maj=3.3km s-min=2.6km az=144.8*

*AZER **12** 10:50:41.0±1.5, 38°.61N×43°.26E, h5^{km}, ml3.3/12, Error ellipse: s-maj=12.5km s-min=9.7km az=73.0*

ISC 12 10:50:39.2±0.9,**38°.61N**±0°.02×**43°.16E**±0°.02,**h7**^{km}±8^{km}, **n94**,σ**1**^{s}**24**/140,**24C-12D**,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VANB	Van	0.18	95	PG	Pg	10 50 42.7	-0.1
VANB				SG	Sg	10 50 46.8	+1.5
VANB	Van	0.18	95	*e*Pg	Pg	10 50 42.7	-0.1
VANB				*e*Sg	Sg	10 50 46.8	+1.5
GEVA	Gevas	0.31	195	*i* P	Pg	10 50 44.6	-0.7
GEVA				*i* S	Sb	10 50 51.8	-0.7
GEVA	Gevas	0.31	195	P	Pg	10 50 44.6	-0.7
GEVA				S	Sb	10 50 51.8	-0.7
ADCV	BITLIS_Adilcev	0.39	300	*i* P	Pg	10 50 46.5	-0.4
ADCV				*i* S	Sb	10 50 53.8	-1.2
ADCV	BITLIS_Adilcev	0.39	300	P	Pg	10 50 46.5	-0.4
ADCV				S	Sb	10 50 53.8	-1.2
ERCV	ERCIS-VAN	0.43	19	PG	Pg	10 50 46.6	-1.0
ERCV				SG	Sg	10 50 53.3	+0.1
ERCV	ERCIS-VAN	0.43	19	*e*Pg	Pg	10 50 46.6	-1.0
ERCV				*e*Sg	Sg	10 50 53.3	+0.1
VMUR	Van-Muradiye	0.49	40	*i* P	Pg	10 50 48.2	-0.6
VMUR				*i* S	Sb	10 50 56.8	-1.1
VMUR	Van-Muradiye	0.49	40	P	Pg	10 50 48.2	-0.6
VMUR				S	Sb	10 50 56.8	-1.1
CLDR	Caldiran	0.79	48	PG	Pg	10 50 53.5	-1.0
CLDR				SG	Sg	10 51 05.2	+0.4
CLDR	Caldiran	0.79	48	*i* P	Pg	10 50 53.5	-1.0
CLDR				*i* S	Sg	10 51 05.0	+0.3
CLDR	Caldiran	0.79	48	P	Pg	10 50 53.5	-1.0
CLDR				*e*Sg	Sg	10 51 05.2	+0.4
TUTA	Tutak	0.83	341	*i* P	Pg	10 50 53.9	-1.4
TUTA	Tutak	0.83	341	P	Pg	10 50 53.9	-1.4
GURO	Guroymak-BITLI	0.89	266	PG	Pg	10 50 54.9	-1.3
GURO				SG	Sg	10 51 07.8	0.0
GURO	Guroymak-BITLI	0.89	266	*e*Pg	Pg	10 50 54.9	-1.3
GURO				*e*Sg	Sg	10 51 07.8	0.0
AGRB	Hanur-Agry	0.97	352	PG	Pg	10 50 56.2	-1.6
AGRB	Hanur-Agry	0.97	352	*e*Pg	Pg	10 50 56.2	-1.6
DYDN	Diyadin	1.02	24	*i* P	Pg	10 50 58.7	0.0
DYDN				*i* S	Sn	10 51 15.8	+1.0
DYDN	Diyadin	1.02	24	P	Pg	10 50 58.7	0.0
DYDN				S	Sn	10 51 15.8	+1.0
EKAR	Karacoban	1.07	307	*i* P	Pg	10 50 59.1	-0.7
EKAR				*i* S	Sn	10 51 22.8	+6.7
EKAR	Karacoban	1.07	307	P	Pg	10 50 59.1	-0.7
HAKT	HAKKARI	1.14	158	*i* P	Pg	10 50 58.9	-2.1
HAKT				*i* S	Sn	10 51 17.2	-0.5
HAKT	HAKKARI	1.14	158	P	Pg	10 50 58.9	-2.1
HAKT				S	Sn	10 51 17.2	-0.5
SRTM	Siirt_Merkez	1.16	238	*i* P	Pg	10 51 00.9	-0.5
SRTM				*i* S	Sn	10 51 22.0	+4.0
SRTM	Siirt_Merkez	1.16	238	P	Pg	10 51 00.9	-0.5
SIRT	Sirnak	1.25	207	PN	Pb	10 51 02.1	-1.0
SIRT				SN	Sn	10 51 20.0	-0.2
SIRT	Sirnak	1.25	207	*e*Pn	Pb	10 51 02.1	-1.0
SIRT				*e*Sn	Sn	10 51 20.0	-0.2
SIRN	S˜–rnak	1.26	208	*i* P	Pg	10 51 03.8	+0.4
SIRN				*i* S	Sn	10 51 21.8	+1.2
SIRN	S˜–rnak	1.26	208	P	Pg	10 51 03.8	+0.4
SIRN				S	Sn	10 51 21.8	+1.2
EATA	Eleskirt	1.35	338	*i* P	Pn	10 51 03.4	-1.4
EATA				*i* S	Sn	10 51 23.8	+0.6
EATA	Eleskirt	1.35	338	P	Pn	10 51 03.4	-1.4
EATA				S	Sn	10 51 23.8	+0.6
YOVA	Hakkari_Yˆ…kse	1.36	139	*i* P	Pn	10 51 04.0	-0.7
YOVA				*i* S	Sn	10 51 24.1	+1.0
YOVA	Hakkari_Yˆ…kse	1.36	139	P	Pn	10 51 04.0	-0.7
YOVA				S	Sn	10 51 24.1	+1.0
CUKT	Cukurca	1.41	165	PN	Pn	10 51 04.6	-0.8
CUKT	Cukurca	1.41	165	*i* P	Pn	10 51 04.5	-0.8
CUKT				*i* S	Sg	10 51 27.4	+3.0
CUKT	Cukurca	1.41	165	P	Pn	10 51 04.5	-0.8
CUKT				S	Sg	10 51 27.4	+3.0
VRTB	Varto-Mus	1.44	293	PN	Pn	10 51 04.9	-0.9
VRTB	Varto-Mus	1.44	293	*i* P	Pn	10 51 05.6	-0.2
VRTB	Varto-Mus	1.44	293	*e*Pn	Pn	10 51 04.9	-0.9
VRTB	Varto-Mus	1.44	293	P	Pn	10 51 05.6	-0.2
TASB	TASBURUN-IGDIR	1.60	31	PN	Pn	10 51 07.6	-0.4
TASB	TASBURUN-IGDIR	1.60	31	*e*Pn	Pn	10 51 07.6	-0.4
SVAN	Silvan-Diyarba	1.61	254	PN	Pn	10 51 07.7	-0.4
SVAN	Silvan-Diyarba	1.61	254	*i* P	Pb	10 51 09.2	-0.1
SVAN				*i* S	Sg	10 51 32.5	+1.6
SVAN	Silvan-Diyarba	1.61	254	*e*Pn	Pn	10 51 07.7	-0.4
SVAN	Silvan-Diyarba	1.61	254	P	Pb	10 51 09.2	-0.1
BTMN	Batman	1.65	245	*i* P	Pb	10 51 10.1	+0.1
BTMN				*i* S	Sg	10 51 34.4	+2.0
BTMN	Batman	1.65	245	P	Pb	10 51 10.1	+0.1
HYR	Heyderabad	1.72	49	⇑P	Pb	10 51 10.7	-0.4
HYR				⇑S	Sg	10 51 34.0	-0.4
HYR	Heyderabad	1.72	49	⇑P	Pb	10 51 10.7	-0.4
HYR				⇑S	Sg	10 51 34.0	-0.4
NAX	Nakhchivan	1.91	72	⇓P	Pb	10 51 13.5	-0.8
	SNR=14						
NAX				⇑S	Sb	10 51 37.5	-0.8
NAX	Nakhchivan	1.91	72	⇓P	Pb	10 51 13.5	-0.8
	SNR=14						
NAX				⇑S	Sb	10 51 37.5	-0.8
BNGB	Bingˆ¶l	1.98	282	PN	Pn	10 51 12.6	-0.6
KARS	Kars	2.01	358	PN	Pn	10 51 13.2	-0.5
KARS	Kars	2.01	358	*e*Pn	Pn	10 51 13.2	-0.5

SBZ	Shahbuz	2.02	66	⇑P	Pb	10 51 15.4	-0.9
SBZ				⇓S	Sb	10 51 40.9	-0.8
SBZ	Shahbuz	2.02	66	⇑P	Pb	10 51 15.4	-0.9
SBZ				⇓S	Sb	10 51 40.9	-0.8
BINT	Bingol	2.11	278	*e*Pn	Pn	10 51 12.6	-2.4
ORD	Ordubad	2.24	81	⇓P	Pn	10 51 17.4	+0.7
ORD				⇑S	Sn	10 51 45.7	+1.1
ORD	Ordubad	2.24	81	⇓P	Pn	10 51 17.4	+0.7
ORD				⇑S	Sn	10 51 45.7	+1.1
DIY	Diyarbakir	2.42	254	*e*Pn	Pn	10 51 19.9	+0.7
DYBB	Diyarbakir	2.47	255	PN	Pn	10 51 19.9	0.0
AKH	Akhalkalaki	2.81	5	PN	Pn	10 51 24.6	-0.1
AKH	Akhalkalaki	2.81	5	*e*Pn	Pn	10 51 24.6	-0.1
ERZN	Erzincan	2.85	291	PN	Pn	10 51 25.2	0.0
GDB	GEDABAY	2.91	43	⇑P	Pn	10 51 27.3	+1.3
	SNR=7.5						
GDB				⇑S	Sn	10 52 03.4	+2.1
GDB	GEDABAY	2.91	43	⇑P	Pn	10 51 27.3	+1.3
	SNR=7.5						
GDB				⇑S	Sn	10 52 03.4	+2.1
BAYT	Ayd˜–ntepe-Bay	2.94	308	PN	Pn	10 51 26.4	-0.1
BAYT	Ayd˜–ntepe-Bay	2.94	308	*e*Pn	Pn	10 51 26.4	-0.1
PTK	Pertek	2.96	277	PN	Pn	10 51 26.8	0.0
PTK	Pertek	2.96	277	*e*Pn	Pn	10 51 26.8	0.0
QZX	Qazax, Azerbai	2.98	34	⇑P	Pn	10 51 28.2	+1.4
	SNR=8.9						
QZX				⇑S	Sn	10 52 04.8	+1.9
QZX	Qazax, Azerbai	2.98	34	⇑P	Pn	10 51 28.2	+1.4
	SNR=8.9						
QZX				⇑S	Sn	10 52 04.8	+1.9
SVRC	Sivrice-ELAZID	3.03	267	PN	Pn	10 51 27.7	-0.1
SVRC	Sivrice-ELAZID	3.03	267	*e*Pn	Pn	10 51 27.7	-0.1
BCA	Borcka	3.07	338	PN	Pn	10 51 28.2	+0.1
BCA	Borcka	3.07	338	*e*Pn	Pn	10 51 28.2	+0.1
CHOM	Cayeli-Rize	3.09	324	PN	Pn	10 51 28.6	+0.1
CHOM	Cayeli-Rize	3.09	324	*e*Pn	Pn	10 51 28.6	+0.1
GANJ	Ganja	3.17	49	⇓P	Pn	10 51 30.9	+1.3
	SNR=10						
GANJ	Ganja	3.17	49	⇓P	Pn	10 51 30.9	+1.3
	SNR=10						
BRDA	Brd	3.52	61	⇓P	Pn	10 51 35.5	+1.2
	SNR=5.3						
BRDA	Brd	3.52	61	⇓P	Pn	10 51 35.5	+1.2
	SNR=5.3						
ZRD	Zardab	3.88	63	⇑P	Pn	10 51 40.2	+1.0
	SNR=5.2						
ZRD	Zardab	3.88	63	⇑P	Pn	10 51 40.2	+1.0
	SNR=5.2						
LRK	Lerik	4.05	88	⇑P	Pn	10 51 42.6	+0.8
	SNR=3.0						
LRK	Lerik	4.05	88	⇑P	Pn	10 51 42.6	+0.8
	SNR=3.0						
ASTR	Astara	4.41	89	⇑P	Pn	10 51 47.4	+0.9
	SNR=3.7						
ASTR	Astara	4.41	89	⇑P	Pn	10 51 47.4	+0.9
	SNR=3.7						
XNQ	Khinaliq	4.60	55	⇓P	Pn	10 51 50.5	+1.1
XNQ	Khinaliq	4.60	55	⇓P	Pn	10 51 50.5	+1.1
RTB	Rutbah	6.03	203	*e*Pn	Pn	10 52 07.0	-1.9
	SNR=3.0						
RTB				*e*Sn	Sn	10 53 16.0	-2.2
	SNR=3.0						

ISCJB ***12*** *11:03:22.0±0.7, 35.°46N±0.°05×140.°20E±0.°08, h70^{km}±9^{km}, mb3.3/2, Error ellipse: s-maj=10.4km s-min=8.4km az=178.8*

IDC ***12*** *11:03:22.6±3.2, 35.°47N×140.°27E, h62^{km}±24^{km}, mb2.9/2, mb1 3.2/3, mb1mx2.9/70, mbtmp3.3/3, ML3.1/1, Error ellipse: s-maj=41.3km s-min=7.8km az=67.0*

JMA ***12*** *11:03:23.3±0.1, 35.°51N×140.°11E, h59^{km}±2^{km}, M2.4*

ISC 12 11:03:22.9±1.1**, 35.°48N**±0.°05×**140.°18E**±0.°07**, h61**^{km}±13^{km}**, n9, σ0.^{s}82**/14**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIHU	Itakohorinouch	0.56	30	P	Pn	11 03 36.8	+1.1
JYT	Yasato	0.75	1	P	Pn	11 03 37.5	-0.4
JYT				*e*S	Sn	11 03 48.0	-0.8
JOD2	Odawara 2	0.91	257	P	Pn	11 03 39.8	-0.1
JOD2				S	Sn	11 03 51.5	-1.0
JHYU	Hitachinakayam	0.92	21	P	Pn	11 03 40.0	0.0
MJAR	Matsushiro Arr	1.92	304	P	Pn	11 03 53.7	+0.4
	2.5nm,0.3s,baz=105,slow=14,SNR=28						
MJAR				S	Sn	11 04 17.5	+1.1
	3.3nm,0.3s,baz=122,slow=34,SNR=9.2						
MAT	Matsushiro	1.92	304	P	Pn	11 03 53.7	+0.4
MAT				S	Sn	11 04 17.3	+0.9
JHJ	Hachijo jima 2	2.37	188	P	Pn	11 04 00.2	+0.7
	10.0nm,0.3s,baz=0.9,slow=23,SNR=7.7						
JHJ				S	Sn	11 04 27.6	+0.1
	15nm,0.3s,baz=52,slow=20,SNR=7.7						
WRA	Warramunga Arr	55.39	187	P	P	11 12 50.9	-0.1
	0.3nm,0.9s,baz=3.0,slow=7.5,SNR=7.7						
ASAR	Alice Springs	59.12	187	P	P	11 13 16.3	-0.8
	0.2nm,0.7s,baz=14,slow=12,SNR=3.4						

IDC 12 11:03:37.3±24.0**, 29.°20S**×**74.°74E, h0**^{km}**, mb3.7**/3**, mb1 4.0**/3**, mb1mx3.5**/67**, mbtmp3.7**/3**, Error ellipse: s-maj=580.1km s-min=48.3km az=64.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	52.80	99	P	P	11 12 54.4	-0.3
	0.3nm,0.6s,baz=253,slow=6.3,SNR=7.9						
CMAR	Chiang Mai Arr	52.83	29	P	P	11 12 54.7	0.0
	0.5nm,0.3s,baz=205,slow=8.0,SNR=3.4						
WRA	Warramunga Arr	54.49	95	P	P	11 13 07.2	0.0
	1.4nm,0.9s,baz=250,slow=7.0,SNR=8.2						

SOME ***12*** *11:07:55.7, 41.°08N×71.°13E, h5^{km}*

KRNET ***12*** *11:07:58.1±0.1, 41.°33N×71.°12E, h0^{km}, mb2.5*

NNC ***12*** *11:07:59.1±5.1, 41.°25N×70.°93E, h0^{km}, mb3.1, mpv2.8, Error ellipse: s-maj=46.0km s-min=22.8km az=51.0*

ISC 12 11:07:58.4±1.3**, 41.°28N**±0.°03×**71.°14E**±0.°05**, h6**^{km}±13^{km}**, n12, σ1.^{s}17**/23**, 7C-6D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IUG	Iuzhnay	1.20	317	*e*P	Pg	11 08 22.0	+0.6
	33nm,0.2s						
IUG				*e*S	Sn	11 08 41.2	+2.7
	28nm,0.2s						
BTK	Batken	1.25	191	⇑*i*P	Pg	11 08 22.2	-0.1
	baz=90						
BTK				⇑*i*S	Sn	11 08 41.1	+1.5
	baz=90						
ARSB	Arslanbob	1.39	88	⇑*i*P	Pb	11 08 24.6	-0.3
	baz=90						
ARSB				⇑*i*S	Sg	11 08 44.4	+1.2
	baz=90						
MNAS	Manas	1.58	40	⇓Pn	Pb	11 08 27.7	-0.4
	2.3nm,0.5s						
MNAS				⇓Sn	Sg	11 08 52.0	+2.8
	2.0nm,0.2s						
MNAS	Manas	1.58	40	⇓*i*P	Pb	11 08 27.7	-0.4
	baz=41						
MNAS				⇓*i*S	Sg	11 08 49.0	-0.2
	baz=41						
KK31	Karatay Array	1.88	346	Pn	Pb	11 08 32.4	-0.8
	3.9nm,0.3s,baz=165,slow=15,SNR=52						
KK31				Sn	Sg	11 08 58.9	0.0
	16nm,0.5s,baz=167,slow=31,SNR=18						
BRLS	Borolday	2.00	331	*e*P	Pn	11 08 31.4	-1.3
	15nm,0.3s						
BRLS				*e*S	Sn	11 08 57.3	-0.9
	21nm,0.3s						
AML	Almayashu	2.09	65	⇑*i*P	Pb	11 08 36.4	-0.7
	baz=67						
AML				⇑*i*S	Sg	11 09 04.9	-0.9
	baz=67						
MRKS	Merke	2.14	46	*e*P	Pb	11 08 37.6	0.0
	5.8nm,0.4s						
MRKS				*e*S	Sg	11 09 07.9	+0.8
	9.2nm,0.3s						
SFK	Sufi-Kurgan	2.20	124	⇑Sn	Sg	11 09 09.0	-0.2
	5.2nm,0.4s						
SFK	Sufi-Kurgan	2.20	124	⇓*e*P	Pb	11 08 39.0	+0.2
	baz=25						
SFK				⇓*i*S	Sg	11 09 08.8	-0.4
	baz=25						
AAK	Ala-Archa	2.85	60	Pn	Pb	11 08 50.1	+0.3
	1.7nm,0.4s						
AAK				Sn	Sg	11 09 28.9	-1.0
	2.1nm,0.4s						

NIED ***12*** *11:17:00, 41.°50N×143.°30E, h47^{km}, Mw4.4 Best double couple: M$_0$4.53000×10^{15} NP1:φ$_s$53.00000°, δ32.00000°, λ176.00000°. NP2:φ$_s$146.00000°, δ88.00000°, λ58.00000°.*

BJI ***12*** *11:17:10.6, 41.°65N×143.°62E, h43^{km}, mb4.7/39, mB4.8/17, Ms4.0/7, Ms7 3.7/8*

ISCJB ***12*** *11:17:14.7±0.3, 41.°54N±0.°03×143.°25E±0.°03, h56^{km}±2^{km}, mb4.6/81, MS3.4/21, Error ellipse: s-maj=5.1km s-min=2.6km az=139.8*

MOS ***12*** *11:17:14.9±0.9, 41.°59N×143.°16E, h56^{km}, mb4.8/36, Error ellipse: s-maj=7.1km s-min=5.1km az=86.9*

JMA ***12*** *11:17:15.9±0.1, 41.°56N×143.°20E, h55^{km}±2^{km}, M4.6*

JMA Felt II J1.

NEIC ***12*** *11:17:16.8±0.4, 41.°54N×143.°09E, h56^{km}±3^{km}, mb4.6/36, Error ellipse: s-maj=4.7km s-min=3.3km az=132.0*

NEIC Felt at Misawa, Honshu. Recorded [2 JMA] in southern and southwestern Hokkaido. Also recorded [2 JMA] in Aomori, Honshu.

IDC ***12*** *11:17:17.1±1.7, 41.°57N×143.°11E, h58^{km}±14^{km}, mb4.2/25, mb1 4.3/29, mb1mx4.1/70, mbtmp4.5/29, MS3.3/25, Ms1 3.3/25, ms1mx3.1/70, Error ellipse: s-maj=13.4km s-min=9.8km az=114.0*

ISC 12 11:17:14.1±0.5**, 41.°51N**±0.°04×**143.°39E**±0.°04**, h38**^{km}±1^{km}**, n234, σ2.^{s}03**/264**, mb4.6**/81**, MS3.2**/21**, 19C-11D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ERM	Erimo	0.54	341	*e*Pn	Pn	11 17 26.9	+1.6
ERM				*e*Sn	Sn	11 17 34.0	+0.8
ERM	Erimo	0.54	341	*d i*P	Pn	11 17 26.9	+1.6
ERM				pmax	pmax		
	comp=Z,1μm,0.4s						
JEM	Erimo	0.54	341	⇑P	Pn	11 17 26.8	+1.4
JEM				*e*S	Sn	11 17 35.1	+1.9
JTHR	Tokachihiroo	0.79	355	P	Pn	11 17 30.5	+1.8
JNBK	Urakawa-nobuka	0.91	328	⇑P	Pn	11 17 31.4	+1.0
JCH	Churui	1.11	359	⇑P	Pn	11 17 34.6	+1.5
JCH				*e*S	Sn	11 17 48.6	+1.5
JSHD	Hidakashinhida	1.14	323	P	Pn	11 17 34.9	+1.4
JOB	Onbets	1.43	13	⇑P	Pn	11 17 39.7	+2.2
JOB				*e*S	Sn	11 17 57.3	+2.2
JBT2	Biratori 2	1.48	329	⇑P	Pn	11 17 39.4	+1.2
JBT2				*e*S	Sn	11 17 58.0	+1.6
JFR	Furan	1.76	341	⇑P	Pn	11 17 42.1	+0.1
JOT	Ohata	1.77	267	⇓P	Pn	11 17 42.6	+0.5
JOT				*e*S	Sn	11 18 02.8	-0.5
JAK	Akkeshi	1.78	33	⇑P	Pn	11 17 44.3	+2.1
JAK				*e*S	Sn	11 18 05.7	+2.2
JKB	Kayabe	1.81	283	⇓P	Pn	11 17 42.9	+0.2
JKB				*e*S	Sn	11 18 03.5	-0.8
JAR	Ashorobuto	1.81	9	⇑P	Pn	11 17 44.1	+1.4
JAR				*e*S	Sn	11 18 05.9	+1.5
JANG	Nango	1.82	232	⇑P	Pn	11 17 43.2	+0.4
JTM	Tenmabayashi	1.90	249	P	Pn	11 17 44.8	+0.9
JTM				*e*S	Sn	11 18 06.2	-0.3
JEW	Eniwo	1.97	313	P	Pn	11 17 46.1	+1.3
JNB	Noboribetsu	2.00	299	⇓P	Pn	11 17 45.5	+0.2
JNB				*e*S	Sn	11 18 07.9	-1.2
ASAJ	Asahikawa	2.67	348	P	Pn	11 17 56.4	+1.8
	comp=Z,47nm,0.3s,baz=199,slow=13,SNR=493						
ASAJ				S	Sn	11 18 26.5	+0.8
	comp=Z,78nm,0.3s,baz=100,slow=17,SNR=6.4						
ASAJ				LR	LR	11 18 44.9	
	comp=Z,186nm,20.9s,baz=168,slow=34						
ASAJ	Asahikawa	2.67	348	*e*Pn	Pn	11 17 56.0	+1.4
ASAJ				*e*Sn	Sn	11 18 25.5	-0.2
GLVR	Golovnino	2.73	34	⇑*i*P	Pn	11 17 57.7	+2.4
GLVR				*i* S	Sn	11 18 29.2	+2.2
GLVR				pmax	pmax		
	comp=E,376nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,5μm,0.1s						
GLVR				smax	smax		
	comp=N,9μm,0.2s						
GLVR				smax	smax		
	comp=E,10μm,0.2s						
GRPR	Tuman	3.04	34	*c i*P	Pn	11 18 01.9	+2.3
GRPR				*i* S	Sn	11 18 35.4	+0.7
GRPR				pmax	pmax		
	comp=Z,5μm,0.2s						
GRPR				pmax	pmax		
	comp=E,2μm,0.1s						
GRPR				pmax	pmax		
	comp=N,1μm,0.2s						
GRPR				smax	smax		
	comp=E,8μm,0.2s						
GRPR				smax	smax		
	comp=N,8μm,0.4s						
LAGR	Lagunnoye	3.10	34	*d i*P	Pn	11 18 03.0	+2.6
LAGR				*i* S	Sn	11 18 37.8	+1.7
LAGR				pmax	pmax		
	comp=N,1μm,0.2s						
LAGR				pmax	pmax		
	comp=Z,4μm,0.2s						
LAGR				smax	smax		
	comp=N,5μm,0.3s						
LAGR				smax	smax		
	comp=E,6μm,0.3s						
YUK	Yuzh-Kuril'sk	3.11	35	*c i*P	Pn	11 18 02.9	+2.3
YUK				*i* S	Sn	11 18 37.6	+1.1
YUK				pmax	pmax		
	comp=E,2μm,0.2s						
YUK				pmax	pmax		
	comp=Z,4μm,0.2s						
YUK				smax	smax		
	comp=E,8μm,0.4s						
YUK				smax	smax		
	comp=N,5μm,0.3s						
SHO	Shikotan	3.46	46	*c i*P	Pn	11 18 08.0	+2.6
SHO				*i* S	Sn	11 18 46.2	+1.1
SHO				pmax	pmax		
	comp=Z,2μm,0.2s						
SHO				smax	smax		
	comp=E,2μm,0.3s						
SHO				smax	smax		
	comp=N,396nm,0.2s						
KUR	Kuril'sk	4.95	40	*c i*P	Pn	11 18 29.0	+3.2
KUR				*i* S	Sn	11 19 23.6	+1.8
KUR				pmax	pmax		
	comp=Z,588nm,0.4s						
KUR				pmax	pmax		
	comp=N,262nm,0.1s						
KUR				pmax	pmax		
	comp=E,376nm,0.3s						
KUR				smax	smax		
	comp=E,523nm,0.3s						
KUR				smax	smax		
	comp=N,902nm,0.4s						
YSS	Yuzh-Sakhalins	5.47	355	*e*Pn	Pn	11 18 33.3	+0.4
YSS	Yuzh-Sakhalins	5.47	355	⇓*e*P	Pn	11 18 34.8	+1.9
YSS				*e*S	Sn	11 19 40.7	+6.2
YSS				pmax	pmax		
	comp=Z,40nm,1.2s						
YSS				MLR	MLR		
	comp=Z,130nm,17.0s						
MJAR	Matsushiro Arr	6.39	221	P	Pn	11 18 48.0	+2.3
	comp=Z,5.8nm,0.3s,baz=28,slow=13,SNR=132						
MJAR				LR	LR	11 21 38.7	
	comp=Z,397nm,21.8s,baz=40,slow=42						
MJAR	Matsushiro Arr	6.39	221	P	Pn	11 18 48.0	+2.3
MJAR				pmax	pmax		
	comp=Z,6.0nm,0.3s						
MJAR				MLR	MLR		
	comp=Z,397nm,21.8s						
MJB9	Matsu-Tunnel	6.39	221	*e*Pn	Pn	11 18 47.4	+1.7
MAJO	Matsushiro	6.39	221	*e*Pn	Pn	11 18 47.2	+1.5
MAJO	Matsushiro	6.39	221	*c i*P	Pn	11 18 47.7	+2.0
MAT	Matsushiro	6.39	221	P	Pn	11 18 47.6	+1.9
MAT				S	Sn	11 19 59.6	+2.2
INU	Inuyama	7.92	221	*e*Pn	Pn	11 19 09.1	+2.4
USA0B	Ussuriysk Arra	8.80	292	*e*Pn	Pn	11 19 20.8	+2.2
USA0B				*e*		11 19 21.1	
USRK	Ussuriysk Ar.	8.80	292	P	Pn	11 19 20.4	+1.8
	baz=98,slow=15						
USRK				LR	LR	11 22 42.5	
	comp=Z,152nm,19.5s,baz=111,slow=38						
JHJ2	Mitsune	8.85	200	*e*Pn	Pn	11 19 18.7	-0.7
JHJ2				*e*Sn	Sn	11 20 52.4	-5.3
JHJ	Hachijo jima 2	8.85	200	P	Pn	11 19 18.5	-0.9
	comp=Z,43nm,0.3s,baz=338,slow=19,SNR=22						
JHJ				S	Sn	11 20 50.9	-6.9
	comp=Z,49nm,0.3s,baz=68,slow=23,SNR=7.7						
MSHR	Mys Shultsa	9.17	281	*i* P	Pn	11 19 26.4	+2.7
TYV	Tymovskoe	9.37	357	*e*P	Pn	11 19 28.5	+2.0
TYV				*e*S	Sn	11 21 11.2	+0.7
TYV				pmax	pmax		
	comp=Z,200nm,6.9s						
TYV				pmax	pmax		
	comp=Z,34nm,0.7s						
TYV				smax	smax		
	comp=E,5.0nm,1.0s						
TYV				smax	smax		
	comp=N,200nm,3.6s						
MDJ	Mudanjiang	10.57	292	*e*Pn	Pn	11 19 42.4	-0.4
KLR	Kul'dur	11.25	317	P	Pn	11 19 53.7	+1.6
	comp=N,0.0nm,0.3s,baz=128,slow=12,SNR=15						
KLR	Kul'dur	11.25	317	⇑*e*P	Pn	11 19 54.0	+1.9
NKL	Nikolayevsk	11.79	352	*e*P	Pn	11 20 00.5	+1.0
NKL				pmax	pmax		
	comp=Z,43nm,1.0s						
KSRS	Korea Array	12.62	256	P	Pn	11 20 12.4	+1.5
	comp=Z,0.4nm,0.3s,baz=68,slow=13,SNR=24						
KSRS				S	Sn	11 22 32.8	+2.7
	comp=Z,1.2nm,0.3s,baz=66,slow=24,SNR=6.8						
KSRS				LR	LR	11 24 44.6	
	comp=Z,137nm,20.1s,baz=70,slow=36						
KS01	Wonju Array Si	12.63	256	*e*Pn	Pn	11 20 09.7	-1.4
KS15	Wonju Array Si	12.65	256	*e*Pn	Pn	11 20 11.0	-0.3
KS15				*e*Sn	Sn	11 22 36.2	+5.3
KSAR	Wonju Array Be	12.65	256	P	Pn	11 20 12.4	+1.0
KSAR				S	Sn	11 22 32.8	+1.9
KSAR	Wonju Array Be	12.65	256	P	Pn	11 20 12.4	+1.0
KSAR				S	Sn	11 22 32.8	+1.9
SKR	Severo-Kuril's	12.72	40	*e*P	Pn	11 20 12.0	-0.2
SKR				pmax	pmax		
	comp=Z,52nm,0.6s						
SKR				pmax	pmax		
	comp=Z,200nm,3.2s						
SKR				MLR	MLR		
	comp=Z,300nm,20.0s						
SKR				MLR	MLR		
	comp=Z,400nm,13.0s						
JNU	Nakatsue	13.00	234	LR	LR	11 25 15.2	
	comp=Z,170nm,20.9s,baz=124,slow=37						
TJN	Taejon	13.48	253	*ce*P	Pn	11 20 25.1	+2.4
CBIJ	Chichi jima	14.41	184	*e*Pn	Pn	11 20 33.6	-1.8
CBIJ				*e*Sn	Sn	11 23 00.8	-13
JCJ	Chichijima	14.41	184	P	Pn	11 20 33.4	-2.0
	comp=Z,17nm,0.3s,baz=265,slow=23,SNR=53						
JCJ				S	Sn	11 23 00.8	-13
	baz=307,slow=20						
PEA0B	Petropavlovsk-	15.09	35	*e*Pn	Pn	11 20 43.0	-1.4
	comp=Z,15nm,1.0s						
PETK	Petropavlovsk-	15.09	35	P	Pn	11 20 41.5	-2.9
	baz=198,slow=8.1						
PETK				LR	LR	11 26 55.1	
	comp=Z,65nm,18.6s,baz=241,slow=38						
PETK	Petropavlovsk-	15.09	35	*e*Pn	Pn	11 20 41.4	-3.0
PEA1	Petropavlovsk-	15.10	35	*e*Pn	Pn	11 20 41.5	-2.9
PET	Petropavlovsk	15.45	37	*e*Pn	P	11 20 51.6	-1.4
	comp=Z,14nm,1.1s						
PET				*e*Sn	Sn	11 23 29.7	-9.2
PET	Petropavlovsk	15.45	37	*e*P	P	11 20 51.6	-1.4
PET				pmax	pmax		
	comp=Z,14nm,1.1s						
ZEA	Zeya	16.33	324	*e*P	Pn	11 21 00.5	+0.3
ZEA				pmax	pmax		
	comp=Z,26nm,0.8s						
HIA	Hailar	18.28	303	*e*P	P	11 21 22.2	-2.3
	comp=Z,21nm,1.0s						
HIA	Hailar	18.28	303	*e*P	P	11 21 22.2	-2.3
HIA				pmax	pmax		
	comp=Z,21nm,1.0s						
MA2	Magadan	18.67	12	P	P	11 21 25.9	-2.6
	comp=Z,1.4nm,0.3s,baz=176,slow=9.8,SNR=7.4						
MA2				LR	LR	11 28 50.3	
	comp=Z,80nm,20.2s,baz=188,slow=37						
MA2	Magadan	18.67	12	*e*P	P	11 21 26.8	-1.7
	comp=Z,22nm,1.0s						
MA2	Magadan	18.67	12	*e*P	P	11 21 26.8	-1.7
MA2				pmax	pmax		
	comp=Z,22nm,1.0s						
JOW	Kunigami	19.21	225	LR	LR	11 29 11.1	
	comp=Z,99nm,21.4s,baz=95,slow=37						
BJI	Beijing	20.64	275	P	P	11 21 47.1	-3.1
BJI				pmax	pmax		
	comp=Z,27nm,1.0s						
BJT	Baijiatuau	20.65	275	*e*P	P	11 21 48.1	-2.2
	comp=Z,16nm,0.8s						
BJT	Baijiatuau	20.65	275	*e*P	P	11 21 48.1	-2.2
BJT				pmax	pmax		
	comp=Z,16nm,0.8s						
NJ2	Nanjing	21.74	252	*e*P	P	11 22 02.7	+0.6
NJ2				pmax	pmax		
	comp=Z,23nm,0.8s						
SEY	Seymchan	22.11	11	P	P	11 22 03.3	-2.5
	comp=Z,35nm,0.7s,baz=190,slow=7.7,SNR=79						
SEY	Seymchan	22.11	11	⇑*e*P	P	11 22 02.8	-3.0
YAK	Yakutsk	22.14	343	P	P	11 22 01.5	-4.6
	comp=Z,27nm,0.2s,baz=44,slow=4.1,SNR=11						
YAK				LR	LR	11 32 29.2	
	comp=Z,18nm,18.3s,baz=89,slow=41						
YAK	Yakutsk	22.14	343	*e*P	P	11 22 01.8	-4.3
	comp=Z,48nm,0.8s						
YAK	Yakutsk	22.14	343	*e*P	P	11 22 01.6	-4.6
YAK				*e**PP	pP	11 22 16.7	+0.7
YAK				*e*S	S	11 26 00.4	-7.2
YAK				pmax	pmax		
	comp=Z,33nm,0.9s						
YAK				pmax	pmax		
	comp=N,9.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,5.0nm,0.8s						
YAK				smax	smax		
	comp=N,79nm,1.1s						
YAK				smax	smax		
	comp=E,40nm,1.1s						
HHC	Hu-ho-hao-te	23.90	279	*e*P	P	11 22 25.3	+1.0
HHC				PP	PnPn	11 23 00.1	+6.7
HHC				S	S	11 26 40.8	+2.8
HHC				pmax	pmax		
	comp=E,17nm,1.0s						
HHC				pmax	pmax		
	comp=E,140nm,5.3s						
HHC				LR	LR		
	comp=E,100nm,9.0s						
HHC				LR	LR		
	comp=E,160nm,13.5s						
BOD	Bodaibo	24.78	321	*e*P	P	11 22 27.6	-4.4
BOD				pmax	pmax		
	comp=Z,7.0nm,1.3s						
WHN	Wuhan	25.80	254	⇓P	P	11 22 40.6	-0.8
ULN	Ulaanbaatar	26.43	296	*e*P	P	11 22 46.5	-0.7
	comp=Z,6.0nm,0.6s						
ULN	Ulaanbaatar	26.43	296	*d i*P	P	11 22 47.0	-0.2
ULN				pmax	pmax		
	comp=Z,16nm,1.3s						
SONA1	Songino Array	26.87	296	*e*P	P	11 22 50.5	-0.7
SONA0	Songino Array	26.87	296	*e*P	P	11 22 50.6	-0.6
SONM	Songino Array	26.87	296	P	P	11 22 50.6	-0.6
	comp=Z,15nm,0.6s,baz=81,slow=8.4,SNR=99						
SONM				LR	LR	11 33 47.2	
	comp=Z,82nm,21.0s,baz=96,slow=37						
GUMO	Guam	27.84	177	LR	LR	11 32 34.5	
	comp=Z,16nm,21.0s,baz=350,slow=33						
XAN	Xi'an	28.11	266	P	P	11 23 01.8	-0.5
XAN				pP	pP	11 23 11.1	-1.9
XAN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,52nm,5.3s						
TLY	Talaya	28.82	304	*e*P	P	11 23 08.0	-0.4
	comp=Z,5.5nm,0.8s						
TLY	Talaya	28.82	304	*e*P	P	11 23 08.3	-0.1
TLY				pmax	pmax		
	comp=Z,8.0nm,1.0s						
TLY				MLR	MLR		
	comp=Z,59nm,20.0s						
ZAK	Zakamensk	28.97	302	*e*P	P	11 23 08.5	-1.3
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
ENH	Enshi	29.49	259	*e*P	P	11 23 12.8	-1.7

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	comp=Z,15nm,1.1s						
H11N2	WAKE ISLAND Hy	29.50	130	T	T	11 54 48.8	
	baz=324,slow=75,SNR=1516						
H11N1	WAKE ISLAND Hy	29.51	130	T	T	11 54 49.4	
	baz=324,slow=75,SNR=1662						
H11N3	WAKE ISLAND Hy	29.51	130	T	T	11 54 50.5	
	baz=324,slow=75,SNR=682						
H11S1	WAKE ISLAND Hy	30.36	132	T	T	11 55 55.3	
	baz=325,slow=76,SNR=1127						
H11S3	WAKE ISLAND Hy	30.36	132	T	T	11 55 54.1	
	baz=325,slow=76,SNR=1879						
H11S2	WAKE ISLAND Hy	30.38	132	T	T	11 55 58.7	
	baz=325,slow=76,SNR=974						
TIXI	Tiksi	31.07	351	P	P	11 23 24.8	-3.2
	comp=Z,1.3nm,0.4s,baz=151,slow=8.2,SNR=3.7						
TIXI	Tiksi	31.07	351	*e*P	P	11 23 24.8	-3.2
TIXI				*e*P	P	11 23 26.3	-1.8
TIXI	Tiksi	31.07	351	*ce*P	P	11 23 26.1	-2.0
TIXI				pmax	pmax		
	comp=Z,5.0nm,1.7s						
LZH	Lanzhou	31.10	273	*e*P	P	11 23 30.1	+1.2
LZH				pP	pP	11 23 42.4	+2.7
LZH				sP	sP	11 23 48.1	+3.8
LZH				*e*PP	PP	11 24 35.6	-3.8
LZH				pmax	pmax		
	comp=Z,26nm,1.0s						
LZH				pmax	pmax		
	comp=Z,210nm,6.0s						
LZH				LR	LR		
	comp=Z,250nm,14.0s						
LZH				LR	LR		
	comp=Z,280nm,15.0s						
KNGR	Kungurtug, Tuv	32.65	302	*i* P	P	11 23 41.1	-1.2
GTA	Gaotai	32.97	281	P	P	11 23 45.0	-0.2
GTA				pP	pP	11 23 57.2	+1.2
GTA				sP	sP	11 24 02.7	+2.1
GTA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
CD2	Chengdu	33.42	264	*e*P	P	11 23 49.0	-0.2
GYA	Guiyang	33.67	255	*e*P	P	11 23 52.7	+1.2
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KMI	Kunming	37.32	257	P	P	11 24 26.7	+3.8
KMI				pmax	pmax		
	comp=Z,11nm,0.8s						
DAV	Davao City (W)	37.77	210	LR	LR	11 39 40.2	
	comp=Z,25nm,21.6s,baz=3.0,slow=36						
RDOG	Red Dog Mine	38.84	29	*e*P	P	11 24 36.9	+1.9
	comp=Z,7.0nm,0.6s						
DGZ	Jazzator, Alta	39.19	302	*i* P	P	11 24 38.9	+0.6
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ZAA0	Zalesovo Array	40.18	309	*e*P	P	11 24 45.9	-0.4
	comp=Z,10nm,0.8s						
ZAA1	Zalesovo Array	40.18	309	*e*P	P	11 24 45.5	-0.8
ZAA1				*e*PcP	PcP	11 26 49.6	-0.2
ZALV	Zalesovo Beam	40.18	309	P	P	11 24 45.5	-0.8
	comp=Z,12nm,0.4s,baz=84,slow=8.4,SNR=18						
ZALV				PcP	PcP	11 26 49.6	-0.2
	comp=Z,1.7nm,0.3s,baz=104,slow=4.6,SNR=2.9						
ZALV				LR	LR	11 42 23.2	
	comp=Z,33nm,18.2s,baz=68,slow=38						
ZALV	Zalesovo Beam	40.18	309	P	P	11 24 45.5	-0.8
ZALV				pmax	pmax		
	comp=Z,13nm,0.4s						
ZALV				MLR	MLR		
	comp=Z,33nm,18.2s						
WMQ	Urumqi	40.37	293	P	P	11 24 49.5	+1.4
WMQ				sP	sP	11 25 08.1	+4.5
WMQ				pmax	pmax		
	comp=Z,23nm,1.3s						
WMQ				LR	LR		
	comp=Z,110nm,24.5s						
WMQ				LR	LR		
	comp=Z,190nm,23.1s						
WMQ				LR	LR		
	comp=Z,110nm,20.3s						
SKNT	Sakolnakorn	41.68	246	P	P	11 25 05.0	+6.0
	comp=Z,5.2nm,0.8s,comp=Z,827nm						
CAST	Castle Rocks	42.70	37	*e*P	P	11 25 09.2	+2.3
	comp=Z,11nm,1.0s						
KDAK	Kodiak Island	42.80	45	P	P	11 25 08.9	+1.3
	comp=Z,11nm,0.7s,baz=245,slow=5.9,SNR=9.1						
KDAK	Kodiak Island	42.80	45	*i* P	P	11 25 09.4	+1.7
BPAW	Bear Paw Mtn.	43.17	36	*e*P	P	11 25 12.7	+2.0
	comp=Z,6.3nm,0.8s						
MK01	Makanchi Array	43.19	298	*e*P	P	11 25 10.0	-1.1
MK31	Makanchi Array	43.19	298	*e*P	P	11 25 10.2	-1.0
MK31	Makanchi Array	43.19	298	*i* P	P	11 25 10.1	-1.0
MK31				pmax	pmax		
	comp=Z,6.0nm,0.5s						
MK32	Makanchi Array	43.19	298	*e*P	P	11 25 10.2	-0.9
MK32				*e*PcP	PcP	11 26 59.7	-0.2
MKAR	Makanchi Array	43.19	298	P	P	11 25 10.2	-0.8
	comp=Z,5.9nm,0.5s,baz=82,slow=12,SNR=37						
MKAR				PcP	PcP	11 26 59.7	-0.2
	comp=Z,0.7nm,0.5s,baz=61,slow=3.1,SNR=2.6						
MKAR	Makanchi Array	43.19	298	*e*P	P	11 25 10.3	-0.8
	comp=Z,79nm,0.5s						
MKAR				PcP	PcP	11 26 59.7	-0.2
MKAR	Makanchi Array	43.19	298	*e*P	P	11 25 10.3	-0.8
MKAR						11 26 59.7	
MKAR				pmax	pmax		
	comp=Z,79nm,0.5s						
MAKZ	Makanchi	43.39	299	*e*P	P	11 25 11.9	-0.8
	comp=Z,16nm,1.1s						
MAKZ	Makanchi	43.39	299	*e*P	P	11 25 11.9	-0.8
MAKZ				pmax	pmax		
	comp=Z,16nm,1.1s						
TOLK	Toolik Lake Re	43.81	29	*e*P	P	11 25 17.2	+1.4
	comp=Z,12nm,1.1s						
CMMT	Chiang Mai	43.98	253	P	P	11 25 21.1	+3.4
	comp=Z,7.4nm,0.8s						
CHTO	Chiang Mai	43.99	253	*e*P	P	11 25 17.6	-0.1
	comp=Z,5.2nm,0.6s						
CHTO	Chiang Mai	43.99	253	*e*P	P	11 25 17.6	-0.1
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.6s						
CHTO	Chiang Mai	43.99	253	P	P	11 25 21.2	+3.5
	comp=Z,33nm,0.7s						
MCK	McKinley	44.09	36	*e*P	P	11 25 20.1	+2.0
	comp=Z,11nm,0.7s						
MCK	McKinley	44.09	36	*e*P	P	11 25 20.1	+2.0
MCK				pmax	pmax		
	comp=Z,11nm,0.7s						
CMAR	Chiang Mai Arr	44.22	252	P	P	11 25 19.1	-0.5
	comp=Z,1.8nm,0.7s,baz=38,slow=7.3,SNR=5.3						
CMAR				LR	LR	11 43 58.2	
	comp=Z,36nm,21.8s,baz=40,slow=36						
MDM	Murphy Dome	44.34	34	*e*P	P	11 25 22.6	+2.5
	comp=Z,26nm,0.8s						
WRH	Wood River Hil	44.42	35	*e*P	P	11 25 23.6	+2.9
	comp=Z,14nm,1.1s						
COLA	College	44.50	35	*e*P	P	11 25 23.8	+2.5
	comp=Z,37nm,0.8s						
COLA	College	44.50	35	*e*P	P	11 25 23.8	+2.5
COLA				pmax	pmax		
	comp=Z,37nm,0.8s						
KURK	Kurchatov	44.51	305	*e*P	P	11 25 20.9	-0.6
	comp=Z,34nm,0.7s						
KURK				*e*P	P	11 25 21.5	-0.1
KURK				*e*PcP	PcP	11 27 04.8	+0.5
KURK	Kurchatov	44.51	305	*d i*P	P	11 25 20.5	-1.0
KURK				pmax	pmax		
	comp=Z,33nm,1.0s						
KURBB	Kurchatov Arra	44.59	305	P	P	11 25 21.5	-0.7
	comp=Z,12nm,0.5s,baz=78,slow=9.2,SNR=46						
KURBB				PcP	PcP	11 27 04.8	+0.3
	comp=Z,1.2nm,0.8s,baz=74,slow=4.0,SNR=2.4						
HDA	Harding Lake	44.92	35	*e*P	P	11 25 26.4	+1.8
	comp=Z,11nm,0.6s						
IL1	Eielson Array	44.92	35	*e*P	P	11 25 25.6	+0.9
ILAR	Eielson Array	44.92	35	P	P	11 25 26.3	+1.6
	comp=Z,20nm,0.9s,baz=268,slow=6.7,SNR=33						
ILAR				LR	LR	11 45 31.7	
	comp=Z,20nm,18.2s,baz=298,slow=38						
ILB	Eielson Array	44.92	35	*e*P	P	11 25 26.3	+1.6
FYU	Fort Yukon	45.49	32	*e*P	P	11 25 31.8	+2.7
	comp=Z,38nm,0.7s						
PDGK	Podgornoye	46.17	295	P	P	11 25 31.4	-3.6
PDGK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BRDH	Bariadhala	46.96	263	LR	LR	11 48 15.7	
	comp=Z,68nm,18.8s,baz=96,slow=40						
EGAK	Eagle	47.36	34	*e*P	P	11 25 45.6	+1.8
	comp=Z,11nm,0.8s						
PHET	Kaeng Krachan	47.51	246	P	P	11 25 47.3	+1.7
ODAN	Odare	47.79	271	*e*P	P	11 25 51.2	+3.2
JIRN	Jiri	48.26	272	*e*P	P	11 25 51.2	-0.6
	comp=Z,24nm,0.5s						
RAMN	Ramite	48.33	271	*e*P	P	11 25 54.7	+2.5
	comp=Z,45nm,0.7s						
GUN	Gumba	48.36	273	*e*P	P	11 25 50.4	-2.1
	comp=Z,78nm,0.5s						
BVAR	Borovoye Array	48.80	310	P	P	11 25 54.8	-0.3
	comp=Z,5.3nm,0.5s,baz=75,slow=8.9,SNR=22						
BVAR				PcP	PcP	11 27 20.0	+0.6
	comp=Z,2.3nm,0.7s,baz=64,slow=4.0,SNR=2.0						
BRVK	Borovoye	48.85	310	*d i*P	P	11 25 54.9	-0.6
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KKN	Kakani	48.88	273	*e*P	P	11 25 55.3	-1.0
PKIN	Phulchoki	48.90	273	*e*P	P	11 25 55.9	-0.7
	comp=Z,17nm,0.5s						
TKM2	Tokmak 2	48.97	296	P	P	11 25 56.0	-0.8
TKM2				pmax	pmax		
	comp=Z,18nm,0.7s						
GKN	Gorkha	49.24	274	*e*P	P	11 25 57.0	-2.1
DANN	Dangsing	49.72	275	*e*P	P	11 25 59.7	-3.1
	comp=Z,96nm,0.5s						
INK	Inuvik	49.72	29	P	P	11 26 03.6	+1.8
	comp=Z,27nm,0.5s,baz=283,slow=5.8,SNR=115						
INK	Inuvik	49.72	29	*e*P	P	11 26 03.7	+1.8
	comp=Z,26nm,0.8s						
AAK	Ala-Archa	49.83	296	LR	LR	11 48 52.8	
	comp=Z,69nm,19.3s,baz=70,slow=38						
KSH	Kashi	50.10	291	*e*P	P	11 26 08.7	+3.3
KSH				*e*PcP	PcP	11 27 26.1	+1.5
KOLN	Koldanda	50.15	274	*e*P	P	11 26 05.2	-0.8
	comp=Z,13nm,0.5s						
PYUN	Piuthan	50.43	275	*e*P	P	11 26 07.1	-1.0
PMG	Port Moresby	50.78	175	LR	LR	11 47 42.4	
	comp=Z,24nm,19.2s,baz=85,slow=36						
MNAS	Manas	51.23	296	P	P	11 26 13.0	-0.9
MNAS				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SFK	Sufi-Kurgan	51.60	293	P	P	11 26 15.7	-1.1
SFK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
JIS	Juneau Island	52.10	42	*e*P	P	11 26 23.3	+3.3
	comp=Z,9.7nm,1.0s						
KK31	Karatay Array	52.31	298	*e*P	P	11 26 20.9	-0.8
KK31	Karatay Array	52.31	298	*i* P	P	11 26 20.3	-1.5
KK31				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KKAR	Karatay Array	52.31	298	*e*P	P	11 26 20.9	-0.8
KKAR	Karatay Array	52.31	298	*e*P	P	11 26 20.9	-0.8
HNR	Honiara	52.92	159	LR	LR	11 46 06.4	
	comp=Z,22nm,21.2s,baz=130,slow=33						
ARU	Arti	54.09	317	P	P	11 26 34.3	-0.3
	comp=Z,2.9nm,0.3s,baz=82,slow=7.2,SNR=4.4						
ARU				LR	LR	11 51 55.1	
	comp=Z,22nm,19.2s,baz=54,slow=39						
ARU	Arti	54.09	317	*e*P	P	11 26 34.3	-0.3
	comp=Z,5.0nm,0.5s						
ARU	Arti	54.09	317	*d i*P	P	11 26 33.5	-1.1
ARU				*PP	pP	11 26 46.5	+0.6
ARU				S	S	11 34 09.5	+1.4
ARU				SS	SS	11 37 49.2	-0.1
ARU				pmax	pmax		
	comp=Z,10.0nm,1.7s						
DLBC	Dease Lake	54.19	40	*e*P	P	11 26 36.9	+1.5
	comp=Z,3.0nm,0.9s						
AB31	Akbulak array	56.30	309	*i* P	P	11 26 49.8	-0.8
AB31				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ABKAR	Akbulak array	56.30	309	*e*P	P	11 26 49.5	-1.1
SPA0	Spitsbergen Ar	56.44	349	*e*P	P	11 26 51.6	+0.3
SPITS	Spitsbergen Ar	56.44	349	P	P	11 26 51.6	+0.3
	comp=Z,0.7nm,0.3s,baz=7.8,slow=12,SNR=12						
AKTO	Aktyubinsk	56.89	310	P	P	11 26 54.1	-0.7
	comp=Z,2.6nm,0.6s,baz=64,slow=12,SNR=8.4						
PRGR	Permogore	57.89	326	*e*P	P	11 27 03.9	+2.3
PRGR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
RES	Resolute Bay	57.89	15	*e*P	P	11 27 02.3	+0.8
	comp=Z,22nm,1.1s						
RES	Resolute Bay	57.89	15	*e*P	P	11 27 02.3	+0.8
RES				pmax	pmax		
	comp=Z,22nm,1.1s						
YKA	Yellowknife Ar	59.19	32	P	P	11 27 11.9	+1.2
	comp=Z,3.0nm,0.7s,baz=309,slow=6.6,SNR=9.5						
YKA	Yellowknife Ar	59.19	32	P	P	11 27 11.9	+1.2
YKA				pmax	pmax		
	comp=Z,2.0nm,0.5s						
ARA0	ARCESS Array S	60.37	339	*e*P	P	11 27 19.3	+0.6
ARCES	ARCESS Array B	60.37	339	P	P	11 27 19.3	+0.6
	comp=Z,1.1nm,0.4s,baz=49,slow=8.2,SNR=15						
KLMR	Klimovskoe	60.82	327	*e*P	P	11 27 23.9	+2.0
KLMR				pmax	pmax		
	comp=Z,10.0nm,1.4s						
KLMR	Klimovskoe	60.82	327	*e*P	P	11 27 24.0	+2.0
KLMR				AMP		11 27 25.9	
	comp=Z,10.0nm,1.4s						
FITZ	Fitzroy Crossi	61.54	199	P	P	11 27 27.4	+0.2
	comp=Z,1.3nm,0.7s,baz=22,slow=13,SNR=3.3						
WB2	Warramunga Arr	61.71	190	*e*P	P	11 27 28.9	+0.5
	comp=Z,5.0nm,0.8s						
WR1	Warramunga Arr	61.71	190	*e*P	P	11 27 28.6	+0.2
	comp=Z,5.8nm,1.0s						
WRA	Warramunga Arr	61.71	190	P	P	11 27 28.6	+0.2
	comp=Z,2.8nm,0.7s,baz=6.9,slow=6.8,SNR=47						
AS01	Alice Springs	65.43	190	*e*P	P	11 27 53.6	+0.8
AS31	Alice Springs	65.43	190	*e*P	P	11 27 53.9	+0.9
	comp=Z,0.8nm,0.7s						
ASAR	Alice Springs	65.44	190	P	P	11 27 53.9	+0.9
	comp=Z,2.1nm,0.8s,baz=7.1,slow=7.6,SNR=30						
FIA1	FINESS Array S	65.58	332	*e*P	P	11 27 53.0	-0.4
FIA0	FINESS Array S	65.58	332	*e*P	P	11 27 52.2	-1.2
FIA0	FINESS Array S	65.58	332	*e*P	P	11 27 52.2	-1.2
FINES	FINESS Array B	65.58	332	P	P	11 27 52.2	-1.2
	comp=Z,3.6nm,0.5s,baz=51,slow=7.3,SNR=14						
FINES				LR	LR	11 59 13.8	
	comp=Z,35nm,18.2s,baz=70,slow=38						
SUMG	Summit	66.21	1	*e*P	P	11 27 59.3	+1.5
	comp=Z,11nm,0.7s						
SUMG	Summit	66.21	1	*e*P	P	11 27 59.3	+1.5
SUMG				pmax	pmax		
	comp=Z,11nm,0.7s						
JTMT	Jette	67.73	45	*e*P	P	11 28 10.1	+2.5
	comp=Z,4.1nm,0.9s						
FFC	Flin Flon	69.13	34	*e*P	P	11 28 17.6	+1.5
	comp=Z,2.8nm,0.8s						
FFC	Flin Flon	69.13	34	*e*P	P	11 28 17.6	+1.5
FFC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KIV	Kislovodsk	69.15	311	*e*P	P	11 28 16.2	-0.3
KIV				pmax	pmax		
	comp=Z,11nm,1.0s						
KBZ	Khabaz	69.17	310	P	P	11 28 16.2	-0.2
	comp=Z,2.1nm,0.6s,baz=5.1,slow=4.9,SNR=5.8						
HRY	Holter Researc	69.68	45	*e*P	P	11 28 21.6	+1.9
LRM	Limekiln Ridge	69.91	46	*e*P	P	11 28 23.5	+2.2
HFS	Hagfors	70.64	336	P	P	11 28 24.7	-0.5
	comp=Z,1.2nm,0.3s,baz=43,slow=6.5,SNR=17						
HFS				LR	LR	12 02 18.4	
	comp=Z,31nm,19.0s,baz=32,slow=38						
NB2	NORSAR Subarra	70.65	338	P	P	11 28 25.3	0.0
	comp=Z,2.7nm,0.7s,baz=34,slow=6.5						
NOA	NORSAR Array B	70.65	338	LR	LR	12 04 44.1	
	comp=Z,20nm,18.8s,baz=5.0,slow=40						
NV01	Mina Array Sit	71.13	55	*e*P	P	11 28 31.1	+2.3
NVAR	Mina Array Bea	71.13	55	P	P	11 28 31.2	+2.4
	comp=Z,2.3nm,0.8s,baz=290,slow=6.4,SNR=16						
AKASG	Malin Array Be	71.70	322	P	P	11 28 30.7	-1.1
	comp=Z,0.6nm,0.3s,baz=44,slow=5.5,SNR=5.8						
AKBB	Malin Array Si	71.70	322	*e*P	P	11 28 30.7	-1.1
	comp=Z,4.1nm,0.9s						
AKBB	Malin Array Si	71.70	322	*e*P	P	11 28 30.7	-1.1
AKBB				pmax	pmax		
	comp=Z,4.0nm,0.9s						
STKA	Stephens Creek	73.04	182	LR	LR	12 09 04.8	
	comp=Z,13nm,18.1s,baz=204,slow=42						
PD31	Pinedale Array	73.47	47	*e*P	P	11 28 44.6	+1.9
PDAR	Pinedale Array	73.47	47	P	P	11 28 44.3	+1.5
	comp=Z,1.0nm,0.7s,baz=239,slow=2.1,SNR=13						
EKA	Eskdalemuir Ar	79.41	341	P	P	11 29 15.8	-0.1
	comp=Z,0.5nm,0.5s,baz=23,slow=5.0,SNR=3.5						
TXAR	Lajitas Array	86.21	54	P	P	11 29 53.6	+1.9
	comp=Z,0.6nm,0.7s,baz=300,slow=4.1,SNR=7.9						
KEST	Kesra	92.35	324	LR	LR	12 16 09.2	
	comp=Z,57nm,18.3s,baz=280,slow=38						
SNAA	Sanae	145.47	198	PKP	PKPbc	11 36 46.7	-0.2
SNAA	Sanae	145.47	198	PKPbc	PKPbc	11 36 46.7	-0.2
	comp=Z,1.9nm,0.6s,baz=133,slow=6.1,SNR=12						
SIV	San Ignacio	146.96	47	PKPbc	PKPab	11 36 54.0	-0.3
	comp=Z,0.7nm,0.6s,baz=320,slow=3.0,SNR=3.7						
VNA3	Neumayer Olymp	147.28	196	PKP	PKPbc	11 36 52.0	-0.2

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*ISCJB **12** 11:23:56.5±0.7, 15°.40S±0°.08×75°.2W±0°.1, h26^{km}, mb3.7/7, MS3.8/2, Error ellipse: s-maj=18.2km s-min=8.3km az=151.5*

*IDC **12** 11:24:03.4±2.5, 15°.40S×75°.53W, h70^{km}±23^{km}, mb3.5/7, mb1 3.9/10, mb1mx3.6/42, mbtmp3.9/10, MS3.2/7, Ms1 3.2/7, ms1mx3.0/31, Error ellipse: s-maj=35.7km s-min=15.2km az=62.0*

ISC 12 11:23:58.3±0.7**, 15°.38S**±0°.09×**75°.14W**±0°.09**, h26**^{km}**, n22, σ2^{s}.21**/17**, mb3.8**/7**, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	3.75	334	P	Pn	11 24 58.3	+3.7
	21nm,0.3s,baz=133,slow=14,SNR=20						
NNA				S	Sb	11 25 45.1	-3.9
	61nm,0.3s,baz=217,slow=9.4,SNR=8.9						
NNA				LR	LR	11 26 08.3	
	comp=Z,90nm,21.6s,baz=113,slow=34						
LPAZ	La Paz	6.81	99	P	Pn	11 25 46.2	+9.0
	9.1nm,0.3s,baz=290,slow=9.8,SNR=157						
LPAZ				S	Sb	11 27 14.5	-3.0
	baz=311,slow=6.2,SNR=1.7						
LPAZ				LR	LR	11 28 38.2	
	comp=Z,154nm,20.0s,baz=264,slow=38						
ATAH	Atahualpa	8.79	338	P	Pn	11 26 07.1	+2.9
	0.6nm,0.3s,baz=129,slow=13,SNR=3.0						
ATAH				S	Sn	11 27 43.5	+0.9
	0.8nm,0.3s,baz=80,slow=17,SNR=1.9						
ATAH				LR	LR	11 29 08.6	
	comp=Z,50nm,21.3s,baz=189,slow=35						
SIV	San Ignacio	13.57	94	P	Pn	11 27 11.0	+1.7
	0.5nm,0.3s,baz=274,slow=9.5,SNR=8.3						
SIV				LR	LR	11 33 43.2	
	comp=Z,63nm,20.8s,baz=290,slow=42						
CPUP	Villa Florida	19.87	126	P	P	11 28 27.2	-0.5
	0.5nm,0.3s,baz=270,slow=4.0,SNR=2.0						
CPUP				LR	LR	11 38 03.5	
	comp=Z,49nm,18.7s,baz=293,slow=42						
PTGA	Pitinga	20.89	47	P	P	11 28 39.7	+0.9
	0.8nm,0.3s,baz=284,slow=4.2,SNR=2.7						
PTGA				LR	LR	11 37 24.3	
	comp=Z,144nm,19.1s,baz=227,slow=38						
PLCA	Paso Flores	25.58	172	P	P	11 29 24.7	-0.7
	2.6nm,1.0s,baz=54,slow=10,SNR=3.4						
TXAR	Lajitas Array	52.29	328	P	P	11 33 04.7	-3.2
	0.5nm,0.6s,baz=148,slow=9.2,SNR=5.0						
PDAR	Pinedale Array	65.94	333	P	P	11 34 41.0	-1.4
	0.1nm,0.6s,baz=129,slow=7.2,SNR=2.3						
NVAR	Mina Array Bea	67.07	324	P	P	11 34 49.4	-0.4
	0.1nm,0.4s,baz=128,slow=5.8,SNR=2.7						
SNAA	Sanae	69.96	161	P	P	11 35 08.0	+0.9
	1.1nm,0.5s,baz=289,slow=9.9,SNR=34						
QSPA	South Pole Qui	74.78	180	P	P	11 35 36.2	+0.1
	1.3nm,0.6s,baz=137,slow=5.1,SNR=7.3						
KOWA	Kowa	76.31	71	LR	LR	12 08 37.2	
	comp=Z,94nm,18.2s,baz=37,slow=35						
TORD	Torodi Ar. Bea	81.12	74	P	P	11 36 13.2	+1.1
	3.6nm,0.8s,baz=252,slow=5.4						
H11N3	WAKE ISLAND Hy	120.95	284	T	T	13 54 51.0	
	baz=97,slow=74,SNR=49						
H11N2	WAKE ISLAND Hy	120.96	284	T	T	13 54 48.5	
	baz=97,slow=74,SNR=49						
H11N1	WAKE ISLAND Hy	120.97	284	T	T	13 54 49.1	
	baz=97,slow=74,SNR=45						
H11S2	WAKE ISLAND Hy	121.00	283	T	T	13 54 54.6	
	baz=98,slow=75,SNR=31						
H11S1	WAKE ISLAND Hy	121.00	283	T	T	13 54 52.9	
	baz=98,slow=75,SNR=27						
H11S3	WAKE ISLAND Hy	121.01	283	T	T	13 54 53.0	
	baz=98,slow=75,SNR=30						
WRA	Warramunga Arr	134.48	220	PKP	PKPdf	11 43 13.7	-1.4
	0.5nm,0.7s,baz=139,slow=1.6,SNR=4.3						
SONM	Songino Array	147.61	358	PKPbc	PKPbc	11 43 41.2	+0.6
	0.9nm,0.6s,baz=336,slow=2.5,SNR=5.6						

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*ISN **12** 11:30:53.1±0.9, 34°.03N×46°.12E, h15^{km}, ML2.9*

TEH 12 11:30:51.4, 34°.12N×46°.14E, h11^{km}**, ML2.9, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDHR	Dehrash	0.61	19	*e*		11 31 15.9	
	comp=Z,9µm,0.1s						
IDHR				*e*Pg	Pb	11 31 04.5	+0.2
IVIS	Veis	0.71	55	*e*Sg	Sb	11 31 16.8	+1.0
IVIS				*e*Pg	Pb	11 31 06.4	+0.5
IVIS				*e*		11 31 18.4	
	comp=Z,6µm,0.1s						
ILIN	Lien	1.04	40	*e*Pg	Pn	11 31 12.6	+0.3
ILIN				*e*		11 31 15.1	
	comp=Z,6µm,0.1s						
IBZA	Bozab	1.47	76	*e*Pn	Pg	11 31 20.6	+1.0
IBZA				*e*		11 31 22.2	
	comp=Z,2µm,0.1s						
IBZA				*e*Sg	Sg	11 31 42.0	+3.4
IKFM	Kafar-mosalman	1.54	112	*e*Pn	Pg	11 31 21.1	+0.1
IKFM				*e*		11 31 23.4	
	comp=Z,99nm,0.1s						

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*IDC **12** 11:32:55.8±3.9, 36°.98N×22°.65E, h0^{km}, mb3.7/5, mb1 3.6/6, mb1mx3.3/59, mbtmp3.6/6, ML2.6/1, MS1.7/2, Ms1 1.7/2, ms1mx1.7/65, Error ellipse: s-maj=81.1km s-min=23.2km az=55.0*

*ISCJB **12** 11:32:57.6±0.7, 36°.39N±0°.03×22°.12E±0°.04, h23^{km}±4^{km}, mb3.6/5, Error ellipse: s-maj=7.0km s-min=3.4km az=42.2*

*CSEM **12** 11:32:57.5±0.2, 36°.41N×22°.14E, h15^{km}, ML3.2, Error ellipse: s-maj=4.4km s-min=2.1km az=39.0*

*THE **12** 11:32:57.1, 36°.39N×22°.08E, h11^{km}±1^{km}, ML3.2/10, Error ellipse: s-maj=1.5km s-min=0.7km az=46.0*

*ATH **12** 11:32:57.3, 36°.43N×22°.16E, h29^{km}±1^{km}, ML3.2/12, Error ellipse: s-maj=2.0km s-min=1.0km az=40.0*

ISC 12 11:32:57.3±1.0**, 36°.43N**±0°.03×**22°.13E**±0°.03**, h31**^{km}±7^{km}**, n88,** σ**1^{s}.40**/128**, mb3.7**/5**, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DYR	Agios Nikonas	0.37	27	P	Pn	11 33 06.3	-0.2
DYR				S	Sb	11 33 10.8	-0.9
DYR				AML	AML	11 33 14.2	
	comp=N,5137µm,0.3s						
DYR				AML	AML	11 33 15.0	
	comp=E,5043µm,0.2s						
DYR	Agios Nikonas	0.37	27	P	Pb	11 33 05.9	0.0
DYR				S	Sn	11 33 12.4	-0.3
DYR	Agios Nikonas	0.37	27	P	Pb	11 33 05.9	0.0
DYR				S	Sb	11 33 11.2	-0.5
MES2	Methoni	0.52	319	P	Pb	11 33 07.3	-0.8
MES2				S	Sb	11 33 15.8	+0.3
MES2	Methoni	0.52	319	P	Pb	11 33 07.9	-0.2
MES2				S	Sb	11 33 16.2	+0.7
PYL	PYLOS	0.56	326	P	Pb	11 33 08.3	-0.5
PYL				S	Sn	11 33 18.3	+1.0
PYL				AML	AML	11 33 19.2	
	comp=N,4041µm,0.2s						
PYL				AML	AML	11 33 21.4	
	comp=E,4296µm,0.2s						
PYL	PYLOS	0.56	326	P	Pb	11 33 08.4	-0.4
PYL				S	Sb	11 33 16.4	-0.2
PYL	PYLOS	0.56	326	P	Pb	11 33 08.7	-0.1
PYL				S	Sb	11 33 16.4	-0.2
VLI	Veliai	0.71	66	P	Pn	11 33 11.8	+0.5
VLI				S	Sb	11 33 20.7	-0.1
VLI				AML	AML	11 33 28.7	
	comp=N,5705µm,0.5s						
VLI				AML	AML	11 33 29.4	
	comp=E,4367µm,0.6s						
VLI	Veliai	0.71	66	P	Pn	11 33 11.4	+0.2
VLI				S	Sn	11 33 22.6	+1.5
VLI	Veliai	0.71	66	P	Pn	11 33 11.5	+0.2
VLI				S	Sb	11 33 21.0	+0.2
KTHR	Kythira	0.73	103	P	Pb	11 33 11.4	-0.2
KTHR	Kythira	0.73	103	P	Pb	11 33 11.4	-0.2
KYTH	Kithira	0.76	102	P	Pn	11 33 12.8	+0.8

KYTH				S	Sb	11 33 21.1	-1.1
KYTH				AML	AML	11 33 28.5	
	comp=E,8040µm,0.4s						
KYTH				AML	AML	11 33 28.6	
	comp=N,11329µm,0.5s						
KYTH	Kithira	0.76	102	P	Pn	11 33 12.2	+0.3
KYTH				S	Sn	11 33 23.4	+1.0
KYTH	Kithira	0.76	102	P	Pn	11 33 12.2	+0.3
KYTH				S	Sb	11 33 21.6	-0.6
ITM	Ithomi	0.76	348	P	Pb	11 33 11.6	-0.6
ITM				S	Sn	11 33 24.5	+2.0
ITM				AML	AML	11 33 27.6	
	comp=N,2616µm,0.2s						
ITM				AML	AML	11 33 28.5	
	comp=E,3213µm,0.3s						
ITM	Ithomi	0.76	348	P	Pb	11 33 11.9	-0.3
ITM				S	Sn	11 33 23.8	+1.3
ITM	Ithomi	0.76	348	P	Pb	11 33 12.0	-0.3
ITM				S	Sn	11 33 23.8	+1.3
MNVA	Monemvasia	0.78	71	P	Pn	11 33 13.6	+1.5
MNVA				S	Sn	11 33 23.2	+0.5
MNVA	Monemvasia	0.78	71	P	Pn	11 33 12.9	+0.8
MNVA				S	Sn	11 33 23.1	+0.5
MES3	Kyparissia	0.89	336	P	Pn	11 33 14.4	+0.6
MES3				S	Sn	11 33 27.7	+2.1
MES3	Kyparissia	0.89	336	P	Pn	11 33 14.6	+0.8
MES3				S	Sn	11 33 27.7	+2.1
VLX	Vlachokerasia	0.96	12	P	Pn	11 33 15.2	+0.5
VLX				S	Sn	11 33 29.5	+2.1
VLX				AML	AML	11 33 34.2	
	comp=N,5731µm,0.8s						
VLX				AML	AML	11 33 34.3	
	comp=E,4770µm,0.6s						
VLX	Vlachokerasia	0.96	12	P	Pn	11 33 15.3	+0.5
VLX				S	Sn	11 33 31.5	+4.1
VLX	Vlachokerasia	0.96	12	P	Pb	11 33 15.5	0.0
VLX				S	Sn	11 33 29.4	+2.0
TRIP	Tripoli	1.10	6	P	Pb	11 33 18.6	+0.7
TRIP				S	Sb	11 33 34.2	+2.4
TRIP				AML	AML	11 33 40.7	
	comp=N,1334µm,0.6s						
TRIP				AML	AML	11 33 48.6	
	comp=E,1471µm,0.7s						
TRIP	Tripoli	1.10	6	P	Pb	11 33 18.2	+0.3
TRIP				S	Sb	11 33 34.0	+2.1
TRIP	Tripoli	1.10	6	P	Pb	11 33 18.4	+0.5
TRIP				S	Sb	11 33 33.8	+1.9
ANKY	Antikythira Is	1.10	120	P	Pb	11 33 18.9	+1.1
ANKY				S	Sb	11 33 32.6	+0.7
ANKY				AML	AML	11 33 39.6	
	comp=N,1857µm,0.6s						
ANKY				AML	AML	11 33 40.9	
	comp=E,1720µm,0.6s						
ANKY	Antikythira Is	1.10	120	P	Pb	11 33 18.1	+0.2
ANKY				S	Sb	11 33 34.0	+2.1
ANKY	Antikythira Is	1.10	120	P	Pb	11 33 18.1	+0.2
ANKY				S	Sb	11 33 32.8	+0.9
AMT	Artemida-Makis	1.15	343	P	Pb	11 33 19.2	+0.5
AMT				S	Sb	11 33 35.7	+2.5
AMT				AML	AML	11 33 44.9	
	comp=N,3708µm,0.5s						
AMT				AML	AML	11 33 48.1	
	comp=E,2248µm,0.6s						
AMT	Artemida-Makis	1.15	343	P	Pb	11 33 19.0	+0.3
AMT				S	Sb	11 33 36.6	+3.4
AMT	Artemida-Makis	1.15	343	P	Pb	11 33 19.1	+0.5
AMT				S	Sb	11 33 35.4	+2.2
KRND	KRANIDI	1.25	40	P	Pb	11 33 20.4	0.0
KRND				S	Sb	11 33 36.5	+0.3
KRND				AML	AML	11 33 44.3	
	comp=E,2132µm,0.5s						
KRND				AML	AML	11 33 47.3	
	comp=N,2071µm,0.8s						
KRND	KRANIDI	1.25	40	P	Pb	11 33 20.3	0.0
KRND				S	Sb	11 33 38.8	+2.6
KRND	KRANIDI	1.25	40	P	Pb	11 33 20.4	0.0
KRND				S	Sb	11 33 36.9	+0.7
DID	Didima	1.39	39	P	Pn	11 33 21.9	+1.2
DID				S	Sb	11 33 40.2	0.0
DID				AML	AML	11 33 48.4	
	comp=E,2163µm,0.6s						
DID				AML	AML	11 33 48.7	
	comp=N,1724µm,0.6s						
DID	Didima	1.39	39	P	Pb	11 33 22.2	-0.6
DID				S	Sb	11 33 40.5	+0.3
GUR	Goura	1.51	6	P	Pb	11 33 26.2	+1.4
GUR				S	Sb	11 33 44.8	+1.2
GUR				AML	AML	11 33 53.6	
	comp=N,1394µm,0.4s						
GUR				AML	AML	11 33 55.6	
	comp=E,1894µm,0.6s						
GUR	Goura	1.51	6	P	Pb	11 33 25.3	+0.5
GUR				S	Sb	11 33 44.5	+0.8
KLV	Kalavryta, Ach	1.61	1	P	Pb	11 33 26.1	-0.3
KLV	Kalavryta, Ach	1.61	1	P	Pb	11 33 26.0	-0.5
THAL	Thalero	1.66	15	P	Pb	11 33 26.4	-0.8
THAL	Thalero	1.66	15	P	Pb	11 33 26.4	-0.8
LOUT	Loutraki	1.69	23	P	Pb	11 33 28.0	+0.2
LOUT	Loutraki	1.69	23	P	Pb	11 33 27.4	-0.5
RLS	Riolos of Patr	1.71	342	P	Pb	11 33 28.7	+0.7
RLS	Riolos of Patr	1.71	342	P	Pb	11 33 28.0	-0.1
LTK	Loutraki	1.72	23	P	Pn	11 33 26.3	+1.1
LTK	Loutraki	1.72	23	P	Pn	11 33 26.8	+1.6
IMMV	Iera Moni Meta	1.79	122	P	Pn	11 33 27.4	+1.3
IMMV	Iera Moni Meta	1.79	122	P	Pn	11 33 27.7	+1.6
LAKA	Lakka	1.81	356	P	Pb	11 33 30.5	+0.7
LAKA	Lakka	1.81	356	P	Pb	11 33 29.6	-0.2
MHLA	Plaka, Milos I	1.87	80	P	Pn	11 33 28.4	+1.1
MHLA	Plaka, Milos I	1.87	80	P	Pn	11 33 28.7	+1.5
PROD	Prodromos	1.92	18	P	Pn	11 33 29.0	+1.0
PROD	Prodromos	1.92	18	P	Pn	11 33 29.5	+1.5
TRIZ	Trizonia	1.93	359	P	Pb	11 33 30.6	-1.2
TRIZ	Trizonia	1.93	359	P	Pb	11 33 30.5	-1.4
VLY	Voula,Athens	1.94	43	P	Pn	11 33 29.6	+1.4
VLY	Voula,Athens	1.94	43	P	Pn	11 33 29.9	+1.7
VAM	Vamos	1.97	121	P	Pn	11 33 29.7	+1.1
VAM	Vamos	1.97	121	P	Pn	11 33 30.1	+1.6
ATHU	Athens Univers	2.02	40	P	Pn	11 33 29.5	+0.2
ATHU	Athens Univers	2.02	40	P	Pn	11 33 30.4	+1.1
VLS	Valsamata	2.13	325	P	Pn	11 33 31.8	+1.0
VLS	Valsamata	2.13	325	P	Pn	11 33 31.8	+1.0
ANX	Ano Chora	2.16	356	P	Pn	11 33 33.8	+2.5
ANX	Ano Chora	2.16	356	P	Pn	11 33 33.7	+2.4
DION	Dionisos Attik	2.18	41	P	Pn	11 33 31.7	+0.2
DION	Dionisos Attik	2.18	41	P	Pn	11 33 32.7	+1.2
PDO	Prodromos	2.29	341	P	Pb	11 33 36.9	-1.0
PDO	Prodromos	2.29	341	P	Pb	11 33 36.2	-1.8
LKR	Lokris	2.32	17	P	Pn	11 33 33.4	0.0
LKR	Lokris	2.32	17	P	Pn	11 33 34.5	+1.1
EVR	Evrytania	2.49	354	P	Pn	11 33 38.3	+2.4
EVR	Evrytania	2.49	354	P	Pn	11 33 38.3	+2.4
IDI	Anoyia	2.52	116	Pn	Pn	11 33 37.8	+1.6
	comp=E,1.3nm,0.3s,baz=293,slow=17,SNR=6.0						
IDI				Sn	Sn	11 34 08.6	+2.8
	comp=E,9.2nm,0.3s,baz=285,slow=16,SNR=6.2						
IDI				LR	LR	11 34 37.1	
	comp=E,17nm,19.0s,baz=88,slow=41						
STON	Ston	7.28	333	*e*Pn	Pn	11 34 39.7	-1.8
STON				Sn	Sn	11 35 56.8	-6.2
MLR	Muntele Rosu	9.50	16	LR	LR	11 38 32.5	
	comp=E,5.4nm,21.6s,baz=186,slow=38						
HFS	Hagfors	24.33	350	P	P	11 38 10.3	-1.7
	comp=E,0.5nm,0.3s,baz=159,slow=9.3,SNR=4.6						
FINES	FINESS Array B	25.16	4	P	P	11 38 17.9	-1.6
	comp=E,1.0nm,0.5s,baz=182,slow=9.7,SNR=3.7						
KURBB	Kurchatov Arra	42.26	52	P	P	11 40 44.7	-2.9
	comp=E,0.4nm,0.4s,baz=277,slow=8.6,SNR=3.2						
MKAR	Makanchi Array	45.15	57	P	P	11 41 09.0	-1.9
	comp=E,0.6nm,0.5s,baz=274,slow=7.8,SNR=10						
ZALV	Zalesovo Beam	45.92	47	P	P	11 41 14.8	-2.1
	comp=E,0.8nm,0.3s,baz=279,slow=8.4,SNR=2.8						

DJA 12 11:34:34.9±1.4,**6°S**±15°×**13°2E**±°,**h17**^{km}±19^{km},**M4.0**/5, **MLv4.0**/5,**Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	2.30	306	P	Pn	11 35 11.8	-0.2
BNDI				S	Sn	11 35 40.8	+0.9
KMPI	Kaimana, Papua	2.93	41	P	Pn	11 35 20.7	0.0
KMPI				S	Sn	11 35 56.0	+0.5
FAKI	Fak Fak	2.98	9	P	Pn	11 35 21.4	0.0
FAKI				S	Sn	11 35 57.9	+1.1
RKPI	Ransiki, Papua	4.96	29	P	Pn	11 35 49.8	+1.1
RKPI				S	Sn	11 36 46.6	+0.9

IDC 12 11:35:55.3±5.4,**28°.85S**×**75°.02E**,**h0**^{km},**mb3.9**/4, **mb1 4.1**/4,**mb1mx3.5**/71,**mbtmp3.9**/4,**Error ellipse: s-maj=147.4km s-min=36.3km az=51.0**,**Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	52.40	29	P	P	11 45 09.5	-0.1
	0.7nm,0.3s,baz=209,slow=6.8,SNR=4.0						
ASAR	Alice Springs	52.61	99	P	P	11 45 09.8	-1.4
	1.3nm,1.0s,baz=236,slow=6.6,SNR=3.3						
WRA	Warramunga Arr	54.28	95	P	P	11 45 25.0	+1.4
	1.5nm,0.9s,baz=253,slow=7.8,SNR=5.5						
MKAR	Makanchi Array	75.57	5	P	P	11 47 41.5	0.0
	0.8nm,0.9s,baz=168,slow=7.4,SNR=3.7						

ISCJB **12** *11:42:53.7±0.8,23°.19N±0°.08×142°.2E±0°.2,h100*^{km}*, mb3.6/10,Error ellipse: s-maj=25.4km s-min=11.8km az=1.0*

IDC **12** *11:42:58.0±2.5,23°.30N×142°.29E,h121*^{km}*±20*^{km}*, mb3.3/10,mb1 3.5/11,mb1mx3.3/69,mbtmp3.7/11,MS3.4/1, Ms1 3.4/1,ms1mx2.2/30,Error ellipse: s-maj=24.2km s-min=17.7km az=94.0*

ISC 12 11:42:55.5±0.9,**23°.1N**±0°.1×**142°.4E**±0°.2,**h100**^{km},**n14**, σ**1**^{s}**43**/14,**mb3.7**/10,**Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	3.95	357	P	Pn	11 43 56.5	+2.5
	baz=145,slow=16						
JCJ				S	Sn	11 44 38.2	-1.1
	58nm,0.3s,baz=292,slow=22,SNR=21						
KSRS	Korea Array	18.94	322	P	Pn	11 47 12.5	+2.2
	0.1nm,0.3s,baz=137,slow=11,SNR=4.4						
TGY	Tagaytay City	22.22	250	LR	LR	11 54 12.4	
	comp=Z,87nm,19.8s,baz=196,slow=30						
KLR	Kul'dur	27.37	345	P	P	11 48 30.6	-0.6
	0.1nm,0.5s,baz=222,slow=14,SNR=3.7						
WRA	Warramunga Arr	43.53	191	P	P	11 50 50.3	+0.9
	0.3nm,0.3s,baz=18,slow=8.7,SNR=19						
MKAR	Makanchi Array	53.21	312	P	P	11 52 03.0	-0.5
	0.2nm,0.4s,baz=104,slow=9.4,SNR=4.2						
KURBB	Kurchatov Arra	55.99	316	P	P	11 52 22.1	-1.4
	0.3nm,0.3s,baz=94,slow=7.8,SNR=5.5						
ILAR	Eielson Array	61.09	28	P	P	11 52 57.8	-0.9
	0.5nm,0.6s,baz=272,slow=4.9,SNR=2.8						
BVAR	Borovoye Array	61.12	319	P	P	11 52 58.1	-1.0
	1.1nm,0.5s,baz=77,slow=7.8,SNR=5.5						
INK	Inuvik	66.55	24	P	P	11 53 33.5	-0.9
	0.6nm,0.6s,baz=300,slow=5.0,SNR=5.2						
FINES	FINESS Array B	81.58	334	P	P	11 55 00.1	-1.9
	0.9nm,0.5s,baz=72,slow=4.5,SNR=6.6						
NVAR	Mina Array Bea	82.81	51	P	P	11 55 10.1	+0.9
	1.0nm,0.8s,baz=272,slow=5.2,SNR=8.4						
PDAR	Pinedale Array	86.88	45	P	P	11 55 29.5	0.0
	0.3nm,0.7s,baz=328,slow=3.2,SNR=2.8						
PLCA	Paso Flores	147.23	130	PKPbc	PKPbc	12 02 27.8	+0.3
	2.7nm,0.9s,baz=283,slow=5.5,SNR=3.9						

MEX 12 11:51:35.5±0.5,**16°.25N**×**98°.17W**,**h8**^{km}±7^{km},**MD3.7**,**Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.14	16	*e*P	Pg	11 51 35.2	-3.4
PNIG				*i* S	Sg	11 51 37.4	-3.3
TLIG	Tlapa	1.36	344	*e*P	Pn	11 51 57.1	-3.8
TLIG				*e*S	Sb	11 52 14.3	-4.6
VHO	Vista Hermosa	1.60	59	*e*P	Pn	11 52 00.9	-3.4
VHO				*i* S	Sn	11 52 20.4	-4.8

IDC **12** *11:59:15.9±1.7,45°.01S×167°.46E,h0*^{km}*,mb3.4/2, mb1 3.8/4,mb1mx3.5/45,mbtmp3.6/4,ML3.6/2,Error ellipse: s-maj=51.6km s-min=22.7km az=169.0*

ISCJB **12** *11:59:17.0±1.1,44°.96S±0°.03×167°.42E±0°.07,h18*^{km}*±7*^{km}*, mb3.3/2,Error ellipse: s-maj=8.7km s-min=5.1km az=9.1*

WEL **12** *11:59:17.9,45°S±4°×16°8E±°,h12*^{km}*,ML3.9/11*

ISC 12 11:59:18.1±1.4,**45°.00S**±0°.05×**167°.50E**±0°.07,**h19**^{km}±4^{km}, **n39**,σ**1**^{s}**36**/39,**South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSZ	Milford Sound	0.45	43	P	Pg	11 59 26.7	-0.5
MSZ				S	Sg	11 59 32.8	-0.5
MLZ	Mavora Lakes	0.57	130	P	Pb	11 59 29.3	-0.2
MLZ				S	Sb	11 59 37.6	+0.4
WHZ	Wether Hill Ro	0.95	161	P	Pb	11 59 35.2	-0.7
WHZ				S	Sb	11 59 48.0	-0.1
WKZ	Wanaka	1.09	81	P	Pb	11 59 38.4	0.0
WKZ				S	Sb	11 59 52.9	+0.6
EAZ	Earnscleugh	1.30	101	P	Pn	11 59 41.6	+0.4
EAZ				S	Sb	11 59 58.5	+0.2
JCZ	Jackson Bay	1.30	45	P	Pn	11 59 41.6	+0.2
TUZ	Tuapeka	1.78	123	P	Pn	11 59 48.5	+0.7
TUZ				S	Sn	12 00 11.4	+1.6
APZ	The Paps	1.86	170	P	Pn	11 59 49.5	+0.5
APZ				S	Sb	12 00 13.6	-1.0
SYZ	Scrubby Hill	1.92	144	P	Pn	11 59 50.1	+0.4
LBZ	Lake Benmore	2.01	73	P	Pn	11 59 52.4	+1.4
FOZ	Fox Glacier	2.22	49	P	Pn	11 59 55.4	+1.5
ODZ	Otahua Downs	2.23	92	P	Pn	11 59 54.6	+0.5
HHSZ	Highcliff Hill	2.35	113	P	Pn	11 59 56.7	+1.0
RPZ	Rata Peaks	2.85	64	Pn	Pn	12 00 03.4	+0.7
	23nm,0.3s,baz=247,slow=2.9,SNR=52						
RPZ				Sn	Sn	12 00 38.1	+1.6
	14nm,0.3s,baz=320,slow=16,SNR=9.0						
RPZ	Rata Peaks	2.85	64	P	Pn	12 00 03.4	+0.7
WVZ	Waitaha Valley	3.02	52	P	Pn	12 00 05.9	+0.9
INZ	Inchbonnie	3.65	53	P	Pn	12 00 14.7	+1.2
MQZ	McQueen's Vall	3.92	73	P	Pn	12 00 17.1	-0.1
AKCZ	Akaroa Harbour	4.03	76	P	Pn	12 00 18.9	0.0
LTZ	Lake Taylor	4.10	59	P	Pn	12 00 20.4	+0.6
OKCZ	Okains Bay	4.18	74	P	Pn	12 00 21.2	+0.3
DSZ	Denniston Nort	4.52	45	P	Pn	12 00 26.1	+0.5
THZ	Tophouse	5.10	52	P	Pn	12 00 33.9	+0.4
QRZ	Quartz Range	5.57	43	P	Pn	12 00 40.4	+0.4
NNZ	Nelson	5.73	51	P	Pn	12 00 43.5	+1.4
TUWZ	Tuamarina	5.91	55	P	Pn	12 00 48.2	+3.7
URZ	Urewera	9.85	50	Pn	Pn	12 01 39.5	+0.9
	0.3nm,0.3s,baz=249,slow=8.6,SNR=2.5						
URZ				Sn	Sn	12 03 23.3	-5.4
	0.2nm,0.3s,baz=262,slow=19,SNR=2.3						
ASAR	Alice Springs	34.60	297	P	P	12 06 06.8	+0.8
	0.2nm,0.6s,baz=137,slow=6.9,SNR=4.3						
WRA	Warramunga Arr	37.09	301	P	P	12 06 27.2	-0.1
	0.4nm,0.7s,baz=138,slow=7.7,SNR=7.7						
H01W1	Cape Leeuwin H	41.46	265	T	T	12 50 51.7	
	baz=120,slow=75,SNR=8.7						
H01W2	Cape Leeuwin H	41.47	265	T	T	12 50 53.3	
	baz=120,slow=75,SNR=16						
H01W3	Cape Leeuwin H	41.47	265	T	T	12 50 53.8	
	baz=120,slow=75,SNR=10						
H08S2	Diego Garcia H	88.18	261	T	T	13 49 05.2	
	baz=140						
H08S1	Diego Carcia H	88.19	261	T	T	13 49 04.9	
	baz=140						
H08S3	Diego Garcia H	88.20	261	T	T	13 49 05.9	
	baz=140						
H08N1	Diego Carcia H	90.13	261	T	T	13 51 34.8	
	baz=154						
H08N3	Diego Garcia H	90.15	261	T	T	13 51 31.0	
	baz=154						
H08N2	Diego Garcia H	90.16	261	T	T	13 51 33.8	
	baz=154						
TORD	Torodi Ar. Bea	146.03	205	PKPbc	PKPdf	12 18 56.9	+0.8
	baz=159,slow=3.9						

IDC 12 12:05:02.8±4.3,**18°.78S**×**169°.44E**,**h248**^{km}±76^{km},**mb3.2**/3, **mb1 3.4**/4,**mb1mx3.1**/46,**mbtmp3.8**/4,**Error ellipse: s-maj=180.1km s-min=33.4km az=150.0**,**Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.31	220	P	Pn	12 06 10.1	-0.2
	1.2nm,0.3s,baz=41,slow=19,SNR=24						
DZM				S	S	12 07 04.5	+0.5
	1.2nm,0.3s,baz=24,slow=20,SNR=2.2						
ASAR	Alice Springs	33.43	255	P	P	12 11 18.4	-0.3
	1.3nm,0.4s,baz=82,slow=8.8,SNR=30						
SONM	Songino Array	86.97	323	P	P	12 17 20.8	+0.7
	0.4nm,0.7s,baz=134,slow=4.2,SNR=2.9						
ILAR	Eielson Array	89.74	17	P	P	12 17 32.0	-0.5
	0.2nm,0.6s,baz=239,slow=4.9,SNR=4.2						

IDC **12** *12:06:08.9±1.1, 1°.25N×126°.07E,h0*^{km}*,mb3.8/4, mb1 3.9/6,mb1mx3.6/55,mbtmp3.8/6,ML3.5/2,MS2.3/1, Ms1 2.3/1,ms1mx2.1/58,Error ellipse: s-maj=53.2km s-min=18.2km az=64.0*

ISCJB **12** *12:06:13.9±0.8, 1°.34N±0°.08×126°.38E±0°.05,h54*^{km}*, mb3.8/4,Error ellipse: s-maj=11.7km s-min=6.1km az=16.8*

DJA **12** *12:06:15.4±0.4, 1°N±4°×12°6E±°,h40*^{km}*±74*^{km}*,M4.2/8, mB4.8/1,mb4.8/1,MLv3.9/8,Mw(mB)4.1/1*

ISC 12 12:06:15.5±1.2,**1°.3N**±0°.1×**126°.40E**±0°.05,**h54**^{km},**n14**, σ**0**^{s}**93**/16,**mb3.9**/4,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.10	119	P	Pn	12 06 34.0	-0.7
TNTI				S	Sn	12 06 49.2	+0.2
LBMI	Labuha	2.23	151	P	Pn	12 06 49.7	-0.3
LBMI				S	Sn	12 07 16.3	-0.1
KMSI	Cibinong	2.53	253	P	Pn	12 06 53.0	-1.1
KMSI				S	Sn	12 07 23.3	-0.5
SANI	Sanana	3.37	187	P	Pn	12 07 04.8	-0.8
LUWI	Luwuk	4.32	237	P	Pn	12 07 20.2	+1.5
NLAI	Namlea	4.58	171	P	Pn	12 07 22.3	+0.1
APSI	Ampana	5.24	245	P	Pn	12 07 32.5	+1.2
SIJI	Sorong	5.32	114	Pn	Pn	12 07 34.4	+1.9
	0.8nm,0.3s,baz=287,slow=19,SNR=4.7						
DAV	Davao City (W)	5.78	352	LR	LR	12 10 19.9	
	comp=Z,29nm,19.2s,baz=178,slow=43						
FITZ	Fitzroy Crossi	19.31	182	P	P	12 10 35.4	-0.8
	0.2nm,0.3s,baz=7.0,slow=11,SNR=10						
WRA	Warramunga Arr	22.51	160	P	P	12 11 10.5	-0.4
	4.8nm,0.7s,baz=339,slow=11,SNR=131						
ASAR	Alice Springs	25.88	164	P	P	12 11 43.0	+0.5
	0.9nm,0.5s,baz=343,slow=6.7,SNR=16						
MKAR	Makanchi Array	59.35	326	P	P	12 16 12.1	-0.1
	0.4nm,0.4s,baz=120,slow=7.3,SNR=11						
KURBB	Kurchatov Arra	63.59	328	P	P	12 16 40.7	+0.1
	0.5nm,0.6s,baz=126,slow=6.2,SNR=6.6						

AZER **12** *12:08:28.3±7.2,38°.54N×42°.83E,h7*^{km}*,ml3.2/6,Error ellipse: s-maj=65.9km s-min=53.4km az=160.0*

ISK **12** *12:08:30.8,38°.61N×43°.17E,h2*^{km}*,ML3.5/17*

CSEM **12** *12:08:31.6±0.1,38°.59N×43°.20E,h2*^{km}*,ML3.5,Error ellipse: s-maj=4.0km s-min=2.9km az=144.0*

DDA **12** *12:08:31.5,38°.58N×43°.18E,h7*^{km}*,Ml3.4*

ISCJB **12** *12:08:32.2±0.5,38°.64N±0°.02×43°.15E±0°.02,h4*^{km}*±4*^{km}*, Error ellipse: s-maj=3.8km s-min=3.0km az=153.6*

ISC 12 12:08:32.4±0.9,**38°.60N**±0°.02×**43°.18E**±0°.02,**h9**^{km}±7^{km}, **n69**,σ**1**^{s}**07**/99,**10C-7D**,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	Van	0.16	91	PG	Pg	12 08 35.9	-0.1
VANB				SG	Sg	12 08 39.8	+1.3
VANB	Van	0.16	91	*e*Pg	Pg	12 08 35.9	-0.1
GEVA	Gevas	0.30	198	*i* P	Pg	12 08 38.2	-0.3
GEVA				*i* S	Sb	12 08 45.0	-0.2
GEVA	Gevas	0.30	198	P	Pg	12 08 38.2	-0.3
GEVA				S	Sb	12 08 45.0	-0.2
ADCV	BITLIS_Adilcev	0.41	300	*i* P	Pg	12 08 39.8	-0.7
ADCV				*i* S	Sg	12 08 46.4	+0.4
ADCV	BITLIS_Adilcev	0.41	300	P	Pg	12 08 39.8	-0.7
ADCV				S	Sg	12 08 46.4	+0.4
ERCV	ERCIS-VAN	0.44	16	PG	Pg	12 08 39.9	-1.1
ERCV				SG	Sg	12 08 47.2	+0.4
ERCV	ERCIS-VAN	0.44	16	*e*Pg	Pg	12 08 39.9	-1.1
ERCV				*e*Sg	Sg	12 08 47.2	+0.4
VMUR	Van-Muradiye	0.49	38	*i* P	Pg	12 08 41.6	-0.5
VMUR				*i* S	Sb	12 08 50.1	-0.7
VMUR	Van-Muradiye	0.49	38	P	Pg	12 08 41.6	-0.5
VMUR				S	Sb	12 08 50.1	-0.7
CLDR	Caldiran	0.79	46	PG	Pg	12 08 46.9	-0.8
CLDR				SG	Sb	12 08 58.8	-0.5
CLDR	Caldiran	0.79	46	*i* P	Pg	12 08 46.2	-1.5
CLDR				*i* S	Sb	12 08 59.0	-0.3
CLDR	Caldiran	0.79	46	P	Pg	12 08 46.2	-1.5
CLDR	Caldiran	0.79	46	*e*Pg	Pg	12 08 46.9	-0.8
CLDR				*e*Sg	Sb	12 08 58.8	-0.5
CLDR				S	Sb	12 08 59.0	-0.3
GURO	Guroymak-BITLI	0.90	267	PG	Pg	12 08 48.0	-1.7
GURO	Guroymak-BITLI	0.90	267	*e*Pg	Pg	12 08 48.0	-1.7
EKAR	Karacoban	1.09	307	*i* P	Pg	12 08 52.3	-1.1
EKAR				*i* S	Sn	12 09 12.8	+3.5
EKAR	Karacoban	1.09	307	P	Pg	12 08 52.3	-1.1
EKAR				S	Sn	12 09 12.8	+3.5
HAKT	HAKKARI	1.12	158	*i* P	Pg	12 08 51.9	-2.0
HAKT				*i* S	Sn	12 09 11.0	+1.0
HAKT	HAKKARI	1.12	158	P	Pg	12 08 51.9	-2.0
HAKT				S	Sn	12 09 11.0	+1.0
SRTM	Siirt_Merkez	1.16	239	*i* P	Pn	12 08 54.3	-0.5
SRTM				*i* S	Sn	12 09 12.0	+1.1
SRTM	Siirt_Merkez	1.16	239	P	Pn	12 08 54.3	-0.5
SRTM				S	Sn	12 09 12.0	+1.1
SIRT	Sirnak	1.24	208	PN	Pn	12 08 55.5	-0.5
SIRT	Sirnak	1.24	208	*e*Pn	Pn	12 08 55.5	-0.5
SIRN	S˜–rnak	1.26	209	*i* P	Pn	12 08 57.3	+1.2
SIRN	S˜–rnak	1.26	209	P	Pn	12 08 57.3	+1.2
YOVA	Hakkari_Yˆ…kse	1.34	139	*i* P	Pn	12 08 56.6	-0.8
YOVA				*i* S	Sn	12 09 17.1	+1.8
YOVA	Hakkari_Yˆ…kse	1.34	139	P	Pn	12 08 56.6	-0.8
YOVA				S	Sn	12 09 17.1	+1.8
CUKT	Cukurca	1.39	166	PN	Pb	12 08 57.9	-0.7
CUKT	Cukurca	1.39	166	*i* P	Pn	12 08 57.1	-1.0
CUKT				*i* S	Sg	12 09 20.4	+3.3
CUKT	Cukurca	1.39	166	P	Pn	12 08 57.1	-1.0
CUKT	Cukurca	1.39	166	*e*Pn	Pb	12 08 57.9	-0.7
VRTB	Varto-Mus	1.46	293	PN	Pb	12 08 58.9	-0.8
VRTB	Varto-Mus	1.46	293	*e*Pn	Pb	12 08 58.9	-0.8
TASB	TASBURUN-IGDIR	1.61	30	PN	Pb	12 09 01.2	-1.1
TASB	TASBURUN-IGDIR	1.61	30	*e*Pn	Pb	12 09 01.2	-1.1
SVAN	Silvan-Diyarba	1.62	255	PN	Pb	12 09 01.2	-1.2
SVAN	Silvan-Diyarba	1.62	255	*i* P	Pb	12 09 01.7	-0.7
SVAN				*i* S	Sg	12 09 24.1	-0.4
SVAN	Silvan-Diyarba	1.62	255	*e*Pn	Pb	12 09 01.2	-1.2
SVAN				S	Sg	12 09 24.1	-0.4
BTMN	Batman	1.66	245	*i* P	Pg	12 09 02.9	-1.3
BTMN				*i* S	Sg	12 09 25.9	+0.1
HYR	Heyderabad	1.71	49	⇓P	Pn	12 09 01.4	-1.0
HYR				⇑S	Sg	12 09 27.8	+0.3
HYR	Heyderabad	1.71	49	⇓P	Pn	12 09 01.4	-1.0
HYR				⇑S	Sg	12 09 27.8	+0.3
NAX	Nakhchivan	1.90	72	⇓P	Pn	12 09 04.5	-0.4
NAX	Nakhchivan	1.90	72	⇓P	Pn	12 09 04.5	-0.4
NAX				⇓S	Sg	12 09 34.0	+0.6
BNGB	Bingˆ¶l	1.99	282	PN	Pn	12 09 06.6	+0.3
SBZ	Shahbuz	2.01	66	⇑P	Pn	12 09 06.4	-0.2
SBZ	Shahbuz	2.01	66	⇑P	Pn	12 09 06.4	-0.2
KARS	Kars	2.03	358	PN	Pn	12 09 06.9	+0.1
KARS	Kars	2.03	358	*e*Pn	Pn	12 09 06.9	+0.1
BINT	Bingol	2.12	278	*e*Pn	Pn	12 09 06.6	-1.5
ORD	Ordubad	2.22	81	⇑P	Pn	12 09 09.7	+0.3
ORD				⇓S	Sb	12 09 41.2	+0.8
ORD	Ordubad	2.22	81	⇑P	Pn	12 09 09.7	+0.3
ORD				⇓S	Sb	12 09 41.2	+0.8
DIY	Diyarbakir	2.43	254	*e*Pn	Pn	12 09 13.5	+1.2
MAZI	Mazidag	2.44	243	PN	Pn	12 09 12.9	+0.4
MAZI	Mazidag	2.44	243	*e*Pn	Pn	12 09 12.9	+0.4
DYBB	Diyarbakir	2.48	256	PN	Pn	12 09 13.5	+0.6
AKH	Akhalkalaki	2.82	5	PN	Pn	12 09 18.2	+0.5
AKH	Akhalkalaki	2.82	5	*e*Pn	Pn	12 09 18.2	+0.5
ERZN	Erzincan	2.87	291	PN	Pn	12 09 18.9	+0.6
GDB	GEDABAY	2.90	42	⇑P	Pn	12 09 18.7	-0.2
GDB	GEDABAY	2.90	42	⇑P	Pn	12 09 18.7	-0.2
BAYT	Ayd˜–ntepe-Bay	2.96	308	PN	Pn	12 09 20.4	+0.8
BAYT	Ayd˜–ntepe-Bay	2.96	308	*e*Pn	Pn	12 09 20.4	+0.8
PTK	Pertek	2.98	277	PN	Pn	12 09 21.2	+1.3
PTK	Pertek	2.98	277	*e*Pn	Pn	12 09 21.2	+1.3
QZX	Qazax, Azerbai	2.98	34	⇑P	Pn	12 09 19.2	-0.6

QZX	**Qazax, Azerbai**	**2.98**	**34**	⇑P	**Pn**	**12 09 19.2**	**-0.6**
SVRC	**Sivrice-ELAZID**	**3.05**	**267**	PN	**Pn**	**12 09 21.6**	**+0.7**
SVRC	**Sivrice-ELAZID**	**3.05**	**267**	*e*Pn	**Pn**	**12 09 21.6**	**+0.7**

IDC 12 12:08:53.4±2.3, 7°.11S×129°.84E, h127km±26km, mb3.4/1, mb1 3.4/6, mb1mx3.1/53, mbtmp3.8/6, Error ellipse: s-maj=38.2km s-min=21.1km az=95.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**6.36**	**13**	P	Pn	12 10 24.4	-0.3
	1.3nm,0.3s,baz=217,slow=20,SNR=7.0						
SIJI				S	Sn	12 11 31.4	-4.8
	1.2nm,0.3s,baz=229,slow=19,SNR=4.8						
BATI	**Baumata**	**6.83**	**243**	P	Pn	12 10 32.1	+0.9
	4.5nm,0.3s,baz=83,slow=8.1,SNR=3.2						
BATI				S	Sn	12 11 45.2	-2.4
	7.3nm,0.3s,baz=104,slow=22,SNR=5.9						
FITZ	**Fitzroy Crossi**	**11.66**	**200**	P	Pn	12 11 34.5	-1.5
	0.4nm,0.3s,baz=25,slow=13,SNR=20						
FITZ				S	Sn	12 13 35.1	-9.5
	0.8nm,0.3s,baz=60,slow=21,SNR=5.9						
WRA	**Warramunga Arr**	**13.49**	**162**	P	Pn	12 12 00.8	+1.1
	0.4nm,0.3s,baz=344,slow=13,SNR=5.2						
WRA				S	Sn	12 14 23.8	-4.8
	1.0nm,0.3s,baz=333,slow=22,SNR=13						
ASAR	**Alice Springs**	**16.92**	**167**	P	P	12 12 42.3	-0.2
	0.1nm,0.3s,baz=339,slow=9.9,SNR=2.5						
ASAR				S	Sn	12 15 45.0	-6.3
	0.2nm,0.3s,baz=344,slow=26,SNR=6.3						
MKAR	**Makanchi Array**	**68.23**	**327**	P	P	12 19 40.4	+0.1
	0.3nm,0.4s,baz=141,slow=7.9,SNR=8.2						

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*ISCJB **12** 12:19:32.3±0.4, 23°.78N±0°.02×122°.05E±0°.02, h32km±3km, Error ellipse: s-maj=3.7km s-min=2.4km az=157.6*

*JMA **12** 12:19:32.6±0.1, 23°.81N×121°.99E, h37km±3km, M2.4*

*TAP **12** 12:19:32.9, 23°.81N×121°.97E, h31km, ML2.7, D*

ISC 12 12:19:32.5±1.1, 23°.81N±0°.02×122°.00E±0°.02, h33km±3km, n46, σ0.s56/84, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ENLB	**Shoufeng**	**0.38**	**285**	P	**Pn**	**12 19 41.9**	**+0.1**
	baz=284						
ENLB				S	**Sb**	**12 19 48.0**	**+0.7**
	baz=284						
HWA	**Hwalien**	**0.40**	**295**	P	**Pn**	**12 19 42.5**	**+0.4**
	baz=296						
HWA				*e*S	**Sn**	**12 19 49.7**	**+1.4**
	baz=296						
TWD	**Chiawan**	**0.46**	**306**	P	**Pb**	**12 19 42.5**	**0.0**
	baz=308						
TWD				*e*S	**Sn**	**12 19 49.9**	**+0.1**
	baz=308						
ESL	**Shilin**	**0.52**	**271**	P	**Pb**	**12 19 43.5**	**0.0**
	baz=269						
ESL				S	**Sn**	**12 19 51.0**	**-0.3**
	baz=269						
NACB	**Ninganchiao**	**0.52**	**315**	P	**Pb**	**12 19 43.3**	**-0.2**
	baz=316						
NACB				*e*S	**Sn**	**12 19 51.5**	**+0.1**
	baz=316						
EGFH	**Guangfu**	**0.54**	**255**	P	**Pn**	**12 19 44.3**	**+0.5**
	baz=253						
EGFH				S	**Sn**	**12 19 52.4**	**+0.6**
	baz=253						
HGSD	**Ruisui**	**0.61**	**239**	*e*P	**Pb**	**12 19 46.7**	**+1.7**
	baz=237						
HGSD				S	**Sb**	**12 19 54.1**	**+0.6**
	baz=237						
NANB	**Nanao**	**0.66**	**340**	P	**Pn**	**12 19 45.6**	**+0.2**
	baz=341						
ENA	**Nanau**	**0.66**	**339**	P	**Pn**	**12 19 45.6**	**0.0**
	baz=341						
ENA				*e*S	**Sb**	**12 19 55.2**	**+0.4**
	baz=341						
EHY	**Hungye**	**0.69**	**244**	P	**Pb**	**12 19 46.3**	**0.0**
	baz=242						
EHY				*e*S	**Sb**	**12 19 55.9**	**+0.3**
	baz=242						
WHF	**Hehuan Shan**	**0.75**	**297**	P	**Pn**	**12 19 47.2**	**0.0**
	baz=297						
WHF				*e*S	**Sn**	**12 19 57.3**	**-0.3**
	baz=297						
YULB	**Yu-li**	**0.77**	**238**	P	**Pn**	**12 19 47.3**	**+0.3**
	baz=235						
YULB				*e*S	**Sb**	**12 19 58.1**	**+0.4**
	baz=235						
TWF1	**Yuli**	**0.79**	**235**	P	**Pb**	**12 19 47.8**	**-0.1**
	baz=233						
TWF1				*e*S	**Sb**	**12 19 58.5**	**+0.2**
	baz=233						
CHGB	**Renai**	**0.80**	**289**	P	**Pb**	**12 19 48.0**	**-0.2**
	baz=288						
CHGB				*e*S	**Sb**	**12 19 59.8**	**+1.0**
	baz=288						
TWC	**Suao**	**0.81**	**350**	P	**Pb**	**12 19 48.4**	**+0.1**
	baz=352						
TWC				*e*S	**Sb**	**12 19 59.3**	**+0.4**
	baz=352						
NNSB	**Datong**	**0.84**	**318**	P	**Pb**	**12 19 48.5**	**-0.3**
	baz=318						
NNSH	**Datong**	**0.84**	**318**	P	**Pb**	**12 19 48.5**	**-0.3**
	baz=318						
NNSH				*e*S	**Sb**	**12 19 59.7**	**-0.1**
	baz=318						
NNS	**Nan Shan**	**0.85**	**318**	P	**Pn**	**12 19 48.4**	**+0.1**
	baz=319						
NNS				*e*S	**Sb**	**12 20 00.0**	**-0.2**
	baz=319						
TWT	**Tachien**	**0.88**	**301**	*e*P	**Pb**	**12 19 49.5**	**+0.1**
	baz=300						
FULB	**Fuli**	**0.89**	**227**	P	**Pn**	**12 19 48.6**	**-0.1**
	baz=225						
FULB				*e*S	**Sb**	**12 20 01.4**	**+0.2**
	baz=225						
CHKT	**Chengkung**	**0.92**	**220**	*e*P	**Pn**	**12 19 48.7**	**-0.4**
	baz=217						
CHKT				*e*S	**Sn**	**12 19 59.9**	**-1.2**
	baz=217						
ENTT	**Nioudou**	**0.92**	**335**	P	**Pb**	**12 19 49.8**	**-0.3**
	baz=336						
ENTT				*e*S	**Sb**	**12 20 02.0**	**0.0**
	baz=336						
SSLB	**Suanglung**	**0.96**	**269**	P	**Pb**	**12 19 50.9**	**+0.2**
	baz=268						
SSLB				*e*S	**Sb**	**12 20 02.9**	**-0.2**
	baz=268						
TWE	**Neicheng**	**0.96**	**342**	P	**Pb**	**12 19 50.5**	**-0.3**
	baz=343						
TWE				*e*S	**Sb**	**12 20 03.0**	**-0.2**
	baz=343						
SMLT	**Sun Moon Lake**	**1.01**	**274**	*e*P	**Pb**	**12 19 51.5**	**-0.2**
	baz=274						
SMLT				*e*S	**Sb**	**12 20 04.1**	**-0.6**
	baz=274						
YUS	**Yu-Shan**	**1.01**	**252**	P	**Pb**	**12 19 52.0**	**+0.1**
	baz=250						
YUS				*e*S	**Sn**	**12 20 04.4**	**+0.3**
	baz=250						
YHNB	**Yeheng**	**1.03**	**327**	P	**Pb**	**12 19 51.6**	**-0.4**
	baz=327						
NSK	**Sanguang**	**1.04**	**326**	P	**Pb**	**12 19 51.9**	**-0.3**
	baz=327						
NSK				*e*S	**Sb**	**12 20 05.0**	**-0.6**
	baz=327						
TYC	**Yuchr**	**1.05**	**275**	*e*P	**Pb**	**12 19 52.1**	**-0.2**
	baz=275						
TYC				*e*S	**Sb**	**12 20 05.4**	**-0.3**
	baz=275						
JYNG	**Yonagunijimaku**	**1.07**	**53**	P	**Pn**	**12 19 52.1**	**+0.9**
JYNG				*e*S	**Sn**	**12 20 05.4**	**+0.4**
ELDTW	**Lidau**	**1.09**	**236**	P	**Pn**	**12 19 52.0**	**+0.4**
	baz=234						
ELDTW				*e*S	**Sb**	**12 20 06.3**	**-0.7**
	baz=234						
YOJ	**Yonaguni jima**	**1.13**	**55**	P	**Pn**	**12 19 52.7**	**+0.7**
YOJ				*e*S	**Sn**	**12 20 06.7**	**+0.3**
ALS	**Alishan**	**1.14**	**255**	S	**Sb**	**12 20 08.3**	**-0.2**
	baz=254						
TIPB	**Shuangxi**	**1.17**	**352**	*e*P	**Pb**	**12 19 54.0**	**-0.2**
	baz=353						
TIPB				*e*S	**Sb**	**12 20 09.3**	**+0.1**
	baz=353						
TWH	**Lutao**	**1.19**	**204**	*e*P	**Pn**	**12 19 52.8**	**-0.1**
	baz=201						
TWH				*e*S	**Sn**	**12 20 07.0**	**-0.9**
	baz=201						
LIOB	**Emei**	**1.23**	**313**	*e*P	**Pb**	**12 19 55.6**	**+0.3**
	baz=313						
NSTT	**Nanjuang**	**1.23**	**312**	*e*P	**Pb**	**12 19 55.4**	**+0.1**
	baz=312						
CHN5	**Tsauling**	**1.23**	**260**	*e*P	**Pb**	**12 19 54.9**	**-0.5**
	baz=259						
IRIF	**Iriomote-Funau**	**1.67**	**71**	P	**Pn**	**12 20 00.5**	**+1.1**
IRIF				S	**Sn**	**12 20 19.9**	**+0.3**
HATJ	**Hateruma jima**	**1.67**	**81**	P	**Pn**	**12 20 00.0**	**+0.6**
HATJ				*e*S	**Sn**	**12 20 19.8**	**+0.1**
JKRS	**Kuro-shima**	**1.89**	**76**	P	**Pn**	**12 20 03.8**	**+1.4**
JKRS				*e*S	**Sn**	**12 20 25.7**	**+0.7**
JIJ	**Ishigaki jima**	**2.04**	**74**	P	**Pn**	**12 20 04.8**	**+0.3**
JIJ				S	**Sn**	**12 20 27.8**	**-0.9**
JISG	**Ishigakijimahi**	**2.25**	**69**	P	**Pn**	**12 20 07.9**	**+0.5**
JISG				*e*S	**Sn**	**12 20 33.2**	**-0.8**
JTJ	**Tarama**	**2.60**	**71**	P	**Pn**	**12 20 12.7**	**+0.5**
JTJ				*e*S	**Sn**	**12 20 42.6**	**-0.1**
JIRB	**Irabujima**	**3.07**	**70**	P	**Pn**	**12 20 17.9**	**-0.8**
JIRB				*e*S	**Sn**	**12 20 53.4**	**-0.8**
JIKM	**Ikemajima**	**3.16**	**69**	P	**Pn**	**12 20 19.0**	**-1.0**
JIKM				*e*S	**Sn**	**12 20 55.4**	**-1.2**

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*IDC **12** 12:21:47.6±0.6, 40°.38N×122°.25E, h0km, mb4.0/19, mb1 4.1/22, mb1mx3.9/77, mbtmp3.9/22, ML3.5/2, MS2.9/4, Ms1 2.9/4, ms1mx2.5/69, Error ellipse: s-maj=17.2km s-min=12.8km az=52.0*

*BJI **12** 12:21:49.7, 40°.49N×122°.40E, h9km, mb4.1/10, mB4.2/6, ML4.2/15, Ms3.8/3*

*ISCJB **12** 12:21:50.9±0.7, 40°.51N±0°.05×122°.45E±0°.05, h34km±8km, mb4.0/23, MS2.8/1, Error ellipse: s-maj=8.3km s-min=6.4km az=9.1*

*NEIC **12** 12:21:52.7±1.6, 40°.41N×122°.33E, h34km±12km, mb4.2/1, Error ellipse: s-maj=8.1km s-min=4.9km az=213.0*

ISC 12 12:21:51.3±2.1, 40°.46N±0°.05×122°.28E±0°.04, h16km±14km, n53, σ2.s02/62, mb4.1/23, Northeastern China

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DL2	**Dalian**	**1.63**	**198**	Pn	**Pn**	**12 22 19.1**	**-0.2**
DL2				Pg	**Pb**	**12 22 20.5**	**-0.4**
DL2				Sg	**Sn**	**12 22 41.9**	**+2.0**
DL2				smax	smax		
	comp=N,4μm,0.7s						
DL2				smax	smax		
	comp=E,6μm,0.7s						
CN2	**Changchun**	**4.09**	**34**	*e*Pg	**Pb**	**12 23 02.1**	**-0.7**
CN2				*e*Sg	**Sb**	**12 23 54.8**	**+2.9**
CN2				smax	smax		
	comp=N,440nm,0.7s						
CN2				smax	smax		
	comp=E,300nm,0.7s						
INCN	**Inchon**	**4.51**	**130**	Pn	**Pn**	**12 22 58.4**	**-0.5**
INCN				*e*Pg	**Pb**	**12 23 10.4**	**+0.3**
BJI	**Beijing**	**4.69**	**267**	Pn	Pn	12 22 58.9	-2.4
BJI				Sn	**Sn**	**12 23 55.3**	**0.0**
BJT	**Baijiatuau**	**4.70**	**267**	*e*Pn	**Pn**	**12 23 01.6**	**+0.2**
KS01	**Wonju Array Si**	**5.30**	**122**	*e*Pn	**Pn**	**12 23 08.4**	**-1.3**
KS15	**Wonju Array Si**	**5.31**	**123**	*e*Pn	**Pn**	**12 23 08.9**	**-0.9**
KS15				*e*Sn	**Sb**	**12 24 31.6**	**+4.5**
KSAR	**Wonju Array Be**	**5.31**	**123**	Pn	**Pn**	**12 23 08.8**	**-1.1**
KSAR				Pg	**Pb**	**12 23 25.9**	**+2.3**
KSAR				Lg	Lg	12 24 31.6	
KSRS	**Korea Array**	**5.33**	**122**	Pn	**Pn**	**12 23 08.8**	**-1.3**
	3.9nm,0.3s,baz=307,slow=14,SNR=28						
KSRS				Pg	**Pb**	**12 23 25.9**	**+2.0**
	5.4nm,0.3s,baz=306,slow=18,SNR=17						
KSRS				Lg	Lg	12 24 31.7	
	18nm,0.3s,baz=306,slow=29,SNR=11						
KSRS				LR	LR	12 25 28.0	
	comp=Z,210nm,19.4s,baz=137,slow=42						
TIA	**Tai'an**	**5.86**	**225**	Pn	**Pn**	**12 23 16.9**	**-0.6**
TIA				Pg	**Pb**	**12 23 37.3**	**+4.2**
TIA				Sg	**Sg**	**12 24 54.7**	**-4.7**
MDJ	**Mudanjiang**	**6.81**	**50**	Pn	**Pn**	**12 23 28.9**	**-1.6**
	18nm,0.6s						
MDJ				*e*Pg	**Pb**	**12 23 53.4**	**+4.2**
USRK	**Ussuriysk Ar.**	**8.11**	**59**	Pn	**Pn**	**12 23 46.3**	**-2.0**
	baz=244,slow=14						
USRK				Lg	Lg	12 26 01.7	
	baz=246,slow=27						
HHC	**Hu-ho-hao-te**	**8.15**	**276**	*e*P	**Pn**	**12 23 53.0**	**+4.0**
HHC				sP	Pb	12 24 02.7	-9.4
HHC				S	**Sn**	**12 25 27.5**	**+6.7**
HHC				pmax	pmax		
	comp=Z,28nm,0.8s						
HHC				pmax	pmax		
	comp=Z,83nm,4.8s						
HHC				LR	LR		
	comp=N,240nm,7.0s						
HHC				LR	LR		
	comp=E,240nm,5.8s						
JNU	**Nakatsue**	**10.06**	**134**	Lg	Lg	12 27 03.4	
	0.3nm,0.3s,baz=22,slow=19,SNR=3.1						
JNU				LR	LR	12 27 35.8	
	comp=Z,38nm,20.6s,baz=302,slow=35						
KLR	**Kul'dur**	**11.04**	**34**	Lg	Lg	12 27 35.9	
	0.0nm,0.3s,baz=134,slow=18,SNR=11						
SONA0	**Songino Array**	**13.56**	**308**	*e*Pn	**Pn**	**12 25 03.5**	**+0.5**
SONM	**Songino Array**	**13.56**	**308**	Pn	**Pn**	**12 25 03.5**	**+0.5**
	0.1nm,0.3s,baz=114,slow=7.0,SNR=3.2						
SONM				Lg	Lg	12 28 58.4	
	baz=123,slow=26,SNR=3.7						
ASAJ	**Asahikawa**	**15.47**	**70**	LR	LR	12 31 02.6	
	comp=Z,54nm,19.0s,baz=296,slow=36						
GTA	**Gaotai**	**17.25**	**274**	*e*P	**P**	**12 25 56.4**	**+3.4**
GTA				pP	sP	12 25 59.9	+0.2
GTA				sP	pP	12 26 03.3	+5.7
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KMI	**Kunming**	**22.37**	**233**	P	**P**	**12 26 51.5**	**+2.6**
KMI				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KMI				pmax	pmax		
	comp=Z,41nm,3.6s						
WMQ	**Urumqi**	**25.75**	**289**	*e*P	**P**	**12 27 22.4**	**+1.4**
ZALV	**Zalesovo Beam**	**28.43**	**311**	LR	LR	12 39 05.5	
	comp=Z,21nm,18.0s,baz=72,slow=36						
MK32	**Makanchi Array**	**29.39**	**296**	*e*P	**P**	**12 27 53.5**	**0.0**
MK32				*e*PcP	**PcP**	**12 30 57.9**	**-1.4**
MKAR	**Makanchi Array**	**29.39**	**296**	P	**P**	**12 27 53.5**	**0.0**
	0.5nm,0.7s,baz=82,slow=8.7,SNR=4.5						
MKAR				PcP	**PcP**	**12 30 57.9**	**-1.4**
	0.4nm,0.6s,baz=96,slow=2.4,SNR=4.6						
TIXI	**Tiksi**	**31.44**	**4**	P	**P**	**12 28 11.5**	**+0.1**
	1.0nm,0.4s,baz=239,slow=3.1,SNR=3.1						
KURK	**Kurchatov**	**31.80**	**304**	*e*P	**P**	**12 28 15.1**	**+0.4**
KURK				*e*PcP	**PcP**	**12 31 04.0**	**-1.5**
KURBB	**Kurchatov Arra**	**31.85**	**303**	P	**P**	**12 28 15.1**	**-0.1**
	2.0nm,0.6s,baz=91,slow=9.4,SNR=20						
KURBB				PcP	**PcP**	**12 31 04.0**	**-1.6**
	0.7nm,0.8s,baz=85,slow=2.7,SNR=5.7						
BVAR	**Borovoye Array**	**36.91**	**308**	P	**P**	**12 28 59.1**	**+0.1**
	0.5nm,0.5s,baz=89,slow=9.2,SNR=4.0						
BVAR				PcP	**PcP**	**12 31 19.9**	**-0.2**
	2.1nm,0.5s,baz=111,slow=1.7,SNR=12						
PSI	**Prapat**	**43.02**	**215**	P	**P**	**12 29 49.8**	**-0.5**
	6.3nm,0.7s,baz=1.0,slow=1.7,SNR=3.9						
ARU	**Arti**	**43.52**	**314**	P	**P**	**12 29 53.3**	**-0.4**
	3.0nm,0.5s,baz=112,slow=8.9,SNR=5.4						
ABKAR	**Akbulak array**	**43.91**	**303**	*e*P	**P**	**12 29 56.7**	**-0.2**
ILAR	**Eielson Array**	**54.60**	**32**	P	**P**	**12 31 17.3**	**-1.2**
	1.1nm,0.8s,baz=283,slow=6.5,SNR=11						
ARA0	**ARCESS Array S**	**55.01**	**335**	*e*P	**P**	**12 31 21.4**	**0.0**
ARCES	**ARCESS Array B**	**55.01**	**335**	P	**P**	**12 31 21.4**	**0.0**
	0.9nm,0.8s,baz=49,slow=9.7,SNR=4.5						
INK	**Inuvik**	**57.96**	**25**	P	**P**	**12 31 42.1**	**-0.2**
	0.6nm,0.5s,baz=305,slow=4.0,SNR=4.4						
FIA0	**FINESS Array S**	**58.18**	**326**	*e*P	**P**	**12 31 43.1**	**-0.9**
FINES	**FINESS Array B**	**58.18**	**326**	P	**P**	**12 31 43.1**	**-0.9**
	2.1nm,0.6s,baz=62,slow=4.9,SNR=9.1						
WR1	**Warramunga Arr**	**61.13**	**167**	*e*P	**P**	**12 32 02.7**	**-2.1**
	5.2nm,0.9s						
WRA	**Warramunga Arr**	**61.13**	**167**	P	**P**	**12 32 02.7**	**-2.1**
	1.6nm,0.8s,baz=350,slow=7.4,SNR=17						
AKASG	**Malin Array Be**	**61.77**	**314**	P	P	12 32 06.3	-2.4
	0.5nm,0.4s,baz=56,slow=7.0,SNR=3.9						
HFS	**Hagfors**	**64.03**	**328**	P	P	12 32 21.4	-2.3
	0.7nm,0.5s,baz=100,slow=7.5,SNR=4.2						
ASAR	**Alice Springs**	**64.71**	**168**	P	**P**	**12 32 26.8**	**-1.7**
	1.0nm,1.1s,baz=2.9,slow=10.0,SNR=5.7						
BR101	**Keskin Array S**	**64.82**	**302**	*e*P	**P**	**12 32 28.1**	**-1.3**
BRTR	**Keskin Array B**	**64.82**	**302**	P	**P**	**12 32 28.1**	**-1.4**
	0.7nm,0.6s,baz=46,slow=5.3,SNR=3.7						
YKA	**Yellowknife Ar**	**67.73**	**25**	P	**P**	**12 32 46.3**	**-1.2**
	1.3nm,0.8s,baz=318,slow=7.0,SNR=3.6						
CLL	**Collm**	**69.81**	**321**	*e*P	**P**	**12 33 00.1**	**-0.5**
	16nm,0.6s						
STKA	**Stephens Creek**	**74.17**	**163**	P	**P**	**12 33 25.3**	**-1.5**
	2.1nm,0.6s,baz=317,slow=9.1,SNR=3.4						
I07A	**Izee**	**79.16**	**40**	*e*P	**P**	**12 33 54.8**	**-0.5**
	2.6nm,0.9s						
NVAR	**Mina Array Bea**	**83.93**	**43**	P	**P**	**12 34 20.6**	**-0.1**
	0.5nm,0.8s,baz=289,slow=3.6,SNR=3.5						
PDAR	**Pinedale Array**	**84.83**	**36**	P	**P**	**12 34 26.2**	**+0.9**
	0.2nm,0.5s,baz=301,slow=3.8,SNR=3.2						
CARC	**Carrizo Plain**	**85.40**	**46**	*e*P	**P**	**12 34 30.2**	**+2.2**
SBI	**Santa Barbara**	**87.21**	**47**	*e*P	**P**	**12 34 34.5**	**-2.3**
BBSC	**Beaumont Base**	**88.01**	**46**	*e*P	P	12 34 37.8	-3.0

IDC 12 12:34:09.5±2.8, 19°.21S×177°.24W, h0km, mb3.6/3, mb1 4.0/3, mb1mx3.6/46, mbtmp3.6/3, Error ellipse: s-maj=288.8km s-min=33.6km az=160.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**45.50**	**261**	P	P	12 42 30.1	-1.0
	0.2nm,0.3s,baz=98,slow=6.9,SNR=9.9						
ASAR	**Alice Springs**	**45.52**	**255**	P	P	12 42 31.8	+0.6
	1.3nm,0.5s,baz=90,slow=8.4,SNR=40						
TXAR	**Lajitas Array**	**85.76**	**57**	P	P	12 46 51.1	0.0
	0.2nm,0.6s,baz=203,slow=5.4,SNR=4.3						

MEX 12 12:46:25.7±0.4, 16°.38N×98°.47W, h6km±4km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.33**	**88**	*e*P	Pg	12 46 31.9	-0.2
PNIG				*e*S	Sg	12 46 36.3	-0.1
TLIG	**Tlapa**	**1.18**	**355**	*e*P	Pg	12 46 45.0	-3.3
TLIG				*e*S	Sg	12 47 00.3	-3.3
ACX	**Acapulco**	**1.42**	**290**	*e*P	Pn	12 46 49.3	-2.8
ACX				*i* S	Sb	12 47 06.9	-4.1
VHO	**Vista Hermosa**	**1.80**	**67**	*e*P	Pn	12 46 53.7	-3.8
VHO				*i* S	Sn	12 47 16.2	-4.5
CAIG	**El Cayaco**	**1.85**	**291**	*i* P	Pn	12 46 55.1	-2.8
CAIG				*e*S	Sn	12 47 16.2	-5.5
MEIG	**Mezcala**	**1.89**	**324**	*i* P	Pn	12 46 55.7	-2.9
MEIG				*i* S	Sn	12 47 18.5	-4.3
HUIG	**Huatulco**	**2.35**	**105**	*i* P	Pn	12 47 02.2	-2.6
HUIG				*i* S	Sn	12 47 29.7	-4.4

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*IDC **12** 12:51:00.6±1.3, 12°.38N×86°.28W, h148km±16km, mb3.3/4, mb1 3.7/6, mb1mx3.2/53, mbtmp3.9/6, Error ellipse: s-maj=32.9km s-min=16.0km az=48.0*

*ISCJB **12** 12:51:01.2±0.4, 12°.15N±0°.05×86°.67W±0°.05, h147km±5km, mb3.4/3, Error ellipse: s-maj=11.3km s-min=3.1km az=41.7*

*CASC **12** 12:51:01.9±2.5, 12°.09N×86°.71W, h132km±13km, MD4.1, ML3.8*

ISC 12 12:51:00.9±0.8, 12°.18N±0°.06×86°.69W±0°.06, h148km±6km, n37, σ1.s71/53, mb3.3/3, 1C, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COPN	**Copaltepe**	**0.09**	**93**	*e*P	**Pn**	**12 51 20.6**	**-0.1**
MOMN	**Momotombo**	**0.26**	**32**	*e*P	**Pn**	**12 51 21.0**	**-0.2**
CNGN	**Cerro Negro**	**0.31**	**358**	*i* P	**Pn**	**12 51 21.4**	**+0.1**
MGAN	**Managua**	**0.43**	**95**	*e*P	**Pn**	**12 51 21.7**	**0.0**
ESTN	**Estel**	**0.96**	**19**	*e*P	**Pn**	**12 51 25.9**	**+0.6**
ESTN				*e*S	**Sn**	**12 51 44.2**	**+0.2**
MATN	**Matagalpa**	**1.05**	**45**	*e*P	**Pn**	**12 51 26.2**	**+0.1**
MATN				*e*S	**Sn**	**12 51 44.9**	**-0.3**
RCON	**San Juan de Ri**	**1.39**	**22**	*e*P	**Pn**	**12 51 30.3**	**+0.9**
CRZ1	**La Cruz**	**1.51**	**137**	*e*S	**Sn**	**12 51 52.1**	**-0.9**
CNCH	**Conchagua**	**1.56**	**314**	*e*P	**Pn**	**12 51 32.6**	**+1.4**
CNCH				*e*S	**Sn**	**12 51 56.8**	**+2.6**
LCND	**La Caˆ–ada**	**1.62**	**314**	⇑*i*P	**Pn**	**12 51 32.5**	**+0.9**
LCND				*e*S	**Sn**	**12 51 57.3**	**+2.0**
VSM	**San Miguel**	**1.98**	**309**	*e*P	**Pn**	**12 51 37.3**	**+1.3**
LCY	**Lacayo**	**2.00**	**308**	*e*P	**Pn**	**12 51 37.5**	**+1.5**
PACA	**Pacayal**	**2.05**	**309**	*e*P	**Pn**	**12 51 38.5**	**+1.9**
MESS	**Mesas**	**2.05**	**134**	*e*P	**Pn**	**12 51 39.5**	**+2.9**
MESS				*e*S	**Sn**	**12 52 03.4**	**-0.5**
CUI	**Cuipilapa**	**2.13**	**135**	*e*S	**Sn**	**12 52 05.3**	**-0.3**
TECA	**Tecapa**	**2.20**	**306**	*e*P	**Pn**	**12 51 39.5**	**+1.0**
VCR	**Vista de Mar**	**2.29**	**153**	*e*P	**Pn**	**12 51 39.9**	**+0.3**
VCR				*e*S	**Sn**	**12 52 06.9**	**-2.4**
JTS	**JuntasAbangare**	**2.54**	**138**	P	**Pn**	**12 51 42.7**	**+0.3**
	34nm,0.3s,baz=27,slow=15,SNR=32						
JTS				S	**Sn**	**12 52 12.7**	**-1.7**
	49nm,0.3s,baz=351,slow=22,SNR=18						
JTS	**JuntasAbangare**	**2.54**	**138**	*e*P	**Pn**	**12 51 43.0**	**+0.5**
JTS				*e*S	**Sn**	**12 52 13.3**	**-1.1**
SNVI	**San Vicente**	**2.54**	**304**	*e*S	**Sn**	**12 52 16.9**	**+2.3**
LFRS	**El Faro**	**2.72**	**302**	*e*P	**Pn**	**12 51 45.0**	**+0.1**
LFRS				*e*S	**Sn**	**12 52 20.2**	**+1.5**
LOMA	**San Marcos**	**2.83**	**301**	*e*P	**Pn**	**12 51 47.8**	**+1.7**
LOMA				*e*S	**Sn**	**12 52 22.3**	**+1.3**
LOMA				IAML		12 52 24.7	
	comp=Z,552nm,0.4s						
UEES	**San Salvador**	**2.93**	**302**	*e*S	**Sn**	**12 52 24.2**	**+0.9**
BOQS	**Boqueron**	**2.96**	**302**	*e*P	**Pn**	**12 51 49.5**	**+1.6**
BOQS				*e*S	**Sn**	**12 52 25.4**	**+1.1**
SRA1	**San Ramˆ‡n**	**3.01**	**134**	*e*S	**Sn**	**12 52 26.1**	**+1.0**
CGA2	**Cerro Gallo 2**	**3.06**	**134**	*e*P	**Pn**	**12 51 50.6**	**+1.4**
CGA2				*e*S	**Sn**	**12 52 26.1**	**-0.4**
URSC	**Urasca**	**3.69**	**129**	*e*P	**Pn**	**12 51 58.6**	**+1.3**
URSC				*e*S	**Sn**	**12 52 42.0**	**+1.1**
BUS	**Buena Vista**	**3.88**	**132**	*e*P	**Pn**	**12 52 02.2**	**+2.1**
BUS				*e*S	**Sn**	**12 52 46.7**	**+0.8**
DRK0	**Durika**	**4.46**	**130**	*e*P	**Pn**	**12 52 09.3**	**+2.0**
DRK0				*e*S	**Sn**	**12 52 58.5**	**-0.5**
CMIG	**Matias Romero**	**9.31**	**303**	P	**Pn**	**12 53 12.9**	**+1.1**
	comp=Z,1.9nm,0.3s,baz=142,slow=9.7,SNR=21						
CMIG				S	**Sn**	**12 54 49.6**	**-5.6**
	comp=Z,0.3nm,0.3s,baz=75,slow=20,SNR=3.1						
SJG	**San Juan**	**20.67**	**71**	P	**P**	**12 55 24.1**	**-5.1**
	comp=Z,5.2nm,0.4s,baz=343,slow=20,SNR=2.4						
TXAR	**Lajitas Array**	**23.26**	**320**	P	**P**	**12 55 56.7**	**+1.3**
	comp=Z,0.9nm,0.8s,baz=140,slow=9.0,SNR=8.8						
PDAR	**Pinedale Array**	**36.36**	**331**	P	**P**	**12 57 51.2**	**+0.2**
	comp=Z,0.3nm,0.7s,baz=120,slow=5.3,SNR=2.9						
PLCA	**Paso Flores**	**54.73**	**165**	P	**P**	**13 00 15.6**	**+0.6**
	comp=Z,2.3nm,1.0s,baz=336,slow=9.3,SNR=3.1						
SONM	**Songino Array**	**119.12**	**350**	PKP	**PKPdf**	**13 09 30.6**	**-2.0**
	comp=Z,0.3nm,0.6s,baz=48,slow=2.1,SNR=2.2						
ASAR	**Alice Springs**	**139.86**	**248**	PKhKP	PKPpre	13 10 06.6	
	comp=Z,0.3nm,0.5s,baz=91,slow=4.1,SNR=3.4						
ASAR				PKP	**PKPdf**	**13 10 12.3**	**0.0**
	comp=Z,0.9nm,0.7s,baz=87,slow=1.7,SNR=5.8						
WRA	**Warramunga Arr**	**139.91**	**254**	PKhKP	PKPpre	13 10 06.2	
	comp=Z,0.5nm,0.9s,baz=95,slow=0.3,SNR=4.3						
WRA				PKP	**PKPdf**	**13 10 13.1**	**+0.7**
	comp=Z,1.1nm,0.6s,baz=89,slow=2.3,SNR=19						

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*NIED **12** 12:51:00, 45°.40N×152°.10E, h23km, Mw5.7 Best double couple: $M_0$4.34000×10^{17} NP1:ϕ_s339.00000°, δ52.00000°, λ19.00000°. NP2:ϕ_s237.00000°, δ76.00000°, λ140.00000°.*

*IDC **12** 12:51:56.8±0.3, 45°.45N×151°.73E, h0km, mb5.3/57, mb1 5.3/66, mb1mx5.2/77, mbtmp5.2/66, ML4.8/7, MS5.7/63, Ms1 5.7/63, ms1mx5.6/76, Error ellipse: s-maj=9.5km s-min=7.6km az=125.0*

*JMA **12** 12:51:57.3±0.5, 45°.45N×152°.09E, h30km, M5.6*

*ISCJB **12** 12:51:57.3±0.6, 45°.38N±0°.02×151°.81E±0°.01, h14km±3km, mb5.4/544, MS5.7/745, Error ellipse: s-maj=3.3km s-min=1.5km az=163.5*

*GCMT **12** 12:51:58.9±0.1, 45°.32N×152°.18E, h14km, MW5.7/134, Moment Tensor Solution. s116,c227; s134,c375; Duration: 1.s7 Moment tensor: Scale 10^{17}Nm; M_{rr}3.62±.04; $M_{\theta\theta}$-1.44±.03; $M_{\phi\phi}$-2.18±.03; $M_{r\theta}$0.91±.07; $M_{\theta\phi}$-2.00±.03; $M_{\phi r}$1.80±.08; Best double couple: $M_0$4.24400×10^{17} NP1:ϕ_s33.00000°, δ59.00000°, λ83.00000°. NP2:ϕ_s227.00000°, δ31.00000°, λ101.00000°. Principal axes: T 4.1550, Plg75.0000°, Azm285.0000°;*

N 0.1770, Plg6.0000°, Azm37.0000°; P -4.3320, Plg14.0000°, Azm128.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.

NEIC ***12*** *12:51:58.9±0.5, 45.°45N×151.°67E, h12km±3km, mb5.5/298, MS5.6/298, MW5.7, MW5.8 Error ellipse: s-maj=3.1km s-min=1.8km az=160.0, Moment Tensor Solution. s16 Moment tensor: Scale 10^{17}Nm; M_{rr}2.05; $M_{\theta\theta}$-1.29; $M_{\phi\phi}$-0.76; $M_{r\theta}$2.46; $M_{\theta\phi}$-0.80; $M_{\phi r}$2.90; Best double couple: $M_0$4.30000×10^{17} NP1:ϕ_s242.00000°, δ14.00000°, λ109.00000°. NP2:ϕ_s42.00000°, δ77.00000°, λ85.00000°. Principal axes: T 4.4000, Plg58.0000°, Azm306.0000°; N -0.2600, Plg5.0000°, Azm43.0000°; P -4.1500, Plg31.0000°, Azm136.0000°;*

SKHL ***12*** *12:51:59.1±0.4, 45.°15N×152.°06E, h46km±9km, mb6.3/5, Ms5.8/5, msh6.0/2*

BJI ***12*** *12:51:59.9, 45.°27N×151.°61E, h29km, mb5.6/82, mB5.9/69, Ms6.0/96, Ms7 5.9/87*

MOS ***12*** *12:52:00.5±1.0, 45.°40N×151.°74E, h37km, mb5.7/125, MS5.8/122, Error ellipse: s-maj=5.0km s-min=4.0km az=101.9*

NEIC ***12*** *12:52:02.0±0.0, 45.°36N×152.°12E, h11km, Moment Tensor Solution. s25 Moment tensor: Scale 10^{17}Nm; M_{rr}2.93; $M_{\theta\theta}$-1.10; $M_{\phi\phi}$-1.83; $M_{r\theta}$2.02; $M_{\theta\phi}$-1.91; $M_{\phi r}$4.42; Best double couple: $M_0$5.80000×10^{17} NP1:ϕ_s27.00000°, δ74.00000°, λ81.00000°. NP2:ϕ_s235.00000°, δ18.00000°, λ117.00000°. Principal axes: T 5.6700, Plg60.0000°, Azm284.0000°; N 0.2900, Plg8.0000°, Azm29.0000°; P -5.9700, Plg28.0000°, Azm123.0000°;*

ISC 12 12:51:58.9±0.4**, 45.°37N**±0.°03×**151.°76E**±0.°03**, h14**km±2km**, h15**km**:pP-P, n2212,** σ1.s57/2096**, mb5.5**/599**, MS5.7**/766**, 110C-28D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.75	268	*i* P	Pn	12 52 44.0	+1.5
KUR				AMB	AMB	12 52 45.0	
	35nm,0.6s						
KUR				AMB	AMB	12 52 45.0	
	52nm,0.6s						
KUR				AMB	AMB	12 52 45.0	
	1µm,0.6s						
KUR				*i* S	Sn	12 53 18.0	+2.5
KUR				A	A	12 53 33.0	
	10µm,0.7s						
KUR				A	A	12 53 33.0	
	6µm,0.7s						
KUR	Kuril'sk	2.75	268	c *i*PN	Pn	12 52 44.0	+1.5
KUR				*i* S	Sb	12 53 19.4	-2.0
KUR				pmax	pmax		
	comp=E,52nm,0.6s						
KUR				pmax	pmax		
	comp=Z,336nm,0.6s						
KUR				pmax	pmax		
	comp=N,35nm,0.4s						
KUR				smax	smax		
	comp=N,4µm,0.6s						
KUR				smax	smax		
	comp=E,4µm,0.6s						
SHO	Shikotan	3.83	249	*i* P	Pn	12 52 58.1	+0.8
SHO				AMB	AMB	12 53 00.0	
	comp=E,174nm,0.5s						
SHO				AMB	AMB	12 53 00.0	
	comp=E,391nm,0.5s						
SHO				AMB	AMB	12 53 00.0	
	comp=E,531nm,0.5s						
SHO				*i* S	Sn	12 53 42.0	-0.1
SHO				A	A	12 53 45.0	
	comp=E,2µm,0.5s						
SHO				A	A	12 53 45.0	
	comp=E,2µm,0.5s						
SHO				AMS	AMS	12 55 02.8	
	comp=E,87µm,16.0s						
SHO	Shikotan	3.83	249	c *i*PN	Pn	12 52 57.7	+0.4
SHO				*i* S	Sn	12 53 42.0	-0.1
SHO				pmax	pmax		
	comp=N,174nm,0.5s						
SHO				pmax	pmax		
	comp=Z,531nm,0.5s						
SHO				pmax	pmax		
	comp=E,391nm,0.6s						
SHO				smax	smax		
	comp=N,2µm,0.4s						
SHO				smax	smax		
	comp=E,1µm,0.6s						
YUK	Yuzh-Kuril'sk	4.41	254	*i* P	Pn	12 53 06.0	+0.6
YUK				AMB	AMB	12 53 09.0	
	comp=E,213nm,0.9s						
YUK				AMB	AMB	12 53 09.0	
	comp=E,299nm,0.9s						
YUK				AMB	AMB	12 53 09.0	
	comp=E,706nm,0.9s						
YUK				*i* S	Sn	12 53 57.7	+1.2
YUK				A	A	12 54 23.0	
	comp=E,4µm,0.6s						
YUK				A	A	12 54 23.0	
	comp=E,1µm,0.6s						
YUK				AMS	AMS	12 55 58.0	
	comp=E,91µm,14.0s						
YUK				AMS	AMS	12 55 58.0	
	comp=E,74µm,14.0s						
YUK	Yuzh-Kuril'sk	4.41	254	c *i*PN	Pn	12 53 06.9	+1.5
YUK				*i* S	Sn	12 53 58.0	+1.5
YUK				pmax	pmax		
	comp=E,299nm,0.9s						
YUK				pmax	pmax		
	comp=Z,706nm,0.9s						
YUK				pmax	pmax		
	comp=N,213nm,0.8s						
YUK				smax	smax		
	comp=N,4µm,0.6s						
YUK				smax	smax		
	comp=E,1µm,0.6s						
LAGR	Lagunnoye	4.46	255	*e*P	Pn	12 53 07.0	+1.0
LAGR				AMB	AMB	12 53 10.0	
	comp=E,132nm,0.4s						
LAGR				AMB	AMB	12 53 10.0	
	comp=E,54nm,0.4s						
LAGR				AMB	AMB	12 53 10.0	
	comp=E,439nm,0.4s						
LAGR				*e*S	Sn	12 54 00.0	+2.4
LAGR				A	A	12 54 18.0	
	comp=E,2.0nm,0.6s						
LAGR				A	A	12 54 18.0	
	comp=E,4.0nm,0.6s						
LAGR	Lagunnoye	4.46	255	*e*PN	Pn	12 53 07.4	+1.4
LAGR				*e*S	Sn	12 54 00.2	+2.6
LAGR				pmax	pmax		
	comp=Z,439nm,0.6s						
LAGR				pmax	pmax		
	comp=N,132nm,0.2s						
LAGR				pmax	pmax		
	comp=E,54nm,0.2s						
LAGR				smax	smax		
	comp=E,4.0nm,0.7s						
LAGR				smax	smax		
	comp=N,2.0nm,0.6s						
GRPR	Tuman	4.49	254	*i* P	Pn	12 53 07.0	+0.6
GRPR				AMB	AMB	12 53 11.0	
	comp=N,250nm,0.4s						
GRPR				AMB	AMB	12 53 11.0	
	comp=N,555nm,0.4s						
GRPR				*i* S	Sn	12 54 00.0	+1.6
GRPR				A	A	12 54 16.0	
	comp=N,2µm,0.5s						
GRPR				A	A	12 54 16.0	
	comp=N,1µm,0.5s						
GRPR	Tuman	4.49	254	⇑ *i*PN	Pn	12 53 07.7	+1.3
GRPR				*i* S	Sn	12 54 00.0	+1.6
GRPR				pmax	pmax		
	comp=Z,555nm,0.4s						
GRPR				pmax	pmax		
	comp=N,250nm,0.3s						
GRPR				smax	smax		
	comp=E,1µm,0.4s						
GRPR				smax	smax		
	comp=N,2µm,0.6s						
GLVR	Golovnino	4.75	252	*i* P	Pn	12 53 11.0	+1.0
GLVR				AMB	AMB	12 53 14.0	
	comp=N,163nm,0.5s						
GLVR				AMB	AMB	12 53 14.0	
	comp=N,340nm,0.5s						
GLVR				AMB	AMB	12 53 14.0	
	comp=N,1µm,0.5s						
GLVR				*e*S	Sn	12 54 06.0	+1.2
GLVR				A	A	12 54 11.0	
	comp=N,2µm,0.4s						
GLVR				A	A	12 54 11.0	
	comp=N,3µm,0.4s						
GLVR	Golovnino	4.75	252	d *i*PN	Pn	12 53 11.4	+1.4
GLVR				*e*S	Sn	12 54 06.1	+1.2
GLVR				pmax	pmax		
	comp=E,340nm,0.6s						
GLVR				pmax	pmax		
	comp=Z,1µm,0.6s						
GLVR				pmax	pmax		
	comp=N,163nm,0.4s						
GLVR				smax	smax		
	comp=N,2µm,0.4s						
GLVR				smax	smax		
	comp=E,3µm,0.4s						
NEM2	Nemuro 2	4.76	247	P	Pn	12 53 09.5	-0.6
NEM2				*e*S	Sn	12 54 02.9	-2.1
JRA	Rausu	4.95	255	P	Pn	12 53 14.5	+1.8
JNK	Nakash	5.35	253	P	Pn	12 53 19.0	+0.8
JNK				*e*S	Sn	12 54 20.2	+0.6
JAK	Akkeshi	5.61	247	P	Pn	12 53 21.2	-0.6
JAK				*e*S	Sn	12 54 22.9	-3.1
JTKR	Abashiri--Toko	5.77	259	⇑P	Pn	12 53 26.2	+2.1
SKR	Severo-Kuril's	6.06	27	*e*P	Pn	12 53 28.3	+0.3
SKR				AMB	AMB	12 53 31.3	
	comp=E,1µm,0.6s						
SKR				AMB	AMB	12 53 33.5	
	comp=E,1µm,5.0s						
SKR				*e*S	Sn	12 54 32.6	-4.5
SKR				A	A	12 55 14.3	
	comp=E,1µm,0.8s						
SKR				A	A	12 55 14.3	
	comp=E,2µm,0.8s						
SKR				AMS	AMS	12 56 12.1	
	comp=E,11µm,13.0s						
SKR				AMS	AMS	12 56 12.1	
	comp=E,20µm,13.0s						
SKR				AMS	AMS	12 56 12.1	
	comp=E,11µm,13.0s						
SKR	Severo-Kuril's	6.06	27	*e*PN	Pn	12 53 28.3	+0.3
SKR				pmax	pmax		
	comp=Z,1µm,0.6s						
SKR				pmax	pmax		
	comp=Z,1µm,4.6s						
SKR				MLR	MLR		
	comp=N,112µm,13.0s						
SKR				MLR	MLR		
	comp=Z,110µm,13.0s						
SKR				MLR	MLR		
	comp=E,198µm,14.0s						
SKR				MLR	MLR		
	comp=Z,106µm,13.0s						
JAR	Ashorobuto	6.10	253	P	Pn	12 53 29.8	+1.3
JAR				*e*S	Sn	12 54 39.6	+1.6
JMP	Maruseppu	6.14	260	⇑P	Pn	12 53 31.5	+2.3
JOB	Onbets	6.21	249	P	Pn	12 53 30.9	+0.8
JOB				*e*S	Sn	12 54 40.6	-0.3
YSS	Yuzh-Sakhalins	6.45	287	*e*P	Pn	12 53 38.0	+4.6
YSS				AMB	AMB	12 53 43.6	
	comp=Z,140nm,0.6s						
YSS				AMB	AMB	12 53 43.6	
	comp=Z,4µm,6.6s						
YSS				*e*S	Sn	12 54 48.5	+1.8
YSS				AMS	AMS	12 54 49.0	
	comp=Z,51µm,13.0s						
YSS				AMS	AMS	12 54 49.0	
	comp=Z,57µm,13.0s						
YSS	Yuzh-Sakhalins	6.45	287	*e*Pn	Pn	12 53 34.2	+0.8
YSS	Yuzh-Sakhalins	6.45	287	c *e*PN	Pn	12 53 38.0	+4.6
YSS				pmax	pmax		
	comp=Z,4µm,6.6s						
YSS				pmax	pmax		
	comp=E,4µm,4.7s						
YSS				pmax	pmax		
	comp=N,80nm,0.6s						
YSS				pmax	pmax		
	comp=Z,140nm,0.6s						
YSS				MLR	MLR		
	comp=N,51µm,13.0s						
YSS				MLR	MLR		
	comp=Z,57µm,13.0s						
HRK	Horoka	6.47	256	*e*P	Pn	12 53 35.7	+2.0
JKK2	Kamakawa 2	6.61	260	P	Pn	12 53 38.1	+2.6
ASAJ	Asahikawa	6.65	262	Pn	Pn	12 53 37.6	+1.6
	comp=Z,10.0nm,0.3s,baz=96,slow=16,SNR=32						
ASAJ				LR	LR	12 56 31.0	
	comp=Z,39µm,20.3s,baz=78,slow=41						
ASAJ	Asahikawa	6.65	262	*e*Pn	Pn	12 53 39.1	+3.0
ASAJ	Asahikawa	6.65	262	P	Pn	12 53 39.0	+3.0
JCH	Churui	6.66	248	P	Pn	12 53 35.9	-0.3
JCH				*e*S	Sn	12 54 49.6	-2.2
MYR	Moyori	6.86	246	*e*P	Pn	12 53 39.1	+0.1
JFR	Furan	6.94	255	P	Pn	12 53 41.7	+1.6
JWK2	Keihoku	6.95	273	P	Pn	12 53 42.5	+2.3
JAB	Ashibetsu	7.08	258	P	Pn	12 53 45.2	+3.2
ERM	Erimo	7.08	245	*e*P	Pn	12 53 44.1	+2.1
ERM	Erimo	7.08	245	*e*Pn	Pn	12 53 45.3	+3.3
ERM	Erimo	7.08	245	c *e*PN	Pn	12 53 44.1	+2.1
ERM				pmax	pmax		
	comp=Z,277nm,1.0s						
JEM	Erimo	7.08	245	*e*S	Sn	12 54 58.9	-3.3
JSS	Shosan	7.11	266	P	Pn	12 53 47.3	+4.9
JNBK	Urakawa-nobuka	7.21	248	P	Pn	12 53 43.2	-0.6
JNBK				*e*S	Sn	12 55 03.7	-1.7
JBT2	Biratori 2	7.25	252	P	Pn	12 53 44.5	+0.2
JHR	Hokuryu	7.35	261	P	Pn	12 53 48.7	+2.9
UGL	Uglegorsk	7.57	303	*e*P	Pn	12 53 53.0	+4.3
UGL				AMB	AMB	12 53 59.5	
	comp=Z,11µm,8.5s						
UGL				*e*S	Sn	12 55 17.0	+2.8
UGL				A	A	12 55 34.5	
	comp=Z,10µm,10.0s						
UGL				A	A	12 55 34.5	
	comp=Z,14µm,10.0s						
UGL				AMS	AMS	12 59 32.0	
	comp=Z,30µm,13.0s						
UGL				AMS	AMS	12 59 32.0	
	comp=Z,53µm,13.0s						
JEW	Eniwo	7.84	255	P	Pn	12 53 53.8	+1.3
TYV	Tymovskoe	8.20	315	*e*P	Pn	12 54 01.4	+4.1
TYV				AMB	AMB	12 54 04.4	
	comp=Z,8µm,7.0s						
TYV				*e*S	Sn	12 55 31.9	+2.2
TYV				AMS	AMS	12 57 39.9	
	comp=Z,62µm,15.0s						
TYV				AMS	AMS	12 57 39.9	
	comp=Z,61µm,15.0s						
TYV	Tymovskoe	8.20	315	*e*PN	Pn	12 54 01.4	+4.1
TYV				pmax	pmax		
	comp=Z,67nm,0.9s						
TYV				pmax	pmax		
	comp=Z,8µm,6.9s						
TYV				MLR	MLR		
	comp=N,62µm,16.0s						
TYV				MLR	MLR		
	comp=Z,61µm,16.0s						
JNB	Noboribetsu	8.27	253	P	Pn	12 53 59.1	+0.8
JNB				*e*S	Sn	12 55 30.0	-1.4
JKB	Kayabe	8.53	250	P	Pn	12 54 01.6	-0.2
JKB				*e*S	Sn	12 55 32.6	-5.1
PEA0B	Petropavlovsk-	8.66	24	*e*Pn	Pn	12 54 03.0	-0.7
PEA0B				*e*Sn	Sn	12 55 40.1	-0.8
PETK	Petropavlovsk-	8.66	24	Pn	Pn	12 54 03.2	-0.4
	baz=186,slow=9.3						
PETK	Petropavlovsk-	8.66	24	*e*Pn	Pn	12 54 02.4	-1.2
PEA1	Petropavlovsk-	8.66	24	*e*Pn	Pn	12 54 03.2	-0.5
JYM2	Yakumo 2	8.86	252	P	Pn	12 54 06.7	+0.2
JSH	Shimam	8.87	256	P	Pn	12 54 09.7	+3.1
PET	Petropavlovsk	8.88	28	*e*Pn	Pn	12 54 05.6	-1.0
PET	Petropavlovsk	8.88	28	c *e*PN	Pn	12 54 05.4	-1.3
PET				pmax	pmax		
	comp=Z,1µm,14.4s						
PET				pmax	pmax		
	comp=Z,1µm,13.6s						
PET				pmax	pmax		
	comp=Z,159nm,0.8s						
PET				MLR	MLR		
	comp=Z,47µm,14.0s						
PET				MLR	MLR		
	comp=Z,44µm,14.0s						
JANG	Nango	9.03	240	P	Pn	12 54 06.4	-2.4
JANG				*e*S	Sn	12 55 41.3	-8.9
JTM	Tenmabayashi	9.07	243	P	Pn	12 54 07.7	-1.6
JTM				*e*S	Sn	12 55 43.2	-7.9
JTH	Tanohata	9.09	237	P	Pn	12 54 06.7	-2.9
JTH				*e*S	Sn	12 55 40.3	-11
JOSM	Okushiri--Mats	9.48	254	P	Pn	12 54 15.6	+0.6
JOSM				*e*S	Sn	12 55 58.0	-3.3
OFUJ	Ofunato	9.77	233	P	Pn	12 54 16.7	-2.2
OFUJ				*e*S	Sn	12 55 59.0	-9.4
OKH	Okha	9.99	328	*i* P	Pn	12 54 25.0	+3.1
OKH				AMB	AMB	12 54 31.0	
	comp=Z,14µm,6.7s						
OKH				*e*S	Sn	12 56 21.5	+7.8
OKH				A	A	12 56 30.6	
	comp=Z,9µm,10.0s						
OKH				AMS	AMS	13 00 00.0	
	comp=Z,49µm,13.0s						
OKH	Okha	9.99	328	⇑ *i*PN	Pn	12 54 25.0	+3.1
OKH				*e*S	Sn	12 56 21.5	+7.8
OKH				pmax	pmax		
	comp=Z,14µm,6.7s						
OKH				smax	smax		
	comp=N,9µm,10.0s						
OKH				MLR	MLR		
	comp=Z,49µm,13.0s						
JRG	Rokugo	10.16	238	P	Pn	12 54 22.3	-2.0
JRG				*e*S	Sn	12 56 10.4	-7.7
JIO	Ouri	10.39	232	P	Pn	12 54 24.6	-2.7
JIO				*e*S	Sn	12 56 12.4	-11
NKL	Nikolayevsk	10.62	321	*i* PN	Pn	12 54 34.0	+3.5
NKL				pmax	pmax		
	comp=N,6µm,7.0s						
NKL				pmax	pmax		
	comp=E,9µm,7.0s						
NKL				pmax	pmax		
	comp=Z,12µm,7.0s						
NKL				pmax	pmax		
	comp=N,350nm,2.0s						
NKL				pmax	pmax		
	comp=E,2µm,2.0s						
NKL				pmax	pmax		
	comp=Z,580nm,2.0s						
NKL				MLR	MLR		
	comp=N,65µm,14.0s						
NKL				MLR	MLR		
	comp=Z,30µm,14.0s						
TEY	Ternei	10.71	274	⇑ *e*PN	Pn	12 54 35.4	+3.7
TEY				*e*S	Sn	12 56 37.5	+6.3
TEY				pmax	pmax		
	comp=E,120nm,1.0s						
TEY				pmax	pmax		
	comp=Z,110nm,1.6s						
TEY				pmax	pmax		
	comp=N,70nm,0.9s						
TEY				pmax	pmax		
	comp=Z,10µm,9.9s						
TEY				pmax	pmax		
	comp=E,10µm,9.4s						
TEY				smax	smax		
	comp=N,8µm,12.2s						
TEY				MLR	MLR		
	comp=E,31µm,13.0s						
TEY				MLR	MLR		
	comp=N,23µm,15.0s						
JFK	Kawauchi	11.43	229	P	Pn	12 54 38.2	-3.5
JFK				*e*S	Sn	12 56 36.2	-13
GRNR	Gornyy	11.59	303	*e*PN	Pn	12 54 50.4	+6.7
GRNR				pmax	pmax		
	comp=Z,26nm,1.0s						
JFY	Yanaizu	12.04	233	P	Pn	12 54 47.7	-2.4
MJAR	Matsushiro Arr	13.50	234	Pn	Pn	12 55 08.5	-1.5
	comp=Z,1.4nm,0.3s,baz=31,slow=12,SNR=45						
MJAR				Sn	Sn	12 57 43.5	+3.8
	comp=Z,0.7nm,0.3s,baz=53,slow=28,SNR=3.7						
MJAR				LR	LR	13 02 11.3	
	comp=Z,26µm,19.1s,baz=45,slow=45						
MJB9	Matsu-Tunnel	13.50	234	*e*Pn	Pn	12 55 08.9	-1.1
MAJO	Matsushiro	13.50	234	*e*Pn	Pn	12 55 08.7	-1.2
MAJO				*e*Sn	Sn	12 57 43.5	+3.8
MAJO	Matsushiro	13.50	234	⇓ *e*P	Pn	12 55 09.5	-0.5
USA0B	Ussuriysk Arra	14.09	272	*e*Pn	Pn	12 55 18.6	+0.6
USRK	Ussuriysk Ar.	14.09	272	Pn	Pn	12 55 18.6	+0.7
	baz=82,slow=12						
USRK				LR	LR	13 01 11.9	
	comp=Z,33µm,18.9s,baz=74,slow=39						
KLR	Kul'dur	14.11	293	Pn	Pn	12 55 20.6	+2.5
	comp=Z,0.0nm,0.3s,baz=101,slow=16,SNR=39						
KLR				PcP	PcP	13 00 38.3	+1.1
	comp=Z,0.1nm,0.3s,baz=97,slow=2.9,SNR=5.6						
KLR				LR	LR	13 01 26.6	
	comp=Z,4µm,18.6s,baz=100,slow=40						
MA2	Magadan	14.24	358	Pn	Pn	12 55 21.0	+1.1
	comp=Z,2.9nm,0.3s,baz=170,slow=11,SNR=13						
MA2				LR	LR	13 01 05.2	
	comp=Z,22µm,18.2s,baz=182,slow=39						
MA2	Magadan	14.24	358	*e*P	Pn	12 55 18.9	-1.0
MA2	Magadan	14.24	358	*e*Pn	Pn	12 55 20.7	+0.8
MA2	Magadan	14.24	358	*e*P	Pn	12 55 20.7	+0.8
INU	Inuyama	15.03	233	*e*Pn	Pn	12 55 29.6	-1.2
	comp=Z,99nm,0.9s						
MSHR	Mys Shultsa	15.09	267	c *e*P	Pn	12 55 31.0	-0.5
JHJ	Hachijo jima 2	15.34	221	Pn	Pn	12 55 34.9	+0.1
	comp=Z,7.3nm,0.3s,baz=61,slow=19,SNR=3.9						
JHJ				LR	LR	13 03 29.7	
	comp=Z,13µm,19.6s,baz=68,slow=45						
MDJ	Mudanjiang	15.70	275	P	Pn	12 55 36.8	-2.7
MDJ				pP	pP	12 55 45.0	-2.5
MDJ				S	S	12 58 41.1	-7.0
MDJ				pmax	pmax		
	comp=Z,98nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,3µm,7.6s						
MDJ				LR	LR		
	comp=Z,48µm,12.7s						
MDJ				LR	LR		
	comp=Z,28µm,16.3s						
MDJ				LR	LR		
	comp=Z,45µm,17.5s						
MDJ	Mudanjiang	15.70	275	*e*Pn	Pn	12 55 39.7	+0.2
	comp=Z,255nm,0.9s						
SMY	Shemya	16.34	55	*e*Pn	Pn	12 55 46.3	-1.4
	comp=Z,1µm,2.0s						
SMY	Shemya	16.34	55	*e*P	Pn	12 55 46.3	-1.4
SMY				pmax	pmax		
	comp=Z,1µm,2.0s						
SEY	Seymchan	17.60	1	P	Pn	12 56 01.8	-1.6
	comp=Z,0.6nm,0.3s,baz=172,slow=9.6,SNR=64						
SEY				LR	LR	13 03 39.3	
	comp=Z,32µm,18.1s,baz=178,slow=40						
SEY	Seymchan	17.60	1	*e*P	Pn	12 56 02.4	-1.0
SEY	Seymchan	17.60	1	c *i*P	Pn	12 56 02.4	-1.0
ZEA	Zeya	17.90	307	⇑ *e*P	P	12 56 07.6	-0.2
ZEA				pmax	pmax		
	comp=N,86nm,1.2s						
ZEA				pmax	pmax		
	comp=E,59nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,110nm,1.2s						
ZEA				pmax	pmax		
	comp=E,7µm,12.0s						
ZEA				pmax	pmax		
	comp=N,3µm,11.0s						
ZEA				MLR	MLR		
	comp=N,20µm,14.0s						
CN2	Changchun	18.78	275	*e*P	P	12 56 17.0	-0.6
CN2				*e*sP	sP	12 56 29.5	+6.1
CN2				*e*S	Sn	12 59 39.9	-8.0
CN2				LR	LR		
	comp=N,27µm,14.0s						
CN2				LR	LR		
	comp=N,39µm,14.0s						
CN2				LR	LR		
	comp=N,46µm,15.0s						
KSRS	Korea Array	19.50	254	P	Pn	12 56 26.2	-0.5
	comp=N,1.2nm,0.3s,baz=62,slow=8.5,SNR=42						
KSRS				PcP	PcP	13 00 47.5	+1.8
	comp=N,0.1nm,0.3s,baz=334,slow=1.2,SNR=5.8						
KS01	Wonju Array Si	19.51	255	*e*P	Pn	12 56 26.7	-0.2
KS01				*e*PcP	PcP	13 00 46.0	+0.2
KS15	Wonju Array Si	19.54	254	*e*P	Pn	12 56 27.2	0.0
KS15				*e*PcP	PcP	13 00 47.5	+1.7
KSAR	Wonju Array Be	19.54	254	P	P	12 56 26.2	+0.4
KSAR				PcP	PcP	13 00 47.5	+1.7
KSAR	Wonju Array Be	19.54	254	P	P	12 56 26.3	+0.4
CBIJ	Chichi jima	19.78	206	*e*P	Pn	12 56 29.5	-0.7
	comp=N,231nm,1.0s						

JCJ	Chichijima	19.78	206	P	P	12 56 29.2	+0.6
	comp=N,7.2nm,0.3s,baz=55,slow=12,SNR=8.7						
JCJ				LR	LR	13 05 35.6	
	comp=N,5µm,18.9s,baz=2.0,slow=41						
JNU	Nakatsue	20.21	240	P	Pn	12 56 34.6	-0.6
	comp=N,60nm,0.8s,baz=73,slow=7.7,SNR=20						
JNU				LR	LR	13 05 23.7	
	comp=N,17µm,19.9s,baz=42,slow=40						
JNU	Nakatsue	20.21	240	eP	Pn	12 56 35.7	+0.5
	comp=N,151nm,1.1s						
CLNS	Chul'man	20.25	314	eP	Pn	12 56 34.6	-1.0
CLNS				e		12 56 51.2	
CLNS				eS	S	13 00 18.6	-1.6
CLNS				e		13 00 49.0	
CLNS				pmax	pmax		
	comp=Z,150nm,0.6s						
CLNS				pmax	pmax		
	comp=N,82nm,0.6s						
CLNS				pmax	pmax		
	comp=E,110nm,0.8s						
CLNS				pmax	pmax		
	comp=N,81nm,0.8s						
CLNS				pmax	pmax		
	comp=Z,89nm,0.8s						
CLNS				pmax	pmax		
	comp=E,53nm,0.9s						
CLNS				smax	smax		
	comp=N,1µm,13.0s						
CLNS				smax	smax		
	comp=E,1µm,11.2s						
CLNS				MLR	MLR		
	comp=E,13µm,13.0s						
CLNS				MLR	MLR		
	comp=Z,26µm,18.0s						
CLNS				MLR	MLR		
	comp=N,14µm,15.0s						
INCN	Inchon	20.37	256	eP	Pn	12 56 36.2	-0.8
	comp=N,101nm,0.9s						
INCN				LR	LR		
	comp=Z,19µm,18.0s						
INCN	Inchon	20.37	256	P	Pn	12 56 36.8	-0.2
	SNR=6.5						
INCN	Inchon	20.37	256	eP	Pn	12 56 36.2	-0.8
INCN				pmax	pmax		
	comp=Z,101nm,0.9s						
INCN				MLR	MLR		
	comp=Z,19µm,18.0s						
TJN	Taejon	20.46	252c	iP	Pn	12 56 37.4	-0.7
YAK	Yakutsk	21.01	330	P	P	12 56 41.1	-0.6
	comp=Z,78nm,0.5s,baz=224,slow=2.6,SNR=21						
YAK				LR	LR	13 05 48.9	
	comp=Z,16µm,18.8s,baz=106,slow=40						
YAK	Yakutsk	21.01	330	eP	P	12 56 41.5	-0.2
	comp=Z,321nm,0.8s						
YAK	Yakutsk	21.01	330	eP	P	12 56 39.9	-1.8
YAK				e		12 56 59.0	
YAK				eS	S	13 00 35.1	0.0
YAK				e		13 00 50.5	
YAK				eSS	SnSn	13 01 03.9	+7.9
YAK				eSSS	SSS	13 01 19.5	
YAK				e		13 08 08.7	
YAK				pmax	pmax		
	comp=Z,151nm,0.9s						
YAK				pmax	pmax		
	comp=N,26nm,0.9s						
YAK				pmax	pmax		
	comp=E,27nm,0.8s						
YAK				pmax	pmax		
	comp=Z,2µm,4.8s						
YAK				pmax	pmax		
	comp=N,778nm,4.6s						
YAK				pmax	pmax		
	comp=E,510nm,3.3s						
YAK				smax	smax		
	comp=N,959nm,4.5s						
YAK				smax	smax		
	comp=E,1µm,3.5s						
YAK				MLR	MLR		
	comp=Z,16µm,18.0s						
YAK				MLR	MLR		
	comp=N,18µm,17.0s						
YAK				MLR	MLR		
	comp=E,12µm,16.0s						
KIWB	Kanaga Island	21.44	61	eP	P	12 56 44.5	-1.9
HIA	Hailar	21.96	292	eP	P	12 56 49.9	-2.2
	comp=E,41nm,0.8s						
HIA				LR	LR		
	comp=Z,33µm,19.0s						
HIA	Hailar	21.96	292	eP	P	12 56 49.9	-2.2
HIA				pmax	pmax		
	comp=Z,41nm,0.8s						
HIA				MLR	MLR		
	comp=Z,33µm,19.0s						
GSTR	Great Sitkin T	22.13	61	eP	P	12 56 52.3	-1.6
DL2	Dalian	23.17	264	⇑iP	P	12 57 04.9	0.0
DL2				S	S	13 01 12.8	-3.2
DL2				pmax	pmax		
	comp=Z,51nm,1.0s						
DL2				pmax	pmax		
	comp=Z,5µm,11.2s						
DL2				LR	LR		
	comp=Z,13µm,13.7s						
DL2				LR	LR		
	comp=Z,10µm,15.7s						
DL2				LR	LR		
	comp=Z,15µm,14.7s						
ATKA	Atka Island	23.29	61	eP	P	12 57 03.5	-2.4
	comp=Z,112nm,1.2s						
ATKA				LR	LR		
	comp=Z,16µm,18.0s						
BOD	Bodaibo	26.18	312	eP	P	12 57 30.0	-2.6
BOD				pmax	pmax		
	comp=Z,25nm,1.0s						
SPIA	Saint Paul Isl	26.18	49	eP	P	12 57 34.4	+1.8
	comp=Z,250nm,1.1s						
SPIA				LR	LR		
	comp=Z,14µm,18.0s						
JOW	Kunigami	26.35	233	P	P	12 57 34.8	+0.4
	comp=Z,49nm,1.0s,baz=34,slow=7.2,SNR=4.6						
JOW	Kunigami	26.35	233	eP	P	12 57 35.3	+0.9
	comp=Z,157nm,1.3s						
BJI	Beijing	26.54	271	P	P	12 57 37.7	+1.7
BJI				pmax	pmax		
	comp=Z,180nm,0.9s						
BJI				LR	LR		
	comp=Z,780nm,13.2s						
BJI				LR	LR		
	comp=Z,6µm,14.7s						
BJT	Baijiatuau	26.55	271	eP	P	12 57 36.7	+0.5
	comp=Z,185nm,1.0s						
BJT				LR	LR		
	comp=Z,23µm,19.0s						
BJT	Baijiatuau	26.55	271	eP	P	12 57 36.7	+0.5
BJT				pmax	pmax		
	comp=Z,185nm,1.0s						
BJT				MLR	MLR		
	comp=Z,23µm,19.0s						
NIKH	Nikolski High	26.57	59	PFAKE		12 57 50.0	+14
NIKH				LR	LR		
	comp=Z,13µm,20.0s						
TIA	Tai'an	27.60	263	P	P	12 57 45.9	+0.3
TIA				S	S	13 02 25.2	-1.4
TIA				pmax	pmax		
	comp=Z,3µm,9.2s						
TIA				LR	LR		
	comp=Z,11µm,18.1s						
TIA				LR	LR		
	comp=Z,12µm,16.1s						
TIA				LR	LR		
	comp=Z,10µm,16.1s						
SSE	Sheshan	27.73	250	P	P	12 57 48.9	+2.1
SSE				S	S	13 02 32.9	+4.2
SSE				pmax	pmax		
	comp=Z,32nm,1.4s						
SSE				pmax	pmax		
	comp=Z,1µm,11.2s						
SSE				LR	LR		
	comp=Z,8µm,15.7s						
SSE				LR	LR		
	comp=Z,9µm,15.9s						
UNV	Unalaska Valle	27.99	57	PFAKE		12 58 00.0	+11
UNV				LR	LR		
	comp=Z,10µm,19.0s						
AKUT	Akutan	28.42	57	PFAKE		12 58 10.0	+17
AKUT				LR	LR		
	comp=Z,9µm,18.0s						
H11N2	WAKE ISLAND Hy	28.48	149	T	T	13 28 38.1	
	baz=336						
H11N1	WAKE ISLAND Hy	28.49	149	T	T	13 28 35.0	
	baz=336						
H11N3	WAKE ISLAND Hy	28.49	149	T	T	13 28 35.3	
	baz=336						
TIXI	Tiksi	28.54	345	P	P	12 57 51.1	-2.5
	comp=Z,16nm,0.4s,baz=144,slow=8.7,SNR=31						
TIXI				PcP	PcP	13 01 05.0	+0.4
	comp=Z,6.7nm,0.6s,baz=122,slow=2.5,SNR=4.8						
TIXI				LR	LR	13 09 21.9	
	comp=Z,15µm,19.8s,baz=144,slow=37						
TIXI	Tiksi	28.54	345	eP	P	12 57 51.1	-2.5
TIXI				eP	P	12 57 51.7	-1.9
TIXI				ePcP	PcP	13 01 05.0	+0.4
TIXI	Tiksi	28.54	345	⇑iP	P	12 57 51.2	-2.5
TIXI				pmax	pmax		
	comp=Z,46nm,1.3s						
TIXI				MLR	MLR		
	comp=Z,16µm,17.0s						
NJ2	Nanjing	28.70	254	eP	P	12 57 54.4	-1.1
NJ2				S	S	13 02 48.5	+4.5
NJ2				ScS	ScS	13 08 38.6	-1.3
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,2µm,11.7s						
NJ2				LR	LR		
	comp=Z,23µm,16.8s						
NJ2				LR	LR		
	comp=Z,31µm,15.2s						
NJ2				LR	LR		
	comp=Z,36µm,15.2s						
WAKE	Wake Island	28.80	150	PFAKE		12 58 10.0	+14
WAKE				LR	LR		
	comp=Z,16µm,19.0s						
HHC	Hu-ho-hao-te	29.47	276	eP	P	12 58 03.6	+1.2
HHC				PP	PnPn	12 58 54.9	-1.5
HHC				S	S	13 02 50.5	-5.7
HHC				sS	sS	13 03 08.9	+5.5
HHC				pmax	pmax		
	comp=Z,190nm,1.0s						
HHC				pmax	pmax		
	comp=Z,3µm,8.6s						
HHC				LR	LR		
	comp=Z,16µm,13.1s						
HHC				LR	LR		
	comp=Z,31µm,14.1s						
HHC				LR	LR		
	comp=Z,36µm,13.8s						
H11S1	WAKE ISLAND Hy	29.53	150	T	T	13 29 54.7	
	baz=339,slow=76,SNR=115						
H11S3	WAKE ISLAND Hy	29.54	150	T	T	13 29 57.0	
	baz=339,slow=76,SNR=70						
H11S2	WAKE ISLAND Hy	29.55	150	T	T	13 29 56.7	
	baz=339,slow=76,SNR=102						
FALS	False Pass	29.79	55	PFAKE		12 58 20.0	+15
FALS				LR	LR		
	comp=Z,17µm,20.0s						
MIDW	Midway	29.83	114	PFAKE		12 58 20.0	+15
MIDW				LR	LR		
	comp=Z,12µm,18.0s						
TIY	Taiyuan	30.17	269	eP	P	12 58 08.9	+0.3
TIY				S	S	13 03 11.5	+4.3
TIY				SS	SnSn	13 04 38.9	-1.6
TIY				pmax	pmax		
	comp=Z,1µm,6.9s						
TIY				LR	LR		
	comp=Z,4µm,12.1s						
TIY				LR	LR		
	comp=Z,10µm,13.6s						
TIY				LR	LR		
	comp=Z,12µm,15.4s						
ANM	Nome	30.36	36	PFAKE		12 58 20.0	+10
ANM				LR	LR		
	comp=Z,13µm,18.0s						
ULN	Ulaanbaatar	30.49	291	eP	P	12 58 11.1	-0.3
ULN	Ulaanbaatar	30.49	291	eP	P	12 58 10.6	-0.8
ULN				epP	P	12 58 11.4	0.0
ULN				LR	LR		
	comp=Z,20µm,18.0s						
ULN	Ulaanbaatar	30.49	291	P	P	12 58 12.2	+0.8
	SNR=27						
ULN	Ulaanbaatar	30.49	291c	iP	P	12 58 11.1	-0.3
ULN				pmax	pmax		
	comp=Z,50nm,0.8s						
ULN				MLR	MLR		
	comp=Z,19µm,17.0s						
BTO	Baotou	30.65	276	eP	P	12 58 13.4	+0.6
SONA1	Songino Array	30.92	291	eP	P	12 58 14.5	-0.6
SONA0	Songino Array	30.93	291	eP	P	12 58 14.8	-0.4
SONA0				ePcP	PcP	13 01 11.7	+0.3
SONM	Songino Array	30.93	291	P	P	12 58 14.8	-0.4
	comp=Z,49nm,0.8s,baz=74,slow=7.0,SNR=99						
SONM				PcP	PcP	13 01 11.7	+0.3
	comp=Z,3.6nm,0.7s,baz=71,slow=2.3,SNR=4.7						
SONM				LR	LR	13 12 29.0	
	comp=Z,23µm,18.2s,baz=76,slow=40						
YOJ	Yonaguni jima	31.21	238	PFAKE		12 58 30.0	+12
YOJ				LR	LR		
	comp=Z,8µm,20.0s						
IRK	Irkutsk	31.54	300	eP	P	12 58 19.7	-0.7
IRK				pmax	pmax		
	comp=Z,43nm,1.1s						
TATO	Taipei	31.75	240	PFAKE		12 58 30.0	+7.5
TATO				LR	LR		
	comp=Z,21µm,20.0s						
TLY	Talaya	32.00	299	eP	P	12 58 23.5	-1.0
TLY	Talaya	32.00	299	eP	P	12 58 24.3	-0.2
	comp=Z,30nm,0.8s						
TLY				LR	LR		
	comp=Z,28µm,19.0s						
TLY	Talaya	32.00	299	P	P	12 58 24.6	+0.2
	SNR=24						
TLY	Talaya	32.00	299c	iP	P	12 58 22.8	-1.7
TLY				e		12 59 32.1	
TLY				ePPP	PPP	12 59 44.1	
TLY				eS	S	13 03 42.0	+6.6
TLY				pmax	pmax		
	comp=Z,31nm,0.8s						
TLY				MLR	MLR		
	comp=Z,23µm,17.0s						
YHNB	Yeheng	32.05	240	PFAKE		12 58 40.0	+15
YHNB				LR	LR		
	comp=Z,22µm,20.0s						
GUMO	Guam	32.22	193	LR	LR	13 11 04.2	
	comp=Z,13µm,19.6s,baz=18,slow=36						
NACB	Ninganchiao	32.28	239	PFAKE		12 58 40.0	+13
NACB				LR	LR		
	comp=Z,14µm,19.0s						
ZAK	Zakamensk	32.43	297	eP	P	12 58 27.1	-1.3
ZAK				pmax	pmax		
	comp=Z,25nm,1.1s						
RDOG	Red Dog Mine	32.48	30	eP	P	12 58 27.3	-1.2
RDOG				epP	P	12 58 29.5	+1.1
RDOG				LR	LR		
	comp=Z,12µm,18.0s						
WHN	Wuhan	32.68	256	⇓P	P	12 58 30.9	+0.3
WHN				S	S	13 03 48.6	+2.3
WHN				LR	LR		
	comp=Z,30µm,14.5s						
WHN				LR	LR		
	comp=Z,48µm,15.7s						
WHN				LR	LR		
	comp=Z,65µm,17.1s						
SSLB	Suanglung	32.96	240	PFAKE		12 58 50.0	+17
SSLB				LR	LR		
	comp=Z,21µm,18.0s						
YULB	Yu-li	33.05	239	eP	P	12 58 33.7	-0.2
	comp=Z,15nm,0.9s						
TPUB	Ta-pu	33.52	239	eP	P	12 58 38.2	+0.2
TPUB				epP	P	12 58 38.8	+0.8
QZH	Quanzhou	33.58	244	⇑iP	P	12 58 36.3	-2.2
QZH				S	S	13 04 04.2	+3.8
QZH				pmax	pmax		
	comp=Z,51nm,2.0s						
QZH				pmax	pmax		
	comp=Z,2µm,4.0s						
QZH				LR	LR		
	comp=Z,8µm,17.5s						
QZH				LR	LR		
	comp=Z,7µm,15.6s						
QZH				LR	LR		
	comp=Z,10µm,15.2s						
TWG	Pinlang	33.61	238	eP	P	12 58 39.3	+0.5
	comp=Z,383nm,1.1s						
TWG				LR	LR		
	comp=Z,31µm,21.0s						
MOY	Mondy	33.63	299	eP	P	12 58 38.6	-0.3
MOY				pmax	pmax		
	comp=Z,26nm,1.4s						
SVW2	Sparrevohn	34.13	43	PFAKE		12 59 00.0	+17
SVW2				LR	LR		
	comp=Z,4µm,18.0s						
XAN	Xi'an	34.47	266	P	P	12 58 46.3	+0.1
XAN				pP	sP	12 58 59.1	+6.7
XAN				S	S	13 04 13.8	-0.4
XAN				pmax	pmax		
	comp=Z,45nm,1.4s						
XAN				pmax	pmax		
	comp=Z,2µm,8.8s						
XAN				LR	LR		
	comp=Z,7µm,17.6s						
XAN				LR	LR		
	comp=Z,12µm,16.3s						
XAN				LR	LR		
	comp=Z,13µm,14.9s						
OHAK	Old Harbor	35.37	50	eP	P	12 58 53.1	-0.5
RSO	Redoubt South	35.51	45	eP	P	12 58 54.9	-0.2
RSO				eS	S	13 04 31.0	+1.1
KDAK	Kodiak Island	35.71	49	P	P	12 58 56.3	-0.3
	comp=Z,49nm,0.8s,baz=292,slow=5.1,SNR=16						
KDAK	Kodiak Island	35.71	49	eP	P	12 58 56.6	+0.1
KDAK	Kodiak Island	35.71	49	eP	P	12 58 56.8	+0.2
	comp=Z,64nm,0.9s						
KDAK				LR	LR		
	comp=Z,16µm,20.0s						
KDAK	Kodiak Island	35.71	49	i P	P	12 58 56.6	+0.1
PPLA	Purkeypile	35.82	40	eP	P	12 58 59.7	+2.1
	comp=Z,223nm,1.3s						
PPLA				LR	LR		
	comp=Z,12µm,18.0s						
CAST	Castle Rocks	35.89	40	eP	P	12 58 59.3	+1.1
	comp=Z,34nm,0.7s						
CAST				LR	LR		
	comp=Z,9µm,18.0s						
HOM	Homer	36.09	46	PFAKE		12 59 10.0	+10
HOM				LR	LR		
	comp=Z,8µm,18.0s						
SKT	Skwentna	36.10	42	eP	P	12 59 01.1	+1.2
	comp=Z,64nm,1.4s						
SKT				LR	LR		
	comp=Z,10µm,19.0s						
ENH	Enshi	36.20	260	eP	P	12 59 01.0	-0.1
	comp=Z,58nm,0.9s						
ENH				LR	LR		
	comp=Z,6µm,20.0s						
CNPM	China Poot	36.30	46	PFAKE		12 59 10.0	+8.4
CNPM				LR	LR		
	comp=Z,11µm,18.0s						
BPAW	Bear Paw Mtn.	36.42	38	eP	P	12 59 03.1	+0.5
	comp=Z,34nm,0.7s						
BPAW				LR	LR		
	comp=Z,7µm,19.0s						
KTH	Kantishna Hill	36.42	39	PFAKE		12 59 10.0	+7.3
KTH				LR	LR		
	comp=Z,10µm,18.0s						
BRLK	Bradley Lake	36.46	46	eP	P	12 59 04.1	+1.0
	comp=Z,256nm,2.0s						
BRLK				LR	LR		
	comp=Z,8µm,20.0s						
SUA	Susitna One	36.48	43	eP	P	12 59 04.0	+0.8
	comp=Z,82nm,1.4s						
SUA				LR	LR		
	comp=Z,6µm,19.0s						
MLY	Manley	36.58	37	eP	P	12 59 04.7	+0.7
	comp=Z,43nm,0.8s						
MLY				LR	LR		
	comp=Z,8µm,20.0s						
TRF	Thorofare Moun	36.70	40	eP	P	12 59 06.2	+1.0
	comp=Z,48nm,0.9s						
TRF				LR	LR		
	comp=Z,10µm,18.0s						
RC01	Rabbit Creek A	36.97	44	eP	P	12 59 08.7	+1.4
	comp=Z,48nm,0.9s						
RC01				LR	LR		
	comp=Z,6µm,19.0s						
COLD	Coldfoot	37.00	33	eP	P	12 59 07.5	0.0
	comp=Z,34nm,0.9s						
COLD				LR	LR		
	comp=Z,10µm,20.0s						
LZH	Lanzhou	37.00	273	⇑P	P	12 59 09.6	+1.5
LZH				pP	sP	12 59 18.9	+4.7
LZH				sP	pP	12 59 22.4	+10
LZH				PP	PP	13 00 29.9	-2.4
LZH				S	S	13 04 50.6	-2.6
LZH				sS	sS	13 05 04.7	+4.3
LZH				SS	SnSn	13 07 19.7	-6.5
LZH				pmax	pmax		
	comp=Z,560nm,1.4s						
LZH				pmax	pmax		
	comp=Z,5µm,5.4s						
LZH				LR	LR		
	comp=Z,23µm,15.2s						
LZH				LR	LR		
	comp=Z,20µm,16.1s						
LZH				LR	LR		
	comp=Z,24µm,16.1s						
BWN	Browne	37.09	38	eP	P	12 59 10.4	+2.1
	comp=Z,411nm,1.2s						
BWN				LR	LR		
	comp=Z,8µm,19.0s						
PMR	Palmer	37.25	43	eP	P	12 59 09.6	0.0
	comp=Z,43nm,0.9s						
PMR	Palmer	37.25	43	eP	P	12 59 09.6	0.0
PMR				pmax	pmax		
	comp=Z,43nm,0.9s						
MCK	McKinley	37.31	39	eP	P	12 59 10.2	0.0
MCK	McKinley	37.31	39	eP	P	12 59 10.2	0.0
	comp=Z,64nm,1.0s						
MCK				LR	LR		
	comp=Z,6µm,21.0s						
MCK	McKinley	37.31	39	eP	P	12 59 10.2	0.0
MCK				pmax	pmax		
	comp=Z,64nm,1.0s						
MCK				MLR	MLR		
	comp=Z,6µm,21.0s						
GHO	Glory Hole Cre	37.34	42	PFAKE		12 59 20.0	+9.5
GHO				LR	LR		
	comp=Z,5µm,20.0s						
TOLK	Toolik Lake Re	37.41	31	P	P	12 59 11.1	0.0
	baz=262						
TOLK	Toolik Lake Re	37.41	31	eP	P	12 59 11.5	+0.4
	comp=Z,109nm,1.4s						
TOLK				LR	LR		
	comp=Z,11µm,19.0s						
SML	Sawmill	37.62	42	eP	P	12 59 12.8	-0.1
SML	Sawmill	37.62	42	eP	P	12 59 12.8	-0.1
	comp=Z,161nm,0.8s						
SML				LR	LR		
	comp=Z,8µm,20.0s						
SML	Sawmill	37.62	42	eP	P	12 59 12.8	-0.1
SML				pmax	pmax		
	comp=Z,161nm,0.8s						
SML				MLR	MLR		
	comp=Z,8µm,20.0s						
MDM	Murphy Dome	37.64	37	eP	P	12 59 13.5	+0.5
	comp=Z,64nm,0.8s						
MDM				LR	LR		
	comp=Z,7µm,20.0s						
KRAR	Krasnoyarsk	37.68	308	i P	P	12 59 13.5	+0.2
WRH	Wood River Hil	37.69	38	eP	P	12 59 13.4	+0.1
	comp=Z,49nm,0.6s						
WRH				LR	LR		
	comp=Z,11µm,19.0s						
COLA	College	37.80	37	eP	P	12 59 14.5	+0.2
	comp=Z,98nm,0.6s						
COLA				LR	LR		
	comp=Z,9µm,18.0s						
COLA	College	37.80	37	eP	P	12 59 14.5	+0.2
COLA				pmax	pmax		
	comp=Z,99nm,0.6s						
COLA				MLR	MLR		
	comp=Z,9µm,18.0s						
CCB	Clear Creek Bu	37.82	38	eP	P	12 59 14.0	-0.4
	comp=Z,112nm,1.7s						
CCB				LR	LR		
	comp=Z,10µm,20.0s						
DHY	Denali Highway	38.02	40	PFAKE		12 59 30.0	+14
DHY				LR	LR		
	comp=Z,9µm,19.0s						
SCM	Sheep Creek Mo	38.09	42	PFAKE		12 59 30.0	+13
SCM				LR	LR		
	comp=Z,7µm,19.0s						

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HDA   Harding Lake     38.19  38  eP     P      12 59 18.3 +0.7
      comp=Z,72nm,0.6s
HDA                               LR     LR
      comp=Z,9µm,20.0s
HVS   Khovu-Aksy       38.20 300  i P    P      12 59 19.9 +1.9
HVS                               pmax   pmax
      comp=Z,45nm,0.9s
HVS                               MLR    MLR
      comp=Z,26µm,14.0s
ILAR  Eielson Array    38.21  37  P      P      12 59 17.2 -0.5
      comp=Z,20nm,0.5s,baz=256,slow=7.9,SNR=194
ILAR                              LR     LR     13 16 35.5
      comp=Z,8µm,20.1s,baz=288,slow=39
ILB   Eielson Array    38.21  37  eP     P      12 59 17.4 -0.5
IL1   Eielson Array    38.21  37  eP     P      12 59 16.8 -1.0
GZH   Guangzhou        38.27 248  P      P      12 59 14.4 -4.3
GZH                               PP     PP     13 00 44.8 -1.4
GZH                               PcP    PcP    13 01 30.7 -2.0
GZH                               S      S      13 05 02.4  -10
GZH                               LR     LR
      comp=Z,13µm,19.0s
GZH                               LR     LR
      comp=Z,11µm,19.4s
GTA   Gaotai           38.27 280 ⇑P      P      12 59 20.1 +1.4
GTA                               pP     sP     12 59 29.7 +4.8
GTA                               sP     pP     12 59 33.8  +11
GTA                               PP     PnPn   13 00 51.0 +3.2
GTA                               S      S      13 05 11.5 -0.8
GTA                               sS     ScP    13 05 25.8 +5.9
GTA                               SS     SnSn   13 07 49.8 -6.9
GTA                               pmax   pmax
      comp=Z,200nm,1.1s
GTA                               pmax   pmax
      comp=Z,2µm,8.7s
GTA                               LR     LR
      comp=Z,13µm,13.4s
GTA                               LR     LR
      comp=Z,14µm,14.4s
GTA                               LR     LR
      comp=Z,20µm,14.1s
KLU   Klutina          38.79  43  PFAKE         12 59 30.0 +7.2
KLU                               LR     LR
      comp=Z,10µm,19.0s
PATS  Pohnpei          38.81 170  PFAKE         12 59 40.0  +17
PATS                              LR     LR
      comp=Z,11µm,18.0s
DIV   Divide           38.89  43  eP     P      12 59 24.6 +1.0
      comp=Z,61nm,0.7s
DIV                               LR     LR
      comp=Z,7µm,18.0s
PAX   Paxson           38.89  40  eP     P      12 59 24.6 +1.0
      comp=Z,41nm,1.3s
PAX                               LR     LR
      comp=Z,12µm,20.0s
PAX   Paxson           38.89  40  eP     P      12 59 24.6 +1.0
PAX                               pmax   pmax
      comp=Z,41nm,1.3s
PAX                               MLR    MLR
      comp=Z,12µm,20.0s
FYU   Fort Yukon       38.91  35  eP     P      12 59 24.4 +0.8
      comp=Z,128nm,0.9s
FYU                               LR     LR
      comp=Z,6µm,20.0s
HARP  HAARP            39.07  41  eP     P      12 59 26.6 +1.5
      comp=Z,77nm,1.0s
HARP                              LR     LR
      comp=Z,10µm,19.0s
PVCP  Virac            39.37 225  eP     P      12 59 28.1 +0.1
BMRM  Bremner River    39.47  43  eP     P      12 59 29.3 +0.8
      comp=Z,61nm,0.8s
BMRM                              LR     LR
      comp=Z,11µm,20.0s
RAGM  Ragged Mountai   39.51  44  PFAKE         12 59 40.0  +11
RAGM                              LR     LR
      comp=Z,13µm,18.0s
CD2   Chengdu          39.83 266 ⇑P      P      12 59 32.2 +0.4
CD2                               pP     sP     12 59 42.3 +4.4
CD2                               sP     pP     12 59 46.7  +11
CD2                               PP     PP     13 01 03.9 +0.7
CD2                               PcS    PcS    13 05 28.4 +0.5
CD2                               S      S      13 05 34.1 -1.7
CD2                               pmax   pmax
      comp=Z,210nm,0.7s
CD2                               pmax   pmax
      comp=Z,4µm,7.4s
CD2                               LR     LR
      comp=Z,16µm,16.9s
CD2                               LR     LR
      comp=Z,13µm,13.0s
CD2                               LR     LR
      comp=Z,12µm,15.8s
CRQM  Cirque           40.21  44  eP     P      12 59 36.3 +1.5
      comp=Z,162nm,0.8s
CRQM                              LR     LR
      comp=Z,8µm,20.0s
TGL   Tana Glacier     40.36  44  eP     P      12 59 37.8 +1.9
      comp=Z,60nm,0.8s
TGL                               LR     LR
      comp=Z,9µm,20.0s
GYA   Guiyang          40.50 258⇑iP      P      12 59 37.0 -0.5
GYA                               pP     sP     12 59 49.3 +5.7
GYA                               PP     PnPn   13 01 16.0 +1.5
GYA                               ScP    ScP    13 05 27.8 -0.9
GYA                               S      S      13 05 44.2 -1.8
GYA                               sS     sS     13 06 02.6 +9.3
GYA                               pmax   pmax
      comp=Z,90nm,0.7s
GYA                               pmax   pmax
      comp=Z,180nm,5.4s
GYA                               LR     LR
      comp=Z,9µm,15.2s
GYA                               LR     LR
      comp=Z,13µm,16.2s
GYA                               LR     LR
      comp=Z,19µm,17.1s
BALM  Baldy            40.56  43  PFAKE         12 59 50.0  +12
BALM                              LR     LR
      comp=Z,8µm,20.0s
EGAK  Eagle            40.66  37  eP     P      12 59 37.6 -0.7
      comp=Z,87nm,0.8s
EGAK                              LR     LR
      comp=Z,6µm,19.0s
PLP   Palo             41.06 222⇓eP      P      12 59 41.5 -0.5
LUBP  Lubang           41.30 230  eP     P      12 59 41.3 -2.7
DAWY  Dawson           41.50  38  eP     P      12 59 45.5 +0.3
      comp=Z,82nm,1.5s
DAWY                              LR     LR
      comp=Z,8µm,20.0s
MSLP  Maasin           42.02 222  eP     P      12 59 49.2 -0.6
DGZ   Jazzator, Alta   42.46 300  i P    P      12 59 53.8 +0.5
DGZ                               pmax   pmax
      comp=Z,16nm,0.7s
ZAA1  Zalesovo Array   42.66 307  eP     P      12 59 52.9 -1.8
ZAA1                              ePcP   PcP    13 01 47.3 +0.9
ZAA0  Zalesovo Array   42.66 307  eP     P      12 59 53.6 -1.1
      comp=Z,9.1nm,0.6s
ZAA0                              LR     LR
      comp=Z,26µm,19.0s
ZALV  Zalesovo Beam    42.66 307  P      P      12 59 52.9 -1.8
      comp=Z,7.7nm,0.7s,baz=64,slow=6.8,SNR=18
ZALV                              PcP    PcP    13 01 47.3 +0.9
      comp=Z,11nm,0.6s,baz=65,slow=4.4,SNR=7.5
ZALV                              ScP    ScP    13 05 36.0 -0.7
      comp=Z,1.1nm,0.4s,baz=131,slow=4.4,SNR=2.7
ZALV                              LR     LR     13 19 03.2
      comp=Z,28µm,18.2s,baz=65,slow=38
JOHN  Johnston Islan   43.11 119  PFAKE         13 00 10.0  +11
JOHN                              LR     LR
      comp=Z,9µm,19.0s
NVS   Novosibirsk      43.29 308⇓iP      P      12 59 58.7 -1.1
NVS                               e             13 01 48.9
NVS                               eS     S      13 06 21.9 -4.5
NVS                               pmax   pmax
      comp=Z,14nm,1.1s
NVS                               pmax   pmax
      comp=N,6.0nm,0.9s
NVS                               smax   smax
      comp=N,9.0nm,1.7s
NVS                               smax   smax
      comp=E,20nm,1.7s
INK   Inuvik           43.32  32  P      P      13 00 00.2 +0.4
      comp=E,57nm,1.0s,baz=278,slow=7.5,SNR=78
INK   Inuvik           43.32  32  eP     P      13 00 00.3 +0.6
      comp=E,63nm,1.0s
INK                               LR     LR
      comp=Z,8µm,19.0s
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QIZ   Qiongzhong       43.44 247  P      P      13 00 03.2 +1.8
QIZ                               pP     sP     13 00 10.2 +2.6
QIZ                               S      S      13 06 35.0 +5.7
QIZ                               sS     sS     13 06 45.7 +9.1
QIZ                               LR     LR
      comp=Z,8µm,17.2s
QIZ                               LR     LR
      comp=Z,9µm,14.2s
QIZ                               LR     LR
      comp=Z,10µm,17.5s
QIZ   Qiongzhong       43.44 247  eP     P      13 00 01.9 +0.5
      comp=Z,30nm,1.0s
QIZ                               LR     LR
      comp=Z,11µm,18.0s
ENPP  El Nido          43.84 229  eP     P      13 00 04.8 +0.2
KMI   Kunming          44.07 260  P      P      13 00 07.0 +0.3
KMI                               pP     sP     13 00 17.7 +4.9
KMI                               sP     pP     13 00 21.8  +11
KMI                               PP     PcP    13 01 51.6 -0.3
KMI                               S      S      13 06 38.1 -0.7
KMI                               sS     sS     13 06 53.8 +7.7
KMI                               SS     SS     13 09 49.5 -6.5
KMI                               pmax   pmax
      comp=Z,26nm,1.3s
KMI                               pmax   pmax
      comp=Z,2µm,7.6s
KMI                               LR     LR
      comp=Z,9µm,17.5s
KMI                               LR     LR
      comp=Z,6µm,17.0s
KMI                               LR     LR
      comp=Z,13µm,17.0s
SKAG  Skagway          44.30  44  eP     P      13 00 09.6 +1.8
      comp=Z,29nm,1.2s
SKAG                              LR     LR
      comp=Z,6µm,20.0s
DAV   Davao City (W)   44.40 219⇑eP      P      13 00 01.0 -8.1
WMQ   Urumqi           44.56 292  P      P      13 00 11.1 +0.9
WMQ                               sP     sP     13 00 24.2 +7.8
WMQ                               ScP    ScP    13 05 44.3 -0.4
WMQ                               S      S      13 06 45.1 -0.2
WMQ                               pmax   pmax
      comp=Z,220nm,0.9s
WMQ                               pmax   pmax
      comp=Z,6µm,6.9s
WMQ                               LR     LR
      comp=Z,42µm,17.3s
WMQ                               LR     LR
      comp=Z,23µm,17.3s
WMQ                               LR     LR
      comp=Z,18µm,18.1s
BESE  Bessie Mountai   44.78  45  eP     P      13 00 14.3 +2.5
      comp=Z,68nm,1.3s
BESE                              LR     LR
      comp=Z,5µm,20.0s
ZSN   Zaisan           44.87 298  eP     P      13 00 12.7 +0.1
      comp=Z,1.7nm,0.8s
ZSN                               LR     LR     13 19 32.0
      comp=Z,2µm,16.2s
SIT   Sitka            44.99  48  eP     P      13 00 14.8 +1.5
      comp=Z,66nm,1.4s
SIT                               LR     LR
      comp=Z,6µm,19.0s
SIT   Sitka            44.99  48  eP     P      13 00 14.8 +1.5
SIT                               pmax   pmax
      comp=Z,66nm,1.4s
SIT                               MLR    MLR
      comp=Z,6µm,19.0s
JIS   Juneau Island    45.11  46  eP     P      13 00 16.5 +2.3
      comp=Z,28nm,0.8s
JIS                               LR     LR
      comp=Z,4µm,20.0s
KEKH  Kekaha           45.79 104  PFAKE         13 00 30.0  +10
KEKH                              LR     LR
      comp=Z,7µm,19.0s
CRAG  Craig            46.67  49  eP     P      13 00 28.2 +1.6
      comp=Z,64nm,1.4s
BATP  Bataraza         46.72 229  eP     P      13 00 27.6 +0.2
MK31  Makanchi Array   46.75 298  eP     P      13 00 26.9 -0.5
MK31  Makanchi Array   46.75 298  i P    P      13 00 26.9 -0.5
MK31                              pmax   pmax
      comp=Z,42nm,0.7s
MK32  Makanchi Array   46.75 298  eP     P      13 00 26.9 -0.6
MK32                              ePcP   PcP    13 02 01.6 +0.9
MKAR  Makanchi Array   46.75 298  P      P      13 00 26.9 -0.6
      comp=Z,52nm,0.8s,baz=68,slow=6.6,SNR=111
MKAR                              PcP    PcP    13 02 01.6 +0.9
      comp=Z,11nm,0.6s,baz=59,slow=1.9,SNR=8.8
MKAR                              ScP    ScP    13 05 52.4 -1.3
      comp=Z,1.7nm,0.8s,baz=69,slow=4.8,SNR=3.4
MKAR                              LR     LR     13 21 50.8
      comp=Z,22µm,18.3s,baz=68,slow=38
MKAR  Makanchi Array   46.75 298  eP     P      13 00 26.9 -0.5
      comp=Z,319nm,0.8s
MKAR                              PcP    PcP    13 02 01.6 +0.9
WRAK  Wrangell Islan   46.75  48  eP     P      13 00 28.9 +1.7
      comp=Z,40nm,1.2s
WRAK                              LR     LR
      comp=Z,7µm,19.0s
MK01  Makanchi Array   46.75 298  eP     P      13 00 26.5 -0.9
MAKZ  Makanchi         46.94 298  eP     P      13 00 28.6 -0.3
      comp=Z,33nm,0.7s
MAKZ                              LR     LR
      comp=Z,25µm,19.0s
MAKZ  Makanchi         46.94 298  eP     P      13 00 28.6 -0.3
MAKZ                              pmax   pmax
      comp=Z,33nm,0.7s
MAKZ                              MLR    MLR
      comp=Z,25µm,19.0s
OPA   Opana            47.16 103  PFAKE         13 00 40.0 +9.1
OPA                               LR     LR
      comp=Z,6µm,20.0s
DLBC  Dease Lake       47.23  45  P      P      13 00 32.5 +1.4
      comp=Z,12nm,0.6s,baz=286,slow=5.7,SNR=29
DLBC  Dease Lake       47.23  45  eP     P      13 00 33.0 +1.9
      comp=Z,88nm,1.5s
DLBC                              LR     LR
      comp=Z,6µm,19.0s
KIP   Kipapa           47.33 103  PFAKE         13 00 40.0 +7.8
KIP                               LR     LR
      comp=Z,5µm,20.0s
KURK  Kurchatov        47.35 304  eP     P      13 00 30.5 -1.5
KURK  Kurchatov        47.35 304  eP     P      13 00 30.7 -1.3
      comp=Z,42nm,0.8s
KURK                              eP     P      13 00 31.4 -0.6
KURK                              ePcP   PcP    13 02 02.6  0.0
KURK                              LR     LR
      comp=Z,7µm,19.0s
KURK  Kurchatov        47.35 304  P      P      13 00 31.2 -0.8
      SNR=23
KURK  Kurchatov        47.35 304c iP     P      13 00 30.5 -1.5
KURK                              pmax   pmax
      comp=Z,36nm,0.7s
KURK                              MLR    MLR
      comp=Z,6µm,16.0s
MANU  Manus Island     47.37 186  PFAKE         13 00 50.0  +17
MANU                              LR     LR
      comp=Z,7µm,19.0s
KURBB Kurchatov Arra   47.44 304  P      P      13 00 31.4 -1.3
      comp=Z,20nm,0.6s,baz=73,slow=8.6,SNR=88
KURBB                             PcP    PcP    13 02 02.6 -0.3
      comp=Z,5.0nm,0.6s,baz=70,slow=3.6,SNR=3.6
TARA  Tarawa           47.64 151  PFAKE         13 00 50.0  +15
TARA                              LR     LR
      comp=Z,12µm,19.0s
DIB   Dawson Inlet,    47.86  52  eP     P      13 00 36.9 +1.0
      comp=Z,23nm,0.7s
DIB                               LR     LR
      comp=Z,6µm,19.0s
SKNT  Sakolnakorn      48.77 250  P      P      13 00 44.4 +1.0
      comp=Z,21nm,1.2s,comp=Z,879nm
KHLH  Kahului Airpor   48.78 102  PFAKE         13 01 00.0  +17
KHLH                              LR     LR
      comp=Z,5µm,20.0s
HLK   Haleakala        48.99 102  PFAKE         13 01 00.0  +15
HLK                               LR     LR
      comp=Z,5µm,20.0s
RABL  Rabaul           49.35 179  eP     P      13 00 48.8 +1.1
      comp=Z,85nm,1.0s
RABL                              LR     LR
      comp=Z,7µm,19.0s
TNTI  Ternate          49.35 213  PFAKE         13 01 00.0  +12
TNTI                              LR     LR
      comp=Z,2µm,18.0s
MYLDM Lahad Datu       49.41 226  eP     P      13 00 46.7 -1.6
      comp=Z,213nm,1.8s
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LSA   Lhasa            49.41 273  PFAKE         13 01 00.0  +11
LSA                               LR     LR
      comp=Z,6µm,20.0s
LSA   Lhasa            49.41 273  i P    P      13 00 50.3 +1.6
      SNR=16
KKM   Kota Kinabalu    49.87 229  PFAKE         13 01 00.0 +8.1
KKM                               LR     LR
      comp=Z,6µm,20.0s
HUH   Hualalai         50.00 103  PFAKE         13 01 10.0  +17
HUH                               LR     LR
      comp=Z,5µm,18.0s
KHLU  Kahalu‘u         50.03 103  PFAKE         13 01 10.0  +17
KHLU                              LR     LR
      comp=Z,5µm,19.0s
CMAI  Chiengmai2       50.05 258  P      P      13 00 54.7 +1.3
      comp=Z,8.0nm,1.1s,comp=Z,283nm
PDGK  Podgornoye       50.09 295  P      P      13 00 53.3  0.0
PDGK                              pmax   pmax
      comp=Z,68nm,0.9s
POHA  Pohakuloa        50.16 103  PFAKE         13 01 10.0  +16
POHA                              LR     LR
      comp=Z,4µm,20.0s
SHLS  Shalkode         50.19 295  eP     P      13 00 52.6 -1.5
      comp=Z,41nm,0.9s
SHLS                              eS     S      13 08 01.0 -4.5
SHLS                              LR     LR     13 23 42.5
      comp=Z,1µm,13.5s
MLOA  Mauna Loa Obse   50.28 103  PFAKE         13 01 10.0  +15
MLOA                              LR     LR
      comp=Z,6µm,18.0s
HMH   Humu‘ula Sheep   50.30 103  PFAKE         13 01 10.0  +15
HMH                               LR     LR
      comp=Z,5µm,20.0s
UZB   Uzynbulak        50.47 295⇑iP      P      13 00 56.9 +0.6
      comp=Z,35nm,0.9s
UZB                               LR     LR     13 24 44.7
      comp=Z,1µm,13.9s
AIN   Ainahou          50.48 103  PFAKE         13 01 10.0  +13
AIN                               LR     LR
      comp=Z,6µm,19.0s
KPKS  Kokpek           50.53 296⇑iP      P      13 00 57.6 +0.9
      comp=Z,64nm,0.9s
KPKS                              eS     S      13 08 10.3  0.0
KPKS                              LR     LR     13 25 06.4
      comp=Z,3µm,12.4s
UWE   Uwekahuna        50.56 103  PFAKE         13 01 10.0  +13
UWE                               LR     LR
      comp=Z,5µm,19.0s
WRMHI West Rim         50.56 103  PFAKE         13 01 10.0  +13
WRMHI                             LR     LR
      comp=Z,6µm,20.0s
OBL   Observatory Le   50.56 103  PFAKE         13 01 10.0  +13
OBL                               LR     LR
      comp=Z,6µm,20.0s
SBLHI Steaming Bluff   50.57 103  PFAKE         13 01 10.0  +13
SBLHI                             LR     LR
      comp=Z,6µm,19.0s
SDHHI Sand Hill        50.58 103  PFAKE         13 01 10.0  +13
SDHHI                             LR     LR
      comp=Z,5µm,21.0s
KKO   Keanakako‘i      50.59 103  PFAKE         13 01 10.0  +13
KKO                               LR     LR
      comp=Z,5µm,20.0s
HLP   Hilina Pali      50.63 103  PFAKE         13 01 10.0  +12
HLP                               LR     LR
      comp=Z,6µm,18.0s
PUH   Pauahi           50.64 103  PFAKE         13 01 10.0  +12
PUH                               LR     LR
      comp=Z,5µm,20.0s
STCH  Steam Cracks     50.70 103  PFAKE         13 01 10.0  +12
STCH                              LR     LR
      comp=Z,5µm,20.0s
JCUZ  Jacuzzi          50.71 103  PFAKE         13 01 10.0  +12
JCUZ                              LR     LR
      comp=Z,4µm,19.0s
HULD  Heiheiahulu Di   50.78 102  PFAKE         13 01 10.0  +11
HULD                              LR     LR
      comp=Z,5µm,20.0s
ZHN   Zhinishke        50.84 295  eP     P      13 00 59.9 +0.9
      comp=Z,30nm,1.1s
ZHN                               eS     S      13 08 14.0 -0.6
ZHN                               LR     LR     13 25 29.6
      comp=Z,2µm,12.6s
CMMT  Chiang Mai       50.88 257  P      P      13 01 00.1 +0.6
      comp=Z,46nm,1.7s,comp=Z,1µm
CHTO  Chiang Mai       50.88 257  eP     P      13 01 00.1 +0.7
      comp=Z,56nm,1.1s
CHTO                              LR     LR
      comp=Z,6µm,19.0s
CHTO  Chiang Mai       50.88 257  P      P      13 01 00.6 +1.1
      SNR=16
CHTO  Chiang Mai       50.88 257  P      P      13 01 00.2 +0.7
      comp=Z,211nm,1.1s,comp=Z,5µm
SATY  Saty             50.91 295⇑iP      P      13 01 00.6 +1.0
      comp=Z,52nm,1.0s
SATY                              eS     S      13 08 15.4 -0.2
SATY                              LR     LR     13 25 49.1
      comp=Z,3µm,11.9s
PHIT  Phitsanulok      51.01 254  P      P      13 01 02.4 +2.0
      comp=Z,30nm,0.9s
BVAR  Borovoye Array   51.01 310  P      P      13 00 59.0 -1.0
      comp=Z,13nm,0.7s,baz=43,slow=7.2,SNR=60
BVAR                              PcP    PcP    13 02 16.3 +0.4
      comp=Z,14nm,0.7s,baz=62,slow=3.4,SNR=4.2
BVAR                              LR     LR     13 24 53.2
      comp=Z,16µm,18.4s,baz=56,slow=39
BVAR  Borovoye Array   51.01 310  P      P      13 00 59.0 -1.0
BVAR                              pmax   pmax
      comp=Z,13nm,0.7s
BVAR                              MLR    MLR
      comp=Z,16µm,18.5s
BRVK  Borovoye         51.05 310  eP     P      13 00 59.3 -1.0
BRVK  Borovoye         51.05 310  eP     P      13 00 59.7 -0.6
      comp=Z,34nm,0.8s
BRVK                              LR     LR
      comp=Z,17µm,18.0s
BRVK  Borovoye         51.05 310  P      P      13 01 00.4 +0.1
      SNR=20
BRVK  Borovoye         51.05 310c iP     P      13 00 59.3 -1.0
BRVK                              pmax   pmax
      comp=Z,33nm,0.8s
BRVK                              MLR    MLR
      comp=Z,16µm,18.0s
PBKT  Sadao Pong       51.07 253  P      P      13 01 02.2 +1.4
      comp=Z,37nm,1.1s,comp=Z,1µm
BRZS  Berezniki        51.10 305  eP     P      13 00 59.9 -0.9
      comp=Z,13nm,0.6s
BRZS                              eS     S      13 08 16.1 -1.8
BRZS                              LR     LR     13 23 30.2
      comp=Z,5µm,16.1s
FAKI  Fak Fak          51.12 205  eP     P      13 01 02.7 +1.5
      comp=Z,60nm,1.1s
FAKI                              LR     LR
      comp=Z,7µm,20.0s
CM31  Chiang Mai Arr   51.13 256  eP     P      13 01 02.7 +1.4
CM31                              ePcP   PcP    13 02 18.0 +1.2
CMAR  Chiang Mai Arr   51.13 256  P      P      13 01 01.6 +0.3
      comp=Z,10nm,0.8s,baz=38,slow=7.7,SNR=50
CMAR                              PcP    PcP    13 02 18.0 +1.2
      comp=Z,4.6nm,0.7s,baz=15,slow=3.1,SNR=4.7
CMAR                              LR     LR     13 25 57.5
      comp=Z,7µm,18.4s,baz=48,slow=40
CMAR  Chiang Mai Arr   51.13 256  P      P      13 01 01.6 +0.3
CMAR                              pmax   pmax
      comp=Z,11nm,0.8s
CMAR                              MLR    MLR
      comp=Z,7µm,18.4s
CM01  Chiang Mai Arr   51.14 256  eP     P      13 01 01.7 +0.3
PRZ   Przheval’sk      51.20 295  eP     P      13 01 03.1 +1.3
      comp=Z,133nm,1.0s
PRZ   Przheval’sk      51.20 295  eP     P      13 01 03.1 +1.3
PRZ                               pmax   pmax
      comp=Z,133nm,1.0s
SHL   Shillong         51.40 269  eP     P      13 01 03.9 +0.4
      comp=Z,170nm,0.9s
SHL   Shillong         51.40 269  eP     P      13 01 03.9 +0.4
SHL                               pmax   pmax
      comp=Z,171nm,0.9s
MDOK  Medeo            51.72 296  i P    P      13 01 06.3 +0.6
      comp=Z,1µm,0.8s
MDOK                              eS     S      13 08 26.3 -0.5
MDOK                              LR     LR     13 23 26.5
      comp=Z,8µm,16.4s
KUU   Kurty            51.80 297⇑iP      P      13 01 06.0 -0.1
      comp=Z,50nm,0.8s
KUU                               eS     S      13 08 26.6 -1.2
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KUU				LR	LR	13 23 31.6	
	comp=Z,9µm,16.6s						
MRSI	Marisa	51.88	219	P	P	13 01 07.9	+1.1
	comp=Z,54nm,1.1s,comp=Z,972nm						
TARG	Taragay, Kyrgy	51.96	294	*e*P	P	13 01 08.3	+0.5
	comp=Z,140nm,0.9s						
TARG				LR	LR		
	comp=Z,15µm,18.0s						
RES	Resolute Bay	52.44	18	P	P	13 01 08.7	-1.7
	comp=Z,36nm,0.9s,baz=3.3,slow=9.8,SNR=18						
RES	Resolute Bay	52.44	18	*e*P	P	13 01 10.0	-0.3
RES	Resolute Bay	52.44	18	*e*P	P	13 01 10.0	-0.3
	comp=Z,45nm,1.0s						
RES				LR	LR		
	comp=Z,5µm,20.0s						
YKW3	Yellowknife Ar	52.55	36	*e*P	P	13 01 11.3	0.0
	comp=Z,38nm,0.9s						
YKW3				LR	LR		
	comp=Z,4µm,21.0s						
YKA	Yellowknife Ar	52.59	36	P	P	13 01 11.8	+0.2
	comp=Z,19nm,0.7s,baz=298,slow=7.2,SNR=42						
YKB5	Yellowknife Ar	52.59	36	*e*P	P	13 01 11.8	+0.2
BTLS	Baital	52.66	299⇑	*e*P	P	13 01 12.5	+0.1
	comp=Z,8.6nm,1.0s						
BTLS				*e*S	S	13 08 38.4	-0.9
BTLS				LR	LR	13 25 05.7	
	comp=Z,2µm,16.2s						
ULHL	Ulahol	52.70	295	P	P	13 01 14.3	+1.3
	SNR=21						
UMPA	Umpang Tak	52.75	254	P	P	13 01 16.7	+3.2
	comp=Z,15nm,0.9s,comp=Z,560nm						
TKM2	Tokmak 2	52.76	296	P	P	13 01 14.6	+1.1
	SNR=78						
TKM2	Tokmak 2	52.76	296	P	P	13 01 14.1	+0.6
TKM2				pmax	pmax		
	comp=Z,64nm,1.0s						
UTHA	Uthaitani	52.82	253	P	P	13 01 15.6	+1.7
	comp=Z,13nm,0.9s,comp=Z,116nm						
TAPN	Taplejung	53.24	273	*e*P	P	13 01 20.4	+3.1
	comp=Z,134nm,0.8s						
APSI	Ampana	53.24	219	P	P	13 01 18.5	+1.5
	comp=Z,42nm,1.0s,comp=Z,806nm						
CHMS	Chumysh	53.26	297	P	P	13 01 17.8	+0.9
	SNR=19						
USP	Ospenovka	53.27	297	P	P	13 01 17.7	+0.6
	SNR=179						
KBK	Karagaybulak	53.31	296	P	P	13 01 18.6	+1.1
	SNR=74						
BRDH	Bariadhala	53.40	266	LR	LR	13 26 20.0	
	comp=Z,4µm,19.7s,baz=71,slow=39						
KZA	Kyzart	53.42	296	P	P	13 01 20.4	+1.8
	SNR=106						
FRU	Bishkek	53.42	297	*e*P	P	13 01 20.0	+1.8
FRU				*e*		13 02 30.0	
FRU				*e*S	S	13 08 48.0	-1.9
FRU				*e*		13 11 04.0	
FRU				pmax	pmax		
	comp=Z,170nm,1.8s						
FRU1	Bishkek	53.43	297	*e*P	P	13 01 18.8	+0.5
	comp=Z,102nm,0.8s						
FRU1				LR	LR		
	comp=Z,14µm,18.0s						
AAK	Ala-Archa	53.60	297	P	P	13 01 20.6	+1.0
	SNR=66						
AAK	Ala-Archa	53.60	297	*e*P	P	13 01 20.1	+0.5
AAK	Ala-Archa	53.60	297	*e*P	P	13 01 20.6	+1.0
	comp=Z,108nm,0.8s						
AAK				LR	LR		
	comp=Z,16µm,18.0s						
AAK	Ala-Archa	53.60	297	P	P	13 01 20.1	+0.5
AAK				pmax	pmax		
	comp=Z,117nm,0.9s						
KBS	Kingsbay	53.71	351	*e*P	P	13 01 19.5	-0.2
KBS	Kingsbay	53.71	351	*e*P	P	13 01 19.8	+0.1
	comp=Z,112nm,0.9s						
KBS				LR	LR		
	comp=Z,6µm,20.0s						
KBS	Kingsbay	53.71	351	*e*P	P	13 01 19.5	-0.2
KBS				IAmb	IAmb	13 01 21.1	
	comp=Z,115nm,0.9s						
ODAN	Odare	53.76	273	*e*P	P	13 01 22.0	+0.9
	comp=Z,97nm,0.9s						
SPA0	Spitsbergen Ar	53.80	350	*e*P	P	13 01 19.3	-1.1
SPA0	Spitsbergen Ar	53.80	350	*e*P	P	13 01 19.9	-0.4
SPA0				IAmb	IAmb	13 01 22.1	
	comp=Z,44nm,0.5s						
SPITS	Spitsbergen Ar	53.80	350	P	P	13 01 19.3	-1.1
	comp=Z,54nm,1.0s,baz=16,slow=7.5,SNR=26						
SRDT	SRDT	53.90	252	P	P	13 01 24.7	+2.9
	comp=Z,32nm,1.4s						
EKS2	Erkin-Say	54.04	297	P	P	13 01 23.6	+0.8
	SNR=93						
JIRN	Jiri	54.12	275	*e*P	P	13 01 24.8	+1.0
	comp=Z,372nm,0.8s						
GUN	Gumba	54.18	275	*e*P	P	13 01 25.9	+1.6
	comp=Z,213nm,0.8s						
SVE	Sverdlovsk	54.20	317*d*	*e*P	P	13 01 22.3	-1.3
SVE				*e*		13 03 29.1	
SVE				*e*S	S	13 08 54.7	-5.2
SVE				pmax	pmax		
	comp=Z,47nm,0.9s						
SVE				MLR	MLR		
	comp=Z,9µm,16.0s						
RAMN	Ramite	54.26	274	*e*P	P	13 01 25.4	+0.7
	comp=Z,283nm,0.7s						
KSH	Kashi	54.31	293	P	P	13 01 29.3	+4.5
KSH				sP	sP	13 01 42.6	+12
KSH				*e*PcP	PcP	13 02 32.0	+3.3
KSH				S	S	13 09 03.4	+1.3
KSH				ScS	ScS	13 11 12.1	-1.6
KSH				SS	SS	13 12 45.3	+1.6
KSH				pmax	pmax		
	comp=Z,92nm,0.9s						
KSH				pmax	pmax		
	comp=Z,2µm,7.3s						
KSH				LR	LR		
	comp=Z,6µm,18.6s						
KSH				LR	LR		
	comp=Z,5µm,13.4s						
KSH				LR	LR		
	comp=Z,3µm,20.4s						
AML	Almayashu	54.37	296	P	P	13 01 27.3	+1.8
	SNR=7.2						
PHET	Kaeng Krachan	54.59	251	P	P	13 01 29.2	+2.3
	comp=Z,33nm,0.7s,comp=Z,314nm						
KKN	Kakani	54.68	275	*e*P	P	13 01 28.8	+1.1
	comp=Z,292nm,0.8s						
PMG	Port Moresby	54.68	186	LR	LR	13 21 23.3	
	comp=Z,2µm,21.9s,baz=323,slow=32						
PKIN	Phulchoki	54.73	275	*e*P	P	13 01 29.2	+1.1
	comp=Z,126nm,0.7s						
LLLB	Lillooet	54.88	51	*e*P	P	13 01 29.6	+0.9
	comp=Z,28nm,0.9s						
LLLB				LR	LR		
	comp=Z,7µm,19.0s						
DMN	Daman	54.91	275	*e*P	P	13 01 30.5	+1.1
	comp=Z,234nm,0.8s						
MNAS	Manas	54.93	297	P	P	13 01 30.0	+0.7
MNAS				pmax	pmax		
	comp=Z,125nm,1.0s						
GKN	Gorkha	55.00	276	*e*P	P	13 01 30.9	+0.9
	comp=Z,312nm,1.0s						
PGC	Sidney	55.01	54	PFAKE		13 01 40.0	+10
PGC				LR	LR		
	comp=Z,6µm,21.0s						
SBUM	Sibu	55.03	231	PFAKE		13 01 40.0	+10
SBUM				LR	LR		
	comp=Z,6µm,20.0s						
HNR	Honiara	55.05	170	LR	LR	13 27 42.6	
	comp=Z,6µm,18.0s,baz=318,slow=39						
ARU	Arti	55.39	318	*e*P	P	13 01 30.7	-1.5
ARU	Arti	55.39	318	*e*P	P	13 01 30.5	-1.7
	comp=Z,46nm,0.9s						
ARU				LR	LR		
	comp=Z,8µm,18.0s						
ARU	Arti	55.39	318*c*	*i*P	P	13 01 30.5	-1.7
ARU						13 02 29.6	
ARU				*e*S	S	13 09 14.3	-1.6
ARU						13 11 16.0	
ARU				SS	SS	13 13 01.4	+1.6
ARU				pmax	pmax		
	comp=Z,60nm,1.2s						
ARU				MLR	MLR		
	comp=Z,10µm,16.0s						
A04D	Lummi Island	55.40	53	P	P	13 01 32.6	+0.2
	baz=302						
DANN	Dangsing	55.40	277	*e*P	P	13 01 34.5	+1.5
	comp=Z,540nm,0.9s						
NLWA	Neilton Lookou	55.43	55	*e*P	P	13 01 33.5	+0.8
	comp=Z,21nm,0.8s						
NLWA				LR	LR		
	comp=Z,5µm,21.0s						
SFK	Sufi-Kurgan	55.64	294	P	P	13 01 35.0	+0.5
SFK				pmax	pmax		
	comp=Z,191nm,1.0s						
TULEG	Thule	55.66	11	*e*P	P	13 01 34.6	+0.8
	comp=Z,68nm,0.8s						
TULEG				LR	LR		
	comp=Z,14µm,20.0s						
KK31	Karatay Array	55.84	299	*e*P	P	13 01 35.8	+0.1
KK31	Karatay Array	55.84	299	*i* P	P	13 01 35.7	+0.1
KK31				pmax	pmax		
	comp=Z,62nm,0.8s						
KKAR	Karatay Array	55.84	299	*e*P	P	13 01 35.8	+0.1
KKAR	Karatay Array	55.84	299	*e*P	P	13 01 35.8	+0.1
KOLN	Koldanda	55.87	276	*e*P	P	13 01 37.2	+0.9
	comp=Z,184nm,0.9s						
B05A	Bryant	55.98	54	P	P	13 01 36.9	+0.3
	baz=302,SNR=14						
B05A				S	S	13 09 23.2	-0.8
	baz=302						
E03A	Lebam	56.05	56	PFAKE		13 01 50.0	+13
E03A				LR	LR		
	comp=Z,4µm,19.0s						
PYUN	Piuthan	56.09	277	*e*P	P	13 01 38.9	+1.0
	comp=Z,448nm,0.9s						
B06A	Marblemount	56.19	53	*e*P	P	13 01 39.1	+1.1
	comp=Z,108nm,1.6s						
B06A				LR	LR		
	comp=Z,5µm,20.0s						
BJO	Bjornoya	56.29	346	*e*P	P	13 01 37.5	-0.8
MTKI	Muara Teweh, K	56.48	226	P	P	13 01 43.7	+3.3
	comp=Z,38nm,1.0s,comp=Z,4µm						
D05A	Enumclaw	56.62	55	*e*P	P	13 01 43.0	+1.9
	comp=Z,63nm,1.3s						
D05A				LR	LR		
	comp=Z,3µm,21.0s						
F04D	Rainier, OR	56.62	56	P	P	13 01 41.4	+0.2
	baz=303						
IUG	Iuzhnay	56.66	298	*i* P	P	13 01 42.7	+1.1
	comp=Z,96nm,0.8s						
IUG				LR	LR	13 26 51.4	
	comp=Z,4µm,17.3s						
SPSI	Sidrap Palu	56.79	219	P	P	13 01 44.5	+1.9
	comp=Z,15nm,1.2s,comp=Z,624nm						
PNT	Penticton	56.81	51	*e*P	P	13 01 43.4	+0.9
PNT	Penticton	56.81	51	*e*P	P	13 01 43.4	+0.9
C06D	Leavenworth	56.85	53	P	P	13 01 41.9	-0.8
	baz=303						
KSM	Kuching	56.89	232	*e*P	P	13 01 44.2	+0.8
	comp=Z,22nm,0.9s						
KSM				LR	LR		
	comp=Z,3µm,20.0s						
G03D	McMinnville, O	56.95	57	P	P	13 01 43.6	+0.1
	baz=303						
LON	Longmire	56.96	55	*e*P	P	13 01 44.8	+1.1
	comp=Z,58nm,1.8s						
LON				LR	LR		
	comp=Z,3µm,20.0s						
LON	Longmire	56.96	55	*e*P	P	13 01 44.8	+1.1
LON				pmax	pmax		
	comp=Z,58nm,1.8s						
LON				MLR	MLR		
	comp=Z,3µm,20.0s						
COR	Corvallis	57.27	58	*e*P	P	13 01 48.1	+2.4
	comp=Z,136nm,1.3s						
COR				LR	LR		
	comp=Z,4µm,20.0s						
COR	Corvallis	57.27	58	*e*P	P	13 01 48.1	+2.4
COR				pmax	pmax		
	comp=Z,136nm,1.3s						
COR				MLR	MLR		
	comp=Z,4µm,20.0s						
LTY	Liberty	57.34	54	*e*P	P	13 01 47.4	+1.1
	comp=Z,73nm,1.5s						
LTY				LR	LR		
	comp=Z,4µm,21.0s						
STKI	Sintang	57.42	230	P	P	13 01 49.7	+2.6
	comp=Z,30nm,0.8s						
B08A	Colville Reser	57.49	52	*e*P	P	13 01 47.4	+0.1
	comp=Z,28nm,0.8s						
B08A				LR	LR		
	comp=Z,4µm,20.0s						
KEBM	Edson Butte	57.60	60	PFAKE		13 02 00.0	+12
KEBM				LR	LR		
	comp=Z,4µm,19.0s						
I03D	Drain, OR	57.73	59	P	P	13 01 50.3	+1.3
	baz=304,SNR=10						
KAPI	Kappang	57.73	219	PFAKE		13 02 00.0	+11
KAPI				LR	LR		
	comp=Z,2µm,19.0s						
H04A	Detroit Lake	57.88	57	*e*P	P	13 01 50.5	+0.4
	comp=Z,122nm,1.3s						
H04A				LR	LR		
	comp=Z,3µm,19.0s						
KNTN	Kanton	57.88	135	PFAKE		13 02 00.0	+10
KNTN				LR	LR		
	comp=Z,7µm,19.0s						
DAG	Danmarks Havn	57.98	357	*i* P	P	13 01 49.0	-1.3
	comp=Z,78nm,1.1s						
DAG				*i* S	S	13 09 48.2	-1.4
DAG	Danmarks Havn	57.98	357	*i* P	P	13 01 49.0	-1.3
DAG				*i* S	S	13 09 48.2	-1.4
DAG				pmax	pmax		
	comp=Z,78nm,1.1s						
PRGR	Permogore	58.02	327	*e*P	P	13 01 49.9	-0.8
PRGR				*e**PP	sP	13 01 59.7	+2.7
PRGR				*e**SP	pP	13 02 03.9	+8.7
PRGR				pmax	pmax		
	comp=Z,62nm,0.7s						
KBO	Bosley Butte	58.03	61	PFAKE		13 02 00.0	+8.7
KBO				LR	LR		
	comp=Z,4µm,18.0s						
G05D	Wamic, OR	58.08	56	P	P	13 01 51.9	+0.4
	baz=304,SNR=13						
E07A	Sunnyside	58.19	54	PFAKE		13 02 00.0	+7.8
E07A				LR	LR		
	comp=Z,4µm,21.0s						
SKLT	Songkhla	58.21	245	P	P	13 01 54.7	+2.0
	comp=Z,74nm,0.9s,comp=Z,1µm						
APA	Apatity	58.23	337⇓	*i*P	P	13 01 50.2	-1.9
APA				pmax	pmax		
	comp=Z,25nm,0.7s						
I04A	Tendick Farm,	58.24	58	P	P	13 01 52.6	-0.1
	baz=304,SNR=13						
TRTT	Trang	58.31	247	P	P	13 01 55.7	+2.3
	comp=Z,12nm,0.8s,comp=Z,401nm						
KEV	Kevo	58.32	340	*e*P	P	13 01 51.5	-1.3
	comp=Z,75nm,0.7s						
KEV				LR	LR		
	comp=Z,6µm,20.0s						
KEV	Kevo	58.32	340	*e*P	P	13 01 51.5	-1.3
KEV				pmax	pmax		
	comp=Z,75nm,0.7s						
KEV				MLR	MLR		
	comp=Z,6µm,20.0s						
C09A	Chrisman Ranch	58.39	52	*e*P	P	13 01 54.4	+0.8
	comp=Z,34nm,0.8s						
C09A				LR	LR		
	comp=Z,3µm,20.0s						
HAMF	Hammerfest	58.41	342	*e*P	P	13 01 52.7	-0.7
HAMF				IAmb	IAmb	13 01 54.0	
	comp=Z,64nm,0.9s						
D08A	Wollman Farm,	58.44	53	*e*P	P	13 01 55.1	+1.2
	comp=Z,74nm,1.6s						
D08A				LR	LR		
	comp=Z,4µm,20.0s						
L02D	Cave Junction,	58.44	60	P	P	13 01 54.2	+0.2
	baz=305						
HAWA	Hanford	58.47	54	*e*P	P	13 01 54.6	+0.4
	comp=Z,43nm,1.0s						
HAWA				LR	LR		
	comp=Z,4µm,21.0s						
G06A	Carlson Farm,	58.48	56	*e*P	P	13 01 56.1	+1.8
	comp=Z,169nm,1.7s						
G06A				LR	LR		
	comp=Z,3µm,19.0s						
F07A	Phinny Hill Vi	58.52	55	*e*P	P	13 01 56.6	+2.1
	comp=Z,65nm,0.8s						
F07A				LR	LR		
	comp=Z,4µm,19.0s						
I05D	Terrebonne, OR	58.57	57	P	P	13 01 56.0	+1.0
	baz=305,SNR=14						
HUMO	Hull Mountain	58.58	60	*e*P	P	13 01 57.1	+2.0
	comp=Z,93nm,1.8s						
HUMO				LR	LR		
	comp=Z,3µm,20.0s						
AB31	Akbulak array	58.59	310	*i* P	P	13 01 53.8	-1.1
AB31				pmax	pmax		
	comp=Z,20nm,0.6s						
ABKAR	Akbulak array	58.59	310	*e*P	P	13 01 54.4	-0.6
E08A	Dider Farm, El	58.68	54	*e*P	P	13 01 56.8	+1.2
	comp=Z,28nm,0.9s						
E08A				LR	LR		
	comp=Z,4µm,21.0s						
J04D	Umpqua Nationa	58.74	59	P	P	13 01 57.1	+0.8
	baz=305,SNR=10						
KULLO	Kullorsuaq	58.77	9	*i* P	P	13 01 55.5	-0.3
KULLO				*i* S	S	13 09 57.7	-2.2
KULLO	Kullorsuaq	58.77	9	*i* P	P	13 01 55.5	-0.3
KULLO				*i* S	S	13 09 57.7	-2.2
ARA0	ARCESS Array S	58.84	341	*e*P	P	13 01 55.9	-0.6
ARCES	ARCESS Array B	58.84	341	P	P	13 01 55.9	-0.6
	comp=Z,74nm,0.8s,baz=42,slow=5.7,SNR=99						
ARCES				LR	LR	13 31 51.7	
	comp=Z,7µm,18.3s,baz=26,slow=41						
ARE0	ARCESS Array S	58.84	341	*e*P	P	13 01 56.4	-0.1
	comp=Z,77nm,0.8s						
ARE0	ARCESS Array S	58.84	341	*e*P	P	13 01 55.9	-0.5
ARE0				IAmb	IAmb	13 01 58.2	
	comp=Z,75nm,0.8s						
AKTO	Aktyubinsk	58.94	312	P	P	13 01 57.1	-0.3
	comp=Z,16nm,0.7s,baz=53,slow=7.4,SNR=32						
AKTO				LR	LR	13 30 16.6	
	comp=Z,27µm,19.1s,baz=47,slow=39						
JCC	Jacoby Creek,	58.95	62	PFAKE		13 02 10.0	+12
JCC				LR	LR		
	comp=Z,3µm,18.0s						
KHMM	Horse Mountain	59.10	62	*e*P	P	13 02 00.8	+1.9
	comp=Z,51nm,1.1s						
PINE	Pine Mountain	59.12	57	*e*P	P	13 01 59.7	+0.7
	comp=Z,43nm,0.8s						
PINE				LR	LR		
	comp=Z,4µm,19.0s						
E09A	Wood Farm, Sta	59.19	54	*e*P	P	13 02 00.7	+1.6
	comp=Z,45nm,0.8s						
E09A				LR	LR		
	comp=Z,4µm,20.0s						
YBH	Yreka Blue Hor	59.23	60	P	P	13 01 59.9	+0.2
	comp=Z,12nm,0.6s,baz=287,slow=11,SNR=43						
YBH				LR	LR	13 24 14.9	
	comp=Z,3µm,21.3s,baz=310,slow=33						
YBH	Yreka Blue Hor	59.23	60	*e*P	P	13 02 00.8	+1.1
	comp=Z,56nm,1.4s						
J05D	Fort Rock, OR	59.24	58	P	P	13 02 00.9	+1.1
	baz=305,SNR=17						
K04D	Chiloquin, OR	59.30	59	P	P	13 02 00.5	+0.3
	baz=305						
M02C	Callahan	59.34	61	P	P	13 02 01.2	+0.8
	baz=306,SNR=9.1						
G08A	Pilot Rock	59.42	55	*e*P	P	13 01 58.5	-2.5
	comp=Z,26nm,1.0s						
G08A				LR	LR		
	comp=Z,3µm,21.0s						
NIL	Nilore	59.45	288	*e*P	P	13 02 02.5	+1.3
	comp=Z,264nm,0.9s						
NIL				LR	LR		
	comp=Z,6µm,18.0s						
NIL	Nilore	59.45	288	*e*P	P	13 02 02.5	+1.3
NIL				pmax	pmax		
	comp=Z,264nm,0.9s						
NIL				MLR	MLR		
	comp=Z,6µm,18.0s						
KMRM	Mail Ridge	59.49	62	PFAKE		13 02 10.0	+8.6
KMRM				LR	LR		
	comp=Z,4µm,20.0s						
COEN	Coen	59.56	190	*e*P	P	13 02 02.5	+0.5
	comp=Z,20nm,0.6s						
COEN				LR	LR		
	comp=Z,3µm,20.0s						
KULM	Kulim	59.63	244	*e*P	P	13 02 03.6	+1.1
	comp=Z,34nm,0.8s						
KULM				LR	LR		
	comp=Z,3µm,21.0s						
N02D	Trinity Center	59.67	61	P	P	13 02 03.4	+0.7
	baz=306,SNR=13						
M04C	Macdoel	59.74	60	P	P	13 02 03.9	+0.8
	baz=306,SNR=13						
K05A	Summer Lake	59.76	58	*e*P	P	13 02 04.5	+1.0
	comp=Z,78nm,1.1s						
K05A				LR	LR		
	comp=Z,4µm,20.0s						
KTK1	Kautokeino	59.77	341	*e*P	P	13 02 02.4	-0.4
I07A	Izee	59.80	56	*e*P	P	13 02 05.4	+1.8
	comp=Z,25nm,1.3s						
KCPM	Cahto Peak	59.88	63	PFAKE		13 02 20.0	+16
KCPM				LR	LR		
	comp=Z,3µm,19.0s						
WDC	Whiskeytown Da	60.01	61	*e*P	P	13 02 05.4	+0.5
	comp=Z,96nm,1.5s						
WDC				LR	LR		
	comp=Z,3µm,20.0s						
WDC	Whiskeytown Da	60.01	61	*e*P	P	13 02 05.4	+0.5
WDC				pmax	pmax		
	comp=Z,96nm,1.5s						
WDC				MLR	MLR		
	comp=Z,3µm,20.0s						
IPM	Ipoh	60.01	243	PFAKE		13 02 20.0	+15
IPM				LR	LR		
	comp=Z,4µm,18.0s						
F10A	Beach Ranch, E	60.02	54	*e*P	P	13 02 06.3	+1.3
	comp=Z,153nm,1.8s						
F10A				LR	LR		
	comp=Z,4µm,21.0s						
WALA	Waterton Lakes	60.05	49	*e*P	P	13 02 05.3	+0.1
	comp=Z,45nm,0.8s						
WALA				LR	LR		
	comp=Z,7µm,20.0s						
PBA	Port Blair	60.14	256	*e*P	P	13 02 06.8	+0.7
	comp=Z,104nm,1.0s						
SOEI	Soe	60.20	212	*e*P	P	13 02 05.6	-1.0
	comp=Z,146nm,1.0s						
TRO	Tromso	60.22	343	*e*P	P	13 02 05.6	-0.3
TRO				IAmb	IAmb	13 02 07.3	
	comp=Z,226nm,0.9s						
MYKOM	Kota Tinggi	60.38	239	*e*P	P	13 02 09.3	+1.6
	comp=Z,20nm,0.9s						
MYKOM				LR	LR		
	comp=Z,4µm,18.0s						
MOD	Modoc Plateau	60.60	59	*e*P	P	13 02 09.0	-0.1
	comp=Z,69nm,1.2s						
MOD				LR	LR		
	comp=Z,3µm,20.0s						
HOPS	Hopland Field	60.61	63	PFAKE		13 02 20.0	+11
HOPS				LR	LR		
	comp=Z,5µm,19.0s						
JTMT	Jette	60.62	51	*e*P	P	13 02 10.6	+1.5
	comp=Z,28nm,0.8s						
JTMT				LR	LR		
	comp=Z,4µm,20.0s						
O03D	Paynes Creek	60.63	61	P	P	13 02 09.0	-0.3
	baz=306,SNR=19						
BMO	Blue Mountains	60.63	55	*e*P	P	13 02 10.8	+1.5
	comp=Z,45nm,1.3s						
BMO				LR	LR		
	comp=Z,3µm,20.0s						
BMO	Blue Mountains	60.63	55	*e*P	P	13 02 10.8	+1.5
BMO				pmax	pmax		
	comp=Z,45nm,1.3s						
BMO				MLR	MLR		
	comp=Z,3µm,20.0s						
KLMR	Klimovskoe	60.80	329	*e*P	P	13 02 08.6	-1.3
KLMR				*e*S	S	13 10 24.0	-2.4
KLMR				pmax	pmax		
	comp=Z,52nm,0.8s						
KLMR				MLR	MLR		
	comp=Z,5µm,15.0s						
KLMR	Klimovskoe	60.80	329	*e*P	P	13 02 08.6	-1.3
KLMR				AMP		13 02 12.6	
	comp=Z,52nm,0.8s						
KLMR				*e*S	S	13 10 24.0	-2.4
KLMR				*e*S	S	13 10 24.0	-2.4
KLMR				LQ	LQ	13 23 48.5	
KLMR				LQ	LQ	13 23 48.5	
KLMR				LR	LR	13 27 28.5	
KLMR				AMP		13 32 55.9	
	comp=Z,5µm,15.1s						
J08A	Circle Bar Ran	60.83	57	*e*P	P	13 02 11.4	+0.8
	comp=Z,87nm,1.3s						
J08A				LR	LR		
	comp=Z,4µm,19.0s						

BATI	Baumata	60.84	212	P	P	13 02 11.5	+0.7
	comp=Z,24nm,0.6s,baz=0.0,slow=1.0,SNR=4.6						
BATI				LR	LR	13 26 58.1	
	comp=Z,1µm,21.8s,baz=57,slow=34						
MTN	Manton Dam	60.88	203	eP	P	13 02 11.4	+0.5
	comp=Z,45nm,1.0s						
GDXM	Geysers	60.89	63	PFAKE		13 02 20.0	+8.9
GDXM				LR	LR		
	comp=Z,6µm,19.0s						
MCCM	Marconi Confer	61.23	64	PFAKE		13 02 30.0	+17
MCCM				LR	LR		
	comp=Z,2µm,18.0s						
ORV	Oroville	61.26	62	eP	P	13 02 14.4	+1.0
	comp=Z,26nm,0.8s						
ORV				LR	LR		
	comp=Z,3µm,19.0s						
WVOR	Wild Horse Val	61.28	58	eP	P	13 02 13.8	0.0
	comp=Z,50nm,1.0s						
WVOR				LR	LR		
	comp=Z,4µm,20.0s						
WVOR	Wild Horse Val	61.28	58	eP	P	13 02 13.8	0.0
WVOR				pmax	pmax		
	comp=Z,50nm,1.0s						
WVOR				MLR	MLR		
	comp=Z,4µm,20.0s						
MSO	Missoula	61.35	51	P	P	13 02 14.8	+0.7
	baz=307,SNR=55						
MSO	Missoula	61.35	51	eP	P	13 02 14.2	+0.1
	comp=Z,66nm,0.9s						
MSO				LR	LR		
	comp=Z,3µm,20.0s						
CHLP	Challavanipeta	61.47	268	eP	P	13 02 15.7	+0.6
CHLP				IAmb	IAmb	13 02 18.6	
	comp=Z,41nm,1.0s						
CHLP				IVMs_BB	IVMs_BB	13 32 36.4	
	comp=Z,1µm,16.1s						
KBL	Kabul	61.70	292	eP	P	13 02 16.3	-0.5
	comp=Z,154nm,0.9s						
KBL				LR	LR		
	comp=Z,11µm,20.0s						
KBL	Kabul	61.70	292	eP	P	13 02 16.3	-0.5
KBL				pmax	pmax		
	comp=Z,154nm,0.9s						
KBL				MLR	MLR		
	comp=Z,11µm,20.0s						
BEKR	Beckworth	61.77	61	eP	P	13 02 16.9	-0.2
	comp=Z,44nm,1.0s						
BEKR				LR	LR		
	comp=Z,2µm,18.0s						
XMAS	Kiritimati	61.94	119	PFAKE		13 02 30.0	+12
XMAS				LR	LR		
	comp=Z,4µm,21.0s						
AFDM	Forest Hills D	61.95	62	eP	P	13 02 18.3	+0.1
	comp=Z,53nm,1.4s						
AFDM				LR	LR		
	comp=Z,3µm,19.0s						
LHMI	Lhok Sumawe	62.05	247	PFAKE		13 02 30.0	+11
LHMI				LR	LR		
	comp=Z,8µm,20.0s						
SUMG	Summit	62.13	3	eP	P	13 02 19.3	0.0
	comp=Z,247nm,0.9s						
SUMG				LR	LR		
	comp=Z,9µm,19.0s						
SUMG	Summit	62.13	3	i P	P	13 02 18.9	-0.4
SUMG				i S	S	13 10 41.8	-2.1
SUMG	Summit	62.13	3	i P	P	13 02 18.9	-0.4
SUMG				i S	S	13 10 41.8	-2.1
MFID	Camas Ranch	62.34	55	eP	P	13 02 22.3	+1.4
	comp=Z,34nm,1.0s						
MFID				LR	LR		
	comp=Z,2µm,22.0s						
STEI	Steigen	62.39	343	eP	P	13 02 19.9	-0.7
STEI				IAmb	IAmb	13 02 24.5	
	comp=Z,50nm,0.9s						
RUBR	Rubicon Trail	62.39	61	eP	P	13 02 22.9	+1.5
	comp=Z,70nm,1.0s						
RUBR				LR	LR		
	comp=Z,2µm,20.0s						
FFC	Flin Flon	62.40	39	eP	P	13 02 20.9	0.0
FFC	Flin Flon	62.40	39	eP	P	13 02 20.7	-0.2
	comp=Z,70nm,1.0s						
FFC				LR	LR		
	comp=Z,4µm,21.0s						
FFC	Flin Flon	62.40	39	eP	P	13 02 20.7	-0.2
FFC				pmax	pmax		
	comp=Z,71nm,1.0s						
FFC				MLR	MLR		
	comp=Z,4µm,21.0s						
PAHR	Pah Rah Range	62.47	60	eP	P	13 02 22.0	+0.3
	comp=Z,75nm,1.3s						
PAHR				LR	LR		
	comp=Z,4µm,18.0s						
VCNR	Virginia City	62.55	61	eP	P	13 02 23.0	+0.6
	comp=Z,39nm,0.8s						
VCNR				LR	LR		
	comp=Z,2µm,20.0s						
LOF	Lofoten	62.56	344	eP	P	13 02 21.9	+0.1
LOF				IAmb	IAmb	13 02 23.3	
	comp=Z,144nm,1.2s						
HRY	Holter Researc	62.58	50	eP	P	13 02 23.4	+1.0
PSI	Prapat	62.63	244	P	P	13 02 23.3	+0.2
	comp=Z,26nm,1.0s,baz=360,slow=4.0,SNR=6.1						
PSI				LR	LR	13 31 05.9	
	comp=Z,2µm,19.6s,baz=89,slow=37						
PSI	Prapat	62.63	244	eP	P	13 02 23.3	+0.2
	comp=Z,31nm,1.0s						
PNTR	Pine Nut	62.71	61	eP	P	13 02 24.0	+0.5
	comp=Z,51nm,0.6s						
PNTR				LR	LR		
	comp=Z,2µm,20.0s						
LRM	Limekiln Ridge	62.78	51	eP	P	13 02 24.0	+0.1
CMB	Columbia Colle	62.87	62	eP	P	13 02 24.2	-0.1
	comp=Z,26nm,0.9s						
CMB				LR	LR		
	comp=Z,2µm,20.0s						
CMB	Columbia Colle	62.87	62	eP	P	13 02 24.2	-0.1
CMB				pmax	pmax		
	comp=Z,26nm,0.9s						
CMB				MLR	MLR		
	comp=Z,2µm,20.0s						
HJGM	San Juan Grade	62.87	64	eP	P	13 02 28.7	+4.4
EGMT	Eagleton	62.87	48	P	P	13 02 24.8	+0.5
	baz=309,SNR=38						
EGMT	Eagleton	62.87	48	eP	P	13 02 24.7	+0.5
	comp=Z,56nm,0.8s						
EGMT				LR	LR		
	comp=Z,4µm,20.0s						
FCC	Fort Churchill	62.93	32	eP	P	13 02 24.4	+0.1
	comp=Z,40nm,0.6s						
FCC				LR	LR		
	comp=Z,5µm,20.0s						
FCC	Fort Churchill	62.93	32	eP	P	13 02 24.4	+0.1
FCC				pmax	pmax		
	comp=Z,40nm,0.6s						
FCC				MLR	MLR		
	comp=Z,5µm,20.0s						
SAO	San Andreas Ge	62.97	64	PFAKE		13 02 40.0	+15
SAO				LR	LR		
	comp=Z,4µm,18.0s						
DLMT	Dillon	62.99	52	eP	P	13 02 25.8	+0.7
	comp=Z,66nm,1.5s						
DLMT				LR	LR		
	comp=Z,2µm,20.0s						
YERR	Yerington	63.00	61	eP	P	13 02 25.8	+0.4
	comp=Z,55nm,0.9s						
YERR				LR	LR		
	comp=Z,3µm,20.0s						
HLID	Hailey	63.07	54	P	P	13 02 26.8	+1.0
	baz=308,SNR=41						
HLID	Hailey	63.07	54	eP	P	13 02 27.1	+1.3
	comp=Z,34nm,1.0s						
HLID				LR	LR		
	comp=Z,4µm,21.0s						
JMIC	Jan Mayen	63.08	353	eP	P	13 02 26.1	+0.9
LCCM	Lewis and Clar	63.09	51	eP	P	13 02 26.7	+0.9
WAKR	Walker	63.17	62	eP	P	13 02 27.1	+0.6
	comp=Z,63nm,1.2s						
WAKR				LR	LR		
	comp=Z,4µm,19.0s						
MCMT	McKenzie Canyo	63.17	53	eP	P	13 02 27.0	+0.5
BKNI	Bangkinang	63.24	240	P	P	13 02 31.1	+4.1
BKNI	Bangkinang	63.24	240	PFAKE		13 02 40.0	+13
BKNI				LR	LR		
	comp=Z,3µm,18.0s						
BMN	Battle Mountai	63.34	59	eP	P	13 02 27.6	0.0
	comp=Z,71nm,1.1s						
BMN				LR	LR		
	comp=Z,3µm,19.0s						
BMN	Battle Mountai	63.34	59	eP	P	13 02 27.6	0.0
BMN				pmax	pmax		
	comp=Z,71nm,1.1s						
BMN				MLR	MLR		
	comp=Z,3µm,19.0s						
BOZ	Bozeman (W)	63.38	51	P	P	13 02 28.5	+0.8
	baz=309,SNR=88						
BOZ	Bozeman (W)	63.38	51	eP	P	13 02 27.9	+0.2
	comp=Z,46nm,0.6s						
BOZ				LR	LR		
	comp=Z,3µm,20.0s						
KVN	Kaiserville	63.66	60	eP	P	13 02 29.8	0.0
	comp=Z,39nm,0.8s						
KVN				LR	LR		
	comp=Z,3µm,18.0s						
KVN	Kaiserville	63.66	60	eP	P	13 02 29.8	0.0
KVN				pmax	pmax		
	comp=Z,39nm,0.8s						
KVN				MLR	MLR		
	comp=Z,3µm,18.0s						
RYN	Ryan	63.66	61	eP	P	13 02 30.1	+0.4
	comp=Z,31nm,0.8s						
RYN				LR	LR		
	comp=Z,4µm,20.0s						
PMPB	Monarch Peak	63.72	64	PFAKE		13 02 40.0	+10
PMPB				LR	LR		
	comp=Z,3µm,19.0s						
NV01	Mina Array Sit	63.91	61	eP	P	13 02 31.0	-0.5
NVAR	Mina Array Bea	63.91	61	P	P	13 02 31.6	+0.1
	comp=Z,27nm,0.6s,baz=296,slow=6.9,SNR=240						
NVAR				LR	LR	13 27 19.0	
	comp=Z,4µm,20.2s,baz=58,slow=33						
MDPB	Devils Postpil	63.93	62	eP	P	13 02 32.5	+0.8
	comp=Z,34nm,1.0s						
MDPB				LR	LR		
	comp=Z,3µm,19.0s						
SMRI	Semarang	63.96	227	PFAKE		13 02 40.0	+8.3
SMRI				LR	LR		
	comp=Z,3µm,20.0s						
QLMT	Earthquake Lak	63.96	52	eP	P	13 02 32.8	+1.1
OMMB	Old Mammoth Mi	63.99	62	eP	P	13 02 32.6	+0.5
	comp=Z,32nm,1.3s						
OMMB				LR	LR		
	comp=Z,3µm,18.0s						
NV11	Mina Array Sit	64.00	61	eP	P	13 02 31.9	-0.1
	comp=Z,3.0nm,1.1s						
NV11				LR	LR		
	comp=Z,300nm,20.0s						
PVM	Polavaram	64.03	269	eP	P	13 02 32.4	+0.2
PVM				IAmb	IAmb	13 02 34.4	
	comp=Z,62nm,0.9s						
PVM				IVMs_BB	IVMs_BB	13 41 13.0	
	comp=Z,1µm,11.6s						
KONS	Konsvik	64.05	343	eP	P	13 02 31.9	+0.3
KONS				IAmb	IAmb	13 02 35.7	
	comp=Z,29nm,1.0s						
MOR8	Moi Rana	64.05	342	eP	P	13 02 29.8	-1.8
MOR8				IAmb	IAmb	13 02 32.0	
	comp=Z,106nm,0.8s						
MLAC	Mammoth, Mammo	64.08	62	P	P	13 02 33.1	+0.5
	baz=309						
YHB	Horse Butte	64.14	52	eP	P	13 02 33.4	+0.5
	comp=Z,44nm,0.8s						
YHB				LR	LR		
	comp=Z,2µm,20.0s						
YMR	Madison River	64.32	52	eP	P	13 02 35.5	+1.4
	comp=Z,34nm,0.8s						
YMR				LR	LR		
	comp=Z,3µm,18.0s						
PAGB	Antelope Grade	64.37	64	eP	P	13 02 35.8	+1.6
	comp=Z,100nm,1.3s						
PAGB				LR	LR		
	comp=Z,2µm,20.0s						
ILULI	Ilulissat	64.48	9	eP	P	13 02 34.2	-0.2
	comp=Z,73nm,0.7s						
ILULI				LR	LR		
	comp=Z,8µm,19.0s						
ILULI	Ilulissat	64.48	9	i P	P	13 02 33.7	-0.7
ILULI	Ilulissat	64.48	9	eP	P	13 02 33.7	-0.7
YFT	Old Faithful	64.53	52	eP	P	13 02 37.8	+2.3
	comp=Z,43nm,1.0s						
YFT				LR	LR		
	comp=Z,7µm,18.0s						
RPR	Rampur	64.60	272	eP	P	13 02 35.9	0.0
RPR				IAmb	IAmb	13 02 37.3	
	comp=Z,37nm,0.9s						
RPR				IVMs_BB	IVMs_BB	13 33 27.1	
	comp=Z,2µm,15.1s						
GSI	Gunungsitoli	64.64	244	P	P	13 02 39.4	+3.2
GSI	Gunungsitoli	64.64	244	PFAKE		13 02 50.0	+14
GSI				LR	LR		
	comp=Z,4µm,20.0s						
UGM	Wanagama	64.66	226	P	P	13 02 52.0	+16
UGM	Wanagama	64.66	226	PFAKE		13 02 50.0	+14
UGM				LR	LR		
	comp=Z,2µm,20.0s						
YPP	Pitchstone Pla	64.66	52	eP	P	13 02 36.7	+0.3
	comp=Z,40nm,1.3s						
YPP				LR	LR		
	comp=Z,2µm,19.0s						
H17A	Grant Village	64.71	52	P	P	13 02 35.5	-1.2
	baz=310						
H17A	Grant Village	64.71	52	PFAKE		13 02 50.0	+13
H17A				LR	LR		
	comp=Z,4µm,19.0s						
SMMC	Simmler	64.79	65	P	P	13 02 36.7	-0.4
	baz=309						
PUL	Pulkovo	64.80	332	eP	P	13 02 37.6	+1.0
PUL	Pulkovo	64.80	332	ceP	P	13 02 37.6	+1.0
PUL				pmax	pmax		
	comp=Z,256nm,0.7s						
TIN	Tinemaha, Big	64.82	62	P	P	13 02 37.6	+0.3
	baz=309						
IMW	Indian Meadow	64.83	52	eP	P	13 02 37.7	+0.3
	comp=Z,56nm,1.0s						
IMW				LR	LR		
	comp=Z,2µm,18.0s						
FLWY	Flagg Ranch	64.84	52	eP	P	13 02 38.7	+1.2
	comp=Z,54nm,1.0s						
FIA1	FINESS Array S	64.88	334	eP	P	13 02 36.2	-0.9
	comp=Z,101nm,0.8s						
FIA0	FINESS Array S	64.88	334	eP	P	13 02 36.5	-0.6
FIA0	FINESS Array S	64.88	334	eP	P	13 02 36.5	-0.6
FINES	FINESS Array B	64.88	334	P	P	13 02 36.5	-0.6
	comp=Z,68nm,0.6s,baz=27,slow=13,SNR=115						
FINES				LR	LR	13 34 27.4	
	comp=Z,10µm,18.7s,baz=30,slow=39						
CARC	Carrizo Plain	64.89	65	esP	sP	13 02 42.8	-1.2
KRJI	Kerinci	64.90	238	P	P	13 02 42.1	+4.1
FXWY	Fox Creek	64.94	53	eP	P	13 02 38.3	+0.2
	comp=Z,35nm,1.0s						
RLMT	Red Lodge	64.97	51	P	P	13 02 39.2	+0.9
	baz=310,SNR=44						
RLMT	Red Lodge	64.97	51	eP	P	13 02 38.6	+0.3
	comp=Z,105nm,1.4s						
RLMT				LR	LR		
	comp=Z,3µm,20.0s						
MOOW	Moose Ponds	65.03	52	eP	P	13 02 39.8	+1.1
	comp=Z,45nm,1.0s						
MOOW				LR	LR		
	comp=Z,3µm,18.0s						
MOS	Moscow	65.04	325	eP	P	13 02 38.0	-0.2
MOS	Moscow	65.04	325	eP	P	13 02 38.1	-0.2
MOS				e		13 03 14.3	
MOS				eS	S	13 11 21.2	+1.6
MOS				e		13 12 26.9	
MOS				pmax	pmax		
	comp=Z,29nm,1.2s						
MOS				pmax	pmax		
	comp=Z,1µm,5.5s						
MOS				MLR	MLR		
	comp=E,6µm,17.0s						
MOS				MLR	MLR		
	comp=Z,7µm,17.0s						
MOS				MLR	MLR		
	comp=N,4µm,18.0s						
VES	Vestal, Richgr	65.04	64	P	P	13 02 37.9	-0.7
	baz=309						
TPAW	Teton Pass	65.08	53	eP	P	13 02 40.0	+0.9
	comp=N,72nm,0.9s						
TPAW				LR	LR		
	comp=Z,2µm,19.0s						
HVU	Hansel Valley	65.12	55	eP	P	13 02 40.5	+1.2
	comp=Z,41nm,0.9s						
HVU				LR	LR		
	comp=Z,2µm,20.0s						
HVU	Hansel Valley	65.12	55	eP	P	13 02 40.5	+1.2
HVU				pmax	pmax		
	comp=Z,41nm,0.9s						
HVU				MLR	MLR		
	comp=Z,2µm,20.0s						
PKM	Mcpherson Peak	65.18	65	P	P	13 02 40.1	+0.3
	baz=309,SNR=6.5						
LOHW	Long Hollow	65.19	52	eP	P	13 02 41.2	+1.5
	comp=Z,35nm,0.9s						
SNOW	Snow King Moun	65.20	53	eP	P	13 02 41.3	+1.4
	comp=Z,58nm,1.0s						
SNOW				LR	LR		
	comp=Z,2µm,20.0s						
REDW	Red Top Meadow	65.22	53	eP	P	13 02 40.5	+0.6
	comp=Z,72nm,1.0s						
REDW				LR	LR		
	comp=Z,3µm,18.0s						
SRSP	Sriramsagar	65.22	272	eP	P	13 02 39.9	-0.1
SRSP				IAmb	IAmb	13 02 41.4	
	comp=Z,71nm,0.9s						
SRSP				IVMs_BB	IVMs_BB	13 33 35.0	
	comp=Z,2µm,18.1s						
MASI	Maura Aman, Be	65.27	237	P	P	13 02 43.0	+2.7
	comp=Z,114nm,1.0s						
CWC	Cottonwood Cre	65.30	63	P	P	13 02 40.5	0.0
	baz=309						
CTA	Charters Tower	65.34	186	P	P	13 02 41.0	+0.5
	comp=Z,9.7nm,0.6s,baz=359,slow=11,SNR=24						
CTA				LR	LR	13 29 24.5	
	comp=Z,3µm,20.4s,baz=352,slow=34						
CTA	Charters Tower	65.34	186	P	P	13 02 41.0	+0.5
CTA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CTAO	Charters Tower	65.34	186	eP	P	13 02 41.2	+0.7
	comp=Z,14nm,0.8s						
CTAO				LR	LR		
	comp=Z,3µm,20.0s						
CTAO	Charters Tower	65.34	186	eP	P	13 02 41.2	+0.7
CTAO				pmax	pmax		
	comp=Z,14nm,0.8s						
CTAO				MLR	MLR		
	comp=Z,3µm,20.0s						
GRAC	Grapevine Rang	65.39	62	P	P	13 02 41.3	+0.4
	baz=309,SNR=24						
MAGC	SCE Magundon P	65.44	64	eP	P	13 02 39.3	-2.0
AHID	Auburn Hatcher	65.46	53	eP	P	13 02 42.8	+1.4
	comp=Z,41nm,1.0s						
AHID				LR	LR		
	comp=Z,4µm,20.0s						
BGU	Big Grassy Mou	65.52	56	eP	P	13 02 43.1	+1.2
	comp=Z,18nm,1.0s						
BGU				LR	LR		
	comp=Z,2µm,18.0s						
SBC	Santa Barbara	65.52	65	P	P	13 02 41.5	-0.3
	baz=310						
ISA	Isabella, Lake	65.54	63	P	P	13 02 41.5	-0.4
	baz=310,SNR=14						
ISA	Isabella, Lake	65.54	63	eP	P	13 02 41.6	-0.4
	comp=Z,36nm,1.4s						
ISA				LR	LR		
	comp=Z,2µm,18.0s						
ISA	Isabella, Lake	65.54	63	eP	P	13 02 41.6	-0.4
ISA				pmax	pmax		
	comp=Z,36nm,1.4s						
ISA				MLR	MLR		
	comp=Z,2µm,18.0s						
LAO	LASA Array	65.58	48	P	P	13 02 41.9	0.0
	baz=311,SNR=40						
LAO	LASA Array	65.58	48	eP	P	13 02 42.0	0.0
	comp=Z,55nm,0.8s						
LAO				LR	LR		
	comp=Z,6µm,19.0s						
SPUT	South Promonto	65.61	55	eP	P	13 02 44.2	+1.7
	comp=Z,49nm,1.0s						
SPUT				LR	LR		
	comp=Z,2µm,19.0s						
R11A	Troy Canyon, C	65.63	60	P	P	13 02 42.9	+0.3
	baz=310,SNR=85						
R11A	Troy Canyon, C	65.63	60	eP	P	13 02 42.4	-0.3
	comp=Z,65nm,1.3s						
R11A				LR	LR		
	comp=Z,2µm,20.0s						
ARVC	Arvin	65.65	64	P	P	13 02 42.7	+0.2
	baz=310						
DAC	Darwin (Calif)	65.70	62	eP	P	13 02 42.8	-0.3
	comp=Z,24nm,1.1s						
DAC				LR	LR		
	comp=Z,3µm,19.0s						
DAC	Darwin (Calif)	65.70	62	eP	P	13 02 42.8	-0.3
DAC				pmax	pmax		
	comp=Z,24nm,1.1s						
DAC				MLR	MLR		
	comp=Z,3µm,19.0s						
SCZ2	Santa Cruz Isl	65.86	66	P	P	13 02 43.7	-0.2
	baz=310						
MPMC	Manual Prospec	65.91	63	P	P	13 02 44.5	+0.1
	baz=310,SNR=36						
OBN	Obninsk	65.91	325	eP	P	13 02 43.3	-0.5
OBN	Obninsk	65.91	325	PFAKE		13 03 00.0	+16
OBN				LR	LR		
	comp=Z,7µm,18.0s						
OBN	Obninsk	65.91	325	ceP	P	13 02 43.3	-0.5
OBN				i *PP	sP	13 02 49.9	-0.2
OBN				e*SP	pP	13 02 57.9	+9.5
OBN				i		13 03 14.9	
OBN				eS	S	13 11 31.1	+0.8
OBN				eSS	SS	13 15 38.0	-6.2
OBN				pmax	pmax		
	comp=Z,210nm,0.9s						
OBN				MLR	MLR		
	comp=Z,7µm,17.0s						
HWUT	Hardware Ranch	65.93	55	eP	P	13 02 45.5	+1.0
	comp=Z,52nm,1.0s						
HWUT				LR	LR		
	comp=Z,2µm,21.0s						
NSS	Namsos	65.99	342	eP	P	13 02 44.4	+0.1
NSS				IAmb	IAmb	13 02 44.8	
	comp=Z,33nm,1.1s						
FURC	Furnace Creek,	66.04	62	P	P	13 02 45.3	+0.3
	baz=310,SNR=29						
OSI	Osito Audit: C	66.05	64	P	P	13 02 44.7	-0.5
	baz=310						
OSI	Osito Audit: C	66.05	64	eP	P	13 02 46.9	+1.7
	comp=Z,48nm,0.9s						
OSI				LR	LR		
	comp=Z,3µm,20.0s						
HYB	Hyderabad	66.08	271	i P	P	13 02 46.0	+0.4
	comp=Z,100nm,1.0s						
HYBB	Hyderabad (bro	66.08	271	eP	P	13 02 45.0	-0.6
HYBB				IAmb	IAmb	13 02 46.5	
	comp=Z,52nm,0.9s						
HYBB				IVMs_BB	IVMs_BB	13 41 03.4	
	comp=Z,1µm,11.8s						
DUG	Dugway, Tooele	66.11	57	P	P	13 02 46.3	+0.6
	baz=310,SNR=32						
DUG	Dugway, Tooele	66.11	57	eP	P	13 02 46.2	+0.6
	comp=Z,68nm,1.0s						
DUG				LR	LR		
	comp=Z,3µm,20.0s						
DUG	Dugway, Tooele	66.11	57	eP	P	13 02 46.2	+0.6
DUG				pmax	pmax		
	comp=Z,69nm,1.0s						
DUG				MLR	MLR		
	comp=Z,3µm,20.0s						
TPNV	Topopah Spring	66.11	61	P	P	13 02 45.9	+0.2
	baz=310,SNR=40						
TPNV	Topopah Spring	66.11	61	eP	P	13 02 45.5	-0.2
	comp=Z,78nm,1.2s						
TPNV				LR	LR		
	comp=Z,3µm,18.0s						
TPNV	Topopah Spring	66.11	61	eP	P	13 02 45.5	-0.2
TPNV				pmax	pmax		
	comp=Z,78nm,1.2s						
TPNV				MLR	MLR		
	comp=Z,3µm,18.0s						
NJS	Nagarjunasagar	66.13	270	eP	P	13 02 45.1	-0.7
NJS				IAmb	IAmb	13 02 47.0	
	comp=Z,38nm,0.9s						
NJS				IVMsBB		13 38 38.2	
	comp=Z,1µm,14.7s						
ADKI	Addanki	66.14	269	eP	P	13 02 46.2	+0.3
ADKI				IAmb	IAmb	13 02 49.5	
	comp=Z,34nm,0.8s						
ADKI				IVMs_BB	IVMs_BB	13 38 37.6	
	comp=Z,1µm,17.0s						
BLG	Laguna Peak, P	66.15	65	P	P	13 02 45.2	-0.6
	baz=310						

LRMC	**Laurel Mtn Rad**	**66.15**	**63**	P	**P**	**13 02 45.1**	**-0.9**
	baz=310						
BW06	**Boulder Array**	**66.32**	**53**	P	**P**	**13 02 47.4**	**+0.3**
	baz=311,SNR=50						
BW06	**Boulder Array**	**66.32**	**53**	*e*P	**P**	**13 02 47.3**	**+0.2**
	comp=Z,33nm,0.9s						
BW06				LR	LR		
	comp=Z,3µm,18.0s						
PD31	**Pinedale Array**	**66.32**	**53**	*e*P	**P**	**13 02 46.5**	**-0.6**
PDAR	**Pinedale Array**	**66.32**	**53**	P	**P**	**13 02 47.3**	**+0.2**
	comp=Z,34nm,1.0s,baz=266,slow=2.4,SNR=120						
PDAR				PKP2bc		13 31 20.3	
	comp=Z,0.5nm,0.8s,baz=100,slow=3.5,SNR=4.3						
PDAR				LR	LR	13 31 53.4	
	comp=Z,2µm,19.3s,baz=343,slow=36						
PDAR	**Pinedale Array**	**66.32**	**53**	*e*P	**P**	**13 02 46.3**	**-0.7**
TCUT	**Toone Canyon**	**66.34**	**55**	*e*P	**P**	**13 02 48.8**	**+1.5**
	comp=Z,62nm,1.0s						
TCUT				LR	LR		
	comp=Z,3µm,20.0s						
EDW2	**Edwards Air Fo**	**66.34**	**64**	P	**P**	**13 02 47.2**	**+0.1**
	baz=310,SNR=20						
SNCC	**San Nicolas Is**	**66.40**	**66**	P	**P**	**13 02 47.2**	**-0.3**
	baz=310						
SNCC	**San Nicolas Is**	**66.40**	**66**	PFAKE		13 03 00.0	+13
SNCC				LR	LR		
	comp=Z,4µm,20.0s						
CTU	**Camp Tracy**	**66.41**	**56**	*e*P	**P**	**13 02 48.9**	**+1.2**
	comp=Z,23nm,0.8s						
CTU				LR	LR		
	comp=Z,3µm,19.0s						
GEYT	**Alibeck**	**66.50**	**301**	P	**P**	**13 02 49.4**	**+1.4**
	comp=Z,72nm,0.8s,baz=276,slow=5.7,SNR=96						
GEYT				LR	LR	13 34 31.0	
	comp=Z,11µm,18.2s,baz=295,slow=38						
GYA0B	**ALIBECK ARRAY**	**66.50**	**301**	*e*P	**P**	**13 02 49.2**	**+1.1**
	comp=Z,132nm,0.9s						
GYA0B				LR	LR		
	comp=Z,11µm,18.0s						
DECC	**Green Verdugo**	**66.52**	**65**	P	**P**	**13 02 47.8**	**-0.5**
	baz=310						
PSUT	**Pine Spring**	**66.56**	**58**	*e*P	**P**	**13 02 49.9**	**+1.2**
	comp=Z,23nm,0.9s						
PSUT				LR	LR		
	comp=Z,3µm,20.0s						
JLU	**Jordanelle**	**66.65**	**55**	*e*P	**P**	**13 02 50.5**	**+1.3**
	comp=Z,39nm,1.2s						
JLU				LR	LR		
	comp=Z,3µm,20.0s						
SFJD	**Kangerlussuaq**	**66.67**	**9**	P	**P**	**13 02 48.4**	**-0.1**
	comp=Z,39nm,0.8s,baz=340,slow=6.2,SNR=6.3						
SFJD				LR	LR	13 34 07.6	
	comp=Z,7µm,19.7s,baz=345,slow=38						
SFJD	**Kangerlussuaq**	**66.67**	**9**	*e*P	**P**	**13 02 48.4**	**-0.1**
SFJD				*e*P	**P**	**13 02 49.2**	**+0.7**
PASC	**Pasadena Art C**	**66.67**	**65**	*e*P	**P**	**13 02 49.2**	**+0.1**
	comp=Z,18nm,0.8s						
PASC				LR	LR		
	comp=Z,4µm,20.0s						
NLU	**North Lily Min**	**66.70**	**56**	*e*P	**P**	**13 02 50.7**	**+1.2**
	comp=Z,47nm,1.0s						
NLU				LR	LR		
	comp=Z,4µm,19.0s						
MWC	**Mount Wilson**	**66.72**	**64**	*e*P	**P**	**13 02 50.6**	**+0.9**
	comp=Z,24nm,0.8s						
MWC	**Mount Wilson**	**66.72**	**64**	*e*P	**P**	**13 02 50.6**	**+0.9**
MWC				pmax	pmax		
	comp=Z,25nm,0.8s						
SRLM	**Srisailam**	**66.73**	**270**	*e*P	**P**	**13 02 49.1**	**-0.7**
SRLM				IAmb	IAmb	13 02 51.1	
	comp=Z,38nm,0.9s						
SRLM				IVMs_BB	IVMs_BB	13 37 35.9	
	comp=Z,1µm,16.2s						
WB9	**Warramunga Arr**	**66.75**	**198**	PFAKE		13 03 00.0	+10
WB9				LR	LR		
	comp=Z,7µm,21.0s						
SHOC	**Shoshone, Teco**	**66.77**	**62**	P	**P**	**13 02 50.0**	**+0.2**
	baz=310,SNR=6.2						
WB8	**Warramunga Arr**	**66.78**	**198**	PFAKE		13 03 00.0	+10
WB8				LR	LR		
	comp=Z,4µm,21.0s						
GSC	**Goldstone, Bar**	**66.82**	**63**	P	**P**	**13 02 50.2**	**0.0**
	baz=310,SNR=14						
GSC	**Goldstone, Bar**	**66.82**	**63**	*e*P	**P**	**13 02 50.6**	**+0.4**
	comp=Z,18nm,0.9s						
GSC				LR	LR		
	comp=Z,2µm,21.0s						
GSC	**Goldstone, Bar**	**66.82**	**63**	*e*P	**P**	**13 02 50.6**	**+0.4**
GSC				pmax	pmax		
	comp=Z,18nm,0.9s						
GSC				MLR	MLR		
	comp=Z,2µm,21.0s						
WB6	**Warramunga Arr**	**66.82**	**198**	PFAKE		13 03 00.0	+10
WB6				LR	LR		
	comp=Z,3µm,21.0s						
WB4	**Warramunga Arr**	**66.87**	**198**	PFAKE		13 03 00.0	+10
WB4				LR	LR		
	comp=Z,4µm,21.0s						
WR0	**Warramunga Arr**	**66.88**	**198**	PFAKE		13 03 00.0	+10
WR0				LR	LR		
	comp=Z,3µm,21.0s						
WB3	**Warramunga Arr**	**66.89**	**198**	PFAKE		13 03 00.0	+10
WB3				LR	LR		
	comp=Z,4µm,20.0s						
WC2	**Warramunga Arr**	**66.89**	**198**	PFAKE		13 03 00.0	+10
WC2				LR	LR		
	comp=Z,4µm,22.0s						
WR9	**Warramunga Arr**	**66.89**	**198**	PFAKE		13 03 00.0	+10
WR9				LR	LR		
	comp=Z,3µm,21.0s						
WR8	**Warramunga Arr**	**66.89**	**198**	PFAKE		13 03 00.0	+10
WR8				LR	LR		
	comp=Z,3µm,21.0s						
WC1	**Warramunga Arr**	**66.89**	**198**	PFAKE		13 03 00.0	+10
WC1				LR	LR		
	comp=Z,3µm,21.0s						
WR7	**Warramunga Arr**	**66.89**	**198**	PFAKE		13 03 00.0	+10
WR7				LR	LR		
	comp=Z,3µm,22.0s						
FMP	**Fort Macarthur**	**66.89**	**65**	P	**P**	**13 02 49.9**	**-0.6**
	baz=310						
WR6	**Warramunga Arr**	**66.90**	**198**	PFAKE		13 03 00.0	+9.5
WR6				LR	LR		
	comp=Z,3µm,21.0s						
WRAB	**Tennant Creek**	**66.90**	**198**	*e*P	**P**	**13 02 50.6**	**+0.1**
	comp=Z,41nm,1.0s						
WRAB				LR	LR		
	comp=Z,4µm,20.0s						
WRAB	**Tennant Creek**	**66.90**	**198**⇓	*e*P	**P**	**13 02 50.3**	**-0.2**
WRAB				pmax	pmax		
	comp=Z,23nm,0.9s						
WRAB				MLR	MLR		
	comp=Z,3µm,19.0s						
WR5	**Warramunga Arr**	**66.90**	**198**	PFAKE		13 03 00.0	+9.5
WR5				LR	LR		
	comp=Z,3µm,21.0s						
WR4	**Warramunga Arr**	**66.90**	**198**	PFAKE		13 03 00.0	+9.4
WR4				LR	LR		
	comp=Z,3µm,20.0s						
WR3	**Warramunga Arr**	**66.91**	**198**	PFAKE		13 03 00.0	+9.4
WR3				LR	LR		
	comp=Z,3µm,22.0s						
WB2	**Warramunga Arr**	**66.91**	**198**	*e*P	**P**	**13 02 50.8**	**+0.2**
	comp=Z,40nm,0.9s						
WB2				LR	LR		
	comp=Z,4µm,21.0s						
WR2	**Warramunga Arr**	**66.91**	**198**	PFAKE		13 03 00.0	+9.4
WR2				LR	LR		
	comp=Z,3µm,20.0s						
WR1	**Warramunga Arr**	**66.91**	**198**	*e*P	**P**	**13 02 50.7**	**+0.1**
	comp=Z,35nm,0.9s						
WRA	**Warramunga Arr**	**66.91**	**198**	P	**P**	**13 02 50.7**	**+0.1**
	comp=Z,12nm,0.8s,baz=20,slow=7.0,SNR=77						
WRA				LR	LR	13 30 07.4	
	comp=Z,4µm,21.7s,baz=25,slow=34						
WRA				PKP2bc		13 31 21.8	
	comp=Z,1.8nm,1.1s,baz=205,slow=2.0,SNR=4.9						
WRA	**Warramunga Arr**	**66.91**	**198**	P	**P**	**13 02 50.7**	**+0.1**
WRA				pmax	pmax		
	comp=Z,12nm,0.9s						
WC3	**Warramunga Arr**	**66.92**	**198**	PFAKE		13 03 00.0	+9.3
WC3				LR	LR		
	comp=Z,4µm,22.0s						
MPU	**Maple Canyon**	**66.92**	**56**	*e*P	**P**	**13 02 51.9**	**+1.0**
	comp=Z,42nm,1.0s						
MPU				LR	LR		
	comp=Z,3µm,20.0s						
WC4	**Warramunga Arr**	**66.93**	**198**	PFAKE		13 03 00.0	+9.3
WC4				LR	LR		
	comp=Z,4µm,20.0s						
BFSC	**Mount Baldy Ra**	**66.96**	**64**	P	**P**	**13 02 51.1**	**0.0**
	baz=310,SNR=12						
RRX	**Edison Barstow**	**66.97**	**63**	P	**P**	**13 02 50.5**	**-0.6**
	baz=310						
VSU	**Vasula**	**67.00**	**332***c*	*i*P	**P**	**13 02 50.1**	**-0.6**
VSU				pmax	pmax		
	comp=Z,176nm,0.7s						
CIS	**Catalina Islan**	**67.02**	**65**	P	**P**	**13 02 50.8**	**-0.6**
	baz=310						
KLRI	**Killari**	**67.02**	**273**	*e*P	**P**	**13 02 50.9**	**-0.7**
KLRI				IAmb	IAmb	13 02 53.8	
	comp=Z,64nm,0.8s						
KLRI				IVMs_BB	IVMs_BB	13 35 50.2	
	comp=Z,3µm,14.4s						
SHPR	**Sheep Range**	**67.07**	**61**	*e*P	**P**	**13 02 52.3**	**+0.5**
	comp=Z,52nm,1.2s						
SHPR				LR	LR		
	comp=Z,2µm,19.0s						
FON	**Fontana**	**67.19**	**64**	*e*P	**P**	**13 02 51.0**	**-1.5**
SCI2	**San Clemente I**	**67.20**	**66**	P	**P**	**13 02 51.4**	**-1.1**
	baz=310						
TUQ	**Turquoise Moun**	**67.28**	**62**	P	**P**	**13 02 53.1**	**-0.1**
	baz=310,SNR=7.6						
TCRU	**Three Creeks R**	**67.35**	**58**	PFAKE		13 03 10.0	+16
TCRU				LR	LR		
	comp=Z,4µm,19.0s						
BBRC	**Big Bear Solar**	**67.41**	**64**	P	**P**	**13 02 52.7**	**-1.5**
	baz=310						
HEC	**Hector,Ludlow**	**67.42**	**63**	P	**P**	**13 02 54.0**	**+0.1**
	baz=310,SNR=15						
TBLU	**Trondheim**	**67.48**	**342**	*e*P	**P**	**13 02 53.4**	**-0.4**
FITZ	**Fitzroy Crossi**	**67.48**	**207**	P	**P**	**13 02 54.2**	**-0.1**
	comp=Z,12nm,0.8s,baz=18,slow=9.3,SNR=28						
FITZ	**Fitzroy Crossi**	**67.48**	**207**	*e*P	**P**	**13 02 54.5**	**+0.3**
	comp=Z,30nm,0.9s						
CCUT	**Cedar City**	**67.49**	**59**	*e*P	**P**	**13 02 55.0**	**+0.4**
	comp=Z,45nm,1.0s						
CCUT				LR	LR		
	comp=Z,3µm,18.0s						
MSU	**Marysvale**	**67.57**	**58**	*e*P	**P**	**13 02 56.0**	**+1.0**
MSU	**Marysvale**	**67.57**	**58**	*e*P	**P**	**13 02 56.1**	**+1.0**
VSR	**Storozhevoye**	**67.59**	**321**	*e*P	**P**	**13 02 53.6**	**-1.1**
VSR				*e*S	**S**	**13 11 44.6**	**-6.2**
VSR				pmax	pmax		
	comp=Z,40nm,0.9s						
VSR				smax	smax		
	comp=E,10.0nm,0.8s						
VSR				MLR	MLR		
	comp=Z,19µm,21.0s						
AFI	**Afiamalu**	**67.60**	**141**	LR	LR	13 29 44.1	
	comp=Z,5µm,19.1s,baz=326,slow=34						
SZCU	**Shurtz Canyon**	**67.62**	**59**	*e*P	**P**	**13 02 56.7**	**+1.3**
	comp=Z,23nm,0.9s						
SZCU				LR	LR		
	comp=Z,2µm,20.0s						
TMUT	**Trail Mountain**	**67.64**	**56**	*e*P	**P**	**13 02 56.3**	**+0.7**
	comp=Z,42nm,1.1s						
MURC	**Murrieta**	**67.67**	**64**	P	**P**	**13 02 55.3**	**-0.2**
	baz=311,SNR=9.8						
VORD	**Divnogorie**	**67.72**	**321**	*e*P	**P**	**13 02 55.6**	**+0.2**
VORD				pmax	pmax		
	comp=Z,30nm,0.8s						
VORD				MLR	MLR		
	comp=Z,19µm,21.0s						
SKHT	**Srikalahasti**	**67.76**	**267**	*e*P	**P**	**13 02 56.6**	**+0.4**
SKHT				IAmb	IAmb	13 02 58.5	
	comp=Z,45nm,0.9s						
SKHT				IVMs_BB	IVMs_BB	13 38 18.6	
	comp=Z,1µm,24.0s						
GMRC	**Granite Mounta**	**67.87**	**63**	P	**P**	**13 02 57.0**	**+0.1**
	baz=311,SNR=23						
GMRC	**Granite Mounta**	**67.87**	**63**	*e*P	**P**	**13 02 54.6**	**-2.3**
MTPU	**Mount Pierson**	**67.88**	**58**	*e*P	**P**	**13 02 58.9**	**+1.7**
	comp=Z,29nm,0.9s						
MTPU				LR	LR		
	comp=Z,3µm,20.0s						
LCMT	**Little Creek M**	**67.91**	**59**	*e*P	**P**	**13 02 57.6**	**+0.5**
	comp=Z,48nm,0.8s						
LCMT				LR	LR		
	comp=Z,4µm,20.0s						
P18A	**Preston Nutter**	**67.98**	**56**	*e*P	**P**	**13 02 58.9**	**+1.1**
	comp=Z,63nm,1.4s						
LDFC	**Landfair**	**68.02**	**62**	*e*P	**P**	**13 02 57.7**	**-0.1**
	comp=Z,57nm,0.9s						
LDFC				LR	LR		
	comp=Z,2µm,18.0s						
K22A	**Casper**	**68.08**	**51**	P	**P**	**13 02 58.6**	**+0.4**
	baz=312,SNR=24						
K22A	**Casper**	**68.08**	**51**	*e*P	**P**	**13 02 58.5**	**+0.4**
K22A				LR	LR		
	comp=Z,3µm,20.0s						
MDND	**Maddock**	**68.13**	**43**	P	**P**	**13 02 58.0**	**-0.2**
	baz=314						
MDND	**Maddock**	**68.13**	**43**	*e*P	**P**	**13 02 59.5**	**+1.3**
	comp=Z,75nm,1.1s						
MDND				LR	LR		
	comp=Z,7µm,20.0s						
PFO	**Pinyon Flats O**	**68.13**	**64**	P	**P**	**13 02 58.4**	**-0.1**
	baz=311,SNR=6.5						
PFO	**Pinyon Flats O**	**68.13**	**64**	*e*P	**P**	**13 02 58.8**	**+0.3**
	comp=Z,27nm,1.1s						
PFO				LR	LR		
	comp=Z,3µm,20.0s						
PFO	**Pinyon Flats O**	**68.13**	**64**	*e*P	**P**	**13 02 58.8**	**+0.3**
PFO				pmax	pmax		
	comp=Z,27nm,1.1s						
PFO				MLR	MLR		
	comp=Z,3µm,20.0s						
XPFO	**Piæon Flat**	**68.13**	**64**	*e*P	**P**	**13 02 58.8**	**+0.3**
	comp=Z,30nm,1.2s						
XPFO				LR	LR		
	comp=Z,3µm,20.0s						
SRU	**San Rafael Swe**	**68.16**	**56**	*e*P	**P**	**13 02 59.4**	**+0.7**
	comp=Z,62nm,0.9s						
SRU				LR	LR		
	comp=Z,3µm,20.0s						
SRU	**San Rafael Swe**	**68.16**	**56**	*e*P	**P**	**13 02 59.4**	**+0.7**
SRU				pmax	pmax		
	comp=Z,62nm,0.9s						
SRU				MLR	MLR		
	comp=Z,3µm,20.0s						
BELC	**Belle Mtn. Jos**	**68.17**	**63**	P	**P**	**13 02 58.5**	**-0.3**
	baz=311,SNR=5.9						
ULM	**Lac du Bonnet**	**68.18**	**40**	P	**P**	**13 02 58.4**	**-0.1**
	comp=Z,11nm,0.5s,baz=322,slow=7.0,SNR=13						
ULM				LR	LR	13 34 19.0	
	comp=Z,4µm,20.3s,baz=330,slow=37						
ULM	**Lac du Bonnet**	**68.18**	**40**	*e*P	**P**	**13 02 57.6**	**-0.8**
	comp=Z,17nm,0.8s						
ULM	**Lac du Bonnet**	**68.18**	**40**	*e*P	**P**	**13 02 57.6**	**-0.8**
ULM				pmax	pmax		
	comp=Z,17nm,0.8s						
109C	**Camp Elliot, M**	**68.18**	**65**	P	**P**	**13 02 57.2**	**-1.5**
	baz=311						
CPE	**Camp Elliot**	**68.18**	**65**	*e*P	**P**	**13 02 59.8**	**+1.1**
	comp=Z,34nm,0.8s						
CPE				LR	LR		
	comp=Z,3µm,20.0s						
PKCU	**Pink Cliffs**	**68.19**	**59**	*e*P	**P**	**13 03 01.0**	**+1.9**
	comp=Z,151nm,1.7s						
PKCU				LR	LR		
	comp=Z,3µm,20.0s						
RWWY	**Rawlins**	**68.34**	**52**	*e*P	**P**	**13 03 00.6**	**+0.6**
	comp=Z,31nm,0.9s						
RWWY				LR	LR		
	comp=Z,3µm,20.0s						
RSSD	**Black Hills**	**68.44**	**49**	P	**P**	**13 02 59.6**	**-0.8**
	baz=313						
RSSD	**Black Hills**	**68.44**	**49**	*e*P	**P**	**13 02 59.8**	**-0.6**
	comp=Z,47nm,0.6s						
RSSD				LR	LR		
	comp=Z,4µm,21.0s						
RSSD	**Black Hills**	**68.44**	**49**	*e*P	**P**	**13 02 59.8**	**-0.6**
RSSD				pmax	pmax		
	comp=Z,47nm,0.6s						
RSSD				MLR	MLR		
	comp=Z,4µm,21.0s						
DZM	**Mont Dzumac**	**68.44**	**165**	P	**P**	**13 03 00.7**	**+0.4**
	comp=Z,16nm,0.8s,baz=22,slow=11,SNR=11						
DZM				LR	LR	13 30 25.1	
	comp=Z,8µm,19.4s,baz=3.0,slow=34						
DZM	**Mont Dzumac**	**68.44**	**165**	*e*S	**S**	**13 12 04.8**	**+3.3**
	comp=Z,863nm,24.5s						
DZM	**Mont Dzumac**	**68.44**	**165**	*e*LR	LR	13 23 56.9	
	comp=Z,7µm,19.9s						
DZM	**Mont Dzumac**	**68.44**	**165**	*e*P	**P**	**13 03 00.7**	**+0.4**
	comp=Z,36nm,1.1s						
NEE2	**Needles Airpor**	**68.53**	**62**	P	**P**	**13 03 00.4**	**-0.5**
	baz=311						
BAR	**Barrett**	**68.60**	**65**	*e*P	**P**	**13 03 02.2**	**+0.8**
	comp=Z,27nm,0.9s						
BAR				LR	LR		
	comp=Z,3µm,20.0s						
IRM	**Iron Mountain**	**68.60**	**63**	P	**P**	**13 03 01.3**	**-0.1**
	baz=311,SNR=21						
MONP2	**Monument Peak**	**68.62**	**65**	P	**P**	**13 03 01.6**	**-0.1**
	baz=311,SNR=6.1						
MOL	**Molde**	**68.66**	**343**	*e*P	**P**	**13 03 02.0**	**+0.8**
MOL				IAmb	IAmb	13 03 03.6	
	comp=Z,48nm,1.2s						
URV	**Uravakonda**	**68.66**	**270**	*e*P	**P**	**13 03 01.2**	**-0.7**
URV				IAmb	IAmb	13 03 04.6	
	comp=Z,35nm,0.9s						
URV				IVMs_BB	IVMs_BB	13 40 11.9	
	comp=Z,2µm,15.0s						
BC3	**Big Chuckawall**	**68.73**	**63**	P	**P**	**13 03 01.8**	**-0.5**
	baz=311,SNR=9.6						
W13A	**Hualapai Mount**	**68.77**	**61**	*e*P	**P**	**13 03 03.2**	**+0.6**
	comp=Z,46nm,1.4s						
W13A				LR	LR		
	comp=Z,2µm,19.0s						
O20A	**White River Ci**	**68.80**	**54**	P	**P**	**13 03 03.1**	**+0.4**
	baz=312,SNR=7.4						
O20A	**White River Ci**	**68.80**	**54**	*e*P	**P**	**13 03 03.5**	**+0.7**
	comp=Z,37nm,1.1s						
O20A				LR	LR		
	comp=Z,2µm,20.0s						
DOMB	**Dombas**	**68.81**	**342**	*e*P	**P**	**13 03 02.6**	**+0.4**
DOMB				IAmb	IAmb	13 03 06.3	
	comp=Z,44nm,0.9s						
U15A	**North Rim**	**68.87**	**59**	*e*P	**P**	**13 03 03.9**	**+0.5**
	comp=Z,82nm,1.1s						
U15A				LR	LR		
	comp=Z,4µm,19.0s						
IKP	**In-Ko-Pah, Jac**	**68.97**	**65**	P	**P**	**13 03 03.6**	**-0.2**
	baz=311,SNR=9.4						
SWSC	**Sam W. Stewart**	**68.98**	**64**	P	**P**	**13 03 03.0**	**-0.7**
	baz=311						
NC303	**NORSAR Array S**	**69.02**	**341**	*e*P	**P**	**13 03 03.0**	**-0.4**
NC405	**NORSAR Array S**	**69.04**	**340**	*e*P	**P**	**13 03 03.3**	**-0.3**
ANGG	**Ammassalik, Gr**	**69.11**	**4**	PFAKE		13 03 20.0	+16
ANGG				LR	LR		
	comp=Z,7µm,20.0s						
NC204	**NORSAR Array S**	**69.12**	**341**	*e*P	**P**	**13 03 03.9**	**-0.2**
PDMCI	**Parker Dam,Lak**	**69.13**	**62**	P	**P**	**13 03 04.6**	**0.0**
	baz=311,SNR=8.2						
NB201	**NORSAR Array S**	**69.19**	**341**	*e*P	**P**	**13 03 04.3**	**-0.3**
NB201	**NORSAR Array S**	**69.19**	**341**	*e*P	**P**	**13 03 05.0**	**+0.4**
NB201				IAmb	IAmb	13 03 05.6	
	comp=Z,179nm,1.1s						
NB2	**NORSAR Subarra**	**69.22**	**341**	P	**P**	**13 03 04.4**	**-0.4**
	comp=Z,126nm,1.1s,baz=28,slow=6.5						
NB2	**NORSAR Subarra**	**69.22**	**341**	P	**P**	**13 03 04.4**	**-0.4**
	baz=28,slow=6.5						
NOA	**NORSAR Array B**	**69.22**	**341**	LR	LR	13 37 53.3	
	comp=Z,6µm,19.1s,baz=35,slow=40						
MAK	**Makhachkala**	**69.25**	**310**	*e*P	**P**	**13 03 05.6**	**+0.4**
MAK				*e*		13 05 46.5	
MAK				*e*S	**S**	**13 12 08.5**	**-2.3**
MAK				pmax	pmax		
	comp=Z,172nm,1.1s						
MAK				MLR	MLR		
	comp=Z,10µm,16.0s						
Y12C	**Blythe**	**69.25**	**63**	P	**P**	**13 03 05.6**	**+0.2**
	baz=312,SNR=10						
Y12C	**Blythe**	**69.25**	**63**	*e*P	**P**	**13 03 06.1**	**+0.8**
	comp=Z,26nm,0.7s						
Y12C				LR	LR		
	comp=Z,2µm,19.0s						
DREC	**Desert Rsrch C**	**69.29**	**64**	*e*P	**P**	**13 03 04.3**	**-1.3**
IZAR	**Zarasai**	**69.29**	**331**	*e*P	**P**	**13 03 05.4**	**+0.2**
IZAR				IAmb	IAmb	13 03 07.2	
	comp=Z,24nm,0.9s						
NBO00	**NORSAR Array S**	**69.33**	**341**	*e*P	**P**	**13 03 05.4**	**0.0**
A33A	**Warroad**	**69.34**	**40**	P	**P**	**13 03 05.6**	**0.0**
	baz=316,SNR=13						
PV09	**Paradox Valley**	**69.38**	**56**	*e*P	**P**	**13 03 07.5**	**+1.0**
HFS	**Hagfors**	**69.41**	**339**	P	**P**	**13 03 05.4**	**-0.5**
	comp=Z,53nm,0.6s,baz=46,slow=6.2,SNR=122						
HFS				LR	LR	13 35 52.5	
	comp=Z,6µm,21.3s,baz=18,slow=38						
HFS	**Hagfors**	**69.41**	**339**	P	**P**	**13 03 05.4**	**-0.5**
HFS				pmax	pmax		
	comp=Z,53nm,0.6s						
HFS				MLR	MLR		
	comp=Z,6µm,21.3s						
NC602	**NORSAR Array S**	**69.41**	**340**	*e*P	**P**	**13 03 05.1**	**-0.8**
NC602	**NORSAR Array S**	**69.41**	**340**	*e*P	**P**	**13 03 05.7**	**-0.2**
NC602				IAmb	IAmb	13 03 07.0	
	comp=Z,450nm,0.8s						
PV21	**Cone Mtn., Par**	**69.43**	**56**	*e*P	**P**	**13 03 07.6**	**+0.9**
	comp=Z,50nm,1.0s						
PV21				LR	LR		
	comp=Z,3µm,21.0s						
IDID	**Didziasalis**	**69.47**	**330**	*e*P	**P**	**13 03 06.5**	**+0.2**
IDID				IAmb	IAmb	13 03 08.4	
	comp=Z,33nm,0.8s						
NAO01	**NORSAR Array S**	**69.47**	**341**	*e*P	**P**	**13 03 06.1**	**-0.2**
ISAL	**Salakas**	**69.48**	**330**	*e*P	**P**	**13 03 06.6**	**+0.2**
ISAL				IAmb	IAmb	13 03 08.5	
	comp=Z,28nm,0.8s						
PV23	**Carpenter Ridg**	**69.48**	**56**	*e*P	**P**	**13 03 07.9**	**+0.9**
	comp=Z,65nm,0.9s						
GLA	**Glamis**	**69.52**	**63**	P	**P**	**13 03 07.1**	**-0.1**
	baz=312,SNR=18						
GLA	**Glamis**	**69.52**	**63**	*e*P	**P**	**13 03 07.8**	**+0.7**
	comp=Z,28nm,0.6s						
GLA				LR	LR		
	comp=Z,3µm,20.0s						
GLA	**Glamis**	**69.52**	**63**	*e*P	**P**	**13 03 07.8**	**+0.7**
GLA				pmax	pmax		
	comp=Z,28nm,0.6s						
GLA				MLR	MLR		
	comp=Z,3µm,20.0s						
PV14	**Lion Creek, Pa**	**69.53**	**56**	*e*P	**P**	**13 03 07.8**	**+0.5**
	comp=Z,47nm,0.8s						
PV14				LR	LR		
	comp=Z,4µm,20.0s						
PV22	**Blue Mesa, Par**	**69.55**	**56**	*e*P	**P**	**13 03 07.9**	**+0.5**
	comp=Z,53nm,1.0s						
PV22				LR	LR		
	comp=Z,3µm,21.0s						
PHWY	**Pilot Hill**	**69.58**	**52**	*e*P	**P**	**13 03 08.2**	**+0.5**
	comp=Z,30nm,1.5s						
PHWY				LR	LR		
	comp=Z,2µm,18.0s						
PV20	**West Nyswonger**	**69.58**	**56**	*e*P	**P**	**13 03 08.6**	**+1.0**
	comp=Z,58nm,0.8s						
AGMN	**Agassiz Nation**	**69.58**	**41**	P	**P**	**13 03 07.1**	**-0.1**
	baz=316,SNR=17						
AGMN	**Agassiz Nation**	**69.58**	**41**	*e*P	**P**	**13 03 06.2**	**-0.9**
	comp=Z,27nm,0.9s						
PV19	**Morning Glory**	**69.59**	**56**	*e*P	**P**	**13 03 08.4**	**+0.8**
	comp=Z,50nm,0.8s						
PV19				LR	LR		
	comp=Z,3µm,20.0s						
IIGN	**Ignalina**	**69.62**	**330**	*e*P	**P**	**13 03 07.4**	**+0.2**
IIGN				IAmb	IAmb	13 03 09.5	
	comp=Z,48nm,1.0s						
PV17	**East Wray Mesa**	**69.62**	**56**	*e*P	**P**	**13 03 08.6**	**+0.7**
	comp=Z,109nm,0.9s						
PV16	**Nyswonger Mesa**	**69.63**	**56**	*e*P	**P**	**13 03 08.5**	**+0.6**
	comp=Z,47nm,0.8s						
PV16				LR	LR		
	comp=Z,4µm,20.0s						
PV11	**David Mesa, Pa**	**69.66**	**56**	*e*P	**P**	**13 03 09.0**	**+0.9**
	comp=Z,136nm,1.2s						
PV18	**Skein Mesa, Pa**	**69.68**	**56**	*e*P	**P**	**13 03 08.5**	**+0.3**
	comp=Z,73nm,1.0s						
PV18				LR	LR		
	comp=Z,3µm,20.0s						
PV12	**Saucer Basin,**	**69.69**	**56**	*e*P	**P**	**13 03 08.8**	**+0.4**
	comp=Z,69nm,1.1s						
MICGM	**Minsk**	**69.69**	**329**	*e*P	**P**	**13 03 07.0**	**-0.7**
MICGM				*e*PP	**PP**	**13 05 40.0**	**-1.2**
MICGM				*e*PPP	PPP	13 07 14.0	
MICGM				*e*S	**S**	**13 12 10.0**	**-5.7**
MICGM				*e*PS	**PnS**	**13 12 32.0**	**-9.4**
MICGM				*e*SS	ScS	13 13 28.0	+19
MICGM				*e*SSS	SSS	13 19 48.0	
MICGM				*e*LR	LR	13 28 46.0	

MICGM				LRM	MLR	13 37 10.0	
	comp=Z,9.9nm,16.0s						
MNK	Minsk	69.69	329	eP	P	13 03 07.0	-0.7
MNK				e		13 05 40.0	
MNK				eS	S	13 12 10.0	-5.7
MNK				MLR	MLR		
	comp=Z,10µm,16.0s						
PV03	Paradox Valley	69.71	56	eP	P	13 03 08.9	+0.5
NACGM	Naroch	69.77	330	eP	P	13 03 08.0	-0.2
NACGM				eS	S	13 12 16.0	-0.6
NACGM				eLQ	LQ	13 28 48.0	
NACGM				eLR	LR	13 34 05.0	
NACGM				LRM	MLR	13 38 02.0	
	comp=Z,3.6nm,16.0s						
PV13	Radium Mtn., P	69.79	56	eP	P	13 03 09.5	+0.6
	comp=Z,59nm,0.8s						
PV13				LR	LR		
	comp=Z,3µm,20.0s						
PV02	Paradox Valley	69.80	56	eP	P	13 03 09.6	+0.5
	comp=Z,40nm,1.1s						
PV01	Paradox Valley	69.95	56	eP	P	13 03 09.8	-0.1
GROC	Groznyy	70.00	312	eP	P	13 03 08.1	-1.7
GROC				e		13 03 29.7	
GROC				e		13 05 43.1	
GROC				pmax	pmax		
	comp=Z,77nm,0.9s						
B34A	Aery, Baudette	70.01	40	P	P	13 03 09.5	-0.3
	baz=317,SNR=13						
C33A	Trail	70.01	42	P	P	13 03 09.9	0.0
	baz=316						
WUAZ	Wupatki	70.03	60	P	P	13 03 10.8	+0.4
	baz=312,SNR=19						
WUAZ	Wupatki	70.03	60	eP	P	13 03 11.5	+1.2
	comp=Z,60nm,1.3s						
WUAZ				LR	LR		
	comp=Z,3µm,20.0s						
Y14A	Wickenburg	70.08	62	eP	P	13 03 10.7	+0.1
	comp=Z,45nm,1.3s						
BORG	Borgarnes	70.09	357	eP	P	13 03 11.4	+1.4
	comp=Z,60nm,0.9s						
BORG				LR	LR		
	comp=Z,2µm,19.0s						
BORG	Borgarnes	70.09	357	eP	P	13 03 11.4	+1.4
BORG				pmax	pmax		
	comp=Z,60nm,0.9s						
BORG				MLR	MLR		
	comp=Z,2µm,19.0s						
AKT	Akhty	70.14	309⇑	iP	P	13 03 11.8	+0.9
AKT				e		13 03 29.0	
AKT				pmax	pmax		
	comp=Z,162nm,0.8s						
SMCO	Snowmass	70.17	54	eP	P	13 03 11.6	+0.1
	comp=Z,36nm,0.9s						
SMCO				LR	LR		
	comp=Z,2µm,20.0s						
HYA	Hoyanger	70.21	343	eP	P	13 03 10.7	0.0
HYA				IAmb	IAmb	13 03 13.2	
	comp=Z,114nm,1.1s						
113A	Mohawk Valley,	70.38	63	eP	P	13 03 12.9	+0.6
	comp=Z,32nm,1.4s						
113A				LR	LR		
	comp=Z,3µm,20.0s						
EIDS	Eidsvold	70.41	181	eP	P	13 03 13.9	+1.6
	comp=Z,21nm,0.6s						
C34A	RKJ Ranch, Bem	70.49	41	P	P	13 03 12.3	-0.5
	baz=317						
ISCO	Idaho Springs	70.52	53	P	P	13 03 14.1	+0.6
	baz=313,SNR=32						
ISCO	Idaho Springs	70.52	53	eP	P	13 03 13.9	+0.5
	comp=Z,24nm,0.8s						
ISCO				LR	LR		
	comp=Z,4µm,19.0s						
ISCO	Idaho Springs	70.52	53	eP	P	13 03 13.9	+0.5
ISCO				pmax	pmax		
	comp=Z,24nm,0.8s						
ISCO				MLR	MLR		
	comp=Z,4µm,19.0s						
B35A	Bob, Littlefor	70.52	40	P	P	13 03 12.8	-0.1
	baz=317,SNR=12						
B35A	Bob, Littlefor	70.52	40	eP	P	13 03 12.4	-0.5
	comp=Z,26nm,1.0s						
B35A				LR	LR		
	comp=Z,5µm,20.0s						
SUE	Sulen	70.60	344	eP	P	13 03 14.0	+0.9
AS01	Alice Springs	70.60	197	eP	P	13 03 13.6	+0.1
AS31	Alice Springs	70.61	197	eP	P	13 03 14.9	+1.2
	comp=Z,11nm,0.9s						
ASAR	Alice Springs	70.61	197	P	P	13 03 14.4	+0.8
	comp=Z,15nm,0.9s,baz=13,slow=5.4,SNR=99						
ASAR				LR	LR	13 32 23.5	
	comp=Z,4µm,21.7s,baz=20,slow=34						
MVCO	Mesa Verde	70.61	57	P	P	13 03 14.4	+0.5
	baz=313,SNR=31						
MVCO	Mesa Verde	70.61	57	eP	P	13 03 14.5	+0.5
	comp=Z,40nm,0.9s						
MVCO				LR	LR		
	comp=Z,3µm,18.0s						
X16A	Lo Mia Camp, P	70.72	60	eP	P	13 03 15.2	+0.5
	comp=Z,55nm,1.0s						
X16A				LR	LR		
	comp=Z,2µm,19.0s						
F32A	Veblen	70.73	44	P	P	13 03 13.3	-0.9
	baz=316						
KONO	Kongsberg	70.83	341	eP	P	13 03 15.0	+0.4
	comp=Z,47nm,0.8s						
KONO				LR	LR		
	comp=Z,4µm,18.0s						
KONO	Kongsberg	70.83	341	eP	P	13 03 15.0	+0.4
KONO				pmax	pmax		
	comp=Z,47nm,0.8s						
KONO				MLR	MLR		
	comp=Z,4µm,18.0s						
KONO	Kongsberg	70.83	341	eP	P	13 03 14.8	+0.2
SUSD	Miller	70.84	46	P	P	13 03 14.2	-0.8
	baz=315						
C35A	Jirik Farms, M	70.89	41	P	P	13 03 14.7	-0.5
	baz=317,SNR=6.6						
NCK	Nalchik	70.94	313⇓	iP	P	13 03 16.6	+1.0
NCK				pmax	pmax		
	comp=Z,147nm,1.0s						
NCK				MLR	MLR		
	comp=Z,17µm,19.0s						
G32A	Webster	70.98	44	P	P	13 03 14.6	-1.3
	baz=316						
G32A	Webster	70.98	44	PFAKE		13 03 30.0	+14
G32A				LR	LR		
	comp=Z,8µm,18.0s						
ASK	Askoy	71.03	343	eP	P	13 03 16.8	+1.0
ASK				IAmb	IAmb	13 03 17.8	
	comp=Z,100nm,1.0s						
KIV	Kislovodsk	71.08	314	eP	P	13 03 17.3	+0.8
KIV	Kislovodsk	71.08	314	eP	P	13 03 17.5	+0.9
	comp=Z,188nm,0.9s						
KIV				LR	LR		
	comp=Z,13µm,18.0s						
KIV	Kislovodsk	71.08	314	P	P	13 03 17.7	+1.2
	SNR=60						
KIV	Kislovodsk	71.08	314	i P	P	13 03 17.1	+0.6
	SNR=29						
KIV	Kislovodsk	71.08	314	eP	P	13 03 17.3	+0.8
KIV				eS	S	13 12 31.7	-0.7
KIV				pmax	pmax		
	comp=Z,245nm,1.1s						
KIV				pmax	pmax		
	comp=Z,849nm,4.8s						
KIV				MLR	MLR		
	comp=Z,12µm,18.0s						
BER	Bergen	71.10	343	eP	P	13 03 17.0	+0.9
KBZ	Khabaz	71.13	314	P	P	13 03 17.7	+1.0
	comp=Z,142nm,0.9s,baz=60,slow=2.1,SNR=170						
KBZ				LR	LR	13 39 04.9	
	comp=Z,19µm,19.3s,baz=38,slow=40						
E34A	Wadena	71.20	42	P	P	13 03 15.9	-1.2
	baz=317						
S22A	4UR Ranch, Cre	71.22	55	P	P	13 03 17.7	-0.1
	baz=313,SNR=45						
S22A	4UR Ranch, Cre	71.22	55	eP	P	13 03 17.9	+0.1
	comp=Z,32nm,1.0s						
S22A				LR	LR		
	comp=Z,2µm,18.0s						
ODD1	Odda	71.26	342	eP	P	13 03 18.3	+1.1
ZEI	Tsey	71.28	312	eP	P	13 03 16.3	-1.6
ZEI				pmax	pmax		
	comp=Z,96nm,0.9s						
W18A	Petrified Fore	71.29	59	P	P	13 03 18.2	+0.2
	baz=313,SNR=12						
W18A	Petrified Fore	71.29	59	eP	P	13 03 19.2	+1.1
	comp=Z,34nm,1.0s						
W18A				LR	LR		
	comp=Z,3µm,20.0s						
D35A	Remer	71.31	41	P	P	13 03 16.7	-1.1
	baz=317,SNR=5.7						
Q24A	Divide	71.35	53	P	P	13 03 17.8	-0.7
	baz=314,SNR=15						
Q24A	Divide	71.35	53	PFAKE		13 03 30.0	+11
Q24A				LR	LR		
	comp=Z,3µm,18.0s						
C36A	Pine Crest Far	71.37	40	P	P	13 03 18.0	-0.1
	baz=318,SNR=9.5						
214A	Organ Pipe Nat	71.52	63	P	P	13 03 19.4	+0.1
	baz=312,SNR=8.1						
E35A	Pequot Lakes	71.53	42	P	P	13 03 18.3	-0.8
	baz=317						
G33A	Ortonville	71.55	44	P	P	13 03 18.8	-0.4
	baz=317,SNR=14						
H32A	Carlson Farm,	71.56	45	P	P	13 03 18.5	-0.8
	baz=316						
X18A	Snowflake	71.56	59	eP	P	13 03 20.9	+1.2
	comp=Z,37nm,1.0s						
X18A				LR	LR		
	comp=Z,3µm,19.0s						
NEY	Neytrino	71.56	313d	iP	P	13 03 20.2	+0.6
NEY				pmax	pmax		
	comp=Z,12nm,0.8s						
NEY				MLR	MLR		
	comp=Z,10µm,18.0s						
PALK	Pallekele	71.57	262	P	P	13 03 20.0	+0.2
	comp=Z,15nm,0.7s,baz=118,slow=2.4,SNR=5.8						
PALK	Pallekele	71.57	262	eP	P	13 03 20.0	+0.2
	comp=Z,152nm,1.9s						
PALK				LR	LR		
	comp=Z,3µm,20.0s						
PALK	Pallekele	71.57	262	P	P	13 03 20.0	+0.2
PALK				pmax	pmax		
	comp=Z,15nm,0.7s						
TBLG	Delisi	71.58	311	eP	P	13 03 21.2	+1.7
	comp=Z,236nm,0.9s						
D36A	Goodland	71.65	41	P	P	13 03 18.6	-1.2
	baz=318						
D36A	Goodland	71.65	41	eP	P	13 03 19.4	-0.3
	comp=Z,29nm,1.2s						
D36A				LR	LR		
	comp=Z,4µm,20.0s						
C37A	Embarrass	71.68	40	P	P	13 03 19.4	-0.6
	baz=318,SNR=11						
F34A	Alexandria	71.68	43	P	P	13 03 19.7	-0.3
	baz=317						
OGNE	Ogallala	71.70	50	P	P	13 03 19.4	-0.9
	baz=315,SNR=16						
OGNE	Ogallala	71.70	50	eP	P	13 03 20.7	+0.4
	comp=Z,109nm,0.6s						
BLS5	Blasjo	71.74	342	eP	P	13 03 20.6	+0.5
SUW	Suwalki	71.75	331	eP	P	13 03 18.6	-1.6
SUW				eS	S	13 12 37.1	-2.5
SUW				LMZ	LR	13 37 49.6	
	comp=Z,7µm,18.1s						
SUW	Suwalki	71.75	331	eP	P	13 03 20.1	-0.1
	comp=Z,176nm,1.1s						
SUW				LR	LR		
	comp=Z,7µm,18.0s						
SUW	Suwalki	71.75	331	eP	P	13 03 20.1	-0.1
SUW				pmax	pmax		
	comp=Z,176nm,1.1s						
SUW				MLR	MLR		
	comp=Z,7µm,18.0s						
EYMN	Ely	71.83	39	P	P	13 03 20.2	-0.7
	baz=319,SNR=11						
EYMN	Ely	71.83	39	eP	P	13 03 19.8	-1.1
	comp=Z,59nm,1.4s						
EYMN				LR	LR		
	comp=Z,5µm,19.0s						
G34A	Benson	71.90	43	P	P	13 03 20.6	-0.8
	baz=317						
F35A	Swanville	71.96	42	P	P	13 03 20.6	-1.2
	baz=317,SNR=6.0						
SDCO	Great Sand Dun	71.99	54	P	P	13 03 22.7	+0.3
	baz=314,SNR=26						
SDCO	Great Sand Dun	71.99	54	eP	P	13 03 23.0	+0.6
	comp=Z,69nm,1.9s						
SDCO				LR	LR		
	comp=Z,2µm,20.0s						
D37A	Cotton	72.00	40	P	P	13 03 21.0	-0.9
	baz=318,SNR=7.3						
E36A	McGregor	72.09	41	P	P	13 03 21.9	-0.5
	baz=318,SNR=19						
C38A	Sawbill Land.	72.10	39	P	P	13 03 21.8	-0.7
	baz=319,SNR=23						
AKASG	Malin Array Be	72.16	326	P	P	13 03 22.2	-0.6
	comp=Z,40nm,0.8s,baz=36,slow=6.2,SNR=73						
AKASG				LR	LR	13 37 49.9	
	comp=Z,9µm,18.3s,baz=25,slow=38						
AKBB	Malin Array Si	72.16	326	eP	P	13 03 22.1	-0.6
	comp=Z,74nm,0.9s						
KIEV	Kiev	72.17	326	eP	P	13 03 22.4	-0.4
KIEV	Kiev	72.17	326	eP	P	13 03 22.1	-0.7
	comp=Z,67nm,0.9s						
KIEV				LR	LR		
	comp=Z,10µm,19.0s						
KIEV	Kiev	72.17	326	i P	P	13 03 21.9	-0.9
	SNR=41						
KIEV	Kiev	72.17	326c	iP	P	13 03 22.4	-0.4
KIEV				pmax	pmax		
	comp=Z,112nm,1.3s						
KIEV				MLR	MLR		
	comp=Z,10µm,18.0s						
KMY	Karmoy	72.19	343	eP	P	13 03 24.4	+1.7
AK11	Malin Array Si	72.20	326	eP	P	13 03 22.6	-0.4
KLNR	Kaliningrad	72.25	333⇑	eP	P	13 03 23.2	0.0
KLNR				pmax	pmax		
	comp=Z,118nm,0.6s						
KLNR				MLR	MLR		
	comp=Z,5µm,18.0s						
STAV	Stavanger	72.34	342	eP	P	13 03 25.0	+1.3
MBWA	Marble Bar	72.35	211	eP	P	13 03 25.2	+1.0
	comp=Z,33nm,1.1s						
E37A	Wrenshall	72.45	41	P	P	13 03 22.7	-1.9
	baz=318						
F36A	Milaca	72.45	42	P	P	13 03 24.1	-0.6
	baz=318						
F36A	Milaca	72.45	42	eP	P	13 03 24.2	-0.4
	comp=Z,12nm,0.9s						
F36A				LR	LR		
	comp=Z,6µm,19.0s						
AKH	Akhalkalaki	72.47	311⇓	iP	P	13 03 26.7	+1.7
AKH	Akhalkalaki	72.47	311	eP	P	13 03 27.1	+2.0
	comp=Z,87nm,0.9s						
AKH				LR	LR		
	comp=Z,9µm,19.0s						
G35A	Watkins	72.47	43	PFAKE		13 03 40.0	+15
G35A				LR	LR		
	comp=Z,5µm,20.0s						
ECSD	EROS Data Cent	72.52	45	P	P	13 03 24.8	-0.3
	baz=317,SNR=29						
ECSD	EROS Data Cent	72.52	45	eP	P	13 03 24.8	-0.3
	comp=Z,30nm,0.8s						
TUC	Tucson	72.55	62	P	P	13 03 24.4	-1.2
	baz=313						
TUC	Tucson	72.55	62	eP	P	13 03 25.6	0.0
	comp=Z,29nm,1.2s						
TUC				LR	LR		
	comp=Z,2µm,19.0s						
TUC	Tucson	72.55	62	eP	P	13 03 25.6	0.0
TUC				pmax	pmax		
	comp=Z,29nm,1.2s						
TUC				MLR	MLR		
	comp=Z,2µm,19.0s						
IVI	Ivigtut	72.55	10	eP	P	13 03 25.2	+0.3
	comp=Z,57nm,0.9s						
IVI				LR	LR		
	comp=Z,5µm,20.0s						
SNART	Snartemo	72.56	341	eP	P	13 03 26.1	+1.2
SNART				IAmb	IAmb	13 03 27.4	
	comp=Z,63nm,1.0s						
H35A	Sunnyside Ranc	72.69	43	P	P	13 03 26.0	-0.1
	baz=318,SNR=15						
GNI	Garni	72.70	310	P	P	13 03 27.8	+1.4
	comp=Z,98nm,1.1s,baz=4.9,slow=4.8,SNR=22						
GNI				LR	LR	13 40 22.1	
	comp=Z,7µm,18.7s,baz=30,slow=40						
KSCO	Kaye Shedlock’	72.73	52	P	P	13 03 25.2	-1.4
	baz=315						
KSCO	Kaye Shedlock’	72.73	52	eP	P	13 03 26.8	+0.2
	comp=Z,83nm,1.4s						
KSCO				LR	LR		
	comp=Z,3µm,20.0s						
E38A	The Farm, Brul	72.81	40	P	P	13 03 25.9	-0.8
	baz=319,SNR=14						
E38A	The Farm, Brul	72.81	40	eP	P	13 03 25.2	-1.5
	comp=Z,39nm,0.6s						
E38A				LR	LR		
	comp=Z,5µm,19.0s						
G36A	St. Michael	72.81	42	P	P	13 03 26.4	-0.4
	baz=318						
SOC	Sochi	72.84	315	eP	P	13 03 26.6	-0.4
SOC	Sochi	72.84	315c	iP	P	13 03 27.1	+0.1
SOC				e*PP	sP	13 03 35.7	+2.4
SOC				e*SP	PcP	13 03 40.4	-3.7
SOC				ePPP	PPP	13 07 51.9	
SOC				eS	S	13 12 53.6	+1.2
SOC				eSS	SS	13 17 30.6	-0.9
SOC				pmax	pmax		
	comp=Z,80nm,0.7s						
SOC				MLR	MLR		
	comp=Z,7µm,18.0s						
C40A	Isle Royale Na	72.88	38	P	P	13 03 25.9	-1.2
	baz=320						
C40A	Isle Royale Na	72.88	38	PFAKE		13 03 40.0	+13
C40A				LR	LR		
	comp=Z,6µm,19.0s						
NRS	Narsarsuaq	72.91	9	PFAKE		13 03 40.0	+13
NRS				LR	LR		
	comp=Z,12µm,18.0s						
F37A	Hinrichs Farm,	72.98	41	P	P	13 03 26.9	-0.8
	baz=318						
T25A	Trinidad	73.03	54	P	P	13 03 28.4	-0.1
	baz=314,SNR=20						
T25A	Trinidad	73.03	54	eP	P	13 03 28.9	+0.3
	comp=Z,43nm,1.0s						
T25A				LR	LR		
	comp=Z,2µm,20.0s						
ANN	Anapa	73.06	317	eP	P	13 03 28.0	-0.2
ANN	Anapa	73.06	317	eP	P	13 03 27.9	-0.2
ANN				eS	S	13 12 56.5	+1.7
ANN				pmax	pmax		
	comp=Z,209nm,1.2s						
F38A	Pierce - Schro	73.15	41	P	P	13 03 28.5	-0.3
	baz=319,SNR=20						
H36A	Jessenland, He	73.22	43	P	P	13 03 28.6	-0.5
	baz=318						
SPMN	Marine on St.	73.27	42	P	P	13 03 28.9	-0.6
	baz=318						
SPMN	Marine on St.	73.27	42	eP	P	13 03 29.9	+0.5
	comp=Z,26nm,0.8s						
SPMN				LR	LR		
	comp=Z,7µm,20.0s						
TRD	Trivandrum	73.32	265⇓	eP	P	13 03 38.2	+8.0
LAZ	Ladron	73.34	58	eP	P	13 03 31.3	+1.0
TASM	ASL Pad, Albuq	73.36	57	P	P	13 03 31.0	+0.5
	baz=314,SNR=22						
ANMO	Albuquerque	73.37	57	P	P	13 03 31.2	+0.7
	comp=Z,12nm,0.9s,baz=311,slow=7.4,SNR=37						
ANMO				LR	LR	13 32 36.3	
	comp=Z,2µm,20.7s,baz=336,slow=33						
ANMO	Albuquerque	73.37	57	P	P	13 03 30.5	0.0
	baz=314						
ANMO	Albuquerque	73.37	57	eP	P	13 03 31.2	+0.7
	comp=Z,21nm,1.0s						
TASL	Snake Pit, Alb	73.37	57	P	P	13 03 31.0	+0.5
	baz=314,SNR=22						
BGNE	Belgrade	73.42	47	P	P	13 03 29.7	-0.9
	baz=316						
BGNE	Belgrade	73.42	47	PFAKE		13 03 40.0	+9.5
BGNE				LR	LR		
	comp=Z,7µm,19.0s						
E39A	Mellen	73.43	40	P	P	13 03 29.7	-0.8
	baz=320,SNR=15						
I36A	Fitzsimmons Fa	73.59	43	P	P	13 03 30.3	-1.1
	baz=318						
LENM	Lemitar	73.60	58	eP	P	13 03 32.7	+0.9
E40A	Wakefield	73.68	39	P	P	13 03 30.9	-1.0
	baz=320,SNR=27						
H37A	Dierke Farm, C	73.69	42	P	P	13 03 31.2	-0.8
	baz=319,SNR=5.8						
Y22D	IRIS PASSCAL I	73.69	58	PFAKE		13 03 40.0	+7.6
Y22D				LR	LR		
	comp=Z,4µm,20.0s						
Y22E	IRIS PASSCAL I	73.69	58	P	P	13 03 31.5	-0.9
	baz=314						
G38A	Ridgeland	73.75	41	P	P	13 03 31.2	-1.1
	baz=319,SNR=5.8						
D41A	Chassel	73.79	38	P	P	13 03 31.4	-1.2
	baz=321,SNR=9.9						
D41A	Chassel	73.79	38	eP	P	13 03 32.3	-0.2
	comp=Z,43nm,0.6s						
D41A				LR	LR		
	comp=Z,6µm,20.0s						
BNM	Barren Site	73.82	58	eP	P	13 03 34.0	+0.8
I37A	Lemond, Waseca	73.89	43	P	P	13 03 32.3	-0.9
	baz=318,SNR=21						
I37A	Lemond, Waseca	73.89	43	eP	P	13 03 32.8	-0.4
	comp=Z,155nm,1.0s						
I37A				LR	LR		
	comp=Z,6µm,20.0s						
H38A	Maiden Rock	73.92	42	P	P	13 03 32.4	-0.9
	baz=319						
J36A	Seneca 1, Swea	73.94	44	P	P	13 03 32.7	-0.8
	baz=318						
J36A	Seneca 1, Swea	73.94	44	eP	P	13 03 33.7	+0.2
	comp=Z,34nm,1.3s						
J36A				LR	LR		
	comp=Z,8µm,18.0s						
F40A	Park Falls	73.98	40	P	P	13 03 32.8	-0.9
	baz=320,SNR=11						
E41A	Kenton	74.08	39	P	P	13 03 33.5	-0.7
	baz=320,SNR=12						
319A	Douglas	74.12	61	eP	P	13 03 35.9	+1.0
	comp=Z,129nm,1.0s						
319A				LR	LR		
	comp=Z,2µm,19.0s						
121A	Cookes Peak, D	74.24	60	P	P	13 03 36.0	+0.4
	baz=314,SNR=29						
COWI	Conover	74.28	39	eP	P	13 03 34.2	-1.2
	comp=Z,24nm,1.1s						
COWI				LR	LR		
	comp=Z,5µm,19.0s						
GKP	Gorka Klasztor	74.32	334	eP	P	13 03 35.2	-0.3
GKP				eS	S	13 13 09.0	+0.2
GKP				LMZ	LR	13 39 53.7	
	comp=Z,11µm,19.1s						
GKP	Gorka Klasztor	74.32	334	eP	P	13 03 35.2	-0.3
GKP				eS	S	13 13 09.0	+0.2
GKP				MLR	MLR		
	comp=Z,11µm,19.1s						
J37A	Redenius Farm,	74.34	44	P	P	13 03 35.3	-0.5
	baz=318,SNR=7.1						
BEL	Belsk	74.36	331	eP	P	13 03 36.3	+0.5
BEL				eS	S	13 13 10.4	+1.0
BEL				LMZ	LR	13 41 17.8	
	comp=Z,7µm,18.6s						
BEL	Belsk	74.36	331	eP	P	13 03 36.3	+0.5
BEL				eS	S	13 13 10.4	+1.0
BEL				MLR	MLR		
	comp=Z,7µm,18.6s						
I38A	Scanlan Farm,	74.38	42	P	P	13 03 35.1	-0.9
	baz=319,SNR=6.3						
H39A	Augusta	74.39	41	P	P	13 03 35.3	-0.8
	baz=320						
K36A	Gilmore City	74.40	45	P	P	13 03 35.6	-0.6
	baz=318,SNR=6.1						
G40A	Rib Lake	74.44	40	P	P	13 03 35.4	-1.0
	baz=320,SNR=8.2						
G40A	Rib Lake	74.44	40	eP	P	13 03 36.0	-0.3
	comp=Z,16nm,0.9s						
G40A				LR	LR		
	comp=Z,5µm,20.0s						
CBKS	Cedar Bluff	74.45	50	P	P	13 03 35.5	-1.1
	baz=316						
CBKS	Cedar Bluff	74.45	50	eP	P	13 03 36.5	-0.1
	comp=Z,31nm,0.5s						
CBKS				LR	LR		
	comp=Z,4µm,19.0s						
CBKS	Cedar Bluff	74.45	50	eP	P	13 03 36.5	-0.1
CBKS				pmax	pmax		
	comp=Z,31nm,0.5s						
CBKS				MLR	MLR		
	comp=Z,4µm,19.0s						
SIM	Simferopol’	74.50	319	eP	P	13 03 37.1	+0.4
SIM	Simferopol’	74.50	319c	iP	P	13 03 37.2	+0.5
SIM				e		13 03 51.0	
SIM						13 06 19.0	
SIM				ePPP	PPP	13 08 07.0	
SIM				eS	S	13 13 10.0	-1.2

SIM				ePS	PnS	13 13 58.0	+13
SIM				SS	SS	13 17 57.0	+0.3
SIM				eSSS	SSS	13 21 13.0	
SIM				pmax	pmax		
	comp=Z,106nm,0.8s						
SIM				MLR	MLR		
	comp=Z,11µm,15.3s						
SORM	Soroca	74.53	325⇑	iP	P	13 03 36.6	-0.2
E42A	Champion	74.56	38	P	P	13 03 36.5	-0.5
	baz=321,SNR=12						
F41A	Three Lakes	74.57	39	P	P	13 03 36.7	-0.5
	baz=320,SNR=14						
F41A	Three Lakes	74.57	39	eP	P	13 03 36.3	-0.9
	comp=Z,27nm,0.9s						
F41A				LR	LR		
	comp=Z,4µm,19.0s						
MLA1	Latheron	74.64	347	eP	P	13 03 37.8	+0.6
L36A	Harm Buss Farm	74.69	45	P	P	13 03 36.4	-1.5
	baz=318						
HSIG		74.69	64	PFAKE		13 03 50.0	+12
HSIG				LR	LR		
	comp=Z,2µm,20.0s						
K37A	Belmond	74.70	44	P	P	13 03 37.3	-0.6
	baz=319						
H40A	Chili	74.84	41	P	P	13 03 37.4	-1.3
	baz=320,SNR=5.4						
J38A	Wedel Dairy, R	74.85	43	P	P	13 03 37.4	-1.4
	baz=319,SNR=11						
LVV	L'vov	74.87	328	eP	P	13 03 39.4	+0.7
LVV				e		13 06 27.3	
LVV				ePPP	PPP	13 08 18.7	
LVV				i S	S	13 13 13.6	-1.5
LVV				ePS	PnS	13 13 35.5	-14
I39A	Houston	74.90	42	P	P	13 03 37.6	-1.5
	baz=320,SNR=7.4						
I39A	Houston	74.90	42	eP	P	13 03 38.5	-0.5
	comp=Z,42nm,0.8s						
I39A				LR	LR		
	comp=Z,6µm,20.0s						
SCHQ	Schefferville	74.94	22	P	P	13 03 39.3	+0.2
	comp=Z,6.2nm,0.6s,baz=351,slow=8.1,SNR=6.7						
SCHQ				LR	LR	13 41 56.1	
	comp=Z,4µm,18.1s,baz=346,slow=40						
SCHQ	Schefferville	74.94	22	eP	P	13 03 39.3	+0.2
	comp=Z,17nm,1.0s						
G41A	Antigo	74.94	40	P	P	13 03 38.9	-0.4
	baz=321						
F42A	Maple Grove Fa	74.99	39	P	P	13 03 38.8	-0.7
	baz=321						
E43A	Lone Tree Farm	75.01	38	P	P	13 03 38.1	-1.5
	baz=322,SNR=7.7						
E43A	Lone Tree Farm	75.01	38	eP	P	13 03 38.5	-1.1
	comp=Z,19nm,0.9s						
E43A				LR	LR		
	comp=Z,5µm,19.0s						
SRIG	Santa Rosalia	75.03	66	PFAKE		13 03 50.0	+10
SRIG				LR	LR		
	comp=Z,4µm,20.0s						
M36A	Felix, Anita	75.10	46	P	P	13 03 39.2	-1.1
	baz=318,SNR=5.9						
L37A	Phoenix Point,	75.12	44	P	P	13 03 39.7	-0.7
	baz=319,SNR=6.9						
H41A	Junction City	75.19	40	P	P	13 03 39.8	-0.9
	baz=320,SNR=6.1						
H41A	Junction City	75.19	40	eP	P	13 03 40.3	-0.4
	comp=Z,21nm,0.8s						
H41A				LR	LR		
	comp=Z,5µm,20.0s						
J39A	Decorah	75.21	42	P	P	13 03 39.6	-1.2
	baz=320,SNR=7.4						
K38A	Parkersburg	75.22	44	P	P	13 03 40.0	-0.9
	baz=319						
K38A	Parkersburg	75.22	44	eP	P	13 03 41.2	+0.3
	comp=Z,78nm,1.5s						
K38A				LR	LR		
	comp=Z,5µm,21.0s						
KIS	Kishinev	75.24	324⇑	iP	P	13 03 40.0	-0.9
	comp=Z,600nm,2.0s						
KIS	Kishinev	75.24	324	i PcP	PcP	13 03 54.0	-0.3
KIS				eScP		13 09 00.0	
KIS				i S	S	13 13 18.0	-1.3
	comp=Z,2µm,10.0s						
KIS				i ScS	SKSac	13 13 44.0	-5.7
KIS	Kishinev	75.24	324α	iP	P	13 03 40.0	-0.9
KIS				i		13 03 54.0	
KIS				e		13 06 38.0	
KIS				e		13 08 12.0	
KIS				i S	S	13 13 18.0	-1.3
KIS				i		13 13 44.0	
KIS				i PS	PnS	13 14 02.0	+7.5
KIS				pmax	pmax		
	comp=Z,600nm,2.0s						
KIS				pmax	pmax		
	comp=Z,2µm,10.0s						
KIS				pmax	pmax		
	comp=N,500nm,12.0s						
KIS				pmax	pmax		
	comp=E,400nm,12.0s						
KIS				pmax	pmax		
	comp=Z,2µm,12.0s						
KIS				smax	smax		
	comp=N,2µm,10.0s						
KIS				smax	smax		
	comp=E,1µm,12.0s						
KIS				MLR	MLR		
	comp=Z,15µm,20.0s						
G42A	Mountain	75.26	39	P	P	13 03 40.3	-0.7
	baz=321,SNR=7.0						
G42A	Mountain	75.26	39	eP	P	13 03 40.4	-0.7
	comp=Z,15nm,0.9s						
G42A				LR	LR		
	comp=Z,4µm,20.0s						
E44A	Grand Marais A	75.28	37	P	P	13 03 39.8	-1.3
	baz=322						
E44A	Grand Marais A	75.28	37	PFAKE		13 03 50.0	+8.9
E44A				LR	LR		
	comp=Z,5µm,20.0s						
I40A	Norwalk	75.30	41	P	P	13 03 40.3	-1.1
	baz=320						
ARMA	Armidale	75.43	180	eP	P	13 03 44.2	+2.1
	comp=Z,29nm,0.9s						
ARMA				LR	LR		
	comp=Z,5µm,20.0s						
N36A	Muff Farm, Cla	75.50	46	P	P	13 03 40.7	-1.8
	baz=318						
L38A	Oak Wood Farm,	75.50	44	P	P	13 03 41.5	-1.1
	baz=319,SNR=8.9						
KWP	Kalwaria Pacla	75.51	329	eP	P	13 03 43.1	+0.6
KWP				eS	S	13 13 22.8	+0.5
KWP				LMZ	LR	13 37 46.4	
	comp=Z,8µm,18.7s						
KWP	Kalwaria Pacla	75.51	329	eP	P	13 03 42.8	+0.3
	comp=Z,2µm,0.9s						
KWP				LR	LR		
	comp=Z,67µm,18.0s						
KWP	Kalwaria Pacla	75.51	329	eP	P	13 03 42.8	+0.3
M37A	Trindle Farm,	75.51	45	P	P	13 03 41.1	-1.6
	baz=319						
I41A	Arkdale	75.52	41	PFAKE		13 03 50.0	+7.4
I41A				LR	LR		
	comp=Z,4µm,20.0s						
SCIA	State Center	75.55	44	P	P	13 03 41.4	-1.5
	baz=319						
SCIA	State Center	75.55	44	PFAKE		13 03 50.0	+7.2
SCIA				LR	LR		
	comp=Z,6µm,20.0s						
F44A	Big Bay de Noc	75.57	38	P	P	13 03 41.7	-1.1
	baz=322,SNR=7.0						
G43A	Wallace	75.58	39	P	P	13 03 42.2	-0.7
	baz=321,SNR=12						
G43A	Wallace	75.58	39	eP	P	13 03 42.3	-0.6
	comp=Z,38nm,0.9s						
G43A				LR	LR		
	comp=Z,4µm,19.0s						
K39A	Oelwein	75.60	43	P	P	13 03 41.7	-1.4
	baz=320,SNR=5.6						
IAS	Iasi	75.61	324⇑	iP	P	13 03 42.9	-0.1
J40A	Soldiers Grove	75.62	42	P	P	13 03 42.1	-1.0
	baz=320						
BANOM	Banah	75.64	292	i P	P	13 03 44.7	+1.1
	SNR=8.0						
SHME	Shamm	75.66	292	i P	P	13 03 43.9	+0.2
	SNR=20						
H42A	Shiocton	75.78	40	P	P	13 03 43.1	-0.9
	baz=321						
H42A	Shiocton	75.78	40	PFAKE		13 04 00.0	+16
H42A				LR	LR		
	comp=Z,6µm,20.0s						
E45A	Wooded Hills,	75.80	37	P	P	13 03 43.3	-0.9
	baz=323						
LEOM	Leova	75.89	324⇑	iP	P	13 03 45.0	+0.3
KSU1	Kansas State U	75.91	48	P	P	13 03 43.0	-2.0
	baz=318						
KSU1	Kansas State U	75.91	48	PFAKE		13 04 00.0	+15
KSU1				LR	LR		
	comp=Z,5µm,19.0s						
N37A	Lee Faris, Mou	75.92	46	P	P	13 03 44.7	-0.2
	baz=319						
N37A	Lee Faris, Mou	75.92	46	eP	P	13 03 45.3	+0.4
	comp=Z,41nm,0.6s						
N37A				LR	LR		
	comp=Z,4µm,19.0s						
KPL	Plockton	75.93	348	eP	P	13 03 44.1	-0.5
KPL				IAmb	IAmb	13 03 49.8	
	comp=Z,63nm,0.8s						
KPL				IAMs_20	IAMs_20	13 44 03.7	
	comp=Z,2µm,15.0s						
M38A	Pleasantville	75.93	45	P	P	13 03 45.1	+0.1
	baz=319,SNR=5.4						
WSAR	Wadi Sarin	75.94	289	P	P	13 03 44.7	-0.6
	comp=Z,15nm,1.0s,baz=88,slow=7.8,SNR=6.4						
WSAR				LR	LR	13 41 36.9	
	comp=Z,4µm,19.5s,baz=40,slow=39						
K40A	Colesburg	75.96	43	P	P	13 03 43.7	-1.4
	baz=320,SNR=7.2						
MATQ	Matagami	75.97	30	P	P	13 03 43.8	-1.2
	baz=327						
J41A	Loganville	75.98	41	P	P	13 03 44.0	-1.3
	baz=320						
L39A	Vinton	75.98	43	P	P	13 03 44.2	-1.1
	baz=320,SNR=18						
PRAR	RASCA	76.01	325⇑	iP	P	13 03 45.3	-0.1
OJC	Ojcow	76.06	331	eP	P	13 03 45.8	+0.2
OJC				eS	S	13 13 25.0	-3.3
OJC				LMZ	LR	13 40 57.1	
	comp=Z,8µm,18.8s						
OJC	Ojcow	76.06	331	eP	P	13 03 45.7	+0.2
	comp=Z,94nm,0.8s						
OJC	Ojcow	76.06	331⇑	eP	P	13 03 45.8	+0.2
OJC				eS	S	13 13 25.0	-3.3
OJC				MLR	MLR		
	comp=Z,8µm,18.8s						
MDH	Madha	76.07	292	P	P	13 03 46.1	+0.1
I42A	Draeger Farm,	76.09	40	P	P	13 03 44.8	-1.0
	baz=321						
I42A	Draeger Farm,	76.09	40	eP	P	13 03 45.2	-0.6
	comp=Z,18nm,0.6s						
I42A				LR	LR		
	comp=Z,5µm,19.0s						
MSFE	Esma-Masafi	76.12	292	P	P	13 03 46.9	+0.6
H43A	Windswept, Lux	76.15	39	P	P	13 03 45.1	-1.1
	baz=322,SNR=5.6						
H43A	Windswept, Lux	76.15	39	eP	P	13 03 46.0	-0.2
	comp=Z,35nm,0.8s						
H43A				LR	LR		
	comp=Z,4µm,19.0s						
F45A	CMU Biological	76.19	37	P	P	13 03 45.4	-1.0
	baz=323						
AMTX	Amarillo	76.19	54	P	P	13 03 46.3	-0.4
	baz=316						
AMTX	Amarillo	76.19	54	eP	P	13 03 47.1	+0.4
	comp=Z,55nm,0.9s						
AMTX				LR	LR		
	comp=Z,2µm,20.0s						
BUR08	Bucovina Ar. S	76.19	326	eP	P	13 03 46.8	+0.3
BUR04	Bucovina Ar. S	76.21	326	eP	P	13 03 46.2	-0.4
BURAR	Bucovina Array	76.21	326⇑	iP	P	13 03 47.0	+0.4
MSTX	Muleshoe	76.21	56	P	P	13 03 45.8	-1.0
	baz=316,SNR=7.4						
MSTX	Muleshoe	76.21	56	eP	P	13 03 47.4	+0.5
	comp=Z,71nm,1.1s						
MSTX				LR	LR		
	comp=Z,3µm,19.0s						
JFWS	Jewell Farm	76.22	42	P	P	13 03 45.5	-1.1
	baz=320						
JFWS	Jewell Farm	76.22	42	eP	P	13 03 46.3	-0.3
	comp=Z,55nm,1.8s						
JFWS				LR	LR		
	comp=Z,7µm,19.0s						
JFWS	Jewell Farm	76.22	42	eP	P	13 03 46.3	-0.3
JFWS				pmax	pmax		
	comp=Z,55nm,1.8s						
JFWS				MLR	MLR		
	comp=Z,7µm,19.0s						
MNTX	Cornudas Mount	76.28	59	P	P	13 03 46.2	-1.0
	baz=315,SNR=48						
MNTX	Cornudas Mount	76.28	59	eP	P	13 03 46.8	-0.4
	comp=Z,24nm,0.8s						
MNTX				LR	LR		
	comp=Z,2µm,22.0s						
UMQ	Umm Al-Quwin	76.33	292	P	P	13 03 49.2	+1.7
UOSS	Minazif	76.38	292	eP	P	13 03 48.6	+0.8
	comp=Z,62nm,0.9s						
UOSS				LR	LR		
	comp=Z,3µm,19.0s						
UOSS	Minazif	76.38	292	i P	P	13 03 47.5	-0.3
	SNR=7.6						
N38A	Joes South For	76.38	45	P	P	13 03 46.0	-1.6
	baz=319						
M39A	Webster	76.39	44	P	P	13 03 46.5	-1.1
	baz=320,SNR=6.0						
O37A	Wolven Farm, M	76.39	46	P	P	13 03 46.6	-1.1
	baz=319						
BIZ	Bicaz	76.40	325⇓	iP	P	13 03 48.0	+0.4
L40A	Anamosa	76.41	43	P	P	13 03 45.6	-2.1
	baz=320,SNR=8.2						
L40A	Anamosa	76.41	43	eP	P	13 03 47.1	-0.6
	comp=Z,33nm,1.0s						
L40A				LR	LR		
	comp=Z,5µm,19.0s						
K41A	Shullsburg	76.43	42	P	P	13 03 46.7	-1.1
	baz=320						
J42A	Columbus	76.43	41	P	P	13 03 45.7	-2.2
	baz=321,SNR=6.2						
F46A	Macinaw City C	76.44	37	P	P	13 03 46.7	-1.1
	baz=323						
I43A	Langenfeld Bro	76.44	40	P	P	13 03 45.7	-2.2
	baz=321,SNR=5.5						
UZH	Uzhgorod	76.49	328	eP	P	13 03 47.9	-0.1
UZH				e		13 03 57.7	
UZH				e		13 06 41.3	
UZH				eS	S	13 13 27.9	-5.2
UZH				eSS	SS	13 18 30.1	+3.5
HATD	Hatta, Dubai	76.50	292	i P	P	13 03 49.5	+1.0
	SNR=10						
TESR	Tescani	76.53	324⇑	iP	P	13 03 48.5	+0.2
GDL2	Guadalupe Moun	76.53	58	eP	P	13 03 49.3	+0.6
INVG	Invergeldie, C	76.55	346	eP	P	13 03 48.2	0.0
INVG				IAMs_20	IAMs_20	13 43 32.5	
	comp=Z,3µm,17.1s						
NIE	Niedzica	76.56	330	eP	P	13 03 49.0	+0.5
NIE				eS	S	13 13 31.1	-2.8
NIE				LMZ	LR	13 43 19.2	
	comp=Z,4µm,19.1s						
NIE	Niedzica	76.56	330⇑	eP	P	13 03 49.0	+0.5
NIE				eS	S	13 13 31.1	-2.8
CRVS	Cervenica-Dubn	76.58	329	eP	P	13 03 48.9	+0.4
CRVS				pmax	pmax		
	comp=Z,133nm,1.7s						
CRVS	Cervenica-Dubn	76.58	329	eP	P	13 03 48.9	+0.4
CRVS				eS	S	13 13 32.1	-1.9
CRVS				eL	L	13 40 36.0	
ASHO	Ashiyiah	76.65	292	i P	P	13 03 50.3	+0.9
	SNR=7.3						
TLCR		76.68	322⇑	iP	P	13 03 49.4	+0.3
N39A	Derby Farms, D	76.68	45	P	P	13 03 47.9	-1.4
	baz=320,SNR=5.6						
N39A	Derby Farms, D	76.68	45	eP	P	13 03 49.0	-0.3
	comp=Z,47nm,1.3s						
N39A				LR	LR		
	comp=Z,6µm,21.0s						
NAZ	Nazwa, Dubai	76.70	292	P	P	13 03 53.0	+3.4
	SNR=5.4						
NAZ	Nazwa, Dubai	76.70	292	i P	P	13 03 50.4	+0.8
	SNR=7.2						
KSP	Ksiaz	76.70	333	eP	P	13 03 49.2	0.0
KSP				eS	S	13 13 32.9	-2.5
KSP				LMZ	LR	13 40 57.9	
	comp=Z,7µm,19.3s						
KSP	Ksiaz	76.70	333⇑	eP	P	13 03 49.2	0.0
KSP				eS	S	13 13 32.9	-2.5
KSP				MLR	MLR		
	comp=Z,7µm,19.3s						
J43A	Natural Harves	76.71	41	P	P	13 03 48.2	-1.2
	baz=321						
P37A	Lathrop	76.72	47	P	P	13 03 47.8	-1.8
	baz=319,SNR=6.6						
RAC	Raciborz	76.73	331	eP	P	13 03 50.3	+1.0
L41A	Preston	76.74	43	P	P	13 03 48.1	-1.5
	baz=320						
K42A	Prairie Point,	76.75	41	P	P	13 03 48.7	-0.9
	baz=321						
M40A	Post Highland	76.77	44	P	P	13 03 48.2	-1.6
	baz=320						
O38A	Galt	76.77	46	P	P	13 03 47.7	-2.1
	baz=319,SNR=5.2						
TRPA	Tarpa	76.82	328⇑	iP	P	13 03 50.6	+0.7
TRPA	Tarpa	76.82	328⇑	eP	P	13 03 51.3	+1.4
LHI	Lord Howe Isla	76.82	174	PFAKE		13 04 00.0	+10
LHI				LR	LR		
	comp=Z,4µm,20.0s						
EAB	Aberfoyle	76.83	347	eP	P	13 03 49.4	-0.4
BMR	Baia Mare	76.83	327⇓	iP	P	13 03 49.4	-0.6
OKC	Ostrava-Krasne	76.95	331	eP	P	13 03 51.9	+1.3
OKC				eS	S	13 13 36.0	-2.1
OKC				AMS	AMS	13 46 20.0	
	comp=Z,5µm,15.8s						
OKC	Ostrava-Krasne	76.95	331	eP	P	13 03 51.9	+1.3
OKC				eS	S	13 13 36.0	-2.1
OKC				MLR	MLR		
	comp=Z,5µm,15.8s						
CFR	Carcaliu	76.97	323⇓	iP	P	13 03 51.0	+0.2
CHGQ	Chibougamau	76.97	29	P	P	13 03 49.5	-1.3
	baz=329						
ARCR	ARCALIA	76.98	326⇑	iP	P	13 03 52.4	+1.5
VRI	Vrincioaia	77.01	324⇓	iP	P	13 03 51.2	+0.1
PLOR	Plostina	77.06	324⇑	iP	P	13 03 51.9	+0.5
LANS	Liptovska Anna	77.08	330	eP	P	13 03 52.5	+1.1
UPC	Upice	77.08	333	eP	P	13 03 52.0	+0.6
UPC				ex	x	13 03 54.1	
UPC				AMS	AMS	13 43 00.0	
	comp=Z,7µm,17.8s						
UPC	Upice	77.08	333	eP	P	13 03 52.0	+0.6
UPC				MLR	MLR		
	comp=Z,7µm,17.8s						
P38A	Dawn	77.11	46	P	P	13 03 50.2	-1.5
	baz=319						
P38A	Dawn	77.11	46	eP	P	13 03 51.5	-0.2
	comp=Z,105nm,1.4s						
P38A				LR	LR		
	comp=Z,5µm,19.0s						
DPC	Dobruska-Polom	77.12	333	eP	P	13 03 53.3	+1.7
DPC				eS	S	13 13 37.7	-2.3
DPC				AMS	AMS	13 42 40.0	
	comp=Z,7µm,17.3s						
DPC	Dobruska-Polom	77.12	333	eP	P	13 03 53.3	+1.7
DPC				eS	S	13 13 37.7	-2.3
DPC				MLR	MLR		
	comp=Z,7µm,17.3s						
N40A	Mertquake, Sal	77.13	44	P	P	13 03 50.4	-1.4
	baz=320,SNR=6.8						
O39A	Kirksville	77.13	45	P	P	13 03 50.4	-1.4
	baz=320						
ASUD	Al Ashush, Dub	77.17	292	P	P	13 03 56.1	+3.8
	SNR=6.3						
ASUD	Al Ashush, Dub	77.17	292	i P	P	13 03 53.6	+1.4
	SNR=12						
L42A	Oliver, Polo	77.19	42	P	P	13 03 51.0	-1.1
	baz=321						
L42A	Oliver, Polo	77.19	42	PFAKE		13 04 00.0	+7.9
L42A				LR	LR		
	comp=Z,5µm,20.0s						
Q37A	Longview Farm,	77.20	47	P	P	13 03 50.5	-1.8
	baz=319						
KRLC	Kraliky	77.20	332	eP	P	13 03 53.7	+1.6
KRLC	Kraliky	77.20	332	eP	P	13 03 53.7	+1.6
MORC	Moravsky Berou	77.21	332⇑	iP	P	13 03 52.6	+0.4
MORC	Moravsky Berou	77.21	332	eP	P	13 03 52.5	+0.4
	comp=Z,104nm,1.0s						
MORC				LR	LR		
	comp=Z,7µm,18.0s						
MORC	Moravsky Berou	77.21	332⇑	iP	P	13 03 52.3	+0.2
MORC				eS	S	13 13 41.2	+0.2
PGBU	Glenifferbraes	77.21	347	eP	P	13 03 52.6	+0.6
PGBU				IAmb	IAmb	13 03 55.4	
	comp=Z,88nm,0.9s						
PGBU				IAMs_20	IAMs_20	13 41 52.7	
	comp=Z,3µm,19.3s						
M41A	Milan	77.26	43	P	P	13 03 50.8	-1.7
	baz=320						
K43A	Burlington	77.27	41	P	P	13 03 51.2	-1.4
	baz=321						
K43A	Burlington	77.27	41	PFAKE		13 04 00.0	+7.4
K43A				LR	LR		
	comp=Z,4µm,20.0s						
KECS	Kecovo	77.28	329	eP	P	13 03 53.2	+0.7
KECS				e		13 04 06.2	
KECS				pmax	pmax		
	comp=Z,31nm,1.0s						
KECS	Kecovo	77.28	329	eP	P	13 03 53.2	+0.7
KECS				ePCP	PcP	13 04 06.2	+3.1
ALNE	Al Ain	77.29	291	P	P	13 03 53.4	+0.4
GRER		77.30	324⇑	iP	P	13 03 55.6	+2.9
CLL	Collm	77.32	335	i P	P	13 03 52.4	-0.3
	comp=Z,29nm,1.0s						
CLL				i Pmax		13 03 54.3	
	comp=Z,113nm,0.8s						
CLL				e		13 04 04.0	
CLL				eS	S	13 13 39.0	-3.0
CLL				ePS	PnS	13 14 18.0	-3.0
CLL				e(SS)		13 19 24.0	
CLL				eSSS	SSS	13 22 12.0	
CLL				e		13 23 18.0	
CLL				LmH		13 37 00.0	
	comp=N,5µm,19.2s						
CLL				LmH		13 37 00.0	
	comp=E,10µm,18.0s						
CLL				LmV		13 45 00.0	
	comp=Z,6µm,18.1s						
CLL	Collm	77.32	335	eP	P	13 03 52.1	-0.5
	comp=Z,90nm,0.7s						
CLL				LR	LR		
	comp=Z,6µm,19.0s						
CLL	Collm	77.32	335	i P	P	13 03 52.4	-0.3
CLL				e*SP	PcP	13 04 04.0	+0.8
CLL				eS	S	13 13 39.0	-3.0
CLL				pmax	pmax		
	comp=Z,113nm,0.8s						
CLL				MLR	MLR		
	comp=Z,6µm,18.1s						
BRG	Berggiesshubel	77.42	334	i P	P	13 03 53.3	+0.1
	comp=Z,70nm,1.3s						
BRG				i PCP	PcP	13 04 04.2	+0.5
	comp=Z,46nm,1.3s						
BRG				S	S	13 13 47.0	+3.9
BRG				SS	SS	13 18 47.0	+6.6
	comp=N,7µm,17.3s						
	comp=E,7µm,18.6s						
	comp=Z,6µm,17.7s						
BRG	Berggiesshubel	77.42	334	i P	P	13 03 53.3	+0.1
BRG				i		13 04 04.2	
BRG				S	S	13 13 47.0	+3.9
BRG				SS	SS	13 18 47.0	+6.6
BRG				pmax	pmax		
	comp=Z,70nm,1.3s						
BRG				MLR	MLR		
	comp=N,7µm,17.3s						
BRG				MLR	MLR		
	comp=E,7µm,18.6s						
BRG				MLR	MLR		
	comp=Z,6µm,17.7s						
TIRR	Tirgusor	77.43	322	eP	P	13 03 53.9	+0.5
	comp=Z,58nm,1.0s						
TIRR				LR	LR		
	comp=Z,13µm,18.0s						
AJN	Ajban	77.44	292	P	P	13 03 53.9	+0.1
STKA	Stephens Creek	77.44	189	P	P	13 03 54.8	+1.5
	comp=Z,7.2nm,0.5s,baz=347,slow=6.4,SNR=17						
STKA				LR	LR	13 41 22.4	
	comp=Z,2µm,19.1s,baz=15,slow=38						
STKA	Stephens Creek	77.44	189	eP	P	13 03 54.9	+1.5
	comp=Z,10nm,1.4s						
EKA	Eskdalemuir Ar	77.45	346	P	P	13 03 53.1	-0.2
	comp=Z,27nm,0.9s,baz=22,slow=4.0,SNR=32						
EKA				LR	LR	13 43 43.4	
	comp=Z,1µm,18.2s,baz=45,slow=40						
HARR	Harsova	77.45	323⇓	iP	P	13 03 54.0	+0.5
ESK	Eskdalemuir	77.47	346	eP	P	13 03 53.8	+0.4
	comp=Z,65nm,1.1s						

ESK				LR	LR		
	comp=Z,3µm,18.0s						
ESK	Eskdalemuir	77.47	346	eP	P	13 03 53.8	+0.4
ESK				pmax	pmax		
	comp=Z,65nm,1.1s						
ESK				MLR	MLR		
	comp=Z,3µm,18.0s						
DOPR	Dopca	77.48	325	⇑iP	P	13 03 55.5	+1.8
TLB	Topalu	77.49	322	⇓iP	P	13 03 54.1	+0.4
L43A	Garden Prairie	77.49	42	P	P	13 03 51.7	-2.1
	baz=321						
PVCC	Panska Ves	77.52	334	eP	P	13 03 56.6	+2.8
PVCC				AMS	AMS	13 42 00.0	
	comp=Z,8µm,17.2s						
PVCC	Panska Ves	77.52	334	eP	P	13 03 56.6	+2.8
PVCC				MLR	MLR		
	comp=Z,8µm,17.2s						
BELQ	Belleterre	77.55	32	P	P	13 03 53.3	-0.8
	baz=326						
O40A	La Belle	77.57	45	P	P	13 03 52.6	-1.7
	baz=320,SNR=9.9						
Q38A	Cooks Store, C	77.57	47	P	P	13 03 52.9	-1.4
	baz=319,SNR=14						
M42A	Sheffield	77.57	43	P	P	13 03 52.7	-1.6
	baz=321						
CJR	Cluj-Napoca	77.58	326	⇓iP	P	13 03 55.3	+1.0
ECK	Cauldkaine Hil	77.58	346	eP	P	13 03 54.7	+0.6
P39B	Salisbury	77.61	46	P	P	13 03 54.4	-0.1
	baz=320,SNR=6.1						
N41A	Harden Midland	77.62	44	P	P	13 03 52.6	-2.0
	baz=320,SNR=5.3						
N41A	Harden Midland	77.62	44	eP	P	13 03 54.3	-0.2
	comp=Z,54nm,1.0s						
N41A				LR	LR		
	comp=Z,5µm,21.0s						
MLR	Muntele Rosu	77.64	324	P	P	13 03 55.0	+0.3
	comp=Z,10.0nm,0.6s,baz=27,slow=6.0,SNR=59						
MLR	Muntele Rosu	77.64	324	⇑iP	P	13 03 55.5	+0.8
MLR	Muntele Rosu	77.64	324	eP	P	13 03 54.5	-0.2
	comp=Z,54nm,0.7s						
MLR				LR	LR		
	comp=Z,4µm,21.0s						
ILGA	Ilgaz	77.68	317	eP	P	13 03 56.5	+1.4
	comp=Z,140nm,1.1s						
ILGA				LR	LR		
	comp=Z,5µm,19.0s						
LTVH	L˜'tav˜'rtes,	77.68	328	⇑eP	P	13 03 56.9	+2.2
BHH	Howats Hill	77.69	346	⇑eP	P	13 03 55.5	+0.9
ISR	Istrita	77.69	324	⇓iP	P	13 03 56.0	+1.1
Q39A	Willow Grove F	77.83	46	P	P	13 03 54.1	-1.6
	baz=320,SNR=8.3						
VYHS	Vyhne	77.86	330	eP	P	13 03 56.0	+0.2
VYHS				e		13 04 10.1	
VYHS				eS	S	13 13 49.4	+1.4
VYHS				pmax	pmax		
	comp=Z,42nm,1.2s						
VYHS	Vyhne	77.86	330	eP	P	13 03 56.0	+0.2
VYHS				e		13 04 10.1	
VYHS				eS	S	13 13 49.4	+1.4
DRGR		77.86	327	⇑iP	P	13 03 56.0	+0.1
L44A	Lake County Fo	77.88	41	P	P	13 03 55.4	-0.5
	baz=322						
N42A	Yates City	77.92	43	P	P	13 03 55.2	-1.0
	baz=321						
VRAC	Vranov	77.93	332	⇑iP	P	13 03 57.0	+0.9
VRAC	Vranov	77.93	332	⇑iP	P	13 03 56.2	+0.1
VRAC				eS	S	13 13 46.7	-2.0
P40A	Paris	77.93	45	P	P	13 03 54.5	-1.8
	baz=320,SNR=9.9						
P40A	Paris	77.93	45	eP	P	13 03 55.2	-1.0
	comp=Z,141nm,1.7s						
P40A				LR	LR		
	comp=Z,4µm,20.0s						
WMOK	Wichita Mounta	77.94	53	P	P	13 03 55.0	-1.4
	baz=317,SNR=22						
WMOK	Wichita Mounta	77.94	53	eP	P	13 03 55.4	-1.1
	comp=Z,18nm,0.8s						
WMOK				LR	LR		
	comp=Z,3µm,18.0s						
WMOK	Wichita Mounta	77.94	53	eP	P	13 03 55.4	-1.1
WMOK				pmax	pmax		
	comp=Z,18nm,0.8s						
WMOK				MLR	MLR		
	comp=Z,3µm,18.0s						
JAVC	Velka Javorina	77.95	331	⇑iP	P	13 03 57.6	+1.3
JAVC				eS	S	13 13 49.8	+0.7
PRA	Prague	77.97	333	eP	P	13 03 59.0	+2.7
PRA				eS	S	13 13 49.9	+0.9
PRA				AMS	AMS	13 42 30.0	
	comp=Z,8µm,17.1s						
PRA	Prague	77.97	333	eP	P	13 03 59.0	+2.7
PRA				eS	S	13 13 49.9	+0.9
PRA				MLR	MLR		
	comp=Z,8µm,17.1s						
ICOR	Ion Corvin	77.97	322	⇑iP	P	13 03 58.0	+1.6
M43A	Waltham Townsh	77.97	42	P	P	13 03 54.4	-2.1
	baz=321						
PSZ	Piszkesteto	77.97	329	⇑iP	P	13 03 57.3	+0.8
PSZ	Piszkesteto	77.97	329	⇑eP	P	13 03 57.5	+1.0
PSZ	Piszkesteto	77.97	329	eP	P	13 03 57.1	+0.6
	comp=Z,45nm,0.8s						
PSZ				LR	LR		
	comp=Z,7µm,18.0s						
GOPC	GO Pecny, Ondr	77.99	333	eP	P	13 03 57.4	+0.9
GOPC				eS	S	13 13 49.3	-0.1
GOPC				AMS	AMS	13 42 30.0	
	comp=Z,9µm,17.5s						
GOPC	GO Pecny, Ondr	77.99	333	eP	P	13 03 57.4	+0.9
GOPC				eS	S	13 13 49.3	-0.1
GOPC				MLR	MLR		
	comp=Z,9µm,17.5s						
PRU	Pruhonice	78.00	333	eP	P	13 03 58.5	+2.0
PRU				eS	S	13 13 46.8	-2.7
PRU				AMS	AMS	13 42 40.0	
	comp=Z,9µm,16.7s						
PRU	Pruhonice	78.00	333	eP	P	13 03 58.5	+2.0
PRU				eS	S	13 13 46.8	-2.7
PRU				MLR	MLR		
	comp=Z,9µm,16.7s						
R38A	Fenwick Farm,	78.00	47	P	P	13 03 54.4	-2.3
	baz=319,SNR=12						
BBO1	Bothel	78.03	345	⇑eP	P	13 03 57.4	+0.8
VOIR		78.05	325	⇓iP	P	13 03 57.8	+0.8
O41A	Passleys Farm,	78.06	44	P	P	13 03 55.7	-1.3
	baz=320,SNR=11						
KESW	Keswick, Cumbr	78.15	345	eP	P	13 03 57.9	+0.7
KESW				IAmb	IAmb	13 04 00.3	
	comp=Z,148nm,1.0s						
KESW				IAMs_20	IAMs_20	13 47 47.0	
	comp=Z,3µm,14.2s						
CLGH	Cloghs, Cushen	78.17	347	eP	P	13 03 57.6	+0.3
CLGH				IAMs_20	IAMs_20	13 42 43.3	
	comp=Z,3µm,17.5s						
KRUC	Moravsky	78.21	332	⇑iP	P	13 03 57.9	+0.2
KRUC				eS	S	13 13 49.5	-2.2
TOBO	Tobermory, Bru	78.22	35	P	P	13 03 56.9	-0.9
	baz=325						
N43A	Stutzman Famil	78.25	43	P	P	13 03 56.9	-1.1
	baz=321						
ARR	Arges	78.28	325	⇓iP	P	13 03 59.7	+1.5
P41A	Barry, Barry	78.31	45	P	P	13 03 57.3	-1.1
	baz=320,SNR=7.5						
Q40A	Laux Farm, Aux	78.33	46	P	P	13 03 57.0	-1.5
	baz=320,SNR=6.0						
SMOL	Smolenice	78.33	331	eP	P	13 04 00.1	+1.7
SMOL				e		13 04 13.7	
SMOL	Smolenice	78.33	331	eP	P	13 04 00.1	+1.7
SMOL				e		13 04 13.7	
R39A	Chumby, Stover	78.35	47	P	P	13 03 57.2	-1.5
	baz=320,SNR=15						
O42A	Bath	78.39	44	P	P	13 03 57.8	-1.0
	baz=321						
S38A	Stockton	78.42	48	P	P	13 03 57.4	-1.6
	baz=319,SNR=14						
NKC	Novy Kostel	78.43	335	eP	P	13 03 59.4	+0.5
NKC	Novy Kostel	78.43	335	eP	P	13 03 59.4	+0.5
M44A	Midewin, Midew	78.44	42	P	P	13 03 57.7	-1.4
	baz=322						
M44A	Midewin, Midew	78.44	42	eP	P	13 03 59.0	0.0
	comp=Z,40nm,0.8s						
M44A				LR	LR		
	comp=Z,6µm,20.0s						
WTSB	Winterswijk	78.45	339	i P	P	13 03 58.9	0.0
	comp=Z,136nm,0.8s						
HPK	Haverah Park	78.47	344	eP	P	13 03 59.1	+0.1
HPK				IAmb	IAmb	13 04 01.5	
	comp=Z,133nm,1.0s						
HPK				IAMs_20	IAMs_20	13 47 01.6	
	comp=Z,3µm,15.8s						
HDIL	Hopedale	78.49	43	P	P	13 03 58.1	-1.3
	baz=321,SNR=5.3						
HDIL	Hopedale	78.49	43	eP	P	13 03 59.7	+0.3
	comp=Z,114nm,1.3s						
HDIL				LR	LR		
	comp=Z,4µm,19.0s						
MODS	Modra-Piesok	78.50	331	eP	P	13 04 00.3	+1.0
MODS				pmax	pmax		
	comp=Z,94nm,0.9s						
MODS	Modra-Piesok	78.50	331	eP	P	13 04 00.3	+1.0
MODS				eS	S	13 13 52.1	-2.8
MODS				eL	L	13 45 35.6	
LPIG	La Paz	78.51	67	LR	LR	13 34 44.2	
	comp=Z,2µm,18.9s,baz=321,slow=33						
LOT	Lotru	78.56	326	⇓iP	P	13 03 59.5	-0.3
KLBO	Killbear Provi	78.65	35	P	P	13 03 58.7	-1.4
	baz=326						
BUD	Budapest	78.65	329	⇑eP	P	13 04 01.2	+1.1
T38A	Diamond	78.67	48	P	P	13 03 59.1	-1.3
	baz=319,SNR=28						
S39A	Bolivar	78.68	47	P	P	13 03 59.0	-1.5
	baz=320,SNR=15						
S39A	Bolivar	78.68	47	eP	P	13 03 59.0	-1.5
	comp=Z,27nm,0.4s						
S39A				LR	LR		
	comp=Z,4µm,19.0s						
O43A	Sugar Creek Fa	78.69	43	P	P	13 03 59.4	-1.1
	baz=321						
TUL1	Leonard	78.71	50	P	P	13 03 59.7	-1.0
	baz=319						
TUL1	Leonard	78.71	50	PFAKE		13 04 10.0	+9.3
TUL1				LR	LR		
	comp=Z,4µm,20.0s						
IOMK	Kirk Michael	78.71	346	eP	P	13 04 00.8	+0.4
IOMK				IAmb	IAmb	13 04 03.5	
	comp=Z,50nm,0.8s						
IOMK				IAMs_20	IAMs_20	13 43 47.4	
	comp=Z,4µm,18.2s						
P42A	Winchester	78.73	44	P	P	13 03 59.3	-1.4
	baz=321,SNR=7.4						
P42A	Winchester	78.73	44	eP	P	13 04 00.9	+0.2
	comp=Z,58nm,1.3s						
P42A				LR	LR		
	comp=Z,6µm,21.0s						
BR101	Keskin Array S	78.74	316	eP	P	13 04 01.6	+0.7
BR131	Keskin Array S	78.74	316	eP	P	13 04 01.8	+0.8
BRTR	Keskin Array B	78.74	316	P	P	13 04 01.6	+0.7
	comp=Z,28nm,0.8s,baz=70,slow=3.9,SNR=72						
BRTR				LR	LR	13 44 09.2	
	comp=Z,6µm,19.4s,baz=44,slow=40						
R40A	Maddies Statio	78.77	46	P	P	13 03 59.2	-1.8
	baz=320,SNR=18						
R40A	Maddies Statio	78.77	46	eP	P	13 03 59.5	-1.4
	comp=Z,32nm,0.9s						
R40A				LR	LR		
	comp=Z,5µm,20.0s						
Q41A	Truxton	78.78	45	P	P	13 03 59.6	-1.4
	baz=320,SNR=6.7						
M45A	Boilermakers S	78.81	41	P	P	13 04 00.4	-0.7
	baz=322						
WIM	Isle of Man	78.84	346	eP	P	13 04 01.9	+0.8
N44A	Piper City	78.86	42	P	P	13 04 00.4	-1.0
	baz=322,SNR=7.1						
BMRO	Meriville Lake	78.87	36	P	P	13 04 01.2	-0.1
	baz=325						
PRD	Provadia	78.88	322	P	P	13 04 02.0	+0.6
BUKO	Buck Lake	78.90	34	P	P	13 04 00.2	-1.3
	baz=326						
ABTX	Abilene, Hawle	78.99	55	P	P	13 04 01.9	-0.4
	baz=317						
ABTX	Abilene, Hawle	78.99	55	eP	P	13 04 03.0	+0.7
	comp=Z,30nm,1.1s						
ABTX				LR	LR		
	comp=Z,3µm,20.0s						
TX31	Lajitas Ar. Si	79.00	59	eP	P	13 04 01.7	-0.8
TX31				eP	pP	13 04 02.1	-5.1
LTX	Lajitas	79.00	59	eP	P	13 04 02.5	+0.1
LTX	Lajitas	79.00	59	eP	P	13 04 02.6	+0.1
TXAR	Lajitas Array	79.00	59	P	P	13 04 02.5	+0.1
	comp=Z,24nm,0.6s,baz=302,slow=4.0,SNR=220						
LBWR	Ladybower, Pea	79.02	344	eP	P	13 04 03.0	+1.0
LBWR				IAmb	IAmb	13 04 05.6	
	comp=Z,133nm,0.8s						
CSKK	Cs˜‡kako	79.03	330	⇑eP	P	13 04 03.2	+1.0
ANTO	Ankara	79.04	317	⇑iP	P	13 04 03.8	+1.3
ANTO	Ankara	79.04	317	eP	P	13 04 02.8	+0.3
	comp=Z,85nm,0.8s						
ANTO				LR	LR		
	comp=Z,6µm,19.0s						
ANTO	Ankara	79.04	317	P	P	13 04 03.9	+1.3
	SNR=17						
SLBS	Sierra La Lagu	79.04	68	eP	P	13 04 03.7	+0.9
	comp=Z,58nm,1.3s						
SLBS				LR	LR		
	comp=Z,3µm,20.0s						
KHC	Kasperske Hory	79.06	334	eP	P	13 04 03.1	+0.7
KHC				eS	S	13 13 57.8	-3.1
KHC				AMS	AMS	13 43 00.0	
	comp=Z,11µm,17.7s						
KHC	Kasperske Hory	79.06	334	eP	P	13 04 02.8	+0.4
	comp=Z,37nm,0.8s						
KHC				LR	LR		
	comp=Z,5µm,18.0s						
KHC	Kasperske Hory	79.06	334	eP	P	13 04 03.1	+0.7
KHC				eS	S	13 13 57.8	-3.1
KHC				MLR	MLR		
	comp=Z,11µm,17.7s						
BR231	Keskin MP Arra	79.07	317	eP	P	13 04 02.8	+0.1
P43A	Skaggs, Pawnee	79.09	44	P	P	13 04 01.4	-1.3
	baz=321						
N45A	Kentland	79.11	42	P	P	13 04 01.7	-1.0
	baz=322						
T39A	Clever	79.16	48	P	P	13 04 01.5	-1.6
	baz=320,SNR=6.8						
BASO	Ashfield	79.16	36	P	P	13 04 02.4	-0.5
	baz=325						
Q42A	Golden Eagle	79.16	45	P	P	13 04 02.4	-0.7
	baz=321						
S40A	Lebanon	79.17	47	P	P	13 04 01.7	-1.5
	baz=320,SNR=17						
WACR	West Acre	79.19	343	eP	P	13 04 03.7	+0.8
WACR				IAmb	IAmb	13 04 05.8	
	comp=Z,256nm,0.9s						
WACR				IAMs_20	IAMs_20	13 44 20.0	
	comp=Z,4µm,19.3s						
O44A	Mansfield	79.20	43	P	P	13 04 02.2	-1.1
	baz=322						
M46A	Old House Fiel	79.20	41	P	P	13 04 02.2	-1.0
	baz=323						
M46A	Old House Fiel	79.20	41	PFAKE		13 04 10.0	+6.7
M46A				LR	LR		
	comp=Z,6µm,20.0s						
R41A	Rosebud	79.21	46	P	P	13 04 02.1	-1.2
	baz=320,SNR=10						
SLMH	Al Salmeh	79.23	311	eP	P	13 04 05.3	+1.8
RAO	Raoul Island	79.23	153	PFAKE		13 04 20.0	+17
RAO				LR	LR		
	comp=Z,7µm,19.0s						
BZS	Buzias	79.26	327	⇑iP	P	13 04 03.7	+0.2
GEC2	GERESS Array S	79.27	333	eP	P	13 04 04.0	+0.4
	comp=Z,35nm,0.8s						
GERES	GERESS Array B	79.27	333	P	P	13 04 03.5	-0.1
	comp=Z,28nm,0.7s,baz=35,slow=4.9,SNR=58						
GERES				LR	LR	13 43 05.2	
	comp=Z,6µm,18.5s,baz=34,slow=39						
GEA0	GERESS Array S	79.28	333	eP	P	13 04 03.0	-0.7
GRFO	Grafenberg	79.28	335	eP	P	13 04 03.6	0.0
	comp=Z,104nm,0.7s						
GRFO				LR	LR		
	comp=Z,5µm,18.0s						
GRFO	Grafenberg	79.28	335	eP	P	13 04 03.6	0.0
GRFO				pmax	pmax		
	comp=Z,104nm,0.7s						
GRFO				MLR	MLR		
	comp=Z,5µm,18.0s						
CLWO	Collingwood	79.36	35	P	P	13 04 03.4	-0.7
	baz=326						
CONA	Conrad Observa	79.37	332	i pP	P	13 04 04.9	+0.7
	comp=Z,68nm,0.9s,SNR=62						
HHAR	Hobbs	79.42	49	PFAKE		13 04 20.0	+15
HHAR				LR	LR		
	comp=Z,5µm,18.0s						
N46A	Monticello	79.43	41	P	P	13 04 02.9	-1.6
	baz=322						
CCM	Cathedral Cave	79.46	46	P	P	13 04 03.6	-1.2
	baz=320						
CCM	Cathedral Cave	79.46	46	eP	P	13 04 04.7	0.0
	comp=Z,90nm,1.5s						
CCM				LR	LR		
	comp=Z,6µm,20.0s						
CCM	Cathedral Cave	79.46	46	eP	P	13 04 04.7	0.0
CCM				pmax	pmax		
	comp=Z,90nm,1.5s						
CCM				MLR	MLR		
	comp=Z,6µm,20.0s						
HPIG		79.48	62	eP	P	13 04 05.5	+0.2
	comp=Z,22nm,0.9s						
HPIG				LR	LR		
	comp=Z,2µm,21.0s						
O45A	Potomac	79.48	42	P	P	13 04 03.4	-1.4
	baz=322,SNR=8.3						
WME	Myndd Eilian	79.50	346	eP	P	13 04 05.0	+0.4
T40A	Mansfield	79.50	47	P	P	13 04 03.5	-1.5
	baz=320,SNR=9.3						
MZR	Muzera	79.51	292	i P	P	13 04 05.5	+0.2
	SNR=14						
R42A	Luebbering	79.52	45	P	P	13 04 03.5	-1.5
	baz=321,SNR=5.9						
SLM	Saint Louis	79.52	45	PFAKE		13 04 20.0	+15
SLM				LR	LR		
	comp=Z,6µm,19.0s						
PEMO	Pembroke	79.53	33	P	P	13 04 03.5	-1.4
	baz=327						
Q43A	New Douglas	79.55	44	P	P	13 04 03.6	-1.6
	baz=321						
SADO	Sadowa	79.56	34	PFAKE		13 04 20.0	+15
SADO				LR	LR		
	comp=Z,4µm,18.0s						
WPM1	Penmaenmawr	79.56	345	eP	P	13 04 05.3	+0.3
HERR	Herculane	79.56	326	⇑iP	P	13 04 05.3	+0.1
S41A	Jillco Farms,	79.57	46	P	P	13 04 03.8	-1.5
	baz=320,SNR=11						
CWF	Charnwood Fore	79.57	344	eP	P	13 04 05.7	+0.7
CWF				IAmb	IAmb	13 04 08.9	
	comp=Z,43nm,0.9s						
CWF				IAMs_20	IAMs_20	13 45 02.5	
	comp=Z,3µm,16.2s						
RAR	Rarotonga	79.58	135	P	P	13 04 06.6	+1.2
	comp=Z,17nm,0.6s,baz=292,slow=19,SNR=2.6						
RAR				LR	LR	13 38 22.2	
	comp=Z,4µm,18.1s,baz=314,slow=35						
U39A	Green Forest	79.59	48	P	P	13 04 04.1	-1.4
	baz=320,SNR=11						
P44A	Sand Creek, Wi	79.66	43	P	P	13 04 04.5	-1.3
	baz=322,SNR=8.4						
SFIN	Lafayette	79.67	42	P	P	13 04 04.0	-1.8
	baz=322						
SFIN	Lafayette	79.67	42	eP	P	13 04 05.6	-0.2
	comp=Z,32nm,1.0s						
SFIN				LR	LR		
	comp=Z,6µm,19.0s						
YRC	Rhoscolyn	79.69	346	eP	P	13 04 06.8	+1.2
AAM	Ann Arbor	79.70	38	P	P	13 04 04.0	-1.9
	baz=324						
AAM	Ann Arbor	79.70	38	PFAKE		13 04 20.0	+14
AAM				LR	LR		
	comp=Z,4µm,19.0s						
YLL	Llanberis	79.72	346	⇑eP	P	13 04 06.2	+0.4
HGN	Heimansgroeve	79.77	339	i P	P	13 04 06.2	0.0
	comp=Z,97nm,1.0s						
HGN	Heimansgroeve	79.77	339	eS	S	13 14 08.8	+0.6
HGN				eSS	SS	13 19 51.3	+36
FOEL	Foel Wylfa	79.78	345	eP	P	13 04 06.9	+0.7
FOEL				IAmb	IAmb	13 04 09.5	
	comp=Z,99nm,0.9s						
FOEL				IAMs_20	IAMs_20	13 42 08.7	
	comp=Z,2µm,17.8s						
BEBN	Eben Emael	79.81	339	⇑P	P	13 04 06.4	0.0
BANO	Bancroft	79.83	33	P	P	13 04 05.9	-0.8
	baz=327						
MORH	M˜‡r˜¡gy, Hung	79.87	329	⇑eP	P	13 04 06.8	0.0
MEM	Membach	79.89	339	⇑P	P	13 04 06.6	-0.2
	comp=Z,99nm,1.0s						
LLW	Llanuwychllyn	79.91	345	eP	P	13 04 07.4	+0.5
S42A	Caledonia	79.91	46	P	P	13 04 05.7	-1.5
	baz=321,SNR=24						
Q44A	Meyer Farm, Va	79.91	44	P	P	13 04 05.5	-1.7
	baz=322,SNR=5.5						
V39A	Pettigrew	79.91	49	P	P	13 04 05.7	-1.7
	baz=320,SNR=9.5						
MDVR	Moldovita	79.92	326	⇓iP	P	13 04 07.4	+0.2
FVM	French Village	79.93	45	eP	P	13 04 07.8	+0.5
	comp=Z,22nm,0.8s						
FVM				LR	LR		
	comp=Z,6µm,20.0s						
FVM	French Village	79.93	45	eP	P	13 04 07.8	+0.5
FVM				pmax	pmax		
	comp=Z,22nm,0.8s						
FVM				MLR	MLR		
	comp=Z,6µm,20.0s						
U40A	Yellville	79.94	48	P	P	13 04 05.7	-1.6
	baz=320,SNR=22						
R43A	Red Bud	79.95	45	P	P	13 04 06.0	-1.4
	baz=321						
MOA	Molln	79.96	332	i pP	P	13 04 07.9	+0.6
	comp=Z,43nm,0.8s,SNR=24						
ELFO	Elginfield	79.97	36	P	P	13 04 06.7	-0.8
	baz=325						
T41A	Mountain View	79.98	47	P	P	13 04 05.4	-2.2
	baz=320,SNR=15						
DSB	Dublin	79.99	347	eP	P	13 04 08.3	+1.0
	comp=Z,62nm,0.9s						
DSB				LR	LR		
	comp=Z,4µm,20.0s						
P45A	Graceland, Par	80.04	43	P	P	13 04 05.3	-2.6
	baz=322						
P45A	Graceland, Par	80.04	43	eP	P	13 04 07.7	-0.2
	comp=Z,31nm,0.8s						
P45A				LR	LR		
	comp=Z,4µm,21.0s						
TRQ	Mont Tremblant	80.07	31	eP	P	13 04 07.4	-0.6
ARSA	Arzberg	80.07	331	i pP	P	13 04 08.5	+0.6
	comp=Z,19nm,0.9s,SNR=13						
HLM1	Long Mynd	80.08	345	eP	P	13 04 07.8	-0.1
HLM1				IAmb	IAmb	13 04 11.0	
	comp=Z,50nm,1.0s						
HLM1				IAMs_20	IAMs_20	13 49 12.0	
	comp=Z,2µm,15.7s						
UCC	Uccle	80.13	340	⇑P	P	13 04 06.8	-1.3
UCC	Uccle	80.13	340	PFAKE		13 04 20.0	+12
UCC				LR	LR		
	comp=Z,6µm,18.0s						
PLVO	Plevna	80.14	33	P	P	13 04 07.3	-1.0
	baz=328						
PLVO	Plevna	80.14	33	eP	P	13 04 07.6	-0.7
	comp=Z,17nm,1.0s						
PLVO				LR	LR		
	comp=Z,3µm,19.0s						
O47A	Sheridan	80.22	41	P	P	13 04 06.6	-2.2
	baz=323						
P46A	Rosedale	80.22	42	P	P	13 04 07.3	-1.6
	baz=322,SNR=9.3						
BCLA	Clavier	80.25	339	⇑P	P	13 04 08.8	0.0
	comp=Z,42nm,1.0s						
BEHE	Becsehely	80.31	330	⇑eP	P	13 04 08.5	-0.7
W39A	Magazine	80.33	49	P	P	13 04 07.8	-1.7
	baz=320						
W39A	Magazine	80.33	49	PFAKE		13 04 20.0	+11
W39A				LR	LR		
	comp=Z,5µm,18.0s						
T42A	Van Buren	80.33	46	P	P	13 04 07.8	-1.6
	baz=321,SNR=8.0						
T42A	Van Buren	80.33	46	eP	P	13 04 08.9	-0.5
	comp=Z,20nm,1.0s						
T42A				LR	LR		
	comp=Z,4µm,19.0s						
Q45A	Warren Harvey,	80.34	43	P	P	13 04 08.5	-1.0
	baz=322,SNR=7.3						
CAN	Canberra	80.36	182	eP	P	13 04 10.9	+1.5
	comp=Z,32nm,1.2s						
CAN				LR	LR		
	comp=Z,4µm,20.0s						
DELO	Deloro Mine	80.37	33	P	P	13 04 08.2	-1.3
	baz=327						
V40A	Witts Springs	80.37	48	P	P	13 04 08.5	-1.3
	baz=320						
V40A	Witts Springs	80.37	48	PFAKE		13 04 20.0	+10
V40A				LR	LR		
	comp=Z,5µm,18.0s						
R44A	Waltonville	80.39	44	P	P	13 04 08.4	-1.3

	baz=322						
S43A	Fulton Ridge,	80.42	45	P	P	13 04 08.2	-1.8
	baz=321,SNR=7.4						
U41A	Viola	80.43	47	P	P	13 04 09.1	-0.9
	baz=320,SNR=7.8						
ALFO	Alfred	80.45	31	P	P	13 04 08.8	-1.1
	baz=329						
JCT	Junction City	80.47	56	P	P	13 04 09.9	-0.5
	baz=318,SNR=13						
JCT	Junction City	80.47	56	*e*P	P	13 04 10.3	-0.1
	comp=Z,92nm,1.4s						
JCT				LR	LR		
	comp=Z,3µm,20.0s						
JCT	Junction City	80.47	56	*e*P	P	13 04 10.3	-0.1
JCT				pmax	pmax		
	comp=Z,92nm,1.4s						
JCT				MLR	MLR		
	comp=Z,3µm,20.0s						
OLIL	Olney	80.49	43	*e*P	P	13 04 10.6	+0.3
	comp=Z,90nm,1.4s						
OLIL				LR	LR		
	comp=Z,4µm,21.0s						
KOGS	Kog	80.52	331	*i* P	P	13 04 10.2	0.0
KOGS				*i* pP	PcP	13 04 21.8	+4.6
KOGS				*e*		13 04 29.9	
KOGS				*e*S	S	13 14 16.2	-0.1
MCH1	Michaelchurch	80.60	344	*e*P	P	13 04 11.5	+0.9
MCH1				IAmb	IAmb	13 04 13.9	
	comp=Z,78nm,0.9s						
MCH1				IAMs_20	IAMs_20	13 48 25.4	
	comp=Z,3µm,17.6s						
Q46A	CEJHS Indians,	80.62	43	P	P	13 04 09.4	-1.6
	baz=322						
STRD	Stroud	80.65	344	⇑*e*P	P	13 04 11.0	+0.1
STRD				IAmb	IAmb	13 04 14.6	
	comp=Z,206nm,0.8s						
STRD				IAMs_20	IAMs_20	13 45 20.4	
	comp=Z,3µm,16.0s						
TYNO	Tyneside	80.65	36	P	P	13 04 10.9	-0.2
	baz=326						
O48A	Farmland	80.67	41	P	P	13 04 09.3	-1.9
	baz=323,SNR=9.7						
T43A	Greenville	80.70	46	P	P	13 04 09.6	-1.8
	baz=321,SNR=8.5						
STU	Stuttgart	80.70	336	*e*P	P	13 04 11.6	+0.4
	comp=Z,45nm,0.8s						
STU				LR	LR		
	comp=Z,3µm,20.0s						
STU	Stuttgart	80.70	336	*e*P	P	13 04 11.6	+0.4
STU				pmax	pmax		
	comp=Z,45nm,0.8s						
STU				MLR	MLR		
	comp=Z,3µm,20.0s						
WHTX	Lake Whitney,	80.71	54	P	P	13 04 10.2	-1.4
	baz=318						
WHTX	Lake Whitney,	80.71	54	*e*P	P	13 04 10.9	-0.7
	comp=Z,35nm,0.9s						
W40A	Ferguson Farm,	80.71	49	P	P	13 04 10.3	-1.2
	baz=320						
W40A	Ferguson Farm,	80.71	49	*e*P	P	13 04 11.7	+0.2
	comp=Z,50nm,0.7s						
W40A				LR	LR		
	comp=Z,5µm,18.0s						
WLF	Walferdange	80.72	338	⇑P	P	13 04 13.0	+1.7
WLF	Walferdange	80.72	338	*e*P	P	13 04 11.7	+0.3
	comp=Z,54nm,0.9s						
WLF				LR	LR		
	comp=Z,6µm,18.0s						
WLF	Walferdange	80.72	338	*e*P	P	13 04 11.7	+0.3
WLF				pmax	pmax		
	comp=Z,55nm,0.9s						
WLF				MLR	MLR		
	comp=Z,6µm,18.0s						
DOU	Dourbes	80.72	339	⇑P	P	13 04 11.4	+0.1
	comp=Z,18nm,1.0s						
SOKA	Soboth	80.73	331	*i* pP	P	13 04 12.1	+0.6
	comp=Z,59nm,0.9s,SNR=51						
V41A	Mountainview	80.74	48	P	P	13 04 09.9	-1.8
	baz=320,SNR=7.6						
S44A	Carbondale	80.74	45	P	P	13 04 10.3	-1.3
	baz=322						
PERS	Pernice	80.74	331	*i* P	P	13 04 11.6	0.0
PERS				*e*S	S	13 14 20.2	+1.5
PERS				*e*SS	SS	13 19 59.9	+29
SIUC	Southern Illin	80.74	45	*e*P	P	13 04 10.9	-0.8
	comp=Z,50nm,1.0s						
SIUC				LR	LR		
	comp=Z,6µm,20.0s						
R45A	Skylar, Fairfi	80.75	44	P	P	13 04 10.0	-1.7
	baz=322						
GROS	Grobnik	80.76	331	*i* P	P	13 04 11.6	-0.2
P47A	Martinsville	80.77	42	P	P	13 04 09.6	-2.1
	baz=323,SNR=5.1						
U42A	Revenden	80.78	47	P	P	13 04 10.7	-1.1
	baz=321						
PGB	Panagyurishte	80.78	324	P	P	13 04 13.0	+1.1
OLDB	Oldbury-Upon-S	80.83	344	*e*P	P	13 04 11.7	-0.1
OLDB				IAmb	IAmb	13 04 14.7	
	comp=Z,71nm,0.9s						
OLDB				IAMs_20	IAMs_20	13 48 23.2	
	comp=Z,3µm,14.9s						
PBMO	Poplar Bluff	80.86	46	*e*P	P	13 04 12.7	+0.4
	comp=Z,66nm,1.1s						
PBMO				LR	LR		
	comp=Z,5µm,20.0s						
BLO	Bloomington	80.90	42	PFAKE		13 04 20.0	+7.5
BLO				LR	LR		
	comp=Z,5µm,19.0s						
MIAR	Mount Ida	80.93	49	P	P	13 04 11.9	-0.9
	baz=320						
MIAR	Mount Ida	80.93	49	PFAKE		13 04 20.0	+7.3
MIAR				LR	LR		
	comp=Z,5µm,19.0s						
KBA	Koelnbreinsper	80.94	333	*i* pP	P	13 04 13.7	+0.9
	comp=Z,98nm,1.0s,SNR=45						
KDZ	Kurdzhali	80.99	322	P	P	13 04 13.5	+0.5
HMNX	Herstmonceux	81.00	342	*e*P	P	13 04 14.2	+1.4
HMNX				IAmb	IAmb	13 04 16.6	
	comp=Z,243nm,0.8s						
HMNX				IAMs_20	IAMs_20	13 45 06.0	
	comp=Z,5µm,18.4s						
OBKA	Obir	81.04	332	*i* pP	P	13 04 13.7	+0.4
	comp=Z,22nm,0.9s,SNR=9.1						
T44A	Benton	81.04	45	P	P	13 04 12.2	-1.1
	baz=321,SNR=6.8						
S45A	Carrier Mills	81.08	44	P	P	13 04 11.5	-1.9
	baz=322,SNR=5.4						
O49A	Covington	81.10	40	P	P	13 04 12.1	-1.4
	baz=324						
PMOR	Pomariorio Ree	81.11	122	*e*T	T	14 33 53.0	
	comp=Z,4.4nm,0.3s						
V42A	Cord	81.12	47	P	P	13 04 12.1	-1.6
	baz=321,SNR=11						
Q47A	Bedord North L	81.13	42	P	P	13 04 12.3	-1.4
	baz=323,SNR=5.1						
VTS	Vitosha	81.15	324	⇑*i*P	P	13 04 14.4	+0.5
VTS	Vitosha	81.15	324	*e*P	P	13 04 13.5	-0.4
VTS				*e*P	P	13 04 14.1	+0.1
VTS				LR	LR		
	comp=Z,10µm,18.0s						
VTS	Vitosha	81.15	324	P	P	13 04 14.0	+0.1
VTS	Vitosha	81.15	324	P	P	13 04 13.5	-0.4
VTS	Vitosha	81.15	324	*e*P	P	13 04 13.5	-0.4
VTS				MLR	MLR		
	comp=Z,10µm,18.0s						
W41B	Gary Mavity, V	81.16	48	P	P	13 04 13.0	-0.9
	baz=320						
W41B	Gary Mavity, V	81.16	48	PFAKE		13 04 30.0	+16
W41B				LR	LR		
	comp=Z,5µm,18.0s						
N50A	Nevada	81.16	39	P	P	13 04 12.6	-1.2
	baz=324						
DIVS	Divibare	81.16	327	*e*P	P	13 04 12.9	-1.0
	comp=Z,40nm,0.9s						
DIVS				LR	LR		
	comp=Z,6µm,18.0s						
MEDO	Medina	81.17	35	P	P	13 04 14.3	+0.5
	baz=327						
P48A	Milroy	81.18	41	P	P	13 04 12.0	-2.0
	baz=323						
R46A	Gibon Southern	81.18	43	P	P	13 04 13.0	-1.0
	baz=322						
U43A	Rector	81.19	46	P	P	13 04 12.7	-1.4
	baz=321						
MYKA	Terra Mystica	81.24	332	*i* P	P	13 04 14.1	-0.1
	comp=Z,20nm,0.7s,SNR=12						
RZN	Rozhen	81.26	323	P	P	13 04 15.0	+0.4
WATA	Walderalm	81.27	334	*i* pP	P	13 04 16.1	+1.6
	comp=Z,86nm,1.0s,SNR=23						
TAOE	Nuku Hiva Isla	81.29	112	*e*LR	LR	13 29 33.4	
	comp=Z,4µm,23.5s						
PARMO	Parma	81.29	46	PFAKE		13 04 30.0	+15
PARMO				LR	LR		
	comp=Z,6µm,20.0s						
USIN	University of	81.30	44	PFAKE		13 04 30.0	+15
USIN				LR	LR		
	comp=Z,5µm,21.0s						
WTTA	Wattenberg	81.32	334	*i* pP	P	13 04 15.2	+0.4
	comp=Z,53nm,0.8s,SNR=19						
ALN	Alexandroupoli	81.33	321	*e*P	P	13 04 14.9	+0.2
	comp=Z,41nm,0.9s						
ALN				LR	LR		
	comp=Z,3µm,19.0s						
ALN	Alexandroupoli	81.33	321	P	P	13 04 14.7	0.0
BFO	Black Forest	81.34	336	*e*P	P	13 04 14.6	-0.2
	comp=Z,61nm,0.9s						
BFO				LR	LR		
	comp=Z,5µm,20.0s						
BFO	Black Forest	81.34	336	*i* P	P	13 04 15.2	+0.5
RDO	Rodhopi	81.35	322	*e*P	P	13 04 15.0	+0.2
RDO	Rodhopi	81.35	322	P	P	13 04 15.0	+0.2
X40A	Basin Creek Fa	81.37	49	P	P	13 04 13.7	-1.3
	baz=320						
X40A	Basin Creek Fa	81.37	49	PFAKE		13 04 30.0	+15
X40A				LR	LR		
	comp=Z,5µm,18.0s						
RETA	Reutte	81.39	334	*i* pP	P	13 04 15.7	+0.6
	comp=Z,47nm,1.0s,SNR=14						
MOTA	Moosalm	81.41	334	*i* pP	P	13 04 16.8	+1.5
	comp=Z,70nm,0.8s,SNR=27						
UALR	University of	81.41	48	PFAKE		13 04 30.0	+15
UALR				LR	LR		
	comp=Z,5µm,19.0s						
ERPA	Erie	81.41	36	P	P	13 04 13.3	-1.8
	baz=326						
ERPA	Erie	81.41	36	PFAKE		13 04 30.0	+15
ERPA				LR	LR		
	comp=Z,4µm,19.0s						
LONY	Lake Ozonia	81.43	32	P	P	13 04 14.0	-1.2
	baz=329						
LONY	Lake Ozonia	81.43	32	*e*P	P	13 04 14.3	-0.9
	comp=Z,21nm,1.4s						
LONY				LR	LR		
	comp=Z,3µm,19.0s						
U44A	Portageville	81.45	46	P	P	13 04 14.4	-1.0
	baz=322						
P49A	Miami Univ. Ec	81.45	41	P	P	13 04 14.3	-1.1
	baz=324,SNR=5.3						
O50A	Cable	81.45	40	P	P	13 04 13.8	-1.7
	baz=324,SNR=7.0						
LJU	Ljubljana	81.46	331	*i* P	P	13 04 14.7	-0.7
LJU				*e*S	S	13 14 22.0	-4.1
W42A	Bald Knob	81.46	48	P	P	13 04 14.0	-1.5
	baz=321						
Q48A	North Vernon	81.46	42	P	P	13 04 14.5	-1.0
	baz=323						
S46A	Don Dixon Farm	81.50	44	P	P	13 04 14.7	-1.0
	baz=322						
PVMO	Portageville	81.51	46	PFAKE		13 04 30.0	+14
PVMO				LR	LR		
	comp=Z,6µm,20.0s						
435B	Jarrell	81.53	55	P	P	13 04 15.5	-0.5
	baz=318						
435B	Jarrell	81.53	55	PFAKE		13 04 30.0	+14
435B				LR	LR		
	comp=Z,3µm,20.0s						
X41A	Kaden, Bauxite	81.54	49	P	P	13 04 14.9	-1.0
	baz=320						
CADS	Cadrg	81.56	332	*i* P	P	13 04 14.4	-1.6
CADS				*e*PP	PP	13 07 17.6	-3.9
CADS				*e*PPP	PPP	13 10 46.1	
T45A	Paducah	81.57	45	P	P	13 04 15.0	-1.1
	baz=322						
T45A	Paducah	81.57	45	PFAKE		13 04 30.0	+14
T45A				LR	LR		
	comp=Z,6µm,20.0s						
V43A	Jonesboro	81.57	47	P	P	13 04 15.2	-0.9
	baz=321						
R47A	Wooly Knot Far	81.59	43	P	P	13 04 15.1	-1.0
	baz=323,SNR=7.2						
BLY	Banja Luka	81.65	329	⇑*i*P	P	13 04 17.0	+0.6
BLY	Banja Luka	81.65	329	*e*P	P	13 04 16.7	+0.3
	comp=Z,19nm,0.8s						
BLY				LR	LR		
	comp=Z,8µm,18.0s						
ACSO	Alum Creek Sta	81.67	39	P	P	13 04 15.7	-0.8
	baz=325						
ACSO	Alum Creek Sta	81.67	39	*e*P	P	13 04 16.9	+0.3
	comp=Z,36nm,0.9s						
ACSO				LR	LR		
	comp=Z,5µm,19.0s						
BOJS	Bojanci	81.68	331	*i* P	P	13 04 15.9	-0.6
HBAR	Harrisburg	81.69	47	PFAKE		13 04 30.0	+13
HBAR				LR	LR		
	comp=Z,4µm,18.0s						
GNAR	Gosnell	81.70	46	PFAKE		13 04 30.0	+13
GNAR				LR	LR		
	comp=Z,4µm,20.0s						
ALLY	Alegheny Colle	81.74	37	*e*P	P	13 04 17.5	+0.6
	comp=Z,80nm,0.4s						
ALLY				LR	LR		
	comp=Z,6µm,20.0s						
ISP	Isparta	81.74	317	⇑*i*P	P	13 04 18.4	+1.3
ISP	Isparta	81.74	317	*e*P	P	13 04 16.6	-0.5
ISP				*e*P	P	13 04 17.5	+0.4
ISP				LR	LR		
	comp=Z,5µm,20.0s						
ISP	Isparta	81.74	317	P	P	13 04 16.6	-0.5
ISP	Isparta	81.74	317	*e*P	P	13 04 16.6	-0.5
ISP				MLR	MLR		
	comp=Z,5µm,20.0s						
U44B	Burton Farm, H	81.75	46	P	P	13 04 16.7	-0.3
	baz=322						
MMNY	Mt. Morris Dam	81.75	35	*e*P	P	13 04 16.9	0.0
	comp=Z,36nm,0.9s						
MMNY				LR	LR		
	comp=Z,3µm,19.0s						
WCI	Wyandotte Cave	81.75	42	P	P	13 04 16.3	-0.8
	baz=323						
WCI	Wyandotte Cave	81.75	42	*e*P	P	13 04 17.1	0.0
	comp=Z,97nm,1.5s						
WCI				LR	LR		
	comp=Z,4µm,20.0s						
WCI	Wyandotte Cave	81.75	42	*e*P	P	13 04 17.1	0.0
WCI				pmax	pmax		
	comp=Z,97nm,1.5s						
WCI				MLR	MLR		
	comp=Z,4µm,20.0s						
ECH	Echery	81.78	337	*e*P	P	13 04 16.9	-0.1
	comp=Z,58nm,0.9s						
ECH				LR	LR		
	comp=Z,4µm,19.0s						
ECH	Echery	81.78	337	*e*P	P	13 04 16.9	-0.1
ECH				pmax	pmax		
	comp=Z,58nm,0.9s						
ECH				MLR	MLR		
	comp=Z,4µm,19.0s						
Q49A	Aurora	81.79	41	P	P	13 04 16.1	-1.2
	baz=324						
KKB	Krupnik	81.80	324	P	P	13 04 17.0	-0.2
P50A	Jamestown	81.81	40	P	P	13 04 15.8	-1.5
	baz=324,SNR=5.2						
FETA	Feichten	81.81	334	*i* pP	P	13 04 17.8	+0.4
	comp=Z,35nm,0.9s,SNR=20						
R48A	Northridge Ran	81.82	42	P	P	13 04 16.5	-0.9
	baz=323						
VAL	Valentia	81.83	349	⇓*i*P	P	13 04 19.1	+2.0
VAL	Valentia	81.83	349	*i* S	S	13 14 29.7	0.0
DAVA	Damuels	81.83	335	*i* pP	P	13 04 17.9	+0.4
	comp=Z,38nm,0.9s,SNR=21						
GLAT	Glass	81.83	46	PFAKE		13 04 30.0	+13
GLAT				LR	LR		
	comp=Z,7µm,20.0s						
HTL	Hartland	81.83	345	*e*P	P	13 04 17.5	+0.3
HTL				IAmb	IAmb	13 04 20.6	
	comp=Z,54nm,1.0s						
HTL				IAMs_20	IAMs_20	13 56 00.0	
	comp=Z,1µm,15.1s						
V44A	Blytheville	81.87	46	P	P	13 04 16.6	-1.0
	baz=321						
NVR	Nevrokopi	81.90	323	P	P	13 04 17.8	0.0
NVR	Nevrokopi	81.90	323	P	P	13 04 17.8	0.0
SMTH	Samothraki Isl	81.91	322	*e*P	P	13 04 17.3	-0.5
SMTH	Samothraki Isl	81.91	322	P	P	13 04 17.3	-0.5
T46A	Princeton	81.92	44	P	P	13 04 17.3	-0.6
	baz=322,SNR=22						
Y41A	Eaglette Beard	81.95	49	P	P	13 04 17.0	-1.1
	baz=320						
X42A	Stuttgart	81.96	48	P	P	13 04 16.4	-1.7
	baz=321						
Z40A	Long Farm, Mag	82.00	50	P	P	13 04 17.0	-1.4
	baz=320						
TRI	Trieste	82.01	332	*e*P	P	13 04 18.3	+0.1
	comp=Z,37nm,0.9s						
TRI				LR	LR		
	comp=Z,5µm,18.0s						
TRI	Trieste	82.01	332	*e*P	P	13 04 18.3	+0.1
TRI				pmax	pmax		
	comp=Z,37nm,0.9s						
TRI				MLR	MLR		
	comp=Z,5µm,18.0s						
W43A	Forest City	82.03	47	P	P	13 04 17.4	-1.1
	baz=321						
U45A	Rockin P Farm,	82.03	45	P	P	13 04 17.1	-1.4
	baz=322						
PLE	Pljevlja	82.05	327	⇑*i*P	P	13 04 18.2	-0.4
M54A	Oil Creek Stat	82.06	36	P	P	13 04 17.0	-1.6
	baz=326,SNR=6.8						
M54A	Oil Creek Stat	82.06	36	*e*P	P	13 04 18.5	-0.1
	comp=Z,34nm,0.9s						
M54A				LR	LR		
	comp=Z,4µm,18.0s						
HALT	Halls	82.09	46	PFAKE		13 04 30.0	+11
HALT				LR	LR		
	comp=Z,5µm,20.0s						
NCB	Newcomb	82.12	32	*e*P	P	13 04 18.3	-0.6
	comp=Z,11nm,1.0s						
NCB				LR	LR		
	comp=Z,3µm,18.0s						
PPT	Papeete	82.13	125	LR	LR	13 38 30.1	
	comp=Z,5µm,18.1s,baz=298,slow=34						
MANT	Manisa	82.14	318	*e*P	P	13 04 19.9	+0.5
	comp=Z,152nm,0.8s						
QASN	Qassioun	82.14	310	*e*P	P	13 04 21.6	+2.4
THAS	Thassos island	82.15	322	P	P	13 04 18.3	-0.7
PPT2	Papeete2	82.15	125	*e*S	S	13 14 32.3	-1.6
	comp=Z,4µm,33.8s						
PPT2	Papeete2	82.15	125	*e*LR	LR	13 30 07.7	
	comp=Z,6µm,21.2s,baz=324						
TOTH	TOTAH	82.19	310	*e*P	P	13 04 21.6	+2.1
SRS	Serrai	82.21	323	*e*P	P	13 04 18.7	-0.7
SRS	Serrai	82.21	323	P	P	13 04 18.7	-0.7
SRS	Serrai	82.21	323	*e*P	P	13 04 18.7	-0.7
IVA	Berane	82.24	326	⇑*i*P	P	13 04 19.1	-0.5
DAVOX	Davos/Dischmat	82.29	335	P	P	13 04 20.6	+0.7
	comp=Z,43nm,1.1s,baz=33,slow=8.5,SNR=21						
DAVOX				LR	LR	13 46 05.5	
	comp=Z,4µm,18.5s,slow=40						
833A	Chaparral WMA,	82.30	57	P	P	13 04 18.4	-1.6
	baz=318						
833A	Chaparral WMA,	82.30	57	PFAKE		13 04 30.0	+10
833A				LR	LR		
	comp=Z,2µm,20.0s						
STIP	Stip	82.31	324	*i* P	P	13 04 18.1	-1.8
S48A	Wiedeman Farm,	82.32	43	P	P	13 04 19.0	-1.0
	baz=323						
Z41A	Richland Creek	82.33	50	P	P	13 04 18.8	-1.3
	baz=320						
Z41A	Richland Creek	82.33	50	PFAKE		13 04 30.0	+10
Z41A				LR	LR		
	comp=Z,5µm,18.0s						
UPM	Unac-Piva	82.34	327	*e*P	P	13 04 19.2	-1.1
VT1	Waterbury	82.34	31	*e*P	P	13 04 20.4	+0.3
	comp=Z,19nm,1.1s						
Q50A	Georgetown	82.34	41	P	P	13 04 19.1	-1.0
	baz=324						
T47A	Sharon Grove	82.35	44	P	P	13 04 19.0	-1.1
	baz=323,SNR=7.7						
T47A	Sharon Grove	82.35	44	*e*P	P	13 04 20.3	+0.1
	comp=Z,85nm,1.4s						
T47A				LR	LR		
	comp=Z,5µm,21.0s						
N54A	Moraine State	82.37	37	P	P	13 04 18.7	-1.6
	baz=326,SNR=7.0						
N54A	Moraine State	82.37	37	*e*P	P	13 04 20.3	+0.1
	comp=Z,42nm,1.0s						
N54A				LR	LR		
	comp=Z,5µm,20.0s						
CCAR	Cane Creek	82.37	49	PFAKE		13 04 30.0	+10
CCAR				LR	LR		
	comp=Z,5µm,18.0s						
X43A	Marvell	82.38	48	P	P	13 04 18.9	-1.5
	baz=321						
X43A	Marvell	82.38	48	PFAKE		13 04 30.0	+10
X43A				LR	LR		
	comp=Z,4µm,19.0s						
140A	Cam and Jess,	82.38	51	P	P	13 04 20.3	-0.1
	baz=320						
140A	Cam and Jess,	82.38	51	PFAKE		13 04 30.0	+10
140A				LR	LR		
	comp=Z,4µm,18.0s						
SKO	Skopje	82.39	325	*e*P	P	13 04 20.4	+0.1
SKO	Skopje	82.39	325	P	P	13 04 20.4	+0.1
SKO	Skopje	82.39	325	*i* P	P	13 04 20.1	-0.1
MET	Memphis--Engin	82.40	47	PFAKE		13 04 30.0	+10
MET				LR	LR		
	comp=Z,4µm,20.0s						
KOME	Kolasin	82.41	327	⇑*i*P	P	13 04 20.5	0.0
BRBR	Barbar	82.41	311	*e*P	P	13 04 22.9	+2.1
V45A	Humboldt	82.41	46	P	P	13 04 19.2	-1.3
	baz=322						
Y42A	Garnett, Star	82.43	49	P	P	13 04 19.6	-1.0
	baz=321						
W44A	Shelby Farms P	82.44	47	P	P	13 04 20.0	-0.7
	baz=322						
PVY	Plav	82.45	326	*e*P	P	13 04 20.0	-0.8
NATX	Nacogdoches	82.45	52	P	P	13 04 20.3	-0.4
	baz=320						
NATX	Nacogdoches	82.45	52	*e*P	P	13 04 21.7	+0.9
	comp=Z,91nm,1.1s						
NATX				LR	LR		
	comp=Z,4µm,19.0s						
KNT	Kendrikon	82.46	324	P	P	13 04 20.6	-0.1
KNT	Kendrikon	82.46	324	P	P	13 04 20.6	-0.1
VAY	Valandovo	82.47	324	*e*P	P	13 04 20.6	-0.1
VAY	Valandovo	82.47	324	P	P	13 04 20.6	-0.1
VAY	Valandovo	82.47	324	*i* P	P	13 04 20.8	+0.1
Q51A	Peebles	82.49	40	P	P	13 04 19.8	-1.1
	baz=324,SNR=7.3						
LIA	Limnos Island	82.53	321	P	P	13 04 20.7	-0.3
LIA	Limnos Island	82.53	321	P	P	13 04 20.7	-0.3
PRK	Paraskevi	82.58	320	P	P	13 04 21.1	-0.2
PRK	Paraskevi	82.58	320	P	P	13 04 21.1	-0.2
CSS	Mathiatis	82.59	313	*e*P	P	13 04 21.5	0.0
	comp=Z,70nm,0.7s						
CSS	Mathiatis	82.59	313	P	P	13 04 21.5	0.0
T48A	Bowling Green	82.60	43	P	P	13 04 20.5	-1.0
	baz=323						
OUZ	Omahuta	82.62	162	PFAKE		13 04 30.0	+8.8
OUZ				LR	LR		
	comp=Z,5µm,19.0s						
WVT	Waverly	82.67	45	P	P	13 04 20.5	-1.3
	baz=322						
WVT	Waverly	82.67	45	*e*P	P	13 04 21.8	-0.1
	comp=Z,28nm,1.2s						
WVT				LR	LR		
	comp=Z,5µm,19.0s						
OUR	Ouranopolis	82.69	322	*e*P	P	13 04 19.0	-2.9
OUR	Ouranopolis	82.69	322	P	P	13 04 19.0	-2.9
OUR	Ouranopolis	82.69	322	*e*P	P	13 04 19.0	-2.9
U47A	Clarksville	82.69	44	P	P	13 04 20.6	-1.4
	baz=323,SNR=6.5						
NKME	Niksic	82.69	327	⇑*i*P	P	13 04 20.7	-1.2
LBNH	Lisbon	82.71	30	P	P	13 04 21.2	-0.7
	baz=331						
PKME	Peaks-Kenny Pk	82.71	28	P	P	13 04 20.4	-1.5
	baz=332						
PKME	Peaks-Kenny Pk	82.71	28	*e*P	P	13 04 22.5	+0.6
	comp=Z,22nm,1.3s						
TUE	Stuetta	82.73	335	*e*P	P	13 04 22.4	+0.2
	comp=Z,78nm,0.8s						
TUE				LR	LR		
	comp=Z,4µm,18.0s						
240A	Hunter Patters	82.73	51	P	P	13 04 21.1	-1.2
	baz=320						
240A	Hunter Patters	82.73	51	PFAKE		13 04 30.0	+7.7
240A				LR	LR		
	comp=Z,4µm,19.0s						
BRY	Bratogost	82.74	327	⇑*i*P	P	13 04 21.0	-1.3

W45A	Hickory Valley	82.75	46	P	P	13 04 20.7	-1.7
	baz=322						
141A	Papa Simpson,	82.77	50	P	P	13 04 21.4	-1.1
	baz=320						
X44A	Crenshaw	82.77	47	P	P	13 04 21.0	-1.4
	baz=321						
Z42A	Norrel Spur, H	82.77	49	P	P	13 04 21.3	-1.1
	baz=321						
V46A	Holladay	82.79	45	P	P	13 04 20.5	-1.9
	baz=322,SNR=5.7						
SIGR	SIGRI	82.79	321	eP	P	13 04 19.9	-2.5
SIGR	SIGRI	82.79	321	P	P	13 04 19.9	-2.5
Y43A	Makayla and Ka	82.82	48	P	P	13 04 22.0	-0.6
	baz=321						
ACCN	Adirondack Com	82.83	32	eP	P	13 04 22.2	-0.3
	comp=Z,15nm,0.8s						
ACCN				LR	LR		
	comp=Z,3µm,20.0s						
GRG	Griva	82.84	324	eP	P	13 04 22.0	-0.7
GRG	Griva	82.84	324	P	P	13 04 22.0	-0.7
ASF	Jabal al Asfar	82.84	309	P	P	13 04 23.6	+0.6
	comp=Z,29nm,0.9s,baz=6.7,slow=3.3,SNR=32						
ASF				LR	LR	13 47 02.1	
	comp=Z,4µm,18.4s,baz=353,slow=40						
PDG	Podgorica	82.86	327	⇑iP	P	13 04 22.0	-0.7
TTG	Podgorica	82.86	327	⇑iP	P	13 04 22.1	-0.7
TTG	Podgorica	82.86	327	eP	P	13 04 21.4	-1.3
	comp=Z,66nm,0.9s						
TTG				LR	LR		
	comp=Z,8µm,19.0s						
TTG	Podgorica	82.86	327	eP	P	13 04 21.4	-1.3
TTG				pmax	pmax		
	comp=Z,66nm,0.9s						
TTG				MLR	MLR		
	comp=Z,8µm,19.0s						
CEME	Cevo	82.89	327	⇑iP	P	13 04 21.7	-1.3
BINY	Binghamton	82.96	34	P	P	13 04 22.0	-1.3
	baz=328						
BINY	Binghamton	82.96	34	PFAKE		13 04 30.0	+6.7
BINY				LR	LR		
	comp=Z,3µm,20.0s						
R51A	Hillsboro	82.97	41	P	P	13 04 22.6	-0.8
	baz=324,SNR=7.5						
KRUS	Krusevo	82.97	325	iP	P	13 04 22.9	-0.6
U48A	Cassie Pea, Po	83.00	44	P	P	13 04 22.7	-0.9
	baz=323,SNR=6.3						
MMAI	Mount Meron Ar	83.01	311	P	P	13 04 24.5	+0.7
	comp=Z,72nm,0.7s,baz=54,slow=7.3,SNR=40						
MMAI				LR	LR	13 46 29.1	
	comp=Z,11µm,19.6s,baz=35,slow=40						
T49A	Edmonton	83.01	43	P	P	13 04 22.5	-1.1
	baz=324						
T49A	Edmonton	83.01	43	eP	P	13 04 23.7	0.0
	comp=Z,73nm,1.6s						
T49A				LR	LR		
	comp=Z,5µm,20.0s						
PHP	Peshkopia	83.03	325	eP	P	13 04 22.9	-0.8
PHP	Peshkopia	83.03	325	P	P	13 04 22.9	-0.8
PHP	Peshkopia	83.03	325	eP	P	13 04 22.9	-0.8
V47A	Nunnelly	83.06	45	P	P	13 04 22.5	-1.4
	baz=323,SNR=7.9						
DRME	Dracevica, Mon	83.10	327	⇑iP	P	13 04 23.3	-0.7
BUM	Brajici-Budva	83.11	327	⇑iP	P	13 04 23.3	-0.9
HCY	Herceg Novi	83.14	327	⇑iP	P	13 04 23.0	-1.2
OXF	Oxford	83.14	47	P	P	13 04 22.7	-1.6
	baz=322,SNR=6.5						
OXF	Oxford	83.14	47	eP	P	13 04 24.6	+0.3
	comp=Z,82nm,1.1s						
OXF				LR	LR		
	comp=Z,3µm,20.0s						
HKT	Hockley	83.16	54	eP	P	13 04 26.0	+1.6
	comp=Z,31nm,1.5s						
HKT				LR	LR		
	comp=Z,4µm,18.0s						
PAIG	Paliouri	83.16	322	eP	P	13 04 23.4	-0.9
PAIG	Paliouri	83.16	322	P	P	13 04 23.4	-0.9
PAIG	Paliouri	83.16	322	eP	P	13 04 23.4	-0.9
Y44A	Strider, Charl	83.16	48	P	P	13 04 24.0	-0.4
	baz=321						
W46A	Michie	83.18	46	P	P	13 04 23.5	-1.1
	baz=322						
241A	Mo Tay, Goldon	83.21	51	P	P	13 04 24.2	-0.5
	baz=320						
241A	Mo Tay, Goldon	83.21	51	PFAKE		13 04 40.0	+15
241A				LR	LR		
	comp=Z,4µm,18.0s						
WVL	Waterville	83.21	28	eP	P	13 04 24.8	+0.3
	comp=Z,31nm,1.3s						
X45A	UM Field Stati	83.22	47	P	P	13 04 23.8	-0.9
	baz=322						
ULC	Ulcinj	83.27	326	⇑iP	P	13 04 24.7	-0.2
142A	Monroe	83.33	50	P	P	13 04 24.7	-0.6
	baz=321						
YER	Yerkesik	83.36	318	eP	P	13 04 26.0	+0.5
YER	Yerkesik	83.36	318	P	P	13 04 26.0	+0.5
R52A	Catlettsburg	83.36	40	P	P	13 04 24.1	-1.3
	baz=325						
OHR	Ohrid	83.37	325	iP	P	13 04 24.7	-0.7
U49A	Red Boiling Sp	83.37	43	P	P	13 04 23.9	-1.6
	baz=323,SNR=9.8						
CHOS	Chios island	83.38	320	P	P	13 04 25.5	-0.1
CHOS	Chios island	83.38	320	P	P	13 04 25.5	-0.1
FETY	Fethiye	83.38	317	eP	P	13 04 25.4	-0.2
FETY	Fethiye	83.38	317	P	P	13 04 25.4	-0.2
FNA	Florina	83.41	324	eP	P	13 04 24.6	-1.1
	comp=Z,58nm,0.9s						
FNA				LR	LR		
	comp=Z,10µm,18.0s						
FNA	Florina	83.41	324	P	P	13 04 24.6	-1.1
FNA	Florina	83.41	324	eP	P	13 04 24.6	-1.1
FNA				pmax	pmax		
	comp=Z,58nm,0.9s						
FNA				MLR	MLR		
	comp=Z,10µm,18.0s						
T50A	Nancy	83.41	42	P	P	13 04 24.3	-1.5
	baz=324,SNR=13						
SENIN	Lac Senin/Sane	83.42	336	eP	P	13 04 26.4	+0.5
	comp=Z,42nm,0.8s						
PLAL	Pickwick Lake	83.45	46	eP	P	13 04 25.8	-0.1
	comp=Z,25nm,1.1s						
PLAL				LR	LR		
	comp=Z,5µm,20.0s						
V48A	Smith Brothers	83.48	44	P	P	13 04 24.5	-1.6
	baz=323,SNR=7.3						
V48A	Smith Brothers	83.48	44	eP	P	13 04 25.4	-0.6
	comp=Z,49nm,1.4s						
V48A				LR	LR		
	comp=Z,6µm,19.0s						
W47A	Westpoint	83.48	45	P	P	13 04 24.7	-1.4
	baz=323,SNR=6.8						
S51A	Beattyville	83.50	41	P	P	13 04 24.7	-1.4
	baz=324						
S51A	Beattyville	83.50	41	eP	P	13 04 26.0	-0.2
	comp=Z,13nm,0.8s						
S51A				LR	LR		
	comp=Z,4µm,19.0s						
143A	Socs Landing,	83.50	49	P	P	13 04 25.2	-1.0
	baz=321						
143A	Socs Landing,	83.50	49	PFAKE		13 04 40.0	+14
143A				LR	LR		
	comp=Z,6µm,18.0s						
MCWV	Mont Chateau	83.51	38	P	P	13 04 25.3	-0.9
	baz=326						
MCWV	Mont Chateau	83.51	38	eP	P	13 04 26.1	-0.1
	comp=Z,20nm,0.8s						
MCWV				LR	LR		
	comp=Z,6µm,20.0s						
LIT	Litokhoron	83.52	323	eP	P	13 04 24.9	-1.3
LIT				eP	pP	13 04 25.7	-5.3
LIT				LR	LR		
	comp=Z,9µm,19.0s						
LIT	Litokhoron	83.52	323	P	P	13 04 24.9	-1.3
LIT	Litokhoron	83.52	323	eP	P	13 04 24.9	-1.3
LIT				MLR	MLR		
	comp=Z,9µm,19.0s						
SSPA	Standing Stone	83.52	36	P	P	13 04 24.6	-1.6
	baz=328						
SSPA	Standing Stone	83.52	36	eP	P	13 04 25.9	-0.3
	comp=Z,106nm,2.0s						
SSPA				LR	LR		
	comp=Z,3µm,19.0s						
X46A	Booneville	83.53	46	P	P	13 04 25.2	-1.2
	baz=322						
O56A	Blue Knob Stat	83.55	36	P	P	13 04 25.5	-0.9
	baz=327,SNR=8.5						
O56A	Blue Knob Stat	83.55	36	eP	P	13 04 26.1	-0.3
	comp=Z,22nm,0.8s						
O56A				LR	LR		
	comp=Z,4µm,18.0s						
Z44A	Pea Ridge, Bel	83.57	48	P	P	13 04 25.6	-1.0
	baz=321						
Y45A	Yeager Farm, C	83.58	47	P	P	13 04 26.4	-0.2
	baz=322,SNR=5.6						
KSPA	Keystone Colle	83.59	34	PFAKE		13 04 40.0	+13
KSPA				LR	LR		
	comp=Z,2µm,21.0s						
242A	Grayson	83.59	50	P	P	13 04 26.0	-0.7
	baz=321						
341A	Kurthwood	83.60	51	P	P	13 04 25.6	-1.2
	baz=320						
341A	Kurthwood	83.60	51	PFAKE		13 04 40.0	+13
341A				LR	LR		
	comp=Z,4µm,19.0s						
KZN	Kozani	83.65	324	P	P	13 04 25.9	-1.1
KZN	Kozani	83.65	324	P	P	13 04 25.9	-1.1
KZN	Kozani	83.65	324	P	P	13 04 25.9	-1.1
AOS	Alonnisos	83.70	322	eP	P	13 04 26.2	-0.9
AOS	Alonnisos	83.70	322	P	P	13 04 26.2	-0.9
S52A	Salyersville	83.70	41	P	P	13 04 25.9	-1.3
	baz=325						
KBN	Korca	83.78	325	eP	P	13 04 27.0	-0.6
KBN	Korca	83.78	325	P	P	13 04 27.0	-0.6
KBN	Korca	83.78	325	eP	P	13 04 27.0	-0.6
EMMW	East Machias	83.80	27	eP	P	13 04 27.3	-0.3
	comp=Z,21nm,1.0s						
XOR	Xorichti	83.83	322	P	P	13 04 26.6	-1.2
XOR	Xorichti	83.83	322	P	P	13 04 26.6	-1.2
NEST	Nestorio	83.85	324	P	P	13 04 27.6	-0.4
NEO	Neokhori	83.87	322	P	P	13 04 26.8	-1.2
NEO	Neokhori	83.87	322	P	P	13 04 26.8	-1.2
BODT	Bodrum	83.87	318	eP	P	13 04 27.6	-0.5
BODT	Bodrum	83.87	318	P	P	13 04 27.6	-0.5
SKIA	Skiathos	83.88	322	P	P	13 04 27.2	-0.9
Z45A	Winona	83.89	48	P	P	13 04 27.4	-0.8
	baz=322						
Z45A	Winona	83.89	48	eP	P	13 04 29.1	+0.9
	comp=Z,274nm,1.7s						
Z45A				LR	LR		
	comp=Z,4µm,19.0s						
W48A	Pulaski	83.90	45	P	P	13 04 27.8	-0.5
	baz=323,SNR=14						
FYTO	Fytoko, Volos	83.90	323	eP	P	13 04 27.2	-1.0
FYTO	Fytoko, Volos	83.90	323	P	P	13 04 27.2	-1.0
V49A	McMinnville	83.91	44	P	P	13 04 26.8	-1.4
	baz=323,SNR=6.9						
Y46A	Houston	83.92	47	P	P	13 04 27.4	-0.9
	baz=322,SNR=9.4						
X47A	Russelville	83.93	46	P	P	13 04 27.3	-1.1
	baz=322						
NWAO	Narrogin (SRO)	83.99	209	P	P	13 04 27.9	-0.5
	comp=Z,26nm,0.7s,baz=358,slow=6.5,SNR=14						
NWAO				LR	LR	13 42 25.5	
	comp=Z,888nm,20.3s,baz=284,slow=36						
342A	Flagon Creek P	84.03	51	P	P	13 04 28.5	-0.5
	baz=321						
342A	Flagon Creek P	84.03	51	PFAKE		13 04 40.0	+11
342A				LR	LR		
	comp=Z,5µm,18.0s						
441A	DeRidder	84.03	52	P	P	13 04 27.7	-1.3
	baz=320						
144A	Alexander Plac	84.08	49	P	P	13 04 28.1	-1.1
	baz=321						
243A	Waterproof	84.10	50	P	P	13 04 28.4	-0.8
	baz=321						
KPRO	Kipourio	84.11	324	P	P	13 04 27.2	-2.1
N59A	State Game Lan	84.14	34	P	P	13 04 28.7	-0.7
	baz=329						
N59A	State Game Lan	84.14	34	PFAKE		13 04 40.0	+11
N59A				LR	LR		
	comp=Z,4µm,21.0s						
THL	Klokotos Trika	84.17	323	P	P	13 04 27.2	-2.3
T52A	Hallie	84.21	41	P	P	13 04 28.9	-1.0
	baz=325						
SMIA	Simia	84.23	322	P	P	13 04 28.7	-1.2
RAYN	Ar Rayn	84.24	298	eP	P	13 04 30.7	+0.5
	comp=Z,38nm,0.8s						
RAYN				LR	LR		
	comp=Z,4µm,20.0s						
RAYN	Ar Rayn	84.24	298	iP	P	13 04 30.7	+0.5
	SNR=45						
W49A	Belvidere	84.25	44	P	P	13 04 29.1	-0.9
	baz=323,SNR=12						
SWET	Sewanee	84.33	44	eP	P	13 04 29.5	-1.0
	comp=Z,40nm,1.0s						
SWET				LR	LR		
	comp=Z,5µm,19.0s						
PAGS	Pennsylvania G	84.34	35	eP	P	13 04 30.5	+0.1
	comp=Z,22nm,0.9s						
PAGS				LR	LR		
	comp=Z,3µm,19.0s						
VBMS	Vicksburg	84.35	49	P	P	13 04 30.4	-0.1
	baz=321						
VBMS	Vicksburg	84.35	49	PFAKE		13 04 40.0	+9.5
VBMS				LR	LR		
	comp=Z,5µm,18.0s						
HRV	Adam Dziewonsk	84.36	31	P	P	13 04 29.5	-1.0
	baz=331						
HRV	Adam Dziewonsk	84.36	31	PFAKE		13 04 40.0	+10
HRV				LR	LR		
	comp=Z,4µm,21.0s						
145A	Houston Renfro	84.36	48	P	P	13 04 30.0	-0.6
	baz=322						
V50A	Pikevile	84.37	43	P	P	13 04 29.3	-1.3
	baz=324,SNR=7.9						
X48A	Hartselle	84.39	45	P	P	13 04 29.5	-1.2
	baz=323						
X48A	Hartselle	84.39	45	eP	P	13 04 30.1	-0.6
	comp=Z,17nm,1.1s						
X48A				LR	LR		
	comp=Z,5µm,21.0s						
KARY	Karystos	84.39	321	P	P	13 04 29.6	-1.1
244A	Avery, Jackson	84.40	49	P	P	13 04 30.1	-0.7
	baz=321						
TZTN	Tazewell	84.41	42	P	P	13 04 30.2	-0.6
	baz=325						
TZTN	Tazewell	84.41	42	eP	P	13 04 30.8	0.0
	comp=Z,22nm,1.2s						
TZTN				LR	LR		
	comp=Z,3µm,20.0s						
Z46A	Louisville	84.42	47	P	P	13 04 29.6	-1.3
	baz=322						
Y47A	UCPARC, Winfie	84.42	46	P	P	13 04 30.2	-0.7
	baz=323,SNR=6.0						
ZAIG	Zacatecas	84.42	63	eP	P	13 04 32.1	+0.7
	comp=Z,26nm,1.0s						
ZAIG				LR	LR		
	comp=Z,4µm,20.0s						
ODNJ	Ogdensburg	84.45	33	PFAKE		13 04 40.0	+9.1
ODNJ				LR	LR		
	comp=Z,3µm,19.0s						
442A	Mamou	84.48	51	P	P	13 04 30.2	-1.0
	baz=321						
343A	Vidalia	84.48	50	P	P	13 04 30.3	-0.9
	baz=321						
VLC	Villacollemand	84.48	333	eP	P	13 04 32.0	+0.9
	comp=Z,60nm,0.7s						
VLC				LR	LR		
	comp=Z,5µm,19.0s						
AGG	Agios Georgios	84.49	323	eP	P	13 04 29.3	-1.9
AGG				eP	pP	13 04 29.8	-6.1
AGG				LR	LR		
	comp=Z,21µm,19.0s						
AGG	Agios Georgios	84.49	323	P	P	13 04 29.3	-1.9
AGG	Agios Georgios	84.49	323	eP	P	13 04 29.3	-1.9
AGG				MLR	MLR		
	comp=Z,21µm,19.0s						
LKR	Lokris	84.51	322	P	P	13 04 29.7	-1.6
LKR	Lokris	84.51	322	P	P	13 04 29.7	-1.6
WES	Weston	84.55	31	eP	P	13 04 32.1	+0.7
	comp=Z,22nm,0.8s						
WES	Weston	84.55	31	eP	P	13 04 32.1	+0.7
WES				pmax	pmax		
	comp=Z,22nm,0.8s						
541A	Lake Charles	84.56	52	PFAKE		13 04 40.0	+8.4
541A				LR	LR		
	comp=Z,4µm,19.0s						
JAN	Janina	84.58	324	eP	P	13 04 31.4	-0.2
JAN	Janina	84.58	324	P	P	13 04 31.4	-0.2
JAN	Janina	84.58	324	eP	P	13 04 31.4	-0.2
V51A	Loudon	84.63	43	P	P	13 04 30.3	-1.6
	baz=324,SNR=5.8						
V51A	Loudon	84.63	43	eP	P	13 04 31.0	-0.9
	comp=Z,22nm,1.0s						
V51A				LR	LR		
	comp=Z,5µm,20.0s						
PTL	Penteli	84.63	321	eP	P	13 04 30.4	-1.5
PTL	Penteli	84.63	321	P	P	13 04 30.4	-1.5
W50A	Signal Mountai	84.65	44	P	P	13 04 30.4	-1.7
	baz=324						
W50A	Signal Mountai	84.65	44	eP	P	13 04 31.4	-0.6
	comp=Z,34nm,1.2s						
W50A				LR	LR		
	comp=Z,4µm,20.0s						
MVL	Millersville	84.69	35	eP	P	13 04 32.6	+0.5
	comp=Z,15nm,0.9s						
APE	Apeiranthos	84.69	320	⇑iP	P	13 04 31.5	-0.8
X49A	Woodville	84.70	45	P	P	13 04 30.8	-1.5
	baz=323,SNR=7.6						
Y48A	Jasper	84.75	46	P	P	13 04 30.7	-1.9
	baz=323						
VILL	Villia	84.78	322	P	P	13 04 30.6	-2.1
LNIG	Linares	84.78	60	eP	P	13 04 31.8	-1.1
	comp=Z,15nm,1.0s						
LNIG				LR	LR		
	comp=Z,2µm,18.0s						
PAL	Palisades	84.79	33	PFAKE		13 04 40.0	+7.4
PAL				LR	LR		
	comp=Z,6µm,20.0s						
146A	Union	84.79	48	P	P	13 04 31.5	-1.3
	baz=322						
146A	Union	84.79	48	PFAKE		13 04 40.0	+7.2
146A				LR	LR		
	comp=Z,4µm,19.0s						
443A	Delano Plantat	84.80	51	P	P	13 04 31.5	-1.3
	baz=321						
EVR	Evrytania	84.80	323	P	P	13 04 31.7	-1.1
EVR	Evrytania	84.80	323	P	P	13 04 31.7	-1.1
BNI	Bardonecchia	84.80	336	eP	P	13 04 33.8	+1.0
	comp=Z,61nm,1.1s						
BNI				LR	LR		
	comp=Z,6µm,19.0s						
BRNJ	Basking Ridge	84.81	34	PFAKE		13 04 40.0	+7.3
BRNJ				LR	LR		
	comp=Z,3µm,19.0s						
245A	Little AP, Sta	84.83	49	P	P	13 04 32.7	-0.3
	baz=322						
VLY	Voula,Athens	84.83	321	eP	P	13 04 30.8	-2.1
VLY	Voula,Athens	84.83	321	P	P	13 04 30.8	-2.1
CPCT	Cooper Cave	84.83	43	eP	P	13 04 33.1	+0.2
	comp=Z,36nm,1.4s						
CPCT				LR	LR		
	comp=Z,5µm,20.0s						
344A	Westbrook Farm	84.83	50	P	P	13 04 32.6	-0.4
	baz=321						
344A	Westbrook Farm	84.83	50	PFAKE		13 04 40.0	+7.0
344A				LR	LR		
	comp=Z,6µm,18.0s						
Z47A	Carrollton	84.86	47	P	P	13 04 32.7	-0.4
	baz=322						
542A	Morse	84.86	52	P	P	13 04 33.6	+0.4
	baz=321						
SGD	Sagiada	84.87	325	P	P	13 04 32.0	-1.0
IGT	Igoumenitsa	84.89	324	eP	P	13 04 32.2	-1.0
IGT	Igoumenitsa	84.89	324	P	P	13 04 32.2	-1.0
IGT	Igoumenitsa	84.89	324	eP	P	13 04 32.2	-1.0
DSF	Desfina	84.91	322	eP	P	13 04 31.4	-2.0
DSF	Desfina	84.91	322	P	P	13 04 31.4	-2.0
DSL	Palaion Diasel	84.91	324	eP	P	13 04 32.5	-0.8
DSL	Palaion Diasel	84.91	324	P	P	13 04 32.5	-0.8
V52A	Sevierville	84.95	42	P	P	13 04 32.7	-0.9
	baz=325,SNR=8.1						
V52A	Sevierville	84.95	42	eP	P	13 04 33.2	-0.3
	comp=Z,50nm,1.4s						
V52A				LR	LR		
	comp=Z,5µm,19.0s						
KEK	Kerkira	84.96	325	P	P	13 04 32.8	-0.7
KEK	Kerkira	84.96	325	P	P	13 04 32.8	-0.7
Z48A	Northport	84.98	46	P	P	13 04 31.9	-1.9
	baz=323						
U53A	Fall Branch	85.01	41	P	P	13 04 32.2	-1.7
	baz=325,SNR=8.4						
TKL	Tuckaleechee C	85.02	42	P	P	13 04 33.7	-0.2
	comp=Z,19nm,1.1s,baz=332,slow=0.9,SNR=13						
TKL				LR	LR	13 42 19.6	
	comp=Z,4µm,21.8s,baz=338,slow=36						
TKL	Tuckaleechee C	85.02	42	eP	P	13 04 33.2	-0.6
	comp=Z,18nm,0.8s						
TKL	Tuckaleechee C	85.02	42	eP	P	13 04 33.3	-0.6
TKL				pmax	pmax		
	comp=Z,18nm,0.8s						
ANX	Ano Chora	85.02	323	P	P	13 04 32.7	-1.3
LTK	Loutraki	85.05	322	eP	P	13 04 31.6	-2.4
LTK	Loutraki	85.05	322	P	P	13 04 31.6	-2.4
X50B	Fort Payne	85.08	44	P	P	13 04 32.2	-2.0
	baz=324,SNR=5.7						
AQU	L’Aquila	85.08	330	eP	P	13 04 33.8	-0.4
	comp=Z,188nm,1.2s						
AQU				LR	LR		
	comp=Z,4µm,19.0s						
SERI	Serifos	85.09	320	P	P	13 04 32.2	-2.1
PSUB	Penn St. - Bra	85.11	34	PFAKE		13 04 50.0	+16
PSUB				LR	LR		
	comp=Z,4µm,19.0s						
SERG	Sergoula	85.11	323	P	P	13 04 33.9	-0.5
TRIZ	Trizonia	85.15	323	P	P	13 04 33.2	-1.3
EFP	Efpalio	85.17	323	P	P	13 04 33.7	-0.9
PVO	Paravola	85.17	323	P	P	13 04 33.2	-1.4
147A	Livingston	85.17	47	P	P	13 04 33.8	-0.9
	baz=322						
147A	Livingston	85.17	47	eP	P	13 04 35.5	+0.8
	comp=Z,198nm,1.5s						
147A				LR	LR		
	comp=Z,3µm,20.0s						
KARP	Karpathos	85.17	318	eP	P	13 04 34.6	-0.1
	comp=Z,140nm,0.9s						
KARP				LR	LR		
	comp=Z,4µm,18.0s						
KARP	Karpathos	85.17	318	P	P	13 04 33.9	-0.8
Y49A	Blount Mountai	85.18	45	P	P	13 04 33.8	-1.0
	baz=323						
Y49A	Blount Mountai	85.18	45	eP	P	13 04 34.7	0.0
	comp=Z,41nm,1.4s						
Y49A				LR	LR		
	comp=Z,5µm,20.0s						
246A	Jackson Lee, B	85.24	48	P	P	13 04 34.8	-0.3
	baz=322						
543A	St. Martinvill	85.28	51	P	P	13 04 34.7	-0.6
	baz=321						
BLA	Blacksburg	85.29	39	P	P	13 04 34.1	-1.1
	baz=326						
BLA	Blacksburg	85.29	39	eP	P	13 04 36.4	+1.1
	comp=Z,19nm,0.8s						
BLA				LR	LR		
	comp=Z,3µm,18.0s						
BLA	Blacksburg	85.29	39	eP	P	13 04 36.4	+1.1
BLA				pmax	pmax		
	comp=Z,19nm,0.8s						
BLA				MLR	MLR		
	comp=Z,3µm,18.0s						
LAKA	Lakka	85.29	323	eP	P	13 04 34.0	-1.3
LAKA	Lakka	85.29	323	P	P	13 04 34.0	-1.3
SANT	Santorini	85.30	319	PFAKE		13 04 50.0	+15
SANT				LR	LR		
	comp=Z,4µm,18.0s						
345A	Thompson Farm,	85.32	49	P	P	13 04 34.6	-0.9
	baz=322						
PDO	Prodromos	85.33	323	P	P	13 04 34.5	-0.9
DID	Didima	85.36	321	eP	P	13 04 32.7	-2.9
DID	Didima	85.36	321	P	P	13 04 32.7	-2.9
MATE	Matera	85.37	327	⇑iP	P	13 04 35.1	-0.4
X51A	Calhoun	85.38	44	P	P	13 04 34.0	-1.7
	baz=324						
X51A	Calhoun	85.38	44	eP	P	13 04 35.8	+0.1
	comp=Z,54nm,1.5s						
X51A				LR	LR		
	comp=Z,5µm,22.0s						
KLV	Kalavryta, Ach	85.38	322	eP	P	13 04 34.1	-1.7
KLV	Kalavryta, Ach	85.38	322	P	P	13 04 34.1	-1.7
LKD2	Lefkada island	85.39	324	P	P	13 04 34.4	-1.3
LKD2	Lefkada island	85.39	324	P	P	13 04 34.4	-1.3
GUR	Goura	85.39	322	eP	P	13 04 33.8	-2.0
GUR	Goura	85.39	322	P	P	13 04 33.8	-2.0
444A	Pine Grove	85.39	50	P	P	13 04 35.7	-0.1
	baz=321						
W52A	Murphy	85.40	43	P	P	13 04 34.4	-1.4
	baz=324						
W52A	Murphy	85.40	43	eP	P	13 04 36.6	+0.7
	comp=Z,58nm,0.2s						

W52A				LR	LR		
	comp=Z,5µm,20.0s						
V53A	**Saluda**	**85.46**	**42**	P	**P**	**13 04 34.8**	**-1.3**
	baz=325						
V53A	**Saluda**	**85.46**	**42**	*e*P	**P**	**13 04 36.5**	**+0.4**
	comp=Z,16nm,1.1s						
V53A				LR	LR		
	comp=Z,5µm,19.0s						
247A	**Quitman**	**85.48**	**48**	P	**P**	**13 04 35.7**	**-0.5**
	baz=322						
Y50A	**Piedmont**	**85.49**	**45**	P	**P**	**13 04 35.3**	**-1.0**
	baz=324						
M65A	**Busby, Falmout**	**85.51**	**31**	P	**P**	**13 04 35.4**	**-0.8**
	baz=332						
LRAL	**Lakeview Retre**	**85.54**	**46**	P	**P**	**13 04 35.2**	**-1.3**
	baz=323						
LRAL	**Lakeview Retre**	**85.54**	**46**	PFAKE		13 04 50.0	+13
LRAL				LR	LR		
	comp=Z,5µm,20.0s						
148A	**Greensboro**	**85.55**	**47**	P	**P**	**13 04 35.7**	**-0.9**
	baz=323						
346A	**Big Creek Wild**	**85.56**	**49**	P	**P**	**13 04 35.9**	**-0.8**
	baz=322						
346A	**Big Creek Wild**	**85.56**	**49**	PFAKE		13 04 50.0	+13
346A				LR	LR		
	comp=Z,5µm,18.0s						
445A	**Amite**	**85.60**	**50**	P	**P**	**13 04 35.7**	**-1.2**
	baz=322						
DRO	**Drossia**	**85.65**	**323**	P	**P**	**13 04 36.4**	**-0.6**
Z49A	**Columbiana**	**85.65**	**46**	P	**P**	**13 04 35.9**	**-1.2**
	baz=323						
RLS	**Riolos of Patr**	**85.66**	**323**	P	**P**	**13 04 36.5**	**-0.5**
RLS	**Riolos of Patr**	**85.66**	**323**	P	**P**	**13 04 36.5**	**-0.5**
W53A	**Cullowhee**	**85.70**	**42**	P	**P**	**13 04 35.9**	**-1.6**
	baz=325,SNR=8.6						
FSK	**Fiskardo**	**85.71**	**324**	P	**P**	**13 04 35.5**	**-1.7**
CVRD	**Centerville Ro**	**85.71**	**37**	*e*P	**P**	**13 04 37.0**	**-0.3**
	comp=Z,31nm,0.9s						
CVRD				LR	LR		
	comp=Z,4µm,20.0s						
CBN	**Corbin Frederi**	**85.78**	**37**	P	**P**	**13 04 36.6**	**-1.0**
	baz=328						
CBN	**Corbin Frederi**	**85.78**	**37**	PFAKE		13 04 50.0	+12
CBN				LR	LR		
	comp=Z,4µm,19.0s						
Y51A	**Rockmart**	**85.81**	**44**	P	**P**	**13 04 36.7**	**-1.2**
	baz=324,SNR=8.6						
X52A	**Dahlonega**	**85.82**	**43**	P	**P**	**13 04 37.2**	**-0.7**
	baz=324						
248A	**Dixon Mills**	**85.90**	**47**	P	**P**	**13 04 37.6**	**-0.8**
	baz=323						
Z50A	**Ashland**	**85.91**	**45**	P	**P**	**13 04 37.5**	**-0.9**
	baz=324,SNR=11						
Z50A	**Ashland**	**85.91**	**45**	*e*P	**P**	**13 04 37.6**	**-0.8**
	comp=Z,174nm,1.8s						
Z50A				LR	LR		
	comp=Z,5µm,20.0s						
VLS	**Valsamata**	**85.93**	**324**	P	**P**	**13 04 37.3**	**-1.1**
VLS	**Valsamata**	**85.93**	**324**	P	**P**	**13 04 37.3**	**-1.1**
VLS	**Valsamata**	**85.93**	**324**	P	**P**	**13 04 37.3**	**-1.1**
BG3	**Lake Jocassee**	**85.96**	**42**	*e*P	**P**	**13 04 38.9**	**+0.3**
	comp=Z,57nm,1.4s						
BG3				LR	LR		
	comp=Z,5µm,20.0s						
MXZ	**Matakaoa Point**	**85.96**	**159**	PFAKE		13 04 50.0	+12
MXZ				LR	LR		
	comp=Z,6µm,20.0s						
ZKR	**Zakros**	**85.97**	**318**	*e*P	**P**	**13 04 38.6**	**-0.1**
ZKR	**Zakros**	**85.97**	**318**	P	**P**	**13 04 38.6**	**-0.1**
149A	**Jones**	**85.99**	**46**	P	**P**	**13 04 37.6**	**-1.2**
	baz=323						
AMT	**Artemida-Makis**	**86.00**	**322**	P	**P**	**13 04 37.5**	**-1.3**
347A	**Saraland**	**86.03**	**48**	P	**P**	**13 04 37.9**	**-1.1**
	baz=322						
545A	**Edgard**	**86.06**	**50**	PFAKE		13 04 50.0	+11
545A				LR	LR		
	comp=Z,5µm,19.0s						
HIZ	**Hauiti**	**86.06**	**162**	PFAKE		13 04 50.0	+11
HIZ				LR	LR		
	comp=Z,4µm,18.0s						
446A	**Poplarville**	**86.08**	**49**	P	**P**	**13 04 38.0**	**-1.2**
	baz=322						
VLI	**Veliai**	**86.15**	**321**	*e*P	**P**	**13 04 36.6**	**-2.9**
VLI	**Veliai**	**86.15**	**321**	P	**P**	**13 04 36.6**	**-2.9**
X53A	**Estanollee**	**86.18**	**43**	P	**P**	**13 04 38.8**	**-0.9**
	baz=325,SNR=9.4						
ITM	**Ithomi**	**86.20**	**322**	*e*P	**P**	**13 04 38.9**	**-0.9**
	comp=Z,119nm,0.9s						
ITM				LR	LR		
	comp=Z,3µm,18.0s						
ITM	**Ithomi**	**86.20**	**322**	P	**P**	**13 04 38.2**	**-1.6**
Z51A	**Franklin**	**86.23**	**45**	P	**P**	**13 04 38.8**	**-1.1**
	baz=324						
CUC	**Castrocucco**	**86.28**	**328**	PFAKE		13 04 50.0	+10
CUC				LR	LR		
	comp=Z,6µm,19.0s						
LAST	**Lasithi**	**86.28**	**319**	*e*P	**P**	**13 04 39.8**	**-0.5**
LAST	**Lasithi**	**86.28**	**319**	P	**P**	**13 04 39.8**	**-0.5**
249A	**Camden**	**86.32**	**47**	P	**P**	**13 04 40.0**	**-0.4**
	baz=323						
546A	**Slidell**	**86.32**	**50**	P	**P**	**13 04 40.0**	**-0.5**
	baz=322						
URZ	**Urewera**	**86.33**	**160**	PFAKE		13 04 50.0	+10
URZ				LR	LR		
	comp=Z,4µm,20.0s						
Y52A	**Lilburn**	**86.33**	**44**	P	**P**	**13 04 39.9**	**-0.5**
	baz=324						
Y52A	**Lilburn**	**86.33**	**44**	*e*P	**P**	**13 04 41.6**	**+1.2**
	comp=Z,48nm,1.6s						
Y52A				LR	LR		
	comp=Z,5µm,19.0s						
348A	**Jackson**	**86.36**	**48**	P	**P**	**13 04 39.3**	**-1.2**
	baz=323						
348A	**Jackson**	**86.36**	**48**	PFAKE		13 04 50.0	+9.4
348A				LR	LR		
	comp=Z,3µm,19.0s						
150A	**Eclectic**	**86.37**	**46**	P	**P**	**13 04 39.8**	**-0.8**
	baz=324						
DYR	**Agios Nikonas**	**86.38**	**322**	P	**P**	**13 04 39.3**	**-1.3**
IDI	**Anoyia**	**86.45**	**319**	P	**P**	**13 04 40.4**	**-0.7**
	comp=Z,28nm,0.7s,baz=24,slow=9.8,SNR=18						
IDI				LR	LR	13 48 10.5	
	comp=Z,3µm,18.6s,baz=13,slow=39						
IDI	**Anoyia**	**86.45**	**319**	⇑*i*P	**P**	**13 04 41.4**	**+0.3**
IDI	**Anoyia**	**86.45**	**319**	*e*P	**P**	**13 04 41.4**	**+0.3**
	comp=Z,65nm,0.9s						
447A	**Lucedale**	**86.45**	**49**	P	**P**	**13 04 40.1**	**-1.0**
	baz=322						
447A	**Lucedale**	**86.45**	**49**	PFAKE		13 04 50.0	+8.9
447A				LR	LR		
	comp=Z,5µm,19.0s						
645A	**Chauvin**	**86.45**	**51**	P	**P**	**13 04 39.8**	**-1.3**
	baz=322						
KTHR	**Kythira**	**86.50**	**321**	P	**P**	**13 04 39.3**	**-1.9**
NCAT	**North Carolina**	**86.52**	**39**	*e*P	**P**	**13 04 41.8**	**+0.5**
	comp=Z,29nm,1.3s						
NCAT				LR	LR		
	comp=Z,3µm,19.0s						
PYL	**PYLOS**	**86.52**	**322**	*e*P	**P**	**13 04 40.0**	**-1.3**
PYL	**PYLOS**	**86.52**	**322**	P	**P**	**13 04 40.0**	**-1.3**
Y53A	**Monroe**	**86.57**	**43**	P	**P**	**13 04 39.7**	**-2.0**
	baz=325						
KMSC	**Kings Mountain**	**86.58**	**41**	P	**P**	**13 04 39.8**	**-1.9**
	baz=326						
KMSC	**Kings Mountain**	**86.58**	**41**	*e*P	**P**	**13 04 41.9**	**+0.2**
	comp=Z,16nm,0.9s						
KMSC				LR	LR		
	comp=Z,4µm,20.0s						
TIP	**Timpagrande**	**86.62**	**327**	⇑*i*P	**P**	**13 04 41.7**	**-0.2**
TIP	**Timpagrande**	**86.62**	**327**	*e*P	**P**	**13 04 41.2**	**-0.7**
TIP				*e*P	**P**	**13 04 41.5**	**-0.4**
TIP				LR	LR		
	comp=Z,8µm,19.0s						
TIP	**Timpagrande**	**86.62**	**327**	P	**P**	**13 04 41.2**	**-0.7**
PAULI	**Pauline**	**86.62**	**42**	PFAKE		13 04 50.0	+8.1
PAULI				LR	LR		
	comp=Z,4µm,18.0s						
VAM	**Vamos**	**86.67**	**320**	P	**P**	**13 04 41.2**	**-0.9**
VAM	**Vamos**	**86.67**	**320**	P	**P**	**13 04 41.2**	**-0.9**
VAM	**Vamos**	**86.67**	**320**	P	**P**	**13 04 41.2**	**-0.9**
Z52A	**Williamson**	**86.70**	**44**	P	**P**	**13 04 40.9**	**-1.4**
	baz=324,SNR=5.1						
SIVA	**Sivas**	**86.71**	**319**	P	**P**	**13 04 42.6**	**+0.3**
SIVA	**Sivas**	**86.71**	**319**	P	**P**	**13 04 42.6**	**+0.3**
IMMV	**Iera Moni Meta**	**86.72**	**320**	P	**P**	**13 04 41.1**	**-1.2**
250A	**Grady**	**86.75**	**46**	P	**P**	**13 04 41.4**	**-1.2**
	baz=323						
250A	**Grady**	**86.75**	**46**	*e*P	**P**	**13 04 42.8**	**+0.2**
	comp=Z,254nm,1.5s						
250A				LR	LR		
	comp=Z,4µm,20.0s						
448A	**Bay Minette**	**86.76**	**48**	P	**P**	**13 04 41.0**	**-1.6**
	baz=323						
TBI	**Tubuai**	**86.78**	**128**	*e*S	**S**	**13 15 17.9**	**-1.8**
	comp=Z,3µm,27.0s						
TBI	**Tubuai**	**86.78**	**128**	*e*LR	LR	13 31 50.2	
	comp=Z,3µm,21.8s,baz=320						
TBI	**Tubuai**	**86.78**	**128**	*e*T	T	14 40 57.8	
	comp=Z,3.4nm,0.3s						
349A	**Repton**	**86.78**	**47**	P	**P**	**13 04 41.3**	**-1.4**
	baz=323						
151A	**Opelika**	**86.79**	**45**	P	**P**	**13 04 41.0**	**-1.7**
	baz=324						
HODGE	**Hodges**	**86.90**	**42**	*e*P	**P**	**13 04 44.1**	**+0.9**
	comp=Z,37nm,1.5s						
HODGE				LR	LR		
	comp=Z,4µm,20.0s						
152A	**Waverly Hall**	**86.98**	**45**	P	**P**	**13 04 42.6**	**-1.0**
	baz=324						
152A	**Waverly Hall**	**86.98**	**45**	*e*P	**P**	**13 04 42.9**	**-0.7**
	comp=Z,35nm,1.4s						
152A				LR	LR		
	comp=Z,6µm,20.0s						
GOGA	**Godfrey**	**86.99**	**43**	P	**P**	**13 04 43.0**	**-0.6**
	baz=325						
GOGA	**Godfrey**	**86.99**	**43**	*e*P	**P**	**13 04 43.7**	**0.0**
	comp=Z,39nm,1.4s						
GOGA				LR	LR		
	comp=Z,5µm,19.0s						
GOGA	**Godfrey**	**86.99**	**43**	*e*P	**P**	**13 04 43.7**	**0.0**
GOGA				pmax	pmax		
	comp=Z,39nm,1.4s						
GOGA				MLR	MLR		
	comp=Z,5µm,19.0s						
BRAL	**Brewton**	**86.99**	**47**	P	**P**	**13 04 42.7**	**-1.0**
	baz=323						
BRAL	**Brewton**	**86.99**	**47**	PFAKE		13 05 00.0	+16
BRAL				LR	LR		
	comp=Z,3µm,18.0s						
Y54A	**Tignall**	**87.00**	**43**	P	**P**	**13 04 42.5**	**-1.2**
	baz=325,SNR=23						
Z53A	**Monticello**	**87.05**	**44**	P	**P**	**13 04 42.9**	**-1.0**
	baz=325,SNR=5.4						
BKZ	**Black Stump Fm**	**87.05**	**161**	PFAKE		13 05 00.0	+16
BKZ				LR	LR		
	comp=Z,4µm,21.0s						
251A	**Midway**	**87.09**	**46**	P	**P**	**13 04 42.8**	**-1.4**
	baz=324						
350A	**Dozier**	**87.16**	**47**	P	**P**	**13 04 44.0**	**-0.6**
	baz=323						
449A	**Pace**	**87.23**	**48**	P	**P**	**13 04 43.5**	**-1.4**
	baz=323						
JSC	**Jenkinsville**	**87.33**	**41**	*e*P	**P**	**13 04 45.8**	**+0.5**
	comp=Z,65nm,1.8s						
JSC				LR	LR		
	comp=Z,4µm,20.0s						
JSC	**Jenkinsville**	**87.33**	**41**	*e*P	**P**	**13 04 45.8**	**+0.5**
JSC				pmax	pmax		
	comp=Z,65nm,1.8s						
JSC				MLR	MLR		
	comp=Z,4µm,20.0s						
153A	**Fort Valley**	**87.43**	**44**	P	**P**	**13 04 44.7**	**-1.1**
	baz=325						
Z54A	**Sparta**	**87.43**	**43**	P	**P**	**13 04 44.9**	**-0.9**
	baz=325,SNR=5.7						
252A	**Lumpkin**	**87.51**	**45**	P	**P**	**13 04 45.6**	**-0.6**
	baz=324						
450A	**Crestview**	**87.53**	**47**	P	**P**	**13 04 45.5**	**-0.8**
	baz=323						
351A	**Pinckard**	**87.65**	**46**	P	**P**	**13 04 45.9**	**-1.0**
	baz=324						
CEL	**Celeste**	**87.76**	**327**	*e*P	**P**	**13 04 47.0**	**-0.4**
	comp=Z,37nm,0.8s						
CEL				LR	LR		
	comp=Z,5µm,20.0s						
253A	**Americus**	**87.76**	**45**	P	**P**	**13 04 46.6**	**-0.8**
	baz=324						
253A	**Americus**	**87.76**	**45**	*e*P	**P**	**13 04 48.0**	**+0.6**
	comp=Z,151nm,1.4s						
253A				LR	LR		
	comp=Z,5µm,20.0s						
Z55A	**Blythe**	**87.78**	**43**	P	**P**	**13 04 46.3**	**-1.2**
	baz=326						
154A	**Montrose**	**87.81**	**44**	P	**P**	**13 04 46.0**	**-1.7**
	baz=325						
154A	**Montrose**	**87.81**	**44**	*e*P	**P**	**13 04 47.9**	**+0.2**
	comp=Z,65nm,0.8s						
154A				LR	LR		
	comp=Z,5µm,20.0s						
352A	**Blakely**	**87.83**	**46**	P	**P**	**13 04 46.4**	**-1.3**
	baz=324						
352A	**Blakely**	**87.83**	**46**	PFAKE		13 05 00.0	+12
352A				LR	LR		
	comp=Z,4µm,20.0s						
CNNC	**Cliffs of the**	**88.06**	**39**	PFAKE		13 05 00.0	+11
CNNC				LR	LR		
	comp=Z,4µm,20.0s						
451A	**Vernon**	**88.11**	**47**	P	**P**	**13 04 49.2**	**+0.2**
	baz=324						
451A	**Vernon**	**88.11**	**47**	PFAKE		13 05 00.0	+11
451A				LR	LR		
	comp=Z,3µm,21.0s						
155A	**Kite**	**88.12**	**43**	P	**P**	**13 04 47.9**	**-1.2**
	baz=325						
452A	**Marianna**	**88.21**	**46**	P	**P**	**13 04 48.3**	**-1.3**
	baz=324						
254A	**Abbeville**	**88.27**	**44**	P	**P**	**13 04 48.8**	**-1.0**
	baz=325,SNR=7.2						
353A	**Camilla**	**88.29**	**45**	P	**P**	**13 04 49.2**	**-0.7**
	baz=324						
BFZ	**Birch Farm**	**88.44**	**162**	PFAKE		13 05 00.0	+10
BFZ				LR	LR		
	comp=Z,5µm,20.0s						
TIGA	**Tifton**	**88.53**	**45**	P	**P**	**13 04 50.5**	**-0.6**
	baz=325						
TIGA	**Tifton**	**88.53**	**45**	*e*P	**P**	**13 04 51.5**	**+0.4**
	comp=Z,170nm,1.6s						
TIGA				LR	LR		
	comp=Z,6µm,20.0s						
156A	**Sylvania**	**88.56**	**43**	P	**P**	**13 04 50.5**	**-0.6**
	baz=326						
453A	**Whigham**	**88.64**	**46**	P	**P**	**13 04 51.3**	**-0.3**
	baz=324						
453A	**Whigham**	**88.64**	**46**	PFAKE		13 05 00.0	+8.4
453A				LR	LR		
	comp=Z,4µm,18.0s						
255A	**Hazlehurst**	**88.68**	**44**	P	**P**	**13 04 51.0**	**-0.7**
	baz=325						
255A	**Hazlehurst**	**88.68**	**44**	PFAKE		13 05 00.0	+8.2
255A				LR	LR		
	comp=Z,5µm,19.0s						
SNZO	**South Karori**	**88.71**	**163**	PFAKE		13 05 00.0	+8.7
SNZO				LR	LR		
	comp=Z,6µm,19.0s						
THZ	**Tophouse**	**88.79**	**164**	PFAKE		13 05 00.0	+8.2
THZ				LR	LR		
	comp=Z,4µm,20.0s						
NHSC	**New Hope**	**88.80**	**41**	P	**P**	**13 04 51.8**	**-0.5**
	baz=326						
NHSC	**New Hope**	**88.80**	**41**	PFAKE		13 05 00.0	+7.7
NHSC				LR	LR		
	comp=Z,4µm,20.0s						
256A	**Glennville**	**88.92**	**43**	P	**P**	**13 04 51.7**	**-1.2**
	baz=326						
355A	**Pearson**	**88.97**	**44**	P	**P**	**13 04 52.1**	**-1.1**
	baz=325						
VAE	**Valguarnera**	**89.01**	**327**	LR	LR	13 50 55.6	
	comp=Z,3µm,18.4s,baz=325,slow=40						
454A	**Quitman**	**89.10**	**45**	P	**P**	**13 04 52.9**	**-0.8**
	baz=325						
257A	**Skidaway Islan**	**89.34**	**43**	P	**P**	**13 04 54.6**	**-0.3**
	baz=326						
257A	**Skidaway Islan**	**89.34**	**43**	PFAKE		13 05 10.0	+15
257A				LR	LR		
	comp=Z,5µm,20.0s						
356A	**Blackshear**	**89.34**	**44**	P	**P**	**13 04 53.8**	**-1.1**
	baz=326						
CLTB	**Caltabellotta**	**89.37**	**328**	PFAKE		13 05 10.0	+15
CLTB				LR	LR		
	comp=Z,6µm,19.0s						
455A	**Stateville**	**89.38**	**45**	P	**P**	**13 04 54.7**	**-0.4**
	baz=325						
KHZ	**Kahutara**	**89.54**	**164**	PFAKE		13 05 10.0	+15
KHZ				LR	LR		
	comp=Z,6µm,19.0s						
357A	**Townsend**	**89.57**	**43**	P	**P**	**13 04 55.5**	**-0.5**
	baz=326						
LTZ	**Lake Taylor**	**89.66**	**165**	PFAKE		13 05 10.0	+14
LTZ				LR	LR		
	comp=Z,4µm,19.0s						
456A	**Hilliard**	**89.89**	**44**	P	**P**	**13 04 56.8**	**-0.6**
	baz=326						
456A	**Hilliard**	**89.89**	**44**	PFAKE		13 05 10.0	+13
456A				LR	LR		
	comp=Z,5µm,19.0s						
555A	**McAlpin**	**89.91**	**45**	P	**P**	**13 04 56.7**	**-0.8**
	baz=325						
555A	**McAlpin**	**89.91**	**45**	PFAKE		13 05 10.0	+12
555A				LR	LR		
	comp=Z,4µm,20.0s						
FOZ	**Fox Glacier**	**89.97**	**167**	PFAKE		13 05 10.0	+13
FOZ				LR	LR		
	comp=Z,6µm,21.0s						
OXZ	**Oxford**	**90.14**	**165**	*e*P	**P**	**13 04 58.9**	**+0.9**
	comp=Z,56nm,0.9s						
OXZ				LR	LR		
	comp=Z,3µm,20.0s						
457A	**Yulee**	**90.20**	**44**	P	**P**	**13 04 58.9**	**0.0**
	baz=326						
556A	**Lake Butler**	**90.29**	**45**	P	**P**	**13 04 59.0**	**-0.4**
	baz=325						
RPZ	**Rata Peaks**	**90.35**	**166**	PFAKE		13 05 10.0	+11
RPZ				LR	LR		
	comp=Z,5µm,20.0s						
WDD	**Wied Dalam**	**90.40**	**327**	PFAKE		13 05 10.0	+10
WDD				LR	LR		
	comp=Z,3µm,20.0s						
LVIG	**Laguna Verde**	**90.51**	**61**	PFAKE		13 05 10.0	+10
LVIG				LR	LR		
	comp=Z,2µm,20.0s						
557A	**Orange Park**	**90.61**	**44**	P	**P**	**13 05 00.9**	**+0.1**
	baz=326						
MQZ	**McQueen's Vall**	**90.62**	**165**	PFAKE		13 05 10.0	+10
MQZ				LR	LR		
	comp=Z,4µm,20.0s						
656A	**Willston**	**90.74**	**45**	P	**P**	**13 05 01.1**	**-0.3**
	baz=325						
656A	**Willston**	**90.74**	**45**	PFAKE		13 05 10.0	+8.6
656A				LR	LR		
	comp=Z,5µm,21.0s						
TLIG	**Tlapa**	**90.78**	**64**	PFAKE		13 05 10.0	+8.0
TLIG				LR	LR		
	comp=Z,2µm,20.0s						
LBZ	**Lake Benmore**	**90.86**	**167**	PFAKE		13 05 10.0	+8.7
LBZ				LR	LR		
	comp=Z,8µm,20.0s						
657A	**Interlachen**	**90.90**	**45**	P	**P**	**13 05 01.3**	**-0.8**
	baz=326						
PBRG	**Braganca**	**91.10**	**344**	*e*P	**P**	**13 05 06.0**	**+3.0**
WKZ	**Wanaka**	**91.11**	**168**	PFAKE		13 05 10.0	+7.5
WKZ				LR	LR		
	comp=Z,7µm,20.0s						
PGAV	**Gavieira, Arco**	**91.23**	**345**	*e*P	**P**	**13 05 03.5**	**-0.2**
	comp=Z,36nm,1.8s						
PGAV	**Gavieira, Arco**	**91.23**	**345**	*e*PP	PP	13 08 41.7	+2.1
PGAV				*e*SKS	**SKSac**	**13 15 41.3**	**+5.8**
PGAV	**Gavieira, Arco**	**91.23**	**345**	*e*LR	LR	13 41 05.6	
	comp=Z,3µm,16.0s						
658A	**Bunnell**	**91.33**	**44**	PFAKE		13 05 20.0	+16
658A				LR	LR		
	comp=Z,5µm,20.0s						
MLZ	**Mavora Lakes**	**91.51**	**169**	PFAKE		13 05 20.0	+16
MLZ				LR	LR		
	comp=Z,8µm,20.0s						
DAMY	**Dhamar**	**91.51**	**292**	PFAKE		13 05 20.0	+14
DAMY				LR	LR		
	comp=Z,7µm,19.0s						
ODZ	**Otahua Downs**	**91.57**	**167**	PFAKE		13 05 20.0	+15
ODZ				LR	LR		
	comp=Z,6µm,18.0s						
POLO	**Lamas de Olo**	**91.72**	**345**	*e*P	**P**	**13 05 04.7**	**-1.2**
	comp=Z,11nm,1.4s						
POLO	**Lamas de Olo**	**91.72**	**345**	*e*S	**SKSac**	**13 15 42.1**	**+3.8**
758A	**Lake Helen**	**91.74**	**44**	P	**P**	**13 05 05.6**	**-0.5**
	baz=326						
MVO	**Moncorvo**	**91.78**	**344**	*e*P	**P**	**13 05 05.6**	**-0.6**
	comp=Z,19nm,1.4s						
MVO	**Moncorvo**	**91.78**	**344**	*e*PP	PP	13 08 50.8	+6.9
MVO				*e*S	**SKSac**	**13 15 43.8**	**+5.2**
MVO	**Moncorvo**	**91.78**	**344**	*e*LR	LR	13 43 34.7	
	comp=Z,4µm,18.0s						
857A	**Zephyrhills**	**91.80**	**46**	P	**P**	**13 05 05.5**	**-0.8**
	baz=326						
PVRL	**Vila Real**	**91.80**	**345**	*e*P	**P**	**13 05 05.6**	**-0.6**
	comp=Z,30nm,1.1s						
WHZ	**Wether Hill Ro**	**92.00**	**169**	PFAKE		13 05 20.0	+13
WHZ				LR	LR		
	comp=Z,8µm,21.0s						
CMAH	**Djebel Manchou**	**92.26**	**332**	P	**P**	**13 05 11.4**	**+2.9**
957A	**Wimauma**	**92.28**	**46**	P	**P**	**13 05 08.4**	**-0.2**
	baz=325						
957A	**Wimauma**	**92.28**	**46**	PFAKE		13 05 20.0	+11
957A				LR	LR		
	comp=Z,3µm,18.0s						
DWPF	**Disney Wildern**	**92.32**	**45**	P	**P**	**13 05 08.4**	**-0.4**
	baz=326						
DWPF	**Disney Wildern**	**92.32**	**45**	PFAKE		13 05 20.0	+11
DWPF				LR	LR		
	comp=Z,6µm,20.0s						
PVIS	**Viseu**	**92.38**	**345**	*e*P	**P**	**13 05 08.1**	**-0.8**
	comp=Z,29nm,1.9s						
KEST	**Kesra**	**92.41**	**330**	P	**P**	**13 05 09.6**	**+0.4**
	comp=Z,29nm,0.8s,baz=255,slow=2.6,SNR=14						
KEST				LR	LR	13 52 22.5	
	comp=Z,4µm,18.4s,baz=325,slow=39						
KEST	**Kesra**	**92.41**	**330**	*e*P	**P**	**13 05 09.7**	**+0.5**
	comp=Z,40nm,0.9s						
ES19	**SONSECA Array**	**92.53**	**341**	*e*P	**P**	**13 05 09.0**	**-0.6**
ABSA	**Djebel Ababsia**	**92.56**	**332**	P	**P**	**13 05 12.3**	**+2.4**
ESDC	**Sonseca Array**	**92.57**	**341**	P	**P**	**13 05 08.8**	**-1.0**
	comp=Z,1.9nm,0.6s,baz=4.3,slow=4.1,SNR=16						
ESDC				LR	LR	13 53 59.1	
	comp=Z,1µm,18.5s,baz=5.0,slow=40						
ESLA	**Sonseca Array**	**92.57**	**341**	PFAKE		13 05 20.0	+10
ESLA				LR	LR		
	comp=Z,3µm,21.0s						
958A	**Wauchula**	**92.59**	**46**	P	**P**	**13 05 09.5**	**-0.6**
	baz=326						
MTE	**Manteigas**	**92.61**	**344**	*e*P	**P**	**13 05 09.7**	**-0.3**
	comp=Z,23nm,2.3s						
MTE	**Manteigas**	**92.61**	**344**	*e*PP	PP	13 08 54.2	+3.7
MTE				*e*S	**SKSac**	**13 15 46.3**	**+3.0**
MTE	**Manteigas**	**92.61**	**344**	*e*LR	LR	13 43 40.7	
	comp=Z,5µm,18.0s						
MTE	**Manteigas**	**92.61**	**344**	PFAKE		13 05 20.0	+10
MTE				LR	LR		
	comp=Z,5µm,19.0s						
CKFL	**Kef-Lekhel**	**92.69**	**332**	P	**P**	**13 05 13.1**	**+2.6**
PAB	**San Pablo**	**92.78**	**342**	PFAKE		13 05 20.0	+9.2
PAB				LR	LR		
	comp=Z,3µm,18.0s						
THTN	**Thala**	**92.79**	**331**	*e*P	**P**	**13 05 12.8**	**+1.8**
	comp=Z,42nm,1.0s						
THTN				LR	LR		
	comp=Z,5µm,18.0s						
DFRA	**Djebel Bou Aff**	**92.83**	**333**	P	**P**	**13 05 14.3**	**+3.1**
COI	**Coimbra**	**92.96**	**345**	*e*P	**P**	**13 05 11.9**	**+0.4**
	comp=Z,39nm,1.0s						
PCAS	**Casmilo, Conde**	**93.13**	**345**	*e*S	**SKSac**	**13 15 51.0**	**+5.0**
059A	**Moore Haven**	**93.41**	**45**	PFAKE		13 05 30.0	+16
059A				LR	LR		
	comp=Z,4µm,21.0s						
PMRV	**Marv??o**	**93.52**	**344**	*e*PP	PP	13 08 59.4	+1.8
PMRV				*e*S	**SKSac**	**13 15 48.9**	**+0.7**
PMRV	**Marv??o**	**93.52**	**344**	*e*LR	LR	13 44 34.2	
	comp=Z,4µm,18.0s						
MYIG	**MØrida**	**93.56**	**55**	PFAKE		13 05 30.0	+15
MYIG				LR	LR		
	comp=Z,1µm,22.0s						
060A	**Indiantown**	**93.74**	**45**	PFAKE		13 05 30.0	+15
060A				LR	LR		
	comp=Z,5µm,20.0s						
CART	**Cartagena**	**93.84**	**339**	PFAKE		13 05 30.0	+14
CART				LR	LR		
	comp=Z,3µm,19.0s						
ALMR	**Almeirim**	**94.01**	**345**	*e*P	**P**	**13 05 16.6**	**+0.2**
ALMR				*e*PP	**PP**	**13 09 02.9**	**+1.5**
ALMR				*e*SKS	**SKSac**	**13 15 48.5**	**-2.3**
ALMR				AMS	AMS	13 54 19.8	
	comp=Z,3µm,18.8s						

ALMR	**Almeirim**	**94.01**	**345**	*e*P	**P**	**13 05 16.6**	**+0.2**
ALMR				*e*		13 09 02.9	
ALMR				*e*		13 15 48.5	
PMTG	**Montargil**	**94.03**	**345**	*e*S	**SKSac**	**13 15 53.7**	**+2.8**
PESTR	**Estremoz**	**94.11**	**344**	*e*S	**SKSac**	**13 15 54.7**	**+3.3**
PESTR	**Estremoz**	**94.11**	**344**	PFAKE		13 05 30.0	+13
PESTR				LR	LR		
	comp=Z,2µm,20.0s						
PMAFR	**Mafra**	**94.34**	**345**	*e*S	**SKSac**	**13 15 58.9**	**+6.3**
061Z	**Ochoppi**	**94.44**	**46**	PFAKE		13 05 30.0	+11
061Z				LR	LR		
	comp=Z,4µm,21.0s						
LIS	**Lisbon**	**94.54**	**345**	*e*P	**P**	**13 05 19.0**	**+0.2**
LIS				*e*PP	**PP**	**13 09 07.2**	**+1.7**
LIS				AMS	AMS	13 51 59.1	
	comp=N,4µm,16.6s						
LIS	**Lisbon**	**94.54**	**345**	*e*P	**P**	**13 05 19.0**	**+0.2**
LIS				*e*		13 09 07.1	
ATD	**Arta Tunnel**	**94.76**	**292**	P	**P**	**13 05 21.1**	**+0.8**
	comp=N,11nm,0.8s,baz=135,slow=4.3,SNR=4.3						
ATD				LR	LR	13 54 13.1	
	comp=N,5µm,18.2s,baz=34,slow=39						
PBEJ	**Beja**	**94.97**	**344**	*e*P	**P**	**13 05 20.5**	**-0.3**
	comp=N,19nm,1.3s						
PNCL	**Nicolau / Gran**	**95.02**	**345**	*e*P	**P**	**13 05 23.5**	**+2.5**
	comp=N,13nm,1.1s						
PNCL	**Nicolau / Gran**	**95.02**	**345**	*e*S	**SKSac**	**13 16 02.7**	**+6.4**
RKT	**Rikitea**	**95.17**	**118**	*e*SKSac	**SKSac**	**13 15 56.3**	**-0.7**
	comp=N,585nm,32.2s						
RKT	**Rikitea**	**95.17**	**118**	*e*PS	PS	13 17 55.4	+0.1
	comp=N,1µm,24.8s						
RKT	**Rikitea**	**95.17**	**118**	*e*LR	LR	13 35 31.0	
	comp=N,2µm,34.5s,baz=317						
MESJ	**Messejana**	**95.22**	**344**	*e*P	**P**	**13 05 22.2**	**+0.2**
MESJ				*e*PP	**PP**	**13 09 12.3**	**+1.5**
MESJ				*e*SKS	**SKSac**	**13 15 55.2**	**-2.2**
MESJ				AMS	AMS	13 49 34.6	
	comp=N,3µm,14.9s						
MESJ	**Messejana**	**95.22**	**344**	*e*P	**P**	**13 05 22.1**	**+0.2**
MESJ				*e*		13 09 12.2	
MESJ				*e*		13 15 55.1	
PCVE	**Castro Verde**	**95.39**	**344**	*e*P	**P**	**13 05 23.5**	**+0.8**
	comp=N,27nm,1.7s						
PVAQ	**Vaqueiros**	**95.55**	**344**	*e*P	**P**	**13 05 25.9**	**+2.5**
PVAQ	**Vaqueiros**	**95.55**	**344**	*e*PP	PP	13 09 16.3	+3.0
PVAQ				*e*S	**SKSac**	**13 16 03.1**	**+4.0**
PVAQ	**Vaqueiros**	**95.55**	**344**	*e*LR	LR	13 43 42.5	
	comp=N,3µm,18.0s						
PBDV	**Barranco-do-Ve**	**95.74**	**344**	*e*S	**SKSac**	**13 16 07.1**	**+6.9**
CCIG	**Comitan**	**95.75**	**60**	PFAKE		13 05 40.0	+15
CCIG				LR	LR		
	comp=Z,2µm,20.0s						
MORF	**Marmelete**	**95.82**	**344**	*e*P	**P**	**13 05 25.1**	**+0.3**
MORF				*e*PP	**PP**	**13 09 17.1**	**+1.6**
MORF				*e*SKS	**SKSac**	**13 15 58.5**	**-2.2**
MORF				AMS	AMS	13 56 49.0	
	comp=Z,4µm,19.7s						
MORF	**Marmelete**	**95.82**	**344**	*e*P	**P**	**13 05 29.0**	**+4.2**
MORF	**Marmelete**	**95.82**	**344**	*e*S	**SKSac**	**13 16 07.1**	**+6.4**
MORF	**Marmelete**	**95.82**	**344**	*e*P	**P**	**13 05 25.0**	**+0.3**
MORF				*e*		13 09 17.0	
MORF				*e*		13 15 58.5	
BBSR	**BB Station**	**95.84**	**30**	PFAKE		13 05 40.0	+15
BBSR				LR	LR		
	comp=Z,3µm,20.0s						
PFVI	**Vila Bisbo**	**96.02**	**345**	*e*S	**SKSac**	**13 16 07.0**	**+5.4**
SFS	**San Fernando**	**96.14**	**342**	PFAKE		13 05 40.0	+14
SFS				LR	LR		
	comp=Z,3µm,18.0s						
ROSA	**Rosais**	**96.29**	**0**	PFAKE		13 05 40.0	+13
ROSA				LR	LR		
	comp=Z,3µm,20.0s						
CMLA	**Cha da Macela**	**97.20**	**358**	PFAKE		13 05 40.0	+8.9
CMLA				LR	LR		
	comp=Z,2µm,18.0s						
MSEY	**Mahe Island**	**97.72**	**271**	PFAKE		13 05 40.0	+6.3
MSEY				LR	LR		
	comp=Z,3µm,18.0s						
RTC	**Rabat Centre**	**98.66**	**342**	PFAKE		13 05 50.0	+12
RTC				LR	LR		
	comp=Z,9µm,18.0s						
MDT	**Midelt**	**99.28**	**340**	P	**Pdif**	**13 05 39.4**	**-1.2**
	comp=Z,2.0nm,0.8s,baz=0.0,slow=5.1,SNR=3.7						
MDT				LR	LR	13 57 40.5	
	comp=Z,3µm,19.2s,baz=33,slow=40						
FURI	**Furi**	**99.44**	**293**	PFAKE		13 05 50.0	+8.2
FURI				LR	LR		
	comp=Z,3µm,19.0s						
SNET	**Serv Nac Est T**	**99.52**	**60**	PFAKE		13 05 50.0	+8.2
SNET				LR	LR		
	comp=Z,2µm,21.0s						
PMOZ	**Porto Moniz, M**	**101.53**	**351**	*e*LR	LR	13 48 17.8	
	comp=Z,2µm,18.0s						
GTBY	**Guantanamo Bay**	**102.30**	**45**	PFAKE		13 06 10.0	+16
GTBY				LR	LR		
	comp=Z,4µm,19.0s						
MTDJ	**Mount Denham**	**102.50**	**48**	PFAKE		13 06 10.0	+15
MTDJ				LR	LR		
	comp=Z,3µm,18.0s						
GRTK	**Grand Turk**	**102.84**	**41**	PFAKE		13 06 10.0	+14
GRTK				LR	LR		
	comp=Z,3µm,21.0s						
ESPN	**Las Esperanzas**	**103.64**	**57**	PFAKE		13 06 10.0	+10
ESPN				LR	LR		
	comp=Z,1µm,20.0s						
HDC	**Heredia**	**105.49**	**58**	PFAKE		13 10 30.0	
HDC				LR	LR		
	comp=Z,1µm,20.0s						
TAM	**Tamanrasset**	**105.52**	**328**	PFAKE		13 10 30.0	
TAM				LR	LR		
	comp=Z,2µm,19.0s						
SDD	**Santo Domingo**	**106.05**	**41**	PFAKE		13 10 30.0	
SDD				LR	LR		
	comp=Z,2µm,20.0s						
MPR	**Mayaguez**	**107.52**	**39**	PFAKE		13 10 40.0	
MPR				LR	LR		
	comp=Z,2µm,19.0s						
EMPR	**Esperanza - Ma**	**107.55**	**38**	PFAKE		13 10 40.0	
EMPR				LR	LR		
	comp=Z,2µm,19.0s						
CRPR	**Cabo Rojo, PR**	**107.72**	**39**	PFAKE		13 10 40.0	
CRPR				LR	LR		
	comp=Z,4µm,20.0s						
CBYP	**Canovanas**	**108.03**	**38**	PFAKE		13 10 40.0	
CBYP				LR	LR		
	comp=Z,5µm,22.0s						
SJG	**San Juan**	**108.04**	**38**	PFAKE		13 10 40.0	
SJG				LR	LR		
	comp=Z,2µm,19.0s						
HUMP	**Col San Antoni**	**108.14**	**38**	PFAKE		13 10 40.0	
HUMP				LR	LR		
	comp=Z,3µm,20.0s						
ABVI	**Anegada Island**	**108.26**	**36**	PFAKE		13 10 40.0	
ABVI				LR	LR		
	comp=Z,2µm,20.0s						
STVI	**Saint Thomas**	**108.34**	**37**	PFAKE		13 10 40.0	
STVI				LR	LR		
	comp=Z,2µm,20.0s						
BCIP	**Isla Barro Col**	**108.67**	**55**	PFAKE		13 10 40.0	
BCIP				LR	LR		
	comp=Z,1µm,20.0s						
SABA	**Saba**	**109.71**	**36**	PFAKE		13 10 40.0	
SABA				LR	LR		
	comp=Z,3µm,20.0s						
PAYG	**Puerto Ayora**	**109.80**	**70**	PFAKE		13 10 40.0	
PAYG				LR	LR		
	comp=Z,2µm,20.0s						
SEUS	**St. Eustatius**	**109.93**	**35**	PFAKE		13 10 40.0	
SEUS				LR	LR		
	comp=Z,3µm,20.0s						
ANWB	**Willy Bob**	**110.25**	**34**	PFAKE		13 10 40.0	
ANWB				LR	LR		
	comp=Z,2µm,20.0s						
MBAR	**Mbarara**	**111.76**	**293**	PFAKE		13 10 50.0	
MBAR				LR	LR		
	comp=Z,4µm,19.0s						
FDF	**Fort de France**	**113.16**	**35**	PFAKE		13 10 50.0	
FDF				LR	LR		
	comp=Z,2µm,20.0s						
HELC	**Santa Helena**	**113.54**	**53**	PFAKE		13 10 50.0	
HELC				LR	LR		
	comp=Z,4µm,21.0s						
SDV	**Santo Domingo**	**113.92**	**47**	PFAKE		13 10 50.0	
SDV				LR	LR		
	comp=Z,3µm,22.0s						
SVB	**Belmont**	**114.44**	**36**	PFAKE		13 10 50.0	+11
SVB				LR	LR		
	comp=Z,2µm,19.0s						
RUSC	**La Rusia**	**115.14**	**51**	PFAKE		13 10 50.0	+9.4
RUSC				LR	LR		
	comp=Z,600nm,21.0s						
TUMC	**Tumaco**	**115.20**	**58**	PFAKE		13 10 50.0	+10
TUMC				LR	LR		
	comp=Z,1µm,20.0s						
GRGR	**Grenville**	**115.29**	**37**	PFAKE		13 10 50.0	+10
GRGR				LR	LR		
	comp=Z,2µm,20.0s						
ROSC	**El Rosal**	**115.33**	**53**	PFAKE		13 10 50.0	+9.1
ROSC				LR	LR		
	comp=Z,900nm,21.0s						
TOC1	**Torodi Ar. Sit**	**115.74**	**327**	PFAKE		13 10 50.0	+8.8
TOC1				LR	LR		
	comp=Z,3µm,19.0s						
TOC2	**Torodi Ar. Sit**	**115.75**	**327**	PFAKE		13 10 50.0	+8.8
TOC2				LR	LR		
	comp=Z,3µm,20.0s						
TOB2	**Torodi Ar. Sit**	**115.76**	**327**	PFAKE		13 10 50.0	+8.8
TOB2				LR	LR		
	comp=Z,2µm,20.0s						
TOC7	**Torodi Ar. Sit**	**115.76**	**327**	PFAKE		13 10 50.0	+8.8
TOC7				LR	LR		
	comp=Z,2µm,20.0s						
TOA1	**Torodi Ar. Sit**	**115.76**	**327**	*e*PKPdf	**PKPdf**	**13 10 40.6**	**-0.5**
TOA1				LR	LR		
	comp=Z,2µm,19.0s						
TOA2	**Torodi Ar. Sit**	**115.76**	**327**	PFAKE		13 10 50.0	+8.8
TOA2				LR	LR		
	comp=Z,2µm,19.0s						
TOA0	**Torodi Ar. Sit**	**115.77**	**327**	*e*PKPdf	**PKPdf**	**13 10 39.4**	**-1.8**
TOA0				LR	LR		
	comp=Z,2µm,19.0s						
TOB5	**Torodi Ar. Sit**	**115.77**	**327**	PFAKE		13 10 50.0	+8.8
TOB5				LR	LR		
	comp=Z,2µm,20.0s						
TOC3	**Torodi Ar. Sit**	**115.77**	**327**	PFAKE		13 10 50.0	+8.8
TOC3				LR	LR		
	comp=Z,3µm,19.0s						
TORD	**Torodi Ar. Bea**	**115.77**	**327**	PKP	**PKPdf**	**13 10 40.6**	**-0.6**
	comp=Z,0.8nm,0.6s,baz=0.0,slow=1.9						
TOA3	**Torodi Ar. Sit**	**115.77**	**327**	PFAKE		13 10 50.0	+8.8
TOA3				LR	LR		
	comp=Z,2µm,19.0s						
TOB3	**Torodi Ar. Sit**	**115.77**	**327**	PFAKE		13 10 50.0	+8.8
TOB3				LR	LR		
	comp=Z,2µm,19.0s						
TOB4	**Torodi Ar. Sit**	**115.78**	**327**	PFAKE		13 10 50.0	+8.8
TOB4				LR	LR		
	comp=Z,2µm,19.0s						
TOC4	**Torodi Ar. Sit**	**115.79**	**327**	PFAKE		13 10 50.0	+8.7
TOC4				LR	LR		
	comp=Z,3µm,20.0s						
TOC5	**Torodi Ar. Sit**	**115.79**	**327**	PFAKE		13 10 50.0	+8.7
TOC5				LR	LR		
	comp=Z,3µm,20.0s						
KOWA	**Kowa**	**116.50**	**334**	PFAKE		13 10 50.0	+7.4
KOWA				LR	LR		
	comp=Z,2µm,19.0s						
OTAV	**Otavalo**	**116.62**	**59**	PFAKE		13 11 00.0	+17
OTAV				LR	LR		
	comp=Z,1µm,19.0s						
VNDA	**Vanda**	**122.78**	**177**	PKP	**PKPdf**	**13 10 52.0**	**-0.7**
	comp=Z,3.3nm,0.7s,baz=325,slow=3.8,SNR=22						
SBA	**Scott Base**	**123.30**	**176**	*e*PKPdf	**PKPdf**	**13 10 53.8**	**+0.1**
SBA	**Scott Base**	**123.30**	**176**	*e*PKIKP	**PKPdf**	**13 10 53.8**	**+0.1**
DBIC	**Dimbokro**	**124.11**	**332**	PKP	**PKPdf**	**13 10 54.9**	**-2.3**
	comp=Z,3.9nm,0.9s,baz=346,slow=4.2,SNR=2.9						
LSZ	**Lusaka**	**124.19**	**284**	PFAKE		13 11 10.0	+13
LSZ				LR	LR		
	comp=Z,2µm,20.0s						
TIC	**Toumodi**	**124.19**	**332**	*e*PKP1	PKPdf	13 11 09.3	+12
KIC	**Kosan Boka**	**124.36**	**331**	*e*PKP1	PKPdf	13 11 09.7	+12
	comp=Z,54nm,1.4s						
LIC	**Lamto**	**124.59**	**332**	*e*PKP1	PKPdf	13 11 10.2	+12
	comp=Z,67nm,1.4s						
NNA	**Nana**	**127.05**	**67**	PFAKE		13 11 10.0	+7.2
NNA				LR	LR		
	comp=Z,2µm,20.0s						
PTGA	**Pitinga**	**127.48**	**42**	PKP	**PKPdf**	**13 11 02.7**	**-1.1**
	comp=Z,1.3nm,0.3s,baz=311,slow=6.7,SNR=5.1						
PTGA	**Pitinga**	**127.48**	**42**	PKP	**PKPdf**	**13 11 02.7**	**-1.1**
PTGA				LR	LR		
	comp=Z,1µm,19.0s						
MAW	**Mawson**	**130.54**	**210**	PKP	**PKPdf**	**13 11 08.0**	**+0.3**
	comp=Z,2.0nm,0.6s,baz=117,slow=3.6,SNR=7.2						
SAML	**Samuel**	**132.88**	**51**	PFAKE		13 11 30.0	+16
SAML				LR	LR		
	comp=Z,2µm,20.0s						
TSUM	**Tsumeb**	**134.12**	**289**	PFAKE		13 11 30.0	+14
TSUM				LR	LR		
	comp=Z,2µm,20.0s						
BOSA	**Boshof**	**134.96**	**273**	PKP	**PKPdf**	**13 11 17.9**	**+0.3**
	comp=Z,3.8nm,0.8s,baz=172,slow=5.0,SNR=4.7						
QSPA	**South Pole Qui**	**135.11**	**180**	PKhKP	PKPpre	13 11 05.5	
	comp=Z,2.1nm,0.7s,baz=310,slow=2.5,SNR=6.2						
QSPA				PKP	**PKPdf**	**13 11 16.5**	**0.0**
	comp=Z,11nm,0.7s,baz=329,slow=0.2,SNR=18						
QSPA	**South Pole Qui**	**135.11**	**180**	*e*PKPdf	**PKPdf**	**13 11 16.5**	**0.0**
QSPA				*e*PKPdf	**PKiKP**	**13 11 17.7**	**-0.3**
LPAZ	**La Paz**	**135.81**	**62**	PKP	**PKPdf**	**13 11 19.4**	**-0.7**
	comp=Z,2.7nm,0.8s,baz=27,slow=4.1,SNR=8.6						
LPAZ	**La Paz**	**135.81**	**62**	*e*PKPdf	**PKPdf**	**13 11 20.0**	**-0.1**
MNMC	**Minye Minye**	**137.00**	**66**	PFAKE		13 11 30.0	+8.2
MNMC				LR	LR		
	comp=Z,1µm,19.0s						
PB11	**IPOC Station P**	**137.41**	**67**	PFAKE		13 11 30.0	+7.6
PB11				LR	LR		
	comp=Z,2µm,20.0s						
PB01	**IPOC Station P**	**138.44**	**68**	PFAKE		13 11 40.0	+16
PB01				LR	LR		
	comp=Z,2µm,21.0s						
PB04	**IPOC Station P**	**138.91**	**70**	PFAKE		13 11 40.0	+15
PB04				LR	LR		
	comp=Z,4µm,20.0s						
SYO	**Syowa Base**	**139.25**	**211**⇑	*e*P	**PKPdf**	**13 11 26.0**	**+2.0**
SYO	**Syowa Base**	**139.25**	**211**⇑	*e*P	PKPdf	13 11 32.0	+8.0
SIV	**San Ignacio**	**139.80**	**54**	PKhKP	PKPpre	13 11 18.7	
	comp=Z,1.0nm,0.6s,baz=318,slow=6.4,SNR=4.4						
RCBR	**Riachuelo**	**140.04**	**12**	PFAKE		13 11 40.0	+13
RCBR				LR	LR		
	comp=Z,2µm,19.0s						
GO02	**Mina Guanaco**	**141.21**	**73**	PFAKE		13 11 40.0	+11
GO02				LR	LR		
	comp=Z,2µm,20.0s						
GO03	**Copiap**	**142.35**	**76**	PFAKE		13 11 40.0	+9.0
GO03				LR	LR		
	comp=Z,2µm,20.0s						
LCO	**Las Campanas**	**142.91**	**79**	PFAKE		13 11 40.0	+7.8
LCO				LR	LR		
	comp=Z,2µm,19.0s						
VCA	**Vinchina**	**144.46**	**76**	*e*P	PKPbc	13 11 34.0	+0.6
AROD	**Rodeo**	**144.46**	**79**	*e*P	PKPbc	13 11 34.1	+0.6
AGUA	**GUANDACOL**	**144.73**	**77**⇓	*e*P	PKPbc	13 11 34.1	0.0
ROC1	**El Roble**	**145.00**	**84**	*e*PKPbc	**PKPdf**	**13 11 36.0**	**+0.2**
ROC1	**El Roble**	**145.00**	**84**	*e*P	**PKPdf**	**13 11 36.1**	**+0.3**
PEL	**Peldehue**	**145.32**	**84**	*e*PKPbc	**PKPbc**	**13 11 35.3**	**-0.6**
PEL				LR	LR		
	comp=Z,2µm,20.0s						
PEL	**Peldehue**	**145.32**	**84**	*e*PKIKP	**PKPbc**	**13 11 35.3**	**-0.6**
PEL				MLR	MLR		
	comp=Z,2µm,20.0s						
GO05	**HualaæØ**	**145.44**	**88**	PFAKE		13 11 50.0	+14
GO05				LR	LR		
	comp=Z,3µm,20.0s						
RTLS	**Leoncito**	**145.54**	**81**⇓	*e*P	**PKPbc**	**13 11 37.0**	**+0.1**
AMOG	**MOGNA**	**145.60**	**79**	*e*P	**PKPdf**	**13 11 36.7**	**+0.1**
AUSP	**Uspallata**	**145.72**	**82**	*e*P	**PKPbc**	**13 11 37.4**	**-0.1**
RTLL	**Cerro Villicun**	**145.84**	**80**	*e*P	**PKPdf**	**13 11 36.9**	**-0.1**
CYA	**Choya**	**145.91**	**73**⇓	*e*P	**PKPdf**	**13 11 37.3**	**+0.1**
BDFB	**Brasilia**	**146.01**	**36**	PFAKE		13 11 50.0	+11
BDFB				LR	LR		
	comp=Z,2µm,18.0s						
RTCV	**Cerro Valdivia**	**146.10**	**81**	*e*P	**PKPdf**	**13 11 37.6**	**+0.2**
ASAL	**Salagasta**	**146.31**	**82**	*e*P	**PKPbc**	**13 11 38.7**	**-0.3**
ACAN	**Cantantal**	**147.28**	**80**	*e*P	**PKPbc**	**13 11 41.5**	**-0.2**
NVL	**N'lazarevskaya**	**148.00**	**204**	*e*PKP2	**PKPbc**	**13 11 42.8**	**+0.4**
NVL				MLR	MLR		
	comp=Z,2µm,20.0s						
MRA	**San Martin**	**148.38**	**79**	*e*P	**PKPbc**	**13 11 44.5**	**-0.3**
TCA	**Tanti**	**148.52**	**76**	*e*P	**PKPdf**	**13 11 42.7**	**+1.2**
PLCA	**Paso Flores**	**149.00**	**97**	PKP	**PKPdf**	**13 11 41.5**	**-0.4**
	comp=Z,14nm,0.6s,baz=297,slow=2.5,SNR=13						
PLCA				PKPbc	**PKPbc**	**13 11 45.8**	**-0.3**
	comp=Z,14nm,0.6s,baz=312,slow=3.2,SNR=52						
PLCA	**Paso Flores**	**149.00**	**97**	*e*PKPdf	**PKPdf**	**13 11 41.9**	**-0.1**
PLCA	**Paso Flores**	**149.00**	**97**	PKIKP	**PKPdf**	**13 11 41.6**	**-0.4**
PLCA						13 11 45.8	
PLCA				pmax	pmax		
	comp=Z,14nm,0.6s						
PLCA				pmax	pmax		
	comp=Z,14nm,0.6s						
CPUP	**Villa Florida**	**149.96**	**61**	PKP	**PKPdf**	**13 11 43.8**	**0.0**
	comp=Z,6.3nm,0.7s,baz=311,slow=5.6,SNR=3.0						
CPUP				PKPbc	**PKPbc**	**13 11 48.2**	**-0.5**
	comp=Z,11nm,0.7s,baz=351,slow=3.8,SNR=23						
SNAA	**Sanae**	**150.97**	**196**	PKP	**PKPdf**	**13 11 41.2**	**-2.9**
SNAA				x	x	13 11 58.4	
SNAA	**Sanae**	**150.97**	**196**	PKP	**PKPdf**	**13 11 43.7**	**-0.4**
	comp=Z,3.2nm,0.9s,baz=181,slow=5.2,SNR=6.8						
SNAA				PKPbc	**PKPbc**	**13 11 48.7**	**-1.1**
	comp=Z,19nm,0.6s,baz=172,slow=2.8,SNR=114						
VNA3	**Neumayer Olymp**	**152.54**	**193**	PKP	**PKPdf**	**13 11 46.6**	**+0.1**
VNA3				x	x	13 12 05.0	
VNA1	**Neumayer--Stat**	**152.82**	**194**	PKP	**PKPdf**	**13 11 46.9**	**+0.1**
VNA1				x	x	13 12 04.9	
SPB	**Sao Paulo**	**153.25**	**42**	PFAKE		13 12 00.0	+3.6
SPB				LR	LR		
	comp=Z,2µm,20.0s						
TRQA	**Tornquist**	**153.91**	**86**	PFAKE		13 12 00.0	+2.6
TRQA				LR	LR		
	comp=Z,3µm,19.0s						

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*IDC **12** 13:01:05.9±0.6, 45°.33N×151°.98E, h0^{km}, mb4.1/23, mb1 4.2/28, mb1mx4.1/74, mbtmp4.1/28, ML3.6/3, Error ellipse: s-maj=17.1km s-min=13.7km az=139.0*
*NEIC **12** 13:01:07.3±0.5, 45°.33N×152°.05E, h10^{km}, mb4.0/2, Error ellipse: s-maj=11.8km s-min=7.3km az=137.0*
*JMA **12** 13:01:08.5±0.6, 45°.62N×151°.90E, h30^{km}, M4.5*
*ISCJB **12** 13:01:08.3±0.5, 45°.24N±0°.07×151°.94E±0°.06, h30^{km}, mb4.1/28, Error ellipse: s-maj=11.2km s-min=3.8km az=151.5*
*MOS **12** 13:01:09.5±1.2, 45°.33N×152°.15E, h42^{km}, mb4.2/12, Error ellipse: s-maj=10.7km s-min=8.0km az=55.0*
*SKHL **12** 13:01:13.5±0.2, 45°.66N×151°.70E, h48^{km}±6^{km}, mb4.6/3*
ISC 12 13:01:10.1±0.6, **45°.30N**±0°.08×**151°.96E**±0°.07, **h30^{km}, n102,** σ**2^{s}.05**/106, **mb4.1**/28, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.89**	**270**	*e*P	**Pn**	**13 01 55.0**	**+1.0**
KUR				AMB	AMB	13 01 58.0	
	16nm,0.4s						
KUR				AMB	AMB	13 01 58.0	
	15nm,0.4s						
KUR				AMB	AMB	13 01 58.0	
	55nm,0.4s						
KUR				*e*S	**Sn**	**13 02 26.0**	**-1.8**
KUR				A	A	13 02 42.0	
	303nm,0.4s						
KUR				A	A	13 02 42.0	
	152nm,0.4s						
KUR	**Kuril'sk**	**2.89**	**270**	*e*PN	**Pn**	**13 01 57.7**	**+3.7**
KUR				*e*S	**Sn**	**13 02 29.9**	**+2.1**
KUR				pmax	pmax		
	comp=E,15nm,0.5s						
KUR				pmax	pmax		
	comp=Z,55nm,0.5s						
KUR				pmax	pmax		
	comp=N,16nm,0.3s						
KUR				smax	smax		
	comp=E,152nm,0.4s						
KUR				smax	smax		
	comp=N,303nm,0.5s						
SHO	**Shikotan**	**3.94**	**251**	*e*P	**Pn**	**13 02 11.0**	**+2.7**
SHO				*e*S	**Sn**	**13 02 54.3**	**+0.8**
SHO				A	A	13 02 55.0	
	comp=N,120nm,0.4s						
SHO				A	A	13 02 55.0	
	comp=N,209nm,0.4s						
SHO	**Shikotan**	**3.94**	**251**	PN	**Pn**	**13 02 11.1**	**+2.7**
YUK	**Yuzh-Kuril'sk**	**4.53**	**256**	*e*P	**Pn**	**13 02 19.0**	**+2.4**
YUK				AMB	AMB	13 02 20.0	
	comp=N,69nm,0.4s						
YUK				*e*S	**Sn**	**13 03 07.0**	**-1.2**
YUK				A	A	13 03 19.0	
	comp=N,136nm,0.5s						
YUK				A	A	13 03 19.0	
	comp=N,215nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**4.53**	**256**	*e*PN	**Pn**	**13 02 19.7**	**+3.1**
YUK				pmax	pmax		
	comp=Z,89nm,0.2s						
LAGR	**Lagunnoye**	**4.58**	**256**	*e*S	**Sn**	**13 03 10.0**	**+0.7**
GRPR	**Tuman**	**4.61**	**256**	*e*P	**Pn**	**13 02 22.0**	**+4.4**
GRPR				*e*S	**Sn**	**13 03 10.0**	**-0.1**
GRPR				A	A	13 03 15.0	
	comp=Z,214nm,0.4s						
GRPR				A	A	13 03 15.0	
	comp=Z,204nm,0.4s						
GRPR	**Tuman**	**4.61**	**256**	PN	**Pn**	**13 02 22.1**	**+4.4**
NEM2	**Nemuro 2**	**4.86**	**249**	P	**Pn**	**13 02 19.9**	**-1.2**
NEM2				*e*S	**Sn**	**13 03 12.4**	**-3.9**
GLVR	**Golovnino**	**4.87**	**254**	*e*P	**Pn**	**13 02 25.0**	**+3.9**
GLVR				*e*S	**Sn**	**13 03 17.0**	**+0.6**
GLVR	**Golovnino**	**4.87**	**254**	PN	**Pn**	**13 02 25.7**	**+4.6**
JRA	**Rausu**	**5.07**	**257**	P	**Pn**	**13 02 25.1**	**+1.2**
JNK	**Nakash**	**5.46**	**254**	P	**Pn**	**13 02 29.6**	**+0.2**
JAK	**Akkeshi**	**5.71**	**249**	P	**Pn**	**13 02 31.5**	**-1.3**
JAK				*e*S	**Sn**	**13 03 33.1**	**-4.2**
JTKR	**Abashiri--Toko**	**5.90**	**260**	P	**Pn**	**13 02 35.7**	**+0.4**
SKR	**Severo-Kuril's**	**6.07**	**26**	*e*P	**Pn**	**13 02 38.1**	**+0.5**
SKR				AMB	AMB	13 02 43.5	
	comp=Z,46nm,0.5s						
SKR				*e*S	**Sn**	**13 03 41.3**	**-4.7**
SKR				A	A	13 03 50.9	
	comp=Z,79nm,0.5s						
SKR				A	A	13 03 50.9	
	comp=Z,68nm,0.5s						
SKR	**Severo-Kuril's**	**6.07**	**26**	*e*PN	**Pn**	**13 02 37.5**	**-0.1**
SKR				pmax	pmax		
	comp=Z,67nm,0.5s						
JAR	**Ashorobuto**	**6.21**	**254**	P	**Pn**	**13 02 40.5**	**+0.9**
JAR				*e*S	**Sn**	**13 03 47.5**	**-2.1**
JMP	**Maruseppu**	**6.27**	**261**	P	**Pn**	**13 02 42.0**	**+1.5**
HRK	**Horoka**	**6.59**	**257**	*e*P	**Pn**	**13 02 46.6**	**+1.7**
JKK2	**Kamakawa 2**	**6.73**	**261**	P	**Pn**	**13 02 48.6**	**+1.8**
JCH	**Churui**	**6.76**	**250**	P	**Pn**	**13 02 46.5**	**-0.7**
JCH				*e*S	**Sn**	**13 03 58.6**	**-4.5**
ASAJ	**Asahikawa**	**6.78**	**263**	Pn	**Pn**	**13 02 49.6**	**+2.2**
	comp=Z,1.4nm,0.3s,baz=341,slow=3.7,SNR=9.1						
ASAJ	**Asahikawa**	**6.78**	**263**	P	**Pn**	**13 02 49.6**	**+2.2**
MYR	**Moyori**	**6.96**	**247**	*e*P	**Pn**	**13 02 49.7**	**-0.2**
JEM	**Erimo**	**7.18**	**246**	*e*S	**Sn**	**13 04 08.0**	**-5.4**
ERM	**Erimo**	**7.18**	**246**	*e*P	**Pn**	**13 02 56.3**	**+3.4**
ERM	**Erimo**	**7.18**	**246**	*i* PN	**Pn**	**13 02 56.3**	**+3.4**
JNBK	**Urakawa-nobuka**	**7.32**	**249**	P	**Pn**	**13 02 53.6**	**-1.2**
JNBK				*e*S	**Sn**	**13 04 12.7**	**-4.0**
JBT2	**Biratori 2**	**7.36**	**253**	P	**Pn**	**13 02 55.2**	**-0.2**
JBT2				*e*S	**Sn**	**13 04 14.3**	**-3.6**
JNB	**Noboribetsu**	**8.38**	**254**	P	**Pn**	**13 03 10.0**	**+0.6**
JKB	**Kayabe**	**8.63**	**251**	P	**Pn**	**13 03 11.8**	**-1.1**
JKB				*e*S	Sn	13 04 41.7	-7.4
PETK	**Petropavlovsk-**	**8.67**	**24**	Pn	**Pn**	**13 03 12.8**	**-0.5**
	baz=191,slow=13						
JANG	**Nango**	**9.12**	**241**	P	**Pn**	**13 03 16.8**	**-2.7**
JANG				*e*S	Sn	13 04 51.4	-10
JTM	**Tenmabayashi**	**9.16**	**244**	P	**Pn**	**13 03 18.5**	**-1.6**
JTM				*e*S	Sn	13 04 54.4	-7.7
JTH	**Tanohata**	**9.17**	**238**	*e*S	Sn	13 04 51.9	-10
OFUJ	**Ofunato**	**9.84**	**234**	*e*S	Sn	13 05 09.4	-9.5
JRG	**Rokugo**	**10.25**	**239**	*e*S	Sn	13 05 20.9	-7.9
JIO	**Ouri**	**10.45**	**233**	*e*S	Sn	13 05 21.3	-13
MJAR	**Matsushiro Arr**	**13.57**	**235**	Pn	**Pn**	**13 04 20.8**	**+0.3**
	comp=Z,0.6nm,0.3s,baz=142,slow=8.8,SNR=9.5						
MAJO	**Matsushiro**	**13.57**	**235**	*i* P	**P**	**13 04 28.3**	**-0.9**
USRK	**Ussuriysk Ar.**	**14.24**	**273**	Pn	**Pn**	**13 04 27.2**	**-2.3**
	baz=103,slow=12						
MDJ	**Mudanjiang**	**15.85**	**276**	Pn	**Pn**	**13 04 50.9**	**0.0**
	comp=Z,9.6nm,0.8s						
SEY	**Seymchan**	**17.67**	**1**	P	**Pn**	**13 05 11.4**	**-2.3**
	comp=Z,0.1nm,0.3s,baz=150,slow=20,SNR=4.9						
SEY	**Seymchan**	**17.67**	**1**	*i* P	**Pn**	**13 05 11.1**	**-2.6**
KSRS	**Korea Array**	**19.62**	**255**	P	**Pn**	**13 05 38.1**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=60,slow=10,SNR=8.2						

KSAR	Wonju Array Be	19.65	255	P	Pn	13 05 38.1	+0.3
KSAR	Wonju Array Be	19.65	255	P	Pn	13 05 38.2	+0.3
YAK	Yakutsk	21.15	330	*e*P	P	13 05 48.7	-3.6
YAK	Yakutsk	21.15	330	*i* P	P	13 05 48.7	-3.6
YAK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
H11N2	WAKE ISLAND Hy	28.34	149	T	T	13 37 46.3	
	baz=333,slow=74,SNR=8.1						
H11N1	WAKE ISLAND Hy	28.35	149	T	T	13 37 45.2	
	baz=333,slow=74,SNR=6.5						
H11N3	WAKE ISLAND Hy	28.36	149	T	T	13 37 45.7	
	baz=333						
TIXI	Tiksi	28.65	345	P	P	13 07 01.7	-1.9
	comp=Z,1.7nm,0.5s,baz=144,slow=10,SNR=5.2						
H11S1	WAKE ISLAND Hy	29.40	151	T	T	13 39 01.5	
	baz=339,slow=76,SNR=8.3						
H11S3	WAKE ISLAND Hy	29.40	151	T	T	13 39 02.6	
	baz=339,slow=76,SNR=6.8						
H11S2	WAKE ISLAND Hy	29.41	151	T	T	13 39 02.6	
	baz=339,slow=76,SNR=6.4						
SONM	Songino Array	31.09	291	P	P	13 07 25.8	+0.2
	comp=Z,2.3nm,0.7s,baz=83,slow=7.8,SNR=10						
SONM	Songino Array	31.09	291	*e*P	P	13 07 26.7	+1.1
SONM				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ILAR	Eielson Array	38.19	37	P	P	13 08 27.1	+0.6
	comp=Z,1.1nm,0.9s,baz=259,slow=7.9,SNR=11						
GTA	Gaotai	38.42	280	*e*P	P	13 08 30.7	+1.8
GTA				pP	pP	13 08 37.9	+0.1
GTA				sP	sP	13 08 42.2	+0.8
GTA				pmax	pmax		
	comp=Z,16nm,0.9s						
INK	Inuvik	43.31	31	P	P	13 09 08.6	0.0
	comp=Z,2.5nm,0.8s,baz=299,slow=12,SNR=4.7						
MKAR	Makanchi Array	46.91	298	P	P	13 09 37.6	0.0
	comp=Z,2.4nm,0.8s,baz=65,slow=8.6,SNR=6.2						
MKAR				PcP	PcP	13 11 10.6	+0.7
	comp=Z,0.4nm,0.6s,baz=63,slow=6.6,SNR=2.4						
MKAR	Makanchi Array	46.91	298	*e*P	P	13 09 38.5	+0.9
MKAR	Makanchi Array	46.91	298	*e*P	P	13 09 38.5	+0.9
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KURK	Kurchatov	47.51	304	P	P	13 09 42.2	+0.1
KURK	Kurchatov	47.51	304	P	P	13 09 42.2	+0.1
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KURBB	Kurchatov Arra	47.60	304	P	P	13 09 42.2	-0.6
	comp=Z,1.6nm,0.8s,baz=67,slow=8.3,SNR=7.6						
BVAR	Borovoye Array	51.17	310	P	P	13 10 10.0	-0.1
	comp=Z,0.6nm,0.5s,baz=46,slow=8.6,SNR=3.2						
BVAR	Borovoye Array	51.17	310	P	P	13 10 10.0	-0.1
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
CMAR	Chiang Mai Arr	51.25	256	P	P	13 10 12.7	+1.6
	comp=Z,0.4nm,0.3s,baz=43,slow=6.8,SNR=4.1						
SPITS	Spitsbergen Ar	53.90	350	P	P	13 10 29.6	-0.4
	comp=Z,1.2nm,0.6s,baz=1.6,slow=10,SNR=2.8						
KSH	Kashi	54.47	293	*e*P	P	13 10 40.6	+5.8
KSH				*e*PcP	PcP	13 11 46.9	+8.9
ARCES	ARCESS Array B	58.96	341	P	P	13 11 06.0	0.0
	comp=Z,4.2nm,0.8s,baz=36,slow=11,SNR=8.3						
NVAR	Mina Array Bea	63.83	61	P	P	13 11 40.8	+1.1
	comp=Z,0.5nm,0.6s,baz=304,slow=7.0,SNR=4.7						
FINES	FINESS Array B	65.01	335	P	P	13 11 46.0	-0.8
	comp=Z,5.5nm,0.7s,baz=27,slow=9.0,SNR=13						
FINES	FINESS Array B	65.01	335	*e*P	P	13 11 46.9	+0.2
FINES	FINESS Array B	65.01	335	*e*P	P	13 11 46.9	+0.2
FINES				pmax	pmax		
	comp=Z,6.0nm,0.7s						
PDAR	Pinedale Array	66.26	53	P	P	13 11 56.3	+0.9
	comp=Z,0.6nm,0.8s,baz=282,slow=2.9,SNR=5.0						
GEYT	Alibeck	66.66	301	P	P	13 11 59.4	+1.6
	comp=Z,4.5nm,0.8s,baz=311,slow=2.9,SNR=10.0						
WRAB	Tennant Creek	66.87	198	P	P	13 11 57.9	-1.3
	comp=Z,0.8nm,0.7s						
WRAB	Tennant Creek	66.87	198	P	P	13 11 57.9	-1.3
WRAB				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRA	Warramunga Arr	66.88	198	P	P	13 11 58.8	-0.4
	comp=Z,0.2nm,0.6s,baz=6.6,slow=6.8,SNR=3.1						
NB2	NORSAR Subarra	69.34	341	P	P	13 12 14.4	+0.1
	comp=Z,1.1nm,0.7s,baz=28,slow=6.5						
HFS	Hagfors	69.53	339	P	P	13 12 15.3	-0.1
	comp=Z,5.6nm,0.8s,baz=23,slow=7.8,SNR=13						
AKT	Akhty	70.30	309	*e*P	P	13 12 21.4	+0.8
AKT				*e*		13 12 44.9	
ASAR	Alice Springs	70.58	198	P	P	13 12 22.2	-0.1
	comp=Z,0.5nm,0.8s,baz=8.9,slow=6.6,SNR=3.2						
KBZ	Khabaz	71.29	314	P	P	13 12 27.2	+0.8
	comp=Z,8.5nm,0.9s,baz=59,slow=5.1,SNR=14						
AKASG	Malin Array Be	72.30	326	P	P	13 12 32.6	+0.2
	comp=Z,1.1nm,0.5s,baz=36,slow=6.0,SNR=7.7						
CLL	Collm	77.45	335	*e*P	P	13 13 03.0	+0.9
CLL	Collm	77.45	335	*e*P	P	13 13 03.0	+0.9
BRTR	Keskin Array B	78.89	316	P	P	13 13 12.4	+1.9
	comp=Z,1.9nm,0.8s,baz=92,slow=4.8,SNR=6.7						
TXAR	Lajitas Array	78.91	60	P	P	13 13 11.4	+0.7
	comp=Z,1.0nm,0.7s,baz=309,slow=5.1,SNR=8.3						
KHC	Kasperske Hory	79.19	334	*e*P	P	13 13 13.5	+1.6
KHC				*e*pP	PcP	13 13 17.5	-2.7
KHC	Kasperske Hory	79.19	334	*e*P	P	13 13 13.5	+1.6
KHC				*e*		13 13 17.5	
GERES	GERESS Array B	79.40	333	P	P	13 13 13.3	+0.2
	comp=Z,0.7nm,0.5s,baz=1.4,slow=5.6,SNR=4.1						
GERES	GERESS Array B	79.40	333	*e*P	P	13 13 16.0	+2.9
GERES	GERESS Array B	79.40	333	*e*P	P	13 13 16.1	+2.9
GERES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MMAI	Mount Meron Ar	83.17	311	P	P	13 13 34.8	+1.5
	comp=Z,5.3nm,0.8s,baz=355,slow=7.2,SNR=4.4						
SNAA	Sanae	150.93	196	PKPbc	PKPbc	13 20 58.0	-0.4
	comp=Z,0.8nm,0.7s,baz=172,slow=7.2,SNR=6.6						
SNAA	Sanae	150.93	196	PKIKP	PKPbc	13 20 58.0	-0.4
SNAA				pmax	pmax		
	comp=Z,800nm,0.7s						

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*IDC **12** 13:11:29.9±0.9, 15.°42S×75.°57W, h0^{km}, mb3.9/4, mb1 4.0/6, mb1mx3.7/40, mbtmp3.8/6, ML3.1/2, Error ellipse: s-maj=42.7km s-min=23.1km az=69.0*

ISC 12 13:11:33.4±0.9**, 15.°3S**±0.°1×**75.°5W**±0.°2**, h26**^{km}**, n14,** σ**1.^{s}36**/10**, mb4.0**/4**, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	Nana	3.55	339	Pn	Pn	13 12 27.3	+0.3
	1.1nm,0.3s,baz=122,slow=9.5,SNR=4.0						
NNA				Sn	Sb	13 13 17.3	-1.0
	16nm,0.3s,baz=202,slow=16,SNR=4.2						
LPAZ	La Paz	7.20	99	Pn	Pn	13 13 23.2	+5.7
	3.4nm,0.3s,baz=280,slow=11,SNR=50						
ATAH	Atahualpa	8.61	341	Sn	Sn	13 15 29.2	+16
	0.3nm,0.3s,baz=100,slow=22,SNR=2.4						
SIV	San Ignacio	13.95	95	Pn	Pn	13 14 49.3	-0.3
	0.2nm,0.3s,baz=205,slow=19,SNR=3.3						
PLCA	Paso Flores	25.68	171	P	P	13 16 59.4	-2.0
	2.0nm,0.9s,baz=27,slow=2.3,SNR=2.4						
TXAR	Lajitas Array	52.05	329	P	P	13 20 42.2	+1.1
	0.3nm,0.6s,baz=148,slow=7.4,SNR=4.0						
SNAA	Sanae	70.13	161	P	P	13 22 44.8	+1.6
	0.9nm,0.5s,baz=272,slow=10,SNR=14						
TORD	Torodi Ar. Bea	81.47	74	P	P	13 23 49.4	+0.4
	2.0nm,0.7s,baz=270,slow=5.4						
H11S2	WAKE ISLAND Hy	120.61	283	T	T	15 42 26.1	
	baz=92,SNR=9.4						
H11S1	WAKE ISLAND Hy	120.62	283	T	T	15 42 26.7	
	baz=92,SNR=5.2						
H11S3	WAKE ISLAND Hy	120.63	283	T	T	15 42 26.7	
	baz=92,SNR=5.3						
ASAR	Alice Springs	131.73	217	PKP	PKPdf	13 30 43.1	-1.8
	0.3nm,0.8s,baz=114,slow=1.4,SNR=5.3						
WRA	Warramunga Arr	134.27	221	PKP	PKPdf	13 30 50.1	+0.3
	0.8nm,0.8s,baz=132,slow=1.7,SNR=8.1						
SONM	Songino Array	147.55	358	PKPbc	PKPab	13 31 16.8	-0.7
	0.5nm,0.5s,baz=7.8,slow=3.3,SNR=4.3						

MEX 12 13:15:28.3±0.3**, 15.°98N**×**98.°33W, h8**^{km}±3^{km}**, MD3.6, Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.45	25	*e*P	Pg	13 15 36.7	-0.3
	baz=205,slow=16						
PNIG				*e*S	Sg	13 15 43.3	+0.3
TLIG	Tlapa	1.59	352	*e*P	Pn	13 15 53.2	-3.6
TLIG				*i* S	Sn	13 16 12.6	-5.1

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*SOME **12** 14:00:31.0, 37.°12N×70.°97E, h0^{km}, MS5.5*

*MOS **12** 14:00:32.8±0.9, 36.°54N×70.°91E, h191^{km}, mb6.0/65, MS4.9/21, Error ellipse: s-maj=4.4km s-min=3.1km az=123.4*

MOS Felt (II-III) at Shymkent, Dzhambul.

*ISCJB **12** 14:00:32.0±0.2, 36.°50N±0.°01×70.°87E±0.°01, h185^{km}±1^{km}, mb5.7/315, Error ellipse: s-maj=2.0km s-min=1.5km az=27.4*

*NEIC **12** 14:00:33.0±0.0, 36.°60N×70.°75E, h190^{km}, Moment Tensor Solution. s19 Moment tensor: Scale 10^{17}Nm; M_{rr}3.71; $M_{\theta\theta}$-3.56; $M_{\phi\phi}$-0.15; $M_{r\theta}$-1.82; $M_{\theta\phi}$-0.86; $M_{\phi r}$0.56; Best double couple: $M_0$4.20000×10^{17} NP1:ϕ_s269.00000°, δ58.00000°, λ104.00000°. NP2:ϕ_s64.00000°, δ34.00000°, λ69.00000°. Principal axes: T 4.2600, Plg72.0000°, Azm214.0000°; N -0.1400, Plg11.0000°, Azm82.0000°; P -4.1200, Plg12.0000°, Azm349.0000°;*

*BJI **12** 14:00:33.7, 36.°61N×70.°96E, h190^{km}, mb5.5/76, mB5.7/47*

*NEIC **12** 14:00:34.3±0.1, 36.°53N×70.°91E, h198^{km}, mb5.6/137, ME5.8, MW5.8, MW5.7, Error ellipse: s-maj=3.9km s-min=2.5km az=196.0, Moment Tensor Solution. s42 Moment tensor: Scale 10^{17}Nm; M_{rr}5.07; $M_{\theta\theta}$-4.33; $M_{\phi\phi}$-0.73; $M_{r\theta}$-3.65; $M_{\theta\phi}$-0.25; $M_{\phi r}$2.03; Best double couple: $M_0$6.30000×10^{17} NP1:ϕ_s76.00000°, δ27.00000°, λ63.00000°. NP2:ϕ_s286.00000°, δ66.00000°, λ103.00000°. Principal axes: T 6.8500, Plg67.0000°, Azm220.0000°; N -1.2300, Plg12.0000°, Azm100.0000°; P -5.6300, Plg20.0000°, Azm6.0000°; Broadband fault plane solution: P waves. NP1:ϕ_s260.00000°, δ50.00000°, λ90.00000°. NP2:ϕ_s80.00000°, δ40.00000°, λ90.00000°. Principal axes: T Plg85.0000°, Azm170.0000°; N Plg0.0000°, Azm0.0000°; P Plg5.0000°, Azm350.0000°; Depth from broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt [IV] at Kabul and Jalalabad; [III] at Bagrami, Jurm and Mahmud-e Raqi. Also felt at Charikar. Felt [IV] at Lahore, Pakistan. Also felt at Dir and Peshawar. Felt [III] at Tashkent, Uzbekistan and [II] at Dushanbe, Tajikistan. Felt [III] at Gurgaon, India. Also felt at Delhi, Jaipur and Noida.

*IDC **12** 14:00:34.6±0.3, 36.°49N×70.°96E, h200^{km}±2^{km}, mb5.4/50, mb1 5.5/57, mb1mx5.4/62, mbtmp6.0/57, MS4.8/13, Ms1 4.9/13, ms1mx4.3/68 Error ellipse: s-maj=5.9km s-min=4.3km az=17.0*

*GCMT **12** 14:00:34.3±0.1, 36.°47N×70.°76E, h192^{km}, MW5.8/140, Moment Tensor Solution. s120,c188; s140,c389; Duration: 1.^{s}9 Moment tensor: Scale 10^{17}Nm; M_{rr}4.67±.05; $M_{\theta\theta}$-4.26±.06; $M_{\phi\phi}$-0.41±.05; $M_{r\theta}$-3.29±.05; $M_{\theta\phi}$-0.70±.06; $M_{\phi r}$0.21±.04; Best double couple: $M_0$5.59700×10^{17} NP1:ϕ_s268.00000°, δ63.00000°, λ97.00000°. NP2:ϕ_s73.00000°, δ28.00000°, λ77.00000°. Principal axes: T 5.7800, Plg71.0000°, Azm192.0000°; N -0.3690, Plg6.0000°, Azm85.0000°; P -5.4130, Plg18.0000°, Azm353.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*NNC **12** 14:00:36.4±2.1, 36.°89N×70.°74E, h203^{km}±28^{km}, mb5.7, mpv6.8 Error ellipse: s-maj=23.7km s-min=12.7km az=167.0*

ISC 12 14:00:34.2±0.2**, 36.°51N**±0.°02×**70.°87E**±0.°02**, h197**^{km}±1^{km}**, h197**^{km}**:pP-P, n1638,** σ**1.^{s}59**/1927**, mb5.7**/374**, 177C-76D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KBL	Kabul	2.47	218	*e*Pn	Pn	14 01 16.5	-1.3
KBL	Kabul	2.47	218	*e*PN	Pn	14 01 16.5	-1.3
CEP	Cherat	2.81	162	P	Pn	14 01 21.2	-0.5
CEP				S	Sn	14 01 54.0	-4.7
CEP	Cherat	2.81	162	P	Sn	14 01 54.4	-4.3
CHCP	Chirah Chowk	3.46	145	P	Pn	14 01 29.0	-0.2
NIL	Nilore	3.46	145	*e*Pn	Pn	14 01 29.0	-0.2
NIL	Nilore	3.46	145	*e*PN	Pn	14 01 29.0	-0.2
THW	Thamme Wali	3.78	169	P	Pn	14 01 32.5	-0.7
SFK	Sufi-Kurgan	4.06	30	⇑P	Pn	14 01 36.3	-0.6
SFK				⇑S	Sn	14 02 23.5	-2.6
SFK	Sufi-Kurgan	4.06	30	PN	Pn	14 01 36.5	-0.3
SFK				S	Sn	14 02 23.5	-2.6
SFK				pmax	pmax		
	comp=Z,4μm,0.6s						
SFK				smax	smax		
	comp=N,16μm,0.7s						
SARP	Sargodha	4.81	161	P	Pn	14 01 44.8	-1.4
TAS	Tashkent	4.97	346	⇑P	Pn	14 01 47.6	-0.4
TAS				⇓S	Sn	14 02 42.0	-4.4
TAS	Tashkent	4.97	346	PN	Pn	14 01 47.4	-0.6
TAS				pmax	pmax		
	comp=Z,34μm,0.5s						
KSH	Kashi	5.02	52	P	Pn	14 01 43.6	-5.3
KSH				sP		14 02 22.6	
KSH				S	Sn	14 02 36.5	-11
KSH				pmax	pmax		
	comp=Z,16μm,1.6s						
KSH				smax	smax		
	comp=Z,52μm,0.6s						
KSH				smax	smax		
	comp=Z,59μm,1.0s						
IUG	Iuzhnay	5.67	354	*e*P	Pn	14 01 56.7	-0.4
	comp=Z,38μm,0.6s						
IUG				*e*S	Sn	14 02 58.8	-3.9
	comp=Z,113μm,0.7s						
CHM	Chimkent	5.88	351	*e*P	Pn	14 01 59.5	-0.3
	comp=Z,85μm,0.4s						
CHM				*e*S	Sn	14 03 03.2	-4.4
	comp=Z,79μm,0.3s						
AML	Almayashu	6.02	20	P	Pn	14 02 00.6	-1.4
	SNR=2498						
MNAS	Manas	6.10	11	⇑P	Pn	14 02 01.6	-1.1
	comp=Z,4μm,0.6s						
MNAS				⇑S	Sn	14 03 07.8	-5.1
	comp=Z,32μm,0.7s						
MNAS	Manas	6.10	11	PN	Pn	14 02 01.6	-1.1
MNAS				pmax	pmax		
	comp=Z,4μm,0.6s						
DHRM	DHARAMSHALA	6.18	132	*e*P	Pn	14 02 02.7	-1.3
DHRM				*e*S	Sn	14 03 10.4	-4.5
UCH	Uchtor	6.37	25	P	Pn	14 02 05.3	-1.3
	SNR=1144						
MRKS	Merke	6.49	16	*e*P	Pn	14 02 06.6	-1.1
	comp=Z,15μm,0.6s						
MRKS				*e*S	Sn	14 03 15.9	-6.0
	comp=Z,20μm,0.8s						
KZA	Kyzart	6.51	30	P	Pn	14 02 06.8	-1.6
	SNR=542						
EKS2	Erkin-Say	6.54	19	P	Pn	14 02 07.3	-1.1
	SNR=1442						
BRLS	Borolday	6.56	353	*e*P	Pn	14 02 04.8	-3.8
BRLS				*e*S	Sn	14 03 11.2	-12
	comp=Z,11μm,0.4s						
KK31	Karatay Array	6.59	358	⇑P	Pn	14 02 08.1	-0.9
	comp=Z,3μm,0.5s,baz=176,slow=12						
KK31				⇑S	Sn	14 03 15.6	-8.6
	comp=Z,12μm,0.6s,baz=182,slow=22,SNR=19						
KK31	Karatay Array	6.59	358	*e*Pn	Pn	14 02 07.8	-1.2
KK31	Karatay Array	6.59	358	*e*PN	Pn	14 02 07.8	-1.2
KKAR	Karatay Array	6.59	358	*e*Pn	Pn	14 02 07.8	-1.2
KKAR	Karatay Array	6.59	358	*e*PN	Pn	14 02 07.8	-1.2
AAK	Ala-Archa	6.73	23	P	Pn	14 02 10.1	-0.8
	comp=Z,1μm,0.3s,baz=212,slow=8.9,SNR=1361						
AAK				S	Sn	14 03 25.0	-2.6
	comp=Z,197nm,0.3s,baz=215,slow=6.7,SNR=4.3						
AAK	Ala-Archa	6.73	23	⇑P	Pn	14 02 10.1	-0.8
	comp=Z,2μm,0.4s						
AAK				⇓S	Sn	14 03 21.9	-5.7
	comp=Z,8μm,0.7s						
AAK	Ala-Archa	6.73	23	P	Pn	14 02 10.1	-0.8
	SNR=1748						
AAK	Ala-Archa	6.73	23	PN	Pn	14 02 09.4	-1.5
AAK				pmax	pmax		
	comp=Z,6μm,0.9s						
KBK	Karagaybulak	6.90	26	P	Pn	14 02 12.4	-0.7
	SNR=2424						
FRU	Bishkek	6.94	23	⇓*i*PN	Pn	14 02 14.0	+0.4
FRU				pmax	pmax		
	comp=Z,3μm,1.8s						
FRU				pmax	pmax		
	comp=E,6μm,5.0s						
ULHL	Ulahol	7.08	34	P	Pn	14 02 14.3	-1.2
	SNR=268						
CHMS	Chumysh	7.13	24	P	Pn	14 02 15.0	-1.1
	SNR=891						
USP	Ospenovka	7.30	21	P	Pn	14 02 17.5	-0.8
	SNR=364						
TKM2	Tokmak 2	7.36	28	⇑P	Pn	14 02 17.4	-1.9
	comp=E,7μm,0.6s						
TKM2				⇑S	Sn	14 03 36.5	-6.2
	comp=E,2μm,0.8s						
TKM2	Tokmak 2	7.36	28	P	Pn	14 02 18.3	-0.9
	SNR=716						
TKM2	Tokmak 2	7.36	28	PN	Pn	14 02 17.3	-1.9
TKM2				pmax	pmax		
	comp=Z,7μm,0.6s						
TARG	Taragay, Kyrgy	7.49	44	*e*Pn	Pn	14 02 19.4	-1.7
SMLA	Simla	7.50	134	*e*P	Pn	14 02 19.3	-1.6
SMLA				*e*S	Sn	14 03 39.1	-6.5
KST	Kastek	7.61	29	⇓*i*P	Pn	14 02 21.3	-1.1
	comp=Z,6μm,0.6s						
KST				*e*S	Sn	14 03 41.1	-7.3
	comp=Z,5μm,0.7s						
IZV	Izvestkoviy	7.87	32	*e*P	Pn	14 02 25.1	-0.8
	comp=Z,1μm,0.5s						
IZV				*e*S	Sn	14 03 47.6	-7.1
	comp=Z,2μm,0.5s						
TNSS	Tian-Shan	8.02	34	*e*P	Pn	14 02 26.5	-1.5
AAA	Alma-Ata	8.14	33	*i* PN	Pn	14 02 29.3	0.0
AAA				pmax	pmax		
	comp=Z,13μm,1.6s						
AAA				MLR	MLR		
	comp=Z,18μm,5.0s						
AAA	Alma-Ata	8.14	33	*e*P	Pn	14 02 44.9	+16
AAA				*e*S	Sn	14 04 20.7	+20
MDOK	Medeo	8.16	34	⇓P	Pn	14 02 28.6	-1.0
	comp=Z,3μm,0.6s						
MDOK	Medeo	8.16	34	*e*P	Pn	14 02 46.1	+16
MDOK				*e*S	Sn	14 04 22.7	+21
KNDC	Almaty	8.17	33	⇓P	Pn	14 02 29.2	-0.5
	comp=Z,9μm,1.0s						
KKR	Kurukshetra	8.21	141	*e*P	Pn	14 02 28.5	-1.8
KKR				*e*S	Sn	14 03 56.0	-6.6
KOTS	Kotyrbulak	8.25	34	*e*P	Pn	14 02 30.2	-0.5
PRZ	Przheval'sk	8.33	42	*e*Pn	Pn	14 02 31.0	-0.9
PRZ	Przheval'sk	8.33	42	*e*PN	Pn	14 02 31.0	-0.9
KTBS	Karatobe	8.46	30	*e*P	Pn	14 02 31.3	-2.0
KUU	Kurty	8.47	28	*e*P	Pn	14 02 45.5	+12
KUU				*e*S	Sn	14 04 21.6	+13
CHKK	Chushkaly	8.70	31	*e*P	Pn	14 02 34.1	-2.3
BTLS	Baital	8.85	15	*e*P	Pn	14 02 36.6	-1.8
KURS	Kuram	8.94	37	*e*P	Pn	14 02 38.9	-0.7
BHGR	Bahadurgarh	9.33	145	*e*P	Pn	14 02 42.7	-2.1
BHGR				*e*S	Sn	14 04 20.5	-8.7
ARXS	Arharly	9.34	32	*e*P	Pn	14 02 42.3	-2.6
JOSI	Joshimath	9.37	127	*e*P	Pn	14 02 44.3	-1.2
JOSI				*e*S	Sn	14 04 24.2	-6.3
KHET	Khetri	9.39	152	*e*P	Pn	14 02 42.7	-2.9
KHET				*e*S	Sn	14 04 20.9	-10
KHET				IAML		14 04 22.9	
	comp=E,5μm,0.4s						
KHET				IAML		14 04 23.2	
	comp=N,3μm,0.3s						
NDI	New Delhi	9.46	144	*e*P	Pn	14 02 44.0	-2.5
NDI				*e*x	Sn	14 04 19.0	-13
PDGK	Podgornoye	9.49	42	⇓P	Pn	14 02 45.2	-1.7
	comp=N,692nm,0.9s						
PDGK	Podgornoye	9.49	42	P	Pn	14 02 45.2	-1.7
PDGK				pmax	pmax		
	comp=Z,998nm,1.0s						
JASL	Jaisalmer	9.56	180	*e*P	Pn	14 02 45.5	-2.3
KUDL	Kundal	9.60	149	*e*P	Pn	14 02 45.8	-2.5
KUDL				*e*S	Sn	14 04 25.8	-10
KUDL				IAML		14 04 27.8	
	comp=E,7μm,0.8s						
KUDL				IAML		14 04 27.9	
	comp=N,5μm,0.8s						
ASHT	Ashkhabad	10.06	282	⇑P	Pn	14 02 52.6	-1.6
	comp=N,2μm,0.8s						
ASHT				⇑S	Sn	14 04 41.9	-4.6
	comp=N,3μm,1.0s						
GEYT	Alibeck	10.27	282	P	Pn	14 02 53.5	-3.5
	comp=N,71nm,0.3s,baz=187,slow=9.0,SNR=505						
GEYT				S	Sn	14 04 46.1	-5.5
	comp=N,114nm,0.3s,baz=79,slow=24,SNR=7.2						
GYA0B	ALIBECK ARRAY	10.27	282	⇓P	Pn	14 02 54.5	-2.5
	comp=N,1μm,0.7s						
GYA0B	ALIBECK ARRAY	10.27	282	*e*Pn	Pn	14 02 54.5	-2.5
MAKZ	Makanchi	13.21	35	*e*Pn	Pn	14 03 32.2	-2.0
MAKZ	Makanchi	13.21	35	*e*P	Pn	14 03 32.2	-2.0
PYUN	Piuthan	13.23	126	*e*P	Pn	14 03 32.4	-2.5
	comp=N,3μm,0.9s						
BHJ	Bhuj	13.25	185	*e*P	Pn	14 03 33.4	-1.6
BHJ				*e*x	Sn	14 05 51.8	-11
BHJ				IAML		14 05 57.1	
	comp=E,2μm,0.5s						
BHJ				IAML		14 05 57.7	
	comp=N,864nm,0.4s						
MK01	Makanchi Array	13.33	36	*e*Pn	Pn	14 03 33.1	-2.7
MK31	Makanchi Array	13.34	36	P	Pn	14 03 34.3	-1.7
	comp=N,1μm,0.7s,baz=200,slow=13,SNR=7656						
MK31	Makanchi Array	13.34	36	*e*Pn	Pn	14 03 34.2	-1.7
MK31	Makanchi Array	13.34	36	*i* P	Pn	14 03 34.2	-1.7
MK31				pmax	pmax		
	comp=Z,1μm,0.7s						
MKAR	Makanchi Array	13.34	36	P	Pn	14 03 34.5	-1.5
	comp=Z,31nm,0.3s,baz=221,slow=9.1,SNR=1238						
MKAR				sP	sPn	14 04 23.1	-0.3
	comp=Z,4.8nm,0.3s,baz=234,slow=12,SNR=1.3						
MKAR				S	Sn	14 06 00.9	-3.8
	comp=Z,3.2nm,0.3s,baz=239,slow=13,SNR=2.0						
KOLN	Koldanda	13.85	125	*e*P	Pn	14 03 40.4	-2.3
	comp=Z,3μm,0.5s						
BHPL	Bhopal	14.39	155	*e*P	Pn	14 03 47.9	-1.2
GKN	Gorkha	14.40	122	*e*P	Pn	14 03 47.8	-1.5
	comp=Z,5μm,0.4s						
WMQ	Urumqi	14.78	55	P	Pn	14 03 53.5	-0.2
WMQ				sP	sPn	14 04 44.5	+1.6
WMQ				S	S	14 06 34.3	-3.8
WMQ				pmax	pmax		
	comp=Z,1μm,0.9s						
WMQ				LR	LR		
	comp=Z,4μm,19.9s						
WMQ				LR	LR		
	comp=Z,2μm,24.9s						
WMQ				LR	LR		
	comp=Z,3μm,23.3s						
DMN	Daman	14.97	122	*e*P	Pn	14 03 54.8	-1.6
	comp=Z,12μm,0.9s						
KKN	Kakani	14.97	121	*e*P	Pn	14 03 55.0	-1.4
AB31	Akbulak array	15.03	331	⇓P	Pn	14 03 55.7	-1.0
	comp=Z,1μm,0.6s,baz=143,slow=12						
AB31	Akbulak array	15.03	331	*e*P	Pn	14 03 54.9	-1.7
AB31				pmax	pmax		
	comp=Z,1μm,0.6s						
ABKAR	Akbulak array	15.03	331	*e*Pn	Pn	14 03 54.7	-1.9
KURBB	Kurchatov Arra	15.14	19	P	Pn	14 03 56.5	-1.6
	comp=Z,5.6nm,0.3s,baz=210,slow=11,SNR=271						
KURBB				S	S	14 06 45.2	-1.1
	baz=212,slow=18,SNR=4.8						
KURBB	Kurchatov Arra	15.14	19	⇓P	Pn	14 03 55.8	-2.3
	comp=Z,1μm,0.7s						
KURK	Kurchatov	15.25	19	⇓P	Pn	14 03 56.5	-2.9
	comp=Z,1μm,1.1s						
KURK	Kurchatov	15.25	19	*e*Pn	Pn	14 03 57.5	-1.9
	comp=Z,1μm,0.9s						
KURK				S	S	14 06 45.2	-3.5
KURK	Kurchatov	15.25	19	*d i*P	Pn	14 03 57.2	-2.2
KURK				pmax	pmax		
	comp=Z,1μm,1.0s						
GUN	Gumba	15.31	120	*e*P	Pn	14 03 59.3	-1.4
	comp=Z,8μm,0.9s						
GUN	Gumba	15.31	120	*e*P	Pn	14 03 59.7	-1.0
BANOM	Banah	16.31	234	P	P	14 04 11.5	-0.3
	SNR=23						
BANOM	Banah	16.31	234	*i* P	P	14 04 11.3	-0.5
	SNR=89						
SHME	Shamm	16.33	234	*i* P	P	14 04 11.6	-0.3
	SNR=54						
RAMN	Ramite	16.41	121	*e*P	P	14 04 12.8	-0.3
	comp=Z,4μm,0.8s						
BVAR	Borovoye Array	16.52	359	P	P	14 04 13.2	-0.5
	comp=Z,80nm,0.3s,baz=164,slow=13,SNR=485						
BVAR				S	S	14 07 15.6	-0.7
	comp=Z,21nm,0.3s,baz=159,slow=20,SNR=4.4						

BVAR				LR	LR	14 11 44.3	
	comp=Z,2µm,19.0s,baz=160,slow=40						
BRVK	Borovoye	16.55	359	⇑P	P	14 04 14.5	+0.4
	comp=Z,2µm,0.8s						
BRVK	Borovoye	16.55	359	eP	P	14 04 13.8	-0.3
	comp=Z,2µm,0.8s						
BRVK	Borovoye	16.55	359	d iP	P	14 04 13.6	-0.5
BRVK				pmax	pmax		
	comp=Z,3µm,1.3s						
I31KZ	AKTYUBINSK INF	16.69	330	i		15 40 00.0	
	baz=144,slow=312,SNR=0.4						
AKTO	Aktyubinsk	16.72	330	P	Pn	14 04 16.7	-0.4
	comp=Z,293nm,0.3s,baz=139,slow=14,SNR=1827						
AKTO				S	S	14 07 18.8	-1.5
	comp=Z,17nm,0.3s,baz=195,slow=20,SNR=5.3						
AKTO				LR	LR	14 12 04.0	
	comp=Z,844nm,19.9s,baz=154,slow=41						
AKTO	Aktyubinsk	16.72	330	⇓P	Pn	14 04 16.9	-0.1
	comp=Z,2µm,0.6s						
MDH	Madha	16.75	232	i P	P	14 04 15.4	-1.2
	SNR=53						
MSFE	Esma-Masafi	16.80	233	i P	P	14 04 17.2	+0.1
	SNR=85						
NGP	Nagpur	16.89	153	eP	P	14 04 17.9	-0.2
NGP				ex	S	14 07 16.2	-8.1
WSAR	Wadi Sarin	16.94	222	P	P	14 04 19.4	+0.8
	comp=Z,15nm,0.3s,baz=70,slow=8.9,SNR=95						
WSAR				sP	sP	14 05 14.4	-1.3
	baz=52,slow=17,SNR=1.2						
WSAR				S	S	14 07 22.6	-2.6
	baz=49,slow=9.3,SNR=2.0						
TAPN	Taplejung	16.94	118	eP	Pn	14 04 19.7	-0.5
	comp=Z,3µm,0.8s						
BIDO	Bidbid	16.99	224	P	Pn	14 04 20.7	+0.2
	SNR=28						
UMQ	Umm Al-Quwin	17.00	234	i P	P	14 04 20.1	+0.8
	SNR=30						
ODAN	Odare	17.02	120	eP	Pn	14 04 20.5	-0.5
	comp=Z,11µm,0.9s						
UOSS	Minazif	17.06	232	eP	P	14 04 18.8	-1.1
	comp=Z,654nm,0.8s						
UOSS	Minazif	17.06	232	i P	P	14 04 18.9	-1.1
	SNR=119						
HATD	Hatta, Dubai	17.19	231	P	Pn	14 04 22.4	-0.5
	SNR=28						
HATD	Hatta, Dubai	17.19	231	i P	P	14 04 21.4	0.0
	SNR=68						
WBK	Wadi Bani Khal	17.27	220	P	Pn	14 04 25.1	+1.3
	SNR=21						
ASHO	Ashiyiah	17.34	231	P	P	14 04 23.7	+0.6
	SNR=214						
ASHO	Ashiyiah	17.34	231	i P	P	14 04 23.6	+0.5
	SNR=327						
NAZ	Nazwa, Dubai	17.38	233	P	P	14 04 24.1	+0.6
	SNR=109						
NAZ	Nazwa, Dubai	17.38	233	i P	P	14 04 23.6	+0.1
	SNR=116						
SMDO	Samad	17.40	223	P	Pn	14 04 26.8	+1.3
	SNR=38						
HOQ	Hoqain	17.41	226	P	Pn	14 04 27.1	+1.7
	SNR=27						
GTK	Tadong	17.60	116	eP	Pn	14 04 27.7	-0.1
BOM	Bombay	17.63	174	eP	P	14 04 24.3	-1.9
BOM				ex	x	14 08 11.9	
DGZ	Jazzator, Alta	17.83	37	i P	Pn	14 04 29.6	-0.8
ASUD	Al Ashush, Dub	17.84	233	P	P	14 04 29.4	+0.9
	SNR=128						
ASUD	Al Ashush, Dub	17.84	233	i P	P	14 04 29.1	+0.6
	SNR=224						
JMDO	Jabal Madar	17.92	222	P	Pn	14 04 31.9	+0.3
	SNR=23						
ALNE	Al Ain	17.99	231	i P	P	14 04 30.5	+0.3
	SNR=153						
ARQ	Araqi	18.06	227	P	Pn	14 04 33.3	+0.3
	SNR=55						
POO	Poona	18.10	171	eP	Pn	14 04 33.1	-0.6
AJN	Ajban	18.11	233	i P	P	14 04 31.5	+0.1
	SNR=105						
BOK	Bokaro	18.11	130	eP	P	14 04 32.3	+0.8
BSY	Bisya	18.12	225	P	Pn	14 04 33.6	-0.3
	SNR=50						
LSA	Lhasa	18.28	106	P	Pn	14 04 36.6	+0.5
LSA				pmax	pmax		
	comp=Z,1µm,0.9s						
LSA	Lhasa	18.28	106	eP	Pn	14 04 35.8	-0.3
	comp=Z,2µm,0.8s						
LSA	Lhasa	18.28	106	P	Pn	14 04 35.5	-0.6
LSA	Lhasa	18.28	106	eP	Pn	14 04 35.8	-0.3
LSA				pmax	pmax		
	comp=Z,2µm,0.8s						
AKT	Akhty	18.64	292	⇑iP	P	14 04 38.2	+1.0
AKT				eS	S	14 08 00.0	+0.9
AKT				pmax	pmax		
	comp=Z,512nm,0.7s						
AKT				smax	smax		
	comp=E,146nm,0.8s						
AKT				smax	smax		
	comp=N,437nm,0.6s						
SRSP	Sriramsagar	18.71	157	eP	P	14 04 37.5	-0.5
SRSP				IAmb	IAmb	14 04 42.1	
	comp=Z,3µm,0.9s						
SRSP				eS	S	14 07 57.9	-2.7
KLRI	Killari	19.05	163	eP	P	14 04 40.9	-0.8
KLRI				IAmb	IAmb	14 04 46.1	
	comp=Z,2µm,0.9s						
KLRI				eS	S	14 08 07.5	0.0
MAK	Makhachkala	19.06	297	eP	P	14 04 42.9	+1.4
MAK				eS	S	14 08 11.6	+4.6
MAK				pmax	pmax		
	comp=Z,805nm,0.9s						
RPR	Rampur	19.09	155	eP	P	14 04 41.3	-0.7
RPR				IAmb	IAmb	14 04 44.8	
	comp=Z,3µm,1.0s						
RPR				eS	S	14 08 04.2	-3.7
TURI	Tura	19.90	118	eP	P	14 04 51.3	+0.6
ZAA0	Zalesovo Array	19.95	25	eP	P	14 04 50.6	-0.3
	comp=Z,2µm,0.9s						
ZALV	Zalesovo Beam	19.95	25	P	P	14 04 50.7	-0.3
	comp=Z,172nm,0.3s,baz=222,slow=9.8,SNR=1793						
ZALV				S	S	14 08 22.8	-1.4
	comp=Z,1.4nm,0.3s,baz=219,slow=18,SNR=2.9						
ZALV	Zalesovo Beam	19.95	25	eP	P	14 04 50.0	-0.9
ZALV				S	S	14 08 22.8	-1.4
MZR	Muzera	20.18	233	i P	P	14 04 53.0	-0.8
	SNR=25						
HYBB	Hyderabad (bro	20.20	158	eP	P	14 04 53.3	-0.7
HYBB				IAmb	IAmb	14 04 58.2	
	comp=Z,874nm,0.9s						
HYBB				eS	S	14 08 29.1	-0.6
HYB	Hyderabad	20.20	158	i P	P	14 04 54.0	0.0
HYB				eS	S	14 08 30.0	+0.2
HYB				LR	LR		
	comp=Z,7.7nm,12.0s						
HYB	Hyderabad	20.20	158	eP	P	14 04 54.8	+0.9
NVS	Novosibirsk	20.21	21	⇓iP	P	14 04 54.1	+0.4
NVS				i *PP	pP	14 05 22.6	-4.0
NVS				e		14 05 53.3	
NVS				i S	S	14 08 30.1	+0.8
NVS				i SS	Sn	14 08 58.0	+11
NVS				pmax	pmax		
	comp=N,2µm,1.2s						
NVS				pmax	pmax		
	comp=E,678nm,1.2s						
NVS				pmax	pmax		
	comp=Z,3µm,1.2s						
NVS				smax	smax		
	comp=N,854nm,1.6s						
NVS				smax	smax		
	comp=E,620nm,1.6s						
GROC	Groznyy	20.34	297	eP	P	14 04 56.6	+1.4
GROC				e*PP	pP	14 05 28.3	+0.2
GROC				e*SP	sP	14 05 53.2	0.0
GROC				eS	S	14 08 35.6	+3.6
GROC				e		14 09 01.2	
GROC				pmax	pmax		
	comp=Z,2µm,0.8s						
DGRG	David-gareji	20.40	292	eP	P	14 04 57.9	+2.0
DGRG				eS	pP	14 05 23.6	-5.3
GUWA	GUWAHATI	20.50	114	eP	P	14 04 58.1	+1.0
GNI	Garni	20.79	288	P	P	14 05 03.0	+2.7
	comp=Z,942nm,0.9s,baz=120,slow=2.0,SNR=225						
GNI				S	S	14 08 46.2	+5.2
	comp=Z,74nm,0.9s,baz=31,slow=19,SNR=1.5						
TBLG	Delisi	20.90	292	eP	P	14 05 03.0	+1.8
	comp=Z,1µm,0.7s						
TBLG	Delisi	20.90	292	eP	P	14 05 02.5	+1.3
DUS	Dusheti	20.96	293	eP	P	14 05 03.7	+1.7
DUS				eS	pP	14 05 28.3	-6.9
SHL	Shillong	21.01	115	eP	P	14 05 02.3	-0.4
	comp=Z,3µm,1.0s						
SHL	Shillong	21.01	115	eP	P	14 05 02.8	+0.1
SHL				ex	S	14 08 48.5	+3.3
SHL	Shillong	21.01	115	eP	P	14 05 02.3	-0.4
SHL				pmax	pmax		
	comp=Z,3µm,1.0s						
TEZP	TEZPUR	21.09	112	eP	P	14 05 03.7	+0.4
GOA	Goa	21.10	172	eP	P	14 05 05.0	+1.5
TASB	TASBURUN-IGDIR	21.17	288	eP	P	14 05 06.2	+2.0
NJS	Nagarjunasagar	21.24	157	eP	P	14 05 04.1	-0.9
NJS				IAmb	IAmb	14 05 07.8	
	comp=Z,1µm,1.1s						
NJS				eS	S	14 08 48.5	-0.4
CHLP	Challavanipeta	21.37	144	eP	P	14 05 05.5	-0.8
CHLP				IAmb	IAmb	14 05 09.2	
	comp=Z,699nm,0.9s						
CHLP				eS	S	14 08 51.3	+0.3
ZIRO	ZIRO	21.40	108	eP	P	14 05 07.2	+0.4
PVM	Polavaram	21.42	151	eP	P	14 05 06.7	-0.1
PVM				IAmb	IAmb	14 05 10.7	
	comp=Z,940nm,1.1s						
PVM				eS	S	14 08 52.1	+0.2
CLDR	Caldiran	21.43	285	eP	P	14 05 09.0	+2.0
SVE	Sverdlovsk	21.46	345	c iP	P	14 05 07.1	+0.3
SVE				eS	S	14 08 54.6	+2.8
SVE				pmax	pmax		
	comp=Z,2µm,1.3s						
SRLM	Srisailam	21.54	159	eP	P	14 05 07.7	-0.5
SRLM				IAmb	IAmb	14 05 10.7	
	comp=Z,970nm,1.0s						
SRLM				eS	S	14 08 53.5	-0.5
ARU	Arti	21.59	341	P	P	14 05 08.6	+0.3
	comp=Z,787nm,0.7s,baz=141,slow=5.9,SNR=555						
ARU				S	S	14 08 55.3	+1.4
	comp=Z,44nm,0.7s,baz=107,slow=19,SNR=2.1						
ARU				LR	LR	14 14 32.2	
	comp=Z,6µm,18.6s,baz=192,slow=39						
ARU	Arti	21.59	341	eP	P	14 05 08.1	-0.1
	comp=Z,2µm,1.0s						
ARU				S	S	14 08 55.3	+1.4
ARU	Arti	21.59	341	d iP	P	14 05 08.3	+0.1
ARU				*PP	pP	14 05 39.5	-2.2
ARU						14 05 46.8	
ARU				eS	S	14 08 55.8	+1.9
ARU				pmax	pmax		
	comp=Z,3µm,1.2s						
AGT	Agartala	21.59	120	eP	P	14 05 10.7	+2.1
ZEI	Tsey	21.64	295	eP	P	14 05 07.2	-2.0
ZEI				pmax	pmax		
	comp=Z,378nm,0.8s						
VIS	Vishakhapatnam	21.71	146	eP	P	14 05 10.7	+0.8
CUKT	Cukurca	21.80	280	eP	P	14 05 12.4	+1.7
AKH	Akhalkalaki	21.80	291	eP	P	14 05 14.2	+3.4
AKH	Akhalkalaki	21.80	291	eP	P	14 05 13.1	+2.3
	comp=Z,522nm,0.9s						
AKH	Akhalkalaki	21.80	291	eP	P	14 05 13.1	+2.3
AKH				eS	pP	14 05 45.9	+1.4
VANB	Van	21.86	284	eP	P	14 05 12.8	+1.5
HVS	Khovu-Aksy	21.90	41	⇑iP	P	14 05 13.7	+2.2
HVS				pmax	pmax		
	comp=Z,718nm,1.4s						
ONI	Oni	21.94	294	eP	P	14 05 14.4	+2.4
ONI				eS	pP	14 05 45.9	0.0
NCK	Nalchik	21.97	297	⇑iP	P	14 05 12.5	+0.3
NCK				pmax	pmax		
	comp=Z,1µm,0.9s						
KARS	Kars	22.08	289	eP	P	14 05 15.9	+2.5
JORH	JORHAT	22.11	109	eP	P	14 05 14.4	+0.7
ADKI	Addanki	22.12	156	eP	P	14 05 12.8	-1.0
ADKI				IAmb	IAmb	14 05 15.3	
	comp=Z,447nm,1.0s						
ADKI				eS	S	14 09 02.0	-1.1
AGRB	Hanur-Agry	22.14	286	eP	P	14 05 16.7	+2.7
SILR	SILCHAR	22.14	116	eP	P	14 05 13.4	-0.6
BELO	BELONIA	22.14	121	eP	P	14 05 16.2	+2.2
URV	Uravakonda	22.22	163	eP	P	14 05 14.4	-0.4
URV				IAmb	IAmb	14 05 16.9	
	comp=Z,731nm,0.8s						
URV				eS	S	14 09 04.4	-0.4
KBZ	Khabaz	22.50	297	P	P	14 05 17.1	0.0
	comp=Z,190nm,0.7s,baz=298,slow=4.9,SNR=5.5						
KBZ				S	S	14 09 13.1	+4.3
	comp=Z,29nm,0.8s,baz=87,slow=17,SNR=1.8						
MOKO	MOKOCHONG	22.54	110	eP	P	14 05 18.7	+0.9
KOHI	KOHIMA	22.56	112	eP	P	14 05 19.4	+1.4
NEY	Neytrino	22.56	296	c iP	P	14 05 20.2	+2.3
NEY				pmax	pmax		
	comp=Z,46nm,0.8s						
BRDH	Bariadhala	22.66	122	P	P	14 05 19.9	+1.2
	comp=Z,760nm,0.7s,baz=50,slow=5.8,SNR=30						
BRDH				S	S	14 09 15.5	+3.8
	comp=Z,82nm,0.4s,baz=90,slow=20,SNR=2.1						
KVAR	Kislovodsk Arr	22.68	298	P	P	14 05 20.1	+1.1
	comp=Z,331nm,0.8s,baz=83,slow=18,SNR=106						
KIV	Kislovodsk	22.69	298	eP	P	14 05 18.8	-0.2
	comp=Z,465nm,0.7s						
KIV				LR	LR		
	comp=Z,2µm,20.0s						
KIV	Kislovodsk	22.69	298	P	P	14 05 19.3	+0.3
	SNR=107						
KIV	Kislovodsk	22.69	298	i P	P	14 05 19.8	+0.8
	SNR=58						
KIV	Kislovodsk	22.69	298	eP	P	14 05 19.6	+0.6
KIV				e*SP	sP	14 06 17.8	-1.0
KIV				eS	S	14 09 13.9	+1.7
KIV				pmax	pmax		
	comp=Z,195nm,3.5s						
KIV				pmax	pmax		
	comp=Z,430nm,1.1s						
KIV				MLR	MLR		
	comp=Z,1µm,15.0s						
SIRT	Sirnak	22.70	281	eP	P	14 05 20.6	+1.5
AZL	Aizawl	22.70	118	eP	P	14 05 21.2	+2.0
GURO	Guroymak-BITLI	22.92	284	eP	P	14 05 23.8	+2.6
IMP	Imphal	22.95	114	eP	P	14 05 23.8	+2.4
GTA	Gaotai	22.96	74	⇑P	P	14 05 23.0	+1.5
GTA				pP	pP	14 06 00.2	+3.1
GTA				sP	sP	14 06 26.1	+4.3
GTA				S	S	14 09 19.6	+2.9
GTA				ScS	ScS	14 16 08.0	-2.2
GTA				pmax	pmax		
	comp=Z,100nm,1.5s						
GTA				pmax	pmax		
	comp=Z,1µm,5.1s						
GTA				LR	LR		
	comp=Z,2µm,13.7s						
GTA				LR	LR		
	comp=Z,2µm,12.7s						
GTA				LR	LR		
	comp=Z,2µm,15.8s						
BCA	Borcka	23.21	291	eP	P	14 05 25.6	+2.0
VRTB	Varto-Mus	23.34	285	eP	P	14 05 28.2	+3.3
SVAN	Silvan-Diyarba	23.61	283	eP	P	14 05 29.6	+2.3
SAIH	SAIHA	23.71	120	eP	P	14 05 30.3	+1.9
KNGR	Kungurtug, Tuv	23.74	45	i P	P	14 05 30.8	+2.4
CHOM	Cayeli-Rize	23.84	290	eP	P	14 05 31.9	+2.5
WHFO	Wadi Hawf	23.89	224	P	P	14 05 32.3	+2.3
	SNR=14						
BNGB	Bingˆ¶l	23.95	285	eP	P	14 05 32.9	+2.4
SKHT	Srikalahasti	24.02	158	eP	P	14 05 30.9	-0.2
SKHT				IAmb	IAmb	14 05 33.4	
	comp=Z,683nm,0.6s						
SKHT				eS	S	14 09 33.9	+0.3
YEDI	Yedisu-Bingol	24.03	286	eP	P	14 05 33.4	+2.2
MAZI	Mazidag	24.28	281	eP	P	14 05 35.3	+1.9
DYBB	Diyarbakir	24.46	283	eP	P	14 05 37.4	+2.4
KRAR	Krasnoyarsk	24.54	30	⇓iP	P	14 05 35.6	+0.2
KTUT	Trabzon	24.60	290	eP	P	14 05 38.2	+2.1
ABTO	Aybut	24.61	224	P	P	14 05 39.0	+2.4
	SNR=19						
SOC	Sochi	24.77	296	c iP	P	14 05 38.5	+0.8
SOC				e*PP	pP	14 06 14.3	-2.1
SOC				e		14 06 21.4	
SOC				e*SP	PP	14 06 37.4	-0.5
SOC				eS	S	14 09 47.8	+2.6
SOC				e*SS	sS	14 10 52.6	-3.0
SOC				pmax	pmax		
	comp=Z,337nm,0.7s						
MDRS	Chennai	24.82	158	eP	P	14 05 39.5	+1.2
PTK	Pertek	24.96	285	eP	P	14 05 41.7	+2.0
SVRC	Sivrice-ELAZID	25.07	284	eP	P	14 05 42.4	+1.7
ESPY	Espiye-Giresun	25.38	290	eP	P	14 05 45.3	+2.0
RAYN	Ar Rayn	25.41	246	eP	P	14 05 42.8	-0.9
	comp=Z,817nm,1.0s						
RAYN				LR	LR		
	comp=Z,3µm,20.0s						
RAYN	Ar Rayn	25.41	246	i P	P	14 05 44.0	+0.3
	SNR=767						
RAYN	Ar Rayn	25.41	246	eP	P	14 05 42.8	-0.9
RAYN				pmax	pmax		
	comp=Z,817nm,1.0s						
RAYN				MLR	MLR		
	comp=Z,3µm,20.0s						
VRH	Novokhopyorsk	25.43	314	eP	P	14 05 58.9	+15
VRH				e*PP	PP	14 06 37.4	-7.7
VRH				e*SP	sP	14 07 00.5	+14
VRH				pmax	pmax		
	comp=Z,2µm,1.2s						
VRH				pmax	pmax		
	comp=Z,940nm,1.0s						
MALT	Malatya	25.77	284	eP	P	14 05 49.3	+2.4
MOY	Mondy	26.17	45	eP	P	14 05 52.6	+2.2
MOY				pmax	pmax		
	comp=Z,162nm,1.9s						
DARE	Darende-Malaty	26.48	285	eP	P	14 05 55.6	+2.4
LZH	Lanzhou	26.51	81	⇓P	P	14 05 56.6	+3.0
LZH				pP	pP	14 06 32.3	-1.1
LZH				PP	PnPn	14 06 47.9	+1.4
LZH				sP	PP	14 06 58.9	+1.4
LZH				S	S	14 10 15.7	+2.6
LZH				sS	sS	14 11 20.2	-4.1
LZH				SS	SnSn	14 11 40.8	+0.5
LZH				pmax	pmax		
	comp=Z,200nm,1.6s						
LZH				pmax	pmax		
	comp=Z,1µm,6.5s						
LZH				LR	LR		
	comp=Z,3µm,11.9s						
LZH				LR	LR		
	comp=Z,2µm,13.0s						
LZH				LR	LR		
	comp=Z,2µm,13.6s						
ANN	Anapa	26.54	299	c iP	P	14 05 53.5	0.0
ANN				e*PP	pP	14 06 33.4	+0.1
ANN				e		14 06 46.0	
ANN				e*SP	sP	14 06 54.1	-2.1
ANN				eS	S	14 10 17.9	+4.9
ANN				pmax	pmax		
	comp=Z,352nm,0.9s						
VORD	Divnogorie	26.76	313	eP	P	14 05 56.0	+0.6
VORD				e*PP	pP	14 06 34.6	-0.6
VORD				e*SP	sP	14 06 56.8	-1.3
VORD				eS	S	14 10 18.3	+2.0
VORD				pmax	pmax		
	comp=Z,700nm,1.3s						
VORD				pmax	pmax		
	comp=Z,480nm,1.0s						
VORD				smax	smax		
	comp=E,590nm,1.1s						
GAZ	Gaziantep	26.87	282	eP	P	14 05 58.7	+2.0
VSR	Storozhevoye	26.92	313	eP	P	14 05 57.4	+0.5
VSR				e*PP	pP	14 06 36.4	-0.3
VSR				e*SP	sP	14 06 59.1	-0.5
VSR				eS	S	14 10 19.8	+0.9
VSR				e*SS	sS	14 11 30.5	+0.3
VSR				pmax	pmax		
	comp=Z,1µm,1.4s						
VSR				pmax	pmax		
	comp=Z,930nm,1.0s						
VSR				smax	smax		
	comp=E,540nm,1.7s						
VORR	Voronezh	27.06	314	⇑iP	P	14 05 59.0	+0.9
VORR				pmax	pmax		
	comp=Z,2µm,1.2s						
ZAK	Zakamensk	27.06	49	eP	P	14 05 58.4	+0.1
ZAK				pmax	pmax		
	comp=Z,66nm,1.1s						
TOKT	Tokat	27.06	289	eP	P	14 06 00.2	+1.8
KMRS	Kahramanmaras	27.07	282	eP	P	14 06 00.0	+1.6
TLY	Talaya	27.71	46	eP	P	14 06 05.2	+1.3
	comp=Z,59nm,0.8s						
TLY				LR	LR		
	comp=Z,1µm,19.0s						
TLY	Talaya	27.71	46	P	P	14 06 06.3	+2.4
	SNR=30						
TLY	Talaya	27.71	46	c iP	P	14 06 05.9	+2.0
TLY				e		14 06 46.8	
TLY				eS	S	14 10 35.0	+3.7
TLY				pmax	pmax		
	comp=Z,78nm,1.5s						
TLY				MLR	MLR		
	comp=Z,890nm,13.0s						
CD2	Chengdu	27.84	92	⇑P	P	14 06 06.6	+1.3
CD2				pP	pP	14 06 45.3	0.0
CD2				sP	sP	14 07 07.6	-0.5
CD2				S	S	14 10 35.9	+2.1
CD2				sS	sS	14 11 45.7	+0.4
CD2				pmax	pmax		
	comp=Z,640nm,0.8s						
CD2				pmax	pmax		
	comp=Z,320nm,5.0s						
CD2				LR	LR		
	comp=Z,2µm,14.2s						
CD2				LR	LR		
	comp=Z,1µm,12.4s						
CD2				LR	LR		
	comp=Z,2µm,10.2s						
YOZ	Yozgat	28.05	287	eP	P	14 06 08.8	+1.6
YURE	YUREGIR	28.17	281	eP	P	14 06 10.5	+2.3
IRK	Irkutsk	28.27	46	eP	P	14 06 09.9	+1.0
IRK				e		14 06 52.7	
IRK				pmax	pmax		
	comp=Z,429nm,1.7s						
ASF	Jabal al Asfar	28.30	271	P	P	14 06 11.3	+1.8
	comp=Z,12nm,0.9s,baz=34,slow=2.3,SNR=31						
ASF				pP	pP	14 06 50.7	+1.2
	comp=Z,7.8nm,0.7s,baz=293,slow=12,SNR=1.3						
SONM	Songino Array	28.41	55	P	P	14 06 11.4	+1.0
	comp=Z,62nm,0.8s,baz=257,slow=10.0,SNR=406						
SONM				pP	pP	14 06 52.6	+2.1
	comp=Z,64nm,0.9s,baz=261,slow=9.1,SNR=6.0						
SONM				ScP	ScP	14 12 37.9	-1.8
	comp=Z,11nm,1.1s,baz=261,slow=3.6,SNR=4.1						
SONM				SKKS	SKKSdf	14 38 25.1	-8.3
	comp=Z,4.5nm,0.8s,baz=104,slow=2.7,SNR=26						
SONA1	Songino Array	28.42	55	eP	P	14 06 10.9	+0.5
CORM	Corum	28.53	289	eP	P	14 06 12.9	+1.4
KARA	Karaisali	28.55	282	eP	P	14 06 13.4	+1.8
BHL	Bhannes	28.80	275	eP	P	14 06 15.6	+1.7
ULN	Ulaanbaatar	28.86	55	eP	P	14 06 14.8	+0.5
	comp=Z,73nm,0.9s						
ULN				LR	LR		
	comp=Z,2µm,20.0s						
ULN	Ulaanbaatar	28.86	55	P	P	14 06 15.6	+1.3
	SNR=36						
ULN	Ulaanbaatar	28.86	55	c iP	P	14 06 15.6	+1.3
ULN				pmax	pmax		
	comp=Z,72nm,0.9s						
SHBL	Chebaa	28.88	274	eP	P	14 06 16.4	+1.7
SIM	Simferopol’	28.90	298	c iP	P	14 06 15.5	+1.0
SIM				e*PP	pP	14 06 56.0	+1.3
SIM				S	S	14 10 49.0	-1.2
SIM				pmax	pmax		
	comp=Z,115nm,0.9s						
MERS	Mersin	29.04	282	eP	P	14 06 17.6	+1.6
ILGA	Ilgaz	29.17	290	eP	P	14 06 18.9	+1.7
	comp=Z,142nm,1.2s						
MMAI	Mount Meron Ar	29.25	274	P	P	14 06 19.7	+1.9
	comp=Z,17nm,0.7s,baz=78,slow=9.5,SNR=14						
MMAI				pP	pP	14 06 60.0	+2.0
	comp=Z,10nm,0.8s,baz=91,slow=13,SNR=2.1						
MMAI				PcP	PcP	14 09 20.7	+1.0
	comp=Z,26nm,0.5s,baz=76,slow=7.0,SNR=18						
MMAI				ScP	ScP	14 12 41.4	-1.1
	comp=Z,11nm,0.8s,baz=8.9,slow=5.9,SNR=5.6						
KERG	Konya-Eregli	29.26	283	i P	P	14 06 19.1	+1.1
BR131	Keskin Array S	29.33	288	eP	P	14 06 19.1	+0.5
BRTR	Keskin Array B	29.33	288	P	P	14 06 19.6	+1.0
	comp=Z,21nm,0.6s,baz=102,slow=8.2,SNR=106						
BRTR				pP	pP	14 07 00.0	+1.2
	comp=Z,40nm,0.7s,baz=91,slow=9.0,SNR=4.1						
BRTR				PcP	PcP	14 09 20.2	+0.3
	comp=Z,33nm,0.9s,baz=143,slow=2.8,SNR=5.2						
BRTR				ScP	ScP	14 12 42.0	-0.8
	comp=Z,6.1nm,0.9s,baz=85,slow=5.6,SNR=4.6						
BRTR	Keskin Array B	29.33	288	P	P	14 06 19.6	+1.0

BRTR				*PP	pP	14 07 00.0	+1.2
BRTR				pmax	pmax		
	comp=Z,20nm,0.6s						
AKSY	AKSARAY - Alti	29.36	286	*i* P	P	14 06 20.0	+1.2
KIZK	Mersin	29.41	281	*i* P	P	14 06 19.3	+0.1
SERE	Sereflikochisa	29.48	286	*e*P	P	14 06 21.3	+1.4
KMI	Kunming	29.50	104	P	P	14 06 20.7	+0.4
KMI				pP	pP	14 07 01.7	+1.2
KMI				sP	sP	14 07 23.1	-0.1
KMI				PP	PnPn	14 07 27.9	+3.0
KMI				S	S	14 11 02.1	+1.7
KMI				sS	sS	14 12 12.1	+0.1
KMI				SS	SnSn	14 12 55.3	+1.2
KMI				pmax	pmax		
	comp=Z,94nm,1.0s						
KMI				pmax	pmax		
	comp=Z,760nm,3.3s						
KMI				LR	LR		
	comp=Z,1µm,10.6s						
KMI				LR	LR		
	comp=Z,720nm,11.8s						
KMI				LR	LR		
	comp=Z,1µm,13.4s						
MOS	Moscow	29.59	321κ	*i*P	P	14 06 22.1	+1.7
MOS				*e**PP	pP	14 07 01.1	+0.5
MOS				*i*		14 07 19.3	
MOS				*i* S	S	14 11 03.0	+2.4
MOS				pmax	pmax		
	comp=Z,2µm,1.2s						
MOS				pmax	pmax		
	comp=Z,1µm,1.1s						
MOS				smax	smax		
	comp=N,2µm,3.0s						
MOS				smax	smax		
	comp=E,2µm,3.0s						
CMAI	Chiengmai2	29.67	116	P	P	14 06 21.4	-0.3
	comp=E,28nm,0.9s,comp=E,442nm						
HMDM	Hanimaadhoo	29.67	175	*e*P	P	14 06 24.3	+2.7
	comp=E,840nm,1.1s						
PRGR	Permogore	29.72	336	*e*P	P	14 06 22.0	+0.5
PRGR				pmax	pmax		
	comp=Z,716nm,0.8s						
AFSR	Af¯ar-Bala (A	29.80	287	*e*P	P	14 06 24.0	+1.3
OBN	Obninsk	29.86	319	*e*P	P	14 06 23.6	+0.7
	comp=Z,933nm,0.7s						
OBN				LR	LR		
	comp=Z,1µm,19.0s						
OBN	Obninsk	29.86	319*d*	*i*P	P	14 06 23.3	+0.5
OBN				*i* *PP	pP	14 07 03.2	+0.1
OBN				*e**SP	sP	14 07 21.3	-4.6
OBN				*e*		14 07 27.1	
OBN				*i* S	S	14 11 06.6	+1.7
OBN				pmax	pmax		
	comp=Z,1µm,0.8s						
OBN				MLR	MLR		
	comp=Z,973nm,20.0s						
GULN	MERSIN_Gulnar	29.95	281	*i* P	P	14 06 23.7	-0.2
KKUL	Konya-Kulu	29.95	287	*i* P	P	14 06 25.4	+1.4
ANTO	Ankara	29.97	288	*e*P	P	14 06 26.6	+2.5
ANTO	Ankara	29.97	288	⇓*i*P	P	14 06 25.4	+1.3
ANTO	Ankara	29.97	288	*e*P	P	14 06 25.6	+1.5
	comp=Z,137nm,1.1s						
ANTO				LR	LR		
	comp=Z,2µm,21.0s						
ANTO	Ankara	29.97	288	⇓P	P	14 06 25.4	+1.3
CHTO	Chiang Mai	30.32	118	*e*P	P	14 06 27.5	+0.2
	comp=Z,177nm,0.9s						
CHTO				LR	LR		
	comp=Z,2µm,19.0s						
CHTO	Chiang Mai	30.32	118	P	P	14 06 28.3	+1.0
	SNR=88						
CHTO	Chiang Mai	30.32	118	*e*P	P	14 06 27.5	+0.2
CHTO				pmax	pmax		
	comp=Z,177nm,0.9s						
CHTO				MLR	MLR		
	comp=Z,2µm,19.0s						
CHTO	Chiang Mai	30.32	118	P	P	14 06 27.5	+0.2
	comp=Z,942nm,1.2s,comp=Z,11µm						
CMMT	Chiang Mai	30.32	118	P	P	14 06 27.5	+0.2
	comp=Z,213nm,0.8s,comp=Z,2µm						
CSS	Mathiatis	30.39	278	*e*P	P	14 06 28.2	+0.4
	comp=Z,31nm,0.9s						
CSS				*e*PcP	PcP	14 09 22.8	+0.3
PALK	Pallekele	30.46	160	P	P	14 06 28.9	+0.4
	comp=Z,278nm,0.7s,baz=296,slow=7.4,SNR=138						
PALK				PcP	PcP	14 09 22.6	-0.4
	comp=Z,28nm,0.5s,baz=296,slow=3.1,SNR=4.0						
PALK	Pallekele	30.46	160	*e*P	P	14 06 28.9	+0.4
	comp=Z,982nm,1.4s						
PALK				PcP	PcP	14 09 22.6	-0.4
PALK	Pallekele	30.46	160	P	P	14 06 29.5	+1.0
	SNR=22						
PALK	Pallekele	30.46	160	*i* P	P	14 06 29.4	+0.8
	SNR=79						
PALK	Pallekele	30.46	160	*i* P	P	14 06 29.7	+1.1
LADK	Ladik-KONYA	30.51	285	*e*P	P	14 06 30.3	+1.3
CM31	Chiang Mai Arr	30.55	119	*e*P	P	14 06 29.7	+0.3
CMAR	Chiang Mai Arr	30.55	119	P	P	14 06 29.7	+0.3
	comp=Z,260nm,0.9s,baz=298,slow=7.6,SNR=447						
CMAR				pP	pP	14 07 11.2	+1.5
	comp=Z,58nm,0.8s,baz=311,slow=9.1,SNR=2.7						
CMAR				PcP	PcP	14 09 23.8	+0.6
	comp=Z,39nm,1.0s,baz=294,slow=4.4,SNR=3.9						
CMAR				ScP	ScP	14 12 46.0	-0.8
	comp=Z,14nm,1.0s,baz=292,slow=4.3,SNR=4.2						
KONT	Konya--Tatoy	30.55	284	*e*P	P	14 06 31.0	+1.7
KONT	Konya--Tatoy	30.55	284	*i* P	P	14 06 30.6	+1.3
KMER	Konya-Meram	30.58	284	*i* P	P	14 06 31.6	+2.0
CM01	Chiang Mai Arr	30.59	119	*e*P	P	14 06 27.9	-1.8
BTO	Baotou	30.71	70	*e*P	P	14 06 31.2	+0.5
BTO				pmax	pmax		
	comp=Z,24nm,0.6s						
EIL	Elat	30.73	268	P	P	14 06 33.2	+2.4
	comp=Z,97nm,1.1s,baz=76,slow=2.9,SNR=45						
EIL				pP	pP	14 07 14.0	+2.8
	comp=Z,25nm,0.9s,baz=297,slow=3.4,SNR=3.0						
EIL				sP	sP	14 07 34.8	+0.9
	comp=Z,111nm,1.0s,baz=81,slow=6.4,SNR=7.8						
KIZT	Kizilcal	30.79	286	*e*P	P	14 06 32.4	+1.0
SZAC	Souni	30.80	278	P	P	14 06 32.0	+0.6
ALFC	Alefka	30.93	279	P	P	14 06 32.5	0.0
AUMIH	MIHALICIK	30.97	288	*e*P	P	14 06 34.3	+1.3
AUMIH	MIHALICIK	30.97	288	*i* P	P	14 06 34.5	+1.5
AUSIV	SIVRIHISAR	30.98	288	*e*P	P	14 06 34.0	+1.0
XAN	Xi’an	31.03	83	⇑P	P	14 06 34.0	+0.5
XAN				S	S	14 11 24.5	+0.7
XAN				sS	sS	14 12 33.0	-2.5
XAN				ScP	ScP	14 12 48.0	-0.3
XAN				SS	SnSn	14 13 25.4	-4.9
XAN				pmax	pmax		
	comp=Z,230nm,1.0s						
XAN				LR	LR		
	comp=Z,2µm,13.2s						
XAN				LR	LR		
	comp=Z,1µm,16.2s						
MDUB	Mudurnu	31.12	290	*e*P	P	14 06 35.5	+1.2
AKMC	Akamas	31.17	279	P	P	14 06 34.9	+0.2
PPCY	Paphos	31.19	279	P	P	14 06 34.9	+0.1
KEPZ	Antalya-Kepez	31.33	283	*i* P	P	14 06 36.0	-0.1
KLMR	Klimovskoe	31.42	331	*e*P	P	14 06 34.7	-1.7
KLMR				*e**PP	pP	14 07 16.1	-0.8
KLMR				*e**SP	sP	14 07 40.2	+0.5
KLMR				*e*		14 07 46.1	
KLMR				pmax	pmax		
	comp=Z,770nm,1.0s						
KLMR	Klimovskoe	31.42	331	*e*P	P	14 06 34.8	-1.7
KLMR				AMP		14 06 37.9	
	comp=Z,770nm,1.0s						
KLMR				*e*pP	pP	14 07 16.2	-0.7
KLMR				*e*sP	sP	14 07 40.2	+0.5
KLMR				*e*PP	PnPn	14 07 46.2	-2.0
ESKT	Eskisehir	31.50	288	*i* P	P	14 06 38.4	+0.8
BOLV	Bolvadin	31.53	286	*i* P	P	14 06 39.0	+1.1
PBA	Port Blair	31.64	136	*e*P	P	14 06 40.9	+2.0
	comp=Z,2µm,1.1s						
SUTC	Sutluce-Ispart	31.70	284	*e*P	P	14 06 40.3	+0.9
BAGO	Egridir - ISPA	31.77	285	*i* P	P	14 06 40.6	+0.6
HHC	Hu-ho-hao-te	31.86	70	*e*P	P	14 06 42.7	+2.0
HHC				pP	pP	14 07 20.6	-0.6
HHC				sP	sP	14 07 47.1	+3.2
HHC				S	S	14 11 41.2	+4.6
HHC				sS	sS	14 12 49.5	+1.0
HHC				pmax	pmax		
	comp=Z,57nm,1.1s						
HHC				pmax	pmax		
	comp=Z,190nm,5.2s						
GYA	Guiyang	31.97	98	⇑*i*P	P	14 06 42.1	+0.2
GYA				pP	pP	14 07 23.2	+0.9
GYA				sP	sP	14 07 45.4	+0.4
GYA				PP	PnPn	14 07 56.5	+0.9
GYA				S	S	14 11 39.7	+1.0
GYA				sS	sS	14 12 49.0	-1.5
GYA				ScP	ScP	14 12 53.2	+1.5
GYA				SS	SnSn	14 13 46.6	-6.5
GYA				ScS	ScS	14 16 46.5	-4.4
GYA				pmax	pmax		
	comp=Z,250nm,1.0s						
GYA				pmax	pmax		
	comp=Z,430nm,4.4s						
GYA				LR	LR		
	comp=Z,2µm,16.2s						
GYA				LR	LR		
	comp=Z,2µm,16.0s						
GYA				LR	LR		
	comp=Z,2µm,15.8s						
ISP	Isparta	32.01	285	⇑*i*P	P	14 06 42.9	+0.8
ISP	Isparta	32.01	285	*e*P	P	14 06 42.7	+0.6
	comp=Z,34nm,0.8s						
ISP	Isparta	32.01	285*c*	*i*P	P	14 06 42.7	+0.6
ISP				pmax	pmax		
	comp=Z,45nm,0.9s						
UMPA	Umpang Tak	32.02	122	P	P	14 06 44.6	+2.3
	comp=Z,202nm,0.9s,comp=Z,2µm						
DAMY	Dhamar	32.18	234	*e*P	P	14 06 45.4	+1.3
	comp=Z,68nm,1.0s						
KORT	Korkueli	32.30	283	*i* P	P	14 06 44.8	+0.1
BRDR	BURDUR-Merkez	32.39	285	*i* P	P	14 06 45.7	+0.3
PHIT	Phitsanulok	32.44	119	P	P	14 06 47.1	+1.3
	comp=Z,683nm,0.9s,comp=Z,5µm						
GDZ	Gediz	32.61	287	*i* P	P	14 06 47.7	+0.4
TLCR		32.66	299	⇑*i*P	P	14 06 49.0	+1.5
TLCR		32.66	299	⇑P	P	14 06 49.0	+1.5
ENH	Enshi	32.68	90	*e*P	P	14 06 49.1	+1.2
	comp=Z,298nm,0.8s						
ENH				LR	LR		
	comp=Z,2µm,19.0s						
KIS	Kishinev	32.72	302	⇑*i*P	P	14 06 48.0	0.0
	comp=Z,1µm,1.0s						
KIS	Kishinev	32.72	302	⇑*i*P	P	14 06 49.7	+1.7
KIS	Kishinev	32.72	302α	*i*P	P	14 06 48.0	0.0
KIS				*i*		14 08 02.0	
KIS				*e*		14 11 56.0	
KIS				pmax	pmax		
	comp=Z,1µm,1.0s						
KIS				pmax	pmax		
	comp=Z,1µm,1.0s						
AKASG	Malin Array Be	32.86	309	P	P	14 06 49.6	+0.4
	comp=Z,290nm,0.6s,baz=81,slow=7.3,SNR=748						
AKASG				ScP	ScP	14 12 53.0	-1.1
	comp=Z,14nm,0.8s,baz=80,slow=3.9,SNR=6.9						
AKBB	Malin Array Si	32.86	309	*e*P	P	14 06 48.8	-0.4
	comp=Z,460nm,0.8s						
KIEV	Kiev	32.87	309	*e*P	P	14 06 48.8	-0.5
	comp=Z,426nm,0.8s						
KIEV				LR	LR		
	comp=Z,2µm,20.0s						
KIEV	Kiev	32.87	309	*i* P	P	14 06 49.5	+0.3
	SNR=13						
KIEV	Kiev	32.87	309*d*	*i*P	P	14 06 49.2	0.0
KIEV				pmax	pmax		
	comp=Z,474nm,0.8s						
GOLH	Golhisar	32.87	284	*i* P	P	14 06 49.3	-0.2
UTHA	Uthaitani	32.88	122	P	P	14 06 50.8	+1.1
	comp=Z,201nm,0.9s,comp=Z,2µm						
AK11	Malin Array Si	32.89	309	*e*P	P	14 06 49.5	+0.1
TIRR	Tirgusor	32.95	297	*e*P	P	14 06 50.8	+0.8
	comp=Z,61nm,1.0s						
TIRR	Tirgusor	32.95	297	*e*P	P	14 06 50.8	+0.8
TIRR				pmax	pmax		
	comp=Z,61nm,1.0s						
TIY	Taiyuan	32.97	75	*e*P	P	14 06 52.7	+2.3
TIY				pP	pP	14 07 33.1	+2.1
TIY				S	S	14 11 57.1	+3.2
TIY				sS	sS	14 13 07.2	+1.2
TIY				pmax	pmax		
	comp=Z,110nm,0.7s						
TIY				LR	LR		
	comp=Z,1µm,7.9s						
TIY				LR	LR		
	comp=Z,970nm,5.5s						
TIY				LR	LR		
	comp=Z,800nm,11.3s						
AKAS	Kas	33.05	282	*i* P	P	14 06 50.4	-0.8
KSL	Kastellorizon	33.08	282	P	P	14 06 50.8	-0.5
KSL	Kastellorizon	33.08	282	P	P	14 06 50.8	-0.5
SORM	Soroca	33.11	304	⇑*i*P	P	14 06 52.2	+0.8
SORM	Soroca	33.11	304	⇑P	P	14 06 52.2	+0.8
CFR	Carcaliu	33.14	299	⇓*i*P	P	14 06 52.7	+1.0
CFR	Carcaliu	33.14	299	⇓P	P	14 06 52.7	+1.0
DEMI	Demirci	33.20	287	*i* P	P	14 06 53.7	+1.3
PBKT	Sadao Pong	33.24	119	P	P	14 06 53.8	+1.0
	comp=Z,680nm,1.0s,comp=Z,8µm						
HARR	Harsova	33.29	298	⇓*i*P	P	14 06 54.4	+1.4
HARR	Harsova	33.29	298	⇓P	P	14 06 54.4	+1.4
DURS	Dursunbey	33.30	288	*i* P	P	14 06 50.5	-2.7
TAVA	DENIZLI_Tavas	33.33	284	*i* P	P	14 06 53.1	-0.4
ICOR	Ion Corvin	33.40	297	⇓*i*P	P	14 06 55.9	+2.0
MANT	Manisa	33.42	286	*i* P	P	14 06 54.2	-0.3
MANT	Manisa	33.42	286	*e*P	P	14 06 55.7	+1.3
	comp=Z,437nm,1.1s						
MANT				*e*pP	pP	14 07 39.3	+4.3
SRDT	SRDT	33.52	124	P	P	14 06 56.2	+1.0
	comp=Z,969nm,1.0s,comp=Z,9µm						
IAS	Iasi	33.59	302	⇓*i*P	P	14 06 56.5	+1.0
IAS	Iasi	33.59	302	⇓P	P	14 06 56.5	+1.0
DALY	Dalyan (Mu˜la	33.67	283	*i* P	P	14 06 56.1	-0.2
TURN	Turunc	33.70	284	*i* P	P	14 06 59.9	+3.4
CIT	Chita	33.72	49	*e*P	P	14 06 56.6	-0.1
CIT				*e*		14 07 40.2	
CIT				*e*S	S	14 12 07.8	+2.7
CIT				pmax	pmax		
	comp=Z,270nm,1.1s						
PRD	Provadia	33.73	295	P	P	14 06 58.0	+1.2
PETR	Petresti	33.78	300	⇑*i*P	P	14 07 00.3	+3.1
STEP	BALIKESIR_Sava	33.92	288	*i* P	P	14 06 59.4	+0.9
PGOR	Pogoanele	33.96	298	⇓*i*P	P	14 07 01.0	+2.2
AYDN	Tasoluk	34.10	285	*i* P	P	14 07 00.1	0.0
VRI	Vrincioaia	34.13	300	⇓*i*P	P	14 07 02.1	+1.8
VRI	Vrincioaia	34.13	300	⇓P	P	14 07 02.1	+1.8
PLOR	Plostina	34.19	300	⇑*i*P	P	14 07 03.0	+2.2
PLOR	Plostina	34.19	300	⇑P	P	14 07 03.0	+2.2
TESR	Tescani	34.19	301	⇑*i*P	P	14 07 02.1	+1.4
ARG	Arkhangelos	34.22	283	P	P	14 07 01.4	+0.3
ARG	Arkhangelos	34.22	283	P	P	14 07 01.4	+0.3
ARG	Arkhangelos	34.22	283	P	P	14 07 01.4	+0.3
ISR	Istrita	34.27	299	⇑*i*P	P	14 07 04.7	+3.2
ISR	Istrita	34.27	299	⇑P	P	14 07 04.7	+3.2
MICGM	Minsk	34.42	315	⇑*i*P	P	14 07 03.0	+0.4
MICGM				PM		14 07 04.0	
	comp=Z,3.0nm,1.0s						
MICGM				PM		14 07 04.0	
	comp=N,0.5nm,1.0s						
MICGM				PM		14 07 04.0	
	comp=E,1.5nm,1.0s						
MICGM				*e*pP	pP	14 07 52.0	+8.7
MICGM				*e*PP	sP	14 08 14.0	+8.0
MICGM				*e*PPP	PPP	14 08 30.0	
MICGM				*e*PcP	PcP	14 09 40.0	+6.7
MICGM				*e*S	S	14 12 16.0	+0.4
MICGM				*e*sS	sS	14 13 30.0	+2.1
MICGM				*e*SS	SS	14 14 14.0	-37
MICGM				*e*SSS	SSS	14 14 30.0	
MICGM				*e*LR	LR	14 18 40.0	
MNK	Minsk	34.42	315	⇑*i*P	P	14 07 03.0	+0.4
MNK				*e*		14 09 40.0	
MNK				*e*S	S	14 12 16.0	+0.4
PRAR	RASCA	34.50	302	⇓*i*P	P	14 07 04.7	+1.3
BIZ	Bicaz	34.57	302	⇓*i*P	P	14 07 05.7	+1.7
BODT	Bodrum	34.66	284	P	P	14 07 04.8	-0.1
BODT	Bodrum	34.66	284	P	P	14 07 04.8	-0.1
MLR	Muntele Rosu	34.69	299	P	P	14 07 07.2	+2.1
	comp=E,72nm,0.9s,baz=95,slow=8.0,SNR=270						
MLR				pP	pP	14 07 47.4	+1.4
	comp=E,72nm,1.1s,baz=30,slow=5.9,SNR=4.3						
MLR				ScP	ScP	14 13 00.3	-0.6
	comp=E,3.4nm,0.8s,baz=145,slow=12,SNR=3.7						
MLR	Muntele Rosu	34.69	299	⇑*i*P	P	14 07 07.6	+2.5
MLR	Muntele Rosu	34.69	299	*e*P	P	14 07 06.9	+1.7
	comp=E,427nm,1.0s						
MLR				pP	pP	14 07 47.4	+1.4
MLR				ScP	ScP	14 13 00.3	-0.6
MLR	Muntele Rosu	34.69	299	⇑P	P	14 07 07.6	+2.5
SGRR	Singureni	34.71	297	⇓*i*P	P	14 07 07.3	+2.1
BAYC	CANAKKALE_Bayr	34.75	289	*i* P	P	14 07 06.3	+0.6
SZH	Strazhica	34.80	295	P	P	14 07 07.0	+1.0
PUL	Pulkovo	34.84	325*c*	*i*P	P	14 07 07.6	+1.5
PUL				pmax	pmax		
	comp=Z,1µm,1.1s						
SMG	Samos	34.90	286	P	P	14 07 07.5	+0.6
SMG	Samos	34.90	286	P	P	14 07 07.5	+0.6
PHET	Kaeng Krachan	34.90	125	P	P	14 07 08.5	+1.4
	comp=Z,291nm,0.9s,comp=Z,2µm						
URLA	Izmir	34.96	287	*i* P	P	14 07 07.2	-0.2
ALN	Alexandroupoli	34.96	291	*e*P	P	14 07 08.6	+1.2
	comp=Z,54nm,1.1s						
ALN	Alexandroupoli	34.96	291	P	P	14 07 08.1	+0.7
ALN	Alexandroupoli	34.96	291	*e*P	P	14 07 08.6	+1.2
ALN				pmax	pmax		
	comp=Z,54nm,1.1s						
PRK	Paraskevi	35.04	288	P	P	14 07 08.7	+0.6
PRK	Paraskevi	35.04	288	P	P	14 07 08.7	+0.6
PRK	Paraskevi	35.04	288	P	P	14 07 08.7	+0.6
DOPR	Dopca	35.07	300	⇑*i*P	P	14 07 10.5	+2.2
NACGM	Naroch	35.13	316	*e*P	P	14 07 09.0	+0.3
NACGM				*e*P	P	14 07 09.0	+0.3
NACGM				*e*sP	sP	14 08 14.0	+1.8
NACGM				*e*PP	PP	14 08 30.0	-2.5
NACGM				*e*S	S	14 12 28.0	+1.5
KARP	Karpathos	35.14	282	*e*P	P	14 07 09.5	+0.5
	comp=Z,582nm,1.0s						
KARP	Karpathos	35.14	282	P	P	14 07 09.4	+0.4
SKNT	Sakolnakorn	35.15	115	P	P	14 07 09.2	0.0
	comp=Z,475nm,1.0s,comp=Z,4µm						
GADA	Gvkgeada	35.18	290	P	P	14 07 10.0	+0.8
GADA	Gvkgeada	35.18	290	P	P	14 07 10.0	+0.8
BURAR	Bucovina Array	35.19	303	⇑*i*P	P	14 07 10.7	+1.3
BURAR	Bucovina Array	35.19	303	⇑P	P	14 07 10.7	+1.3
BUR04	Bucovina Ar. S	35.20	303	*e*P	P	14 07 08.9	-0.5
BUR08	Bucovina Ar. S	35.20	303	*e*P	P	14 07 10.5	+1.0
IDID	Didziasalis	35.25	316	*e*P	P	14 07 10.8	+1.1
IDID				IAmb	IAmb	14 07 12.6	
	comp=Z,414nm,1.0s						
RDO	Rodhopi	35.31	292	P	P	14 07 11.4	+1.0
RDO	Rodhopi	35.31	292	P	P	14 07 11.4	+1.0
MTUR	Matau	35.31	299	⇓*i*P	P	14 07 12.5	+2.0
MTUR	Matau	35.31	299	⇓P	P	14 07 12.5	+2.0
VOIR		35.32	299	⇑*i*P	P	14 07 11.9	+1.4
VOIR		35.32	299	⇑P	P	14 07 11.9	+1.4
KDZ	Kurdzhali	35.34	293	P	P	14 07 11.0	+0.4
CHOS	Chios island	35.37	287	P	P	14 07 11.8	+0.8
CHOS	Chios island	35.37	287	P	P	14 07 11.8	+0.8
SIGR	SIGRI	35.37	288	P	P	14 07 09.3	-1.6
SIGR	SIGRI	35.37	288	P	P	14 07 09.3	-1.6
HUMR	Humele	35.41	298	⇑*i*P	P	14 07 13.1	+2.0
BOD	Bodaibo	35.41	39	⇓*i*P	P	14 07 11.0	+0.1
BOD				*e*		14 07 53.8	
BOD				*e*		14 17 04.3	
BOD				pmax	pmax		
	comp=Z,140nm,1.4s						
SMTH	Samothraki Isl	35.41	291	P	P	14 07 11.7	+0.4
SMTH	Samothraki Isl	35.41	291	P	P	14 07 11.7	+0.4
ATD	Arta Tunnel	35.45	233	*e*P	P	14 07 13.6	+1.8
	comp=Z,187nm,1.0s						
BJT	Baijiatuau	35.45	70	*e*P	P	14 07 11.3	-0.2
	comp=Z,25nm,0.6s						
BJT	Baijiatuau	35.45	70	*e*P	P	14 07 11.3	-0.2
BJT				pmax	pmax		
	comp=Z,25nm,0.6s						
BJI	Beijing	35.45	70	P	P	14 07 13.7	+2.2
BJI				pmax	pmax		
	comp=Z,49nm,1.1s						
IIGN	Ignalina	35.55	316	IAmb	IAmb	14 07 20.2	
	comp=Z,509nm,0.9s						
ARR	Arges	35.61	299	⇓*i*P	P	14 07 14.8	+1.8
IZAR	Zarasai	35.63	317	*e*P	P	14 07 14.2	+1.3
IZAR				IAmb	IAmb	14 07 15.8	
	comp=Z,417nm,0.8s						
ISAL	Salakas	35.65	317	*e*P	P	14 07 14.3	+1.2
ISAL				IAmb	IAmb	14 07 16.1	
	comp=Z,304nm,0.9s						
LIA	Limnos Island	35.76	290	P	P	14 07 14.9	+0.7
LIA	Limnos Island	35.76	290	P	P	14 07 14.9	+0.7
ARCR	ARCALIA	35.77	302	⇑*i*P	P	14 07 16.8	+2.6
AMGA	Amorgos Island	35.82	284	P	P	14 07 14.9	+0.1
RZN	Rozhen	35.85	293	P	P	14 07 15.0	-0.2
ZKR	Zakros	36.00	281	P	P	14 07 16.6	+0.3
ZKR	Zakros	36.00	281	P	P	14 07 16.6	+0.3
THAS	Thassos island	36.00	291	P	P	14 07 16.6	+0.4
APE	Apeiranthos	36.05	285	⇑*i*P	P	14 07 17.7	+0.9
APE	Apeiranthos	36.05	285	P	P	14 07 17.2	+0.4
APE	Apeiranthos	36.05	285	P	P	14 07 17.2	+0.4
APE	Apeiranthos	36.05	285*c*	*i*P	P	14 07 17.4	+0.6
APE				pmax	pmax		
	comp=Z,249nm,1.1s						
LVV	L’vov	36.07	307	*e*P	P	14 07 17.8	+1.1
VSU	Vasula	36.11	322*c*	*e*P	P	14 07 17.3	+0.4
PGB	Panagyurishte	36.16	294	P	P	14 07 18.5	+0.8
LOT	Lotru	36.22	299	⇑*i*P	P	14 07 20.2	+2.0
SANT	Santorini	36.27	284	⇑*i*P	P	14 07 18.8	+0.1
SANT	Santorini	36.27	284	*e*P	P	14 07 18.5	-0.2
	comp=Z,251nm,1.2s						
CJR	Cluj-Napoca	36.29	301	⇑*i*P	P	14 07 20.7	+2.0
CJR	Cluj-Napoca	36.29	301	⇑P	P	14 07 20.7	+2.0
IOSP	Ios island	36.32	284	P	P	14 07 18.9	-0.1
BMR	Baia Mare	36.36	303	⇑*i*P	P	14 07 21.4	+2.2
BMR	Baia Mare	36.36	303	⇑P	P	14 07 21.4	+2.2
WHN	Wuhan	36.49	86	⇑P	P	14 07 21.5	+1.0
NVR	Nevrokopi	36.54	292	P	P	14 07 21.8	+1.0
NVR	Nevrokopi	36.54	292	P	P	14 07 21.8	+1.0
LAST	Lasithi	36.57	282	P	P	14 07 21.8	+0.6
LAST	Lasithi	36.57	282	P	P	14 07 21.8	+0.6
OUR	Ouranopolis	36.60	291	P	P	14 07 19.6	-1.7
OUR	Ouranopolis	36.60	291	P	P	14 07 19.6	-1.7
OUR	Ouranopolis	36.60	291	P	P	14 07 19.6	-1.7
MMB	Musomiste	36.60	293	P	P	14 07 21.0	-0.4
KARY	Karystos	36.69	287	P	P	14 07 23.0	+0.9
SRS	Serrai	36.77	292	P	P	14 07 23.2	+0.4
SRS	Serrai	36.77	292	P	P	14 07 23.2	+0.4
SRS	Serrai	36.77	292	P	P	14 07 23.2	+0.4
DEV	Deva	36.80	300	⇑*i*P	P	14 07 25.2	+2.2
DEV	Deva	36.80	300	⇑P	P	14 07 25.2	+2.2
CHBT	CHBT	36.83	122	P	P	14 07 25.0	+1.5
	comp=Z,95nm,0.5s,comp=Z,2µm						
SERI	Serifos	36.84	285	P	P	14 07 23.0	-0.5
VTS	Vitosha	36.86	294	⇑*i*P	P	14 07 25.2	+1.5
VTS	Vitosha	36.86	294	*e*P	P	14 07 24.9	+1.2
	comp=Z,48nm,0.9s						
VTS	Vitosha	36.86	294	P	P	14 07 24.3	+0.6
VTS	Vitosha	36.86	294	⇑P	P	14 07 25.2	+1.5
AOS	Alonnisos	36.88	289	P	P	14 07 24.0	+0.3
AOS	Alonnisos	36.88	289	P	P	14 07 24.0	+0.3
PAIG	Paliouri	36.90	290	P	P	14 07 24.7	+0.9
PAIG	Paliouri	36.90	290	P	P	14 07 24.7	+0.9
DRGR		36.90	302	⇑*i*P	P	14 07 25.5	+1.6
DRGR		36.90	302	⇑P	P	14 07 25.5	+1.6
KWP	Kalwaria Pacla	36.92	306	*i* P	P	14 07 25.4	+1.5
KWP				*e*PP	PnPn	14 08 54.7	-0.4
KWP				*i* S	S	14 12 57.7	+3.8
KWP	Kalwaria Pacla	36.92	306	*e*P	P	14 07 25.3	+1.3
	comp=Z,4µm,1.1s						
KWP	Kalwaria Pacla	36.92	306	⇑*i*P	P	14 07 25.4	+1.5
KWP				*e*		14 08 54.7	
KWP				*i* S	S	14 12 57.7	+3.8
TIA	Tai’an	36.97	76	P	P	14 07 25.7	+1.2
TIA				pmax	pmax		
	comp=Z,130nm,1.3s						
IDI	Anoyia	37.00	282	P	P	14 07 24.6	-0.2
	comp=Z,41nm,0.3s,baz=50,slow=12,SNR=56						
IDI				pP	pP	14 08 07.5	+1.4
	comp=Z,54nm,0.6s,baz=96,slow=10,SNR=2.8						
IDI	Anoyia	37.00	282	⇓*i*P	P	14 07 24.9	+0.1
IDI	Anoyia	37.00	282	*e*P	P	14 07 24.5	-0.4
	comp=Z,176nm,1.2s						
IDI				pP	pP	14 08 07.5	+1.4
TRPA	Tarpa	37.00	304	⇑*i*P	P	14 07 26.6	+2.0
TRPA	Tarpa	37.00	304	⇑*e*P	P	14 07 26.4	+1.8
TRPA	Tarpa	37.00	304	⇑*e*S	S	14 13 09.6	+15
SUW	Suwalki	37.03	314	*i* P	P	14 07 25.4	+0.6
SUW				*e*PP	PP	14 08 53.2	-0.1
SUW				*i* S	S	14 12 57.2	+1.8

SUW	Suwalki	37.03	314	eP	P	14 07 24.6	-0.2
	comp=Z,677nm,0.8s						
SUW	Suwalki	37.03	314	⇑iP	P	14 07 25.4	+0.6
SUW				e		14 08 53.2	
SUW				i S	S	14 12 57.2	+1.8
KKB	Krupnik	37.04	293	P	P	14 07 25.0	-0.1
PTL	Penteli	37.12	287	P	P	14 07 26.6	+0.8
PTL	Penteli	37.12	287	P	P	14 07 26.6	+0.8
UZH	Uzhgorod	37.17	305	eP	P	14 07 25.3	-0.7
UZH				e		14 08 55.9	
UZH				eS	S	14 12 58.5	+0.9
UZH				eSS	SS	14 15 38.9	-10
SKIA	Skiathos	37.20	289	P	P	14 07 26.9	+0.5
ATHU	Athens Univers	37.20	287	P	P	14 07 27.0	+0.5
ATHU	Athens Univers	37.20	287	P	P	14 07 27.0	+0.5
HERR	Herculane	37.21	298	⇓iP	P	14 07 27.0	+0.6
VLY	Voula,Athens	37.22	287	P	P	14 07 27.0	+0.4
VLY	Voula,Athens	37.22	287	P	P	14 07 27.0	+0.4
ATH	Athens Observa	37.26	287	P	P	14 07 27.5	+0.6
ATH	Athens Observa	37.26	287	P	P	14 07 27.5	+0.6
KNT	Kendrikon	37.28	292	P	P	14 07 27.5	+0.4
KNT	Kendrikon	37.28	292	P	P	14 07 27.5	+0.4
NEO	Neokhori	37.36	289	P	P	14 07 28.2	+0.4
NEO	Neokhori	37.36	289	P	P	14 07 28.2	+0.4
HIA	Hailar	37.37	54	P	P	14 07 25.3	-2.4
	comp=Z,16nm,0.4s						
HIA				LR	LR		
	comp=Z,1µm,19.0s						
HIA	Hailar	37.37	54	P	P	14 07 25.3	-2.4
HIA				pmax	pmax		
	comp=Z,16nm,0.4s						
HIA				MLR	MLR		
	comp=Z,1µm,19.0s						
XOR	Xorichti	37.37	289	P	P	14 07 28.2	+0.3
XOR	Xorichti	37.37	289	P	P	14 07 28.2	+0.3
FIA1	FINESS Array S	37.42	326	eP	P	14 07 28.0	+0.1
FINES	FINESS Array B	37.42	326	P	P	14 07 28.6	+0.7
	comp=Z,491nm,0.7s,baz=101,slow=9.9,SNR=702						
FINES				PP	PP	14 08 55.2	-2.2
	comp=Z,156nm,0.8s,baz=95,slow=12,SNR=6.1						
FINES				LR	LR	14 24 55.5	
	comp=Z,757nm,18.3s,baz=129,slow=39						
LTVH	L˜'tav˜'rtes,	37.44	303	⇑eP	P	14 07 31.7	+3.4
LTVH	L˜'tav˜'rtes,	37.44	303	⇓eS	S	14 13 12.8	+11
SMIA	Simia	37.45	288	P	P	14 07 29.1	+0.5
VAY	Valandovo	37.50	293	P	P	14 07 29.6	+0.7
VAY	Valandovo	37.50	293	P	P	14 07 29.6	+0.7
VAY	Valandovo	37.50	293	i Pn	P	14 07 29.6	+0.7
VAY	Valandovo	37.50	293	P	P	14 07 29.6	+0.7
VILL	Villia	37.53	287	P	P	14 07 29.1	-0.1
FYTO	Fytoko, Volos	37.56	289	P	P	14 07 29.8	+0.4
FYTO	Fytoko, Volos	37.56	289	P	P	14 07 29.8	+0.4
APA	Apatity	37.59	337	⇓iP	P	14 07 29.0	-0.2
APA				i S	S	14 13 05.0	+1.6
APA				i SS	SS	14 15 50.0	-6.7
APA				pmax	pmax		
	comp=Z,200nm,1.0s						
APA				MLR	MLR		
	comp=Z,5µm,11.0s						
LKR	Lokris	37.66	288	P	P	14 07 30.3	0.0
LKR	Lokris	37.66	288	P	P	14 07 30.3	0.0
IMMV	Iera Moni Meta	37.66	283	P	P	14 07 30.3	-0.1
GRG	Griva	37.69	292	P	P	14 07 30.4	-0.1
GRG	Griva	37.69	292	P	P	14 07 30.4	-0.1
GRG	Griva	37.69	292	P	P	14 07 30.4	-0.1
MDVR	Moldovita	37.71	298	⇓iP	P	14 07 31.9	+1.2
BZS	Buzias	37.72	300	⇑iP	P	14 07 32.2	+1.5
BZS	Buzias	37.72	300	⇑P	P	14 07 32.2	+1.5
CRVS	Cervenica-Dubn	37.72	305	eP	P	14 07 31.8	+1.1
CRVS				pmax	pmax		
	comp=Z,36nm,1.0s						
CRVS	Cervenica-Dubn	37.72	305	eP	P	14 07 31.8	+1.1
CRVS				ePP	PP	14 08 56.8	-4.1
CRVS				eSS	SS	14 15 59.2	-0.8
STIP	Stip	37.73	293	i Pn	P	14 07 29.4	-1.4
DID	Didima	37.73	286	P	P	14 07 29.3	-1.6
DID	Didima	37.73	286	P	P	14 07 29.3	-1.6
GVD	Gavdhos	37.75	282	P	P	14 07 30.8	-0.3
GVD	Gavdhos	37.75	282	P	P	14 07 30.8	-0.3
LIT	Litokhoron	37.77	291	eP	P	14 07 31.4	+0.2
	comp=Z,64nm,0.8s						
LIT	Litokhoron	37.77	291	P	P	14 07 31.1	-0.1
LIT	Litokhoron	37.77	291	eP	P	14 07 31.4	+0.2
LIT				pmax	pmax		
	comp=Z,64nm,0.8s						
LTK	Loutraki	37.82	287	P	P	14 07 30.8	-0.9
LTK	Loutraki	37.82	287	P	P	14 07 30.8	-0.9
PROD	Prodromos	37.82	288	P	P	14 07 31.1	-0.5
LOUT	Loutraki	37.83	287	P	P	14 07 30.8	-0.9
KRND	KRANIDI	37.83	286	P	P	14 07 30.3	-1.4
PKDT	Phuket	37.91	132	P	P	14 07 33.6	+1.0
	comp=Z,299nm,1.0s,comp=Z,2µm						
DSF	Desfina	38.08	288	P	P	14 07 32.7	-1.1
DSF	Desfina	38.08	288	P	P	14 07 32.7	-1.1
ANKY	Antikythira Is	38.09	284	P	P	14 07 32.6	-1.3
ANKY	Antikythira Is	38.09	284	P	P	14 07 32.6	-1.3
AGG	Agios Georgios	38.10	289	eP	P	14 07 34.1	+0.1
	comp=Z,670nm,1.7s						
AGG	Agios Georgios	38.10	289	P	P	14 07 33.9	-0.1
AGG	Agios Georgios	38.10	289	eP	P	14 07 34.1	+0.1
AGG				pmax	pmax		
	comp=Z,670nm,1.7s						
BSI	Banda Aceh	38.13	138	P	P	14 07 32.9	-1.5
VLI	Veliai	38.15	285	P	P	14 07 32.6	-1.8
VLI	Veliai	38.15	285	P	P	14 07 32.6	-1.8
KYTH	Kithira	38.18	284	P	P	14 07 33.7	-1.0
KYTH	Kithira	38.18	284	P	P	14 07 33.7	-1.0
KTHR	Kythira	38.22	284	P	P	14 07 34.2	-0.8
THL	Klokotos Trika	38.23	290	P	P	14 07 34.9	-0.1
SKO	Skopje	38.24	294	P	P	14 07 35.6	+0.5
SKO	Skopje	38.24	294	P	P	14 07 35.6	+0.5
SKO	Skopje	38.24	294	i Pn	P	14 07 36.0	+0.9
BEL	Belsk	38.25	310	i P	P	14 07 36.3	+1.3
BEL				eS	S	14 13 17.8	+4.1
BEL	Belsk	38.25	310	⇑iP	P	14 07 36.3	+1.3
BEL				eS	S	14 13 17.8	+4.1
KZN	Kozani	38.27	291	P	P	14 07 35.6	+0.1
KZN	Kozani	38.27	291	P	P	14 07 35.6	+0.1
KZN	Kozani	38.27	291	P	P	14 07 35.6	+0.1
QIZ	Qiongzhong	38.32	106	eP	P	14 07 35.4	-0.6
	comp=Z,265nm,1.4s						
QIZ				LR	LR		
	comp=Z,2µm,21.0s						
GUR	Goura	38.32	287	P	P	14 07 34.4	-1.6
GUR	Goura	38.32	287	P	P	14 07 34.4	-1.6
KECS	Kecovo	38.37	304	eP	P	14 07 37.6	+1.5
KECS				pmax	pmax		
	comp=Z,36nm,0.6s						
KECS	Kecovo	38.37	304	eP	P	14 07 37.6	+1.5
VLX	Vlachokerasia	38.43	286	P	P	14 07 35.6	-1.2
VLX	Vlachokerasia	38.43	286	P	P	14 07 35.6	-1.2
TRIZ	Trizonia	38.43	288	P	P	14 07 36.1	-0.6
SERG	Sergoula	38.44	288	P	P	14 07 35.7	-1.1
KLV	Kalavryta, Ach	38.45	287	P	P	14 07 35.1	-1.8
KLV	Kalavryta, Ach	38.45	287	P	P	14 07 35.1	-1.8
KRUS	Krusevo	38.48	293	i Pn	P	14 07 37.6	+0.4
BIA	Bitola	38.48	292	ePn	P	14 07 37.8	+0.7
FNA	Florina	38.48	292	eP	P	14 07 37.5	+0.3
FNA	Florina	38.48	292	P	P	14 07 37.3	+0.1
FNA	Florina	38.48	292	eP	P	14 07 37.5	+0.3
NIE	Niedzica	38.48	306	i P	P	14 07 39.0	+1.9
NIE				eS	S	14 13 23.5	+6.0
NIE	Niedzica	38.48	306	⇑iP	P	14 07 38.9	+1.9
NIE				eS	S	14 13 23.5	+6.0
ANX	Ano Chora	38.50	288	P	P	14 07 36.7	-0.7
EVR	Evrytania	38.52	289	P	P	14 07 37.6	+0.1
EVR	Evrytania	38.52	289	P	P	14 07 37.6	+0.1
LAKA	Lakka	38.53	288	P	P	14 07 36.6	-1.0
LAKA	Lakka	38.53	288	P	P	14 07 36.6	-1.0
EFP	Efpalio	38.55	288	P	P	14 07 37.1	-0.6
DYR	Agios Nikonas	38.61	285	P	P	14 07 37.3	-1.0
KPRO	Kipourio	38.64	291	P	P	14 07 38.5	-0.1
PENT	Pentalofos	38.77	291	P	P	14 07 40.0	+0.4
TRTT	Trang	38.78	130	P	P	14 07 40.3	+0.5
	comp=Z,212nm,1.0s,comp=Z,2µm						
PSZ	Piszkesteto	38.78	303	⇑iP	P	14 07 41.3	+1.7
PSZ	Piszkesteto	38.78	303	⇑eP	P	14 07 41.1	+1.5
PSZ	Piszkesteto	38.78	303	eP	P	14 07 41.0	+1.4
	comp=Z,53nm,0.8s						
PSZ	Piszkesteto	38.78	303	⇑P	P	14 07 41.3	+1.7
NEST	Nestorio	38.79	291	P	P	14 07 40.0	+0.2
PVO	Paravola	38.80	288	P	P	14 07 40.0	+0.3
DRO	Drossia	38.80	287	P	P	14 07 38.8	-1.1
OJC	Ojcow	38.81	307	i P	P	14 07 40.6	+0.9
OJC				esP	sP	14 08 46.2	+2.4
OJC				ePP	PnPn	14 09 15.5	-1.8
OJC				i S	S	14 13 25.1	+2.8
OJC	Ojcow	38.81	307	eP	P	14 07 40.6	+0.9
	comp=Z,231nm,0.8s						
OJC	Ojcow	38.81	307	eP	P	14 07 40.7	+1.0
OJC				pmax	pmax		
	comp=Z,231nm,0.8s						
ITM	Ithomi	38.82	286	eP	P	14 07 39.4	-0.6
	comp=Z,50nm,0.8s						
ITM	Ithomi	38.82	286	P	P	14 07 38.7	-1.3
KLNR	Kaliningrad	38.84	314	c iP	P	14 07 40.6	+0.8
KLNR				pmax	pmax		
	comp=Z,1µm,0.8s						
GZH	Guangzhou	38.90	98	P	P	14 07 41.1	+0.3
GZH				S	S	14 13 25.2	+1.0
GZH				pmax	pmax		
	comp=Z,960nm,4.7s						
AMT	Artemida-Makis	38.91	287	P	P	14 07 39.5	-1.2
RLS	Riolos of Patr	38.97	288	P	P	14 07 40.6	-0.6
RLS	Riolos of Patr	38.97	288	P	P	14 07 40.6	-0.6
DIVS	Divibare	39.01	297	eP	P	14 07 42.1	+0.5
	comp=Z,128nm,1.0s						
DSL	Palaion Diasel	39.01	289	P	P	14 07 41.7	+0.1
DSL	Palaion Diasel	39.01	289	P	P	14 07 41.7	+0.1
PHP	Peshkopia	39.02	294	P	P	14 07 41.0	-0.7
PHP	Peshkopia	39.02	294	P	P	14 07 41.0	-0.7
PHP	Peshkopia	39.02	294	P	P	14 07 41.0	-0.7
LANS	Liptovska Anna	39.03	305	eP	P	14 07 43.3	+1.7
LANS	Liptovska Anna	39.03	305	eP	P	14 07 43.3	+1.7
PYL	PYLOS	39.04	286	P	P	14 07 40.2	-1.6
PYL	PYLOS	39.04	286	P	P	14 07 40.2	-1.6
PDO	Prodromos	39.06	289	P	P	14 07 41.6	-0.4
JAN	Janina	39.09	290	P	P	14 07 42.4	+0.2
JAN	Janina	39.09	290	P	P	14 07 42.4	+0.2
JAN	Janina	39.09	290	P	P	14 07 42.4	+0.2
PVY	Plav	39.23	295	⇑iP	P	14 07 43.8	+0.3
IVA	Berane	39.24	295	eP	P	14 07 44.5	+1.0
LHMI	Lhok Sumawe	39.26	136	P	P	14 07 45.1	+1.3
	comp=Z,1µm,1.1s,comp=Z,10µm						
LHMI	Lhok Sumawe	39.26	136	eP	P	14 07 43.7	-0.1
	comp=Z,2µm,1.3s						
BUD	Budapest	39.39	303	⇑eP	P	14 07 46.1	+1.6
LKD2	Lefkada island	39.42	289	P	P	14 07 44.1	-0.9
LKD2	Lefkada island	39.42	289	P	P	14 07 44.1	-0.9
VYHS	Vyhne	39.47	304	eP	P	14 07 46.4	+1.2
VYHS				pmax	pmax		
	comp=Z,87nm,1.5s						
VYHS	Vyhne	39.47	304	eP	P	14 07 46.4	+1.2
VYHS				ePP	PnPn	14 09 23.0	-2.0
VYHS				eSS	SS	14 16 35.2	+0.5
KFL	Anninata	39.48	288	P	P	14 07 44.4	-1.0
IGT	Igoumenitsa	39.51	290	P	P	14 07 44.7	-0.9
IGT	Igoumenitsa	39.51	290	P	P	14 07 44.7	-0.9
IGT	Igoumenitsa	39.51	290	P	P	14 07 44.7	-0.9
KOME	Kolasin	39.52	295	⇑iP	P	14 07 46.6	+0.8
PLE	Pljevlja	39.54	296	⇑iP	P	14 07 46.5	+0.5
MCO	Taipa Grande	39.56	99	P	P	14 07 48.0	+1.8
SGD	Sagiada	39.56	290	P	P	14 07 45.5	-0.6
FSK	Fiskardo	39.57	288	P	P	14 07 44.7	-1.4
NJ2	Nanjing	39.58	82	eP	P	14 07 46.3	+0.1
NJ2				sP	sP	14 08 49.7	-0.6
NJ2				PP	PP	14 09 20.6	-0.7
NJ2				ScP	ScP	14 13 17.8	-1.5
NJ2				S	S	14 13 36.6	+2.5
NJ2				pmax	pmax		
	comp=Z,130nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,800nm,3.5s						
NJ2				LR	LR		
	comp=Z,1µm,13.6s						
NJ2				LR	LR		
	comp=Z,1µm,10.8s						
NJ2				LR	LR		
	comp=Z,1µm,12.5s						
VLS	Valsamata	39.61	288	P	P	14 07 45.2	-1.3
VLS	Valsamata	39.61	288	P	P	14 07 45.2	-1.3
VLS	Valsamata	39.61	288	P	P	14 07 45.2	-1.3
MORH	M˜‡r˜¡gy, Hung	39.74	301	⇑eP	P	14 07 48.7	+1.3
PDG	Podgorica	39.77	295	⇑iP	P	14 07 48.0	+0.2
TTG	Podgorica	39.77	295	⇑iP	P	14 07 47.8	0.0
TTG	Podgorica	39.77	295	eP	P	14 07 47.6	-0.2
	comp=Z,51nm,0.8s						
TTG	Podgorica	39.77	295	eP	P	14 07 47.6	-0.2
TTG				pmax	pmax		
	comp=Z,51nm,0.8s						
DL2	Dalian	39.81	71	P	P	14 07 50.0	+1.9
DL2				pP	pP	14 08 31.0	+1.2
DL2				S	S	14 13 40.8	+3.4
DL2				pmax	pmax		
	comp=Z,89nm,1.1s						
RAC	Raciborz	39.85	307	eP	P	14 07 48.8	+0.6
ULC	Ulcinj	39.86	294	⇑iP	P	14 07 48.1	-0.4
DRME	Dracevica, Mon	39.87	295	⇑iP	P	14 07 48.5	0.0
SKLT	Songkhla	39.87	130	P	P	14 07 49.3	+0.5
	comp=Z,524nm,1.0s,comp=Z,5µm						
KEK	Kerkira	39.87	291	P	P	14 07 47.3	-1.3
KEK	Kerkira	39.87	291	P	P	14 07 47.3	-1.3
OKC	Ostrava-Krasne	39.88	307	⇓eP	P	14 07 50.9	+2.4
OKC				eS	S	14 13 35.5	-2.7
OKC	Ostrava-Krasne	39.88	307	eP	P	14 07 50.9	+2.4
OKC				eS	S	14 13 35.5	-2.7
UPM	Unac-Piva	39.91	296	⇑iP	P	14 07 49.7	+0.6
CSKK	Cs˜‡kako	39.91	303	⇑eP	P	14 07 49.8	+0.9
NKME	Niksic	39.94	295	⇑iP	P	14 07 49.4	+0.2
HKC	Hong Kong Obse	39.96	99	⇑P	P	14 07 51.0	+1.5
CEME	Cevo	40.00	295	⇑iP	P	14 07 49.8	+0.1
BUM	Brajici-Budva	40.06	295	⇑iP	P	14 07 50.1	-0.1
BRY	Bratogost	40.22	296	⇑iP	P	14 07 51.8	+0.2
JAVC	Velka Javorina	40.22	305	⇑iP	P	14 07 53.5	+2.0
JAVC				eSCP	ScP	14 13 21.7	+0.1
JAVC				eS	S	14 13 48.8	+5.4
JAVC				eSS	SS	14 16 53.1	+3.4
MORC	Moravsky Berou	40.27	306	⇑iP	P	14 07 53.7	+1.9
MORC	Moravsky Berou	40.27	306	eP	P	14 07 53.1	+1.2
	comp=Z,461nm,1.5s						
MORC	Moravsky Berou	40.27	306	⇑P	P	14 07 53.7	+1.9
MORC	Moravsky Berou	40.27	306	⇑iP	P	14 07 53.2	+1.4
MORC				eSCP	ScP	14 13 21.1	-0.7
MORC				eS	S	14 13 47.0	+2.8
MORC				eSS	SS	14 16 50.8	+0.1
HCY	Herceg Novi	40.33	295	⇑iP	P	14 07 52.0	-0.3
SMOL	Smolenice	40.40	305	eP	P	14 07 54.2	+1.4
SMOL	Smolenice	40.40	305	eP	P	14 07 54.2	+1.4
GKP	Gorka Klasztor	40.49	312	eP	P	14 07 54.2	+0.8
GKP				eS	S	14 13 49.3	+2.3
GKP	Gorka Klasztor	40.49	312	⇑eP	P	14 07 54.2	+0.8
GKP				eS	S	14 13 49.3	+2.3
MODS	Modra-Piesok	40.51	304	eP	P	14 07 55.1	+1.3
MODS				pmax	pmax		
	comp=Z,105nm,1.4s						
MODS	Modra-Piesok	40.51	304	eP	P	14 07 55.1	+1.3
MODS				eSS	SS	14 17 04.9	+10
KEV	Kevo	40.75	338	eP	P	14 07 55.8	+0.4
	comp=Z,460nm,0.8s						
KEV				LR	LR		
	comp=Z,9µm,19.0s						
KEV	Kevo	40.75	338	eP	P	14 07 55.8	+0.4
KEV				pmax	pmax		
	comp=Z,460nm,0.8s						
KEV				MLR	MLR		
	comp=Z,9µm,19.0s						
KRLC	Kraliky	40.76	307	⇓eP	P	14 07 57.6	+1.8
KRLC				epP	pP	14 08 32.4	-5.3
KRLC	Kraliky	40.76	307	eP	P	14 07 57.6	+1.8
STON	Ston	40.83	296	P	P	14 07 57.2	+0.8
VRAC	Vranov	40.91	306	P	P	14 07 58.4	+1.4
	comp=Z,77nm,0.7s,baz=88,slow=8.7,SNR=114						
VRAC				ScP	ScP	14 13 24.5	+0.2
	comp=Z,20nm,0.9s,baz=67,slow=5.3,SNR=6.1						
VRAC	Vranov	40.91	306	⇑iP	P	14 07 58.8	+1.8
VRAC	Vranov	40.91	306	⇑P	P	14 07 58.8	+1.8
VRAC	Vranov	40.91	306	⇑iP	P	14 07 58.5	+1.5
VRAC				eSCP	ScP	14 13 23.6	-0.7
VRAC				eS	S	14 13 56.5	+3.0
VRAC				eSS	SS	14 17 06.7	+3.6
BLY	Banja Luka	40.92	299	⇑iP	P	14 07 58.5	+1.3
BLY	Banja Luka	40.92	299	eP	P	14 07 58.1	+0.9
	comp=Z,55nm,1.1s						
CLNS	Chul'man	40.97	43	eP	P	14 07 58.2	+0.8
CLNS				e		14 09 41.0	
CLNS				pmax	pmax		
	comp=Z,78nm,1.1s						
CLNS				pmax	pmax		
	comp=N,14nm,0.9s						
CLNS				pmax	pmax		
	comp=E,49nm,1.0s						
CLNS				pmax	pmax		
	comp=E,56nm,1.1s						
CLNS				pmax	pmax		
	comp=N,35nm,1.0s						
BEHE	Becsehely	41.00	301	⇑eP	P	14 07 59.3	+1.5
TPTI		41.02	138	P	P	14 07 56.7	-1.5
DPC	Dobruska-Polom	41.04	307	⇓eP	P	14 08 00.3	+2.2
DPC				eSCP	ScP	14 13 24.2	-0.6
DPC				eS	S	14 14 01.0	+5.5
DPC				eSS	SS	14 17 10.4	+4.6
DPC	Dobruska-Polom	41.04	307	⇓eP	P	14 08 00.3	+2.2
DPC				eS	S	14 14 01.0	+5.5
KSP	Ksiaz	41.05	308	i P	P	14 07 59.2	+1.1
KSP				eS	S	14 13 59.5	+4.0
KSP	Ksiaz	41.05	308	⇑iP	P	14 07 59.2	+1.1
KSP				eS	S	14 13 59.5	+4.0
KRUC	Moravsky	41.05	305	⇑iP	P	14 07 59.4	+1.2
KRUC				eSCP	ScP	14 13 23.9	-0.9
KRUC				eS	S	14 13 59.2	+3.6
KRUC				eSS	SS	14 17 06.1	+0.2
ARCES	ARCESS Array B	41.09	338	P	P	14 07 59.1	+0.9
	comp=N,592nm,0.7s,baz=114,slow=8.1,SNR=1031						
ARCES				pP	pP	14 08 40.7	+0.5
	comp=N,76nm,0.7s,baz=116,slow=8.2,SNR=2.4						
ARCES				LR	LR	14 26 28.1	
	comp=N,3µm,19.9s,baz=143,slow=38						
ARE0	ARCESS Array S	41.09	338	eP	P	14 07 59.1	+0.9
	comp=N,772nm,0.8s						
ARE0	ARCESS Array S	41.09	338	eP	P	14 07 59.4	+1.2
ARE0				IAmb	IAmb	14 08 00.6	
	comp=Z,796nm,0.8s						
UPC	Upice	41.24	308	⇓eP	P	14 08 01.5	+1.9
UPC				eSS	SS	14 17 12.8	+3.3
UPC	Upice	41.24	308	eP	P	14 08 01.5	+1.9
KULM	Kulim	41.36	132	eP	P	14 08 01.3	+0.2
	comp=Z,447nm,1.2s						
KOGS	Kog	41.37	301	⇑iP	P	14 08 01.7	+0.9
KOGS				eScP	ScP	14 13 25.3	-0.8
CONA	Conrad Observa	41.49	304	eP	P	14 08 03.0	+1.2
	comp=Z,110nm,0.8s,SNR=79						
CONA				eScP	ScP	14 13 26.7	+0.1
	comp=Z,33nm,1.2s						
KTK1	Kautokeino	41.56	336	eP	P	14 08 02.7	+0.7
CN2	Changchun	41.69	63	eP	P	14 08 04.7	+1.3
CN2				epP	pP	14 08 45.7	+0.2
CN2				eS	S	14 14 06.1	+1.0
CN2				pmax	pmax		
	comp=Z,30nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,640nm,17.0s						
CN2				LR	LR		
	comp=Z,860nm,17.0s						
CN2				LR	LR		
	comp=Z,990nm,19.0s						
ARSA	Arzberg	41.78	303	eP	P	14 08 05.1	+1.0
	comp=Z,34nm,1.1s,SNR=19						
ARSA				eScP	ScP	14 13 28.2	+0.4
	comp=Z,34nm,1.0s						
BSD	Bornholm Skovb	41.93	315	i P	P	14 08 04.8	-0.3
	comp=Z,491nm,1.0s						
BSD	Bornholm Skovb	41.93	315	i P	P	14 08 04.8	-0.3
BSD				pmax	pmax		
	comp=Z,490nm,1.0s						
MATE	Matera	41.99	293	⇑iP	P	14 08 06.2	+0.4
OZLJ	Ozalj	42.01	300	P	P	14 08 07.3	+1.3
GOPC	GO Pecny, Ondr	42.05	307	⇓eP	P	14 08 08.1	+1.8
GOPC				epP	pP	14 08 49.9	+1.5
GOPC				eS	S	14 14 11.4	+1.1
GOPC				eSS	SS	14 17 24.3	-1.1
GOPC	GO Pecny, Ondr	42.05	307	eP	P	14 08 08.1	+1.8
GOPC				e		14 08 49.9	
GOPC				eS	S	14 14 11.4	+1.1
GOPC				eSS	SS	14 17 24.3	-1.1
PERS	Pernice	42.12	302	⇑iP	P	14 08 07.9	+1.0
PERS				eS	S	14 14 14.7	+3.2
PERS				e		14 21 39.6	
ZEA	Zeya	42.14	48	eP	P	14 08 08.6	+1.7
ZEA				e		14 08 52.4	
ZEA				pmax	pmax		
	comp=E,62nm,0.8s						
ZEA				pmax	pmax		
	comp=N,59nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,160nm,1.0s						
PVCC	Panska Ves	42.16	308	⇓eP	P	14 08 08.9	+1.8
PVCC				eSCP	ScP	14 13 29.8	+0.6
PVCC	Panska Ves	42.16	308	eP	P	14 08 08.9	+1.8
BOJS	Bojanci	42.18	300	⇑iP	P	14 08 08.3	+1.0
BOJS				eScP	ScP	14 13 29.0	-0.4
BOJS				eS	S	14 14 14.6	+2.5
BOJS				eSS	SS	14 17 33.9	+5.9
SOKA	Soboth	42.18	302	eP	P	14 08 08.3	+0.9
	comp=Z,109nm,0.7s,SNR=83						
SOKA				eScP	ScP	14 13 29.7	+0.3
	comp=Z,51nm,1.4s,SNR=6.1						
HAMF	Hammerfest	42.18	339	eP	P	14 08 08.2	+1.2
HAMF				IAmb	IAmb	14 08 09.6	
	comp=Z,1µm,0.7s						
PRU	Pruhonice	42.20	307	⇓eP	P	14 08 09.4	+1.9
PRU				epP	pP	14 08 50.4	+0.8
PRU				eSCP	ScP	14 13 29.6	+0.2
PRU				eS	S	14 14 17.1	+4.6
PRU	Pruhonice	42.20	307	eP	P	14 08 09.4	+1.9
PRU				e		14 08 50.4	
PRU				eS	S	14 14 17.1	+4.6
IPM	Ipoh	42.23	132	eP	P	14 08 07.9	-0.2
	comp=Z,834nm,1.0s						
QZH	Quanzhou	42.23	92	⇑iP	P	14 08 09.0	+1.0
QZH				pP	pP	14 08 53.5	+3.4
QZH				sP	sP	14 09 13.5	+1.1
QZH				S	S	14 14 15.3	+1.9
QZH				sS	sS	14 15 28.2	+0.7
QZH				pmax	pmax		
	comp=Z,94nm,0.8s						
QZH				LR	LR		
	comp=Z,1µm,15.6s						
QZH				LR	LR		
	comp=Z,660nm,12.8s						
QZH				LR	LR		
	comp=Z,910nm,12.8s						
PRA	Prague	42.27	307	⇓eP	P	14 08 10.0	+2.0
PRA				epP	pP	14 08 51.9	+1.7
PRA				esP	sP	14 09 15.4	+2.9
PRA	Prague	42.27	307	eP	P	14 08 10.0	+2.0
PRA				e		14 08 51.9	
PRA				e		14 09 15.4	
TIP	Timpagrande	42.29	291	⇑iP	P	14 08 08.7	+0.3
TIP	Timpagrande	42.29	291	eP	P	14 08 08.2	-0.2
	comp=Z,168nm,1.3s						
TIP	Timpagrande	42.29	291	P	P	14 08 08.2	-0.2
PSI	Prapat	42.36	136	P	P	14 08 08.8	-0.4
	comp=Z,586nm,0.9s,baz=360,slow=6.3,SNR=125						
PSI				ScP	ScP	14 13 29.4	-1.3
	comp=Z,19nm,0.9s,baz=358,slow=0.5,SNR=3.7						
OBKA	Obir	42.53	302	i P	P	14 08 11.2	+0.9
	comp=Z,44nm,0.9s,SNR=22						
OBKA				eScP	ScP	14 13 29.6	-1.2
	comp=Z,42nm,1.4s						
BRG	Berggiesshubel	42.54	308	⇑iP	P	14 08 11.4	+1.3
	comp=Z,241nm,0.8s						
BRG				i pP	pP	14 08 48.4	-4.0
	comp=Z,55nm,1.0s						
BRG				i sP	sP	14 09 15.6	+1.0
	comp=Z,112nm,1.1s						
BRG				eSCP	ScP	14 13 29.9	-0.8
	comp=Z,92nm,1.3s						
BRG				e		14 15 03.9	
	comp=Z,23nm,1.2s						
BRG	Berggiesshubel	42.54	308	⇑iP	P	14 08 11.4	+1.3
BRG				i *PP	pP	14 08 48.4	-4.0
BRG				i *SP	sP	14 09 15.6	+1.0
BRG				pmax	pmax		
	comp=Z,241nm,0.8s						
MOA	Molln	42.56	304	eP	P	14 08 11.1	+0.6

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      comp=Z,78nm,0.8s,SNR=52
MOA                              eScP   ScP    14 13 30.9  0.0
      comp=Z,34nm,1.4s
LJU   Ljubljana        42.60 301⇑iP     P      14 08 12.0 +1.3
LJU                              epP    pP     14 08 55.0 +2.0
LJU                              esP    sP     14 09 14.7 -0.6
LJU                              ePP    PP     14 09 40.6  -13
LJU                              i PcP  PcP    14 09 57.3 -1.8
LJU                              e             14 10 51.8
LJU                              eScP   ScP    14 13 31.1  0.0
LJU                              eS     S      14 14 22.1 +3.6
LJU                              eSS    SS     14 17 43.0 +6.7
CUC   Castrocucco      42.80 292 eP     P      14 08 13.0 +0.5
      comp=Z,241nm,1.0s
RGN   Rugen            42.84 314 eP     P      14 08 14.4 +2.0
      comp=Z,887nm,0.9s
GEC2  GERESS Array S   42.84 305 eP     P      14 08 13.6 +0.8
      comp=Z,35nm,0.9s
GEC2  GERESS Array S   42.84 305 eP     P      14 08 13.6 +0.8
GEC2                              pmax  pmax
      comp=Z,35nm,0.9s
GERES GERESS Array B   42.84 305  P     P      14 08 13.3 +0.5
      comp=Z,17nm,0.7s,baz=79,slow=7.2,SNR=29
GERES                             pP    pP     14 08 55.7 +0.7
      comp=Z,19nm,0.7s,baz=70,slow=6.5,SNR=5.9
GERES                             sP    sP     14 09 18.1 +0.8
      comp=Z,12nm,0.8s,baz=79,slow=8.3,SNR=2.4
GERES                             PP    PP     14 09 55.5 -0.7
      comp=Z,38nm,0.9s,baz=76,slow=8.2,SNR=4.9
GERES                             PcP   PcP    14 09 59.8 -0.2
      comp=Z,56nm,1.0s,baz=99,slow=5.3,SNR=7.2
GERES                             ScP   ScP    14 13 31.8 -0.3
      comp=Z,17nm,0.8s,baz=83,slow=4.3,SNR=6.5
GEA0  GERESS Array S   42.84 305 eP     P      14 08 12.8 +0.1
GSI   Gunungsitoli     42.87 139  P     P      14 08 14.2 +1.0
      comp=Z,2µm,1.4s,comp=Z,19µm
GSI   Gunungsitoli     42.87 139 eP     P      14 08 14.2 +1.0
      comp=Z,2µm,1.1s
KHC   Kasperske Hory   42.89 306⇓eP     P      14 08 14.5 +1.4
KHC                              epP    pP     14 08 57.5 +2.1
KHC                              eSCP   ScP    14 13 32.7 +0.4
KHC                              eS     S      14 14 19.4 -3.3
KHC                              eSS    SS     14 17 42.4 +0.6
KHC   Kasperske Hory   42.89 306 eP     P      14 08 14.1 +1.0
      comp=Z,97nm,1.8s
KHC   Kasperske Hory   42.89 306 eP     P      14 08 14.5 +1.4
KHC                              e             14 08 57.5
KHC                              eS     S      14 14 19.4 -3.3
KHC                              eSS    SS     14 17 42.4 +0.6
HFS   Hagfors          42.99 322  P     P      14 08 14.3 +0.6
      comp=Z,701nm,0.7s,baz=96,slow=11,SNR=994
HFS                               LR    LR     14 29 07.0
      comp=Z,2µm,18.6s,baz=96,slow=40
CLL   Collm            43.10 309⇑iP     P      14 08 15.3 +0.6
      comp=Z,156nm,0.9s
CLL                              i sP   sP     14 09 19.7 +0.4
CLL                              ePP    PcP    14 10 00.0 -0.7
CLL                              epPP          14 10 33.0
CLL                              ePPP   PPP    14 10 42.0
CLL                              esPP          14 10 57.0
CLL                              i ScP  ScP    14 13 32.8 -0.2
      comp=Z,56nm,1.2s
CLL                              eS     S      14 14 24.0 -1.5
CLL                              esS    sS     14 15 48.0 +8.1
CLL                              eSS    SS     14 17 46.0 +0.4
CLL                              esSSS         14 20 30.0
CLL                              e             14 21 30.0
CLL   Collm            43.10 309 eP     P      14 08 15.3 +0.6
      comp=Z,240nm,1.3s
CLL   Collm            43.10 309⇑iP     P      14 08 15.3 +0.6
CLL                              i *SP  sP     14 09 19.7 +0.4
CLL                              eS     S      14 14 24.0 -1.5
CLL                               pmax  pmax
      comp=Z,156nm,0.9s
CADS  Cadrg            43.12 301⇑iP     P      14 08 15.5 +0.5
CADS                             eS     S      14 14 29.2 +3.1
MYKA  Terra Mystica    43.13 302 eP     P      14 08 15.8 +0.7
      comp=Z,35nm,0.9s,SNR=20
MYKA                             eScP   ScP    14 13 33.1 -0.2
      comp=Z,7.7nm,0.8s
CEL   Celeste          43.17 290 eP     P      14 08 15.8 +0.3
      comp=Z,159nm,1.2s
TRI   Trieste          43.18 301 eP     P      14 08 15.6 +0.3
      comp=Z,82nm,1.0s
TRI   Trieste          43.18 301 eP     P      14 08 15.6 +0.3
TRI                               pmax  pmax
      comp=Z,82nm,1.0s
TRO   Tromso           43.22 336 eP     P      14 08 16.5 +1.2
TRO                               IAmb  IAmb   14 08 17.1
      comp=Z,582nm,1.2s
KBA   Koelnbreinsper   43.27 303 eP     P      14 08 17.2 +0.8
      comp=Z,26nm,0.5s,SNR=25
KBA                              eScP   ScP    14 13 33.4 -0.6
      comp=Z,21nm,1.1s
COP   Copenhagen       43.36 315 i P    P      14 08 18.1 +1.5
      comp=Z,527nm,0.9s
COP   Copenhagen       43.36 315 i P    P      14 08 18.1 +1.5
COP                               pmax  pmax
      comp=Z,530nm,0.9s
MSEY  Mahe Island      43.43 203 eP     P      14 08 18.9 +1.3
      comp=Z,70nm,0.9s
MSEY                              LR    LR
      comp=Z,1µm,20.0s
MSEY  Mahe Island      43.43 203 i P    P      14 08 19.1 +1.4
      SNR=6.1
MSEY  Mahe Island      43.43 203 i P    P      14 08 20.9 +3.2
LLD   Lille Linde      43.48 315 i P    P      14 08 19.5 +1.9
      comp=Z,812nm,0.9s
LLD   Lille Linde      43.48 315 i P    P      14 08 19.5 +1.9
LLD                               pmax  pmax
      comp=Z,810nm,0.9s
NKC   Novy Kostel      43.53 307⇓eP     P      14 08 19.1 +0.9
NKC   Novy Kostel      43.53 307 eP     P      14 08 19.1 +0.9
MOR8  Moi Rana         43.76 331 eP     P      14 08 19.8 +0.1
MOR8                              IAmb  IAmb   14 08 21.0
      comp=Z,1µm,0.8s
STEI  Steigen          43.92 333 eP     P      14 08 22.0 +1.1
STEI                              IAmb  IAmb   14 08 22.9
      comp=Z,723nm,0.9s
INCN  Inchon           43.98  71 eP     P      14 08 23.8 +1.9
      comp=Z,50nm,0.8s
INCN                              LR    LR
      comp=Z,1µm,20.0s
YAK   Yakutsk          44.02  35  P     P      14 08 22.0 +0.3
      comp=Z,178nm,0.6s,baz=283,slow=2.7,SNR=80
YAK                               pP    pP     14 09 05.6 +1.4
      comp=Z,305nm,0.7s,baz=193,slow=1.0,SNR=6.9
YAK                               ScP   ScP    14 13 36.0 -0.5
      comp=Z,17nm,0.5s,baz=198,slow=2.1,SNR=5.8
YAK   Yakutsk          44.02  35 eP     P      14 08 21.5 -0.3
      comp=Z,469nm,0.9s
YAK                               pP    pP     14 09 05.6 +1.4
YAK                               ScP   ScP    14 13 36.0 -0.5
YAK                               LR    LR
      comp=Z,3µm,21.0s
YAK   Yakutsk          44.02  35c iP    P      14 08 22.2 +0.4
YAK                              e             14 09 59.3
YAK                              eS     S      14 14 38.5  0.0
YAK                               pmax  pmax
      comp=Z,191nm,0.8s
YAK                               pmax  pmax
      comp=N,24nm,1.1s
YAK                               pmax  pmax
      comp=E,52nm,1.3s
YAK                               smax  smax
      comp=N,604nm,1.7s
YAK                               smax  smax
      comp=E,1µm,2.0s
AQU   L'Aquila         44.05 296 eP     P      14 08 22.2 -0.2
      comp=E,137nm,1.0s
AQU   L'Aquila         44.05 296 eP     P      14 08 22.2 -0.2
AQU                               pmax  pmax
      comp=Z,137nm,1.0s
NC602 NORSAR Array S   44.12 323 eP     P      14 08 22.9 +0.2
NC602                             IAmb  IAmb   14 08 23.9
      comp=Z,4µm,0.9s
NB2   NORSAR Subarra   44.31 323  P     P      14 08 24.2  0.0
      comp=Z,616nm,0.7s,baz=94,slow=7.9
NB2   NORSAR Subarra   44.31 323  P     P      14 08 24.2  0.0
      baz=94,slow=7.9
KONS  Konsvik          44.35 331 eP     P      14 08 25.7 +1.3
KONS                              IAmb  IAmb   14 08 26.2
      comp=Z,347nm,0.7s
GRFO  Grafenberg       44.37 307 eP     P      14 08 26.2 +1.5
      comp=Z,136nm,0.9s
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GRFO  Grafenberg       44.37 307 eP     P      14 08 26.3 +1.5
GRFO                              pmax  pmax
      comp=Z,136nm,0.9s
PBSI  Pulau Batu       44.38 139  P     P      14 08 26.8 +1.5
WTTA  Wattenberg       44.40 303 i P    P      14 08 25.4 +0.1
      comp=Z,29nm,0.4s,SNR=29
WTTA                             eScP   ScP    14 13 38.5 -0.2
      comp=Z,52nm,1.0s
NSS   Namsos           44.43 328 eP     P      14 08 25.1  0.0
NSS                               IAmb  IAmb   14 08 26.3
      comp=Z,231nm,0.9s
WATA  Walderalm        44.43 303 eP     P      14 08 26.7 +1.2
      comp=Z,40nm,0.5s,SNR=14
WATA                             eScP   ScP    14 13 39.5 +0.8
      comp=Z,45nm,1.0s,SNR=5.1
OSL   Oslo             44.46 321 eP     P      14 08 26.0 +0.7
OSL                               IAmb  IAmb   14 08 26.7
      comp=Z,357nm,0.9s
MDJ   Mudanjiang       44.49  61  P     P      14 08 25.3 -0.5
MDJ                               S     S      14 14 36.6 -9.2
MDJ                               pmax  pmax
      comp=Z,43nm,1.6s
MDJ                               pmax  pmax
      comp=Z,260nm,3.7s
MDJ                               LR    LR
      comp=Z,1µm,13.5s
MDJ                               LR    LR
      comp=Z,830nm,11.6s
MDJ                               LR    LR
      comp=Z,1µm,11.2s
MDJ   Mudanjiang       44.49  61 eP     P      14 08 23.4 -2.4
      comp=Z,58nm,1.3s
MDJ                               LR    LR
      comp=Z,1µm,19.0s
VAE   Valguarnera      44.52 289  P     P      14 08 28.8 +2.6
      comp=Z,72nm,0.8s,baz=25,slow=3.8,SNR=15
VAE                               ScP   ScP    14 13 39.2 +0.1
      comp=Z,16nm,0.8s,baz=52,slow=14,SNR=2.2
LOF   Lofoten          44.59 333 eP     P      14 08 26.7 +0.5
LOF                               IAmb  IAmb   14 08 27.5
      comp=Z,309nm,1.0s
YHNB  Yeheng           44.60  91 eP     P      14 08 28.9 +1.9
      comp=Z,134nm,0.9s
TPUB  Ta-pu            44.64  93 eP     P      14 08 29.4 +2.1
      comp=Z,256nm,1.5s
SSLB  Suanglung        44.67  92 eP     P      14 08 29.0 +1.4
      comp=Z,213nm,0.8s
MOTA  Moosalm          44.75 303 eP     P      14 08 29.1 +1.0
      comp=Z,71nm,0.8s,SNR=43
MOTA                             eScP   ScP    14 13 40.6 +0.5
      comp=Z,57nm,0.9s,SNR=7.6
TJN   Taejon           44.87  73 eP     P      14 08 29.1 +0.2
WDD   Wied Dalam       44.92 287 eP     P      14 08 29.6 +0.3
      comp=Z,358nm,0.9s
KS01  Wonju Array Si   44.95  71 eP     P      14 08 28.9 -0.6
KS15  Wonju Array Si   44.95  71 eP     P      14 08 30.9 +1.4
KSAR  Wonju Array Be   44.95  71  P     P      14 08 29.4 -0.1
KSAR                              pP    pP     14 09 12.9 +0.7
KSAR                              PcP   PcP    14 10 08.1 +0.8
KSAR                              ScP   ScP    14 13 39.4 -1.5
KSAR  Wonju Array Be   44.95  71  P     P      14 08 29.4 -0.1
KSAR                              *PP   pP     14 09 12.9 +0.7
KSAR                                           14 10 08.1
RETA  Reutte           44.96 304 eP     P      14 08 29.2 -0.3
      comp=Z,46nm,1.1s,SNR=18
RETA                             eScP   ScP    14 13 40.5 -0.2
      comp=Z,44nm,1.2s
KSRS  Korea Array      44.97  71  P     P      14 08 29.4 -0.4
      comp=Z,15nm,0.6s,baz=286,slow=6.9,SNR=60
KSRS                              pP    pP     14 09 12.9 +0.5
      comp=Z,38nm,0.9s,baz=280,slow=7.2,SNR=4.4
KSRS                              PcP   PcP    14 10 08.1 +0.8
      comp=Z,21nm,0.8s,baz=284,slow=5.1,SNR=4.8
KSRS                              ScP   ScP    14 13 39.4 -1.5
      comp=Z,17nm,0.9s,baz=282,slow=4.1,SNR=10
TBLU  Trondheim        44.99 326 eP     P      14 08 29.8 +0.3
TBLU                              IAmb  IAmb   14 08 30.8
      comp=Z,342nm,0.9s
NACB  Ninganchiao      45.00  91 eP     P      14 08 31.9 +1.7
      comp=Z,185nm,1.2s
KONO  Kongsberg        45.01 321 eP     P      14 08 29.4 -0.3
      comp=Z,350nm,0.8s
KONO  Kongsberg        45.01 321c iP    P      14 08 30.3 +0.6
KONO                              pmax  pmax
      comp=Z,408nm,0.8s
KONO  Kongsberg        45.01 321 eP     P      14 08 30.2 +0.6
KONO                              IAmb  IAmb   14 08 31.2
      comp=Z,365nm,0.8s
FETA  Feichten         45.05 303 i P    P      14 08 30.0 -0.4
      comp=Z,80nm,1.0s,SNR=34
FETA                             eScP   ScP    14 13 41.6 +0.3
      comp=Z,62nm,1.1s,SNR=6.7
YULB  Yu-li            45.13  92 eP     P      14 08 33.1 +1.9
      comp=Z,170nm,0.9s
BJO   Bjornoya         45.18 343 eP     P      14 08 32.8 +1.9
BJO                               IAmb  IAmb   14 08 33.4
      comp=Z,1µm,0.8s
MUD   Monsted U'grnd   45.19 316 i P    P      14 08 32.5 +1.4
      comp=Z,387nm,1.1s
MUD   Monsted U'grnd   45.19 316 i P    P      14 08 32.5 +1.4
MUD                               pmax  pmax
      comp=Z,390nm,1.1s
KLR   Kul'dur          45.22  54c iP    P      14 08 32.4 +0.9
TWG   Pinlang          45.23  93 eP     P      14 08 34.3 +2.3
      comp=Z,1µm,0.8s
CLTB  Caltabellotta    45.40 289 eP     P      14 08 32.4 -0.8
      comp=Z,116nm,1.0s
DOMB  Dombas           45.42 324 eP     P      14 08 33.8 +0.8
DOMB                              IAmb  IAmb   14 08 34.6
      comp=Z,396nm,0.9s
HOMB  Homborsund       45.54 319 eP     P      14 08 34.4 +0.5
HOMB                              IAmb  IAmb   14 08 35.5
      comp=Z,401nm,0.9s
DAVA  Damuels          45.58 304 eP     P      14 08 34.7 +0.1
      comp=Z,153nm,0.5s,SNR=81
DAVA                             eScP   ScP    14 13 43.7 +0.2
      comp=Z,70nm,1.0s,SNR=6.7
BKNI  Bangkinang       45.58 135  P     P      14 08 34.6 -0.1
BKNI  Bangkinang       45.58 135 eP     P      14 08 33.4 -1.4
      comp=Z,2µm,0.9s
DAVOX Davos/Dischmat   45.67 303  P     P      14 08 35.0 -0.3
      comp=Z,79nm,0.5s,baz=95,slow=10,SNR=78
DAVOX                             PcP   PcP    14 10 10.2 +0.4
      baz=92,slow=7.4
DAVOX                             ScP   ScP    14 13 43.3 -0.6
      comp=Z,51nm,1.0s,baz=94,slow=6.7,SNR=10
TIXI  Tiksi            45.80  22  P     P      14 08 36.1 +0.4
      comp=Z,90nm,0.3s,baz=268,slow=4.8,SNR=225
TIXI                              pP    pP     14 09 19.6 +1.1
      comp=Z,103nm,0.7s,baz=272,slow=5.7,SNR=2.7
TIXI                              ScP   ScP    14 13 42.7 -1.0
      comp=Z,89nm,1.2s,baz=268,slow=1.6,SNR=7.9
TIXI  Tiksi            45.80  22 eP     P      14 08 35.5 -0.2
      comp=Z,319nm,0.9s
TIXI                              pP    pP     14 09 19.6 +1.1
TIXI                              ScP   ScP    14 13 42.7 -1.0
TIXI                              LR    LR
      comp=Z,2µm,19.0s
TIXI  Tiksi            45.80  22c iP    P      14 08 36.4 +0.7
TIXI                              pmax  pmax
      comp=Z,340nm,0.9s
STU   Stuttgart        45.80 306 eP     P      14 08 37.7 +1.6
      comp=Z,80nm,0.8s
STU   Stuttgart        45.80 306 eP     P      14 08 37.7 +1.6
STU                               pmax  pmax
      comp=Z,80nm,0.8s
VLC   Villacollemand   45.82 299 eP     P      14 08 36.8 +0.4
      comp=Z,104nm,0.9s
SISI  Saibi            45.89 139  P     P      14 08 38.1 +1.0
      comp=Z,623nm,1.1s,comp=Z,6µm
MSHR  Mys Shultsa      46.03  63ceP     P      14 08 40.6 +2.7
MYKOM Kota Tinggi      46.06 131 eP     P      14 08 39.0 +0.6
      comp=Z,556nm,0.9s
TUE   Stuetta          46.08 303 eP     P      14 08 38.4 -0.1
      comp=Z,48nm,0.7s
MOL   Molde            46.17 325 eP     P      14 08 39.9 +1.2
MOL                               IAmb  IAmb   14 08 41.1
      comp=Z,120nm,0.8s
SNART Snartemo         46.23 319 eP     P      14 08 40.2 +1.0
SNART                             IAmb  IAmb   14 08 41.4
      comp=Z,214nm,0.8s
USRK  Ussuriysk Ar.    46.25  61  P     P      14 08 39.7  0.0
      comp=Z,7.1nm,0.5s,baz=268,slow=7.4
USRK                              LR    LR     14 29 32.4
      comp=Z,576nm,20.6s,baz=283,slow=38
AKN   Aaknes           46.40 324 eP     P      14 08 42.8 +2.2
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AKN                               IAmb  IAmb   14 08 43.4
      comp=Z,213nm,0.9s
BFO   Black Forest     46.44 305 eP     P      14 08 41.3 +0.2
      comp=Z,84nm,1.1s
BFO                               LR    LR
      comp=Z,44nm,22.0s
BFO   Black Forest     46.44 305 i P    P      14 08 41.5 +0.4
ODD1  Odda             46.52 321 eP     P      14 08 42.9 +1.4
ODD1                              IAmb  IAmb   14 08 43.9
      comp=Z,287nm,1.0s
BLS5  Blasjo           46.61 321 eP     P      14 08 43.7 +1.5
BLS5                              IAmb  IAmb   14 08 44.7
      comp=Z,447nm,1.0s
HYA   Hoyanger         46.75 323 eP     P      14 08 43.9 +0.6
HYA                               IAmb  IAmb   14 08 45.3
      comp=Z,228nm,0.9s
RGRI  Rengat           46.87 134  P     P      14 08 46.0 +1.2
WTSB  Winterswijk      46.90 310 i P    P      14 08 45.5 +1.0
      comp=Z,952nm,1.7s
WTSB                             epP    pP     14 09 28.6 +1.1
WTSB                             i sP   sP     14 09 50.7 +1.2
WTSB                             ePP    PP     14 10 36.3 -0.3
STAV  Stavanger        47.00 320 eP     P      14 08 46.3 +1.1
STAV                              IAmb  IAmb   14 08 47.7
      comp=Z,312nm,0.9s
TPRI  Tanjung Pinang   47.16 131  P     P      14 08 47.3 +0.3
BER   Bergen           47.17 322 eP     P      14 08 47.6 +1.2
BER                               IAmb  IAmb   14 08 48.4
      comp=Z,437nm,0.8s
KMY   Karmoy           47.23 320 eP     P      14 08 48.9 +2.0
KMY                               IAmb  IAmb   14 08 49.1
      comp=Z,336nm,1.0s
ECH   Echery           47.23 305 eP     P      14 08 47.5 +0.3
      comp=Z,37nm,0.9s
ECH   Echery           47.23 305 eP     P      14 08 47.5 +0.3
ECH                               pmax  pmax
      comp=Z,37nm,0.9s
ASK   Askoy            47.24 322 eP     P      14 08 47.9 +0.9
ASK                               IAmb  IAmb   14 08 48.9
      comp=Z,323nm,0.8s
SUE   Sulen            47.45 323 eP     P      14 08 49.6 +1.0
SUE                               IAmb  IAmb   14 08 50.4
      comp=Z,280nm,0.9s
SPA0  Spitsbergen Ar   47.46 347 eP     P      14 08 50.3 +1.8
SPA0  Spitsbergen Ar   47.46 347 eP     P      14 08 50.8 +2.2
SPA0                              IAmb  IAmb   14 08 51.5
      comp=Z,630nm,1.0s
SPITS Spitsbergen Ar   47.46 347  P     P      14 08 49.7 +1.2
      comp=Z,275nm,0.7s,baz=116,slow=9.4,SNR=194
SPITS                             PcP   PcP    14 10 17.4 +2.0
      comp=Z,25nm,0.5s,baz=134,slow=4.2,SNR=3.2
SPITS                             LR    LR     14 32 07.5
      comp=Z,2µm,18.1s,baz=120,slow=40
SENIN Lac Senin/Sane   47.49 303 eP     P      14 08 49.5  0.0
      comp=Z,153nm,0.7s
MEM   Membach          47.58 309 ⇑P     P      14 08 50.5 +0.7
      comp=Z,50nm,0.8s
PPSI  Pulau Pagai      47.58 139  P     P      14 08 51.9 +1.7
      comp=Z,1µm,1.1s,comp=Z,14µm
HGN   Heimansgroeve    47.60 309 i P    P      14 08 50.6 +0.7
      comp=Z,248nm,1.7s
HGN                              epP    pP     14 09 32.4 -0.7
HGN                              esP    sP     14 09 56.7 +1.6
HGN                              ePP    PP     14 10 43.9 +0.8
HGN                              eS     S      14 15 18.9  -11
ABRA  Dolores          47.63  99 eP     P      14 08 53.0 +2.4
WLF   Walferdange      47.63 307 ⇓P     P      14 08 51.6 +1.3
WLF   Walferdange      47.63 307 eP     P      14 08 51.8 +1.5
      comp=Z,617nm,1.7s
WLF   Walferdange      47.63 307 eP     P      14 08 51.8 +1.5
WLF                               pmax  pmax
      comp=Z,617nm,1.7s
BOLP  Bolinao          47.70 101 eP     P      14 08 52.3 +1.2
BEBN  Eben Emael       47.75 309 ⇑P     P      14 08 51.7 +0.6
KRJI  Kerinci          47.81 137  P     P      14 08 52.0 -0.1
APYP  Conner           47.93  99 eP     P      14 08 54.4 +1.4
GRNR  Gornyy           47.98  51⇑iP     P      14 08 57.1 +4.2
GRNR                             e             14 09 40.3
GRNR                              pmax  pmax
      comp=E,84nm,1.0s
GRNR                              pmax  pmax
      comp=Z,180nm,1.0s
SCZP  Santa Cruz       48.04 102 eP     P      14 08 56.6 +2.9
BCLA  Clavier          48.05 308 ⇑P     P      14 08 54.4 +1.0
BNI   Bardonecchia     48.20 301 eP     P      14 08 55.0 +0.1
      comp=Z,52nm,0.8s
BNI   Bardonecchia     48.20 301 eP     P      14 08 55.0 +0.1
BNI                               pmax  pmax
      comp=Z,52nm,0.8s
DOU   Dourbes          48.55 308 ⇑P     P      14 08 58.4 +1.1
      comp=Z,88nm,1.7s
KBS   Kingsbay         48.58 347 eP     P      14 08 58.7 +1.7
      comp=Z,612nm,0.9s
KBS                               LR    LR
      comp=Z,2µm,19.0s
KBS   Kingsbay         48.58 347 eP     P      14 08 58.7 +1.7
KBS                               pmax  pmax
      comp=Z,612nm,0.9s
KBS                               MLR   MLR
      comp=Z,2µm,19.0s
KBS   Kingsbay         48.58 347 eP     P      14 08 58.8 +1.7
KBS                               IAmb  IAmb   14 08 59.9
      comp=Z,638nm,0.9s
UCC   Uccle            48.58 309 ⇑P     P      14 08 58.0 +0.5
UCC   Uccle            48.58 309 eP     P      14 08 59.3 +1.9
      comp=Z,60nm,1.0s
UCC   Uccle            48.58 309 eP     P      14 08 59.3 +1.9
UCC                               pmax  pmax
      comp=Z,60nm,1.0s
SNF   Seneffe          48.68 309 ⇓P     P      14 08 59.5 +1.3
      comp=Z,128nm,1.5s
JNU   Nakatsue         48.69  75  P     P      14 08 59.2 +0.6
      comp=Z,74nm,0.8s,baz=311,slow=4.2,SNR=31
JNU                               pP    pP     14 09 42.1 +0.1
      comp=Z,43nm,0.9s,baz=294,slow=6.4,SNR=2.8
JNU   Nakatsue         48.69  75 eP     P      14 09 00.0 +1.4
      comp=Z,174nm,1.2s
JNU                               pP    pP     14 09 42.1 +0.1
KMBO  Kilima Mbogo     48.76 227 i P    P      14 09 15.3  +16
KMBO  Kilima Mbogo     48.76 227  PFAKE        14 09 10.0  +10
KMBO                              LR    LR
      comp=Z,912nm,19.0s
KMBO  Kilima Mbogo     48.76 227 i P    P      14 09 15.3  +16
CAUP  Cauayan          48.90  99 eP     P      14 09 04.5 +4.1
KEST  Kesra            48.93 288  P     P      14 09 01.6 +1.0
      comp=Z,84nm,0.8s,baz=4.7,slow=2.2,SNR=76
KEST  Kesra            48.93 288 eP     P      14 09 01.5 +1.0
      comp=Z,845nm,2.0s
MASI  Maura Aman, Be   49.11 137  P     P      14 09 01.4 -0.5
JOW   Kunigami         49.17  84  P     P      14 09 01.7 -0.6
      comp=Z,77nm,0.4s,baz=303,slow=5.6,SNR=57
JOW   Kunigami         49.17  84 eP     P      14 09 01.6 -0.7
      comp=Z,98nm,0.4s
LUBP  Lubang           49.49 104 eP     P      14 09 05.8 +1.0
THTN  Thala            49.49 288 eP     P      14 09 06.7 +1.9
      comp=Z,90nm,0.8s
TGY   Tagaytay City    49.82 103  P     P      14 09 08.6 +1.3
      comp=Z,527nm,0.9s,baz=3.4,slow=19,SNR=14
CMAH  Djebel Manchou   50.09 290  P     P      14 09 09.6 +0.4
ABSA  Djebel Ababsia   50.17 290  P     P      14 09 10.6 +0.8
NKL   Nikolayevsk      50.18  47 i P    P      14 09 10.0 +0.5
NKL                              e             14 09 54.3
NKL                               pmax  pmax
      comp=N,26nm,1.0s
NKL                               pmax  pmax
      comp=E,86nm,1.0s
NKL                               pmax  pmax
      comp=Z,260nm,1.0s
PMBI  Palembang        50.37 134  P     P      14 09 12.3 +0.9
ENPP  El Nido          50.38 107 eP     P      14 09 12.4 +0.9
KSM   Kuching          50.42 125 eP     P      14 09 10.8 -1.0
      comp=Z,222nm,1.0s
LRW   Lerwick          50.42 322 eP     P      14 09 11.6 +0.4
LRW                               IAmb  IAmb   14 09 12.8
      comp=Z,465nm,1.0s
SAN1  Sandwick         50.47 322 eP     P      14 09 11.9 +0.4
CAEH  'Ain El Ouahch   50.47 291  P     P      14 09 12.4 +0.4
BUSP  Coron            50.49 106 eP     P      14 09 14.0 +1.6
ELSH  Elham, Standar   50.52 310⇑eP     P      14 09 12.5 +0.5
ELSH                              IAmb  IAmb   14 09 14.5
      comp=Z,365nm,0.7s
WACR  West Acre        50.52 312⇑eP     P      14 09 12.4 +0.3
WACR                              IAmb  IAmb   14 09 14.6
      comp=Z,761nm,0.9s
BATP  Bataraza         50.67 111 eP     P      14 09 14.0 +0.3
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CKFL  Kef-Lekhel       50.70 290   P       P       14 09 13.8  0.0
CASM  Ain Smara        50.92 290   P       P       14 09 15.7 +0.3
SJMP  San Jose         50.93 105  eP       P       14 09 16.3 +0.7
SBUM  Sibu             50.99 122  eP       P       14 09 15.6 -0.5
      comp=Z,261nm,1.1s
CTEI  Djebel Teioual   51.05 290   P       P       14 09 17.1 +0.6
HMNX  Herstmonceux     51.07 310  eP       P       14 09 16.5 +0.4
DFRA  Djebel Bou Aff   51.28 291   P       P       14 09 18.5 +0.3
MDSI  Maura Dua        51.30 135   P       P       14 09 15.1 -3.2
KKM   Kota Kinabalu    51.31 115  eP       P       14 09 19.5 +0.9
      comp=Z,586nm,1.1s
DRUM  Mains of Drumt   51.55 318⇑eP        P       14 09 19.9 +0.3
DRUM                               IAmb    IAmb    14 09 21.2
      comp=Z,199nm,0.8s
HPK   Haverah Park     51.60 314⇑eP        P       14 09 20.4 +0.2
HPK                                IAmb    IAmb    14 09 22.1
      comp=Z,311nm,0.7s
EDMD  Edmundbyers      51.63 315⇑eP        P       14 09 20.4 +0.1
EDMD                               IAmb    IAmb    14 09 21.9
      comp=Z,274nm,0.7s
CWF   Charnwood Fore   51.67 312⇑eP        P       14 09 20.4 -0.2
CWF                                IAmb    IAmb    14 09 21.6
      comp=Z,118nm,1.3s
LWLI  Liwa             51.67 136   P       P       14 09 18.8 -2.4
MME1  Meikle Cairn     51.73 318⇑eP        P       14 09 20.9 -0.2
CKHR  Kef el Ahmar     51.75 290   P       P       14 09 22.1 +0.5
SET   Setif            51.77 290   P       P       14 09 23.0 +1.3
LBWR  Ladybower, Pea   51.78 313⇑eP        P       14 09 21.4 -0.1
LBWR                               IAmb    IAmb    14 09 23.2
      comp=Z,113nm,0.8s
MLA1  Latheron         51.78 320⇑eP        P       14 09 21.3  0.0
ESY   Stoneypath       51.79 317⇑eP        P       14 09 21.5  0.0
CUYO  Cuyo Island      51.83 106  eP       P       14 09 24.3 +2.0
TYV   Tymovskoe        51.84  50  eP       P       14 09 23.6 +1.7
TYV                               e                14 10 07.4
TYV                                pmax    pmax
      comp=Z,2µm,10.2s
MCD   Coleburn Disti   51.84 319⇑eP        P       14 09 22.2 +0.4
EDU   Dundee           51.90 317  eP       P       14 09 22.5 +0.2
KLI   Kotabumi         51.99 135   P       P       14 09 21.0 -2.4
BIGH  Upper Bighouse   52.03 320⇑eP        P       14 09 23.5 +0.3
BIGH                               IAmb    IAmb    14 09 25.0
      comp=Z,843nm,1.0s
EDI   Edinburgh        52.11 317⇑eP        P       14 09 24.0 +0.2
EDI                                IAmb    IAmb    14 09 25.7
      comp=Z,237nm,0.8s
STNC  Stoke            52.12 313⇑eP        P       14 09 24.4 +0.4
STNC                               IAmb    IAmb    14 09 25.6
      comp=Z,183nm,0.9s
EKA   Eskdalemuir Ar   52.21 316   P       P       14 09 23.9 -0.6
      comp=Z,192nm,0.9s,baz=88,slow=7.8,SNR=160
EKA                                pP      pP      14 10 08.7 +0.3
      comp=Z,121nm,1.0s,baz=74,slow=7.7,SNR=4.8
EKA                                PcP     PcP     14 10 34.7 +1.4
      comp=Z,28nm,0.6s,baz=86,slow=5.4,SNR=4.8
EKA                                ScP     ScP     14 14 12.1 +0.8
      comp=Z,14nm,0.9s,baz=96,slow=5.1,SNR=4.5
EKA                                PKiKP   PKiKP   14 17 01.2  -11
      comp=Z,11nm,0.9s,baz=88,slow=8.4,SNR=5.6
EKA                                LR      LR      14 34 27.8
      comp=Z,691nm,18.2s,baz=70,slow=39
EKA   Eskdalemuir Ar   52.21 316   P       P       14 09 23.9 -0.6
EKA                                *PP     pP      14 10 08.7 +0.3
EKA                                pmax    pmax
      comp=Z,194nm,0.9s
ECK   Cauldkaine Hil   52.22 316⇑eP        P       14 09 24.6  0.0
ESK   Eskdalemuir      52.24 316  eP       P       14 09 25.4 +0.7
      comp=Z,269nm,1.1s
ESK                                LR      LR
      comp=Z,1µm,21.0s
ESK   Eskdalemuir      52.24 316  eP       P       14 09 25.4 +0.7
ESK                                pmax    pmax
      comp=Z,269nm,1.1s
ESK                                MLR     MLR
      comp=Z,1µm,21.0s
STKI  Sintang          52.24 125   P       P       14 09 26.6 +1.3
KESW  Keswick, Cumbr   52.33 315⇑eP        P       14 09 25.8 +0.4
KESW                               IAmb    IAmb    14 09 27.2
      comp=Z,242nm,0.9s
KASI  Kota Agung       52.33 136   P       P       14 09 23.2 -2.7
BBO1  Bothel           52.38 315⇑eP        P       14 09 26.0 +0.2
STRD  Stroud           52.39 311⇑eP        P       14 09 25.7 -0.3
MBAR  Mbarara          52.43 234  eP       P       14 09 27.6 +0.7
      comp=Z,268nm,0.8s
MBAR                               LR      LR
      comp=Z,759nm,19.0s
MBAR  Mbarara          52.43 234  eP       P       14 09 27.6 +0.7
MBAR                               pmax    pmax
      comp=Z,268nm,0.8s
MBAR                               MLR     MLR
      comp=Z,759nm,19.0s
MDO   Dochfour         52.46 319  eP       P       14 09 26.5 +0.1
INVG  Invergeldie, C   52.48 317⇑eP        P       14 09 26.6 +0.1
INVG                               IAmb    IAmb    14 09 28.3
      comp=Z,191nm,1.0s
JMIC  Jan Mayen        52.53 336  eP       P       14 09 28.7 +2.0
JMIC                               IAmb    IAmb    14 09 29.8
      comp=Z,232nm,0.8s
KIBA  Kibaya           52.53 225  i P      P       14 09 28.5 +0.8
BLSI  Bandar Lampung   52.62 135   P       P       14 09 25.5 -2.6
PVCP  Virac            52.65 101  eP       P       14 09 28.4 +0.1
HLM1  Long Mynd        52.65 312⇑eP        P       14 09 28.1 +0.2
HLM1                               IAmb    IAmb    14 09 29.3
      comp=Z,127nm,1.1s
KOND  Kondoa           52.66 226  i P      P       14 09 29.7 +1.1
EAB   Aberfoyle        52.69 317⇑eP        P       14 09 28.0 -0.1
RCP   Roxas            52.74 104⇓eP        P       14 09 30.2 +1.2
FOEL  Foel Wylfa       52.76 313⇑eP        P       14 09 28.9 +0.2
FOEL                               IAmb    IAmb    14 09 30.3
      comp=Z,164nm,1.1s
MONM  Monmouth         52.77 312  eP       P       14 09 28.4 -0.3
MONM                               IAmb    IAmb    14 09 29.9
      comp=Z,176nm,0.9s
HGH   Gray Hill        52.81 311  eP       P       14 09 28.9 -0.2
MCH1  Michaelchurch    52.84 312⇑eP        P       14 09 29.2 -0.1
MCH1                               IAmb    IAmb    14 09 31.1
      comp=Z,261nm,0.8s
PGBU  Glenifferbraes   52.85 317⇑eP        P       14 09 29.6 +0.4
PGBU                               IAmb    IAmb    14 09 30.9
      comp=Z,312nm,1.0s
YSS   Yuzh-Sakhalins   52.90  55  eP       P       14 09 30.7 +0.9
      comp=Z,109nm,1.0s
YSS   Yuzh-Sakhalins   52.90  55  eP       P       14 09 30.7 +0.9
YSS                               e                14 10 14.6
YSS                               e                14 10 37.2
YSS                               eS       S       14 16 40.5 -2.7
YSS                                pmax    pmax
      comp=Z,70nm,1.2s
AKET  Djebel Ketaf     52.97 291   P       P       14 09 31.1 +0.5
LLW   Llanuwychllyn    53.04 313  eP       P       14 09 30.9 +0.3
MJB9  Matsu-Tunnel     53.04  68  eP       P       14 09 32.1 +1.1
MAJO  Matsushiro       53.04  68  eP       P       14 09 31.2 +0.2
      comp=Z,75nm,0.9s
MAJO                               LR      LR
      comp=Z,593nm,19.0s
MAJO  Matsushiro       53.04  68⇑eP        P       14 09 31.4 +0.4
MAJO                               pmax    pmax
      comp=Z,46nm,1.4s
MAT   Matsushiro       53.04  68   P       P       14 09 30.1 -0.9
MAT                                S       S       14 16 34.8  -11
MJAR  Matsushiro Arr   53.05  68   P       P       14 09 30.1 -0.9
      comp=Z,22nm,1.0s,baz=288,slow=10.0,SNR=22
MJAR                               pP      pP      14 10 16.0 +0.9
      comp=Z,69nm,0.9s,baz=288,slow=10,SNR=13
MJAR                               ScP     ScP     14 14 14.0 -1.4
      comp=Z,16nm,1.0s,baz=286,slow=5.8,SNR=6.3
MJAR                               PKiKP   PKiKP   14 17 14.0 +0.1
      comp=Z,4.3nm,0.9s,baz=290,slow=8.4,SNR=4.1
WPM1  Penmaenmawr      53.08 314⇑iP        P       14 09 31.2 +0.2
GAL1  Galloway         53.18 316⇑eP        P       14 09 31.6  0.0
GAL1                               IAmb    IAmb    14 09 33.2
      comp=Z,78nm,1.0s
GUIM  Jordan           53.19 105  eP       P       14 09 31.3 -1.0
IOMK  Kirk Michael     53.23 315⇑eP        P       14 09 32.4 +0.3
IOMK                               IAmb    IAmb    14 09 33.8
      comp=Z,282nm,1.0s
ADJB  Djebel Djouab    53.26 291   P       P       14 09 32.5 -0.2
YLL   Llanberis        53.27 313⇑eP        P       14 09 32.6 +0.3
WME   Myndd Eilian     53.28 314⇑iP        P       14 09 32.4 -0.1
WIM   Isle of Man      53.32 315⇑eP        P       14 09 32.7  0.0
ABA   Alger-Bouzarea   53.32 292   P       P       14 09 32.0 -1.0
WLF1  Llynfaes         53.36 314⇑eP        P       14 09 33.0  0.0
WLF1                               IAmb    IAmb    14 09 34.5
      comp=Z,218nm,1.1s
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WPS   Cemaes, Angles   53.40 314⇑eP        P       14 09 33.3  0.0
WPS                                IAmb    IAmb    14 09 34.7
      comp=Z,136nm,1.2s
YRC   Rhoscolyn        53.48 314⇑eP        P       14 09 34.0 +0.2
MYLDM Lahad Datu       53.57 114  eP       P       14 09 36.9 +1.8
EMHD  Djebel Mahouad   53.61 291   P       P       14 09 34.9 -0.4
ASAJ  Asahikawa        53.64  58   P       P       14 09 35.8 +0.6
      comp=Z,9.5nm,0.5s,baz=263,slow=8.1,SNR=9.9
CNP   Catarman         53.68 102  eP       P       14 09 39.0 +3.2
CGJI  Cibinong         53.90 135   P       P       14 09 34.1 -3.2
CLGH  Cloghs, Cushen   53.91 316⇑eP        P       14 09 37.2 +0.2
CLGH                               IAmb    IAmb    14 09 38.4
      comp=Z,175nm,1.1s
HTL   Hartland         54.00 311  eP       P       14 09 37.3 -0.3
HTL                                IAmb    IAmb    14 09 39.8
      comp=Z,40nm,0.5s
GMM   Mts of Mourne    54.03 315⇑eP        P       14 09 37.6 -0.2
COCO  West Island      54.27 148  eP       P       14 09 42.5 +2.5
      comp=Z,582nm,1.3s
COCO  West Island      54.27 148  i P      P       14 09 43.4 +3.4
MA2   Magadan          54.42  38  eP       P       14 09 41.1 +0.5
      comp=Z,145nm,1.2s
MA2                                LR      LR
      comp=Z,741nm,21.0s
MA2   Magadan          54.42  38  eP       P       14 09 41.1 +0.5
MA2                                pmax    pmax
      comp=Z,145nm,1.2s
LLP   Lapu-Lapu        54.45 105⇓eP        P       14 09 42.2 +0.8
PBKI  Pangkalan Bun    54.45 127   P       P       14 09 42.4 +1.0
      comp=Z,709nm,1.1s,comp=Z,7µm
DBJI  Dramaga          54.45 134   P       P       14 09 38.2 -3.2
SEY   Seymchan         54.47  34c iP       P       14 09 41.8 +1.0
DSB   Dublin           54.52 314  eP       P       14 09 41.7 +0.3
      comp=Z,47nm,0.8s
EBNR  Beni Rached      54.64 292   P       P       14 09 43.1 +0.5
DAG   Danmarks Havn    54.69 344  i P      P       14 09 43.4 +1.1
      comp=Z,457nm,0.9s
DAG   Danmarks Havn    54.69 344  i P      P       14 09 43.4 +1.1
DAG                                pmax    pmax
      comp=Z,460nm,0.9s
IDGL  Inch Island, C   54.70 316⇑eP        P       14 09 43.2 +0.6
IDGL                               IAmb    IAmb    14 09 44.9
      comp=Z,249nm,0.9s
SKJI  Sukabumi         54.70 135   P       P       14 09 44.4 +1.2
      comp=Z,201nm,0.9s,comp=Z,2µm
ERM   Erimo            54.71  60   PFAKE           14 09 50.0 +7.1
ERM                                LR      LR
      comp=Z,1µm,19.0s
PLP   Palo             54.73 103⇓eP        P       14 09 41.5 -1.9
ECHA  Ech Chlef        54.81 292   P       P       14 09 44.2 +0.4
EANR  'Ain N'Sour      55.09 292   P       P       14 09 45.7 -0.2
ETRT  Tiaret           55.16 291   P       P       14 09 46.0 -0.4
LEM   Lembang          55.17 134   P       P       14 09 43.9 -2.8
      comp=Z,32nm,0.8s,baz=65,slow=13,SNR=7.2
MSLP  Maasin           55.25 104  eP       P       14 09 48.9 +1.7
MTKI  Muara Teweh, K   55.28 122   P       P       14 09 48.2 +0.8
      comp=Z,140nm,0.9s
PAGZ  Pagadian         55.52 108  eP       P       14 09 50.8 +1.7
CISI  Cisompet, Garu   55.88 134   P       P       14 09 50.0 -1.6
CART  Cartagena        56.02 294  eP       P       14 09 52.2 -0.2
      comp=Z,128nm,0.7s
KPJI  Karang Pucung    56.35 133   P       P       14 09 52.3 -2.6
CMJI  Cimerak          56.43 134   P       P       14 09 54.9 -0.5
SMKI  Samarinda        56.52 120   P       P       14 09 58.5 +2.3
BUTP  Butuan           56.56 105  eP       P       14 09 58.8 +2.3
BUKP  Musuan           56.79 106  eP       P       14 09 59.3 +1.1
SGKI  Sangatta, Kali   56.86 120   P       P       14 09 55.6 -2.9
BKB   Balikpapan       56.88 121   P       P       14 10 00.1 +1.4
SMRI  Semarang         57.03 131   P       P       14 10 01.2 +1.5
      comp=Z,219nm,0.9s
SMRI  Semarang         57.03 131  eP       P       14 09 57.8 -2.0
VAL   Valentia         57.16 313  eP       S       14 17 41.7 +2.1
SKMP  Bagumbayan, Su   57.24 108  eP       P       14 10 02.0 +0.7
ES19  SONSECA Array    57.30 298  eP       P       14 10 01.4 -0.1
ESDC  Sonseca Array    57.36 298   P       P       14 10 01.4 -0.4
      comp=Z,25nm,0.6s,baz=61,slow=7.4,SNR=149
ESDC                               pP      pP      14 10 46.4 -0.2
      comp=Z,18nm,0.7s,baz=58,slow=7.4,SNR=2.6
ESDC                               ScP     ScP     14 14 34.3  0.0
      comp=Z,6.4nm,1.0s,baz=46,slow=4.2,SNR=5.0
ESDC                               PKiKP   PKiKP   14 17 14.2 -4.6
      comp=Z,2.4nm,0.6s,baz=56,slow=6.8,SNR=4.3
ESLA  Sonseca Array    57.36 298  eP       P       14 10 01.9  0.0
TAM   Tamanrasset      57.43 276  eP       P       14 10 02.5 -0.2
TAM   Tamanrasset      57.43 276  eP       P       14 10 02.5 -0.2
PAB   San Pablo        57.69 298  eP       P       14 10 04.1  0.0
      comp=Z,166nm,1.4s
PAB                                LR      LR
      comp=Z,768nm,21.0s
PAB   San Pablo        57.69 298  eP       P       14 10 04.1  0.0
PAB                                pmax    pmax
      comp=Z,166nm,1.4s
PAB                                MLR     MLR
      comp=Z,768nm,21.0s
DAV   Davao City (W)   57.70 107⇑iP        P       14 10 04.8 +0.3
DAV   Davao City (W)   57.70 107   PFAKE           14 10 20.0  +16
DAV                                LR      LR
      comp=Z,666nm,21.0s
UGM   Wanagama         57.76 132  eP       P       14 10 03.3 -1.6
MPSI  Mapaga           57.88 117   P       P       14 10 06.7 +1.1
      comp=Z,282nm,1.1s,comp=Z,3µm
MRIV  Mauritius Mete   57.90 195  eP       P       14 10 07.8 +2.1
NGJI  Ngawi            57.90 130   P       P       14 10 06.1 +0.3
WOJI  Wonogiri, Jawa   57.94 131   P       P       14 10 03.3 -2.7
PCJI  Pacitan          58.38 131   P       P       14 10 06.4 -2.6
PBRG  Braganca         58.49 301  eP       P       14 10 09.7  0.0
      comp=Z,77nm,1.8s
PBRG                              epP      pP      14 10 54.3 -0.2
BORG  Borgarnes        58.54 330  eP       P       14 10 12.5 +3.0
BORG                               LR      LR
      comp=Z,374nm,22.0s
BORG  Borgarnes        58.54 330  eP       P       14 10 12.5 +3.0
BORG                               MLR     MLR
      comp=Z,374nm,22.0s
PWJI  Pagerwojo        58.62 131   P       P       14 10 08.0 -2.8
PCI   Palu             58.70 118   P       P       14 10 12.6 +1.3
MVO   Moncorvo         58.94 300  eP       P       14 10 13.2 +0.4
      comp=Z,94nm,1.1s
MVO                               epP      pP      14 10 57.5 -0.2
RER   Riviere de l'E   59.11 196  eP       P       14 10 15.9 +1.8
OPO   Ambohidratompo   59.18 206   P       P       14 10 15.5 +0.8
      comp=Z,50nm,0.6s,baz=22,slow=7.9,SNR=44
MRSI  Marisa           59.26 115   P       P       14 10 15.7 +0.5
PVRL  Vila Real        59.37 301  eP       P       14 10 16.0 +0.3
      comp=Z,71nm,1.4s
PVRL                              epP      pP      14 11 01.1 +0.4
POLO  Lamas de Olo     59.39 301  eP       P       14 10 16.1 +0.2
      comp=Z,27nm,1.5s
POLO                              epP      pP      14 11 00.6 -0.3
PCAB  Cabril           59.41 301  eP       P       14 10 16.6 +0.6
      comp=Z,146nm,1.2s
PCAB                              epP      pP      14 11 01.1 +0.1
PGAV  Gavieira, Arco   59.48 302  eP       P       14 10 17.1 +0.6
      comp=Z,131nm,1.5s
PGAV                              epP      pP      14 11 01.6 +0.1
BLJI  Banyuglugur      59.52 129   P       P       14 10 16.9  0.0
MTE   Manteigas        59.60 300  eP       P       14 10 18.2 +0.9
      comp=Z,207nm,1.1s
MTE                               epP      PcP     14 11 02.6 +0.1
MTE   Manteigas        59.60 300  eP       P       14 10 18.0 +0.7
PVIS  Viseu            59.72 300  eP       P       14 10 18.7 +0.6
      comp=Z,168nm,1.2s
PVIS                              epP      pP      14 11 03.3 +0.1
PCBR  Castelo Branco   59.78 299  eP       P       14 10 18.8 +0.3
      comp=Z,97nm,1.5s
PCBR                              epP      pP      14 11 03.5  0.0
GMJI  Gumukmas         59.83 129   P       P       14 10 17.2 -1.8
PMRV  Marv??o          59.89 299  eP       P       14 10 19.6 +0.3
      comp=Z,132nm,1.3s
PMRV                              epP      PcP     14 11 03.9 +0.3
APSI  Ampana           60.00 117   P       P       14 10 20.7 +0.5
PEA0B Petropavlovsk-   60.03  44  eP       P       14 10 20.1 +0.1
PEA0B                             epP      pP      14 11 06.9 +1.8
PETK  Petropavlovsk-   60.03  44   P       P       14 10 19.5 -0.5
      comp=Z,7.6nm,0.6s,baz=314,slow=3.3
PETK                               pP      pP      14 11 07.1 +2.1
      baz=273,slow=6.4
PTO   Porto            60.04 301  eP       P       14 10 21.3 +1.1
CBIJ  Chichi jima      60.10  77   P       P       14 10 18.8 -2.0
JCJ   Chichijima       60.10  77   P       P       14 10 18.8 -2.0
      comp=Z,19nm,0.4s,baz=270,slow=12,SNR=11
PBAR  Barrancos        60.16 297  eP       P       14 10 21.3 +0.2
      comp=Z,441nm,1.1s
PBAR                              epP      pP      14 11 05.8 -0.4
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TTSI  Tana Toraja      60.19 120   P       P       14 10 21.5  0.0
PESTR Estremoz         60.26 298  eP       P       14 10 22.4 +0.6
      comp=Z,138nm,1.2s
PESTR                             epP      pP      14 11 06.4 -0.5
PESTR Estremoz         60.26 298  eP       P       14 10 22.1 +0.3
PESTR                             epP      pP      14 11 07.8 +0.9
COI   Coimbra          60.29 300  eP       P       14 10 22.7 +0.8
      comp=Z,216nm,1.1s
COI                               epP      pP      14 11 07.3 +0.3
PCAS  Casmilo, Conde   60.41 300  eP       P       14 10 23.3 +0.5
      comp=Z,81nm,1.8s
PCAS                              epP      pP      14 11 08.0 +0.1
JAGI  Jajag, Banyuwa   60.43 129   P       P       14 10 20.8 -2.3
JAGI  Jajag, Banyuwa   60.43 129  eP       P       14 10 20.3 -2.8
PTOM  Tomar            60.53 299  eP       P       14 10 24.2 +0.6
      comp=Z,215nm,1.1s
PTOM                              epP      pP      14 11 08.6 -0.1
PET   Petropavlovsk    60.60  44  eP       P       14 10 19.9 -3.8
      comp=Z,22nm,0.9s
PET                                LR      LR
      comp=Z,885nm,20.0s
PET   Petropavlovsk    60.60  44  eP       P       14 10 22.1 -1.6
PET                               e*PP     PcP     14 11 06.1  0.0
PET                               eS       S       14 18 21.9 -1.9
PET                                pmax    pmax
      comp=Z,41nm,1.3s
PET                                MLR     MLR
      comp=Z,1µm,13.0s
PET                                MLR     MLR
      comp=Z,1µm,12.0s
PMTG  Montargil        60.63 299  eP       P       14 10 25.0 +0.8
      comp=Z,71nm,1.5s
PMTG                              epP      pP      14 11 09.0 -0.4
MDT   Midelt           60.69 291   P       P       14 10 24.9  0.0
      comp=Z,64nm,0.9s,baz=84,slow=9.0,SNR=63
KMSI  Cibinong         60.69 113   P       P       14 10 26.0 +1.1
      comp=Z,926nm,1.0s,comp=Z,8µm
EVO   Evora            60.70 298  eP       P       14 10 25.3 +0.6
      comp=Z,164nm,1.1s
EVO                               epP      pP      14 11 09.7 -0.3
SRBI  Singaraja        60.80 128   P       P       14 10 25.0 -0.6
SPSI  Sidrap Palu      60.81 121   P       P       14 10 25.8 +0.1
PBEJ  Beja             60.81 297  eP       P       14 10 26.9 +1.4
      comp=Z,134nm,1.1s
PBEJ                              epP      pP      14 11 11.4 +0.7
ALMR  Almeirim         60.84 299  eP       P       14 10 26.1 +0.4
ALMR                               AMb     AMB     14 10 27.5
      comp=Z,143nm,1.2s
ALMR  Almeirim         60.84 299  eP       P       14 10 26.1 +0.4
      comp=Z,149nm,1.0s
ALMR                              epP      pP      14 11 10.3 -0.6
ALMR  Almeirim         60.84 299  eP       P       14 10 26.0 +0.4
LUWI  Luwuk            60.90 116   P       P       14 10 28.3 +2.0
      comp=Z,205nm,1.1s,comp=Z,2µm
LUWI  Luwuk            60.90 116  eP       P       14 10 25.8 -0.5
PVAQ  Vaqueiros        60.97 297  eP       P       14 10 26.8 +0.2
      comp=Z,183nm,1.0s
PVAQ                              epP      pP      14 11 11.3 -0.5
SUMG  Summit           61.02 341  eP       P       14 10 28.0 +1.2
SUMG  Summit           61.02 341  i P      P       14 10 28.3 +1.5
SUMG  Summit           61.02 341  i P      P       14 10 28.3 +1.5
PCVE  Castro Verde     61.10 297  eP       P       14 10 27.8 +0.3
      comp=Z,89nm,1.8s
PCVE                              epP      pP      14 11 12.6 -0.1
MESJ  Messejana        61.15 297  eP       P       14 10 28.1 +0.4
MESJ                               AMb     AMB     14 10 29.8
      comp=Z,160nm,1.2s
MESJ  Messejana        61.15 297  eP       P       14 10 28.2 +0.4
      comp=Z,164nm,1.1s
MESJ                              epP      pP      14 11 12.9 -0.1
MESJ  Messejana        61.15 297  eP       P       14 10 28.1 +0.4
PBDV  Barranco-do-Ve   61.20 297  eP       P       14 10 28.6 +0.5
      comp=Z,285nm,1.1s
PBDV                              epP      pP      14 11 13.3 -0.1
PNCL  Nicolau / Gran   61.25 298  eP       P       14 10 29.1 +0.7
      comp=Z,119nm,1.2s
PNCL                              epP      pP      14 11 13.8 +0.1
PMAFR Mafra            61.42 299  eP       P       14 10 30.3 +0.7
      comp=Z,185nm,1.0s
LIS   Lisbon           61.43 299  eP       P       14 10 30.1 +0.4
LIS                                AMb     AMB     14 10 31.9
      comp=Z,208nm,0.9s
LIS   Lisbon           61.43 299  eP       P       14 10 30.0 +0.4
PMST  Lisbon--Monsan   61.45 299  eP       P       14 10 31.0 +1.3
      comp=Z,215nm,1.2s
KAPI  Kappang          61.55 121   PFAKE           14 10 40.0 +9.3
KAPI                               LR      LR
      comp=Z,390nm,20.0s
PTEO  Sao Teotonio     61.63 297  eP       P       14 10 31.7 +0.7
      comp=Z,232nm,1.1s
PTEO                              epP      pP      14 11 15.7 -0.6
MORF  Marmelete        61.68 297  eP       P       14 10 31.8 +0.3
MORF                               AMb     AMB     14 10 34.1
      comp=Z,121nm,2.1s
MORF  Marmelete        61.68 297  eP       P       14 10 31.8 +0.3
      comp=Z,119nm,1.6s
MORF                              epP      pP      14 11 16.4 -0.4
MORF  Marmelete        61.68 297  eP       P       14 10 31.7 +0.3
PFVI  Vila Bisbo       61.89 297  eP       P       14 10 33.3 +0.6
      comp=Z,140nm,1.3s
PFVI                              epP      pP      14 11 18.2 +0.1
PFVI  Vila Bisbo       61.89 297  eP       P       14 10 33.4 +0.6
BKSI  Bulukumba        62.03 121   P       P       14 10 33.8  0.0
TWSI  Taliwang, Sumb   62.37 127   P       P       14 10 36.6 +0.5
KDI   Kendari          62.80 118   P       P       14 10 39.6 +0.6
PLAI  Plampang         63.02 126   P       P       14 10 37.9 -2.5
TNTI  Ternate          63.09 111   P       P       14 10 41.8 +0.9
      comp=Z,571nm,1.5s,comp=Z,6µm
TNTI  Ternate          63.09 111  eP       P       14 10 41.6 +0.6
SANI  Sanana           63.93 114   P       P       14 10 46.9 +0.5
KULLO Kullorsuaq       64.03 346  i P      P       14 10 47.0 +0.8
KULLO Kullorsuaq       64.03 346  i P      P       14 10 47.0 +0.8
ANGG  Ammassalik, Gr   64.36 334  eP       P       14 10 49.5 +1.1
TULEG Thule            64.41 350  eP       P       14 10 49.8 +1.2
WBSI  Waikabubak, Su   64.68 125   P       P       14 10 48.8 -2.5
WSI   Waingapu         65.30 124   P       P       14 10 54.2 -1.0
LSZ   Lusaka           65.39 226  eP       P       14 10 56.2 +0.3
LSZ                                LR      LR
      comp=Z,925nm,19.0s
LSZ   Lusaka           65.39 226  eP       P       14 10 56.2 +0.3
LSZ                                MLR     MLR
      comp=Z,925nm,19.0s
NLAI  Namlea           65.55 114   P       P       14 10 58.0 +1.1
      comp=Z,252nm,0.8s,comp=Z,2µm
EDFI  Ende, Flores     65.57 123   P       P       14 10 54.5 -2.6
TORD  Torodi Ar. Bea   65.61 269   P       P       14 10 55.0 -2.4
      comp=Z,106nm,0.5s,baz=43,slow=6.5
TORD                               pP      pP      14 11 41.3 -1.9
      baz=46,slow=6.2
MMRI  Maumere          65.86 122   P       P       14 10 57.3 -1.5
MMRI  Maumere          65.86 122  eP       P       14 10 56.4 -2.5
BASI  Baing, Sumba     65.89 125   P       P       14 10 58.0 -1.0
ILULI Ilulissat        66.36 341  eP       P       14 11 01.9 +0.7
ILULI Ilulissat        66.36 341  i P      P       14 11 02.1 +0.9
ILULI Ilulissat        66.36 341  i P      P       14 11 02.1 +0.9
AAI   Ambon            66.66 114   P       P       14 11 07.0 +3.1
MSAI  Masohi           66.97 113   P       P       14 11 06.5 +0.6
SFJD  Kangerlussuaq    67.71 339   P       P       14 11 10.7 +0.9
      comp=Z,92nm,0.8s,baz=53,slow=8.3,SNR=16
SFJD                               LR      LR      14 41 13.7
      comp=Z,885nm,18.4s,baz=26,slow=36
SFJD  Kangerlussuaq    67.71 339  eP       P       14 11 11.5 +1.7
SFJD  Kangerlussuaq    67.71 339  i P      P       14 11 11.2 +1.5
SFJD  Kangerlussuaq    67.71 339  i P      P       14 11 11.2 +1.5
BATI  Baumata          67.96 122   P       P       14 11 11.2 -0.8
      comp=Z,508nm,0.9s,baz=176,slow=1.2,SNR=46
BATI  Baumata          67.96 122   P       P       14 11 11.4 -0.7
SOEI  Soe              68.05 121   P       P       14 11 11.9 -0.9
SOEI  Soe              68.05 121  eP       P       14 11 11.9 -0.9
BNDI  Bandanaira       68.48 113   P       P       14 11 15.4 +0.1
RES   Resolute Bay     68.68 356  eP       P       14 11 15.0 -0.7
      comp=Z,24nm,0.7s
RES   Resolute Bay     68.68 356  eP       P       14 11 15.0 -0.7
RES                                pmax    pmax
      comp=Z,24nm,0.7s
SMY   Shemya           69.01  39  eP       P       14 11 18.5 +0.4
SMY   Shemya           69.01  39  eP       P       14 11 18.5 +0.4
BLWY  Bulawayo         69.06 223  i P      P       14 11 19.3 +0.4
BLWY  Bulawayo         69.06 223  i P      P       14 11 19.3 +0.4
FAKI  Fak Fak          69.18 110   P       P       14 11 20.2 +0.5
FAKI  Fak Fak          69.18 110  eP       P       14 11 20.3 +0.6
GUMO  Guam             69.25  88   P       P       14 11 21.3 +1.2
      comp=Z,46nm,1.0s,baz=353,slow=6.1,SNR=6.4
GUMO  Guam             69.25  88  eP       P       14 11 22.3 +2.2
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KOWA Kowa 69.46 273 P P 14 11 20.4 -1.0
comp=Z,150nm,0.6s,baz=62,slow=5.5,SNR=190
RKPI Ransiki, Papua 69.74 108 P P 14 11 24.1 +1.0
comp=Z,153nm,1.1s,comp=Z,3µm
NRS Narsarsuaq 69.81 332 *i* P P 14 11 23.5 +0.7
NRS Narsarsuaq 69.81 332 *i* P P 14 11 23.5 +0.7
PMAR Madeira 69.82 296 *e*P P 14 11 24.1 +0.5
comp=Z,369nm,1.0s
PMOZ Porto Moniz, M 69.97 296 *e*P P 14 11 26.1 +1.6
comp=Z,214nm,1.1s
KMPI Kaimana, Papua 70.76 110 P P 14 11 31.6 +2.3
TOLK Toolik Lake Re 70.94 15 P P 14 11 30.7 +1.1
baz=326,SNR=271
BAKI Biak 71.02 106 P P 14 11 31.9 +1.0
comp=Z,221nm,1.2s,comp=Z,3µm
SRPI Serui, Papua 71.55 107 P P 14 11 34.9 +0.8
comp=Z,270nm,1.1s
SAUI Saumlaki 71.82 115 P P 14 11 37.5 +1.9
comp=Z,3µm,1.2s,comp=Z,24µm
BART Pico Bartolome 72.89 304 *e*PcP pP 14 12 28.8 +0.2
CMLA Cha da Macela 73.13 305 *e*PcP pP 14 12 29.5 -0.5
CMLA Cha da Macela 73.13 305 PFAKE 14 11 50.0 +6.9
CMLA LR LR
comp=Z,352nm,19.0s
CMLA Cha da Macela 73.13 305 *i* P P 14 11 44.6 +1.5
PSET Sete Cidades 73.23 305 *e*PcP pP 14 12 32.2 +1.6
PSMN Pico do Norte, 73.24 304 *e*PcP pP 14 12 30.8 +0.1
PSMA Santa Maria 73.29 304 *e*PcP pP 14 12 31.1 +0.2
MBWA Marble Bar 73.61 133 *e*P P 14 11 45.2 -0.8
comp=Z,2µm,1.4s
MBWA *e*PcP PcP 14 12 00.3 -0.5
MBWA *e*pP pP 14 12 33.5 +0.6
MBWA LR LR
comp=Z,584nm,19.0s
INK Inuvik 73.91 9 *e*P P 14 11 47.6 +0.6
comp=Z,208nm,0.9s
INK *e*pP pP 14 12 34.9 +0.9
INK Inuvik 73.91 9 *e*P P 14 11 47.6 +0.6
INK *e**PP pP 14 12 34.9 +0.9
INK pmax pmax
comp=Z,208nm,0.9s
PGRA Graciosa 74.04 307 *e*PcP pP 14 12 35.7 +0.4
DBIC Dimbokro 74.59 267 P P 14 11 51.1 -0.8
comp=Z,33nm,0.5s,baz=30,slow=6.2,SNR=60
DBIC pP pP 14 12 38.9 0.0
comp=Z,47nm,0.9s,baz=52,slow=7.6,SNR=3.1
PICO Pico 74.62 307 *e*PcP pP 14 12 39.9 +1.0
KIC Kosan Boka 74.68 267 *e*P P 14 11 51.5 -0.9
comp=Z,325nm,1.1s
PCAN Candelaria 74.69 307 *e*PcP pP 14 12 40.0 +0.8
PCED Cedros 74.73 307 *e*PcP pP 14 12 40.4 +1.0
TIC Toumodi 74.74 267 *e*P P 14 11 51.7 -1.1
ILAR Eielson Array 74.80 16 P P 14 11 52.0 -0.2
comp=Z,43nm,0.9s,baz=323,slow=4.2,SNR=310
ILAR pP pP 14 12 38.5 -0.8
comp=Z,39nm,1.0s,baz=318,slow=4.2,SNR=5.1
ILAR PP PP 14 14 41.9 +0.4
comp=Z,15nm,0.9s,baz=322,slow=8.5,SNR=4.1
ILAR LR LR 14 48 36.8
comp=Z,833nm,18.5s,baz=14,slow=38
TSUM Tsumeb 74.84 232 *e*P P 14 11 53.8 +0.5
comp=Z,172nm,0.8s
TSUM LR LR
comp=Z,1µm,20.0s
FITZ Fitzroy Crossi 74.98 126 P P 14 11 53.4 -0.5
comp=Z,176nm,0.9s,baz=330,slow=6.3,SNR=190
FITZ pP pP 14 12 41.7 +0.7
comp=Z,53nm,0.9s,baz=331,slow=8.0,SNR=3.6
LIC Lamto 74.99 267 *e*P P 14 11 53.1 -1.1
comp=Z,286nm,1.1s
GENI Genyem 75.05 105 P P 14 11 55.6 +1.1
comp=Z,451nm,1.2s,comp=Z,6µm
JAY Jayapura 75.42 104 P P 14 11 57.9 +1.2
H07S1 FLORES T-PHASE 75.90 309 *e*PcP pP 14 12 40.3 -5.9
EGAK Eagle 75.96 14 *e*P P 14 11 59.2 +0.4
comp=Z,257nm,1.5s
EGAK *e*pP pP 14 12 44.2 -1.9
EGAK LR LR
comp=Z,579nm,21.0s
DAWY Dawson 76.94 13 *e*P P 14 12 05.0 +0.5
comp=Z,231nm,1.3s
DAWY *e*pP pP 14 12 52.1 +0.4
BOSA Boshof 77.69 220 P P 14 12 08.9 -0.2
comp=Z,158nm,0.8s,baz=24,slow=4.1,SNR=263
BOSA pP pP 14 12 56.0 -0.6
comp=Z,46nm,0.9s,baz=52,slow=12,SNR=1.8
BOSA Boshof 77.69 220 *i* P P 14 12 09.5 +0.4
BOSA Boshof 77.69 220 *i* P P 14 12 09.5 +0.4
KDAK Kodiak Island 79.23 22 *e*P P 14 12 17.7 +0.7
comp=Z,1µm,1.6s
KDAK *e*pP pP 14 13 04.7 +0.1
KDAK LR LR
comp=Z,349nm,20.0s
KDAK Kodiak Island 79.23 22 *i* P P 14 12 17.5 +0.5
YKA Yellowknife Ar 81.24 3 P P 14 12 28.1 +0.5
comp=Z,77nm,0.4s,baz=350,slow=5.4,SNR=263
YKA pP pP 14 13 15.2 -0.2
comp=Z,53nm,0.9s,baz=348,slow=5.3,SNR=2.5
YKA sP sP 14 13 38.8 +2.4
comp=Z,41nm,0.7s,baz=351,slow=5.5,SNR=3.0
YKA PP PP 14 15 36.4 +1.3
comp=Z,12nm,0.9s,baz=352,slow=7.7,SNR=4.5
YKA PKKPbc PKKPbc 14 30 59.6 -2.1
comp=Z,2.8nm,0.6s,baz=173,slow=2.3,SNR=12
NWAO Narrogin (SRO) 81.54 142 P P 14 12 27.8 -1.8
comp=Z,58nm,0.7s,baz=186,slow=7.8,SNR=38
SCHQ Schefferville 82.05 337 P P 14 12 31.5 -0.6
comp=Z,46nm,0.8s,baz=42,slow=6.6,SNR=16
SCHQ pP pP 14 13 19.7 -0.3
comp=Z,38nm,0.8s,baz=9.4,slow=3.0,SNR=3.2
SCHQ LR LR 14 48 39.4
comp=Z,769nm,21.2s,baz=60,slow=35
WRA Warramunga Arr 82.08 122 P P 14 12 31.3 -1.4
comp=Z,336nm,0.8s,baz=324,slow=5.0,SNR=1182
WRA pP pP 14 13 21.4 +0.7
comp=Z,39nm,0.9s,baz=320,slow=5.0,SNR=3.0
WRA PP PP 14 15 44.9 +0.9
comp=Z,11nm,0.9s,baz=316,slow=7.0,SNR=4.6
WRA PKKPbc PKKPbc 14 31 00.9 +1.0
comp=Z,6.1nm,0.8s,baz=127,slow=2.3,SNR=40
WRA PKPPKP P'P'df 14 39 02.1 -3.0
comp=Z,3.3nm,1.0s,baz=136,slow=1.4,SNR=10.0
WRAB Tennant Creek 82.08 122 *e*P P 14 12 31.5 -1.3
comp=Z,430nm,0.8s
WRAB LR LR
comp=Z,555nm,20.0s
WRAB Tennant Creek 82.08 122 *e*P P 14 12 31.5 -1.3
WRAB pmax pmax
comp=Z,430nm,0.8s
WRAB MLR MLR
comp=Z,555nm,20.0s
SUR Sutherland 83.00 221 PKKP PKKPdf 14 30 51.9 +1.3
comp=Z,9.3nm,1.1s,baz=211,slow=1.3,SNR=3.1
SUR Sutherland 83.00 221 *e*P P 14 12 38.1 +0.7
comp=Z,183nm,1.0s
SUR PKKP PKKPdf 14 30 51.9 +1.3
SUR LR LR
comp=Z,2µm,20.0s
WAKE Wake Island 83.23 71 PFAKE 14 12 50.0 +11
WAKE LR LR
comp=Z,941nm,22.0s
DLBC Dease Lake 83.80 11 *e*P P 14 12 42.2 +1.0
comp=Z,144nm,1.4s
FCC Fort Churchill 84.25 352 *e*P P 14 12 43.8 +0.5
comp=Z,292nm,1.5s
FCC *e*pP pP 14 13 32.9 +1.5
ASAR Alice Springs 84.34 125 P P 14 12 42.9 -1.4
comp=Z,249nm,0.7s,baz=310,slow=4.9,SNR=1030
ASAR pP pP 14 13 32.6 +0.2
comp=Z,49nm,0.9s,baz=321,slow=5.5,SNR=3.7
ASAR sP sP 14 13 55.2 +2.1
comp=Z,24nm,0.6s,baz=322,slow=5.3,SNR=2.0
ASAR PP PP 14 16 03.4 +1.0
comp=Z,13nm,0.9s,baz=315,slow=6.9,SNR=3.1
ASAR PKiKP PKiKP 14 17 57.5 +0.2
comp=Z,2.7nm,0.7s,baz=330,slow=1.1,SNR=5.8
ASAR PKKP PKKPdf 14 30 47.5 +0.1
comp=Z,1.2nm,0.9s,baz=40,slow=0.5,SNR=5.6
ASAR PKKPbc PKKPbc 14 30 55.7 +0.8
comp=Z,3.3nm,0.8s,baz=128,slow=2.9,SNR=24
ASAR PKPPKP P'P'df 14 38 58.4 -2.3
comp=Z,4.2nm,0.9s,baz=137,slow=2.8,SNR=14
PMG Port Moresby 84.71 106 P P 14 12 44.9 -1.4
comp=Z,98nm,1.1s,baz=309,slow=6.5,SNR=22
PMG pP pP 14 13 36.0 +1.5
comp=Z,69nm,0.9s,baz=274,slow=3.5,SNR=6.2
SACV Santiago Islan 84.77 285 PFAKE 14 13 00.0 +13
SACV LR LR
comp=Z,407nm,19.0s
WRAK Wrangell Islan 85.35 13 *e*P P 14 12 49.6 +0.8
comp=Z,51nm,0.8s
WRAK *e*pP pP 14 13 37.9 +0.9
WRAK LR LR
comp=Z,632nm,20.0s
CHGQ Chibougamau 88.62 338 P P 14 13 05.5 +0.9
baz=27
FFC Flin Flon 88.92 356 *e*P P 14 13 05.6 -0.4
comp=Z,126nm,1.1s
FFC *e*pP pP 14 13 55.2 +0.6
FFC LR LR
comp=Z,847nm,19.0s
FFC Flin Flon 88.92 356 *e*P P 14 13 05.6 -0.4
FFC *e**PP pP 14 13 55.2 +0.6
FFC pmax pmax
comp=Z,126nm,1.1s
FFC MLR MLR
comp=Z,847nm,19.0s
SHEL Horse Pasture 89.00 249 PFAKE 14 13 20.0 +13
SHEL LR LR
comp=Z,670nm,19.0s
MATQ Matagami 89.69 340 P P 14 13 10.4 +0.7
baz=25
CTA Charters Tower 90.64 115 P P 14 13 13.3 -1.2
comp=Z,140nm,0.8s,baz=302,slow=7.6,SNR=149
CTA PKiKP PKiKP 14 18 07.0 -0.7
comp=Z,4.7nm,0.8s,baz=319,slow=4.6,SNR=2.6
CTA PKKPbc PKKPbc 14 30 40.8 +1.6
comp=Z,0.9nm,0.3s,baz=84,slow=4.3,SNR=5.2
CTAO Charters Tower 90.64 115 *e*P P 14 13 13.3 -1.2
comp=Z,1µm,0.9s
CTAO *e*pP pP 14 14 03.7 +0.5
CTAO LR LR
comp=Z,408nm,20.0s
CTAO Charters Tower 90.64 115 *e*P P 14 13 13.3 -1.2
CTAO *e**PP pP 14 14 03.7 +0.5
CTAO MLR MLR
comp=Z,408nm,20.0s
ASCN Ascension 90.85 261 PFAKE 14 13 30.0 +14
ASCN LR LR
comp=Z,1µm,20.0s
PKME Peaks-Kenny Pk 91.00 333 P P 14 13 16.7 +0.9
baz=31
PKME Peaks-Kenny Pk 91.00 333 *e*P P 14 13 17.0 +1.2
comp=Z,25nm,1.1s
PKME LR LR
comp=Z,541nm,20.0s
BELQ Belleterre 92.13 340 P P 14 13 21.9 +0.8
baz=24
ALFO Alfred 92.59 337 P P 14 13 24.1 +1.0
baz=27
ULM Lac du Bonnet 92.82 352 P P 14 13 23.4 -0.7
comp=Z,44nm,0.9s,baz=5.3,slow=4.8,SNR=39
ULM pP pP 14 14 13.6 +0.7
comp=Z,18nm,0.9s,baz=24,slow=6.2,SNR=4.5
ULM sP sP 14 14 34.6 +1.1
comp=Z,30nm,1.1s,baz=353,slow=5.5,SNR=3.0
ULM LR LR 15 00 13.9
comp=Z,769nm,18.1s,baz=24,slow=38
LBNH Lisbon 92.83 334 P P 14 13 25.2 +0.9
baz=29
PEMO Pembroke 93.28 338 P P 14 13 26.9 +0.6
baz=25
LONY Lake Ozonia 93.39 336 P P 14 13 27.2 +0.3
baz=27,SNR=16
LONY Lake Ozonia 93.39 336 *e*P P 14 13 27.1 +0.1
comp=Z,21nm,0.8s
LONY LR LR
comp=Z,643nm,21.0s
PLVO Plevna 93.81 338 P P 14 13 29.7 +1.0
baz=25
A33A Warroad 94.05 351 P P 14 13 29.9 +0.1
baz=11,SNR=28
C40A Isle Royale Na 94.07 347 P P 14 13 29.6 -0.3
baz=16,SNR=14
BANO Bancroft 94.08 338 P P 14 13 30.9 +0.9
baz=25
BUKO Buck Lake 94.12 340 P P 14 13 30.3 +0.1
baz=24
PGC Sidney 94.26 9 *e*P P 14 13 30.6 -0.1
comp=Z,29nm,0.9s
A04D Lummi Island 94.29 9 P P 14 13 31.5 +0.6
baz=349
B35A Bob, Littlefor 94.39 350 P P 14 13 31.2 -0.2
baz=12,SNR=14
B34A Aery, Baudette 94.40 350 P P 14 13 31.2 -0.2
baz=12,SNR=19
KLBO Killbear Provi 94.42 340 P P 14 13 31.2 -0.4
baz=23
DELO Deloro Mine 94.44 338 P P 14 13 31.4 -0.3
baz=25
EYMN Ely 94.45 348 P P 14 13 31.7 0.0
baz=14,SNR=29
EYMN Ely 94.45 348 *e*P P 14 13 31.3 -0.4
comp=Z,51nm,0.9s
EYMN LR LR
comp=Z,817nm,19.0s
C38A Sawbill Land. 94.64 348 P P 14 13 32.2 -0.4
baz=14,SNR=9.9
E44A Grand Marais A 94.66 344 P P 14 13 33.1 +0.5
baz=18
SADO Sadowa 94.66 339 *e*P P 14 13 31.4 -1.3
comp=Z,7.2nm,0.7s
WALA Waterton Lakes 94.70 3 *e*P P 14 13 33.0 +0.1
comp=Z,41nm,0.9s
E45A Wooded Hills, 94.74 344 P P 14 13 33.2 +0.2
baz=19
AGMN Agassiz Nation 94.74 351 P P 14 13 33.1 +0.1
baz=11,SNR=23
AGMN Agassiz Nation 94.74 351 *e*P P 14 13 31.9 -1.1
comp=Z,54nm,1.1s
AGMN LR LR
comp=Z,940nm,21.0s
C37A Embarrass 94.78 349 P P 14 13 33.3 +0.1
baz=14,SNR=13
D41A Chassel 94.78 346 P P 14 13 33.3 +0.1
baz=16,SNR=7.5
B05A Bryant 94.81 9 P P 14 13 34.0 +0.8
baz=350,SNR=13
C36A Pine Crest Far 94.85 349 P P 14 13 33.5 -0.1
baz=13,SNR=11
STKA Stephens Creek 94.88 126 P P 14 13 32.6 -1.1
comp=Z,19nm,0.6s,baz=331,slow=5.2,SNR=31
STKA PP PP 14 17 26.9 +1.1
comp=Z,8.5nm,0.8s,baz=290,slow=8.8,SNR=2.9
TOBO Tobermory, Bru 94.90 341 P P 14 13 34.6 +0.9
baz=22
C35A Jirik Farms, M 95.08 350 P P 14 13 34.0 -0.5
baz=12,SNR=9.8
E43A Lone Tree Farm 95.12 345 P P 14 13 34.5 -0.2
baz=18,SNR=7.3
F46A Macinaw City C 95.19 343 P P 14 13 34.4 -0.7
baz=19
WLVO Wesleyville 95.22 338 P P 14 13 36.0 +0.8
baz=24
C34A RKJ Ranch, Bem 95.25 350 P P 14 13 35.3 0.0
baz=11
E42A Champion 95.26 345 P P 14 13 35.2 -0.2
baz=17,SNR=12
C33A Trail 95.26 351 P P 14 13 35.6 +0.2
baz=11
CLWO Collingwood 95.28 340 P P 14 13 36.5 +0.9
baz=23
C06D Leavenworth 95.29 8 P P 14 13 36.0 +0.5
baz=350
D37A Cotton 95.37 349 P P 14 13 35.6 -0.2
baz=13,SNR=6.9
F44A Big Bay de Noc 95.38 344 P P 14 13 36.0 +0.1
baz=18,SNR=6.8
BMRO Meriville Lake 95.40 340 P P 14 13 37.0 +1.0
baz=22
E41A Kenton 95.43 346 P P 14 13 36.1 -0.1
baz=16
NLWA Neilton Lookou 95.44 10 *e*P P 14 13 37.2 +1.0
comp=Z,26nm,1.0s
NLWA LR LR
comp=Z,586nm,19.0s
F45A CMU Biological 95.45 344 P P 14 13 36.5 +0.3
baz=19
D36A Goodland 95.47 349 P P 14 13 35.9 -0.4
baz=13
MDND Maddock 95.59 354 P P 14 13 36.7 -0.2
baz=7.7
E40A Wakefield 95.63 347 P P 14 13 37.3 +0.2
baz=15,SNR=29
F43A Flat Rock, Esc 95.68 345 P P 14 13 37.6 +0.4
baz=18,SNR=15
D35A Remer 95.69 350 P P 14 13 36.9 -0.5
baz=12
E38A The Farm, Brul 95.76 348 P P 14 13 37.5 -0.2
baz=14,SNR=6.9
E39A Mellen 95.81 347 P P 14 13 37.9 -0.1
baz=15,SNR=18
COWI Conover 95.82 346 *e*P P 14 13 37.6 -0.3
comp=Z,16nm,0.8s
COWI LR LR
comp=Z,798nm,19.0s
EGMT Eagleton 95.84 0 P P 14 13 38.5 +0.4
baz=360
EGMT Eagleton 95.84 0 *e*P P 14 13 37.3 -0.8
comp=Z,56nm,1.1s
EGMT LR LR
comp=Z,288nm,20.0s
E37A Wrenshall 95.94 348 P P 14 13 38.3 -0.2
baz=13
F42A Maple Grove Fa 95.94 345 P P 14 13 38.3 -0.2
baz=17
BINY Binghamton 96.02 336 P P 14 13 38.4 -0.5
baz=26
BINY Binghamton 96.02 336 PFAKE 14 13 50.0 +11
BINY LR LR
comp=Z,701nm,20.0s
BASO Ashfield 96.06 340 P P 14 13 40.2 +1.1
baz=22
E36A McGregor 96.12 349 P P 14 13 39.6 +0.3
baz=13,SNR=14
F41A Three Lakes 96.16 346 P P 14 13 39.7 +0.2
baz=16,SNR=18
F40A Park Falls 96.18 347 P P 14 13 39.3 -0.2
baz=15,SNR=6.9
E35A Pequot Lakes 96.25 350 P P 14 13 39.8 -0.1
baz=12
F39A Loretta 96.32 347 P P 14 13 40.3 +0.1
baz=15,SNR=17
G43A Wallace 96.33 345 P P 14 13 40.3 +0.1
baz=17,SNR=15
PAL Palisades 96.37 334 P P 14 13 39.9 -0.6
baz=28
E34A Wadena 96.40 350 P P 14 13 40.4 -0.2
baz=11
TYNO Tyneside 96.41 339 P P 14 13 41.2 +0.6
baz=23
F38A Pierce - Schro 96.45 348 P P 14 13 41.2 +0.4
baz=14,SNR=12
G42A Mountain 96.50 345 P P 14 13 41.1 +0.1
baz=17,SNR=8.8
G41A Antigo 96.68 346 P P 14 13 41.4 -0.5
baz=16
ELFO Elginfield 96.73 340 P P 14 13 42.7 +0.6
baz=22
F37A Hinrichs Farm, 96.80 348 P P 14 13 42.6 +0.2
baz=13
F36A Milaca 96.81 349 P P 14 13 42.4 0.0
baz=12,SNR=8.8
G40A Rib Lake 96.82 347 P P 14 13 42.7 +0.2
baz=15,SNR=15
MSO Missoula 96.92 3 P P 14 13 43.2 +0.1
baz=356,SNR=6.0
HAWA Hanford 96.94 7 PFAKE 14 13 50.0 +7.0
HAWA LR LR
comp=Z,563nm,21.0s
G39A Holcombe 96.98 347 P P 14 13 43.1 -0.1
baz=14
H43A Windswept, Lux 97.10 345 P P 14 13 43.8 0.0
baz=17
F34A Alexandria 97.12 350 P P 14 13 43.6 -0.2
baz=11
LAO LASA Array 97.14 358 P Pdif 14 13 45.3 +1.3
baz=2.3
LAO LASA Array 97.14 358 *e*P Pdif 14 13 44.9 +0.9
comp=Z,37nm,0.8s
LAO LR LR
comp=Z,657nm,20.0s
G38A Ridgeland 97.21 348 P P 14 13 43.9 -0.3
baz=14
H42A Shiocton 97.22 345 P Pdif 14 13 44.5 +0.2
baz=16
SPMN Marine on St. 97.31 348 P Pdif 14 13 45.1 +0.4
baz=13
ERPA Erie 97.34 339 P P 14 13 44.8 -0.1
baz=23
H41A Junction City 97.34 346 P P 14 13 44.9 0.0
baz=16
G36A St. Michael 97.45 349 P Pdif 14 13 45.4 +0.1
baz=12
H40A Chili 97.48 347 P Pdif 14 13 45.8 +0.3
baz=15,SNR=12
G35A Watkins 97.58 350 P Pdif 14 13 46.0 +0.1
baz=12
H39A Augusta 97.58 347 P Pdif 14 13 46.1 +0.2
baz=14
I43A Langenfeld Bro 97.74 345 P Pdif 14 13 46.9 +0.2
baz=17,SNR=5.2
H38A Maiden Rock 97.76 348 P Pdif 14 13 46.8 +0.1
baz=14
M54A Oil Creek Stat 97.80 338 P P 14 13 46.8 -0.2
baz=24
G33A Ortonville 97.86 351 P P 14 13 47.1 -0.1
baz=10
G05D Wamic, OR 97.88 9 P Pdif 14 13 48.1 +0.8
baz=350
I42A Draeger Farm, 97.89 345 P Pdif 14 13 47.5 +0.2
baz=16
I41A Arkdale 97.92 346 P Pdif 14 13 47.7 +0.2
baz=16
G32A Webster 97.93 352 P Pdif 14 13 47.6 +0.1
baz=9.4
H37A Dierke Farm, C 97.96 348 P Pdif 14 13 48.2 +0.6
baz=13
SSPA Standing Stone 98.04 337 P P 14 13 47.6 -0.4
baz=25
H36A Jessenland, He 98.12 349 P Pdif 14 13 48.7 +0.3
baz=12
H35A Sunnyside Ranc 98.14 350 P Pdif 14 13 49.0 +0.6
baz=12
AAM Ann Arbor 98.18 341 Pdiff P 14 13 48.6 0.0
baz=20
AAM Ann Arbor 98.18 341 PFAKE 14 14 00.0 +11
AAM LR LR
comp=Z,698nm,20.0s
I40A Norwalk 98.22 347 Pdiff Pdif 14 13 49.1 +0.2
baz=15
BOZ Bozeman (W) 98.24 2 Pdiff Pdif 14 13 49.7 +0.6
baz=358
BOZ Bozeman (W) 98.24 2 *e*P P 14 13 47.3 -1.7
comp=Z,7.3nm,0.8s
BOZ LR LR
comp=Z,640nm,22.0s
BOZ Bozeman (W) 98.24 2 *e*P P 14 13 47.3 -1.7
BOZ pmax pmax
comp=Z,7.0nm,0.8s
BOZ MLR MLR
comp=Z,640nm,22.0s
J43A Natural Harves 98.28 345 Pdiff Pdif 14 13 49.3 +0.2
baz=17
I38A Scanlan Farm, 98.39 348 Pdiff Pdif 14 13 49.8 +0.2
baz=14
N54A Moraine State 98.40 338 Pdiff P 14 13 49.3 -0.3
baz=23
I39A Houston 98.43 347 Pdiff P 14 13 49.5 -0.2
baz=14
J42A Columbus 98.49 345 Pdiff P 14 13 49.7 -0.3
baz=16
I37A Lemond, Waseca 98.59 349 Pdiff Pdif 14 13 50.7 +0.3
baz=13
O56A Blue Knob Stat 98.59 337 Pdiff P 14 13 50.3 -0.3
baz=24
J41A Loganville 98.62 346 Pdiff P 14 13 50.6 0.0
baz=15
H32A Carlson Farm, 98.67 352 Pdiff Pdif 14 13 50.9 0.0
baz=9.4
BMO Blue Mountains 98.67 6 PFAKE 14 14 00.0 +9.0
BMO LR LR
comp=Z,606nm,19.0s
I36A Fitzsimmons Fa 98.68 349 Pdiff Pdif 14 13 51.0 +0.1
baz=12
J40A Soldiers Grove 98.73 347 Pdiff P 14 13 50.9 -0.2
baz=15
RLMT Red Lodge 98.74 0 Pdiff Pdif 14 13 51.9 +0.5
baz=360
RLMT Red Lodge 98.74 0 *e*P P 14 13 49.7 -1.7
comp=Z,89nm,1.8s
RLMT LR LR
comp=Z,782nm,20.0s

I05D	**Terrebonne, OR**	**98.77**	**9**	Pdiff	Pdif	14 13 52.0	+0.7
	baz=350						
K43A	**Burlington**	**98.91**	**345**	Pdiff	**P**	**14 13 51.6**	**-0.2**
	baz=17						
J39A	**Decorah**	**98.96**	**347**	Pdiff	**P**	**14 13 51.5**	**-0.6**
	baz=14						
K42A	**Prairie Point,**	**99.05**	**345**	Pdiff	**Pdif**	**14 13 52.1**	**-0.4**
	baz=16						
JFWS	**Jewell Farm**	**99.10**	**346**	Pdiff	**Pdif**	**14 13 52.5**	**-0.2**
	baz=15						
JFWS	**Jewell Farm**	**99.10**	**346**	*e*Pdif	**Pdif**	**14 13 52.5**	**-0.2**
	comp=Z,17nm,0.6s						
JFWS				LR	LR		
	comp=Z,841nm,19.0s						
JFWS	**Jewell Farm**	**99.10**	**346**	*e*P	**Pdif**	**14 13 52.5**	**-0.2**
JFWS				pmax	pmax		
	comp=Z,17nm,0.6s						
JFWS				MLR	MLR		
	comp=Z,841nm,19.0s						
J38A	**Wedel Dairy, R**	**99.11**	**348**	Pdiff	**Pdif**	**14 13 52.3**	**-0.5**
	baz=13						
I03D	**Drain, OR**	**99.13**	**10**	Pdiff	**Pdif**	**14 13 52.2**	**-0.7**
	baz=348						
I04A	**Tendick Farm,**	**99.16**	**10**	Pdiff	**Pdif**	**14 13 52.3**	**-0.8**
	baz=349						
LKWY	**Lake**	**99.29**	**1**	PFAKE		14 14 10.0	+16
LKWY				LR	LR		
	comp=Z,2µm,20.0s						
J37A	**Redenius Farm,**	**99.30**	**349**	Pdiff	**Pdif**	**14 13 53.7**	**+0.1**
	baz=13						
ECSD	**EROS Data Cent**	**99.33**	**351**	Pdiff	**Pdif**	**14 13 53.9**	**+0.2**
	baz=10						
ECSD	**EROS Data Cent**	**99.33**	**351**	*e*Pdif	**Pdif**	**14 13 54.0**	**+0.2**
	comp=Z,11nm,0.8s						
ECSD				LR	LR		
	comp=Z,809nm,21.0s						
J36A	**Seneca 1, Swea**	**99.40**	**349**	Pdiff	**Pdif**	**14 13 54.5**	**+0.4**
	baz=12						
K41A	**Shullsburg**	**99.41**	**346**	Pdiff	**Pdif**	**14 13 53.9**	**-0.2**
	baz=15						
K40A	**Colesburg**	**99.47**	**347**	Pdiff	**Pdif**	**14 13 54.2**	**-0.2**
	baz=14						
MCWV	**Mont Chateau**	**99.55**	**337**	Pdiff	**Pdif**	**14 13 55.3**	**+0.5**
	baz=23						
K39A	**Oelwein**	**99.61**	**347**	Pdiff	**Pdif**	**14 13 54.4**	**-0.6**
	baz=14						
RSSD	**Black Hills**	**99.61**	**356**	Pdiff	**Pdif**	**14 13 55.7**	**+0.5**
	baz=4.1						
RSSD	**Black Hills**	**99.61**	**356**	*e*Pdif	**Pdif**	**14 13 54.4**	**-0.9**
	comp=Z,13nm,1.0s						
RSSD	**Black Hills**	**99.61**	**356**	*e*P	**Pdif**	**14 13 54.4**	**-0.9**
RSSD				pmax	pmax		
	comp=Z,13nm,1.0s						
M46A	**Old House Fiel**	**99.70**	**343**	Pdiff	**Pdif**	**14 13 55.2**	**-0.2**
	baz=18						
J04D	**Umpqua Nationa**	**99.75**	**10**	Pdiff	**Pdif**	**14 13 56.4**	**+0.5**
	baz=349						
K38A	**Parkersburg**	**99.81**	**348**	Pdiff	**Pdif**	**14 13 55.4**	**-0.6**
	baz=13						
J05D	**Fort Rock, OR**	**99.82**	**9**	Pdiff	**Pdif**	**14 13 55.6**	**-0.6**
	baz=350						
K37A	**Belmond**	**99.84**	**348**	Pdiff	**Pdif**	**14 13 56.2**	**+0.1**
	baz=12						
BBSR	**BB Station**	**99.86**	**323**	PFAKE		14 14 10.0	+14
BBSR				LR	LR		
	comp=Z,463nm,20.0s						
L42A	**Oliver, Polo**	**99.86**	**345**	Pdiff	**Pdif**	**14 13 56.0**	**-0.1**
	baz=16						
M45A	**Boilermakers S**	**99.92**	**343**	Pdiff	**Pdif**	**14 13 56.4**	**0.0**
	baz=18						
ACSO	**Alum Creek Sta**	**99.94**	**340**	Pdiff	**Pdif**	**14 13 56.2**	**-0.3**
	baz=21						
ACSO	**Alum Creek Sta**	**99.94**	**340**	PFAKE		14 14 10.0	+13
ACSO				LR	LR		
	comp=Z,489nm,21.0s						
L41A	**Preston**	**99.95**	**346**	Pdiff	**Pdif**	**14 13 56.4**	**-0.2**
	baz=15						
CBN	**Corbin Frederi**	**100.07**	**335**	PFAKE		14 14 10.0	+13
CBN				LR	LR		
	comp=Z,606nm,22.0s						
K36A	**Gilmore City**	**100.10**	**349**	Pdiff	**Pdif**	**14 13 57.3**	**+0.1**
	baz=12						
M44A	**Midewin, Midew**	**100.10**	**344**	Pdiff	**Pdif**	**14 13 57.1**	**-0.1**
	baz=17						
L40A	**Anamosa**	**100.11**	**347**	Pdiff	**Pdif**	**14 13 56.9**	**-0.3**
	baz=14						
HLID	**Hailey**	**100.16**	**4**	Pdiff	**Pdif**	**14 13 58.0**	**+0.3**
	baz=356						
HLID	**Hailey**	**100.16**	**4**	PFAKE		14 14 10.0	+12
HLID				LR	LR		
	comp=Z,976nm,20.0s						
L39A	**Vinton**	**100.19**	**347**	Pdiff	**Pdif**	**14 13 56.8**	**-0.8**
	baz=14						
O50A	**Cable**	**100.19**	**340**	Pdiff	**Pdif**	**14 13 57.1**	**-0.6**
	baz=20						
MFID	**Camas Ranch**	**100.22**	**5**	*e*Pdif	**Pdif**	**14 13 56.9**	**-1.0**
	comp=Z,8.6nm,1.1s						
M43A	**Waltham Townsh**	**100.26**	**345**	Pdiff	**Pdif**	**14 13 57.9**	**0.0**
	baz=16						
N46A	**Monticello**	**100.27**	**343**	Pdiff	**Pdif**	**14 13 57.8**	**-0.2**
	baz=18						
L38A	**Oak Wood Farm,**	**100.34**	**348**	Pdiff	**Pdif**	**14 13 58.1**	**-0.2**
	baz=13						
O49A	**Covington**	**100.34**	**341**	Pdiff	**Pdif**	**14 13 57.8**	**-0.5**
	baz=20						
M42A	**Sheffield**	**100.41**	**345**	Pdiff	**Pdif**	**14 13 58.2**	**-0.4**
	baz=16						
O48A	**Farmland**	**100.49**	**342**	Pdiff	**Pdif**	**14 13 58.5**	**-0.5**
	baz=19						
N45A	**Kentland**	**100.50**	**343**	Pdiff	**Pdif**	**14 13 58.6**	**-0.4**
	baz=18						
L02D	**Cave Junction,**	**100.60**	**11**	Pdiff	**Pdif**	**14 13 59.0**	**-0.4**
	baz=348						
SCIA	**State Center**	**100.61**	**348**	Pdiff	**Pdif**	**14 13 59.2**	**-0.3**
	baz=13						
SCIA	**State Center**	**100.61**	**348**	PFAKE		14 14 10.0	+11
SCIA				LR	LR		
	comp=Z,798nm,19.0s						
M41A	**Milan**	**100.64**	**346**	Pdiff	**Pdif**	**14 13 59.1**	**-0.6**
	baz=15						
L36A	**Harm Buss Farm**	**100.65**	**349**	Pdiff	**Pdif**	**14 13 59.5**	**-0.2**
	baz=12						
N44A	**Piper City**	**100.69**	**344**	Pdiff	**Pdif**	**14 13 59.8**	**0.0**
	baz=17						
P50A	**Jamestown**	**100.74**	**340**	Pdiff	**Pdif**	**14 13 59.4**	**-0.8**
	baz=20						
O47A	**Sheridan**	**100.76**	**342**	Pdiff	**Pdif**	**14 13 59.5**	**-0.7**
	baz=19						
N43A	**Stutzman Famil**	**100.78**	**345**	Pdiff	**Pdif**	**14 14 00.3**	**+0.1**
	baz=16						
M40A	**Post Highland**	**100.80**	**347**	Pdiff	**Pdif**	**14 13 59.9**	**-0.4**
	baz=14						
M39A	**Webster**	**100.85**	**347**	Pdiff	**Pdif**	**14 14 00.2**	**-0.3**
	baz=14						
SFIN	**Lafayette**	**100.85**	**343**	Pdiff	**Pdif**	**14 13 59.8**	**-0.7**
	baz=18						
WVOR	**Wild Horse Val**	**100.95**	**7**	PFAKE		14 14 10.0	+8.8
WVOR				LR	LR		
	comp=Z,961nm,19.0s						
N42A	**Yates City**	**101.06**	**345**	Pdiff	**Pdif**	**14 14 01.3**	**-0.2**
	baz=16						
AHID	**Auburn Hatcher**	**101.08**	**1**	PFAKE		14 14 10.0	+8.2
AHID				LR	LR		
	comp=Z,946nm,19.0s						
BW06	**Boulder Array**	**101.10**	**0**	PFAKE		14 14 10.0	+8.0
BW06				LR	LR		
	comp=Z,760nm,20.0s						
PDAR	**Pinedale Array**	**101.10**	**0**	P	**Pdif**	**14 14 02.0**	**+0.1**
	comp=Z,2.3nm,0.6s,baz=36,slow=3.0,SNR=22						
PDAR				pP	**pPdif**	**14 14 53.2**	**+2.3**
	comp=Z,0.7nm,0.7s,baz=11,slow=1.8,SNR=1.9						
PDAR				sP	**sPdif**	**14 15 14.1**	**+2.6**
	comp=Z,1.2nm,0.7s,baz=25,slow=1.6,SNR=2.8						
PDAR				PP	**PP**	**14 18 09.3**	**-2.5**
	comp=Z,6.1nm,1.0s,baz=18,slow=5.2,SNR=8.2						
PDAR				PKiKP	**PKiKP**	**14 18 25.8**	**-0.1**
	comp=Z,2.7nm,0.8s,baz=81,slow=4.4,SNR=6.0						
PDAR				PKKPbc	**PKKPbc**	**14 30 10.8**	**-1.0**
	comp=Z,1.4nm,0.8s,baz=143,slow=5.1,SNR=7.1						
O45A	**Potomac**	**101.12**	**343**	Pdiff	**Pdif**	**14 14 01.6**	**-0.2**
	baz=17						
Q51A	**Peebles**	**101.16**	**340**	Pdiff	**Pdif**	**14 14 01.5**	**-0.5**
	baz=21						
HDIL	**Hopedale**	**101.17**	**345**	Pdiff	**Pdif**	**14 14 01.5**	**-0.5**
	baz=16						
HDIL	**Hopedale**	**101.17**	**345**	PFAKE		14 14 10.0	+8.0
HDIL				LR	LR		
	comp=Z,708nm,20.0s						
K22A	**Casper**	**101.18**	**358**	Pdiff	**Pdif**	**14 14 01.8**	**-0.4**
	baz=2.1						
M37A	**Trindle Farm,**	**101.24**	**348**	Pdiff	**Pdif**	**14 14 01.6**	**-0.7**
	baz=12						
M36A	**Felix, Anita**	**101.31**	**349**	Pdiff	**Pdif**	**14 14 01.9**	**-0.7**
	baz=12						
P48A	**Milroy**	**101.31**	**341**	Pdiff	**Pdif**	**14 14 01.9**	**-0.7**
	baz=19						
N40A	**Mertquake, Sal**	**101.31**	**347**	Pdiff	**Pdif**	**14 14 01.9**	**-0.7**
	baz=14						
O44A	**Mansfield**	**101.38**	**344**	Pdiff	**Pdif**	**14 14 02.4**	**-0.5**
	baz=17						
M02C	**Callahan**	**101.46**	**10**	Pdiff	**Pdif**	**14 14 02.3**	**-1.1**
	baz=349						
N39A	**Derby Farms, D**	**101.49**	**347**	Pdiff	**Pdif**	**14 14 03.2**	**-0.2**
	baz=14						
Q50A	**Georgetown**	**101.51**	**340**	Pdiff	**Pdif**	**14 14 03.1**	**-0.4**
	baz=20						
P46A	**Rosedale**	**101.60**	**343**	Pdiff	**Pdif**	**14 14 03.8**	**-0.1**
	baz=18						
Q49A	**Aurora**	**101.60**	**341**	Pdiff	**Pdif**	**14 14 03.4**	**-0.5**
	baz=20						
O42A	**Bath**	**101.68**	**345**	Pdiff	**Pdif**	**14 14 04.2**	**-0.1**
	baz=16						
N38A	**Joes South For**	**101.70**	**348**	Pdiff	**Pdif**	**14 14 04.3**	**-0.1**
	baz=13						
N37A	**Lee Faris, Mou**	**101.89**	**348**	Pdiff	**Pdif**	**14 14 05.1**	**-0.1**
	baz=12						
O41A	**Passleys Farm,**	**101.92**	**346**	Pdiff	**Pdif**	**14 14 05.1**	**-0.3**
	baz=15						
N36A	**Muff Farm, Cla**	**101.96**	**349**	Pdiff	**Pdif**	**14 14 05.3**	**-0.2**
	baz=12						
BLA	**Blacksburg**	**101.97**	**337**	PFAKE		14 14 20.0	+14
BLA				LR	LR		
	comp=Z,481nm,19.0s						
Q47A	**Bedord North L**	**102.06**	**342**	Pdiff	**Pdif**	**14 14 05.6**	**-0.3**
	baz=18						
P44A	**Sand Creek, Wi**	**102.07**	**344**	Pdiff	**Pdif**	**14 14 06.1**	**+0.1**
	baz=17						
P43A	**Skaggs, Pawnee**	**102.10**	**345**	Pdiff	**Pdif**	**14 14 05.8**	**-0.4**
	baz=16						
O39A	**Kirksville**	**102.10**	**347**	Pdiff	**Pdif**	**14 14 06.1**	**-0.1**
	baz=14						
O40A	**La Belle**	**102.11**	**347**	Pdiff	**Pdif**	**14 14 05.8**	**-0.3**
	baz=14						
HWUT	**Hardware Ranch**	**102.22**	**2**	*e*Pdif	**Pdif**	**14 14 06.5**	**-0.4**
	comp=Z,18nm,1.0s						
HWUT				LR	LR		
	comp=Z,722nm,20.0s						
P42A	**Winchester**	**102.32**	**345**	Pdiff	**Pdif**	**14 14 06.7**	**-0.4**
	baz=15						
P41A	**Barry, Barry**	**102.38**	**346**	Pdiff	**Pdif**	**14 14 07.1**	**-0.4**
	baz=15						
O38A	**Galt**	**102.39**	**348**	Pdiff	**Pdif**	**14 14 07.4**	**-0.1**
	baz=13						
R48A	**Northridge Ran**	**102.42**	**341**	Pdiff	**Pdif**	**14 14 07.1**	**-0.5**
	baz=19						
Q45A	**Warren Harvey,**	**102.51**	**343**	Pdiff	**Pdif**	**14 14 07.7**	**-0.2**
	baz=17						
OGNE	**Ogallala**	**102.64**	**354**	Pdiff	**Pdif**	**14 14 08.5**	**-0.1**
	baz=5.8						
OGNE	**Ogallala**	**102.64**	**354**	PFAKE		14 14 20.0	+11
OGNE				LR	LR		
	comp=Z,669nm,21.0s						
Q44A	**Meyer Farm, Va**	**102.70**	**344**	Pdiff	**Pdif**	**14 14 08.8**	**0.0**
	baz=16						
P40A	**Paris**	**102.71**	**347**	Pdiff	**Pdif**	**14 14 08.5**	**-0.4**
	baz=14						
Q43A	**New Douglas**	**102.81**	**345**	Pdiff	**Pdif**	**14 14 09.1**	**-0.2**
	baz=16						
P39B	**Salisbury**	**102.88**	**347**	Pdiff	**Pdif**	**14 14 08.9**	**-0.8**
	baz=13						
P38A	**Dawn**	**102.89**	**348**	Pdiff	**Pdif**	**14 14 09.5**	**-0.2**
	baz=13						
CNNC	**Cliffs of the**	**102.92**	**334**	PFAKE		14 14 20.0	+10
CNNC				LR	LR		
	comp=Z,649nm,19.0s						
P37A	**Lathrop**	**103.06**	**348**	Pdiff	**Pdif**	**14 14 10.1**	**-0.3**
	baz=12						
Q41A	**Truxton**	**103.11**	**346**	Pdiff	**Pdif**	**14 14 10.8**	**+0.1**
	baz=15						
Q40A	**Laux Farm, Aux**	**103.24**	**346**	Pdiff	**Pdif**	**14 14 11.0**	**-0.2**
	baz=14						
R44A	**Waltonville**	**103.34**	**344**	Pdiff	**Pdif**	**14 14 11.6**	**-0.1**
	baz=16						
Q39A	**Willow Grove F**	**103.35**	**347**	Pdiff	**Pdif**	**14 14 11.3**	**-0.4**
	baz=13						
U53A	**Fall Branch**	**103.41**	**338**	Pdiff	**Pdif**	**14 14 11.5**	**-0.6**
	baz=22						
T50A	**Nancy**	**103.45**	**340**	Pdiff	**Pdif**	**14 14 11.4**	**-0.8**
	baz=20						
R43A	**Red Bud**	**103.50**	**345**	Pdiff	**Pdif**	**14 14 12.0**	**-0.4**
	baz=16						
Q38A	**Cooks Store, C**	**103.55**	**348**	Pdiff	**Pdif**	**14 14 12.5**	**-0.1**
	baz=13						
T49A	**Edmonton**	**103.56**	**341**	Pdiff	**Pdif**	**14 14 12.0**	**-0.7**
	baz=19						
S46A	**Don Dixon Farm**	**103.56**	**343**	Pdiff	**Pdif**	**14 14 12.6**	**-0.1**
	baz=18						
DUG	**Dugway, Tooele**	**103.59**	**3**	PFAKE		14 14 20.0	+7.0
DUG				LR	LR		
	comp=Z,637nm,20.0s						
O20A	**White River Ci**	**103.72**	**359**	Pdiff	**Pdif**	**14 14 13.5**	**-0.1**
	baz=0.7						
R41A	**Rosebud**	**103.78**	**346**	Pdiff	**Pdif**	**14 14 13.7**	**+0.1**
	baz=15						
KSU1	**Kansas State U**	**103.88**	**350**	PFAKE		14 14 30.0	+16
KSU1				LR	LR		
	comp=Z,845nm,19.0s						
S44A	**Carbondale**	**103.91**	**344**	Pdiff	**Pdif**	**14 14 14.4**	**+0.2**
	baz=16						
R40A	**Maddies Statio**	**103.95**	**346**	Pdiff	**Pdif**	**14 14 14.3**	**-0.1**
	baz=14						
MAW	**Mawson**	**103.97**	**183**	PKiKP	**PKiKP**	**14 18 30.4**	**+0.7**
	comp=Z,7.8nm,1.0s,baz=27,slow=10,SNR=6.9						
MAW				PKKPbc	**PKKPbc**	**14 30 03.5**	**-0.8**
	comp=Z,3.2nm,0.8s,baz=270,slow=5.1,SNR=5.1						
CCM	**Cathedral Cave**	**103.98**	**346**	Pdiff	**Pdif**	**14 14 15.1**	**+0.6**
	baz=15						
ISCO	**Idaho Springs**	**103.99**	**357**	PFAKE		14 14 30.0	+15
ISCO				LR	LR		
	comp=Z,1µm,20.0s						
R39A	**Chumby, Stover**	**104.08**	**347**	Pdiff	**Pdif**	**14 14 15.1**	**+0.2**
	baz=13						
V53A	**Saluda**	**104.13**	**338**	Pdiff	**Pdif**	**14 14 13.5**	**-1.8**
	baz=22						
S42A	**Caledonia**	**104.17**	**345**	Pdiff	**Pdif**	**14 14 14.5**	**-0.9**
	baz=15						
U49A	**Red Boiling Sp**	**104.18**	**341**	Pdiff	**Pdif**	**14 14 14.4**	**-1.1**
	baz=19						
S43A	**Fulton Ridge,**	**104.20**	**344**	Pdiff	**Pdif**	**14 14 14.7**	**-0.9**
	baz=16						
R38A	**Fenwick Farm,**	**104.35**	**348**	Pdiff	**Pdif**	**14 14 15.8**	**-0.4**
	baz=12						
TKL	**Tuckaleechee C**	**104.42**	**339**	Pdiff	**Pdif**	**14 14 17.1**	**+0.5**
	comp=Z,4.4nm,1.0s,baz=99,slow=13,SNR=3.6						
V51A	**Loudon**	**104.45**	**339**	Pdiff	**Pdif**	**14 14 16.3**	**-0.4**
	baz=20						
CBKS	**Cedar Bluff**	**104.55**	**352**	Pdiff	**Pdif**	**14 14 16.8**	**-0.3**
	baz=7.7						
T44A	**Benton**	**104.56**	**344**	Pdiff	**Pdif**	**14 14 16.9**	**-0.3**
	baz=16						
S40A	**Lebanon**	**104.67**	**346**	Pdiff	**Pdif**	**14 14 17.2**	**-0.4**
	baz=14						
W53A	**Cullowhee**	**104.70**	**338**	Pdiff	**Pdif**	**14 14 16.6**	**-1.3**
	baz=21						
T43A	**Greenville**	**104.72**	**345**	Pdiff	**Pdif**	**14 14 17.0**	**-0.8**
	baz=16						
S39A	**Bolivar**	**104.73**	**347**	Pdiff	**Pdif**	**14 14 16.2**	**-1.7**
	baz=13						
V50A	**Pikevile**	**104.79**	**340**	Pdiff	**Pdif**	**14 14 17.8**	**-0.4**
	baz=20						
Q24A	**Divide**	**104.81**	**357**	Pdiff	**Pdif**	**14 14 17.8**	**-0.9**
	baz=3.3						
S38A	**Stockton**	**104.89**	**348**	Pdiff	**Pdif**	**14 14 18.4**	**-0.2**
	baz=13						
V49A	**McMinnville**	**104.92**	**341**	Pdiff	**Pdif**	**14 14 18.5**	**-0.3**
	baz=19						
U46A	**Springville**	**104.93**	**343**	Pdiff	**Pdif**	**14 14 18.7**	**-0.1**
	baz=17						
T42A	**Van Buren**	**104.94**	**345**	Pdiff	**Pdif**	**14 14 18.4**	**-0.4**
	baz=15						
NVAR	**Mina Array Bea**	**104.95**	**7**	Pdiff	**Pdif**	**14 14 20.5**	**+1.4**
	comp=Z,2.4nm,0.9s,baz=345,slow=2.6,SNR=14						
NVAR				PKiKP	**PKiKP**	**14 18 33.8**	**+0.8**
	comp=Z,2.2nm,0.8s,baz=272,slow=2.4,SNR=5.3						
NVAR				PKKPbc	**PKKPbc**	**14 29 59.4**	**-1.1**
	comp=Z,2.0nm,0.7s,baz=195,slow=6.3,SNR=11						
W52A	**Murphy**	**105.00**	**339**	Pdiff	**Pdif**	**14 14 18.7**	**-0.4**
	baz=21						
T41A	**Mountain View**	**105.06**	**346**	Pdiff	**Pdif**	**14 14 19.0**	**-0.5**
	baz=14						
WVT	**Waverly**	**105.07**	**342**	Pdiff	**Pdif**	**14 14 19.0**	**-0.4**
	baz=18						
U45A	**Rockin P Farm,**	**105.08**	**343**	Pdiff	**Pdif**	**14 14 18.8**	**-0.7**
	baz=17						
T40A	**Mansfield**	**105.11**	**346**	Pdiff	**Pdif**	**14 14 19.0**	**-0.7**
	baz=14						
R11A	**Troy Canyon, C**	**105.27**	**5**	Pdiff	**Pdif**	**14 14 19.9**	**-0.6**
	baz=355						
W50A	**Signal Mountai**	**105.29**	**340**	Pdiff	**Pdif**	**14 14 19.3**	**-1.2**
	baz=20						
T39A	**Clever**	**105.39**	**347**	PKiKP	**PKiKP**	**14 18 34.1**	**+0.6**
	baz=13						
NHSC	**New Hope**	**105.64**	**335**	PFAKE		14 18 50.0	
NHSC				LR	LR		
	comp=Z,510nm,21.0s						
SDCO	**Great Sand Dun**	**106.04**	**357**	PFAKE		14 18 50.0	
SDCO				LR	LR		
	comp=Z,1µm,21.0s						
GOGA	**Godfrey**	**106.42**	**338**	PFAKE		14 18 50.0	
GOGA				LR	LR		
	comp=Z,723nm,22.0s						
MVCO	**Mesa Verde**	**106.65**	**359**	PFAKE		14 18 50.0	
MVCO				LR	LR		
	comp=Z,885nm,20.0s						
CASY	**Casey**	**106.91**	**164**	PFAKE		14 18 50.0	
CASY				LR	LR		
	comp=Z,281nm,20.0s						
MIAR	**Mount Ida**	**107.83**	**347**	PFAKE		14 18 50.0	
MIAR				LR	LR		
	comp=Z,789nm,20.0s						
WUAZ	**Wupatki**	**108.31**	**2**	PFAKE		14 18 50.0	
WUAZ				LR	LR		
	comp=Z,506nm,20.0s						
WMOK	**Wichita Mounta**	**108.46**	**351**	PFAKE		14 18 50.0	
WMOK				LR	LR		
	comp=Z,541nm,20.0s						
ANMO	**Albuquerque**	**108.86**	**358**	Pdiff	**Pdif**	**14 14 38.2**	**+1.6**
	comp=Z,2.3nm,0.8s,baz=334,slow=5.0,SNR=3.6						
ANMO				PP	**PP**	**14 19 05.0**	**-4.0**
	comp=Z,1.7nm,0.7s,baz=352,slow=8.5,SNR=4.6						
ANMO	**Albuquerque**	**108.86**	**358**	Pdif	**Pdif**	**14 14 38.2**	**+1.6**
ANMO				PP	**PP**	**14 19 05.0**	**-4.0**
ANMO				LR	LR		
	comp=Z,765nm,20.0s						
BRAL	**Brewton**	**109.56**	**340**	PFAKE		14 18 50.0	
BRAL				LR	LR		
	comp=Z,808nm,21.0s						
PFO	**Pinyon Flats O**	**109.90**	**7**	PFAKE		14 18 50.0	
PFO				LR	LR		
	comp=Z,589nm,20.0s						
ANWB	**Willy Bob**	**109.99**	**312**	PFAKE		14 18 50.0	
ANWB				LR	LR		
	comp=Z,385nm,20.0s						
NATX	**Nacogdoches**	**110.75**	**347**	PFAKE		14 19 00.0	
NATX				LR	LR		
	comp=Z,649nm,20.0s						
TUC	**Tucson**	**111.52**	**2**	PFAKE		14 19 00.0	
TUC				LR	LR		
	comp=Z,871nm,19.0s						
GRTK	**Grand Turk**	**112.04**	**322**	PFAKE		14 19 00.0	
GRTK				LR	LR		
	comp=Z,433nm,21.0s						
MNTX	**Cornudas Mount**	**112.06**	**357**	PFAKE		14 19 00.0	
MNTX				LR	LR		
	comp=Z,596nm,19.0s						
SJG	**San Juan**	**112.18**	**316**	PFAKE		14 19 00.0	
SJG				LR	LR		
	comp=Z,423nm,19.0s						
JCT	**Junction City**	**112.79**	**351**	PFAKE		14 19 00.0	
JCT				LR	LR		
	comp=Z,764nm,19.0s						
GRGR	**Grenville**	**114.13**	**308**	PFAKE		14 19 00.0	+9.5
GRGR				LR	LR		
	comp=Z,267nm,19.0s						
TXAR	**Lajitas Array**	**114.30**	**355**	Pdiff	**Pdif**	**14 15 02.6**	**+1.8**
	comp=Z,0.4nm,0.6s,baz=56,slow=3.2,SNR=3.9						
TXAR				PKP	**PKiKP**	**14 18 50.1**	**-0.5**
	comp=Z,0.8nm,0.5s,baz=91,slow=1.7,SNR=9.2						
TXAR				PKKPbc	**PKKPbc**	**14 29 29.2**	**-1.2**
	comp=Z,1.5nm,0.6s,baz=190,slow=5.9,SNR=8.9						
TXAR				PKKPab	**PKKPab**	**14 29 38.6**	**-2.5**
	comp=Z,2.2nm,0.9s,baz=187,slow=8.8,SNR=6.2						
NVL	**N'lazarevskaya**	**114.93**	**198**	*e*PKIKP	PKPdf	14 18 51.9	+1.6
NVL				pmax	pmax		
	comp=Z,5.0nm,0.5s						
GTBY	**Guantanamo Bay**	**115.31**	**324**	PFAKE		14 19 00.0	+7.3
GTBY				LR	LR		
	comp=Z,423nm,22.0s						
KVTX	**Kingsville**	**115.41**	**349**	PFAKE		14 19 00.0	+7.3
KVTX				LR	LR		
	comp=Z,664nm,21.0s						
MTDJ	**Mount Denham**	**117.91**	**326**	PFAKE		14 19 10.0	+12
MTDJ				LR	LR		
	comp=Z,618nm,22.0s						
SNAA	**Sanae**	**119.37**	**200**	PKiKP	**PKPdf**	**14 18 58.3**	**-0.6**
SNAA	**Sanae**	**119.37**	**200**	PKP	**PKPdf**	**14 18 57.2**	**-1.7**
	comp=Z,9.3nm,0.7s,baz=65,slow=3.3,SNR=31						
SNAA				PKKPbc	**PKKPab**	**14 29 11.7**	**+0.1**
	comp=Z,2.6nm,0.6s,baz=244,slow=3.2,SNR=27						
AFI	**Afiamalu**	**120.06**	**85**	PKP	**PKPdf**	**14 19 02.0**	**+0.1**
	comp=Z,49nm,0.8s,baz=349,slow=5.3,SNR=4.2						
AFI	**Afiamalu**	**120.06**	**85**	PKP	**PKPdf**	**14 19 02.0**	**+0.1**
AFI	**Afiamalu**	**120.06**	**85**	PKIKP	**PKPdf**	**14 19 02.0**	**+0.1**
AFI				pmax	pmax		
	comp=Z,49nm,0.8s						
VNA1	**Neumayer--Stat**	**120.52**	**202**	PKiKP	**PKPdf**	**14 19 01.1**	**+0.1**
RPZ	**Rata Peaks**	**120.75**	**124**	PKP	**PKPdf**	**14 19 01.4**	**-0.9**
	comp=Z,30nm,0.6s,baz=223,slow=14,SNR=3.7						
VNA3	**Neumayer Olymp**	**121.18**	**202**	PKiKP	**PKPdf**	**14 19 01.8**	**-0.6**
SDV	**Santo Domingo**	**122.15**	**313**	PKP	**PKPdf**	**14 19 04.3**	**-1.9**
	comp=Z,25nm,0.6s,baz=23,slow=3.7,SNR=15						
SDV	**Santo Domingo**	**122.15**	**313**	PKP	**PKPdf**	**14 19 04.3**	**-1.9**
SDV				LR	LR		
	comp=Z,514nm,19.0s						
SDV	**Santo Domingo**	**122.15**	**313**	*e*P	**PKPdf**	**14 19 05.6**	**-0.6**
SNZO	**South Karori**	**122.32**	**120**	PFAKE		14 19 20.0	+15
SNZO				LR	LR		
	comp=Z,602nm,19.0s						
URZ	**Urewera**	**122.86**	**116**	PKP	**PKPdf**	**14 19 04.0**	**-2.5**
	comp=Z,58nm,0.6s,baz=255,slow=4.6,SNR=66						
PAMC	**Pamplona, Colo**	**124.60**	**314**	*e*P	**PKPdf**	**14 19 09.6**	**-1.7**
MOTC	**Monteria, Cord**	**125.07**	**318**	*e*P	**PKPdf**	**14 19 10.9**	**-0.6**
BRRC	**Barranca, Sant**	**125.36**	**315**	*e*P	**PKPdf**	**14 19 11.8**	**-0.4**
BARC	**Barichara**	**125.48**	**314**	*e*P	**PKPdf**	**14 19 09.5**	**-3.2**
VNDA	**Vanda**	**125.54**	**164**	PKP	**PKPdf**	**14 19 09.8**	**-0.7**
	comp=Z,12nm,0.7s,baz=288,slow=5.3,SNR=46						
VNDA				PP	**PP**	**14 21 03.1**	**-2.0**
	comp=Z,3.8nm,0.8s,baz=298,slow=8.7,SNR=4.7						
VNDA				SKP		14 22 23.7	
	comp=Z,3.3nm,0.9s,baz=233,slow=5.1,SNR=1.9						
ZARC	**Zaragoza, Cauc**	**125.69**	**317**	*e*P	**PKPdf**	**14 19 10.9**	**-1.9**
RUSC	**La Rusia**	**125.99**	**314**	*e*P	**PKPdf**	**14 19 12.5**	**-1.4**
PTBC	**PUERTO BERRIO,**	**126.25**	**316**	*e*P	**PKPdf**	**14 19 13.6**	**-0.3**
QSPA	**South Pole Qui**	**126.31**	**180**	PKP	**PKPdf**	**14 19 11.7**	**-0.7**
	comp=Z,41nm,0.8s,baz=272,slow=1.0,SNR=59						
QSPA	**South Pole Qui**	**126.31**	**180**	PKP	**PKPdf**	**14 19 11.7**	**-0.7**
QSPA				LR	LR		
	comp=Z,911nm,20.0s						
SBA	**Scott Base**	**126.62**	**165**	*e*PKPdf	**PKPdf**	**14 19 12.7**	**+0.1**
SBA	**Scott Base**	**126.62**	**165**	*e*PKIKP	**PKPdf**	**14 19 12.7**	**+0.1**
BCIP	**Isla Barro Col**	**126.87**	**323**	PFAKE		14 19 30.0	+15
BCIP				LR	LR		
	comp=Z,507nm,21.0s						
HELC	**Santa Helena**	**127.14**	**316**	*e*P	**PKPdf**	**14 19 13.9**	**-2.1**
NORC	**Norcasia**	**127.28**	**315**	*e*P	**PKPdf**	**14 19 16.2**	**+0.4**
CHIC	**Chingaza**	**127.38**	**313**	*e*P	**PKPdf**	**14 19 15.4**	**-1.1**
ROSC	**El Rosal**	**127.55**	**314**	PKP	**PKPdf**	**14 19 17.4**	**+0.6**
	comp=Z,84nm,0.8s,baz=139,slow=2.8,SNR=30						
JTS	**JuntasAbangare**	**128.18**	**329**	PFAKE		14 19 30.0	+12
JTS				LR	LR		
	comp=Z,453nm,20.0s						
TOLC	**Tolima**	**128.34**	**315**	*e*P	**PKPdf**	**14 19 19.6**	**+1.3**
PRAC	**Prado**	**128.79**	**314**	*e*P	**PKPdf**	**14 19 18.9**	**+0.2**
YOTC	**Yotoco, Valle**	**129.41**	**316**	*e*P	**PKPdf**	**14 19 19.6**	**-0.5**
HORQ	**Saladito**	**129.97**	**316**	*e*P	**PKPdf**	**14 19 21.6**	**+0.3**
SAML	**Samuel**	**130.17**	**292**	PFAKE		14 19 30.0	+8.8
SAML				LR	LR		
	comp=Z,623nm,20.0s						
PCON	**Cinco Dias**	**130.79**	**314**	*e*P	**PKPdf**	**14 19 23.8**	**+0.6**
FLOC	**Florencia**	**130.96**	**313**	*e*P	**PKPdf**	**14 19 23.6**	**+0.7**
SOTA	**Rioblanco**	**131.07**	**315**	*e*P	**PKPdf**	**14 19 22.9**	**-0.8**

RAR	Rarotonga	133.61	85	SKPbc	SKPbc	14 22 36.9	-0.7
	comp=Z,16nm,0.8s,baz=263,slow=14,SNR=2.5						
OTAV	Otavalo	133.67	315	PFAKE		14 19 40.0	+12
OTAV				LR	LR		
	comp=Z,628nm,19.0s						
CPUP	Villa Florida	135.11	268	PKhKP	PKPpre	14 19 19.6	
	comp=Z,1.5nm,0.5s,baz=118,slow=3.5,SNR=4.2						
CPUP				PKP	PKPdf	14 19 29.6	-0.5
	comp=Z,29nm,0.7s,baz=68,slow=4.9,SNR=13						
CPUP				SKPbc	SKPbc	14 22 40.4	-1.8
	comp=Z,7.4nm,0.9s,baz=65,slow=4.8,SNR=3.4						
LPAZ	La Paz	138.51	288	PKhKP	PKPpre	14 19 27.4	
	comp=Z,2.7nm,0.9s,baz=13,slow=5.7,SNR=4.2						
LPAZ				PKP	PKPdf	14 19 37.5	0.0
	comp=Z,13nm,0.7s,baz=50,slow=5.6,SNR=16						
LPAZ				PP	PP	14 22 26.9	-3.0
	comp=Z,7.3nm,0.9s,baz=53,slow=5.2,SNR=4.1						
LPAZ				SKPbc	SKPbc	14 22 51.5	-1.9
	comp=Z,11nm,1.1s,baz=61,slow=4.0,SNR=3.9						
PPT	Papeete	139.69	73	PKP	PKPdf	14 19 39.9	+1.1
	comp=Z,44nm,0.7s,baz=68,slow=19,SNR=3.7						
YJA	Yavi	139.73	278	⇓eP	PKPpre	14 19 29.7	
HJA	Humahuaca	140.16	277	⇓eP	PKPpre	14 19 32.8	
PAYG	Puerto Ayora	140.29	330	PFAKE		14 19 50.0	+10
PAYG				LR	LR		
	comp=Z,491nm,21.0s						
PMSA	Palmer Station	141.17	209	PKhKP	PKPpre	14 19 34.9	
	comp=Z,26nm,0.6s,baz=83,slow=0.9,SNR=10.0						
NNA	Nana	142.06	302	PKP	PKPdf	14 19 41.1	-2.2
	comp=Z,15nm,0.6s,baz=21,slow=8.6,SNR=4.8						
NNA	Nana	142.06	302	PKP	PKPdf	14 19 41.1	-2.2
NNA				LR	LR		
	comp=Z,251nm,21.0s						
TRQA	Tornquist	142.77	253	ePKPdf	PKPdf	14 19 43.3	-0.5
TRQA				LR	LR		
	comp=Z,583nm,20.0s						
TRQA	Tornquist	142.77	253	ePKIKP	PKPdf	14 19 43.3	-0.5
TRQA				MLR	MLR		
	comp=Z,583nm,20.0s						
CYA	Choya	142.82	270	⇓eP	PKPpre	14 19 38.5	
TCA	Tanti	142.94	265	eP	PKPpre	14 19 39.5	
MRA	San Martin	144.20	264	⇓eP	PKPab	14 19 44.6	-0.4
PB10	IPOC Station P	144.41	280	eP	PKPab	14 19 45.2	-0.7
PB14	IPOC Station P	144.84	279	⇓eP	PKPbc	14 19 47.0	-0.8
VCA	Vinchina	144.88	271	⇓eP	PKPbc	14 19 47.6	0.0
ACAN	Cantantal	145.33	264	eP	PKPdf	14 19 47.8	-0.7
AGUA	GUANDACOL	145.40	270	⇓eP	PKPdf	14 19 48.6	-0.2
AMOG	MOGNA	145.93	267	⇓eP	PKPbc	14 19 50.7	0.0
RTLL	Cerro Villicun	146.05	267	eP	PKPdf	14 19 49.6	-0.1
ACDV	Cuesta del Vie	146.16	269	⇓eP	PKPdf	14 19 50.9	+0.7
AROD	Rodeo	146.45	269	eP	PKPbc	14 19 52.3	-0.3
ASAL	Salagasta	146.75	265	⇓eP	PKPbc	14 19 52.5	-0.5
AAGR	Agrelo	146.90	264	⇓eP	PKPbc	14 19 52.9	-0.6
ARCO	CERRO ARCO	146.91	264	⇓eP	PKPdf	14 19 52.5	+1.2
LCO	Las Campanas	147.00	272	ePKPdf	PKPdf	14 19 51.9	+0.2
LCO	Las Campanas	147.00	272	ePKIKP	PKPdf	14 19 51.9	+0.2
AUSP	Uspallata	147.08	266	⇓eP	PKPbc	14 19 53.1	-1.1
ROC1	El Roble	148.62	265	eP	PKPbc	14 19 57.2	-1.0
PLCA	Paso Flores	149.73	250	PKP	PKPdf	14 19 56.1	+0.5
	comp=Z,25nm,0.8s,baz=142,slow=1.9,SNR=23						
PLCA				PKPbc	PKPbc	14 20 00.7	+0.2
	comp=Z,139nm,0.8s,baz=138,slow=3.0,SNR=113						
PLCA	Paso Flores	149.73	250	eP	PKPdf	14 19 57.2	+1.6
CANA	Caviahue	149.78	256	⇓eP	PKPbc	14 20 00.2	-0.6

ISCJB ***12*** *14:07:23.8±0.3, 36°.45N±0°.03×70°.89E±0°.05, h188^{km}, mb4.5/33, Error ellipse: s-maj=5.5km s-min=4.5km az=17.6*

NEIC ***12*** *14:07:24.2±1.4, 36°.36N×70°.92E, h181^{km}±13^{km}, mb4.5/3, Error ellipse: s-maj=10.0km s-min=5.7km az=208.0*

IDC ***12*** *14:07:25.6±2.0, 36°.40N×70°.90E, h193^{km}±19^{km}, mb4.3/30, mb1 4.4/34, mb1mx4.2/68, mbtmp4.9/34, Error ellipse: s-maj=9.4km s-min=7.6km az=22.0*

NNC ***12*** *14:07:30.1±3.9, 36°.91N×70°.84E, h195^{km}±54^{km}, mb4.5, mpv5.4, Error ellipse: s-maj=40.6km s-min=36.8km az=84.0*

ISC 12 14:07:25.0±0.4**, 36°.50N**±0°.05×**70°.86E**±0°.05**, h188**^{km}**, n66, σ1^{s}61**/76**, mb4.5**/33**, 7C-3D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CHCP	Chirah Chowk	3.45	144	P	Pn	14 08 21.3	+1.7
THW	Thamme Wali	3.77	169	P	Pn	14 08 24.8	+1.3
SFK	Sufi-Kurgan	4.08	30	⇑P	Pn	14 08 28.1	+0.6
	440nm,0.5s						
SFK				⇑S	Sn	14 09 15.8	-0.8
	798nm,0.4s						
SARP	Sargodha	4.81	161	P	Pn	14 08 37.0	+0.4
AML	Almayashu	6.04	20	P	Pn	14 08 53.0	+0.2
	SNR=49						
MNAS	Manas	6.12	11	⇓P	Pn	14 08 53.9	+0.3
	140nm,0.4s						
MNAS				⇓S	Sn	14 10 00.6	-3.1
	3μm,0.5s						
UCH	Uchtor	6.38	25	P	Pn	14 08 57.8	+0.4
	SNR=14						
KZA	Kyzart	6.53	30	P	Pn	14 09 00.3	+1.1
	SNR=11						
EKS2	Erkin-Say	6.55	19	P	Pn	14 09 00.4	+1.0
	SNR=26						
KK31	Karatay Array	6.60	358	P	Pn	14 08 59.9	+0.1
	244nm,0.5s,baz=175,slow=13,SNR=294						
KK31				⇑S	Sn	14 10 09.9	-5.0
	3μm,0.7s,baz=183,slow=21,SNR=6.9						
AAK	Ala-Archa	6.74	23	P	Pn	14 09 02.5	+0.7
	91nm,0.3s,baz=162,slow=4.0,SNR=47						
AAK				S	Sn	14 10 16.2	-2.2
	74nm,0.3s,baz=297,slow=22,SNR=11						
AAK	Ala-Archa	6.74	23	⇓P	Pn	14 09 02.4	+0.7
	88nm,0.3s						
AAK				⇑S	Sn	14 10 16.8	-1.6
	668nm,0.7s						
AAK	Ala-Archa	6.74	23	P	Pn	14 09 02.5	+0.7
	SNR=46						
KBK	Karagaybulak	6.91	26	P	Pn	14 09 05.0	+0.9
	SNR=12						
CHMS	Chumysh	7.15	24	P	Pn	14 09 07.1	+0.1
	SNR=30						
USP	Ospenovka	7.32	21	P	Pn	14 09 08.7	-0.5
	SNR=29						
TKM2	Tokmak 2	7.38	28	⇑P	Pn	14 09 09.4	-0.8
	209nm,0.7s						
TKM2				⇑S	Sn	14 10 28.3	-5.3
	189nm,0.7s						
TKM2	Tokmak 2	7.38	28	P	Pn	14 09 10.5	+0.3
	SNR=16						
GEYT	Alibeck	10.26	282	P	Pn	14 09 47.1	-0.7
	1.7nm,0.3s,baz=91,slow=17,SNR=6.0						
GEYT				S	Sn	14 11 38.3	-3.8
	6.4nm,0.3s,baz=89,slow=7.5,SNR=4.2						
MKAR	Makanchi Array	13.36	36	P	Pn	14 10 27.5	+0.2
	1.2nm,0.3s,baz=226,slow=11,SNR=2.3						
AB31	Akbulak array	15.03	331	P	P	14 10 50.3	+1.6
	49nm,0.6s,baz=100,slow=8.0,SNR=61						
KURK	Kurchatov	15.27	19	Pn	Pn	14 10 50.8	+0.1
BVAR	Borovoye Array	16.53	359	P	Pn	14 11 06.2	+0.2
	4.6nm,0.3s,baz=170,slow=8.8,SNR=7.6						
BVAR				S	S	14 14 07.1	-0.9
	3.9nm,0.3s,baz=166,slow=22,SNR=4.0						
AKTO	Aktyubinsk	16.73	330	P	Pn	14 11 08.9	+0.6
	17nm,0.3s,baz=136,slow=9.0,SNR=10						
AKTO				S	S	14 14 11.4	-0.8
	2.0nm,0.3s,baz=156,slow=20,SNR=3.4						
AKTO	Aktyubinsk	16.73	330	⇑P	Pn	14 11 09.0	+0.6
	407nm,1.1s						
WSAR	Wadi Sarin	16.92	222	P	Pn	14 11 12.2	+1.3
	0.6nm,0.3s,baz=42,slow=16,SNR=2.3						
LSA	Lhasa	18.29	106	eP	P	14 11 22.9	-2.2
	14nm,0.5s						
ZALV	Zalesovo Beam	19.96	25	P	P	14 11 43.4	+0.9
	66nm,0.8s,baz=216,slow=10,SNR=10						
ZALV				S	S	14 15 16.8	+0.4
	14nm,0.8s,baz=220,slow=22,SNR=2.6						
ARU	Arti	21.60	341	P	P	14 12 01.2	+1.4
	53nm,0.7s,baz=108,slow=20,SNR=2.8						
RAYN	Ar Rayn	25.39	246	eP	P	14 12 30.8	-4.4
	5.7nm,0.5s						
SONM	Songino Array	28.43	55	P	P	14 13 03.0	+0.9
	7.2nm,0.8s,baz=270,slow=9.5,SNR=4.6						
BRTR	Keskin Array B	29.33	288	P	P	14 13 11.0	+0.8
	3.2nm,0.8s,baz=91,slow=6.1,SNR=2.7						
CMAR	Chiang Mai Arr	30.55	118	P	P	14 13 21.6	+0.6
	15nm,0.8s,baz=296,slow=9.5,SNR=6.8						
AKASG	Malin Array Be	32.86	309	P	P	14 13 42.0	+1.2
	30nm,0.7s,baz=82,slow=7.7,SNR=13						
FINES	FINESS Array B	37.42	326	P	P	14 14 20.9	+1.3
	22nm,0.8s,baz=112,slow=7.4,SNR=10						
ARCES	ARCESS Array B	41.10	338	P	P	14 14 51.5	+1.5
	24nm,0.6s,baz=113,slow=8.1,SNR=13						
PSI	Prapat	42.36	136	P	P	14 15 01.2	+0.3
	45nm,0.9s,baz=360,slow=4.7,SNR=7.7						
GERES	GERESS Array B	42.84	305	P	P	14 15 06.1	+1.7
	2.5nm,0.7s,baz=74,slow=7.2,SNR=2.9						
HFS	Hagfors	43.00	322	P	P	14 15 06.6	+1.2
	38nm,0.6s,baz=98,slow=10,SNR=16						
CLL	Collm	43.10	309	eP	P	14 15 08.0	+1.7
NB2	NORSAR Subarra	44.31	323	P	P	14 15 16.5	+0.6
	comp=Z,15nm,0.6s,baz=97,slow=7.9						
NB2	NORSAR Subarra	44.31	323	P	P	14 15 16.5	+0.6
	baz=97,slow=7.9						
KSAR	Wonju Array Be	44.96	71	P	P	14 15 21.6	+0.3
KSRS	Korea Array	44.99	71	P	P	14 15 21.6	+0.1
	comp=Z,2.2nm,0.8s,baz=274,slow=6.1,SNR=5.0						
DAVOX	Davos/Dischmat	45.67	303	P	P	14 15 28.3	+1.4
	comp=Z,4.3nm,0.6s,baz=58,slow=9.5						
TIXI	Tiksi	45.82	22	P	P	14 15 28.4	+0.9
	comp=Z,6.8nm,0.3s,baz=297,slow=4.8,SNR=7.7						
SPITS	Spitsbergen Ar	47.47	347	P	P	14 15 41.4	+1.1
	comp=Z,9.1nm,0.7s,baz=119,slow=12,SNR=5.4						
KEST	Kesra	48.93	288	P	P	14 15 52.8	+0.6
	comp=Z,6.4nm,0.9s,baz=111,slow=17,SNR=3.2						
JOW	Kunigami	49.18	84	P	P	14 15 54.4	+0.3
	comp=Z,7.3nm,0.5s,baz=270,slow=19,SNR=2.8						
EKA	Eskdalemuir Ar	52.21	316	P	P	14 16 17.0	+0.7
	comp=Z,5.9nm,0.7s,baz=89,slow=7.4,SNR=6.4						
MJAR	Matsushiro Arr	53.06	68	P	P	14 16 23.1	+0.2
	comp=Z,2.4nm,0.9s,baz=284,slow=9.9,SNR=3.6						
ESDC	Sonseca Array	57.36	298	P	P	14 16 54.0	+0.4
	comp=Z,0.5nm,0.4s,baz=50,slow=6.9,SNR=4.9						
OPO	Ambohidratompo	59.16	206	P	P	14 17 05.7	-0.5
	comp=Z,5.2nm,0.9s,baz=51,slow=10.0,SNR=3.3						
TORD	Torodi Ar. Bea	65.60	269	P	P	14 17 47.4	-1.6
	comp=Z,3.7nm,0.5s,baz=49,slow=6.2						
BATI	Baumata	67.96	122	P	P	14 18 03.4	-0.5
	comp=Z,40nm,0.7s,baz=342,slow=3.2,SNR=6.8						
KOWA	Kowa	69.45	273	P	P	14 18 12.5	-0.6
	comp=Z,7.1nm,0.6s,baz=56,slow=6.3,SNR=5.8						
MBWA	Marble Bar	73.61	133	eP	P	14 18 33.6	-4.2
ILAR	Eielson Array	74.81	16	P	P	14 18 44.7	+0.6
	comp=Z,1.9nm,0.9s,baz=325,slow=4.8,SNR=3.3						
FITZ	Fitzroy Crossi	74.98	126	P	P	14 18 45.9	+0.2
	comp=Z,12nm,0.8s,baz=297,slow=3.7,SNR=7.3						
BOSA	Boshof	77.67	220	P	P	14 19 01.2	+0.4
	comp=Z,11nm,0.8s,baz=17,slow=8.1,SNR=4.2						
YKA	Yellowknife Ar	81.25	3	P	P	14 19 20.6	+1.1
	comp=Z,1.6nm,0.4s,baz=350,slow=5.4,SNR=8.8						
WRA	Warramunga Arr	82.09	122	P	P	14 19 23.6	-0.9
	comp=Z,24nm,0.8s,baz=324,slow=5.0,SNR=16						
WRAB	Tennant Creek	82.09	122	eP	P	14 19 22.1	-2.4
	comp=Z,7.7nm,0.7s						
ASAR	Alice Springs	84.35	125	P	P	14 19 35.2	-0.8
	comp=Z,21nm,0.7s,baz=310,slow=4.9,SNR=25						
CTA	Charters Tower	90.64	115	P	P	14 20 05.5	-0.7
	comp=Z,8.4nm,0.7s,baz=304,slow=7.8,SNR=7.2						
CTAO	Charters Tower	90.64	115	eP	P	14 20 03.6	-2.7

MEX 12 14:15:33.4±0.3**, 15°.91N**×**98°.27W, h16**^{km}±695^{km}**, MD3.5, Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.50	16	eP	Pg	14 15 41.7	-1.7
PNIG				i S	Sg	14 15 48.2	-1.9
TLIG	Tlapa	1.67	350	eP	Pn	14 15 58.5	-3.6
TLIG				eS	Sn	14 16 18.2	-5.1

ISCJB ***12*** *14:28:58.4±0.5, 26°.37S±0°.03×27°.43E±0°.03, h10^{km}±3^{km}, mb4.0/8, Error ellipse: s-maj=4.8km s-min=3.9km az=41.8*

NEIC ***12*** *14:28:58.9±0.6, 26°.32S×27°.52E, h5^{km}, mb4.0/1, Error ellipse: s-maj=13.6km s-min=8.4km az=101.0*

PRE ***12*** *14:28:58.9±1.7, 26°.37S×27°.42E, h2^{km}, ML3.2*

IDC ***12*** *14:28:58.4±0.9, 26°.40S×27°.42E, h0^{km}, mb4.0/7, mb1 4.1/12, mb1mx3.8/57, mbtmp4.1/12, ML3.8/3, Error ellipse: s-maj=15.3km s-min=12.0km az=84.0*

ISC 12 14:28:58.9±0.9**, 26°.35S**±0°.03×**27°.41E**±0°.03**, h9**^{km}±6^{km}**, n36, σ1^{s}63**/57**, mb4.0**/8**, South Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
WDLM	Western Deep L	0.08	170	eP	Pg	14 29 01.5	+0.2
WDLM				AML	AML	14 29 03.5	
	comp=Z,14μm,0.2s						
KLOF	Kloof	0.18	91	eP	Pg	14 29 02.2	-0.6
KLOF				eS	Sg	14 29 03.7	-1.8
KLOF				AML	AML	14 29 04.1	
	comp=Z,7μm,0.1s						
PRYS	Parys	0.58	184	eP	Pb	14 29 10.8	-0.5
PRYS				eS	Sg	14 29 17.2	-0.6
PRYS				AML	AML	14 29 23.9	
	comp=Z,937nm,0.5s						
KSR	Koster	0.67	317	eP	Pg	14 29 12.3	+0.4
KSR				eS	Sb	14 29 23.4	+1.0
KSR				AML	AML	14 29 29.6	
	comp=Z,906nm,0.8s						
ERPM	east rand prop	0.75	90	eP	Pg	14 29 12.9	-0.5
ERPM				eS	Sg	14 29 23.5	+0.3
ERPM				AML	AML	14 29 29.2	
	comp=Z,351nm,0.9s						
SLR	Silverton	0.99	52	eP	Pg	14 29 17.9	-0.1
SLR				eS	Sb	14 29 31.8	+0.1
SLR				AML	AML	14 29 37.9	
	comp=Z,321nm,1.0s						
SWZ	Schweizer	2.03	245	eP	Pb	14 29 35.2	-0.9
SWZ				eS	Sb	14 30 01.5	-0.1
SWZ				AML	AML	14 30 04.5	
	comp=Z,1μm,0.7s						
LBTB	Lobatse	2.10	309	Pn	Pb	14 29 37.5	+0.2
	comp=Z,39nm,0.3s,baz=131,slow=14,SNR=558						
LBTB				Pg	Pg	14 29 38.7	-0.5
	comp=Z,39nm,0.3s,baz=132,slow=17,SNR=568						
LBTB				Lg	Lg	14 30 07.0	
	comp=Z,291nm,0.3s,baz=117,slow=20,SNR=62						
LBTB	Lobatse	2.10	309	eP	Pn	14 29 36.0	+1.6
LBTB				eS	Sb	14 30 03.2	-0.4
LBTB				AML	AML	14 30 22.3	
	comp=Z,222nm,0.8s						
BOSA	Boshof	2.96	220	Pn	Pn	14 29 47.3	+1.1
	comp=Z,5.5nm,0.3s,baz=42,slow=12,SNR=86						
BOSA				Sn	Sn	14 30 21.9	+0.1
	comp=Z,9.7nm,0.3s,baz=45,slow=13,SNR=5.8						
BOSA				Lg	Lg	14 30 30.0	
	comp=Z,90nm,0.3s,baz=322,slow=17,SNR=31						
BOSA	Boshof	2.96	220	i P	Pn	14 29 47.4	+1.1
BOSA	Boshof	2.96	220	eP	Pn	14 29 46.9	+0.7
BOSA				eS	Sn	14 30 23.7	+1.8
BOSA				AML	AML	14 30 30.4	
	comp=Z,217nm,0.3s						
BOSA	Boshof	2.96	220	i P	Pn	14 29 47.4	+1.1
KSD	Kokstad	4.54	158	eP	Pn	14 30 08.9	+1.0
KSD				eS	Sn	14 31 00.3	-0.6
KSD				AML	AML	14 31 23.8	
	comp=Z,54nm,0.5s						
HVD	Gariep Dam	4.56	201	eP	Pn	14 30 09.6	+1.3
HVD				eS	Sn	14 31 01.4	-0.2
HVD				AML	AML	14 31 30.9	
	comp=Z,57nm,0.5s						
MSNA	Messina	4.64	31	eP	Pn	14 30 10.2	+0.9
MSNA				eS	Sn	14 31 01.8	-1.6
MSNA				AML	AML	14 31 07.2	
	comp=Z,26nm,0.7s						
UPI	Upington	5.83	248	eP	Pn	14 30 26.8	+1.2
UPI				eS	Sn	14 31 32.2	-0.4
UPI				AML	AML	14 32 03.5	
	comp=N,98nm,0.7s						
ARMS	Ukamas	7.03	254	eP	Pn	14 30 44.1	+1.9
ARMS				eS	Sn	14 31 59.3	-3.0
ARMS				AML	AML	14 32 53.7	
	comp=Z,27nm,0.4s						
BUFB	Buffelsbos	8.11	196	eP	Pn	14 30 59.6	+2.8
BUFB				eS	Sn	14 32 24.5	-4.2
BUFB				AML	AML	14 32 29.5	
	comp=Z,4.4nm,1.2s						
SUR	Sutherland	8.32	222	Pn	Pn	14 31 01.9	+2.0
	comp=Z,1.5nm,0.3s,baz=55,slow=15,SNR=19						
SUR				Sn	Sn	14 32 31.0	-3.1
	comp=Z,3.8nm,0.3s,baz=313,slow=22,SNR=7.7						
SUR				Lg	Lg	14 33 20.0	
	comp=Z,7.4nm,0.3s,baz=318,slow=15,SNR=4.9						
SUR	Sutherland	8.32	222	eP	Pn	14 31 01.1	+1.1
SUR				AML	AML	14 33 22.9	
	comp=Z,128nm,0.6s						
SUR	Sutherland	8.32	222	PKKPbc	Pn	14 31 01.0	+1.1
	comp=Z,12nm,0.6s,baz=51,slow=14,SNR=19						
SUR	Sutherland	8.32	222	PKKPbc	Pn	14 31 01.0	+1.1
CVNA	Calvinia	8.43	231	eP	Pn	14 31 01.9	+0.6
CVNA				eS	Sn	14 32 33.1	-3.6
CVNA				AML	AML	14 32 50.6	
	comp=Z,15nm,0.5s						
KOMG	Komaggas	9.41	246	eP	Pn	14 31 16.8	+2.0
KOMG				eS	Sn	14 32 56.6	-4.2
KOMG				AML	AML	14 33 57.1	
	comp=Z,23nm,0.5s						
LSZ	Lusaka	11.04	4	Pn	Pn	14 31 37.3	+0.1
	comp=Z,0.9nm,0.3s,baz=184,slow=13,SNR=7.5						
LSZ				Sn	Sn	14 33 39.9	-1.0
	comp=Z,0.9nm,0.3s,baz=162,slow=6.4,SNR=4.9						
TSUM	Tsumeb	11.51	306	Pn	Pn	14 31 43.9	+0.2
	comp=Z,1.3nm,0.3s,baz=126,slow=12,SNR=14						
TSUM				Sn	Sn	14 33 48.7	-3.9
	comp=Z,0.4nm,0.3s,baz=140,slow=7.9,SNR=2.5						
TSUM				Lg	Lg	14 35 02.5	
	comp=Z,0.5nm,0.3s,baz=66,slow=20,SNR=4.6						
MBAR	Mbarara	25.80	8	P	P	14 34 30.1	-0.5
	comp=Z,2.2nm,0.6s						
TORD	Torodi Ar. Bea	46.55	324	P	P	14 37 27.3	+0.2
	comp=Z,2.7nm,0.9s,baz=146,slow=8.4						
SNAA	Sanae	48.40	192	P	P	14 37 41.9	+1.0
	comp=Z,2.3nm,0.8s,baz=44,slow=5.6,SNR=11						
KOWA	Kowa	50.81	319	P	P	14 38 01.5	+1.6
	comp=Z,2.4nm,0.7s,baz=157,slow=12,SNR=4.7						
ESDC	Sonseca Array	71.90	335	P	P	14 40 22.9	+0.4
	comp=Z,0.5nm,0.4s,baz=164,slow=5.9,SNR=4.6						
VNDA	Vanda	72.89	171	P	P	14 40 28.5	+0.7
	comp=Z,0.6nm,0.7s,baz=194,slow=4.2,SNR=3.6						
MKAR	Makanchi Array	88.06	34	P	P	14 41 50.0	+0.5
	comp=Z,0.6nm,0.8s,baz=245,slow=3.0,SNR=2.8						
KURBB	Kurchatov Arra	88.94	30	P	P	14 41 55.4	+1.9
	comp=Z,0.2nm,0.4s,baz=231,slow=5.7,SNR=3.4						
KURK	Kurchatov	89.05	30	P	P	14 41 55.4	+1.4

MOS ***12*** *14:44:53.8±1.0, 36°.43N×71°.22E, h153^{km}, mb4.8/48, Error ellipse: s-maj=5.8km s-min=4.0km az=94.5*

ISCJB ***12*** *14:44:53.8±0.3, 36°.47N±0°.02×71°.15E±0°.02, h152^{km}±3^{km}, mb4.5/97, Error ellipse: s-maj=3.2km s-min=2.7km az=179.0*

BJI ***12*** *14:44:54.4, 36°.50N×71°.10E, h175^{km}, mb4.7/37, mB4.9/24*

IDC ***12*** *14:44:55.2±2.2, 36°.40N×71°.11E, h156^{km}±21^{km}, mb4.2/37, mb1 4.3/43, mb1mx4.2/67, mbtmp4.7/43, Error ellipse: s-maj=10.3km s-min=7.2km az=8.0*

NEIC ***12*** *14:44:56.2±0.2, 36°.52N×71°.17E, mb4.7/34, Error ellipse: s-maj=5.4km s-min=4.6km az=156.0*

NEIC Felt at Kabul.

NNC ***12*** *14:44:57.2±2.3, 36°.75N×70°.89E, h162^{km}±29^{km}, mb4.6, mpv5.7, Error ellipse: s-maj=22.7km s-min=12.9km az=171.0*

ISC 12 14:44:54.8±0.3**, 36°.47N**±0°.03×**71°.11E**±0°.03**, h154**^{km}±3^{km}**, h154**^{km}**:pP-P, n329, σ2^{s}04**/379**, mb4.6**/109**, 25C-27D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KBL	Kabul	2.56	222	ePn	Pn	14 45 37.4	+0.4
KBL	Kabul	2.56	222	ePN	Pn	14 45 37.4	+0.4
CEP	Cherat	2.72	166	P	Pn	14 45 40.3	+1.3
CEP				S	Sn	14 46 14.0	+0.9
CEP	Cherat	2.72	166	P	Sn	14 46 13.8	+0.7
CHCP	Chirah Chowk	3.31	147	P	Pn	14 45 47.8	+1.4
THW	Thamme Wali	3.70	172	P	Pn	14 45 52.2	+0.8
SFK	Sufi-Kurgan	4.01	27	⇑P	Pn	14 45 56.5	+1.1
	556nm,0.4s						
SFK				⇑S	Sn	14 46 41.5	-1.2
	660nm,0.2s						
SFK	Sufi-Kurgan	4.01	27	PN	Pn	14 45 56.3	+0.8
SFK				S	Sn	14 46 41.4	-1.2
SFK				pmax	pmax		
	comp=Z,556nm,0.4s						
SFK				smax	smax		
	comp=N,2μm,0.5s						
SARP	Sargodha	4.72	164	P	Pn	14 46 04.7	+0.1
KSH	Kashi	4.90	50	P	Pn	14 46 03.7	-3.4
KSH				sP		14 46 40.4	
KSH				S	Sn	14 46 53.6	-10
TAS	Tashkent	5.06	344	⇓P	Pn	14 46 09.2	+0.2
	comp=N,114nm,0.3s						
TAS				⇓S	Sn	14 47 04.0	-3.0
	comp=N,985nm,0.3s						
TAS	Tashkent	5.06	344	PN	Pn	14 46 08.7	-0.3
TAS				pmax	pmax		
	comp=Z,71nm,0.2s						
AML	Almayashu	6.00	19	P	Pn	14 46 21.3	-0.5
	SNR=212						
MNAS	Manas	6.11	10	⇑P	Pn	14 46 23.0	0.0
	comp=Z,307nm,0.6s						
MNAS				⇑S	Sn	14 47 28.6	-3.5
	comp=Z,755nm,0.6s						
MNAS	Manas	6.11	10	PN	Pn	14 46 23.0	0.0
MNAS				pmax	pmax		
	comp=Z,283nm,0.5s						
UCH	Uchtor	6.33	24	P	Pn	14 46 26.4	+0.1
	SNR=97						
KZA	Kyzart	6.46	29	P	Pn	14 46 27.2	-0.8
	SNR=105						
EKS2	Erkin-Say	6.52	18	P	Pn	14 46 28.1	-0.4
	SNR=333						
KK31	Karatay Array	6.64	356	⇑P	Pn	14 46 30.0	-0.1
	comp=Z,115nm,0.3s,baz=177,slow=13,SNR=1942						
KK31				⇑S	Sn	14 47 41.3	-3.4
	comp=Z,332nm,0.5s,baz=183,slow=20,SNR=3.7						
KK31	Karatay Array	6.64	356	ePn	Pn	14 46 29.9	-0.1
KK31	Karatay Array	6.64	356	ePN	Pn	14 46 29.9	-0.1
KKAR	Karatay Array	6.64	356	ePn	Pn	14 46 29.9	-0.1
KKAR	Karatay Array	6.64	356	ePN	Pn	14 46 29.9	-0.1
AAK	Ala-Archa	6.69	22	P	Pn	14 46 30.5	-0.3
	comp=Z,119nm,0.3s,baz=191,slow=7.6,SNR=196						
AAK				S	Sn	14 47 43.3	-2.8
	comp=Z,32nm,0.3s,baz=349,slow=19,SNR=11						
AAK	Ala-Archa	6.69	22	⇑P	Pn	14 46 30.8	-0.1
	comp=Z,283nm,0.5s						
AAK				S	Sn	14 47 43.8	-2.3
	comp=Z,348nm,1.1s						
AAK	Ala-Archa	6.69	22	P	Pn	14 46 30.8	-0.1
	SNR=286						
AAK	Ala-Archa	6.69	22	ePn	Pn	14 46 30.9	-0.1
AAK				S	Sn	14 47 43.3	-2.8
AAK	Ala-Archa	6.69	22	PN	Pn	14 46 30.7	-0.1
AAK				pmax	pmax		
	comp=Z,283nm,0.5s						
KBK	Karagaybulak	6.85	24	P	Pn	14 46 33.6	+0.6
	SNR=65						
FRU	Bishkek	6.91	22	⇓iPN	Pn	14 46 35.0	+1.4
FRU				pmax	pmax		
	comp=Z,260nm,1.8s						
ULHL	Ulahol	7.01	33	P	Pn	14 46 34.6	-0.5
	SNR=48						
CHMS	Chumysh	7.10	22	P	Pn	14 46 35.7	-0.4
	SNR=408						
USP	Ospenovka	7.27	20	P	Pn	14 46 37.7	-0.8
	SNR=127						
TKM2	Tokmak 2	7.31	27	⇓P	Pn	14 46 40.2	+1.0
	comp=Z,791nm,0.6s						
TKM2				⇓S	Sn	14 47 59.8	-1.3
	comp=Z,169nm,1.0s						
TKM2	Tokmak 2	7.31	27	P	Pn	14 46 38.7	-0.5
	SNR=1488						
TKM2	Tokmak 2	7.31	27	PN	Pn	14 46 39.5	+0.3
TKM2				pmax	pmax		
	comp=Z,791nm,0.6s						
KDJ	Kajisay	7.36	38	ePn	Pn	14 46 38.9	-0.8
TARG	Taragay, Kyrgy	7.39	43	ePn	Pn	14 46 40.4	-0.1
KKR	Kurukshetra	8.06	142	eP	Pn	14 46 48.2	-0.8
KKR				eS	Sn	14 48 11.9	-7.0
KKR				IAML		14 48 51.8	
	comp=Z,1μm,0.3s						
AAA	Alma-Ata	8.08	32	ePN	Pn	14 46 49.3	+0.1
AAA				eS	Sn	14 48 20.0	+0.8
AAA				pmax	pmax		
	comp=Z,500nm,0.8s						
AAA				smax	smax		
	comp=E,900nm,1.5s						
AAA				MLR	MLR		

	comp=Z,300nm,3.0s						
MDOK	**Medeo**	**8.10**	**33**	⇓P	**Pn**	**14 46 50.3**	**+0.8**
	comp=Z,256nm,0.6s						
KNDC	**Almaty**	**8.11**	**32**	⇑P	**Pn**	**14 46 51.0**	**+1.4**
	comp=Z,749nm,0.8s						
PRZ	**Przheval'sk**	**8.24**	**41**	*e*Pn	**Pn**	**14 46 51.7**	**+0.2**
PRZ	**Przheval'sk**	**8.24**	**41**	*e*PN	**Pn**	**14 46 51.7**	**+0.2**
BHGR	**Bahadurgarh**	**9.18**	**146**	*e*P	**Pn**	**14 47 04.6**	**+0.7**
BHGR				*e*S	Sn	14 48 36.8	-9.1
BHGR				IAML		14 48 54.1	
	comp=Z,2µm,0.0s						
JOSI	**Joshimath**	**9.19**	**127**	*e*P	**Pn**	**14 47 02.5**	**-1.8**
JOSI				*e*S	**Sn**	**14 48 40.8**	**-5.6**
JOSI				IAML		14 48 50.4	
	comp=E,631nm,0.4s						
KHET	**Khetri**	**9.27**	**153**	*e*P	**Pn**	**14 47 02.9**	**-2.2**
KHET				*e*S	**Sn**	**14 48 39.9**	**-8.0**
KHET				IAML		14 48 44.9	
	comp=N,153nm,0.6s						
KHET				IAML		14 48 45.6	
	comp=E,179nm,0.8s						
NDI	**New Delhi**	**9.31**	**145**	*e*P	**Pn**	**14 47 06.0**	**+0.3**
NDI				*e*S	**Sn**	**14 48 41.0**	**-8.1**
PDGK	**Podgornoye**	**9.40**	**41**	⇑P	**Pn**	**14 47 05.8**	**-1.1**
	comp=E,81nm,0.7s						
PDGK	**Podgornoye**	**9.40**	**41**	P	**Pn**	**14 47 05.1**	**-1.7**
PDGK				pmax	pmax		
	comp=Z,105nm,0.8s						
KUDL	**Kundal**	**9.46**	**150**	*e*P	**Pn**	**14 47 05.9**	**-1.7**
KUDL				*e*S	**Sn**	**14 48 45.1**	**-7.5**
KUDL				IAML		14 48 49.3	
	comp=E,119nm,0.6s						
KUDL				IAML		14 48 50.0	
	comp=N,105nm,0.7s						
JASL	**Jaisalmer**	**9.52**	**181**	*e*P	**Pn**	**14 47 07.3**	**-1.1**
JASL				*e*x	x	14 48 40.5	
JASL				IAML		14 48 51.5	
	comp=Z,840nm,0.3s						
GEYT	**Alibeck**	**10.47**	**282**	P	**Pn**	**14 47 17.4**	**-3.5**
	comp=Z,11nm,0.3s,baz=145,slow=5.4,SNR=82						
GEYT				S	**Sn**	**14 49 09.7**	**-7.0**
	comp=Z,8.4nm,0.3s,baz=101,slow=35,SNR=5.0						
GYA0B	**ALIBECK ARRAY**	**10.47**	**282**	⇓P	**Pn**	**14 47 17.8**	**-3.0**
	comp=Z,114nm,0.5s						
GYA0B				⇓S	**Sn**	**14 49 10.9**	**-5.8**
	comp=Z,860nm,1.1s						
GYA0B	**ALIBECK ARRAY**	**10.47**	**282**	*e*Pn	**Pn**	**14 47 18.1**	**-2.8**
PYUN	**Piuthan**	**13.05**	**126**	*e*P	**Pn**	**14 47 52.8**	**-2.0**
	comp=Z,300nm,0.4s						
PYUN				*e*S	Sn	14 50 08.0	-11
	comp=Z,330nm,0.5s						
MAKZ	**Makanchi**	**13.13**	**35**	*e*Pn	**Pn**	**14 47 54.2**	**-1.2**
MAKZ	**Makanchi**	**13.13**	**35**	*e*P	**Pn**	**14 47 54.2**	**-1.2**
MK01	**Makanchi Array**	**13.25**	**36**	*e*Pn	**Pn**	**14 47 55.4**	**-1.6**
MK31	**Makanchi Array**	**13.27**	**35**	⇓P	**Pn**	**14 47 56.2**	**-1.0**
	comp=Z,77nm,0.7s,baz=220,slow=13,SNR=421						
MK31	**Makanchi Array**	**13.27**	**35**	*e*Pn	**Pn**	**14 47 56.2**	**-1.0**
MK31	**Makanchi Array**	**13.27**	**35**	*i* P	**Pn**	**14 47 56.1**	**-1.0**
MK31				pmax	pmax		
	comp=Z,77nm,0.7s						
MKAR	**Makanchi Array**	**13.27**	**35**	P	**Pn**	**14 47 56.2**	**-0.9**
	comp=Z,3.4nm,0.3s,baz=218,slow=14,SNR=94						
DANN	**Dangsing**	**13.40**	**124**	*e*P	**Pn**	**14 47 57.3**	**-1.9**
	comp=Z,365nm,0.5s						
KOLN	**Koldanda**	**13.68**	**126**	*e*P	**Pn**	**14 48 01.2**	**-1.5**
	comp=Z,225nm,0.4s						
KOLN				*e*S	Sn	14 50 25.2	-9.1
GKN	**Gorkha**	**14.21**	**123**	*e*P	**Pn**	**14 48 07.7**	**-1.7**
	comp=Z,458nm,0.5s						
WMQ	**Urumqi**	**14.64**	**55**	P	**Pn**	**14 48 14.7**	**+0.1**
WMQ				S	**Sn**	**14 50 55.1**	**-2.0**
WMQ				pmax	pmax		
	comp=Z,99nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,820nm,4.9s						
WMQ				LR	LR		
	comp=Z,920nm,14.9s						
WMQ				LR	LR		
	comp=Z,920nm,14.9s						
WMQ				LR	LR		
	comp=Z,320nm,15.5s						
DMN	**Daman**	**14.78**	**123**	*e*P	**Pn**	**14 48 16.0**	**-0.6**
	comp=Z,253nm,0.5s						
KKN	**Kakani**	**14.79**	**122**	*e*P	**Pn**	**14 48 15.6**	**-1.0**
	comp=Z,344nm,0.5s						
PKIN	**Phulchoki**	**15.00**	**122**	*e*P	**Pn**	**14 48 18.4**	**-0.9**
	comp=Z,376nm,0.5s						
KURBB	**Kurchatov Arra**	**15.12**	**18**	P	**Pn**	**14 48 17.7**	**-2.6**
	comp=Z,0.6nm,0.3s,baz=206,slow=11,SNR=61						
KURBB				S	**S**	**14 51 12.5**	**-0.7**
	baz=201,slow=19,SNR=4.5						
KURBB	**Kurchatov Arra**	**15.12**	**18**	⇑P	**Pn**	**14 48 18.5**	**-1.8**
	comp=Z,58nm,0.5s						
GUN	**Gumba**	**15.13**	**120**	*e*P	**Pn**	**14 48 19.9**	**-1.1**
	comp=Z,258nm,0.4s						
AB31	**Akbulak array**	**15.15**	**331**	⇓P	**P**	**14 48 21.3**	**-0.9**
	comp=Z,16nm,0.5s,baz=161,slow=12,SNR=6.5						
AB31				S	**Sn**	**14 50 58.4**	**-11**
	comp=Z,18nm,0.4s,baz=155,slow=24,SNR=9.1						
AB31	**Akbulak array**	**15.15**	**331**	P	**Pn**	**14 48 19.9**	**-0.8**
AB31				pmax	pmax		
	comp=Z,16nm,0.5s						
ABKAR	**Akbulak array**	**15.15**	**331**	*e*Pn	**Pn**	**14 48 18.4**	**-2.3**
KURK	**Kurchatov**	**15.23**	**18**	⇑P	**Pn**	**14 48 19.2**	**-2.5**
	comp=Z,46nm,1.3s						
KURK	**Kurchatov**	**15.23**	**18**	*e*Pn	**Pn**	**14 48 18.9**	**-2.8**
	comp=Z,61nm,0.9s						
KURK				S	**Sn**	**14 51 12.5**	**+1.5**
KURK	**Kurchatov**	**15.23**	**18**	*e*P	**Pn**	**14 48 18.9**	**-2.8**
KURK				S	**Sn**	**14 51 12.5**	**+1.5**
KURK				pmax	pmax		
	comp=Z,61nm,0.9s						
JBP	**Jabalpur**	**15.32**	**147**	*e*P	**Pn**	**14 48 22.1**	**-0.9**
JBP				*e*x	x	14 51 00.5	
JIRN	**Jiri**	**15.50**	**120**	*e*P	**Pn**	**14 48 24.7**	**-0.8**
	comp=Z,479nm,0.4s						
RAMN	**Ramite**	**16.23**	**121**	*e*P	**Pn**	**14 48 33.7**	**-0.6**
	comp=Z,212nm,0.4s						
BANOM	**Banah**	**16.44**	**234**	P	**P**	**14 48 36.7**	**0.0**
	SNR=18						
BANOM	**Banah**	**16.44**	**234**	*i* P	**P**	**14 48 36.3**	**-0.4**
	SNR=8.8						
SHME	**Shamm**	**16.46**	**235**	*i* P	**P**	**14 48 36.9**	**0.0**
	SNR=14						
BVA0	**Borovoye Array**	**16.56**	**358**	⇑P	**Pn**	**14 48 37.8**	**-0.2**
	comp=Z,53nm,0.7s						
BVA0	**Borovoye Array**	**16.56**	**358**	P	**Pn**	**14 48 37.7**	**-0.2**
BVA0				pmax	pmax		
	comp=Z,53nm,0.7s						
BVAR	**Borovoye Array**	**16.56**	**358**	P	**P**	**14 48 36.9**	**-0.9**
	comp=Z,9.8nm,0.3s,baz=162,slow=12,SNR=145						
BVAR				S	**S**	**14 51 34.2**	**-7.4**
	comp=Z,1.2nm,0.3s,baz=167,slow=20,SNR=9.6						
BRVK	**Borovoye**	**16.60**	**358**	⇓P	**P**	**14 48 37.8**	**-0.4**
	comp=Z,30nm,0.8s						
BRVK	**Borovoye**	**16.60**	**358**	*e*P	**P**	**14 48 37.8**	**-0.4**
	comp=Z,69nm,0.6s						
BRVK	**Borovoye**	**16.60**	**358**	P	**P**	**14 48 37.7**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,46nm,0.5s						
TAPN	**Taplejung**	**16.75**	**118**	*e*P	**Pn**	**14 48 42.5**	**+1.7**
	comp=Z,309nm,0.4s						
NGP	**Nagpur**	**16.76**	**153**	*e*P	**Pn**	**14 48 41.9**	**+1.3**
NGP				*e*x	**S**	**14 51 37.1**	**-10**
ODAN	**Odare**	**16.83**	**120**	*e*P	**P**	**14 48 41.6**	**+0.4**
	comp=Z,134nm,0.5s						
AKTO	**Aktyubinsk**	**16.85**	**330**	P	**P**	**14 48 41.0**	**+0.1**
	comp=Z,4.6nm,0.3s,baz=143,slow=8.3,SNR=72						
AKTO				S	**S**	**14 51 39.6**	**-8.8**
	comp=Z,1.9nm,0.3s,baz=0.9,slow=20,SNR=11						
AKTO	**Aktyubinsk**	**16.85**	**330**	⇓P	**Pn**	**14 48 41.6**	**+0.2**
	comp=Z,8.6nm,0.5s						
MDH	**Madha**	**16.88**	**233**	P	**P**	**14 48 40.5**	**-1.0**
MSFE	**Esma-Masafi**	**16.92**	**233**	P	**P**	**14 48 40.7**	**-1.3**
WSAR	**Wadi Sarin**	**17.03**	**223**	P	**Pn**	**14 48 44.2**	**+0.3**
	comp=Z,1.7nm,0.3s,baz=77,slow=10,SNR=17						
WSAR	**Wadi Sarin**	**17.03**	**223**	P	**Pn**	**14 48 45.1**	**+1.2**
UOSS	**Minazif**	**17.18**	**232**	*e*P	**Pn**	**14 48 46.0**	**+0.3**
	comp=Z,32nm,0.8s						
UOSS	**Minazif**	**17.18**	**232**	P	**P**	**14 48 44.3**	**-0.6**
UOSS	**Minazif**	**17.18**	**232**	P	**Pn**	**14 48 45.9**	**+0.2**
HATD	**Hatta, Dubai**	**17.32**	**232**	P	**P**	**14 48 46.3**	**0.0**
HATD	**Hatta, Dubai**	**17.32**	**232**	*i* P	**P**	**14 48 46.9**	**+0.6**
	SNR=7.3						
WBK	**Wadi Bani Khal**	**17.36**	**221**	P	**Pn**	**14 48 50.8**	**+2.9**
ASHO	**Ashiyiah**	**17.46**	**232**	P	**Pn**	**14 48 49.7**	**+0.6**
	SNR=16						
ASHO	**Ashiyiah**	**17.46**	**232**	*i* P	**Pn**	**14 48 49.1**	**0.0**
	SNR=11						
SMDO	**Samad**	**17.50**	**224**	P	**Pn**	**14 48 49.9**	**+0.4**
NAZ	**Nazwa, Dubai**	**17.50**	**233**	P	**Pn**	**14 48 50.3**	**+0.8**
NAZ	**Nazwa, Dubai**	**17.50**	**233**	P	**Pn**	**14 48 49.5**	**0.0**
DGZ	**Jazzator, Alta**	**17.75**	**37**	*i* P	**Pn**	**14 48 52.6**	**+0.2**
ASUD	**Al Ashush, Dub**	**17.97**	**233**	P	**Pn**	**14 48 57.0**	**+1.9**
	SNR=6.6						
ASUD	**Al Ashush, Dub**	**17.97**	**233**	P	**P**	**14 48 54.2**	**+0.7**
POO	**Poona**	**18.03**	**172**	*e*x	**P**	**14 48 55.0**	**+0.8**
LSA	**Lhasa**	**18.09**	**106**	*e*P	**Pn**	**14 49 00.1**	**+3.2**
	comp=Z,30nm,0.8s						
LSA	**Lhasa**	**18.09**	**106**	*e*P	**Pn**	**14 49 00.1**	**+3.2**
LSA				pmax	pmax		
	comp=Z,30nm,0.8s						
ALNE	**Al Ain**	**18.11**	**231**	*i* P	**Pn**	**14 48 56.4**	**-0.3**
	SNR=15						
AJN	**Ajban**	**18.24**	**234**	P	**P**	**14 48 57.3**	**+1.0**
AKT	**Akhty**	**18.83**	**293**	*e*P	**P**	**14 49 03.8**	**+1.0**
AKT				*e*S	**S**	**14 52 30.5**	**+1.6**
AKT				pmax	pmax		
	comp=Z,38nm,0.7s						
AKT				smax	smax		
	comp=N,63nm,0.6s						
AKT				smax	smax		
	comp=E,56nm,0.4s						
ZAA0	**Zalesovo Array**	**19.91**	**24**	*e*P	**P**	**14 49 14.7**	**+0.5**
	comp=E,172nm,0.6s						
ZALV	**Zalesovo Beam**	**19.91**	**24**	P	**P**	**14 49 14.7**	**+0.5**
	comp=E,39nm,0.3s,baz=223,slow=11,SNR=190						
ZALV				S	**S**	**14 52 48.0**	**-1.6**
	baz=224,slow=12,SNR=1.6						
HYB	**Hyderabad**	**20.09**	**159**	*i* P	**P**	**14 49 18.0**	**+1.5**
NVS	**Novosibirsk**	**20.18**	**21**	⇓*i*P	**P**	**14 49 18.0**	**+0.9**
NVS				*i* S	**S**	**14 52 51.5**	**-3.5**
NVS				pmax	pmax		
	comp=Z,148nm,1.0s						
NVS				pmax	pmax		
	comp=N,107nm,0.9s						
NVS				smax	smax		
	comp=N,19nm,1.3s						
NVS				smax	smax		
	comp=E,10.0nm,1.1s						
MZR	**Muzera**	**20.31**	**234**	P	**P**	**14 49 19.3**	**+0.4**
GROC	**Groznyy**	**20.52**	**297**	*e*P	**P**	**14 49 22.4**	**+1.5**
GROC				*e**PP	**pP**	**14 49 48.7**	**+0.8**
GROC				*e**SP	**sP**	**14 50 08.0**	**+0.6**
GROC				*e*S	**S**	**14 53 05.5**	**+3.5**
GROC				*e*		14 53 26.1	
GROC				*e**SS	**sS**	**14 53 50.7**	**+3.4**
GROC				pmax	pmax		
	comp=Z,172nm,1.4s						
DGRG	**David-gareji**	**20.59**	**292**	*e*P	Pn	14 49 23.9	-1.9
BWNR	**Bhubaneshwar**	**20.62**	**137**	*e*P	**P**	**14 49 23.1**	**+1.0**
BWNR				*e*S	**S**	**14 53 05.6**	**+1.5**
GNI	**Garni**	**20.99**	**288**	P	**P**	**14 49 26.7**	**+0.7**
	comp=Z,74nm,0.8s,baz=29,slow=4.8,SNR=25						
TBLG	**Delisi**	**21.09**	**292**	*e*P	**P**	**14 49 28.0**	**+1.0**
	comp=Z,79nm,0.8s						
TBLG	**Delisi**	**21.09**	**292**	*e*P	**P**	**14 49 28.0**	**+1.0**
TBLG				pmax	pmax		
	comp=Z,79nm,0.8s						
SVE	**Sverdlovsk**	**21.55**	**344**	*de*P	**P**	**14 49 32.5**	**+0.8**
SVE				*e*S	**S**	**14 53 17.8**	**-2.7**
SVE				pmax	pmax		
	comp=Z,70nm,0.9s						
ARU	**Arti**	**21.69**	**341**	P	**P**	**14 49 33.8**	**+0.5**
	comp=Z,13nm,0.3s,baz=134,slow=5.0,SNR=30						
ARU	**Arti**	**21.69**	**341**	*e*P	**P**	**14 49 33.5**	**+0.3**
	comp=Z,32nm,0.7s						
ARU	**Arti**	**21.69**	**341**	*c i*P	**P**	**14 49 33.7**	**+0.5**
ARU						14 50 04.1	
ARU				S	**S**	**14 53 25.0**	**+2.0**
ARU				pmax	pmax		
	comp=Z,81nm,1.7s						
HVS	**Khovu-Aksy**	**21.81**	**41**	⇓*i*P	**P**	**14 49 38.2**	**+3.6**
HVS				pmax	pmax		
	comp=Z,45nm,0.8s						
ZEI	**Tsey**	**21.83**	**295**	*e*P	**P**	**14 49 36.4**	**+1.3**
ZEI				pmax	pmax		
	comp=Z,22nm,0.6s						
AKH	**Akhalkalaki**	**21.99**	**291**	*e*P	**P**	**14 49 38.8**	**+2.0**
	comp=Z,56nm,1.0s						
AKH	**Akhalkalaki**	**21.99**	**291**	*e*P	**P**	**14 49 38.7**	**+2.0**
ONI	**Oni**	**22.13**	**295**	*e*P	**P**	**14 49 40.2**	**+2.2**
NCK	**Nalchik**	**22.16**	**297**	*i* P	**P**	**14 49 39.2**	**+1.1**
NCK				pmax	pmax		
	comp=Z,70nm,1.0s						
KBZ	**Khabaz**	**22.69**	**297**	P	**P**	**14 49 43.6**	**+0.4**
	comp=Z,12nm,0.8s,baz=120,slow=8.2,SNR=26						
NEY	**Neytrino**	**22.75**	**296**	⇑*i*P	**P**	**14 49 46.7**	**+2.8**
NEY				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GTA	**Gaotai**	**22.79**	**74**	⇑P	**P**	**14 49 46.5**	**+2.2**
GTA				pP	pP	14 50 19.1	+6.2
GTA				sP	PP	14 50 39.5	+0.2
GTA				pmax	pmax		
	comp=Z,23nm,1.3s						
KVAR	**Kislovodsk Arr**	**22.87**	**298**	P	**P**	**14 49 45.8**	**+0.8**
	comp=Z,8.4nm,0.5s,baz=227,slow=3.5,SNR=6.3						
KIV	**Kislovodsk**	**22.88**	**298**	*e*P	**P**	**14 49 44.1**	**-0.9**
	comp=Z,14nm,0.6s						
KIV	**Kislovodsk**	**22.88**	**298**	P	**P**	**14 49 45.6**	**+0.5**
KIV	**Kislovodsk**	**22.88**	**298**	*e*P	**P**	**14 49 45.7**	**+0.7**
KIV				*e**PP	**pP**	**14 50 13.7**	**0.0**
KIV				*e*S	**S**	**14 53 44.4**	**+1.5**
KIV				pmax	pmax		
	comp=Z,17nm,1.0s						
KNGR	**Kungurtug, Tuv**	**23.63**	**45**	*i* P	**P**	**14 49 54.2**	**+2.3**
KRAR	**Krasnoyarsk**	**24.48**	**30**	*i* P	**P**	**14 50 00.9**	**+1.6**
MDRS	**Chennai**	**24.70**	**158**	*e*x	x	14 52 18.8	
SOC	**Sochi**	**24.96**	**296**	*e*P	**P**	**14 50 07.7**	**+3.8**
SOC				*e**SP	**sP**	**14 50 52.1**	**-1.6**
SOC				*e*S	**S**	**14 54 20.9**	**+4.9**
SOC				pmax	pmax		
	comp=Z,40nm,0.7s						
RAYN	**Ar Rayn**	**25.57**	**247**	*e*P	**P**	**14 50 08.7**	**-0.9**
	comp=Z,13nm,0.8s						
RAYN	**Ar Rayn**	**25.57**	**247**	*i* P	**P**	**14 50 09.7**	**+0.1**
	SNR=15						
RAYN	**Ar Rayn**	**25.57**	**247**	*e*P	**P**	**14 50 08.7**	**-0.9**
RAYN				pmax	pmax		
	comp=Z,13nm,0.8s						
MOY	**Mondy**	**26.07**	**45**	*e*P	**P**	**14 50 15.8**	**+1.9**
MOY				pmax	pmax		
	comp=Z,18nm,1.8s						
LZH	**Lanzhou**	**26.33**	**81**	*e*P	**P**	**14 50 17.1**	**+0.6**
LZH				pP	pP	14 50 52.8	+4.3
LZH				*e*PP	**sP**	**14 51 07.7**	**+1.3**
LZH				sP	PP	14 51 13.4	-5.5
LZH				pmax	pmax		
	comp=Z,35nm,1.2s						
LZH				pmax	pmax		
	comp=Z,260nm,5.4s						
ANN	**Anapa**	**26.73**	**299**	*e*P	**P**	**14 50 20.5**	**+0.8**
ANN				pmax	pmax		
	comp=Z,67nm,1.5s						
VORD	**Divnogorie**	**26.93**	**313**	*e*P	**P**	**14 50 22.2**	**+0.8**
VORD				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZAK	**Zakamensk**	**26.95**	**49**	*e*P	**P**	**14 50 22.3**	**+0.5**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
VSR	**Storozhevoye**	**27.09**	**313**	*e*P	**P**	**14 50 23.7**	**+0.8**
VSR				*e**PP	**pP**	**14 50 54.6**	**-0.4**
VSR				*e*S	**S**	**14 54 50.4**	**+1.1**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VSR				smax	smax		
	comp=E,30nm,1.4s						
TLY	**Talaya**	**27.60**	**46**	*e*P	**P**	**14 50 28.8**	**+1.3**
	comp=E,3.7nm,0.7s						
TLY	**Talaya**	**27.60**	**46**	⇓*e*P	**P**	**14 50 29.9**	**+2.4**
TLY				pmax	pmax		
	comp=Z,3.0nm,0.6s						
CD2	**Chengdu**	**27.64**	**92**	*e*P	**P**	**14 50 28.0**	**-0.1**
SONM	**Songino Array**	**28.28**	**55**	P	**P**	**14 50 34.4**	**+0.7**
	comp=Z,3.0nm,0.7s,baz=264,slow=9.3,SNR=25						
SONA1	**Songino Array**	**28.29**	**55**	*e*P	**P**	**14 50 32.4**	**-1.4**
ULN	**Ulaanbaatar**	**28.72**	**55**	*e*P	**P**	**14 50 36.5**	**-1.1**
	comp=Z,3.6nm,0.7s						
ULN	**Ulaanbaatar**	**28.72**	**55**	⇓*i*P	**P**	**14 50 38.7**	**+1.1**
ULN				pmax	pmax		
	comp=Z,11nm,2.5s						
KMI	**Kunming**	**29.30**	**104**	P	**P**	**14 50 44.0**	**+0.9**
KMI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KMI				pmax	pmax		
	comp=Z,57nm,3.9s						
BRTR	**Keskin Array B**	**29.53**	**288**	P	**P**	**14 50 45.9**	**+1.1**
	comp=Z,3.3nm,0.7s,baz=108,slow=8.9,SNR=16						
PRGR	**Permogore**	**29.84**	**336**	*e*P	**P**	**14 50 47.4**	**+0.3**
PRGR				pmax	pmax		
	comp=Z,11nm,0.6s						
OBN	**Obninsk**	**30.02**	**319**	⇓*e*P	**P**	**14 50 51.0**	**+2.3**
OBN				*e**PP	**pP**	**14 51 23.6**	**+2.4**
OBN				*SP	**sP**	**14 51 40.0**	**+1.0**
OBN						14 51 53.0	
OBN				pmax	pmax		
	comp=Z,7.0nm,0.3s						
OBN				MLR	MLR		
	comp=Z,173nm,15.0s						
CHTO	**Chiang Mai**	**30.13**	**118**	*e*P	**P**	**14 50 49.8**	**-0.4**
	comp=Z,3.7nm,0.8s						
CHTO				*e*pP	**pP**	**14 51 26.3**	**+3.6**
CHTO	**Chiang Mai**	**30.13**	**118**	*e*P	**P**	**14 50 49.8**	**-0.4**
CHTO				*e**PP	**pP**	**14 51 26.3**	**+3.6**
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CHTO	**Chiang Mai**	**30.13**	**118**	P	**P**	**14 50 53.6**	**+3.4**
	comp=Z,24nm,1.2s						
CMMT	**Chiang Mai**	**30.13**	**118**	P	**P**	**14 50 53.5**	**+3.3**
	comp=Z,5.3nm,1.2s,comp=Z,473nm						
PALK	**Pallekele**	**30.35**	**161**	P	**P**	**14 50 51.8**	**-0.4**
	comp=Z,6.4nm,0.9s,baz=270,slow=1.0,SNR=3.5						
CMAR	**Chiang Mai Arr**	**30.36**	**119**	P	**P**	**14 50 52.5**	**+0.3**
	comp=Z,5.3nm,0.8s,baz=301,slow=8.3,SNR=36						
XAN	**Xi'an**	**30.85**	**83**	P	**P**	**14 50 57.3**	**+0.9**
XAN				pmax	pmax		
	comp=Z,15nm,0.8s						
KLMR	**Klimovskoe**	**31.55**	**331**	*e*P	**P**	**14 51 01.8**	**-0.4**
KLMR				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KLMR	**Klimovskoe**	**31.55**	**331**	*e*P	**P**	**14 51 01.8**	**-0.4**
KLMR				AMP		14 51 12.3	
	comp=Z,8.0nm,1.1s						
HHC	**Hu-ho-hao-te**	**31.69**	**70**	*e*P	**P**	**14 51 05.1**	**+1.3**
HHC				sP	sP	14 52 06.0	+12
HHC				S	**S**	**14 55 56.3**	**-5.7**
HHC				pmax	pmax		
	comp=Z,17nm,1.0s						
HHC				pmax	pmax		
	comp=Z,270nm,5.2s						
GYA	**Guiyang**	**31.77**	**98**	*e*P	**P**	**14 51 05.5**	**+0.8**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PHIT	**Phitsanulok**	**32.25**	**119**	P	**P**	**14 51 12.5**	**+3.7**
	comp=Z,18nm,0.8s						
AKASG	**Malin Array Be**	**33.03**	**309**	P	**P**	**14 51 15.9**	**+0.7**
	comp=Z,16nm,0.5s,baz=81,slow=7.2,SNR=57						
AKBB	**Malin Array Si**	**33.03**	**309**	*e*P	**P**	**14 51 14.3**	**-0.9**
	comp=Z,19nm,0.6s						
AKBB	**Malin Array Si**	**33.03**	**309**	*e*P	**P**	**14 51 14.3**	**-0.9**
AKBB				pmax	pmax		
	comp=Z,19nm,0.6s						
KIEV	**Kiev**	**33.04**	**309**	*e*P	**P**	**14 51 15.7**	**+0.4**
	comp=Z,19nm,0.6s						
KIEV				*e*pP	**pP**	**14 51 49.6**	**+1.6**
KIEV	**Kiev**	**33.04**	**309**	P	**P**	**14 51 16.2**	**+0.9**
KIEV	**Kiev**	**33.04**	**309**	*d i*P	**P**	**14 51 15.9**	**+0.6**
KIEV				pmax	pmax		
	comp=Z,15nm,0.6s						
PBKT	**Sadao Pong**	**33.06**	**119**	P	**P**	**14 51 18.4**	**+2.6**
	comp=Z,13nm,1.2s,comp=Z,719nm						
AK11	**Malin Array Si**	**33.06**	**309**	*e*P	**P**	**14 51 15.8**	**+0.3**
CFR	**Carcaliu**	**33.33**	**299**	⇑*i*P	**P**	**14 51 19.7**	**+1.8**
CFR	**Carcaliu**	**33.33**	**299**	⇑P	**P**	**14 51 19.7**	**+1.8**
SRDT	**SRDT**	**33.34**	**124**	P	**P**	**14 51 21.1**	**+2.9**
	comp=Z,19nm,0.7s,comp=Z,5µm						
PLOR	**Plostina**	**34.37**	**300**	⇑*i*P	**P**	**14 51 30.0**	**+3.1**
PLOR	**Plostina**	**34.37**	**300**	⇑P	**P**	**14 51 30.0**	**+3.1**
TESR	**Tescani**	**34.38**	**301**	⇓*i*P	**P**	**14 51 29.0**	**+2.1**
MLR	**Muntele Rosu**	**34.87**	**299**	P	**P**	**14 51 33.4**	**+2.0**
	comp=Z,3.0nm,0.8s,baz=115,slow=7.0,SNR=17						
MLR	**Muntele Rosu**	**34.87**	**299**	⇓*i*P	**P**	**14 51 34.8**	**+3.5**
MLR	**Muntele Rosu**	**34.87**	**299**	*e*P	**P**	**14 51 33.3**	**+2.0**
	comp=Z,13nm,0.8s						
MLR	**Muntele Rosu**	**34.87**	**299**	⇓P	**P**	**14 51 34.8**	**+3.5**
SKNT	**Sakolnakorn**	**34.96**	**115**	P	**P**	**14 51 33.8**	**+1.6**
	comp=Z,16nm,0.8s						
BOD	**Bodaibo**	**35.32**	**39**	*e*P	**P**	**14 51 35.1**	**+0.3**
BOD				pmax	pmax		
	comp=Z,15nm,1.2s						
BURAR	**Bucovina Array**	**35.38**	**303**	⇑*i*P	**P**	**14 51 37.5**	**+1.9**
BURAR	**Bucovina Array**	**35.38**	**303**	⇑P	**P**	**14 51 37.5**	**+1.9**
BUR04	**Bucovina Ar. S**	**35.38**	**303**	*e*P	P	14 51 30.4	-5.3
BUR08	**Bucovina Ar. S**	**35.39**	**303**	*e*P	**P**	**14 51 37.3**	**+1.6**
LVV	**L'vov**	**36.25**	**307**	*e*P	**P**	**14 51 44.5**	**+1.6**
VSU	**Vasula**	**36.26**	**322**	*i* P	**P**	**14 51 43.7**	**+0.9**
VSU				pmax	pmax		
	comp=Z,23nm,0.7s						
DRGR		**37.09**	**302**	⇓*i*P	**P**	**14 51 52.4**	**+2.3**
DRGR		**37.09**	**302**	⇓P	**P**	**14 51 52.4**	**+2.3**
KWP	**Kalwaria Pacla**	**37.10**	**306**	*e*P	**P**	**14 51 52.6**	**+2.5**
KWP	**Kalwaria Pacla**	**37.10**	**306**	*e*P	**P**	**14 51 52.6**	**+2.5**
TRPA	**Tarpa**	**37.18**	**304**	⇓*i*P	**P**	**14 51 52.1**	**+1.3**
IDI	**Anoyia**	**37.19**	**282**	P	**P**	**14 51 50.7**	**-0.4**
	comp=Z,3.6nm,0.6s,baz=79,slow=16,SNR=4.7						
FIA1	**FINESS Array S**	**37.56**	**326**	*e*P	**P**	**14 51 52.1**	**-1.6**
FINES	**FINESS Array B**	**37.56**	**326**	P	**P**	**14 51 54.8**	**+1.1**
	comp=Z,2.5nm,0.4s,baz=120,slow=8.1,SNR=23						
NIE	**Niedzica**	**38.66**	**306**	*e*P	**P**	**14 52 05.8**	**+2.6**
NIE	**Niedzica**	**38.66**	**306**	*e*P	**P**	**14 52 05.8**	**+2.6**
OJC	**Ojcow**	**38.99**	**307**	*e*P	**P**	**14 52 07.4**	**+1.5**
OJC	**Ojcow**	**38.99**	**307**	*e*P	**P**	**14 52 07.4**	**+1.5**
NJ2	**Nanjing**	**39.39**	**82**	*e*P	**P**	**14 52 09.3**	**-0.1**
NJ2				pmax	pmax		
	comp=Z,25nm,0.7s						
MORC	**Moravsky Berou**	**40.45**	**306**	⇓*i*P	**P**	**14 52 19.8**	**+1.8**
MORC	**Moravsky Berou**	**40.45**	**306**	*e*P	**P**	**14 52 19.6**	**+1.6**
	comp=Z,5.7nm,0.8s						
MORC	**Moravsky Berou**	**40.45**	**306**	⇓P	**P**	**14 52 19.8**	**+1.8**
GKP	**Gorka Klasztor**	**40.66**	**312**	*e*P	**P**	**14 52 21.5**	**+1.9**
GKP	**Gorka Klasztor**	**40.66**	**312**	*e*P	**P**	**14 52 21.5**	**+1.9**
VRAC	**Vranov**	**41.09**	**306**	⇑*i*P	**P**	**14 52 25.7**	**+2.5**
VRAC	**Vranov**	**41.09**	**306**	⇑P	**P**	**14 52 25.7**	**+2.5**
ARCES	**ARCESS Array B**	**41.21**	**338**	P	**P**	**14 52 25.1**	**+1.2**
	comp=Z,16nm,0.7s,baz=112,slow=8.4,SNR=93						
ARCES	**ARCESS Array B**	**41.21**	**338**	*e*P	**P**	**14 52 25.2**	**+1.4**
ARCES	**ARCESS Array B**	**41.21**	**338**	*e*P	**P**	**14 52 25.3**	**+1.4**
ARE0	**ARCESS Array S**	**41.21**	**338**	*e*P	**P**	**14 52 25.6**	**+1.7**
ARE0				IAmb	IAmb	14 52 26.0	
	comp=Z,8.8nm,0.7s						
DPC	**Dobruska-Polom**	**41.22**	**307**	*e*P	**P**	**14 52 27.1**	**+2.8**
DPC				*e*x	x	14 52 30.3	
DPC	**Dobruska-Polom**	**41.22**	**307**	*e*P	**P**	**14 52 27.1**	**+2.8**
UPC	**Upice**	**41.41**	**308**	*e*P	**P**	**14 52 28.2**	**+2.4**
UPC	**Upice**	**41.41**	**308**	*e*P	**P**	**14 52 28.2**	**+2.4**
KTK1	**Kautokeino**	**41.68**	**336**	*e*P	**P**	**14 52 28.7**	**+1.0**
ZEA	**Zeya**	**42.03**	**47**	*e*P	**P**	**14 52 32.8**	**+2.1**
ZEA				pmax	pmax		
	comp=Z,29nm,1.0s						
HAMF	**Hammerfest**	**42.29**	**339**	*e*P	**P**	**14 52 34.3**	**+1.7**
HAMF				IAmb	IAmb	14 52 34.7	
	comp=Z,27nm,0.6s						
BRG	**Berggiesshubel**	**42.71**	**308**	*e*P	**P**	**14 52 37.9**	**+1.6**
	comp=Z,7.5nm,0.8s						
BRG	**Berggiesshubel**	**42.71**	**308**	*e*P	**P**	**14 52 37.9**	**+1.6**
BRG				pmax	pmax		
	comp=Z,8.0nm,0.8s						
HFS	**Hagfors**	**43.15**	**322**	P	**P**	**14 52 40.5**	**+0.8**
	comp=Z,3.7nm,0.3s,baz=98,slow=10,SNR=43						
CLL	**Collm**	**43.28**	**309**	*i* P	**P**	**14 52 42.2**	**+1.3**
	comp=Z,5.0nm,0.7s						
CLL				*i* pP	**pP**	**14 53 17.0**	**+2.1**
CLL				*e*PP	**PP**	**14 54 24.0**	**-0.4**
TRO	**Tromso**	**43.33**	**336**	*e*P	**P**	**14 52 42.4**	**+1.4**
TRO				IAmb	IAmb	14 52 44.6	
	comp=Z,12nm,1.1s						
MOR8	**Moi Rana**	**43.89**	**331**	*e*P	**P**	**14 52 45.9**	**+0.3**
MOR8				IAmb	IAmb	14 52 46.2	
	comp=Z,20nm,0.5s						
YAK	**Yakutsk**	**43.94**	**35**	P	**P**	**14 52 46.2**	**+0.2**
	comp=Z,38nm,0.7s,baz=279,slow=0.4,SNR=16						
YAK	**Yakutsk**	**43.94**	**35**	*e*P	**P**	**14 52 45.9**	**-0.1**
YAK				pmax	pmax		
	comp=Z,42nm,0.9s						
YAK				pmax	pmax		

	comp=N,3.0nm,0.8s						
YAK				pmax	pmax		
	comp=E,5.0nm,0.9s						
STEI	Steigen	44.04	333	eP	P	14 52 48.1	+1.5
STEI				IAmb	IAmb	14 52 50.8	
	comp=Z,27nm,1.3s						
NC405	NORSAR Array S	44.22	323	eP	P	14 52 49.3	+1.0
NC602	NORSAR Array S	44.27	323	eP	P	14 52 48.4	-0.2
NC602				IAmb	IAmb	14 52 50.6	
	comp=Z,43nm,0.5s						
NC303	NORSAR Array S	44.40	323	eP	P	14 52 50.9	+1.2
NC303	NORSAR Array S	44.40	323	eP	P	14 52 50.5	+0.9
NC303				IAmb	IAmb	14 52 52.0	
	comp=Z,20nm,0.8s						
NB201	NORSAR Array S	44.42	323	eP	P	14 52 50.6	+0.7
NB201	NORSAR Array S	44.42	323	eP	P	14 52 49.7	-0.2
NB201				IAmb	IAmb	14 52 50.2	
	comp=Z,14nm,0.9s						
NB2	NORSAR Subarra	44.46	323	P	P	14 52 50.5	+0.3
	comp=Z,2.1nm,0.4s,baz=98,slow=7.9						
NB2	NORSAR Subarra	44.46	323	P	P	14 52 50.5	+0.3
	baz=98,slow=7.9						
KONS	Konsvik	44.48	331	eP	P	14 52 51.4	+1.2
KONS				IAmb	IAmb	14 52 52.4	
	comp=Z,7.7nm,0.5s						
NAO01	NORSAR Array S	44.60	323	eP	P	14 52 51.8	+0.6
NAO01				IAmb	IAmb	14 52 53.5	
	comp=Z,8.4nm,0.8s						
NBO00	NORSAR Array S	44.67	323	eP	P	14 52 52.5	+0.7
NBO00	NORSAR Array S	44.67	323	eP	P	14 52 52.3	+0.4
NBO00				IAmb	IAmb	14 52 55.0	
	comp=Z,12nm,0.8s						
NC204	NORSAR Array S	44.70	323	eP	P	14 52 53.1	+1.0
NC204	NORSAR Array S	44.70	323	eP	P	14 52 51.8	-0.3
NC204				IAmb	IAmb	14 52 53.1	
	comp=Z,11nm,0.3s						
LOF	Lofoten	44.71	333	eP	P	14 52 52.8	+0.8
KSAR	Wonju Array Be	44.78	71	P	P	14 52 53.2	+0.2
KSAR	Wonju Array Be	44.78	71	P	P	14 52 53.3	+0.2
KSRS	Korea Array	44.81	71	P	P	14 52 53.2	0.0
	comp=Z,2.4nm,0.8s,baz=274,slow=7.1,SNR=9.1						
BJO	Bjornoya	45.28	343	eP	P	14 52 58.0	+1.6
BJO				IAmb	IAmb	14 52 58.4	
	comp=Z,34nm,0.6s						
TIXI	Tiksi	45.77	22	P	P	14 53 01.2	+0.8
	comp=Z,23nm,0.3s,baz=267,slow=4.4,SNR=96						
TIXI	Tiksi	45.77	22	eP	P	14 53 00.5	+0.2
	comp=Z,22nm,0.8s						
TIXI	Tiksi	45.77	22	c iP	P	14 53 01.1	+0.8
TIXI				pmax	pmax		
	comp=Z,21nm,1.0s						
DAVOX	Davos/Dischmat	45.85	303	P	P	14 53 02.8	+1.2
	comp=Z,1.9nm,0.4s,baz=114,slow=18,SNR=3.8						
SPA0	Spitsbergen Ar	47.54	347	eP	P	14 53 13.6	-0.5
SPA0	Spitsbergen Ar	47.54	347	eP	P	14 53 16.2	+2.2
SPA0				IAmb	IAmb	14 53 16.7	
	comp=Z,21nm,1.0s						
SPITS	Spitsbergen Ar	47.54	347	P	P	14 53 16.0	+1.9
	comp=Z,8.9nm,0.6s,baz=101,slow=7.5,SNR=36						
SPITS	Spitsbergen Ar	47.54	347	P	P	14 53 16.0	+1.9
SPITS				pmax	pmax		
	comp=Z,9.0nm,0.6s						
JNU	Nakatsue	48.52	75	P	P	14 53 24.2	+2.0
	comp=Z,21nm,0.9s,baz=256,slow=8.3,SNR=6.9						
KBS	Kingsbay	48.66	347	eP	P	14 53 22.9	+0.3
	comp=Z,20nm,0.6s						
KBS	Kingsbay	48.66	347	eP	P	14 53 22.9	+0.3
KBS				pmax	pmax		
	comp=Z,20nm,0.6s						
KMBO	Kilima Mbogo	48.87	228	P	P	14 53 26.4	+1.1
	comp=Z,1.0nm,0.3s,baz=36,slow=19,SNR=2.7						
JOW	Kunigami	48.99	84	P	P	14 53 26.7	+0.9
	comp=Z,14nm,0.4s,baz=309,slow=6.5,SNR=10.0						
KEST	Kesra	49.13	289	P	P	14 53 27.6	+0.7
	comp=Z,2.6nm,0.7s,baz=341,slow=7.4,SNR=3.7						
EKA	Eskdalemuir Ar	52.37	316	P	P	14 53 51.9	+1.2
	comp=Z,4.3nm,0.9s,baz=319,slow=31,SNR=4.6						
EKA				PcP	PcP	14 54 59.9	+0.4
	comp=Z,0.7nm,0.4s,baz=95,slow=8.6,SNR=3.3						
YSS	Yuzh-Sakhalins	52.77	55	eP	P	14 53 53.0	-0.8
YSS				pmax	pmax		
	comp=Z,50nm,1.3s						
MJAR	Matsushiro Arr	52.88	68	P	P	14 53 54.9	+0.1
	comp=Z,5.9nm,1.1s,baz=287,slow=9.0,SNR=8.9						
SEY	Seymchan	54.40	34	⇑iP	P	14 54 06.5	+1.1
ESDC	Sonseca Array	57.55	298	P	P	14 54 27.6	-0.6
	comp=Z,0.3nm,0.4s,baz=59,slow=7.9,SNR=5.2						
PETK	Petropavlovsk-	59.93	44	P	P	14 54 44.1	-0.3
	comp=Z,2.8nm,0.7s,baz=299,slow=1.6						
SUMG	Summit	61.12	341	eP	P	14 54 51.0	-1.6
	comp=Z,16nm,0.9s						
SUMG	Summit	61.12	341	eP	P	14 54 51.0	-1.6
SUMG				pmax	pmax		
	comp=Z,16nm,0.9s						
TOA0	Torodi Ar. Sit	65.80	269	eP	P	14 55 20.4	-3.4
TORD	Torodi Ar. Bea	65.80	269	P	P	14 55 22.2	-1.5
	comp=Z,4.4nm,0.6s,baz=43,slow=5.1						
KOWA	Kowa	69.66	273	P	P	14 55 46.9	-1.0
	comp=Z,6.8nm,0.6s,baz=49,slow=9.1,SNR=17						
COLD	Coldfoot	71.98	16	eP	P	14 56 01.6	+0.5
	comp=Z,18nm,1.3s						
INK	Inuvik	73.92	9	eP	P	14 56 12.0	-0.4
	comp=Z,38nm,1.3s						
INK	Inuvik	73.92	9	eP	P	14 56 12.0	-0.4
INK				pmax	pmax		
	comp=Z,38nm,1.3s						
MDM	Murphy Dome	74.33	16	eP	P	14 56 15.1	+0.1
	comp=Z,12nm,1.0s						
BPAW	Bear Paw Mtn.	74.40	18	eP	P	14 56 15.5	+0.1
	comp=Z,5.5nm,0.7s						
CAST	Castle Rocks	74.68	19	eP	P	14 56 17.6	+0.5
	comp=Z,27nm,1.1s						
DBIC	Dimbokro	74.78	267	P	P	14 56 17.3	-1.0
	comp=Z,2.4nm,0.5s,baz=15,slow=8.4,SNR=5.8						
IL1	Eielson Array	74.79	16	eP	P	14 56 16.0	-1.5
ILAR	Eielson Array	74.79	16	P	P	14 56 17.5	0.0
	comp=Z,3.4nm,0.9s,baz=318,slow=4.6,SNR=29						
ILAR				PP	PP	14 59 05.9	-0.2
	comp=Z,1.6nm,1.0s,baz=316,slow=6.7,SNR=4.8						
ILAR	Eielson Array	74.79	16	P	P	14 56 17.5	0.0
ILAR						14 59 05.9	
ILAR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ILAR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
FITZ	Fitzroy Crossi	74.80	127	P	P	14 56 18.9	+0.6
	comp=Z,1.8nm,0.4s,baz=316,slow=4.2,SNR=12						
SKT	Skwentna	76.02	19	eP	P	14 56 25.0	+0.4
	comp=Z,11nm,1.0s						
PAX	Paxson	76.66	16	eP	P	14 56 27.8	-0.5
	comp=Z,22nm,1.4s						
PAX	Paxson	76.66	16	eP	P	14 56 27.8	-0.5
PAX				pmax	pmax		
	comp=Z,22nm,1.4s						
DAWY	Dawson	76.93	13	eP	P	14 56 30.0	+0.2
	comp=Z,19nm,1.4s						
SCM	Sheep Creek Mo	77.21	18	eP	P	14 56 29.6	-1.8
	comp=Z,39nm,1.4s						
SCM	Sheep Creek Mo	77.21	18	eP	P	14 56 29.6	-1.8
SCM				pmax	pmax		
	comp=Z,39nm,1.4s						
BOSA	Boshof	77.78	220	P	P	14 56 35.5	+0.5
	comp=Z,7.5nm,0.8s,baz=57,slow=4.9,SNR=4.1						
KDAK	Kodiak Island	79.19	22	i P	P	14 56 43.4	+1.2
YKW3	Yellowknife Ar	81.20	3	eP	P	14 56 51.0	-1.9
	comp=Z,6.8nm,0.7s						
YKA	Yellowknife Ar	81.27	3	P	P	14 56 54.0	+0.8
	comp=Z,4.1nm,0.5s,baz=351,slow=5.4,SNR=24						
WRA	Warramunga Arr	81.90	122	P	P	14 56 56.8	-0.4
	comp=Z,8.2nm,0.6s,baz=324,slow=4.9,SNR=153						
WRA	Warramunga Arr	81.90	122	P	P	14 56 56.8	-0.4
WRA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
WRAB	Tennant Creek	81.90	122	eP	P	14 56 57.0	-0.2
	comp=Z,18nm,1.0s						
WRAB	Tennant Creek	81.90	122	eP	P	14 56 57.0	-0.2
WRAB				pmax	pmax		
	comp=Z,18nm,1.0s						
WB2	Warramunga Arr	81.91	122	eP	P	14 56 57.0	-0.3
	comp=Z,13nm,0.4s						
DLBC	Dease Lake	83.81	11	eP	P	14 57 08.3	+1.7
	comp=Z,10nm,1.3s						
AS31	Alice Springs	84.17	125	eP	P	14 57 08.8	0.0
	comp=Z,3.4nm,0.5s						
ASAR	Alice Springs	84.17	125	P	P	14 57 08.2	-0.6
	comp=Z,8.9nm,0.6s,baz=310,slow=4.9,SNR=212						
AS01	Alice Springs	84.19	125	eP	P	14 57 08.4	-0.5
CTA	Charters Tower	90.45	115	P	P	14 57 39.0	-0.1
	comp=Z,8.7nm,0.6s,baz=318,slow=6.7,SNR=11						
STKA	Stephens Creek	94.70	126	P	P	14 57 58.1	-0.3
	comp=Z,0.9nm,0.5s,baz=110,slow=1.6,SNR=3.8						
PDAR	Pinedale Array	101.14	0	P	Pdif	14 58 27.9	+0.2
	comp=Z,0.4nm,0.9s,baz=343,slow=2.8,SNR=3.3						
SNAA	Sanae	119.40	200	PKP	PKPdf	15 03 23.7	-1.0
	comp=Z,1.9nm,1.2s,baz=104,slow=4.1,SNR=2.5						
CPUP	Villa Florida	135.30	268	PKP	PKPdf	15 03 55.5	-0.8
	comp=Z,1.3nm,0.7s,baz=67,slow=7.7,SNR=3.0						

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*IDC **12** 15:07:01.6±1.1, 29°.67S×176°.06W, h0^{km}, mb4.1/6, mb1 4.3/7, mb1mx3.9/48, mbtmp4.1/7, ML3.4/1, Error ellipse: s-maj=35.9km s-min=19.2km az=161.0*

*ISCJB **12** 15:07:02.4±0.5, 29°.69S±0°.05×175°.96W±0°.06, h28^{km}, mb4.8/20, Error ellipse: s-maj=8.3km s-min=6.0km az=29.1*

*NEIC **12** 15:07:02.8±5.3, 29°.58S×176°.03W, h15^{km}±34^{km}, mb4.9/25, Error ellipse: s-maj=13.4km s-min=10.5km az=149.0*

ISC 12 15:07:04.9±0.6**, 29°.60S**±0°.08×**176°.01W**±0°.07**, h28^{km}, n53,** σ1^s**21**/56**, mb4.9**/20**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.70	281	Pn	Pn	15 07 33.5	+0.8
	253nm,0.3s,baz=71,slow=8.2,SNR=9.3						
RAO				Sn	Sn	15 07 54.4	+0.8
	332nm,0.3s,baz=104,slow=22,SNR=12						
RAO	Raoul Island	1.70	281	ePn	Pn	15 07 32.8	+0.1
RAO				eSn	Sn	15 07 54.4	+0.8
MXZ	Matakaoa Point	9.24	209	ePn	Pn	15 09 21.4	+5.1
URZ	Urewera	10.35	212	Pn	Pn	15 09 30.6	-0.8
	0.3nm,0.3s,baz=37,slow=5.1,SNR=4.5						
URZ				Sn	Sn	15 11 28.2	+1.7
	1.4nm,0.3s,baz=116,slow=22,SNR=10						
URZ	Urewera	10.35	212	ePn	Pn	15 09 31.0	-0.5
URZ				eSn	Sn	15 11 28.2	+1.7
OUZ	Omahuta	10.42	235	ePn	Pn	15 09 37.8	+5.5
BKZ	Black Stump Fm	11.37	211	ePn	Pn	15 09 43.6	-1.8
HIZ	Hauiti	11.67	218	ePn	Pn	15 09 49.8	+0.3
BFZ	Birch Farm	12.73	208	ePn	Pn	15 10 04.7	+0.7
SNZO	South Karori	13.91	210	ePn	Pn	15 10 18.4	-1.6
THZ	Tophouse	15.09	214	ePn	Pn	15 10 35.3	-0.9
	34nm,1.2s						
KHZ	Kahutara	15.31	211	ePn	Pn	15 10 36.7	-2.3
	24nm,0.8s						
OXZ	Oxford	16.71	212	ePn	P	15 10 59.4	+0.4
	160nm,2.0s						
MQZ	McQueen's Vall	16.73	210	ePn	Pn	15 10 55.7	-1.5
	77nm,1.6s						
LBZ	Lake Benmore	18.38	213	eP	P	15 11 15.1	-2.4
	86nm,1.6s						
ODZ	Otahua Downs	18.68	211	eP	Pn	15 11 22.1	+1.0
	45nm,1.6s						
WKZ	Wanaka	19.27	214	eP	Pn	15 11 28.2	-0.1
	250nm,1.9s						
MLZ	Mavora Lakes	20.10	214	eP	P	15 11 37.1	+0.9
	115nm,1.7s						
WHZ	Wether Hill Ro	20.56	213	eP	P	15 11 39.0	-2.3
	103nm,1.5s						
PPTF	Pamatai, Papee	26.95	70	eP	P	15 12 44.1	-0.1
	143nm,1.3s						
PPT	Papeete	26.95	70	eP	P	15 12 43.7	-0.4
KNTN	Kanton	26.99	9	eP	P	15 12 43.0	-1.4
	277nm,1.5s						
EIDS	Eidsvold	29.44	270	eP	P	15 13 03.9	-2.4
	48nm,1.9s						
HNR	Honiara	30.15	307	eP	P	15 13 11.5	-1.1
	189nm,0.9s						
TAU	Tasmania Unive	32.16	236	eP	P	15 13 29.1	-0.9
	116nm,1.6s						
CTA	Charters Tower	35.40	277	P	P	15 13 59.5	+1.0
	2.5nm,0.6s,baz=113,slow=7.7,SNR=5.8						
CTAO	Charters Tower	35.40	277	eP	P	15 14 00.2	+1.6
	32nm,1.8s						
XMAS	Kiritimati	36.13	33	eP	P	15 14 05.5	+0.8
	60nm,1.0s						
STKA	Stephens Creek	36.35	255	P	P	15 14 07.2	+0.7
	3.7nm,0.7s,baz=101,slow=7.9,SNR=7.4						
STKA	Stephens Creek	36.35	255	eP	P	15 14 07.0	+0.4
	7.3nm,1.7s						
RABL	Rabaul	39.32	304	eP	P	15 14 30.2	-1.5
	41nm,0.6s						
BBOO	Buckleboo	40.85	253	eP	P	15 14 45.4	+1.1
	67nm,1.5s						
AS01	Alice Springs	44.85	265	eP	P	15 15 15.2	-1.7
AS31	Alice Springs	44.89	265	eP	P	15 15 17.4	+0.2
	6.5nm,1.9s						
ASAR	Alice Springs	44.89	265	P	P	15 15 17.3	+0.1
	1.5nm,0.6s,baz=99,slow=7.7,SNR=34						
WC3	Warramunga Arr	45.77	270	eP	P	15 15 23.1	-1.1
	38nm,2.0s						
WB2	Warramunga Arr	45.80	270	eP	P	15 15 23.2	-1.3
	33nm,1.8s						
WRAB	Tennant Creek	45.80	270	eP	P	15 15 23.5	-0.9
	21nm,1.8s						
WR1	Warramunga Arr	45.81	270	eP	P	15 15 23.8	-0.8
	32nm,1.8s						
WRA	Warramunga Arr	45.81	270	P	P	15 15 23.7	-0.8
	2.6nm,0.7s,baz=109,slow=8.0,SNR=32						
MTN	Manton Dam	51.58	277	eP	P	15 16 09.9	+1.0
	8.6nm,1.3s						
FITZ	Fitzroy Crossi	54.10	268	P	P	15 16 28.4	+0.9
	2.1nm,0.8s,baz=160,slow=7.3,SNR=4.4						
FITZ	Fitzroy Crossi	54.10	268	eP	P	15 16 27.1	-0.4
	30nm,2.0s						
PASC	Pasadena Art C	83.70	45	eP	P	15 19 30.0	-1.1
CCCA	Chr Cany lake	85.10	44	eP	P	15 19 39.5	+1.3
NVAR	Mina Array Bea	86.49	42	P	P	15 19 47.2	+1.9
	0.6nm,0.9s,baz=218,slow=5.7,SNR=2.7						
KURK	Kurchatov	121.75	314	ePKPdf	PKPdf	15 25 57.0	+1.3
KURBB	Kurchatov Arra	121.79	314	PKP	PKPdf	15 25 57.0	+1.2
	0.6nm,0.7s,baz=102,slow=1.3,SNR=5.0						
FIA0	FINESS Array S	144.96	342	ePKPdf	PKPdf	15 26 38.4	-0.2
FINES	FINESS Array B	144.96	342	PKPbc	PKPdf	15 26 38.4	-0.2
	1.2nm,0.5s,baz=58,slow=4.7,SNR=8.4						
NB2	NORSAR Subarra	148.19	353	PKP	PKPbc	15 26 48.5	+1.0
	comp=Z,0.5nm,0.5s,baz=11,slow=2.9						
HFS	Hagfors	148.78	351	PKPbc	PKPbc	15 26 49.8	+0.9
	comp=Z,2.0nm,0.7s,baz=207,slow=1.7,SNR=4.5						
HFS				PKPab	pPKPdf	15 26 54.1	-0.3
	comp=Z,1.2nm,0.6s,baz=22,slow=4.8,SNR=5.0						
AKASG	Malin Array Be	151.68	325	PKPbc	PKPbc	15 26 57.6	+1.4
	comp=Z,0.9nm,0.5s,baz=43,slow=2.6,SNR=2.0						

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*IDC **12** 15:10:03.2±1.5, 14°.19N×91°.58W, h0^{km}, mb3.8/7, mb1 4.1/9, mb1mx3.8/50, mbtmp3.8/9, ML3.8/2, Error ellipse: s-maj=62.8km s-min=17.4km az=44.0*

*CASC **12** 15:10:05.8±0.9, 14°.22N×92°.17W, h35^{km}±794^{km}, ML3.2, mb4.2(NEIC)*

*NEIC **12** 15:10:06.8±2.6, 13°.91N×92°.03W, h32^{km}±19^{km}, mb4.2/32, MD4.1(MEX), Error ellipse: s-maj=17.1km s-min=6.8km az=213.0*

*MEX **12** 15:10:07.5±0.4, 13°.89N×92°.33W, h20^{km}±33^{km}, MD4.2*

ISC 12 15:10:02.6±2.1**, 14°.01N**±0°.07×**92°.08W**±0°.06**, h2^{km}**±12^{km}**, n72,** σ1^s**49**/81**, mb4.2**/34**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.92	349	i P	Pn	15 10 23.2	+0.6
THIG				eS	Sn	15 10 35.8	-0.6
IXG	Ixpaco	1.59	84	eP	Pb	15 10 32.3	-0.5
IXG				eS	Sg	15 10 54.1	+0.3
PCIG		2.02	327	eP	Pn	15 10 37.7	-0.1
PCIG				i S	Sn	15 11 00.6	-3.0
CCIG	Comitan	2.26	359	i P	Pb	15 10 43.4	-1.0
CCIG				i S	Sb	15 11 12.0	-1.0
CCIG	Comitan	2.26	359	ePn	Pg	15 10 45.6	-0.5
CCIG				eSn	Sb	15 11 11.7	-1.3
CCIG				eSn	Sg	15 11 15.9	+0.4
RTR	El Retiro	2.37	92	eP	Pb	15 10 44.5	-1.7
SBLS	San Blas	2.39	94	eP	Pb	15 10 44.7	-1.9
SNJE	San Jose	2.41	93	eP	Pb	15 10 45.3	-1.6
UNIC	Santa Ana	2.45	90	eS	Sb	15 11 16.3	-1.9
MTO3	Montecristo	2.67	81	eP	Pn	15 10 48.1	+1.1
MTO3				eS	Sn	15 11 21.2	+1.2
MTO3				IAML		15 11 29.6	
	comp=Z,53nm,0.4s						
BOQS	Boqueron	2.73	95	eP	Pn	15 10 49.7	+1.8
SNET	Serv Nac Est T	2.79	96	ePn	Pn	15 10 48.3	-0.1
LOMA	San Marcos	2.85	97	eP	Pn	15 10 50.8	+1.6
LOMA				IAML		15 11 38.6	
	comp=Z,394nm,0.4s						
LFU	La Fuente	2.89	95	eP	Pn	15 10 51.6	+1.6
TGIG		2.93	340	eP	Pn	15 10 51.5	+1.0
TGIG				i S	Sn	15 11 25.2	-1.1
TGIG		2.93	340	ePn	Pn	15 10 51.5	+1.0
TGIG				eSn	Sn	15 11 24.6	-1.8
LFRS	El Faro	2.96	97	eP	Pn	15 10 52.5	+1.6
SNVI	San Vicente	3.17	97	eS	Sn	15 11 33.6	+1.2
CMIG	Matias Romero	4.09	319	Pn	Pn	15 11 06.4	+0.1
	comp=Z,5.7nm,0.3s,baz=126,slow=12,SNR=29						
CMIG				Sn	Sn	15 11 53.2	-1.6
	comp=Z,10nm,0.3s,baz=121,slow=6.7,SNR=8.5						
TGUH	Tegucigalpa,Un	4.67	89	ePn	Pn	15 11 15.6	+1.4
ESTN	Estel	5.63	99	ePn	Pn	15 11 29.2	+1.6
LVIG	Laguna Verde	7.04	324	ePn	Pn	15 11 47.0	+0.2
TLIG	Tlapa	7.17	300	ePn	Pn	15 11 51.2	+2.4
JTS	JuntasAbangare	7.89	117	Pn	Pn	15 11 56.4	-2.1
	comp=Z,1.2nm,0.3s,baz=334,slow=16,SNR=2.8						
JTS				Lg	Lg	15 14 01.8	
	comp=Z,0.6nm,0.3s,baz=264,slow=17,SNR=4.1						
555A	McAlpin	18.11	26	ePn	P	15 14 20.6	+4.7
	comp=Z,30nm,0.8s						
TXAR	Lajitas Array	18.65	327	P	Pn	15 14 25.1	+2.8
	comp=Z,0.1nm,0.3s,baz=150,slow=13,SNR=14						
TX31	Lajitas Ar. Si	18.65	327	eP	Pn	15 14 24.5	+2.3
147A	Livingston	18.91	10	eP	Pn	15 14 27.4	+2.2
	comp=Z,33nm,1.5s						
ABTX	Abilene, Hawle	19.78	341	eP	Pn	15 14 36.8	+1.0
	comp=Z,4.2nm,0.5s						
MIAR	Mount Ida	20.50	356	eP	Pn	15 14 45.8	+1.6
	comp=Z,16nm,1.8s						
GDL2	Guadalupe Moun	21.31	330	eP	P	15 14 53.4	+2.3
MNTX	Cornudas Mount	21.42	328	eP	P	15 14 53.5	+1.4
	comp=Z,4.5nm,0.8s						
X51A	Calhoun	21.49	16	eP	P	15 14 52.3	-0.5
	comp=Z,8.7nm,0.8s						
WMOK	Wichita Mounta	21.51	345	eP	P	15 14 53.5	+0.4
	comp=Z,2.2nm,0.8s						
SWET	Sewanee	21.84	14	eP	P	15 14 55.6	-1.0
	comp=Z,12nm,0.8s						
V48A	Smith Brothers	22.15	11	eP	P	15 14 59.4	-0.5
	comp=Z,6.5nm,0.6s						
AMTX	Amarillo	22.52	339	eP	P	15 15 04.0	0.0
	comp=Z,7.1nm,0.6s						
SIUC	Southern Illin	23.75	6	eP	P	15 15 15.3	-1.1
	comp=Z,17nm,1.1s						
BNM	Barren Site	24.00	329	eP	P	15 15 21.3	+2.1
ANMO	Albuquerque	24.56	331	P	P	15 15 26.4	+2.1
	comp=Z,2.7nm,0.7s,baz=144,slow=13,SNR=9.3						
ANMO	Albuquerque	24.56	331	eP	P	15 15 26.2	+1.9
	comp=Z,2.5nm,0.7s						
MVCO	Mesa Verde	27.36	331	eP	P	15 15 51.0	+1.3
	comp=Z,4.2nm,0.9s						
PV13	Radium Mtn., P	28.27	331	eP	P	15 15 59.3	+1.5
	comp=Z,5.3nm,1.2s						
PV18	Skein Mesa, Pa	28.38	331	eP	P	15 15 59.4	+0.6
	comp=Z,3.6nm,0.9s						
PV12	Saucer Basin,	28.39	332	eP	P	15 16 00.4	+1.6
	comp=Z,21nm,1.9s						
PV11	David Mesa, Pa	28.41	331	eP	P	15 15 59.2	+0.2
	comp=Z,8.6nm,1.3s						
PV17	East Wray Mesa	28.43	331	eP	P	15 15 58.4	-0.8
	comp=Z,5.0nm,1.1s						
PV16	Nyswonger Mesa	28.44	331	eP	P	15 16 00.2	+0.9
	comp=Z,2.8nm,0.8s						
PV19	Morning Glory	28.47	331	eP	P	15 15 59.9	+0.4
	comp=Z,3.4nm,0.9s						
PV14	Lion Creek, Pa	28.54	331	eP	P	15 15 59.4	-0.7
	comp=Z,7.7nm,1.4s						
PKCU	Pink Cliffs	29.48	326	eP	P	15 16 08.1	-0.6
	comp=Z,6.1nm,1.2s						
XPFO	Piæon Flat	29.50	316	eP	P	15 16 08.2	-0.5
	comp=Z,16nm,1.8s						
PFO	Pinyon Flats O	29.50	316	eP	P	15 16 08.1	-0.6
	comp=Z,16nm,1.8s						
SVB	Belmont	29.96	88	eP	P	15 16 11.5	-1.2
	comp=Z,218nm,1.5s						
CCUT	Cedar City	30.14	325	eP	P	15 16 14.1	-0.3
	comp=Z,7.5nm,1.6s						
PSUT	Pine Spring	31.11	326	eP	P	15 16 24.8	+1.9
	comp=Z,1.8nm,0.9s						
JLU	Jordanelle	31.45	331	eP	P	15 16 26.1	+0.2
	comp=Z,3.6nm,1.0s						
PDAR	Pinedale Array	32.38	336	P	P	15 16 34.1	0.0
	comp=Z,0.1nm,0.4s,baz=175,slow=11,SNR=2.3						
NV01	Mina Array Sit	33.62	321	eP	P	15 16 46.6	+1.6
NVAR	Mina Array Bea	33.62	321	P	P	15 16 47.8	+2.8
	comp=Z,1.4nm,0.7s,baz=135,slow=9.0,SNR=12						
HLID	Hailey	35.13	331	eP	P	15 16 59.7	+1.8
	comp=Z,2.4nm,0.9s						
J08A	Circle Bar Ran	36.99	327	eP	P	15 17 14.8	+1.0
	comp=Z,3.0nm,0.8s						
F10A	Beach Ranch, E	38.27	331	eP	P	15 17 25.0	+0.5
	comp=Z,3.6nm,0.7s						
SIV	San Ignacio	42.75	133	P	P	15 18 00.8	-1.1
	comp=Z,0.7nm,0.8s,baz=320,slow=11,SNR=3.8						
SCHQ	Schefferville	45.24	20	P	P	15 18 19.9	-1.6
	comp=Z,4.7nm,0.5s,baz=240,slow=16,SNR=3.0						
SCHQ	Schefferville	45.24	20	eP	P	15 18 19.6	-1.9
	comp=Z,50nm,1.8s						
YKA	Yellowknife Ar	51.00	347	P	P	15 19 05.7	-0.2
	comp=Z,0.9nm,0.6s,baz=144,slow=7.6,SNR=3.9						
DLBC	Dease Lake	52.62	336	eP	P	15 19 19.2	+1.1
	comp=Z,17nm,2.0s						
IL1	Eielson Array	62.80	337	eP	P	15 20 29.0	-0.5
ILAR	Eielson Array	62.80	337	P	P	15 20 30.0	+0.5
	comp=Z,1.2nm,1.0s,baz=129,slow=4.3,SNR=7.5						
ILB	Eielson Array	62.80	337	eP	P	15 20 29.4	-0.1
CMAR	Chiang Mai Arr	145.96	341	PKPbc	PKPab	15 29 44.0	-1.3
	comp=Z,2.8nm,0.7s,baz=336,slow=3.4,SNR=23						

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*ISCJB **12** 15:20:57.4±0.4, 36°.22N±0°.05×144°.57E±0°.05, h10^{km}, mb3.9/28, Error ellipse: s-maj=6.9km s-min=5.2km az=151.0*

*IDC **12** 15:20:58.0±0.7, 36°.26N×144°.63E, h0^{km}, mb3.8/21, mb1 4.0/27, mb1mx3.9/77, mbtmp3.9/27, ML3.8/4, MS3.0/1, Ms1 3.0/1, ms1mx2.4/81, Error ellipse: s-maj=17.1km s-min=14.4km az=130.0*

*NEIC **12** 15:20:59.4±0.4, 36°.29N×144°.64E, h10^{km}, mb4.6/7, Error ellipse: s-maj=8.5km s-min=6.2km az=150.0*

ISC 12 15:20:59.2±0.6**, 36°.32N**±0°.06×**144°.60E**±0°.07**, h10^{km}, n62,** σ1^s**87**/62**, mb4.0**/28**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	5.08	232	ePn	Pn	15 22 14.8	-0.5
JHJ2				eSn	Sn	15 23 09.7	-4.3
JHJ	Hachijo jima 2	5.09	233	Pn	Pn	15 22 14.8	-0.8
	20nm,0.3s,baz=348,slow=22,SNR=12						
JHJ				Sn	Sn	15 23 09.3	-5.1
	53nm,0.3s,baz=56,slow=24,SNR=11						
MJAR	Matsushiro Arr	5.16	274	Pn	Pn	15 22 16.5	-0.1
	4.1nm,0.3s,baz=95,slow=9.3,SNR=42						
MJAR				Sn	Sn	15 23 14.3	-1.8
	3.1nm,0.3s,baz=35,slow=30,SNR=5.0						
MAJO	Matsushiro	5.16	274	ePn	Pn	15 22 17.4	+0.8
MAJO				eSn	Sn	15 23 14.3	-1.8
MAT	Matsushiro	5.16	274	P	Pn	15 22 17.2	+0.7
MAT				eS	Sn	15 23 11.2	-4.9
MJB9	Matsu-Tunnel	5.16	274	ePn	Pn	15 22 17.4	+0.8
ERM	Erimo	5.79	349	ePn	Pn	15 22 23.8	-1.4
ERM				eSn	Sn	15 23 21.3	-10
INU	Inuyama	6.24	263	ePn	Pn	15 22 31.6	+0.4
ASAJ	Asahikawa	7.94	349	Pn	Pn	15 22 53.1	-1.5
	3.3nm,0.3s,baz=181,slow=10,SNR=36						
ASAJ				Sn	Sn	15 24 16.5	-7.9
	1.0nm,0.3s,baz=114,slow=20,SNR=2.4						
ASAJ	Asahikawa	7.94	349	ePn	Pn	15 22 52.8	-1.8
ASAJ				eSn	Sn	15 24 15.4	-9.0
CBIJ	Chichi jima	9.43	193	ePn	Pn	15 23 13.6	-1.5
CBIJ				eSn	Sn	15 24 51.3	-10
JCJ	Chichijima	9.43	193	Pn	Pn	15 23 13.1	-2.0
	1.8nm,0.3s,baz=24,slow=20,SNR=4.4						
JCJ				Sn	Sn	15 24 51.2	-10
	4.5nm,0.3s,baz=345,slow=20,SNR=4.8						
YSS	Yuzh-Sakhalins	10.71	353	ePn	Pn	15 23 31.7	-0.9
USA0B	Ussuriysk Arra	12.43	313	ePn	Pn	15 23 56.7	+0.6
USRK	Ussuriysk Ar.	12.43	313	Pn	Pn	15 23 57.9	+1.8
	baz=121,slow=14						
KSRS	Korea Array	13.40	280	Pn	Pn	15 24 12.1	+2.7
	0.1nm,0.3s,baz=85,slow=15,SNR=3.2						
KSRS				LR	LR	15 29 34.0	
	comp=Z,60nm,20.8s,baz=315,slow=38						

KSAR	**Wonju Array Be**	**13.43**	**280**	Pn	**Pn**	**15 24 12.1**	**+2.3**
KLR	**Kul'dur**	**15.95**	**328**	Pn	**P**	**15 24 46.7**	**-0.5**
	0.0nm,0.3s,baz=130,slow=12,SNR=4.6						
PETK	**Petropavlovsk-**	**19.14**	**25**	P	**Pn**	**15 25 23.8**	**+0.6**
	baz=198,slow=9.1						
PEA1	**Petropavlovsk-**	**19.14**	**25**	eP	**Pn**	**15 25 23.8**	**+0.5**
H11N2	**WAKE ISLAND Hy**	**25.61**	**124**	T	T	15 53 26.5	
	baz=316,slow=76,SNR=24						
H11N1	**WAKE ISLAND Hy**	**25.61**	**124**	T	T	15 53 34.1	
	baz=316,slow=76,SNR=18						
H11N3	**WAKE ISLAND Hy**	**25.62**	**124**	T	T	15 53 25.5	
	baz=316,slow=76,SNR=19						
H11S1	**WAKE ISLAND Hy**	**26.35**	**126**	T	T	15 54 21.2	
	baz=318,slow=76,SNR=8.2						
H11S3	**WAKE ISLAND Hy**	**26.35**	**126**	T	T	15 54 23.1	
	baz=318,slow=76,SNR=6.4						
H11S2	**WAKE ISLAND Hy**	**26.36**	**126**	T	T	15 54 24.0	
	baz=318,slow=76,SNR=7.1						
SEY	**Seymchan**	**27.07**	**8**	P	**P**	**15 26 43.0**	**+1.4**
	0.8nm,0.5s,baz=176,slow=15,SNR=4.2						
ENH	**Enshi**	**29.85**	**269**	eP	**P**	**15 27 06.7**	**-0.1**
	11nm,1.0s						
SONA0	**Songino Array**	**30.30**	**304**	eP	**P**	**15 27 13.2**	**+2.4**
SONM	**Songino Array**	**30.30**	**304**	P	**P**	**15 27 13.2**	**+2.5**
	0.2nm,0.5s,baz=92,slow=11,SNR=2.3						
CMAR	**Chiang Mai Arr**	**43.83**	**259**	P	**P**	**15 29 06.0**	**+0.3**
	0.4nm,0.5s,baz=46,slow=5.2,SNR=4.1						
ZAA1	**Zalesovo Array**	**44.28**	**313**	eP	**P**	**15 29 08.0**	**-0.8**
ZALV	**Zalesovo Beam**	**44.28**	**313**	P	**P**	**15 29 08.0**	**-0.8**
	0.9nm,0.4s,baz=101,slow=8.9,SNR=2.5						
MK01	**Makanchi Array**	**46.66**	**303**	eP	**P**	**15 29 27.8**	**0.0**
MK32	**Makanchi Array**	**46.66**	**303**	eP	**P**	**15 29 28.8**	**+1.0**
MKAR	**Makanchi Array**	**46.66**	**303**	P	**P**	**15 29 28.8**	**+1.0**
	1.0nm,0.7s,baz=80,slow=10,SNR=5.9						
KTH	**Kantishna Hill**	**46.91**	**34**	eP	**P**	**15 29 27.4**	**-2.2**
	53nm,1.9s						
KURBB	**Kurchatov Arra**	**48.45**	**309**	P	**P**	**15 29 41.8**	**+0.1**
	1.8nm,0.5s,baz=81,slow=7.8,SNR=7.1						
ILAR	**Eielson Array**	**48.73**	**32**	P	**P**	**15 29 43.6**	**0.0**
	0.4nm,0.6s,baz=255,slow=6.3,SNR=6.0						
BVAR	**Borovoye Array**	**52.94**	**313**	P	**P**	**15 30 15.5**	**0.0**
	0.6nm,0.5s,baz=96,slow=13,SNR=3.2						
BRVK	**Borovoye**	**52.99**	**313**	eP	**P**	**15 30 16.6**	**+0.8**
	1.9nm,0.8s						
INK	**Inuvik**	**53.85**	**27**	P	**P**	**15 30 22.5**	**+0.6**
	1.3nm,0.7s,baz=261,slow=3.7,SNR=3.8						
INK	**Inuvik**	**53.85**	**27**	eP	**P**	**15 30 23.2**	**+1.3**
	8.8nm,1.6s						
WR1	**Warramunga Arr**	**56.79**	**192**	eP	**P**	**15 30 43.8**	**+0.1**
	13nm,1.5s						
WRA	**Warramunga Arr**	**56.79**	**192**	P	**P**	**15 30 43.8**	**+0.1**
	0.1nm,0.3s,baz=8.8,slow=7.0,SNR=6.9						
AS31	**Alice Springs**	**60.51**	**191**	eP	**P**	**15 31 10.2**	**+0.7**
	3.1nm,1.6s						
ASAR	**Alice Springs**	**60.51**	**191**	P	**P**	**15 31 09.8**	**+0.3**
	0.2nm,0.4s,baz=7.1,slow=6.6,SNR=11						
AKTO	**Aktyubinsk**	**61.04**	**313**	P	**P**	**15 31 13.8**	**+0.8**
	1.0nm,0.5s,baz=55,slow=12,SNR=3.4						
YKA	**Yellowknife Ar**	**63.12**	**31**	P	**P**	**15 31 27.0**	**+0.3**
	1.0nm,0.7s,baz=271,slow=6.2,SNR=3.2						
FIA0	**FINESS Array S**	**70.62**	**333**	eP	**P**	**15 32 15.2**	**+0.8**
FINES	**FINESS Array B**	**70.62**	**333**	P	**P**	**15 32 15.2**	**+0.8**
	1.8nm,0.7s,baz=39,slow=9.1,SNR=6.8						
KBZ	**Khabaz**	**73.29**	**312**	P	**P**	**15 32 31.7**	**+1.0**
	1.8nm,0.5s,baz=118,slow=4.5,SNR=4.0						
NV01	**Mina Array Sit**	**73.34**	**54**	eP	**P**	**15 32 29.8**	**-1.7**
NVAR	**Mina Array Bea**	**73.34**	**54**	P	**P**	**15 32 32.1**	**+0.6**
	0.5nm,0.5s,baz=283,slow=6.7,SNR=6.6						
HFS	**Hagfors**	**75.77**	**337**	P	**P**	**15 32 46.0**	**+1.2**
	0.4nm,0.4s,baz=48,slow=4.3,SNR=4.2						
NB2	**NORSAR Subarra**	**75.81**	**339**	P	**P**	**15 32 45.4**	**+0.2**
	comp=Z,0.7nm,0.6s,baz=37,slow=6.2						
PDAR	**Pinedale Array**	**76.31**	**47**	P	**P**	**15 32 49.4**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=277,slow=2.2,SNR=5.9						
AKASG	**Malin Array Be**	**76.41**	**324**	P	**P**	**15 32 48.8**	**+0.1**
	comp=Z,0.7nm,0.5s,baz=46,slow=6.6,SNR=3.1						
AKBB	**Malin Array Si**	**76.41**	**324**	eP	**P**	**15 32 48.4**	**-0.3**
	comp=Z,12nm,1.8s						
BR101	**Keskin Array S**	**81.22**	**313**	eP	**P**	**15 33 15.6**	**0.0**
BRTR	**Keskin Array B**	**81.22**	**313**	P	**P**	**15 33 15.5**	**0.0**
	comp=Z,0.7nm,0.7s,baz=71,slow=6.2,SNR=3.2						
TXAR	**Lajitas Array**	**88.49**	**54**	P	**P**	**15 33 53.1**	**+0.8**
	comp=Z,0.2nm,0.5s,baz=272,slow=3.4,SNR=3.0						

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*IDC **12** 15:22:09.1±2.2, 39.°29N×69.°87E, h0^{km}, mb3.8/3, mb1 3.6/9, mb1mx3.4/71, mbtmp3.6/9, ML3.3/5, Error ellipse: s-maj=36.9km s-min=15.3km az=161.0*

*ISCJB **12** 15:22:11.2±1.2, 39.°50N±0.°06×69.°63E±0.°04, h12^{km}±7^{km}, mb3.6/3, Error ellipse: s-maj=10.3km s-min=5.4km az=165.9*

*SOME **12** 15:22:11.8, 39.°58N×69.°68E, h0^{km}*

*KRNET **12** 15:22:14.2±0.1, 39.°65N×69.°87E, h13^{km}, mb3.9*

*NNC **12** 15:22:16.4±2.4, 39.°69N×69.°90E, h0^{km}, mb4.2, mpv4.0, Error ellipse: s-maj=19.3km s-min=9.7km az=32.0*

ISC 12 15:22:11.4±1.5**, 39.°59N**±0.°05×**69.°79E**±0.°04**, h2**^{km}±10^{km}**, n43, σ2.^{s}15**/65**, mb3.8**/3**, 24C-10D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BTK	**Batken**	**0.92**	**59**	⇑iP	**Pb**	**15 22 30.2**	**+0.1**
	baz=61						
BTK				⇑iS	**Sg**	**15 22 42.1**	**+1.1**
	baz=61						
DRK	**Karamyk**	**1.56**	**93**	⇑iP	**Pg**	**15 22 42.5**	**+1.2**
	baz=96						
DRK				⇑iS	**Sg**	**15 23 03.3**	**+1.7**
	baz=96						
TAS	**Tashkent**	**1.78**	**348**	⇑Pg	**Pg**	**15 22 46.9**	**+1.5**
	526nm,0.4s						
TAS				⇓Lg	Lg	15 23 12.3	
	2μm,0.3s						
TAS	**Tashkent**	**1.78**	**348**	⇑iP	**Pg**	**15 22 46.8**	**+1.3**
	baz=46						
TAS				⇑iS	**Sg**	**15 23 10.1**	**+1.6**
	baz=46						
IUG	**Iuzhnay**	**2.56**	**4**	eP	**Pg**	**15 22 59.8**	**-0.6**
	280nm,0.3s						
IUG				eS	**Sg**	**15 23 34.0**	**+0.4**
	187nm,0.2s						
ARK	**Arkit**	**2.76**	**36**	⇑iP	**Pb**	**15 22 59.9**	**-1.5**
	baz=36						
ARK				⇑iS	**Sb**	**15 23 34.2**	**-1.5**
	baz=36						
SFK	**Sufi-Kurgan**	**2.89**	**80**	⇓Pn	**Pb**	**15 23 04.4**	**+0.5**
	7.0nm,0.3s						
SFK				⇑Lg	Lg	15 23 46.3	
	38nm,0.3s						
SFK	**Sufi-Kurgan**	**2.89**	**80**	⇓iP	**Pb**	**15 23 02.6**	**-1.3**
	baz=81						
SFK				⇓iS	**Sb**	**15 23 38.0**	**-1.8**
	baz=81						
ARSB	**Arslanbob**	**2.99**	**54**	⇑iP	**Pn**	**15 23 01.9**	**+2.0**
	baz=54						
ARSB				⇑iS	**Sb**	**15 23 39.5**	**-3.0**
	baz=54						
BRLS	**Borolday**	**3.44**	**1**	eP	**Pb**	**15 23 11.7**	**-1.2**
BRLS				eS	**Sb**	**15 23 55.0**	**-0.1**
MNAS	**Manas**	**3.55**	**35**	⇓Pn	**Pn**	**15 23 10.8**	**+3.2**
MNAS				⇓Lg	Lg	15 24 04.4	
	47nm,0.4s						
MNAS	**Manas**	**3.55**	**35**	⇑iP	**Pn**	**15 23 10.8**	**+3.2**
	baz=34						
MNAS				⇑iS	**Sn**	**15 23 53.3**	**+3.1**
	baz=34						
KK31	**Karatay Array**	**3.55**	**9**	⇑Pg	**Pg**	**15 23 18.7**	**-0.8**
	9.7nm,0.3s,baz=185,slow=12,SNR=76						
KK31				Lg	Lg	15 24 05.4	
	12nm,0.2s,baz=189,slow=30,SNR=11						
AML	**Almayashu**	**3.90**	**48**	P	**Pn**	**15 23 15.3**	**+2.7**
	SNR=33						
AML	**Almayashu**	**3.90**	**48**	⇓iP	**Pn**	**15 23 15.1**	**+2.4**
	baz=48						
AML				⇓iS	**Sn**	**15 24 02.1**	**+2.9**
	baz=48						
MRKS	**Merke**	**4.08**	**38**	eP	**Pg**	**15 23 27.8**	**-1.8**
	26nm,0.3s						
MRKS				eS	**Sg**	**15 24 22.4**	**-0.1**
	52nm,0.3s						
EKS2	**Erkin-Say**	**4.30**	**43**	P	**Pn**	**15 23 20.8**	**+2.9**
	SNR=65						
EKS2	**Erkin-Say**	**4.30**	**43**	⇑iP	**Pn**	**15 23 21.0**	**+3.1**
	baz=43						
EKS2				⇑iS	**Sn**	**15 24 11.4**	**+2.7**
	baz=43						
UCH	**Uchtor**	**4.45**	**52**	⇑iP	**Pn**	**15 23 23.3**	**+3.1**
	baz=52						
UCH				⇑iS	**Sn**	**15 24 15.0**	**+2.3**
	baz=52						
AAK	**Ala-Archa**	**4.68**	**48**	Pn	**Pn**	**15 23 26.0**	**+2.9**
	8.7nm,0.3s,baz=208,slow=6.9,SNR=24						
AAK				Sn	**Sn**	**15 24 21.5**	**+3.4**
	6.8nm,0.3s,baz=332,slow=20,SNR=7.5						
AAK	**Ala-Archa**	**4.68**	**48**	⇑Pn	**Pn**	**15 23 25.7**	**+2.5**
	15nm,0.6s						
AAK				⇓Sn	**Sn**	**15 24 21.6**	**+3.4**
	14nm,0.3s						
AAK	**Ala-Archa**	**4.68**	**48**	P	**Pn**	**15 23 26.2**	**+3.0**
	SNR=13						
AAK	**Ala-Archa**	**4.68**	**48**	⇑iP	**Pn**	**15 23 26.3**	**+3.1**
	baz=48						
AAK				⇑iS	**Sn**	**15 24 20.1**	**+2.0**
	baz=48						
KZA	**Kyzart**	**4.83**	**57**	P	**Pn**	**15 23 28.0**	**+2.6**
	SNR=19						
KBK	**Karagaybulak**	**4.96**	**50**	P	**Pn**	**15 23 30.3**	**+3.3**
	SNR=16						
CHMS	**Chumysh**	**5.06**	**46**	P	**Pn**	**15 23 30.9**	**+2.6**
	SNR=24						
USP	**Ospenovka**	**5.10**	**42**	P	**Pn**	**15 23 31.1**	**+2.2**
	SNR=17						
TKM2	**Tokmak 2**	**5.50**	**51**	⇓Pn	**Pn**	**15 23 36.4**	**+2.0**
	3.4nm,0.2s						
TKM2				⇑Sn	**Sn**	**15 24 40.3**	**+1.9**
	22nm,0.7s						
TKM2	**Tokmak 2**	**5.50**	**51**	P	**Pn**	**15 23 37.0**	**+2.5**
	SNR=19						
ULHL	**Ulahol**	**5.56**	**59**	P	**Pn**	**15 23 37.6**	**+2.3**
	SNR=8.5						
KST	**Kastek**	**5.79**	**51**	eP	**Pn**	**15 23 41.5**	**+3.1**
	7.9nm,0.2s						
KST				eS	**Sn**	**15 24 45.4**	**0.0**
	11nm,0.6s						
BTLS	**Baital**	**6.29**	**29**	eP	**Pg**	**15 24 10.4**	**-1.6**
	7.1nm,0.4s						
BTLS				eS	**Sg**	**15 25 35.0**	**+1.5**
	17nm,0.5s						
TNSS	**Tian-Shan**	**6.39**	**55**	eP	**Pg**	**15 24 11.6**	**-2.3**
	3.7nm,0.3s						
TNSS				eS	**Sg**	**15 25 37.2**	**+0.4**
	13nm,0.6s						
KUU	**Kurty**	**6.52**	**47**	eP	**Pg**	**15 24 14.2**	**-2.0**
	5.1nm,0.6s						
KUU				eS	**Sg**	**15 25 41.7**	**+1.1**
	14nm,0.6s						
GEYT	**Alibeck**	**9.27**	**263**	Pn	**Pn**	**15 24 25.9**	**-0.1**
	0.2nm,0.3s,baz=81,slow=14,SNR=2.9						
GEYT				Sn	**Sn**	**15 26 08.7**	**-2.1**
	0.5nm,0.3s,baz=104,slow=18,SNR=4.2						
MKAR	**Makanchi Array**	**11.61**	**48**	Pn	**Pn**	**15 24 59.7**	**+1.5**
	0.1nm,0.3s,baz=229,slow=15,SNR=5.5						
AB31	**Akbulak array**	**11.94**	**327**	⇑P	**Pn**	**15 25 02.9**	**+0.3**
	0.4nm,0.3s,baz=164,slow=11,SNR=5.8						
KURBB	**Kurchatov Arra**	**12.63**	**26**	Pn	**Pn**	**15 25 11.6**	**-0.3**
	0.0nm,0.3s,baz=209,slow=9.5,SNR=3.6						
BVAR	**Borovoye Array**	**13.44**	**2**	Pn	**Pn**	**15 25 21.2**	**-1.9**
	0.2nm,0.3s,baz=176,slow=12,SNR=2.9						
ZALV	**Zalesovo Beam**	**17.61**	**30**	P	**P**	**15 26 17.5**	**-1.3**
	baz=236,slow=12,SNR=2.2						
SONM	**Songino Array**	**27.50**	**60**	P	**P**	**15 27 57.1**	**-2.1**
	0.2nm,0.5s,baz=282,slow=7.2,SNR=2.2						
ARCES	**ARCESS Array B**	**37.93**	**336**	P	**P**	**15 29 29.7**	**0.0**
	1.9nm,0.8s,baz=112,slow=7.0,SNR=8.2						
HFS	**Hagfors**	**40.07**	**320**	P	**P**	**15 29 47.5**	**-0.2**
	0.8nm,0.4s,baz=95,slow=9.4,SNR=7.0						

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*ISCJB **12** 15:23:03.0±0.5, 41.°53N±0.°03×35.°09E±0.°03, h0^{km}, Error ellipse: s-maj=4.2km s-min=3.4km az=3.6*

*DDA **12** 15:23:02.6, 41.°54N×35.°12E, h7^{km}, Ml2.6, Suspected Mining explosion.*

*ISK **12** 15:23:02.4, 41.°53N×35.°11E, h4^{km}, ML2.2/4*

*CSEM **12** 15:23:03.0±0.2, 41.°52N×35.°10E, h1^{km}, ML2.2, Error ellipse: s-maj=4.2km s-min=3.7km az=12.0, Suspected Mining explosion.*

ISC 12 15:23:03.3±0.9**, 41.°51N**±0.°03×**35.°11E**±0.°02**, h0**^{km}**, n24, σ0.^{s}56**/42**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOYT	**Boyabat**	**0.18**	**240**	iP	**Pg**	**15 23 06.1**	**-0.5**
BOYT				iS	**Sg**	**15 23 09.6**	**+0.7**
BOYT	**Boyabat**	**0.18**	**240**	P	**Pg**	**15 23 06.1**	**-0.5**
BOYT				S	**Sg**	**15 23 09.6**	**+0.7**
DIKM	**Dikmen**	**0.18**	**39**	PG	**Pg**	**15 23 06.2**	**-0.5**
DIKM				SG	**Sg**	**15 23 09.7**	**+0.6**
DIKM	**Dikmen**	**0.18**	**39**	ePg	**Pg**	**15 23 06.2**	**-0.5**
DIKM				eSg	**Sg**	**15 23 09.7**	**+0.6**
SINO	**SINOP_Merkez**	**0.51**	**8**	iP	**Pg**	**15 23 12.7**	**-0.4**
SINO	**SINOP_Merkez**	**0.51**	**8**	P	**Pg**	**15 23 12.7**	**-0.4**
HAVZ	**Havza**	**0.63**	**133**	iP	**Pg**	**15 23 14.4**	**-1.0**
HAVZ				iS	**Sb**	**15 23 26.7**	**+0.1**
HAVZ	**Havza**	**0.63**	**133**	P	**Pg**	**15 23 14.4**	**-1.0**
HAVZ				S	**Sb**	**15 23 26.7**	**+0.1**
SAMS	**Samsun-Alacam**	**0.83**	**100**	iP	**Pg**	**15 23 18.5**	**-0.6**
SAMS				iS	**Sg**	**15 23 30.5**	**+0.7**
SAMS	**Samsun-Alacam**	**0.83**	**100**	P	**Pg**	**15 23 18.5**	**-0.6**
SAMS				S	**Sg**	**15 23 30.5**	**+0.7**
KVT	**Kavak**	**0.83**	**121**	PG	**Pg**	**15 23 19.2**	**+0.1**
KVT				SG	**Sb**	**15 23 31.5**	**-0.7**
KVT	**Kavak**	**0.83**	**121**	ePg	**Pg**	**15 23 19.2**	**+0.1**
KVT				eSg	**Sb**	**15 23 31.5**	**-0.7**
BZK	**Bozkurt**	**0.94**	**299**	PG	**Pg**	**15 23 21.1**	**-0.2**
BZK				SG	**Sb**	**15 23 34.7**	**-0.7**
BZK	**Bozkurt**	**0.94**	**299**	ePg	**Pg**	**15 23 21.1**	**-0.2**
BZK				eSg	**Sb**	**15 23 34.7**	**-0.7**
ILGA	**Ilgaz**	**1.14**	**247**	iP	**Pg**	**15 23 25.2**	**+0.1**
ILGA	**Ilgaz**	**1.14**	**247**	P	**Pg**	**15 23 25.2**	**+0.1**
COAL	**Corum-Alaca**	**1.26**	**184**	iP	**Pg**	**15 23 26.7**	**-0.6**
COAL				iS	**Sn**	**15 23 46.1**	**+0.3**
COAL	**Corum-Alaca**	**1.26**	**184**	P	**Pg**	**15 23 26.7**	**-0.6**
COAL				S	**Sn**	**15 23 46.1**	**+0.3**
CORM	**Corum**	**1.38**	**195**	PN	**Pg**	**15 23 29.3**	**-0.3**
CORM				SN	**Sn**	**15 23 48.8**	**0.0**
CORM	**Corum**	**1.38**	**195**	ePn	**Pg**	**15 23 29.3**	**-0.3**
CORM				eSn	**Sn**	**15 23 48.8**	**0.0**
ERBA	**Erbaa**	**1.50**	**123**	iP	**Pn**	**15 23 31.3**	**-0.1**
ERBA				iS	**Sn**	**15 23 52.6**	**+1.0**
ERBA	**Erbaa**	**1.50**	**123**	P	**Pn**	**15 23 31.3**	**-0.1**
ERBA				S	**Sn**	**15 23 52.6**	**+1.0**
YOZ	**Yozgat**	**1.87**	**175**	PN	**Pn**	**15 23 36.6**	**-0.1**
YOZ	**Yozgat**	**1.87**	**175**	ePn	**Pn**	**15 23 36.6**	**-0.1**

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*KLM **12** 15:40:11.0, 3.°03S×129.°57E, h4^{km}, mb5.7*

*IDC **12** 15:40:11.2±0.3, 2.°87S×129.°24E, h0^{km}, mb5.0/44, mb1 5.0/49, mb1mx4.9/57, mbtmp5.0/49, ML4.8/3, MS4.7/45, Ms1 4.7/45, ms1mx4.7/61, Error ellipse: s-maj=9.6km s-min=6.8km az=54.0*

*NEIC **12** 15:40:12.6±0.4, 2.°89S×129.°32E, h10^{km}±2^{km}, mb5.5/138, MS5.1/112, Error ellipse: s-maj=3.8km s-min=2.9km az=57.0*

*GCMT **12** 15:40:12.6±0.1, 2.°82S×129.°20E, h22^{km}, MW5.5/123, Moment Tensor Solution. s113,c187; s123,c225; Duration: 1.^{s}3 Moment tensor: Scale 10^{17}Nm; M_{rr}0.14±.03; $M_{\theta\theta}$-1.50±.02; $M_{\phi\phi}$1.36±.03; $M_{r\theta}$-0.03±.03; $M_{\theta\phi}$0.97±.02; $M_{\phi r}$0.89±.05; Best double couple: $M_0$1.94200×10^{17} NP1:ϕ_s330.00000°, δ80.00000°, λ156.00000°. NP2:ϕ_s65.00000°, δ66.00000°, λ11.00000°. Principal axes: T 2.0370, Plg24.0000°, Azm285.0000°; N -0.1910, Plg64.0000°, Azm128.0000°; P -1.8460, Plg9.0000°, Azm19.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*ISCJB **12** 15:40:13.5±0.6, 2.°91S±0.°02×129.°38E±0.°02, h28^{km}±4^{km}, mb5.3/234, MS4.9/182 Error ellipse: s-maj=3.2km s-min=2.5km az=145.4*

*MOS **12** 15:40:14.8±1.1, 2.°85S×129.°33E, h33^{km}, mb5.4/70, MS4.8/34, Error ellipse: s-maj=8.1km s-min=4.7km az=115.2*

*DJA **12** 15:40:18.2±0.2, 3°S±2°×12°9E±°, h44^{km}±2^{km}, M5.5/58, mb5.7/58, mB5.9/51, MLv5.8/18, Mw(mB)5.5/51, Mwp5.5/2*

ISC 12 15:40:16.8±0.2**, 2.°92S**±0.°03×**129.°35E**±0.°03**, h39**^{km}±2^{km}**, n726, σ1.^{s}73**/701**, mb5.3**/233**, MS5.0**/183**, 11C-8D, Seram**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**0.60**	**225**	P	**Pn**	**15 40 27.3**	**-1.6**
MSAI				S	**Sn**	**15 40 41.7**	**+4.3**
AAI	**Ambon**	**1.38**	**236**	P	**Pn**	**15 40 42.0**	**+2.4**
AAI				S	**Sn**	**15 41 01.5**	**+4.8**
BNDI	**Bandanaira**	**1.69**	**161**	P	**Pn**	**15 40 47.1**	**+3.3**
BNDI				S	**Sn**	**15 41 10.5**	**+6.3**
NLAI	**Namlea**	**2.27**	**262**	P	**Pn**	**15 40 53.3**	**+1.6**
NLAI				S	**Sn**	**15 41 21.8**	**+3.3**
SIJI	**Sorong**	**2.79**	**43**	Pn	**Pn**	**15 40 57.5**	**-1.5**
	294nm,0.3s,baz=63,slow=23,SNR=666						
SIJI				Sn	**Sn**	**15 41 33.8**	**+2.3**
	258nm,0.3s,baz=214,slow=23,SNR=9.2						
SIJI				LR	LR	15 42 09.0	
	comp=Z,12μm,21.1s,baz=56,slow=42						
FAKI	**Fak Fak**	**2.90**	**90**	P	**Pn**	**15 41 01.4**	**+1.0**
FAKI	**Fak Fak**	**2.90**	**90**	ePn	**Pn**	**15 40 59.5**	**-0.9**
LBMI	**Labuha**	**2.92**	**321**	P	**Pn**	**15 41 00.1**	**-0.6**
LBMI				S	**Sn**	**15 41 33.7**	**-0.9**
SANI	**Sanana**	**3.47**	**284**	P	**Pn**	**15 41 06.3**	**-1.9**
TNTI	**Ternate**	**4.17**	**332**	P	**Pn**	**15 41 16.9**	**-0.9**
TNTI	**Ternate**	**4.17**	**332**	ePn	**Pn**	**15 41 16.3**	**-1.5**
KMPI	**Kaimana, Papua**	**4.41**	**100**	P	**Pn**	**15 41 22.5**	**+1.3**
RKPI	**Ransiki, Papua**	**5.02**	**74**	P	**Pn**	**15 41 28.7**	**-0.9**
SAUI	**Saumlaki**	**5.39**	**159**	P	Pn	15 41 40.7	+6.0
	2μm,0.9s,24μm9.1nm						
SAUI	**Saumlaki**	**5.39**	**159**	ePn	**Pn**	**15 41 37.7**	**+3.0**
KMSI	**Cibinong**	**6.39**	**303**	P	**Pn**	**15 41 46.1**	**-2.3**
	3μm,0.5s,39μm23nm						
KDI	**Kendari**	**6.80**	**261**	P	**Pn**	**15 41 54.6**	**+0.6**
	646nm,1.0s,6μm2.3nm						
LUWI	**Luwuk**	**6.83**	**286**	P	**Pn**	**15 41 53.0**	**-1.5**
	2μm,1.1s,23μm9.6nm						
LUWI	**Luwuk**	**6.83**	**286**	ePn	**Pn**	**15 41 52.8**	**-1.7**
LUWI				eSn	**Sn**	**15 43 05.2**	**-5.8**
SRPI	**Serui, Papua**	**6.96**	**82**	P	**Pn**	**15 41 58.6**	**+2.3**
	814nm,0.6s,9μm15μm3.1nm						
BAKI	**Biak**	**6.97**	**76**	P	**Pn**	**15 41 55.9**	**-0.5**
	936nm,0.8s,8μm2.5nm						
APSI	**Ampana**	**7.95**	**284**	P	**Pn**	**15 42 08.8**	**-1.0**
	3μm,0.7s,26μm11nm						
MRSI	**Marisa**	**8.14**	**294**	P	**Pn**	**15 42 11.6**	**-0.8**
SOEI	**Soe**	**8.46**	**216**	P	Pn	15 42 21.6	+4.6
SOEI	**Soe**	**8.46**	**216**	ePn	Pn	15 42 21.7	+4.7
MMRI	**Maumere**	**9.07**	**231**	P	Pn	15 42 30.6	+5.3
	753nm,1.5s,11μm						
MMRI	**Maumere**	**9.07**	**231**	ePn	**Pn**	**15 42 28.8**	**+3.5**
BATI	**Baumata**	**9.18**	**218**	Pn	Pn	15 42 31.1	+4.3
	40nm,0.3s,baz=162,slow=1.0,SNR=50						
BATI	**Baumata**	**9.18**	**218**	P	Pn	15 42 31.9	+5.1
	262nm,1.1s,4μm						
BKSI	**Bulukumba**	**9.51**	**255**	P	**Pn**	**15 42 33.7**	**+2.5**
	375nm,1.7s,6μm						
TTSI	**Tana Toraja**	**9.52**	**269**	P	**Pn**	**15 42 33.4**	**+2.0**
	370nm,0.8s,5μm						
EDFI	**Ende, Flores**	**9.57**	**232**	P	Pn	15 42 36.6	+4.4
	432nm,0.8s,6μm						
SPSI	**Sidrap Palu**	**9.62**	**264**	P	**Pn**	**15 42 35.0**	**+2.3**
	365nm,0.8s,4μm						
MPSI	**Mapaga**	**9.98**	**289**	P	**Pn**	**15 42 37.2**	**-0.6**
	160nm,0.5s,2μm						
MTN	**Manton Dam**	**10.02**	**170**	P	**Pn**	**15 42 37.7**	**-0.5**
	baz=10.0,SNR=78						
MTN	**Manton Dam**	**10.02**	**170**	ePn	**Pn**	**15 42 37.5**	**-0.8**
MTN				eSn	**Sn**	**15 44 26.5**	**-3.0**
KDU	**Kakadu**	**10.19**	**163**	P	**Pn**	**15 42 39.0**	**-1.6**
	baz=10,SNR=341						
MATI	**Mati**	**10.27**	**343**	eP	**Pn**	**15 42 44.1**	**+2.4**
SKMP	**Bagumbayan, Su**	**10.53**	**333**	eP	**Pn**	**15 42 44.9**	**-0.4**
DAV	**Davao City (W)**	**10.61**	**339**	Pn	**Pn**	**15 42 47.6**	**+1.3**
	baz=214,slow=11,SNR=1.7						
DAV	**Davao City (W)**	**10.61**	**339**	⇑eP	Pn	15 42 58.1	+12
DAV	**Davao City (W)**	**10.61**	**339**	ePn	**Pn**	**15 42 44.2**	**-2.1**
GENI	**Genyem**	**10.81**	**89**	P	**Pn**	**15 42 50.5**	**+1.4**
	359nm,0.9s,5μm						
WSI	**Waingapu**	**11.22**	**233**	P	Pn	15 43 00.3	+5.6
	824nm,0.7s,20μm						
BASI	**Baing, Sumba**	**11.34**	**230**	P	Pn	15 43 04.2	+8.0
JAY	**Jayapura**	**11.35**	**88**	Pn	**Pn**	**15 42 55.8**	**-0.7**
	2.9nm,0.3s,baz=236,slow=12,SNR=13						
JAY	**Jayapura**	**11.35**	**88**	P	**Pn**	**15 42 59.3**	**+2.8**
	992nm,0.9s,8μm						
PALU	**Palau**	**11.40**	**27**	P	**Pn**	**15 42 57.1**	**0.0**
	baz=12,SNR=14						
BUKP	**Musuan**	**11.54**	**338**	eP	**Pn**	**15 43 00.8**	**+1.7**
WBSI	**Waikabubak, Su**	**11.94**	**236**	P	**Pn**	**15 43 07.7**	**+3.2**
	416nm,1.0s,7μm						
SGKI	**Sangatta, Kali**	**11.98**	**281**	P	**Pn**	**15 43 06.3**	**+1.3**
SMKI	**Samarinda**	**12.38**	**281**	P	P	15 43 16.8	-5.1
BKB	**Balikpapan**	**12.55**	**277**	P	**Pn**	**15 43 16.9**	**+4.0**
	640nm,0.7s,5μm						
KNRA	**Kununurra**	**12.69**	**183**	P	**Pn**	**15 43 14.0**	**-0.8**
	baz=13,SNR=174						
PLAI	**Plampang**	**12.92**	**242**	P	**Pn**	**15 43 22.2**	**+4.3**
	445nm,1.3s,6μm						
MYLDM	**Lahad Datu**	**13.50**	**307**	ePn	**Pn**	**15 43 23.4**	**-2.4**
TWSI	**Taliwang, Sumb**	**13.68**	**244**	P	**Pn**	**15 43 31.0**	**+2.7**
	234nm,1.0s,3μm						
MSLP	**Maasin**	**13.71**	**341**	eP	**P**	**15 43 38.3**	**+1.6**
LLP	**Lapu-Lapu**	**14.20**	**338**	eP	**Pn**	**15 43 36.2**	**+0.8**
LLP				eS	**Sn**	**15 46 13.6**	**+1.9**
MTKI	**Muara Teweh, K**	**14.58**	**277**	P	**Pn**	**15 43 42.3**	**+1.8**
	316nm,1.0s,6μm						
SRBI	**Singaraja**	**14.97**	**249**	P	**P**	**15 43 48.5**	**-2.3**
	177nm,1.1s,3μm						
GUIM	**Jordan**	**15.04**	**334**	eP	**Pn**	**15 43 45.1**	**-1.6**
DNP	**Denpasar**	**15.18**	**247**	P	P	15 44 00.3	+7.2
IGBI	**Denpasar**	**15.29**	**247**	P	P	15 44 04.3	+10
FITZ	**Fitzroy Crossi**	**15.52**	**193**	P	**Pn**	**15 43 51.4**	**-1.5**
	baz=16,SNR=179						
FITZ	**Fitzroy Crossi**	**15.52**	**193**	Pn	**Pn**	**15 43 51.8**	**-1.1**
	3.2nm,0.3s,baz=29,slow=10,SNR=74						
FITZ				Sn	**Sn**	**15 46 43.3**	**-0.6**
	1.1nm,0.3s,baz=99,slow=17,SNR=3.7						
FITZ				LR	LR	15 50 44.2	
	comp=Z,5μm,18.8s,baz=34,slow=41						
FITZ	**Fitzroy Crossi**	**15.52**	**193**	ePn	**Pn**	**15 43 51.5**	**-1.4**
	210nm,1.1s						
FITZ				Sn	**Sn**	**15 46 43.3**	**-0.6**
RCP	**Roxas**	**15.81**	**336**	⇓eP	**P**	**15 44 01.8**	**+1.8**
KKM	**Kota Kinabalu**	**15.85**	**304**	ePn	**Pn**	**15 43 54.3**	**-3.0**
	295nm,1.6s						
KKM	**Kota Kinabalu**	**15.85**	**304**	P	**Pn**	**15 43 58.0**	**+0.7**
CUYO	**Cuyo Island**	**15.99**	**329**	eP	**Pn**	**15 43 59.8**	**+0.8**
CNP	**Catarman**	**16.02**	**343**	eP	**P**	**15 44 03.7**	**+1.4**
JAGI	**Jajag, Banyuwa**	**16.09**	**249**	P	**Pn**	**15 44 01.3**	**+1.0**
	199nm,1.0s,4μm						
JAGI	**Jajag, Banyuwa**	**16.09**	**249**	ePn	**Pn**	**15 43 60.0**	**-0.3**
	1μm,1.9s						
BLJI	**Banyuglugur**	**16.40**	**252**	P	**P**	**15 44 08.3**	**+1.7**
	365nm,0.9s,3μm						
GMJI	**Gumukmas**	**16.70**	**251**	P	**P**	**15 44 09.6**	**-0.3**
	319nm,1.5s,4μm						
ENPP	**El Nido**	**17.16**	**325**	eP	**P**	**15 44 15.2**	**+0.2**
PVCP	**Virac**	**17.20**	**343**	eP	**P**	**15 44 14.9**	**-0.4**
GRJI	**Gresik**	**17.27**	**256**	P	**P**	**15 44 21.1**	**+4.9**
SJMP	**San Jose**	**17.33**	**332**	eP	**P**	**15 44 16.9**	**0.0**
BUSP	**Coron**	**17.39**	**329**	eP	**Pn**	**15 44 15.4**	**-1.2**
COEN	**Coen**	**17.52**	**130**	P	**Pn**	**15 44 18.3**	**+0.1**
	baz=18,SNR=60						
COEN	**Coen**	**17.52**	**130**	ePn	**Pn**	**15 44 17.7**	**-0.5**
	1μm,2.0s						
WRAB	**Tennant Creek**	**17.60**	**164**	ePn	**Pn**	**15 44 16.2**	**-3.0**
	150nm,0.8s						
WRAB	**Tennant Creek**	**17.60**	**164**	ceP	**Pn**	**15 44 16.1**	**-3.1**
WRAB				pmax	pmax		
	comp=Z,156nm,1.3s						
WR1	**Warramunga Arr**	**17.61**	**164**	ePn	**Pn**	**15 44 16.4**	**-2.9**
	comp=Z,164nm,0.9s						
WR1				eSn	**Sn**	**15 47 25.9**	**-8.7**
WRA	**Warramunga Arr**	**17.61**	**164**	P	**Pn**	**15 44 16.4**	**-2.9**
	comp=Z,8.9nm,0.3s,baz=345,slow=12,SNR=248						
WRA				S	**Sn**	**15 47 25.9**	**-8.7**
	comp=Z,2.5nm,0.3s,baz=352,slow=24,SNR=5.4						
WRA				LR	LR	15 51 50.3	
	comp=Z,4μm,18.4s,baz=335,slow=40						
WB2	**Warramunga Arr**	**17.61**	**164**	ePn	**Pn**	**15 44 16.6**	**-2.8**
	comp=Z,176nm,1.0s						
WC3	**Warramunga Arr**	**17.64**	**164**	ePn	**Pn**	**15 44 16.4**	**-3.2**
	comp=Z,243nm,1.1s						
PBKI	**Pangkalan Bun**	**17.66**	**270**	P	**P**	**15 44 21.6**	**+1.0**
BOAC	**Boac**	**17.89**	**336**	eP	**P**	**15 44 25.7**	**+2.7**
SBUM	**Sibu**	**17.93**	**287**	ePn	**Pn**	**15 44 22.5**	**-0.9**
	comp=Z,231nm,1.5s						
SBUM	**Sibu**	**17.93**	**287**	P	**P**	**15 44 24.0**	**+0.4**
MANU	**Manus Island**	**18.02**	**88**	ePn	**Pn**	**15 44 21.9**	**-2.6**

STKI	Sintang	18.11	279	P	P	15 44 26.9	+1.4
	comp=Z,132nm,1.2s,comp=Z,5µm						
PWJI	Pagerwojo	18.18	253	P	P	15 44 26.3	0.0
	comp=Z,227nm,0.9s,comp=Z,3µm						
NGJI	Ngawi	18.35	255	P	Pn	15 44 30.4	+2.0
	comp=Z,448nm,1.2s,comp=Z,9µm						
PCJI	Pacitan	18.83	253	P	P	15 44 33.0	-0.4
	comp=Z,371nm,0.8s,comp=Z,4µm						
PMG	Port Moresby	18.84	111	P	Pn	15 44 35.2	+1.0
	comp=Z,1.7nm,0.3s,baz=306,slow=6.1,SNR=16						
PMG				S	S	15 48 06.2	+0.4
	comp=Z,0.4nm,0.3s,baz=316,slow=18,SNR=2.1						
LUBP	Lubang	18.85	332	*e*P	P	15 44 33.0	-0.6
TGY	Tagaytay City	18.85	334	P	P	15 44 33.7	0.0
	comp=Z,40nm,0.3s,baz=186,slow=9.2,SNR=2.3						
TGY				S	S	15 48 05.8	-0.4
	comp=Z,8.0nm,0.3s,baz=90,slow=17,SNR=1.6						
TGY				LR	LR	15 52 53.2	
	comp=Z,2µm,18.8s,baz=144,slow=41						
WOJI	Wonogiri, Jawa	18.98	254	P	Pn	15 44 35.6	-0.4
	comp=Z,304nm,1.1s,comp=Z,4µm						
SMRI	Semarang	19.28	257	P	Pn	15 44 40.0	+0.4
	comp=Z,582nm,1.3s,comp=Z,8µm						
SMRI	Semarang	19.28	257	*e*P	P	15 44 37.6	-0.8
	comp=Z,1µm,1.2s						
UGM	Wanagama	19.38	254	P	Pn	15 44 41.7	+0.8
	comp=Z,414nm,1.2s,comp=Z,5µm						
UGM	Wanagama	19.38	254	*e*P	P	15 44 38.7	-0.9
	comp=Z,318nm,0.9s						
KSM	Kuching	19.53	283	*e*P	P	15 44 41.5	+0.4
	comp=Z,134nm,1.0s						
KSM	Kuching	19.53	283	P	Pn	15 44 42.0	-0.6
BALP	Baler	20.07	338	*e*P	P	15 44 45.8	-1.2
QIS	Mount Isa	20.19	151	P	P	15 44 48.1	-0.2
	baz=20,SNR=210						
MBWA	Marble Bar	20.41	207	*e*P	P	15 44 48.3	-2.3
	comp=Z,370nm,1.2s						
MBWA				LR	LR		
	comp=Z,4µm,21.0s						
SCZP	Santa Cruz	20.79	334	*e*P	P	15 44 53.4	-1.3
KPJI	Karang Pucung	20.80	257	P	P	15 44 54.8	-0.1
	comp=Z,307nm,1.1s,comp=Z,4µm						
MTSU	Mount Surprise	21.07	137	P	P	15 44 58.2	+0.3
	baz=21,SNR=33						
CAUP	Cauayan	21.09	340	*e*P	P	15 44 59.4	+1.4
AS31	Alice Springs	21.09	168	*e*P	P	15 44 57.2	-0.8
	comp=Z,155nm,0.6s						
AS31				*e*S	S	15 48 46.1	-4.7
ASAR	Alice Springs	21.09	168	P	P	15 44 57.7	-0.4
	comp=Z,202nm,0.6s,baz=348,slow=11,SNR=1837						
ASAR				S	S	15 48 48.1	-2.8
	comp=Z,59nm,0.8s,baz=346,slow=19,SNR=9.6						
ASAR				PcP	PcP	15 49 04.2	+0.6
	comp=Z,36nm,0.8s,baz=6.6,slow=1.2,SNR=6.4						
ASAR				ScP	ScP	15 52 40.5	+2.9
	comp=Z,3.4nm,0.9s,baz=338,slow=2.2,SNR=2.9						
ASAR				LR	LR	15 53 55.3	
	comp=Z,4µm,18.1s,baz=352,slow=39						
ASAR	Alice Springs	21.09	168	P	P	15 44 57.7	-0.4
ASAR				S	S	15 48 48.1	-2.8
ASAR				pmax	pmax		
	comp=Z,199nm,0.6s						
ASAR				smax	smax		
	comp=N,59nm,0.8s						
ASAR				MLR	MLR		
	comp=Z,4µm,18.1s						
ASPA	Alice Springs	21.09	168	P	P	15 44 57.3	-0.8
	baz=21						
AS01	Alice Springs	21.10	168	*e*P	P	15 44 57.2	-0.9
CMJI	Cimerak	21.36	256	P	P	15 45 06.9	+6.0
CISI	Cisompet, Garu	21.93	257	P	P	15 45 08.4	+1.3
CISI	Cisompet, Garu	21.93	257	*e*P	P	15 45 04.3	-2.8
	comp=Z,227nm,0.8s						
LEM	Lembang	22.00	259	P	P	15 45 06.5	-1.4
	comp=Z,34nm,0.7s,baz=359,slow=16,SNR=10						
LEM				LR	LR	15 54 32.9	
	comp=Z,6µm,20.2s,baz=82,slow=39						
WRKA	Warakurna	22.02	183	P	P	15 45 06.6	-1.3
	baz=22,SNR=513						
ABRA	Dolores	22.14	338	*e*P	P	15 45 09.2	-0.1
APYP	Conner	22.14	339	*e*P	P	15 45 09.9	+0.7
GUMO	Guam	22.49	43	P	P	15 45 11.2	-1.9
	comp=Z,21nm,0.4s,baz=180,slow=20,SNR=2.8						
GUMO	Guam	22.49	43	*e*P	P	15 45 10.8	-2.4
	comp=Z,218nm,1.3s						
GUMO				LR	LR		
	comp=Z,2µm,19.0s						
RABL	Rabaul	22.80	94	*e*P	P	15 45 14.2	-2.2
	comp=Z,277nm,0.9s						
DBJI	Dramaga	22.81	260	P	P	15 45 18.3	+1.8
CTA	Charters Tower	23.74	137	P	P	15 45 26.2	+0.6
	comp=Z,21nm,0.9s,baz=316,slow=12,SNR=15						
CTA				S	Sn	15 49 50.7	-11
	comp=Z,6.6nm,0.7s,baz=322,slow=17,SNR=2.1						
CTA				LR	LR	15 56 05.9	
	comp=Z,3µm,20.4s,baz=322,slow=40						
CTAO	Charters Tower	23.74	137	*e*P	P	15 45 25.1	-0.5
	comp=Z,182nm,1.2s						
CTAO				LR	LR		
	comp=Z,6µm,21.0s						
CTAO	Charters Tower	23.74	137	*e*P	P	15 45 25.1	-0.5
CTAO				pmax	pmax		
	comp=Z,182nm,1.2s						
CTAO				MLR	MLR		
	comp=Z,6µm,21.0s						
CGJI	Cibinong	23.86	260	P	P	15 45 27.9	+1.2
	comp=Z,85nm,0.8s						
GIRL	Giralia	24.48	216	P	P	15 45 32.7	+0.3
	baz=24,SNR=8.6						
KLI	Kotabumi	24.51	265	P	P	15 45 33.9	+1.1
PMBI	Palembang	24.55	269	P	P	15 45 34.9	+1.8
KASI	Kota Agung	24.92	263	P	P	15 45 37.3	+0.8
	comp=Z,85nm,0.8s,comp=Z,1µm						
TPRI	Tanjung Pinang	25.11	278	P	P	15 45 39.1	+0.9
MDSI	Maura Dua	25.17	266	P	P	15 45 40.0	+1.3
LWLI	Liwa	25.31	264	P	P	15 45 41.5	+1.3
MEEK	Meekatharra	25.74	203	P	P	15 45 40.8	-3.0
	baz=26,SNR=69						
MYKOM	Kota Tinggi	25.92	280	*e*P	P	15 45 46.1	+0.5
	comp=Z,120nm,0.8s						
MYKOM	Kota Tinggi	25.92	280	P	P	15 45 47.0	+1.5
MNAI	Manna	26.38	266	*e*P	P	15 45 49.3	-0.4
	comp=Z,2µm,1.7s						
TWG	Pinlang	26.83	343	*e*P	P	15 45 51.2	-2.4
	comp=Z,98nm,0.6s						
MASI	Maura Aman, Be	27.07	269	P	P	15 45 57.4	+1.4
	comp=Z,429nm,1.1s,comp=Z,5µm						
YULB	Yu-li	27.30	344	*e*P	P	15 45 56.1	-1.8
	comp=Z,30nm,1.3s						
TPUB	Ta-pu	27.41	342	*e*P	P	15 45 58.0	-0.9
	comp=Z,44nm,0.9s						
QLP	Quilpie	27.52	150	P	P	15 45 59.5	-0.3
	baz=28,SNR=13						
FORT	Forrest	27.74	182	P	P	15 46 01.1	-0.6
	baz=28,SNR=12						
FORT	Forrest	27.74	182	*e*P	P	15 46 00.1	-1.7
	comp=Z,170nm,0.8s						
SSLB	Suanglung	27.77	343	*e*P	P	15 46 00.0	-2.1
	comp=Z,26nm,0.8s						
KRJI	Kerinci	27.87	271	P	P	15 46 04.3	+1.0
	comp=Z,260nm,1.0s,comp=Z,3µm						
YOJ	Yonaguni jima	27.90	348	*e*P	P	15 45 59.9	-3.3
	comp=Z,101nm,1.1s						
YOJ	Yonaguni jima	27.90	348	*e*P	P	15 45 59.9	-3.3
YOJ				pmax	pmax		
	comp=Z,101nm,1.1s						
NACB	Ninganchiao	27.96	345	*e*P	P	15 45 58.0	-5.8
	comp=Z,24nm,0.9s						
BKNI	Bangkinang	28.48	276	P	P	15 46 09.9	+1.3
	comp=Z,327nm,1.0s,comp=Z,3µm						
BKNI	Bangkinang	28.48	276	*e*P	P	15 46 08.9	+0.4
	comp=Z,302nm,1.0s						
YHNB	Yeheng	28.49	345	*e*P	P	15 46 07.0	-1.6
	comp=Z,162nm,1.8s						
TATO	Taipei	28.76	345	PFAKE		15 46 20.0	+9.2
TATO				LR	LR		
	comp=Z,2µm,21.0s						
MORW	Morawa	28.93	205	P	P	15 46 10.7	-1.7
	baz=29,SNR=13						
QIZ	Qiongzhong	29.05	319	P	P	15 46 16.3	+2.8
QIZ				S	S	15 51 07.0	+4.4
QIZ				LR	LR		
	comp=Z,2µm,24.1s						
QIZ				LR	LR		
	comp=Z,1µm,14.1s						
QIZ				LR	LR		
	comp=Z,1µm,18.2s						
QIZ	Qiongzhong	29.05	319	PFAKE		15 46 20.0	+6.5
QIZ				LR	LR		
	comp=Z,2µm,22.0s						
KMBL	Kambalda	29.16	193	P	P	15 46 12.8	-1.7
	baz=29,SNR=28						
IPM	Ipoh	29.24	284	*e*P	P	15 46 16.0	+0.7
	comp=Z,95nm,0.9s						
JOW	Kunigami	29.59	358	P	P	15 46 18.2	0.0
	comp=Z,14nm,0.9s,baz=124,slow=7.3,SNR=2.3						
JOW				LR	LR	15 56 24.7	
	comp=Z,3µm,21.2s,baz=158,slow=33						
JOW	Kunigami	29.59	358	*e*P	P	15 46 17.8	-0.5
	comp=Z,105nm,1.5s						
QZH	Quanzhou	29.60	340	*e*P	P	15 46 19.8	+1.5
QZH				S	S	15 51 07.8	-3.2
QZH				LR	LR		
	comp=Z,1µm,21.3s						
QZH				LR	LR		
	comp=Z,1µm,20.4s						
QZH				LR	LR		
	comp=Z,2µm,23.7s						
KULM	Kulim	29.80	286	*e*P	P	15 46 20.4	0.0
	comp=Z,50nm,0.9s						
KULM	Kulim	29.80	286	P	P	15 46 21.0	+0.7
BLDU	Ballidu	30.03	202	P	P	15 46 19.9	-2.2
	baz=30,SNR=17						
SISI	Saibi	30.28	272	P	P	15 46 24.2	-0.3
	comp=Z,159nm,1.3s,comp=Z,2µm						
SKLT	Songkhla	30.37	289	P	P	15 46 28.8	+3.5
	comp=Z,35nm,0.8s,comp=Z,1µm						
BBOO	Buckleboo	30.40	169	P	P	15 46 24.3	-1.1
	baz=30,SNR=32						
BBOO	Buckleboo	30.40	169	*e*P	P	15 46 24.1	-1.2
	comp=Z,49nm,0.8s						
KLBR	Kellerberrin	30.55	200	P	P	15 46 24.6	-2.1
	baz=31,SNR=28						
EIDS	Eidsvold	30.59	139	*e*P	P	15 46 26.5	-0.7
	comp=Z,49nm,1.3s						
PSI	Prapat	30.94	280	P	P	15 46 30.0	-0.5
	comp=Z,74nm,0.6s,baz=179,slow=4.3,SNR=41						
PSI				S	S	15 51 32.0	-0.7
	comp=Z,5.3nm,0.8s,baz=180,slow=20,SNR=5.2						
PSI				LR	LR	15 59 57.5	
	comp=Z,3µm,20.6s,baz=90,slow=38						
PSI	Prapat	30.94	280	*e*P	P	15 46 29.4	-1.1
	comp=Z,97nm,0.6s						
PSI				S	S	15 51 32.0	-0.7
PSI	Prapat	30.94	280	*e*P	P	15 46 29.4	-1.1
PSI				S	S	15 51 32.0	-0.7
PSI				pmax	pmax		
	comp=Z,97nm,0.6s						
CHBT	CHBT	31.02	301	P	P	15 46 33.3	+2.3
	comp=Z,131nm,0.5s,comp=Z,746µm						
STKA	Stephens Creek	31.03	160	P	P	15 46 30.6	-0.3
	baz=31,SNR=38						
STKA	Stephens Creek	31.03	160	P	P	15 46 30.8	-0.2
	comp=Z,16nm,0.7s,baz=338,slow=8.9,SNR=29						
STKA				LR	LR	16 00 32.3	
	comp=Z,2µm,20.6s,baz=334,slow=39						
STKA	Stephens Creek	31.03	160	*e*P	P	15 46 30.6	-0.3
	comp=Z,9.4nm,0.9s						
STKA	Stephens Creek	31.03	160	*e*P	P	15 46 30.6	-0.3
STKA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HNR	Honiara	31.08	103	*e*P	P	15 46 30.9	-0.7
	comp=Z,304nm,1.1s						
HNR				LR	LR		
	comp=Z,2µm,21.0s						
HNR	Honiara	31.08	103	*e*P	P	15 46 30.9	-0.7
HNR				pmax	pmax		
	comp=Z,304nm,1.1s						
HNR				MLR	MLR		
	comp=Z,2µm,21.0s						
MUN	Mundaring	31.44	202	P	P	15 46 32.4	-2.1
	baz=32,SNR=22						
TRTT	Trang	31.46	290	P	P	15 46 36.0	+1.1
	comp=Z,20nm,0.9s,comp=Z,368nm						
HTT	Hallett	31.65	165	P	P	15 46 36.4	0.0
	baz=32,SNR=23						
SKNT	Sakolnakorn	31.90	309	P	P	15 46 40.9	+2.1
	comp=Z,14nm,1.0s						
NWAO	Narrogin (SRO)	31.94	199	P	P	15 46 37.2	-1.7
	baz=32,SNR=21						
NWAO	Narrogin (SRO)	31.94	199	P	P	15 46 37.4	-1.5
	comp=Z,14nm,0.4s,baz=262,slow=8.5,SNR=28						
NWAO				LR	LR	16 00 26.7	
	comp=Z,3µm,20.1s,baz=251,slow=38						
NWAO	Narrogin (SRO)	31.94	199	*e*P	P	15 46 36.6	-2.3
	comp=Z,123nm,1.4s						
NWAO	Narrogin (SRO)	31.94	199	*e*P	P	15 46 36.6	-2.3
NWAO				pmax	pmax		
	comp=Z,123nm,1.4s						
GSI	Gunungsitoli	32.04	277	P	P	15 46 40.3	+0.2
	comp=Z,182nm,1.1s,comp=Z,2µm						
GSI	Gunungsitoli	32.04	277	*e*P	P	15 46 38.9	-1.2
	comp=Z,143nm,0.9s						
CBIJ	Chichi jima	32.31	22	*e*P	P	15 46 40.6	-1.5
	comp=Z,309nm,1.7s						
JCJ	Chichijima	32.31	22	P	P	15 46 41.1	-1.1
	comp=Z,43nm,1.0s,baz=168,slow=20,SNR=2.4						
CMSA	Cobar Meteorol	32.37	153	P	P	15 46 43.0	+0.3
	baz=32,SNR=26						
TPTI		32.73	281	P	P	15 46 45.9	-0.2
	comp=Z,71nm,0.8s,comp=Z,1µm						
LHMI	Lhok Sumawe	33.36	284	P	P	15 46 56.8	+5.2
LHMI	Lhok Sumawe	33.36	284	*e*P	P	15 46 52.4	+0.7
	comp=Z,136nm,0.7s						
PHET	Kaeng Krachan	33.44	299	P	P	15 46 53.9	+1.7
	comp=Z,13nm,0.7s,comp=Z,147nm						
COCO	West Island	33.48	252	PFAKE		15 47 00.0	+7.3
COCO				LR	LR		
	comp=Z,3µm,20.0s						
RKGY	Rocky Gully	33.57	199	P	P	15 46 52.1	-1.1
	baz=34,SNR=6.4						
PBKT	Sadao Pong	34.07	306	P	P	15 46 59.0	+1.3
	comp=Z,14nm,0.7s						
SRDT	SRDT	34.52	301	P	P	15 47 03.2	+1.5
	comp=Z,58nm,1.0s,comp=Z,2µm						
UTHA	Uthaitani	34.82	303	P	P	15 47 04.7	+0.5
	comp=Z,14nm,0.6s,comp=Z,142nm						
PHIT	Phitsanulok	34.85	306	P	P	15 47 08.7	+4.3
	comp=Z,54nm,0.9s						
BSI	Banda Aceh	35.02	284	P	P	15 47 17.5	+11
ARPS	Mount Arapiles	35.60	163	P	P	15 47 11.1	+0.4
	baz=36,SNR=35						
UMPA	Umpang Tak	35.62	303	P	P	15 47 14.2	+3.0
	comp=Z,10nm,1.0s,comp=Z,217nm						
JNU	Nakatsue	35.87	2	P	P	15 47 13.9	+0.9
	comp=Z,6.5nm,0.7s,baz=273,slow=7.5,SNR=5.5						
JNU				LR	LR	16 02 52.6	
	comp=Z,2µm,18.4s,baz=127,slow=38						
JNU	Nakatsue	35.87	2	*e*P	P	15 47 12.8	-0.2
	comp=Z,47nm,1.2s						
YNG	Young	35.91	153	P	P	15 47 14.4	+0.9
	baz=36,SNR=11						
NJ2	Nanjing	36.18	345	*e*P	P	15 47 18.0	+2.4
NJ2				pmax	pmax		
	comp=Z,15nm,0.6s						
NJ2				LR	LR		
	comp=Z,1µm,17.9s						
NJ2				LR	LR		
	comp=Z,840nm,22.8s						
NJ2				LR	LR		
	comp=Z,1µm,23.9s						
WHN	Wuhan	36.22	338	⇓P	P	15 47 20.3	+4.2
WHN				S	S	15 52 51.8	-2.0
WHN				LR	LR		
	comp=Z,930nm,15.1s						
WHN				LR	LR		
	comp=Z,5µm,22.2s						
WHN				LR	LR		
	comp=Z,4µm,27.9s						
GYA	Guiyang	36.52	324	⇑*i*P	P	15 47 18.8	0.0
GYA				PP	PP	15 48 45.4	+2.9
GYA				S	S	15 52 59.8	+1.0
GYA				pmax	pmax		
	comp=Z,30nm,0.9s						
GYA				pmax	pmax		
	comp=Z,140nm,5.4s						
GYA				LR	LR		
	comp=Z,840nm,20.5s						
GYA				LR	LR		
	comp=Z,710nm,20.0s						
GYA				LR	LR		
	comp=Z,810nm,20.5s						
CM01	Chiang Mai Arr	36.68	306	*e*P	P	15 47 19.9	-0.3
CM31	Chiang Mai Arr	36.71	307	*e*P	P	15 47 21.6	+1.2
CMAR	Chiang Mai Arr	36.71	307	P	P	15 47 20.9	+0.5
	comp=Z,12nm,0.9s,baz=134,slow=7.4,SNR=45						
CMAR				PcP	PcP	15 49 42.5	-0.2
	comp=Z,4.1nm,0.8s,baz=162,slow=2.4,SNR=4.6						
CMAR				ScP	ScP	15 53 30.3	+3.8
	comp=Z,1.2nm,0.8s,baz=142,slow=3.1,SNR=5.1						
CMAR				LR	LR	16 03 58.2	
	comp=Z,1µm,21.3s,baz=134,slow=39						
CMMT	Chiang Mai	36.89	307	P	P	15 47 22.6	+0.6
	comp=Z,62nm,1.0s,comp=Z,749nm						
CHTO	Chiang Mai	36.90	307	*e*P	P	15 47 22.4	+0.3
	comp=Z,67nm,1.0s						
CHTO				LR	LR		
	comp=Z,1µm,21.0s						
CHTO	Chiang Mai	36.90	307	P	P	15 47 22.9	+0.9
	SNR=25						
CHTO	Chiang Mai	36.90	307	*e*P	P	15 47 22.4	+0.3
CHTO				pmax	pmax		
	comp=Z,67nm,1.0s						
CHTO				MLR	MLR		
	comp=Z,1µm,21.0s						
CHTO	Chiang Mai	36.90	307	P	P	15 47 22.6	+0.6
	comp=Z,278nm,1.7s,comp=Z,3µm						
CAN	Canberra	37.04	153	*e*P	P	15 47 24.1	+1.0
	comp=Z,50nm,0.9s						
CAN	Canberra	37.04	153	*e*P	P	15 47 24.1	+1.0
CAN				pmax	pmax		
	comp=Z,50nm,0.9s						
JHJ	Hachijo jima 2	37.17	15	LR	LR	16 01 07.5	
	comp=Z,2µm,21.4s,baz=92,slow=34						
CNB	Canberra Magne	37.20	152	P	P	15 47 25.0	+0.5
	baz=37,SNR=5.1						
CMAI	Chiengmai2	37.43	309	P	P	15 47 27.2	+0.5
	comp=Z,11nm,0.8s						
TOO	Toolangi	37.54	159	P	P	15 47 28.6	+1.3
	baz=38,SNR=10						
KMI	Kunming	37.99	319	P	P	15 47 32.5	+1.0
KMI				PP	PnPn	15 49 01.6	+1.2
KMI				S	S	15 53 23.5	+2.1
KMI				SS	SnSn	15 55 59.3	-6.5
KMI				pmax	pmax		
	comp=Z,32nm,1.4s						
KMI				pmax	pmax		
	comp=Z,160nm,3.6s						
KMI				LR	LR		
	comp=Z,1µm,23.3s						
KMI				LR	LR		
	comp=Z,750nm,22.1s						
KMI				LR	LR		
	comp=Z,1µm,19.7s						
ENH	Enshi	38.07	332	*e*P	P	15 47 30.2	-1.6
	comp=Z,44nm,1.1s						
ENH				LR	LR		
	comp=Z,1µm,19.0s						
INU	Inuyama	38.74	10	*e*P	P	15 47 36.6	-0.7
	comp=Z,98nm,1.6s						
TJN	Taejon	39.13	357	*i* P	P	15 47 40.7	+0.1
PBA	Port Blair	39.17	292	*e*P	P	15 47 41.0	-0.2
	comp=Z,111nm,1.2s						
MJAR	Matsushiro Arr	40.12	11	P	P	15 47 47.3	-1.5
	comp=Z,12nm,0.9s,baz=193,slow=9.8,SNR=19						
MJAR				LR	LR	16 01 31.3	
	comp=Z,618nm,20.6s,baz=200,slow=32						
MAJO	Matsushiro	40.12	11	*e*P	P	15 47 47.5	-1.3
	comp=Z,122nm,0.9s						
MAJO	Matsushiro	40.12	11	*i* P	P	15 47 47.5	-1.3
MAJO				pmax	pmax		
	comp=Z,19nm,0.9s						
MAT	Matsushiro	40.12	11	P	P	15 47 47.1	-1.7
MAT				S	S	15 53 58.4	+5.8
MJB9	Matsu-Tunnel	40.12	11	*e*P	P	15 47 47.2	-1.6
	comp=Z,124nm,0.9s						
KS15	Wonju Array Si	40.18	358	*e*P	P	15 47 49.0	-0.2
KSAR	Wonju Array Be	40.18	358	P	P	15 47 48.4	-0.9
KSAR				PcP	PcP	15 49 53.1	0.0
KSAR	Wonju Array Be	40.18	358	P	P	15 47 48.4	-0.9
KSAR						15 49 53.1	
KSRS	Korea Array	40.19	358	P	P	15 47 48.4	-0.9
	comp=Z,4.2nm,0.7s,baz=173,slow=9.8,SNR=17						
KSRS				PcP	PcP	15 49 53.1	0.0
	comp=Z,3.0nm,0.7s,baz=178,slow=2.8,SNR=5.9						
KSRS				LR	LR	16 02 12.1	
	comp=Z,1µm,21.3s,baz=192,slow=33						
KS01	Wonju Array Si	40.21	358	*e*P	P	15 47 47.0	-2.5
INCN	Inchon	40.27	357	PFAKE		15 48 00.0	+10
INCN				LR	LR		
	comp=Z,2µm,22.0s						
TIA	Tai’an	40.57	345	P	P	15 47 50.0	-2.5
TIA				pmax	pmax		
	comp=Z,12nm,1.0s						
DZM	Mont Dzumac	40.73	121	P	P	15 47 54.9	+0.7
	comp=Z,3.1nm,0.5s,baz=175,slow=22,SNR=6.5						
DZM	Mont Dzumac	40.73	121	*e*P	P	15 47 52.8	-1.4
	comp=Z,64nm,1.1s						
DZM				*e*S	S	15 54 01.6	-0.8
	comp=Z,743nm,33.8s						
DZM				*e*LR	LR	15 59 07.4	
	comp=Z,3µm,24.2s						
DZM	Mont Dzumac	40.73	121	*e*P	P	15 47 54.9	+0.7
	comp=Z,34nm,1.1s						
XAN	Xi’an	41.49	334	P	P	15 48 00.3	0.0
XAN				pmax	pmax		
	comp=Z,17nm,1.1s						
XAN				pmax	pmax		
	comp=Z,130nm,6.9s						
XAN				LR	LR		
	comp=Z,650nm,23.0s						
XAN				LR	LR		
	comp=Z,890nm,28.7s						
XAN				LR	LR		
	comp=Z,1µm,23.5s						
CD2	Chengdu	41.55	326	P	P	15 48 00.5	-0.3
CD2				pP	pP	15 48 04.0	-7.9
CD2				PP	PP	15 49 36.7	-0.7
CD2				PcS	PcS	15 53 48.7	-0.5
CD2				S	S	15 54 17.3	+3.1
CD2				sS	sS	15 54 23.5	-9.1
CD2				pmax	pmax		
	comp=Z,30nm,0.5s						
CD2				pmax	pmax		
	comp=Z,320nm,5.2s						
CD2				LR	LR		
	comp=Z,2µm,20.5s						
CD2				LR	LR		
	comp=Z,2µm,22.9s						
CD2				LR	LR		
	comp=Z,2µm,20.7s						
DL2	Dalian	42.22	351	P	P	15 48 16.3	+10
DL2				S	S	15 54 46.0	+22
DL2				pmax	pmax		
	comp=Z,22nm,0.7s						
DL2				LR	LR		
	comp=N,580nm,16.6s						
DL2				LR	LR		
	comp=E,1µm,19.1s						
DL2				LR	LR		
	comp=Z,1µm,18.9s						
MOO	Moorlands	42.46	160	P	P	15 48 09.3	+1.3
	baz=43,SNR=5.9						
WAKE	Wake Island	42.79	57	PFAKE		15 48 20.0	+9.0
WAKE				LR	LR		
	comp=Z,1µm,21.0s						
TAU	Tasmania Unive	42.92	161	*e*P	P	15 48 12.3	+0.6
	comp=Z,112nm,1.4s						
TAU				LR	LR		
	comp=Z,2µm,20.0s						
TAU	Tasmania Unive	42.92	161	*e*P	P	15 48 12.3	+0.6
TAU				pmax	pmax		
	comp=Z,112nm,1.4s						
TAU				MLR	MLR		
	comp=Z,2µm,20.0s						
TIY	Taiyuan	43.36	340	*e*P	P	15 48 23.1	+7.7
TIY				pP	sP	15 49 07.6	+36
TIY				PP	PcP	15 50 12.5	+8.9
TIY				S	S	15 54 33.3	-7.5
TIY				pmax	pmax		
	comp=Z,87nm,3.7s						
TIY				LR	LR		
	comp=N,370nm,12.8s						
TIY				LR	LR		
	comp=E,260nm,11.3s						
TIY				LR	LR		
	comp=Z,790nm,23.8s						
TARA	Tarawa	43.77	85	PFAKE		15 48 30.0	+11
TARA				LR	LR		
	comp=Z,134nm,21.0s						

BJT	**Baijiatuau**	**44.41**	**346**	*e*P	**P**	**15 48 24.3**	**+0.7**
	comp=Z,71nm,1.3s						
BJT				LR	LR		
	comp=Z,1µm,22.0s						
BJT	**Baijiatuau**	**44.41**	**346**	*e*P	**P**	**15 48 24.3**	**+0.7**
BJT				pmax	pmax		
	comp=Z,71nm,1.3s						
BJT				MLR	MLR		
	comp=Z,1µm,22.0s						
BJI	**Beijing**	**44.42**	**346**	P	**P**	**15 48 24.9**	**+1.1**
BJI				S	**S**	**15 54 56.4**	**+0.4**
BJI				pmax	pmax		
	comp=Z,14nm,0.6s						
BJI				LR	LR		
	comp=Z,810nm,22.6s						
BJI				LR	LR		
	comp=Z,1µm,25.5s						
BRDH	**Bariadhala**	**44.73**	**307**	P	**P**	**15 48 28.1**	**+1.6**
	comp=Z,85nm,0.3s,baz=90,slow=20,SNR=3.2						
BRDH				LR	LR	16 09 56.7	
	comp=Z,758nm,19.8s,baz=134,slow=40						
MSHR	**Mys Shultsa**	**45.31**	**2**	*i* P	**P**	**15 48 30.9**	**+0.1**
LZH	**Lanzhou**	**45.53**	**331**	⇓P	**P**	**15 48 33.4**	**+0.5**
LZH				pP	pP	15 48 38.8	-5.3
LZH				sP	sP	15 48 42.5	-6.2
LZH				PP	**PP**	**15 50 21.0**	**+0.9**
LZH				S	**S**	**15 55 14.3**	**+1.8**
LZH				sS	sS	15 55 23.8	-7.3
LZH				SS	**ScS**	**15 58 29.8**	**+3.2**
LZH				pmax	pmax		
	comp=Z,42nm,1.0s						
LZH				pmax	pmax		
	comp=Z,240nm,4.8s						
LZH				LR	LR		
	comp=Z,2µm,17.6s						
LZH				LR	LR		
	comp=Z,1µm,17.7s						
LZH				LR	LR		
	comp=Z,2µm,18.6s						
SHL	**Shillong**	**46.03**	**310**	*e*P	**P**	**15 48 36.6**	**-0.5**
	comp=Z,130nm,0.8s						
SHL	**Shillong**	**46.03**	**310**	⇑*i*P	**P**	**15 48 38.5**	**+1.5**
SHL				*e*S	**S**	**15 55 20.0**	**0.0**
SHL	**Shillong**	**46.03**	**310**	*e*P	**P**	**15 48 36.6**	**-0.5**
SHL				pmax	pmax		
	comp=Z,130nm,0.8s						
ERM	**Erimo**	**46.45**	**14**	PFAKE		15 48 50.0	+10
ERM				LR	LR		
	comp=Z,1µm,20.0s						
HHC	**Hu-ho-hao-te**	**46.49**	**341**	*e*P	**P**	**15 48 41.3**	**+1.0**
HHC				sP	pP	15 48 52.3	+0.8
HHC				PP	**PP**	**15 50 32.0**	**+1.9**
HHC				S	**S**	**15 55 28.5**	**+2.5**
HHC				SS	**SS**	**15 58 45.7**	**-6.8**
HHC				pmax	pmax		
	comp=Z,13nm,0.8s						
HHC				pmax	pmax		
	comp=Z,120nm,5.2s						
HHC				LR	LR		
	comp=Z,920nm,18.1s						
HHC				LR	LR		
	comp=Z,730nm,18.2s						
HHC				LR	LR		
	comp=Z,1µm,19.6s						
CN2	**Changchun**	**46.64**	**356**	*e*P	**P**	**15 48 44.0**	**+2.7**
CN2				*e*sP	pP	15 48 51.0	-1.5
CN2				*e*S	**S**	**15 55 33.0**	**+5.2**
CN2				SS	**SS**	**15 58 52.1**	**-2.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,890nm,24.0s						
CN2				LR	LR		
	comp=Z,590nm,24.0s						
CN2				LR	LR		
	comp=Z,920nm,23.0s						
USA0B	**Ussuriysk Arra**	**46.96**	**3**	*e*P	**P**	**15 48 44.2**	**+0.4**
	comp=Z,53nm,1.3s						
USRK	**Ussuriysk Ar.**	**46.96**	**3**	P	**P**	**15 48 42.8**	**-1.0**
	comp=Z,7.4nm,0.8s,baz=167,slow=7.5						
USRK				LR	LR	16 09 33.8	
	comp=Z,1µm,18.6s,baz=180,slow=38						
MDJ	**Mudanjiang**	**47.32**	**0**	P	**P**	**15 48 44.0**	**-2.6**
MDJ				PcS	**PcS**	**15 54 07.9**	**-4.3**
MDJ				S	**S**	**15 55 42.4**	**+4.9**
MDJ				sS	sS	15 55 48.1	-8.1
MDJ				ScS	**ScS**	**15 58 36.6**	**-0.9**
MDJ				pmax	pmax		
	comp=Z,17nm,2.0s						
MDJ				pmax	pmax		
	comp=Z,260nm,4.4s						
MDJ				LR	LR		
	comp=Z,910nm,15.9s						
MDJ				LR	LR		
	comp=Z,970nm,17.9s						
MDJ				LR	LR		
	comp=Z,1µm,17.5s						
MDJ	**Mudanjiang**	**47.32**	**0**	*e*P	**P**	**15 48 46.4**	**-0.2**
	comp=Z,141nm,1.8s						
MDJ				LR	LR		
	comp=Z,1µm,21.0s						
ASAJ	**Asahikawa**	**48.31**	**13**	P	**P**	**15 48 55.2**	**+1.0**
	comp=Z,18nm,1.0s,baz=166,slow=7.8,SNR=3.3						
ASAJ				LR	LR	16 09 49.9	
	comp=Z,817nm,20.1s,baz=218,slow=37						
ASAJ	**Asahikawa**	**48.31**	**13**	*e*P	**P**	**15 48 52.4**	**-1.8**
	comp=Z,142nm,1.6s						
LSA	**Lhasa**	**48.85**	**314**	*e*P	**P**	**15 48 59.6**	**+0.3**
	comp=Z,51nm,0.8s						
LSA				LR	LR		
	comp=Z,569nm,21.0s						
LSA	**Lhasa**	**48.85**	**314**	*e*P	**P**	**15 48 59.6**	**+0.3**
LSA				pmax	pmax		
	comp=Z,51nm,0.8s						
LSA				MLR	MLR		
	comp=Z,569nm,21.0s						
SHO	**Shikotan**	**49.15**	**17**	*e*P	**P**	**15 49 03.6**	**+2.9**
SHO				pmax	pmax		
	comp=Z,4.0nm,0.4s						
SHO				pmax	pmax		
	comp=N,11nm,0.5s						
CHLP	**Challavanipeta**	**49.40**	**297**	*e*P	**P**	**15 49 02.4**	**-0.7**
PALK	**Pallekele**	**49.59**	**282**	P	**P**	**15 49 04.2**	**-0.5**
	comp=N,8.9nm,0.6s,baz=126,slow=2.8,SNR=6.6						
PALK				LR	LR	16 12 01.1	
	comp=N,1µm,20.0s,baz=122,slow=39						
PALK	**Pallekele**	**49.59**	**282**	*e*P	**P**	**15 49 03.5**	**-1.2**
	comp=N,45nm,1.1s						
PALK	**Pallekele**	**49.59**	**282**	*i* P	**P**	**15 49 06.7**	**+2.0**
GTA	**Gaotai**	**50.12**	**330**	⇑P	**P**	**15 49 08.1**	**-0.3**
GTA				pP	pP	15 49 12.1	-7.6
GTA				sP	sP	15 49 15.2	-9.1
GTA				S	**S**	**15 56 18.1**	**+0.7**
GTA				sS	sS	15 56 27.0	-9.1
GTA				SS	**SS**	**15 59 48.8**	**-2.4**
GTA				pmax	pmax		
	comp=N,14nm,1.3s						
GTA				pmax	pmax		
	comp=N,160nm,6.2s						
GTA				LR	LR		
	comp=N,610nm,20.2s						
GTA				LR	LR		
	comp=N,470nm,19.2s						
GTA				LR	LR		
	comp=N,1µm,20.3s						
ODAN	**Odare**	**50.15**	**309**	*e*P	**P**	**15 49 08.8**	**-0.2**
	comp=N,214nm,1.0s						
RAMN	**Ramite**	**50.81**	**309**	*e*P	**P**	**15 49 14.1**	**+0.1**
	comp=N,211nm,0.8s						
YSS	**Yuzh-Sakhalins**	**51.05**	**12**	*e*P	**P**	**15 49 14.4**	**-0.6**
	comp=N,85nm,1.4s						
YSS				LR	LR		
	comp=Z,614nm,21.0s						
YSS	**Yuzh-Sakhalins**	**51.05**	**12**	*e*P	**P**	**15 49 14.4**	**-0.6**
YSS				pmax	pmax		
	comp=Z,85nm,1.4s						
YSS				MLR	MLR		
	comp=Z,614nm,21.0s						
PVM	**Polavaram**	**51.16**	**295**	*e*P	**P**	**15 49 15.6**	**-0.8**
JIRN	**Jiri**	**51.48**	**309**	*e*P	**P**	**15 49 19.1**	**0.0**
	comp=Z,195nm,0.9s						
GUN	**Gumba**	**51.84**	**309**	*e*P	**P**	**15 49 21.5**	**-0.3**
	comp=Z,229nm,0.8s						
SKHT	**Srikalahasti**	**51.93**	**290**	*e*P	**P**	**15 49 21.6**	**-0.7**

KLR	**Kul'dur**	**51.98**	**2**	P	**P**	**15 49 21.4**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=206,slow=3.1,SNR=13						
KLR	**Kul'dur**	**51.98**	**2**	*i* P	**P**	**15 49 20.7**	**-1.3**
PKIN	**Phulchoki**	**52.05**	**309**	*e*P	**P**	**15 49 23.3**	**0.0**
	comp=Z,64nm,0.7s						
OUZ	**Omahuta**	**52.06**	**134**	*e*P	**P**	**15 49 24.7**	**+1.8**
	comp=Z,34nm,1.3s						
KKN	**Kakani**	**52.24**	**309**	*e*P	**P**	**15 49 24.2**	**-0.4**
	comp=Z,119nm,1.0s						
ADKI	**Addanki**	**52.26**	**293**	*e*P	**P**	**15 49 23.8**	**-0.8**
DMN	**Daman**	**52.29**	**309**	*e*P	**P**	**15 49 24.6**	**-0.5**
	comp=Z,179nm,0.9s						
HIA	**Hailar**	**52.64**	**352**	PFAKE		15 49 40.0	+13
HIA				LR	LR		
	comp=Z,1µm,20.0s						
GKN	**Gorkha**	**52.84**	**309**	*e*P	**P**	**15 49 28.5**	**-0.5**
	comp=Z,189nm,0.8s						
NJS	**Nagarjunasagar**	**53.07**	**293**	*e*P	**P**	**15 49 29.4**	**-1.2**
SRLM	**Srisailam**	**53.32**	**292**	*e*P	**P**	**15 49 31.0**	**-1.5**
KOLN	**Koldanda**	**53.55**	**308**	*e*P	**P**	**15 49 34.2**	**-0.1**
	comp=Z,230nm,0.9s						
DANN	**Dangsing**	**53.69**	**309**	*e*P	**P**	**15 49 35.1**	**-0.3**
	comp=Z,227nm,0.9s						
RPR	**Rampur**	**53.77**	**296**	*e*P	**P**	**15 49 34.7**	**-1.0**
HYB	**Hyderabad**	**54.01**	**294**	*i* P	**P**	**15 49 36.5**	**-1.1**
HYBB	**Hyderabad (bro**	**54.01**	**294**	*e*P	**P**	**15 49 36.1**	**-1.5**
FOZ	**Fox Glacier**	**54.03**	**144**	*e*P	**P**	**15 49 39.6**	**+2.3**
	comp=Z,269nm,1.7s						
PYUN	**Piuthan**	**54.18**	**308**	*e*P	**P**	**15 49 38.7**	**-0.2**
	comp=Z,366nm,1.0s						
ULN	**Ulaanbaatar**	**54.21**	**342**	*e*P	**P**	**15 49 38.9**	**+0.3**
	comp=Z,22nm,0.8s						
ULN				LR	LR		
	comp=Z,586nm,19.0s						
ULN	**Ulaanbaatar**	**54.21**	**342**	P	**P**	**15 49 39.7**	**+1.0**
	SNR=19						
ULN	**Ulaanbaatar**	**54.21**	**342**	*c i*P	**P**	**15 49 39.2**	**+0.6**
ULN				pmax	pmax		
	comp=Z,38nm,1.7s						
MLZ	**Mavora Lakes**	**54.21**	**147**	*e*P	**P**	**15 49 40.0**	**+1.4**
	comp=Z,60nm,1.2s						
WKZ	**Wanaka**	**54.37**	**146**	*e*P	**P**	**15 49 40.9**	**+1.1**
	comp=Z,99nm,1.3s						
SONA0	**Songino Array**	**54.39**	**341**	*e*P	**P**	**15 49 39.7**	**-0.2**
SONA0				⇑*e*		16 19 54.4	
SONM	**Songino Array**	**54.39**	**341**	P	**P**	**15 49 39.7**	**-0.2**
	comp=Z,5.8nm,0.7s,baz=165,slow=8.6,SNR=23						
SONM				LR	LR	16 14 31.7	
	comp=Z,500nm,21.2s,baz=160,slow=38						
SONM				PKPPKP	**P'P'df**	**16 19 54.4**	**+2.1**
	comp=Z,0.4nm,0.8s,baz=282,slow=6.9,SNR=2.2						
SONA1	**Songino Array**	**54.40**	**341**	*e*P	**P**	**15 49 40.5**	**+0.5**
WHZ	**Wether Hill Ro**	**54.46**	**148**	*e*P	**P**	**15 49 40.7**	**+0.4**
	comp=Z,119nm,1.2s						
HIZ	**Hauiti**	**54.52**	**137**	*e*P	**P**	**15 49 43.4**	**+2.5**
	comp=Z,88nm,1.3s						
URV	**Uravakonda**	**54.54**	**291**	*e*P	**P**	**15 49 39.6**	**-1.9**
SRSP	**Sriramsagar**	**54.65**	**296**	*e*P	**P**	**15 49 40.9**	**-1.3**
LBZ	**Lake Benmore**	**54.76**	**145**	*e*P	**P**	**15 49 43.5**	**+1.0**
	comp=Z,73nm,0.9s						
RPZ	**Rata Peaks**	**54.87**	**144**	P	**P**	**15 49 44.8**	**+1.4**
	comp=Z,26nm,0.5s,baz=328,slow=4.4,SNR=16						
RPZ				LR	LR	16 14 18.7	
	comp=Z,1µm,19.1s,slow=37						
THZ	**Tophouse**	**54.90**	**141**	*e*P	**P**	**15 49 44.8**	**+1.1**
	comp=Z,31nm,0.8s						
LTZ	**Lake Taylor**	**55.07**	**142**	*e*P	**P**	**15 49 46.9**	**+2.1**
	comp=Z,72nm,1.4s						
OXZ	**Oxford**	**55.23**	**143**	*e*P	**P**	**15 49 46.9**	**+0.9**
	comp=Z,35nm,0.8s						
ODZ	**Otahua Downs**	**55.42**	**145**	*e*P	**P**	**15 49 49.2**	**+1.9**
	comp=Z,45nm,1.2s						
KHZ	**Kahutara**	**55.65**	**141**	*e*P	**P**	**15 49 49.4**	**+0.5**
	comp=Z,30nm,0.6s						
SNZO	**South Karori**	**55.81**	**140**	*e*P	**P**	**15 49 50.4**	**+0.3**
	comp=Z,149nm,1.4s						
SNZO				LR	LR		
	comp=Z,2µm,22.0s						
MQZ	**McQueen's Vall**	**55.81**	**143**	*e*P	**P**	**15 49 51.3**	**+1.2**
	comp=Z,198nm,1.9s						
BKZ	**Black Stump Fm**	**55.95**	**137**	*e*P	**P**	**15 49 52.6**	**+1.3**
	comp=Z,41nm,0.8s						
URZ	**Urewera**	**55.97**	**135**	LR	LR	16 15 37.3	
	comp=Z,1µm,19.2s,slow=38						
KLRI	**Killari**	**55.98**	**294**	*e*P	**P**	**15 49 50.2**	**-1.6**
ZEA	**Zeya**	**56.48**	**359**	*e*P	**P**	**15 49 54.2**	**-0.5**
ZEA				*e*		16 01 31.0	
ZEA				pmax	pmax		
	comp=Z,17nm,1.0s						
ZEA				MLR	MLR		
	comp=Z,800nm,18.0s						
ZEA				MLR	MLR		
	comp=N,400nm,17.0s						
BFZ	**Birch Farm**	**56.51**	**138**	*e*P	**P**	**15 49 55.8**	**+0.6**
	comp=N,63nm,1.2s						
MXZ	**Matakaoa Point**	**56.51**	**134**	*e*P	**P**	**15 49 56.2**	**+1.0**
	comp=N,49nm,1.1s						
NKL	**Nikolayevsk**	**56.67**	**8**	*e*P	**P**	**15 49 56.0**	**0.0**
NKL				pmax	pmax		
	comp=Z,34nm,0.9s						
ZAK	**Zakamensk**	**57.62**	**341**	*e*P	**P**	**15 50 04.5**	**+1.5**
ZAK				pmax	pmax		
	comp=Z,13nm,1.3s						
TLY	**Talaya**	**58.62**	**342**	PFAKE		15 50 20.0	+10
TLY				LR	LR		
	comp=Z,537nm,19.0s						
TLY	**Talaya**	**58.62**	**342**	P	**P**	**15 50 10.9**	**+1.1**
	SNR=7.6						
TLY	**Talaya**	**58.62**	**342**	*e*P	**P**	**15 50 10.5**	**+0.7**
TLY				pmax	pmax		
	comp=Z,19nm,1.3s						
TLY				MLR	MLR		
	comp=Z,422nm,17.0s						
IRK	**Irkutsk**	**58.91**	**342**	*e*P	**P**	**15 50 13.1**	**+1.3**
IRK				pmax	pmax		
	comp=Z,51nm,1.5s						
NDI	**New Delhi**	**59.03**	**306**	*e*P	**P**	**15 50 12.0**	**-1.1**
AFI	**Afiamalu**	**59.11**	**104**	LR	LR	16 15 13.5	
	comp=Z,473nm,21.7s,baz=264,slow=36						
MOY	**Mondy**	**59.48**	**340**	*e*P	**P**	**15 50 17.2**	**+1.3**
MOY				pmax	pmax		
	comp=Z,49nm,1.5s						
WMQ	**Urumqi**	**59.65**	**326**	P	**P**	**15 50 18.5**	**+1.3**
WMQ				pP	pP	15 50 20.7	-8.0
WMQ				sP	sP	15 50 27.3	-6.0
WMQ				S	**S**	**15 58 25.9**	**+0.8**
WMQ				pmax	pmax		
	comp=Z,100nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,650nm,3.7s						
WMQ				LR	LR		
	comp=Z,2µm,18.3s						
WMQ				LR	LR		
	comp=Z,2µm,18.5s						
WMQ				LR	LR		
	comp=Z,2µm,20.9s						
MIDW	**Midway**	**59.79**	**55**	PFAKE		15 50 30.0	+12
MIDW				LR	LR		
	comp=Z,595nm,21.0s						
KNGR	**Kungurtug, Tuv**	**59.88**	**337**	*i* P	**P**	**15 50 19.7**	**+1.0**
PEA0B	**Petropavlovsk-**	**60.69**	**19**	*e*P	**P**	**15 50 24.6**	**+0.7**
	comp=Z,38nm,0.8s						
PETK	**Petropavlovsk-**	**60.69**	**19**	P	**P**	**15 50 24.2**	**+0.2**
	comp=Z,35nm,0.8s,baz=190,slow=4.2						
PETK				PcP	**PcP**	**15 51 06.5**	**-1.3**
	baz=223,slow=7.9						
PETK				LR	LR	16 16 27.1	
	comp=Z,337nm,20.9s,baz=206,slow=36						
PEA1	**Petropavlovsk-**	**60.69**	**19**	*e*P	**P**	**15 50 24.2**	**+0.2**
PEA1				*e*PcP	**PcP**	**15 51 06.5**	**-1.4**
PET	**Petropavlovsk**	**60.93**	**20**	*e*P	**P**	**15 50 25.9**	**+0.3**
	comp=Z,36nm,0.9s						
PET				LR	LR		
	comp=Z,476nm,21.0s						
PET	**Petropavlovsk**	**60.93**	**20**	*e*P	**P**	**15 50 26.2**	**+0.6**
PET				*e*S	**S**	**15 58 41.1**	**+0.2**
PET				*e*SS	**SS**	**16 02 40.7**	**-0.2**
PET				pmax	pmax		
	comp=Z,49nm,0.8s						
PET				pmax	pmax		
	comp=Z,200nm,15.5s						
PET				pmax	pmax		
	comp=Z,100nm,14.0s						
BOD	**Bodaibo**	**61.79**	**351**	*e*P	**P**	**15 50 31.2**	**-0.1**
BOD				pmax	pmax		
	comp=Z,52nm,1.7s						

HVS	**Khovu-Aksy**	**61.83**	**335**	*i* P	**P**	**15 50 33.6**	**+1.7**
HVS				pmax	pmax		
	comp=Z,111nm,1.2s						
JOHN	**Johnston Islan**	**63.40**	**70**	PFAKE		15 51 00.0	+17
JOHN				LR	LR		
	comp=Z,87nm,19.0s						
ZSN	**Zaisan**	**63.48**	**328**	*e*P	**P**	**15 50 44.0**	**+1.1**
	comp=Z,1.5nm,0.9s						
DGZ	**Jazzator, Alta**	**63.63**	**331**	*i* P	**P**	**15 50 44.6**	**+0.6**
DGZ				pmax	pmax		
	comp=Z,17nm,1.2s						
NIL	**Nilore**	**64.10**	**310**	PFAKE		15 51 00.0	+13
NIL				LR	LR		
	comp=Z,337nm,19.0s						
SHLS	**Shalkode**	**64.12**	**322**	*e*P	**P**	**15 50 46.6**	**-0.8**
	comp=Z,18nm,1.7s						
PDGK	**Podgornoye**	**64.20**	**322**	P	**P**	**15 50 47.4**	**-0.4**
PDGK				pmax	pmax		
	comp=Z,27nm,1.0s						
UZB	**Uzynbulak**	**64.39**	**321**	*e*P	**P**	**15 50 49.9**	**+0.7**
	comp=Z,11nm,1.7s						
UZB				*e*S	**S**	**15 59 27.8**	**+2.7**
TARG	**Taragay, Kyrgy**	**64.44**	**319**	*e*P	**P**	**15 50 49.7**	**-0.1**
	comp=Z,27nm,1.0s						
MK01	**Makanchi Array**	**64.47**	**326**	*e*P	**P**	**15 50 48.9**	**-0.5**
MK31	**Makanchi Array**	**64.48**	**326**	*e*P	**P**	**15 50 49.3**	**-0.3**
MK31	**Makanchi Array**	**64.48**	**326**	*e*P	**P**	**15 50 48.9**	**-0.6**
MK31				pmax	pmax		
	comp=Z,12nm,0.8s						
MK32	**Makanchi Array**	**64.48**	**326**	*e*P	**P**	**15 50 49.4**	**-0.2**
MK32				*e*		16 19 34.3	
MKAR	**Makanchi Array**	**64.48**	**326**	P	**P**	**15 50 49.4**	**-0.2**
	comp=Z,11nm,0.5s,baz=118,slow=8.3,SNR=86						
MKAR				PKPPKP	**P'P'df**	**16 19 34.3**	**-3.1**
	comp=Z,1.1nm,1.0s,baz=212,slow=28,SNR=3.3						
MKAR	**Makanchi Array**	**64.48**	**326**	*e*P	**P**	**15 50 49.1**	**-0.4**
	comp=Z,104nm,0.8s						
MKAR				P'P'		16 19 34.3	
MKAR	**Makanchi Array**	**64.48**	**326**	*e*P	**P**	**15 50 49.1**	**-0.4**
MKAR				pmax	pmax		
	comp=Z,104nm,0.8s						
MA2	**Magadan**	**64.55**	**12**	LR	LR	16 17 40.0	
	comp=Z,549nm,21.2s,baz=194,slow=35						
MA2	**Magadan**	**64.55**	**12**	*e*P	**P**	**15 50 50.0**	**+0.4**
	comp=Z,23nm,0.9s						
MA2	**Magadan**	**64.55**	**12**	*e*P	**P**	**15 50 50.0**	**+0.4**
MA2				pmax	pmax		
	comp=Z,23nm,0.9s						
KSH	**Kashi**	**64.61**	**317**	*e*P	**P**	**15 50 50.7**	**+0.1**
KSH				sP	pP	15 50 57.4	-4.8
KSH				*e*PcP	**PcP**	**15 51 24.8**	**+0.5**
KSH				PcS		15 55 23.3	
KSH				S	**S**	**15 59 26.3**	**-1.5**
KSH				SS	**SS**	**16 03 38.8**	**-0.4**
KSH				pmax	pmax		
	comp=Z,44nm,0.3s						
KSH				pmax	pmax		
	comp=Z,180nm,3.0s						
KSH				LR	LR		
	comp=Z,730nm,22.2s						
KSH				LR	LR		
	comp=Z,330nm,17.2s						
KSH				LR	LR		
	comp=Z,750nm,24.6s						
CASY	**Casey**	**64.62**	**188**	*e*P	**P**	**15 50 49.5**	**-0.5**
	comp=Z,22nm,0.8s						
MAKZ	**Makanchi**	**64.67**	**326**	*e*P	**P**	**15 50 50.5**	**-0.2**
	comp=Z,35nm,1.2s						
MAKZ	**Makanchi**	**64.67**	**326**	*e*P	**P**	**15 50 50.5**	**-0.2**
MAKZ				pmax	pmax		
	comp=Z,35nm,1.2s						
SATY	**Saty**	**64.73**	**321**	*e*P	**P**	**15 50 51.5**	**+0.2**
	comp=Z,16nm,0.8s						
SATY				*e*S	**S**	**15 59 31.5**	**+2.2**
SATY				LR	LR	16 20 21.1	
YAK	**Yakutsk**	**64.77**	**0**	*e*P	**P**	**15 50 50.9**	**-0.1**
	comp=Z,167nm,0.6s						
YAK				LR	LR		
	comp=Z,890nm,20.0s						
YAK	**Yakutsk**	**64.77**	**0**	*e*P	**P**	**15 50 50.7**	**-0.3**
YAK				*e**PP	**sP**	**15 51 07.0**	**-0.1**
YAK				*e*		15 51 24.9	
YAK				*e*		15 53 12.5	
YAK				*e*PPP	PPP	15 54 45.0	
YAK				*e*S	**S**	**15 59 24.9**	**-3.8**
YAK				*e**SS	**sS**	**15 59 45.8**	**-2.2**
YAK				*e*		16 00 42.7	
YAK				*e*SSS	SSS	16 06 35.4	
YAK				pmax	pmax		
	comp=Z,73nm,0.8s						
YAK				pmax	pmax		
	comp=N,11nm,1.0s						
YAK				pmax	pmax		
	comp=E,4.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,95nm,3.3s						
YAK				pmax	pmax		
	comp=N,37nm,3.5s						
YAK				pmax	pmax		
	comp=E,103nm,3.5s						
YAK				smax	smax		
	comp=N,116nm,4.4s						
YAK				smax	smax		
	comp=E,183nm,3.8s						
KPKS	**Kokpek**	**64.77**	**321**	*e*P	**P**	**15 50 52.1**	**+0.6**
	comp=E,26nm,1.7s						
ZHN	**Zhinishke**	**64.77**	**321**	*e*P	**P**	**15 50 52.6**	**+1.1**
	comp=E,7.8nm,1.2s						
ZHN				LR	LR	16 20 08.9	
	comp=E,203nm,21.1s						
KDJ	**Kajisay**	**65.05**	**320**	*e*P	**P**	**15 50 53.9**	**+0.4**
	comp=E,49nm,1.3s						
MDOK	**Medeo**	**65.64**	**321**	*e*P	**P**	**15 50 58.9**	**+1.6**
	comp=E,102nm,1.0s						
MDOK				LR	LR	16 20 17.9	
	comp=E,388nm,23.5s						
KRAR	**Krasnoyarsk**	**65.85**	**339**	*i* P	**P**	**15 50 59.4**	**+1.3**
KUU	**Kurty**	**66.45**	**321**	*e*P	**P**	**15 51 03.1**	**+0.8**
	comp=E,20nm,0.7s						
KUU				*e*S	**S**	**15 59 53.8**	**+3.8**
TKM2	**Tokmak 2**	**66.45**	**320**	P	**P**	**15 51 00.6**	**-2.0**
TKM2				pmax	pmax		
	comp=Z,18nm,0.9s						
SMY	**Shemya**	**66.97**	**28**	*e*P	**P**	**15 51 05.8**	**+0.5**
	comp=Z,82nm,1.1s						
SMY	**Shemya**	**66.97**	**28**	*e*P	**P**	**15 51 05.8**	**+0.5**
SMY				pmax	pmax		
	comp=Z,83nm,1.1s						
AAK	**Ala-Archa**	**67.04**	**319**	*e*P	**P**	**15 51 06.7**	**+0.5**
	comp=Z,58nm,1.5s						
AAK	**Ala-Archa**	**67.04**	**319**	*e*P	**P**	**15 51 06.7**	**+0.5**
AAK				pmax	pmax		
	comp=Z,58nm,1.5s						
FRU	**Bishkek**	**67.05**	**319**	*e*P	**P**	**15 51 07.0**	**+0.9**
FRU				*e*		15 51 20.0	
ZAA0	**Zalesovo Array**	**67.66**	**333**	*e*P	**P**	**15 51 08.9**	**-0.8**
	comp=Z,65nm,1.0s						
ZALV	**Zalesovo Beam**	**67.66**	**333**	P	**P**	**15 51 09.0**	**-0.7**
	comp=Z,17nm,0.8s,baz=117,slow=6.1,SNR=25						
ZALV				PcP	**PcP**	**15 51 35.6**	**-0.9**
	comp=Z,25nm,1.0s,baz=129,slow=5.9,SNR=5.3						
ZALV				PKPPKP	**P'P'df**	**16 19 32.4**	**+0.8**
	comp=Z,0.8nm,0.4s,baz=310,slow=7.6,SNR=4.1						
ZALV				LR	LR	16 24 25.0	
	comp=Z,201nm,18.6s,baz=118,slow=39						
ZALV	**Zalesovo Beam**	**67.66**	**333**	*e*P	**P**	**15 51 08.3**	**-1.4**
ZALV				PcP	**PcP**	**15 51 35.6**	**-0.9**
ZALV				P'P'		16 19 32.4	
ZALV	**Zalesovo Beam**	**67.66**	**333**	*e*P	**P**	**15 51 08.3**	**-1.4**
ZALV						15 51 35.6	
ZAA1	**Zalesovo Array**	**67.66**	**333**	*e*P	**P**	**15 51 09.0**	**-0.8**
ZAA1				*e*PcP	**PcP**	**15 51 35.6**	**-0.9**
ZAA1				*e*		16 19 32.4	
SEM	**Semipalatinsk**	**67.69**	**328**	*e*P	**P**	**15 51 10.9**	**+0.6**
	comp=Z,11nm,1.7s						
SEY	**Seymchan**	**67.94**	**11**	P	**P**	**15 51 11.9**	**+0.6**
	comp=Z,22nm,0.6s,baz=205,slow=4.8,SNR=95						
SEY	**Seymchan**	**67.94**	**11**	*d i*P	**P**	**15 51 11.8**	**+0.5**
PAF	**Port-aux-Franc**	**68.08**	**217**	*e*P	**P**	**15 51 11.5**	**-1.0**
	comp=Z,1µm,1.9s						
PAF	**Port-aux-Franc**	**68.08**	**217**	*e*P	**P**	**15 51 11.5**	**-1.0**
PAF				pmax	pmax		
	comp=Z,1µm,1.9s						
MNAS	**Manas**	**68.28**	**318**	P	**P**	**15 51 14.6**	**+0.5**
MNAS				pmax	pmax		
	comp=Z,52nm,1.3s						

BTLS	Baital	68.44	321	eP	P	15 51 15.8	+1.0
	comp=Z,7.0nm,1.8s						
KURBB	Kurchatov Arra	68.72	328	P	P	15 51 16.0	-0.4
	comp=Z,13nm,0.6s,baz=128,slow=5.9,SNR=127						
KURK	Kurchatov	68.72	328	eP	P	15 51 15.9	-0.5
	comp=Z,82nm,0.9s						
KURK				LR	LR		
	comp=Z,1µm,22.0s						
KURK	Kurchatov	68.72	328	P	P	15 51 16.5	0.0
	SNR=61						
KURK	Kurchatov	68.72	328	P	P	15 51 16.0	-0.5
KURK				pmax	pmax		
	comp=Z,13nm,0.6s						
NVS	Novosibirsk	68.95	333	⇑iP	P	15 51 17.5	-0.2
NVS				eS	S	16 00 20.5	+1.1
NVS				pmax	pmax		
	comp=N,31nm,1.1s						
NVS				pmax	pmax		
	comp=Z,68nm,1.1s						
NVS				pmax	pmax		
	comp=E,40nm,1.3s						
NVS				smax	smax		
	comp=N,23nm,2.5s						
NVS				smax	smax		
	comp=E,19nm,2.3s						
KK31	Karatay Array	69.87	318	eP	P	15 51 22.7	-1.1
KK31	Karatay Array	69.87	318	eP	P	15 51 22.7	-1.1
KKAR	Karatay Array	69.87	318	eP	P	15 51 22.7	-1.1
KKAR	Karatay Array	69.87	318	eP	P	15 51 22.7	-1.1
KIWB	Kanaga Island	70.80	32	eP	P	15 51 28.8	-0.4
RAR	Rarotonga	71.13	111	LR	LR	16 24 02.7	
	comp=E,188nm,18.6s,baz=269,slow=37						
GSTR	Great Sitkin T	71.50	32	eP	P	15 51 31.9	-1.6
BRZS	Berezniki	71.60	325	eP	P	15 51 34.1	0.0
	comp=E,16nm,1.2s						
BRZS				LR	LR	16 23 45.9	
	comp=E,154nm,17.3s						
MRIV	Mauritius Mete	71.98	250	eP	P	15 51 36.7	-0.4
	comp=E,332nm,1.8s						
ATKA	Atka Island	72.55	33	eP	P	15 51 39.8	+0.1
	comp=E,48nm,0.8s						
XMAS	Kiritimati	73.34	87	eP	P	15 51 44.3	-0.9
	comp=E,117nm,1.2s						
XMAS				LR	LR		
	comp=Z,3.0nm,20.0s						
WSAR	Wadi Sarin	73.53	295	P	P	15 51 45.5	-0.6
	comp=Z,8.2nm,0.6s,baz=115,slow=8.9,SNR=9.6						
WSAR				LR	LR	16 28 29.2	
	comp=Z,334nm,18.9s,baz=119,slow=40						
RER	Riviere de l'E	73.66	249	eP	P	15 51 47.2	+0.2
	comp=Z,140nm,1.1s						
MSEY	Mahe Island	73.70	266	eP	P	15 51 46.5	-0.9
	comp=Z,190nm,2.0s						
MSEY				LR	LR		
	comp=Z,1µm,21.0s						
MSEY	Mahe Island	73.70	266	eP	P	15 51 46.5	-0.9
MSEY				pmax	pmax		
	comp=Z,191nm,2.0s						
MSEY				MLR	MLR		
	comp=Z,1µm,21.0s						
BIDO	Bidbid	74.04	295	P	P	15 51 53.0	+3.9
	SNR=7.1						
BVA0	Borovoye Array	74.29	327	P	P	15 51 49.6	-0.4
BVA0				pmax	pmax		
	comp=Z,67nm,1.4s						
BVAR	Borovoye Array	74.29	327	P	P	15 51 49.4	-0.6
	comp=Z,3.1nm,0.5s,baz=134,slow=8.3,SNR=24						
BVAR				LR	LR	16 27 05.0	
	comp=Z,520nm,21.6s,baz=120,slow=38						
BRVK	Borovoye	74.36	327	eP	P	15 51 49.6	-0.8
	comp=Z,34nm,0.8s						
BRVK				LR	LR		
	comp=Z,335nm,22.0s						
BRVK	Borovoye	74.36	327	P	P	15 51 50.3	-0.1
	SNR=35						
BRVK	Borovoye	74.36	327	d iP	P	15 51 50.8	+0.4
BRVK				pmax	pmax		
	comp=Z,14nm,1.0s						
TIXI	Tiksi	74.43	360	LR	LR	16 25 14.0	
	comp=Z,666nm,20.5s,baz=202,slow=36						
TIXI	Tiksi	74.43	360	eP	P	15 51 49.6	-0.8
	comp=Z,21nm,0.9s						
TIXI	Tiksi	74.43	360	ceP	P	15 51 50.0	-0.4
TIXI				pmax	pmax		
	comp=Z,14nm,0.6s						
NIKH	Nikolski High	75.81	33	eP	P	15 51 59.2	+0.5
	comp=Z,66nm,1.1s						
UOSS	Minazif	76.01	296	eP	P	15 51 59.6	-0.9
	comp=Z,77nm,1.6s						
VNDA	Vanda	76.55	173	P	P	15 52 02.4	-0.2
	comp=Z,5.5nm,0.6s,baz=310,slow=9.7,SNR=24						
VNDA				LR	LR	16 24 47.1	
	comp=Z,831nm,20.6s,baz=342,slow=35						
VNDA	Vanda	76.55	173	eP	P	15 52 02.3	-0.2
VNDA				esP	P	15 52 02.5	0.0
POHA	Pohakuloa	77.02	69	PFAKE		15 52 20.0	+13
POHA				LR	LR		
	comp=Z,1µm,20.0s						
GEYT	Alibeck	77.11	310	P	P	15 52 06.9	+0.4
	comp=Z,2.9nm,0.8s,baz=98,slow=11,SNR=6.4						
GEYT				LR	LR	16 31 43.7	
	comp=Z,181nm,20.6s,baz=335,slow=40						
GYA0B	ALIBECK ARRAY	77.11	310	eP	P	15 52 04.4	-2.1
	comp=Z,13nm,0.9s						
SBA	Scott Base	77.44	172	eP	P	15 52 08.1	+0.6
	comp=Z,18nm,1.0s						
SBA				LR	LR		
	comp=Z,808nm,19.0s						
SBA	Scott Base	77.44	172	eP	P	15 52 08.1	+0.6
SBA				pmax	pmax		
	comp=Z,19nm,1.0s						
SBA				MLR	MLR		
	comp=Z,808nm,19.0s						
UNV	Unalaska Valle	77.45	33	eP	P	15 52 07.4	-0.6
	comp=Z,44nm,1.1s						
MAW	Mawson	78.50	201	P	P	15 52 13.3	-0.2
	baz=78,SNR=45						
MAW	Mawson	78.50	201	P	P	15 52 13.2	-0.3
	comp=Z,17nm,0.6s,baz=65,slow=5.5,SNR=50						
MAW				LR	LR	16 23 02.6	
	comp=Z,849nm,21.8s,baz=56,slow=33						
MAW	Mawson	78.50	201	eP	P	15 52 13.0	-0.5
	comp=Z,28nm,1.8s						
MAW	Mawson	78.50	201	eP	P	15 52 13.0	-0.5
MAW				pmax	pmax		
	comp=Z,28nm,1.8s						
AB31	Akbulak array	78.93	321	i P	P	15 52 15.7	-0.6
AB31				pmax	pmax		
	comp=Z,42nm,1.2s						
ABKAR	Akbulak array	78.93	321	eP	P	15 52 15.6	-0.7
AKTO	Aktyubinsk	80.47	322	P	P	15 52 25.0	+0.4
	comp=Z,8.1nm,0.5s,baz=119,slow=7.2,SNR=24						
AKTO				LR	LR	16 30 47.5	
	comp=Z,429nm,21.3s,baz=105,slow=38						
PPT	Papeete	80.62	107	P	P	15 52 27.2	+1.1
	comp=Z,62nm,1.2s,baz=210,slow=20,SNR=1.6						
PPT				LR	LR	16 27 04.8	
	comp=Z,235nm,20.7s,baz=274,slow=35						
PPT2	Papeete2	80.62	107	eLR	LR	16 17 37.3	
	comp=Z,2µm,34.8s						
TBI	Tubuai	80.76	113	eLQ	LQ	16 14 25.8	
	comp=Z,708nm,37.8s						
TBI				eLR	LR	16 17 33.0	
	comp=Z,1µm,27.0s						
SVE	Sverdlovsk	80.96	329	⇓eP	P	15 52 28.7	+1.6
SVE				pmax	pmax		
	comp=Z,52nm,1.2s						
SDPT	Sand Point	81.26	33	eP	P	15 52 28.9	+0.2
OPO	Ambohidratompo	81.65	252	P	P	15 52 32.2	+0.4
	comp=Z,24nm,0.5s,baz=89,slow=5.8,SNR=37						
ARU	Arti	81.92	328	eP	P	15 52 31.5	-0.7
	comp=Z,28nm,1.0s						
ARU				LR	LR		
	comp=Z,439nm,21.0s						
ARU	Arti	81.92	328	d iP	P	15 52 32.4	+0.2
ARU						15 55 38.7	
ARU				PPP	PPP	15 57 31.1	
ARU				eS	S	16 02 46.1	+3.0
ARU				SS	SS	16 07 59.6	-2.6
ARU				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CHGN	Chignik	82.65	32	eP	P	15 52 36.4	+0.5
RAYN	Ar Rayn	85.51	294	eP	P	15 52 51.1	-0.3
	comp=Z,78nm,1.0s						
RAYN				LR	LR		
	comp=Z,983nm,21.0s						
RAYN	Ar Rayn	85.51	294	eP	P	15 52 51.1	-0.3
RAYN				pmax	pmax		
	comp=Z,78nm,1.0s						
RAYN				MLR	MLR		
	comp=Z,983nm,21.0s						
AKT	Akhty	85.64	312	eP	P	15 52 52.6	+0.9
AKT				e		15 56 12.2	
AKT				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KDAK	Kodiak Island	86.10	32	P	P	15 52 54.1	+0.7
	comp=Z,16nm,0.8s,baz=65,slow=0.1,SNR=7.3						
KDAK	Kodiak Island	86.10	32	eP	P	15 52 55.3	+1.9
	comp=Z,139nm,1.4s						
KDAK				LR	LR		
	comp=Z,389nm,22.0s						
QSPA	South Pole Qui	87.03	180	P	P	15 52 58.1	+0.1
	comp=Z,21nm,1.1s,baz=330,slow=2.7,SNR=15						
QSPA				LR	LR	16 33 30.2	
	comp=Z,627nm,18.8s,baz=352,slow=37						
QSPA	South Pole Qui	87.03	180	eP	P	15 52 57.3	-0.8
	comp=Z,18nm,0.9s						
CNPM	China Poot	87.13	30	eP	P	15 52 58.1	-0.4
	comp=Z,299nm,1.9s						
ATD	Arta Tunnel	87.15	282	P	P	15 53 01.5	+1.9
	comp=Z,5.8nm,0.3s,baz=196,slow=3.3,SNR=4.3						
ATD				LR	LR	16 33 18.2	
	comp=Z,214nm,18.2s,baz=73,slow=37						
SYO	Syowa Base	87.21	201	⇑eP	P	15 52 58.4	-0.3
GROC	Groznyy	87.28	313	eP	P	15 52 58.2	-1.3
GROC				e		15 56 26.0	
GROC				eS	SKSac	16 03 22.3	-1.9
GROC				pmax	pmax		
	comp=Z,136nm,1.2s						
PPLA	Purkeypile	87.33	27	eP	P	15 53 01.3	+1.8
	comp=Z,14nm,0.8s						
BRLK	Bradley Lake	87.35	30	eP	P	15 53 01.6	+2.0
	comp=Z,200nm,1.8s						
DGRG	David-gareji	87.39	312	eP	P	15 53 02.0	+1.8
SKT	Skwentna	87.45	28	eP	P	15 53 00.4	+0.4
	comp=Z,65nm,1.8s						
CAST	Castle Rocks	87.48	26	eP	P	15 53 01.1	+1.0
	comp=Z,13nm,0.7s						
TBLG	Delisi	87.90	312	eP	P	15 53 03.6	+1.0
TBLG	Delisi	87.90	312	eP	P	15 53 03.6	+1.0
DUS	Dusheti	87.96	312	eP	P	15 53 06.0	+3.0
BPAW	Bear Paw Mtn.	88.09	26	eP	P	15 53 04.1	+1.1
	comp=Z,6.5nm,0.8s						
RC01	Rabbit Creek A	88.14	29	eP	P	15 53 04.7	+1.5
	comp=Z,158nm,2.0s						
TRF	Thorofare Moun	88.28	26	eP	P	15 53 04.9	+0.8
	comp=Z,37nm,1.6s						
ZEI	Tsey	88.62	313	eP	P	15 53 06.6	+0.4
ZEI				pmax	pmax		
	comp=Z,60nm,1.4s						
GHO	Glory Hole Cre	88.63	28	eP	P	15 53 07.3	+1.6
	comp=Z,66nm,1.6s						
BWN	Browne	88.76	26	eP	P	15 53 07.1	+1.0
	comp=Z,28nm,0.9s						
AKH	Akhalkalaki	88.80	311	eP	P	15 53 07.3	+0.2
	comp=Z,63nm,1.2s						
AKH	Akhalkalaki	88.80	311	eP	P	15 53 09.8	+2.7
NCK	Nalchik	88.90	313	i P	P	15 53 08.1	+0.8
NCK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SML	Sawmill	88.92	28	eP	P	15 53 07.4	+0.4
	comp=Z,20nm,0.7s						
MCK	McKinley	88.92	26	eP	P	15 53 06.6	-0.4
	comp=Z,16nm,1.0s						
MCK	McKinley	88.92	26	eP	P	15 53 06.6	-0.4
MCK				pmax	pmax		
	comp=Z,16nm,1.0s						
ONI	Oni	88.93	313	eP	P	15 53 13.8	+6.3
COLD	Coldfoot	88.97	23	eP	P	15 53 07.7	+0.7
	comp=Z,9.7nm,1.0s						
SCM	Sheep Creek Mo	89.39	28	eP	P	15 53 10.0	+0.7
	comp=Z,38nm,1.1s						
WRH	Wood River Hil	89.40	25	eP	P	15 53 07.8	-1.3
	comp=Z,46nm,1.7s						
MDM	Murphy Dome	89.41	25	eP	P	15 53 08.4	-0.8
	comp=Z,5.3nm,0.9s						
KBZ	Khabaz	89.43	314	P	P	15 53 10.0	+0.3
	comp=Z,3.6nm,0.7s,baz=152,slow=3.1,SNR=7.8						
KBZ				LR	LR	16 38 28.9	
	comp=Z,265nm,20.4s,baz=72,slow=39						
KBZ	Khabaz	89.43	314	P	P	15 53 10.0	+0.3
KBZ				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KBZ				MLR	MLR		
	comp=Z,265nm,20.4s						
TOLK	Toolik Lake Re	89.44	21	eP	P	15 53 10.1	+0.8
	comp=Z,23nm,1.4s						
NEY	Neytrino	89.52	313	i P	P	15 53 10.4	0.0
NEY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
DHY	Denali Highway	89.53	27	eP	P	15 53 11.0	+1.0
	comp=Z,13nm,0.7s						
CCB	Clear Creek Bu	89.55	25	eP	P	15 53 08.8	-1.0
	comp=Z,25nm,1.3s						
COLA	College	89.56	25	eP	P	15 53 10.4	+0.6
	comp=Z,6.9nm,0.6s						
COLA				LR	LR		
	comp=Z,1.0nm,19.0s						
COLA	College	89.56	25	eP	P	15 53 10.4	+0.6
COLA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
COLA				MLR	MLR		
	comp=Z,1.0nm,19.0s						
PRGR	Permogore	89.56	332	eP	P	15 53 09.4	-0.5
PRGR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KIV	Kislovodsk	89.60	314	eP	P	15 53 10.7	+0.1
	comp=Z,30nm,1.1s						
KIV				LR	LR		
	comp=Z,311nm,20.0s						
KIV	Kislovodsk	89.60	314	eP	P	15 53 11.0	+0.4
KIV				e		16 03 38.1	
KIV				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HDA	Harding Lake	89.88	26	eP	P	15 53 10.5	-0.9
	comp=Z,10nm,1.0s						
IL1	Eielson Array	89.95	25	eP	P	15 53 10.2	-1.5
ILAR	Eielson Array	89.95	25	P	P	15 53 10.7	-1.0
	comp=Z,1.4nm,0.6s,baz=265,slow=4.4,SNR=17						
ILAR				PKKPbc	PKKPbc	16 10 47.0	+0.9
	comp=Z,0.4nm,0.7s,baz=71,slow=3.3,SNR=3.7						
ILB	Eielson Array	89.95	25	eP	P	15 53 10.7	-1.0
EYAK	Cordova Ski Ar	90.00	29	eP	P	15 53 10.9	-1.1
	comp=Z,0.2nm,0.6s						
DIV	Divide	90.05	29	eP	P	15 53 13.4	+1.0
	comp=Z,15nm,0.7s						
TAOE	Nuku Hiva Isla	90.05	99	eLR	LR	16 21 57.0	
	comp=Z,988nm,25.4s						
FYU	Fort Yukon	90.83	23	eP	P	15 53 16.1	+0.4
	comp=Z,22nm,1.2s						
KMBO	Kilima Mbogo	92.04	269	PFAKE		15 53 30.0	+7.2
KMBO				LR	LR		
	comp=Z,620nm,22.0s						
VORD	Divnogorie	92.28	321	eP	P	15 53 21.2	-1.6
VORD				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VSR	Storozhevoye	92.37	321	eP	P	15 53 23.4	+0.2
VSR				pmax	pmax		
	comp=Z,6.0nm,0.5s						
EGAK	Eagle	92.40	25	eP	P	15 53 22.8	-0.3
	comp=Z,7.4nm,0.9s						
EGAK				LR	LR		
	comp=Z,511nm,20.0s						
KLMR	Klimovskoe	92.44	331	eP	P	15 53 22.2	-1.1
KLMR				pmax	pmax		
	comp=Z,12nm,0.9s						
KLMR	Klimovskoe	92.44	331	eP	P	15 53 22.3	-1.1
KLMR				AMP		15 53 31.3	
	comp=Z,12nm,0.9s						
KLMR				LQ	LQ	16 27 42.9	
KLMR				LQ	LQ	16 27 42.9	
MOS	Moscow	93.36	326	eP	P	15 53 29.6	+1.9
MOS				pmax	pmax		
	comp=Z,35nm,0.9s						
ASF	Jabal al Asfar	93.61	302	P	P	15 53 30.2	+0.6
	comp=Z,2.4nm,0.8s,baz=96,slow=6.3,SNR=4.6						
ASF				LR	LR	16 41 15.5	
	comp=Z,334nm,19.9s,baz=76,slow=39						
OBN	Obninsk	93.97	325	PFAKE		15 53 40.0	+10
OBN				LR	LR		
	comp=Z,349nm,22.0s						
OBN	Obninsk	93.97	325	⇑eP	P	15 53 31.1	+0.6
OBN				e		15 53 42.6	
OBN						15 57 21.0	
OBN				e		16 04 35.6	
OBN				pmax	pmax		
	comp=Z,8.0nm,0.7s						
OBN				MLR	MLR		
	comp=Z,617nm,23.0s						
MMAI	Mount Meron Ar	94.89	303	P	P	15 53 36.8	+1.5
	comp=Z,1.0nm,0.5s,baz=94,slow=12,SNR=2.7						
MMAI				LR	LR	16 42 22.8	
	comp=Z,524nm,20.2s,baz=135,slow=39						
APA	Apatity	94.95	337	⇓iP	P	15 53 34.0	-0.7
APA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
APA				MLR	MLR		
	comp=Z,400nm,24.0s						
INK	Inuvik	95.34	22	P	P	15 53 35.8	-0.7
	comp=Z,4.1nm,0.8s,baz=120,slow=14,SNR=13						
INK	Inuvik	95.34	22	eP	P	15 53 36.2	-0.2
	comp=Z,24nm,1.4s						
NVL	N'lazarevskaya	96.04	197	eP	P	15 53 24.5	-15
NVL				pmax	pmax		
	comp=Z,5.0nm,0.6s						
NVL				MLR	MLR		
	comp=Z,652nm,18.0s						
BR101	Keskin Array S	96.25	309	eP	P	15 53 40.5	-0.9
BR101				ePP	PP	15 57 33.7	-1.4
BR131	Keskin Array S	96.25	309	eP	P	15 53 38.3	-3.2
BRTR	Keskin Array B	96.25	309	P	P	15 53 40.6	-0.9
	comp=Z,1.0nm,0.6s,baz=123,slow=4.6,SNR=4.6						
BRTR				PP	PP	15 57 33.7	-1.4
	comp=Z,0.6nm,0.7s,baz=79,slow=6.4,SNR=3.7						
BRTR				LR	LR	16 44 04.8	
	comp=Z,119nm,20.5s,baz=64,slow=40						
ANTO	Ankara	96.89	310	PFAKE		15 54 00.0	+16
ANTO				LR	LR		
	comp=Z,197nm,21.0s						
KEV	Kevo	96.99	340	PFAKE		15 54 00.0	+16
KEV				LR	LR		
	comp=Z,692nm,22.0s						
WRAK	Wrangell Islan	97.02	34	eP	P	15 53 44.6	+0.3
	comp=Z,6.8nm,0.9s						
WRAK				LR	LR		
	comp=Z,405nm,20.0s						
PUL	Pulkovo	97.06	330	i P	Pdif	15 53 45.0	+0.4
PUL				pmax	pmax		
	comp=Z,104nm,0.6s						
SPA0	Spitsbergen Ar	97.46	349	eP	P	15 53 45.3	-0.7
SPITS	Spitsbergen Ar	97.46	349	P	P	15 53 45.7	-0.3
	comp=Z,1.4nm,0.6s,baz=67,slow=4.2,SNR=4.4						
SPITS				LR	LR	16 43 07.2	
	comp=Z,252nm,22.0s,baz=110,slow=39						
ARA0	ARCESS Array S	97.55	340	eP	P	15 53 44.8	-1.7
ARA0				ePKKPbc	PKKPbc	16 10 27.0	+0.8
ARA0				eP'P'df	P'P'df	16 18 35.2	-2.1
ARCES	ARCESS Array B	97.55	340	P	P	15 53 44.8	-1.7
	comp=Z,2.2nm,0.7s,baz=82,slow=6.6,SNR=11						
ARCES				PKKP	PKKPbc	16 10 27.0	+0.8
	comp=Z,2.1nm,0.9s,baz=279,slow=1.7,SNR=3.6						
ARCES				PKPPKP	P'P'df	16 18 35.2	-2.1
	comp=Z,2.0nm,0.9s,baz=352,slow=12,SNR=2.7						
ARCES	ARCESS Array B	97.55	340	eP	P	15 53 46.1	-0.5
ARCES				PKKP	PKKPbc	16 10 27.0	+0.8
ARCES				P'P'		16 18 35.2	
KBS	Kingsbay	97.96	350	PFAKE		15 54 00.0	+12
KBS				LR	LR		
	comp=Z,547nm,21.0s						
MBAR	Mbarara	98.57	269	PFAKE		15 54 00.0	+7.4
MBAR				LR	LR		
	comp=Z,768nm,22.0s						
AKASG	Malin Array Be	98.67	321	LR	LR	16 43 38.3	
	comp=Z,213nm,21.8s,baz=75,slow=39						
AKBB	Malin Array Si	98.67	321	eP	P	15 53 50.8	-1.1
	comp=Z,3.8nm,1.0s						
AKBB	Malin Array Si	98.67	321	eP	P	15 53 50.8	-1.1
AKBB				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KIEV	Kiev	98.67	321	PFAKE		15 54 00.0	+8.0
KIEV				LR	LR		
	comp=Z,331nm,21.0s						
KIEV	Kiev	98.67	321	i P	Pdif	15 53 52.2	+0.2
KIEV				pmax	pmax		
	comp=Z,2.0nm,0.9s						
FIA0	FINESS Array S	98.89	332	eP	P	15 53 51.6	-1.0
FIA0	FINESS Array S	98.89	332	eP	P	15 53 51.6	-1.0
FINES	FINESS Array B	98.89	332	P	P	15 53 51.6	-1.0
	comp=Z,0.9nm,0.6s,baz=60,slow=8.2,SNR=4.4						
VSU	Vasula	99.07	329	i P	Pdif	15 53 53.3	-0.2
VSU				pmax	pmax		
	comp=Z,15nm,0.9s						
SNAA	Sanae	99.45	194	Pdiff	Pdif	15 53 54.3	-0.8
SNAA	Sanae	99.45	194	P	Pdif	15 53 55.9	+0.7
	comp=Z,1.5nm,0.7s,baz=156,slow=4.3,SNR=9.5						
SNAA	Sanae	99.45	194	eP	Pdif	15 53 55.3	+0.2
	comp=Z,14nm,1.5s						
SNAA	Sanae	99.45	194	eP	Pdif	15 53 55.3	+0.2
SNAA				pmax	pmax		
	comp=Z,14nm,1.5s						
LSZ	Lusaka	99.98	254	LR	LR	16 34 33.0	
	comp=Z,548nm,20.3s,baz=96,slow=33						
LSZ	Lusaka	99.98	254	ePdif	Pdif	15 53 57.6	-1.1
LSZ				e		15 53 58.1	
LSZ				LR	LR		
	comp=Z,586nm,20.0s						
LSZ	Lusaka	99.98	254	eP	Pdif	15 53 57.6	-1.1
LSZ				MLR	MLR		
	comp=Z,586nm,20.0s						
BOSA	Boshof	100.94	240	P	Pdif	15 54 02.9	+0.1
	comp=Z,4.0nm,0.7s,baz=111,slow=5.9,SNR=6.3						
VNA3	Neumayer Olymp	101.31	192	Pdiff	Pdif	15 54 09.2	+5.8
MLR	Muntele Rosu	101.47	316	PP	PP	15 58 17.2	+2.5
	comp=Z,0.6nm,0.7s,baz=112,slow=5.4,SNR=4.3						
BUR04	Bucovina Ar. S	101.67	318	ePdif	Pdif	15 54 03.0	-2.5
BUR08	Bucovina Ar. S	101.67	318	ePdif	Pdif	15 54 05.4	-0.2
NLWA	Neilton Lookou	103.47	42	PFAKE		15 54 20.0	+6.5
NLWA				LR	LR		
	comp=Z,423nm,22.0s						
RES	Resolute Bay	103.82	11	Pdiff	Pdif	15 54 15.1	+0.7
	comp=Z,2.6nm,0.8s,baz=237,slow=17,SNR=3.2						
RES				PP	PKiKP	15 58 32.7	+0.8
	comp=Z,3.4nm,0.9s,baz=333,slow=2.3,SNR=3.0						
SUR	Sutherland	103.99	236	PFAKE		15 54 30.0	+14
SUR				LR	LR		
	comp=Z,2µm,20.0s						
YKA	Yellowknife Ar	104.38	26	PKKP	PKKPdf	16 10 16.8	+1.5
	comp=Z,1.0nm,0.7s,baz=171,slow=29,SNR=4.0						
OKC	Ostrava-Krasne	105.81	321	AMS	AMS	16 53 40.0	
	comp=Z,300nm,18.8s						
NB2	NORSAR Subarra	105.86	334	P	Pdif	15 54 23.6	-0.2
	comp=Z,8.6nm,1.7s,baz=72,slow=4.4						
NB2	NORSAR Subarra	105.86	334	P	Pdif	15 54 23.6	-0.2
	baz=72,slow=4.4						
HAWA	Hanford	106.59	42	PFAKE		15 58 50.0	
HAWA				LR	LR		
	comp=Z,420nm,20.0s						
DPC	Dobruska-Polom	106.80	322	AMS	AMS	16 46 40.0	
	comp=Z,400nm,17.9s						
UPC	Upice	106.95	322	AMS	AMS	16 49 00.0	
	comp=Z,600nm,20.2s						
PVCC	Panska Ves	107.82	323	AMS	AMS	16 47 00.0	
	comp=Z,500nm,24.6s						
GOPC	GO Pecny, Ondr	107.88	322	AMS	AMS	16 45 30.0	
	comp=Z,600nm,26.5s						
PRU	Pruhonice	108.00	322	AMS	AMS	16 51 40.0	
	comp=Z,400nm,23.2s						
BRG	Berggiesshubel	108.09	323	e(P)		15 58 53.3	
	comp=Z,2.2nm,0.9s						
WVOR	Wild Horse Val	108.13	46	PFAKE		15 58 50.0	
WVOR				LR	LR		
	comp=Z,486nm,20.0s						
BMO	Blue Mountains	108.48	44	PFAKE		15 58 50.0	
BMO				LR	LR		
	comp=Z,516nm,22.0s						
CLL	Collm	108.52	324	ePKPdf	PKiKP	15 58 41.0	-0.3
CLL				e		15 59 11.0	
CLL				ePS	PS	16 08 25.0	-6.9
CLL				LV		16 58 00.0	
	comp=Z,400nm,19.6s						
KHC	Kasperske Hory	108.86	321	AMS	AMS	16 48 00.0	
	comp=Z,500nm,20.2s						
GERES	GERESS Array B	108.88	321	PKiKP	PKiKP	15 58 43.3	+1.1
	comp=Z,0.7nm,0.4s,baz=100,slow=3.0,SNR=4.0						
NKC	Novy Kostel	109.20	323	AMS	AMS	16 48 20.0	
	comp=Z,600nm,20.5s						
NVAR	Mina Array Bea	109.24	50	PKiKP	PKiKP	15 58 45.1	+1.8
	comp=Z,0.3nm,0.2s,baz=260,slow=22,SNR=7.2						
NVAR				PKKPbc	PKKPbc	16 09 52.6	+2.0

	comp=Z,0.6nm,0.7s,baz=134,slow=4.3,SNR=5.1						
NVAR				PKKP	PKKPdf	16 10 04.6	-1.6
	comp=Z,1.2nm,0.8s,baz=128,slow=4.9,SNR=5.0						
TSUM	Tsumeb	109.48	249	PFAKE		15 59 00.0	
TSUM				LR	LR		
	comp=Z,819nm,21.0s						
HLID	Hailey	110.83	44	PFAKE		15 59 00.0	
HLID				LR	LR		
	comp=Z,501nm,20.0s						
PFO	Pinyon Flats O	111.68	55	PKKPbc	PKKPbc	16 09 43.7	+1.3
	baz=97,slow=7.5						
PFO	Pinyon Flats O	111.68	55	PKKPbc	PKKPbc	16 09 43.7	+1.3
PFO				LR	LR		
	comp=Z,658nm,20.0s						
BOZ	Bozeman (W)	112.10	41	PFAKE		15 59 00.0	
BOZ				LR	LR		
	comp=Z,495nm,22.0s						
BFO	Black Forest	112.40	322	PFAKE		15 59 00.0	
BFO				LR	LR		
	comp=Z,23nm,22.0s						
EGMT	Eagleton	112.44	39	PFAKE		15 59 00.0	
EGMT				LR	LR		
	comp=Z,596nm,22.0s						
DUG	Dugway, Tooele	112.94	47	PFAKE		15 59 00.0	
DUG				LR	LR		
	comp=Z,536nm,20.0s						
LKWY	Lake	113.27	42	PFAKE		15 59 00.0	
LKWY				LR	LR		
	comp=Z,2µm,20.0s						
AHID	Auburn Hatcher	113.39	44	PFAKE		15 59 00.0	
AHID				LR	LR		
	comp=Z,444nm,21.0s						
HWUT	Hardware Ranch	113.42	46	PFAKE		15 59 00.0	
HWUT				LR	LR		
	comp=Z,539nm,20.0s						
FFC	Flin Flon	113.78	30	PFAKE		15 59 00.0	
FFC				LR	LR		
	comp=Z,455nm,20.0s						
RLMT	Red Lodge	113.82	41	PFAKE		15 59 00.0	
RLMT				LR	LR		
	comp=Z,556nm,22.0s						
BW06	Boulder Array	114.46	44	PFAKE		15 59 10.0	+17
BW06				LR	LR		
	comp=Z,414nm,19.0s						
PDAR	Pinedale Array	114.46	44	PKiKP	PKiKP	15 58 54.4	+1.2
	comp=Z,0.4nm,0.6s,baz=54,slow=2.8,SNR=2.1						
PDAR				PKKPbc	PKKPbc	16 09 32.4	-1.2
	comp=Z,0.5nm,0.6s,baz=104,slow=4.7,SNR=6.7						
PDAR				PKKP	PKKPdf	16 09 52.0	-4.4
	comp=Z,1.3nm,0.8s,baz=111,slow=6.9,SNR=5.5						
BORG	Borgarnes	114.78	347	PFAKE		15 59 00.0	+7.2
BORG				LR	LR		
	comp=Z,152nm,22.0s						
LAO	LASA Array	115.17	39	PFAKE		15 59 10.0	+16
LAO				LR	LR		
	comp=Z,486nm,20.0s						
EKA	Eskdalemuir Ar	115.28	332	PKP	PKPdf	15 58 54.6	+0.6
	comp=Z,0.2nm,0.3s,baz=44,slow=3.2,SNR=3.5						
ESK	Eskdalemuir	115.31	332	PFAKE		15 59 10.0	+16
ESK				LR	LR		
	comp=Z,478nm,19.0s						
WUAZ	Wupatki	115.32	52	PFAKE		15 59 10.0	+15
WUAZ				LR	LR		
	comp=Z,501nm,20.0s						
SFJD	Kangerlussuaq	116.04	360	PFAKE		15 59 10.0	+15
SFJD				LR	LR		
	comp=Z,410nm,22.0s						
TUC	Tucson	116.62	55	PFAKE		15 59 10.0	+13
TUC				LR	LR		
	comp=Z,608nm,19.0s						
MVCO	Mesa Verde	117.05	49	PFAKE		15 59 10.0	+12
MVCO				LR	LR		
	comp=Z,385nm,20.0s						
S22A	4UR Ranch, Cre	118.13	48	*e*PKPdf	PKPdf	15 59 02.4	+1.9
ISCO	Idaho Springs	118.29	46	PFAKE		15 59 10.0	+9.2
ISCO				LR	LR		
	comp=Z,476nm,20.0s						
SDCO	Great Sand Dun	119.12	48	*e*PKPdf	PKPdf	15 59 03.5	+1.1
SDCO				LR	LR		
	comp=Z,484nm,21.0s						
ANMO	Albuquerque	119.33	51	PFAKE		15 59 10.0	+7.2
ANMO				LR	LR		
	comp=Z,364nm,20.0s						
ULM	Lac du Bonnet	119.36	32	PKP	PKPdf	15 59 03.1	+1.1
	comp=Z,2.2nm,0.6s,baz=315,slow=4.3,SNR=2.7						
ULM				PKKPbc	PKKPbc	16 09 16.3	+0.2
	comp=Z,1.7nm,0.3s,baz=8.0,slow=1.0,SNR=3.2						
T25A	Trinidad	120.14	48	*e*PKPdf	PKPdf	15 59 05.6	+1.4
OGNE	Ogallala	120.34	43	PFAKE		15 59 20.0	+16
OGNE				LR	LR		
	comp=Z,374nm,20.0s						
AGMN	Agassiz Nation	120.49	33	PFAKE		15 59 20.0	+16
AGMN				LR	LR		
	comp=Z,679nm,22.0s						
MNTX	Cornudas Mount	121.20	54	*e*PKPdf	PKPdf	15 59 07.8	+1.6
MNTX				LR	LR		
	comp=Z,379nm,20.0s						
ECSD	EROS Data Cent	122.55	38	*e*PKPdf	PKPdf	15 59 08.2	-0.2
ECSD				LR	LR		
	comp=Z,449nm,22.0s						
EYMN	Ely	123.05	32	PFAKE		15 59 20.0	+11
EYMN				LR	LR		
	comp=Z,430nm,21.0s						
F36A	Milaca	123.20	35	*e*PKPdf	PKPdf	15 59 09.7	+0.1
TX31	Lajitas Ar. Si	123.31	57	*e*PKPdf	PKPdf	15 59 10.4	-0.1
TX31				*e*PKPdf	PKPdf	15 59 11.6	+1.1
TXAR	Lajitas Array	123.32	57	PKP	PKPdf	15 59 12.0	+1.6
	comp=Z,1.4nm,0.8s,baz=185,slow=2.6,SNR=8.9						
TXAR				PKKPbc	PKKPbc	16 09 01.1	+0.5
	comp=Z,0.8nm,0.6s,baz=124,slow=6.8,SNR=4.9						
TXAR	Lajitas Array	123.32	57	PKIKP	PKPdf	15 59 12.0	+1.6
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ESDC	Sonseca Array	124.12	317	PKPPKP	P'P'df	16 17 52.7	+4.7
	comp=Z,0.6nm,0.4s,baz=229,slow=20,SNR=8.9						
PAB	San Pablo	124.44	317	PFAKE		15 59 20.0	+7.7
PAB				LR	LR		
	comp=Z,271nm,21.0s						
KSU1	Kansas State U	124.89	43	PFAKE		15 59 20.0	+7.0
KSU1				LR	LR		
	comp=Z,506nm,20.0s						
WMOK	Wichita Mounta	125.28	49	PFAKE		15 59 30.0	+16
WMOK				LR	LR		
	comp=Z,430nm,20.0s						
G40A	Rib Lake	125.42	33	*e*PKPdf	PKPdf	15 59 14.0	+0.1
COWI	Conover	125.47	32	*e*PKPdf	PKPdf	15 59 14.2	+0.2
COWI				LR	LR		
	comp=Z,640nm,22.0s						
SCIA	State Center	125.64	38	PFAKE		15 59 30.0	+16
SCIA				LR	LR		
	comp=Z,540nm,22.0s						
JCT	Junction City	126.12	54	*e*PKPdf	PKPdf	15 59 16.4	+0.7
JCT				LR	LR		
	comp=Z,478nm,21.0s						
JCT	Junction City	126.12	54	*e*PKIKP	PKPdf	15 59 16.4	+0.7
JCT				MLR	MLR		
	comp=Z,478nm,21.0s						
P38A	Dawn	126.68	41	*e*PKPdf	PKPdf	15 59 17.1	+0.6
L40A	Anamosa	126.77	37	*e*PKPdf	PKPdf	15 59 16.7	+0.2
JFWS	Jewell Farm	126.84	36	PFAKE		15 59 30.0	+13
JFWS				LR	LR		
	comp=Z,562nm,20.0s						
TOA0	Torodi Ar. Sit	127.28	284	*e*PKPdf	PKPdf	15 59 18.2	0.0
TOA0				*e*PKPdf	PKPdf	15 59 19.0	+0.8
TORD	Torodi Ar. Bea	127.28	284	PKP	PKPdf	15 59 17.7	-0.6
	comp=Z,3.0nm,0.8s,baz=90,slow=2.9						
TOA1	Torodi Ar. Sit	127.28	284	*e*PKPdf	PKPdf	15 59 17.7	-0.6
MDT	Midelt	127.67	310	PKP	PKPdf	15 59 20.4	+1.7
	comp=Z,2.7nm,1.0s,baz=320,slow=3.4,SNR=2.7						
S39A	Bolivar	127.83	43	*e*PKPdf	PKPdf	15 59 19.3	+0.6
R40A	Maddies Statio	128.22	42	*e*PKPdf	PKPdf	15 59 20.0	+0.6
KVTX	Kingsville	128.70	57	PFAKE		15 59 30.0	+9.4
KVTX				LR	LR		
	comp=Z,519nm,19.0s						
HDIL	Hopedale	128.83	38	PFAKE		15 59 30.0	+9.5
HDIL				LR	LR		
	comp=Z,468nm,21.0s						
CCM	Cathedral Cave	129.03	41	*e*PKPdf	PKPdf	15 59 20.0	-0.9
CCM	Cathedral Cave	129.03	41	*e*PKIKP	PKPdf	15 59 20.0	-0.9
V40A	Witts Springs	129.13	45	*e*PKPdf	PKPdf	15 59 21.8	+0.5
MIAR	Mount Ida	129.21	47	*e*PKPdf	PKPdf	15 59 23.4	+2.0
MIAR				LR	LR		
	comp=Z,586nm,19.0s						
HKT	Hockley	129.50	53	*e*PKPdf	PKPdf	15 59 20.6	-1.4
HKT	Hockley	129.50	53	*e*PKIKP	PKPdf	15 59 20.6	-1.4
NATX	Nacogdoches	129.67	50	PFAKE		15 59 30.0	+7.6
NATX				LR	LR		
	comp=Z,450nm,19.0s						
AAM	Ann Arbor	130.94	32	PFAKE		15 59 40.0	+16
AAM				LR	LR		
	comp=Z,691nm,21.0s						
WVT	Waverly	132.37	41	*e*PKPdf	PKPdf	15 59 27.6	+0.3
WVT	Waverly	132.37	41	*e*PKIKP	PKPdf	15 59 27.6	+0.3
KOWA	Kowa	132.59	287	PKP	PKPdf	15 59 28.3	-0.1
	comp=Z,1.8nm,0.4s,baz=90,slow=4.0,SNR=7.0						
KOWA				SKPbc	SKPab	16 02 56.1	+2.1
	comp=Z,3.7nm,0.9s,baz=157,slow=6.7,SNR=4.7						
ACSO	Alum Creek Sta	132.73	34	PFAKE		15 59 40.0	+12
ACSO				LR	LR		
	comp=Z,303nm,21.0s						
PLAL	Pickwick Lake	132.85	43	*e*PKPdf	PKPdf	15 59 28.7	+0.4
PLCA	Paso Flores	132.91	159	PKP	PKPdf	15 59 30.6	+2.2
	comp=Z,7.1nm,0.7s,baz=258,slow=1.2,SNR=16						
PLCA				SKPbc	SKPab	16 02 56.5	+1.9
	comp=Z,3.3nm,0.8s,baz=300,slow=6.3,SNR=4.6						
PLCA	Paso Flores	132.91	159	*e*PKPdf	PKPdf	15 59 29.8	+1.4
PLCA				SKPbc	SKPab	16 02 56.5	+1.9
PLCA	Paso Flores	132.91	159	*e*PKIKP	PKPdf	15 59 29.8	+1.4
LONY	Lake Ozonia	133.41	24	PFAKE		15 59 40.0	+11
LONY				LR	LR		
	comp=Z,351nm,22.0s						
KIC	Kosan Boka	134.13	276	*e*PKIKP	PKPdf	15 59 32.9	+1.6
	comp=Z,41nm,1.1s						
DBIC	Dimbokro	134.23	276	PKP	PKPdf	15 59 32.8	+1.3
	comp=Z,6.0nm,0.6s,baz=75,slow=2.0,SNR=6.4						
CMIG	Matias Romero	134.36	69	PKP	PKPdf	15 59 33.3	+1.7
	comp=Z,2.1nm,0.8s,baz=262,slow=19,SNR=2.9						
TIC	Toumodi	134.39	276	*e*PKIKP	PKPdf	15 59 33.3	+1.5
LIC	Lamto	134.42	276	*e*PKIKP	PKPdf	15 59 33.3	+1.5
	comp=Z,31nm,0.6s						
LRAL	Lakeview Retre	134.68	44	*e*PKPdf	PKPdf	15 59 31.5	-0.2
PKME	Peaks-Kenny Pk	134.76	19	PFAKE		15 59 40.0	+8.5
PKME				LR	LR		
	comp=Z,420nm,21.0s						
BINY	Binghamton	134.79	27	*e*PKPpre	PKPpre	15 59 21.0	
BINY				*e*PKPdf	PKiKP	15 59 33.2	0.0
BINY				LR	LR		
	comp=Z,658nm,20.0s						
O56A	Blue Knob Stat	135.06	30	*e*PKPdf	PKPdf	15 59 31.5	-0.8
TKL	Tuckaleechee C	135.27	39	PKP	PKPdf	15 59 33.4	+0.5
	comp=Z,2.7nm,0.6s,baz=338,slow=10,SNR=4.6						
TKL	Tuckaleechee C	135.27	39	*e*PKPdf	PKPdf	15 59 36.5	+3.7
BRAL	Brewton	135.65	47	PFAKE		15 59 50.0	+16
BRAL				LR	LR		
	comp=Z,664nm,21.0s						
BLA	Blacksburg	136.26	35	PFAKE		15 59 50.0	+15
BLA				LR	LR		
	comp=Z,490nm,22.0s						
ODNJ	Ogdensburg	136.31	26	*e*PKPpre	PKPpre	15 59 21.2	
BRNJ	Basking Ridge	136.65	27	*e*PKPpre	PKPpre	15 59 21.9	
GOGA	Godfrey	136.87	42	PFAKE		15 59 50.0	+14
GOGA				LR	LR		
	comp=Z,497nm,22.0s						
CBN	Corbin Frederi	137.21	31	PFAKE		15 59 50.0	+14
CBN				LR	LR		
	comp=Z,679nm,22.0s						
TRQA	Tornquist	137.90	167	PFAKE		15 59 50.0	+12
TRQA				LR	LR		
	comp=Z,538nm,19.0s						
CMLA	Cha da Macela	138.37	330	PFAKE		15 59 50.0	+11
CMLA				LR	LR		
	comp=Z,334nm,19.0s						
CNNC	Cliffs of the	139.10	35	PFAKE		15 59 50.0	+10
CNNC				LR	LR		
	comp=Z,574nm,21.0s						
NHSC	New Hope	139.19	39	PFAKE		15 59 50.0	+10
NHSC				LR	LR		
	comp=Z,457nm,21.0s						
PAYG	Puerto Ayora	140.22	95	PFAKE		15 59 50.0	+7.4
PAYG				LR	LR		
	comp=Z,457nm,19.0s						
TCA	Tanti	143.44	160	*e*P	PKPbc	15 59 45.5	+0.3
AGUA	GUANDACOL	143.53	153	*i* P	PKPdf	15 59 47.1	-1.1
GO03	Copiap	144.28	149	*e*PKPdf	PKPdf	15 59 49.3	-0.2
VCA	Vinchina	144.30	153	*e*P	PKPdf	15 59 49.0	-0.6
JTS	JuntasAbangare	145.17	76	PKPbc	PKPdf	15 59 52.0	+0.7
	comp=Z,59nm,0.9s,baz=355,slow=4.7,SNR=19						
JTS	JuntasAbangare	145.17	76	*e*PKPbc	PKPdf	15 59 52.0	+0.7
JTS				LR	LR		
	comp=Z,384nm,21.0s						
ESPN	Las Esperanzas	145.43	73	*e*PKPdf	PKPbc	15 59 52.0	+0.3
CYA	Choya	145.59	156	*e*P	PKPdf	15 59 51.3	-0.4
PB14	IPOC Station P	146.56	146	*e*P	PKPab	15 59 58.0	+1.7
GO02	Mina Guanaco	146.58	148	*e*PKPdf	PKPbc	15 59 55.5	+0.1
AHML	Horco Molle	147.24	155	*i* P	PKPbc	15 59 58.0	+1.2
AHML				*e*P	PKPbc	15 59 58.1	+1.3
BBSR	BB Station	147.87	23	PFAKE		16 00 10.0	+9.3
BBSR				LR	LR		
	comp=Z,352nm,19.0s						
MTDJ	Mount Denham	149.58	58	PFAKE		16 00 10.0	+1.7
MTDJ				LR	LR		
	comp=Z,336nm,20.0s						
NNA	Nana	150.05	120	PKPbc	PKPbc	16 00 06.5	+2.1
	comp=Z,52nm,1.0s,baz=269,slow=1.3,SNR=7.7						
NNA	Nana	150.05	120	*e*PKPbc	PKPbc	16 00 06.5	+2.1
NNA				LR	LR		
	comp=Z,207nm,19.0s						
CPUP	Villa Florida	150.22	168	PKP	PKPdf	16 00 00.6	+1.3
	comp=Z,2.4nm,0.4s,baz=197,slow=0.6,SNR=5.4						
CPUP				PKPbc	PKPbc	16 00 05.5	+1.1
	comp=Z,19nm,0.8s,baz=161,slow=2.3,SNR=31						
CPUP	Villa Florida	150.22	168	*e*pPKPdf	PKPbc	16 00 03.4	-1.0
HJA	Humahuaca	150.31	152	*i* P	PKPbc	16 00 05.7	+0.5
BCIP	Isla Barro Col	150.33	77	PFAKE		16 00 10.0	-1.4
BCIP				LR	LR		
	comp=Z,425nm,21.0s						
PB11	IPOC Station P	150.74	141	*e*pPKPdf	PKPbc	16 00 04.5	-1.5
GTBY	Guantanamo Bay	150.74	53	PFAKE		16 00 10.0	-2.9
GTBY				LR	LR		
	comp=Z,430nm,20.0s						
SACV	Santiago Islan	150.77	296	PFAKE		16 00 10.0	-3.2
SACV				LR	LR		
	comp=Z,338nm,20.0s						
YJA	Yavi	151.14	150	*e*P	PKPbc	16 00 07.4	+0.1
MNMC	Minye Minye	151.24	140	*e*pPKPdf	PKPbc	16 00 05.7	-1.7
OTAV	Otavalo	152.09	95	PFAKE		16 00 10.0	+0.3
OTAV				LR	LR		
	comp=Z,282nm,19.0s						
GRTK	Grand Turk	152.83	46	PFAKE		16 00 10.0	-0.5
GRTK				LR	LR		
	comp=Z,348nm,20.0s						
LPAZ	La Paz	154.26	138	PKPbc	PKPbc	16 00 15.7	+1.1
	comp=Z,2.3nm,0.3s,baz=286,slow=2.4,SNR=5.7						
LPAZ	La Paz	154.26	138	*e*pPKPdf	PKPbc	16 00 11.2	-3.4
LPAZ	La Paz	154.26	138	*e*PKIKP	PKPbc	16 00 11.2	-3.4
SJG	San Juan	158.58	44	PFAKE		16 00 20.0	+8.9
SJG				LR	LR		
	comp=Z,317nm,22.0s						
SDV	Santo Domingo	159.27	73	PKP	PKPdf	16 00 14.2	+1.9
	comp=Z,11nm,0.3s,baz=341,slow=7.4,SNR=3.2						
SDV	Santo Domingo	159.27	73	PFAKE		16 00 20.0	+7.7
SDV				LR	LR		
	comp=Z,458nm,20.0s						
ANWB	Willy Bob	161.72	36	PFAKE		16 00 30.0	+15
ANWB				LR	LR		
	comp=Z,367nm,21.0s						
SAML	Samuel	162.82	133	*e*PKPdf	PKPdf	16 00 16.9	+1.0
SAML				LR	LR		
	comp=Z,529nm,21.0s						
SAML	Samuel	162.82	133	*e*PKIKP	PKPdf	16 00 16.9	+1.0
SAML				MLR	MLR		
	comp=Z,529nm,21.0s						
GRGR	Grenville	165.77	49	PFAKE		16 00 30.0	+12
GRGR				LR	LR		
	comp=Z,487nm,20.0s						
PTGA	Pitinga	170.01	111	*e*PKPdf	PKPdf	16 00 22.6	+1.1
PTGA				LR	LR		
	comp=Z,12µm,22.0s						

DJA 12 15:55:14.7±0.6**, 3°S**±4°×**12°9E**±°**, h10^{km}, M3.9**/6**, mb4.5**/1**, MLv3.6**/6**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.77	217	P	Pg	15 55 29.5	-0.2
MSAI				S	Sb	15 55 40.4	-0.5
AAI	Ambon	1.53	231	P	Pn	15 55 41.9	-0.2
AAI				S	Sg	15 56 03.4	-0.7
NLAI	Namlea	2.34	257	P	Pn	15 55 53.8	+0.5
LBMI	Labuha	2.80	318	P	Pn	15 56 00.2	+0.6
APSI	Ampana	7.94	283	P	Pn	15 57 10.1	-0.2

IDC 12 16:03:01.4±3.6**, 5°.16S**×**104°.08E, h0^{km}, mb3.5**/6**, mb1 3.6**/6**, mb1mx3.4**/67**, mbtmp3.5**/6**, MS4.0**/1**, Ms1 4.0**/1**, ms1mx3.2**/47**, Error ellipse: s-maj=157.5km s-min=21.1km az=54.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	24.01	348	P	P	16 08 17.1	-0.9
	0.5nm,0.4s,baz=182,slow=9.3,SNR=4.3						
WRA	Warramunga Arr	32.90	119	P	P	16 09 38.2	+0.5
	0.2nm,0.4s,baz=308,slow=8.8,SNR=8.7						
ASAR	Alice Springs	34.12	126	P	P	16 09 47.4	-0.9
	0.1nm,0.4s,baz=292,slow=7.3,SNR=7.3						
JAY	Jayapura	36.64	87	LR	LR	16 28 03.8	
	comp=Z,190nm,18.8s,baz=156,slow=41						
SONM	Songino Array	52.81	2	P	P	16 12 18.6	-0.1
	0.4nm,0.7s,baz=179,slow=13,SNR=2.5						
KURBB	Kurchatov Arra	59.77	341	P	P	16 13 07.5	-0.6
	0.5nm,0.8s,baz=160,slow=8.9,SNR=2.6						
ZALV	Zalesovo Beam	61.07	347	P	P	16 13 18.3	+1.3
	0.4nm,0.5s,baz=149,slow=5.9,SNR=3.8						

IDC ***12*** *16:13:06.0±0.6, 58°.04N×32°.17W, h0^{km}, mb4.0/24, mb1 4.1/27, mb1mx3.9/74, mbtmp4.0/27, ML3.1/3, MS3.7/7, Ms1 3.7/7, ms1mx3.3/63, Error ellipse: s-maj=18.5km s-min=12.0km az=9.0*

ISCJB ***12*** *16:13:07.2±0.2, 58°.19N±0°.05×32°.05W±0°.05, h14^{km}, mb4.3/63, MS3.8/12, Error ellipse: s-maj=7.8km s-min=3.8km az=0.7*

CSEM ***12*** *16:13:07.8±0.1, 58°.14N×32°.00W, h10^{km}, mb4.5/33, Error ellipse: s-maj=8.1km s-min=3.9km az=179.0*

NEIC ***12*** *16:13:08.1±0.2, 58°.13N×32°.00W, h10^{km}, mb4.5/35, Error ellipse: s-maj=7.4km s-min=3.7km az=179.0*

ISC 12 16:13:08.8±0.4**, 58°.17N**±0°.08×**32°.09W**±0°.05**, h14^{km}, n142,** σ1^{s}**23**/130**, mb4.3**/63**, MS3.8**/12**, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRS	Narsarsuaq	7.38	300	*e*Pn	Pn	16 14 57.0	+1.0
NRS				*e*Sn	Sn	16 16 08.5	-11
NRS	Narsarsuaq	7.38	300	*e*Pn	Pn	16 14 57.0	+1.0
NRS				*e*Sn	Sn	16 16 08.5	-11
ANGG	Ammassalik, Gr	7.91	343	*e*Pn	Pn	16 15 03.1	-0.1
BORG	Borgarnes	8.36	33	*e*Pn	Pn	16 15 11.3	+2.0
BORG	Borgarnes	8.36	33	*e*Pn	Pn	16 15 11.4	+2.0
SFJD	Kangerlussuaq	12.24	324	LR	LR	16 20 02.0	
	comp=Z,393nm,19.2s,baz=98,slow=34						
ILULI	Ilulissat	13.82	331	*e*Pn	Pn	16 16 20.7	-3.3
SUMG	Summit	14.69	352	*e*Pn	Pn	16 16 36.8	+0.6
EKA	Eskdalemuir Ar	16.06	88	Pn	Pn	16 16 53.5	-0.5
	baz=297,slow=9.5,SNR=1.8						
JMIC	Jan Mayen	16.18	28	LR	LR	16 21 18.5	
	comp=Z,94nm,21.1s,baz=249,slow=30						
FRB	Frobisher Bay	18.35	303	P	P	16 17 21.4	-1.2
	0.1nm,0.3s,baz=101,slow=12,SNR=3.9						
SCHQ	Schefferville	19.33	275	P	P	16 17 32.7	-0.7
	0.2nm,0.3s,baz=73,slow=11,SNR=3.9						
SCHQ				LR	LR	16 23 39.2	
	comp=Z,336nm,19.8s,baz=84,slow=33						
SCHQ	Schefferville	19.33	275	*e*P	Pn	16 17 34.1	-0.4
	60nm,2.0s						
NC204	NORSAR Array S	21.53	64	*e*P	P	16 17 55.0	-2.3
NBO00	NORSAR Array S	21.59	64	*e*P	P	16 17 57.8	-0.1
NAO01	NORSAR Array S	21.68	65	*e*P	P	16 17 56.3	-2.5
NB2	NORSAR Subarra	21.80	64	P	P	16 18 00.7	+0.6
	comp=Z,25nm,2.0s,baz=282,slow=10						
NOA	NORSAR Array B	21.80	64	LR	LR	16 25 00.0	
	comp=Z,126nm,21.6s,baz=80,slow=33						
NB201	NORSAR Array S	21.83	64	*e*P	P	16 18 01.1	+0.7
NC303	NORSAR Array S	21.83	64	*e*P	P	16 18 01.6	+1.2
NC602	NORSAR Array S	22.02	65	*e*P	P	16 18 02.0	-0.4
NC405	NORSAR Array S	22.02	64	*e*P	P	16 18 02.8	+0.4
UCC	Uccle	22.20	94	*e*P	P	16 18 04.6	+0.2
	comp=Z,45nm,1.4s						
HFS	Hagfors	23.20	66	P	P	16 18 14.9	+0.1
	comp=Z,3.6nm,0.9s,baz=238,slow=8.5,SNR=4.5						
ESDC	Sonseca Array	25.85	123	P	P	16 18 37.2	-2.5
	comp=Z,0.2nm,0.4s,baz=323,slow=8.7,SNR=8.7						
ESLA	Sonseca Array	25.85	123	*e*P	P	16 18 42.5	+2.8
	comp=Z,9.9nm,1.3s						
ES19	SONSECA Array	25.86	123	*e*P	P	16 18 40.1	+0.3
GRFO	Grafenberg	26.46	90	*e*P	P	16 18 46.7	+1.6
	comp=Z,8.8nm,1.0s						
CLL	Collm	26.49	85	*e*P	P	16 18 46.0	+0.6
ARA0	ARCESS Array S	26.65	41	*e*P	P	16 18 45.3	-1.4
ARCES	ARCESS Array B	26.65	41	P	P	16 18 45.3	-1.4
	comp=Z,1.7nm,0.8s,baz=268,slow=8.6,SNR=4.8						
NKC	Novy Kostel	26.80	88	AMS	AMS	16 29 00.0	
	comp=Z,300nm,17.1s						
DAVOX	Davos/Dischmat	27.52	96	LR	LR	16 29 36.1	
	comp=Z,177nm,19.5s,slow=36						
PVCC	Panska Ves	27.75	86	AMS	AMS	16 30 30.0	
	comp=Z,200nm,19.9s						
KHC	Kasperske Hory	28.03	89	AMS	AMS	16 29 20.0	
	comp=Z,200nm,19.7s						
PRU	Pruhonice	28.04	86	AMS	AMS	16 30 20.0	
	comp=Z,300nm,16.7s						
TRQ	Mont Tremblant	28.14	264	*e*P	P	16 19 01.1	+0.7
GOPC	GO Pecny, Ondr	28.21	86	AMS	AMS	16 30 30.0	
	comp=Z,300nm,16.5s						
UPC	Upice	28.52	84	AMS	AMS	16 31 20.0	
	comp=Z,200nm,15.9s						
FIA0	FINESS Array S	28.59	59	*e*P	P	16 19 03.7	-0.3
FINES	FINESS Array B	28.59	59	P	P	16 19 03.7	-0.3
	comp=Z,2.3nm,0.9s,baz=265,slow=9.6,SNR=4.6						
FIA1	FINESS Array S	28.59	59	*e*P	P	16 19 03.6	-0.4
DPC	Dobruska-Polom	28.78	84	AMS	AMS	16 31 20.0	
	comp=Z,200nm,15.3s						
OKC	Ostrava-Krasne	30.03	84	AMS	AMS	16 32 30.0	
	comp=Z,200nm,15.5s						
PLVO	Plevna	30.25	264	*e*P	P	16 19 20.4	+1.5
	comp=Z,7.2nm,1.3s						
OJC	Ojcow	30.68	82	*e*P	P	16 19 21.5	-1.2
	comp=Z,26nm,2.0s						
MDT	Midelt	31.43	132	LR	LR	16 30 35.6	
	comp=Z,45nm,21.0s,baz=32,slow=34						
PSZ	Piszkesteto	32.11	86	*e*P	P	16 19 35.6	+0.3
	comp=Z,4.7nm,0.9s						
O56A	Blue Knob Stat	34.39	259	*e*P	P	16 19 57.0	+1.7
	comp=Z,18nm,1.5s						
E43A	Lone Tree Farm	34.63	275	*e*P	P	16 19 59.0	+1.8
	comp=Z,8.3nm,1.3s						
DIVS	Divibare	34.64	91	*e*P	P	16 19 56.7	-0.8
	comp=Z,2.2nm,0.9s						
BUR08	Bucovina Ar. S	35.08	82	*e*P	P	16 20 00.9	-0.3
BUR04	Bucovina Ar. S	35.10	82	*e*P	P	16 20 02.1	+0.7
KIEV	Kiev	35.29	75	*e*P	P	16 20 02.2	-0.6
	comp=Z,5.1nm,1.1s						
AKASG	Malin Array Be	35.29	75	P	P	16 20 01.9	-0.9
	comp=Z,1.3nm,0.7s,baz=307,slow=8.1,SNR=4.8						
AKBB	Malin Array Si	35.29	75	*e*P	P	16 20 02.2	-0.6
	comp=Z,5.3nm,1.1s						
COWI	Conover	35.94	276	*e*P	P	16 20 08.7	+0.2
	comp=Z,4.7nm,0.9s						
EYMN	Ely	35.99	280	*e*P	P	16 20 09.1	+0.2
	comp=Z,10.0nm,1.1s						
FFC	Flin Flon	37.20	296	*e*P	P	16 20 17.8	-1.4
	comp=Z,2.5nm,0.6s						
FNA	Florina	37.69	94	*e*P	P	16 20 22.7	-0.8
	comp=Z,9.2nm,1.1s						
YKA	Yellowknife Ar	38.45	312	P	P	16 20 29.3	-0.3
	comp=Z,1.1nm,0.7s,baz=62,slow=9.2,SNR=3.5						
YKB5	Yellowknife Ar	38.45	312	*e*P	P	16 20 29.3	-0.3
J36A	Seneca 1, Swea	40.54	277	*e*P	P	16 20 48.6	+1.3
	comp=Z,10nm,1.0s						
INK	Inuvik	41.56	327	P	P	16 20 55.8	+0.5
	comp=Z,1.8nm,0.7s,baz=25,slow=6.8,SNR=3.6						
INK	Inuvik	41.56	327	*e*P	P	16 20 55.8	+0.5
	comp=Z,15nm,1.8s						
W50A	Signal Mountai	41.71	260	*e*P	P	16 20 58.2	+1.2
	comp=Z,5.0nm,0.7s						
LAO	LASA Array	44.37	289	*e*P	P	16 21 20.5	+2.1
	comp=Z,8.4nm,0.9s						
TAM	Tamanrasset	44.44	126	*e*P	P	16 21 19.5	+0.2
	comp=Z,6.6nm,1.3s						
BR101	Keskin Array S	44.94	84	*e*P	P	16 21 24.6	+1.5
BRTR	Keskin Array B	44.94	84	P	P	16 21 24.6	+1.5
	comp=Z,2.7nm,0.9s,baz=324,slow=6.1,SNR=15						

V40A	Witts Springs	45.21	268	*e*P	P	16 21 26.0	+0.8
	comp=Z,6.8nm,0.8s						
W39A	Magazine	46.18	268	*e*P	P	16 21 33.4	+0.6
	comp=Z,11nm,1.2s						
DAWY	Dawson	46.18	324	*e*P	P	16 21 33.6	+1.0
	comp=Z,3.8nm,0.9s						
X40A	Basin Creek Fa	46.22	267	*e*P	P	16 21 33.8	+0.6
	comp=Z,6.3nm,0.8s						
MIAR	Mount Ida	46.56	267	*e*P	P	16 21 36.8	+0.9
	comp=Z,13nm,1.4s						
KBZ	Khabaz	46.87	74	P	P	16 21 39.3	+1.1
	comp=Z,1.1nm,0.3s,baz=338,slow=5.4,SNR=4.6						
BOZ	Bozeman (W)	47.82	291	*e*P	P	16 21 45.5	-0.3
	comp=Z,2.6nm,0.8s						
IL1	Eielson Array	47.86	328	*e*P	P	16 21 45.6	0.0
ILAR	Eielson Array	47.86	328	P	P	16 21 46.2	+0.7
	comp=Z,2.5nm,0.8s,baz=34,slow=6.7,SNR=17						
ILAR				PcP	PcP	16 23 13.3	-0.6
	comp=Z,0.7nm,0.6s,baz=6.1,slow=2.8,SNR=6.4						
ILB	Eielson Array	47.86	328	*e*P	P	16 21 46.2	+0.7
ILB				*e*PcP	PcP	16 23 13.3	-0.6
MDM	Murphy Dome	48.08	329	*e*P	P	16 21 47.2	-0.1
	comp=Z,5.7nm,0.9s						
KOWA	Kowa	48.41	142	P	P	16 21 50.3	-0.1
	comp=Z,4.6nm,1.0s,baz=326,slow=7.3,SNR=4.3						
PD31	Pinedale Array	48.82	287	*e*P	P	16 21 52.4	-1.2
PDAR	Pinedale Array	48.82	287	P	P	16 21 52.4	-1.2
	comp=Z,0.6nm,0.5s,baz=60,slow=13,SNR=3.3						
PNT	Penticton	48.99	300	*e*P	P	16 21 55.5	+1.0
WMOK	Wichita Mounta	49.17	272	*e*P	P	16 21 57.5	+1.4
	comp=Z,2.6nm,0.8s						
AKTO	Aktyubinsk	49.36	57	P	P	16 21 57.8	+0.5
	comp=Z,3.3nm,0.7s,baz=317,slow=9.3,SNR=7.5						
ABKAR	Akbulak array	51.07	57	*e*P	P	16 22 10.3	0.0
ABKAR				*e*PcP	PcP	16 23 25.3	-0.6
TOA1	Torodi Ar. Sit	51.63	136	*e*P	P	16 22 12.5	-2.3
TOA1	Torodi Ar. Sit	51.63	136	*e*P	P	16 22 12.5	-2.3
TOA0	Torodi Ar. Sit	51.63	136	*e*P	P	16 22 13.2	-1.7
TOA0	Torodi Ar. Sit	51.63	136	*e*P	P	16 22 13.2	-1.7
TORD	Torodi Ar. Bea	51.63	136	P	P	16 22 12.5	-2.3
	comp=Z,3.5nm,1.0s,baz=336,slow=6.6						
BVAR	Borovoye Array	52.65	48	P	P	16 22 22.9	+0.9
	comp=Z,3.1nm,0.8s,baz=291,slow=6.0,SNR=13						
MOD	Modoc Plateau	54.79	294	*e*P	P	16 22 39.1	+1.1
	comp=Z,3.6nm,0.9s						
KVN	Kaiserville	55.89	290	*e*P	P	16 22 46.0	0.0
	comp=Z,3.7nm,0.8s						
TXAR	Lajitas Array	55.97	272	P	P	16 22 45.7	-0.9
	comp=Z,0.8nm,0.8s,baz=72,slow=6.7,SNR=5.3						
PAHR	Pah Rah Range	56.02	292	*e*P	P	16 22 48.3	+1.4
	comp=Z,5.1nm,1.0s						
NV01	Mina Array Sit	56.47	290	*e*P	P	16 22 49.6	-0.6
NVAR	Mina Array Bea	56.47	290	P	P	16 22 49.9	-0.3
	comp=Z,0.6nm,0.6s,baz=56,slow=5.5,SNR=5.3						
GNO	Genoa	56.85	291	*e*P	P	16 22 49.3	-3.5
WDC	Whiskeytown Da	56.88	295	*e*P	P	16 22 55.0	+2.1
ZAA1	Zalesovo Array	57.16	39	*e*P	P	16 22 55.3	+0.7
ZALV	Zalesovo Beam	57.16	39	P	P	16 22 55.3	+0.7
	comp=Z,0.6nm,0.5s,baz=306,slow=10.0,SNR=2.1						
KURK	Kurchatov	57.62	45	*e*P	P	16 22 57.8	-0.1
KURBB	Kurchatov Arra	57.66	45	P	P	16 22 57.8	-0.4
	comp=Z,2.9nm,0.9s,baz=322,slow=7.2,SNR=20						
GEYT	Alibeck	58.83	68	P	P	16 23 08.0	+1.3
	comp=Z,0.5nm,0.4s,baz=302,slow=14,SNR=2.4						
GLA	Glamis	58.89	283	*e*P	P	16 23 07.9	+0.8
	comp=Z,9.7nm,1.0s						
CTCC	Cactus City	59.02	285	*e*P	P	16 23 04.2	-3.7
TJR	Tejon Ranch	59.34	288	*e*P	P	16 23 08.5	-1.6
CHFC	Chilao Flat St	59.52	287	*e*P	P	16 23 12.4	+0.8
MK31	Makanchi Array	62.23	45	*e*P	P	16 23 29.6	-0.1
MK32	Makanchi Array	62.23	45	*e*P	P	16 23 29.9	+0.2
MKAR	Makanchi Array	62.23	45	P	P	16 23 29.9	+0.2
	comp=Z,1.7nm,0.7s,baz=337,slow=6.1,SNR=15						
MKAR	Makanchi Array	62.23	45	*e*P	P	16 23 29.2	-0.5
	comp=Z,12nm,0.7s						
MK01	Makanchi Array	62.26	45	*e*P	P	16 23 29.3	-0.5
KSH	Kashi	65.77	54	*e*P	P	16 23 55.7	+2.5
KSH				*e*PcP	PcP	16 24 27.6	+3.3
KSH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
WMQ	Urumqi	66.76	43	P	P	16 24 01.8	+2.4
H10S1	ASCENSION HYDR	68.38	161	T	T	17 38 23.0	
	baz=350,slow=75,SNR=5.5						
H10S3	ASCENSION HYDR	68.38	161	T	T	17 38 23.1	
	baz=350,slow=75,SNR=5.0						
H10S2	ASCENSION HYDR	68.39	161	T	T	17 38 26.7	
	baz=350,slow=75,SNR=5.1						
SONA1	Songino Array	68.93	29	*e*P	P	16 24 13.0	-0.1
SONA0	Songino Array	68.94	29	*e*P	P	16 24 12.9	-0.2
SONM	Songino Array	68.94	29	P	P	16 24 12.9	-0.2
	comp=Z,2.3nm,1.0s,baz=328,slow=8.2,SNR=13						
ULN	Ulaanbaatar	69.08	28	*e*P	P	16 24 14.4	+0.4
	comp=Z,3.6nm,0.9s						
GTA	Gaotai	74.81	37	*e*P	P	16 24 48.7	+0.2
GTA				pP	pP	16 24 53.3	+0.2
GTA				sP	sP	16 24 55.8	+1.0
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
HHC	Hu-ho-hao-te	76.78	28	*e*P	P	16 24 59.6	-0.1
HHC				sP	PcP	16 25 12.5	+1.6
HHC				S	S	16 34 45.5	-0.7
HHC				pmax	pmax		
	comp=Z,12nm,0.9s						
HHC				pmax	pmax		
	comp=Z,140nm,5.6s						
NNA	Nana	78.86	225	LR	LR	16 58 40.7	
	comp=Z,241nm,21.5s,baz=225,slow=35						
LZH	Lanzhou	79.11	35	*e*P	P	16 25 12.1	-0.7
LZH				pP	pP	16 25 16.6	-0.8
LZH				sP	sP	16 25 19.2	+0.1
LZH				*e*PP	PP	16 28 39.7	+28
LZH				pmax	pmax		
	comp=Z,18nm,0.9s						
LZH				pmax	pmax		
	comp=Z,340nm,5.0s						
KSRS	Korea Array	83.27	16	P	P	16 25 34.5	-0.1
	comp=Z,1.1nm,0.6s,baz=353,slow=5.5,SNR=9.3						
KS15	Wonju Array Si	83.27	16	*e*P	P	16 25 34.5	-0.2
KSAR	Wonju Array Be	83.27	16	P	P	16 25 34.5	-0.2
NJ2	Nanjing	86.87	24	*e*P	P	16 25 52.1	-0.7
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
GYA	Guiyang	88.93	36	*e*P	P	16 26 02.0	-0.9
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CM31	Chiang Mai Arr	93.63	46	*e*P	P	16 26 24.8	+0.1
CMAR	Chiang Mai Arr	93.63	46	P	P	16 26 24.8	+0.1
	comp=Z,0.5nm,0.7s,baz=311,slow=4.4,SNR=5.1						
SNAA	Sanae	131.16	168	PKP	PKPdf	16 32 17.8	-0.8
	comp=Z,0.7nm,0.7s,baz=2.0,slow=4.1,SNR=5.7						
WRA	Warramunga Arr	140.55	20	PKhKP	PKPpre	16 32 31.8	
	comp=Z,0.2nm,0.9s,baz=342,slow=2.4,SNR=1.6						
WRA				PKP	PKPdf	16 32 37.3	-0.2
	comp=Z,0.7nm,0.7s,baz=330,slow=2.4,SNR=9.1						
WR1	Warramunga Arr	140.55	20	*e*PKPpre	PKPpre	16 32 31.8	
WR1				*e*PKPdf	PKPdf	16 32 37.3	-0.2
AS31	Alice Springs	144.09	22	*e*PKPdf	PKPab	16 32 40.8	-0.5
ASAR	Alice Springs	144.09	22	PKP	PKPab	16 32 40.8	-0.5
	comp=Z,0.8nm,0.7s,baz=350,slow=2.5,SNR=17						
QSPA	South Pole Qui	148.07	180	PKPbc	PKPbc	16 32 51.0	-1.3
	comp=Z,1.7nm,0.9s,baz=153,slow=2.8,SNR=4.6						

MEX 12 16:16:32.8±0.3**, 18°.81N**×**102°.78W, h56**^{km}±29^{km}**, MD3.6, Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMIG	Aquila	0.75	226	*e*P	Pn	16 16 46.0	-1.5
MMIG				*i* S	Sn	16 16 56.4	-1.8
ZIIG	Zihuatanejo	1.73	134	*e*P	Pn	16 16 59.1	-1.4
ZIIG				*i* S	Sn	16 17 19.5	-2.0
ARIG	Puente Sto Nin	2.36	103	*e*P	Pn	16 17 08.4	-0.9
ARIG				*i* S	Sn	16 17 34.8	-2.2

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*ISCJB **12** 16:18:56.8±0.3, 29°.14S±0°.06×75°.00E±0°.07, h10^{km}, mb4.5/46, Error ellipse: s-maj=9.6km s-min=7.9km az=141.8*

*IDC **12** 16:18:57.1±0.5, 29°.08S×74°.99E, h0^{km}, mb4.1/19, mb1 4.2/19, mb1mx4.1/66, mbtmp4.1/19, Error ellipse: s-maj=17.5km s-min=16.3km az=71.0*

*NEIC **12** 16:18:58.6±0.2, 29°.10S×74°.95E, h10^{km}, mb4.8/28, Error ellipse: s-maj=7.1km s-min=5.6km az=45.0*

*GCMT **12** 16:18:58.6±0.4, 29°.05S×74°.96E, h18^{km}±1^{km}, MW4.9/67, Moment Tensor Solution. s17,c22; s67,c103; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-3.35±.25; M$_{\theta\theta}$1.32±.15; M$_{\phi\phi}$2.03±.15; M$_{r\theta}$-0.06±.36; M$_{\theta\phi}$-1.26±.09; M$_{\phi r}$-0.31±.34; Best double couple: M$_0$3.18200×10^{16} NP1:φ$_s$326.00000°, δ47.00000°, λ-85.00000°. NP2: φ$_s$139.00000°, δ43.00000°, λ-95.00000°. Principal axes: T 2.9920, Plg2.0000°, Azm53.0000°; N 0.3800, Plg4.0000°, Azm143.0000°; P -3.3720, Plg86.0000°, Azm294.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 12 16:18:58.7±0.4**, 29°.12S**±0°.09×**74°.97E**±0°.10**, h10**^{km}**, n79, σ0^{s}.77**/73**, mb4.6**/46**, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S2	Diego Garcia H	21.49	353	T	T	16 46 03.1	
	baz=174,slow=77,SNR=92						
H08S1	Diego Carcia H	21.49	353	T	T	16 46 03.8	
	baz=174,slow=77,SNR=63						
H08S3	Diego Garcia H	21.51	353	T	T	16 46 11.8	
	baz=174,slow=77,SNR=154						
H01W2	Cape Leeuwin H	33.55	110	T	T	17 00 56.2	
	baz=269,slow=74,SNR=28						
H01W3	Cape Leeuwin H	33.55	110	T	T	17 01 08.7	
	baz=269,slow=74,SNR=24						
H01W1	Cape Leeuwin H	33.57	110	T	T	17 01 01.8	
	baz=269,slow=74,SNR=31						
MAW	Mawson	39.19	187	*e*P	P	16 26 25.9	-0.6
	2.0nm,1.3s						
BOSA	Boshof	43.27	258	P	P	16 27 02.0	+1.2
	0.9nm,0.3s,baz=90,slow=6.1,SNR=3.3						
LSZ	Lusaka	45.17	277	P	P	16 27 16.9	+0.8
	1.5nm,0.6s,baz=108,slow=6.3,SNR=4.1						
LSZ	Lusaka	45.17	277	*e*P	P	16 27 16.0	-0.1
	34nm,2.0s						
SBUM	Sibu	47.52	55	*e*P	P	16 27 35.1	+0.7
	19nm,1.6s						
ASAR	Alice Springs	52.61	99	P	P	16 28 13.3	+0.3
	6.9nm,1.2s,baz=253,slow=6.4,SNR=20						
AS31	Alice Springs	52.61	99	*e*P	P	16 28 12.4	-0.7
	4.2nm,1.5s						
CM01	Chiang Mai Arr	52.63	29	*e*P	P	16 28 13.4	+0.3
AS01	Alice Springs	52.65	99	*e*P	P	16 28 13.2	-0.2
CM31	Chiang Mai Arr	52.66	29	*e*P	P	16 28 13.4	+0.2
CMAR	Chiang Mai Arr	52.66	29	P	P	16 28 13.8	+0.5
	2.6nm,1.0s,baz=212,slow=7.9,SNR=14						
CHTO	Chiang Mai	52.98	29	*e*P	P	16 28 16.2	+0.6
	13nm,1.4s						
CHTO	Chiang Mai	52.98	29	P	P	16 28 17.5	+1.9
	34nm,1.3s						
CMMT	Chiang Mai	52.98	29	P	P	16 28 17.4	+1.8
	7.5nm,1.3s						
WR1	Warramunga Arr	54.30	95	*e*P	P	16 28 25.6	+0.1
	18nm,1.4s						
WRA	Warramunga Arr	54.30	95	P	P	16 28 25.6	+0.1
	6.7nm,1.0s,baz=250,slow=6.8,SNR=21						
WB2	Warramunga Arr	54.31	95	*e*P	P	16 28 25.7	+0.1
	18nm,1.3s						
WRAB	Tennant Creek	54.31	95	*e*P	P	16 28 25.4	-0.1
	9.2nm,1.0s						
MTN	Manton Dam	54.40	85	*e*P	P	16 28 26.5	+0.3
	15nm,1.4s						
STKA	Stephens Creek	56.65	111	P	P	16 28 42.4	+0.2
	4.8nm,0.9s,baz=326,slow=1.0,SNR=5.2						
STKA	Stephens Creek	56.65	111	*e*P	P	16 28 42.1	-0.2
	10nm,1.9s						
SHL	Shillong	56.75	18	*e*P	P	16 28 42.5	-0.5
	20nm,1.1s						
SNAA	Sanae	58.82	201	P	P	16 28 57.6	+0.6
	2.7nm,1.0s,baz=90,slow=5.9,SNR=5.8						
SNAA	Sanae	58.82	201	*e*P	P	16 28 57.4	+0.4
	9.1nm,1.5s						
RAYN	Ar Rayn	59.53	328	*e*P	P	16 29 02.7	+0.3
	9.1nm,1.4s						
LSA	Lhasa	60.49	16	*e*P	P	16 29 10.8	+1.4
	17nm,1.6s						
QSPA	South Pole Qui	61.02	180	P	P	16 29 11.9	-0.4
	1.4nm,0.5s,baz=320,slow=3.6,SNR=11						
VNDA	Vanda	61.12	166	P	P	16 29 12.2	-0.5
	2.5nm,1.0s,baz=270,slow=7.6,SNR=7.4						
VNDA	Vanda	61.12	166	*e*P	P	16 29 13.3	+0.7
	14nm,1.4s						
CAN	Canberra	61.60	117	*e*P	P	16 29 15.9	-0.7
	70nm,2.0s						
SBA	Scott Base	62.14	166	*e*P	P	16 29 20.1	+0.6
	31nm,1.9s						
KBL	Kabul	63.56	355	*e*P	P	16 29 28.3	-1.4
	3.0nm,0.6s						
CTAO	Charters Tower	64.58	100	*e*P	P	16 29 36.5	-0.1
	28nm,1.6s						
AAK	Ala-Archa	71.40	360	*e*P	P	16 30 19.7	+0.7
	8.3nm,1.4s						
WHZ	Wether Hill Ro	71.65	133	*e*P	P	16 30 22.0	+1.4
	180nm,1.9s						
KKAR	Karatay Array	71.98	357	*e*P	P	16 30 23.2	+0.9
LTZ	Lake Taylor	75.77	131	*e*P	P	16 30 43.5	-1.3
	70nm,1.6s						
MK01	Makanchi Array	75.82	5	*e*P	P	16 30 43.4	-1.3
MK32	Makanchi Array	75.85	5	*e*P	P	16 30 43.9	-1.0
MKAR	Makanchi Array	75.85	5	P	P	16 30 43.9	-1.0
	1.7nm,1.0s,baz=193,slow=8.7,SNR=7.3						
BR101	Keskin Array S	78.55	329	*e*P	P	16 31 00.8	+0.4
BR131	Keskin Array S	78.55	329	*e*P	P	16 30 59.0	-1.3
BRTR	Keskin Array B	78.55	329	P	P	16 31 00.8	+0.4
	0.7nm,0.8s,baz=191,slow=5.9,SNR=4.1						
BJT	Baijiatuau	78.72	31	*e*P	P	16 31 00.9	-0.3
	8.3nm,1.0s						
ABKAR	Akbulak array	79.17	350	*e*P	P	16 31 03.5	+0.2
KURBB	Kurchatov Arra	79.45	2	P	P	16 31 04.7	-0.2
	0.7nm,0.7s,baz=195,slow=5.0,SNR=6.0						
KURK	Kurchatov	79.55	2	*e*P	P	16 31 04.7	-0.7
SONA0	Songino Array	81.64	21	*e*P	P	16 31 17.2	+0.3
SONM	Songino Array	81.64	21	P	P	16 31 17.2	+0.3
	0.7nm,0.8s,baz=211,slow=6.1,SNR=7.2						
SONA1	Songino Array	81.66	21	*e*P	P	16 31 16.9	0.0
ULN	Ulaanbaatar	81.88	21	*e*P	P	16 31 18.0	-0.2
	8.0nm,1.7s						
BVAR	Borovoye Array	81.89	357	P	P	16 31 16.3	-1.6
	0.8nm,0.6s,baz=134,slow=8.3,SNR=6.2						
BRVK	Borovoye	81.93	357	*e*P	P	16 31 18.1	0.0
	3.2nm,0.9s						
TOA0	Torodi Ar. Sit	82.19	290	*e*P	P	16 31 19.3	-1.1
TORD	Torodi Ar. Bea	82.19	290	P	P	16 31 19.5	-0.9
	1.6nm,1.0s,baz=127,slow=5.3						
TOA1	Torodi Ar. Sit	82.20	290	*e*P	P	16 31 19.5	-0.9
KSAR	Wonju Array Be	82.71	40	P	P	16 31 23.1	+0.5
KSRS	Korea Array	82.74	40	P	P	16 31 23.1	+0.4
	0.6nm,0.6s,baz=222,slow=4.3,SNR=3.1						
ALN	Alexandroupoli	83.10	325	*e*P	P	16 31 25.1	+0.6
	12nm,1.9s						
ZAA0	Zalesovo Array	83.16	6	*e*P	P	16 31 23.8	-0.6
	4.8nm,1.1s						
ZALV	Zalesovo Beam	83.16	6	P	P	16 31 23.9	-0.6
	0.8nm,0.6s,baz=144,slow=5.3,SNR=4.8						
ZALV	Zalesovo Beam	83.16	6	*e*P	P	16 31 23.3	-1.2
ZAA1	Zalesovo Array	83.17	6	*e*P	P	16 31 23.9	-0.6
ARU	Arti	86.34	351	*e*P	P	16 31 39.2	-1.3
	20nm,1.9s						
MLR	Muntele Rosu	86.59	328	P	P	16 31 42.1	0.0
	0.9nm,0.7s,baz=145,slow=12,SNR=7.1						
BUR04	Bucovina Ar. S	88.52	329	*e*P	P	16 31 51.7	+0.4
AKASG	Malin Array Be	89.16	333	P	P	16 31 54.6	+0.5
	0.2nm,0.3s,baz=125,slow=4.9,SNR=5.4						
AKBB	Malin Array Si	89.16	333	*e*P	P	16 31 53.9	-0.2
	3.0nm,0.4s						
KIEV	Kiev	89.16	333	*e*P	P	16 31 53.4	-0.7
	2.5nm,0.5s						
BWN	Browne	135.15	26	*e*PKPdf	PKPdf	16 38 16.9	-0.7
DLBC	Dease Lake	145.98	23	*e*PKPdf	PKPbc	16 38 38.4	+0.2
YKA	Yellowknife Ar	146.03	8	PKPbc	PKPdf	16 38 36.7	-0.6
	0.8nm,0.7s,baz=333,slow=5.5,SNR=4.0						
YKB5	Yellowknife Ar	146.03	8	*e*PKPdf	PKPdf	16 38 37.2	0.0

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*ISCJB **12** 16:25:44.5±0.3, 29°.17S±0°.06×74°.97E±0°.05, h10^{km}, mb4.7/74, MS4.3/43, Error ellipse: s-maj=8.2km s-min=6.6km az=19.8*

*IDC **12** 16:25:44.8±0.4, 29°.12S×74°.96E, h0^{km}, mb4.4/31, mb1 4.5/31, mb1mx4.4/63, mbtmp4.4/31, MS4.3/37, Ms1 4.3/37, ms1mx4.1/61, Error ellipse: s-maj=13.4km s-min=12.3km az=33.0*

*BJI **12** 16:25:44.5, 29°.74S×75°.16E, h24^{km}, mb4.6/28, mB5.1/19, Ms4.8/13, Ms7 4.5/12*

*NEIC **12** 16:25:46.2±0.2, 29°.12S×74°.94E, h10^{km}, mb4.9/43, Error ellipse: s-maj=5.5km s-min=4.2km az=206.0*

*GCMT **12** 16:25:46.2±0.2, 29°.04S×74°.89E, h13^{km}, MW5.0/100, Moment Tensor Solution. s41,c46; s100,c161; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-4.54±.24; M$_{\theta\theta}$1.61±.15; M$_{\phi\phi}$2.94±.15; M$_{r\theta}$0.48±.34; M$_{\theta\phi}$-1.92±.08; M$_{\phi r}$1.07±.32; Best double couple: M$_0$4.56500×10^{16} NP1:φ$_s$156.00000°, δ50.00000°, λ-75.00000°. NP2: φ$_s$314.00000°, δ42.00000°, λ-107.00000°. Principal axes: T 4.3470, Plg4.0000°, Azm236.0000°; N 0.4450, Plg11.0000°, Azm326.0000°; P -4.7830, Plg78.0000°, Azm127.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 12 16:25:46.5±0.4**, 29°.23S**±0°.07×**74°.82E**±0°.08**, h10**^{km}**, n160, σ1^{s}.35**/136**, mb4.8**/74**, MS4.3**/43**, 2C-3D, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S2	Diego Garcia H	21.58	354	T	T	16 52 51.0	
	baz=174,slow=76,SNR=156						
H08S1	Diego Carcia H	21.58	354	T	T	16 52 50.3	
	baz=174,slow=76,SNR=132						
H08S3	Diego Garcia H	21.60	354	T	T	16 52 53.3	
	baz=174,slow=76,SNR=228						
OPO	Ambohidratompo	27.33	287	LR	LR	16 39 27.4	
	comp=Z,806nm,19.2s,baz=128,slow=30						
H01W2	Cape Leeuwin H	33.64	110	T	T	17 07 47.9	
	baz=269,slow=75,SNR=51						
H01W3	Cape Leeuwin H	33.64	110	T	T	17 07 53.1	
	baz=269,slow=75,SNR=38						
H01W1	Cape Leeuwin H	33.66	110	T	T	17 07 48.5	
	baz=269,slow=75,SNR=43						
NWAO	Narrogin (SRO)	36.34	107	LR	LR	16 44 44.4	
	comp=Z,410nm,19.3s,baz=140,slow=31						
PALK	Pallekele	36.73	10	LR	LR	16 44 05.3	
	comp=Z,523nm,21.9s,baz=126,slow=30						
LEM	Lembang	38.10	61	LR	LR	16 44 57.8	
	comp=Z,586nm,22.0s,baz=220,slow=30						
MAW	Mawson	39.07	187	P	P	16 33 14.4	+1.2
	5.2nm,1.1s,baz=5.9,slow=12,SNR=4.1						
MAW				LR	LR	16 45 50.7	
	comp=Z,542nm,18.8s,baz=46,slow=31						
MAW	Mawson	39.07	187	*e*P	P	16 33 14.2	+0.9
	2.2nm,1.3s						
PSI	Prapat	39.35	40	LR	LR	16 45 43.1	
	comp=Z,667nm,20.5s,baz=267,slow=31						
BOSA	Boshof	43.12	258	P	P	16 33 48.0	+0.6
	3.2nm,0.7s,baz=100,slow=10,SNR=6.1						
BOSA				LR	LR	16 48 01.2	
	comp=Z,845nm,20.4s,baz=100,slow=31						
LBTB	Lobatse	43.76	263	P	P	16 33 53.7	+1.2
	2.6nm,0.8s,baz=149,slow=15,SNR=3.6						
LBTB	Lobatse	43.76	263	*e*P	P	16 33 53.7	+1.2
	48nm,1.9s						
SYO	Syowa Base	44.73	197⇑	*e*pP	pP	16 34 05.3	+2.7
LSZ	Lusaka	45.05	278	P	P	16 34 03.7	+0.8
	6.9nm,0.8s,baz=109,slow=7.4,SNR=16						
LSZ	Lusaka	45.05	278	*e*P	P	16 34 04.2	+1.3
	6.8nm,0.8s						
SUR	Sutherland	46.09	252	P	P	16 34 12.1	+1.0
	7.5nm,0.8s,baz=104,slow=14,SNR=5.2						
SUR	Sutherland	46.09	252	*e*P	P	16 34 12.7	+1.6
	111nm,1.7s						
FITZ	Fitzroy Crossi	47.53	88	P	P	16 34 21.4	-0.9
	2.6nm,1.1s,baz=259,slow=10,SNR=3.1						
FITZ				LR	LR	16 52 58.4	
	comp=Z,440nm,18.8s,baz=276,slow=34						
FITZ	Fitzroy Crossi	47.53	88	*e*P	P	16 34 22.1	-0.2
	16nm,1.6s						
SBUM	Sibu	47.69	55	*e*P	P	16 34 22.5	-1.0
	14nm,1.2s						
BATI	Baumata	49.33	78	LR	LR	16 53 00.4	
	comp=Z,368nm,21.4s,baz=266,slow=33						
ATD	Arta Tunnel	50.93	318	LR	LR	16 53 39.0	
	comp=Z,141nm,19.1s,baz=14,slow=33						
PBKT	Sadao Pong	52.07	32	P	P	16 34 56.7	0.0
	14nm,1.3s						
TSUM	Tsumeb	52.71	267	*e*P	P	16 35 01.2	-0.6
	23nm,1.5s						
ASAR	Alice Springs	52.73	99	P	P	16 35 00.8	-1.0
	4.4nm,0.9s,baz=252,slow=6.3,SNR=34						
ASAR				LR	LR	16 54 24.0	
	comp=Z,365nm,21.4s,baz=278,slow=33						
AS31	Alice Springs	52.73	99	*e*P	P	16 35 00.2	-1.6
	1.6nm,0.9s						
AS01	Alice Springs	52.77	99	*e*P	P	16 35 00.8	-1.3
CM01	Chiang Mai Arr	52.79	29	*e*P	P	16 35 00.9	-1.1
CM31	Chiang Mai Arr	52.82	29	*e*P	P	16 35 01.1	-1.1
CMAR	Chiang Mai Arr	52.82	29	P	P	16 35 01.9	-0.4
	3.1nm,0.9s,baz=213,slow=7.4,SNR=21						
CMAR				LR	LR	16 54 59.3	
	comp=Z,286nm,19.0s,baz=200,slow=33						
CHTO	Chiang Mai	53.14	29	*e*P	P	16 35 03.7	-0.9
	15nm,1.1s						
CHTO	Chiang Mai	53.14	29	P	P	16 35 04.5	-0.1
	52nm,1.2s						
CMMT	Chiang Mai	53.14	29	P	P	16 35 04.5	-0.1
	12nm,1.2s,302nm						
BRDH	Bariadhala	54.09	19	LR	LR	16 53 41.3	
	comp=Z,590nm,21.9s,baz=200,slow=31						
WR1	Warramunga Arr	54.42	95	*e*P	P	16 35 13.2	-1.0
	20nm,1.4s						
WRA	Warramunga Arr	54.42	95	P	P	16 35 13.2	-1.0
	6.5nm,0.9s,baz=248,slow=7.4,SNR=28						
WRA				LR	LR	16 57 54.1	
	comp=Z,382nm,18.1s,baz=200,slow=36						
WB2	Warramunga Arr	54.43	95	*e*P	P	16 35 12.5	-1.8
	27nm,1.5s						
WRAB	Tennant Creek	54.44	95	*e*P	P	16 35 13.4	-0.9
	9.2nm,0.9s						
MTN	Manton Dam	54.54	85	*e*P	P	16 35 14.2	-0.8
	10nm,1.0s						
STKA	Stephens Creek	56.73	111	P	P	16 35 29.7	-1.0
	5.8nm,0.8s,baz=297,slow=9.2,SNR=6.2						
STKA				LR	LR	16 57 03.7	
	comp=Z,339nm,19.5s,baz=225,slow=33						
STKA	Stephens Creek	56.73	111	*e*P	P	16 35 29.4	-1.2
	2.2nm,0.9s						
UOSS	Minazif	56.76	340	*e*P	P	16 35 29.6	-1.1
	75nm,1.7s						
SHL	Shillong	56.89	18	*e*P	P	16 35 31.1	-0.7
	19nm,0.8s						
SHL	Shillong	56.89	18	*e*P	P	16 35 33.0	+1.1
TAU	Tasmania Unive	58.49	125	*e*P	P	16 35 46.0	+3.1
	165nm,1.8s						
SNAA	Sanae	58.67	201	P	P	16 35 45.9	+2.1
SNAA	Sanae	58.67	201	P	P	16 35 45.3	+1.6
	4.5nm,1.0s,baz=115,slow=9.6,SNR=11						
SNAA	Sanae	58.67	201	*e*P	P	16 35 45.4	+1.6
	7.6nm,1.1s						
RAYN	Ar Rayn	59.55	329	*e*P	P	16 35 49.5	-0.9
	10nm,0.9s						
KMI	Kunming	60.33	29	P	P	16 36 02.0	+6.1
KMI				pP	sP	16 36 07.4	+7.1
KMI				sP	pP	16 36 09.3	+10
KMI				PP	PP	16 38 18.3	+9.1
KMI				S	S	16 44 12.3	+1.6
KMI				sS	sS	16 44 20.6	+4.6
KMI	Kunming	60.33	29	SS	SS	16 48 11.0	+2.2
KMI				pmax	pmax		
	comp=Z,12nm,1.1s						
KMI				pmax	pmax		
	comp=Z,77nm,3.9s						
KMI				LR	LR		
	comp=N,230nm,21.9s						
KMI				LR	LR		
	comp=E,140nm,20.1s						
KMI				LR	LR		
	comp=Z,310nm,24.5s						
SIJI	Sorong	60.63	73	LR	LR	16 57 48.3	
	comp=Z,168nm,21.8s,slow=32						
LSA	Lhasa	60.64	16	*e*P	P	16 35 57.5	-0.7
	comp=Z,8.5nm,0.9s						
DAV	Davao City (W)	60.70	62	LR	LR	17 00 16.4	
	comp=Z,133nm,21.1s,baz=249,slow=34						
QSPA	South Pole Qui	60.91	180	P	P	16 35 59.5	+0.2
	comp=Z,5.3nm,0.6s,baz=286,slow=5.8,SNR=12						
QSPA				LR	LR	16 58 43.7	
	comp=Z,212nm,21.2s,baz=297,slow=32						
VNDA	Vanda	61.05	166	P	P	16 35 59.8	-0.1
	comp=Z,5.2nm,1.1s,baz=269,slow=6.7,SNR=11						
VNDA				LR	LR	16 59 01.3	
	comp=Z,130nm,19.1s,baz=268,slow=33						
VNDA	Vanda	61.05	166	*e*P	P	16 36 00.1	+0.2
	comp=Z,18nm,1.4s						
CAN	Canberra	61.68	117	*e*P	P	16 36 05.1	+0.2

	comp=Z,64nm,1.9s						
TGY	Tagaytay City	61.95	52	LR	LR	16 59 24.3	
	comp=Z,210nm,20.9s,baz=224,slow=33						
GYA	Guiyang	63.23	32	eP	P	16 36 18.0	+2.7
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KBL	Kabul	63.66	355	eP	P	16 36 16.3	-1.8
	comp=Z,5.8nm,0.9s						
COEN	Coen	64.57	92	eP	P	16 36 24.1	-0.3
	comp=Z,28nm,1.5s						
CTA	Charters Tower	64.70	100	P	P	16 36 24.6	-0.5
	comp=Z,5.7nm,1.0s,baz=230,slow=9.5,SNR=3.0						
CTAO	Charters Tower	64.70	100	eP	P	16 36 23.9	-1.2
	comp=Z,47nm,1.8s						
ARMA	Armidale	65.35	112	eP	P	16 36 28.4	-1.0
	comp=Z,84nm,1.9s						
CD2	Chengdu	65.85	27	eP	P	16 36 33.3	+1.0
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.0s						
EIDS	Eidsvold	66.75	107	eP	P	16 36 37.1	-1.2
	comp=Z,26nm,1.4s						
ENH	Enshi	67.77	32	eP	P	16 36 41.9	-2.6
	comp=Z,10nm,0.9s						
JAY	Jayapura	67.79	80	LR	LR	17 04 49.2	
	comp=Z,154nm,20.6s,baz=194,slow=35						
KSH	Kashi	68.40	1	eP	P	16 36 50.8	+2.4
KSH				ePcP	PcP	16 37 16.9	+3.2
GEYT	Alibeck	68.61	346	P	P	16 36 49.6	0.0
	comp=Z,0.6nm,0.5s,baz=97,slow=12,SNR=2.5						
GYA0B	ALIBECK ARRAY	68.61	346	eP	P	16 36 48.4	-1.2
	comp=Z,3.6nm,0.8s						
NACB	Ninganchiao	69.58	45	eP	P	16 36 55.0	-0.8
	comp=Z,24nm,1.0s						
PMG	Port Moresby	70.09	90	P	P	16 36 58.4	-0.9
	comp=Z,9.6nm,0.9s,baz=243,slow=11,SNR=2.2						
PMG				LR	LR	17 07 32.5	
	comp=Z,308nm,18.1s,baz=268,slow=36						
LZH	Lanzhou	70.47	25	eP	P	16 37 03.1	+1.8
LZH				ePP	PP	16 39 40.5	+2.7
LZH				pmax	pmax		
	comp=Z,26nm,1.3s						
LZH				pmax	pmax		
	comp=Z,210nm,5.0s						
LZH				LR	LR		
	comp=Z,340nm,16.7s						
LZH				LR	LR		
	comp=Z,320nm,18.4s						
LZH				LR	LR		
	comp=Z,420nm,18.9s						
XAN	Xi’an	70.71	30	P	P	16 37 01.5	-1.2
XAN				pP	PcP	16 37 15.5	-8.0
XAN				pmax	pmax		
	comp=Z,11nm,0.9s						
XAN				LR	LR		
	comp=Z,170nm,23.0s						
XAN				LR	LR		
	comp=Z,210nm,23.0s						
XAN				LR	LR		
	comp=Z,390nm,20.1s						
ASF	Jabal al Asfar	70.89	327	P	P	16 37 04.6	+0.7
	comp=Z,2.2nm,0.7s,baz=214,slow=5.9,SNR=4.8						
AAK	Ala-Archa	71.51	360	eP	P	16 37 07.5	0.0
	comp=Z,6.3nm,1.1s						
KK31	Karatay Array	72.08	357	eP	P	16 37 10.5	-0.2
KKAR	Karatay Array	72.08	357	eP	P	16 37 10.5	-0.2
GTA	Gaotai	72.15	20	eP	P	16 37 11.1	-0.2
GTA				S	S	16 46 34.9	+1.2
GTA				pmax	pmax		
	comp=Z,4.0nm,1.7s						
GTA				pmax	pmax		
	comp=Z,72nm,5.1s						
GTA				LR	LR		
	comp=Z,150nm,19.2s						
GTA				LR	LR		
	comp=Z,120nm,18.2s						
GTA				LR	LR		
	comp=Z,250nm,20.3s						
WMQ	Urumqi	73.64	10	P	P	16 37 21.7	+1.7
WMQ				pmax	pmax		
	comp=Z,27nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,250nm,5.5s						
WMQ				LR	LR		
	comp=Z,290nm,20.5s						
WMQ				LR	LR		
	comp=Z,260nm,23.7s						
WMQ				LR	LR		
	comp=Z,360nm,25.7s						
NJ2	Nanjing	73.92	38	eP	P	16 37 23.9	+2.1
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
MK01	Makanchi Array	75.94	5	eP	P	16 37 30.9	-2.3
MK31	Makanchi Array	75.97	5	eP	P	16 37 31.4	-1.9
MK32	Makanchi Array	75.97	5	eP	P	16 37 31.5	-1.9
MKAR	Makanchi Array	75.97	5	P	P	16 37 31.5	-1.9
	comp=Z,2.3nm,0.7s,baz=187,slow=5.7,SNR=18						
MKAR				LR	LR	17 08 20.7	
	comp=Z,114nm,21.3s,baz=206,slow=34						
MKAR	Makanchi Array	75.97	5	eP	P	16 37 31.3	-2.1
	comp=Z,26nm,0.9s						
HHC	Hu-ho-hao-te	77.60	28	eP	P	16 37 44.8	+2.0
HHC				sP	PcP	16 37 53.9	+0.9
HHC				PP	PP	16 40 42.6	+4.4
HHC				S	S	16 47 40.0	+5.6
HHC				SS	SS	16 52 37.5	+2.9
HHC				pmax	pmax		
	comp=Z,21nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,4.5s						
HHC				LR	LR		
	comp=Z,170nm,15.5s						
HHC				LR	LR		
	comp=Z,220nm,14.5s						
HHC				LR	LR		
	comp=Z,190nm,18.1s						
KBZ	Khabaz	78.28	337	P	P	16 37 46.2	-0.1
	comp=Z,3.3nm,0.8s,baz=175,slow=6.2,SNR=5.8						
BRTR	Keskin Array B	78.57	329	P	P	16 37 48.2	-0.1
	comp=Z,1.8nm,0.7s,baz=154,slow=6.9,SNR=11						
BR101	Keskin Array S	78.57	329	eP	P	16 37 48.2	-0.1
BR131	Keskin Array S	78.57	329	eP	P	16 37 48.0	-0.3
ABKAR	Akbulak array	79.25	350	eP	P	16 37 50.5	-1.1
KURBB	Kurchatov Arra	79.56	2	P	P	16 37 52.2	-1.1
	comp=Z,1.9nm,0.9s,baz=196,slow=5.7,SNR=8.9						
IDI	Anoyia	79.58	320	P	P	16 37 54.5	+0.7
	comp=Z,3.2nm,0.4s,baz=68,slow=5.4,SNR=3.4						
IDI	Anoyia	79.58	320	eP	P	16 37 53.9	+0.1
	comp=Z,31nm,1.4s						
KURK	Kurchatov	79.66	2	eP	P	16 37 52.9	-0.9
GUMO	Guam	79.83	68	LR	LR	17 09 50.1	
	comp=Z,53nm,19.0s,baz=224,slow=33						
AKTO	Aktyubinsk	80.70	349	P	P	16 37 58.1	-1.3
	comp=Z,1.7nm,0.7s,baz=156,slow=6.7,SNR=5.4						
AKTO				LR	LR	17 13 15.1	
	comp=Z,76nm,18.5s,baz=170,slow=35						
DZM	Mont Dzumac	80.88	110	LR	LR	17 10 07.7	
	comp=Z,151nm,20.8s,baz=304,slow=33						
PMSA	Palmer Station	80.98	197	LR	LR	17 12 09.8	
	comp=Z,114nm,18.4s,baz=202,slow=34						
HNR	Honiara	81.24	96	LR	LR	17 12 03.2	
	comp=Z,122nm,20.2s,baz=140,slow=34						
JNU	Nakatsue	81.64	45	LR	LR	17 10 30.2	
	comp=Z,283nm,22.0s,baz=303,slow=33						
SONA0	Songino Array	81.79	21	eP	P	16 38 04.7	-0.8
SONM	Songino Array	81.79	21	P	P	16 38 04.7	-0.8
	comp=Z,1.1nm,0.6s,baz=199,slow=7.2,SNR=10						
SONM				LR	LR	17 13 48.8	
	comp=Z,148nm,19.9s,baz=213,slow=35						
SONA1	Songino Array	81.81	21	eP	P	16 38 03.8	-1.8
BVAR	Borovoye Array	82.00	357	P	P	16 38 05.9	-0.4
	comp=Z,2.9nm,0.6s,baz=162,slow=8.1,SNR=21						
BVAR				LR	LR	17 12 44.5	
	comp=Z,156nm,19.8s,baz=188,slow=34						
ULN	Ulaanbaatar	82.03	21	eP	P	16 38 05.9	-0.8
	comp=Z,6.8nm,1.3s						
BRVK	Borovoye	82.03	357	eP	P	16 38 05.3	-1.1
	comp=Z,5.2nm,0.8s						
TOA0	Torodi Ar. Sit	82.10	290	eP	P	16 38 06.1	-1.6
TORD	Torodi Ar. Bea	82.10	290	P	P	16 38 06.5	-1.2
	comp=Z,2.7nm,0.9s,baz=128,slow=8.1						
TOA1	Torodi Ar. Sit	82.11	290	eP	P	16 38 06.5	-1.2
KS15	Wonju Array Si	82.88	40	eP	P	16 38 10.1	-1.2
KSAR	Wonju Array Be	82.88	40	P	P	16 38 10.3	-0.9
KS01	Wonju Array Si	82.91	40	eP	P	16 38 09.7	-1.7
KSRS	Korea Array	82.91	40	P	P	16 38 10.3	-1.1
	comp=Z,1.3nm,0.7s,baz=212,slow=3.8,SNR=5.5						
KSRS				LR	LR	17 11 32.3	
	comp=Z,271nm,21.9s,baz=203,slow=33						
ALN	Alexandroupoli	83.12	325	eP	P	16 38 12.3	0.0
	comp=Z,5.1nm,0.8s						
ZALV	Zalesovo Beam	83.28	6	P	P	16 38 11.5	-1.4
	comp=Z,1.7nm,0.5s,baz=185,slow=8.2,SNR=5.1						
ZALV				LR	LR	17 14 09.9	
	comp=Z,101nm,19.2s,baz=246,slow=35						
ZALV	Zalesovo Beam	83.28	6	eP	P	16 38 11.4	-1.5
ZAA1	Zalesovo Array	83.29	6	eP	P	16 38 11.5	-1.4
AGG	Agios Georgios	83.69	322	eP	P	16 38 14.2	-1.2
	comp=Z,18nm,1.0s						
LIT	Litokhoron	84.37	322	eP	P	16 38 18.1	-0.7
	comp=Z,9.9nm,0.7s						
FNA	Florina	85.45	322	eP	P	16 38 23.7	-0.7
	comp=Z,4.9nm,0.7s						
ARU	Arti	86.43	351	LR	LR	17 16 19.1	
	comp=Z,116nm,18.7s,baz=142,slow=35						
ARU	Arti	86.43	351	eP	P	16 38 28.2	-0.5
	comp=Z,7.0nm,1.2s						
VRI	Vrincioaia	86.53	329	⇓iP	P	16 38 30.1	+0.6
PLOR	Plostina	86.56	329	⇑iP	P	16 38 30.0	+0.3
MLR	Muntele Rosu	86.61	328	P	P	16 38 30.2	+0.1
	comp=Z,3.1nm,0.8s,baz=106,slow=7.4,SNR=16						
MLR	Muntele Rosu	86.61	328	⇓iP	P	16 38 30.5	+0.5
MLR	Muntele Rosu	86.61	328	eP	P	16 38 29.9	-0.2
	comp=Z,16nm,0.9s						
VOIR		86.99	327	⇓iP	P	16 38 31.4	-0.4
KOWA	Kowa	87.53	288	P	P	16 38 35.8	+0.8
	comp=Z,3.8nm,0.7s,baz=104,slow=8.7,SNR=7.7						
MJAR	Matsushiro Arr	88.44	46	LR	LR	17 13 22.2	
	comp=Z,82nm,21.8s,baz=230,slow=32						
DIVS	Divibare	88.52	324	eP	P	16 38 39.4	+0.2
	comp=Z,4.9nm,1.1s						
BUR04	Bucovina Ar. S	88.54	329	eP	P	16 38 39.4	+0.2
BUR08	Bucovina Ar. S	88.56	329	eP	P	16 38 40.0	+0.6
AKASG	Malin Array Be	89.20	333	P	P	16 38 42.2	+0.1
	comp=Z,3.9nm,0.8s,baz=134,slow=4.2,SNR=10						
AKBB	Malin Array Si	89.20	333	eP	P	16 38 41.7	-0.3
	comp=Z,5.2nm,0.8s						
KIEV	Kiev	89.20	333	eP	P	16 38 41.9	-0.2
	comp=Z,4.9nm,0.7s						
USRK	Ussuriysk Ar.	89.81	37	LR	LR	17 16 46.4	
	comp=Z,269nm,21.1s,baz=210,slow=34						
ASAJ	Asahikawa	95.67	42	LR	LR	17 22 56.2	
	comp=Z,58nm,18.2s,baz=236,slow=36						
OHAK	Old Harbor	136.48	36	ePKPpre	PKPpre	16 45 01.7	
DLBC	Dease Lake	146.13	23	PKPbc	PKPab	16 45 26.1	-0.9
	comp=Z,2.2nm,0.7s,baz=309,slow=3.1,SNR=7.3						
YKA	Yellowknife Ar	146.16	8	PKPbc	PKPdf	16 45 24.9	-0.3
	comp=Z,1.3nm,0.6s,baz=342,slow=4.0,SNR=6.0						
FRNY	Flat Rock	150.59	311	ePKPbc	PKPbc	16 45 37.6	-0.9
NCB	Newcomb	151.32	309	ePKPbc	PKPbc	16 45 39.8	-0.5
LONY	Lake Ozonia	151.32	311	ePKPbc	PKPbc	16 45 39.7	-0.6
TJR	Tejon Ranch	167.14	60	ePKPdf	PKPdf	16 45 52.3	-0.5
PASC	Pasadena Art C	167.88	63	ePKPdf	PKPdf	16 45 52.7	-0.7
BFSC	Mount Baldy Ra	168.26	62	ePKPdf	PKPdf	16 45 52.9	-0.9
EML	El Monte Cty P	169.35	67	ePKPab	PKPab	16 47 06.6	-0.4
BORC	Borrego Spring	169.58	64	ePKPab	PKPab	16 47 08.3	+0.3
U15A	North Rim	170.66	38	ePKPab	PKPab	16 47 12.4	-0.5
MNTX	Cornudas Mount	177.53	4	ePKPdf	PKPdf	16 45 57.7	+0.2
MNTX				ePKPab	PKPab	16 47 43.6	+0.6
TXAR	Lajitas Array	178.67	275	PKP	PKPdf	16 45 57.3	-0.5
	comp=Z,0.4nm,0.9s,baz=289,slow=3.8,SNR=3.9						

MEX 12 16:28:25.0±0.5, 18°.40N×102°.84W, h83^{km}±10^{km}, MD4.0, Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMIG	Aquila	0.49	257	eP	Pn	16 28 37.5	-1.4
MMIG				eS	Sn	16 28 47.8	-1.5
ZIIG	Zihuatanejo	1.53	121	i P	Pn	16 28 50.0	-0.8
ZIIG				i S	Sn	16 29 08.5	-1.8
ARIG	Puente Sto Nin	2.37	92	i P	Pn	16 29 00.8	-1.2
ARIG				i S	Sn	16 29 28.8	-1.5

NNC 12 16:29:01.6±6.3, 39°.05N×75°.71E, h0^{km}, mb3.4, mpv2.9, 2C-3D, Error ellipse: s-maj=59.2km s-min=43.2km az=20.0, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	1.96	300	⇓P	Pn	16 29 36.6	+0.3
	1.5nm,0.2s						
SFK				⇓S	Sb	16 30 02.8	-0.5
	4.2nm,0.3s						
MNAS	Manas	4.21	326	⇓P	Pn	16 30 08.5	+1.4
	1.0nm,0.3s						
MNAS				⇑S	Sn	16 30 59.0	+2.0
	2.1nm,0.5s						
KK31	Karatay Array	5.64	318	P	Pn	16 30 23.2	-3.5
	0.6nm,0.3s,baz=135,slow=13,SNR=12						
KK31				⇑S	Sn	16 31 28.2	-3.9
	0.6nm,0.3s,baz=139,slow=20,SNR=5.3						
KK31	Karatay Array	5.64	318	eP	Pn	16 30 22.8	-3.9

DJA 12 16:52:16.7±0.7, 3°S±5°×14°0E±°, h55^{km}±11^{km}, M3.8/4, MLv3.8/4, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	Genyem	0.38	45	P	Pn	16 52 28.2	+1.2
GENI				S	Sn	16 52 37.6	+3.2
JAY	Jayapura	0.87	67	P	Pn	16 52 33.2	+0.2
JAY				S	Sn	16 52 46.4	+1.5
WAMI	Wamena	1.56	229	P	Pn	16 52 41.6	-0.6
WAMI				S	Sn	16 53 01.9	+0.6
SRPI	Serui, Papua	3.79	285	P	Pn	16 53 12.6	0.0
BAKI	Biak	4.14	294	P	Pn	16 53 17.6	+0.2

MEX 12 17:00:19.2±0.3, 18°.47N×102°.88W, h87^{km}±7^{km}, MD3.8, Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMIG	Aquila	0.47	247	eP	Pn	17 00 32.1	-1.3
MMIG				eS	Sn	17 00 42.3	-1.7
ZIIG	Zihuatanejo	1.60	122	eP	Pn	17 00 44.8	-1.4
ZIIG				i S	Sn	17 01 05.0	-1.6
ARIG	Puente Sto Nin	2.42	94	i P	Pn	17 00 55.9	-1.0
ARIG				i S	Sn	17 01 24.0	-1.7

IDC 12 17:08:33.5±1.8, 58°.03N×32°.40W, h0^{km}, mb3.5/6, mb1 3.6/6, mb1mx3.4/71, mbtmp3.5/6, MS2.8/1, Ms1 2.7/1, ms1mx2.5/52, Error ellipse: s-maj=50.6km s-min=31.4km az=62.0, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YKA	Yellowknife Ar	38.43	312	LR	LR	17 32 09.1	
	comp=Z,12nm,19.2s,baz=20,slow=37						
ILAR	Eielson Array	47.90	328	P	P	17 17 13.1	+0.3
	0.5nm,0.8s,baz=46,slow=9.1,SNR=4.6						
TORD	Torodi Ar. Bea	51.64	136	P	P	17 17 42.0	+0.2
	0.9nm,1.0s,baz=347,slow=5.9						
BVAR	Borovoye Array	52.87	48	P	P	17 17 51.2	+0.7
	0.7nm,0.9s,baz=342,slow=3.4,SNR=4.0						
KURBB	Kurchatov Arra	57.88	45	P	P	17 18 26.2	-0.4
	0.5nm,0.6s,baz=320,slow=8.2,SNR=5.6						
MKAR	Makanchi Array	62.45	45	P	P	17 18 57.6	-0.4
	0.2nm,0.6s,baz=308,slow=7.1,SNR=2.2						
SONM	Songino Array	69.14	28	P	P	17 19 41.5	+0.2
	0.5nm,0.9s,baz=343,slow=4.5,SNR=2.6						
ASAR	Alice Springs	144.28	22	PKP	PKPab	17 28 08.2	-0.8
	1.4nm,1.2s,baz=342,slow=2.1,SNR=3.0						

IDC 12 17:09:42.3±1.3, 57°.90N×32°.33W, h0^{km}, mb3.5/9, mb1 3.6/9, mb1mx3.5/68, mbtmp3.5/9, MS3.5/4, Ms1 3.5/4, ms1mx3.0/50, Error ellipse: s-maj=36.2km s-min=24.5km az=22.0

ISC 12 17:09:45.6±1.1, 58°.0N±0°.2×32°.4W±0°.1, h18^{km}, n17, σ1^{s}.64/11, mb3.5/11, Reykjanes Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFJD	Kangerlussuaq	12.30	325	LR	LR	17 16 39.7	
	comp=Z,209nm,18.8s,baz=96,slow=34						
SCHQ	Schefferville	19.17	275	LR	LR	17 20 04.5	
	comp=Z,212nm,19.3s,baz=38,slow=32						
ESDC	Sonseca Array	25.89	123	P	P	17 15 19.0	+2.8
	0.1nm,0.3s,baz=331,slow=8.5,SNR=4.2						
ARCES	ARCESS Array B	26.92	41	P	P	17 15 27.5	+2.2
	0.8nm,0.7s,baz=282,slow=14,SNR=2.9						
FINES	FINESS Array B	28.85	58	LR	LR	17 26 51.7	
	comp=Z,82nm,19.2s,baz=83,slow=36						
AKASG	Malin Array Be	35.52	74	P	P	17 16 40.8	-0.1
	0.1nm,0.3s,baz=303,slow=9.1,SNR=2.5						
AKASG				LR	LR	17 30 54.4	
	comp=Z,52nm,19.1s,baz=275,slow=36						
BRTR	Keskin Array B	45.14	84	P	P	17 18 01.6	+0.7
	0.2nm,0.3s,baz=339,slow=7.7,SNR=3.5						
ILAR	Eielson Array	47.94	328	P	P	17 18 22.7	+0.3
	0.5nm,0.7s,baz=44,slow=9.3,SNR=4.1						
PDAR	Pinedale Array	48.71	287	P	P	17 18 29.5	+0.6
	0.2nm,0.5s,baz=62,slow=14,SNR=2.5						
TORD	Torodi Ar. Bea	51.61	136	P	P	17 18 48.9	-1.9
	0.8nm,1.0s,baz=335,slow=9.7						
BVAR	Borovoye Array	52.92	48	P	P	17 19 00.1	0.0
	0.5nm,0.7s,baz=356,slow=16,SNR=3.2						
KURBB	Kurchatov Arra	57.94	45	P	P	17 19 35.1	-1.1
	0.2nm,0.4s,baz=326,slow=7.5,SNR=2.7						
MKAR	Makanchi Array	62.50	45	P	P	17 20 06.1	-1.5
	0.5nm,0.8s,baz=335,slow=6.4,SNR=3.0						
H10S1	ASCENSION HYDR	68.24	161	T	T	18 34 51.2	
	baz=353						
H10S3	ASCENSION HYDR	68.25	161	T	T	18 34 53.5	
	baz=353						
H10S2	ASCENSION HYDR	68.25	161	T	T	18 34 52.9	
	baz=353						
SONM	Songino Array	69.21	28	P	P	17 20 50.1	-0.7
	0.8nm,1.1s,baz=319,slow=5.7,SNR=3.3						

MEX 12 17:16:11.1±0.4, 15°.22N×93°.85W, h57^{km}±10^{km}, MD4.0, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.77	52	eP	Pn	17 16 24.5	-1.5
PCIG				eS	Sn	17 16 35.2	-1.8
THIG		1.56	101	i P	Pn	17 16 35.0	-1.5
THIG				eS	Sn	17 16 53.3	-2.4
TGIG		1.69	24	eP	Pn	17 16 37.0	-1.5
TGIG				eS	Sn	17 16 56.6	-2.5
CCIG	Comitan	1.95	57	eP	Pn	17 16 40.9	-1.2
CCIG				eS	Sn	17 17 03.9	-1.7

WEL 12 17:46:45.7, 40°S±4°×17°3E±°, h12^{km}, ML3.5/30, Off west coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NMEZ	Namu Road	0.67	60	P	Pb	17 46 59.4	+0.2
NMEZ				S	Sb	17 47 08.3	0.0
KHEZ	Kahui Hut	0.82	56	P	Pb	17 47 02.2	+0.3
KHEZ				S	Sb	17 47 13.0	+0.1
PKE	Pukeiti	0.86	50	P	Pn	17 47 03.5	-0.2
PKE				S	Sb	17 47 15.1	+0.9
PREZ	Palmer Road	0.89	63	P	Pg	17 47 02.9	0.0
PREZ				S	Sg	17 47 14.4	-0.1
DREZ	Durham Road	1.00	56	P	Pn	17 47 05.3	-0.2
LREZ	Lake Rotokare	1.02	74	P	Pb	17 47 04.8	-0.5
LREZ				S	Sb	17 47 18.2	-0.5
QRZ	Quartz Range	1.17	203	P	Pg	17 47 08.9	+0.8
DUWZ	D’Urville Isla	1.21	150	P	Pn	17 47 06.6	-1.8
VRZ	Vera Road	1.40	64	P	Pn	17 47 10.9	-0.2
VRZ				S	Sn	17 47 29.1	-0.4
NNZ	Nelson	1.47	173	P	Pn	17 47 12.2	+0.2
TCW	Tory Channel	1.69	150	P	Pn	17 47 15.0	-0.1
OHWZ	Ohakea	1.73	106	P	Pn	17 47 15.5	-0.1
OHWZ				S	Sn	17 47 36.1	-1.5
KIW	Kapiti Island	1.75	130	P	Pn	17 47 15.1	-0.8
KIW				S	Sn	17 47 36.2	-1.8
PKVZ	Pokaka	1.77	76	P	Pn	17 47 15.8	-0.4
TUWZ	Tuamarina	1.78	160	P	Pn	17 47 16.8	+0.5
HIZ	Hauiti	1.82	48	P	Pn	17 47 17.2	+0.4
MTVZ	Mangateitei	1.84	79	P	Pn	17 47 17.2	0.0
OGWZ	Otaki Gorge	1.88	125	P	Pn	17 47 17.7	+0.1
OGWZ				S	Sn	17 47 40.1	-1.2
TWVZ	Taurewa	1.91	70	P	Pn	17 47 17.7	-0.4
TWVZ				S	Sn	17 47 41.5	-0.6
TRVZ	Turoa	1.92	77	P	Pn	17 47 18.2	-0.2
FWVZ	Far West T-bar	1.93	76	P	Pn	17 47 18.4	-0.2
DRZ	Dome Shelter	1.94	76	P	Pb	17 47 20.1	-1.0
COVZ	Chateau Observ	1.94	74	P	Pn	17 47 18.3	-0.2
WHVZ	Whangaehu Hut	1.95	77	P	Pn	17 47 18.6	-0.3
NGZ	Ngauruhoe	1.99	74	P	Pn	17 47 19.3	0.0
CAW	Cannon Point	2.00	133	P	Pn	17 47 19.9	+0.6
WTVZ	West Tongariro	2.00	72	P	Pn	17 47 19.6	+0.1
TUVZ	Tukino	2.01	77	P	Pn	17 47 19.8	+0.3
THZ	Tophouse	2.02	185	P	Pb	17 47 21.0	-1.3
BSWZ	Blackbirch Sta	2.04	164	P	Pn	17 47 21.1	+1.3
KRVZ	Karewarewa	2.05	72	P	Pn	17 47 20.1	+0.1
MOVZ	Moawhango	2.05	81	P	Pn	17 47 19.9	-0.2
MRZ	Mangatainoka R	2.08	117	P	Pn	17 47 20.5	+0.1
BHW	Baring Head	2.12	142	P	Pn	17 47 21.7	+0.8
POWZ	Post Office Ro	2.12	108	P	Pn	17 47 22.2	+1.3
KATZ	Kakaramea	2.13	69	P	Pn	17 47 21.3	+0.1
HOWZ	Holdsworth Sta	2.15	123	P	Pn	17 47 22.5	+1.2
TSZ	Takapari Road	2.19	99	P	Pn	17 47 23.1	+1.1
RATZ	Rangitukua	2.23	67	P	Pn	17 47 23.0	+0.6
DSZ	Denniston Nort	2.23	207	P	Pb	17 47 24.5	-1.5
WATZ	Wairara	2.27	63	P	Pn	17 47 23.7	+0.6
BHHZ	Black Hill Sta	2.27	84	P	Pn	17 47 23.4	+0.3
MTW	Mount Morrison	2.29	129	P	Pn	17 47 24.4	+1.2
MSWZ	Moikau Station	2.31	137	P	Pn	17 47 24.5	+0.9
PRWZ	Pori Road	2.31	111	P	Pb	17 47 26.3	-1.1
TLZ	Tolley Road	2.35	53	P	Pn	17 47 24.5	+0.4
PNHZ	Pukenui	2.36	95	P	Pn	17 47 26.2	+1.9
PAWZ	Paruwai Farm	2.38	134	P	Pb	17 47 28.0	-0.6
DVHZ	Dannevirke	2.39	104	P	Pb	17 47 27.4	-1.2
PLWZ	Palliser	2.43	139	P	Pn	17 47 26.2	+1.1
KUTZ	Kaahu Road	2.44	60	P	Pb	17 47 28.4	-1.1
KRHZ	Kereru	2.50	89	P	Pb	17 47 28.9	-1.6
TMWZ	Te Maipa	2.50	124	P	Pb	17 47 29.2	-1.3
BFZ	Birch Farm	2.55	112	P	Pb	17 47 29.5	-1.9
BKZ	Black Stump Fm	2.66	78	P	Pn	17 47 30.3	+1.9
KHZ	Kahutara	2.68	174	P	Pn	17 47 30.5	+1.9
MRHZ	Matea Rd	2.71	71	P	Pn	17 47 31.3	+2.2
TOZ	Tahuroa Road	2.74	43	P	Pn	17 47 30.2	+0.8
AWAZ	Awhitu Peninsu	2.93	24	P	Pn	17 47 34.3	+2.2
WTAZ	Waiatarua	3.03	22	P	Pn	17 47 36.0	+2.5
MKAZ	Moumakai	3.09	32	P	Pn	17 47 36.4	+2.2
INZ	Inchbonnie	3.23	203	P	Pn	17 47 38.1	+1.9
WIAZ	Waiheke Island	3.35	29	P	Pn	17 47 40.0	+2.2
URZ	Urewera	3.44	66	P	Pn	17 47 41.6	+2.6
KUZ	Kuaotunu	3.63	35	P	Pn	17 47 42.6	+1.0
MWZ	Matawai	3.70	69	P	Pn	17 47 44.4	+1.7

IDC 12 17:50:03.1±1.7, 8°.98N×126°.73E, h0^{km}, mb3.9/4, mb1 4.0/4, mb1mx3.3/64, mbtmp3.9/4, Error ellipse: s-maj=79.5km s-min=33.7km az=62.0, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	28.56	292	P	P	17 56 01.0	0.0
	0.2nm,0.4s,baz=101,slow=8.4,SNR=4.2						
ASAR	Alice Springs	33.19	168	P	P	17 56 41.8	-0.1
	0.2nm,0.8s,baz=344,slow=11,SNR=2.2						
FINES	FINESS Array B	87.24	332	P	P	18 02 50.6	-0.7
	1.2nm,0.6s,baz=54,slow=5.5,SNR=9.7						
HFS	Hagfors	93.40	333	P	P	18 03 21.1	+0.8
	1.6nm,0.5s,baz=60,slow=4.0,SNR=9.5						

NIED 12 17:52:00, 45°.40N×151°.70E, h14^{km}, Mw3.8 Best double couple: M$_0$6.58000×10^{14} NP1:φ$_s$216.00000°, δ30.00000°, λ91.00000°. NP2:φ$_s$35.00000°, δ60.00000°, λ89.00000°.

SKHL 12 17:52:11.3±0.5, 44°.95N×152°.11E, h35^{km}±5^{km}, mb4.6/6

MOS 12 17:52:11.0±0.4, 45°.00N×152°.10E, h35^{km}, mb4.1/1, Error ellipse: s-maj=99.9km s-min=19.5km az=167.7

ISC 12 17:52:13.2±4.5, 45°.1N±0°.2×152°.0E±0°.2, h41^{km}, n13, σ0^{s}.79/21, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril’sk	2.95	274	eP	Pn	17 52 57.0	-0.4
KUR				AMB	AMB	17 53 00.0	
	16nm,0.4s						

KUR				AMB	AMB	17 53 00.0	
	94nm,0.4s						
KUR				*e*S	**Sn**	**17 53 31.0**	**-0.5**
KUR				A	A	17 53 42.0	
	242nm,0.4s						
KUR				A	A	17 53 42.0	
	360nm,0.4s						
KUR	**Kuril'sk**	**2.95**	**274**	*e*PN	**Pn**	**17 52 57.1**	**-0.4**
KUR				*e*S	**Sn**	**17 53 31.8**	**+0.3**
KUR				pmax	pmax		
	comp=Z,94nm,0.3s						
KUR				pmax	pmax		
	comp=N,63nm,0.1s						
KUR				pmax	pmax		
	comp=E,16nm,0.1s						
KUR				smax	smax		
	comp=N,242nm,0.4s						
KUR				smax	smax		
	comp=E,250nm,0.5s						
SHO	**Shikotan**	**3.91**	**254**	*e*P	**Pn**	**17 53 10.0**	**-0.7**
SHO				AMB	AMB	17 53 12.0	
	comp=E,12nm,0.3s						
SHO				AMB	AMB	17 53 12.0	
	comp=E,8.0nm,0.3s						
SHO				AMB	AMB	17 53 12.0	
	comp=E,23nm,0.3s						
SHO				*e*S	**Sn**	**17 53 54.0**	**-1.3**
SHO				A	A	17 54 09.0	
	comp=E,73nm,0.4s						
SHO				A	A	17 54 09.0	
	comp=E,150nm,0.4s						
SHO	**Shikotan**	**3.91**	**254**	*e*PN	**Pn**	**17 53 10.5**	**-0.2**
SHO				pmax	pmax		
	comp=N,12nm,0.5s						
SHO				pmax	pmax		
	comp=Z,23nm,0.5s						
SHO				pmax	pmax		
	comp=E,8.0nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**4.53**	**259**	*e*P	**Pn**	**17 53 19.0**	**-0.2**
YUK				AMB	AMB	17 53 20.0	
	comp=E,24nm,0.4s						
YUK				AMB	AMB	17 53 20.0	
	comp=E,28nm,0.4s						
YUK				AMB	AMB	17 53 20.0	
	comp=E,35nm,0.4s						
YUK				*e*S	**Sn**	**17 54 10.0**	**-0.5**
YUK				A	A	17 54 26.0	
	comp=E,140nm,0.4s						
YUK				A	A	17 54 26.0	
	comp=E,42nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**4.53**	**259**	*e*PN	**Pn**	**17 53 19.7**	**+0.5**
YUK				pmax	pmax		
	comp=Z,90nm,0.5s						
YUK				pmax	pmax		
	comp=N,24nm,0.2s						
YUK				pmax	pmax		
	comp=E,28nm,0.1s						
LAGR	**Lagunnoye**	**4.58**	**259**	*e*P	**Pn**	**17 53 21.0**	**+1.2**
LAGR				AMB	AMB	17 53 21.0	
	comp=E,20nm,0.5s						
LAGR				AMB	AMB	17 53 21.0	
	comp=E,54nm,0.5s						
LAGR				*e*S	**Sn**	**17 54 13.0**	**+1.3**
LAGR				A	A	17 54 25.0	
	comp=E,173nm,0.5s						
LAGR				A	A	17 54 25.0	
	comp=E,143nm,0.5s						
LAGR	**Lagunnoye**	**4.58**	**259**	*e*PN	**Pn**	**17 53 21.1**	**+1.2**
LAGR				*e*S	**Sn**	**17 54 13.0**	**+1.3**
LAGR				pmax	pmax		
	comp=Z,54nm,0.3s						
LAGR				pmax	pmax		
	comp=N,20nm,0.2s						
LAGR				smax	smax		
	comp=N,173nm,0.5s						
LAGR				smax	smax		
	comp=E,143nm,0.5s						
GRPR	**Tuman**	**4.60**	**259**	*e*P	**Pn**	**17 53 20.0**	**-0.2**
GRPR				AMB	AMB	17 53 21.0	
	comp=E,34nm,0.4s						
GRPR				AMB	AMB	17 53 21.0	
	comp=E,50nm,0.4s						
GRPR				*e*S	**Sn**	**17 54 12.0**	**-0.3**
GRPR				A	A	17 54 14.0	
	comp=E,76nm,0.4s						
GRPR				A	A	17 54 14.0	
	comp=E,86nm,0.4s						
GRPR	**Tuman**	**4.60**	**259**	*e*PN	**Pn**	**17 53 20.8**	**+0.6**
GRPR				pmax	pmax		
	comp=Z,50nm,0.3s						
GRPR				pmax	pmax		
	comp=N,34nm,0.1s						
GLVR	**Golovnino**	**4.85**	**256**	*e*P	**Pn**	**17 53 24.0**	**+0.4**
GLVR				AMB	AMB	17 53 25.0	
	comp=N,79nm,0.3s						
GLVR				*e*S	**Sn**	**17 54 18.0**	**-0.5**
GLVR				A	A	17 54 19.0	
	comp=N,54nm,0.3s						
GLVR				A	A	17 54 19.0	
	comp=N,131nm,0.3s						
GLVR	**Golovnino**	**4.85**	**256**	*e*PN	**Pn**	**17 53 24.0**	**+0.4**
GLVR				pmax	pmax		
	comp=Z,79nm,0.1s						
MYR	**Moyori**	**6.92**	**249**	*e*P	**Pn**	**17 53 52.0**	**0.0**

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*IDC **12** 17:54:24.9±2.3, 33°.84N×116°.64W, h0^{km}, mb3.5/1, mb1 3.7/4, mb1mx3.3/61, mbtmp3.2/4, ML3.9/3, Error ellipse: s-maj=37.1km s-min=12.8km az=51.0*

*ISCJB **12** 17:54:27.6±0.2, 34°.09N±0°.01×116°.37W±0°.01, h9^{km}±1^{km}, mb3.6/1, Error ellipse: s-maj=1.7km s-min=1.6km az=162.2*

*NEIC **12** 17:54:28.8±0.0, 34°.09N×116°.39W, h11^{km}, ML3.9(PAS), After PAS.*

NEIC Felt [III] at Joshua Tree, Morongo Valley and Yucca Valley; [II] at Cathedral City, Desert Hot Springs, Huntington Beach, Palm Desert, Palm Springs, Rancho Mirage and Twentynine Palms. Also felt at Banning, Corona, Hesperia, Highland, Indio, Irvine, Landers, Mission Viejo, Phelan, Redondo Beach, Riverside, San Jacinto, Temecula, Thousand Palms, Trabuco Canyon, Van Nuys and Whittier.

ISC 12 17:54:28.5±0.9**, 34°.06N**±0°.01×**116°.42W**±0°.01**, h14**^{km}±7^{km}**, n173,** σ1^{s}.**24**/232**, Southern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DEVC	**Devers**	**0.18**	**228**	*e*Pg	**Pg**	**17 54 33.5**	**+0.8**
TPC	**Twentynine Pal**	**0.31**	**81**	*e*Pg	**Pg**	**17 54 34.4**	**-0.6**
BELC	**Belle Mtn. Jos**	**0.35**	**99**	P	**Pg**	**17 54 35.5**	**-0.3**
	baz=285,SNR=1000						
BELC				S	**Sg**	**17 54 40.2**	**-0.5**
	baz=285						
BELC	**Belle Mtn. Jos**	**0.35**	**99**	*e*Pg	**Pg**	**17 54 35.5**	**-0.3**
GVDA	**Garner Valley**	**0.44**	**209**	*e*Pg	**Pb**	**17 54 37.8**	**-0.4**
PFO	**Pinyon Flats O**	**0.45**	**184**	P	**Pb**	**17 54 37.7**	**-0.6**
	baz=6.6,SNR=528						
PFO				S	**Sb**	**17 54 44.0**	**-0.8**
	baz=6.6						
PFO	**Pinyon Flats O**	**0.45**	**184**	*e*Pg	**Pb**	**17 54 37.7**	**-0.6**
XPFO	**Piæon Flat**	**0.45**	**184**	*e*Pg	**Pb**	**17 54 37.6**	**-0.7**
BBRC	**Big Bear Solar**	**0.46**	**296**	P	**Pg**	**17 54 37.7**	**-0.1**
	baz=111,SNR=89						
BBRC				S	**Sg**	**17 54 44.2**	**+0.1**
	baz=111						
BBRC	**Big Bear Solar**	**0.46**	**296**	*e*Pg	**Pg**	**17 54 37.7**	**-0.1**
BBSC	**Beaumont Base**	**0.49**	**254**	*e*Pg	**Pb**	**17 54 38.8**	**-0.1**
DNR	**Dunn Ranch,Anz**	**0.52**	**200**	*e*Pg	**Pb**	**17 54 39.2**	**-0.3**
DNR				*e*Sg	**Sb**	**17 54 47.4**	**+0.4**
SNDA	**J Saunders Pla**	**0.53**	**198**	*e*Pg	**Pb**	**17 54 39.4**	**-0.3**
SNDA				*e*Sg	**Sb**	**17 54 47.4**	**+0.1**
CTCC	**Cactus City**	**0.54**	**138**	*e*Pg	**Pb**	**17 54 39.4**	**-0.4**
CTCC				*e*Sg	**Sb**	**17 54 47.3**	**-0.1**
CRY	**Cary Ranch**	**0.56**	**209**	*e*Pg	**Pb**	**17 54 39.9**	**-0.3**
SVD	**Seven Oaks Dam**	**0.57**	**275**	*e*Pg	**Pb**	**17 54 39.7**	**-0.6**
SVD				*e*Sg	**Sb**	**17 54 48.4**	**+0.1**
FRD	**Ford Ranch, An**	**0.58**	**195**	P	**Pb**	**17 54 40.3**	**-0.3**
	baz=16,SNR=1000						
FRD				S	**Sb**	**17 54 48.5**	**-0.3**
	baz=16						
FRD	**Ford Ranch, An**	**0.58**	**195**	*e*Pg	**Pb**	**17 54 40.3**	**-0.3**
CTW	**Cottonwood Mou**	**0.59**	**130**	*e*Pg	**Pb**	**17 54 40.3**	**-0.4**
HMTC	**Hemet**	**0.60**	**235**	*e*Pg	**Pb**	**17 54 40.5**	**-0.3**
DGR	**Domenigoni Val**	**0.64**	**231**	*e*Pg	**Pb**	**17 54 41.2**	**-0.3**
BACC	**Bachelor Mtn.**	**0.68**	**230**	*e*Pg	**Pb**	**17 54 41.9**	**-0.3**
HAY	**Hayfield**	**0.70**	**119**	*e*Pg	**Pb**	**17 54 42.8**	**+0.1**
BATC	**Bat Cave Butte**	**0.77**	**141**	*e*Pg	**Pb**	**17 54 43.6**	**-0.1**
HEC	**Hector,Ludlow**	**0.77**	**5**	P	**Pg**	**17 54 42.4**	**-1.2**
	baz=184,SNR=550						
HEC				S	**Sg**	**17 54 53.1**	**-0.7**
	baz=184						
HEC	**Hector,Ludlow**	**0.77**	**5**	*e*Pg	**Pg**	**17 54 42.4**	**-1.2**
BORC	**Borrego Spring**	**0.79**	**180**	*e*Pg	**Pb**	**17 54 43.9**	**-0.1**
MURC	**Murrieta**	**0.79**	**235**	P	**Pb**	**17 54 43.8**	**-0.4**
	baz=54,SNR=144						
MURC				S	**Sb**	**17 54 54.5**	**-0.2**
	baz=54						
PLM	**Palomar**	**0.79**	**208**	*e*Pg	**Pb**	**17 54 44.4**	**+0.1**
RVR	**Riverside**	**0.80**	**266**	*e*Pg	**Pb**	**17 54 43.9**	**-0.4**
RVR				*e*Sn	**Sb**	**17 54 54.9**	**0.0**
BC3	**Big Chuckawall**	**0.90**	**116**	P	**Pg**	**17 54 45.7**	**-0.2**
	baz=299,SNR=1000						
BC3				S	**Sg**	**17 54 57.4**	**-0.3**
	baz=299						
VTV	**Victorville**	**0.91**	**304**	*e*Pg	**Pg**	**17 54 45.4**	**-0.7**
VTV				*e*Sn	**Sg**	**17 54 57.1**	**-0.9**
RRX	**Edison Barstow**	**0.95**	**330**	P	**Pg**	**17 54 46.1**	**-0.7**
	baz=147,SNR=48						
RRX				S	**Sg**	**17 54 58.4**	**-0.8**
	baz=147						
GMRC	**Granite Mounta**	**0.96**	**41**	P	**Pg**	**17 54 45.6**	**-1.5**
	baz=221,SNR=1000						
GMRC				S	**Sg**	**17 54 57.9**	**-1.8**
	baz=221						
GMRC	**Granite Mounta**	**0.96**	**41**	*e*Pg	**Pg**	**17 54 45.8**	**-1.3**
GMRC				*e*Sg	**Sg**	**17 54 58.2**	**-1.5**
CRNC	**Corona**	**0.97**	**260**	*e*Sg	**Sb**	**17 54 59.7**	**0.0**
DANC	**Danby, Needles**	**1.03**	**56**	*e*Pg	**Pg**	**17 54 47.5**	**-1.0**
DANC				*e*Sg	**Sg**	**17 55 01.0**	**-1.0**
BFSC	**Mount Baldy Ra**	**1.04**	**280**	P	**Pg**	**17 54 48.2**	**-0.5**
	baz=98,SNR=895						
BFSC				S	**Sb**	**17 55 02.2**	**0.0**
	baz=98						
BFSC	**Mount Baldy Ra**	**1.04**	**280**	*e*Pg	**Pg**	**17 54 48.2**	**-0.5**
EL2	**El Mirage 2**	**1.04**	**297**	*e*Pg	**Pn**	**17 54 49.5**	**+0.6**
ERRC	**Elmore Ranch**	**1.06**	**152**	*e*Sn	**Sn**	**17 55 04.8**	**+1.2**
IRM	**Iron Mountain**	**1.06**	**84**	P	**Pg**	**17 54 47.3**	**-1.7**
	baz=267,SNR=1000						
IRM				S	**Sg**	**17 55 01.5**	**-1.4**
	baz=267						
IRM	**Iron Mountain**	**1.06**	**84**	*e*Pg	**Pg**	**17 54 48.1**	**-0.9**
IRM				*e*Sn	**Sg**	**17 55 02.7**	**-0.2**
SSK	**Sunset Peak**	**1.07**	**279**	*e*Pg	**Pb**	**17 54 48.8**	**-0.2**
DSCC	**Desert Studies**	**1.11**	**13**	*e*Pg	**Pg**	**17 54 48.4**	**-1.6**
HWB	**Hans Werner Br**	**1.12**	**204**	*e*Pn	**Pb**	**17 54 49.5**	**-0.2**
HWB				*e*Sn	**Sb**	**17 55 04.7**	**+0.4**
DPP	**Dos Picos Cty**	**1.14**	**203**	*e*Pn	**Pb**	**17 54 49.9**	**-0.2**
DPP				*e*Sn	**Sb**	**17 55 05.3**	**+0.5**
PSRC	**Puddingstone R**	**1.15**	**272**	*e*Pn	**Pb**	**17 54 50.3**	**0.0**
PSRC				*e*Sn	**Sb**	**17 55 06.0**	**+0.9**
CBKC	**Canebrake**	**1.16**	**173**	*e*Pn	**Pg**	**17 54 49.7**	**-1.2**
MONP2	**Monument Peak**	**1.16**	**180**	P	**Pg**	**17 54 50.2**	**-0.7**
	baz=1.2,SNR=194						
MONP2				S	**Sb**	**17 55 05.6**	**+0.1**
	baz=1.2						
PEM	**Pine Mountain**	**1.21**	**276**	*e*Pn	**Pg**	**17 54 51.0**	**-0.8**
EML	**El Monte Cty P**	**1.22**	**197**	*e*Pn	**Pn**	**17 54 51.5**	**+0.3**
EML				*e*Sn	**Sn**	**17 55 07.6**	**+0.2**
BLKC	**Black Mountain**	**1.22**	**328**	*e*Pn	**Pg**	**17 54 50.6**	**-1.5**
SWSC	**Sam W. Stewart**	**1.22**	**155**	P	**Pg**	**17 54 49.9**	**-2.2**
	baz=337,SNR=46						
SWSC	**Sam W. Stewart**	**1.22**	**155**	*e*Pn	**Pg**	**17 54 50.0**	**-2.0**
SWSC				*e*Sn	**Sn**	**17 55 08.4**	**+0.8**
CRR	**Carrizo Plain**	**1.23**	**162**	*e*Pn	**Pg**	**17 54 50.4**	**-1.8**
HOLC	**Holcomb Ridge**	**1.25**	**289**	*e*Pn	**Pg**	**17 54 51.7**	**-0.8**
GSC	**Goldstone, Bar**	**1.28**	**346**	P	**Pn**	**17 54 51.1**	**-1.1**
	baz=164,SNR=294						
GSC				S	**Sg**	**17 55 08.2**	**-1.8**
	baz=164						
GSC	**Goldstone, Bar**	**1.28**	**346**	*e*Pn	**Pn**	**17 54 51.1**	**-1.1**
109C	**Camp Elliot, M**	**1.30**	**206**	P	**Pn**	**17 54 52.3**	**0.0**
	baz=26,SNR=39						
109C				S	**Sb**	**17 55 09.5**	**+0.2**
	baz=26						
CPE	**Camp Elliot**	**1.30**	**206**	*e*Pn	**Pn**	**17 54 52.2**	**-0.1**
CPE				*e*Sn	**Sn**	**17 55 09.6**	**+0.2**
JNH	**Juniper Hills**	**1.33**	**287**	*e*Pn	**Pn**	**17 54 53.1**	**+0.2**
CHFC	**Chilao Flat St**	**1.36**	**282**	*e*Pn	**Pn**	**17 54 53.6**	**+0.3**
CHFC				*e*Sn	**Sn**	**17 55 12.3**	**+1.0**
MWC	**Mount Wilson**	**1.37**	**277**	*e*Pn	**Pn**	**17 54 53.6**	**+0.1**
BAR	**Barrett**	**1.39**	**189**	*e*Pn	**Pn**	**17 54 53.4**	**-0.2**
BAR				*e*Sn	**Sn**	**17 55 12.8**	**+1.0**
LRRC	**Littlerock Res**	**1.41**	**290**	*e*Pn	**Pn**	**17 54 54.4**	**+0.6**
LRRC				*e*Sn	**Sg**	**17 55 14.2**	**+0.2**
GVRC	**Garvey Reservo**	**1.41**	**270**	*e*Pn	**Pg**	**17 54 55.2**	**-0.5**
WESC	**Westside Schoo**	**1.42**	**156**	*e*Sn	**Sg**	**17 55 15.7**	**+1.6**
IKP	**In-Ko-Pah, Jac**	**1.43**	**169**	P	**Pn**	**17 54 53.4**	**-0.8**
	baz=351,SNR=89						
IKP				Sb	**Sn**	**17 55 14.1**	**+1.3**
	baz=351						
TUQ	**Turquoise Moun**	**1.44**	**16**	P	**Pn**	**17 54 52.9**	**-1.4**
	baz=196,SNR=141						
TUQ	**Turquoise Moun**	**1.44**	**16**	*e*Pn	**Pn**	**17 54 54.9**	**+0.6**
TUQ				*e*Sn	**Sb**	**17 55 13.3**	**-0.1**
BTCC	**Brunts Corner**	**1.45**	**136**	*e*Pn	**Pg**	**17 54 56.4**	**+0.1**
BTCC				*e*Sn	**Sg**	**17 55 16.6**	**+1.6**
YUH	**Yuha Desert**	**1.47**	**163**	*e*Pn	**Pn**	**17 54 53.6**	**-1.0**
PASC	**Pasadena Art C**	**1.47**	**275**	*e*Pn	**Pn**	**17 54 55.1**	**+0.4**
LDFC	**Landfair**	**1.48**	**46**	*e*Pn	**Pn**	**17 54 55.3**	**+0.3**
LDFC				*e*Sn	**Sn**	**17 55 14.6**	**+0.3**
EDW2	**Edwards Air Fo**	**1.54**	**303**	P	**Pn**	**17 54 54.7**	**-0.9**
	baz=120,SNR=579						
EDW2	**Edwards Air Fo**	**1.54**	**303**	*e*Pn	**Pb**	**17 54 56.9**	**0.0**
EDW2				*e*Sn	**Sg**	**17 55 17.8**	**-0.3**
FMP	**Fort Macarthur**	**1.60**	**258**	Pb	**Pn**	**17 54 57.0**	**+0.6**
	baz=76						
FMP				Sb	**Sg**	**17 55 18.7**	**-1.2**
	baz=76						
DECC	**Green Verdugo**	**1.60**	**278**	Pb	**Pn**	**17 54 57.4**	**+0.9**
	baz=95						
DECC				Sb	**Sg**	**17 55 19.0**	**-1.0**
	baz=95						
DECC	**Green Verdugo**	**1.60**	**278**	*e*Pn	**Pb**	**17 54 58.2**	**+0.2**
BLYC	**Blythe**	**1.60**	**100**	*e*Pn	**Pn**	**17 54 56.1**	**-0.4**
BLYC				*e*Pg	**Pb**	**17 54 58.2**	**+0.3**
BLYC				*e*Sn	**Sg**	**17 55 20.8**	**+0.5**
Y12C	**Blythe**	**1.60**	**100**	P	**Pn**	**17 54 54.8**	**-1.7**
	baz=283,SNR=381						
Y12C	**Blythe**	**1.60**	**100**	*e*Pn	**Pn**	**17 54 54.8**	**-1.7**
NEE2	**Needles Airpor**	**1.65**	**64**	P	**Pn**	**17 54 55.5**	**-1.6**
	baz=246,SNR=29						
NEE2				Sb	**Sn**	**17 55 19.4**	**+1.3**
	baz=246						
FOXC	**Fox Airport**	**1.65**	**295**	*e*Pn	**Pb**	**17 54 59.0**	**+0.2**
CCCA	**Chr Cany lake**	**1.66**	**332**	*e*Pn	**Pb**	**17 54 59.7**	**+0.7**
CCCA				*e*Sn	**Sb**	**17 55 20.9**	**+1.1**
GLA	**Glamis**	**1.67**	**127**	P	**Pn**	**17 54 56.1**	**-1.2**
	baz=309,SNR=202						
GLA				Sg	**Sg**	**17 55 22.6**	**+0.4**
	baz=309						
GLA	**Glamis**	**1.67**	**127**	*e*Pn	**Pn**	**17 54 56.2**	**-1.2**
IR2C	**Iron Canyon**	**1.68**	**282**	*e*Pn	**Pb**	**17 54 59.1**	**0.0**
IR2C				*e*Sn	**Sg**	**17 55 21.9**	**-0.6**
ALPC	**Antelope**	**1.68**	**293**	*e*Pn	**Pb**	**17 54 59.7**	**+0.5**
RPV	**Rancho Palos V**	**1.68**	**260**	*e*Sn	**Sg**	**17 55 21.1**	**-1.5**
DJJ	**Donna J Jenkin**	**1.69**	**272**	*e*Pn	**Pb**	**17 54 59.1**	**-0.3**
TPO	**Tropico Hills**	**1.71**	**299**	*e*Pn	**Pb**	**17 55 00.0**	**+0.3**
CCAC	**Calif City Air**	**1.71**	**310**	*e*Pn	**Pn**	**17 54 57.9**	**-0.2**
LRMC	**Laurel Mtn Rad**	**1.76**	**324**	Sb	**Sb**	**17 55 23.5**	**+0.7**
	baz=142						
CIAC	**Catalina I. Ai**	**1.79**	**249**	*e*Pn	**Pb**	**17 55 01.4**	**+0.3**
CIAC				*e*Sn	**Sn**	**17 55 21.1**	**-0.5**
CIAC				*e*Sg	**Sb**	**17 55 24.1**	**+0.7**
CIS	**Catalina Islan**	**1.79**	**249**	Pb	**Pb**	**17 55 00.6**	**-0.6**
	baz=67,SNR=22						
CIS				Sb	**Sb**	**17 55 24.0**	**+0.6**
	baz=67						
SHOC	**Shoshone, Teco**	**1.84**	**4**	P	**Pn**	**17 54 58.7**	**-1.1**
	baz=183,SNR=33						
SHOC				Sb	**Sb**	**17 55 25.5**	**+0.5**
	baz=183						
PDMCI	**Parker Dam,Lak**	**1.90**	**82**	Pb	**Pn**	**17 55 02.3**	**+1.7**
	baz=264						
PDMCI				Sb	**Sn**	**17 55 26.7**	**+2.2**
	baz=264						
OSI	**Osito Audit: C**	**1.99**	**287**	Pb	**Pb**	**17 55 04.2**	**-0.3**
	baz=105,SNR=42						
OSI	**Osito Audit: C**	**1.99**	**287**	*e*Pn	**Pn**	**17 55 03.2**	**+1.4**
CLC	**China Lake**	**2.00**	**331**	*e*Pn	**Pn**	**17 55 01.6**	**-0.5**
CLC				*e*Pg	**Pb**	**17 55 05.4**	**+0.6**
CLC				*e*Sn	**Sb**	**17 55 31.5**	**+1.8**
SCI2	**San Clemente I**	**2.08**	**239**	Pb	**Pb**	**17 55 05.4**	**-0.7**
	baz=58						
TJR	**Tejon Ranch**	**2.15**	**297**	*e*Pn	**Pn**	**17 55 03.4**	**-0.6**
WWPM	**Walker Pass**	**2.17**	**321**	*e*Pn	**Pn**	**17 55 03.9**	**-0.5**
WWPM				*e*Pg	**Pb**	**17 55 08.5**	**+0.9**
MPMC	**Manual Prospec**	**2.18**	**337**	P	**Pn**	**17 55 03.8**	**-0.9**
	baz=155,SNR=55						
MPMC				Sb	**Sb**	**17 55 35.9**	**+0.9**
	baz=155						
BLG	**Laguna Peak, P**	**2.20**	**272**	Pb	**Pb**	**17 55 07.6**	**-0.5**
	baz=90						
BLG				Sb	**Sb**	**17 55 36.7**	**+1.5**
	baz=90						
SBI	**Santa Barbara**	**2.25**	**256**	*e*Sn	**Sg**	**17 55 38.7**	**-2.1**
ARVC	**Arvin**	**2.26**	**299**	P	**Pn**	**17 55 05.2**	**-0.3**
	baz=117,SNR=32						
ISA	**Isabella, Lake**	**2.33**	**314**	P	**Pn**	**17 55 05.9**	**-0.7**
	baz=132,SNR=146						
ISA				Sb	**Sb**	**17 55 40.3**	**+1.2**
	baz=132						
ISA	**Isabella, Lake**	**2.33**	**314**	*e*Pn	**Pn**	**17 55 05.7**	**-0.8**
W13A	**Hualapai Mount**	**2.33**	**63**	*e*Pn	**Pn**	**17 55 06.1**	**-0.7**
DAC	**Darwin (Calif)**	**2.42**	**337**	*e*Pn	**Pn**	**17 55 07.3**	**-0.6**
113A	**Mohawk Valley,**	**2.56**	**119**	*e*Pn	**Pn**	**17 55 07.8**	**-1.9**
SHPR	**Sheep Range**	**2.65**	**22**	*e*Pn	**Pn**	**17 55 10.6**	**-0.4**
VES	**Vestal, Richgr**	**2.82**	**310**	P	**Pn**	**17 55 13.0**	**-0.3**
	baz=128,SNR=17						
Y14A	**Wickenburg**	**2.84**	**91**	*e*Pn	**Pn**	**17 55 11.9**	**-1.6**
TPNV	**Topopah Spring**	**2.89**	**3**	P	**Pn**	**17 55 14.1**	**-0.3**
	baz=182,SNR=26						
TPNV				Sb	**Sb**	**17 55 56.9**	**+1.7**
	baz=182						
TPNV	**Topopah Spring**	**2.89**	**3**	*e*Pn	**Pn**	**17 55 14.2**	**-0.1**
PKM	**Mcpherson Peak**	**2.92**	**287**	P	**Pn**	**17 55 15.1**	**+0.2**
	baz=105,SNR=18						
GRAC	**Grapevine Rang**	**3.03**	**346**	Sb	**Sb**	**17 56 02.5**	**+3.1**
	baz=164						
PAGB	**Antelope Grade**	**3.56**	**299**	*e*Pn	**Pn**	**17 55 24.2**	**+0.7**
LCMT	**Little Creek M**	**3.92**	**40**	*e*Pn	**Pn**	**17 55 28.6**	**+0.1**
OMMB	**Old Mammoth Mi**	**4.12**	**330**	*e*Pn	**Pn**	**17 55 33.0**	**+1.6**
U15A	**North Rim**	**4.12**	**54**	*e*Pn	**Pn**	**17 55 31.6**	**+0.1**
X16A	**Lo Mia Camp, P**	**4.14**	**84**	*e*Pn	**Pn**	**17 55 31.9**	**+0.3**
MEMM	**East Mammoth H**	**4.14**	**331**	*e*Pn	**Pn**	**17 55 31.6**	**-0.1**
MEMM				*e*Pg	**Pb**	**17 55 40.6**	**-0.9**
PMPB	**Monarch Peak**	**4.19**	**302**	*e*Pn	**Pn**	**17 55 33.1**	**+1.0**
CCUT	**Cedar City**	**4.28**	**35**	*e*Pn	**Pn**	**17 55 34.1**	**+0.6**
R11A	**Troy Canyon, C**	**4.34**	**9**	P	**Pn**	**17 55 33.2**	**-1.0**
	baz=189						
R11A	**Troy Canyon, C**	**4.34**	**9**	*e*Pn	**Pn**	**17 55 34.8**	**+0.5**
SZCU	**Shurtz Canyon**	**4.45**	**37**	*e*Pn	**Pn**	**17 55 34.6**	**-1.2**
NV11	**Mina Array Sit**	**4.59**	**343**	*e*Pn	**Pn**	**17 55 38.2**	**+0.6**
NV01	**Mina Array Sit**	**4.62**	**341**	*e*Pn	**Pn**	**17 55 38.5**	**+0.3**
NV01				*e*Lg	Lg	17 56 56.5	
NVAR	**Mina Array Bea**	**4.62**	**341**	Pn	**Pn**	**17 55 39.0**	**+0.8**
	1.4nm,0.3s,baz=164,slow=15,SNR=13						
NVAR				Pg	**Pb**	**17 55 53.0**	**+3.4**
	1.6nm,0.3s,baz=158,slow=17,SNR=8.9						
NVAR				Sn	**Sn**	**17 56 33.4**	**+1.5**
	1.9nm,0.3s,baz=136,slow=16,SNR=4.7						
NVAR				Lg	Lg	17 56 56.5	
	4.5nm,0.3s,baz=159,slow=27,SNR=7.1						
PKCU	**Pink Cliffs**	**4.75**	**43**	*e*Pn	**Pn**	**17 55 41.3**	**+1.2**
RYN	**Ryan**	**4.87**	**340**	*e*Pn	**Pn**	**17 55 41.6**	**0.0**
SAO	**San Andreas Ge**	**4.92**	**305**	*e*Pn	**Pn**	**17 55 38.9**	**-3.2**
PSUT	**Pine Spring**	**4.92**	**24**	*e*Pn	**Pn**	**17 55 43.0**	**+0.7**
TUC	**Tucson**	**5.03**	**109**	P	**Pn**	**17 55 42.2**	**-1.5**
	baz=292						
TUC	**Tucson**	**5.03**	**109**	*e*Pn	**Pn**	**17 55 41.5**	**-2.3**
WAKR	**Walker**	**5.06**	**332**	*e*Pn	Pn	17 55 39.7	-4.6
CMB	**Columbia Colle**	**5.11**	**322**	*e*Pn	**Pn**	**17 55 46.0**	**+1.2**
KVN	**Kaiserville**	**5.17**	**345**	*e*Pn	**Pn**	**17 55 46.7**	**+1.1**
MTPU	**Mount Pierson**	**5.25**	**40**	*e*Pn	**Pn**	**17 55 46.3**	**-0.7**
X18A	**Snowflake**	**5.38**	**83**	*e*Pn	**Pn**	**17 55 49.8**	**+1.2**
PNTR	**Pine Nut**	**5.64**	**334**	*e*Pn	**Pn**	**17 55 52.1**	**0.0**
AFDM	**Forest Hills D**	**6.11**	**324**	*e*Pn	**Pn**	**17 56 00.2**	**+1.8**
AFDM				*e*Sg	**Sg**	**17 57 36.4**	**-8.0**
BMN	**Battle Mountai**	**6.39**	**354**	*e*Pn	**Pn**	**17 56 02.8**	**+0.3**
BMN				*e*Lg	Lg	17 57 49.7	
BEKR	**Beckworth**	**6.60**	**333**	*e*Pn	**Pn**	**17 56 05.7**	**+0.3**
TMUT	**Trail Mountain**	**6.70**	**37**	*e*Pn	**Pn**	**17 56 06.2**	**-0.6**
DUG	**Dugway, Tooele**	**6.77**	**24**	*e*Pg	**Pg**	**17 56 34.0**	**-4.2**
	10nm,0.7s						
MAC	**Mark West Spri**	**6.78**	**313**	*e*Pn	**Pn**	**17 56 09.1**	**+1.4**
MVCO	**Mesa Verde**	**7.17**	**62**	*e*Pn	**Pn**	**17 56 12.2**	**-1.1**
PV19	**Morning Glory**	**7.36**	**53**	*e*Pn	**Pn**	**17 56 13.1**	**-2.7**
PV14	**Lion Creek, Pa**	**7.37**	**52**	*e*Pn	**Pn**	**17 56 15.0**	**-1.0**
PV18	**Skein Mesa, Pa**	**7.37**	**53**	*e*Pn	**Pn**	**17 56 15.3**	**-0.7**
121A	**Cookes Peak, D**	**7.39**	**99**	P	**Pn**	**17 56 15.6**	**-0.6**
	baz=285,SNR=8.0						
PV13	**Radium Mtn., P**	**7.39**	**54**	*e*Pn	**Pn**	**17 56 15.4**	**-0.8**
PV20	**West Nyswonger**	**7.39**	**52**	*e*Pn	**Pn**	**17 56 15.4**	**-0.8**
PV16	**Nyswonger Mesa**	**7.40**	**53**	*e*Pn	**Pn**	**17 56 15.6**	**-0.8**
PV03	**Paradox Valley**	**7.42**	**53**	*e*Pn	**Pn**	**17 56 16.2**	**-0.4**
PV02	**Paradox Valley**	**7.47**	**54**	*e*Pn	**Pn**	**17 56 16.1**	**-1.2**
PV12	**Saucer Basin,**	**7.48**	**53**	*e*Pn	**Pn**	**17 56 18.7**	**+1.2**
LAZ	**Ladron**	**7.69**	**85**	*e*Pn	**Pn**	**17 56 18.7**	**-1.7**
ANMO	**Albuquerque**	**8.27**	**81**	Pg	Pb	17 56 58.3	+6.6
	0.2nm,0.3s,baz=266,slow=16,SNR=5.9						
ANMO				Lg	Lg	17 58 44.4	
	0.2nm,0.3s,baz=151,slow=19,SNR=2.7						
PDAR	**Pinedale Array**	**10.22**	**30**	Pn	**Pn**	**17 56 59.2**	**+4.1**
	0.2nm,0.3s,baz=204,slow=13,SNR=1.7						
PDAR				Pg		17 57 40.0	
	0.2nm,0.3s,baz=213,slow=22,SNR=4.0						
LPIG	**La Paz**	**11.26**	**150**	Lg	Lg	18 00 19.5	
	19nm,0.3s,baz=140,slow=18,SNR=2.5						
LTX	**Lajitas**	**11.83**	**110**	*e*Pn	**Pn**	**17 57 18.8**	**+1.7**
TXAR	**Lajitas Array**	**11.83**	**110**	Pn	**Pn**	**17 57 18.8**	**+1.7**
	0.2nm,0.3s,baz=280,slow=11,SNR=5.2						
VT2	**Vantage 2**	**13.18**	**349**	*e*Pn	**Pn**	**17 57 39.0**	**+3.7**
VT2				*e*Sn	**Sn**	**18 00 04.6**	**+3.0**
PHC	**Port Hardy**	**18.49**	**337**	*e*P	**P**	**17 58 43.5**	**-0.5**
ILAR	**Eielson Array**	**35.87**	**338**	P	**P**	**18 01 25.7**	**-2.0**
	0.6nm,0.7s,baz=132,slow=4.0,SNR=4.5						

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*NIED **12** 17:55:00, 45°.40N×151°.80E, h23^{km}, Mw4.1 Best double couple: M$_0$1.82000×10^{15} NP1:φ$_s$46.00000°, δ19.00000°, λ68.00000°. NP2:φ$_s$249.00000°, δ72.00000°, λ98.00000°.*

*SKHL **12** 17:55:16.9±0.6, 45°.26N×151°.76E, h36^{km}±4^{km}, mb4.6/2*

*ISCJB **12** 17:55:17.7±0.8, 45°.36N±0°.09×151°.6E±0°.1, h35^{km}, mb3.9/20, MS3.7/2, Error ellipse: s-maj=16.2km s-min=5.4km az=141.4*

*MOS **12** 17:55:19.3±1.2, 45°.42N×151°.42E, h46^{km}, mb4.3/11, Error ellipse: s-maj=10.5km s-min=8.7km az=139.4*

*IDC **12** 17:55:24.1±1.2, 46°.63N×150°.37E, h0^{km}, mb3.8/13, mb1 3.9/15, mb1mx3.7/71, mbtmp3.8/15, ML3.0/1, MS3.4/4, Ms1 3.4/4, ms1mx2.7/72, Error ellipse: s-maj=33.6km s-min=22.0km az=100.0*

*NEIC **12** 17:55:26.6±3.9, 46°.62N×150°.32E, h15^{km}±24^{km}, mb4.4/1, Error ellipse: s-maj=16.2km s-min=9.5km az=128.0*

ISC 12 17:55:19.8±1.2**, 45°.4N**±0°.1×**151°.6E**±0°.1**, h35**^{km}**, n57,** σ**0^{s}.87**/49**, mb4.1**/20**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**2.61**	**268**	*e*P	**Pn**	**17 55 59.7**	**+0.3**
KUR				AMB	AMB	17 56 03.3	
	190nm,0.5s						
KUR				*e*S	**Sn**	**17 56 31.3**	**+1.5**
KUR				A	A	17 56 38.0	
	690nm,0.5s						
KUR				A	A	17 56 38.0	
	460nm,0.5s						
KUR	**Kuril'sk**	**2.61**	**268**	*i* PN	**Pn**	**17 55 59.5**	**+0.1**
SHO	**Shikotan**	**3.69**	**248**	*e*P	**Pn**	**17 56 13.5**	**-0.9**
SHO				AMB	AMB	17 56 17.0	
	25nm,0.2s						
SHO				*e*S	**Sn**	**17 56 56.2**	**-0.4**
SHO				A	A	17 57 16.0	
	170nm,0.5s						
SHO				A	A	17 57 16.0	
	280nm,0.5s						
SHO	**Shikotan**	**3.69**	**248**	*e*PN	**Pn**	**17 56 13.4**	**-0.9**
SHO				*e*S	**Sn**	**17 56 56.2**	**-0.4**
SHO				pmax	pmax		
	comp=Z,22nm,0.4s						
SHO				pmax	pmax		

	comp=N,4.0nm,0.2s						
SHO				pmax	pmax		
	comp=E,4.0nm,0.1s						
SHO				smax	smax		
	comp=N,115nm,0.5s						
SHO				smax	smax		
	comp=E,143nm,0.5s						
YUK	Yuzh-Kuril'sk	4.28	254	eP	Pn	17 56 22.0	-0.3
YUK				eS	Sn	17 57 11.1	+0.2
YUK				A	A	17 57 31.0	
	comp=E,270nm,0.6s						
YUK				A	A	17 57 31.0	
	comp=E,550nm,0.6s						
YUK	Yuzh-Kuril'sk	4.28	254	i PN	Pn	17 56 22.1	-0.3
SKR	Severo-Kuril's	6.13	28	eP	Pn	17 56 47.8	+0.1
SKR	Severo-Kuril's	6.13	28	i PN	Pn	17 56 47.8	+0.1
YSS	Yuzh-Sakhalins	6.31	288	eP	Pn	17 56 49.8	-0.5
YSS	Yuzh-Sakhalins	6.31	288	i PN	Pn	17 56 49.9	-0.4
YSS				pmax	pmax		
	comp=Z,38nm,1.3s						
ASAJ	Asahikawa	6.50	262	Pn	Pn	17 56 54.1	+1.2
	comp=Z,0.3nm,0.3s,baz=13,slow=18,SNR=3.7						
ASAJ				LR	LR	17 59 39.8	
	comp=Z,200nm,18.7s,baz=72,slow=42						
ERM	Erimo	6.95	244	eP	Pn	17 56 59.2	+0.1
ERM	Erimo	6.95	244	i PN	Pn	17 56 59.2	+0.1
PETK	Petropavlovsk-	8.72	25	Pn	Pn	17 57 23.2	-0.1
	baz=189,slow=11						
MJA0	Matsu Arr-Jizo	13.36	233	ePN	Pn	17 58 27.3	+0.4
MJA0				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR	Matsushiro Arr	13.39	233	ePN	Pn	17 58 27.3	+0.1
MJAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MAJO	Matsushiro	13.39	233	eP	Pn	17 58 25.7	-1.5
MAJO	Matsushiro	13.39	233	i PN	Pn	17 58 27.5	+0.3
USRK	Ussuriysk Ar.	13.95	272	LR	LR	18 04 00.5	
	comp=Z,87nm,19.1s,baz=34,slow=39						
KLR	Kul'dur	13.97	293	LR	LR	18 03 57.8	
	comp=Z,8.1nm,20.0s,baz=106,slow=40						
KLR	Kul'dur	13.97	293	eP	Pn	17 58 33.8	-1.4
KLR	Kul'dur	13.97	293	i P	Pn	17 58 33.8	-1.4
KSRS	Korea Array	19.36	254	P	Pn	17 59 43.3	-0.3
	comp=Z,0.1nm,0.3s,baz=63,slow=11,SNR=3.8						
KSAR	Wonju Array Be	19.40	254	P	P	17 59 43.3	+0.6
KSAR	Wonju Array Be	19.40	254	P	P	17 59 43.3	+0.6
YAK	Yakutsk	20.94	331	eP	Pn	18 00 02.4	+0.5
YAK	Yakutsk	20.94	331	i P	P	17 59 58.9	-0.3
YAK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
H11N2	WAKE ISLAND Hy	28.55	149	T	T	18 33 04.1	
	baz=342						
H11N1	WAKE ISLAND Hy	28.57	149	T	T	18 33 05.8	
	baz=342						
H11N3	WAKE ISLAND Hy	28.57	149	T	T	18 33 10.2	
	baz=342						
H11S1	WAKE ISLAND Hy	29.61	150	T	T	18 34 20.2	
	baz=342,slow=74						
H11S3	WAKE ISLAND Hy	29.61	150	T	T	18 34 28.3	
	baz=342,slow=74						
H11S2	WAKE ISLAND Hy	29.62	150	T	T	18 34 23.2	
	baz=342						
ULN	Ulaanbaatar	30.35	291	i P	P	18 01 27.0	-1.2
ULN				pmax	pmax		
	comp=Z,1.0nm,1.0s						
SONM	Songino Array	30.79	291	P	P	18 01 30.6	-1.5
	comp=Z,0.4nm,0.7s,baz=65,slow=10,SNR=3.0						
GTA	Gaotai	38.12	280	eP	P	18 02 36.6	+1.1
GTA				pP	sP	18 02 51.4	+1.5
GTA				sP	pP	18 02 57.5	+12
GTA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
MKAR	Makanchi Array	46.62	298	P	P	18 03 43.7	-0.7
	comp=Z,0.5nm,0.6s,baz=71,slow=10,SNR=4.4						
MKAR				LR	LR	18 24 23.9	
	comp=Z,69nm,20.5s,baz=22,slow=38						
MKAR	Makanchi Array	46.62	298	eP	P	18 03 45.9	+1.5
MKAR	Makanchi Array	46.62	298	eP	P	18 03 45.9	+1.5
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURK	Kurchatov	47.23	304	P	P	18 03 48.7	-0.3
KURK	Kurchatov	47.23	304	P	P	18 03 48.7	-0.3
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KURBB	Kurchatov Arra	47.32	304	P	P	18 03 48.7	-1.0
	comp=Z,0.4nm,0.4s,baz=71,slow=8.4,SNR=5.1						
SPITS	Spitsbergen Ar	53.77	350	P	P	18 04 37.6	-0.4
	comp=Z,2.0nm,0.8s,baz=21,slow=12,SNR=4.5						
AKTO	Aktyubinsk	58.83	312	P	P	18 05 14.2	-0.3
	comp=Z,0.9nm,0.6s,baz=76,slow=8.3,SNR=3.6						
AKTO				LR	LR	18 32 59.3	
	comp=Z,61nm,19.7s,baz=7.7,slow=39						
FINES	FINESS Array B	64.82	334	P	P	18 05 54.3	-0.2
	comp=Z,1.3nm,0.6s,baz=43,slow=8.6,SNR=7.8						
WRAB	Tennant Creek	66.86	198	eP	P	18 06 29.1	+21
	comp=Z,3.3nm,1.1s						
WRA	Warramunga Arr	66.87	198	P	P	18 06 23.9	+16
	comp=Z,0.4nm,0.8s,baz=15,slow=5.8,SNR=3.4						
NB2	NORSAR Subarra	69.17	341	P	P	18 06 22.1	-0.2
	comp=Z,2.7nm,0.7s,baz=29,slow=6.5						
HFS	Hagfors	69.36	339	P	P	18 06 23.2	-0.2
	comp=Z,2.9nm,0.6s,baz=46,slow=6.2,SNR=11						
ASAR	Alice Springs	70.57	197	P	P	18 06 46.8	+16
	comp=Z,0.4nm,1.0s,baz=15,slow=6.2,SNR=3.3						
KIV	Kislovodsk	70.97	314	eP	P	18 06 34.2	+0.5
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KBZ	Khabaz	71.03	313	P	P	18 06 35.6	+1.7
	comp=Z,5.3nm,0.9s,baz=45,slow=2.9,SNR=7.0						
AKASG	Malin Array Be	72.08	326	P	P	18 06 39.8	-0.3
	comp=Z,0.7nm,0.3s,baz=36,slow=6.3,SNR=3.8						
MLR	Muntele Rosu	77.56	324	P	P	18 07 13.5	+1.5
	comp=Z,0.8nm,0.9s,baz=27,slow=16,SNR=3.2						
BRTR	Keskin Array B	78.64	316	P	P	18 07 19.0	+0.8
	comp=Z,0.5nm,0.8s,baz=93,slow=4.2,SNR=3.7						
BRTR	Keskin Array B	78.64	316	eP	P	18 07 19.7	+1.5
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
GERES	GERESS Array B	79.20	333	P	P	18 07 21.9	+0.8
	comp=Z,0.3nm,0.5s,baz=60,slow=6.1,SNR=2.9						

ISCJB ***12*** *18:04:08.3±0.3, 44°.56N±0°.05×142°.01E±0°.08, h243^{km}±3^{km}, mb3.2/10, Error ellipse: s-maj=8.8km s-min=8.6km az=3.8*

JMA ***12*** *18:04:08.8±0.2, 44°.64N×141°.92E, h239^{km}±2^{km}, M3.3*

IDC ***12*** *18:04:08.7±0.4, 44°.58N×142°.00E, h231^{km}±4^{km}, mb3.0/10, mb1 3.2/15, mb1mx3.0/76, mbtmp3.6/15, Error ellipse: s-maj=13.8km s-min=10.9km az=115.0*

ISC 12 18:04:09.0±0.6**, 44°.56N**±0°.06×**141°.98E**±0°.06**, h238**^{km}±6^{km}**, n35, σ0^{s}.87**/41**, mb3.2**/10**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSS	Shosan	0.18	209	P	Pn	18 04 40.2	+0.3
JSS				eS	S	18 05 04.4	+0.4
JYG	Yagishiri	0.42	251	P	Pn	18 04 40.4	+0.1
JSE	Soyaes	0.59	47	P	Pn	18 04 40.7	0.0
JSE				eS	S	18 05 05.0	-0.7
ASAJ	Asahikawa	0.63	135	P	Pn	18 04 41.3	+0.2
	16nm,0.3s,baz=275,slow=8.8,SNR=221						
ASAJ				S	S	18 05 04.7	-1.4
	1.0nm,0.3s,baz=0.0,slow=20,SNR=3.5						
ASAJ	Asahikawa	0.63	135	P	Pn	18 04 41.2	+0.2
JRR	Rishiri	0.75	321	P	Pn	18 04 41.3	-0.1
JWK2	Keihoku	0.76	356	P	Pn	18 04 41.2	-0.2
JHR	Hokuryu	0.84	193	P	Pn	18 04 42.6	+0.7
JHR				eS	S	18 05 08.8	+1.1
JKK2	Kamakawa 2	0.88	141	P	Pn	18 04 42.7	+0.5
JTKR	Abashiri--Toko	1.51	112	P	Pn	18 04 47.1	+0.9
JSK	Shakotan	1.62	222	P	Pn	18 04 47.5	+0.3
JEW	Eniwo	1.76	193	P	Pn	18 04 49.2	+0.8
JAR	Ashorobuto	1.81	134	P	Pn	18 04 49.9	+1.1
JCH	Churui	2.19	152	P	Pn	18 04 51.5	-0.8
JCH				eS	S	18 05 24.3	-2.0
JRA	Rausu	2.34	104	P	Pn	18 04 55.3	+1.5
JNBK	Urakawa-nobuka	2.35	166	P	Pn	18 04 54.4	+0.5
JNBK				eS	S	18 05 29.6	+0.5
JAK	Akkeshi	2.52	128	P	Pn	18 04 57.0	+1.5
JKB	Kayabe	2.76	195	P	Pn	18 04 57.5	-0.6
NEM2	Nemuro 2	2.97	112	eS	S	18 05 38.7	-2.1
USRK	Ussuriysk Ar.	7.17	271	P	Pn	18 05 51.6	+0.1
	baz=82,slow=12						
MJAR	Matsushiro Arr	8.51	201	P	Pn	18 06 07.8	-1.0
	0.2nm,0.3s,baz=18,slow=14,SNR=3.3						
KSRS	Korea Array	12.76	241	P	P	18 07 04.5	-0.1
	0.1nm,0.3s,baz=49,slow=15,SNR=2.8						
PETK	Petropavlovsk-	13.41	45	P	P	18 07 11.4	-0.3
	baz=215,slow=10						
SEY	Seymchan	19.36	14	P	P	18 08 16.0	-0.5
	0.3nm,0.3s,baz=196,slow=7.4,SNR=9.6						
SONM	Songino Array	24.71	290	P	P	18 09 08.7	+0.2
	0.4nm,0.5s,baz=84,slow=8.8,SNR=4.5						
MKAR	Makanchi Array	40.89	295	P	P	18 11 27.4	-0.4
	0.2nm,0.4s,baz=81,slow=9.2,SNR=3.1						
KDAK	Kodiak Island	41.44	47	P	P	18 11 33.0	+1.0
	7.4nm,1.0s,baz=281,slow=5.2,SNR=2.5						
KURBB	Kurchatov Arra	42.05	302	P	P	18 11 37.1	+0.1
	0.1nm,0.4s,baz=70,slow=8.4,SNR=2.7						
ILAR	Eielson Array	43.04	36	P	P	18 11 43.9	-0.9
	0.3nm,0.7s,baz=294,slow=6.8,SNR=3.8						
BVAR	Borovoye Array	46.08	307	P	P	18 12 10.0	+1.0
	0.2nm,0.4s,baz=81,slow=7.4,SNR=2.6						
FITZ	Fitzroy Crossi	64.11	197	P	P	18 14 17.6	-0.2
	0.6nm,0.6s,baz=27,slow=6.8,SNR=3.3						
WRA	Warramunga Arr	64.57	188	P	P	18 14 20.9	+0.2
	0.6nm,0.8s,baz=8.9,slow=6.8,SNR=9.2						
ASAR	Alice Springs	68.30	188	P	P	18 14 45.5	+1.2
	0.5nm,0.6s,baz=359,slow=4.5,SNR=13						
PDAR	Pinedale Array	72.16	47	P	P	18 15 08.0	+0.1
	0.2nm,0.4s,baz=260,slow=2.7,SNR=3.7						
SNAA	Sanae	148.02	200	PKPbc	PKPbc	18 23 25.1	+0.2
	0.7nm,0.8s,baz=196,slow=7.4,SNR=5.7						

SOME ***12*** *18:28:53.7, 50°.48N×86°.43E, h5^{km}*

NNC ***12*** *18:29:02.3±2.5, 50°.25N×87°.47E, h0^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=21.9km s-min=13.4km az=47.0*

ISC 12 18:28:57.9±3.5**, 50°.33N**±0°.09×**86°.1E**±0°.2**, h10**^{km}**, n6, σ2^{s}.88**/11**, 5C-2D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZSN	Zaisan	3.00	197	eP	Pg	18 29 54.1	-1.3
	1.5nm,0.2s						
ZSN				eS	Sg	18 30 37.6	+3.3
	9.0nm,0.4s						
SEM	Semipalatinsk	3.77	273	eP	Pb	18 30 04.2	-0.5
SEM				eS	Sb	18 30 54.6	+4.1
MK31	Makanchi Array	4.37	217	Pn	Pb	18 30 16.6	+1.9
	0.4nm,0.2s,baz=52,slow=13,SNR=98						
MK31				Sn	Sg	18 31 16.6	-1.4
	0.9nm,0.4s,baz=57,slow=28,SNR=4.5						
MK31				⇑Lg	Lg	18 31 36.1	
	1.2nm,0.4s,baz=46,slow=30,SNR=5.0						
KURK	Kurchatov	4.81	277	⇑Pn	Pg	18 30 28.2	-1.8
	1.9nm,0.8s						
KURK				⇓Sn	Sg	18 31 33.6	+1.3
	0.9nm,0.5s						
KURK				⇑Lg	Lg	18 32 02.2	
	6.0nm,0.8s						
KURBB	Kurchatov Arra	4.87	276	⇑Pn	Pg	18 30 28.4	-2.7
	1.5nm,0.5s						
KURBB				⇑Sn	Sg	18 31 36.3	+2.2
	2.8nm,0.4s						
KURBB				⇓Lg	Lg	18 32 05.6	
	5.0nm,0.7s						
KAPS	Kapalarasan	6.81	225	eP	Pb	18 30 49.9	-6.3
	1.3nm,0.4s						
KAPS				eS	Sb	18 32 13.8	-3.7
	2.5nm,0.7s						

MAN 12 18:37:47.1, 10°.28N×123°.18E, h8^{km}**, mb3.8, ML2.5, MS2.0, 1D, Cebu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIM	Jordan	0.67	301	eP	Pb	18 38 01.6	+0.5
GUIM				eS	Sn	18 38 12.9	-0.7
LLP	Lapu-Lapu	0.78	87	eP	Pg	18 38 01.4	-0.7
LLP				eS	Sg	18 38 11.3	-0.9
SNPH	Sibulan	0.93	176	⇓iP	Pg	18 38 04.5	-0.5
SNPH				i S	Sg	18 38 15.9	-1.4
MSLP	Maasin	1.66	95	eP	Pn	18 38 16.6	+0.1
MSLP				eS	Sb	18 38 38.9	-0.2
LUBP	Lubang	4.47	320	eP	Pg	18 39 31.5	+19
LUBP				eS	Sn	18 39 38.3	-9.1

ISCJB ***12*** *18:47:28.4±0.5, 24°.88N±0°.03×122°.48E±0°.02, h6^{km}±3^{km}, Error ellipse: s-maj=5.2km s-min=3.1km az=23.9*

JMA ***12*** *18:47:28.8±0.2, 24°.82N×122°.45E, h2^{km}±3^{km}, M2.1*

TAP ***12*** *18:47:29.2, 24°.88N×122°.38E, h6^{km}±1^{km}, ML2.5, D*

ISC 12 18:47:28.6±1.2**, 24°.84N**±0°.04×**122°.48E**±0°.03**, h8**^{km}±12^{km}**, n30, σ0^{s}.40**/59**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1	0.44	228	P	Pb	18 47 38.4	-0.1
	baz=215						
EOS1				S	Sb	18 47 45.5	+0.3
	baz=215						
TWB1	Santiao Chiao	0.48	290	P	Pg	18 47 37.5	-0.4
	baz=290						
TWB1				S	Sg	18 47 43.5	-0.7
	baz=290						
EGS		0.50	270	P	Pg	18 47 38.3	0.0
	baz=265						
EGS				eS	Sg	18 47 45.1	+0.2
	baz=265						
JYNG	Yonagunijimaku	0.57	133	P	Pb	18 47 40.4	-0.5
JYNG				S	Sg	18 47 48.2	+1.0
NTC	Toucheng	0.59	271	eP	Pg	18 47 40.1	0.0
	baz=267						
NTC				eS	Sg	18 47 48.7	+0.8
	baz=267						
TIPB	Shuangxi	0.61	282	P	Pg	18 47 40.6	+0.1
	baz=280						
TIPB				S	Sg	18 47 48.6	+0.2
	baz=280						
YOJ	Yonaguni jima	0.61	128	P	Pb	18 47 41.1	-0.5
YOJ				eS	Sb	18 47 49.7	-0.6
TWC	Suao	0.62	248	P	Pg	18 47 40.5	-0.1
	baz=240						
TWC				S	Sg	18 47 48.4	-0.4
	baz=240						
ILA	Ilan	0.67	263	eP	Pg	18 47 41.5	-0.1
	baz=258						
ILA				eS	Sg	18 47 50.7	+0.4
	baz=258						
NWF	Wu-fen Shan	0.68	290	eP	Pg	18 47 41.8	+0.1
	baz=289						
NWF				eS	Sg	18 47 50.6	+0.1
	baz=289						
WFSB	Wu-fen Shan	0.68	290	P	Pg	18 47 41.7	+0.1
	baz=289						
WFSB				eS	Sg	18 47 50.5	0.0
	baz=289						
TWE	Neicheng	0.75	261	P	Pg	18 47 42.7	-0.4
	baz=255						
TWE				eS	Sg	18 47 53.0	+0.1
	baz=255						
NANB	Nanao	0.79	238	P	Pg	18 47 43.8	+0.1
	baz=232						
NANB				eS	Sb	18 47 55.5	+0.2
	baz=232						
ENA	Nanau	0.79	239	eP	Pg	18 47 44.1	+0.2
	baz=232						
ENA				eS	Sb	18 47 55.3	-0.2
	baz=232						
YM07	YM07	0.85	293	P	Pg	18 47 44.9	-0.1
	baz=293						
YM07				S	Sg	18 47 56.5	+0.4
	baz=293						
ENTT	Nioudou	0.86	256	P	Pg	18 47 45.0	-0.1
	baz=252						
ENTT				eS	Sb	18 47 57.4	0.0
	baz=252						
YM11	YM11	0.89	291	eP	Pg	18 47 45.5	-0.2
	baz=291						
YM11				eS	Sg	18 47 57.3	+0.1
	baz=291						
YM10	YM10	0.89	290	P	Pg	18 47 45.9	+0.1
	baz=290						
YM10				eS	Sg	18 47 57.4	-0.1
	baz=290						
NWLT	Wulai	0.89	266	eP	Pg	18 47 46.0	+0.2
	baz=262						
NWLT				eS	Sg	18 47 58.2	+0.8
	baz=262						
TWY	Chenhua	0.91	298	eP	Pg	18 47 46.0	-0.1
	baz=299						
TWY				eS	Sg	18 47 57.6	-0.3
	baz=299						
TWS1	Kuangyinshan	1.00	285	eP	Pg	18 47 47.1	-0.7
	baz=284						
TWS1				eS	Sg	18 48 00.2	-0.6
	baz=284						
YHNB	Yeheng	1.02	260	P	Pg	18 47 47.9	-0.4
	baz=257						
YHNB				eS	Sg	18 48 02.1	+0.5
	baz=257						
NSK	Sanguang	1.04	261	P	Pg	18 47 47.8	-0.8
	baz=257						
NSK				eS	Sg	18 48 01.9	-0.2
	baz=257						
NACB	Ninganchiao	1.05	231	eP	Pg	18 47 48.4	-0.4
	baz=225						
NACB				eS	Sg	18 48 02.1	-0.3
	baz=225						
NNSB	Datong	1.08	248	eP	Pg	18 47 49.0	-0.4
	baz=243						
NNSB				eS	Sg	18 48 03.6	+0.1
	baz=243						
NNSH	Datong	1.08	248	eP	Pg	18 47 49.1	-0.3
	baz=243						
NNSH				eS	Sg	18 48 03.1	-0.5
	baz=243						
NNS	Nan Shan	1.09	249	P	Pg	18 47 49.7	+0.2
	baz=244						
NNS				S	Sb	18 48 04.2	0.0
	baz=244						
IRIF	Iriomote-Funau	1.24	114	P	Pn	18 47 52.9	+0.6
WHF	Hehuan Shan	1.31	238	eP	Pg	18 47 53.2	-0.6
	baz=234						
WHF				eS	Sg	18 48 10.5	-0.3
	baz=234						
CHGB	Renai	1.43	237	eP	Pb	18 47 55.8	+0.2
	baz=233						
CHGB				eS	Sb	18 48 13.8	-0.2
	baz=233						

SOME ***12*** *18:49:03.9, 43°.07N×85°.37E, h20^{km}*

IDC ***12*** *18:49:16.2±0.8, 43°.45N×84°.90E, h0^{km}, mb3.6/9, mb1 3.7/15, mb1mx3.6/73, mbtmp3.7/15, ML3.6/6, MS3.3/2, Ms1 3.3/2, ms1mx2.5/64, Error ellipse: s-maj=20.4km s-min=10.7km az=56.0*

BJI ***12*** *18:49:19.2, 43°.46N×84°.72E, h12^{km}, mb4.0/4, mB4.1/2, ML3.9/11, Ms3.5/3*

NNC ***12*** *18:49:20.6±2.1, 43°.53N×84°.55E, h0^{km}, mb4.1, mpv3.7, Error ellipse: s-maj=18.6km s-min=9.8km az=123.0*

ISC 12 18:49:20.9±0.6**, 43°.61N**±0°.05×**84°.66E**±0°.04**, h10**^{km}**, n40, σ2^{s}.73**/47**, mb3.6**/9**, 9C-12D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMQ	Urumqi	2.21	83	Pn	Pn	18 49 58.3	+0.6
WMQ				Sg	Sn	18 50 26.6	+1.5
WMQ				smax	smax		
	comp=N,3μm,0.7s						
WMQ				smax	smax		
	comp=E,3μm,0.7s						
MK31	Makanchi Array	3.60	333	⇑Pn	Pn	18 50 18.1	+1.4
	2.7nm,0.2s,baz=151,slow=15,SNR=699						
MK31				⇓Pg	Pb	18 50 27.4	+2.8
	15nm,0.4s,baz=147,slow=16,SNR=30						
MK31				⇓Lg	Lg	18 51 15.1	
	31nm,0.2s,baz=150,slow=29,SNR=13						
MKAR	Makanchi Array	3.60	333	Pn	Pn	18 50 18.4	+1.7
	4.9nm,0.3s,baz=150,slow=15,SNR=196						
MKAR				Pg	Pb	18 50 28.2	+3.5
	21nm,0.3s,baz=144,slow=16,SNR=33						
MKAR				Lg	Lg	18 51 14.8	
	120nm,0.3s,baz=144,slow=28,SNR=16						
MAKZ	Makanchi	3.72	330	⇓Pg	Pb	18 50 31.8	+5.1
	13nm,0.4s						
MAKZ				⇑Lg	Lg	18 51 19.1	
	116nm,0.6s						
PDGK	Podgornoye	3.77	268	⇑Pn	Pn	18 50 19.9	+0.7
	3.0nm,0.4s						
PDGK				⇓Lg	Lg	18 51 16.0	
	99nm,0.5s						
SHLS	Shalkode	3.81	265	eP	Pn	18 50 17.5	-2.3
	87nm,0.4s						
SHLS				eS	Sb	18 51 12.6	-2.1
	731nm,0.4s						
ZSN	Zaisan	3.85	2	eP	Pn	18 50 22.1	+2.0
	9.4nm,0.4s						
ZSN				eS	Sb	18 51 20.1	+4.6
	160nm,0.6s						
UZB	Uzynbulak	4.13	266	eP	Pn	18 50 25.6	+1.4
	18nm,0.4s						
UZB				eS	Sb	18 51 25.9	+2.0
	126nm,0.5s						
KPKS	Kokpek	4.35	270	eP	Pn	18 50 29.1	+2.0
	19nm,0.2s						
KPKS				eS	Sb	18 51 32.1	+2.2
	375nm,0.5s						
ZHN	Zhinishke	4.56	267	eP	Pn	18 50 33.2	+3.2
	21nm,0.4s						
ZHN				eS	Sb	18 51 40.0	+4.0
	93nm,0.2s						
SATY	Saty	4.59	265	eP	Pn	18 50 34.2	+3.7
	16nm,0.3s						
SATY				eS	Sb	18 51 41.1	+4.0
	225nm,0.4s						
MDOK	Medeo	5.56	268	⇓Pg	Pb	18 51 02.1	+3.9
	3.8nm,0.5s						
MDOK				⇑Lg	Lg	18 52 16.9	
	28nm,0.5s						
KNDC	Almaty	5.62	269	⇑Pg	Pb	18 51 03.5	+4.4
	11nm,0.4s						
KNDC				⇓Lg	Lg	18 52 15.3	
	116nm,0.7s						
TKM2	Tokmak 2	6.65	267	⇓Pn	Pn	18 50 57.3	-1.6
	2.3nm,0.5s						
TKM2				⇑Lg	Lg	18 52 48.0	
	9.1nm,0.4s						
AAK	Ala-Archa	7.50	266	Pn	Pn	18 51 10.9	+0.5
	0.7nm,0.3s,baz=207,slow=16,SNR=2.0						
AAK				Lg	Lg	18 53 18.4	
	1.1nm,0.3s,baz=18,slow=20,SNR=3.2						
KSH	Kashi	7.69	241	P	Pn	18 51 23.1	+10
KSH				smax	smax		
	comp=N,68nm,0.9s						
KSH				smax	smax		
	comp=E,63nm,0.9s						
KURBB	Kurchatov Arra	8.17	331	Pn	Pn	18 51 18.9	-0.5
	0.5nm,0.3s,baz=142,slow=13,SNR=30						
KURBB				Sn	Sn	18 52 53.4	+1.7
	0.8nm,0.3s,baz=135,slow=17,SNR=5.0						
KURBB				Lg	Lg	18 53 44.3	
	1.8nm,0.3s,baz=148,slow=33,SNR=11						
KURBB	Kurchatov Arra	8.17	331	⇓Pn	Pn	18 51 18.8	-0.6
	3.1nm,0.3s						
KURBB				⇑Lg	Lg	18 53 42.2	
	224nm,0.7s						
KURK	Kurchatov	8.21	332	⇑Pn	Pn	18 51 19.1	-0.9
	1.0nm,0.3s						
KURK				⇓Lg	Lg	18 53 42.5	
	69nm,0.6s						
MNAS	Manas	8.97	267	⇓Pg	Pg	18 51 59.2	-13
	1.3nm,0.6s						
MNAS				⇓Lg	Lg	18 54 00.8	
	6.3nm,0.6s						
KK31	Karatay Array	10.32	272	⇑Lg	Lg	18 54 47.3	
	5.4nm,0.7s,baz=77,slow=31,SNR=3.9						
ZALV	Zalesovo Beam	10.35	1	Pn	Pn	18 51 48.0	-1.3
	4.2nm,0.3s,baz=185,slow=14,SNR=46						
ZALV				Sn	Sn	18 53 41.4	-3.9
	3.1nm,0.3s,baz=181,slow=24,SNR=11						
ZALV				Lg	Lg	18 54 49.4	
	baz=187,slow=23,SNR=3.0						
ZALV				LR	LR	18 56 31.2	
	comp=Z,42nm,20.8s,baz=62,slow=41						
GTA	Gaotai	12.11	105	eP	Pn	18 52 12.4	-1.1
GTA				pP		18 52 15.9	
GTA				sP		18 52 19.5	
GTA				S	Sn	18 54 30.8	+2.2
GTA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
GTA				LR	LR		
	comp=N,87nm,8.6s						
GTA				LR	LR		
	comp=E,69nm,7.9s						
BVA0	Borovoye Array	13.36	320	Lg	Lg	18 56 27.1	

	14nm,1.2s,baz=124,slow=25,SNR=4.8						
BVAR	Borovoye Array	13.36	320	Pn	Pn	18 52 28.6	-1.7
	0.2nm,0.3s,baz=115,slow=14,SNR=4.5						
BVAR				Sn	Sn	18 54 56.5	-2.3
	0.3nm,0.3s,baz=123,slow=16,SNR=4.1						
BVAR				Lg	Lg	18 56 27.7	
	0.3nm,0.3s,baz=119,slow=27,SNR=5.9						
BRVK	Borovoye	13.43	320	⇓Lg	Lg	18 56 25.3	
	11nm,0.7s						
SONM	Songino Array	15.74	67	Pn	Pn	18 53 01.0	-1.7
	0.1nm,0.3s,baz=254,slow=13,SNR=15						
AKTO	Aktyubinsk	19.34	300	P	P	18 53 45.9	-0.4
	0.2nm,0.3s,baz=88,slow=6.7,SNR=4.7						
HHC	Hu-ho-hao-te	20.08	89	*e*P	P	18 53 56.2	+1.7
HHC				S	S	18 57 38.3	-1.8
HHC				SS	SnSn	18 58 05.3	+8.8
HHC				pmax	pmax		
	comp=Z,18nm,1.0s						
HHC				LR	LR		
	comp=N,72nm,8.6s						
HHC				LR	LR		
	comp=E,120nm,9.2s						
GEYT	Alibeck	20.84	263	P	P	18 54 03.0	+0.3
	0.5nm,0.4s,baz=64,slow=18,SNR=2.7						
ARU	Arti	20.96	317	P	P	18 54 02.9	-0.8
	1.2nm,0.4s,baz=359,slow=1.6,SNR=4.3						
KMI	Kunming	23.63	135	P	P	18 54 34.0	+1.6
KMI				pmax	pmax		
	comp=Z,13nm,1.0s						
KMI				pmax	pmax		
	comp=Z,33nm,4.3s						
CMAR	Chiang Mai Arr	27.81	150	P	P	18 55 06.4	-3.8
	0.3nm,0.5s,baz=338,slow=9.2,SNR=3.3						
BRTR	Keskin Array B	37.82	282	P	P	18 56 35.5	-2.2
	0.2nm,0.3s,baz=69,slow=7.9,SNR=3.0						
ARCES	ARCESS Array B	39.25	331	P	P	18 56 47.3	-1.8
	1.4nm,0.9s,baz=96,slow=9.2,SNR=2.9						
HFS	Hagfors	44.47	318	P	P	18 57 30.8	-1.0
	1.8nm,0.8s,baz=96,slow=9.0,SNR=2.7						
NB2	NORSAR Subarra	45.48	319	P	P	18 57 37.8	-2.2
	comp=Z,0.7nm,0.5s,baz=78,slow=7.9						
TORD	Torodi Ar. Bea	76.00	275	P	P	19 01 06.4	-2.1
	comp=Z,0.2nm,0.6s,baz=37,slow=5.6						
WRA	Warramunga Arr	77.93	133	P	P	19 01 15.1	-4.0
	comp=Z,0.6nm,0.7s,baz=332,slow=4.7,SNR=5.4						
WRA				LR	LR	19 39 21.8	
	comp=Z,93nm,21.1s,baz=330,slow=39						
ASAR	Alice Springs	80.77	135	P	P	19 01 29.2	-5.3
	comp=Z,0.5nm,1.0s,baz=322,slow=5.1,SNR=3.2						

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*ISCJB **12** 18:49:43.3±0.5, 7°.36N±0°.06×94°.07E±0°.05, h20^{km}, mb4.0/18, MS3.4/14, Error ellipse: s-maj=9.1km s-min=6.2km az=27.9*

*NEIC **12** 18:49:50.7±1.0, 7°.56N×94°.26E, h60^{km}±10^{km}, mb4.4/2, Error ellipse: s-maj=12.6km s-min=9.7km az=69.0*

*IDC **12** 18:49:50.4±2.8, 7°.52N×94°.25E, h57^{km}±26^{km}, mb3.6/15, mb1 3.7/18, mb1mx3.5/69, mbtmp3.9/18, ML3.9/3, MS3.4/18, Ms1 3.4/18, ms1mx3.1/59, Error ellipse: s-maj=24.4km s-min=14.0km az=56.0*

ISC 12 18:49:45.7±0.6**, 7°.46N**±0°.08×**94°.04E**±0°.07**, h20**^{km}**, n56, σ2^{s}.06**/43**, mb4.0**/18**, MS3.4**/14**, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PKDT	Phuket	4.28	84	P	Pn	18 50 48.2	-1.6
TRTT	Trang	5.62	86	P	Pn	18 51 06.5	-1.7
SKLT	Songkhla	6.54	92	P	Pn	18 51 26.7	+5.9
	45nm,0.7s,0.2nm						
PSI	Prapat	6.71	133	P	Pn	18 51 27.4	+4.0
	0.8nm,0.3s,baz=359,slow=4.2,SNR=4.0						
PSI				S	Sn	18 52 37.9	-1.5
	1.0nm,0.3s,baz=180,slow=17,SNR=2.7						
PSI				LR	LR	18 54 33.8	
	comp=Z,335nm,19.4s,baz=269,slow=42						
PHET	Kaeng Krachan	7.72	45	P	Pn	18 51 41.4	+4.2
	16nm,0.9s,152nm0.1nm						
UMPA	Umpang Tak	9.89	28	P	Pn	18 52 09.6	+2.7
	5.1nm,0.7s,71nm						
PBKT	Sadao Pong	11.31	36	P	Pn	18 52 26.9	+0.6
	9.0nm,0.6s,940nm						
PBKT	Sadao Pong	11.31	36	P	Pn	18 52 26.9	+0.6
	9.0nm,0.6s,940nm0.0nm						
CMAR	Chiang Mai Arr	11.93	23	P	Pn	18 52 36.0	+1.1
	0.8nm,0.3s,baz=212,slow=14,SNR=14						
CMAR				LR	LR	18 56 29.0	
	comp=Z,62nm,21.1s,baz=206,slow=34						
CMAR	Chiang Mai Arr	11.93	23	P	Pn	18 52 36.0	+1.1
CHTO	Chiang Mai	12.26	22	*e*P	Pn	18 52 39.8	+0.5
	2.0nm,0.4s						
CHTO	Chiang Mai	12.26	22	P	P	18 52 47.7	-3.9
	15nm,0.6s						
CHTO	Chiang Mai	12.26	22	P	P	18 52 47.7	-3.9
	15nm,0.6s,0.1nm						
CMMT	Chiang Mai	12.26	22	P	P	18 52 47.2	-4.4
	3.5nm,0.4s						
CMMT	Chiang Mai	12.26	22	P	P	18 52 47.2	-4.4
	3.5nm,0.4s,0.0nm						
PALK	Pallekele	13.23	270	P	P	18 52 58.7	-3.7
	0.2nm,0.3s,baz=113,slow=15,SNR=2.4						
PALK				S	Sn	18 55 19.0	-0.3
	0.6nm,0.3s,baz=115,slow=17,SNR=4.1						
PALK				LR	LR	18 57 43.1	
	comp=Z,210nm,21.6s,baz=117,slow=35						
CMAI	Chiengmai2	13.32	21	P	P	18 53 10.0	+6.5
LEM	Lembang	19.61	136	LR	LR	19 03 45.0	
	comp=Z,193nm,19.1s,baz=253,slow=43						
RAMN	Ramite	20.64	341	*e*P	P	18 54 25.3	+0.9
	38nm,0.6s						
JIRN	Jiri	21.43	341	*e*P	P	18 54 32.7	-0.3
	55nm,0.9s						
DMN	Daman	21.76	338	*e*P	P	18 54 36.1	-0.4
	25nm,0.8s						
GKN	Gorkha	22.29	338	*e*P	P	18 54 41.3	-0.8
	22nm,0.7s						
LSA	Lhasa	22.29	353	*e*P	P	18 54 43.2	+0.8
	14nm,0.8s						
KOLN	Koldanda	22.49	335	*e*P	P	18 54 44.0	-0.3
	16nm,0.6s						
PYUN	Piuthan	23.04	334	*e*P	P	18 54 50.6	+0.5
	33nm,0.8s						
H08S3	Diego Garcia H	26.20	236	T	T	19 22 13.7	
	baz=56						
H08S2	Diego Garcia H	26.20	236	T	T	19 22 01.9	
	baz=56						
H08S1	Diego Carcia H	26.22	236	T	T	19 22 09.4	
	baz=56						
TGY	Tagaytay City	27.22	74	LR	LR	19 05 58.6	
	comp=Z,64nm,20.7s,baz=204,slow=36						
DAV	Davao City (W)	31.29	89	LR	LR	19 10 07.1	
	comp=Z,37nm,19.3s,baz=302,slow=39						
JOW	Kunigami	37.77	55	LR	LR	19 14 19.3	
	comp=Z,54nm,18.3s,baz=269,slow=39						
MKAR	Makanchi Array	40.47	348	P	P	18 57 22.0	-1.1
	2.9nm,0.7s,baz=162,slow=6.5,SNR=4.0						
SONM	Songino Array	41.59	13	P	P	18 57 31.9	-0.5
	0.8nm,0.8s,baz=201,slow=7.6,SNR=5.0						
SONM				LR	LR	19 17 06.3	
	comp=Z,40nm,18.9s,baz=212,slow=39						
JNU	Nakatsue	42.60	48	LR	LR	19 16 58.1	
	comp=Z,70nm,18.5s,baz=302,slow=38						
KSRS	Korea Array	42.85	41	LR	LR	19 16 29.4	
	comp=Z,36nm,18.3s,baz=189,slow=38						
GEYT	Alibeck	44.44	319	P	P	18 57 57.6	+2.0
	0.7nm,0.5s,baz=116,slow=6.6,SNR=3.3						
GEYT				LR	LR	19 19 39.2	
	comp=Z,36nm,18.5s,baz=230,slow=40						
KURBB	Kurchatov Arra	44.92	346	P	P	18 57 57.7	-1.4
	3.7nm,0.8s,baz=163,slow=7.6,SNR=4.9						
KURK	Kurchatov	44.99	346	P	P	18 57 57.7	-1.9
ZALV	Zalesovo Beam	46.95	353	P	P	18 58 14.8	-0.3
	2.4nm,0.4s,baz=173,slow=8.2,SNR=7.0						
ZALV				LR	LR	19 22 17.1	
	comp=Z,26nm,18.7s,baz=62,slow=42						
WRA	Warramunga Arr	48.10	125	P	P	18 58 23.6	-0.9
	0.8nm,1.1s,baz=303,slow=8.6,SNR=5.8						
WRA				LR	LR	19 21 23.3	
	comp=Z,65nm,18.9s,baz=230,slow=40						
WRAB	Tennant Creek	48.11	125	*e*P	P	18 58 29.1	+4.5
	2.9nm,0.7s						
MJAR	Matsushiro Arr	49.52	48	LR	LR	19 21 59.5	
	comp=Z,22nm,18.9s,baz=255,slow=39						
ASAR	Alice Springs	49.73	130	P	P	18 58 35.6	-1.4
	0.3nm,0.9s,baz=299,slow=7.5,SNR=3.7						
ASAR				PcP	PcP	18 59 58.5	+0.4
	0.2nm,0.8s,baz=303,slow=5.1,SNR=2.9						
AKTO	Aktyubinsk	52.27	332	P	P	18 58 57.1	+1.5
	0.4nm,0.4s,baz=122,slow=15,SNR=2.9						
OPO	Ambohidratompo	52.95	240	LR	LR	19 17 48.2	
	comp=Z,136nm,18.6s,baz=12,slow=32						
KMBO	Kilima Mbogo	57.28	264	LR	LR	19 19 53.7	
	comp=Z,53nm,21.3s,baz=93,slow=31						
MMAI	Mount Meron Ar	59.76	304	LR	LR	19 30 01.1	
	comp=Z,29nm,18.5s,baz=145,slow=40						
BRTR	Keskin Array B	62.62	311	P	P	19 00 09.2	+0.1
	0.3nm,0.5s,baz=111,slow=7.9,SNR=2.9						
AKASG	Malin Array Be	68.42	322	P	P	19 00 47.9	+1.8
	0.2nm,0.3s,baz=102,slow=4.0,SNR=3.0						
FINES	FINESS Array B	73.03	332	P	P	19 01 13.7	-0.3
	0.6nm,0.4s,baz=48,slow=5.9,SNR=6.1						
BOSA	Boshof	75.28	238	P	P	19 01 28.1	+0.1
	2.6nm,0.9s,baz=27,slow=6.8,SNR=1.9						
ARCES	ARCESS Array B	75.62	340	P	P	19 01 29.6	+0.6
	1.9nm,0.9s,baz=87,slow=7.3,SNR=3.2						
GERES	GERESS Array B	78.07	318	P	P	19 01 45.8	+2.5
	1.0nm,0.8s,baz=82,slow=8.0,SNR=4.3						
HFS	Hagfors	78.76	330	P	P	19 01 46.5	-0.3
	2.2nm,0.8s,baz=97,slow=4.6,SNR=6.4						
HFS				LR	LR	19 38 48.5	
	comp=Z,18nm,18.8s,baz=77,slow=37						
NB2	NORSAR Subarra	80.04	331	P	P	19 01 56.4	+2.6
	comp=Z,7.8nm,1.7s,baz=94,slow=5.6						
PLCA	Paso Flores	144.12	200	PKP	PKPdf	19 09 21.4	+0.8
	comp=Z,2.5nm,1.0s,baz=194,slow=8.3,SNR=2.5						

MEX 12 19:14:04.2±0.3**, 17°.67N**×**103°.25W, h16**^{km}±999^{km}**, MD4.0, Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	Aquila	0.62	352	*e*P	Pg	19 14 14.4	-2.0
MMIG				*i* S	Sg	19 14 22.3	-2.5
ZIIG	Zihuatanejo	1.70	92	*e*P	Pn	19 14 29.9	-3.3
ZIIG				*i* S	Sn	19 14 49.8	-4.9
ARIG	Puente Sto Nin	2.83	77	*e*P	Pn	19 14 46.2	-2.5
ARIG				*i* S	Sn	19 15 18.9	-3.6

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*ISCJB **12** 19:15:47.5±1.1, 5°.2N±0°.1×94°.1E±0°.2, h34^{km}, mb3.7/8, Error ellipse: s-maj=31.8km s-min=16.0km az=152.9*

*IDC **12** 19:15:54.9±10.0, 5°.37N×94°.30E, h79^{km}±95^{km}, mb3.3/8, mb1 3.4/9, mb1mx3.2/68, mbtmp3.6/9, ML3.9/1, Error ellipse: s-maj=61.8km s-min=17.2km az=55.0*

ISC 12 19:15:49.4±1.3**, 5°.2N**±0°.2×**94°.1E**±0°.2**, h34**^{km}**, n12, σ0^{s}.85**/9**, mb3.7**/8**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	14.02	19	P	Pn	19 19 06.7	+0.9
	0.2nm,0.3s,baz=213,slow=12,SNR=8.0						
H08S2	Diego Garcia H	25.02	240	T	T	19 47 17.9	
	baz=59						
H08S3	Diego Garcia H	25.02	240	T	T	19 47 16.3	
	baz=59,SNR=10						
H08S1	Diego Carcia H	25.04	240	T	T	19 47 19.1	
	baz=59						
MKAR	Makanchi Array	42.68	348	P	P	19 23 43.0	+0.1
	1.0nm,0.5s,baz=170,slow=7.1,SNR=13						
SONM	Songino Array	43.79	12	P	P	19 23 50.2	-1.8
	0.2nm,0.4s,baz=201,slow=7.3,SNR=3.7						
WRA	Warramunga Arr	46.80	123	P	P	19 24 16.3	+0.1
	0.3nm,0.4s,baz=306,slow=9.2,SNR=11						
KURBB	Kurchatov Arra	47.12	347	P	P	19 24 18.4	+0.2
	1.2nm,0.6s,baz=172,slow=6.9,SNR=12						
ASAR	Alice Springs	48.29	128	P	P	19 24 27.9	+0.2
	0.2nm,0.5s,baz=299,slow=7.3,SNR=5.2						
ZALV	Zalesovo Beam	49.20	353	P	P	19 24 34.0	-0.1
	0.5nm,0.3s,baz=172,slow=4.2,SNR=3.1						
BVAR	Borovoye Array	51.50	342	P	P	19 24 51.6	0.0
	0.5nm,0.5s,baz=143,slow=13,SNR=7.5						
BRTR	Keskin Array B	64.14	312	P	P	19 26 21.3	+0.5
	0.3nm,0.6s,baz=64,slow=6.9,SNR=2.6						

IDC 12 19:18:03.9±2.6**, 16°.39S**×**173°.23W, h0**^{km}**, mb3.7**/3**, mb1 3.9**/4**, mb1mx3.5**/56**, mbtmp3.7**/4**, ML3.5**/1**, MS3.3**/4**, Ms1 3.4**/4**, ms1mx2.8**/48**, Error ellipse: s-maj=132.0km s-min=24.8km az=143.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	2.84	30	Pn	Pn	19 18 49.5	-1.0
	8.0nm,0.3s,baz=116,slow=2.9,SNR=6.3						
AFI				Sn	Sn	19 19 17.2	-8.3
	45nm,0.3s,baz=230,slow=21,SNR=11						
RAR	Rarotonga	13.61	113	LR	LR	19 25 08.2	
	comp=Z,65nm,20.6s,baz=235,slow=31						
PPT	Papeete	22.65	96	LR	LR	19 30 26.7	
	comp=Z,37nm,18.0s,baz=1.5,slow=33						
WRA	Warramunga Arr	49.79	258	P	P	19 26 58.3	-0.5
	0.3nm,0.5s,baz=96,slow=6.8,SNR=6.5						
ASAR	Alice Springs	49.97	253	P	P	19 26 59.8	-0.4
	1.4nm,0.6s,baz=89,slow=7.9,SNR=22						
PDAR	Pinedale Array	82.89	42	P	P	19 30 30.7	-0.1
	0.3nm,0.6s,baz=275,slow=4.4,SNR=2.5						
PSI	Prapat	88.72	273	LR	LR	20 10 58.7	
	comp=Z,44nm,18.8s,baz=94,slow=36						
CMAR	Chiang Mai Arr	93.08	288	LR	LR	20 07 26.6	
	comp=Z,23nm,21.4s,baz=182,slow=32						
BRTR	Keskin Array B	147.02	320	PKPbc	PKPbc	19 37 49.7	+0.5
	0.4nm,0.6s,baz=29,slow=3.6,SNR=3.2						

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*MAN **12** 19:21:51.8, 5°.86N×126°.43E, h13^{km}, mb5.5, ML4.4, MS4.7*

*DJA **12** 19:21:53.0±1.8, 6°N±16°×12°7E±°, h120^{km}±31^{km}, M4.3/2, mB4.8/1, mb4.3/2, Mw(mB)4.0/1*

*BJI **12** 19:21:53.0, 6°.10N×126°.70E, h42^{km}, mb4.5/16, mB4.8/10, Ms3.9/7, Ms7 3.8/6*

*IDC **12** 19:21:55.1±1.4, 6°.03N×126°.32E, h44^{km}±12^{km}, mb4.1/24, mb1 4.1/25, mb1mx3.9/58, mbtmp4.3/25, ML4.0/1, MS3.5/31, Ms1 3.6/31, ms1mx3.4/62, Error ellipse: s-maj=20.9km s-min=8.1km az=68.0*

*ISCJB **12** 19:21:56.3±0.5, 5°.97N±0°.03×126°.29E±0°.06, h70^{km}±4^{km}, mb4.2/34, Error ellipse: s-maj=9.9km s-min=4.2km az=171.1*

*NEIC **12** 19:21:56.7±1.4, 6°.00N×126°.33E, h62^{km}±12^{km}, mb4.5/5, Error ellipse: s-maj=17.7km s-min=7.3km az=73.0*

ISC 12 19:21:56.1±0.9**, 5°.92N**±0°.04×**126°.32E**±0°.06**, h54**^{km}±8^{km}**, n96, σ1^{s}.77**/81**, mb4.3**/34**, MS3.7**/30**, 5C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	Mati	1.02	356	*e*P	Pn	19 22 10.7	-3.6
MATI				*e*S	Sn	19 22 27.7	0.0
DAV	Davao City (W)	1.36	327	P	Pn	19 22 17.9	-0.9
	261nm,0.3s,baz=112,slow=1.8,SNR=68						
DAV				S	Sn	19 22 31.8	-4.0
	268nm,0.3s,baz=270,slow=19,SNR=16						
DAV				LR	LR	19 23 05.1	
	comp=Z,4μm,18.9s,baz=98,slow=55						
GSPH	General Santos	1.37	277	⇑*i*P	Pn	19 22 16.9	-2.2
GSPH				*i* S	Sn	19 22 34.3	-1.9
DMPH	Davao City--Mi	1.41	325	⇑*e*P	Pn	19 22 22.5	+3.0
DMPH				*e*S	Sn	19 22 46.6	+10
SKMP	Bagumbayan, Su	1.87	289	*e*P	Pn	19 22 24.6	-1.1
BIPH	Bislig	2.25	1	⇑*e*P	Pn	19 22 32.6	+1.7
BIPH				*e*S	Sn	19 23 02.8	+5.2
BUKP	Musuan	2.31	327	*e*P	Pn	19 22 31.4	-0.5
BUKP				*e*S	Sn	19 23 01.7	+2.5
CTBH	Cotabato--PC H	2.43	302	⇑*e*P	Pn	19 22 32.6	-0.8
CTBH				*i* S	Sn	19 23 06.7	+4.7
CGP	Cagayan de Oro	2.99	327	⇑*e*P	Pn	19 22 40.8	-0.3
CGP				*e*S	Sn	19 23 17.1	+1.3
BUTP	Butuan	3.11	347	*e*P	Pn	19 22 44.0	+1.3
BUTP				*e*S	Sn	19 23 32.8	+14
PAGZ	Pagadian	3.49	303	*e*P	Pn	19 22 48.9	+1.0
SCPH	Surigao	3.93	348	⇓*e*P	Pn	19 22 56.7	+2.8
SCPH				*e*S	Sn	19 23 48.2	+9.5
MSLP	Maasin	4.43	341	*e*P	Pn	19 23 01.5	+0.6
LLP	Lapu-Lapu	4.95	332	*e*P	Pn	19 23 10.1	+2.1
LLP				*e*S	Sn	19 24 03.4	-0.6
TNTI	Ternate	5.22	168	P	Pn	19 23 13.6	+2.0
OCLP	Ormoc	5.38	342	*e*P	Pn	19 23 11.4	-2.4
PLP	Palo	5.38	346	⇓*e*P	Pn	19 23 15.9	+2.1
PLP				*e*S	Sn	19 24 22.3	+7.8
KMSI	Cibinong	5.80	204	P	Pn	19 23 24.0	+4.4
GUIM	Jordan	5.96	322	*e*P	Pn	19 23 21.8	0.0
LBMI	Labuha	6.62	170	P	Pn	19 23 33.7	+2.9
CNP	Catarman	6.75	346	*e*P	Pn	19 23 34.5	+1.9
CNP				*e*S	Sn	19 24 46.8	-1.4
MRSI	Marisa	6.95	219	P	Pn	19 23 38.0	+2.6
CUYO	Cuyo Island	7.18	313	*e*P	Pn	19 23 38.6	+0.1
LUWI	Luwuk	7.77	207	P	Pn	19 23 51.2	+4.6
SANI	Sanana	7.92	182	P	Pn	19 23 51.4	+2.7
PVCP	Virac	7.92	345	*e*P	Pn	19 23 52.6	+3.9
APSI	Ampana	8.23	215	P	Pn	19 23 58.2	+5.3
	49nm,0.8s,675nm						
SIJI	Sorong	8.36	144	P	Pn	19 23 54.3	-0.3
	1.7nm,0.3s,baz=183,slow=19,SNR=7.5						
SIJI				S	Sn	19 25 24.8	-2.9
	1.0nm,0.3s,baz=343,slow=20,SNR=2.9						
SIJI				LR	LR	19 26 30.0	
	comp=Z,113nm,21.7s,baz=300,slow=32						
MPSI	Mapaga	8.47	229	P	Pn	19 24 00.2	+3.9
NLAI	Namlea	9.13	175	P	Pn	19 24 06.5	+1.3
TGY	Tagaytay City	9.71	327	LR	LR	19 28 27.2	
	comp=Z,543nm,19.7s,baz=154,slow=41						
APYP	Conner	12.87	338	*e*P	P	19 25 04.2	-1.3
STKI	Sintang	15.92	249	P	P	19 25 46.4	+6.9
BATI	Baumata	16.23	189	P	P	19 25 44.7	+1.7
	1.7nm,0.3s,baz=326,slow=7.3,SNR=2.6						
BATI				LR	LR	19 32 17.0	
	comp=Z,134nm,21.9s,baz=260,slow=38						
GUMO	Guam	19.79	66	LR	LR	19 32 38.8	
	comp=Z,130nm,21.9s,baz=221,slow=33						
JOW	Kunigami	20.88	5	LR	LR	19 34 48.2	
	comp=Z,95nm,20.1s,baz=270,slow=37						
LEM	Lembang	22.55	236	LR	LR	19 37 21.5	
	comp=Z,94nm,19.0s,baz=40,slow=41						
FITZ	Fitzroy Crossi	23.87	182	P	P	19 27 05.7	+0.9
	6.4nm,0.8s,baz=350,slow=8.5,SNR=18						
FITZ				PcP	PcP	19 30 47.5	+0.7
	1.3nm,0.5s,baz=0.0,slow=4.0,SNR=4.1						
SKNT	Sakolnakorn	24.46	299	P	P	19 27 14.8	+4.5
WRAB	Tennant Creek	26.88	163	*e*P	P	19 27 32.7	+0.6
	9.6nm,0.8s						
WRA	Warramunga Arr	26.88	163	P	P	19 27 32.5	+0.4
	1.9nm,0.5s,baz=347,slow=10,SNR=19						
WRA				PcP	PcP	19 30 54.1	+0.6
	1.2nm,0.7s,baz=345,slow=3.1,SNR=5.0						
JNU	Nakatsue	27.40	8	LR	LR	19 40 06.0	
	comp=Z,53nm,18.2s,baz=123,slow=40						
PSI	Prapat	27.49	265	LR	LR	19 39 39.5	
	comp=Z,96nm,19.5s,baz=90,slow=39						
CMAR	Chiang Mai Arr	29.46	297	P	P	19 27 53.6	-1.5
	1.0nm,0.8s,baz=125,slow=5.7,SNR=2.3						
CMAR				PcP	PcP	19 31 00.7	+0.7
	1.0nm,0.7s,baz=142,slow=1.0,SNR=8.1						
CMAR				LR	LR	19 41 38.2	
	comp=Z,94nm,18.0s,baz=129,slow=40						
KMI	Kunming	29.58	313	P	P	19 28 01.0	+4.6
KMI				pP	pP	19 28 06.6	-3.4
KMI				pmax	pmax		
	comp=Z,18nm,0.9s						
KMI				pmax	pmax		
	comp=Z,56nm,3.1s						
KMI				LR	LR		
	comp=N,130nm,20.2s						
KMI				LR	LR		
	comp=E,93nm,16.6s						
KMI				LR	LR		
	comp=Z,200nm,18.6s						
ASAR	Alice Springs	30.32	166	P	P	19 28 03.1	+0.4
	1.3nm,0.5s,baz=342,slow=6.6,SNR=24						
ASAR				PcP	PcP	19 31 03.0	+0.9
	2.0nm,0.4s,baz=355,slow=2.2,SNR=12						
ASAR				LR	LR	19 41 29.0	
	comp=Z,64nm,20.8s,baz=16,slow=39						
KSAR	Wonju Array Be	31.41	2	P	P	19 28 14.4	+2.3
KSRS	Korea Array	31.43	2	P	P	19 28 14.4	+2.2
	2.3nm,0.8s,baz=186,slow=10.0,SNR=8.0						
KSRS				LR	LR	19 42 33.3	
	comp=Z,70nm,19.1s,baz=190,slow=40						
XAN	Xi’an	32.30	332	P	P	19 28 19.9	-0.1
XAN				pP	pP	19 28 30.6	-3.1
XAN				sP	sP	19 28 37.2	-2.9
XAN				pmax	pmax		
	comp=Z,18nm,0.8s						
XAN				pmax	pmax		
	comp=Z,86nm,4.4s						
XAN				LR	LR		
	comp=N,180nm,21.6s						
XAN				LR	LR		
	comp=Z,270nm,27.3s						
MJAR	Matsushiro Arr	32.37	18	LR	LR	19 39 23.8	
	comp=Z,46nm,21.4s,baz=195,slow=32						
CTA	Charters Tower	32.44	143	P	P	19 28 22.8	+1.5
	1.6nm,0.6s,baz=332,slow=12,SNR=3.4						
HNR	Honiara	36.82	114	LR	LR	19 42 46.1	
	comp=Z,56nm,21.8s,baz=321,slow=34						
BRDH	Bariadhala	37.36	300	LR	LR	19 44 34.1	
	comp=Z,111nm,21.9s,baz=113,slow=36						
NWAO	Narrogin (SRO)	39.58	192	P	P	19 29 22.6	+0.3
	12nm,0.8s,baz=286,slow=7.8,SNR=7.8						
STKA	Stephens Creek	40.31	160	P	P	19 29 29.4	+1.1
	1.8nm,0.4s,baz=327,slow=10,SNR=7.4						
STKA				PcP	PcP	19 31 31.9	+0.8
	1.6nm,0.4s,baz=35,slow=2.0,SNR=4.3						
STKA				LR	LR	19 50 20.1	
	comp=Z,72nm,19.8s,baz=358,slow=42						
ASAJ	Asahikawa	40.64	18	P	P	19 29 30.5	-0.4
	14nm,1.0s,baz=238,slow=13,SNR=2.8						
GTA	Gaotai	41.03	328	*e*P	P	19 29 35.5	+1.1
GTA				pP	pP	19 29 41.0	-7.4
GTA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,47nm,5.1s						
GTA				LR	LR		
	comp=N,92nm,20.3s						
GTA				LR	LR		
	comp=E,120nm,21.3s						
GTA				LR	LR		
	comp=Z,210nm,21.0s						
H11S3	WAKE ISLAND Hy	41.28	69	T	T	20 13 20.9	
	baz=253,slow=77,SNR=155						
H11S1	WAKE ISLAND Hy	41.29	69	T	T	20 13 21.8	
	baz=253,slow=77,SNR=124						
H11S2	WAKE ISLAND Hy	41.29	69	T	T	20 13 21.9	
	baz=253,slow=77,SNR=198						
H11N1	WAKE ISLAND Hy	41.74	67	T	T	20 14 02.9	
	baz=255,slow=75,SNR=15						
H11N2	WAKE ISLAND Hy	41.75	67	T	T	20 14 04.6	
	baz=255,slow=75,SNR=12						
H11N3	WAKE ISLAND Hy	41.76	67	T	T	20 14 05.2	
	baz=255,slow=75,SNR=16						
KLR	Kul’dur	43.41	5	P	P	19 29 53.8	+0.4
	0.1nm,0.5s,baz=224,slow=7.0,SNR=4.5						
ULN	Ulaanbaatar	44.93	342	*e*P	P	19 30 06.4	+0.6
	6.0nm,0.8s						
SONM	Songino Array	45.11	341	P	P	19 30 07.9	+0.7
	2.5nm,0.9s,baz=156,slow=9.1,SNR=18						
SONM				PcP	PcP	19 31 47.4	+0.3
	3.2nm,0.8s,baz=157,slow=3.5,SNR=13						
SONM				LR	LR	19 52 49.0	
	comp=Z,45nm,18.2s,baz=153,slow=41						
DZM	Mont Dzumac	48.14	127	LR	LR	19 49 26.5	
	comp=Z,64nm,21.3s,baz=330,slow=34						
PETK	Petropavlovsk-	53.58	23	P	P	19 31 09.0	-2.6
	1.1nm,0.6s,baz=174,slow=1.4						
PETK				LR	LR	19 58 18.4	
	comp=Z,15nm,18.0s,baz=227,slow=41						
MKAR	Makanchi Array	55.54	325	P	P	19 31 25.1	-0.9
	1.0nm,0.3s,baz=123,slow=8.8,SNR=17						
MKAR				PcP	PcP	19 32 24.9	-0.5
	3.1nm,0.7s,baz=118,slow=4.1,SNR=9.4						
MKAR				LR	LR	19 55 44.4	
	comp=Z,89nm,22.0s,baz=77,slow=37						
YAK	Yakutsk	56.05	2	P	P	19 31 29.5	+0.2
	16nm,0.7s,baz=71,slow=1.6,SNR=5.8						
YAK	Yakutsk	56.05	2	*e*P	P	19 31 27.8	-1.4
	30nm,0.8s						
KSH	Kashi	56.23	314	*e*P	P	19 31 33.6	+2.5
KSH				*e*PcP	PcP	19 32 29.7	+1.4
ZALV	Zalesovo Beam	58.47	333	P	P	19 31 46.5	+0.1
	1.2nm,0.3s,baz=132,slow=6.2,SNR=6.9						
ZALV				LR	LR	19 58 19.2	
	comp=Z,60nm,19.9s,baz=70,slow=37						
KURK	Kurchatov	59.69	327	*e*P	P	19 31 55.9	+0.9
KURBB	Kurchatov Arra	59.69	327	P	P	19 31 55.6	+0.6
	1.6nm,0.5s,baz=127,slow=7.0,SNR=17						
URZ	Urewera	64.41	137	LR	LR	19 59 52.8	
	comp=Z,55nm,19.2s,baz=301,slow=35						
BVAR	Borovoye Array	65.28	327	P	P	19 32 32.7	+0.4
	1.8nm,0.5s,baz=124,slow=6.3,SNR=19						
BVAR				LR	LR	20 03 51.1	

	comp=Z,60nm,19.1s,baz=113,slow=39						
BRVK	Borovoye	65.35	327	eP	P	19 32 33.0	+0.3
	8.0nm,0.7s						
WSAR	Wadi Sarin	67.20	293	P	P	19 32 45.8	+0.6
	2.7nm,0.7s,baz=190,slow=6.1,SNR=2.6						
GEYT	Alibeck	69.22	308	LR	LR	20 08 06.5	
	comp=Z,42nm,18.4s,baz=260,slow=40						
AKTO	Aktyubinsk	71.71	321	LR	LR	20 08 26.2	
	comp=Z,60nm,18.2s,baz=104,slow=39						
RAYN	Ar Rayn	79.26	293	eP	P	19 33 55.4	-1.0
	2.0nm,0.7s						
KBZ	Khabaz	81.19	313	LR	LR	20 15 24.7	
	comp=Z,42nm,19.6s,baz=84,slow=40						
ILAR	Eielson Array	83.32	26	P	P	19 34 15.5	-1.5
	0.5nm,0.5s,baz=237,slow=5.0,SNR=7.4						
VNDA	Vanda	85.63	173	P	P	19 34 28.9	+0.5
	2.7nm,0.9s,baz=311,slow=6.1,SNR=11						
VNDA				LR	LR	20 12 51.6	
	comp=Z,46nm,20.2s,baz=315,slow=36						
ARCES	ARCESS Array B	88.27	340	P	P	19 34 40.4	-1.0
	1.9nm,0.4s,baz=85,slow=6.3,SNR=25						
ARCES				LR	LR	20 17 17.3	
	comp=Z,43nm,20.1s,baz=73,slow=38						
SPITS	Spitsbergen Ar	88.27	349	P	P	19 34 39.9	-1.4
	0.9nm,0.4s,baz=58,slow=14,SNR=3.2						
BRTR	Keskin Array B	88.32	310	P	P	19 34 40.5	-2.0
	1.2nm,0.8s,baz=120,slow=5.0,SNR=5.6						
FINES	FINESS Array B	89.72	332	P	P	19 34 47.2	-1.1
	1.3nm,0.4s,baz=55,slow=7.2,SNR=21						
FINES				LR	LR	20 17 50.5	
	comp=Z,56nm,20.8s,baz=82,slow=37						
AKASG	Malin Array Be	89.95	321	P	P	19 34 48.3	-1.3
	0.3nm,0.4s,baz=63,slow=5.4,SNR=2.6						
MLR	Muntele Rosu	93.05	316	LR	LR	20 21 07.1	
	comp=Z,15nm,21.6s,baz=79,slow=38						
HFS	Hagfors	95.91	332	P	P	19 35 15.2	-1.6
	1.3nm,0.5s,baz=90,slow=8.6,SNR=8.4						
HFS				LR	LR	20 22 01.6	
	comp=Z,47nm,18.7s,baz=64,slow=38						
NB2	NORSAR Subarra	96.66	334	P	P	19 35 18.4	-2.0
	comp=Z,2.5nm,1.0s,baz=66,slow=4.6						
NOA	NORSAR Array B	96.66	334	LR	LR	20 22 44.1	
	comp=Z,40nm,21.2s,baz=70,slow=38						
TXAR	Lajitas Array	120.57	51	PKP	PKPdf	19 40 40.7	-2.0
	comp=Z,0.3nm,0.7s,baz=340,slow=5.0,SNR=2.4						
PLCA	Paso Flores	142.18	159	PKP	PKPdf	19 41 20.7	-2.2
	comp=Z,1.5nm,0.8s,baz=197,slow=4.6,SNR=3.2						

ISCJB ***12*** *19:28:28.9±1.8, 5°.76N±0°.04×126°.37E±0°.05, h11^{km}±12^{km}, mb3.7/13, Error ellipse: s-maj=9.2km s-min=6.5km az=154.3*

MAN ***12*** *19:28:31.2, 5°.97N×126°.24E, h1^{km}, mb5.1, ML4.0, MS4.1*

IDC ***12*** *19:28:34.3±2.3, 5°.72N×125°.69E, h44^{km}±23^{km}, mb3.5/12, mb1 3.7/13, mb1mx3.4/58, mbtmp3.7/13, ML3.5/1, Error ellipse: s-maj=50.7km s-min=12.7km az=72.0*

ISC 12 19:28:30.6±1.5, **5°.93N**±0°.04×**126°.26E**±0°.05, **h11**^{km}±9^{km}, **n30**, σ2^{s}.**31**/38, **mb3.8**/13, **2C-2D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	Mati	1.01	0	eP	Pg	19 28 49.3	-0.7
MATI				eS	Sn	19 29 06.2	+1.4
GSPH	General Santos	1.31	277⇓	eP	Pg	19 28 55.3	-0.6
GSPH				i S	Sg	19 29 12.8	-0.1
DAV	Davao City (W)	1.32	329	P	Pg	19 28 55.7	-0.2
	35nm,0.3s,baz=106,slow=4.4,SNR=5.5						
DAV				S	Sg	19 29 11.1	-1.9
	78nm,0.3s,baz=284,slow=22,SNR=4.5						
DMPH	Davao City--Mi	1.36	327⇑	eP	Pb	19 29 00.9	+4.8
DMPH				eS	Sn	19 29 21.1	+7.5
SKMP	Bagumbayan, Su	1.80	289	eP	Pn	19 29 03.1	+1.5
SKMP				eS	Sb	19 29 27.6	+1.4
BIPH	Bislig	2.24	3⇑	eP	Pg	19 29 12.7	-0.9
BIPH				eS	Sg	19 29 43.6	+0.9
BUKP	Musuan	2.27	329	eP	Pn	19 29 09.6	+1.5
BUKP				eS	Sb	19 29 39.3	-0.4
CTBH	Cotabato--PC H	2.37	303	eP	Pb	19 29 12.5	-0.8
CTBH				i S	Sb	19 29 43.6	+1.0
CGP	Cagayan de Oro	2.95	328⇓	eP	Pb	19 29 23.4	+0.2
CGP				eS	Sb	19 29 57.1	-2.1
BUTP	Butuan	3.08	348	eP	Pn	19 29 22.7	+3.4
BUTP				eS	Sb	19 30 02.7	-0.4
PAGZ	Pagadian	3.43	304	eP	Pn	19 29 27.1	+3.1
MSLP	Maasin	4.40	342	eP	Pn	19 29 39.7	+2.3
OCLP	Ormoc	5.34	342	eP	Pn	19 29 51.9	+1.6
SIJI	Sorong	8.41	143	P	Pn	19 30 35.9	+3.4
	0.6nm,0.3s,baz=343,slow=19,SNR=3.1						
FITZ	Fitzroy Crossi	23.89	181	P	P	19 33 42.8	-1.6
	1.3nm,0.6s,baz=321,slow=14,SNR=6.1						
WRA	Warramunga Arr	26.91	163	P	P	19 34 11.2	-0.8
	0.3nm,0.4s,baz=344,slow=10,SNR=5.8						
ASAR	Alice Springs	30.35	166	P	P	19 34 41.8	-0.9
	0.6nm,0.5s,baz=347,slow=7.1,SNR=7.5						
ASAR				PcP	PcP	19 37 40.2	-2.5
	0.7nm,0.4s,baz=350,slow=2.6,SNR=6.6						
STKA	Stephens Creek	40.34	160	P	P	19 36 12.6	+4.2
	2.2nm,0.7s,baz=335,slow=5.4,SNR=3.5						
H11S3	WAKE ISLAND Hy	41.33	69	T	T	20 19 59.6	
	baz=255,SNR=22						
H11S1	WAKE ISLAND Hy	41.34	69	T	T	20 20 00.9	
	baz=255,SNR=21						
H11S2	WAKE ISLAND Hy	41.35	69	T	T	20 19 59.7	
	baz=255,SNR=22						
SONM	Songino Array	45.07	341	P	P	19 36 46.9	+0.2
	0.8nm,0.7s,baz=163,slow=12,SNR=2.5						
SONM				PcP	PcP	19 38 26.1	-1.3
	0.3nm,0.6s,baz=163,slow=3.7,SNR=5.0						
MKAR	Makanchi Array	55.49	325	P	P	19 38 03.5	-2.1
	0.6nm,0.6s,baz=123,slow=8.8,SNR=4.9						
MKAR				PcP	PcP	19 39 03.5	-2.1
	0.6nm,0.6s,baz=142,slow=2.9,SNR=4.6						
KURBB	Kurchatov Arra	59.65	327	P	P	19 38 33.9	-0.8
	0.8nm,0.9s,baz=124,slow=6.1,SNR=5.5						
BVAR	Borovoye Array	65.23	327	P	P	19 39 10.8	-1.4
	0.4nm,0.6s,baz=104,slow=4.6,SNR=4.9						
ILAR	Eielson Array	83.33	26	P	P	19 40 59.5	+2.2
	0.4nm,0.7s,baz=250,slow=5.4,SNR=4.3						
VNDA	Vanda	85.66	173	P	P	19 41 06.7	-2.1
	0.7nm,0.8s,baz=319,slow=6.9,SNR=4.2						
ARCES	ARCESS Array B	88.23	340	P	P	19 41 19.1	-2.5
	0.7nm,0.6s,baz=87,slow=6.6,SNR=6.0						
BRTR	Keskin Array B	88.26	310	P	P	19 41 20.0	-2.6
	0.6nm,0.8s,baz=111,slow=6.3,SNR=3.6						
FINES	FINESS Array B	89.68	332	P	P	19 41 25.8	-2.7
	0.8nm,0.8s,baz=64,slow=4.4,SNR=5.3						

ISCJB ***12*** *19:52:25.4±0.4, 11°.81N±0°.03×88°.21W±0°.03, h54^{km}±3^{km}, mb4.2/21, MS3.5/17, Error ellipse: s-maj=6.9km s-min=2.5km az=44.4*

CASC ***12*** *19:52:25.4±2.5, 11°.78N×88°.24W, h36^{km}±999^{km}, MD4.6, ML3.9, mb4.6(NEIC)*

IDC ***12*** *19:52:27.1±2.6, 11°.94N×88°.01W, h42^{km}±24^{km}, mb3.8/9, mb1 4.1/12, mb1mx3.8/50, mbtmp4.1/12, ML3.8/3, MS3.5/20, Ms1 3.5/20, ms1mx3.3/43, Error ellipse: s-maj=34.7km s-min=13.1km az=49.0*

NEIC ***12*** *19:52:27.6±1.3, 11°.88N×88°.13W, h48^{km}±13^{km}, mb4.5/13, Error ellipse: s-maj=18.2km s-min=7.1km az=49.0*

ISC 12 19:52:26.8±0.6, **11°.83N**±0°.05×**88°.19W**±0°.05, **h39**^{km}±3^{km}, **n252**, σ1^{s}.**63**/246, **mb4.3**/21, **MS3.6**/17, **1C, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNCH	Conchagua	1.48	13	eP	Pn	19 52 51.5	+0.4
CNCH				eS	Sn	19 53 11.2	+2.0
LCND	La Caˆ–ada	1.50	11	eP	Pn	19 52 50.3	-1.0
LCND				eS	Sn	19 53 11.3	+1.7
LCND				IAML		19 53 13.9	
	comp=Z,2µm,0.2s						
LCY	Lacayo	1.59	356	eP	Pn	19 52 51.8	-0.8
VSM	San Miguel	1.59	357	eP	Pn	19 52 52.2	-0.6
COPN	Copaltepe	1.60	77	eP	Pn	19 52 51.7	-0.9
CNGN	Cerro Negro	1.60	65	eP	Pn	19 52 51.7	-1.0
CNGN				IAML		19 53 27.9	
	comp=N,999nm,0.4s						
PACA	Pacayal	1.63	355	eP	Pn	19 52 53.3	+0.1
TECA	Tecapa	1.68	350	eP	Pn	19 52 52.9	-1.0
MOMN	Momotombo	1.71	70	eP	Pn	19 52 53.0	-1.2
XAVN	Gruta Xavier	1.85	80	eP	Pn	19 52 55.2	-0.8
MGAN	Managua	1.92	80	eP	Pn	19 52 56.6	-0.5
MGAN				eS	Sn	19 53 21.1	+1.1
LFRS	El Faro	1.98	335	eP	Pn	19 52 56.5	-1.4
BRAN	Las Pilas	2.00	64	eS	Sn	19 53 19.2	-2.7
LOMA	San Marcos	2.05	332	eP	Pn	19 52 58.2	-0.7
LOMA				eS	Sn	19 53 22.8	-0.4
LOMA				IAML		19 53 23.3	
	comp=Z,2µm,0.3s						
LBRS	Las Brisas	2.07	336	eP	Pn	19 52 58.3	-0.9
LFU	La Fuente	2.11	335	eP	Pn	19 52 58.3	-1.4
LFU				eS	Sn	19 53 24.7	-0.1
CUSC	San Salvador	2.13	333	eS	Sn	19 53 24.6	-0.6
BOQS	Boqueron	2.17	331	eP	Pn	19 52 60.0	-0.7
ESTN	Estel	2.18	54	eP	Pn	19 53 00.1	-0.6
CEDA	San Andres	2.29	329	eS	Sn	19 53 28.5	-0.6
CEDA				IAML		19 53 34.7	
	comp=Z,917nm,0.4s						
SBLS	San Blas	2.44	325	eP	Pn	19 53 04.1	-0.2
SNJE	San Jose	2.45	326	eP	Pn	19 53 03.8	-0.8
MATN	Matagalpa	2.46	63	eP	Pn	19 53 03.9	-0.7
MATN				eS	Sn	19 53 34.9	+1.4
RTR	El Retiro	2.50	325	eP	Pn	19 53 04.3	-0.8
CONN	Concepcion	2.52	96	eP	Pn	19 53 04.3	-1.0
RCON	San Juan de Ri	2.58	50	eP	Pn	19 53 05.9	-0.3
MTO3	Montecristo	2.80	336	eP	Pn	19 53 08.8	-0.5
MESS	Mesas	3.13	110	eP	Pn	19 53 13.6	-0.1
MESS				eS	Sn	19 53 50.4	+0.5
CUI	Cuipilapa	3.19	111	eP	Pn	19 53 14.9	+0.4
CUI				eS	Sn	19 53 51.8	+0.5
IXG	Ixpaco	3.21	317	eP	Pn	19 53 13.5	-1.4
JTS	JuntasAbangare	3.52	115	P	Pn	19 53 19.2	0.0
	comp=Z,23nm,0.3s,baz=6.1,slow=9.2,SNR=46						
JTS				LR	LR	19 54 47.5	
	comp=Z,773nm,21.2s,baz=38,slow=41						
JTS	JuntasAbangare	3.52	115⇑	eP	Pn	19 53 18.6	-0.6
JTS				eS	Sn	19 53 57.9	-1.7
ESPN	Las Esperanzas	3.82	84	eP	Pn	19 53 22.6	-0.5
SRA1	San Ramˆ‡n	4.03	115	eS	Sn	19 54 12.1	-0.2
CGA2	Cerro Gallo 2	4.08	116	eP	Pn	19 53 27.6	+0.8
CGA2				eS	Sn	19 54 14.8	+1.5
HDC	Heredia	4.39	114	eP	Pn	19 53 31.7	+0.5
HDC				eS	Sn	19 54 22.8	+1.5
SJS	Escuela Geolog	4.47	114	eS	Sn	19 54 24.1	+0.9
LCR2	La Lucha 2	4.61	116	eP	Pn	19 53 35.0	+0.9
LCR2				eS	Sn	19 54 24.6	-2.0
CVTR	Volcan Turrial	4.71	112	eP	Pn	19 53 36.0	+0.2
URSC	Urasca	4.76	114	eP	Pn	19 53 38.2	+1.9
BUS	Buena Vista	4.91	117	eP	Pn	19 53 39.6	+1.1
BUS				eS	Sn	19 54 32.7	-1.6
EDDO	Dominical	4.96	121	eP	Pn	19 53 38.9	0.0
EDDO				eS	Sn	19 54 32.0	-3.0
EDLM	Las Mercedes	5.18	119	eP	Pn	19 53 43.9	+1.9
EDLM				eS	Sn	19 54 38.6	-2.0
DRK0	Durika	5.49	117	eP	Pn	19 53 47.0	+0.8
DRK0				eS	Sn	19 54 45.8	-2.5
ACR	Cerro Adams	5.86	122	eP	Pn	19 53 51.8	+0.5
ICCO	Coco Island	6.35	170	eP	Pn	19 53 55.4	-2.5
CMIG	Matias Romero	8.33	310	P	Pn	19 54 25.6	+0.5
	comp=Z,1.8nm,0.3s,baz=152,slow=11,SNR=13						
CMIG				LR	LR	19 57 48.6	
	comp=Z,288nm,18.6s,baz=136,slow=38						
BCIP	Isla Barro Col	8.63	107	eP	Pn	19 54 29.5	+0.3
GUYC	Guyana, Colomb	14.25	116	eP	Pn	19 55 48.9	+2.3
SOTA	Rioblanco	14.99	129	eP	P	19 56 02.2	+0.7
ROSC	El Rosal	15.37	116	P	Pn	19 56 03.2	+1.7
	comp=Z,0.5nm,0.3s,baz=1.6,slow=11,SNR=6.6						
ROSC				LR	LR	20 02 53.8	
	comp=Z,59nm,18.8s,baz=328,slow=41						
BARC	Barichara	15.70	108	eP	P	19 56 10.2	+1.1
URIC	Uribia, Colomb	15.86	89	eP	P	19 56 11.6	+1.0
PAMC	Pamplona, Colo	15.91	105	eP	P	19 56 10.2	-1.6
CHIC	Chingaza	15.99	115	eP	Pn	19 56 09.8	+0.3
RUSC	La Rusia	16.04	110	eP	P	19 56 14.1	+0.9
FLOC	Florencia	16.07	128	eP	P	19 56 16.1	+3.0
SDV	Santo Domingo	17.51	98	P	Pn	19 56 27.9	-0.5
	comp=Z,0.7nm,0.3s,baz=286,slow=10,SNR=8.2						
SDV	Santo Domingo	17.51	98	eP	Pn	19 56 27.1	-1.3
	comp=Z,19nm,0.9s						
555A	McAlpin	18.84	14	P	Pn	19 56 45.4	+1.2
	baz=196						
454A	Quitman	19.26	12	P	Pn	19 56 49.6	+0.3
	baz=193						
345A	Thompson Farm,	19.46	355	P	Pn	19 56 50.7	-1.1
	baz=174						
833A	Chaparral WMA,	19.47	329	P	Pn	19 56 52.1	+0.2
	baz=145						
347A	Saraland	19.48	359	P	P	19 56 49.4	-1.1
	baz=179						
348A	Jackson	19.49	1	P	P	19 56 49.5	-1.1
	baz=181						
353A	Camilla	19.77	10	P	Pn	19 56 56.2	+0.8
	baz=191						
342A	Flagon Creek P	19.82	350	P	Pn	19 56 57.1	+1.1
	baz=168						
341A	Kurthwood	19.95	347	P	P	19 56 56.3	+0.7
	baz=165						
TIGA	Tifton	19.97	12	P	Pn	19 56 57.2	-0.6
	baz=193						
249A	Camden	20.07	3	P	P	19 56 57.3	+0.3
	baz=183						
247A	Quitman	20.13	359	P	P	19 56 56.7	-0.9
	baz=179						
245A	Little AP, Sta	20.17	356	P	Pn	19 56 59.3	-0.8
	baz=175						
356A	Blackshear	20.19	15	P	Pn	19 57 00.4	0.0
	baz=197						
244A	Avery, Jackson	20.25	354	P	P	19 56 57.4	-1.5
	baz=173						
252A	Lumpkin	20.32	8	P	Pn	19 57 01.4	-0.4
	baz=190						
251A	Midway	20.33	7	P	P	19 57 00.3	+0.5
	baz=188						
242A	Grayson	20.46	350	P	Pn	19 57 02.7	-0.8
	baz=169						
254A	Abbeville	20.52	12	P	P	19 57 02.3	+0.5
	baz=194						
149A	Jones	20.71	3	P	Pn	19 57 04.9	-1.5
	baz=184						
148A	Greensboro	20.73	1	P	P	19 57 02.2	-1.9
	baz=182						
151A	Opelika	20.77	7	P	Pn	19 57 06.0	-1.1
	baz=188,SNR=7.2						
150A	Eclectic	20.77	5	P	P	19 57 05.4	+0.8
	baz=186						
256A	Glennville	20.88	15	P	Pn	19 57 07.3	-1.0
	baz=197						
152A	Waverly Hall	20.98	8	P	Pn	19 57 08.2	-1.4
	baz=189						
LRAL	Lakeview Retre	21.13	3	P	P	19 57 09.3	+0.9
	baz=183						
LRAL	Lakeview Retre	21.13	3	eP	P	19 57 08.9	+0.4
	comp=Z,11nm,0.9s						
154A	Montrose	21.21	12	P	P	19 57 10.8	+1.6
	baz=194						
Z49A	Columbiana	21.32	4	P	P	19 57 08.9	-1.6
	baz=184,SNR=7.7						
155A	Kite	21.35	13	P	P	19 57 12.2	+1.4
	baz=195,SNR=14						
Z50A	Ashland	21.43	5	P	P	19 57 10.2	-1.4
	baz=186,SNR=6.3						
Z48A	Northport	21.45	1	P	P	19 57 12.4	+0.5
	baz=182						
JCT	Junction City	21.46	332	eP	P	19 57 11.6	-0.4
	comp=Z,19nm,1.1s						
Z53A	Monticello	21.77	10	P	P	19 57 15.8	+0.6
	baz=192,SNR=7.1						
WHTX	Lake Whitney,	21.81	338	P	P	19 57 16.4	+0.7
	baz=155						
Z54A	Sparta	21.86	12	P	P	19 57 15.0	-1.2
	baz=194						
GOGA	Godfrey	21.91	11	P	P	19 57 17.5	+0.7
	baz=192,SNR=8.2						
GOGA	Godfrey	21.91	11	eP	P	19 57 18.1	+1.3
	comp=Z,45nm,1.3s						
Y46A	Houston	21.96	359	P	P	19 57 14.5	-2.8
	baz=178						
Y45A	Yeager Farm, C	21.97	357	P	P	19 57 15.9	-1.5
	baz=176						
Y47A	UCPARC, Winfie	21.97	1	P	P	19 57 17.6	+0.2
	baz=181,SNR=6.3						
Y49A	Blount Mountai	21.99	4	P	P	19 57 17.2	-0.4
	baz=184						
Y48A	Jasper	22.00	2	P	P	19 57 14.9	-2.8
	baz=182						
Y51A	Rockmart	22.15	7	P	P	19 57 20.3	+0.9
	baz=188,SNR=12						
Y52A	Lilburn	22.25	9	P	P	19 57 19.7	-0.7
	baz=190						
Y53A	Monroe	22.32	10	P	P	19 57 20.0	-1.2
	baz=192						
Y54A	Tignall	22.50	12	P	P	19 57 25.2	+2.1
	baz=194,SNR=9.4						
X47A	Russelville	22.59	1	P	P	19 57 22.7	-1.4
	baz=181						
OXF	Oxford	22.61	357	P	P	19 57 22.8	-1.4
	baz=177						
OXF	Oxford	22.61	357	eP	P	19 57 24.0	-0.2
	comp=Z,32nm,1.1s						
TXAR	Lajitas Array	22.61	323	P	P	19 57 24.9	+0.5
	comp=Z,5.3nm,0.9s,baz=138,slow=8.3,SNR=26						
X44A	Crenshaw	22.64	356	P	P	19 57 21.0	-3.5
	baz=175						
X49A	Woodville	22.64	4	P	P	19 57 23.8	-0.9
	baz=185						
X50B	Fort Payne	22.65	5	P	P	19 57 23.8	-0.9
	baz=186						
X40A	Basin Creek Fa	22.95	350	P	P	19 57 27.1	-0.7
	baz=168						
MIAR	Mount Ida	23.14	349	P	P	19 57 29.8	+0.1
	baz=166,SNR=28						
MIAR	Mount Ida	23.14	349	eP	P	19 57 29.7	-0.1
	comp=Z,25nm,0.8s						
PCRV	Puerto La Cruz	23.18	92	P	P	19 57 29.8	-0.6
	comp=Z,13nm,0.6s,baz=237,slow=6.2,SNR=7.7						
X39A	Fountain Ranch	23.21	348	P	P	19 57 30.7	+0.2
	baz=165						
ABTX	Abilene, Hawle	23.22	335	P	P	19 57 29.9	-0.7
	baz=150						
W48A	Pulaski	23.23	3	P	P	19 57 28.7	-2.0
	baz=183						
W49A	Belvidere	23.25	4	P	P	19 57 29.4	-1.5
	baz=185						
W47A	Westpoint	23.32	1	P	P	19 57 29.1	-2.4
	baz=181						
W50A	Signal Mountai	23.41	6	P	P	19 57 31.9	-0.6
	baz=187						
W41B	Gary Mavity, V	23.53	352	P	P	19 57 34.0	+0.4
	baz=170,SNR=7.1						
W40A	Ferguson Farm,	23.68	350	P	P	19 57 35.0	+0.1
	baz=168						
W39A	Magazine	23.81	349	P	P	19 57 36.4	+0.2
	baz=166,SNR=7.1						
V47A	Nunnelly	23.90	1	P	P	19 57 33.8	-3.2
	baz=182						
V41A	Mountainview	24.12	352	P	P	19 57 37.7	-1.4
	baz=170						
V40A	Witts Springs	24.23	351	P	P	19 57 40.4	+0.2
	baz=169,SNR=8.4						
V52A	Sevierville	24.26	9	P	P	19 57 41.0	+0.6
	baz=191,SNR=6.5						
LPIG	La Paz	24.28	303	LR	LR	20 06 12.3	
	comp=Z,73nm,19.2s,baz=95,slow=34						
V39A	Pettigrew	24.41	349	P	P	19 57 41.6	-0.2
	baz=167,SNR=11						
U47A	Clarksville	24.52	2	P	P	19 57 40.8	-1.9
	baz=182						
U42A	Revenden	24.57	354	P	P	19 57 40.4	-2.8
	baz=173						
U41A	Viola	24.64	353	P	P	19 57 41.8	-2.0
	baz=171						
WMOK	Wichita Mounta	24.76	339	P	P	19 57 43.4	-1.5
	baz=154						
WMOK	Wichita Mounta	24.76	339	eP	P	19 57 41.3	-3.7
	comp=Z,20nm,1.5s						
U40A	Yellville	24.78	351	P	P	19 57 44.1	-1.0
	baz=169,SNR=12						
U39A	Green Forest	24.91	350	P	P	19 57 46.2	-0.1
	baz=168						
TUL1	Leonard	24.94	345	P	P	19 57 46.6	0.0
	baz=162						
T47A	Sharon Grove	25.07	2	P	P	19 57 45.9	-1.8
	baz=182						
T46A	Princeton	25.11	1	P	P	19 57 43.0	-5.0
	baz=180						
T43A	Greenville	25.22	356	P	P	19 57 47.7	-1.3
	baz=175						
T42A	Van Buren	25.23	355	P	P	19 57 47.4	-1.7
	baz=173						
T41A	Mountain View	25.31	353	P	P	19 57 48.9	-1.0
	baz=172,SNR=9.9						
MNTX	Cornudas Mount	25.35	324	P	P	19 57 51.5	+1.2
	baz=137						
MNTX	Cornudas Mount	25.35	324	eP	P	19 57 49.1	-1.2
	comp=Z,15nm,1.5s						
T40A	Mansfield	25.51	352	P	P	19 57 50.0	-1.7
	baz=170						
T39A	Clever	25.52	350	P	P	19 57 51.7	-0.1
	baz=168,SNR=5.4						
T38A	Diamond	25.69	349	P	P	19 57 53.7	+0.4
	baz=166,SNR=5.1						
MSTX	Muleshoe	25.75	331	P	P	19 57 54.9	+0.9
	baz=145						
S46A	Don Dixon Farm	25.75	1	P	P	19 57 51.4	-2.4
	baz=181						
S41A	Jillco Farms,	25.85	354	P	P	19 57 52.5	-2.3
	baz=172						
S40A	Lebanon	25.95	352	P	P	19 57 53.8	-1.9
	baz=170						
AMTX	Amarillo	26.02	334	P	P	19 57 57.0	+0.5
	baz=149						
AMTX	Amarillo	26.02	334	eP	P	19 57 56.7	+0.2
	comp=Z,26nm,1.1s						
S39A	Bolivar	26.16	351	P	P	19 57 55.5	-2.0
	baz=168,SNR=15						
S38A	Stockton	26.20	350	P	P	19 57 57.0	-1.0
	baz=167						
BLA	Blacksburg	26.22	14	P	P	19 57 57.0	-1.2
	baz=197						
CCM	Cathedral Cave	26.26	355	P	P	19 57 56.3	-2.1
	baz=173						
R41A	Rosebud	26.51	354	P	P	19 57 58.7	-2.1
	baz=173						
R39A	Chumby, Stover	26.73	351	P	P	19 58 01.4	-1.3
	baz=169						
R38A	Fenwick Farm,	26.74	350	P	P	19 57 60.0	-2.8
	baz=167						
Q49A	Aurora	27.22	6	P	P	19 58 03.1	-4.0
	baz=187						
121A	Cookes Peak, D	27.36	322	P	P	19 58 13.6	+4.9
	baz=134						
Q39A	Willow Grove F	27.44	352	P	P	19 58 07.6	-1.4
	baz=170						
Q38A	Cooks Store, C	27.45	351	P	P	19 58 08.1	-1.1
	baz=168						
P49A	Miami Univ. Ec	27.76	6	P	P	19 58 12.0	0.0
	baz=187,SNR=9.0						
P39B	Salisbury	27.84	352	P	P	19 58 11.2	-1.5
	baz=170						
P41A	Barry, Barry	27.85	355	P	P	19 58 10.6	-2.1
	baz=174						
P50A	Jamestown	27.94	7	P	P	19 58 09.0	-4.5
	baz=189						
P38A	Dawn	28.09	351	P	P	19 58 12.2	-2.7
	baz=169						
ANMO	Albuquerque	28.37	327	P	P	19 58 21.0	+3.3
	baz=140						
TASL	Snake Pit, Alb	28.37	327	P	P	19 58 20.6	+2.9
	baz=140						
TASM	ASL Pad, Albuq	28.37	327	P	P	19 58 19.9	+2.2
	baz=140						
TUC	Tucson	29.10	318	P	P	19 58 30.6	+6.5
	baz=129						
T25A	Trinidad	29.11	333	P	P	19 58 25.4	+1.1
	baz=146						
N39A	Derby Farms, D	29.18	353	P	P	19 58 23.1	-1.5
	baz=171						
M38A	Pleasantville	29.80	352	P	P	19 58 26.2	-3.9
	baz=170						
SDCO	Great Sand Dun	30.11	332	P	P	19 58 35.3	+2.2
	baz=144						
SDCO	Great Sand Dun	30.11	332	eP	P	19 58 35.2	+2.0
	comp=Z,6.1nm,1.2s						
L41A	Preston	30.20	357	P	P	19 58 30.5	-3.0
	baz=175						
L40A	Anamosa	30.23	356	P	P	19 58 31.6	-2.3
	baz=174						
L38A	Oak Wood Farm,	30.48	353	P	P	19 58 32.6	-3.5
	baz=171						
K37A	Belmond	31.18	352	P	P	19 58 41.4	-0.9
	baz=170,SNR=9.1						
J42A	Columbus	31.38	359	P	P	19 58 41.8	-2.2
	baz=178						
J37A	Redenius Farm,	31.71	353	P	P	19 58 45.0	-1.9
	baz=170						
J36A	Seneca 1, Swea	31.83	351	P	P	19 58 47.0	-1.0
	baz=168						

I43A	Langenfeld Bro	31.94	0	P	P	19 58 46.3	-2.6
	baz=180						
SAML	Samuel	32.31	129	*e*P	P	19 58 52.5	+0.1
	comp=Z,10nm,0.8s						
ECSD	EROS Data Cent	32.61	349	P	P	19 58 53.9	-0.9
	baz=164						
ECSD	EROS Data Cent	32.61	349	*e*P	P	19 58 52.4	-2.5
	comp=Z,4.8nm,1.0s						
H40A	Chili	32.73	357	P	P	19 58 53.3	-2.6
	baz=176						
H36A	Jessenland, He	33.00	352	P	P	19 58 56.3	-1.9
	baz=170						
H35A	Sunnyside Ranc	33.25	351	P	P	19 58 58.4	-1.9
	baz=168,SNR=6.5						
O20A	White River Ci	33.30	331	P	P	19 59 02.1	+1.0
	baz=142						
G42A	Mountain	33.30	360	P	P	19 58 57.3	-3.5
	baz=180						
G38A	Ridgeland	33.37	355	P	P	19 58 59.6	-1.9
	baz=173						
G39A	Holcombe	33.44	356	P	P	19 59 00.5	-1.5
	baz=175						
SPMN	Marine on St.	33.51	354	P	P	19 59 01.5	-1.1
	baz=172						
H32A	Carlson Farm,	33.52	348	P	P	19 59 01.8	-0.9
	baz=163						
F40A	Park Falls	34.01	358	P	P	19 59 04.8	-2.2
	baz=176						
F39A	Loretta	34.05	357	P	P	19 59 05.5	-1.8
	baz=175						
F44A	Big Bay de Noc	34.06	2	P	P	19 59 05.9	-1.5
	baz=183						
F38A	Pierce - Schro	34.16	355	P	P	19 59 07.3	-1.0
	baz=174						
F36A	Milaca	34.22	353	P	P	19 59 07.7	-1.1
	baz=171,SNR=5.5						
G32A	Webster	34.25	348	P	P	19 59 07.0	-2.1
	baz=164						
LPAZ	La Paz	34.27	144	P	P	19 59 08.3	-1.9
	comp=Z,0.5nm,0.5s,baz=246,slow=4.1,SNR=3.9						
LPAZ				LR	LR	20 13 09.7	
	comp=Z,52nm,20.7s,baz=328,slow=36						
F34A	Alexandria	34.38	351	P	P	19 59 09.5	-0.7
	baz=168						
E43A	Lone Tree Farm	34.45	1	P	P	19 59 08.3	-2.4
	baz=182						
E39A	Mellen	34.49	357	P	P	19 59 10.3	-0.9
	baz=176						
E40A	Wakefield	34.53	358	P	P	19 59 09.1	-2.4
	baz=177						
LONY	Lake Ozonia	34.70	17	P	P	19 59 12.1	-0.9
	baz=204						
E44A	Grand Marais A	34.73	3	P	P	19 59 10.0	-3.2
	baz=184						
E36A	McGregor	34.84	354	P	P	19 59 11.9	-2.2
	baz=171						
E34A	Wadena	35.07	352	P	P	19 59 12.3	-3.8
	baz=168						
EDW2	Edwards Air Fo	35.47	315	P	P	19 59 29.0	+9.2
	baz=123						
PDAR	Pinedale Array	35.98	333	P	P	19 59 22.9	-1.5
	comp=Z,0.1nm,0.3s,baz=186,slow=7.2,SNR=3.4						
PDAR				PcP	PcP	20 01 51.4	+0.9
	comp=Z,0.4nm,0.4s,baz=126,slow=5.7,SNR=4.4						
C35A	Jirik Farms, M	36.09	353	P	P	19 59 24.2	-0.7
	baz=170						
EYMN	Ely	36.11	356	P	P	19 59 22.7	-2.3
	baz=174						
B35A	Bob, Littlefor	36.71	354	P	P	19 59 27.3	-2.8
	baz=171						
AGMN	Agassiz Nation	36.92	351	P	P	19 59 30.1	-1.8
	baz=167						
AGMN	Agassiz Nation	36.92	351	*e*P	P	19 59 30.2	-1.6
	comp=Z,8.2nm,0.8s						
A33A	Warroad	37.48	352	P	P	19 59 36.0	-0.6
	baz=168,SNR=6.1						
NVAR	Mina Array Bea	37.70	320	P	P	19 59 40.0	+1.0
	comp=Z,2.3nm,0.9s,baz=139,slow=7.9,SNR=8.7						
NVAR				PcP	PcP	20 01 56.5	+0.8
	comp=Z,1.7nm,0.7s,baz=136,slow=3.7,SNR=8.7						
NVAR				LR	LR	20 15 21.6	
	comp=Z,90nm,19.8s,baz=224,slow=36						
ULM	Lac du Bonnet	38.83	352	P	P	19 59 47.8	-0.2
	comp=Z,5.9nm,0.8s,baz=147,slow=7.8,SNR=4.9						
BOZ	Bozeman (W)	39.13	334	P	P	19 59 51.5	+0.6
	baz=142						
EGMT	Eagleton	40.34	338	P	P	20 00 00.9	+0.1
	baz=146						
YBH	Yreka Blue Hor	42.37	321	LR	LR	20 22 02.8	
	comp=Z,66nm,18.0s,baz=160,slow=42						
I04A	Tendick Farm,	43.39	324	P	P	20 00 26.2	+0.5
	baz=127						
RPN	Rapa Nui	43.83	208	LR	LR	20 13 35.7	
	comp=Z,95nm,21.7s,baz=42,slow=29						
SCHQ	Schefferville	46.08	17	LR	LR	20 19 48.0	
	comp=Z,44nm,20.0s,baz=188,slow=36						
CPUP	Villa Florida	48.37	142	P	P	20 01 04.2	-0.9
	comp=Z,1.9nm,0.9s,baz=290,slow=12,SNR=3.2						
CPUP				LR	LR	20 20 20.3	
	comp=Z,20nm,18.7s,baz=283,slow=35						
FRB	Frobisher Bay	53.66	11	LR	LR	20 26 18.0	
	comp=Z,57nm,18.3s,baz=264,slow=38						
PLCA	Paso Flores	54.79	164	P	P	20 01 53.1	+0.2
	comp=Z,1.4nm,0.6s,baz=289,slow=4.4,SNR=3.7						
RES	Resolute Bay	62.95	358	LR	LR	20 32 58.1	
	comp=Z,23nm,18.6s,baz=106,slow=39						
ILAR	Eielson Array	66.30	336	P	P	20 03 08.8	-2.2
	comp=Z,0.2nm,0.6s,baz=157,slow=4.9,SNR=3.0						
PPT	Papeete	67.29	245	LR	LR	20 24 04.0	
	comp=Z,92nm,18.1s,baz=20,slow=28						
MDT	Midelt	78.34	59	LR	LR	20 38 55.8	
	comp=Z,32nm,18.2s,baz=324,slow=36						
SPITS	Spitsbergen Ar	81.45	12	LR	LR	20 42 43.0	
	comp=Z,42nm,18.5s,baz=55,slow=37						
KOWA	Kowa	81.55	77	LR	LR	20 39 06.6	
	comp=Z,40nm,19.5s,baz=204,slow=34						
NOA	NORSAR Array B	84.25	29	LR	LR	20 43 24.5	
	comp=Z,8.5nm,18.1s,baz=65,slow=36						
AFI	Afiamalu	86.70	255	LR	LR	20 35 33.8	
	comp=Z,31nm,19.5s,baz=26,slow=30						
GERES	GERESS Array B	88.87	40	LR	LR	20 40 00.1	
	comp=Z,31nm,21.5s,baz=309,slow=32						
PETK	Petropavlovsk-	94.51	326	LR	LR	20 50 53.2	
	comp=Z,12nm,18.1s,baz=42,slow=37						
SONM	Songino Array	119.20	349	PKP	PKPdf	20 11 11.5	-0.6
	comp=Z,0.3nm,0.8s,baz=26,slow=1.4,SNR=3.6						
KSRS	Korea Array	120.40	327	PKP	PKPdf	20 11 15.7	+1.1
	comp=Z,0.8nm,0.6s,baz=20,slow=3.9,SNR=3.8						
KSAR	Wonju Array Be	120.43	327	PKP	PKPdf	20 11 15.7	+1.0
ASAR	Alice Springs	138.37	248	PKP	PKPdf	20 11 50.0	+1.0
	comp=Z,0.8nm,0.7s,baz=109,slow=1.5,SNR=10						
WRA	Warramunga Arr	138.40	253	PKP	PKPdf	20 11 50.5	+1.4
	comp=Z,1.4nm,0.8s,baz=89,slow=2.0,SNR=18						
FITZ	Fitzroy Crossi	146.77	255	PKPbc	PKPab	20 12 06.6	-0.4
	baz=129,slow=4.6						
CMAR	Chiang Mai Arr	149.09	347	PKPbc	PKPdf	20 12 09.3	+1.5
	comp=Z,2.1nm,0.8s,baz=315,slow=2.4,SNR=9.6						

IDC 12 19:57:12.3±1.4**, 7°.66S**×**122°.86E, h265**km±13km**, mb3.1**/2**, mb1 3.5**/7**, mb1mx3.0**/58**, mbtmp4.0**/7**, Error ellipse: s-maj=36.7km s-min=17.4km az=68.0, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	2.65	163	P	Pn	19 58 03.8	+1.6
	21nm,0.3s,baz=26,slow=1.1,SNR=38						
BATI				S	S	19 58 41.3	-0.4
	26nm,0.3s,baz=312,slow=4.8,SNR=5.0						
FITZ	Fitzroy Crossi	10.72	166	P	Pn	19 59 40.2	+0.5
	0.1nm,0.3s,baz=7.1,slow=8.1,SNR=5.0						
SIJI	Sorong	10.76	52	P	Pn	19 59 40.5	+0.3
	0.8nm,0.3s,baz=262,slow=23,SNR=6.8						
WRA	Warramunga Arr	16.51	139	P	P	20 00 47.1	-0.9
	0.8nm,0.3s,baz=318,slow=12,SNR=73						
WRA				S	S	20 03 52.7	+5.5
	0.1nm,0.3s,baz=318,slow=27,SNR=3.1						
ASAR	Alice Springs	19.11	148	P	P	20 01 16.4	+0.2
	1.2nm,0.3s,baz=335,slow=14,SNR=74						
STKA	Stephens Creek	29.75	147	P	P	20 02 54.4	-0.1
	1.0nm,0.3s,baz=313,slow=9.8,SNR=6.5						
MKAR	Makanchi Array	65.10	330	P	P	20 07 24.6	-0.2
	0.3nm,0.8s,baz=141,slow=9.3,SNR=2.3						

IDC 12 20:04:45.0±2.9**, 4°.10N**×**94°.41E, h0**km**, mb3.3**/3**, mb1 3.5**/4**, mb1mx3.2**/64**, mbtmp3.2**/4**, ML3.6**/1**, Error ellipse: s-maj=114.0km s-min=27.0km az=60.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	14.95	17	Pn	Pn	20 08 18.9	+1.2
	0.1nm,0.3s,baz=206,slow=11,SNR=4.1						
WRA	Warramunga Arr	45.93	123	P	P	20 13 09.7	-0.3
	0.4nm,0.6s,baz=302,slow=9.2,SNR=4.9						
ASAR	Alice Springs	47.36	128	P	P	20 13 21.3	+0.1
	0.2nm,0.5s,baz=306,slow=8.2,SNR=3.7						
KURBB	Kurchatov Arra	48.26	346	P	P	20 13 27.4	-0.3
	0.2nm,0.5s,baz=159,slow=7.3,SNR=3.0						

KRSC 12 20:11:43.9±1.6**, 49°.96N**×**156°.99E, h72**km±25km**, ML3.7, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	0.92	323	*e*P	Pn	20 12 01.7	+0.2
SKR				*e*S	Sn	20 12 14.4	-0.1
PAU	Pauzhetka	1.52	356	*e*P	Pn	20 12 11.2	+2.1
PAU				*e*S	Sn	20 12 31.0	+2.8
KDTR	Khodutka, Kamc	1.98	20	*e*P	Pn	20 12 17.7	+2.4
KDTR				*e*S	Sn	20 12 42.2	+3.0
MIPR	Malaya Ipel'ka	2.33	357	*e*P	Pn	20 12 22.5	+2.5
ASAK	Asacha	2.50	13	*e*P	Pn	20 12 25.2	+2.8
MTVR	Mutnovka	2.64	16	*e*P	Pn	20 12 27.3	+3.0
MTVR				*e*S	Sn	20 12 59.3	+3.9
RUS	Russkaya	2.66	21	*e*P	Pn	20 12 26.8	+2.4
RUS				*e*S	Sn	20 12 58.0	+2.4
UGLR	Uglovaya	3.45	19	*e*P	Pn	20 12 39.0	+3.6
SDLR	Sedlovina	3.53	19	*e*P	Pn	20 12 39.6	+3.2
SDLR				*e*S	Sn	20 13 19.5	+2.5
SPN	Mys Shipunski	3.67	30	*e*P	Pn	20 12 41.2	+3.0
SPN				*e*S	Sn	20 13 22.6	+2.3
MKZ	Mys Kozlova	5.45	30	*e*P	Pn	20 13 04.3	+1.9
MKZ				S	Sn	20 14 05.8	+2.1

IDC ***12*** *20:17:23.6±1.2, 62°.83N×151°.19W, h108km±16km, mb3.6/12, mb1 3.7/17, mb1mx3.4/86, mbtmp4.0/17, Error ellipse: s-maj=24.4km s-min=9.9km az=118.0*
ISCJB ***12*** *20:17:24.1±0.2, 62°.88N±0°.02×151°.16W±0°.05, h129km±2km, mb3.8/12, Error ellipse: s-maj=3.9km s-min=3.1km az=7.1*
NEIC ***12*** *20:17:25.7±0.0, 62°.87N×151°.17W, h117km, ML3.7(AEIC), After AEIC.*
ISC 12 20:17:25.3±0.7**, 62°.86N**±0°.03×**151°.16W**±0°.04**, h122**km±5km**, n107, σ0s.72**/121**, mb3.9**/12**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PPLA	Purkeypile	0.47	274	P	Pn	20 17 43.5	+0.1
PPLA				S	Sn	20 17 56.7	-0.4
TRAP	Trapper Creek	0.68	141	P	Pn	20 17 44.8	+0.1
CAST	Castle Rocks	0.70	324	P	Pn	20 17 44.5	-0.3
CAST				S	Sn	20 17 58.4	-1.2
KTH	Kantishna Hill	0.70	9	P	Pn	20 17 44.9	0.0
KTH				S	Sn	20 17 59.1	-0.7
HUR	Hurricane	0.71	80	P	Pn	20 17 45.1	+0.2
TRF	Thorofare Moun	0.71	34	P	Pn	20 17 45.0	-0.1
TRF				S	Sn	20 17 59.9	-0.2
SKT	Skwentna	0.90	191	P	Pn	20 17 46.5	-0.1
SKT				S	Sn	20 18 02.5	-0.1
CHUM	Lake Minchumin	1.15	334	P	Pn	20 17 48.9	0.0
CHUM				S	Sn	20 18 06.0	-0.9
BPAW	Bear Paw Mtn.	1.24	4	P	Pn	20 17 49.6	-0.4
BPAW				S	Sn	20 18 07.7	-1.1
MCK	McKinley	1.33	48	P	Pn	20 17 51.1	+0.2
MCK				S	Sn	20 18 10.3	-0.1
SUA	Susitna One	1.42	172	P	Pn	20 17 52.4	+0.3
SUA				S	Sn	20 18 13.0	+0.7
GHO	Glory Hole Cre	1.51	135	P	Pn	20 17 53.4	+0.4
BWN	Browne	1.52	29	P	Pn	20 17 53.6	+0.7
PMR	Palmer	1.59	142	P	Pn	20 17 53.8	-0.1
SPCG	Spurr Capps Gl	1.63	195	P	Pn	20 17 54.4	0.0
SPCG				S	Sn	20 18 16.5	-0.1
SPCP	Crater Peak Br	1.67	197	P	Pn	20 17 55.1	+0.1
SPCP				S	Sn	20 18 18.0	+0.4
SML	Sawmill	1.69	128	P	Pn	20 17 54.9	-0.2
SML				S	Sn	20 18 18.4	+0.6
SPCR	Spurr Chakacha	1.74	197	P	Pn	20 17 55.7	0.0
DHY	Denali Highway	1.74	81	P	Pn	20 17 56.0	+0.2
FIB	Fire Island	1.77	164	P	Pn	20 17 57.2	+1.3
RC01	Rabbit Creek A	1.90	159	P	Pn	20 17 57.3	-0.3
KNK	Knik Glacier	1.93	138	P	Pn	20 17 58.0	0.0
NEA	Nenana	1.95	27	P	Pn	20 17 58.1	0.0
SCM	Sheep Creek Mo	2.06	118	P	Pn	20 17 59.5	-0.2
WRH	Wood River Hil	2.12	39	P	Pn	20 18 00.2	0.0
MLY	Manley	2.18	5	P	Pn	20 18 01.0	-0.1
TT01	Tatalina	2.23	273	P	Pn	20 18 01.1	-0.5
PTE	Portage	2.25	152	P	Pn	20 18 02.1	+0.2
CCB	Clear Creek Bu	2.33	38	P	Pn	20 18 02.8	-0.1
RDJH	Redoubt Jeurge	2.41	200	P	Pn	20 18 04.3	+0.2
HDA	Harding Lake	2.44	49	P	Pn	20 18 04.2	0.0
MDM	Murphy Dome	2.47	30	P	Pn	20 18 04.7	0.0
PS10	TAPS Pump St10	2.51	75	P	Pn	20 18 06.1	+0.8
RDWB	Redoubt West	2.52	199	P	Pn	20 18 05.7	+0.2
PS08	TAPS Pump Stn8	2.56	47	P	Pn	20 18 05.8	-0.1
PAX	Paxson	2.61	85	P	Pn	20 18 07.3	+0.8
ILAR	Eielson Array	2.69	43	P	Pn	20 18 07.4	-0.2
	25nm,0.3s,baz=227,slow=13,SNR=834						
ILAR				S	Sn	20 18 38.6	-1.6
	11nm,0.3s,baz=221,slow=21,SNR=8.1						
ILB	Eielson Array	2.69	43	P	Pn	20 18 07.4	-0.2
GLM	Gilmore Dome	2.71	36	P	Pn	20 18 07.9	+0.1
PS11	TAPS Pump St11	2.76	104	P	Pn	20 18 09.3	+0.9
HARP	HAARP	2.81	97	P	Pn	20 18 09.9	+0.8
KLU	Klutina	2.82	117	P	Pn	20 18 08.6	-0.7
VMT	TAPS Tl Valdez	2.88	126	P	Pn	20 18 09.3	-0.7
PS06	TAPS Pump Stn6	3.07	11	P	Pn	20 18 12.6	+0.2
DIV	Divide	3.08	122	P	Pn	20 18 11.8	-0.9
BRLK	Bradley Lake	3.11	177	P	Pn	20 18 13.8	+0.7
IM05	Indian Mountai	3.32	342	P	Pn	20 18 15.5	-0.2
HIN	Hinchinbrook I	3.33	136	P	Pn	20 18 16.0	+0.1
CNPM	China Poot	3.35	181	P	Pn	20 18 16.6	+0.3
PRP	Porcupine Dome	3.63	40	P	Pn	20 18 19.8	-0.2
BMRM	Bremner River	3.64	119	P	Pn	20 18 19.1	-0.9
GLB	Gilahina Butte	3.73	109	P	Pn	20 18 20.9	-0.4
GOAT	Goat Mountain	3.82	124	P	Pn	20 18 22.0	-0.5
RAGM	Ragged Mountai	3.97	126	P	Pn	20 18 24.2	-0.2
VRDI	Verde Repeater	3.98	111	P	Pn	20 18 24.3	-0.5
MCARA	McCarthy VSAT	4.10	108	P	Pn	20 18 26.1	0.0
CDD	Cape Douglas	4.13	198	P	Pn	20 18 26.5	0.0
HMT	Hamilton	4.16	124	P	Pn	20 18 26.8	-0.2
BCA3	Beaver Creek A	4.29	83	P	Pn	20 18 28.3	-0.3
BERG	Berg Lake	4.34	122	P	Pn	20 18 29.0	-0.3
COLD	Coldfoot	4.40	5	P	Pn	20 18 30.2	+0.1
PTPK	Patty Peak	4.43	108	P	Pn	20 18 30.6	-0.1
KHIT	Khitrov Hills	4.49	119	P	Pn	20 18 31.6	+0.2
BALM	Baldy	4.55	110	P	Pn	20 18 31.5	-0.7
KAPH	Katmai Pasha	4.56	201	P	Pn	20 18 31.9	-0.4
KIAG	Kiagna River	4.60	111	P	Pn	20 18 32.0	-0.9
KAHC	Katmai Hardscr	4.63	206	P	Pn	20 18 33.2	-0.1
WAX	Waxell Ridge	4.64	118	P	Pn	20 18 32.9	-0.6
KULT	Kultieth River	4.81	119	P	Pn	20 18 35.6	-0.1
EGAK	Eagle	4.83	62	P	Pn	20 18 36.0	+0.2
BARN	Barnard Glacie	4.83	108	P	Pn	20 18 35.8	-0.3
YUK2	White River	4.93	98	P	Pn	20 18 37.6	+0.3
KAKN	Katmai Knife C	4.97	205	P	Pn	20 18 38.8	+1.0
CTGM	Chitina Glacie	5.02	108	P	Pn	20 18 38.5	-0.1
KABU	Katmai Buttres	5.04	206	P	Pn	20 18 39.3	+0.6
ANCK	Angle Creek	5.15	206	P	Pn	20 18 41.6	+1.4
KDAK	Kodiak Island	5.15	189	P	Pn	20 18 39.0	-1.2
	14nm,0.3s,baz=51,slow=6.6,SNR=237						
KDAK				S	Sn	20 19 34.3	-4.0
	13nm,0.3s,baz=279,slow=20,SNR=9.3						
KDAK	Kodiak Island	5.15	189	P	Pn	20 18 39.1	-1.0
CAHL	Cahill	5.24	205	P	Pn	20 18 42.1	+0.6
BM3	Burnt Mountain	5.34	28	P	Pn	20 18 42.5	-0.2
DAWY	Dawson	5.41	72	*e*P	Pn	20 18 43.5	-0.2
SAMH	Samovar Hills	5.68	114	P	Pn	20 18 47.5	+0.2
OHAK	Old Harbor	5.76	192	P	Pn	20 18 45.5	-2.8
YUK6	Outpost Mounta	6.35	102	P	Pn	20 18 55.5	-0.9
PNL	Peninsula	6.51	114	P	Pn	20 18 58.1	-0.5
HYT	Haines Junctio	6.78	101	P	Pn	20 19 01.9	-0.4
ANNW	Aniakchak Nort	6.89	214	P	Pn	20 19 03.5	-0.2
BESE	Bessie Mountai	9.06	111	P	Pn	20 19 32.5	-0.5
INK	Inuvik	9.09	45	P	Pn	20 19 32.4	-0.8
	0.3nm,0.3s,baz=245,slow=16,SNR=5.2						
DLBC	Dease Lake	11.25	104	P	Pn	20 20 02.8	+0.3
	0.3nm,0.3s,baz=270,slow=8.1,SNR=3.6						
YKA	Yellowknife Ar	16.64	75	P	Pn	20 21 11.2	+0.2
	0.5nm,0.3s,baz=286,slow=11,SNR=7.9						
SEY	Seymchan	25.02	296	P	P	20 22 37.0	-0.4
	2.1nm,0.7s,baz=68,slow=9.6,SNR=7.4						
KSRS	Korea Array	53.43	282	P	P	20 26 33.3	+1.1
	0.6nm,0.6s,baz=16,slow=6.5,SNR=2.7						
KSAR	Wonju Array Be	53.46	282	P	P	20 26 33.3	+0.9
SONM	Songino Array	53.83	305	P	P	20 26 36.1	+0.9
	1.0nm,0.7s,baz=25,slow=7.2,SNR=9.5						
ZALV	Zalesovo Beam	55.59	324	P	P	20 26 47.2	-0.4
	0.9nm,0.6s,baz=35,slow=5.4,SNR=4.1						
FINES	FINESS Array B	55.99	2	P	P	20 26 50.0	-0.3
	0.8nm,0.7s,baz=21,slow=9.6,SNR=3.2						
FINES	FINESS Array B	55.99	2	P	P	20 26 50.0	-0.3
ARU	Arti	58.82	341	P	P	20 27 10.1	-0.1
	baz=59,slow=5.9						
EKA	Eskdalemuir Ar	59.53	21	P	P	20 27 14.8	-0.3
	0.3nm,0.4s,baz=332,slow=4.9,SNR=8.0						
BVAR	Borovoye Array	59.94	332	P	P	20 27 17.9	-0.1
	1.7nm,0.6s,baz=39,slow=7.4,SNR=7.8						
KURK	Kurchatov	60.15	326	P	P	20 27 19.3	-0.1
KURBB	Kurchatov Arra	60.26	326	P	P	20 27 19.3	-0.9
	0.8nm,0.6s,baz=29,slow=7.2,SNR=4.3						
MKAR	Makanchi Array	62.74	322	P	P	20 27 36.1	-0.8
	0.7nm,0.4s,baz=44,slow=6.9,SNR=14						
AKTO	Aktyubinsk	64.71	340	P	P	20 27 49.4	-0.4
	3.4nm,0.6s,baz=39,slow=6.6,SNR=11						
AKASG	Malin Array Be	66.78	360	P	P	20 28 02.5	-0.5
	1.7nm,0.4s,baz=2.4,slow=6.5,SNR=7.6						
BRTR	Keskin Array B	77.68	356	P	P	20 29 09.8	+1.6
	0.3nm,0.3s,baz=15,slow=8.8,SNR=2.8						

IDC ***12*** *20:27:23.5±0.8, 1°.93S×127°.33E, h0km, mb3.7/6, mb1 3.9/9, mb1mx3.7/55, mbtmp3.7/9, ML3.6/3, MS3.3/3, Ms1 3.3/3, ms1mx2.6/59, Error ellipse: s-maj=30.0km s-min=16.6km az=64.0*
ISCJB ***12*** *20:27:27.9±0.5, 1°.93S±0°.05×127°.33E±0°.04, h33km, mb3.7/6, MS3.3/3, Error ellipse: s-maj=7.7km s-min=6.4km az=7.5*
DJA ***12*** *20:27:27.6±0.3, 2°S±3°×12°7E±°, h10km, M4.4/6, mb4.6/3, mB4.7/3, MLv4.3/6, Mw(mB)3.9/3*
ISC 12 20:27:28.7±0.8**, 1°.98S**±0°.06×**127°.33E**±0°.06**, h35**km**, n22, σ1s.44**/20**, mb3.7**/6**, MS3.5**/3**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NLAI	Namlea	1.28	190	P	Pn	20 27 50.5	+0.4
LBMI	Labuha	1.34	7	P	Pn	20 27 51.1	+0.1
SANI	Sanana	1.34	267	P	Pn	20 27 50.8	-0.2
AAI	Ambon	1.91	153	P	Pn	20 28 00.6	+1.8
MSAI	Masohi	2.10	130	P	Pn	20 28 03.6	+2.2
TNTI	Ternate	2.73	1	P	Pn	20 28 11.3	+1.2
SIJI	Sorong	4.09	74	Pn	Pn	20 28 28.9	+0.1
	4.2nm,0.3s,baz=269,slow=6.9,SNR=16						
SIJI				Sn	Sn	20 29 16.4	+0.9
	baz=108,slow=20,SNR=2.4						
APSI	Ampana	5.78	280	P	Pn	20 28 53.7	+1.7
	100nm,0.9s,1μm0.4nm						
MRSI	Marisa	5.91	294	P	Pn	20 28 54.9	+1.0
MPSI	Mapaga	7.78	287	P	Pn	20 29 21.6	+2.1
SPSI	Sidrap Palu	7.80	255	P	Pn	20 29 22.4	+2.5
FITZ	Fitzroy Crossi	16.11	186	Pn	P	20 31 14.2	-1.4
	0.1nm,0.3s,baz=17,slow=11,SNR=4.8						
WRA	Warramunga Arr	19.13	159	P	P	20 31 47.9	-1.1
	0.4nm,0.3s,baz=342,slow=12,SNR=38						
ASAR	Alice Springs	22.48	164	P	P	20 32 24.4	-0.8
	2.1nm,0.6s,baz=345,slow=11,SNR=54						
GUMO	Guam	23.27	48	LR	LR	20 42 24.3	
	comp=Z,10nm,18.4s,baz=208,slow=39						
CMAR	Chiang Mai Arr	34.53	307	P	P	20 34 14.1	-0.1
	0.4nm,0.7s,baz=142,slow=6.4,SNR=3.8						
SONM	Songino Array	52.87	342	P	P	20 36 39.0	-2.3
	0.4nm,0.8s,baz=150,slow=6.1,SNR=3.9						
MKAR	Makanchi Array	62.59	327	P	P	20 37 50.0	+0.5
	1.0nm,0.6s,baz=123,slow=8.6,SNR=14						
KURBB	Kurchatov Arra	66.86	329	P	P	20 38 17.4	+0.2
	0.9nm,0.5s,baz=131,slow=5.9,SNR=13						
VNDA	Vanda	77.73	173	P	P	20 39 22.5	+0.9
	0.7nm,0.9s,baz=324,slow=9.2,SNR=2.0						
ASF	Jabal al Asfar	91.41	302	LR	LR	21 26 48.3	
	comp=Z,103nm,21.3s,baz=293,slow=39						
EIL	Elat	93.03	299	LR	LR	21 28 59.9	
	comp=Z,16nm,19.7s,baz=221,slow=40						

ISK ***12*** *20:30:59.7, 38°.67N×43°.17E, h7km, ML2.3/5*
ISCJB ***12*** *20:31:01.0±0.4, 38°.69N±0°.02×43°.17E±0°.03, h7km±5km, Error ellipse: s-maj=4.3km s-min=3.7km az=16.9*
DDA ***12*** *20:31:00.8, 38°.70N×43°.20E, h7km, Ml2.7*
CSEM ***12*** *20:31:00.6±0.2, 38°.69N×43°.20E, h10km, ML2.3, Error ellipse: s-maj=4.6km s-min=3.8km az=91.0*
ISC 12 20:31:01.0±0.9**, 38°.69N**±0°.02×**43°.18E**±0°.02**, h12**km±7km**, n31, σ0s.93**/53**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VANB	Van	0.19	121	PG	Pg	20 31 05.0	-0.3
VANB				SG	Sg	20 31 09.2	+1.0
VANB	Van	0.19	121	*e*Pg	Pg	20 31 05.0	-0.3
VANB				*e*Sg	Sg	20 31 09.2	+1.0
ERCV	ERCIS-VAN	0.35	20	PG	Pg	20 31 07.4	-0.7
ERCV				SG	Sg	20 31 13.5	+0.7
ERCV	ERCIS-VAN	0.35	20	*e*Pg	Pg	20 31 07.4	-0.7
ERCV				*e*Sg	Sg	20 31 13.5	+0.7
ADCV	BITLIS_Adilcev	0.38	288	*i* P	Pg	20 31 08.7	+0.1
ADCV				*i* S	Sb	20 31 15.4	-0.3
ADCV	BITLIS_Adilcev	0.38	288	P	Pg	20 31 08.7	+0.1
ADCV				S	Sb	20 31 15.4	-0.3
GEVA	Gevas	0.39	194	*i* P	Pg	20 31 07.8	-1.1
GEVA				*i* S	Sg	20 31 14.6	+0.4
GEVA	Gevas	0.39	194	P	Pg	20 31 07.8	-1.1
GEVA				S	Sg	20 31 14.6	+0.4
VMUR	Van-Muradiye	0.42	46	*i* P	Pg	20 31 09.1	-0.4
VMUR				*i* S	Sg	20 31 16.4	+1.2
VMUR	Van-Muradiye	0.42	46	P	Pg	20 31 09.1	-0.4
CLDR	Caldiran	0.73	52	PG	Pg	20 31 14.4	-0.8
CLDR				SG	Sg	20 31 25.6	+0.8
CLDR	Caldiran	0.73	52	*i* P	Pg	20 31 14.4	-0.8
CLDR				*i* S	Sg	20 31 25.7	+0.8
CLDR	Caldiran	0.73	52	P	Pg	20 31 14.4	-0.8
CLDR				*e*Sg	Sg	20 31 25.6	+0.8
TUTA	Tutak	0.76	338	*i* P	Pg	20 31 15.1	-0.8
TUTA				*i* S	Sg	20 31 26.2	+0.3
TUTA	Tutak	0.76	338	P	Pg	20 31 15.1	-0.8
TUTA				S	Sg	20 31 26.2	+0.3
AGRB	Hanur-Agry	0.89	351	PG	Pg	20 31 17.6	-0.7
AGRB	Hanur-Agry	0.89	351	*e*Pg	Pg	20 31 17.6	-0.7
GURO	Guroymak-BITLI	0.91	261	PG	Pg	20 31 17.3	-1.4
GURO				SG	Sg	20 31 30.4	-0.2
GURO	Guroymak-BITLI	0.91	261	*e*Pg	Pg	20 31 17.3	-1.4
GURO				*e*Sg	Sg	20 31 30.4	-0.2
EKAR	Karacoban	1.04	303	*i* P	Pn	20 31 22.9	+1.2
EKAR	Karacoban	1.04	303	P	Pn	20 31 22.9	+1.2
HAKT	HAKKARI	1.21	160	*i* P	Pb	20 31 23.2	-0.8
HAKT				*i* S	Sn	20 31 41.7	+1.2
HAKT	HAKKARI	1.21	160	P	Pb	20 31 23.2	-0.8
HAKT				S	Sn	20 31 41.7	+1.2
SRTM	Siirt_Merkez	1.21	235	*i* P	Pg	20 31 24.7	+0.3
SRTM				*i* S	Sn	20 31 42.8	+2.4
SRTM	Siirt_Merkez	1.21	235	P	Pg	20 31 24.7	+0.3
SRTM				S	Sn	20 31 42.8	+2.4
EATA	Eleskirt	1.28	336	*i* P	Pn	20 31 24.2	-1.0
EATA				*i* S	Sn	20 31 43.2	+0.7
EATA	Eleskirt	1.28	336	P	Pn	20 31 24.2	-1.0
EATA				S	Sn	20 31 43.2	+0.7
SIRT	Sirnak	1.33	206	PN	Pn	20 31 24.9	-0.6
SIRT	Sirnak	1.33	206	*e*Pn	Pn	20 31 24.9	-0.6
CUKT	Cukurca	1.48	167	PN	Pn	20 31 27.1	-0.6
CUKT	Cukurca	1.48	167	*e*Pn	Pn	20 31 27.1	-0.6

IDC 12 20:46:53.4±25.0**, 17°.34S**×**179°.05W, h314**km±257km**, mb3.4**/8**, mb1 3.6**/8**, mb1mx3.2**/50**, mbtmp4.0**/8**, Error ellipse: s-maj=52.5km s-min=34.2km az=85.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	32.94	260	P	P	20 52 59.6	+0.1

	1.8nm,0.6s,baz=76,slow=8.5,SNR=4.5						
STKA	Stephens Creek	38.38	240	P	P	20 53 44.9	-0.4
	1.4nm,0.6s,baz=98,slow=9.1,SNR=3.7						
WRA	Warramunga Arr	44.14	259	P	P	20 54 31.7	-0.3
	0.9nm,0.6s,baz=97,slow=6.8,SNR=37						
ASAR	Alice Springs	44.36	254	P	P	20 54 33.6	-0.1
	11nm,0.6s,baz=90,slow=8.3,SNR=115						
FITZ	Fitzroy Crossi	52.52	260	P	P	20 55 35.5	0.0
	1.7nm,0.9s,baz=168,slow=6.2,SNR=8.0						
VNDA	Vanda	60.96	185	P	P	20 56 33.5	+0.1
	0.4nm,0.4s,baz=27,slow=4.7,SNR=5.4						
NVAR	Mina Array Bea	79.44	44	P	P	20 58 25.8	+0.2
	0.2nm,0.4s,baz=230,slow=6.9,SNR=3.4						
TXAR	Lajitas Array	86.21	58	P	P	20 58 60.0	-0.3
	0.5nm,0.7s,baz=194,slow=4.6,SNR=5.4						

MAN 12 20:48:17.4, 16°.54N×120°.12E, h28km, mb3.9, ML2.6, MS2.2, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOLP	Bolinao	0.26	232	eP	Pn	20 48 25.7	+0.3
BOLP				eS	Sn	20 48 32.5	+2.1
ABRA	Dolores	1.24	27	eP	Pn	20 48 38.8	-0.1
APYP	Conner	1.69	39	eP	Pn	20 48 45.2	0.0
APYP				eS	Sn	20 49 06.6	+0.6

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*ISCJB **12** 20:51:49.3±0.6, 45°.26N±0°.03×14°.95E±0°.04, h0km±5km, Error ellipse: s-maj=6.0km s-min=4.0km az=139.7*

*VIE **12** 20:51:49.4±0.7, 45°.26N×14°.94E, h4km, mb1.9/6, ml2.5/10, Error ellipse: s-maj=4.9km s-min=2.4km az=166.0 43 km ESE of Rijeka*

*LJU **12** 20:51:49.3, 45°.26N×14°.97E, h15km, ML2.1*

ISC 12 20:51:48.5±1.4, 45°.21N±0°.04×14°.94E±0°.04, h9km±10km, n19, σ0s.80/30, 2D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GBRS	Gornja Briga	0.34	344	⇓iPg	Pb	20 51 55.9	-0.8
GBRS				i Sg	Sb	20 52 00.5	-1.8
	comp=Z,210nm,0.1s						
BOJS	Bojanci	0.37	36	⇓iPg	Pg	20 51 56.1	+0.3
BOJS				i Sg	Sg	20 52 00.9	+0.2
	comp=Z,165nm,0.1s						
KNDS	Knezji Dol	0.51	309	i Pg	Pb	20 51 59.0	-0.7
KNDS				i Sg	Sb	20 52 06.8	-0.5
	comp=Z,86nm,0.2s						
OZLJ	Ozalj	0.55	42	ePg	Pb	20 51 59.8	-0.5
OZLJ				Sg	Sg	20 52 06.3	-0.1
VISS	Visnje	0.60	353	i Pg	Pg	20 52 00.2	0.0
CEY	Cerknica	0.64	326	ePg	Pb	20 52 01.3	-0.6
CRES	Cresnjev	0.72	30	i Pg	Pg	20 52 02.3	-0.1
	comp=Z,50nm,0.2s						
SKDS	Skadanscina	0.74	298	i Pg	Pg	20 52 02.8	+0.1
	comp=Z,11nm,0.1s						
GCIS	Gornji Cirnik	0.82	36	i Pg	Pb	20 52 04.6	-0.3
	comp=Z,23nm,0.2s						
PDKS	Podkum	0.85	3	i Pg	Pb	20 52 05.5	0.0
	comp=Z,18nm,0.1s						
UDBI	Udbina	0.90	139	ePg	Pn	20 52 08.5	+1.2
UDBI				Sg	Sn	20 52 20.2	-0.3
VNDS	Vrh nad Dolski	0.91	349	i Pg	Pb	20 52 06.1	-0.4
OBKA	Obir	1.33	348	ePg	Pg	20 52 14.6	+0.6
	comp=Z,4.5nm,0.1s						
OBKA				Sg	Sg	20 52 32.8	+1.4
	comp=Z,14nm,0.2s						
SOKA	Soboth	1.47	2	ePg	Pg	20 52 16.8	0.0
	comp=Z,2.8nm,0.2s						
SOKA				Sg	Sg	20 52 35.3	-0.6
	comp=Z,3.4nm,0.2s						
MYKA	Terra Mystica	1.69	328	Pg	Pg	20 52 21.1	+0.2
	comp=Z,1.5nm,0.3s						
MYKA				Sg	Sg	20 52 42.8	0.0
	comp=Z,8.5nm,0.5s						
ARSA	Arzberg	2.08	11	Pn	Pn	20 52 23.2	-0.4
	comp=Z,0.5nm,0.2s						
ARSA				Pg	Pg	20 52 28.3	-0.2
	comp=Z,0.8nm,0.2s						
ARSA				Sn	Sb	20 52 52.4	-0.1
	comp=Z,2.4nm,0.5s						
KBA	Koelnbreinsper	2.18	330	Sn	Sb	20 52 54.1	-1.2
	comp=Z,1.7nm,0.3s						
MOA	Molln	2.69	350	Pn	Pn	20 52 33.3	+1.3
MOA				Sn	Sn	20 53 06.1	+1.5
STON	Ston	3.07	139	Sn	Sb	20 53 19.6	-1.1

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*ATH **12** 20:52:25.0, 39°.99N×20°.51E, h23km, ML2.3/12, Error ellipse: s-maj=1.3km s-min=0.7km az=320.0*

*ISCJB **12** 20:52:25.6±0.4, 39°.99N±0°.02×20°.52E±0°.03, h10km±3km, Error ellipse: s-maj=3.8km s-min=2.8km az=33.7*

*CSEM **12** 20:52:25.6±0.1, 40°.00N×20°.52E, h10km, ML2.3, Error ellipse: s-maj=2.8km s-min=2.1km az=141.0*

*THE **12** 20:52:25.8, 39°.96N×20°.55E, h8km, ML2.3/12, Error ellipse: s-maj=0.9km s-min=0.5km az=321.0*

*TIR **12** 20:52:26.6, 39°.55N×20°.53E, h6km, Md2.6/3*

ISC 12 20:52:25.7±0.9, 39°.99N±0°.02×20°.53E±0°.02, h15km±7km, n113, σ0s.78/158, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAN	Janina	0.41	142	P	Pg	20 52 33.2	-0.8
JAN				S	Sb	20 52 40.7	-0.2
JAN				AML	AML	20 52 41.2	
	comp=N,4773µm,0.2s						
JAN				AML	AML	20 52 41.2	
	comp=E,4013µm,0.4s						
JAN	Janina	0.41	142	P	Pg	20 52 33.1	-0.9
JAN				S	Sg	20 52 39.3	-0.4
JAN	Janina	0.41	142	P	Pg	20 52 33.5	-0.5
JAN				S	Sg	20 52 40.5	+0.8
SRN	Sarande	0.42	256	P	Pg	20 52 34.0	-0.1
SRN				S	Sb	20 52 40.8	-0.2
SRN	Sarande	0.42	256	P	Pg	20 52 34.0	-0.1
SRN	Sarande	0.42	256	i Pg	Pg	20 52 34.5	+0.4
	baz=8.0						
SRN				S	Sb	20 52 40.8	-0.2
SRN				i Sg	Sg	20 52 41.5	+1.8
	baz=8.0						
SRN	Sarande	0.42	256	i PG	Pg	20 52 34.5	+0.5
SRN				i SG	Sb	20 52 41.5	+0.5
SGD	Sagiada	0.43	211	P	Pg	20 52 33.9	-0.5
SGD	Sagiada	0.43	211	P	Pg	20 52 33.9	-0.5
SGD	Sagiada	0.43	211	P	Pg	20 52 34.0	-0.5
IGT	Igoumenitsa	0.48	198	P	Pg	20 52 34.8	-0.4
IGT				S	Sb	20 52 42.9	+0.2
IGT				AML	AML	20 52 43.9	
	comp=E,1083µm,0.3s						
IGT				AML	AML	20 52 47.3	
	comp=N,1306µm,0.3s						
IGT	Igoumenitsa	0.48	198	P	Pg	20 52 34.4	-0.8
IGT				S	Sg	20 52 41.3	-0.3
IGT	Igoumenitsa	0.48	198	P	Pg	20 52 34.8	-0.4
IGT	Igoumenitsa	0.48	198	i Pg	Pg	20 52 35.3	+0.1
	baz=32						
IGT				S	Sg	20 52 41.3	-0.3
IGT				i Sg	Sb	20 52 42.9	+0.2
	baz=32						
IGT	Igoumenitsa	0.48	198	i PG	Pg	20 52 35.4	+0.2
IGT				i SG	Sb	20 52 42.9	+0.2
KASA	Kassiopi	0.51	242	P	Pg	20 52 36.3	+0.4
KASA				S	Sg	20 52 43.3	+0.6
KASA	Kassiopi	0.51	242	P	Pg	20 52 35.8	0.0
KASA				S	Sg	20 52 43.1	+0.4
PENT	Pentalofos	0.52	66	P	Pg	20 52 35.8	-0.2
PENT				S	Sb	20 52 43.9	0.0
PENT				AML	AML	20 52 47.6	
	comp=E,474µm,0.3s						
PENT				AML	AML	20 52 48.2	
	comp=N,650µm,0.3s						
PENT	Pentalofos	0.52	66	P	Pg	20 52 35.7	-0.2
PENT				S	Sb	20 52 43.5	-0.5
PENT	Pentalofos	0.52	66	P	Pg	20 52 35.7	-0.2
PENT				S	Sb	20 52 43.5	-0.5
NEST	Nestorio	0.59	43	P	Pg	20 52 36.9	-0.4
NEST				S	Sg	20 52 45.0	-0.1
NEST				AML	AML	20 52 49.3	
	comp=E,350µm,0.4s						
NEST				AML	AML	20 52 53.0	
	comp=N,352µm,0.6s						
NEST	Nestorio	0.59	43	P	Pg	20 52 37.1	-0.2
NEST	Nestorio	0.59	43	P	Pg	20 52 36.8	-0.5
NEST				S	Sg	20 52 45.2	+0.1
KEK	Kerkira	0.62	244	P	Pg	20 52 37.5	-0.4
KEK				S	Sb	20 52 47.3	+0.5
KEK				AML	AML	20 52 53.1	
	comp=N,466µm,0.2s						
KEK				AML	AML	20 52 53.4	
	comp=E,489µm,0.6s						
KEK	Kerkira	0.62	244	P	Pg	20 52 37.3	-0.6
KEK				S	Sb	20 52 47.1	+0.2
KEK	Kerkira	0.62	244	P	Pg	20 52 37.4	-0.5
KEK				S	Sg	20 52 46.8	+0.7
KPRO	Kipourio	0.65	92	P	Pg	20 52 37.9	-0.5
KPRO				S	Sg	20 52 47.0	+0.1
KPRO				AML	AML	20 52 48.7	
	comp=E,846µm,0.3s						
KPRO				AML	AML	20 52 49.1	
	comp=N,758µm,0.4s						
KPRO	Kipourio	0.65	92	P	Pg	20 52 37.6	-0.8
KPRO				S	Sg	20 52 46.9	0.0
KPRO	Kipourio	0.65	92	P	Pg	20 52 37.9	-0.5
KPRO				S	Sg	20 52 46.9	0.0
KBN	Korca	0.67	17	P	Pg	20 52 38.5	-0.3
KBN	Korca	0.67	17	P	Pg	20 52 38.5	-0.3
DSL	Palaion Diasel	0.96	152	P	Pg	20 52 42.7	-1.6
DSL				S	Sn	20 52 58.5	+0.3
DSL				AML	AML	20 53 00.7	
	comp=N,808µm,0.4s						
DSL				AML	AML	20 53 01.3	
	comp=E,687µm,0.3s						
DSL	Palaion Diasel	0.96	152	P	Pg	20 52 42.8	-1.5
DSL				S	Sg	20 52 56.9	+0.1
DSL	Palaion Diasel	0.96	152	P	Pg	20 52 43.1	-1.2
DSL				S	Sg	20 52 56.9	+0.1
KZN	Kozani	1.01	71	P	Pg	20 52 45.2	0.0
KZN				S	Sb	20 52 58.5	+0.5
KZN				AML	AML	20 53 04.9	
	comp=N,185µm,0.3s						
KZN				AML	AML	20 53 05.9	
	comp=E,302µm,0.4s						
KZN	Kozani	1.01	71	P	Pg	20 52 44.9	-0.3
KZN				S	Sb	20 52 58.7	+0.6
FNA	Florina	1.03	39	P	Pg	20 52 44.5	-1.1
FNA	Florina	1.03	39	P	Pg	20 52 44.5	-1.1
FNA				S	Sn	20 53 00.1	+0.1
FNA	Florina	1.03	39	P	Pg	20 52 44.6	-1.0
FNA				S	Sn	20 53 00.1	+0.1
OHR	Ohrid	1.14	10	i Pn	Pn	20 52 47.9	+0.6
BIA	Bitola	1.20	30	P	Pb	20 52 48.0	-0.2
BIA	Bitola	1.20	30	i Pn	Pb	20 52 48.5	+0.3
BIA	Bitola	1.20	30	P	Pb	20 52 48.0	-0.2
LKD2	Lefkada island	1.20	175	P	Pb	20 52 47.4	-0.8
LKD2	Lefkada island	1.20	175	P	Pb	20 52 47.2	-1.0
LKD2				S	Sn	20 53 05.1	+1.0
LKD2	Lefkada island	1.20	175	P	Pb	20 52 47.6	-0.6
LKD2				S	Sn	20 53 05.1	+1.0
THL	Klokotos Trika	1.22	110	P	Pn	20 52 47.3	-1.0
THL				S	Sg	20 53 05.0	-0.1
THL				AML	AML	20 53 08.4	
	comp=N,167µm,0.9s						
THL				AML	AML	20 53 09.8	
	comp=E,114µm,0.3s						
THL	Klokotos Trika	1.22	110	P	Pn	20 52 47.9	-0.4
THL				S	Sb	20 53 04.3	+0.1
THL	Klokotos Trika	1.22	110	P	Pn	20 52 47.9	-0.4
THL				S	Sn	20 53 05.3	+0.7
MGNA	Meganis˛„	1.34	171	P	Pn	20 52 49.8	-0.2
MGNA	Meganis˛„	1.34	171	P	Pn	20 52 50.1	+0.1
EVGI	Lefkada island	1.37	176	P	Pn	20 52 50.0	-0.4
EVGI	Lefkada island	1.37	176	P	Pn	20 52 49.8	-0.5
EVGI	Lefkada island	1.37	176	P	Pn	20 52 50.4	+0.1
EVR	Evrytania	1.46	137	P	Pn	20 52 51.5	-0.2
EVR				S	Sn	20 53 10.9	+0.3
EVR				AML	AML	20 53 16.1	
	comp=E,171µm,0.3s						
EVR				AML	AML	20 53 17.4	
	comp=N,198µm,0.3s						
EVR	Evrytania	1.46	137	P	Pn	20 52 51.4	-0.2
EVR				S	Sn	20 53 11.0	+0.4
EVR	Evrytania	1.46	137	P	Pn	20 52 51.8	+0.1
EVR				S	Sn	20 53 11.4	+0.8
PDO	Prodromos	1.48	160	P	Pn	20 52 52.8	+1.0
PDO				S	Sg	20 53 13.2	-0.1
PDO				AML	AML	20 53 19.9	
	comp=N,282µm,0.3s						
PDO				AML	AML	20 53 20.4	
	comp=E,287µm,0.2s						
PDO	Prodromos	1.48	160	P	Pn	20 52 51.9	+0.1
PDO	Prodromos	1.48	160	P	Pn	20 52 52.6	+0.8
PDO				S	Sg	20 53 12.8	-0.5
KRUS	Krusevo	1.49	21	i Pn	Pb	20 52 53.2	+0.1
LIT	Litokhoron	1.51	85	P	Pb	20 52 54.2	+0.6
LIT	Litokhoron	1.51	85	P	Pn	20 52 51.8	-0.6
LIT	Litokhoron	1.51	85	P	Pb	20 52 53.5	0.0
FSK	Fiskardo	1.52	179	P	Pn	20 52 51.9	-0.6
FSK				S	Sn	20 53 12.9	+0.9
PVO	Paravola	1.57	150	P	Pb	20 52 54.4	-0.1
PVO				S	Sn	20 53 14.6	+1.3
PVO				AML	AML	20 53 24.7	
	comp=N,282µm,0.5s						
PVO				AML	AML	20 53 29.0	
	comp=E,202µm,0.7s						
PVO	Paravola	1.57	150	P	Pn	20 52 52.7	-0.4
PVO	Paravola	1.57	150	P	Pn	20 52 54.1	+1.0
PVO				S	Sb	20 53 14.7	+0.5
SCTE	Santa Cesarea	1.58	274	P	Pn	20 52 52.0	-1.3
SCTE	Santa Cesarea	1.58	274	P	Pn	20 52 52.8	-0.5
AGG	Agios Georgios	1.70	124	P	Pb	20 52 57.0	+0.3
AGG	Agios Georgios	1.70	124	P	Pb	20 52 56.3	-0.4
PHP	Peshkopia	1.70	358	P	Pb	20 52 56.8	+0.1
PHP	Peshkopia	1.70	358	P	Pb	20 52 56.8	+0.1
ANX	Ano Chora	1.76	142	P	Pn	20 52 57.0	+1.2
ANX	Ano Chora	1.76	142	P	Pn	20 52 56.7	+0.8
VLS	Valsamata	1.81	178	P	Pn	20 52 54.5	-1.9
VLS	Valsamata	1.81	178	P	Pn	20 52 55.6	-0.8
VLS	Valsamata	1.81	178	P	Pn	20 52 55.7	-0.7
KFL	Anninata	1.88	174	P	Pn	20 52 56.0	-1.4
KFL	Anninata	1.88	174	P	Pn	20 52 56.9	-0.5
KFL	Anninata	1.88	174	P	Pn	20 52 57.0	-0.5
EFP	Efpalio	1.89	145	P	Pb	20 53 00.2	+0.3
EFP	Efpalio	1.89	145	P	Pn	20 52 59.2	+1.7
SERG	Sergoula	1.97	142	P	Pn	20 52 59.1	+0.5
SERG	Sergoula	1.97	142	P	Pn	20 52 59.2	+0.6
TRIZ	Trizonia	2.02	143	P	Pb	20 53 02.1	0.0
TRIZ	Trizonia	2.02	143	P	Pn	20 53 01.0	+1.8
RLS	Riolos of Patr	2.06	159	P	Pn	20 53 00.1	+0.3
RLS	Riolos of Patr	2.06	159	P	Pn	20 53 00.3	+0.5
LAKA	Lakka	2.08	147	P	Pn	20 53 01.2	+1.1
LAKA	Lakka	2.08	147	P	Pn	20 53 01.0	+0.9
STIP	Stip	2.12	36	ePn	Pb	20 53 03.7	-0.3
XOR	Xorichti	2.15	106	P	Pn	20 53 02.9	+1.8
XOR	Xorichti	2.15	106	P	Pn	20 53 02.4	+1.3
KNT	Kendrikon	2.16	56	P	Pn	20 53 00.7	-0.5
KNT	Kendrikon	2.16	56	P	Pn	20 53 01.3	+0.1
NEO	Neokhori	2.19	107	P	Pb	20 53 04.2	-0.9
NEO	Neokhori	2.19	107	P	Pn	20 53 03.3	+1.6
DSF	Desfina	2.21	135	P	Pn	20 53 03.3	+1.3
DSF	Desfina	2.21	135	P	Pn	20 53 03.0	+1.0
KLV	Kalavryta, Ach	2.32	146	P	Pn	20 53 05.7	+2.3
KLV	Kalavryta, Ach	2.32	146	P	Pn	20 53 04.9	+1.5
SKIA	Skiathos	2.42	109	P	Pn	20 53 06.2	+1.5
SKIA	Skiathos	2.42	109	P	Pn	20 53 05.9	+1.1
GUR	Goura	2.49	145	P	Pn	20 53 07.1	+1.3
GUR	Goura	2.49	145	P	Pn	20 53 06.9	+1.1
NOCI	Noci	2.76	288	P	Pn	20 53 06.8	-2.7
NOCI	Noci	2.76	288	P	Pn	20 53 08.5	-1.0
DID	Didima	3.26	139	P	Pn	20 53 15.6	-0.8
DID	Didima	3.26	139	P	Pn	20 53 16.5	+0.1
DION	Dionisos Attik	3.27	125	P	Pn	20 53 17.2	+0.7
DION	Dionisos Attik	3.27	125	P	Pn	20 53 17.4	+0.9

KRSC 12 20:53:08.2±1.5, 54°.40N×158°.32E, h247km±15km, ML3.7, Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GNL	Ganaly	0.74	198	eP	Pn	20 53 42.8	+1.0
AVH	Avacha	1.16	168	P	Pn	20 53 45.5	+1.5
SDLR	Sedlovina	1.17	163	eP	Pn	20 53 45.8	+1.7
SMAR	Somma	1.17	166	eP	Pn	20 53 45.8	+1.6
UGLR	Uglovaya	1.23	166	eP	Pn	20 53 45.8	+1.3
KRMR	Karymshinskiy	1.58	184	eP	Pn	20 53 47.2	+0.4
SPN	Mys Shipunski	1.65	142	eP	Pn	20 53 47.6	+0.2
SPN				eS	S	20 54 18.8	+0.6
RUS	Russkaya	1.97	177	eP	Pn	20 53 50.4	+0.2
RUS				eS	S	20 54 23.1	-0.1
MKZ	Mys Kozlova	1.99	84	eP	Pn	20 53 51.4	+1.1
MKZ				eS	S	20 54 24.4	+1.0
ZLN	Zelenaya	2.16	40	S	S	20 54 25.2	-1.2
KDTR	Khodutka, Kamc	2.60	183	eS	S	20 54 32.2	-1.9
KBTR	Krutoberegovo	3.15	53	eP	Pn	20 54 03.5	+1.6
KBTR				eS	S	20 54 44.7	+0.2

WEL 12 20:56:01.8, 42°S±4°×17°1E±°, h12km, ML3.7/13, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DSZ	Denniston Nort	0.40	40	P	Pb	20 56 12.1	+1.2
DSZ				S	Sb	20 56 17.5	+0.5
INZ	Inchbonnie	0.67	181	P	Pb	20 56 16.0	+0.6
INZ				S	Sb	20 56 24.7	0.0
LTZ	Lake Taylor	0.94	141	P	Pn	20 56 21.2	+0.3
LTZ				S	Sb	20 56 33.0	+0.4
THZ	Tophouse	1.12	75	P	Pg	20 56 23.6	+0.3
THZ				S	Sn	20 56 38.7	+0.1
WVZ	Waitaha Valley	1.15	207	P	Pg	20 56 23.9	-0.1
WVZ				S	Sn	20 56 39.3	-0.1
OXZ	Oxford	1.34	162	P	Pn	20 56 26.6	+0.2
QRZ	Quartz Range	1.47	34	P	Pn	20 56 28.6	+0.5
EYCZ	Eyrewell	1.52	155	P	Pg	20 56 31.1	+0.1
KHZ	Kahutara	1.58	104	P	Pb	20 56 30.7	-0.3
KHZ				S	Sb	20 56 51.0	0.0
NNZ	Nelson	1.66	60	P	Pb	20 56 31.9	-0.5
RPZ	Rata Peaks	1.69	190	P	Pb	20 56 32.5	-0.3
BSWZ	Blackbirch Sta	1.83	80	P	Pb	20 56 34.6	-0.7
MQZ	McQueen’s Vall	1.87	152	P	Pn	20 56 33.1	-0.5
FOZ	Fox Glacier	1.91	219	P	Pn	20 56 34.0	-0.2
TUWZ	Tuamarina	1.96	72	P	Pn	20 56 36.0	+1.1
OKCZ	Okains Bay	2.04	145	P	Pn	20 56 35.9	-0.1
CMWZ	Cape Campbell	2.08	82	P	Pg	20 56 42.7	+1.1
AKCZ	Akaroa Harbour	2.10	150	P	Pn	20 56 36.5	-0.4
TCW	Tory Channel	2.27	69	P	Pn	20 56 40.3	+1.2
LBZ	Lake Benmore	2.51	201	P	Pn	20 56 43.4	+0.9
JCZ	Jackson Bay	2.81	223	P	Pn	20 56 47.0	+0.3
KIW	Kapiti Island	2.85	66	P	Pn	20 56 48.8	+1.7
CAW	Cannon Point	2.87	72	P	Pn	20 56 48.2	+0.9
PLWZ	Palliser	2.88	82	P	Pn	20 56 47.5	0.0
MSWZ	Moikau Station	2.91	79	P	Pn	20 56 47.9	0.0
ODZ	Otahua Downs	3.05	191	P	Pn	20 56 49.5	-0.3
OGWZ	Otaki Gorge	3.05	67	P	Pn	20 56 51.2	+1.3
MTW	Mount Morrison	3.16	75	P	Pn	20 56 51.3	-0.1
HOWZ	Holdsworth Sta	3.26	71	P	Pn	20 56 52.8	+0.1
WKZ	Wanaka	3.29	212	P	Pn	20 56 53.3	+0.1
KHEZ	Kahui Hut	3.37	36	P	Pn	20 56 56.4	+2.0
MRZ	Mangatainoka R	3.40	67	P	Pn	20 56 55.2	+0.5
PKE	Pukeiti	3.44	35	P	Pn	20 56 57.3	+2.0
WAZ	Wanganui	3.52	50	P	Pn	20 56 59.4	+3.0
PRWZ	Pori Road	3.71	68	P	Pn	20 56 59.1	+0.1
VRZ	Vera Road	3.86	42	P	Pn	20 57 03.2	+2.3
MLZ	Mavora Lakes	4.10	215	P	Pn	20 57 05.9	+1.6
TUZ	Tuapeka	4.12	198	P	Pn	20 57 04.3	-0.2
WHVZ	Whangaehu Hut	4.18	50	P	Pn	20 57 08.1	+2.4
MOVZ	Moawhango	4.20	52	P	Pn	20 57 07.1	+1.4
TUVZ	Tukino	4.23	50	P	Pn	20 57 09.2	+2.9
TWVZ	Taurewa	4.25	47	P	Pn	20 57 08.8	+2.4
NGZ	Ngauruhoe	4.26	49	P	Pn	20 57 10.5	+3.8
WTVZ	West Tongariro	4.30	48	P	Pn	20 57 08.4	+1.3
BHHZ	Black Hill Sta	4.33	55	P	Pn	20 57 08.2	+0.7
KRVZ	Karewarewa	4.34	48	P	Pn	20 57 11.2	+3.4
HIZ	Hauiti	4.39	37	P	Pn	20 57 09.4	+1.2
KATZ	Kakaramea	4.46	48	P	Pn	20 57 12.7	+3.3
SYZ	Scrubby Hill	4.78	200	P	Pn	20 57 13.4	-0.3
TLZ	Tolley Road	4.86	41	P	Pn	20 57 16.8	+2.0

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*TEH **12** 21:02:39.5, 27°.15N×54°.00E, h28km, ML3.4*

*CSEM **12** 21:02:44.0±1.2, 26°.98N×54°.19E, h20km, ML3.1, Error ellipse: s-maj=27.2km s-min=23.7km az=83.0*

*DSN **12** 21:02:44.9±4.4, 26°.70N×54°.21E, h15km, ML3.1/7, Error ellipse: s-maj=50.6km s-min=13.4km az=147.0*

*OMAN **12** 21:02:47.0±2.2, 26°.95N×54°.38E, h28km, Error ellipse: s-maj=24.5km s-min=13.8km az=25.0*

ISC 12 21:02:41.7±1.1, 27°.20N±0°.04×54°.36E±0°.08, h18km, n54, σ1s.62/61, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHRM	Jahrom	1.48	332	e		21 03 31.7	
	comp=Z,99nm,0.2s						
JHRM				ePg	Pn	21 03 07.3	-0.2
JHRM				e		21 03 34.1	
	comp=N,99nm,0.4s						
JHRM				e		21 03 39.0	
	comp=E,99nm,0.3s						
JHRM	Jahrom	1.48	332	e		21 03 31.7	
	comp=Z,99nm,0.2s						
JHRM				ePn	Pn	21 03 07.4	-0.1
GENO	Geno	1.63	82	ePn	Pg	21 03 12.9	-0.2
GENO				e		21 03 38.3	
	comp=Z,99nm,0.0s						
GENO				e		21 03 46.7	
	comp=N,99nm,0.2s						
GENO				e		21 03 50.2	
	comp=E,99nm,0.3s						
GENO	Geno	1.63	82	ePn	Pg	21 03 12.7	-0.4
SHME	Shamm	1.96	125	eP	Pb	21 03 16.0	-1.0
	SNR=7.0						
SHME	Shamm	1.96	125	ePn	Pg	21 03 19.8	+0.4
SHME	Shamm	1.96	125	P	Pb	21 03 16.7	-0.2
BANOM	Banah	2.15	126	P	Pb	21 03 19.3	-0.9
BANOM	Banah	2.15	126	P	Pb	21 03 19.3	-0.9
NIAN	Nian	2.23	80	ePn	Pb	21 03 20.9	-0.6
NIAN				e		21 04 12.5	
	comp=E,99nm,0.2s						
NIAN				e		21 04 13.8	
	comp=N,99nm,0.2s						
NIAN				e		21 04 18.8	
	comp=Z,99nm,0.4s						
MSFE	Esma-Masafi	2.44	138	P	Pn	21 03 20.2	-0.5
MSFE	Esma-Masafi	2.44	138	ePn	Pn	21 03 22.6	+1.9
MSFE	Esma-Masafi	2.44	138	P	Pn	21 03 22.3	+1.6
NAZ	Nazwa, Dubai	2.49	152	P	Pn	21 03 22.3	+1.0
NAZ				S	Sn	21 03 53.3	+2.0
NAZ	Nazwa, Dubai	2.49	152	ePn	Pn	21 03 23.0	+1.7
NAZ	Nazwa, Dubai	2.49	152	P	Pn	21 03 22.3	+1.0
NAZ				S	Sn	21 03 53.3	+2.0
ASUD	Al Ashush, Dub	2.71	161	P	Pn	21 03 25.0	+0.7
	SNR=11						
ASUD	Al Ashush, Dub	2.71	161	eP	Pn	21 03 24.3	0.0
	SNR=11						
ASUD	Al Ashush, Dub	2.71	161	ePn	Pn	21 03 24.9	+0.7
ASUD	Al Ashush, Dub	2.71	161	P	Pn	21 03 24.3	0.0
	SNR=11						
UOSS	Minazif	2.79	143	P	Pn	21 03 26.5	+1.0
	SNR=5.9						
UOSS				S	Sn	21 04 00.7	+2.0
UOSS	Minazif	2.79	143	P	Pn	21 03 24.1	-1.3
UOSS	Minazif	2.79	143	P	Pn	21 03 26.5	+1.0
	SNR=5.9						
UOSS				S	Sn	21 04 00.7	+2.0
HATD	Hatta, Dubai	2.85	145	P	Pn	21 03 25.8	-0.5
HATD	Hatta, Dubai	2.85	145	ePn	Pn	21 03 27.6	+1.3
HATD	Hatta, Dubai	2.85	145	P	Pn	21 03 25.8	-0.5
ASHO	Ashiyiah	2.93	148	P	Pn	21 03 28.7	+1.2
	SNR=10						
ASHO	Ashiyiah	2.93	148	eP	Pn	21 03 26.2	-1.2
	SNR=10						
ASHO	Ashiyiah	2.93	148	P	Pn	21 03 28.7	+1.2
	SNR=10						
ALNE	Al Ain	3.37	158	eP	Pn	21 03 32.5	-0.9
	SNR=11						
ALNE	Al Ain	3.37	158	ePn	Pn	21 03 33.7	+0.2
ALNE	Al Ain	3.37	158	P	Pn	21 03 33.5	0.0
	SNR=11						
TVBK	TV Kerman	3.49	37	ePn	Pn	21 03 32.2	-3.2
KHGB	Koh Gabri	3.67	30	ePn	Pn	21 03 34.1	-3.7
KHGB				e		21 03 45.2	
	comp=Z,99nm,0.1s						
IMEH	Mehriz	4.19	3	e		21 04 43.2	
	comp=N,391nm,0.2s						

IMEH				e		21 04 59.1	
	comp=Z,199nm,0.3s						
IMEH	Mehriz	4.19	3	ePn	Pn	21 03 46.8	+1.9
IMEH				eSg	Sn	21 04 37.0	+3.6
IMEH				e		21 04 59.1	
	comp=Z,199nm,0.3s						
MZR	Muzera	4.25	191	i P	Pn	21 03 41.7	-3.8
	SNR=7.6						
ISAD	Sadrabad	4.74	353	ePn	Pn	21 03 53.7	+1.2
ISAD				e		21 03 55.8	
	comp=Z,428nm,0.1s						
ISAD				e		21 04 52.0	
	comp=N,350nm,0.2s						
ISAD	Sadrabad	4.74	353	ePn	Pn	21 03 53.6	+1.1
ISAD				e		21 03 55.8	
	comp=Z,428nm,0.1s						
IRAM	Ramesheh	4.91	340	ePn	Pn	21 03 54.1	-0.7
IRAM				e		21 04 25.5	
	comp=Z,121nm,0.2s						
IRAM				e		21 04 53.9	
	comp=N,210nm,0.2s						
IRAM				e		21 04 56.6	
	comp=E,246nm,0.2s						
IRAM	Ramesheh	4.91	340	ePn	Pn	21 03 54.2	-0.6
IRAM				e		21 04 25.5	
	comp=Z,121nm,0.2s						
ICHK	Chekchek	5.03	1	ePn	Pn	21 03 57.5	+1.0
WSAR	Wadi Sarin	5.52	135	P	Pn	21 04 03.9	+0.9
	SNR=7.4						
WSAR				S	Sn	21 05 05.3	-0.9
WSAR	Wadi Sarin	5.52	135	P	Pn	21 04 03.9	+0.9
	SNR=7.4						
WSAR				S	Sn	21 05 05.3	-0.9
IGAR	Gharneh	5.57	339	e		21 04 06.7	
	comp=Z,141nm,0.1s						
IGAR				ePn	Pn	21 04 02.8	-1.0
IGAR				e		21 05 11.6	
	comp=N,261nm,0.1s						
IGAR	Gharneh	5.57	339	e		21 04 06.7	
	comp=Z,141nm,0.1s						
IGAR				ePn	Pn	21 04 02.8	-1.0
IZEF	Zefreh	5.95	343	e		21 04 10.3	
	comp=N,82nm,0.2s						
IZEF				ePn	Pn	21 04 07.3	-1.8
IZEF				e		21 05 19.6	
	comp=Z,113nm,0.2s						
IZEF				e		21 05 23.0	
	comp=E,90nm,0.2s						
IZEF	Zefreh	5.95	343	ePn	Pn	21 04 07.1	-2.0
IZEF				e		21 05 19.6	
	comp=Z,113nm,0.2s						
ANAR	Anarak	6.00	355	e		21 04 13.5	
	comp=Z,99nm,0.2s						
ANAR				ePn	Pn	21 04 09.5	-0.2
ANAR				e		21 04 20.6	
	comp=N,99nm,0.1s						
ANAR				e		21 04 27.7	
	comp=E,99nm,0.2s						
ANAR	Anarak	6.00	355	e	Pn	21 04 13.5	+3.8
	comp=Z,99nm,0.2s						
IKLH	Kolahrood	6.56	339	ePn	Pn	21 04 15.6	-1.9
IKLH				e		21 04 22.3	
	comp=Z,93nm,0.1s						
IKLH				e		21 05 37.0	
	comp=E,151nm,0.2s						
IKLH				e		21 05 43.4	
	comp=N,110nm,0.1s						
IKLH	Kolahrood	6.56	339	ePn	Pn	21 04 15.5	-1.9
IKLH				e		21 04 22.3	
	comp=Z,93nm,0.1s						
IKOO	Kooshah	6.59	37	e	Pb	21 04 36.6	+0.7
	comp=N,98nm,0.1s						
IKOO				e		21 04 37.2	
	comp=E,115nm,0.1s						
MHTO	MHTO	7.01	151	P	Pn	21 04 24.6	+1.2
MHTO				S	Sn	21 05 38.9	-3.8

RSNC 12 21:06:05.6±0.6**, 6°.53N×78°.02W, h18^{km}**±6^{km}**, ML3.2, Mw3.8, South of Panama**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOLC	Bahia Solano	0.68	116	eP	Pb	21 06 17.9	-1.0
SOLC				eS	Sb	21 06 27.6	-0.4
SOLC				i		21 06 31.2	
	comp=Z,616nm,0.3s						
DBBC	Dabeiba	1.86	75	eP	Pn	21 06 34.8	-1.9
CAPC	Capurgana	2.20	18	eP	Pn	21 06 40.8	-0.5
CAPC				i		21 07 18.4	
	comp=Z,300nm,0.7s						
HELC	Santa Helena	2.50	98	eP	Pn	21 06 44.8	-1.0
HELC				eS	Sn	21 07 15.8	-0.2
HELC				i		21 07 19.3	
	comp=Z,112nm,0.6s						
AZU	Azuero	2.56	299	eS	Sn	21 07 16.2	-0.8
UREC	San Josˆ' de U	2.75	64	eP	Pn	21 06 47.6	-1.3
BCIP	Isla Barro Col	3.18	326	eP	Pn	21 06 54.4	-0.4
MOTC	Monteria, Cord	3.23	46	eP	Pn	21 06 54.4	-1.1
MOTC				i		21 07 38.0	
	comp=Z,53nm,0.6s						
ZARC	Zaragoza, Cauc	3.28	73	eP	Pn	21 06 55.7	-0.5
PTBC	PUERTO BERRIO,	3.54	90	eP	Pn	21 06 59.0	-0.8
PTBC				eS	Sn	21 07 40.7	-0.6

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*IDC **12** 21:15:54.9±1.0, 14°.67S×166°.84E, h0^{km}, mb3.8/8, mb1 4.0/9, mb1mx3.8/56, mbtmp3.8/9, ML3.5/1, MS3.3/1, Ms1 3.3/1, ms1mx2.5/40, Error ellipse: s-maj=29.4km s-min=24.5km az=88.0*

*NEIC **12** 21:15:60.0±0.6, 14°.77S×166°.87E, h35^{km}, mb4.2/2, Error ellipse: s-maj=16.7km s-min=14.4km az=165.0*

*ISCJB **12** 21:16:00.9±0.8, 15°.12S±0°.07×167°.0E±0°.1, h67^{km}, mb3.7/8, Error ellipse: s-maj=15.3km s-min=10.6km az=178.8*

ISC 12 21:16:03.4±0.8**, 15°.04S**±0°.09×**166°.9E**±0°.1**, h67^{km}, n13, σ1^{s}.94**/14**, mb3.9**/8**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.01	183	Pn	Pn	21 17 43.0	-0.5
	0.7nm,0.3s,baz=128,slow=21,SNR=16						
DZM				Sn	Sn	21 18 58.9	-2.8
	baz=72,slow=20,SNR=2.0						
DZM				LR	LR	21 20 22.9	
	comp=Z,207nm,18.9s,baz=276,slow=36						
CTAO	Charters Tower	20.30	253	P	P	21 20 33.4	-0.6
	6.0nm,0.6s						
AFI	Afiamalu	20.68	90	P	P	21 20 36.7	-1.5
	18nm,1.0s						
WRA	Warramunga Arr	31.40	256	P	P	21 22 18.7	+0.3
	0.6nm,1.0s,baz=82,slow=7.0,SNR=3.7						
ASAR	Alice Springs	32.23	249	P	P	21 22 24.6	-1.0
	0.5nm,0.7s,baz=70,slow=9.3,SNR=5.3						
FITZ	Fitzroy Crossi	39.60	260	P	P	21 23 29.1	+0.4
	1.6nm,0.8s,baz=80,slow=11,SNR=3.3						
VNDA	Vanda	62.54	181	P	P	21 26 21.3	+1.5
	0.7nm,0.8s,baz=9.9,slow=8.4,SNR=4.0						
CMAR	Chiang Mai Arr	74.75	294	P	P	21 27 35.1	-1.6
	0.6nm,0.6s,baz=136,slow=5.8,SNR=4.1						
QSPA	South Pole Qui	74.99	180	P	P	21 27 41.9	+4.4
	2.3nm,0.8s,baz=288,slow=0.6,SNR=6.8						
ILAR	Eielson Array	86.93	18	P	P	21 28 38.8	-1.9
	0.7nm,0.8s,baz=252,slow=5.0,SNR=6.0						
MKAR	Makanchi Array	97.18	316	P	P	21 29 28.9	+0.2
	0.5nm,0.8s,baz=100,slow=6.0,SNR=2.4						
ARCES	ARCESS Array B	120.46	345	PKP	PKPdf	21 34 47.6	+0.9
	1.2nm,0.7s,baz=156,slow=1.2,SNR=7.0						
AKASG	Malin Array Be	130.79	326	PKP	PKPdf	21 35 07.3	+0.4
	0.6nm,0.4s,baz=30,slow=4.3,SNR=5.0						

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*IDC **12** 21:18:25.6±0.7, 27°.05N×54°.99E, h0^{km}, mb4.0/24, mb1 4.1/27, mb1mx4.0/69, mbtmp4.0/27, ML3.2/3, MS3.1/12, Ms1 3.1/12, ms1mx2.8/65, Error ellipse: s-maj=17.0km s-min=13.0km az=171.0*

*DSN **12** 21:18:26.2±1.7, 27°.15N×55°.04E, h15^{km}, ML4.2/11, Error ellipse: s-maj=23.6km s-min=5.0km az=21.0*

*TEH **12** 21:18:26.7, 27°.02N×55°.02E, h10^{km}, ML4.2*

*NEIC **12** 21:18:26.7±0.0, 27°.02N×55°.02E, h10^{km}, mb4.5/27, MN4.2(TEH), After TEH.*

*ISCJB **12** 21:18:27.6±0.2, 27°.02N±0°.02×55°.05E±0°.02, h17^{km}, mb4.3/66, MS3.1/11, Error ellipse: s-maj=3.4km s-min=2.4km az=147.5*

*MOS **12** 21:18:28.2±1.6, 26°.88N×55°.03E, h30^{km}, mb4.4/28, Error ellipse: s-maj=8.7km s-min=5.3km az=109.2*

*CSEM **12** 21:18:28.5±0.1, 27°.01N×55°.14E, h10^{km}, mb4.5/29, Error ellipse: s-maj=5.2km s-min=3.3km az=60.0*

*THR **12** 21:18:30.0±0.6, 27°.18N×55°.24E, h39^{km}±4^{km}, ML4.0*

*OMAN **12** 21:18:30.3±0.2, 26°.77N×54°.91E, h28^{km}, Error ellipse: s-maj=2.8km s-min=1.5km az=328.0*

ISC 12 21:18:29.2±0.3**, 26°.96N**±0°.03×**55°.04E**±0°.03**, h17^{km}, n294, σ1^{s}.62**/296**, mb4.4**/71**, MS3.1**/11**, 3C-4D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BNDS	Bandar-Abbas	1.10	66	ePg	Pb	21 18 46.7	-3.2
BNDS	Bandar-Abbas	1.10	66	ePg	Pb	21 18 46.5	-3.4
BNDS	Bandar-Abbas	1.10	66	ePg	Pb	21 18 46.7	-3.2
GENO	Geno	1.10	66	ePg	Pb	21 18 47.7	-2.2
GENO				e		21 19 07.9	
	comp=E,99nm,0.2s						
GENO				e		21 19 12.5	
	comp=N,99nm,0.2s						
GENO				e		21 19 21.9	
	comp=Z,99nm,0.2s						
GENO	Geno	1.10	66	ePg	Pb	21 18 47.7	-2.2
SHME	Shamm	1.34	132	eP	Pn	21 18 51.9	-1.3
	SNR=38						
SHME				S	Sb	21 19 11.0	+0.1
SHME	Shamm	1.34	132	P	Pn	21 18 52.1	-1.1
	SNR=38						
SHME				S	Sb	21 19 11.0	+0.1
BANOM	Banah	1.53	132	P	Pn	21 18 55.0	-0.9
	SNR=99						
BANOM	Banah	1.53	132	eP	Pn	21 18 55.0	-0.9
	SNR=99						
BANOM				S	Sb	21 19 16.3	-0.1
BANOM	Banah	1.53	132	P	Pn	21 18 55.0	-0.9
	SNR=99						
BANOM				S	Sb	21 19 16.3	-0.1
UMQ	Umm Al-Quwin	1.54	158	eP	Pb	21 18 56.7	-0.6
	SNR=18						
NIAN	Nian	1.71	69	ePn	Pn	21 18 57.6	-0.6
NIAN				e		21 19 30.5	
	comp=N,99nm,0.2s						
NIAN				e		21 19 31.6	
	comp=E,99nm,0.2s						
NIAN				e		21 19 37.2	
	comp=Z,99nm,0.3s						
NIAN	Nian	1.71	69	ePn	Pn	21 18 57.6	-0.6
KHSK	Kohestak	1.81	96	ePn	Pn	21 18 59.0	-0.6
KHSK				e		21 19 37.0	
	comp=E,99nm,0.2s						
KHSK				e		21 19 38.5	
	comp=N,99nm,0.3s						
KHSK				e		21 19 44.3	
	comp=Z,99nm,0.2s						
KHSK	Kohestak	1.81	96	ePn	Pn	21 18 59.0	-0.6
MSFE	Esma-Masafi	1.89	147	eP	Pn	21 19 00.5	-0.2
	SNR=11						
MSFE	Esma-Masafi	1.89	147	P	Pn	21 19 01.0	+0.3
	SNR=11						
MDH	Madha	2.01	145	eP	Pn	21 19 02.0	-0.3
	SNR=16						
MDH	Madha	2.01	145	P	Pn	21 19 02.0	-0.3
	SNR=16						
JHRM	Jahrom	2.01	320	ePn	Pn	21 19 03.7	+1.3
JHRM				e		21 19 46.4	
	comp=Z,99nm,0.2s						
JHRM				e		21 19 46.8	
	comp=N,99nm,0.2s						
JHRM				e		21 19 48.8	
	comp=E,99nm,0.3s						
JHRM	Jahrom	2.01	320	ePn	Pn	21 19 03.7	+1.3
NAZ	Nazwa, Dubai	2.04	164	eP	Pn	21 19 03.8	+1.0
	SNR=15						
NAZ	Nazwa, Dubai	2.04	164	ePn	Pb	21 19 05.1	-0.8
NAZ	Nazwa, Dubai	2.04	164	P	Pn	21 19 03.8	+1.0
	SNR=15						
NAZ	Nazwa, Dubai	2.04	164	ePn	Pb	21 19 05.1	-0.8
GHIR	Ghir-Karzin	2.25	306	ePn	Pn	21 19 07.0	+1.3
GHIR				eSg	Sg	21 19 40.4	-1.1
GHIR				IAML		21 19 49.5	
	comp=N,1µm,0.4s						
GHIR				IAML		21 19 51.9	
	comp=E,994nm,0.4s						
GHIR	Ghir-Karzin	2.25	306	ePn	Pn	21 19 07.2	+1.5
GHIR	Ghir-Karzin	2.25	306	ePn	Pn	21 19 07.2	+1.5
GHIR				eSg	Sg	21 19 40.4	-1.1
UOSS	Minazif	2.27	152	ePn	Pn	21 19 07.5	+1.6
UOSS	Minazif	2.27	152	eP	Pn	21 19 06.6	+0.7
	SNR=13						
UOSS	Minazif	2.27	152	P	Pn	21 19 06.6	+0.7
	SNR=13						
UOSS	Minazif	2.27	152	ePn	Pn	21 19 07.5	+1.6
ASUD	Al Ashush, Dub	2.34	173	P	Pn	21 19 07.5	+0.6
	SNR=15						
ASUD	Al Ashush, Dub	2.34	173	eP	Pn	21 19 07.5	+0.6
	SNR=15						
ASUD	Al Ashush, Dub	2.34	173	P	Pn	21 19 07.5	+0.6
	SNR=15						
HATD	Hatta, Dubai	2.35	155	eP	Pn	21 19 07.8	+0.8
	SNR=17						
HATD	Hatta, Dubai	2.35	155	P	Pn	21 19 07.8	+0.8
	SNR=17						
AJN	Ajban	2.39	181	eP	Pn	21 19 08.0	+0.4
	SNR=19						
ASHO	Ashiyiah	2.45	158	P	Pn	21 19 08.4	-0.1
	SNR=50						
ASHO	Ashiyiah	2.45	158	eP	Pn	21 19 08.2	-0.3
	SNR=51						
ASHO	Ashiyiah	2.45	158	P	Pn	21 19 08.4	-0.1
	SNR=50						
ALNE	Al Ain	2.96	167	i P	Pn	21 19 15.3	-0.2
	SNR=14						
ALNE	Al Ain	2.96	167	P	Pn	21 19 15.7	+0.2
	SNR=14						
NGRK	Negar Kerman	3.06	29	ePn	Pn	21 19 15.7	-1.5
NGRK				e		21 20 16.5	
	comp=E,99nm,0.3s						
NGRK				e		21 20 35.3	
	comp=N,99nm,0.3s						
NGRK				e		21 20 44.5	
	comp=Z,99nm,0.5s						
NGRK	Negar Kerman	3.06	29	ePn	Pn	21 19 15.7	-1.5
KRBR	Kerman	3.37	26	ePn	Pn	21 19 13.1	-8.2
TVBK	TV Kerman	3.37	26	ePn	Pn	21 19 21.3	-0.1
TVBK				e		21 19 33.3	
	comp=Z,99nm,0.1s						
TVBK				e		21 20 22.3	
	comp=E,99nm,0.1s						
TVBK				e		21 20 34.4	
	comp=N,99nm,0.2s						
TVBK	TV Kerman	3.37	26	ePn	Pn	21 19 21.3	-0.1
KHGB	Koh Gabri	3.63	20	ePn	Pn	21 19 25.0	+0.2
KHGB				e		21 19 32.4	
	comp=Z,99nm,0.2s						
KHGB				e		21 19 41.1	
	comp=N,99nm,0.4s						
KHGB				e		21 20 46.6	
	comp=E,99nm,0.4s						
KHGB	Koh Gabri	3.63	20	ePn	Pn	21 19 25.0	+0.2
CHMN	Cheshme madani	3.63	37	ePn	Pn	21 19 25.4	+0.4
CHMN				e		21 19 31.0	
	comp=Z,99nm,0.2s						
CHMN				e		21 19 31.0	
	comp=N,99nm,0.1s						
CHMN				e		21 20 53.3	
	comp=E,99nm,0.9s						
CHMN	Cheshme madani	3.63	37	ePn	Pn	21 19 25.4	+0.4
AHBU	AHRAM	3.81	301	ePn	Pn	21 19 28.9	+1.7
MZR	Muzera	4.19	200	i P	Pn	21 19 31.4	-0.9
	SNR=20						
IMEH	Mehriz	4.43	355	ePn	Pn	21 19 35.7	-0.1
IMEH				e		21 19 42.6	
	comp=Z,1µm,0.1s						
IMEH				e		21 19 43.6	
	comp=N,859nm,0.1s						
IMEH	Mehriz	4.43	355	ePn	Pn	21 19 35.7	-0.1
SLWS		4.51	242	P	Pn	21 19 35.9	-0.8
SLWS				S	Sn	21 20 29.8	+1.0
BSY	Bisya	4.64	154	P	Pn	21 19 38.2	-0.3
BSYO	Bisya	4.66	154	P	Pn	21 19 38.2	-0.7
SMDO	Samad	4.75	144	P	Pn	21 19 39.0	-1.2
SMDO	Samad	4.75	144	P	Pn	21 19 39.0	-1.2
BTHS		4.77	233	P	Pn	21 19 39.3	-1.1
WSAR	Wadi Sarin	4.94	138	Pn	Pn	21 19 41.7	-0.9
	comp=N,1.4nm,0.3s,baz=324,slow=6.0,SNR=33						
WSAR				Sn	Sn	21 20 39.7	+0.3
	comp=N,1.5nm,0.3s,baz=25,slow=19,SNR=2.8						
WSAR				LR	LR	21 22 11.9	
	comp=N,107nm,18.6s,baz=338,slow=45						
WSAR	Wadi Sarin	4.94	138	P	Pn	21 19 42.1	-0.5
WSAR	Wadi Sarin	4.94	138	P	Pn	21 19 42.1	-0.5
WSAR				Sn	Sn	21 20 39.7	+0.3
ISAD	Sadrabad	5.07	347	ePn	Pn	21 19 45.2	+0.5
ISAD				e		21 19 50.0	
	comp=Z,2µm,0.2s						
ISAD				e		21 19 52.4	
	comp=E,1µm,0.1s						
ISAD				e		21 19 52.5	
	comp=N,2µm,0.3s						
ISAD	Sadrabad	5.07	347	ePn	Pn	21 19 45.2	+0.5
BOQSS		5.19	259	P	Pn	21 19 47.5	+1.4
IRAM	Ramesheh	5.36	335	ePn	Pn	21 19 47.5	-1.1
IRAM				e		21 19 53.0	
	comp=Z,1µm,0.2s						
IRAM				e		21 19 54.7	
	comp=E,1µm,0.2s						
IRAM				e		21 19 57.9	
	comp=N,1µm,0.2s						
IRAM	Ramesheh	5.36	335	ePn	Pn	21 19 47.5	-1.1
JMDO	Jabal Madar	5.36	148	P	Pn	21 19 46.7	-1.7
JMDO	Jabal Madar	5.36	148	P	Pn	21 19 46.7	-1.7
WBK	Wadi Bani Khal	5.62	140	P	Pn	21 19 50.9	-1.1
WBK	Wadi Bani Khal	5.62	140	P	Pn	21 19 50.9	-1.1
IGAR	Gharneh	6.01	335	ePn	Pn	21 19 56.6	-1.0
IGAR				e		21 20 01.7	
	comp=Z,2µm,0.2s						
IGAR				e		21 20 01.9	
	comp=N,2µm,0.2s						
NASN	Na’in	6.13	342	ePn	Pn	21 19 57.8	-1.5
NASN	Na’in	6.13	342	ePn	Pn	21 19 57.8	-1.5
JLN	Jalan Bani Buh	6.23	139	P	Pn	21 20 00.0	-0.4
ZNGN	Zangian	6.30	326	ePn	Pn	21 20 01.2	-0.4
ZNGN				e		21 21 17.5	
	comp=N,99nm,0.4s						
ZNGN				e		21 21 17.9	
	comp=E,99nm,0.3s						
ZNGN				e		21 21 21.0	
	comp=Z,99nm,0.2s						
ZNGN	Zangian	6.30	326	ePn	Pn	21 20 01.2	-0.4
ANAR	Anarak	6.31	350	ePn	Pn	21 20 00.2	-1.4
ANAR				e		21 20 14.2	
	comp=N,99nm,0.3s						
ANAR				e		21 20 31.6	
	comp=E,99nm,0.2s						
ANAR	Anarak	6.31	350	ePn	Pn	21 20 00.2	-1.4
IZEF	Zefreh	6.36	339	ePn	Pn	21 20 00.1	-2.3
IZEF				e		21 20 06.3	
	comp=N,545nm,0.2s						
IZEF				e		21 20 06.3	
	comp=Z,630nm,0.2s						
IZEF				e		21 20 06.4	
	comp=E,462nm,0.2s						
ROKH	ROKH	6.39	328	ePn	Pn	21 20 01.4	-1.5
ROKH				e		21 21 30.3	
	comp=N,99nm,0.4s						
ROKH				e		21 22 36.8	
	comp=E,99nm,0.8s						
ROKH				e		21 22 43.8	
	comp=Z,99nm,0.9s						
ROKH	ROKH	6.39	328	ePn	Pn	21 20 01.4	-1.5
KFJS		6.41	283	P	Pn	21 20 04.1	+1.2
IKOO	Kooshah	6.44	31	ePn	Pn	21 20 03.0	-0.6
IKOO				e		21 20 32.5	
	comp=Z,256nm,0.3s						
IKOO				e		21 20 33.9	
	comp=N,238nm,0.2s						
IKOO				e		21 20 37.9	
	comp=E,234nm,0.1s						
IKOO	Kooshah	6.44	31	ePn	Pn	21 20 03.0	-0.6
ITEG	Tejag	6.73	28	e		21 20 28.3	
	comp=Z,121nm,0.1s						
ITEG				ePn	Pn	21 20 07.1	-0.4
TABS	Tabas	6.90	15	ePn	Pn	21 20 07.8	-1.9
TABS	Tabas	6.90	15	ePn	Pn	21 20 07.8	-1.9
IKLH	Kolahrood	7.01	336	e		21 20 15.9	
	comp=Z,452nm,0.2s						
IKLH				ePn	Pn	21 20 09.3	-2.0
IKLH				e		21 20 28.0	
	comp=N,552nm,0.1s						
IKLH				e		21 21 48.1	
	comp=E,394nm,0.2s						
IVRN	Varamin	8.49	341	e		21 20 35.8	
	comp=E,337nm,0.2s						
IVRN				e		21 20 42.8	
	comp=Z,139nm,0.2s						
IFIR	Firoozkooh	8.87	348	e		21 20 46.7	
	comp=Z,137nm,0.1s						
IFIR				e		21 20 52.8	
	comp=E,132nm,0.2s						
IFIR				e		21 20 58.5	
	comp=N,112nm,0.2s						
ISHM	Shahmirzad	8.94	351	ePn	Pn	21 20 37.1	-0.8
ISHM				e		21 20 47.2	
	comp=Z,192nm,0.2s						
IDMV	Damavand	8.96	344	ePn	Pn	21 20 37.2	-1.0
IDMV				e		21 20 42.1	
	comp=Z,172nm,0.2s						
IDMV	Damavand	8.96	344	ePn	Pn	21 20 37.2	-1.0
WHFO	Wadi Hawf	9.08	188	P	Pn	21 20 36.1	-3.4
WHFO				S	Sn	21 22 16.4	-5.0
RAYN	Ar Rayn	9.29	250	ePn	Pn	21 20 40.0	-2.4
RAYN	Ar Rayn	9.29	250	P	Pn	21 20 39.5	-2.9
RAYN	Ar Rayn	9.29	250	eP	Pn	21 20 40.0	-2.4
RAYN	Ar Rayn	9.29	250	ePn	Pn	21 20 40.0	-2.4
IALA	Alasht	9.29	349	ePn	Pn	21 20 42.4	-0.2
IALA				e		21 20 48.5	
	comp=Z,216nm,0.2s						
IALA				e		21 20 51.2	
	comp=E,289nm,0.2s						
IALA	Alasht	9.29	349	ePn	Pn	21 20 42.4	-0.2
IRAZ	Razeghan	9.48	334	ePn	Pn	21 20 42.8	-2.4
IRAZ				e		21 21 06.0	
	comp=N,217nm,0.3s						
IRAZ				e		21 22 56.4	
	comp=E,93nm,0.3s						
IPRN	Peran	9.53	347	ePn	Pn	21 20 46.8	+1.0
IPRN				e		21 20 52.8	
	comp=E,1µm,0.2s						
IPRN				e		21 20 56.2	
	comp=Z,285nm,0.2s						
IPRN				e		21 21 04.9	
	comp=N,672nm,0.2s						
IGLO	Ghaloghah	9.57	354	ePn	Pn	21 20 47.4	+1.0
IGLO				e		21 20 54.4	
	comp=Z,425nm,0.4s						
IGLO				e		21 21 03.4	
	comp=N,1µm,0.4s						
IGLO				e		21 21 05.1	
	comp=E,466nm,0.4s						
IBZA	Bozab	9.70	322	ePn	Pn	21 20 46.6	-1.6
IBZA				e		21 20 55.6	
	comp=Z,99nm,0.1s						
ISRO	Mashad	10.05	21	e		21 21 01.4	
	comp=Z,331nm,0.5s						
ISRO				e		21 21 06.4	
	comp=E,114nm,0.6s						
ISRO				e		21 24 46.5	
	comp=N,732nm,0.8s						
IVIS	Veis	10.31	319	ePn	Pn	21 20 52.5	-4.0
IVIS				e		21 21 00.7	
	comp=Z,408nm,0.1s						
IVIS				e		21 21 04.8	
	comp=E,310nm,0.1s						
IVIS				e		21 21 07.8	
	comp=N,444nm,0.2s						
ILIN	Lien	10.53	321	ePn	Pn	21 20 57.5	-2.1
ILIN				e		21 21 02.5	
	comp=Z,447nm,0.2s						
ILIN				e		21 21 09.9	
	comp=E,380nm,0.1s						
IDHR	Dehrash	10.71	318	ePn	Pn	21 20 58.6	-3.4
IDHR				e		21 21 08.9	
	comp=Z,767nm,0.1s						
IDHR				e		21 21 09.4	
	comp=E,1µm,0.1s						
IDHR				e		21 23 11.9	
	comp=N,1µm,0.3s						
GEYT	Alibeck	11.24	13	LR	LR	21 26 21.6	
	comp=N,169nm,19.7s,baz=245,slow=43						
GYA0B	ALIBECK ARRAY	11.24	13	ePn	Pn	21 21 09.2	+0.1

GYA0B	ALIBECK ARRAY	11.24	13	*e*Pn	Pn	21 21 09.2	+0.1
IBST	Bostanabad	12.72	329	*e*		21 21 36.2	
	comp=Z,73nm,0.3s						
IBST				*e*		21 21 40.1	
	comp=N,48nm,0.3s						
IBST				*e*		21 21 52.2	
	comp=E,36nm,0.1s						
KBL	Kabul	14.21	54	*e*Pn	Pn	21 21 51.4	+1.6
KBL	Kabul	14.21	54	*e*P	Pn	21 21 51.4	+1.6
KBL	Kabul	14.21	54	*e*P	Pn	21 21 51.4	+1.6
GNI	Garni	15.69	330	Pn	Pn	21 22 11.2	+1.6
	comp=E,0.7nm,0.3s,baz=233,slow=7.8,SNR=4.5						
GNI				LR	LR	21 29 12.8	
	comp=E,96nm,20.9s,baz=138,slow=42						
DAMY	Dhamar	15.83	221	*e*Pn	P	21 22 14.2	-1.2
	comp=E,16nm,0.5s						
ASF	Jabal al Asfar	16.61	293	Pn	Pn	21 22 21.3	-0.1
	comp=E,0.4nm,0.3s,baz=90,slow=16,SNR=4.3						
GROC	Groznyy	17.86	337	*e*P	P	21 22 39.7	+2.3
GROC				*e*S	S	21 26 01.6	-0.4
GROC				pmax	pmax		
	comp=Z,29nm,1.0s						
GROC	Groznyy	17.86	337	*e*P	P	21 22 39.7	+2.3
	comp=Z,29nm,1.0s						
MMAI	Mount Meron Ar	18.04	294	P	P	21 22 39.6	0.0
	comp=Z,0.3nm,0.3s,baz=100,slow=15,SNR=4.7						
ZEI	Tsey	18.21	333	*e*P	Pn	21 22 37.9	-3.5
ZEI				pmax	pmax		
	comp=Z,18nm,0.6s						
NCK	Nalchik	18.93	334	*i* P	Pn	21 22 49.6	-0.3
NCK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
NCK	Nalchik	18.93	334	*i* P	Pn	21 22 49.6	-0.3
	comp=Z,4.0nm,0.6s						
NEY	Neytrino	19.08	332	*i* P	P	21 22 51.4	+0.3
NEY				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NEY	Neytrino	19.08	332	*i* P	P	21 22 51.4	+0.3
	comp=Z,2.0nm,0.7s						
ATD	Arta Tunnel	19.16	219	LR	LR	21 31 48.8	
	comp=Z,70nm,19.0s,baz=318,slow=42						
ATD	Arta Tunnel	19.16	219	*e*P	Pn	21 22 55.3	+2.4
	comp=Z,20nm,1.1s						
KBZ	Khabaz	19.40	333	P	Pn	21 22 56.8	+1.3
	comp=Z,0.2nm,0.3s,baz=122,slow=7.1,SNR=7.3						
KIV	Kislovodsk	19.68	333	*e*P	Pn	21 22 58.4	-0.5
	comp=Z,31nm,0.9s						
KIV	Kislovodsk	19.68	333	*e*P	Pn	21 22 58.9	0.0
KIV				pmax	pmax		
	comp=Z,31nm,1.0s						
KIV				MLR	MLR		
	comp=Z,16nm,14.0s						
KIV	Kislovodsk	19.68	333	*e*P	Pn	21 22 58.4	-0.5
	comp=Z,31nm,0.9s						
CSS	Mathiatis	20.22	299	*e*P	Pn	21 23 04.7	-0.7
	comp=Z,12nm,0.7s						
CSS	Mathiatis	20.22	299	*e*P	Pn	21 23 04.7	-0.7
	comp=Z,12nm,0.7s						
KK31	Karatay Array	20.44	34	*e*P	P	21 23 05.9	+0.2
KK31	Karatay Array	20.44	34	*e*P	P	21 23 05.9	+0.2
KK31	Karatay Array	20.44	34	*e*P	P	21 23 05.9	+0.2
KKAR	Karatay Array	20.44	34	*e*P	P	21 23 06.7	+1.0
KKAR	Karatay Array	20.44	34	*e*P	P	21 23 06.7	+1.0
KKAR	Karatay Array	20.44	34	*e*P	P	21 23 06.7	+1.0
SOC	Sochi	20.71	327	*e*P	Pn	21 23 13.6	+2.6
SOC				pmax	pmax		
	comp=Z,19nm,0.7s						
KSH	Kashi	21.47	49	*e*P	P	21 23 16.1	-0.9
KSH				*e*pP	sP	21 23 25.1	+1.1
KSH				PP	PnPn	21 23 38.9	+1.7
KSH				S	S	21 27 01.3	-13
KSH				PcS	PcS	21 30 58.4	+0.3
KSH	Kashi	21.47	49	ScS	ScS	21 34 35.2	-5.1
KSH				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KSH				pmax	pmax		
	comp=Z,83nm,4.5s						
BR131	Keskin Array S	21.88	311	*e*P	P	21 23 22.0	+0.6
BR131	Keskin Array S	21.88	311	*e*P	P	21 23 22.0	+0.6
BRTR	Keskin Array B	21.88	311	P	P	21 23 19.7	-1.7
	comp=Z,1.8nm,0.7s,baz=137,slow=13,SNR=13						
AAK	Ala-Archa	22.28	40	P	P	21 23 24.7	-1.0
	comp=Z,1.9nm,0.4s,baz=243,slow=2.3,SNR=3.3						
AAK				LR	LR	21 32 23.0	
	comp=Z,44nm,21.6s,baz=261,slow=38						
AAK	Ala-Archa	22.28	40	*e*P	P	21 23 28.2	+2.5
	comp=Z,3.9nm,0.7s						
AAK	Ala-Archa	22.28	40	*e*P	P	21 23 28.2	+2.5
AAK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
AAK	Ala-Archa	22.28	40	*e*P	P	21 23 28.2	+2.5
	comp=Z,3.9nm,0.7s						
ANTO	Ankara	22.52	310	*e*P	P	21 23 29.8	+1.6
	comp=Z,8.7nm,0.6s						
ANTO	Ankara	22.52	310	*e*P	P	21 23 29.8	+1.6
ANTO				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ANTO	Ankara	22.52	310	*e*P	P	21 23 29.8	+1.6
	comp=Z,8.7nm,0.6s						
ABKAR	Akbulak array	22.58	8	*e*P	P	21 23 28.7	+0.1
ABKAR	Akbulak array	22.58	8	*e*P	P	21 23 28.7	+0.1
AKTK	Aktyubinsk	23.55	5	P	P	21 23 37.5	-1.1
	comp=Z,94nm,18.6s						
AKTO	Aktyubinsk	23.55	5	P	P	21 23 37.5	-1.1
	comp=Z,5.2nm,0.7s,baz=190,slow=13,SNR=12						
AKTO				LR	LR	21 34 48.8	
	comp=Z,94nm,18.6s,baz=177,slow=42						
KARP	Karpathos	25.26	297	*e*P	P	21 23 56.7	+2.2
	comp=Z,42nm,0.8s						
KARP	Karpathos	25.26	297	*e*P	P	21 23 56.7	+2.2
	comp=Z,42nm,0.8s						
HMDM	Hanimaadhoo	26.47	136	*e*P	P	21 24 08.9	+3.3
	comp=Z,125nm,0.9s						
SANT	Santorini	26.78	298	*e*P	P	21 24 09.4	+1.1
	comp=Z,80nm,1.4s						
SANT	Santorini	26.78	298	*e*P	P	21 24 09.4	+1.1
	comp=Z,80nm,1.4s						
VORD	Divnogorie	26.80	338	*e*P	P	21 24 08.2	-0.1
VORD				pmax	pmax		
	comp=Z,5.0nm,1.1s						
VORD	Divnogorie	26.80	338	*e*P	P	21 24 08.2	-0.1
	comp=Z,5.0nm,1.1s						
IDI	Anoyia	27.03	295	P	P	21 24 09.2	-1.5
	comp=Z,4.2nm,0.6s,baz=78,slow=15,SNR=2.8						
IDI	Anoyia	27.03	295	*e*P	P	21 24 12.2	+1.6
	comp=Z,10.0nm,0.8s						
IDI	Anoyia	27.03	295	*e*P	P	21 24 12.2	+1.6
	comp=Z,10.0nm,0.8s						
VSR	Storozhevoye	27.05	338	*e*P	P	21 24 08.9	-1.7
VSR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ALN	Alexandroupoli	27.63	308	*e*P	P	21 24 16.3	+0.4
	comp=Z,2.6nm,0.7s						
ALN	Alexandroupoli	27.63	308	*e*P	P	21 24 16.3	+0.4
ALN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ALN	Alexandroupoli	27.63	308	*e*P	P	21 24 16.3	+0.4
	comp=Z,2.6nm,0.7s						
BRVK	Borovoye	28.44	19	*e*P	P	21 24 23.8	+0.8
	comp=Z,4.4nm,0.8s						
BRVK	Borovoye	28.44	19	*i* P	P	21 24 22.3	-0.6
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRVK	Borovoye	28.44	19	*e*P	P	21 24 23.8	+0.8
	comp=Z,4.4nm,0.8s						
BVAR	Borovoye Array	28.44	20	P	P	21 24 21.1	-1.8
	comp=Z,5.3nm,0.9s,baz=189,slow=6.9,SNR=22						
BVAR				LR	LR	21 37 35.8	
	comp=Z,76nm,18.6s,baz=202,slow=40						
MK01	Makanchi Array	29.20	40	*e*P	P	21 24 30.9	+1.0
MK01	Makanchi Array	29.20	40	*e*P	P	21 24 30.9	+1.0
MKAR	Makanchi Array	29.21	40	P	P	21 24 29.2	-0.7
	comp=Z,0.7nm,0.7s,baz=232,slow=6.0,SNR=5.9						
MKAR				LR	LR	21 38 00.5	
	comp=Z,46nm,18.3s,baz=171,slow=40						
MKAR	Makanchi Array	29.21	40	*e*P	P	21 24 31.7	+1.8
	comp=Z,9.5nm,0.9s						
ARU	Arti	29.55	4	LR	LR	21 38 32.3	
	comp=Z,29nm,20.0s,baz=208,slow=41						
ARU	Arti	29.55	4	*e*P	P	21 24 34.4	+1.6
	comp=Z,3.7nm,0.8s						
ARU	Arti	29.55	4	*c* *i*P	P	21 24 37.2	+4.4
ARU						21 25 30.8	
ARU				S	S	21 29 34.8	+8.0
ARU				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MLR	Muntele Rosu	29.64	316	P	P	21 24 33.6	-0.2
	comp=Z,0.5nm,0.7s,baz=322,slow=19,SNR=2.0						
MLR				LR	LR	21 40 00.8	
	comp=Z,6.8nm,19.9s,baz=160,slow=44						
MLR	Muntele Rosu	29.64	316	⇑*i*P	P	21 24 38.5	+4.7
MLR	Muntele Rosu	29.64	316	⇑P	P	21 24 38.5	+4.7
KURBB	Kurchatov Arra	29.65	31	P	P	21 24 32.2	-1.5
	comp=Z,1.6nm,0.7s,baz=233,slow=8.8,SNR=7.9						
KURK	Kurchatov	29.76	31	*e*P	P	21 24 37.3	+2.7
KURK	Kurchatov	29.76	31	*i* P	P	21 24 33.8	-0.9
KURK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KURK	Kurchatov	29.76	31	*i* P	P	21 24 33.8	-0.9
	comp=Z,4.0nm,1.1s						
VTS	Vitosha	30.22	309	*e*P	P	21 24 40.6	+1.5
	comp=Z,6.0nm,0.8s						
VTS	Vitosha	30.22	309	*e*P	P	21 24 40.6	+1.5
VTS				pmax	pmax		
	comp=Z,6.0nm,0.8s						
VTS	Vitosha	30.22	309	*e*P	P	21 24 40.6	+1.5
	comp=Z,6.0nm,0.8s						
BIZ	Bicaz	30.26	319	⇓*i*P	P	21 24 39.0	-0.2
AKASG	Malin Array Be	30.80	327	P	P	21 24 41.4	-2.4
	comp=Z,1.2nm,0.5s,baz=134,slow=8.5,SNR=7.8						
KIEV	Kiev	30.80	327	*e*P	P	21 24 43.5	-0.4
	comp=Z,6.8nm,0.8s						
KIEV	Kiev	30.80	327	*i* P	P	21 24 41.8	-2.1
KIEV				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KIEV	Kiev	30.80	327	*e*P	P	21 24 43.5	-0.4
	comp=Z,6.8nm,0.8s						
BURAR	Bucovina Array	31.13	319	⇓*i*P	P	21 24 47.0	0.0
OBN	Obninsk	31.18	339	⇓*e*P	P	21 24 46.9	-0.3
OBN				*e*		21 24 54.5	
OBN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,16nm,16.0s						
WMQ	Urumqi	31.23	49	P	P	21 24 52.1	+4.2
WMQ				pP	sP	21 25 02.3	+7.1
WMQ				pmax	pmax		
	comp=Z,37nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,230nm,4.1s						
WMQ				LR	LR		
	comp=N,140nm,26.1s						
WMQ				LR	LR		
	comp=E,140nm,27.3s						
WMQ				LR	LR		
	comp=Z,73nm,21.1s						
DGZ	Jazzator, Alta	33.66	39	*i* P	P	21 25 07.7	-1.5
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
CRVS	Cervenica-Dubn	33.95	319	*e*P	P	21 25 13.3	+1.8
CRVS	Cervenica-Dubn	33.95	319	*e*P	P	21 25 13.3	+1.8
ZAA0	Zalesovo Array	34.75	31	*e*P	P	21 25 17.4	-1.0
	comp=Z,6.6nm,0.6s						
ZALV	Zalesovo Beam	34.75	31	P	P	21 25 16.1	-2.2
	comp=Z,4.7nm,0.5s,baz=239,slow=9.0,SNR=15						
ZALV				LR	LR	21 41 36.7	
	comp=Z,56nm,18.0s,baz=98,slow=40						
ZALV	Zalesovo Beam	34.75	31	*e*P	P	21 25 17.3	-1.1
ZALV	Zalesovo Beam	34.75	31	*e*P	P	21 25 17.3	-1.1
NIE	Niedzica	34.86	319	*e*P	P	21 25 19.3	-0.2
NIE	Niedzica	34.86	319	*e*P	P	21 25 19.3	-0.2
CUC	Castrocucco	34.92	302	*e*P	P	21 25 21.6	+1.5
	comp=Z,16nm,0.7s						
CUC	Castrocucco	34.92	302	*e*P	P	21 25 21.6	+1.5
	comp=Z,16nm,0.7s						
IDID	Didziasalis	34.99	332	*e*P	P	21 25 19.5	-0.9
IDID				IAmb	IAmb	21 25 25.9	
	comp=Z,3.1nm,0.9s						
IDID	Didziasalis	34.99	332	*e*P	P	21 25 19.5	-0.9
	SNR=27						
IIGN	Ignalina	35.23	331	*e*P	P	21 25 21.7	-0.8
IIGN				IAmb	IAmb	21 25 28.9	
	comp=Z,4.4nm,0.7s						
ISAL	Salakas	35.42	332	*e*P	P	21 25 23.2	-0.9
ISAL				IAmb	IAmb	21 25 30.5	
	comp=Z,8.4nm,1.1s						
KLMR	Klimovskoe	35.49	347	*e*P	P	21 25 23.6	-1.0
KLMR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KLMR	Klimovskoe	35.49	347	*e*P	P	21 25 23.7	-0.9
KLMR				AMP		21 25 31.3	
	comp=Z,5.0nm,0.9s						
MORC	Moravsky Berou	36.63	319	*e*P	P	21 25 36.3	+1.6
	comp=Z,3.8nm,0.7s						
MORC	Moravsky Berou	36.63	319	*e*P	P	21 25 36.3	+1.6
MORC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MORC	Moravsky Berou	36.63	319	*e*P	P	21 25 36.3	+1.6
	comp=Z,3.8nm,0.7s						
VSU	Vasula	37.18	336	*i* P	P	21 25 37.4	-1.7
VSU				pmax	pmax		
	comp=Z,21nm,0.9s						
DPC	Dobruska-Polom	37.59	319	*e*P	P	21 25 46.2	+3.4
DPC	Dobruska-Polom	37.59	319	*e*P	P	21 25 46.2	+3.4
KBA	Koelnbreinsper	38.30	313	*e*P	P	21 25 51.1	+2.1
	comp=Z,4.0nm,0.6s						
KBA	Koelnbreinsper	38.30	313	P	P	21 25 51.1	+2.1
	comp=Z,4.0nm,0.6s						
GERES	GERESS Array B	38.62	316	P	P	21 25 50.6	-1.0
	comp=Z,0.8nm,0.8s,baz=103,slow=5.8,SNR=6.0						
KHC	Kasperske Hory	38.79	316	*e*P	P	21 25 52.4	-0.5
KHC	Kasperske Hory	38.79	316	*e*P	P	21 25 54.1	+1.1
	comp=Z,1.3nm,0.6s						
KHC	Kasperske Hory	38.79	316	*e*P	P	21 25 52.4	-0.5
KHC	Kasperske Hory	38.79	316	*e*P	P	21 25 54.1	+1.1
	comp=Z,1.3nm,0.6s						
GTA	Gaotai	39.10	60	*e*P	P	21 25 55.5	-0.3
GTA				pP	sP	21 26 04.8	+1.6
GTA				sP	pP	21 26 08.8	+7.7
GTA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
WTTA	Wattenberg	39.48	313	*e*P	P	21 26 00.5	+1.6
	comp=Z,6.2nm,0.7s						
WTTA	Wattenberg	39.48	313	P	P	21 26 00.5	+1.6
	comp=Z,6.2nm,0.7s						
WATA	Walderalm	39.53	313	*e*pP	P	21 25 59.2	-0.1
	comp=Z,6.1nm,0.7s						
FIA1	FINESS Array S	39.58	339	*e*P	P	21 26 00.2	+1.0
FINES	FINESS Array B	39.58	339	P	P	21 25 56.4	-2.8
	comp=Z,3.3nm,0.7s,baz=139,slow=9.0,SNR=15						
FINES	FINESS Array B	39.58	339	P	P	21 25 56.4	-2.8
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MOTA	Moosalm	39.85	313	pP	P	21 26 01.9	0.0
	comp=Z,0.1nm,0.3s						
TAMR	Tamra	39.89	296	*e*P	P	21 26 03.0	+0.8
	comp=Z,34nm,1.0s						
TAMR	Tamra	39.89	296	*e*P	P	21 26 03.0	+0.8
	comp=Z,34nm,1.0s						
CLL	Collm	39.90	319	*e*(sP)	sP	21 26 06.0	-3.5
FETA	Feichten	40.01	312	*e*P	P	21 26 01.2	-2.1
	comp=Z,6.4nm,0.8s						
RETA	Reutte	40.11	313	*e*P	P	21 26 02.7	-1.3
	comp=Z,2.2nm,0.7s						
GRFO	Grafenberg	40.43	316	*e*P	P	21 26 07.8	+1.2
	comp=Z,38nm,1.9s						
GRFO	Grafenberg	40.43	316	*e*P	P	21 26 07.8	+1.2
	comp=Z,38nm,1.9s						
DAVOX	Davos/Dischmat	40.52	311	P	P	21 26 06.9	-0.6
	baz=135,slow=18,SNR=3.8						
DAVA	Damuels	40.64	312	*e*P	P	21 26 05.3	-3.1
	comp=Z,0.4nm,0.2s						
TUE	Stuetta	40.81	311	*e*P	P	21 26 11.2	+1.2
	comp=Z,11nm,1.4s						
TUE	Stuetta	40.81	311	*e*P	P	21 26 11.2	+1.2
	comp=Z,11nm,1.4s						
BNI	Bardonecchia	42.40	308	*e*P	P	21 26 23.5	+0.6
	comp=Z,36nm,1.9s						
BNI	Bardonecchia	42.40	308	*e*P	P	21 26 23.5	+0.6
BNI				pmax	pmax		
	comp=Z,36nm,1.9s						
BNI	Bardonecchia	42.40	308	*e*P	P	21 26 23.5	+0.6
	comp=Z,36nm,1.9s						
ECH	Echery	42.64	313	*e*P	P	21 26 25.9	+1.2
	comp=Z,16nm,1.6s						
ECH	Echery	42.64	313	*e*P	P	21 26 25.9	+1.2
ECH				pmax	pmax		
	comp=Z,16nm,1.6s						
ECH	Echery	42.64	313	*e*P	P	21 26 25.9	+1.2
	comp=Z,16nm,1.6s						
APA	Apatity	42.70	348	⇓*i*P	P	21 26 27.5	+2.6
APA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
APA				MLR	MLR		
	comp=Z,100nm,10.0s						
HFS	Hagfors	43.46	331	P	P	21 26 28.4	-2.7
	comp=Z,5.3nm,0.7s,baz=134,slow=8.5,SNR=9.3						
HFS				LR	LR	21 47 41.0	
	comp=Z,22nm,20.1s,baz=174,slow=40						
WLF	Walferdange	43.60	315	*e*P	P	21 26 33.2	+0.8
	comp=Z,19nm,1.3s						
WLF	Walferdange	43.60	315	*e*P	P	21 26 33.2	+0.8
WLF				pmax	pmax		
	comp=Z,19nm,1.3s						
NC405	NORSAR Array S	44.80	332	*e*P	P	21 26 40.1	-1.8
SONM	Songino Array	44.87	48	P	P	21 26 42.9	+0.2
	comp=Z,0.2nm,0.4s,baz=280,slow=6.9,SNR=3.6						
SONA1	Songino Array	44.87	48	*e*P	P	21 26 44.8	+2.0
SONA1	Songino Array	44.87	48	*e*P	P	21 26 44.8	+2.0
NB201	NORSAR Array S	44.95	332	*e*P	P	21 26 44.1	+1.0
NB2	NORSAR Subarra	44.98	332	P	P	21 26 41.4	-1.9
	comp=Z,3.6nm,0.6s,baz=119,slow=7.9						
NC303	NORSAR Array S	45.00	332	*e*P	P	21 26 45.4	+1.9
NAO01	NORSAR Array S	45.02	331	*e*P	P	21 26 44.4	+0.7
NBO00	NORSAR Array S	45.16	331	*e*P	P	21 26 45.9	+1.2
GYA	Guiyang	45.85	78	*e*P	P	21 26 53.0	+2.2
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ARCES	ARCESS Array B	45.95	346	P	P	21 26 48.9	-2.0
	comp=Z,1.5nm,0.8s,baz=140,slow=11,SNR=4.4						
HHC	Hu-ho-hao-te	48.14	58	*e*P	P	21 27 10.7	+2.2
HHC				pP	sP	21 27 16.9	+0.9
HHC				S	S	21 34 05.6	-1.3
HHC				pmax	pmax		
	comp=Z,20nm,1.1s						
HHC				pmax	pmax		
	comp=Z,130nm,5.5s						
ESDC	Sonseca Array	50.09	300	P	P	21 27 20.8	-2.7
	comp=Z,0.4nm,0.4s,baz=75,slow=7.2,SNR=8.1						
EKA	Eskdalemuir Ar	50.29	321	P	P	21 27 21.7	-2.9
	comp=Z,0.2nm,0.2s,baz=100,slow=7.8,SNR=3.5						
BOD	Bodaibo	51.16	36	*e*P	P	21 27 29.5	-1.6
BOD				pmax	pmax		
	comp=Z,5.0nm,1.6s						
MDT	Midelt	51.46	292	P	P	21 27 32.8	-1.2
	comp=Z,0.8nm,0.4s,baz=72,slow=3.2,SNR=3.4						
NJ2	Nanjing	55.07	68	*e*P	P	21 28 01.9	+1.6
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KOWA	Kowa	56.17	270	P	P	21 28 06.1	-2.3
	comp=Z,2.4nm,0.6s,baz=62,slow=6.9,SNR=7.2						
KOWA	Kowa	56.17	270	*e*P	P	21 28 10.3	+1.9
	comp=Z,6.9nm,0.8s						
DBIC	Dimbokro	60.21	262	P	P	21 28 35.9	-0.9
	comp=Z,3.3nm,0.9s,baz=124,slow=3.6,SNR=2.4						
KSAR	Wonju Array Be	61.15	60	P	P	21 28 41.5	-1.3
KSAR	Wonju Array Be	61.15	60	P	P	21 28 41.6	-1.3
KSAR	Wonju Array Be	61.15	60	P	P	21 28 41.5	-1.3
KSRS	Korea Array	61.18	60	P	P	21 28 41.6	-1.5
	comp=Z,0.7nm,0.5s,baz=288,slow=6.5,SNR=2.9						
BOSA	Boshof	62.21	210	P	P	21 28 50.3	+0.2
	comp=Z,2.6nm,0.8s,baz=15,slow=9.5,SNR=4.7						
JOW	Kunigami	64.38	72	*e*P	P	21 29 05.1	+0.6
	comp=Z,64nm,1.4s						
SUMG	Summit	65.56	341	*e*P	P	21 29 12.9	+0.9
	comp=Z,5.3nm,0.8s						
SUMG	Summit	65.56	341	*e*P	P	21 29 12.9	+0.9
SUMG				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ILAR	Eielson Array	86.98	9	P	P	21 31 11.9	-1.2
	comp=Z,0.5nm,0.7s,baz=311,slow=3.8,SNR=4.7						
ILAR	Eielson Array	86.98	9	P	P	21 31 12.0	-1.2
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
WRA	Warramunga Arr	89.83	112	P	P	21 31 27.3	-0.1
	comp=Z,0.2nm,0.5s,baz=314,slow=3.9,SNR=3.7						

IDC 12 21:19:56.0±1.1, 48°.76S×120°.83E, h0^{km}, mb3.9/4, mb1 4.0/4, mb1mx3.7/47, mbtmp3.9/4, MS3.7/23, Ms1 3.7/23, ms1mx3.6/38, Error ellipse: s-maj=176.7km s-min=20.5km az=117.0, Western Indian-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	14.71	338	T	T	21 38 54.6	
	baz=160,slow=74,SNR=19						
H01W1	Cape Leeuwin H	14.71	338	T	T	21 38 54.0	
	baz=160,slow=74,SNR=20						
H01W3	Cape Leeuwin H	14.73	338	T	T	21 38 56.5	
	baz=160,slow=74,SNR=19						
NWAO	Narrogin (SRO)	16.05	349	LR	LR	21 28 26.3	
	comp=Z,705nm,21.5s,baz=55,slow=32						
ASAR	Alice Springs	27.10	27	P	P	21 25 40.8	+0.4
	0.9nm,0.5s,baz=196,slow=9.1,SNR=11						
WRA	Warramunga Arr	30.74	25	P	P	21 26 12.6	-0.3
	0.4nm,0.6s,baz=198,slow=8.2,SNR=7.7						
WRA				LR	LR	21 38 59.8	
	comp=Z,188nm,18.9s,baz=200,slow=37						
VNDA	Vanda	32.82	165	LR	LR	21 38 44.6	
	comp=Z,300nm,19.2s,baz=316,slow=34						
MAW	Mawson	34.20	215	P	P	21 26 42.5	-0.1
	1.9nm,0.9s,baz=70,slow=13,SNR=6.6						
MAW				LR	LR	21 36 03.4	
	comp=Z,69nm,20.7s,baz=64,slow=28						
BATI	Baumata	38.51	4	LR	LR	21 42 27.9	
	comp=Z,202nm,21.1s,baz=206,slow=35						
QSPA	South Pole Qui	41.36	180	LR	LR	21 44 08.1	
	comp=Z,208nm,18.6s,baz=354,slow=35						
LEM	Lembang	43.26	341	LR	LR	21 43 20.5	
	comp=Z,74nm,20.4s,baz=220,slow=32						
DZM	Mont Dzumac	44.81	70	LR	LR	21 43 31.4	
	comp=Z,52nm,19.9s,baz=284,slow=32						
PMG	Port Moresby	45.02	38	LR	LR	21 46 47.2	
	comp=Z,106nm,18.7s,baz=230,slow=36						
JAY	Jayapura	49.13	27	LR	LR	21 49 23.7	
	comp=Z,182nm,20.6s,baz=185,slow=36						
HNR	Honiara	51.06	53	LR	LR	21 49 21.1	
	comp=Z,92nm,18.6s,baz=192,slow=35						
SNAA	Sanae	53.47	199	P	P	21 29 17.4	0.0
	2.2nm,1.0s,baz=124,slow=7.3,SNR=6.0						
SNAA				LR	LR	21 51 00.5	
	comp=Z,221nm,18.5s,baz=164,slow=35						
DAV	Davao City (W)	55.75	6	LR	LR	21 52 49.0	
	comp=Z,32nm,21.7s,baz=163,slow=35						
GUMO	Guam	65.64	26	LR	LR	21 59 58.4	
	comp=Z,35nm,19.0s,baz=192,slow=37						
PALK	Pallekele	65.94	316	LR	LR	21 52 55.9	
	comp=Z,68nm,21.4s,baz=168,slow=30						
PMSA	Palmer Station	66.74	178	LR	LR	21 58 36.2	
	comp=Z,109nm,21.9s,baz=212,slow=35						
JOW	Kunigami	75.55	7	LR	LR	22 03 39.4	
	comp=Z,18nm,21.3s,baz=315,slow=35						
JNU	Nakatsue	82.01	9	LR	LR	22 09 12.5	
	comp=Z,18nm,20.9s,baz=302,slow=36						
KSRS	Korea Array	86.07	6	LR	LR	22 14 18.0	
	comp=Z,7.5nm,18.9s,baz=145,slow=38						
MJAR	Matsushiro Arr	86.33	14	LR	LR	22 09 29.1	
	comp=Z,13nm,21.2s,baz=250,slow=34						
PLCA	Paso Flores	90.32	171	LR	LR	22 12 23.5	
	comp=Z,33nm,19.5s,baz=198,slow=35						
ASAJ	Asahikawa	94.45	16	LR	LR	22 13 50.2	
	comp=Z,24nm,21.9s,baz=185,slow=34						
SONM	Songino Array	97.03	350	LR	LR	22 17 50.8	
	comp=Z,18nm,20.5s,baz=184,slow=36						
PDAR	Pinedale Array	144.88	80	PKP	PKPab	21 39 33.6	-0.1
	1.1nm,1.0s,baz=226,slow=3.5,SNR=6.8						

ROM ***12*** *21:22:55.5±0.2, 40°.56N±0°.01×13°.53E±0°.03, h440^{km}±1^{km}, ML3.7/20*

PDG ***12*** *21:22:55.3±0.7, 40°.69N×13°.54E, h426^{km}±4^{km}, ML4.1/13, Error ellipse: s-maj=1.7km s-min=2.1km az=0.0*

ISCJB ***12*** *21:22:60.0±0.2, 40°.65N±0°.02×13°.47E±0°.02, h421^{km}±1^{km}, mb3.7/22, Error ellipse: s-maj=3.2km s-min=2.8km az=9.4*

LDG ***12*** *21:22:59.7±0.1, 40°.62N×13°.41E, h430^{km}, Md3.6/1, Ml3.4/7, Error ellipse: s-maj=3.9km s-min=2.0km az=15.0*

IDC ***12*** *21:23:01.5±0.7, 40°.70N×13°.41E, h418^{km}±9^{km}, mb3.3/14, mb1 3.3/25, mb1mx3.1/79, mbtmp4.0/25, Error ellipse: s-maj=12.7km s-min=11.0km az=140.0*

NEIC ***12*** *21:23:01.7±0.3, 40°.60N×13°.60E, h423^{km}±4^{km}, mb4.0/7, ML4.0(ROM), Error ellipse: s-maj=5.6km s-min=4.6km az=218.0*

NEIC Felt on Isola d'Ischia, Italy.

MOS ***12*** *21:23:01.3±0.8, 40°.72N×13°.61E, h427^{km}, mb3.9/17, Error*

ellipse: s-maj=8.8km s-min=4.6km az=61.8
*CSEM **12** 21:23:01.0±0.1, 40°.67N×13°.48E, h420^{km}±1^{km}, mb3.8/19,*
Error ellipse: s-maj=4.2km s-min=2.6km az=17.0
ISC 12 21:23:01.5±0.5**, 40°.68N**±0°.05×**13°.61E**±0°.05**, h416**^{km}±6^{km}**,**
n450,σ**1**^{s}**21**/514**, mb3.6**/21**, 54C-30D, Tyrrhenian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MODR	**Mondragone**	**0.51**	**23**	P	**P**	**21 23 52.7**	**-0.3**
MSC	**Monte Massico**	**0.58**	**28**	P	**P**	**21 23 52.8**	**-0.2**
SGG	**Gregorio Mates**	**0.92**	**39**	*i*P	**P**	**21 23 54.0**	**0.0**
SGG				S	**S**	**21 24 35.9**	**-0.6**
GIUL	**Giuliano Di Ro**	**0.92**	**343**	P	**P**	**21 23 53.8**	**-0.2**
GIUL				S	**S**	**21 24 35.2**	**-1.3**
PTRJ	**Pietraroja**	**0.98**	**45**	P	**P**	**21 23 53.9**	**-0.3**
PTRJ				S	**S**	**21 24 36.3**	**-0.6**
PTRJ				AML	AML		
	comp=E,178µm,1.0s						
PTRJ				AML	AML		
	comp=N,161µm,0.7s						
SACR	**S. Croce Del S**	**1.10**	**49**	P	**P**	**21 23 54.9**	**+0.3**
MRB1	**Monte Rocchett**	**1.12**	**66**	P	**P**	**21 23 54.5**	**-0.2**
MCRV	**Calabrutti - M**	**1.19**	**84**	*i*P	**P**	**21 23 54.7**	**-0.3**
MCRV				S	**S**	**21 24 37.9**	**-0.4**
MCRV				AML	AML		
	comp=E,80µm,0.5s						
MCRV				AML	AML		
	comp=N,84µm,0.7s						
MCRV				AML	AML		
	comp=E,80µm,0.5s						
MCRV				AML	AML		
	comp=N,84µm,0.7s						
MCRV				AML	AML		
	comp=N,84µm,0.7s						
MCRV				AML	AML		
	comp=E,80µm,0.5s						
SNAL	**S. Angelo Dei**	**1.24**	**78**	*i*P	**P**	**21 23 54.8**	**-0.3**
SNAL				S	**S**	**21 24 38.5**	**0.0**
SNAL				AML	AML		
	comp=E,105µm,1.6s						
SNAL				AML	AML		
	comp=N,132µm,1.1s						
SNAL				AML	AML		
	comp=E,105µm,1.6s						
SNAL				AML	AML		
	comp=N,132µm,1.1s						
SNAL				AML	AML		
	comp=N,132µm,1.1s						
SNAL				AML	AML		
	comp=E,105µm,1.6s						
CAFE	**Carife**	**1.28**	**74**	*i*P	**P**	**21 23 55.3**	**-0.1**
CAFE				S	**S**	**21 24 38.6**	**-0.3**
CDRU	**Civita di Ruta**	**1.30**	**98**	*i*P	**P**	**21 23 55.2**	**-0.3**
CDRU				S	**S**	**21 24 38.4**	**-0.7**
CMPR	**Campora**	**1.34**	**105**	P	**P**	**21 23 55.1**	**-0.5**
MRLC	**Muro Lucano**	**1.43**	**86**	*i*P	**P**	**21 23 55.6**	**-0.3**
MRLC				S	**S**	**21 24 39.8**	**-0.1**
BULG	**Bulgheria - Ca**	**1.47**	**113**	*i*P	**P**	**21 23 56.0**	**-0.2**
BULG				AML	AML		
	comp=E,128µm,0.6s						
BULG				AML	AML		
	comp=N,215µm,0.6s						
BULG				AML	AML		
	comp=E,128µm,0.6s						
BULG				AML	AML		
	comp=N,215µm,0.6s						
BULG				AML	AML		
	comp=E,128µm,0.6s						
BULG				AML	AML		
	comp=N,215µm,0.6s						
SLCN	**Sala Consilina**	**1.57**	**100**	*i*P	**P**	**21 23 56.3**	**-0.4**
SLCN				AML	AML		
	comp=E,152µm,0.7s						
SLCN				AML	AML		
	comp=N,113µm,0.7s						
SLCN				AML	AML		
	comp=E,152µm,0.7s						
SLCN				AML	AML		
	comp=N,113µm,0.7s						
SLCN				AML	AML		
	comp=E,152µm,0.7s						
SLCN				AML	AML		
	comp=N,113µm,0.7s						
MGR	**Morigerati**	**1.58**	**109**	*i*P	**P**	**21 23 56.4**	**-0.3**
MGR				S	**S**	**21 24 40.6**	**-0.5**
MGR				AML	AML		
	comp=E,136µm,0.6s						
MGR				AML	AML		
	comp=N,127µm,0.6s						
MGR				AML	AML		
	comp=E,136µm,0.6s						
MGR				AML	AML		
	comp=N,127µm,0.6s						
MGR				AML	AML		
	comp=E,136µm,0.6s						
MGR				AML	AML		
	comp=N,127µm,0.6s						
MTSN	**Montesano sull**	**1.68**	**103**	*i*P	**P**	**21 23 56.7**	**-0.5**
MTSN				S	**S**	**21 24 41.9**	**-0.4**
MTSN				AML	AML		
	comp=E,89µm,0.8s						
MTSN				AML	AML		
	comp=N,69µm,0.6s						
MTSN				AML	AML		
	comp=E,89µm,0.8s						
MTSN				AML	AML		
	comp=N,69µm,0.6s						
AQU	**L'Aquila**	**1.68**	**355**	*e*P	**P**	**21 23 59.1**	**+2.0**
AQU	**L'Aquila**	**1.68**	**355**	*e*P	**P**	**21 23 59.1**	**+2.0**
AQU	**L'Aquila**	**1.68**	**355**	*e*P	**P**	**21 23 59.1**	**+2.0**
MCEL	**Monticello**	**1.71**	**101**	*i*P	**P**	**21 23 57.3**	**-0.1**
MCEL				S	**S**	**21 24 42.2**	**-0.3**
MCEL				AML	AML		
	comp=E,136µm,1.6s						
MCEL				AML	AML		
	comp=N,101µm,1.2s						
MCEL				AML	AML		
	comp=N,101µm,1.2s						
MCEL				AML	AML		
	comp=E,136µm,1.6s						
SIRI	**Monte Sirino -**	**1.79**	**105**	P	**P**	**21 23 57.2**	**-0.6**
SIRI				AML	AML		
	comp=E,105µm,0.6s						
SIRI				AML	AML		
	comp=N,95µm,0.6s						
SIRI				AML	AML		
	comp=E,105µm,0.6s						
SIRI				AML	AML		
	comp=N,95µm,0.6s						
CUC	**Castrocucco**	**1.82**	**111**	*e*P	**P**	**21 23 57.5**	**-0.4**
CUC	**Castrocucco**	**1.82**	**111**	*e*P	**P**	**21 23 57.5**	**-0.4**
CUC	**Castrocucco**	**1.82**	**111**	*i*P	**P**	**21 23 57.5**	**-0.4**
CUC				AML	AML		
	comp=E,166µm,1.5s						
CUC				AML	AML		
	comp=N,216µm,0.7s						
CUC				AML	AML		
	comp=N,216µm,0.7s						
CUC				AML	AML		
	comp=E,166µm,1.5s						
SCHR	**S. Chirico Rap**	**1.94**	**103**	*i*P	**P**	**21 23 58.5**	**-0.2**
SCHR				S	**S**	**21 24 44.3**	**-0.6**
MMN	**Mormanno**	**1.98**	**113**	*i*P	**P**	**21 23 58.4**	**-0.4**
T0716	**Rotonda - Cont**	**1.98**	**111**	*i*P	**P**	**21 23 58.6**	**-0.2**
CET2	**Cetraro**	**2.13**	**122**	*i*P	**P**	**21 23 59.2**	**-0.5**
CET2				AML	AML		
	comp=E,213µm,0.8s						
CET2				AML	AML		
	comp=N,412µm,0.5s						
CET2				AML	AML		
	comp=N,412µm,0.5s						
CET2				AML	AML		
	comp=E,213µm,0.8s						
IACL	**Alicudi**	**2.21**	**165**	P	**P**	**21 23 59.2**	**-1.1**
IFIL	**Filicudi I Eol**	**2.23**	**160**	P	**P**	**21 23 59.3**	**-1.1**
CAR1	**CAROLEI**	**2.45**	**125**	*i*P	**P**	**21 24 00.7**	**-1.1**
CAR1				AML	AML		
	comp=E,186µm,0.5s						
CAR1				AML	AML		
	comp=N,144µm,0.4s						
CAR1				AML	AML		
	comp=N,144µm,0.4s						
CAR1				AML	AML		
	comp=E,186µm,0.5s						
VPL	**Vulcano Piano**	**2.53**	**155**	P	**P**	**21 24 01.9**	**-0.5**
CELI	**Celico**	**2.56**	**119**	*i*P	**P**	**21 24 02.6**	**-0.2**
CELI				S	**S**	**21 24 52.5**	**+0.2**
CELI				AML	AML		
	comp=E,160µm,1.3s						
CELI				AML	AML		
	comp=N,162µm,1.0s						
CELI				AML	AML		
	comp=N,162µm,1.0s						
CELI				AML	AML		
	comp=E,160µm,1.3s						
SOLUN	**Solunto**	**2.58**	**181**	P	**P**	**21 24 02.2**	**-0.6**
SOLUN				S	**S**	**21 24 51.1**	**-1.3**
GIB	**Gibilmanna**	**2.70**	**173**	P	**P**	**21 24 02.9**	**-0.9**
GIB				S	**S**	**21 24 53.2**	**-1.0**
JOPP	**Joppolo**	**2.71**	**139**	*i*P	**P**	**21 24 02.5**	**-1.2**
JOPP				AML	AML		
	comp=E,84µm,0.6s						
JOPP				AML	AML		
	comp=N,223µm,0.6s						
JOPP				AML	AML		
	comp=E,84µm,0.6s						
JOPP				AML	AML		
	comp=N,223µm,0.6s						
PLLN	**Pollina**	**2.71**	**171**	P	**P**	**21 24 02.9**	**-1.0**
PLLN				S	**S**	**21 24 52.9**	**-1.4**
TIP	**Timpagrande**	**2.84**	**121**	⇑*i*P	**P**	**21 24 04.0**	**-0.7**
TIP	**Timpagrande**	**2.84**	**121**	*e*P	**P**	**21 24 03.8**	**-1.0**
TIP	**Timpagrande**	**2.84**	**121**	*e*P	**P**	**21 24 03.8**	**-1.0**
MCSR	**Castroreale**	**2.90**	**154**	*i*P	**P**	**21 24 04.2**	**-1.1**
MCSR				AML	AML		
	comp=E,470µm,0.4s						
MCSR				AML	AML		
	comp=N,384µm,0.4s						
MCSR				AML	AML		
	comp=E,470µm,0.4s						
MCSR				AML	AML		
	comp=N,384µm,0.4s						
ALJA	**Alia**	**2.92**	**178**	P	**P**	**21 24 05.1**	**-0.3**
ALJA				AML	AML		
	comp=E,424µm,1.1s						
ALJA				AML	AML		
	comp=N,144µm,0.5s						
ALJA				AML	AML		
	comp=E,423µm,1.1s						
ALJA				AML	AML		
	comp=N,144µm,0.5s						
MSCL	**Scilla**	**2.97**	**145**	P	**P**	**21 24 04.1**	**-1.6**
MSCL				S	**S**	**21 24 56.2**	**-1.6**
MSCL				AML	AML		
	comp=E,320µm,0.6s						
MSCL				AML	AML		
	comp=N,367µm,0.6s						
MSCL				AML	AML		
	comp=E,320µm,0.6s						
MSCL				AML	AML		
	comp=N,367µm,0.6s						
CEL	**Celeste**	**2.99**	**143**	*e*P	**P**	**21 24 04.4**	**-1.5**
CEL	**Celeste**	**2.99**	**143**	*e*P	**P**	**21 24 04.4**	**-1.5**
RESU	**Resuttano**	**3.04**	**173**	P	**P**	**21 24 06.4**	**0.0**
RESU				AML	AML		
	comp=E,119µm,0.7s						
RESU				AML	AML		
	comp=N,174µm,0.6s						
RESU				AML	AML		
	comp=E,119µm,0.7s						
RESU				AML	AML		
	comp=N,174µm,0.6s						
GALF	**Gagliano Caste**	**3.05**	**166**	P	**P**	**21 24 07.0**	**+0.5**
GALF				AML	AML		
	comp=E,93µm,0.7s						
GALF				AML	AML		
	comp=N,89µm,0.8s						
GALF				AML	AML		
	comp=N,89µm,0.8s						
GALF				AML	AML		
	comp=E,93µm,0.7s						
CLTB	**Caltabellotta**	**3.11**	**186**	*e*P	**P**	**21 24 07.4**	**+0.5**
CLTB	**Caltabellotta**	**3.11**	**186**	*e*P	**P**	**21 24 07.4**	**+0.5**
MTTG	**Motta San Giov**	**3.12**	**148**	P	**P**	**21 24 05.7**	**-1.3**
MTTG				AML	AML		
	comp=E,118µm,0.6s						
MTTG				AML	AML		
	comp=N,171µm,0.7s						
MTTG				AML	AML		
	comp=E,118µm,0.6s						
MTTG				AML	AML		
	comp=N,171µm,0.7s						
VAE	**Valguarnera**	**3.25**	**169**	P	**P**	**21 24 08.4**	**+0.4**
	comp=N,1.8nm,0.3s,baz=347,slow=6.5,SNR=3.9						
VAE				S	**S**	**21 25 04.5**	**+2.4**
	comp=N,0.3nm,0.3s,baz=328,slow=15,SNR=2.1						
MPAZ	**Palizzi**	**3.29**	**145**	P	**P**	**21 24 06.9**	**-1.4**
HLNI	**Lentini**	**3.46**	**163**	*i*P	**P**	**21 24 08.0**	**-1.7**
HLNI				S	**S**	**21 25 01.7**	**-3.4**
HLNI				AML	AML		
	comp=E,122µm,1.6s						
HLNI				AML	AML		
	comp=N,83µm,1.3s						
HLNI				AML	AML		
	comp=N,83µm,1.3s						
HLNI				AML	AML		
	comp=E,121µm,1.6s						
HCRL	**Carlentini**	**3.56**	**161**	P	**P**	**21 24 09.0**	**-1.6**
HAGA	**Augusta**	**3.59**	**160**	P	**P**	**21 24 09.1**	**-1.7**
SSY	**Sortino**	**3.70**	**162**	P	**P**	**21 24 11.3**	**-0.5**
STON	**Ston**	**3.76**	**53**	*e*Pn	**P**	**21 24 12.1**	**0.0**
PGF	**Pioggiola**	**3.93**	**300**	*e*Pn	**P**	**21 24 13.5**	**-0.3**
PGF	**Pioggiola**	**3.93**	**300**	*e*Pn	**P**	**21 24 13.5**	**-0.3**
HCY	**Herceg Novi**	**4.07**	**63**	⇑*i*Pn	**P**	**21 24 15.8**	**+0.9**
HCY				*e*Sn	**S**	**21 25 13.6**	**-1.3**
HCY	**Herceg Novi**	**4.07**	**63**	⇑*i*Pn	**P**	**21 24 15.8**	**+0.9**
HCY				*e*Sn	**S**	**21 25 13.6**	**-1.3**
TREB	**Trebinje**	**4.09**	**59**	⇑*i*Pn	**P**	**21 24 16.1**	**+1.0**
UDBI	**Udbina**	**4.16**	**22**	P	**P**	**21 24 16.5**	**+0.6**
BUM	**Brajici-Budva**	**4.29**	**66**	⇓*i*Pn	**P**	**21 24 18.0**	**+0.9**
BUM				*e*Sn	**S**	**21 25 17.6**	**-1.2**
BUM	**Brajici-Budva**	**4.29**	**66**	⇓*i*Pn	**P**	**21 24 18.0**	**+0.9**
BUM				*e*Sn	**S**	**21 25 17.6**	**-1.2**
BRY	**Bratogost**	**4.30**	**57**	⇑*i*Pn	**P**	**21 24 17.5**	**+0.2**
BRY				*e*Sn	**S**	**21 25 17.3**	**-1.9**
BRY	**Bratogost**	**4.30**	**57**	⇑*i*Pn	**P**	**21 24 17.5**	**+0.2**
BRY				*e*Sn	**S**	**21 25 17.3**	**-1.9**
CEME	**Cevo**	**4.39**	**63**	⇓*i*Pn	**P**	**21 24 18.4**	**+0.3**
CEME				*e*Sn	**S**	**21 25 19.3**	**-1.4**
CEME	**Cevo**	**4.39**	**63**	⇓*i*Pn	**P**	**21 24 18.4**	**+0.3**
CEME				*e*Sn	**S**	**21 25 19.3**	**-1.4**
ULC	**Ulcinj**	**4.43**	**71**	⇑*i*Pn	**P**	**21 24 18.7**	**+0.3**
ULC				*e*Sn	**S**	**21 25 19.6**	**-1.7**
ULC	**Ulcinj**	**4.43**	**71**	⇑*i*Pn	**P**	**21 24 18.7**	**+0.3**
ULC				*e*Sn	**S**	**21 25 19.6**	**-1.7**
DRME	**Dracevica, Mon**	**4.45**	**68**	⇑*i*Pn	**P**	**21 24 20.0**	**+1.4**
DRME				*e*Sn	**S**	**21 25 20.5**	**-1.1**
DRME	**Dracevica, Mon**	**4.45**	**68**	⇑*i*Pn	**P**	**21 24 20.0**	**+1.4**
DRME				*e*Sn	**S**	**21 25 20.5**	**-1.1**
NKME	**Niksic**	**4.51**	**61**	⇓*i*Pn	**P**	**21 24 18.9**	**-0.3**
NKME				*e*Sn	**S**	**21 25 21.2**	**-1.5**
NKME	**Niksic**	**4.51**	**61**	⇓*i*Pn	**P**	**21 24 18.9**	**-0.3**
NKME				*e*Sn	**S**	**21 25 21.2**	**-1.5**
NKY	**Niksic**	**4.56**	**60**	*e*Pn	**P**	**21 24 19.9**	**+0.2**
NKY				*e*Sn	**S**	**21 25 22.3**	**-1.3**
NKY	**Niksic**	**4.56**	**60**	*e*Pn	**P**	**21 24 19.9**	**+0.2**
NKY				*e*Sn	**S**	**21 25 22.3**	**-1.3**
PDG	**Podgorica**	**4.58**	**66**	⇑*i*P	**P**	**21 24 21.2**	**+1.4**
PDG	**Podgorica**	**4.58**	**66**	⇑*i*Pn	**P**	**21 24 20.9**	**+1.1**
PDG	**Podgorica**	**4.58**	**66**	⇑*i*P	**P**	**21 24 21.2**	**+1.4**
PDG				*e*Sn	**S**	**21 25 22.8**	**-1.0**
TTG	**Podgorica**	**4.58**	**66**	⇑*i*Pn	**P**	**21 24 20.9**	**+1.1**
TTG				*e*Sn	**S**	**21 25 22.8**	**-1.0**
TTG	**Podgorica**	**4.58**	**66**	*e*P	**P**	**21 24 21.3**	**+1.4**
TTG				*e*S	**S**	**21 25 24.0**	**+0.2**
TTG	**Podgorica**	**4.58**	**66**	*e*P	**P**	**21 24 21.3**	**+1.4**
TTG				*e*S	**S**	**21 25 24.0**	**+0.2**
TTG	**Podgorica**	**4.58**	**66**	*e*P	**P**	**21 24 21.3**	**+1.4**
TTG				*e*S	**S**	**21 25 24.0**	**+0.2**
UPM	**Unac-Piva**	**4.69**	**56**	⇓*i*Pn	**P**	**21 24 22.4**	**+1.4**
UPM				*e*Sn	**S**	**21 25 24.8**	**-1.3**
UPM	**Unac-Piva**	**4.69**	**56**	⇓*i*Pn	**P**	**21 24 22.4**	**+1.4**
UPM				*e*Sn	**S**	**21 25 24.8**	**-1.3**
BLY	**Banja Luka**	**4.85**	**32**	⇑*i*P	**P**	**21 24 22.9**	**+0.5**
BLY	**Banja Luka**	**4.85**	**32**	*e*P	**P**	**21 24 22.7**	**+0.4**
BLY	**Banja Luka**	**4.85**	**32**	⇑*i*Pn	**P**	**21 24 22.8**	**+0.4**
KOME	**Kolasin**	**4.92**	**62**	⇓*i*Pn	**P**	**21 24 24.8**	**+1.5**
KOME				*e*Sn	**S**	**21 25 29.4**	**-0.8**
KOME	**Kolasin**	**4.92**	**62**	⇓*i*Pn	**P**	**21 24 24.8**	**+1.5**
KOME				*e*Sn	**S**	**21 25 29.4**	**-0.8**
BOJS	**Bojanci**	**4.97**	**13**	*i*P	**P**	**21 24 23.7**	**+0.1**
BOJS				*i*S	**S**	**21 25 28.8**	**-2.1**
BOJS	**Bojanci**	**4.97**	**13**	P	**P**	**21 24 23.7**	**+0.1**
BOJS				*i*S	**S**	**21 25 28.8**	**-2.1**
TAMR	**Tamra**	**5.05**	**226**	*e*P	**P**	**21 24 24.5**	**-0.1**
TAMR	**Tamra**	**5.05**	**226**	*e*P	**P**	**21 24 24.5**	**-0.1**
PLE	**Pljevlja**	**5.05**	**56**	⇓*i*Pn	**P**	**21 24 26.0**	**+1.4**
PLE				*e*Sn	**S**	**21 25 31.6**	**-1.1**
PLE	**Pljevlja**	**5.05**	**56**	⇓*i*Pn	**P**	**21 24 26.0**	**+1.4**
PLE				*e*Sn	**S**	**21 25 31.6**	**-1.1**
PVY	**Plav**	**5.13**	**66**	⇑*i*Pn	**P**	**21 24 26.9**	**+1.5**
PVY				*e*Sn	**S**	**21 25 33.4**	**-0.7**
PVY	**Plav**	**5.13**	**66**	⇑*i*Pn	**P**	**21 24 26.9**	**+1.5**
PVY				*e*Sn	**S**	**21 25 33.4**	**-0.7**
BEY	**Berane**	**5.18**	**63**	⇑*i*Pn	**P**	**21 24 28.0**	**+2.1**
BEY				*e*Sn	**S**	**21 25 35.1**	**+0.1**
IVA	**Berane**	**5.18**	**63**	⇑*i*Pn	**P**	**21 24 28.0**	**+2.1**
IVA				*e*Sn	**S**	**21 25 35.1**	**+0.1**
SGD	**Sagiada**	**5.18**	**100**	P	**P**	**21 24 27.0**	**+1.1**
SGD	**Sagiada**	**5.18**	**100**	P	**P**	**21 24 27.0**	**+1.1**
HAPS	**Han Pijesak,Bl**	**5.22**	**47**	⇑*i*Pn	**P**	**21 24 26.3**	**0.0**
IGT	**Igoumenitsa**	**5.28**	**100**	P	**P**	**21 24 27.9**	**+1.0**
IGT	**Igoumenitsa**	**5.28**	**100**	P	**P**	**21 24 27.9**	**+1.0**
IGT	**Igoumenitsa**	**5.28**	**100**	P	**P**	**21 24 27.9**	**+1.0**
IGT	**Igoumenitsa**	**5.28**	**100**	P	**P**	**21 24 27.9**	**+1.0**
CRES	**Cresnjev**	**5.32**	**14**	⇑*i*Pn	**P**	**21 24 26.8**	**-0.4**
BBLS	**Lazići**	**5.35**	**52**	⇑*i*Pn	**P**	**21 24 28.3**	**+0.7**
GCIS	**Gornji Cirnik**	**5.39**	**15**	*i*P	**P**	**21 24 27.9**	**0.0**
GCIS				*i*S	**S**	**21 25 37.3**	**-1.5**
GCIS	**Gornji Cirnik**	**5.39**	**15**	*i*P	**P**	**21 24 27.9**	**0.0**
GCIS				*i*S	**S**	**21 25 37.3**	**-1.5**
SBF	**Sospel**	**5.58**	**307**	*e*P	**P**	**21 24 28.7**	**-1.3**
SBF				*e*Sn	**S**	**21 25 43.2**	**+0.7**
	comp=E,40nm,0.8s						
SBF	**Sospel**	**5.58**	**307**	*e*P	**P**	**21 24 28.7**	**-1.3**
SBF				*e*Sn	**S**	**21 25 43.2**	**+0.7**
	comp=E,20nm,0.8s						
IVAS	**Ivanjica**	**5.66**	**57**	⇓*i*Pn	**P**	**21 24 31.5**	**+0.7**
LKD2	**Lefkada island**	**5.75**	**107**	P	**P**	**21 24 32.4**	**+0.6**
LKD2	**Lefkada island**	**5.75**	**107**	P	**P**	**21 24 32.4**	**+0.6**
LKD2	**Lefkada island**	**5.75**	**107**	P	**P**	**21 24 32.4**	**+0.6**
FSK	**Fiskardo**	**5.81**	**110**	P	**P**	**21 24 32.7**	**+0.3**
EVGI	**Lefkada island**	**5.81**	**108**	P	**P**	**21 24 33.1**	**+0.7**
EVGI	**Lefkada island**	**5.81**	**108**	P	**P**	**21 24 33.1**	**+0.7**
KRUS	**Krusevo**	**5.82**	**81**	*i*P	**P**	**21 24 34.3**	**+1.7**
DIVS	**Divibare**	**5.83**	**52**	*e*P	**P**	**21 24 33.5**	**+0.9**
DIVS	**Divibare**	**5.83**	**52**	*e*P	**P**	**21 24 33.5**	**+0.9**
TEKS	**Tekeris**	**5.83**	**46**	*e*Pn	**P**	**21 24 33.1**	**+0.5**
BIA	**Bitola**	**5.86**	**84**	*i*P	**P**	**21 24 35.5**	**+2.5**
FNA	**Florina**	**5.90**	**86**	*e*P	**P**	**21 24 34.7**	**+1.3**
FNA	**Florina**	**5.90**	**86**	*e*P	**P**	**21 24 34.7**	**+1.3**
LMR	**La Mourre**	**5.92**	**299**	*e*P	**P**	**21 24 32.3**	**-1.2**
LMR	**La Mourre**	**5.92**	**299**	*e*P	**P**	**21 24 32.3**	**-1.2**
FRF	**La Foret Royal**	**5.93**	**301**	*e*P	**P**	**21 24 32.5**	**-1.1**
FRF				*e*Sn	**S**	**21 25 51.1**	**+2.0**
	comp=E,17nm,0.9s						
FRF	**La Foret Royal**	**5.93**	**301**	*e*P	**P**	**21 24 32.5**	**-1.1**
VLS	**Valsamata**	**5.95**	**113**	P	**P**	**21 24 34.0**	**+0.1**
VLS	**Valsamata**	**5.95**	**113**	P	**P**	**21 24 34.0**	**+0.1**
VLS	**Valsamata**	**5.95**	**113**	P	**P**	**21 24 34.0**	**+0.1**
VLS	**Valsamata**	**5.95**	**113**	P	**P**	**21 24 34.0**	**+0.1**
DSL	**Palaion Diasel**	**5.96**	**103**	P	**P**	**21 24 35.2**	**+1.2**
DSL	**Palaion Diasel**	**5.96**	**103**	P	**P**	**21 24 35.2**	**+1.2**
DSL	**Palaion Diasel**	**5.96**	**103**	P	**P**	**21 24 35.2**	**+1.2**
KPRO	**Kipourio**	**5.97**	**94**	P	**P**	**21 24 36.1**	**+2.0**
KPRO	**Kipourio**	**5.97**	**94**	P	**P**	**21 24 36.1**	**+2.0**
KEST	**Kesra**	**5.97**	**216**	P	**P**	**21 24 33.5**	**-0.8**
	comp=E,0.5nm,0.3s,baz=133,slow=14,SNR=15						
KEST	**Kesra**	**5.97**	**216**	*e*P	**P**	**21 24 33.9**	**-0.4**
KEST	**Kesra**	**5.97**	**216**	*e*P	**P**	**21 24 33.9**	**-0.4**
KOGS	**Kog**	**6.08**	**17**	*i*P	**P**	**21 24 35.7**	**+0.6**
KOGS	**Kog**	**6.08**	**17**	*i*P	**P**	**21 24 35.7**	**+0.6**
SOKA	**Soboth**	**6.09**	**9**	*e*S	**S**	**21 25 51.6**	**-0.7**
	comp=E,6.8nm,1.1s						
SOKA	**Soboth**	**6.09**	**9**	S	**S**	**21 25 51.6**	**-0.7**
	comp=E,6.8nm,1.1s						
KFL	**Anninata**	**6.12**	**112**	P	**P**	**21 24 36.0**	**+0.3**
KFL	**Anninata**	**6.12**	**112**	P	**P**	**21 24 36.0**	**+0.3**
SELS	**Selova**	**6.15**	**63**	⇑*i*Pn	**P**	**21 24 36.6**	**+0.7**
TRUS	**Trudelj**	**6.15**	**53**	⇑*i*Pn	**P**	**21 24 36.7**	**+0.8**
GRUS	**Gruza**	**6.17**	**56**	⇑*i*Pn	**P**	**21 24 37.5**	**+1.4**
BEHE	**Becsehely**	**6.23**	**21**	⇑*i*Pn	**P**	**21 24 37.7**	**+1.0**
FGSL	**Fruska Gora**	**6.38**	**43**	⇑*i*Pn	**P**	**21 24 39.5**	**+1.1**
THTN	**Thala**	**6.41**	**219**	*e*P	**P**	**21 24 40.5**	**+1.4**
THTN	**Thala**	**6.41**	**219**	*e*P	**P**	**21 24 40.5**	**+1.4**
PVO	**Paravola**	**6.44**	**106**	P	**P**	**21 24 40.7**	**+1.5**
PVO	**Paravola**	**6.44**	**106**	P	**P**	**21 24 40.7**	**+1.5**
MBDF	**Montbardon**	**6.46**	**311**	*e*P	**P**	**21 24 39.2**	**-0.2**
MBDF				*e*Sn	**S**	**21 26 02.0**	**+2.1**
	comp=E,11nm,0.7s						
MBDF	**Montbardon**	**6.46**	**311**	*e*P	**P**	**21 24 39.2**	**-0.2**
BARS	**Barje**	**6.50**	**68**	⇑*i*Pn	**P**	**21 24 41.4**	**+1.7**
THL	**Klokotos Trika**	**6.54**	**97**	P	**P**	**21 24 41.3**	**+0.6**
THL	**Klokotos Trika**	**6.54**	**97**	P	**P**	**21 24 41.3**	**+0.6**
STIP	**Stip**	**6.55**	**78**	*e*P	**P**	**21 24 40.5**	**-0.3**
EVR	**Evrytania**	**6.55**	**103**	P	**P**	**21 24 42.2**	**+1.2**
EVR	**Evrytania**	**6.55**	**103**	P	**P**	**21 24 42.2**	**+1.2**
EVR	**Evrytania**	**6.55**	**103**	P	**P**	**21 24 42.2**	**+1.2**
DAVOX	**Davos/Dischmat**	**6.67**	**337**	P	**P**	**21 24 40.2**	**-2.1**
	baz=202,slow=11						
BOVS	**Bovan**	**6.70**	**61**	⇓*i*Pn	**P**	**21 24 43.4**	**+1.0**
BNI	**Bardonecchia**	**6.71**	**313**	*e*P	**P**	**21 24 44.1**	**+1.4**
BNI	**Bardonecchia**	**6.71**	**313**	*e*P	**P**	**21 24 44.1**	**+1.4**
ARSA	**Arzberg**	**6.72**	**11**	*e*P	**P**	**21 24 41.5**	**-1.1**
	comp=E,5.4nm,0.9s						
ARSA	**Arzberg**	**6.72**	**11**	P	**P**	**21 24 41.5**	**-1.1**
	comp=E,5.4nm,0.9s						
EFP	**Efpalio**	**6.79**	**107**	P	**P**	**21 24 44.6**	**+1.1**
EFP	**Efpalio**	**6.79**	**107**	P	**P**	**21 24 44.6**	**+1.1**
LIT	**Litokhoron**	**6.80**	**92**	*e*P	**P**	**21 24 44.2**	**+0.5**
LIT	**Litokhoron**	**6.80**	**92**	*e*P	**P**	**21 24 44.2**	**+0.5**
LIT	**Litokhoron**	**6.80**	**92**	*e*P	**P**	**21 24 44.2**	**+0.5**
VAY	**Valandovo**	**6.81**	**82**	*i*P	**P**	**21 24 44.4**	**+0.7**
SMRF	**Simiane la Rot**	**6.81**	**302**	*e*P	**P**	**21 24 42.6**	**-1.1**
SMRF	**Simiane la Rot**	**6.81**	**302**	*e*P	**P**	**21 24 42.6**	**-1.1**
DRO	**Drossia**	**6.84**	**111**	P	**P**	**21 24 44.7**	**+0.6**
DRO	**Drossia**	**6.84**	**111**	P	**P**	**21 24 44.7**	**+0.6**
AGG	**Agios Georgios**	**6.91**	**101**	*e*P	**P**	**21 24 46.2**	**+1.3**
AGG	**Agios Georgios**	**6.91**	**101**	P	**P**	**21 24 45.7**	**+0.8**
AGG	**Agios Georgios**	**6.91**	**101**	*e*P	**P**	**21 24 46.2**	**+1.3**
AGG	**Agios Georgios**	**6.91**	**101**	*e*P	**P**	**21 24 46.2**	**+1.3**
LAKA	**Lakka**	**6.92**	**108**	P	**P**	**21 24 45.8**	**+0.9**
LAKA	**Lakka**	**6.92**	**108**	P	**P**	**21 24 45.8**	**+0.9**
LAKA	**Lakka**	**6.92**	**108**	P	**P**	**21 24 45.8**	**+0.9**
LPG	**La Plagne**	**6.96**	**316**	*e*P	**P**	**21 24 45.7**	**+0.1**
LPG				*e*Sn	**S**	**21 26 12.5**	**+2.5**
	comp=E,11nm,0.7s						
LPG	**La Plagne**	**6.96**	**316**	*e*P	**P**	**21 24 45.7**	**+0.1**
LPL	**La Plagne**	**6.98**	**316**	*e*P	**P**	**21 24 44.2**	**-1.5**
LPL				*e*Sn	**S**	**21 26 13.3**	**+3.0**
	comp=E,4.9nm,0.7s						
LPL	**La Plagne**	**6.98**	**316**	*e*P	**P**	**21 24 44.2**	**-1.5**
KUBS	**Kucevo**	**7.03**	**55**	⇑*i*Pn	**P**	**21 24 44.8**	**-1.2**
ORIF	**Oris-en-Rattie**	**7.09**	**309**	*e*P	**P**	**21 24 45.5**	**-1.3**
ORIF				*e*Sn	**S**	**21 26 14.4**	**+2.0**
	comp=E,28nm,1.3s						
ORIF	**Oris-en-Rattie**	**7.09**	**309**	*e*P	**P**	**21 24 45.5**	**-1.3**
KLV	**Kalavryta, Ach**	**7.12**	**109**	P	**P**	**21 24 47.9**	**+0.7**
KLV	**Kalavryta, Ach**	**7.12**	**109**	P	**P**	**21 24 47.9**	**+0.7**
KLV	**Kalavryta, Ach**	**7.12**	**109**	P	**P**	**21 24 47.9**	**+0.7**
MOA	**Molln**	**7.19**	**4**	*e*P	**P**	**21 24 47.3**	**-0.4**
	comp=E,3.8nm,0.8s						
MOA	**Molln**	**7.19**	**4**	P	**P**	**21 24 47.3**	**-0.4**
	comp=E,3.8nm,0.8s						
MDVR	**Moldovita**	**7.24**	**53**	⇓*i*P	**P**	**21 24 49.1**	**+0.7**
MDVR	**Moldovita**	**7.24**	**53**	⇓*i*P	**P**	**21 24 49.1**	**+0.7**
SENIN	**Lac Senin/Sane**	**7.30**	**323**	*e*P	**P**	**21 24 50.3**	**+1.0**
SENIN				*e*S	**S**	**21 26 18.9**	**+2.1**
SENIN	**Lac Senin/Sane**	**7.30**	**323**	*e*P	**P**	**21 24 50.3**	**+1.0**
ITM	**Ithomi**	**7.36**	**116**	*e*P	**P**	**21 24 49.8**	**-0.1**
ITM	**Ithomi**	**7.36**	**116**	P	**P**	**21 24 49.7**	**-0.1**
ITM	**Ithomi**	**7.36**	**116**	*e*P	**P**	**21 24 49.8**	**-0.1**
PYL	**PYLOS**	**7.38**	**118**	P	**P**	**21 24 49.3**	**-0.8**
PYL	**PYLOS**	**7.38**	**118**	P	**P**	**21 24 49.3**	**-0.8**
PYL	**PYLOS**	**7.38**	**118**	P	**P**	**21 24 49.3**	**-0.8**
VTS	**Vitosha**	**7.44**	**72**	⇑*i*P	**P**	**21 24 51.7**	**+1.0**
VTS	**Vitosha**	**7.44**	**72**	*e*P	**P**	**21 24 50.8**	**+0.1**
VTS	**Vitosha**	**7.44**	**72**	⇑P	**P**	**21 24 51.7**	**+1.0**
VTS	**Vitosha**	**7.44**	**72**	P	**P**	**21 24 51.7**	**+1.0**
CSKK	**Csˆ‡kako**	**7.48**	**25**	⇓*e*Pn	**P**	**21 24 52.3**	**+1.4**

BZS	Buzias	7.66	47	⇑iP	P	21 24 53.8	+0.9
BZS	Buzias	7.66	47	⇑P	P	21 24 53.8	+0.9
BZS	Buzias	7.66	47	P	P	21 24 53.8	+0.9
HERR	Herculane	7.72	54	⇓iP	P	21 24 54.7	+1.1
HERR	Herculane	7.72	54	⇓iP	P	21 24 54.7	+1.1
VIVF	Saint-Julien-l	7.79	305	eP	P	21 24 52.7	-1.7
VIVF				eSn	S	21 26 29.6	+3.1
	comp=E,2.0nm,0.4s						
VIVF	Saint-Julien-l	7.79	305	eP	P	21 24 52.7	-1.7
DYR	Agios Nikonas	7.86	117	P	P	21 24 54.8	-0.5
DYR	Agios Nikonas	7.86	117	P	P	21 24 54.8	-0.5
LASF	Ste Croix	7.98	298	eP	P	21 24 55.1	-1.4
LASF	Ste Croix	7.98	298	eP	P	21 24 55.1	-1.4
CABF	La Chapelle	8.06	320	eP	P	21 24 54.9	-2.4
CABF	La Chapelle	8.06	320	eP	P	21 24 54.9	-2.4
MODS	Modra-Piesok	8.13	18	eP	P	21 24 58.9	+1.0
MODS	Modra-Piesok	8.13	18	eP	P	21 24 58.9	+1.0
MODS	Modra-Piesok	8.13	18	eP	P	21 24 58.9	+1.0
GEA0	GERESS Array S	8.16	0	eP	P	21 24 58.1	-0.2
GEA0	GERESS Array S	8.16	0	eP	P	21 24 58.1	-0.2
GEC2	GERESS Array S	8.17	0	eP	P	21 24 59.3	+0.8
GEC2	GERESS Array S	8.17	0	eP	P	21 24 59.3	+0.8
GEC2	GERESS Array S	8.17	0	eP	P	21 24 59.3	+0.8
GERES	GERESS Array B	8.17	0	P	P	21 24 57.7	-0.7
	comp=E,0.2nm,0.3s,baz=173,slow=12,SNR=5.9						
PSZ	Piszkesteto	8.53	30	⇑iP	P	21 25 03.9	+1.5
PSZ	Piszkesteto	8.53	30	ePn	P	21 25 04.7	+2.3
PSZ	Piszkesteto	8.53	30	eP	P	21 25 03.6	+1.2
PSZ	Piszkesteto	8.53	30	⇑P	P	21 25 03.9	+1.5
PSZ	Piszkesteto	8.53	30	eP	P	21 25 03.6	+1.2
DEV	Deva	8.54	49	⇑iP	P	21 25 04.7	+2.2
DEV	Deva	8.54	49	⇑P	P	21 25 04.7	+2.2
DEV	Deva	8.54	49	P	P	21 25 04.7	+2.2
KRUC	Moravsky	8.61	12	eP	P	21 25 04.6	+1.3
HINF	Hinteralfeld	8.63	328	eP	P	21 25 01.4	-2.1
HINF	Hinteralfeld	8.63	328	eP	P	21 25 01.4	-2.1
VYHS	Vyhne	8.66	24	eP	P	21 25 04.7	+0.9
VYHS	Vyhne	8.66	24	eP	P	21 25 04.7	+0.9
VYHS	Vyhne	8.66	24	eP	P	21 25 04.7	+0.9
JAVC	Velka Javorina	8.68	18	eP	P	21 25 06.3	+2.3
LOT	Lotru	8.83	54	⇓iP	P	21 25 08.3	+2.4
LOT	Lotru	8.83	54	⇓iP	P	21 25 08.3	+2.4
VRAC	Vranov	8.89	13	P	P	21 25 07.8	+1.5
	comp=E,0.4nm,0.3s,baz=192,slow=11,SNR=14						
VRAC	Vranov	8.89	13	⇑iP	P	21 25 08.0	+1.7
VRAC	Vranov	8.89	13	⇑P	P	21 25 08.0	+1.7
VRAC	Vranov	8.89	13	P	P	21 25 08.0	+1.7
VRAC	Vranov	8.89	13	eP	P	21 25 07.7	+1.5
MTLF	Montolieu	8.89	291	eP	P	21 25 04.5	-2.0
MTLF	Montolieu	8.89	291	eP	P	21 25 04.5	-2.0
CDF	Champ du Feu	8.96	332	eP	P	21 25 05.1	-2.1
CDF	Champ du Feu	8.96	332	eP	P	21 25 05.1	-2.1
DRGR		8.98	44	⇓iP	P	21 25 09.3	+1.8
DRGR		8.98	44	⇓P	P	21 25 09.3	+1.8
DRGR		8.98	44	P	P	21 25 09.3	+1.8
HAU	Haudompre	8.98	327	eP	P	21 25 06.5	-0.9
HAU	Haudompre	8.98	327	eP	P	21 25 06.5	-0.9
GRFO	Grafenberg	9.17	350	eP	P	21 25 10.3	+0.9
GRFO	Grafenberg	9.17	350	eP	P	21 25 10.3	+0.9
GRFO	Grafenberg	9.17	350	eP	P	21 25 10.3	+0.9
SMF	Signal de Mont	9.26	313	eP	P	21 25 07.6	-2.8
SMF	Signal de Mont	9.26	313	ePn	P	21 25 17.6	+7.2
SMF	Signal de Mont	9.26	313	eP	P	21 25 07.6	-2.8
GOPC	GO Pecny, Ondr	9.28	5	eP	P	21 25 11.7	+1.1
GOPC	GO Pecny, Ondr	9.28	5	eP	P	21 25 11.7	+1.1
GOPC	GO Pecny, Ondr	9.28	5	eP	P	21 25 11.7	+1.1
ARR	Arges	9.33	56	⇑iP	P	21 25 14.0	+2.6
ARR	Arges	9.33	56	⇑iP	P	21 25 14.0	+2.6
CJR	Cluj-Napoca	9.41	47	⇓iP	P	21 25 14.2	+2.0
CJR	Cluj-Napoca	9.41	47	⇓P	P	21 25 14.2	+2.0
CJR	Cluj-Napoca	9.41	47	P	P	21 25 14.2	+2.0
LANS	Liptovska Anna	9.43	24	eP	P	21 25 14.7	+2.3
LANS	Liptovska Anna	9.43	24	eP	P	21 25 14.7	+2.3
LANS	Liptovska Anna	9.43	24	eP	P	21 25 14.7	+2.3
ALN	Alexandroupoli	9.44	85	eP	P	21 25 12.9	+0.5
ALN	Alexandroupoli	9.44	85	eP	P	21 25 13.0	+0.5
ALN	Alexandroupoli	9.44	85	eP	P	21 25 13.0	+0.5
CAF	Calviac	9.49	300	eP	P	21 25 11.0	-2.1
CAF	Calviac	9.49	300	eP	P	21 25 11.0	-2.1
MORC	Moravsky Berou	9.51	16	⇑iP	P	21 25 13.7	+0.5
MORC	Moravsky Berou	9.51	16	eP	P	21 25 14.9	+1.6
MORC	Moravsky Berou	9.51	16	⇑P	P	21 25 13.7	+0.5
MORC	Moravsky Berou	9.51	16	P	P	21 25 13.7	+0.5
MORC	Moravsky Berou	9.51	16	eP	P	21 25 14.8	+1.6
AVF	Avril sur Loir	9.61	313	eP	P	21 25 12.9	-1.4
AVF	Avril sur Loir	9.61	313	eP	P	21 25 12.9	-1.4
VOIR		9.63	57	⇑iP	P	21 25 17.1	+2.5
VOIR		9.63	57	⇑P	P	21 25 17.1	+2.5
VOIR		9.63	57	P	P	21 25 17.1	+2.5
LOR	Lormes	9.63	316	eP	P	21 25 13.5	-1.1
LOR	Lormes	9.63	316	eP	P	21 25 13.5	-1.1
KRLC	Kraliky	9.66	12	eP	P	21 25 17.1	+2.2
KRLC	Kraliky	9.66	12	eP	P	21 25 17.1	+2.2
KRLC	Kraliky	9.66	12	eP	P	21 25 17.1	+2.2
PAGF	Fort de Pagny	9.67	327	eP	P	21 25 13.9	-1.1
PAGF	Fort de Pagny	9.67	327	eP	P	21 25 13.9	-1.1
SSF	Saint Saulge	9.69	315	eP	P	21 25 13.1	-2.1
SSF	Saint Saulge	9.69	315	eP	P	21 25 13.1	-2.1
BGF	Bois d'Agland	9.77	311	eP	P	21 25 14.2	-1.9
BGF	Bois d'Agland	9.77	311	eP	P	21 25 14.2	-1.9
TRPA	Tarpa	9.81	38	⇑iP	P	21 25 18.1	+1.6
TRPA	Tarpa	9.81	38	⇑iP	P	21 25 18.1	+1.6
DPC	Dobruska-Polom	9.86	10	eP	P	21 25 18.9	+1.8
DPC	Dobruska-Polom	9.86	10	eP	P	21 25 18.9	+1.8
DPC	Dobruska-Polom	9.86	10	eP	P	21 25 18.9	+1.8
MEZF	Maizieres J'vi	9.92	325	eP	P	21 25 17.3	-0.4
MEZF	Maizieres J'vi	9.92	325	eP	P	21 25 17.3	-0.4
APE	Apeiranthos	9.97	107	iP	P	21 25 18.9	+0.4
APE	Apeiranthos	9.97	107	iP	P	21 25 18.9	+0.4
RJF	Les Rejaudoux	9.99	302	eP	P	21 25 17.3	-1.3
RJF	Les Rejaudoux	9.99	302	eP	P	21 25 17.3	-1.3
TCF	Toulx Ste Croi	10.00	308	eP	P	21 25 17.1	-1.6
TCF	Toulx Ste Croi	10.00	308	eP	P	21 25 17.1	-1.6
MLR	Muntele Rosu	10.22	58	P	P	21 25 22.9	+1.7
	comp=E,0.2nm,0.3s,baz=122,slow=24,SNR=12						
MLR	Muntele Rosu	10.22	58	eP	P	21 25 21.8	+0.6
MLR	Muntele Rosu	10.22	58	eP	P	21 25 21.8	+0.6
LFF	La Frestale	10.37	298	eP	P	21 25 23.6	+0.8
LFF	La Frestale	10.37	298	eP	P	21 25 23.6	+0.8
IDI	Anoyia	10.40	118	P	P	21 25 24.3	+1.0
	comp=E,3.3nm,0.3s,baz=318,slow=14,SNR=16						
IDI	Anoyia	10.40	118	⇑iP	P	21 25 24.4	+1.1
IDI	Anoyia	10.40	118	eP	P	21 25 23.1	-0.2
IDI	Anoyia	10.40	118	eP	P	21 25 23.1	-0.2
WLF	Walferdange	10.41	332	eP	P	21 25 24.6	+1.4
WLF	Walferdange	10.41	332	eP	P	21 25 24.5	+1.4
OJC	Ojcow	10.48	22	eP	P	21 25 24.4	+0.5
OJC	Ojcow	10.48	22	eP	P	21 25 24.4	+0.5
OJC	Ojcow	10.48	22	eP	P	21 25 24.4	+0.5
ETSF	Etsaut	10.81	286	eP	P	21 25 27.1	-0.7
ETSF	Etsaut	10.81	286	eP	P	21 25 27.1	-0.7
BUR04	Bucovina Ar. S	10.84	46	eP	P	21 25 30.6	+2.6
BUR04	Bucovina Ar. S	10.84	46	eP	P	21 25 30.6	+2.6
BUR08	Bucovina Ar. S	10.85	46	eP	P	21 25 30.2	+2.1
BUR08	Bucovina Ar. S	10.85	46	eP	P	21 25 30.2	+2.1
KWP	Kalwaria Pacla	11.01	33	eP	P	21 25 31.9	+2.1
KWP	Kalwaria Pacla	11.01	33	eP	P	21 25 31.9	+2.1
KWP	Kalwaria Pacla	11.01	33	eP	P	21 25 31.9	+2.1
GIVF	Givet	11.26	330	eP	P	21 25 32.5	0.0
GIVF	Givet	11.26	330	eP	P	21 25 32.5	0.0
TLB	Topalu	11.32	65	⇑iP	P	21 25 34.1	+0.9
TLB	Topalu	11.32	65	⇑P	P	21 25 34.1	+0.9
TLB	Topalu	11.32	65	P	P	21 25 34.1	+0.9
BAIF	Baives	11.47	328	eP	P	21 25 34.4	-0.4
BAIF	Baives	11.47	328	eP	P	21 25 34.4	-0.4
MFF	Saint Martin d	11.59	305	eP	P	21 25 35.9	-0.2
MFF	Saint Martin d	11.59	305	eP	P	21 25 35.9	-0.2
KARP	Karpathos	11.83	111	eP	P	21 25 38.2	-0.9
KARP	Karpathos	11.83	111	eP	P	21 25 38.2	-0.9
TLCR		12.02	63	⇓iP	P	21 25 41.5	+0.7
TLCR		12.02	63	⇓P	P	21 25 41.5	+0.7
TLCR		12.02	63	P	P	21 25 41.5	+0.7
LEOM	Leova	12.09	57	⇑iP	P	21 25 42.9	+1.3
LEOM	Leova	12.09	57	⇑P	P	21 25 42.9	+1.3
LEOM	Leova	12.09	57	P	P	21 25 42.9	+1.3
LDF	La Druitiere	12.57	314	eP	P	21 25 45.9	-1.0
LDF	La Druitiere	12.57	314	eP	P	21 25 45.9	-1.0
FLN	La Foliniere	12.86	314	eP	P	21 25 49.0	-1.1
FLN	La Foliniere	12.86	314	eP	P	21 25 49.0	-1.1
GRR	Gorron	12.87	312	eP	P	21 25 49.0	-1.2
GRR	Gorron	12.87	312	eP	P	21 25 49.0	-1.2
SORM	Soroca	12.90	50	⇓iP	P	21 25 51.7	+1.3
SORM	Soroca	12.90	50	⇓P	P	21 25 51.7	+1.3
SORM	Soroca	12.90	50	P	P	21 25 51.7	+1.3
ES19	SONSECA Array	13.43	272	eP	P	21 25 56.1	-0.4
ES19	SONSECA Array	13.43	272	eP	P	21 25 56.1	-0.4
ESDC	Sonseca Array	13.48	271	P	P	21 25 56.5	-0.5
	comp=E,0.2nm,0.3s,baz=76,slow=11,SNR=5.8						
SGMF	Saint Gilles	13.79	309	eP	P	21 25 59.1	-1.1
QUIF	Quistinic	14.01	307	eP	P	21 26 01.7	-0.9
QUIF	Quistinic	14.01	307	eP	P	21 26 01.7	-0.9
ROSF	Rostrenen	14.26	308	eP	P	21 26 03.8	-1.5
ROSF	Rostrenen	14.26	308	eP	P	21 26 03.8	-1.5
KLNR	Kaliningrad	14.62	15	iP	P	21 26 09.4	+0.4
AK11	Malin Array Si	14.74	42	eP	P	21 26 09.8	-0.7
AK11	Malin Array Si	14.74	42	eP	P	21 26 09.8	-0.7
KIEV	Kiev	14.77	42	eP	P	21 26 10.6	-0.2
KIEV	Kiev	14.77	42	c iP	P	21 26 10.5	-0.2
KIEV	Kiev	14.77	42	eP	P	21 26 10.6	-0.2
AKASG	Malin Array Be	14.79	42	P	P	21 26 10.4	-0.5
	comp=E,13nm,0.3s,baz=238,slow=10,SNR=35						
AKBB	Malin Array Si	14.79	42	eP	P	21 26 10.8	-0.1
AKBB	Malin Array Si	14.79	42	eP	P	21 26 10.8	-0.1
SUW	Suwalki	14.81	23	eP	P	21 26 11.9	+0.8
SUW	Suwalki	14.81	23	eP	P	21 26 11.6	+0.4
SUW	Suwalki	14.81	23	eP	P	21 26 11.6	+0.4
BR131	Keskin Array S	15.34	87	eP	P	21 26 18.3	+1.1
BR131	Keskin Array S	15.34	87	eP	P	21 26 18.3	+1.1
BRTR	Keskin Array B	15.34	87	P	P	21 26 18.5	+1.3
	comp=E,0.2nm,0.3s,baz=266,slow=8.5,SNR=8.9						
PABE	Paberze	16.34	21	eP	P	21 26 27.4	-0.1
MDT	Midelt	16.56	248	P	P	21 26 28.2	-2.2
	comp=E,0.1nm,0.3s,baz=68,slow=12,SNR=5.3						
CSS	Mathiatis	16.58	104	eP	P	21 26 31.2	+0.8
	comp=E,9.3nm,1.2s						
CSS	Mathiatis	16.58	104	eP	P	21 26 31.2	+0.8
	comp=E,9.3nm,1.2s						
IIGN	Ignalina	16.89	25	eP	P	21 26 32.5	-0.8
IIGN				IAmb	IAmb	21 26 34.0	
	comp=Z,3.2nm,0.6s						
IDID	Didziasalis	17.03	26	eP	P	21 26 34.4	-0.4
IDID				IAmb	IAmb	21 26 35.4	
	comp=Z,5.3nm,0.6s						
EKA	Eskdalemuir Ar	18.39	328	P	P	21 26 47.5	-1.7
	baz=140,slow=11,SNR=20						
SOC	Sochi	19.55	73	eP	P	21 26 59.9	-0.8
SOC				pmax	pmax		
	comp=Z,20nm,0.8s						
VSU	Vasula	19.67	21	iP	P	21 27 00.9	-0.6
VSU				pmax	pmax		
	comp=Z,43nm,1.0s						
VORD	Divnogorie	20.54	51	eP	P	21 27 08.9	-0.7
VORD				pmax	pmax		
	comp=Z,6.0nm,0.4s						
VSR	Storozhevoye	20.56	51	eP	P	21 27 09.0	-0.7
VSR				pmax	pmax		
	comp=Z,30nm,0.8s						
VSR	Storozhevoye	20.56	51	eP	P	21 27 09.0	-0.7
	comp=Z,30nm,0.8s						
OBN	Obninsk	20.97	39	⇓eP	P	21 27 12.0	-1.4
OBN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
NEY	Neytrino	21.75	74	iP	P	21 27 21.1	+0.1
NEY				pmax	pmax		
	comp=Z,1.0nm,1.0s						
KBZ	Khabaz	21.86	72	P	P	21 27 23.7	+2.0
	comp=Z,2.2nm,0.6s,baz=256,slow=9.3,SNR=3.7						
FINES	FINESS Array B	22.14	16	P	P	21 27 23.8	-0.3
	comp=Z,1.5nm,0.5s,baz=187,slow=8.4,SNR=4.8						
FIA1	FINESS Array S	22.15	16	eP	P	21 27 24.1	+0.1
NCK	Nalchik	22.37	73	iP	P	21 27 26.7	+0.3
NCK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARCES	ARCESS Array B	29.60	8	P	P	21 28 29.7	-0.4
	comp=Z,1.5nm,0.8s,baz=174,slow=5.6,SNR=4.8						
AKTO	Aktyubinsk	32.15	57	P	P	21 28 53.0	+0.4
	comp=Z,2.5nm,0.9s,baz=278,slow=8.0,SNR=6.8						
AKTO	Aktyubinsk	32.15	57	P	P	21 28 53.0	+0.4
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARU	Arti	32.98	46	P	P	21 28 59.5	0.0
	comp=Z,3.9nm,0.3s,baz=92,slow=23,SNR=11						
ARU	Arti	32.98	46	eP	P	21 28 59.7	+0.2
	comp=Z,5.2nm,0.5s						
ARU	Arti	32.98	46	eP	P	21 28 59.7	+0.2
ARU				pmax	pmax		
	comp=Z,5.0nm,0.5s						
ABKAR	Akbulak array	33.43	59	eP	P	21 29 03.4	0.0
GYA0B	ALIBECK ARRAY	34.27	80	eP	P	21 29 09.5	-1.4
	comp=Z,1.9nm,0.9s						
DBIC	Dimbokro	37.67	211	P	P	21 29 37.9	-1.6
	comp=Z,2.6nm,0.8s,baz=12,slow=12,SNR=2.6						
BRVK	Borovoye	39.66	52	eP	P	21 29 55.9	+0.7
	comp=Z,14nm,0.3s						
BRVK	Borovoye	39.66	52	iP	P	21 29 54.7	-0.5
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BVAR	Borovoye Array	39.72	52	P	P	21 29 57.0	+1.3
	comp=Z,2.4nm,0.6s,baz=286,slow=7.3,SNR=18						
KURBB	Kurchatov Arra	45.10	55	P	P	21 30 38.5	+0.1
	comp=Z,1.5nm,0.6s,baz=281,slow=9.6,SNR=16						
KURK	Kurchatov	45.13	54	eP	P	21 30 38.7	0.0
	comp=Z,2.8nm,0.6s						
KURK	Kurchatov	45.13	54	iP	P	21 30 37.2	-1.5
KURK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KSH	Kashi	46.81	70	eP	P	21 30 52.2	+0.3
KSH				ePP	PP	21 32 47.4	+0.6
ZAA0	Zalesovo Array	48.05	49	eP	P	21 31 00.5	-0.3
	comp=Z,1.6nm,0.6s						
ZALV	Zalesovo Beam	48.05	49	P	P	21 31 00.9	0.0
	comp=Z,2.1nm,0.5s,baz=287,slow=7.5,SNR=8.7						
MK31	Makanchi Array	48.57	59	eP	P	21 31 04.2	-0.7
MK31	Makanchi Array	48.57	59	eP	P	21 31 04.2	-0.7
MKAR	Makanchi Array	48.57	59	P	P	21 31 05.1	+0.1
	comp=Z,1.8nm,0.5s,baz=288,slow=6.4,SNR=27						
MKAR	Makanchi Array	48.57	59	eP	P	21 31 05.0	+0.1
	comp=Z,13nm,0.6s						
MK01	Makanchi Array	48.58	59	eP	P	21 31 04.6	-0.4
WMQ	Urumqi	53.20	60	eP	P	21 31 40.5	+1.4
SONA1	Songino Array	62.94	49	eP	P	21 32 45.1	-0.6
SONM	Songino Array	62.94	49	P	P	21 32 46.6	+1.0
	comp=Z,1.2nm,0.6s,baz=288,slow=7.4,SNR=9.5						
LZH	Lanzhou	67.78	61	eP	P	21 33 17.5	+1.0
LZH				pP	pP	21 34 45.8	0.0
LZH				sP	sP	21 35 29.6	-0.6
LZH				ePP	PP	21 35 51.8	-0.2
LZH				pmax	pmax		
	comp=Z,19nm,1.0s						
LZH				pmax	pmax		
	comp=Z,92nm,4.9s						
HHC	Hu-ho-hao-te	69.93	53	eP	P	21 33 29.7	+0.3
HHC				pmax	pmax		
	comp=Z,26nm,1.1s						
HHC				pmax	pmax		
	comp=Z,51nm,5.2s						
ULM	Lac du Bonnet	70.43	320	P	P	21 33 32.0	-0.1
	comp=Z,0.9nm,0.6s,baz=63,slow=4.5,SNR=3.0						
ULM	Lac du Bonnet	70.43	320	P	P	21 33 32.0	-0.1
ULM				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CMAR	Chiang Mai Arr	74.75	79	P	P	21 33 58.2	+0.5
	comp=Z,0.5nm,0.6s,baz=303,slow=6.7,SNR=4.1						
PDAR	Pinedale Array	82.37	322	P	P	21 34 39.0	+0.3
	comp=Z,0.5nm,0.6s,baz=14,slow=5.0,SNR=5.7						

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*DDA **12** 21:23:42.3, 36°.26N×28°.85E, h7^{km}, Ml2.7*

*CSEM **12** 21:23:43.4±0.4, 36°.25N×28°.95E, h10^{km}, ML2.3, Error ellipse: s-maj=6.9km s-min=4.6km az=10.0*

ISK 12 21:23:42.9, 36°.27N×28°.96E, h14^{km}, ML2.3/6, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FETY	Fethiye	0.38	15	PG	Pg	21 23 50.9	+0.3
FETY				SG	Sb	21 23 57.0	-0.2
FETY	Fethiye	0.38	15	ePg	Pg	21 23 50.9	+0.3
FETY				eSg	Sb	21 23 57.0	-0.2
AKAS	Kas	0.53	94	PG	Pg	21 23 53.6	+0.3
AKAS				SG	Sb	21 24 01.8	+0.3
AKAS	Kas	0.53	94	iP	Pb	21 23 53.7	-0.3
AKAS				iS	Sb	21 24 02.2	+0.7
AKAS	Kas	0.53	94	ePg	Pg	21 23 53.6	+0.3
AKAS				eSg	Sb	21 24 01.8	+0.3
AKAS				S	Sg	21 24 02.2	+1.9
DALY	Dalyan (Mu˜la	0.60	336	PG	Pb	21 23 55.2	0.0
DALY				SG	Sb	21 24 03.9	+0.4
DALY	Dalyan (Mu˜la	0.60	336	iP	Pb	21 23 54.9	-0.2
DALY				iS	Sb	21 24 04.0	+0.5
DALY	Dalyan (Mu˜la	0.60	336	P	Pg	21 23 54.9	+0.3
DALY	Dalyan (Mu˜la	0.60	336	ePg	Pb	21 23 55.2	0.0
DALY				eSg	Sb	21 24 03.9	+0.4
TURN	Turunc	0.67	335	PG	Pn	21 23 58.0	+0.1
TURN	Turunc	0.67	335	ePg	Pn	21 23 58.0	+0.1
ARG	Arkhangelos	0.67	266	PG	Pb	21 23 56.6	+0.1
ARG	Arkhangelos	0.67	266	ePg	Pb	21 23 56.6	+0.1
YER	Yerkesik	1.02	328	PG	Pn	21 24 03.1	+0.2
YER	Yerkesik	1.02	328	ePg	Pn	21 24 03.1	+0.2
GOLH	Golhisar	1.08	26	iP	Pg	21 24 04.2	+0.4
GOLH				iS	Sn	21 24 20.4	+1.8
GOLH	Golhisar	1.08	26	P	Pg	21 24 04.2	+0.4
GOLH				S	Sn	21 24 20.4	+1.8
TAVA	DENIZLI_Tavas	1.20	358	iP	Pb	21 24 05.6	+0.2
TAVA				iS	Sg	21 24 22.9	+1.3
TAVA	DENIZLI_Tavas	1.20	358	P	Pb	21 24 05.6	+0.2
TAVA				S	Sg	21 24 22.9	+1.4
DAT	Datca	1.20	293	PN	Pg	21 24 06.0	-0.1
DAT	Datca	1.20	293	ePn	Pg	21 24 06.0	-0.1
AYDN	Tasoluk	1.64	328	iP	Pg	21 24 13.7	-0.6
AYDN				iS	Sg	21 24 35.0	-0.6
AYDN	Tasoluk	1.64	328	P	Pg	21 24 13.7	-0.6
AYDN				S	Sg	21 24 35.0	-0.6

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*ISK **12** 21:56:26.9, 38°.41N×40°.83E, h9^{km}, ML2.5/6*

*ISCJB **12** 21:56:27.5±0.4, 38°.41N±0°.02×40°.83E±0°.03, h6^{km}±4^{km}, Error ellipse: s-maj=4.0km s-min=3.1km az=167.9*

*CSEM **12** 21:56:27.5±0.1, 38°.41N×40°.83E, h10^{km}, ML2.4, Error ellipse: s-maj=2.9km s-min=2.2km az=44.0*

*DDA **12** 21:56:27.4, 38°.41N×40°.82E, h7^{km}, Ml2.4*

ISC 12 21:56:27.6±1.0, **38°.41N**±0°.02×**40°.82E**±0°.02, **h8**^{km}±9^{km}, **n35, σ0^{s}.53**/58, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HANI	Diyarbakir_Han	0.33	271	iP	Pg	21 56 34.0	-0.2
HANI	Diyarbakir_Han	0.33	271	P	Pg	21 56 34.0	-0.2
SVAN	Silvan-Diyarba	0.39	131	PG	Pg	21 56 34.9	-0.4
SVAN				SG	Sg	21 56 40.9	+0.5
SVAN	Silvan-Diyarba	0.39	131	iP	Pg	21 56 34.8	-0.4
SVAN				iS	Sg	21 56 41.0	+0.6
SVAN	Silvan-Diyarba	0.39	131	ePg	Pg	21 56 34.9	-0.4
SVAN				eSg	Sg	21 56 40.9	+0.5
BINT	Bingol	0.53	331	ePg	Pb	21 56 38.7	-0.6
BINT				eSg	Sb	21 56 47.7	+0.5
BGOL	Bingol	0.59	348	iP	Pg	21 56 38.6	-0.4
BGOL				iS	Sg	21 56 47.6	+0.8
BGOL	Bingol	0.59	348	P	Pg	21 56 38.6	-0.4
BGOL				S	Sg	21 56 47.6	+0.8
BNGB	Bingˆ¶l	0.59	349	PG	Pg	21 56 38.7	-0.4
BNGB				SG	Sb	21 56 47.7	-1.1
BNGL	BINGOL	0.60	25	iP	Pg	21 56 39.0	-0.2
BNGL				iS	Sb	21 56 48.7	-0.4
BTMN	Batman	0.63	146	iP	Pg	21 56 39.9	+0.2
BTMN				iS	Sb	21 56 49.5	-0.3
BTMN	Batman	0.63	146	P	Pg	21 56 39.9	+0.2
BTMN				S	Sb	21 56 49.5	-0.3
DIY	Diyarbakir	0.70	223	ePg	Pg	21 56 41.2	+0.2
DIY				eSg	Sb	21 56 51.4	-0.4
DYBB	Diyarbakir	0.71	230	PG	Pg	21 56 41.2	0.0
DYBB				SG	Sb	21 56 51.4	-0.7
GURO	Guroymak-BITLI	0.96	81	PG	Pg	21 56 45.7	-0.3
GURO				SG	Sb	21 56 59.5	+0.1
GURO	Guroymak-BITLI	0.96	81	ePg	Pg	21 56 45.7	-0.3
GURO				eSg	Sb	21 56 59.5	+0.1
SRTM	Siirt_Merkez	0.96	115	iP	Pg	21 56 46.0	0.0
SRTM				iS	Sn	21 57 03.1	+1.7
SRTM	Siirt_Merkez	0.96	115	P	Pg	21 56 46.0	0.0
MAZI	Mazidag	0.99	198	PG	Pg	21 56 46.4	-0.3
MAZI				SG	Sb	21 57 00.7	+0.3
MAZI	Mazidag	0.99	198	ePg	Pg	21 56 46.4	-0.3
MAZI				eSg	Sb	21 57 00.7	+0.3
YEDI	Yedisu-Bingol	1.05	348	PG	Pg	21 56 47.4	-0.4
YEDI	Yedisu-Bingol	1.05	348	ePg	Pg	21 56 47.4	-0.4
MARD	Mardin	1.09	182	iP	Pg	21 56 48.2	-0.4
MARD				iS	Sn	21 57 03.7	-1.0
SVRC	Sivrice-ELAZID	1.19	269	PN	Pb	21 56 50.3	-0.2
SVRC				SN	Sn	21 57 07.3	+0.1
SVRC	Sivrice-ELAZID	1.19	269	ePn	Pb	21 56 50.3	-0.2
SVRC				eSn	Sn	21 57 07.3	+0.1
PTK	Pertek	1.22	294	PN	Pb	21 56 50.6	-0.4
PTK				SN	Sn	21 57 08.1	+0.2
PTK	Pertek	1.22	294	ePn	Pb	21 56 50.6	-0.4
PTK				eSn	Sn	21 57 08.1	+0.2
TNCL	Tunceli-Merkez	1.22	305	iP	Pg	21 56 51.3	+0.2
TNCL				iS	Sn	21 57 09.7	+1.8
TNCL	Tunceli-Merkez	1.22	305	P	Pg	21 56 51.3	+0.2
SIRT	Sirnak	1.57	125	PN	Pn	21 56 55.7	-0.1
SIRT	Sirnak	1.57	125	ePn	Pn	21 56 55.7	-0.1
URFA	Urfa	1.85	239	PN	Pn	21 56 59.5	-0.3
URFA	Urfa	1.85	239	ePn	Pn	21 56 59.5	-0.3
MALT	Malatya	1.89	268	PN	Pn	21 57 00.2	0.0
MALT	Malatya	1.89	268	ePn	Pn	21 57 00.2	0.0

IDC 12 22:37:05.7±2.5, **6°.37S**×**130°.43E, h151**^{km}±34^{km}, **mb3.2**/1, **mb1 3.3**/5, **mb1mx3.0**/49, **mbtmp3.7**/5, **MS3.4**/1, **Ms1 3.4**/1, **ms1mx2.3**/19, **Error ellipse: s-maj=59.7km s-min=20.3km az=88.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	5.52	9	P	Pn	22 38 26.6	+0.5
	2.9nm,0.3s,baz=131,slow=23,SNR=24						
SIJI				S	Sn	22 39 23.6	-5.3
	5.1nm,0.3s,baz=127,slow=23,SNR=8.6						
FITZ	Fitzroy Crossi	12.56	201	P	Pn	22 39 57.3	-2.0
	0.3nm,0.3s,baz=32,slow=11,SNR=13						
FITZ				S	Sn	22 42 04.3	-14
	0.2nm,0.3s,baz=0.0,slow=7.1,SNR=2.7						
WRA	Warramunga Arr	14.02	165	P	Pn	22 40 17.7	-0.2
	0.3nm,0.3s,baz=346,slow=11,SNR=12						
WRA				S	Sn	22 42 46.1	-7.2
	0.8nm,0.3s,baz=343,slow=22,SNR=12						
ASAR	Alice Springs	17.52	169	P	Pn	22 41 01.6	+0.8
	0.3nm,0.3s,baz=345,slow=10,SNR=13						
ASAR				S	S	22 44 10.2	-4.3
	0.2nm,0.3s,baz=360,slow=29,SNR=4.6						
TGY	Tagaytay City	22.41	335	LR	LR	22 51 17.0	
	comp=Z,101nm,19.8s,baz=352,slow=38						
MKAR	Makanchi Array	67.93	326	P	P	22 47 48.0	-0.2
	0.2nm,0.3s,baz=122,slow=7.0,SNR=4.0						

MEX 12 22:47:28.4±0.9, **27°.74N**×**111°.84W, h5**^{km}±25^{km}, **MD3.5, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRIG	Santa Rosalia	0.55	220	iP	Pg	22 47 38.1	-0.8
SRIG				eS	Sg	22 47 47.1	+1.0
GUYB	Guaymas	0.87	80	eP	Pg	22 47 43.4	-1.8
GUYB				iS	Sg	22 47 55.2	-1.3
HSIG		1.50	32	iP	Pn	22 47 53.0	-3.0
HSIG				iS	Sn	22 48 10.4	-5.5

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*IDC **12** 23:03:39.4±2.5, 36°.93N×142°.60E, h0^{km}, mb3.6/4, mb1 3.7/6, mb1mx3.4/70, mbtmp3.6/6, ML3.5/2, MS2.9/7, Ms1 2.9/7, ms1mx2.6/60, Error ellipse: s-maj=57.7km s-min=26.2km az=71.0*

*ISCJB **12** 23:03:40.3±1.0, 36°.85N±0°.05×142°.4E±0°.1, h9^{km}, mb3.5/4, MS3.4/3, Error ellipse: s-maj=11.7km s-min=6.5km az=1.4*

*JMA **12** 23:03:44.0±0.3, 36°.87N×142°.18E, h31^{km}, M3.4*

ISC 12 23:03:41.9±1.2, **36°.85N**±0°.05×**142°.3E**±0°.1, **h9**^{km}**, n33, σ1^{s}.35**/25, **mb3.5**/4, **MS3.4**/3, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONAJ	Iwakimizuishiy	1.23	282	P	Pn	23 04 03.7	-1.5
JFK	Kawauchi	1.25	295	P	Pn	23 04 04.2	-1.3
JHO	Hitachi	1.41	261	P	Pn	23 04 06.6	-1.1
JFFD	Fukushimafurud	1.41	280	P	Pn	23 04 06.4	-1.3
JMM	Marumori	1.57	311	P	Pn	23 04 09.2	-0.7

JFT	Otama	1.70	294	P	Pn	23 04 12.0	+0.2
JIO	Ouri	1.77	335	P	Pn	23 04 12.4	-0.3
JIO				*e*S	Sn	23 04 33.1	-2.2
JOU	Okura	1.99	320	P	Pn	23 04 16.6	+0.8
JFY	Yanaizu	2.14	286	P	Pn	23 04 18.6	+0.7
JYS	Shirataka	2.24	308	P	Pn	23 04 20.3	+1.1
JMK	Ichinoseki	2.27	338	P	Pn	23 04 20.3	+0.8
JMK				*e*S	Sn	23 04 47.3	-0.3
JAG	Ashikaga	2.32	260	P	Pn	23 04 20.6	+0.3
BSO1	Boso 1	2.44	206	P	Pn	23 04 22.2	+0.9
JYK	Kaneyama	2.57	324	P	Pn	23 04 24.9	+1.2
MJAR	Matsushiro Arr	3.30	266	Pn	Pn	23 04 35.5	+1.8
	3.1nm,0.3s,baz=89,slow=14,SNR=14						
MJAR				LR	LR	23 06 06.5	
	comp=Z,64nm,18.3s,baz=70,slow=42						
MAT	Matsushiro	3.30	266	P	Pn	23 04 35.0	+1.3
MAT				*e*S	Sn	23 05 15.5	+2.4
JHJ	Hachijo jima 2	4.25	210	Pn	Pn	23 04 47.6	+0.8
	8.3nm,0.3s,baz=0.0,slow=20,SNR=3.7						
JHJ				Sn	Sn	23 05 33.5	-3.1
	10.0nm,0.3s,baz=80,slow=17,SNR=2.8						
USRK	Ussuriysk Ar.	10.74	316	LR	LR	23 10 10.8	
	comp=Z,55nm,20.8s,baz=307,slow=36						
KSRS	Korea Array	11.49	277	LR	LR	23 10 54.9	
	comp=Z,35nm,19.1s,baz=139,slow=37						
JOW	Kunigami	15.53	234	LR	LR	23 13 19.3	
	comp=Z,16nm,18.3s,baz=106,slow=37						
H11N2	WAKE ISLAND Hy	27.45	122	T	T	23 38 16.5	
	baz=314,slow=75,SNR=12						
H11N1	WAKE ISLAND Hy	27.45	122	T	T	23 38 11.2	
	baz=314,slow=75,SNR=8.6						
H11N3	WAKE ISLAND Hy	27.46	122	T	T	23 38 13.0	
	baz=314,slow=75,SNR=8.0						
H11S1	WAKE ISLAND Hy	28.17	124	T	T	23 39 13.1	
	baz=316,slow=76,SNR=7.0						
H11S3	WAKE ISLAND Hy	28.17	124	T	T	23 39 13.4	
	baz=316,slow=76,SNR=7.6						
H11S2	WAKE ISLAND Hy	28.18	124	T	T	23 39 07.2	
	baz=316,slow=76,SNR=8.7						
SONM	Songino Array	28.48	304	P	P	23 09 38.2	+0.9
	0.7nm,0.7s,baz=102,slow=8.2,SNR=5.1						
MKAR	Makanchi Array	44.82	302	P	P	23 11 56.0	-0.1
	0.5nm,0.8s,baz=83,slow=10.0,SNR=4.1						
KURBB	Kurchatov Arra	46.67	308	P	P	23 12 10.0	-0.6
	0.4nm,0.3s,baz=80,slow=8.3,SNR=4.0						
WRA	Warramunga Arr	56.98	189	P	P	23 13 27.6	-0.2
	0.2nm,0.5s,baz=5.4,slow=7.1,SNR=4.4						
GEYT	Alibeck	64.54	299	LR	LR	23 43 05.8	
	comp=Z,23nm,18.2s,baz=220,slow=37						
KVAR	Kislovodsk Arr	71.56	311	LR	LR	23 49 01.8	
	comp=Z,26nm,18.3s,slow=38						
IDI	Anoyia	87.63	313	LR	LR	23 59 31.1	
	comp=Z,13nm,18.2s,baz=57,slow=38						

ISK ***12*** *23:27:52.9, 38°.72N×43°.42E, h8^{km}, ML2.3/5*
ISCJB ***12*** *23:27:53.7±0.5, 38°.73N±0°.02×43°.49E±0°.04, h12^{km}±4^{km}, Error ellipse: s-maj=5.8km s-min=3.6km az=14.9*
CSEM ***12*** *23:27:53.1±0.3, 38°.74N×43°.51E, h15^{km}, ML2.3, Error ellipse: s-maj=6.3km s-min=4.3km az=107.0*
DDA ***12*** *23:27:53.1, 38°.71N×43°.54E, h7^{km}, Ml2.5*
ISC 12 23:27:53.5±0.9**, 38°.72N**±0°.02×**43°.53E**±0°.03**, h13**^{km}±6^{km}**, n31,** σ**1^{s}20**/56**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	Van	0.17	223	PG	Pg	23 27 57.7	+0.2
VANB				SG	Sg	23 28 01.4	+1.1
VANB	Van	0.17	223	*e*Pg	Pg	23 27 57.7	+0.2
VANB				*e*Sg	Sg	23 28 01.4	+1.1
VMUR	Van-Muradiye	0.27	6	*i* P	Pg	23 27 58.3	-1.1
VMUR				*i* S	Sb	23 28 05.0	-0.1
VMUR	Van-Muradiye	0.27	6	P	Pg	23 27 58.3	-1.1
VMUR				S	Sb	23 28 05.0	-0.1
ERCV	ERCIS-VAN	0.34	333	PG	Pg	23 27 59.4	-1.1
ERCV				SG	Sg	23 28 03.9	-1.3
ERCV	ERCIS-VAN	0.34	333	*e*Pg	Pg	23 27 59.4	-1.1
ERCV				*e*Sg	Sg	23 28 03.9	-1.3
CLDR	Caldiran	0.52	35	PG	Pg	23 28 03.8	0.0
CLDR				SG	Sb	23 28 12.8	+0.6
CLDR	Caldiran	0.52	35	*i* P	Pg	23 28 03.5	-0.3
CLDR				*i* S	Sb	23 28 12.2	0.0
CLDR	Caldiran	0.52	35	P	Pg	23 28 03.5	-0.3
CLDR	Caldiran	0.52	35	*e*Pg	Pg	23 28 03.8	0.0
CLDR				S	Sb	23 28 12.2	0.0
GEVA	Gevas	0.55	223	*i* P	Pg	23 28 03.0	-1.3
GEVA				*i* S	Sb	23 28 12.4	-0.6
GEVA	Gevas	0.55	223	P	Pg	23 28 03.0	-1.3
GEVA				S	Sb	23 28 12.4	-0.6
ADCV	BITLIS_Adilcev	0.64	278	*i* P	Pg	23 28 05.3	-0.7
ADCV				*i* S	Sb	23 28 15.9	+0.3
ADCV	BITLIS_Adilcev	0.64	278	P	Pg	23 28 05.3	-0.7
ADCV				S	Sb	23 28 15.9	+0.3
TUTA	Tutak	0.88	321	*i* P	Pg	23 28 09.3	-1.3
TUTA				*i* S	Sb	23 28 22.9	+0.2
TUTA	Tutak	0.88	321	P	Pg	23 28 09.3	-1.3
TUTA				S	Sb	23 28 22.9	+0.2
AGRB	Hanur-Agry	0.95	334	PG	Pg	23 28 10.9	-1.1
AGRB				SG	Sb	23 28 24.2	-0.5
AGRB	Hanur-Agry	0.95	334	*e*Pg	Pg	23 28 10.9	-1.1
AGRB				*e*Sg	Sb	23 28 24.2	-0.5
HAKT	HAKKARI	1.17	173	*i* P	Pg	23 28 13.9	-2.1
HAKT				*i* S	Sn	23 28 32.9	+1.3
HAKT	HAKKARI	1.17	173	P	Pg	23 28 13.9	-2.1
HAKT				S	Sn	23 28 32.9	+1.3
GURO	Guroymak-BITLI	1.19	262	PN	Pg	23 28 14.4	-2.0
GURO				SN	Sg	23 28 30.0	-1.8
GURO	Guroymak-BITLI	1.19	262	*e*Pn	Pg	23 28 14.4	-2.0
GURO				*e*Sn	Sg	23 28 30.0	-1.8
IGDI	IGDIR	1.23	20	*i* P	Pb	23 28 15.9	-0.7
IGDI				*i* S	Sn	23 28 34.9	+2.0
EKAR	Karacoban	1.27	296	*i* P	Pg	23 28 18.0	+0.1
EKAR				*i* S	Sn	23 28 38.0	+3.9
EKAR	Karacoban	1.27	296	P	Pg	23 28 18.0	+0.1
SRTM	Siirt_Merkez	1.46	241	*i* P	Pn	23 28 20.0	+0.3
SRTM				*i* S	Sg	23 28 42.1	+1.7
SRTM	Siirt_Merkez	1.46	241	P	Pn	23 28 20.0	+0.3
SRTM				S	Sg	23 28 42.2	+1.7
CUKT	Cukurca	1.47	178	PN	Pb	23 28 20.5	-0.3
CUKT	Cukurca	1.47	178	*e*Pn	Pb	23 28 20.5	-0.3
SIRT	Sirnak	1.49	216	PN	Pn	23 28 19.9	-0.2
SIRT	Sirnak	1.49	216	*e*Pn	Pn	23 28 19.9	-0.2

ISCJB ***12*** *23:33:56.2±0.2, 26°.92N±0°.02×59°.45E±0°.02, h10^{km}, mb4.4/94, MS3.2/18, Error ellipse: s-maj=3.0km s-min=2.3km az=34.4*
IDC ***12*** *23:33:56.5±0.5, 26°.96N×59°.46E, h0^{km}, mb4.3/31, mb1 4.4/35, mb1mx4.3/65, mbtmp4.3/35, ML3.5/3, MS3.2/13, Ms1 3.2/13, ms1mx2.9/61, Error ellipse: s-maj=12.0km s-min=11.0km az=25.0*
NEIC ***12*** *23:33:58.0±0.3, 26°.95N×59°.43E, h10^{km}, mb4.5/28, MN4.3(TEH), Error ellipse: s-maj=6.5km s-min=5.2km az=155.0*
MOS ***12*** *23:33:59.2±0.9, 26°.98N×59°.41E, h33^{km}, mb4.6/40, Error ellipse: s-maj=7.2km s-min=4.6km az=104.1*
OMAN ***12*** *23:33:59.8±0.1, 26°.81N×59°.39E, h10^{km}, Error ellipse: s-maj=3.5km s-min=1.4km az=309.0*
CSEM ***12*** *23:33:59.0±0.2, 26°.88N×59°.56E, h15^{km}, mb4.4/30, Error ellipse: s-maj=6.6km s-min=4.3km az=109.0*
THR ***12*** *23:33:59.4±1.0, 26°.73N×59°.34E, h14^{km}±20^{km}, ML4.6*
TEH ***12*** *23:34:00.3, 26°.80N×59°.41E, h10^{km}, ML4.5*
DSN ***12*** *23:34:06.4±2.2, 26°.63N×59°.12E, h15^{km}, ML4.5/9, Error ellipse: s-maj=36.9km s-min=9.9km az=5.0*
ISC 12 23:33:57.8±0.3**, 26°.89N**±0°.03×**59°.40E**±0°.02**, h10**^{km}**, n421,** σ**1^{s}83**/440**, mb4.5**/104**, MS3.1**/18**, 22C-20D, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHBR	Chabahar	1.62	143	*e*Pn	Pg	23 34 28.9	+0.1
CHBR				*e*Sg	Sn	23 34 47.5	+0.2
CHBR				IAML		23 34 49.4	
	comp=E,7µm,0.2s						
CHBR	Chabahar	1.62	143	*e*Pn	Pg	23 34 28.9	+0.1
CHBR	Chabahar	1.62	143	*e*Pn	Pg	23 34 28.9	+0.1
CHBR				*e*Sg	Sn	23 34 47.5	+0.2
KHSK	Kohestak	2.10	267	*e*Pn	Pg	23 34 38.2	0.0
KHSK				*e*		23 35 04.8	
	comp=E,99nm,0.2s						
KHSK				*e*		23 35 05.9	
	comp=N,99nm,0.1s						
KHSK				*e*		23 35 06.8	
	comp=Z,99nm,0.1s						
KHSK	Kohestak	2.10	267	*e*Pn	Pg	23 34 38.2	0.0
NIAN	Nian	2.38	287	*e*Pn	Pb	23 34 41.9	+1.1
NIAN				*e*		23 35 12.5	
	comp=N,99nm,0.1s						
NIAN				*e*		23 35 12.5	
	comp=Z,99nm,0.1s						
NIAN				*e*		23 35 13.8	
	comp=E,99nm,0.1s						
NIAN	Nian	2.38	287	*e*Pn	Pb	23 34 41.9	+1.1
IBND	Bandar-abas	2.61	283	*e*Pn	Pg	23 34 47.2	-0.6
GENO	Geno	2.92	281	*e*Pn	Pb	23 34 48.9	-1.2
GENO				*e*		23 35 24.1	
	comp=N,99nm,0.1s						
GENO				*e*		23 35 24.8	
	comp=E,99nm,0.1s						
GENO				*e*		23 35 26.2	
	comp=Z,99nm,0.1s						
GENO	Geno	2.92	281	*e*Pn	Pb	23 34 48.9	-1.2
BNDS	Bandar-Abbas	2.92	281	*e*Pn	Pn	23 34 47.2	+2.7
BNDS	Bandar-Abbas	2.92	281	*e*Pn	Pn	23 34 47.2	+2.7
BNDS	Bandar-Abbas	2.92	281	*e*Pn	Pn	23 34 47.2	+2.7
BANOM	Banah	2.94	252	P	Pn	23 34 47.0	+2.3
	SNR=82						
BANOM				S	Sn	23 35 22.2	+2.0
BANOM	Banah	2.94	252	*e*P	Pb	23 34 47.9	-2.5
	SNR=82						
BANOM				S	Sn	23 35 20.2	0.0
BANOM	Banah	2.94	252	P	Pn	23 34 47.0	+2.3
	SNR=82						
BANOM				S	Sn	23 35 22.2	+2.0
ZHSF	Zahedan	2.97	24	*e*Pn	Pb	23 34 50.5	-0.4
ZHSF	Zahedan	2.97	24	*e*Pn	Pb	23 34 50.5	-0.4
ZHSF	Zahedan	2.97	24	*e*Pn	Pb	23 34 50.5	-0.4
SHME	Shamm	3.04	255	*e*P	Pb	23 34 49.7	-2.4
	SNR=80						
SHME				S	Sn	23 35 23.9	+1.3
SHME	Shamm	3.04	255	*e*Pn	Pb	23 34 49.9	-2.1
SHME	Shamm	3.04	255	P	Pb	23 34 50.0	-2.1
	SNR=80						
SHME				S	Sn	23 35 24.6	+2.1
MDH	Madha	3.21	241	*e*P	Pn	23 34 50.5	+2.2
	SNR=154						
MDH	Madha	3.21	241	P	Pn	23 34 50.6	+2.2
	SNR=154						
MDH				S	Sn	23 35 25.1	-1.6
MSFE	Esma-Masafi	3.29	243	*e*P	Pn	23 34 51.7	+2.2
	SNR=43						
MSFE	Esma-Masafi	3.29	243	*e*Pn	Pn	23 34 51.8	+2.3
MSFE	Esma-Masafi	3.29	243	P	Pn	23 34 51.5	+2.0
	SNR=43						
MSFE	Esma-Masafi	3.29	243	*e*Pn	Pn	23 34 51.8	+2.3
MSFE				S	Sn	23 35 30.5	+1.8
	SNR=5.1						
CHMN	Cheshme madani	3.38	331	*e*Pn	Pb	23 34 54.8	-3.3
CHMN				*e*		23 34 56.2	
	comp=Z,99nm,0.2s						
CHMN				*e*		23 35 53.4	
	comp=E,99nm,0.2s						
CHMN				*e*		23 35 53.8	
	comp=N,99nm,0.2s						
CHMN	Cheshme madani	3.38	331	*e*Pn	Pb	23 34 54.8	-3.3
UOSS	Minazif	3.47	237	*e*Pn	Pn	23 34 53.9	+2.0
UOSS	Minazif	3.47	237	P	Pn	23 34 53.4	+1.5
	SNR=20						
UOSS	Minazif	3.47	237	*i* P	Pn	23 34 54.0	+2.0
	SNR=167						
UOSS	Minazif	3.47	237	*e*Pn	Pn	23 34 53.9	+2.0
BIDO	Bidbid	3.55	199	P	Pn	23 34 54.7	+1.7
	SNR=30						
BIDO				S	Sn	23 35 34.0	-1.1
	SNR=13						
BIDO	Bidbid	3.55	199	*e*Pn	Pn	23 34 54.7	+1.7
BIDO	Bidbid	3.55	199	P	Pn	23 34 54.7	+1.7
	SNR=30						
BIDO	Bidbid	3.55	199	*e*Pn	Pn	23 34 54.7	+1.7
BIDO				S	Sn	23 35 34.0	-1.1
	SNR=13						
HATD	Hatta, Dubai	3.59	236	P	Pn	23 34 56.0	+2.4
	SNR=36						
HATD				S	Sn	23 35 35.0	-1.2
	SNR=8.4						
HATD	Hatta, Dubai	3.59	236	*i* P	Pn	23 34 55.6	+1.9
	SNR=36						
HATD	Hatta, Dubai	3.59	236	*e*Pn	Pn	23 34 55.7	+2.1
HATD	Hatta, Dubai	3.59	236	*e*Pn	Pn	23 34 55.7	+2.1
HATD	Hatta, Dubai	3.59	236	P	Pn	23 34 56.0	+2.4
	SNR=36						
HATD				S	Sn	23 35 35.0	-1.2
	SNR=8.4						
NGRK	Negar Kerman	3.61	320	*e*Pn	Pb	23 34 59.0	-3.0
NGRK				*e*		23 35 44.0	
	comp=N,99nm,0.1s						
NGRK				*e*		23 35 44.6	
	comp=Z,99nm,0.1s						
NGRK				*e*		23 35 44.7	
	comp=E,99nm,0.1s						
NGRK	Negar Kerman	3.61	320	*e*Pn	Pb	23 34 59.0	-3.0
WSAR	Wadi Sarin	3.71	191	Pn	Pn	23 34 57.7	+2.5
	comp=E,159nm,0.3s,baz=42,slow=9.6,SNR=2356						
WSAR				Sn	Sn	23 35 36.5	-2.4
	comp=E,351nm,0.3s,baz=354,slow=12,SNR=24						
WSAR	Wadi Sarin	3.71	191	P	Pn	23 34 56.7	+1.5
	SNR=3494						
WSAR				S	Sn	23 35 36.7	-2.2
WSAR	Wadi Sarin	3.71	191	P	Pn	23 34 56.7	+1.5
	SNR=1000						
ASHO	Ashiyiah	3.73	235	P	Pn	23 34 58.0	+2.4
	SNR=117						
ASHO				S	Sn	23 35 41.2	+1.6
ASHO	Ashiyiah	3.73	235	*i* P	Pn	23 34 58.5	+2.9
	SNR=117						
ASHO	Ashiyiah	3.73	235	P	Pn	23 34 58.0	+2.4
	SNR=117						
ASHO				S	Sn	23 35 41.2	+1.6
HOQ	Hoqain	3.80	210	P	Pn	23 34 58.3	+1.8
	SNR=35						
HOQ	Hoqain	3.80	210	*e*Pn	Pn	23 34 58.3	+1.8
HOQ	Hoqain	3.80	210	*e*Pn	Pn	23 34 58.3	+1.8
TVBK	TV Kerman	3.86	324	*e*Pn	Pb	23 35 02.4	-3.8
TVBK				*e*		23 35 52.9	
	comp=N,99nm,0.1s						
TVBK				*e*		23 35 53.6	
	comp=Z,99nm,0.1s						
TVBK				*e*		23 35 54.7	
	comp=E,99nm,0.1s						
TVBK	TV Kerman	3.86	324	*e*Pn	Pb	23 35 02.4	-3.8
NAZ	Nazwa, Dubai	3.87	241	P	Pb	23 35 03.0	-3.1
	SNR=24						
NAZ				S	Sn	23 35 44.4	+1.6
NAZ	Nazwa, Dubai	3.87	241	*i* P	Pb	23 35 02.0	-4.1
	SNR=24						
NAZ	Nazwa, Dubai	3.87	241	*e*Pn	Pn	23 35 00.6	+3.3
NAZ	Nazwa, Dubai	3.87	241	*e*Pn	Pn	23 35 00.6	+3.3
NAZ	Nazwa, Dubai	3.87	241	P	Pb	23 35 02.0	-4.1
	SNR=24						
NAZ				S	Sn	23 35 44.4	+1.6
SMDO	Samad	4.01	198	P	Pn	23 35 01.6	+2.2
	SNR=54						
SMDO	Samad	4.01	198	P	Pn	23 35 01.6	+2.2
	SNR=54						
WBK	Wadi Bani Khal	4.28	185	P	Pn	23 35 05.3	+2.2
	SNR=105						
WBK				S	Sn	23 35 51.0	-2.2
	SNR=11						
WBK	Wadi Bani Khal	4.28	185	P	Pn	23 35 05.3	+2.2
	SNR=105						
WBK				S	Sn	23 35 51.0	-2.2
	SNR=11						
ASUD	Al Ashush, Dub	4.31	239	*i* P	Pn	23 35 07.7	+4.2
	SNR=168						
ASUD	Al Ashush, Dub	4.31	239	*e*Pn	Pb	23 35 09.1	-4.6
ASUD	Al Ashush, Dub	4.31	239	P	Pn	23 35 07.7	+4.2
	SNR=168						
ASUD	Al Ashush, Dub	4.31	239	*e*Pn	Pb	23 35 09.1	-4.6
KHGB	Koh Gabri	4.32	324	*e*Pn	Pn	23 35 07.6	+3.8
KHGB				*e*		23 36 02.5	
	comp=E,99nm,0.2s						
KHGB				*e*		23 36 05.3	
	comp=N,99nm,0.2s						
KHGB				*e*		23 36 18.2	
	comp=Z,99nm,0.6s						
KHGB	Koh Gabri	4.32	324	*e*Pn	Pn	23 35 07.6	+3.8
ALNE	Al Ain	4.34	230	*i* P	Pn	23 35 07.7	+3.8
	SNR=102						
ALNE	Al Ain	4.34	230	*e*Pn	Pn	23 35 08.6	+4.7
ALNE	Al Ain	4.34	230	*e*Pn	Pn	23 35 08.6	+4.7
ALNE				S	Sn	23 35 56.6	+1.9
AJN	Ajban	4.61	241	*i* P	Pn	23 35 11.8	+4.3
	SNR=13						
JMDO	Jabal Madar	4.66	195	S	Sn	23 36 03.1	+0.7
	SNR=11						
JMDO	Jabal Madar	4.66	195	S	Sn	23 36 03.1	+0.7
	SNR=11						
JLN	Jalan Bani Buh	4.72	180	P	Pn	23 35 11.0	+1.9
	SNR=8.4						
JLN				S	Sn	23 36 02.2	-1.8
JHRM	Jahrom	5.41	289	*e*		23 36 24.1	
	comp=Z,99nm,0.1s						
JHRM				*e*		23 36 34.0	
	comp=E,99nm,0.2s						
JHRM				*e*		23 36 34.8	
	comp=N,99nm,0.2s						
IKOO	Kooshah	5.52	357	*e*Pn	Pn	23 35 23.4	+3.0
IKOO				*e*		23 35 24.8	
	comp=Z,5µm,0.1s						
IKOO				*e*		23 35 24.9	
	comp=N,8µm,0.1s						
IKOO				*e*		23 35 27.7	
	comp=E,4µm,0.1s						
IKOO	Kooshah	5.52	357	*e*Pn	Pn	23 35 23.4	+3.0
IDAH	Dahanechah	5.84	4	*e*Pn	Pn	23 35 28.5	+3.8
IDAH				*e*		23 35 29.0	
	comp=Z,2µm,0.2s						
IDAH				*e*		23 35 29.4	
	comp=E,1µm,0.2s						
IDAH				*e*		23 35 30.2	
	comp=N,2µm,0.1s						
IDAH	Dahanechah	5.84	4	*e*Pn	Pn	23 35 28.5	+3.8
GHIR	Ghir-Karzin	5.86	285	*e*Pn	Pn	23 35 28.1	+3.2
GHIR				IAML		23 36 33.4	
	comp=E,180nm,0.4s						
GHIR				IAML		23 36 34.4	
	comp=N,203nm,0.6s						
GHIR	Ghir-Karzin	5.86	285	*e*Pn	Pn	23 35 28.1	+3.2
GHIR	Ghir-Karzin	5.86	285	*e*Pn	Pn	23 35 28.1	+3.2
ITEG	Tejag	6.01	355	*e*Pn	Pn	23 35 30.4	+3.4
ITEG				*e*		23 35 30.9	
	comp=Z,6µm,0.2s						
ITEG				*e*		23 35 31.8	
	comp=N,4µm,0.2s						
ITEG				*e*		23 35 32.1	
	comp=E,5µm,0.2s						
ITEG	Tejag	6.01	355	*e*Pn	Pn	23 35 30.4	+3.4
MHTO	MHTO	6.03	193	P	Pn	23 35 30.4	+3.4
	SNR=62						
IMEH	Mehriz	6.13	318	*e*Pn	Pn	23 35 32.0	+3.3
IMEH				*e*		23 36 47.5	
	comp=N,752nm,0.3s						
IMEH				*e*		23 37 22.7	
	comp=Z,811nm,0.4s						
IMEH	Mehriz	6.13	318	*e*Pn	Pn	23 35 32.0	+3.3
IMON	Monand	6.28	2	*e*Pn	Pn	23 35 34.5	+3.7
IMON	Monand	6.28	2	*e*Pn	Pn	23 35 34.5	+3.7
TPRV	Parvadeh(Tabas	6.55	340	*e*Pn	Pn	23 35 37.7	+3.4
TPRV	Parvadeh(Tabas	6.55	340	*e*Pn	Pn	23 35 37.7	+3.4
TKDS	Koohdasht(Taba	6.98	344	*e*Pn	Pn	23 35 43.4	+3.1
TKDS				*e*		23 35 45.5	
	comp=Z,99nm,0.2s						
TKDS				*e*		23 35 45.8	
	comp=N,99nm,0.2s						
TKDS				*e*		23 35 47.7	
	comp=E,99nm,0.2s						
TKDS	Koohdasht(Taba	6.98	344	*e*Pn	Pn	23 35 43.4	+3.1
ISAD	Sadrabad	7.06	316	*e*Pn	Pn	23 35 45.2	+3.7
ISAD				*e*		23 37 09.1	
	comp=E,1µm,0.2s						
ISAD				*e*		23 37 10.8	
	comp=N,1µm,0.3s						
ISAD				*e*		23 37 14.5	
	comp=Z,506nm,0.2s						
ISAD	Sadrabad	7.06	316	*e*Pn	Pn	23 35 45.2	+3.7
TNSJ	Nastanj	7.45	342	*e*Pn	Pn	23 35 49.9	+3.3
TNSJ	Nastanj	7.45	342	*e*Pn	Pn	23 35 49.9	+3.3
IRAM	Ramesheh	7.84	310	*e*Pn	Pn	23 35 54.6	+2.4
IRAM				*e*		23 37 19.2	
	comp=E,2µm,0.3s						
IRAM				*e*		23 37 20.2	
	comp=N,2µm,0.2s						
IRAM				*e*		23 37 23.5	
	comp=Z,1µm,0.2s						
IRAM	Ramesheh	7.84	310	*e*Pn	Pn	23 35 54.6	+2.4
NASN	Na’in	8.21	317	*e*Pn	Pn	23 36 01.2	+3.9
NASN	Na’in	8.21	317	*e*Pn	Pn	23 36 01.3	+3.9
NASN	Na’in	8.21	317	*e*Pn	Pn	23 36 01.2	+3.9
IGAR	Gharneh	8.43	312	*e*Pn	Pn	23 36 02.7	+2.4
IGAR				*e*		23 37 36.2	
	comp=Z,656nm,0.1s						
IGAR				*e*		23 37 36.5	
	comp=N,2µm,0.2s						
IZEF	Zefreh	8.57	316	*e*		23 36 05.6	
	comp=Z,239nm,0.3s						
IZEF				*e*Pn	Pn	23 36 04.9	+2.7
IZEF				*e*		23 37 45.6	
	comp=E,178nm,0.2s						
IZEF				*e*		23 37 46.7	
	comp=N,185nm,0.1s						
BOQSS		9.05	266	P	Pn	23 36 11.1	+2.6
BOQSS				S	Sn	23 37 47.4	-3.2
IMOG	Moghan	9.19	360	*e*Pn	Pn	23 36 14.5	+3.8
IMOG				*e*		23 36 15.4	
	comp=Z,264nm,0.2s						
IMOG				*e*		23 36 16.0	
	comp=E,172nm,0.2s						
IMOG				*e*		23 36 16.4	
	comp=N,204nm,0.2s						
IMOG	Moghan	9.19	360	*e*Pn	Pn	23 36 14.5	+3.8
IKLH	Kolahrood	9.32	315	*e*Pn	Pn	23 36 14.8	+2.3
IKLH				*e*		23 38 01.1	
	comp=N,235nm,0.1s						
IKLH				*e*		23 38 11.7	
	comp=E,232nm,0.1s						
IKLH				*e*		23 38 15.6	
	comp=Z,191nm,0.2s						
IKLH	Kolahrood	9.32	315	*e*Pn	Pn	23 36 14.8	+2.3
ISRO	Mashad	9.39	0	*e*Pn	Pn	23 36 18.7	+5.4
ISRO				*e*		23 36 18.9	
	comp=N,874nm,0.4s						
ISRO				*e*		23 36 19.3	
	comp=Z,1µm,0.5s						
ISRO				*e*		23 39 34.0	
	comp=E,202nm,0.9s						
ISRO	Mashad	9.39	0	*e*Pn	Pn	23 36 18.7	+5.4
IMYA	Miami	9.44	3	*e*Pn	Pn	23 36 18.0	+4.0
IMYA				*e*		23 36 18.7	
	comp=Z,676nm,0.7s						
IMYA				*e*		23 36 33.1	
	comp=E,220nm,0.3s						
IMYA				*e*		23 36 48.3	
	comp=N,179nm,0.3s						
IMYA	Miami	9.44	3	*e*Pn	Pn	23 36 18.0	+4.0
IPAY	Payeh	9.53	358	*e*Pn	Pn	23 36 20.3	+4.9
IPAY				*e*		23 36 21.2	
	comp=Z,336nm,0.4s						
IPAY				*e*		23 36 22.6	
	comp=N,303nm,0.2s						
IPAY				*e*		23 36 23.1	
	comp=E,222nm,0.2s						
IPAY	Payeh	9.53	358	*e*Pn	Pn	23 36 20.3	+4.9
IAKL	Akhelmad	9.70	357	*e*Pn	Pn	23 36 22.0	+4.4
IAKL				*e*		23 36 23.4	
	comp=Z,514nm,0.3s						
IAKL				*e*		23 36 23.4	
	comp=N,423nm,0.1s						
IAKL				*e*		23 36 24.0	
	comp=E,254nm,0.2s						
IKRD	Kardeh	9.88	356	*e*Pn	Pn	23 36 23.6	+3.4
IKRD				*e*		23 36 24.6	
	comp=Z,159nm,0.3s						
IKRD				*e*		23 36 27.3	
	comp=E,151nm,0.2s						
IKRD				*e*		23 36 39.0	
	comp=N,184nm,0.3s						
IKRD	Kardeh	9.88	356	*e*Pn	Pn	23 36 23.6	+3.4
DMTO	DMTO	10.02	205	P	Pn	23 36 23.0	+1.1
	SNR=8.8						
ISFR	Sfrayin	10.20	354	*e*Pn	Pn	23 36 29.3	+4.7
ISFR				*e*		23 36 31.3	
	comp=Z,276nm,0.2s						
ISFR				*e*		23 36 31.6	

	comp=N,406nm,0.2s						
KFJS		10.25	280	P	Pn	23 36 25.1	0.0
ISHM	Shahmirzad	10.30	331	ePn	Pn	23 36 29.6	+3.6
ISHM				e		23 36 31.8	
	comp=Z,191nm,0.3s						
IFIR	Firoozkooh	10.41	329	ePn	Pn	23 36 30.9	+3.5
IFIR				e		23 36 33.0	
	comp=Z,79nm,0.2s						
IFIR				e		23 37 14.4	
	comp=N,101nm,0.3s						
IFIR				e		23 37 38.8	
	comp=E,114nm,0.3s						
IFIR	Firoozkooh	10.41	329	ePn	Pn	23 36 30.9	+3.5
IEMG	Emamgholi	10.51	357	ePn	Pn	23 36 32.4	+3.6
IEMG				e		23 36 34.0	
	comp=Z,207nm,0.3s						
IEMG				e		23 36 38.2	
	comp=E,431nm,0.2s						
IEMG				e		23 36 40.8	
	comp=N,488nm,0.2s						
IEMG	Emamgholi	10.51	357	ePn	Pn	23 36 32.4	+3.6
SHGR	Shooshtar-Gavs	10.59	302	ePn	Pn	23 36 29.6	-0.1
IDMV	Damavand	10.71	326	ePn	Pn	23 36 34.9	+3.4
IDMV				e		23 36 36.9	
	comp=Z,266nm,0.3s						
IDMV	Damavand	10.71	326	ePn	Pn	23 36 34.9	+3.4
GEYT	Alibeck	11.06	355	Pn	Pn	23 36 36.5	+0.5
	comp=Z,0.6nm,0.3s,baz=200,slow=12,SNR=7.1						
GYA0B	ALIBECK ARRAY	11.06	355	ePn	Pn	23 36 37.4	+1.3
GYA0B	ALIBECK ARRAY	11.06	355	ePn	Pn	23 36 37.4	+1.3
CEP	Cherat	12.81	54	P	Pn	23 37 00.7	+0.5
RAYN	Ar Rayn	13.02	258	ePn	Pn	23 37 01.8	-1.2
RAYN	Ar Rayn	13.02	258	eP	Pn	23 37 01.8	-1.2
IVIS	Veis	13.20	308	e		23 37 24.0	
	comp=Z,280nm,0.3s						
IVIS				ePn	Pn	23 37 05.0	-0.5
IVIS				e		23 39 29.8	
	comp=E,369nm,0.2s						
IVIS				e		23 39 33.3	
	comp=N,510nm,0.2s						
NIL	Nilore	13.73	57	ePn	Pn	23 37 14.3	+1.8
	comp=N,18nm,0.5s						
NIL	Nilore	13.73	57	eP	Pn	23 37 14.4	+1.8
NIL				pmax	pmax		
	comp=Z,19nm,0.5s						
NIL	Nilore	13.73	57	ePn	Pn	23 37 14.4	+1.8
	comp=Z,18nm,0.5s						
ISHB	Shabestar	16.22	318	e	P	23 37 53.5	+4.3
	comp=Z,64nm,0.2s						
ISHB				e		23 37 54.7	
	comp=E,97nm,0.3s						
ISHB				e		23 38 26.5	
	comp=N,68nm,0.2s						
SFK	Sufi-Kurgan	17.57	38	i P	Pn	23 38 01.8	-1.2
SFK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
GNI	Garni	17.97	321	P	P	23 38 08.2	-0.3
	comp=Z,0.9nm,0.3s,baz=6.3,slow=3.1,SNR=14						
KK31	Karatay Array	18.53	26	eP	P	23 38 14.0	-0.4
KK31	Karatay Array	18.53	26	i P	P	23 38 12.9	-1.5
KK31				pmax	pmax		
	comp=Z,4.0nm,0.5s						
KK31	Karatay Array	18.53	26	eP	P	23 38 14.0	-0.4
KKAR	Karatay Array	18.53	26	eP	P	23 38 14.0	-0.4
KKAR	Karatay Array	18.53	26	eP	P	23 38 14.0	-0.4
KKAR	Karatay Array	18.53	26	eP	P	23 38 14.0	-0.4
DAMY	Dhamar	18.61	232	eP	P	23 38 16.1	+0.2
	comp=Z,72nm,1.8s						
KSH	Kashi	18.69	44	P	P	23 38 11.1	-5.3
KSH				pP	Pn	23 38 14.1	-2.6
KSH				S	Sn	23 41 29.8	-16
KSH				SS	S	23 41 53.3	+4.0
KSH				ePcP	PcP	23 42 44.2	-0.3
KSH				pmax	pmax		
	comp=Z,12nm,0.8s						
KSH				pmax	pmax		
	comp=Z,71nm,4.3s						
MNAS	Manas	18.89	31	i P	P	23 38 17.8	-0.7
MNAS				pmax	pmax		
	comp=Z,13nm,0.6s						
MNAS	Manas	18.89	31	i P	P	23 38 17.8	-0.7
	comp=Z,13nm,0.6s						
GROC	Groznyy	19.68	329	eP	P	23 38 22.9	-4.1
GROC				eS	S	23 42 03.7	-5.1
GROC				pmax	pmax		
	comp=Z,16nm,0.5s						
AAK	Ala-Archa	19.96	34	P	P	23 38 30.5	+0.3
	comp=Z,0.9nm,0.3s,baz=206,slow=10.0,SNR=7.8						
AAK	Ala-Archa	19.96	34	eP	Pn	23 38 31.2	-0.8
	comp=Z,6.2nm,0.8s						
AAK	Ala-Archa	19.96	34	eP	Pn	23 38 31.2	-0.8
	comp=Z,6.2nm,0.8s						
ASF	Jabal al Asfar	20.26	290	P	Pn	23 38 35.5	0.0
	comp=Z,3.6nm,0.7s,baz=57,slow=10.0,SNR=11						
ZEI	Tsey	20.28	325	eP	P	23 38 34.4	+0.6
ZEI				pmax	pmax		
	comp=Z,9.0nm,0.4s						
ZEI	Tsey	20.28	325	eP	P	23 38 34.4	+0.6
	comp=Z,9.0nm,0.4s						
NCK	Nalchik	20.95	326	i P	P	23 38 41.7	+0.9
NCK				pmax	pmax		
	comp=Z,13nm,0.9s						
NCK	Nalchik	20.95	326	i P	P	23 38 41.7	+0.9
	comp=Z,13nm,0.9s						
KDJ	Kajisay	21.05	39	eP	P	23 38 41.5	-0.6
	comp=Z,21nm,1.0s						
KDJ	Kajisay	21.05	39	eP	P	23 38 41.5	-0.6
	comp=Z,21nm,1.0s						
NEY	Neytrino	21.21	325	i P	P	23 38 43.4	-0.4
NEY				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NEY	Neytrino	21.21	325	i P	P	23 38 43.4	-0.4
	comp=Z,3.0nm,0.8s						
KBZ	Khabaz	21.46	326	P	P	23 38 48.0	+1.7
	comp=Z,4.0nm,0.6s,baz=160,slow=4.6,SNR=6.5						
KBZ	Khabaz	21.46	326	P	P	23 38 48.0	+1.7
KBZ				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KBZ	Khabaz	21.46	326	P	P	23 38 48.0	+1.7
	comp=Z,4.0nm,0.6s						
KOLN	Koldanda	21.51	82	eP	P	23 38 48.8	+1.6
	comp=Z,17nm,0.7s						
DANN	Dangsing	21.63	81	eP	P	23 38 50.6	+2.0
	comp=Z,53nm,0.7s						
MMAI	Mount Meron Ar	21.65	292	P	P	23 38 53.9	+5.4
	comp=Z,1.1nm,0.5s,baz=103,slow=12,SNR=3.6						
MMAI				LR	LR	23 49 12.1	
	comp=Z,66nm,19.0s,baz=230,slow=42						
EIL	Elat	21.70	283	P	P	23 38 51.1	+2.1
	comp=Z,2.0nm,0.9s,baz=188,slow=14,SNR=1.9						
KVAR	Kislovodsk Arr	21.73	326	P	P	23 38 50.2	+0.9
	comp=Z,31nm,0.9s,baz=339,slow=4.6,SNR=19						
KIV	Kislovodsk	21.73	326	eP	P	23 38 49.8	+0.5
	comp=Z,28nm,0.8s						
KIV	Kislovodsk	21.73	326	P	P	23 38 51.1	+1.7
	SNR=17						
KIV	Kislovodsk	21.73	326	eP	P	23 38 50.3	+1.0
KIV				eS	S	23 42 52.8	+3.0
KIV				pmax	pmax		
	comp=Z,36nm,1.0s						
KIV				MLR	MLR		
	comp=Z,16nm,14.0s						
KIV	Kislovodsk	21.73	326	eP	P	23 38 50.3	+1.0
	comp=Z,36nm,1.0s						
ATD	Arta Tunnel	21.82	229	LR	LR	23 48 57.8	
	comp=Z,36nm,19.9s,baz=30,slow=41						
AB31	Akbulak array	22.33	1	i P	P	23 38 53.7	-1.9
AB31				pmax	pmax		
	comp=Z,5.0nm,0.5s						
ABKAR	Akbulak array	22.33	1	eP	P	23 38 54.5	-1.1
ABKAR	Akbulak array	22.33	1	eP	P	23 38 54.5	-1.1
GKN	Gorkha	22.41	81	eP	P	23 38 58.5	+1.6
	comp=Z,12nm,0.7s						
KKN	Kakani	23.00	82	eP	P	23 39 04.3	+1.2
PKIN	Phulchoki	23.11	82	eP	P	23 39 05.6	+1.2
	comp=Z,13nm,0.5s						
GUN	Gumba	23.52	81	eP	P	23 39 09.6	+1.1
	comp=Z,28nm,0.8s						
AKTK	Aktyubinsk	23.53	358	i P	P	23 39 06.8	-1.2
	comp=Z,8.0nm,0.5s						
AKTO	Aktyubinsk	23.53	358	P	P	23 39 07.4	-0.6
	comp=Z,6.9nm,0.5s,baz=169,slow=11,SNR=28						
AKTO				LR	LR	23 49 57.4	
	comp=Z,55nm,21.3s,baz=182,slow=41						
AKTO	Aktyubinsk	23.53	358	i P	P	23 39 06.8	-1.2
AKTO				pmax	pmax		
	comp=Z,8.0nm,0.5s						
CSS	Mathiatis	23.72	296	eP	P	23 39 10.4	+0.3
	comp=Z,6.5nm,0.6s						
CSS	Mathiatis	23.72	296	eP	P	23 39 10.4	+0.3
	comp=Z,6.5nm,0.6s						
JIRN	Jiri	23.81	82	eP	P	23 39 12.1	+0.7
	comp=Z,34nm,0.6s						
RAMN	Ramite	24.24	84	eP	P	23 39 15.5	+0.2
	comp=Z,14nm,0.6s						
BR131	Keskin Array S	24.95	307	eP	P	23 39 22.3	+0.8
BR131	Keskin Array S	24.95	307	P	P	23 39 23.5	+2.0
	SNR=36						
BR131	Keskin Array S	24.95	307	eP	P	23 39 22.3	+0.8
BRTR	Keskin Array B	24.95	307	P	P	23 39 22.0	+0.5
	comp=Z,21nm,0.8s,baz=126,slow=9.4,SNR=135						
ODAN	Odare	24.95	84	eP	P	23 39 22.6	+0.9
ILGA	Ilgaz	25.44	310	eP	P	23 39 28.0	+1.9
	comp=Z,8.9nm,1.0s						
ILGA	Ilgaz	25.44	310	eP	P	23 39 28.0	+1.9
	comp=Z,8.9nm,1.0s						
ANTO	Ankara	25.60	307	eP	P	23 39 27.5	+0.1
	comp=Z,14nm,0.6s						
ANTO	Ankara	25.60	307	eP	P	23 39 27.5	+0.1
ANTO				pmax	pmax		
	comp=Z,14nm,0.6s						
ANTO	Ankara	25.60	307	eP	P	23 39 27.5	+0.1
	comp=Z,14nm,0.6s						
BR231	Keskin MP Arra	25.61	307	eP	P	23 39 28.1	+0.6
BR231	Keskin MP Arra	25.61	307	eP	P	23 39 28.1	+0.6
MAKZ	Makanchi	26.69	36	eP	P	23 39 37.3	+0.2
	comp=Z,4.3nm,0.9s						
MAKZ	Makanchi	26.69	36	eP	P	23 39 37.3	+0.2
MAKZ				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MAKZ	Makanchi	26.69	36	eP	P	23 39 37.3	+0.2
	comp=Z,4.3nm,0.9s						
MK01	Makanchi Array	26.84	36	eP	P	23 39 38.8	+0.3
MK01	Makanchi Array	26.84	36	eP	P	23 39 38.8	+0.3
MK31	Makanchi Array	26.85	36	eP	P	23 39 39.0	+0.5
MK31	Makanchi Array	26.85	36	eP	P	23 39 39.0	+0.5
MK31	Makanchi Array	26.85	36	eP	P	23 39 39.0	+0.5
MKAR	Makanchi Array	26.85	36	P	P	23 39 38.2	-0.3
	comp=Z,2.1nm,0.5s,baz=228,slow=9.0,SNR=20						
MKAR				LR	LR	23 51 52.9	
	comp=Z,61nm,18.1s,baz=228,slow=40						
MKAR	Makanchi Array	26.85	36	eP	P	23 39 39.0	+0.4
	comp=Z,24nm,0.6s						
BVAR	Borovoye Array	27.36	15	P	P	23 39 42.6	-0.4
	comp=Z,12nm,0.8s,baz=216,slow=10,SNR=88						
BVAR				LR	LR	23 52 09.3	
	comp=Z,30nm,18.4s,baz=192,slow=40						
BRVK	Borovoye	27.37	14	eP	P	23 39 42.7	-0.3
	comp=Z,14nm,1.1s						
BRVK	Borovoye	27.37	14c	iP	P	23 39 42.6	-0.5
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BRVK	Borovoye	27.37	14	eP	P	23 39 42.7	-0.3
	comp=Z,14nm,1.1s						
KURBB	Kurchatov Arra	27.84	27	P	P	23 39 46.9	-0.3
	comp=Z,4.7nm,0.9s,baz=226,slow=9.1,SNR=15						
KURK	Kurchatov	27.94	27	P	P	23 39 46.9	-1.3
KURK	Kurchatov	27.94	27	i P	P	23 39 48.0	-0.2
KURK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KURK	Kurchatov	27.94	27	i P	P	23 39 48.0	-0.2
	comp=Z,4.0nm,1.1s						
PALK	Pallekele	28.11	130	LR	LR	23 50 38.9	
	comp=Z,63nm,19.0s,baz=296,slow=36						
WMQ	Urumqi	28.40	46	P	P	23 39 54.0	+1.5
WMQ				pP	sP	23 39 58.3	+1.5
WMQ				sP	pP	23 40 01.0	+5.4
WMQ				pmax	pmax		
	comp=Z,23nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,240nm,5.7s						
WMQ				LR	LR		
	comp=N,64nm,19.5s						
WMQ				LR	LR		
	comp=Z,66nm,20.7s						
VORD	Divnogorie	28.50	333	eP	P	23 39 51.9	-1.2
VORD				pmax	pmax		
	comp=Z,6.0nm,0.8s						
VORD	Divnogorie	28.50	333	eP	P	23 39 51.9	-1.2
	comp=Z,6.0nm,0.8s						
VSR	Storozhevoye	28.74	333	eP	P	23 39 53.7	-1.6
VSR				pmax	pmax		
	comp=Z,6.0nm,0.4s						
VSR	Storozhevoye	28.74	333	eP	P	23 39 53.7	-1.6
	comp=Z,6.0nm,0.4s						
ARU	Arti	29.52	359d	iP	P	23 40 01.0	-1.2
ARU						23 40 55.4	
ARU				S	S	23 44 56.9	+0.3
ARU				SS	SnSn	23 46 26.1	+2.0
ARU				pmax	pmax		
	comp=Z,4.0nm,1.2s						
ARU	Arti	29.52	359	i P	P	23 40 01.0	-1.2
	comp=Z,4.0nm,1.2s						
SANT	Santorini	30.28	297	⇑iP	P	23 40 12.2	+3.0
IDI	Anoyia	30.60	294	eP	P	23 40 12.4	+0.4
	comp=Z,44nm,1.7s						
DGZ	Jazzator, Alta	31.35	36	i P	P	23 40 18.1	-0.5
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.7s						
DGZ	Jazzator, Alta	31.35	36	i P	P	23 40 18.1	-0.5
	comp=Z,1.0nm,0.7s						
VRI	Vrincioaia	32.10	315	⇓iP	P	23 40 25.4	+0.3
VRI	Vrincioaia	32.10	315	⇓P	P	23 40 25.4	+0.3
VRI	Vrincioaia	32.10	315	P	P	23 40 25.4	+0.3
PLOR	Plostina	32.14	315	⇓iP	P	23 40 25.4	-0.1
PLOR	Plostina	32.14	315	⇓P	P	23 40 25.4	-0.1
PLOR	Plostina	32.14	315	P	P	23 40 25.4	-0.1
SORM	Soroca	32.16	320	⇓iP	P	23 40 24.2	-1.4
SORM	Soroca	32.16	320	⇓P	P	23 40 24.2	-1.4
SORM	Soroca	32.16	320	P	P	23 40 24.2	-1.4
TESR	Tescani	32.42	316	⇓iP	P	23 40 27.9	0.0
TESR	Tescani	32.42	316	⇓iP	P	23 40 27.9	0.0
MLR	Muntele Rosu	32.45	314	P	P	23 40 27.7	-0.6
	comp=Z,1.0nm,0.7s,baz=124,slow=3.6,SNR=7.9						
MLR	Muntele Rosu	32.45	314	⇓iP	P	23 40 27.8	-0.5
MLR	Muntele Rosu	32.45	314	eP	P	23 40 28.6	+0.3
	comp=Z,8.7nm,1.1s						
MLR	Muntele Rosu	32.45	314	⇓P	P	23 40 27.8	-0.5
MLR	Muntele Rosu	32.45	314	P	P	23 40 27.8	-0.5
OBN	Obninsk	32.74	336	eP	P	23 40 30.2	-0.3
	comp=Z,19nm,0.7s						
OBN	Obninsk	32.74	336c	iP	P	23 40 29.8	-0.7
OBN				e		23 40 42.8	
OBN				S	S	23 45 47.0	0.0
OBN				eSSS	SSS	23 48 05.6	
OBN				pmax	pmax		
	comp=Z,17nm,1.0s						
OBN				MLR	MLR		
	comp=Z,18nm,19.0s						
OBN	Obninsk	32.74	336	eP	P	23 40 30.2	-0.3
	comp=Z,19nm,0.7s						
ZALV	Zalesovo Beam	32.89	28	P	P	23 40 31.0	-0.9
	comp=Z,5.0nm,0.3s,baz=225,slow=9.1,SNR=8.2						
ZALV	Zalesovo Beam	32.89	28	eP	P	23 40 31.9	+0.1
ZALV	Zalesovo Beam	32.89	28	eP	P	23 40 32.0	+0.1
ZALV	Zalesovo Beam	32.89	28	eP	P	23 40 32.0	+0.1
NVS	Novosibirsk	32.91	25	⇓iP	P	23 40 32.0	0.0
NVS				pmax	pmax		
	comp=N,9.0nm,1.2s						
NVS				pmax	pmax		
	comp=E,7.0nm,1.2s						
NVS				pmax	pmax		
	comp=Z,14nm,1.2s						
BIZ	Bicaz	32.95	316	⇑iP	P	23 40 32.2	-0.3
BIZ	Bicaz	32.95	316	⇑iP	P	23 40 32.2	-0.3
AKASG	Malin Array Be	33.05	324	P	P	23 40 32.3	-1.0
	comp=Z,0.9nm,0.3s,baz=129,slow=8.2,SNR=8.1						
AKBB	Malin Array Si	33.05	324	eP	P	23 40 32.4	-1.0
	comp=Z,8.9nm,0.3s						
AKBB	Malin Array Si	33.05	324	eP	P	23 40 32.4	-1.0
AKBB				pmax	pmax		
	comp=Z,9.0nm,0.3s						
AKBB	Malin Array Si	33.05	324	eP	P	23 40 32.4	-1.0
	comp=Z,8.9nm,0.3s						
KIEV	Kiev	33.06	324	eP	P	23 40 32.3	-1.1
	comp=Z,7.4nm,0.4s						
KIEV	Kiev	33.06	324	i P	P	23 40 31.2	-2.2
KIEV				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AK11	Malin Array Si	33.07	324	eP	P	23 40 33.4	-0.1
AK11	Malin Array Si	33.07	324	eP	P	23 40 33.4	-0.1
ITM	Ithomi	33.20	297	eP	P	23 40 35.3	+0.5
	comp=Z,5.5nm,0.7s						
ITM	Ithomi	33.20	297	eP	P	23 40 35.3	+0.5
	comp=Z,5.5nm,0.7s						
ARR	Arges	33.25	313	⇑iP	P	23 40 35.7	+0.4
ARR	Arges	33.25	313	⇑iP	P	23 40 35.7	+0.4
VTS	Vitosha	33.32	307	⇑iP	P	23 40 35.7	-0.3
VTS	Vitosha	33.32	307	⇑P	P	23 40 35.7	-0.3
VTS	Vitosha	33.32	307	P	P	23 40 35.7	-0.3
BURAR	Bucovina Array	33.78	317	⇑iP	P	23 40 39.7	-0.2
BURAR	Bucovina Array	33.78	317	⇑P	P	23 40 39.7	-0.2
BURAR	Bucovina Array	33.78	317	⇑iP	P	23 40 39.7	-0.2
BUR04	Bucovina Ar. S	33.79	317	eP	P	23 40 39.5	-0.5
BUR04	Bucovina Ar. S	33.79	317	eP	P	23 40 39.5	-0.5
BUR08	Bucovina Ar. S	33.81	317	eP	P	23 40 39.9	-0.2
BUR08	Bucovina Ar. S	33.81	317	eP	P	23 40 39.9	-0.2
LOT	Lotru	33.85	313	⇑iP	P	23 40 40.1	-0.4
LOT	Lotru	33.85	313	⇑iP	P	23 40 40.1	-0.4
FNA	Florina	34.21	304	eP	P	23 40 43.8	+0.1
	comp=Z,4.7nm,0.8s						
FNA	Florina	34.21	304	eP	P	23 40 43.8	+0.1
FNA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
HERR	Herculane	34.56	311	⇓iP	P	23 40 46.1	-0.4
HERR	Herculane	34.56	311	⇓iP	P	23 40 46.1	-0.4
DRGR		35.02	314	⇑iP	P	23 40 50.6	0.0
DRGR		35.02	314	⇑P	P	23 40 50.6	0.0
DRGR		35.02	314	⇑iP	P	23 40 50.6	0.0
BZS	Buzias	35.33	312	⇓iP	P	23 40 53.4	+0.2
BZS	Buzias	35.33	312	⇓P	P	23 40 53.4	+0.2
BZS	Buzias	35.33	312	⇓iP	P	23 40 53.4	+0.2
BANR	Banloc	35.57	311	⇑iP	P	23 40 56.3	+1.0
BANR	Banloc	35.57	311	⇑iP	P	23 40 56.3	+1.0
TRPA	Tarpa	35.64	316	⇓iP	P	23 40 55.9	+0.1
TRPA	Tarpa	35.64	316	⇓iP	P	23 40 55.9	+0.1
PRGR	Permogore	35.95	349	eP	P	23 40 56.2	-2.1
PRGR				pmax	pmax		
	comp=Z,11nm,1.0s						
DIVS	Divibare	35.99	309	eP	P	23 40 58.0	-1.0
	comp=Z,3.7nm,0.8s						
KLMR	Klimovskoe	36.54	344	eP	P	23 41 00.4	-2.9
KLMR				e		23 42 21.9	
KLMR				pmax	pmax		
	comp=Z,19nm,0.9s						
KLMR	Klimovskoe	36.54	344	eP	P	23 41 00.5	-2.9
KLMR				AMP		23 41 02.5	
	comp=Z,19nm,0.9s						
KLMR				ePP	PnPn	23 42 21.9	-4.1
PSZ	Piszkesteto	37.21	315	eP	P	23 41 08.7	-0.7
	comp=Z,3.4nm,0.8s						
PSZ	Piszkesteto	37.21	315	eP	P	23 41 08.7	-0.7
PSZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CMAR	Chiang Mai Arr	37.32	95	P	P	23 41 11.1	+0.6
	comp=Z,0.5nm,0.4s,baz=281,slow=11,SNR=4.0						
CMAR				LR	LR	23 58 35.1	
	comp=Z,26nm,19.9s,baz=192,slow=40						
KNGR	Kungurtug, Tuv	37.39	40	i P	P	23 41 10.2	-0.7
TIP	Timpagrande	37.47	300	eP	P	23 41 11.9	+0.2
	comp=Z,8.4nm,1.0s						
KRAR	Krasnoyarsk	37.75	30	i P	P	23 41 13.5	-0.2
VYHS	Vyhne	38.07	315	eP	P	23 41 16.3	-0.3
VYHS	Vyhne	38.07	315	eP	P	23 41 16.3	-0.3
CSKK	Csˆ‡kako	38.08	314	eP	P	23 41 16.6	0.0
OJC	Ojcow	38.11	318	eP	P	23 41 15.2	-1.6
	comp=Z,5.3nm,0.8s						
OJC	Ojcow	38.11	318	eP	P	23 41 15.2	-1.6
OJC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CUC	Castrocucco	38.28	301	eP	P	23 41 18.7	+0.3
	comp=Z,15nm,0.9s						
LZH	Lanzhou	38.71	65	eP	P	23 41 22.1	-0.2
LZH				pP	sP	23 41 27.0	+0.4
LZH				sP	pP	23 41 29.7	+4.3
LZH				ePP	PnPn	23 42 54.3	+1.4
LZH				pmax	pmax		
	comp=Z,16nm,1.3s						
LZH				pmax	pmax		
	comp=Z,130nm,5.4s						
LZH				LR	LR		
	comp=N,350nm,14.3s						
LZH				LR	LR		
	comp=E,370nm,15.2s						
LZH				LR	LR		
	comp=Z,540nm,15.9s						
KMI	Kunming	38.85	83	P	P	23 41 24.1	+0.4
KMI				pP	sP	23 41 29.6	+1.6
KMI				sP	pP	23 41 31.3	+4.5
KMI				pmax	pmax		
	comp=Z,8.0nm,1.4s						
KMI				pmax	pmax		
	comp=Z,62nm,4.1s						
VSU	Vasula	38.93	333	i P	P	23 41 22.1	-1.5
VSU				pmax	pmax		
	comp=Z,18nm,0.9s						
MORC	Moravsky Berou	39.31	317	eP	P	23 41 25.8	-1.2
	comp=Z,2.9nm,0.8s						
MORC	Moravsky Berou	39.31	317	eP	P	23 41 25.8	-1.2
MORC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
VRAC	Vranov	39.74	316	⇑iP	P	23 41 29.8	-0.7
VRAC	Vranov	39.74	316	⇑P	P	23 41 29.8	-0.7
VRAC	Vranov	39.74	316	⇑iP	P	23 41 29.8	-0.7
CONA	Conrad Observa	39.79	314	eP	P	23 41 30.4	-0.7
	comp=Z,1.1nm,0.6s						
CONA	Conrad Observa	39.79	314	P	P	23 41 30.4	-0.7
	comp=Z,1.1nm,0.6s						
ARSA	Arzberg	39.83	313	eP	P	23 41 31.1	-0.2
	comp=Z,2.9nm,0.6s						
ARSA	Arzberg	39.83	313	P	P	23 41 31.1	-0.2
	comp=Z,2.9nm,0.6s						
SOKA	Soboth	40.02	312	eP	P	23 41 32.4	-0.5
	comp=Z,3.4nm,0.7s						
SOKA	Soboth	40.02	312	P	P	23 41 32.4	-0.5
	comp=Z,3.4nm,0.7s						
MOA	Molln	40.81	313	eP	P	23 41 38.9	-0.5
	comp=Z,8.3nm,0.6s,SNR=15						
MYKA	Terra Mystica	40.94	311	eP	P	23 41 40.8	+0.2
	comp=Z,1.3nm,0.4s						
MYKA	Terra Mystica	40.94	311	P	P	23 41 40.8	+0.2
	comp=Z,1.3nm,0.4s						
FIA1	FINESS Array S	41.14	336	eP	P	23 41 41.0	-0.9
FINES	FINESS Array B	41.14	336	P	P	23 41 40.4	-1.5
	comp=Z,8.7nm,0.4s,baz=134,slow=8.7,SNR=106						
KBA	Koelnbreinsper	41.24	312	eP	P	23 41 42.5	-0.6
	comp=Z,5.2nm,0.7s,SNR=5.4						
GEA0	GERESS Array S	41.42	314	eP	P	23 41 43.5	-1.1
GEC2	GERESS Array S	41.43	314	eP	P	23 41 44.1	-0.5
	comp=Z,7.7nm,0.7s						
GEC2	GERESS Array S	41.43	314	eP	P	23 41 44.1	-0.5
GEC2				pmax	pmax		
	comp=Z,8.0nm,0.7s						
GERES	GERESS Array B	41.43	314	P	P	23 41 44.0	-0.5
	comp=Z,5.6nm,0.7s,baz=108,slow=8.6,SNR=54						
GERES				LR	LR	00 00 32.9	
	comp=Z,17nm,18.6s,baz=110,slow=38						
KHC	Kasperske Hory	41.58	315	eP	P	23 41 44.8	-0.9
KHC				epP	sP	23 41 51.2	+1.1
KHC	Kasperske Hory	41.58	315	eP	P	23 41 44.9	-0.9
	comp=Z,1.9nm,0.8s						
KHC	Kasperske Hory	41.58	315	eP	P	23 41 44.8	-0.9
KHC				e		23 41 51.2	
BRG	Berggiesshubel	41.84	317	eP	P	23 41 47.1	-0.7
	comp=Z,3.7nm,1.0s						
BRG	Berggiesshubel	41.84	317	eP	P	23 41 47.1	-0.7
SONM	Songino Array	42.02	47	P	P	23 41 50.7	+1.2
	comp=Z,0.8nm,0.6s,baz=250,slow=9.4,SNR=9.9						
SONM				LR	LR	00 01 52.1	
	comp=Z,40nm,19.4s,baz=250,slow=40						
SONA1	Songino Array	42.03	47	eP	P	23 41 48.6	-1.0
WTTA	Wattenberg	42.41	312	eP	P	23 41 52.4	-0.4
	comp=Z,6.1nm,0.6s						
WTTA	Wattenberg	42.41	312	P	P	23 41 52.4	-0.4
	comp=Z,6.1nm,0.6s						
ULN	Ulaanbaatar	42.46	47	i P	P	23 41 50.9	-2.2
ULN				pmax	pmax		
	comp=Z,1.0nm,0.8s						
WATA	Walderalm	42.47	312	i P	P	23 41 53.8	+0.6
	comp=Z,4.3nm,0.6s						
WATA	Walderalm	42.47	312	P	P	23 41 53.8	+0.6
	comp=Z,4.3nm,0.6s						
CLL	Collm	42.54	318	i P	P	23 41 53.0	-0.5
	comp=Z,10.0nm,1.0s						
CLL	Collm	42.54	318	i P	P	23 41 53.0	-0.5
CLL				pmax	pmax		

	comp=Z,10.0nm,1.0s						
MOTA	**Moosalm**	**42.79**	**312**	*e*P	**P**	**23 41 55.8**	**+0.1**
	comp=Z,5.5nm,0.6s,SNR=8.6						
FETA	**Feichten**	**42.98**	**311**	*e*P	**P**	**23 41 56.3**	**-1.0**
	comp=Z,8.0nm,0.6s						
FETA	**Feichten**	**42.98**	**311**	P	**P**	**23 41 56.3**	**-1.0**
	comp=Z,8.0nm,0.6s						
RETA	**Reutte**	**43.04**	**312**	*e*P	**P**	**23 41 56.4**	**-1.4**
	comp=Z,5.4nm,0.5s						
RETA	**Reutte**	**43.04**	**312**	P	**P**	**23 41 56.4**	**-1.4**
	comp=Z,5.4nm,0.5s						
KEST	**Kesra**	**43.27**	**294**	P	**P**	**23 42 01.5**	**+1.7**
	comp=Z,1.7nm,0.6s,baz=44,slow=5.0,SNR=6.8						
DAVA	**Damuels**	**43.59**	**311**	*e*P	**P**	**23 42 01.3**	**-1.0**
	comp=Z,17nm,0.7s						
DAVA	**Damuels**	**43.59**	**311**	P	**P**	**23 42 01.3**	**-1.0**
	comp=Z,17nm,0.7s						
APA	**Apatity**	**43.65**	**346**⇓	*i*P	**P**	**23 42 01.0**	**-1.3**
APA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
APA				MLR	MLR		
	comp=Z,100nm,10.0s						
TUE	**Stuetta**	**43.82**	**310**	*e*P	**P**	**23 42 03.5**	**-0.7**
	comp=Z,4.5nm,0.5s						
HHC	**Hu-ho-hao-te**	**44.87**	**58**	*e*P	**P**	**23 42 13.1**	**+0.5**
HHC				sP	sP	23 42 26.4	+9.5
HHC				S	**S**	**23 48 52.5**	**+2.1**
HHC				sS	sS	23 49 01.0	+5.5
HHC				SS	ScS	23 51 57.9	-13
HHC				pmax	pmax		
	comp=Z,17nm,0.9s						
HHC				pmax	pmax		
	comp=Z,57nm,6.1s						
SENIN	**Lac Senin/Sane**	**45.21**	**310**	*e*P	**P**	**23 42 14.9**	**-0.5**
	comp=Z,34nm,1.9s						
HFS	**Hagfors**	**45.44**	**330**	P	**P**	**23 42 16.3**	**-0.4**
	comp=Z,4.8nm,0.5s,baz=127,slow=9.6,SNR=41						
BNI	**Bardonecchia**	**45.51**	**308**	*e*P	**P**	**23 42 16.1**	**-1.5**
	comp=Z,40nm,1.9s						
BNI	**Bardonecchia**	**45.51**	**308**	*e*P	**P**	**23 42 16.1**	**-1.5**
BNI				pmax	pmax		
	comp=Z,40nm,1.9s						
ECH	**Echery**	**45.56**	**312**	*e*P	**P**	**23 42 16.8**	**-1.0**
	comp=Z,7.6nm,0.9s						
ECH	**Echery**	**45.56**	**312**	*e*P	**P**	**23 42 16.8**	**-1.0**
ECH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
OPO	**Ambohidratompo**	**46.72**	**196**	P	**P**	**23 42 29.3**	**+1.9**
	comp=Z,5.2nm,0.8s,baz=28,slow=12,SNR=4.6						
KEV	**Kevo**	**46.82**	**345**	*e*P	**P**	**23 42 26.8**	**-0.6**
	comp=Z,25nm,0.7s						
KEV	**Kevo**	**46.82**	**345**	*e*P	**P**	**23 42 26.8**	**-0.6**
KEV				pmax	pmax		
	comp=Z,25nm,0.7s						
NB201	**NORSAR Array S**	**46.90**	**330**	*e*P	**P**	**23 42 27.5**	**-0.7**
NB201				IAmb	IAmb	23 42 29.9	
	comp=Z,34nm,1.4s						
NB2	**NORSAR Subarra**	**46.94**	**330**	P	**P**	**23 42 27.0**	**-1.5**
	comp=Z,1.6nm,0.6s,baz=113,slow=7.9						
NB2	**NORSAR Subarra**	**46.94**	**330**	P	**P**	**23 42 27.0**	**-1.5**
	baz=113,slow=7.9						
NC303	**NORSAR Array S**	**46.94**	**331**	*e*P	**P**	**23 42 28.7**	**+0.2**
NC303				IAmb	IAmb	23 42 31.0	
	comp=Z,15nm,1.2s						
ARCES	**ARCESS Array B**	**47.01**	**344**	P	**P**	**23 42 28.1**	**-0.8**
	comp=Z,11nm,0.4s,baz=140,slow=8.4,SNR=201						
ARCES	**ARCESS Array B**	**47.01**	**344**	*e*P	**P**	**23 42 27.3**	**-1.6**
ARCES	**ARCESS Array B**	**47.01**	**344**	*e*P	**P**	**23 42 27.3**	**-1.6**
ARE0	**ARCESS Array S**	**47.01**	**344**	*e*P	**P**	**23 42 27.8**	**-1.1**
	comp=Z,57nm,1.5s						
ARE0	**ARCESS Array S**	**47.01**	**344**	*e*P	**P**	**23 42 28.2**	**-0.7**
ARE0				IAmb	IAmb	23 42 28.4	
	comp=Z,20nm,0.4s						
NBO00	**NORSAR Array S**	**47.13**	**330**	*e*P	**P**	**23 42 29.1**	**-0.8**
NBO00				IAmb	IAmb	23 42 29.8	
	comp=Z,12nm,0.9s						
KTK1	**Kautokeino**	**47.20**	**343**	*e*P	**P**	**23 42 29.6**	**-0.7**
NSS	**Namsos**	**48.17**	**335**	*e*P	**P**	**23 42 37.4**	**-0.6**
NSS				IAmb	IAmb	23 42 40.1	
	comp=Z,9.8nm,1.1s						
HAMF	**Hammerfest**	**48.24**	**345**	*e*P	**P**	**23 42 37.9**	**-0.5**
HAMF				IAmb	IAmb	23 42 38.3	
	comp=Z,38nm,0.6s						
KONS	**Konsvik**	**48.73**	**337**	*e*P	**P**	**23 42 41.9**	**-0.3**
KONS				IAmb	IAmb	23 42 42.3	
	comp=Z,14nm,1.0s						
TRO	**Tromso**	**48.75**	**342**	*e*P	**P**	**23 42 41.5**	**-0.9**
TRO				IAmb	IAmb	23 42 41.8	
	comp=Z,22nm,0.5s						
STEI	**Steigen**	**48.80**	**340**	*e*P	**P**	**23 42 41.9**	**-0.8**
STEI				IAmb	IAmb	23 42 43.5	
	comp=Z,9.2nm,0.9s						
BOD	**Bodaibo**	**48.94**	**35**	*e*P	**P**	**23 42 42.8**	**-1.1**
BOD				pmax	pmax		
	comp=Z,6.0nm,1.5s						
LOF	**Lofoten**	**49.45**	**339**	*e*P	**P**	**23 42 46.2**	**-1.5**
LOF				IAmb	IAmb	23 42 47.3	
	comp=Z,7.7nm,0.8s						
NJ2	**Nanjing**	**51.46**	**69**	*e*P	**P**	**23 43 02.0**	**-1.5**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
EKA	**Eskdalemuir Ar**	**52.81**	**320**	P	**P**	**23 43 12.1**	**-1.1**
	comp=Z,1.0nm,0.3s,baz=104,slow=7.2,SNR=24						
ESDC	**Sonseca Array**	**53.48**	**301**	P	**P**	**23 43 18.0**	**-0.5**
	comp=Z,0.6nm,0.5s,baz=71,slow=7.2,SNR=9.9						
ESDC	**Sonseca Array**	**53.48**	**301**	P	**P**	**23 43 18.0**	**-0.5**
SPA0	**Spitsbergen Ar**	**54.91**	**350**	*e*P	**P**	**23 43 28.3**	**0.0**
SPITS	**Spitsbergen Ar**	**54.91**	**350**	P	**P**	**23 43 27.9**	**-0.4**
	comp=Z,1.2nm,0.4s,baz=126,slow=9.7,SNR=11						
SPITS				LR	LR	00 09 52.3	
	comp=Z,21nm,19.6s,baz=290,slow=39						
MDT	**Midelt**	**55.10**	**293**	P	**P**	**23 43 31.2**	**+0.8**
	comp=Z,1.7nm,0.7s,baz=79,slow=6.5,SNR=4.4						
KBS	**Kingsbay**	**56.07**	**350**	*e*P	**P**	**23 43 36.6**	**0.0**
	comp=Z,29nm,0.8s						
KBS	**Kingsbay**	**56.07**	**350**	*e*P	**P**	**23 43 36.6**	**0.0**
KBS				pmax	pmax		
	comp=Z,29nm,0.8s						
KSAR	**Wonju Array Be**	**57.78**	**61**	P	**P**	**23 43 48.7**	**-0.7**
KSAR	**Wonju Array Be**	**57.78**	**61**	P	**P**	**23 43 48.7**	**-0.7**
KSAR	**Wonju Array Be**	**57.78**	**61**	P	**P**	**23 43 48.7**	**-0.7**
KSRS	**Korea Array**	**57.81**	**61**	P	**P**	**23 43 48.7**	**-0.9**
	comp=Z,1.0nm,0.5s,baz=287,slow=7.3,SNR=3.9						
TIXI	**Tiksi**	**58.27**	**20**	*i* P	**P**	**23 43 50.5**	**-1.6**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KLR	**Kul'dur**	**58.85**	**47**	*i* P	**P**	**23 43 54.2**	**-2.4**
KOWA	**Kowa**	**60.07**	**272**	P	**P**	**23 44 05.8**	**+0.3**
	comp=Z,1.4nm,0.8s,baz=62,slow=14,SNR=3.1						
LBTB	**Lobatse**	**61.05**	**215**	*e*P	**P**	**23 44 11.7**	**-0.4**
	comp=Z,67nm,1.9s						
LBTB	**Lobatse**	**61.05**	**215**	*e*P	**P**	**23 44 11.7**	**-0.4**
LBTB				pmax	pmax		
	comp=Z,67nm,1.9s						
DBIC	**Dimbokro**	**64.08**	**264**	P	**P**	**23 44 32.1**	**-0.3**
	comp=Z,1.8nm,0.9s,baz=78,slow=6.4,SNR=2.9						
BOSA	**Boshof**	**64.18**	**213**	P	**P**	**23 44 33.6**	**+0.7**
	comp=Z,6.5nm,0.6s,baz=20,slow=7.4,SNR=19						
MJAR	**Matsushiro Arr**	**66.03**	**60**	LR	LR	00 18 30.6	
	comp=Z,6.8nm,18.0s,baz=235,slow=40						
ASAJ	**Asahikawa**	**67.15**	**51**	LR	LR	00 15 57.5	
	comp=Z,26nm,19.2s,baz=94,slow=38						
FITZ	**Fitzroy Crossi**	**78.27**	**117**	P	**P**	**23 45 57.7**	**-0.6**
	comp=Z,1.9nm,0.7s,baz=338,slow=5.4,SNR=3.8						
WRA	**Warramunga Arr**	**86.23**	**114**	P	**P**	**23 46 39.4**	**-0.7**
	comp=Z,2.5nm,0.7s,baz=313,slow=4.3,SNR=35						
ILAR	**Eielson Array**	**86.37**	**11**	LR	LR	00 31 35.1	
	comp=Z,18nm,19.0s,baz=359,slow=40						
ASAR	**Alice Springs**	**87.75**	**118**	P	**P**	**23 46 47.1**	**-0.3**
	comp=Z,2.9nm,0.7s,baz=304,slow=4.9,SNR=23						
AS01	**Alice Springs**	**87.79**	**118**	*e*P	**P**	**23 46 46.6**	**-1.0**

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*IDC **12** 23:49:26.2±1.0, 26°.97N×59°.27E, h0^{km}, mb4.0/13, mb1 4.1/14, mb1mx3.8/62, mbtmp4.0/14, ML4.7/1, MS3.0/3, Ms1 3.0/3, ms1mx2.4/65, Error ellipse: s-maj=23.3km s-min=18.4km az=123.0*

*NEIC **12** 23:49:28.0±0.6, 27°.02N×59°.33E, h10^{km}, mb4.1/1, MN4.3(TEH), Error ellipse: s-maj=14.2km s-min=10.4km az=102.0*

*THR **12** 23:49:29.4±0.9, 26°.73N×59°.34E, h14^{km}±18^{km}, ML4.0*

*CSEM **12** 23:49:29.9±0.2, 26°.87N×59°.53E, h10^{km}, ML4.3, Error ellipse: s-maj=8.0km s-min=4.6km az=89.0*

*TEH **12** 23:49:31.1, 26°.81N×59°.44E, h10^{km}, ML4.3*

*DSN **12** 23:49:35.8±2.3, 26°.71N×59°.10E, h15^{km}, ML3.9/9, Error ellipse: s-maj=40.2km s-min=14.1km az=0.0*

*OMAN **12** 23:49:35.4±1.3, 26°.55N×59°.22E, h10^{km}, Error ellipse: s-maj=27.0km s-min=5.2km az=227.0*

ISC 12 23:49:28.0±0.5**, 26°.85N**±0°.03×**59°.38E**±0°.04**, h10^{km}, n112, σ2^{s}46**/110**, mb4.1**/15**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHBR	**Chabahar**	**1.59**	**141**	*e*Pn	**Pg**	**23 49 58.7**	**+0.2**
CHBR				*e*Sg	**Sb**	**23 50 17.4**	**-0.2**
CHBR				IAML		23 50 19.2	
	comp=E,3µm,0.3s						
CHBR				IAML		23 50 19.3	
	comp=N,2µm,0.3s						
CHBR	**Chabahar**	**1.59**	**141**	*e*Pn	**Pg**	**23 49 58.7**	**+0.2**
CHBR	**Chabahar**	**1.59**	**141**	*e*Pn	**Pg**	**23 49 58.7**	**+0.2**
CHBR				*e*Sg	**Sb**	**23 50 17.4**	**-0.2**
KHSK	**Kohestak**	**2.08**	**268**	*e*		23 50 34.5	
	comp=E,99nm,0.2s						
KHSK				*e*Pn	**Pg**	**23 50 08.1**	**+0.2**
KHSK				*e*		23 50 34.8	
	comp=N,99nm,0.1s						
KHSK				*e*		23 50 35.1	
	comp=Z,99nm,0.1s						
NIAN	**Nian**	**2.38**	**288**	*e*Pn	**Pb**	**23 50 11.7**	**+0.8**
NIAN				*e*		23 50 42.2	
	comp=N,99nm,0.1s						
NIAN				*e*		23 50 42.2	
	comp=Z,99nm,0.1s						
NIAN				*e*		23 50 42.9	
	comp=E,99nm,0.1s						
NIAN	**Nian**	**2.38**	**288**	*e*Pn	**Pb**	**23 50 11.7**	**+0.8**
GENO	**Geno**	**2.91**	**282**	*e*Pn	**Pb**	**23 50 18.6**	**-1.5**
GENO				*e*		23 50 53.9	
	comp=N,99nm,0.1s						
GENO				*e*		23 50 54.0	
	comp=E,99nm,0.1s						
GENO				*e*		23 50 54.1	
	comp=Z,99nm,0.1s						
GENO	**Geno**	**2.91**	**282**	*e*Pn	**Pb**	**23 50 18.6**	**-1.5**
BANOM	**Banah**	**2.91**	**252**	P	**Pb**	**23 50 17.5**	**-2.6**
	SNR=38						
BANOM	**Banah**	**2.91**	**252**	*e*P	**Pb**	**23 50 17.5**	**-2.6**
	SNR=38						
BANOM				S	**Sn**	**23 50 50.3**	**+0.8**
BANOM	**Banah**	**2.91**	**252**	P	**Pb**	**23 50 17.5**	**-2.6**
	SNR=38						
BANOM				S	**Sn**	**23 50 50.3**	**+0.8**
BNDS	**Bandar-Abbas**	**2.91**	**282**	*e*Pn	**Pn**	**23 50 17.1**	**+2.5**
BNDS	**Bandar-Abbas**	**2.91**	**282**	*e*Pn	**Pn**	**23 50 17.1**	**+2.5**
BNDS	**Bandar-Abbas**	**2.91**	**282**	*e*Pn	**Pn**	**23 50 17.1**	**+2.5**
SHME	**Shamm**	**3.01**	**255**	*e*P	**Pb**	**23 50 19.6**	**-2.1**
	SNR=32						
SHME	**Shamm**	**3.01**	**255**	*e*Pn	**Pb**	**23 50 19.7**	**-2.1**
SHME	**Shamm**	**3.01**	**255**	P	**Pb**	**23 50 19.8**	**-1.9**
	SNR=32						
ZHSF	**Zahedan**	**3.02**	**24**	*e*Pn	**Pb**	**23 50 20.4**	**-1.5**
ZHSF	**Zahedan**	**3.02**	**24**	*e*Pn	**Pb**	**23 50 20.4**	**-1.5**
ZHSF	**Zahedan**	**3.02**	**24**	*e*Pn	**Pb**	**23 50 20.4**	**-1.5**
MDH	**Madha**	**3.17**	**242**	*e*P	**Pn**	**23 50 20.4**	**+2.4**
	SNR=48						
MDH	**Madha**	**3.17**	**242**	P	**Pn**	**23 50 20.5**	**+2.5**
	SNR=48						
MSFE	**Esma-Masafi**	**3.25**	**244**	*e*P	**Pn**	**23 50 21.6**	**+2.5**
	SNR=19						
MSFE	**Esma-Masafi**	**3.25**	**244**	*e*Pn	**Pn**	**23 50 21.3**	**+2.2**
MSFE	**Esma-Masafi**	**3.25**	**244**	P	**Pn**	**23 50 21.4**	**+2.3**
	SNR=19						
CHMN	**Cheshme madani**	**3.41**	**332**	*e*Pn	**Pn**	**23 50 24.6**	**+3.0**
CHMN				*e*		23 50 26.4	
	comp=E,99nm,0.1s						
CHMN				*e*		23 50 26.4	
	comp=Z,99nm,0.0s						
CHMN				*e*		23 51 23.4	
	comp=N,99nm,0.3s						
CHMN	**Cheshme madani**	**3.41**	**332**	*e*Pn	**Pn**	**23 50 24.6**	**+3.0**
UOSS	**Minazif**	**3.43**	**237**	*i* P	**Pn**	**23 50 23.4**	**+1.9**
	SNR=51						
UOSS	**Minazif**	**3.43**	**237**	P	**Pn**	**23 50 23.4**	**+1.9**
	SNR=51						
BIDO	**Bidbid**	**3.50**	**199**	P	**Pn**	**23 50 24.4**	**+1.9**
	SNR=6.2						
BIDO	**Bidbid**	**3.50**	**199**	*e*Pn	**Pn**	**23 50 24.4**	**+1.9**
BIDO	**Bidbid**	**3.50**	**199**	*e*Pn	**Pn**	**23 50 24.4**	**+1.9**
BIDO	**Bidbid**	**3.50**	**199**	P	**Pn**	**23 50 24.4**	**+1.9**
	SNR=6.2						
HATD	**Hatta, Dubai**	**3.55**	**236**	P	**Pn**	**23 50 25.7**	**+2.5**
	SNR=9.0						
HATD	**Hatta, Dubai**	**3.55**	**236**	*i* P	**Pn**	**23 50 25.7**	**+2.5**
	SNR=8.7						
HATD	**Hatta, Dubai**	**3.55**	**236**	P	**Pn**	**23 50 25.7**	**+2.5**
	SNR=8.7						
NGRK	**Negar Kerman**	**3.64**	**321**	*e*Pn	**Pn**	**23 50 28.7**	**+4.0**
NGRK				*e*		23 51 14.0	
	comp=E,99nm,0.1s						
NGRK				*e*		23 51 14.7	
	comp=Z,99nm,0.1s						
NGRK				*e*		23 51 15.2	
	comp=N,99nm,0.1s						
NGRK	**Negar Kerman**	**3.64**	**321**	*e*Pn	**Pn**	**23 50 28.7**	**+4.0**
WSAR	**Wadi Sarin**	**3.66**	**191**	Pn	**Pn**	**23 50 27.6**	**+2.9**
	comp=N,54nm,0.3s,baz=26,slow=8.3,SNR=937						
WSAR				Sn	**Sn**	**23 51 06.3**	**-1.5**
	comp=N,65nm,0.3s,baz=337,slow=6.5,SNR=19						
WSAR				LR	LR	23 52 08.2	
	comp=N,139nm,18.3s,baz=42,slow=43						
WSAR	**Wadi Sarin**	**3.66**	**191**	P	**Pn**	**23 50 27.6**	**+2.9**
	SNR=1505						
ASHO	**Ashiyiah**	**3.69**	**235**	P	**Pn**	**23 50 27.9**	**+2.8**
	SNR=41						
ASHO	**Ashiyiah**	**3.69**	**235**	*i* P	**Pn**	**23 50 28.3**	**+3.1**
	SNR=43						
ASHO	**Ashiyiah**	**3.69**	**235**	P	**Pn**	**23 50 27.9**	**+2.8**
	SNR=41						
HOQ	**Hoqain**	**3.75**	**210**	P	**Pn**	**23 50 28.4**	**+2.4**
	SNR=11						
HOQ	**Hoqain**	**3.75**	**210**	*e*Pn	**Pn**	**23 50 28.3**	**+2.3**
HOQ	**Hoqain**	**3.75**	**210**	P	**Pn**	**23 50 28.4**	**+2.4**
	SNR=11						
NAZ	**Nazwa, Dubai**	**3.83**	**242**	P	**Pb**	**23 50 32.6**	**-3.0**
	SNR=12						
NAZ	**Nazwa, Dubai**	**3.83**	**242**	*i* P	**Pb**	**23 50 31.4**	**-4.2**
	SNR=12						
NAZ	**Nazwa, Dubai**	**3.83**	**242**	P	**Pb**	**23 50 31.4**	**-4.2**
	SNR=12						
TVBK	**TV Kerman**	**3.89**	**324**	*e*Pn	**Pn**	**23 50 32.3**	**+4.2**
TVBK				*e*		23 51 22.6	
	comp=N,99nm,0.1s						
TVBK				*e*		23 51 23.3	
	comp=Z,99nm,0.1s						
TVBK				*e*		23 51 24.4	
	comp=E,99nm,0.1s						
TVBK	**TV Kerman**	**3.89**	**324**	*e*Pn	**Pn**	**23 50 32.3**	**+4.2**
SMDO	**Samad**	**3.96**	**198**	P	**Pn**	**23 50 31.6**	**+2.7**
	SNR=15						
SMDO	**Samad**	**3.96**	**198**	P	**Pn**	**23 50 31.6**	**+2.7**
	SNR=15						
WBK	**Wadi Bani Khal**	**4.23**	**185**	P	**Pn**	**23 50 35.3**	**+2.7**
	SNR=39						
WBK	**Wadi Bani Khal**	**4.23**	**185**	P	**Pn**	**23 50 35.3**	**+2.7**
	SNR=39						
ASUD	**Al Ashush, Dub**	**4.27**	**240**	P	**Pb**	**23 50 38.7**	**-4.5**
	SNR=130						
ASUD	**Al Ashush, Dub**	**4.27**	**240**	*i* P	**Pb**	**23 50 38.5**	**-4.7**
	SNR=130						
ASUD	**Al Ashush, Dub**	**4.27**	**240**	P	**Pb**	**23 50 38.5**	**-4.7**
	SNR=130						
ALNE	**Al Ain**	**4.30**	**231**	*i* P	Pn	23 50 37.9	+4.4
	SNR=17						
ALNE	**Al Ain**	**4.30**	**231**	P	Pn	23 50 38.5	+5.0
	SNR=17						
KHGB	**Koh Gabri**	**4.34**	**325**	*e*Pn	**Pn**	**23 50 37.5**	**+3.2**
KHGB				*e*		23 51 32.1	
	comp=E,99nm,0.2s						
KHGB				*e*		23 51 33.9	
	comp=Z,99nm,0.1s						
KHGB				*e*		23 51 35.0	
	comp=N,99nm,0.1s						
KHGB	**Koh Gabri**	**4.34**	**325**	*e*Pn	**Pn**	**23 50 37.5**	**+3.2**
BSYO	**Bisya**	**4.54**	**206**	P	Pn	23 50 41.8	+5.0
	SNR=17						
BSY	**Bisya**	**4.54**	**206**	P	Pn	23 50 41.8	+5.0
	SNR=17						
AJN	**Ajban**	**4.57**	**241**	*i* P	**Pn**	**23 50 40.0**	**+2.8**
	SNR=11						
JMDO	**Jabal Madar**	**4.61**	**195**	P	Pn	23 50 42.1	+4.4
	SNR=24						
JMDO				S	**Sn**	**23 51 33.0**	**+1.7**
	SNR=9.3						
JMDO	**Jabal Madar**	**4.61**	**195**	P	Pn	23 50 42.1	+4.4
	SNR=24						
JMDO				S	**Sn**	**23 51 33.0**	**+1.7**
	SNR=9.3						
JHRM	**Jahrom**	**5.41**	**289**	*e*Pn	**Pn**	**23 50 52.2**	**+3.4**
JHRM				*e*		23 51 53.8	
	comp=Z,99nm,0.1s						
JHRM				*e*		23 51 57.7	
	comp=E,99nm,0.1s						
JHRM				*e*		23 51 59.0	
	comp=N,99nm,0.1s						
JHRM	**Jahrom**	**5.41**	**289**	*e*Pn	**Pn**	**23 50 52.2**	**+3.4**
IKOO	**Kooshah**	**5.57**	**357**	*e*Pn	**Pn**	**23 50 53.2**	**+2.0**
IKOO				*e*		23 50 54.5	
	comp=N,4µm,0.1s						
IKOO				*e*		23 50 54.5	
	comp=Z,4µm,0.1s						
IKOO				*e*		23 50 57.5	
	comp=E,3µm,0.1s						
IKOO	**Kooshah**	**5.57**	**357**	*e*Pn	**Pn**	**23 50 53.2**	**+2.0**
GHIR	**Ghir-Karzin**	**5.85**	**286**	*e*Pn	**Pn**	**23 50 58.0**	**+3.0**
GHIR				IAML		23 52 07.0	
	comp=E,46nm,0.3s						
GHIR				IAML		23 52 11.5	
	comp=N,53nm,0.4s						
GHIR	**Ghir-Karzin**	**5.85**	**286**	*e*Pn	**Pn**	**23 50 58.0**	**+3.0**
GHIR	**Ghir-Karzin**	**5.85**	**286**	*e*Pn	**Pn**	**23 50 58.0**	**+3.0**
IDAH	**Dahanechah**	**5.89**	**4**	*e*Pn	**Pn**	**23 50 58.2**	**+2.6**
IDAH				*e*		23 50 58.6	
	comp=Z,623nm,0.2s						
IDAH				*e*		23 50 59.1	
	comp=E,487nm,0.1s						
IDAH				*e*		23 50 59.6	
	comp=N,597nm,0.1s						
IDAH	**Dahanechah**	**5.89**	**4**	*e*Pn	**Pn**	**23 50 58.2**	**+2.6**
MHTO	**MHTO**	**5.97**	**193**	P	Pn	23 51 00.7	+4.2
	SNR=40						
ITEG	**Tejag**	**6.05**	**355**	*e*Pn	**Pn**	**23 51 00.5**	**+2.7**
ITEG				*e*		23 51 00.6	
	comp=Z,2µm,0.1s						
ITEG				*e*		23 51 01.8	
	comp=E,2µm,0.1s						
ITEG				*e*		23 51 02.2	
	comp=N,2µm,0.1s						
ITEG	**Tejag**	**6.05**	**355**	*e*Pn	**Pn**	**23 51 00.5**	**+2.7**
IMEH	**Mehriz**	**6.16**	**318**	*e*Pn	**Pn**	**23 51 01.7**	**+2.5**
IMEH				*e*		23 51 32.5	
	comp=Z,167nm,0.2s						
IMEH				*e*		23 52 17.2	
	comp=N,175nm,0.2s						
IMEH	**Mehriz**	**6.16**	**318**	*e*Pn	**Pn**	**23 51 01.7**	**+2.5**
TPRV	**Parvadeh(Tabas**	**6.59**	**340**	*e*Pn	**Pn**	**23 51 07.5**	**+2.5**
TPRV				*e*		23 53 37.0	
	comp=E,99nm,0.7s						
TPRV	**Parvadeh(Tabas**	**6.59**	**340**	*e*Pn	**Pn**	**23 51 07.5**	**+2.5**
TKDS	**Koohdasht(Taba**	**7.02**	**344**	*e*Pn	**Pn**	**23 51 13.2**	**+2.2**
TKDS				*e*		23 51 15.1	
	comp=Z,99nm,0.2s						
TKDS				*e*		23 51 15.5	
	comp=N,99nm,0.1s						
TKDS				*e*		23 51 15.9	
	comp=E,99nm,0.2s						
TKDS	**Koohdasht(Taba**	**7.02**	**344**	*e*Pn	**Pn**	**23 51 13.2**	**+2.2**
DQM	**DQM**	**7.09**	**194**	P	**Pn**	**23 51 14.9**	**+3.0**
	SNR=8.2						
TNSJ	**Nastanj**	**7.49**	**342**	*e*Pn	**Pn**	**23 51 19.7**	**+2.3**
TNSJ				*e*		23 53 53.9	
	comp=Z,99nm,0.5s						
TNSJ	**Nastanj**	**7.49**	**342**	*e*Pn	**Pn**	**23 51 19.7**	**+2.3**
IRAM	**Ramesheh**	**7.86**	**311**	*e*Pn	**Pn**	**23 51 24.4**	**+1.8**
IRAM				*e*		23 52 50.1	
	comp=N,490nm,0.1s						
IRAM				*e*		23 52 51.9	
	comp=E,558nm,0.1s						
IRAM				*e*		23 52 52.0	
	comp=Z,329nm,0.1s						
IRAM	**Ramesheh**	**7.86**	**311**	*e*Pn	**Pn**	**23 51 24.4**	**+1.8**
IGAR	**Gharneh**	**8.45**	**313**	*e*		23 53 05.7	
	comp=N,448nm,0.1s						
IGAR				*e*		23 53 05.9	
	comp=Z,173nm,0.1s						
IZEF	**Zefreh**	**8.59**	**316**	*e*Pn	**Pn**	**23 51 35.1**	**+2.4**
IZEF				*e*		23 53 10.3	
	comp=N,40nm,0.2s						
IZEF				*e*		23 53 13.1	
	comp=Z,37nm,0.2s						
IZEF				*e*		23 53 15.1	
	comp=E,40nm,0.1s						
IZEF	**Zefreh**	**8.59**	**316**	*e*Pn	**Pn**	**23 51 35.1**	**+2.4**
KVAR	**Kislovodsk Arr**	**21.76**	**326**	P	**P**	**23 54 17.7**	**-2.1**
	comp=E,3.0nm,0.7s,baz=345,slow=6.6,SNR=3.2						
KIV	**Kislovodsk**	**21.76**	**326**	*e*P	**P**	**23 54 17.2**	**-2.6**
	comp=E,5.5nm,0.6s						
AKTO	**Aktyubinsk**	**23.58**	**358**	P	**P**	**23 54 37.2**	**-1.5**
	comp=E,1.4nm,0.3s,baz=178,slow=14,SNR=6.2						
AKTO				LR	LR	00 05 05.4	
	comp=E,28nm,19.0s,baz=180,slow=40						
BRTR	**Keskin Array B**	**24.96**	**307**	P	**P**	**23 54 53.3**	**+1.5**
	comp=E,4.0nm,0.8s,baz=122,slow=11,SNR=31						
MKAR	**Makanchi Array**	**26.90**	**36**	P	**P**	**23 55 08.6**	**-0.6**
	comp=E,0.5nm,0.4s,baz=218,slow=9.1,SNR=12						
BVAR	**Borovoye Array**	**27.41**	**15**	P	**P**	**23 55 12.8**	**-0.9**
	comp=E,2.7nm,0.8s,baz=206,slow=9.6,SNR=18						
KURBB	**Kurchatov Arra**	**27.89**	**27**	P	**P**	**23 55 17.2**	**-0.7**
	comp=E,0.8nm,0.7s,baz=226,slow=9.0,SNR=6.4						
KURK	**Kurchatov**	**28.00**	**27**	P	**P**	**23 55 17.2**	**-1.7**
BRDH	**Bariadhala**	**29.54**	**91**	LR	LR	00 09 51.5	
	comp=E,54nm,19.6s,baz=194,slow=41						
ZALV	**Zalesovo Beam**	**32.94**	**28**	P	**P**	**23 56 00.8**	**-1.7**
	comp=E,1.9nm,0.3s,baz=229,slow=9.4,SNR=9.1						
FINES	**FINESS Array B**	**41.17**	**336**	P	**P**	**23 57 10.8**	**-1.5**
	comp=E,2.1nm,0.3s,baz=135,slow=8.5,SNR=38						
GERES	**GERESS Array B**	**41.45**	**314**	P	**P**	**23 57 13.4**	**-1.5**
	comp=E,0.8nm,0.7s,baz=106,slow=8.4,SNR=9.1						
SONM	**Songino Array**	**42.07**	**47**	P	**P**	**23 57 20.1**	**+0.1**
	comp=E,0.2nm,0.3s,baz=251,slow=9.0,SNR=3.5						
CLL	**Collm**	**42.56**	**318**	*e*P	**P**	**23 57 23.0**	**-0.8**
DAVOX	**Davos/Dischmat**	**43.53**	**311**	P	**P**	**23 57 30.3**	**-1.6**
	baz=148,slow=18,SNR=4.4						
HFS	**Hagfors**	**45.47**	**330**	P	**P**	**23 57 45.8**	**-1.3**
	comp=E,1.1nm,0.5s,baz=142,slow=7.3,SNR=10						
ARCES	**ARCESS Array B**	**47.05**	**344**	P	**P**	**23 57 57.9**	**-1.5**
	comp=E,2.6nm,0.3s,baz=138,slow=8.4,SNR=54						
EKA	**Eskdalemuir Ar**	**52.84**	**320**	P	**P**	**23 58 42.5**	**-1.1**
	comp=E,0.2nm,0.3s,baz=101,slow=8.2,SNR=5.3						
BOSA	**Boshof**	**64.13**	**213**	P	**P**	**00 00 01.9**	**-0.9**
	comp=E,4.3nm,1.0s,baz=24,slow=6.1,SNR=5.3						

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*IDC **12** 23:54:39.5±1.9, 7°.59S×128°.59E, h162^{km}±19^{km}, mb3.7/5, mb1 3.8/10, mb1mx3.4/52, mbtmp4.2/10, Error ellipse: s-maj=22.8km s-min=18.4km az=112.0*

ISC 12 23:54:37.3±0.7**, 7°.69S**±0°.06×**128°.85E**±0°.09**, h150^{km}, n11, σ2^{s}39**/16**, mb4.0**/5**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**5.70**	**244**	P	**Pn**	**23 56 01.1**	**+1.0**
	55nm,0.3s,baz=88,slow=3.2,SNR=30						
BATI				S	**Sn**	**23 57 03.6**	**-1.2**
	54nm,0.3s,baz=269,slow=3.5,SNR=14						
SIJI	**Sorong**	**7.19**	**20**	P	**Pn**	**23 56 22.2**	**+2.2**
	2.1nm,0.3s,baz=269,slow=22,SNR=13						
SIJI				S	**Sn**	**23 57 36.3**	**-4.2**
	3.0nm,0.3s,baz=253,slow=19,SNR=3.4						
FITZ	**Fitzroy Crossi**	**10.81**	**196**	P	**Pn**	**23 57 08.8**	**+0.8**
	1.4nm,0.3s,baz=25,slow=9.2,SNR=49						
FITZ				S	**Sn**	**23 59 04.6**	**-3.0**
	3.5nm,0.3s,baz=89,slow=21,SNR=9.0						
WRA	**Warramunga Arr**	**13.29**	**157**	P	**P**	**23 57 43.3**	**-1.4**
	0.4nm,0.3s,baz=334,slow=13,SNR=29						
WRA				S	**Sn**	**00 00 04.7**	**-2.8**
	2.8nm,0.3s,baz=329,slow=22,SNR=12						
ASAR	**Alice Springs**	**16.61**	**164**	P	**Pn**	**23 58 26.6**	**+5.0**
	1.1nm,0.3s,baz=337,slow=9.9,SNR=90						
ASAR				S	**S**	**00 01 26.5**	**+0.2**
	1.0nm,0.3s,baz=341,slow=26,SNR=9.4						
SONM	**Songino Array**	**58.74**	**342**	P	**P**	**00 04 19.8**	**+0.2**
	1.1nm,0.6s,baz=166,slow=7.7,SNR=8.4						
MKAR	**Makanchi Array**	**68.18**	**327**	P	**P**	**00 05 21.0**	**-0.5**
	1.0nm,0.3s,baz=115,slow=8.4,SNR=26						
ZALV	**Zalesovo Beam**	**71.70**	**334**	P	**P**	**00 05 41.6**	**-1.1**
	1.5nm,0.5s,baz=132,slow=6.1,SNR=5.1						

KURBB	Kurchatov Arra	72.50	329	P	P	00 05 47.0	-0.6
	1.5nm,0.5s,baz=131,slow=5.1,SNR=18						
BVAR	Borovoye Array	78.04	328	P	P	00 06 18.7	-0.5
	0.6nm,0.5s,baz=123,slow=9.3,SNR=8.0						
EKA	Eskdalemuir Ar	119.21	331	PKP	PKPdf	00 13 09.7	+1.2
	0.2nm,0.4s,baz=33,slow=4.3,SNR=3.3						

DDA ***13*** *00:02:34.0, 36°.80N×27°.34E, h7^{km}, Ml3.0*
ISCJB ***13*** *00:02:35.9±0.4, 36°.84N±0°.02×27°.44E±0°.03, h6^{km}±4^{km}, Error ellipse: s-maj=4.0km s-min=3.5km az=138.2*
ATH ***13*** *00:02:35.9, 36°.82N×27°.42E, h16^{km}±6^{km}, ML2.1/4, Error ellipse: s-maj=6.3km s-min=1.3km az=211.0*
ISK ***13*** *00:02:35.7, 36°.84N×27°.44E, h6^{km}, ML2.3/11*
CSEM ***13*** *00:02:36.0±0.1, 36°.84N×27°.44E, h5^{km}, ML2.3, Error ellipse: s-maj=3.1km s-min=2.5km az=20.0*
ISC 13 00:02:35.9±0.8**, 36°.83N**±0°.02×**27°.45E**±0°.02**, h13**^{km}±5^{km}**, n45,** σ**1**^{s}**.44**/69**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAT	Datca	0.14	135	PG	Pg	00 02 39.2	-0.2
DAT				SG	Sg	00 02 41.9	-0.1
DAT	Datca	0.14	135	i P	Pg	00 02 39.2	-0.2
DAT				i S	Sg	00 02 41.8	-0.2
DAT	Datca	0.14	135	P	Pg	00 02 39.2	-0.2
DAT				S	Sg	00 02 41.8	-0.2
BDRM	Kayabasi	0.24	358	i P	Pg	00 02 40.5	-0.4
BDRM				i S	Sg	00 02 44.5	+0.2
BDRM	Kayabasi	0.24	358	P	Pg	00 02 40.5	-0.4
BDRM				S	Sg	00 02 44.5	+0.2
BODT	Bodrum	0.26	334	PG	Pg	00 02 40.9	-0.4
BODT				SG	Sg	00 02 45.0	0.0
BODT	Bodrum	0.26	334	ePg	Pg	00 02 40.9	-0.4
BODT				eSg	Sg	00 02 45.0	0.0
NISR	Nisiros	0.34	230	P	Pg	00 02 41.6	-1.2
NISR				S	Sg	00 02 47.2	-0.1
NISR				AML	AML	00 02 47.7	
	comp=N,1005µm,0.2s						
NISR				AML	AML	00 02 48.6	
	comp=E,1966µm,0.2s						
NISR	Nisiros	0.34	230	P	Pg	00 02 42.0	-0.7
NISR				S	Sg	00 02 47.2	-0.1
MLSB	Milas	0.53	29	PG	Pg	00 02 46.6	+0.3
MLSB				SG	Sg	00 02 54.2	+0.8
MLSB	Milas	0.53	29	ePg	Pg	00 02 46.6	+0.3
MLSB				eSg	Sg	00 02 54.2	+0.8
MRSB	Marmaris-Mugla	0.61	101	PG	Pg	00 02 48.0	+0.3
MRSB	Marmaris-Mugla	0.61	101	ePg	Pg	00 02 48.0	+0.3
YER	Yerkesik	0.73	65	PG	Pg	00 02 50.4	+0.4
YER	Yerkesik	0.73	65	ePg	Pg	00 02 50.4	+0.4
ARG	Arkhangelos	0.82	138	PG	Pb	00 02 52.3	+0.4
ARG	Arkhangelos	0.82	138	P	Pg	00 02 50.7	-1.0
ARG				S	Sb	00 03 04.5	+1.6
ARG				AML	AML	00 03 05.6	
	comp=E,151µm,0.3s						
ARG				AML	AML	00 03 07.7	
	comp=N,160µm,0.3s						
ARG	Arkhangelos	0.82	138	P	Pg	00 02 51.2	-0.5
ARG	Arkhangelos	0.82	138	ePg	Pb	00 02 52.3	+0.4
ARG				S	Sb	00 03 03.8	+0.9
AYDN	Tasoluk	0.90	22	i P	Pg	00 02 52.5	-0.7
AYDN				i S	Sg	00 03 05.0	+0.1
AYDN	Tasoluk	0.90	22	P	Pg	00 02 52.5	-0.7
AYDN				S	Sg	00 03 05.0	+0.1
TURN	Turunc	0.92	87	PG	Pg	00 02 47.7	-6.0
TURN				SG	Sg	00 02 58.0	-7.7
TURN	Turunc	0.92	87	i P	Pg	00 02 47.8	-5.9
TURN				i S	Sg	00 02 58.8	-7.0
DALY	Dalyan (Mu˜la	0.96	90	PG	Pg	00 02 54.6	+0.2
DALY	Dalyan (Mu˜la	0.96	90	i P	Pg	00 02 54.2	-0.2
DALY				i S	Sb	00 03 08.1	+1.0
DALY	Dalyan (Mu˜la	0.96	90	P	Pg	00 02 54.2	-0.2
DALY	Dalyan (Mu˜la	0.96	90	ePg	Pg	00 02 54.6	+0.2
DALY				S	Sb	00 03 08.1	+1.0
SMG	Samos	1.01	331	P	Pg	00 02 53.7	-1.6
SMG				S	Sn	00 03 09.9	0.0
SMG				AML	AML	00 03 12.7	
	comp=E,490µm,0.3s						
SMG				AML	AML	00 03 13.1	
	comp=N,311µm,0.3s						
SMG	Samos	1.01	331	P	Pg	00 02 54.3	-1.0
SMG				S	Sb	00 03 09.4	+1.0
AYDB	Zeytinkoy-Aydi	1.17	17	PN	Pg	00 02 58.3	-0.1
AYDB	Zeytinkoy-Aydi	1.17	17	ePn	Pg	00 02 58.3	-0.1
AMGA	Amorgos Island	1.25	271	P	Pb	00 02 58.9	-0.5
AMGA				S	Sn	00 03 16.8	+0.9
AMGA				AML	AML	00 03 19.1	
	comp=E,70µm,0.2s						
AMGA				AML	AML	00 03 20.2	
	comp=N,83µm,0.4s						
AMGA	Amorgos Island	1.25	271	P	Pb	00 02 59.0	-0.4
AMGA				S	Sn	00 03 16.4	+0.5
DGB	˜zmir	1.30	340	i P	Pn	00 02 58.3	-1.5
DGB				i S	Sb	00 03 15.7	-1.2
FETY	Fethiye	1.32	98	PN	Pg	00 03 02.1	+0.8
FETY	Fethiye	1.32	98	ePn	Pg	00 03 02.1	+0.8
TAVA	DENIZLI_Tavas	1.33	61	i P	Pn	00 03 01.0	+0.7
TAVA				i S	Sg	00 03 18.8	+0.1
TAVA	DENIZLI_Tavas	1.33	61	P	Pn	00 03 01.0	+0.7
TAVA				S	Sg	00 03 18.8	+0.1
APE	Apeiranthos	1.56	279	PN	Pb	00 03 04.6	-0.1
APE	Apeiranthos	1.56	279	P	Pn	00 03 04.3	+0.9
APE	Apeiranthos	1.56	279	P	Pb	00 03 04.6	-0.1
BLCB	Balcova	1.59	348	PN	Pb	00 03 04.9	-0.2
BLCB	Balcova	1.59	348	ePn	Pb	00 03 04.9	-0.2
IOSP	Ios island	1.74	267	P	Pg	00 03 09.6	+0.3
IOSP	Ios island	1.74	267	P	Pb	00 03 08.5	+0.8

KRNET ***13*** *00:06:07.8±0.1, 39°.44N×73°.54E, h11^{km}, mb3.2*
NNC ***13*** *00:06:07.9±2.0, 39°.48N×73°.75E, h0^{km}, mb3.7, mpv3.3, Error ellipse: s-maj=24.8km s-min=9.7km az=64.0*
SOME ***13*** *00:06:08.4, 39°.50N×73°.40E, h5^{km}*
ISC 13 00:06:08.9±1.4**, 39°.44N**±0°.06×**73°.59E**±0°.03**, h10**^{km}**, n39,** σ**2**^{s}**.23**/69**, 38C-9D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	0.58	353	⇑P	Pg	00 06 18.7	-1.5
	46nm,0.3s						
SFK				⇑S	Sg	00 06 27.3	-0.5
	175nm,0.3s						
SFK	Sufi-Kurgan	0.58	353	⇑iP	Pg	00 06 19.2	-1.0
	baz=57						
SFK				⇑iS	Sg	00 06 27.3	-0.5
	baz=57						
DRK	Karamyk	1.39	272	⇑iP	Pb	00 06 33.3	-1.7
	baz=72						
DRK				⇑iS	Sg	00 06 52.3	-1.2
	baz=72						
ARSB	Arslanbob	1.94	346	⇑eP	Pb	00 06 43.9	-0.5
	baz=47						
ARSB				⇑iS	Sg	00 07 10.4	-0.9
	baz=47						
BTK	Batken	2.22	287	⇑iP	Pb	00 06 47.0	-2.2
	baz=87						
BTK				⇑iS	Sb	00 07 16.3	-0.5
	baz=87						
TOKL	Toktogul	2.56	348	⇓eP	Pb	00 06 52.3	-2.6
	baz=49						
TOKL				⇓iS	Sb	00 07 25.0	-1.5
	baz=49						
ARK	Arkit	2.66	333	⇑eP	Pb	00 06 53.3	-3.4
	baz=34						
ARK				⇑iS	Sb	00 07 27.0	-2.5
	baz=34						
AML	Almayashu	2.69	2	P	Pb	00 06 56.0	-1.4
	SNR=26						
AML	Almayashu	2.69	2	⇑iP	Pb	00 06 55.0	-2.4
	baz=3.0						
AML				⇑iS	Sb	00 07 29.1	-1.5
	baz=3.0						
UCH	Uchtor	2.87	14	⇑iP	Pb	00 06 57.6	-2.9
	baz=15						
UCH				⇑iS	Sb	00 07 33.6	-2.3
	baz=15						
KZA	Kyzart	2.92	25	P	Pb	00 07 00.5	-0.8
	SNR=12						
KZA	Kyzart	2.92	25	⇑iP	Pb	00 06 58.5	-2.8
	baz=26						
KZA				⇑iS	Sb	00 07 35.1	-2.2
	baz=26						
MNAS	Manas	3.15	345	⇑Pn	Pn	00 06 59.3	+0.6
	3.6nm,0.3s						
MNAS				⇓Lg	Lg	00 07 46.0	
	32nm,0.7s						
MNAS	Manas	3.15	345	⇑iP	Pn	00 07 00.8	+2.1
	baz=46						
MNAS				⇑iS	Sn	00 07 39.3	+2.8
	baz=46						
EKS2	Erkin-Say	3.22	2	P	Pb	00 07 04.5	-1.8
	SNR=10						
EKS2	Erkin-Say	3.22	2	⇓iP	Pn	00 07 02.0	+2.3
	baz=3.0						
EKS2				⇓iS	Sb	00 07 41.6	-4.0
	baz=3.0						
AAK	Ala-Archa	3.27	12	Pn	Pn	00 07 01.1	+0.8
	8.9nm,0.5s						
AAK				⇑Lg	Lg	00 07 51.3	
	27nm,0.7s						
AAK	Ala-Archa	3.27	12	⇑iP	Pn	00 07 02.6	+2.3
	baz=12						
AAK				⇑iS	Sn	00 07 42.7	+3.3
	baz=12						
MRKS	Merke	3.32	355	eP	Pb	00 07 08.1	+0.3
	9.3nm,0.2s						
MRKS				eS	Sb	00 07 50.8	+2.6
	58nm,0.3s						
KBK	Karagaybulak	3.38	17	P	Pb	00 07 08.0	-0.9
	SNR=8.1						
KBK	Karagaybulak	3.38	17	⇑iP	Pn	00 07 04.0	+2.2
	baz=18						
KBK				⇑iS	Sn	00 07 45.0	+3.0
	baz=18						
ULHL	Ulahol	3.45	35	⇑iP	Pn	00 07 05.4	+2.5
	baz=35						
ULHL				⇑iS	Sb	00 07 48.1	-4.2
	baz=35						
BOOM	Boomskoye usch	3.53	30	⇑iP	Pn	00 07 06.5	+2.6
	baz=30						
BOOM				⇑iS	Sn	00 07 49.9	+4.1
	baz=30						
CHMS	Chumysh	3.66	13	P	Pb	00 07 09.9	-3.9
	SNR=8.2						
TKM2	Tokmak 2	3.79	23	⇓Pn	Pn	00 07 09.0	+1.4
	3.7nm,0.5s						
TKM2				⇑Lg	Lg	00 08 07.0	
	14nm,0.7s						
TKM2	Tokmak 2	3.79	23	P	Pb	00 07 13.0	-3.1
	SNR=7.8						
TKM2	Tokmak 2	3.79	23	⇑iP	Pn	00 07 10.6	+3.0
	baz=23						
TKM2				⇑iS	Sn	00 07 55.9	+3.5
	baz=23						
IUG	Iuzhnay	3.82	316	eP	Pb	00 07 16.3	-0.1
	16nm,0.6s						
IUG				eS	Sb	00 08 03.7	+0.8
	32nm,0.8s						
KST	Kastek	4.02	26	eP	Pg	00 07 23.2	-2.7
	6.0nm,0.4s						
KST				eS	Sg	00 08 17.1	-0.9
	17nm,0.5s						
IZV	Izvestkoviy	4.26	31	eP	Pg	00 07 29.1	-1.3
	7.4nm,0.5s						
IZV				eS	Sg	00 08 27.6	+2.0
	20nm,0.3s						
KK31	Karatay Array	4.33	329	⇑Pn	Pn	00 07 17.2	+2.4
	0.7nm,0.3s,baz=136,slow=14,SNR=16						
KK31				⇑Pg	Pb	00 07 26.6	+1.5
	3.1nm,0.5s,baz=128,slow=13,SNR=10						
KK31				⇑Sn	Sn	00 08 07.8	+2.3
	2.7nm,0.3s,baz=193,slow=31,SNR=4.1						
KK31				⇑Lg	Lg	00 08 26.7	
	6.6nm,0.4s,baz=138,slow=28,SNR=5.0						
TNSS	Tian-Shan	4.40	34	eP	Pg	00 07 32.7	-0.4
	4.7nm,0.3s						
TNSS				eS	Sg	00 08 33.4	+3.3
	24nm,0.8s						
MDOK	Medeo	4.54	34	⇑Pg	Pb	00 07 27.7	-1.1
	5.0nm,0.7s						
MDOK				⇓Lg	Lg	00 08 31.9	
	19nm,0.9s						
MDOK	Medeo	4.54	34	eP	Pg	00 07 34.2	-1.7
	5.1nm,0.6s						
MDOK				eS	Sg	00 08 36.4	+1.6
	12nm,0.8s						
KOTS	Kotyrbulak	4.63	34	eP	Pg	00 07 35.5	-2.0
	4.8nm,0.3s						
KOTS				eS	Sg	00 08 38.3	+0.8
	20nm,0.5s						
KTBS	Karatobe	4.86	28	eP	Pg	00 07 39.6	-2.3
	1.6nm,0.6s						
KTBS				eS	Sg	00 08 45.1	+0.2
	9.3nm,0.4s						
KUU	Kurty	4.91	24	⇓iP	Pg	00 07 39.8	-3.0
	2.6nm,0.3s						
KUU				⇓iS	Sg	00 08 45.4	-0.9
	18nm,0.4s						
CHKK	Chushkaly	5.09	29	eP	Pg	00 07 44.0	-2.4
	3.7nm,0.3s						
CHKK				eS	Sg	00 08 52.8	+0.4
	15nm,0.5s						
SATY	Saty	5.12	44	eP	Pg	00 07 44.9	-2.1
	6.9nm,0.2s						
SATY				eS	Sg	00 08 55.6	+2.3
	6.5nm,0.8s						

IDC 13 00:14:47.2±2.8**, 7°.05S**×**129°.87E, h78**^{km}±36^{km}**, mb3.3**/2**, mb1 3.7**/6**, mb1mx3.3**/50**, mbtmp3.9**/6**, Error ellipse: s-maj=69.4km s-min=23.2km az=92.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	6.29	13	P	Pn	00 16 17.4	-0.1
	3.1nm,0.3s,baz=157,slow=22,SNR=14						
SIJI				S	Sn	00 17 25.0	-3.0
	5.5nm,0.3s,baz=72,slow=22,SNR=4.5						
FITZ	Fitzroy Crossi	11.73	200	P	Pn	00 17 32.5	+0.8
	1.6nm,0.3s,baz=32,slow=12,SNR=34						
FITZ				S	Sn	00 19 33.6	-7.3
	1.2nm,0.3s,baz=136,slow=23,SNR=9.4						
WRA	Warramunga Arr	13.53	162	P	Pn	00 17 54.5	-1.5
	0.4nm,0.3s,baz=342,slow=13,SNR=38						
WRA				S	Sn	00 20 16.0	-8.8
	1.9nm,0.3s,baz=336,slow=22,SNR=13						
ASAR	Alice Springs	16.97	167	P	P	00 18 40.4	-0.1
	0.3nm,0.3s,baz=345,slow=9.8,SNR=8.5						
ASAR				S	Sn	00 21 39.2	-8.8
	0.3nm,0.3s,baz=354,slow=26,SNR=6.0						
MKAR	Makanchi Array	68.19	327	P	P	00 25 39.5	+0.1
	0.3nm,0.3s,baz=122,slow=7.7,SNR=6.9						
KURBB	Kurchatov Arra	72.48	329	P	P	00 26 05.3	-0.1
	0.3nm,0.5s,baz=128,slow=5.0,SNR=3.9						

MEX 13 00:28:59.9±0.3**, 16°.24N**×**98°.17W, h13**^{km}±2^{km}**, MD3.7, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.16	15	i P	Pg	00 29 03.2	-0.5
PNIG				i S	Sg	00 29 05.9	-0.5
TLIG	Tlapa	1.37	344	eP	Pn	00 29 21.4	-3.5
TLIG				eS	Sn	00 29 37.7	-5.2

MOS ***13*** *00:38:19.5±0.9, 56°.28S×27°.52W, h69^{km}, mb5.2/8, Error ellipse: s-maj=24.0km s-min=12.2km az=113.6*
ISCJB ***13*** *00:38:23.7±0.3, 56°.28S±0°.06×27°.5W±0°.1, h112^{km}, mb4.9/30, Error ellipse: s-maj=10.0km s-min=6.2km az=138.0*
BJI ***13*** *00:38:23.4, 56°.30S×27°.50W, h101^{km}, mB5.2/2*
NEIC ***13*** *00:38:24.7±1.2, 56°.27S×27°.45W, h104^{km}±10^{km}, mb4.8/16, Error ellipse: s-maj=9.9km s-min=6.1km az=225.0*
IDC ***13*** *00:38:25.7±1.8, 56°.22S×27°.39W, h112^{km}±15^{km}, mb4.4/11, mb1 4.6/13, mb1mx4.3/28, mbtmp4.9/13, MS3.2/5, Ms1 3.2/5, ms1mx3.0/26, Error ellipse: s-maj=18.9km s-min=11.6km az=66.0*
ISC 13 00:38:25.4±0.3**, 56°.31S**±0°.07×**27°.52W**±0°.08**, h112**^{km}**, n166,** σ**1**^{s}**.07**/176**, mb4.9**/29**, 3C-1D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	Hope Point	5.51	288	ePn	Pn	00 39 44.8	-0.2
VNA1	Neumayer--Stat	16.62	157	P	Pn	00 42 09.5	-1.7
VNA3	Neumayer Olymp	16.81	160	P	Pn	00 42 11.5	-2.0
VNA3				S	Sn	00 45 19.0	-1.1
EFI	East Falkland	18.45	272	i P	P	00 42 30.7	-1.3
EFI				pmax	pmax		
	comp=Z,50nm,0.9s						
SNAA	Sanae	18.58	155	P	P	00 42 32.8	-0.5
SNAA				S	Sn	00 46 07.0	+4.4
SNAA	Sanae	18.58	155	P	P	00 42 32.9	-0.4
	comp=Z,7.8nm,0.3s,baz=303,slow=9.9,SNR=420						
SNAA				ScP	ScP	00 50 22.2	+0.1
	comp=Z,0.2nm,0.3s,baz=238,slow=1.1,SNR=8.9						
SNAA	Sanae	18.58	155	eP	P	00 42 32.1	-1.2
	comp=Z,69nm,0.6s						
SNAA				ScP	ScP	00 50 22.2	+0.1
SNAA	Sanae	18.58	155	c iP	P	00 42 32.7	-0.6
PMSA	Palmer Station	19.59	230	P	Pn	00 42 47.3	+0.7
	comp=Z,9.3nm,0.3s,baz=62,slow=9.0,SNR=24						
NVL	N'lazarevskaya	22.15	146	⇓iP	P	00 43 11.2	-0.3
NVL				pmax	pmax		
	comp=Z,13nm,0.9s						
TRQA	Tornquist	29.26	294	eP	P	00 44 16.5	-0.1
	comp=Z,26nm,1.6s						
TRQA	Tornquist	29.26	294	eP	P	00 44 16.5	-0.1
TRQA				pmax	pmax		
	comp=Z,26nm,1.6s						
SYO	Syowa Base	31.50	141	⇑eP	P	00 44 34.4	-1.6
SYO	Syowa Base	31.50	141	⇑epP	pP	00 44 54.6	-6.0
PLCA	Paso Flores	31.87	281	P	P	00 44 38.8	-0.9
	comp=Z,3.0nm,1.0s,baz=146,slow=8.0,SNR=3.8						
PLCA				PcP	PcP	00 47 27.9	+0.3
	comp=Z,0.8nm,0.7s,baz=124,slow=1.9,SNR=3.4						
PLCA				LR	LR	00 57 18.6	
	comp=Z,47nm,18.5s,baz=163,slow=36						
QSPA	South Pole Qui	33.94	180	P	P	00 44 58.7	+1.2
	comp=Z,2.7nm,0.4s,baz=27,slow=3.6,SNR=19						
QSPA				PcP	PcP	00 47 33.6	+0.6
	comp=Z,4.2nm,0.7s,baz=8.9,slow=3.0,SNR=3.7						
QSPA				LR	LR	00 57 45.2	
	comp=Z,59nm,21.3s,baz=207,slow=34						
QSPA	South Pole Qui	33.94	180	eP	P	00 44 58.4	+0.9
	comp=Z,9.6nm,0.7s						
QSPA				PcP	PcP	00 47 33.6	+0.6
GO05	HualaæØ	36.77	286	eP	P	00 45 21.4	-0.5
	comp=Z,32nm,1.3s						
CPUP	Villa Florida	36.85	312	P	P	00 45 22.1	-0.5
	comp=Z,8.4nm,0.6s,baz=152,slow=7.0,SNR=31						
CPUP				PcP	PcP	00 47 42.4	+0.4
	comp=Z,4.0nm,0.5s,baz=113,slow=1.1,SNR=9.9						
CPUP				LR	LR	00 58 52.0	
	comp=Z,24nm,19.6s,baz=158,slow=33						
CPUP	Villa Florida	36.85	312	eP	P	00 45 22.3	-0.3
CPUP				e		00 47 42.5	
CPUP				pmax	pmax		
	comp=Z,8.0nm,0.6s						
PEL	Peldehue	37.55	290	eP	P	00 45 29.1	+0.6
	comp=Z,113nm,1.8s						
PEL	Peldehue	37.55	290	eP	P	00 45 29.1	+0.6
PEL				pmax	pmax		
	comp=Z,113nm,1.8s						
ROC1	El Roble	37.85	289	eP	P	00 45 30.9	-0.4
	comp=Z,25nm,1.1s						
MAW	Mawson	40.05	143	P	P	00 45 49.2	+0.3
	comp=Z,7.3nm,0.6s,baz=228,slow=7.6,SNR=29						
MAW				ScP	ScP	00 51 30.6	+0.9
	comp=Z,5.6nm,0.9s,baz=263,slow=4.9,SNR=11						
MAW				LR	LR	01 00 31.2	
	comp=Z,28nm,20.2s,baz=238,slow=33						
MAW	Mawson	40.05	143	eP	P	00 45 49.1	+0.3
	comp=Z,1.6nm,0.7s						
MAW				ScP	ScP	00 51 30.6	+0.9
MAW	Mawson	40.05	143	eP	P	00 45 49.1	+0.3
MAW				pmax	pmax		
	comp=Z,2.0nm,0.7s						
LCO	Las Campanas	40.84	294	eP	P	00 45 55.5	-0.7
	comp=Z,84nm,1.8s						
LCO	Las Campanas	40.84	294	eP	P	00 45 55.5	-0.7
LCO				pmax	pmax		
	comp=Z,84nm,1.8s						
GO02	Mina Guanaco	43.45	298	eP	P	00 46 17.3	-0.1
	comp=Z,38nm,0.6s						
VNDA	Vanda	46.30	183	P	P	00 46 40.9	+1.9
	comp=Z,2.7nm,0.6s,baz=180,slow=7.3,SNR=28						
VNDA				ScP	ScP	00 51 55.4	+0.5
	comp=Z,1.1nm,0.8s,baz=201,slow=1.6,SNR=6.6						
VNDA	Vanda	46.30	183	eP	P	00 46 39.8	+0.8
	comp=Z,18nm,1.8s						
VNDA				ScP	ScP	00 51 55.4	+0.5
VNDA	Vanda	46.30	183	eP	P	00 46 39.8	+0.8
VNDA				pmax	pmax		
	comp=Z,18nm,1.8s						
PB01	IPOC Station P	46.89	301	eP	P	00 46 44.5	+0.2
	comp=Z,44nm,0.6s						
PB11	IPOC Station P	48.07	302	eP	P	00 46 53.7	+0.2
	comp=Z,35nm,0.7s						
H10S2	ASCENSION HYDR	48.31	17	T	T	01 39 40.5	
	baz=189,slow=75,SNR=24						
H10S3	ASCENSION HYDR	48.31	17	T	T	01 39 40.7	
	baz=189,slow=75,SNR=12						
H10S1	ASCENSION HYDR	48.32	17	T	T	01 39 43.0	
	baz=189,slow=75,SNR=4.8						
MNMC	Minye Minye	48.58	302	eP	P	00 46 58.3	+0.6
	comp=Z,103nm,0.5s						
LBTB	Lobatse	49.26	73	eP	P	00 47 02.1	-0.5
	comp=Z,18nm,1.3s						
LBTB	Lobatse	49.26	73	eP	P	00 47 02.1	-0.5
LBTB				pmax	pmax		
	comp=Z,18nm,1.3s						
H10N1	ASCENSION HYDR	49.42	17	T	T	01 41 04.7	
	baz=188,slow=75,SNR=10						
H10N3	ASCENSION HYDR	49.42	17	T	T	01 41 04.6	
	baz=188,slow=75,SNR=11						
H10N2	ASCENSION HYDR	49.44	17	T	T	01 41 05.8	
	baz=188,slow=75,SNR=13						
LPAZ	La Paz	50.38	306	P	P	00 47 12.4	+0.6
	comp=Z,29nm,0.6s,baz=121,slow=5.0,SNR=164						
LPAZ				PcP	PcP	00 48 29.7	+1.1
	comp=Z,4.1nm,0.7s,baz=169,slow=5.2,SNR=2.0						
LPAZ	La Paz	50.38	306	eP	P	00 47 12.3	+0.6
	comp=Z,28nm,0.6s						
LPAZ				PcP	PcP	00 48 29.7	+1.1
LPAZ	La Paz	50.38	306	eP	P	00 47 12.3	+0.6
LPAZ						00 48 29.7	
LPAZ				pmax	pmax		
	comp=Z,28nm,0.6s						
SAML	Samuel	54.86	315	eP	P	00 47 43.5	-0.5
	comp=Z,15nm,1.0s						
SAML	Samuel	54.86	315	eP	P	00 47 43.5	-0.5
SAML				pmax	pmax		
	comp=Z,15nm,1.0s						
RPN	Rapa Nui	63.43	261	LR	LR	01 11 48.9	
	comp=Z,32nm,21.8s,baz=12,slow=32						
LIC	Lamto	65.01	25	eP	P	00 48 53.1	-0.2
	comp=Z,42nm,0.7s						
KIC	Kosan Boka	65.21	25	eP	P	00 48 53.8	-0.8
	comp=Z,98nm,1.5s						
TIC	Toumodi	65.42	25	eP	P	00 48 55.6	-0.4
DBIC	Dimbokro	65.48	25	P	P	00 48 56.4	+0.1
	comp=Z,7.6nm,0.6s,baz=167,slow=8.1,SNR=15						
OTAV	Otavalo	69.65	304	eP	P	00 49 24.3	+1.1
	comp=Z,17nm,0.6s						
OTAV	Otavalo	69.65	304	eP	P	00 49 24.3	+1.1
OTAV				pmax	pmax		
	comp=Z,17nm,0.6s						
PRAC	Prado	71.14	309	eP	P	00 49 30.9	-0.8
	comp=Z,84nm,1.8s						
RUSC	La Rusia	72.34	312	eP	P	00 49 38.6	-0.8
	comp=Z,13nm,1.7s						
PCRV	Puerto La Cruz	73.04	322	P	P	00 49 43.6	+0.6
	comp=Z,34nm,0.6s,baz=163,slow=6.3,SNR=31						
KOWA	Kowa	73.24	24	P	P	00 49 44.5	+0.5
	comp=Z,3.4nm,0.6s,baz=165,slow=7.4,SNR=17						
KOWA	Kowa	73.24	24	eP	P	00 49 44.5	+0.5
	comp=Z,34nm,1.9s						
SDV	Santo Domingo	74.06	315	P	P	00 49 49.4	+0.2
	comp=Z,13nm,0.8s,baz=159,slow=8.6,SNR=7.5						
SDV	Santo Domingo	74.06	315	eP	P	00 49 49.5	+0.3
	comp=Z,16nm,1.0s						
TAM	Tamanrasset	83.61	30	eP	P	00 50 42.1	+1.0
	comp=Z,3.7nm,1.1s						
TAM	Tamanrasset	83.61	30	eP	P	00 50 42.1	+1.0
TAM				pmax	pmax		
	comp=Z,4.0nm,1.1s						
DGAR	Diego Garcia	89.39	102	i P	P	00 51 08.3	-1.1
ESDC	Sonseca Array	97.69	18	P	Pdif	00 51 48.8	+1.9
	comp=Z,0.5nm,0.7s,baz=186,slow=5.9,SNR=4.4						
ES19	SONSECA Array	97.72	18	eP	Pdif	00 51 47.8	+0.7
ASAR	Alice Springs	98.79	163	P	P	00 51 52.0	-0.4
	comp=Z,0.8nm,0.7s,baz=185,slow=4.0,SNR=8.7						

ASAR				PP	PP	00 55 50.6	-3.4
	comp=Z,0.6nm,0.8s,baz=192,slow=7.3,SNR=4.1						
WRA	Warramunga Arr	102.51	163	P	Pdif	00 52 08.6	-0.4
	comp=Z,0.2nm,0.6s,baz=197,slow=4.6,SNR=6.1						
WRA				PKiKP	PKiKP	00 56 29.1	-0.5
	comp=Z,0.3nm,0.7s,baz=209,slow=1.3,SNR=4.9						
KIV	Kislovodsk	115.98	49	*i* PKIKP	PKPdf	00 56 53.3	-0.8
KIV				*e*		00 57 19.8	
KIV				*e*		00 57 59.2	
KIV				*e*PPP	PPP	01 00 30.1	
KIV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
P18A	Preston Nutter	118.23	300	*e*PKPdf	PKPdf	00 56 59.2	+0.3
MSU	Marysvale	118.31	297	*e*PKPdf	PKPdf	00 56 59.9	+0.9
MSU	Marysvale	118.31	297	*e*PKIKP	PKPdf	00 56 59.9	+0.9
PSUT	Pine Spring	119.16	296	*e*PKPdf	PKPdf	00 57 01.8	+1.2
DUG	Dugway, Tooele	119.92	298	*e*PKPdf	PKPdf	00 57 02.5	+0.6
ULM	Lac du Bonnet	120.31	316	PKP	PKPdf	00 57 01.1	-1.0
	comp=Z,2.1nm,0.5s,baz=180,slow=2.0,SNR=3.2						
PD31	Pinedale Array	120.33	302	*e*PKPdf	PKPdf	00 57 01.9	-0.9
PDAR	Pinedale Array	120.33	302	PKP	PKPdf	00 57 01.6	-1.2
	comp=Z,0.6nm,0.5s,baz=138,slow=5.3,SNR=9.8						
HWUT	Hardware Ranch	120.39	300	*e*PKPdf	PKPdf	00 57 02.9	+0.1
BGU	Big Grassy Mou	120.58	299	*e*PKPdf	PKPdf	00 57 03.8	+0.6
NB2	NORSAR Subarra	120.92	21	PKPdf	PKPdf	00 57 02.2	-0.8
	comp=Z,1.5nm,1.2s,baz=202,slow=1.9						
NV01	Mina Array Sit	121.33	293	*e*PKPdf	PKPdf	00 57 05.4	+0.6
NVAR	Mina Array Bea	121.33	293	PKP	PKPdf	00 57 05.7	+0.9
	comp=Z,1.6nm,0.7s,baz=134,slow=3.4,SNR=12						
LOHW	Long Hollow	121.47	302	*e*PKPdf	PKPdf	00 57 05.1	+0.2
TPAW	Teton Pass	121.54	302	*e*PKPdf	PKPdf	00 57 05.5	+0.4
MOOW	Moose Ponds	121.64	302	*e*PKPdf	PKPdf	00 57 05.4	+0.2
FXWY	Fox Creek	121.69	302	*e*PKPdf	PKPdf	00 57 05.6	+0.3
LAO	LASA Array	121.81	307	*e*PKPdf	PKPdf	00 57 05.3	+0.1
IMW	Indian Meadow	121.84	302	*e*PKPdf	PKPdf	00 57 06.2	+0.5
BMN	Battle Mountai	122.29	295	*e*PKPdf	PKPdf	00 57 07.0	+0.5
BMN	Battle Mountai	122.29	295	*e*PKIKP	PKPdf	00 57 07.0	+0.5
OBN	Obninsk	122.67	38	*e*PKIKP	PKPdf	00 57 05.1	-1.3
OBN				*e*		00 58 43.5	
OBN				*e*PPP	PPP	01 01 21.7	
OBN				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GCMT	Greycliff	122.68	305	*e*PKPdf	PKPdf	00 57 07.6	+0.5
LRM	Limekiln Ridge	124.00	303	*e*PKPdf	PKPdf	00 57 10.6	+0.9
HRY	Holter Researc	124.37	304	*e*PKPdf	PKPdf	00 57 11.0	+0.8
EGMT	Eagleton	124.39	306	*e*PKPdf	PKPdf	00 57 10.7	+0.5
WVOR	Wild Horse Val	124.49	296	*e*PKPdf	PKPdf	00 57 11.9	+1.3
FINES	FINESS Array B	124.70	28	PKP	PKPdf	00 57 09.8	-0.3
	comp=Z,3.7nm,0.5s,baz=148,slow=1.8,SNR=53						
CMAR	Chiang Mai Arr	125.15	111	PKP	PKPdf	00 57 12.4	0.0
	comp=Z,0.9nm,0.3s,baz=239,slow=3.5,SNR=4.7						
MSO	Missoula	125.44	303	*e*PKPdf	PKPdf	00 57 12.7	+0.4
BMO	Blue Mountains	125.60	299	*e*PKPdf	PKPdf	00 57 13.0	+0.4
BMO	Blue Mountains	125.60	299	*e*PKIKP	PKPdf	00 57 13.0	+0.4
K05A	Summer Lake	125.84	295	*e*PKPdf	PKPdf	00 57 14.4	+1.2
PINE	Pine Mountain	126.63	296	*e*PKPdf	PKPdf	00 57 16.4	+1.6
G08A	Pilot Rock	126.73	298	*e*PKPdf	PKPdf	00 57 15.7	+0.9
ABKAR	Akbulak array	127.67	56	*e*PKPdf	PKPdf	00 57 16.2	0.0
KLMR	Klimovskoe	128.14	35	*e*PKIKP	PKPdf	00 57 15.8	-0.9
KLMR				pmax	pmax		
	comp=Z,6.0nm,1.4s						
KLMR	Klimovskoe	128.14	35	*e*PKPdf	PKPdf	00 57 15.9	-0.8
KLMR				AMP		00 57 17.0	
	comp=Z,6.0nm,1.4s						
KSH	Kashi	128.82	75	*e*PKP	PKPdf	00 57 18.2	-0.8
KSH				*e*PP	PP	00 59 28.9	+1.2
LON	Longmire	129.16	298	*e*PKPdf	PKPdf	00 57 20.0	+0.7
LON	Longmire	129.16	298	*e*PKIKP	PKPdf	00 57 20.0	+0.7
PRGR	Permogore	130.72	37	*e*PKIKP	PKPdf	00 57 21.5	-0.1
ARCES	ARCESS Array B	131.26	22	PKP	PKPdf	00 57 21.8	-0.7
	comp=Z,1.2nm,0.5s,baz=183,slow=1.8,SNR=13						
ARU	Arti	132.01	48	*i* PKIKP	PKPdf	00 57 22.8	-1.4
ARU						00 59 46.7	
ARU				SS	SS	01 17 18.9	+3.3
BRVK	Borovoye	135.05	58	*i* PKIKP	PKPdf	00 57 31.0	+0.9
BVAR	Borovoye Array	135.08	58	PKP	PKPdf	00 57 30.2	+0.1
	comp=Z,1.2nm,0.6s,baz=203,slow=2.9,SNR=9.0						
GYA	Guiyang	135.74	113	*e*Pdif	Pdif	00 54 37.0	+0.5
GYA				PKP	PKPdf	00 57 33.0	+0.6
GYA				sPKP		00 58 09.8	
GYA				PP	PP	01 00 16.2	+4.4
GYA				AMB	AMB		
	comp=Z,120nm,7.9s						
YKA	Yellowknife Ar	136.24	318	PKP	PKPdf	00 57 32.0	0.0
	comp=Z,3.1nm,0.4s,baz=127,slow=2.3,SNR=16						
YKA	Yellowknife Ar	136.24	318	PKIKP	PKPdf	00 57 32.0	0.0
MKAR	Makanchi Array	137.15	72	PKP	PKPdf	00 57 33.3	-0.9
	comp=Z,0.6nm,0.7s,baz=262,slow=4.6,SNR=4.2						
MKAR				SKPbc	SKPbc	01 00 55.4	-1.4
	comp=Z,1.1nm,0.9s,baz=258,slow=3.6,SNR=6.4						
KURK	Kurchatov	137.68	65	*i* PKIKP	PKPdf	00 57 37.9	+2.9
CD2	Chengdu	137.77	106	PKP	PKPdf	00 57 36.1	+0.2
WMQ	Urumqi	138.14	79	*e*PKP	PKPdf	00 57 37.1	+0.9
WMQ				LR	LR		
	comp=Z,73nm,23.9s						
WMQ				LR	LR		
	comp=Z,67nm,22.5s						
WMQ				LR	LR		
	comp=Z,38nm,18.3s						
DIB	Dawson Inlet,	138.57	299	*e*PKPdf	PKPdf	00 57 37.9	+1.3
DGZ	Jazzator, Alta	141.64	72	*i* PKIKP	PKPdf	00 57 42.1	-0.4
LZH	Lanzhou	141.74	101	*e*PKP	PKPdf	00 57 44.5	+1.3
LZH				sPKP		00 58 22.1	
LZH				LR	LR		
	comp=Z,49nm,18.0s						
LZH				LR	LR		
	comp=Z,53nm,18.1s						
LZH				LR	LR		
	comp=Z,67nm,20.0s						
NVS	Novosibirsk	142.33	62	*e*PKHKP	PKPpre	00 57 32.7	
ZALV	Zalesovo Beam	142.65	64	PKP	PKPdf	00 57 42.1	-1.8
	comp=Z,1.3nm,0.4s,baz=255,slow=3.9,SNR=5.0						
ZALV	Zalesovo Beam	142.65	64	*e*PKPdf	PKPdf	00 57 45.4	+1.5
ZALV	Zalesovo Beam	142.65	64	*e*PKIKP	PKPdf	00 57 45.4	+1.5
WHN	Wuhan	142.94	118	PKP	PKPdf	00 57 39.6	-5.6
INK	Inuvik	145.89	320	*e*PKPdf	PKPdf	00 57 49.5	+0.4
INK	Inuvik	145.89	320	*e*PKP2	PKPdf	00 57 49.5	+0.4
NJ2	Nanjing	146.36	122	*e*PKPbc	PKPbc	00 57 52.3	-0.2
DAWY	Dawson	146.83	312	*e*PKPdf	PKPbc	00 57 52.8	-0.2
EGAK	Eagle	147.78	313	*e*PKPbc	PKPbc	00 57 55.4	-0.1
DIV	Divide	148.65	305	*e*PKPbc	PKPbc	00 57 58.8	+0.9
KLU	Klutina	148.84	305	*e*PKPbc	PKPbc	00 57 58.9	+0.5
PAX	Paxson	149.09	308	*e*PKPbc	PKPbc	00 57 59.5	+0.5
HHC	Hu-ho-hao-te	149.37	103	*e*PKPbc	PKPdf	00 57 54.9	-1.0
HHC				AMB	AMB		
	comp=Z,120nm,5.1s						
SCM	Sheep Creek Mo	149.58	306	*e*PKPbc	PKPbc	00 58 01.2	+1.0
FYU	Fort Yukon	149.85	315	*e*PKPbc	PKPbc	00 58 01.5	+0.9
SML	Sawmill	150.03	305	*e*PKPbc	PKPbc	00 58 01.6	+0.3
ILAR	Eielson Array	150.15	311	PKP	PKPdf	00 57 53.4	-2.9
	comp=Z,0.8nm,0.8s,baz=351,slow=1.9,SNR=8.4						
ILAR				PKPbc	PKPbc	00 58 01.3	-0.2
	comp=Z,26nm,0.8s,baz=126,slow=1.7,SNR=150						
ILB	Eielson Array	150.15	311	*e*PKPbc	PKPbc	00 58 01.5	0.0
RC01	Rabbit Creek A	150.47	303	*e*PKPbc	PKPbc	00 58 03.2	+0.9
CCB	Clear Creek Bu	150.51	311	*e*PKPbc	PKPbc	00 58 02.1	-0.2
ZAK	Zakamensk	150.57	81	*e*PKIKP	PKPbc	00 58 02.8	-0.2
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MDM	Murphy Dome	150.75	312	*e*PKPbc	PKPbc	00 58 02.5	-0.4
KDAK	Kodiak Island	150.77	296	*e*PKPbc	PKPbc	00 58 03.5	+0.5
MCK	McKinley	150.79	309	*e*PKPbc	PKPbc	00 58 03.4	+0.4
MCK	McKinley	150.79	309	*e*PKIKP	PKPbc	00 58 03.4	+0.4
OHAK	Old Harbor	150.92	295	*e*PKPbc	PKPbc	00 58 02.9	-0.6
SONM	Songino Array	150.93	87	PKPbc	PKPbc	00 58 03.6	-0.4
	comp=Z,4.9nm,0.7s,baz=217,slow=3.5,SNR=33						
SONA1	Songino Array	150.94	87	*e*PKPbc	PKPbc	00 58 03.6	-0.5
TRF	Thorofare Moun	151.32	308	*e*PKPbc	PKPbc	00 58 04.6	+0.2
TLY	Talaya	151.42	78	*e*PKIKP	PKPbc	00 58 05.3	+0.5
TLY				pmax	pmax		
	comp=Z,2.0nm,0.6s						
SKT	Skwentna	151.54	305	*e*PKPbc	PKPbc	00 58 05.0	+0.2
RSO	Redoubt South	151.71	301	*e*PKPbc	PKPbc	00 58 05.4	0.0
BPAW	Bear Paw Mtn.	151.75	309	*e*PKPbc	PKPbc	00 58 05.0	-0.2
TOLK	Toolik Lake Re	151.76	319	*e*PKPbc	PKPbc	00 58 05.5	+0.4
MLY	Manley	151.81	311	*e*PKPbc	PKPbc	00 58 04.6	-0.7
COLD	Coldfoot	151.88	316	*e*PKPbc	PKPbc	00 58 06.1	+0.7
PPLA	Purkeypile	152.04	307	*e*PKPbc	PKPbc	00 58 06.4	+0.4
CAST	Castle Rocks	152.10	308	*e*PKPbc	PKPbc	00 58 05.7	-0.3
CN2	Changchun	158.77	115	*e*PKP	PKPdf	00 58 10.0	+1.2

IDC 13 00:39:31.4±1.3**, 0°.85N**×**125°.32E, h0^{km}, mb3.4**/4**, mb1 3.6**/4**, mb1mx3.4**/53**, mbtmp3.5**/4**, MS3.3**/1**, Ms1 3.3**/1**, ms1mx2.3**/33**, Error ellipse: s-maj=144.3km s-min=21.3km az=68.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.48	157	P	P	00 44 32.1	-0.4
	0.9nm,0.3s,baz=336,slow=11,SNR=31						
ASAR	Alice Springs	25.76	162	P	P	00 45 04.4	+0.4
	0.3nm,0.4s,baz=348,slow=11,SNR=5.7						
NWAO	Narrogin (SRO)	34.45	192	LR	LR	01 02 11.4	
	comp=Z,45nm,18.3s,baz=275,slow=40						
SONM	Songino Array	49.60	343	P	P	00 48 24.8	+0.2
	0.2nm,0.4s,baz=167,slow=7.0,SNR=2.8						
MKAR	Makanchi Array	59.15	327	P	P	00 49 33.6	-0.4
	0.2nm,0.4s,baz=120,slow=7.6,SNR=4.9						

IDC 13 00:55:39.2±2.6**, 9°.05N**×**123°.02E, h0^{km}, mb3.7**/4**, mb1 3.9**/4**, mb1mx3.5**/57**, mbtmp3.7**/4**, MS3.4**/2**, Ms1 3.4**/2**, ms1mx2.5**/56**, Error ellipse: s-maj=338.1km s-min=21.8km az=64.0, Negros**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	25.16	294	LR	LR	01 10 36.5	
	comp=Z,19nm,18.7s,baz=225,slow=36						
WRA	Warramunga Arr	30.89	159	P	P	01 01 57.5	-0.1
	0.6nm,0.5s,baz=337,slow=9.5,SNR=8.6						
ASAR	Alice Springs	34.21	162	P	P	01 02 26.8	0.0
	1.1nm,0.7s,baz=340,slow=7.3,SNR=9.5						
MKAR	Makanchi Array	51.11	325	P	P	01 04 43.7	-0.1
	0.3nm,0.6s,baz=119,slow=9.9,SNR=3.7						
KURBB	Kurchatov Arra	55.30	327	P	P	01 05 14.4	-0.1
	0.6nm,0.4s,baz=120,slow=8.8,SNR=8.2						
OPO	Ambohidratompo	79.64	249	LR	LR	01 41 35.7	
	comp=Z,68nm,18.2s,baz=15,slow=35						

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*ISCJB **13** 00:57:53.4±0.4, 17°.52S±0°.04×69°.68W±0°.04, h109^{km}±5^{km}, mb4.5/28, Error ellipse: s-maj=7.2km s-min=6.5km az=28.5*

*NEIC **13** 00:57:57.2±1.1, 17°.60S×69°.65W, h122^{km}±9^{km}, mb4.6/12, ML4.4(GUC), Error ellipse: s-maj=12.8km s-min=10.2km az=55.0*

NEIC Felt [II] at Arica, Chile.

*GUC **13** 00:57:57.3±0.6, 17°.97S×70°.06W, h138^{km}±5^{km}, ML4.4*

*IDC **13** 00:57:58.7±2.0, 17°.61S×69°.56W, h133^{km}±17^{km}, mb4.1/14, mb1 4.3/16, mb1mx4.1/37, mbtmp4.6/16, Error ellipse: s-maj=18.6km s-min=12.6km az=83.0*

ISC 13 00:57:55.2±0.7**, 17°.64S**±0°.05×**69°.63W**±0°.07**, h106^{km}**±7^{km}**, n299, σ1§21**/308**, mb4.5**/28**, 9C-1D, Peru-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB12	IPOC Station P	1.18	214	⇑*i*P	Pn	00 58 18.8	+0.6
PB12				*i* S	Sn	00 58 35.5	+0.1
PB12				IAML		00 58 36.4	
	comp=N,11μm,0.2s						
MNMC	Minye Minye	1.48	179	⇑*i*P	Pn	00 58 24.1	+2.2
MNMC				*i* S	Sn	00 58 44.5	+2.4
MNMC				IAML		00 58 50.1	
	comp=N,7μm,0.7s						
LPAZ	La Paz	1.97	47	P	Pn	00 58 34.0	+5.7
	comp=N,38nm,0.3s,baz=239,slow=6.3,SNR=883						
LPAZ				S	Sn	00 59 00.3	+6.9
	comp=N,13nm,0.3s,baz=123,slow=14,SNR=5.3						
PSGC	Pisagua	2.00	193	⇑*i*P	Pn	00 58 28.2	0.0
PSGC				*e*S	Sn	00 58 51.2	-2.2
PB11	IPOC Station P	2.11	181	⇑*i*P	Pn	00 58 30.9	+1.2
PB11				*i* S	Sn	00 58 56.3	+0.4
PB11				IAML		00 58 59.6	
	comp=N,2μm,0.3s						
PB08	IPOC Station P	2.53	170	⇑*i*P	Pn	00 58 37.4	+2.1
PB08				*i* S	Sn	00 59 07.9	+2.0
PB08				IAML		00 59 11.9	
	comp=N,2μm,0.8s						
PB01	IPOC Station P	3.39	178	*i* P	Pn	00 58 46.8	+0.3
PB01				*i* S	Sn	00 59 23.8	-2.2
PB01				IAML		00 59 25.3	
	comp=E,1μm,0.7s						
PB07	IPOC Station P	4.07	183	⇑*i*P	Pn	00 58 55.5	-0.2
PB09	IPOC Station P	4.15	175	⇑*i*P	Pn	00 58 57.5	+0.8
PB09				*i* S	Sn	00 59 42.6	-1.8
PB03	IPOC Station P	4.39	182	⇑*i*P	Pn	00 58 59.6	-0.3
PB03				*e*S	Sn	00 59 44.9	-5.2
PB04	IPOC Station P	4.69	186	⇓*i*P	Pn	00 59 03.0	-1.1
PB04				*i* S	Sn	00 59 49.7	-7.8
PB06	IPOC Station P	5.04	179	⇑*i*P	Pn	00 59 08.1	-0.6
PB06				*i* S	Sn	00 59 59.9	-5.9
SIV	San Ignacio	8.36	80	P	Pn	00 59 54.5	+0.8
	comp=E,30nm,0.3s,baz=273,slow=11,SNR=238						
SIV				S	Sn	01 01 26.9	+0.6
	comp=E,2.1nm,0.3s,baz=358,slow=21,SNR=6.0						
NNA	Nana	8.96	308	P	Pn	01 00 01.3	-0.5
	comp=E,2.9nm,0.3s,baz=139,slow=14,SNR=5.7						
SAML	Samuel	10.67	37	*e*Pn	Pn	01 00 24.7	-0.4
	comp=E,19nm,0.6s						
SAML				*e*Sn	Sn	01 02 21.1	-1.6
PTGA	Pitinga	19.30	31	P	Pn	01 02 12.6	-1.6
	comp=E,7.2nm,0.3s,baz=83,slow=23,SNR=53						
PLCA	Paso Flores	23.03	182	P	P	01 02 51.5	+0.2
	comp=E,5.9nm,0.7s,baz=26,slow=11,SNR=14						
PCRV	Puerto La Cruz	28.08	10	P	P	01 03 37.4	+0.4
	comp=E,4.5nm,0.3s,baz=327,slow=4.0,SNR=5.7						
453A	Whigham	50.24	344	P	P	01 06 38.8	-1.8
	baz=162						
353A	Camilla	50.68	344	P	P	01 06 42.6	-1.3
	baz=162						
351A	Pinckard	51.00	342	P	P	01 06 46.7	+0.4
	baz=160						
352A	Blakely	51.00	343	P	P	01 06 45.3	-1.0
	baz=161						
156A	Sylvania	51.28	347	P	P	01 06 46.0	-2.4
	baz=166						
253A	Americus	51.34	344	P	P	01 06 46.9	-1.9
	baz=162						
252A	Lumpkin	51.44	344	P	P	01 06 47.3	-2.2
	baz=162						
251A	Midway	51.71	343	P	P	01 06 50.1	-1.6
	baz=161						
347A	Saraland	52.03	339	P	P	01 06 53.8	-0.2
	baz=157						
152A	Waverly Hall	52.07	344	P	P	01 06 52.4	-1.8
	baz=162						
151A	Opelika	52.10	343	P	P	01 06 52.8	-1.7
	baz=161						
Z54A	Sparta	52.14	346	P	P	01 06 52.5	-2.3
	baz=164						
150A	Eclectic	52.37	342	P	P	01 06 55.7	-0.8
	baz=160						
248A	Dixon Mills	52.41	341	P	P	01 06 55.8	-0.9
	baz=158						
Z52A	Williamson	52.48	344	P	P	01 06 56.2	-1.1
	baz=162						
149A	Jones	52.59	342	P	P	01 06 57.2	-0.9
	baz=159						
247A	Quitman	52.66	340	P	P	01 06 57.8	-0.7
	baz=157						
Y54A	Tignall	52.71	346	P	P	01 06 57.1	-1.9
	baz=164						
344A	Westbrook Farm	52.85	337	P	P	01 06 59.3	-0.8
	baz=155						
Z50A	Ashland	52.95	343	P	P	01 06 59.7	-1.1
	baz=160						
LRAL	Lakeview Retre	53.06	342	P	P	01 06 59.6	-1.9
	baz=159						
Z49A	Columbiana	53.07	342	P	P	01 06 59.8	-1.8
	baz=160						
245A	Little AP, Sta	53.08	338	P	P	01 07 01.5	-0.2
	baz=156						
Y51A	Rockmart	53.32	344	P	P	01 07 02.0	-1.5
	baz=162						
X53A	Estanollee	53.46	346	P	P	01 07 03.8	-0.7
	baz=164						
Z47A	Carrollton	53.54	341	P	P	01 07 04.1	-0.9
	baz=158						
Z48A	Northport	53.54	341	P	P	01 07 03.8	-1.3
	baz=159						
Y49A	Blount Mountai	53.65	343	P	P	01 07 03.5	-2.5
	baz=160						
KMSC	Kings Mountain	53.66	348	P	P	01 07 04.2	-1.7
	baz=166						
833A	Chaparral WMA,	54.02	327	P	P	01 07 09.0	+0.4
	baz=144						
W53A	Cullowhee	54.07	346	P	P	01 07 08.2	-0.9
	baz=164						
Y47A	UCPARC, Winfie	54.12	341	P	P	01 07 08.0	-1.3
	baz=158						
X49A	Woodville	54.24	343	P	P	01 07 08.3	-1.9
	baz=160						
X48A	Hartselle	54.39	342	P	P	01 07 09.8	-1.4
	baz=160						
Y46A	Houston	54.42	340	P	P	01 07 10.1	-1.3
	baz=157						
V53A	Saluda	54.47	347	P	P	01 07 09.7	-2.2
	baz=165						
W50A	Signal Mountai	54.62	344	P	P	01 07 11.7	-1.3
	baz=162						
Y45A	Yeager Farm, C	54.63	340	P	P	01 07 12.6	-0.4
	baz=157						
NATX	Nacogdoches	54.68	334	P	P	01 07 14.6	+1.2
	baz=150						
X47A	Russelville	54.69	342	P	P	01 07 12.1	-1.3
	baz=159						
W49A	Belvidere	54.80	343	P	P	01 07 12.9	-1.3
	baz=161						
V52A	Sevierville	54.81	346	P	P	01 07 12.8	-1.5
	baz=164						
V51A	Loudon	54.95	345	P	P	01 07 14.2	-1.1
	baz=163						
X46A	Booneville	54.95	341	P	P	01 07 14.4	-0.9
	baz=158						
W48A	Pulaski	55.00	343	P	P	01 07 14.2	-1.5
	baz=160						
V50A	Pikevile	55.01	345	P	P	01 07 14.6	-1.1
	baz=162,SNR=7.7						
X45A	UM Field Stati	55.09	340	P	P	01 07 15.6	-0.7
	baz=157						
U53A	Fall Branch	55.09	347	P	P	01 07 15.0	-1.3
	baz=165						
OXF	Oxford	55.17	340	P	P	01 07 15.4	-1.5
	baz=157						
W47A	Westpoint	55.30	342	P	P	01 07 16.1	-1.6
	baz=159						
V49A	McMinnville	55.31	344	P	P	01 07 16.2	-1.6
	baz=161,SNR=5.8						
Z40A	Long Farm, Mag	55.47	336	P	P	01 07 19.8	+0.8
	baz=152						
V48A	Smith Brothers	55.53	343	P	P	01 07 18.2	-1.2
	baz=160						
X43A	Marvell	55.67	339	P	P	01 07 19.2	-1.2
	baz=155						
W45A	Hickory Valley	55.70	341	P	P	01 07 20.1	-0.5
	baz=157						
V47A	Nunnelly	55.81	342	P	P	01 07 19.5	-1.9
	baz=159						
JCT	Junction City	55.97	328	P	P	01 07 24.7	+1.9
	baz=145						
U49A	Red Boiling Sp	55.98	344	P	P	01 07 21.1	-1.5
	baz=161,SNR=5.7						
WHTX	Lake Whitney,	56.10	331	P	P	01 07 24.7	+1.1
	baz=148						
U48A	Cassie Pea, Po	56.18	344	P	P	01 07 22.7	-1.3
	baz=161						
WVT	Waverly	56.19	342	P	P	01 07 22.8	-1.3
	baz=159						
T50A	Nancy	56.23	345	P	P	01 07 23.4	-1.0
	baz=163						
U47A	Clarksville	56.32	343	P	P	01 07 23.7	-1.3
	baz=160,SNR=5.3						
X40A	Basin Creek Fa	56.35	337	P	P	01 07 24.7	-0.5
	baz=153						
T49A	Edmonton	56.48	345	P	P	01 07 24.9	-1.3
	baz=162,SNR=6.1						
MIAR	Mount Ida	56.68	336	P	P	01 07 27.5	-0.1
	baz=152						
T48A	Bowling Green	56.71	344	P	P	01 07 26.5	-1.3
	baz=161						
W41B	Gary Mavity, V	56.75	338	P	P	01 07 27.4	-0.7
	baz=154						
T47A	Sharon Grove	56.78	343	P	P	01 07 27.1	-1.2
	baz=160,SNR=5.6						
X39A	Fountain Ranch	56.86	336	P	P	01 07 29.3	+0.4
	baz=152,SNR=10						
V42A	Cord	57.02	339	P	P	01 07 29.1	-0.9
	baz=155						
T46A	Princeton	57.05	343	P	P	01 07 29.0	-1.3
	baz=159,SNR=7.1						
W40A	Ferguson Farm,	57.06	337	P	P	01 07 30.8	+0.5
	baz=153,SNR=7.0						
TXAR	Lajitas Array	57.10	324	P	P	01 07 31.3	+0.5
	comp=E,0.5nm,0.5s,baz=157,slow=8.1,SNR=7.2						
S48A	Wiedeman Farm,	57.14	344	P	P	01 07 29.0	-1.8
	baz=161,SNR=5.6						
R51A	Hillsboro	57.17	347	P	P	01 07 29.6	-1.4
	baz=164						
U43A	Rector	57.20	340	P	P	01 07 30.4	-0.8
	baz=156						
V41A	Mountainview	57.26	338	P	P	01 07 31.0	-0.8
	baz=154,SNR=16						
W39A	Magazine	57.33	337	P	P	01 07 32.8	+0.6
	baz=152,SNR=7.4						
U42A	Revenden	57.46	339	P	P	01 07 32.3	-0.7
	baz=156,SNR=15						
V40A	Witts Springs	57.52	338	P	P	01 07 33.0	-0.6
	baz=154,SNR=16						
T44A	Benton	57.60	341	P	P	01 07 32.8	-1.3
	baz=157						
U41A	Viola	57.68	339	P	P	01 07 33.7	-1.0
	baz=155,SNR=16						
WCI	Wyandotte Cave	57.74	345	P	P	01 07 32.4	-2.6
	baz=161						
T43A	Greenville	57.81	341	P	P	01 07 34.8	-0.7
	baz=157,SNR=15						
S45A	Carrier Mills	57.84	342	P	P	01 07 34.6	-1.2
	baz=159						
V39A	Pettigrew	57.85	337	P	P	01 07 35.8	-0.2
	baz=153,SNR=23						
U40A	Yellville	58.02	338	P	P	01 07 36.6	-0.4
	baz=154,SNR=13						
T42A	Van Buren	58.03	340	P	P	01 07 35.9	-1.1
	baz=156,SNR=14						
S44A	Carbondale	58.06	342	P	P	01 07 36.4	-0.8
	baz=158,SNR=7.9						
S43A	Fulton Ridge,	58.20	341	P	P	01 07 37.4	-0.8
	baz=157,SNR=14						
Q48A	North Vernon	58.26	345	P	P	01 07 37.3	-1.3
	baz=162						
T41A	Mountain View	58.26	339	P	P	01 07 37.9	-0.8
	baz=155,SNR=11						
U39A	Green Forest	58.27	337	P	P	01 07 38.3	-0.5
	baz=153,SNR=7.7						
R45A	Skylar, Fairfi	58.33	343	P	P	01 07 37.6	-1.5
	baz=159						
P50A	Jamestown	58.47	347	P	P	01 07 38.2	-1.8
	baz=164						
R44A	Waltonville	58.52	342	P	P	01 07 39.3	-1.1
	baz=158						
N59A	State Game Lan	58.54	355	P	P	01 07 37.9	-2.7
	baz=173						
P49A	Miami Univ. Ec	58.60	346	P	P	01 07 39.3	-1.7
	baz=163						
S42A	Caledonia	58.60	340	P	P	01 07 40.0	-1.1
	baz=156,SNR=10						
T40A	Mansfield	58.62	339	P	P	01 07 40.6	-0.6
	baz=154,SNR=15						
P48A	Milroy	58.69	346	P	P	01 07 39.7	-1.9
	baz=162						
TUL1	Leonard	58.74	335	P	P	01 07 42.6	+0.5
	baz=151						
S41A	Jillco Farms,	58.75	340	P	P	01 07 41.5	-0.6
	baz=155,SNR=21						
R43A	Red Bud	58.80	341	P	P	01 07 41.4	-1.0
	baz=157						
T39A	Clever	58.81	338	P	P	01 07 42.2	-0.3
	baz=153,SNR=6.1						
P47A	Martinsville	58.92	345	P	P	01 07 41.7	-1.5
	baz=162						
WMOK	Wichita Mounta	59.01	332	P	P	01 07 44.1	+0.2
	baz=147						
WMOK	Wichita Mounta	59.01	332	*e*P	P	01 07 44.5	+0.6
	comp=E,1.8nm,0.6s						
CCM	Cathedral Cave	59.01	340	P	P	01 07 44.2	+0.4
	baz=156						
CCM	Cathedral Cave	59.01	340	*e*P	P	01 07 43.9	0.0
	comp=E,99nm,0.8s						
S40A	Lebanon	59.01	339	P	P	01 07 43.3	-0.6
	baz=154,SNR=17						
R42A	Luebbering	59.07	341	P	P	01 07 43.8	-0.5
	baz=156,SNR=23						

O49A	Covington	59.14	347	P	P	01 07 43.0	-1.7
	baz=164						
T38A	Diamond	59.15	337	P	P	01 07 45.1	+0.2
	baz=152,SNR=13						
R41A	Rosebud	59.27	340	P	P	01 07 45.1	-0.6
	baz=156,SNR=42						
S39A	Bolivar	59.38	338	P	P	01 07 45.9	-0.5
	baz=154,SNR=28						
P44A	Sand Creek, Wi	59.52	343	P	P	01 07 45.6	-1.7
	baz=159						
S38A	Stockton	59.54	338	P	P	01 07 47.1	-0.4
	baz=153,SNR=6.2						
R40A	Maddies Statio	59.56	339	P	P	01 07 47.1	-0.6
	baz=155,SNR=14						
Q42A	Golden Eagle	59.57	341	P	P	01 07 47.1	-0.6
	baz=157						
M54A	Oil Creek Stat	59.58	351	P	P	01 07 45.6	-2.1
	baz=169						
O47A	Sheridan	59.61	345	P	P	01 07 46.4	-1.5
	baz=162						
Q41A	Truxton	59.82	341	P	P	01 07 48.9	-0.5
	baz=156,SNR=18						
R39A	Chumby, Stover	59.84	339	P	P	01 07 49.2	-0.3
	baz=154,SNR=15						
P43A	Skaggs, Pawnee	59.94	342	P	P	01 07 48.9	-1.3
	baz=158,SNR=5.5						
R38A	Fenwick Farm,	60.03	338	P	P	01 07 50.6	-0.2
	baz=153,SNR=9.5						
P42A	Winchester	60.13	342	P	P	01 07 50.3	-1.2
	baz=157,SNR=6.9						
Q40A	Laux Farm, Aux	60.13	340	P	P	01 07 50.9	-0.6
	baz=155,SNR=6.0						
ERPA	Erie	60.22	351	P	P	01 07 51.4	-0.7
	baz=169						
MSTX	Muleshoe	60.26	328	P	P	01 07 54.4	+1.7
	baz=143						
N46A	Monticello	60.37	345	P	P	01 07 51.7	-1.4
	baz=161						
P41A	Barry, Barry	60.43	341	P	P	01 07 52.2	-1.3
	baz=156						
AMTX	Amarillo	60.47	330	P	P	01 07 54.3	+0.2
	baz=145						
O43A	Sugar Creek Fa	60.48	343	P	P	01 07 52.0	-1.9
	baz=158						
Q39A	Willow Grove F	60.48	339	P	P	01 07 53.6	-0.3
	baz=154,SNR=12						
P40A	Paris	60.61	340	P	P	01 07 54.2	-0.6
	baz=155,SNR=11						
Q38A	Cooks Store, C	60.62	339	P	P	01 07 54.7	-0.1
	baz=154,SNR=7.8						
N44A	Piper City	60.63	344	P	P	01 07 53.1	-1.8
	baz=160						
O41A	Passleys Farm,	60.78	341	P	P	01 07 54.3	-1.6
	baz=157						
P39B	Salisbury	60.80	340	P	P	01 07 55.6	-0.5
	baz=155,SNR=8.0						
O40A	La Belle	61.09	341	P	P	01 07 57.1	-0.9
	baz=156,SNR=11						
P38A	Dawn	61.19	339	P	P	01 07 58.3	-0.4
	baz=154,SNR=6.5						
N41A	Harden Midland	61.31	342	P	P	01 07 58.4	-1.1
	baz=157,SNR=5.0						
P37A	Lathrop	61.44	338	P	P	01 08 00.2	-0.2
	baz=153						
M43A	Waltham Townsh	61.45	344	P	P	01 07 58.8	-1.6
	baz=159						
N40A	Mertquake, Sal	61.70	341	P	P	01 08 00.6	-1.5
	baz=156						
WLVO	Wesleyville	61.79	353	P	P	01 08 02.1	-0.5
	baz=171						
O37A	Wolven Farm, M	61.88	339	P	P	01 08 03.4	0.0
	baz=153						
N39A	Derby Farms, D	61.98	340	P	P	01 08 03.0	-1.0
	baz=155,SNR=6.0						
L43A	Garden Prairie	62.09	344	P	P	01 08 04.1	-0.5
	baz=159						
LONY	Lake Ozonia	62.12	356	P	P	01 08 03.6	-1.3
	baz=175						
N38A	Joes South For	62.14	340	P	P	01 08 04.1	-1.0
	baz=154						
M40A	Post Highland	62.15	342	P	P	01 08 03.9	-1.2
	baz=156,SNR=5.6						
L42A	Oliver, Polo	62.17	343	P	P	01 08 04.3	-1.0
	baz=158						
DELO	Deloro Mine	62.28	354	P	P	01 08 04.2	-1.7
	baz=171						
BASO	Ashfield	62.34	350	P	P	01 08 05.3	-1.0
	baz=167						
BWLO	Walkerton	62.35	351	P	P	01 08 05.3	-1.1
	baz=168						
M39A	Webster	62.42	341	P	P	01 08 05.9	-1.0
	baz=156,SNR=5.9						
N37A	Lee Faris, Mou	62.43	339	P	P	01 08 06.9	-0.2
	baz=154,SNR=5.6						
L41A	Preston	62.47	343	P	P	01 08 05.8	-1.4
	baz=158,SNR=5.2						
K43A	Burlington	62.47	345	P	P	01 08 05.8	-1.4
	baz=160						
PKME	Peaks-Kenny Pk	62.60	0	P	P	01 08 06.3	-1.7
	baz=180						
L40A	Anamosa	62.67	342	P	P	01 08 07.5	-1.0
	baz=157,SNR=6.2						
M38A	Pleasantville	62.69	340	P	P	01 08 07.8	-0.9
	baz=155,SNR=9.1						
N36A	Muff Farm, Cla	62.74	339	P	P	01 08 09.5	+0.4
	baz=153						
K42A	Prairie Point,	62.80	344	P	P	01 08 08.5	-0.9
	baz=159,SNR=7.0						
K41A	Shullsburg	62.91	343	P	P	01 08 09.8	-0.3
	baz=158						
TASL	Snake Pit, Alb	62.92	326	P	P	01 08 12.7	+2.0
	baz=140						
ANMO	Albuquerque	62.92	326	P	P	01 08 12.7	+2.0
	baz=140						
TASM	ASL Pad, Albuq	62.92	326	P	P	01 08 11.6	+1.0
	baz=140						
L39A	Vinton	62.95	341	P	P	01 08 09.6	-0.9
	baz=156,SNR=7.3						
M37A	Trindle Farm,	62.96	340	P	P	01 08 09.9	-0.6
	baz=154						
J43A	Natural Harves	63.13	345	P	P	01 08 10.2	-1.4
	baz=160						
SCIA	State Center	63.14	340	P	P	01 08 10.7	-1.0
	baz=155						
SCIA	State Center	63.14	340	*e*P	P	01 08 11.3	-0.3
	comp=E,10nm,0.4s						
JFWS	Jewell Farm	63.17	343	P	P	01 08 11.1	-0.8
	baz=158,SNR=5.6						
JFWS	Jewell Farm	63.17	343	*e*P	P	01 08 11.1	-0.8
	comp=E,13nm,0.7s						
K40A	Colesburg	63.23	342	P	P	01 08 11.3	-1.0
	baz=157,SNR=6.1						
M36A	Felix, Anita	63.25	339	P	P	01 08 12.5	0.0
	baz=153,SNR=9.7						
K39A	Oelwein	63.45	342	P	P	01 08 12.7	-1.1
	baz=156,SNR=5.6						
L37A	Phoenix Point,	63.51	340	P	P	01 08 12.8	-1.3
	baz=154						
J41A	Loganville	63.53	344	P	P	01 08 13.9	-0.4
	baz=158,SNR=7.6						
I43A	Langenfeld Bro	63.53	345	P	P	01 08 12.9	-1.4
	baz=160						
I42A	Draeger Farm,	63.73	345	P	P	01 08 14.2	-1.3
	baz=160						
J40A	Soldiers Grove	63.76	343	P	P	01 08 15.1	-0.7
	baz=158,SNR=7.7						
L36A	Harm Buss Farm	63.78	339	P	P	01 08 15.2	-0.8
	baz=153						
J39A	Decorah	63.98	342	P	P	01 08 16.5	-0.7
	baz=157,SNR=17						
H43A	Windswept, Lux	63.99	346	P	P	01 08 15.6	-1.7
	baz=161						
K37A	Belmond	64.05	341	P	P	01 08 16.8	-0.8
	baz=154,SNR=6.6						
I41A	Arkdale	64.13	344	P	P	01 08 17.6	-0.6
	baz=159						
I40A	Norwalk	64.18	343	P	P	01 08 18.2	-0.3
	baz=158						
J38A	Wedel Dairy, R	64.19	342	P	P	01 08 17.5	-1.1
	baz=156						
K36A	Gilmore City	64.19	340	P	P	01 08 18.5	-0.1
	baz=154,SNR=18						
H42A	Shiocton	64.21	345	P	P	01 08 17.7	-1.0
	baz=160						
I39A	Houston	64.40	343	P	P	01 08 19.8	-0.1
	baz=157						
BGNE	Belgrade	64.42	337	P	P	01 08 20.0	-0.2
	baz=150						
J37A	Redenius Farm,	64.51	341	P	P	01 08 20.3	-0.4
	baz=155,SNR=14						
H41A	Junction City	64.60	344	P	P	01 08 20.3	-0.8
	baz=159,SNR=6.1						
SDCO	Great Sand Dun	64.60	329	P	P	01 08 22.6	+0.9
	baz=142,SNR=5.8						
SDCO	Great Sand Dun	64.60	329	*e*P	P	01 08 22.5	+0.7
	comp=E,3.9nm,0.9s						
J36A	Seneca 1, Swea	64.78	340	P	P	01 08 22.1	-0.3
	baz=154,SNR=9.6						
H40A	Chili	64.80	344	P	P	01 08 21.8	-0.7
	baz=158,SNR=12						
I38A	Scanlan Farm,	64.80	342	P	P	01 08 22.2	-0.4
	baz=156,SNR=16						
G42A	Mountain	64.88	345	P	P	01 08 22.0	-1.0
	baz=160						
H39A	Augusta	65.09	343	P	P	01 08 23.2	-1.2
	baz=157						
F44A	Big Bay de Noc	65.12	347	P	P	01 08 23.1	-1.4
	baz=162						
F43A	Flat Rock, Esc	65.14	347	P	P	01 08 23.3	-1.4
	baz=162						
I36A	Fitzsimmons Fa	65.29	341	P	P	01 08 25.5	-0.2
	baz=154						
G40A	Rib Lake	65.34	344	P	P	01 08 24.9	-1.1
	baz=158						
H38A	Maiden Rock	65.37	342	P	P	01 08 25.4	-0.8
	baz=156						
H37A	Dierke Farm, C	65.47	342	P	P	01 08 26.9	+0.1
	baz=156						
F41A	Three Lakes	65.51	345	P	P	01 08 26.6	-0.5
	baz=160,SNR=13						
G39A	Holcombe	65.62	343	P	P	01 08 27.1	-0.7
	baz=158						
E43A	Lone Tree Farm	65.62	347	P	P	01 08 27.2	-0.5
	baz=162						
H36A	Jessenland, He	65.77	341	P	P	01 08 28.9	+0.1
	baz=155,SNR=15						
COWI	Conover	65.85	345	*e*P	P	01 08 28.9	-0.4
	comp=E,6.3nm,1.1s						
E42A	Champion	65.88	346	P	P	01 08 27.1	-2.4
	baz=161						
ECSD	EROS Data Cent	65.89	339	P	P	01 08 29.7	+0.1
	baz=152						
ECSD	EROS Data Cent	65.89	339	*e*P	P	01 08 29.4	-0.2
	comp=E,4.6nm,0.3s						
F40A	Park Falls	65.93	344	P	P	01 08 29.6	-0.2
	baz=159,SNR=38						
SPMN	Marine on St.	66.02	342	P	P	01 08 29.9	-0.5
	baz=156,SNR=9.5						
SNAA	Sanae	66.13	161	P	P	01 08 31.2	+0.3
	comp=E,1.6nm,1.0s,baz=255,slow=9.1,SNR=4.9						
F39A	Loretta	66.13	344	P	P	01 08 30.1	-1.0
	baz=158						
E41A	Kenton	66.15	346	P	P	01 08 30.3	-0.9
	baz=160						
H35A	Sunnyside Ranc	66.16	341	P	P	01 08 31.0	-0.3
	baz=154,SNR=11						
ISCO	Idaho Springs	66.27	330	P	P	01 08 34.7	+2.2
	baz=142,SNR=5.6						
ISCO	Idaho Springs	66.27	330	*e*P	P	01 08 33.3	+0.8
	comp=E,3.4nm,0.9s						
G36A	St. Michael	66.31	342	P	P	01 08 32.4	+0.2
	baz=155						
E40A	Wakefield	66.36	345	P	P	01 08 32.5	0.0
	baz=159,SNR=32						
F37A	Hinrichs Farm,	66.43	343	P	P	01 08 32.9	-0.1
	baz=156,SNR=5.2						
F38A	Pierce - Schro	66.43	343	P	P	01 08 32.8	-0.2
	baz=157,SNR=15						
E39A	Mellen	66.47	344	P	P	01 08 33.1	-0.1
	baz=158,SNR=28						
D41A	Chassel	66.62	346	P	P	01 08 33.8	-0.3
	baz=160						
F36A	Milaca	66.81	342	P	P	01 08 35.0	-0.4
	baz=155,SNR=16						
E38A	The Farm, Brul	66.94	344	P	P	01 08 35.6	-0.6
	baz=157,SNR=5.0						
E36A	McGregor	67.33	343	P	P	01 08 38.4	-0.2
	baz=156,SNR=9.8						
C40A	Isle Royale Na	67.56	346	P	P	01 08 39.9	-0.1
	baz=160						
D37A	Cotton	67.68	343	P	P	01 08 41.0	+0.1
	baz=156						
E35A	Pequot Lakes	67.70	342	P	P	01 08 41.1	+0.1
	baz=154						
C38A	Sawbill Land.	67.89	344	P	P	01 08 41.4	-0.8
	baz=158,SNR=7.5						
D36A	Goodland	67.90	343	P	P	01 08 41.4	-0.9
	baz=156						
F32A	Veblen	67.95	340	P	P	01 08 43.0	+0.4
	baz=152						
LIC	Lamto	68.03	76	*e*P	P	01 08 43.4	-0.3
	comp=E,35nm,0.6s						
D35A	Remer	68.07	342	P	P	01 08 43.1	-0.3
	baz=155						
C37A	Embarrass	68.14	344	P	P	01 08 43.4	-0.3
	baz=157,SNR=6.2						
EYMN	Ely	68.16	344	P	P	01 08 43.4	-0.5
	baz=158,SNR=7.9						
EYMN	Ely	68.16	344	*e*P	P	01 08 43.1	-0.8
	comp=E,17nm,0.8s						
TIC	Toumodi	68.19	75	*e*P	P	01 08 44.5	-0.3
KIC	Kosan Boka	68.34	76	*e*P	P	01 08 45.5	-0.2
	comp=E,56nm,0.7s						
C36A	Pine Crest Far	68.34	343	P	P	01 08 44.7	-0.3
	baz=156,SNR=9.6						
DBIC	Dimbokro	68.35	75	P	P	01 08 45.9	+0.2
	comp=E,24nm,0.6s,baz=224,slow=6.0,SNR=44						
C35A	Jirik Farms, M	68.61	343	P	P	01 08 45.9	-0.8
	baz=155						
C34A	RKJ Ranch, Bem	68.84	342	P	P	01 08 47.7	-0.4
	baz=154						
RSSD	Black Hills	69.05	334	P	P	01 08 51.6	+1.9
	baz=145						
B35A	Bob, Littlefor	69.14	343	P	P	01 08 49.6	-0.4
	baz=155,SNR=10						
AGMN	Agassiz Nation	69.70	342	P	P	01 08 53.1	-0.3
	baz=153						
AGMN	Agassiz Nation	69.70	342	*e*P	P	01 08 53.8	+0.4
	comp=E,8.2nm,0.5s						
TPNV	Topopah Spring	69.86	322	P	P	01 08 57.0	+2.2
	baz=132						
BW06	Boulder Array	70.45	330	P	P	01 09 00.7	+2.3
	baz=140						
PDAR	Pinedale Array	70.45	330	P	P	01 08 58.6	+0.3
	comp=E,0.9nm,0.4s,baz=115,slow=7.3,SNR=15						
ULM	Lac du Bonnet	71.45	343	P	P	01 09 03.6	-0.4
	comp=E,17nm,0.5s,baz=151,slow=5.9,SNR=28						
LAO	LASA Array	72.03	334	P	P	01 09 08.2	+0.6
	baz=143						
RLMT	Red Lodge	72.11	332	P	P	01 09 09.6	+1.3
	baz=140						
KOWA	Kowa	72.16	68	P	P	01 09 09.0	0.0
	comp=E,13nm,0.6s,baz=243,slow=8.3,SNR=58						
SCHQ	Schefferville	72.22	2	P	P	01 09 08.0	-0.4
	comp=E,2.4nm,0.5s,baz=170,slow=7.5,SNR=4.3						
QSPA	South Pole Qui	72.53	180	P	P	01 09 11.2	+0.7
	comp=E,1.8nm,0.6s,baz=141,slow=3.6,SNR=6.6						
BOZ	Bozeman (W)	73.56	331	P	P	01 09 17.8	+1.0
	baz=138						
MFID	Camas Ranch	74.06	327	*e*P	P	01 09 21.4	+1.7
	comp=E,3.4nm,0.9s						
EGMT	Eagleton	74.56	333	P	P	01 09 22.8	+0.3
	baz=140						
VNDA	Vanda	80.51	190	P	P	01 09 56.8	+1.7
	comp=E,0.8nm,0.7s,baz=120,slow=4.5,SNR=7.1						
PAB	San Pablo	83.26	45	*e*P	P	01 10 10.3	+0.1
	comp=E,6.2nm,0.9s						
ESDC	Sonseca Array	83.58	45	P	P	01 10 12.8	+0.9
	comp=E,0.7nm,0.4s,baz=258,slow=5.2,SNR=14						
YKA	Yellowknife Ar	87.34	341	P	P	01 10 30.2	+0.4
	comp=E,3.7nm,0.7s,baz=137,slow=4.8,SNR=12						
GERES	GERESS Array B	98.80	42	P	P	01 11 22.6	-0.5
	comp=E,0.7nm,0.9s,baz=241,slow=2.7,SNR=4.9						
ASAR	Alice Springs	132.95	210	PKP	PKPdf	01 16 58.9	-0.1
	comp=E,0.2nm,0.3s,baz=100,slow=1.1,SNR=3.3						
WRA	Warramunga Arr	135.86	213	PKP	PKPdf	01 17 04.6	+0.2
	comp=E,0.6nm,0.6s,baz=142,slow=1.7,SNR=8.6						
ZALV	Zalesovo Beam	138.72	23	PKP	PKPdf	01 17 09.3	+0.7
	comp=E,1.2nm,0.5s,baz=270,slow=1.5,SNR=5.4						
MKAR	Makanchi Array	142.83	32	PKhKP	PKPpre	01 17 12.8	
	comp=E,0.2nm,0.4s,baz=334,slow=2.8,SNR=5.7						
USRK	Ussuriysk Ar.	147.87	330	PKPbc	PKPbc	01 17 29.0	+0.9
	baz=48,slow=2.1						
SONM	Songino Array	149.71	5	PKPbc	PKPbc	01 17 33.6	+0.8
	comp=E,2.7nm,0.5s,baz=317,slow=1.6,SNR=23						

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*CSEM **13** 01:11:27.4±0.3, 38°.45N×20°.54E, h10km, ML1.4, Error ellipse: s-maj=8.9km s-min=5.0km az=87.0*

*ATH **13** 01:11:27.7, 38°.44N×20°.60E, h13km±2km, ML1.4/4, Error ellipse: s-maj=3.2km s-min=1.0km az=274.0*

THE 13 01:11:28.3, 38°.43N×20°.63E, h8km±1km, ML1.4/8, Error ellipse: s-maj=1.9km s-min=0.7km az=257.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FSK	Fiskardo	0.06	303	P	Pg	01 11 30.1	-0.1
FSK				S	Sg	01 11 31.5	0.0
FSK	Fiskardo	0.06	303	P	Pg	01 11 30.1	-0.1
FSK				S	Sg	01 11 31.7	+0.2
EVGI	Lefkada island	0.20	6	P	Pg	01 11 32.0	-0.3
EVGI				S	Sg	01 11 34.9	-0.2
EVGI	Lefkada island	0.20	6	P	Pg	01 11 31.9	-0.4
EVGI				S	Sg	01 11 35.3	+0.2
EVGI	Lefkada island	0.20	6	P	Pg	01 11 31.9	-0.4
EVGI				S	Sg	01 11 35.0	-0.1
VLS	Valsamata	0.25	187	P	Pg	01 11 33.1	-0.1
VLS				S	Sg	01 11 37.3	+0.6
VLS				AML	AML	01 11 38.1	
	comp=E,828μm,0.2s						
VLS				AML	AML	01 11 39.1	
	comp=N,441μm,0.1s						
VLS	Valsamata	0.25	187	P	Pg	01 11 33.2	-0.1
VLS				S	Sg	01 11 37.8	+1.1
VLS	Valsamata	0.25	187	P	Pg	01 11 33.2	-0.1
VLS				S	Sg	01 11 37.2	+0.5
MGNA	Meganis¸„	0.26	29	P	Pg	01 11 34.1	+0.6
MGNA				S	Sg	01 11 37.7	+0.6
MGNA	Meganis¸„	0.26	29	P	Pg	01 11 33.7	+0.1
MGNA				S	Sg	01 11 37.5	+0.4
KFL	Anninata	0.34	158	P	Pg	01 11 34.9	-0.1
KFL	Anninata	0.34	158	P	Pg	01 11 34.9	-0.1
KFL				S	Sg	01 11 39.3	-0.2
KFL	Anninata	0.34	158	P	Pg	01 11 34.9	-0.1
KFL				S	Sg	01 11 39.3	-0.2
LKD2	Lefkada island	0.36	4	P	Pg	01 11 34.4	-1.1
LKD2				S	Sg	01 11 39.9	-0.4
LKD2				AML	AML	01 11 40.6	
	comp=N,291μm,0.2s						
LKD2				AML	AML	01 11 40.8	
	comp=E,189μm,0.2s						
LKD2	Lefkada island	0.36	4	P	Pg	01 11 34.6	-0.9
LKD2				S	Sg	01 11 40.4	+0.1
LKD2	Lefkada island	0.36	4	P	Pg	01 11 34.6	-0.9
LKD2				S	Sg	01 11 40.0	-0.3
PDO	Prodromos	0.47	68	P	Pg	01 11 36.9	-0.5
PDO				AML	AML	01 11 49.3	
	comp=N,94μm,0.4s						
PDO				AML	AML	01 11 51.1	
	comp=E,81μm,0.3s						
PDO	Prodromos	0.47	68	P	Pg	01 11 37.1	-0.3
PDO				S	Sb	01 11 44.9	-1.0
PDO	Prodromos	0.47	68	P	Pg	01 11 37.1	-0.3
PDO				S	Sb	01 11 44.9	-1.0
PVO	Paravola	0.73	75	P	Pg	01 11 42.1	-0.2
PVO				AML	AML	01 11 58.4	
	comp=N,51μm,0.5s						
PVO				AML	AML	01 11 58.9	
	comp=E,40μm,0.6s						
PVO	Paravola	0.73	75	P	Pg	01 11 42.1	-0.2
DSL	Palaion Diasel	0.80	27	P	Pg	01 11 42.1	-1.6
DSL	Palaion Diasel	0.80	27	P	Pg	01 11 42.4	-1.2
DSL				S	Sb	01 11 55.3	-0.1
DSL	Palaion Diasel	0.80	27	P	Pg	01 11 42.5	-1.1
DSL				S	Sb	01 11 55.3	-0.1
IGT	Igoumenitsa	1.13	348	P	Pg	01 11 49.3	-0.7
IGT	Igoumenitsa	1.13	348	P	Pg	01 11 49.5	-0.5
IGT				S	Sn	01 12 06.8	+0.7
IGT	Igoumenitsa	1.13	348	P	Pg	01 11 49.0	-1.0
IGT				S	Sn	01 12 06.8	+0.7

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*IDC **13** 01:31:57.7±0.8, 9°.49S×113°.07E, h0km, mb4.0/12, mb1 4.2/13, mb1mx4.0/55, mbtmp4.0/13, ML3.9/1, MS3.1/7, Ms1 3.1/7, ms1mx2.7/59, Error ellipse: s-maj=41.4km s-min=14.3km az=55.0*

*ISCJB **13** 01:32:00.7±0.5, 9°.88S±0°.06×112°.88E±0°.05, h36km, mb4.0/14, MS3.1/5, Error ellipse: s-maj=9.2km s-min=5.8km az=28.3*

*NEIC **13** 01:32:02.3±0.5, 9°.64S×113°.03E, h35km, mb4.0/2, Error ellipse: s-maj=25.5km s-min=8.0km az=52.0*

*DJA **13** 01:32:02.4±0.6, 10°S±8°×11°3E±°, h10km, M4.4/12, mb4.7/1, MLv4.3/12*

ISC 13 01:32:02.6±0.6, 9°.71S±0°.09×112°.94E±0°.07, h36km, n39, σ1s.55/36, mb4.0/14, MS3.1/5, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GMJI	Gumukmas	1.51	19	P	Pn	01 32 26.9	-0.3
JAGI	Jajag, Banyuwa	1.72	44	P	Pn	01 32 30.8	+0.8
BLJI	Banyuglugur	2.06	18	P	Pn	01 32 37.0	+2.3
PCJI	Pacitan	2.31	311	P	Pn	01 32 40.1	+2.0
IGBI	Denpasar	2.35	68	P	Pn	01 32 40.5	+1.8
DNP	Denpasar	2.46	66	P	Pn	01 32 41.9	+1.7
WOJI	Wonogiri, Jawa	2.73	313	P	Pn	01 32 46.0	+2.1
NGJI	Ngawi	2.75	328	P	Pn	01 32 47.2	+3.0
SRBI	Singaraja	2.77	54	P	Pn	01 32 46.5	+2.1
UGM	Wanagama	2.98	307	P	Pn	01 32 49.6	+2.1
TWSI	Taliwang, Sumb	4.01	76	P	Pn	01 33 03.3	+1.8
KPJI	Karang Pucung	4.62	300	P	Pn	01 33 11.8	+1.9
PLAI	Plampang	4.85	80	P	Pn	01 33 15.1	+2.0
LEM	Lembang	6.00	298	LR	LR	01 36 17.3	
	comp=Z,95nm,20.6s,baz=59,slow=43						
EDFI	Ende, Flores	8.69	84	P	Pn	01 34 07.1	+1.2
MBWA	Marble Bar	13.12	151	*e*Pn	Pn	01 35 04.0	-2.5
MBWA				*e*Sn	Sn	01 37 16.4	-15
FITZ	Fitzroy Crossi	14.87	125	Pn	Pn	01 35 28.3	-2.1
	0.4nm,0.3s,baz=323,slow=8.9,SNR=11						
FITZ				Sn	Sn	01 38 02.1	-12
	0.2nm,0.3s,baz=153,slow=18,SNR=5.3						
FITZ				LR	LR	01 41 12.7	
	comp=Z,32nm,18.8s,baz=342,slow=37						
DAV	Davao City (W)	20.89	38	LR	LR	01 47 25.0	
	comp=Z,26nm,18.1s,baz=122,slow=45						
WRA	Warramunga Arr	23.02	119	P	P	01 37 04.5	-0.3
	4.5nm,1.0s,baz=291,slow=11,SNR=19						
WRA				LR	LR	01 47 00.5	
	comp=Z,50nm,21.1s,baz=205,slow=39						
WRAB	Tennant Creek	23.03	119	*e*P	P	01 37 05.1	+0.3
	2.0nm,0.6s						
ASAR	Alice Springs	24.36	127	P	P	01 37 18.4	+0.9
	1.6nm,0.6s,baz=303,slow=8.5,SNR=24						
ASAR				PcP	PcP	01 40 58.0	+1.5
	0.8nm,0.4s,baz=300,slow=1.8,SNR=8.4						
CMAR	Chiang Mai Arr	31.21	334	P	P	01 38 19.3	+0.5
	2.2nm,0.3s,baz=159,slow=7.7,SNR=5.0						
STKA	Stephens Creek	34.50	134	P	P	01 38 49.2	+1.7
	2.5nm,0.6s,baz=305,slow=12,SNR=4.5						
STKA				LR	LR	01 53 32.9	
	comp=Z,35nm,20.4s,baz=2.2,slow=38						
JOW	Kunigami	39.26	22	LR	LR	01 57 22.5	
	comp=Z,49nm,21.1s,baz=339,slow=39						
MJAR	Matsushiro Arr	51.78	26	P	P	01 41 04.8	-2.1
	2.6nm,0.7s,baz=198,slow=8.1,SNR=6.4						
ULN	Ulaanbaatar	57.56	355	*e*P	P	01 41 47.9	-0.8
	1.4nm,0.6s						
SONM	Songino Array	57.59	355	P	P	01 41 48.4	-0.5
	1.9nm,0.6s,baz=174,slow=8.5,SNR=17						
MKAR	Makanchi Array	62.55	337	P	P	01 42 22.3	-0.6
	1.7nm,0.5s,baz=148,slow=7.7,SNR=28						
KURBB	Kurchatov Arra	67.12	337	P	P	01 42 51.9	-0.5
	0.8nm,0.7s,baz=153,slow=5.9,SNR=4.4						
KURK	Kurchatov	67.16	337	P	P	01 42 51.9	-0.8
ZALV	Zalesovo Beam	67.74	342	P	P	01 42 55.2	-1.1
	1.1nm,0.4s,baz=154,slow=5.4,SNR=4.7						
BVAR	Borovoye Array	72.23	335	P	P	01 43 23.3	-0.7
	0.4nm,0.5s,baz=120,slow=7.5,SNR=2.8						
VNDA	Vanda	72.27	170	P	P	01 43 25.1	+1.3
	0.6nm,0.6s,baz=314,slow=6.6,SNR=6.0						
BRVK	Borovoye	72.30	335	*e*P	P	01 43 24.4	0.0
RAYN	Ar Rayn	73.70	298	*e*P	P	01 43 32.9	-0.5
ARU	Arti	79.65	333	*e*P	P	01 44 05.2	-1.0
BRTR	Keskin Array B	88.03	311	P	P	01 44 50.0	+0.4
	0.4nm,0.9s,baz=134,slow=5.3,SNR=5.3						
SNAA	Sanae	88.66	197	LR	LR	02 20 46.2	
	comp=Z,28nm,19.0s,baz=352,slow=33						
MIAR	Mount Ida	145.36	40	*e*PKPdf	PKPbc	01 51 37.1	0.0

ISCJB **13** *01:46:30.3±0.6, 36°.86N±0°.04×120°.24E±0°.08, h10^{km}, mb3.9/3, MS3.6/2, Error ellipse: s-maj=9.5km s-min=5.5km az=16.7*
BJI **13** *01:46:32.6, 37°.09N×120°.00E, h8^{km}, ML3.9/13*
IDC **13** *01:46:32.9±3.8, 36°.92N×120°.17E, h0^{km}, mb4.0/3, mb1 4.0/4, mb1mx3.4/68, mbtmp3.9/4, ML3.5/1, MS3.1/3, Ms1 3.1/3, ms1mx2.5/72, Error ellipse: s-maj=108.7km s-min=21.7km az=5.0*
ISC 13 01:46:33.0±0.7**, 36°.97N**±0°.04×**120°.17E**±0°.05**, h10^{km}, n13,** σ**1^{s}.64**/18**, mb4.1**/3**, Southeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DL2	Dalian	2.25	30	Pg	Pb	01 47 13.1	-0.6
DL2				Sn	Sn	01 47 37.0	-1.1
DL2				Sg	Sb	01 47 41.0	-0.6
DL2				smax	smax		
	comp=N,750nm,0.7s						
DL2				smax	smax		
	comp=E,1μm,0.6s						
TIA	Tai'an	2.56	254	Pn	Pn	01 47 13.7	-0.9
TIA				Pg	Pb	01 47 18.3	-0.7
TIA				Sg	Sb	01 47 49.7	-0.9
TIA				smax	smax		
	comp=N,310nm,0.7s						
TIA				smax	smax		
	comp=E,170nm,0.5s						
BJI	Beijing	4.38	316	Pn	Pn	01 47 37.8	-1.7
BJI				Sg	Sb	01 48 41.3	-1.6
BJI				smax	smax		
	comp=N,160nm,0.7s						
BJI				smax	smax		
	comp=E,120nm,0.5s						
NJ2	Nanjing	5.02	193	ePn	Pn	01 47 45.4	-3.0
NJ2				Pg	Pg	01 48 07.9	-1.3
NJ2				Sn	Sn	01 48 49.1	+2.6
NJ2				Sg	Sg	01 49 14.4	+0.1
NJ2				smax	smax		
	comp=N,170nm,0.7s						
NJ2				smax	smax		
	comp=E,130nm,0.7s						
KSRS	Korea Array	6.21	83	Pn	Pn	01 48 05.8	+1.1
	1.0nm,0.3s,baz=269,slow=13,SNR=16						
KSRS				Lg	Lg	01 49 49.1	
	5.6nm,0.3s,baz=266,slow=30,SNR=7.6						
KSRS				LR	LR	01 50 30.3	
	comp=Z,31nm,21.1s,baz=338,slow=38						
HHC	Hu-ho-hao-te	7.74	303	eP	Pn	01 48 29.2	+3.4
HHC				sP	Pb	01 48 37.9	-9.5
HHC				S	Sn	01 49 59.8	+6.2
HHC				sS	Sb	01 50 04.9	-15
HHC				pmax	pmax		
	comp=Z,19nm,0.7s						
HHC				pmax	pmax		
	comp=Z,76nm,5.2s						
HHC				LR	LR		
	comp=N,120nm,5.5s						
HHC				LR	LR		
	comp=E,210nm,4.9s						
HHC				LR	LR		
	comp=Z,100nm,5.9s						
LZH	Lanzhou	13.16	271	eP	Pn	01 49 40.5	+0.4
LZH				pP	P	01 49 44.0	-6.3
LZH				sP		01 49 46.8	
WMQ	Urumqi	25.55	296	eP	P	01 52 03.2	+1.3
MKAR	Makanchi Array	29.61	301	P	P	01 52 40.4	+2.1
	comp=Z,0.5nm,0.5s,baz=89,slow=10,SNR=6.7						
KURBB	Kurchatov Arra	32.55	308	P	P	01 53 06.0	+1.9
	comp=Z,2.2nm,0.7s,baz=99,slow=9.5,SNR=20						
FINES	FINESS Array B	60.15	326	P	P	01 56 41.7	+1.3
	comp=Z,1.1nm,0.6s,baz=64,slow=8.7,SNR=6.2						
ATD	Arta Tunnel	73.07	272	LR	LR	02 33 05.7	
	comp=Z,40nm,18.4s,baz=302,slow=38						
SFJD	Kangerlussuaq	76.12	356	LR	LR	02 31 03.6	
	comp=Z,21nm,18.5s,baz=100,slow=35						

ISCJB **13** *02:00:07.5±0.5, 24°.66N±0°.03×122°.57E±0°.02, h105^{km}±4^{km}, Error ellipse: s-maj=4.4km s-min=2.9km az=176.8*
JMA **13** *02:00:07.2±0.2, 24°.61N×122°.55E, h112^{km}±2^{km}, M2.5*
TAP **13** *02:00:07.3, 24°.70N×122°.58E, h110^{km}, ML3.4, C*
ISC 13 02:00:07.7±1.5**, 24°.67N**±0°.05×**122°.57E**±0°.03**, h108^{km}**±8^{km}**, n72,** σ**0^{s}.61**/124**, 6C-1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.41	122	P	Pn	02 00 23.8	+0.1
JYNG				S	Sn	02 00 36.2	+0.5
EOS1	EOS1	0.42	253	⇑P	Pn	02 00 24.1	+0.4
	baz=244						
EOS1				eS	Sn	02 00 36.6	+0.9
	baz=244						
YOJ	Yonaguni jima	0.45	117	⇑P	Pn	02 00 24.1	+0.2
	baz=126						
YOJ				S	Sn	02 00 36.4	+0.2
	baz=126						
YOJ	Yonaguni jima	0.45	117	P	Pn	02 00 24.1	+0.2
YOJ				eS	Sn	02 00 36.5	+0.3
EGS		0.60	287	eP	Pn	02 00 24.7	-0.3
	baz=276						
TWB1	Santiao Chiao	0.63	303	eP	Pn	02 00 25.3	+0.2
	baz=300						
TWB1				eS	Sn	02 00 38.4	0.0
	baz=300						
TWC	Suao	0.66	265	P	Pn	02 00 25.1	-0.3
	baz=259						
TWC				eS	Sn	02 00 38.0	-0.8
	baz=259						
TIPB	Shuangxi	0.74	294	⇑iP	Pn	02 00 26.3	+0.1
	baz=287						
TIPB				S	Sn	02 00 39.7	-0.4
	baz=287						
NANB	Nanao	0.78	252	i P	Pn	02 00 26.7	+0.2
	baz=250						
NANB				S	Sn	02 00 40.8	+0.1
	baz=250						
ENA	Nanau	0.79	252	P	Pn	02 00 26.8	+0.2
	baz=250						
ENA				eS	Sn	02 00 40.8	-0.1
	baz=250						
NWF	Wu-fen Shan	0.82	299	P	Pn	02 00 27.2	+0.2
	baz=292						
NWF				S	Sn	02 00 41.3	-0.2
	baz=292						
WFSB	Wu-fen Shan	0.82	299	eP	Pn	02 00 26.8	0.0
	baz=292						
WFSB				S	Sn	02 00 41.4	+0.1
	baz=292						
TWE	Neicheng	0.82	274	P	Pn	02 00 26.9	0.0
	baz=270						
TWE				S	Sn	02 00 40.6	-0.7
	baz=270						
SLBB	Yuanshan	0.85	276	⇓P	Pn	02 00 27.5	+0.3
	baz=279						
SLBB				S	Sn	02 00 41.8	-0.2
	baz=279						
ENTT	Nioudou	0.91	268	eP	Pn	02 00 28.2	+0.5
	baz=272						
TWA	Mucha	0.95	289	eP	Pn	02 00 28.1	0.0
	baz=280						
TWA				eS	Sn	02 00 42.5	-1.1
	baz=280						
NWLT	Wulai	0.97	277	eP	Pn	02 00 28.1	-0.3
	baz=279						
YM07	YM07	1.00	301	P	Pn	02 00 28.6	0.0
	baz=291						
YM07				S	Sn	02 00 44.1	-0.4
	baz=291						
NACB	Ninganchiao	1.02	241	P	Pn	02 00 28.4	-0.4
	baz=240						
NACB				eS	Sn	02 00 44.3	-0.5
	baz=240						
TATO	Taipei	1.03	287	eP	Pn	02 00 28.6	-0.3
	baz=279						
TATO				eS	Sn	02 00 43.6	-1.4
	baz=279						
YM11	YM11	1.03	299	eP	Pn	02 00 29.8	+0.7
	baz=289						
YM11				eS	Sn	02 00 45.1	-0.1
	baz=289						
YM10	YM10	1.03	298	eP	Pn	02 00 29.1	0.0
	baz=288						
YM04	YM04	1.05	297	P	Pn	02 00 29.3	0.0
	baz=287						
YM04				eS	Sn	02 00 44.6	-1.0
	baz=287						
TWD	Chiawan	1.06	237	P	Pn	02 00 28.9	-0.4
	baz=232						
TWD				eS	Sn	02 00 45.6	-0.1
	baz=232						
TWY	Chenhua	1.07	305	eP	Pn	02 00 29.4	0.0
	baz=302						
YHNB	Yeheng	1.08	270	⇑P	Pn	02 00 30.0	+0.4
	baz=274						
YHNB				S	Sn	02 00 46.3	0.0
	baz=274						
NSK	Sanguang	1.10	271	⇑iP	Pn	02 00 30.1	+0.3
	baz=275						
NSK				S	Sn	02 00 46.3	-0.3
	baz=275						
NNSB	Datong	1.11	258	P	Pn	02 00 30.2	+0.2
	baz=252						
NNSB				eS	Sn	02 00 46.6	-0.1
	baz=252						
NNSH	Datong	1.11	258	P	Pn	02 00 30.1	+0.2
	baz=252						
NNSH				eS	Sn	02 00 46.5	-0.3
	baz=252						
IRIF	Iriomote-Funau	1.11	107	P	Pn	02 00 29.8	0.0
IRIF				S	Sn	02 00 46.5	-0.1
NNS	Nan Shan	1.11	258	eP	Pn	02 00 30.2	+0.2
	baz=252						
HWA	Hwalien	1.12	232	eP	Pn	02 00 30.0	+0.1
	baz=231						
TWS1	Kuangyinshan	1.13	293	eP	Pn	02 00 30.1	+0.1
	baz=285						
TWS1				eS	Sn	02 00 46.6	-0.4
	baz=285						
ENLB	Shoufeng	1.17	229	eP	Pn	02 00 30.6	+0.1
	baz=226						
ENLB				eS	Sn	02 00 48.1	+0.5
	baz=226						
WLTB	Daxi	1.21	279	eP	Pn	02 00 30.8	-0.1
	baz=279						
WLTB				eS	Sn	02 00 49.2	+0.7
	baz=279						
HATJ	Hateruma jima	1.28	118	eS	Sn	02 00 50.3	+0.3
WHF	Hehuan Shan	1.30	247	⇑iP	Pn	02 00 32.6	+0.2
	baz=241						
WHF				S	Sn	02 00 50.5	-0.5
	baz=241						
ESL	Shilin	1.34	231	eP	Pn	02 00 31.8	-0.6
	baz=227						
TDCB	Techi	1.35	252	P	Pn	02 00 33.4	+0.6
	baz=246						
TDCB				S	Sn	02 00 51.6	-0.1
	baz=246						
JKRS	Kuro-shima	1.38	108	P	Pn	02 00 33.6	+0.7
JKRS				S	Sn	02 00 52.5	+0.4
CHGB	Renai	1.41	245	P	Pn	02 00 33.9	+0.4
	baz=239						
CHGB				S	Sn	02 00 52.6	-0.5
	baz=239						
LIOB	Emei	1.41	269	eP	Pn	02 00 33.6	+0.2
	baz=268						
LIOB				S	Sn	02 00 52.6	-0.1
	baz=268						
NSTT	Nanjuang	1.43	269	eP	Pn	02 00 33.9	+0.4
	baz=268						
NSTT				eS	Sn	02 00 52.7	-0.4
	baz=268						
EGFH	Guangfu	1.44	227	eP	Pn	02 00 33.0	-0.6
	baz=223						
JIJ	Ishigaki jima	1.47	102	P	Pn	02 00 34.0	+0.1
JIJ				S	Sn	02 00 53.0	-0.8
HGSD	Ruisui	1.57	222	eP	Pn	02 00 35.0	-0.2
	baz=222						
HGSD				eS	Sn	02 00 56.2	+0.1
	baz=222						
JISG	Ishigakijimahi	1.59	93	P	Pn	02 00 35.5	+0.1
JISG				eS	Sn	02 00 55.9	-0.6
NMLH	Miaoli	1.62	266	eP	Pn	02 00 36.8	+0.9
	baz=264						
EHY	Hungye	1.62	225	eP	Pn	02 00 35.3	-0.6
	baz=232						
SMLT	Sun Moon Lake	1.71	243	eP	Pn	02 00 38.0	+0.9
	baz=238						
SMLT				eS	Sn	02 01 01.2	+1.8
	baz=238						
SSLB	Suanglung	1.72	240	eP	Pn	02 00 37.4	+0.4
	baz=237						
SSLB				eS	Sn	02 01 00.1	+0.8
	baz=237						
YULB	Yu-li	1.72	223	eP	Pn	02 00 36.3	-0.8
	baz=229						
YULB				eS	Sn	02 00 57.9	-1.6
	baz=229						
TYC	Yuchr	1.74	244	eP	Pn	02 00 38.3	+1.1
	baz=247						
TYC				eS	Sn	02 01 00.4	+0.7
	baz=247						
TWF1	Yuli	1.75	222	eP	Pn	02 00 37.1	-0.4
	baz=229						
TWF1				eS	Sn	02 00 58.6	-1.6
	baz=229						
FULB	Fuli	1.87	219	eP	Pn	02 00 38.8	-0.2
	baz=214						
FULB				eS	Sn	02 01 02.6	-0.3
	baz=214						
WJS	Zhushan	1.88	244	eP	Pn	02 00 40.4	+1.3
	baz=253						
YUS	Yu-Shan	1.89	232	eP	Pn	02 00 40.1	+0.5
	baz=231						
JTJ	Tarama	1.94	90	P	Pn	02 00 39.9	+0.1
JTJ				eS	Sn	02 01 04.1	-0.2
CHN5	Tsauling	2.03	239	eP	Pn	02 00 41.7	+0.7
	baz=248						
CHN5				eS	Sn	02 01 07.5	+0.9
	baz=248						
TWH	Lutao	2.19	207	eP	Pn	02 00 42.9	-0.2
	baz=211						
TWH				eS	Sn	02 01 08.9	-1.2
	baz=211						
CHN4	Tsaushan	2.23	234	eP	Pn	02 00 44.0	+0.4
	baz=234						
CHN4				eS	Sn	02 01 12.2	+1.1
	baz=234						
STYT	Tauyuan	2.24	228	eP	Pn	02 00 44.0	+0.3
	baz=228						
TPUB	Ta-pu	2.24	233	eP	Pn	02 00 44.0	+0.4
	baz=228						
TPUB				eS	Sn	02 01 11.8	+0.7
	baz=228						
WTP	Ta-pu	2.28	232	eP	Pn	02 00 45.4	+1.1
	baz=232						
TWGBT	Beinan	2.29	217	eP	Pn	02 00 43.8	-0.5
	baz=222						
TWGBT				eS	Sn	02 01 11.5	-1.0
	baz=222						
TWG	Pinlang	2.29	217	eP	Pn	02 00 43.9	-0.5
	baz=222						
TWG				eS	Sn	02 01 11.1	-1.4
	baz=222						
TWK	Hsinying	2.36	234	eP	Pn	02 00 46.2	+0.9
	baz=234						
TWK				eS	Sn	02 01 14.4	+0.3
	baz=234						
CHN1	Nanshi	2.38	232	eP	Pn	02 00 46.1	+0.6
	baz=232						
CHN1				eS	Sn	02 01 15.2	+0.6
	baz=232						
SLGT	Liugui	2.43	227	eP	Pn	02 00 47.4	+1.3
	baz=227						
VWUC	VWUC	2.85	277	eP	Pn	02 00 50.8	-0.8
	baz=276						
PHUB	P'eng-hu	2.97	248	eP	Pn	02 00 54.0	+0.8
	baz=248						
WDGT	Dungji	3.01	243	eP	Pn	02 00 53.0	-0.7
	baz=243						

ISCJB **13** *02:00:16.2±0.5, 50°.13N±0°.03×19°.03E±0°.03, h0^{km}, Error ellipse: s-maj=4.8km s-min=2.5km az=15.8*
CSEM **13** *02:00:16.8±0.3, 50°.12N×19°.09E, h2^{km}, ML2.7/6, Error ellipse: s-maj=8.3km s-min=4.3km az=11.0*
PRU **13** *02:00:17.6, 50°.12N×19°.06E, h0^{km}*
WAR **13** *02:00:17.8, 50°.10N×19°.20E, h1^{km}, Mw2.4*
ISC 13 02:00:16.7±0.8**, 50°.04N**±0°.03×**19°.12E**±0°.02**, h0^{km}, n37,** σ**0^{s}.89**/68**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHZP	Chorzow	0.27	342	ePg	Pg	02 00 22.8	+0.9
CHZP				eSg	Sg	02 00 26.1	+0.9
CHZP	Chorzow	0.27	342	ePg	Pg	02 00 22.8	+0.9
CHZP				eSg	Sg	02 00 26.1	+0.9
OJC	Ojcow	0.47	67	ePg	Pg	02 00 25.5	-0.3
OJC				eSg	Sg	02 00 31.6	-0.4
OJC	Ojcow	0.47	67	ePg	Pg	02 00 25.5	-0.3
OJC				eSg	Sg	02 00 31.6	-0.4
OJC	Ojcow	0.47	67	ePg	Pg	02 00 25.5	-0.3
OJC				eSg	Sg	02 00 31.6	-0.4
OKC	Ostrava-Krasne	0.66	253	ePG	Pg	02 00 30.2	+0.9
OKC				eSG	Sg	02 00 37.8	-0.1
	comp=Z,16nm,0.3s						
OKC	Ostrava-Krasne	0.66	253	Pg	Pg	02 00 30.2	+0.9
OKC				Sg	Sg	02 00 37.8	-0.1
	16nm,0.3s						
LANS	Liptovska Anna	0.92	166	ePG	Pn	02 00 36.5	-0.4
LANS				eSG	Sn	02 00 50.1	-0.7
NIE	Niedzica	0.99	129	ePg	Pb	02 00 36.9	+0.2
NIE				eSg	Sb	02 00 51.3	+1.1
NIE	Niedzica	0.99	129	ePg	Pb	02 00 36.9	+0.2
NIE				eSg	Sb	02 00 51.3	+1.1
NIE	Niedzica	0.99	129	ePg	Pb	02 00 36.9	+0.2
NIE				eSg	Sb	02 00 51.3	+1.1
MORC	Moravsky Berou	1.05	256	ePg	Pb	02 00 38.0	+0.2
MORC				eSg	Sb	02 00 52.8	+0.6
MORC	Moravsky Berou	1.05	256	ePG	Pb	02 00 38.0	+0.2
MORC				eSG	Sb	02 00 52.8	+0.6
KRLC	Kraliky	1.51	272	ePG	Pn	02 00 44.4	-0.6
KRLC				eSG	Sn	02 01 05.6	+0.2
	comp=Z,4.9nm,0.4s						
KRLC	Kraliky	1.51	272	Pg	Pn	02 00 44.4	-0.6
KRLC				Sg	Sn	02 01 05.6	+0.2
	4.9nm,0.4s						
JAVC	Velka Javorina	1.51	219	ePN	Pb	02 00 47.5	+1.8
VYHS	Vyhne	1.56	187	ePN	Pg	02 00 46.7	+0.1
VYHS				eSN	Sb	02 01 07.8	+1.1
VYHS				eLG	Lg	02 01 09.5	
VYHS	Vyhne	1.56	187	ePg	Pg	02 00 46.7	+0.1
VYHS				eSn	Sb	02 01 07.8	+1.1
VRAC	Vranov	1.80	247	ePn	Pb	02 00 50.9	+0.4
VRAC				eSg	Sg	02 01 15.3	+0.9
VRAC	Vranov	1.80	247	ePN	Pb	02 00 50.9	+0.4
VRAC				eSG	Sg	02 01 15.3	+0.9
DPC	Dobruska-Polom	1.82	281	ePG	Pn	02 00 49.5	+0.1
DPC				eSG	Sn	02 01 13.4	+0.2
	comp=Z,8.0nm,0.3s						
DPC	Dobruska-Polom	1.82	281	Pg	Pn	02 00 49.5	+0.1
DPC				Sg	Sn	02 01 13.4	+0.2
	8.0nm,0.3s						
CRVS	Cervenica-Dubn	1.91	126	ePN	Pg	02 00 53.4	+0.2
CRVS				eSN	Sg	02 01 18.6	+0.7
KSP	Ksiaz	1.98	295	ePg	Pg	02 00 54.8	+0.2
KSP				eSg	Sg	02 01 20.1	-0.1
KSP	Ksiaz	1.98	295	ePg	Pg	02 00 54.8	+0.2
KSP				eSg	Sg	02 01 20.1	-0.1
KSP	Ksiaz	1.98	295	ePg	Pg	02 00 54.8	+0.2
KSP				eSg	Sg	02 01 20.1	-0.1
KRUC	Moravsky	2.02	242	ePn	Pb	02 00 54.3	-0.1
KRUC				eSg	Sg	02 01 22.3	+0.6
KRUC	Moravsky	2.02	242	ePN	Pb	02 00 54.3	-0.1
KRUC				eSG	Sg	02 01 22.3	+0.6
UPC	Upice	2.05	284	eSG	Sb	02 01 21.2	+0.4
UPC	Upice	2.05	284	Sg	Sb	02 01 21.2	+0.4
PRU	Pruhonice	2.95	271	eSG	Sg	02 01 49.5	-2.0
	comp=Z,6.3nm,0.6s						
PRU	Pruhonice	2.95	271	Sg	Sg	02 01 49.5	-2.0
	6.3nm,0.6s						
PVCC	Panska Ves	2.96	281	eSG	Sg	02 01 50.8	-0.9
	comp=Z,8.3nm,0.2s						
PVCC	Panska Ves	2.96	281	Sg	Sg	02 01 50.8	-0.9
	8.3nm,0.2s						
BRG	Berggiesshubel	3.41	286	SG	Sg	02 02 06.3	+0.1
	4.4nm,0.5s						
KHC	Kasperske Hory	3.72	258	ePN	Pn	02 01 14.5	-0.9
KHC				eSN	Sn	02 01 57.5	-2.4
KHC				eSG	Sg	02 02 14.2	-1.9
	comp=Z,3.5nm,0.4s						
KHC	Kasperske Hory	3.72	258	Pn	Pn	02 01 14.5	-0.9
KHC				Sn	Sn	02 01 57.5	-2.4
KHC				Sg	Sg	02 02 14.2	-1.9
	3.5nm,0.4s						

DJA **13** *02:05:20.9±0.5, 3°S±3°×12°9E±°, h11^{km}±5^{km}, M4.2/9, mb4.6/1, mB5.4/1, MLv4.0/9, Mw(mB)4.9/1*
NEIC **13** *02:05:22.8±0.8, 2°.82S×129°.27E, h35^{km}, mb4.1/1, Error ellipse: s-maj=46.9km s-min=9.9km az=74.0*
IDC **13** *02:05:24.7±3.7, 2°.92S×129°.08E, h56^{km}±37^{km}, mb3.7/4, mb1 4.0/7, mb1mx3.5/58, mbtmp4.1/7, ML3.9/3, MS3.1/8, Ms1 3.1/8, ms1mx2.8/55, Error ellipse: s-maj=30.1km s-min=12.1km az=79.0*
ISC 13 02:05:21.3±0.8**, 2°.77S**±0°.04×**129°.22E**±0°.05**, h33^{km}, n24,** σ**1^{s}.56**/23**, mb4.0**/5**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.64	207	P	Pn	02 05 32.8	-1.3
AAI	Ambon	1.37	228	P	Pn	02 05 42.5	-1.6
AAI				S	Sb	02 06 03.6	0.0
BNDI	Bandanaira	1.87	159	P	Pb	02 05 55.1	+0.3
NLAI	Namlea	2.17	258	P	Pn	02 05 52.8	-2.3
NLAI				S	Sb	02 06 27.7	+1.2
LBMI	Labuha	2.73	321	P	Pn	02 06 01.5	-1.3
LBMI				S	Sn	02 06 33.5	-1.2
LBMI				Sg	Sb	02 06 44.9	+2.4
SIJI	Sorong	2.78	47	P	Pb	02 06 09.2	-1.1
	21nm,0.3s,baz=264,slow=22,SNR=52						
SIJI				S	Sb	02 06 44.9	+0.9
	19nm,0.3s,baz=45,slow=23,SNR=15						
FAKI	Fak Fak	3.03	93	P	Pb	02 06 13.6	-0.9
SANI	Sanana	3.31	282	P	Pn	02 06 08.2	-2.6
RKPI	Ransiki, Papua	5.11	76	P	Pn	02 06 41.5	+6.0
DAV	Davao City (W)	10.43	340	LR	LR	02 13 03.0	
	comp=Z,60nm,19.1s,baz=328,slow=44						
FITZ	Fitzroy Crossi	15.63	193	P	Pn	02 09 00.1	+0.8
	0.2nm,0.3s,baz=26,slow=10,SNR=7.5						
FITZ				LR	LR	02 16 02.7	
	comp=Z,63nm,18.1s,baz=31,slow=41						
WRAB	Tennant Creek	17.78	164	ePn	P	02 09 26.7	-0.2
	17nm,1.0s						
WRA	Warramunga Arr	17.78	164	P	P	02 09 26.4	-0.5
	0.7nm,0.3s,baz=344,slow=12,SNR=54						
WRA				LR	LR	02 16 59.1	
	comp=Z,87nm,21.3s,baz=5.0,slow=39						
ASAR	Alice Springs	21.26	168	P	P	02 10 06.5	+1.5
	17nm,0.6s,baz=350,slow=12,SNR=179						
ASAR				S	S	02 13 58.3	-1.3
	3.9nm,1.0s,baz=351,slow=23,SNR=9.2						
LEM	Lembang	21.90	259	LR	LR	02 19 48.7	
	comp=Z,96nm,19.7s,baz=42,slow=40						
GUMO	Guam	22.48	43	LR	LR	02 18 53.4	
	comp=Z,18nm,21.6s,baz=189,slow=36						
STKA	Stephens Creek	31.21	159	LR	LR	02 25 32.7	
	comp=Z,85nm,19.2s,baz=24,slow=39						
JNU	Nakatsue	35.73	2	LR	LR	02 26 23.5	
	comp=Z,22nm,20.5s,baz=128,slow=35						
KSRS	Korea Array	40.04	358	LR	LR	02 29 17.3	
	comp=Z,16nm,20.8s,baz=220,slow=36						
MKAR	Makanchi Array	64.30	326	P	P	02 15 54.9	+1.3
	0.9nm,0.8s,baz=125,slow=7.4,SNR=5.5						
KURBB	Kurchatov Arra	68.53	328	P	P	02 16 21.5	+1.0
	0.6nm,0.6s,baz=132,slow=5.6,SNR=8.0						
KURK	Kurchatov	68.53	328	eP	P	02 16 21.7	+1.2
BVAR	Borovoye Array	74.10	327	P	P	02 16 55.1	+1.0
	0.3nm,0.3s,baz=116,slow=6.6,SNR=3.3						
BRVK	Borovoye	74.17	327	eP	P	02 16 57.4	+2.9
	8.0nm,0.8s						

CSEM **13** *02:09:39.9±0.7, 37°.33N×43°.86E, h2^{km}, ML2.4, Error ellipse: s-maj=18.6km s-min=8.0km az=114.0*
ISN **13** *02:09:39.3±0.3, 37°.26N×43°.70E, h0^{km}, ML2.5*
ISK 13 02:09:39.7, 37°.34N×43°.81E, h5^{km}, ML2.4/4**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CUKT	Cukurca	0.18	240	PG	Pg	02 09 43.9	+0.5
CUKT				SG	Sg	02 09 47.8	+2.0
CUKT	Cukurca	0.18	240	ePg	Pg	02 09 43.9	+0.5
CUKT				eSg	Sg	02 09 47.8	+2.0

MSL	Mosul	1.09	211	*e*Pg	Pb	02 10 00.9	-0.2
	baz=28,slow=16,SNR=9.0						
MSL				*e*Sg	Sb	02 10 16.0	+0.4
	SNR=9.0						
SIRT	Sirnak	1.10	279	PN	Pn	02 10 01.9	0.0
SIRT				SN	Sn	02 10 17.9	+0.4
SIRT	Sirnak	1.10	279	*e*Pn	Pn	02 10 01.9	0.0
SIRT				*e*Sn	Sn	02 10 17.9	+0.4
VANB	Van	1.30	345	PN	Pg	02 10 03.9	-0.7
VANB	Van	1.30	345	*e*Pn	Pg	02 10 03.9	-0.7
CLDR	Caldiran	1.80	3	PN	Pb	02 10 13.2	-0.1
CLDR	Caldiran	1.80	3	*e*Pn	Pb	02 10 13.2	-0.1
GURO	Guroymak-BITLI	1.85	311	PN	Pb	02 10 13.8	-0.3
GURO	Guroymak-BITLI	1.85	311	*e*Pn	Pb	02 10 13.8	-0.3
SVAN	Silvan-Diyarba	2.22	292	PN	Pb	02 10 19.3	-1.1
SVAN	Silvan-Diyarba	2.22	292	*e*Pn	Pb	02 10 19.3	-1.1
MAZI	Mazidag	2.68	274	PN	Pb	02 10 26.1	-2.1
MAZI	Mazidag	2.68	274	*e*Pn	Pb	02 10 26.1	-2.1

ISCJB ***13*** *02:32:42.8±1.0, 38°.59N±0°.06×43°.21E±0°.05, h26^{km}±9^{km}, Error ellipse: s-maj=10.7km s-min=6.0km az=158.4*

ISK ***13*** *02:32:42.0, 38°.63N×43°.16E, h3^{km}, ML2.2/2*

DDA ***13*** *02:32:43.1, 38°.64N×43°.20E, h7^{km}, Ml2.7*

CSEM ***13*** *02:32:43.2±0.3, 38°.65N×43°.16E, h5^{km}, ML2.2, Error ellipse: s-maj=8.0km s-min=5.3km az=5.0*

ISC 13 02:32:43.0±0.9**, 38°.62N**±0°.04×**43°.18E**±0°.03**, h16**^{km}±8^{km}**,** **n14,** σ0^{s}.**55**/25**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VANB	Van	0.17	97	PG	Pg	02 32 47.5	+0.2
VANB				SG	Sb	02 32 51.5	+0.5
VANB	Van	0.17	97	*e*Pg	Pg	02 32 47.5	+0.2
VANB				*e*Sg	Sb	02 32 51.5	+0.5
TVAN	Van	0.20	116	*i* P	Pg	02 32 47.0	-0.9
TVAN				*i* S	Sg	02 32 51.6	+0.4
TVAN	Van	0.20	116	P	Pg	02 32 47.0	-0.9
TVAN				S	Sg	02 32 51.6	+0.4
GEVA	Gevas	0.32	197	*i* P	Pg	02 32 49.4	-0.4
GEVA				*i* S	Sb	02 32 56.0	+0.6
GEVA	Gevas	0.32	197	S	Sb	02 32 56.0	+0.6
ADCV	BITLIS_Adilcev	0.40	299	*i* P	Pg	02 32 51.1	-0.1
ADCV				*i* S	Sb	02 32 58.0	+0.1
ADCV	BITLIS_Adilcev	0.40	299	P	Pg	02 32 51.1	-0.1
ADCV				S	Sb	02 32 58.0	+0.1
CLDR	Caldiran	0.78	47	PG	Pg	02 32 58.0	-0.3
CLDR				SG	Sb	02 33 09.6	+0.7
CLDR	Caldiran	0.78	47	*e*Pg	Pg	02 32 58.0	-0.3
CLDR				*e*Sg	Sb	02 33 09.6	+0.7
GURO	Guroymak-BITLI	0.90	266	PG	Pb	02 32 59.9	-0.4
GURO				SG	Sg	02 33 12.8	+0.5
GURO	Guroymak-BITLI	0.90	266	*e*Pg	Pb	02 32 59.9	-0.4
GURO				*e*Sg	Sg	02 33 12.8	+0.5
AGRB	Hanur-Agry	0.97	352	PG	Pb	02 33 00.9	-0.6
AGRB	Hanur-Agry	0.97	352	*e*Pg	Pb	02 33 00.9	-0.6

ISCJB ***13*** *02:41:34.3±0.1, 55°.48N±0°.02×164°.30W±0°.03, h194^{km}±1^{km}, mb4.5/295, Error ellipse: s-maj=4.0km s-min=2.5km az=152.7*

BJI ***13*** *02:41:35.8, 56°.05N×164°.07W, h193^{km}, mb4.5/15, mB4.9/8*

NEIC ***13*** *02:41:35.3±0.1, 55°.48N×164°.35W, h185^{km}±1^{km}, mb4.8/265, ML4.4(AEIC), Error ellipse: s-maj=3.5km s-min=2.2km az=147.0*

MOS ***13*** *02:41:36.4±1.0, 55°.60N×164°.12W, h202^{km}, mb4.6/41, Error ellipse: s-maj=8.9km s-min=6.9km az=63.0*

IDC ***13*** *02:41:37.4±0.5, 55°.63N×164°.14W, h196^{km}±3^{km}, mb3.8/25, mb1 4.0/27, mb1mx3.8/81, mbtmp4.3/27, Error ellipse: s-maj=11.4km s-min=8.1km az=2.0*

ISC 13 02:41:36.3±0.3**, 55°.39N**±0°.05×**164°.05W**±0°.04**, h191**^{km}±2^{km}**, h191**^{km}**:pP-P, n1012,** σ1^{s}.**20**/1101**, mb4.7**/296**, 4C, Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SSLN	Shishaldin Nor	0.58	177	P	Pn	02 42 01.8	-1.0
SSBA	Shishaldin	0.62	184	P	Pn	02 42 01.3	-1.7
SSBA				S	Sn	02 42 21.4	-2.1
SSLW	Shishaldin Wes	0.62	184	P	Pn	02 42 01.6	-1.4
FALS	False Pass	0.65	145	P	Pn	02 42 01.5	-1.5
FALS				S	Sn	02 42 22.1	-1.4
SSLS	Shishaldin Sou	0.68	177	P	Pn	02 42 02.1	-1.1
BALA	Baldy Mountain	0.75	105	P	Pn	02 42 03.1	-0.5
WEBT	Westdahl Beart	0.90	207	P	Pn	02 42 03.4	-1.1
WESE	West Dahl East	0.97	199	P	Pn	02 42 03.5	-1.5
WESP	Westdahl Peak	0.98	203	P	Pn	02 42 03.8	-1.3
WESP				S	Sn	02 42 26.2	-1.1
DT1	Dutton Round H	1.05	105	P	Pn	02 42 03.9	-1.6
DRIA	Deer Island	1.11	112	P	Pn	02 42 04.3	-1.7
PS4A	Pavlof South-4	1.25	91	P	Pn	02 42 06.5	-0.6
DOL	Dolgoi Island	1.28	100	P	Pn	02 42 06.2	-1.1
PVV	Pavlof Volcano	1.29	90	P	Pn	02 42 06.7	-0.6
AKSA	Akutan Strait	1.58	218	P	Pn	02 42 08.2	-1.7
AKSA				S	Sn	02 42 33.5	-2.4
AKUT	Akutan	1.60	219	P	Pn	02 42 08.8	-1.3
AKUT				S	Sn	02 42 34.6	-1.7
AHB	Akutan Harbor	1.64	219	P	Pn	02 42 08.6	-1.9
AKGG	Akutan Green G	1.64	224	P	Pn	02 42 08.9	-1.6
AKLV	Akutan Long Va	1.65	223	P	Pn	02 42 08.7	-2.0
AKRB	Akutan Reef Bi	1.72	224	P	Pn	02 42 09.5	-1.8
AKMO	Akutan Morgan	1.73	222	P	Pn	02 42 09.4	-1.9
SDPT	Sand Point	2.04	90	P	Pn	02 42 13.1	-1.4
SDPT				S	Sn	02 42 41.7	-2.5
MTBL	Makushin Table	2.09	228	P	Pn	02 42 13.1	-2.0
UNV	Unalaska Valle	2.10	224	P	Pn	02 42 13.0	-2.2
UNV				S	Sn	02 42 42.0	-3.4
MSW	Makushin Switc	2.17	228	P	Pn	02 42 13.8	-2.2
MSW				S	Sn	02 42 43.5	-3.3
MCIR	Makushin Cirqu	2.19	230	P	Pn	02 42 14.5	-1.8
VNWF	Veniaminof 8	2.65	71	P	Pn	02 42 22.5	+1.1
VNHG	Veniaminof 1	2.88	71	P	Pn	02 42 25.2	+1.1
OKER	Okmok East Rim	3.04	232	P	Pn	02 42 22.9	-3.0
OKTU	Okmok Mt. Tuli	3.08	231	P	Pn	02 42 23.4	-3.0
OKAK	Okmok	3.10	236	P	Pn	02 42 24.8	-1.8
CHGN	Chignik	3.31	72	P	Pn	02 42 28.7	-0.3
AZAC	Aniakchak	3.59	63	P	Pn	02 42 32.7	+0.1
ANNW	Aniakchak Nort	3.62	62	P	Pn	02 42 32.7	-0.3
ANNE	Aniakchak Nort	3.68	63	P	Pn	02 42 33.9	+0.2
NIKH	Nikolski High	3.72	231	P	Pn	02 42 32.0	-2.2
NIKH				S	Sn	02 43 15.5	-3.9
SPIA	Saint Paul Isl	3.89	300	P	Pn	02 42 36.1	-0.1
PLK1	Peulik 1	4.77	57	P	Pn	02 42 48.2	+0.8
PLK2	Peulik 2	4.89	58	P	Pn	02 42 49.9	+0.9
KELA	Mount Kelaz	5.48	53	P	Pn	02 42 57.2	+0.5
CAHL	Cahill	5.51	57	P	Pn	02 42 57.3	+0.3
KABU	Katmai Buttres	5.61	55	P	Pn	02 42 58.5	+0.2
KAKN	Katmai Knife C	5.73	56	P	Pn	02 43 00.4	+0.5
KAHC	Katmai Hardscr	5.92	53	P	Pn	02 43 03.5	+1.1
KAPH	Katmai Pasha	6.20	55	P	Pn	02 43 06.0	0.0
OHAK	Old Harbor	6.27	69	P	Pn	02 43 03.6	-3.1
CDD	Cape Douglas	6.68	54	P	Pn	02 43 12.2	0.0
KOFP	Korovin Flat P	6.71	246	P	Pn	02 43 10.3	-2.4
KDAK	Kodiak Island	6.77	65	P	Pn	02 43 11.4	-2.0
	11nm,0.3s,baz=185,slow=5.2,SNR=149						
KDAK				S	Sn	02 44 22.9	-7.3
	17nm,0.3s,baz=86,slow=23,SNR=12						
ATKA	Atka Island	6.80	246	P	Pn	02 43 11.9	-1.9
SVW2	Sparrevohn	7.26	35	P	Pn	02 43 20.4	+0.7
RDWB	Redoubt West	7.85	45	P	Pn	02 43 28.4	+0.8
GSMY	Great Sitkin M	7.87	250	P	Pn	02 43 25.2	-2.6
RSO	Redoubt South	7.87	45	*e*Pn	Pn	02 43 28.9	+1.0
GSTD	Great Sitkin T	7.91	250	P	Pn	02 43 25.8	-2.6
GSCK	Great Sitkin C	7.94	250	P	Pn	02 43 26.2	-2.4
CNPM	China Poot	8.05	54	P	Pn	02 43 29.2	-0.9
ETKA	Kagalaska Isla	8.15	249	P	Pn	02 43 28.5	-2.9
BRLK	Bradley Lake	8.32	53	P	Pn	02 43 32.3	-1.2
KIWB	Kanaga Island	8.55	251	*e*Pn	Pn	02 43 35.7	-0.9
KIWB				*e*Sn	Sn	02 45 09.1	-3.3
SPCP	Crater Peak Br	8.59	42	P	Pn	02 43 39.0	+1.8
TT01	Tatalina	8.59	25	P	Pn	02 43 37.9	+0.9
SPCG	Spurr Capps Gl	8.65	42	P	Pn	02 43 39.4	+1.4
SLKM	Skilak Lake	8.96	49	P	Pn	02 43 41.9	0.0
SLKM	Skilak Lake	8.96	49	P	Pn	02 43 41.9	0.0
SUA	Susitna One	9.25	43	P	Pn	02 43 46.2	+0.4
SKT	Skwentna	9.27	39	P	Pn	02 43 47.4	+1.4
FIB	Fire Island	9.31	46	P	Pn	02 43 47.4	+0.9
FIB	Fire Island	9.31	46	P	Pn	02 43 47.4	+0.9
RC01	Rabbit Creek A	9.45	47	*e*Pn	Pn	02 43 48.8	+0.5
PPLA	Purkeypile	9.67	34	*e*Pn	Pn	02 43 53.6	+2.4
CAST	Castle Rocks	10.08	32	*e*Pn	Pn	02 43 58.3	+1.8
SML	Sawmill	10.40	45	*e*Pn	Pn	02 43 59.1	-1.6
SML	Sawmill	10.40	45	*e*P	Pn	02 43 59.1	-1.6
TRF	Thorofare Moun	10.68	35	*e*Pn	Pn	02 44 05.2	+0.9
SCM	Sheep Creek Mo	10.83	47	*e*Pn	Pn	02 44 05.1	-1.1
SCM	Sheep Creek Mo	10.83	47	*e*P	Pn	02 44 05.1	-1.1
BPAW	Bear Paw Mtn.	10.92	32	*e*Pn	Pn	02 44 08.6	+1.4
DIV	Divide	11.19	52	*e*Pn	Pn	02 44 09.2	-1.7
DIV				*e*Sn	Sn	02 46 10.6	-4.8
KLU	Klutina	11.27	50	*e*Pn	Pn	02 44 09.8	-2.1
MCK	McKinley	11.31	36	*e*Pn	Pn	02 44 12.4	0.0
MCK	McKinley	11.31	36	*e*P	Pn	02 44 12.4	0.0
BMRM	Bremner River	11.66	53	*e*Pn	Pn	02 44 15.1	-1.8
BMRM				*e*Sn	Sn	02 46 22.1	-4.5
MLY	Manley	11.69	29	*e*Pn	Pn	02 44 18.9	+1.7
HARP	HAARP	12.00	46	*e*Pn	Pn	02 44 21.4	+0.3
WRH	Wood River Hil	12.08	35	*e*Pn	Pn	02 44 20.8	-1.4
PAX	Paxson	12.15	44	*e*Pn	Pn	02 44 21.6	-1.5
PAX				*e*Sn	Sn	02 46 36.4	-1.8
PAX	Paxson	12.15	44	*e*P	Pn	02 44 21.6	-1.5
PAX				*e*		02 46 36.4	
CCB	Clear Creek Bu	12.29	34	*e*Pn	Pn	02 44 22.8	-1.9
MDM	Murphy Dome	12.37	33	*e*Pn	Pn	02 44 25.0	-0.8
ILAR	Eielson Array	12.67	35	P	Pn	02 44 27.0	-2.6
	0.4nm,0.3s,baz=226,slow=12,SNR=47						
ILAR				ScP	ScP	02 53 04.0	-0.5
	0.1nm,0.3s,baz=292,slow=3.5,SNR=6.9						
ILB	Eielson Array	12.67	35	*e*Pn	Pn	02 44 28.1	-1.6
FYU	Fort Yukon	14.37	31	*e*Pn	Pn	02 44 50.6	-0.2
EGAK	Eagle	14.70	41	*e*Pn	Pn	02 44 52.9	-2.0
TOLK	Toolik Lake Re	14.86	21	P	P	02 44 59.1	+1.2
	baz=214						
DAWY	Dawson	15.07	45	*e*Pn	Pn	02 44 58.2	-1.2
	61nm,1.5s						
SKAG	Skagway	15.93	63	*e*P	Pn	02 45 11.2	+1.3
	36nm,0.6s						
BESE	Bessie Mountai	16.17	67	*e*P	Pn	02 45 14.8	+2.0
	24nm,0.7s						
JIS	Juneau Island	16.42	68	*e*P	Pn	02 45 17.6	+1.8
	19nm,0.8s						
CRAG	Craig	17.48	77	*e*P	Pn	02 45 27.9	-0.5
	29nm,0.9s						
WRAK	Wrangell Islan	17.73	74	*e*P	Pn	02 45 32.5	+1.2
	63nm,0.8s						
DIB	Dawson Inlet,	18.48	84	*e*P	Pn	02 45 39.5	-0.6
	48nm,0.7s						
DLBC	Dease Lake	18.70	67	P	Pn	02 45 42.4	-0.3
	0.6nm,0.3s,baz=279,slow=12,SNR=16						
DLBC	Dease Lake	18.70	67	*e*P	Pn	02 45 42.0	-0.7
	13nm,0.9s						
INK	Inuvik	19.07	35	P	P	02 45 42.5	-1.3
	2.7nm,0.3s,baz=230,slow=11,SNR=98						
INK				S	S	02 49 03.9	-5.7
	0.3nm,0.3s,baz=152,slow=32,SNR=7.6						
INK	Inuvik	19.07	35	*e*P	P	02 45 42.4	-1.5
	20nm,0.7s						
INK				S	S	02 49 03.9	-5.7
INK	Inuvik	19.07	35	*e*P	P	02 45 42.4	-1.5
INK				S	S	02 49 03.9	-5.7
INK				pmax	pmax		
	comp=Z,20nm,0.7s						
PETK	Petropavlovsk-	22.28	280	P	P	02 46 18.5	+1.0
	comp=Z,1.6nm,0.4s,baz=77,slow=14						
SEY	Seymchan	23.16	307	*i* P	P	02 46 24.8	-0.6
LLLB	Lillooet	25.52	83	*e*P	P	02 46 48.2	+1.2
	comp=Z,9.0nm,0.6s						
YKA	Yellowknife Ar	25.89	54	P	P	02 46 50.7	+0.6
	comp=Z,2.4nm,0.6s,baz=272,slow=8.7,SNR=15						
YKA				sP	sP	02 47 50.0	-0.8
	comp=Z,0.7nm,0.3s,baz=274,slow=9.2,SNR=2.0						
YKA				PcP	PcP	02 50 13.6	+0.2
	comp=Z,2.3nm,0.7s,baz=272,slow=2.3,SNR=7.0						
A04D	Lummi Island	25.97	87	P	P	02 46 53.8	+2.9
	baz=301						
NLWA	Neilton Lookou	26.01	91	*e*P	P	02 46 54.0	+2.6
	comp=Z,25nm,1.0s						
B05A	Bryant	26.55	88	P	P	02 46 58.6	+2.5
	baz=302,SNR=12						
D05A	Enumclaw	27.19	90	*e*P	P	02 47 03.9	+2.0
	comp=Z,40nm,0.8s						
F04D	Rainier, OR	27.23	93	P	P	02 47 04.3	+2.1
	baz=305						
LON	Longmire	27.54	90	*e*P	P	02 47 07.2	+2.2
	comp=Z,18nm,0.6s						
LON	Longmire	27.54	90	*e*P	P	02 47 07.2	+2.2
LON				pmax	pmax		
	comp=Z,18nm,0.6s						
G03D	McMinnville, O	27.59	94	P	P	02 47 07.5	+2.0
	baz=307						
B08A	Colville Reser	28.08	86	*e*P	P	02 47 12.1	+2.2
	comp=Z,24nm,0.8s						
I03D	Drain, OR	28.47	97	P	P	02 47 15.5	+2.3
	baz=309						
H04A	Detroit Lake	28.52	94	*e*P	P	02 47 15.9	+2.2
	comp=Z,36nm,0.6s						
G05D	Wamic, OR	28.68	93	P	P	02 47 17.5	+2.3
	baz=306,SNR=7.8						
I04A	Tendick Farm,	28.94	96	P	P	02 47 19.4	+1.9
	baz=309,SNR=11						
C09A	Chrisman Ranch	28.98	86	*e*P	P	02 47 19.6	+1.9
	comp=Z,25nm,1.3s						
D08A	Wollman Farm,	29.01	88	*e*P	P	02 47 19.9	+1.9
	comp=Z,23nm,1.1s						
HAWA	Hanford	29.04	89	*e*P	P	02 47 20.3	+2.0
	comp=Z,37nm,0.8s						
I05D	Terrebonne, OR	29.21	94	P	P	02 47 22.0	+2.1
	baz=308,SNR=12						
L02D	Cave Junction,	29.31	100	P	P	02 47 22.7	+1.9
	baz=311						
J04D	Umpqua Nationa	29.46	97	P	P	02 47 24.5	+2.3
	baz=309,SNR=5.1						
E09A	Wood Farm, Sta	29.76	88	*e*P	P	02 47 26.5	+1.9
	comp=Z,26nm,1.0s						
PINE	Pine Mountain	29.77	95	*e*P	P	02 47 27.5	+2.5
	comp=Z,12nm,0.8s						
J05D	Fort Rock, OR	29.93	96	P	P	02 47 28.8	+2.5
	baz=309,SNR=22						
G08A	Pilot Rock	30.00	91	*e*P	P	02 47 28.6	+1.7
	comp=Z,14nm,0.8s						
K04D	Chiloquin, OR	30.05	97	P	P	02 47 30.0	+2.6
	baz=310						
YBH	Yreka Blue Hor	30.09	100	P	P	02 47 30.4	+2.6
	comp=Z,5.0nm,0.9s,baz=315,slow=5.3,SNR=10.0						
YBH	Yreka Blue Hor	30.09	100	*e*P	P	02 47 30.3	+2.6
	comp=Z,8.2nm,1.0s						
YBH	Yreka Blue Hor	30.09	100	*e*P	P	02 47 30.3	+2.6
YBH				pmax	pmax		
	comp=Z,8.0nm,1.0s						
M02C	Callahan	30.23	100	P	P	02 47 31.6	+2.6
	baz=312						
I07A	Izee	30.41	93	*e*P	P	02 47 32.9	+2.3
	comp=Z,18nm,0.8s						
K05A	Summer Lake	30.47	96	*e*P	P	02 47 33.9	+2.7
	comp=Z,28nm,0.8s						
M04C	Macdoel	30.55	99	P	P	02 47 34.0	+2.2
	baz=311,SNR=5.4						
F10A	Beach Ranch, E	30.59	88	*e*P	P	02 47 33.7	+1.6
	comp=Z,15nm,0.8s						
F10A				*e*PcP	PcP	02 50 26.4	+0.9
N02D	Trinity Center	30.60	101	P	P	02 47 34.7	+2.6
	baz=312						
WALA	Waterton Lakes	30.78	81	*e*P	P	02 47 35.5	+1.7
	comp=Z,30nm,1.4s						
WALA				*e*PcP	PcP	02 50 26.6	+0.6
BMO	Blue Mountains	31.20	90	*e*P	P	02 47 39.5	+2.0
	comp=Z,22nm,1.3s						
BMO	Blue Mountains	31.20	90	*e*P	P	02 47 39.5	+2.0
BMO				pmax	pmax		
	comp=Z,22nm,1.3s						
JTMT	Jette	31.27	83	*e*P	P	02 47 40.0	+1.9
	comp=Z,32nm,0.8s						
MOD	Modoc Plateau	31.34	97	*e*P	P	02 47 41.0	+2.3
	comp=Z,16nm,0.8s						
J08A	Circle Bar Ran	31.45	93	*e*P	P	02 47 41.8	+2.2
	comp=Z,32nm,0.6s						
J08A				*e*PcP	PcP	02 50 29.3	+1.5
O03D	Paynes Creek	31.56	101	P	P	02 47 42.1	+1.5
	baz=313,SNR=10						
TIXI	Tiksi	31.86	326	*i* P	P	02 47 42.6	-0.1
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.4s						
WVOR	Wild Horse Val	31.94	95	*e*P	P	02 47 46.0	+2.0
	comp=Z,32nm,0.8s						
WVOR	Wild Horse Val	31.94	95	*e*P	P	02 47 46.0	+2.0
WVOR				pmax	pmax		
	comp=Z,32nm,0.8s						
MSO	Missoula	31.97	84	P	P	02 47 45.5	+1.3
	baz=304,SNR=8.5						
MSO	Missoula	31.97	84	*e*P	P	02 47 45.6	+1.5
	comp=Z,8.4nm,0.8s						
BEKR	Beckworth	32.66	100	*e*P	P	02 47 51.8	+1.4
	comp=Z,20nm,1.0s						
MFID	Camas Ranch	32.92	91	*e*P	P	02 47 54.0	+1.5
	comp=Z,21nm,0.8s						
MFID				*e*PcP	PcP	02 50 32.4	+0.4
AFDM	Forest Hills D	32.95	102	*e*P	P	02 47 54.6	+1.9
	comp=Z,16nm,1.3s						
HRY	Holter Researc	33.24	83	*e*P	P	02 47 56.7	+1.5
PAHR	Pah Rah Range	33.32	99	*e*P	P	02 47 57.1	+1.1
	comp=Z,27nm,0.8s						
LRM	Limekiln Ridge	33.40	85	*e*P	P	02 47 58.0	+1.3
VCNR	Virginia City	33.45	100	*e*P	P	02 47 59.8	+2.6
	comp=Z,28nm,0.9s						
DLMT	Dillon	33.58	85	*e*P	P	02 47 59.5	+1.3
	comp=Z,20nm,1.6s						
DLMT				*e*PcP	PcP	02 50 34.9	+1.1
PNTR	Pine Nut	33.62	100	*e*P	P	02 48 01.1	+2.4
	comp=Z,50nm,0.8s						
PNTR				*e*PcP	PcP	02 50 35.4	+1.3
HLID	Hailey	33.64	89	P	P	02 48 00.5	+1.8
	baz=309,SNR=30						
HLID	Hailey	33.64	89	*e*P	P	02 48 00.6	+1.8
	comp=Z,13nm,0.8s						
HLID				*e*PcP	PcP	02 50 34.4	+0.3
YAK	Yakutsk	33.64	309	*i* P	P	02 47 57.7	-0.6
YAK				pmax	pmax		
	comp=Z,23nm,0.7s						
EGMT	Eagleton	33.67	79	P	P	02 48 00.0	+1.2
	baz=304,SNR=15						
EGMT	Eagleton	33.67	79	*e*P	P	02 48 00.0	+1.2
	comp=Z,20nm,0.8s						
EGMT				*e*PcP	PcP	02 50 34.0	+0.1
MCMT	McKenzie Canyo	33.76	86	*e*P	P	02 48 01.4	+1.5
MCMT				*e*PcP	PcP	02 50 35.5	+1.1
YERR	Yerington	33.90	100	*e*P	P	02 48 01.8	+0.8
	comp=Z,28nm,0.9s						
CMB	Columbia Colle	33.92	102	*e*P	P	02 48 03.2	+2.2
	comp=Z,12nm,1.1s						
CMB				*e*PcP	PcP	02 50 35.0	+0.2
BOZ	Bozeman (W)	33.99	84	P	P	02 48 03.1	+1.3
	baz=306,SNR=20						
BOZ	Bozeman (W)	33.99	84	*e*P	P	02 48 03.1	+1.3
	comp=Z,9.7nm,0.8s						
BOZ				*e*PcP	PcP	02 50 34.8	-0.2
BOZ	Bozeman (W)	33.99	84	*e*P	P	02 48 03.1	+1.3
BOZ				*e*		02 50 34.8	
BOZ				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BMN	Battle Mountai	34.05	96	*e*P	P	02 48 04.1	+1.8
	comp=Z,14nm,0.7s						
BMN	Battle Mountai	34.05	96	*e*P	P	02 48 04.1	+1.8
BMN				pmax	pmax		
	comp=Z,14nm,0.7s						
WAKR	Walker	34.12	101	*e*P	P	02 48 05.2	+2.3
	comp=Z,24nm,0.8s						
KVN	Kaiserville	34.49	99	*e*P	P	02 48 08.0	+1.8
	comp=Z,17nm,0.9s						
KVN	Kaiserville	34.49	99	*e*P	P	02 48 08.0	+1.8
KVN				pmax	pmax		
	comp=Z,17nm,0.9s						
FFC	Flin Flon	34.52	65	*e*P	P	02 48 06.3	+0.4
	comp=Z,4.0nm,0.9s						
FFC				*e*PcP	PcP	02 50 35.9	-0.2
FFC	Flin Flon	34.52	65	*e*P	P	02 48 06.3	+0.4
FFC				*e*		02 50 35.9	
FFC				pmax	pmax		
	comp=Z,4.0nm,0.9s						
RYN	Ryan	34.55	100	*e*P	P	02 48 08.5	+1.9
	comp=Z,17nm,0.9s						
QLMT	Earthquake Lak	34.56	85	*e*P	P	02 48 08.7	+1.9
YHB	Horse Butte	34.75	85	*e*P	P	02 48 10.2	+1.9
	comp=Z,36nm,0.9s						
NV01	Mina Array Sit	34.81	100	*e*P	P	02 48 10.2	+1.2
NV01				*e*PcP	PcP	02 50 38.3	+0.8
NVAR	Mina Array Bea	34.81	100	P	P	02 48 10.5	+1.6
	comp=Z,16nm,0.7s,baz=302,slow=8.2,SNR=102						
NVAR				PcP	PcP	02 50 38.4	+0.9
	comp=Z,2.2nm,0.6s,baz=293,slow=2.4,SNR=10						
YMR	Madison River	34.93	85	*e*P	P	02 48 12.1	+2.3
	comp=Z,55nm,0.7s						
MDPB	Devils Postpil	34.94	102	*e*P	P	02 48 12.7	+2.6
	comp=Z,23nm,0.8s						
ELK	Elko	34.97	94	P	P	02 48 16.0	+5.7
	comp=Z,25nm,0.8s,baz=352,slow=9.2,SNR=74						
GCMT	Greycliff	34.99	83	*e*P	P	02 48 11.5	+1.2
OMMB	Old Mammoth Mi	34.99	101	*e*P	P	02 48 13.1	+2.5
	comp=Z,23nm,1.0s						
MLAC	Mammoth, Mammo	35.07	101	P	P	02 48 14.0	+2.9
	baz=315						
YFT	Old Faithful	35.13	85	*e*P	P	02 48 13.3	+1.7
	comp=Z,22nm,0.7s						
YPP	Pitchstone Pla	35.26	86	*e*P	P	02 48 14.3	+1.5
	comp=Z,8.4nm,0.9s						
H17A	Grant Village	35.31	85	P	P	02 48 16.3	+3.2
	baz=308,SNR=17						
IMW	Indian Meadow	35.41	86	*e*P	P	02 48 16.1	+2.0
	comp=Z,16nm,1.0s						
FLWY	Flagg Ranch	35.43	86	*e*P	P	02 48 16.5	+2.3
	comp=Z,25nm,0.8s						
FXWY	Fox Creek	35.52	87	*e*P	P	02 48 16.9	+1.9
	comp=Z,4.0nm,0.8s						
MOOW	Moose Ponds	35.61	86	*e*P	P	02 48 17.5	+1.8
	comp=Z,4.6nm,0.9s						
RLMT	Red Lodge	35.62	83	P	P	02 48 17.6	+1.9
	baz=307,SNR=20						
RLMT	Red Lodge	35.62	83	*e*P	P	02 48 17.6	+1.9
	comp=Z,26nm,1.1s						
TPAW	Teton Pass	35.66	87	*e*P	P	02 48 18.2	+2.1
	comp=Z,6.0nm,0.8s						
PAGB	Antelope Grade	35.66	105	*e*P	P	02 48 18.9	+2.9
	comp=Z,16nm,0.9s						
HVU	Hansel Valley	35.70	91	*e*P	P	02 48 18.3	+1.9
	comp=Z,27nm,0.8s						
HVU	Hansel Valley	35.70	91	*e*P	P	02 48 18.3	+1.9
HVU				pmax	pmax		
	comp=Z,27nm,0.8s						
LOHW	Long Hollow	35.78	86	*e*P	P	02 48 18.8	+1.7
	comp=Z,10nm,1.0s						
REDW	Red Top Meadow	35.79	87	*e*P	P	02 48 19.4	+2.1
	comp=Z,15nm,1.4s						
TIN	Tinemaha, Big	35.82	101	P	P	02 48 19.5	+2.1
	baz=316						
AHID	Auburn Hatcher	36.03	88	*e*P	P	02 48 20.9	+1.6
	comp=Z,13nm,0.9s						
SMMC	Simmler	36.10	105	P	P	02 48 21.9	+2.2
	baz=318						
BGU	Big Grassy Mou	36.11	92	*e*P	P	02 48 21.5	+1.6
	comp=Z,9.7nm,0.8s						
SPUT	South Promonto	36.19	91	*e*P	P	02 48 22.3	+1.8
	comp=Z,14nm,1.2s						
VES	Vestal, Richgr	36.22	104	P	P	02 48 22.2	+1.6
	baz=317,SNR=5.9						
CWC	Cottonwood Cre	36.35	102	P	P	02 48 23.9	+2.0
	baz=316						
GRAC	Grapevine Rang	36.35	101	P	P	02 48 23.8	+2.0
	baz=316						
R11A	Troy Canyon, C	36.40	97	P	P	02 48 23.9	+1.5
	baz=314,SNR=26						
R11A	Troy Canyon, C	36.40	97	*e*P	P	02 48 22.8	+0.4
	comp=Z,30nm,1.0s						
R11A				*e*PcP	PcP	02 50 43.3	+1.1
LAO	LASA Array	36.41	79	P	P	02 48 24.0	+1.8
	baz=306,SNR=14						
LAO	LASA Array	36.41	79	*e*P	P	02 48 24.2	+2.0
	comp=Z,18nm,0.6s						
LAO				*e*PcP	PcP	02 50 41.2	-0.8
HWUT	Hardware Ranch	36.50	90	*e*P	P	02 48 25.0	+1.8
	comp=Z,17nm,0.9s						
HWUT				*e*PcP	PcP	02 50 41.7	-0.8
DGMT	Dagmar	36.52	75	P	P	02 48 24.3	+1.2
	baz=304						
DGMT	Dagmar	36.52	75	*e*P	P	02 48 23.7	+0.6
	comp=Z,19nm,0.6s						
DGMT				*e*PcP	PcP	02 50 42.8	+0.6
PKM	Mcpherson Peak	36.52	105	P	P	02 48 25.4	+2.0
	baz=318						
ISA	Isabella, Lake	36.69	103	P	P	02 48 25.8	+1.1
	baz=317,SNR=5.8						
ISA	Isabella, Lake	36.69	103	*e*P	P	02 48 25.9	+1.1
	comp=Z,10.0nm,1.0s						

ISA	Isabella, Lake	36.69	103	eP	P	02 48 25.9	+1.1
ISA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
DUG	Dugway, Tooele	36.72	93	P	P	02 48 26.7	+1.6
	baz=312,SNR=32						
DUG	Dugway, Tooele	36.72	93	eP	P	02 48 26.8	+1.8
	comp=Z,27nm,0.9s						
DUG				ePcP	PcP	02 50 43.6	+0.5
DAC	Darwin (Calif)	36.74	102	eP	P	02 48 26.1	+0.8
	comp=Z,17nm,0.7s						
DAC	Darwin (Calif)	36.74	102	eP	P	02 48 26.1	+0.8
DAC				pmax	pmax		
	comp=Z,17nm,0.7s						
BW06	Boulder Array	36.91	87	P	P	02 48 27.8	+1.1
	baz=310,SNR=18						
BW06	Boulder Array	36.91	87	eP	P	02 48 28.0	+1.3
	comp=Z,31nm,1.5s						
PD31	Pinedale Array	36.91	87	eP	P	02 48 27.9	+1.2
PDAR	Pinedale Array	36.91	87	P	P	02 48 27.9	+1.2
	comp=Z,5.9nm,0.5s,baz=290,slow=3.9,SNR=88						
PDAR				PcP	PcP	02 50 43.5	-0.3
	comp=Z,0.8nm,0.6s,baz=180,slow=0.4,SNR=3.7						
PDAR				ScP	ScP	02 54 12.1	0.0
	comp=Z,0.3nm,0.6s,baz=270,slow=3.6,SNR=3.7						
PDAR	Pinedale Array	36.91	87	eP	P	02 48 26.4	-0.3
PDAR				PcP	PcP	02 50 43.5	-0.3
PDAR				ScP	ScP	02 54 12.1	0.0
TCUT	Toone Canyon	36.91	90	eP	P	02 48 28.8	+2.1
	comp=Z,27nm,0.8s						
MPMC	Manual Prospec	36.95	102	P	P	02 48 28.8	+1.7
	baz=317,SNR=11						
FURC	Furnace Creek,	37.01	101	P	P	02 48 29.2	+2.0
	baz=316,SNR=19						
TPNV	Topopah Spring	37.01	100	P	P	02 48 29.4	+1.9
	baz=316,SNR=36						
TPNV	Topopah Spring	37.01	100	eP	P	02 48 29.4	+1.9
	comp=Z,39nm,0.9s						
TPNV	Topopah Spring	37.01	100	eP	P	02 48 29.4	+1.9
TPNV				pmax	pmax		
	comp=Z,39nm,0.9s						
JLU	Jordanelle	37.23	91	eP	P	02 48 31.0	+1.6
	comp=Z,16nm,0.9s						
PSUT	Pine Spring	37.25	96	eP	P	02 48 31.2	+1.6
	comp=Z,14nm,0.8s						
LRMC	Laurel Mtn Rad	37.27	103	P	P	02 48 30.9	+1.2
	baz=317,SNR=7.2						
SCZ2	Santa Cruz Isl	37.28	106	P	P	02 48 30.8	+1.1
	baz=319						
NLU	North Lily Min	37.30	92	eP	P	02 48 31.6	+1.6
	comp=Z,16nm,0.8s						
BLG	Laguna Peak, P	37.51	106	P	P	02 48 32.5	+1.0
	baz=319						
MPU	Maple Canyon	37.51	92	eP	P	02 48 33.6	+1.8
	comp=Z,10nm,0.8s						
EDW2	Edwards Air Fo	37.53	104	P	P	02 48 32.9	+1.1
	baz=318						
SHOC	Shoshone, Teco	37.75	101	P	P	02 48 34.8	+1.3
	baz=317						
GSC	Goldstone, Bar	37.88	102	P	P	02 48 36.0	+1.3
	baz=317,SNR=14						
GSC	Goldstone, Bar	37.88	102	eP	P	02 48 36.4	+1.6
	comp=Z,18nm,1.1s						
GSC	Goldstone, Bar	37.88	102	eP	P	02 48 36.4	+1.6
GSC				pmax	pmax		
	comp=Z,19nm,1.1s						
SHPR	Sheep Range	37.94	99	eP	P	02 48 37.0	+1.7
	comp=Z,6.6nm,0.9s						
MWC	Mount Wilson	37.98	104	eP	P	02 48 37.5	+1.8
	comp=Z,23nm,1.4s						
MWC	Mount Wilson	37.98	104	eP	P	02 48 37.5	+1.8
MWC				pmax	pmax		
	comp=Z,23nm,1.4s						
BFSC	Mount Baldy Ra	38.19	104	P	P	02 48 38.7	+1.3
	baz=318,SNR=5.8						
CCUT	Cedar City	38.22	96	eP	P	02 48 39.3	+1.6
	comp=Z,38nm,1.6s						
MSU	Marysvale	38.22	94	eP	P	02 48 39.8	+2.0
MSU				ePcP	PcP	02 50 49.6	+1.7
MSU	Marysvale	38.22	94	eP	P	02 48 39.8	+2.0
MSU				e		02 50 49.6	
TUQ	Turquoise Moun	38.28	101	P	P	02 48 39.7	+1.5
	baz=317,SNR=9.0						
SZCU	Shurtz Canyon	38.34	96	eP	P	02 48 40.2	+1.5
	comp=Z,16nm,1.2s						
CIS	Catalina Islan	38.40	106	P	P	02 48 40.1	+1.1
	baz=319						
HEC	Hector,Ludlow	38.49	102	P	P	02 48 41.3	+1.5
	baz=318,SNR=11						
MTPU	Mount Pierson	38.54	95	eP	P	02 48 42.7	+2.1
	comp=Z,20nm,1.3s						
P18A	Preston Nutter	38.56	91	eP	P	02 48 42.3	+1.6
	comp=Z,32nm,1.4s						
P18A				ePcP	PcP	02 50 50.1	+1.1
LCMT	Little Creek M	38.66	97	eP	P	02 48 43.2	+1.9
	comp=Z,14nm,0.9s						
K22A	Casper	38.70	85	P	P	02 48 42.4	+0.7
	baz=310,SNR=16						
K22A	Casper	38.70	85	eP	P	02 48 42.4	+0.7
	comp=Z,20nm,0.8s						
SRU	San Rafael Swe	38.76	92	eP	P	02 48 44.0	+1.9
	comp=Z,52nm,1.0s						
SRU	San Rafael Swe	38.76	92	eP	P	02 48 44.0	+1.9
SRU				pmax	pmax		
	comp=Z,53nm,1.0s						
PKCU	Pink Cliffs	38.89	95	eP	P	02 48 45.7	+2.3
	comp=Z,32nm,1.0s						
GMRC	Granite Mounta	38.90	101	P	P	02 48 44.7	+1.4
	baz=317,SNR=19						
RWWY	Rawlins	38.93	86	eP	P	02 48 44.5	+0.8
	comp=Z,25nm,1.0s						
LDFC	Landfair	38.99	101	eP	P	02 48 45.5	+1.5
	comp=Z,48nm,0.8s						
RSSD	Black Hills	39.19	81	P	P	02 48 46.5	+0.9
	baz=309						
RSSD	Black Hills	39.19	81	eP	P	02 48 46.7	+1.0
	comp=Z,15nm,0.6s						
RSSD				ePcP	PcP	02 50 50.8	0.0
RSSD	Black Hills	39.19	81	eP	P	02 48 46.7	+1.0
RSSD				e		02 50 50.8	
RSSD				pmax	pmax		
	comp=Z,15nm,0.6s						
BELC	Belle Mtn. Jos	39.29	103	P	P	02 48 47.7	+1.1
	baz=318,SNR=11						
PFO	Pinyon Flats O	39.32	103	P	P	02 48 47.8	+1.0
	baz=318						
PFO	Pinyon Flats O	39.32	103	eP	P	02 48 48.3	+1.5
	comp=Z,7.7nm,0.9s						
PFO	Pinyon Flats O	39.32	103	eP	P	02 48 48.3	+1.5
PFO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
XPFO	Piæon Flat	39.33	103	eP	P	02 48 48.3	+1.4
	comp=Z,7.6nm,0.9s						
FRD	Ford Ranch, An	39.33	104	P	P	02 48 48.2	+1.4
	baz=319,SNR=6.0						
O20A	White River Ci	39.37	89	P	P	02 48 48.5	+1.3
	baz=312,SNR=49						
O20A	White River Ci	39.37	89	eP	P	02 48 48.5	+1.3
	comp=Z,58nm,0.7s						
MDND	Maddock	39.40	73	P	P	02 48 48.4	+1.3
	baz=306,SNR=7.0						
MDND	Maddock	39.40	73	eP	P	02 48 48.9	+1.8
	comp=Z,66nm,0.9s						
NEE2	Needles Airpor	39.50	100	P	P	02 48 49.3	+1.2
	baz=317						
109C	Camp Elliot, M	39.51	105	P	P	02 48 49.4	+1.2
	baz=319						
CPE	Camp Elliot	39.51	105	eP	P	02 48 50.3	+2.1
	comp=Z,27nm,1.0s						
U15A	North Rim	39.61	97	eP	P	02 48 51.1	+1.7
	comp=Z,28nm,1.1s						
IRM	Iron Mountain	39.65	102	P	P	02 48 51.0	+1.6
	baz=318,SNR=13						
W13A	Hualapai Mount	39.67	99	eP	P	02 48 51.4	+1.7
	comp=Z,16nm,0.8s						
BC3	Big Chuckawall	39.85	102	P	P	02 48 51.9	+0.8
	baz=318						
MONP2	Monument Peak	39.88	104	P	P	02 48 53.1	+1.6
	baz=319,SNR=6.3						
BAR	Barrett	39.90	105	eP	P	02 48 53.4	+1.9
	comp=Z,19nm,1.1s						
PV09	Paradox Valley	39.97	91	eP	P	02 48 53.4	+1.1
ULM	Lac du Bonnet	40.02	68	P	P	02 48 52.8	+0.6
	comp=Z,4.0nm,0.5s,baz=304,slow=8.5,SNR=7.9						
ULM				PcP	PcP	02 50 53.1	0.0
	comp=Z,4.1nm,0.7s,baz=323,slow=5.1,SNR=4.2						
ULM	Lac du Bonnet	40.02	68	eP	P	02 48 52.8	+0.6
	comp=Z,15nm,1.3s						
ULM				PcP	PcP	02 50 53.1	0.0
ULM	Lac du Bonnet	40.02	68	eP	P	02 48 52.8	+0.6
ULM						02 50 53.1	
ULM				pmax	pmax		
	comp=Z,15nm,1.3s						
PV10	Paradox Valley	40.10	92	eP	P	02 48 54.3	+1.0
SWSC	Sam W. Stewart	40.19	104	P	P	02 48 54.9	+1.2
	baz=319						
IKP	In-Ko-Pah, Jac	40.24	104	P	P	02 48 55.5	+1.2
	baz=319,SNR=6.0						
PV03	Paradox Valley	40.30	92	eP	P	02 48 55.8	+0.9
Y12C	Blythe	40.30	101	P	P	02 48 56.0	+1.3
	baz=318,SNR=9.1						
Y12C	Blythe	40.30	101	eP	P	02 48 56.6	+1.9
	comp=Z,30nm,1.0s						
PV02	Paradox Valley	40.39	91	eP	P	02 48 57.1	+1.4
	comp=Z,28nm,0.8s						
GLA	Glamis	40.65	102	P	P	02 48 59.0	+1.4
	baz=319,SNR=5.9						
GLA	Glamis	40.65	102	eP	P	02 48 59.0	+1.4
	comp=Z,22nm,0.8s						
GLA	Glamis	40.65	102	eP	P	02 48 59.0	+1.4
GLA				pmax	pmax		
	comp=Z,22nm,0.8s						
SMCO	Snowmass	40.74	89	eP	P	02 48 59.4	+0.7
	comp=Z,6.5nm,0.6s						
WUAZ	Wupatki	40.78	97	P	P	02 49 00.2	+1.3
	baz=316						
WUAZ	Wupatki	40.78	97	eP	P	02 49 00.1	+1.3
	comp=Z,19nm,0.9s						
A33A	Warroad	41.03	69	P	P	02 49 01.0	+0.5
	baz=306,SNR=7.2						
ISCO	Idaho Springs	41.09	87	P	P	02 49 02.7	+1.2
	baz=313,SNR=6.9						
ISCO	Idaho Springs	41.09	87	eP	P	02 49 02.4	+0.9
	comp=Z,3.8nm,0.8s						
ISCO				ePcP	PcP	02 50 57.1	-0.1
ISCO	Idaho Springs	41.09	87	eP	P	02 49 02.4	+0.9
ISCO				e		02 50 57.1	
ISCO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
AGMN	Agassiz Nation	41.16	70	P	P	02 49 01.8	+0.3
	baz=307,SNR=7.0						
AGMN	Agassiz Nation	41.16	70	eP	P	02 49 02.0	+0.5
	comp=Z,11nm,0.8s						
MVCO	Mesa Verde	41.22	92	P	P	02 49 03.2	+0.7
	baz=315,SNR=13						
MVCO	Mesa Verde	41.22	92	eP	P	02 49 03.4	+0.9
	comp=Z,15nm,0.8s						
C33A	Trail	41.53	71	P	P	02 49 04.5	0.0
	baz=307						
B34A	Aery, Baudette	41.70	69	P	P	02 49 06.1	+0.2
	baz=307,SNR=8.4						
H11N2	WAKE ISLAND Hy	41.80	223	T	T	03 32 46.1	
	baz=26						
S22A	4UR Ranch, Cre	41.80	90	P	P	02 49 08.7	+1.5
	baz=314,SNR=8.2						
S22A	4UR Ranch, Cre	41.80	90	eP	P	02 49 08.8	+1.6
	comp=Z,3.5nm,0.7s						
H11N3	WAKE ISLAND Hy	41.81	223	T	T	03 32 45.9	
	baz=26						
H11N1	WAKE ISLAND Hy	41.82	223	T	T	03 33 20.3	
	baz=26						
SUSD	Miller	41.83	77	P	P	02 49 07.4	+0.4
	baz=309,SNR=6.1						
Q24A	Divide	41.92	88	P	P	02 49 09.3	+1.1
	baz=313						
F32A	Veblen	41.95	74	P	P	02 49 07.8	-0.2
	baz=308						
W18A	Petrified Fore	42.00	96	P	P	02 49 10.3	+1.5
	baz=316						
W18A	Petrified Fore	42.00	96	eP	P	02 49 10.6	+1.8
	comp=Z,15nm,0.8s						
G32A	Webster	42.12	75	P	P	02 49 09.6	+0.1
	baz=309,SNR=5.9						
G32A	Webster	42.12	75	eP	P	02 49 10.0	+0.6
	comp=Z,31nm,0.8s						
B35A	Bob, Littlefor	42.27	69	P	P	02 49 10.6	+0.1
	baz=307,SNR=12						
B35A	Bob, Littlefor	42.27	69	eP	P	02 49 10.9	+0.4
	comp=Z,12nm,0.6s						
OGNE	Ogallala	42.36	83	P	P	02 49 12.6	+1.1
	baz=312						
C35A	Jirik Farms, M	42.53	70	P	P	02 49 12.6	0.0
	baz=308,SNR=9.6						
SDCO	Great Sand Dun	42.56	89	P	P	02 49 14.7	+1.3
	baz=314,SNR=15						
SDCO	Great Sand Dun	42.56	89	eP	P	02 49 14.0	+0.6
	comp=Z,11nm,0.8s						
214A	Organ Pipe Nat	42.59	102	P	P	02 49 14.8	+1.4
	baz=319,SNR=12						
E34A	Wadena	42.62	72	P	P	02 49 13.4	+0.1
	baz=308						
H32A	Carlson Farm,	42.63	76	P	P	02 49 13.7	+0.1
	baz=310,SNR=9.9						
G33A	Ortonville	42.75	74	P	P	02 49 14.3	-0.1
	baz=309						
D35A	Remer	42.87	71	P	P	02 49 15.7	+0.3
	baz=308,SNR=8.2						
H11S1	WAKE ISLAND Hy	42.98	223	T	T	03 34 29.8	
	baz=24						
H11S2	WAKE ISLAND Hy	43.00	223	T	T	03 35 10.4	
	baz=24						
H11S3	WAKE ISLAND Hy	43.00	223	T	T	03 34 31.0	
	baz=24						
E35A	Pequot Lakes	43.00	72	P	P	02 49 17.0	+0.6
	baz=309,SNR=8.9						
F34A	Alexandria	43.02	73	P	P	02 49 16.7	+0.1
	baz=309						
C36A	Pine Crest Far	43.10	69	P	P	02 49 17.6	+0.3
	baz=308,SNR=6.6						
G34A	Benson	43.16	74	P	P	02 49 17.7	0.0
	baz=309						
D36A	Goodland	43.29	70	P	P	02 49 19.0	+0.3
	baz=308,SNR=5.7						
D36A	Goodland	43.29	70	eP	P	02 49 19.4	+0.6
	comp=Z,15nm,0.8s						
KSCO	Kaye Shedlock’	43.33	86	P	P	02 49 20.7	+1.4
	baz=313,SNR=7.5						
KSCO	Kaye Shedlock’	43.33	86	eP	P	02 49 21.2	+1.9
	comp=Z,53nm,0.8s						
F35A	Swanville	43.35	72	P	P	02 49 19.5	+0.3
	baz=309						
TUC	Tucson	43.47	99	P	P	02 49 22.0	+1.6
	baz=319						
TUC	Tucson	43.47	99	eP	P	02 49 22.0	+1.6
	comp=Z,32nm,1.5s						
TUC				ePcP	PP	02 51 05.5	+0.2
TUC	Tucson	43.47	99	eP	P	02 49 22.0	+1.6
TUC				e		02 51 05.6	
TUC				pmax	pmax		
	comp=Z,32nm,1.5s						
C37A	Embarrass	43.47	69	P	P	02 49 20.5	+0.3
	baz=308,SNR=9.9						
ECSD	EROS Data Cent	43.58	76	P	P	02 49 20.8	-0.2
	baz=310,SNR=14						
ECSD	EROS Data Cent	43.58	76	eP	P	02 49 20.9	-0.2
	comp=Z,9.7nm,0.7s						
ECSD				ePcP	PcP	02 51 04.5	-0.5
T25A	Trinidad	43.60	89	P	P	02 49 22.9	+1.2
	baz=315,SNR=31						
T25A	Trinidad	43.60	89	eP	P	02 49 23.1	+1.5
	comp=Z,32nm,0.9s						
E36A	McGregor	43.65	71	P	P	02 49 22.1	+0.5
	baz=309,SNR=10.0						
D37A	Cotton	43.70	70	P	P	02 49 22.1	+0.1
	baz=309						
EYMN	Ely	43.70	68	P	P	02 49 22.4	+0.3
	baz=308,SNR=11						
EYMN	Ely	43.70	68	eP	P	02 49 22.4	+0.3
	comp=Z,13nm,0.8s						
G35A	Watkins	43.80	73	P	P	02 49 23.0	+0.2
	baz=310						
F36A	Milaca	43.92	72	P	P	02 49 23.8	0.0
	baz=309,SNR=7.4						
F36A	Milaca	43.92	72	eP	P	02 49 24.0	+0.2
	comp=Z,11nm,1.0s						
F36A				ePcP	PcP	02 51 06.5	+0.4
H35A	Sunnyside Ranc	43.94	74	P	P	02 49 24.1	+0.2
	baz=310,SNR=11						
C38A	Sawbill Land.	43.96	68	P	P	02 49 24.1	0.0
	baz=309						
TASM	ASL Pad, Albuq	43.99	93	P	P	02 49 25.1	+0.4
	baz=316						
ANMO	Albuquerque	43.99	93	P	P	02 49 25.2	+0.5
	baz=316						
ANMO	Albuquerque	43.99	93	eP	P	02 49 25.8	+1.2
	comp=Z,3.5nm,0.7s						
ANMO				ePcP	PcP	02 51 07.6	+0.8
ANMO	Albuquerque	43.99	93	i P	P	02 49 25.9	+1.2
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.2s						
TASL	Snake Pit, Alb	43.99	93	P	P	02 49 25.2	+0.5
	baz=316						
LAZ	Ladron	43.99	94	eP	P	02 49 26.5	+1.7
E37A	Wrenshall	44.08	70	P	P	02 49 25.2	+0.1
	baz=309						
G36A	St. Michael	44.19	73	P	P	02 49 26.1	+0.2
	baz=310						
BGNE	Belgrade	44.24	80	P	P	02 49 27.1	+0.7
	baz=312,SNR=12						
LENM	Lemitar	44.26	94	eP	P	02 49 28.9	+2.0
Y22E	IRIS PASSCAL I	44.35	94	P	P	02 49 28.6	+1.0
	baz=317						
Y22D	IRIS PASSCAL I	44.36	94	P	P	02 49 28.5	+0.9
	baz=317						
BNM	Barren Site	44.47	94	eP	P	02 49 30.5	+1.9
F37A	Hinrichs Farm,	44.49	71	P	P	02 49 28.5	+0.2
	baz=310						
E38A	The Farm, Brul	44.51	70	P	P	02 49 28.5	+0.1
	baz=309,SNR=7.3						
E38A	The Farm, Brul	44.51	70	eP	P	02 49 28.6	+0.2
	comp=Z,25nm,0.7s						
H36A	Jessenland, He	44.52	73	P	P	02 49 29.3	+0.8
	baz=310,SNR=13						
SPMN	Marine on St.	44.71	72	P	P	02 49 30.3	+0.3
	baz=310,SNR=5.2						
SPMN	Marine on St.	44.71	72	eP	P	02 49 30.6	+0.5
	comp=Z,14nm,0.9s						
SPMN				ePcP	PcP	02 51 09.5	+0.6
F38A	Pierce - Schro	44.74	71	P	P	02 49 31.0	+0.7
	baz=310,SNR=17						
I36A	Fitzsimmons Fa	44.83	74	P	P	02 49 30.8	-0.2
	baz=311						
C40A	Isle Royale Na	44.96	67	P	P	02 49 32.0	+0.1
	baz=309						
121A	Cookes Peak, D	44.99	96	P	P	02 49 34.3	+1.6
	baz=318,SNR=6.4						
H37A	Dierke Farm, C	45.06	73	P	P	02 49 33.1	+0.2
	baz=311						
J36A	Seneca 1, Swea	45.10	75	P	P	02 49 32.9	-0.2
	baz=311,SNR=5.1						
J36A	Seneca 1, Swea	45.10	75	eP	P	02 49 33.5	+0.3
	comp=Z,27nm,1.1s						
CBKS	Cedar Bluff	45.10	84	P	P	02 49 34.3	+1.0
	baz=314,SNR=13						
CBKS	Cedar Bluff	45.10	84	eP	P	02 49 34.5	+1.2
	comp=Z,48nm,0.7s						
CBKS	Cedar Bluff	45.10	84	eP	P	02 49 34.5	+1.2
CBKS				pmax	pmax		
	comp=Z,48nm,0.7s						
I37A	Lemond, Waseca	45.17	74	P	P	02 49 34.1	+0.4
	baz=311,SNR=15						
I37A	Lemond, Waseca	45.17	74	eP	P	02 49 34.2	+0.6
	comp=Z,42nm,0.9s						
E39A	Mellen	45.19	69	P	P	02 49 33.4	-0.4
	baz=310,SNR=7.4						
G38A	Ridgeland	45.26	71	P	P	02 49 34.3	-0.1
	baz=310,SNR=7.6						
F39A	Loretta	45.29	70	P	P	02 49 34.8	+0.2
	baz=310,SNR=5.2						
H38A	Maiden Rock	45.35	72	P	P	02 49 35.6	+0.5
	baz=311,SNR=12						
E40A	Wakefield	45.49	69	P	P	02 49 36.6	+0.4
	baz=310,SNR=11						
K36A	Gilmore City	45.49	76	P	P	02 49 36.2	-0.1
	baz=312						
J37A	Redenius Farm,	45.55	75	P	P	02 49 36.8	+0.2
	baz=311,SNR=21						
G39A	Holcombe	45.56	71	P	P	02 49 36.7	0.0
	baz=310,SNR=9.6						
F40A	Park Falls	45.71	70	P	P	02 49 37.9	0.0
	baz=310,SNR=17						
I38A	Scanlan Farm,	45.74	73	P	P	02 49 38.4	+0.3
	baz=311,SNR=13						
D41A	Chassel	45.81	67	P	P	02 49 39.1	+0.5
	baz=310						
D41A	Chassel	45.81	67	eP	P	02 49 39.5	+0.9
	comp=Z,14nm,1.1s						
K37A	Belmond	45.86	75	P	P	02 49 38.9	-0.1
	baz=312,SNR=20						
HSIG		45.87	103	eP	P	02 49 40.5	+1.1
	comp=Z,12nm,0.9s						
H39A	Augusta	45.89	72	P	P	02 49 39.4	+0.1
	baz=311,SNR=5.2						
E41A	Kenton	45.98	68	P	P	02 49 40.1	+0.1
	baz=310						
M36A	Felix, Anita	46.09	77	P	P	02 49 41.1	+0.1
	baz=312,SNR=5.1						
G40A	Rib Lake	46.09	70	P	P	02 49 41.0	+0.1
	baz=311,SNR=12						
G40A	Rib Lake	46.09	70	eP	P	02 49 41.1	+0.2
	comp=Z,11nm,0.7s						
G40A				ePcP	PcP	02 51 14.2	+0.5
COWI	Conover	46.12	69	eP	P	02 49 41.1	0.0
	comp=Z,5.9nm,0.8s						
J38A	Wedel Dairy, R	46.13	74	P	P	02 49 41.4	+0.2
	baz=312,SNR=15						
L37A	Phoenix Point,	46.22	76	P	P	02 49 41.9	0.0
	baz=312,SNR=12						
I39A	Houston	46.30	73	P	P	02 49 42.3	-0.2
	baz=311,SNR=16						
I39A	Houston	46.30	73	eP	P	02 49 42.8	+0.3
	comp=Z,36nm,0.7s						
F41A	Three Lakes	46.37	69	P	P	02 49 43.2	+0.1
	baz=311,SNR=6.4						
F41A	Three Lakes	46.37	69	eP	P	02 49 43.4	+0.3
	comp=Z,12nm,1.0s						
H40A	Chili	46.41	71	P	P	02 49 43.5	+0.2
	baz=311,SNR=10						
K38A	Parkersburg	46.41	75	P	P	02 49 43.3	-0.2
	baz=312						
K38A	Parkersburg	46.41	75	eP	P	02 49 43.8	+0.4
	comp=Z,22nm,1.0s						
N36A	Muff Farm, Cla	46.43	78	P	P	02 49 43.9	+0.3
	baz=313,SNR=5.6						
M37A	Trindle Farm,	46.53	77	P	P	02 49 44.8	+0.4
	baz=313,SNR=7.9						
J39A	Decorah	46.54	73	P	P	02 49 44.0	-0.4
	baz=312,SNR=18						
E42A	Champion	46.55	68	P	P	02 49 44.7	+0.2
	baz=311,SNR=7.3						
L38A	Oak Wood Farm,	46.65	75	P	P	02 49 45.1	-0.2
	baz=312,SNR=7.0						
SCIA	State Center	46.66	76	P	P	02 49 45.3	-0.1
	baz=312						
SCIA	State Center	46.66	76	eP	P	02 49 46.0	+0.6
	comp=Z,22nm,0.9s						
G41A	Antigo	46.67	70	P	P	02 49 45.5	+0.1
	baz=311						
KSU1	Kansas State U	46.67	81	P	P	02 49 45.3	-0.2
	baz=314,SNR=5.4						
KSU1	Kansas State U	46.67	81	eP	P	02 49 45.6	+0.1
	comp=Z,19nm,0.9s						
KSU1				ePcP	PcP	02 51 15.5	-0.3
AMTX	Amarillo	46.76	89	P	P	02 49 46.9	+0.6
	baz=316						
AMTX	Amarillo	46.76	89	eP	P	02 49 47.4	+1.1
	comp=Z,24nm,1.2s						
I40A	Norwalk	46.77	72	P	P	02 49 46.1	0.0
	baz=312,SNR=7.2						
MSTX	Muleshoe	46.80	91	P	P	02 49 47.0	+0.4
	baz=317,SNR=7.7						
MSTX	Muleshoe	46.80	91	eP	P	02 49 47.1	+0.5
	comp=Z,14nm,0.8s						
H41A	Junction City	46.81	71	P	P	02 49 46.3	-0.1
	baz=311						
H41A	Junction City	46.81	71	eP	P	02 49 46.9	+0.4
	comp=Z,8.1nm,0.8s						
K39A	Oelwein	46.86	74	P	P	02 49 46.2	-0.6
	baz=312,SNR=19						
N37A	Lee Faris, Mou	46.89	78	P	P	02 49 47.7	+0.5
	baz=313,SNR=16						
SUMG	Summit	46.92	20	eP	P	02 49 48.4	+1.0
	comp=Z,18nm,0.9s						
SUMG	Summit	46.92	20	eP	P	02 49 48.4	+1.0
SUMG				pmax	pmax		
	comp=Z,18nm,0.9s						
MNTX	Cornudas Mount	46.98	95	P	P	02 49 49.3	+1.4
	baz=318,SNR=20						
MNTX	Cornudas Mount	46.98	95	eP	P	02 49 49.4	+1.4
	comp=Z,19nm,0.8s						
MNTX				ePcP	PcP	02 51 17.4	+0.4
M38A	Pleasantville	47.00	76	P	P	02 49 47.8	-0.2
	baz=313,SNR=8.5						
J40A	Soldiers Grove	47.03	73	P	P	02 49 47.8	-0.4

	baz=312,SNR=6.3						
G42A	Mountain	47.06	69	P	P	02 49 48.3	-0.1
	baz=311,SNR=11						
G42A	Mountain	47.06	69	*e*P	P	02 49 48.7	+0.4
	comp=Z,13nm,0.7s						
I41A	Arkdale	47.06	71	P	P	02 49 48.6	+0.2
	baz=312,SNR=11						
I41A	Arkdale	47.06	71	*e*P	P	02 49 48.8	+0.4
	comp=Z,28nm,0.8s						
I41A				*e*PcP	PcP	02 51 17.8	+0.7
E43A	Lone Tree Farm	47.07	67	P	P	02 49 48.9	+0.4
	baz=311,SNR=12						
E43A	Lone Tree Farm	47.07	67	*e*P	P	02 49 49.0	+0.4
	comp=Z,22nm,0.7s						
L39A	Vinton	47.19	75	P	P	02 49 49.0	-0.4
	baz=313,SNR=14						
K40A	Colesburg	47.27	74	P	P	02 49 49.4	-0.7
	baz=312,SNR=5.6						
O37A	Wolven Farm, M	47.33	78	P	P	02 49 50.5	0.0
	baz=314,SNR=9.8						
F43A	Flat Rock, Esc	47.34	68	P	P	02 49 50.6	+0.1
	baz=311,SNR=5.6						
N38A	Joes South For	47.41	77	P	P	02 49 50.8	-0.3
	baz=313,SNR=7.4						
G43A	Wallace	47.44	69	P	P	02 49 51.1	-0.2
	baz=312						
G43A	Wallace	47.44	69	*e*P	P	02 49 51.5	+0.2
	comp=Z,8.1nm,0.8s						
J41A	Loganville	47.44	72	P	P	02 49 51.1	-0.3
	baz=312,SNR=8.7						
E44A	Grand Marais A	47.48	66	P	P	02 49 52.1	+0.6
	baz=311						
H42A	Shiocton	47.48	70	P	P	02 49 51.4	-0.3
	baz=312						
H42A	Shiocton	47.48	70	*e*P	P	02 49 51.8	+0.1
	comp=Z,9.6nm,0.7s						
M39A	Webster	47.53	76	P	P	02 49 52.1	+0.1
	baz=313,SNR=18						
P37A	Lathrop	47.61	79	P	P	02 49 52.5	-0.2
	baz=314,SNR=14						
JFWS	Jewell Farm	47.62	73	P	P	02 49 52.1	-0.6
	baz=312,SNR=6.2						
JFWS	Jewell Farm	47.62	73	*e*P	P	02 49 52.2	-0.6
	comp=Z,14nm,0.8s						
JFWS				*e*PcP	PcP	02 51 18.7	-0.4
JFWS	Jewell Farm	47.62	73	*e*P	P	02 49 52.2	-0.5
JFWS				*e*		02 51 18.7	
JFWS				pmax	pmax		
	comp=Z,14nm,0.8s						
F44A	Big Bay de Noc	47.64	67	P	P	02 49 53.0	+0.2
	baz=311,SNR=5.6						
L40A	Anamosa	47.66	74	P	P	02 49 52.3	-0.7
	baz=313,SNR=6.8						
L40A	Anamosa	47.66	74	*e*P	P	02 49 52.9	-0.2
	comp=Z,17nm,0.8s						
I42A	Draeger Farm,	47.69	71	P	P	02 49 53.3	+0.1
	baz=312,SNR=8.4						
I42A	Draeger Farm,	47.69	71	*e*P	P	02 49 53.5	+0.2
	comp=Z,15nm,0.6s						
O38A	Galt	47.73	78	P	P	02 49 53.4	-0.2
	baz=314,SNR=5.7						
N39A	Derby Farms, D	47.75	76	P	P	02 49 53.6	-0.2
	baz=313,SNR=7.0						
N39A	Derby Farms, D	47.75	76	*e*P	P	02 49 53.8	0.0
	comp=Z,24nm,0.8s						
K41A	Shullsburg	47.79	73	P	P	02 49 53.5	-0.5
	baz=313,SNR=9.2						
H43A	Windswept, Lux	47.92	70	P	P	02 49 55.0	0.0
	baz=312,SNR=7.1						
M40A	Post Highland	47.94	75	P	P	02 49 54.8	-0.5
	baz=313						
J42A	Columbus	47.96	72	P	P	02 49 55.0	-0.3
	baz=312						
E45A	Wooded Hills,	48.04	66	P	P	02 49 55.6	-0.3
	baz=311						
P38A	Dawn	48.04	78	P	P	02 49 55.8	-0.2
	baz=314,SNR=22						
P38A	Dawn	48.04	78	*e*P	P	02 49 55.8	-0.2
	comp=Z,49nm,0.8s						
Q37A	Longview Farm,	48.04	80	P	P	02 49 55.4	-0.7
	baz=314						
L41A	Preston	48.05	74	P	P	02 49 55.3	-0.7
	baz=313,SNR=5.4						
I43A	Langenfeld Bro	48.11	70	P	P	02 49 56.3	-0.1
	baz=312,SNR=9.6						
KSRS	Korea Array	48.15	278	P	P	02 49 56.1	-0.7
	comp=Z,0.5nm,0.4s,baz=41,slow=7.5,SNR=6.5						
KSRS				pP	pP	02 50 40.4	+1.6
	comp=Z,4.0nm,0.9s,baz=48,slow=9.0,SNR=6.2						
O39A	Kirksville	48.16	77	P	P	02 49 56.3	-0.6
	baz=314						
KSAR	Wonju Array Be	48.18	278	P	P	02 49 56.1	-1.0
KSAR				pP	pP	02 50 40.4	+1.4
KSAR	Wonju Array Be	48.18	278	P	P	02 49 56.1	-1.0
KSAR				*PP	pP	02 50 40.4	+1.4
K42A	Prairie Point,	48.20	72	P	P	02 49 56.5	-0.6
	baz=313,SNR=8.6						
N40A	Mertquake, Sal	48.26	76	P	P	02 49 57.1	-0.6
	baz=314						
J43A	Natural Harves	48.30	71	P	P	02 49 57.5	-0.4
	baz=312						
F45A	CMU Biological	48.31	67	P	P	02 49 57.9	0.0
	baz=312						
Q38A	Cooks Store, C	48.45	79	P	P	02 49 58.6	-0.6
	baz=314,SNR=18						
M41A	Milan	48.50	74	P	P	02 49 58.7	-0.7
	baz=313						
WMOK	Wichita Mounta	48.52	87	P	P	02 50 00.2	+0.5
	baz=316,SNR=45						
WMOK	Wichita Mounta	48.52	87	*e*P	P	02 50 00.2	+0.5
	comp=Z,24nm,0.8s						
WMOK				*e*PcP	PcP	02 51 22.3	-0.2
WMOK	Wichita Mounta	48.52	87	*e*P	P	02 50 00.3	+0.6
WMOK				*e*		02 51 22.3	
WMOK				pmax	pmax		
	comp=Z,24nm,0.8s						
L42A	Oliver, Polo	48.55	73	P	P	02 49 58.9	-0.9
	baz=313						
P39B	Salisbury	48.57	78	P	P	02 49 59.8	-0.2
	baz=314,SNR=43						
O40A	La Belle	48.62	77	P	P	02 50 00.2	-0.3
	baz=314,SNR=34						
F46A	Macinaw City C	48.64	66	P	P	02 50 00.9	+0.4
	baz=312						
Q39A	Willow Grove F	48.75	78	P	P	02 50 01.0	-0.4
	baz=314,SNR=36						
N41A	Harden Midland	48.78	75	P	P	02 50 01.1	-0.5
	baz=314						
N41A	Harden Midland	48.78	75	*e*P	P	02 50 01.8	+0.1
	comp=Z,86nm,1.3s						
K43A	Burlington	48.80	72	P	P	02 50 01.3	-0.5
	baz=313						
K43A	Burlington	48.80	72	*e*P	P	02 50 01.3	-0.5
	comp=Z,29nm,1.0s						
R38A	Fenwick Farm,	48.83	80	P	P	02 50 00.8	-1.2
	baz=315,SNR=20						
L43A	Garden Prairie	48.93	72	P	P	02 50 01.8	-0.9
	baz=313						
P40A	Paris	48.93	77	P	P	02 50 02.6	-0.2
	baz=314,SNR=44						
P40A	Paris	48.93	77	*e*P	P	02 50 02.6	-0.2
	comp=Z,79nm,0.7s						
N42A	Yates City	49.15	75	P	P	02 50 04.0	-0.4
	baz=314,SNR=5.8						
O41A	Passleys Farm,	49.17	76	P	P	02 50 04.2	-0.4
	baz=314,SNR=11						
S38A	Stockton	49.22	80	P	P	02 50 04.0	-1.0
	baz=315,SNR=41						
R39A	Chumby, Stover	49.23	79	P	P	02 50 03.7	-1.4
	baz=315,SNR=14						
Q40A	Laux Farm, Aux	49.29	78	P	P	02 50 05.2	-0.3
	baz=315,SNR=56						
M43A	Waltham Townsh	49.32	73	P	P	02 50 04.9	-0.9
	baz=314						
TUL1	Leonard	49.38	83	P	P	02 50 06.1	-0.1
	baz=316,SNR=8.3						
TUL1	Leonard	49.38	83	*e*P	P	02 50 06.2	0.0
	comp=Z,19nm,0.8s						
P41A	Barry, Barry	49.38	76	P	P	02 50 06.0	-0.2
	baz=314,SNR=11						
L44A	Lake County Fo	49.39	72	P	P	02 50 05.2	-1.0
	baz=313						
T38A	Diamond	49.42	81	P	P	02 50 06.0	-0.5
	baz=316,SNR=24						
S39A	Bolivar	49.51	80	P	P	02 50 05.7	-1.5
	baz=315,SNR=25						
S39A	Bolivar	49.51	80	*e*P	P	02 50 05.7	-1.5
	comp=Z,19nm,0.7s						
N43A	Stutzman Famil	49.55	74	P	P	02 50 06.4	-1.0
	baz=314						
O42A	Bath	49.56	75	P	P	02 50 07.1	-0.4
	baz=314,SNR=6.8						
ABTX	Abilene, Hawle	49.56	89	P	P	02 50 08.2	+0.5
	baz=318,SNR=18						
ABTX	Abilene, Hawle	49.56	89	*e*P	P	02 50 08.3	+0.6
	comp=Z,42nm,0.8s						
MATQ	Matagami	49.59	58	P	P	02 50 07.0	-0.7
	baz=312						
R40A	Maddies Statio	49.67	79	P	P	02 50 07.5	-0.9
	baz=315,SNR=68						
R40A	Maddies Statio	49.67	79	*e*P	P	02 50 07.5	-0.9
	comp=Z,59nm,0.6s						
TX31	Lajitas Ar. Si	49.72	96	*e*P	P	02 50 10.0	+1.0
TXAR	Lajitas Array	49.73	96	P	P	02 50 10.0	+0.9
	comp=Z,16nm,0.7s,baz=301,slow=5.5,SNR=70						
TXAR				PcP	PcP	02 51 27.8	+0.6
	comp=Z,2.6nm,0.6s,baz=223,slow=1.5,SNR=7.8						
HDIL	Hopedale	49.75	74	P	P	02 50 08.6	-0.3
	baz=314,SNR=11						
HDIL	Hopedale	49.75	74	*e*P	P	02 50 09.0	+0.1
	comp=Z,48nm,0.8s						
Q41A	Truxton	49.79	77	P	P	02 50 09.0	-0.3
	baz=315,SNR=35						
P42A	Winchester	49.84	76	P	P	02 50 09.3	-0.4
	baz=314,SNR=18						
P42A	Winchester	49.84	76	*e*P	P	02 50 09.3	-0.4
	comp=Z,34nm,0.7s						
M44A	Midewin, Midew	49.86	73	P	P	02 50 09.4	-0.3
	baz=314						
O43A	Sugar Creek Fa	49.92	75	P	P	02 50 09.9	-0.4
	baz=314						
T39A	Clever	49.95	81	P	P	02 50 09.5	-1.0
	baz=316,SNR=54						
S40A	Lebanon	50.03	79	P	P	02 50 09.7	-1.4
	baz=315,SNR=14						
HHAR	Hobbs	50.16	82	*e*P	P	02 50 11.2	-0.9
	comp=Z,15nm,0.6s						
R41A	Rosebud	50.17	78	P	P	02 50 11.4	-0.8
	baz=315,SNR=40						
Q42A	Golden Eagle	50.21	77	P	P	02 50 12.3	-0.1
	baz=315,SNR=13						
N44A	Piper City	50.22	73	P	P	02 50 11.8	-0.6
	baz=314,SNR=6.1						
P43A	Skaggs, Pawnee	50.26	75	P	P	02 50 12.3	-0.4
	baz=315,SNR=7.7						
M45A	Boilermakers S	50.29	72	P	P	02 50 12.1	-0.9
	baz=314						
T40A	Mansfield	50.34	80	P	P	02 50 12.2	-1.3
	baz=316,SNR=23						
U39A	Green Forest	50.34	81	P	P	02 50 12.5	-1.0
	baz=316,SNR=40						
CCM	Cathedral Cave	50.41	78	P	P	02 50 13.7	-0.3
	baz=315						
CCM	Cathedral Cave	50.41	78	*e*P	P	02 50 13.9	-0.1
	comp=Z,16nm,0.7s						
CCM				*e*PcP	PcP	02 51 29.9	+0.5
CCM	Cathedral Cave	50.41	78	*e*P	P	02 50 13.9	-0.1
CCM				*e*		02 51 29.9	
CCM				pmax	pmax		
	comp=Z,16nm,0.7s						
S41A	Jillco Farms,	50.46	79	P	P	02 50 13.4	-1.0
	baz=316,SNR=103						
O44A	Mansfield	50.48	74	P	P	02 50 13.9	-0.6
	baz=314						
R42A	Luebbering	50.51	78	P	P	02 50 14.0	-0.7
	baz=315,SNR=14						
N45A	Kentland	50.52	73	P	P	02 50 14.6	-0.1
	baz=314						
SLM	Saint Louis	50.56	77	*e*P	P	02 50 15.2	+0.1
	comp=Z,36nm,0.6s						
SLM	Saint Louis	50.56	77	*e*P	P	02 50 15.2	+0.1
SLM				pmax	pmax		
	comp=Z,36nm,0.6s						
V39A	Pettigrew	50.64	82	P	P	02 50 14.9	-0.9
	baz=316,SNR=17						
Q43A	New Douglas	50.65	76	P	P	02 50 15.6	-0.1
	baz=315,SNR=8.7						
BELQ	Belleterre	50.66	61	P	P	02 50 15.5	-0.2
	baz=313						
TOBO	Tobermory, Bru	50.69	65	P	P	02 50 16.2	+0.3
	baz=313						
U40A	Yellville	50.72	81	P	P	02 50 15.1	-1.2
	baz=316,SNR=31						
O45A	Potomac	50.82	74	P	P	02 50 16.9	-0.1
	baz=315,SNR=11						
T41A	Mountain View	50.84	79	P	P	02 50 15.7	-1.5
	baz=316,SNR=18						
S42A	Caledonia	50.87	78	P	P	02 50 16.5	-0.9
	baz=316,SNR=19						
P44A	Sand Creek, Wi	50.88	75	P	P	02 50 17.2	-0.2
	baz=315,SNR=11						
N46A	Monticello	50.91	72	P	P	02 50 17.2	-0.4
	baz=314						
FVM	French Village	50.92	78	*e*P	P	02 50 18.4	+0.6
	comp=Z,30nm,0.6s						
FVM	French Village	50.92	78	*e*P	P	02 50 18.4	+0.6
FVM				pmax	pmax		
	comp=Z,30nm,0.6s						
R43A	Red Bud	50.99	77	P	P	02 50 17.7	-0.5
	baz=315,SNR=11						
W39A	Magazine	51.02	83	P	P	02 50 18.2	-0.4
	baz=317,SNR=12						
W39A	Magazine	51.02	83	*e*P	P	02 50 18.4	-0.1
	comp=Z,15nm,0.7s						
CHGQ	Chibougamau	51.05	56	P	P	02 50 17.7	-0.9
	baz=313						
Q44A	Meyer Farm, Va	51.05	76	P	P	02 50 18.0	-0.7
	baz=315,SNR=6.6						
JCT	Junction City	51.06	91	P	P	02 50 19.2	+0.2
	baz=319,SNR=12						
JCT	Junction City	51.06	91	*e*P	P	02 50 19.3	+0.3
	comp=Z,21nm,0.7s						
JCT	Junction City	51.06	91	*e*P	P	02 50 19.3	+0.3
JCT				pmax	pmax		
	comp=Z,21nm,0.7s						
SFIN	Lafayette	51.07	73	P	P	02 50 18.8	0.0
	baz=315,SNR=12						
SFIN	Lafayette	51.07	73	*e*P	P	02 50 18.9	+0.1
	comp=Z,29nm,0.8s						
V40A	Witts Springs	51.13	81	P	P	02 50 18.4	-1.0
	baz=316,SNR=44						
V40A	Witts Springs	51.13	81	*e*P	P	02 50 18.4	-1.0
	comp=Z,35nm,0.6s						
T42A	Van Buren	51.23	79	P	P	02 50 18.4	-1.6
	baz=316,SNR=26						
T42A	Van Buren	51.23	79	*e*P	P	02 50 18.6	-1.5
	comp=Z,24nm,0.9s						
U41A	Viola	51.25	80	P	P	02 50 19.0	-1.3
	baz=316,SNR=15						
WHTX	Lake Whitney,	51.28	88	P	P	02 50 20.9	+0.4
	baz=318,SNR=11						
WHTX	Lake Whitney,	51.28	88	*e*P	P	02 50 21.2	+0.7
	comp=Z,25nm,0.8s						
KLBO	Killbear Provi	51.28	64	P	P	02 50 19.5	-0.8
	baz=314						
BMRO	Meriville Lake	51.28	65	P	P	02 50 20.6	+0.3
	baz=314						
P45A	Graceland, Par	51.31	74	P	P	02 50 20.1	-0.6
	baz=315						
P45A	Graceland, Par	51.31	74	*e*P	P	02 50 20.8	+0.1
	comp=Z,13nm,0.8s						
X39A	Fountain Ranch	51.33	83	P	P	02 50 20.8	-0.1
	baz=317,SNR=14						
S43A	Fulton Ridge,	51.41	78	P	P	02 50 21.0	-0.4
	baz=316,SNR=46						
BRCO	Bruce Peninsul	51.41	66	P	P	02 50 21.9	+0.6
	baz=314						
W40A	Ferguson Farm,	51.43	82	P	P	02 50 21.1	-0.4
	baz=317,SNR=12						
W40A	Ferguson Farm,	51.43	82	*e*P	P	02 50 21.3	-0.3
	comp=Z,30nm,0.6s						
BASO	Ashfield	51.45	66	P	P	02 50 22.0	+0.4
	baz=314						
R44A	Waltonville	51.48	76	P	P	02 50 21.3	-0.6
	baz=316,SNR=8.8						
V41A	Mountainview	51.52	81	P	P	02 50 21.1	-1.2
	baz=316,SNR=45						
Q45A	Warren Harvey,	51.53	75	P	P	02 50 21.8	-0.5
	baz=315,SNR=8.5						
P46A	Rosedale	51.55	74	P	P	02 50 22.1	-0.2
	baz=315,SNR=5.3						
MIAR	Mount Ida	51.61	83	P	P	02 50 22.8	-0.1
	baz=317,SNR=20						
MIAR	Mount Ida	51.61	83	*e*P	P	02 50 22.9	-0.1
	comp=Z,22nm,1.0s						
MIAR				*e*PcP	PcP	02 51 34.1	+0.2
MIAR	Mount Ida	51.61	83	*e*P	P	02 50 22.9	-0.1
MIAR				*e*		02 51 34.1	
MIAR				pmax	pmax		
	comp=Z,22nm,1.0s						
U42A	Revenden	51.63	80	P	P	02 50 21.6	-1.5
	baz=316,SNR=10						
BUKO	Buck Lake	51.64	63	P	P	02 50 23.2	+0.2
	baz=314						
T43A	Greenville	51.64	78	P	P	02 50 22.5	-0.6
	baz=316,SNR=108						
BWLO	Walkerton	51.66	66	P	P	02 50 23.5	+0.3
	baz=314						
O47A	Sheridan	51.68	73	P	P	02 50 22.4	-1.0
	baz=315,SNR=7.0						
OLIL	Olney	51.68	75	*e*P	P	02 50 23.5	+0.1
	comp=Z,26nm,0.8s						
PBMO	Poplar Bluff	51.78	79	*e*P	P	02 50 23.1	-1.0
	comp=Z,32nm,1.1s						
S44A	Carbondale	51.78	77	P	P	02 50 23.6	-0.6
	baz=316,SNR=8.9						
SIUC	Southern Illin	51.78	77	*e*P	P	02 50 23.7	-0.4
	comp=Z,28nm,0.8s						
CLWO	Collingwood	51.86	65	P	P	02 50 25.1	+0.4
	baz=314						
Q46A	CEJHS Indians,	51.88	74	P	P	02 50 24.1	-0.8
	baz=315						
R45A	Skylar, Fairfi	51.89	76	P	P	02 50 24.6	-0.4
	baz=316,SNR=7.1						
W41B	Gary Mavity, V	51.91	81	P	P	02 50 24.2	-0.9
	baz=317,SNR=13						
W41B	Gary Mavity, V	51.91	81	*e*P	P	02 50 24.4	-0.8
	comp=Z,10nm,0.7s						
V42A	Cord	51.94	80	P	P	02 50 23.8	-1.5
	baz=316,SNR=6.0						
T44A	Benton	52.02	78	P	P	02 50 25.1	-0.8
	baz=316,SNR=9.6						
X40A	Basin Creek Fa	52.08	82	P	P	02 50 25.5	-0.9
	baz=317						
X40A	Basin Creek Fa	52.08	82	*e*P	P	02 50 26.2	-0.1
	comp=Z,4.4nm,0.8s						
ULN	Ulaanbaatar	52.08	301	*e*P	P	02 50 24.9	-1.5
	comp=Z,1.1nm,0.6s						
ULN				*e*pP	pP	02 51 10.7	+1.7
ULN	Ulaanbaatar	52.08	301	*ce*P	P	02 50 26.2	-0.2
U43A	Rector	52.08	79	P	P	02 50 25.3	-1.1
	baz=316,SNR=6.6						
435B	Jarrell	52.10	89	*e*P	P	02 50 27.7	+1.1
	comp=Z,18nm,0.8s						
P47A	Martinsville	52.15	73	P	P	02 50 26.0	-0.8
	baz=315,SNR=13						
S45A	Carrier Mills	52.16	77	P	P	02 50 26.4	-0.6
	baz=316,SNR=6.6						
Y40A	Okolona	52.17	83	P	P	02 50 26.7	-0.4
	baz=317						
ELFO	Elginfield	52.20	67	P	P	02 50 27.7	+0.5
	baz=315						
O48A	Farmland	52.21	72	P	P	02 50 26.0	-1.3
	baz=315,SNR=9.0						
SADO	Sadowa	52.23	64	*e*P	P	02 50 27.4	0.0
	comp=Z,12nm,0.8s						
BLO	Bloomington	52.24	74	*e*P	P	02 50 27.4	-0.1
	comp=Z,35nm,1.2s						
BLO	Bloomington	52.24	74	*e*P	P	02 50 27.4	-0.1
BLO				pmax	pmax		
	comp=Z,35nm,1.2s						
W42A	Bald Knob	52.25	81	P	P	02 50 27.1	-0.5
	baz=317						
X41A	Kaden, Bauxite	52.25	82	P	P	02 50 26.8	-0.8
	baz=317						
R46A	Gibon Southern	52.37	75	P	P	02 50 28.0	-0.5
	baz=316						
U44A	Portageville	52.39	78	P	P	02 50 28.3	-0.4
	baz=316						
SONM	Songino Array	52.42	302	P	P	02 50 28.4	-0.5
	comp=Z,1.1nm,0.8s,baz=56,slow=7.4,SNR=8.4						
SONM				pP	pP	02 51 12.0	+0.5
	comp=Z,6.4nm,0.9s,baz=47,slow=6.5,SNR=25						
SONM				ScP	ScP	02 55 14.9	-0.6
	comp=Z,0.9nm,0.9s,baz=49,slow=2.0,SNR=4.3						
V43A	Jonesboro	52.43	80	P	P	02 50 28.0	-0.9
	baz=317						
Q47A	Bedord North L	52.46	74	P	P	02 50 28.6	-0.5
	baz=316,SNR=11						
USIN	University of	52.47	76	*e*P	P	02 50 29.1	-0.1
	comp=Z,39nm,0.8s						
PEMO	Pembroke	52.56	62	P	P	02 50 29.5	-0.3
	baz=314						
ACTO	Acton	52.57	65	P	P	02 50 30.4	+0.5
	baz=315						
T45A	Paducah	52.60	77	P	P	02 50 29.7	-0.5
	baz=316						
P48A	Milroy	52.63	73	P	P	02 50 29.4	-1.0
	baz=316,SNR=17						
S46A	Don Dixon Farm	52.64	76	P	P	02 50 29.9	-0.6
	baz=316						
Y41A	Eaglette Beard	52.64	83	P	P	02 50 30.9	+0.3
	baz=317,SNR=20						
Z40A	Long Farm, Mag	52.65	84	P	P	02 50 31.2	+0.6
	baz=318,SNR=8.1						
BANO	Bancroft	52.68	63	P	P	02 50 31.0	+0.3
	baz=315						
U44B	Burton Farm, H	52.70	78	P	P	02 50 30.7	-0.2
	baz=316,SNR=8.0						
O49A	Covington	52.71	71	P	P	02 50 29.8	-1.2
	baz=315						
X42A	Stuttgart	52.71	82	P	P	02 50 30.7	-0.3
	baz=317						
PKRO	Pickering	52.83	65	P	P	02 50 32.0	+0.2
	baz=315						
Q48A	North Vernon	52.84	73	P	P	02 50 30.9	-1.0
	baz=316						
R47A	Wooly Knot Far	52.86	75	P	P	02 50 31.0	-1.1
	baz=316						
833A	Chaparral WMA,	52.92	93	P	P	02 50 33.5	+0.9
	baz=320,SNR=13						
833A	Chaparral WMA,	52.92	93	*e*P	P	02 50 33.5	+0.9
	comp=Z,26nm,0.9s						
N50A	Nevada	52.93	70	P	P	02 50 31.9	-0.7
	baz=315,SNR=6.0						
P49A	Miami Univ. Ec	52.96	72	P	P	02 50 31.6	-1.3
	baz=316,SNR=6.8						
Z41A	Richland Creek	52.99	84	P	P	02 50 33.0	0.0
	baz=318						
T46A	Princeton	53.00	77	P	P	02 50 32.8	-0.3
	baz=316,SNR=15						
140A	Cam and Jess,	53.01	85	P	P	02 50 33.9	+0.7
	baz=318						
U45A	Rockin P Farm,	53.02	78	P	P	02 50 32.9	-0.3
	baz=317						
TYNO	Tyneside	53.03	66	P	P	02 50 33.4	+0.2
	baz=315						
WCI	Wyandotte Cave	53.03	74	P	P	02 50 32.7	-0.6
	baz=316						
WCI	Wyandotte Cave	53.03	74	*e*P	P	02 50 32.6	-0.7
	comp=Z,11nm,0.8s						
WCI	Wyandotte Cave	53.03	74	*e*P	P	02 50 32.6	-0.7
WCI				pmax	pmax		
	comp=Z,11nm,0.8s						
NATX	Nacogdoches	53.04	86	P	P	02 50 33.9	+0.4
	baz=318						
DRWO	Darlington Wes	53.07	64	P	P	02 50 34.0	+0.5
	baz=315						
DRCO	St. Marys Ceme	53.08	64	P	P	02 50 34.3	+0.7
	baz=315						
PLVO	Plevna	53.09	62	P	P	02 50 33.8	0.0
	baz=315						
PLVO	Plevna	53.09	62	*e*P	P	02 50 34.1	+0.4
	comp=Z,9.3nm,0.9s						
O50A	Cable	53.12	71	P	P	02 50 33.4	-0.6
	baz=316,SNR=5.7						
R48A	Northridge Ran	53.14	74	P	P	02 50 33.5	-0.6
	baz=316						
Y42A	Garnett, Star	53.14	82	P	P	02 50 34.4	+0.2
	baz=318,SNR=7.2						
X43A	Marvell	53.16	81	P	P	02 50 34.0	-0.2
	baz=317,SNR=5.9						
X43A	Marvell	53.16	81	*e*P	P	02 50 34.1	-0.1
	comp=Z,43nm,0.8s						
DELO	Deloro Mine	53.19	63	P	P	02 50 33.6	-0.7
	baz=315						
WLVO	Wesleyville	53.21	64	P	P	02 50 34.9	+0.4
	baz=315						
Q49A	Aurora	53.24	73	P	P	02 50 33.9	-1.0
	baz=316						
W44A	Shelby Farms P	53.30	80	P	P	02 50 35.6	+0.2
	baz=317						
STCO	Saint Catharin	53.31	65	P	P	02 50 35.5	+0.2
	baz=315						

U46A	Springville	53.34	77	P	P	02 50 35.5	-0.1
	baz=317,SNR=21						
240A	Hunter Patters	53.35	85	P	P	02 50 35.9	+0.2
	baz=318						
V45A	Humboldt	53.35	78	P	P	02 50 35.3	-0.3
	baz=317						
ACSO	Alum Creek Sta	53.41	70	P	P	02 50 35.5	-0.5
	baz=316						
P50A	Jamestown	53.41	71	P	P	02 50 35.4	-0.6
	baz=316,SNR=5.2						
141A	Papa Simpson,	53.41	84	P	P	02 50 36.6	+0.4
	baz=318						
T47A	Sharon Grove	53.48	76	P	P	02 50 36.3	-0.2
	baz=316,SNR=13						
T47A	Sharon Grove	53.48	76	eP	P	02 50 36.4	-0.2
	comp=Z,25nm,0.9s						
TRQ	Mont Tremblant	53.52	60	eP	P	02 50 36.1	-0.7
Y43A	Makayla and Ka	53.57	82	P	P	02 50 37.3	0.0
	baz=318						
S48A	Wiedeman Farm,	53.57	75	P	P	02 50 36.8	-0.5
	baz=316,SNR=7.0						
X44A	Crenshaw	53.58	80	P	P	02 50 37.1	-0.3
	baz=317,SNR=11						
ORIO	Orleans, Innes	53.59	61	P	P	02 50 36.6	-0.7
	baz=315						
W45A	Hickory Valley	53.64	79	P	P	02 50 37.8	0.0
	baz=317,SNR=12						
ERPA	Erie	53.66	67	P	P	02 50 37.7	-0.2
	baz=316						
ERPA	Erie	53.66	67	eP	P	02 50 38.0	+0.2
	comp=Z,13nm,0.6s						
WVT	Waverly	53.69	77	P	P	02 50 37.8	-0.4
	baz=317						
WVT	Waverly	53.69	77	eP	P	02 50 38.0	-0.2
	comp=Z,29nm,0.8s						
WVT	Waverly	53.69	77	eP	P	02 50 38.0	-0.2
WVT				pmax	pmax		
	comp=Z,29nm,0.8s						
MEDO	Medina	53.71	65	P	P	02 50 38.6	+0.4
	baz=315						
HKT	Hockley	53.72	89	eP	P	02 50 39.5	+1.1
	comp=Z,8.8nm,1.0s						
HKT	Hockley	53.72	89	eP	P	02 50 39.5	+1.1
HKT				pmax	pmax		
	comp=Z,9.0nm,1.0s						
U47A	Clarksville	53.77	77	P	P	02 50 38.6	-0.2
	baz=317,SNR=16						
V46A	Holladay	53.77	78	P	P	02 50 38.5	-0.3
	baz=317,SNR=27						
ALFO	Alfred	53.78	60	P	P	02 50 37.7	-0.9
	baz=315						
T48A	Bowling Green	53.78	75	P	P	02 50 38.4	-0.4
	baz=317,SNR=7.5						
241A	Mo Tay, Goldon	53.84	85	P	P	02 50 40.0	+0.7
	baz=318,SNR=10.0						
241A	Mo Tay, Goldon	53.84	85	eP	P	02 50 40.1	+0.8
	comp=Z,43nm,0.7s						
Q50A	Georgetown	53.86	72	P	P	02 50 38.9	-0.4
	baz=316						
ALLY	Alegheny Colle	53.91	67	eP	P	02 50 39.8	+0.1
	comp=Z,24nm,0.8s						
Y44A	Strider, Charl	53.94	81	P	P	02 50 40.0	0.0
	baz=318,SNR=8.7						
OXF	Oxford	53.99	80	eP	P	02 50 39.9	-0.4
	comp=Z,163nm,0.9s						
OXF	Oxford	53.99	80	eP	P	02 50 39.9	-0.4
OXF				pmax	pmax		
	comp=Z,163nm,0.9s						
142A	Monroe	54.00	83	P	P	02 50 40.7	+0.3
	baz=318						
X45A	UM Field Stati	54.06	80	P	P	02 50 40.5	-0.3
	baz=318,SNR=8.0						
Q51A	Peebles	54.07	72	P	P	02 50 40.5	-0.4
	baz=316,SNR=5.3						
V47A	Nunnelly	54.09	77	P	P	02 50 40.6	-0.5
	baz=317,SNR=12						
W46A	Michie	54.11	79	P	P	02 50 40.8	-0.4
	baz=317,SNR=14						
U48A	Cassie Pea, Po	54.13	76	P	P	02 50 41.3	-0.1
	baz=317,SNR=31						
143A	Socs Landing,	54.19	83	P	P	02 50 42.0	+0.2
	baz=318						
143A	Socs Landing,	54.19	83	eP	P	02 50 42.7	+0.9
	comp=Z,60nm,1.2s						
341A	Kurthwood	54.21	85	P	P	02 50 42.5	+0.5
	baz=319,SNR=7.0						
341A	Kurthwood	54.21	85	eP	P	02 50 42.7	+0.8
	comp=Z,31nm,0.9s						
242A	Grayson	54.24	84	P	P	02 50 42.4	+0.2
	baz=318						
M54A	Oil Creek Stat	54.26	67	P	P	02 50 41.9	-0.3
	baz=316,SNR=5.7						
M54A	Oil Creek Stat	54.26	67	eP	P	02 50 42.1	-0.1
	comp=Z,10nm,0.6s						
T49A	Edmonton	54.26	75	P	P	02 50 41.6	-0.6
	baz=317,SNR=10						
T49A	Edmonton	54.26	75	eP	P	02 50 42.2	-0.1
	comp=Z,14nm,0.9s						
MMNY	Mt. Morris Dam	54.30	65	eP	P	02 50 42.8	+0.4
	comp=Z,40nm,1.5s						
Z44A	Pea Ridge, Bel	54.32	82	P	P	02 50 42.6	-0.1
	baz=318,SNR=6.6						
Y45A	Yeager Farm, C	54.39	81	P	P	02 50 43.0	-0.2
	baz=318,SNR=5.4						
PLAL	Pickwick Lake	54.39	78	eP	P	02 50 42.9	-0.4
	comp=Z,34nm,1.2s						
X46A	Booneville	54.42	79	P	P	02 50 43.1	-0.4
	baz=318,SNR=8.5						
R51A	Hillsboro	54.46	72	P	P	02 50 43.7	0.0
	baz=316,SNR=26						
W47A	Westpoint	54.46	78	P	P	02 50 43.2	-0.5
	baz=317,SNR=16						
N54A	Moraine State	54.48	68	P	P	02 50 43.4	-0.4
	baz=316						
N54A	Moraine State	54.48	68	eP	P	02 50 43.4	-0.4
	comp=Z,9.0nm,0.6s						
V48A	Smith Brothers	54.54	77	P	P	02 50 43.6	-0.7
	baz=317,SNR=6.8						
V48A	Smith Brothers	54.54	77	eP	P	02 50 43.9	-0.4
	comp=Z,13nm,0.9s						
U49A	Red Boiling Sp	54.55	76	P	P	02 50 44.0	-0.4
	baz=317,SNR=13						
LONY	Lake Ozonia	54.65	61	P	P	02 50 44.1	-0.8
	baz=316						
LONY	Lake Ozonia	54.65	61	eP	P	02 50 44.2	-0.8
	comp=Z,5.5nm,0.8s						
342A	Flagon Creek P	54.66	85	P	P	02 50 45.7	+0.6
	baz=319						
Z45A	Winona	54.67	81	P	P	02 50 45.0	-0.2
	baz=318						
Z45A	Winona	54.67	81	eP	P	02 50 45.5	+0.2
	comp=Z,124nm,1.6s						
T50A	Nancy	54.70	74	P	P	02 50 45.1	-0.3
	baz=317,SNR=11						
HHC	Hu-ho-hao-te	54.73	292	eP	P	02 50 42.6	-3.1
HHC				pmax	pmax		
	comp=Z,12nm,1.0s						
HHC				pmax	pmax		
	comp=Z,120nm,6.1s						
243A	Waterproof	54.76	84	P	P	02 50 46.2	+0.4
	baz=318						
Y46A	Houston	54.76	80	P	P	02 50 45.7	-0.2
	baz=318,SNR=22						
144A	Alexander Plac	54.80	82	P	P	02 50 46.4	+0.2
	baz=318						
X47A	Russelville	54.85	79	P	P	02 50 45.6	-1.0
	baz=318,SNR=8.2						
W48A	Pulaski	54.91	78	P	P	02 50 46.4	-0.6
	baz=318,SNR=21						
S51A	Beattyville	54.94	73	P	P	02 50 46.5	-0.6
	baz=317,SNR=6.0						
S51A	Beattyville	54.94	73	eP	P	02 50 47.0	-0.2
	comp=Z,12nm,0.9s						
FRNY	Flat Rock	54.99	60	eP	P	02 50 46.1	-1.3
	comp=Z,5.6nm,0.8s						
V49A	McMinnville	55.03	76	P	P	02 50 47.3	-0.5
	baz=317,SNR=23						
VBMS	Vicksburg	55.05	83	P	P	02 50 48.1	+0.1
	baz=318						
VBMS	Vicksburg	55.05	83	eP	P	02 50 48.4	+0.4
	comp=Z,24nm,0.7s						
244A	Avery, Jackson	55.09	83	P	P	02 50 48.6	+0.4
	baz=318,SNR=12						
442A	Mamou	55.09	85	P	P	02 50 49.1	+0.8
	baz=319						
145A	Houston Renfro	55.10	82	P	P	02 50 48.1	-0.2
	baz=318						
ARCES	ARCESS Array B	55.19	356	P	P	02 50 47.7	-0.7
	comp=Z,4.5nm,1.0s,baz=19,slow=7.7,SNR=4.5						
S52A	Salyersville	55.19	73	P	P	02 50 48.3	-0.6
	baz=317						
Z46A	Louisville	55.22	81	P	P	02 50 49.0	-0.2
	baz=318,SNR=5.8						
NCB	Newcomb	55.29	61	eP	P	02 50 49.3	-0.3
	comp=Z,5.7nm,0.8s						
W49A	Belvidere	55.30	77	P	P	02 50 49.1	-0.7
	baz=318,SNR=12						
Y47A	UCPARC, Winfie	55.31	79	P	P	02 50 49.3	-0.6
	baz=318,SNR=18						
X48A	Hartselle	55.36	78	P	P	02 50 49.3	-0.9
	baz=318,SNR=12						
X48A	Hartselle	55.36	78	eP	P	02 50 49.3	-0.9
	comp=Z,17nm,0.4s						
SWET	Sewanee	55.41	77	eP	P	02 50 50.0	-0.6
	comp=Z,12nm,0.7s						
ZAIG	Zacatecas	55.43	100	eP	P	02 50 52.2	+1.0
	comp=Z,9.9nm,1.2s						
MCWV	Mont Chateau	55.49	69	P	P	02 50 50.7	-0.4
	baz=317,SNR=5.7						
MCWV	Mont Chateau	55.49	69	eP	P	02 50 51.1	0.0
	comp=Z,17nm,0.8s						
344A	Westbrook Farm	55.50	83	P	P	02 50 51.8	+0.6
	baz=319,SNR=6.3						
344A	Westbrook Farm	55.50	83	eP	P	02 50 52.0	+0.8
	comp=Z,27nm,0.9s						
LNIG	Linares	55.52	96	eP	P	02 50 50.6	-0.8
	comp=Z,12nm,1.3s						
V50A	Pikevile	55.54	76	P	P	02 50 50.9	-0.6
	baz=318,SNR=19						
245A	Little AP, Sta	55.54	82	P	P	02 50 51.6	+0.1
	baz=318,SNR=5.2						
146A	Union	55.57	81	P	P	02 50 51.6	-0.1
	baz=318,SNR=5.8						
T52A	Hallie	55.66	73	P	P	02 50 52.1	-0.2
	baz=317						
BINY	Binghamton	55.67	64	P	P	02 50 52.6	+0.2
	baz=317,SNR=6.1						
BINY	Binghamton	55.67	64	eP	P	02 50 52.7	+0.4
	comp=Z,29nm,1.1s						
Y48A	Jasper	55.68	79	P	P	02 50 51.4	-1.1
	baz=318,SNR=5.9						
Z47A	Carrollton	55.71	80	P	P	02 50 52.2	-0.5
	baz=318,SNR=21						
X49A	Woodville	55.71	78	P	P	02 50 51.9	-0.7
	baz=318,SNR=34						
O56A	Blue Knob Stat	55.73	67	P	P	02 50 52.1	-0.7
	baz=317,SNR=6.0						
O56A	Blue Knob Stat	55.73	67	eP	P	02 50 52.6	-0.2
	comp=Z,12nm,0.8s						
TZTN	Tazewell	55.76	74	P	P	02 50 52.7	-0.3
	baz=317						
TZTN	Tazewell	55.76	74	eP	P	02 50 52.8	-0.3
	comp=Z,9.9nm,0.9s						
W50A	Signal Mountai	55.77	76	P	P	02 50 52.6	-0.5
	baz=318,SNR=16						
W50A	Signal Mountai	55.77	76	eP	P	02 50 52.7	-0.5
	comp=Z,31nm,0.9s						
SSPA	Standing Stone	55.82	67	P	P	02 50 53.2	-0.1
	baz=317						
SSPA	Standing Stone	55.82	67	eP	P	02 50 53.3	-0.1
	comp=Z,15nm,0.8s						
V51A	Loudon	55.86	75	P	P	02 50 53.1	-0.6
	baz=318,SNR=6.9						
V51A	Loudon	55.86	75	eP	P	02 50 53.5	-0.2
	comp=Z,14nm,0.9s						
Z48A	Northport	55.86	79	P	P	02 50 53.0	-0.8
	baz=318,SNR=17						
543A	St. Martinvill	55.89	85	P	P	02 50 54.6	+0.6
	baz=319						
147A	Livingston	55.98	81	P	P	02 50 54.0	-0.6
	baz=318						
147A	Livingston	55.98	81	eP	P	02 50 54.6	0.0
	comp=Z,29nm,0.8s						
ACCN	Adirondack Com	55.99	62	eP	P	02 50 54.6	+0.1
	comp=Z,8.0nm,0.9s						
345A	Thompson Farm,	56.01	83	P	P	02 50 55.0	+0.1
	baz=319						
CPCT	Cooper Cave	56.02	76	eP	P	02 50 54.3	-0.6
	comp=Z,17nm,1.0s						
444A	Pine Grove	56.05	84	P	P	02 50 54.9	-0.2
	baz=319						
X50B	Fort Payne	56.13	77	P	P	02 50 54.9	-0.8
	baz=318,SNR=21						
Y49A	Blount Mountai	56.15	78	P	P	02 50 54.8	-1.0
	baz=318,SNR=10						
Y49A	Blount Mountai	56.15	78	eP	P	02 50 54.9	-1.0
	comp=Z,16nm,0.6s						
LBNH	Lisbon	56.24	60	P	P	02 50 55.1	-1.2
	baz=317						
LBNH	Lisbon	56.24	60	eP	P	02 50 55.9	-0.4
	comp=Z,7.2nm,0.8s						
LBNH	Lisbon	56.24	60	eP	P	02 50 55.9	-0.4
LBNH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
V52A	Sevierville	56.25	75	P	P	02 50 56.0	-0.5
	baz=318,SNR=8.0						
V52A	Sevierville	56.25	75	eP	P	02 50 56.2	-0.3
	comp=Z,16nm,1.1s						
247A	Quitman	56.25	81	P	P	02 50 56.8	+0.3
	baz=319,SNR=5.5						
346A	Big Creek Wild	56.27	82	P	P	02 50 56.7	+0.1
	baz=319						
TKL	Tuckaleechee C	56.28	75	P	P	02 50 56.5	-0.3
	comp=Z,11nm,0.9s,baz=319,slow=10,SNR=14						
TKL				PcP	PcP	02 51 52.3	+0.5
	comp=Z,7.2nm,0.9s,baz=321,slow=9.4,SNR=4.5						
TKL	Tuckaleechee C	56.28	75	eP	P	02 50 56.5	-0.3
	comp=Z,16nm,0.9s						
TKL				PcP	PcP	02 51 52.3	+0.5
TKL	Tuckaleechee C	56.28	75	eP	P	02 50 56.5	-0.3
TKL						02 51 52.3	
TKL				pmax	pmax		
	comp=Z,16nm,0.9s						
148A	Greensboro	56.40	80	P	P	02 50 56.5	-1.1
	baz=318						
U53A	Fall Branch	56.42	73	P	P	02 50 57.5	-0.3
	baz=318,SNR=6.6						
LRAL	Lakeview Retre	56.43	79	P	P	02 50 56.5	-1.3
	baz=318,SNR=10						
LRAL	Lakeview Retre	56.43	79	eP	P	02 50 56.6	-1.1
	comp=Z,9.5nm,0.6s						
X51A	Calhoun	56.49	76	P	P	02 50 57.4	-0.8
	baz=318,SNR=5.5						
X51A	Calhoun	56.49	76	eP	P	02 50 57.9	-0.3
	comp=Z,20nm,1.1s						
Y50A	Piedmont	56.50	78	P	P	02 50 57.3	-1.0
	baz=318,SNR=11						
Z49A	Columbiana	56.57	79	P	P	02 50 57.8	-1.0
	baz=318,SNR=18						
W52A	Murphy	56.62	75	P	P	02 50 58.3	-0.9
	baz=318,SNR=8.9						
W52A	Murphy	56.62	75	eP	P	02 50 58.8	-0.4
	comp=Z,16nm,0.8s						
248A	Dixon Mills	56.71	81	P	P	02 50 59.8	0.0
	baz=319,SNR=17						
N59A	State Game Lan	56.72	65	P	P	02 50 59.9	+0.1
	baz=317						
PKME	Peaks-Kenny Pk	56.77	57	P	P	02 50 59.4	-0.6
	baz=318						
446A	Poplarville	56.77	83	P	P	02 50 60.0	-0.2
	baz=319						
347A	Saraland	56.78	82	P	P	02 51 00.4	+0.2
	baz=319,SNR=6.3						
V53A	Saluda	56.80	74	P	P	02 51 00.2	-0.3
	baz=318,SNR=7.5						
V53A	Saluda	56.80	74	eP	P	02 51 00.3	-0.2
	comp=Z,15nm,1.1s						
Y51A	Rockmart	56.87	77	P	P	02 50 59.7	-1.2
	baz=318,SNR=8.2						
Z50A	Ashland	56.87	78	P	P	02 50 59.9	-1.0
	baz=318,SNR=14						
Z50A	Ashland	56.87	78	eP	P	02 50 60.0	-1.0
	comp=Z,19nm,0.8s						
149A	Jones	56.87	79	P	P	02 51 00.1	-0.8
	baz=319,SNR=14						
BLA	Blacksburg	56.97	71	P	P	02 51 01.3	-0.3
	baz=318						
BLA	Blacksburg	56.97	71	eP	P	02 51 01.9	+0.3
	comp=Z,21nm,1.1s						
BLA	Blacksburg	56.97	71	eP	P	02 51 01.9	+0.3
BLA				pmax	pmax		
	comp=Z,21nm,1.1s						
W53A	Cullowhee	56.98	75	P	P	02 51 00.8	-0.9
	baz=318						
X52A	Dahlonega	57.00	76	P	P	02 51 01.1	-0.7
	baz=318,SNR=25						
645A	Chauvin	57.08	85	P	P	02 51 02.6	+0.2
	baz=320						
348A	Jackson	57.13	81	P	P	02 51 02.7	0.0
	baz=319						
348A	Jackson	57.13	81	eP	P	02 51 03.1	+0.3
	comp=Z,37nm,0.7s						
249A	Camden	57.15	80	P	P	02 51 02.5	-0.3
	baz=319						
LUPA	Lehigh Univers	57.16	65	eP	P	02 51 03.4	+0.6
447A	Lucedale	57.17	82	P	P	02 51 03.1	+0.1
	baz=319						
NJ2	Nanjing	57.18	280	eP	P	02 51 03.7	+0.6
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ODNJ	Ogdensburg	57.20	64	eP	P	02 51 03.4	+0.4
	comp=Z,17nm,0.9s						
BG3	Lake Jocassee	57.24	75	eP	P	02 51 03.1	-0.3
	comp=Z,16nm,1.0s						
BG3				ePcP	PcP	02 51 56.8	+1.3
Z51A	Franklin	57.24	78	P	P	02 51 02.2	-1.3
	baz=318,SNR=5.1						
150A	Eclectic	57.30	79	P	P	02 51 02.7	-1.2
	baz=319,SNR=8.0						
X53A	Estanollee	57.40	75	P	P	02 51 04.0	-0.6
	baz=318,SNR=5.3						
Y52A	Lilburn	57.45	76	P	P	02 51 04.1	-0.9
	baz=318,SNR=5.7						
Y52A	Lilburn	57.45	76	eP	P	02 51 04.5	-0.4
	comp=Z,11nm,0.8s						
BRNJ	Basking Ridge	57.51	64	eP	P	02 51 05.8	+0.6
	comp=Z,15nm,0.7s						
448A	Bay Minette	57.52	82	P	P	02 51 05.3	-0.1
	baz=319						
349A	Repton	57.58	81	P	P	02 51 05.9	0.0
	baz=319,SNR=6.5						
PAL	Palisades	57.61	64	P	P	02 51 05.8	-0.2
	baz=318						
250A	Grady	57.63	80	P	P	02 51 05.4	-0.8
	baz=319						
250A	Grady	57.63	80	eP	P	02 51 05.5	-0.7
	comp=Z,25nm,0.8s						
HRV	Adam Dziewonsk	57.69	61	P	P	02 51 05.6	-0.9
	baz=318						
Y53A	Monroe	57.72	76	P	P	02 51 06.0	-0.8
	baz=319,SNR=9.4						
Z52A	Williamson	57.76	77	P	P	02 51 05.8	-1.3
	baz=319,SNR=8.0						
BRAL	Brewton	57.80	81	P	P	02 51 07.2	-0.2
	baz=319						
BRAL	Brewton	57.80	81	eP	P	02 51 07.8	+0.4
	comp=Z,37nm,0.8s						
BRAL				ePcP	PcP	02 51 58.4	+0.6
CBN	Corbin Frederi	57.87	68	P	P	02 51 07.1	-0.7
	baz=318						
152A	Waverly Hall	57.98	78	P	P	02 51 07.1	-1.5
	baz=319						
PAULI	Pauline	57.98	74	eP	P	02 51 08.4	-0.2
	comp=Z,12nm,1.0s						
KMSC	Kings Mountain	58.01	73	P	P	02 51 08.2	-0.6
	baz=318,SNR=8.9						
KMSC	Kings Mountain	58.01	73	eP	P	02 51 08.4	-0.4
	comp=Z,16nm,0.8s						
350A	Dozier	58.01	80	P	P	02 51 08.2	-0.6
	baz=319,SNR=5.9						
449A	Pace	58.01	81	P	P	02 51 09.0	+0.1
	baz=319						
251A	Midway	58.02	79	P	P	02 51 07.6	-1.3
	baz=319,SNR=7.4						
GOGA	Godfrey	58.12	76	P	P	02 51 08.2	-1.4
	baz=319,SNR=7.5						
GOGA	Godfrey	58.12	76	eP	P	02 51 08.8	-0.8
	comp=Z,12nm,0.9s						
GOGA	Godfrey	58.12	76	eP	P	02 51 08.8	-0.8
GOGA				pmax	pmax		
	comp=Z,12nm,0.9s						
NCAT	North Carolina	58.16	72	eP	P	02 51 09.9	+0.1
	comp=Z,20nm,1.2s						
Z53A	Monticello	58.16	77	P	P	02 51 08.6	-1.3
	baz=319,SNR=11						
HODGE	Hodges	58.17	75	eP	P	02 51 09.7	-0.2
	comp=Z,11nm,0.8s						
Y54A	Tignall	58.21	75	P	P	02 51 09.2	-1.0
	baz=319,SNR=8.5						
450A	Crestview	58.33	81	P	P	02 51 10.6	-0.5
	baz=319						
252A	Lumpkin	58.47	78	P	P	02 51 10.6	-1.5
	baz=319,SNR=5.8						
153A	Fort Valley	58.49	77	P	P	02 51 10.8	-1.3
	baz=319						
351A	Pinckard	58.53	80	P	P	02 51 11.6	-0.9
	baz=319,SNR=13						
Z54A	Sparta	58.60	76	P	P	02 51 11.8	-1.1
	baz=319,SNR=14						
JSC	Jenkinsville	58.69	74	eP	P	02 51 13.4	-0.1
	comp=Z,9.9nm,0.8s						
JSC	Jenkinsville	58.69	74	eP	P	02 51 13.4	-0.1
JSC				pmax	pmax		
	comp=Z,10.0nm,0.8s						
352A	Blakely	58.75	79	P	P	02 51 12.8	-1.2
	baz=319						
352A	Blakely	58.75	79	eP	P	02 51 13.1	-0.9
	comp=Z,18nm,0.8s						
253A	Americus	58.76	78	P	P	02 51 12.6	-1.4
	baz=319,SNR=6.1						
253A	Americus	58.76	78	eP	P	02 51 13.0	-1.1
	comp=Z,26nm,0.8s						
154A	Montrose	58.92	77	P	P	02 51 13.6	-1.5
	baz=319						
154A	Montrose	58.92	77	eP	P	02 51 14.2	-0.9
	comp=Z,34nm,0.8s						
451A	Vernon	58.95	80	P	P	02 51 14.2	-1.1
	baz=320						
155A	Kite	59.27	76	P	P	02 51 16.1	-1.4
	baz=319,SNR=6.1						
254A	Abbeville	59.32	77	P	P	02 51 16.5	-1.4
	baz=319,SNR=6.3						
552A	Lynn Haven	59.57	80	P	P	02 51 19.1	-0.5
	baz=320						
255A	Hazlehurst	59.78	77	P	P	02 51 19.9	-1.1
	baz=320						
553A	Crawfordville	60.01	80	P	P	02 51 22.3	-0.3
	baz=320						
355A	Pearson	60.02	77	P	P	02 51 21.3	-1.3
	baz=320						
454A	Quitman	60.06	79	P	P	02 51 21.8	-1.1
	baz=320						
NHSC	New Hope	60.16	74	P	P	02 51 23.3	-0.3
	baz=319						
455A	Stateville	60.37	78	P	P	02 51 24.2	-0.8
	baz=320						
356A	Blackshear	60.43	77	P	P	02 51 24.7	-0.7
	baz=320						
555A	McAlpin	60.88	78	P	P	02 51 27.9	-0.6
	baz=320						
555A	McAlpin	60.88	78	eP	P	02 51 28.2	-0.3
	comp=Z,36nm,0.8s						
556A	Lake Butler	61.28	78	P	P	02 51 31.0	-0.2
	baz=320,SNR=7.6						
457A	Yulee	61.29	77	P	P	02 51 30.9	-0.3
	baz=320						
557A	Orange Park	61.65	78	P	P	02 51 33.6	-0.1
	baz=320,SNR=5.0						
656A	Willston	61.70	79	P	P	02 51 33.7	-0.3
	baz=320						
656A	Willston	61.70	79	eP	P	02 51 34.0	+0.1
	comp=Z,48nm,1.3s						
TLIG	Tlapa	61.83	100	eP	P	02 51 36.1	+1.0
	comp=Z,20nm,0.7s						
657A	Interlachen	61.90	78	P	P	02 51 34.8	-0.5
	baz=320						
KURK	Kurchatov	62.13	320	eP	P	02 51 35.4	-1.1
KURK				epP	pP	02 52 21.4	+0.8
KURK	Kurchatov	62.13	320	eP	P	02 51 36.0	-0.6
KURBB	Kurchatov Arra	62.24	320	P	P	02 51 36.9	-0.4
	comp=Z,0.5nm,0.8s,baz=30,slow=7.5,SNR=4.1						
KURBB				pP	pP	02 52 21.6	+0.3
	comp=Z,3.2nm,1.0s,baz=36,slow=7.0,SNR=8.4						
757A	Oxford	62.28	79	P	P	02 51 37.4	-0.5
	baz=321						
LZH	Lanzhou	62.31	294	eP	P	02 51 39.1	+0.9
LZH				pP	pP	02 52 25.6	+3.3
LZH				sP	sP	02 52 45.5	+2.5
LZH				PP	PP	02 54 01.6	+4.3
LZH				pmax	pmax		
	comp=Z,18nm,1.0s						
LZH				pmax	pmax		
	comp=Z,160nm,4.3s						
658A	Bunnell	62.37	78	P	P	02 51 38.2	-0.2

	baz=321						
KLMR	**Klimovskoe**	**62.60**	**347**	*e*P	**P**	**02 51 37.8**	**-1.7**
KLMR				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KLMR	**Klimovskoe**	**62.60**	**347**	*e*P	**P**	**02 51 37.8**	**-1.7**
KLMR				AMP		02 51 39.1	
	comp=Z,3.0nm,0.8s						
857A	**Zephyrhills**	**62.71**	**79**	P	**P**	**02 51 40.6**	**-0.1**
	baz=321						
758A	**Lake Helen**	**62.75**	**78**	P	**P**	**02 51 41.0**	**0.0**
	baz=321						
BVAR	**Borovoye Array**	**62.99**	**327**	P	**P**	**02 51 42.1**	**-0.1**
	comp=Z,2.1nm,0.6s,baz=38,slow=7.3,SNR=11						
BVAR				pP	**pP**	**02 52 26.8**	**+0.4**
	comp=Z,5.5nm,0.8s,baz=20,slow=5.5,SNR=9.6						
BRVK	**Borovoye**	**63.00**	**327**	*e*P	**P**	**02 51 39.7**	**-2.6**
BRVK				*e*pP	**pP**	**02 52 26.7**	**+0.2**
BRVK	**Borovoye**	**63.00**	**327**	*ce*P	**P**	**02 51 42.7**	**+0.4**
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
957A	**Wimauma**	**63.17**	**80**	P	**P**	**02 51 43.8**	**+0.1**
	baz=321						
FINES	**FINESS Array B**	**63.23**	**355**	P	**P**	**02 51 42.6**	**-1.0**
	comp=Z,3.4nm,0.7s,baz=15,slow=8.4,SNR=16						
FINES				pP	**pP**	**02 52 27.5**	**-0.4**
	comp=Z,5.0nm,0.8s,baz=12,slow=10,SNR=5.7						
DWPF	**Disney Wildern**	**63.28**	**79**	P	**P**	**02 51 44.1**	**-0.4**
	baz=321						
ARU	**Arti**	**63.28**	**335**	*c i*P	**P**	**02 51 45.6**	**+1.5**
ARU				*PP	**pP**	**02 52 29.5**	**+1.2**
ARU						02 54 03.3	
ARU				S	**S**	**03 00 03.8**	**+3.6**
ARU				SS	**SS**	**03 04 07.1**	**-1.9**
ARU				pmax	pmax		
	comp=Z,3.0nm,1.2s						
859A	**Kempfer Cattle**	**63.62**	**78**	P	**P**	**02 51 46.5**	**-0.2**
	baz=321						
NC405	**NORSAR Array S**	**63.79**	**2**	*e*P	**P**	**02 51 47.9**	**+0.5**
NB2	**NORSAR Subarra**	**63.85**	**3**	P	pP	02 52 32.5	+0.4
	comp=Z,0.8nm,0.7s,baz=358,slow=6.5						
058A	**Arcadia**	**63.88**	**80**	P	**P**	**02 51 48.1**	**-0.3**
	baz=321,SNR=5.3						
MKAR	**Makanchi Array**	**63.93**	**316**	P	**P**	**02 51 47.0**	**-1.5**
	comp=Z,0.5nm,0.7s,baz=40,slow=2.5,SNR=4.4						
MKAR				pP	**pP**	**02 52 32.4**	**-0.5**
	comp=Z,1.9nm,0.8s,baz=46,slow=6.9,SNR=8.1						
959A	**Okeechobee**	**64.04**	**79**	P	**P**	**02 51 49.7**	**+0.3**
	baz=321						
WMQ	**Urumqi**	**64.07**	**310**	P	**P**	**02 51 49.2**	**-0.3**
WMQ				pmax	pmax		
	comp=Z,15nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,190nm,5.7s						
WMQ				LR	LR		
	comp=Z,86nm,23.3s						
WMQ				LR	LR		
	comp=Z,130nm,37.1s						
WMQ				LR	LR		
	comp=Z,42nm,18.7s						
059A	**Moore Haven**	**64.32**	**79**	P	**P**	**02 51 51.2**	**-0.1**
	baz=321						
059Z	**Ave Maria**	**64.64**	**80**	P	**P**	**02 51 53.5**	**+0.1**
	baz=322						
HFS	**Hagfors**	**64.81**	**1**	P	**P**	**02 51 53.3**	**-0.7**
	comp=Z,6.1nm,0.6s,baz=31,slow=3.4,SNR=23						
HFS				pP	**pP**	**02 52 39.1**	**+0.7**
	comp=Z,4.4nm,0.8s,baz=20,slow=4.6,SNR=3.8						
060Z	**West Palm Beac**	**65.09**	**79**	P	**P**	**02 51 56.3**	**+0.1**
	baz=322						
061Z	**Ochoppi**	**65.31**	**80**	P	**P**	**02 51 57.8**	**+0.1**
	baz=322						
CCIG	**Comitan**	**66.49**	**95**	*e*P	**P**	**02 52 06.6**	**+1.1**
	comp=Z,5.9nm,0.7s						
GYA	**Guiyang**	**68.26**	**285**	*e*P	**P**	**02 52 17.5**	**+1.0**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
EKA	**Eskdalemuir Ar**	**68.53**	**12**	P	**P**	**02 52 17.0**	**-0.6**
	comp=Z,0.8nm,0.5s,baz=345,slow=4.4,SNR=5.8						
EKA	**Eskdalemuir Ar**	**68.53**	**12**	P	**P**	**02 52 17.0**	**-0.6**
OBN	**Obninsk**	**68.57**	**347**	*e*P	**P**	**02 52 15.7**	**-2.0**
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ABKAR	**Akbulak array**	**69.42**	**331**	*e*P	**P**	**02 52 22.9**	**-0.2**
ABKAR				*e*pP	**pP**	**02 53 09.5**	**+1.4**
KMI	**Kunming**	**71.47**	**287**	P	**P**	**02 52 37.1**	**+0.9**
KMI				pmax	pmax		
	comp=Z,15nm,0.5s						
KSH	**Kashi**	**72.54**	**315**	*e*P	**P**	**02 52 43.8**	**+1.6**
CLL	**Collm**	**73.64**	**2**	*e*P	**P**	**02 52 48.0**	**-0.3**
AKASG	**Malin Array Be**	**73.70**	**351**	P	**P**	**02 52 47.3**	**-1.3**
	comp=Z,2.5nm,0.6s,baz=6.8,slow=5.8,SNR=6.3						
AKASG				pP	**pP**	**02 53 33.7**	**-0.4**
	comp=Z,5.7nm,0.8s,baz=11,slow=6.6,SNR=7.2						
KIEV	**Kiev**	**73.71**	**351**	*e*P	**P**	**02 52 47.1**	**-1.6**
	comp=Z,2.2nm,0.6s						
KIEV				*e*pP	**pP**	**02 53 34.2**	**0.0**
KIEV	**Kiev**	**73.71**	**351**	*i* P	**P**	**02 52 47.7**	**-0.9**
KIEV				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KHC	**Kasperske Hory**	**75.83**	**2**	*e*P	pP	02 53 47.5	+0.8
GERES	**GERESS Array B**	**76.12**	**2**	P	**P**	**02 53 01.2**	**-1.4**
	comp=Z,0.7nm,0.7s,baz=20,slow=4.3,SNR=6.1						
GERES				pP	**pP**	**02 53 49.6**	**+1.1**
	comp=Z,0.6nm,0.7s,baz=0.0,slow=3.1,SNR=3.7						
VYHS	**Vyhne**	**76.46**	**358**	*e*P	**P**	**02 53 03.6**	**-0.9**
VYHS	**Vyhne**	**76.46**	**358**	*e*P	**P**	**02 53 03.6**	**-0.9**
BUR04	**Bucovina Ar. S**	**77.07**	**354**	*e*P	**P**	**02 53 07.9**	**-0.1**
BUR04				*e*pP	**pP**	**02 53 54.9**	**+1.0**
KIV	**Kislovodsk**	**78.46**	**341**	*e*P	**P**	**02 53 15.4**	**-0.3**
KIV				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KBZ	**Khabaz**	**78.64**	**340**	P	**P**	**02 53 17.5**	**+0.9**
	comp=Z,0.4nm,0.3s,baz=350,slow=4.2,SNR=4.2						
KBZ				pP	**pP**	**02 54 03.3**	**+0.7**
	comp=Z,2.8nm,0.8s,baz=207,slow=4.2,SNR=3.5						
NCK	**Nalchik**	**78.73**	**340**	*i* P	**P**	**02 53 17.3**	**+0.2**
NCK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**78.91**	**286**	P	**P**	**02 53 18.6**	**+0.2**
	comp=Z,1.8nm,0.3s,baz=12,slow=5.6,SNR=4.2						
CMAR				pP	**pP**	**02 54 04.8**	**+0.2**
	comp=Z,2.7nm,0.8s,baz=18,slow=6.0,SNR=1.8						
OBIP	**Obispado Ponce**	**79.49**	**74**	*e*P	**P**	**02 53 22.7**	**+1.1**
	comp=Z,22nm,0.7s						
SJG	**San Juan**	**79.68**	**73**	*e*P	**P**	**02 53 23.3**	**+0.7**
	comp=Z,20nm,0.8s						
SJG	**San Juan**	**79.68**	**73**	*e*P	**P**	**02 53 23.3**	**+0.7**
SJG				pmax	pmax		
	comp=Z,20nm,0.8s						
AKT	**Akhty**	**79.78**	**336**	*e*P	**P**	**02 53 23.2**	**+0.3**
AKT				*e*		02 53 29.7	
AKT				*e**PP	**pP**	**02 54 11.3**	**+2.2**
AKT				*e**SP	**sP**	**02 54 30.8**	**+1.4**
AKT				pmax	pmax		
	comp=Z,8.0nm,0.9s						
AKT				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MTP	**Monte Pirata**	**80.02**	**73**	*e*P	**P**	**02 53 25.3**	**+0.9**
	comp=Z,32nm,1.0s						
ES19	**SONSECA Array**	**83.77**	**15**	*e*P	**P**	**02 53 43.8**	**0.0**
ES19				*e*pP	**pP**	**02 54 31.5**	**+1.1**
ESDC	**Sonseca Array**	**83.79**	**15**	P	**P**	**02 53 43.7**	**-0.1**
	comp=Z,1.2nm,0.7s,baz=347,slow=5.1,SNR=6.9						
ESDC				pP	**pP**	**02 54 31.3**	**+0.8**
	comp=Z,1.1nm,0.8s,baz=348,slow=4.3,SNR=4.9						
BRTR	**Keskin Array B**	**84.06**	**346**	P	**P**	**02 53 45.0**	**-0.3**
	comp=Z,1.4nm,0.9s,baz=48,slow=1.8,SNR=8.0						
BRTR				pP	**pP**	**02 54 32.7**	**+0.8**
	comp=Z,1.0nm,1.0s,baz=70,slow=1.4,SNR=3.2						
SDV	**Santo Domingo**	**84.70**	**82**	*e*P	**P**	**02 53 49.0**	**+0.1**
	comp=Z,9.1nm,0.8s						
RUSC	**La Rusia**	**85.75**	**86**	*e*P	**P**	**02 53 54.3**	**-0.2**
	comp=Z,25nm,1.6s						
CTAO	**Charters Tower**	**86.19**	**226**	*e*P	**P**	**02 53 55.2**	**-0.6**
CTAO	**Charters Tower**	**86.19**	**226**	*e*P	**P**	**02 53 55.2**	**-0.6**
MTN	**Manton Dam**	**86.82**	**242**	*e*P	**P**	**02 53 58.3**	**-0.7**
MTN				*e*pP	**pP**	**02 54 45.7**	**-0.2**
OTAV	**Otavalo**	**87.30**	**93**	*e*P	**P**	**02 54 03.1**	**+1.1**
	comp=Z,6.4nm,1.0s						
OTAV	**Otavalo**	**87.30**	**93**	*e*P	**P**	**02 54 03.1**	**+1.1**
OTAV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
WRAB	**Tennant Creek**	**91.32**	**236**	*e*P	**P**	**02 54 18.8**	**-1.2**
	comp=Z,2.5nm,0.9s						
WRAB	**Tennant Creek**	**91.32**	**236**	*ce*P	**P**	**02 54 18.4**	**-1.6**
WRAB				pmax	pmax		
	comp=Z,3.0nm,0.9s						
WB2	**Warramunga Arr**	**91.33**	**236**	*e*P	**P**	**02 54 18.9**	**-1.1**
WRA	**Warramunga Arr**	**91.33**	**236**	P	**P**	**02 54 18.9**	**-1.1**
	comp=Z,3.5nm,0.9s,baz=35,slow=6.0,SNR=24						
WRA				pP	**pP**	**02 55 07.4**	**+0.1**
	comp=Z,1.6nm,1.1s,baz=44,slow=5.5,SNR=3.5						
ASAR	**Alice Springs**	**94.73**	**234**	P	**P**	**02 54 34.6**	**-1.0**
	comp=Z,1.2nm,0.6s,baz=24,slow=4.3,SNR=10						
PLCA	**Paso Flores**	**124.08**	**114**	PKP	**PKPdf**	**03 00 11.2**	**0.0**
	comp=Z,2.7nm,0.8s,baz=265,slow=4.4,SNR=7.2						
TRQA	**Tornquist**	**126.75**	**106**	*e*PKPdf	**PKPdf**	**03 00 15.6**	**-0.7**
TRQA	**Tornquist**	**126.75**	**106**	*e*PKIKP	**PKPdf**	**03 00 15.6**	**-0.7**
QSPA	**South Pole Qui**	**145.16**	**180**	PKPbc	**PKPdf**	**03 00 49.1**	**-0.3**
	comp=Z,36nm,0.8s,baz=41,slow=1.2,SNR=82						
QSPA	**South Pole Qui**	**145.16**	**180**	*e*PKPbc	**PKPdf**	**03 00 48.5**	**-0.8**

MEX 13 02:44:35.3±0.4**,27°.98N**×**112°.03W,h5^{km}**±6^{km}**,MD3.8,**
Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SRIG	**Santa Rosalia**	**0.68**	**196**	*e*P	Pg	02 44 47.3	-1.1
SRIG				*e*S	Sg	02 44 57.0	-0.2
GUYB	**Guaymas**	**1.03**	**94**	*e*P	Pg	02 44 52.5	-2.5
GUYB				*e*S	Sg	02 45 05.7	-2.7
HSIG		**1.41**	**42**	*e*P	Pn	02 44 58.0	-3.6
HSIG				*i* S	Sb	02 45 15.5	-4.9

MEX 13 03:26:51.3±0.7**,14°.37N**×**94°.03W,h10^{km},MD3.9,Off**
coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		**1.54**	**31**	*e*P	Pn	03 27 15.0	-3.9
PCIG				*e*S	Sn	03 27 33.8	-5.3
THIG		**1.79**	**72**	*e*P	Pn	03 27 18.8	-3.5
THIG				*i* S	Sn	03 27 41.0	-4.2
TGIG		**2.55**	**20**	*e*P	Pn	03 27 30.7	-2.1
TGIG				*i* S	Sn	03 28 00.4	-3.6
CCIG	**Comitan**	**2.64**	**44**	*e*P	Pn	03 27 32.1	-2.0
CCIG				*i* S	Sn	03 28 02.6	-3.8

IDC 13 03:28:19.4±1.2**,2°.97S**×**129°.37E,h0^{km},mb3.7**/3**,**
mb1 4.1/5**,mb1mx3.5**/59**,mbtmp3.9**/5**,ML4.1**/2**,Error**
ellipse: s-maj=34.5km s-min=22.8km az=88.0,Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**2.82**	**42**	Pn	Pn	03 29 06.3	+0.5
	30nm,0.3s,baz=269,slow=18,SNR=71						
SIJI				Sn	Sn	03 29 39.9	-0.7
	25nm,0.3s,baz=119,slow=23,SNR=9.2						
FITZ	**Fitzroy Crossi**	**15.47**	**193**	Pn	P	03 32 02.1	-1.7
	0.3nm,0.3s,baz=45,slow=11,SNR=9.4						
WRA	**Warramunga Arr**	**17.55**	**164**	P	Pn	03 32 24.8	-0.9
	0.7nm,0.3s,baz=346,slow=12,SNR=33						
ASAR	**Alice Springs**	**21.04**	**168**	P	P	03 33 05.3	+0.3
	4.6nm,0.6s,baz=350,slow=10.0,SNR=29						
MKAR	**Makanchi Array**	**64.54**	**326**	P	P	03 38 58.3	-0.1
	0.4nm,0.7s,baz=116,slow=6.7,SNR=2.5						
KURBB	**Kurchatov Arra**	**68.78**	**328**	P	P	03 39 25.4	+0.1
	0.4nm,0.6s,baz=129,slow=5.9,SNR=3.9						

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*ISCJB **13** 03:41:06.4±0.8,7°.79S±0°.06×124°.90E±0°.05,h10^{km},*
mb3.8/2,Error ellipse: s-maj=8.8km s-min=7.1km az=15.1
*IDC **13** 03:41:07.2±1.4,7°.73S×124°.67E,h0^{km},mb3.7/2,*
mb1 4.2/5,mb1mx3.7/56,mbtmp4.0/5,ML3.9/3,MS2.9/4,
Ms1 2.9/4,ms1mx2.5/47,Error ellipse: s-maj=40.3km
s-min=15.4km az=95.0
*DJA **13** 03:41:12.9±0.7,8°S±2°×12°5E±°,h16^{km}±5^{km},M4.1/7,*
mB5.0/2,mb4.4/3,MLv4.0/7,Mw(mB)4.4/2
ISC 13 03:41:09.9±1.1**,7°.77S**±0°.06×**124°.82E**±0°.06**,h10^{km},n16,**
σ2^{s}.68/17**,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	**Soe**	**2.04**	**195**	P	**Pn**	**03 41 46.6**	**+2.1**
SOEI				S	**Sn**	**03 42 11.8**	**+1.7**
SOEI				Sg	**Sg**	**03 42 18.3**	**+2.7**
BATI	**Baumata**	**2.67**	**205**	Pg	**Pn**	**03 41 55.9**	**+2.8**
	22nm,0.3s,baz=120,slow=1.4,SNR=8.3						
BATI				Lg	Lg	03 42 31.6	
	15nm,0.3s,baz=302,slow=19,SNR=5.7						
BATI	**Baumata**	**2.67**	**205**	P	**Pn**	**03 41 55.4**	**+2.3**
MMRI	**Maumere**	**2.69**	**251**	P	**Pn**	**03 41 55.6**	**+2.3**
MMRI				S	**Sn**	**03 42 24.2**	**-1.8**
MMRI				Sg	**Sg**	**03 42 38.4**	**+1.9**
EDFI	**Ende, Flores**	**3.24**	**252**	P	**Pn**	**03 42 00.2**	**-0.8**
NLAI	**Namlea**	**5.04**	**27**	P	**Pn**	**03 42 28.8**	**+3.1**
BKSI	**Bulukumba**	**5.26**	**297**	P	**Pn**	**03 42 28.3**	**-0.4**
SPSI	**Sidrap Palu**	**6.29**	**307**	P	**Pn**	**03 42 44.2**	**+1.4**
FITZ	**Fitzroy Crossi**	**10.29**	**176**	Pn	**Pn**	**03 43 36.3**	**-1.5**
	0.3nm,0.3s,baz=345,slow=12,SNR=11						
FITZ				Sn	Sn	03 45 25.8	-7.5
	0.3nm,0.3s,baz=96,slow=21,SNR=2.7						
FITZ				LR	LR	03 47 16.8	
	comp=Z,44nm,19.7s,baz=334,slow=36						
WRA	**Warramunga Arr**	**15.21**	**144**	Pn	**Pn**	**03 44 43.5**	**-1.5**
	0.9nm,0.3s,baz=315,slow=13,SNR=77						
WRA				Sn	**Sn**	**03 47 27.4**	**-6.3**
	0.2nm,0.3s,baz=322,slow=24,SNR=5.2						
ASAR	**Alice Springs**	**18.05**	**152**	P	**Pn**	**03 45 22.1**	**+1.1**
	0.5nm,0.3s,baz=329,slow=12,SNR=24						
ASAR				S	Sn	03 48 34.1	-8.4
	baz=202,slow=27,SNR=5.6						
STKA	**Stephens Creek**	**28.62**	**149**	LR	LR	04 01 32.9	
	comp=Z,52nm,18.4s,baz=216,slow=43						
CMAR	**Chiang Mai Arr**	**36.49**	**316**	LR	LR	04 04 33.1	
	comp=Z,16nm,19.1s,baz=195,slow=39						
KSRS	**Korea Array**	**45.09**	**3**	LR	LR	04 10 01.0	
	comp=Z,8.3nm,20.8s,baz=215,slow=38						
SONM	**Songino Array**	**57.72**	**345**	P	P	03 50 59.0	-2.0
	0.7nm,0.8s,baz=166,slow=9.7,SNR=4.8						
MKAR	**Makanchi Array**	**66.17**	**329**	P	**P**	**03 51 56.1**	**-1.6**
	1.0nm,0.7s,baz=125,slow=9.3,SNR=2.9						

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*ISCJB **13** 03:47:17.5±0.7,38°.28N±0°.06×70°.49E±0°.07,h23^{km},*
mb3.7/10,MS2.9/5,Error ellipse: s-maj=8.6km
s-min=7.6km az=155.4
*NNC **13** 03:47:21.3±2.6,38°.56N×70°.66E,h0^{km},mb4.6,mpv4.3,*
Error ellipse: s-maj=20.8km s-min=14.8km az=11.0
*IDC **13** 03:47:21.2±5.4,38°.42N×70°.67E,h33^{km}±36^{km},mb3.6/10,*
mb1 3.8/17,mb1mx3.6/71,mbtmp3.9/17,ML3.4/7,MS2.9/10,
Ms1 2.9/10,ms1mx2.7/64,Error ellipse: s-maj=35.3km
s-min=15.8km az=12.0
ISC 13 03:47:19.4±1.0**,38°.30N**±0°.09×**70°.57E**±0°.07**,h23^{km},n35,**
σ1^{s}.71/31**,mb3.8**/10**,MS3.0**/5**,11C-7D,**
Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**2.85**	**52**	⇑Pn	**Pn**	**03 48 06.3**	**+2.6**
	94nm,0.5s						
SFK				⇑Lg	Lg	03 48 47.3	
	441nm,0.9s						
TAS	**Tashkent**	**3.19**	**342**	⇓Pn	**Pn**	**03 48 10.9**	**+2.8**
	255nm,0.7s						
TAS				⇑Lg	Lg	03 48 54.1	
	824nm,0.5s						
MNAS	**Manas**	**4.44**	**19**	⇓Pn	**Pn**	**03 48 25.7**	**+0.2**
	34nm,0.6s						
MNAS				⇑Sn	**Sn**	**03 49 17.8**	**+1.3**
	67nm,0.9s						
MNAS				⇓Lg	Lg	03 49 33.8	
	285nm,1.1s						
AML	**Almayashu**	**4.52**	**31**	P	**Pn**	**03 48 29.0**	**+2.2**
	SNR=12						
KK31	**Karatay Array**	**4.80**	**359**	⇑Pn	**Pn**	**03 48 28.5**	**-1.9**
	6.7nm,0.3s,baz=177,slow=5.7,SNR=135						
KK31				⇓Pg	**Pb**	**03 48 41.6**	**-1.2**
	33nm,0.6s,baz=182,slow=16,SNR=14						
KK31				⇓Sn	**Sn**	**03 49 27.1**	**+1.9**
	34nm,0.6s,baz=247,slow=11,SNR=4.2						
KK31				⇓Lg	Lg	03 49 42.8	
	136nm,0.8s,baz=173,slow=28,SNR=9.1						
EKS2	**Erkin-Say**	**5.00**	**28**	P	Pn	03 48 38.4	+5.2
	SNR=27						
KZA	**Kyzart**	**5.21**	**42**	P	Pb	03 48 43.5	-6.5
	SNR=6.5						
AAK	**Ala-Archa**	**5.27**	**33**	Pn	**Pn**	**03 48 38.2**	**+1.3**
	3.9nm,0.3s,baz=225,slow=9.2,SNR=26						
AAK				Lg	Lg	03 50 01.3	
	1.7nm,0.3s,baz=343,slow=17,SNR=5.7						
KBK	**Karagaybulak**	**5.49**	**36**	P	Pn	03 48 45.0	+5.1
	SNR=42						
CHMS	**Chumysh**	**5.67**	**33**	P	Pn	03 48 48.6	+6.3
	SNR=16						
USP	**Ospenovka**	**5.79**	**30**	P	Pn	03 48 49.1	+5.2
	SNR=17						
TKM2	**Tokmak 2**	**6.00**	**38**	⇑Pn	**Pn**	**03 48 47.1**	**+0.2**
	21nm,0.7s						
TKM2				⇑Sn	**Sn**	**03 49 56.3**	**+1.3**
	18nm,0.8s						
TKM2				⇓Lg	Lg	03 50 22.3	
	61nm,0.9s						
TKM2	**Tokmak 2**	**6.00**	**38**	P	Pn	03 48 51.6	+4.6
	SNR=27						
MKAR	**Makanchi Array**	**12.11**	**42**	Pn	**Pn**	**03 50 09.6**	**-0.9**
	0.2nm,0.3s,baz=231,slow=14,SNR=16						
MKAR				LR	LR	03 54 59.0	
	comp=Z,31nm,18.2s,baz=211,slow=38						
AB31	**Akbulak array**	**13.36**	**328**	⇑Pn	**Pn**	**03 50 28.1**	**+0.5**
	4.9nm,0.5s,baz=146,slow=11,SNR=100						
AB31				⇑Sn	**Sn**	**03 52 56.5**	**+1.3**
	5.4nm,0.6s,baz=290,slow=73,SNR=9.4						
KURBB	**Kurchatov Arra**	**13.56**	**22**	Pn	**Pn**	**03 50 27.1**	**-3.2**
	0.1nm,0.3s,baz=215,slow=13,SNR=6.1						
BVAR	**Borovoye Array**	**14.73**	**360**	Pn	**Pn**	**03 50 43.4**	**-2.8**
	1.0nm,0.3s,baz=168,slow=12,SNR=10.0						
BVAR				LR	LR	03 56 42.9	
	comp=Z,58nm,21.2s,baz=196,slow=38						
AKTO	**Aktyubinsk**	**15.07**	**328**	Pn	**Pn**	**03 50 48.4**	**-2.3**
	0.5nm,0.3s,baz=145,slow=13,SNR=14						
AKTO				LR	LR	03 57 51.6	
	comp=Z,16nm,20.2s,baz=168,slow=42						
AKTO	**Aktyubinsk**	**15.07**	**328**	⇑Pn	**Pn**	**03 50 51.0**	**+0.3**
	9.1nm,1.1s						
AKTO				⇑Sn	**Sn**	**03 53 39.9**	**+3.1**
	5.7nm,0.6s						
WSAR	**Wadi Sarin**	**18.15**	**218**	LR	LR	04 00 22.3	
	comp=Z,87nm,20.4s,baz=140,slow=43						
ZALV	**Zalesovo Beam**	**18.45**	**27**	P	**Pn**	**03 51 30.7**	**-2.7**
	0.2nm,0.3s,baz=219,slow=11,SNR=7.7						
ZALV				LR	LR	03 59 06.3	
	comp=Z,46nm,18.6s,baz=248,slow=38						
ARU	**Arti**	**19.83**	**340**	P	**P**	**03 51 48.3**	**0.0**
	0.0nm,0.3s,baz=141,slow=9.2,SNR=7.2						
KBZ	**Khabaz**	**21.52**	**293**	P	**P**	**03 52 08.1**	**+1.4**
	2.9nm,0.7s,baz=132,slow=5.1,SNR=5.8						
KBZ				LR	LR	04 02 36.2	
	comp=Z,39nm,19.4s,baz=142,slow=42						
SONM	**Songino Array**	**27.64**	**58**	P	**P**	**03 53 05.6**	**+0.3**
	0.4nm,0.6s,baz=262,slow=9.1,SNR=3.6						
MLR	**Muntele Rosu**	**33.63**	**297**	LR	LR	04 10 10.2	
	comp=Z,6.1nm,21.9s,baz=166,slow=41						
FINES	**FINESS Array B**	**35.81**	**325**	P	**P**	**03 54 15.5**	**-1.1**
	1.1nm,0.6s,baz=111,slow=11,SNR=6.4						
ARCES	**ARCESS Array B**	**39.36**	**337**	P	**P**	**03 54 45.5**	**-1.1**
	0.8nm,0.5s,baz=99,slow=8.0,SNR=11						
HFS	**Hagfors**	**41.45**	**321**	P	**P**	**03 55 03.2**	**-0.8**
	1.1nm,0.6s,baz=106,slow=11,SNR=8.7						
HFS				LR	LR	04 13 26.3	
	comp=Z,22nm,20.2s,baz=103,slow=38						
GERES	**GERESS Array B**	**41.63**	**304**	LR	LR	04 13 15.6	
	comp=Z,24nm,21.0s,baz=88,slow=37						
SPITS	**Spitsbergen Ar**	**45.67**	**346**	LR	LR	04 17 57.2	
	comp=Z,20nm,19.0s,baz=215,slow=40						
ESDC	**Sonseca Array**	**56.33**	**297**	P	**P**	**03 56 58.2**	**-0.3**
	0.3nm,0.6s,baz=64,slow=8.1,SNR=4.1						
INK	**Inuvik**	**72.19**	**9**	P	**P**	**03 58 41.2**	**-0.6**
	1.1nm,0.5s,baz=338,slow=5.4,SNR=11						
ILAR	**Eielson Array**	**73.15**	**16**	P	**P**	**03 58 48.0**	**+0.4**
	0.3nm,0.8s,baz=321,slow=4.4,SNR=5.1						
YKA	**Yellowknife Ar**	**79.47**	**2**	P	**P**	**03 59 23.5**	**-0.1**
	0.5nm,0.4s,baz=352,slow=5.5,SNR=4.1						
WRA	**Warramunga Arr**	**83.23**	**122**	P	**P**	**03 59 44.7**	**+0.6**
	0.8nm,0.6s,baz=325,slow=4.9,SNR=15						

NNC 13 04:16:49.1±2.7**,36°.98N**×**71°.11E,h0^{km},mb3.6,mpv3.2,**
2C-3D,Error ellipse: s-maj=21.0km s-min=18.7km
az=145.0,Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**3.57**	**31**	⇓Pn	Pn	04 17 46.0	+0.1
	1.3nm,0.3s						
SFK				⇑Sn	Sn	04 18 30.3	+1.4
	4.0nm,0.3s						
MNAS	**Manas**	**5.61**	**11**	⇑Pn	Pn	04 18 13.5	-0.4
	0.9nm,0.3s						
MNAS				⇓Sn	Sn	04 19 19.2	+0.1
	3.8nm,0.4s						
KK31	**Karatay Array**	**6.14**	**356**	Pn	Pn	04 18 21.1	+0.1
	1.5nm,0.4s,baz=179,slow=13,SNR=25						
KK31				⇓Sn	Sn	04 19 34.1	+2.2
	2.9nm,0.5s,baz=177,slow=21,SNR=8.3						

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*ISCJB **13** 04:18:19.2±0.8,21°.95N±0°.09×143°.4E±0°.2,h200^{km},*
mb3.5/10,Error ellipse: s-maj=24.7km s-min=11.7km
az=168.2
*IDC **13** 04:18:19.2±2.5,21°.92N×143°.39E,h184^{km}±21^{km},*
mb3.4/11,mb1 3.6/13,mb1mx3.3/69,mbtmp3.9/13,Error
ellipse: s-maj=23.4km s-min=15.1km az=94.0
ISC 13 04:18:20.7±0.8**,22°.0N**±0°.1×**143°.3E**±0°.2**,h200^{km},n15,**
σ0^{s}.89/15**,mb3.6**/10**,Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	**Chichijima**	**5.21**	**349**	P	**Pn**	**04 19 37.8**	**+0.1**
	18nm,0.3s,baz=272,slow=22,SNR=24						
JCJ				S	**Sn**	**04 20 36.6**	**-2.1**
MJAR	**Matsushiro Arr**	**15.18**	**344**	P	**P**	**04 21 46.2**	**+0.6**
	1.1nm,0.3s,baz=159,slow=9.5,SNR=8.9						
KSRS	**Korea Array**	**20.36**	**323**	P	Pn	04 22 44.5	-2.4
	3.1nm,0.6s,baz=148,slow=9.0,SNR=17						
KLR	**Kul'dur**	**28.71**	**344**	P	**P**	**04 23 59.8**	**+0.6**
	0.4nm,0.5s,baz=160,slow=9.0,SNR=21						
SONM	**Songino Array**	**39.19**	**320**	P	**P**	**04 25 29.9**	**+0.5**
	0.5nm,0.5s,baz=134,slow=7.8,SNR=4.2						
SEY	**Seymchan**	**41.42**	**6**	P	**P**	**04 25 48.1**	**+0.9**
	2.0nm,0.6s,baz=192,slow=14,SNR=6.7						
WRA	**Warramunga Arr**	**42.55**	**192**	P	**P**	**04 25 56.1**	**-0.8**
	0.5nm,0.3s,baz=17,slow=10.0,SNR=35						
KURBB	**Kurchatov Arra**	**57.39**	**317**	P	**P**	**04 27 48.6**	**+0.4**
	1.0nm,0.3s,baz=94,slow=7.7,SNR=8.4						
ILAR	**Eielson Array**	**61.77**	**27**	P	**P**	**04 28 16.7**	**-1.1**
	0.8nm,0.7s,baz=265,slow=5.2,SNR=11						
INK	**Inuvik**	**67.30**	**24**	P	**P**	**04 28 53.6**	**+0.1**
	0.7nm,0.7s,baz=274,slow=4.5,SNR=3.8						
YKA	**Yellowknife Ar**	**76.19**	**28**	P	**P**	**04 29 46.6**	**0.0**
	0.8nm,0.7s,baz=292,slow=5.8,SNR=3.0						
NVAR	**Mina Array Bea**	**82.92**	**52**	P	**P**	**04 30 24.2**	**+0.6**
	0.5nm,0.6s,baz=285,slow=6.0,SNR=5.6						
FINES	**FINESS Array B**	**82.98**	**334**	P	**P**	**04 30 22.5**	**-0.6**
	1.0nm,0.6s,baz=52,slow=9.9,SNR=3.9						
PLCA	**Paso Flores**	**145.87**	**131**	PKPbc	**PKPab**	**04 37 36.8**	**-0.8**
	4.8nm,0.8s,baz=243,slow=4.2,SNR=7.8						
LPAZ	**La Paz**	**149.83**	**85**	PKPbc	**PKPbc**	**04 37 48.9**	**+0.3**
	2.3nm,0.6s,baz=337,slow=2.9,SNR=20						

IDC 13 04:29:33.9±4.6**,7°.34S**×**130°.44E,h35^{km}**±45^{km}**,mb4.0**/2**,**
mb1 3.9/6**,mb1mx3.5**/59**,mbtmp4.0**/6**,ML3.8**/4**,MS2.4**/1**,**
Ms1 2.4/1**,ms1mx2.0**/56**,Error ellipse: s-maj=59.6km**
s-min=27.1km az=94.0,Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**6.48**	**7**	Pn	Pn	04 31 07.0	+0.1
	2.8nm,0.3s,baz=218,slow=20,SNR=9.8						
SIJI				Sn	Sn	04 32 12.2	-7.5
	3.9nm,0.3s,baz=268,slow=23,SNR=8.5						
FITZ	**Fitzroy Crossi**	**11.67**	**203**	Pn	Pn	04 32 18.2	+0.2
	0.6nm,0.3s,baz=31,slow=8.4,SNR=34						
FITZ				Sn	Sn	04 34 21.6	-5.5
	0.7nm,0.3s,baz=122,slow=10,SNR=8.3						
FITZ				LR	LR	04 37 20.0	
	comp=Z,20nm,21.1s,baz=282,slow=40						
WRA	**Warramunga Arr**	**13.08**	**164**	Pn	Pn	04 32 36.5	-0.9
	0.4nm,0.3s,baz=348,slow=13,SNR=32						
WRA				Sn	Sn	04 34 55.9	-5.9
	1.4nm,0.3s,baz=336,slow=23,SNR=8.9						
ASAR	**Alice Springs**	**16.57**	**169**	Pn	Pn	04 33 24.4	+0.7
	0.3nm,0.3s,baz=343,slow=9.3,SNR=13						

ASAR				Sn	Sn	04 36 23.4	-3.2
	0.2nm,0.3s,baz=354,slow=25,SNR=6.0						
MKAR	**Makanchi Array**	**68.75**	**327**	P	P	04 40 34.0	-0.2
	1.2nm,0.4s,baz=119,slow=8.0,SNR=23						
SEY	**Seymchan**	**72.06**	**10**	P	P	04 40 54.5	+0.4
	1.3nm,0.2s,baz=176,slow=4.1,SNR=4.1						

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*ISCJB **13** 04:34:56.9±0.7, 51.°39N±0.°03×16.°10E±0.°03, h0^{km}, Error ellipse: s-maj=4.9km s-min=2.8km az=18.3*

*CSEM **13** 04:34:58.1±0.4, 51.°43N×16.°08E, h2^{km}, ML3.0/12, Error ellipse: s-maj=7.0km s-min=4.3km az=7.0*

*PRU **13** 04:34:58.9, 51.°42N×16.°09E, h0^{km}*

*VIE **13** 04:34:59.5±0.9, 51.°31N×15.°96E, h0^{km}, mb2.4/3, ml2.4/6, Error ellipse: s-maj=7.2km s-min=5.1km az=30.0 76 km WNW of Wroclaw Suspected Mining induced.*

ISC 13 04:34:57.9±1.2**, 51.°45N**±0.°05×**16.°10E**±0.°02**, h0**^{km}**, n46, σ0^{s}75**/79**, 1D, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.62**	**168**	*i* Pg	**Pg**	**04 35 09.9**	**+0.2**
KSP				*e*Sg	**Sg**	**04 35 18.3**	**+0.6**
KSP	**Ksiaz**	**0.62**	**168**	⇓*i*Pg	**Pg**	**04 35 09.9**	**+0.2**
KSP				*e*Sg	**Sg**	**04 35 18.3**	**+0.6**
UPC	**Upice**	**0.94**	**183**	*e*PG	**Pg**	**04 35 16.1**	**+0.2**
UPC				*e*SG	**Sg**	**04 35 28.5**	**+0.4**
	comp=Z,52nm,0.4s						
UPC	**Upice**	**0.94**	**183**	Pg	**Pg**	**04 35 16.1**	**+0.2**
UPC				Sg	**Sg**	**04 35 28.5**	**+0.4**
	52nm,0.4s						
DPC	**Dobruska-Polom**	**1.11**	**172**	*e*PG	**Pg**	**04 35 18.8**	**-0.3**
DPC				*e*SG	**Sg**	**04 35 33.5**	**+0.1**
	comp=Z,17nm,0.4s						
DPC	**Dobruska-Polom**	**1.11**	**172**	Pg	**Pg**	**04 35 18.8**	**-0.3**
DPC				Sg	**Sg**	**04 35 33.5**	**+0.1**
	17nm,0.4s						
PVCC	**Panska Ves**	**1.33**	**227**	*e*PG	**Pg**	**04 35 23.3**	**-0.1**
PVCC				*e*SG	**Sb**	**04 35 41.7**	**+0.4**
	comp=Z,52nm,0.2s						
PVCC	**Panska Ves**	**1.33**	**227**	Pg	**Pg**	**04 35 23.3**	**-0.1**
PVCC				Sg	**Sb**	**04 35 41.7**	**+0.4**
	52nm,0.2s						
KRLC	**Kraliky**	**1.44**	**162**	*e*SG	**Sg**	**04 35 42.8**	**-1.4**
	comp=Z,6.6nm,0.6s						
KRLC	**Kraliky**	**1.44**	**162**	Sg	**Sg**	**04 35 42.8**	**-1.4**
	6.6nm,0.6s						
BRG	**Berggiesshubel**	**1.47**	**248**	PG	**Pn**	**04 35 25.6**	**0.0**
BRG				SG	**Sn**	**04 35 45.8**	**+0.2**
	31nm,0.4s						
PRA	**Prague**	**1.74**	**218**	*e*SG	**Sg**	**04 35 54.4**	**+0.8**
	17nm,0.5s						
PRA	**Prague**	**1.74**	**218**	Sg	**Sg**	**04 35 54.4**	**+0.8**
	17nm,0.5s						
GOPC	**GO Pecny, Ondr**	**1.75**	**209**	*e*PG	**Pb**	**04 35 30.3**	**-0.5**
GOPC	**GO Pecny, Ondr**	**1.75**	**209**	Pg	**Pb**	**04 35 30.3**	**-0.5**
PRU	**Pruhonice**	**1.76**	**215**	*e*PN	**Pn**	**04 35 29.2**	**-0.4**
PRU				*e*PG	**Pb**	**04 35 30.8**	**-0.3**
PRU				*e*SG	**Sb**	**04 35 53.7**	**0.0**
	comp=Z,12nm,0.6s						
PRU	**Pruhonice**	**1.76**	**215**	Pn	**Pn**	**04 35 29.2**	**-0.4**
MORC	**Moravsky Berou**	**1.91**	**151**	*e*Pn	**Pn**	**04 35 30.5**	**-1.2**
MORC				*e*Sg	**Sb**	**04 35 58.2**	**+0.2**
MORC	**Moravsky Berou**	**1.91**	**151**	*e*PN	**Pn**	**04 35 30.5**	**-1.2**
MORC				*e*SG	**Sb**	**04 35 58.2**	**+0.2**
CLL	**Collm**	**1.94**	**267**	*e*Pg	**Pn**	**04 35 33.0**	**+0.9**
CLL				*i*		04 35 38.1	
CLL				*e*Sg	**Sg**	**04 36 00.0**	**-0.2**
	comp=Z,9.0nm,0.4s						
CLL				*e*		04 36 13.0	
OKC	**Ostrava-Krasne**	**2.08**	**140**	*e*SG	**Sb**	**04 36 02.2**	**-0.5**
	comp=Z,12nm,0.5s						
OKC	**Ostrava-Krasne**	**2.08**	**140**	Sg	**Sb**	**04 36 02.2**	**-0.5**
	comp=Z,12nm,0.5s						
VRAC	**Vranov**	**2.17**	**171**	*e*Pn	**Pn**	**04 35 35.6**	**+0.4**
VRAC				*e*Sg	**Sb**	**04 36 05.9**	**+0.6**
VRAC	**Vranov**	**2.17**	**171**	*e*PN	**Pn**	**04 35 35.6**	**+0.4**
VRAC				*e*SG	**Sb**	**04 36 05.9**	**+0.6**
KRUC	**Moravsky**	**2.40**	**175**	*e*Pn	**Pb**	**04 35 41.5**	**-0.4**
KRUC				*e*Sg	**Sg**	**04 36 15.0**	**+0.2**
KRUC	**Moravsky**	**2.40**	**175**	*e*PN	**Pb**	**04 35 41.5**	**-0.4**
KRUC				*e*SG	**Sg**	**04 36 15.0**	**+0.2**
NKC	**Novy Kostel**	**2.61**	**244**	*e*PN	**Pn**	**04 35 41.3**	**0.0**
NKC				*e*PG	**Pg**	**04 35 46.9**	**-1.0**
NKC				*e*SG	**Sg**	**04 36 22.9**	**+1.2**
	comp=Z,16nm,0.3s						
NKC	**Novy Kostel**	**2.61**	**244**	Pn	**Pn**	**04 35 41.3**	**0.0**
OJC	**Ojcow**	**2.65**	**116**	*e*Pg	**Pg**	**04 35 48.7**	**+0.1**
OJC				*e*Sg	**Sg**	**04 36 23.3**	**+0.3**
OJC	**Ojcow**	**2.65**	**116**	*e*Pg	**Pg**	**04 35 48.7**	**+0.1**
OJC				*e*Sg	**Sg**	**04 36 23.3**	**+0.3**
JAVC	**Velka Javorina**	**2.78**	**158**	*e*Pn	**Pn**	**04 35 44.7**	**+1.0**
JAVC	**Velka Javorina**	**2.78**	**158**	*e*PN	**Pn**	**04 35 44.7**	**+1.0**
JAVC				*e*SG	**Sg**	**04 36 28.3**	**+1.1**
KHC	**Kasperske Hory**	**2.83**	**216**	*e*PN	**Pn**	**04 35 44.4**	**+0.1**
KHC				*e*PG	**Pb**	**04 35 50.0**	**+0.8**
KHC				*e*SN	**Sn**	**04 36 17.5**	**-1.6**
KHC				*e*SG	**Sg**	**04 36 28.0**	**-0.6**
	comp=Z,5.8nm,0.3s						
KHC	**Kasperske Hory**	**2.83**	**216**	Pn	**Pn**	**04 35 44.4**	**+0.1**
LANS	**Liptovska Anna**	**3.16**	**135**	*e*SG	**Sg**	**04 36 39.2**	**0.0**
LANS	**Liptovska Anna**	**3.16**	**135**	*e*Sg	**Sg**	**04 36 39.3**	**0.0**
MODS	**Modra-Piesok**	**3.17**	**166**	*e*PG	**Pg**	**04 35 59.5**	**+0.9**
MODS				*e*SG	**Sg**	**04 36 38.4**	**-1.3**
MODS				*e*LG	Lg	04 36 44.6	
MODS	**Modra-Piesok**	**3.17**	**166**	*e*Pg	**Pg**	**04 35 59.5**	**+0.9**
CONA	**Conrad Observa**	**3.53**	**183**	*i* Pn	**Pn**	**04 35 54.5**	**+0.5**
	comp=Z,0.9nm,0.4s						
CONA				*e*Pg	**Pg**	**04 36 04.3**	**-1.1**
	comp=Z,2.3nm,0.4s						
CONA				Sg	**Sg**	**04 36 50.8**	**-0.3**
	comp=Z,4.5nm,0.4s						
CONA	**Conrad Observa**	**3.53**	**183**	Pn	**Pn**	**04 35 54.5**	**+0.5**
	comp=Z,0.9nm,0.4s						
MOA	**Molln**	**3.79**	**199**	Pg	**Pg**	**04 36 09.6**	**-0.9**
	comp=Z,1.1nm,0.2s						
MOA				Sg	**Sg**	**04 36 59.7**	**0.0**
	comp=Z,6.2nm,0.4s						
MOA	**Molln**	**3.79**	**199**	Pg	**Pg**	**04 36 09.6**	**-0.9**
	comp=Z,1.1nm,0.2s						
MOA				Sg	**Sg**	**04 36 59.7**	**0.0**
	comp=Z,6.2nm,0.4s						
ARSA	**Arzberg**	**4.22**	**185**	Sg	**Sg**	**04 37 15.1**	**+1.8**
	comp=Z,4.8nm,0.6s						
ARSA	**Arzberg**	**4.22**	**185**	Sg	**Sg**	**04 37 15.1**	**+1.8**
	comp=Z,4.8nm,0.6s						
KBA	**Koelnbreinsper**	**4.73**	**203**	*e*Pn	**Pn**	**04 36 12.3**	**+1.7**
	comp=Z,0.4nm,0.2s						
KBA				Sg	**Sg**	**04 37 29.0**	**-0.7**
	comp=Z,1.7nm,0.4s						
KBA	**Koelnbreinsper**	**4.73**	**203**	Pn	**Pn**	**04 36 12.3**	**+1.7**
	comp=Z,0.4nm,0.2s						
KBA				Sg	**Sg**	**04 37 29.0**	**-0.7**
	comp=Z,1.7nm,0.4s						

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*ISCJB **13** 04:42:08.7±0.3, 0.°12S±0.°04×130.°69E±0.°03, h10^{km}, mb4.4/17, MS3.1/2, Error ellipse: s-maj=5.9km s-min=4.3km az=33.9*

*IDC **13** 04:42:08.6±0.7, 0.°11S×130.°62E, h0^{km}, mb4.3/11, mb1 4.4/12, mb1mx4.0/61, mbtmp4.3/12, ML3.8/1, MS3.0/3, Ms1 3.0/3, ms1mx2.6/58, Error ellipse: s-maj=31.3km s-min=8.4km az=57.0*

*NEIC **13** 04:42:10.0±0.4, 0.°10S×130.°78E, h10^{km}, mb4.3/7, Error ellipse: s-maj=17.5km s-min=5.9km az=65.0*

*DJA **13** 04:42:14.1±0.9, 0°S±5°×13°1E±°, h37^{km}±24^{km}, M4.3/11, mb4.1/1, MLv4.4/11*

ISC 13 04:42:11.0±0.6**, 0.°19S**±0.°06×**130.°66E**±0.°04**, h10**^{km}**, n49, σ1^{s}38**/46**, mb4.4**/17**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**0.91**	**138**	Pg	**Pg**	**04 42 28.0**	**-0.5**
	177nm,0.3s,baz=277,slow=23,SNR=199						
SIJI				Lg	Lg	04 42 41.3	
	240nm,0.3s,baz=212,slow=23,SNR=34						
FAKI	**Fak Fak**	**3.14**	**150**	P	**Pn**	**04 43 01.0**	**+0.4**
FAKI				S	**Sn**	**04 43 35.7**	**-2.5**
FAKI	**Fak Fak**	**3.14**	**150**	*e*Pn	**Pn**	**04 43 00.5**	**-0.1**
LBMI	**Labuha**	**3.19**	**262**	P	**Pn**	**04 43 01.9**	**+0.6**
LBMI				S	**Sn**	**04 43 39.3**	**-0.1**
LBMI				Sg	**Sg**	**04 43 56.3**	**+2.7**
TNTI	**Ternate**	**3.43**	**286**	P	**Pn**	**04 43 05.9**	**+1.3**
TNTI	**Ternate**	**3.43**	**286**	*e*Pn	**Pn**	**04 43 06.3**	**+1.8**
MSAI	**Masohi**	**3.58**	**209**	P	**Pn**	**04 43 07.8**	**+1.2**
RKPI	**Ransiki, Papua**	**3.75**	**110**	P	**Pn**	**04 43 09.8**	**+0.8**
RKPI				Sg	**Sg**	**04 44 16.2**	**+4.5**
AAI	**Ambon**	**4.26**	**215**	P	**Pn**	**04 43 17.1**	**+1.2**
BNDI	**Bandanaira**	**4.37**	**190**	P	**Pn**	**04 43 18.4**	**+0.9**
NLAI	**Namlea**	**4.67**	**230**	P	**Pn**	**04 43 22.3**	**+0.7**
SANI	**Sanana**	**5.02**	**248**	P	**Pn**	**04 43 25.8**	**-0.7**
SAUI	**Saumlaki**	**7.76**	**175**	*e*Pn	**Pn**	**04 44 02.7**	**-1.4**
FITZ	**Fitzroy Crossi**	**18.46**	**195**	P	**P**	**04 46 24.9**	**-2.2**
	0.2nm,0.3s,baz=22,slow=10,SNR=7.0						
GUMO	**Guam**	**19.64**	**45**	LR	LR	04 52 48.9	
	comp=Z,20nm,20.2s,baz=184,slow=33						
WRAB	**Tennant Creek**	**19.95**	**170**	*e*P	**P**	**04 46 43.4**	**0.0**
	9.8nm,0.8s						
WRAB				*e*S	S	04 50 14.4	-14
WRA	**Warramunga Arr**	**19.96**	**170**	P	**P**	**04 46 43.0**	**-0.5**
	7.2nm,0.8s,baz=352,slow=12,SNR=43						
WRA				S	S	04 50 16.6	-12
	6.1nm,1.1s,baz=351,slow=22,SNR=7.6						
WB2	**Warramunga Arr**	**19.96**	**170**	*e*P	**P**	**04 46 43.5**	**0.0**
	10nm,0.9s						
AS31	**Alice Springs**	**23.55**	**173**	*e*P	**P**	**04 47 22.1**	**+0.4**
	5.2nm,0.6s						
ASAR	**Alice Springs**	**23.55**	**173**	P	**P**	**04 47 21.7**	**-0.1**
	11nm,0.7s,baz=355,slow=8.3,SNR=85						
ASAR				S	**S**	**04 51 38.7**	**+2.7**
	1.2nm,0.7s,baz=351,slow=23,SNR=5.4						
AS01	**Alice Springs**	**23.55**	**172**	*e*P	**P**	**04 47 21.7**	**-0.1**
CTA	**Charters Tower**	**24.98**	**143**	P	**P**	**04 47 36.6**	**+1.5**
	5.2nm,0.8s,baz=333,slow=11,SNR=6.7						
CTAO	**Charters Tower**	**24.98**	**143**	*e*P	**P**	**04 47 34.0**	**-1.1**
HNR	**Honiara**	**30.56**	**108**	LR	LR	05 01 04.7	
	comp=Z,94nm,20.1s,baz=190,slow=37						
JNU	**Nakatsue**	**33.14**	**0**	LR	LR	05 01 57.3	
	comp=Z,20nm,18.4s,baz=303,slow=36						
STKA	**Stephens Creek**	**33.17**	**163**	P	**P**	**04 48 48.4**	**+0.6**
	4.6nm,0.9s,baz=322,slow=12,SNR=3.5						
CM01	**Chiang Mai Arr**	**36.23**	**302**	*e*P	**P**	**04 49 14.9**	**+0.4**
CMAR	**Chiang Mai Arr**	**36.26**	**302**	P	**P**	**04 49 15.0**	**+0.2**
	2.4nm,0.6s,baz=120,slow=7.1,SNR=14						
CMMT	**Chiang Mai**	**36.41**	**303**	P	**P**	**04 49 17.0**	**+0.9**
CHTO	**Chiang Mai**	**36.42**	**303**	*e*P	**P**	**04 49 16.4**	**+0.3**
	4.0nm,0.7s						
CHTO	**Chiang Mai**	**36.42**	**303**	P	**P**	**04 49 17.7**	**+1.5**
	44nm,0.8s						
KS15	**Wonju Array Si**	**37.54**	**356**	*e*P	P	04 49 22.1	-3.3
HHC	**Hu-ho-hao-te**	**44.38**	**339**	*e*P	**P**	**04 50 22.3**	**+0.4**
HHC				pP	pP	04 50 26.8	+1.7
HHC				sP	sP	04 50 29.3	+3.0
HHC				pmax	pmax		
	comp=Z,18nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,5.0s						
GTA	**Gaotai**	**48.47**	**328**	*e*P	**P**	**04 50 53.9**	**-0.2**
GTA				pP	pP	04 50 57.8	+0.5
GTA				sP	sP	04 51 00.9	+2.4
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ULN	**Ulaanbaatar**	**52.08**	**340**	*e*P	**P**	**04 51 20.6**	**-0.7**
	comp=Z,1.9nm,0.6s						
WMQ	**Urumqi**	**58.17**	**325**	P	**P**	**04 52 05.1**	**-0.2**
MK01	**Makanchi Array**	**62.98**	**325**	*e*P	**P**	**04 52 36.8**	**-1.3**
MK31	**Makanchi Array**	**63.00**	**325**	*e*P	**P**	**04 52 37.9**	**-0.3**
MKAR	**Makanchi Array**	**63.00**	**325**	P	**P**	**04 52 36.6**	**-1.6**
	comp=Z,2.3nm,0.6s,baz=117,slow=8.5,SNR=14						
ZAA0	**Zalesovo Array**	**65.85**	**332**	*e*P	P	04 52 54.7	-1.9
	comp=Z,2.4nm,0.8s						
ZALV	**Zalesovo Beam**	**65.85**	**332**	P	P	04 52 54.7	-1.9
	comp=Z,0.9nm,0.4s,baz=124,slow=5.6,SNR=5.7						
ZALV	**Zalesovo Beam**	**65.85**	**332**	*e*P	**P**	**04 52 55.2**	**-1.4**
KURK	**Kurchatov**	**67.14**	**327**	*e*P	**P**	**04 53 04.0**	**-1.0**
KURBB	**Kurchatov Arra**	**67.14**	**327**	P	**P**	**04 53 03.6**	**-1.4**
	comp=Z,7.5nm,0.6s,baz=126,slow=5.8,SNR=43						
BVAR	**Borovoye Array**	**72.73**	**327**	P	**P**	**04 53 37.9**	**-1.4**
	comp=Z,1.8nm,0.8s,baz=114,slow=6.5,SNR=7.8						
BRVK	**Borovoye**	**72.80**	**327**	*e*P	**P**	**04 53 38.5**	**-1.3**
VNDA	**Vanda**	**79.09**	**173**	P	**P**	**04 54 14.3**	**-0.8**
	comp=Z,1.4nm,0.9s,baz=312,slow=5.5,SNR=6.2						
RAYN	**Ar Rayn**	**85.63**	**293**	*e*P	P	04 54 48.3	-2.2
	comp=Z,1.7nm,0.5s						
ARCES	**ARCESS Array B**	**95.45**	**340**	P	P	04 55 33.5	-2.2
	comp=Z,1.6nm,0.6s,baz=76,slow=6.4,SNR=8.2						

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*ASRS **13** 04:43:22.0, 53.°84N×91.°02E, M3.1, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

NNC 13 04:43:34.5±4.0**, 53.°38N**×**90.°41E, h0**^{km}**, mb4.1, mpv3.8, 8C-3D, Error ellipse: s-maj=31.8km s-min=27.7km az=74.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAA0	**Zalesovo Array**	**3.37**	**282**	⇑Pn	Pn	04 44 29.5	+1.1
	16nm,0.8s						
ZAA0				⇓Lg	Lg	04 45 20.3	
	83nm,0.9s						
KURK	**Kurchatov**	**7.74**	**255**	⇑Pn	Pn	04 45 28.4	0.0
	3.7nm,0.9s						
KURK				⇑Sn	Sn	04 46 59.6	+3.0
	12nm,1.0s						
KURK				⇓Lg	Lg	04 47 42.2	
	18nm,0.8s						
KURBB	**Kurchatov Arra**	**7.83**	**254**	⇑Pn	Pn	04 45 26.9	-2.7
	3.3nm,0.6s						
KURBB				⇑Sn	Sn	04 46 57.4	-1.5
	34nm,0.8s						
KURBB				⇑Lg	Lg	04 47 42.8	
	57nm,0.8s						
MK31	**Makanchi Array**	**8.40**	**222**	⇑Pn	Pn	04 45 36.4	-1.0
	7.9nm,1.4s,baz=31,slow=13,SNR=7.6						
MK31				⇑Sn	Sn	04 47 16.6	+3.7
	4.5nm,0.8s						
MK31				⇓Lg	Lg	04 48 02.6	
	11nm,0.9s,baz=38,slow=29						

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*BJI **13** 04:50:40.6, 17.°91S×178.°04W, h616^{km}, mb5.2/52, mB5.0/28*

*ISCJB **13** 04:50:41.0±0.4, 18.°30S±0.°03×178.°54W±0.°02, h616^{km}±6^{km}, mb5.1/343, Error ellipse: s-maj=4.3km s-min=3.0km az=150.9*

*MOS **13** 04:50:41.7±0.9, 18.°15S×178.°51W, h616^{km}, mb5.2/66, Error ellipse: s-maj=8.5km s-min=7.1km az=59.4*

*WEL **13** 04:50:44.0, 18.°27S×178.°55W, h644^{km}*

*GCMT **13** 04:50:44.6±0.3, 18.°27S×178.°33W, h645^{km}±2^{km}, MW5.2/75, Moment Tensor Solution. s75,c114; Duration: 1^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.79±.03; $M_{\theta\theta}$0.79±.04; $M_{\phi\phi}$0.00±.05; $M_{r\theta}$-0.41±.04; $M_{\theta\phi}$-0.15±.04; $M_{\phi r}$0.12±.05; Best double couple: $M_0$0.91000×10^{17} NP1:ϕ_s103.00000°, δ59.00000°, λ-87.00000°. NP2:ϕ_s278.00000°, δ31.00000°, λ-94.00000°. Principal axes: T 0.9210, Plg14.0000°, Azm191.0000°; N -0.0220, Plg2.0000°, Azm282.0000°; P -0.8990, Plg76.0000°, Azm21.0000°; nsta1 refers to body waves, cutoff=40s.*

*NEIC **13** 04:50:44.6±0.1, 18.°27S×178.°55W, mb5.1/280 Error ellipse: s-maj=4.3km s-min=2.5km az=140.0*

*IDC **13** 04:50:44.9±0.7, 18.°20S×178.°45W, h646^{km}±7^{km}, mb4.6/36, mb1 4.6/37, mb1mx4.5/51, mbtmp5.5/37, Error ellipse: s-maj=9.7km s-min=8.6km az=139.0*

ISC 13 04:50:42.8±0.5**, 18.°27S**±0.°04×**178.°37W**±0.°04**, h626**^{km}±5^{km}**, h628**^{km}**:pP-P, n1357, σ1^{s}21**/1399**, mb5.1**/342**, 53C-85D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.67**	**57**	P	**P**	**04 52 39.8**	**-0.5**
	45nm,0.3s,baz=12,slow=0.7,SNR=32						
AFI				S	**S**	**04 54 12.4**	**-4.0**
	3.6nm,0.3s,baz=68,slow=23,SNR=3.9						
AFI	**Afiamalu**	**7.67**	**57**	*e*P	**P**	**04 52 39.8**	**-0.5**
AFI				*e*S	**S**	**04 54 13.2**	**-3.2**
FUNA	**Funafuti**	**9.97**	**346**	*e*P	**P**	**04 53 00.3**	**-1.6**
RIZ	**Raoul Island**	**10.94**	**178**	P	**P**	**04 53 10.2**	**-1.0**
RAO	**Raoul Island**	**10.94**	**178**	P	**P**	**04 53 10.2**	**-1.0**
	206nm,0.3s,baz=74,slow=8.8,SNR=11						
RAO	**Raoul Island**	**10.94**	**178**	*e*P	**P**	**04 53 09.1**	**-2.1**
RAO				*e*S	**S**	**04 55 09.2**	**-3.8**
RAO	**Raoul Island**	**10.94**	**178**	*e*P	**P**	**04 53 09.1**	**-2.1**
RAO				*e*S	**S**	**04 55 09.2**	**-3.8**
GLKZ	**Green Lake**	**10.95**	**178**	P	**P**	**04 53 10.1**	**-1.3**
GLKZ				S	**S**	**04 55 10.3**	**-2.8**
DZM	**Mont Dzumac**	**14.75**	**253**	P	**P**	**04 53 48.5**	**+0.8**
	9.5nm,0.3s,baz=120,slow=3.5,SNR=46						
DZM				S	**S**	**04 56 20.3**	**+1.7**
	baz=348,slow=13,SNR=3.9						
DZM	**Mont Dzumac**	**14.75**	**253**	*e*P	**P**	**04 53 48.3**	**+0.5**
	87nm,0.9s						
DZM	**Mont Dzumac**	**14.75**	**253**	*e*P	**P**	**04 53 47.3**	**-0.5**
DZM				*e*S	**S**	**04 56 21.3**	**+2.7**
KNTN	**Kanton**	**16.72**	**24**	*e*P	**P**	**04 54 05.0**	**-0.7**
	377nm,0.8s						
OUZ	**Omahuta**	**18.33**	**201**	*e*P	**P**	**04 54 22.5**	**+2.4**
	175nm,0.6s						
OUZ	**Omahuta**	**18.33**	**201**	P	**P**	**04 54 23.2**	**+3.1**
GRZ	**Great Barrier**	**18.73**	**196**	P	**P**	**04 54 25.6**	**+2.0**
WCZ	**Waipu Caves**	**18.75**	**199**	P	**P**	**04 54 27.1**	**+3.2**
KUZ	**Kuaotunu**	**19.13**	**195**	P	**P**	**04 54 29.1**	**+1.8**
MXZ	**Matakaoa Point**	**19.45**	**188**	*e*P	**P**	**04 54 29.2**	**-0.9**
	134nm,0.5s						
MXZ	**Matakaoa Point**	**19.45**	**188**	P	**P**	**04 54 29.0**	**-1.2**
WMGZ	**Waiomatatini S**	**19.68**	**188**	P	**P**	**04 54 31.9**	**-0.4**
HAZ	**Te Kaha**	**19.71**	**189**	P	**P**	**04 54 31.3**	**-1.2**
PKGZ	**Pakihiroa**	**19.80**	**188**	P	**P**	**04 54 32.2**	**-1.2**
RUGZ	**Raukumara Rang**	**19.93**	**189**	P	**P**	**04 54 32.7**	**-1.9**
WHRZ	**Whale Island**	**19.94**	**191**	P	**P**	**04 54 36.0**	**+1.4**
PUZ	**Puketiti**	**19.95**	**188**	P	**P**	**04 54 33.9**	**-0.8**
TGRZ	**Tauranga**	**19.95**	**193**	P	**P**	**04 54 37.0**	**+2.3**
OPRZ	**Ohinepanea**	**20.01**	**192**	P	**P**	**04 54 35.1**	**-0.1**
TWGZ	**Tauwhareparae**	**20.09**	**188**	P	**P**	**04 54 35.0**	**-1.0**
MARZ	**Manawahe**	**20.12**	**191**	P	P	04 54 28.0	-8.3
KMRZ	**Kaimai**	**20.13**	**193**	P	**P**	**04 54 38.3**	**+1.9**
EDRZ	**Edgecumbe**	**20.23**	**191**	P	**P**	**04 54 37.0**	**-0.3**
KARZ	**Kaharoa**	**20.24**	**192**	P	**P**	**04 54 37.8**	**+0.5**
OMRZ	**Omania**	**20.30**	**192**	P	**P**	**04 54 38.5**	**+0.7**
MKRZ	**Makatiti**	**20.31**	**192**	P	**P**	**04 54 38.7**	**+0.7**
URZ	**Urewera**	**20.31**	**190**	P	**P**	**04 54 35.4**	**-2.5**
	118nm,0.3s,baz=282,slow=3.2,SNR=199						
URZ	**Urewera**	**20.31**	**190**	*e*P	**P**	**04 54 35.4**	**-2.5**
	196nm,0.6s						
URZ	**Urewera**	**20.31**	**190**	P	**P**	**04 54 35.5**	**-2.4**
MWZ	**Matawai**	**20.31**	**189**	P	**P**	**04 54 36.5**	**-1.5**
NGRZ	**Ngongotaha**	**20.33**	**192**	P	**P**	**04 54 40.5**	**+2.3**
CNGZ	**Carnagh Statio**	**20.36**	**188**	P	**P**	**04 54 38.4**	**0.0**
TKGZ	**Te Karaka**	**20.37**	**189**	P	**P**	**04 54 38.0**	**-0.4**
TARZ	**Mount Tarawera**	**20.39**	**192**	P	**P**	**04 54 38.9**	**+0.1**
HLRZ	**Highlands Stat**	**20.44**	**192**	P	**P**	**04 54 40.1**	**+1.0**
RAGZ	**Rawiri**	**20.49**	**189**	P	**P**	**04 54 39.3**	**-0.3**
RRRZ	**Republican Roa**	**20.49**	**192**	P	**P**	**04 54 39.9**	**+0.3**
MUGZ	**Murupara**	**20.58**	**191**	P	**P**	**04 54 38.8**	**-1.5**
HRRZ	**Handcock Road**	**20.59**	**192**	P	**P**	**04 54 40.6**	**+0.1**
RIGZ	**Rimuhau**	**20.64**	**189**	P	**P**	**04 54 40.5**	**-0.4**
PRRZ	**Plateau Road**	**20.67**	**192**	P	**P**	**04 54 40.6**	**-0.6**
RTZ	**Ruatahuna**	**20.68**	**190**	P	**P**	**04 54 39.4**	**-1.9**
TLZ	**Tolley Road**	**20.69**	**194**	P	**P**	**04 54 44.0**	**+2.7**
WPRZ	**Whakapapatarin**	**20.74**	**192**	P	**P**	**04 54 41.9**	**+0.2**
ALRZ	**Allen Road**	**20.74**	**192**	P	**P**	**04 54 41.2**	**-0.7**
KUTZ	**Kaahu Road**	**20.78**	**193**	P	**P**	**04 54 43.2**	**+1.1**
SNGZ	**Shannon Statio**	**20.78**	**189**	P	**P**	**04 54 41.0**	**-1.2**
PRGZ	**Paritu Road**	**20.84**	**188**	P	**P**	**04 54 43.8**	**+1.1**
MTHZ	**Maungataniwha**	**20.93**	**191**	P	**P**	**04 54 42.3**	**-1.2**
RAHZ	**Arahi**	**20.95**	**190**	P	**P**	**04 54 43.4**	**-0.3**
KNZ	**Kokohu**	**20.97**	**189**	P	**P**	**04 54 43.0**	**-0.8**
MRHZ	**Matea Rd**	**20.99**	**191**	P	**P**	**04 54 43.1**	**-1.0**
WATZ	**Wairara**	**21.01**	**193**	P	**P**	**04 54 44.8**	**+0.6**
HIZ	**Hauiti**	**21.02**	**195**	*e*P	**P**	**04 54 46.5**	**+2.2**
	116nm,0.8s						
HIZ	**Hauiti**	**21.02**	**195**	P	**P**	**04 54 46.9**	**+2.6**
MHGZ	**Mahia Peninsul**	**21.06**	**188**	P	**P**	**04 54 44.7**	**+0.1**
WHHZ	**Waihua**	**21.09**	**190**	P	**P**	**04 54 44.5**	**-0.3**
RATZ	**Rangitukua**	**21.15**	**193**	P	**P**	**04 54 45.1**	**-0.4**
RITZ	**Rihia Road**	**21.24**	**192**	P	**P**	**04 54 45.5**	**-0.8**
KATZ	**Kakaramea**	**21.27**	**193**	P	**P**	**04 54 46.3**	**-0.4**
BKZ	**Black Stump Fm**	**21.30**	**191**	*e*P	**P**	**04 54 45.0**	**-1.8**
	94nm,0.4s						
TWVZ	**Taurewa**	**21.42**	**193**	P	**P**	**04 54 47.2**	**-0.7**
WTVZ	**West Tongariro**	**21.43**	**193**	P	**P**	**04 54 46.4**	**-1.7**
NGZ	**Ngauruhoe**	**21.48**	**193**	P	**P**	**04 54 47.1**	**-1.5**
COVZ	**Chateau Observ**	**21.52**	**193**	P	**P**	**04 54 47.6**	**-1.3**
TUVZ	**Tukino**	**21.56**	**193**	P	**P**	**04 54 47.6**	**-1.7**
KWHZ	**Kaweka Forest**	**21.56**	**191**	P	**P**	**04 54 47.4**	**-1.8**
FWVZ	**Far West T-bar**	**21.57**	**193**	P	**P**	**04 54 47.8**	**-1.7**
DRZ	**Dome Shelter**	**21.59**	**193**	P	**P**	**04 54 49.2**	**-0.5**
WHVZ	**Whangaehu Hut**	**21.59**	**193**	P	**P**	**04 54 47.9**	**-1.7**
TRVZ	**Turoa**	**21.61**	**193**	P	**P**	**04 54 48.3**	**-1.5**
VRZ	**Vera Road**	**21.63**	**195**	P	**P**	**04 54 51.1**	**+1.4**
PKVZ	**Pokaka**	**21.65**	**193**	P	**P**	**04 54 49.2**	**-0.8**
MOVZ	**Moawhango**	**21.68**	**192**	P	**P**	**04 54 48.6**	**-1.6**
CKHZ	**Cape Kidnapper**	**21.68**	**190**	P	**P**	**04 54 49.3**	**-0.8**
BHHZ	**Black Hill Sta**	**21.69**	**192**	P	**P**	**04 54 47.7**	**-2.7**
KRHZ	**Kereru**	**21.79**	**191**	P	**P**	**04 54 48.8**	**-2.3**
KAHZ	**Kahuranaki**	**21.84**	**190**	P	**P**	**04 54 50.9**	**-0.8**
PKE	**Pukeiti**	**21.89**	**196**	P	**P**	**04 54 55.8**	**+3.8**
KHEZ	**Kahui Hut**	**21.97**	**196**	P	**P**	**04 54 55.8**	**+3.0**
LREZ	**Lake Rotokare**	**22.03**	**195**	P	**P**	**04 54 55.0**	**+1.7**
PNHZ	**Pukenui**	**22.08**	**191**	P	**P**	**04 54 51.9**	**-1.9**
PXZ	**Pawanui**	**22.08**	**190**	P	**P**	**04 54 49.0**	**-4.7**
NMEZ	**Namu Road**	**22.12**	**196**	P	**P**	**04 54 57.2**	**+3.2**
WAZ	**Wanganui**	**22.17**	**194**	P	**P**	**04 54 54.1**	**-0.5**
WPHZ	**Waipukurau**	**22.18**	**191**	P	**P**	**04 54 54.4**	**-0.2**
TSZ	**Takapari Road**	**22.26**	**192**	P	**P**	**04 54 54.4**	**-0.9**
DVHZ	**Dannevirke**	**22.46**	**191**	P	**P**	**04 54 55.3**	**-1.8**
ANWZ	**Angora Road**	**22.56**	**190**	P	**P**	**04 54 56.9**	**-1.0**
PRWZ	**Pori Road**	**22.74**	**191**	P	**P**	**04 54 58.0**	**-1.6**
BFZ	**Birch Farm**	**22.82**	**191**	*e*P	**P**	**04 54 58.8**	**-1.4**
	191nm,1.1s						
BFZ	**Birch Farm**	**22.82**	**191**	P	**P**	**04 54 58.7**	**-1.5**
SNZO	**South Karori**	**23.72**	**193**	*e*P	**P**	**04 55 07.2**	**-1.0**
	457nm,0.6s						
THZ	**Tophouse**	**24.58**	**196**	*e*P	**P**	**04 55 15.1**	**-0.7**
	342nm,0.3s						
THZ				*e*S	**S**	**04 58 52.4**	**-2.2**
KHZ	**Kahutara**	**25.04**	**194**	*e*P	**P**	**04 55 18.8**	**-1.0**
	187nm,0.5s						
KHZ				*e*S	**S**	**04 59 03.9**	**+2.2**
LTZ	**Lake Taylor**	**25.70**	**196**	*e*P	**P**	**04 55 24.6**	**-1.0**
	262nm,0.6s						
LTZ				*e*S	**S**	**04 59 10.8**	**-1.3**
OXZ	**Oxford**	**26.27**	**196**	*e*P	**P**	**04 55 29.6**	**-1.0**
	515nm,0.7s						
MQZ	**McQueen’s Vall**	**26.47**	**195**	*e*P	**P**	**04 55 31.7**	**-0.7**
	107nm,0.4s						
RPZ	**Rata Peaks**	**26.89**	**197**	P	**P**	**04 55 34.7**	**-1.4**
	90nm,0.6s,baz=318,slow=1.1,SNR=27						
RPZ	**Rata Peaks**	**26.89**	**197**	*e*P	**P**	**04 55 35.0**	**-1.1**
	138nm,0.5s						
FOZ	**Fox Glacier**	**27.09**	**199**	*e*P	**P**	**04 55 37.5**	**-0.3**
	476nm,0.6s						
PPT2	**Papeete2**	**27.39**	**93**	*e*LR	LR	05 03 20.9	
	36nm,24.2s						
LBZ	**Lake Benmore**	**27.76**	**198**	*e*P	**P**	**04 55 42.3**	**-1.3**
	180nm,0.9s						
ODZ	**Otahua Downs**	**28.23**	**197**	*e*P	**P**	**04 55 47.0**	**-0.7**
	72nm,0.6s						
WKZ	**Wanaka**	**28.51**	**199**	*e*P	**P**	**04 55 49.7**	**-0.4**
	262nm,0.6s						
WKZ				*e*S	**S**	**04 59 53.6**	**-2.1**
EIDS	**Eidsvold**	**29.18**	**251**	*e*P	**P**	**04 55 56.1**	**-0.1**
	24nm,0.6s						
MLZ	**Mavora Lakes**	**29.27**	**200**	*e*P	**P**	**04 55 57.3**	**+0.6**
	315nm,0.5s						
ARMA	**Armidale**	**29.80**	**240**	*e*P	**P**	**04 56 02.2**	**+0.7**
	59nm,0.6s						
WHZ	**Wether Hill Ro**	**29.80**	**199**	*e*P	**P**	**04 56 01.7**	**+0.6**
	336nm,1.1s						
CTA	**Charters Tower**	**33.43**	**261**	P	**P**	**04 56 32.6**	**+0.3**
	28nm,0.5s,baz=96,slow=11,SNR=74						
CTA				PcP	**PcP**	**04 58 54.9**	**+0.4**
	9.6nm,0.6s,baz=49,slow=3.0,SNR=5.8						
CTAO	**Charters Tower**	**33.43**	**261**	*e*P	**P**	**04 56 32.1**	**-0.1**
	31nm,0.7s						
CTAO				*e*PcP	**PcP**	**04 58 54.9**	**+0.4**
CTAO	**Charters Tower**	**33.43**	**261**	*e*P	**P**	**04 56 32.1**	**-0.1**
CTAO				*e*		04 58 54.9	
CTAO				pmax	pmax		
	comp=Z,31nm,0.7s						
CAN	**Canberra**	**33.52**	**233**	*e*P	**P**	**04 56 33.3**	**+0.4**
	comp=Z,154nm,0.7s						
CAN	**Canberra**	**33.52**	**233**	*e*P	**P**	**04 56 33.3**	**+0.4**
CAN				pmax	pmax		
	comp=Z,154nm,0.7s						

PMG	Port Moresby	34.56	280	P	P	04 56 42.7	+1.0
	comp=Z,176nm,0.8s,baz=70,slow=5.2,SNR=48						
PMG				PcP	PcP	04 58 58.7	+0.8
	comp=Z,20nm,0.9s,baz=89,slow=5.5,SNR=3.0						
COEN	Coen	37.15	271	eP	P	04 57 03.8	+0.9
	comp=Z,145nm,0.8s						
MANU	Manus Island	37.26	292	eP	P	04 57 04.7	+0.8
	comp=Z,297nm,1.4s						
TAU	Tasmania Unive	38.00	222	eP	P	04 57 10.2	+0.8
	comp=Z,68nm,0.9s						
TAU	Tasmania Unive	38.00	222	eP	P	04 57 10.2	+0.8
TAU				pmax	pmax		
	comp=Z,68nm,0.9s						
STKA	Stephens Creek	38.49	242	P	P	04 57 14.9	+1.3
	comp=Z,57nm,0.5s,baz=91,slow=10.0,SNR=92						
STKA				PcP	PcP	04 59 10.7	+0.9
	comp=Z,10nm,0.6s,baz=76,slow=8.3,SNR=3.1						
STKA	Stephens Creek	38.49	242	eP	P	04 57 14.9	+1.3
	comp=Z,18nm,0.9s						
STKA				PcP	PcP	04 59 10.7	+0.9
JAY	Jayapura	43.04	286	P	P	04 57 50.4	+0.6
	comp=Z,204nm,0.6s,baz=108,slow=3.0,SNR=100						
JAY	Jayapura	43.04	286	P	P	04 57 50.5	+0.7
	comp=Z,2µm,0.8s,comp=Z,17µm						
BBOO	Buckleboo	43.27	241	eP	P	04 57 51.1	-0.1
	comp=Z,54nm,0.9s						
BBOO				eS	S	05 03 34.3	-0.5
GENI	Genyem	43.50	286	P	P	04 57 54.0	+0.7
	comp=Z,314nm,0.7s,comp=Z,4µm						
WRAB	Tennant Creek	44.59	260	eP	P	04 58 00.9	-0.8
	comp=Z,42nm,0.6s						
WRAB				ePcP	PcP	04 59 29.8	-0.7
WRAB				eS	S	05 03 49.5	-4.3
WRAB	Tennant Creek	44.59	260	d iP	P	04 58 00.8	-0.8
WRAB				pmax	pmax		
	comp=Z,33nm,0.6s						
WRA	Warramunga Arr	44.60	260	P	P	04 58 01.0	-0.7
	comp=Z,31nm,0.4s,baz=94,slow=7.0,SNR=637						
WRA				PcP	PcP	04 59 30.8	+0.2
	comp=Z,12nm,0.3s,baz=91,slow=3.8,SNR=12						
WRA				S	S	05 03 49.3	-4.7
	comp=Z,14nm,0.8s,baz=98,slow=13,SNR=12						
WRA				PKiKP	PKiKP	05 06 26.2	-1.5
	comp=Z,1.0nm,0.5s,baz=63,slow=0.6,SNR=8.4						
AS01	Alice Springs	44.69	255	eP	P	04 58 02.2	-0.1
AS01				eS	S	05 03 51.8	-3.3
AS31	Alice Springs	44.73	255	eP	P	04 58 02.9	+0.2
	comp=Z,24nm,0.5s						
AS31				eS	S	05 03 53.8	-2.0
ASAR	Alice Springs	44.73	255	P	P	04 58 02.9	+0.2
	comp=Z,71nm,0.6s,baz=88,slow=8.6,SNR=640						
ASAR				PcP	PcP	04 59 30.9	0.0
	comp=Z,28nm,0.4s,baz=104,slow=3.9,SNR=22						
ASAR				S	S	05 03 53.4	-2.4
	comp=Z,35nm,1.0s,baz=88,slow=16,SNR=56						
SRPI	Serui, Papua	47.38	285	P	P	04 58 23.0	+0.3
BAKI	Biak	47.77	286	P	P	04 58 26.4	+0.8
	comp=Z,212nm,0.9s,comp=Z,2µm						
GUMO	Guam	48.13	309	P	P	04 58 28.1	0.0
	comp=Z,246nm,0.7s,baz=179,slow=10,SNR=15						
GUMO	Guam	48.13	309	eP	P	04 58 28.3	+0.2
	comp=Z,274nm,0.8s						
MTN	Manton Dam	48.83	269	eP	P	04 58 32.6	-0.7
	comp=Z,82nm,0.7s						
MTN				eS	S	05 04 50.7	-1.6
RKPI	Ransiki, Papua	49.42	284	P	P	04 58 37.5	-0.2
FORT	Forrest	49.89	245	eP	P	04 58 39.8	-1.1
FORT				ePcP	PcP	04 59 49.9	+0.4
SAUI	Saumlaki	49.93	275	P	P	04 58 42.7	+1.3
FAKI	Fak Fak	50.68	282	P	P	04 58 46.6	-0.3
	comp=Z,50nm,1.2s,comp=Z,618nm						
FAKI	Fak Fak	50.68	282	eP	P	04 58 46.3	-0.7
	comp=Z,143nm,1.6s						
BNDI	Bandanaira	52.32	279	P	P	04 58 59.8	+1.1
	comp=Z,191nm,0.7s						
SIJI	Sorong	52.35	283	P	P	04 58 59.0	+0.1
	comp=Z,410nm,0.7s,baz=98,slow=5.3,SNR=73						
AAI	Ambon	54.21	279	P	P	04 59 11.9	-0.1
	comp=Z,203nm,0.4s,comp=Z,4µm						
NLAI	Namlea	55.39	279	P	P	04 59 20.0	-0.1
	comp=Z,187nm,0.7s,comp=Z,2µm						
LBMI	Labuha	55.93	282	P	P	04 59 24.4	+0.5
	comp=Z,162nm,0.9s,comp=Z,2µm						
SOEI	Soe	56.11	270	P	P	04 59 26.8	+1.6
	comp=Z,311nm,0.8s,comp=Z,2µm						
SOEI	Soe	56.11	270	eP	P	04 59 26.6	+1.4
	comp=Z,196nm,0.7s						
BATI	Baumata	56.56	270	P	P	04 59 27.9	-0.3
TNTI	Ternate	56.58	283	P	P	04 59 28.5	+0.2
TNTI	Ternate	56.58	283	eP	P	04 59 27.3	-1.1
	comp=Z,131nm,0.8s						
SANI	Sanana	56.84	280	P	P	04 59 29.5	-0.6
	comp=Z,175nm,0.9s,comp=Z,1µm						
MBWA	Marble Bar	58.02	256	eP	P	04 59 37.3	-0.7
	comp=Z,88nm,0.6s						
MMRI	Maumere	58.34	271	P	P	04 59 39.4	-0.8
	comp=Z,166nm,0.9s						
MMRI	Maumere	58.34	271	eP	P	04 59 39.7	-0.5
	comp=Z,97nm,0.7s						
EDFI	Ende, Flores	58.83	271	P	P	04 59 43.2	-0.4
	comp=Z,114nm,0.8s,comp=Z,1µm						
NWAO	Narrogin (SRO)	59.08	242	P	P	04 59 45.0	+0.1
	comp=Z,8.5nm,0.6s,baz=319,slow=5.8,SNR=6.4						
BASI	Baing, Sumba	59.49	269	P	P	04 59 47.6	-0.3
SBA	Scott Base	60.07	184	eP	P	04 59 53.4	+2.8
	comp=Z,30nm,0.8s						
VNDA	Vanda	60.09	185	P	P	04 59 52.7	+2.0
	comp=Z,8.0nm,0.6s,baz=358,slow=7.9,SNR=114						
VNDA				ScP	ScP	05 03 32.1	+1.9
	comp=Z,2.8nm,0.8s,baz=338,slow=4.2,SNR=4.0						
VNDA	Vanda	60.09	185	eP	P	04 59 52.8	+2.0
	comp=Z,49nm,1.6s						
VNDA				ScP	ScP	05 03 32.1	+1.9
VNDA	Vanda	60.09	185	eP	P	04 59 52.8	+2.0
VNDA				pmax	pmax		
	comp=Z,49nm,1.6s						
LUWI	Luwuk	60.20	280	P	P	04 59 51.7	-0.9
LUWI	Luwuk	60.20	280	eP	P	04 59 53.1	+0.5
	comp=Z,226nm,1.2s						
WBSI	Waikabubak, Su	60.77	269	P	P	04 59 56.7	+0.3
	comp=Z,79nm,0.6s						
APSI	Ampana	61.30	279	P	P	05 00 00.7	+1.0
	comp=Z,138nm,1.0s,comp=Z,1µm						
BKSI	Bulukumba	61.31	274	P	P	05 00 01.0	+1.2
SPSI	Sidrap Palu	62.06	275	P	P	05 00 02.0	-2.7
	comp=Z,40nm,0.7s,comp=Z,483nm						
TTSI	Tana Toraja	62.31	276	P	P	05 00 06.2	-0.1
PLAI	Plampang	62.53	269	P	P	05 00 07.8	+0.1
	comp=Z,156nm,1.0s,comp=Z,1µm						
MPSI	Mapaga	63.37	280	P	P	05 00 12.9	-0.2
	comp=Z,68nm,0.8s,comp=Z,500nm						
TWSI	Taliwang, Sumb	63.40	269	P	P	05 00 12.7	-0.6
	comp=Z,132nm,0.8s,comp=Z,1µm						
JHJ2	Mitsune	64.85	322	eP	P	05 00 22.2	+0.3
	comp=Z,2µm,2.0s						
JHJ	Hachijo jima 2	64.87	322	P	P	05 00 22.0	-0.1
	comp=Z,223nm,0.4s,baz=142,slow=4.7,SNR=20						
DNP	Denpasar	65.01	269	P	P	05 00 22.4	-1.0
IGBI	Denpasar	65.03	269	P	P	05 00 22.4	-1.1
SRBI	Singaraja	65.17	269	P	P	05 00 23.0	-1.4
BKB	Balikpapan	65.65	277	P	P	05 00 26.5	-0.9
CASY	Casey	65.83	205	eP	P	05 00 28.6	+1.0
	comp=Z,42nm,1.2s						
JAGI	Jajag, Banyuwa	66.07	269	P	P	05 00 27.6	-2.4
JAGI	Jajag, Banyuwa	66.07	269	eP	P	05 00 27.9	-2.1
	comp=Z,139nm,0.7s						
MYLDM	Lahad Datu	66.43	284	eP	P	05 00 33.8	+1.5
GMJI	Gumukmas	66.80	269	P	P	05 00 34.0	-0.4
INU	Inuyama	68.07	322	eP	P	05 00 41.9	+0.2
	comp=Z,25nm,1.0s						
GRJI	Gresik	68.10	270	P	P	05 00 41.5	-0.9
MJAR	Matsushiro Arr	68.21	323	P	P	05 00 42.1	-0.5
	comp=Z,46nm,0.6s,baz=166,slow=6.4,SNR=129						
MJAR				PcP	PcP	05 01 03.6	+0.7
	comp=Z,9.4nm,0.8s,baz=175,slow=4.8,SNR=5.4						
MAJO	Matsushiro	68.22	323	eP	P	05 00 42.4	-0.2
	comp=Z,65nm,0.6s						
MAJO	Matsushiro	68.22	323	d iP	P	05 00 42.1	-0.5
MAJO				pmax	pmax		
	comp=Z,53nm,0.6s						
MAT	Matsushiro	68.22	323	P	P	05 00 41.8	-0.8
MJB9	Matsu-Tunnel	68.22	323	eP	P	05 00 42.4	-0.3
	comp=Z,67nm,0.6s						
PWJI	Pagerwojo	68.42	268	P	P	05 00 41.0	-3.3
JOW	Kunigami	68.47	310	P	P	05 00 45.1	+0.7
	comp=Z,38nm,0.7s,baz=128,slow=15,SNR=8.1						
JOW	Kunigami	68.47	310	eP	P	05 00 45.0	+0.6
	comp=Z,52nm,0.9s						
NGJI	Ngawi	68.94	269	P	P	05 00 46.2	-1.2
PCJI	Pacitan	68.97	268	P	P	05 00 45.6	-2.0
WOJI	Wonogiri, Jawa	69.31	268	P	P	05 00 49.7	+0.1
UGM	Wanagama	69.67	268	P	P	05 00 49.1	-2.7
UGM	Wanagama	69.67	268	eP	P	05 00 51.6	-0.2
	comp=Z,217nm,0.6s						
KIWB	Kanaga Island	69.83	1	eP	P	05 00 50.5	-1.3
SMRI	Semarang	70.00	269	P	P	05 00 52.6	-1.1
SMRI	Semarang	70.00	269	eP	P	05 00 54.4	+0.7
	comp=Z,127nm,0.7s						
GSTR	Great Sitkin T	70.09	2	eP	P	05 00 52.0	-1.4
ATKA	Atka Island	70.26	3	eP	P	05 00 53.3	-1.0
	comp=Z,190nm,1.0s						
JNU	Nakatsue	70.42	316	P	P	05 00 55.4	-0.5
	comp=Z,25nm,0.6s,baz=50,slow=3.0,SNR=6.8						
JNU	Nakatsue	70.42	316	eP	P	05 00 55.6	-0.2
	comp=Z,33nm,0.8s						
SMY	Shemya	71.00	355	eP	P	05 00 57.9	-0.8
	comp=Z,122nm,1.1s						
SMY	Shemya	71.00	355	eP	P	05 00 57.9	-0.8
SMY				pmax	pmax		
	comp=Z,122nm,1.1s						
YOJ	Yonaguni jima	71.18	305	eP	P	05 00 59.5	-0.8
	comp=Z,200nm,1.0s						
YOJ	Yonaguni jima	71.18	305	eP	P	05 00 59.5	-0.8
YOJ				pmax	pmax		
	comp=Z,200nm,1.0s						
KPJI	Karang Pucung	71.35	268	P	P	05 01 00.7	-0.9
NIKH	Nikolski High	71.42	6	eP	P	05 01 00.4	-0.7
	comp=Z,176nm,1.2s						
ASAJ	Asahikawa	71.61	331	P	P	05 01 03.6	+1.2
	comp=Z,42nm,0.9s,baz=209,slow=7.4,SNR=9.7						
QSPA	South Pole Qui	71.79	180	P	P	05 01 04.7	+1.3
	comp=Z,21nm,0.8s,baz=33,slow=2.6,SNR=45						
QSPA	South Pole Qui	71.79	180	eP	P	05 01 04.7	+1.3
	comp=Z,24nm,0.8s						
TWG	Pinlang	71.89	302	eP	P	05 01 02.9	-1.7
	comp=Z,305nm,0.6s						
YULB	Yu-li	71.99	303	eP	P	05 01 03.4	-1.8
	comp=Z,46nm,0.6s						
NACB	Ninganchiao	72.14	304	eP	P	05 01 04.7	-1.3
	comp=Z,76nm,0.6s						
SKR	Severo-Kuril's	72.23	343	eP	P	05 01 05.5	-0.3
SKR				e*PP	PP	05 03 53.0	-5.6
SKR				pmax	pmax		
	comp=Z,86nm,1.1s						
SKR				MLR	MLR		
	comp=Z,100nm,22.0s						
CISI	Cisompet, Garu	72.34	268	P	P	05 01 05.3	-2.2
CISI	Cisompet, Garu	72.34	268	eP	P	05 01 06.4	-1.0
	comp=Z,102nm,0.9s						
SSLB	Suanglung	72.46	303	eP	P	05 01 06.4	-1.4
	comp=Z,120nm,0.4s						
TPUB	Ta-pu	72.48	303	eP	P	05 01 06.1	-1.9
	comp=Z,209nm,0.6s						
UNV	Unalaska Valle	72.54	7	eP	P	05 01 06.4	-1.1
	comp=Z,56nm,0.6s						
YHNB	Yeheng	72.56	304	eP	P	05 01 07.5	-1.0
	comp=Z,68nm,1.0s						
TATO	Taipei	72.63	304	eP	P	05 01 08.5	-0.3
	comp=Z,526nm,1.8s						
LEM	Lembang	72.74	268	P	P	05 01 10.0	+0.1
	comp=Z,174nm,0.8s,baz=55,slow=4.6,SNR=33						
LEM	Lembang	72.74	268	P	P	05 01 07.1	-2.8
AKUT	Akutan	72.91	8	eP	P	05 01 08.7	-0.9
	comp=Z,39nm,0.7s						
DBJI	Dramaga	73.64	268	P	P	05 01 13.4	-1.4
SKJI	Sukabumi	73.70	268	P	P	05 01 11.1	-4.0
PET	Petropavlovsk	73.73	346	eP	P	05 01 13.8	-0.5
PET				pmax	pmax		
	comp=Z,68nm,0.6s						
YSS	Yuzh-Sakhalins	73.75	333	eP	P	05 01 15.2	+0.6
	comp=Z,50nm,0.8s						
YSS	Yuzh-Sakhalins	73.75	333	⇑ iP	P	05 01 15.6	+1.0
YSS				pmax	pmax		
	comp=Z,80nm,1.4s						
PEA0B	Petropavlovsk-	74.03	345	eP	P	05 01 15.9	-0.1
	comp=Z,74nm,0.7s						
PETK	Petropavlovsk-	74.03	345	P	P	05 01 15.8	-0.3
	comp=Z,60nm,0.6s,baz=120,slow=7.5						
CGJI	Cibinong	74.63	268	P	P	05 01 18.1	-2.2
TJN	Taejon	74.70	317	i P	P	05 01 20.1	-0.1
SDPT	Sand Point	74.89	10	eP	P	05 01 19.8	-0.9
QZH	Quanzhou	74.90	303	⇓ iP	P	05 01 21.8	+0.3
QZH				pmax	pmax		
	comp=Z,85nm,0.7s						
KSRS	Korea Array	74.99	318	P	P	05 01 22.5	+0.7
	comp=Z,14nm,0.7s,baz=130,slow=6.4,SNR=58						
KS15	Wonju Array Si	75.01	318	eP	P	05 01 22.6	+0.8
KSAR	Wonju Array Be	75.01	318	P	P	05 01 22.5	+0.6
KSAR	Wonju Array Be	75.01	318	P	P	05 01 22.5	+0.6
KS01	Wonju Array Si	75.02	318	eP	P	05 01 21.8	-0.2
SNCC	San Nicolas Is	76.00	48	P	P	05 01 29.1	+1.7
	baz=237						
KASI	Kota Agung	76.09	269	P	P	05 01 23.9	-4.5
CHGN	Chignik	76.16	11	eP	P	05 01 27.2	-0.6
	comp=Z,76nm,0.8s						
MSHR	Mys Shultsa	76.31	324	d iP	P	05 01 30.0	+1.1
SCZ2	Santa Cruz Isl	76.33	47	P	P	05 01 30.9	+1.6
	baz=237						
SBC	Santa Barbara	76.52	47	P	P	05 01 31.9	+1.7
	baz=237						
SCI2	San Clemente I	76.54	48	P	P	05 01 31.9	+1.5
	baz=238,SNR=5.1						
LWLI	Liwa	76.66	269	P	P	05 01 27.9	-3.7
SAO	San Andreas Ge	76.66	44	eP	P	05 01 32.8	+1.8
	comp=Z,50nm,0.8s						
SAO	San Andreas Ge	76.66	44	eP	P	05 01 32.8	+1.8
SAO				pmax	pmax		
	comp=Z,50nm,0.8s						
PKM	Mcpherson Peak	76.70	46	P	P	05 01 33.0	+1.5
	baz=236,SNR=9.9						
MDSI	Maura Dua	76.70	270	P	P	05 01 29.7	-2.0
PMPB	Monarch Peak	76.77	45	eP	P	05 01 33.7	+2.0
	comp=Z,116nm,1.4s						
BLG	Laguna Peak, P	76.79	47	P	P	05 01 34.0	+2.2
	baz=237						
SMMC	Simmler	76.81	46	P	P	05 01 33.4	+1.5
	baz=236,SNR=11						
CIS	Catalina Islan	76.86	48	P	P	05 01 33.1	+0.9
	baz=238						
PAGB	Antelope Grade	76.87	45	eP	P	05 01 34.1	+2.0
	comp=Z,21nm,0.7s						
TYV	Tymovskoe	76.87	336	eP	P	05 01 32.0	+0.3
TYV				pmax	pmax		
	comp=Z,57nm,0.7s						
TYV				pmax	pmax		
	comp=Z,300nm,8.1s						
USRK	Ussuriysk Ar.	76.93	326	P	P	05 01 33.0	+0.8
	comp=Z,15nm,0.6s,baz=127,slow=4.3						
FMP	Fort Macarthur	77.11	48	P	P	05 01 34.8	+1.3
	baz=238						
KMRM	Mail Ridge	77.26	40	eP	P	05 01 36.5	+2.2
	comp=Z,108nm,0.9s						
OSI	Osito Audit: C	77.30	47	P	P	05 01 35.8	+1.2
	baz=237						
DECC	Green Verdugo	77.38	47	P	P	05 01 35.8	+0.9
	baz=238						
PASC	Pasadena Art C	77.44	47	eP	P	05 01 36.4	+1.2
	comp=Z,49nm,0.9s						
ARVC	Arvin	77.50	46	P	P	05 01 36.8	+1.2
	baz=237,SNR=11						
109C	Camp Elliot, M	77.53	49	P	P	05 01 36.8	+1.1
	baz=239,SNR=7.9						
CPE	Camp Elliot	77.53	49	eP	P	05 01 37.0	+1.2
	comp=Z,28nm,0.6s						
MWC	Mount Wilson	77.55	47	eP	P	05 01 37.1	+1.0
	comp=Z,47nm,0.7s						
MWC	Mount Wilson	77.55	47	eP	P	05 01 37.1	+1.0
MWC				pmax	pmax		
	comp=Z,47nm,0.7s						
KHMM	Horse Mountain	77.65	39	eP	P	05 01 38.5	+2.0
	comp=Z,91nm,1.4s						
VES	Vestal, Richgr	77.72	46	P	P	05 01 37.6	+0.9
	baz=237,SNR=22						
BAR	Barrett	77.73	49	eP	P	05 01 37.9	+1.0
	comp=Z,23nm,1.0s						
MURC	Murrieta	77.83	48	P	P	05 01 38.6	+1.1
	baz=238,SNR=12						
BFSC	Mount Baldy Ra	77.84	48	P	P	05 01 38.4	+0.8
	baz=238,SNR=16						
MNAI	Manna	77.90	269	P	P	05 01 34.9	-3.3
EDW2	Edwards Air Fo	77.95	47	P	P	05 01 39.2	+1.1
	baz=238,SNR=41						
MONP2	Monument Peak	78.02	49	P	P	05 01 40.2	+1.5
	baz=239,SNR=59						
ISA	Isabella, Lake	78.04	46	P	P	05 01 39.9	+1.4
	baz=237,SNR=57						
ISA	Isabella, Lake	78.04	46	eP	P	05 01 39.9	+1.4
	comp=Z,55nm,0.9s						
OHAK	Old Harbor	78.07	14	eP	P	05 01 37.2	-0.8
CMB	Columbia Colle	78.07	43	eP	P	05 01 39.6	+0.9
	comp=Z,52nm,1.0s						
CMB	Columbia Colle	78.07	43	eP	P	05 01 39.6	+0.9
CMB				pmax	pmax		
	comp=Z,52nm,1.0s						
IKP	In-Ko-Pah, Jac	78.12	50	P	P	05 01 40.6	+1.5
	baz=239,SNR=29						
WDC	Whiskeytown Da	78.19	40	eP	P	05 01 40.4	+1.3
	comp=Z,42nm,1.2s						
WDC	Whiskeytown Da	78.19	40	eP	P	05 01 40.4	+1.3
WDC				pmax	pmax		
	comp=Z,42nm,1.2s						
NJ2	Nanjing	78.19	310	eP	P	05 01 40.0	+0.7
NJ2				pmax	pmax		
	comp=Z,63nm,0.9s						
FRD	Ford Ranch, An	78.20	49	P	P	05 01 40.9	+1.4
	baz=239,SNR=36						
AFDM	Forest Hills D	78.22	42	eP	P	05 01 40.4	+1.0
	comp=Z,36nm,0.9s						
ORV	Oroville	78.23	41	eP	P	05 01 40.5	+1.1
	comp=Z,27nm,0.8s						
ORV	Oroville	78.23	41	eP	P	05 01 40.5	+1.1
ORV				pmax	pmax		
	comp=Z,27nm,0.8s						
N02D	Trinity Center	78.33	40	P	P	05 01 41.6	+1.7
	baz=233,SNR=14						
MGL	Magalia	78.35	41	eP	P	05 01 41.1	+1.0
PFO	Pinyon Flats O	78.36	49	P	P	05 01 41.5	+1.1
	baz=239,SNR=10						
PFO	Pinyon Flats O	78.36	49	eP	P	05 01 41.5	+1.1
	comp=Z,21nm,1.1s						
PFO	Pinyon Flats O	78.36	49	eP	P	05 01 41.5	+1.1
PFO				pmax	pmax		
	comp=Z,21nm,1.1s						
XPFO	Piæon Flat	78.36	49	eP	P	05 01 41.5	+1.1
	comp=Z,21nm,1.1s						
BBRC	Big Bear Solar	78.37	48	P	P	05 01 41.5	+1.0
	baz=238						
SRIG	Santa Rosalia	78.47	56	eP	P	05 01 42.3	+1.4
	comp=Z,39nm,0.8s						
O03D	Paynes Creek	78.48	41	P	P	05 01 41.6	+0.9
	baz=234,SNR=16						
O03D	Paynes Creek	78.48	41	eP	P	05 01 41.7	+0.9
LRMC	Laurel Mtn Rad	78.48	47	P	P	05 01 42.0	+1.1
	baz=238,SNR=17						
M02C	Callahan	78.49	39	P	P	05 01 42.6	+1.8
	baz=233						
SWSC	Sam W. Stewart	78.50	50	P	P	05 01 42.3	+1.4
	baz=239,SNR=24						
MDJ	Mudanjiang	78.50	325	P	P	05 01 38.9	-1.8
MDJ				pmax	pmax		
	comp=Z,150nm,1.0s						
MDJ	Mudanjiang	78.50	325	eP	P	05 01 41.8	+1.2
	comp=Z,108nm,0.9s						
L02D	Cave Junction,	78.50	38	P	P	05 01 42.3	+1.5
	baz=232						
KEBM	Edson Butte	78.52	37	eP	P	05 01 42.7	+1.8
	comp=Z,50nm,0.9s						
RRX	Edison Barstow	78.64	47	P	P	05 01 42.6	+0.9
	baz=238						
SLBS	Sierra La Lagu	78.70	60	eP	P	05 01 44.4	+2.1
	comp=Z,41nm,0.7s						
CWC	Cottonwood Cre	78.72	46	P	P	05 01 43.5	+1.2
	baz=237						
KDAK	Kodiak Island	78.74	14	eP	P	05 01 41.7	+0.1
	comp=Z,310nm,1.7s						
KDAK	Kodiak Island	78.74	14	i P	P	05 01 41.5	-0.1
OMMB	Old Mammoth Mi	78.75	44	eP	P	05 01 43.8	+1.2
	comp=Z,49nm,1.2s						
YBH	Yreka Blue Hor	78.78	39	P	P	05 01 43.9	+1.6
	comp=Z,42nm,0.6s,baz=177,slow=3.2,SNR=146						
YBH	Yreka Blue Hor	78.78	39	eP	P	05 01 43.8	+1.4
	comp=Z,45nm,0.7s						
YBH	Yreka Blue Hor	78.78	39	eP	P	05 01 43.8	+1.4
YBH				pmax	pmax		
	comp=Z,45nm,0.7s						
LGBM	Gray Butte	78.86	40	eP	P	05 01 44.4	+1.4
MLAC	Mammoth, Mammo	78.87	44	P	P	05 01 44.7	+1.6
	baz=237,SNR=12						
BELC	Belle Mtn. Jos	78.89	49	P	P	05 01 44.5	+1.3
	baz=239,SNR=38						
MPMC	Manual Prospec	78.92	46	P	P	05 01 44.7	+1.3
	baz=238,SNR=35						
TIN	Tinemaha, Big	78.95	45	P	P	05 01 44.8	+1.4
	baz=237,SNR=8.4						
WAKR	Walker	78.95	43	eP	P	05 01 45.1	+1.6
	comp=Z,59nm,0.8s						
DAC	Darwin (Calif)	78.97	46	eP	P	05 01 44.6	+1.0
	comp=Z,38nm,1.4s						
GSC	Goldstone, Bar	79.00	47	P	P	05 01 44.7	+1.1
	baz=238,SNR=16						
GSC	Goldstone, Bar	79.00	47	eP	P	05 01 44.2	+0.6
	comp=Z,33nm,1.3s						
GSC	Goldstone, Bar	79.00	47	eP	P	05 01 44.2	+0.6
GSC				pmax	pmax		
	comp=Z,33nm,1.3s						
HEC	Hector,Ludlow	79.08	48	P	P	05 01 45.1	+1.0
	baz=239,SNR=20						
BC3	Big Chuckawall	79.11	49	P	P	05 01 45.7	+1.4
	baz=240,SNR=17						
BEKR	Beckworth	79.13	42	eP	P	05 01 45.5	+1.1
	comp=Z,36nm,0.6s						
HUMO	Hull Mountain	79.16	38	eP	P	05 01 45.9	+1.6
	comp=Z,68nm,1.2s						
PNTR	Pine Nut	79.18	43	eP	P	05 01 46.0	+1.4
	comp=Z,101nm,0.9s						
GLA	Glamis	79.25	50	P	P	05 01 46.8	+1.8
	baz=240,SNR=23						
GLA	Glamis	79.25	50	eP	P	05 01 46.9	+1.9
	comp=Z,46nm,1.0s						
GLA				eS	S	05 10 56.8	+1.3
GLA	Glamis	79.25	50	eP	P	05 01 46.9	+1.9
GLA				eS	S	05 10 56.8	+1.3
GLA				pmax	pmax		
	comp=Z,46nm,1.0s						
VCNR	Virginia City	79.26	42	eP	P	05 01 46.4	+1.3
	comp=Z,38nm,1.0s						
M04C	Macdoel	79.33	39	P	P	05 01 46.6	+1.2
	baz=234,SNR=17						
YERR	Yerington	79.35	43	eP	P	05 01 47.0	+1.4
	comp=Z,60nm,0.8s						
GRNR	Gornyy	79.37	333	eP	P	05 01 48.1	+3.0
GRNR				pmax	pmax		
	comp=Z,130nm,1.0s						
GRAC	Grapevine Rang	79.51	45	P	P	05 01 47.7	+1.5
	baz=238,SNR=14						
GMRC	Granite Mounta	79.53	48	P	P	05 01 47.6	+1.1
	baz=239,SNR=20						
FURC	Furnace Creek,	79.57	46	P	P	05 01 47.7	+1.2
	baz=238,SNR=13						
IRM	Iron Mountain	79.58	49	P	P	05 01 48.2	+1.5
	baz=240,SNR=34						
I03D	Drain, OR	79.59	37	P	P	05 01 47.6	+1.2
	baz=232,SNR=14						
RYN	Ryan	79.62	44	eP	P	05 01 48.2	+1.2
	comp=Z,24nm,0.8s						
NV01	Mina Array Sit	79.66	44	eP	P	05 01 47.6	+0.4
NVAR	Mina Array Bea	79.66	44	P	P	05 01 48.4	+1.2
	comp=Z,30nm,0.6s,baz=224,slow=8.7,SNR=282						
NVAR				PKKPbc	PKKPbc	05 20 30.6	+0.5
	comp=Z,0.4nm,0.5s,baz=60,slow=5.3,SNR=5.9						
PAHR	Pah Rah Range	79.66	42	eP	P	05 01 48.1	+1.0
	comp=Z,73nm,1.3s						
SHOC	Shoshone, Teco	79.68	47	P	P	05 01 48.1	+1.0
	baz=239,SNR=17						
TUQ	Turquoise Moun	79.68	47	P	P	05 01 48.4	+1.1
	baz=239,SNR=40						
NV11	Mina Array Sit	79.75	44	eP	P	05 01 48.9	+1.2
	comp=Z,4.5nm,1.1s						
Y12C	Blythe	79.82	49	P	P	05 01 49.5	+1.6
	baz=240,SNR=18						
Y12C	Blythe	79.82	49	eP	P	05 01 49.5	+1.6
	comp=Z,30nm,0.8s						
K04D	Chiloquin, OR	79.88	39	P	P	05 01 49.0	+0.8
	baz=234						
113A	Mohawk Valley,	79.89	51	eP	P	05 01 49.9	+1.7
	comp=Z,34nm,1.0s						
J04D	Umpqua Nationa	80.04	38	P	P	05 01 50.5	+1.4
	baz=233,SNR=27						
LDFC	Landfair	80.07	48	eP	P	05 01 50.7	+1.4

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      comp=Z,98nm,0.9s
KVN   Kaiserville      80.13  43 eP      P        05 01 50.7 +1.1
      comp=Z,44nm,0.8s
KVN   Kaiserville      80.13  43 eP      P        05 01 50.7 +1.1
KVN                                pmax  pmax
      comp=Z,44nm,0.8s
COR   Corvallis        80.16  36 eP      P        05 01 50.8 +1.4
      comp=Z,41nm,0.8s
COR   Corvallis        80.16  36 eP      P        05 01 50.8 +1.4
COR                                pmax  pmax
      comp=Z,41nm,0.8s
I04A  Tendick Farm,    80.19  38  P      P        05 01 50.5 +0.8
      baz=233,SNR=19
214A  Organ Pipe Nat   80.20  52  P      P        05 01 51.7 +1.7
      baz=241
TPNV  Topopah Spring   80.24  46  P      P        05 01 51.5 +1.3
      baz=238,SNR=38
TPNV  Topopah Spring   80.24  46 eP      P        05 01 51.5 +1.3
      comp=Z,32nm,0.9s
TPNV  Topopah Spring   80.24  46 eP      P        05 01 51.5 +1.3
TPNV                               pmax  pmax
      comp=Z,32nm,0.9s
HSIG                   80.26  55 eP      P        05 01 51.8 +1.5
      comp=Z,20nm,0.8s
CN2   Changchun        80.33 322 ⇓P      P        05 01 50.8 +0.6
CN2                              epP     pP       05 03 58.0  -2.7
CN2                              eS      S        05 11 08.6 +2.8
CN2                                pmax  pmax
      comp=Z,60nm,0.6s
CN2                                pmax  pmax
      comp=Z,200nm,5.0s
MOD   Modoc Plateau    80.33  40 eP      P        05 01 51.7 +1.1
      comp=Z,64nm,0.8s
PDMCI Parker Dam,Lak   80.37  49  P      P        05 01 52.2 +1.5
      baz=240,SNR=12
KLR   Kul'dur          80.44 329d iP     P        05 01 51.2 +0.5
K05A  Summer Lake      80.45  39 eP      P        05 01 52.8 +1.6
      comp=Z,104nm,0.8s
G03D  McMinnville, O   80.57  36  P      P        05 01 52.7 +1.3
      baz=232,SNR=9.9
J05D  Fort Rock, OR    80.58  38  P      P        05 01 53.3 +1.5
      baz=234,SNR=81
CNPM  China Poot       80.62  14 eP      P        05 01 51.4  0.0
      comp=Z,55nm,0.6s
SHPR  Sheep Range      80.76  47 eP      P        05 01 54.4 +1.5
      comp=Z,25nm,0.9s
WHN   Wuhan            80.84 306 ⇑P      P        05 01 53.6 +0.4
WHN                                pmax  pmax
      comp=Z,440nm,0.7s
F03A  Seaside          80.85  35 eP      P        05 01 54.2 +1.3
      comp=Z,104nm,1.2s
H04A  Detroit Lake     80.86  37 eP      P        05 01 53.9 +0.8
      comp=Z,240nm,1.6s
BRLK  Bradley Lake     80.91  14 eP      P        05 01 52.9  -0.1
      comp=Z,80nm,0.9s
W13A  Hualapai Mount   80.95  49 eP      P        05 01 55.4 +1.4
      comp=Z,15nm,0.8s
Y14A  Wickenburg       81.02  50 eP      P        05 01 55.5 +1.3
      comp=Z,25nm,0.8s
PINE  Pine Mountain    81.05  38 eP      P        05 01 55.7 +1.5
      comp=Z,109nm,0.8s
I05D  Terrebonne, OR   81.14  38  P      P        05 01 55.7 +1.2
      baz=234,SNR=32
RSO   Redoubt South    81.14  13 eP      P        05 01 53.8  -0.5
SVW2  Sparrevohn       81.18  11 eP      P        05 01 53.8  -0.4
      comp=Z,26nm,0.7s
E03A  Lebam            81.22  35 eP      P        05 01 55.8 +1.0
      comp=Z,103nm,0.9s
F04D  Rainier, OR      81.24  35  P      P        05 01 56.3 +1.4
      baz=232
R11A  Troy Canyon, C   81.42  45  P      P        05 01 57.1 +0.8
      baz=239,SNR=43
R11A  Troy Canyon, C   81.42  45 eP      P        05 01 57.0 +0.8
      comp=Z,27nm,1.1s
DIB   Dawson Inlet,    81.43  26 eP      P        05 01 56.5 +0.8
      comp=Z,29nm,0.8s
BMN   Battle Mountai   81.44  43 eP      P        05 01 57.6 +1.3
      comp=Z,73nm,1.0s
BMN   Battle Mountai   81.44  43 eP      P        05 01 57.6 +1.3
BMN                                pmax  pmax
      comp=Z,73nm,1.0s
TIA   Tai'an           81.52 312  P      P        05 01 56.8 +0.2
TIA                                pmax  pmax
      comp=Z,21nm,0.8s
MA2   Magadan          81.55 345  P      P        05 01 55.6  -0.6
      comp=Z,25nm,0.6s,baz=137,slow=5.6,SNR=10
MA2   Magadan          81.55 345 eP      P        05 01 55.7  -0.4
      comp=Z,29nm,0.7s
MA2   Magadan          81.55 345 eP      P        05 01 55.7  -0.4
MA2                                pmax  pmax
      comp=Z,29nm,0.7s
LVP   Lakeview Peak    81.56  36 eP      P        05 01 57.8 +1.1
NLWA  Neilton Lookou   81.59  34 eP      P        05 01 57.9 +1.2
      comp=Z,60nm,1.0s
WVOR  Wild Horse Val   81.66  40 eP      P        05 01 58.6 +1.3
      comp=Z,79nm,1.0s
WVOR  Wild Horse Val   81.66  40 eP      P        05 01 58.6 +1.3
WVOR                               pmax  pmax
      comp=Z,79nm,1.0s
G05D  Wamic, OR        81.68  37  P      P        05 01 58.2 +1.0
      baz=234,SNR=15
TUC   Tucson           81.89  52  P      P        05 02 00.7 +2.0
      baz=242
TUC   Tucson           81.89  52 eP      P        05 02 00.6 +2.0
      comp=Z,56nm,1.1s
TUC   Tucson           81.89  52 eP      P        05 02 00.6 +2.0
TUC                                pmax  pmax
      comp=Z,56nm,1.1s
GAMB  Gambell          81.94   3 eP      P        05 01 58.7 +0.8
      comp=Z,64nm,0.9s
I07A  Izee             82.06  39 eP      P        05 02 00.7 +1.4
      comp=Z,42nm,0.8s
G06A  Carlson Farm,    82.07  37 eP      P        05 02 00.1 +0.8
      comp=Z,32nm,0.8s
J08A  Circle Bar Ran   82.27  40 eP      P        05 02 01.5 +1.2
      comp=Z,116nm,1.3s
LON   Longmire         82.31  35 eP      P        05 02 00.9 +0.5
      comp=Z,19nm,0.8s
LON   Longmire         82.31  35 eP      P        05 02 00.9 +0.5
LON                                pmax  pmax
      comp=Z,19nm,0.8s
LCMT  Little Creek M   82.34  47 eP      P        05 02 02.2 +1.3
      comp=Z,41nm,0.9s
RC01  Rabbit Creek A   82.36  14 eP      P        05 01 60.0  -0.2
      comp=Z,51nm,0.9s
X16A  Lo Mia Camp, P   82.38  50 eP      P        05 02 02.4 +1.1
      comp=Z,63nm,1.1s
D05A  Enumclaw         82.47  35 eP      P        05 02 02.5 +1.5
      comp=Z,99nm,1.0s
SUA   Susitna One      82.47  13 eP      P        05 02 00.4  -0.5
      comp=Z,102nm,0.7s
SISI  Saibi            82.50 271  P      P        05 01 56.3  -5.7
CCUT  Cedar City       82.53  47 eP      P        05 02 03.5 +1.6
      comp=Z,35nm,0.9s
PGC   Sidney           82.59  33 eP      P        05 02 02.8 +1.2
      comp=Z,59nm,0.9s
319A  Douglas          82.61  54 eP      P        05 02 03.8 +1.5
      comp=Z,84nm,0.8s
BBB   Bella Bella      82.61  29 eP      P        05 02 02.5 +0.8
      comp=Z,30nm,0.8s
PSUT  Pine Spring      82.68  46 eP      P        05 02 03.7 +1.1
      comp=Z,36nm,0.8s
U15A  North Rim        82.73  48 eP      P        05 02 04.7 +1.7
      comp=Z,81nm,0.9s
SZCU  Shurtz Canyon    82.74  47 eP      P        05 02 04.4 +1.5
      comp=Z,32nm,1.0s
SKT   Skwentna         82.77  12 eP      P        05 02 01.0  -1.2
      comp=Z,17nm,0.8s
CRAG  Craig            82.83  24 eP      P        05 02 04.0 +1.4
F07A  Phinny Hill Vi   82.86  37 eP      P        05 02 04.5 +1.5
      comp=Z,34nm,0.8s
PMR   Palmer           82.94  14 eP      P        05 02 02.7  -0.3
      comp=Z,58nm,0.6s
PMR   Palmer           82.94  14 eP      P        05 02 02.7  -0.3
PMR                                pmax  pmax
      comp=Z,58nm,0.6s
WUAZ  Wupatki          82.95  49  P      P        05 02 05.4 +1.4
      baz=242
WUAZ  Wupatki          82.95  49 eP      P        05 02 05.5 +1.6
      comp=Z,46nm,1.1s
A04D  Lummi Island     83.02  33  P      P        05 02 04.9 +1.1
      baz=232,SNR=7.7
B05A  Bryant           83.06  34  P      P        05 02 04.9 +0.9
      baz=233,SNR=35
G08A  Pilot Rock       83.07  38 eP      P        05 02 05.2 +0.9
      comp=Z,88nm,1.4s
KULM  Kulim            83.12 278 eP      P        05 02 05.8 +0.7
      comp=Z,68nm,1.4s
PKCU  Pink Cliffs      83.21  47 eP      P        05 02 07.6 +2.2
      comp=Z,78nm,1.1s
E07A  Sunnyside        83.28  36 eP      P        05 02 06.8 +1.6
      comp=Z,62nm,0.9s
SML   Sawmill          83.31  14 eP      P        05 02 04.7  -0.3
      comp=Z,28nm,0.8s
SML   Sawmill          83.31  14 eP      P        05 02 04.7  -0.3
SML                                pmax  pmax
      comp=Z,28nm,0.8s
DIV   Divide           83.33  15 eP      P        05 02 05.0  -0.2
      comp=Z,94nm,0.7s
HAWA  Hanford          83.37  37 eP      P        05 02 06.9 +1.3
      comp=Z,71nm,1.0s
PPLA  Purkeypile       83.47  12 eP      P        05 02 04.4  -1.5
      comp=Z,18nm,0.6s
BMRM  Bremner River    83.49  16 eP      P        05 02 06.0 +0.1
      comp=Z,95nm,1.0s
X18A  Snowflake        83.53  51 eP      P        05 02 08.5 +1.6
      comp=Z,23nm,0.9s
MAW   Mawson           83.54 200  P      P        05 02 07.0 +0.9
      comp=Z,2.6nm,0.4s,baz=122,slow=7.7,SNR=9.0
MAW   Mawson           83.54 200  P      P        05 02 07.0 +0.9
MAW                                pmax  pmax
      comp=Z,3.0nm,0.4s
B06A  Marblemount      83.54  34 eP      P        05 02 06.8 +0.5
      comp=Z,34nm,0.9s
SCM   Sheep Creek Mo   83.56  14 eP      P        05 02 06.3  0.0
      comp=Z,178nm,0.6s
SCM   Sheep Creek Mo   83.56  14 eP      P        05 02 06.3  0.0
SCM                                pmax  pmax
      comp=Z,178nm,0.6s
HPIG                   83.58  59 eP      P        05 02 09.0 +1.7
      comp=Z,21nm,0.8s
MTPU  Mount Pierson    83.58  47 eP      P        05 02 09.3 +2.0
      comp=Z,30nm,0.9s
KLU   Klutina          83.61  15 eP      P        05 02 06.6 +0.1
      comp=Z,41nm,0.9s
E08A  Dider Farm, El   83.69  37 eP      P        05 02 08.2 +1.1
      comp=Z,39nm,0.8s
BMO   Blue Mountains   83.80  39 eP      P        05 02 08.4 +0.5
      comp=Z,15nm,0.8s
BMO   Blue Mountains   83.80  39 eP      P        05 02 08.4 +0.5
BMO                                pmax  pmax
      comp=Z,15nm,0.8s
MSU   Marysvale        83.82  46 eP      P        05 02 09.9 +1.6
WRAK  Wrangell Islan   83.82  24 eP      P        05 02 08.2 +0.7
      comp=Z,42nm,0.8s
WTV   Waterville       83.89  35 eP      P        05 02 08.9 +0.7
MFID  Camas Ranch      83.92  41 eP      P        05 02 09.5 +0.9
      comp=Z,35nm,0.9s
W18A  Petrified Fore   83.95  50  P      P        05 02 10.3 +1.3
      baz=243
W18A  Petrified Fore   83.95  50 eP      P        05 02 10.3 +1.3
      comp=Z,53nm,1.4s
PSI   Prapat           83.95 275  P      P        05 02 08.6  -0.7
      comp=Z,62nm,0.8s,baz=180,slow=5.3,SNR=36
PSI   Prapat           83.95 275 eP      P        05 02 08.7  -0.7
      comp=Z,65nm,0.8s
CAST  Castle Rocks     83.97  12 eP      P        05 02 06.6  -1.5
      comp=Z,116nm,0.7s
BJT   Baijiatuau       84.06 315 eP      P        05 02 09.7 +0.6
      comp=Z,27nm,0.5s
BJI   Beijing          84.06 315⇓iP      P        05 02 09.5 +0.4
BJI                                pmax  pmax
      comp=Z,52nm,1.2s
D08A  Wollman Farm,    84.09  36 eP      P        05 02 10.1 +0.9
      comp=Z,52nm,0.8s
SEY   Seymchan         84.13 347  P      P        05 02 08.8  -0.2
      comp=Z,61nm,0.7s,baz=146,slow=5.7,SNR=169
SEY   Seymchan         84.13 347d iP     P        05 02 08.5  -0.4
DUG   Dugway, Tooele   84.21  44  P      P        05 02 10.8 +0.7
      baz=240
DUG   Dugway, Tooele   84.21  44 eP      P        05 02 10.8 +0.7
      comp=Z,7.1nm,0.8s
DUG   Dugway, Tooele   84.21  44 eP      P        05 02 10.8 +0.7
DUG                                pmax  pmax
      comp=Z,7.0nm,0.8s
E09A  Wood Farm, Sta   84.23  37 eP      P        05 02 10.5 +0.7
      comp=Z,64nm,1.4s
121A  Cookes Peak, D   84.26  53  P      P        05 02 12.4 +1.9
      baz=244,SNR=19
TRF   Thorofare Moun   84.35  12 eP      P        05 02 09.2  -1.0
      comp=Z,133nm,0.7s
BGU   Big Grassy Mou   84.43  44 eP      P        05 02 12.2 +1.1
      comp=Z,6.6nm,1.0s
JIS   Juneau Island    84.45  22 eP      P        05 02 11.2 +0.6
      comp=Z,26nm,1.0s
F10A  Beach Ranch, E   84.46  38 eP      P        05 02 11.5 +0.4
      comp=Z,70nm,0.8s
ENH   Enshi            84.50 304 eP      P        05 02 12.2 +0.7
      comp=Z,91nm,0.7s
BESE  Bessie Mountai   84.51  21 eP      P        05 02 12.1 +1.1
      comp=Z,39nm,0.9s
ZAIG  Zacatecas        84.54  64 eP      P        05 02 14.5 +2.3
      comp=Z,28nm,0.9s
HARP  HAARP            84.58  15 eP      P        05 02 11.6 +0.4
      comp=Z,91nm,0.8s
MOIG  Morelia          84.58  67 eP      P        05 02 14.2 +1.8
      comp=Z,57nm,0.8s
NLU   North Lily Min   84.58  45 eP      P        05 02 13.3 +1.3
      comp=Z,6.6nm,0.9s
LLLB  Lillooet         84.60  32 eP      P        05 02 12.3 +0.7
      comp=Z,36nm,0.9s
B08A  Colville Reser   84.61  35 eP      P        05 02 11.9 +0.2
      comp=Z,51nm,0.8s
GSI   Gunungsitoli     84.76 273  P      P        05 02 07.4  -5.8
GSI   Gunungsitoli     84.76 273 eP      P        05 02 14.2 +1.0
      comp=Z,98nm,0.8s
BPAW  Bear Paw Mtn.    84.80  12 eP      P        05 02 10.5  -1.7
      comp=Z,51nm,1.6s
TMUT  Trail Mountain   84.86  46 eP      P        05 02 15.1 +1.6
      comp=Z,26nm,0.7s
HLID  Hailey           84.87  41  P      P        05 02 14.6 +1.3
      baz=239
HLID  Hailey           84.87  41 eP      P        05 02 14.7 +1.3
      comp=Z,35nm,0.8s
C09A  Chrisman Ranch   84.88  36 eP      P        05 02 13.7 +0.8
      comp=Z,47nm,0.7s
MCK   McKinley         84.88  13 eP      P        05 02 11.9  -0.7
      comp=Z,75nm,0.9s
MCK   McKinley         84.88  13 eP      P        05 02 11.9  -0.7
MCK                                pmax  pmax
      comp=Z,75nm,0.9s
MPU   Maple Canyon     84.91  45 eP      P        05 02 14.6 +1.1
      comp=Z,12nm,0.9s
SPUT  South Promonto   85.00  44 eP      P        05 02 14.8 +0.9
      comp=Z,14nm,0.9s
HVU   Hansel Valley    85.02  43 eP      P        05 02 15.1 +1.1
      comp=Z,17nm,0.7s
HVU   Hansel Valley    85.02  43 eP      P        05 02 15.1 +1.1
HVU                                pmax  pmax
      comp=Z,17nm,0.7s
SKAG  Skagway          85.02  20 eP      P        05 02 14.4 +1.1
CTU   Camp Tracy       85.16  44 eP      P        05 02 15.9 +1.2
      comp=Z,14nm,0.8s
BWN   Browne           85.16  12 eP      P        05 02 13.5  -0.4
      comp=Z,138nm,1.2s
SRU   San Rafael Swe   85.24  46 eP      P        05 02 16.1 +1.0
      comp=Z,30nm,0.7s
SRU   San Rafael Swe   85.24  46 eP      P        05 02 16.1 +1.0
SRU                                pmax  pmax
      comp=Z,30nm,0.7s
GYA   Guiyang          85.25 300 eP      P        05 02 16.8 +1.4
GYA                                pP    pP       05 04 28.5 +0.5
GYA                                sP    sP       05 05 29.0  -1.5
GYA                                PP    PP       05 05 48.4 +2.9
GYA                                SKS   SKSac    05 11 41.3  -0.5
GYA                                S     S        05 11 55.0  -0.2
GYA                                pmax  pmax
      comp=Z,20nm,1.0s
GYA                                pmax  pmax
      comp=Z,120nm,5.8s
JLU   Jordanelle       85.32  45 eP      P        05 02 16.4 +0.9
      comp=Z,9.4nm,0.7s
ZEA   Zeya             85.52 331 eP      P        05 02 16.8 +1.0
ZEA                                pmax  pmax
      comp=N,44nm,0.9s
ZEA                                pmax  pmax
      comp=Z,81nm,1.0s
LAZ   Ladron           85.55  52 eP      P        05 02 18.1 +1.3
LENM  Lemitar          85.57  52 eP      P        05 02 18.1 +1.3
Y22D  IRIS PASSCAL I   85.57  52  P      P        05 02 18.5 +1.7
      baz=245
Y22E  IRIS PASSCAL I   85.57  52  P      P        05 02 18.4 +1.6
      baz=245
TCUT  Toone Canyon     85.59  44 eP      P        05 02 17.5 +0.7
      comp=Z,44nm,0.7s
P18A  Preston Nutter   85.67  46 eP      P        05 02 18.3 +1.0
      comp=Z,10.0nm,0.8s
MLY   Manley           85.68  11 eP      P        05 02 15.3  -1.1
      comp=Z,44nm,1.4s
WRH   Wood River Hil   85.71  13 eP      P        05 02 15.7  -0.8
      comp=Z,135nm,1.4s
HWUT  Hardware Ranch   85.72  44 eP      P        05 02 17.9 +0.5
      comp=Z,9.4nm,0.7s
TPTI                   85.75 275  P      P        05 02 12.6  -5.3
MNTX  Cornudas Mount   85.75  55  P      P        05 02 19.1 +1.5
      baz=246,SNR=45
MNTX  Cornudas Mount   85.75  55 eP      P        05 02 19.0 +1.5
      comp=Z,19nm,0.6s
MVCO  Mesa Verde       85.79  49  P      P        05 02 18.4 +0.6
      baz=244,SNR=7.9
MVCO  Mesa Verde       85.79  49 eP      P        05 02 18.3 +0.5
      comp=Z,20nm,1.5s
BNM   Barren Site      85.82  52 eP      P        05 02 19.3 +1.2
LPM   Los Pinos Moun   85.89  52 eP      P        05 02 19.9 +1.6
PV09  Paradox Valley   85.92  47 eP      P        05 02 19.6 +1.1
CCB   Clear Creek Bu   85.92  13 eP      P        05 02 16.6  -0.9
      comp=Z,76nm,0.5s
PV03  Paradox Valley   86.01  48 eP      P        05 02 19.5 +0.7
PV02  Paradox Valley   86.06  48 eP      P        05 02 19.9 +0.8
      comp=Z,12nm,0.8s
COLA  College          86.11  13 eP      P        05 02 17.5  -0.8
      comp=Z,101nm,0.6s
COLA  College          86.11  13 eP      P        05 02 17.5  -0.8
COLA                               pmax  pmax
      comp=Z,101nm,0.6s
DLBC  Dease Lake       86.14  23 eP      P        05 02 19.4 +0.6
      comp=Z,91nm,1.8s
TX31  Lajitas Ar. Si   86.15  58 eP      P        05 02 21.8 +2.2
TXAR  Lajitas Array    86.16  58  P      P        05 02 21.7 +2.1
      comp=Z,57nm,0.8s,baz=220,slow=6.0,SNR=636
TXAR                               PKKPbc PKKPbc  05 20 14.3  -0.2
      comp=Z,0.2nm,0.4s,baz=108,slow=2.9,SNR=8.3
TLIG  Tlapa            86.16  70 eP      P        05 02 22.0 +2.2
      comp=Z,23nm,0.9s
IL1   Eielson Array    86.23  13 eP      P        05 02 17.0  -2.0
IL1                              epP     pP       05 04 33.6 +1.6
IL1                              eS      S        05 12 00.3  -2.2
ILAR  Eielson Array    86.23  13  P      P        05 02 18.1  -0.9
      comp=Z,25nm,0.5s,baz=231,slow=5.8,SNR=220
ILAR                               pP    pP       05 04 33.7 +1.6
      comp=Z,7.2nm,1.3s,baz=229,slow=5.7,SNR=4.1
ILAR                               PKiKP PKiKP    05 07 20.4  -1.2
      comp=Z,0.7nm,0.6s,baz=333,slow=1.5,SNR=6.0
ILAR                               PKKPbc PKKPdf  05 20 12.3 +3.5
      comp=Z,0.6nm,0.5s,baz=343,slow=2.2,SNR=6.8
ILB   Eielson Array    86.23  13 eP      P        05 02 18.0  -0.9
TASM  ASL Pad, Albuq   86.29  51  P      P        05 02 21.2 +1.0
      baz=245,SNR=45
ANMO  Albuquerque      86.29  51  P      P        05 02 21.2 +1.0
      baz=245
ANMO  Albuquerque      86.29  51 eP      P        05 02 21.2 +1.0
      comp=Z,25nm,0.9s
ANMO  Albuquerque      86.29  51d iP     P        05 02 21.2 +1.0
ANMO                               pmax  pmax
      comp=Z,26nm,1.0s
TASL  Snake Pit, Alb   86.29  51  P      P        05 02 21.3 +1.0
      baz=245,SNR=44
MCMT  McKenzie Canyo   86.48  40 eP      P        05 02 22.1 +1.1
XAN   Xi'an            86.50 307  P      P        05 02 21.8 +0.7
XAN                                pmax  pmax
      comp=Z,77nm,1.1s
AHID  Auburn Hatcher   86.58  43 eP      P        05 02 22.5 +1.1
      comp=Z,66nm,1.5s
HIA   Hailar           86.68 325 eP      P        05 02 22.0 +0.5
      comp=Z,17nm,0.6s
HIA   Hailar           86.68 325 eP      P        05 02 22.0 +0.5
HIA                                pmax  pmax
      comp=Z,17nm,0.6s
RDOG  Red Dog Mine     86.81   6 eP      P        05 02 21.9 +0.3
      comp=Z,12nm,0.6s
RDOG                             epP     pP       05 04 33.0  -2.1
MSO   Missoula         86.84  38  P      P        05 02 22.3  -0.1
      baz=239,SNR=35
MSO   Missoula         86.84  38 eP      P        05 02 22.5 +0.1
      comp=Z,16nm,0.6s
DLMT  Dillon           86.91  40 eP      P        05 02 24.0 +1.2
      comp=Z,25nm,0.8s
TPAW  Teton Pass       87.02  42 eP      P        05 02 24.7 +1.1
      comp=Z,47nm,1.1s
REDW  Red Top Meadow   87.03  42 eP      P        05 02 24.7 +1.2
      comp=Z,78nm,1.1s
FXWY  Fox Creek        87.05  42 eP      P        05 02 24.7 +1.1
      comp=Z,29nm,1.1s
JTMT  Jette            87.11  37 eP      P        05 02 23.5  -0.2
      comp=Z,14nm,0.7s
SNOW  Snow King Moun   87.14  42 eP      P        05 02 25.4 +1.3
      comp=Z,86nm,1.1s
S22A  4UR Ranch, Cre   87.21  49  P      P        05 02 25.8 +1.3
      baz=244,SNR=38
S22A  4UR Ranch, Cre   87.21  49 eP      P        05 02 25.9 +1.3
      comp=Z,25nm,1.1s
LRM   Limekiln Ridge   87.22  40 eP      P        05 02 25.1 +0.6
IMW   Indian Meadow    87.23  42 eP      P        05 02 25.9 +1.3
      comp=Z,54nm,0.9s
O20A  White River Ci   87.27  46  P      P        05 02 25.7 +1.0
      baz=244,SNR=24
O20A  White River Ci   87.27  46 eP      P        05 02 25.7 +1.0
      comp=Z,24nm,0.8s
MOOW  Moose Ponds      87.28  42 eP      P        05 02 25.7 +1.0
      comp=Z,19nm,1.0s
LOHW  Long Hollow      87.30  42 eP      P        05 02 25.8 +0.9
      comp=Z,95nm,1.6s
QLMT  Earthquake Lak   87.37  41 eP      P        05 02 26.8 +1.7
DAWY  Dawson           87.42  16 eP      P        05 02 24.8 +0.2
      comp=Z,33nm,0.8s
FLWY  Flagg Ranch      87.47  42 eP      P        05 02 27.1 +1.5
      comp=Z,55nm,0.9s
YHB   Horse Butte      87.47  41 eP      P        05 02 27.3 +1.8
      comp=Z,56nm,1.0s
YPP   Pitchstone Pla   87.49  42 eP      P        05 02 27.4 +1.6
      comp=Z,40nm,1.7s
EGAK  Eagle            87.55  15 eP      P        05 02 25.1  0.0
      comp=Z,53nm,0.7s
HHC   Hu-ho-hao-te     87.55 314 eP      P        05 02 26.3 +0.4
HHC                                pmax  pmax
      comp=Z,43nm,1.1s
HHC                                pmax  pmax
      comp=Z,140nm,5.4s
YFT   Old Faithful     87.56  41 eP      P        05 02 28.9 +2.9
      comp=Z,36nm,0.9s
YMR   Madison River    87.58  41 eP      P        05 02 27.9 +1.8
      comp=Z,52nm,1.0s
LCCM  Lewis and Clar   87.58  40 eP      P        05 02 26.9 +0.9
BW06  Boulder Array    87.58  43  P      P        05 02 26.7 +0.6
      baz=242,SNR=68
BW06  Boulder Array    87.58  43 eP      P        05 02 26.7 +0.6
      comp=Z,31nm,0.7s
PD31  Pinedale Array   87.58  43 eP      P        05 02 26.7 +0.5
PDAR  Pinedale Array   87.58  43  P      P        05 02 26.6 +0.5
      comp=Z,23nm,0.6s,baz=216,slow=3.5,SNR=319
PDAR                               PKKP  PKKPbc   05 20 10.4  -1.4
      comp=Z,0.5nm,0.5s,baz=71,slow=3.1,SNR=6.7
BOZ   Bozeman (W)      87.61  40  P      P        05 02 27.1 +1.0
      baz=241,SNR=45
BOZ   Bozeman (W)      87.61  40 eP      P        05 02 27.2 +1.0
      comp=Z,49nm,1.3s
BOZ   Bozeman (W)      87.61  40 eP      P        05 02 27.2 +1.0
BOZ                                pmax  pmax
      comp=Z,49nm,1.3s
H17A  Grant Village    87.69  42  P      P        05 02 28.8 +2.1
      baz=242,SNR=30
H17A  Grant Village    87.69  42 eP      P        05 02 29.1 +2.5
      comp=Z,36nm,0.8s
SMCO  Snowmass         87.73  47 eP      P        05 02 28.1 +1.0
      comp=Z,50nm,1.6s
COLD  Coldfoot         87.76  11 eP      P        05 02 26.4 +0.3
      comp=Z,47nm,0.8s
LNIG  Linares          87.96  63 eP      P        05 02 28.2 +0.2
      comp=Z,87nm,0.9s
WALA  Waterton Lakes   88.00  36 eP      P        05 02 28.3 +0.5
      comp=Z,21nm,0.8s
KMI   Kunming          88.03 297  P      P        05 02 29.8 +1.2
KMI                                pmax  pmax
      comp=Z,33nm,1.1s
HRY   Holter Researc   88.04  39 eP      P        05 02 28.8 +0.8
FYU   Fort Yukon       88.13  13 eP      P        05 02 26.8  -1.0
      comp=Z,29nm,0.6s
SDCO  Great Sand Dun   88.17  49  P      P        05 02 29.7 +0.6
      baz=245,SNR=20
SDCO  Great Sand Dun   88.17  49 eP      P        05 02 29.7 +0.6
      comp=Z,8.7nm,0.9s
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UMPA	Umpang Tak	88.37	288	P	P	05 02 31.9	+1.8
	comp=Z,12nm,1.0s,comp=Z,908nm						
RWWY	Rawlins	88.66	45	eP	P	05 02 31.8	+0.6
	comp=Z,48nm,1.1s						
MSTX	Muleshoe	88.67	54	P	P	05 02 32.2	+0.9
	baz=247						
MSTX	Muleshoe	88.67	54	eP	P	05 02 32.2	+0.9
	comp=Z,57nm,0.9s						
T25A	Trinidad	88.71	50	P	P	05 02 32.0	+0.5
	baz=246,SNR=7.8						
T25A	Trinidad	88.71	50	eP	P	05 02 32.0	+0.5
	comp=Z,5.4nm,0.6s						
SYO	Syowa Base	88.82	193	⇑eP	P	05 02 30.4	-0.7
RLMT	Red Lodge	88.86	41	P	P	05 02 33.2	+1.2
	baz=243,SNR=26						
RLMT	Red Lodge	88.86	41	eP	P	05 02 33.2	+1.2
	comp=Z,29nm,1.0s						
GCMT	Greycliff	88.92	41	eP	P	05 02 33.7	+1.6
Q24A	Divide	88.92	48	P	P	05 02 33.3	+0.7
	baz=246,SNR=7.0						
ISCO	Idaho Springs	88.95	47	P	P	05 02 33.6	+1.0
	baz=245,SNR=9.3						
ISCO	Idaho Springs	88.95	47	eP	P	05 02 34.0	+1.3
	comp=Z,36nm,1.8s						
ISCO	Idaho Springs	88.95	47	eP	P	05 02 34.0	+1.3
ISCO				pmax	pmax		
	comp=Z,36nm,1.8s						
CM01	Chiang Mai Arr	89.01	290	eP	P	05 02 33.8	+0.8
CM31	Chiang Mai Arr	89.04	290	eP	P	05 02 34.7	+1.5
CMAR	Chiang Mai Arr	89.04	290	P	P	05 02 34.3	+1.1
	comp=Z,26nm,0.9s,baz=112,slow=2.8,SNR=128						
CMAR				PKKPbc	PKKPbc	05 20 08.1	+1.0
	comp=Z,1.7nm,0.4s,baz=278,slow=4.2,SNR=7.6						
TOLK	Toolik Lake Re	89.13	10	P	P	05 02 32.6	+0.1
	baz=207						
TOLK	Toolik Lake Re	89.13	10	eP	P	05 02 32.5	+0.1
	comp=Z,17nm,0.8s						
CMMT	Chiang Mai	89.15	290	P	P	05 02 34.4	+0.7
	comp=Z,55nm,1.0s,comp=Z,493nm						
CHTO	Chiang Mai	89.16	290	eP	P	05 02 33.9	+0.2
	comp=Z,36nm,0.8s						
CHTO	Chiang Mai	89.16	290	eP	P	05 02 33.9	+0.2
CHTO				pmax	pmax		
	comp=Z,36nm,0.8s						
CHTO	Chiang Mai	89.16	290	P	P	05 02 34.4	+0.7
	comp=Z,244nm,1.0s,comp=Z,2µm						
833A	Chaparral WMA,	89.25	60	P	P	05 02 35.0	+1.1
	baz=249						
833A	Chaparral WMA,	89.25	60	eP	P	05 02 35.1	+1.2
	comp=Z,37nm,0.9s						
CD2	Chengdu	89.29	303	P	P	05 02 34.0	-0.1
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CMAI	Chiengmai2	89.44	291	P	P	05 02 35.9	+0.7
	comp=Z,7.6nm,0.9s,comp=Z,120nm						
K22A	Casper	89.53	45	P	P	05 02 35.8	+0.7
	baz=245,SNR=16						
K22A	Casper	89.53	45	eP	P	05 02 36.0	+0.8
	comp=Z,44nm,1.3s						
JCT	Junction City	89.69	58	P	P	05 02 36.7	+0.8
	baz=249						
JCT	Junction City	89.69	58	eP	P	05 02 36.8	+0.8
	comp=Z,27nm,0.8s						
JCT	Junction City	89.69	58	eP	P	05 02 36.8	+0.8
JCT				pmax	pmax		
	comp=Z,27nm,0.8s						
AMTX	Amarillo	89.86	53	P	P	05 02 37.3	+0.5
	baz=248						
AMTX	Amarillo	89.86	53	eP	P	05 02 37.1	+0.4
	comp=Z,29nm,0.8s						
EGMT	Eagleton	89.90	39	P	P	05 02 37.2	+0.6
	baz=242						
EGMT	Eagleton	89.90	39	eP	P	05 02 37.5	+0.9
	comp=Z,20nm,1.3s						
SNAA	Sanae	90.24	179	P	P	05 02 37.9	+0.1
	comp=Z,3.6nm,0.6s,baz=196,slow=8.2,SNR=82						
SNAA				PKKPbc	PKKPdf	05 20 01.8	+2.5
	comp=Z,1.5nm,0.8s,baz=343,slow=1.6,SNR=14						
SNAA	Sanae	90.24	179	eP	P	05 02 37.9	+0.1
	comp=Z,13nm,1.4s						
SNAA				PKKPbc	PKKPdf	05 20 01.8	+2.5
SNAA	Sanae	90.24	179	i P	P	05 02 37.6	-0.2
ABTX	Abilene, Hawle	90.60	56	P	P	05 02 41.0	+0.9
	baz=249						
ABTX	Abilene, Hawle	90.60	56	eP	P	05 02 41.1	+1.0
	comp=Z,133nm,1.4s						
KSCO	Kaye Shedlock’	90.74	49	P	P	05 02 41.5	+0.8
	baz=247						
KSCO	Kaye Shedlock’	90.74	49	eP	P	05 02 42.0	+1.2
	comp=Z,32nm,1.1s						
PLCA	Paso Flores	91.06	134	P	P	05 02 42.2	0.0
	comp=Z,2.7nm,0.5s,baz=273,slow=5.5,SNR=9.2						
LZH	Lanzhou	91.14	308	⇓P	P	05 02 43.8	+1.1
LZH				pP	pP	05 04 56.6	-0.6
LZH				sP	sP	05 05 55.3	-3.8
LZH				ePP	PP	05 06 35.4	+3.8
LZH				pmax	pmax		
	comp=Z,100nm,1.0s						
LZH				pmax	pmax		
	comp=Z,150nm,5.4s						
LAO	LASA Array	91.46	41	P	P	05 02 45.3	+1.5
	baz=245						
LAO	LASA Array	91.46	41	eP	P	05 02 45.2	+1.5
	comp=Z,46nm,0.8s						
CCIG	Comitan	91.54	73	eP	P	05 02 46.5	+1.5
	comp=Z,11nm,0.8s						
435B	Jarrell	91.59	58	P	P	05 02 45.7	+1.0
	baz=250						
435B	Jarrell	91.59	58	eP	P	05 02 46.0	+1.3
	comp=Z,23nm,0.7s						
RSSD	Black Hills	91.80	44	P	P	05 02 45.9	+0.3
	baz=246						
RSSD	Black Hills	91.80	44	eP	P	05 02 46.0	+0.3
	comp=Z,27nm,1.0s						
RSSD	Black Hills	91.80	44	eP	P	05 02 46.0	+0.4
RSSD				pmax	pmax		
	comp=Z,27nm,1.0s						
OGNE	Ogallala	91.91	47	P	P	05 02 46.6	+0.5
	baz=248						
OGNE	Ogallala	91.91	47	eP	P	05 02 47.2	+1.1
	comp=Z,24nm,1.0s						
WMOK	Wichita Mounta	92.02	54	P	P	05 02 46.6	0.0
	baz=249						
WMOK	Wichita Mounta	92.02	54	eP	P	05 02 46.8	+0.2
	comp=Z,6.4nm,1.1s						
WHTX	Lake Whitney,	92.11	57	P	P	05 02 47.6	+0.6
	baz=250						
INK	Inuvik	92.22	15	P	P	05 02 46.1	-0.5
	comp=Z,27nm,0.9s,baz=223,slow=3.9,SNR=64						
INK				PKiKP	PKiKP	05 07 30.8	-0.7
	comp=Z,1.5nm,0.8s,baz=181,slow=6.8,SNR=4.0						
INK	Inuvik	92.22	15	eP	P	05 02 46.1	-0.5
	comp=Z,40nm,1.0s						
INK				PKiKP	PKiKP	05 07 30.8	-0.7
HKT	Hockley	92.73	59	eP	P	05 02 51.7	+1.8
	comp=Z,21nm,1.5s						
CBKS	Cedar Bluff	92.76	50	P	P	05 02 50.6	+0.7
	baz=249						
CBKS	Cedar Bluff	92.76	50	eP	P	05 02 51.0	+1.1
	comp=Z,34nm,0.9s						
CBKS	Cedar Bluff	92.76	50	eP	P	05 02 51.0	+1.1
CBKS				pmax	pmax		
	comp=Z,34nm,0.9s						
DGMT	Dagmar	93.44	40	P	P	05 02 53.7	+0.9
	baz=246,SNR=20						
DGMT	Dagmar	93.44	40	eP	P	05 02 54.0	+1.2
	comp=Z,50nm,0.8s						
ULN	Ulaanbaatar	93.45	319	eP	P	05 02 52.0	-1.0
	comp=Z,9.4nm,0.8s						
ULN	Ulaanbaatar	93.45	319	⇓iP	P	05 02 52.5	-0.5
ULN				pmax	pmax		
	comp=Z,12nm,0.9s						
SONA1	Songino Array	93.84	319	eP	P	05 02 54.0	-0.8
SONA1				eS	S	05 13 12.0	+0.3
SONM	Songino Array	93.84	319	P	P	05 02 54.0	-0.7
	comp=Z,3.9nm,0.7s,baz=132,slow=4.4,SNR=29						
SONM				PKiKP	PKiKP	05 07 34.4	-0.7
	comp=Z,0.4nm,0.3s,baz=44,slow=1.4,SNR=6.0						
SONM				PKKPbc	PKKPdf	05 19 55.3	+0.4
	comp=Z,0.8nm,0.8s,baz=305,slow=5.2,SNR=4.9						
BOD	Bodaibo	93.99	330	eP	P	05 02 54.0	-1.0
BOD				pmax	pmax		
	comp=Z,9.0nm,1.5s						
YKA	Yellowknife Ar	94.64	25	P	P	05 02 57.5	-0.3
	comp=Z,7.3nm,0.7s,baz=237,slow=4.5,SNR=24						
YKA				PKKPbc	PKKPdf	05 19 51.8	-1.9
	comp=Z,0.6nm,0.5s,baz=32,slow=2.4,SNR=6.4						
BGNE	Belgrade	94.81	48	P	P	05 03 00.3	+1.1
	baz=250						
BGNE	Belgrade	94.81	48	eP	P	05 03 00.4	+1.3
	comp=Z,49nm,0.9s						
KSU1	Kansas State U	95.15	51	P	P	05 03 01.8	+1.1
	baz=251						
KSU1	Kansas State U	95.15	51	eP	P	05 03 02.4	+1.7
	comp=Z,49nm,0.6s						
GTA	Gaotai	95.29	310	⇑P	P	05 03 01.9	+0.4
GTA				pP	pP	05 05 16.4	0.0
GTA				sP	sP	05 06 15.3	-3.0
GTA				pmax	pmax		
	comp=Z,12nm,0.9s						
542A	Morse	95.48	60	P	P	05 03 02.8	+0.5
	baz=252						
X39A	Fountain Ranch	95.58	56	P	P	05 03 03.3	+0.6
	baz=252						
MIAR	Mount Ida	96.01	56	Pdiff	P	05 03 04.9	+0.3
	baz=252						
MIAR	Mount Ida	96.01	56	eP	P	05 03 05.9	+1.2
	comp=Z,18nm,1.8s						
MIAR	Mount Ida	96.01	56	eP	P	05 03 05.9	+1.2
MIAR				pmax	pmax		
	comp=Z,18nm,1.8s						
MDND	Maddock	96.06	42	Pdiff	P	05 03 04.5	-0.1
	baz=250						
Y40A	Okolona	96.08	56	Pdiff	P	05 03 05.2	+0.2
	baz=252						
T38A	Diamond	96.22	53	Pdiff	P	05 03 05.9	+0.3
	baz=252						
HHAR	Hobbs	96.26	54	eP	P	05 03 06.5	+0.7
	comp=Z,2.6nm,0.7s						
H32A	Carlson Farm,	96.34	45	Pdiff	P	05 03 05.8	-0.2
	baz=251						
V39A	Pettigrew	96.35	54	Pdiff	P	05 03 06.2	-0.1
	baz=252						
JTS	JuntasAbangare	96.38	81	eP	P	05 03 08.2	+1.4
	comp=Z,6.9nm,0.8s						
JTS	JuntasAbangare	96.38	81	eP	P	05 03 08.2	+1.4
JTS				pmax	pmax		
	comp=Z,7.0nm,0.8s						
TIXI	Tiksi	96.51	345	⇑iP	P	05 03 04.5	-1.5
TIXI				pmax	pmax		
	comp=Z,9.0nm,0.9s						
G32A	Webster	96.55	45	Pdiff	P	05 03 06.5	-0.4
	baz=251						
G32A	Webster	96.55	45	eP	P	05 03 07.0	+0.1
	comp=Z,21nm,1.0s						
W40A	Ferguson Farm,	96.60	55	Pdiff	P	05 03 07.8	+0.5
	baz=252						
U39A	Green Forest	96.64	54	Pdiff	P	05 03 07.5	0.0
	baz=252						
ECSD	EROS Data Cent	96.65	46	Pdiff	P	05 03 07.3	-0.1
	baz=251						
ECSD	EROS Data Cent	96.65	46	eP	P	05 03 07.3	-0.1
	comp=Z,11nm,1.1s						
Q37A	Longview Farm,	96.67	51	Pdiff	P	05 03 07.8	+0.2
	baz=252						
S38A	Stockton	96.70	53	Pdiff	P	05 03 07.9	+0.2
	baz=252						
X41A	Kaden, Bauxite	96.83	56	Pdiff	P	05 03 08.4	0.0
	baz=253						
R38A	Fenwick Farm,	96.87	52	Pdiff	P	05 03 08.4	-0.1
	baz=252						
N36A	Muff Farm, Cla	96.90	49	Pdiff	P	05 03 08.7	+0.1
	baz=252						
T39A	Clever	96.92	53	Pdiff	P	05 03 08.8	+0.1
	baz=252						
P37A	Lathrop	96.96	51	Pdiff	P	05 03 09.1	+0.3
	baz=252						
V40A	Witts Springs	96.98	55	Pdiff	P	05 03 09.1	+0.1
	baz=253						
V40A	Witts Springs	96.98	55	eP	P	05 03 09.5	+0.4
	comp=Z,8.0nm,1.0s						
U40A	Yellville	97.12	54	Pdiff	Pdif	05 03 09.3	-0.3
	baz=253						
S39A	Bolivar	97.16	53	Pdiff	P	05 03 10.3	+0.5
	baz=253						
M36A	Felix, Anita	97.21	49	Pdiff	P	05 03 10.5	+0.6
	baz=252						
G33A	Ortonville	97.24	45	Pdiff	Pdif	05 03 09.7	-0.2
	baz=252						
W41B	Gary Mavity, V	97.24	55	Pdiff	Pdif	05 03 10.1	0.0
	baz=253						
O37A	Wolven Farm, M	97.29	50	Pdiff	P	05 03 10.7	+0.4
	baz=252						
Q38A	Cooks Store, C	97.31	52	Pdiff	P	05 03 10.8	+0.4
	baz=253						
N37A	Lee Faris, Mou	97.42	50	Pdiff	P	05 03 11.4	+0.6
	baz=252						
N37A	Lee Faris, Mou	97.42	50	ePdif	P	05 03 12.4	+1.5
	comp=Z,34nm,0.3s						
L36A	Harm Buss Farm	97.50	48	Pdiff	P	05 03 11.4	+0.3
	baz=252						
R39A	Chumby, Stover	97.56	52	Pdiff	P	05 03 12.4	+0.9
	baz=253						
T40A	Mansfield	97.61	54	Pdiff	P	05 03 12.0	+0.2
	baz=253						
M37A	Trindle Farm,	97.72	49	Pdiff	P	05 03 12.7	+0.6
	baz=253						
S40A	Lebanon	97.75	53	Pdiff	P	05 03 12.9	+0.4
	baz=253						
O38A	Galt	97.77	50	Pdiff	P	05 03 12.8	+0.4
	baz=253						
K36A	Gilmore City	97.81	48	Pdiff	P	05 03 13.2	+0.6
	baz=253						
Q39A	Willow Grove F	97.82	52	Pdiff	P	05 03 13.4	+0.8
	baz=253						
U41A	Viola	97.83	54	Pdiff	P	05 03 13.2	+0.4
	baz=253						
J36A	Seneca 1, Swea	98.10	47	Pdiff	P	05 03 14.2	+0.4
	baz=253						
J36A	Seneca 1, Swea	98.10	47	ePdif	P	05 03 14.4	+0.6
	comp=Z,14nm,1.3s						
R40A	Maddies Statio	98.13	52	Pdiff	P	05 03 14.8	+0.8
	baz=253						
R40A	Maddies Statio	98.13	52	ePdif	P	05 03 15.0	+1.0
	comp=Z,6.0nm,0.9s						
N38A	Joes South For	98.14	50	Pdiff	P	05 03 14.5	+0.4
	baz=253						
T41A	Mountain View	98.16	54	Pdiff	P	05 03 15.0	+0.8
	baz=253						
S41A	Jillco Farms,	98.32	53	Pdiff	P	05 03 15.1	+0.2
	baz=254						
M38A	Pleasantville	98.35	49	Pdiff	P	05 03 15.5	+0.6
	baz=253						
K37A	Belmond	98.42	48	Pdiff	P	05 03 15.6	+0.4
	baz=253						
Q40A	Laux Farm, Aux	98.48	52	Pdiff	P	05 03 16.2	+0.6
	baz=254						
O39A	Kirksville	98.49	51	Pdiff	P	05 03 16.3	+0.7
	baz=253						
P40A	Paris	98.65	51	Pdiff	P	05 03 17.4	+1.0
	baz=254						
P40A	Paris	98.65	51	ePdif	P	05 03 17.8	+1.5
	comp=Z,7.7nm,0.8s						
T42A	Van Buren	98.67	54	Pdiff	P	05 03 16.9	+0.4
	baz=254						
F35A	Swanville	98.69	45	Pdiff	P	05 03 17.0	+0.6
	baz=253						
N39A	Derby Farms, D	98.69	50	Pdiff	P	05 03 16.6	0.0
	baz=254						
N39A	Derby Farms, D	98.69	50	ePdif	P	05 03 16.7	+0.1
	comp=Z,9.4nm,0.9s						
L38A	Oak Wood Farm,	98.72	49	Pdiff	Pdif	05 03 16.6	0.0
	baz=253						
H36A	Jessenland, He	98.75	46	Pdiff	Pdif	05 03 16.6	0.0
	baz=253						
R41A	Rosebud	98.80	53	Pdiff	Pdif	05 03 17.1	0.0
	baz=254						
CCM	Cathedral Cave	98.84	53	Pdiff	P	05 03 17.6	+0.4
	baz=254						
CCM	Cathedral Cave	98.84	53	ePdif	P	05 03 19.8	+2.5
	comp=Z,4.1nm,0.7s						
O40A	La Belle	98.94	51	Pdiff	P	05 03 17.8	+0.1
	baz=254						
K38A	Parkersburg	99.00	48	Pdiff	Pdif	05 03 18.2	+0.4
	baz=254						
A33A	Warroad	99.07	42	Pdiff	Pdif	05 03 17.9	0.0
	baz=253						
M39A	Webster	99.10	49	Pdiff	Pdif	05 03 18.6	+0.3
	baz=254						
ULM	Lac du Bonnet	99.16	40	P	Pdif	05 03 18.2	-0.1
	comp=Z,2.3nm,0.5s,baz=317,slow=1.6,SNR=3.1						
T43A	Greenville	99.30	54	Pdiff	Pdif	05 03 19.6	+0.4
	baz=254						
N40A	Mertquake, Sal	99.37	50	Pdiff	Pdif	05 03 19.9	+0.4
	baz=254						
F36A	Milaca	99.39	45	Pdiff	Pdif	05 03 20.0	+0.5
	baz=254						
F36A	Milaca	99.39	45	ePdif	Pdif	05 03 20.1	+0.5
	comp=Z,5.4nm,0.7s						
L39A	Vinton	99.41	49	Pdiff	Pdif	05 03 20.3	+0.7
	baz=254						
B34A	Aery, Baudette	99.41	42	Pdiff	Pdif	05 03 19.1	-0.3
	baz=253						
P41A	Barry, Barry	99.42	51	Pdiff	Pdif	05 03 20.5	+0.8
	baz=254						
M40A	Post Highland	99.56	50	Pdiff	Pdif	05 03 20.8	+0.5
	baz=254						
I38A	Scanlan Farm,	99.70	47	Pdiff	Pdif	05 03 21.3	+0.4
	baz=254						
J39A	Decorah	99.94	48	Pdiff	Pdif	05 03 22.4	+0.4
	baz=254						
L40A	Anamosa	99.95	49	Pdiff	Pdif	05 03 22.5	+0.5
	baz=254						
D36A	Goodland	100.00	44	Pdiff	Pdif	05 03 22.5	+0.4
	baz=254						
D36A	Goodland	100.00	44	ePdif	Pdif	05 03 22.4	+0.2
I39A	Houston	100.21	47	Pdiff	Pdif	05 03 23.3	+0.1
	baz=255						
G38A	Ridgeland	100.33	46	Pdiff	Pdif	05 03 23.9	+0.2
	baz=255						
D37A	Cotton	100.48	44	Pdiff	Pdif	05 03 24.6	+0.3
	baz=255						
F38A	Pierce - Schro	100.53	45	Pdiff	Pdif	05 03 25.1	+0.6
	baz=255						
H39A	Augusta	100.59	46	Pdiff	Pdif	05 03 25.6	+0.7
	baz=255						
J40A	Soldiers Grove	100.64	48	Pdiff	Pdif	05 03 25.2	+0.1
	baz=255						
K41A	Shullsburg	100.75	49	Pdiff	Pdif	05 03 25.9	+0.3
	baz=255						
G39A	Holcombe	100.83	46	Pdiff	Pdif	05 03 26.1	+0.2
	baz=255						
I40A	Norwalk	100.85	47	Pdiff	Pdif	05 03 26.3	+0.3
	baz=255						
JFWS	Jewell Farm	100.86	48	Pdiff	Pdif	05 03 27.0	+0.9
	baz=255						
JFWS	Jewell Farm	100.86	48	ePdif	Pdif	05 03 27.5	+1.4
JFWS	Jewell Farm	100.86	48	eP	Pdif	05 03 27.5	+1.4
V47A	Nunnelly	101.13	56	Pdiff	Pdif	05 03 27.3	-0.1
	baz=256						
J41A	Loganville	101.14	48	Pdiff	Pdif	05 03 28.3	+0.9
	baz=256						
F39A	Loretta	101.16	45	Pdiff	Pdif	05 03 27.5	+0.1
	baz=255						
H40A	Chili	101.20	47	Pdiff	Pdif	05 03 28.2	+0.6
	baz=256						
K42A	Prairie Point,	101.47	49	Pdiff	Pdif	05 03 29.6	+0.8
	baz=256						
E39A	Mellen	101.52	45	Pdiff	Pdif	05 03 29.5	+0.5
	baz=256						
TAPN	Taplejung	101.55	295	eP	PKiKP	05 07 50.4	+0.7
ODAN	Odare	101.70	295	eP	PKiKP	05 07 49.8	-0.1
F40A	Park Falls	101.70	45	Pdiff	Pdif	05 03 30.2	+0.4
	baz=256						
J42A	Columbus	101.76	48	Pdiff	Pdif	05 03 30.4	+0.3
	baz=256						
E40A	Wakefield	101.98	45	Pdiff	Pdif	05 03 31.5	+0.5
	baz=256						
I42A	Draeger Farm,	102.05	48	Pdiff	Pdif	05 03 31.6	+0.3
	baz=256						
F41A	Three Lakes	102.35	46	Pdiff	Pdif	05 03 33.2	+0.5
	baz=257						
RAMN	Ramite	102.40	294	eP	PKiKP	05 07 50.9	-0.3
I43A	Langenfeld Bro	102.58	48	Pdiff	Pdif	05 03 34.2	+0.5
	baz=257						
E41A	Kenton	102.61	45	Pdiff	Pdif	05 03 34.7	+0.9
	baz=257						
G42A	Mountain	102.70	46	Pdiff	Pdif	05 03 35.0	+0.8
	baz=257						
JIRN	Jiri	102.93	295	eP	PKiKP	05 07 51.6	-0.7
LPAZ	La Paz	103.23	112	PKiKP	PKiKP	05 07 54.1	+0.6
	comp=Z,1.0nm,0.6s,baz=270,slow=3.0,SNR=3.8						
LPAZ				PKKPbc	PKKPbc	05 19 29.9	-0.3
	comp=Z,1.4nm,0.5s,baz=41,slow=3.1,SNR=13						
GUN	Gumba	103.26	295	eP	PKiKP	05 07 52.2	-0.6
PKIN	Phulchoki	103.59	295	eP	PKiKP	05 07 51.7	-1.7
KKN	Kakani	103.75	295	eP	PKiKP	05 07 52.6	-1.0
DMN	Daman	103.85	295	eP	PKiKP	05 07 53.1	-0.7
GKN	Gorkha	104.35	295	eP	PKiKP	05 07 53.0	-1.6
KOLN	Koldanda	105.19	295	eP	PKiKP	05 07 54.9	-1.3
RES	Resolute Bay	105.76	16	ePKP	PKiKP	05 07 54.9	-0.7
N54A	Moraine State	107.96	52	PKiKP	PKiKP	05 08 00.1	-0.7
	baz=261						
ZALV	Zalesovo Beam	108.54	322	Pdiff	Pdif	05 03 59.1	-0.8
	comp=Z,0.6nm,0.5s,baz=111,slow=8.1,SNR=3.6						
ZALV				PKiKP	PKiKP	05 08 00.1	-1.3
	comp=Z,4.5nm,0.5s,baz=147,slow=0.6,SNR=16						
O56A	Blue Knob Stat	108.93	53	PKiKP	PKiKP	05 08 01.9	-0.7
	baz=262						
MKAR	Makanchi Array	109.41	314	Pdiff	Pdif	05 04 04.2	+0.1
	comp=Z,1.2nm,0.6s,baz=46,slow=6.2,SNR=4.0						
MKAR				PKiKP	PKiKP	05 08 02.1	-1.2
	comp=Z,7.6nm,0.5s,baz=153,slow=0.7,SNR=100						
MKAR				PKKPbc	PKKPbc	05 19 10.4	-0.9
	comp=Z,1.4nm,0.7s,baz=295,slow=2.2,SNR=4.1						
SAML	Samuel	110.57	107	ePKP	PKiKP	05 08 05.8	-0.6
SAML	Samuel	110.57	107	ePKIKP	PKiKP	05 08 05.8	-0.6
KURK	Kurchatov	112.11	318	ePKP	PKiKP	05 08 06.7	-1.5
KURK	Kurchatov	112.11	318	c iPKIKP	PKiKP	05 08 07.2	-1.0
KURK				pmax	pmax		
	comp=Z,12nm,1.0s						
KURBB	Kurchatov Arra	112.17	318	PKiKP	PKiKP	05 08 07.1	-1.2
	comp=Z,9.1nm,0.7s,baz=95,slow=1.8,SNR=77						
LONY	Lake Ozonia	112.32	49	PKiKP	PKiKP	05 08 08.0	-0.9
	baz=266						
KSH	Kashi	113.32	306	ePKP	PKiKP	05 08 11.4	+0.3
KSH				PP	PP	05 09 20.9	+6.5
ULHL	Ulahol	113.32	309	P	PKiKP	05 08 11.1	-0.1
	SNR=6.5						
TKM2	Tokmak 2	113.84	309	P	PKiKP	05 08 10.9	-1.2
	SNR=17						
KZA	Kyzart	114.05	309	P	PKPdf	05 08 12.2	-0.5
	SNR=5.6						
KBK	Karagaybulak	114.30	309	P	PKPdf	05 08 12.3	-0.7
	SNR=5.3						
CHMS	Chumysh	114.46	310	P	PKPdf	05 08 12.3	-0.8
	SNR=5.5						
AAK	Ala-Archa	114.64	309	PKP	PKPdf	05 08 13.0	-0.6
	comp=Z,2.3nm,0.4s,baz=184,slow=4.3,SNR=5.2						
AAK	Ala-Archa	114.64	309	ePKPdf	PKPdf	05 08 13.2	-0.4
AAK	Ala-Archa	114.64	309	ePKIKP	PKPdf	05 08 13.2	-0.4
USP	Ospenovka	114.66	310	P	PKPdf	05 08 12.7	-0.8
	SNR=7.8						
EKS2	Erkin-Say	115.17	309	P	PKPdf	05 08 13.9	-0.6
	SNR=5.8						
PKME	Peaks-Kenny Pk	116.10	48	PKiKP	PKPdf	05 08 15.7	-0.4
	baz=270						
HUMP	Col San Antoni	116.26	78	ePKPdf	PKPdf	05 08 16.4	-0.8
PTGA	Pitinga	116.62	100	PKP	PKPdf	05 08 17.7	-0.3
	comp=Z,5.6nm,0.6s,baz=152,slow=1.1,SNR=11						
PQI	Presque Isle	116.97	46	ePKPdf	PKPdf	05 08 16.6	-1.0
BVAR	Borovoye Array	117.14	321	PKP	PKPdf	05 08 17.0	-0.9
	comp=Z,11nm,0.3s,baz=90,slow=1.5,SNR=56						
BRVK	Borovoye	117.20	321	ePKPdf	PKPdf	05 08 17.2	-0.8
BRVK	Borovoye	117.20	321	c iPKIKP	PKPdf	05 08 17.3	-0.7
BRVK				pmax	pmax		
	comp=Z,26nm,1.7s						
KK31	Karatay Array	117.57	310	ePKPdf	PKPdf	05 08 18.4	-0.7
KK31	Karatay Array	117.57	310	ePKIKP	PKPdf	05 08 18.4	-0.7
KKAR	Karatay Array	117.57	310	ePKPdf	PKPdf	05 08 18.4	-0.7
KKAR	Karatay Array	117.57	310	ePKIKP	PKPdf	05 08 18.4	-0.7
KBL	Kabul	118.50	300	ePKPdf	PKPdf	05 08 21.2	-0.1
SPA0	Spitsbergen Ar	119.62	357	ePKPdf	PKPdf	05 08 21.8	-0.2
SPA0	Spitsbergen Ar	119.62	357	ePKPdf	PKPdf	05 08 21.5	-0.5
SPA0				IAmb	IAmb	05 08 22.0	
	comp=Z,53nm,1.0s						
SPITS	Spitsbergen Ar	119.62	357	PKP	PKPdf	05 08 21.5	-0.5
	comp=Z,34nm,0.7s,baz=18,slow=5.6,SNR=58						
ILULI	Ilulissat	119.76	19	ePKPdf	PKPdf	05 08 20.8	-1.6
ILULI	Ilulissat	119.76	19	ePKIKP	PKPdf	05 08 20.8	-1.6
SUMG	Summit	121.07	13	ePKPdf	PKPdf	05 08 25.1	-0.3
SUMG	Summit	121.07	13	ePKIKP	PKPdf	05 08 25.1	-0.3
SVE	Sverdlovsk	121.95	326	ePKIKP	PKPdf	05 08 26.3	-0.7
SVE				pmax	pmax		
	comp=Z,33nm,0.8s						
OPO	Ambohidratompo	122.17	233	PKP	PKPdf	05 08 29.2	+0.4
	comp=Z,12nm,0.7s,baz=122,slow=3.3,SNR=11						
MSEY	Mahe Island	122.24	252	i PKIKP	PKPdf	05 08 30.6	+1.7
ARU	Arti	123.17	326	ePKPdf	PKPdf	05 08 28.7	-0.6
ARU	Arti	123.17	326	i PKIKP	PKPdf	05 08 28.6	-0.7
ARU						05 14 43.6	

ARU				SP	SP	05 19 13.1	-2.2
ABKAR	Akbulak array	124.22	318	ePKPdf	PKPdf	05 08 31.0	-0.6
IVI	Ivigtut	124.72	27	ePKPdf	PKPdf	05 08 31.2	-0.9
AKTO	Aktyubinsk	125.16	319	PKP	PKPdf	05 08 32.6	-0.7
	comp=Z,13nm,0.7s,baz=50,slow=3.1,SNR=45						
HAMF	Hammerfest	125.97	351	ePKPdf	PKPdf	05 08 33.6	-0.7
HAMF				IAmb	IAmb	05 08 34.0	
	comp=Z,25nm,0.6s						
KEV	Kevo	126.22	349	ePKPdf	PKPdf	05 08 34.2	-0.6
KEV	Kevo	126.22	349	ePKIKP	PKPdf	05 08 34.2	-0.6
SUR	Sutherland	126.39	200	ePKPdf	PKPdf	05 08 37.0	+0.4
ARCES	ARCESS Array B	126.67	350	PKP	PKPdf	05 08 35.0	-0.7
	comp=Z,32nm,0.6s,baz=13,slow=1.2,SNR=124						
ARCES				PKKPbc	PKKPab	05 18 08.7	+0.7
	comp=Z,1.7nm,0.9s,baz=233,slow=0.6,SNR=7.6						
ARE0	ARCESS Array S	126.67	350	ePKPdf	PKPdf	05 08 35.5	-0.2
ARE0	ARCESS Array S	126.67	350	ePKPdf	PKPdf	05 08 35.3	-0.4
ARE0				IAmb	IAmb	05 08 36.0	
	comp=Z,38nm,0.6s						
PRGR	Permogore	126.88	336	ePKIKP	PKPdf	05 08 35.0	-1.2
PRGR				pmax	pmax		
	comp=Z,18nm,0.7s						
JMIC	Jan Mayen	126.94	4	PKP	PKPdf	05 08 37.0	+0.9
	comp=Z,28nm,0.8s,baz=73,slow=1.4,SNR=11						
GEYT	Alibeck	127.27	304	PKP	PKPdf	05 08 37.3	-0.6
	comp=Z,6.0nm,0.4s,baz=276,slow=2.8,SNR=4.6						
KTK1	Kautokeino	127.51	350	ePKPdf	PKPdf	05 08 36.5	-0.8
TRO	Tromso	127.55	352	ePKPdf	PKPdf	05 08 36.6	-0.7
TRO				IAmb	IAmb	05 08 37.6	
	comp=Z,30nm,0.7s						
BOSA	Boshof	128.10	207	PKP	PKPdf	05 08 40.2	+0.3
	comp=Z,10.0nm,0.8s,baz=202,slow=0.4,SNR=9.8						
LOF	Lofoten	129.58	354	ePKPdf	PKPdf	05 08 40.4	-0.8
LOF				IAmb	IAmb	05 08 45.3	
	comp=Z,21nm,1.1s						
STEI	Steigen	129.60	353	ePKPdf	PKPdf	05 08 40.7	-0.5
STEI				IAmb	IAmb	05 08 42.0	
	comp=Z,28nm,0.7s						
KLMR	Klimovskoe	129.70	337	ePKIKP	PKPdf	05 08 39.4	-2.2
KLMR				e		05 10 57.3	
KLMR				pmax	pmax		
	comp=Z,30nm,1.0s						
KLMR	Klimovskoe	129.70	337	ePKPdf	PKPdf	05 08 39.4	-2.2
KLMR				AMP		05 08 42.2	
	comp=Z,30nm,1.0s						
KLMR				ePP	PP	05 10 57.3	-5.1
BORG	Borgarnes	131.05	13	ePKPdf	PKPdf	05 08 44.2	+0.1
KONS	Konsvik	131.21	354	ePKPdf	PKPdf	05 08 43.9	-0.4
KONS				ePKPdf	PKPdf	05 08 44.0	-0.4
KONS				IAmb	IAmb	05 08 45.0	
	comp=Z,11nm,0.6s						
MOR8	Moi Rana	131.38	353	ePKPdf	PKPdf	05 08 43.4	-1.3
MOR8				IAmb	IAmb	05 08 44.4	
	comp=Z,9.3nm,0.8s						
FIA1	FINESS Array S	133.54	344	ePKPpre	PKPpre	05 08 35.4	
FIA1				ePKPpre	PKPpre	05 08 43.9	
FIA1				ePKPdf	PKPdf	05 08 48.0	-0.9
FINES	FINESS Array B	133.54	344	PKhKP	PKPpre	05 08 35.0	
	comp=Z,1.1nm,0.4s,baz=45,slow=4.1,SNR=13						
FINES				PKP	PKPdf	05 08 48.0	-0.9
	comp=Z,13nm,0.5s,baz=114,slow=3.5,SNR=31						
FINES	FINESS Array B	133.54	344	i PKHKP	PKPpre	05 08 35.0	
FINES						05 08 48.0	
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
FINES				pmax	pmax		
	comp=Z,13nm,0.5s						
AKT	Akhty	134.48	311	ePKIKP	PKPdf	05 08 51.5	+0.1
AKT				e		05 11 08.7	
AKT				e		05 11 31.2	
AKT				pmax	pmax		
	comp=Z,24nm,0.8s						
OBN	Obninsk	134.63	332	c iPKIKP	PKPdf	05 08 51.7	+0.6
OBN				e		05 11 34.7	
OBN				ePPP	PPP	05 14 35.8	
OBN				pmax	pmax		
	comp=Z,24nm,0.7s						
VSR	Storozhevoye	135.73	327	ePKIKP	PKPdf	05 08 52.3	-1.0
VSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
VORD	Divnogorie	135.81	326	ePKIKP	PKPdf	05 08 53.2	-0.2
VORD				pmax	pmax		
	comp=Z,20nm,0.9s						
NC303	NORSAR Array S	136.53	353	ePKPpre	PKPpre	05 08 43.9	
NC303				ePKPdf	PKPdf	05 08 55.4	+0.9
NC405	NORSAR Array S	136.60	353	ePKPpre	PKPpre	05 08 45.3	
NB201	NORSAR Array S	136.71	353	ePKPpre	PKPpre	05 08 44.4	
NB201				ePKPdf	PKPdf	05 08 55.4	+0.5
NB2	NORSAR Subarra	136.73	353	PKP	PKPpre	05 08 43.3	
	comp=Z,3.2nm,0.5s,baz=16,slow=3.2						
NB2	NORSAR Subarra	136.73	353	PKP	PKPpre	05 08 43.3	
	baz=16,slow=3.2						
ZEI	Tsey	136.76	314	i PKIKP	PKPdf	05 08 54.1	-1.6
NBO00	NORSAR Array S	136.79	354	ePKPpre	PKPpre	05 08 47.0	
NBO00				ePKPdf	PKPdf	05 08 53.7	-1.2
NAO01	NORSAR Array S	136.96	353	ePKPpre	PKPpre	05 08 44.0	
NC602	NORSAR Array S	136.99	353	ePKPpre	PKPpre	05 08 47.5	
NC602				ePKPdf	PKPdf	05 08 55.4	0.0
KBZ	Khabaz	137.09	315	PKP	PKPdf	05 08 56.7	+0.8
	comp=Z,6.6nm,0.9s,baz=162,slow=0.3,SNR=10						
KIV	Kislovodsk	137.14	316	ePKIKP	PKPdf	05 08 54.7	-1.6
KIV				e		05 11 13.2	
KIV				e		05 11 48.1	
KIV				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HFS	Hagfors	137.29	351	PKhKP	PKPpre	05 08 43.9	
	comp=Z,6.7nm,0.4s,baz=60,slow=3.5,SNR=35						
NEY	Neytrino	137.39	315	⇓iPKIKP	PKPdf	05 08 57.7	+0.8
AKH	Akhalkalaki	137.53	312	⇓iP	PKPpre	05 08 49.0	
LSZ	Lusaka	137.62	220	ePKPpre	PKPpre	05 08 50.7	
LSZ				ePKPdf	PKPdf	05 08 58.0	0.0
LSZ				eSKPbc	SKPbc	05 11 34.7	+0.7
LSZ	Lusaka	137.62	220	ePKHKP	PKPpre	05 08 50.7	
LSZ				e		05 08 58.0	
IDID	Didziasalis	138.37	339	eP	PKPdf	05 08 50.3	-7.7
IDID				IAmb	IAmb	05 08 53.9	
	comp=Z,10nm,0.6s						
IIGN	Ignalina	138.52	339	eP	PKPdf	05 08 51.1	-7.1
IIGN				IAmb	IAmb	05 08 53.5	
	comp=Z,12nm,0.5s						
RAYN	Ar Rayn	138.80	285	ePKPpre	PKPpre	05 08 51.5	
RAYN				ePKPdf	PKPdf	05 08 59.5	-0.4
RAYN	Ar Rayn	138.80	285	ePKHKP	PKPpre	05 08 51.5	
RAYN				e		05 08 59.5	
TSUM	Tsumeb	139.60	204	ePKPdf	PKPdf	05 09 01.4	-0.2
AKASG	Malin Array Be	140.89	332	PKhKP	PKPpre	05 08 56.6	
	comp=Z,24nm,0.4s,baz=40,slow=4.2,SNR=44						
AKBB	Malin Array Si	140.89	332	ePKPpre	PKPpre	05 08 56.4	
KIEV	Kiev	140.90	332	ePKPpre	PKPpre	05 08 55.7	
KIEV	Kiev	140.90	332	c iPKHKP	PKPpre	05 08 56.6	
AK11	Malin Array Si	140.93	332	ePKPpre	PKPpre	05 08 56.3	
SIM	Simferopol’	142.05	322	ePKHKP	PKPpre	05 09 01.7	
SIM				pmax	pmax		
	comp=Z,57nm,0.8s						
ESY	Stoneypath	142.28	4	eP	PKPdf	05 09 02.1	-2.9
CLGH	Cloghs, Cushen	142.78	7	eP	PKPdf	05 09 03.2	-2.7
EKA	Eskdalemuir Ar	142.82	5	PKhKP	PKPpre	05 09 03.0	
	comp=Z,8.1nm,0.4s,baz=328,slow=2.8,SNR=69						
EKA	Eskdalemuir Ar	142.82	5	i PKHKP	PKPpre	05 09 03.0	
EKA				pmax	pmax		
	comp=Z,8.0nm,0.4s						
ESK	Eskdalemuir	142.83	5	ePKPdf	PKPpre	05 09 02.8	
ESK	Eskdalemuir	142.83	5	eP	PKPpre	05 09 02.7	
ESK	Eskdalemuir	142.83	5	ePKHKP	PKPpre	05 09 02.8	
ECK	Cauldkaine Hil	142.97	5	eP	PKPpre	05 09 03.0	
GKP	Gorka Klasztor	143.01	344	ePKP	PKPab	05 09 04.3	+0.1
GKP	Gorka Klasztor	143.01	344	ePKIKP	PKPab	05 09 04.3	0.0
BHH	Howats Hill	143.05	5	eP	PKPab	05 09 03.9	-0.5
SORM	Soroca	143.12	330	⇓iP	PKPab	05 09 04.4	-0.4
SORM	Soroca	143.12	330	⇓PKIKP	PKPab	05 09 04.4	-0.4
GAL1	Galloway	143.14	6	eP	PKPab	05 09 03.7	-1.0
BEL	Belsk	143.25	340	i PKPdf	PKPbc	05 09 05.9	+0.4
BEL	Belsk	143.25	340	⇓iPKIKP	PKPbc	05 09 05.9	+0.4
SLMH	Al Salmeh	143.38	307	eP	PKPbc	05 09 06.5	0.0
EDMD	Edmundbyers	143.40	3	eP	PKPab	05 09 04.6	-1.1
BBO1	Bothel	143.40	5	eP	PKPab	05 09 05.1	-0.6
KESW	Keswick, Cumbr	143.56	5	eP	PKPab	05 09 05.4	-0.9
GMM	Mts of Mourne	143.62	8	eP	PKPbc	05 09 06.1	-0.5
KIS	Kishinev	143.68	328	⇓iPKP	PKPbc	05 09 06.0	-1.0
KIS				M	M	05 09 06.5	
	comp=Z,600nm,1.0s						
KIS	Kishinev	143.68	328	⇓iP	PKPab	05 09 07.2	+0.1
KIS	Kishinev	143.68	328	κ iPKIKP	PKPbc	05 09 06.0	-1.0
KIS				e		05 12 28.0	
KIS				pmax	pmax		
	comp=Z,600nm,1.0s						
KIS				pmax	pmax		
	comp=Z,500nm,1.0s						
LVV	L’vov	143.75	335	ePKIKP	PKPbc	05 09 06.8	-0.3
IOMK	Kirk Michael	143.76	6	eP	PKPbc	05 09 06.3	-0.7
WIM	Isle of Man	143.86	6	eP	PKPbc	05 09 06.8	-0.6
IAS	Iasi	144.16	329	⇓iP	PKPdf	05 09 08.6	0.0
IAS	Iasi	144.16	329	⇓PKIKP	PKPdf	05 09 08.6	0.0
HPK	Haverah Park	144.29	3	eP	PKPdf	05 09 08.5	-0.1
LEOM	Leova	144.32	328	⇑iP	PKPbc	05 09 09.1	+0.2
LEOM	Leova	144.32	328	⇑PKIKP	PKPbc	05 09 09.1	+0.2
ILGA	Ilgaz	144.36	316	ePKPbc	PKPbc	05 09 09.8	+0.2
KWP	Kalwaria Pacla	144.41	336	i PKPdf	PKPbc	05 09 09.3	+0.1
KWP	Kalwaria Pacla	144.41	336	ePKPdf	PKPdf	05 09 09.1	+0.1
KWP	Kalwaria Pacla	144.41	336	⇓iPKIKP	PKPbc	05 09 09.3	+0.1
DSB	Dublin	144.54	8	ePKPdf	PKPdf	05 09 09.0	0.0
WPS	Cemaes, Angles	144.61	6	eP	PKPdf	05 09 08.6	-0.6
WME	Myndd Eilian	144.64	6	eP	PKPdf	05 09 08.8	-0.4
PRAR	RASCA	144.67	331	⇑iP	PKPbc	05 09 10.2	+0.2
WLF1	Llynfaes	144.73	6	eP	PKPdf	05 09 08.9	-0.5
YRC	Rhoscolyn	144.75	6	eP	PKPdf	05 09 09.5	+0.1
WPM1	Penmaenmawr	144.81	6	eP	PKPdf	05 09 09.7	+0.2
LBWR	Ladybower, Pea	144.84	3	eP	PKPdf	05 09 09.5	-0.1
TLCR		144.89	326	⇓iP	PKPbc	05 09 10.8	+0.1
TLCR		144.89	326	⇓PKIKP	PKPbc	05 09 10.8	+0.1
BUR08	Bucovina Ar. S	144.93	332	ePKPdf	PKPdf	05 09 10.4	+0.4
BUR04	Bucovina Ar. S	144.94	332	ePKPdf	PKPdf	05 09 10.1	0.0
BURAR	Bucovina Array	144.94	332	⇑iP	PKPbc	05 09 11.1	+0.1
BURAR	Bucovina Array	144.94	332	⇑PKIKP	PKPbc	05 09 11.1	+0.1
OJC	Ojcow	144.96	340	i PKPdf	PKPbc	05 09 10.9	+0.1
OJC	Ojcow	144.96	340	ePKPdf	PKPdf	05 09 09.2	-0.7
OJC	Ojcow	144.96	340	⇓iPKIKP	PKPbc	05 09 10.9	+0.1
GIUM	Giurgiulesti	145.01	327	⇑iP	PKPab	05 09 11.7	-0.5
BIZ	Bicaz	145.04	330	⇑iP	PKPab	05 09 11.8	-0.6
BR131	Keskin Array S	145.06	314	ePKPdf	PKPdf	05 09 10.0	-0.6
BRTR	Keskin Array B	145.06	314	PKP	PKPdf	05 09 09.5	-1.1
	comp=Z,35nm,0.7s,baz=138,slow=3.9,SNR=163						
BRTR				pPKP	pPKPdf	05 11 36.7	+2.0
	comp=Z,3.7nm,0.9s,baz=45,slow=0.3,SNR=5.6						
BRTR	Keskin Array B	145.06	314	PKIKP	PKPdf	05 09 09.5	-1.1
BRTR				pmax	pmax		
	comp=Z,38nm,0.7s						
TESR	Tescani	145.08	329	⇓iP	PKPbc	05 09 11.7	+0.4
STNC	Stoke	145.12	4	eP	PKPbc	05 09 11.3	+0.2
FKH	Fakeheh	145.19	304	eP	PKPbc	05 09 12.6	+0.4
LLW	Llanuwychllyn	145.24	6	eP	PKPdf	05 09 10.6	+0.3
FOEL	Foel Wylfa	145.24	5	eP	PKPbc	05 09 11.4	-0.2
CFR	Carcaliu	145.25	326	⇓iP	PKPbc	05 09 11.8	0.0
CFR	Carcaliu	145.25	326	⇓PKIKP	PKPbc	05 09 11.8	0.0
PETR	Petresti	145.35	328	⇓iP	PKPab	05 09 13.0	-0.6
UZH	Uzhgorod	145.38	336	ePKHKP	PKPpre	05 09 09.0	
UZH				i		05 09 12.5	
TOTH	TOTAH	145.44	303	eP	PKPbc	05 09 12.6	-0.2
KSP	Ksiaz	145.46	344	i PKPdf	PKPbc	05 09 12.8	+0.6
KSP	Ksiaz	145.46	344	⇓iPKP2	PKPbc	05 09 12.8	+0.6
NIE	Niedzica	145.47	338	i PKPdf	PKPbc	05 09 13.0	+0.7
NIE	Niedzica	145.47	338	⇓iPKP2	PKPbc	05 09 13.0	+0.6
CRVS	Cervenica-Dubn	145.48	337	ePKIKP	PKPdf	05 09 11.1	+0.3
CRVS				e		05 09 14.4	
CRVS	Cervenica-Dubn	145.48	337	ePKP	PKPdf	05 09 11.1	+0.3
VRI	Vrincioaia	145.50	328	⇑iP	PKPbc	05 09 12.3	-0.2
VRI	Vrincioaia	145.50	328	⇑PKIKP	PKPbc	05 09 12.3	-0.2
QASN	Qassioun	145.51	303	eP	PKPbc	05 09 13.3	+0.2
CWF	Charnwood Fore	145.52	3	eP	PKPdf	05 09 11.4	+0.7
HWQ	Hawqa	145.54	304	eP	PKPbc	05 09 12.9	-0.2
PLOR	Plostina	145.55	328	⇑iP	PKPdf	05 09 11.4	+0.3
PLOR	Plostina	145.55	328	⇑PKIKP	PKPdf	05 09 11.4	+0.3
ANTO	Ankara	145.56	315	⇓iP	PKPdf	05 09 11.6	+0.3
ANTO	Ankara	145.56	315	ePKPdf	PKPdf	05 09 11.4	+0.1
ANTO				ePKPbc	PKPbc	05 09 13.2	+0.3
ANTO	Ankara	145.56	315	⇓PKIKP	PKPdf	05 09 11.6	+0.3
TIRR	Tirgusor	145.58	325	⇓iP	PKPbc	05 09 13.1	+0.4
TIRR	Tirgusor	145.58	325	ePKPdf	PKPbc	05 09 12.2	-0.5
TIRR	Tirgusor	145.58	325	ePKIKP	PKPbc	05 09 12.3	-0.5
BR231	Keskin MP Arra	145.58	315	ePKPdf	PKPbc	05 09 13.2	+0.1
WACR	West Acre	145.60	1	eP	PKPbc	05 09 12.0	-0.5
HLM1	Long Mynd	145.64	5	eP	PKPbc	05 09 12.1	-0.6
BMR	Baia Mare	145.65	334	⇑iP	PKPbc	05 09 13.0	+0.1
BMR	Baia Mare	145.65	334	⇑PKP2	PKPbc	05 09 13.0	+0.1
TRPA	Tarpa	145.69	335	⇑iP	PKPbc	05 09 12.9	0.0
HARR	Harsova	145.69	326	⇑iP	PKPbc	05 09 13.6	+0.6
HARR	Harsova	145.69	326	⇑PKP2	PKPbc	05 09 13.6	+0.6
TLB	Topalu	145.70	326	⇑iP	PKPdf	05 09 11.9	+0.6
TLB	Topalu	145.70	326	⇑PKIKP	PKPdf	05 09 11.9	+0.6
GRER		145.72	328	⇓iP	PKPab	05 09 14.6	-0.5
ARCR	ARCALIA	145.73	332	⇓iP	PKPbc	05 09 13.5	+0.4
MBAR	Mbarara	145.78	240	ePKPdf	PKPbc	05 09 14.7	+0.2
CLL	Collm	145.82	347	ePKPdf	PKPdf	05 09 12.0	+0.7
CLL				⇓iPKPbc	PKPbc	05 09 13.5	+0.3
	comp=Z,324nm,0.7s						
CLL				ePKPab	PKPab	05 09 15.0	-0.2
	comp=Z,89nm,0.7s						
CLL	Collm	145.82	347	ePKPdf	PKPbc	05 09 12.5	-0.7
CLL	Collm	145.82	347	⇓ePKIKP	PKPdf	05 09 12.0	+0.7
CLL				e		05 09 15.0	
CLL				pmax	pmax		
	comp=Z,324nm,0.7s						
CLL				pmax	pmax		
	comp=Z,89nm,0.7s						
UPC	Upice	145.84	344	⇑ePKP	PKPbc	05 09 13.9	+0.6
UPC	Upice	145.84	344	ePKP2	PKPbc	05 09 13.9	+0.6
BHL	Bhannes	145.89	304	eP	PKPbc	05 09 14.2	0.0
DPC	Dobruska-Polom	145.90	343	⇑ePKP	PKPbc	05 09 14.3	+0.8
DPC				ex	x	05 09 19.2	
DPC	Dobruska-Polom	145.90	343	ePKP2	PKPbc	05 09 14.3	+0.8
QRWL	Qaraoun	145.98	303	eP	PKPbc	05 09 14.7	+0.3
LANS	Liptovska Anna	145.99	339	ePKP2	PKPbc	05 09 14.9	+1.1
LANS	Liptovska Anna	145.99	339	ePKP	PKPbc	05 09 14.9	+1.1
TCHB	Talchebab	146.01	302	eP	PKPpre	05 08 54.4	
KRLC	Kraliky	146.02	342	⇑ePKP	PKPbc	05 09 14.4	+0.5
KRLC	Kraliky	146.02	342	ePKP2	PKPbc	05 09 14.4	+0.5
BRG	Berggiesshubel	146.02	346	i PKP	PKPdf	05 09 12.2	+0.5
	comp=Z,17nm,1.1s						
BRG	Berggiesshubel	146.02	346	i PKP	PKPbc	05 09 14.1	+0.3
	comp=Z,128nm,0.6s						
BRG				epPKP	pPKPdf	05 11 40.5	+4.7
	comp=Z,6.7nm,0.9s						
BRG	Berggiesshubel	146.02	346	i PKIKP	PKPdf	05 09 12.2	+0.6
BRG				i		05 09 14.1	
BRG				pmax	pmax		
	comp=Z,17nm,1.1s						
BRG				pmax	pmax		
	comp=Z,128nm,0.6s						
MORC	Moravsky Berou	146.06	341	⇓iP	PKPdf	05 09 12.2	+0.4
MORC	Moravsky Berou	146.06	341	ePKPdf	PKPdf	05 09 12.3	+0.4
MORC	Moravsky Berou	146.06	341	⇓PKIKP	PKPdf	05 09 12.2	+0.4
MORC	Moravsky Berou	146.06	341	ePKP	PKPdf	05 09 11.1	-0.7
DOPR	Dopca	146.08	330	⇑iP	PKPbc	05 09 15.0	+0.8
ISR	Istrita	146.12	328	⇓iP	PKPbc	05 09 14.9	+0.6
ISR	Istrita	146.12	328	⇓PKP2	PKPbc	05 09 14.9	+0.6
WTSB	Winterswijk	146.13	354	ePKPdf	PKPdf	05 09 11.6	-0.1
WTSB				i PKPbc	PKPbc	05 09 14.1	+0.1
WTSB				ePKPab	PKiKP	05 09 16.2	0.0
ICOR	Ion Corvin	146.14	325	⇑iP	PKPbc	05 09 15.1	+0.8
MCH1	Michaelchurch	146.14	5	eP	PKPbc	05 09 13.5	-0.6
MLR	Muntele Rosu	146.16	329	⇑iP	PKPbc	05 09 13.8	-0.7
MLR	Muntele Rosu	146.16	329	ePKPdf	PKPdf	05 09 13.2	+1.0
MLR	Muntele Rosu	146.16	329	⇑PKIKP	PKPbc	05 09 13.8	-0.7
KECS	Kecovo	146.19	337	ePKP2	PKPbc	05 09 15.3	+1.0
KECS	Kecovo	146.19	337	ePKP	PKPbc	05 09 15.3	+1.0
PVCC	Panska Ves	146.19	345	⇑ePKP	PKPbc	05 09 15.1	+0.8
PVCC	Panska Ves	146.19	345	ePKP2	PKPbc	05 09 15.1	+0.8
MONM	Monmouth	146.32	5	eP	PKPdf	05 09 13.3	+1.2
CJR	Cluj-Napoca	146.35	332	⇓iP	PKPbc	05 09 15.3	+0.4
CJR	Cluj-Napoca	146.35	332	⇓PKP2	PKPbc	05 09 15.3	+0.4
MMAI	Mount Meron Ar	146.37	303	PKPbc	PKPbc	05 09 15.7	+0.3
	comp=Z,65nm,0.5s,baz=71,slow=5.1,SNR=98						
MMAI				pPKPbc	pPKPdf	05 11 41.2	+4.2
	comp=Z,3.2nm,0.4s,baz=57,slow=18,SNR=4.6						
MDB	Medias	146.43	331	⇑iP	PKPbc	05 09 15.6	+0.5
MDB	Medias	146.43	331	⇑PKP2	PKPbc	05 09 15.6	+0.5
STRD	Stroud	146.43	4	eP	PKPbc	05 09 14.2	-0.7
HGH	Gray Hill	146.52	5	eP	PKPbc	05 09 14.4	-0.7
PLAR	PLOIESTI	146.52	328	⇓iP	PKPbc	05 09 15.7	+0.4
VOIR		146.63	329	⇓iP	PKPbc	05 09 15.6	-0.1
VOIR		146.63	329	⇓PKP2	PKPbc	05 09 15.6	-0.1
PRA	Prague	146.65	345	⇑ePKP	PKPbc	05 09 16.1	+0.6
PRA	Prague	146.65	345	ePKP2	PKPbc	05 09 16.1	+0.6
DRGR		146.67	333	⇓iP	PKPbc	05 09 15.1	-0.7
DRGR		146.67	333	⇓PKIKP	PKPbc	05 09 15.2	-0.6
PRU	Pruhonice	146.70	345	⇑ePKP	PKPbc	05 09 15.9	+0.2
PRU				ePKPAB	PKPab	05 09 19.2	+0.4
PRU	Pruhonice	146.70	345	ePKP2	PKPbc	05 09 15.9	+0.2
GOPC	GO Pecny, Ondr	146.71	344	⇑ePKP	PKPbc	05 09 16.3	+0.6
GOPC	GO Pecny, Ondr	146.71	344	ePKP2	PKPbc	05 09 16.3	+0.6
PCED	Cedros	146.73	46	eP	PKPbc	05 09 16.6	+0.5
	comp=Z,97nm,0.5s						
CALA	Caldeira	146.75	46	eP	PKPbc	05 09 17.8	+1.5
VRAC	Vranov	146.76	342	⇑iP	PKPbc	05 09 16.0	+0.1
VRAC	Vranov	146.76	342	⇑PKP2	PKPbc	05 09 16.0	+0.1
VRAC	Vranov	146.76	342	ePKP	PKPdf	05 09 13.3	+0.3
VYHS	Vyhne	146.76	339	ePKP2	PKPbc	05 09 16.2	+0.3
VYHS	Vyhne	146.76	339	ePKP	PKPbc	05 09 16.2	+0.3
HOR	Horta	146.83	46	eP	PKPbc	05 09 17.0	+0.7
	comp=Z,55nm,0.6s						
JAVC	Velka Javorina	146.83	341	ePKP	PKPdf	05 09 14.1	+0.9
PSZ	Piszkesteto	146.88	337	⇓iP	PKPbc	05 09 16.2	-0.1
PSZ	Piszkesteto	146.88	337	ePKPbc	PKPbc	05 09 16.4	+0.1
PSZ	Piszkesteto	146.88	337	⇓PKP2	PKPbc	05 09 16.2	-0.1
ARR	Arges	146.88	330	⇓iP	PKPbc	05 09 17.1	+0.7
NKC	Novy Kostel	146.95	347	⇑ePKP	PKPbc	05 09 16.8	+0.4
NKC	Novy Kostel	146.95	347	ePKP2	PKPbc	05 09 16.8	+0.4
PCAN	Candelaria	146.96	46	eP	PKPbc	05 09 16.1	-0.6
	comp=Z,76nm,0.7s						
PRD	Provadia	146.96	324	eP	PKPbc	05 09 16.8	+0.3
PICO	Pico	146.98	46	eP	PKPbc	05 09 17.4	+0.5
	comp=Z,283nm,1.1s						
ROSA	Rosais	147.00	46	eP	PKPbc	05 09 17.3	+0.5
	comp=Z,66nm,0.4s						
PGRA	Graciosa	147.02	45	eP	PKPbc	05 09 17.2	+0.3
	comp=Z,77nm,0.6s						
SGRR	Singureni	147.03	327	⇑iP	PKPab	05 09 20.1	-0.3
KRUC	Moravsky	147.04	342	ePKP	PKPdf	05 09 12.8	-0.6
SMOL	Smolenice	147.21	340	ePKP2	PKPbc	05 09 18.0	+0.9
SMOL	Smolenice	147.21	340	ePKP	PKPbc	05 09 18.0	+0.9
SMOL				e		05 09 21.8	
LOT	Lotru	147.23	331	⇓iP	PKPdf	05 09 13.7	-0.3
HUMR	Humele	147.32	328	⇓iP	PKPbc	05 09 17.2	-0.3
CSS	Mathiatis	147.32	307	ePKPdf	PKPdf	05 09 13.3	-1.0
CSS				ePKPbc	PKPbc	05 09 17.4	-0.4
CSS	Mathiatis	147.32	307	P	PKPbc	05 09 17.2	-0.6
CSS	Mathiatis	147.32	307	P	PKPbc	05 09 17.3	-0.6
MODS	Modra-Piesok	147.38	341	ePKP2	PKPbc	05 09 18.3	+0.8
MODS	Modra-Piesok	147.38	341	ePKP	PKPbc	05 09 18.3	+0.8
BEBN	Eben Emael	147.38	355	⇓PKP	PKPbc	05 09 17.3	-0.1
HGN	Heimansgroeve	147.40	355	ePKPdf	PKPdf	05 09 13.7	-0.2
HGN				i PKPbc	PKPbc	05 09 17.5	+0.1
HGN				ePKPab	PKPab	05 09 21.5	-0.1
UCC	Uccle	147.47	357	⇓PKP	PKPbc	05 09 17.7	+0.1
UCC	Uccle	147.47	357	ePKPbc	PKPbc	05 09 18.1	+0.4
MEM	Membach	147.54	355	⇑PKP	PKPdf	05 09 14.3	+0.1
MEM				⇓PKPbc	PKPbc	05 09 17.9	+0.1
ADH	Angra Heroismo	147.71	45	eP	PKPbc	05 09 19.3	+0.7
	comp=Z,86nm,0.6s						
SZH	Strazhica	147.71	326	eP	PKPbc	05 09 18.1	-0.4
GRFO	Grafenberg	147.71	348	ePKPbc	PKPbc	05 09 18.6	+0.2
GRFO				ePKPab	PKPab	05 09 23.0	0.0
KHC	Kasperske Hory	147.73	345	ePKPDF	PKPdf	05 09 14.5	-0.1
KHC				⇑ePKP	PKPbc	05 09 18.9	+0.5
KHC				ePKPAB	PKPab	05 09 24.0	+0.9
KHC	Kasperske Hory	147.73	345	ePKPdf	PKPdf	05 09 13.8	-0.8
KHC				ePKPbc	PKPbc	05 09 17.9	-0.5
KHC				ePKPab	PKPab	05 09 22.8	-0.3
KHC	Kasperske Hory	147.73	345	ePKIKP	PKPdf	05 09 14.5	-0.1
KHC				e		05 09 24.0	
ZIMR		147.74	327	⇑iP	PKPbc	05 09 19.5	+1.0
ZIMR		147.74	327	PKP2	PKPbc	05 09 19.5	+1.0
SZAC	Souni	147.74	307	P	PKPbc	05 09 18.5	-0.4
SNF	Seneffe	147.76	357	⇓PKP	PKPbc	05 09 18.6	+0.3
BCLA	Clavier	147.79	356	⇓PKP	PKPbc	05 09 18.1	-0.3
ALFC	Alefka	147.80	308	P	PKPbc	05 09 18.2	-0.8
JMB	Yambol	147.89	324	eP	PKPbc	05 09 18.9	-0.1
GEC2	GERESS Array S	147.97	345	ePKPdf	PKPdf	05 09 15.1	0.0
GEC2				ePKPbc	PKPbc	05 09 19.5	+0.4
GERES	GERESS Array B	147.97	345	PKP	PKPdf	05 09 14.4	-0.7
	comp=Z,52nm,0.7s,baz=64,slow=3.1,SNR=186						
GERES				PKPbc	PKPbc	05 09 19.1	0.0
	comp=Z,53nm,0.7s,baz=23,slow=3.2,SNR=224						
GEA0	GERESS Array S	147.97	345	ePKPdf	PKPdf	05 09 14.3	-0.7
GEA0				ePKPbc	PKPbc	05 09 18.5	-0.6
AKMC	Akamas	148.06	308	P	PKPbc	05 09 18.2	-1.5
BZS	Buzias	148.07	333	⇓iP	PKPbc	05 09 19.1	-0.2
BZS	Buzias	148.07	333	⇓PKHKP	PKPpre	05 09 19.1	
SRE	Strehaia	148.09	330	⇓iP	PKPbc	05 09 20.2	+0.8
SRE	Strehaia	148.09	330	⇓PKP2	PKPbc	05 09 20.2	+0.8
PPCY	Paphos	148.10	307	P	PKPbc	05 09 18.5	-1.2
ISP	Isparta	148.11	314	⇑iP	PKPbc	05 09 18.6	-1.2
DOU	Dourbes	148.16	356	⇓PKP	PKPbc	05 09 19.7	+0.3
CONA	Conrad Observa	148.21	342	i PKiKP	PKPbc	05 09 20.0	+0.3
	comp=Z,47nm,0.7s,SNR=35						
HERR	Herculane	148.28	331	⇓iP	PKPbc	05 09 19.8	-0.1
WLF	Walferdange	148.47	354	⇑PKP	PKPbc	05 09 21.0	+0.8
WLF	Walferdange	148.47	354	ePKPdf	PKPdf	05 09 17.0	+1.3
WLF				ePKPbc	PKPbc	05 09 20.4	+0.3
MDVR	Moldovita	148.68	332	⇓iP	PKPbc	05 09 20.5	-0.4
MOA	Molln	148.74	344	ePKPbc	PKPbc	05 09 20.9	-0.1
	comp=Z,20nm,0.8s,SNR=22						
ARSA	Arzberg	148.92	342	ePKPbc	PKPbc	05 09 21.2	-0.2
	comp=Z,11nm,0.8s,SNR=10						
STU	Stuttgart	148.96	350	ePKPbc	PKPbc	05 09 21.8	+0.3
KDZ	Kurdzhali	149.08	324	eP	PKPbc	05 09 21.5	-0.5
MANT	Manisa	149.09	316	ePKPbc	PKPbc	05 09 22.3	-0.1
PGB	Panagyurishte	149.14	326	eP	PKPbc	05 09 21.8	-0.3
PSET	Sete Cidades	149.16	45	eP	PKPdf	05 09 19.0	+1.8
	comp=Z,112nm,1.4s						
ALN	Alexandroupoli	149.22	322	ePKPbc	PKPbc	05 09 21.8	-0.5
ALN	Alexandroupoli	149.22	322	P	PKPbc	05 09 19.8	-2.4
PDA	Ponta Delgada	149.24	45	eP	PKPbc	05 09 19.9	-2.5
	comp=Z,42nm,0.7s						
CMLA	Cha da Macela	149.32	45	eP	PKPbc	05 09 23.3	+0.6
	comp=Z,109nm,0.6s						
CMLA	Cha da Macela	149.32	45	ePKPbc	PKPbc	05 09 23.8	+1.2
RDO	Rodhopi	149.35	323	P	PKPbc	05 09 21.8	-0.8
RDO	Rodhopi	149.35	323	P	PKPbc	05 09 21.8	-0.8
KOGS	Kog	149.41	340	i PKPbc	PKPbc	05 09 22.0	-0.5
RZN	Rozhen	149.44	325	eP	PKPbc	05 09 22.4	-0.6
BFO	Black Forest	149.52	351	ePKPdf	PKPdf	05 09 16.6	-0.9
BFO				ePKPbc	PKPbc	05 09 22.9	+0.1
BFO	Black Forest	149.52	351	ePKIKP	PKPdf	05 09 16.6	-0.9
BART	Pico Bartolome	149.56	45	eP	PKPbc	05 09 23.0	-0.3
	comp=Z,38nm,0.6s						
ASCN	Ascension	149.56	147	ePKPbc	PKPbc	05 09 24.2	+0.3
KSL	Kastellorizon	149.58	311	P	PKPbc	05 09 22.5	-0.8
KSL	Kastellorizon	149.58	311	P	PKPbc	05 09 22.5	-0.8
SOKA	Soboth	149.58	342	ePKPbc	PKPbc	05 09 22.5	-0.6
	comp=Z,31nm,0.6s,SNR=14						
PERS	Pernice	149.60	341	i PKPbc	PKPbc	05 09 22.5	-0.6
VTS	Vitosha	149.61	328	⇓iP	PKPbc	05 09 23.1	-0.3
VTS	Vitosha	149.61	328	ePKPbc	PKPbc	05 09 23.3	0.0
VTS				ePKPab	PKPab	05 09 31.1	-0.2
VTS	Vitosha	149.61	328	eP	PKPbc	05 09 23.1	-0.3
VTS	Vitosha	149.61	328	P	PKPbc	05 09 22.9	-0.5
VTS	Vitosha	149.61	328	⇓PKHKP	PKPpre	05 09 23.2	
KBA	Koelnbreinsper	149.69	344	ePKPbc	PKPbc	05 09 22.5	-0.9
	comp=Z,47nm,0.8s,SNR=18						
EZN	Ezine	149.72	320	P	PKPbc	05 09 23.1	-0.4
EZN	Ezine	149.72	320	P	PKPbc	05 09 23.1	-0.4
GADA	Gvkgeada	149.75	321	P	PKPbc	05 09 22.6	-0.9
GADA	Gvkgeada	149.75	321	P	PKPbc	05 09 22.6	-0.9
SMTH	Samothraki Isl	149.79	322	P	PKPbc	05 09 22.2	-1.5
SMTH	Samothraki Isl	149.79	322	P	PKPbc	05 09 22.2	-1.5
ECH	Echery	149.79	353	ePKPdf	PKPdf	05 09 17.6	-0.3
ECH				ePKPbc	PKPbc	05 09 23.0	-0.4
ECH				ePKPab	PKPab	05 09 30.9	-0.7
ECH	Echery	149.79	353	ePKIKP	PKPdf	05 09 17.6	-0.3
ECH				e		05 09 31.0	
WATA	Walderalm	149.88	346	i PKiKP	PKiKP	05 09 24.8	+0.4
	comp=Z,50nm,0.6s,SNR=17						
OBKA	Obir	149.88	342	ePKPbc	PKPbc	05 09 23.0	-0.8
	comp=Z,17nm,0.7s,SNR=6.0						
RETA	Reutte	149.91	348	i PKiKP	PKPbc	05 09 23.7	-0.1
	comp=Z,28nm,0.6s,SNR=18						
WTTA	Wattenberg	149.93	346	i PKiKP	PKPbc	05 09 23.9	-0.1
	comp=Z,43nm,0.4s,SNR=20						
MOTA	Moosalm	149.97	347	i PKiKP	PKiKP	05 09 24.9	+0.3
	comp=Z,42nm,0.7s,SNR=19						
DIVS	Divibare	149.97	333	ePKPdf	PKPdf	05 09 17.8	-0.6
DIVS				ePKPbc	PKPbc	05 09 24.3	+0.2
DIVS				ePKPab	PKPab	05 09 31.7	-1.0
YER	Yerkesik	149.99	314	P	PKPbc	05 09 24.1	-0.2
YER	Yerkesik	149.99	314	P	PKPbc	05 09 24.1	-0.2

PSMA	Santa Maria	149.99	46	*e*P	PKPbc	05 09 24.6	+0.4
	comp=Z,48nm,0.6s						
MYKA	Terra Mystica	150.03	343	*i* PKPbc	PKPbc	05 09 23.3	-0.8
	comp=Z,42nm,0.5s,SNR=21						
PSMN	Pico do Norte,	150.03	46	*e*P	PKPbc	05 09 24.4	+0.1
	comp=Z,218nm,1.2s						
MMB	Musomiste	150.05	326	*e*P	PKPbc	05 09 23.6	-0.7
PRK	Paraskevi	150.11	319	P	PKPbc	05 09 23.8	-0.6
PRK	Paraskevi	150.11	319	P	PKPbc	05 09 23.8	-0.6
NVR	Nevrokopi	150.14	325	P	PKPbc	05 09 23.7	-0.8
NVR	Nevrokopi	150.14	325	P	PKPbc	05 09 23.7	-0.8
THAS	Thassos island	150.17	323	P	PKPbc	05 09 23.5	-1.0
KKB	Krupnik	150.19	327	*e*P	PKPbc	05 09 24.2	-0.4
DAVA	Damuels	150.27	349	*i* PKiKP	PKPbc	05 09 24.9	+0.1
	comp=Z,73nm,1.1s,SNR=21						
LJU	Ljubljana	150.31	342	*i* PKPbc	PKPbc	05 09 24.5	-0.2
FETA	Feichten	150.36	347	*i* PKiKP	PKPbc	05 09 25.0	0.0
	comp=Z,67nm,0.9s						
LIA	Limnos Island	150.36	322	P	PKPbc	05 09 24.3	-0.7
LIA	Limnos Island	150.36	322	P	PKPbc	05 09 24.3	-0.7
SIGR	SIGRI	150.39	320	P	PKPbc	05 09 22.3	-2.7
SIGR	SIGRI	150.39	320	P	PKPbc	05 09 22.3	-2.7
OZLJ	Ozalj	150.40	340	P	PKPbc	05 09 24.5	-0.4
SRS	Serrai	150.45	325	P	PKPbc	05 09 23.7	-1.5
SRS	Serrai	150.45	325	P	PKPbc	05 09 23.7	-1.5
BLY	Banja Luka	150.56	337	⇓*i*P	PKPbc	05 09 25.4	+0.1
BLY	Banja Luka	150.56	337	*e*PKPbc	PKPbc	05 09 25.3	+0.1
BOJS	Bojanci	150.57	340	*i* PKPbc	PKPbc	05 09 25.5	+0.2
SMG	Samos	150.65	316	P	PKPbc	05 09 25.0	-0.7
SMG	Samos	150.65	316	P	PKPbc	05 09 25.0	-0.7
BODT	Bodrum	150.69	315	P	PKPbc	05 09 25.1	-0.8
BODT	Bodrum	150.69	315	P	PKPbc	05 09 25.1	-0.8
CHOS	Chios island	150.76	318	P	PKPbc	05 09 25.5	-0.6
CHOS	Chios island	150.76	318	P	PKPbc	05 09 25.5	-0.6
DAVOX	Davos/Dischmat	150.76	348	PKP	PKPdf	05 09 19.5	-0.2
	comp=Z,9.6nm,0.8s,baz=180,slow=1.0,SNR=8.1						
DAVOX				PKPbc	PKiKP	05 09 26.2	-0.1
	comp=Z,111nm,0.5s,baz=307,slow=5.1,SNR=105						
STIP	Stip	150.78	327	*i* P	PKPbc	05 09 24.2	-1.7
KNT	Kendrikon	150.79	326	P	PKPbc	05 09 24.6	-1.4
KNT	Kendrikon	150.79	326	P	PKPbc	05 09 24.6	-1.4
TRI	Trieste	150.84	342	*e*PKPbc	PKPbc	05 09 24.0	-1.9
PLE	Pljevlja	150.85	333	⇓*i*PKP	PKPbc	05 09 25.8	-0.4
VAY	Valandovo	150.85	326	*i* P	PKPbc	05 09 25.1	-1.0
SKO	Skopje	150.95	329	*i* P	PKPbc	05 09 26.0	-0.3
IVA	Berane	150.99	332	⇓*i*PKP	PKPbc	05 09 26.1	-0.4
TUE	Stuetta	151.16	349	*e*PKPdf	PKPdf	05 09 20.3	0.0
TUE				*e*PKPbc	PKPbc	05 09 26.9	0.0
UPM	Unac-Piva	151.16	333	⇓*i*PKP	PKPbc	05 09 26.0	-1.0
KOME	Kolasin	151.18	332	⇓*i*PKP	PKPbc	05 09 26.5	-0.4
PVY	Plav	151.18	331	*e*PKP	PKPbc	05 09 26.1	-0.8
UDBI	Udbina	151.26	339	P	PKPbc	05 09 26.6	-0.4
NKY	Niksic	151.44	333	⇓*i*PKP	PKPbc	05 09 26.8	-0.7
NKME	Niksic	151.50	333	⇓*i*PKP	PKPbc	05 09 26.9	-0.6
KRUS	Krusevo	151.50	328	*i* P	PKPbc	05 09 26.9	-0.8
BRY	Bratogost	151.56	333	⇓*i*PKP	PKPbc	05 09 27.0	-0.8
KARP	Karpathos	151.59	312	*e*PKPbc	PKPbc	05 09 27.7	-0.2
KARP	Karpathos	151.59	312	P	PKPbc	05 09 26.8	-1.2
SENIN	Lac Senin/Sane	151.59	352	*e*PKPdf	PKPdf	05 09 22.0	+1.1
SENIN				*e*PKPbc	PKPbc	05 09 27.7	-0.1
SENIN				*e*PKPab	PKPab	05 09 38.2	-1.3
PDG	Podgorica	151.63	332	⇑*i*P	PKPbc	05 09 27.1	-0.6
TTG	Podgorica	151.63	332	⇓*i*PKP	PKPbc	05 09 27.2	-0.5
TTG	Podgorica	151.63	332	*e*PKPbc	PKPbc	05 09 26.4	-1.3
TTG				*e*PKPab	PKPab	05 09 38.4	-1.1
PHP	Peshkopia	151.66	329	P	PKPbc	05 09 26.5	-1.4
PHP	Peshkopia	151.66	329	P	PKPbc	05 09 26.5	-1.4
CEME	Cevo	151.69	332	⇓*i*PKP	PKPbc	05 09 27.2	-0.8
BIA	Bitola	151.72	327	*i* P	PKPbc	05 09 27.9	-0.2
LIT	Litokhoron	151.76	325	*e*PKPbc	PKPbc	05 09 27.0	-1.1
LIT				*e*PKPab	PKPab	05 09 39.7	-0.5
LIT	Litokhoron	151.76	325	P	PKPbc	05 09 26.9	-1.3
AMGA	Amorgos Island	151.76	316	P	PKPbc	05 09 26.7	-1.6
DRME	Dracevica, Mon	151.86	332	⇓*i*PKP	PKPbc	05 09 27.6	-0.7
FNA	Florina	151.87	327	*e*PKPdf	PKPdf	05 09 20.6	-0.7
FNA				*e*PKPbc	PKPbc	05 09 27.3	-1.2
FNA				*e*PKPab	PKPab	05 09 39.9	-0.8
FNA	Florina	151.87	327	P	PKPdf	05 09 19.5	-1.8
FNA	Florina	151.87	327	*e*PKIKP	PKPdf	05 09 20.6	-0.7
FNA				*e*		05 09 27.3	
FNA				*e*		05 09 39.9	
APE	Apeiranthos	151.87	317	⇓*i*P	PKPbc	05 09 26.7	-1.8
APE	Apeiranthos	151.87	317	P	PKPbc	05 09 26.6	-1.9
APE	Apeiranthos	151.87	317	P	PKPbc	05 09 26.6	-1.9
APE	Apeiranthos	151.87	317	⇓PKIKP	PKPbc	05 09 26.7	-1.8
XOR	Xorichti	151.87	323	P	PKPbc	05 09 25.8	-2.7
XOR	Xorichti	151.87	323	P	PKPbc	05 09 25.8	-2.7
BUM	Brajici-Budva	151.90	332	⇓*i*PKP	PKPbc	05 09 27.7	-0.8
OHR	Ohrid	151.92	328	*i* P	PKPbc	05 09 27.9	-0.7
STON	Ston	151.94	334	P	PKPbc	05 09 27.1	-1.3
HCY	Herceg Novi	151.95	333	⇓*i*PKP	PKPbc	05 09 27.5	-1.0
KARY	Karystos	151.99	319	P	PKPbc	05 09 27.5	-1.2
ULC	Ulcinj	152.00	331	⇓*i*PKP	PKPbc	05 09 27.9	-0.8
IOSP	Ios island	152.22	316	P	PKPdf	05 09 20.2	-1.7
NEST	Nestorio	152.31	327	P	PKPbc	05 09 28.6	-0.9
SANT	Santorini	152.31	315	⇑*i*P	PKPbc	05 09 27.9	-1.6
SANT	Santorini	152.31	315	*e*PKPbc	PKPbc	05 09 28.0	-1.5
SANT				*e*PKPab	PKPab	05 09 40.7	-2.0
PTL	Penteli	152.33	320	P	PKPbc	05 09 28.2	-1.3
PTL	Penteli	152.33	320	P	PKPbc	05 09 28.2	-1.3
THR3	Thira Island,	152.33	316	P	PKPbc	05 09 28.0	-1.5
THR3	Thira Island,	152.33	316	P	PKPbc	05 09 28.0	-1.5
THR6	Thira Island,	152.36	315	P	PKPbc	05 09 28.4	-1.2
THR6	Thira Island,	152.36	315	P	PKPbc	05 09 28.4	-1.2
THL	Klokotos Trika	152.40	324	P	PKPbc	05 09 27.8	-1.7
VLY	Voula,Athens	152.50	320	P	PKPbc	05 09 28.2	-1.6
VLY	Voula,Athens	152.50	320	P	PKPbc	05 09 28.2	-1.6
VILL	Villia	152.59	321	P	PKPbc	05 09 28.5	-1.6
AGG	Agios Georgios	152.59	323	*e*PKPdf	PKPdf	05 09 21.4	-0.9
AGG				*e*PKPbc	PKPbc	05 09 28.9	-1.2
AGG				*e*PKPab	PKPab	05 09 42.2	-1.6
AGG	Agios Georgios	152.59	323	P	PKPbc	05 09 28.6	-1.5
AGG	Agios Georgios	152.59	323	*e*PKIKP	PKPdf	05 09 21.5	-0.9
AGG				*e*		05 09 28.9	
AGG				*e*		05 09 42.2	
LTK	Loutraki	152.89	321	P	PKPbc	05 09 29.1	-1.6
LTK	Loutraki	152.89	321	P	PKPbc	05 09 29.1	-1.6
DSF	Desfina	152.89	322	P	PKPbc	05 09 29.5	-1.2
DSF	Desfina	152.89	322	P	PKPbc	05 09 29.5	-1.2
BNI	Bardonecchia	152.96	352	*e*PKPdf	PKPdf	05 09 23.0	+0.1
BNI				*e*PKPbc	PKPbc	05 09 30.7	-0.1
BNI				*e*PKPab	PKPab	05 09 45.2	-0.1
BNI	Bardonecchia	152.96	352	*e*PKIKP	PKPdf	05 09 23.0	+0.1
BNI				*e*		05 09 45.2	
EVR	Evrytania	152.96	324	P	PKPbc	05 09 30.5	-0.4
EVR	Evrytania	152.96	324	P	PKPbc	05 09 30.5	-0.4
LAST	Lasithi	152.96	313	P	PKPbc	05 09 30.7	-0.3
LAST	Lasithi	152.96	313	P	PKPbc	05 09 30.7	-0.3
DID	Didima	153.06	320	P	PKPbc	05 09 29.3	-1.8
DID	Didima	153.06	320	P	PKPbc	05 09 29.3	-1.8
ANX	Ano Chora	153.12	323	P	PKPdf	05 09 23.1	-0.2
SERG	Sergoula	153.16	323	P	PKPbc	05 09 30.6	-0.7
TRIZ	Trizonia	153.19	323	P	PKPbc	05 09 30.6	-0.7
DSL	Palaion Diasel	153.20	325	P	PKPbc	05 09 30.8	-0.6
DSL	Palaion Diasel	153.20	325	P	PKPbc	05 09 30.8	-0.6
EFP	Efpalio	153.24	323	P	PKPbc	05 09 31.6	+0.2
IDI	Anoyia	153.30	314	PKPbc	PKPbc	05 09 32.1	+0.4
	comp=Z,17nm,0.4s,baz=60,slow=4.7,SNR=28						
IDI	Anoyia	153.30	314	⇑*i*P	PKPbc	05 09 31.1	-0.6
IDI	Anoyia	153.30	314	*e*PKPdf	PKPdf	05 09 23.5	-0.1
IDI				*e*PKPbc	PKPbc	05 09 30.5	-1.2
GUR	Goura	153.32	321	P	PKPbc	05 09 30.6	-1.1
GUR	Goura	153.32	321	P	PKPbc	05 09 30.6	-1.1
LAKA	Lakka	153.33	322	P	PKPbc	05 09 31.8	+0.2
LAKA	Lakka	153.33	322	P	PKPbc	05 09 31.8	+0.2
PVO	Paravola	153.33	324	P	PKPbc	05 09 31.7	+0.1
KLV	Kalavryta, Ach	153.36	322	P	PKPbc	05 09 31.1	-0.7
KLV	Kalavryta, Ach	153.36	322	P	PKPbc	05 09 31.1	-0.7
KEK	Kerkira	153.47	327	P	PKPbc	05 09 30.9	-1.0
KEK	Kerkira	153.47	327	P	PKPbc	05 09 30.9	-1.0
PDO	Prodromos	153.53	324	P	PKPbc	05 09 31.6	-0.4
VLX	Vlachokerasia	153.67	320	P	PKPbc	05 09 31.9	-0.6
VLX	Vlachokerasia	153.67	320	P	PKPbc	05 09 31.9	-0.6
DRO	Drossia	153.68	322	P	PKPbc	05 09 35.6	+3.2
LKD2	Lefkada island	153.69	325	P	PKPbc	05 09 31.6	-0.8
LKD2	Lefkada island	153.69	325	P	PKPbc	05 09 31.6	-0.8
VAM	Vamos	153.70	315	P	PKPbc	05 09 32.4	-0.1
VAM	Vamos	153.70	315	P	PKPbc	05 09 32.4	-0.1
VLI	Veliai	153.74	319	P	PKPbc	05 09 31.3	-1.2
VLI	Veliai	153.74	319	P	PKPbc	05 09 31.3	-1.2
RLS	Riolos of Patr	153.75	323	P	PKPbc	05 09 32.5	0.0
RLS	Riolos of Patr	153.75	323	P	PKPbc	05 09 32.5	0.0
EVGI	Lefkada island	153.81	325	P	PKPbc	05 09 32.3	-0.3
FSK	Fiskardo	153.98	325	P	PKPbc	05 09 32.2	-0.7
AQU	L'Aquila	153.98	340	*e*PKPbc	PKPbc	05 09 32.9	-0.1
ITM	Ithomi	154.06	321	*e*PKPbc	PKPbc	05 09 32.7	-0.6
ITM				*e*PKPab	PKPab	05 09 49.0	-1.2
DYR	Agios Nikonas	154.09	319	P	PKPbc	05 09 31.9	-1.4
PYL	PYLOS	154.36	320	P	PKPbc	05 09 32.1	-1.7
PYL	PYLOS	154.36	320	P	PKPbc	05 09 32.1	-1.7
PGAV	Gavieira, Arco	154.91	18	*e*PKPdf	PKPdf	05 09 26.2	+0.6
PGAV	Gavieira, Arco	154.91	18	*e*PKPab	PKPab	05 09 53.9	+0.2
PCAB	Cabril	155.22	17	*e*PKPab	PKPab	05 09 55.3	+0.4
TIP	Timpagrande	155.37	331	⇑*i*P	PKPdf	05 09 33.6	+7.3
TIP	Timpagrande	155.37	331	*e*PKPdf	PKPdf	05 09 26.1	-0.2
TIP				*e*PKPab	PKPab	05 09 53.9	-1.9
PBRG	Braganca	155.47	15	*e*PKPab	PKPab	05 09 56.1	+0.1
PTO	Porto	155.57	19	*e*PKPab	PKPab	05 09 56.5	+0.1
POLO	Lamas de Olo	155.59	17	*e*PKPab	PKPab	05 09 57.2	+0.5
PVRL	Vila Real	155.71	17	*e*PKPab	PKPab	05 09 57.3	+0.2
MVO	Moncorvo	156.00	16	*e*PKPdf	PKPdf	05 09 27.6	+0.5
MVO	Moncorvo	156.00	16	*e*PKPab	PKPab	05 09 58.7	+0.3
PVIS	Viseu	156.17	18	*e*PKPab	PKPab	05 09 59.5	+0.4
MTE	Manteigas	156.57	18	*e*PKPdf	PKPdf	05 09 28.4	+0.6
MTE	Manteigas	156.57	18	*e*PKPab	PKPab	05 10 00.9	+0.1
PCAS	Casmilo, Conde	156.59	20	*e*PKPdf	PKPdf	05 09 28.2	+0.4
PCAS	Casmilo, Conde	156.59	20	*e*PKPab	PKPab	05 10 01.0	+0.1
PTOM	Tomar	157.01	20	*e*PKPab	PKPab	05 10 02.6	-0.1
PCBR	Castelo Branco	157.10	18	*e*PKPdf	PKPdf	05 09 28.8	+0.4
PCBR	Castelo Branco	157.10	18	*e*PKPab	PKPab	05 10 03.1	0.0
PMAFR	Mafra	157.30	22	*e*PKPab	PKPab	05 10 04.3	+0.3
PMRV	Marv??o	157.51	19	*e*PKPab	PKPab	05 10 05.0	+0.1
PMTG	Montargil	157.57	20	*e*PKPab	PKPab	05 10 04.9	-0.2
PESTR	Estremoz	157.96	19	*e*PKPdf	PKPdf	05 09 29.6	+0.1
PESTR	Estremoz	157.96	19	*e*PKPab	PKPab	05 10 06.9	0.0
ES19	SONSECA Array	158.11	12	*e*PKPdf	PKPdf	05 09 29.6	-0.1
ES19				*e*PKPab	PKPab	05 10 07.5	-0.1
ESDC	Sonseca Array	158.12	12	PKP	PKPdf	05 09 30.1	+0.3
	comp=Z,2.2nm,0.8s,baz=348,slow=3.1,SNR=9.3						
ESDC				PKPbc	PKPbc	05 09 41.6	
	comp=Z,1.8nm,0.7s,baz=336,slow=2.6,SNR=5.5						
ESDC				PKPab	PKPab	05 10 07.4	-0.2
	comp=Z,4.7nm,0.7s,baz=347,slow=4.0,SNR=14						
ESLA	Sonseca Array	158.12	12	*e*PKPdf	PKPdf	05 09 29.4	-0.3
ESLA				*e*PKPab	PKPab	05 10 07.9	+0.3
EVO	Evora	158.13	21	*e*PKPdf	PKPdf	05 09 30.4	+0.7
EVO	Evora	158.13	21	*e*PKPab	PKPab	05 10 07.8	+0.2
PAB	San Pablo	158.17	13	*e*PKPdf	PKPdf	05 09 30.1	+0.3
PAB	San Pablo	158.17	13	*e*PKIKP	PKPdf	05 09 30.1	+0.3
PNCL	Nicolau / Gran	158.32	22	*e*PKPab	PKPab	05 10 08.7	+0.2
MESJ	Messejana	158.68	22	*e*PKPdf	PKPdf	05 09 31.0	+0.7
MESJ	Messejana	158.68	22	*e*PKPab	PKPab	05 10 10.1	+0.1
PTEO	Sao Teotonio	158.75	23	*e*PKPab	PKPab	05 10 10.4	+0.1
PBAR	Barrancos	158.77	19	*e*PKPdf	PKPdf	05 09 30.7	+0.3
PBAR	Barrancos	158.77	19	*e*PKPab	PKPab	05 10 10.5	+0.1
PCVE	Castro Verde	158.93	22	*e*PKPab	PKPab	05 10 11.3	+0.2
PVAQ	Vaqueiros	159.24	21	*e*PKPdf	PKPdf	05 09 30.4	-0.6
PVAQ	Vaqueiros	159.24	21	*e*PKPab	PKPab	05 10 12.8	+0.3
KEST	Kesra	161.31	340	PKP	PKPdf	05 09 33.6	+0.2
	comp=Z,4.7nm,0.8s,baz=21,slow=0.8,SNR=5.1						
KEST				PKPab	PKPab	05 10 21.6	-0.1
	comp=Z,11nm,0.6s,baz=273,slow=1.7,SNR=14						
KEST	Kesra	161.31	340	*e*PKPdf	PKPdf	05 09 32.9	-0.5
KEST				*e*PKPab	PKPab	05 10 21.8	+0.1
DBIC	Dimbokro	166.85	150	PKP	PKPdf	05 09 38.2	-0.6
	comp=Z,11nm,0.6s,baz=162,slow=0.9,SNR=25						
DBIC	Dimbokro	166.85	150	*e*PKPdf	PKPdf	05 09 38.6	-0.2
KOWA	Kowa	173.41	124	PKP	PKPdf	05 09 41.4	-0.9
	comp=Z,13nm,0.8s,baz=165,slow=1.6,SNR=33						
KOWA				PKPab	PKPab	05 11 15.7	-0.2
	comp=Z,3.4nm,0.8s,baz=243,slow=6.8,SNR=4.2						

IDC 13 04:51:57.5±8.8, 18°.02S×178°.57W, h590^{km}±109^{km}, mb3.7/8, mb1 3.9/8, mb1mx3.4/52, mbtmp4.6/8, Error ellipse: s-maj=48.2km s-min=39.4km az=167.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	33.28	261	P	P	04 57 48.2	+0.4
	6.0nm,0.4s,baz=83,slow=13,SNR=3.9						
STKA	Stephens Creek	38.44	241	P	P	04 58 30.3	+0.1
	6.2nm,0.5s,baz=100,slow=11,SNR=2.0						
WRA	Warramunga Arr	44.46	260	P	P	04 59 16.8	-1.0
	5.9nm,0.5s,baz=93,slow=6.8,SNR=5.3						
ASAR	Alice Springs	44.61	254	P	P	04 59 18.2	-0.7
	20nm,0.6s,baz=84,slow=8.8,SNR=6.1						
FITZ	Fitzroy Crossi	52.86	261	P	P	05 00 19.8	+0.1
	4.9nm,0.5s,baz=72,slow=5.0,SNR=2.3						
MJAR	Matsushiro Arr	67.90	323	P	P	05 01 58.2	-0.2
	2.1nm,0.7s,baz=163,slow=6.2,SNR=1.6						
TXAR	Lajitas Array	86.18	58	P	P	05 03 37.6	-0.1
	2.6nm,0.9s,baz=224,slow=5.0,SNR=1.4						
CMAR	Chiang Mai Arr	88.78	290	P	P	05 03 50.2	+0.3
	1.5nm,0.8s,baz=123,slow=3.3,SNR=2.0						

GCMT 13 05:01:28.0±0.3, 41°.33S×89°.51W, h17^{km}±1^{km}, MW5.0/90, Moment Tensor Solution. s48,c55; s90,c135; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.88±.17; $M_{\theta\theta}$0.61±.13; $M_{\phi\phi}$0.26±.14; $M_{r\theta}$-1.31±.35; $M_{\theta\phi}$-3.97±.10; $M_{\phi r}$-0.84±.34; **Best double couple:** $M_0$4.33200×10^{16} **NP1:**ϕ_s91.00000°, δ76.00000°, λ-159.00000°. **NP2:**ϕ_s356.00000°, δ70.00000°, λ-15.00000°. **Principal axes:** T 4.4400, Plg4.0000°, Azm223.0000°; N -0.2170, Plg65.0000°, Azm124.0000°; P -4.2230, Plg24.0000°, Azm315.0000°; **nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s. Southeast of Easter Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAOE	Nuku Hiva Isla	55.07	291	*e*LR	LR	05 26 46.8	
	343nm,26.7s						
PPT2	Papeete2	56.22	276	*e*LR	LR	05 27 20.4	
	176nm,25.8s						
DZM	Mont Dzumac	85.63	244	*e*LR	LR	05 40 50.5	
	318nm,25.9s						

IDC 13 05:04:08.2±7.7, 7°.42S×120°.21E, h320^{km}±92^{km}, mb2.9/2, mb1 3.0/4, mb1mx2.7/62, mbtmp3.6/4 Error ellipse: s-maj=119.9km s-min=33.0km az=53.0, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	11.86	154	P	Pn	05 06 49.0	+0.3
	0.1nm,0.3s,baz=342,slow=16,SNR=5.1						
FITZ				S	S	05 08 58.8	-2.1
	0.1nm,0.3s,baz=203,slow=17,SNR=4.9						
WRA	Warramunga Arr	18.51	134	P	P	05 08 02.1	-0.2
	0.2nm,0.3s,baz=307,slow=11,SNR=11						
ASAR	Alice Springs	20.82	142	P	P	05 08 26.3	+0.2
	0.6nm,0.3s,baz=321,slow=8.6,SNR=9.1						
MKAR	Makanchi Array	63.62	332	P	P	05 14 05.6	-0.1
	0.3nm,0.4s,baz=149,slow=8.2,SNR=6.3						

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*DDA **13** 05:07:45.5, 38°.44N×40°.44E, h15^{km}, Ml2.9*
*ISK **13** 05:07:45.6, 38°.47N×40°.45E, h12^{km}, ML2.5/8*
*ISCJB **13** 05:07:46.1±0.4, 38°.46N±0°.02×40°.45E±0°.03, h8^{km}±4^{km}, Error ellipse: s-maj=4.3km s-min=3.5km az=35.6*
*CSEM **13** 05:07:46.1±0.2, 38°.44N×40°.45E, h10^{km}, ML2.9, Error ellipse: s-maj=4.7km s-min=3.8km az=10.0*

ISC 13 05:07:45.6±0.9, 38°.47N±0°.03×40°.44E±0°.02, h15^{km}±6^{km}, n31, σ0^s.41/46, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HANI	Diyarbakir_Han	0.06	212	*i* P	Pg	05 07 48.4	-0.2
HANI	Diyarbakir_Han	0.06	212	P	Pg	05 07 48.4	-0.2
BINT	Bingol	0.41	5	*e*Pg	Pn	05 07 57.0	-0.1
BGOL	Bingol	0.55	19	*i* P	Pb	05 07 57.0	-0.1
BGOL				*i* S	Sb	05 08 04.8	0.0
BGOL	Bingol	0.55	19	P	Pb	05 07 57.0	-0.1
BGOL				S	Sb	05 08 04.8	0.0
BNGB	Bingˆ¶l	0.56	19	PG	Pb	05 07 57.0	-0.1
BNGB				SG	Sb	05 08 05.2	+0.2
DYBB	Diyarbakir	0.56	205	PG	Pb	05 07 57.5	+0.3
DYBB				SG	Sb	05 08 06.2	+1.1
DIY	Diyarbakir	0.59	197	*e*Pg	Pb	05 07 57.5	-0.2
DIY				*e*Sg	Sb	05 08 06.2	+0.2
DIYA	Diyarbakir	0.60	205	*i* P	Pn	05 08 06.3	+6.7
SVAN	Silvan-Diyarba	0.67	118	PG	Pb	05 07 58.9	-0.2
SVAN				SG	Sb	05 08 08.9	+0.7
SVAN	Silvan-Diyarba	0.67	118	*i* P	Pg	05 07 58.6	-0.2
SVAN				*i* S	Sb	05 08 08.9	+0.7
SVAN	Silvan-Diyarba	0.67	118	P	Pg	05 07 58.6	-0.2
SVAN	Silvan-Diyarba	0.67	118	*e*Pg	Pb	05 07 58.9	-0.2
SVAN				*e*Sg	Sb	05 08 08.9	+0.7
BNGL	BINGOL	0.74	49	*i* P	Pn	05 08 01.2	-0.5
BNGL				*i* S	Sb	05 08 10.9	+0.6
SVRC	Sivrice-ELAZID	0.90	265	PG	Pn	05 08 03.4	-0.4
SVRC				SG	Sn	05 08 16.4	-0.2
SVRC	Sivrice-ELAZID	0.90	265	*e*Pg	Pn	05 08 03.4	-0.4
SVRC				*e*Sg	Sn	05 08 16.4	-0.2
PTK	Pertek	0.92	298	PG	Pb	05 08 03.4	0.0
PTK	Pertek	0.92	298	*e*Pg	Pb	05 08 03.4	0.0
MAZI	Mazidag	1.00	180	PG	Pg	05 08 04.9	-0.2
MAZI	Mazidag	1.00	180	*e*Pg	Pg	05 08 04.9	-0.2
ELZG	Elazig	1.14	272	*i* P	Pg	05 08 07.5	-0.2
ELZG				*i* S	Sg	05 08 23.4	+0.7
ELZG	Elazig	1.14	272	P	Pg	05 08 07.5	-0.2
ELZG				S	Sg	05 08 23.4	+0.7
MARD	Mardin	1.18	167	*i* P	Pg	05 08 08.0	-0.4
MARD				*i* S	Sg	05 08 23.6	-0.2
GURO	Guroymak-BITLI	1.25	86	PN	Pb	05 08 09.2	+0.2
GURO	Guroymak-BITLI	1.25	86	*e*Pn	Pb	05 08 09.2	+0.2
SRTM	Siirt_Merkez	1.26	112	*i* P	Pb	05 08 09.1	0.0
SRTM				*i* S	Sg	05 08 26.6	+0.3
SRTM	Siirt_Merkez	1.26	112	P	Pb	05 08 09.1	0.0
SRTM				S	Sg	05 08 26.6	+0.3
MALT	Malatya	1.59	265	PN	Pb	05 08 15.1	+0.4
MALT	Malatya	1.59	265	*e*Pn	Pb	05 08 15.1	+0.4
URFA	Urfa	1.64	232	PN	Pb	05 08 14.9	-0.7
URFA	Urfa	1.64	232	*e*Pn	Pb	05 08 14.9	-0.7

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*NIED **13** 05:14:00, 38°.80N×142°.50E, h44^{km}, Mw4.3 Best double couple: $M_0$3.63000×10^{15} NP1:ϕ_s58.00000°, δ21.00000°, λ107.00000°. NP2:ϕ_s219.00000°, δ70.00000°, λ84.00000°.*
*BJI **13** 05:14:21.7, 38°.78N×142°.51E, h36^{km}, mb4.6/39, mB4.9/22, Ms4.2/15, Ms7 3.9/14*
*NEIC **13** 05:14:24.9±0.3, 38°.92N×142°.40E, h35^{km}, mb4.6/21, Error ellipse: s-maj=8.2km s-min=5.2km az=155.0*
NEIC Recorded [3 JMA] in Miyagi.
*JMA **13** 05:14:24.1±0.1, 38°.80N×142°.46E, h44^{km}±2^{km}, M4.5*
JMA Felt III J1.
*IDC **13** 05:14:26.1±2.6, 38°.76N×142°.32E, h55^{km}±22^{km}, mb4.0/15, mb1 4.2/18, mb1mx3.9/77, mbtmp4.3/18, ML4.1/2, MS3.5/20, Ms1 3.5/20, ms1mx3.1/77, Error ellipse: s-maj=19.1km s-min=16.0km az=160.0*

ISC 13 05:14:23.3±1.4, 38°.76N±0°.04×142°.50E±0°.05, h31^{km}±9^{km}, n106, σ2^s.00/105, mb4.5/43, MS3.6/17, 1C, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	0.73	296	P	Pn	05 14 37.6	+0.2
OFUJ				*e*S	Sn	05 14 47.0	-0.5
JIO	Ouri	0.95	252	P	Pb	05 14 40.7	-0.7
JIO				S	Sb	05 14 52.5	-1.2
JMK	Ichinoseki	1.02	281	P	Pb	05 14 41.7	-0.8
JMK				*e*S	Sn	05 14 54.4	-0.3
JOM	Ohasama	1.18	307	P	Pb	05 14 44.0	-1.2
JOM				*e*S	Sn	05 14 58.5	-0.2
JTH	Tanohata	1.28	337	P	Pn	05 14 44.9	-0.1
JOU	Okura	1.50	255	P	Pn	05 14 48.6	+0.6
JOU				*e*S	Sn	05 15 07.1	+0.6
JRG	Rokugo	1.59	294	P	Pn	05 14 50.0	+0.7
JRG				*e*S	Sn	05 15 09.7	+1.0
JMM	Marumori	1.61	237	P	Pn	05 14 50.0	+0.4
JMM				*e*S	Sn	05 15 08.8	-0.6
JYK	Kaneyama	1.68	276	P	Pn	05 14 51.2	+0.6
JANG	Nango	1.78	335	P	Pn	05 14 51.8	-0.2
JANG				*e*S	Sn	05 15 12.8	-0.8
JFK	Kawauchi	1.89	223	P	Pn	05 14 54.0	+0.5
JYS	Shirataka	1.99	255	P	Pn	05 14 55.8	+1.0
JYS				*e*S	Sn	05 15 19.6	+1.0
MJAR	Matsushiro Arr	4.06	238	P	Pn	05 15 25.8	+2.4
	10nm,0.3s,baz=39,slow=12,SNR=38						
MJAR				LR	LR	05 17 12.8	
	comp=Z,336nm,19.1s,baz=65,slow=42						
MAJO	Matsushiro	4.07	238	*e*Pn	Pn	05 15 26.4	+3.1
MAT	Matsushiro	4.07	238	P	Pn	05 15 26.2	+2.8
MAT				S	Sn	05 16 15.7	+5.8
MJB9	Matsu-Tunnel	4.07	238	*e*Pn	Pn	05 15 26.5	+3.1
ASAJ	Asahikawa	5.35	1	P	Pn	05 15 41.7	+0.7
	5.9nm,0.3s,baz=203,slow=17,SNR=18						
ASAJ				S	Sn	05 16 39.9	-1.6
	2.8nm,0.3s,baz=272,slow=33,SNR=3.3						
ASAJ				LR	LR	05 18 19.4	
	comp=Z,371nm,20.6s,baz=176,slow=44						
INU	Inuyama	5.55	234	*e*Pn	Pn	05 15 46.3	+2.5
USRK	Ussuriysk Ar.	9.58	308	P	Pn	05 16 39.5	+0.5
	baz=108,slow=15						
USRK				LR	LR	05 20 13.3	
	comp=Z,290nm,18.8s,baz=133,slow=37						
JNU	Nakatsue	10.97	243	LR	LR	05 21 32.9	
	comp=Z,115nm,21.1s,baz=124,slow=39						
KSRS	Korea Array	11.56	268	P	Pn	05 17 10.2	+4.0
	0.5nm,0.3s,baz=83,slow=13,SNR=11						
KSRS				LR	LR	05 21 12.4	
	comp=Z,146nm,18.6s,baz=80,slow=36						
KSAR	Wonju Array Be	11.60	268	P	Pn	05 17 10.2	+3.6
CBIJ	Chichi jima	11.63	181	P	Pn	05 17 05.9	-1.3
CBIJ				S	Sn	05 19 09.2	-6.8
JCJ	Chichijima	11.63	181	P	Pn	05 17 05.9	-1.3
	2.8nm,0.3s,baz=351,slow=20,SNR=10						
JCJ				S	Sn	05 19 09.2	-6.8
	2.1nm,0.3s,baz=240,slow=23,SNR=3.7						
KLR	Kul'dur	13.00	327	P	Pn	05 17 25.4	-0.4
	0.0nm,0.3s,baz=135,slow=12,SNR=7.2						
KLR				LR	LR	05 22 25.0	
	comp=Z,24nm,19.4s,baz=133,slow=37						
CN2	Changchun	13.78	297	*e*P	Pn	05 17 37.1	+0.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PETK	Petropavlovsk-	17.77	31	LR	LR	05 26 14.5	
	comp=Z,67nm,18.5s,baz=212,slow=40						
TIA	Tai'an	20.28	271	P	Pn	05 18 57.4	-1.1
TIA				pmax	pmax		
	comp=Z,11nm,0.9s						
NJ2	Nanjing	20.38	258	*e*P	P	05 18 57.8	+0.4
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
HHC	Hu-ho-hao-te	23.80	285	*e*P	P	05 19 28.3	-5.1
HHC				sP	sP	05 19 43.3	-2.9
HHC				S	S	05 23 39.6	-7.5
HHC				pmax	pmax		
	comp=Z,24nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,6.5s						
HHC				LR	LR		
	comp=Z,130nm,7.7s						
HHC				LR	LR		
	comp=Z,180nm,9.6s						
HHC				LR	LR		
	comp=Z,150nm,12.9s						
YAK	Yakutsk	24.60	345	*e*P	P	05 19 38.9	-1.4
	comp=Z,58nm,0.5s						
SEY	Seymchan	24.93	11	P	P	05 19 45.5	+2.1
	comp=Z,4.6nm,0.8s,baz=198,slow=10,SNR=9.1						
GUMO	Guam	25.16	175	LR	LR	05 30 24.1	
	comp=Z,27nm,20.0s,baz=94,slow=38						
ULN	Ulaanbaatar	27.15	301	*e*P	P	05 20 03.6	-0.2
SONA1	Songino Array	27.58	301	*e*P	P	05 20 06.8	-0.8
SONM	Songino Array	27.59	301	P	P	05 20 07.2	-0.4
	comp=Z,4.0nm,0.6s,baz=97,slow=8.7,SNR=26						
SONM				LR	LR	05 31 23.2	
	comp=Z,73nm,20.6s,baz=52,slow=37						
H11N2	WAKE ISLAND Hy	28.36	125	T	T	05 50 44.2	
	baz=317,slow=75,SNR=151						
H11N1	WAKE ISLAND Hy	28.37	125	T	T	05 50 42.5	
	baz=317,slow=75,SNR=189						
ENH	Enshi	28.37	263	*e*P	P	05 20 16.7	+1.9
	comp=Z,15nm,0.8s						
H11N3	WAKE ISLAND Hy	28.38	125	T	T	05 50 48.5	
	baz=317,slow=75,SNR=91						
H11S1	WAKE ISLAND Hy	29.14	127	T	T	05 51 44.2	
	baz=319,slow=76,SNR=48						
H11S3	WAKE ISLAND Hy	29.14	127	T	T	05 51 39.6	
	baz=319,slow=76,SNR=104						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H11S2	WAKE ISLAND Hy	29.16	127	T	T	05 51 36.8	
	baz=319,slow=76,SNR=59						
TLY	Talaya	29.89	308	eP	P	05 20 27.7	-0.3
	comp=Z,10nm,0.9s						
LZH	Lanzhou	30.67	277	eP	P	05 20 35.6	+0.4
LZH				pP	sP	05 20 45.6	-2.6
LZH				sP	pP	05 20 50.3	+6.0
LZH				ePP	PnPn	05 21 34.4	-0.8
LZH				pmax	pmax		
	comp=Z,21nm,1.0s						
LZH				pmax	pmax		
	comp=Z,98nm,4.9s						
LZH				LR	LR		
	comp=Z,710nm,12.1s						
LZH				LR	LR		
	comp=Z,390nm,11.4s						
LZH				LR	LR		
	comp=Z,630nm,12.5s						
GYA	Guiyang	32.38	259	eP	P	05 20 51.8	+1.5
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CD2	Chengdu	32.56	268	eP	P	05 20 51.8	0.0
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
GTA	Gaotai	32.92	285	⇑P	P	05 20 55.0	+0.1
GTA				S	S	05 26 09.0	-1.8
GTA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,58nm,5.6s						
GTA				LR	LR		
	comp=Z,90nm,16.5s						
GTA				LR	LR		
	comp=Z,180nm,17.5s						
GTA				LR	LR		
	comp=Z,230nm,17.1s						
TIXI	Tiksi	33.69	352	LR	LR	05 37 34.2	
	comp=Z,60nm,18.1s,baz=212,slow=41						
KMI	Kunming	36.09	260	P	P	05 21 25.1	+2.5
KMI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
WMQ	Urumqi	40.86	295	P	P	05 22 03.0	+0.7
WMQ				pmax	pmax		
	comp=Z,32nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,220nm,5.5s						
WMQ				LR	LR		
	comp=Z,53nm,19.1s						
WMQ				LR	LR		
	comp=Z,190nm,16.9s						
WMQ				LR	LR		
	comp=Z,120nm,22.1s						
ZAA0	Zalesovo Array	41.41	311	eP	P	05 22 06.0	-0.6
	comp=Z,7.6nm,0.6s						
ZALV	Zalesovo Beam	41.41	311	P	P	05 22 05.8	-0.7
	comp=Z,7.3nm,0.5s,baz=86,slow=7.6,SNR=22						
ZALV				LR	LR	05 39 53.7	
	comp=Z,88nm,19.1s,baz=68,slow=37						
MK01	Makanchi Array	43.95	301	eP	P	05 22 26.5	-0.8
MK31	Makanchi Array	43.96	301	eP	P	05 22 26.7	-0.6
MKAR	Makanchi Array	43.96	301	P	P	05 22 26.7	-0.6
	comp=Z,7.3nm,0.7s,baz=82,slow=11,SNR=30						
MKAR				LR	LR	05 41 19.7	
	comp=Z,59nm,20.2s,baz=94,slow=37						
MKAR	Makanchi Array	43.96	301	eP	P	05 22 26.7	-0.6
	comp=Z,48nm,0.6s						
MAKZ	Makanchi	44.16	301	eP	P	05 22 28.1	-0.9
	comp=Z,8.6nm,0.8s						
KURK	Kurchatov	45.57	307	eP	P	05 22 39.2	-0.9
	comp=Z,18nm,1.0s						
KURBB	Kurchatov Arra	45.64	307	P	P	05 22 39.7	-0.9
	comp=Z,11nm,0.6s,baz=80,slow=8.2,SNR=61						
MDM	Murphy Dome	47.00	33	eP	P	05 22 52.5	+1.4
	comp=Z,9.3nm,1.3s						
IL1	Eielson Array	47.58	33	eP	P	05 22 56.2	+0.5
ILAR	Eielson Array	47.58	33	P	P	05 22 56.2	+0.6
	comp=Z,3.4nm,0.7s,baz=270,slow=6.5,SNR=38						
ILB	Eielson Array	47.58	33	eP	P	05 22 56.2	+0.6
BVAR	Borovoye Array	50.06	311	P	P	05 23 14.1	-0.8
	comp=Z,1.9nm,0.5s,baz=70,slow=8.1,SNR=9.4						
BVAR				LR	LR	05 45 21.6	
	comp=Z,59nm,18.6s,baz=103,slow=37						
AAK	Ala-Archa	50.45	297	LR	LR	05 46 21.9	
	comp=Z,23nm,20.1s,baz=122,slow=38						
KSH	Kashi	50.51	293	eP	P	05 23 23.0	+4.4
KSH				ePcP	PcP	05 24 39.0	+2.7
INK	Inuvik	52.46	28	P	P	05 23 33.5	+0.9
	comp=Z,1.2nm,0.5s,baz=301,slow=7.2,SNR=12						
KK31	Karatay Array	53.02	299	eP	P	05 23 36.2	-1.0
KKAR	Karatay Array	53.02	299	eP	P	05 23 36.1	-1.1
NIL	Nilore	54.91	288	eP	P	05 23 55.4	+4.3
	comp=Z,16nm,1.0s						
ARU	Arti	55.65	318	eP	P	05 23 55.5	-0.6
	comp=Z,6.5nm,0.6s						
ABKAR	Akbulak array	57.50	310	eP	P	05 24 08.6	-0.7
AKTO	Aktyubinsk	58.17	311	LR	LR	05 50 48.7	
	comp=Z,60nm,18.0s,baz=147,slow=38						
WRA	Warramunga Arr	58.89	189	P	P	05 24 18.4	-0.8
	comp=Z,6.5nm,0.8s,baz=11,slow=7.7,SNR=4.0						
ARCES	ARCESS Array B	62.69	339	P	P	05 24 44.5	-0.1
	comp=Z,1.3nm,0.8s,baz=63,slow=8.3,SNR=4.7						
FIA1	FINESS Array S	67.69	332	eP	P	05 25 16.3	-0.8
FINES	FINESS Array B	67.69	332	P	P	05 25 16.2	-0.9
	comp=Z,1.4nm,0.7s,baz=58,slow=7.2,SNR=4.4						
K05A	Summer Lake	69.19	52	eP	P	05 25 28.8	+1.7
	comp=Z,13nm,1.4s						
JCHM	Cahill Ridge	71.18	57	eP	P	05 25 40.8	+1.7
FFC	Flin Flon	71.79	33	eP	P	05 25 42.9	+0.4
	comp=Z,2.2nm,0.8s						
NB2	NORSAR Subarra	72.93	338	P	P	05 25 50.8	+1.6
	comp=Z,0.4nm,0.5s,baz=35,slow=6.2						
NOA	NORSAR Array B	72.93	338	LR	LR	06 00 51.7	
	comp=Z,36nm,20.2s,baz=255,slow=38						
KVN	Kaiserville	73.03	53	eP	P	05 25 51.2	+0.8
	comp=Z,3.9nm,1.0s						
NV01	Mina Array Sit	73.27	54	eP	P	05 25 52.8	+1.0
NVAR	Mina Array Bea	73.27	54	P	P	05 25 52.9	+1.0
	comp=Z,1.9nm,0.8s,baz=293,slow=6.1,SNR=9.3						
AKASG	Malin Array Be	73.46	322	P	P	05 25 51.5	-0.9
	comp=Z,0.9nm,0.4s,baz=44,slow=6.4,SNR=8.1						
DUG	Dugway, Tooele	75.58	50	eP	P	05 26 05.8	+0.6
	comp=Z,3.2nm,0.8s						
PD31	Pinedale Array	75.85	46	eP	P	05 26 06.9	+0.1
PDAR	Pinedale Array	75.85	46	P	P	05 26 06.8	+0.1
	comp=Z,0.9nm,0.6s,baz=256,slow=2.6,SNR=14						
MTPU	Mount Pierson	77.31	51	eP	P	05 26 17.2	+1.9
	comp=Z,2.6nm,0.8s						
P18A	Preston Nutter	77.47	49	eP	P	05 26 16.9	+0.8
	comp=Z,1.9nm,0.8s						
BUR08	Bucovina Ar. S	77.48	322	eP	P	05 26 16.2	+0.5
U15A	North Rim	78.27	53	eP	P	05 26 21.9	+1.3
	comp=Z,5.4nm,1.4s						
X16A	Lo Mia Camp, P	80.09	54	eP	P	05 26 31.5	+1.1
	comp=Z,1.9nm,0.8s						
SDCO	Great Sand Dun	81.49	48	eP	P	05 26 38.7	+0.7
	comp=Z,4.3nm,1.4s						
ANMO	Albuquerque	82.82	51	eP	P	05 26 46.6	+1.7
	comp=Z,5.5nm,1.3s						
PPT	Papeete	84.65	117	LR	LR	05 58 19.3	
	comp=Z,42nm,19.8s,baz=342,slow=31						
TX31	Lajitas Ar. Si	88.39	53	eP	P	05 27 13.0	+0.5
TXAR	Lajitas Array	88.39	53	P	P	05 27 12.9	+0.4
	comp=Z,0.9nm,0.6s,baz=298,slow=3.4,SNR=17						
ATD	Arta Tunnel	90.27	285	LR	LR	06 11 48.8	
	comp=Z,63nm,20.2s,baz=254,slow=38						
VAE	Valguarnera	90.34	321	LR	LR	06 11 38.6	
	comp=Z,101nm,18.3s,baz=162,slow=38						
BLO	Bloomington	90.36	36	eP	P	05 27 22.1	+0.7
	comp=Z,18nm,0.6s						
KEST	Kesra	94.16	323	LR	LR	06 14 00.9	
	comp=Z,66nm,18.5s,baz=226,slow=38						
LPAZ	La Paz	145.07	59	PKPbc	PKPbc	05 33 57.8	-0.4
	comp=Z,1.0nm,0.6s,baz=322,slow=2.1,SNR=11						
SIV	San Ignacio	149.30	49	PKPbc	PKPbc	05 34 08.8	-0.6
	comp=Z,1.7nm,0.6s,baz=353,slow=0.4,SNR=11						

ISCJB ***13*** *05:15:23.7±0.7, 50°.34N±0°.04×18°.80E±0°.03, h0^{km}, Error ellipse: s-maj=6.3km s-min=2.7km az=9.9*
CSEM ***13*** *05:15:24.3±0.4, 50°.34N×18°.84E, h2^{km}, Error ellipse: s-maj=8.7km s-min=4.1km az=13.0*
WAR ***13*** *05:15:24.7, 50°.36N×18°.92E, h1^{km}, Mw2.5*
PRU ***13*** *05:15:25.0, 50°.34N×18°.86E, h0^{km}*
ISC 13 05:15:24.4±0.9**, 50°.37N**±0°.05×**18°.86E**±0°.02**, h0**^{km}**, n29, σ0^{s}.52**/50**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHZP	Chorzow	0.12	131	ePg	Pg	05 15 26.7	+0.1
CHZP				eSg	Sg	05 15 28.4	+0.3
CHZP	Chorzow	0.12	131	ePg	Pg	05 15 26.7	+0.1
CHZP				eSg	Sg	05 15 28.4	+0.3
OJC	Ojcow	0.62	103	ePg	Pg	05 15 35.8	-0.5
OJC				eSg	Sg	05 15 44.2	-0.2
OJC	Ojcow	0.62	103	ePg	Pg	05 15 35.8	-0.5
OJC				eSg	Sg	05 15 44.2	-0.2
OJC	Ojcow	0.62	103	ePg	Pg	05 15 35.8	-0.5
OJC				eSg	Sg	05 15 44.2	-0.2
MORC	Moravsky Berou	1.03	236	ePg	Pg	05 15 44.0	-0.2
MORC				eSg	Sg	05 15 58.2	+0.7
MORC	Moravsky Berou	1.03	236	ePG	Pg	05 15 44.0	-0.2
MORC				eSG	Sg	05 15 58.2	+0.7
LANS	Liptovska Anna	1.28	162	ePG	Pg	05 15 48.7	-0.2
LANS				eSG	Sb	05 16 06.3	-0.1
LANS	Liptovska Anna	1.28	162	ePg	Pg	05 15 48.7	-0.2
LANS				eSg	Sb	05 16 06.3	-0.1
NIE	Niedzica	1.33	135	ePg	Pn	05 15 50.5	+0.2
NIE				eSg	Sn	05 16 09.0	+0.3
NIE	Niedzica	1.33	135	ePg	Pn	05 15 50.5	+0.2
NIE				eSg	Sn	05 16 09.0	+0.3
NIE	Niedzica	1.33	135	ePg	Pn	05 15 50.5	+0.2
NIE				eSg	Sn	05 16 09.0	+0.3
KRLC	Kraliky	1.36	258	ePG	Pg	05 15 49.5	-1.0
KRLC				eSG	Sg	05 16 08.3	+0.1
KRLC	Kraliky	1.36	258	Pg	Pg	05 15 49.5	-1.0
KRLC				Sg	Sg	05 16 08.3	+0.1
KSP	Ksiaz	1.70	287	ePg	Pb	05 15 56.6	0.0
KSP				eSg	Sg	05 16 19.8	+0.8
KSP	Ksiaz	1.70	287	ePg	Pb	05 15 56.6	0.0
KSP				eSg	Sg	05 16 19.8	+0.8
KSP	Ksiaz	1.70	287	ePg	Pb	05 15 56.6	0.0
KSP				eSg	Sg	05 16 19.8	+0.8
VRAC	Vranov	1.81	235	ePn	Pn	05 15 57.5	+0.7
VRAC				eSg	Sb	05 16 21.5	0.0
VRAC	Vranov	1.81	235	ePN	Pn	05 15 57.5	+0.7
VRAC				eSG	Sb	05 16 21.5	0.0
UPC	Upice	1.82	276	eSG	Sg	05 16 23.4	+0.4
	comp=Z,3.5nm,0.3s						
UPC	Upice	1.82	276	Sg	Sg	05 16 23.4	+0.4
	3.5nm,0.3s						
VYHS	Vyhne	1.87	180	ePN	Pn	05 15 57.7	0.0
VYHS				eSN	Sn	05 16 20.6	-1.5
VYHS				eLG	Lg	05 16 23.8	
VYHS	Vyhne	1.87	180	ePg	Pn	05 15 57.7	0.0
VYHS				eSn	Sn	05 16 20.6	-1.5
KRUC	Moravsky	2.06	232	eSg	Sb	05 16 28.6	-0.3
KRUC	Moravsky	2.06	232	eSG	Sb	05 16 28.6	-0.3
CRVS	Cervenica-Dubn	2.24	130	ePN	Pb	05 16 06.1	+0.4
CRVS	Cervenica-Dubn	2.24	130	ePn	Pb	05 16 06.2	+0.5
KHC	Kasperske Hory	3.64	252	eSG	Sg	05 17 21.5	+0.3
KHC	Kasperske Hory	3.64	252	Sg	Sg	05 17 21.5	+0.3

MOS ***13*** *05:18:01.2±1.0, 0°.40N×123°.65E, h198^{km}, mb5.0/38, Error ellipse: s-maj=13.9km s-min=6.7km az=114.4*
BJI ***13*** *05:18:01.5, 0°.40N×123°.80E, h189^{km}, mb4.8/62, mB4.8/34*
ISCJB ***13*** *05:18:03.6±0.3, 0°.39N±0°.02×123°.89E±0°.03, h216^{km}±3^{km}, mb4.7/119, Error ellipse: s-maj=4.8km s-min=3.4km az=144.7*
NEIC ***13*** *05:18:03.6±0.4, 0°.40N×123°.80E, h201^{km}±4^{km}, mb4.9/47, Error ellipse: s-maj=6.0km s-min=3.7km az=65.0*
IDC ***13*** *05:18:03.7±1.3, 0°.36N×123°.68E, h204^{km}±11^{km}, mb4.5/32, mb1 4.5/35, mb1mx4.3/60, mbtmp5.0/35, Error ellipse: s-maj=11.6km s-min=7.0km az=71.0*
DJA ***13*** *05:18:04.5±0.2, 0°N±3°×12°4E±°, h199^{km}±3^{km}, M4.5/19, mB4.9/12, mb4.6/19, MLv5.0/18, Mw(mB)4.2/12*
KLM ***13*** *05:18:11.0, 0°.29N×123°.81E, h285^{km}, mb5.0*
ISC 13 05:18:04.6±0.6**, 0°.36N**±0°.04×**123°.86E**±0°.04**, h211**^{km}±5^{km}**, n269, σ1^{s}.29**/305**, mb4.8**/118**, 13C-1D, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	Cibinong	0.25	29	P	Pn	05 18 32.0	-0.4
LUWI	Luwuk	1.76	218	P	Pn	05 18 40.3	-1.4
LUWI	Luwuk	1.76	218	ePn	Pn	05 18 40.2	-1.5
LUWI				eSn	S	05 19 06.1	-4.2
MRSI	Marisa	1.92	274	P	Pn	05 18 42.2	-1.0
APSI	Ampana	2.54	240	P	Pn	05 18 49.0	-0.7
SANI	Sanana	3.20	138	P	Pn	05 18 54.6	-2.6
TNTI	Ternate	3.53	83	P	Pn	05 19 00.4	-0.7
TNTI				S	S	05 19 42.8	-2.2
TNTI	Ternate	3.53	83	ePn	Pn	05 19 00.2	-0.9
TNTI				eSn	S	05 19 43.0	-2.0
LBMI	Labuha	3.77	105	P	Pn	05 19 03.0	-1.0
MPSI	Mapaga	3.96	270	P	Pn	05 19 06.4	0.0
KDI	Kendari	4.46	196	P	Pn	05 19 12.3	-0.3
NLAI	Namlea	4.82	138	P	Pn	05 19 16.8	-0.3
TTSI	Tana Toraja	5.27	230	P	Pn	05 19 23.3	+0.6
	581nm,0.9s,4μm1.7nm						
AAI	Ambon	5.91	133	P	Pn	05 19 30.7	-0.2
SPSI	Sidrap Palu	5.93	224	P	Pn	05 19 31.1	-0.1
	68nm,0.9s,639nm0.2nm						
MSAI	Masohi	6.26	126	P	Pn	05 19 35.6	+0.2
SGKI	Sangatta, Kali	6.32	262	P	Pn	05 19 35.7	-0.5
	179nm,0.9s,2μm0.5nm						
SMKI	Samarinda	6.70	263	P	Pn	05 19 41.6	+0.5
BKSI	Bulukumba	6.76	213	P	Pn	05 19 42.4	+0.5
	22nm,0.8s,329nm0.1nm						
MYLDM	Lahad Datu	7.18	312	ePn	Pn	05 19 50.0	+2.6
SIJI	Sorong	7.50	99	P	Pn	05 19 53.4	+1.8
	4.4nm,0.3s,baz=295,slow=23,SNR=4.9						
BNDI	Bandanaira	7.74	129	P	Pn	05 19 53.7	-0.9
KBKI	Kotabaru	8.50	245	P	Pn	05 20 06.4	+1.9
FAKI	Fak Fak	8.99	111	P	Pn	05 20 09.1	-1.7
FAKI	Fak Fak	8.99	111	ePn	Pn	05 20 10.2	-0.6
MTKI	Muara Teweh, K	9.06	262	P	Pn	05 20 12.4	+0.8
EDFI	Ende, Flores	9.30	193	P	Pn	05 20 14.7	-0.2
KKM	Kota Kinabalu	9.50	307	P	P	05 20 32.0	+6.4
SOEI	Soe	10.05	178	P	Pn	05 20 25.2	+0.6
SOEI	Soe	10.05	178	ePn	Pn	05 20 24.4	-0.1
BATI	Baumata	10.49	181	P	Pn	05 20 31.7	+1.5
	11nm,0.3s,baz=165,slow=0.4,SNR=8.8						
BATI	Baumata	10.49	181	P	Pn	05 20 32.0	+1.8
PLAI	Plampang	10.95	213	P	Pn	05 20 37.2	+1.2
TWSI	Taliwang, Sumb	11.40	217	P	P	05 20 50.8	+3.9
SBUM	Sibu	11.82	280	P	P	05 20 53.0	+1.4
STKI	Sintang	12.39	269	P	P	05 21 01.0	+3.0
KSM	Kuching	13.60	275	P	P	05 21 12.0	+0.6
TGY	Tagaytay City	13.96	348	P	P	05 21 16.7	+1.2
	55nm,0.3s,baz=35,slow=2.5,SNR=4.5						
MTN	Manton Dam	14.97	151	P	Pn	05 21 25.2	-0.9
	baz=15,SNR=77						
MTN	Manton Dam	14.97	151	ePn	Pn	05 21 25.3	-0.8
	114nm,0.5s						
KDU	Kakadu	15.52	147	P	P	05 21 31.8	-0.9
	baz=16,SNR=55						
GENI	Genyem	16.56	100	P	Pn	05 21 56.0	+11
KNRA	Kununurra	16.65	163	P	P	05 21 45.5	+0.5
	baz=17,SNR=67						
JAY	Jayapura	17.08	100	P	Pn	05 21 51.1	-0.4
	1.4nm,0.3s,baz=228,slow=11,SNR=5.2						
FITZ	Fitzroy Crossi	18.42	175	P	P	05 22 04.1	-0.3
	4.3nm,0.3s,baz=15,slow=8.6,SNR=122						
FITZ				S	S	05 25 20.5	-3.2
	baz=161,slow=15,SNR=3.6						
MDSI	Maura Dua	20.24	256	P	P	05 22 26.4	+2.4
MNAI	Manna	21.41	257	eP	P	05 22 36.6	+0.3
	277nm,1.4s						
WRAB	Tennant Creek	22.63	154	eP	P	05 22 47.3	-0.5
	121nm,1.0s						
WRAB	Tennant Creek	22.63	154	ceP	P	05 22 47.4	-0.5
WRAB				pmax	pmax		
	comp=Z,100nm,1.0s						
WRA	Warramunga Arr	22.64	154	P	P	05 22 47.3	-0.6
	comp=Z,74nm,0.4s,baz=336,slow=10,SNR=535						
WRA				S	S	05 26 36.4	-3.4
	comp=Z,4.8nm,0.8s,baz=335,slow=16,SNR=6.3						
WRA				ScP	ScP	05 29 51.0	-0.3
	comp=Z,1.1nm,0.6s,baz=327,slow=2.7,SNR=5.2						
TPUB	Ta-pu	23.02	352	eP	P	05 22 51.8	+0.4
	comp=Z,133nm,0.8s						
YULB	Yu-li	23.04	354	eP	P	05 22 50.6	-0.8
	comp=Z,27nm,0.7s						
SSLB	Suanglung	23.46	353	eP	P	05 22 54.7	-0.6
	comp=Z,31nm,0.5s						
KULM	Kulim	23.69	282	eP	P	05 22 57.9	+0.4
	comp=Z,19nm,1.1s						
NACB	Ninganchiao	23.78	355	eP	P	05 22 59.0	+0.9
	comp=Z,20nm,0.8s						
COEN	Coen	23.83	127	P	P	05 22 58.4	-0.4
	baz=24,SNR=17						
COEN	Coen	23.83	127	eP	P	05 22 58.5	-0.3
	comp=Z,14nm,0.6s						
YOJ	Yonaguni jima	23.98	358	eP	P	05 23 01.0	+1.0
	comp=Z,62nm,0.9s						
YHNB	Yeheng	24.29	354	eP	P	05 23 03.5	+0.6
	comp=Z,46nm,1.1s						
QZH	Quanzhou	24.97	349	⇑iP	P	05 23 10.6	+1.7
PSI	Prapat	25.04	276	eP	P	05 23 10.5	+0.6
	comp=Z,11nm,0.7s						
PMG	Port Moresby	25.14	113	P	P	05 23 11.5	+0.8
	comp=Z,28nm,0.8s,baz=321,slow=6.5,SNR=7.6						
WRKA	Warakurna	25.61	171	P	P	05 23 14.8	0.0
	baz=26,SNR=75						
SKNT	Sakolnakorn	25.61	311	P	P	05 23 15.7	+0.8
	comp=Z,9.4nm,0.9s,comp=Z,1μm						
AS31	Alice Springs	25.79	158	eP	P	05 23 16.8	+0.3
	comp=Z,7.2nm,0.6s						
ASAR	Alice Springs	25.80	158	P	P	05 23 16.8	+0.3
	comp=Z,14nm,0.7s,baz=340,slow=7.8,SNR=114						
ASAR				PcP	PcP	05 26 40.7	+0.3
	comp=Z,2.3nm,0.4s,baz=346,slow=2.3,SNR=5.9						
ASAR				ScP	ScP	05 30 00.0	0.0
	comp=Z,4.8nm,0.8s,baz=342,slow=2.5,SNR=19						
AS01	Alice Springs	25.81	158	eP	P	05 23 16.8	+0.1
QIS	Mount Isa	25.87	144	P	P	05 23 17.5	+0.3
	baz=26,SNR=46						
PHET	Kaeng Krachan	27.07	298	P	P	05 23 29.6	+1.7
	comp=Z,9.6nm,0.8s						
MTSU	Mount Surprise	27.25	133	P	P	05 23 30.9	+1.4
	baz=27,SNR=4.0						
SRDT	SRDT	28.15	301	P	P	05 23 39.2	+1.7
	comp=Z,30nm,0.8s						
UTHA	Uthaitani	28.45	303	P	P	05 23 41.1	+0.9
	comp=Z,13nm,0.7s,comp=Z,111nm						
PHIT	Phitsanulok	28.51	307	P	P	05 23 42.0	+1.4
	comp=Z,33nm,0.8s						
UTTA	Uttaradit	28.71	308	P	P	05 23 43.5	+1.1
	comp=Z,10nm,0.8s						
UMPA	Umpang Tak	29.26	304	P	P	05 23 48.6	+1.3
	comp=Z,7.0nm,0.8s						
CTA	Charters Tower	29.90	134	P	P	05 23 54.0	+1.0
	comp=Z,7.0nm,0.9s,baz=305,slow=11,SNR=6.9						
CTA	Charters Tower	29.90	134	P	P	05 23 54.0	+1.0
CTA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CTAO	Charters Tower	29.90	134	eP	P	05 23 53.6	+0.7
	comp=Z,10nm,1.0s						
CM01	Chiang Mai Arr	30.34	308	eP	P	05 23 57.5	+0.6
CM01				ePcP	PcP	05 26 52.5	+0.8
CM31	Chiang Mai Arr	30.37	308	eP	P	05 23 58.7	+1.6
CMAR	Chiang Mai Arr	30.37	308	P	P	05 23 57.5	+0.4
	comp=Z,7.3nm,0.8s,baz=136,slow=7.7,SNR=30						
CMAR				PcP	PcP	05 26 51.9	+0.1
	comp=Z,3.8nm,0.9s,baz=170,slow=1.9,SNR=10						
CMAR				ScP	ScP	05 30 15.4	+1.1
	comp=Z,0.9nm,0.6s,baz=166,slow=3.1,SNR=5.7						
CMMT	Chiang Mai	30.57	308	P	P	05 23 59.4	+0.6
	comp=Z,40nm,0.9s,comp=Z,449nm						
CHTO	Chiang Mai	30.57	308	eP	P	05 23 59.1	+0.3
	comp=Z,26nm,0.8s						
CHTO	Chiang Mai	30.57	308	P	P	05 23 59.5	+0.6
	comp=Z,180nm,0.9s						
GYA	Guiyang	30.79	329	⇑iP	P	05 24 01.8	+1.0
GYA				pP	pP	05 24 41.3	-2.4
GYA				sP	sP	05 25 03.3	-4.8
GYA				PP	PnPn	05 25 12.8	+1.7
GYA				PcP	PcP	05 26 54.1	+1.2
GYA				S	S	05 28 50.8	+2.2
GYA				sS	sS	05 30 02.0	-3.0
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,5.3s						
CMAI	Chiengmai2	31.13	310	P	P	05 24 04.7	+0.8
	comp=Z,4.9nm,0.9s,comp=Z,106nm						
FORT	Forrest	31.22	173	P	P	05 24 04.4	0.0
	baz=31,SNR=26						
FORT	Forrest	31.22	173	eP	P	05 24 04.3	0.0
	comp=Z,57nm,0.7s						
WHN	Wuhan	31.35	344	⇑P	P	05 24 08.1	+2.6
WHN				pmax	pmax		
	comp=Z,62nm,0.9s						
BLDU	Ballidu	31.54	192	P	P	05 24 06.6	-0.6
	baz=32,SNR=6.4						
KMBL	Kambalda	31.61	183	P	P	05 24 07.3	-0.4
	baz=32,SNR=5.2						
NJ2	Nanjing	31.88	352	eP	P	05 24 12.3	+2.2
NJ2				pmax	pmax		
	comp=Z,46nm,1.0s						
CBIJ	Chichi jima	31.89	32	eP	P	05 24 09.8	-0.5
	comp=Z,84nm,0.4s						
JCJ	Chichijima	31.89	32	P	P	05 24 09.9	-0.4
	comp=Z,85nm,0.3s,baz=187,slow=1.6,SNR=28						
KMI	Kunming	31.99	322	P	P	05 24 14.3	+2.8
KMI				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KLBR	Kellerberrin	32.30	190	P	P	05 24 13.3	-0.4
	baz=32,SNR=8.0						
QLP	Quilpie	33.20	145	P	P	05 24 22.5	+0.7
	baz=33,SNR=11						
BBOO	Buckleboo	34.94	162	P	P	05 24 36.6	+0.1
	baz=35,SNR=19						
BBOO	Buckleboo	34.94	162	eP	P	05 24 36.6	+0.1
	comp=Z,56nm,1.0s						
CD2	Chengdu	35.88	330	eP	P	05 24 44.8	+0.1
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
STKA	Stephens Creek	36.19	154	P	P	05 24 47.7	+0.5
	baz=36,SNR=18						
STKA	Stephens Creek	36.19	154	P	P	05 24 47.7	+0.5
	comp=Z,12nm,0.5s,baz=335,slow=8.4,SNR=24						
STKA				ScP	ScP	05 30 35.0	+0.6
	comp=Z,5.5nm,1.0s,baz=358,slow=8.6,SNR=3.1						
STKA	Stephens Creek	36.19	154	eP	P	05 24 47.7	+0.5
	comp=Z,3.7nm,0.8s						
STKA				ScP	ScP	05 30 35.0	+0.6
TIA	Tai’an	36.22	351	P	P	05 24 48.3	+0.9
TIA				pmax	pmax		
	comp=Z,23nm,0.9s						
XAN	Xi’an	36.32	339	P	P	05 24 47.9	-0.4
XAN				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HTT	Hallett	36.47	159	P	P	05 24 50.4	+0.7
	baz=37,SNR=23						
EIDS	Eidsvold	36.69	136	eP	P	05 24 52.1	+0.5
	comp=Z,8.4nm,0.9s						
KS15	Wonju Array Si	37.09	5	eP	P	05 24 55.5	+0.8
KSAR	Wonju Array Be	37.09	5	P	P	05 24 55.1	+0.4
KSAR				PcP	PcP	05 27 11.0	+0.5
KSAR				ScP	ScP	05 30 38.0	+0.4
KSRS	Korea Array	37.11	5	P	P	05 24 55.1	+0.3
	comp=Z,14nm,0.9s,baz=181,slow=9.4,SNR=20						
KSRS				PcP	PcP	05 27 11.0	+0.4
	comp=Z,2.3nm,0.6s,baz=188,slow=3.9,SNR=5.4						
KSRS				ScP	ScP	05 30 38.0	+0.4
	comp=Z,1.4nm,0.6s,baz=194,slow=4.7,SNR=4.8						
KS01	Wonju Array Si	37.12	5	eP	P	05 24 54.3	-0.7
CMSA	Cobar Meteorol	37.87	149	P	P	05 25 02.5	+1.2
	baz=38,SNR=40						
MAJO	Matsushiro	38.39	19	eP	P	05 25 05.0	-0.7
	comp=Z,16nm,0.9s						
MAT	Matsushiro	38.39	19	P	P	05 25 04.6	-1.0
MJAR	Matsushiro Arr	38.39	19	P	P	05 25 04.8	-0.8
	comp=Z,12nm,0.8s,baz=198,slow=9.7,SNR=26						
MJB9	Matsu-Tunnel	38.39	19	eP	P	05 25 05.2	-0.4
	comp=Z,17nm,0.9s						
SHL	Shillong	39.76	312	eP	P	05 25 17.8	+0.4
	comp=Z,30nm,0.7s						
BJI	Beijing	40.12	351	⇓eP	P	05 25 20.8	+1.0
BJI				pmax	pmax		
	comp=Z,31nm,0.6s						
LZH	Lanzhou	40.12	335	eP	P	05 25 22.3	+2.1
LZH				pP	pP	05 26 04.8	+0.1
LZH				sP	sP	05 26 21.8	-6.8
LZH				ePP	PnPn	05 27 01.9	-1.1
LZH				pmax	pmax		
	comp=Z,27nm,0.9s						
LZH				pmax	pmax		
	comp=Z,200nm,6.0s						
LZH				LR	LR		
	comp=Z,350nm,14.3s						
LZH				LR	LR		

	comp=Z,370nm,15.2s						
LZH				LR	LR		
	comp=Z,540nm,15.9s						
ARMA	Armidale	40.43	142	P	P	05 25 24.5	+1.8
	baz=41,SNR=14						
ARMA	Armidale	40.43	142	*e*P	P	05 25 24.4	+1.7
	comp=Z,18nm,0.8s						
ARPS	Mount Arapiles	40.53	158	P	P	05 25 24.0	+0.7
	baz=41,SNR=9.9						
YNG	Young	41.44	149	P	P	05 25 32.5	+1.7
	baz=42,SNR=11						
HHC	Hu-ho-hao-te	41.82	346	*e*P	P	05 25 34.0	+0.1
HHC				pmax	pmax		
	comp=Z,30nm,1.1s						
HHC				pmax	pmax		
	comp=Z,46nm,5.0s						
MGCD	Mangrove Creek	42.10	145	P	P	05 25 37.8	+1.7
	baz=42,SNR=14						
CAN	Canberra	42.55	149	*e*P	P	05 25 41.6	+1.9
	comp=Z,37nm,0.7s						
LSA	Lhasa	42.69	316	P	P	05 25 42.6	+1.1
LSA				pmax	pmax		
	comp=Z,15nm,0.7s						
TOO	Toolangi	42.70	154	P	P	05 25 42.8	+1.8
	baz=43,SNR=6.4						
CNB	Canberra Magne	42.73	149	P	P	05 25 42.9	+1.7
	baz=43,SNR=12						
CN2	Changchun	43.28	2	*e*P	P	05 25 47.4	+2.0
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PALK	Pallekele	43.58	280	*i* P	P	05 25 44.5	-3.9
USRK	Ussuriysk Ar.	44.25	8	P	P	05 25 53.3	+0.2
	comp=Z,18nm,0.4s,baz=192,slow=6.5						
RAMN	Ramite	44.51	310	*e*P	P	05 25 55.6	-0.2
	comp=Z,126nm,0.7s						
GTA	Gaotai	44.66	333	⇑P	P	05 25 56.8	+0.2
GTA				pP	pP	05 26 40.9	-1.1
GTA				sP	sP	05 27 03.5	-2.2
GTA				PcP	PcP	05 27 35.8	+0.4
GTA				ScP	ScP	05 31 08.1	+0.5
GTA				PcS	PcS	05 31 31.8	+2.5
GTA				S	S	05 32 16.8	0.0
GTA				pmax	pmax		
	comp=Z,25nm,1.2s						
GTA				pmax	pmax		
	comp=Z,71nm,4.8s						
JIRN	Jiri	45.18	310	*e*P	P	05 26 01.2	0.0
	comp=Z,136nm,0.7s						
GUN	Gumba	45.54	310	*e*P	P	05 26 03.9	-0.1
	comp=Z,133nm,0.6s						
DMN	Daman	45.98	309	*e*P	P	05 26 06.9	-0.5
	comp=Z,72nm,0.9s						
GKN	Gorkha	46.54	310	*e*P	P	05 26 10.9	-0.7
	comp=Z,74nm,0.6s						
ASAJ	Asahikawa	46.66	19	P	P	05 26 12.8	+0.8
	comp=Z,21nm,0.7s,baz=198,slow=8.7,SNR=8.0						
KOLN	Koldanda	47.23	309	*e*P	P	05 26 16.6	-0.4
	comp=Z,121nm,0.6s						
DANN	Dangsing	47.38	310	*e*P	P	05 26 18.3	0.0
	comp=Z,196nm,0.6s						
PYUN	Piuthan	47.86	309	*e*P	P	05 26 21.6	-0.3
	comp=Z,214nm,0.5s						
KLR	Kul’dur	49.16	7	P	P	05 26 30.7	-0.4
	comp=Z,1.0nm,0.5s,baz=210,slow=4.7,SNR=37						
KLR	Kul’dur	49.16	7	*c i*P	P	05 26 30.6	-0.5
ULN	Ulaanbaatar	49.52	345	*e*P	P	05 26 33.6	-0.5
	comp=Z,26nm,0.8s						
ULN	Ulaanbaatar	49.52	345	*c i*P	P	05 26 33.4	-0.7
ULN				pmax	pmax		
	comp=Z,25nm,0.9s						
SONM	Songino Array	49.67	345	P	P	05 26 34.5	-0.6
	comp=Z,30nm,0.8s,baz=159,slow=8.2,SNR=81						
SONM				PcP	PcP	05 27 52.8	-0.4
	comp=Z,3.3nm,0.6s,baz=164,slow=5.0,SNR=5.2						
SONA1	Songino Array	49.68	345	*e*P	P	05 26 34.6	-0.6
ZEA	Zeya	53.28	3	*e*P	P	05 27 00.5	-1.1
ZEA				pmax	pmax		
	comp=Z,23nm,1.0s						
TLY	Talaya	53.91	345	*e*P	P	05 27 06.0	-0.2
TLY				pmax	pmax		
	comp=Z,22nm,0.8s						
WMQ	Urumqi	53.94	328	P	P	05 27 06.5	-0.2
WMQ				pP	pP	05 27 49.8	-4.0
WMQ				sP	PcP	05 28 10.8	+1.6
WMQ				pmax	pmax		
	comp=Z,59nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,220nm,3.8s						
WMQ				LR	LR		
	comp=Z,200nm,39.2s						
WMQ				LR	LR		
	comp=Z,120nm,26.9s						
WMQ				LR	LR		
	comp=Z,73nm,17.1s						
KNGR	Kungurtug, Tuv	54.85	340	*i* P	P	05 27 13.0	-0.1
HVS	Khovu-Aksy	56.67	338	*i* P	P	05 27 24.6	-1.4
HVS				pmax	pmax		
	comp=Z,37nm,0.9s						
DGZ	Jazzator, Alta	58.19	333	*i* P	P	05 27 36.1	-0.7
DGZ				pmax	pmax		
	comp=Z,16nm,0.9s						
PRZ	Przheval’sk	58.47	322	*e*P	P	05 27 39.8	+1.0
	comp=Z,61nm,0.8s						
KSH	Kashi	58.49	318	P	P	05 27 39.3	+0.3
KSH				pP	pP	05 28 23.4	-3.4
KSH				*e*PcP	PcP	05 28 26.9	-0.3
KSH				PP	PP	05 29 53.3	+2.3
KSH				S	S	05 35 21.5	-4.4
KSH				SS	SS	05 39 20.8	-1.3
KSH				pmax	pmax		
	comp=Z,24nm,0.8s						
KSH				pmax	pmax		
	comp=Z,130nm,4.2s						
MK01	Makanchi Array	58.75	328	*e*P	P	05 27 39.6	-0.9
MK31	Makanchi Array	58.77	328	*e*P	P	05 27 39.9	-0.8
MKAR	Makanchi Array	58.77	328	P	P	05 27 39.9	-0.8
	comp=Z,25nm,0.4s,baz=119,slow=8.6,SNR=121						
MKAR				PcP	PcP	05 28 27.2	-0.7
	comp=Z,5.4nm,0.6s,baz=166,slow=3.3,SNR=5.5						
MKAR				ScP	ScP	05 32 07.3	-1.0
	comp=Z,1.1nm,0.7s,baz=132,slow=3.4,SNR=4.3						
MKAR	Makanchi Array	58.77	328	*e*P	P	05 27 39.9	-0.8
	comp=Z,259nm,0.8s						
MKAR				PcP	PcP	05 28 27.2	-0.7
MKAR				ScP	ScP	05 32 07.3	-1.0
MAKZ	Makanchi	58.95	328	*e*P	P	05 27 40.9	-0.9
	comp=Z,30nm,0.6s						
PETK	Petropavlovsk-	59.62	23	P	P	05 27 47.5	+1.1
	comp=Z,14nm,0.8s,baz=193,slow=5.8						
ULHL	Ulahol	59.70	321	P	P	05 27 49.0	+1.7
	SNR=7.7						
KZA	Kyzart	60.24	320	P	P	05 27 51.4	+0.1
	SNR=24						
TKM2	Tokmak 2	60.45	321	P	P	05 27 52.0	-0.5
	SNR=25						
LBZ	Lake Benmore	60.60	143	*e*P	P	05 27 54.6	+1.4
	comp=Z,43nm,1.4s						
KBK	Karagaybulak	60.73	320	P	P	05 27 57.0	+2.7
	SNR=9.8						
AAK	Ala-Archa	61.01	320	P	P	05 27 57.9	+1.7
	SNR=6.3						
AAK	Ala-Archa	61.01	320	*e*P	P	05 27 56.0	-0.1
	comp=Z,16nm,0.8s						
FRU	Bishkek	61.03	320	*e*P	P	05 27 58.0	+1.9
AML	Almayashu	61.28	319	P	P	05 28 00.1	+1.8
	SNR=7.9						
USP	Ospenovka	61.32	321	P	P	05 27 57.5	-0.6
	SNR=14						
KBL	Kabul	61.37	310	*e*P	P	05 27 57.6	-1.2
EKS2	Erkin-Say	61.48	320	P	P	05 27 59.1	-0.1
	SNR=16						
YAK	Yakutsk	61.68	3	P	P	05 27 59.9	-0.1
	comp=Z,41nm,0.3s,baz=90,slow=0.2,SNR=18						
YAK	Yakutsk	61.68	3	*e*P	P	05 27 59.2	-0.8
YAK				pmax	pmax		
	comp=Z,105nm,0.9s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.0s						
YAK				pmax	pmax		
	comp=N,16nm,1.1s						
BKZ	Black Stump Fm	62.10	136	*e*P	P	05 28 04.2	+0.8
	comp=N,12nm,0.9s						
URZ	Urewera	62.15	134	*e*P	P	05 28 04.1	+0.5
	comp=N,9.1nm,1.0s						
ZAA0	Zalesovo Array	62.35	335	*e*P	P	05 28 02.8	-1.8
	comp=N,17nm,1.0s						
ZALV	Zalesovo Beam	62.35	335	P	P	05 28 02.8	-1.9
	comp=N,5.9nm,0.4s,baz=122,slow=5.7,SNR=20						
ZALV	Zalesovo Beam	62.35	335	*e*P	P	05 28 02.6	-2.0
MA2	Magadan	62.67	15	P	P	05 28 07.8	+1.2
	comp=N,39nm,0.6s,baz=188,slow=6.1,SNR=16						
MA2	Magadan	62.67	15	*e*P	P	05 28 07.6	+1.0
	comp=N,41nm,0.8s						
KURBB	Kurchatov Arra	63.09	329	P	P	05 28 08.4	-1.2
	comp=N,34nm,0.7s,baz=131,slow=6.0,SNR=88						
KURK	Kurchatov	63.10	330	*e*P	P	05 28 08.6	-1.0
	comp=N,99nm,0.9s						
KURK	Kurchatov	63.10	330	*c i*P	P	05 28 08.5	-1.2
KURK				pmax	pmax		
	comp=Z,81nm,0.9s						
NVS	Novosibirsk	63.64	335	*e*P	P	05 28 11.3	-1.8
NVS				pmax	pmax		
	comp=Z,14nm,0.7s						
NVS				pmax	pmax		
	comp=N,7.0nm,0.9s						
NVS				pmax	pmax		
	comp=E,6.0nm,0.6s						
KK31	Karatay Array	63.81	319	*e*P	P	05 28 13.3	-1.2
KKAR	Karatay Array	63.81	319	*e*P	P	05 28 13.3	-1.2
SEY	Seymchan	65.96	14	P	P	05 28 29.1	+1.2
	comp=E,7.6nm,0.6s,baz=214,slow=6.1,SNR=22						
SEY	Seymchan	65.96	14	*c e*P	P	05 28 28.9	+1.0
WSAR	Wadi Sarin	67.18	295	P	P	05 28 33.9	-2.6
	comp=E,3.7nm,0.6s,baz=161,slow=6.2,SNR=5.0						
BVAR	Borovoye Array	68.63	329	P	P	05 28 43.5	-1.4
	comp=E,28nm,0.9s,baz=126,slow=7.3,SNR=58						
BRVK	Borovoye	68.70	329	*e*P	P	05 28 44.2	-1.1
	comp=E,40nm,0.9s						
BRVK	Borovoye	68.70	329	*c e*P	P	05 28 44.0	-1.3
BRVK				pmax	pmax		
	comp=Z,44nm,1.0s						
UOSS	Minazif	69.66	296	*e*P	P	05 28 50.5	-1.2
	comp=Z,33nm,1.4s						
TIXI	Tiksi	71.25	2	*e*P	P	05 28 59.5	-1.0
	comp=Z,38nm,0.9s						
TIXI	Tiksi	71.25	2	*c e*P	P	05 28 59.4	-1.0
TIXI				pmax	pmax		
	comp=Z,50nm,1.1s						
ABKAR	Akbulak array	72.98	322	*e*P	P	05 29 09.7	-1.4
AKTO	Aktyubinsk	74.55	323	P	P	05 29 19.1	-1.1
	comp=Z,20nm,0.7s,baz=108,slow=7.4,SNR=42						
SVE	Sverdlovsk	75.36	330	*e*P	P	05 29 23.8	-0.9
SVE				pmax	pmax		
	comp=Z,62nm,0.8s						
ARU	Arti	76.28	329	*e*P	P	05 29 28.1	-1.8
ARU				*e*PcP	P	05 29 28.5	-1.4
ARU	Arti	76.28	329	*c i*P	P	05 29 28.1	-1.8
ARU				S	S	05 38 56.3	-0.4
ARU				pmax	pmax		
	comp=Z,40nm,1.0s						
OPO	Ambohidratompo	77.48	251	P	P	05 29 37.3	-0.4
	comp=Z,18nm,0.8s,baz=94,slow=5.0,SNR=16						
MAW	Mawson	79.62	200	*e*P	P	05 29 48.8	+0.7
	comp=Z,1.2nm,1.4s						
VNDA	Vanda	80.48	172	P	P	05 29 52.9	+0.3
	comp=Z,0.5nm,0.5s,baz=328,slow=6.6,SNR=5.8						
VNDA	Vanda	80.48	172	*e*P	P	05 29 53.1	+0.6
	comp=Z,3.0nm,1.4s						
TBLG	Delisi	81.64	312	*e*P	P	05 29 59.0	-0.5
	comp=Z,9.7nm,0.7s						
ZEI	Tsey	82.39	313	*e*P	P	05 30 02.0	-1.5
ZEI				pmax	pmax		
	comp=Z,20nm,1.1s						
AKH	Akhalkalaki	82.54	312	*e*P	P	05 30 04.5	+0.3
	comp=Z,14nm,0.9s						
KBZ	Khabaz	83.22	314	P	P	05 30 06.6	-0.8
	comp=Z,4.0nm,0.8s,baz=138,slow=2.1,SNR=7.3						
NEY	Neytrino	83.30	313	*i* P	P	05 30 08.4	+0.3
NEY				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KIV	Kislovodsk	83.39	314	*e*P	P	05 30 05.8	-2.7
KIV				pmax	pmax		
	comp=Z,4.0nm,0.9s						
PRGR	Permogore	84.10	332	*e*P	P	05 30 09.7	-1.8
PRGR				pmax	pmax		
	comp=Z,37nm,0.9s						
OHAK	Old Harbor	85.82	33	*e*pP	pP	05 31 08.0	-3.7
KDAK	Kodiak Island	86.25	32	*i* P	P	05 30 23.7	+1.4
VORD	Divnogorie	86.29	321	*e*P	P	05 30 21.1	-1.5
VORD				pmax	pmax		
	comp=Z,10.0nm,0.5s						
VSR	Storozhevoye	86.39	321	*e*P	P	05 30 21.4	-1.7
VSR				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KLMR	Klimovskoe	86.93	331	*e*P	P	05 30 23.1	-2.4
KLMR				pmax	pmax		
	comp=Z,29nm,0.7s						
KLMR	Klimovskoe	86.93	331	*e*P	P	05 30 23.2	-2.3
KLMR				AMP		05 30 27.5	
	comp=Z,29nm,0.7s						
ANN	Anapa	87.21	315	*e*P	P	05 30 26.4	-0.8
ANN				pmax	pmax		
	comp=Z,64nm,1.2s						
ASF	Jabal al Asfar	87.24	302	P	P	05 30 27.6	-0.2
	comp=Z,7.6nm,0.9s,baz=18,slow=1.4,SNR=12						
MLY	Manley	87.73	25	*e*P	P	05 30 29.6	+0.3
	comp=Z,5.5nm,1.1s						
COLD	Coldfoot	88.09	23	*e*P	P	05 30 32.2	+1.2
	comp=Z,9.8nm,1.2s						
OBN	Obninsk	88.16	325	*e*P	P	05 30 28.5	-2.9
OBN				pmax	pmax		
	comp=Z,11nm,1.0s						
ILAR	Eielson Array	89.36	25	P	P	05 30 35.4	-1.6
	comp=Z,0.6nm,0.6s,baz=247,slow=5.1,SNR=9.4						
BR131	Keskin Array S	89.95	310	*e*P	P	05 30 39.0	-1.5
BRTR	Keskin Array B	89.95	310	P	P	05 30 38.9	-1.6
	comp=Z,2.5nm,0.8s,baz=95,slow=6.2,SNR=8.0						
ARCES	ARCESS Array B	92.60	340	P	P	05 30 50.0	-1.9
	comp=Z,5.7nm,0.7s,baz=86,slow=6.0,SNR=39						
ARCES	ARCESS Array B	92.60	340	*e*P	P	05 30 50.0	-1.9
ARCES				*e*PcP	P	05 30 50.2	-1.7
ARCES	ARCESS Array B	92.60	340	P	P	05 30 50.0	-1.9
ARCES				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ARE0	ARCESS Array S	92.60	340	*e*P	P	05 30 50.2	-1.6
	comp=Z,12nm,1.1s						
DAWY	Dawson	92.64	26	*e*P	P	05 30 53.0	+0.8
	comp=Z,5.4nm,1.0s						
AKASG	Malin Array Be	92.67	321	P	P	05 30 50.5	-2.1
	comp=Z,0.4nm,0.3s,baz=70,slow=4.8,SNR=6.0						
AKASG	Malin Array Be	92.67	321	P	P	05 30 50.5	-2.1
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
SPA0	Spitsbergen Ar	93.21	349	*e*P	P	05 30 53.5	-1.0
SPITS	Spitsbergen Ar	93.21	349	P	P	05 30 53.3	-1.2
	comp=Z,12nm,0.5s,baz=71,slow=6.3,SNR=32						
SPITS	Spitsbergen Ar	93.21	349	P	P	05 30 53.3	-1.2
SPITS				pmax	pmax		
	comp=Z,13nm,0.5s						
FIA1	FINESS Array S	93.42	332	*e*P	P	05 30 55.0	-0.8
	comp=Z,8.2nm,0.9s						
FINES	FINESS Array B	93.42	332	P	P	05 30 53.7	-2.0
	comp=Z,5.3nm,1.0s,baz=72,slow=4.5,SNR=15						
INK	Inuvik	94.33	21	P	P	05 30 59.5	-0.3
	comp=Z,1.8nm,0.6s,baz=299,slow=3.2,SNR=8.0						
INK	Inuvik	94.33	21	*e*P	P	05 30 59.8	0.0
	comp=Z,6.0nm,1.3s						
LSZ	Lusaka	95.57	255	*e*P	P	05 31 06.1	-0.7
	comp=Z,9.1nm,0.9s						
BUR04	Bucovina Ar. S	95.58	318	*e*P	P	05 31 04.7	-1.4
BUR04				*e*PcP	P	05 31 05.0	-1.1
BUR08	Bucovina Ar. S	95.58	318	*e*P	P	05 31 05.3	-0.9
BUR08				*e*PcP	P	05 31 05.5	-0.6
NVL	N’lazarevskaya	97.47	198	*e*P	P	05 31 04.6	-9.4
NVL				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HFS	Hagfors	99.63	332	P	Pdif	05 31 21.6	-2.3
	comp=Z,2.5nm,0.5s,baz=94,slow=5.8,SNR=17						
NB2	NORSAR Subarra	100.49	333	P	Pdif	05 31 24.9	-2.8
	comp=Z,1.2nm,0.6s,baz=72,slow=4.4						
PDAR	Pinedale Array	115.77	41	PKP	PKPdf	05 36 22.4	-0.2
	comp=Z,0.2nm,0.4s,baz=56,slow=2.7,SNR=4.2						
PDAR				PKKPbc	PKKPab	05 46 59.3	-2.0
	comp=Z,0.3nm,0.7s,baz=121,slow=5.7,SNR=4.0						
U15A	North Rim	116.46	48	*e*PKPdf	PKPdf	05 36 26.0	+1.8
ANMO	Albuquerque	121.40	48	*e*PKPdf	PKPdf	05 36 35.0	+1.4
ANMO	Albuquerque	121.40	48	*c i*PKIKP	PKPdf	05 36 35.3	+1.7
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.3s						
ECSD	EROS Data Cent	123.17	34	*e*PKPdf	PKPdf	05 36 36.6	+0.1
F36A	Milaca	123.42	31	*e*PKPdf	PKPdf	05 36 36.9	0.0
MNTX	Cornudas Mount	123.59	51	*e*PKPdf	PKPdf	05 36 39.0	+1.3
I37A	Lemond, Waseca	124.75	32	*e*PKPdf	PKPdf	05 36 39.9	+0.4
G40A	Rib Lake	125.50	29	*e*PKPdf	PKPdf	05 36 41.0	+0.1
F41A	Three Lakes	125.67	28	*e*PKPdf	PKPdf	05 36 41.2	-0.1
TXAR	Lajitas Array	125.92	53	PKP	PKPdf	05 36 43.2	+0.9
	comp=Z,0.5nm,0.8s,baz=186,slow=0.8,SNR=7.7						
KOWA	Kowa	126.38	288	*e*PKPdf	PKPdf	05 36 43.4	0.0
DBIC	Dimbokro	128.36	279	PKP	PKPdf	05 36 47.5	+0.3
	comp=Z,1.4nm,0.6s,baz=126,slow=4.6,SNR=3.9						
S39A	Bolivar	128.92	38	*e*PKPdf	PKPdf	05 36 47.7	+0.1
R40A	Maddies Statio	129.18	37	*e*PKPdf	PKPdf	05 36 48.2	+0.1
V40A	Witts Springs	130.41	40	*e*PKPdf	PKPdf	05 36 51.2	+0.7
M54A	Oil Creek Stat	133.20	24	*e*PKPdf	PKPdf	05 36 56.0	+0.4
ROC1	El Roble	144.66	158	*e*PKPbc	PKPdf	05 37 17.5	+0.4
GO03	Copiap	149.73	155	*e*PKPdf	PKPdf	05 37 27.1	+1.7
GO02	Mina Guanaco	152.12	153	*e*PKPbc	PKPbc	05 37 36.9	+0.6
CPUP	Villa Florida	154.15	178	*e*PKPbc	PKPbc	05 37 41.0	+0.7

ISCJB ***13*** *05:31:30.4±0.2, 6°.83N±0°.03×73°.11W±0°.03, h160^{km}±2^{km}, mb4.2/87, Error ellipse: s-maj=5.3km s-min=4.3km az=32.7*

IDC ***13*** *05:31:30.9±0.7, 6°.76N×72°.97W, h161^{km}±9^{km}, mb3.5/8, mb1 3.9/11, mb1mx3.5/48, mbtmp4.1/11, Error ellipse: s-maj=24.9km s-min=7.5km az=132.0*

NEIC ***13*** *05:31:31.7±0.4, 6°.72N×73°.11W, h160^{km}±4^{km}, mb4.2/82, Error ellipse: s-maj=9.0km s-min=6.5km az=103.0*

RSNC ***13*** *05:31:32.6±1.0, 6°.82N×73°.14W, h148^{km}±5^{km}, ML3.9, Mw4.0*

ISC 13 05:31:31.4±0.6, **6°.83N**±0°.03×**73°.11W**±0°.04, **h155**^{km}±5^{km}, **n357, σ0^{s}.89**/377, **mb4.2**/89, **2D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.25	197	*i* P	Pn	05 31 52.6	-0.1
BARC				*i*		05 31 52.9	
	comp=Z,1µm,0.2s						
BARC				*e*S	Sn	05 32 07.8	-1.0
PAMC	Pamplona, Colo	0.65	39	*e*P	Pn	05 31 55.5	+0.8
PAMC				*e*S	Sn	05 32 12.2	-0.2
PAMC				*i*		05 32 14.7	
	comp=Z,778nm,0.3s						
BRRC	Barranca, Sant	0.66	295	*e*P	Pn	05 31 54.5	+0.4
BRRC				*e*S	Sn	05 32 11.6	+0.2
BRRC				*i*		05 32 15.4	
	comp=Z,1µm,0.2s						
RUSC	La Rusia	0.93	178	*e*Pn	Pn	05 31 56.2	-0.4
RUSC				*e*Sn	Sn	05 32 15.0	-0.9
RUSC	La Rusia	0.93	178	*e*P	Pn	05 31 56.3	-0.3
RUSC				*i*		05 31 57.3	
	comp=Z,588nm,0.2s						
RUSC				*e*S	Sn	05 32 14.7	-1.2
TAMC	Tame, Arauca	1.37	107	⇓*i*P	Pn	05 32 00.7	+0.8
TAMC				*i*		05 32 00.9	
	comp=Z,1µm,0.2s						
TAMC				*e*S	Sn	05 32 21.9	0.0
PTBC	PUERTO BERRIO,	1.37	258	*e*P	Pn	05 31 59.1	-0.9
PTBC				*e*S	Sn	05 32 20.8	-1.1
PTBC				*i*		05 32 26.5	
	comp=Z,1µm,0.3s						
OCAC	Ocana	1.42	352	*e*P	Pn	05 32 00.9	+0.3
OCAC				*e*S	Sn	05 32 22.9	-0.2
YOPC	Yopal, Colombi	1.62	155	*e*P	Pn	05 32 03.0	+0.4
YOPC				*e*S	Sn	05 32 26.4	-0.3
ZARC	Zaragoza, Cauc	1.86	291	*e*P	Pn	05 32 05.0	-0.1
ZARC				*e*S	Sn	05 32 30.3	-0.8
ZARC				*i*		05 32 37.1	
	comp=Z,1µm,0.4s						
NORC	Norcasia	2.15	234	*e*P	Pn	05 32 08.6	-0.1
NORC				*e*S	Sn	05 32 37.5	+0.1
CHIC	Chingaza	2.27	196	*e*P	Pn	05 32 10.2	-0.2
CHIC				*e*S	Sn	05 32 39.2	-1.2
CHIC				*i*		05 32 44.1	
	comp=Z,414nm,0.3s						
ROSC	El Rosal	2.31	211	P	Pn	05 32 12.1	+1.1
	comp=Z,128nm,0.3s,baz=343,slow=5.0,SNR=226						
ROSC				S	Sn	05 32 42.0	+0.7
	comp=Z,182nm,0.3s,baz=280,slow=22,SNR=11						
ROSC	El Rosal	2.31	211	*e*Pn	Pn	05 32 12.0	+1.1
ROSC				*e*Sn	Sn	05 32 41.9	+0.7
ROSC	El Rosal	2.31	211	*e*P	Pn	05 32 12.1	+1.1
ROSC				*i*		05 32 49.1	
	comp=Z,979nm,0.5s						
HELC	Santa Helena	2.49	255	*e*Pn	Pn	05 32 12.4	-0.5
HELC	Santa Helena	2.49	255	*e*P	Pn	05 32 12.5	-0.5
HELC				*e*S	Sn	05 32 45.1	+0.2
HELC				*i*		05 32 51.1	
	comp=Z,488nm,0.6s						
UREC	San Josˆ' de U	2.57	291	*e*P	Pn	05 32 13.4	-0.2
UREC				*e*S	Sn	05 32 44.9	-1.4
GUYC	Guyana, Colomb	2.77	235	*e*P	Pn	05 32 16.8	+0.3
DBBC	Dabeiba	3.08	274	*e*P	Pn	05 32 20.1	+0.1
CODC	Agustˆ›n Codaz	3.10	354	*e*P	Pn	05 32 20.3	+0.1
CODC				*i*		05 33 04.9	
	comp=Z,195nm,0.3s						
SDV	Santo Domingo	3.19	50	P	Pn	05 32 21.8	+0.3
	comp=Z,153nm,0.3s,baz=214,slow=3.2,SNR=110						
SDV				S	Sn	05 32 59.4	-1.0
	comp=Z,83nm,0.3s,baz=64,slow=20,SNR=16						
SDV	Santo Domingo	3.19	50	*e*Pn	Pn	05 32 21.7	+0.2
SDV				*e*Sn	Sn	05 33 00.6	+0.2
SDV	Santo Domingo	3.19	50	*e*P	Pn	05 32 21.9	+0.3
PRAC	Prado	3.57	210	*e*Pn	Pn	05 32 25.4	-0.8
PRAC				*e*Sn	Sn	05 33 09.7	+0.9
PRAC	Prado	3.57	210	*e*P	Pn	05 32 25.5	-0.7
PRAC				*e*S	Sn	05 33 08.8	0.0
SJAC	San Juan de Ar	3.63	193	*e*P	Pn	05 32 28.1	+1.0
PLMC	San Josˆ' del	3.69	239	*e*P	Pn	05 32 28.0	+0.2
BCIP	Isla Barro Col	7.06	290	*e*Pn	Pn	05 33 10.2	-2.0
OTAV	Otavalo	8.44	219	*e*Pn	Pn	05 33 31.1	0.0
PCRV	Puerto La Cruz	9.02	68	P	Pn	05 33 35.8	-2.6
	comp=Z,2.0nm,0.3s,baz=256,slow=4.4,SNR=17						
PCJ	Portland Cotta	11.54	340	⇓*i*P	Pn	05 34 13.8	+2.3
GWJ	Greenwich	11.72	343	*i* P	Pn	05 34 16.9	+2.9
STH	Stony Hill	11.75	342	*i* P	Pn	05 34 16.1	+1.8
MTDJ	Mount Denham	12.12	340	*e*Pn	Pn	05 34 21.9	+2.6
BBJ	Bamboo Saint A	12.18	341	*i* P	P	05 34 23.0	-3.0
GTBY	Guantanamo Bay	13.16	352	*e*Pn	P	05 34 36.2	-0.7
SAML	Samuel	18.54	148	*e*P	P	05 35 35.9	-0.4
	comp=Z,2.0nm,1.0s						
SAML				*e*pP	pP	05 36 03.0	+0.1
LPAZ	La Paz	23.49	168	pP	pP	05 36 59.4	+1.6
	comp=Z,2.3nm,0.7s,baz=358,slow=9.1,SNR=8.4						
657A	Interlachen	24.09	341	P	P	05 36 34.2	+1.5
	baz=158						
656A	Willston	24.12	340	P	P	05 36 34.4	+1.5
	baz=157						
656A	Willston	24.12	340	*e*P	P	05 36 35.0	+2.1
	comp=Z,38nm,1.4s						
555A	McAlpin	24.95	339	P	P	05 36 42.0	+1.5
	baz=156						
SIV	San Ignacio	25.62	152	pP	pP	05 37 18.1	-0.8
	comp=Z,0.7nm,0.5s,baz=331,slow=11,SNR=3.9						
452A	Marianna	26.44	336	P	P	05 36 55.5	+1.7
	baz=152						
251A	Midway	27.63	337	P	P	05 37 05.8	+1.3
	baz=153						
152A	Waverly Hall	27.89	339	P	P	05 37 08.0	+1.2
	baz=155						
151A	Opelika	27.98	338	P	P	05 37 09.0	+1.3
	baz=154						
Z52A	Williamson	28.25	340	P	P	05 37 11.4	+1.3
	baz=156						
347A	Saraland	28.39	331	P	P	05 37 12.7	+1.4
	baz=146						
Y53A	Monroe	28.59	342	P	P	05 37 14.5	+1.5
	baz=158						
Y52A	Lilburn	28.75	341	P	P	05 37 15.7	+1.3
	baz=157						
Y52A	Lilburn	28.75	341	*e*P	P	05 37 15.8	+1.3
	comp=Z,4.9nm,1.4s						
346A	Big Creek Wild	28.83	330	*e*P	P	05 37 17.2	+2.0
	comp=Z,11nm,0.6s						
Z50A	Ashland	28.86	337	P	P	05 37 16.9	+1.5
	baz=153						
Z50A	Ashland	28.86	337	*e*P	P	05 37 17.0	+1.5
	comp=Z,4.5nm,0.6s						
Z49A	Columbiana	29.04	336	P	P	05 37 18.5	+1.5
	baz=152						
147A	Livingston	29.33	333	P	P	05 37 20.9	+1.4
	baz=148						
Y50A	Piedmont	29.36	338	P	P	05 37 21.6	+1.8
	baz=154						
BG3	Lake Jocassee	29.45	343	*e*P	P	05 37 22.1	+1.5

	comp=Z,9.0nm,1.5s						
344A	**Westbrook Farm** baz=143	**29.52**	**328**	P	**P**	**05 37 22.9**	**+1.6**
Y49A	**Blount Mountai** baz=153	**29.58**	**337**	P	**P**	**05 37 23.0**	**+1.2**
Y49A	**Blount Mountai** comp=Z,4.7nm,0.5s	**29.58**	**337**	*e*P	**P**	**05 37 23.2**	**+1.4**
Z47A	**Carrollton** baz=149	**29.69**	**334**	P	**P**	**05 37 24.2**	**+1.5**
W52A	**Murphy** baz=158	**29.84**	**342**	P	**P**	**05 37 25.7**	**+1.6**
244A	**Avery, Jackson** baz=143	**29.97**	**329**	P	**P**	**05 37 26.4**	**+1.2**
VBMS	**Vicksburg** baz=144	**30.02**	**330**	P	**P**	**05 37 27.0**	**+1.3**
145A	**Houston Renfro** baz=145	**30.04**	**331**	P	**P**	**05 37 27.2**	**+1.3**
Z46A	**Louisville** baz=148	**30.07**	**333**	P	**P**	**05 37 27.5**	**+1.4**
X49A	**Woodville** baz=153	**30.13**	**338**	P	**P**	**05 37 28.0**	**+1.4**
Y47A	**UCPARC, Winfie** baz=150	**30.20**	**335**	P	**P**	**05 37 28.5**	**+1.3**
X48A	**Hartselle** baz=152	**30.35**	**337**	P	**P**	**05 37 29.7**	**+1.2**
X48A	**Hartselle** comp=Z,3.6nm,0.7s	**30.35**	**337**	*e*P	**P**	**05 37 29.8**	**+1.2**
CPCT	**Cooper Cave** comp=Z,6.3nm,1.3s	**30.35**	**341**	*e*P	**P**	**05 37 30.4**	**+1.8**
W50A	**Signal Mountai** baz=156	**30.39**	**340**	P	**P**	**05 37 30.4**	**+1.4**
W50A	**Signal Mountai** comp=Z,5.5nm,1.0s	**30.39**	**340**	*e*P	**P**	**05 37 30.7**	**+1.8**
Y46A	**Houston** baz=148	**30.61**	**334**	P	**P**	**05 37 32.2**	**+1.3**
V51A	**Loudon** baz=158	**30.63**	**342**	P	**P**	**05 37 32.3**	**+1.4**
V51A	**Loudon** comp=Z,11nm,1.4s	**30.63**	**342**	*e*P	**P**	**05 37 32.6**	**+1.6**
U53A	**Fall Branch** baz=161	**30.65**	**345**	P	**P**	**05 37 32.3**	**+1.1**
X47A	**Russelville** baz=151	**30.73**	**336**	P	**P**	**05 37 32.9**	**+1.0**
V50A	**Pikevile** baz=156	**30.74**	**341**	P	**P**	**05 37 33.3**	**+1.3**
Z44A	**Pea Ridge, Bel** baz=145	**30.84**	**331**	P	**P**	**05 37 34.2**	**+1.3**
Y45A	**Yeager Farm, C** baz=147	**30.91**	**333**	P	**P**	**05 37 34.9**	**+1.5**
V49A	**McMinnville** baz=155	**31.10**	**340**	P	**P**	**05 37 36.4**	**+1.2**
Z43A	**Armstrong Fami** baz=144	**31.18**	**330**	P	**P**	**05 37 36.8**	**+0.9**
PLAL	**Pickwick Lake** comp=Z,5.8nm,1.1s	**31.22**	**336**	*e*P	**P**	**05 37 38.3**	**+2.1**
W47A	**Westpoint** baz=152	**31.27**	**337**	P	**P**	**05 37 37.7**	**+1.1**
V48A	**Smith Brothers** baz=153,SNR=7.2	**31.41**	**338**	P	**P**	**05 37 38.9**	**+1.0**
V48A	**Smith Brothers** comp=Z,9.3nm,0.9s	**31.41**	**338**	*e*P	**P**	**05 37 39.1**	**+1.3**
T52A	**Hallie** baz=161	**31.45**	**345**	P	**P**	**05 37 39.4**	**+1.1**
W46A	**Michie** baz=150	**31.48**	**336**	P	**P**	**05 37 39.2**	**+0.7**
Y43A	**Makayla and Ka** baz=145	**31.59**	**331**	P	**P**	**05 37 40.5**	**+1.0**
V47A	**Nunnelly** baz=152,SNR=8.5	**31.74**	**337**	P	**P**	**05 37 41.6**	**+0.8**
V46A	**Holladay** baz=151	**31.95**	**337**	P	**P**	**05 37 43.9**	**+1.2**
Y42A	**Garnett, Star** baz=143	**31.95**	**330**	P	**P**	**05 37 43.7**	**+1.0**
U48A	**Cassie Pea, Po** baz=154	**31.99**	**339**	P	**P**	**05 37 44.1**	**+1.2**
S51A	**Beattyville** baz=160	**32.12**	**344**	P	**P**	**05 37 45.0**	**+1.0**
WVT	**Waverly** baz=152	**32.13**	**337**	P	**P**	**05 37 44.7**	**+0.6**
WVT	**Waverly** comp=Z,5.0nm,1.0s	**32.13**	**337**	*e*P	**P**	**05 37 44.8**	**+0.6**
T49A	**Edmonton** baz=156	**32.19**	**341**	P	**P**	**05 37 45.7**	**+1.0**
T49A	**Edmonton** comp=Z,2.7nm,0.9s	**32.19**	**341**	*e*P	**P**	**05 37 46.0**	**+1.2**
U47A	**Clarksville** baz=153	**32.20**	**338**	P	**P**	**05 37 45.6**	**+0.9**
V45A	**Humboldt** baz=150	**32.24**	**335**	P	**P**	**05 37 46.2**	**+1.0**
X42A	**Stuttgart** baz=144	**32.45**	**331**	P	**P**	**05 37 47.7**	**+0.7**
U46A	**Springville** baz=151	**32.46**	**337**	P	**P**	**05 37 47.8**	**+0.7**
T48A	**Bowling Green** baz=155	**32.48**	**340**	P	**P**	**05 37 48.2**	**+1.0**
T47A	**Sharon Grove** baz=154	**32.62**	**339**	P	**P**	**05 37 49.3**	**+0.8**
T47A	**Sharon Grove** comp=Z,4.7nm,0.8s	**32.62**	**339**	*e*P	**P**	**05 37 49.7**	**+1.3**
Y40A	**Okolona** baz=141	**32.86**	**328**	P	**P**	**05 37 50.6**	**+0.1**
S48A	**Wiedeman Farm,** baz=156	**32.87**	**341**	P	**P**	**05 37 51.2**	**+0.7**
T46A	**Princeton** baz=152	**32.96**	**338**	P	**P**	**05 37 52.0**	**+0.6**
X40A	**Basin Creek Fa** baz=142	**33.00**	**329**	P	**P**	**05 37 52.0**	**+0.2**
MVL	**Millersville** comp=Z,4.3nm,0.8s	**33.15**	**355**	*e*P	**P**	**05 37 54.5**	**+1.5**
W41B	**Gary Mavity, V** baz=144	**33.25**	**331**	P	**P**	**05 37 54.1**	**+0.2**
W41B	**Gary Mavity, V** comp=Z,3.8nm,1.3s	**33.25**	**331**	*e*P	**P**	**05 37 54.7**	**+0.7**
Q50A	**Georgetown** baz=160	**33.35**	**344**	P	**P**	**05 37 55.8**	**+1.1**
V42A	**Cord** baz=146	**33.36**	**332**	P	**P**	**05 37 55.5**	**+0.6**
MIAR	**Mount Ida** baz=141	**33.42**	**328**	P	**P**	**05 37 55.6**	**+0.1**
S46A	**Don Dixon Farm** baz=153	**33.46**	**339**	P	**P**	**05 37 56.2**	**+0.5**
WCI	**Wyandotte Cave** baz=156	**33.46**	**341**	P	**P**	**05 37 56.5**	**+0.8**
WCI	**Wyandotte Cave** comp=Z,6.9nm,0.6s	**33.46**	**341**	*e*P	**P**	**05 37 57.0**	**+1.3**
R47A	**Wooly Knot Far** baz=156	**33.60**	**341**	P	**P**	**05 37 57.5**	**+0.6**
W40A	**Ferguson Farm,** baz=142	**33.67**	**330**	P	**P**	**05 37 58.2**	**+0.6**
W40A	**Ferguson Farm,** comp=Z,6.3nm,0.6s	**33.67**	**330**	*e*P	**P**	**05 37 58.5**	**+1.0**
V41A	**Mountainview** baz=144,SNR=7.3	**33.70**	**331**	P	**P**	**05 37 57.9**	**0.0**
Q48A	**North Vernon** baz=157	**33.93**	**342**	P	**P**	**05 38 00.5**	**+0.7**
SSPA	**Standing Stone** baz=172	**33.93**	**353**	P	**P**	**05 38 00.9**	**+1.2**
T43A	**Greenville** baz=148	**33.94**	**335**	P	**P**	**05 38 00.3**	**+0.4**
P50A	**Jamestown** baz=161	**34.02**	**345**	P	**P**	**05 38 01.6**	**+1.0**
V40A	**Witts Springs** baz=144,SNR=5.4	**34.04**	**331**	P	**P**	**05 38 00.7**	**-0.1**
V40A	**Witts Springs** comp=Z,4.7nm,0.5s	**34.04**	**331**	*e*P	**P**	**05 38 01.6**	**+0.8**
W39A	**Magazine** baz=141	**34.04**	**329**	P	**P**	**05 38 01.2**	**+0.5**
W39A	**Magazine** comp=Z,4.9nm,0.7s	**34.04**	**329**	*e*P	**P**	**05 38 01.2**	**+0.5**
U41A	**Viola** baz=145,SNR=6.0	**34.05**	**332**	P	**P**	**05 38 00.9**	**+0.1**
S44A	**Carbondale** baz=151	**34.05**	**337**	P	**P**	**05 38 01.3**	**+0.5**
ODNJ	**Ogdensburg** comp=Z,11nm,1.4s	**34.13**	**358**	*e*P	**P**	**05 38 02.7**	**+1.2**
Q47A	**Bedord North L** baz=156	**34.15**	**341**	P	**P**	**05 38 02.5**	**+0.8**
R45A	**Skylar, Fairfi** baz=153	**34.20**	**339**	P	**P**	**05 38 02.6**	**+0.5**
T42A	**Van Buren** baz=147,SNR=5.1	**34.24**	**334**	P	**P**	**05 38 02.5**	**+0.1**
T42A	**Van Buren** comp=Z,5.8nm,1.0s	**34.24**	**334**	*e*P	**P**	**05 38 03.0**	**+0.5**
BLO	**Bloomington** comp=Z,4.5nm,0.6s	**34.40**	**341**	*e*P	**P**	**05 38 05.6**	**+1.8**
R44A	**Waltonville** baz=151	**34.46**	**337**	P	**P**	**05 38 04.6**	**+0.3**
V39A	**Pettigrew** baz=142	**34.47**	**330**	P	**P**	**05 38 04.7**	**+0.1**
O50A	**Cable** baz=162	**34.49**	**346**	P	**P**	**05 38 05.4**	**+0.9**
U40A	**Yellville** baz=144,SNR=9.9	**34.49**	**331**	P	**P**	**05 38 04.8**	**+0.1**
Q46A	**CEJHS Indians,** baz=155	**34.53**	**340**	P	**P**	**05 38 05.4**	**+0.4**
N54A	**Moraine State** baz=168	**34.54**	**351**	P	**P**	**05 38 06.0**	**+1.0**
T41A	**Mountain View** baz=146,SNR=5.2	**34.55**	**333**	P	**P**	**05 38 05.1**	**0.0**
P47A	**Martinsville** baz=157	**34.60**	**342**	P	**P**	**05 38 06.0**	**+0.5**
Q45A	**Warren Harvey,** baz=153	**34.70**	**339**	P	**P**	**05 38 06.6**	**+0.3**
S42A	**Caledonia** baz=148	**34.74**	**335**	P	**P**	**05 38 06.6**	**-0.1**
FVM	**French Village** comp=Z,4.6nm,0.6s	**34.77**	**336**	*e*P	**P**	**05 38 08.7**	**+1.7**
R43A	**Red Bud** baz=150	**34.82**	**336**	P	**P**	**05 38 07.5**	**+0.1**
U39A	**Green Forest** baz=143	**34.82**	**331**	P	**P**	**05 38 07.2**	**-0.3**
HHAR	**Hobbs** comp=Z,3.0nm,0.8s	**34.97**	**330**	*e*P	**P**	**05 38 08.4**	**-0.4**
N50A	**Nevada** baz=162	**34.97**	**347**	P	**P**	**05 38 09.5**	**+0.8**
T40A	**Mansfield** baz=145	**34.98**	**332**	P	**P**	**05 38 08.9**	**+0.1**
S41A	**Jillco Farms,** baz=147	**34.99**	**334**	P	**P**	**05 38 09.1**	**+0.2**
M54A	**Oil Creek Stat** baz=169	**35.02**	**351**	P	**P**	**05 38 10.3**	**+1.1**
M54A	**Oil Creek Stat** comp=Z,2.2nm,0.6s	**35.02**	**351**	*e*P	**P**	**05 38 10.5**	**+1.3**
P46A	**Rosedale** baz=155	**35.02**	**341**	P	**P**	**05 38 09.9**	**+0.7**
P45A	**Graceland, Par** baz=154	**35.12**	**340**	P	**P**	**05 38 10.6**	**+0.6**
CCM	**Cathedral Cave** baz=148	**35.17**	**335**	P	**P**	**05 38 11.2**	**+0.7**
CCM	**Cathedral Cave** comp=Z,10nm,0.7s	**35.17**	**335**	*e*P	**P**	**05 38 11.3**	**+0.9**
R42A	**Luebbering** baz=149	**35.17**	**335**	P	**P**	**05 38 10.8**	**+0.4**
O47A	**Sheridan** baz=157	**35.27**	**343**	P	**P**	**05 38 11.7**	**+0.5**
T39A	**Clever** baz=144	**35.28**	**331**	P	**P**	**05 38 11.3**	**-0.2**
Q43A	**New Douglas** baz=151	**35.30**	**337**	P	**P**	**05 38 11.7**	**+0.2**
S40A	**Lebanon** baz=145,SNR=9.4	**35.34**	**333**	P	**P**	**05 38 12.0**	**+0.1**
R41A	**Rosebud** baz=148,SNR=5.0	**35.43**	**335**	P	**P**	**05 38 12.7**	**0.0**
SFIN	**Lafayette** baz=156,SNR=6.9	**35.68**	**342**	P	**P**	**05 38 15.1**	**+0.3**
SFIN	**Lafayette** comp=Z,11nm,0.5s	**35.68**	**342**	*e*P	**P**	**05 38 15.3**	**+0.5**
T38A	**Diamond** baz=142	**35.73**	**330**	P	**P**	**05 38 14.8**	**-0.5**
S39A	**Bolivar** baz=144	**35.79**	**332**	P	**P**	**05 38 15.4**	**-0.4**
S39A	**Bolivar** comp=Z,11nm,1.5s	**35.79**	**332**	*e*P	**P**	**05 38 15.8**	**0.0**
R40A	**Maddies Statio** baz=146,SNR=5.2	**35.81**	**334**	P	**P**	**05 38 15.7**	**-0.2**
R40A	**Maddies Statio** comp=Z,3.6nm,0.6s	**35.81**	**334**	*e*P	**P**	**05 38 15.8**	**0.0**
P43A	**Skaggs, Pawnee** baz=152	**35.85**	**338**	P	**P**	**05 38 16.2**	**0.0**
Q41A	**Truxton** baz=148	**35.92**	**336**	P	**P**	**05 38 16.8**	**-0.1**
S38A	**Stockton** baz=143,SNR=5.1	**36.02**	**331**	P	**P**	**05 38 17.2**	**-0.5**
N46A	**Monticello** baz=157	**36.04**	**342**	P	**P**	**05 38 18.3**	**+0.5**
P42A	**Winchester** baz=150	**36.11**	**337**	P	**P**	**05 38 18.3**	**-0.2**
P42A	**Winchester** comp=Z,5.7nm,0.9s	**36.11**	**337**	*e*P	**P**	**05 38 18.5**	**0.0**
R39A	**Chumby, Stover** baz=145,SNR=6.0	**36.17**	**333**	P	**P**	**05 38 18.4**	**-0.5**
Q40A	**Laux Farm, Aux** baz=147,SNR=5.7	**36.31**	**335**	P	**P**	**05 38 19.9**	**-0.2**
R38A	**Fenwick Farm,** baz=144	**36.46**	**332**	P	**P**	**05 38 20.8**	**-0.6**
TXAR	**Lajitas Array** comp=Z,1.1nm,0.6s,baz=125,slow=9.4,SNR=20	**36.47**	**312**	P	**P**	**05 38 21.9**	**+0.1**
TXAR	comp=Z,0.2nm,0.8s,baz=93,slow=5.5,SNR=3.7			PcP	**PcP**	**05 40 42.8**	**+0.4**
TX31	**Lajitas Ar. Si**	**36.47**	**312**	*e*P	**P**	**05 38 22.3**	**+0.6**
WMOK	**Wichita Mounta** baz=134	**36.48**	**323**	P	**P**	**05 38 21.0**	**-0.7**
WMOK	**Wichita Mounta** comp=Z,1.6nm,0.6s	**36.48**	**323**	*e*P	**P**	**05 38 21.3**	**-0.4**
HDIL	**Hopedale** baz=152	**36.57**	**339**	P	**P**	**05 38 21.8**	**-0.6**
HDIL	**Hopedale** comp=Z,6.1nm,0.6s	**36.57**	**339**	*e*P	**P**	**05 38 22.1**	**-0.2**
Q39A	**Willow Grove F** baz=146	**36.74**	**334**	P	**P**	**05 38 23.4**	**-0.4**
P40A	**Paris** baz=148	**36.75**	**335**	P	**P**	**05 38 23.5**	**-0.3**
P40A	**Paris** comp=Z,4.4nm,0.7s	**36.75**	**335**	*e*P	**P**	**05 38 24.0**	**+0.2**
N43A	**Stutzman Famil** baz=153	**36.87**	**340**	P	**P**	**05 38 24.3**	**-0.5**
Q38A	**Cooks Store, C** baz=145,SNR=6.9	**36.96**	**333**	P	**P**	**05 38 25.5**	**-0.2**
P39B	**Salisbury** baz=146	**37.01**	**334**	P	**P**	**05 38 25.6**	**-0.5**
N42A	**Yates City** baz=152	**37.08**	**339**	P	**P**	**05 38 26.1**	**-0.5**
O40A	**La Belle** baz=148	**37.17**	**336**	P	**P**	**05 38 26.8**	**-0.6**
Q37A	**Longview Farm,** baz=144	**37.27**	**332**	P	**P**	**05 38 27.6**	**-0.7**
N41A	**Harden Midland** baz=150	**37.28**	**338**	P	**P**	**05 38 27.6**	**-0.7**
N41A	**Harden Midland** comp=Z,5.2nm,0.8s	**37.28**	**338**	*e*P	**P**	**05 38 27.6**	**-0.7**
P38A	**Dawn** baz=146	**37.46**	**334**	P	**P**	**05 38 29.3**	**-0.5**
M41A	**Milan** baz=151	**37.74**	**338**	P	**P**	**05 38 31.3**	**-0.9**
O38A	**Galt** baz=146	**37.84**	**334**	P	**P**	**05 38 32.6**	**-0.5**
L42A	**Oliver, Polo** comp=Z,4.1nm,0.8s	**37.98**	**340**	*e*P	**P**	**05 38 33.7**	**-0.5**
N39A	**Derby Farms, D** baz=148	**38.07**	**336**	P	**P**	**05 38 34.6**	**-0.3**
K43A	**Burlington** comp=Z,10nm,1.0s	**38.18**	**342**	*e*P	**P**	**05 38 35.7**	**-0.1**
O37A	**Wolven Farm, M** baz=145	**38.18**	**334**	P	**P**	**05 38 35.4**	**-0.4**
N38A	**Joes South For** baz=147	**38.30**	**335**	P	**P**	**05 38 36.6**	**-0.3**
L41A	**Preston** baz=152	**38.34**	**339**	P	**P**	**05 38 36.4**	**-0.7**
PKME	**Peaks-Kenny Pk** baz=186	**38.43**	**4**	P	**P**	**05 38 38.3**	**+0.4**
M39A	**Webster** baz=149	**38.45**	**337**	P	**P**	**05 38 38.0**	**-0.1**
MSTX	**Muleshoe** baz=128	**38.48**	**319**	P	**P**	**05 38 38.1**	**-0.6**
L40A	**Anamosa** baz=150	**38.59**	**338**	P	**P**	**05 38 38.9**	**-0.4**
N37A	**Lee Faris, Mou** baz=145	**38.69**	**334**	P	**P**	**05 38 39.5**	**-0.6**
N37A	**Lee Faris, Mou** comp=Z,8.9nm,0.8s	**38.69**	**334**	*e*P	**P**	**05 38 39.7**	**-0.5**
M38A	**Pleasantville** baz=147	**38.81**	**336**	P	**P**	**05 38 40.6**	**-0.6**
MNTX	**Cornudas Mount** baz=123,SNR=5.5	**38.97**	**314**	P	**P**	**05 38 42.8**	**+0.1**
MNTX	**Cornudas Mount** comp=Z,6.5nm,1.4s	**38.97**	**314**	*e*P	**P**	**05 38 43.3**	**+0.6**
JFWS	**Jewell Farm** baz=152	**38.99**	**340**	P	**P**	**05 38 42.2**	**-0.4**
JFWS	**Jewell Farm** comp=Z,9.2nm,0.6s	**38.99**	**340**	*e*P	**P**	**05 38 42.4**	**-0.2**
K40A	**Colesburg** baz=151	**39.11**	**339**	P	**P**	**05 38 43.3**	**-0.4**
M37A	**Trindle Farm,** baz=146	**39.15**	**335**	P	**P**	**05 38 43.2**	**-0.8**
I43A	**Langenfeld Bro** baz=156	**39.19**	**343**	P	**P**	**05 38 44.0**	**-0.3**
SCIA	**State Center** baz=148	**39.23**	**336**	P	**P**	**05 38 44.4**	**-0.2**
SCIA	**State Center** comp=Z,9.8nm,0.5s	**39.23**	**336**	*e*P	**P**	**05 38 45.0**	**+0.4**
J41A	**Loganville** baz=153	**39.31**	**340**	P	**P**	**05 38 44.7**	**-0.6**
I42A	**Draeger Farm,** baz=155	**39.43**	**342**	P	**P**	**05 38 45.9**	**-0.3**
I42A	**Draeger Farm,** comp=Z,4.1nm,0.7s	**39.43**	**342**	*e*P	**P**	**05 38 46.5**	**+0.2**
M36A	**Felix, Anita** baz=145	**39.51**	**334**	P	**P**	**05 38 46.3**	**-0.8**
J40A	**Soldiers Grove** baz=152	**39.58**	**340**	P	**P**	**05 38 46.9**	**-0.7**
L37A	**Phoenix Point,** baz=147	**39.63**	**336**	P	**P**	**05 38 47.2**	**-0.8**
J39A	**Decorah** baz=151	**39.87**	**339**	P	**P**	**05 38 49.0**	**-0.9**
I41A	**Arkdale** baz=154	**39.88**	**341**	P	**P**	**05 38 49.8**	**-0.2**
I40A	**Norwalk** baz=152	**39.98**	**340**	P	**P**	**05 38 50.5**	**-0.4**
L36A	**Harm Buss Farm** baz=146	**39.99**	**335**	P	**P**	**05 38 50.2**	**-0.7**
F46A	**Macinaw City C** baz=162	**40.09**	**347**	P	**P**	**05 38 51.9**	**+0.2**
K37A	**Belmond** baz=147	**40.12**	**336**	P	**P**	**05 38 51.9**	**-0.1**
F45A	**CMU Biological** baz=161	**40.17**	**346**	P	**P**	**05 38 52.3**	**0.0**
G43A	**Wallace** baz=157	**40.32**	**344**	P	**P**	**05 38 53.4**	**-0.1**
G42A	**Mountain** baz=156	**40.52**	**343**	P	**P**	**05 38 55.0**	**-0.2**
H40A	**Chili** baz=153	**40.55**	**341**	P	**P**	**05 38 55.4**	**-0.2**
F44A	**Big Bay de Noc** baz=160	**40.66**	**346**	P	**P**	**05 38 56.4**	**+0.1**
I38A	**Scanlan Farm,** baz=150	**40.71**	**339**	P	**P**	**05 38 56.7**	**-0.1**
F43A	**Flat Rock, Esc** baz=158	**40.72**	**345**	P	**P**	**05 38 56.6**	**-0.2**
G40A	**Rib Lake** baz=154	**41.07**	**342**	P	**P**	**05 38 59.7**	**-0.1**
F41A	**Three Lakes** baz=156	**41.16**	**343**	P	**P**	**05 39 00.2**	**-0.3**
E43A	**Lone Tree Farm** baz=159	**41.18**	**345**	P	**P**	**05 39 00.1**	**-0.5**
E43A	**Lone Tree Farm** comp=Z,5.7nm,1.0s	**41.18**	**345**	*e*P	**P**	**05 39 00.8**	**+0.3**
I36A	**Fitzsimmons Fa** baz=148	**41.32**	**337**	P	**P**	**05 39 01.0**	**-0.8**
G39A	**Holcombe** baz=152	**41.40**	**341**	P	**P**	**05 39 02.1**	**-0.3**
T25A	**Trinidad** comp=Z,1.8nm,0.8s	**41.49**	**321**	*e*P	**P**	**05 39 05.2**	**+1.6**
F40A	**Park Falls** baz=154	**41.63**	**342**	P	**P**	**05 39 04.0**	**-0.3**
LAZ	**Ladron**	**41.68**	**316**	*e*P	**P**	**05 39 06.1**	**+1.0**
H36A	**Jessenland, He** baz=148	**41.76**	**338**	P	**P**	**05 39 04.9**	**-0.5**
E41A	**Kenton** baz=156	**41.78**	**344**	P	**P**	**05 39 05.3**	**-0.3**
F39A	**Loretta** baz=153	**41.88**	**341**	P	**P**	**05 39 05.9**	**-0.4**
SPMN	**Marine on St.** baz=150	**41.90**	**339**	P	**P**	**05 39 06.3**	**-0.2**
E40A	**Wakefield** baz=155,SNR=7.6	**42.04**	**343**	P	**P**	**05 39 07.6**	**0.0**
ECSD	**EROS Data Cent** baz=144	**42.14**	**334**	P	**P**	**05 39 07.6**	**-0.9**
ECSD	**EROS Data Cent** comp=Z,2.7nm,1.0s	**42.14**	**334**	*e*P	**P**	**05 39 08.3**	**-0.3**
E39A	**Mellen** baz=154	**42.17**	**342**	P	**P**	**05 39 08.7**	**0.0**
H35A	**Sunnyside Ranc** baz=147	**42.21**	**337**	P	**P**	**05 39 08.6**	**-0.4**
F38A	**Pierce - Schro** baz=152	**42.23**	**340**	P	**P**	**05 39 08.8**	**-0.3**
G36A	**St. Michael** baz=149	**42.25**	**338**	P	**P**	**05 39 08.6**	**-0.7**
G35A	**Watkins** baz=148	**42.51**	**338**	P	**P**	**05 39 10.8**	**-0.6**
G35A	**Watkins** comp=Z,6.0nm,0.8s	**42.51**	**338**	*e*P	**P**	**05 39 10.9**	**-0.5**
OGNE	**Ogallala** baz=135	**42.65**	**327**	P	**P**	**05 39 11.2**	**-1.6**
F36A	**Milaca** baz=149	**42.71**	**339**	P	**P**	**05 39 12.5**	**-0.5**
H32A	**Carlson Farm,** baz=143	**43.12**	**334**	P	**P**	**05 39 15.4**	**-0.9**
E36A	**McGregor** baz=150	**43.18**	**340**	P	**P**	**05 39 16.4**	**-0.4**
TUC	**Tucson** baz=118	**43.25**	**311**	P	**P**	**05 39 16.0**	**-1.7**
S22A	**4UR Ranch, Cre** baz=127	**43.39**	**320**	P	**P**	**05 39 19.6**	**+0.6**
S22A	**4UR Ranch, Cre** comp=Z,3.4nm,1.3s	**43.39**	**320**	*e*P	**P**	**05 39 20.2**	**+1.2**
C38A	**Sawbill Land.** baz=153	**43.59**	**342**	P	**P**	**05 39 20.2**	**+0.1**
E35A	**Pequot Lakes** baz=149	**43.62**	**339**	P	**P**	**05 39 20.1**	**-0.3**
D36A	**Goodland** baz=151	**43.72**	**340**	P	**P**	**05 39 20.6**	**-0.5**
D36A	**Goodland** comp=Z,7.4nm,1.3s	**43.72**	**340**	*e*P	**P**	**05 39 20.9**	**-0.2**
SUSD	**Miller** baz=141	**43.73**	**333**	P	**P**	**05 39 20.4**	**-0.9**
G32A	**Webster** baz=144	**43.75**	**335**	P	**P**	**05 39 20.4**	**-1.0**
EYMN	**Ely** baz=153,SNR=5.3	**43.87**	**342**	P	**P**	**05 39 21.8**	**-0.5**
EYMN	**Ely** comp=Z,6.8nm,0.6s	**43.87**	**342**	*e*P	**P**	**05 39 21.9**	**-0.3**
C37A	**Embarrass** baz=152	**43.89**	**341**	P	**P**	**05 39 22.1**	**-0.3**
ISCO	**Idaho Springs** baz=130	**43.91**	**323**	P	**P**	**05 39 23.6**	**+0.5**
C36A	**Pine Crest Far** baz=151	**44.12**	**341**	P	**P**	**05 39 24.0**	**-0.3**
C35A	**Jirik Farms, M** baz=150	**44.45**	**340**	P	**P**	**05 39 26.5**	**-0.4**
C34A	**RKJ Ranch, Bem** baz=148	**44.73**	**339**	P	**P**	**05 39 28.9**	**-0.3**
PV02	**Paradox Valley** comp=Z,3.7nm,0.7s	**44.88**	**319**	*e*P	**P**	**05 39 31.9**	**+1.2**
B35A	**Bob, Littlefor** baz=150	**44.94**	**341**	P	**P**	**05 39 30.2**	**-0.6**
B35A	**Bob, Littlefor** comp=Z,2.9nm,0.6s	**44.94**	**341**	*e*P	**P**	**05 39 30.4**	**-0.4**
C33A	**Trail** baz=148	**45.13**	**338**	P	**P**	**05 39 31.7**	**-0.6**
WUAZ	**Wupatki** comp=Z,3.7nm,0.8s	**45.22**	**315**	*e*P	**P**	**05 39 34.8**	**+1.3**
B34A	**Aery, Baudette** baz=149,SNR=7.9	**45.36**	**340**	P	**P**	**05 39 33.6**	**-0.5**
AGMN	**Agassiz Nation** baz=148	**45.62**	**339**	P	**P**	**05 39 35.6**	**-0.6**
O20A	**White River Ci** baz=127	**45.70**	**322**	P	**P**	**05 39 37.2**	**0.0**
O20A	**White River Ci** comp=Z,1.9nm,0.8s	**45.70**	**322**	*e*P	**P**	**05 39 37.8**	**+0.7**
RSSD	**Black Hills** baz=135	**45.94**	**329**	P	**P**	**05 39 39.4**	**+0.4**
A33A	**Warroad** baz=149	**46.00**	**340**	P	**P**	**05 39 39.0**	**-0.1**
U15A	**North Rim** comp=Z,3.2nm,1.4s	**46.32**	**315**	*e*P	**P**	**05 39 43.1**	**+0.9**
GLA	**Glamis** baz=115	**46.64**	**310**	P	**P**	**05 39 44.5**	**+0.1**
MDND	**Maddock** baz=143	**46.69**	**336**	P	**P**	**05 39 44.7**	**+0.2**
ULM	**Lac du Bonnet** comp=Z,3.6nm,0.4s,baz=142,slow=7.3,SNR=8.4	**47.28**	**340**	P	**P**	**05 39 48.1**	**-1.0**
ULM	**Lac du Bonnet** comp=Z,8.7nm,1.2s	**47.28**	**340**	*e*P	**P**	**05 39 48.0**	**-1.0**
MSU	**Marysvale**	**47.31**	**318**	*e*P	**P**	**05 39 50.8**	**+1.0**
IRM	**Iron Mountain** baz=116	**47.34**	**311**	P	**P**	**05 39 50.1**	**+0.3**
MPU	**Maple Canyon** comp=Z,5.0nm,1.2s	**47.76**	**320**	*e*P	**P**	**05 39 54.3**	**+1.1**
BW06	**Boulder Array** baz=128	**48.08**	**324**	P	**P**	**05 39 56.3**	**+0.6**
PD31	**Pinedale Array**	**48.08**	**324**	*e*P	**P**	**05 39 55.6**	**0.0**
PDAR	**Pinedale Array** comp=Z,0.7nm,0.5s,baz=116,slow=8.9,SNR=9.0	**48.08**	**324**	P	**P**	**05 39 55.5**	**0.0**
PDAR	**Pinedale Array**	**48.08**	**324**	*e*P	**P**	**05 39 55.4**	**-0.2**
TCUT	**Toone Canyon**	**48.23**	**321**	*e*P	**P**	**05 39 57.6**	**+0.8**

	comp=Z,8.3nm,0.6s						
PSUT	Pine Spring	48.45	317	*e*P	P	05 39 59.9	+1.4
	comp=Z,1.9nm,1.0s						
HWUT	Hardware Ranch	48.60	322	*e*P	P	05 40 00.4	+0.8
	comp=Z,1.9nm,0.6s						
DUG	Dugway, Tooele	48.61	319	P	P	05 40 00.1	+0.4
	baz=122						
DUG	Dugway, Tooele	48.61	319	*e*P	P	05 40 00.9	+1.2
	comp=Z,1.4nm,0.6s						
GSC	Goldstone, Bar	49.06	312	P	P	05 40 03.2	0.0
	baz=115						
DGMT	Dagmar	49.15	333	P	P	05 40 03.9	+0.4
	baz=138,SNR=6.0						
DGMT	Dagmar	49.15	333	*e*P	P	05 40 04.1	+0.6
	comp=Z,13nm,0.6s						
REDW	Red Top Meadow	49.19	324	*e*P	P	05 40 04.6	+0.5
	comp=Z,3.3nm,0.6s						
LOHW	Long Hollow	49.20	324	*e*P	P	05 40 05.0	+0.8
	comp=Z,1.8nm,0.6s						
TPAW	Teton Pass	49.33	324	*e*P	P	05 40 06.4	+1.2
	comp=Z,4.5nm,1.4s						
MOOW	Moose Ponds	49.36	324	*e*P	P	05 40 05.5	+0.1
	comp=Z,1.5nm,0.8s						
TPNV	Topopah Spring	49.37	314	P	P	05 40 06.2	+0.7
	baz=117						
RLMT	Red Lodge	49.38	327	*e*P	P	05 40 05.5	0.0
	comp=Z,4.0nm,1.5s						
IMW	Indian Meadow	49.56	324	*e*P	P	05 40 07.2	+0.2
	comp=Z,1.6nm,0.6s						
BOZ	Bozeman (W)	50.98	326	P	P	05 40 17.7	+0.3
	baz=128						
BOZ	Bozeman (W)	50.98	326	*e*P	P	05 40 18.3	+0.8
	comp=Z,1.2nm,0.7s						
HLID	Hailey	51.44	322	P	P	05 40 21.2	+0.3
	baz=123						
HLID	Hailey	51.44	322	*e*P	P	05 40 21.3	+0.4
	comp=Z,1.3nm,0.8s						
NVAR	Mina Array Bea	51.48	315	P	P	05 40 21.8	+0.4
	comp=Z,0.5nm,0.6s,baz=120,slow=5.7,SNR=4.2						
EGMT	Eagleton	51.51	329	*e*P	P	05 40 21.8	+0.5
	comp=Z,2.3nm,0.9s						
LRM	Limekiln Ridge	51.58	326	*e*P	P	05 40 22.6	+0.6
HRY	Holter Researc	51.77	327	*e*P	P	05 40 24.0	+0.7
FFC	Flin Flon	53.08	339	*e*P	P	05 40 32.0	-0.6
	comp=Z,2.1nm,0.4s						
F10A	Beach Ranch, E	54.42	323	*e*P	P	05 40 42.5	-0.1
G08A	Pilot Rock	55.12	322	*e*P	P	05 40 48.2	+0.5
	comp=Z,3.2nm,0.7s						
J05D	Fort Rock, OR	55.62	319	P	P	05 40 51.5	+0.2
	baz=116						
YBH	Yreka Blue Hor	55.94	317	P	P	05 40 52.4	-1.3
	comp=Z,1.0nm,0.6s,baz=229,slow=15,SNR=5.3						
YBH	Yreka Blue Hor	55.94	317	*e*P	P	05 40 52.6	-1.0
	comp=Z,4.1nm,1.5s						
KBO	Bosley Butte	57.17	317	*e*P	P	05 41 03.2	+0.9
	comp=Z,135nm,1.5s						
KEBM	Edson Butte	57.50	317	*e*P	P	05 41 06.4	+1.8
	comp=Z,41nm,1.4s						
YKA	Yellowknife Ar	63.26	340	P	P	05 41 42.6	-0.6
	comp=Z,2.8nm,0.6s,baz=133,slow=6.5,SNR=15						
INK	Inuvik	73.03	340	P	P	05 42 43.6	-0.3
	comp=Z,1.2nm,0.7s,baz=84,slow=5.5,SNR=6.4						
INK	Inuvik	73.03	340	*e*P	P	05 42 43.6	-0.3
	comp=Z,1.6nm,0.8s						
BMRM	Bremner River	75.12	331	*e*P	P	05 42 57.3	+1.0
	comp=Z,32nm,1.5s						
ILAR	Eielson Array	76.96	335	P	P	05 43 06.1	-0.5
	comp=Z,0.3nm,0.5s,baz=132,slow=4.5,SNR=4.7						
GHO	Glory Hole Cre	77.31	332	*e*P	P	05 43 08.2	-0.5
	comp=Z,21nm,1.4s						
PPLA	Purkeypile	78.98	333	*e*P	P	05 43 17.6	-0.3
	comp=Z,11nm,1.3s						
CAST	Castle Rocks	78.99	333	*e*P	P	05 43 18.1	+0.2
	comp=Z,1.6nm,1.1s						
SVW2	Sparrevohn	80.42	331	*e*P	P	05 43 24.8	-0.8
	comp=Z,16nm,1.4s						
LZH	Lanzhou	137.22	4	*e*PKP	PKPdf	05 50 36.0	-1.0
LZH				pPKP	pPKPdf	05 51 16.0	-2.0
LZH				sPKP		05 51 33.8	
AS01	Alice Springs	149.09	234	*e*PKPbc	PKPbc	05 51 00.8	-1.5
ASAR	Alice Springs	149.12	234	PKPbc	PKPbc	05 51 00.5	-1.8
	comp=Z,0.7nm,0.5s,baz=112,slow=3.6,SNR=7.6						
WRA	Warramunga Arr	150.35	241	PKPbc	PKPbc	05 51 03.9	-1.5
	comp=Z,0.8nm,0.4s,baz=107,slow=2.8,SNR=19						

*IDC **13** 05:31:45.6±2.9, 32°.47N×88°.73E, h0^{km}, mb3.4/3, mb1 3.7/3, mb1mx3.3/70, mbtmp3.5/3, MS3.6/2, Ms1 3.5/2, ms1mx2.6/48, Error ellipse: s-maj=93.3km s-min=29.5km az=78.0*

ISC 13 05:31:52.6±1.7**, 32°.7N**±0°.2×**89°.2E**±0°.3**, h35^{km}, n8,** σ**0^{s}.90**/5**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMQ	Urumqi	11.15	354	*e*P	Pn	05 34 20.9	-8.7
WMQ				smax	smax		
	comp=N,76nm,0.5s						
WMQ				smax	smax		
	comp=E,27nm,0.7s						
MKAR	Makanchi Array	15.02	341	Pn	P	05 35 27.5	+0.2
	comp=E,0.1nm,0.3s,baz=154,slow=9.2,SNR=5.8						
CMAR	Chiang Mai Arr	16.68	146	Pn	P	05 35 46.7	+0.9
	comp=E,0.8nm,0.3s,baz=332,slow=9.4,SNR=3.5						
SONM	Songino Array	19.95	36	P	Pn	05 36 23.6	+0.1
	comp=E,0.7nm,0.8s,baz=220,slow=12,SNR=5.0						
ZALV	Zalesovo Beam	21.46	353	P	P	05 36 37.6	-0.1
	comp=E,2.0nm,0.6s,baz=172,slow=12,SNR=8.0						
KBZ	Khabaz	37.55	301	LR	LR	05 58 01.5	
	comp=E,25nm,20.5s,baz=72,slow=42						
JHJ	Hachijo jima 2	42.13	75	LR	LR	05 58 26.3	
	comp=E,279nm,19.6s,baz=84,slow=38						
WRA	Warramunga Arr	67.85	134	P	P	05 42 46.7	-0.8
	comp=E,0.3nm,0.5s,baz=324,slow=6.3,SNR=13						

*ISCJB **13** 05:38:22.8±0.5, 31°.26S±0°.06×179°.2W±0°.2, h350^{km}, mb3.3/3, Error ellipse: s-maj=18.7km s-min=4.6km az=21.3*

*IDC **13** 05:38:24.8±5.6, 31°.30S×179°.76W, h348^{km}±58^{km}, mb3.2/3, mb1 3.4/4, mb1mx3.1/48, mbtmp4.1/4, Error ellipse: s-maj=61.1km s-min=30.3km az=10.0*

*WEL **13** 05:38:26.5±0.8, 31°S±6°×17°9W±1°5, h311^{km}±10^{km}*

ISC 13 05:38:23.5±0.7**, 31°.36S**±0°.07×**179°.2W**±0°.1**, h350^{km}, n74,** σ**2^{s}.69**/83**, mb3.2**/3**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.34	27	P	Pn	05 39 18.6	+1.2
GLKZ				S	S	05 39 58.9	-1.7
RAO	Raoul Island	2.35	27	S	S	05 39 57.5	-3.3
	187nm,0.3s,baz=285,slow=24,SNR=6.4						
RIZ	Raoul Island	2.36	27	S	S	05 39 57.4	-3.4
MXZ	Matakaoa Point	6.53	198	P	Pn	05 40 03.8	+3.5
MXZ				S	S	05 41 18.1	-0.8
GRZ	Great Barrier	6.63	221	P	Pn	05 40 04.5	+3.1
WMGZ	Waiomatatini S	6.75	197	P	Pn	05 40 07.2	+4.4
WMGZ				S	S	05 41 23.3	-0.2
KUZ	Kuaotunu	6.85	217	P	Pn	05 40 08.0	+3.9
HAZ	Te Kaha	6.86	201	P	Pn	05 40 07.6	+3.5
HAZ				S	S	05 41 26.4	+0.5
PKGZ	Pakihiroa	6.90	199	P	Pn	05 40 07.4	+2.8
PUZ	Puketiti	7.03	197	P	Pn	05 40 07.8	+1.7
PUZ				S	S	05 41 27.8	-1.7
PUZ	Puketiti	7.03	197	P	S	05 41 26.9	-2.6
RUGZ	Raukumara Rang	7.09	201	P	Pn	05 40 08.5	+1.6
WCZ	Waipu Caves	7.09	228	P	Pn	05 40 09.3	+2.5
OUZ	Omahuta	7.19	236	P	Pn	05 40 09.0	+1.0
TWGZ	Tauwhareparae	7.20	198	P	Pn	05 40 11.4	+3.3
TWGZ				S	S	05 41 33.7	+0.5
TWGZ	Tauwhareparae	7.20	198	P	S	05 41 27.6	-5.6
WHRZ	Whale Island	7.22	205	P	Pn	05 40 13.8	+5.4
WHRZ				S	S	05 41 36.0	+2.2
OPRZ	Ohinepanea	7.37	208	P	Pn	05 40 14.6	+4.5
MKAZ	Moumakai	7.42	218	P	Pn	05 40 14.0	+3.4
CNGZ	Carnagh Statio	7.43	196	P	Pn	05 40 13.4	+2.7
MWZ	Matawai	7.47	201	P	Pn	05 40 12.2	+0.9
MWZ				S	S	05 41 38.3	-0.8
MWZ	Matawai	7.47	201	P	S	05 41 39.2	0.0
TKGZ	Te Karaka	7.48	198	P	Pn	05 40 14.2	+2.9
TKGZ	Te Karaka	7.48	198	P	S	05 41 34.6	-4.6
URZ	Urewera	7.54	203	P	Pn	05 40 12.3	+0.3
	8.2nm,0.3s,baz=272,slow=3.6,SNR=41						
URZ				S	S	05 41 38.5	-1.9
	10nm,0.3s,baz=67,slow=24,SNR=15						
URZ	Urewera	7.54	203	P	Pn	05 40 12.8	+0.7
URZ				S	S	05 41 38.9	-1.5
URZ	Urewera	7.54	203	P	S	05 41 42.5	+2.1
RAGZ	Rawiri	7.66	201	P	Pn	05 40 14.5	+1.0
RIGZ	Rimuhau	7.75	198	P	Pn	05 40 18.0	+3.4
RIGZ	Rimuhau	7.75	198	P	S	05 41 38.1	-7.1
RRRZ	Republican Roa	7.82	206	P	S	05 41 49.5	+2.9
MUGZ	Murupara	7.85	204	P	Pn	05 40 16.0	+0.3
PRGZ	Paritu Road	7.93	197	P	S	05 41 40.9	-8.0
SNGZ	Shannon Statio	7.94	200	P	S	05 41 42.8	-6.5
KNZ	Kokohu	8.07	198	P	Pn	05 40 18.4	+0.1
KNZ	Kokohu	8.07	198	P	S	05 41 44.1	-7.9
MHGZ	Mahia Peninsul	8.14	196	P	S	05 41 49.3	-4.2
RAHZ	Arahi	8.14	201	P	S	05 41 52.6	-1.1
MTHZ	Maungataniwha	8.16	203	P	S	05 41 50.4	-3.7
WHHZ	Waihua	8.25	200	P	S	05 41 51.0	-4.8
NMHZ	Naumai	8.40	202	P	S	05 41 58.6	-0.7
ARHZ	Aropaoanui	8.49	201	P	S	05 41 55.5	-5.7
BKZ	Black Stump Fm	8.56	203	P	Pn	05 40 23.9	-0.3
BKZ	Black Stump Fm	8.56	203	P	S	05 41 57.0	-5.9
WTVZ	West Tongariro	8.85	208	P	Pn	05 40 28.7	+1.0
TWVZ	Taurewa	8.88	208	P	Pn	05 40 26.6	-1.4
TUVZ	Tukino	8.96	207	P	Pn	05 40 28.9	-0.1
FWVZ	Far West T-bar	8.99	207	P	Pn	05 40 27.5	-1.9
WHVZ	Whangaehu Hut	9.00	207	P	Pn	05 40 29.4	-0.2
BHHZ	Black Hill Sta	9.00	204	P	Pn	05 40 29.4	-0.1
KAHZ	Kahuranaki	9.02	200	P	Pn	05 40 30.4	+0.8
TRVZ	Turoa	9.03	207	P	Pn	05 40 29.8	-0.1
MOVZ	Moawhango	9.04	206	P	Pn	05 40 30.6	+0.7
PXZ	Pawanui	9.24	199	P	Pn	05 40 32.1	-0.1
PNHZ	Pukenui	9.34	203	P	Pn	05 40 32.1	-1.3
PRHZ	Porangahau	9.52	200	P	Pn	05 40 36.3	+0.7
TSZ	Takapari Road	9.54	203	P	Pn	05 40 35.0	-0.9
PKE	Pukeiti	9.62	214	P	P	05 40 41.0	+2.4
WAZ	Wanganui	9.64	208	P	P	05 40 38.1	-0.7
DVHZ	Dannevirke	9.70	202	P	Pn	05 40 37.8	+0.1
PRWZ	Pori Road	9.99	202	P	Pn	05 40 41.0	-0.1
BFZ	Birch Farm	10.02	201	P	Pn	05 40 40.1	-1.4
HOWZ	Holdsworth Sta	10.45	203	P	Pn	05 40 43.0	-3.6
ASAR	Alice Springs	42.09	269	P	P	05 45 40.0	-2.6
	0.6nm,0.7s,baz=102,slow=7.8,SNR=5.8						
WRA	Warramunga Arr	43.16	274	P	P	05 45 48.0	-3.1
	1.1nm,0.7s,baz=111,slow=8.0,SNR=29						
SNAA	Sanae	77.22	179	P	P	05 49 43.4	+4.2
VNA3	Neumayer Olymp	77.41	177	P	P	05 49 44.4	+4.3
KSRS	Korea Array	84.45	320	P	P	05 50 17.5	+0.2
	1.2nm,0.5s,baz=143,slow=6.4,SNR=5.6						
KURBB	Kurchatov Arra	121.03	313	PKP	PKPdf	05 56 34.4	0.0
	0.3nm,0.3s,baz=110,slow=2.0,SNR=7.5						
BVAR	Borovoye Array	126.40	315	PKP	PKPdf	05 56 44.9	+0.4
	0.9nm,0.7s,baz=113,slow=1.9,SNR=6.4						
FINES	FINESS Array B	145.69	339	PKP	PKPbc	05 57 20.3	-0.6
	5.4nm,0.4s,baz=38,slow=5.3,SNR=56						
FINES				PKPbc	PKPab	05 57 21.1	-0.9
	5.4nm,0.4s,baz=50,slow=4.8,SNR=58						
NB2	NORSAR Subarra	149.54	350	PKP	PKPbc	05 57 31.9	+0.7
	comp=Z,2.8nm,0.7s,baz=24,slow=2.9						
HFS	Hagfors	149.97	347	PKPbc	PKPbc	05 57 33.1	+0.9
	comp=Z,3.9nm,0.8s,baz=116,slow=3.4,SNR=6.6						
HFS				PKPab	PKPab	05 57 38.7	-0.5
	comp=Z,2.2nm,0.5s,baz=73,slow=5.0,SNR=14						
AKASG	Malin Array Be	151.44	321	PKPbc	PKPbc	05 57 36.3	+0.5
	comp=Z,2.7nm,0.7s,baz=58,slow=2.4,SNR=7.4						

*ROM **13** 06:09:50.4±0.2, 44°.505N±0°.010×6°.73E±0°.02, h10^{km}, ML2.4/14*

*GEN **13** 06:09:50.1, 44°.47N×6°.67E, h5^{km}, ML2.4*

*CSEM **13** 06:09:50.0±0.1, 44°.49N×6°.71E, h5^{km}, ML2.9/7, Error ellipse: s-maj=3.5km s-min=2.4km az=61.0*

*ISCJB **13** 06:09:50.6±0.3, 44°.49N±0°.02×6°.74E±0°.03, h19^{km}±3^{km}, Error ellipse: s-maj=4.0km s-min=2.6km az=158.8*

*LDG **13** 06:09:50.4±0.0, 44°.49N×6°.70E, h2^{km}, Md3.0/2, Ml3.0/8, Error ellipse: s-maj=1.0km s-min=0.8km az=57.0*

*STR **13** 06:09:51.1±0.2, 45°N±1°×°±°, h6^{km}±2^{km}, M2.6/7, MLv2.6/7*

ISC 13 06:09:50.6±0.8**, 44°.49N**±0°.02×**6°.74E**±0°.02**, h18^{km}**±4^{km}**, n75,** σ**1^{s}.01**/107**, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SURF	Saint Ours	0.05	95	Pg	Pg	06 09 52.9	-1.2
SURF	Saint Ours	0.05	95	Pg	Pg	06 09 52.9	-1.2
SURF				Sg	Sg	06 09 54.5	-2.0
OGAG	Argentiere	0.14	258	Pg	Pg	06 09 57.0	+2.1
OGAG				Sg	Sg	06 10 01.6	+3.8
MBDF	Montbardon	0.24	6	*e*Pg	Pg	06 09 55.5	-0.8
MBDF				*e*Sg	Sg	06 09 58.9	-1.3
MBDF	Montbardon	0.24	6	*e*Pg	Pg	06 09 55.5	-0.8
MBDF				*e*Sg	Sg	06 09 58.9	-1.3
PZZ	Stroppo	0.27	85	P	Pg	06 09 56.6	-0.1
PZZ				S	Sg	06 10 00.8	-0.1
PZZ				AML	AML		
	comp=E,5370µm,0.9s						
PZZ				AML	AML		
	comp=N,4240µm,0.6s						
PZZ				AML	AML		
	comp=E,5370µm,0.9s						
PZZ				AML	AML		
	comp=N,4240µm,0.6s						
PZZ				AML	AML		
	comp=N,4240µm,0.6s						
PZZ				AML	AML		
	comp=E,5370µm,0.9s						
ISO	Isola	0.38	143	Pg	Pg	06 09 57.9	-0.6
ISO	Isola	0.38	143	Pg	Pg	06 09 57.9	-0.6
ISO				Sg	Sg	06 10 02.6	-1.2
RRL	Rocca Remolon	0.44	5	P	Pg	06 09 59.2	-0.4
RRL	Rocca Remolon	0.44	5	P	Pg	06 09 59.3	-0.4
RRL				S	Sg	06 10 05.4	-0.3
RRL				AML	AML		
	comp=E,486µm,0.5s						
RRL				AML	AML		
	comp=N,431µm,0.4s						
RRL				AML	AML		
	comp=E,486µm,0.5s						
RRL				AML	AML		
	comp=N,431µm,0.4s						
RRL				AML	AML		
	comp=N,431µm,0.4s						
RRL				AML	AML		
	comp=E,486µm,0.5s						
STV	Sant Anna di V	0.48	120	P	Pg	06 10 00.2	-0.2
STV	Sant Anna di V	0.48	120	P	Pg	06 10 00.2	-0.2
STV				AML	AML		
	comp=E,452µm,0.2s						
STV				AML	AML		
	comp=N,562µm,1.5s						
STV				AML	AML		
	comp=E,452µm,0.2s						
STV				AML	AML		
	comp=N,562µm,1.5s						
STV				AML	AML		
	comp=N,562µm,1.5s						
STV				AML	AML		
	comp=E,452µm,0.2s						
OGDI	Digne	0.49	220	Pn	Pb	06 10 01.1	+0.4
OGDI				Sg	Sb	06 10 08.2	+0.6
ENR	Entracque	0.55	118	P	Pg	06 10 01.1	-0.6
ENR	Entracque	0.55	118	P	Pg	06 10 01.4	-0.3
ENR				S	Sg	06 10 09.6	+0.5
ENR				AML	AML		
	comp=E,561µm,1.1s						
ENR				AML	AML		
	comp=N,509µm,0.4s						
ENR				AML	AML		
	comp=E,561µm,1.1s						
ENR				AML	AML		
	comp=N,509µm,0.4s						
ENR				AML	AML		
	comp=E,561µm,1.1s						
ENR				AML	AML		
	comp=N,509µm,0.4s						
BNI	Bardonecchia	0.57	356	P	Pg	06 10 01.5	-0.5
BNI				S	Sg	06 10 09.0	-0.6
BNI				AML	AML		
	comp=E,144µm,0.6s						
BNI				AML	AML		
	comp=N,100µm,0.5s						
BNI				AML	AML		
	comp=E,144µm,0.6s						
BNI				AML	AML		
	comp=N,100µm,0.5s						
BNI				AML	AML		
	comp=N,100µm,0.5s						
BNI				AML	AML		
	comp=E,144µm,0.6s						
LUCF	Luceram	0.74	143	Pg	Pg	06 10 04.9	-0.1
LUCF	Luceram	0.74	143	Pg	Pg	06 10 04.9	-0.1
LUCF				Sg	Sg	06 10 14.0	-0.9
CALF	Calern	0.74	170	Pg	Pg	06 10 05.0	-0.2
CALF	Calern	0.74	170	Pg	Pg	06 10 05.0	-0.2
CALF				Sg	Sg	06 10 15.0	-0.1
ORIF	Oris-en-Rattie	0.75	306	*e*Pg	Pg	06 10 04.0	-1.3
ORIF				*e*Sg	Sg	06 10 14.0	-1.3
ORIF	Oris-en-Rattie	0.75	306	*e*Pg	Pg	06 10 04.0	-1.3
ORIF				*e*Sg	Sg	06 10 14.0	-1.3
ORIF	Oris-en-Rattie	0.75	306	P	Pg	06 10 04.0	-1.3
ORIF				AML	AML		
	comp=E,178µm,1.0s						
ORIF				AML	AML		
	comp=N,205µm,1.4s						
ORIF				AML	AML		
	comp=N,205µm,1.4s						
ORIF				AML	AML		
	comp=E,178µm,1.0s						
RSP	Reno Superiore	0.76	29	P	Pg	06 10 05.2	-0.3
RSP	Reno Superiore	0.76	29	P	Pg	06 10 05.4	-0.1
RSP				AML	AML		
	comp=E,154µm,0.3s						
RSP				AML	AML		
	comp=N,162µm,0.5s						
RSP				AML	AML		
	comp=E,154µm,0.3s						
RSP				AML	AML		
	comp=N,162µm,0.5s						
RSP				AML	AML		
	comp=N,162µm,0.5s						
RSP				AML	AML		
	comp=E,154µm,0.3s						
SAOF	Saorge	0.77	130	P	Pg	06 10 05.4	-0.3
SAOF				S	Sg	06 10 15.9	0.0
SAOF				AML	AML		
	comp=E,284µm,0.3s						
SAOF				AML	AML		
	comp=N,300µm,1.6s						
SAOF				AML	AML		
	comp=E,284µm,0.3s						
SAOF				AML	AML		
	comp=N,300µm,1.6s						
SAOF				AML	AML		
	comp=N,300µm,1.6s						
SAOF				AML	AML		
	comp=E,284µm,0.3s						
SBF	Sospel	0.80	141	*e*Pg	Pg	06 10 05.8	-0.4
SBF	Sospel	0.80	141	*e*Pg	Pg	06 10 05.8	-0.4
GBOS	Grotte di Boss	0.83	107	P	Pg	06 10 06.5	-0.2
REVF	Revere	0.87	149	Pg	Pb	06 10 08.0	+0.7
REVF	Revere	0.87	149	Pg	Pg	06 10 07.0	-0.6
REVF				Sg	Sb	06 10 19.7	+1.1
FRF	La Foret Royal	0.93	184	*e*Pg	Pg	06 10 07.8	-0.8
FRF				*e*Sn	Sb	06 10 21.1	+1.0
	comp=E,55nm,0.2s						
FRF	La Foret Royal	0.93	184	*e*Pg	Pg	06 10 07.8	-0.8
FRF				*e*Sn	Sb	06 10 21.1	+1.0
	comp=E,27nm,0.2s						
NEGI	Seborga	0.94	132	P	Pg	06 10 08.6	-0.3
NEGI	Seborga	0.94	132	P	Pg	06 10 08.6	-0.3
NEGI				AML	AML		
	comp=E,355µm,0.2s						
NEGI				AML	AML		
	comp=N,317µm,0.3s						
NEGI				AML	AML		
	comp=E,355µm,0.2s						
NEGI				AML	AML		
	comp=N,317µm,0.3s						
SMRF	Simiane la Rot	0.98	239	*e*P	Pn	06 10 10.2	+0.7
SMRF				*e*Sn	Sb	06 10 22.4	+0.7
	comp=N,96nm,0.3s						
SMRF	Simiane la Rot	0.98	239	*e*P	Pn	06 10 10.2	+0.7
SMRF				*e*Sn	Sb	06 10 22.4	+0.7
	comp=N,48nm,0.3s						
IMI	Imperia	1.01	124	P	Pg	06 10 09.8	-0.4
IMI	Imperia	1.01	124	P	Pg	06 10 09.7	-0.4
IMI				AML	AML		
	comp=E,356µm,0.2s						
IMI				AML	AML		
	comp=N,474µm,1.6s						
IMI				AML	AML		
	comp=N,474µm,1.6s						
IMI				AML	AML		
	comp=E,356µm,0.2s						
LPG	La Plagne	1.01	1	*e*Pg	Pg	06 10 10.0	-0.3
LPG				*e*Sn	Sb	06 10 23.8	+0.9
	comp=E,41nm,0.3s						
LPG	La Plagne	1.01	1	*e*Pg	Pg	06 10 10.0	-0.3
LPG				*e*Sn	Sb	06 10 23.8	+0.9
	comp=E,20nm,0.3s						
RORO	Rocca Rossa	1.02	111	P	Pg	06 10 09.6	-0.8
RORO	Rocca Rossa	1.02	111	P	Pg	06 10 09.8	-0.7
RORO				AML	AML		
	comp=E,246µm,1.2s						
RORO				AML	AML		
	comp=N,252µm,1.0s						
RORO				AML	AML		
	comp=N,252µm,1.0s						
RORO				AML	AML		
	comp=E,246µm,1.2s						
LPL	La Plagne	1.03	360	*e*Pg	Pg	06 10 09.3	-1.3
LPL	La Plagne	1.03	360	*e*Pn	Pg	06 10 10.1	-0.5
LPL				*e*Sn	Sb	06 10 24.3	+1.0
	comp=E,26nm,0.3s						
LPL	La Plagne	1.03	360	*e*Pg	Pg	06 10 09.3	-1.3
LPL	La Plagne	1.03	360	*e*Pn	Pg	06 10 10.1	-0.5
LPL				*e*Sn	Sb	06 10 24.3	+1.0
	comp=E,13nm,0.3s						
QLNO	Quiliano	1.16	97	AML	AML		
	comp=N,191µm,0.4s						
QLNO				AML	AML		
	comp=E,208µm,1.3s						
QLNO				AML	AML		
	comp=N,191µm,0.4s						
QLNO				AML	AML		
	comp=E,208µm,1.3s						
LMR	La Mourre	1.16	188	*e*Pn	Pg	06 10 11.5	-1.6
LMR	La Mourre	1.16	188	*e*P	Pn	06 10 13.3	+1.3
LMR				*e*Sn	Sg	06 10 26.7	-1.6
	comp=E,39nm,0.2s						
LMR	La Mourre	1.16	188	*e*Pn	Pg	06 10 11.5	-1.6
LMR	La Mourre	1.16	188	*e*P	Pn	06 10 13.3	+1.3
LMR				*e*Sn	Sg	06 10 26.7	-1.6
	comp=E,20nm,0.2s						
FINB	Finale Ligure	1.18	105	P	Pg	06 10 12.9	-0.5
FINB				AML	AML		
	comp=E,404µm,0.3s						
FINB				AML	AML		
	comp=N,10µm,0.3s						
FINB				AML	AML		
	comp=E,404µm,0.3s						
FINB				AML	AML		
	comp=N,10µm,0.3s						
RSL	Roselend	1.21	356	Pn	Pg	06 10 13.3	-0.6
RSL				Pg	Pn	06 10 14.4	+1.7
RSL	Roselend	1.21	356	Pn	Pg	06 10 13.3	-0.6
RSL	Roselend	1.21	356	Pg	Pn	06 10 14.4	+1.7
PCP	Piancastagn	1.29	87	P	Pn	06 10 14.6	+0.8
PCP	Piancastagn	1.29	87	P	Pn	06 10 14.8	+1.0
PCP				AML	AML		
	comp=E,166µm,0.7s						
PCP				AML	AML		
	comp=N,182µm,1.3s						
PCP				AML	AML		
	comp=E,166µm,0.7s						
PCP				AML	AML		
	comp=N,182µm,1.3s						
VIVF	Saint-Julien-l	1.52	285	*e*Pn	Pn	06 10 16.3	-0.6
VIVF	Saint-Julien-l	1.52	285	*e*Pg	Pn	06 10 17.5	+0.6
VIVF				*e*Sn	Sn	06 10 35.3	-1.0
	comp=N,16nm,0.3s						
VIVF	Saint-Julien-l	1.52	285	*e*Pn	Pn	06 10 16.3	-0.6
VIVF	Saint-Julien-l	1.52	285	*e*Pg	Pn	06 10 17.5	+0.6
VIVF				*e*Sn	Sn	06 10 35.3	-1.0
	comp=N,8.0nm,0.3s						
OG35	Corcelles	1.76	333	Pn	Pb	06 10 22.6	+0.2
OG35				Pg	Pg	06 10 23.9	-0.6
OG35	Corcelles	1.76	333	Pn	Pb	06 10 22.6	+0.2
OG35	Corcelles	1.76	333	Pg	Pg	06 10 23.9	-0.6
OG35				Sg	Sg	06 10 47.7	+0.3
LASF	Ste Croix	2.11	260	*e*Pn	Pn	06 10 24.4	-0.6

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LASF  Ste Croix         2.11 260 eP     Pn    06 10 26.4 +1.4
LASF  Ste Croix         2.11 260 ePn    Pn    06 10 24.4 -0.6
LASF  Ste Croix         2.11 260 eP     Pn    06 10 26.4 +1.4
PGF   Pioggiola         2.54 139 ePn    Pn    06 10 30.4 -0.6
PGF   Pioggiola         2.54 139 eP     Pn    06 10 32.1 +1.1
PGF                              eSn    Sn    06 11 00.1 -1.4
      comp=N,7.6nm,0.2s
PGF   Pioggiola         2.54 139 ePn    Pn    06 10 30.4 -0.6
PGF   Pioggiola         2.54 139 eP     Pn    06 10 32.1 +1.1
PGF                              eSn    Sn    06 11 00.1 -1.4
      comp=N,3.8nm,0.2s
LBL   Lubilhac          2.59 288  P     Pn    06 10 33.3 +1.6
LBL   Lubilhac          2.59 288  P     Pn    06 10 33.3 +1.6
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*MDD **13** 06:19:43.0±1.3, 35°.95N×10°.18W, h10km, mbLg2.8/32, Error ellipse: s-maj=12.0km s-min=10.3km az=71.0, PRXIMO*
*CNRM **13** 06:19:43.4, 35°.51N×9°.99W, h30km, ML3.5*
*CSEM **13** 06:19:44.7±0.3, 36°.04N×10°.05W, h20km, ML2.8, Error ellipse: s-maj=6.4km s-min=4.9km az=62.0*
*INMG **13** 06:19:44.2±1.2, 35°.86N×10°.20W, h23km±12km, ML2.6, Error ellipse: s-maj=11.9km s-min=3.6km az=58.0*
*IGIL **13** 06:19:44.1, 35°.87N×10°.18W, h22km, ML2.4*
ISC 13 06:19:38.1±2.2**, 35°.84N**±0°.08×**10°.26W**±0°.09**, h10**km**, n113,** σ**2s.09**/192**, 6C-4D, Azores-Cape St. Vincent Ridge**

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Code  Station Name       Δ°  AZ°   Phase ID        Time      Res
                                  Op     ISC     h  m  s    ISC
PFVI  Vila Bisbo        1.73  41⇑iPn    Pn    06 20 10.5 +2.1
PFVI                             eSn    Sn    06 20 30.2 -0.3
PFVI                              A     A     06 20 33.7
      16nm,0.2s
PFVI  Vila Bisbo        1.73  41 ⇑P     Pn    06 20 10.4 +2.1
      28nm,0.1s,SNR=18
PFVI                              S     Sn    06 20 30.5 -0.1
      25nm,0.1s,SNR=7.9
PFVI  Vila Bisbo        1.73  41⇑iPn    Pn    06 20 10.5 +2.1
PFVI                             eSn    Sn    06 20 30.2 -0.3
PFVI                              S     Sn    06 20 30.5 -0.1
      25nm,0.1s,SNR=7.9
MORF  Marmelete         1.96  41 eP     Pn    06 20 13.6 +2.1
MORF                             eS     Sn    06 20 35.1 -1.0
MORF                              AML   AML   06 20 35.5
      comp=N,32nm,0.2s
MORF  Marmelete         1.96  41 ePn    Pn    06 20 13.6 +2.1
MORF                             eSn    Sn    06 20 35.4 -0.7
MORF                              A     A     06 20 41.8
      comp=N,20nm,0.2s
MORF  Marmelete         1.96  41  P     Pn    06 20 13.6 +2.1
MORF                              S     Sn    06 20 35.1 -1.0
      comp=N,32nm,0.2s
MORF  Marmelete         1.96  41  P     Pn    06 20 13.6 +2.1
MORF                             eSn    Sn    06 20 35.4 -0.7
PTEO  Sao Teotonio      2.11  35 ePn    Pn    06 20 15.4 +2.0
PTEO                             eSn    Sn    06 20 38.9 -0.8
PTEO                              A     A     06 20 43.7
      comp=N,12nm,0.1s
PTEO  Sao Teotonio      2.11  35  P     Pn    06 20 15.4 +2.0
PTEO                              S     Sn    06 20 38.9 -0.8
      comp=N,6.2nm,0.1s
PTEO  Sao Teotonio      2.11  35  P     Pn    06 20 15.4 +2.0
PTEO                              S     Sn    06 20 38.9 -0.8
      comp=N,6.2nm,0.1s
PBDV  Barranco-do-Ve    2.34  53⇓iPn    Pn    06 20 19.3 +2.6
PBDV                             eSn    Sn    06 20 44.7 -0.9
PBDV                              A     A     06 20 50.9
      comp=N,8.1nm,0.1s
PBDV  Barranco-do-Ve    2.34  53  P     Pn    06 20 19.3 +2.6
PBDV                              S     Sn    06 20 44.7 -0.9
      comp=N,8.1nm,0.1s
PBDV  Barranco-do-Ve    2.34  53  P     Pn    06 20 19.3 +2.6
PBDV                              S     Sn    06 20 44.7 -0.9
      comp=N,8.1nm,0.1s
PCVE  Castro Verde      2.53  44⇑ePn    Pn    06 20 21.7 +2.4
PCVE                             eSn    Sn    06 20 50.0 -0.1
PCVE                              A     A     06 20 51.2
      comp=N,8.6nm,0.2s
PCVE  Castro Verde      2.53  44  P     Pn    06 20 21.7 +2.4
PCVE                              S     Sn    06 20 50.0 -0.1
      comp=N,8.6nm,0.2s
PCVE  Castro Verde      2.53  44  P     Pn    06 20 21.7 +2.4
PCVE                              S     Sn    06 20 50.0 -0.1
      comp=N,8.6nm,0.2s
PVAQ  Vaqueiros         2.58  52⇑iPn    Pn    06 20 22.3 +2.4
PVAQ                             eSn    Sn    06 20 50.4 -0.9
PVAQ                              A     A     06 20 52.7
      comp=N,13nm,0.1s
PVAQ  Vaqueiros         2.58  52  P     Pn    06 20 22.3 +2.4
PVAQ                              S     Sn    06 20 50.4 -0.9
      comp=N,13nm,0.1s
PVAQ  Vaqueiros         2.58  52  P     Pn    06 20 22.3 +2.4
PVAQ                              S     Sn    06 20 50.4 -0.9
      comp=N,13nm,0.1s
MESJ  Messejana         2.58  39 eP     Pn    06 20 22.1 +2.1
MESJ                             eS     Sn    06 20 50.0 -1.5
MESJ                              AML   AML   06 20 52.5
      comp=N,16nm,0.2s
MESJ  Messejana         2.58  39 ePn    Pn    06 20 22.1 +2.1
MESJ                             eSn    Sn    06 20 50.7 -0.8
MESJ                              A     A     06 20 53.5
      comp=N,12nm,0.1s
MESJ  Messejana         2.58  39  P     Pn    06 20 22.1 +2.1
MESJ                              S     Sn    06 20 50.0 -1.5
      comp=N,16nm,0.2s
MESJ  Messejana         2.58  39  P     Pn    06 20 22.1 +2.1
MESJ                              S     Sn    06 20 50.0 -1.5
      comp=N,16nm,0.2s
MESJ                             eSn    Sb    06 20 50.7 -5.7
PNCL  Nicolau / Gran    2.66  31 ePn    Pn    06 20 22.9 +1.8
PNCL                             eSn    Sn    06 20 52.4 -1.0
PNCL                              A     A     06 20 56.0
      comp=N,18nm,0.1s
PNCL  Nicolau / Gran    2.66  31 ePn    Pn    06 20 22.9 +1.8
PNCL                             eSn    Sn    06 20 52.4 -1.0
EGRO  El Granado        2.80  52  P     Pn    06 20 25.3 +2.3
      comp=N,6.4nm,0.1s,SNR=28
EGRO                              S     Sn    06 20 56.5 -0.4
      comp=N,6.1nm,0.2s
EGRO  El Granado        2.80  52  P     Pn    06 20 25.3 +2.3
      comp=N,6.4nm,0.1s,SNR=28
EGRO                              S     Sn    06 20 56.5 -0.4
      comp=N,6.1nm,0.2s
PBEJ  Beja              2.91  41 ePn    Pn    06 20 27.5 +3.0
PBEJ                             eSn    Sn    06 20 59.1 -0.4
PBEJ                              A     A     06 21 01.0
      comp=N,7.7nm,0.2s
PBEJ  Beja              2.91  41  P     Pn    06 20 27.5 +3.0
PBEJ                              S     Sn    06 20 59.1 -0.4
      comp=N,3.8nm,0.2s
PBEJ  Beja              2.91  41  P     Pn    06 20 27.5 +3.0
PBEJ                              S     Sn    06 20 59.1 -0.4
      comp=N,3.8nm,0.2s
PMST  Lisbon--Monsan    3.02  16 eSn    Sn    06 21 02.6 +0.4
PMST                              A     A     06 21 03.6
      comp=N,34nm,0.9s
PMST  Lisbon--Monsan    3.02  16 eSn    Sn    06 21 02.6 +0.4
PMAFR Mafra             3.21  14⇓ePn    Pn    06 20 31.1 +2.5
PMAFR                            eSn    Sn    06 21 05.8 -1.1
PMAFR                             A     A     06 21 09.5
      comp=N,32nm,0.5s
PMAFR Mafra             3.21  14  P     Pn    06 20 31.2 +2.5
      comp=N,3.9nm,0.1s,SNR=8.2
PMAFR                             S     Sn    06 21 05.1 -1.8
      comp=N,39nm,0.2s,SNR=11
PMAFR Mafra             3.21  14⇓ePn    Pn    06 20 31.1 +2.5
PMAFR                             S     Sn    06 21 05.1 -1.8
      comp=N,39nm,0.2s,SNR=11
PMAFR                            eSn    Sb    06 21 05.8 -8.6
EVO   Evora             3.23  33 ePn    Pn    06 20 30.7 +1.7
EVO                              eSn    Sn    06 21 06.1 -1.4
EVO                               A     A     06 21 07.3
      comp=N,22nm,0.1s
EVO   Evora             3.23  33  P     Pn    06 20 30.7 +1.7
EVO                               S     Sn    06 21 06.1 -1.4
      comp=N,22nm,0.1s
EVO   Evora             3.23  33  P     Pn    06 20 30.7 +1.7
EVO                               S     Sn    06 21 06.1 -1.4
      comp=N,22nm,0.1s
EMIN  Mina Concepcio    3.47  55  P     Pn    06 20 34.1 +2.0
      comp=N,0.5nm,0.1s,SNR=20
EMIN                              S     Sn    06 21 12.6 -0.6
      comp=N,1.3nm,0.1s
EMIN  Mina Concepcio    3.47  55  P     Pn    06 20 34.1 +2.0
      comp=N,0.5nm,0.1s,SNR=20
EMIN                              S     Sn    06 21 12.6 -0.6
      comp=N,1.3nm,0.1s
PBAR  Barrancos         3.48  47 ePn    Pn    06 20 34.2 +1.9
PBAR                             eSn    Sn    06 21 12.6 -1.0
PBAR                              A     A     06 21 19.7
      comp=N,8.8nm,0.2s
PBAR  Barrancos         3.48  47  P     Pn    06 20 34.2 +1.9
PBAR                              S     Sn    06 21 12.6 -1.0
      comp=N,8.8nm,0.2s
PBAR  Barrancos         3.48  47  P     Pn    06 20 34.2 +1.9
PBAR                              S     Sn    06 21 12.6 -1.0
      comp=N,8.8nm,0.2s
PMTG  Montargil         3.61  26 ePn    Pn    06 20 35.9 +1.8
PMTG                             eSn    Sn    06 21 14.8 -2.0
PMTG                              A     A     06 21 18.0
      comp=N,18nm,0.1s
PMTG  Montargil         3.61  26 ePn    Pn    06 20 35.9 +1.8
PMTG                             eSn    Sn    06 21 14.8 -2.0
PESTR Estremoz          3.70  34 ePn    Pn    06 20 36.8 +1.4
PESTR                            eSn    Sn    06 21 17.2 -1.8
PESTR                             A     A     06 21 21.0
      comp=N,3.5nm,0.2s
PESTR Estremoz          3.70  34 ePn    Pn    06 20 36.8 +1.4
PESTR                            eSn    Sn    06 21 17.2 -1.8
RSA   Sarsar            3.75 104  P     Pn    06 20 37.6 +1.5
RSA                               S     Sn    06 21 16.9 -3.3
RSA   Sarsar            3.75 104  P     Pn    06 20 37.6 +1.5
RSA                               S     Sn    06 21 17.0 -3.3
EBAD  Badajoz           3.90  41  P     Pn    06 20 39.8 +1.7
      comp=N,2.9nm,0.1s,SNR=12
EBAD                              S     Sn    06 21 22.0 -1.9
      comp=N,4.9nm,0.1s,SNR=4.5
EBAD  Badajoz           3.90  41  P     Pn    06 20 39.8 +1.7
      comp=N,2.9nm,0.1s,SNR=12
EBAD                              S     Sn    06 21 22.0 -1.9
      comp=N,4.9nm,0.1s,SNR=4.5
PTOM  Tomar             4.05  21 eSn    Sn    06 21 25.4 -2.2
PTOM                              A     A     06 21 29.1
      comp=N,16nm,0.5s
PTOM  Tomar             4.05  21  S     Sn    06 21 25.4 -2.2
      comp=N,7.9nm,0.5s
PTOM  Tomar             4.05  21  S     Sn    06 21 25.4 -2.2
      comp=N,7.9nm,0.5s
PMRV  Marv??o           4.25  32 ePn    Pn    06 20 44.6 +1.7
PMRV                             eSn    Sn    06 21 30.0 -2.6
PMRV                              A     A     06 21 32.7
      comp=N,10.0nm,0.3s
PMRV  Marv??o           4.25  32  P     Pn    06 20 44.6 +1.7
PMRV                              S     Sn    06 21 30.0 -2.6
      comp=N,10.0nm,0.3s
PMRV  Marv??o           4.25  32  P     Pn    06 20 44.6 +1.7
PMRV                              S     Sn    06 21 30.0 -2.6
      comp=N,10.0nm,0.3s
SICH  Sidi Chahed       4.41 112  P     Pn    06 20 45.1 -0.1
PCAS  Casmilo, Conde    4.43  18 ePn    Pn    06 20 47.6 +2.1
PCAS                             eSn    Sn    06 21 35.3 -1.8
PCAS                              A     A     06 21 37.5
      comp=N,5.3nm,0.4s
PCAS  Casmilo, Conde    4.43  18 ePn    Pn    06 20 47.6 +2.1
PCAS                             eSn    Sn    06 21 35.3 -1.8
ECAB  El Cabril         4.48  59 ⇑P     Pn    06 20 48.1 +2.0
      comp=N,1.8nm,0.2s,SNR=18
ECAB                              S     Sn    06 21 35.5 -2.7
      comp=N,0.9nm,0.1s
ECAB  El Cabril         4.48  59  P     Pn    06 20 48.1 +2.0
      comp=N,1.8nm,0.2s,SNR=18
ECAB                              S     Sn    06 21 35.5 -2.7
      comp=N,0.9nm,0.1s
HORN  Hornachuelos      4.49  62  P     Pn    06 20 46.4 +0.2
EMIJ  Mijas             4.50  79  S     Sn    06 21 35.5 -3.3
      comp=N,5.1nm,0.3s,SNR=7.9
PCBR  Castelo Branco    4.56  28 eSn    Sn    06 21 38.0 -2.3
PCBR                              A     A     06 21 40.8
      comp=N,4.0nm,0.3s
PCBR  Castelo Branco    4.56  28  S     Sn    06 21 38.0 -2.3
      comp=N,2.0nm,0.3s
PCBR  Castelo Branco    4.56  28  S     Sn    06 21 38.0 -2.3
      comp=N,2.0nm,0.3s
OUK   Oukaimeden        5.03 156  P     Pn    06 20 51.7 -2.2
OUK                               S     Sn    06 21 43.3 -9.0
MTE   Manteigas         5.03  24 ePn    Pn    06 20 55.3 +1.5
MTE                              eSn    Sn    06 21 49.9 -2.1
MTE                               A     A     06 21 52.9
      comp=N,7.8nm,0.3s
MTE   Manteigas         5.03  24  P     Pn    06 20 55.3 +1.5
MTE                               S     Sn    06 21 49.9 -2.1
      comp=N,3.9nm,0.3s
MTE   Manteigas         5.03  24  P     Pn    06 20 55.3 +1.5
MTE                               S     Sn    06 21 49.9 -2.1
      comp=N,3.9nm,0.3s
EADA  Adamuz            5.11  61 ⇓P     Pn    06 20 56.9 +2.1
      comp=N,4.2nm,0.2s,SNR=18
EADA                              S     Sn    06 21 52.2 -1.7
      comp=N,5.2nm,0.1s,SNR=7.9
EADA  Adamuz            5.11  61  P     Pn    06 20 56.9 +2.1
      comp=N,4.2nm,0.2s,SNR=18
EADA                              S     Sn    06 21 52.2 -1.7
      comp=N,5.2nm,0.1s,SNR=7.9
EGOR  Sierra Gorda,     5.12  74  P     Pn    06 20 58.2 +3.2
      comp=N,0.4nm,0.1s,SNR=7.9
EGOR                              S     Sn    06 21 53.9 -0.3
      comp=N,0.5nm,0.1s,SNR=7.9
EGOR  Sierra Gorda,     5.12  74  P     Pn    06 20 58.2 +3.2
      comp=N,0.4nm,0.1s,SNR=7.9
EGOR                              S     Sn    06 21 53.9 -0.3
      comp=N,0.5nm,0.1s,SNR=7.9
CZD   Col de Zad        5.14 121  P     Pn    06 20 54.6 -0.9
CZD                               S     Sn    06 21 47.6 -7.4
PVIS  Viseu             5.21  20 ePn    Pn    06 20 58.3 +2.1
PVIS                             eSn    Sn    06 21 54.3 -2.1
PVIS                              A     A     06 21 57.2
      comp=N,6.1nm,0.2s
PVIS  Viseu             5.21  20  P     Pn    06 20 58.3 +2.1
PVIS                              S     Sn    06 21 54.3 -2.1
      comp=N,3.1nm,0.2s
PVIS  Viseu             5.21  20  P     Pn    06 20 58.3 +2.1
PVIS                              S     Sn    06 21 54.3 -2.1
      comp=N,3.1nm,0.2s
EPLA  Plasencia         5.36  37  S     Sn    06 21 57.8 -2.2
      comp=N,5.5nm,0.2s,SNR=7.9
EPLA  Plasencia         5.36  37  S     Sn    06 21 57.8 -2.2
      comp=N,5.5nm,0.2s,SNR=7.9
ELGU  Los Guajares,     5.45  77  S     Sn    06 22 01.6 -0.8
      comp=N,7.0nm,0.4s,SNR=7.9
ELGU  Los Guajares,     5.45  77  S     Sn    06 22 01.6 -0.8
      comp=N,7.0nm,0.4s,SNR=7.9
EQUE  Quentar           5.66  74  S     Sn    06 22 05.4 -2.1
      comp=N,1.5nm,0.3s,SNR=7.9
EQUE  Quentar           5.66  74  S     Sn    06 22 05.4 -2.1
      comp=N,1.5nm,0.3s,SNR=7.9
PVRL  Vila Real         5.79  19 eSn    Sn    06 22 07.0 -3.5
PVRL                              A     A     06 22 10.8
      comp=N,7.4nm,0.3s
PVRL  Vila Real         5.79  19  S     Sn    06 22 07.0 -3.5
      comp=N,3.7nm,0.3s
PVRL  Vila Real         5.79  19  S     Sn    06 22 07.0 -3.5
      comp=N,3.7nm,0.3s
POLO  Lamas de Olo      5.86  19 ePn    Pn    06 21 07.5 +2.4
POLO                             eSn    Sn    06 22 08.8 -3.5
POLO                              A     A     06 22 12.2
      comp=N,1.5nm,0.4s
POLO  Lamas de Olo      5.86  19 ePn    Pn    06 21 07.5 +2.4
POLO                             eSn    Sn    06 22 08.8 -3.5
EALB  Alboran           5.87  87  S     Sn    06 22 09.0 -3.5
      comp=N,8.0nm,0.3s,SNR=7.9
MVO   Moncorvo          5.89  25 ePn    Pn    06 21 06.8 +1.3
MVO                              eSn    Sn    06 22 10.2 -3.0
MVO                               A     A     06 22 12.6
      comp=N,4.5nm,0.1s
MVO   Moncorvo          5.89  25  P     Pn    06 21 06.9 +1.4
      comp=N,3.1nm,0.3s,SNR=5.5
MVO                               S     Sn    06 22 10.2 -3.0
      comp=N,2.0nm,0.1s,SNR=7.9
MVO   Moncorvo          5.89  25  P     Pn    06 21 06.9 +1.4
      comp=N,3.1nm,0.3s,SNR=5.5
MVO                               S     Sn    06 22 10.2 -3.0
      comp=N,2.0nm,0.1s,SNR=7.9
PAB   San Pablo         5.97  50  P     Pn    06 21 07.6 +0.9
      comp=N,0.2nm,0.1s,SNR=7.9
PAB                               S     Sn    06 22 10.5 -4.7
      comp=N,0.8nm,0.2s,SNR=7.9
PAB   San Pablo         5.97  50  P     Pn    06 21 07.6 +0.9
      comp=N,0.2nm,0.1s,SNR=7.9
PAB                               S     Sn    06 22 10.5 -4.7
      comp=N,0.8nm,0.2s,SNR=7.9
ELOB  Lobios            6.26  15  P     Pn    06 21 12.7 +2.1
      comp=N,0.8nm,0.2s,SNR=5.1
ELOB                              S     Sn    06 22 17.8 -4.4
      comp=N,2.4nm,0.1s,SNR=7.9
ELOB  Lobios            6.26  15  P     Pn    06 21 12.7 +2.1
      comp=N,0.8nm,0.2s,SNR=5.1
ELOB                              S     Sn    06 22 17.8 -4.5
      comp=N,2.4nm,0.1s,SNR=7.9
ESDC  Sonseca Array     6.29  51  P     Pn    06 21 12.5 +1.5
      comp=N,1.2nm,0.2s,baz=236,slow=13,SNR=10.0
ESDC                              S     Sn    06 22 20.1 -2.9
      comp=N,0.2nm,0.5s,baz=239,slow=24,SNR=7.9
ESDC  Sonseca Array     6.29  51  P     Pn    06 21 12.5 +1.5
      comp=N,1.2nm,0.2s,baz=236,slow=13,SNR=10.0
ESDC                              S     Sn    06 22 20.1 -2.9
      comp=N,0.2nm,0.5s,slow=24,SNR=7.9
PGAV  Gavieira, Arco    6.31  14 ePn    Pn    06 21 13.6 +2.2
PGAV                             eSn    Sn    06 22 20.1 -3.5
PGAV                              A     A     06 22 23.8
      comp=N,2.8nm,0.2s
PGAV  Gavieira, Arco    6.31  14 ePn    Pn    06 21 13.6 +2.2
PGAV                             eSn    Sn    06 22 20.1 -3.5
PBRG  Braganca          6.56  24 ePn    Pn    06 21 16.5 +1.8
PBRG                             eSn    Sn    06 22 25.8 -3.8
PBRG                              A     A     06 22 28.1
      comp=N,3.2nm,0.1s
PBRG  Braganca          6.56  24  P     Pn    06 21 16.5 +1.8
PBRG                              S     Sn    06 22 25.8 -3.8
      comp=N,1.6nm,0.1s
PBRG  Braganca          6.56  24  P     Pn    06 21 16.5 +1.8
PBRG                              S     Sn    06 22 25.8 -3.8
      comp=N,1.6nm,0.1s
SESP  Santiago Espad    6.58  67  P     Pn    06 21 17.8 +2.6
      comp=N,0.9nm,0.2s,SNR=7.9
SESP                              S     Sn    06 22 27.5 -2.8
      comp=N,2.2nm,0.2s,SNR=7.9
SESP  Santiago Espad    6.58  67  P     Pn    06 21 17.8 +2.6
      comp=N,0.9nm,0.2s,SNR=7.9
SESP                              S     Sn    06 22 27.5 -2.8
      comp=N,2.2nm,0.2s,SNR=7.9
EAGO  Agolada(Pontev    7.16  13  P     Pn    06 21 24.7 +1.8
      comp=N,0.9nm,0.1s,SNR=7.9
EAGO                              S     Sn    06 22 40.2 -4.0
      comp=N,1.6nm,0.1s,SNR=7.9
EAGO  Agolada(Pontev    7.16  13  P     Pn    06 21 24.7 +1.8
      comp=N,0.9nm,0.1s,SNR=7.9
EAGO                              S     Sn    06 22 40.2 -4.0
      comp=N,1.6nm,0.1s,SNR=7.9
ETOB  Tobarra           7.49  65  P     Pn    06 21 29.1 +1.5
      comp=N,0.2nm,0.1s,SNR=7.9
ETOB                              S     Sn    06 22 49.5 -3.1
      comp=N,1.3nm,0.3s,SNR=7.9
ETOB  Tobarra           7.49  65  P     Pn    06 21 29.1 +1.5
      comp=N,0.2nm,0.1s,SNR=7.9
ETOB                              S     Sn    06 22 49.5 -3.1
      comp=N,1.3nm,0.3s,SNR=7.9
ETOR  Torete            8.14  50  P     Pn    06 21 38.5 +2.0
      comp=N,2.9nm,0.9s,SNR=7.9
ETOR  Torete            8.14  50  P     Pn    06 21 38.5 +2.0
      comp=N,2.9nm,0.9s,SNR=7.9
```

MEX 13 06:20:49.5±0.4**, 16°.68N×94°.31W, h112**km±10km**, MD3.8, Oaxaca**

```
Code  Station Name       Δ°  AZ°   Phase ID        Time      Res
                                  Op     ISC     h  m  s    ISC
TGIG                    1.14  85 i P    Pn    06 21 11.1 -1.3
TGIG                             i S    Sn    06 21 28.2 -1.5
PCIG                    1.43 133 eP     Pn    06 21 14.2 -1.4
PCIG                             i S    Sn    06 21 33.8 -1.5
VHO   Vista Hermosa     2.35 280 eP     Pn    06 21 26.1 -1.1
VHO                              i S    Sn    06 21 54.4 -1.8
TLIG  Tlapa             4.16 283 eP     Pn    06 21 50.3 -0.9
TLIG                             eS     Sn    06 22 37.1 -1.9
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*IDC **13** 07:07:12.6±0.8, 6°.05N×126°.73E, h0km, mb3.8/9, mb1 4.0/9, mb1mx3.7/56, mbtmp3.8/9, MS3.2/2, Ms1 3.2/2, ms1mx2.4/59, Error ellipse: s-maj=41.4km s-min=11.3km az=57.0*
*MAN **13** 07:07:15.6, 5°.78N×126°.04E, h144km, mb4.9, ML3.9, MS3.9*
*ISCJB **13** 07:07:16.8±1.1, 5°.88N±0°.04×126°.37E±0°.08, h40km±10km, mb4.3/21, MS3.2/2, Error ellipse: s-maj=13.8km s-min=7.3km az=173.1*
*NEIC **13** 07:07:18.0±1.5, 5°.94N×126°.46E, h35km±14km, mb4.5/9, Error ellipse: s-maj=17.3km s-min=5.7km az=75.0*
ISC 13 07:07:16.7±2.1**, 5°.96N**±0°.08×**126°.39E**±0°.08**, h27**km±15km**, n38,** σ**1s.03**/47**, mb4.1**/21**, 1C, Mindanao**

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Code  Station Name       Δ°  AZ°   Phase ID        Time      Res
                                  Op     ISC     h  m  s    ISC
MATI  Mati              0.99 352 eP     Pb    07 07 47.9 +13
MATI                             eS     Sb    07 07 48.4 +0.6
DAV   Davao City (W)    1.36 324  Pg    Pb    07 07 41.1 -0.5
      109nm,0.3s,baz=92,slow=10.0,SNR=5.3
DAV                               Lg    Lg    07 08 00.4
      176nm,0.3s,baz=27,slow=22,SNR=11
DAV                               LR    LR    07 08 28.6
      comp=Z,542nm,18.6s,baz=136,slow=50
DAV   Davao City (W)    1.36 324 ePn    Pb    07 07 41.0 -0.6
DAV                              eSn    Sb    07 07 58.4 -0.3
GSPH  General Santos    1.44 275⇑iP     Pn    07 07 39.9 -1.3
GSPH                             i S    Sn    07 07 57.6 -1.7
SKMP  Bagumbayan, Su    1.92 287 eP     Pn    07 07 47.2 -0.5
SKMP                             eS     Sb    07 08 18.4 +3.8
BUKP  Musuan            2.32 325 eP     Pn    07 07 54.2 +1.0
BUKP                             eS     Sb    07 08 24.6 -1.5
FITZ  Fitzroy Crossi   23.92 182  P     P     07 12 28.9 +0.3
      1.7nm,0.6s,baz=3.0,slow=10.0,SNR=3.9
PMG   Port Moresby     25.72 126  LR    LR    07 23 42.5
      comp=Z,43nm,19.5s,baz=242,slow=39
WRAB  Tennant Creek    26.90 163 eP     P     07 12 55.6 -0.1
      5.5nm,1.1s
WR1   Warramunga Arr   26.90 163 eP     P     07 12 55.4 -0.4
      8.0nm,1.3s
WR1                              ePcP   PcP   07 16 17.8 +0.1
WRA   Warramunga Arr   26.90 163  P     P     07 12 55.4 -0.4
      0.3nm,0.5s,baz=339,slow=10,SNR=9.7
WRA                               PcP   PcP   07 16 17.8 +0.1
      0.5nm,0.7s,baz=336,slow=2.6,SNR=5.1
WB2   Warramunga Arr   26.91 163 eP     P     07 12 56.2 +0.4
      3.6nm,0.8s
AS31  Alice Springs    30.35 166 eP     P     07 13 26.8 +0.3
      1.1nm,1.0s
AS31                             ePcP   PcP   07 16 26.4  0.0
ASAR  Alice Springs    30.35 166  P     P     07 13 26.8 +0.3
      0.7nm,0.5s,baz=346,slow=7.0,SNR=14
ASAR                              PcP   PcP   07 16 26.4  0.0
      1.4nm,0.8s,baz=345,slow=2.4,SNR=10
COCO  West Island      34.48 238 eP     P     07 14 02.5 -0.1
      119nm,1.0s
FORT  Forrest          36.57 178 eP     P     07 14 18.2 -2.2
      24nm,0.9s
BBOO  Buckleboo        39.64 167 eP     P     07 14 47.2 +0.8
      39nm,1.3s
SONA0 Songino Array    45.09 341 eP     P     07 15 31.5 +0.8
SONA0                            ePcP   PcP   07 17 10.9 -0.3
SONM  Songino Array    45.09 341  P     P     07 15 31.5 +0.8
      0.6nm,0.6s,baz=156,slow=7.2,SNR=5.1
SONM                              PcP   PcP   07 17 10.9 -0.3
      0.6nm,0.7s,baz=132,slow=2.6,SNR=4.9
SONA1 Songino Array    45.10 341 eP     P     07 15 32.1 +1.3
MK01  Makanchi Array   55.53 325 eP     P     07 16 50.6 +1.0
MK32  Makanchi Array   55.55 325 eP     P     07 16 50.9 +1.1
MKAR  Makanchi Array   55.55 325  P     P     07 16 50.9 +1.1
      0.9nm,0.7s,baz=125,slow=7.7,SNR=8.3
KURBB Kurchatov Arra   59.69 327  P     P     07 17 20.0 +1.2
      1.4nm,0.7s,baz=127,slow=6.5,SNR=6.8
KURK  Kurchatov        59.69 327 eP     P     07 17 20.0 +1.2
BVAR  Borovoye Array   65.28 327  P     P     07 17 57.1 +0.9
      0.3nm,0.4s,baz=123,slow=10,SNR=3.6
UNV   Unalaska Valle   71.80  35 eP     P     07 18 36.2 -0.6
      20nm,1.2s
CASY  Casey            72.98 187 eP     P     07 18 44.3 +0.8
      16nm,1.4s
CAST  Castle Rocks     80.91  27 eP     P     07 19 27.9 -0.5
      7.1nm,1.4s
BPAW  Bear Paw Mtn.    81.45  26 eP     P     07 19 31.4 +0.1
      2.1nm,1.0s
RAGM  Ragged Mountai   84.33  30 eP     P     07 19 46.7 +0.4
      104nm,1.0s
VNDA  Vanda            85.67 173  P     P     07 19 52.9 +0.3
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	0.9nm,0.8s,baz=316,slow=7.4,SNR=4.2						
VNDA	**Vanda**	**85.67**	**173**	*e*P	**P**	**07 19 52.7**	**+0.2**
VNDA				*e*PcP	**P**	**07 19 52.9**	**+0.3**
ARA0	**ARCESS Array S**	**88.25**	**340**	*e*P	**P**	**07 20 04.0**	**-1.3**
ARCES	**ARCESS Array B**	**88.25**	**340**	P	**P**	**07 20 04.0**	**-1.3**
	0.7nm,0.5s,baz=77,slow=6.7,SNR=8.2						
NOA	**NORSAR Array B**	**96.65**	**334**	LR	LR	08 08 21.6	
	comp=Z,12nm,20.1s,baz=195,slow=38						
G32A	**Webster**	**115.68**	**33**	*e*PKPdf	**PKPdf**	**07 25 56.3**	**-0.6**
TRQA	**Tornquist**	**147.16**	**168**	*e*PKPbc	**PKPbc**	**07 26 58.1**	**+0.2**

IDC 13 07:14:28.6±2.5**, 15°.64S×167°.03E, h0^{km}, mb3.4**/2**, mb1 3.7**/3**, mb1mx3.4**/48**, mbtmp3.5**/3**, ML3.1**/1**, Error ellipse: s-maj=53.4km s-min=46.2km az=105.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**6.42**	**185**	Pn	Pn	07 16 04.0	-0.6
	0.5nm,0.3s,baz=341,slow=18,SNR=16						
DZM				Sn	Sn	07 17 14.0	-4.7
	1.1nm,0.3s,baz=300,slow=20,SNR=3.9						
WRA	**Warramunga Arr**	**31.39**	**257**	P	P	07 20 51.3	-0.3
	0.3nm,0.7s,baz=87,slow=9.9,SNR=3.0						
ASAR	**Alice Springs**	**32.15**	**250**	P	P	07 20 58.6	+0.4
	0.5nm,0.7s,baz=75,slow=9.1,SNR=6.3						
ARCES	**ARCESS Array B**	**121.07**	**345**	PKP	PKPdf	07 33 22.5	-0.1
	3.6nm,1.2s,baz=67,slow=3.2,SNR=4.5						

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*ISCJB **13** 07:34:09.3±0.5, 56°.89S±0°.10×30°.5W±0°.3, h10^{km}, mb4.5/13, MS3.7/15, Error ellipse: s-maj=23.4km s-min=9.0km az=149.3*

*NEIC **13** 07:34:15.6±1.6, 56°.95S×30°.49W, h47^{km}±13^{km}, mb4.6/6, Error ellipse: s-maj=19.2km s-min=7.9km az=58.0*

*IDC **13** 07:34:17.8±6.2, 56°.99S×30°.57W, h64^{km}±55^{km}, mb4.1/9, mb1 4.1/10, mb1mx3.9/30, mbtmp4.3/10, ML3.3/1, MS3.7/16, Ms1 3.7/16, ms1mx3.6/29, Error ellipse: s-maj=31.7km s-min=15.7km az=66.0*

ISC 13 07:34:10.7±0.5**, 56°.9S**±0°.1×**30°.4W**±0°.2**, h10^{km}, n67, σ0^{s}.95**/59**, mb4.5**/13**, MS3.8**/15**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	**4.35**	**304**	*e*Pn	**Pn**	**07 35 18.5**	**+1.8**
VNA1	**Neumayer--Stat**	**16.74**	**154**	P	**P**	**07 38 08.4**	**+1.3**
VNA3	**Neumayer Olymp**	**16.85**	**157**	P	**P**	**07 38 10.1**	**+1.7**
PMSA	**Palmer Station**	**18.02**	**230**	LR	LR	07 43 50.1	
	comp=Z,439nm,21.0s,baz=65,slow=32						
SNAA	**Sanae**	**18.75**	**153**	P	**Pn**	**07 38 31.6**	**+1.9**
SNAA	**Sanae**	**18.75**	**153**	P	**P**	**07 38 29.6**	**+0.2**
	0.1nm,0.3s,baz=288,slow=8.4,SNR=11						
SNAA				PcP	**PcP**	**07 42 56.3**	**0.0**
	0.1nm,0.3s,baz=277,slow=2.8,SNR=10						
SNAA	**Sanae**	**18.75**	**153**	*e*P	**Pn**	**07 38 29.9**	**+0.2**
	11nm,1.1s						
SNAA				PcP	**PcP**	**07 42 56.3**	**0.0**
PLCA	**Paso Flores**	**30.46**	**285**	LR	LR	07 51 57.0	
	comp=Z,112nm,20.8s,baz=176,slow=35						
QSPA	**South Pole Qui**	**33.37**	**180**	P	**P**	**07 40 49.0**	**+0.2**
	2.8nm,0.9s,baz=150,slow=3.4,SNR=6.9						
QSPA				LR	LR	07 53 23.0	
	comp=Z,176nm,20.5s,baz=184,slow=34						
QSPA	**South Pole Qui**	**33.37**	**180**	*e*P	**P**	**07 40 48.8**	**+0.1**
	9.7nm,1.4s						
CPUP	**Villa Florida**	**36.12**	**316**	P	**P**	**07 41 12.9**	**+0.3**
	5.2nm,0.9s,baz=164,slow=7.2,SNR=6.3						
CPUP				LR	LR	07 56 15.0	
	comp=Z,24nm,19.2s,baz=176,slow=36						
CPUP	**Villa Florida**	**36.12**	**316**	*e*P	**P**	**07 41 12.1**	**-0.6**
	8.8nm,1.0s						
MAW	**Mawson**	**40.52**	**144**	P	**P**	**07 41 49.5**	**+0.3**
	2.0nm,0.7s,baz=226,slow=10,SNR=4.7						
MAW	**Mawson**	**40.52**	**144**	*e*P	**P**	**07 41 49.5**	**+0.3**
	1.0nm,0.9s						
VNDA	**Vanda**	**45.64**	**184**	P	**P**	**07 42 30.8**	**+0.2**
	2.9nm,0.7s,baz=194,slow=4.5,SNR=22						
VNDA				LR	LR	07 59 46.7	
	comp=Z,35nm,18.1s,baz=168,slow=34						
VNDA	**Vanda**	**45.64**	**184**	*e*P	**P**	**07 42 31.1**	**+0.5**
PB01	**IPOC Station P**	**45.88**	**305**	*e*P	**P**	**07 42 32.5**	**-0.8**
	14nm,1.4s						
BOSA	**Boshof**	**47.87**	**78**	LR	LR	07 58 17.9	
	comp=Z,210nm,21.9s,baz=208,slow=30						
H10S2	**ASCENSION HYDR**	**49.36**	**21**	T	T	08 37 16.1	
	baz=190,slow=74,SNR=8.4						
H10S3	**ASCENSION HYDR**	**49.36**	**21**	T	T	08 37 16.3	
	baz=190,slow=74,SNR=8.5						
H10S1	**ASCENSION HYDR**	**49.37**	**21**	T	T	08 37 17.4	
	baz=190,slow=74,SNR=5.5						
LPAZ	**La Paz**	**49.48**	**309**	P	**P**	**07 43 01.5**	**-0.3**
	0.9nm,0.7s,baz=134,slow=7.2,SNR=6.4						
LPAZ				LR	LR	08 08 06.9	
	comp=Z,31nm,18.3s,baz=166,slow=41						
LPAZ	**La Paz**	**49.48**	**309**	*e*P	**P**	**07 43 01.2**	**-0.5**
CASY	**Casey**	**53.69**	**162**	*e*P	**P**	**07 43 31.6**	**-0.3**
	9.9nm,1.0s						
SAML	**Samuel**	**54.20**	**319**	*e*P	**P**	**07 43 36.1**	**-0.2**
	8.7nm,1.3s						
NNA	**Nana**	**57.16**	**302**	LR	LR	08 07 52.6	
	comp=Z,39nm,21.0s,baz=160,slow=35						
DBIC	**Dimbokro**	**66.69**	**28**	P	**P**	**07 45 02.8**	**+1.2**
	3.3nm,1.0s,baz=220,slow=7.7,SNR=3.5						
DBIC				LR	LR	08 08 00.9	
	comp=Z,35nm,18.2s,baz=124,slow=30						
PCRV	**Puerto La Cruz**	**72.55**	**324**	P	**P**	**07 45 38.2**	**+0.4**
	16nm,0.6s,baz=179,slow=3.5,SNR=13						
KOWA	**Kowa**	**74.42**	**26**	P	**P**	**07 45 50.3**	**+1.6**
	3.6nm,0.9s,baz=191,slow=4.4,SNR=6.5						
KOWA				LR	LR	08 13 04.2	
	comp=Z,44nm,19.9s,baz=217,slow=31						
KMBO	**Kilima Mbogo**	**76.97**	**72**	LR	LR	08 16 04.5	
	comp=Z,54nm,20.8s,baz=106,slow=32						
PPT	**Papeete**	**90.28**	**236**	LR	LR	08 18 24.3	
	comp=Z,44nm,20.3s,baz=168,slow=29						
STKA	**Stephens Creek**	**91.32**	**173**	LR	LR	08 25 54.5	
	comp=Z,92nm,20.4s,baz=204,slow=34						
LHI	**Lord Howe Isla**	**91.58**	**188**	*e*P	**P**	**07 47 17.1**	**-0.4**
	172nm,1.3s						
KEST	**Kesra**	**98.19**	**32**	LR	LR	08 27 24.2	
	comp=Z,87nm,19.9s,baz=201,slow=32						
ASAR	**Alice Springs**	**98.67**	**165**	P	**P**	**07 47 48.2**	**-1.9**
	0.5nm,0.7s,baz=176,slow=4.6,SNR=6.6						
ESDC	**Sonseca Array**	**98.75**	**20**	LR	LR	08 27 08.7	
	comp=Z,48nm,20.7s,baz=110,slow=32						
DZM	**Mont Dzumac**	**100.09**	**196**	LR	LR	08 29 37.2	
	comp=Z,34nm,18.7s,baz=281,slow=33						
MCMT	**McKenzie Canyo**	**122.43**	**303**	*e*PKPdf	**PKPdf**	**07 53 03.9**	**-1.6**
CM01	**Chiang Mai Arr**	**126.35**	**114**	*e*PKPdf	**PKPdf**	**07 53 12.2**	**-1.3**
CMAR	**Chiang Mai Arr**	**126.37**	**114**	PKP	**PKPdf**	**07 53 12.9**	**-0.6**
	0.9nm,0.3s,baz=248,slow=3.8,SNR=5.3						
SCO	**Scoresbysund**	**127.21**	**4**	*e*PKPdf	**PKPdf**	**07 53 15.5**	**+2.0**
ZALV	**Zalesovo Beam**	**144.32**	**67**	PKP	**PKPab**	**07 53 43.1**	**-0.6**
	2.6nm,0.6s,baz=241,slow=4.4,SNR=5.5						
ZALV	**Zalesovo Beam**	**144.32**	**67**	*e*PKPdf	**PKPab**	**07 53 43.6**	**0.0**
ZAA1	**Zalesovo Array**	**144.32**	**66**	*e*PKPdf	**PKPab**	**07 53 43.1**	**-0.6**
INK	**Inuvik**	**145.33**	**320**	PKPbc	**PKPbc**	**07 53 45.1**	**-1.7**
	2.6nm,1.0s,baz=96,slow=1.6,SNR=4.5						
DAWY	**Dawson**	**146.04**	**312**	*e*PKPdf	**PKPdf**	**07 53 48.5**	**+0.2**
BALM	**Baldy**	**146.12**	**306**	*e*PKPdf	**PKPab**	**07 53 50.1**	**-0.2**
KLU	**Klutina**	**147.89**	**305**	*e*PKPab	**PKPab**	**07 53 57.6**	**+0.3**
PAX	**Paxson**	**148.21**	**308**	*e*PKPbc	**PKPbc**	**07 53 55.4**	**0.0**
SCM	**Sheep Creek Mo**	**148.64**	**306**	*e*PKPbc	**PKPbc**	**07 53 56.4**	**-0.2**
GHO	**Glory Hole Cre**	**149.33**	**305**	*e*PKPab	**PKPab**	**07 54 02.2**	**-0.9**
IL1	**Eielson Array**	**149.35**	**311**	*e*PKPbc	**PKPbc**	**07 53 57.0**	**-1.1**
ILAR	**Eielson Array**	**149.35**	**311**	PKPbc	**PKPbc**	**07 53 56.9**	**-1.3**
	3.4nm,0.8s,baz=134,slow=1.7,SNR=34						
ILB	**Eielson Array**	**149.35**	**311**	*e*PKPbc	**PKPbc**	**07 53 57.2**	**-1.0**
RC01	**Rabbit Creek A**	**149.47**	**304**	*e*PKPab	**PKPab**	**07 54 03.2**	**-0.4**
CCB	**Clear Creek Bu**	**149.70**	**311**	*e*PKPab	**PKPab**	**07 54 04.4**	**0.0**
WRH	**Wood River Hil**	**149.77**	**310**	*e*PKPbc	**PKPab**	**07 54 03.0**	**-1.7**
BWN	**Browne**	**150.27**	**309**	*e*PKPbc	**PKPbc**	**07 54 00.5**	**+0.1**
TRF	**Thorofare Moun**	**150.44**	**308**	*e*PKPbc	**PKPbc**	**07 54 01.2**	**+0.2**
TRF				*e*PKPab	**PKPab**	**07 54 07.4**	**-0.3**
SKT	**Skwentna**	**150.57**	**305**	*e*PKPbc	**PKPbc**	**07 54 00.2**	**-1.0**
BPAW	**Bear Paw Mtn.**	**150.90**	**309**	*e*PKPbc	**PKPbc**	**07 54 01.1**	**-0.9**
BPAW				*e*PKPab	**PKPab**	**07 54 09.1**	**-0.3**
TOLK	**Toolik Lake Re**	**151.15**	**318**	*e*PKPbc	**PKPbc**	**07 54 01.8**	**-0.6**
COLD	**Coldfoot**	**151.20**	**316**	*e*PKPbc	**PKPbc**	**07 54 02.8**	**+0.2**
CAST	**Castle Rocks**	**151.21**	**307**	*e*PKPbc	**PKPbc**	**07 54 01.9**	**-0.8**
CAST				*e*PKPab	**PKPab**	**07 54 09.6**	**-1.1**
SONA0	**Songino Array**	**152.51**	**91**	*e*PKPbc	**PKPbc**	**07 54 05.1**	**-1.2**
SONM	**Songino Array**	**152.51**	**91**	PKPbc	**PKPbc**	**07 54 05.1**	**-1.2**
	1.3nm,0.7s,baz=206,slow=2.2,SNR=7.5						
SONA1	**Songino Array**	**152.52**	**91**	*e*PKPbc	**PKPbc**	**07 54 05.1**	**-1.2**

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*NEIC **13** 08:08:58.6±0.0, 18°.84N×60°.53W, h49^{km}, mb4.1/1, MD4.3(TRN), After TRN.*

TRN 13 08:08:58.3, 18°.84N×60°.52W, h50^{km}, MD4.3, 6C-4D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANWB	**Willy Bob**	**1.68**	**226**	*e*Pn	Pn	08 09 26.1	+0.9
ANWB				*e*Sn	Sn	08 09 47.8	+2.3
ANWB	**Willy Bob**	**1.68**	**226**	*e*P	Pn	08 09 26.1	+0.9
ANWB				*e*S	Sn	08 09 47.9	+2.3
SMRT	**St. Maarten**	**2.55**	**252**	*e*Pn	Pn	08 09 38.5	+1.3
SMRT				*e*Sn	Sn	08 10 06.3	-0.8
SMRT	**St. Maarten**	**2.55**	**252**	*e*P	Pn	08 09 38.5	+1.3
SMRT				*e*S	Sn	08 10 07.8	+0.7
DEG	**La Desirade**	**2.57**	**192**	*e*Pn	Pn	08 09 38.8	+1.3
DEG				*e*Sn	Sn	08 10 09.4	+1.8
DEG	**La Desirade**	**2.57**	**192**	*e*P	Pn	08 09 38.8	+1.3
DEG				*e*S	Sn	08 10 09.4	+1.8
NVRH	**Round Hill, Ne**	**2.58**	**231**	*e*P	Pn	08 09 40.5	+2.9
NVRH				*e*S	Sn	08 10 09.4	+1.6
NEV	**Hard Times**	**2.59**	**229**	*e*Pn	Pn	08 09 40.8	+3.0
NEV				*e*Sn	Sn	08 10 09.3	+1.3
NEV	**Hard Times**	**2.59**	**229**	⇑*i*P	Pn	08 09 40.8	+3.0
NEV				*e*S	Sn	08 10 09.3	+1.3
SEG	**Port Louis**	**2.60**	**201**	⇑*i*P	Pn	08 09 39.8	+1.9
MBWH		**2.63**	**218**	⇑*i*P	Pn	08 09 40.1	+1.9
MLYT	**Lee's Yard**	**2.65**	**217**	*i* P	Pn	08 09 40.5	+2.0
MLYT				*e*S	Sn	08 10 12.4	+3.1
SEUS	**St. Eustatius**	**2.70**	**241**	*e*Pn	Pn	08 09 41.1	+1.9
SEUS				*e*Sn	Sn	08 10 11.4	+0.6
SEUS	**St. Eustatius**	**2.70**	**241**	*i* P	Pn	08 09 41.1	+1.9
SEUS				*e*S	Sn	08 10 11.4	+0.6
GDHS	**Morne Mazeau,**	**2.82**	**205**	*e*P	Pn	08 09 43.0	+2.0
GDHS				*e*S	Sn	08 10 16.3	+2.6
SABA	**Saba**	**2.86**	**245**	*e*Pn	Pn	08 09 43.2	+1.7
SABA				*e*Sn	Sn	08 10 16.1	+1.4
SABA	**Saba**	**2.86**	**245**	*e*P	Pn	08 09 43.2	+1.7
SABA				*e*S	Sn	08 10 16.1	+1.4
LZG	**Guadaloupe-1**	**2.94**	**204**	⇓*i*P	Pn	08 09 45.1	+2.5
MGG	**Marie-Galante**	**3.01**	**195**	*e*Pn	Pn	08 09 45.5	+2.1
MGG	**Marie-Galante**	**3.01**	**195**	*e*P	Pn	08 09 45.5	+2.1
TBG	**Guadaloupe-3**	**3.16**	**200**	*e*P	Pn	08 09 47.6	+2.1
TBG				*e*S	Sn	08 10 23.2	+1.1
MDVC	**Dominica, Viel**	**3.32**	**195**	*e*P	Pn	08 09 50.1	+2.4
MDVC				*e*S	Sn	08 10 27.2	+1.2
MDPO	**Dominica; Chan**	**3.37**	**196**	*e*P	Pn	08 09 50.4	+2.0
MDPO				*e*S	Sn	08 10 27.7	+0.5
BBL	**Barber's Block**	**3.42**	**196**	*e*Pn	Pn	08 09 51.1	+2.0
BBL				*e*Sn	Sn	08 10 30.1	+1.6
BBL	**Barber's Block**	**3.42**	**196**	*e*P	Pn	08 09 51.1	+2.0
BBL				*e*S	Sn	08 10 30.1	+1.6
DLPL	**La Plaine**	**3.56**	**191**	*e*P	Pn	08 09 52.5	+1.4
DLPL				*e*S	Sn	08 10 32.1	+0.3
DLPL	**La Plaine**	**3.56**	**191**	*e*P	Pn	08 09 52.5	+1.4
DLPL				*e*S	Sn	08 10 32.1	+0.3
MDN	**Morne-Daniel**	**3.60**	**194**	*e*Pn	Pn	08 09 55.1	+3.5
MDN				*e*Sn	Sn	08 10 33.8	+0.8
MDN	**Morne-Daniel**	**3.60**	**194**	*e*P	Pn	08 09 55.1	+3.5
MDN				*e*S	Sn	08 10 33.8	+0.8
ABVI	**Anegada Island**	**3.62**	**269**	*e*Pn	Pn	08 09 51.7	-0.1
ABVI				*e*Sn	Sn	08 10 30.8	-2.5
DBCT	**Belle View Cho**	**3.64**	**193**	*e*Pn	Pn	08 09 53.5	+1.3
DBCT	**Belle View Cho**	**3.64**	**193**	*e*P	Pn	08 09 53.5	+1.3
DSTT	**Stowe**	**3.65**	**192**	*e*Pn	Pn	08 09 53.8	+1.4
DSTT	**Stowe**	**3.65**	**192**	*e*P	Pn	08 09 53.8	+1.4
BAMF	**Morne Balai**	**4.05**	**189**	*e*P	Pn	08 09 59.4	+1.5
CXM	**Morne La Croix**	**4.06**	**189**	⇓*e*P	Pn	08 09 59.6	+1.6
CXM				*e*S	Sn	08 10 43.2	-1.1
PCM	**Pelee Case Pet**	**4.06**	**190**	⇓*e*P	Pn	08 09 59.3	+1.3
PCM	**Pelee Case Pet**	**4.06**	**190**	⇓*i*P	Pn	08 09 59.5	+1.6
GBMF	**Grand Be**	**4.07**	**189**	*e*P	Pn	08 09 59.6	+1.5
PML	**Morne Lenard**	**4.09**	**189**	⇑*i*P	Pn	08 09 60.0	+1.6
FDF	**Fort de France**	**4.13**	**189**	*e*Pn	Pn	08 09 59.9	+0.9
FDF				*e*Sn	Sn	08 10 44.6	-1.4
FDF	**Fort de France**	**4.13**	**189**	*e*P	Pn	08 10 00.2	+1.3
FDF				*e*S	Sn	08 10 44.2	-1.8
CDVI	**St. Croix**	**4.18**	**256**	*e*Pn	Pn	08 10 01.1	+1.5
CDVI				*e*Sn	Sn	08 10 44.5	-2.7
STVI	**Saint Thomas**	**4.24**	**264**	*e*Pn	Pn	08 10 00.6	+0.2
STVI				*e*Sn	Sn	08 10 44.7	-3.8
LPMF	**Morne Lapointe**	**4.26**	**186**	⇑*i*P	Pn	08 10 02.2	+1.4
MVM	**Montagne Vaucl**	**4.28**	**185**	⇑*i*P	Pn	08 10 02.9	+2.0
TRMF	**Trois Ilets**	**4.31**	**187**	*i* P	Pn	08 10 03.0	+1.6
BIM	**Bigot**	**4.33**	**187**	*e*P	Pn	08 10 03.5	+1.9
BIM	**Bigot**	**4.33**	**187**	*e*S	Sn	08 10 50.5	-0.5
MTP	**Monte Pirata**	**4.84**	**262**	*e*Pn	Pn	08 10 09.3	+0.7
MTP				*e*Sn	Sn	08 11 00.8	-2.6
SLB	**Belfond**	**5.01**	**186**	*e*Sn	Sn	08 11 08.3	+0.6
SLB	**Belfond**	**5.01**	**186**	*e*S	Sn	08 11 08.3	+0.6
CBYP	**Canovanas**	**5.10**	**264**	*e*Pn	Pn	08 10 13.1	+0.9
CBYP				*e*Sn	Sn	08 11 06.3	-3.5
HUMP	**Col San Antoni**	**5.11**	**263**	*e*Pn	Pn	08 10 13.2	+0.9
HUMP				*e*Sn	Sn	08 11 07.6	-2.4
MCLT	**Moule a Chique**	**5.12**	**185**	*e*Pn	Pn	08 10 14.8	+2.4
MCLT				*e*Sn	Sn	08 11 11.2	+1.0
MCLT	**Moule a Chique**	**5.12**	**185**	*e*P	Pn	08 10 14.8	+2.4
MCLT	**Moule a Chique**	**5.12**	**185**	*e*S	Sn	08 11 11.2	+1.0
SJG	**San Juan**	**5.40**	**263**	*e*Sn	Sn	08 11 14.5	-2.6
SVV	**Soufriere Volc**	**5.53**	**187**	*e*Pn	Pn	08 10 20.6	+2.5
SVV				*e*Sn	Sn	08 11 20.1	-0.4
SVV	**Soufriere Volc**	**5.53**	**187**	*e*P	Pn	08 10 20.6	+2.5
SVV	**Soufriere Volc**	**5.53**	**187**	*e*S	Sn	08 11 20.1	-0.4
SVCV	**St. Vincent, C**	**5.57**	**186**	*e*P	Pn	08 10 21.4	+2.7
SVCV	**St. Vincent, C**	**5.57**	**186**	*e*S	Sn	08 11 21.4	0.0
SVB	**Belmont**	**5.58**	**187**	*e*Pn	Pn	08 10 20.9	+2.1
SVB				*e*Sn	Sn	08 11 21.0	-0.7
SVB				*e*Sn	Sn	08 11 23.4	+1.6
SVB	**Belmont**	**5.58**	**187**	*e*P	Pn	08 10 20.9	+2.1
SVB	**Belmont**	**5.58**	**187**	*e*S	Sn	08 11 21.0	-0.7
ICMP	**Isla Caja de M**	**5.79**	**262**	*e*Sn	Sn	08 11 26.7	0.0
OBIP	**Obispado Ponce**	**5.84**	**263**	*e*Sn	Sn	08 11 27.1	-0.8
AOPR	**Arecibo Observ**	**5.94**	**266**	*e*Pn	Pn	08 10 25.2	+1.5
AOPR				*e*Sn	Sn	08 11 27.4	-3.0
AGP	**Aguadilla**	**6.30**	**267**	*e*Pn	Pn	08 10 27.7	-0.9
AGP				*e*Sn	Sn	08 11 38.9	-0.4
CRPR	**Cabo Rojo, PR**	**6.32**	**263**	*e*Sn	Sn	08 11 37.0	-2.7
MPR	**Mayaguez**	**6.32**	**265**	*e*Sn	Sn	08 11 36.6	-3.1
GRGR	**Grenville**	**6.76**	**190**	*e*Pn	Pn	08 10 37.2	+2.2
GRGR	**Grenville**	**6.76**	**190**	*e*P	Pn	08 10 37.6	+2.6
HELC	**Santa Helena**	**19.29**	**231**	*e*P	Pn	08 13 20.9	0.0
	19nm,1.6s						

IDC 13 08:17:07.4±2.8**, 18°.14S×177°.65W, h0^{km}, mb3.5**/3**, mb1 3.9**/3**, mb1mx3.5**/47**, mbtmp3.5**/3**, Error ellipse: s-maj=330.6km s-min=32.2km az=159.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**45.30**	**260**	P	P	08 25 26.6	-0.8
	0.4nm,1.1s,baz=97,slow=7.0,SNR=5.6						
ASAR	**Alice Springs**	**45.42**	**254**	P	P	08 25 28.6	+0.3
	1.0nm,0.6s,baz=88,slow=8.8,SNR=19						
TXAR	**Lajitas Array**	**85.51**	**57**	P	P	08 29 47.8	0.0
	0.4nm,0.7s,baz=226,slow=6.7,SNR=6.1						

MAN 13 08:58:25.8, 5°.89N×126°.43E, h22^{km}, mb5.0, ML4.0, MS4.0, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**1.06**	**351**	*e*P	Pn	08 58 44.1	-1.3
MATI				*e*S	Sn	08 58 59.5	0.0
DMPH	**Davao City--Mi**	**1.50**	**322**	⇓*e*P	Pb	08 58 55.2	+2.3
DMPH				*e*S	Sb	08 59 24.1	+13
SKMP	**Bagumbayan, Su**	**1.98**	**289**	*e*P	Pn	08 58 58.4	+0.4
SKMP				*e*S	Sn	08 59 22.5	+0.4
BUKP	**Musuan**	**2.40**	**326**	*e*P	Pn	08 59 05.1	+1.3
BUKP				*e*S	Sb	08 59 35.1	-2.3

IDC 13 09:10:44.0±1.2**, 44°.61N×28°.25W, h0^{km}, mb3.9**/10**, mb1 4.1**/10**, mb1mx3.7**/64**, mbtmp3.9**/10**, MS3.4**/32**, Ms1 3.4**/32**, ms1mx3.3**/58**, Error ellipse: s-maj=34.7km s-min=22.1km az=6.0, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESDC	**Sonseca Array**	**18.64**	**97**	LR	LR	09 21 18.6	
	comp=Z,87nm,18.5s,baz=265,slow=34						
MDT	**Midelt**	**21.79**	**115**	LR	LR	09 22 51.6	
	comp=Z,50nm,18.9s,baz=0.5,slow=33						
SFJD	**Kangerlussuaq**	**25.43**	**340**	LR	LR	09 24 03.2	
	comp=Z,114nm,19.7s,baz=134,slow=31						
SCHQ	**Schefferville**	**26.64**	**306**	LR	LR	09 25 27.7	
	comp=Z,120nm,18.1s,baz=24,slow=33						
JMIC	**Jan Mayen**	**28.17**	**14**	LR	LR	09 25 12.5	
	comp=Z,36nm,19.6s,baz=256,slow=31						
NOA	**NORSAR Array B**	**28.39**	**41**	LR	LR	09 26 05.1	
	comp=Z,25nm,21.3s,baz=250,slow=32						
GERES	**GERESS Array B**	**28.80**	**66**	P	P	09 16 43.5	0.0
	1.0nm,0.8s,baz=286,slow=9.6,SNR=5.9						
GERES				LR	LR	09 27 15.9	
	comp=Z,67nm,20.0s,baz=280,slow=34						
HFS	**Hagfors**	**29.33**	**43**	LR	LR	09 27 09.2	
	comp=Z,31nm,20.3s,baz=281,slow=34						
FRB	**Frobisher Bay**	**29.65**	**324**	LR	LR	09 25 33.6	
	comp=Z,90nm,20.9s,baz=156,slow=30						
KEST	**Kesra**	**29.84**	**94**	LR	LR	09 26 46.9	
	comp=Z,77nm,21.5s,baz=210,slow=32						
VAE	**Valguarnera**	**32.66**	**88**	LR	LR	09 30 02.6	
	comp=Z,78nm,18.0s,baz=323,slow=36						
FINES	**FINESS Array B**	**35.52**	**42**	LR	LR	09 30 37.7	
	comp=Z,35nm,20.7s,baz=282,slow=34						
KOWA	**Kowa**	**36.39**	**138**	P	P	09 17 49.9	-0.1
	2.5nm,1.0s,baz=326,slow=13,SNR=4.5						
KOWA				LR	LR	09 31 18.1	
	comp=Z,77nm,19.1s,baz=37,slow=34						
MLR	**Muntele Rosu**	**37.68**	**69**	LR	LR	09 33 00.5	
	comp=Z,17nm,19.4s,baz=322,slow=36						
AKASG	**Malin Array Be**	**38.34**	**60**	P	P	09 18 04.9	-1.3
	1.4nm,0.6s,baz=280,slow=8.0,SNR=4.0						
AKASG				LR	LR	09 34 06.1	
	comp=Z,54nm,18.8s,baz=310,slow=37						
TKL	**Tuckaleechee C**	**42.66**	**278**	LR	LR	09 35 25.7	
	comp=Z,48nm,19.0s,baz=38,slow=35						
DBIC	**Dimbokro**	**42.95**	**145**	LR	LR	09 35 18.8	
	comp=Z,64nm,18.4s,baz=328,slow=34						
ULM	**Lac du Bonnet**	**44.68**	**302**	LR	LR	09 35 57.6	
	comp=Z,124nm,19.1s,baz=120,slow=34						
BRTR	**Keskin Array B**	**45.16**	**74**	P	P	09 19 02.9	+0.4
	1.9nm,0.9s,baz=282,slow=6.2,SNR=6.7						
BRTR				LR	LR	09 37 57.5	
	comp=Z,38nm,20.8s,baz=276,slow=36						
KBZ	**Khabaz**	**49.50**	**64**	P	P	09 19 36.7	+0.7
	1.4nm,0.7s,baz=271,slow=2.9,SNR=3.5						
GNI	**Garni**	**52.44**	**68**	LR	LR	09 45 05.6	
	comp=Z,22nm,18.4s,baz=113,slow=39						
AKTO	**Aktyubinsk**	**55.40**	**51**	LR	LR	09 43 23.4	
	comp=Z,27nm,19.6s,baz=261,slow=35						
PDAR	**Pinedale Array**	**56.43**	**299**	LR	LR	09 43 19.9	
	comp=Z,79nm,19.4s,baz=66,slow=35						
ROSC	**El Rosal**	**56.47**	**239**	LR	LR	09 43 22.2	
	comp=Z,14nm,19.1s,baz=39,slow=35						
ANMO	**Albuquerque**	**58.74**	**290**	LR	LR	09 45 27.5	
	comp=Z,46nm,21.1s,baz=64,slow=36						
JTS	**JuntasAbangare**	**59.33**	**253**	LR	LR	09 42 05.6	
	comp=Z,17nm,20.5s,baz=90,slow=32						
TXAR	**Lajitas Array**	**60.13**	**283**	P	P	09 20 53.2	-0.2
	1.2nm,1.0s,baz=66,slow=5.9,SNR=8.7						
TXAR				LR	LR	09 46 15.4	
	comp=Z,51nm,21.9s,baz=0.0,slow=35						
BVAR	**Borovoye Array**	**60.47**	**43**	LR	LR	09 47 44.2	
	comp=Z,28nm,18.4s,baz=242,slow=37						
ILAR	**Eielson Array**	**60.95**	**335**	P	P	09 20 58.6	+0.2
	0.9nm,1.0s,baz=54,slow=3.8,SNR=5.1						
NVAR	**Mina Array Bea**	**64.37**	**299**	LR	LR	09 48 23.8	
	comp=Z,51nm,20.0s,baz=275,slow=35						
YBH	**Yreka Blue Hor**	**65.01**	**305**	LR	LR	09 48 36.5	
	comp=Z,49nm,19.0s,baz=48,slow=35						
KURBB	**Kurchatov Arra**	**65.91**	**42**	P	P	09 21 31.4	0.0
	0.7nm,0.2s,baz=319,slow=6.7,SNR=5.3						
ZALV	**Zalesovo Beam**	**66.48**	**36**	LR	LR	09 51 33.0	
	comp=Z,25nm,18.2s,baz=243,slow=37						
LPIG	**La Paz**	**68.02**	**283**	LR	LR	09 51 05.0	
	comp=Z,37nm,19.3s,baz=32,slow=36						
MKAR	**Makanchi Array**	**70.35**	**43**	P	P	09 21 59.5	+0.1
	1.1nm,1.0s,baz=285,slow=4.6,SNR=5.3						
NNA	**Nana**	**71.47**	**231**	LR	LR	09 53 56.2	
	comp=Z,15nm,18.3s,baz=105,slow=36						
SONM	**Songino Array**	**79.69**	**29**	P	P	09 22 53.2	-0.2
	1.5nm,1.0s,baz=338,slow=6.0,SNR=6.3						

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*ISK **13** 09:18:41.9, 36°.96N×26°.63E, h18^{km}, ML2.5/5*

*CSEM **13** 09:18:42.9±0.1, 37°.00N×26°.66E, h20^{km}, ML2.5, Error ellipse: s-maj=4.1km s-min=2.7km az=8.0*

*ATH **13** 09:18:42.9, 37°.07N×26°.61E, h26^{km}±8^{km}, ML1.9/3, Error ellipse: s-maj=9.1km s-min=1.1km az=319.0*

*ISCJB **13** 09:18:43.2±0.5, 37°.01N±0°.04×26°.66E±0°.04, h25^{km}±7^{km}, Error ellipse: s-maj=6.4km s-min=4.9km az=176.5*

*DDA **13** 09:18:46.8, 37°.19N×26°.98E, h7^{km}, Ml2.3*

ISC 13 09:18:42.7±1.1**, 37°.03N**±0°.04×**26°.67E**±0°.02**, h28^{km}**±12^{km}**, n32, σ0^{s}.67**/42**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BODT	**Bodrum**	**0.51**	**86**	PG	**Pb**	**09 18 53.4**	**+0.1**
BODT	**Bodrum**	**0.51**	**86**	*e*Pg	**Pb**	**09 18 53.4**	**+0.1**
BDRM	**Kayabasi**	**0.62**	**86**	*i* P	**Pb**	**09 18 55.6**	**+0.5**
BDRM	**Kayabasi**	**0.62**	**86**	P	**Pb**	**09 18 55.6**	**+0.5**
AMGA	**Amorgos Island**	**0.65**	**253**	P	**Pb**	**09 18 55.1**	**-0.5**
AMGA				S	**Sb**	**09 19 04.5**	**+0.1**
AMGA				AML	AML	09 19 07.7	
	comp=N,206µm,0.3s						
AMGA				AML	AML	09 19 09.2	
	comp=E,157µm,0.1s						
AMGA	**Amorgos Island**	**0.65**	**253**	P	**Pb**	**09 18 55.2**	**-0.5**
SMG	**Samos**	**0.69**	**11**	P	**Pb**	**09 18 56.4**	**+0.1**
SMG				S	**Sb**	**09 19 05.5**	**0.0**
SMG				AML	AML	09 19 09.1	
	comp=E,473µm,0.4s						
SMG				AML	AML	09 19 09.5	
	comp=N,456µm,0.2s						
SMG	**Samos**	**0.69**	**11**	P	**Pb**	**09 18 56.2**	**-0.1**
SMG				S	**Sb**	**09 19 05.6**	**0.0**
DAT	**Datca**	**0.79**	**112**	PG	**Pb**	**09 18 57.7**	**-0.2**
DAT				SG	**Sn**	**09 19 09.4**	**+0.5**
DAT	**Datca**	**0.79**	**112**	*i* P	**Pn**	**09 18 58.7**	**+0.7**
DAT				*i* S	**Sn**	**09 19 09.4**	**+0.5**
DAT	**Datca**	**0.79**	**112**	*e*Pg	**Pb**	**09 18 57.7**	**-0.2**
DAT	**Datca**	**0.79**	**112**	P	**Pn**	**09 18 58.7**	**+0.7**
DAT				*e*Sg	**Sn**	**09 19 09.4**	**+0.5**
DATC	**Datca-Mugla**	**0.84**	**108**	PG	**Pn**	**09 18 58.8**	**+0.2**
DATC	**Datca-Mugla**	**0.84**	**108**	*e*Pg	**Pn**	**09 18 58.8**	**+0.2**
APE	**Apeiranthos**	**0.91**	**273**	PG	**Pn**	**09 18 59.5**	**-0.2**
APE				SG	**Sn**	**09 19 12.4**	**+0.5**
APE	**Apeiranthos**	**0.91**	**273**	P	**Pn**	**09 18 59.7**	**0.0**
APE				S	**Sn**	**09 19 12.2**	**+0.3**
APE				AML	AML	09 19 15.3	
	comp=N,125µm,0.2s						
APE				AML	AML	09 19 16.5	
	comp=E,102µm,0.6s						
APE	**Apeiranthos**	**0.91**	**273**	P	**Pn**	**09 18 59.7**	**0.0**
APE				*e*Sg	**Sn**	**09 19 12.4**	**+0.5**
DGB	**˜zmir**	**1.04**	**9**	*i* P	**Pb**	**09 19 02.6**	**+0.5**
DGB				*i* S	**Sb**	**09 19 16.1**	**+0.9**
IOSP	**Ios island**	**1.15**	**255**	P	**Pb**	**09 19 03.9**	**0.0**
IOSP	**Ios island**	**1.15**	**255**	P	**Pb**	**09 19 04.0**	**0.0**
AYDN	**Tasoluk**	**1.15**	**56**	*i* P	**Pb**	**09 19 03.9**	**-0.2**
AYDN	**Tasoluk**	**1.15**	**56**	P	**Pb**	**09 19 03.9**	**-0.2**
YER	**Yerkesik**	**1.29**	**85**	PN	**Pb**	**09 19 06.5**	**0.0**
YER	**Yerkesik**	**1.29**	**85**	*e*Pn	**Pb**	**09 19 06.5**	**0.0**
URLA	**Izmir**	**1.33**	**357**	PN	**Pb**	**09 19 07.3**	**+0.2**
URLA	**Izmir**	**1.33**	**357**	*e*Pn	**Pb**	**09 19 07.3**	**+0.2**
CHOS	**Chios island**	**1.44**	**340**	PN	**Pb**	**09 19 08.6**	**-0.4**
CHOS	**Chios island**	**1.44**	**340**	*e*Pn	**Pb**	**09 19 08.6**	**-0.4**
KARP	**Karpathos**	**1.53**	**165**	PN	**Pn**	**09 19 08.1**	**-0.1**
KARP	**Karpathos**	**1.53**	**165**	*e*Pn	**Pn**	**09 19 08.1**	**-0.1**
TURN	**Turunc**	**1.56**	**95**	PN	**Pn**	**09 19 06.0**	**-2.5**
TURN	**Turunc**	**1.56**	**95**	*e*Pn	**Pn**	**09 19 06.0**	**-2.5**

IDC 13 09:23:01.0±11.0**, 21°.95N×142°.79E, h327^{km}**±96^{km}**, mb3.1**/5**, mb1 3.2**/5**, mb1mx2.8**/63**, mbtmp3.8**/5**, Error ellipse: s-maj=159.4km s-min=21.0km az=78.0, Mariana**

Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSRS	Korea Array	20.10	324	P	P	09 27 10.9	-0.2
	2.5nm,0.6s,baz=147,slow=8.9,SNR=15						
SONM	Songino Array	38.91	320	P	P	09 29 55.8	-0.3
	0.4nm,0.4s,baz=132,slow=6.0,SNR=4.6						
WRA	Warramunga Arr	42.45	192	P	P	09 30 24.7	-0.3
	0.5nm,0.7s,baz=7.4,slow=7.6,SNR=5.0						
KURBB	Kurchatov Arra	57.09	317	P	P	09 32 14.5	+0.6
	0.6nm,0.5s,baz=91,slow=7.8,SNR=6.1						
FINES	FINESS Array B	82.80	334	P	P	09 34 48.4	-0.4
	0.7nm,0.3s,baz=58,slow=5.2,SNR=6.0						

NNC 13 09:31:48.9±3.3**,37°.85N×71°.50E,h0^{km},mb4.0,mpv3.6, 4C-4D,Error ellipse: s-maj=25.3km s-min=20.6km az=169.0,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	2.67	35	⇓Pn	Pn	09 32 33.6	+0.3
	3.9nm,0.3s						
SFK				⇓Sn	Sn	09 33 08.1	+1.6
	63nm,0.6s						
AML	Almayashu	4.60	21	P	Pn	09 32 59.1	-0.9
	SNR=38						
MNAS	Manas	4.70	9	⇓Pn	Pn	09 33 01.4	+0.2
	7.7nm,0.3s						
MNAS				⇑Sn	Sn	09 33 57.2	+0.7
	12nm,0.5s						
KZA	Kyzart	5.11	33	P	Pn	09 33 03.4	-3.7
	SNR=11						
EKS2	Erkin-Say	5.12	19	P	Pn	09 33 06.3	-0.6
	SNR=6.0						
AAK	Ala-Archa	5.30	25	⇑Pn	Pn	09 33 07.3	-2.2
	4.4nm,0.5s						
AAK				⇑Sn	Sn	09 34 11.1	-0.3
	13nm,0.8s						
AAK	Ala-Archa	5.30	25	P	Pn	09 33 07.5	-2.0
	SNR=5.4						
KK31	Karatay Array	5.31	352	⇓Pn	Pn	09 33 10.6	+1.2
	2.8nm,0.5s,baz=175,slow=15,SNR=14						
KK31				⇑Sn	Sn	09 34 13.1	+1.9
	2.4nm,0.3s,baz=180,slow=24,SNR=3.9						
KBK	Karagaybulak	5.48	28	P	Pn	09 33 10.2	-1.7
	SNR=5.4						
TKM2	Tokmak 2	5.95	30	P	Pn	09 33 15.1	-3.4
	SNR=6.0						

*ISCJB **13** 09:53:15.9±0.7,50°.20N±0°.06×19°.16E±0°.03,h0^{km},Error ellipse: s-maj=8.4km s-min=3.1km az=3.7*

*CSEM **13** 09:53:16.8±0.3,50°.21N×19°.20E,h1^{km},ML2.5/5,Error ellipse: s-maj=9.1km s-min=3.2km az=3.0*

*PRU **13** 09:53:17.6,50°.18N×19°.20E,h0^{km}*

ISC 13 09:53:16.8±1.0**,50°.18N**±0°.07×**19°.21E**±0°.02**,h0^{km},n25, σ0^{s}82**/37**,Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	Ojcow	0.38	84	*i* Pg	Pg	09 53 24.0	-0.1
OJC				*i* Sg	Sg	09 53 28.9	0.0
OJC	Ojcow	0.38	84	*i* Pg	Pg	09 53 24.0	-0.1
OJC				*i* Sg	Sg	09 53 28.9	0.0
OJC	Ojcow	0.38	84	*i* Pg	Pg	09 53 24.0	-0.1
OJC				*i* Sg	Sg	09 53 28.9	0.0
OKC	Ostrava-Krasne	0.77	244	*e*SG	Sg	09 53 42.6	+1.2
	comp=Z,31nm,0.8s						
OKC	Ostrava-Krasne	0.77	244	Sg	Sg	09 53 42.6	+1.2
	31nm,0.8s						
NIE	Niedzica	1.04	137	*e*Pg	Pb	09 53 37.5	-0.1
NIE				*e*Sg	Sb	09 53 52.3	+0.5
NIE	Niedzica	1.04	137	*e*Pg	Pb	09 53 37.5	-0.1
NIE				*e*Sg	Sb	09 53 52.3	+0.5
NIE	Niedzica	1.04	137	*e*Pg	Pb	09 53 37.5	-0.1
NIE				*e*Sg	Sb	09 53 52.3	+0.5
MORC	Moravsky Berou	1.15	250	*e*Pg	Pb	09 53 39.4	-0.2
MORC				*e*Sg	Sb	09 53 55.1	0.0
MORC	Moravsky Berou	1.15	250	*e*PG	Pb	09 53 39.4	-0.2
MORC				*e*SG	Sb	09 53 55.1	0.0
KRLC	Kraliky	1.57	267	*e*PG	Pb	09 53 46.3	-0.4
KRLC				*e*SG	Sb	09 54 06.9	-0.2
	comp=Z,2.6nm,0.5s						
KRLC	Kraliky	1.57	267	Pg	Pb	09 53 46.3	-0.4
KRLC				Sg	Sb	09 54 06.9	-0.2
	2.6nm,0.5s						
DPC	Dobruska-Polom	1.86	276	*e*PG	Pg	09 53 52.1	-0.4
DPC				*e*SG	Sg	09 54 17.6	+1.0
	comp=Z,12nm,0.6s						
DPC	Dobruska-Polom	1.86	276	Pg	Pg	09 53 52.1	-0.4
DPC				Sg	Sg	09 54 17.6	+1.0
	12nm,0.6s						
VRAC	Vranov	1.91	244	*e*Sg	Sb	09 54 16.6	-0.3
VRAC	Vranov	1.91	244	*e*SG	Sb	09 54 16.6	-0.3
UPC	Upice	2.08	280	*e*SG	Sg	09 54 25.5	+2.1
	comp=Z,7.1nm,0.5s						
UPC	Upice	2.08	280	Sg	Sg	09 54 25.5	+2.1
	7.1nm,0.5s						
KRUC	Moravsky	2.15	240	*e*Sg	Sb	09 54 24.1	+0.4
KRUC	Moravsky	2.15	240	*e*SG	Sb	09 54 24.1	+0.4
GOPC	GO Pecny, Ondr	2.86	266	*e*SG	Sg	09 54 48.5	-0.3
	comp=Z,5.8nm,0.7s						
GOPC	GO Pecny, Ondr	2.86	266	Sg	Sg	09 54 48.5	-0.3
	5.8nm,0.7s						
PRU	Pruhonice	3.01	268	*e*SG	Sg	09 54 53.4	-0.2
PRU	Pruhonice	3.01	268	Sg	Sg	09 54 53.4	-0.2
KHC	Kasperske Hory	3.81	256	*e*SG	Sg	09 55 16.3	-2.7

IDC 13 10:00:13.5±1.1**,2°.81N×32°.03W,h0^{km},mb3.9**/6**, mb1 4.1**/6**,mb1mx3.7**/57**,mbtmp3.9**/6**,MS3.4**/15**, Ms1 3.4**/15**,ms1mx3.1**/53**,Error ellipse: s-maj=37.9km s-min=27.1km az=157.0,Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N3	ASCENSION HYDR	20.44	121	T	T	10 25 25.2	
	baz=302						
H10N2	ASCENSION HYDR	20.45	121	T	T	10 25 25.7	
	baz=302						
H10N1	ASCENSION HYDR	20.46	121	T	T	10 25 26.8	
	baz=302						
H10S3	ASCENSION HYDR	20.89	124	T	T	10 25 59.6	
	baz=306						
H10S1	ASCENSION HYDR	20.90	124	T	T	10 26 00.1	
	baz=306						
H10S2	ASCENSION HYDR	20.91	124	T	T	10 26 01.2	
	baz=306						
DBIC	Dimbokro	27.35	81	LR	LR	10 15 18.1	
	comp=Z,70nm,18.3s,baz=260,slow=33						
KOWA	Kowa	29.98	66	P	P	10 06 24.2	+0.1
	1.3nm,0.6s,baz=251,slow=13,SNR=4.1						
KOWA				LR	LR	10 16 22.0	
	comp=Z,87nm,21.0s,baz=219,slow=32						
TORD	Torodi Ar. Bea	34.89	71	P	P	10 07 05.7	-1.4
	3.5nm,0.9s,baz=260,slow=9.4						
SJG	San Juan	36.72	297	LR	LR	10 18 59.4	
	comp=Z,34nm,19.2s,baz=98,slow=31						
CPUP	Villa Florida	37.92	219	LR	LR	10 21 26.4	
	comp=Z,62nm,18.1s,baz=58,slow=34						
LPAZ	La Paz	40.41	241	LR	LR	10 24 01.5	
	comp=Z,85nm,20.0s,baz=70,slow=35						
ROSC	El Rosal	42.23	274	LR	LR	10 24 54.4	
	comp=Z,26nm,18.0s,baz=131,slow=35						
NNA	Nana	46.90	251	LR	LR	10 27 48.6	
	comp=Z,30nm,18.2s,baz=124,slow=35						
TKL	Tuckaleechee C	57.86	311	LR	LR	10 30 11.7	
	comp=Z,34nm,21.9s,baz=22,slow=31						
GERES	GERESS Array B	60.19	33	P	P	10 10 24.1	+0.7
	0.4nm,0.5s,baz=228,slow=7.3,SNR=3.6						
NOA	NORSAR Array B	66.63	21	LR	LR	10 37 27.7	
	comp=Z,15nm,19.0s,baz=230,slow=34						
BRTR	Keskin Array B	69.61	49	P	P	10 11 25.8	+0.7
	1.4nm,0.8s,baz=256,slow=5.0,SNR=6.4						
BRTR				LR	LR	10 43 10.3	
	comp=Z,16nm,18.9s,baz=164,slow=37						
ULM	Lac du Bonnet	71.33	323	LR	LR	10 37 57.4	
	comp=Z,27nm,20.9s,baz=146,slow=32						
TXAR	Lajitas Array	72.63	300	P	P	10 11 43.1	-0.4
	0.4nm,0.5s,baz=116,slow=6.7,SNR=7.7						
ANMO	Albuquerque	75.63	305	LR	LR	10 41 15.6	
	comp=Z,26nm,21.4s,baz=70,slow=33						
SNAA	Sanae	76.73	171	P	P	10 12 06.7	+0.3
	1.4nm,0.9s,baz=355,slow=8.2,SNR=6.2						
LPIG	La Paz	78.15	294	LR	LR	10 46 18.0	
	comp=Z,17nm,18.1s,baz=238,slow=35						
PDAR	Pinedale Array	78.94	313	LR	LR	10 42 37.0	
	comp=Z,42nm,21.8s,baz=112,slow=32						
YBH	Yreka Blue Hor	88.65	312	LR	LR	10 51 00.5	
	comp=Z,26nm,18.8s,baz=75,slow=34						

*ISCJB **13** 10:17:54.2±0.7,8°.56S±0°.05×74°.31W±0°.05,h152^{km}±7^{km}, mb4.2/42,Error ellipse: s-maj=9.9km s-min=6.3km az=34.1*

*IDC **13** 10:17:54.6±2.1,8°.48S×74°.23W,h141^{km}±22^{km},mb3.7/9, mb1 3.9/13,mb1mx3.7/43,mbtmp4.2/13,Error ellipse: s-maj=31.2km s-min=13.3km az=47.0*

*NEIC **13** 10:17:55.5±0.9,8°.55S×74°.29W,h147^{km}±10^{km},mb4.3/33, Error ellipse: s-maj=11.8km s-min=7.8km az=57.0*

ISC 13 10:17:55.3±0.6**,8°.59S**±0°.06×**74°.31W**±0°.06**,h151^{km}**±5^{km}**, h151^{km}:pP-P,n71,σ1^{s}19**/80**,mb4.3**/42**,Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	4.20	216	P	Pn	10 18 59.1	+0.9
	1.7nm,0.3s,baz=24,slow=10.0,SNR=4.6						
NNA				S	Sn	10 19 44.7	-2.5
	15nm,0.3s,baz=124,slow=22,SNR=9.3						
ATAH	Atahualpa	4.29	289	P	Pn	10 18 58.9	-1.0
	145nm,0.3s,baz=110,slow=4.2,SNR=265						
ATAH				S	Sn	10 19 47.6	-2.4
	15nm,0.3s,baz=324,slow=18,SNR=6.0						
OTAV	Otavalo	9.69	335	*e*Pn	Pn	10 20 11.8	+0.1
LPAZ	La Paz	9.75	142	P	Pn	10 20 12.9	+0.4
	0.8nm,0.3s,baz=344,slow=8.0,SNR=17						
LPAZ	La Paz	9.75	142	*e*Pn	Pn	10 20 12.7	+0.2
SAML	Samuel	11.01	93	*e*Pn	Pn	10 20 26.9	-1.7
SAML				*e*Sn	Sn	10 22 26.7	-3.7
PB11	IPOC Station P	11.99	158	*e*Pn	Pn	10 20 42.7	+1.1
RUSC	La Rusia	14.44	5	*e*Pn	P	10 21 18.6	+2.8
SIV	San Ignacio	14.88	121	P	Pn	10 21 19.0	+0.8
	baz=307,slow=14						
PTBC	PUERTO BERRIO,	15.03	359	*e*P	P	10 21 21.3	-0.6
ZARC	Zaragoza, Cauc	15.98	358	*e*P	P	10 21 33.9	+1.4
PTGA	Pitinga	16.28	62	P	P	10 21 38.1	+2.4
	1.2nm,0.3s,baz=244,slow=16,SNR=11						
PTGA	Pitinga	16.28	62	*e*Pn	P	10 21 38.5	+2.8
	10nm,1.1s						
SJCC	San Jacinto, C	18.38	357	*e*P	Pn	10 22 00.1	-0.7
CODC	Agustˆ›n Codaz	18.42	3	*e*P	Pn	10 21 59.5	-1.6
CPUP	Villa Florida	23.90	140	P	P	10 22 55.2	0.0
	1.2nm,0.4s,baz=320,slow=13,SNR=4.1						
CBYP	Canovanas	27.96	17	*e*P	P	10 23 31.1	-0.8
	48nm,1.5s						
MYIG	MØrida	33.04	333	*e*P	P	10 24 16.4	-0.2
	89nm,1.1s						
V48A	Smith Brothers	45.64	346	*e*P	P	10 26 00.0	-0.7
V48A				*e*pP	pP	10 26 35.3	+0.7
TX31	Lajitas Ar. Si	47.13	324	*e*P	P	10 26 13.5	+0.9
TXAR	Lajitas Array	47.13	324	P	P	10 26 13.4	+0.8
	1.7nm,0.7s,baz=150,slow=8.7,SNR=26						
TXAR				PcP	PcP	10 27 42.2	+0.2
	0.6nm,0.8s,baz=140,slow=6.5,SNR=4.0						
PARMO	Parma	47.29	343	*e*P	P	10 26 14.0	+0.5
	26nm,0.6s						
ABTX	Abilene, Hawle	47.57	331	*e*P	P	10 26 15.7	-0.1
	7.4nm,0.8s						
MCWV	Mont Chateau	48.27	354	*e*P	P	10 26 21.0	-0.1
	17nm,0.4s						
WMOK	Wichita Mounta	48.92	333	*e*P	P	10 26 26.6	+0.5
	1.9nm,0.6s						
S39A	Bolivar	49.35	340	*e*P	P	10 26 28.9	-0.5
S39A				*e*PcP	PcP	10 27 49.1	-0.6
T25A	Trinidad	53.52	330	*e*P	P	10 27 01.8	+1.2
	6.3nm,1.1s						
SDCO	Great Sand Dun	54.53	330	*e*P	P	10 27 08.8	+0.7
	2.6nm,0.9s						
SDCO				*e*pP	pP	10 27 45.0	+2.0
X16A	Lo Mia Camp, P	55.36	323	*e*P	P	10 27 14.8	+0.8
	1.9nm,0.6s						
WUAZ	Wupatki	56.08	324	*e*P	P	10 27 19.5	+0.4
	4.8nm,0.9s						
SMCO	Snowmass	56.37	330	*e*P	P	10 27 21.6	+0.3
	1.9nm,0.9s						
W13A	Hualapai Mount	57.31	322	*e*P	P	10 27 27.9	+0.2
	2.2nm,0.8s						
SRU	San Rafael Swe	58.16	327	*e*P	P	10 27 34.2	+0.6
	2.9nm,0.7s						
PSUT	Pine Spring	59.60	325	*e*P	P	10 27 44.0	+0.4
	1.8nm,0.8s						
TPNV	Topopah Spring	59.96	322	*e*P	P	10 27 47.2	+1.2
	3.2nm,1.0s						
TCUT	Toone Canyon	60.08	328	*e*P	P	10 27 47.5	+0.7
	9.9nm,0.6s						
DUG	Dugway, Tooele	60.17	327	*e*P	P	10 27 48.3	+1.0
	3.6nm,0.8s						
PDAR	Pinedale Array	60.37	331	P	P	10 27 48.3	-0.5
	0.9nm,0.6s,baz=122,slow=6.7,SNR=12						
PDAR	Pinedale Array	60.37	331	*e*P	P	10 27 49.3	+0.5
R11A	Troy Canyon, C	60.48	323	*e*P	P	10 27 50.8	+1.2
	1.3nm,0.8s						
HWUT	Hardware Ranch	60.52	329	*e*P	P	10 27 50.1	+0.4
	4.2nm,0.6s						
HVU	Hansel Valley	61.27	328	*e*P	P	10 27 55.5	+0.7
	1.9nm,0.9s						
LOHW	Long Hollow	61.51	331	*e*P	P	10 27 57.0	+0.5
	1.7nm,0.7s						
ULM	Lac du Bonnet	61.53	344	P	P	10 27 55.8	-0.3
	2.1nm,0.5s,baz=173,slow=3.9,SNR=3.2						
H17A	Grant Village	62.08	331	*e*P	P	10 28 00.8	+0.5
	2.2nm,0.6s						
GCMT	Greycliff	62.72	333	*e*P	P	10 28 05.2	+0.8
HLID	Hailey	63.38	328	*e*P	P	10 28 08.6	-0.3
	2.5nm,1.0s						
BOZ	Bozeman (W)	63.48	332	*e*P	P	10 28 10.2	+0.9
	3.2nm,0.8s						
MFID	Camas Ranch	64.02	328	*e*P	P	10 28 13.7	+0.7
	7.1nm,0.8s						
HRY	Holter Researc	64.40	332	*e*P	P	10 28 16.4	+1.1
EGMT	Eagleton	64.47	334	*e*P	P	10 28 15.9	+0.1
	5.2nm,0.6s						
MSO	Missoula	65.47	331	*e*P	P	10 28 23.0	+0.7
	6.2nm,0.7s						
F10A	Beach Ranch, E	66.50	329	*e*P	P	10 28 30.5	+1.6
	3.8nm,0.9s						
PINE	Pine Mountain	67.08	325	*e*P	P	10 28 33.4	+0.8
	4.9nm,0.9s						
WALA	Waterton Lakes	67.08	333	*e*P	P	10 28 33.1	+0.6
	7.0nm,1.1s						
DBIC	Dimbokro	70.88	80	P	P	10 28 56.8	+0.3
	2.0nm,0.5s,baz=271,slow=6.4,SNR=4.5						
SNAA	Sanae	76.11	162	P	P	10 29 27.2	+1.1
	1.1nm,0.5s,baz=270,slow=8.9,SNR=29						
YKA	Yellowknife Ar	77.36	342	P	P	10 29 33.0	0.0
	2.4nm,0.7s,baz=141,slow=5.7,SNR=8.1						
TORD	Torodi Ar. Bea	78.50	75	P	P	10 29 39.7	-0.7
	0.4nm,0.3s,baz=270,slow=4.3						
SUMG	Summit	84.26	10	*e*P	P	10 30 10.1	+0.1
	9.9nm,1.0s						
SUMG				*e*pP	pP	10 30 47.6	-0.2
EGAK	Eagle	88.13	337	*e*P	P	10 30 29.3	+0.7
	4.1nm,0.9s						
IL1	Eielson Array	90.41	336	*e*P	P	10 30 39.3	+0.1
ILAR	Eielson Array	90.41	336	P	P	10 30 39.3	+0.1
	0.8nm,0.7s,baz=140,slow=3.2,SNR=8.0						
MDM	Murphy Dome	91.01	336	*e*P	P	10 30 42.8	+0.7
	12nm,1.2s						
ZALV	Zalesovo Beam	131.75	16	PKP	PKPdf	10 36 49.6	-0.7
	0.9nm,0.4s,baz=318,slow=1.9,SNR=3.8						
MKAR	Makanchi Array	137.00	24	PKP	PKPdf	10 37 01.0	+0.5
	0.6nm,0.8s,baz=47,slow=4.1,SNR=4.5						
ASAR	Alice Springs	137.71	220	PKP	PKPdf	10 37 02.3	-0.2
	0.8nm,0.7s,baz=115,slow=2.6,SNR=7.5						
ASAR				pPKP	pPKPdf	10 37 43.3	+0.8
	0.9nm,0.7s,baz=120,slow=2.2,SNR=4.9						
KSH	Kashi	139.32	36	*e*PKP	PKPdf	10 37 01.8	-3.3
WRA	Warramunga Arr	140.01	225	PKP	PKPdf	10 37 07.3	+0.5
	1.2nm,0.8s,baz=122,slow=2.3,SNR=6.0						
WRA				pPKP	pPKPdf	10 37 46.0	-0.8
	1.6nm,0.7s,baz=130,slow=1.8,SNR=6.4						
KSRS	Korea Array	144.92	328	PKP	PKPbc	10 37 14.6	+0.2
	2.1nm,0.6s,baz=43,slow=3.7,SNR=9.4						
LZH	Lanzhou	152.57	3	*e*PKPbc	PKPdf	10 37 24.8	-2.7
LZH				pPKP	pPKPdf	10 38 08.0	+0.3
LZH				sPKP		10 38 24.3	

MEX 13 10:38:52.2±0.4**,16°.49N×98°.49W,h13^{km}**±9^{km}**,MD3.5, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.36	105	*e*P	Pg	10 38 58.9	-0.6
PNIG				*i* S	Sg	10 39 04.3	-0.1
TLIG	Tlapa	1.07	356	*e*P	Pb	10 39 09.1	-3.6
TLIG				*i* S	Sb	10 39 22.6	-4.1

*CSEM **13** 10:42:07.9±0.2,45°.63N×26°.56E,h139^{km}±2^{km},mb2.5, Error ellipse: s-maj=3.5km s-min=3.4km az=16.0*

BUC 13 10:42:07.7±0.8**,45°.62N×26°.54E,h147^{km}**±8^{km}**,MD3.8**/5**, 43C-24D,Error ellipse: s-maj=5.7km s-min=5.0km az=66.0,Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLOR	Plostina	0.24	19	⇑*i*P	Pn	10 42 27.4	-0.3
PLOR	Plostina	0.24	19	⇑*i*P	Pn	10 42 27.4	-0.3
PLOR				*i* S	Sn	10 42 41.6	-1.4
PLOR	Plostina	0.24	19	P	Pn	10 42 27.3	-0.4
PLOR				*i* S	Sn	10 42 41.6	-1.4
VRI	Vrincioaia	0.28	29	⇑*i*P	Pn	10 42 27.6	-0.2
VRI	Vrincioaia	0.28	29	⇑*i*P	Pn	10 42 27.6	-0.2
VRI				*i* S	Sn	10 42 42.3	-0.9
VRI	Vrincioaia	0.28	29	P	Pn	10 42 27.5	-0.3
VRI				S	Sn	10 42 41.5	-1.7
ODBI	Odobesti	0.39	69	S	Sn	10 42 44.0	+0.3
ODBI	Odobesti	0.39	69	*i* S	Sn	10 42 44.0	+0.3
ODBI	Odobesti	0.39	69	*i* S	Sn	10 42 44.0	+0.3
GRER		0.39	128	⇓*i*P	Pn	10 42 28.5	+0.3
GRER		0.39	128	⇓*i*P	Pn	10 42 28.5	+0.3
GRER				*i* S	Sn	10 42 42.1	-1.6
GRER		0.39	128	⇓*i*P	Pn	10 42 28.5	+0.3
GRER				*i* S	Sn	10 42 42.1	-1.6
MLR	Muntele Rosu	0.44	253	⇑*i*P	Pn	10 42 28.4	-0.1
MLR	Muntele Rosu	0.44	253	⇑*i*P	Pn	10 42 28.4	-0.1
MLR				*i* S	Sn	10 42 43.5	-0.8
MLR	Muntele Rosu	0.44	253	P	Pn	10 42 28.4	-0.1
MLR				S	Sn	10 42 43.4	-0.9
PETR	Petresti	0.50	78	⇑*i*P	Pn	10 42 29.0	+0.4
PETR	Petresti	0.50	78	⇑*i*P	Pn	10 42 29.0	+0.4
PETR				*i* S	Sn	10 42 44.2	-0.3
PETR	Petresti	0.50	78	P	Pn	10 42 28.9	+0.3
PETR				S	Sn	10 42 44.1	-0.4
ISR	Istrita	0.50	180	⇓*i*P	Pn	10 42 29.1	+0.3
ISR	Istrita	0.50	180	⇓*i*P	Pn	10 42 29.1	+0.3
ISR				*i* S	Sn	10 42 43.7	-1.0
ISR	Istrita	0.50	180	⇓*i*P	Pn	10 42 29.1	+0.3
ISR				*i* S	Sn	10 42 43.7	-1.0
SECR		0.67	210	S	Sn	10 42 46.8	+0.4
SECR		0.67	210	*i* S	Sn	10 42 46.8	+0.4
SECR		0.67	210	*i* S	Sn	10 42 46.8	+0.4
PGOR	Pogoanele	0.78	156	S	Sn	10 42 48.3	+0.7
PGOR	Pogoanele	0.78	156	*i* S	Sn	10 42 48.3	+0.7
PGOR	Pogoanele	0.78	156	*i* S	Sn	10 42 48.3	+0.7
PLAR	PLOIESTI	0.79	207	S	Sn	10 42 48.1	+0.3
PLAR	PLOIESTI	0.79	207	*i* S	Sn	10 42 48.1	+0.3
PLAR	PLOIESTI	0.79	207	*i* S	Sn	10 42 48.1	+0.3
DOPR	Dopca	0.88	294	⇑*i*P	Pn	10 42 30.9	-0.2
DOPR	Dopca	0.88	294	⇑*i*P	Pn	10 42 30.9	-0.2
DOPR				*i* S	Sn	10 42 48.0	-1.0
DOPR	Dopca	0.88	294	⇑*i*P	Pn	10 42 30.9	-0.2
DOPR				*i* S	Sn	10 42 48.0	-1.0
TESR	Tescani	0.89	5	⇑*i*P	Pn	10 42 30.8	-0.5
TESR	Tescani	0.89	5	⇑*i*P	Pn	10 42 30.8	-0.5
TESR				*i* S	Sn	10 42 47.5	-1.8
TESR	Tescani	0.89	5	P	Pn	10 42 30.8	-0.5
TESR				S	Sn	10 42 47.6	-1.7
SULR		0.96	192	⇑*i*P	Pn	10 42 32.2	+0.4
SULR		0.96	192	⇑*i*P	Pn	10 42 32.2	+0.4
SULR				*i* S	Sn	10 42 50.3	+0.1
SULR		0.96	192	⇑*i*P	Pn	10 42 32.2	+0.4
SULR				*i* S	Sn	10 42 50.3	+0.1
VOIR		1.06	260	⇑*i*P	Pn	10 42 32.5	-0.3
VOIR		1.06	260	⇑*i*P	Pn	10 42 32.5	-0.3
VOIR				*i* S	Sn	10 42 50.3	-1.6
VOIR		1.06	260	⇑*i*P	Pn	10 42 32.5	-0.3
VOIR				*i* S	Sn	10 42 50.3	-1.6
AMRR	Amara	1.16	151	⇑*i*P	Pn	10 42 34.0	+0.4
AMRR	Amara	1.16	151	⇑*i*P	Pn	10 42 34.0	+0.4
AMRR				*i* S	Sn	10 42 53.0	-0.3
AMRR	Amara	1.16	151	⇑*i*P	Pn	10 42 34.0	+0.4
AMRR				*i* S	Sn	10 42 53.0	-0.3
GIUM	Giurgiulesti	1.18	96	P	Pn	10 42 33.6	-0.2
GIUM				S	Sn	10 42 53.1	-0.5
CFR	Carcaliu	1.21	111	⇓*i*P	Pn	10 42 33.8	-0.2
CFR	Carcaliu	1.21	111	⇓*i*P	Pn	10 42 33.8	-0.2
CFR				*i* S	Sn	10 42 52.7	-1.4
CFR	Carcaliu	1.21	111	⇓*i*P	Pn	10 42 33.8	-0.2
CFR				*i* S	Sn	10 42 52.7	-1.4
BUC1	Bucharest	1.32	196	S	Sn	10 42 55.5	-0.6
BUC1	Bucharest	1.32	196	*i* S	Sn	10 42 55.5	-0.6
BUC1	Bucharest	1.32	196	*i* S	Sn	10 42 55.5	-0.6
BIZ	Bicaz	1.35	347	⇑*i*P	Pn	10 42 36.3	+0.9
BIZ	Bicaz	1.35	347	⇑*i*P	Pn	10 42 36.3	+0.9
BIZ	Bicaz	1.35	347	⇑*i*P	Pn	10 42 36.3	+0.9
HARR	Harsova	1.36	133	⇓*i*P	Pn	10 42 35.5	0.0
HARR	Harsova	1.36	133	⇓*i*P	Pn	10 42 35.5	0.0
HARR	Harsova	1.36	133	⇓*i*P	Pn	10 42 35.5	0.0
ARR	Arges	1.36	260	⇑*i*P	Pn	10 42 35.8	+0.2
ARR	Arges	1.36	260	⇑*i*P	Pn	10 42 35.8	+0.2
ARR				*i* S	Sn	10 42 57.3	+0.3
ARR	Arges	1.36	260	⇑*i*P	Pn	10 42 35.8	+0.2
ARR				*i* S	Sn	10 42 57.3	+0.3
SGRR	Singureni	1.46	196	⇓*i*P	Pn	10 42 35.8	-0.7
SGRR	Singureni	1.46	196	⇓*i*P	Pn	10 42 35.8	-0.7
SGRR				*i* S	Sn	10 42 57.3	-1.2
SGRR	Singureni	1.46	196	⇓*i*P	Pn	10 42 35.8	-0.7
SGRR				*i* S	Sn	10 42 57.3	-1.2
LEOM	Leova	1.46	54	⇑*i*P	Pn	10 42 36.6	+0.1
LEOM	Leova	1.46	54	⇑*i*P	Pn	10 42 36.6	+0.1
LEOM				*i* S	Sn	10 42 58.0	-0.7
LEOM	Leova	1.46	54	⇑*i*P	Pn	10 42 36.6	+0.1
LEOM				*i* S	Sn	10 42 58.0	-0.7
TLB	Topalu	1.49	134	⇓*i*P	Pn	10 42 36.8	0.0
TLB	Topalu	1.49	134	⇓*i*P	Pn	10 42 36.8	0.0
TLB				*i* S	Sn	10 42 57.8	-1.3
TLB	Topalu	1.49	134	⇓*i*P	Pn	10 42 36.8	0.0
TLB				*i* S	Sn	10 42 57.8	-1.3
HUMR	Humele	1.55	226	⇑*i*P	Pn	10 42 37.6	0.0
HUMR	Humele	1.55	226	⇑*i*P	Pn	10 42 37.6	0.0
HUMR				*i* S	Sn	10 42 59.3	-1.1
HUMR	Humele	1.55	226	⇑*i*P	Pn	10 42 37.6	0.0
HUMR				*i* S	Sn	10 42 59.3	-1.1
TLCR		1.66	104	⇑*i*P	Pn	10 42 38.7	0.0
TLCR		1.66	104	⇑*i*P	Pn	10 42 38.7	0.0
TLCR				*i* S	Sn	10 43 01.5	-1.0
TLCR		1.66	104	⇑*i*P	Pn	10 42 38.7	0.0
TLCR				*i* S	Sn	10 43 01.5	-1.0
ICOR	Ion Corvin	1.75	149	⇑*i*P	Pn	10 42 40.1	+0.3
ICOR	Ion Corvin	1.75	149	⇑*i*P	Pn	10 42 40.1	+0.3
ICOR	Ion Corvin	1.75	149	⇑*i*P	Pn	10 42 40.1	+0.3
TIRR	Tirgusor	1.77	131	⇓*i*P	Pn	10 42 39.9	0.0
TIRR	Tirgusor	1.77	131	⇓*i*P	Pn	10 42 39.9	0.0
TIRR				*i* S	Sn	10 43 02.7	-1.9
TIRR	Tirgusor	1.77	131	⇓*i*P	Pn	10 42 39.9	0.0
TIRR				*i* S	Sn	10 43 02.7	-1.9
KIS	Kishinev	2.10	48	*i* S	Sn	10 43 08.0	-3.4
	300nm,1.0s						
KIS	Kishinev	2.10	48	*i* S	Sn	10 43 08.7	-2.7
	300nm,1.0s						
BURAR	Bucovina Array	2.19	336	⇓*i*P	Pn	10 42 45.5	+0.6
BURAR	Bucovina Array	2.19	336	⇓*i*P	Pn	10 42 45.5	+0.6
BURAR	Bucovina Array	2.19	336	⇓*i*P	Pn	10 42 45.5	+0.6
SORM	Soroca	2.81	26	⇑*i*P	Pn	10 42 52.0	-0.4
SORM	Soroca	2.81	26	⇑*i*P	Pn	10 42 52.0	-0.4
SORM	Soroca	2.81	26	⇑*i*P	Pn	10 42 52.0	-0.4

*ISK **13** 10:49:46.5,36°.59N×36°.38E,h7^{km}±2^{km},ML2.2/4*

*CSEM **13** 10:49:47.1±0.2,36°.62N×36°.37E,h10^{km},ML2.2,Error ellipse: s-maj=6.4km s-min=3.8km az=126.0*

*DDA **13** 10:49:47.5,36°.65N×36°.37E,h7^{km},Ml2.5*

ISC 13 10:49:46.9±1.1**,36°.62N**±0°.03×**36°.37E**±0°.03**,h9^{km}**±10^{km}**, n18,σ0^{s}45**/28**,Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAHT	Tahtakopru-Hat	0.28	212	PG	Pg	10 49 52.2	-0.4

TAHT				SG	**Sg**	**10 49 56.5**	**+0.1**
TAHT	**Tahtakopru-Hat**	**0.28**	**212**	*e*Pg	**Pg**	**10 49 52.2**	**-0.4**
TAHT				*e*Sg	**Sg**	**10 49 56.5**	**+0.1**
KUZU	**Kuzuini**	**0.59**	**75**	*i* P	**Pb**	**10 49 59.3**	**0.0**
KUZU				*i* S	**Sn**	**10 50 10.3**	**-0.8**
KUZU	**Kuzuini**	**0.59**	**75**	P	**Pb**	**10 49 59.3**	**0.0**
KUZU				S	**Sn**	**10 50 10.3**	**-0.8**
YAYL	**Yayladag**	**0.62**	**200**	PG	**Pg**	**10 49 58.5**	**-0.4**
YAYL				SG	**Sg**	**10 50 07.2**	**+0.1**
YAYL	**Yayladag**	**0.62**	**200**	*i* P	**Pb**	**10 49 59.9**	**0.0**
YAYL				*i* S	**Sb**	**10 50 09.8**	**+1.0**
YAYL	**Yayladag**	**0.62**	**200**	*e*Pg	**Pg**	**10 49 58.5**	**-0.4**
YAYL	**Yayladag**	**0.62**	**200**	P	**Pb**	**10 49 59.9**	**0.0**
YAYL				*e*Sg	**Sg**	**10 50 07.2**	**+0.1**
YAYL				S	**Sb**	**10 50 09.8**	**+1.0**
YURE	**YUREGIR**	**0.63**	**289**	*i* P	**Pb**	**10 49 59.9**	**-0.1**
YURE	**YUREGIR**	**0.63**	**289**	P	**Pb**	**10 49 59.9**	**-0.1**
KRTS	**Karatas**	**0.80**	**267**	PG	**Pg**	**10 50 02.5**	**+0.2**
KRTS				SG	**Sb**	**10 50 14.2**	**+0.3**
KRTS	**Karatas**	**0.80**	**267**	*e*Pg	**Pg**	**10 50 02.5**	**+0.2**
KRTS				*e*Sg	**Sb**	**10 50 14.2**	**+0.3**
GAZ	**Gaziantep**	**0.87**	**50**	PG	**Pg**	**10 50 03.9**	**+0.3**
GAZ	**Gaziantep**	**0.87**	**50**	*e*Pg	**Pg**	**10 50 03.9**	**+0.3**
ANDN	**Andirin**	**0.96**	**359**	*i* P	**Pg**	**10 50 05.0**	**-0.4**
ANDN	**Andirin**	**0.96**	**359**	P	**Pg**	**10 50 04.9**	**-0.4**
KMRS	**Kahramanmaras**	**0.98**	**25**	PG	**Pb**	**10 50 06.2**	**+0.2**
KMRS	**Kahramanmaras**	**0.98**	**25**	*e*Pg	**Pb**	**10 50 06.2**	**+0.2**

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*IDC **13** 11:27:31.2±0.8, 20°.07S×174°.17W, h0^{km}, mb3.9/7, mb1 4.3/9, mb1mx3.9/54, mbtmp4.0/9, ML3.9/2, MS3.5/4, Ms1 3.5/4, ms1mx2.9/47, Error ellipse: s-maj=37.9km s-min=18.6km az=134.0*

*NEIC **13** 11:27:32.5±0.7, 20°.12S×174°.13W, h10^{km}, mb4.3/2, Error ellipse: s-maj=25.4km s-min=13.1km az=129.0*

ISC 13 11:27:35.7±0.8**, 20°.0S**±0°.1×**174°.1W**±0°.2**, h31^{km}, n17, σ1^{s}58**/18**, mb4.1**/10**, MS3.5**/3**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**6.45**	**20**	Pn	**Pn**	**11 29 07.6**	**-1.2**
	2.0nm,0.3s,baz=187,slow=8.1,SNR=2.9						
AFI				Sn	**Sn**	**11 30 20.5**	**-0.9**
	4.5nm,0.3s,baz=62,slow=18,SNR=3.3						
AFI	**Afiamalu**	**6.45**	**20**	Pn	**Pn**	**11 29 07.5**	**-1.2**
AFI				*e*Sn	**Sn**	**11 30 20.1**	**-1.3**
AFI				Sn	**Sn**	**11 30 20.5**	**-0.9**
RAR	**Rarotonga**	**13.44**	**98**	LR	LR	11 35 05.7	
	comp=Z,139nm,18.1s,baz=260,slow=34						
URZ	**Urewera**	**19.73**	**201**	P	**P**	**11 31 59.7**	**-3.1**
	0.5nm,0.3s,baz=13,slow=4.1,SNR=5.6						
PPT	**Papeete**	**23.31**	**88**	LR	LR	11 39 49.7	
	comp=Z,98nm,19.4s,baz=234,slow=32						
JAY	**Jayapura**	**47.43**	**286**	P	**P**	**11 36 10.0**	**+2.1**
	10nm,0.7s,baz=146,slow=3.4,SNR=4.3						
ASAR	**Alice Springs**	**48.22**	**256**	P	**P**	**11 36 13.3**	**-0.6**
	1.7nm,0.7s,baz=89,slow=6.8,SNR=14						
ASAR				PcP	**PcP**	**11 37 42.3**	**+1.4**
	1.4nm,0.9s,baz=83,slow=3.5,SNR=6.9						
WRAB	**Tennant Creek**	**48.32**	**261**	*e*P	**P**	**11 36 12.6**	**-2.0**
	2.8nm,1.1s						
WRA	**Warramunga Arr**	**48.33**	**261**	P	**P**	**11 36 13.3**	**-1.5**
	1.9nm,0.9s,baz=96,slow=6.4,SNR=12						
VNDA	**Vanda**	**58.75**	**186**	P	**P**	**11 37 30.4**	**+0.1**
	0.9nm,0.9s,baz=356,slow=6.8,SNR=4.6						
RPN	**Rapa Nui**	**59.20**	**110**	LR	LR	11 59 03.4	
	comp=Z,35nm,18.2s,baz=337,slow=32						
NVAR	**Mina Array Bea**	**78.17**	**42**	P	**P**	**11 39 34.0**	**+1.6**
	2.5nm,0.9s,baz=226,slow=8.6,SNR=11						
HLID	**Hailey**	**83.58**	**39**	*e*P	**P**	**11 40 03.1**	**+1.9**
	2.7nm,1.2s						
TXAR	**Lajitas Array**	**83.71**	**56**	P	**P**	**11 40 02.9**	**+0.9**
	0.7nm,0.9s,baz=216,slow=6.2,SNR=7.1						
PDAR	**Pinedale Array**	**86.11**	**42**	P	**P**	**11 40 14.0**	**0.0**
	0.5nm,0.8s,baz=211,slow=1.6,SNR=3.3						
PDAR				LR	LR	12 12 04.9	
	comp=Z,25nm,19.0s,baz=52,slow=31						
ILAR	**Eielson Array**	**87.07**	**11**	P	**P**	**11 40 18.9**	**+1.1**
	0.4nm,0.7s,baz=207,slow=5.8,SNR=4.5						
AKASG	**Malin Array Be**	**144.27**	**334**	PKP	**PKPdf**	**11 47 07.8**	**-0.7**
	1.6nm,0.6s,baz=38,slow=4.4,SNR=4.5						

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*MOS **13** 11:34:32.0±1.6, 52°.72N×106°.91E, h10^{km}, mb4.4/1, Error ellipse: s-maj=22.7km s-min=11.8km az=48.3*

BYKL 13 11:34:33.0±0.2**, 52°.77N×106°.74E, h20**^{km}±4^{km}**, 8C-6D, FELT I=II MSK at Yelantsy, Tyrgan, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRG	**Tyrgan**	**0.24**	**268**	⇑*i*Pg	Pb	11 34 38.2	-0.6
TRG				*e*Sg	Sb	11 34 42.2	-0.5
TRG				Pmax			
	3μm,0.2s						
TRG				Smax			
	3μm,0.2s						
TRG	**Tyrgan**	**0.24**	**268**	⇑*i*PG	Pb	11 34 38.2	-0.6
TRG				*e*		11 34 41.9	
TRG				pmax	pmax		
	comp=Z,2μm,0.1s						
TRG				smax	smax		
	comp=E,3μm,0.2s						
ZRHB	**Zarechye**	**0.33**	**131**	⇑*i*Pg	Pb	11 34 40.4	+0.2
ZRHB				*e*Sg	Sb	11 34 45.5	+0.4
ZRHB				Pmax			
	comp=E,274nm,0.2s						
ZRHB				Smax			
	comp=E,3μm,0.7s						
STDB	**Stepnoy Dvoret**	**0.64**	**201**	*e*Pg	Pb	11 34 46.1	+0.5
STDB				*e*Pb	Pn	11 34 49.3	+2.3
STDB				*e*Sg	Sb	11 34 55.1	+1.0
STDB				*e*Sb	Sn	11 35 01.1	+4.5
STDB				max			
	comp=E,560nm,0.3s						
STDB				Smax			
	comp=E,2μm,0.5s						
KAB	**Kabansk**	**0.72**	**184**	*e*Pg	Pb	11 34 45.7	-1.2
KAB				*i* Sg	Sb	11 34 56.4	0.0
KAB				Pmax			
	comp=E,148nm,0.1s						
KAB				Smax			
	comp=E,2μm,0.6s						
KAB	**Kabansk**	**0.72**	**184**	*e*PG	Pb	11 34 46.0	-0.9
KAB				*e*		11 34 56.3	
KAB				pmax	pmax		
	comp=Z,156nm,0.1s						
KAB				smax	smax		
	comp=E,2μm,0.6s						
FFNB	**Fofonovo**	**0.72**	**179**	⇑*i*Pg	Pb	11 34 46.1	-0.8
FFNB				*e*Sg	Sb	11 34 56.6	+0.2
FFNB				Pmax			
	comp=E,148nm,0.2s						
FFNB				Smax			
	comp=E,913nm,0.3s						
KELR	**Kotokel**	**0.81**	**90**	⇑*i*Pg	Pb	11 34 47.2	-1.3
KELR				*e*Pb	Pn	11 34 49.7	+0.4
KELR				*e*Sg	Sb	11 34 58.6	-0.4
OGRR	**Ongureny**	**1.01**	**30**	⇑*i*Pg	Pn	11 34 52.3	+0.2
OGRR				*e*Sg	Sn	11 35 06.5	+0.7
OGRR				*e*Sb	Sb	11 35 10.3	+5.5
OGRR				Pmax			
	comp=E,119nm,0.2s						
OGRR				max			
	comp=E,859nm,0.2s						
OGRR	**Ongureny**	**1.01**	**30**	*e*PG	Pn	11 34 52.4	+0.3
OGRR				*e*		11 35 05.7	
OGRR				pmax	pmax		
	comp=Z,121nm,0.2s						
OGRR				smax	smax		
	comp=N,514nm,0.3s						
UUDB	**Ulan-Yde**	**1.07**	**148**	⇓*i*Pg	Pb	11 34 52.1	-0.7
UUDB				*i* Sg	Sb	11 35 05.6	-0.7
UUDB				Pmax			
	comp=N,250nm,0.2s						
UUDB				Smax			
	comp=N,493nm,0.3s						
BGT	**Bolshoye Golou**	**1.09**	**229**	⇓*i*Pg	Pn	11 34 52.9	-0.3
BGT				*e*Pb	Pb	11 34 54.5	+1.3
BGT				*e*Sg	Sn	11 35 08.4	+0.7
BGT				*e*Sb	Sb	11 35 10.6	+3.6
BGT				max			
	comp=N,147nm,0.1s						
BGT				max			
	comp=N,1μm,0.3s						
HRMR	**Khuramsha**	**1.15**	**173**	⇓*i*Pg	Pn	11 34 53.7	-0.3
HRMR				*e*Pb	Pb	11 34 54.7	+0.5
HRMR				*i* Sg	Sn	11 35 09.0	-0.2
HRMR				max			
	comp=N,680nm,0.3s						
HRMR				Smax			
	comp=N,3μm,0.3s						
MXMB	**Maximikha**	**1.31**	**67**	*e*Pg	Pb	11 34 57.8	+0.9
MXMB				*e*Sg	Sb	11 35 15.5	+2.3
LSTR	**Listvyanka**	**1.48**	**233**	⇓*i*Pg	Pb	11 34 59.4	-0.4
	comp=N,42nm,0.4s						
LSTR				⇓*i*Pg	Pb	11 34 59.4	-0.4
	comp=N,31nm,0.4s						
LSTR				⇑*i*Pg	Pb	11 34 59.4	-0.4
	comp=N,42nm,0.4s						
LSTR				*e*Sg	Sb	11 35 19.8	+1.7
LSTR				Pmax			
	comp=N,93nm,0.3s						
LSTR				Smax			
	comp=N,661nm,0.3s						
IRK	**Irkutsk**	**1.60**	**252**	⇓*i*Pg	Pb	11 35 02.3	+0.5
IRK				*i* Sg	Sb	11 35 23.2	+1.6
IRK				*e*		11 35 26.0	
IRK				Pmax			
	comp=N,392nm,0.3s						
IRK				max			
	comp=N,922nm,0.2s						
IRK	**Irkutsk**	**1.60**	**252**	*e*PN	Pb	11 35 01.1	-0.7
IRK				*e*		11 35 22.0	
IRK				pmax	pmax		
	comp=Z,392nm,0.4s						
IRK				smax	smax		
	comp=E,892nm,0.2s						
IVK	**Ivanovka**	**1.73**	**237**	⇑*i*Pg	Pb	11 35 03.7	-0.3
IVK				*e*Sg	Sb	11 35 26.7	+1.4
IVK				Pmax			
	comp=E,99nm,0.3s						
IVK				Smax			
	comp=E,590nm,0.2s						
IVK	**Ivanovka**	**1.73**	**237**	*e*PN	Pb	11 35 04.1	+0.1
IVK				*e*		11 35 26.7	
IVK				pmax	pmax		
	comp=Z,104nm,0.3s						
IVK				smax	smax		
	comp=E,588nm,0.2s						
SYVR	**Suvo**	**2.15**	**64**	*e*Pn	Pn	11 35 08.4	+0.7
SYVR				*e*Pg	Pb	11 35 11.1	-0.2
SYVR				*e*Sn	Sn	11 35 34.5	+0.7
SYVR				*e*Sg	Sb	11 35 40.0	+2.5
SYVR				Pmax			
	comp=E,89nm,0.4s						
SYVR				Smax			
	comp=E,141nm,0.7s						
SYVR	**Suvo**	**2.15**	**64**	*e*PN	Pn	11 35 08.8	+1.1
SYVR				*e*		11 35 10.9	
SYVR				*e*		11 35 39.9	
SYVR				pmax	pmax		
	comp=Z,92nm,0.4s						
SYVR				smax	smax		
	comp=N,103nm,0.3s						
TLY	**Talaya**	**2.19**	**241**	*e*Pg	Pb	11 35 11.9	-0.1
TLY				*e*Sn	Sn	11 35 33.5	-1.4
TLY				*e*Sg	Sb	11 35 40.5	+1.8
TLY				Pmax			
	comp=N,58nm,0.2s						
TLY				Smax			
	comp=N,343nm,0.2s						
TLY	**Talaya**	**2.19**	**241**	*e*PN	Pn	11 35 10.1	+1.8
TLY				*e*		11 35 11.8	
TLY				*e*		11 35 40.3	
TLY				pmax	pmax		
	comp=Z,58nm,0.2s						
TLY				smax	smax		
	comp=N,346nm,0.2s						
ARS	**Arshan**	**2.78**	**254**	*e*Pn	Pn	11 35 18.0	+1.6
ARS				*e*Pg	Pb	11 35 22.3	+0.3
ARS				*e*		11 35 24.5	
ARS				*e*Sg	Sb	11 35 58.7	+3.0
ARS				max			
	comp=N,195nm,0.3s						
ARS				Smax			
	comp=N,543nm,0.6s						
ARS	**Arshan**	**2.78**	**254**	*e*PN	Pb	11 35 21.9	-0.1
ARS				*e*		11 35 58.5	
ARS				pmax	pmax		
	comp=Z,188nm,0.3s						
ARS				smax	smax		
	comp=E,456nm,0.4s						
ZAK	**Zakamensk**	**3.22**	**223**	*e*Pn	Pn	11 35 24.2	+1.7
ZAK				*e*Pg	Pb	11 35 30.5	+1.0
ZAK				*e*PgPg	PbPb	11 35 33.7	+1.0
ZAK				*e*Sg	Sb	11 36 13.5	+5.2
ZAK				max			
	comp=E,16nm,0.3s						
ZAK				Smax			
	comp=E,83nm,0.5s						
NIZ	**Nizh Angarsk**	**3.43**	**27**	*e*Pn	Pn	11 35 27.5	+2.2
NIZ				*e*Pg	Pb	11 35 33.1	+0.1
NIZ				*e*Sn	Sn	11 36 06.3	+1.0
NIZ				*e*Sg	Sb	11 36 17.9	+3.7
NIZ				Pmax			
	comp=E,23nm,0.3s						
NIZ				Smax			
	comp=E,124nm,0.6s						
MOY	**Mondy**	**3.70**	**255**	*e*Pn	Pn	11 35 29.7	+0.6
MOY				*e*Pg	Pb	11 35 39.1	+1.4
MOY				*e*		11 36 17.7	
MOY				*e*Sg	Sb	11 36 26.9	+4.7
MOY				Pmax			
	comp=E,88nm,0.8s						
MOY				Smax			
	comp=E,186nm,1.2s						
MOY	**Mondy**	**3.70**	**255**	*e*PN	Pn	11 35 32.8	+3.7
MOY				*e*		11 35 40.3	
MOY				*e*		11 36 29.3	
MOY				pmax	pmax		
	comp=Z,86nm,0.5s						
MOY				smax	smax		
	comp=N,195nm,0.9s						
KMO	**Kumora**	**4.07**	**38**	*e*Pg	Pb	11 35 44.7	+0.8
KMO				*e*Sg	Sb	11 36 38.1	+5.4
KMO				Pmax			
	comp=N,17nm,0.5s						
KMO				Smax			
	comp=N,133nm,1.0s						
YOA	**Uoyan**	**4.45**	**39**	*e*Sg	Sb	11 36 49.9	+6.3
YOA				Smax			
	comp=N,359nm,0.2s						
SVKR	**Severomuysk**	**5.20**	**47**	*e*Sg	Sb	11 37 14.6	+9.3
SVKR				Smax			
	comp=N,106nm,0.6s						
KNGR	**Kungurtug, Tuv**	**6.13**	**253**	*e*	Pb	11 36 22.2	+3.1
KNGR				*e*Sg	Sb	11 37 43.4	+11
NLYR	**Nelyaty**	**6.40**	**51**	*e*	Pb	11 36 27.3	+3.7
NLYR				*e*Sg	Sb	11 37 52.9	+13
NLYR				Smax			
	comp=N,49nm,1.3s						
TDJR	**Todzha**	**6.50**	**271**	*e*		11 37 28.1	
TDJR				*e*Sg	Sb	11 37 56.0	+14
BOD	**Bodaibo**	**6.54**	**36**	*e*Sn	Sn	11 37 21.6	-0.3
BOD				*e*Sg	Sb	11 37 55.4	+12
BOD				Smax			
	comp=N,24nm,1.2s						
TUP	**Tupik**	**8.04**	**73**	*e*Pn	Pn	11 36 29.0	+0.5
TUP				*e*		11 36 37.2	
TUP				*e*Pg	Pb	11 36 57.4	+6.0
TUP				*e*Sn	Sn	11 37 53.3	-5.4
TUP				*e*		11 38 05.5	
TUP				*e*Sg	Sb	11 38 42.4	+16
TUP				Pmax			
	comp=N,2.0nm,1.5s						
TUP				Smax			
	comp=N,61nm,1.3s						
TUP	**Tupik**	**8.04**	**73**	*e*PN	Pn	11 36 28.9	+0.4
TUP				*e*		11 36 56.6	
TUP				*e*S	Sn	11 37 59.6	+0.9
TUP				pmax	pmax		
	comp=Z,4.0nm,0.5s						
TUP				smax	smax		
	comp=N,61nm,1.2s						

IDC 13 11:40:58.3±2.0**, 11°.29S×111°.77E, h0^{km}, mb3.9**/7**, mb1 4.0**/8**, mb1mx3.7**/56**, mbtmp3.9**/8**, ML3.4**/1**, Error ellipse: s-maj=107.6km s-min=18.4km az=43.0, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**15.03**	**118**	Pn	Pn	11 44 31.8	-0.3
	0.1nm,0.3s,baz=282,slow=12,SNR=4.8						
FITZ				Sn	Sn	11 47 05.6	-14
	0.3nm,0.3s,baz=98,slow=21,SNR=4.6						
WRA	**Warramunga Arr**	**23.36**	**114**	P	P	11 46 08.6	-0.1
	2.1nm,0.8s,baz=287,slow=12,SNR=15						
ASAR	**Alice Springs**	**24.40**	**123**	P	P	11 46 19.1	+0.4
	1.3nm,0.6s,baz=299,slow=8.9,SNR=21						
CMAR	**Chiang Mai Arr**	**32.15**	**337**	P	P	11 47 28.9	+1.1
	1.5nm,0.6s,baz=171,slow=8.5,SNR=7.4						
MKAR	**Makanchi Array**	**63.55**	**338**	P	P	11 51 30.3	-0.4
	0.6nm,0.5s,baz=148,slow=6.7,SNR=5.1						
KURBB	**Kurchatov Arra**	**68.12**	**338**	P	P	11 51 59.7	-0.2
	0.3nm,0.5s,baz=148,slow=6.5,SNR=3.8						
ZALV	**Zalesovo Beam**	**68.90**	**343**	P	P	11 52 04.3	-0.5
	0.5nm,0.3s,baz=142,slow=7.3,SNR=3.7						
BRTR	**Keskin Array B**	**88.17**	**311**	P	P	11 53 51.6	0.0
	1.8nm,0.9s,baz=124,slow=6.6,SNR=7.0						

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*HEL **13** 11:54:49.2±0.4, 67°.57N×34°.09E, h0^{km}, ML2.5, Explosion*

*CSEM **13** 11:54:50.7±0.7, 67°.49N×33°.58E, h1^{km}, ML2.5, Error ellipse: s-maj=13.5km s-min=6.2km az=85.0, Mining explosion.*

*KOLA **13** 11:54:50.5, 67°.66N×33°.94E, h0^{km}*

*NAO **13** 11:54:54.6±2.4, 67°.57N×33°.04E, ML2.9*

ISC 13 11:54:48.0±1.9**, 67°.60N**±0°.04×**34°.13E**±0°.09**, h0^{km}, n36, σ1^{s}41**/63**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APA	**Apatity**	**0.28**	**264**	P	**Pg**	**11 54 54.5**	**+1.1**
APA				S	**Sg**	**11 54 57.4**	**+0.4**
APA0	**Apatity Array**	**0.43**	**271**	P	**Pg**	**11 54 57.0**	**+0.7**
APA0				S	**Sg**	**11 55 01.8**	**-0.2**
VRF	**Varrio**	**1.73**	**277**	PG	**Pn**	**11 55 20.0**	**+0.6**
VRF				MSG		11 55 40.5	
	comp=Z,56nm,0.2s						
VRF				SG	**Sn**	**11 55 41.3**	**-0.8**
VRF	**Varrio**	**1.73**	**277**	Pg	**Pn**	**11 55 20.0**	**+0.6**
VRF				Sg	**Sn**	**11 55 41.3**	**-0.8**
	comp=Z,56nm,0.2s						
KU6	**Riekki**	**2.31**	**229**	PG	**Pb**	**11 55 29.7**	**-0.7**
	baz=45						
KU6				MSG		11 55 56.6	
	comp=Z,22nm,0.2s						
KU6				SG	**Sb**	**11 55 59.6**	**+0.3**
KU6	**Riekki**	**2.31**	**229**	Pg	**Pb**	**11 55 29.7**	**-0.7**
KU6				Sg	**Sb**	**11 55 59.7**	**+0.3**
	comp=Z,22nm,0.2s						
MSF	**Maaselka**	**2.64**	**232**	PG	**Pb**	**11 55 34.9**	**-1.1**
	baz=49						
MSF				SG	**Sb**	**11 56 09.8**	**+0.9**
MSF	**Maaselka**	**2.64**	**232**	Pg	**Pb**	**11 55 34.9**	**-1.1**
SGF	**Sodankyl**	**2.93**	**270**	PN	**Pn**	**11 55 36.7**	**+1.0**
SGF				SB	**Sb**	**11 56 16.2**	**-1.0**
SGF	**Sodankyl**	**2.93**	**270**	Pn	**Pn**	**11 55 36.7**	**+1.0**
KEV	**Kevo**	**3.38**	**313**	PN	**Pn**	**11 55 43.8**	**+1.8**
KEV				SN	**Sn**	**11 56 22.9**	**+0.1**
KEV	**Kevo**	**3.38**	**313**	Pn	**Pn**	**11 55 43.8**	**+1.8**
KEV				Sn	**Sn**	**11 56 22.9**	**+0.1**
ARA0	**ARCESS Array S**	**3.71**	**305**	Pn	**Pn**	**11 55 47.6**	**+1.0**
	baz=122,slow=16						
ARA0				Sn	**Sn**	**11 56 29.1**	**-1.8**
	baz=124,slow=28						
ARA0				Lg	Lg	11 56 41.6	
	baz=122,slow=37						
ARA0	**ARCESS Array S**	**3.71**	**305**	Pn	**Pn**	**11 55 47.6**	**+1.0**
	baz=122,slow=15,SNR=553						
ARA0				Sn	**Sn**	**11 56 29.1**	**-1.8**
	baz=124,slow=27,SNR=9.6						
ARA0				Lg	Lg	11 56 41.6	
	SNR=1.6						
ARA0	**ARCESS Array S**	**3.71**	**305**	Pn	**Pn**	**11 55 47.6**	**+1.0**
	baz=122,slow=16						
ARA0				Sn	**Sn**	**11 56 29.1**	**-1.8**
	baz=124,slow=28						
ARA0				Lg	Lg	11 56 41.6	
	baz=122,slow=37						
ARE0	**ARCESS Array S**	**3.71**	**305**	PN	**Pn**	**11 55 47.6**	**+1.0**
	baz=122						
ARE0				SN	**Sn**	**11 56 29.1**	**-1.8**
ARE0	**ARCESS Array S**	**3.71**	**305**	Pn	**Pn**	**11 55 47.6**	**+1.0**
ARE0				Sn	**Sn**	**11 56 29.1**	**-1.8**
ARE0	**ARCESS Array S**	**3.71**	**305**	*e*P	**Pn**	**11 55 47.8**	**+1.2**
ARE0				*e*S	**Sn**	**11 56 29.1**	**-1.8**
ARE0				IAML		11 56 46.7	
	comp=Z,23nm,0.3s						
HEF	**Hetta**	**4.02**	**286**	PN	**Pn**	**11 55 51.6**	**+0.9**
HEF				SN	**Sn**	**11 56 38.2**	**-0.3**
HEF	**Hetta**	**4.02**	**286**	*e*P	**Pn**	**11 55 52.0**	**+1.3**
HEF				*e*S	**Sn**	**11 56 37.7**	**-0.8**
TOF	**Tornio**	**4.16**	**253**	PN	**Pn**	**11 55 53.4**	**+0.7**
TOF				SG	**Sb**	**11 56 53.3**	**+0.5**
TOF	**Tornio**	**4.16**	**253**	Pn	**Pn**	**11 55 53.4**	**+0.7**
OUL	**Oulu**	**4.17**	**237**	PB	**Pn**	**11 55 56.0**	**+3.2**
	baz=47						
KALU	**Kalix**	**4.62**	**253**	PG	**Pb**	**11 56 11.6**	**+1.9**
	baz=63						
KALU				SN	**Sn**	**11 56 54.4**	**+1.3**
LANU	**Lannavaara**	**4.62**	**281**	PN	**Pn**	**11 55 58.9**	**-0.2**
LANU				SN	**Sn**	**11 56 53.4**	**0.0**
LANU	**Lannavaara**	**4.62**	**281**	Pn	**Pn**	**11 55 58.9**	**-0.2**
LANU				Sn	**Sn**	**11 56 53.4**	**0.0**
KIF	**Kilpisjarvi**	**5.14**	**292**	*e*P	**Pn**	**11 56 06.5**	**+0.4**
KIF				*e*S	**Sn**	**11 57 03.2**	**-2.8**
TRO	**Tromso**	**5.92**	**297**	*e*P	**Pn**	**11 56 18.2**	**+1.4**
TRO				*e*S	**Sn**	**11 57 23.2**	**-2.0**
TRO				IAML		11 57 25.2	
	comp=Z,5.1nm,0.3s						
FIA0	**FINESS Array S**	**7.08**	**213**	Pn	**Pn**	**11 56 34.4**	**+1.6**
	baz=20,slow=14						
FIA0				Sn	**Sn**	**11 57 51.1**	**-2.7**
	baz=38,slow=28						
FIA0				Lg	Lg	11 58 25.9	
	baz=22,slow=28						
FIA0	**FINESS Array S**	**7.08**	**213**	Pn	**Pn**	**11 56 34.4**	**+1.6**
	baz=20,slow=13,SNR=8.8						
FIA0				Sn	**Sn**	**11 57 51.1**	**-2.7**
	baz=38,slow=23						
FIA0				Lg	Lg	11 58 25.9	
	SNR=3.8						
FIA0	**FINESS Array S**	**7.08**	**213**	Pn	**Pn**	**11 56 34.4**	**+1.6**
	baz=20,slow=14						
FIA0				Sn	**Sn**	**11 57 51.1**	**-2.7**
	baz=38,slow=28						
FIA0				Lg	Lg	11 58 25.9	
	baz=22,slow=28						
STEI	**Steigen**	**7.17**	**281**	*e*P	**Pn**	**11 56 33.5**	**-0.4**
HFS	**Hagfors**	**11.65**	**240**	Pn	**Pn**	**11 57 33.7**	**-1.7**
	baz=45,slow=14						
HFS	**Hagfors**	**11.65**	**240**	Pn	**Pn**	**11 57 33.7**	**-1.7**
	baz=45,slow=14						
NRA0	**NORESS Array S**	**11.95**	**246**	Pn	**Pn**	**11 57 38.0**	**-1.4**
	baz=49,slow=16						
NRA0	**NORESS Array S**	**11.95**	**246**	Pn	**Pn**	**11 57 38.0**	**-1.4**
	baz=49,slow=16						

IDC 13 11:55:40.1±2.1**, 7°.35S×129°.18E, h149**^{km}±25^{km}**, mb2.9**/1**, mb1 3.3**/6**, mb1mx3.0**/57**, mbtmp3.7**/6**, Error ellipse: s-maj=25.7km s-min=19.7km az=113.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**6.14**	**242**	P	Pn	11 57 10.2	+1.4
	7.5nm,0.3s,baz=124,slow=5.7,SNR=4.3						
BATI				S	Sn	11 58 17.9	-0.2
	14nm,0.3s,baz=76,slow=24,SNR=6.6						
SIJI	**Sorong**	**6.77**	**18**	P	Pn	11 57 17.0	-0.1
	0.8nm,0.3s,baz=264,slow=22,SNR=6.6						
FITZ	**Fitzroy Crossi**	**11.22**	**198**	P	Pn	11 58 15.9	-0.3
	baz=37,slow=15						
FITZ				S	Sn	12 00 11.7	-8.6
	0.5nm,0.3s,baz=30,slow=9.9,SNR=4.3						
WRA	**Warramunga Arr**	**13.48**	**159**	P	Pn	11 58 44.0	-1.5
	0.4nm,0.3s,baz=335,slow=14,SNR=20						
WRA				S	Sn	12 01 05.6	-9.2
	0.7nm,0.3s,baz=339,slow=22,SNR=8.4						
ASAR	**Alice Springs**	**16.84**	**165**	P	Pn	11 59 28.3	+1.1
	0.1nm,0.3s,baz=342,slow=10,SNR=15						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR				S	S	12 02 29.5	-5.2
	0.2nm,0.3s,baz=350,slow=26,SNR=8.2						
MKAR	**Makanchi Array**	**68.08**	**327**	P	P	12 06 23.6	-0.1
	0.2nm,0.5s,baz=151,slow=6.3,SNR=3.0						

MEX 13 12:28:55.3±0.4**,17°.98N**×**102°.41W,h10**^{km}±5^{km}**,MD3.9, Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMIG	**Aquila**	**0.94**	**289**	*e*P	Pg	12 29 10.6	-2.9
MMIG				*i* S	Sg	12 29 22.8	-3.0
ZIIG	**Zihuatanejo**	**0.97**	**113**	*e*P	Pg	12 29 10.8	-3.2
ZIIG				*e*S	Sg	12 29 23.6	-3.0
ARIG	**Puente Sto Nin**	**1.98**	**81**	*e*P	Pn	12 29 25.6	-3.3
ARIG				*i* S	Sn	12 29 49.0	-4.8
CAIG	**El Cayaco**	**2.24**	**114**	*i* P	Pn	12 29 30.1	-2.3
CAIG				*i* S	Sn	12 29 55.2	-5.0
CJM	**Chamela**	**2.92**	**302**	*i* P	Pn	12 29 39.6	-2.3
CJM				*i* S	Sn	12 30 13.1	-3.9

IDC 13 12:51:11.3±6.0**,8°.33S**×**155°.83E,h0**^{km}**,mb3.9**/3**, mb1 4.1**/3**,mb1mx3.4**/48**,mbtmp3.9**/3**,MS2.9**/3**,Ms1 2.9**/3**, ms1mx2.5**/47**,Error ellipse: s-maj=101.8km s-min=77.7km az=7.0,Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.21**	**105**	LR	LR	12 53 42.0	
	comp=Z,27nm,19.9s,baz=313,slow=36						
DZM	**Mont Dzumac**	**17.06**	**144**	LR	LR	13 00 54.1	
	comp=Z,81nm,18.9s,baz=262,slow=34						
WRA	**Warramunga Arr**	**23.79**	**239**	P	P	12 56 26.0	+0.1
	1.3nm,0.8s,baz=65,slow=9.8,SNR=9.1						
ASAR	**Alice Springs**	**25.96**	**231**	P	P	12 56 45.0	-0.8
	1.8nm,0.9s,baz=63,slow=10.0,SNR=13						
STKA	**Stephens Creek**	**26.92**	**208**	P	P	12 56 55.2	+0.9
	2.0nm,0.6s,baz=40,slow=15,SNR=4.8						
SONM	**Songino Array**	**70.90**	**327**	LR	LR	13 34 14.6	
	comp=Z,26nm,19.1s,baz=222,slow=36						

MEX 13 12:56:56.5±0.5**,14°.71N**×**92°.43W,h96**^{km}±5^{km}**,MD3.7, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		**0.26**	**38**	*e*P	Pn	12 57 09.0	-1.5
THIG				*e*S	Sn	12 57 19.3	-1.6
PCIG		**1.25**	**323**	*e*P	Pn	12 57 19.1	-0.5
PCIG				*e*S	Sn	12 57 35.2	-1.7
CCIG	**Comitan**	**1.59**	**10**	*e*P	Pn	12 57 22.7	-1.2
CCIG				*e*S	Sn	12 57 43.3	-1.4
TGIG		**2.17**	**342**	*i* P	Pn	12 57 30.4	-0.8
TGIG				*i* S	Sn	12 57 56.4	-1.3

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*ISCJB **13** 12:58:10.0±0.4, 49°.87N±0°.03×18°.46E±0°.03, h0^{km}, Error ellipse: s-maj=4.2km s-min=2.4km az=16.4*

*IPEC **13** 12:58:11.6±0.2, 49°.84N×18°.58E, h0^{km}, ML2.4/3, Error ellipse: s-maj=1.8km s-min=1.1km az=163.0*

*CSEM **13** 12:58:11.3±0.2, 49°.83N×18°.50E, h1^{km}, ML3.1/9, Error ellipse: s-maj=4.9km s-min=2.7km az=11.0*

*VIE **13** 12:58:12.6±0.8, 49°.69N×18°.47E, h0^{km}, mb2.3/2, ml2.8/4, Error ellipse: s-maj=7.6km s-min=5.0km az=1.0   22 km SE of Ostrava Suspected Mining induced.*

*PRU **13** 12:58:12.1, 49°.86N×18°.50E, h0^{km}*

ISC 13 12:58:11.6±0.8**,49°.78N**±0°.03×**18°.56E**±0°.02**,h0**^{km}**,n44, σ0**^{s}**81**/78**,Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.28**	**283**	*e*PG	**Pg**	**12 58 17.6**	**+0.7**
OKC				*e*SG	**Sg**	**12 58 20.9**	**+0.4**
	comp=Z,171nm,0.5s						
OKC	**Ostrava-Krasne**	**0.28**	**283**	Pg	**Pg**	**12 58 17.6**	**+0.7**
OKC				Sg	**Sg**	**12 58 20.9**	**+0.4**
	171nm,0.5s						
MORC	**Moravsky Berou**	**0.66**	**271**	*e*Pg	**Pg**	**12 58 24.4**	**+0.1**
	baz=84						
MORC				*e*Sg	**Sg**	**12 58 32.5**	**-0.3**
	105nm,0.3s,baz=84						
MORC	**Moravsky Berou**	**0.66**	**271**	*e*PG	**Pg**	**12 58 24.5**	**+0.1**
MORC				*e*SG	**Sg**	**12 58 32.6**	**-0.3**
MORC	**Moravsky Berou**	**0.66**	**271**	*e*Pg	**Pg**	**12 58 24.4**	**+0.1**
	baz=84						
MORC				*e*Sg	**Sg**	**12 58 32.5**	**-0.3**
	105nm,0.3s,baz=84						
LANS	**Liptovska Anna**	**0.86**	**136**	*e*PG	**Pb**	**12 58 29.1**	**-0.3**
LANS				*e*SG	**Sn**	**12 58 43.8**	**-0.5**
LANS	**Liptovska Anna**	**0.86**	**136**	*e*Pg	**Pb**	**12 58 29.1**	**-0.3**
LANS				*e*Sg	**Sn**	**12 58 43.8**	**-0.5**
OJC	**Ojcow**	**0.91**	**60**	*e*Pg	**Pg**	**12 58 28.7**	**-0.4**
OJC				*e*Sg	**Sg**	**12 58 41.0**	**+0.1**
OJC	**Ojcow**	**0.91**	**60**	*e*Pg	**Pg**	**12 58 28.7**	**-0.4**
OJC				*e*Sg	**Sg**	**12 58 41.0**	**+0.1**
JAVC	**Velka Javorina**	**1.09**	**213**	*e*Pg	**Pn**	**12 58 33.7**	**-0.4**
	baz=31						
JAVC	**Velka Javorina**	**1.09**	**213**	*e*PG	**Pn**	**12 58 33.8**	**-0.4**
JAVC	**Velka Javorina**	**1.09**	**213**	*e*Pg	**Pn**	**12 58 33.7**	**-0.4**
	baz=31						
NIE	**Niedzica**	**1.19**	**107**	*e*Pg	**Pn**	**12 58 35.5**	**0.0**
NIE				*e*Sg	**Sn**	**12 58 52.7**	**+0.4**
NIE	**Niedzica**	**1.19**	**107**	*e*Pg	**Pn**	**12 58 35.5**	**0.0**
NIE				*e*Sg	**Sn**	**12 58 52.7**	**+0.4**
KRLC	**Kraliky**	**1.19**	**285**	*e*PG	**Pg**	**12 58 33.2**	**-1.2**
KRLC				*e*SG	**Sg**	**12 58 48.9**	**-0.9**
KRLC	**Kraliky**	**1.19**	**285**	Pg	**Pg**	**12 58 33.2**	**-1.2**
KRLC				Sg	**Sg**	**12 58 48.9**	**-0.9**
VYHS	**Vyhne**	**1.29**	**172**	*e*PG	**Pn**	**12 58 36.8**	**-0.2**
VYHS				*e*SG	**Sn**	**12 58 55.2**	**+0.2**
VYHS				*e*LG	Lg	12 58 59.1	
VYHS	**Vyhne**	**1.29**	**172**	*e*Pg	**Pn**	**12 58 36.8**	**-0.2**
VYHS				*e*Sn	**Sn**	**12 58 55.2**	**+0.2**
VRAC	**Vranov**	**1.37**	**251**	*e*Pg	**Pg**	**12 58 37.5**	**-0.3**
VRAC				*e*Sg	**Sg**	**12 58 55.3**	**-0.2**
	36nm,0.3s,baz=67						
VRAC	**Vranov**	**1.37**	**251**	*e*PG	**Pg**	**12 58 37.5**	**-0.3**
VRAC				*e*SG	**Sg**	**12 58 55.4**	**-0.1**
VRAC	**Vranov**	**1.37**	**251**	*e*Pg	**Pg**	**12 58 37.5**	**-0.3**
	baz=67						
VRAC				*e*Sg	**Sg**	**12 58 55.3**	**-0.2**
	36nm,0.3s,baz=67						
DPC	**Dobruska-Polom**	**1.56**	**293**	*e*PG	**Pn**	**12 58 39.7**	**-0.9**
DPC				*e*SG	**Sn**	**12 59 00.5**	**-1.0**
	comp=Z,30nm,0.3s						
DPC	**Dobruska-Polom**	**1.56**	**293**	Pg	**Pn**	**12 58 39.7**	**-0.9**
DPC				Sg	**Sn**	**12 59 00.5**	**-1.0**
	30nm,0.3s						
KRUC	**Moravsky**	**1.59**	**244**	*e*Pg	**Pn**	**12 58 40.9**	**0.0**
	baz=60						
KRUC				*e*Sg	**Sb**	**12 59 02.5**	**+0.2**
	38nm,0.2s,baz=60						
KRUC	**Moravsky**	**1.59**	**244**	*e*PG	**Pn**	**12 58 41.0**	**0.0**
KRUC				*e*SG	**Sb**	**12 59 02.6**	**+0.2**
KRUC	**Moravsky**	**1.59**	**244**	*e*Pg	**Pn**	**12 58 40.9**	**0.0**
	baz=60						
KRUC				*e*Sg	**Sb**	**12 59 02.5**	**+0.2**
	38nm,0.2s,baz=60						
MODS	**Modra-Piesok**	**1.64**	**212**	*e*PN	**Pn**	**12 58 41.7**	**0.0**
MODS				*e*SN	**Sg**	**12 59 04.0**	**-0.2**
MODS	**Modra-Piesok**	**1.64**	**212**	*e*Pn	**Pn**	**12 58 41.7**	**0.0**
MODS				*e*Sn	**Sg**	**12 59 04.0**	**-0.2**
UPC	**Upice**	**1.80**	**295**	*e*SG	**Sn**	**12 59 07.4**	**0.0**
	comp=Z,15nm,0.4s						
UPC	**Upice**	**1.80**	**295**	Sg	**Sn**	**12 59 07.4**	**0.0**
	15nm,0.4s						
KSP	**Ksiaz**	**1.81**	**307**	*e*Pg	**Pn**	**12 58 43.0**	**-1.0**
KSP				*e*Sg	**Sn**	**12 59 06.4**	**-1.2**
GOPC	**GO Pecny, Ondr**	**2.45**	**275**	*e*SG	**Sb**	**12 59 27.2**	**0.0**
	comp=Z,9.6nm,0.2s						
GOPC	**GO Pecny, Ondr**	**2.45**	**275**	Sg	**Sb**	**12 59 27.2**	**0.0**
	9.6nm,0.2s						
CONA	**Conrad Observa**	**2.57**	**225**	*e*Pn	**Pn**	**12 58 54.0**	**-0.6**
	1.3nm,0.2s						
CONA				Sn	**Sn**	**12 59 24.7**	**-1.8**
	3.0nm,0.2s						
CONA	**Conrad Observa**	**2.57**	**225**	Pn	**Pn**	**12 58 54.0**	**-0.6**
	1.3nm,0.2s						
CONA				Sn	**Sn**	**12 59 24.7**	**-1.8**
	3.0nm,0.2s						
PRU	**Pruhonice**	**2.61**	**276**	*e*PG	**Pb**	**12 58 59.6**	**+0.4**
PRU				*e*SG	**Sb**	**12 59 32.2**	**+0.4**
	comp=Z,11nm,0.4s						
PRU	**Pruhonice**	**2.61**	**276**	Pg	**Pb**	**12 58 59.6**	**+0.4**
PRU				Sg	**Sb**	**12 59 32.2**	**+0.4**
	11nm,0.4s						
PRA	**Prague**	**2.69**	**278**	*e*SG	**Sb**	**12 59 36.0**	**+2.0**
PRA	**Prague**	**2.69**	**278**	Sg	**Sb**	**12 59 36.0**	**+2.0**
BRG	**Berggiesshubel**	**3.16**	**292**	PG	**Pb**	**12 59 09.1**	**+0.5**
BRG				SG	**Sb**	**12 59 49.8**	**+2.2**
	6.5nm,0.6s						
KHC	**Kasperske Hory**	**3.32**	**261**	*e*PG	**Pb**	**12 59 12.8**	**+1.5**
KHC				*e*SG	**Sb**	**12 59 54.7**	**+2.5**
	comp=Z,9.6nm,0.3s						
KHC	**Kasperske Hory**	**3.32**	**261**	Pg	**Pb**	**12 59 12.8**	**+1.5**
MOA	**Molln**	**3.43**	**237**	*i* Pn	**Pn**	**12 59 06.4**	**0.0**
	0.4nm,0.1s						
MOA				*i* Sn	**Sn**	**12 59 46.6**	**-1.1**
	2.9nm,0.2s						
MOA	**Molln**	**3.43**	**237**	Pn	**Pn**	**12 59 06.4**	**0.0**
	0.4nm,0.1s						
MOA				Sn	**Sn**	**12 59 46.6**	**-1.1**
	2.9nm,0.2s						

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*CASC **13** 13:00:38.1±2.8, 11°.83N×88°.02W, h47^{km}±318^{km}, ML3.8*

*ISCJB **13** 13:00:39.7±0.9, 12°.01N±0°.08×87°.95W±0°.06, h35^{km}, mb3.6/4, MS2.8/1, Error ellipse: s-maj=13.8km s-min=5.2km az=35.4*

*IDC **13** 13:00:42.2±3.9, 12°.06N×87°.88W, h43^{km}±38^{km}, mb3.5/4, mb1 3.8/5, mb1mx3.4/50, mbtmp3.7/5, ML2.7/1, MS3.0/1, Ms1 3.0/1, ms1mx2.3/32, Error ellipse: s-maj=65.5km s-min=18.0km az=49.0*

ISC 13 13:00:40.9±1.0**,11°.98N**±0°.08×**87°.96W**±0°.07**,h35**^{km}**,n23, σ1**^{s}**50**/26**,mb3.7**/4**,1D,Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNCH	**Conchagua**	**1.29**	**5**	*e*P	**Pn**	**13 01 02.2**	**-0.4**
CNCH				*e*S	**Sn**	**13 01 21.9**	**+3.2**
CNCH				IAML		13 01 23.5	
	comp=E,4µm,0.4s						
LCND	**La Caˆ–ada**	**1.32**	**3**	*e*P	**Pn**	**13 01 01.5**	**-1.4**
LCND				IAML		13 01 22.5	
	comp=Z,939nm,0.4s						
CNGN	**Cerro Negro**	**1.33**	**67**	*e*P	**Pn**	**13 01 02.1**	**-1.0**
CNGN				IAML		13 01 29.4	
	comp=N,432nm,0.4s						
COPN	**Copaltepe**	**1.35**	**82**	⇓*e*P	**Pn**	**13 01 02.8**	**-0.5**
MOMN	**Momotombo**	**1.45**	**73**	*e*P	**Pn**	**13 01 04.0**	**-0.7**
LCY	**Lacayo**	**1.47**	**347**	*e*P	**Pn**	**13 01 03.6**	**-1.4**
PACA	**Pacayal**	**1.52**	**346**	*e*P	**Pn**	**13 01 04.5**	**-1.3**
PACA				*e*S	**Sn**	**13 01 27.0**	**+2.6**
PACA				IAML		13 01 30.4	
	comp=E,4µm,0.6s						
APYN	**Apoyeque**	**1.59**	**81**	*e*P	**Pn**	**13 01 06.5**	**-0.2**
TECA	**Tecapa**	**1.59**	**341**	*e*P	**Pn**	**13 01 05.2**	**-1.6**
XAVN	**Gruta Xavier**	**1.60**	**84**	*e*P	**Pn**	**13 01 06.4**	**-0.4**
MGAN	**Managua**	**1.68**	**84**	*e*P	**Pn**	**13 01 07.2**	**-0.7**
MGAN				*e*S	**Sn**	**13 01 24.9**	**-3.3**
ESTN	**Estel**	**1.91**	**54**	*e*P	**Pn**	**13 01 10.3**	**-0.8**
LFRS	**El Faro**	**1.95**	**327**	*e*P	**Pn**	**13 01 09.9**	**-1.8**
LBRS	**Las Brisas**	**2.04**	**329**	*e*P	**Pn**	**13 01 11.0**	**-1.9**
MATN	**Matagalpa**	**2.20**	**64**	*e*P	**Pn**	**13 01 14.1**	**-0.9**
BOAB	**BOACO BROADBAN**	**2.29**	**78**	*e*P	**Pn**	**13 01 15.2**	**-1.0**
JTS	**JuntasAbangare**	**3.40**	**119**	P	**Pn**	**13 01 32.0**	**+0.5**
	comp=E,0.8nm,0.3s,baz=331,slow=19,SNR=5.2						
JTS				S	**Sn**	**13 02 11.6**	**+1.0**
	comp=E,3.8nm,0.3s,baz=291,slow=20,SNR=3.2						
ATAH	**Atahualpa**	**21.24**	**153**	LR	LR	13 13 17.7	
	comp=E,37nm,18.8s,baz=54,slow=36						
TXAR	**Lajitas Array**	**22.63**	**322**	P	**P**	**13 05 38.9**	**-0.1**
	comp=E,2.7nm,0.8s,baz=139,slow=11,SNR=29						
TKL	**Tuckaleechee C**	**23.87**	**8**	P	**P**	**13 05 50.7**	**-0.5**
	comp=E,3.0nm,0.8s,baz=187,slow=14,SNR=4.9						
PDAR	**Pinedale Array**	**35.95**	**332**	P	**P**	**13 07 39.7**	**+1.2**
	comp=E,0.5nm,0.8s,baz=123,slow=13,SNR=5.5						
SIV	**San Ignacio**	**38.47**	**136**	P	**P**	**13 08 00.3**	**+0.3**
	comp=E,0.7nm,0.6s,baz=304,slow=9.6,SNR=4.6						
CMAR	**Chiang Mai Arr**	**149.00**	**347**	PKPbc	**PKPbc**	**13 20 25.4**	**-0.9**
	comp=E,0.7nm,0.6s,baz=339,slow=3.7,SNR=5.4						

NNC 13 13:28:12.6±3.3**,43°.95N**×**85°.91E,h0**^{km}**,mb3.6,mpv3.3, 10C-6D,Error ellipse: s-maj=25.1km s-min=15.3km az=110.0,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MK31	**Makanchi Array**	**3.82**	**319**	⇓Pn	Pn	13 29 12.9	+0.3
	0.6nm,0.2s,baz=135,slow=15,SNR=99						
MK31				⇑Pg	Pb	13 29 21.7	+0.9
	11nm,0.5s,baz=138,slow=16,SNR=40						
MK31				⇑Sn	Sn	13 30 00.4	+2.1
	1.4nm,0.2s,baz=45,slow=67,SNR=5.1						
MK31				⇓Lg	Lg	13 30 15.7	
	2.9nm,0.2s,baz=144,slow=28,SNR=9.8						
MAKZ	**Makanchi**	**3.98**	**317**	⇑Pn	Pn	13 29 15.1	+0.2
	3.4nm,0.5s						
MAKZ				⇑Pg	Pb	13 29 24.6	+1.0
	7.4nm,0.8s						
MAKZ				⇓Sn	Sn	13 30 02.1	-0.2
	3.6nm,0.4s						
MAKZ				⇓Lg	Lg	13 30 19.1	
	9.0nm,0.7s						
PDGK	**Podgornoye**	**4.70**	**265**	⇓Pn	Pn	13 29 24.8	0.0
	1.7nm,0.9s						
PDGK				⇑Pg	Pg	13 29 39.4	-3.2
	4.2nm,0.7s						
PDGK				⇓Sn	Sn	13 30 22.7	+2.6
	5.6nm,0.5s						
PDGK				⇑Lg	Lg	13 30 43.0	
	14nm,0.6s						
KURBB	**Kurchatov Arra**	**8.35**	**326**	⇑Pn	Pn	13 30 13.1	-1.7
	1.1nm,0.6s						
KURBB				⇑Lg	Lg	13 32 40.2	
	10nm,0.6s						
KURK	**Kurchatov**	**8.38**	**326**	⇑Pn	Pn	13 30 12.8	-2.5
	1.0nm,0.5s						
KURK				⇑Lg	Lg	13 32 39.5	
	7.8nm,0.9s						

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*ISCJB **13** 14:01:19.7±0.2, 38°.60S±0°.02×176°.99E±0°.03, h75^{km}±1^{km}, mb4.4/18, Error ellipse: s-maj=3.7km s-min=3.0km az=11.7*

*IDC **13** 14:01:20.4±0.6, 38°.35S×176°.99E, h62^{km}±7^{km}, mb4.2/14, mb1 4.3/15, mb1mx4.1/43, mbtmp4.4/15, MS3.4/21, Ms1 3.5/21, ms1mx3.3/42, Error ellipse: s-maj=19.1km s-min=16.1km az=54.0*

*WEL **13** 14:01:20.6, 38°.5S±0°.8×177°.0E±0°.8, h65^{km}±1^{km}, ML5.2/59*

*NEIC **13** 14:01:21.3±0.0, 38°.52S×176°.97E, h61^{km}, mb4.7/5, ML5.3(WEL), After WEL.*

NEIC Felt in the eastern part of the North Island.

ISC 13 14:01:20.8±0.6**,38°.61S**±0°.03×**176°.93E**±0°.03**,h71**^{km}±4^{km}**, n289,σ1**^{s}**64**/285**,mb4.4**/18**,1C-1D,North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTZ	**Ruatahuna**	**0.04**	**95**	P	**Pn**	**14 01 29.9**	**-1.3**
RTZ				S	**Sn**	**14 01 37.4**	**-1.5**
MUGZ	**Murupara**	**0.18**	**317**	P	**Pn**	**14 01 30.3**	**-1.2**
MUGZ				S	**Sn**	**14 01 37.1**	**-2.3**
MTHZ	**Maungataniwha**	**0.25**	**197**	P	**Pn**	**14 01 31.4**	**-0.4**
MTHZ				S	**Sn**	**14 01 40.2**	**+0.1**
RAHZ	**Arahi**	**0.33**	**159**	P	**Pn**	**14 01 32.6**	**+0.2**
RAHZ				S	**Sn**	**14 01 41.9**	**+1.1**
SNGZ	**Shannon Statio**	**0.36**	**118**	P	**Pn**	**14 01 32.4**	**-0.1**
SNGZ				S	**Sn**	**14 01 41.4**	**+0.1**
URZ	**Urewera**	**0.38**	**22**	P	**Pn**	**14 01 30.5**	**-2.2**
	5µm,0.3s,baz=232,slow=5.8						
URZ				S	**Sn**	**14 01 38.3**	**-3.1**
	16µm,0.3s,baz=41,slow=18,SNR=158						
URZ				LR	LR	14 01 40.4	
	comp=Z,1µm,21.4s,baz=126,slow=155						
URZ	**Urewera**	**0.38**	**22**	P	**Pn**	**14 01 30.8**	**-1.9**
RAGZ	**Rawiri**	**0.40**	**73**	P	**Pn**	**14 01 31.8**	**-1.1**
RAGZ				S	**Sn**	**14 01 40.4**	**-1.4**
RRRZ	**Republican Roa**	**0.43**	**310**	P	**Pn**	**14 01 32.1**	**-1.0**
PRRZ	**Plateau Road**	**0.44**	**285**	Pn	**Pn**	**14 01 32.6**	**-0.6**
PRRZ	**Plateau Road**	**0.44**	**285**	P	**Pn**	**14 01 32.6**	**-0.6**
PRRZ				S	**Sn**	**14 01 41.4**	**-0.9**
MRHZ	**Matea Rd**	**0.46**	**241**	P	**Pn**	**14 01 33.4**	**-0.1**
ALRZ	**Allen Road**	**0.47**	**276**	Pn	**Pn**	**14 01 33.1**	**-0.3**
ALRZ	**Allen Road**	**0.47**	**276**	P	**Pn**	**14 01 33.1**	**-0.3**
NMHZ	**Naumai**	**0.49**	**191**	Pn	**Pn**	**14 01 34.8**	**+1.0**
NMHZ	**Naumai**	**0.49**	**191**	P	**Pn**	**14 01 34.8**	**+1.0**
TARZ	**Mount Tarawera**	**0.50**	**318**	P	**Pn**	**14 01 33.0**	**-0.8**
WHHZ	**Waihua**	**0.52**	**153**	P	**Pn**	**14 01 34.5**	**+0.6**
EDRZ	**Edgecumbe**	**0.53**	**343**	P	**Pn**	**14 01 32.7**	**-1.4**
MWZ	**Matawai**	**0.54**	**59**	P	**Pn**	**14 01 32.9**	**-1.3**
MWZ				S	**Sn**	**14 01 42.0**	**-2.0**
HRRZ	**Handcock Road**	**0.56**	**293**	Pn	**Pn**	**14 01 33.6**	**-0.7**
HRRZ	**Handcock Road**	**0.56**	**293**	P	**Pn**	**14 01 33.6**	**-0.7**
HLRZ	**Highlands Stat**	**0.58**	**308**	P	**Pn**	**14 01 33.9**	**-0.7**
MKRZ	**Makatiti**	**0.60**	**322**	P	**Pn**	**14 01 34.7**	**-0.1**
WPRZ	**Whakapapatarin**	**0.61**	**278**	Pn	**Pn**	**14 01 34.6**	**-0.2**
WPRZ	**Whakapapatarin**	**0.61**	**278**	P	**Pn**	**14 01 34.6**	**-0.2**
HSRZ	**Hossack Road**	**0.62**	**299**	P	**Pn**	**14 01 34.5**	**-0.4**
BKZ	**Black Stump Fm**	**0.65**	**212**	*e*Pn	**Pn**	**14 01 36.1**	**+0.7**
BKZ				*e*Sn	**Sn**	**14 01 41.3**	**-4.7**
BKZ	**Black Stump Fm**	**0.65**	**212**	P	**Pn**	**14 01 36.0**	**+0.7**
ARHZ	**Aropaoanui**	**0.65**	**176**	Pn	**Pn**	**14 01 36.4**	**+1.1**
ARHZ	**Aropaoanui**	**0.65**	**176**	P	**Pn**	**14 01 36.4**	**+1.1**
RIGZ	**Rimuhau**	**0.66**	**98**	P	**Pn**	**14 01 34.8**	**-0.5**
MARZ	**Manawahe**	**0.66**	**342**	P	**Pn**	**14 01 34.1**	**-1.2**
OMRZ	**Omania**	**0.67**	**319**	P	**Pn**	**14 01 34.5**	**-1.0**
GRRZ	**Galatos Road**	**0.70**	**292**	P	**Pn**	**14 01 35.7**	**0.0**
KNZ	**Kokohu**	**0.71**	**125**	P	**Pn**	**14 01 35.5**	**-0.3**
HATZ	**Hinemaiaia**	**0.71**	**247**	Pn	**Pn**	**14 01 36.2**	**+0.2**
HATZ	**Hinemaiaia**	**0.71**	**247**	P	**Pn**	**14 01 36.3**	**+0.4**
UTU	**Utuhina**	**0.72**	**307**	P	**Pn**	**14 01 35.8**	**-0.3**
TKGZ	**Te Karaka**	**0.74**	**77**	P	**Pn**	**14 01 35.7**	**-0.5**
LIRZ	**Lichensteins R**	**0.74**	**324**	P	**Pn**	**14 01 35.5**	**-0.9**
WHRZ	**Whale Island**	**0.76**	**3**	P	**Pn**	**14 01 35.1**	**-1.4**
WHTZ	**Whakaora**	**0.77**	**266**	Pn	**Pn**	**14 01 37.1**	**+0.5**
WHTZ	**Whakaora**	**0.77**	**266**	P	**Pn**	**14 01 37.1**	**+0.5**
NGRZ	**Ngongotaha**	**0.78**	**311**	P	**Pn**	**14 01 36.4**	**-0.3**
KARZ	**Kaharoa**	**0.80**	**317**	P	**Pn**	**14 01 36.0**	**-1.0**
PRGZ	**Paritu Road**	**0.81**	**113**	P	**Pn**	**14 01 36.5**	**-0.5**
OPRZ	**Ohinepanea**	**0.82**	**339**	P	**Pn**	**14 01 35.5**	**-1.7**
MCHZ	**McNeill Hill**	**0.85**	**192**	Pn	**Pn**	**14 01 38.8**	**+1.3**
MCHZ	**McNeill Hill**	**0.85**	**192**	P	**Pn**	**14 01 38.9**	**+1.3**
RUGZ	**Raukumara Rang**	**0.87**	**42**	P	**Pn**	**14 01 36.3**	**-1.7**
KUTZ	**Kaahu Road**	**0.88**	**278**	Pn	**Pn**	**14 01 38.0**	**+0.2**
KUTZ	**Kaahu Road**	**0.88**	**278**	P	**Pn**	**14 01 38.0**	**+0.2**
KWHZ	**Kaweka Forest**	**0.90**	**206**	P	**Pn**	**14 01 39.4**	**+1.2**
RITZ	**Rihia Road**	**0.92**	**246**	Pn	**Pn**	**14 01 39.3**	**+1.0**
RITZ	**Rihia Road**	**0.92**	**246**	P	**Pn**	**14 01 39.3**	**+1.0**
TWGZ	**Tauwhareparae**	**0.93**	**63**	P	**Pn**	**14 01 37.9**	**-0.6**
MHGZ	**Mahia Peninsul**	**0.93**	**126**	P	**Pn**	**14 01 38.5**	**-0.1**
RATZ	**Rangitukua**	**0.94**	**254**	Pn	**Pn**	**14 01 39.2**	**+0.5**
RATZ	**Rangitukua**	**0.94**	**254**	P	**Pn**	**14 01 39.3**	**+0.7**
WATZ	**Wairara**	**0.94**	**264**	Pn	**Pn**	**14 01 39.1**	**+0.4**
WATZ	**Wairara**	**0.94**	**264**	P	**Pn**	**14 01 39.1**	**+0.4**
CNGZ	**Carnagh Statio**	**1.01**	**83**	P	**Pn**	**14 01 39.1**	**-0.3**
TGRZ	**Tauranga**	**1.03**	**329**	P	**Pn**	**14 01 38.4**	**-1.3**
KATZ	**Kakaramea**	**1.03**	**249**	Pn	**Pn**	**14 01 40.5**	**+0.7**
KATZ	**Kakaramea**	**1.03**	**249**	P	**Pn**	**14 01 40.6**	**+0.7**
CKHZ	**Cape Kidnapper**	**1.05**	**174**	Pn	**Pn**	**14 01 40.5**	**+0.6**
CKHZ	**Cape Kidnapper**	**1.05**	**174**	P	**Pn**	**14 01 40.5**	**+0.6**
HAZ	**Te Kaha**	**1.09**	**38**	P	**Pn**	**14 01 38.4**	**-2.0**
KMRZ	**Kaimai**	**1.09**	**314**	P	**Pn**	**14 01 39.7**	**-0.8**
WIZ	**White Island**	**1.10**	**11**	P	**Pn**	**14 01 39.1**	**-1.5**
BHHZ	**Black Hill Sta**	**1.11**	**217**	Pn	**Pn**	**14 01 41.7**	**+0.9**
BHHZ	**Black Hill Sta**	**1.11**	**217**	P	**Pn**	**14 01 41.7**	**+0.9**
KRVZ	**Karewarewa**	**1.12**	**244**	Pn	**Pn**	**14 01 41.8**	**+0.8**
KRVZ	**Karewarewa**	**1.12**	**244**	P	**Pn**	**14 01 41.8**	**+0.8**
KRHZ	**Kereru**	**1.12**	**203**	P	**Pn**	**14 01 41.6**	**+0.7**
TLZ	**Tolley Road**	**1.13**	**284**	Pn	**Pn**	**14 01 41.0**	**0.0**
TLZ	**Tolley Road**	**1.13**	**284**	P	**Pn**	**14 01 41.0**	**0.0**
OTVZ	**Oturere**	**1.13**	**241**	Pn	**Pn**	**14 01 42.0**	**+0.9**
PKGZ	**Pakihiroa**	**1.16**	**52**	P	**Pn**	**14 01 40.5**	**-0.8**
WTVZ	**West Tongariro**	**1.16**	**244**	Pn	**Pn**	**14 01 42.4**	**+0.9**
WTVZ	**West Tongariro**	**1.16**	**244**	P	**Pn**	**14 01 42.4**	**+0.9**
PUZ	**Puketiti**	**1.17**	**63**	P	**Pn**	**14 01 40.4**	**-1.1**
KAHZ	**Kahuranaki**	**1.18**	**182**	Pn	**Pn**	**14 01 42.3**	**+0.6**
KAHZ	**Kahuranaki**	**1.18**	**182**	P	**Pn**	**14 01 42.3**	**+0.6**
NGZ	**Ngauruhoe**	**1.18**	**241**	Pn	**Pn**	**14 01 42.7**	**+0.9**
NGZ	**Ngauruhoe**	**1.18**	**241**	P	**Pn**	**14 01 42.7**	**+0.9**
TUVZ	**Tukino**	**1.19**	**236**	Pn	**Pn**	**14 01 43.0**	**+1.0**
TUVZ	**Tukino**	**1.19**	**236**	P	**Pn**	**14 01 43.0**	**+1.0**
MOVZ	**Moawhango**	**1.21**	**229**	Pn	**Pn**	**14 01 42.9**	**+0.8**
MOVZ	**Moawhango**	**1.21**	**229**	P	**Pn**	**14 01 43.0**	**+0.8**
COVZ	**Chateau Observ**	**1.23**	**241**	P	**Pn**	**14 01 43.4**	**+0.9**
WHVZ	**Whangaehu Hut**	**1.24**	**237**	Pn	**Pn**	**14 01 43.2**	**+0.5**
WHVZ	**Whangaehu Hut**	**1.24**	**237**	P	**Pn**	**14 01 43.6**	**+0.9**
FWVZ	**Far West T-bar**	**1.25**	**239**	Pn	**Pn**	**14 01 43.6**	**+0.9**
FWVZ	**Far West T-bar**	**1.25**	**239**	P	**Pn**	**14 01 43.7**	**+0.9**
TWVZ	**Taurewa**	**1.25**	**248**	Pn	**Pn**	**14 01 43.2**	**+0.6**
TWVZ	**Taurewa**	**1.25**	**248**	P	**Pn**	**14 01 43.3**	**+0.6**
DRZ	**Dome Shelter**	**1.26**	**238**	Pn	**Pn**	**14 01 43.8**	**+0.9**
DRZ	**Dome Shelter**	**1.26**	**238**	P	**Pn**	**14 01 43.8**	**+0.9**
WNVZ	**Wahianoa**	**1.26**	**235**	Pn	**Pn**	**14 01 43.8**	**+1.0**
TRVZ	**Turoa**	**1.28**	**237**	Pn	**Pn**	**14 01 44.0**	**+0.9**
TRVZ	**Turoa**	**1.28**	**237**	P	**Pn**	**14 01 44.0**	**+0.9**
MTVZ	**Mangateitei**	**1.38**	**235**	Pn	**Pn**	**14 01 45.2**	**+1.0**
MTVZ	**Mangateitei**	**1.38**	**235**	P	**Pn**	**14 01 45.3**	**+1.0**
PKVZ	**Pokaka**	**1.41**	**241**	Pn	**Pn**	**14 01 45.8**	**+1.1**
PKVZ	**Pokaka**	**1.41**	**241**	P	**Pn**	**14 01 45.9**	**+1.2**
WMGZ	**Waiomatatini S**	**1.41**	**56**	P	**Pn**	**14 01 43.6**	**-1.0**
PXZ	**Pawanui**	**1.42**	**182**	Pn	**Pn**	**14 01 44.1**	**-0.6**
PXZ	**Pawanui**	**1.42**	**182**	P	**Pn**	**14 01 44.5**	**-0.2**
PNHZ	**Pukenui**	**1.42**	**203**	P	**Pn**	**14 01 45.0**	**+0.2**
TOZ	**Tahuroa Road**	**1.43**	**308**	P	**Pn**	**14 01 44.5**	**-0.3**
WPHZ	**Waipukurau**	**1.50**	**195**	P	**Pn**	**14 01 45.7**	**-0.1**
MXZ	**Matakaoa Point**	**1.51**	**46**	*e*Pn	**Pn**	**14 01 45.2**	**-0.7**
MXZ	**Matakaoa Point**	**1.51**	**46**	P	**Pn**	**14 01 45.2**	**-0.7**
TSZ	**Takapari Road**	**1.63**	**207**	Pn	**Pn**	**14 01 47.5**	**-0.1**
TSZ	**Takapari Road**	**1.63**	**207**	P	**Pn**	**14 01 47.5**	**-0.1**
HIZ	**Hauiti**	**1.63**	**273**	*e*Pn	**Pn**	**14 01 48.6**	**+1.1**
HIZ	**Hauiti**	**1.63**	**273**	P	**Pn**	**14 01 48.7**	**+1.2**
PRHZ	**Porangahau**	**1.67**	**188**	P	**Pn**	**14 01 47.6**	**-0.4**
VRZ	**Vera Road**	**1.77**	**253**	P	**Pn**	**14 01 50.8**	**+1.5**
DVHZ	**Dannevirke**	**1.79**	**199**	P	**Pn**	**14 01 48.9**	**-0.7**
ANWZ	**Angora Road**	**1.88**	**191**	P	**Pn**	**14 01 50.3**	**-0.6**
WAZ	**Wanganui**	**1.90**	**232**	P	**Pn**	**14 01 52.8**	**+1.8**
POWZ	**Post Office Ro**	**1.99**	**207**	P	**Pn**	**14 01 52.3**	**-0.1**
OHWZ	**Ohakea**	**2.03**	**218**	P	**Pn**	**14 01 53.9**	**+1.1**
MKAZ	**Moumakai**	**2.06**	**316**	P	**Pn**	**14 01 53.1**	**-0.1**
PRWZ	**Pori Road**	**2.08**	**201**	P	**Pn**	**14 01 53.0**	**-0.5**
KUZ	**Kuaotunu**	**2.10**	**332**	P	**Pn**	**14 01 52.7**	**-1.1**
BFZ	**Birch Farm**	**2.13**	**194**	*e*Pn	**Pn**	**14 01 53.2**	**-1.1**
BFZ	**Birch Farm**	**2.13**	**194**	P	**Pn**	**14 01 53.1**	**-1.1**
LREZ	**Lake Rotokare**	**2.15**	**246**	P	**Pn**	**14 01 56.4**	**+2.0**
DREZ	**Durham Road**	**2.21**	**254**	Pn	**Pn**	**14 01 57.6**	**+2.4**
DREZ	**Durham Road**	**2.21**	**254**	P	**Pn**	**14 01 57.6**	**+2.4**
KBAZ	**Karaka Road Bo**	**2.22**	**312**	P	**Pn**	**14 01 56.0**	**+0.7**
PREZ	**Palmer Road**	**2.28**	**250**	P	**Pn**	**14 01 59.0**	**+2.7**
ETAZ	**East Tamaki Re**	**2.29**	**316**	P	**Pn**	**14 01 57.0**	**+0.6**
MRZ	**Mangatainoka R**	**2.30**	**207**	Pn	**Pn**	**14 01 55.5**	**-0.9**
MRZ	**Mangatainoka R**	**2.30**	**207**	P	**Pn**	**14 01 55.6**	**-0.9**
TIWZ	**Tintock**	**2.31**	**200**	P	**Pn**	**14 01 55.8**	**-0.8**
WIAZ	**Waiheke Island**	**2.31**	**321**	P	**Pn**	**14 01 56.6**	**0.0**
CPWZ	**Castlepoint**	**2.36**	**194**	Pn	**Pn**	**14 01 56.9**	**-0.4**
CPWZ	**Castlepoint**	**2.36**	**194**	P	**Pn**	**14 01 57.0**	**-0.4**
PKE	**Pukeiti**	**2.37**	**255**	P	**Pn**	**14 01 59.7**	**+2.2**
KHEZ	**Kahui Hut**	**2.38**	**252**	P	**Pn**	**14 02 00.0**	**+2.4**
AWAZ	**Awhitu Peninsu**	**2.38**	**310**	P	**Pn**	**14 01 58.1**	**+0.5**
EPAZ	**Eden Park BICE**	**2.45**	**314**	P	**Pn**	**14 01 59.3**	**+0.8**
HBAZ	**Herne Bay Bore**	**2.48**	**315**	P	**Pn**	**14 01 59.5**	**+0.6**
NMEZ	**Namu Road**	**2.51**	**250**	P	**Pn**	**14 02 01.5**	**+2.2**
WTAZ	**Waiatarua**	**2.51**	**311**	P	**Pn**	**14 02 00.1**	**+0.8**
HOWZ	**Holdsworth Sta**	**2.53**	**205**	P	**Pn**	**14 01 58.0**	**-1.6**
OGWZ	**Otaki Gorge**	**2.59**	**211**	P	**Pn**	**14 01 59.3**	**-1.0**
ABAZ	**Army Bay**	**2.61**	**320**	P	**Pn**	**14 02 01.3**	**+0.7**
TMWZ	**Te Maipa**	**2.62**	**198**	P	**Pn**	**14 01 59.3**	**-1.5**
RVAZ	**Riverhead Bore**	**2.62**	**314**	P	**Pn**	**14 02 01.2**	**+0.4**
GRZ	**Great Barrier**	**2.63**	**333**	P	**Pn**	**14 02 00.6**	**-0.4**
KIW	**Kapiti Island**	**2.73**	**214**	P	**Pn**	**14 02 01.5**	**-0.8**
MTW	**Mount Morrison**	**2.77**	**203**	P	**Pn**	**14 02 01.0**	**-1.9**
CAW	**Cannon Point**	**2.88**	**209**	Pn	**Pn**	**14 02 02.7**	**-1.6**
CAW	**Cannon Point**	**2.88**	**209**	P	**Pn**	**14 02 02.7**	**-1.6**
TRWZ	**Traveller**	**2.94**	**199**	P	**Pn**	**14 02 03.3**	**-1.9**
MSWZ	**Moikau Station**	**3.08**	**204**	P	**Pn**	**14 02 05.0**	**-2.2**
WEL	**Wellington**	**3.15**	**211**	Pn	**Pn**	**14 02 06.4**	**-1.5**
DUWZ	**D'Urville Isla**	**3.19**	**226**	Pn	**Pn**	**14 02 07.6**	**-0.9**
DUWZ	**D'Urville Isla**	**3.19**	**226**	P	**Pn**	**14 02 07.7**	**-0.9**
SNZO	**South Karori**	**3.19**	**212**	*e*Pn	**Pn**	**14 02 06.8**	**-1.8**
TCW	**Tory Channel**	**3.30**	**217**	P	**Pn**	**14 02 08.3**	**-1.8**
WCZ	**Waipu Caves**	**3.37**	**321**	P	**Pn**	**14 02 11.7**	**+0.6**
TUWZ	**Tuamarina**	**3.63**	**218**	P	**Pn**	**14 02 12.5**	**-2.1**

CMWZ	Cape Campbell	3.76	213	P	Pn	14 02 15.9	-0.5
NNZ	Nelson	3.77	225	Pn	Pn	14 02 14.5	-2.0
NNZ	Nelson	3.77	225	P	Pn	14 02 14.7	-1.8
BSWZ	Blackbirch Sta	3.88	216	Pn	Pn	14 02 15.8	-2.3
BSWZ	Blackbirch Sta	3.88	216	P	Pn	14 02 15.8	-2.2
QRZ	Quartz Range	4.05	236	Pn	Pn	14 02 18.7	-1.5
QRZ	Quartz Range	4.05	236	P	Pn	14 02 18.8	-1.5
OUZ	Omahuta	4.31	321	*e*Pn	Pn	14 02 23.7	-0.2
OUZ	Omahuta	4.31	321	P	Pn	14 02 24.9	+1.0
THZ	Tophouse	4.41	223	*e*Pn	Pn	14 02 23.3	-1.9
THZ	Tophouse	4.41	223	P	Pn	14 02 23.1	-2.1
KHZ	Kahutara	4.60	213	*e*Pn	Pn	14 02 26.3	-1.4
KHZ	Kahutara	4.60	213	P	Pn	14 02 24.8	-2.9
DSZ	Denniston Nort	5.02	230	Pn	Pn	14 02 30.8	-2.7
DSZ	Denniston Nort	5.02	230	P	Pn	14 02 31.0	-2.6
LTZ	Lake Taylor	5.47	219	*e*Pn	Pn	14 02 36.4	-3.3
LTZ	Lake Taylor	5.47	219	P	Pn	14 02 36.6	-3.1
INZ	Inchbonnie	5.86	224	P	Pn	14 02 41.7	-3.2
OKCZ	Okains Bay	5.88	209	P	Pn	14 02 41.6	-3.7
EYCZ	Eyrewell	5.92	214	P	Pn	14 02 42.5	-3.3
OXZ	Oxford	5.99	217	*e*Pn	Pn	14 02 43.5	-3.3
OXZ	Oxford	5.99	217	P	Pn	14 02 42.1	-4.7
MQZ	McQueen’s Vall	6.03	211	*e*Pn	Pn	14 02 43.7	-3.5
MQZ	McQueen’s Vall	6.03	211	P	Pn	14 02 42.3	-4.9
AKCZ	Akaroa Harbour	6.07	209	P	Pn	14 02 43.8	-4.0
WVZ	Waitaha Valley	6.47	225	Pn	Pn	14 02 52.3	-1.0
RPZ	Rata Peaks	6.76	219	P	Pn	14 02 52.7	-4.6
	6.3nm,0.3s,baz=204,slow=1.7,SNR=40						
RPZ				S	Sn	14 04 04.9	-7.8
	49nm,0.3s,baz=179,slow=23,SNR=20						
RPZ	Rata Peaks	6.76	219	*e*Pn	Pn	14 02 54.6	-2.6
RPZ				S	Sn	14 04 04.9	-7.8
RPZ	Rata Peaks	6.76	219	P	Pn	14 02 53.2	-4.1
CTZ	Chatham Island	7.06	139	Pn	Pn	14 03 00.4	-0.9
FOZ	Fox Glacier	7.28	225	Pn	Pn	14 03 03.6	-0.8
LBZ	Lake Benmore	7.67	219	*e*Pn	Pn	14 03 06.8	-3.0
LBZ	Lake Benmore	7.67	219	P	Pn	14 03 06.3	-3.5
ODZ	Otahua Downs	7.96	214	*e*Pn	Pn	14 03 09.0	-4.7
ODZ	Otahua Downs	7.96	214	P	Pn	14 03 09.0	-4.6
WKZ	Wanaka	8.57	221	Pn	Pn	14 03 18.2	-3.9
WKZ	Wanaka	8.57	221	P	Pn	14 03 18.2	-3.9
HHSZ	Highcliff Hill	8.65	211	P	Pn	14 03 19.8	-3.3
EAZ	Earnscleugh	8.72	218	P	Pn	14 03 20.0	-4.0
DZM	Mont Dzumac	18.78	328	P	P	14 05 34.5	0.0
	0.2nm,0.3s,baz=107,slow=20,SNR=2.9						
DZM				LR	LR	14 11 59.9	
	comp=Z,119nm,18.3s,baz=202,slow=34						
DZM	Mont Dzumac	18.78	328	*e*LR	LR	14 09 56.2	
	451nm,26.6s						
MILA	Mila	21.97	265	P	P	14 06 07.8	-0.9
	baz=22						
MOO	Moorlands	22.87	251	P	P	14 06 20.3	+2.0
	baz=22,SNR=6.7						
TOO	Toolangi	24.71	263	P	P	14 06 36.4	+1.2
	baz=24,SNR=19						
CMSA	Cobar Meteorol	26.44	276	P	P	14 06 51.8	+0.8
	baz=26,SNR=6.2						
RAR	Rarotonga	26.50	56	LR	LR	14 15 29.0	
	comp=Z,68nm,21.1s,baz=224,slow=32						
STKA	Stephens Creek	29.50	272	P	P	14 07 19.8	+1.6
	baz=29,SNR=6.3						
STKA	Stephens Creek	29.50	272	P	P	14 07 20.4	+2.1
	5.7nm,0.8s,baz=118,slow=9.1,SNR=9.0						
STKA				LR	LR	14 17 40.7	
	comp=Z,54nm,21.5s,baz=28,slow=33						
QLP	Quilpie	29.89	284	P	P	14 07 23.4	+1.7
	baz=30,SNR=6.3						
HTT	Hallett	31.02	268	P	P	14 07 32.7	+1.0
	baz=31,SNR=3.8						
CTA	Charters Tower	32.28	296	P	P	14 07 43.3	+0.5
	2.0nm,0.4s,baz=136,slow=13,SNR=4.6						
HNR	Honiara	32.81	328	LR	LR	14 18 55.7	
	comp=Z,39nm,21.4s,baz=160,slow=32						
BBOO	Buckleboo	33.49	267	P	P	14 07 53.8	+0.5
	baz=33,SNR=4.8						
MTSU	Mount Surprise	34.94	296	P	P	14 08 07.9	+2.0
	baz=35,SNR=3.9						
PPT2	Papeete2	35.92	64	*e*LR	LR	14 17 41.8	
	312nm,29.8s,baz=235						
PPT	Papeete	35.93	64	LR	LR	14 19 41.7	
	comp=Z,30nm,19.9s,baz=200,slow=31						
COEN	Coen	38.62	300	P	P	14 08 38.7	+1.5
	baz=38,SNR=6.9						
AS01	Alice Springs	39.33	279	*e*P	P	14 08 43.5	+0.4
AS31	Alice Springs	39.36	279	*e*P	P	14 08 43.2	-0.2
	8.9nm,0.5s						
ASAR	Alice Springs	39.36	279	P	P	14 08 44.0	+0.6
	14nm,0.6s,baz=128,slow=8.8,SNR=247						
ASAR				PcP	PcP	14 10 49.3	-1.3
	0.5nm,0.4s,baz=118,slow=3.7,SNR=2.4						
ASAR				S	S	14 14 37.8	-1.9
	0.7nm,0.7s,baz=126,slow=14,SNR=5.3						
ASAR				LR	LR	14 25 44.5	
	comp=Z,62nm,18.4s,baz=138,slow=37						
PMG	Port Moresby	39.48	310	LR	LR	14 22 41.5	
	comp=Z,71nm,20.4s,baz=163,slow=33						
VNDA	Vanda	39.54	185	P	P	14 08 47.4	+3.2
	0.4nm,0.5s,baz=33,slow=10,SNR=3.8						
VNDA				LR	LR	14 23 26.3	
	comp=Z,28nm,18.1s,baz=348,slow=33						
FORT	Forrest	40.54	266	P	P	14 08 53.7	+0.7
	baz=40,SNR=8.4						
WB2	Warramunga Arr	41.11	285	*e*P	P	14 08 56.9	-1.0
	5.4nm,0.8s						
WRAB	Tennant Creek	41.12	285	*e*P	P	14 08 56.6	-1.3
	4.6nm,0.7s						
WRA	Warramunga Arr	41.12	285	P	P	14 08 58.2	+0.3
	3.1nm,0.7s,baz=126,slow=7.1,SNR=60						
WRKA	Warakurna	43.01	274	P	P	14 09 13.1	-0.3
	baz=43,SNR=22						
KMBL	Kambalda	45.11	262	P	P	14 09 30.0	0.0
	baz=45,SNR=5.4						
CASY	Casey	45.95	211	*e*P	P	14 09 33.0	-3.2
	29nm,0.9s						
KNRA	Kununurra	47.92	285	P	P	14 09 52.8	+0.7
	baz=48,SNR=4.1						
MTN	Manton Dam	47.94	290	P	P	14 09 52.8	+0.5
	baz=48,SNR=3.9						
NWAO	Narrogin (SRO)	48.04	258	P	P	14 09 52.6	-0.3
	baz=48,SNR=8.2						
NWAO	Narrogin (SRO)	48.04	258	P	P	14 09 52.6	-0.3
	5.3nm,0.4s,baz=354,slow=5.2,SNR=12						
KLBR	Kellerberrin	48.20	259	P	P	14 09 54.0	-0.1
	baz=48,SNR=31						
TAOE	Nuku Hiva Isla	48.55	64	*e*LR	LR	14 23 44.0	
	422nm,37.6s						
FITZ	Fitzroy Crossi	48.86	280	P	P	14 09 59.7	+0.4
	7.6nm,0.5s,baz=158,slow=10,SNR=59						
FITZ				LR	LR	14 31 04.5	
	comp=Z,63nm,19.0s,baz=146,slow=36						
MUN	Mundaring	49.22	258	P	P	14 10 01.9	-0.1
	baz=49,SNR=8.3						
BLDU	Ballidu	49.43	260	P	P	14 10 03.3	-0.3
	baz=49,SNR=16						
MEEK	Meekatharra	49.80	266	P	P	14 10 06.2	-0.3
	baz=49,SNR=28						
MORW	Morawa	50.65	262	P	P	14 10 12.9	0.0
	baz=50,SNR=12						
QSPA	South Pole Qui	51.51	180	P	P	14 10 22.6	+3.6
	2.9nm,0.6s,baz=352,slow=0.6,SNR=8.9						
QSPA				LR	LR	14 29 39.9	
	comp=Z,38nm,20.3s,baz=56,slow=33						
QSPA	South Pole Qui	51.51	180	*e*P	P	14 10 22.0	+3.0
	13nm,1.1s						
BATI	Baumata	55.21	286	LR	LR	14 33 49.9	
	comp=Z,118nm,21.5s,baz=219,slow=35						
GIRL	Giralia	55.26	267	P	P	14 10 47.9	+1.1
	baz=55,SNR=8.2						
GUMO	Guam	59.97	323	LR	LR	14 34 45.9	
	comp=Z,15nm,19.8s,baz=154,slow=34						
MAW	Mawson	63.15	203	LR	LR	14 37 58.7	
	comp=Z,74nm,18.2s,baz=100,slow=35						
SYO	Syowa Base	68.15	195	⇑*e*X	P	14 12 13.6	+0.8
SYO	Syowa Base	68.15	195	⇓*e*P	P	14 12 19.3	+6.5
LEM	Lembang	69.62	278	LR	LR	14 45 15.9	
	comp=Z,34nm,19.4s,baz=289,slow=38						
SNAA	Sanae	70.02	180	P	P	14 12 26.4	+2.0
SNAA	Sanae	70.02	180	P	P	14 12 26.4	+2.0
	2.6nm,0.8s,baz=222,slow=8.8,SNR=11						
VNA3	Neumayer Olymp	70.35	178	P	P	14 12 28.6	+2.2
VNA1	Neumayer--Stat	70.98	178	P	P	14 12 32.7	+2.6
MJAR	Matsushiro Arr	82.89	329	P	P	14 13 36.6	-0.8
	1.9nm,0.9s,baz=167,slow=8.1,SNR=4.2						
MJAR				LR	LR	14 47 27.7	
	comp=Z,14nm,20.5s,baz=70,slow=34						
KSRS	Korea Array	88.13	323	P	P	14 14 04.5	+1.2
	4.8nm,1.0s,baz=142,slow=5.0,SNR=11						
KSRS				LR	LR	14 49 10.2	
	comp=Z,29nm,20.4s,baz=199,slow=33						
KSAR	Wonju Array Be	88.14	323	P	P	14 14 04.5	+1.1
KS01	Wonju Array Si	88.16	323	*e*P	P	14 14 03.0	-0.5
LPIG	La Paz	92.30	61	LR	LR	14 46 28.0	
	comp=Z,30nm,21.8s,baz=268,slow=29						
CM01	Chiang Mai Arr	92.31	292	*e*P	P	14 14 21.2	-2.1
CMAR	Chiang Mai Arr	92.34	292	P	P	14 14 24.3	+0.8
	2.2nm,0.7s,baz=152,slow=3.4,SNR=12						
CMAR				LR	LR	14 57 48.7	
	comp=Z,27nm,20.9s,baz=196,slow=37						
PETK	Petropavlovsk-	92.86	349	P	P	14 14 25.6	+0.6
	1.1nm,0.7s,baz=119,slow=10						
PETK				LR	LR	14 49 28.7	
	comp=Z,21nm,21.6s,baz=149,slow=31						
NBPM	Berryessa Peak	95.06	43	*e*P	P	14 14 34.8	-0.6
YBH	Yreka Blue Hor	97.01	41	LR	LR	14 48 46.0	
	comp=Z,32nm,21.4s,baz=211,slow=29						
NVAR	Mina Array Bea	97.03	46	P	P	14 14 45.5	+0.8
	0.5nm,0.8s,baz=229,slow=8.2,SNR=4.4						
NVAR				LR	LR	14 49 25.4	
	comp=Z,18nm,20.6s,baz=119,slow=30						
CD2	Chengdu	97.05	304	*e*P	P	14 14 43.5	-1.3
PDAR	Pinedale Array	104.88	47	PKiKP	PKiKP	14 19 37.6	+3.2
	0.3nm,0.6s,baz=191,slow=1.8,SNR=4.0						
KURK	Kurchatov	123.49	311	PKP	PKPdf	14 20 07.9	-1.3
KURBB	Kurchatov Arra	123.50	311	PKP	PKPdf	14 20 07.9	-1.3
	0.4nm,0.3s,baz=112,slow=2.0,SNR=8.6						
MVL	Millersville	124.82	64	*e*PKPdf	PKPdf	14 20 08.4	-3.7
BVAR	Borovoye Array	129.05	312	PKP	PKPdf	14 20 19.6	-0.2
	0.3nm,0.3s,baz=80,slow=1.7,SNR=3.8						
KBZ	Khabaz	145.37	293	PKPbc	PKPdf	14 20 50.1	+0.1
	3.8nm,0.8s,baz=181,slow=2.7,SNR=6.8						
ARCES	ARCESS Array B	145.46	343	PKPbc	PKPdf	14 20 48.4	-1.0
	7.6nm,0.8s,baz=43,slow=2.5,SNR=43						
LIC	Lamto	147.71	176	*e*PKIKP	PKPab	14 21 01.4	+1.3
	75nm,1.9s						
KIC	Kosan Boka	147.86	177	*e*PKIKP	PKPab	14 21 01.5	+0.8
	168nm,2.1s						
TIC	Toumodi	148.13	176	*e*PKIKP	PKPab	14 21 00.9	-0.9
DBIC	Dimbokro	148.16	177	PKPbc	PKPab	14 21 01.7	-0.2
	2.5nm,0.7s,baz=86,slow=7.4,SNR=4.1						
FINES	FINESS Array B	150.91	331	PKPbc	PKPbc	14 21 03.0	-1.2
	6.0nm,0.8s,baz=72,slow=2.5,SNR=12						
BRTR	Keskin Array B	151.64	284	PKPbc	PKPbc	14 21 06.7	-0.2
	1.2nm,0.8s,baz=134,slow=5.3,SNR=4.1						
TORD	Torodi Ar. Bea	154.29	191	PKP	PKPdf	14 21 05.4	+0.5
	1.0nm,0.9s,baz=188,slow=0.6						
HFS	Hagfors	155.99	339	PKPab	PKPab	14 21 32.2	-1.2
	3.3nm,1.0s,baz=107,slow=7.7,SNR=3.9						

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*ISCJB **13** 14:01:43.2±0.7, 39°.75N±0°.03×32°.53E±0°.05, h7^{km}±6^{km}, Error ellipse: s-maj=7.3km s-min=5.3km az=24.2*

*CSEM **13** 14:01:43.4±0.1, 39°.76N×32°.55E, h10^{km}, ML2.3, Error ellipse: s-maj=2.8km s-min=2.2km az=119.0*

*DDA **13** 14:01:43.5, 39°.76N×32°.62E, h7^{km}, Ml2.6*

*ISK **13** 14:01:43.1, 39°.76N×32°.56E, h9^{km}, ML2.3/5*

ISC 13 14:01:43.7±1.2**, 39°.74N**±0°.03×**32°.57E**±0°.04**, h4**^{km}±11^{km}**, n22, σ0^s.85**/33**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LOD	Lodumlu	0.21	45	PG	Pg	14 01 47.7	-0.1
LOD				SG	Sg	14 01 51.3	+0.8
LOD	Lodumlu	0.21	45	*e*Pg	Pg	14 01 47.7	-0.1
LOD				*e*Sg	Sg	14 01 51.3	+0.8
ANTO	Ankara	0.21	54	PG	Pg	14 01 47.8	-0.1
ANTO				SG	Sg	14 01 51.5	+0.8
ANTO	Ankara	0.21	54	*e*Pg	Pg	14 01 47.8	-0.1
ANTO				*e*Sg	Sg	14 01 51.5	+0.8
KKUL	Konya-Kulu	0.63	155	*i* P	Pg	14 01 56.0	+0.1
KKUL				*i* S	Sg	14 02 05.1	+1.1
KKUL	Konya-Kulu	0.63	155	P	Pg	14 01 56.0	+0.1
KKUL				S	Sg	14 02 05.1	+1.1
KULU	Kulu	0.78	154	PG	Pg	14 01 58.9	+0.3
KULU				SG	Sb	14 02 10.5	-0.3
KULU	Kulu	0.78	154	*e*Pg	Pg	14 01 58.9	+0.3
KULU				*e*Sg	Sb	14 02 10.5	-0.3
AUSIV	SIVRIHISAR	0.85	250	PG	Pg	14 02 00.0	-0.1
AUSIV	SIVRIHISAR	0.85	250	*e*Pg	Pg	14 02 00.0	-0.1
KIZT	Kizilcal	1.01	212	PG	Pb	14 02 03.2	-0.8
KIZT	Kizilcal	1.01	212	*e*Pg	Pb	14 02 03.2	-0.8
SERE	Sereflikochisa	1.11	136	PN	Pb	14 02 05.0	-0.5
SERE	Sereflikochisa	1.11	136	*e*Pn	Pb	14 02 05.0	-0.5
BCAM	Yenicaga	1.14	340	*i* P	Pb	14 02 05.2	-0.9
BCAM				*i* S	Sn	14 02 25.7	+2.9
BCAM	Yenicaga	1.14	340	P	Pb	14 02 05.2	-0.9
CHBY	Cihanbeyli	1.19	168	PN	Pb	14 02 06.2	-0.6
CHBY	Cihanbeyli	1.19	168	*e*Pn	Pb	14 02 06.2	-0.6
CDAG	Cicekdag	1.39	94	*i* P	Pn	14 02 09.0	-1.1
CDAG				*i* S	Sg	14 02 28.8	+0.2
CDAG	Cicekdag	1.39	94	P	Pn	14 02 09.0	-1.1
CDAG				S	Sg	14 02 28.8	+0.2
CORM	Corum	1.64	74	PN	Pn	14 02 12.9	-0.6
CORM	Corum	1.64	74	*e*Pn	Pn	14 02 12.9	-0.6

MEX 13 14:09:55.8±0.8**, 14°.76N**×**92°.33W, h91**^{km}±8^{km}**, MD3.9, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.16	22	*e*P	Pn	14 10 07.1	-1.7
THIG				*i* S	Sn	14 10 16.9	-1.5
PCIG		1.27	318	*e*P	Pn	14 10 17.5	-1.3
PCIG				*i* S	Sn	14 10 34.6	-1.5
CCIG	Comitan	1.52	7	*e*P	Pn	14 10 21.4	-0.7
CCIG				*e*S	Sn	14 10 40.0	-2.0
TGIG		2.15	339	*e*P	Pn	14 10 28.0	-2.1
TGIG				*i* S	Sn	14 10 54.8	-1.5

IDC 13 14:09:58.7±449.0**, 47°.10N**×**45°.51E, h0**^{km}**, Error ellipse: s-maj=201.1km s-min=153.5km az=177.0, Ukraine-Moldova-Southwestern Russia region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I31KZ	AKTYUBINSK INF	8.91	64	*i*		15 10 35.0	
	baz=252,slow=295,SNR=19						
I43RU	DUBNA INFRASON	10.90	335	*i*		15 21 00.0	
	baz=142,slow=312,SNR=1.2						
I26DE	FREYUNG INFRAS	21.28	286	*i*		16 17 10.0	
	baz=82,slow=295,SNR=1.3						

IDC 13 14:25:14.3±6.0**, 8°.29S**×**126°.97E, h258**^{km}±68^{km}**, mb2.6**/1**, mb1 3.0**/5**, mb1mx2.8**/49**, mbtmp3.6**/5**, Error ellipse: s-maj=90.3km s-min=22.2km az=45.0, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	3.78	239	P	Pn	14 26 16.1	+0.1
	7.1nm,0.3s,baz=83,slow=3.5,SNR=8.4						
BATI				S	S	14 27 05.4	+0.3
	5.6nm,0.3s,baz=32,slow=9.5,SNR=3.7						
FITZ	Fitzroy Crossi	9.84	187	P	Pn	14 27 31.4	+0.6
	0.2nm,0.3s,baz=7.6,slow=12,SNR=9.6						
WRA	Warramunga Arr	13.61	149	P	Pn	14 28 17.4	-0.1
	0.2nm,0.3s,baz=327,slow=12,SNR=12						
WRA				S	S	14 30 41.7	-6.7
	0.0nm,0.3s,baz=331,slow=36,SNR=2.3						
ASAR	Alice Springs	16.68	157	P	P	14 28 51.8	-0.4
	0.4nm,0.3s,baz=333,slow=11,SNR=16						
MKAR	Makanchi Array	67.70	329	P	P	14 35 44.0	0.0
	0.2nm,0.7s,baz=116,slow=6.6,SNR=2.2						

IDC 13 14:31:46.6±1.8**, 3°.05N**×**124°.92E, h0**^{km}**, mb3.3**/4**, mb1 3.5**/4**, mb1mx3.1**/60**, mbtmp3.3**/4**, MS3.5**/1**, Ms1 3.5**/1**, ms1mx2.4**/29**, Error ellipse: s-maj=211.7km s-min=21.8km az=65.0, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.66	158	P	P	14 37 07.4	-1.9
	0.5nm,0.7s,baz=336,slow=11,SNR=4.9						
PSI	Prapat	25.96	270	LR	LR	14 50 27.7	
	comp=Z,97nm,18.1s,baz=92,slow=43						
ASAR	Alice Springs	27.96	162	P	P	14 37 40.9	+1.7
	0.3nm,0.8s,baz=339,slow=8.0,SNR=3.6						
MKAR	Makanchi Array	57.09	326	P	P	14 41 35.6	+0.7
	0.2nm,0.5s,baz=117,slow=8.4,SNR=3.0						
KURBB	Kurchatov Arra	61.34	328	P	P	14 42 03.3	-0.9
	0.1nm,0.2s,baz=141,slow=6.5,SNR=2.9						

DJA 13 14:33:58.9±1.6**, 3°S**±5°×**13°0E**±°**, h15**^{km}±13^{km}**, M3.3**/5**, MLv3.3**/5**, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.90	220	P	Pb	14 34 13.9	-2.3
MSAI				S	Sb	14 34 27.9	-0.1
AAI	Ambon	1.66	232	P	Pn	14 34 27.9	+0.4
BNDI	Bandanaira	1.90	168	P	Pn	14 34 30.9	+0.1
SWI	Sorong	2.50	45	P	Pn	14 34 39.7	+0.7
SWI				S	Sn	14 35 10.1	+0.8
FAKI	Fak Fak	2.76	96	P	Pn	14 34 42.2	-0.4
LBMI	Labuha	2.83	315	P	Pn	14 34 43.3	-0.3

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*ISCJB **13** 14:37:52.0±0.8, 24°.15S±0°.06×67°.03W±0°.05, h181^{km}, mb3.6/3, Error ellipse: s-maj=8.8km s-min=6.1km az=2.9*

*IDC **13** 14:37:54.8±3.3, 24°.01S×66°.78W, h194^{km}±31^{km}, mb3.4/3, mb1 3.6/5, mb1mx3.2/41, mbtmp4.0/5, MS2.8/1, Ms1 2.8/1, ms1mx2.4/18, Error ellipse: s-maj=31.8km s-min=26.3km az=92.0*

*GUC **13** 14:37:55.5±0.4, 23°.93S×67°.59W, h226^{km}±8^{km}, ML4.2*

ISC 13 14:37:52.7±0.8**, 24°.10S**±0°.08×**67°.02W**±0°.07**, h181**^{km}**, n16, σ1^s.23**/24**, mb3.6**/3**, 4C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB15	IPOC Station P	2.41	291	⇑*i*P	Pn	14 38 36.4	+1.7
PB15				*e*S	Sn	14 39 07.7	+0.4
PB15				IAML		14 39 09.7	
	comp=N,2μm,0.3s						
PB06	IPOC Station P	2.72	300	⇑*i*P	Pn	14 38 39.7	+1.4
PB06				*e*S	Sn	14 39 13.3	-0.3
PB06				IAML		14 39 14.5	
	comp=N,756nm,0.2s						
PB09	IPOC Station P	3.07	318	⇑*i*P	Pn	14 38 44.1	+1.6
PB09				*e*S	Sn	14 39 21.7	+0.4
PB09				IAML		14 39 23.2	
	comp=N,276nm,0.5s						
PB05	IPOC Station P	3.17	292	⇑*i*P	Pn	14 38 44.6	+1.0
PB05				*e*S	Sn	14 39 21.2	-2.1
PB05				IAML		14 39 23.5	
	comp=E,182nm,0.6s						
PB03	IPOC Station P	3.24	309	*e*P	Pn	14 38 45.5	+1.0
PB03				*e*S	Sn	14 39 23.9	-1.0
PB03				IAML		14 39 25.3	
	comp=E,502nm,0.5s						
PB10	IPOC Station P	3.29	280	*e*P	Pn	14 38 45.8	+0.9
PB10				*e*S	Sn	14 39 23.5	-2.1
PB10				IAML		14 39 29.3	
	comp=E,164nm,0.5s						
PB04	IPOC Station P	3.37	301	*e*P	Pn	14 38 47.2	+1.1
PB04				*e*S	Sn	14 39 26.1	-1.7
PB04				IAML		14 39 29.2	
	comp=N,435nm,0.5s						
LPAZ	La Paz	7.84	352	P	Pn	14 39 46.0	+1.4
	comp=N,4.1nm,0.3s,baz=156,slow=7.1,SNR=69						
LPAZ				S	Sn	14 41 13.6	+0.5
	baz=246,slow=20,SNR=1.4						
SIV	San Ignacio	9.82	36	P	Pn	14 40 09.5	-0.5
	comp=N,1.6nm,0.3s,baz=225,slow=14,SNR=23						
SIV				S	Sn	14 41 58.1	-1.3
	comp=N,0.3nm,0.3s,baz=243,slow=16,SNR=2.3						
NNA	Nana	15.23	321	LR	LR	14 46 31.7	
	comp=N,32nm,19.8s,baz=155,slow=34						
SNAA	Sanae	59.26	161	P	P	14 47 35.9	+1.1
	comp=N,0.4nm,0.7s,baz=249,slow=8.6,SNR=5.1						
TORD	Torodi Ar. Bea	76.63	69	P	P	14 49 22.7	-1.2
	comp=N,0.7nm,0.5s,baz=241,slow=5.8						
BOSA	Boshof	80.71	117	P	P	14 49 45.7	-0.5
	comp=N,1.0nm,0.4s,baz=251,slow=4.2,SNR=4.2						
ASAR	Alice Springs	128.35	205	PKP	PKPdf	14 56 38.5	+0.1
	comp=N,0.4nm,0.6s,baz=144,slow=1.8,SNR=7.0						
WRA	Warramunga Arr	131.52	207	PKP	PKPdf	14 56 45.0	+0.5
	comp=N,0.3nm,0.5s,baz=154,slow=1.9,SNR=10						
MKAR	Makanchi Array	146.62	40	PKPbc	PKPbc	14 57 13.0	+0.1
	comp=N,0.9nm,0.6s,baz=299,slow=2.6,SNR=12						

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*NIED **13** 14:42:00, 38°.40N×142°.30E, h32^{km}, Mw4.0 Best double couple: $M_0$1.10000×10^{15} NP1:ϕ_s144.00000°, δ39.00000°, λ-45.00000°. NP2:ϕ_s272.00000°, δ64.00000°, λ-120.00000°.*

*ISCJB **13** 14:42:15.1±1.0, 38°.34N±0°.03×142°.26E±0°.05, h25^{km}±6^{km}, mb3.9/19, MS3.3/8, Error ellipse: s-maj=7.3km s-min=5.2km az=21.5*

*JMA **13** 14:42:17.0±0.1, 38°.43N×142°.21E, h34^{km}±1^{km}, M4.2*

JMA Felt II J1.

*IDC **13** 14:42:18.3±3.8, 38°.33N×142°.11E, h33^{km}±30^{km}, mb3.8/19, mb1 3.9/24, mb1mx3.8/72, mbtmp4.0/24, ML4.0/3, MS3.1/11, Ms1 3.1/11, ms1mx2.8/69, Error ellipse: s-maj=18.4km s-min=11.1km az=90.0*

ISC 13 14:42:15.0±1.7**, 38°.33N**±0°.04×**142°.17E**±0°.06**, h12**^{km}±10^{km}**, n49, σ1^s.12**/46**, mb4.1**/19**, MS3.4**/8**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIO	Ouri	0.66	282	P	Pn	14 42 29.9	-0.2
JIO				S	Sb	14 42 38.7	+1.1
OFUJ	Ofunato	0.85	333	P	Pg	14 42 31.5	0.0
OFUJ				S	Sg	14 42 41.6	-1.0
JMK	Ichinoseki	0.97	310	P	Pg	14 42 34.0	+0.2
JMK				S	Sg	14 42 46.0	-0.5
JMM	Marumori	1.18	248	P	Pn	14 42 37.7	+0.4
JMM				*e*S	Sb	14 42 53.3	+0.8
JOU	Okura	1.19	272	P	Pb	14 42 38.2	+0.8
JOU				S	Sn	14 42 53.6	+0.1
JOM	Ohasama	1.34	329	P	Pn	14 42 39.0	-0.5
JOM				S	Sb	14 42 55.0	-2.1
JFK	Kawauchi	1.40	227	P	Pn	14 42 40.7	+0.3
JFK				S	Sn	14 42 57.6	-1.3
JYK	Kaneyama	1.54	293	P	Pn	14 42 42.8	+0.5
JYK				*e*S	Sb	14 43 02.8	-0.1
JRG	Rokugo	1.61	312	P	Pn	14 42 43.3	+0.1
JYS	Shirataka	1.66	267	P	Pn	14 42 44.9	+1.0
MJAR	Matsushiro Arr	3.62	242	Pn	Pn	14 43 13.0	+2.1
	5.3nm,0.3s,baz=60,slow=12,SNR=38						
MJAR				Lg	Lg	14 44 02.5	
	5.0nm,0.3s,baz=353,slow=19,SNR=4.1						
MAT	Matsushiro	3.62	242	P	Pn	14 43 13.7	+2.8
MAT				S	Sb	14 43 59.2	-3.7
JHJ	Hachijo jima 2	5.54	201	Pn	Pn	14 43 37.7	+0.4
	30nm,0.3s,baz=145,slow=7.2,SNR=11						
JHJ				Sn	Sn	14 44 38.6	-2.4
	39nm,0.3s,baz=264,slow=23,SNR=6.9						
ASAJ	Asahikawa	5.79	3	Pn	Pn	14 43 40.6	-0.1
	4.5nm,0.3s,baz=205,slow=17,SNR=73						
ASAJ				Sn	Sn	14 44 47.7	+0.6
	baz=331,slow=19,SNR=2.1						
USRK	Ussuriysk Ar.	9.65	311	Pn	Pn	14 44 35.1	+1.5
	baz=104,slow=12						
USRK				LR	LR	14 48 17.0	
	comp=Z,107nm,19.0s,baz=150,slow=37						
JNU	Nakatsue	10.54	244	LR	LR	14 49 19.9	
	comp=Z,72nm,18.0s,baz=122,slow=40						
JCJ	Chichijima	11.20	180	Pn	Pn	14 44 54.5	-0.3
	baz=246,slow=20						
JCJ				Sn	Sn	14 46 49.2	-11
	baz=287,slow=19						
KSRS	Korea Array	11.30	270	Pn	Pn	14 45 02.0	+5.9
	0.1nm,0.3s,baz=77,slow=15,SNR=3.0						
KLR	Kul’dur	13.23	329	LR	LR	14 50 24.1	
	comp=Z,11nm,19.2s,baz=164,slow=37						
MA2	Magadan	21.97	12	P	P	14 47 08.6	+0.1
	8.3nm,0.9s,baz=198,slow=20,SNR=3.2						
GUMO	Guam	24.75	174	LR	LR	14 57 38.1	
	comp=Z,9.0nm,20.8s,baz=349,slow=37						
SEY	Seymchan	25.41	11	P	P	14 47 43.3	+1.3
	5.6nm,0.8s,baz=190,slow=7.7,SNR=18						
SONM	Songino Array	27.59	302	P	P	14 48 01.0	-1.1
	0.3nm,0.6s,baz=142,slow=7.2,SNR=2.7						
H11N2	WAKE ISLAND Hy	28.33	124	T	T	15 18 18.3	
	baz=316,slow=76,SNR=720						
H11N1	WAKE ISLAND Hy	28.34	124	T	T	15 18 31.3	
	baz=316,slow=76,SNR=653						
H11N3	WAKE ISLAND Hy	28.35	124	T	T	15 18 17.7	
	baz=316,slow=76,SNR=571						
H11S1	WAKE ISLAND Hy	29.09	126	T	T	15 19 21.3	

	baz=318,slow=76,SNR=113						
H11S3	WAKE ISLAND Hy	29.09	126	T	T	15 19 22.7	
	baz=318,slow=76,SNR=266						
H11S2	WAKE ISLAND Hy	29.11	126	T	T	15 19 22.5	
	baz=318,slow=76,SNR=164						
ZALV	Zalesovo Beam	41.50	311	P	P	14 50 01.5	-0.3
	1.1nm,0.4s,baz=79,slow=8.3,SNR=4.2						
ZALV				LR	LR	15 07 58.4	
	comp=Z,32nm,18.0s,baz=70,slow=37						
MKAR	Makanchi Array	43.96	301	P	P	14 50 21.8	0.0
	1.1nm,0.8s,baz=87,slow=10,SNR=8.4						
KURBB	Kurchatov Arra	45.69	307	P	P	14 50 35.4	-0.1
	1.3nm,0.4s,baz=80,slow=7.7,SNR=22						
ILAR	Eielson Array	48.09	33	P	P	14 50 55.8	+1.7
	0.4nm,0.8s,baz=280,slow=6.5,SNR=5.1						
BVAR	Borovoye Array	50.16	312	P	P	14 51 09.8	-0.3
	0.3nm,0.4s,baz=78,slow=9.0,SNR=3.4						
BVAR				LR	LR	15 12 08.3	
	comp=Z,34nm,21.4s,baz=354,slow=36						
CTA	Charters Tower	58.23	175	P	P	14 52 09.3	+0.2
	1.8nm,0.9s,baz=189,slow=18,SNR=3.1						
FITZ	Fitzroy Crossi	58.23	199	P	P	14 52 09.8	+0.7
	1.2nm,0.5s,baz=2.9,slow=7.7,SNR=9.5						
WRA	Warramunga Arr	58.42	189	P	P	14 52 10.4	-0.1
	2.9nm,0.5s,baz=6.9,slow=7.0,SNR=68						
ASAR	Alice Springs	62.15	189	P	P	14 52 36.3	+0.3
	2.4nm,0.6s,baz=7.4,slow=4.8,SNR=48						
ARCES	ARCESS Array B	63.00	339	P	P	14 52 41.2	0.0
	2.3nm,1.0s,baz=82,slow=7.4,SNR=2.7						
GEYT	Alibeck	63.74	299	LR	LR	15 22 03.3	
	comp=Z,25nm,18.9s,baz=140,slow=37						
FINES	FINESS Array B	67.95	332	P	P	14 53 12.8	-0.5
	1.1nm,0.8s,baz=60,slow=4.6,SNR=3.6						
HFS	Hagfors	73.16	336	P	P	14 53 45.0	-0.1
	1.1nm,0.7s,baz=37,slow=7.4,SNR=5.9						
HFS				LR	LR	15 29 50.9	
	comp=Z,19nm,19.4s,baz=31,slow=39						
NOA	NORSAR Array B	73.23	337	LR	LR	15 30 17.2	
	comp=Z,17nm,19.9s,baz=40,slow=39						
AKASG	Malin Array Be	73.64	322	P	P	14 53 47.8	-0.3
	0.5nm,0.4s,baz=44,slow=6.3,SNR=3.8						
NVAR	Mina Array Bea	73.74	54	P	P	14 53 48.9	-0.3
	0.5nm,0.7s,baz=269,slow=7.4,SNR=4.3						
PDAR	Pinedale Array	76.34	46	P	P	14 54 04.3	+0.2
	0.5nm,0.6s,baz=264,slow=2.5,SNR=5.4						
GERES	GERESS Array B	81.93	329	LR	LR	15 33 55.9	
	comp=Z,28nm,19.0s,baz=10.0,slow=38						
DAVOX	Davos/Dischmat	85.13	329	LR	LR	15 35 20.5	
	comp=Z,24nm,18.5s,baz=268,slow=37						
TXAR	Lajitas Array	88.86	53	P	P	14 55 09.1	-0.3
	0.5nm,0.7s,baz=292,slow=2.6,SNR=6.2						

IDC 13 14:54:59.6±7.5**, 17°.48S×178°.83W, h624**^{km}±88^{km}**, mb2.7**/7**, mb1 3.0**/7**, mb1mx2.8**/48**, mbtmp3.7**/7**, Error ellipse: s-maj=110.4km s-min=27.0km az=148.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	33.13	260	P	P	15 00 46.6	-0.1
	0.7nm,0.4s,baz=63,slow=9.0,SNR=4.2						
WRA	Warramunga Arr	44.32	259	P	P	15 02 16.5	0.0
	0.4nm,0.5s,baz=96,slow=7.2,SNR=22						
ASAR	Alice Springs	44.53	254	P	P	15 02 18.1	+0.1
	1.5nm,0.5s,baz=87,slow=9.2,SNR=51						
ASAR				PcP	PcP	15 03 47.0	-0.3
	0.1nm,0.3s,baz=102,slow=4.0,SNR=3.4						
NVAR	Mina Array Bea	79.39	44	P	P	15 06 03.1	+0.3
	0.2nm,0.5s,baz=224,slow=5.8,SNR=3.0						
ILAR	Eielson Array	85.56	13	P	P	15 06 33.0	+0.2
	0.2nm,0.4s,baz=211,slow=3.8,SNR=4.1						
TXAR	Lajitas Array	86.10	58	P	P	15 06 36.6	+0.3
	0.3nm,0.7s,baz=215,slow=4.1,SNR=3.8						
PDAR	Pinedale Array	87.32	44	P	P	15 06 41.4	-0.5
	0.2nm,0.6s,baz=246,slow=4.5,SNR=2.8						

IDC 13 15:02:18.9±5.7**, 8°.50S×158°.83E, h72**^{km}±77^{km}**, mb3.2**/3**, mb1 3.4**/3**, mb1mx3.1**/45**, mbtmp3.5**/3**, Error ellipse: s-maj=66.9km s-min=36.8km az=126.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.44	130	P	Pn	15 02 43.4	+0.3
	45nm,0.3s,baz=261,slow=3.9,SNR=42						
HNR				S	Sn	15 03 01.3	-0.1
	256nm,0.3s,baz=288,slow=23,SNR=28						
HNR				LR	LR	15 03 27.1	
	comp=Z,66nm,18.9s,baz=112,slow=47						
HNR	Honiara	1.44	130	*e*P	Pn	15 02 42.0	-1.1
HNR				*e*S	Sn	15 02 58.0	-3.4
WRA	Warramunga Arr	26.29	242	P	P	15 07 48.3	+0.4
	0.4nm,0.7s,baz=65,slow=9.5,SNR=4.6						
ASAR	Alice Springs	28.23	235	P	P	15 08 04.8	-0.5
	0.2nm,0.5s,baz=64,slow=10.0,SNR=6.1						
SONM	Songino Array	72.67	326	P	P	15 13 39.2	0.0
	0.4nm,0.5s,baz=135,slow=6.4,SNR=4.0						

IDC 13 15:10:37.9±2.6**, 6°.49S×130°.01E, h0**^{km}**, mb3.3**/1**, mb1 3.3**/4**, mb1mx3.1**/53**, mbtmp3.1**/4**, ML2.8**/3**, MS2.9**/1**, Ms1 2.9**/1**, ms1mx2.3**/23**, Error ellipse: s-maj=109.5km s-min=30.7km az=77.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.30	200	Pn	Pn	15 13 34.6	+0.2
	0.1nm,0.3s,baz=0.0,slow=12,SNR=3.9						
FITZ				Sn	Sn	15 15 33.6	-19
	0.1nm,0.3s,baz=233,slow=20,SNR=4.5						
WRA	Warramunga Arr	14.02	163	Pn	Pn	15 13 58.2	+0.2
	0.0nm,0.3s,baz=339,slow=14,SNR=4.0						
WRA				Sn	Sn	15 16 18.4	-16
	0.1nm,0.3s,baz=335,slow=23,SNR=8.6						
ASAR	Alice Springs	17.48	168	P	Pn	15 14 43.1	-0.2
	0.0nm,0.3s,baz=358,slow=8.3,SNR=3.1						
ASAR				S	Sn	15 17 45.6	-13
	0.1nm,0.3s,baz=337,slow=39,SNR=3.5						
TGY	Tagaytay City	22.35	336	LR	LR	15 25 18.7	
	comp=Z,30nm,19.3s,baz=296,slow=39						
MKAR	Makanchi Array	67.81	327	P	P	15 21 37.8	0.0
	0.1nm,0.5s,baz=116,slow=6.6,SNR=3.3						

TAP 13 15:11:30.6, 22°.32N×119°.99E, h36^{km}**, ML3.4, 1C-5D, C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWP	Hsiaoliuchiu	0.35	85	P	Pn	15 11 39.8	+0.7
	baz=85						
TWP				S	Sn	15 11 46.9	+1.3
	baz=85						
WLCH	Liuqiu	0.36	85	P	Pn	15 11 40.0	+0.9
	baz=85						
WLCH				S	Sn	15 11 47.0	+1.3
	baz=85						
KAU	Kaohsiung	0.39	50	*e*P	Pn	15 11 40.5	+1.0
	baz=40						
KAU				*e*S	Sn	15 11 47.1	+1.1
	baz=40						
SCZT	Fangliau	0.59	85	*e*P	Pn	15 11 43.1	+0.5
	baz=85						
SCZT				*e*S	Sn	15 11 51.8	+0.9
	baz=85						
SGLT	Jiouru	0.61	49	*e*P	Pn	15 11 44.1	+1.1
	baz=39						
SGLT				*e*S	Sn	15 11 53.9	+2.3
	baz=39						
MASBT	Mashibuluo	0.66	64	⇓P	Pn	15 11 44.2	+0.6
	baz=64						
MASBT				S	Sn	15 11 53.6	+0.9
	baz=64						
SSD	Sandimen	0.73	54	⇓P	Pn	15 11 45.3	+0.9
	baz=55						
SSD				*e*S	Sn	15 11 55.9	+1.5
	baz=55						
TAI1	Yung-k’ang	0.75	17	*e*P	Pn	15 11 45.8	+1.1
	baz=18						
TAI1				S	Sn	15 11 56.6	+1.8
	baz=18						
EAST	Anshuo	0.80	85	*e*P	Pn	15 11 46.5	+1.1
	baz=85						
CHN3	Shinhua	0.83	25	*e*P	Pn	15 11 47.0	+1.2
	baz=25						
TAW	Tawu	0.84	87	*e*P	Pn	15 11 46.8	+0.8
	baz=87						
TAW				*e*S	Sn	15 11 57.5	+0.4
	baz=87						
TWK1	Hengchun	0.84	116	*e*P	Pn	15 11 47.1	+1.1
	baz=104						
TWK1				*e*S	Sn	15 11 58.9	+1.7
	baz=104						
TWKBT	Hengchun	0.85	116	*e*P	Pn	15 11 46.8	+0.7
	baz=104						
TWKBT				*e*S	Sn	15 11 58.2	+0.8
	baz=104						
SCLT	Jiali	0.87	12	*e*P	Pn	15 11 47.4	+1.0
	baz=14						
SCLT				*e*S	Sn	15 11 59.4	+1.5
	baz=14						
SLGT	Liugui	0.90	42	*e*P	Pn	15 11 47.9	+1.0
	baz=42						
SLGT				S	Sn	15 12 00.8	+2.1
	baz=42						
ECL	Taimali	0.93	73	P	Pn	15 11 48.3	+1.1
	baz=84						
ECL				*e*S	Sn	15 11 60.0	+0.6
	baz=84						
SGST	Jiashian	0.94	36	⇑P	Pn	15 11 48.5	+1.2
	baz=37						
SGST				*e*S	Sn	15 12 01.6	+2.1
	baz=37						
TSEB	Hengchuen, Pin	0.94	116	*e*P	Pn	15 11 47.6	+0.3
	baz=117						
TSEB				*e*S	Sn	15 12 00.2	+0.6
	baz=117						
WDGT	Dungji	0.98	342	*e*P	Pn	15 11 48.9	+1.0
	baz=356						
WDGT				*e*S	Sn	15 12 01.4	+0.8
	baz=356						
CHN1	Nanshi	0.99	30	*e*P	Pn	15 11 49.1	+1.0
	baz=30						
CHN1				*e*S	Sn	15 12 02.9	+2.0
	baz=30						
VCHM	Qimei	1.03	330	P	Pn	15 11 49.1	+0.6
	baz=330						
VCHM				*e*S	Sn	15 12 02.2	+0.6
	baz=330						
CHN8	Yiju	1.04	11	*e*P	Pn	15 11 49.3	+0.6
	baz=13						
CHN8				*e*S	Sn	15 12 03.5	+1.5
	baz=13						
TWK	Hsinying	1.05	26	P	Pn	15 11 49.7	+0.8
	baz=27						
TWK				*e*S	Sn	15 12 04.4	+2.1
	baz=27						
WTP	Ta-pu	1.09	32	*e*P	Pn	15 11 50.2	+0.8
	baz=33						
WTP				*e*S	Sn	15 12 04.9	+1.6
	baz=33						
STYT	Tauyuan	1.10	40	*e*P	Pn	15 11 51.1	+1.5
	baz=41						
STYT				*e*S	Sn	15 12 05.3	+1.7
	baz=41						
TWG	Pinlang	1.12	63	P	Pn	15 11 51.1	+1.4
	baz=64						
TWG				*e*S	Sn	15 12 05.7	+1.8
	baz=64						
TWGBT	Beinan	1.12	64	P	Pn	15 11 51.2	+1.3
	baz=64						
TWGBT				*e*S	Sn	15 12 05.3	+1.3
	baz=64						
TPUB	Ta-pu	1.14	31	⇓P	Pn	15 11 50.6	+0.5
	baz=32						
TPUB				*e*S	Sn	15 12 06.1	+1.6
	baz=32						
CHN4	Tsaushan	1.17	28	*e*P	Pn	15 11 51.2	+0.8
	baz=29						
CHN4				*e*S	Sn	15 12 06.8	+1.6
	baz=29						
WLGB	Puzi	1.19	14	*e*P	Pn	15 11 51.6	+0.9
	baz=15						
WLGB				*e*S	Sn	15 12 07.8	+2.1
	baz=15						
CHY	Chiayi	1.24	19	*e*P	Pn	15 11 52.9	+1.5
	baz=20						
CHY				*e*S	Sn	15 12 08.6	+1.7
	baz=20						
PHUB	P’eng-hu	1.25	342	*e*P	Pn	15 11 51.3	-0.3
	baz=351						
PHUB				*e*S	Sn	15 12 07.7	+0.6
	baz=351						
ELDTW	Lidau	1.28	47	*e*P	Pn	15 11 53.2	+1.1
	baz=48						
ELDTW				*e*S	Sn	15 12 10.2	+2.0
	baz=48						
CHN2	Minshiung	1.29	20	*e*P	Pn	15 11 53.1	+1.1
	baz=33						
CHN2				*e*S	Sn	15 12 10.0	+1.9
	baz=33						
PNG	Penghu	1.30	342	*e*P	Pn	15 11 53.0	+0.7
	baz=351						
PNG				*e*S	Sn	15 12 09.2	+0.7
	baz=351						
WSF	Szhu	1.33	9	*e*P	Pn	15 11 53.6	+0.9
	baz=359						
WSF				*e*S	Sn	15 12 09.8	+0.7
	baz=359						
CHN5	Tsauling	1.42	26	⇓*e*P	Pn	15 11 54.7	+0.6
	baz=26						
TWH	Lutao	1.43	74	*e*P	Pn	15 11 54.8	+0.7
	baz=75						
WDLH	Douliu	1.45	20	*e*P	Pn	15 11 55.0	+0.6
	baz=32						
WDLH				*e*S	Sn	15 12 14.0	+1.8
	baz=32						
WGK	Gukeng	1.46	21	*e*P	Pn	15 11 55.1	+0.6
	baz=22						
WGK				*e*S	Sn	15 12 13.2	+0.9
	baz=22						
YUS	Yu-Shan	1.46	37	*e*P	Pn	15 11 56.0	+1.0
	baz=37						
FULB	Fuli	1.49	54	⇓P	Pn	15 11 56.8	+1.9
	baz=42						
CHKT	Chengkung	1.49	58	*e*P	Pn	15 11 56.2	+1.4
	baz=72						
CHKT				*e*S	Sn	15 12 14.7	+1.7
	baz=72						
TWF1	Yuli	1.58	49	*e*P	Pn	15 11 57.5	+1.3
	baz=50						
RLNB	Erlin	1.60	12	*e*P	Pn	15 11 57.6	+1.2
	baz=1.0						
YULB	Yu-li	1.61	48	*e*P	Pn	15 11 57.7	+1.1
	baz=48						
WJS	Zhushan	1.64	24	*e*P	Pn	15 11 57.8	+0.8
	baz=14						
WJS				*e*S	Sn	15 12 19.8	+2.9
	baz=14						
WNT	Mingjian	1.68	22	*e*P	Pn	15 11 58.0	+0.5
	baz=23						
EHY	Hungye	1.70	46	*e*P	Pn	15 11 59.2	+1.4
	baz=47						
EHY				*e*S	Sn	15 12 21.5	+3.1
	baz=47						
SSLB	Suanglung	1.71	31	*e*P	Pn	15 11 59.0	+1.0
	baz=32						
SSLB				*e*S	Sn	15 12 21.0	+2.4
	baz=32						
HGSD	Ruisui	1.76	48	*e*P	Pn	15 12 00.4	+1.8
	baz=48						
SMLT	Sun Moon Lake	1.77	28	*e*P	Pn	15 11 60.0	+1.1
	baz=30						
SMLT				*e*S	Sn	15 12 22.7	+2.6
	baz=30						
TYC	Yuchr	1.77	27	P	Pn	15 11 59.9	+1.2
	baz=28						
TYC				*e*S	Sn	15 12 22.4	+2.5
	baz=28						
ESL	Shilin	2.00	41	*e*P	Pn	15 12 03.5	+1.7
	baz=42						
CHGB	Renai	2.05	32	*e*P	Pn	15 12 03.8	+1.1
	baz=33						
CHGB				*e*S	Sn	15 12 29.6	+2.4
	baz=33						
WHF	Hehuan Shan	2.16	33	*e*P	Pn	15 12 06.2	+1.7
	baz=33						
TDCB	Techi	2.21	29	P	Pn	15 12 05.8	+0.9
	baz=30						
TDCB				*e*S	Sn	15 12 32.1	+1.2
	baz=30						
TWD	Chiawan	2.29	40	*e*P	Pn	15 12 07.2	+1.3
	baz=40						
NACB	Ninganchiao	2.36	38	*e*P	Pn	15 12 08.0	+1.1
	baz=50						
NNSB	Datong	2.46	31	*e*P	Pn	15 12 09.9	+1.6
	baz=44						
NNSB				*e*S	Sn	15 12 39.1	+1.9
	baz=44						
NNSH	Datong	2.46	31	*e*P	Pn	15 12 09.5	+1.2
	baz=43						
NNSH				*e*S	Sn	15 12 38.5	+1.3
	baz=43						
NNS	Nan Shan	2.46	31	*e*P	Pn	15 12 10.5	+2.1
	baz=31						
NSTT	Nanjuang	2.48	22	*e*P	Pn	15 12 09.4	+0.9
	baz=24						
NSTT				*e*S	Sn	15 12 38.7	+1.1
	baz=24						
LIOB	Emei	2.50	22	*e*P	Pn	15 12 09.9	+1.2
	baz=24						
LIOB				*e*S	Sn	15 12 39.8	+1.7
	baz=24						
ENA	Nanau	2.65	37	*e*P	Pn	15 12 13.3	+2.5
	baz=47						
NANB	Nanao	2.65	37	*e*P	Pn	15 12 12.9	+2.1
	baz=47						
NSK	Sanguang	2.66	28	*e*P	Pn	15 12 12.4	+1.4
	baz=18						
YHNB	Yeheng	2.66	28	*e*P	Pn	15 12 12.6	+1.5
	baz=17						
ENTT	Nioudou	2.73	32	*e*P	Pn	15 12 14.7	+2.8
	baz=32						
TWE	Neicheng	2.84	32	*e*P	Pn	15 12 15.5	+2.0
	baz=33						
SLBB	Yuanshan	2.86	32	*e*P	Pn	15 12 15.5	+1.8
	baz=18						
EOS1	EOS1	2.96	41	*e*P	Pn	15 12 18.0	+2.9
	baz=53						
TIPB	Shuangxi	3.13	32	*e*P	Pn	15 12 19.4	+1.9
	baz=20						
YM04	YM04	3.16	26	*e*P	Pn	15 12 18.6	+0.8
	baz=15						
YM10	YM10	3.17	27	*e*P	Pn	15 12 19.3	+1.3
	baz=15						
YM11	YM11	3.18	27	*e*P	Pn	15 12 20.1	+1.9
	baz=15						
YM07	YM07	3.21	27	*e*P	Pn	15 12 19.6	+1.0
	baz=16						
TWY	Chenhua	3.29	26	*e*P	Pn	15 12 20.4	+0.7
	baz=16						
YOJ	Yonaguni jima	3.50	52	*e*P	Pn	15 12 23.5	+1.0
	baz=51						
MATB	Ma-tsu	3.82	359	*e*P	Pn	15 12 28.0	+1.1
	baz=360						

MAN 13 15:13:39.0, 11°.02N×124°.04E, h10^{km}**, mb4.2, ML3.0, MS2.6, 2D, Leyte**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OCLP	Ormoc	0.56	86	*e*P	Pg	15 13 49.9	0.0
OCLP				*e*S	Sb	15 13 58.8	-0.1
LLP	Lapu-Lapu	0.70	186	*e*P	Pg	15 13 52.5	0.0
LLP				*e*S	Sb	15 14 03.1	+0.1
PLP	Palo	0.93	81	⇓*e*P	Pb	15 13 57.2	0.0
PLP				*i* S	Sn	15 14 10.8	-0.8
MSLP	Maasin	1.19	137	*e*P	Pb	15 14 01.4	-0.3
MSLP				*e*S	Sn	15 14 19.4	+1.4
RCP	Roxas	1.38	293	⇓*e*P	Pn	15 14 03.6	-0.8
RCP				*e*S	Sg	15 14 24.0	+0.4
GUIM	Jordan	1.48	255	*e*P	Pn	15 14 04.3	-1.5
GUIM				*e*S	Sn	15 14 23.4	-1.8

IDC 13 15:15:26.5±1.1**, 3°.05N×126°.99E, h0**^{km}**, mb3.7**/8**, mb1 3.8**/8**, mb1mx3.6**/58**, mbtmp3.7**/8**, Error ellipse: s-maj=95.1km s-min=14.9km az=70.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	21.06	184	P	P	15 20 12.4	0.0
	1.3nm,0.6s,baz=11,slow=9.3,SNR=4.6						
WRA	Warramunga Arr	23.97	163	P	P	15 20 42.7	-0.1
	1.7nm,0.6s,baz=342,slow=10.0,SNR=26						
ASAR	Alice Springs	27.40	166	P	P	15 21 14.1	+0.1
	0.3nm,0.3s,baz=341,slow=8.9,SNR=14						
STKA	Stephens Creek	37.41	159	P	P	15 22 41.3	-0.1
	2.9nm,0.8s,baz=334,slow=13,SNR=2.6						
SONM	Songino Array	48.02	341	P	P	15 24 07.3	-0.3
	0.3nm,0.6s,baz=159,slow=9.8,SNR=3.3						
MKAR	Makanchi Array	58.26	325	P	P	15 25 22.7	-0.2
	0.5nm,0.5s,baz=109,slow=7.1,SNR=10						
KURBB	Kurchatov Arra	62.44	327	P	P	15 25 51.3	-0.2
	1.0nm,0.8s,baz=125,slow=6.4,SNR=11						
BVAR	Borovoye Array	68.02	327	P	P	15 26 28.2	+0.5
	0.4nm,0.6s,baz=90,slow=6.2,SNR=3.0						

*ISK **13** 15:16:39.3, 37°.19N×39°.04E, h11^{km}, ML2.4/4*
*CSEM **13** 15:16:40.4±0.3, 37°.28N×39°.14E, h5^{km}, ML2.5, Error ellipse: s-maj=6.4km s-min=5.4km az=132.0*
*DDA **13** 15:16:40.7, 37°.26N×39°.14E, h7^{km}, Ml2.5*
ISC 13 15:16:40.7±1.1**, 37°.29N**±0°.03×**39°.13E**±0°.05**, h6**^{km}±11^{km}**, n17, σ0^{s}.57**/25**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SANL	SANLIURFA_Merk	0.16	225	*i* P	Pg	15 16 43.8	-0.2
SANL				*i* S	Sg	15 16 47.0	+0.8
SANL	SANLIURFA_Merk	0.16	225	P	Pg	15 16 43.8	-0.2
SANL				S	Sg	15 16 47.0	+0.8
URFA	Urfa	0.29	302	PG	Pg	15 16 45.9	-0.6
URFA				SG	Sg	15 16 50.7	+0.3
URFA	Urfa	0.29	302	*e*Pg	Pg	15 16 45.9	-0.6
URFA				*e*Sg	Sg	15 16 50.7	+0.3
SURC	SANLIURFA_SURC	0.58	226	*i* P	Pg	15 16 51.9	-0.1
SURC				*i* S	Sb	15 17 01.1	-0.8
SURC	SANLIURFA_SURC	0.58	226	P	Pg	15 16 51.8	-0.1
SURC				S	Sb	15 17 01.0	-0.8
MAZI	Mazidag	1.06	80	PN	Pn	15 17 01.8	-0.4
MAZI				SN	Sn	15 17 18.3	+0.9
MAZI	Mazidag	1.06	80	*e*Pn	Pn	15 17 01.8	-0.4
MAZI				*e*Sn	Sn	15 17 18.3	+0.9
SVRC	Sivrice-ELAZID	1.10	7	PN	Pb	15 17 02.5	+0.2
SVRC	Sivrice-ELAZID	1.10	7	*e*Pn	Pb	15 17 02.5	+0.2
MALT	Malatya	1.17	332	PN	Pg	15 17 02.8	-0.4
MALT	Malatya	1.17	332	*e*Pn	Pg	15 17 02.8	-0.4
ELZG	Elazig	1.22	354	*i* P	Pn	15 17 04.9	+0.5
ELZG	Elazig	1.22	354	P	Pn	15 17 04.9	+0.5
MARD	Mardin	1.31	88	*i* P	Pb	15 17 05.4	-0.4
AKCD	Akcadag	1.39	317	*i* P	Pb	15 17 07.0	-0.2
AKCD	Akcadag	1.39	317	P	Pb	15 17 07.1	-0.2

DJA 13 15:17:04.2±0.6**, 2°S**±6°×**13°5E**±°**, h14**^{km}±7^{km}**, M3.0**/5**, MLv3.0**/5**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RKPI	Ransiki, Papua	0.94	275	P	Pb	15 17 20.9	-1.3
RKPI				S	Sn	15 17 36.3	+0.1
BAKI	Biak	1.07	68	P	Pb	15 17 23.3	-1.3
SRPI	Serui, Papua	1.16	104	P	Pn	15 17 26.0	-0.1
SRPI				S	Sg	15 17 42.3	+0.5
KMPI	Kaimana, Papua	2.49	214	P	Pn	15 17 36.5	-7.9
FAKI	Fak Fak	3.15	245	P	Pn	15 17 53.5	+0.1
FAKI				S	Sn	15 18 30.8	-0.1

*IDC **13** 15:20:20.2±1.1, 3°.35S×100°.38E, h0^{km}, mb4.2/15, mb1 4.3/15, mb1mx4.0/64, mbtmp4.3/15, MS3.3/6, Ms1 3.3/6, ms1mx2.8/57, Error ellipse: s-maj=39.6km s-min=14.0km az=51.0*
*ISCJB **13** 15:20:22.5±0.7, 3°.39S±0°.09×100°.37E±0°.08, h29^{km}, mb4.2/19, MS3.4/5, Error ellipse: s-maj=15.8km s-min=6.6km az=43.2*
*DJA **13** 15:20:23.5±1.0, 3°S±6°×10°0E±°, h32^{km}±16^{km}, M4.4/8, mb4.3/1, MLv4.4/8*
*NEIC **13** 15:20:25.5±0.8, 3°.30S×100°.41E, h35^{km}, mb4.0/2, Error ellipse: s-maj=29.9km s-min=9.4km az=52.0*
ISC 13 15:20:24.4±0.8**, 3°.4S**±0°.1×**100°.44E**±0°.09**, h29**^{km}**, n50, σ1^{s}.64**/41**, mb4.3**/19**, MS3.5**/5**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PPSI	Pulau Pagai	0.77	326	P	Pb	15 20 38.6	-0.6
PPSI				S	Sn	15 20 50.1	+0.3

KRJI	Kerinci	1.65	38	P	Pn	15 20 51.7	+0.2
MASI	Maura Aman, Be	1.81	82	P	Pn	15 20 53.1	-0.6
SISI	Saibi	2.46	327	P	Pn	15 21 01.4	-1.2
BKNI	Bangkinang	3.75	9	P	Pn	15 21 20.3	0.0
MDSI	Maura Dua	3.88	106	P	Pn	15 21 23.0	+0.9
LWLI	Liwa	3.95	114	P	Pb	15 21 32.3	-1.1
PBSI	Pulau Batu	3.96	327	P	Pn	15 21 21.9	-1.4
KASI	Kota Agung	4.56	118	P	Pb	15 21 40.2	-3.5
GSI	Gunungsitoli	5.48	328	P	Pn	15 21 43.2	-0.9
PSI	Prapat	6.34	346	LR	LR	15 24 31.9	
	comp=Z,207nm,21.6s,baz=94,slow=41						
PHIT	Phitsanulok	20.46	360	P	Pn	15 25 05.1	+3.1
	12nm,0.7s						
CMAR	Chiang Mai Arr	21.77	356	P	P	15 25 12.1	-1.8
	3.1nm,0.7s,baz=186,slow=10,SNR=17						
CMAI	Chiengmai2	23.23	357	P	P	15 25 31.2	+1.7
BATI	Baumata	24.02	108	P	P	15 25 39.0	+2.0
	7.3nm,0.4s,baz=304,slow=3.6,SNR=2.6						
SAIH	SAIHA	26.74	345	eP	P	15 26 01.9	+0.1
H08S2	Diego Garcia H	28.13	260	T	T	15 55 34.9	
	baz=83,slow=75,SNR=2224						
H08S3	Diego Garcia H	28.14	260	T	T	15 55 29.7	
	baz=83,slow=75,SNR=2047						
H08S1	Diego Carcia H	28.15	260	T	T	15 55 29.5	
	baz=83,slow=75,SNR=1813						
FITZ	Fitzroy Crossi	28.68	122	P	P	15 26 21.2	+2.2
	1.8nm,0.9s,baz=292,slow=5.4,SNR=5.2						
KOHI	KOHIMA	29.59	348	ex	P	15 26 25.8	-1.4
MOKO	MOKOCHONG	30.10	349	ex	P	15 26 31.5	-0.2
ZIRO	ZIRO	31.40	349	ex	P	15 26 41.3	-1.9
H01W3	Cape Leeuwin H	33.81	160	T	T	16 02 41.5	
	baz=336,slow=76,SNR=66						
H01W2	Cape Leeuwin H	33.82	160	T	T	16 02 41.8	
	baz=336,slow=76,SNR=66						
H01W1	Cape Leeuwin H	33.82	160	T	T	16 02 37.7	
	baz=336,slow=76,SNR=58						
WRA	Warramunga Arr	36.92	119	P	P	15 27 30.8	-0.3
	1.2nm,0.4s,baz=308,slow=9.0,SNR=33						
WRAB	Tennant Creek	36.92	119	eP	P	15 27 32.0	+1.0
	0.9nm,0.3s						
ASAR	Alice Springs	38.09	125	P	P	15 27 40.8	-0.1
	2.4nm,0.4s,baz=299,slow=7.7,SNR=50						
XAN	Xi'an	38.09	11	P	P	15 27 39.8	-0.9
XAN				pP	sP	15 27 52.9	0.0
XAN				pmax	pmax		
	comp=Z,15nm,0.6s						
GTA	Gaotai	42.60	359	eP	P	15 28 17.6	-0.6
GTA				pP	pP	15 28 22.8	-4.0
GTA				sP	sP	15 28 25.8	-4.5
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
JNU	Nakatsue	46.35	36	LR	LR	15 49 17.9	
	comp=Z,23nm,18.2s,baz=303,slow=38						
KSAR	Wonju Array Be	47.97	30	P	P	15 29 00.2	-0.4
KSRS	Korea Array	48.00	30	P	P	15 29 00.2	-0.6
	comp=Z,2.9nm,1.0s,baz=222,slow=8.7,SNR=7.1						
KSH	Kashi	48.28	335	eP	P	15 29 06.0	+2.9
KSH				ePcP	PcP	15 30 35.5	+5.7
SONM	Songino Array	51.29	5	P	P	15 29 26.7	+0.8
	comp=Z,9.5nm,0.6s,baz=189,slow=9.5,SNR=78						
SONM				PcP	PcP	15 30 40.8	+0.2
	comp=Z,0.9nm,0.6s,baz=179,slow=4.5,SNR=2.3						
ULN	Ulaanbaatar	51.38	6	eP	P	15 29 26.3	-0.3
	comp=Z,0.9nm,0.4s						
MKAR	Makanchi Array	52.49	344	P	P	15 29 35.0	+0.3
	comp=Z,4.4nm,0.7s,baz=148,slow=8.4,SNR=45						
MJAR	Matsushiro Arr	53.09	38	LR	LR	15 53 18.0	
	comp=Z,14nm,18.3s,baz=65,slow=37						
USRK	Ussuriysk Ar.	55.18	27	P	P	15 29 54.4	0.0
	comp=Z,6.0nm,0.7s,baz=217,slow=5.2						
USRK				LR	LR	15 54 46.3	
	comp=Z,36nm,20.0s,baz=201,slow=38						
KURBB	Kurchatov Arra	57.01	344	P	P	15 30 07.6	+0.2
	comp=Z,3.4nm,1.0s,baz=164,slow=7.2,SNR=21						
KURK	Kurchatov	57.07	344	eP	P	15 30 03.7	-4.0
ZALV	Zalesovo Beam	58.62	349	P	P	15 30 18.4	-0.2
	comp=Z,5.1nm,0.8s,baz=178,slow=5.3,SNR=18						
BVAR	Borovoye Array	61.64	340	P	P	15 30 38.9	-0.4
	comp=Z,2.1nm,0.7s,baz=134,slow=8.3,SNR=12						
MAW	Mawson	69.05	194	LR	LR	15 55 18.0	
	comp=Z,65nm,20.9s,baz=256,slow=30						
PETK	Petropavlovsk-	73.83	32	P	P	15 31 55.3	-0.9
	comp=Z,0.9nm,0.7s,baz=277,slow=1.2						
BRTR	Keskin Array B	74.59	313	P	P	15 32 00.5	-0.6
	comp=Z,1.4nm,0.9s,baz=126,slow=6.3,SNR=4.3						
BOSA	Boshof	75.38	241	LR	LR	16 00 04.4	
	comp=Z,30nm,20.3s,baz=122,slow=32						
FINES	FINESS Array B	85.55	332	P	P	15 32 59.4	-0.2
	comp=Z,0.9nm,0.9s,baz=116,slow=13,SNR=3.0						
TXAR	Lajitas Array	145.52	39	PKPbc	PKPab	15 40 01.7	+0.7
	comp=Z,3.5nm,0.6s,baz=297,slow=1.0,SNR=54						

*NEIC **13** 15:20:43.0±8.9, 18°.68S×172°.85W, h10km, mb4.0/1, Error ellipse: s-maj=174.0km s-min=23.1km az=79.0*

*IDC **13** 15:20:43.6±15.0, 18°.21S×173°.24W, h0km, mb4.7/5, mb1 4.8/5, mb1mx3.9/53, mbtmp4.7/5, Error ellipse: s-maj=289.6km s-min=140.8km az=80.0*

ISC 13 15:20:46.7±11.0**, 18°.8S**±0°.4×**17°3W**±°**, h19km, n8,** σ**0ˢ.91**/8**, mb4.6**/7**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	11.31	202	ePn	Pn	15 23 27.1	-0.2
CTA	Charters Tower	38.29	261	P	P	15 28 06.5	+0.2
	10nm,0.4s,baz=88,slow=10,SNR=42						
STKA	Stephens Creek	42.69	243	P	P	15 28 43.5	+1.0
	5.5nm,0.8s,baz=89,slow=11,SNR=7.7						
ASAR	Alice Springs	49.42	255	P	P	15 29 35.3	-0.5
	9.5nm,0.7s,baz=89,slow=7.7,SNR=54						
WRAB	Tennant Creek	49.43	260	eP	P	15 29 34.6	-1.2
	0.8nm,0.4s						
WRA	Warramunga Arr	49.44	260	P	P	15 29 34.9	-1.1
	2.2nm,0.3s,baz=97,slow=7.5,SNR=41						
FITZ	Fitzroy Crossi	57.85	260	P	P	15 30 37.6	-0.1
	3.0nm,0.5s,baz=91,slow=4.8,SNR=24						
MBWA	Marble Bar	62.75	255	eP	P	15 31 10.9	-0.2
	30nm,0.6s						

*ISCJB **13** 15:33:56.6±0.6, 6°.93S±0°.06×129°.95E±0°.08, h104km, mb3.6/2, Error ellipse: s-maj=13.1km s-min=6.0km az=35.1*

*IDC **13** 15:33:58.3±2.2, 6°.96S×129°.97E, h115km±23km, mb3.5/2, mb1 3.8/7, mb1mx3.4/51, mbtmp4.2/7, Error ellipse: s-maj=27.7km s-min=19.6km az=110.0*

*DJA **13** 15:34:00.1±0.4, 7°S±4°×13°0E±°, h153km±16km, M4.3/8, mb4.3/7, mB4.7/5, MLv4.6/8, Mw(mB)3.9/5*

ISC 13 15:33:58.3±0.8**, 6°.76S**±0°.06×**129°.81E**±0°.07**, h104km, n14,** σ**2ˢ.63**/17**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	1.91	129	P	Pn	15 34 32.6	+2.6
SAUI				S	Sn	15 34 57.6	+3.5
MSAI	Masohi	3.50	345	P	Pn	15 34 57.3	+6.4
FAKI	Fak Fak	4.52	33	P	Pn	15 35 05.4	+0.7
FAKI				S	Sn	15 35 56.3	+0.1
SIJI	Sorong	6.03	14	P	Pn	15 35 27.0	+1.9
	6.0nm,0.3s,baz=200,slow=12,SNR=20						
SIJI				S	Sn	15 36 31.4	-1.4
	3.0nm,0.3s,baz=250,slow=23,SNR=8.4						
SOEI	Soe	6.24	241	P	Pn	15 35 31.6	+3.6
	45nm,0.9s						
RKPI	Ransiki, Papua	6.79	40	P	Pn	15 35 36.9	+1.4
	71nm,0.8s,1μm						
BATI	Baumata	6.98	240	P	Pn	15 35 40.6	+2.6
	18nm,0.3s,baz=132,slow=3.2,SNR=30						
BATI				S	Sn	15 36 56.7	+0.9
	11nm,0.3s,baz=138,slow=22,SNR=8.9						
BATI	Baumata	6.98	240	P	Pn	15 35 40.6	+2.6
BAKI	Biak	8.37	49	P	Pn	15 35 59.4	+2.5
FITZ	Fitzroy Crossi	11.98	199	P	Pn	15 36 42.5	-3.2
	1.4nm,0.3s,baz=26,slow=11,SNR=82						
FITZ				S	Sn	15 38 46.3	-11
	1.2nm,0.3s,baz=192,slow=19,SNR=4.4						
WRA	Warramunga Arr	13.82	162	P	Pn	15 37 05.2	-4.7
	0.8nm,0.3s,baz=340,slow=14,SNR=35						
WRA				S	Sn	15 39 28.7	-14
	2.1nm,0.3s,baz=338,slow=22,SNR=12						
ASAR	Alice Springs	17.27	167	P	P	15 37 51.1	-1.8
	0.4nm,0.3s,baz=345,slow=10,SNR=27						
ASAR				S	Sn	15 40 47.2	-18
	0.2nm,0.3s,baz=333,slow=16,SNR=4.9						
MKAR	Makanchi Array	67.92	327	P	P	15 44 46.5	+0.6
	0.7nm,0.4s,baz=118,slow=7.7,SNR=15						
KURBB	Kurchatov Arra	72.21	329	P	P	15 45 11.9	0.0
	0.3nm,0.5s,baz=122,slow=5.2,SNR=4.0						

MAN 13 15:45:59.8, 8°.01N×126°.53E, h32km, mb4.4, ML3.2, MS3.0, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	Bislig	0.24	315⇑	iP	Pn	15 46 10.4	+3.3
BIPH				iS	Sn	15 46 15.6	+3.7
BUTP	Butuan	1.31	317	eP	Pn	15 46 21.7	-0.2
BUTP				eS	Sn	15 46 39.3	+1.0
BUKP	Musuan	1.46	265	eP	Pn	15 46 23.3	-0.7
BUKP				eS	Sn	15 46 43.3	+1.1
CGP	Cagayan de Oro	1.87	284⇑	eP	Pn	15 46 29.9	+0.3
CGP				eS	Sn	15 46 52.3	+0.1

*IDC **13** 15:54:18.5±4.9, 24°.15S×66°.34W, h152km±58km, mb3.4/2, mb1 3.4/3, mb1mx3.1/36, mbtmp3.8/3, Error ellipse: s-maj=92.2km s-min=28.8km az=93.0*

*ISCJB **13** 15:54:19.6±1.0, 24°.19S±0°.06×66°.97W±0°.07, h181km, mb3.6/2, Error ellipse: s-maj=9.2km s-min=7.8km az=14.6*

*GUC **13** 15:54:21.8±0.4, 24°.13S×67°.48W, h217km±9km, ML4.2*

ISC 13 15:54:19.9±1.1**, 24°.16S**±0°.07×**66°.97W**±0°.08**, h181km, n11,** σ**1ˢ.09**/19**, 5C, Salta Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB15	IPOC Station P	2.49	292	eP	Pn	15 55 03.8	+1.1
PB15				eS	Sn	15 55 35.8	-0.2
GO02	Mina Guanaco	2.59	247⇑	iP	Pn	15 55 05.3	+1.3
GO02				eS	Sn	15 55 38.7	+0.4
GO02				IAML		15 55 41.6	
	comp=N,849nm,0.1s						
PB06	IPOC Station P	2.80	301⇑	eP	Pn	15 55 07.7	+1.3
PB06				eS	Sn	15 55 42.1	-0.4
PB06				IAML		15 55 45.1	
	comp=N,635nm,0.2s						
PB09	IPOC Station P	3.15	318⇑	eP	Pn	15 55 12.3	+1.6
PB09				eS	Sn	15 55 51.1	+0.8
PB09				IAML		15 55 51.7	
	comp=E,221nm,0.3s						
PB14	IPOC Station P	3.17	261	eP	Pn	15 55 11.4	+0.4
PB14				eS	Sn	15 55 49.1	-1.6
PB05	IPOC Station P	3.25	293⇑	iP	Pn	15 55 12.5	+0.8
PB05				eS	Sn	15 55 50.2	-1.9
PB05				IAML		15 55 56.0	
	comp=N,210nm,0.4s						
PB03	IPOC Station P	3.32	309⇑	eP	Pn	15 55 13.5	+0.7
PB03				eS	Sn	15 55 52.6	-1.3
PB03				IAML		15 55 54.5	
	comp=N,436nm,0.2s						
LPAZ	La Paz	7.91	352	P	Pn	15 56 13.0	+0.3
	comp=N,0.7nm,0.3s,baz=158,slow=9.2,SNR=18						
LPAZ				S	Sn	15 57 41.7	-0.1
	comp=N,0.1nm,0.3s,baz=344,slow=18,SNR=3.8						
SNAA	Sanae	59.19	161	P	P	16 04 01.8	+0.3
	comp=N,1.8nm,0.9s,baz=286,slow=7.3,SNR=9.0						
TORD	Torodi Ar. Bea	76.60	69	P	P	16 05 49.7	-1.2
	comp=N,0.4nm,0.5s,baz=251,slow=5.7						
MKAR	Makanchi Array	146.63	40	PKPbc	PKPbc	16 13 40.4	+0.2
	comp=N,0.7nm,0.6s,baz=304,slow=3.9,SNR=8.4						

IDC 13 16:10:46.4±2.4**, 0°.87N×124°.89E, h0km, mb3.2**/3**, mb1 3.4**/3**, mb1mx3.1**/54**, mbtmp3.2**/3**, Error ellipse: s-maj=305.6km s-min=26.3km az=64.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.67	156	P	P	16 15 49.4	-0.2
	0.5nm,0.7s,baz=334,slow=10.0,SNR=9.6						
ASAR	Alice Springs	25.92	161	P	P	16 16 20.2	-0.3
	0.6nm,1.1s,baz=344,slow=11,SNR=5.7						
MKAR	Makanchi Array	58.89	327	P	P	16 20 47.6	+0.4
	0.2nm,0.4s,baz=130,slow=8.5,SNR=4.7						

*IDC **13** 16:19:47.2±0.9, 9°.52S×156°.03E, h0km, mb4.0/11, mb1 4.2/11, mb1mx3.9/45, mbtmp4.0/11, MS3.3/11, Ms1 3.3/11, ms1mx3.1/40, Error ellipse: s-maj=32.1km s-min=18.2km az=120.0*

*ISCJB **13** 16:19:51.0±0.8, 9°.5S±0°.1×155°.9E±0°.2, h33km, mb3.9/11, MS3.3/9, Error ellipse: s-maj=27.8km s-min=14.9km az=32.8*

ISC 13 16:19:52.7±0.9**, 9°.5S**±0°.2×**156°.0E**±0°.2**, h35km, n18,** σ**0ˢ.61**/12**, mb4.0**/11**, MS3.4**/9**, D'Entrecasteaux Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	3.91	89	LR	LR	16 22 02.9	
	comp=Z,253nm,20.4s,baz=214,slow=35						
PMG	Port Moresby	8.71	270	LR	LR	16 25 08.4	
	comp=Z,276nm,20.7s,baz=98,slow=37						
WRA	Warramunga Arr	23.33	241	P	P	16 24 57.9	-0.1
	7.1nm,0.8s,baz=67,slow=10,SNR=43						
WRA				PcP	PcP	16 28 45.1	+0.5
	0.3nm,0.7s,baz=69,slow=2.8,SNR=4.3						
ASAR	Alice Springs	25.35	234	P	P	16 25 16.2	-0.5
	2.5nm,0.8s,baz=66,slow=9.7,SNR=18						
GUMO	Guam	25.48	334	LR	LR	16 34 03.3	
	comp=Z,29nm,21.1s,baz=166,slow=34						
STKA	Stephens Creek	25.94	209	P	P	16 25 22.1	+0.2
	6.0nm,1.0s,baz=38,slow=9.6,SNR=5.4						
STKA				LR	LR	16 35 16.5	
	comp=Z,63nm,18.0s,baz=21,slow=36						
FITZ	Fitzroy Crossi	30.64	251	P	P	16 26 04.1	+0.1
	3.0nm,1.0s,baz=59,slow=5.9,SNR=3.4						
TGY	Tagaytay City	41.96	304	LR	LR	16 43 06.5	
	comp=Z,27nm,20.2s,baz=121,slow=33						
LEM	Lembang	47.93	269	LR	LR	16 53 02.3	
	comp=Z,74nm,19.6s,baz=239,slow=42						
ASAJ	Asahikawa	54.76	348	LR	LR	16 51 03.9	
	comp=Z,17nm,20.1s,baz=167,slow=34						
PETK	Petropavlovsk-	62.41	1	P	P	16 30 11.4	-0.5
	1.1nm,0.7s,baz=176,slow=6.5						
PETK				LR	LR	16 52 57.4	
	comp=Z,33nm,21.8s,baz=149,slow=32						
CMAR	Chiang Mai Arr	62.77	296	P	P	16 30 15.3	+0.2
	0.6nm,0.6s,baz=132,slow=6.9,SNR=5.0						
SONM	Songino Array	71.98	327	P	P	16 31 13.3	+0.3
	1.0nm,0.9s,baz=143,slow=6.3,SNR=7.1						
SONM				LR	LR	17 03 17.4	
	comp=Z,18nm,19.8s,baz=184,slow=36						
QSPA	South Pole Qui	80.46	180	P	P	16 32 00.4	-0.5
	1.8nm,0.9s,baz=102,slow=3.2,SNR=4.0						
ILAR	Eielson Array	85.36	21	P	P	16 32 25.0	-0.9
	0.3nm,0.6s,baz=236,slow=5.7,SNR=5.9						
MKAR	Makanchi Array	85.94	319	P	P	16 32 29.2	-0.1
	0.7nm,0.6s,baz=100,slow=5.3,SNR=9.7						
NVAR	Mina Array Bea	92.51	52	P	P	16 33 02.0	+1.1
	0.1nm,0.3s,baz=280,slow=5.4,SNR=2.5						
NVAR				LR	LR	17 06 03.5	
	comp=Z,55nm,21.8s,baz=264,slow=30						
PDAR	Pinedale Array	99.65	48	LR	LR	17 12 57.8	
	comp=Z,13nm,19.1s,baz=169,slow=32						

*ISCJB **13** 16:31:51.9±0.5, 50°.28N±0°.03×18°.73E±0°.03, h0km, Error ellipse: s-maj=4.7km s-min=2.3km az=10.1*

*CSEM **13** 16:31:52.6±0.3, 50°.25N×18°.77E, h2km, ML2.8/7, Error ellipse: s-maj=7.6km s-min=3.4km az=8.0*

*PRU **13** 16:31:53.3, 50°.27N×18°.79E, h0km*

*VIE **13** 16:31:55.3±0.9, 49°.87N×18°.84E, h0km, mb2.3/3, ml2.6/4, Error ellipse: s-maj=9.6km s-min=6.3km az=168.0 43 km E of Ostrava Suspected Mining induced.*

*IDC **13** 16:31:57.5±2.9, 50°.46N×19°.04E, h0km, mb1 3.4/3, mb1mx3.0/55, mbtmp3.3/3, ML2.8/3, Error ellipse: s-maj=54.5km s-min=11.4km az=131.0*

ISC 13 16:31:52.6±0.7**, 50°.20N**±0°.03×**18°.80E**±0°.02**, h0km, n48,** σ**0ˢ.74**/81**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHZP	Chorzow	0.16	53	ePg	Pg	16 31 55.6	0.0
CHZP				eSg	Sg	16 31 57.6	0.0
CHZP	Chorzow	0.16	53	ePg	Pg	16 31 55.6	0.0
CHZP				eSg	Sg	16 31 57.6	0.0
RAC	Raciborz	0.41	254	eSg	Sb	16 32 10.1	+0.7
OKC	Ostrava-Krasne	0.55	230	ePG	Pb	16 32 05.2	0.0
OKC				eSG	Sg	16 32 11.7	+1.4
	comp=Z,30nm,0.4s						
OKC	Ostrava-Krasne	0.55	230	Pg	Pb	16 32 05.2	0.0
OKC				Sg	Sg	16 32 11.7	+1.4
	30nm,0.4s						
OJC	Ojcow	0.64	88	ePg	Pg	16 32 05.0	+0.1
OJC				eSg	Sg	16 32 13.7	+0.5
OJC	Ojcow	0.64	88	ePg	Pg	16 32 05.0	+0.1
OJC				eSg	Sg	16 32 13.7	+0.5
OJC	Ojcow	0.64	88	ePg	Pg	16 32 05.0	+0.1
OJC				eSg	Sg	16 32 13.7	+0.5
MORC	Moravsky Berou	0.91	243	ePg	Pb	16 32 11.2	-0.1
MORC				eSg	Sb	16 32 24.2	+0.1
MORC	Moravsky Berou	0.91	243	ePG	Pb	16 32 11.2	-0.1
MORC				eSG	Sb	16 32 24.2	+0.1
LANS	Liptovska Anna	1.14	157	ePG	Pn	16 32 16.1	+0.3
LANS				eSG	Sn	16 32 32.6	+0.5
LANS	Liptovska Anna	1.14	157	ePg	Pn	16 32 16.1	+0.3
LANS				eSg	Sn	16 32 32.6	+0.5
NIE	Niedzica	1.25	128	ePg	Pn	16 32 17.4	+0.1
NIE				eSg	Sn	16 32 35.4	+0.6
NIE	Niedzica	1.25	128	ePg	Pn	16 32 17.4	+0.1
NIE				eSg	Sn	16 32 35.4	+0.6
NIE	Niedzica	1.25	128	ePg	Pn	16 32 17.4	+0.1
NIE				eSg	Sn	16 32 35.4	+0.6
KRLC	Kraliky	1.30	265	ePG	Pg	16 32 17.3	-0.3
KRLC				eSG	Sg	16 32 34.5	+0.1
	comp=Z,12nm,0.4s						
KRLC	Kraliky	1.30	265	Pg	Pg	16 32 17.3	-0.3
KRLC				Sg	Sg	16 32 34.5	+0.1
	12nm,0.4s						
JAVC	Velka Javorina	1.53	209	ePn	Pg	16 32 22.3	+0.4
JAVC	Velka Javorina	1.53	209	ePN	Pg	16 32 22.3	+0.4
DPC	Dobruska-Polom	1.60	276	ePG	Pn	16 32 22.4	+0.3
DPC				eSG	Sg	16 32 44.1	+0.3
DPC	Dobruska-Polom	1.60	276	Pg	Pn	16 32 22.4	+0.3
DPC				Sg	Sg	16 32 44.1	+0.3
VRAC	Vranov	1.68	239	ePn	Pn	16 32 23.6	+0.3
VRAC				eSg	Sg	16 32 47.2	+0.5
VRAC	Vranov	1.68	239	ePN	Pn	16 32 23.6	+0.3
VRAC				eSG	Sg	16 32 47.2	+0.5
VYHS	Vyhne	1.71	179	ePN	Pn	16 32 24.2	+0.6
VYHS				eLG	Lg	16 32 55.2	
VYHS	Vyhne	1.71	179	ePg	Pn	16 32 24.2	+0.6
KSP	Ksiaz	1.72	293	ePg	Pb	16 32 25.3	+0.2
KSP				eSg	Sg	16 32 48.3	+0.3
KSP	Ksiaz	1.72	293	ePg	Pb	16 32 25.3	+0.2
KSP				eSg	Sg	16 32 48.3	+0.3
UPC	Upice	1.81	281	eSG	Sg	16 32 51.0	+0.2
UPC	Upice	1.81	281	Sg	Sg	16 32 51.0	+0.2
KRUC	Moravsky	1.93	235	ePn	Pn	16 32 26.7	0.0
KRUC				eSg	Sg	16 32 54.5	-0.1
KRUC	Moravsky	1.93	235	ePN	Pn	16 32 26.7	0.0
KRUC				eSG	Sg	16 32 54.5	-0.1
CRVS	Cervenica-Dubn	2.17	126	ePN	Pg	16 32 33.7	-0.4
CRVS				eSN	Sg	16 33 02.3	+0.1
CRVS				eLG	Lg	16 33 07.0	
CRVS	Cervenica-Dubn	2.17	126	ePn	Pg	16 32 33.7	-0.4
CRVS				eSn	Sg	16 33 02.3	+0.1
PVCC	Panska Ves	2.73	279	eSG	Sg	16 33 20.4	+0.2
	comp=Z,23nm,0.5s						
PVCC	Panska Ves	2.73	279	Sg	Sg	16 33 20.4	+0.2
	23nm,0.5s						
PRU	Pruhonice	2.75	267	ePG	Pb	16 32 41.9	-0.7
PRU				eSG	Sb	16 33 18.6	+1.8
	comp=Z,13nm,0.7s						
CONA	Conrad Observa	2.98	221	ePn	Pn	16 32 41.5	+0.3
	0.4nm,0.2s						
CONA				eSn	Sn	16 33 16.4	-1.3
	2.6nm,0.3s						
CONA	Conrad Observa	2.98	221	Pn	Pn	16 32 41.5	+0.3
	0.4nm,0.2s						
CONA				Sn	Sn	16 33 16.4	-1.3
	2.6nm,0.3s						
BRG	Berggiesshubel	3.17	284	PG	Pg	16 32 55.4	+2.0
BRG				SG	Sg	16 33 33.0	-1.4
	7.6nm,0.6s						
KHC	Kasperske Hory	3.56	255	ePG	Pg	16 33 00.0	-0.7
KHC				eSG	Sg	16 33 45.8	-1.0
	comp=Z,9.4nm,0.5s						
KHC	Kasperske Hory	3.56	255	Pg	Pg	16 33 00.0	-0.7
KHC				Sg	Sg	16 33 45.8	-1.0
	9.4nm,0.5s						
GERES	GERESS Array B	3.59	250	Pn	Pb	16 32 57.4	+0.5
	0.6nm,0.3s,baz=66,slow=14,SNR=11						
GERES				Sn	Sb	16 33 43.0	+2.0
	1.7nm,0.3s,baz=61,slow=29,SNR=5.2						
MOA	Molln	3.80	233	i Pn	Pn	16 32 52.8	+0.4
	0.3nm,0.2s						
MOA				Sg	Sg	16 33 53.0	-1.5
	3.2nm,0.3s						
MOA	Molln	3.80	233	Pn	Pn	16 32 52.8	+0.4
	0.3nm,0.2s						
MOA				Sg	Sg	16 33 53.0	-1.5
	3.2nm,0.3s						
CLL	Collm	3.84	289	eSg	Sg	16 33 57.0	+1.0
	comp=Z,14nm,0.9s						
AKASG	Malin Array Be	6.68	82	Lg	Lg	16 35 24.0	
	comp=Z,0.7nm,0.3s,baz=272,slow=26,SNR=3.7						
FINES	FINESS Array B	11.98	17	Pn	Pn	16 34 39.6	-4.8
	comp=Z,0.1nm,0.3s,baz=206,slow=12,SNR=4.6						
FINES				Sn	Sn	16 36 46.6	-12
	comp=Z,0.1nm,0.3s,baz=201,slow=26,SNR=3.6						
ARCES	ARCESS Array B	19.66	7	Pn	P	16 36 20.2	-2.6
	comp=Z,0.1nm,0.3s,baz=197,slow=12,SNR=4.1						

MAN 13 16:38:26.0, 11°.25N×124°.70E, h16km, mb4.2, ML3.0, MS2.6, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OCLP	Ormoc	0.21	203	eP	Pb	16 38 31.5	0.0
OCLP				eS	Sb	16 38 35.9	+0.7
LLP	Lapu-Lapu	1.17	218⇓	eP	Pn	16 38 47.5	-0.3
LLP				eS	Sn	16 39 03.5	+0.1
CNP	Catarman	1.26	359	eP	Pn	16 38 48.4	-0.6
CNP				eS	Sn	16 39 05.6	+0.1

*NEIC **13** 16:59:11.8±1.0, 20°.44S×178°.13W, h513km±11km, mb4.0/1, Error ellipse: s-maj=13.7km s-min=9.1km az=155.0*

*ISCJB **13** 16:59:12.6±0.5, 20°.44S±0°.09×178°.15W±0°.08, h534km, mb4.2/25, Error ellipse: s-maj=13.0km s-min=8.5km az=150.3*

*IDC **13** 16:59:12.5±1.4, 20°.43S×178°.14W, h516km±15km, mb3.8/24, mb1 3.9/27, mb1mx3.7/50, mbtmp4.7/27, Error ellipse: s-maj=12.4km s-min=10.0km az=159.0*

ISC 13 16:59:13.4±0.5**, 20°.4S**±0°.1×**178°.11W**±0°.08**, h534km, n42,** σ**1ˢ.36**/45**, mb4.1**/25**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	8.82	44	P	P	17 01 16.7	-2.6
	1.0nm,0.3s,baz=128,slow=19,SNR=2.4						
AFI				S	S	17 02 58.5	-4.0
	0.8nm,0.3s,baz=80,slow=19,SNR=2.0						
DZM	Mont Dzumac	14.51	261	P	P	17 02 16.5	-1.7
	0.4nm,0.3s,baz=112,slow=19,SNR=5.0						
URZ	Urewera	18.30	192	P	P	17 02 52.2	-2.4
	0.7nm,0.3s,baz=282,slow=3.9,SNR=7.5						
PPT	Papeete	27.11	89	P	P	17 04 14.6	+0.8
	44nm,0.8s,baz=17,slow=3.6,SNR=4.3						
CTA	Charters Tower	33.40	264	P	P	17 05 08.2	+0.1
	13nm,0.6s,baz=96,slow=11,SNR=35						
PMG	Port Moresby	35.21	283	P	P	17 05 23.4	+0.2
	20nm,0.7s,baz=88,slow=7.5,SNR=6.6						
STKA	Stephens Creek	37.75	244	P	P	17 05 44.1	+0.1
	2.1nm,0.7s,baz=56,slow=7.1,SNR=2.8						
JAY	Jayapura	43.91	288	P	P	17 06 33.6	+0.5
	21nm,0.5s,baz=147,slow=4.9,SNR=60						
ASAR	Alice Springs	44.45	257	P	P	17 06 36.9	-0.4
	15nm,0.5s,baz=97,slow=7.6,SNR=166						
ASAR				ScP	ScP	17 11 11.3	+0.6
	0.4nm,0.8s,baz=96,slow=6.1,SNR=3.1						
ASAR				S	S	17 12 30.2	-3.4
	1.6nm,0.8s,baz=92,slow=15,SNR=8.5						
WRAB	Tennant Creek	44.51	262	eP	P	17 06 36.4	-1.4
	2.5nm,0.4s						
WRA	Warramunga Arr	44.52	262	P	P	17 06 36.9	-0.9
	8.8nm,0.5s,baz=97,slow=8.4,SNR=87						
WRA				ScP	ScP	17 11 12.5	+1.5

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
	0.6nm,0.9s,baz=90,slow=4.1,SNR=3.6						
FITZ	Fitzroy Crossi	52.94	262	P	P	17 07 40.5	+0.1
	3.3nm,0.5s,baz=89,slow=3.1,SNR=7.0						
SIJI	Sorong	53.10	285	P	P	17 07 41.7	+0.1
	46nm,0.7s,baz=90,slow=5.1,SNR=23						
BATI	Baumata	56.82	271	P	P	17 08 08.9	+1.3
	14nm,0.6s,baz=166,slow=3.9,SNR=4.0						
VNDA	Vanda	58.03	185	P	P	17 08 15.3	+0.6
	0.8nm,0.7s,baz=353,slow=7.2,SNR=9.7						
JHJ	Hachijo jima 2	66.67	322	P	P	17 09 11.5	+0.2
	27nm,0.3s,baz=45,slow=20,SNR=4.6						
QSPA	South Pole Qui	69.70	180	P	P	17 09 29.7	+0.3
	5.1nm,0.8s,baz=171,slow=1.1,SNR=11						
MJAR	Matsushiro Arr	70.04	324	P	P	17 09 31.9	+0.2
	1.7nm,0.4s,baz=163,slow=6.0,SNR=15						
ASAJ	Asahikawa	73.56	332	P	P	17 09 53.7	+1.7
	10nm,0.7s,baz=200,slow=3.1,SNR=14						
PETK	Petropavlovsk-	76.12	345	P	P	17 10 06.6	+0.5
	6.5nm,0.6s,baz=127,slow=5.5						
KSRS	Korea Array	76.72	319	P	P	17 10 11.2	+1.4
	1.0nm,0.5s,baz=126,slow=6.2,SNR=11						
KSAR	Wonju Array Be	76.74	319	P	P	17 10 11.2	+1.3
USRK	Ussuriysk Ar.	78.80	326	P	P	17 10 21.2	+0.4
	4.3nm,0.7s,baz=197,slow=4.4						
YBH	Yreka Blue Hor	80.25	39	P	P	17 10 30.8	+2.1
	2.2nm,0.8s,baz=23,slow=6.3,SNR=4.5						
NVAR	Mina Array Bea	81.00	43	P	P	17 10 34.5	+1.6
	1.5nm,0.8s,baz=221,slow=10,SNR=10						
TXAR	Lajitas Array	87.07	57	P	P	17 11 04.6	+1.8
	1.9nm,0.7s,baz=214,slow=7.2,SNR=18						
ILAR	Eielson Array	88.21	13	P	P	17 11 07.1	0.0
	0.8nm,0.5s,baz=213,slow=5.4,SNR=12						
CMAR	Chiang Mai Arr	89.97	290	P	P	17 11 17.8	+1.3
	2.8nm,0.8s,baz=120,slow=3.0,SNR=16						
CHTO	Chiang Mai	90.10	290	*e*P	P	17 11 16.0	-1.0
SONM	Songino Array	95.59	319	P	P	17 11 42.2	+0.5
	0.3nm,0.4s,baz=106,slow=3.2,SNR=5.1						
MKAR	Makanchi Array	111.03	313	PKiKP	PKiKP	17 16 44.7	-1.4
	0.2nm,0.5s,baz=54,slow=1.4,SNR=4.5						
KURK	Kurchatov	113.83	317	PKiKP	PKiKP	17 16 50.1	-1.1
KURBB	Kurchatov Arra	113.88	317	PKiKP	PKiKP	17 16 50.1	-1.2
	0.3nm,0.6s,baz=115,slow=1.9,SNR=4.7						
BVAR	Borovoye Array	118.91	320	PKP	PKPdf	17 17 00.2	-0.8
	0.9nm,0.4s,baz=126,slow=0.7,SNR=10						
HFS	Hagfors	139.40	351	PKhKP	PKPpre	17 17 32.1	
	1.0nm,0.4s,baz=86,slow=5.9,SNR=10						
AKASG	Malin Array Be	142.85	331	PKhKP	PKPpre	17 17 42.7	
	7.5nm,0.6s,baz=44,slow=4.4,SNR=37						
EKA	Eskdalemuir Ar	144.88	5	PKP	PKPdf	17 17 49.7	+0.4
	0.3nm,0.4s,baz=331,slow=2.7,SNR=4.5						
BRTR	Keskin Array B	146.68	312	PKPbc	PKPbc	17 17 55.5	-0.2
	1.5nm,0.6s,baz=124,slow=3.9,SNR=10						
MMAI	Mount Meron Ar	147.66	300	PKPbc	PKPbc	17 17 59.0	+0.6
	4.2nm,0.5s,baz=58,slow=6.0,SNR=5.4						
CLL	Collm	147.91	347	*i* PKPbc	PKPbc	17 17 58.7	+0.3
	comp=Z,4.0nm,0.6s						
CLL				*i* PKPab	PKPab	17 18 03.0	+0.1
	comp=Z,6.0nm,0.7s						
GERES	GERESS Array B	150.05	344	PKPbc	PKPbc	17 18 04.0	+0.2
	comp=Z,0.6nm,0.6s,baz=2.9,slow=2.7,SNR=4.8						
IDI	Anoyia	154.90	311	PKPab	PKPab	17 18 33.5	+0.5
	comp=Z,1.9nm,0.5s,baz=300,slow=16,SNR=2.8						

IDC ***13*** *16:59:57.9±4.3, 8°.25S×120°.41E, h157km±44km, mb3.0/4, mb1 3.2/7, mb1mx3.0/58, mbtmp3.6/7, Error ellipse: s-maj=68.2km s-min=24.7km az=66.0*

ISCJB ***13*** *17:00:01.2±0.7, 8°.36S±0°.07×120°.56E±0°.05, h150km, mb3.4/3, Error ellipse: s-maj=10.0km s-min=6.6km az=22.9*

DJA ***13*** *17:00:01.2±0.5, 8°S±5°×12°1E±°, h157km±5km, M4.4/1, MLv4.4/1*

ISC 13 16:59:58.6±0.9**, 8°.29S**±0°.06×**120°.53E**±0°.06**, h150**km**, n17, σ3s.30**/23**, mb3.4**/3**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDFI	Ende, Flores	1.23	112	P	Pn	17 00 29.4	+3.8
EDFI				S	Sn	17 00 50.3	+4.1
WSI	Waingapu	1.39	190	P	Pn	17 00 30.3	+3.3
WSI				S	Sn	17 00 53.3	+4.5
MMRI	Maumere	1.72	102	P	Pn	17 00 34.1	+3.6
WBSI	Waikabubak, Su	1.75	220	P	Pn	17 00 33.8	+2.9
BASI	Baing, Sumba	1.92	179	P	Pn	17 00 35.7	+2.9
PLAI	Plampang	2.78	259	P	Pn	17 00 46.3	+3.2
BKSI	Bulukumba	2.98	352	P	Pn	17 00 49.1	+3.4
BATI	Baumata	3.63	122	P	Pn	17 00 57.0	+2.9
	24nm,0.3s,baz=296,slow=6.4,SNR=66						
BATI				S	Sn	17 01 39.3	+2.2
	29nm,0.3s,baz=120,slow=8.6,SNR=8.9						
BATI	Baumata	3.63	122	P	Pn	17 00 57.0	+2.9
TWSI	Taliwang, Sumb	3.64	263	P	Pn	17 00 56.6	+2.5
SOEI	Soe	3.97	112	P	Pn	17 01 00.8	+2.3
FITZ	Fitzroy Crossi	10.94	154	P	Pn	17 02 31.3	+0.2
	0.4nm,0.3s,baz=326,slow=11,SNR=26						
FITZ				S	Sn	17 04 31.7	-0.4
	0.5nm,0.3s,baz=216,slow=19,SNR=4.9						
WRA	Warramunga Arr	17.69	132	P	P	17 03 54.3	-0.2
	0.3nm,0.3s,baz=310,slow=12,SNR=21						
WRA				S	S	17 07 06.0	-4.7
	0.6nm,0.3s,baz=303,slow=25,SNR=5.6						
ASAR	Alice Springs	19.95	142	P	P	17 04 19.8	+0.7
	2.5nm,0.7s,baz=312,slow=9.8,SNR=15						
ASAR				S	Sn	17 08 02.4	-5.8
	0.6nm,0.6s,baz=317,slow=23,SNR=2.7						
SONM	Songino Array	57.27	349	P	P	17 09 29.3	-1.2
	0.2nm,0.6s,baz=170,slow=8.8,SNR=2.5						
MKAR	Makanchi Array	64.53	332	P	P	17 10 17.3	-2.2
	0.6nm,0.5s,baz=142,slow=7.9,SNR=8.1						
KURBB	Kurchatov Arra	69.02	333	P	P	17 10 45.0	-2.8
	0.3nm,0.5s,baz=140,slow=5.9,SNR=4.0						

IDC 13 17:29:48.4±7.9**, 6°.33S**×**128°.73E, h217**km±83km**, mb2.9**/2**, mb1 3.3**/6**, mb1mx2.9**/59**, mbtmp3.8**/6**, Error ellipse: s-maj=77.5km s-min=21.9km az=44.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	6.32	232	P	Pn	17 31 21.2	+1.0
	0.9nm,0.3s,baz=82,slow=7.1,SNR=2.7						
BATI				S	S	17 32 32.7	-0.3
	4.5nm,0.3s,baz=36,slow=19,SNR=9.8						
FITZ	Fitzroy Crossi	12.08	194	P	Pn	17 32 34.2	+0.3
	0.3nm,0.3s,baz=17,slow=7.8,SNR=23						
FITZ				S	S	17 34 43.0	-4.6
	0.2nm,0.3s,baz=105,slow=19,SNR=5.5						
WRA	Warramunga Arr	14.59	159	P	Pn	17 33 03.8	-1.3
	0.4nm,0.3s,baz=341,slow=12,SNR=27						
WRA				S	S	17 35 40.6	-6.0
	0.1nm,0.3s,baz=339,slow=23,SNR=4.1						
ASAR	Alice Springs	17.94	164	P	P	17 33 43.0	+0.3
	0.5nm,0.3s,baz=343,slow=11,SNR=77						
ASAR				S	S	17 36 52.8	-4.6
	0.0nm,0.3s,baz=343,slow=18,SNR=4.4						
MKAR	Makanchi Array	66.98	327	P	P	17 40 17.9	-0.1
	0.2nm,0.4s,baz=108,slow=10,SNR=5.1						
KURBB	Kurchatov Arra	71.28	329	P	P	17 40 44.2	0.0
	0.3nm,0.5s,baz=129,slow=5.1,SNR=5.2						

KRNET ***13*** *17:44:30.6±0.1, 41°.36N×73°.01E, h17km, mb3.4*

SOME ***13*** *17:44:31.0, 41°.42N×72°.95E, h0km*

NNC ***13*** *17:44:32.0±0.5, 41°.40N×72°.99E, h0km, mb3.6, mpv3.4, Error ellipse: s-maj=5.5km s-min=2.7km az=76.0*

KNET ***13*** *17:44:32.9±0.9, 41°.46N×73°.16E, h0km, ml2.7, Error ellipse: s-maj=8.9km s-min=4.5km az=84.0*

ISC 13 17:44:30.4±1.0**, 41°.38N**±0°.02×**73°.02E**±0°.02**, h3**km±9km**, n52, σ1s.11**/89**, 44C-24D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARSB	Arslanbob	0.06	207	⇑*i*P	Pg	17 44 31.4	-0.3
	baz=17						
ARSB				⇑*i*S	Sg	17 44 32.6	-0.1
	baz=17						
TOKL	Toktogul	0.57	349	⇓*i*P	Pg	17 44 42.1	+0.7
	baz=50						
TOKL				⇓*i*S	Sg	17 44 50.8	+1.9
	baz=50						
ARK	Arkit	0.90	298	⇑*i*P	Pg	17 44 47.1	-0.5
	baz=99						
ARK				⇑*i*S	Sg	17 44 59.9	+0.7
	baz=99						
AML	Almayashu	0.91	34	P	Pg	17 44 48.4	+0.5
	20nm,0.3s,SNR=40						
AML				⇑S	Sb	17 45 01.6	-0.2
	95nm,0.2s						
AML	Almayashu	0.91	34	⇑*i*P	Pg	17 44 48.5	+0.7
	baz=33						
AML				⇑*i*S	Sb	17 45 01.7	0.0
	baz=33						
MNAS	Manas	1.17	341	⇑P	Pb	17 44 52.8	-0.6
	14nm,0.4s						
MNAS				⇓S	Sn	17 45 10.0	-0.5
	16nm,0.2s						
MNAS	Manas	1.17	341	⇓*i*P	Pb	17 44 53.0	-0.4
	baz=42						
MNAS				⇓*i*S	Sn	17 45 10.1	-0.4
	baz=42						
MRKS	Merke	1.38	6	⇓*i*P	Pn	17 44 56.8	+0.1
	43nm,0.4s						
MRKS				*e*S	Sg	17 45 15.6	+1.0
	166nm,0.3s						
EKS2	Erkin-Say	1.40	24	⇓P	Pn	17 44 57.1	+0.1
	4.3nm,0.2s,SNR=17						
EKS2				⇓S	Sg	17 45 16.4	+0.8
	10nm,0.2s						
EKS2	Erkin-Say	1.40	24	⇓*i*P	Pn	17 44 57.1	+0.1
	baz=23						
EKS2				⇓*i*S	Sg	17 45 16.3	+0.8
	baz=23						
UCH	Uchtor	1.41	52	⇑P	Pg	17 44 58.3	+0.9
	0.7nm,0.1s,SNR=7.0						
UCH	Uchtor	1.41	52	⇓*i*P	Pn	17 44 57.0	-0.4
	baz=52						
UCH				⇓*i*S	Sg	17 45 16.7	+1.1
	baz=52						
SFK	Sufi-Kurgan	1.41	165	⇓P	Pg	17 44 58.2	+0.8
	16nm,0.2s						
SFK				⇑S	Sg	17 45 18.6	+2.8
	144nm,0.3s						
SFK	Sufi-Kurgan	1.41	165	⇑*i*P	Pn	17 44 56.8	-0.4
	baz=64						
SFK				⇑*i*S	Sn	17 45 16.1	-0.4
	baz=64						
AAK	Ala-Archa	1.67	41	⇑P	Pg	17 45 02.8	+0.3
	13nm,0.5s						
AAK				S	Sg	17 45 25.3	+1.1
	34nm,0.5s						
AAK	Ala-Archa	1.67	41	⇓P	Pg	17 45 02.9	+0.4
	13nm,0.2s,SNR=11						
AAK	Ala-Archa	1.67	41	⇑*i*P	Pb	17 45 02.2	+0.2
	baz=40						
AAK				⇑*i*S	Sg	17 45 24.7	+0.5
	baz=40						
KZA	Kyzart	1.81	67	⇑P	Pb	17 45 04.5	+0.1
	6.9nm,0.3s,SNR=31						
KZA				⇓S	Sg	17 45 29.1	+0.5
	17nm,0.2s						
KZA	Kyzart	1.81	67	⇑*i*P	Pb	17 45 04.6	+0.1
	baz=66						
KZA				⇑*i*S	Sb	17 45 28.5	+0.8
	baz=66						
FRU1	Bishkek	1.87	39	⇓*i*P	Pb	17 45 04.9	-0.3
	baz=39						
FRU1				⇓*i*S	Sb	17 45 29.5	+0.5
	baz=39						
KBK	Karagaybulak	1.92	48	⇑P	Pg	17 45 07.3	0.0
	3.5nm,0.1s,SNR=12						
KBK	Karagaybulak	1.92	48	⇑*i*P	Pb	17 45 06.7	+0.4
	baz=47						
KBK				⇑*i*S	Sg	17 45 32.8	+0.6
	baz=47						
CHMS	Chumysh	2.07	38	⇓P	Pb	17 45 09.9	+1.2
	10nm,0.2s,SNR=23						
CHMS	Chumysh	2.07	38	⇑*i*P	Pb	17 45 08.9	+0.2
	baz=38						
CHMS				⇑*i*S	Sb	17 45 36.1	+1.3
	baz=38						
DRK	Karamyk	2.11	207	⇑*i*P	Pb	17 45 09.0	-0.5
	baz=7.0						
DRK				⇑*i*S	Sb	17 45 36.1	-0.1
	baz=7.0						
BTK	Batken	2.13	232	⇑*i*P	Pn	17 45 07.9	+0.9
	baz=33						
BTK				⇑*i*S	Sb	17 45 35.9	-0.6
	baz=33						
USP	Ospenovka	2.19	30	⇑P	Pb	17 45 11.4	+0.8
	12nm,0.4s,SNR=31						
USP	Ospenovka	2.19	30	⇑*i*P	Pb	17 45 10.4	-0.2
	baz=30						
USP				⇑*i*S	Sb	17 45 39.0	+0.9
	baz=30						
IUG	Iuzhnay	2.36	290	*e*P	Pb	17 45 14.6	+0.9
	48nm,0.3s						
IUG				*e*S	Sg	17 45 46.3	0.0
	193nm,0.6s						
BOOM	Boomskoye usch	2.45	62	⇑*i*P	Pn	17 45 13.2	+1.8
	baz=62						
BOOM				⇑*i*S	Sb	17 45 44.8	-1.0
	baz=62						
TKM2	Tokmak 2	2.46	50	⇑Pg	Pb	17 45 16.3	+0.9
	20nm,0.4s						
TKM2				⇑Lg	Lg	17 45 50.1	
	92nm,0.5s						
TKM2	Tokmak 2	2.46	50	⇑P	Pb	17 45 16.3	+0.9
	46nm,0.4s,SNR=84						
TKM2	Tokmak 2	2.46	50	⇑*i*P	Pb	17 45 14.0	-1.4
	baz=50						
TKM2				⇑*i*S	Sb	17 45 45.5	-0.7
	baz=50						
KK31	Karatay Array	2.54	314	⇓Pn	Pb	17 45 16.6	0.0
	7.6nm,0.3s,baz=135,slow=15,SNR=166						
KK31				⇑Lg	Lg	17 45 51.6	
	40nm,0.5s,baz=139,slow=27,SNR=15						
ULHL	Ulahol	2.56	69	⇑P	Pb	17 45 17.2	0.0
	7.7nm,0.3s,SNR=22						
ULHL	Ulahol	2.56	69	⇓*i*P	Pb	17 45 15.5	-1.6
	baz=69						
ULHL				⇓*i*S	Sb	17 45 48.2	-0.9
	baz=69						
TAS	Tashkent	2.81	270	⇑Lg	Lg	17 46 01.6	
	184nm,0.4s						
BRLS	Borolday	2.88	306	*e*P	Pb	17 45 23.2	+0.7
	3.4nm,0.5s						
BRLS				*e*S	Sg	17 46 01.2	-1.8
	42nm,0.5s						
MTBS	Maitube	3.08	54	⇓*i*P	Pb	17 45 27.3	+1.4
	8.4nm,0.4s						
MTBS				⇓*i*S	Sg	17 46 07.5	-1.8
	42nm,0.4s						
IZV	Izvestkoviy	3.14	57	*e*P	Pb	17 45 29.1	+2.1
	8.8nm,0.2s						
IZV				*e*S	Sg	17 46 11.5	+0.1
	45nm,0.6s						
TNSS	Tian-Shan	3.36	59	*e*P	Pb	17 45 32.8	+2.0
	7.1nm,0.4s						
TNSS				*e*S	Sg	17 46 17.7	-0.5
	30nm,0.5s						
KNDC	Almaty	3.46	57	⇑Lg	Lg	17 46 21.2	
	59nm,0.8s						
MDOK	Medeo	3.48	58	⇑Pg	Pg	17 45 36.3	-0.9
	3.2nm,0.4s						
MDOK				⇑Lg	Lg	17 46 21.3	
	16nm,0.6s						
MDOK	Medeo	3.48	58	*e*P	Pb	17 45 35.0	+2.2
	6.3nm,0.2s						
MDOK				*e*S	Sg	17 46 21.3	-1.0
	20nm,0.3s						
KUU	Kurty	3.51	43	*e*P	Pb	17 45 34.9	+1.7
	6.1nm,0.3s						
KUU				*e*S	Sg	17 46 21.7	-1.5
	35nm,0.4s						
KOTS	Kotyrbulak	3.56	57	*e*P	Pg	17 45 36.9	-1.7
	7.8nm,0.2s						
KOTS				*e*S	Sg	17 46 24.6	-0.1
	47nm,0.5s						
KTBS	Karatobe	3.57	48	*e*P	Pb	17 45 36.7	+2.4
	2.2nm,0.1s						
KTBS				*e*S	Sg	17 46 24.3	-0.9
	41nm,0.7s						
SATY	Saty	4.34	65	*e*P	Pg	17 45 52.1	-1.4
	7.5nm,0.7s						
SATY				*e*S	Sg	17 46 50.0	+0.2
	18nm,0.3s						
ARXS	Arharly	4.53	50	*e*P	Pg	17 45 54.8	-2.4
	8.3nm,0.6s						
ARXS				*e*S	Sg	17 46 55.5	-0.6
	34nm,0.6s						
PDGK	Podgornoye	5.18	66	⇑Pg	Pg	17 46 07.4	-2.2
	1.6nm,0.6s						
PDGK				⇓Lg	Lg	17 47 15.7	
	8.8nm,0.7s						
DJR	Jarkent	5.79	57	*e*P	Pg	17 46 19.3	-1.9
	1.1nm,0.9s						
DJR				*e*S	Sg	17 47 36.4	+0.2
	3.3nm,0.3s						
KAPS	Kapalarasan	6.05	48	*e*P	Pg	17 46 23.9	-2.4
	1.2nm,0.8s						
KAPS				*e*S	Sg	17 47 44.5	-0.2
	7.0nm,0.6s						

MOS ***13*** *17:57:01.3±1.1, 7°.95S×109°.05E, h45km, mb5.2/45, Error ellipse: s-maj=8.4km s-min=5.3km az=119.8*

BJI ***13*** *17:57:04.9, 8°.00S×109°.10E, h70km, mb4.8/33, mB4.9/25, Ms4.5/17, Ms7 4.3/15*

DJA ***13*** *17:57:06.0±0.3, 8°S±4°×10°9E±°, h59km±4km, M4.8/27, mB5.2/20, mb5.0/27, MLv5.2/24, Mw(mB)4.6/20*

GCMT ***13*** *17:57:06.3±0.3, 8°.43S×109°.15E, h71km±2km, MW4.9/72, Moment Tensor Solution. s47,c61; s72,c106; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.25±.10; $M_{\theta\theta}$-2.77±.09; $M_{\phi\phi}$0.51±.11; $M_{r\theta}$1.13±.07; $M_{\theta\phi}$0.33±.08; $M_{\phi r}$-0.10±.07; Best double couple: $M_0$2.77000×10^{16} NP1:ϕ_s96.00000°,δ57.00000°,λ90.00000°. NP2: ϕ_s276.00000°,δ33.00000°,λ90.00000°. Principal axes: T 2.4930, Plg78.0000°, Azm5.0000°; N 0.5510, Plg0.0000°, Azm96.0000°; P -3.0470, Plg12.0000°, Azm186.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***13*** *17:57:06.3±0.5, 7°.98S×109°.10E, h74km±4km, mb4.9/93 Error ellipse: s-maj=5.1km s-min=3.0km az=218.0*

NEIC Felt [III] at Ciamis, Cilacap and Pangandaran. Also felt at Sleman.

ISCJB ***13*** *17:57:06.4±0.3, 8°.00S±0°.03×109°.09E±0°.02, h93km±2km, mb4.8/157, Error ellipse: s-maj=5.5km s-min=3.0km az=26.4*

IDC ***13*** *17:57:09.0±0.9, 7°.93S×109°.16E, h97km±8km, mb4.4/46, mb1 4.5/48, mb1mx4.4/60, mbtmp4.8/48, MS3.6/39, Ms1 3.6/39, ms1mx3.5/54, Error ellipse: s-maj=10.1km s-min=6.9km az=39.0*

KLM ***13*** *17:57:09.0, 8°.15S×109°.22E, h71km, mb5.1*

ISC 13 17:57:05.8±0.5**, 8°.11S**±0°.04×**109°.09E**±0°.03**, h73**km±4km**, n725, σ1s.35**/738**, mb4.9**/160**, 13C-8D, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMJI	Cimerak	0.71	297	P	Pn	17 57 20.3	-0.8
CMJI				S	Sn	17 57 31.3	-1.1
KPJI	Karang Pucung	0.78	349	P	Pn	17 57 24.1	+2.1
CISI	Cisompet, Garu	1.37	293	P	Pn	17 57 28.7	-0.6
CISI				S	Sn	17 57 45.1	-1.9
CISI	Cisompet, Garu	1.37	293	*e*Pn	Pn	17 57 28.5	-0.9
CISI				*e*Sn	Sn	17 57 45.6	-1.4
UGM	Wanagama	1.44	82	P	Pn	17 57 30.6	+0.5
UGM				S	Sn	17 57 49.8	+1.4
UGM	Wanagama	1.44	82	*e*Pn	Pn	17 57 31.0	+0.9
UGM				*e*Sn	Sn	17 57 48.2	-0.2
SMRI	Semarang	1.71	52	P	Pn	17 57 36.6	+2.9
SMRI	Semarang	1.71	52	*e*Pn	Pn	17 57 37.0	+3.3
WOJI	Wonogiri, Jawa	1.84	82	P	Pn	17 57 35.5	+0.1
LEM	Lembang	1.93	311	P	Pn	17 57 39.1	+2.2
	206nm,0.3s,baz=64,slow=8.4,SNR=210						
LEM				S	Sn	17 58 05.1	+4.7
	395nm,0.3s,baz=139,slow=19,SNR=8.8						
LEM				LR	LR	17 58 22.6	
	comp=Z,3μm,19.8s,baz=162,slow=39						
PCJI	Pacitan	2.07	93	P	Pn	17 57 39.6	+1.1
NGJI	Ngawi	2.46	73	P	Pn	17 57 47.9	+4.1
PWJI	Pagerwojo	2.69	88	P	Pn	17 57 47.5	+0.6
SKJI	Sukabumi	2.74	293	P	Pn	17 57 48.6	+1.1
DBJI	Dramaga	2.78	303	P	Pn	17 57 50.4	+2.2
TBJI	Tambak Boyo	3.02	65	P	Pn	17 57 54.4	+3.0
SBJI	Serang	3.54	304	P	Pn	17 58 05.0	+6.6
GRJI	Gresik	3.57	71	P	Pn	17 58 01.6	+2.8
CGJI	Cibinong	3.68	294	P	Pn	17 58 00.2	-0.1
GMJI	Gumukmas	4.32	93	P	Pn	17 58 09.6	+0.5
BLJI	Banyuglugur	4.48	86	P	Pn	17 58 13.4	+2.1
BLSI	Bandar Lampung	4.69	305	P	Pn	17 58 19.3	+5.2
JAGI	Jajag, Banyuwa	5.03	94	P	Pn	17 58 21.1	+2.3
	260nm,0.7s,7μm3.4nm						
JAGI	Jajag, Banyuwa	5.03	94	*e*Pn	Pn	17 58 19.6	+0.8
JAGI				*e*Sn	Sn	17 59 13.0	-2.6
KASI	Kota Agung	5.23	299	P	Pn	17 58 25.0	+3.5
	201nm,0.6s,3μm1.2nm						
KLI	Kotabumi	5.29	307	P	Pn	17 58 26.9	+4.5
LWLI	Liwa	5.86	301	P	Pn	17 58 33.5	+3.2
PBKI	Pangkalan Bun	5.95	26	P	Pn	17 58 43.0	+12
IGBI	Denpasar	6.04	97	P	Pn	17 58 34.2	+1.6
MDSI	Maura Dua	6.06	306	P	Pn	17 58 35.7	+2.8
	77nm,0.7s,886nm0.3nm						
SRBI	Singaraja	6.07	90	P	Pn	17 58 35.6	+2.6
	109nm,0.5s,2μm0.9nm						
TWSI	Taliwang, Sumb	7.74	95	P	Pn	17 59 06.8	+11
MASI	Maura Aman, Be	8.41	306	P	Pn	17 59 07.8	+2.7
	109nm,0.6s,3μm0.6nm						
STKI	Sintang	8.46	16	P	Pn	17 59 09.9	+4.2
	75nm,0.6s,4μm						
PLAI	Plampang	8.63	95	P	Pn	17 59 09.8	+1.8
	100nm,0.9s,1μm						
MTKI	Muara Teweh, K	9.17	39	P	Pn	17 59 19.6	+4.1
	38nm,0.5s						
KSM	Kuching	9.59	7	*e*Pn	Pn	17 59 24.4	+3.2
KSM	Kuching	9.59	7	P	Pn	17 59 25.0	+3.8
KRJI	Kerinci	9.66	308	P	Pn	17 59 23.2	+1.0
	143nm,0.8s,2μm						
SBUM	Sibu	10.94	17	*e*Pn	Pn	17 59 44.3	+4.7
SBUM	Sibu	10.94	17	P	Pn	17 59 45.0	+5.4
MYKOM	Kota Tinggi	11.13	332	P	Pn	17 59 46.0	+3.8
BKSI	Bulukumba	11.30	77	P	Pn	17 59 54.9	+10
SPSI	Sidrap Palu	11.39	69	P	Pn	17 59 49.9	+4.2
	12nm,0.8s						
BKNI	Bangkinang	11.60	316	*e*Pn	Pn	17 59 48.9	+0.3
TTSI	Tana Toraja	11.80	65	P	Pn	17 59 57.5	+6.1
	35nm,1.2s,434nm						
SISI	Saibi	12.02	304	P	Pn	17 59 50.8	-3.5
EDFI	Ende, Flores	12.49	94	P	Pn	17 59 59.6	-1.2
	44nm,0.6s,672nm						
COCO	West Island	12.72	250	*e*Pn	Pn	18 00 01.4	-2.5
COCO	West Island	12.72	250	*e*P	Pn	18 00 01.4	-2.5
MMRI	Maumere	13.02	93	P	P	18 00 17.0	+1.3
MMRI	Maumere	13.02	93	*e*Pn	Pn	18 00 06.2	-1.8
MPSI	Mapaga	13.66	53	P	P	18 00 23.5	+0.8
	18nm,1.5s,279nm						
APSI	Ampana	14.41	61	P	P	18 00 34.0	+2.9
	59nm,0.6s,704nm						
BATI	Baumata	14.54	99	P	Pn	18 00 29.5	+1.5
	13nm,0.3s,baz=135,slow=7.0,SNR=9.2						
BATI				S	Sn	18 03 00.6	-7.5
	5.3nm,0.3s,baz=179,slow=17,SNR=3.6						
BATI	Baumata	14.54	99	P	Pn	18 00 29.7	+1.7
GSI	Gunungsitoli	14.80	309	*e*Pn	Pn	18 00 26.6	-4.7
PSI	Prapat	14.84	317	LR	LR	18 06 39.1	
	comp=Z,259nm,18.8s,baz=91,slow=39						
PSI	Prapat	14.84	317	*e*Pn	Pn	18 00 27.7	-4.2
PSI	Prapat	14.84	317	*e*P	Pn	18 00 27.7	-4.2
IPM	Ipoh	14.87	327	*e*Pn	Pn	18 00 32.3	+0.2
SOEI	Soe	15.09	97	P	P	18 00 37.4	-1.3
	140nm,0.8s,1μm						
SOEI	Soe	15.09	97	*e*Pn	Pn	18 00 33.2	-1.9
	90nm,0.7s						
LUWI	Luwuk	15.33	63	P	P	18 00 46.3	+5.0
LUWI	Luwuk	15.33	63	*e*Pn	Pn	18 00 38.4	+0.2
	32nm,0.8s						
MRSI	Marisa	15.39	57	P	P	18 00 44.5	+2.5
	29nm,0.6s,278nm						
KULM	Kulim	15.74	327	*e*Pn	Pn	18 00 42.8	-0.5
	13nm,0.9s						
KKM	Kota Kinabalu	15.75	27	*e*Pn	P	18 00 46.9	+0.8
MYLDM	Lahad Datu	16.20	36	*e*Pn	P	18 00 51.7	+0.7
	20nm,1.0s						
MBWA	Marble Bar	16.55	143	*e*Pn	Pn	18 00 50.2	-3.3
	44nm,1.4s						
SANI	Sanana	17.87	71	P	Pn	18 01 10.3	+0.6
LHMI	Lhok Sumawe	17.95	317	*e*P	Pn	18 01 11.2	+0.7
	98nm,1.2s						
TRTT	Trang	18.40	329	P	Pn	18 01 20.8	+4.7
	9.9nm,1.0s						
FITZ	Fitzroy Crossi	18.92	123	P	Pn	18 01 22.6	+0.4
	0.7nm,0.3s,baz=297,slow=7.1,SNR=26						
FITZ				S	S	18 04 39.3	-13
	0.3nm,0.3s,baz=103,slow=19,SNR=3.1						
AAI	Ambon	19.50	78	P	Pn	18 01 28.8	-0.4

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        216nm,0.6s,3µm
LBMI  Labuha            19.79  69  P      Pn     18 01 32.2 -0.4
TNTI  Ternate           20.25  65  P      P      18 01 36.6 +1.2
TNTI  Ternate           20.25  65 eP      P      18 01 35.4  0.0
        56nm,0.6s
MSAI  Masohi            20.30  78  P      Pn     18 01 39.5 +0.9
        14nm,0.6s,533nm
BNDI  Bandanaira        20.99  81  P      Pn     18 01 54.7 +7.9
MTN   Manton Dam        22.18 104 eP      P      18 01 57.0 +0.8
        24nm,0.6s
DAV   Davao City (W)    22.31  48  LR     LR     18 11 05.7
        comp=Z,130nm,20.6s,baz=228,slow=38
SIJI  Sorong            23.24  73  P      P      18 02 06.3 -0.8
        22nm,0.6s,baz=189,slow=21,SNR=18
FAKI  Fak Fak           23.62  79  P      P      18 02 11.2 +0.6
FAKI  Fak Fak           23.62  79 eP      P      18 02 08.5 -2.1
        22nm,0.7s
TGY   Tagaytay City     25.00  28  LR     LR     18 13 32.5
        comp=Z,88nm,20.3s,baz=221,slow=40
PBA   Port Blair        25.49 320 eP      P      18 02 27.7 +0.3
        96nm,1.3s
PBKT  Sadao Pong        25.80 342  P      P      18 02 31.8 +1.6
NWAO  Narrogin (SRO)    25.83 164  P      P      18 02 32.4 +2.0
        8.2nm,0.8s,baz=192,slow=10,SNR=4.0
NWAO                               LR     LR     18 12 07.5
        comp=Z,242nm,21.3s,baz=242,slow=35
NWAO  Narrogin (SRO)    25.83 164 eP      P      18 02 31.1 +0.7
        19nm,1.3s
NWAO  Narrogin (SRO)    25.83 164 eP      P      18 02 31.1 +0.7
NWAO                               pmax   pmax
        comp=Z,19nm,1.3s
RKPI  Ransiki, Papua    25.83  77  P      P      18 02 32.1 +1.4
WR1   Warramunga Arr    27.13 118 eP      P      18 02 42.8 +0.5
        comp=Z,20nm,0.6s
WR1                               ePcP    PcP    18 06 01.8 +0.2
WR1                               e              18 13 46.7
WRA   Warramunga Arr    27.13 118  P      P      18 02 42.8 +0.5
        comp=Z,15nm,0.6s,baz=290,slow=11,SNR=155
WRA                                PcP    PcP    18 06 01.8 +0.2
        comp=Z,4.0nm,0.6s,baz=300,slow=1.9,SNR=15
WRA                                LR     LR     18 13 46.7
        comp=Z,117nm,21.7s,baz=270,slow=37
WRAB  Tennant Creek     27.14 118 eP      P      18 02 43.3 +0.9
        comp=Z,20nm,0.6s
WRAB                              ePcP    PcP    18 06 01.5  0.0
WRAB  Tennant Creek     27.14 118d iP     P      18 02 43.8 +1.4
WRAB                               pmax   pmax
        comp=Z,16nm,0.6s
WB2   Warramunga Arr    27.14 118 eP      P      18 02 43.1 +0.7
CM01  Chiang Mai Arr    28.19 339 eP      P      18 02 50.5 -1.2
CM01                              ePcP    PcP    18 06 05.0 +1.0
CM31  Chiang Mai Arr    28.23 339 eP      P      18 02 51.9 -0.2
CM31                              ePcP    PcP    18 06 05.0 +0.8
CMAR  Chiang Mai Arr    28.23 339  P      P      18 02 51.6 -0.5
        comp=Z,3.0nm,0.8s,baz=176,slow=8.7,SNR=21
CMAR                               PcP    PcP    18 06 05.6 +1.4
        comp=Z,1.8nm,0.5s,baz=187,slow=3.3,SNR=9.2
CMAR                               LR     LR     18 15 02.4
        comp=Z,231nm,19.1s,baz=177,slow=38
AS31  Alice Springs     28.37 126 eP      P      18 02 54.3 +1.0
        comp=Z,3.4nm,0.8s
AS31                              ePcP    PcP    18 06 04.5  0.0
ASAR  Alice Springs     28.37 126  P      P      18 02 53.9 +0.5
        comp=Z,9.3nm,0.7s,baz=305,slow=9.3,SNR=144
ASAR                               PcP    PcP    18 06 05.2 +0.6
        comp=Z,5.3nm,0.6s,baz=313,slow=1.6,SNR=20
ASAR                               ScP    ScP    18 09 38.9 -0.5
        comp=Z,1.1nm,0.7s,baz=305,slow=2.2,SNR=5.2
AS01  Alice Springs     28.41 126 eP      P      18 02 54.2 +0.6
AS01                              ePcP    PcP    18 06 04.8 +0.1
CMMT  Chiang Mai        28.56 340  P      P      18 02 59.2 +4.2
        comp=Z,4.8nm,0.6s
CHTO  Chiang Mai        28.56 340 eP      P      18 02 55.0  0.0
        comp=Z,2.8nm,0.8s
CHTO  Chiang Mai        28.56 340 eP      P      18 02 55.0  0.0
CHTO                               pmax   pmax
        comp=Z,3.0nm,0.8s
FORT  Forrest           28.69 144 eP      P      18 02 55.6 -0.5
        comp=Z,24nm,0.9s
PALK  Pallekele         32.16 298  P      P      18 03 27.4 +0.4
        comp=Z,9.5nm,0.7s,baz=117,slow=11,SNR=9.9
YULB  Yu-li             33.51  21 eP      P      18 03 38.9 +0.4
        comp=Z,7.6nm,1.0s
KMI   Kunming           33.60 350  P      P      18 03 41.9 +2.3
KMI                                pmax   pmax
        comp=Z,2.0nm,0.5s
SSLB  Suanglung         33.75  20 eP      P      18 03 40.4 -0.3
        comp=Z,8.7nm,0.7s
COEN  Coen              33.93 103 eP      P      18 03 43.0 +0.6
        comp=Z,17nm,0.6s
SAIH  SAIHA             34.25 333 eP      P      18 03 43.7 -1.5
SAIH                               IAmb   IAmb   18 03 45.0
        comp=Z,11nm,0.8s
NACB  Ninganchiao       34.33  21 eP      P      18 03 46.5 +0.9
        comp=Z,17nm,0.8s
GYA   Guiyang           34.44 356 eP      P      18 03 47.4 +0.7
GYA                                pmax   pmax
        comp=Z,10.0nm,0.8s
YHNB  Yeheng            34.71  20 eP      P      18 03 49.4 +0.3
        comp=Z,51nm,1.5s
BRDH  Bariadhala        35.04 331  LR     LR     18 20 17.4
        comp=Z,204nm,18.4s,baz=158,slow=40
BBOO  Buckleboo         35.05 138 eP      P      18 03 52.0 +0.2
        comp=Z,54nm,1.3s
YOJ   Yonaguni jima     35.10  22 eP      P      18 03 52.7 +0.4
        comp=Z,48nm,0.9s
YOJ   Yonaguni jima     35.10  22 eP      P      18 03 52.7 +0.4
YOJ                                pmax   pmax
        comp=Z,48nm,0.9s
H08S2 Diego Garcia H    36.24 268  T      T      18 42 13.4
        baz=93,slow=75,SNR=181
H08S3 Diego Garcia H    36.25 268  T      T      18 42 19.7
        baz=93,slow=75,SNR=230
H08S1 Diego Carcia H    36.26 268  T      T      18 42 16.1
        baz=93,slow=75,SNR=230
KOHI  KOHIMA            36.64 337 eP      P      18 04 03.8 -1.8
KOHI                               IAML          18 04 09.5
        comp=Z,8.0nm,0.3s
MOKO  MOKOCHONG         37.03 338 eP      P      18 04 07.9 -1.1
MOKO                               IAmb   IAmb   18 04 10.1
        comp=Z,184nm,0.1s
SHL   Shillong          37.42 334 eP      P      18 04 10.2 -2.1
        comp=Z,7.2nm,0.4s
SHL   Shillong          37.42 334 eP      P      18 04 11.1 -1.2
SHL   Shillong          37.42 334 eP      P      18 04 10.2 -2.1
SHL                                pmax   pmax
        comp=Z,7.0nm,0.4s
PMG   Port Moresby      37.64  95  P      P      18 04 15.6 +1.5
        comp=Z,11nm,0.7s,baz=333,slow=2.3,SNR=7.0
PMG                                LR     LR     18 21 17.5
        comp=Z,44nm,19.4s,baz=272,slow=38
H08N1 Diego Carcia H    37.80 270  T      T      18 44 29.9
        baz=126,SNR=26
H08N2 Diego Garcia H    37.82 270  T      T      18 44 31.6
        baz=126,SNR=23
H08N3 Diego Garcia H    37.82 270  T      T      18 44 36.3
        baz=126,SNR=30
CTA   Charters Tower    37.87 112  P      P      18 04 17.9 +1.9
        comp=Z,7.4nm,0.6s,baz=268,slow=15,SNR=27
CTA                                PcP    PcP    18 06 30.8 -0.3
        comp=Z,3.3nm,0.6s,baz=266,slow=4.7,SNR=7.2
CTAO  Charters Tower    37.87 112 eP      P      18 04 17.8 +1.8
        comp=Z,7.7nm,0.7s
CTAO  Charters Tower    37.87 112 eP      P      18 04 17.8 +1.8
CTAO                               pmax   pmax
        comp=Z,8.0nm,0.7s
ENH   Enshi             38.16   1 eP      P      18 04 18.0 -0.2
        comp=Z,5.8nm,0.6s
STKA  Stephens Creek    38.37 133  P      P      18 04 21.3 +1.2
        comp=Z,15nm,0.6s,baz=310,slow=8.9,SNR=35
STKA                               PcP    PcP    18 06 32.9 +0.4
        comp=Z,8.9nm,0.6s,baz=18,slow=3.1,SNR=6.4
STKA                               LR     LR     18 22 31.6
        comp=Z,157nm,19.4s,baz=263,slow=40
STKA  Stephens Creek    38.37 133 eP      P      18 04 21.4 +1.3
        comp=Z,3.7nm,0.6s
STKA                              ePcP    PcP    18 06 32.9 +0.4
STKA  Stephens Creek    38.37 133 eP      P      18 04 21.4 +1.3
STKA                              e              18 06 32.9
STKA                               pmax   pmax
        comp=Z,4.0nm,0.6s
BOK   Bokaro            38.98 325 eP      P      18 04 23.3 -1.9
CD2   Chengdu           39.13 353  P      P      18 04 27.0 +0.6
CD2                                pP     pP     18 04 44.1 -0.1
CD2                                sP     sP     18 04 52.5 -0.2
CD2                                PP     PP     18 05 58.3 +0.8
CD2                                S      S      18 10 23.0 +2.0
CD2                                pmax   pmax
        comp=Z,20nm,0.5s
CD2                                pmax   pmax
        comp=Z,220nm,5.0s
CD2                                LR     LR
        comp=Z,240nm,12.0s
CD2                                LR     LR
        comp=Z,400nm,15.5s
CD2                                LR     LR
        comp=Z,280nm,12.5s
JOW   Kunigami          39.40  28  LR     LR     18 21 51.7
        comp=Z,88nm,20.1s,baz=160,slow=38
JOW   Kunigami          39.40  28 eP      P      18 04 28.7  0.0
        comp=Z,51nm,1.4s
HYB   Hyderabad         39.42 310 i P     P      18 04 28.0 -1.0
ODAN  Odare             40.63 330 eP      P      18 04 37.2 -1.9
        comp=Z,13nm,0.5s
NJ2   Nanjing           41.01  13 eP      P      18 04 43.1 +1.3
NJ2                                pmax   pmax
        comp=Z,13nm,0.5s
RAMN  Ramite            41.11 329 eP      P      18 04 41.6 -1.5
        comp=Z,6.1nm,0.5s
LSA   Lhasa             41.36 336 eP      P      18 04 45.4 +0.1
        comp=Z,4.4nm,0.6s
LSA   Lhasa             41.36 336 eP      P      18 04 45.4 +0.1
LSA                                pmax   pmax
        comp=Z,4.0nm,0.6s
GUMO  Guam              41.55  59  P      P      18 04 45.7 -0.9
        comp=Z,50nm,0.6s,baz=183,slow=14,SNR=8.4
GUMO                               LR     LR     18 20 46.9
        comp=Z,19nm,20.4s,baz=234,slow=34
JIRN  Jiri              41.90 329 eP      P      18 04 47.4 -2.3
        comp=Z,17nm,0.4s
XAN   Xi’an             41.91 360  P      P      18 04 43.3 -6.0
XAN                                pP     pP     18 04 50.8  -16
XAN                                pmax   pmax
        comp=Z,4.0nm,0.8s
XAN                                LR     LR
        comp=N,100nm,4.8s
XAN                                LR     LR
        comp=E,87nm,8.6s
XAN                                LR     LR
        comp=Z,250nm,24.9s
PKIN  Phulchoki         42.24 328 eP      P      18 04 49.8 -2.5
        comp=Z,2.6nm,0.3s
GUN   Gumba             42.26 329 eP      P      18 04 49.3 -3.3
        comp=Z,24nm,0.6s
DMN   Daman             42.42 328 eP      P      18 04 51.7 -2.1
        comp=Z,6.4nm,0.5s
KKN   Kakani            42.47 328 eP      P      18 04 52.1 -2.1
        comp=Z,19nm,1.0s
GKN   Gorkha            42.98 328 eP      P      18 04 55.6 -2.6
        comp=Z,7.2nm,0.3s
KOLN  Koldanda          43.36 326 eP      P      18 04 59.2 -2.1
        comp=Z,9.2nm,0.3s
EIDS  Eidsvold          43.50 118 eP      P      18 05 03.9 +1.6
        comp=Z,18nm,1.5s
POO   Poona             43.69 308 eP      P      18 05 04.1 +0.1
POO                                IAmb   IAmb   18 05 06.0
        comp=Z,137nm,0.1s
DANN  Dangsing          43.73 327 eP      P      18 05 01.9 -2.5
        comp=Z,21nm,0.4s
BHPL  Bhopal            43.93 316 eP      P      18 05 04.5 -1.2
BHPL                               IAmb   IAmb   18 05 06.0
        comp=Z,11nm,0.4s
LZH   Lanzhou           44.23 354 eP      P      18 05 10.6 +2.5
LZH                                pP     pP     18 05 28.8 +2.6
LZH                                sP     sP     18 05 35.9 +1.3
LZH                                PP     PP     18 06 55.8 +3.1
LZH                                pmax   pmax
        comp=Z,23nm,1.0s
LZH                                pmax   pmax
        comp=Z,120nm,4.9s
LZH                                LR     LR
        comp=Z,350nm,14.3s
LZH                                LR     LR
        comp=Z,370nm,15.2s
LZH                                LR     LR
        comp=Z,540nm,15.9s
CAN   Canberra          45.44 133 eP      P      18 05 19.0 +1.3
        comp=Z,17nm,1.2s
CAN   Canberra          45.44 133 eP      P      18 05 19.0 +1.3
CAN                                pmax   pmax
        comp=Z,17nm,1.2s
ARMA  Armidale          45.51 125 eP      P      18 05 21.2 +2.7
        comp=Z,13nm,1.4s
ARMA                              ePcP    PcP    18 06 57.9 +1.6
JNU   Nakatsue          45.95  26  LR     LR     18 25 54.6
        comp=Z,49nm,21.1s,baz=122,slow=38
JNU   Nakatsue          45.95  26 eP      P      18 05 24.0 +2.4
JNU                               e              18 25 54.6
CBIJ  Chichi jima       47.47  41 eP      P      18 05 31.4 -2.2
        comp=Z,86nm,1.1s
JCJ   Chichijima        47.47  41  P      P      18 05 31.5 -2.1
        comp=Z,24nm,0.3s,baz=270,slow=19,SNR=16
GTA   Gaotai            48.05 350 ⇑P      P      18 05 38.1 +0.1
GTA                                pP     pP     18 05 56.3 -0.1
GTA                                sP     sP     18 06 05.4 +0.7
GTA                                PcP    PcP    18 07 05.8 +0.9
GTA                                S      S      18 12 33.4 +2.3
GTA                                pmax   pmax
        comp=Z,3.0nm,1.7s
GTA                                pmax   pmax
        comp=Z,46nm,5.1s
GTA                                LR     LR
        comp=Z,170nm,23.8s
GTA                                LR     LR
        comp=Z,200nm,21.6s
GTA                                LR     LR
        comp=Z,120nm,20.3s
KS15  Wonju Array Si    48.60  20 eP      P      18 05 42.6 +0.5
KSAR  Wonju Array Be    48.60  20  P      P      18 05 42.4 +0.2
KSAR                               PcP    PcP    18 07 07.8 +1.0
KSAR  Wonju Array Be    48.60  20  P      P      18 05 42.4 +0.2
KSAR                                             18 07 07.8
KSRS  Korea Array       48.63  20  P      P      18 05 42.4  0.0
        comp=Z,1.4nm,0.6s,baz=199,slow=9.2,SNR=8.4
KSRS                               PcP    PcP    18 07 07.8 +1.0
        comp=Z,1.8nm,0.7s,baz=212,slow=3.2,SNR=7.1
KSRS                               LR     LR     18 26 31.5
        comp=Z,39nm,21.7s,baz=218,slow=36
KS01  Wonju Array Si    48.64  20 eP      P      18 05 39.7 -2.8
KS01                              ePcP    PcP    18 07 07.9 +1.0
HHC   Hu-ho-hao-te      48.77   2 eP      P      18 05 45.4 +1.9
HHC                                pP     pP     18 06 04.1 +2.3
HHC                                PP     PP     18 07 32.9 -4.5
HHC                                S      S      18 12 44.8 +3.7
HHC                                sS     sS     18 13 15.1 +2.8
HHC                                pmax   pmax
        comp=Z,25nm,1.1s
HHC                                pmax   pmax
        comp=Z,120nm,6.0s
HHC                                LR     LR
        comp=Z,170nm,12.7s
HHC                                LR     LR
        comp=Z,150nm,14.7s
HHC                                LR     LR
        comp=Z,67nm,14.8s
SMLA  Simla             49.56 323 eP      P      18 05 48.4 -1.2
HNR   Honiara           50.25  96  P      P      18 05 55.1  0.0
        comp=Z,65nm,0.7s,baz=329,slow=5.9,SNR=3.2
HNR                                LR     LR     18 29 10.9
        comp=Z,36nm,18.7s,baz=348,slow=38
INU   Inuyama           50.62  30 eP      P      18 05 56.1 -1.5
        comp=Z,16nm,1.3s
DHRM  DHARAMSHALA       50.88 324 eP      P      18 05 59.3 -0.6
DHRM                               IAmb   IAmb   18 06 00.5
        comp=Z,11nm,0.8s
MAJO  Matsushiro        52.15  30 eP      P      18 06 07.2 -1.8
        comp=Z,9.3nm,0.7s
MAJO                              ePcP    PcP    18 07 21.0 +1.1
MAJO  Matsushiro        52.15  30d iP     P      18 06 07.4 -1.6
MAJO                               pmax   pmax
        comp=Z,8.0nm,0.6s
MAT   Matsushiro        52.15  30  P      P      18 06 06.9 -2.1
MJAR  Matsushiro Arr    52.15  30  P      P      18 06 07.4 -1.6
        comp=Z,9.5nm,0.7s,baz=208,slow=8.3,SNR=34
MJAR                               PcP    PcP    18 07 21.0 +1.0
        comp=Z,2.7nm,0.7s,baz=202,slow=5.7,SNR=5.6
MJB9  Matsu-Tunnel      52.16  30 eP      P      18 06 07.4 -1.6
        comp=Z,9.4nm,0.7s
NIL   Nilore            53.68 323 eP      P      18 06 19.1 -1.1
        comp=Z,17nm,0.6s
NIL                               ePcP    PcP    18 07 26.0 +0.2
NIL   Nilore            53.68 323 eP      P      18 06 19.2 -1.1
NIL                               e              18 07 26.0
NIL                                pmax   pmax
        comp=Z,17nm,0.6s
CN2   Changchun         53.75  15 eP      P      18 06 22.3 +1.7
CN2                                pmax   pmax
        comp=Z,10.0nm,0.5s
WMQ   Urumqi            55.20 341  P      P      18 06 32.3 +1.1
WMQ                                sP     sP     18 06 59.8 +1.6
WMQ                                PcP    PcP    18 07 31.6 +0.2
WMQ                                pmax   pmax
        comp=Z,17nm,0.6s
WMQ                                pmax   pmax
        comp=Z,110nm,4.9s
WMQ                                LR     LR
        comp=Z,230nm,26.7s
WMQ                                LR     LR
        comp=Z,340nm,31.1s
WMQ                                LR     LR
        comp=Z,200nm,28.1s
SONA0 Songino Array     55.75 358 eP      P      18 06 34.7 -0.5
SONA0                             ePcP    PcP    18 07 33.5  0.0
SONA0                             eScP    ScP    18 11 25.3 -0.9
SONA0                             e              18 33 04.9
SONM  Songino Array     55.75 358  P      P      18 06 34.7 -0.5
        comp=Z,2.4nm,0.5s,baz=178,slow=8.6,SNR=21
SONM                               PcP    PcP    18 07 33.5  0.0
        comp=Z,4.0nm,0.6s,baz=176,slow=3.7,SNR=10.0
SONM                               ScP    ScP    18 11 25.3 -0.9
        comp=Z,0.8nm,0.7s,baz=134,slow=4.2,SNR=2.8
SONM                               LR     LR     18 33 04.9
        comp=Z,97nm,19.7s,baz=178,slow=39
ULN   Ulaanbaatar       55.76 358 eP      P      18 06 34.8 -0.4
        comp=Z,2.7nm,0.6s
ULN   Ulaanbaatar       55.76 358⇑eP      P      18 06 34.6 -0.6
ULN                                pmax   pmax
        comp=Z,3.0nm,0.7s
SONA1 Songino Array     55.76 358 eP      P      18 06 35.1 -0.1
SONA1                             ePcP    PcP    18 07 33.5 -0.1
USRK  Ussuriysk Ar.     56.03  20  P      P      18 06 36.3 -0.7
        comp=Z,1.3nm,0.6s,baz=175,slow=7.5
USRK                               LR     LR     18 33 52.8
        comp=Z,30nm,18.0s,baz=179,slow=40
KSH   Kashi             56.45 330 eP      P      18 06 38.8 -1.5
KSH                               esP     sP     18 07 07.1 -0.2
KSH                               ePcP    PcP    18 07 35.4 -1.1
KSH                                S      S      18 14 18.1 -7.9
KSH                                pmax   pmax
        comp=Z,5.0nm,0.6s
KSH                                pmax   pmax
        comp=Z,94nm,5.2s
DZM   Mont Dzumac       56.79 111  LR     LR     18 32 55.4
        comp=Z,70nm,18.2s,baz=227,slow=38
KBL   Kabul             56.86 321 eP      P      18 06 42.0 -1.4
        comp=Z,4.9nm,0.6s
KBL   Kabul             56.86 321 eP      P      18 06 42.0 -1.4
KBL                                pmax   pmax
        comp=Z,5.0nm,0.6s
PRZ   Przheval’sk       57.62 333 eP      P      18 06 48.9 +0.3
        comp=Z,8.4nm,0.6s
PRZ   Przheval’sk       57.62 333 eP      P      18 06 48.9 +0.3
PRZ                                pmax   pmax
        comp=Z,8.0nm,0.6s
WSAR  Wadi Sarin        58.34 304  P      P      18 06 53.9 +0.2
        comp=Z,11nm,0.7s,baz=162,slow=8.0,SNR=21
KZA   Kyzart            58.75 331  P      P      18 06 57.0 +0.3
        SNR=6.4
TKM2  Tokmak 2          59.23 332  P      P      18 06 59.1 -0.7
        SNR=38
KBK   Karagaybulak      59.34 331  P      P      18 07 00.3 -0.2
        SNR=10
AML   Almayashu         59.55 330  P      P      18 07 01.8 -0.5
        SNR=5.9
FRU1  Bishkek           59.61 331 eP      P      18 07 01.9 -0.3
        comp=Z,9.8nm,0.6s
MK01  Makanchi Array    59.61 339 eP      P      18 07 00.5 -1.7
MK01                              ePcP    PcP    18 07 48.3 -0.4
MK31  Makanchi Array    59.64 339 eP      P      18 07 00.4 -1.9
MK31                              ePcP    PcP    18 07 48.9 +0.1
MK31  Makanchi Array    59.64 339 eP      P      18 07 00.4 -1.9
MK31                              e              18 07 48.9
MK32  Makanchi Array    59.64 339 eP      P      18 07 01.0 -1.3
MK32                              ePcP    PcP    18 07 49.1 +0.3
MK32                              e              18 37 31.3
MKAR  Makanchi Array    59.64 339  P      P      18 07 01.0 -1.3
        comp=Z,7.4nm,0.4s,baz=153,slow=6.3,SNR=95
MKAR                               PcP    PcP    18 07 49.1 +0.3
        comp=Z,4.5nm,0.6s,baz=139,slow=6.7,SNR=5.9
MKAR                               LR     LR     18 37 31.3
        comp=Z,44nm,19.3s,baz=160,slow=41
MKAR  Makanchi Array    59.64 339 eP      P      18 07 00.7 -1.6
        comp=Z,66nm,0.4s
MKAR                              ePcP    PcP    18 07 49.0 +0.3
MKAR  Makanchi Array    59.64 339 eP      P      18 07 00.7 -1.6
MKAR                              e              18 07 49.0
MKAR                               pmax   pmax
        comp=Z,66nm,0.4s
MAKZ  Makanchi          59.76 339 eP      P      18 07 03.3 +0.1
        comp=Z,2.0nm,0.9s
MAKZ                              ePcP    PcP    18 07 49.6 +0.3
MAKZ  Makanchi          59.76 339 eP      P      18 07 03.3 +0.1
MAKZ                              e              18 07 49.6
MAKZ                               pmax   pmax
        comp=Z,2.0nm,0.9s
EKS2  Erkin-Say         59.91 330  P      P      18 07 04.3  0.0
        SNR=17
ASAJ  Asahikawa         60.17  27  P      P      18 07 05.0 -0.9
        comp=Z,9.5nm,0.6s,baz=175,slow=11,SNR=18
ASAJ                               LR     LR     18 32 44.4
        comp=Z,55nm,22.0s,baz=206,slow=36
KLR   Kul’dur           60.45  17d iP     P      18 07 06.6 -1.2
DGZ   Jazzator, Alta    60.59 344 i P     P      18 07 08.2 -0.8
DGZ                                pmax   pmax
        comp=Z,10.0nm,0.6s
ABPO  Ambohimpanom      60.84 253 eP      P      18 07 11.4 +0.1
        comp=Z,7.3nm,1.0s
ABPO  Ambohimpanom      60.84 253 eP      P      18 07 11.4 +0.1
ABPO                               pmax   pmax
        comp=Z,7.0nm,1.0s
OPO   Ambohidratompo    60.87 253  P      P      18 07 12.7 +1.2
        comp=Z,6.2nm,0.8s,baz=69,slow=8.4,SNR=7.8
UOSS  Minazif           61.08 304 eP      P      18 07 12.2 -0.4
        comp=Z,35nm,1.4s
CRZF  Crozet Islands    61.84 221 eP      P      18 07 18.3 +0.9
        comp=Z,229nm,1.4s
KK31  Karatay Array     61.86 329 eP      P      18 07 16.6 -0.9
KK31  Karatay Array     61.86 329 eP      P      18 07 16.6 -0.9
KKAR  Karatay Array     61.86 329 eP      P      18 07 16.6 -0.9
KKAR  Karatay Array     61.86 329 eP      P      18 07 16.6 -0.9
YSS   Yuzh-Sakhalins    62.45  25 eP      P      18 07 20.8 -0.5
        comp=Z,20nm,1.0s
YSS   Yuzh-Sakhalins    62.45  25 eP      P      18 07 20.8 -0.5
YSS                                pmax   pmax
        comp=Z,20nm,1.0s
MLZ   Mavora Lakes      62.71 137 eP      P      18 07 22.7 -0.5
        comp=Z,37nm,1.5s
ZEA   Zeya              63.50  12 eP      P      18 07 27.7 -0.4
ZEA                                pmax   pmax
        comp=Z,20nm,1.0s
KURBB Kurchatov Arra    64.21 339  P      P      18 07 31.5 -1.4
        comp=Z,1.8nm,0.4s,baz=155,slow=5.7,SNR=26
KURBB                              PcP    PcP    18 08 07.1  0.0
        comp=Z,4.2nm,0.6s,baz=148,slow=3.4,SNR=22
KURK  Kurchatov         64.25 339 eP      P      18 07 31.5 -1.6
KURK                              ePcP    PcP    18 08 06.3 -1.0
KURK  Kurchatov         64.25 339 eP      P      18 07 31.5 -1.6
KURK                              e              18 08 06.3
RPZ   Rata Peaks        64.29 135 eP      P      18 07 34.5 +0.8
        comp=Z,44nm,1.4s
OXZ   Oxford            64.89 134 eP      P      18 07 38.4 +0.8
        comp=Z,24nm,1.2s
ZAA0  Zalesovo Array    65.13 344 eP      P      18 07 37.1 -1.7
        comp=Z,8.3nm,1.3s
ZALV  Zalesovo Beam     65.13 344  P      P      18 07 36.9 -1.9
        comp=Z,4.3nm,0.3s,baz=156,slow=5.6,SNR=24
ZALV                               PcP    PcP    18 08 08.9 -2.0
        comp=Z,1.8nm,0.3s,baz=144,slow=4.3,SNR=4.8
ZALV                               LR     LR     18 38 20.3
        comp=Z,33nm,19.1s,baz=70,slow=38
ZAA1  Zalesovo Array    65.13 344 eP      P      18 07 36.9 -1.9
ZAA1                              ePcP    PcP    18 08 08.9 -2.0
ZAA1                              e              18 38 20.3
THZ   Tophouse          65.18 132 eP      P      18 07 40.9 +1.4
        comp=Z,25nm,1.0s
MQZ   McQueen’s Vall    65.41 134 eP      P      18 07 42.5 +1.6
        comp=Z,30nm,1.2s
TYV   Tymovskoe         65.52  23 eP      P      18 07 39.5 -1.8
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TYV				pmax	pmax		
	comp=Z,15nm,2.0s						
BOD	Bodaibo	65.82	3	eP	P	18 07 42.6	-0.6
BOD				pmax	pmax		
	comp=Z,4.0nm,1.3s						
GEYT	Alibeck	65.96	318	P	P	18 07 43.5	-1.1
	comp=Z,5.1nm,0.5s,baz=174,slow=3.0,SNR=16						
GEYT				LR	LR	18 38 07.3	
	comp=Z,22nm,21.2s,baz=240,slow=37						
GYA0B	ALIBECK ARRAY	65.96	318	eP	P	18 07 44.2	-0.3
	comp=Z,11nm,0.5s						
HIZ	Hauiti	66.07	128	eP	P	18 07 46.8	+1.5
	comp=Z,104nm,1.4s						
SNZO	South Karori	66.42	132	eP	P	18 07 47.7	+0.3
	comp=Z,150nm,1.3s						
MAW	Mawson	66.92	198	P	P	18 07 51.1	+1.0
	comp=Z,4.8nm,0.8s,baz=51,slow=6.7,SNR=7.4						
MAW				LR	LR	18 29 49.2	
	comp=Z,90nm,21.4s,baz=60,slow=29						
MAW	Mawson	66.92	198	eP	P	18 07 50.6	+0.5
	comp=Z,1.0nm,0.7s						
MAW	Mawson	66.92	198	eP	P	18 07 50.6	+0.5
MAW				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BKZ	Black Stump Fm	67.43	129	eP	P	18 07 54.9	+0.9
	comp=Z,26nm,1.3s						
BFZ	Birch Farm	67.47	131	eP	P	18 07 54.2	+0.1
	comp=Z,38nm,1.2s						
URZ	Urewera	67.79	128	eP	P	18 07 56.7	+0.6
	comp=Z,8.0nm,0.9s						
DAMY	Dhamar	67.99	289	eP	P	18 07 59.8	+1.6
	comp=Z,15nm,0.8s						
MXZ	Matakaoa Point	68.64	127	eP	P	18 08 02.8	+1.2
	comp=Z,92nm,1.3s						
ATD	Arta Tunnel	68.70	286	P	P	18 08 03.6	+1.2
	comp=Z,3.9nm,0.4s,baz=38,slow=18,SNR=3.8						
ATD				LR	LR	18 35 15.3	
	comp=Z,41nm,18.7s,baz=60,slow=33						
BVA0	Borovoye Array	69.20	336	eP	P	18 08 00.8	-3.8
BVA0				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BVAR	Borovoye Array	69.20	336	P	P	18 08 03.4	-1.2
	comp=Z,6.3nm,0.6s,baz=140,slow=8.2,SNR=44						
BVAR				LR	LR	18 41 16.7	
	comp=Z,66nm,20.0s,baz=138,slow=38						
BRVK	Borovoye	69.27	336	eP	P	18 08 04.2	-0.8
	comp=Z,3.6nm,0.7s						
BRVK	Borovoye	69.27	336c	iP	P	18 08 04.5	-0.5
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SKR	Severo-Kuril’s	71.26	29	eP	P	18 08 16.8	-0.4
AB31	Akbulak array	71.42	328	eP	P	18 08 16.8	-1.4
AB31				pmax	pmax		
	comp=Z,6.0nm,0.5s						
ABKAR	Akbulak array	71.42	328	eP	P	18 08 16.7	-1.5
YAK	Yakutsk	71.73	10	eP	P	18 08 18.3	-1.5
	comp=Z,58nm,0.6s						
YAK	Yakutsk	71.73	10	eP	P	18 08 17.4	-2.4
YAK				pmax	pmax		
	comp=N,3.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,20nm,0.8s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.3s						
AKTO	Aktyubinsk	73.13	329	P	P	18 08 27.6	-0.8
	comp=E,2.2nm,0.6s,baz=111,slow=4.4,SNR=9.3						
AKTO				LR	LR	18 45 21.3	
	comp=E,48nm,19.5s,baz=138,slow=40						
AKTO	Aktyubinsk	73.13	329	P	P	18 08 29.0	+0.6
AKTO				pmax	pmax		
	comp=Z,3.0nm,0.6s						
PEA0B	Petropavlovsk-	73.57	28	eP	P	18 08 30.4	-0.6
	comp=Z,8.9nm,1.0s						
PETK	Petropavlovsk-	73.57	28	P	P	18 08 30.6	-0.3
	comp=Z,6.0nm,0.6s,baz=199,slow=2.2						
PEA1	Petropavlovsk-	73.57	28	eP	P	18 08 30.6	-0.3
PET	Petropavlovsk	73.96	29	eP	P	18 08 32.5	-0.7
	comp=Z,10nm,0.7s						
PET	Petropavlovsk	73.96	29	eP	P	18 08 32.5	-0.7
PET				pmax	pmax		
	comp=Z,10.0nm,0.7s						
VNDA	Vanda	74.51	170	P	P	18 08 36.9	+0.8
	comp=Z,1.7nm,0.7s,baz=318,slow=7.6,SNR=12						
VNDA				LR	LR	18 37 14.1	
	comp=Z,46nm,21.7s,baz=311,slow=32						
VNDA	Vanda	74.51	170	eP	P	18 08 36.2	+0.1
VNDA				ePcP	P	18 08 36.6	+0.5
VNDA	Vanda	74.51	170	eP	P	18 08 36.2	+0.1
AKT	Akhty	74.68	317	eP	P	18 08 37.5	-0.3
AKT				e		18 08 50.0	
AKT				e*PP	PcP	18 08 53.0	+1.3
AKT				e		18 11 23.9	
AKT				eS	S	18 18 06.2	-2.2
AKT				pmax	pmax		
	comp=Z,9.0nm,0.6s						
MA2	Magadan	75.18	20	eP	P	18 08 40.1	0.0
	comp=Z,30nm,1.3s						
MA2	Magadan	75.18	20	eP	P	18 08 40.1	0.0
MA2				pmax	pmax		
	comp=Z,30nm,1.3s						
SYO	Syowa Base	75.19	200⇑	eP	P	18 08 40.4	+0.3
SYO	Syowa Base	75.19	200⇓	ePcP	PcP	18 08 57.6	+4.4
GNI	Garni	76.19	315	P	P	18 08 47.1	+0.5
	comp=Z,4.9nm,0.5s,baz=210,slow=14,SNR=3.8						
GNI				LR	LR	18 46 46.6	
	comp=Z,30nm,18.5s,baz=98,slow=39						
ARU	Arti	76.51	334	eP	P	18 08 47.4	-0.4
	comp=Z,3.7nm,0.6s						
ARU	Arti	76.51	334c	iP	P	18 08 46.6	-1.2
ARU				*PP	pP	18 09 03.6	-3.8
ARU						18 11 34.1	
ARU				S	S	18 18 26.3	-1.4
ARU				pmax	pmax		
	comp=Z,4.0nm,0.7s						
GROC	Groznyy	76.71	318	eP	P	18 08 49.1	-0.1
GROC				e		18 09 00.0	
GROC				e*PP	pP	18 09 10.8	+1.9
GROC				eS	S	18 18 29.0	-1.4
GROC				e		18 18 56.0	
GROC				pmax	pmax		
	comp=Z,12nm,0.4s						
TBLG	Delisi	76.82	316	eP	P	18 08 50.0	+0.1
	comp=Z,18nm,0.7s						
TBLG	Delisi	76.82	316	eP	P	18 08 50.0	+0.1
TBLG				pmax	pmax		
	comp=Z,18nm,0.7s						
AKH	Akhalkalaki	77.56	315	eP	P	18 08 54.8	+0.6
	comp=Z,8.3nm,1.0s						
AKH	Akhalkalaki	77.56	315	eP	P	18 08 54.8	+0.6
AKH				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ZEI	Tsey	77.81	317	eP	P	18 08 54.5	-1.2
ZEI				pmax	pmax		
	comp=Z,11nm,0.6s						
SEY	Seymchan	78.17	19	P	P	18 08 56.7	-0.1
	comp=Z,3.3nm,0.5s,baz=253,slow=2.7,SNR=27						
SEY	Seymchan	78.17	19⇑	eP	P	18 08 57.0	+0.1
NCK	Nalchik	78.30	317⇓	eP	P	18 08 58.4	+0.3
NCK				pmax	pmax		
	comp=Z,17nm,0.4s						
NEY	Neytrino	78.79	317⇓	eP	P	18 09 01.1	+0.1
NEY				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KBZ	Khabaz	78.86	317	P	P	18 09 01.1	+0.1
	comp=Z,6.8nm,0.8s,baz=107,slow=5.0,SNR=13						
KBZ				LR	LR	18 48 06.9	
	comp=Z,12nm,20.3s,baz=113,slow=39						
KIV	Kislovodsk	79.08	318	eP	P	18 09 02.3	-0.2
	comp=Z,11nm,0.7s						
KIV	Kislovodsk	79.08	318c	eP	P	18 09 02.1	-0.4
KIV				e		18 09 09.2	
KIV				e		18 12 01.0	
KIV				ePPP	PPP	18 13 48.4	
KIV				pmax	pmax		
	comp=Z,11nm,0.7s						
KIV				MLR	MLR		
	comp=Z,15nm,15.0s						
LSZ	Lusaka	79.17	256	eP	P	18 09 03.6	0.0
	comp=Z,5.5nm,0.8s						
LSZ	Lusaka	79.17	256	eP	P	18 09 03.6	0.0
LSZ				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ASF	Jabal al Asfar	79.48	305	P	P	18 09 05.6	+0.7
	comp=Z,3.6nm,0.7s,baz=73,slow=3.7,SNR=6.5						
MIDW	Midway	79.53	59	eP	P	18 09 05.0	-0.2
	comp=Z,65nm,1.0s						
TIXI	Tiksi	80.66	6	eP	P	18 09 08.5	-1.8
	comp=Z,27nm,0.6s						
TIXI	Tiksi	80.66	6c	iP	P	18 09 08.6	-1.7
TIXI				pmax	pmax		
	comp=Z,26nm,0.7s						
LBTB	Lobatse	80.75	246	eP	P	18 09 12.9	+0.9
	comp=Z,7.1nm,0.8s						
BOSA	Boshof	80.78	242	P	P	18 09 12.9	+0.8
	comp=Z,4.8nm,0.6s,baz=109,slow=4.9,SNR=15						
BOSA				LR	LR	18 38 41.4	
	comp=Z,63nm,19.4s,baz=81,slow=31						
BOSA	Boshof	80.78	242	eP	P	18 09 12.7	+0.6
	comp=Z,11nm,1.3s						
BOSA	Boshof	80.78	242	eP	P	18 09 12.7	+0.6
BOSA				pmax	pmax		
	comp=Z,11nm,1.3s						
MMAI	Mount Meron Ar	80.92	305	P	P	18 09 13.7	+1.0
	comp=Z,4.5nm,0.5s,baz=98,slow=10,SNR=8.9						
MMAI				LR	LR	18 46 36.2	
	comp=Z,18nm,20.6s,baz=180,slow=37						
QSPA	South Pole Qui	81.89	180	P	P	18 09 18.0	+0.8
	comp=Z,3.7nm,0.8s,baz=302,slow=1.8,SNR=11						
QSPA				LR	LR	18 44 26.2	
	comp=Z,52nm,19.3s,baz=302,slow=35						
QSPA	South Pole Qui	81.89	180	eP	P	18 09 18.0	+0.8
	comp=Z,9.9nm,1.3s						
QSPA				e		18 44 26.2	
VRH	Novokhopyorsk	82.48	324	eP	P	18 09 19.5	-0.8
VRH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ANN	Anapa	82.91	317	eP	P	18 09 20.3	-2.3
ANN				e*PP	pP	18 09 42.6	+0.1
ANN				ePPP	PPP	18 14 23.8	
ANN				eS	S	18 19 34.2	-1.4
ANN				pmax	pmax		
	comp=Z,16nm,1.3s						
CSS	Mathiatis	83.10	307	eP	P	18 09 24.2	+0.2
	comp=Z,13nm,0.9s						
VORD	Divnogorie	83.81	323	eP	P	18 09 24.5	-2.7
VORD				pmax	pmax		
	comp=Z,4.0nm,0.6s						
VSR	Storozhevoye	83.98	324	eP	P	18 09 27.0	-1.0
VSR				pmax	pmax		
	comp=Z,20nm,0.6s						
BR101	Keskin Array S	84.11	311	eP	P	18 09 28.8	-0.4
BR101			⇑	e		18 50 27.4	
BR131	Keskin Array S	84.11	311	eP	P	18 09 28.5	-0.6
BRTR	Keskin Array B	84.11	311	P	P	18 09 28.8	-0.4
	comp=Z,8.2nm,0.6s,baz=140,slow=6.8,SNR=54						
BRTR				LR	LR	18 50 27.4	
	comp=Z,21nm,18.2s,baz=100,slow=38						
SUR	Sutherland	84.27	238	eP	P	18 09 32.2	+1.9
	comp=Z,56nm,1.3s						
ANTO	Ankara	84.77	311	eP	P	18 09 31.9	-0.5
	comp=Z,12nm,1.0s						
ANTO	Ankara	84.77	311	eP	P	18 09 31.9	-0.5
ANTO				pmax	pmax		
	comp=Z,12nm,1.0s						
BR231	Keskin MP Arra	84.78	311	eP	P	18 09 32.7	+0.2
PRGR	Permogore	84.94	335	eP	P	18 09 31.8	-0.8
PRGR				pmax	pmax		
	comp=Z,23nm,0.6s						
SIM	Simferopol’	85.20	317	eP	P	18 09 34.9	+0.6
SIM				pmax	pmax		
	comp=Z,15nm,0.7s						
ISP	Isparta	85.99	309	eP	P	18 09 38.9	+0.3
	comp=Z,8.1nm,0.6s						
ISP	Isparta	85.99	309	eP	P	18 09 38.9	+0.3
ISP				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KIWB	Kanaga Island	86.45	37	eP	P	18 09 39.3	-1.1
OBN	Obninsk	86.78	327	eP	P	18 09 40.8	-1.0
	comp=Z,27nm,0.7s						
OBN	Obninsk	86.78	327c	iP	P	18 09 41.3	-0.5
OBN				e		18 13 03.9	
OBN				pmax	pmax		
	comp=Z,26nm,0.6s						
GSTR	Great Sitkin T	87.17	37	eP	P	18 09 42.7	-1.2
KLMR	Klimovskoe	87.30	333	eP	P	18 09 41.6	-2.7
KLMR				pmax	pmax		
	comp=Z,26nm,1.4s						
KLMR	Klimovskoe	87.30	333	eP	P	18 09 41.7	-2.6
KLMR				AMP		18 09 45.3	
	comp=Z,26nm,1.4s						
MANT	Manisa	87.65	309	eP	P	18 09 46.7	-0.1
	comp=Z,48nm,0.3s						
KARP	Karpathos	88.15	306	eP	P	18 09 48.0	-1.0
	comp=Z,52nm,0.7s						
ATKA	Atka Island	88.31	37	eP	P	18 09 48.5	-0.7
	comp=Z,28nm,1.2s						
TSUM	Tsumeb	88.78	251	eP	P	18 09 53.6	+1.1
	comp=Z,7.4nm,0.8s						
TIRR	Tirgusor	89.02	315	eP	P	18 09 52.9	+0.1
	comp=Z,17nm,1.2s						
TIRR	Tirgusor	89.02	315	eP	P	18 09 52.9	+0.1
TIRR				pmax	pmax		
	comp=Z,17nm,1.2s						
SNAA	Sanae	89.09	197	P	P	18 09 54.1	+1.4
SNAA	Sanae	89.09	197	P	P	18 09 54.2	+1.5
	comp=Z,3.4nm,0.7s,baz=141,slow=6.2,SNR=28						
SNAA				LR	LR	18 45 23.2	
	comp=Z,69nm,21.1s,baz=284,slow=32						
SNAA	Sanae	89.09	197	eP	P	18 09 54.0	+1.2
	comp=Z,5.2nm,0.9s						
SNAA	Sanae	89.09	197⇓	eP	P	18 09 53.3	+0.5
SANT	Santorini	89.66	307	eP	P	18 09 57.3	+1.2
	comp=Z,67nm,1.4s						
AKASG	Malin Array Be	89.84	321	P	P	18 09 54.5	-2.0
	comp=Z,1.9nm,0.5s,baz=91,slow=4.7,SNR=9.2						
AKASG				LR	LR	18 55 40.0	
	comp=Z,14nm,18.9s,baz=105,slow=39						
AKBB	Malin Array Si	89.84	321	eP	P	18 09 55.5	-1.0
	comp=Z,4.1nm,0.6s						
KIEV	Kiev	89.85	321	eP	P	18 09 55.0	-1.5
	comp=Z,4.1nm,0.6s						
KIEV	Kiev	89.85	321c	iP	P	18 09 56.0	-0.5
KIEV				pmax	pmax		
	comp=Z,7.0nm,1.7s						
AK11	Malin Array Si	89.87	321	eP	P	18 09 54.7	-1.9
IDI	Anoyia	89.92	306	P	P	18 09 58.0	+0.7
	comp=Z,7.5nm,0.6s,baz=96,slow=12,SNR=24						
IDI	Anoyia	89.92	306	eP	P	18 09 57.7	+0.3
	comp=Z,8.6nm,0.7s						
ALN	Alexandroupoli	90.02	311	eP	P	18 09 57.9	+0.3
	comp=Z,9.1nm,1.4s						
ALN	Alexandroupoli	90.02	311	eP	P	18 09 57.9	+0.3
ALN				pmax	pmax		
	comp=Z,9.0nm,1.4s						
MLR	Muntele Rosu	90.94	316	P	P	18 10 01.9	0.0
	comp=Z,0.5nm,0.6s,baz=249,slow=8.6,SNR=4.1						
VNA1	Neumayer--Stat	91.12	197	P	P	18 10 02.5	+0.4
VNA3	Neumayer Olymp	91.23	196	P	P	18 10 03.8	+1.1
BUR04	Bucovina Ar. S	91.81	318	eP	P	18 10 06.1	+0.1
BUR08	Bucovina Ar. S	91.83	318	eP	P	18 10 05.8	-0.1
VTS	Vitosha	92.40	313	eP	P	18 10 08.2	-0.6
	comp=Z,3.1nm,0.6s						
VTS	Vitosha	92.40	313	eP	P	18 10 08.2	-0.6
VTS				pmax	pmax		
	comp=Z,3.0nm,0.6s						
LIT	Litokhoron	92.57	310	eP	P	18 10 08.6	-0.9
	comp=Z,8.9nm,0.6s						
LIT	Litokhoron	92.57	310	eP	P	18 10 08.6	-0.9
LIT				pmax	pmax		
	comp=Z,9.0nm,0.6s						
VSU	Vasula	92.86	329c	iP	P	18 10 09.7	-0.6
VSU				pmax	pmax		
	comp=Z,47nm,0.7s						
FIA1	FINESS Array S	93.72	331	eP	P	18 10 13.9	-0.3
FIA0	FINESS Array S	93.72	331	eP	P	18 10 14.0	-0.2
FIA0				e		18 56 41.7	
FIA0	FINESS Array S	93.72	331	eP	P	18 10 14.0	-0.2
FINES	FINESS Array B	93.72	331	P	P	18 10 14.0	-0.2
	comp=Z,4.2nm,0.8s,baz=111,slow=4.3,SNR=9.6						
FINES				LR	LR	18 56 41.7	
	comp=Z,42nm,19.1s,baz=106,slow=38						
ARA0	ARCESS Array S	95.29	339	eP	P	18 10 20.2	-1.1
ARA0				e		18 58 33.9	
ARCES	ARCESS Array B	95.29	339	P	P	18 10 20.2	-1.1
	comp=Z,1.8nm,0.7s,baz=101,slow=6.3,SNR=11						
ARCES				LR	LR	18 58 33.9	
	comp=Z,59nm,18.6s,baz=89,slow=39						
KIP	Kipapa	95.60	69⇓	eP	P	18 10 22.2	-1.5
KLNR	Kaliningrad	95.89	324⇑	eP	P	18 10 23.9	-0.4
KLNR				pmax	pmax		
	comp=Z,30nm,0.6s						
SPA0	Spitsbergen Ar	98.44	348	eP	P	18 10 33.8	-1.6
SPITS	Spitsbergen Ar	98.44	348	P	P	18 10 34.3	-1.1
	comp=Z,5.1nm,0.6s,baz=67,slow=3.7,SNR=7.8						
SPITS				LR	LR	19 01 08.5	
	comp=Z,33nm,20.7s,baz=345,slow=39						
GERES	GERESS Array B	99.59	318	P	Pdif	18 10 40.1	-1.1
	comp=Z,0.4nm,0.6s,baz=131,slow=4.3,SNR=3.4						
GERES				LR	LR	19 03 40.7	
	comp=Z,28nm,19.6s,baz=94,slow=40						
HFS	Hagfors	99.66	330	P	Pdif	18 10 40.9	-0.2
	comp=Z,2.9nm,0.6s,baz=123,slow=5.3,SNR=10						
HFS				LR	LR	19 00 45.1	
	comp=Z,32nm,21.7s,baz=111,slow=38						
NB2	NORSAR Subarra	100.86	331	P	Pdif	18 10 45.6	-0.9
	comp=Z,1.2nm,0.7s,baz=93,slow=4.6						
YKA	Yellowknife Ar	117.16	21	PKP	PKPdf	18 15 42.1	-0.1
	comp=Z,1.9nm,0.6s,baz=325,slow=1.5,SNR=12						
KVN	Kaiserville	127.72	46	ePKPdf	PKPdf	18 16 04.7	+1.2
KVN	Kaiserville	127.72	46	ePKIKP	PKPdf	18 16 04.7	+1.2
NV01	Mina Array Sit	127.82	47	ePKPdf	PKPdf	18 16 05.6	+1.8
NVAR	Mina Array Bea	127.82	47	PKP	PKPdf	18 16 05.7	+1.9
	comp=Z,0.9nm,0.7s,baz=267,slow=1.8,SNR=6.2						
HLID	Hailey	128.19	40	ePKPdf	PKPdf	18 16 05.7	+1.4
EGMT	Eagleton	128.43	33	ePKPdf	PKPdf	18 16 05.2	+0.7
BOZ	Bozeman (W)	128.80	36	ePKPdf	PKPdf	18 16 06.8	+1.5
BOZ	Bozeman (W)	128.80	36	ePKIKP	PKPdf	18 16 06.8	+1.5
PD31	Pinedale Array	131.62	38	ePKPdf	PKPdf	18 16 11.3	+0.4
PDAR	Pinedale Array	131.62	38	PKP	PKPdf	18 16 11.3	+0.4
	comp=Z,0.6nm,0.6s,baz=157,slow=2.0,SNR=5.9						
U15A	North Rim	133.00	47	ePKPdf	PKPdf	18 16 15.8	+2.1
ULM	Lac du Bonnet	133.13	22	PKP	PKPdf	18 16 13.4	+0.2
	comp=Z,2.0nm,0.6s,baz=243,slow=4.5,SNR=3.3						
MDND	Maddock	133.52	26	P	PKPdf	18 16 15.4	+1.4
	baz=319						
O20A	White River Ci	133.91	40	ePKPdf	PKPdf	18 16 16.4	+1.2
RSSD	Black Hills	133.98	33	P	PKPdf	18 16 16.1	+0.8
	baz=311						
PV13	Radium Mtn., P	134.59	43	ePKPdf	PKPdf	18 16 18.6	+2.0
B35A	Bob, Littlefor	135.49	22	P	PKPdf	18 16 19.0	+1.4
	baz=327						
C35A	Jirik Farms, M	135.94	22	P	PKPdf	18 16 19.2	+0.7
	baz=326						
G32A	Webster	136.43	27	P	PKPdf	18 16 21.0	+1.4
	baz=320						
EYMN	Ely	136.63	20	P	PKPdf	18 16 21.5	+1.7
	baz=330						
G33A	Ortonville	136.96	27	P	PKPdf	18 16 22.0	+1.5
	baz=322						
D37A	Cotton	136.97	22	P	PKPdf	18 16 22.2	+1.8
	baz=328						
SDCO	Great Sand Dun	137.02	41	P	PKPdf	18 16 22.3	+1.1
	baz=305						
C40A	Isle Royale Na	137.41	18	P	PKPdf	18 16 23.3	+2.0
	baz=333						
ECSD	EROS Data Cent	138.01	28	P	PKPdf	18 16 24.5	+2.0
	baz=320						
E39A	Mellen	138.31	20	P	PKPdf	18 16 25.1	+2.1
	baz=330						
F40A	Park Falls	138.85	20	P	PKPdf	18 16 26.1	+2.2
	baz=330						
H38A	Maiden Rock	139.12	23	P	PKPdf	18 16 26.7	+2.2
	baz=327						
E42A	Champion	139.12	18	P	PKPdf	18 16 26.6	+2.2
	baz=334						
J36A	Seneca 1, Swea	139.35	26	P	PKPdf	18 16 27.0	+2.0
	baz=323						
J36A	Seneca 1, Swea	139.35	26	ePKPpre	PKPpre	18 16 17.9	
J36A				ePKPdf	PKiKP	18 16 27.3	0.0
F41A	Three Lakes	139.35	20	P	PKPdf	18 16 26.9	+2.0
	baz=332						
E43A	Lone Tree Farm	139.44	17	P	PKPdf	18 16 27.3	+2.3
	baz=335						
H39A	Augusta	139.50	22	P	PKPdf	18 16 27.3	+2.1
	baz=328						
K36A	Gilmore City	139.85	27	P	PKPdf	18 16 28.1	+2.2
	baz=322						
H40A	Chili	139.88	22	P	PKPdf	18 16 28.1	+2.2
	baz=329						
F44A	Big Bay de Noc	139.98	17	P	PKPdf	18 16 28.3	+2.4
	baz=336						
I39A	Houston	140.10	23	P	PKPdf	18 16 28.1	+1.8
	baz=327						
I39A	Houston	140.10	23	ePKPpre	PKPpre	18 16 17.7	
I39A				ePKPdf	PKiKP	18 16 27.8	-1.0
K37A	Belmond	140.11	26	P	PKPdf	18 16 28.1	+1.7
	baz=324						
P38A	Dawn	142.65	29	ePKPpre	PKPpre	18 16 27.9	
TX31	Lajitas Ar. Si	142.69	51	ePKPpre	PKPpre	18 16 28.0	
TXAR	Lajitas Array	142.69	51	PKhKP	PKPpre	18 16 28.0	
	comp=Z,2.2nm,0.6s,baz=269,slow=1.8,SNR=24						
PKME	Peaks-Kenny Pk	142.95	358	ePKPpre	PKPpre	18 16 28.2	
WMOK	Wichita Mounta	143.16	40	P	PKPbc	18 16 29.2	0.0
	baz=310						
WMOK	Wichita Mounta	143.16	40	ePKPpre	PKPbc	18 16 29.0	-0.2
WMOK	Wichita Mounta	143.16	40	ePKIKP	PKPbc	18 16 29.0	-0.2
CPUP	Villa Florida	143.31	201	PKP	PKPbc	18 16 30.4	+0.6
	comp=Z,2.0nm,0.7s,baz=148,slow=1.3,SNR=4.8						
CPUP	Villa Florida	143.31	201	ePKPpre	PKPbc	18 16 30.0	+0.2
CPUP	Villa Florida	143.31	201	ePKIKP	PKPbc	18 16 30.0	+0.3
Q39A	Willow Grove F	143.37	29	P	PKPbc	18 16 29.2	-0.4
	baz=322						
P40A	Paris	143.42	28	P	PKPbc	18 16 29.7	+0.1
	baz=323						
O41A	Passleys Farm,	143.47	26	P	PKPbc	18 16 29.7	-0.1
	baz=326						
P41A	Barry, Barry	143.75	27	P	PKPab	18 16 30.2	+0.3
	baz=325						
Q40A	Laux Farm, Aux	143.84	28	P	PKPbc	18 16 30.8	-0.1
	baz=323						
ABTX	Abilene, Hawle	143.89	43	ePKPdf	PKPbc	18 16 32.3	+1.0
R39A	Chumby, Stover	143.90	30	P	PKPab	18 16 30.8	+0.3
	baz=321,SNR=7.0						
O43A	Sugar Creek Fa	143.99	24	P	PKPbc	18 16 31.1	-0.3
	baz=328						
P42A	Winchester	144.14	26	P	PKPab	18 16 31.4	+0.1
	baz=326						
P42A	Winchester	144.14	26	ePKPdf	PKPbc	18 16 31.6	-0.2
NCB	Newcomb	144.16	4	ePKPdf	PKPab	18 16 31.5	+0.2
TUL1	Leonard	144.19	36	P	PKPbc	18 16 32.0	-0.1
	baz=315						
TUL1	Leonard	144.19	36	ePKPdf	PKPbc	18 16 32.5	+0.4
N45A	Kentland	144.20	22	P	PKPbc	18 16 32.2	+0.2
	baz=331						
T38A	Diamond	144.22	33	P	PKPbc	18 16 32.0	-0.2
	baz=318,SNR=7.2						
S39A	Bolivar	144.24	31	P	PKPbc	18 16 32.3	+0.1
	baz=320						
S39A	Bolivar	144.24	31	ePKPdf	PKPbc	18 16 32.2	0.0
Q41A	Truxton	144.26	28	P	PKPbc	18 16 32.3	+0.1
	baz=324						
R40A	Maddies Statio	144.30	29	P	PKPbc	18 16 32.3	-0.1
	baz=322,SNR=14						
R40A	Maddies Statio	144.30	29	ePKPdf	PKPab	18 16 32.0	0.0
O44A	Mansfield	144.44	23	P	PKPbc	18 16 32.6	-0.1
	baz=329						
P43A	Skaggs, Pawnee	144.45	25	P	PKPbc	18 16 32.8	+0.1
	baz=327						
Q42A	Golden Eagle	144.61	27	P	PKPbc	18 16 33.4	+0.1
	baz=325						
O45A	Potomac	144.65	22	P	PKPbc	18 16 33.6	+0.3
	baz=330						
T39A	Clever	144.72	32	P	PKPbc	18 16 33.9	+0.2
	baz=319						
R41A	Rosebud	144.72	28	P	PKPbc	18 16 33.8	+0.2
	baz=323						
S40A	Lebanon	144.72	30	P	PKPab	18 16 33.6	0.0
	baz=321,SNR=24						
SFIN	Lafayette	144.77	22	P	PKPbc	18 16 34.0	+0.3
	baz=332						
SFIN	Lafayette	144.77	22	ePKPdf	PKPdf	18 16 34.3	-0.3
ACCN	Adirondack Com	144.78	3	ePKPdf	PKPab	18 16 33.5	-0.1
Q43A	New Douglas	144.96	26	P	PKPbc	18 16 34.6	+0.2
	baz=326						
P44A	Sand Creek, Wi	144.97	24	P	PKPbc	18 16 34.7	+0.2
	baz=328						
MMNY	Mt. Morris Dam	144.97	9	ePKPbc	PKPab	18 16 34.2	-0.1
HHAR	Hobbs	144.97	33	ePKPbc	PKPbc	18 16 34.3	-0.2
SLM	Saint Louis	144.97	27	ePKPbc	PKPbc	18 16 33.9	-0.5
SLM	Saint Louis	144.97	27	ePKIKP	PKPbc	18 16 33.9	-0.5
CCM	Cathedral Cave	144.98	29	P	PKPdf	18 16 35.5	+0.4
	baz=323						
CCM	Cathedral Cave	144.98	29	ePKPbc	PKPdf	18 16 35.3	+0.2
CCM	Cathedral Cave	144.98	29	ePKIKP	PKPdf	18 16 35.3	+0.2
JCT	Junction City	145.00	47	P	PKPdf	18 16 36.1	+0.6
	baz=304						
JCT	Junction City	145.00	47	ePKPbc	PKPdf	18 16 36.0	+0.6
JCT	Junction City	145.00	47	ePKIKP	PKPdf	18 16 36.0	+0.6

R42A	**Luebbering** baz=324	**145.01**	**28**	P	**PKPdf**	**18 16 35.0**	**-0.2**
T40A	**Mansfield** baz=321	**145.06**	**31**	P	**PKPbc**	**18 16 34.8**	**0.0**
S41A	**Jillco Farms,** baz=322	**145.11**	**30**	P	**PKPab**	**18 16 35.1**	**+0.1**
U39A	**Green Forest** baz=319	**145.14**	**33**	P	**PKPbc**	**18 16 35.1**	**0.0**
ERPA	**Erie** baz=344	**145.19**	**12**	P	**PKPbc**	**18 16 35.1**	**0.0**
ERPA	**Erie**	**145.19**	**12**	*e*PKPbc	**PKPbc**	**18 16 35.1**	**0.0**
O47A	**Sheridan** baz=333	**145.22**	**21**	P	**PKPab**	**18 16 35.3**	**0.0**
P45A	**Graceland, Par** baz=330	**145.26**	**23**	P	**PKPdf**	**18 16 35.8**	**+0.2**
P45A	**Graceland, Par**	**145.26**	**23**	*e*PKPbc	**PKPab**	**18 16 35.5**	**0.0**
Q44A	**Meyer Farm, Va** baz=328	**145.28**	**25**	P	**PKPdf**	**18 16 35.7**	**+0.1**
P46A	**Rosedale** baz=331	**145.39**	**22**	P	**PKPab**	**18 16 36.1**	**+0.1**
R43A	**Red Bud** baz=326	**145.40**	**27**	P	**PKPab**	**18 16 36.0**	**0.0**
FVM	**French Village**	**145.42**	**28**	*e*PKPdf	**PKPab**	**18 16 37.0**	**+0.8**
FVM	**French Village**	**145.42**	**28**	*e*PKIKP	**PKPab**	**18 16 37.0**	**+0.8**
S42A	**Caledonia** baz=324	**145.42**	**28**	P	**PKPab**	**18 16 36.2**	**0.0**
V39A	**Pettigrew** baz=318	**145.46**	**34**	P	**PKPdf**	**18 16 36.1**	**0.0**
U40A	**Yellville** baz=319	**145.50**	**32**	P	**PKPbc**	**18 16 36.3**	**+0.1**
T41A	**Mountain View** baz=322	**145.53**	**30**	P	**PKPbc**	**18 16 36.4**	**+0.1**
O48A	**Farmland** baz=335	**145.55**	**19**	P	**PKPbc**	**18 16 36.4**	**+0.1**
Q45A	**Warren Harvey,** baz=329	**145.64**	**24**	P	**PKPab**	**18 16 37.0**	**0.0**
N50A	**Nevada** baz=338	**145.69**	**17**	P	**PKPab**	**18 16 37.0**	**-0.1**
HRV	**Adam Dziewonsk** baz=359	**145.73**	**1**	P	**PKPbc**	**18 16 36.9**	**+0.1**
HRV	**Adam Dziewonsk**	**145.73**	**1**	*e*PKPdf	**PKPab**	**18 16 37.0**	**-0.1**
HRV	**Adam Dziewonsk**	**145.73**	**1**	*e*PKP2	**PKPab**	**18 16 37.0**	**-0.1**
WHTX	**Lake Whitney,** baz=308	**145.74**	**42**	P	**PKPab**	**18 16 38.2**	**+0.7**
WHTX	**Lake Whitney,**	**145.74**	**42**	*e*PKPdf	**PKPab**	**18 16 38.4**	**+0.8**
BINY	**Binghamton** baz=351	**145.75**	**7**	P	**PKPab**	**18 16 37.1**	**-0.1**
BINY	**Binghamton**	**145.75**	**7**	*e*PKPdf	**PKPbc**	**18 16 36.8**	**0.0**
R44A	**Waltonville** baz=327	**145.80**	**26**	P	**PKPab**	**18 16 37.4**	**-0.1**
OLIL	**Olney**	**145.80**	**24**	*e*PKPdf	**PKPab**	**18 16 37.6**	**+0.1**
M54A	**Oil Creek Stat** baz=344	**145.84**	**12**	P	**PKPbc**	**18 16 37.1**	**-0.1**
M54A	**Oil Creek Stat**	**145.84**	**12**	*e*PKPdf	**PKPdf**	**18 16 36.7**	**+0.2**
W39A	**Magazine** baz=317	**145.85**	**35**	P	**PKPbc**	**18 16 37.5**	**+0.1**
W39A	**Magazine**	**145.85**	**35**	*e*PKPdf	**PKPbc**	**18 16 37.4**	**+0.1**
Q46A	**CEJHS Indians,** baz=330	**145.85**	**23**	P	**PKPbc**	**18 16 37.4**	**+0.2**
P47A	**Martinsville** baz=332	**145.85**	**21**	P	**PKPbc**	**18 16 37.3**	**+0.1**
T42A	**Van Buren** baz=323,SNR=39	**145.87**	**29**	P	**PKPab**	**18 16 37.8**	**-0.1**
T42A	**Van Buren**	**145.87**	**29**	*e*PKPdf	**PKPbc**	**18 16 37.5**	**+0.1**
O49A	**Covington** baz=336	**145.88**	**18**	P	**PKPbc**	**18 16 37.5**	**+0.2**
S43A	**Fulton Ridge,** baz=325	**145.91**	**28**	P	**PKPbc**	**18 16 37.3**	**-0.2**
V40A	**Witts Springs** baz=319,SNR=13	**145.93**	**33**	P	**PKPbc**	**18 16 37.5**	**-0.1**
V40A	**Witts Springs**	**145.93**	**33**	*e*PKPdf	**PKPdf**	**18 16 37.0**	**+0.1**
QUA2	**Belchertown**	**145.94**	**2**	*e*PKPdf	**PKPbc**	**18 16 37.5**	**+0.2**
U41A	**Viola** baz=321	**145.99**	**31**	P	**PKPbc**	**18 16 37.9**	**+0.1**
BLO	**Bloomington**	**146.04**	**22**	*e*PKPdf	**PKPab**	**18 16 38.1**	**-0.3**
BLO	**Bloomington**	**146.04**	**22**	*e*PKP2	**PKPab**	**18 16 38.1**	**-0.3**
R45A	**Skylar, Fairfi** baz=328	**146.10**	**25**	P	**PKPab**	**18 16 38.5**	**-0.2**
O50A	**Cable** baz=337	**146.13**	**18**	P	**PKPbc**	**18 16 38.1**	**+0.1**
X39A	**Fountain Ranch** baz=316	**146.15**	**36**	P	**PKPab**	**18 16 39.2**	**+0.1**
P48A	**Milroy** baz=334	**146.17**	**20**	P	**PKPbc**	**18 16 38.1**	**-0.1**
SIUC	**Southern Illin**	**146.18**	**27**	*e*PKPdf	**PKPbc**	**18 16 38.2**	**0.0**
S44A	**Carbondale** baz=326	**146.19**	**27**	P	**PKPbc**	**18 16 38.6**	**+0.3**
T43A	**Greenville** baz=324	**146.21**	**28**	P	**PKPbc**	**18 16 38.4**	**0.0**
ACSO	**Alum Creek Sta** baz=338	**146.24**	**17**	P	**PKPbc**	**18 16 38.5**	**+0.1**
ACSO	**Alum Creek Sta**	**146.24**	**17**	*e*PKPdf	**PKPbc**	**18 16 38.3**	**0.0**
W40A	**Ferguson Farm,** baz=318	**146.25**	**34**	P	**PKPbc**	**18 16 38.8**	**+0.3**
W40A	**Ferguson Farm,**	**146.25**	**34**	*e*PKPdf	**PKPbc**	**18 16 38.6**	**+0.1**
V41A	**Mountainview** baz=320,SNR=8.7	**146.30**	**32**	P	**PKPbc**	**18 16 38.5**	**-0.2**
N54A	**Moraine State** baz=344	**146.30**	**12**	P	**PKPbc**	**18 16 38.6**	**+0.1**
N54A	**Moraine State**	**146.30**	**12**	*e*PKPdf	**PKPbc**	**18 16 38.3**	**-0.2**
U42A	**Revenden** baz=322,SNR=7.3	**146.33**	**30**	P	**PKPbc**	**18 16 38.8**	**+0.1**
P49A	**Miami Univ. Ec** baz=335	**146.35**	**19**	P	**PKPbc**	**18 16 38.7**	**0.0**
PBMO	**Poplar Bluff**	**146.39**	**29**	*e*PKPdf	**PKPbc**	**18 16 38.9**	**0.0**
435B	**Jarrell**	**146.39**	**44**	*e*PKPdf	**PKPab**	**18 16 40.1**	**+0.1**
KSPA	**Keystone Colle**	**146.41**	**7**	*e*PKPdf	**PKPbc**	**18 16 39.0**	**+0.2**
MIAR	**Mount Ida** baz=317	**146.44**	**35**	P	**PKPab**	**18 16 39.7**	**-0.4**
MIAR	**Mount Ida**	**146.44**	**35**	*e*PKPdf	**PKPbc**	**18 16 39.0**	**-0.1**
MIAR	**Mount Ida**	**146.44**	**35**	*e*PKP2	**PKPbc**	**18 16 39.0**	**-0.1**
833A	**Chaparral WMA,** baz=302	**146.45**	**50**	P	**PKPab**	**18 16 40.8**	**+0.4**
R46A	**Gibon Southern** baz=329	**146.49**	**24**	P	**PKPbc**	**18 16 39.4**	**+0.2**
S45A	**Carrier Mills** baz=327	**146.49**	**26**	P	**PKPbc**	**18 16 39.6**	**+0.4**
T44A	**Benton** baz=325	**146.53**	**28**	P	**PKPbc**	**18 16 39.5**	**+0.2**
Q48A	**North Vernon** baz=333	**146.54**	**21**	P	**PKPbc**	**18 16 39.5**	**+0.2**
P50A	**Jamestown** baz=336	**146.57**	**18**	P	**PKPbc**	**18 16 39.3**	**-0.1**
V42A	**Cord** baz=321	**146.68**	**31**	P	**PKPbc**	**18 16 39.7**	**-0.1**
W41B	**Gary Mavity, V** baz=319	**146.71**	**33**	P	**PKPbc**	**18 16 39.7**	**-0.1**
W41B	**Gary Mavity, V**	**146.71**	**33**	*e*PKPdf	**PKPbc**	**18 16 39.8**	**-0.1**
U43A	**Rector** baz=323	**146.73**	**29**	P	**PKPbc**	**18 16 39.9**	**0.0**
Q49A	**Aurora** baz=334	**146.76**	**20**	P	**PKPbc**	**18 16 40.1**	**+0.2**
R47A	**Wooly Knot Far** baz=331	**146.80**	**23**	P	**PKPbc**	**18 16 40.1**	**+0.1**
X40A	**Basin Creek Fa**	**146.90**	**34**	*e*PKPdf	**PKPdf**	**18 16 39.4**	**+0.9**
WCI	**Wyandotte Cave** baz=331	**146.95**	**23**	P	**PKPbc**	**18 16 40.6**	**+0.2**
WCI	**Wyandotte Cave**	**146.95**	**23**	*e*PKPbc	**PKPbc**	**18 16 40.7**	**+0.2**
WCI	**Wyandotte Cave**	**146.95**	**23**	*e*PKP2	**PKPbc**	**18 16 40.7**	**+0.2**
R48A	**Northridge Ran** baz=332	**146.96**	**22**	P	**PKPbc**	**18 16 40.7**	**+0.2**
UALR	**University of**	**146.96**	**33**	*e*PKPbc	**PKPbc**	**18 16 41.1**	**+0.5**
Y40A	**Okolona** baz=316	**146.99**	**35**	P	**PKPbc**	**18 16 41.1**	**+0.4**
ODNJ	**Ogdensburg**	**147.00**	**5**	*e*PKPbc	**PKPbc**	**18 16 40.5**	**+0.1**
SSPA	**Standing Stone** baz=347	**147.02**	**10**	P	**PKPbc**	**18 16 40.8**	**+0.2**
SSPA	**Standing Stone**	**147.02**	**10**	*e*PKPbc	**PKPbc**	**18 16 40.7**	**+0.2**
N59A	**State Game Lan** baz=351	**147.04**	**7**	P	**PKPbc**	**18 16 41.2**	**+0.5**
N59A	**State Game Lan**	**147.04**	**7**	*e*PKPbc	**PKPbc**	**18 16 41.0**	**+0.4**
PAL	**Palisades** baz=355	**147.13**	**4**	P	**PKPbc**	**18 16 41.0**	**+0.2**
PAL	**Palisades**	**147.13**	**4**	*e*PKPbc	**PKPbc**	**18 16 41.0**	**+0.2**
PAL	**Palisades**	**147.13**	**4**	*e*PKP2	**PKPbc**	**18 16 41.0**	**+0.2**
Q50A	**Georgetown** baz=336	**147.21**	**19**	P	**PKPbc**	**18 16 41.0**	**-0.2**
Q51A	**Peebles** baz=337	**147.25**	**18**	P	**PKPbc**	**18 16 41.2**	**-0.1**
O56A	**Blue Knob Stat** baz=346	**147.25**	**11**	P	**PKPbc**	**18 16 41.6**	**+0.3**
O56A	**Blue Knob Stat**	**147.25**	**11**	*e*PKPbc	**PKPbc**	**18 16 41.4**	**+0.1**
U44B	**Burton Farm, H** baz=325	**147.25**	**28**	P	**PKPbc**	**18 16 41.8**	**+0.4**
T46A	**Princeton** baz=328	**147.32**	**26**	P	**PKPbc**	**18 16 42.1**	**+0.5**
BRNJ	**Basking Ridge**	**147.40**	**5**	*e*PKPbc	**PKPbc**	**18 16 42.2**	**+0.6**
LUPA	**Lehigh Univers**	**147.40**	**6**	*e*PKPbc	**PKPbc**	**18 16 41.6**	**0.0**
V44A	**Blytheville** baz=324	**147.41**	**29**	P	**PKPbc**	**18 16 42.4**	**+0.6**
Z40A	**Long Farm, Mag** baz=316	**147.46**	**37**	P	**PKPbc**	**18 16 43.0**	**+1.0**
Y41A	**Eaglette Beard** baz=317	**147.47**	**35**	P	**PKPbc**	**18 16 42.8**	**+0.8**
U45A	**Rockin P Farm,** baz=326	**147.52**	**27**	P	**PKPbc**	**18 16 42.6**	**+0.5**
S48A	**Wiedeman Farm,** baz=331	**147.54**	**23**	P	**PKPbc**	**18 16 42.4**	**+0.2**
MCWV	**Mont Chateau** baz=343	**147.58**	**13**	P	**PKPbc**	**18 16 42.5**	**+0.3**
MCWV	**Mont Chateau**	**147.58**	**13**	*e*PKPbc	**PKPbc**	**18 16 42.6**	**+0.4**
PAGS	**Pennsylvania G**	**147.60**	**8**	*e*PKPbc	**PKPbc**	**18 16 42.0**	**-0.2**
T47A	**Sharon Grove** baz=329	**147.70**	**25**	P	**PKPbc**	**18 16 42.8**	**+0.2**
T47A	**Sharon Grove**	**147.70**	**25**	*e*PKPbc	**PKPbc**	**18 16 42.6**	**0.0**
U46A	**Springville** baz=327	**147.77**	**27**	P	**PKPbc**	**18 16 43.3**	**+0.5**
Z41A	**Richland Creek** baz=316	**147.81**	**36**	P	**PKPbc**	**18 16 43.7**	**+0.8**
Z41A	**Richland Creek**	**147.81**	**36**	*e*PKPdf	**PKPdf**	**18 16 38.0**	**-2.0**
Z41A				*e*PKPbc	**PKPbc**	**18 16 43.8**	**+0.9**
MVL	**Millersville**	**147.87**	**8**	*e*PKPbc	**PKPbc**	**18 16 43.4**	**+0.4**
T48A	**Bowling Green** baz=330	**147.88**	**24**	P	**PKPbc**	**18 16 43.4**	**+0.3**
CCAR	**Cane Creek**	**147.91**	**34**	*e*PKPbc	**PKPbc**	**18 16 44.3**	**+1.0**
Y42A	**Garnett, Star** baz=319	**147.96**	**34**	P	**PKPbc**	**18 16 43.9**	**+0.5**
LNIG	**Linares**	**148.05**	**55**	*e*PKPbc	**PKPbc**	**18 16 44.4**	**+0.5**
PSUB	**Penn St. - Bra**	**148.06**	**7**	*e*PKPbc	**PKPbc**	**18 16 43.4**	**0.0**
240A	**Hunter Patters** baz=314	**148.09**	**39**	P	**PKPbc**	**18 16 44.6**	**+0.9**
U47A	**Clarksville** baz=328	**148.09**	**25**	P	**PKPbc**	**18 16 44.1**	**+0.5**
WVT	**Waverly** baz=327	**148.12**	**26**	P	**PKPbc**	**18 16 44.2**	**+0.4**
WVT	**Waverly**	**148.12**	**26**	*e*PKPbc	**PKPbc**	**18 16 44.1**	**+0.4**
WVT	**Waverly**	**148.12**	**26**	*e*PKP2	**PKPbc**	**18 16 44.1**	**+0.4**
141A	**Papa Simpson,** baz=316	**148.22**	**37**	P	**PKPbc**	**18 16 44.6**	**+0.6**
T49A	**Edmonton** baz=332	**148.22**	**23**	P	**PKPbc**	**18 16 44.2**	**+0.2**
T49A	**Edmonton**	**148.22**	**23**	*e*PKPbc	**PKPbc**	**18 16 43.8**	**-0.2**
V46A	**Holladay** baz=326	**148.26**	**27**	P	**PKPbc**	**18 16 44.1**	**0.0**
X44A	**Crenshaw** baz=322	**148.33**	**31**	P	**PKPbc**	**18 16 44.9**	**+0.5**
U48A	**Cassie Pea, Po** baz=330	**148.34**	**24**	P	**PKPbc**	**18 16 44.6**	**+0.3**
Y43A	**Makayla and Ka** baz=320	**148.37**	**33**	P	**PKPbc**	**18 16 45.1**	**+0.7**
S51A	**Beattyville** baz=336	**148.43**	**19**	P	**PKPbc**	**18 16 44.5**	**0.0**
S51A	**Beattyville**	**148.43**	**19**	*e*PKPbc	**PKPbc**	**18 16 44.2**	**-0.3**
V47A	**Nunnelly** baz=327	**148.51**	**26**	P	**PKPbc**	**18 16 44.6**	**-0.2**
T50A	**Nancy** baz=333	**148.56**	**22**	P	**PKPbc**	**18 16 44.8**	**0.0**
241A	**Mo Tay, Goldon** baz=315	**148.62**	**38**	P	**PKPbc**	**18 16 46.5**	**+1.4**
241A	**Mo Tay, Goldon**	**148.62**	**38**	*e*PKPbc	**PKPbc**	**18 16 46.1**	**+0.9**
U49A	**Red Boiling Sp** baz=331	**148.65**	**23**	P	**PKPbc**	**18 16 45.3**	**+0.2**
W46A	**Michie** baz=325	**148.69**	**28**	P	**PKPbc**	**18 16 45.0**	**-0.2**
OXF	**Oxford** baz=323	**148.69**	**30**	P	**PKPbc**	**18 16 45.4**	**+0.2**
OXF	**Oxford**	**148.69**	**30**	*e*PKPbc	**PKPbc**	**18 16 45.2**	**0.0**
OXF	**Oxford**	**148.69**	**30**	*e*PKP2	**PKPbc**	**18 16 45.2**	**0.0**
Y44A	**Strider, Charl** baz=321	**148.72**	**32**	P	**PKPbc**	**18 16 46.0**	**+0.7**
V48A	**Smith Brothers** baz=328	**148.88**	**26**	P	**PKPbc**	**18 16 45.6**	**-0.2**
V48A	**Smith Brothers**	**148.88**	**26**	*e*PKPbc	**PKPbc**	**18 16 45.5**	**-0.2**
341A	**Kurthwood** baz=314	**148.94**	**39**	P	**PKPbc**	**18 16 47.5**	**+1.5**
W47A	**Westpoint** baz=327	**148.96**	**27**	P	**PKPbc**	**18 16 45.8**	**-0.2**
PLAL	**Pickwick Lake**	**148.96**	**28**	*e*PKPbc	**PKPbc**	**18 16 45.5**	**-0.4**
X46A	**Booneville** baz=324	**149.06**	**29**	P	**PKPbc**	**18 16 46.1**	**-0.1**
Z44A	**Pea Ridge, Bel** baz=320	**149.12**	**33**	P	**PKPbc**	**18 16 47.0**	**+0.6**
Y45A	**Yeager Farm, C** baz=322	**149.14**	**31**	P	**PKPbc**	**18 16 47.2**	**+0.8**
V49A	**McMinnville** baz=330	**149.25**	**24**	P	**PKPbc**	**18 16 46.6**	**-0.1**
W48A	**Pulaski** baz=328	**149.34**	**26**	P	**PKPbc**	**18 16 46.8**	**-0.1**
TZTN	**Tazewell** baz=335	**149.44**	**20**	P	**PKPbc**	**18 16 47.3**	**+0.2**
TZTN	**Tazewell**	**149.44**	**20**	*e*PKPbc	**PKPbc**	**18 16 47.4**	**+0.2**
X47A	**Russelville** baz=326	**149.44**	**28**	P	**PKPbc**	**18 16 46.8**	**-0.4**
Z45A	**Winona** baz=321	**149.45**	**32**	P	**PKPbc**	**18 16 47.9**	**+0.7**
Z45A	**Winona**	**149.45**	**32**	*e*PKPbc	**PKPbc**	**18 16 48.2**	**+1.0**
Y46A	**Houston** baz=323	**149.47**	**30**	P	**PKPbc**	**18 16 47.4**	**+0.2**
PTRD	**Partlow Road**	**149.51**	**10**	*e*PKPbc	**PKPbc**	**18 16 47.2**	**0.0**
CVRD	**Centerville Ro**	**149.53**	**11**	*e*PKPdf	**PKPdf**	**18 16 41.2**	**-1.4**
CVRD				*e*PKPbc	**PKPbc**	**18 16 47.6**	**+0.4**
V50A	**Pikevile** baz=332	**149.65**	**23**	P	**PKPbc**	**18 16 47.7**	**0.0**
W49A	**Belvidere** baz=329	**149.65**	**25**	P	**PKPbc**	**18 16 47.7**	**0.0**
SWET	**Sewanee**	**149.71**	**25**	*e*PKPbc	**PKPbc**	**18 16 47.4**	**-0.5**
BLA	**Blacksburg** baz=341	**149.77**	**15**	P	**PKPbc**	**18 16 48.1**	**+0.1**
V51A	**Loudon** baz=333	**149.82**	**22**	P	**PKPbc**	**18 16 48.4**	**+0.3**
V51A	**Loudon**	**149.82**	**22**	*e*PKPbc	**PKPbc**	**18 16 48.2**	**+0.2**
X48A	**Hartselle** baz=327	**149.87**	**27**	P	**PKPbc**	**18 16 47.9**	**-0.3**
X48A	**Hartselle**	**149.87**	**27**	*e*PKPbc	**PKPbc**	**18 16 47.6**	**-0.6**
343A	**Vidalia** baz=316	**149.92**	**37**	P	**PKPbc**	**18 16 48.3**	**-0.1**
U53A	**Fall Branch** baz=337	**149.93**	**19**	P	**PKPbc**	**18 16 48.4**	**+0.1**
Y47A	**UCPARC, Winfie** baz=325	**149.95**	**29**	P	**PKPbc**	**18 16 48.3**	**-0.1**
W50A	**Signal Mountai** baz=331	**149.97**	**24**	P	**PKPbc**	**18 16 48.7**	**+0.2**
W50A	**Signal Mountai**	**149.97**	**24**	*e*PKPbc	**PKPbc**	**18 16 48.4**	**-0.2**
V52A	**Sevierville** baz=334	**150.06**	**21**	P	**PKPbc**	**18 16 49.2**	**+0.6**
V52A	**Sevierville**	**150.06**	**21**	*e*PKPbc	**PKPbc**	**18 16 49.0**	**+0.4**
URVA	**University of**	**150.06**	**11**	*e*PKPbc	**PKPbc**	**18 16 49.1**	**+0.6**
CPCT	**Cooper Cave**	**150.07**	**23**	*e*PKPbc	**PKPbc**	**18 16 48.9**	**+0.2**
X49A	**Woodville** baz=328	**150.14**	**26**	P	**PKPbc**	**18 16 48.9**	**+0.1**
TKL	**Tuckaleechee C** comp=Z,20nm,0.6s,baz=149,slow=6.3,SNR=44	**150.16**	**21**	PKPbc	**PKPbc**	**18 16 49.3**	**+0.4**
TKL	**Tuckaleechee C**	**150.16**	**21**	*e*PKPbc	**PKPbc**	**18 16 49.2**	**+0.3**
Y48A	**Jasper** baz=326	**150.26**	**28**	P	**PKPbc**	**18 16 48.8**	**-0.3**
344A	**Westbrook Farm**	**150.32**	**36**	*e*PKPbc	**PKPbc**	**18 16 50.6**	**+1.2**
146A	**Union** baz=322	**150.35**	**32**	P	**PKPbc**	**18 16 50.3**	**+0.9**
146A	**Union**	**150.35**	**32**	*e*PKPbc	**PKPbc**	**18 16 50.2**	**+0.8**
Z47A	**Carrollton** baz=324	**150.41**	**30**	P	**PKPbc**	**18 16 49.8**	**+0.2**
X50B	**Fort Payne** baz=330	**150.47**	**25**	P	**PKPbc**	**18 16 49.5**	**-0.2**
V53A	**Saluda** baz=336	**150.48**	**20**	P	**PKPbc**	**18 16 50.1**	**+0.5**
V53A	**Saluda**	**150.48**	**20**	*e*PKPbc	**PKPbc**	**18 16 50.2**	**+0.5**
Z48A	**Northport** baz=325	**150.52**	**29**	P	**PKPbc**	**18 16 49.8**	**0.0**
W52A	**Murphy** baz=333	**150.60**	**22**	P	**PKPbc**	**18 16 50.4**	**+0.4**
W52A	**Murphy**	**150.60**	**22**	*e*PKPbc	**PKPbc**	**18 16 50.3**	**+0.3**
Y49A	**Blount Mountai** baz=328	**150.65**	**27**	P	**PKPbc**	**18 16 50.2**	**0.0**
Y49A	**Blount Mountai**	**150.65**	**27**	*e*PKPbc	**PKPbc**	**18 16 50.1**	**0.0**
X51A	**Calhoun** baz=331	**150.71**	**24**	P	**PKPbc**	**18 16 50.5**	**+0.3**
X51A	**Calhoun**	**150.71**	**24**	*e*PKPbc	**PKPbc**	**18 16 50.5**	**+0.3**
X51A				*e*PKPab	**PKPab**	**18 16 57.4**	**+0.2**
147A	**Livingston**	**150.73**	**31**	*e*PKPbc	**PKPbc**	**18 16 50.5**	**+0.2**
147A				*e*PKPab	**PKPab**	**18 16 57.7**	**+0.3**
246A	**Jackson Lee, B** baz=321	**150.80**	**33**	P	**PKPbc**	**18 16 51.2**	**+0.8**
W53A	**Cullowhee** baz=335	**150.81**	**21**	P	**PKPbc**	**18 16 51.2**	**+0.6**
345A	**Thompson Farm,** baz=319	**150.83**	**35**	P	**PKPbc**	**18 16 51.3**	**+0.7**
Y50A	**Piedmont** baz=329	**150.92**	**26**	P	**PKPbc**	**18 16 50.7**	**0.0**
NCAT	**North Carolina**	**151.00**	**15**	*e*PKPbc	**PKPbc**	**18 16 50.9**	**0.0**
247A	**Quitman** baz=322	**151.04**	**32**	P	**PKPbc**	**18 16 51.6**	**+0.5**
X52A	**Dahlonega** baz=333	**151.05**	**23**	P	**PKPbc**	**18 16 51.6**	**+0.5**
BG3	**Lake Jocassee**	**151.06**	**21**	*e*PKPbc	**PKPbc**	**18 16 51.8**	**+0.8**
LRAL	**Lakeview Retre** baz=326	**151.07**	**29**	P	**PKPbc**	**18 16 51.2**	**+0.1**
LRAL	**Lakeview Retre**	**151.07**	**29**	*e*PKPbc	**PKPbc**	**18 16 51.0**	**-0.1**
148A	**Greensboro** baz=324	**151.10**	**30**	P	**PKPbc**	**18 16 51.5**	**+0.3**
Z49A	**Columbiana** baz=327	**151.15**	**28**	P	**PKPbc**	**18 16 51.5**	**+0.2**
Y51A	**Rockmart** baz=330	**151.20**	**25**	P	**PKPbc**	**18 16 51.3**	**-0.1**
Z50A	**Ashland** baz=328	**151.38**	**27**	P	**PKPbc**	**18 16 52.0**	**+0.1**
Z50A	**Ashland**	**151.38**	**27**	*e*PKPbc	**PKPbc**	**18 16 51.6**	**-0.2**
Z50A				*e*PKPab	**PKPab**	**18 17 00.2**	**+0.1**
KMSC	**Kings Mountain** baz=338	**151.44**	**18**	P	**PKPbc**	**18 16 52.1**	**+0.2**
KMSC	**Kings Mountain**	**151.44**	**18**	*e*PKPbc	**PKPbc**	**18 16 52.0**	**+0.1**
149A	**Jones** baz=326	**151.52**	**29**	P	**PKPbc**	**18 16 52.6**	**+0.5**
347A	**Saraland** baz=321	**151.59**	**33**	P	**PKPbc**	**18 16 53.2**	**+0.9**
PAULI	**Pauline**	**151.59**	**19**	*e*PKPdf	**PKPdf**	**18 16 44.2**	**-1.8**
PAULI				*e*PKPbc	**PKPbc**	**18 16 52.2**	**0.0**
Y52A	**Lilburn** baz=332	**151.64**	**23**	P	**PKPbc**	**18 16 53.0**	**+0.6**
Y52A	**Lilburn**	**151.64**	**23**	*e*PKPdf	**PKPdf**	**18 16 46.2**	**0.0**
Y52A				*e*PKPbc	**PKPbc**	**18 16 53.0**	**+0.6**
Y52A				*e*PKPab	**PKPab**	**18 16 59.9**	**-1.2**
Z51A	**Franklin** baz=329	**151.66**	**26**	P	**PKPbc**	**18 16 52.9**	**+0.5**
Y53A	**Monroe** baz=333	**151.83**	**23**	P	**PKPbc**	**18 16 53.3**	**+0.5**
249A	**Camden** baz=324	**151.87**	**30**	P	**PKPbc**	**18 16 53.6**	**+0.7**
150A	**Eclectic** baz=327	**151.88**	**28**	P	**PKPbc**	**18 16 53.3**	**+0.3**
HODGE	**Hodges**	**151.98**	**20**	*e*PKPbc	**PKPbc**	**18 16 53.5**	**+0.3**
447A	**Lucedale** baz=320	**151.99**	**34**	P	**PKPbc**	**18 16 53.5**	**+0.3**
Z52A	**Williamson** baz=331	**152.09**	**25**	P	**PKPbc**	**18 16 54.2**	**+0.7**
Y54A	**Tignall** baz=334	**152.16**	**21**	P	**PKPbc**	**18 16 54.1**	**+0.5**
151A	**Opelika** baz=328	**152.26**	**27**	P	**PKPbc**	**18 16 54.1**	**+0.2**
JSC	**Jenkinsville**	**152.26**	**19**	*e*PKPbc	**PKPbc**	**18 16 53.9**	**+0.1**
GOGA	**Godfrey** baz=333	**152.27**	**23**	P	**PKPbc**	**18 16 54.3**	**+0.5**
GOGA	**Godfrey**	**152.27**	**23**	*e*PKPdf	**PKPdf**	**18 16 48.9**	**+1.8**
GOGA				*e*PKPbc	**PKPbc**	**18 16 53.9**	**+0.1**
GOGA				*e*PKPab	**PKPab**	**18 17 03.6**	**-0.2**
GOGA	**Godfrey**	**152.27**	**23**	*e*PKIKP	**PKPdf**	**18 16 48.9**	**+1.8**
GOGA				*e*		18 17 03.6	
250A	**Grady** baz=326	**152.28**	**29**	P	**PKPbc**	**18 16 54.3**	**+0.4**
250A	**Grady**	**152.28**	**29**	*e*PKPdf	**PKPdf**	**18 16 47.8**	**+0.7**
250A				*e*PKPbc	**PKPbc**	**18 16 54.4**	**+0.4**
250A				*e*PKPab	**PKPab**	**18 17 04.2**	**+0.3**
349A	**Repton** baz=324	**152.34**	**31**	P	**PKPbc**	**18 16 54.7**	**+0.6**
Z53A	**Monticello** baz=332	**152.35**	**23**	P	**PKPbc**	**18 16 54.5**	**+0.5**
152A	**Waverly Hall** baz=330	**152.41**	**26**	P	**PKPbc**	**18 16 54.6**	**+0.5**
152A	**Waverly Hall**	**152.41**	**26**	*e*PKPbc	**PKPbc**	**18 16 54.1**	**0.0**
BRAL	**Brewton** baz=324	**152.55**	**31**	P	**PKPbc**	**18 16 55.5**	**+1.0**
BRAL	**Brewton**	**152.55**	**31**	*e*PKPbc	**PKPbc**	**18 16 55.7**	**+1.2**
251A	**Midway** baz=328	**152.59**	**27**	P	**PKPbc**	**18 16 55.2**	**+0.7**
Z54A	**Sparta** baz=334	**152.66**	**22**	P	**PKPbc**	**18 16 55.3**	**+0.5**
153A	**Fort Valley** baz=331	**152.79**	**24**	P	**PKPbc**	**18 16 55.5**	**+0.5**
252A	**Lumpkin** baz=329	**152.97**	**27**	P	**PKPbc**	**18 16 56.0**	**+0.5**
253A	**Americus** baz=330	**153.18**	**25**	P	**PKPbc**	**18 16 56.7**	**+0.8**
253A	**Americus**	**153.18**	**25**	*e*PKPbc	**PKPbc**	**18 16 56.4**	**+0.5**
253A				*e*PKPab	**PKPab**	**18 17 08.2**	**+0.5**
451A	**Vernon** baz=325	**153.66**	**30**	P	**PKPbc**	**18 16 57.4**	**+0.4**
554A	**Perry** baz=329	**155.07**	**27**	P	**PKPab**	**18 17 14.6**	**-1.1**
LPAZ	**La Paz** comp=Z,2.2nm,0.7s,baz=150,slow=4.2,SNR=7.3	**155.61**	**186**	PKPab	**PKPab**	**18 17 20.3**	**+1.3**
LPAZ	**La Paz**	**155.61**	**186**	*e*PKPdf	**PKPdf**	**18 16 50.6**	**-2.4**
LPAZ				*e*PKPab	**PKPab**	**18 17 20.0**	**+1.0**
LPAZ	**La Paz**	**155.61**	**186**	*e*PKIKP	**PKPdf**	**18 16 50.6**	**-2.4**
LPAZ				*e*		18 17 20.0	
060Z	**West Palm Beac** baz=332	**159.62**	**26**	P	**PKPab**	**18 17 33.5**	**-1.9**

NDI 13 18:10:22.9±3.0,26°.48N×93°.19E,h42^{km}±577^{km},ML2.6, Northeastern India

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KOHI	**KOHIMA**	**1.12**	**132**	*e*P	Pn	18 10 45.5	+3.2
KOHI				*e*S	Sn	18 11 01.8	+5.2
KOHI	comp=E,56nm,0.2s			IAML		18 11 02.5	
KOHI	comp=N,66nm,0.3s			IAML		18 11 02.5	
ZIRO	**ZIRO**	**1.20**	**29**	*e*P	Pn	18 10 43.1	-0.3
ZIRO				*e*S	Sn	18 10 57.6	-1.0
MOKO	**MOKOCHONG**	**1.20**	**97**	*e*P	Pn	18 10 45.5	+2.0
MOKO				*e*S	Sn	18 11 00.7	+2.0
MOKO	comp=E,108nm,0.3s			IAML		18 11 02.8	
MOKO	comp=N,91nm,0.1s			IAML		18 11 03.5	
GUWA	**GUWAHATI**	**1.37**	**258**	*e*P	Pn	18 10 45.8	+0.2
GUWA				*e*S	Sn	18 11 03.0	+0.5
GUWA	comp=E,81nm,0.1s			IAML		18 11 04.1	
GUWA	comp=N,49nm,0.1s			IAML		18 11 04.6	
SHL	**Shillong**	**1.48**	**232**	*e*x	x	18 10 38.9	
SHL				*e*S	Sn	18 11 04.9	-0.7
SHL	comp=N,30nm,0.1s			IAML		18 11 07.4	
SHL	comp=E,28nm,0.3s			IAML		18 11 08.5	
TURI	**Tura**	**2.73**	**251**	*e*P	Pn	18 11 06.1	+1.9
TURI				*e*S	Sn	18 11 36.7	+0.7
TURI	comp=E,53nm,0.2s			IAML		18 11 39.1	
TURI	comp=N,55nm,0.1s			IAML		18 11 39.2	

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*ISCJB **13** 18:15:36.5±0.5, 1°.24N±0°.06×91°.55E±0°.04, h10^{km}, mb4.1/15, Error ellipse: s-maj=9.3km s-min=5.5km az=24.4*

*IDC **13** 18:15:37.0±1.1, 1°.17N×91°.43E, h0^{km}, mb3.8/8, mb1 3.9/11, mb1mx3.7/67, mbtmp3.8/11, ML3.7/3, MS3.2/7, Ms1 3.2/7, ms1mx2.9/71, Error ellipse: s-maj=34.9km s-min=18.3km az=43.0*

*NEIC **13** 18:15:38.3±0.3, 1°.20N×91°.49E, h10^{km}, mb4.5/9, Error ellipse: s-maj=7.4km s-min=4.6km az=28.0*

*DJA **13** 18:15:44.7±0.9, 1°N±7°×9°2E±°, h10^{km}, M4.7/6, mb5.0/6, mB5.2/6, MLv4.7/6, Mw(mB)4.6/6*

ISC 13 18:15:38.4±0.7, 1°.24N±0°.08×91°.64E±0°.06, h10^{km}, n66, σ1^{s}.94/60, mb4.1/15, North Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SNSI	**Sinabang, Aceh**	**4.83**	**76**	P	**Pn**	**18 16 52.2**	**+1.0**
SNSI				S	**Sn**	**18 17 45.5**	**-1.7**
BSI	**Banda Aceh** 131nm,0.7s,3μm	**5.59**	**41**	P	**Pn**	**18 17 02.0**	**+0.4**

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MLSI   Meulaboh, Aceh      5.63  58  P       Pn      18 17 03.9 +1.7
MLSI                                 S       Sn      18 18 02.1  -4.9
TPTI                       5.89  70  P       Pn      18 17 06.7 +0.9
       64nm,0.6s,1µm
GSI    Gunungsitoli        5.94  89  P       Pn      18 17 07.2 +0.8
       103nm,0.8s
GSI                                  S       Sn      18 18 11.7  -2.9
       103nm,0.8s
GSI    Gunungsitoli        5.94  89 ePn      Pn      18 17 08.0 +1.6
GSI                                 eSn      Sn      18 18 10.8  -3.8
KCSI   Kotacane, Aceh      6.53  70  P       Pn      18 17 16.3 +1.6
       100nm,0.7s,1µm
KCSI                                 S       Sn      18 18 27.6  -1.7
       100nm,0.7s,1µm
LHMI   Lhok Sumawe         6.62  53 ePn      Pn      18 17 17.7 +1.9
PBSI   Pulau Batu          6.76 101  P       Pn      18 17 19.6 +1.8
       94nm,0.9s
PBSI                                 S       Sn      18 18 30.4  -4.6
       94nm,0.9s
TSI    Tuntungan           7.28  72  P       Pn      18 17 30.9 +6.1
PSI    Prapat              7.45  78  Pn      Pn      18 17 28.2 +0.9
       0.8nm,0.3s,baz=180,slow=9.9,SNR=3.2
PSI                                  LR      LR      18 20 46.2
       comp=Z,424nm,18.7s,baz=269,slow=40
PSI    Prapat              7.45  78 ePn      Pn      18 17 28.4 +1.1
MNSI   Mandailing Nat      7.95  93  P       Pn      18 17 36.1 +2.0
       46nm,0.6s,1µm
KULM   Kulim               9.86  66 ePn      Pn      18 18 01.4 +1.2
KULM                                eSn      Sn      18 19 46.4  -4.6
IPM    Ipoh                9.91  71 ePn      Pn      18 18 02.7 +1.7
KRJI   Kerinci            10.37 109  P       Pn      18 18 09.9 +2.6
PBA    Port Blair         10.41   6 ePn      Pn      18 18 07.0  -0.8
MYKOM  Kota Tinggi        12.22  87 ePn      Pn      18 18 34.0 +1.3
PALK   Pallekele          12.44 299  Pn      Pn      18 18 33.5  -2.2
       1.8nm,0.3s,baz=115,slow=12,SNR=13
PALK                                 Sn      Sn      18 20 42.0   -13
       2.9nm,0.3s,baz=116,slow=11,SNR=5.0
CM01   Chiang Mai Arr     18.52  22 eP       Pn      18 19 56.5 +1.2
CM31   Chiang Mai Arr     18.55  22 eP       Pn      18 19 57.0 +1.3
CMAR   Chiang Mai Arr     18.55  22  P       Pn      18 19 57.7 +2.1
       0.1nm,0.3s,baz=218,slow=13,SNR=6.7
CMAR                                 LR      LR      18 26 31.2
       comp=Z,58nm,20.8s,baz=208,slow=35
KSM    Kuching            18.67  89 eP       Pn      18 19 57.5 +0.4
       19nm,1.0s
CHTO   Chiang Mai         18.88  22 eP       P       18 19 58.8  -0.3
       5.0nm,0.8s
CHTO   Chiang Mai         18.88  22  P       Pn      18 20 08.7 +9.1
       32nm,1.2s
CMMT   Chiang Mai         18.88  22  P       Pn      18 20 08.7 +9.1
       7.2nm,1.2s
SHL    Shillong           24.19   1 eP       P       18 21 01.0 +5.6
LSA    Lhasa              28.31 359  P       P       18 21 36.6 +3.7
LSA                                  pmax    pmax
       comp=Z,4.0nm,0.7s
LSA    Lhasa              28.31 359 eP       P       18 21 34.4 +1.6
       comp=Z,8.8nm,0.8s
TGY    Tagaytay City      31.66  65  LR      LR      18 35 53.9
       comp=Z,35nm,19.2s,baz=192,slow=38
DAV    Davao City (W)     34.33  79  LR      LR      18 39 49.8
       comp=Z,17nm,18.4s,baz=204,slow=42
GTA    Gaotai             38.72  10 eP       P       18 23 11.8 +8.9
GTA                                  pP      sP      18 23 15.9 +8.7
GTA                                  sP      pP      18 23 18.6   +13
GTA                                  pmax    pmax
       comp=Z,2.0nm,1.0s
H01W3  Cape Leeuwin H     41.66 152  T       T       19 07 48.2
       baz=325,slow=76,SNR=15
H01W2  Cape Leeuwin H     41.67 152  T       T       19 07 48.2
       baz=325,slow=76,SNR=15
H01W1  Cape Leeuwin H     41.67 152  T       T       19 07 47.0
       baz=325,slow=76,SNR=16
JOW    Kunigami           43.41  51  LR      LR      18 40 05.3
       comp=Z,43nm,21.5s,baz=184,slow=34
KK31   Karatay Array      45.76 338 eP       P       18 23 59.9  -0.2
KKAR   Karatay Array      45.76 338 eP       P       18 24 00.1   0.0
MK01   Makanchi Array     46.08 351 eP       P       18 24 02.5   0.0
MK31   Makanchi Array     46.10 351 eP       P       18 24 03.0 +0.3
MK32   Makanchi Array     46.10 351 eP       P       18 24 03.2 +0.4
MKAR   Makanchi Array     46.10 351  P       P       18 24 03.2 +0.4
       comp=Z,0.5nm,0.5s,baz=173,slow=9.6,SNR=7.7
MKAR   Makanchi Array     46.10 351 eP       P       18 24 03.0 +0.3
       comp=Z,12nm,0.6s
MAKZ   Makanchi           46.16 351 eP       P       18 24 03.9 +0.7
       comp=Z,2.7nm,1.3s
WRA    Warramunga Arr     46.85 119  P       P       18 24 10.1 +1.1
       comp=Z,2.3nm,0.6s,baz=296,slow=8.6,SNR=36
WR1    Warramunga Arr     46.85 119 eP       P       18 24 10.1 +1.1
WB2    Warramunga Arr     46.86 119 eP       P       18 24 10.0 +0.8
FORT   Forrest            47.04 136 eP       P       18 24 11.0 +0.6
       comp=Z,24nm,1.0s
GYA0B  ALIBECK ARRAY      47.76 324 eP       P       18 24 14.3  -1.6
       comp=Z,2.9nm,0.7s
AS31   Alice Springs      47.95 124 eP       P       18 24 18.3 +0.7
       comp=Z,0.9nm,1.0s
ASAR   Alice Springs      47.95 124  P       P       18 24 18.9 +1.4
       comp=Z,0.5nm,0.8s,baz=294,slow=8.1,SNR=6.9
SONA0  Songino Array      48.15  13 eP       P       18 24 20.2 +1.4
SONM   Songino Array      48.15  13  P       P       18 24 20.2 +1.4
       comp=Z,1.6nm,0.5s,baz=193,slow=9.5,SNR=17
SONA1  Songino Array      48.16  13 eP       P       18 24 19.7 +0.8
DAMY   Dhamar             48.51 288 eP       P       18 24 19.9  -2.4
       comp=Z,26nm,1.2s
KURBB  Kurchatov Arra     50.45 349  P       P       18 24 35.9  -0.3
       comp=Z,0.6nm,0.9s,baz=174,slow=6.9,SNR=6.0
KURK   Kurchatov          50.52 349 eP       P       18 24 35.9  -0.9
ZALV   Zalesovo Beam      52.84 355  P       P       18 24 54.3 +0.3
       comp=Z,0.7nm,0.4s,baz=161,slow=6.4,SNR=4.1
ZALV   Zalesovo Beam      52.84 355 eP       P       18 24 53.1  -0.9
ZAA1   Zalesovo Array     52.84 355 eP       P       18 24 54.3 +0.3
GUMO   Guam               54.06  74  LR      LR      18 47 34.4
       comp=Z,16nm,21.2s,baz=270,slow=35
MJAR   Matsushiro Arr     55.51  45  LR      LR      18 50 30.3
       comp=Z,19nm,18.4s,baz=105,slow=38
BR101  Keskin Array S     65.02 314 eP       P       18 26 18.4  -0.8
BRTR   Keskin Array B     65.02 314  P       P       18 26 18.4  -0.8
       comp=Z,0.2nm,0.3s,baz=128,slow=2.4,SNR=2.3
GERES  GERESS Array B     81.13 319  P       P       18 27 54.3   0.0
       comp=Z,0.6nm,0.7s,baz=84,slow=4.0,SNR=5.3
TXAR   Lajitas Array     146.26  25  PKPbc   PKPab   18 35 20.9 +0.1
       comp=Z,0.4nm,0.6s,baz=54,slow=1.8,SNR=6.1
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*CSEM **13** 18:25:15.6±0.2, 34.°19N×15.°34W, h30km, mb4.4, Error ellipse: s-maj=8.8km s-min=3.3km az=131.0*

*CNRM **13** 18:25:17.5, 33.°95N×15.°04W, h30km, ML4.0*

*MDD **13** 18:25:17.7±1.9, 34.°33N×14.°99W, h0km, mb4.4/14, Error ellipse: s-maj=18.4km s-min=15.2km az=84.0, PRXIMO*

*IGIL **13** 18:25:19.3, 34.°29N×15.°42W, h50km, ML2.7*

*INMG **13** 18:25:20.0±2.1, 34.°17N×15.°32W, h39km±11km, ML3.0, Error ellipse: s-maj=7.2km s-min=2.2km az=126.0*

ISC 13 18:25:13.1±1.0, **34.°12N**±0.°07×**15.°39W**±0.°07, **h10km, n124, σ1.ˢ20**/132, **2C-2D, Madeira Islands region**

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Code   Station Name        Δ°   AZ°    Phase ID           Time      Res
                                    Op      ISC      h  m  s     ISC
PMPS   Porto Santo         1.33 217⇑iP       Pg      18 25 39.9 +1.3
PMPS                                eS       Sb      18 25 55.3 +0.2
PMPS                                 A       A       18 25 57.0
       276nm,0.4s
PMPS   Porto Santo         1.33 217  P       Pg      18 25 39.9 +1.3
PMPS                                 S       Sb      18 25 55.3 +0.2
       138nm,0.4s
PMPS   Porto Santo         1.33 217⇑iP       Pg      18 25 39.9 +1.3
PMPS                                 S       Sb      18 25 55.3 +0.2
       138nm,0.4s
PMAR   Madeira             1.89 223 eP       Pb      18 25 47.8  -0.1
PMAR                                eS       Sn      18 26 09.2  -0.5
PMAR                                 A       A       18 26 16.5
       151nm,0.2s
PMAR   Madeira             1.89 223  P       Pb      18 25 47.8  -0.1
PMAR                                 S       Sn      18 26 09.2  -0.5
       76nm,0.2s
PMAR   Madeira             1.89 223 eP       Pb      18 25 47.8  -0.1
PMAR                                 S       Sb      18 26 12.4 +0.7
FUL    Funchal             1.94 221 eP       Pb      18 25 48.3  -0.2
FUL                                 eS       Sn      18 26 10.0  -0.5
FUL                                  A       A       18 26 13.8
       136nm,0.1s
FUL    Funchal             1.94 221  P       Pb      18 25 48.3  -0.2
FUL                                  S       Sn      18 26 10.0  -0.5
       68nm,0.1s
PMOZ   Porto Moniz, M      1.99 230⇓iP       Pb      18 25 49.4  -0.2
PMOZ                                eS       Sn      18 26 11.4  -0.7
PMOZ                                 A       A       18 26 17.8
       187nm,0.6s
PMOZ   Porto Moniz, M      1.99 230  P       Pb      18 25 49.2  -0.3
       112nm,0.2s,SNR=7.9
PMOZ                                 S       Sn      18 26 11.7  -0.4
       258nm,0.4s,SNR=7.9
PMOZ   Porto Moniz, M      1.99 230  P       Pb      18 25 49.2  -0.3
       112nm,0.2s,SNR=7.9
PMOZ                                 S       Sn      18 26 11.7  -0.4
       258nm,0.4s,SNR=7.9
CFUE   Fuerteventura       5.60 167  S       Sn      18 27 36.0  -4.8
       8.3nm,0.1s,SNR=7.9
CFTV   Fuerteventura       5.80 169  P       Pn      18 26 43.7 +4.4
       2.1nm,0.3s,SNR=4.0
CFTV                                 S       Sn      18 27 38.8  -7.1
       3.0nm,0.1s,SNR=7.9
TBT    Taburiente          5.84 202  P       Pn      18 26 39.9 +0.1
       22nm,0.2s,SNR=7.9
TBT                                  S       Sn      18 27 40.2  -6.7
       78nm,0.2s,SNR=7.9
TBT    Taburiente          5.84 202  P       Pn      18 26 39.9 +0.1
       22nm,0.2s,SNR=7.9
EHIG   Higuera             5.92 201  S       Sn      18 27 44.2  -4.8
       8.4nm,0.1s,SNR=7.9
CCAN   Las Canadas         5.98 190  S       Sn      18 27 45.5  -5.0
       0.4nm,0.1s,SNR=7.9
EOSO   Osorio              6.04 181  S       Sn      18 27 46.9  -4.8
       5.0nm,0.2s,SNR=7.9
PFVI   Vila Bisbo          6.13  59 eP       Pn      18 26 43.5  -0.2
PFVI                                eS       Sn      18 27 45.3  -8.5
PFVI                                 A       A       18 27 52.8
       12nm,0.7s
PFVI   Vila Bisbo          6.13  59  P       Pn      18 26 43.3  -0.4
       16nm,0.2s,SNR=8.9
PFVI                                 S       Sn      18 27 44.2   -10
       5.4nm,0.1s,SNR=7.9
PFVI   Vila Bisbo          6.13  59 eP       Pn      18 26 43.5  -0.2
EGOM   La Gomera           6.15 195  P       Pn      18 26 45.6 +1.6
       3.7nm,0.1s,SNR=7.9
EGOM                                 S       Sn      18 27 48.7  -5.7
       8.2nm,0.1s,SNR=7.9
EGOM   La Gomera           6.15 195  P       Pn      18 26 45.6 +1.6
       3.7nm,0.1s,SNR=7.9
MORF   Marmelete           6.33  58 eP       Pn      18 26 46.4  -0.1
MORF                                eS       Sn      18 27 50.1  -8.8
MORF                                 AML     AML     18 27 53.4
       comp=N,14nm,0.1s
MORF   Marmelete           6.33  58 eP       Pn      18 26 46.1  -0.5
MORF                                eS       Sn      18 27 50.7  -8.3
MORF                                 A       A       18 27 55.1
       comp=N,9.4nm,0.3s
MORF   Marmelete           6.33  58  P       Pn      18 26 46.1  -0.5
MORF                                 S       Sn      18 27 50.7  -8.3
       comp=N,9.4nm,0.3s
MORF   Marmelete           6.33  58 eP       Pn      18 26 46.1  -0.5
PTEO   Sao Teotonio        6.40  56 eP       Pn      18 26 47.2  -0.2
PTEO                                eS       Sn      18 27 51.9  -8.6
PTEO                                 A       A       18 27 56.8
       comp=N,12nm,0.8s
PTEO   Sao Teotonio        6.40  56  P       Pn      18 26 47.2  -0.2
PTEO                                 S       Sn      18 27 51.9  -8.6
       comp=N,5.9nm,0.8s
PTEO   Sao Teotonio        6.40  56 eP       Pn      18 26 47.2  -0.2
CHIE   El Hierro           6.75 200  S       Sn      18 28 02.8  -6.4
       comp=N,1.1nm,0.1s,SNR=7.9
PBDV   Barranco-do-Ve      6.82  61 eP       Pn      18 26 53.0  -0.2
PBDV                                eS       Sn      18 28 01.5  -9.4
PBDV                                 A       A       18 28 06.7
       comp=N,6.1nm,0.6s
PBDV   Barranco-do-Ve      6.82  61  P       Pn      18 26 53.0  -0.2
PBDV                                 S       Sn      18 28 01.5  -9.4
       comp=N,6.1nm,0.6s
PBDV   Barranco-do-Ve      6.82  61 eP       Pn      18 26 53.0  -0.2
PNCL   Nicolau / Gran      6.83  52 eP       Pn      18 26 53.2  -0.1
PNCL                                eS       Sn      18 28 03.1  -8.0
PNCL                                 A       A       18 28 07.1
       comp=N,5.4nm,0.4s
PNCL   Nicolau / Gran      6.83  52 eP       Pn      18 26 53.2  -0.1
TTIG   Tnine Tigouga,      6.87 119  P       Pn      18 26 52.2  -1.9
PMAFR  Mafra               6.88  44 eP       Pn      18 26 53.0  -1.1
PMAFR                               eS       Sn      18 27 59.9   -13
PMAFR                                A       A       18 28 04.9
       comp=N,26nm,0.4s
PMAFR  Mafra               6.88  44  P       Pn      18 26 52.5  -1.6
       comp=N,3.8nm,0.1s,SNR=7.9
PMAFR                                S       Sn      18 28 00.1   -12
       comp=N,17nm,0.2s,SNR=7.9
PMAFR  Mafra               6.88  44 eP       Pn      18 26 53.0  -1.1
MESJ   Messejana           6.89  55 eP       Pn      18 26 53.7  -0.5
MESJ                                eS       Sn      18 28 02.5   -10
MESJ                                 AML     AML     18 28 07.6
       comp=N,4.0nm,0.2s
MESJ   Messejana           6.89  55 eP       Pn      18 26 54.3 +0.1
MESJ                                eS       Sn      18 28 04.3  -8.3
MESJ                                 A       A       18 28 14.6
       comp=N,4.1nm,0.2s
MESJ   Messejana           6.89  55  P       Pn      18 26 54.3 +0.1
MESJ                                 S       Sn      18 28 04.3  -8.3
       comp=N,4.1nm,0.2s
MESJ   Messejana           6.89  55 eP       Pn      18 26 54.3 +0.1
PCVE   Castro Verde        6.91  57 eP       Pn      18 26 54.5   0.0
PCVE                                eS       Sn      18 28 05.2  -8.0
PCVE                                 A       A       18 28 10.0
       comp=N,5.2nm,0.4s
PCVE   Castro Verde        6.91  57  P       Pn      18 26 54.5   0.0
PCVE                                 S       Sn      18 28 05.2  -8.0
       comp=N,5.2nm,0.4s
PCVE   Castro Verde        6.91  57 eP       Pn      18 26 54.5   0.0
OUK    Oukaimeden          6.97 113  P       Pn      18 26 56.9 +1.3
OUK                                  S       Sn      18 28 10.6  -4.5
OUK    Oukaimeden          6.97 113  P       Pn      18 26 56.9 +1.3
PVAQ   Vaqueiros           7.04  60 eP       Pn      18 26 56.0  -0.2
PVAQ                                eS       Sn      18 28 06.5   -10
PVAQ                                 A       A       18 28 11.4
       comp=N,6.9nm,0.1s
PVAQ   Vaqueiros           7.04  60  P       Pn      18 26 56.0  -0.2
PVAQ                                 S       Sn      18 28 06.5   -10
       comp=N,6.9nm,0.1s
PVAQ   Vaqueiros           7.04  60 eP       Pn      18 26 56.0  -0.2
PBEJ   Beja                7.23  55 eP       Pn      18 27 00.0 +1.2
PBEJ                                eS       Sn      18 28 12.1  -8.8
PBEJ                                 A       A       18 28 18.3
       comp=N,3.6nm,0.3s
PBEJ   Beja                7.23  55  P       Pn      18 27 00.0 +1.2
PBEJ                                 S       Sn      18 28 12.1  -8.8
       comp=N,1.8nm,0.3s
PBEJ   Beja                7.23  55 eP       Pn      18 27 00.0 +1.2
EGRO   El Granado          7.26  60  P       Pn      18 26 59.4 +0.1
       comp=N,3.3nm,0.1s,SNR=10
EGRO                                 S       Sn      18 28 11.9   -10
       comp=N,2.5nm,0.1s,SNR=7.9
EGRO   El Granado          7.26  60  P       Pn      18 26 59.4 +0.1
       comp=N,3.3nm,0.1s,SNR=10
EVO    Evora               7.40  51 eP       Pn      18 27 00.9  -0.3
EVO                                 eS       Sn      18 28 14.8   -10
EVO                                  A       A       18 28 25.1
       comp=N,4.9nm,0.3s
EVO    Evora               7.40  51  P       Pn      18 27 00.9  -0.3
EVO                                  S       Sn      18 28 14.8   -10
       comp=N,4.9nm,0.3s
EVO    Evora               7.40  51 eP       Pn      18 27 00.9  -0.3
ALMR   Almeirim            7.43  45 eP       Pn      18 27 01.4  -0.1
ALMR                                eS       Sn      18 28 15.9   -10
ALMR   Almeirim            7.43  45  P       Pn      18 27 01.4  -0.1
ALMR                                 S       Sn      18 28 15.9   -10
ALMR   Almeirim            7.43  45 eP       Pn      18 27 01.4  -0.1
PMTG   Montargil           7.58  47 eP       Pn      18 27 02.5  -1.2
PMTG                                eS       Sn      18 28 19.8   -10
PMTG                                 A       A       18 28 26.4
       comp=N,2.6nm,0.3s
PMTG   Montargil           7.58  47 eP       Pn      18 27 02.5  -1.2
PTOM   Tomar               7.83  44 eP       Pn      18 27 07.7 +0.7
PTOM   Tomar               7.83  44  P       Pn      18 27 07.7 +0.7
PTOM   Tomar               7.83  44 eP       Pn      18 27 07.7 +0.7
PESTR  Estremoz            7.86  51 eP       Pn      18 27 07.5   0.0
PESTR                               eS       Sn      18 28 26.4   -10
PESTR                                A       A       18 28 30.1
       comp=N,2.3nm,0.9s
PESTR  Estremoz            7.86  51 eP       Pn      18 27 07.5   0.0
PBAR   Barrancos           7.87  57 eP       Pn      18 27 07.8 +0.2
PBAR                                eS       Sn      18 28 27.0   -10
PBAR                                 A       A       18 28 32.9
       comp=N,5.9nm,0.3s
PBAR   Barrancos           7.87  57  P       Pn      18 27 07.8 +0.2
PBAR                                 S       Sn      18 28 27.0   -10
       comp=N,5.9nm,0.3s
PBAR   Barrancos           7.87  57 eP       Pn      18 27 07.8 +0.2
EMIN   Mina Concepcio      7.95  60 ⇓P       Pn      18 27 08.3  -0.3
       comp=N,4.8nm,0.2s,SNR=18
EMIN                                 S       Sn      18 28 30.0  -8.6
       comp=N,0.8nm,0.1s,SNR=7.9
EMIN   Mina Concepcio      7.95  60  P       Pn      18 27 08.3  -0.3
       comp=N,4.8nm,0.2s,SNR=18
PCAS   Casmilo, Conde      8.08  41 eP       Pn      18 27 09.3  -1.2
PCAS   Casmilo, Conde      8.08  41 eP       Pn      18 27 09.3  -1.2
EBAD   Badajoz             8.18  53  P       Pn      18 27 11.5  -0.3
       comp=N,1.2nm,0.1s,SNR=18
EBAD                                 S       Sn      18 28 34.8  -9.5
       comp=N,1.6nm,0.1s,SNR=7.9
EBAD   Badajoz             8.18  53  P       Pn      18 27 11.5  -0.3
       comp=N,1.2nm,0.1s,SNR=18
PMRV   Marv??o             8.31  48 eP       Pn      18 27 12.7  -1.0
PMRV                                eS       Sn      18 28 36.9   -11
PMRV                                 A       A       18 28 44.3
       comp=N,3.2nm,0.7s
PMRV   Marv??o             8.31  48  P       Pn      18 27 12.7  -1.0
PMRV                                 S       Sn      18 28 36.9   -11
       comp=N,3.2nm,0.7s
PMRV   Marv??o             8.31  48 eP       Pn      18 27 12.7  -1.0
PCBR   Castelo Branco      8.52  46 eP       Pn      18 27 16.0  -0.5
PCBR   Castelo Branco      8.52  46  P       Pn      18 27 16.0  -0.5
PCBR   Castelo Branco      8.52  46 eP       Pn      18 27 16.0  -0.5
CZD    Col de Zad          8.70  94  P       Pn      18 27 19.1  -0.2
CZD    Col de Zad          8.70  94  P       Pn      18 27 19.1  -0.2
PVIS   Viseu               8.87  40 eP       Pn      18 27 20.7  -0.7
PVIS   Viseu               8.87  40  P       Pn      18 27 20.7  -0.7
PVIS   Viseu               8.87  40 eP       Pn      18 27 20.7  -0.7
ECAB   El Cabril           8.98  61  P       Pn      18 27 22.4  -0.5
       comp=N,5.0nm,0.2s,SNR=39
ECAB                                 S       Sn      18 28 53.3   -11
       comp=N,1.3nm,0.2s,SNR=7.9
ECAB   El Cabril           8.98  61  P       Pn      18 27 22.4  -0.5
       comp=N,5.0nm,0.2s,SNR=39
EMIJ   Mijas               9.01  71  P       Pn      18 27 22.3  -0.9
       comp=N,2.2nm,0.3s,SNR=7.9
EMIJ                                 S       Sn      18 28 53.7   -11
       comp=N,1.6nm,0.3s,SNR=7.9
EMIJ   Mijas               9.01  71  P       Pn      18 27 22.3  -0.9
       comp=N,2.2nm,0.3s,SNR=7.9
HORN   Hornachuelos        9.01  63  P       Pn      18 27 21.2  -2.0
POLO   Lamas de Olo        9.40  37 eP       Pn      18 27 27.2  -1.6
POLO                                eS       Sn      18 29 02.7   -12
POLO                                 A       A       18 29 11.6
       comp=N,1.4nm,0.8s
POLO   Lamas de Olo        9.40  37 eP       Pn      18 27 27.2  -1.6
EPLA   Plasencia           9.50  49  P       Pn      18 27 29.1  -1.0
       comp=N,1.0nm,0.1s,SNR=4.0
EPLA                                 S       Sn      18 29 05.8   -11
       comp=N,1.5nm,0.2s,SNR=7.9
EPLA   Plasencia           9.50  49  P       Pn      18 27 29.1  -1.0
       comp=N,1.0nm,0.1s,SNR=4.0
EADA   Adamuz              9.62  62  P       Pn      18 27 31.1  -0.6
       comp=N,3.2nm,0.2s,SNR=7.9
EADA   Adamuz              9.62  62  P       Pn      18 27 31.1  -0.6
       comp=N,3.2nm,0.2s,SNR=7.9
PGAV   Gavieira, Arco      9.63  34 eP       Pn      18 27 31.2  -0.6
PGAV                                eS       Sn      18 29 08.5   -12
PGAV                                 A       A       18 29 08.9
       comp=N,3.6nm,0.7s
PGAV   Gavieira, Arco      9.63  34 eP       Pn      18 27 31.2  -0.6
ELOB   Lobios              9.65  35  P       Pn      18 27 30.8  -1.3
       comp=N,2.2nm,0.3s,SNR=7.5
ELOB                                 S       Sn      18 29 06.8   -14
       comp=N,0.5nm,0.1s,SNR=7.9
ELOB   Lobios              9.65  35  P       Pn      18 27 30.8  -1.3
       comp=N,2.2nm,0.3s,SNR=7.5
EGOR   Sierra Gorda,       9.65  69  P       Pn      18 27 34.1 +1.9
       comp=N,1.1nm,0.4s,SNR=7.9
EGOR                                 S       Sn      18 29 11.2   -10
       comp=N,2.1nm,0.4s,SNR=7.9
EGOR   Sierra Gorda,       9.65  69  P       Pn      18 27 34.1 +1.9
       comp=N,1.1nm,0.4s,SNR=7.9
MVO    Moncorvo            9.65  41 eP       Pn      18 27 31.3  -0.9
MVO                                 eS       Sn      18 29 08.2   -13
MVO                                  A       A       18 29 14.8
       comp=N,3.7nm,0.4s
MVO    Moncorvo            9.65  41  P       Pn      18 27 30.8  -1.4
       comp=N,3.0nm,0.4s,SNR=4.0
MVO                                  S       Sn      18 29 07.3   -13
       comp=N,0.5nm,0.1s,SNR=7.9
MVO    Moncorvo            9.65  41 eP       Pn      18 27 31.3  -0.9
ELGU   Los Guajares,       9.97  71  P       Pn      18 27 36.6 +0.1
       comp=N,0.6nm,0.2s,SNR=4.0
ELGU                                 S       Sn      18 29 19.9  -8.5
       comp=N,4.5nm,0.4s,SNR=7.9
ELGU   Los Guajares,       9.97  71  P       Pn      18 27 36.6 +0.1
       comp=N,0.6nm,0.2s,SNR=4.0
EMAZ   Mazaricos          10.14  28  P       Pn      18 27 37.5  -1.2
       comp=N,0.5nm,0.3s,SNR=4.0
EMAZ                                 S       Sn      18 29 15.2   -17
       comp=N,1.9nm,0.1s,SNR=7.9
EMAZ   Mazaricos          10.14  28  P       Pn      18 27 37.5  -1.2
       comp=N,0.5nm,0.3s,SNR=4.0
PAB    San Pablo          10.37  55  P       Pn      18 27 41.2  -0.7
       comp=N,1.1nm,0.2s,SNR=7.9
PAB                                  S       Sn      18 29 25.2   -13
       comp=N,0.7nm,0.3s,SNR=7.9
PAB    San Pablo          10.37  55  P       Pn      18 27 41.2  -0.7
       comp=N,1.1nm,0.2s,SNR=7.9
EAGO   Agolada(Pontev     10.38  31  P       Pn      18 27 39.8  -2.2
       comp=N,1.3nm,0.2s,SNR=7.9
EAGO                                 S       Sn      18 29 21.4   -17
       comp=N,1.6nm,0.2s,SNR=7.9
EAGO   Agolada(Pontev     10.38  31  P       Pn      18 27 39.8  -2.2
       comp=N,1.3nm,0.2s,SNR=7.9
EQES   Quesada            10.63  66  P       Pn      18 27 44.9  -0.8
       comp=N,0.9nm,0.4s,SNR=7.9
EQES                                 S       Sn      18 29 35.5  -9.3
       comp=N,0.6nm,0.2s,SNR=7.9
EQES   Quesada            10.63  66  P       Pn      18 27 44.8  -0.8
       comp=N,0.9nm,0.4s,SNR=7.9
ESDC   Sonseca Array      10.69  55  P       Pn      18 27 45.5  -0.8
       SNR=7.9
ESDC   Sonseca Array      10.69  55  P       Pn      18 27 45.5  -0.8
       SNR=7.9
ETOB   Tobarra            12.03  64  P       Pn      18 28 04.4  -0.2
       comp=N,0.9nm,0.2s,SNR=7.9
ETOB   Tobarra            12.03  64  P       Pn      18 28 04.4  -0.2
       comp=N,0.9nm,0.2s,SNR=7.9
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*NIED **13** 18:40:00, 42.°90N×146.°30E, h29km, Mw3.7 Best double couple: M$_0$4.20000×10^{14} NP1:φ$_s$118.00000°, δ48.00000°, λ-55.00000°. NP2:φ$_s$252.00000°, δ52.00000°, λ-122.00000°.*

*IDC **13** 18:40:31.1±1.0, 42.°91N×146.°51E, h0km, mb3.5/9, mb1 3.7/11, mb1mx3.5/68, mbtmp3.5/11, ML3.2/2, MS3.0/3, Ms1 3.0/3, ms1mx2.4/67, Error ellipse: s-maj=24.1km s-min=20.2km az=13.0*

*JMA **13** 18:40:35.9±0.1, 42.°86N×146.°32E, h49km±2km, M3.6*

*MOS **13** 18:40:35.0±1.2, 42.°81N×146.°32E, h43km, mb4.4/1, Error ellipse: s-maj=17.7km s-min=8.5km az=97.2*

*ISCJB **13** 18:40:36.6±0.9, 42.°94N±0.°06×146.°29E±0.°07, h51km±7km, mb3.8/9, MS3.7/1, Error ellipse: s-maj=10.9km s-min=5.6km az=142.2*

*SKHL **13** 18:40:37.0±0.8, 42.°90N×146.°24E, h37km±3km, mb4.9/6*

ISC 13 18:40:36.2±1.5, **42.°93N**±0.°06×**146.°26E**±0.°04, **h31km**±10km, **n46, σ0.ˢ97**/55, **mb3.5**/9, **3C-2D, Off southeast coast of Hokkaido**

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Code   Station Name        Δ°   AZ°    Phase ID           Time      Res
                                    Op      ISC      h  m  s     ISC
NEM2   Nemuro 2            0.58 319  P       Pn      18 40 49.0 +0.7
NEM2                                eS       Sn      18 40 58.4 +1.7
GLVR   Golovnino           0.97 326 i P      Pn      18 40 54.0 +0.3
GLVR                                 AMB     AMB     18 40 56.0
       353nm,0.3s
GLVR                                eS       Sn      18 41 07.0 +0.5
GLVR                                 A       A       18 41 08.0
       2µm,0.3s
GLVR                                 A       A       18 41 08.0
       782nm,0.3s
GLVR   Golovnino           0.97 326c iPN     Pb      18 40 54.5   0.0
GLVR                                eS       Sb      18 41 07.8 +0.8
GLVR                                 pmax    pmax
       comp=Z,353nm,0.1s
GLVR                                 smax    smax
       comp=N,2µm,0.3s
GLVR                                 smax    smax
```

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=E,782nm,0.2s						
SHO	Shikotan	1.03	24	iP	Pb	18 40 55.0	-0.3
SHO				AMB	AMB	18 40 56.0	
	comp=E,270nm,0.4s						
SHO				AMB	AMB	18 40 56.0	
	comp=E,292nm,0.4s						
SHO				AMB	AMB	18 40 56.0	
	comp=E,628nm,0.4s						
SHO				iS	Sb	18 41 09.0	+0.5
SHO				A	A	18 41 10.0	
	comp=E,1µm,0.2s						
SHO				A	A	18 41 10.0	
	comp=E,2µm,0.2s						
SHO	Shikotan	1.03	24c	iPN	Pb	18 40 55.7	+0.4
SHO				iS	Sb	18 41 09.3	+0.8
SHO				pmax	pmax		
	comp=Z,628nm,0.4s						
SHO				pmax	pmax		
	comp=N,270nm,0.3s						
SHO				pmax	pmax		
	comp=E,292nm,0.3s						
SHO				smax	smax		
	comp=E,2µm,0.3s						
SHO				smax	smax		
	comp=N,1µm,0.2s						
GRPR	Tuman	1.12	342	eP	Pb	18 40 56.0	-1.0
GRPR				AMB	AMB	18 40 57.0	
	comp=N,275nm,0.4s						
GRPR				AMB	AMB	18 40 57.0	
	comp=N,329nm,0.4s						
GRPR				AMB	AMB	18 40 57.0	
	comp=N,908nm,0.4s						
GRPR				eS	Sn	18 41 10.0	-0.1
GRPR				A	A	18 41 12.0	
	comp=N,2µm,0.4s						
GRPR				A	A	18 41 12.0	
	comp=N,4µm,0.4s						
GRPR	Tuman	1.12	342	ePN	Pb	18 40 56.2	-0.8
GRPR				eS	Sb	18 41 10.5	-0.7
GRPR				pmax	pmax		
	comp=N,275nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,908nm,0.3s						
GRPR				pmax	pmax		
	comp=E,329nm,0.2s						
GRPR				smax	smax		
	comp=N,2µm,0.5s						
GRPR				smax	smax		
	comp=E,4µm,0.4s						
YUK	Yuzh-Kuril'sk	1.14	345	iP	Pn	18 40 56.0	0.0
YUK				AMB	AMB	18 40 58.0	
	comp=E,213nm,0.4s						
YUK				AMB	AMB	18 40 58.0	
	comp=E,382nm,0.4s						
YUK				AMB	AMB	18 40 58.0	
	comp=E,920nm,0.4s						
YUK				eS	Sn	18 41 10.0	-0.6
YUK				A	A	18 41 14.0	
	comp=E,2µm,0.4s						
YUK				A	A	18 41 14.0	
	comp=E,1µm,0.4s						
YUK	Yuzh-Kuril'sk	1.14	345c	iPN	Pb	18 40 56.4	-0.9
YUK				eS	Sn	18 41 10.5	-0.1
YUK				pmax	pmax		
	comp=N,213nm,0.1s						
YUK				pmax	pmax		
	comp=E,382nm,0.1s						
YUK				pmax	pmax		
	comp=Z,920nm,0.1s						
YUK				smax	smax		
	comp=N,2µm,0.5s						
YUK				smax	smax		
	comp=E,1µm,0.4s						
JAK	Akkeshi	1.15	274	P	Pn	18 40 56.5	+0.3
JAK				eS	Sn	18 41 11.5	+0.6
LAGR	Lagunnoye	1.18	343	iP	Pb	18 40 57.0	-0.9
LAGR				AMB	AMB	18 40 58.0	
	comp=E,819nm,0.4s						
LAGR				eS	Sn	18 41 11.0	-0.5
LAGR				A	A	18 41 16.0	
	comp=E,5µm,0.4s						
LAGR				A	A	18 41 16.0	
	comp=E,3µm,0.4s						
LAGR	Lagunnoye	1.18	343d	iPN	Pb	18 40 57.0	-0.9
LAGR				eS	Sn	18 41 11.5	0.0
LAGR				pmax	pmax		
	comp=Z,819nm,0.1s						
LAGR				smax	smax		
	comp=E,3µm,0.3s						
LAGR				smax	smax		
	comp=N,5µm,0.4s						
JNK	Nakash	1.30	301	P	Pn	18 40 58.8	+0.5
JNK				eS	Sn	18 41 15.0	+0.3
JRA	Rausu	1.31	321	P	Pb	18 40 59.3	-0.8
JOB	Onbets	1.79	270	P	Pn	18 41 05.3	+0.4
JAR	Ashorobuto	1.86	282	P	Pn	18 41 06.8	+0.9
JTKR	Abashiri--Toko	2.01	302	P	Pn	18 41 09.5	+1.6
JCH	Churui	2.16	263	P	Pn	18 41 10.5	+0.5
HRK	Horoka	2.35	284	eP	Pn	18 41 14.6	+1.8
HRK				eS	Sn	18 41 42.4	+1.8
JMP	Maruseppu	2.37	298	P	Pn	18 41 14.6	+1.6
JEM	Erimo	2.47	249	P	Pn	18 41 16.2	+1.9
KUR	Kuril'sk	2.58	26	iP	Pn	18 41 17.0	+1.3
KUR				AMB	AMB	18 41 18.0	
	comp=N,15nm,0.2s						
KUR				AMB	AMB	18 41 18.0	
	comp=N,24nm,0.2s						
KUR				AMB	AMB	18 41 18.0	
	comp=N,36nm,0.2s						
KUR				iS	Sn	18 41 46.0	0.0
KUR				A	A	18 41 49.0	
	comp=N,267nm,0.2s						
KUR				A	A	18 41 49.0	
	comp=N,88nm,0.2s						
KUR	Kuril'sk	2.58	26d	iPN	Pn	18 41 17.1	+1.3
KUR				iS	Sn	18 41 46.8	+0.8
KUR				pmax	pmax		
	comp=Z,36nm,0.2s						
KUR				pmax	pmax		
	comp=N,15nm,0.1s						
KUR				pmax	pmax		
	comp=E,24nm,0.1s						
KUR				smax	smax		
	comp=N,267nm,0.2s						
KUR				smax	smax		
	comp=E,88nm,0.1s						
ASAJ	Asahikawa	2.92	295	Pn	Pn	18 41 22.6	+2.1
	comp=E,2.4nm,0.3s,baz=130,slow=12,SNR=37						
ASAJ				Sn	Sb	18 42 01.7	-1.0
	comp=E,3.6nm,0.3s,baz=306,slow=6.0,SNR=5.1						
ASAJ				LR	LR	18 42 51.2	
	comp=E,99nm,20.4s,baz=62,slow=45						
MJAR	Matsushiro Arr	8.90	227	Pn	Pn	18 42 41.7	-0.9
	comp=E,0.3nm,0.3s,baz=25,slow=12,SNR=4.1						
USRK	Ussuriysk Ar.	10.44	282	LR	LR	18 47 12.9	
	comp=E,49nm,20.2s,baz=179,slow=38						
SEY	Seymchan	20.36	8	P	P	18 45 08.9	-0.9
	comp=E,0.7nm,0.6s,baz=180,slow=19,SNR=2.4						
SONM	Songino Array	28.20	294	P	P	18 46 26.7	+0.6
	comp=E,0.7nm,0.6s,baz=81,slow=8.7,SNR=7.6						
H11N2	WAKE ISLAND Hy	28.93	137	T	T	19 17 25.3	
	baz=328,slow=75,SNR=365						
H11N1	WAKE ISLAND Hy	28.94	137	T	T	19 17 34.3	
	baz=328,slow=75,SNR=162						
H11N3	WAKE ISLAND Hy	28.94	137	T	T	19 17 27.9	
	baz=328,slow=75,SNR=254						
H11S1	WAKE ISLAND Hy	29.86	138	T	T	19 18 38.9	
	baz=329,slow=76,SNR=796						
H11S3	WAKE ISLAND Hy	29.87	138	T	T	19 18 36.6	
	baz=329,slow=76,SNR=721						
H11S2	WAKE ISLAND Hy	29.88	138	T	T	19 18 27.8	
	baz=329,slow=76,SNR=536						
ILAR	Eielson Array	42.53	36	P	P	18 48 26.4	-2.0
	comp=E,0.3nm,0.7s,baz=267,slow=4.5,SNR=3.9						
MKAR	Makanchi Array	44.40	298	P	P	18 48 44.0	+0.2
	comp=E,0.3nm,0.5s,baz=83,slow=9.9,SNR=3.9						
MKAR	Makanchi Array	44.40	298	P	P	18 48 44.0	+0.2
KURK	Kurchatov	45.46	304	P	P	18 48 53.2	+1.1
KURBB	Kurchatov Arra	45.54	304	P	P	18 48 53.1	+0.4
	comp=E,0.2nm,0.3s,baz=73,slow=8.6,SNR=5.3						
BVAR	Borovoye Array	49.52	310	P	P	18 49 24.6	+0.9
	comp=E,0.2nm,0.4s,baz=72,slow=8.3,SNR=4.3						
HNR	Honiara	53.59	163	P	P	18 49 53.4	-0.9
	comp=E,33nm,0.4s,baz=300,slow=8.1,SNR=5.6						
HNR	Honiara	53.59	163	P	P	18 49 53.4	-0.9
HNR				pmax	pmax		
	comp=Z,70nm,0.7s						
FINES	FINESS Array B	65.31	333	P	P	18 51 14.6	-0.1
	comp=Z,1.5nm,0.5s,baz=44,slow=8.8,SNR=12						
EKA	Eskdalemuir Ar	78.72	343	P	P	18 52 35.2	+0.1
	comp=Z,0.2nm,0.3s,baz=29,slow=5.9,SNR=3.8						
TXAR	Lajitas Array	83.64	56	P	P	18 53 02.3	+0.3
	comp=Z,0.3nm,0.7s,baz=291,slow=5.5,SNR=4.4						
TKL	Tuckaleechee C	89.44	39	LR	LR	19 37 36.6	
	comp=Z,28nm,18.4s,baz=7.0,slow=38						

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*IDC **13** 18:43:35.2±8.8, 23°.01S×179°.39E, h544^{km}±75^{km}, mb3.6/5, mb1 3.7/6, mb1mx3.1/48, mbtmp4.6/6, Error ellipse: s-maj=88.3km s-min=33.7km az=45.0*

ISC 13 18:43:36.7±3.4**, 23°.3S**±0°.2×**179°.3E**±0°.4**, h553**^{km}**, n6, σ0**^{s}**.83**/9**, mb4.2**/5**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	15.07	187	P	P	18 46 47.5	+0.9
	1.3nm,0.3s,baz=270,slow=5.1,SNR=12						
URZ				S	S	18 49 21.8	-1.0
	0.6nm,0.3s,baz=227,slow=21,SNR=9.1						
CTA	Charters Tower	30.83	269	P	P	18 49 08.6	+0.4
	15nm,0.4s,baz=97,slow=11,SNR=75						
STKA	Stephens Creek	34.37	247	P	P	18 49 38.9	+0.9
	2.7nm,0.4s,baz=86,slow=9.5,SNR=10						
ASAR	Alice Springs	41.50	260	P	P	18 50 36.0	-0.2
	5.2nm,0.7s,baz=88,slow=8.1,SNR=93						
ASAR				PcP	PcP	18 52 20.2	-0.4
	0.6nm,0.7s,baz=96,slow=3.4,SNR=4.4						
WRA	Warramunga Arr	41.80	266	P	P	18 50 37.6	-1.0
	2.6nm,0.2s,baz=96,slow=8.3,SNR=147						
WRA				PcP	PcP	18 52 21.4	-0.3
	0.3nm,0.5s,baz=100,slow=3.0,SNR=2.9						
FITZ	Fitzroy Crossi	50.23	265	P	P	18 51 42.3	-0.2
	2.0nm,0.5s,baz=93,slow=6.0,SNR=16						

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*NIED **13** 18:59:00, 37°.80N×143°.50E, h32^{km}, Mw3.4 Best double couple: $M_0$1.52000×10^{14} NP1:ϕ_s228.00000°, δ64.00000°, λ176.00000°. NP2:ϕ_s319.00000°, δ87.00000°, λ26.00000°.*

*IDC **13** 18:59:31.3±1.7, 37°.60N×143°.86E, h0^{km}, mb3.3/3, mb1 3.8/7, mb1mx3.4/71, mbtmp3.8/7, ML3.9/3, Error ellipse: s-maj=36.9km s-min=24.0km az=78.0*

*ISCJB **13** 18:59:35.1±0.8, 37°.70N±0°.04×143°.69E±0°.06, h33^{km}, mb3.4/3, Error ellipse: s-maj=7.1km s-min=6.0km az=172.7*

*JMA **13** 18:59:37.4±0.2, 37°.77N×143°.53E, h44^{km}, M4.1*

ISC 13 18:59:35.6±1.2**, 37°.69N**±0°.05×**143°.76E**±0°.09**, h35**^{km}**, n20, σ1**^{s}**.69**/33**, mb3.3**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIO	Ouri	2.05	293	P	Pn	19 00 07.9	+0.4
JIO				S	Sn	19 00 29.8	-2.1
OFUJ	Ofunato	2.15	311	P	Pn	19 00 09.3	+0.3
OFUJ				eS	Sn	19 00 32.6	-1.8
JMK	Ichinoseki	2.36	303	P	Pn	19 00 12.4	+0.6
JMK				S	Sn	19 00 38.4	-1.2
JOU	Okura	2.53	286	P	Pn	19 00 15.2	+0.9
JOU				eS	Sn	19 00 43.0	-0.9
JOM	Ohasama	2.63	313	P	Pn	19 00 16.5	+1.0
JOM				S	Sn	19 00 44.8	-1.4
JFT	Otama	2.72	267	P	Pn	19 00 18.0	+1.2
JFT				eS	Sn	19 00 48.1	-0.4
JYK	Kaneyama	2.94	296	P	Pn	19 00 21.0	+1.2
JYK				S	Sn	19 00 53.2	-0.7
JRG	Rokugo	2.98	306	P	Pn	19 00 21.7	+1.3
JRG				eS	Sn	19 00 54.4	-0.6
JANG	Nango	3.20	328	P	Pn	19 00 23.8	+0.4
JAG	Ashikaga	3.67	251	P	Pn	19 00 30.9	+1.1
JAG				S	Sn	19 01 10.6	-1.2
JRY	Ryogami san	4.24	248	P	Pn	19 00 38.6	+0.9
JOT	Ohata	4.24	331	P	Pn	19 00 38.9	+1.2
MJAR	Matsushiro Arr	4.58	257	Pn	Pn	19 00 43.3	+0.9
	3.3nm,0.3s,baz=78,slow=16,SNR=35						
MJAR				Sn	Sn	19 01 36.2	+1.8
	2.8nm,0.3s,baz=91,slow=27,SNR=9.9						
MAT	Matsushiro	4.58	257	P	Pn	19 00 44.6	+2.2
MAT				S	Sn	19 01 36.8	+2.4
JHJ	Hachijo jima 2	5.60	217	Pn	Pn	19 00 56.6	+0.2
	8.8nm,0.3s,baz=16,slow=20,SNR=7.1						
JHJ				Sn	Sn	19 01 54.0	-5.5
	30nm,0.3s,baz=83,slow=22,SNR=7.8						
ASAJ	Asahikawa	6.48	353	Pn	Pn	19 01 09.9	+1.4
	3.4nm,0.3s,baz=195,slow=14,SNR=48						
ASAJ				Sn	Sn	19 02 18.4	-2.7
	0.4nm,0.3s,baz=61,slow=19,SNR=2.0						
JCJ	Chichijima	10.65	188	Pn	Pn	19 02 03.4	-2.3
JCJ				Sn	Sn	19 03 53.2	-10
MKAR	Makanchi Array	45.35	302	P	P	19 07 51.4	+1.1
	0.1nm,0.4s,baz=74,slow=5.1,SNR=2.6						
WRA	Warramunga Arr	58.01	190	P	P	19 09 24.8	-0.1
	0.7nm,0.6s,baz=10,slow=7.1,SNR=12						
ASAR	Alice Springs	61.73	190	P	P	19 09 51.3	+0.8
	0.1nm,0.4s,baz=6.4,slow=6.8,SNR=7.7						

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*ISCJB **13** 19:14:38.4±0.4, 71°.33N±0°.03×10°.05W±0°.08, h10^{km}, mb3.4/5, MS2.9/8, Error ellipse: s-maj=4.5km s-min=3.2km az=150.9*

*CSEM **13** 19:14:42.2±0.2, 71°.31N×9°.85W, h20^{km}, ML4.0, Error ellipse: s-maj=5.5km s-min=3.2km az=127.0*

*IDC **13** 19:14:42.4±1.2, 71°.36N×9°.70W, h0^{km}, mb3.5/5, mb1 3.8/9, mb1mx3.4/74, mbtmp3.7/9, ML3.6/3, MS2.9/10, Ms1 2.9/10, ms1mx2.7/61, Error ellipse: s-maj=21.9km s-min=9.3km az=58.0*

*NAO **13** 19:14:43.7±5.9, 71°.32N×9°.47W, h17^{km}±21^{km}, ML4.0*

*REY **13** 19:14:44.4, 70°.78N×9°.20W, h10^{km}*

*BER **13** 19:14:46.3±3.1, 71°.32N×9°.04W, h22^{km}±8^{km}, ML3.0, ML4.0(NAO)*

ISC 13 19:14:41.5±0.6**, 71°.33N**±0°.04×**9°.51W**±0°.04**, h10**^{km}**, n75, σ2**^{s}**.41**/87**, mb3.5**/5**, MS2.8**/8**, 4C, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNW	Jan Mayen West	0.46	130⇑	iP	Pn	19 14 53.2	-0.9
JNW				eS	Sb	19 14 59.1	+0.7
JNW				IAML		19 14 59.9	
	comp=Z,6µm,0.2s						
JMIC	Jan Mayen	0.47	136	Pg	Pb	19 14 53.2	+1.3
JMIC				Lg	Lg	19 14 59.7	
JMIC	Jan Mayen	0.47	136	Pg	Pb	19 14 53.1	+1.3
	comp=Z,726nm,0.3s,baz=72,slow=1.6,SNR=3303						
JMIC				Lg	Lg	19 14 59.9	
	comp=Z,1µm,0.3s,baz=66,slow=20,SNR=106						
JMIC				LR	LR	19 15 15.7	
	comp=Z,436nm,20.6s,baz=122,slow=61						
JMIC	Jan Mayen	0.47	136	Pg	Pb	19 14 53.2	+1.3
JMIC				Lg	Lg	19 14 59.7	
JMIC	Jan Mayen	0.47	136⇑	eP	Pb	19 14 53.1	+1.3
JMIC				eS	Sb	19 14 59.6	+0.8
JMIC				IAML		19 15 02.8	
	comp=Z,2µm,0.2s						
JMI	Jan Mayen	0.47	147⇑	iP	Pn	19 14 53.4	-0.8
JMI				eS	Sb	19 15 00.1	+1.3
JMI				IAML		19 15 06.3	
	comp=Z,4µm,0.3s						
JNE	Jan Mayen East	0.52	130⇑	iP	Pb	19 14 53.8	+1.2
JNE				eS	Sb	19 15 01.3	+1.1
JNE				IAML		19 15 02.6	
	comp=Z,6µm,0.2s						
ILEI	Leirhofn	5.55	210	P	Pn	19 16 02.6	-1.3
	baz=215						
ILEI				S	Sn	19 17 04.5	-3.1
	baz=215						
ILEI	Leirhofn	5.55	210	P	Pn	19 16 02.6	-1.3
ILEI				S	Sn	19 17 04.5	-3.1
IGIL	Gilhagi	5.83	209	P	Pn	19 16 06.3	-1.5
	baz=213						
IGIL				S	Sn	19 17 11.6	-3.0
	baz=213						
IHED	Heoinshofoi	5.98	212	P	Pn	19 16 09.0	-0.9
	baz=216						
DAG	Danmarks Havn	6.02	340	iP	Pn	19 16 10.2	-0.1
DAG	Danmarks Havn	6.02	340	iP	Pn	19 16 09.7	-0.7
DAG	Danmarks Havn	6.02	340	iP	Pn	19 16 10.2	-0.1
DAG				IAML		19 17 13.9	
	comp=Z,21nm,0.4s						
IDIM	Dimmadalsˆ¡s	6.03	210	P	Pn	19 16 10.2	-0.3
	baz=214						
IDIM	Dimmadalsˆ¡s	6.03	210	P	Pn	19 16 10.2	-0.3
IGHA	Grjothals	6.09	209	P	Pn	19 16 09.5	-2.0
	baz=213						
IGHA	Grjothals	6.09	209	P	Pn	19 16 09.5	-2.0
IGRA	Granastaoir	6.18	212	P	Pn	19 16 11.8	-0.7
	baz=216						
IGRA				S	Sn	19 17 20.1	-3.0
	baz=216						
IGRS	Grimsstaoir	6.21	206	P	Pn	19 16 11.2	-1.8
	baz=210						
IHLA	Hella	6.30	215	S	Sn	19 17 23.6	-2.5
	baz=219						
IMEL	Melhnausar	6.35	208	P	Pn	19 16 14.1	-0.9
	baz=212						
IMEL				S	Sn	19 17 25.6	-1.8
	baz=212						
IHRN	Hraun	6.50	222	P	Pn	19 16 17.3	+0.3
	baz=226						
IADA	Aoalbol	6.72	203	P	Pn	19 16 18.5	-1.6
	baz=206						
IADA				S	Sn	19 17 34.4	-2.2
	baz=206						
IADA	Aoalbol	6.72	203	P	Pn	19 16 18.5	-1.6
IADA				S	Sn	19 17 34.4	-2.2
IMKO	Mokollar	6.86	205	P	Pn	19 16 21.0	-1.0
	baz=208						
IVSH	V-Sauoahnukur	6.95	203	P	Pn	19 16 21.3	-1.9
	baz=206						
IVSH	V-Sauoahnukur	6.95	203	P	Pn	19 16 21.3	-1.9
BJO1	Bjornoya	8.90	56	Pn	Pn	19 16 50.5	+0.6
BJO	Bjornoya	8.96	56	ePn	Pn	19 16 52.0	+1.4
SUMG	Summit	9.02	292	iP	Pn	19 16 55.4	+3.5
SUMG				iS	Sn	19 18 29.2	-4.3
SUMG	Summit	9.02	292	iP	Pn	19 16 55.4	+3.5
SUMG				iS	Sn	19 18 29.2	-4.3
SUMG				IAML		19 18 34.8	
	comp=Z,2.5nm,0.4s						
STEI	Steigen	9.23	100	ePn	Pn	19 16 56.1	+1.7
STEI				eSn	Sn	19 18 32.3	-5.8
STEI				IAML		19 18 45.0	
	comp=Z,5.4nm,0.8s						
KBS	Kingsbay	9.32	26	Pn	Pn	19 16 56.3	+0.7
KBS	Kingsbay	9.32	26	ePn	Pn	19 16 56.3	+0.7
KBS				eSn	Sn	19 18 32.8	-7.5
KBS				IAML		19 18 37.9	
	comp=Z,9.6nm,0.2s						
SOFL	Sornfelli, Far	9.35	173	ePn	Pn	19 16 58.0	+1.8
KONS	Konsvik	9.43	110	ePn	Pn	19 16 57.9	+0.8
KONS				eSn	Sn	19 18 37.1	-6.0
KONS				IAML		19 18 42.5	
	comp=Z,5.6nm,0.3s						
SPA0	Spitsbergen Ar	9.56	33	Pn	Pn	19 17 01.2	+2.3
	baz=243,slow=16						
SPA0	Spitsbergen Ar	9.56	33	ePn	Pn	19 17 00.9	+2.0
SPA0				eSn	Sn	19 18 39.9	-6.3
SPITS	Spitsbergen Ar	9.56	33	Pn	Pn	19 17 01.1	+2.3
	baz=236,slow=15,SNR=434						
SPITS				Sn	Sn	19 18 44.4	-1.7
	baz=237,slow=27,SNR=3.9						
TRO	Tromso	9.61	86	ePn	Pn	19 17 00.5	+0.8
KIF	Kilpisjarvi	10.48	88	ePn	Pn	19 17 11.2	-0.3
KIF				eSn	Sn	19 18 59.4	-9.4
NSS	Namsos	10.50	120	ePn	Pn	19 17 13.3	+1.5
NSS				eSn	Sn	19 19 00.7	-8.7
NSS				IAML		19 19 07.7	
	comp=Z,8.8nm,0.4s						
AKN	Aaknes	11.20	137	Pn	Pn	19 17 22.6	+1.2
AKN	Aaknes	11.20	137	ePn	Pn	19 17 22.1	+0.7
AKN				eSn	Sn	19 19 16.8	-10
AKN				IAML		19 19 27.6	
	comp=Z,6.2nm,0.3s						
HEF	Hetta	11.69	88	ePn	Pn	19 17 29.3	+1.3
LRW	Lerwick	11.73	159	ePn	Pn	19 17 31.2	+2.7
LRW				eSn	Sn	19 19 29.4	-10
ARA0	ARCESS Array S	11.76	82	Pn	Pn	19 17 31.3	+2.3
	baz=293,slow=12						
ARA0	ARCESS Array S	11.76	82	Pn	Pn	19 17 31.3	+2.3
	baz=293,slow=12						
ARCES	ARCESS Array B	11.76	82	Pn	Pn	19 17 31.6	+2.6
	comp=Z,0.2nm,0.3s,baz=293,slow=12,SNR=21						
HYA	Hoyanger	11.94	141	ePn	Pn	19 17 32.1	+0.6
HYA				eSn	Sn	19 19 33.4	-11
HYA				IAML		19 19 49.1	
	comp=Z,4.3nm,0.3s						
ASK	Askoy	12.37	144	ePn	Pn	19 17 37.8	+0.4
NOA	NORSAR Array B	13.18	131	LR	LR	19 22 17.4	
	comp=Z,28nm,20.4s,baz=340,slow=34						
NRA0	NORESS Array S	13.53	131	Pn	Pn	19 17 54.7	+1.5
	baz=322,slow=14						
NRA0	NORESS Array S	13.53	131	Pn	Pn	19 17 54.7	+1.5
	baz=322,slow=14						
BLS5	Blasjo	13.60	143	ePn	Pn	19 17 52.3	-1.9
BLS5				eSn	Sn	19 20 13.7	-11
HFS	Hagfors	14.58	128	Pn	Pn	19 18 06.9	-0.6
	baz=333,slow=14						
HFS	Hagfors	14.58	128	Pn	Pn	19 18 07.3	-0.3
	comp=Z,0.1nm,0.3s,baz=317,slow=14,SNR=5.2						
HFS				Sn	Sn	19 20 42.5	-6.6
	comp=Z,0.1nm,0.3s,baz=318,slow=21,SNR=2.2						
HFS				LR	LR	19 22 12.6	
	comp=Z,30nm,21.8s,baz=320,slow=31						
HFS	Hagfors	14.58	128	Pn	Pn	19 18 06.9	-0.6
	baz=333,slow=14						
EKA	Eskdalemuir Ar	16.29	167	Pn	P	19 18 31.5	-1.4
	baz=360,slow=13,SNR=5.0						
FIA0	FINESS Array S	17.03	107	P	P	19 18 42.3	+1.1
	baz=319,slow=12						
FIA0	FINESS Array S	17.03	107	Pn	P	19 18 42.3	+1.1
	baz=319,slow=12						
FINES	FINESS Array B	17.03	107	Pn	P	19 18 41.9	+0.7
	comp=Z,0.3nm,0.3s,baz=320,slow=12,SNR=9.9						
KLMR	Klimovskoe	21.73	94	eP	P	19 19 34.0	+1.5
KLMR				AMP		19 19 42.0	
	comp=Z,15nm,1.2s						
RES	Resolute Bay	23.14	318	P	P	19 19 48.0	+0.7
	comp=Z,0.6nm,0.5s,baz=24,slow=10.0,SNR=1.6						
RES				LR	LR	19 28 42.1	
	comp=Z,25nm,21.0s,baz=6.5,slow=36						
GERES	GERESS Array B	25.00	142	P	P	19 20 08.6	+3.4
	comp=Z,0.7nm,0.7s,baz=352,slow=8.1,SNR=6.8						
GERES				LR	LR	19 28 25.9	
	comp=Z,26nm,20.0s,baz=290,slow=33						
VRAC	Vranov	25.16	137	LR	LR	19 28 55.6	
	comp=Z,26nm,18.3s,baz=334,slow=34						
DAVOX	Davos/Dischmat	26.29	149	LR	LR	19 31 03.3	
	comp=Z,39nm,18.4s,baz=300,slow=37						
SCHQ	Schefferville	29.22	266	LR	LR	19 32 04.6	
	comp=Z,25nm,19.1s,baz=314,slow=36						
MLR	Muntele Rosu	30.96	128	LR	LR	19 33 13.4	
	comp=Z,13nm,19.3s,baz=346,slow=36						
MDT	Midelt	38.66	173	LR	LR	19 38 23.4	
	comp=Z,52nm,18.6s,baz=191,slow=37						
ZALV	Zalesovo Beam	41.48	63	LR	LR	19 41 34.7	
	comp=Z,21nm,19.9s,baz=56,slow=39						
KURBB	Kurchatov Arra	42.54	70	P	P	19 22 39.6	+2.9
	comp=Z,0.5nm,0.7s,baz=335,slow=7.4,SNR=2.6						
MKAR	Makanchi Array	47.08	70	P	P	19 23 15.8	+2.8
	comp=Z,0.6nm,0.9s,baz=316,slow=6.0,SNR=3.4						
TORD	Torodi Ar. Bea	58.55	167	P	P	19 24 40.8	+2.9
	comp=Z,0.5nm,0.6s,baz=350,slow=5.9						

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*GII **13** 19:15:20.7±0.1, 33°.57N×35°.33E, h11^{km}, MD1.3/5*

*ISCJB **13** 19:15:21.1±0.9, 33°.61N±0°.04×35°.31E±0°.07, h15^{km}±8^{km}, Error ellipse: s-maj=11.5km s-min=5.3km az=27.1*

*GRAL **13** 19:15:22.5±0.3, 33°.57N×35°.38E, h18^{km}±5^{km}, MD2.9*

*CSEM **13** 19:15:22.5, 33°.57N×35°.38E, h18^{km}, ML2.9*

ISC 13 19:15:21.2±1.3**, 33°.57N**±0°.04×**35°.32E**±0°.06**, h18**^{km}±5^{km}**, n22, σ0**^{s}**.51**/31**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DQRL	Deir Qamar	0.25	58	eP	Pg	19 15 27.3	+0.2
DQRL	Deir Qamar	0.25	58	eP	Pg	19 15 27.3	+0.2
QRWL	Qaraoun	0.31	94	eP	Pg	19 15 28.0	+0.1
QRWL	Qaraoun	0.31	94	eP	Pg	19 15 28.0	+0.1
SHBL	Chebaa	0.42	122	eP	Pb	19 15 29.7	-0.6
SHBL	Chebaa	0.42	122	eP	Pb	19 15 29.7	-0.6
BHL	Bhannes	0.43	40	eP	Pb	19 15 30.1	-0.4
BHL	Bhannes	0.43	40	eP	Pb	19 15 30.1	-0.4
RCY	Rachaya	0.44	100	eP	Pb	19 15 30.1	-0.5
NATI	Neve Ativ	0.47	131	Pg	Pb	19 15 30.5	-0.4
NATI				Sg	Sb	19 15 37.2	-0.3
KSDI	Kefar Szold	0.47	143	Pg	Pb	19 15 30.9	-0.2
HNTI	Hanita	0.50	194	Pg	Pg	19 15 31.3	0.0

HNTI				Sg	Sb	19 15 39.1	+0.6
MMA0B	Mount Meron ar	0.56	172	Pg	Pb	19 15 32.4	-0.1
MMA0B				Sg	Sb	19 15 40.7	+0.5
KSHT	Keshet	0.72	145	Pg	Pb	19 15 35.2	-0.1
BLGI	Bet Lehem HaGe	0.84	187	Pg	Pg	19 15 37.2	-0.5
BLGI				Sg	Sb	19 15 49.2	+0.9
HWQ	Hawqa	0.88	36	*e*P	Pb	19 15 37.5	-0.5
HWQ	Hawqa	0.88	36	*e*P	Pb	19 15 37.5	-0.5
OFRI	‘Ofer	0.99	196	Pg	Pg	19 15 39.4	-1.0
OFRI				Sg	Sg	19 15 53.7	+0.3
MMLI	Mount Malkishu	1.13	175	Pg	Pb	19 15 42.1	-0.2
MMLI				Sg	Sg	19 15 58.0	-0.1
HMDT	Nahal Hemdat	1.33	172	Pn	Pn	19 15 45.3	+0.4
HMDT				Sn	Sg	19 16 03.8	-0.4
SLTI	Sal’it	1.35	190	Pn	Pn	19 15 45.1	-0.1
SLTI				Sn	Sb	19 16 04.0	+1.1
DSI	Dead Sea	2.00	178	Pn	Pn	19 15 54.4	+0.3
DSI				Sn	Sb	19 16 21.9	+0.3

*ISCJB **13** 19:18:47.7±0.3,29°.30N±0°.04×103°.07E±0°.05,h10^{km}, mb4.3/20,Error ellipse: s-maj=6.2km s-min=5.3km az=167.5*

*IDC **13** 19:18:48.1±0.7,29°.31N×102°.98E,h0^{km},mb3.8/11, mb1 3.8/13,mb1mx3.6/79,mbtmp3.8/13,ML3.4/1,Error ellipse: s-maj=26.9km s-min=13.7km az=58.0*

*NEIC **13** 19:18:49.7±0.2,29°.31N×102°.97E,h10^{km},mb4.8/9,Error ellipse: s-maj=6.1km s-min=4.2km az=51.0*

*BJI **13** 19:18:49.9,29°.35N×103°.06E,h18^{km},ML3.6/15,Ms3.3/2, Ms7 3.3/1*

ISC 13 19:18:50.6±0.6,**29°.46N**±0°.05×**102°.98E**±0°.06,**h10^{km},n48,** σ**1^{s}.67**/51,**mb4.2**/20,**1D,Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CD2	Chengdu	1.60	25	⇓*i*Pg	Pn	19 19 21.8	+2.8
CD2				Sg	Sb	19 19 43.8	+3.2
CD2				smax	smax		
	comp=N,1μm,0.5s						
CD2				smax	smax		
	comp=E,2μm,0.4s						
KMI	Kunming	4.32	183	Pg	Pn	19 19 59.1	+2.4
KMI				smax	smax		
	comp=N,33nm,0.7s						
KMI				smax	smax		
	comp=E,27nm,0.9s						
KMI				LR	LR		
	comp=N,90nm,3.8s						
KMI				LR	LR		
	comp=E,160nm,3.8s						
KMI				LR	LR		
	comp=Z,170nm,5.0s						
GYA	Guiyang	4.42	132	Pg	Pn	19 20 00.8	+2.9
GYA				Sn	Sn	19 20 51.9	+2.3
GYA				Sg	Sb	19 21 05.3	+3.3
GYA				smax	smax		
	comp=N,120nm,0.7s						
GYA				smax	smax		
	comp=E,80nm,0.7s						
ENH	Enshi	5.71	80	*e*Pn	Pn	19 20 13.3	-2.3
ENH				*e*Sn	Sn	19 21 16.9	-4.4
XAN	Xi’an	6.82	46	Pn	Pn	19 20 31.1	+0.3
XAN				Pg	Pb	19 20 52.1	+2.9
XAN				Sn	Sn	19 21 44.8	-3.7
XAN				Sg	Sg	19 22 22.8	-6.7
XAN				smax	smax		
	comp=N,61nm,0.8s						
XAN				smax	smax		
	comp=E,110nm,0.9s						
CMAR	Chiang Mai Arr	11.55	199	Pn	Pn	19 21 34.0	-1.7
	baz=27,slow=12,SNR=3.2						
SONA0	Songino Array	18.54	7	*e*P	P	19 23 09.1	+1.7
SONM	Songino Array	18.54	7	P	P	19 23 09.1	+1.7
	0.1nm,0.3s,baz=189,slow=10,SNR=11						
SONA1	Songino Array	18.55	7	*e*P	P	19 23 09.0	+1.4
WMQ	Urumqi	18.82	324	*e*P	P	19 23 11.8	+1.3
WMQ				smax	smax		
	comp=N,14nm,0.7s						
WMQ				smax	smax		
	comp=E,12nm,0.9s						
KS15	Wonju Array Si	22.21	62	*e*P	P	19 23 48.0	+0.7
KSAR	Wonju Array Be	22.21	62	P	P	19 23 46.8	-0.5
KSRS	Korea Array	22.24	62	P	P	19 23 46.8	-0.8
	comp=E,1.9nm,0.6s,baz=242,slow=9.6,SNR=7.9						
JOW	Kunigami	22.45	91	P	P	19 23 49.1	-0.7
	comp=E,12nm,0.9s,baz=255,slow=20,SNR=4.3						
JOW	Kunigami	22.45	91	*e*P	P	19 23 48.8	-1.0
	comp=E,63nm,1.6s						
MK01	Makanchi Array	23.62	323	*e*P	P	19 24 02.2	+0.4
MK31	Makanchi Array	23.64	323	*e*P	P	19 24 02.3	+0.3
MK32	Makanchi Array	23.64	323	*e*P	P	19 24 02.9	+0.9
MKAR	Makanchi Array	23.64	323	P	P	19 24 02.9	+0.9
	comp=E,1.2nm,0.5s,baz=130,slow=10,SNR=13						
MKAR	Makanchi Array	23.64	323	*e*P	P	19 24 02.3	+0.3
	comp=E,18nm,0.6s						
MAKZ	Makanchi	23.82	322	*e*P	P	19 24 04.3	+0.6
	comp=E,2.5nm,0.6s						
NIL	Nilore	25.63	287	*e*P	P	19 24 19.5	-0.9
	comp=E,7.6nm,0.3s						
ZALV	Zalesovo Beam	27.81	337	P	P	19 24 39.7	-0.1
	comp=E,0.4nm,0.3s,baz=137,slow=9.2,SNR=2.6						
ZAA1	Zalesovo Array	27.81	337	*e*P	P	19 24 39.7	-0.1
KURBB	Kurchatov Arra	28.01	326	P	P	19 24 41.7	+0.1
	comp=E,0.3nm,0.5s,baz=131,slow=10.0,SNR=4.3						
KURK	Kurchatov	28.02	326	*e*P	P	19 24 41.7	-0.1
MYLDM	Lahad Datu	28.26	146	*e*P	P	19 24 43.2	-0.9
	comp=E,12nm,1.1s						
CBIJ	Chichi jima	34.50	84	*e*P	P	19 25 38.2	-0.9
	comp=E,64nm,1.1s						
ASAJ	Asahikawa	34.59	54	*e*P	P	19 25 40.8	+1.2
	comp=E,109nm,1.9s						
ABKAR	Akbulak array	38.06	314	*e*P	P	19 26 09.0	-0.2
FITZ	Fitzroy Crossi	52.09	152	P	P	19 27 58.5	-2.5
	comp=E,1.9nm,0.9s,baz=323,slow=10,SNR=5.2						
MBWA	Marble Bar	52.85	160	*e*P	P	19 28 04.0	-2.6
	comp=E,65nm,1.8s						
WR1	Warramunga Arr	57.68	145	*e*P	P	19 28 39.6	-1.8
	comp=E,12nm,0.8s						
WRA	Warramunga Arr	57.68	145	P	P	19 28 39.6	-1.8
	comp=E,1.3nm,0.4s,baz=336,slow=7.7,SNR=58						
WB2	Warramunga Arr	57.68	145	*e*P	P	19 28 39.7	-1.8
ARA0	ARCESS Array S	58.36	336	*e*P	P	19 28 45.8	+0.1
ARCES	ARCESS Array B	58.36	336	P	P	19 28 45.8	+0.1
	comp=E,1.6nm,0.9s,baz=90,slow=8.1,SNR=3.8						
FIA0	FINESS Array S	58.39	327	*e*P	P	19 28 45.2	-0.8
FINES	FINESS Array B	58.39	327	P	P	19 28 45.2	-0.8
	comp=E,1.2nm,0.9s,baz=72,slow=9.1,SNR=3.4						
AS31	Alice Springs	60.62	147	*e*P	P	19 28 59.2	-2.6
	comp=E,1.0nm,1.1s						
ASAR	Alice Springs	60.62	147	P	P	19 29 00.2	-1.6
	comp=E,0.6nm,0.5s,baz=330,slow=7.0,SNR=15						
AS01	Alice Springs	60.64	147	*e*P	P	19 29 00.2	-1.8
HFS	Hagfors	64.59	326	P	P	19 29 27.7	-0.2
	comp=E,0.6nm,0.5s,baz=110,slow=6.7,SNR=5.5						
IDI	Anoyia	64.62	298	*e*P	P	19 29 27.9	-0.7
	comp=E,18nm,1.6s						
NC405	NORSAR Array S	65.27	328	*e*P	P	19 29 32.2	-0.2
NB201	NORSAR Array S	65.48	328	*e*P	P	19 29 33.4	-0.3
NC203	NORSAR Array S	65.64	328	*e*P	P	19 29 34.5	-0.2
NC204	NORSAR Array S	65.66	328	*e*P	P	19 29 34.4	-0.6

KRSC 13 19:19:07.6±1.2,**56°.00N**×**163°.98E,h9^{km}**±33^{km},**ML3.5,Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	Krutoberegovo	0.68	289	*e*P	Pg	19 19 20.7	0.0
KBTR				*e*S	Sb	19 19 30.6	-0.6
BKI	Bering	1.38	124	*e*P	Pg	19 19 34.0	-0.1
BKI				*e*S	Sg	19 19 52.4	+0.4
SMKR	Semkarok	1.52	294	*e*P	Pn	19 19 34.3	-0.7
SMKR				*e*S	Sn	19 19 53.5	-1.4
BDR	Baidarnaya	1.65	292	*e*P	Pn	19 19 36.8	+0.1
BDR				*e*S	Sn	19 19 57.9	-0.2
SRKR	Sorokina	1.70	294	*e*P	Pn	19 19 36.7	-0.7
ZLN	Zelenaya	1.78	272	*e*P	Pb	19 19 39.9	-0.5
ZLN				*e*S	Sg	19 20 04.1	-0.7
BZGR	Bezymyannyi-Gr	1.84	270	*e*P	Pb	19 19 41.0	-0.5
LGNR	Loginova	1.85	274	*e*P	Pb	19 19 41.1	-0.5
KLY	Klyuchi	1.89	281	*e*P	Pn	19 19 39.2	-0.7
KLY				*e*S	Sn	19 20 01.9	-1.9
KRSR	Krestovskiy	1.92	278	*e*P	Pn	19 19 41.2	+0.6
MKZ	Mys Kozlova	1.93	223	*e*P	Pb	19 19 42.2	-0.7
MKZ				*e*S	Sb	19 20 07.9	+0.9
BZWR	Bezymyannyi-We	1.96	271	*e*P	Pb	19 19 43.1	-0.3
BZMR	Bezymyannaya	1.96	270	*e*P	Pb	19 19 42.7	-0.8
BZMR				*e*S	Sb	19 20 07.4	-0.7
KIRR	Kirishev	2.04	270	*e*P	Pb	19 19 44.2	-0.7
KIRR				*e*S	Sb	19 20 11.1	+0.7
KPT	Kopyto	2.11	271	*e*P	Pb	19 19 45.1	-0.9
TUMD	Tumrok D	2.18	250	*e*P	Pb	19 19 46.3	-0.8
TUMD				*e*S	Sb	19 20 14.8	+0.6
TUMR	Tumrok	2.29	253	*e*P	Pb	19 19 48.3	-0.7
SPN	Mys Shipunski	3.70	220	*e*P	Pn	19 20 06.7	+1.8
SDLR	Sedlovina	4.02	229	*e*P	Pn	19 20 12.4	+3.0
GNL	Ganaly	4.18	239	*e*P	Pn	19 20 16.3	+4.7
DALK	Dalny	4.25	228	*e*P	Pn	19 20 15.8	+3.4
KRMR	Karymshinskiy	4.66	230	*e*P	Pn	19 20 22.9	+4.9
RUS	Russkaya	4.80	224	*e*P	Pn	19 20 23.0	+3.1
KDTR	Khodutka, Kamc	5.45	222	*e*P	Pn	19 20 31.6	+2.7

*ISCJB **13** 19:48:50.9±0.2,23°.77N±0°.01×121°.69E±0°.01,h28^{km}±1^{km}, Error ellipse: s-maj=2.3km s-min=1.5km az=34.5*

*JMA **13** 19:48:50.4±0.1,23°.78N×121°.65E,h31^{km}±2^{km},M3.0*

*TAP **13** 19:48:51.0,23°.78N×121°.64E,h33^{km},ML3.4,B*

ISC 13 19:48:51.2±0.9,**23°.78N**±0°.02×**121°.65E**±0°.02,**h31^{km}**±5^{km}, **n108,**σ**0^{s}.67**/189,**Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENLB	Shoufeng	0.13	340	*e*P	Pn	19 48 57.1	-0.1
	baz=353						
ENLB				*e*S	Sb	19 49 02.0	+1.1
	baz=353						
HWA	Hwalien	0.20	348	*e*P	Pb	19 48 57.7	+0.1
	baz=359						
HWA				*e*S	Sn	19 49 03.6	+1.2
	baz=359						
ESL	Shilin	0.20	280	*e*P	Pb	19 48 57.3	-0.3
	baz=281						
ESL				*e*S	Sb	19 49 01.7	-0.3
	baz=281						
EGFH	Guangfu	0.23	242	*e*P	Pb	19 48 57.9	0.0
	baz=251						
EGFH				*e*S	Sb	19 49 02.6	+0.1
	baz=251						
TWD	Chiawan	0.30	350	*e*P	Pb	19 48 58.4	-0.5
	baz=358						
TWD				*e*S	Sn	19 49 04.6	-0.4
	baz=358						
HGSD	Ruisui	0.35	216	*e*P	Pn	19 48 59.9	-0.3
	baz=227						
HGSD				*e*S	Sn	19 49 06.3	+0.1
	baz=227						
NACB	Ninganchiao	0.40	352	P	Pb	19 48 59.6	-0.5
	baz=347						
NACB				*e*S	Sb	19 49 06.3	+0.1
	baz=347						
EHY	Hungye	0.41	228	*e*P	Pb	19 48 59.7	-0.6
	baz=233						
EHY				*e*S	Sb	19 49 06.2	-0.3
	baz=233						
YULB	Yu-li	0.50	220	*e*P	Pb	19 49 01.1	-0.7
	baz=227						
YULB				*e*S	Sb	19 49 08.1	-0.9
	baz=227						
WHF	Hehuan Shan	0.51	316	P	Pb	19 49 01.2	-0.9
	baz=310						
WHF				*e*S	Sb	19 49 09.2	-0.5
	baz=310						
CHGB	Renai	0.52	303	P	Pb	19 49 01.7	-0.5
	baz=309						
CHGB				S	Sb	19 49 09.4	-0.3
	baz=309						
TWF1	Yuli	0.54	218	*e*P	Pb	19 49 01.6	-0.7
	baz=226						
TWF1				*e*S	Sb	19 49 09.1	-0.7
	baz=226						
SSLB	Suanglung	0.64	271	*e*P	Pb	19 49 03.2	-0.8
	baz=272						
SSLB				*e*S	Sb	19 49 12.6	-0.2
	baz=272						
TWT	Tachien	0.64	317	P	Pb	19 49 03.8	-0.4
	baz=312						
TWT				*e*S	Sb	19 49 12.6	-0.4
	baz=312						
ENA	Nanau	0.65	7	P	Pb	19 49 03.5	-0.7
	baz=17						
ENA				*e*S	Sn	19 49 13.2	-0.3
	baz=17						
NANB	Nanao	0.65	8	P	Pb	19 49 03.7	-0.5
	baz=17						
NANB				*e*S	Sb	19 49 12.9	-0.2
	baz=17						
TDCB	Techi	0.65	316	P	Pb	19 49 03.8	-0.6
	baz=313						
TDCB				*e*S	Sb	19 49 12.1	-1.2
	baz=313						
FULB	Fuli	0.66	210	*e*P	Pn	19 49 04.7	+0.1
	baz=217						
FULB				*e*S	Sn	19 49 14.6	+0.7
	baz=217						
NNSB	Datong	0.69	339	P	Pn	19 49 04.0	-1.0
	baz=340						
NNSB				S	Sb	19 49 13.2	-1.1
	baz=340						
NNSH	Datong	0.69	339	*e*P	Pn	19 49 04.0	-1.0
	baz=339						
NNSH				*e*S	Sb	19 49 13.0	-1.3
	baz=339						
SMLT	Sun Moon Lake	0.70	279	P	Pn	19 49 04.4	-0.7
	baz=286						
SMLT				*e*S	Sb	19 49 13.8	-0.6
	baz=286						
NNS	Nan Shan	0.71	339	P	Pn	19 49 04.3	-0.9
	baz=340						
NNS				*e*S	Sb	19 49 13.8	-0.9
	baz=340						
CHKT	Chengkung	0.72	201	*e*P	Pn	19 49 04.7	-0.6
	baz=189						
CHKT				*e*S	Sn	19 49 15.2	-0.1
	baz=189						
TYC	Yuchr	0.74	280	P	Pn	19 49 04.8	-0.7
	baz=285						
TYC				*e*S	Sb	19 49 15.3	-0.1
	baz=285						
ALS	Alishan	0.82	251	*e*P	Pn	19 49 06.9	0.0
	baz=252						
ALS				*e*S	Sn	19 49 17.8	-0.4
	baz=252						
ELDTW	Lidau	0.83	225	*e*P	Pn	19 49 06.1	-0.7
	baz=220						
ELDTW				*e*S	Sn	19 49 16.9	-1.2
	baz=220						
TWC	Suao	0.85	12	*e*P	Pn	19 49 06.9	-0.1
	baz=13						
TWC				*e*S	Sn	19 49 18.3	-0.1
	baz=13						
WJS	Zhushan	0.85	273	*e*P	Pb	19 49 07.4	-0.1
	baz=274						
WJS				*e*S	Sb	19 49 19.4	+0.9
	baz=274						
ENTT	Nioudou	0.86	355	P	Pn	19 49 06.8	-0.5
	baz=355						
ENTT				*e*S	Sn	19 49 18.6	-0.2
	baz=355						
EOS1	EOS1	0.88	29	*e*P	Pb	19 49 08.1	+0.1
	baz=30						
WNT	Mingjian	0.89	277	*e*P	Pb	19 49 08.2	0.0
	baz=277						
WNT				*e*S	Sb	19 49 20.3	+0.5
	baz=277						
CHN5	Tsauling	0.91	259	*e*P	Pb	19 49 08.4	-0.2
	baz=260						
CHN5				*e*S	Sb	19 49 20.4	0.0
	baz=260						
YHNB	Yeheng	0.92	344	P	Pn	19 49 07.8	-0.4
	baz=344						
YHNB				*e*S	Sn	19 49 19.3	-1.1
	baz=344						
NSK	Sanguang	0.93	343	P	Pn	19 49 08.0	-0.3
	baz=343						
NSK				*e*S	Sn	19 49 19.6	-1.1
	baz=343						
TWE	Neicheng	0.94	1	P	Pn	19 49 08.1	-0.2
	baz=350						
TWE				*e*S	Sn	19 49 20.6	-0.1
	baz=350						
TCU	Taichung	0.97	293	*e*P	Pb	19 49 09.3	-0.1
	baz=293						
TCU				*e*S	Sb	19 49 23.6	+1.8
	baz=293						
WGK	Gukeng	1.00	265	*e*P	Pb	19 49 10.2	+0.2
	baz=266						
WGK				*e*S	Sb	19 49 23.5	+0.6
	baz=266						
NWLT	Wulai	1.00	352	*e*P	Pn	19 49 08.9	-0.3
	baz=352						
STYT	Tauyuan	1.02	233	*e*P	Pn	19 49 09.7	+0.2
	baz=226						
STYT				*e*S	Sn	19 49 23.0	+0.2
	baz=226						
WDLH	Douliu	1.02	265	*e*P	Pb	19 49 10.2	-0.2
	baz=266						
WDLH				*e*S	Sb	19 49 24.1	+0.5
	baz=266						
NSY	Sanyi	1.03	308	*e*P	Pb	19 49 10.6	0.0
	baz=308						
NSY				*e*S	Sb	19 49 24.0	+0.2
	baz=308						
NSTT	Nanjuang	1.04	325	*e*P	Pb	19 49 10.2	-0.4
	baz=325						
NSTT				*e*S	Sn	19 49 22.9	-0.1
	baz=325						
LIOB	Emei	1.04	326	*e*P	Pb	19 49 10.5	-0.2
	baz=326						
LIOB				*e*S	Sn	19 49 23.3	0.0
	baz=326						
WCHH	Zhanghua	1.04	287	*e*P	Pb	19 49 10.9	+0.1
	baz=287						
WCHH				*e*S	Sb	19 49 24.8	+0.7
	baz=287						
TPUB	Ta-pu	1.05	243	*e*P	Pb	19 49 10.8	-0.1
	baz=244						
TPUB				*e*S	Sb	19 49 24.1	-0.2
	baz=244						
CHN4	Tsaushan	1.06	247	*e*P	Pb	19 49 10.8	-0.2
	baz=247						
CHN4				*e*S	Sb	19 49 24.7	+0.1
	baz=247						
TWH	Lutao	1.07	189	*e*P	Pn	19 49 09.2	-0.9
	baz=178						
TWH				*e*S	Sn	19 49 23.0	-1.0
	baz=178						
NTC	Toucheng	1.08	9	*e*P	Pn	19 49 10.5	+0.2
	baz=357						
WTP	Ta-pu	1.09	241	*e*P	Pn	19 49 10.9	+0.4
	baz=242						
WTP				*e*S	Sb	19 49 26.4	+0.9
	baz=242						
NMLH	Miaoli	1.09	314	*e*P	Pb	19 49 11.2	-0.4
	baz=313						
NMLH				*e*S	Sb	19 49 25.6	+0.1
	baz=313						
EGS		1.09	13	*e*P	Pb	19 49 11.1	-0.5
	baz=14						
PTSB	Yuanli	1.09	308	*e*P	Pb	19 49 11.1	-0.5
	baz=307						
PTSB				*e*S	Sb	19 49 25.9	+0.4
	baz=307						
TWG	Pinlang	1.09	209	*e*P	Pn	19 49 09.6	-0.8
	baz=197						
CHN2	Minshiung	1.11	257	*e*S	Sb	19 49 27.0	+1.1
	baz=259						
WLTB	Daxi	1.13	341	*e*P	Pn	19 49 10.8	-0.1
	baz=349						
WLTB				*e*S	Sb	19 49 26.6	0.0
	baz=349						
CHY	Chiayi	1.16	256	*e*P	Pn	19 49 11.5	+0.2
	baz=258						
CHY				*e*S	Sb	19 49 26.6	-0.8
	baz=258						
SBCB	Hsinchu	1.18	329	*e*P	Pb	19 49 13.2	+0.2
	baz=327						
SBCB				*e*S	Sb	19 49 29.5	+1.6
	baz=327						
TWK	Hsinying	1.18	245	*e*P	Pb	19 49 12.8	-0.4
	baz=246						
TWK				*e*S	Sb	19 49 28.3	+0.2
	baz=246						
CHN1	Nanshi	1.19	240	*e*P	Pb	19 49 12.7	-0.6
	baz=242						
CHN1				*e*S	Sb	19 49 28.3	+0.1
	baz=242						
RLNB	Erlin	1.19	276	*e*P	Pn	19 49 12.2	+0.5
	baz=277						
RLNB				*e*S	Sb	19 49 28.4	+0.2
	baz=277						
HSN	Hsinchu	1.20	329	*e*S	Sb	19 49 29.3	+0.9
	baz=329						
TIPB	Shuangxi	1.20	8	*e*P	Pn	19 49 12.0	+0.1
	baz=356						
TIPB				*e*S	Sn	19 49 27.5	+0.4
	baz=356						
TWA	Mucha	1.20	357	*e*P	Pn	19 49 11.9	0.0
	baz=357						
TATO	Taipei	1.20	353	*e*P	Pn	19 49 11.9	0.0
	baz=352						
TATO				*e*S	Sb	19 49 27.9	-0.7
	baz=352						
SGST	Jiashian	1.20	235	*e*P	Pb	19 49 13.6	+0.2
	baz=236						
SGST				*e*S	Sb	19 49 29.3	+0.6
	baz=236						
SLGT	Liugui	1.21	230	*e*P	Pb	19 49 12.9	-0.6
	baz=231						
SLGT				*e*S	Sb	19 49 29.3	+0.4
	baz=231						
NCUH	Zhongli	1.26	340	*e*P	Pb	19 49 13.5	-0.9
	baz=338						
NCUH				*e*S	Sb	19 49 30.8	+0.5
	baz=338						
NCU	National Centr	1.26	340	*e*S	Sb	19 49 30.7	+0.4
	baz=338						
TAP1	Taipei	1.26	355	*e*S	Sb	19 49 29.9	-0.4
	baz=353						
WLGB	Puzi	1.28	257	*e*P	Pn	19 49 13.2	+0.3
	baz=258						
WLGB				*e*S	Sb	19 49 31.6	+0.9
	baz=258						
WFSB	Wu-fen Shan	1.29	5	*e*P	Pb	19 49 14.0	-0.9
	baz=5.0						
WSF	Szhu	1.32	264	*e*P	Pn	19 49 14.1	+0.7
	baz=265						
WSF				*e*S	Sb	19 49 31.5	-0.4
	baz=265						
TWS1	Kuangyinshan	1.33	351	*e*P	Pn	19 49 14.1	+0.4
	baz=7.0						
TWS1				*e*S	Sb	19 49 33.5	+1.1
	baz=7.0						
ECL	Taimali	1.34	209	*e*P	Pn	19 49 12.6	-1.2
	baz=199						
JYNG	Yonagunijimaku	1.36	60	P	Pn	19 49 14.5	+0.5
JYNG				*e*S	Sn	19 49 30.6	-0.4
CHN3	Shinhua	1.37	240	*e*S	Sb	19 49 35.7	+2.2
	baz=242						
YM04	YM04	1.37	356	*e*P	Pn	19 49 14.2	-0.1
	baz=355						
CHN8	Yiju	1.39	252	*e*S	Sb	19 49 33.7	-0.3
	baz=254						
SSD	Sandimen	1.39	223	P	Pn	19 49 15.1	+0.6
	baz=223						
SSD				*e*S	Sb	19 49 33.4	-0.6
	baz=223						
NTST	Danshui	1.39	352	*e*P	Pn	19 49 15.1	+0.6
	baz=7.0						
NTST				*e*S	Sb	19 49 33.0	-1.0
	baz=7.0						
YM03	YM03	1.40	356	*e*P	Pb	19 49 15.7	-1.1
	baz=356						
YM08	YM08	1.41	358	*e*P	Pn	19 49 14.0	-0.7
	baz=357						
YOJ	Yonaguni jima	1.42	61	*e*P	Pn	19 49 15.4	+0.6
	baz=61						
YOJ				*e*S	Sn	19 49 32.5	+0.1
	baz=61						
YOJ	Yonaguni jima	1.42	61	P	Pn	19 49 15.3	+0.5
YOJ				*e*S	Sn	19 49 32.5	+0.1
SCLT	Jiali	1.47	246	*e*S	Sb	19 49 35.6	-0.5
	baz=248						
MASBT	Mashibuluo	1.49	219	*e*P	Pb	19 49 17.5	-0.8
	baz=209						
MASBT				*e*S	Sb	19 49 36.9	0.0
	baz=209						
EAST	Anshuo	1.57	208	*e*P	Pn	19 49 16.4	-0.6
	baz=195						

TAW	Tawu	1.58	206	*e*P	Pn	19 49 16.8	-0.3
	baz=194						
SCZT	Fangliau	1.69	214	*e*P	Pn	19 49 19.4	+0.8
	baz=201						
SCZT				*e*S	Sb	19 49 41.0	-1.6
	baz=201						
WDGT	Dungji	1.90	255	*e*P	Pn	19 49 21.7	+0.2
	baz=257						
WDGT				*e*S	Sn	19 49 44.0	-0.4
	baz=257						
PHUB	P'eng-hu	1.93	263	*e*P	Pn	19 49 21.4	-0.4
	baz=252						
PHUB				*e*S	Sn	19 49 44.9	-0.1
	baz=252						
PNG	Penghu	1.93	264	*e*P	Pn	19 49 21.9	0.0
	baz=266						
PNG				*e*S	Sn	19 49 45.7	+0.5
	baz=266						
HEN	Hengchun	1.96	206	*e*P	Pn	19 49 23.5	+1.2
	baz=191						
HEN				*e*S	Sn	19 49 47.2	+1.4
	baz=191						
IRIF	Iriomote-Funau	1.98	73	P	Pn	19 49 23.5	+0.9
IRIF				*e*S	Sn	19 49 47.3	+1.0
TWK1	Hengchun	1.99	203	*e*S	Sn	19 49 46.9	+0.4
	baz=190						
TWKBT	Hengchun	1.99	203	*e*S	Sn	19 49 46.9	+0.3
	baz=190						
HATJ	Hateruma jima	1.99	82	P	Pn	19 49 23.2	+0.5
HATJ				*e*S	Sn	19 49 46.9	+0.3
TSEB	Hengchuen, Pin	1.99	201	*e*S	Sn	19 49 47.4	+0.7
	baz=188						
VCHM	Qimei	2.12	255	*e*S	Sn	19 49 50.0	+0.3
	baz=258						
JKRS	Kuro-shima	2.20	78	P	Pn	19 49 26.9	+1.2
JKRS				*e*S	Sn	19 49 53.0	+1.1
VWUC	VWUC	2.34	301	*e*P	Pn	19 49 28.0	+0.4
	baz=300						
VWUC				*e*S	Sn	19 49 56.1	+0.8
	baz=300						
JIJ	Ishigaki jima	2.35	75	P	Pn	19 49 28.0	+0.3
JIJ				S	Sn	19 49 54.9	-0.6
JISG	Ishigakijimahi	2.56	71	P	Pn	19 49 30.8	+0.3
JISG				*e*S	Sn	19 49 59.9	-0.7
MATB	Ma-tsu	2.83	327	*e*P	Pn	19 49 35.4	+1.2
	baz=322						
MATB				*e*S	Sn	19 50 08.0	+0.7
	baz=322						
JTJ	Tarama	2.91	72	P	Pn	19 49 36.5	+1.1
JTJ				*e*S	Sn	19 50 09.1	-0.3
KNM	Kinmen	3.01	283	*e*S	Sn	19 50 13.7	+2.0
	baz=283						
KNMB	Chin-men Tao	3.06	284	*e*S	Sn	19 50 12.0	-1.0
	baz=285						
JIRB	Irabujima	3.38	71	*e*S	Sn	19 50 21.0	+0.1

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*NEIC **13** 19:53:17.0±0.0, 41°.90N×111°.92W, h2^{km}, MW3.7, ML3.5(SLC), Moment Tensor Solution. s78 Moment tensor: Scale 10^{14}Nm; M_{rr}-3.56; $M_{\theta\theta}$-0.13; $M_{\phi\phi}$3.69; $M_{r\theta}$-1.10; $M_{\theta\phi}$0.10; $M_{\phi r}$0.79; Best double couple: $M_0$3.90000×10^{14} NP1:ϕ_s166.00000°, δ53.00000°, λ-110.00000°. NP2:ϕ_s17.00000°, δ41.00000°, λ-65.00000°. Principal axes: T 3.7800, Plg6.0000°, Azm270.0000°; N 0.1900, Plg16.0000°, Azm178.0000°; P -3.9600, Plg73.0000°, Azm20.0000°; After SLC.*

NEIC Felt [IV] at Preston, Idaho. Also felt at Franklin and Weston. Felt [III] at Richmond, Smithfield and Trenton and [II] at Logan and Lewiston, Utah. Also felt at Centerville, Clarkston, Cornish, Hyde Park, Mendon, Providence, Salt Lake City and Woods Cross.

*IDC **13** 19:53:17.3±0.7, 41°.81N×111°.74W, h0^{km}, mb3.1/2, mb1 3.6/8, mb1mx3.4/67, mbtmp3.4/8, ML3.0/6, MS2.9/7, Ms1 2.9/7, ms1mx2.8/14 Error ellipse: s-maj=15.2km s-min=7.4km az=153.0*

ISC 13 19:53:18.5±1.1, **41°.86N**±0°.03×**111°.92W**±0°.03, **h9**^{km}±8^{km}, **n167**, σ1ˢ**91**/176, **MS3.0**/4, **Utah**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWUT	Hardware Ranch	0.36	133	*e*Pg	Pg	19 53 24.9	-0.9
HWUT				*e*Sg	Sn	19 53 35.2	+4.6
HVU	Hansel Valley	0.64	263	*e*Pg	Pb	19 53 29.6	-2.5
SPUT	South Promonto	0.68	216	*e*Pg	Pb	19 53 31.0	-1.6
TCUT	Toone Canyon	0.83	152	*e*Pg	Pb	19 53 34.2	-1.1
AHID	Auburn Hatcher	1.09	34	*e*Pg	Pb	19 53 37.1	-2.7
CTU	Camp Tracy	1.17	174	*e*Pg	Pn	19 53 40.1	-1.2
CTU				*e*Sn	Sn	19 53 56.9	-0.5
BGU	Big Grassy Mou	1.25	222	*e*Pg	Pn	19 53 40.6	-1.7
BGU				*e*Sn	Sb	19 53 58.0	-0.7
JLU	Jordanelle	1.30	164	*e*Pg	Pn	19 53 42.7	-0.5
REDW	Red Top Meadow	1.70	27	*e*Pn	Pn	19 53 46.7	-1.9
TPAW	Teton Pass	1.78	23	*e*Pn	Pn	19 53 48.2	-1.6
DUG	Dugway, Tooele	1.79	202	P	Pn	19 53 49.3	-0.5
	baz=21						
DUG				S	Sn	19 54 12.6	-0.2
	baz=21						
DUG	Dugway, Tooele	1.79	202	*e*Pn	Pn	19 53 49.0	-0.8
SNOW	Snow King Moun	1.82	28	*e*Pn	Pn	19 53 49.1	-1.2
MPU	Maple Canyon	1.85	173	*e*Pn	Pn	19 53 50.7	0.0
FXWY	Fox Creek	1.90	20	*e*Pn	Pn	19 53 50.1	-1.3
NLU	North Lily Min	1.90	184	*e*Pn	Pn	19 53 51.1	-0.3
BW06	Boulder Array	1.98	62	Pb	Pn	19 53 52.9	+0.5
	baz=244						
BW06				Sb	Sb	19 54 19.4	-0.2
	baz=244						
BW06	Boulder Array	1.98	62	*e*Pn	Pn	19 53 52.3	-0.2
PD31	Pinedale Array	1.98	62	*e*Pn	Pn	19 53 52.5	0.0
PD31				*e*Sn	Sb	19 54 19.6	0.0
PDAR	Pinedale Array	1.98	62	Pn	Pn	19 53 52.5	0.0
	77nm,0.3s,baz=234,slow=15,SNR=738						
PDAR				Sn	Sb	19 54 19.6	0.0
	147nm,0.3s,baz=240,slow=25,SNR=26						
LOHW	Long Hollow	2.01	29	*e*Pn	Pn	19 53 51.4	-1.5
MOOW	Moose Ponds	2.08	24	*e*Pn	Pn	19 53 52.4	-1.4
MOOW				*e*Sn	Sn	19 54 20.8	+0.8
IMW	Indian Meadow	2.16	19	*e*Pn	Pn	19 53 53.8	-1.3
IMW				*e*Sn	Sn	19 54 22.8	+0.6
FLWY	Flagg Ranch	2.40	22	*e*Pn	Pn	19 53 57.4	-0.9
HLID	Hailey	2.51	314	Pb	Pn	19 54 00.4	+0.7
	baz=131						
HLID				Sb	Sn	19 54 33.2	+2.7
	baz=131						
HLID	Hailey	2.51	314	*e*Pn	Pn	19 53 59.5	-0.2
HLID				*e*Sn	Sn	19 54 32.2	+1.8
YPP	Pitchstone Pla	2.55	18	*e*Pn	Pn	19 53 59.8	-0.6
P18A	Preston Nutter	2.56	150	*e*Pn	Pn	19 54 02.6	+2.0
TMUT	Trail Mountain	2.61	168	*e*Pn	Pn	19 54 02.0	+0.8
YFT	Old Faithful	2.71	17	*e*Pn	Pn	19 54 03.8	+1.2
H17A	Grant Village	2.72	21	Pb	Pn	19 54 04.4	+1.7
	baz=202						
H17A				Sb	Sb	19 54 41.5	+0.3
	baz=202						
H17A	Grant Village	2.72	21	*e*Pn	Pn	19 54 03.9	+1.2
ELK	Elko	2.73	247	Pn	Pn	19 54 06.0	+3.1
	7.1nm,0.3s,baz=93,slow=12,SNR=72						
ELK				Sn	Sb	19 54 44.2	+2.7
	8.5nm,0.3s,baz=218,slow=20,SNR=6.6						
ELK				LR	LR	19 55 30.3	
	comp=Z,214nm,19.7s,baz=42,slow=47						
YMR	Madison River	2.90	14	*e*Pn	Pn	19 54 04.6	-0.5
SRU	San Rafael Swe	2.94	158	*e*Pn	Pn	19 54 07.0	+1.3
YHB	Horse Butte	2.94	10	*e*Pn	Pn	19 54 05.5	-0.3
QLMT	Earthquake Lak	3.00	7	*e*Pn	Pn	19 54 06.0	-0.4
MCMT	McKenzie Canyo	3.05	347	*e*Pn	Pn	19 54 07.3	+0.1
TCRU	Three Creeks R	3.27	187	*e*Pn	Pn	19 54 12.0	+1.8
O20A	White River Ci	3.27	120	Pb	Pn	19 54 13.2	+3.0
	baz=304						
O20A	White River Ci	3.27	120	*e*Pn	Pn	19 54 12.4	+2.2
MFID	Camas Ranch	3.28	300	*e*Pn	Pn	19 54 12.4	+2.2
MSU	Marysvale	3.34	183	*e*Pn	Pn	19 54 12.3	+1.1
RWWY	Rawlins	3.53	91	*e*Pn	Pn	19 54 13.8	0.0
DLMT	Dillon	3.54	352	*e*Pn	Pn	19 54 15.9	+2.0
PSUT	Pine Spring	3.63	205	*e*Pn	Pn	19 54 15.6	+0.4
BOZ	Bozeman (W)	3.75	3	Pb	Pn	19 54 21.1	+4.5
	baz=183						
BOZ				Sb	Sb	19 55 11.2	+0.7
	baz=183						
BOZ	Bozeman (W)	3.75	3	*e*Pn	Pn	19 54 19.9	+3.2
RLMT	Red Lodge	3.79	30	P	Pn	19 54 17.9	+0.5
	baz=212						
RLMT	Red Lodge	3.79	30	*e*Pn	Pn	19 54 17.8	+0.4
MTPU	Mount Pierson	3.81	183	*e*Pn	Pn	19 54 19.3	+1.5
PV09	Paradox Valley	3.98	147	*e*Pn	Pn	19 54 20.7	+0.8
LRM	Limekiln Ridge	3.98	355	*e*Pn	Pn	19 54 21.4	+1.3
PV21	Cone Mtn., Par	3.99	145	*e*Pn	Pn	19 54 21.2	+1.1
PV23	Carpenter Ridg	4.07	146	*e*Pn	Pn	19 54 22.6	+1.4
K22A	Casper	4.08	77	P	Pn	19 54 22.5	+1.1
	baz=261						
K22A				Sb	Sb	19 55 21.3	+1.0
	baz=261						
K22A	Casper	4.08	77	*e*Pn	Pn	19 54 22.1	+0.7
PV22	Blue Mesa, Par	4.09	143	*e*Pn	Pn	19 54 22.7	+1.2
PV10	Paradox Valley	4.12	147	*e*Pn	Pn	19 54 23.5	+1.6
PV14	Lion Creek, Pa	4.13	146	*e*Pn	Pn	19 54 23.1	+1.1
PV20	West Nyswonger	4.18	146	*e*Pn	Pn	19 54 24.3	+1.7
PV19	Morning Glory	4.20	147	*e*Pn	Pn	19 54 23.9	+0.9
PV16	Nyswonger Mesa	4.22	146	*e*Pn	Pn	19 54 24.5	+1.2
PV17	East Wray Mesa	4.23	147	*e*Pn	Pn	19 54 25.2	+1.8
BMN	Battle Mountai	4.25	252	*e*Pn	Pn	19 54 22.9	-0.7
PV11	David Mesa, Pa	4.25	146	*e*Pn	Pn	19 54 24.8	+1.1
GCMT	Greycliff	4.26	22	*e*Pn	Pn	19 54 23.7	0.0
PV12	Saucer Basin,	4.27	145	*e*Pn	Pn	19 54 25.9	+2.0
PV18	Skein Mesa, Pa	4.28	146	*e*Pn	Pn	19 54 25.3	+1.1
PV03	Paradox Valley	4.30	146	*e*Pn	Pn	19 54 26.1	+1.7
SZCU	Shurtz Canyon	4.35	192	*e*Pn	Pn	19 54 26.5	+1.4
PV05	Paradox Valley	4.35	149	*e*Pn	Pn	19 54 26.2	+1.1
PV02	Paradox Valley	4.39	145	*e*Pn	Pn	19 54 27.1	+1.5
PV15	Paradox Valley	4.39	142	*e*Pn	Pn	19 54 26.4	+0.8
PV13	Radium Mtn., P	4.39	146	*e*Pn	Pn	19 54 27.3	+1.6
PKCU	Pink Cliffs	4.42	184	*e*Pn	Pn	19 54 27.9	+1.9
CCUT	Cedar City	4.44	195	*e*Pn	Pn	19 54 28.1	+1.8
R11A	Troy Canyon, C	4.49	220	P	Pn	19 54 29.0	+2.1
	baz=37						
R11A	Troy Canyon, C	4.49	220	*e*Pn	Pn	19 54 28.9	+1.9
PV01	Paradox Valley	4.52	144	*e*Pn	Pn	19 54 28.6	+1.2
N23A	Red Feather La	4.60	100	P	Pn	19 54 30.3	+1.8
	baz=285						
N23A	Red Feather La	4.60	100	*e*Pn	Pn	19 54 29.6	+1.1
SMCO	Snowmass	4.62	124	*e*Pn	Pn	19 54 30.6	+1.6
HRY	Holter Researc	4.86	1	*e*Pn	Pn	19 54 33.0	+1.1
PHWY	Pilot Hill	4.88	94	*e*Pn	Pn	19 54 32.9	+0.5
KNB	Kanab	4.88	188	*e*Pn	Pn	19 54 35.1	+2.7
BMO	Blue Mountains	4.94	309	*e*Pn	Pn	19 54 34.1	+1.1
LCMT	Little Creek M	4.95	192	*e*Pn	Pn	19 54 35.2	+2.1
WVOR	Wild Horse Val	5.03	279	*e*Pn	Pn	19 54 37.0	+2.8
J08A	Circle Bar Ran	5.06	289	*e*Pn	Pn	19 54 38.8	+4.1
MSO	Missoula	5.18	344	P	Pn	19 54 34.8	-1.6
	baz=163						
MSO	Missoula	5.18	344	*e*Pn	Pn	19 54 39.0	+2.6
ISCO	Idaho Springs	5.21	111	P	Pn	19 54 39.1	+2.2
	baz=296						
ISCO	Idaho Springs	5.21	111	*e*Pn	Pn	19 54 37.8	+0.8
MVCO	Mesa Verde	5.34	149	P	Pn	19 54 38.2	-0.5
	baz=332						
MVCO	Mesa Verde	5.34	149	*e*Pn	Pn	19 54 40.4	+1.8
U15A	North Rim	5.43	183	*e*Pn	Pn	19 54 42.5	+2.6
KVN	Kaiserville	5.48	241	*e*Pn	Pn	19 54 41.1	+0.6
F10A	Beach Ranch, E	5.62	319	*e*Pn	Pn	19 54 44.1	+1.7
S22A	4UR Ranch, Cre	5.68	135	P	Pn	19 54 43.5	+0.2
	baz=318						
S22A	4UR Ranch, Cre	5.68	135	*e*Pn	Pn	19 54 43.4	+0.1
NV11	Mina Array Sit	5.87	236	*e*Pn	Pn	19 54 47.7	+1.8
SHPR	Sheep Range	5.91	206	*e*Pn	Pn	19 54 49.2	+2.8
Q24A	Divide	5.92	117	P	Pn	19 54 49.3	+2.6
	baz=302						
TPNV	Topopah Spring	5.94	216	*e*Pn	Pn	19 54 49.0	+2.3
NV01	Mina Array Sit	5.97	237	*e*Pn	Pn	19 54 50.5	+3.2
NVAR	Mina Array Bea	5.97	237	Pn	Pn	19 54 49.4	+2.2
	1.3nm,0.3s,baz=56,slow=12,SNR=5.2						
NVAR				Pg	Pb	19 55 06.9	+4.0
	4.1nm,0.3s,baz=51,slow=17,SNR=14						
NVAR				Sn	Sn	19 55 56.3	+0.4
	1.4nm,0.3s,baz=40,slow=20,SNR=2.3						
NVAR				Lg	Lg	19 56 20.8	
	baz=53,slow=14,SNR=2.0						
I07A	Izee	5.99	294	*e*Pn	Pn	19 54 50.4	+2.9
RYN	Ryan	5.99	240	*e*Pn	Pn	19 54 50.3	+2.8
PAHR	Pah Rah Range	6.06	252	*e*Pn	Pn	19 54 50.8	+2.4
G08A	Pilot Rock	6.16	306	*e*Pn	Pn	19 54 51.4	+1.6
RSSD	Black Hills	6.21	66	*e*Pn	Pn	19 54 49.5	-1.1
YERR	Yerington	6.28	245	*e*Pn	Pn	19 54 52.4	+0.8
LAO	LASA Array	6.33	38	*e*Pn	Pn	19 54 52.2	+0.1
WUAZ	Wupatki	6.34	176	*e*Pn	Pn	19 54 55.2	+2.8
EGMT	Eagleton	6.36	13	*e*Pn	Pn	19 54 54.7	+2.2
VCNR	Virginia City	6.42	249	*e*Pn	Pn	19 54 57.2	+3.8
VCNR				*e*Sg	Sg	19 56 44.8	+0.3
SDCO	Great Sand Dun	6.42	128	*e*Pn	Pn	19 54 55.4	+1.8
E09A	Wood Farm, Sta	6.46	318	*e*Pn	Pn	19 54 54.7	+1.0
PNTR	Pine Nut	6.47	247	*e*Pn	Pn	19 54 56.5	+2.3
BENR	Benton	6.58	233	*e*Sn	Sn	19 56 10.5	-0.6
BENR				*e*Sg	Sb	19 56 28.9	-3.4
BENR				*e*Lg	Lg	19 56 35.7	
WAKR	Walker	6.66	242	*e*Pn	Pn	19 54 59.1	+2.4
WAKR				*e*Sg	Sg	19 56 47.3	-4.9
BEKR	Beckworth	6.70	256	*e*Pn	Pn	19 54 57.0	-0.3
BEKR				*e*Sg	Sg	19 56 47.6	-5.9
K05A	Summer Lake	6.71	280	*e*Pn	Pn	19 54 58.7	+1.3
OMMB	Old Mammoth Mi	6.91	234	*e*Pn	Pn	19 55 04.2	+4.0
PINE	Pine Mountain	6.91	289	*e*Pn	Pn	19 54 59.4	-0.8
MINS	Minaret Summit	6.92	235	*e*Pg	Pb	19 55 14.8	-4.3
MDPB	Devils Postpil	6.94	235	*e*Pn	Pn	19 55 05.0	+4.3
W18A	Petrified Fore	6.94	165	*e*Pn	Pn	19 54 59.1	-1.5
PAT2	Paterson 2	6.95	308	*e*Sg	Sb	19 56 41.8	-0.6
F07A	Phinny Hill Vi	7.05	308	*e*Pn	Pn	19 55 01.0	-0.9
DAC	Darwin (Calif)	7.11	220	*e*Pn	Pn	19 55 00.0	-2.8
WALA	Waterton Lakes	7.34	350	*e*Pn	Pn	19 55 09.0	+3.0
WALA				*e*Sg	Sb	19 57 04.7	+11
X16A	Lo Mia Camp, P	7.44	177	*e*Pn	Pn	19 55 11.1	+3.6
T25A	Trinidad	7.48	127	*e*Pn	Pn	19 55 09.5	+1.5
X18A	Snowflake	7.48	167	*e*Pn	Pn	19 55 09.5	+1.5
OGNE	Ogallala	7.49	94	*e*Pn	Pn	19 55 09.9	+1.8
CMB	Columbia Colle	7.54	242	*e*Pn	Pn	19 55 11.2	+2.5
GSC	Goldstone, Bar	7.58	212	*e*Pn	Pn	19 55 14.7	+5.5
WIFE	Three Sisters-	7.59	290	*e*Sg	Sb	19 57 18.5	+17
IRO	Indian Ridge	7.88	289	*e*Pg	Pb	19 55 31.2	-4.2
YBH	Yreka Blue Hor	8.06	273	Pn	Pn	19 55 18.8	+2.9
	0.2nm,0.3s,baz=83,slow=17,SNR=4.2						
YBH				Pg	Pb	19 55 37.7	-0.7
	0.3nm,0.3s,baz=39,slow=13,SNR=3.3						
YBH	Yreka Blue Hor	8.06	273	*e*Pn	Pn	19 55 14.8	-1.1
YBH				Pg	Pb	19 55 37.7	-0.7
ANMO	Albuquerque	8.12	146	Pn	Pn	19 55 13.1	-3.7
	0.1nm,0.3s,baz=335,slow=14,SNR=2.3						
ANMO				Pg	Pb	19 55 47.4	+7.9
	0.6nm,0.3s,baz=323,slow=13,SNR=6.8						
ANMO				Lg	Lg	19 57 32.0	
	0.3nm,0.3s,baz=332,slow=5.1,SNR=4.1						
ANMO	Albuquerque	8.12	146	*e*Pn	Pn	19 55 16.6	-0.3
ANMO				Pg	Pb	19 55 47.4	+7.9
ANMO				*e*Lg	Lg	19 57 32.0	
HUMO	Hull Mountain	8.22	279	*e*Pn	Pn	19 55 22.1	+4.0
LAZ	Ladron	8.34	152	*e*Pn	Pn	19 55 19.7	-0.1
LAZ				*e*Sg	Sb	19 57 38.9	+16
BRMM	Rolling Bench	8.52	237	*e*Pg	Pn	19 55 55.3	+33
DGMT	Dagmar	8.57	37	*e*Pn	Pn	19 55 23.2	+0.4
LENM	Lemitar	8.61	151	*e*Pn	Pn	19 55 21.1	-2.4
OBSR	Observation Ro	8.69	309	*e*Sn	Sn	19 57 07.2	+4.3
BNM	Barren Site	8.75	150	*e*Pn	Pn	19 55 24.7	-0.8
PMCM	McMillan Canyo	9.00	230	*e*Sn	Sn	19 57 04.7	-5.4
CBKS	Cedar Bluff	9.79	104	*e*Pn	Pn	19 55 39.2	-0.3
ECSD	EROS Data Cent	11.41	75	*e*Pn	Pn	19 56 00.2	-1.4
AGMN	Agassiz Nation	13.04	55	*e*Pn	Pn	19 56 20.4	-3.5
ULM	Lac du Bonnet	13.93	47	Pn	Pn	19 56 31.1	-4.9
	0.5nm,0.3s,baz=244,slow=13,SNR=4.3						
ULM				LR	LR	20 02 00.1	
	comp=Z,47nm,21.0s,baz=317,slow=38						
TXAR	Lajitas Array	14.17	149	Pn	Pn	19 56 40.4	+0.8
	0.0nm,0.3s,baz=337,slow=11,SNR=2.5						
TXAR				LR	LR	20 01 56.8	
	comp=Z,19nm,21.3s,baz=0.0,slow=37						
B35A	Bob, Littlefor	14.38	57	*e*Pn	Pn	19 56 41.1	-1.2
D36A	Goodland	14.39	62	*e*Pn	Pn	19 56 41.1	-1.3
YKA	Yellowknife Ar	20.73	356	P	P	19 57 58.9	-0.2
	0.8nm,0.6s,baz=172,slow=9.7,SNR=6.8						
TKL	Tuckaleechee C	22.75	97	LR	LR	20 07 50.0	
	comp=Z,51nm,18.6s,baz=354,slow=39						
SADO	Sadowa	23.94	72	LR	LR	20 07 59.4	
	comp=Z,54nm,20.4s,baz=79,slow=37						
INK	Inuvik	28.91	344	LR	LR	20 11 21.9	
	comp=Z,23nm,19.0s,baz=341,slow=37						
ILAR	Eielson Array	30.34	331	P	P	19 59 31.1	+0.9
	0.1nm,0.6s,baz=121,slow=6.4,SNR=2.6						
JTS	JuntasAbangare	39.36	135	LR	LR	20 20 06.0	
	comp=Z,25nm,18.0s,baz=164,slow=41						
WRA	Warramunga Arr	120.55	270	PKP	PKPdf	20 12 11.2	+0.4
	0.2nm,0.8s,baz=56,slow=1.2,SNR=2.8						

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*IDC **13** 19:53:35.0±1.9, 38°.89S×177°.91E, h0^{km}, mb3.9/4, mb1 4.1/5, mb1mx3.8/43, mbtmp3.9/5, ML3.3/1, MS2.9/1, Ms1 2.9/1, ms1mx2.5/43, Error ellipse: s-maj=44.4km s-min=14.2km az=55.0*

*NEIC **13** 19:53:41.8±0.0, 38°.57S×177°.84E, h30^{km}, mb4.1/2, ML4.2(WEL), After WEL.*

NEIC Felt at Gisborne.

*WEL **13** 19:53:41.1, 38°.6S±0°.9×17°8E±°, h32^{km}±1^{km}, ML4.7/41*

ISC 13 19:53:40.2±0.7, **38°.64S**±0°.02×**177°.94E**±0°.03, **h29**^{km}±4^{km}, **n213**, σ1ˢ**79**/231, **mb4.1**/8, **1D**, **North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIGZ	Rimuhau	0.16	244	P	Pn	19 53 47.5	+0.8
RIGZ				S	Sn	19 53 52.8	+3.0
TKGZ	Te Karaka	0.21	340	S*	Sb	19 53 50.7	+0.1
TKGZ	Te Karaka	0.21	340	P	Pb	19 53 46.9	+0.5
TKGZ				S	Sb	19 53 51.6	+1.0
CNGZ	Carnagh Statio	0.26	54	*e*Sg	Sb	19 53 49.8	-1.7
CNGZ	Carnagh Statio	0.26	54	P	Sb	19 53 49.8	-1.7
CNGZ				S	Sn	19 53 58.7	+5.6
PRGZ	Paritu Road	0.29	189	*e*Sg	Sb	19 53 50.2	-2.1
PRGZ	Paritu Road	0.29	189	P	Sb	19 53 50.2	-2.1
KNZ	Kokohu	0.44	209	*e*Pg	Pn	19 53 51.6	+1.1
KNZ				*e*Sg	Sn	19 54 01.0	+3.5
KNZ	Kokohu	0.44	209	P	Pn	19 53 51.7	+1.1
KNZ				S	Sn	19 54 00.4	+2.9
RAGZ	Rawiri	0.44	289	P	Pb	19 53 49.5	-0.1
RAGZ				S	Sn	19 53 56.4	-1.3
MWZ	Matawai	0.45	313	*e*Pg	Pb	19 53 49.2	-0.5
MWZ	Matawai	0.45	313	P	Pb	19 53 49.2	-0.5
MWZ				S	Sb	19 53 55.5	-0.7
TWGZ	Tauwhareparae	0.46	4	P	Pn	19 53 50.9	0.0
TWGZ				S	Sn	19 53 58.9	+0.7
SNGZ	Shannon Statio	0.49	253	P	Pn	19 53 51.5	+0.2
SNGZ				S	Sn	19 53 59.9	+1.0
MHGZ	Mahia Peninsul	0.51	183	*e*Pg	Pn	19 53 53.4	+1.8
MHGZ	Mahia Peninsul	0.51	183	P	Pn	19 53 53.4	+1.8
PUZ	Puketiti	0.62	24	*e*Pg	Pb	19 53 53.1	+0.6
PUZ				*e*Sg	Sn	19 54 04.5	+2.5
PUZ	Puketiti	0.62	24	P	Pn	19 53 53.3	+0.2
PUZ				S	Sn	19 54 03.8	+1.8
RUGZ	Raukumara Rang	0.70	343	P	Pb	19 53 53.3	-0.7
RUGZ				S	Sn	19 54 02.7	-1.6
WHHZ	Waihua	0.70	231	P	Pb	19 53 55.2	+1.2
RAHZ	Arahi	0.72	247	P	Pb	19 53 55.0	+0.7
RTZ	Ruatahuna	0.75	271	P	Pn	19 53 54.7	-0.3
URZ	Urewera	0.75	300	Pg	Pb	19 53 53.8	-1.0
	767nm,0.3s,baz=111,slow=12,SNR=607						
URZ				Lg	Lg	19 54 03.4	
	baz=90,slow=20						
URZ				LR	LR	19 54 30.5	
	comp=Z,1µm,18.9s,baz=132,slow=62						
URZ	Urewera	0.75	300	*e*Pg	Pb	19 53 53.8	-1.0
URZ				*e*Sn	Sn	19 54 07.7	+2.4
URZ				*e*		19 54 30.6	
URZ	Urewera	0.75	300	P	Pb	19 53 54.0	-0.8
URZ				S	Sn	19 54 03.7	-1.6
PKGZ	Pakihiroa	0.76	8	P	Pb	19 53 55.2	+0.3
MTHZ	Maungataniwha	0.89	256	P	Pn	19 53 57.0	+0.2
HAZ	Te Kaha	0.89	352	P	Pn	19 53 56.3	-0.5
WMGZ	Waiomatatini S	0.90	25	P	Pn	19 53 57.2	+0.3
MUGZ	Murupara	0.93	280	P	Pn	19 53 57.4	0.0
ARHZ	Aropaoanui	0.97	229	P	Pn	19 53 58.7	+0.9
NMHZ	Naumai	1.00	242	*e*Pn	Pn	19 53 59.0	+0.7
NMHZ	Naumai	1.00	242	P	Pn	19 53 59.0	+0.7
EDRZ	Edgecumbe	1.08	299	*e*Pn	Pn	19 53 59.3	-0.2
EDRZ				*e*Sn	Sb	19 54 24.5	+10
EDRZ	Edgecumbe	1.08	299	P	Pn	19 53 59.4	-0.1
WHRZ	Whale Island	1.09	315	P	Pn	19 53 59.4	-0.2
MXZ	Matakaoa Point	1.11	15	*e*Pn	Pn	19 53 60.0	+0.2
MXZ				*e*Sn	Sb	19 54 19.6	+4.8
MXZ	Matakaoa Point	1.11	15	P	Pn	19 54 00.0	+0.2
RRRZ	Republican Roa	1.16	284	*e*Pn	Pn	19 54 00.5	0.0
RRRZ	Republican Roa	1.16	284	P	Pn	19 54 00.6	0.0
MARZ	Manawahe	1.19	303	*e*Pn	Pn	19 54 00.6	-0.4
MARZ	Manawahe	1.19	303	P	Pn	19 54 00.8	-0.2
TARZ	Mount Tarawera	1.20	289	*e*Pn	Pn	19 54 01.2	+0.1
TARZ	Mount Tarawera	1.20	289	P	Pn	19 54 01.4	+0.3
MRHZ	Matea Rd	1.21	260	P	Pn	19 54 01.6	+0.4
CKHZ	Cape Kidnapper	1.22	213	*e*Pn	Pn	19 54 01.9	+0.5
CKHZ	Cape Kidnapper	1.22	213	P	Pn	19 54 01.9	+0.5
PRRZ	Plateau Road	1.22	276	*e*Pn	Pn	19 54 01.4	+0.1
PRRZ	Plateau Road	1.22	276	P	Pn	19 54 01.5	+0.1
BKZ	Black Stump Fm	1.25	245	*e*Pn	Pn	19 54 02.1	+0.3
BKZ				*e*Sn	Sb	19 54 28.6	+10
BKZ	Black Stump Fm	1.25	245	P	Pn	19 54 02.5	+0.7
ALRZ	Allen Road	1.25	273	*e*Pn	Pn	19 54 02.1	+0.3
ALRZ	Allen Road	1.25	273	P	Pb	19 54 02.8	-0.5
ALRZ				P	Pn	19 54 02.1	+0.3
WIZ	White Island	1.26	332	P	Pn	19 54 01.8	0.0
MCHZ	McNeill Hill	1.26	230	*e*Pn	Pn	19 54 02.9	+1.0
MCHZ	McNeill Hill	1.26	230	P	Pn	19 54 02.8	+1.0
MKRZ	Makatiti	1.26	293	*e*Pn	Pb	19 54 02.3	-1.1
MKRZ				*e*Sn	Sb	19 54 24.0	+4.8
MKRZ	Makatiti	1.26	293	P	Pb	19 54 03.3	-0.1
HLRZ	Highlands Stat	1.31	287	P	Pn	19 54 03.0	+0.5
HRRZ	Handcock Road	1.32	280	*e*Pn	Pn	19 54 02.8	0.0
HRRZ	Handcock Road	1.32	280	P	Pn	19 54 03.0	+0.2
OMRZ	Omania	1.34	293	*e*Pn	Pn	19 54 02.7	-0.3
OMRZ	Omania	1.34	293	P	Pn	19 54 02.8	-0.2
OPRZ	Ohinepanea	1.35	306	*e*Pn	Pn	19 54 02.0	-1.0
OPRZ	Ohinepanea	1.35	306	P	Pn	19 54 02.3	-0.8
HSRZ	Hossack Road	1.37	283	P	Pn	19 54 03.6	+0.2
LIRZ	Lichensteins R	1.38	297	*e*Pn	Pn	19 54 03.2	-0.3
LIRZ	Lichensteins R	1.38	297	P	Pn	19 54 03.2	-0.3
WPRZ	Whakapapatarin	1.40	274	P	Pb	19 54 05.4	-0.3
KAHZ	Kahuranaki	1.42	215	*e*Pn	Pn	19 54 04.5	+0.4
KAHZ	Kahuranaki	1.42	215	P	Pn	19 54 04.5	+0.4
KWHZ	Kaweka Forest	1.42	236	P	Pn	19 54 04.5	+0.4
UTU	Utuhina	1.45	288	*e*Pn	Pn	19 54 04.8	+0.3
UTU				*e*Sn	Sb	19 54 32.6	+8.0
UTU				*e*Sg	Sn	19 54 36.1	+14
UTU	Utuhina	1.45	288	P	Pn	19 54 05.2	+0.7
GRRZ	Galatos Road	1.47	281	P	Pn	19 54 05.0	+0.3
HATZ	Hinemaiaia	1.47	260	*e*Sn	Sb	19 54 29.3	+4.2
HATZ				*e*Sg	Sn	19 54 37.8	+15
HATZ	Hinemaiaia	1.47	260	P	Pn	19 54 05.7	+0.9
KARZ	Kaharoa	1.47	294	*e*Pn	Pn	19 54 04.3	-0.5
KARZ	Kaharoa	1.47	294	P	Pn	19 54 04.3	-0.5
NGRZ	Ngongotaha	1.48	291	P	Pn	19 54 05.4	+0.5
WHTZ	Whakaora	1.55	268	P	Pb	19 54 08.1	-0.3
KRHZ	Kereru	1.58	230	P	Pn	19 54 06.7	+0.3
TGRZ	Tauranga	1.61	304	*e*Pn	Pn	19 54 05.8	-0.8
TGRZ				*e*Sn	Sb	19 54 36.5	+7.4
TGRZ	Tauranga	1.61	304	P	Pn	19 54 06.0	-0.7
PXZ	Pawanui	1.62	211	*e*Pn	Pn	19 54 06.4	-0.4
PXZ				*e*		19 54 53.5	
PXZ				*e*		19 54 57.6	
PXZ	Pawanui	1.62	211	P	Pn	19 54 06.5	-0.4
RITZ	Rihia Road	1.66	258	*e*Sn	Sb	19 54 43.6	+13
RITZ				*e*Lg	Lg	19 54 51.6	
RITZ	Rihia Road	1.66	258	P	Pn	19 54 07.9	+0.5
KUTZ	Kaahu Road	1.67	274	P	Pn	19 54 07.9	+0.4
BHHZ	Black Hill Sta	1.69	239	*e*Pn	Pn	19 54 08.1	+0.3
BHHZ	Black Hill Sta	1.69	239	P	Pn	19 54 08.1	+0.3
RATZ	Rangitukua	1.71	262	*e*Sn	Sb	19 54 45.9	+14
RATZ				*e*Lg	Lg	19 54 51.1	
RATZ	Rangitukua	1.71	262	P	Pn	19 54 09.3	+1.2
WATZ	Wairara	1.73	267	*e*Pn	Pn	19 54 08.3	-0.1
WATZ				*e*Sn	Sb	19 54 42.9	+10
WATZ	Wairara	1.73	267	P	Pb	19 54 10.1	-1.2
KMRZ	Kaimai	1.76	296	P	Pn	19 54 08.2	-0.6
KATZ	Kakaramea	1.79	258	*e*Pn	Pn	19 54 09.8	+0.6
KATZ				*e*Sn	Sn	19 54 26.0	-5.1
KATZ				*e*Sg	Sb	19 54 40.9	+6.5
KATZ	Kakaramea	1.79	258	P	Pn	19 54 09.8	+0.6
WPHZ	Waipukurau	1.84	219	*e*Pn	Pn	19 54 09.7	-0.2
WPHZ	Waipukurau	1.84	219	P	Pn	19 54 09.7	-0.2
OTVZ	Oturere	1.85	253	*e*Sn	Sb	19 54 48.1	+12
KRVZ	Karewarewa	1.85	255	*e*Pn	Pn	19 54 10.2	0.0
KRVZ				*e*Sn	Sb	19 54 43.3	+7.0
KRVZ	Karewarewa	1.85	255	P	Pn	19 54 10.3	+0.1
PNHZ	Pukenui	1.86	226	*e*Pn	Pn	19 54 09.8	-0.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
PNHZ	Pukenui	1.86	226	P	Pn	19 54 09.8	-0.3
MOVZ	Moawhango	1.87	245	*e*Pn	Pn	19 54 11.1	+0.8
MOVZ				*e*Sn	Sb	19 54 52.0	+15
MOVZ				*e*Lg	Lg	19 55 01.1	
MOVZ	Moawhango	1.87	245	P	Pn	19 54 11.1	+0.8
TUVZ	Tukino	1.89	250	*e*Sn	Sb	19 54 49.2	+12
TUVZ				*e*Lg	Lg	19 54 57.8	
TUVZ	Tukino	1.89	250	P	Pb	19 54 13.6	-0.5
WTVZ	West Tongariro	1.90	255	*e*Pn	Pn	19 54 11.0	+0.3
WTVZ				*e*Sn	Sb	19 54 51.3	+14
WTVZ				*e*Lg	Lg	19 54 55.6	
WTVZ	West Tongariro	1.90	255	P	Pn	19 54 11.2	+0.5
NGZ	Ngauruhoe	1.90	253	*e*Sn	Sb	19 54 46.5	+8.7
NGZ				*e*Lg	Lg	19 54 53.6	
NGZ	Ngauruhoe	1.90	253	P	Pb	19 54 13.0	-1.3
TLZ	Tolley Road	1.91	279	P	Pn	19 54 11.0	+0.1
PRHZ	Porangahau	1.92	211	*e*Pn	Pn	19 54 10.1	-0.7
PRHZ	Porangahau	1.92	211	P	Pn	19 54 10.2	-0.7
WHVZ	Whangaehu Hut	1.94	250	P	Pn	19 54 12.5	+1.0
WNVZ	Wahianoa	1.95	249	*e*Pn	Pn	19 54 12.2	+0.6
COVZ	Chateau Observ	1.95	253	P	Pn	19 54 12.9	+1.4
DRZ	Dome Shelter	1.96	250	P	Pb	19 54 14.2	-1.2
FWVZ	Far West T-bar	1.96	251	*e*Sn	Sb	19 54 44.0	+4.5
FWVZ				*e*Lg	Lg	19 54 50.7	
FWVZ	Far West T-bar	1.96	251	P	Pn	19 54 12.6	+0.9
TRVZ	Turoa	1.98	250	P	Pb	19 54 14.8	-0.9
TWVZ	Taurewa	2.00	257	*e*Sn	Sb	19 54 50.7	+10
TWVZ				*e*Lg	Lg	19 55 01.0	
TWVZ	Taurewa	2.00	257	P	Pn	19 54 13.0	+0.9
TSZ	Takapari Road	2.09	227	*e*Pn	Pn	19 54 12.6	-0.8
TSZ				*e*Lg	Lg	19 55 09.4	
TSZ	Takapari Road	2.09	227	P	Pn	19 54 12.8	-0.5
PKVZ	Pokaka	2.12	251	P	Pb	19 54 19.3	+1.3
TOZ	Tahuroa Road	2.13	294	P	Pn	19 54 13.3	-0.4
ANWZ	Angora Road	2.14	211	P	Pn	19 54 13.0	-1.0
DVHZ	Dannevirke	2.15	219	*e*Pn	Pn	19 54 13.3	-0.8
DVHZ	Dannevirke	2.15	219	P	Pn	19 54 13.4	-0.8
HIZ	Hauiti	2.42	272	*e*Pn	Pn	19 54 18.3	+0.5
HIZ				*e*Sn	Sb	19 55 07.3	+15
HIZ				*e*Lg	Lg	19 55 09.8	
HIZ	Hauiti	2.42	272	P	Pn	19 54 18.5	+0.6
BFZ	Birch Farm	2.42	212	*e*Pn	Pn	19 54 16.4	-1.4
BFZ				*e*Sn	Sn	19 54 47.8	+1.1
BFZ				*e*		19 55 40.0	
BFZ	Birch Farm	2.42	212	P	Pn	19 54 16.5	-1.4
POWZ	Post Office Ro	2.43	223	*e*Pn	Pn	19 54 17.5	-0.4
POWZ	Post Office Ro	2.43	223	P	Pn	19 54 17.5	-0.4
PRWZ	Pori Road	2.45	218	P	Pn	19 54 17.7	-0.5
VRZ	Vera Road	2.53	258	*e*Pn	Pn	19 54 21.0	+1.7
VRZ				*e*Sn	Sb	19 54 55.9	+0.2
VRZ				*e*Lg	Lg	19 55 16.1	
VRZ	Vera Road	2.53	258	P	Pn	19 54 20.8	+1.5
WAZ	Wanganui	2.55	243	*e*Pn	Pn	19 54 21.3	+1.6
WAZ				*e*Lg	Lg	19 55 24.4	
WAZ	Wanganui	2.55	243	P	Pn	19 54 21.4	+1.7
KUZ	Kuaotunu	2.58	316	P	Pn	19 54 18.9	-1.1
TIWZ	Tintock	2.66	216	*e*Sn	Sn	19 54 56.9	+4.5
MKAZ	Moumakai	2.68	304	*e*Pn	Pn	19 54 20.5	-0.9
MKAZ				*e*Sn	Sn	19 54 50.8	-2.1
MKAZ				*e*Sg	Sb	19 55 11.2	+11
MKAZ	Moumakai	2.68	304	P	Pn	19 54 20.5	-0.9
MRZ	Mangatainoka R	2.72	221	*e*Pn	Pn	19 54 20.7	-1.3
MRZ	Mangatainoka R	2.72	221	P	Pn	19 54 20.5	-1.5
KBAZ	Karaka Road Bo	2.87	302	P	Pn	19 54 24.3	+0.4
LREZ	Lake Rotokare	2.88	252	P	Pn	19 54 25.7	+1.6
WIAZ	Waiheke Island	2.89	309	P	Pn	19 54 23.9	-0.4
ETAZ	East Tamaki Re	2.92	304	P	Pn	19 54 25.6	+0.9
TMWZ	Te Maipa	2.93	212	*e*Pn	Pn	19 54 23.0	-1.8
TMWZ	Te Maipa	2.93	212	P	Pn	19 54 23.1	-1.8
HOWZ	Holdsworth Sta	2.93	219	*e*Pn	Pn	19 54 23.1	-1.7
HOWZ	Holdsworth Sta	2.93	219	P	Pn	19 54 23.2	-1.7
DREZ	Durham Road	2.97	258	P	Pn	19 54 27.4	+2.0
PREZ	Palmer Road	3.03	255	P	Pn	19 54 28.5	+2.2
AWAZ	Awhitu Peninsu	3.05	300	P	Pn	19 54 26.5	+0.1
OGWZ	Otaki Gorge	3.05	224	*e*Pn	Pn	19 54 24.9	-1.6
OGWZ	Otaki Gorge	3.05	224	P	Pn	19 54 24.7	-1.8
GRZ	Great Barrier	3.10	320	P	Pn	19 54 26.5	-0.6
KHEZ	Kahui Hut	3.13	257	P	Pn	19 54 30.0	+2.3
PKE	Pukeiti	3.13	259	P	Pn	19 54 29.8	+2.1
MTW	Mount Morrison	3.14	216	P	Pn	19 54 25.8	-1.9
WTAZ	Waiatarua	3.17	302	P	Pn	19 54 28.4	+0.3
ABAZ	Army Bay	3.20	309	P	Pn	19 54 28.5	0.0
KIW	Kapiti Island	3.22	226	P	Pn	19 54 27.5	-1.4
RVAZ	Riverhead Bore	3.25	304	P	Pn	19 54 29.6	+0.4
TRWZ	Traveller	3.25	211	*e*Sn	Sn	19 55 10.4	+3.3
TRWZ				*e*		19 56 01.4	
NMEZ	Namu Road	3.26	255	P	Pn	19 54 31.5	+2.2
CAW	Cannon Point	3.31	221	*e*Pn	Pn	19 54 27.9	-2.2
CAW				*e*Sn	Sn	19 55 10.7	+2.1
CAW				*e*Lg	Lg	19 55 48.0	
PAWZ	Paruwai Farm	3.35	214	P	Pn	19 54 28.8	-1.9
MSWZ	Moikau Station	3.46	216	*e*Sn	Sn	19 55 09.9	-2.2
MSWZ				*e*Sg	Sn	19 55 12.0	-0.1
PLWZ	Palliser	3.58	214	*e*Pn	Pn	19 54 31.5	-2.3
SNZO	South Karori	3.65	222	*e*Pn	Pn	19 54 31.9	-2.8
DUWZ	D'Urville Isla	3.78	234	P	Pn	19 54 35.4	-1.1
TCW	Tory Channel	3.81	226	*e*Sn	Sn	19 55 20.7	-0.2
TCW				*e*Sg	Sn	19 55 22.7	+1.9
TCW	Tory Channel	3.81	226	P	Pn	19 54 35.1	-1.9
WCZ	Waipu Caves	3.94	312	*e*Pn	Pn	19 54 38.2	-0.5
WCZ	Waipu Caves	3.94	312	P	Pn	19 54 38.3	-0.3
TUWZ	Tuamarina	4.15	226	*e*Sn	Sn	19 55 29.7	+0.6
NNZ	Nelson	4.35	232	*e*Pn	Pn	19 54 42.2	-2.1
NNZ				*e*Sg	Sb	19 55 57.0	+9.0
OUZ	Omahuta	4.87	313	*e*Pn	Pn	19 54 51.5	0.0
OUZ	Omahuta	4.87	313	P	Pn	19 54 51.7	+0.2
THZ	Tophouse	4.96	229	*e*Pn	Pn	19 54 50.5	-2.3
THZ				*e*Sn	Sn	19 55 46.7	-2.5
KHZ	Kahutara	5.05	220	*e*Pn	Pn	19 54 50.5	-3.4
KHZ				*e*Sn	Sn	19 55 45.6	-5.6
KHZ	Kahutara	5.05	220	P	Pn	19 54 52.1	-1.8
LTZ	Lake Taylor	5.97	224	*e*Pn	Pn	19 55 03.4	-3.3
LTZ				*e*Sn	Sn	19 56 08.4	-5.7
MQZ	McQueen's Vall	6.45	217	*e*Pn	Pn	19 55 09.2	-3.9
MQZ				*e*Sn	Sn	19 56 14.7	-11
OXZ	Oxford	6.47	222	*e*Pn	Pn	19 55 10.2	-3.3
OXZ				*e*Sn	Sn	19 56 15.9	-10
CTZ	Chatham Island	6.54	143	P	Pn	19 55 15.5	+1.1
RPZ	Rata Peaks	7.26	223	Pn	Pn	19 55 21.6	-2.7
	0.6nm,0.3s,baz=52,slow=20,SNR=4.4						
RPZ				Sn	Sn	19 56 37.2	-8.6
	4.3nm,0.3s,baz=360,slow=21,SNR=11						
FOZ	Fox Glacier	7.84	229	*e*Pn	Pn	19 55 30.2	-2.1
FOZ				*e*Sn	Sn	19 56 50.8	-9.3
LBZ	Lake Benmore	8.17	223	*e*Pn	Pn	19 55 33.0	-3.8
LBZ				*e*Sn	Sn	19 56 55.1	-13
ODZ	Otahua Downs	8.40	218	*e*Pn	Pn	19 55 36.5	-3.5
ODZ				*e*Sn	Sn	19 57 03.9	-10
WKZ	Wanaka	9.09	224	*e*Pn	Pn	19 55 43.3	-6.2
WKZ				*e*Sn	Sn	19 57 22.4	-8.4
MLZ	Mavora Lakes	9.93	224	*e*Pn	Pn	19 55 55.0	-5.8
MLZ				*e*Sn	Sn	19 57 42.2	-9.1
DZM	Mont Dzumac	19.23	326	LR	LR	20 04 12.6	
	comp=Z,38nm,21.3s,baz=50,slow=33						
CTA	Charters Tower	33.00	295	P	P	20 00 13.1	+0.2
	1.4nm,0.4s,baz=130,slow=10,SNR=4.1						
COEN	Coen	39.32	299	*e*P	P	20 01 06.5	-0.3
	26nm,1.5s						
AS01	Alice Springs	40.11	279	*e*P	P	20 01 12.2	-1.2
AS31	Alice Springs	40.15	279	*e*P	P	20 01 12.8	-1.0
	2.3nm,1.4s						
ASAR	Alice Springs	40.15	279	P	P	20 01 12.6	-1.2
	2.1nm,0.8s,baz=122,slow=6.5,SNR=60						
WC3	Warramunga Arr	41.86	284	*e*P	P	20 01 26.3	-1.6
	11nm,1.4s						
WB2	Warramunga Arr	41.89	284	*e*P	P	20 01 26.5	-1.6
WR1	Warramunga Arr	41.90	284	*e*P	P	20 01 26.3	-1.9
	26nm,1.8s						
WRA	Warramunga Arr	41.90	284	P	P	20 01 26.3	-1.9
	0.9nm,1.0s,baz=125,slow=8.0,SNR=24						
FITZ	Fitzroy Crossi	49.65	279	P	P	20 02 28.0	-1.4
	0.9nm,0.7s,baz=121,slow=5.9,SNR=5.2						
SYO	Syowa Base	68.33	195⇓	*e*P	P	20 04 26.2	-12
ARA0	ARCESS Array S	145.72	343	*e*PKPdf	PKPdf	20 13 14.6	-0.2
ARCES	ARCESS Array B	145.72	343	PKPbc	PKPdf	20 13 14.5	-0.2
	1.9nm,0.7s,baz=46,slow=3.5,SNR=10						

MEX 13 19:56:20.4±0.5, 17°.03N×95°.81W, h20^{km}±19^{km}, MD3.6, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VHO	Vista Hermosa	0.89	273	*e*P	Pb	19 56 34.4	-2.9
VHO				*e*S	Sb	19 56 45.7	-3.1
HUIG	Huatulco	1.29	193	*i* P	Pn	19 56 40.4	-3.0
HUIG				*e*S	Sn	19 56 55.3	-4.8
PNIG	Pinotepa	2.31	254	*e*P	Pn	19 56 55.0	-2.5
PNIG				*e*S	Sn	19 57 22.1	-3.2

IDC 13 20:05:32.5±58.0, 14°.90S×172°.69W, h0^{km}, mb4.0/3, mb1 4.2/3, mb1mx3.6/52, mbtmp4.0/3, Error ellipse: s-maj=1132.0km s-min=197.0km az=78.0, Samoa Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	44.88	240	P	P	20 13 49.5	+0.4
	0.7nm,0.4s,baz=70,slow=9.6,SNR=4.9						
WRA	Warramunga Arr	50.63	256	P	P	20 14 34.4	+0.5
	0.3nm,0.6s,baz=84,slow=6.9,SNR=9.9						
ASAR	Alice Springs	50.92	252	P	P	20 14 35.0	-1.1
	3.0nm,0.6s,baz=88,slow=8.3,SNR=38						

TAP 13 20:09:35.0, 21°.71N×122°.04E, h6^{km}, ML2.8, C

ISCJB 13 20:09:35.0±1.2, 21°.74N±0°.06×122°.04E±0°.03, h4^{km}±8^{km}, Error ellipse: s-maj=9.7km s-min=4.2km az=177.6

JMA 13 20:09:37.7±0.8, 22°.01N×122°.01E, h0^{km}, M3.5

ISC 13 20:09:37.0±2.1, 21°.87N±0°.08×121°.95E±0°.04, h10^{km}±11^{km}, n33, σ1ˢ42/48, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAY	Lan-yu	0.41	294	*e*S	Sb	20 09 55.2	+2.5
	baz=306						
TWH	Lutao	0.95	332	*e*P	Pg	20 09 54.3	-0.9
	baz=332						
TWH				*e*S	Sn	20 10 09.6	-0.3
	baz=332						
TWKBT	Hengchun	1.06	274	*e*P	Pb	20 09 56.5	-0.9
	baz=281						
TWKBT				*e*S	Sn	20 10 12.3	-0.5
	baz=281						
TWK1	Hengchun	1.07	274	*e*P	Pb	20 09 56.5	-1.1
	baz=281						
TWK1				*e*S	Sn	20 10 12.5	-0.5
	baz=281						
TAW	Tawu	1.09	297	*e*S	Sn	20 10 14.8	+1.2
	baz=301						
ECL	Taimali	1.18	308	*e*P	Pn	20 09 59.0	-0.5
	baz=312						
ECL				*e*S	Sn	20 10 17.2	+1.6
	baz=312						
TWGBT	Beinan	1.24	320	*e*P	Pg	20 10 00.5	-0.4
	baz=333						
TWG	Pinlang	1.25	319	*e*P	Pg	20 10 00.6	-0.4
	baz=303						
TWG				*e*S	Sg	20 10 20.3	+3.0
	baz=303						
SCZT	Fangliau	1.33	292	*e*P	Pn	20 10 01.4	-0.3
	baz=297						
CHKT	Chengkung	1.34	336	*e*P	Pn	20 10 00.9	-0.8
	baz=336						
CHKT				*e*S	Sg	20 10 20.8	+0.6
	baz=336						
MASBT	Mashibuluo	1.43	301	*e*P	Pb	20 10 03.4	-0.3
	baz=315						
FULB	Fuli	1.46	335	*e*S	Sg	20 10 24.5	+0.6
	baz=335						
SSD	Sandimen	1.50	306	*e*P	Pn	20 10 03.9	-0.1
	baz=319						
TWF1	Yuli	1.60	338	*e*P	Pn	20 10 05.4	+0.1
	baz=338						
YULB	Yu-li	1.63	338	*e*P	Pn	20 10 05.8	0.0
	baz=338						
SLGT	Liugui	1.65	313	*e*P	Pb	20 10 07.0	-0.5
	baz=315						
HGSD	Ruisui	1.69	343	*e*P	Pn	20 10 06.7	+0.2
	baz=342						
STYT	Tauyuan	1.70	320	*e*P	Pb	20 10 07.5	-0.9
	baz=321						
SGST	Jiashian	1.75	314	*e*P	Pg	20 10 10.0	-0.6
	baz=315						
WTP	Ta-pu	1.85	318	*e*P	Pb	20 10 10.8	-0.1
	baz=305						
WTP				*e*S	Sg	20 10 38.7	+2.2
	baz=305						
CHN1	Nanshi	1.86	315	*e*P	Pg	20 10 11.7	-0.9
	baz=316						
CHN1				*e*S	Sg	20 10 38.4	+1.7
	baz=316						
TPUB	Ta-pu	1.88	320	*e*P	Pb	20 10 10.9	-0.5
	baz=307						
CHN4	Tsaushan	1.94	320	*e*P	Pb	20 10 12.5	+0.1
	baz=307						
TWK	Hsinying	1.94	316	*e*P	Pb	20 10 12.3	-0.2
	baz=317						
CHN5	Tsauling	2.08	326	*e*P	Pb	20 10 14.4	-0.6
	baz=326						
CHN5				*e*S	Sg	20 10 43.6	-0.4
	baz=326						
JYNG	Yonagunijimaku	2.73	19	P	Pn	20 10 21.1	+0.3
JYNG				*e*S	Sb	20 10 56.4	-2.9
HATJ	Hateruma jima	2.77	38	P	Pn	20 10 22.8	+1.4
HATJ				*e*S	Sb	20 10 57.7	-2.8
IRIF	Iriomote-Funau	2.95	33	P	Pn	20 10 25.6	+1.7
JKRS	Kuro-shima	3.02	38	P	Pn	20 10 26.5	+1.6
JKRS				S	Sb	20 11 04.1	-3.8
JIJ	Ishigaki jima	3.20	39	P	Pn	20 10 28.6	+1.3
JIJ				*e*S	Sn	20 11 06.9	+1.4
JISG	Ishigakijimahi	3.47	38	P	Pn	20 10 32.1	+1.1
JISG				*e*S	Sn	20 11 13.3	+1.2
JTJ	Tarama	3.74	42	P	Pn	20 10 36.6	+1.8
JTJ				*e*S	Sn	20 11 20.9	+2.0
JIRB	Irabujima	4.17	44	*e*S	Sn	20 11 30.2	+0.6

MAN 13 20:46:34.3, 10°.05N×123°.15E, h5^{km}, mb4.0, ML2.8, MS2.4, 1C-1D, Cebu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIM	Jordan	0.80	316	*e*P	Pb	20 46 50.7	0.0
GUIM				*e*S	Sn	20 47 04.0	-0.6
LLP	Lapu-Lapu	0.85	71⇓	*e*P	Pg	20 46 50.2	-0.5
LLP				*e*S	Sg	20 47 01.4	-0.3
RCP	Roxas	1.56	345⇑	*e*P	Pg	20 47 05.6	+1.3
MSLP	Maasin	1.69	87	*e*P	Pn	20 47 04.0	-0.5
MSLP				*e*S	Sb	20 47 27.7	+0.2
PAGZ	Pagadian	2.19	174	*e*P	Pn	20 47 11.6	+0.1
PAGZ				*e*S	Sn	20 47 40.0	+0.9

IDC 13 20:50:44.8±1.1, 36°.39N×142°.02E, h0^{km}, mb3.6/7, mb1 3.7/11, mb1mx3.5/73, mbtmp3.7/11, ML3.6/3, MS2.8/3, Ms1 2.8/3, ms1mx2.4/64, Error ellipse: s-maj=26.3km s-min=17.7km az=71.0

ISCJB 13 20:50:46.0±1.3, 36°.39N±0°.04×141°.92E±0°.08, h19^{km}±9^{km}, mb3.6/7, MS3.3/1, Error ellipse: s-maj=10.2km s-min=6.8km az=7.3

JMA 13 20:50:50.1±0.2, 36°.45N×141°.62E, h58^{km}±4^{km}, M3.0

ISC 13 20:50:45.8±1.8, 36°.44N±0°.05×141°.83E±0°.06, h8^{km}±11^{km}, n31, σ1ˢ19/30, mb3.6/7, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHYU	Hitachinakayam	1.01	265	P	Pn	20 51 06.4	+0.1
JHYU				*e*S	Sg	20 51 18.3	0.0
JHO	Hitachi	1.03	280	P	Pg	20 51 06.0	+0.4
JHO				S	Sg	20 51 18.3	-0.8
ONAJ	Iwakimizuishiy	1.06	309	P	Pn	20 51 07.6	+0.5
CHOJ	Chosi	1.08	227	P	Pn	20 51 07.6	+0.4
CHOJ				S	Sg	20 51 20.6	+0.1
JFK	Kawauchi	1.20	321	P	Pg	20 51 09.8	+0.9
JFFD	Fukushimafurud	1.21	303	P	Pn	20 51 08.9	-0.2
JMM	Marumori	1.65	330	P	Pn	20 51 15.4	+0.3
JAG	Ashikaga	1.92	270	P	Pn	20 51 19.3	+0.5
JFY	Yanaizu	1.96	300	P	Pn	20 51 20.3	+0.9
JIO	Ouri	2.05	349	P	Pn	20 51 20.8	+0.2
JRY	Ryogami san	2.41	261	S	Sn	20 51 52.3	-3.0
MJAR	Matsushiro Arr	2.92	273	Pn	Pn	20 51 34.5	+1.8
	5.3nm,0.3s,baz=107,slow=8.8,SNR=63						
MJAR				Sn	Sb	20 52 13.8	-0.4
	3.4nm,0.3s,baz=160,slow=19,SNR=8.0						
MJAR				LR	LR	20 52 58.9	
	comp=Z,81nm,18.3s,baz=105,slow=44						
MAT	Matsushiro	2.92	273	P	Pb	20 51 36.1	-2.1
MAT				S	Sn	20 52 09.0	+1.0
JHJ	Hachijo jima 2	3.72	208	Pn	Pn	20 51 44.4	+0.8
	20nm,0.3s,baz=328,slow=21,SNR=10						
JHJ				Sn	Sn	20 52 26.7	-0.8
	7.9nm,0.3s,baz=54,slow=18,SNR=3.3						
ASAJ	Asahikawa	7.69	4	Pn	Pn	20 52 38.1	0.0
	0.8nm,0.3s,baz=213,slow=6.1,SNR=9.5						
ASAJ				Sn	Sn	20 54 02.7	-2.8
	baz=318,slow=15,SNR=2.1						
JCJ	Chichijima	9.32	178	Pn	Pn	20 52 59.6	-0.9
	baz=204,slow=19						
JCJ				Sn	Sn	20 54 34.7	-11
	1.3nm,0.3s,baz=300,slow=20,SNR=2.2						
KSRS	Korea Array	11.18	279	LR	LR	20 57 52.1	
	comp=Z,31nm,18.7s,baz=80,slow=38						
H11N2	WAKE ISLAND Hy	27.55	120	T	T	21 25 13.4	
	baz=313,slow=75,SNR=14						
H11N1	WAKE ISLAND Hy	27.56	120	T	T	21 25 08.7	
	baz=313,slow=75,SNR=11						
H11N3	WAKE ISLAND Hy	27.57	120	T	T	21 25 15.6	
	baz=313,slow=75,SNR=11						
H11S1	WAKE ISLAND Hy	28.25	123	T	T	21 26 07.4	
	baz=315,slow=76,SNR=8.1						
H11S3	WAKE ISLAND Hy	28.25	123	T	T	21 26 07.3	
	baz=315,slow=76,SNR=9.4						
H11S2	WAKE ISLAND Hy	28.27	123	T	T	21 26 07.9	
	baz=315,slow=76,SNR=9.0						
SONM	Songino Array	28.40	305	P	P	20 56 42.6	+1.8
	1.1nm,0.6s,baz=112,slow=9.1,SNR=7.5						
ZALV	Zalesovo Beam	42.57	313	P	P	20 58 42.8	+0.8
	0.5nm,0.3s,baz=101,slow=7.9,SNR=3.7						
MKAR	Makanchi Array	44.72	303	P	P	20 59 00.5	+1.1
	0.7nm,0.8s,baz=91,slow=8.6,SNR=6.1						
KURBB	Kurchatov Arra	46.63	308	P	P	20 59 15.4	+1.0
	1.0nm,0.6s,baz=83,slow=7.8,SNR=15						
WRA	Warramunga Arr	56.52	188	P	P	21 00 28.3	-0.3
	0.3nm,0.8s,baz=7.6,slow=7.3,SNR=5.9						
ASAR	Alice Springs	60.25	188	P	P	21 00 54.4	-0.2
	0.2nm,0.8s,baz=19,slow=8.8,SNR=3.5						
SPITS	Spitsbergen Ar	61.17	349	LR	LR	21 32 08.7	
	comp=Z,20nm,18.4s,baz=265,slow=41						
TXAR	Lajitas Array	90.22	53	P	P	21 03 47.7	+0.4
	0.4nm,1.1s,baz=306,slow=6.2,SNR=2.3						

IDC 13 21:11:50.9±2.4, 6°.26S×153°.47E, h0^{km}, mb3.6/7, mb1 3.8/8, mb1mx3.6/47, mbtmp3.7/8, ML2.1/1, MS3.3/2, Ms1 3.3/2, ms1mx2.6/38, Error ellipse: s-maj=83.6km s-min=22.3km az=124.0

ISCJB 13 21:11:55.5±1.4, 6°.1S±0°.3×153°.1E±0°.2, h29^{km}, mb3.5/7, MS3.2/2, Error ellipse: s-maj=47.8km s-min=11.3km az=137.5

ISC 13 21:11:56.0±1.9, 6°.2S±0°.4×153°.3E±0°.3, h29^{km}, n11, σ1ˢ21/10, mb3.7/7, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.85	242	Pn	Pn	21 13 35.8	+1.2
	2.2nm,0.3s,baz=51,slow=13,SNR=5.2						
PMG				Sn	Sn	21 14 50.5	-1.1
	1.6nm,0.3s,baz=307,slow=20,SNR=2.4						
WRA	Warramunga Arr	22.92	232	P	P	21 16 58.9	+1.0
	0.3nm,0.5s,baz=54,slow=10,SNR=6.5						
ASAR	Alice Springs	25.47	225	P	P	21 17 22.1	+0.2
	0.1nm,0.4s,baz=40,slow=42,SNR=4.4						
FITZ	Fitzroy Crossi	29.44	244	P	P	21 17 56.6	-0.9
	1.9nm,0.8s,baz=270,slow=24,SNR=40						
BATI	Baumata	29.57	260	LR	LR	21 33 00.4	
	comp=Z,80nm,18.9s,baz=238,slow=43						
MJAR	Matsushiro Arr	44.81	343	LR	LR	21 38 10.0	
	comp=Z,20nm,19.0s,baz=325,slow=35						
MKAR	Makanchi Array	81.69	319	P	P	21 24 13.9	+2.0
	0.3nm,0.5s,baz=98,slow=6.3,SNR=6.1						
ZALV	Zalesovo Beam	82.58	326	P	P	21 24 16.5	+0.2
	0.4nm,0.3s,baz=122,slow=5.2,SNR=4.6						
ILAR	Eielson Array	83.28	22	P	P	21 24 19.4	-0.3
	0.4nm,0.6s,baz=246,slow=5.8,SNR=4.3						
BVAR	Borovoye Array	90.65	323	P	P	21 24 55.2	-0.6
	0.3nm,0.5s,baz=72,slow=4.7,SNR=3.4						
TORD	Torodi Ar. Bea	151.18	286	PKPab	PKPab	21 31 54.4	-1.1
	baz=82,slow=3.0						

ISCJB 13 21:26:12.9±0.1, 15°.06S±0°.02×72°.90W±0°.04, h107^{km}, mb5.0/220, Error ellipse: s-maj=6.1km s-min=2.3km az=155.5

NEIC 13 21:26:13.2±0.4, 15°.23S×73°.17W, h89^{km}±4^{km}, mb5.1/210, ML4.8(ARE), Error ellipse: s-maj=5.8km s-min=2.9km az=70.0

NEIC Felt [III] at Coracora and [II] at Ayacucho, Caraveli and Pausa. Also felt at Santa Eulalia.

MOS 13 21:26:13.6±1.1, 15°.15S×73°.42W, h98^{km}, mb5.0/38, Error ellipse: s-maj=14.7km s-min=6.0km az=113.5

GCMT 13 21:26:13.2±0.3, 15°.26S×73°.26W, h117^{km}±2^{km}, MW5.1/86, Moment Tensor Solution. s55,c66; s86,c123; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.87±.12; $M_{\theta\theta}$-0.30±.12; $M_{\phi\phi}$4.18±.16; $M_{r\theta}$1.40±.09; $M_{\theta\phi}$-1.59±.14; $M_{\phi r}$-1.79±.13; Best double couple: $M_0$4.86200×10^{16} NP1:ϕ_s331.00000°, δ59.00000°, λ-103.00000°. NP2: ϕ_s175.00000°, δ33.00000°, λ-70.00000°. Principal axes: T 5.1930, Plg13.0000°, Azm71.0000°; N -0.6580, Plg11.0000°, Azm338.0000°; P -4.5310, Plg73.0000°, Azm210.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.

IDC 13 21:26:15.1±0.4, 15°.13S×73°.23W, h106^{km}±3^{km}, mb4.5/24, mb1 4.7/29, mb1mx4.5/44, mbtmp4.9/29, MS3.7/19, Ms1 3.7/19, ms1mx3.5/41 Error ellipse: s-maj=12.8km s-min=8.5km az=55.0

ISC 13 21:26:14.8±0.3, 15°.22S±0°.04×73°.12W±0°.06, h105^{km}±2^{km}, h105^{km}:pP-P, n850, σ1ˢ34/903, mb5.0/219, 13C-12D, Southern Peru

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB12	IPOC Station P	4.31	142	*e*P	Pn	21 27 17.2	-1.1
PB12				*e*S	Sn	21 28 04.4	-3.2
PB16	IPOC Station P	4.65	132⇓	*e*P	Pn	21 27 24.0	+0.6
PB16				*e*S	Sn	21 28 16.0	-0.4
NNA	Nana	4.84	311	P	Pn	21 27 23.4	-2.1
	68nm,0.3s,baz=131,slow=12,SNR=35						
NNA				S	Sn	21 28 16.4	-4.0
	210nm,0.3s,baz=57,slow=4.4,SNR=9.2						
NNA				LR	LR	21 29 16.4	
	comp=Z,869nm,21.4s,baz=166,slow=39						
NNA	Nana	4.84	311	*e*Pn	Pn	21 27 21.2	-4.2
NNA				*e*Sn	Sn	21 28 14.2	-6.2
NNA				S		21 28 16.4	
NNA	Nana	4.84	311	*e*P	Pn	21 27 21.3	-4.2
NNA				S	Sn	21 28 16.4	-4.0
LPAZ	La Paz	4.92	103	P	Pn	21 27 30.8	+3.7
	27nm,0.3s,baz=290,slow=12,SNR=263						
LPAZ				S	Sn	21 28 09.2	-14
	10nm,0.3s,baz=225,slow=11,SNR=3.8						
LPAZ	La Paz	4.92	103	*e*Pn	Pn	21 27 30.3	+3.2
LPAZ				S	Sn	21 28 09.2	-14
LPAZ	La Paz	4.92	103	*e*P	Pn	21 27 30.3	+3.2
MNMC	Minye Minye	5.15	140	*e*Pn	Pn	21 27 29.2	-0.7
MNMC	Minye Minye	5.15	140⇓	*e*P	Pn	21 27 29.2	-0.7
MNMC				*e*S	Sn	21 28 25.5	-2.7
PSGC	Pisagua	5.21	147⇓	*e*P	Pn	21 27 28.8	-1.8
PSGC				*e*S	Sn	21 28 24.3	-5.2
PB11	IPOC Station P	5.60	144	*e*Pn	Pn	21 27 34.4	-1.5
PB11	IPOC Station P	5.60	144⇑	*e*P	Pn	21 27 34.3	-1.5
PB11				*e*S	Sn	21 28 35.1	-3.9
PB08	IPOC Station P	6.19	143⇑	*e*P	Pn	21 27 42.9	-1.1
PB08				*e*S	Sn	21 28 50.8	-2.8
PB01	IPOC Station P	6.75	150	*e*Pn	Pn	21 27 49.4	-2.0
PB01	IPOC Station P	6.75	150	*e*P	Pn	21 27 49.1	-2.2
PB01				*e*S	Sn	21 29 01.0	-5.7
PB07	IPOC Station P	7.16	155⇓	*e*P	Pn	21 27 54.6	-2.5
PB07				*e*S	Sn	21 29 10.5	-6.6
PB04	IPOC Station P	7.62	159	*e*Pn	Pn	21 28 00.1	-3.1
ATAH	Atahualpa	9.55	327	P	Pn	21 28 29.4	-0.5
	2.4nm,0.3s,baz=160,slow=12,SNR=18						
ATAH				S	Sn	21 30 10.4	-5.2
	2.9nm,0.3s,baz=212,slow=18,SNR=2.6						

GO02	Mina Guanaco	10.43	162	*e*Pn	Pn	21 28 39.4	-2.2
SAML	Samuel	11.54	58	*e*Pn	Pn	21 28 53.8	-2.6
	5.9nm,1.1s						
SAML	Samuel	11.54	58	*e*P	Pn	21 28 53.8	-2.6
SAML				pmax	pmax		
	comp=Z,6.0nm,1.1s						
SIV	San Ignacio	11.63	95	P	Pn	21 28 57.0	-0.6
	comp=Z,21nm,0.3s,baz=275,slow=14,SNR=426						
SIV				LR	LR	21 34 24.3	
	comp=Z,715nm,21.2s,baz=292,slow=42						
GO03	Copiap	12.60	168	*e*Sn	Sn	21 31 24.6	-4.5
LCO	Las Campanas	13.91	171	*e*Pn	Pn	21 29 27.7	+0.1
LCO	Las Campanas	13.91	171	*e*P	Pn	21 29 27.7	+0.1
GO04	Tololo Observa	15.04	172	*e*Pn	Pn	21 29 40.7	-1.3
	comp=Z,209nm,1.4s						
AMOG	MOGNA	16.21	166	*i* P	Pn	21 29 56.4	-0.1
OTAV	Otavalo	16.24	341	*e*Pn	Pn	21 29 57.5	+0.2
	comp=Z,17nm,1.0s						
OTAV	Otavalo	16.24	341	*e*P	Pn	21 29 57.5	+0.2
OTAV				pmax	pmax		
	comp=Z,17nm,1.0s						
GCUF	Volcan Galeras	16.86	345	*e*P	Pn	21 30 05.3	+0.2
RTLS	Leoncito	16.87	169	*i* P	P	21 30 06.9	+1.7
RTCV	Cerro Valdivia	17.09	167	*i* P	P	21 30 08.0	+0.7
AUSP	Uspallata	17.27	169	*i* P	Pn	21 30 10.9	+1.2
SOTA	Rioblanco	17.58	348	*e*P	Pn	21 30 17.2	+3.4
ASAL	Salagasta	17.73	168	*i* P	Pn	21 30 15.5	+0.4
PCON	Cinco Dias	17.73	349	*e*P	Pn	21 30 16.9	+1.2
ROC1	El Roble	17.78	174	*e*P	Pn	21 30 16.2	+0.3
	comp=Z,77nm,0.9s						
ROC1	El Roble	17.78	174	*i* P	Pn	21 30 16.1	+0.3
ACAN	Cantantal	17.82	163	*i* P	Pn	21 30 17.2	+1.1
TCA	Tanti	17.84	156	*i* P	Pn	21 30 16.4	-0.1
PEL	Peldehue	17.98	173	*e*P	Pn	21 30 17.6	-0.4
	comp=Z,204nm,1.5s						
PEL	Peldehue	17.98	173	*e*P	Pn	21 30 17.6	-0.4
PEL				pmax	pmax		
	comp=Z,204nm,1.5s						
MRA	San Martin	18.40	160	*i* P	Pn	21 30 22.9	-0.2
MRA				*i* P	P	21 30 23.6	+1.7
CPUP	Villa Florida	18.43	129	P	Pn	21 30 22.4	-0.9
	comp=Z,0.4nm,0.3s,baz=315,slow=12,SNR=12						
CPUP	Villa Florida	18.43	129	*e*P	Pn	21 30 23.2	-0.1
	comp=Z,14nm,1.1s						
PRAC	Prado	18.89	355	*e*P	P	21 30 28.7	+1.5
	comp=Z,52nm,1.2s						
HORQ	Saladito	18.90	349	*e*P	P	21 30 28.9	+1.2
YOTC	Yotoco, Valle	19.34	350	*e*P	P	21 30 33.4	+1.1
PTGA	Pitinga	19.39	43	P	P	21 30 32.6	0.0
	comp=Z,16nm,0.3s,baz=225,slow=11,SNR=70						
PTGA				S	S	21 33 58.5	-8.0
	comp=Z,0.4nm,0.3s,baz=140,slow=7.9,SNR=2.3						
PTGA				LR	LR	21 39 18.5	
	comp=Z,401nm,18.9s,baz=233,slow=40						
PTGA	Pitinga	19.39	43	*e*P	P	21 30 33.3	+0.6
	comp=Z,173nm,0.7s						
PTGA				S	S	21 33 58.5	-8.0
ANIL	Santa Ana	19.71	353	*e*P	Pn	21 30 39.9	+1.1
GO05	HualaæØ	19.74	177	*e*P	P	21 30 35.0	-1.3
	comp=Z,40nm,0.9s						
ROSC	El Rosal	19.96	357	P	Pn	21 30 42.3	+0.4
	comp=Z,1.8nm,0.3s,baz=169,slow=13,SNR=13						
ROSC	El Rosal	19.96	357	*e*P	Pn	21 30 41.6	-0.3
	comp=Z,39nm,0.8s						
ROSC	El Rosal	19.96	357	*e*P	Pn	21 30 41.6	-0.3
GUYC	Guyana, Colomb	20.43	354	*e*P	Pn	21 30 47.5	0.0
NORC	Norcasia	20.72	355	*e*P	P	21 30 47.9	+0.9
RUSC	La Rusia	20.98	0	*e*P	P	21 30 50.3	+0.1
	comp=Z,34nm,1.1s						
RUSC	La Rusia	20.98	0	*e*P	P	21 30 50.4	+0.1
HELC	Santa Helena	21.40	353	*e*P	P	21 30 57.1	+2.4
	comp=Z,92nm,1.0s						
HELC	Santa Helena	21.40	353	*e*P	P	21 30 58.4	+3.7
PTBC	PUERTO BERRIO,	21.66	356	*e*P	P	21 30 56.2	-0.8
BRRC	Barranca, Sant	22.19	358	*e*P	P	21 31 03.8	+1.2
ZARC	Zaragoza, Cauc	22.63	356	*e*P	P	21 31 07.2	0.0
SDV	Santo Domingo	24.08	6	P	P	21 31 19.6	-1.2
	comp=Z,9.2nm,0.4s,baz=208,slow=9.0,SNR=6.3						
SDV	Santo Domingo	24.08	6	P	P	21 31 21.4	+0.6
	comp=Z,36nm,1.1s						
TRQA	Tornquist	24.79	159	*e*P	P	21 31 24.7	-2.2
	comp=Z,38nm,1.1s						
TRQA	Tornquist	24.79	159	*e*P	P	21 31 24.7	-2.2
TRQA				pmax	pmax		
	comp=Z,38nm,1.1s						
SJCC	San Jacinto, C	25.04	355	*e*P	P	21 31 31.9	+2.5
PLCA	Paso Flores	25.52	175	P	P	21 31 34.0	+0.5
	comp=Z,44nm,0.9s,baz=13,slow=10.0,SNR=43						
PLCA				PcP	PcP	21 35 03.0	+0.5
	comp=Z,2.9nm,1.0s,baz=1.0,slow=4.6,SNR=3.3						
PLCA	Paso Flores	25.52	175	*e*P	P	21 31 34.1	+0.5
	comp=Z,171nm,1.4s						
PLCA				PcP	PcP	21 35 03.0	+0.5
SPB	Sao Paulo	25.59	113	*e*P	P	21 31 35.6	+1.3
	comp=Z,54nm,0.9s						
PCRV	Puerto La Cruz	26.59	19	LR	LR	21 43 56.6	
	comp=Z,310nm,19.6s,baz=209,slow=40						
JTS	JuntasAbangare	27.92	334	LR	LR	21 41 55.1	
	comp=Z,88nm,21.6s,baz=229,slow=34						
SJG	San Juan	33.83	12	P	P	21 32 45.1	-2.0
	comp=Z,3.6nm,0.3s,baz=254,slow=7.4,SNR=3.0						
RPN	Rapa Nui	35.66	245	P	P	21 33 01.5	-1.5
	comp=Z,43nm,0.7s,baz=50,slow=7.9,SNR=3.7						
RPN				LR	LR	21 44 08.4	
	comp=Z,95nm,20.0s,baz=102,slow=30						
CMIG	Matias Romero	38.62	325	P	P	21 33 27.7	-0.4
	comp=Z,6.7nm,1.0s,baz=181,slow=9.0,SNR=8.5						
CMIG				pP	pP	21 33 51.7	-0.4
	comp=Z,5.3nm,0.7s,baz=119,slow=6.6,SNR=4.6						
CMIG				PcP	PcP	21 35 38.6	+0.2
	comp=Z,2.4nm,0.7s,baz=137,slow=4.4,SNR=3.6						
455A	Stateville	46.68	348	P	P	21 34 32.2	-0.8
	baz=167						
452A	Marianna	47.25	346	P	P	21 34 36.7	-0.7
	baz=164						
LNIG	Linares	47.44	327	*e*P	P	21 34 38.4	-0.6
	comp=Z,14nm,0.9s						
ZAIG	Zacatecas	47.50	322	*e*P	P	21 34 40.7	+0.8
	comp=Z,19nm,1.0s						
254A	Abbeville	47.90	348	P	P	21 34 41.9	-0.6
	baz=167						
251A	Midway	48.49	346	P	P	21 34 46.1	-0.9
	baz=164,SNR=5.1						
154A	Montrose	48.51	349	P	P	21 34 46.8	-0.3
	baz=167						
154A	Montrose	48.51	349	*e*P	P	21 34 47.3	+0.1
	comp=Z,28nm,0.8s						
250A	Grady	48.59	345	P	P	21 34 46.9	-0.9
	baz=163						
250A	Grady	48.59	345	*e*P	P	21 34 47.3	-0.5
	comp=Z,63nm,1.8s						
153A	Fort Valley	48.69	348	P	P	21 34 47.8	-0.7
	baz=166						
249A	Camden	48.81	344	P	P	21 34 48.6	-0.8
	baz=162						
152A	Waverly Hall	48.89	347	P	P	21 34 49.4	-0.7
	baz=165						
152A	Waverly Hall	48.89	347	*e*P	P	21 34 49.5	-0.6
	comp=Z,19nm,1.1s						
346A	Big Creek Wild	48.92	341	P	P	21 34 49.7	-0.6
	baz=159						
345A	Thompson Farm,	49.03	341	P	P	21 34 50.7	-0.4
	baz=158						
Z54A	Sparta	49.07	349	P	P	21 34 50.4	-1.0
	baz=168						
248A	Dixon Mills	49.09	344	P	P	21 34 50.8	-0.7
	baz=161						
443A	Delano Plantat	49.12	339	P	P	21 34 50.9	-0.9
	baz=156						
150A	Eclectic	49.13	346	P	P	21 34 50.9	-0.9
	baz=164						
Z53A	Monticello	49.25	348	P	P	21 34 51.9	-0.8
	baz=167						
247A	Quitman	49.29	343	P	P	21 34 52.5	-0.6
	baz=160						
442A	Mamou	49.30	338	P	P	21 34 52.0	-1.2
	baz=155						
149A	Jones	49.31	345	P	P	21 34 52.3	-1.0
	baz=163						
Z52A	Williamson	49.33	347	P	P	21 34 52.8	-0.6
	baz=166,SNR=6.0						
GOGA	Godfrey	49.35	349	P	P	21 34 52.6	-0.9
	baz=167						
GOGA	Godfrey	49.35	349	*e*P	P	21 34 53.2	-0.3
	comp=Z,9.9nm,1.0s						
GOGA	Godfrey	49.35	349	*e*P	P	21 34 53.2	-0.3
GOGA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
344A	Westbrook Farm	49.39	340	*e*P	P	21 34 53.8	-0.1
	comp=Z,20nm,0.8s						
441A	DeRidder	49.61	337	P	P	21 34 53.6	-1.9
	baz=154						
Z51A	Franklin	49.62	347	P	P	21 34 55.0	-0.6
	baz=165						
Y54A	Tignall	49.65	350	P	P	21 34 54.7	-1.2
	baz=168						
245A	Little AP, Sta	49.66	341	P	P	21 34 54.9	-1.0
	baz=159						
Z50A	Ashland	49.73	346	P	P	21 34 55.5	-0.9
	baz=164,SNR=8.2						
Z50A	Ashland	49.73	346	*e*P	P	21 34 56.0	-0.5
	comp=Z,17nm,0.9s						
147A	Livingston	49.78	343	P	P	21 34 55.3	-1.5
	baz=161						
LRAL	Lakeview Retre	49.78	345	P	P	21 34 55.8	-1.0
	baz=162						
Y53A	Monroe	49.81	349	P	P	21 34 56.1	-0.9
	baz=167						
Z49A	Columbiana	49.81	345	P	P	21 34 55.9	-1.2
	baz=163,SNR=6.6						
342A	Flagon Creek P	49.86	338	P	P	21 34 57.4	0.0
	baz=156						
342A	Flagon Creek P	49.86	338	*e*P	P	21 34 58.3	+0.9
	comp=Z,62nm,1.2s						
Y52A	Lilburn	49.91	348	P	P	21 34 56.5	-1.3
	baz=166						
Y52A	Lilburn	49.91	348	*e*P	P	21 34 57.8	0.0
	comp=Z,8.7nm,0.9s						
146A	Union	49.97	342	P	P	21 34 57.3	-1.0
	baz=160						
243A	Waterproof	50.03	340	P	P	21 34 57.8	-0.9
	baz=157						
341A	Kurthwood	50.13	338	P	P	21 34 59.4	-0.1
	baz=155						
Y51A	Rockmart	50.15	347	P	P	21 34 58.5	-1.1
	baz=165,SNR=9.5						
145A	Houston Renfro	50.20	341	P	P	21 34 59.1	-0.9
	baz=159						
833A	Chaparral WMA,	50.20	329	P	P	21 34 59.8	-0.4
	baz=146						
833A	Chaparral WMA,	50.20	329	*e*P	P	21 35 00.6	+0.4
	comp=Z,31nm,0.9s						
Z47A	Carrollton	50.22	344	P	P	21 34 58.8	-1.3
	baz=161						
Z48A	Northport	50.25	344	P	P	21 34 59.2	-1.1
	baz=162,SNR=6.8						
Y50A	Piedmont	50.29	346	P	P	21 34 59.6	-1.1
	baz=164						
144A	Alexander Plac	50.38	341	P	P	21 35 00.6	-0.7
	baz=158						
CNNC	Cliffs of the	50.38	355	P	P	21 35 01.2	-0.1
	baz=174						
X53A	Estanollee	50.38	349	P	P	21 35 00.8	-0.6
	baz=167						
Y49A	Blount Mountai	50.42	346	P	P	21 35 00.4	-1.3
	baz=163,SNR=5.0						
Y49A	Blount Mountai	50.42	346	*e*P	P	21 35 00.9	-0.8
	comp=Z,7.4nm,0.8s						
242A	Grayson	50.43	339	P	P	21 35 01.4	-0.2
	baz=156						
Z46A	Louisville	50.46	343	P	P	21 35 01.6	-0.3
	baz=160						
X52A	Dahlonega	50.59	348	P	P	21 35 02.2	-0.7
	baz=167						
Y48A	Jasper	50.66	345	P	P	21 35 02.4	-1.0
	baz=162						
241A	Mo Tay, Goldon	50.66	338	P	P	21 35 03.0	-0.4
	baz=155						
KMSC	Kings Mountain	50.69	351	P	P	21 35 03.5	-0.1
	baz=170						
X51A	Calhoun	50.75	347	P	P	21 35 03.0	-1.1
	baz=165						
X51A	Calhoun	50.75	347	*e*P	P	21 35 03.7	-0.4
	comp=Z,17nm,1.0s						
143A	Socs Landing,	50.76	340	P	P	21 35 02.9	-1.2
	baz=157						
142A	Monroe	50.80	339	P	P	21 35 03.5	-1.0
	baz=156						
X50B	Fort Payne	50.82	347	P	P	21 35 03.5	-1.2
	baz=164,SNR=9.5						
Y47A	UCPARC, Winfie	50.82	344	P	P	21 35 03.6	-1.1
	baz=162,SNR=6.8						
Z45A	Winona	50.84	342	P	P	21 35 04.2	-0.6
	baz=159						
Z44A	Pea Ridge, Bel	50.98	341	P	P	21 35 05.1	-0.8
	baz=158						
240A	Hunter Patters	50.98	337	P	P	21 35 05.4	-0.5
	baz=154						
W53A	Cullowhee	51.01	349	P	P	21 35 05.4	-0.7
	baz=168						
X49A	Woodville	51.02	346	P	P	21 35 04.9	-1.3
	baz=164,SNR=5.2						
NATX	Nacogdoches	51.08	336	P	P	21 35 06.2	-0.4
	baz=153						
Y46A	Houston	51.08	343	P	P	21 35 05.2	-1.4
	baz=160						
X48A	Hartselle	51.14	345	P	P	21 35 05.9	-1.1
	baz=163,SNR=8.2						
X48A	Hartselle	51.14	345	*e*P	P	21 35 06.0	-1.1
	comp=Z,11nm,0.8s						
141A	Papa Simpson,	51.18	338	P	P	21 35 07.4	0.0
	baz=155						
Y45A	Yeager Farm, C	51.26	342	P	P	21 35 07.5	-0.4
	baz=160						
X47A	Russelville	51.41	344	P	P	21 35 07.5	-1.5
	baz=162						
V53A	Saluda	51.44	350	P	P	21 35 08.6	-0.7
	baz=168						
W50A	Signal Mountai	51.46	347	P	P	21 35 08.6	-0.9
	baz=165,SNR=6.2						
W50A	Signal Mountai	51.46	347	*e*P	P	21 35 09.0	-0.5
	comp=Z,13nm,0.8s						
Z42A	Norrel Spur, H	51.46	340	P	P	21 35 08.6	-0.8
	baz=157						
W49A	Belvidere	51.59	346	P	P	21 35 08.9	-1.5
	baz=164						
TKL	Tuckaleechee C	51.59	349	P	P	21 35 09.2	-1.2
	comp=Z,4.3nm,1.0s,baz=205,slow=6.1,SNR=4.1						
TKL	Tuckaleechee C	51.59	349	*e*P	P	21 35 09.5	-0.9
	comp=Z,41nm,1.9s						
SWET	Sewanee	51.61	347	*e*P	P	21 35 09.8	-0.8
	comp=Z,13nm,0.7s						
X45A	UM Field Stati	51.74	343	P	P	21 35 09.7	-1.7
	baz=160						
Z41A	Richland Creek	51.74	339	P	P	21 35 11.1	-0.4
	baz=156						
Z41A	Richland Creek	51.74	339	*e*P	P	21 35 11.2	-0.2
	comp=Z,48nm,0.9s						
V52A	Sevierville	51.74	349	P	P	21 35 10.7	-0.8
	baz=167,SNR=5.9						
V52A	Sevierville	51.74	349	*e*P	P	21 35 11.1	-0.4
	comp=Z,14nm,0.9s						
W48A	Pulaski	51.77	346	P	P	21 35 10.4	-1.3
	baz=163,SNR=8.8						
OXF	Oxford	51.83	343	P	P	21 35 10.3	-1.8
	baz=160						
OXF	Oxford	51.83	343	*e*P	P	21 35 10.8	-1.3
	comp=Z,39nm,1.3s						
OXF	Oxford	51.83	343	*e*P	P	21 35 10.8	-1.3
OXF				pmax	pmax		
	comp=Z,39nm,1.3s						
V51A	Loudon	51.84	348	P	P	21 35 11.2	-1.0
	baz=166						
V51A	Loudon	51.84	348	*e*P	P	21 35 12.2	-0.1
	comp=Z,9.4nm,0.8s						
V50A	Pikevile	51.87	348	P	P	21 35 11.4	-1.0
	baz=165,SNR=6.4						
PLAL	Pickwick Lake	51.91	344	*e*P	P	21 35 11.5	-1.2
	comp=Z,10nm,0.8s						
Y42A	Garnett, Star	51.92	340	P	P	21 35 12.0	-0.9
	baz=157						
Z40A	Long Farm, Mag	51.95	338	P	P	21 35 13.7	+0.6
	baz=155						
X44A	Crenshaw	52.03	342	P	P	21 35 12.0	-1.6
	baz=159						
W47A	Westpoint	52.04	345	P	P	21 35 12.1	-1.6
	baz=162						
V49A	McMinnville	52.13	347	P	P	21 35 13.0	-1.4
	baz=164,SNR=5.9						
JCT	Junction City	52.19	331	P	P	21 35 14.1	-0.8
	baz=147						
JCT	Junction City	52.19	331	*e*P	P	21 35 14.9	-0.1
	comp=Z,13nm,1.0s						
JCT	Junction City	52.19	331	*e*P	P	21 35 14.9	-0.1
JCT				pmax	pmax		
	comp=Z,13nm,1.0s						
Y41A	Eaglette Beard	52.24	339	P	P	21 35 14.7	-0.5
	baz=156						
V48A	Smith Brothers	52.31	346	P	P	21 35 14.5	-1.2
	baz=163,SNR=8.6						
V48A	Smith Brothers	52.31	346	*e*P	P	21 35 14.5	-1.2
	comp=Z,58nm,1.6s						
V48A				*e*pP	pP	21 35 41.0	0.0
WHTX	Lake Whitney,	52.42	334	P	P	21 35 16.1	-0.5
	baz=150						
WHTX	Lake Whitney,	52.42	334	*e*P	P	21 35 16.7	+0.1
	comp=Z,25nm,0.9s						
HPIG		52.48	323	*e*P	P	21 35 17.6	+0.2
	comp=Z,8.4nm,0.9s						
V47A	Nunnelly	52.57	345	P	P	21 35 15.8	-1.8
	baz=162						
Y40A	Okolona	52.59	339	P	P	21 35 17.5	-0.3
	baz=155						
U49A	Red Boiling Sp	52.82	347	P	P	21 35 17.9	-1.6
	baz=165						
SLBS	Sierra La Lagu	52.83	316	*e*P	P	21 35 19.6	-0.3
	comp=Z,20nm,0.8s						
T52A	Hallie	52.87	350	P	P	21 35 18.5	-1.3
	baz=168						
WVT	Waverly	52.93	345	P	P	21 35 18.4	-1.9
	baz=162						
WVT	Waverly	52.93	345	*e*P	P	21 35 18.7	-1.6
	comp=Z,15nm,1.1s						
WVT	Waverly	52.93	345	*e*P	P	21 35 18.7	-1.6
WVT				pmax	pmax		
	comp=Z,15nm,1.1s						
UALR	University of	52.97	340	*e*P	P	21 35 20.3	-0.3
	comp=Z,27nm,0.9s						
U48A	Cassie Pea, Po	52.99	346	P	P	21 35 19.5	-1.2
	baz=164						
U47A	Clarksville	53.09	346	P	P	21 35 19.9	-1.6
	baz=163						
T50A	Nancy	53.12	348	P	P	21 35 20.2	-1.4
	baz=166						
MIAR	Mount Ida	53.17	339	P	P	21 35 21.6	-0.4
	baz=155,SNR=22						
MIAR	Mount Ida	53.17	339	*e*P	P	21 35 21.4	-0.7
	comp=Z,23nm,0.8s						
MIAR	Mount Ida	53.17	339	*e*P	P	21 35 21.4	-0.7
MIAR				pmax	pmax		
	comp=Z,23nm,0.8s						
TXAR	Lajitas Array	53.21	326	P	P	21 35 22.1	-0.6
	comp=Z,6.8nm,0.8s,baz=148,slow=8.5,SNR=52						
TXAR				pP	pP	21 35 48.4	+0.5
	comp=Z,2.1nm,0.6s,baz=134,slow=8.9,SNR=4.0						
TXAR				LR	LR	21 57 41.2	
	comp=Z,38nm,18.1s,baz=0.0,slow=36						
TX31	Lajitas Ar. Si	53.22	326	*e*P	P	21 35 22.0	-0.7
U46A	Springville	53.23	345	P	P	21 35 20.5	-2.0
	baz=162						
W41B	Gary Mavity, V	53.30	340	P	P	21 35 22.3	-0.7
	baz=157,SNR=10						
W41B	Gary Mavity, V	53.30	340	*e*P	P	21 35 22.1	-0.8
	comp=Z,14nm,0.9s						
X39A	Fountain Ranch	53.33	338	P	P	21 35 23.2	-0.1
	baz=155,SNR=8.5						
T49A	Edmonton	53.34	348	P	P	21 35 22.2	-1.1
	baz=165,SNR=11						
T49A	Edmonton	53.34	348	*e*P	P	21 35 22.3	-1.0
	comp=Z,17nm,0.8s						
U45A	Rockin P Farm,	53.38	344	P	P	21 35 21.3	-2.2
	baz=161						
U44B	Burton Farm, H	53.52	344	P	P	21 35 23.9	-0.7
	baz=160						
T48A	Bowling Green	53.53	347	P	P	21 35 23.4	-1.2
	baz=164						
T47A	Sharon Grove	53.57	346	P	P	21 35 24.0	-1.0
	baz=163						
T47A	Sharon Grove	53.57	346	*e*P	P	21 35 24.1	-0.8
	comp=Z,18nm,0.8s						
W40A	Ferguson Farm,	53.59	340	P	P	21 35 24.9	-0.2
	baz=156,SNR=11						
W40A	Ferguson Farm,	53.59	340	*e*P	P	21 35 25.3	+0.2
	comp=Z,48nm,0.9s						
V42A	Cord	53.61	342	P	P	21 35 24.3	-1.0
	baz=158						
T46A	Princeton	53.81	345	P	P	21 35 25.6	-1.1
	baz=162						
V41A	Mountainview	53.83	341	P	P	21 35 25.7	-1.2
	baz=157,SNR=12						
W39A	Magazine	53.84	339	P	P	21 35 26.8	-0.1
	baz=155,SNR=14						
W39A	Magazine	53.84	339	*e*P	P	21 35 27.3	+0.4
	comp=Z,28nm,1.0s						
U43A	Rector	53.85	343	P	P	21 35 25.5	-1.4
	baz=159						
ABTX	Abilene, Hawle	53.92	332	P	P	21 35 27.1	-0.5
	baz=148,SNR=8.1						
ABTX	Abilene, Hawle	53.92	332	*e*P	P	21 35 27.7	+0.1
	comp=Z,40nm,1.0s						
ABTX				*e*pP	pP	21 35 52.7	-0.2
T45A	Paducah	53.98	345	P	P	21 35 25.4	-2.5
	baz=162						
S48A	Wiedeman Farm,	53.98	347	P	P	21 35 26.0	-1.9
	baz=165,SNR=8.5						
V40A	Witts Springs	54.07	340	P	P	21 35 27.8	-0.9
	baz=156,SNR=14						
V40A	Witts Springs	54.07	340	*e*P	P	21 35 28.2	-0.4
	comp=Z,19nm,0.8s						
U42A	Revenden	54.07	342	P	P	21 35 27.4	-1.2
	baz=158,SNR=11						
PBMO	Poplar Bluff	54.23	343	*e*P	P	21 35 29.0	-0.8
	comp=Z,20nm,0.8s						
U41A	Viola	54.27	341	P	P	21 35 28.8	-1.3
	baz=158,SNR=15						
V39A	Pettigrew	54.37	339	P	P	21 35 30.1	-0.7
	baz=156,SNR=18						
S46A	Don Dixon Farm	54.38	346	P	P	21 35 29.2	-1.6
	baz=163,SNR=6.9						
SDMD	Soldier’s Deli	54.45	356	*e*P	P	21 35 31.8	+0.5
	comp=Z,29nm,1.2s						
T43A	Greenville	54.48	343	P	P	21 35 30.2	-1.3
	baz=160,SNR=15						
U40A	Yellville	54.58	340	P	P	21 35 31.2	-1.1
	baz=157,SNR=18						
WCI	Wyandotte Cave	54.58	347	P	P	21 35 31.2	-1.1
	baz=164						
WCI	Wyandotte Cave	54.58	347	*e*P	P	21 35 31.4	-0.9
	comp=Z,47nm,1.3s						
WCI	Wyandotte Cave	54.58	347	*e*P	P	21 35 31.4	-0.9
WCI				pmax	pmax		
	comp=Z,47nm,1.3s						
S45A	Carrier Mills	54.59	345	P	P	21 35 31.5	-0.8
	baz=162						
USIN	University of	54.64	346	*e*P	P	21 35 31.9	-0.8
	comp=Z,44nm,0.8s						
R48A	Northridge Ran	54.66	348	P	P	21 35 31.5	-1.3
	baz=165						
T42A	Van Buren	54.66	342	P	P	21 35 31.0	-1.8
	baz=159,SNR=10						
T42A	Van Buren	54.66	342	*e*P	P	21 35 31.7	-1.2
	comp=Z,9.2nm,0.8s						
R47A	Wooly Knot Far	54.70	347	P	P	21 35 31.4	-1.7
	baz=164,SNR=6.1						
S44A	Carbondale	54.77	344	P	P	21 35 32.6	-1.1
	baz=161,SNR=13						
SIUC	Southern Illin	54.78	344	*e*P	P	21 35 32.8	-0.9
	comp=Z,38nm,0.8s						
Q51A	Peebles	54.80	350	P	P	21 35 32.2	-1.6
	baz=168						
U39A	Green Forest	54.81	340	P	P	21 35 33.1	-0.9
	baz=156,SNR=10						
R46A	Gibon Southern	54.84	346	P	P	21 35 32.5	-1.6
	baz=163						
T41A	Mountain View	54.87	342	P	P	21 35 33.2	-1.2
	baz=158						
S43A	Fulton Ridge,	54.88	344	P	P	21 35 32.7	-1.8
	baz=160,SNR=5.5						
MCWV	Mont Chateau	54.95	354	P	P	21 35 33.2	-1.7
	baz=172						
Q49A	Aurora	55.05	349	P	P	21 35 34.4	-1.2
	baz=166						
R45A	Skylar, Fairfi	55.09	345	P	P	21 35 34.8	-1.2
	baz=162,SNR=11						
Q48A	North Vernon	55.14	348	P	P	21 35 34.6	-1.7
	baz=165						
TUL1	Leonard	55.19	338	P	P	21 35 36.1	-0.6
	baz=153,SNR=6.3						
TUL1	Leonard	55.19	338	*e*P	P	21 35 36.4	-0.4
	comp=Z,40nm,1.1s						
T40A	Mansfield	55.20	341	P	P	21 35 35.6	-1.2
	baz=157,SNR=11						

R44A	Waltonville baz=161,SNR=6.6	55.25	345	P	P	21 35 35.8	-1.2
S42A	Caledonia baz=159	55.26	343	P	P	21 35 35.5	-1.7
Q47A	Bedord North L baz=164	55.29	347	P	P	21 35 36.1	-1.2
WMOK	Wichita Mounta baz=150	55.34	334	P	P	21 35 36.7	-1.2
WMOK	Wichita Mounta	55.34	334	*e*P	P	21 35 37.1	-0.8
WMOK				*e*pP	pP	21 36 03.3	0.0
WMOK	Wichita Mounta	55.34	334	*e*P	P	21 35 37.1	-0.8
WMOK				*e**PP	pP	21 36 03.3	0.0
FVM	French Village	55.36	343	*e*P	P	21 35 38.4	+0.5
FVM				*e*pP	pP	21 36 04.1	+0.8
FVM	French Village	55.36	343	*e*P	P	21 35 38.4	+0.5
FVM				*e**PP	pP	21 36 04.1	+0.8
T39A	Clever baz=156,SNR=9.6	55.36	340	P	P	21 35 36.8	-1.2
S41A	Jillco Farms, baz=158,SNR=17	55.37	342	P	P	21 35 36.6	-1.4
P50A	Jamestown baz=168	55.44	350	P	P	21 35 36.9	-1.6
R43A	Red Bud baz=160,SNR=5.6	55.50	344	P	P	21 35 37.8	-1.1
P49A	Miami Univ. Ec baz=166	55.53	349	P	P	21 35 37.2	-1.9
P48A	Milroy baz=166	55.59	348	P	P	21 35 37.5	-2.0
S40A	Lebanon baz=157,SNR=11	55.61	341	P	P	21 35 38.4	-1.2
Q45A	Warren Harvey, baz=162	55.64	346	P	P	21 35 38.3	-1.5
CCM	Cathedral Cave baz=159	55.66	343	P	P	21 35 39.0	-1.0
CCM	Cathedral Cave comp=Z,21nm,0.8s	55.66	343	*e*P	P	21 35 39.9	-0.1
CCM	Cathedral Cave	55.66	343	*e*P	P	21 35 39.9	-0.1
CCM	comp=Z,21nm,0.8s			pmax	pmax		
T38A	Diamond baz=155,SNR=16	55.67	340	P	P	21 35 39.3	-0.8
R42A	Luebbering baz=159,SNR=5.7	55.74	343	P	P	21 35 39.4	-1.2
SSPA	Standing Stone comp=Z,41nm,1.5s	55.74	356	*e*P	P	21 35 41.3	+0.7
P47A	Martinsville baz=165	55.79	348	P	P	21 35 39.3	-1.6
GDL2	Guadalupe Moun	55.85	328	*e*P	P	21 35 41.8	+0.1
Q44A	Meyer Farm, Va baz=162,SNR=7.7	55.85	345	P	P	21 35 40.0	-1.4
R41A	Rosebud baz=159,SNR=11	55.92	343	P	P	21 35 40.7	-1.2
ACSO	Alum Creek Sta baz=169	55.92	351	P	P	21 35 41.0	-0.8
O50A	Cable baz=168	55.94	350	P	P	21 35 40.4	-1.6
S39A	Bolivar baz=156,SNR=16	55.95	341	P	P	21 35 41.1	-1.0
S39A	Bolivar comp=Z,25nm,0.9s	55.95	341	*e*P	P	21 35 41.3	-0.9
MNTX	Cornudas Mount baz=142,SNR=17	55.98	327	P	P	21 35 41.4	-1.1
MNTX	Cornudas Mount comp=Z,12nm,1.0s	55.98	327	*e*P	P	21 35 41.7	-0.8
Q43A	New Douglas baz=161	56.06	344	P	P	21 35 41.6	-1.3
S38A	Stockton baz=156	56.09	340	P	P	21 35 41.7	-1.4
O49A	Covington baz=167	56.10	350	P	P	21 35 41.8	-1.3
P45A	Graceland, Par baz=163	56.15	346	P	P	21 35 41.7	-1.7
P45A	Graceland, Par comp=Z,52nm,1.3s	56.15	346	*e*P	P	21 35 42.0	-1.4
R40A	Maddies Statio baz=158,SNR=9.0	56.18	342	P	P	21 35 42.3	-1.4
R40A	Maddies Statio comp=Z,12nm,0.7s	56.18	342	*e*P	P	21 35 42.4	-1.3
N54A	Moraine State baz=172	56.26	354	P	P	21 35 43.4	-0.8
N54A	Moraine State comp=Z,28nm,1.3s	56.26	354	*e*P	P	21 35 43.9	-0.3
Q42A	Golden Eagle baz=160,SNR=9.9	56.26	344	P	P	21 35 43.2	-1.0
P44A	Sand Creek, Wi baz=162	56.29	346	P	P	21 35 43.1	-1.4
O48A	Farmland baz=166,SNR=7.1	56.31	349	P	P	21 35 42.9	-1.8
R39A	Chumby, Stover baz=157,SNR=5.8	56.43	341	P	P	21 35 44.2	-1.3
N50A	Nevada baz=168	56.48	351	P	P	21 35 44.2	-1.5
MSTX	Muleshoe baz=145	56.48	330	P	P	21 35 45.0	-1.1
MSTX	Muleshoe comp=Z,24nm,1.1s	56.48	330	*e*P	P	21 35 45.5	-0.6
O47A	Sheridan baz=165	56.49	348	P	P	21 35 44.1	-1.8
Q41A	Truxton baz=159,SNR=8.0	56.49	343	P	P	21 35 44.8	-1.1
R38A	Fenwick Farm, baz=156,SNR=13	56.59	340	P	P	21 35 45.3	-1.4
P43A	Skaggs, Pawnee baz=161	56.68	345	P	P	21 35 45.9	-1.3
AMTX	Amarillo baz=147	56.73	332	P	P	21 35 47.0	-0.9
M54A	Oil Creek Stat baz=172	56.76	354	P	P	21 35 47.4	-0.5
M54A	Oil Creek Stat comp=Z,12nm,0.9s	56.76	354	*e*P	P	21 35 47.5	-0.3
Q40A	Laux Farm, Aux baz=158	56.77	342	P	P	21 35 46.6	-1.3
SFIN	Lafayette baz=164	56.82	347	P	P	21 35 46.0	-2.2
SFIN	Lafayette comp=Z,18nm,1.0s	56.82	347	*e*P	P	21 35 46.6	-1.6
O45A	Potomac baz=163	56.83	347	P	P	21 35 46.1	-2.2
P42A	Winchester baz=160,SNR=6.0	56.84	344	P	P	21 35 46.4	-2.0
P42A	Winchester comp=Z,22nm,0.9s	56.84	344	*e*P	P	21 35 47.4	-1.0
O44A	Mansfield baz=162	56.91	346	P	P	21 35 46.8	-2.1
Q39A	Willow Grove F baz=157,SNR=14	57.08	342	P	P	21 35 48.9	-1.2
P41A	Barry, Barry baz=159,SNR=5.7	57.12	344	P	P	21 35 49.0	-1.4
BINY	Binghamton baz=177	57.19	357	P	P	21 35 51.5	+0.7
BINY	Binghamton comp=Z,28nm,0.9s	57.19	357	*e*P	P	21 35 51.7	+0.9
Q38A	Cooks Store, C baz=156,SNR=18	57.20	341	P	P	21 35 49.8	-1.1
O43A	Sugar Creek Fa baz=162	57.24	345	P	P	21 35 49.2	-1.9
N46A	Monticello baz=164	57.24	348	P	P	21 35 49.7	-1.5
P40A	Paris baz=158,SNR=5.8	57.26	343	P	P	21 35 50.1	-1.3
Q37A	Longview Farm, baz=156	57.40	340	P	P	21 35 51.1	-1.2
ERPA	Erie baz=172	57.40	354	P	P	21 35 50.8	-1.5
P39B	Salisbury baz=158,SNR=7.5	57.42	342	P	P	21 35 51.3	-1.2
N44A	Piper City baz=163	57.44	347	P	P	21 35 50.8	-1.8
HRV	Adam Dziewonsk baz=182	57.45	1	P	P	21 35 51.6	-1.0
HRV	Adam Dziewonsk	57.45	1	*e*pP	pP	21 36 19.4	+1.2
O41A	Passleys Farm, baz=160	57.48	344	P	P	21 35 51.5	-1.4
HDIL	Hopedale baz=162	57.49	345	P	P	21 35 51.6	-1.3
O40A	La Belle baz=159	57.76	343	P	P	21 35 53.4	-1.4
P38A	Dawn baz=157	57.79	341	P	P	21 35 53.8	-1.3
N43A	Stutzman Famil baz=162	57.82	346	P	P	21 35 53.7	-1.5
MMNY	Mt. Morris Dam comp=Z,115nm,2.0s	57.83	356	*e*P	P	21 35 55.5	+0.3
319A	Douglas comp=Z,28nm,1.0s	57.89	323	*e*P	P	21 35 56.5	+0.3
121A	Cookes Peak, D baz=140,SNR=9.1	57.92	325	P	P	21 35 56.2	-0.2
N42A	Yates City baz=161	57.93	345	P	P	21 35 54.5	-1.5
M44A	Midewin, Midew baz=163	57.99	347	P	P	21 35 55.6	-0.8
P37A	Lathrop baz=156,SNR=7.4	58.01	341	P	P	21 35 55.3	-1.3
N41A	Harden Midland baz=160	58.03	344	P	P	21 35 55.0	-1.7
N41A	Harden Midland comp=Z,24nm,0.8s	58.03	344	*e*P	P	21 35 55.6	-1.1
O39A	Kirksville baz=158	58.07	343	P	P	21 35 55.8	-1.2
M43A	Waltham Townsh baz=162	58.24	346	P	P	21 35 56.8	-1.4
KSU1	Kansas State U baz=153	58.33	339	P	P	21 35 57.6	-1.2
KSU1	Kansas State U comp=Z,20nm,0.8s	58.33	339	*e*P	P	21 35 58.4	-0.4
N40A	Mertquake, Sal baz=159	58.39	344	P	P	21 35 58.0	-1.2
M42A	Sheffield baz=161	58.45	345	P	P	21 35 57.8	-1.8
O37A	Wolven Farm, M baz=156	58.47	341	P	P	21 35 58.7	-1.1
BNM	Barren Site	58.55	328	*e*P	P	21 36 01.0	+0.2
M41A	Milan baz=160	58.57	345	P	P	21 35 58.9	-1.6
N39A	Derby Farms, D baz=158	58.64	343	P	P	21 35 59.6	-1.3
N38A	Joes South For baz=157	58.77	342	P	P	21 36 00.7	-1.2
M40A	Post Highland baz=159	58.85	344	P	P	21 36 00.4	-2.0
L43A	Garden Prairie baz=162	58.90	346	P	P	21 36 01.6	-1.2
LAZ	Ladron	59.01	327	*e*P	P	21 36 04.0	+0.1
DRWO	Darlington Wes baz=174	59.02	355	P	P	21 36 03.4	-0.1
DRCO	St. Marys Ceme baz=174	59.03	355	P	P	21 36 03.8	+0.2
N37A	Lee Faris, Mou baz=156	59.03	341	P	P	21 36 02.5	-1.2
N37A	Lee Faris, Mou comp=Z,29nm,0.8s	59.03	341	*e*P	P	21 36 02.9	-0.8
WLVO	Wesleyville baz=174	59.05	356	P	P	21 36 03.8	+0.1
ANMO	Albuquerque comp=Z,4.3nm,0.8s,baz=135,slow=10,SNR=9.6	59.08	328	P	P	21 36 03.3	-1.1
ANMO	Albuquerque baz=142	59.08	328	P	P	21 36 04.0	-0.4
ANMO	Albuquerque comp=Z,6.3nm,0.9s	59.08	328	*e*P	P	21 36 04.2	-0.2
ANMO	Albuquerque	59.08	328	*ce*P	P	21 36 03.8	-0.6
ANMO	comp=Z,8.0nm,1.0s			pmax	pmax		
TASL	Snake Pit, Alb baz=142,SNR=6.9	59.08	328	P	P	21 36 04.2	-0.2
M39A	Webster baz=159	59.10	343	P	P	21 36 02.8	-1.3
L41A	Preston baz=160	59.22	345	P	P	21 36 03.6	-1.3
CBKS	Cedar Bluff baz=150	59.24	336	P	P	21 36 04.7	-0.5
CBKS	Cedar Bluff comp=Z,40nm,1.3s	59.24	336	*e*P	P	21 36 05.1	-0.1
CBKS	Cedar Bluff	59.24	336	*e*P	P	21 36 05.1	-0.1
CBKS	comp=Z,40nm,1.3s			pmax	pmax		
K43A	Burlington baz=163	59.31	347	P	P	21 36 04.1	-1.4
N36A	Muff Farm, Cla baz=156	59.32	341	P	P	21 36 04.7	-1.0
M38A	Pleasantville baz=158	59.33	343	P	P	21 36 04.4	-1.3
L40A	Anamosa baz=160	59.39	344	P	P	21 36 04.5	-1.6
L40A	Anamosa	59.39	344	*e*P	P	21 36 05.0	-1.1
L40A				*e*PcP	PcP	21 36 53.4	+0.5
TUC	Tucson baz=137	59.45	323	P	P	21 36 06.6	-0.2
TUC	Tucson comp=Z,6.9nm,0.9s	59.45	323	*e*P	P	21 36 06.8	0.0
TUC	Tucson	59.45	323	*e*P	P	21 36 06.8	0.0
TUC	comp=Z,7.0nm,0.9s			pmax	pmax		
BASO	Ashfield baz=170	59.46	353	P	P	21 36 05.6	-0.9
BWLO	Walkerton baz=171	59.50	353	P	P	21 36 06.1	-0.8
DELO	Deloro Mine baz=175	59.59	356	P	P	21 36 06.6	-0.8
K42A	Prairie Point, baz=162	59.61	346	P	P	21 36 06.2	-1.4
L39A	Vinton baz=159	59.65	344	P	P	21 36 07.0	-1.0
K41A	Shullsburg baz=161	59.67	345	P	P	21 36 07.1	-1.0
CLWO	Collingwood baz=172	59.74	354	P	P	21 36 08.2	-0.3
FRNY	Flat Rock	59.77	360	*e*P	P	21 36 09.4	+0.8
FRNY				*e*pP	pP	21 36 35.1	+0.8
T25A	Trinidad baz=145,SNR=7.0	59.84	331	P	P	21 36 09.6	0.0
L38A	Oak Wood Farm, baz=158,SNR=5.7	59.93	343	P	P	21 36 08.2	-1.6
JFWS	Jewell Farm baz=161	59.95	346	P	P	21 36 08.5	-1.4
SADO	Sadowa	59.95	355	*e*P	P	21 36 09.5	-0.4
SADO				*e*pP	pP	21 36 35.4	-0.3
J43A	Natural Harves baz=163	59.97	347	P	P	21 36 08.7	-1.4
BMRO	Meriville Lake baz=171	59.98	353	P	P	21 36 09.3	-0.8
J42A	Columbus baz=162	60.07	347	P	P	21 36 09.9	-0.8
PLVO	Plevna baz=176	60.08	357	P	P	21 36 10.9	+0.2
BANO	Bancroft baz=175	60.11	356	P	P	21 36 10.7	-0.3
L37A	Phoenix Point, baz=157	60.15	342	P	P	21 36 10.5	-0.8
K39A	Oelwein baz=159	60.17	344	P	P	21 36 09.6	-1.8
PKME	Peaks-Kenny Pk comp=Z,14nm,0.9s	60.29	3	*e*P	P	21 36 13.0	+0.8
J41A	Loganville baz=161	60.32	346	P	P	21 36 11.1	-1.3
K38A	Parkersburg baz=158	60.35	343	P	P	21 36 11.7	-0.9
214A	Organ Pipe Nat baz=135	60.39	321	P	P	21 36 13.4	+0.2
L36A	Harm Buss Farm baz=156	60.40	342	P	P	21 36 11.9	-1.1
ORIO	Orleans, Innes baz=177	60.42	358	P	P	21 36 13.4	+0.3
J40A	Soldiers Grove baz=160	60.52	345	P	P	21 36 12.3	-1.5
I42A	Draeger Farm, baz=163	60.57	347	P	P	21 36 13.0	-1.1
KSCO	Kaye Shedlock' comp=Z,80nm,1.6s	60.59	334	*e*P	P	21 36 14.8	+0.2
X18A	Snowflake comp=Z,16nm,1.1s	60.61	325	*e*P	P	21 36 15.6	+0.8
KLBO	Killbear Provi baz=172	60.63	354	P	P	21 36 12.8	-1.7
BUKO	Buck Lake baz=173	60.64	355	P	P	21 36 14.3	-0.3
K37A	Belmond baz=157	60.70	343	P	P	21 36 13.5	-1.6
J39A	Decorah baz=160,SNR=5.7	60.71	345	P	P	21 36 13.5	-1.6
PEMO	Pembroke baz=176	60.72	357	P	P	21 36 15.2	+0.1
K36A	Gilmore City baz=156	60.82	342	P	P	21 36 14.8	-1.1
SDCO	Great Sand Dun baz=144,SNR=40	60.84	331	P	P	21 36 16.4	-0.1
SDCO	Great Sand Dun comp=Z,18nm,0.8s	60.84	331	*e*P	P	21 36 16.5	0.0
H43A	Windswept, Lux baz=164	60.88	348	P	P	21 36 15.2	-1.1
H43A	Windswept, Lux comp=Z,16nm,0.9s	60.88	348	*e*P	P	21 36 15.4	-0.9
J38A	Wedel Dairy, R baz=159	60.89	344	P	P	21 36 15.2	-1.1
BGNE	Belgrade baz=152	60.92	339	P	P	21 36 15.9	-0.7
BGNE	Belgrade comp=Z,82nm,1.0s	60.92	339	*e*P	P	21 36 16.4	-0.1
W18A	Petrified Fore baz=139,SNR=11	60.93	326	P	P	21 36 17.0	0.0
W18A	Petrified Fore comp=Z,37nm,1.3s	60.93	326	*e*P	P	21 36 17.6	+0.6
I40A	Norwalk baz=161	60.96	346	P	P	21 36 15.6	-1.2
I39A	Houston baz=160	61.15	345	P	P	21 36 16.6	-1.5
I39A	Houston	61.15	345	*e*P	P	21 36 17.1	-1.0
I39A				*e*PcP	PcP	21 36 59.6	-0.3
TRQ	Mont Tremblant	61.16	359	*e*P	P	21 36 19.3	+1.0
J37A	Redenius Farm, baz=158	61.18	343	P	P	21 36 17.3	-1.0
X16A	Lo Mia Camp, P comp=Z,20nm,1.2s	61.35	324	*e*P	P	21 36 20.0	+0.1
H41A	Junction City baz=162	61.42	347	P	P	21 36 18.7	-1.2
J36A	Seneca 1, Swea baz=157,SNR=7.5	61.42	342	P	P	21 36 18.7	-1.2
J36A	Seneca 1, Swea	61.42	342	*e*P	P	21 36 19.2	-0.7
J36A				*e*PcP	PcP	21 37 01.5	+0.5
S22A	4UR Ranch, Cre baz=143,SNR=6.9	61.47	330	P	P	21 36 20.4	-0.4
S22A	4UR Ranch, Cre comp=Z,7.4nm,1.0s	61.47	330	*e*P	P	21 36 20.4	-0.4
S22A				*e*pP	pP	21 36 47.8	+1.1
I38A	Scanlan Farm, baz=159,SNR=9.9	61.53	344	P	P	21 36 19.6	-1.1
H40A	Chili baz=161	61.59	346	P	P	21 36 19.8	-1.3
G43A	Wallace baz=164	61.62	348	P	P	21 36 19.9	-1.3
F45A	CMU Biological baz=166	61.65	350	P	P	21 36 20.1	-1.3
G42A	Mountain baz=163	61.76	348	P	P	21 36 20.9	-1.2
I37A	Lemond, Waseca baz=158	61.79	344	P	P	21 36 21.6	-0.8
H39A	Augusta baz=160	61.86	345	P	P	21 36 22.3	-0.5
MVCO	Mesa Verde comp=Z,13nm,1.1s	61.88	328	*e*P	P	21 36 23.5	+0.1
Y14A	Wickenburg	61.91	323	*e*P	P	21 36 23.8	+0.3
Y14A				*e*pP	pP	21 36 52.6	+3.3
F43A	Flat Rock, Esc baz=165	62.08	349	P	P	21 36 23.2	-1.0
F44A	Big Bay de Noc baz=166	62.08	350	P	P	21 36 23.4	-0.8
H38A	Maiden Rock baz=159	62.11	345	P	P	21 36 23.5	-1.0
WUAZ	Wupatki baz=138,SNR=8.0	62.12	325	P	P	21 36 25.3	+0.3
WUAZ	Wupatki comp=Z,30nm,1.1s	62.12	325	*e*P	P	21 36 25.4	+0.3
G40A	Rib Lake baz=161	62.16	346	P	P	21 36 23.9	-1.0
H37A	Dierke Farm, C baz=158	62.19	344	P	P	21 36 24.3	-0.7
F41A	Three Lakes baz=163	62.37	347	P	P	21 36 25.3	-0.9
GLA	Glamis baz=134	62.37	321	P	P	21 36 26.5	-0.1
G39A	Holcombe baz=160	62.41	346	P	P	21 36 25.7	-0.7
H36A	Jessenland, He baz=157,SNR=9.8	62.45	343	P	P	21 36 26.3	-0.5
G38A	Ridgeland baz=160	62.46	345	P	P	21 36 25.9	-0.9
ECSD	EROS Data Cent baz=154,SNR=14	62.48	341	P	P	21 36 26.2	-0.8
ECSD	EROS Data Cent comp=Z,24nm,1.1s	62.48	341	*e*P	P	21 36 26.4	-0.7
BELQ	Belleterre baz=174	62.53	356	P	P	21 36 26.9	-0.3
ISCO	Idaho Springs baz=144,SNR=7.7	62.55	332	P	P	21 36 27.9	0.0
ISCO	Idaho Springs comp=Z,18nm,1.5s	62.55	332	*e*P	P	21 36 28.3	+0.3
ISCO				*e*pP	pP	21 36 56.8	+2.9
ISCO	Idaho Springs	62.55	332	*e*P	P	21 36 28.3	+0.3
ISCO				*e**PP	pP	21 36 56.8	+2.9
ISCO	comp=Z,18nm,1.5s			pmax	pmax		
E43A	Lone Tree Farm baz=165	62.57	349	P	P	21 36 26.1	-1.4
PV01	Paradox Valley	62.63	329	*e*P	P	21 36 28.8	+0.4
Y12C	Blythe baz=134	62.67	322	P	P	21 36 28.8	+0.3
Y12C	Blythe comp=Z,9.3nm,0.9s	62.67	322	*e*P	P	21 36 29.2	+0.7
SMCO	Snowmass comp=Z,11nm,1.0s	62.68	331	*e*P	P	21 36 29.1	+0.2
COWI	Conover comp=Z,8.2nm,0.8s	62.72	348	*e*P	P	21 36 28.0	-0.6
COWI				*e*S	S	21 44 50.0	+0.9
SPMN	Marine on St. baz=159	62.75	344	P	P	21 36 27.9	-0.9
SPMN	Marine on St. comp=Z,15nm,0.8s	62.75	344	*e*P	P	21 36 28.2	-0.6
F40A	Park Falls baz=162,SNR=5.7	62.76	347	P	P	21 36 27.9	-1.0
PV02	Paradox Valley comp=Z,28nm,1.4s	62.77	329	*e*P	P	21 36 29.9	+0.5
E42A	Champion baz=164	62.79	349	P	P	21 36 27.6	-1.4
H35A	Sunnyside Ranc baz=156,SNR=7.3	62.82	343	P	P	21 36 28.3	-0.9
PV03	Paradox Valley	62.86	329	*e*P	P	21 36 30.2	+0.3
IKP	In-Ko-Pah, Jac baz=132	62.89	320	P	P	21 36 30.5	+0.5
F39A	Loretta baz=161	62.94	346	P	P	21 36 29.1	-0.9
G36A	St. Michael baz=158	63.01	344	P	P	21 36 29.8	-0.7
E41A	Kenton baz=163	63.03	348	P	P	21 36 29.2	-1.4
BC3	Big Chuckawall baz=133	63.17	321	P	P	21 36 32.1	+0.1
G35A	Watkins baz=157	63.20	343	P	P	21 36 31.0	-0.7
F38A	Pierce - Schro baz=160	63.21	345	P	P	21 36 31.2	-0.6
E40A	Wakefield baz=162,SNR=10.0	63.21	347	P	P	21 36 31.2	-0.6
W13A	Hualapai Mount comp=Z,9.0nm,1.3s	63.24	323	*e*P	P	21 36 32.7	+0.2
MONP2	Monument Peak baz=132	63.25	320	P	P	21 36 32.5	-0.1
BAR	Barrett comp=Z,11nm,0.9s	63.26	319	*e*P	P	21 36 33.1	+0.6
E39A	Mellen baz=161,SNR=6.6	63.29	347	P	P	21 36 31.6	-0.8
U15A	North Rim comp=Z,15nm,1.1s	63.30	325	*e*P	P	21 36 33.9	+0.9
IRM	Iron Mountain baz=134,SNR=7.7	63.33	322	P	P	21 36 33.2	+0.3
H32A	Carlson Farm, baz=154	63.43	341	P	P	21 36 32.6	-0.8
D41A	Chassel baz=163	63.53	348	P	P	21 36 32.7	-1.2
D41A	Chassel comp=Z,14nm,0.8s	63.53	348	*e*P	P	21 36 32.8	-1.0
F36A	Milaca baz=158,SNR=12	63.53	344	P	P	21 36 32.9	-1.0
F36A	Milaca comp=Z,24nm,0.9s	63.53	344	*e*P	P	21 36 33.5	-0.4
G34A	Benson baz=156	63.55	342	P	P	21 36 33.4	-0.7
PHWY	Pilot Hill comp=Z,20nm,1.4s	63.70	333	*e*P	P	21 36 35.9	+0.4
BELC	Belle Mtn. Jos baz=133	63.73	321	P	P	21 36 36.0	+0.3
E38A	The Farm, Brul baz=160	63.74	346	P	P	21 36 34.5	-0.8
G33A	Ortonville baz=155	63.74	342	P	P	21 36 34.8	-0.5
PFO	Pinyon Flats O baz=133	63.76	320	P	P	21 36 36.0	+0.2
FRD	Ford Ranch, An baz=132,SNR=5.4	63.76	320	P	P	21 36 36.3	+0.5
F35A	Swanville baz=157	63.81	343	P	P	21 36 35.0	-0.8
SUSD	Miller baz=152	63.87	340	P	P	21 36 35.3	-0.9
F34A	Alexandria baz=156,SNR=5.1	63.95	343	P	P	21 36 35.9	-0.8
KNB	Kanab comp=Z,26nm,1.0s	64.02	325	*e*P	P	21 36 38.5	+1.0

KNB	Kanab	64.02	325	*e*P	P	21 36 38.5	+1.0
KNB				pmax	pmax		
	comp=Z,26nm,1.0s						
O20A	White River Ci	64.03	331	P	P	21 36 37.7	+0.1
	baz=142,SNR=6.4						
O20A	White River Ci	64.03	331	*e*P	P	21 36 38.2	+0.6
	comp=Z,22nm,1.1s						
PKCU	Pink Cliffs	64.05	326	*e*P	P	21 36 39.0	+1.1
	comp=Z,24nm,1.2s						
GMRC	Granite Mounta	64.07	322	P	P	21 36 38.1	+0.3
	baz=134						
E36A	McGregor	64.07	345	P	P	21 36 37.0	-0.5
	baz=158,SNR=13						
G32A	Webster	64.12	341	P	P	21 36 37.1	-0.8
	baz=154						
G32A	Webster	64.12	341	*e*P	P	21 36 37.6	-0.3
	comp=Z,31nm,0.9s						
LCMT	Little Creek M	64.25	325	*e*P	P	21 36 39.4	+0.4
	comp=Z,12nm,1.0s						
SRU	San Rafael Swe	64.36	328	*e*P	P	21 36 40.1	+0.4
	comp=Z,24nm,1.1s						
SRU				*e*pP	pP	21 37 07.2	+1.4
SRU	San Rafael Swe	64.36	328	*e*P	P	21 36 40.2	+0.4
SRU				*e**PP	pP	21 37 07.2	+1.4
SRU				pmax	pmax		
	comp=Z,24nm,1.1s						
E35A	Pequot Lakes	64.41	344	P	P	21 36 39.0	-0.6
	baz=157,SNR=6.7						
MTPU	Mount Pierson	64.42	327	*e*P	P	21 36 41.0	+0.7
	comp=Z,7.1nm,1.0s						
C40A	Isle Royale Na	64.46	348	P	P	21 36 39.2	-0.7
	baz=163						
C40A	Isle Royale Na	64.46	348	*e*P	P	21 36 39.5	-0.4
	comp=Z,21nm,1.1s						
D37A	Cotton	64.46	346	P	P	21 36 39.0	-1.0
	baz=159,SNR=5.4						
HEC	Hector,Ludlow	64.50	321	P	P	21 36 41.2	+0.6
	baz=133						
F32A	Veblen	64.56	342	P	P	21 36 40.0	-0.6
	baz=154						
E34A	Wadena	64.58	343	P	P	21 36 40.1	-0.7
	baz=156						
SZCU	Shurtz Canyon	64.58	326	*e*P	P	21 36 42.3	+1.1
	comp=Z,15nm,1.1s						
D36A	Goodland	64.66	345	P	P	21 36 41.1	-0.2
	baz=159						
D36A	Goodland	64.66	345	*e*P	P	21 36 41.4	+0.1
	comp=Z,24nm,1.4s						
TUQ	Turquoise Moun	64.67	322	P	P	21 36 41.9	+0.1
	baz=134						
CCUT	Cedar City	64.70	325	*e*P	P	21 36 43.2	+1.2
	comp=Z,18nm,1.0s						
CCUT				*e*pP	pP	21 37 10.7	+2.5
C38A	Sawbill Land.	64.72	347	P	P	21 36 40.7	-1.0
	baz=161						
MSU	Marysvale	64.77	327	*e*P	P	21 36 43.4	+1.0
MSU				*e*pP	pP	21 37 11.0	+2.4
MSU	Marysvale	64.77	327	*e*P	P	21 36 43.4	+1.0
MSU				*e**PP	pP	21 37 11.0	+2.4
RWWY	Rawlins	64.79	332	*e*P	P	21 36 43.1	+0.6
	comp=Z,69nm,1.8s						
MATQ	Matagami	64.81	357	P	P	21 36 41.9	-0.3
	baz=175						
TMUT	Trail Mountain	64.85	328	*e*P	P	21 36 43.6	+0.5
	comp=Z,8.9nm,0.9s						
CHGQ	Chibougamau	64.85	359	P	P	21 36 42.6	+0.2
	baz=179						
BFSC	Mount Baldy Ra	64.91	320	P	P	21 36 43.4	+0.1
	baz=132						
C37A	Embarrass	64.94	346	P	P	21 36 42.3	-0.8
	baz=160,SNR=7.2						
SHPR	Sheep Range	64.97	323	*e*P	P	21 36 44.4	+0.7
	comp=Z,14nm,1.1s						
SHPR				*e*pP	pP	21 37 10.7	+0.9
EYMN	Ely	64.99	346	P	P	21 36 42.3	-1.1
	baz=160,SNR=5.2						
EYMN	Ely	64.99	346	*e*P	P	21 36 42.8	-0.6
	comp=Z,13nm,1.0s						
GSC	Goldstone, Bar	65.11	321	P	P	21 36 44.8	+0.3
	baz=133						
GSC	Goldstone, Bar	65.11	321	*e*P	P	21 36 43.7	-0.9
	comp=Z,3.6nm,0.7s						
GSC	Goldstone, Bar	65.11	321	*e*P	P	21 36 43.7	-0.9
GSC				pmax	pmax		
	comp=Z,4.0nm,0.7s						
C36A	Pine Crest Far	65.12	345	P	P	21 36 43.7	-0.6
	baz=159,SNR=9.5						
SHOC	Shoshone, Teco	65.20	322	P	P	21 36 45.3	+0.2
	baz=134						
K22A	Casper	65.26	333	P	P	21 36 45.6	+0.1
	baz=144						
K22A	Casper	65.26	333	*e*P	P	21 36 45.9	+0.4
	comp=Z,17nm,0.9s						
C35A	Jirik Farms, M	65.35	345	P	P	21 36 44.8	-1.0
	baz=158						
RSSD	Black Hills	65.45	336	P	P	21 36 46.8	+0.1
	baz=147						
RSSD	Black Hills	65.45	336	*e*P	P	21 36 47.3	+0.6
	comp=Z,33nm,1.5s						
RSSD	Black Hills	65.45	336	*e*P	P	21 36 47.3	+0.6
RSSD				pmax	pmax		
	comp=Z,33nm,1.5s						
EDW2	Edwards Air Fo	65.55	320	P	P	21 36 47.6	+0.2
	baz=132						
C34A	RKJ Ranch, Bem	65.55	344	P	P	21 36 46.4	-0.6
	baz=157						
PSUT	Pine Spring	65.68	326	*e*P	P	21 36 49.2	+0.9
	comp=Z,21nm,1.0s						
LRMC	Laurel Mtn Rad	65.75	321	P	P	21 36 49.0	+0.2
	baz=132						
NLU	North Lily Min	65.78	328	*e*P	P	21 36 50.0	+1.0
	comp=Z,20nm,1.1s						
C33A	Trail	65.88	343	P	P	21 36 48.6	-0.6
	baz=156						
TPNV	Topopah Spring	65.90	323	P	P	21 36 50.5	+0.8
	baz=134,SNR=13						
TPNV	Topopah Spring	65.90	323	*e*P	P	21 36 50.9	+1.2
	comp=Z,12nm,1.0s						
TPNV	Topopah Spring	65.90	323	*e*P	P	21 36 50.9	+1.2
TPNV				pmax	pmax		
	comp=Z,12nm,1.0s						
B35A	Bob, Littlefor	65.90	345	P	P	21 36 48.1	-1.1
	baz=158,SNR=14						
B35A	Bob, Littlefor	65.90	345	*e*P	P	21 36 48.4	-0.9
	comp=Z,23nm,1.0s						
FURC	Furnace Creek,	65.93	322	P	P	21 36 50.1	+0.5
	baz=133						
JLU	Jordanelle	65.95	329	*e*P	P	21 36 51.0	+0.9
	comp=Z,23nm,0.9s						
MPMC	Manual Prospec	66.03	322	P	P	21 36 50.5	-0.1
	baz=133,SNR=5.3						
DAC	Darwin (Calif)	66.23	322	*e*P	P	21 36 52.4	+0.5
DAC				*e*pP	PcP	21 37 20.9	-0.4
DAC	Darwin (Calif)	66.23	322	*e*P	P	21 36 52.4	+0.5
DAC				*e**PP	PcP	21 37 20.9	-0.4
B34A	Aery, Baudette	66.25	345	P	P	21 36 50.8	-0.7
	baz=157						
TCUT	Toone Canyon	66.32	329	*e*P	P	21 36 52.7	+0.3
	comp=Z,32nm,1.0s						
TCUT				*e*pP	PcP	21 37 21.1	-0.5
DUG	Dugway, Tooele	66.34	328	P	P	21 36 52.9	+0.5
	baz=138,SNR=34						
DUG	Dugway, Tooele	66.34	328	*e*P	P	21 36 53.1	+0.7
	comp=Z,41nm,1.0s						
DUG	Dugway, Tooele	66.34	328	*e*P	P	21 36 53.1	+0.7
DUG				pmax	pmax		
	comp=Z,41nm,1.0s						
ISA	Isabella, Lake	66.36	321	P	P	21 36 53.1	+0.5
	baz=132						
ISA	Isabella, Lake	66.36	321	*e*P	P	21 36 53.5	+0.9
	comp=Z,20nm,1.6s						
ISA	Isabella, Lake	66.36	321	*e*P	P	21 36 53.5	+0.9
ISA				pmax	pmax		
	comp=Z,20nm,1.6s						
AGMN	Agassiz Nation	66.40	344	P	P	21 36 52.0	-0.5
	baz=156,SNR=18						
AGMN	Agassiz Nation	66.40	344	*e*P	P	21 36 52.2	-0.2
	comp=Z,33nm,0.8s						
AGMN				*e*pP	pP	21 37 19.0	+0.3
R11A	Troy Canyon, C	66.50	325	P	P	21 36 54.2	+0.7
	baz=135,SNR=24						
R11A	Troy Canyon, C	66.50	325	*e*P	P	21 36 54.4	+0.8
	comp=Z,14nm,1.0s						
CWC	Cottonwood Cre	66.64	322	P	P	21 36 54.9	+0.5
	baz=132						
PKM	Mcpherson Peak	66.68	319	P	P	21 36 55.0	+0.2
	baz=130						
PDAR	Pinedale Array	66.71	332	P	P	21 36 54.2	-0.6
	comp=Z,4.6nm,1.0s,baz=146,slow=6.6,SNR=22						
PDAR				pP	pP	21 37 22.1	+1.0
	comp=Z,1.5nm,0.6s,baz=140,slow=7.2,SNR=4.2						
PDAR				LR	LR	22 08 52.7	
	comp=Z,14nm,19.0s,baz=112,slow=38						
BW06	Boulder Array	66.71	332	P	P	21 36 54.0	-0.8
	baz=142,SNR=7.0						
BW06	Boulder Array	66.71	332	*e*P	P	21 36 54.7	-0.2
	comp=Z,17nm,1.4s						
HWUT	Hardware Ranch	66.77	330	*e*P	P	21 36 55.1	-0.1
	comp=Z,20nm,0.9s						
VES	Vestal, Richgr	66.85	321	P	P	21 36 56.1	+0.5
	baz=131						
A33A	Warroad	66.86	344	P	P	21 36 54.8	-0.5
	baz=157,SNR=16						
BGU	Big Grassy Mou	66.99	328	*e*P	P	21 36 57.0	+0.5
	comp=Z,18nm,1.0s						
SMMC	Simmler	67.07	320	P	P	21 36 57.9	+0.9
	baz=130						
MDND	Maddock	67.09	341	P	P	21 36 57.2	+0.4
	baz=152,SNR=9.1						
MDND	Maddock	67.09	341	*e*P	P	21 36 57.4	+0.5
	comp=Z,110nm,0.6s						
TIN	Tinemaha, Big	67.14	322	P	P	21 36 58.3	+0.8
	baz=132						
VNA3	Neumayer Olymp	67.27	162	P	P	21 36 58.8	+1.0
VNA3	Neumayer Olymp	67.27	162	sP	sP	21 37 35.4	-0.1
AHID	Auburn Hatcher	67.42	331	*e*P	P	21 36 59.5	+0.2
	comp=Z,17nm,0.8s						
HVU	Hansel Valley	67.50	329	*e*P	P	21 37 00.0	+0.3
	comp=Z,26nm,0.8s						
HVU	Hansel Valley	67.50	329	*e*P	P	21 37 00.0	+0.3
HVU				pmax	pmax		
	comp=Z,26nm,0.8s						
VNA1	Neumayer--Stat	67.50	161	P	P	21 37 00.7	+1.5
VNA1	Neumayer--Stat	67.50	161	sP	sP	21 37 37.6	+0.7
LOHW	Long Hollow	67.84	331	*e*P	P	21 37 02.0	0.0
	comp=Z,9.4nm,0.8s						
MLAC	Mammoth, Mammo	67.88	322	P	P	21 37 02.9	+0.6
	baz=132						
TPAW	Teton Pass	67.91	331	*e*P	P	21 37 02.9	+0.4
	comp=Z,48nm,1.8s						
OMMB	Old Mammoth Mi	67.97	322	*e*P	P	21 37 03.8	+0.8
	comp=Z,18nm,1.2s						
MOOW	Moose Ponds	68.02	332	*e*P	P	21 37 02.9	-0.2
	comp=Z,10nm,1.0s						
NV11	Mina Array Sit	68.02	323	*e*P	P	21 37 04.0	+0.9
	comp=Z,0.7nm,1.2s						
FXWY	Fox Creek	68.06	331	*e*P	P	21 37 03.4	+0.1
	comp=Z,14nm,0.9s						
NV01	Mina Array Sit	68.10	323	*e*P	P	21 37 03.9	+0.2
NV01				*e*pP	PcP	21 37 29.1	0.0
NVAR	Mina Array Bea	68.10	323	P	P	21 37 03.1	-0.6
	comp=Z,3.2nm,0.8s,baz=141,slow=5.8,SNR=5.2						
NVAR				pP	PcP	21 37 28.9	-0.1
	comp=Z,2.2nm,0.7s,baz=134,slow=4.9,SNR=4.1						
ULM	Lac du Bonnet	68.19	344	P	P	21 37 03.0	-0.7
	comp=Z,20nm,0.6s,baz=152,slow=7.1,SNR=21						
ULM				pP	PcP	21 37 28.1	-0.7
	comp=Z,10nm,0.7s,baz=142,slow=4.7,SNR=5.1						
ULM	Lac du Bonnet	68.19	344	*e*P	P	21 37 02.8	-0.9
	comp=Z,25nm,0.9s						
ULM				*e*pP	PcP	21 37 27.6	-1.1
ULM	Lac du Bonnet	68.19	344	*e*P	P	21 37 02.8	-0.9
ULM				*e**PP	PcP	21 37 27.7	-1.1
ULM				pmax	pmax		
	comp=Z,25nm,0.9s						
IMW	Indian Meadow	68.22	331	*e*P	P	21 37 04.7	+0.2
	comp=Z,51nm,1.5s						
FLWY	Flagg Ranch	68.25	332	*e*P	P	21 37 05.2	+0.7
	comp=Z,43nm,0.8s						
RYN	Ryan	68.36	323	*e*P	P	21 37 06.3	+1.0
	comp=Z,9.2nm,1.1s						
KVN	Kaiserville	68.41	324	*e*P	P	21 37 06.1	+0.5
	comp=Z,14nm,1.2s						
KVN	Kaiserville	68.41	324	*e*P	P	21 37 06.1	+0.5
KVN				pmax	pmax		
	comp=Z,14nm,1.2s						
RLMT	Red Lodge	68.43	333	P	P	21 37 05.7	+0.1
	baz=142,SNR=11						
RLMT	Red Lodge	68.43	333	*e*P	P	21 37 05.8	+0.2
	comp=Z,36nm,1.2s						
RLMT				*e*PcP	pP	21 37 35.1	+3.2
LAO	LASA Array	68.44	336	P	P	21 37 05.6	+0.1
	baz=146,SNR=5.1						
LAO	LASA Array	68.44	336	*e*P	P	21 37 06.1	+0.7
	comp=Z,43nm,1.3s						
WAKR	Walker	68.81	323	*e*P	P	21 37 09.5	+1.4
	comp=Z,13nm,1.1s						
BMN	Battle Mountai	68.86	325	*e*P	P	21 37 08.3	0.0
	comp=Z,5.0nm,0.8s						
BMN	Battle Mountai	68.86	325	*e*P	P	21 37 08.3	0.0
BMN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
YHB	Horse Butte	68.99	332	*e*P	P	21 37 10.5	+1.4
	comp=Z,25nm,0.9s						
YERR	Yerington	69.02	323	*e*P	P	21 37 10.5	+1.1
	comp=Z,23nm,1.2s						
GCMT	Greycliff	69.13	334	*e*P	P	21 37 10.1	+0.3
GCMT				*e*pP	pP	21 37 37.2	+1.0
QLMT	Earthquake Lak	69.16	332	*e*P	P	21 37 11.6	+1.4
DGMT	Dagmar	69.17	338	P	P	21 37 10.6	+0.7
	baz=148,SNR=8.4						
DGMT	Dagmar	69.17	338	*e*P	P	21 37 10.8	+0.9
	comp=Z,60nm,1.1s						
DGMT				*e*pP	pP	21 37 38.3	+2.0
PNTR	Pine Nut	69.30	323	*e*P	P	21 37 12.5	+1.4
	comp=Z,17nm,1.0s						
SNAA	Sanae	69.48	161	P	P	21 37 12.5	+0.9
SNAA	Sanae	69.48	161	sP	sP	21 37 49.2	-0.2
SNAA	Sanae	69.48	161	P	P	21 37 12.6	+0.9
	comp=Z,27nm,0.7s,baz=270,slow=5.5,SNR=188						
SNAA				LR	LR	22 06 10.4	
	comp=Z,39nm,18.8s,baz=278,slow=34						
SNAA	Sanae	69.48	161	*e*P	P	21 37 12.6	+0.9
	comp=Z,36nm,0.8s						
PAHR	Pah Rah Range	69.58	324	*e*P	P	21 37 13.8	+1.0
	comp=Z,37nm,1.0s						
HLID	Hailey	69.63	329	P	P	21 37 13.7	+0.7
	baz=137,SNR=19						
HLID	Hailey	69.63	329	*e*P	P	21 37 13.8	+0.7
	comp=Z,11nm,0.8s						
MCMT	McKenzie Canyo	69.81	331	*e*P	P	21 37 15.0	+0.8
BOZ	Bozeman (W)	69.84	332	P	P	21 37 14.5	+0.3
	baz=140,SNR=22						
BOZ	Bozeman (W)	69.84	332	*e*P	P	21 37 14.6	+0.3
	comp=Z,19nm,1.1s						
BOZ				*e*pP	pP	21 37 44.3	+3.6
BOZ	Bozeman (W)	69.84	332	*e*P	P	21 37 14.6	+0.3
BOZ				*e**PP	pP	21 37 44.3	+3.6
BOZ				pmax	pmax		
	comp=Z,19nm,1.1s						
SCHQ	Schefferville	69.98	4	LR	LR	22 07 03.5	
	comp=Z,22nm,21.5s,baz=134,slow=35						
AFDM	Forest Hills D	70.01	322	*e*P	P	21 37 15.5	+0.3
	comp=Z,18nm,1.4s						
MFID	Camas Ranch	70.23	328	*e*P	P	21 37 17.3	+0.7
	comp=Z,59nm,1.0s						
LRM	Limekiln Ridge	70.38	332	*e*P	P	21 37 18.3	+0.6
ORV	Oroville	70.72	322	*e*P	P	21 37 20.8	+1.3
	comp=Z,40nm,1.1s						
ORV	Oroville	70.72	322	*e*P	P	21 37 20.8	+1.3
ORV				pmax	pmax		
	comp=Z,40nm,1.1s						
LIC	Lamto	70.73	78	*e*P	P	21 37 20.0	-0.2
	comp=Z,54nm,1.1s						
HRY	Holter Researc	70.79	333	*e*P	P	21 37 20.8	+0.9
TIC	Toumodi	70.87	77	*e*P	P	21 37 20.8	-0.2
EGMT	Eagleton	70.93	335	P	P	21 37 20.6	-0.1
	baz=143,SNR=16						
EGMT	Eagleton	70.93	335	*e*P	P	21 37 21.1	+0.4
	comp=Z,28nm,0.9s						
WVOR	Wild Horse Val	71.01	326	*e*P	P	21 37 21.8	+0.4
	comp=Z,14nm,1.4s						
WVOR	Wild Horse Val	71.01	326	*e*P	P	21 37 21.8	+0.4
WVOR				pmax	pmax		
	comp=Z,14nm,1.4s						
DBIC	Dimbokro	71.03	77	P	P	21 37 22.5	+0.5
	comp=Z,14nm,0.9s,baz=231,slow=6.8,SNR=14						
DBIC				LR	LR	22 06 45.9	
	comp=Z,88nm,18.9s,baz=226,slow=34						
DBIC	Dimbokro	71.03	77	*e*P	P	21 37 22.9	+0.9
	comp=Z,14nm,0.9s						
KIC	Kosan Boka	71.05	78	*e*P	P	21 37 22.3	+0.2
	comp=Z,62nm,1.0s						
O03D	Paynes Creek	71.37	323	P	P	21 37 23.6	+0.1
	baz=130						
J08A	Circle Bar Ran	71.56	327	*e*P	P	21 37 25.0	+0.4
	comp=Z,12nm,1.0s						
J08A				*e*PcP	PcP	21 37 37.3	-6.1
MOD	Modoc Plateau	71.56	325	*e*P	P	21 37 25.7	+1.0
	comp=Z,32nm,1.1s						
MSO	Missoula	71.82	332	P	P	21 37 26.6	+0.4
	baz=138,SNR=17						
MSO	Missoula	71.82	332	*e*P	P	21 37 27.2	+1.0
	comp=Z,26nm,1.2s						
BMO	Blue Mountains	72.00	329	*e*P	P	21 37 27.2	0.0
	comp=Z,14nm,0.8s						
BMO	Blue Mountains	72.00	329	*e*P	P	21 37 27.3	0.0
BMO				pmax	pmax		
	comp=Z,14nm,0.8s						
N02D	Trinity Center	72.33	323	P	P	21 37 29.6	+0.3
	baz=130						
LMPM	Military Pass	72.34	323	*e*P	P	21 37 29.9	+0.4
M04C	Macdoel	72.35	324	P	P	21 37 29.8	+0.4
	baz=131,SNR=6.2						
K05A	Summer Lake	72.44	325	*e*P	P	21 37 31.4	+1.3
	comp=Z,23nm,1.0s						
I07A	Izee	72.60	327	*e*P	P	21 37 32.2	+1.4
	comp=Z,23nm,1.4s						
M02C	Callahan	72.68	323	P	P	21 37 32.1	+0.7
	baz=130						
F10A	Beach Ranch, E	72.75	329	*e*P	P	21 37 32.3	+0.6
	comp=Z,23nm,0.9s						
YBH	Yreka Blue Hor	72.82	323	P	P	21 37 31.0	-1.2
	comp=Z,7.2nm,0.9s,baz=153,slow=6.7,SNR=9.5						
YBH				LR	LR	22 07 46.3	
	comp=Z,23nm,19.9s,baz=148,slow=34						
YBH	Yreka Blue Hor	72.82	323	*e*P	P	21 37 31.7	-0.5
	comp=Z,9.9nm,1.0s						
YBH	Yreka Blue Hor	72.82	323	P	P	21 37 31.0	-1.2
YBH				pmax	pmax		
	comp=Z,7.0nm,0.9s						
YBH				MLR	MLR		
	comp=Z,23nm,19.9s						
K04D	Chiloquin, OR	72.85	325	P	P	21 37 32.7	+0.4
	baz=131						
KHMM	Horse Mountain	72.87	322	*e*P	P	21 37 31.6	-1.0
	comp=Z,32nm,1.2s						
J05D	Fort Rock, OR	72.99	325	P	P	21 37 33.7	+0.4
	baz=131,SNR=13						
G08A	Pilot Rock	73.14	328	*e*P	P	21 37 35.0	+1.0
	comp=Z,12nm,0.9s						
PINE	Pine Mountain	73.17	326	*e*P	P	21 37 35.4	+1.1
	comp=Z,30nm,0.9s						
J04D	Umpqua Nationa	73.45	325	P	P	21 37 36.4	+0.4
	baz=131,SNR=5.4						
WALA	Waterton Lakes	73.48	333	*e*P	P	21 37 36.3	+0.3
	comp=Z,22nm,0.9s						
E09A	Wood Farm, Sta	73.59	329	*e*P	P	21 37 37.1	+0.7
	comp=Z,25nm,1.0s						
L02D	Cave Junction,	73.60	323	P	P	21 37 36.8	+0.2
	baz=129						
I05D	Terrebonne, OR	73.75	326	P	P	21 37 38.5	+1.0
	baz=132,SNR=12						
FFC	Flin Flon	73.86	343	*e*P	P	21 37 37.6	-0.2
	comp=Z,7.2nm,0.8s						
FFC				*e*PcP	PcP	21 37 52.3	-0.5
FFC	Flin Flon	73.86	343	*e*P	P	21 37 37.6	-0.2
FFC				*e*		21 37 52.3	
FFC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
G06A	Carlson Farm,	73.97	327	*e*P	P	21 37 40.0	+1.2
	comp=Z,12nm,0.9s						
NVL	N'lazarevskaya	74.08	160	⇑*i*P	P	21 37 41.1	+2.1
NVL				pmax	pmax		
	comp=Z,22nm,1.0s						
HAWA	Hanford	74.19	329	*e*P	P	21 37 41.4	+1.4
	comp=Z,28nm,0.9s						
G05D	Wamic, OR	74.33	327	P	P	21 37 42.1	+1.2
	baz=132						
D08A	Wollman Farm,	74.35	329	*e*P	P	21 37 41.8	+0.9
	comp=Z,9.3nm,0.9s						
KOWA	Kowa	74.42	70	P	P	21 37 42.8	+0.8
	comp=Z,27nm,0.7s,baz=245,slow=6.0,SNR=60						
KOWA				LR	LR	22 10 23.9	
	comp=Z,150nm,18.9s,baz=14,slow=36						
KOWA	Kowa	74.42	70	*e*P	P	21 37 42.8	+0.8
	comp=Z,30nm,0.7s						
H04A	Detroit Lake	74.43	326	*e*P	P	21 37 42.0	+0.6
	comp=Z,20nm,0.9s						
I03D	Drain, OR	74.43	325	P	P	21 37 41.8	+0.4
	baz=130						
C09A	Chrisman Ranch	74.55	330	*e*P	P	21 37 43.3	+1.2
	comp=Z,25nm,1.3s						
QSPA	South Pole Qui	74.94	180	P	P	21 37 45.0	+0.8
	comp=Z,34nm,0.8s,baz=152,slow=4.6,SNR=73						
QSPA	South Pole Qui	74.94	180	*e*P	P	21 37 45.0	+0.8
	comp=Z,184nm,0.9s						
B08A	Colville Reser	75.45	330	*e*P	P	21 37 47.5	+0.3
	comp=Z,18nm,1.0s						
LON	Longmire	75.59	328	*e*P	P	21 37 48.8	+0.6
	comp=Z,5.7nm,0.8s						
LON	Longmire	75.59	328	*e*P	P	21 37 48.8	+0.6
LON				pmax	pmax		
	comp=Z,6.0nm,0.8s						
D05A	Enumclaw	75.97	328	*e*P	P	21 37 51.2	+1.0
	comp=Z,50nm,0.8s						
E03A	Lebam	76.37	327	*e*P	P	21 37 53.9	+1.4
	comp=Z,44nm,1.1s						
B05A	Bryant	76.74	329	P	P	21 37 54.4	-0.1
	baz=132,SNR=8.3						
NLWA	Neilton Lookou	77.08	327	*e*P	P	21 37 57.8	+1.3
	comp=Z,36nm,0.9s						
NLWA				*e*pP	pP	21 38 25.5	+2.2
A04D	Lummi Island	77.35	329	P	P	21 37 58.6	+0.7
	baz=131						
PGC	Sidney	77.68	329	*e*P	P	21 38 01.1	+1.4
	comp=Z,61nm,1.4s						
LLLB	Lillooet	78.20	331	*e*P	P	21 38 02.8	+0.1
	comp=Z,35nm,1.4s						
TORD	Torodi Ar. Bea	79.20	73	P	P	21 38 08.8	0.0
	comp=Z,7.9nm,0.8s,baz=238,slow=4.9						
MDT	Midelt	80.96	53	P	P	21 38 17.9	-0.2
	comp=Z,2.3nm,0.9s,baz=219,slow=6.5,SNR=1.8						
MDT				LR	LR	22 12 22.7	
	comp=Z,77nm,19.2s,baz=252,slow=34						
SBA	Scott Base	81.24	191	*e*P	P	21 38 20.3	+1.6
	comp=Z,26nm,1.1s						
SBA	Scott Base	81.24	191	*e*P	P	21 38 20.3	+1.6
SBA				pmax	pmax		
	comp=Z,25nm,1.1s						
RAR	Rarotonga	81.58	250	LR	LR	22 08 17.3	
	comp=Z,56nm,20.8s,baz=115,slow=31						
VNDA	Vanda	82.29	190	P	P	21 38 25.1	+0.8
	comp=Z,13nm,1.0s,baz=128,slow=4.4,SNR=50						
VNDA	Vanda	82.29	190	*e*P	P	21 38 25.9	+1.7
	comp=Z,20nm,1.0s						
SYO	Syowa Base	83.74	160	⇑*i*P	P	21 38 32.1	+0.3
SYO	Syowa Base	83.74	160	⇓*i*PcP	PcP	21 38 34.4	-1.3
YKA	Yellowknife Ar	83.99	342	P	P	21 38 32.7	-0.3
	comp=Z,23nm,0.8s,baz=136,slow=5.1,SNR=138						
YKA				pP	pP	21 38 58.9	-1.3
	comp=Z,5.4nm,0.8s,baz=136,slow=5.3,SNR=3.1						
YKW3	Yellowknife Ar	84.04	342	*e*P	P	21 38 33.1	-0.1
	comp=Z,38nm,0.9s						
YKW3				*e*pP	pP	21 38 59.7	-0.8
ESDC	Sonseca Array	84.31	46	P	P	21 38 36.9	+1.6
	comp=Z,2.1nm,0.7s,baz=258,slow=4.9,SNR=11						
ESDC				pP	pP	21 39 03.6	+1.1
	comp=Z,4.4nm,0.9s,baz=254,slow=4.7,SNR=4.6						
ES19	SONSECA Array	84.36	46	*e*P	P	21 38 37.6	+2.1
WRAK	Wrangell Islan	86.70	331	*e*P	P	21 38 46.7	+0.1
	comp=Z,20nm,1.0s						
DLBC	Dease Lake	86.82	334	*e*P	P	21 38 48.2	+0.9
	comp=Z,29nm,1.0s						
DLBC				*e*pP	pP	21 39 15.8	+1.1
JIS	Juneau Island	88.64	332	*e*P	P	21 38 57.0	+1.2
	comp=Z,48nm,1.5s						
BESE	Bessie Mountai	89.01	333	*e*P	P	21 38 59.0	+1.3
	comp=Z,34nm,1.0s						
BOSA	Boshof	89.97	120	LR	LR	22 17 51.2	
	comp=Z,70nm,18.7s,baz=216,slow=34						
SUMG	Summit	90.55	10	*e*P	P	21 39 06.2	+1.2
	comp=Z,38nm,0.7s						
SUMG				*e*pP	pP	21 39 33.7	+1.2
SUMG	Summit	90.55	10	*e*P	P	21 39 06.2	+1.2
SUMG				*e**PP	pP	21 39 33.7	+1.2
SUMG				pmax	pmax		
	comp=Z,38nm,0.7s						
MAW	Mawson	91.44	165	P	P	21 39 09.2	+0.3
	comp=Z,8.7nm,0.8s,baz=241,slow=4.8,SNR=13						
MAW				LR	LR	22 19 14.4	

	comp=Z,68nm,19.4s,baz=244,slow=35						
MAW	**Mawson**	**91.44**	**165**	eP	**P**	**21 39 10.1**	**+1.3**
	comp=Z,3.2nm,1.0s						
KEST	**Kesra**	**92.79**	**54**	LR	LR	22 22 49.5	
	comp=Z,38nm,18.5s,baz=310,slow=37						
DAWY	**Dawson**	**93.64**	**336**	eP	**P**	**21 39 18.7**	**-0.3**
	comp=Z,10nm,0.9s						
INK	**Inuvik**	**93.72**	**341**	eP	**P**	**21 39 19.1**	**-0.1**
	comp=Z,16nm,0.9s						
INK	**Inuvik**	**93.72**	**341**	eP	**P**	**21 39 19.1**	**-0.1**
INK				pmax	pmax		
	comp=Z,16nm,0.9s						
EGAK	**Eagle**	**94.65**	**337**	eP	**P**	**21 39 23.4**	**-0.1**
	comp=Z,9.9nm,0.9s						
KLU	**Klutina**	**95.27**	**333**	eP	**P**	**21 39 26.4**	**-0.2**
	comp=Z,7.7nm,0.7s						
DAVOX	**Davos/Dischmat**	**96.24**	**43**	LR	LR	22 22 17.1	
	comp=Z,28nm,18.4s,baz=264,slow=35						
IL1	**Eielson Array**	**96.89**	**336**	eP	**P**	**21 39 32.7**	**-1.1**
ILAR	**Eielson Array**	**96.89**	**336**	P	**P**	**21 39 33.0**	**-0.7**
	comp=Z,1.2nm,0.8s,baz=150,slow=3.8,SNR=12						
ILAR				pP	**pP**	**21 40 00.3**	**-1.1**
	comp=Z,0.7nm,0.7s,baz=134,slow=3.1,SNR=3.2						
FYU	**Fort Yukon**	**96.92**	**337**	eP	**P**	**21 39 34.4**	**+0.6**
	comp=Z,13nm,1.0s						
CCB	**Clear Creek Bu**	**97.22**	**335**	eP	**P**	**21 39 33.9**	**-1.3**
	comp=Z,5.4nm,1.0s						
WRH	**Wood River Hil**	**97.27**	**335**	eP	**P**	**21 39 35.2**	**-0.3**
	comp=Z,14nm,1.6s						
MDM	**Murphy Dome**	**97.50**	**335**	eP	**P**	**21 39 36.0**	**-0.6**
	comp=Z,19nm,1.1s						
SKT	**Skwentna**	**97.95**	**332**	eP	**P**	**21 39 38.1**	**-0.5**
	comp=Z,9.2nm,1.1s						
BPAW	**Bear Paw Mtn.**	**98.35**	**334**	eP	**P**	**21 39 39.8**	**-0.6**
	comp=Z,7.1nm,1.0s						
CAST	**Castle Rocks**	**98.62**	**333**	eP	**P**	**21 39 40.8**	**-0.8**
	comp=Z,8.0nm,1.0s						
COLD	**Coldfoot**	**98.99**	**337**	eP	**Pdif**	**21 39 43.8**	**+0.7**
	comp=Z,3.5nm,0.8s						
GERES	**GERESS Array B**	**99.24**	**42**	P	**Pdif**	**21 39 45.3**	**+0.5**
	comp=Z,0.3nm,0.6s,baz=209,slow=5.6,SNR=2.6						
GERES				pP	**pP**	**21 40 12.4**	**0.0**
	comp=Z,0.9nm,0.8s,baz=270,slow=4.7,SNR=4.3						
CLL	**Collm**	**99.33**	**39**	ePdif	**Pdif**	**21 39 44.0**	**-1.0**
CLL				ePS	**PS**	**21 52 43.0**	**-5.7**
AKASG	**Malin Array Be**	**109.43**	**41**	PKiKP	**PKiKP**	**21 44 33.0**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=232,slow=3.0,SNR=2.5						
BRTR	**Keskin Array B**	**112.38**	**53**	PKiKP	**PKiKP**	**21 44 38.4**	**-0.5**
	comp=Z,1.1nm,1.0s,baz=151,slow=3.3,SNR=4.5						
OBN	**Obninsk**	**113.60**	**36**	i PKIKP	**PKiKP**	**21 44 41.1**	**+0.6**
OBN				e		21 45 33.3	
OBN				ePPP	PPP	21 47 56.9	
OBN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KLMR	**Klimovskoe**	**114.17**	**30**	ePKIKP	PKPdf	21 44 40.0	-1.4
KLMR				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KLMR	**Klimovskoe**	**114.17**	**30**	ePKPdf	PKPdf	21 44 40.1	-1.3
KLMR				AMP		21 44 42.6	
	comp=Z,8.0nm,1.3s						
ASF	**Jabal al Asfar**	**114.74**	**61**	PKP	PKPdf	21 44 44.4	+0.8
	comp=Z,1.1nm,0.6s,baz=162,slow=3.2,SNR=3.8						
KIV	**Kislovodsk**	**118.94**	**48**	⇓iPKIKP	**PKPdf**	**21 44 51.2**	**-0.1**
KIV				e		21 46 13.1	
KIV				ePPP	PPP	21 48 45.2	
KIV				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NEY	**Neytrino**	**119.05**	**49**	⇑iPKIKP	**PKPdf**	**21 44 51.9**	**+0.2**
KBZ	**Khabaz**	**119.12**	**48**	PKP	**PKPdf**	**21 44 52.1**	**+0.6**
	comp=Z,5.5nm,0.8s,baz=188,slow=0.6,SNR=12						
NCK	**Nalchik**	**119.66**	**48**	⇑iPKIKP	**PKPdf**	**21 44 54.9**	**+2.3**
STKA	**Stephens Creek**	**122.55**	**215**	PKP	**PKPdf**	**21 44 58.3**	**-0.3**
	comp=Z,4.6nm,0.7s,baz=89,slow=3.1,SNR=7.1						
SEY	**Seymchan**	**122.78**	**337**	⇑iPKIKP	**PKPdf**	**21 44 58.9**	**+0.9**
PET	**Petropavlovsk**	**124.66**	**325**	ePKIKP	**PKPdf**	**21 45 01.3**	**-0.5**
ARU	**Arti**	**125.00**	**30**	ePKPdf	**PKPdf**	**21 45 03.4**	**+1.0**
ARU	**Arti**	**125.00**	**30**	i PKIKP	**PKPdf**	**21 45 03.6**	**+1.2**
ARU						21 46 53.5	
ARU						21 52 05.6	
ARU				PS	**PS**	**21 56 42.1**	**-12**
ARU				SS	SS	22 03 39.5	-0.1
PETK	**Petropavlovsk-**	**125.16**	**325**	PKP	**PKPdf**	**21 45 02.6**	**-0.3**
	comp=Z,3.9nm,0.8s,baz=94,slow=5.8						
AKTO	**Aktyubinsk**	**127.35**	**37**	PKP	**PKPdf**	**21 45 08.2**	**+1.0**
	comp=Z,5.4nm,0.9s,baz=316,slow=4.4,SNR=23						
CTA	**Charters Tower**	**127.76**	**229**	PKP	**PKPdf**	**21 45 08.4**	**-0.4**
	comp=Z,2.6nm,0.7s,baz=164,slow=6.4,SNR=4.7						
CTA	**Charters Tower**	**127.76**	**229**	PKIKP	**PKPdf**	**21 45 08.5**	**-0.4**
CTA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
CTAO	**Charters Tower**	**127.76**	**229**	ePKPdf	**PKPdf**	**21 45 09.5**	**+0.7**
CTAO	**Charters Tower**	**127.76**	**229**	ePKIKP	**PKPdf**	**21 45 09.5**	**+0.7**
YAK	**Yakutsk**	**130.51**	**346**	i PKIKP	**PKPdf**	**21 45 13.5**	**+0.8**
NWAO	**Narrogin (SRO)**	**131.11**	**192**	PKP	**PKPdf**	**21 45 14.8**	**-0.1**
	comp=Z,19nm,1.1s,baz=90,slow=2.0,SNR=3.4						
GEYT	**Alibeck**	**131.52**	**53**	PKP	**PKPdf**	**21 45 15.6**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=129,slow=4.1,SNR=3.2						
BRVK	**Borovoye**	**132.52**	**29**	d iPKIKP	**PKPdf**	**21 45 18.1**	**+1.3**
BVAR	**Borovoye Array**	**132.59**	**29**	PKP	**PKPdf**	**21 45 17.0**	**0.0**
	comp=Z,1.7nm,0.7s,baz=279,slow=2.8,SNR=17						
BVAR	**Borovoye Array**	**132.59**	**29**	PKIKP	**PKPdf**	**21 45 17.0**	**0.0**
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AS01	**Alice Springs**	**133.16**	**215**	ePKPdf	**PKPdf**	**21 45 17.9**	**-1.2**
AS31	**Alice Springs**	**133.19**	**215**	ePKPdf	**PKPdf**	**21 45 19.1**	**-0.1**
ASAR	**Alice Springs**	**133.19**	**215**	PKP	**PKPdf**	**21 45 18.9**	**-0.3**
	comp=Z,4.6nm,0.7s,baz=137,slow=2.1,SNR=36						
ASAR				pPKP	**pPKPdf**	**21 45 47.2**	**-0.7**
	comp=Z,1.2nm,0.6s,baz=135,slow=2.1,SNR=2.5						
WRA	**Warramunga Arr**	**135.84**	**219**	PKP	**PKPdf**	**21 45 24.2**	**0.0**
	comp=Z,15nm,0.8s,baz=148,slow=1.4,SNR=62						
WRA				pPKP	**pPKPdf**	**21 45 52.5**	**-0.4**
	comp=Z,2.4nm,0.6s,baz=137,slow=1.9,SNR=2.5						
WRAB	**Tennant Creek**	**135.84**	**219**	c iPKIKP	**PKPdf**	**21 45 24.5**	**+0.4**
NVS	**Novosibirsk**	**136.41**	**20**	ePKIKP	**PKPdf**	**21 45 24.8**	**+0.7**
NVS				e		21 45 53.8	
ZALV	**Zalesovo Beam**	**137.67**	**19**	PKP	**PKPdf**	**21 45 26.8**	**+0.4**
	comp=Z,20nm,0.7s,baz=259,slow=1.5,SNR=3.6						
ZALV				pPKP	**pPKPdf**	**21 45 56.2**	**+1.0**
	comp=Z,11nm,1.0s,baz=298,slow=3.2,SNR=3.8						
KURK	**Kurchatov**	**137.90**	**27**	ePKPdf	**PKPdf**	**21 45 27.5**	**+0.6**
KURK	**Kurchatov**	**137.90**	**27**	d iPKIKP	**PKPdf**	**21 45 28.2**	**+1.3**
KURBB	**Kurchatov Arra**	**137.93**	**27**	PKP	**PKPdf**	**21 45 27.9**	**+0.9**
	comp=Z,5.2nm,0.9s,baz=307,slow=2.8,SNR=30						
KLR	**Kul'dur**	**140.46**	**334**	⇑iPKIKP	**PKPdf**	**21 45 32.8**	**+1.1**
FITZ	**Fitzroy Crossi**	**142.08**	**210**	PKhKP	PKPpre	21 45 29.4	
	comp=Z,9.2nm,0.8s,baz=204,slow=2.1,SNR=17						
MKAR	**Makanchi Array**	**142.44**	**28**	PKhKP	PKPpre	21 45 31.9	
	comp=Z,1.9nm,0.7s,baz=331,slow=2.8,SNR=16						
HVS	**Khovu-Aksy**	**142.63**	**14**	⇑ePKIKP	**PKPdf**	**21 45 35.6**	**-0.1**
MOY	**Mondy**	**143.34**	**6**	ePKIKP	PKPbc	21 45 35.4	+1.1
MOY				pmax	pmax		
	comp=Z,13nm,2.0s						
KSH	**Kashi**	**143.71**	**42**	ePKP	**PKPdf**	**21 45 38.1**	**+0.1**
KSH				sPKP		21 46 14.9	
KSH				ePP	**PP**	**21 48 55.1**	**+3.8**
KSH				PKS	**PKSdf**	**21 49 12.1**	**-1.6**
KSH				SKS	**SKSdf**	**21 52 35.9**	**-2.3**
KSH				SS	**SS**	**22 07 29.1**	**+3.5**
KSH				AMB	AMB		
	comp=Z,65nm,8.9s						
USRK	**Ussuriysk Ar.**	**144.09**	**329**	PKP	**PKPab**	**21 45 36.3**	**+0.2**
	comp=Z,4.1nm,0.6s,baz=39,slow=5.7						
JSD	**Sado**	**144.18**	**315**	P	**PKPab**	**21 45 36.2**	**-0.4**
HIA	**Hailar**	**144.45**	**345**	c iPKIKP	PKPbc	21 45 37.7	+0.1
NIL	**Nilore**	**144.53**	**53**	ePKPdf	**PKPdf**	**21 45 39.2**	**-0.3**
JRY	**Ryogami san**	**144.71**	**312**	P	**PKPab**	**21 45 38.1**	**-0.6**
ZAK	**Zakamensk**	**144.81**	**4**	ePKIKP	PKPbc	21 45 39.0	+0.3
ZAK				e		21 46 06.8	
ZAK				pmax	pmax		
	comp=Z,26nm,1.1s						
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
JOD2	**Odawara 2**	**144.92**	**311**	P	PKPbc	21 45 38.6	-0.9
MDJ	**Mudanjiang**	**144.94**	**331**	PKP	PKPbc	21 45 36.4	-2.8
MJAR	**Matsushiro Arr**	**144.96**	**313**	PKP	PKPbc	21 45 39.1	-0.5
	comp=Z,34nm,0.9s,baz=154,slow=1.4,SNR=60						
MJAR				pPKP	pPKPdf	21 46 06.7	-2.2
	comp=Z,6.3nm,0.8s,baz=177,slow=2.1,SNR=3.2						
MAJO	**Matsushiro**	**144.96**	**313**	ePKPbc	PKPbc	21 45 38.9	-0.7
MAJO	**Matsushiro**	**144.96**	**313**	d iPKIKP	PKPbc	21 45 38.5	-1.1
MAT	**Matsushiro**	**144.96**	**313**	P	PKPbc	21 45 38.9	-0.7
MAT	**Matsushiro**	**144.96**	**313**	PKP	PKPbc	21 45 38.7	-0.9
CBIJ	**Chichi jima**	**145.14**	**296**	PKPbc	**PKPbc**	**21 45 39.2**	**-1.1**
JCJ	**Chichijima**	**145.14**	**296**	PKPbc	**PKPbc**	**21 45 39.2**	**-1.1**
	comp=Z,74nm,0.9s,baz=272,slow=21,SNR=5.0						
MSHR	**Mys Shultsa**	**145.67**	**327**	⇑ePKP2	**PKPdf**	**21 45 40.8**	**-0.3**
JGN	**Niukaw**	**145.74**	**313**	P	**PKPdf**	**21 45 41.6**	**+0.1**
JGF	**Kuroka**	**146.02**	**312**	P	**PKPdf**	**21 45 42.3**	**+0.3**
WMQ	**Urumqi**	**147.13**	**26**	ePKPbc	**PKPdf**	**21 45 44.5**	**+0.9**
WMQ				pPKP	pPKPdf	21 46 13.3	+0.9
WMQ				LR	LR		
	comp=Z,200nm,28.1s						
WMQ				LR	LR		
	comp=Z,220nm,33.7s						
WMQ				LR	LR		
	comp=Z,180nm,19.7s						
CN2	**Changchun**	**147.41**	**335**	ePKPbc	**PKPdf**	**21 45 44.3**	**+0.3**
CN2				epPKP	pPKPdf	21 46 10.9	-1.9
CN2				AMB	AMB		
	comp=Z,200nm,6.0s						
ULN	**Ulaanbaatar**	**147.45**	**360**	ePKPdf	**PKPdf**	**21 45 45.2**	**+1.1**
ULN	**Ulaanbaatar**	**147.45**	**360**	d ePKIKP	**PKPdf**	**21 45 45.0**	**+0.9**
SONM	**Songino Array**	**147.48**	**1**	PKPbc	**PKPbc**	**21 45 45.6**	**-1.2**
	comp=Z,32nm,0.8s,baz=348,slow=1.1,SNR=97						
SONM				pPKPbc	**pPKPbc**	**21 46 15.8**	**+0.5**
	comp=Z,11nm,0.7s,baz=322,slow=1.4,SNR=6.0						
JWT	**Wachi**	**147.56**	**313**	P	**PKPbc**	**21 45 47.4**	**+0.2**
JAD	**Aida**	**148.60**	**314**	P	**PKPbc**	**21 45 49.7**	**-0.3**
FAKI	**Fak Fak**	**149.09**	**236**	ePKPdf	**PKPdf**	**21 45 48.9**	**+1.2**
JHS	**Saijyo**	**149.30**	**315**	P	**PKPbc**	**21 45 51.8**	**0.0**
JMN	**Monobe**	**149.43**	**312**	P	**PKPbc**	**21 45 52.9**	**+0.7**
SOEI	**Soe**	**149.79**	**216**	ePKPbc	**PKPbc**	**21 45 54.0**	**+0.3**
KSRS	**Korea Array**	**151.04**	**324**	PKP	**PKPdf**	**21 45 51.0**	**+1.1**
	comp=Z,5.1nm,0.9s,baz=11,slow=1.1,SNR=18						
KSRS				PKPbc	**PKiKP**	**21 45 56.5**	**+0.1**
	comp=Z,22nm,0.8s,baz=8.1,slow=1.6,SNR=43						
KSRS				PKPab	**PKPab**	**21 46 03.9**	**+0.2**
	comp=Z,8.7nm,0.9s,baz=53,slow=2.8,SNR=7.9						
KSAR	**Wonju Array Be**	**151.07**	**324**	PKP	**PKPdf**	**21 45 51.0**	**+1.1**
KSAR				PKPbc	**PKiKP**	**21 45 56.5**	**0.0**
KSAR				PKPab	**PKPab**	**21 46 03.9**	**0.0**
KSAR	**Wonju Array Be**	**151.07**	**324**	PKIKP	**PKPdf**	**21 45 51.1**	**+1.1**
KSAR						21 46 03.9	
TJN	**Taejon**	**152.11**	**323**	⇓iPKIKP	**PKPbc**	**21 45 58.1**	**-0.2**
HHC	**Hu-ho-hao-te**	**154.14**	**352**	ePKPbc	**PKPdf**	**21 45 53.9**	**-0.7**
GTA	**Gaotai**	**155.12**	**13**	⇓PKP	**PKPdf**	**21 45 57.4**	**+1.4**
GTA				pPKP	pPKPdf	21 46 24.4	-0.5
GTA				sPKP		21 46 34.6	
GTA				AMB	AMB		
	comp=Z,47nm,5.6s						
GTA				LR	LR		
	comp=Z,180nm,21.9s						
GTA				LR	LR		
	comp=Z,180nm,23.5s						
GTA				LR	LR		
	comp=Z,130nm,21.3s						
LZH	**Lanzhou**	**159.04**	**7**	ePKP	**PKPdf**	**21 46 00.3**	**-0.8**
LZH				pPKP	pPKPdf	21 46 27.3	-2.7
LZH				sPKP		21 46 38.6	
LZH				LR	LR		
	comp=Z,69nm,18.0s						
LZH				LR	LR		
	comp=Z,73nm,18.1s						
LZH				LR	LR		
	comp=Z,97nm,20.2s						
LSA	**Lhasa**	**159.57**	**42**	ePKPdf	**PKPdf**	**21 46 04.0**	**+1.7**
LSA	**Lhasa**	**159.57**	**42**	ePKIKP	**PKPdf**	**21 46 04.1**	**+1.7**
NJ2	**Nanjing**	**160.00**	**329**	ePKP	**PKPdf**	**21 46 01.8**	**-0.3**
XAN	**Xi'an**	**161.17**	**355**	PKP	**PKPdf**	**21 46 04.5**	**+1.1**
CD2	**Chengdu**	**164.12**	**10**	PKP	**PKPdf**	**21 46 05.0**	**-1.4**
GYA	**Guiyang**	**168.81**	**1**	ePKP	**PKPdf**	**21 46 08.3**	**-2.0**
GYA				pPKP	pPKPdf	21 46 36.0	-3.2
GYA				PKPab	**PKPab**	**21 47 22.3**	**+1.3**
GYA				PKS	**PKSdf**	**21 49 40.0**	**-3.0**
GYA				PP	**PP**	**21 51 11.9**	**+2.9**
GYA				AMB	AMB		
	comp=Z,130nm,8.1s						
CMAR	**Chiang Mai Arr**	**171.75**	**66**	PKP	**PKPdf**	**21 46 12.4**	**+0.5**
	comp=Z,1.4nm,0.8s,baz=275,slow=1.9,SNR=8.2						

IDC 13 21:28:19.5±3.0, 6°.23S×129°.39E, h114^{km}±40^{km}, mb2.9/1, mb1 3.2/5, mb1mx2.9/50, mbtmp3.5/5, Error ellipse: s-maj=66.4km s-min=21.2km az=90.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**5.64**	**19**	P	Pn	21 29 40.9	-0.2
	1.2nm,0.3s,baz=360,slow=9.5,SNR=20						
SIJI				S	Sn	21 30 39.8	-4.9
	1.8nm,0.3s,baz=288,slow=24,SNR=7.8						
FITZ	**Fitzroy Crossi**	**12.35**	**197**	P	Pn	21 31 13.5	+2.0
	0.2nm,0.3s,baz=23,slow=13,SNR=15						
FITZ				S	Sn	21 33 24.8	-2.7
	0.1nm,0.3s,baz=113,slow=15,SNR=4.4						
WRA	**Warramunga Arr**	**14.46**	**161**	P	Pn	21 31 38.5	-0.2
	0.2nm,0.3s,baz=337,slow=13,SNR=14						
WRA				S	Sn	21 34 01.9	-17
	0.3nm,0.3s,baz=327,slow=23,SNR=10						
ASAR	**Alice Springs**	**17.87**	**166**	P	P	21 32 18.7	-1.3
	0.1nm,0.3s,baz=348,slow=10,SNR=11						
MKAR	**Makanchi Array**	**67.25**	**327**	P	P	21 39 01.8	+0.1
	0.2nm,0.5s,baz=123,slow=7.6,SNR=2.8						

WEL 13 21:34:06.1, 38°.6S±0°.8×17°8E±°, h31^{km}±1^{km}, ML3.5/29, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TKGZ	**Te Karaka**	**0.12**	**354**	P	Pb	21 34 11.7	0.0
TKGZ				S	Sb	21 34 16.6	+1.0
RIGZ	**Rimuhau**	**0.17**	**208**	P	Pn	21 34 12.4	-0.2
RIGZ				S	Sn	21 34 17.8	+1.3
CNGZ	**Carnagh Statio**	**0.28**	**75**	P	Pn	21 34 14.7	+0.7
MWZ	**Matawai**	**0.35**	**310**	P	Pb	21 34 14.1	-0.2
MWZ				S	Sb	21 34 20.3	+0.4
RAGZ	**Rawiri**	**0.36**	**280**	P	Pb	21 34 14.4	-0.1
RAGZ				S	Sn	21 34 21.1	-0.1
PRGZ	**Paritu Road**	**0.36**	**178**	P	Pn	21 34 15.2	-0.1
TWGZ	**Tauwhareparae**	**0.39**	**14**	P	Pn	21 34 15.7	+0.1
TWGZ				S	Sn	21 34 23.8	+1.8
SNGZ	**Shannon Statio**	**0.47**	**241**	P	Pn	21 34 16.4	-0.3
SNGZ				S	Sn	21 34 24.8	+1.0
KNZ	**Kokohu**	**0.49**	**198**	P	Pb	21 34 16.5	+0.1
PUZ	**Puketiti**	**0.58**	**33**	P	Pn	21 34 18.1	0.0
PUZ				S	Sn	21 34 28.7	+2.2
MHGZ	**Mahia Peninsul**	**0.59**	**177**	P	Pn	21 34 18.5	+0.2
RUGZ	**Raukumara Rang**	**0.61**	**346**	P	Pb	21 34 18.1	-0.3
RUGZ				S	Sn	21 34 27.4	-0.1
URZ	**Urewera**	**0.66**	**297**	P	Pb	21 34 18.8	-0.4
URZ				S	Sn	21 34 28.4	-0.1
PKGZ	**Pakihiroa**	**0.69**	**14**	P	Pb	21 34 20.1	+0.4
PKGZ				P	Pb	21 34 20.1	+0.4
PKGZ				S	Sn	21 34 31.3	+1.9
RTZ	**Ruatahuna**	**0.69**	**265**	P	Pn	21 34 19.6	-0.2
RTZ				S	Sn	21 34 30.1	+0.6
RAHZ	**Arahi**	**0.70**	**239**	P	Pb	21 34 20.3	+0.3
WHHZ	**Waihua**	**0.71**	**223**	P	Pb	21 34 20.4	+0.3
WHHZ				P	Pb	21 34 20.4	+0.3
HAZ	**Te Kaha**	**0.80**	**355**	P	Pn	21 34 21.1	-0.1
HAZ				S	Sb	21 34 32.9	+0.8
MTHZ	**Maungataniwha**	**0.85**	**250**	P	Pn	21 34 22.1	+0.1
WMGZ	**Waiomatatini S**	**0.86**	**31**	P	Pn	21 34 22.0	+0.1
MUGZ	**Murupara**	**0.86**	**275**	P	Pn	21 34 22.3	+0.2
ARHZ	**Aropaoanui**	**0.98**	**224**	P	Pb	21 34 24.1	-0.4
NMHZ	**Naumai**	**0.99**	**237**	P	Pb	21 34 25.3	+0.6
WHRZ	**Whale Island**	**0.99**	**315**	P	Pb	21 34 25.1	+0.4
EDRZ	**Edgecumbe**	**0.99**	**297**	P	Pb	21 34 24.5	-0.2
MXZ	**Matakaoa Point**	**1.05**	**20**	P	Pn	21 34 24.9	+0.3
RRRZ	**Republican Roa**	**1.08**	**281**	P	Pn	21 34 25.6	+0.5
MARZ	**Manawahe**	**1.10**	**301**	P	Pb	21 34 26.3	-0.2
TARZ	**Mount Tarawera**	**1.11**	**286**	P	Pb	21 34 26.5	-0.4
PRRZ	**Plateau Road**	**1.16**	**272**	P	Pb	21 34 27.7	+0.3
MRHZ	**Matea Rd**	**1.17**	**256**	P	Pn	21 34 26.5	+0.3
ALRZ	**Allen Road**	**1.19**	**269**	P	Pb	21 34 27.7	-0.4
HLRZ	**Highlands Stat**	**1.23**	**284**	P	Pb	21 34 28.4	-0.2
BKZ	**Black Stump Fm**	**1.23**	**240**	P	Pn	21 34 27.7	+0.5
HRRZ	**Handcock Road**	**1.25**	**277**	P	Pb	21 34 29.3	+0.2
OPRZ	**Ohinepanea**	**1.25**	**304**	P	Pn	21 34 27.2	-0.2
CKHZ	**Cape Kidnapper**	**1.26**	**209**	P	Pn	21 34 26.8	-0.6
OMRZ	**Omania**	**1.26**	**291**	P	Pn	21 34 28.0	+0.5
MCHZ	**McNeill Hill**	**1.27**	**225**	P	Pn	21 34 28.3	+0.6
KARZ	**Kaharoa**	**1.38**	**292**	P	Pn	21 34 29.5	+0.3
KWHZ	**Kaweka Forest**	**1.42**	**232**	P	Pn	21 34 29.8	+0.1
HATZ	**Hinemaiaia**	**1.43**	**256**	P	Pb	21 34 32.3	+0.3
KAHZ	**Kahuranaki**	**1.45**	**212**	P	Pn	21 34 29.6	-0.6
KRHZ	**Kereru**	**1.59**	**227**	P	Pn	21 34 32.0	0.0
RITZ	**Rihia Road**	**1.62**	**254**	P	Pb	21 34 35.8	+0.4
PXZ	**Pawanui**	**1.66**	**208**	P	Pn	21 34 30.8	-2.2
RATZ	**Rangitukua**	**1.67**	**259**	P	Pb	21 34 37.0	+0.9
BHHZ	**Black Hill Sta**	**1.68**	**236**	P	Pn	21 34 33.6	+0.2
KATZ	**Kakaramea**	**1.75**	**256**	P	Pb	21 34 38.3	+0.7
KRVZ	**Karewarewa**	**1.82**	**252**	P	Pb	21 34 37.3	-1.4
MOVZ	**Moawhango**	**1.85**	**242**	P	Pb	21 34 37.7	-1.6
WTVZ	**West Tongariro**	**1.86**	**252**	P	Pb	21 34 40.3	+0.8
NGZ	**Ngauruhoe**	**1.87**	**250**	P	Pb	21 34 40.4	+0.7
PNHZ	**Pukenui**	**1.87**	**223**	P	Pn	21 34 35.1	-0.9
WHVZ	**Whangaehu Hut**	**1.92**	**247**	P	Pb	21 34 40.4	-0.1
FWVZ	**Far West T-bar**	**1.93**	**248**	P	Pb	21 34 39.8	-1.0
PRHZ	**Porangahau**	**1.95**	**209**	P	Pn	21 34 35.6	-1.4
BFZ	**Birch Farm**	**2.46**	**210**	P	Pn	21 34 42.7	-1.3
MRZ	**Mangatainoka R**	**2.74**	**219**	P	Pn	21 34 46.3	-1.6

ROM 13 21:34:18.6±0.2, 44°.83N±0°.01×11°.34E±0°.01, h9^{km}, Md1.2/3, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T0822	**Casumaru (Bond**	**0.00**	**50**	P	Pg	21 34 21.8	+1.7
T0822				S	Sg	21 34 24.1	+3.0
T0822				END			
T0822				END			
T0800	**Massa Finalese**	**0.07**	**284**	P	Pg	21 34 22.2	+1.6
T0800				S	Sg	21 34 24.9	+2.9
T0800				END			
T0800				END			
T0821	**Loc. Casaglia**	**0.16**	**63**	P	Pg	21 34 23.7	+1.7
RAVA	**Ravarino**	**0.18**	**245**	P	Pg	21 34 24.2	+2.0
RAVA				AML	AML		
	comp=E,490µm,1.6s						
RAVA				AML	AML		
	comp=N,558µm,0.2s						
RAVA				AML	AML		
	comp=N,558µm,0.2s						
RAVA				AML	AML		
	comp=E,490µm,1.6s						
RAVA				END			
RAVA				END			
FIU	**Minerbio Fiu**	**0.22**	**151**	P	Pg	21 34 24.7	+1.7

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*CSEM **13** 21:37:27.3±0.8, 49°.92N×18°.62E, h1^{km}, Error ellipse: s-maj=14.0km s-min=5.8km az=43.0*

PRU 13 21:37:29.1, 49°.86N×18°.56E, h0^{km}, 1D, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.27**	**265**	⇓iPG	Pg	21 37 34.5	+0.3
OKC				eSG	Sg	21 37 37.8	+0.1
	comp=Z,15nm,0.8s						
OKC	**Ostrava-Krasne**	**0.27**	**265**	Pg	Pg	21 37 34.5	+0.3
OKC				Sg	Sg	21 37 37.8	+0.1
	15nm,0.8s						
MORC	**Moravsky Berou**	**0.66**	**263**	ePg	Pg	21 37 41.9	+0.1
MORC				eSg	Sg	21 37 50.1	-0.3
MORC	**Moravsky Berou**	**0.66**	**263**	ePG		21 36 21.8	
MORC				eSG		21 36 30.9	
MORC				ePG	Pg	21 37 41.9	+0.1
MORC				eSG	Sg	21 37 50.1	-0.3
JAVC	**Velka Javorina**	**1.16**	**210**	ePg	Pg	21 37 51.4	+0.1
JAVC	**Velka Javorina**	**1.16**	**210**	ePG	Pg	21 37 51.4	+0.1
KRLC	**Kraliky**	**1.17**	**281**	ePG	Pg	21 37 50.1	-1.4
KRLC				eSG	Sg	21 38 06.0	-0.6
KRLC	**Kraliky**	**1.17**	**281**	Pg	Pg	21 37 50.1	-1.4
KRLC				Sg	Sg	21 38 06.0	-0.6
VYHS	**Vyhne**	**1.38**	**172**	ePG	Pg	21 37 55.0	-0.5
VYHS				eSG	Sg	21 38 13.1	-0.3
VYHS	**Vyhne**	**1.38**	**172**	ePg	Pg	21 37 55.0	-0.5
VYHS				eSn	Sg	21 38 13.1	-0.3
VRAC	**Vranov**	**1.39**	**247**	ePg	Pg	21 37 54.8	-1.0
VRAC				eSg	Sg	21 38 12.9	-0.9
VRAC	**Vranov**	**1.39**	**247**	ePG	Pg	21 37 54.8	-1.0
VRAC				eSG	Sg	21 38 12.9	-0.9
DPC	**Dobruska-Polom**	**1.52**	**290**	ePG	Pn	21 37 56.3	-1.3
DPC				eSG	Sg	21 38 17.7	-0.3
DPC	**Dobruska-Polom**	**1.52**	**290**	Pg	Pn	21 37 56.3	-1.3
DPC				Sg	Sg	21 38 17.7	-0.3
KRUC	**Moravsky**	**1.62**	**241**	ePg	Pn	21 37 58.4	-0.5
KRUC	**Moravsky**	**1.62**	**241**	ePG	Pn	21 37 58.4	-0.5
KRUC				eSG	Sn	21 38 19.9	-0.6

JMA 13 21:40:32.4, 35°.74N×139°.77E, h28^{km}±1^{km}, M0.9, Near south coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHU	**Hanno**	**0.41**	**286**	P	Pb	21 40 41.1	-0.3
JHU				eS	Sb	21 40 47.4	0.0
JAG	**Ashikaga**	**0.73**	**340**	eS	Sb	21 40 55.8	-0.4

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*ISCJB **13** 21:56:15.4±0.8, 41°.54N±0°.06×42°.22E±0°.06, h12^{km}±6^{km}, Error ellipse: s-maj=11.5km s-min=4.4km az=142.8*
*DDA **13** 21:56:15.3, 41°.54N×42°.22E, h7^{km}, Ml2.6*
*CSEM **13** 21:56:15.3, 41°.54N×42°.22E, h7^{km}, ML2.6*

ISC 13 21:56:14.5±2.4, 41°.55N±0°.07×42°.23E±0°.04, h15^{km}±27^{km}, n12, σ0^{s}.10/24, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EPOS	**Posof**	**0.38**	**96**	i P	**Pb**	**21 56 23.0**	**0.0**
EPOS				i S	**Sb**	**21 56 28.7**	**0.0**
EPOS	**Posof**	**0.38**	**96**	P	**Pb**	**21 56 23.0**	**0.0**
EPOS				S	**Sb**	**21 56 28.7**	**0.0**
ARTV	**Artvin**	**0.43**	**212**	i P	**Pb**	**21 56 23.9**	**0.0**
ARTV				i S	**Sb**	**21 56 30.1**	**-0.2**
ARTV	**Artvin**	**0.43**	**212**	P	**Pb**	**21 56 23.9**	**0.0**
ARTV				S	**Sb**	**21 56 30.1**	**-0.2**
DBOC	**Borcka**	**0.47**	**245**	i P	**Pb**	**21 56 24.6**	**0.0**
DBOC				i S	**Sb**	**21 56 31.2**	**-0.1**
DBOC	**Borcka**	**0.47**	**245**	P	**Pb**	**21 56 24.6**	**0.0**
DBOC				S	**Sb**	**21 56 31.2**	**-0.1**
DAGI	**Agillar**	**0.52**	**207**	i P	**Pb**	**21 56 25.5**	**0.0**
DAGI				i S	**Sb**	**21 56 33.0**	**+0.1**
DBAD	**Bademkaya**	**0.66**	**218**	i P	**Pb**	**21 56 27.9**	**0.0**
DBAD				i S	**Sb**	**21 56 36.9**	**-0.1**
DBAD	**Bademkaya**	**0.66**	**218**	P	**Pb**	**21 56 27.9**	**0.0**
DBAD				S	**Sb**	**21 56 36.9**	**-0.1**
DDEM	**Demirkent**	**0.75**	**209**	i P	**Pb**	**21 56 29.5**	**+0.2**
DDEM				i S	**Sb**	**21 56 39.5**	**+0.2**
DDEM	**Demirkent**	**0.75**	**209**	P	**Pb**	**21 56 29.5**	**+0.2**
DDEM				S	**Sb**	**21 56 39.5**	**+0.2**
ONI	**Oni**	**1.39**	**41**	P	**Pb**	**21 56 40.3**	**+0.1**
ONI				S	**Sg**	**21 56 59.2**	**0.0**

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*CSEM **13** 22:11:05.7±0.2, 34°.56N×34°.66E, h10^{km}, ML3.0, Error ellipse: s-maj=7.4km s-min=3.5km az=53.0*
*ISCJB **13** 22:11:06.4±0.8, 34°.55N±0°.03×34°.65E±0°.05, h23^{km}±8^{km}, Error ellipse: s-maj=8.1km s-min=3.4km az=146.0*
*DDA **13** 22:11:08.3, 34°.82N×34°.43E, h8^{km}, Ml2.7*
*GRAL **13** 22:11:08.8±0.4, 34°.36N×34°.67E, h0^{km}±3^{km}, MD3.0*
*GII **13** 22:11:09.4±0.1, 34°.59N×34°.66E, h32^{km}, MD2.0/6*

ISC 13 22:11:07.6±1.7, 34°.57N±0°.03×34°.68E±0°.05, h30^{km}±17^{km}, n54, σ0^{s}.91/84, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BHL	**Bhannes**	**1.05**	**129**	eP	**Pn**	**22 11 25.6**	**-0.7**
BHL	**Bhannes**	**1.05**	**129**	eP	**Pn**	**22 11 25.6**	**-0.7**
HWQ	**Hawqa**	**1.09**	**105**	eP	**Pb**	**22 11 27.7**	**-0.2**
HWQ	**Hawqa**	**1.09**	**105**	eP	**Pb**	**22 11 27.7**	**-0.2**
DQRL	**Deir Qamar**	**1.14**	**139**	eP	**Pn**	**22 11 26.9**	**-0.7**
DQRL				eS	**Sn**	**22 11 39.6**	**-2.5**
DQRL	**Deir Qamar**	**1.14**	**139**	eP	**Pn**	**22 11 26.9**	**-0.7**
DQRL				eS	**Sn**	**22 11 39.6**	**-2.5**
CSS	**Mathiatis**	**1.18**	**290**	Pg	**Pn**	**22 11 27.0**	**-1.0**
CSS				Sg	**Sn**	**22 11 41.5**	**-1.5**
CSS	**Mathiatis**	**1.18**	**290**	Pg	**Pn**	**22 11 27.0**	**-1.0**
CSS				Sg	**Sn**	**22 11 41.5**	**-1.5**
RCY	**Rachaya**	**1.44**	**138**	eP	**Pn**	**22 11 31.9**	**+0.1**
RCY				eS	**Sn**	**22 11 49.1**	**-0.6**
RCY	**Rachaya**	**1.44**	**138**	eP	**Pn**	**22 11 31.9**	**+0.1**
RCY				eS	**Sn**	**22 11 49.1**	**-0.6**

SHBL	**Chebaa**	**1.51**	**144**	*e*P	**Pn**	**22 11 32.9**	**+0.2**
SHBL				*e*S	**Sn**	**22 11 50.7**	**-0.7**
SHBL	**Chebaa**	**1.51**	**144**	*e*P	**Pn**	**22 11 32.9**	**+0.2**
SHBL				*e*S	**Sn**	**22 11 50.7**	**-0.7**
HNTI	**Hanita**	**1.54**	**164**	Pn	**Pn**	**22 11 32.4**	**-0.6**
HNTI				Sn	**Sn**	**22 11 50.5**	**-1.5**
HNTI	**Hanita**	**1.54**	**164**	Pn	**Pn**	**22 11 32.4**	**-0.6**
HNTI				Sn	**Sn**	**22 11 50.5**	**-1.5**
LEF	**Lefka**	**1.57**	**291**	P	**Pn**	**22 11 33.9**	**+0.5**
LEF				S	**Sn**	**22 11 52.3**	**-0.4**
NATI	**Neve Ativ**	**1.57**	**146**	Pn	**Pn**	**22 11 33.6**	**+0.2**
NATI				Sn	**Sn**	**22 11 52.7**	**-0.1**
KSDI	**Kefar Szold**	**1.60**	**149**	Pn	**Pn**	**22 11 33.9**	**+0.1**
KSDI				Sn	**Sn**	**22 11 53.0**	**-0.4**
KSDI	**Kefar Szold**	**1.60**	**149**	Pn	**Pn**	**22 11 33.9**	**+0.1**
KSDI				Sn	**Sn**	**22 11 53.0**	**-0.4**
MMA0B	**Mount Meron ar**	**1.66**	**158**	Pn	**Pn**	**22 11 34.5**	**-0.3**
MMA0B				Sn	**Sn**	**22 11 53.8**	**-1.3**
MMA0B	**Mount Meron ar**	**1.66**	**158**	Pn	**Pn**	**22 11 34.5**	**-0.3**
MMA0B				Sn	**Sn**	**22 11 53.8**	**-1.3**
KSHT	**Keshet**	**1.84**	**149**	Pn	**Pn**	**22 11 38.1**	**+0.9**
KSHT	**Keshet**	**1.84**	**149**	Pn	**Pn**	**22 11 38.1**	**+0.9**
GULN	**MERSIN_Gulnar**	**1.86**	**330**	*i* P	**Pn**	**22 11 36.7**	**-0.7**
GULN				*i* S	**Sn**	**22 11 59.4**	**-0.4**
GULN	**MERSIN_Gulnar**	**1.86**	**330**	P	**Pn**	**22 11 36.7**	**-0.7**
GULN				S	**Sn**	**22 11 59.4**	**-0.4**
BLGI	**Bet Lehem HaGe**	**1.88**	**167**	Pn	**Pn**	**22 11 37.8**	**+0.1**
BLGI				Sn	**Sn**	**22 12 00.4**	**0.0**
BLGI	**Bet Lehem HaGe**	**1.88**	**167**	Pn	**Pn**	**22 11 37.8**	**+0.1**
BLGI				Sn	**Sn**	**22 12 00.4**	**0.0**
OFRI	**‘Ofer**	**1.96**	**172**	Pn	**Pn**	**22 11 38.9**	**+0.1**
OFRI				Sn	**Sn**	**22 12 01.8**	**-0.6**
OFRI	**‘Ofer**	**1.96**	**172**	Pn	**Pn**	**22 11 38.9**	**+0.1**
OFRI				Sn	**Sn**	**22 12 01.8**	**-0.6**
MMLI	**Mount Malkishu**	**2.21**	**163**	Pn	**Pn**	**22 11 42.9**	**+0.6**
MMLI	**Mount Malkishu**	**2.21**	**163**	Pn	**Pn**	**22 11 42.9**	**+0.6**
SLTI	**Sal’it**	**2.34**	**172**	Pn	**Pn**	**22 11 44.8**	**+0.8**
SLTI				Sn	**Sn**	**22 12 12.2**	**+0.4**
SLTI	**Sal’it**	**2.34**	**172**	Pn	**Pn**	**22 11 44.8**	**+0.8**
SLTI				Sn	**Sn**	**22 12 12.2**	**+0.4**
HMDT	**Nahal Hemdat**	**2.42**	**163**	Pn	**Pn**	**22 11 46.0**	**+0.9**
HMDT				Sn	**Sn**	**22 12 14.7**	**+1.1**
HMDT	**Nahal Hemdat**	**2.42**	**163**	Pn	**Pn**	**22 11 46.0**	**+0.9**
HMDT				Sn	**Sn**	**22 12 14.7**	**+1.1**
KERG	**Konya-Eregli**	**2.88**	**351**	*i* P	**Pn**	**22 11 52.9**	**+1.4**
KERG				*i* S	**Sn**	**22 12 26.1**	**+1.0**
KERG	**Konya-Eregli**	**2.88**	**351**	P	**Pn**	**22 11 52.9**	**+1.4**
KERG				S	**Sn**	**22 12 26.1**	**+1.0**
AMAZ	**Amatzia**	**3.04**	**176**	Pn	**Pn**	**22 11 54.6**	**+1.0**
AMAZ				Sn	**Sn**	**22 12 29.4**	**+0.5**
AMAZ	**Amatzia**	**3.04**	**176**	Pn	**Pn**	**22 11 54.6**	**+1.0**
AMAZ				Sn	**Sn**	**22 12 29.4**	**+0.5**
DSI	**Dead Sea**	**3.05**	**169**	Pn	**Pn**	**22 11 54.4**	**+0.7**
DSI	**Dead Sea**	**3.05**	**169**	Pn	**Pn**	**22 11 54.4**	**+0.7**
YTIR	**Yattir**	**3.22**	**173**	Pn	**Pn**	**22 11 57.4**	**+1.2**
YTIR	**Yattir**	**3.22**	**173**	Pn	**Pn**	**22 11 57.4**	**+1.2**
MZDA	**Masada**	**3.30**	**170**	Pn	**Pn**	**22 11 58.4**	**+1.2**
MZDA	**Masada**	**3.30**	**170**	Pn	**Pn**	**22 11 58.4**	**+1.2**
KZIT	**Kziot**	**3.66**	**184**	Pn	**Pn**	**22 12 02.9**	**+0.7**
KZIT	**Kziot**	**3.66**	**184**	Pn	**Pn**	**22 12 02.9**	**+0.7**
PRNI	**Paran**	**4.21**	**176**	Pn	**Pn**	**22 12 10.6**	**+0.8**
PRNI	**Paran**	**4.21**	**176**	Pn	**Pn**	**22 12 10.6**	**+0.8**
HRFI	**Mount Harif**	**4.53**	**176**	Pn	**Pn**	**22 12 15.1**	**+1.0**
HRFI	**Mount Harif**	**4.53**	**176**	Pn	**Pn**	**22 12 15.1**	**+1.0**
MBRI	**Mt Berech**	**4.76**	**178**	Pn	**Pn**	**22 12 18.7**	**+1.3**
MBRI	**Mt Berech**	**4.76**	**178**	Pn	**Pn**	**22 12 18.7**	**+1.3**
EIL	**Elat**	**4.89**	**177**	Pn	**Pn**	**22 12 19.9**	**+0.8**
EIL	**Elat**	**4.89**	**177**	Pn	**Pn**	**22 12 19.9**	**+0.8**

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*NIED **13** 22:32:00, 44.°50N×151.°10E, h8^{km}, Mw4.0 Best double couple: $M_0$1.03000×10^{15} NP1:ϕ_s71.00000°, δ37.00000°, λ-80.00000°. NP2:ϕ_s238.00000°, δ54.00000°, λ-98.00000°.*

*BJI **13** 22:32:45.0, 44.°23N×151.°65E, h10^{km}, mb4.4/27, mB4.8/19, Ms4.5/9, Ms7 4.2/5*

*IDC **13** 22:32:46.3±0.6, 44.°09N×151.°26E, h0^{km}, mb4.1/29, mb1 4.2/34, mb1mx4.1/75, mbtmp4.0/34, ML3.6/3, Error ellipse: s-maj=16.0km s-min=11.8km az=168.0*

*JMA **13** 22:32:49.8±0.6, 44.°49N×151.°06E, h30^{km}, M4.4*

*MOS **13** 22:32:50.3±0.8, 44.°02N×151.°11E, h36^{km}, mb4.6/25, Error ellipse: s-maj=8.1km s-min=7.4km az=120.1*

*SKHL **13** 22:32:51.4±0.9, 44.°21N×150.°99E, h41^{km}±8^{km}, mb4.6/4*

*NEIC **13** 22:32:51.4±2.2, 44.°11N×151.°17E, h29^{km}±15^{km}, mb4.6/16, Error ellipse: s-maj=9.8km s-min=5.6km az=161.0*

ISC 13 22:32:47.8±2.1**, 44.°00N**±0.°07×**151.°17E**±0.°05**, h7**^{km}±12^{km}**, n166,** σ**1^{s}95**/186**, mb4.4**/58**, MS4.1**/4**, 7C-9D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril’sk**	**2.66**	**299**	*e*P	**Pn**	**22 33 30.0**	**-1.0**
KUR				AMB	AMB	22 33 37.0	
	128nm,0.5s						
KUR				*e*S	**Sn**	**22 33 58.0**	**-5.6**
KUR				A	A	22 34 02.0	
	460nm,0.4s						
KUR				A	A	22 34 02.0	
	138nm,0.4s						
KUR	**Kuril’sk**	**2.66**	**299**	*e*PN	**Pn**	**22 33 30.1**	**-1.0**
KUR				pmax	pmax		
	comp=Z,128nm,0.5s						
SHO	**Shikotan**	**3.14**	**269**	*e*P	**Pn**	**22 33 37.0**	**-0.6**
SHO				AMB	AMB	22 33 43.0	
	comp=Z,6.0nm,0.3s						
SHO				AMB	AMB	22 33 43.0	
	comp=Z,12nm,0.3s						
SHO				AMB	AMB	22 33 43.0	
	comp=Z,17nm,0.3s						
SHO				*i* S	**Sn**	**22 34 11.0**	**-4.3**
SHO				A	A	22 34 14.0	
	comp=Z,179nm,0.4s						
SHO				A	A	22 34 14.0	
	comp=Z,230nm,0.4s						
SHO	**Shikotan**	**3.14**	**269**	*e*PN	**Pn**	**22 33 37.8**	**+0.2**
SHO				pmax	pmax		
	comp=Z,17nm,0.3s						
SHO				pmax	pmax		
	comp=N,6.0nm,0.2s						
SHO				pmax	pmax		
	comp=E,12nm,0.2s						
YUK	**Yuzh-Kuril’sk**	**3.83**	**272**	*i* P	**Pn**	**22 33 46.0**	**-1.1**
YUK				AMB	AMB	22 33 53.0	
	comp=E,83nm,0.3s						
YUK				*e*S	**Sn**	**22 34 28.0**	**-4.4**
YUK				A	A	22 34 37.0	
	comp=E,190nm,0.3s						
YUK				A	A	22 34 37.0	
	comp=E,79nm,0.3s						
YUK	**Yuzh-Kuril’sk**	**3.83**	**272**	*d i*PN	**Pn**	**22 33 46.5**	**-0.6**
YUK				pmax	pmax		
	comp=Z,83nm,0.3s						
LAGR	**Lagunnoye**	**3.88**	**273**	*e*P	**Pn**	**22 33 47.0**	**-0.8**
LAGR				*e*S	**Sn**	**22 34 29.0**	**-4.7**
LAGR				A	A	22 34 37.0	
	comp=Z,333nm,0.5s						
LAGR				A	A	22 34 37.0	
	comp=Z,218nm,0.5s						
LAGR	**Lagunnoye**	**3.88**	**273**	PN	**Pn**	**22 33 47.9**	**+0.1**
GRPR	**Tuman**	**3.90**	**272**	*e*P	**Pn**	**22 33 48.0**	**0.0**
GRPR				*e*S	**Sn**	**22 34 30.0**	**-4.0**
GRPR				A	A	22 34 36.0	
	comp=Z,235nm,0.4s						
GRPR				A	A	22 34 36.0	
	comp=Z,134nm,0.4s						
GRPR	**Tuman**	**3.90**	**272**	*e*PN	**Pn**	**22 33 48.0**	**0.0**
NEM2	**Nemuro 2**	**3.99**	**263**	P	**Pn**	**22 33 48.3**	**-1.0**
NEM2				*e*S	**Sn**	**22 34 31.6**	**-4.7**
GLVR	**Golovnino**	**4.09**	**268**	*e*P	**Pn**	**22 33 50.0**	**-0.7**
GLVR				*e*S	**Sn**	**22 34 34.0**	**-4.9**
GLVR				A	A	22 34 40.0	
	comp=Z,283nm,0.4s						
GLVR				A	A	22 34 40.0	
	comp=Z,296nm,0.4s						
GLVR	**Golovnino**	**4.09**	**268**	*e*PN	**Pn**	**22 33 50.9**	**+0.2**
JRA	**Rausu**	**4.37**	**271**	P	**Pn**	**22 33 55.1**	**+0.6**
JNK	**Nakash**	**4.69**	**267**	P	**Pn**	**22 33 58.7**	**-0.2**
JNK				*e*S	**Sn**	**22 34 49.4**	**-4.2**
JAK	**Akkeshi**	**4.81**	**260**	P	**Pn**	**22 34 00.3**	**-0.3**
JAK				*e*S	**Sn**	**22 34 52.3**	**-4.4**
JAR	**Ashorobuto**	**5.42**	**265**	P	**Pn**	**22 34 09.3**	**+0.4**
JAR				*e*S	**Sn**	**22 35 08.0**	**-3.5**
JOB	**Onbets**	**5.45**	**261**	P	**Pn**	**22 34 09.2**	**-0.2**
JMP	**Maruseppu**	**5.63**	**273**	P	**Pn**	**22 34 12.8**	**+0.9**
HRK	**Horoka**	**5.85**	**268**	*e*P	**Pn**	**22 34 16.1**	**+1.1**
JCH	**Churui**	**5.86**	**259**	P	**Pn**	**22 34 14.6**	**-0.5**
JCH				*e*S	**Sn**	**22 35 18.0**	**-4.5**
MYR	**Moyori**	**6.02**	**256**	*e*P	**Pn**	**22 34 18.1**	**+0.9**
MYR				*e*S	**Sn**	**22 35 22.0**	**-4.3**
ASAJ	**Asahikawa**	**6.18**	**274**	Pn	**Pn**	**22 34 21.2**	**+1.8**
	comp=Z,2.0nm,0.3s,baz=60,slow=15,SNR=12						
ASAJ				Sn	**Sn**	**22 35 33.9**	**+3.6**
	baz=236,slow=15,SNR=1.9						
ASAJ	**Asahikawa**	**6.18**	**274**	*e*Pn	**Pn**	**22 34 20.8**	**+1.4**
ASAJ				Sn	**Sn**	**22 35 33.9**	**+3.6**
ERM	**Erimo**	**6.20**	**254**	*e*P	**Pn**	**22 34 21.9**	**+2.2**
ERM	**Erimo**	**6.20**	**254**	*e*Pn	**Pn**	**22 34 22.8**	**+3.1**
ERM	**Erimo**	**6.20**	**254**	⇑*e*PN	**Pn**	**22 34 21.9**	**+2.2**
JNBK	**Urakawa-nobuka**	**6.39**	**257**	P	**Pn**	**22 34 22.6**	**+0.3**
JNBK				*e*S	**Sn**	**22 35 30.5**	**-5.1**
SKR	**Severo-Kuril’s**	**7.48**	**25**	*e*P	**Pn**	**22 34 38.0**	**+0.8**
SKR				AMB	AMB	22 34 39.0	
	comp=Z,43nm,0.5s						
SKR				*e*S	**Sn**	**22 35 57.6**	**-4.7**
SKR				A	A	22 36 08.0	
	comp=Z,100nm,0.5s						
SKR	**Severo-Kuril’s**	**7.48**	**25**	*e*PN	**Pn**	**22 34 38.8**	**+1.6**
SKR				pmax	pmax		
	comp=Z,43nm,0.5s						
SKR				MLR	MLR		
	comp=Z,100nm,16.0s						
JNB	**Noboribetsu**	**7.56**	**262**	P	**Pn**	**22 34 38.4**	**+0.1**
JNB				*e*S	**Sn**	**22 36 00.3**	**-3.9**
JKB	**Kayabe**	**7.73**	**258**	P	**Pn**	**22 34 41.0**	**+0.3**
JKB				*e*S	**Sn**	**22 36 01.5**	**-7.0**
JANG	**Nango**	**8.03**	**247**	*e*S	Sn	22 36 07.4	-8.5
JTM	**Tenmabayashi**	**8.14**	**250**	*e*S	**Sn**	**22 36 11.0**	**-7.4**
JOSM	**Okushiri--Mats**	**8.78**	**261**	P	**Pn**	**22 34 55.3**	**+0.3**
JIO	**Ouri**	**9.24**	**237**	*e*S	Sn	22 36 35.9	-10
PETK	**Petropavlovsk-**	**10.09**	**23**	Pn	**Pn**	**22 35 10.8**	**-2.2**
	baz=191,slow=11						
PETK	**Petropavlovsk-**	**10.09**	**23**	*e*Pn	**Pn**	**22 35 12.5**	**-0.5**
PET	**Petropavlovsk**	**10.30**	**26**	*e*P	**Pn**	**22 35 15.6**	**-0.2**
MAJO	**Matsushiro**	**12.38**	**237**	*e*P	**Pn**	**22 35 46.2**	**+1.8**
MAJO	**Matsushiro**	**12.38**	**237**	⇑*e*PN	**Pn**	**22 35 47.6**	**+3.2**
MAJO				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MJAR	**Matsushiro Arr**	**12.38**	**237**	Pn	**Pn**	**22 35 45.1**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=61,slow=13,SNR=3.1						
USRK	**Ussuriysk Ar.**	**13.79**	**278**	Pn	**Pn**	**22 36 03.2**	**-0.3**
	baz=85,slow=15						
USRK				Sn	**Sn**	**22 38 33.8**	**-3.1**
	baz=104,slow=30						
KLR	**Kul’dur**	**14.32**	**298**	Pn	**Pn**	**22 36 10.7**	**-0.1**
	comp=Z,0.0nm,0.3s,baz=122,slow=13,SNR=2.5						
KLR	**Kul’dur**	**14.32**	**298**	⇑*e*P	**Pn**	**22 36 13.8**	**+2.9**
SEY	**Seymchan**	**18.98**	**2**	P	**P**	**22 37 06.7**	**-2.8**
	comp=Z,0.2nm,0.3s,baz=186,slow=10,SNR=7.6						
SEY	**Seymchan**	**18.98**	**2**	*e*P	**Pn**	**22 37 11.0**	**+0.8**
SEY	**Seymchan**	**18.98**	**2**	⇓*e*P	**Pn**	**22 37 11.0**	**+0.8**
YAK	**Yakutsk**	**22.02**	**333**	*e*P	**P**	**22 37 42.2**	**-0.2**
H11N2	**WAKE ISLAND Hy**	**27.54**	**146**	T	T	23 07 31.3	
	baz=343						
H11N1	**WAKE ISLAND Hy**	**27.55**	**147**	T	T	23 07 29.6	
	baz=343						
H11N3	**WAKE ISLAND Hy**	**27.56**	**146**	T	T	23 07 35.9	
	baz=343						
NJ2	**Nanjing**	**27.93**	**256**	*e*P	**P**	**22 38 39.6**	**+1.0**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
H11S1	**WAKE ISLAND Hy**	**28.57**	**148**	T	T	23 08 49.2	
	baz=339						
H11S3	**WAKE ISLAND Hy**	**28.58**	**148**	T	T	23 08 49.6	
	baz=339						
H11S2	**WAKE ISLAND Hy**	**28.59**	**148**	T	T	23 08 53.0	
	baz=339						
HHC	**Hu-ho-hao-te**	**29.21**	**278**	*e*P	**P**	**22 38 53.4**	**+3.3**
HHC				sP	sP	22 38 59.8	+6.8
HHC				PP	**PnPn**	**22 39 45.3**	**+2.7**
HHC				S	**S**	**22 43 43.0**	**+0.1**
HHC				pmax	pmax		
	comp=Z,27nm,0.9s						
HHC				pmax	pmax		
	comp=Z,100nm,5.4s						
HHC				LR	LR		
	comp=Z,400nm,13.3s						
TIXI	**Tiksi**	**29.76**	**346**	*e*P	**P**	**22 38 54.7**	**+0.2**
TIXI	**Tiksi**	**29.76**	**346**	⇓*e*P	**P**	**22 38 54.7**	**+0.2**
TIXI				pmax	pmax		
	comp=Z,7.0nm,1.3s						
ULN	**Ulaanbaatar**	**30.61**	**293**	*e*P	**P**	**22 39 03.3**	**+0.8**
ULN	**Ulaanbaatar**	**30.61**	**293**	*e*P	**P**	**22 39 03.0**	**+0.5**
	comp=Z,2.5nm,0.8s						
ULN	**Ulaanbaatar**	**30.61**	**293**	⇑*i*P	**P**	**22 39 03.3**	**+0.8**
ULN				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SONA1	**Songino Array**	**31.05**	**293**	*e*P	**P**	**22 39 06.7**	**+0.4**
SONM	**Songino Array**	**31.05**	**293**	P	**P**	**22 39 04.8**	**-1.5**
	comp=Z,1.3nm,0.8s,baz=75,slow=8.7,SNR=7.1						
SONM	**Songino Array**	**31.05**	**293**	*e*P	**P**	**22 39 07.2**	**+0.9**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.8s						
LZH	**Lanzhou**	**36.66**	**274**	*e*P	**P**	**22 39 55.6**	**+0.4**
LZH				pP	sP	22 40 01.8	+3.7
LZH				sP	pP	22 40 04.0	+6.7
LZH				*e*PP	**PP**	**22 41 20.8**	**+2.3**
LZH				pmax	pmax		
	comp=Z,28nm,1.0s						
LZH				pmax	pmax		
	comp=Z,170nm,4.9s						
RSO	**Redoubt South**	**36.79**	**43**	*e*P	**P**	**22 39 55.5**	**-0.5**
KDAK	**Kodiak Island**	**36.93**	**48**	P	**P**	**22 39 56.4**	**-0.6**
	comp=Z,6.3nm,1.0s,baz=298,slow=9.0,SNR=4.5						
GTA	**Gaotai**	**38.11**	**281**	⇓P	P	22 40 13.8	+6.4
GTA				pP	sP	22 40 18.3	+8.0
GTA				sP	pP	22 40 20.8	+11
GTA				S	S	22 46 10.3	+10
GTA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,40nm,5.6s						
GTA				LR	LR		
	comp=Z,180nm,15.6s						
GTA				LR	LR		
	comp=Z,110nm,13.7s						
TOLK	**Toolik Lake Re**	**38.81**	**30**	*e*P	**P**	**22 40 13.2**	**+0.4**
	comp=Z,4.1nm,0.6s						
SML	**Sawmill**	**38.92**	**41**	*e*P	**P**	**22 40 13.7**	**-0.1**
	comp=Z,9.7nm,0.8s						
SML	**Sawmill**	**38.92**	**41**	*e*P	**P**	**22 40 13.7**	**-0.1**
SML				pmax	pmax		
	comp=Z,10.0nm,0.8s						
WRH	**Wood River Hil**	**39.04**	**37**	*e*P	**P**	**22 40 15.5**	**+0.8**
	comp=Z,2.5nm,0.8s						
CD2	**Chengdu**	**39.32**	**267**	*e*P	**P**	**22 40 17.5**	**-0.1**
IL1	**Eielson Array**	**39.56**	**36**	*e*P	**P**	**22 40 18.4**	**-0.7**
ILAR	**Eielson Array**	**39.56**	**36**	P	**P**	**22 40 18.1**	**-1.0**
	comp=Z,1.0nm,0.7s,baz=253,slow=7.5,SNR=9.1						
ILAR				PcP	**PcP**	**22 42 24.7**	**-1.5**
	comp=Z,0.2nm,0.4s,baz=250,slow=2.7,SNR=2.6						
ILAR	**Eielson Array**	**39.56**	**36**	*e*P	**P**	**22 40 19.0**	**-0.1**
ILAR	**Eielson Array**	**39.56**	**36**	*e*P	**P**	**22 40 19.1**	**-0.1**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GYA	**Guiyang**	**39.81**	**259**	*e*P	**P**	**22 40 24.0**	**+2.2**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
EGAK	**Eagle**	**42.02**	**36**	*e*P	**P**	**22 40 39.5**	**+0.2**
ZALV	**Zalesovo Beam**	**43.16**	**308**	P	**P**	**22 40 47.7**	**-1.1**
	comp=Z,1.6nm,0.6s,baz=68,slow=8.3,SNR=6.5						
ZALV				PcP	**PcP**	**22 42 37.9**	**-0.3**
	comp=Z,1.4nm,0.6s,baz=46,slow=4.3,SNR=5.5						
ZALV	**Zalesovo Beam**	**43.16**	**308**	*e*P	**P**	**22 40 48.9**	**+0.1**
ZALV				PcP	**PcP**	**22 42 37.9**	**-0.3**
NVS	**Novosibirsk**	**43.82**	**309**	*e*P	P	22 40 47.1	-7.0
WMQ	**Urumqi**	**44.69**	**293**	P	**P**	**22 41 03.3**	**+2.0**
WMQ				pP	sP	22 41 11.4	+7.2
WMQ				pmax	pmax		
	comp=Z,17nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,160nm,4.3s						
INK	**Inuvik**	**44.71**	**31**	P	**P**	**22 40 59.7**	**-1.3**
	comp=Z,0.5nm,0.5s,baz=279,slow=7.6,SNR=2.4						
MK31	**Makanchi Array**	**47.03**	**299**	*e*P	**P**	**22 41 20.0**	**+0.3**
MK31	**Makanchi Array**	**47.03**	**299**	*e*P	**P**	**22 41 20.0**	**+0.3**
MKAR	**Makanchi Array**	**47.03**	**299**	P	**P**	**22 41 20.0**	**+0.3**
	comp=Z,2.0nm,0.6s,baz=73,slow=7.8,SNR=18						
MKAR				PcP	**PcP**	**22 42 50.3**	**-1.5**
	comp=Z,0.3nm,0.5s,baz=26,slow=2.0,SNR=2.8						
MKAR	**Makanchi Array**	**47.03**	**299**	*e*P	**P**	**22 41 20.0**	**+0.3**
	comp=Z,21nm,0.6s						
MKAR				PcP	**PcP**	**22 42 50.3**	**-1.5**
MK01	**Makanchi Array**	**47.03**	**299**	*e*P	**P**	**22 41 20.1**	**+0.4**
KURK	**Kurchatov**	**47.78**	**305**	*e*P	**P**	**22 41 26.0**	**+0.6**
KURK	**Kurchatov**	**47.78**	**305**	*e*P	**P**	**22 41 25.8**	**+0.3**
	comp=Z,19nm,0.6s						
KURK				PcP	**PcP**	**22 42 53.7**	**-0.6**
KURK	**Kurchatov**	**47.78**	**305**	⇑*i*P	**P**	**22 41 26.0**	**+0.6**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KURBB	**Kurchatov Arra**	**47.87**	**305**	P	**P**	**22 41 26.2**	**+0.1**
	comp=Z,3.3nm,0.6s,baz=72,slow=8.8,SNR=20						
KURBB				PcP	**PcP**	**22 42 53.7**	**-0.9**
	comp=Z,0.6nm,0.6s,baz=71,slow=3.3,SNR=3.1						
DLBC	**Dease Lake**	**48.51**	**44**	P	**P**	**22 41 30.9**	**-0.2**
	comp=Z,1.7nm,0.7s,baz=270,slow=10,SNR=3.1						
BVAR	**Borovoye Array**	**51.57**	**310**	P	**P**	**22 41 54.4**	**+0.2**
	comp=Z,0.9nm,0.6s,baz=81,slow=8.9,SNR=4.9						
RES	**Resolute Bay**	**53.88**	**18**	P	**P**	**22 42 10.5**	**-0.5**
	comp=Z,4.0nm,0.9s,baz=321,slow=6.0,SNR=4.2						
RES	**Resolute Bay**	**53.88**	**18**	*e*P	**P**	**22 42 10.5**	**-0.5**
	comp=Z,5.5nm,0.9s						
YKA	**Yellowknife Ar**	**53.95**	**35**	PcP	**PcP**	**22 43 16.2**	**-0.7**
	comp=Z,0.5nm,0.6s,baz=296,slow=4.3,SNR=2.6						
KSH	**Kashi**	**54.46**	**293**	*e*P	P	22 42 19.9	+4.0
KSH				sP	sP	22 42 27.1	+8.2
KSH				*e*PcP	**PcP**	**22 43 22.4**	**+3.0**
SPITS	**Spitsbergen Ar**	**55.08**	**350**	P	**P**	**22 42 19.9**	**+0.2**
	comp=Z,1.9nm,0.7s,baz=353,slow=9.0,SNR=2.8						
ARU	**Arti**	**56.13**	**318**	*e*P	**P**	**22 42 27.6**	**+0.1**
ARU	**Arti**	**56.13**	**318**	*e*P	**P**	**22 42 27.7**	**+0.1**
	comp=Z,9.8nm,0.6s						
ARU	**Arti**	**56.13**	**318**	*c i*P	**P**	**22 42 27.6**	**+0.1**
ARU				S	**S**	**22 50 18.9**	**+2.3**
ARU				SS	**SS**	**22 54 05.9**	**+3.7**
ARU				pmax	pmax		
	comp=Z,9.0nm,0.6s						
PRGR	**Permogore**	**58.95**	**328**	*e*P	**P**	**22 42 47.0**	**-0.3**
AKTO	**Aktyubinsk**	**59.55**	**312**	P	**P**	**22 42 49.9**	**-1.8**
	comp=Z,0.4nm,0.4s,baz=59,slow=10,SNR=2.7						
ARCES	**ARCESS Array B**	**60.00**	**341**	P	**P**	**22 42 53.4**	**-1.1**
	comp=Z,2.8nm,0.9s,baz=41,slow=8.4,SNR=5.0						
ARCES	**ARCESS Array B**	**60.00**	**341**	*e*P	**P**	**22 42 54.6**	**+0.1**
ARCES	**ARCESS Array B**	**60.00**	**341**	*e*P	**P**	**22 42 54.7**	**+0.2**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MSO	**Missoula**	**62.55**	**50**	*e*P	**P**	**22 43 12.8**	**+0.5**
	comp=Z,4.0nm,0.9s						
SUMG	**Summit**	**63.53**	**3**	*e*P	**P**	**22 43 18.4**	**-0.3**
	comp=Z,6.3nm,1.0s						
SUMG	**Summit**	**63.53**	**3**	*e*P	**P**	**22 43 18.4**	**-0.3**
SUMG				pmax	pmax		
	comp=Z,6.0nm,1.0s						
LRM	**Limekiln Ridge**	**63.98**	**51**	*e*P	**P**	**22 43 22.0**	**+0.1**
HLID	**Hailey**	**64.22**	**54**	*e*P	**P**	**22 43 22.2**	**-1.2**
	comp=Z,4.4nm,1.3s						
BOZ	**Bozeman (W)**	**64.57**	**50**	*e*P	**P**	**22 43 25.9**	**+0.2**
	comp=Z,2.7nm,0.9s						
BOZ	**Bozeman (W)**	**64.57**	**50**	*e*P	**P**	**22 43 25.9**	**+0.2**
BOZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
RYN	**Ryan**	**64.70**	**60**	*e*P	**P**	**22 43 26.9**	**+0.3**
	comp=Z,2.6nm,0.9s						
KVN	**Kaiserville**	**64.71**	**59**	*e*P	**P**	**22 43 27.4**	**+0.7**
	comp=Z,4.5nm,1.3s						
KVN	**Kaiserville**	**64.71**	**59**	*e*P	**P**	**22 43 27.4**	**+0.7**
KVN				pmax	pmax		
	comp=Z,5.0nm,1.3s						
NVAR	**Mina Array Bea**	**64.96**	**60**	P	**P**	**22 43 25.9**	**-2.5**
	comp=Z,1.0nm,0.7s,baz=298,slow=6.8,SNR=8.8						
WRA	**Warramunga Arr**	**65.47**	**197**	P	**P**	**22 43 31.4**	**-0.1**
	comp=Z,1.8nm,0.7s,baz=17,slow=6.9,SNR=14						
WRA	**Warramunga Arr**	**65.47**	**197**	*e*P	**P**	**22 43 32.1**	**+0.6**
WRA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FINES	**FINESS Array B**	**65.94**	**334**	P	**P**	**22 43 33.6**	**-0.4**
	comp=Z,4.0nm,0.6s,baz=41,slow=7.4,SNR=18						
FINES	**FINESS Array B**	**65.94**	**334**	*e*P	P	22 43 36.8	+2.8
FINES				pmax	pmax		
	comp=Z,4.0nm,0.6s						
R11A	**Troy Canyon, C**	**66.70**	**59**	*e*P	**P**	**22 43 40.3**	**+0.8**
	comp=Z,5.2nm,1.4s						
OBN	**Obninsk**	**66.80**	**325**	*e*P	P	22 43 42.4	+2.8
OBN	**Obninsk**	**66.80**	**325**	⇓*e*P	**P**	**22 43 41.4**	**+1.8**
OBN				*e*PPP	PPP	22 47 43.0	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,102nm,19.0s						
PDAR	**Pinedale Array**	**67.50**	**52**	P	**P**	**22 43 44.0**	**-0.7**
	comp=Z,0.5nm,0.6s,baz=322,slow=5.7,SNR=6.3						
VSU	**Vasula**	**68.01**	**332**	⇓*e*P	**P**	**22 43 47.1**	**-0.2**
VSU				pmax	pmax		
	comp=Z,22nm,0.8s						
LCMT	**Little Creek M**	**68.98**	**59**	*e*P	**P**	**22 43 55.1**	**+1.2**
	comp=Z,3.7nm,0.9s						
ASAR	**Alice Springs**	**69.17**	**197**	P	**P**	**22 43 56.9**	**+2.0**
	comp=Z,1.5nm,0.9s,baz=16,slow=6.0,SNR=7.4						
ASAR	**Alice Springs**	**69.17**	**197**	*e*P	**P**	**22 43 59.0**	**+4.1**
ASAR	**Alice Springs**	**69.17**	**197**	*e*P	**P**	**22 43 59.0**	**+4.1**
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SRU	**San Rafael Swe**	**69.28**	**55**	*e*P	**P**	**22 43 56.5**	**+0.7**
	comp=Z,5.7nm,1.0s						
SRU	**San Rafael Swe**	**69.28**	**55**	*e*P	**P**	**22 43 56.5**	**+0.7**
SRU				pmax	pmax		
	comp=Z,6.0nm,1.0s						
NB2	**NORSAR Subarra**	**70.38**	**341**	P	**P**	**22 44 01.5**	**-0.5**
	comp=Z,0.8nm,0.6s,baz=28,slow=6.5						
HFS	**Hagfors**	**70.54**	**339**	P	**P**	**22 44 01.8**	**-1.2**
	comp=Z,1.3nm,0.5s,baz=56,slow=5.4,SNR=8.0						
NCK	**Nalchik**	**71.57**	**313**	⇓*e*P	**P**	**22 44 10.0**	**+0.5**
NCK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KIV	**Kislovodsk**	**71.73**	**314**	*e*P	**P**	**22 44 11.7**	**+1.2**
KIV	**Kislovodsk**	**71.73**	**314**	*de*P	**P**	**22 44 11.1**	**+0.6**
KIV				*e*		22 44 32.5	
KIV				*e*		22 46 49.4	
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,87nm,24.0s						
KBZ	**Khabaz**	**71.77**	**314**	P	**P**	**22 44 09.0**	**-1.6**
	comp=Z,4.0nm,0.8s,baz=62,slow=5.1,SNR=7.0						
AKASG	**Malin Array Be**	**73.06**	**326**	P	**P**	**22 44 17.2**	**-1.0**
	comp=Z,0.7nm,0.4s,baz=33,slow=5.9,SNR=5.2						
KIEV	**Kiev**	**73.07**	**326**	*e*P	**P**	**22 44 17.8**	**-0.5**
KIEV	**Kiev**	**73.07**	**326**	⇑*e*P	**P**	**22 44 17.8**	**-0.5**
KIEV				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KLNR	**Kaliningrad**	**73.28**	**333**	⇓*e*P	**P**	**22 44 20.8**	**+1.4**
LAZ	**Ladron**	**74.43**	**57**	*e*P	**P**	**22 44 28.0**	**+1.2**
LAZ				*e*S	**S**	**22 54 04.1**	**+2.0**
ANMO	**Albuquerque**	**74.47**	**56**	P	**P**	**22 44 26.1**	**-1.0**
	comp=Z,1.3nm,0.7s,baz=315,slow=5.7,SNR=3.3						
KWP	**Kalwaria Pacla**	**76.47**	**328**	*e*P	**P**	**22 44 38.4**	**+0.4**
	comp=Z,48nm,1.0s						
KWP	**Kalwaria Pacla**	**76.47**	**328**	*e*P	**P**	**22 44 38.4**	**+0.4**
KWP				pmax	pmax		
	comp=Z,48nm,1.0s						
BUR08	**Bucovina Ar. S**	**77.09**	**326**	*e*P	**P**	**22 44 41.7**	**0.0**
BUR04	**Bucovina Ar. S**	**77.11**	**326**	*e*P	**P**	**22 44 41.7**	**-0.1**
MLR	**Muntele Rosu**	**78.51**	**324**	P	**P**	**22 44 49.6**	**-0.1**
	comp=Z,0.3nm,0.7s,baz=270,slow=1.0						
EKA	**Eskdalemuir Ar**	**78.67**	**345**	P	**P**	**22 44 50.2**	**+0.1**
	comp=Z,0.2nm,0.4s,baz=13,slow=4.9,SNR=3.0						
BRTR	**Keskin Array B**	**79.43**	**316**	P	**P**	**22 44 54.6**	**-0.3**
	comp=Z,0.4nm,0.7s,baz=34,slow=6.1,SNR=3.2						
TX31	**Lajitas Ar. Si**	**80.06**	**59**	*e*P	**P**	**22 44 58.3**	**-0.1**
TXAR	**Lajitas Array**	**80.06**	**59**	P	**P**	**22 44 58.0**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=296,slow=4.0,SNR=9.5						
TXAR	**Lajitas Array**	**80.06**	**59**	*e*P	**P**	**22 44 58.5**	**+0.1**
TXAR	**Lajitas Array**	**80.06**	**59**	*e*P	**P**	**22 44 58.5**	**+0.1**
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KHC	**Kasperske Hory**	**80.10**	**333**	*e*P	**P**	**22 44 58.8**	**+0.6**
KHC	**Kasperske Hory**	**80.10**	**333**	*e*P	**P**	**22 44 58.8**	**+0.6**
GERES	**GERESS Array B**	**80.31**	**333**	P	**P**	**22 44 58.8**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=32,slow=5.8,SNR=2.4						
MMAI	**Mount Meron Ar**	**83.58**	**310**	P	**P**	**22 45 17.4**	**+0.5**

	comp=Z,5.0nm,0.7s,baz=57,slow=5.5,SNR=7.0						
TKL	Tuckaleechee C	86.32	42	P	P	22 45 29.2	-1.3
	comp=Z,4.9nm,0.8s,baz=24,slow=5.9,SNR=7.3						
TORD	Torodi Ar. Bea	116.69	326	PKP	PKPdf	22 51 30.4	-2.8
	comp=Z,0.2nm,0.5s,baz=122,slow=1.9						
PLCA	Paso Flores	149.24	99	PKPbc	PKPbc	22 52 35.9	-0.9
	comp=Z,2.4nm,1.0s,baz=329,slow=5.9,SNR=3.9						
CPUP	Villa Florida	150.99	62	PKPbc	PKPbc	22 52 39.4	-2.0
	comp=Z,1.9nm,0.8s,baz=270,slow=3.0,SNR=3.7						

NIED ***13*** *22:37:00, 45°.50N×152°.10E, h23^{km}, Mw4.9 Best double couple: M$_0$2.65000×10^{16} NP1:φ$_s$335.00000°, δ60.00000°, λ16.00000°. NP2:φ$_s$237.00000°, δ76.00000°, λ149.00000°.*

SKHL ***13*** *22:37:22.4±0.7, 44°.95N×152°.35E, h37^{km}±7^{km}, mb5.0/5, Ms4.7/4*

IDC ***13*** *22:37:22.1±0.4, 45°.22N×151°.88E, h0^{km}, mb4.5/47, mb1 4.6/52, mb1mx4.5/79, mbtmp4.5/52, ML3.8/3, MS4.5/55, Ms1 4.5/55, ms1mx4.4/75, Error ellipse: s-maj=11.8km s-min=9.2km az=147.0*

ISCJB ***13*** *22:37:22.3±0.1, 45°.17N±0°.03×151°.96E±0°.02, h12^{km}, mb4.9/230, MS4.7/87, Error ellipse: s-maj=4.3km s-min=1.7km az=161.6*

BJI ***13*** *22:37:22.0, 45°.29N×151°.81E, h6^{km}, mb5.0/73, mB5.1/60, Ms5.0/76, Ms7 4.8/72*

JMA ***13*** *22:37:23.1±0.6, 45°.48N×152°.12E, h30^{km}, M5.0*

NEIC ***13*** *22:37:26.0±1.1, 45°.26N×151°.83E, h22^{km}±8^{km}, mb5.0/116, Error ellipse: s-maj=4.8km s-min=2.5km az=161.0*

MOS ***13*** *22:37:26.6±0.9, 45°.25N×151°.83E, h38^{km}, mb5.1/70, MS4.7/38, Error ellipse: s-maj=5.8km s-min=4.3km az=118.8*

GCMT ***13*** *22:37:26.0±0.2, 45°.29N×152°.08E, h16^{km}, MW5.0/91, Moment Tensor Solution. s49,c64; s91,c151; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.37±.13; M$_{\theta\theta}$-1.41±.09; M$_{\phi\phi}$-1.96±.09; M$_{r\theta}$-0.25±.25; M$_{\theta\phi}$-1.71±.06; M$_{\phi r}$0.63±.26; Best double couple: M$_0$3.46100×10^{16} NP1:φ$_s$31.00000°, δ49.00000°, λ77.00000°. NP2: φ$_s$230.00000°, δ43.00000°, λ105.00000°. Principal axes: T 3.4900, Plg80.0000°, Azm235.0000°; N -0.0580, Plg10.0000°, Azm39.0000°; P -3.4320, Plg3.0000°, Azm130.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 13 22:37:24.3±0.6, **45°.22N**±0°.05×**151°.98E**±0°.04, **h13**^{km}±3^{km}, **n871**, σ**1**^{s}**40**/924, **mb4.9**/234, **MS4.7**/87, **60C-33D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	Kuril'sk	2.91	272	*i* P	Pn	22 38 10.0	-0.2
KUR				AMB	AMB	22 38 16.0	
	153nm,0.4s						
KUR				*e*S	Sn	22 38 45.3	+0.3
KUR				A	A	22 38 55.0	
	817nm,0.5s						
KUR				A	A	22 38 55.0	
	133nm,0.5s						
KUR	Kuril'sk	2.91	272	*c i*PN	Pn	22 38 10.1	-0.2
KUR				*e*S	Sn	22 38 47.0	+2.0
KUR				pmax	pmax		
	comp=Z,153nm,0.4s						
KUR				smax	smax		
	comp=E,133nm,0.3s						
KUR				smax	smax		
	comp=N,817nm,0.5s						
SHO	Shikotan	3.92	252	*i* P	Pn	22 38 24.0	-0.1
SHO				AMB	AMB	22 38 35.0	
	comp=N,101nm,0.6s						
SHO				AMB	AMB	22 38 35.0	
	comp=N,118nm,0.6s						
SHO				*e*S	Sn	22 39 10.0	0.0
SHO				A	A	22 39 12.0	
	comp=N,446nm,0.5s						
SHO				AMS	AMS	22 40 32.0	
	comp=N,6μm,14.0s						
SHO	Shikotan	3.92	252	*c i*PN	Pn	22 38 24.3	+0.2
SHO				*e*S	Sn	22 39 10.6	+0.6
SHO				pmax	pmax		
	comp=Z,118nm,0.6s						
SHO				pmax	pmax		
	comp=N,101nm,0.5s						
SHO				smax	smax		
	comp=E,446nm,0.5s						
SHO				smax	smax		
	comp=N,86nm,0.3s						
SHO				MLR	MLR		
	comp=Z,6μm,14.0s						
YUK	Yuzh-Kuril'sk	4.53	257	*e*P	Pn	22 38 32.0	-0.4
YUK				AMB	AMB	22 38 44.0	
	comp=Z,209nm,0.3s						
YUK				*e*S	Sn	22 39 24.8	-0.1
YUK				A	A	22 39 29.0	
	comp=Z,285nm,0.3s						
YUK				AMS	AMS	22 41 18.0	
	comp=Z,900nm,14.0s						
YUK				AMS	AMS	22 41 18.0	
	comp=Z,4μm,14.0s						
YUK	Yuzh-Kuril'sk	4.53	257	*e*PN	Pn	22 38 32.5	+0.1
YUK				*e*S	Sn	22 39 25.3	+0.4
YUK				pmax	pmax		
	comp=Z,209nm,0.3s						
YUK				smax	smax		
	comp=N,285nm,0.3s						
YUK				smax	smax		
	comp=E,445nm,0.6s						
YUK				MLR	MLR		
	comp=Z,5μm,14.0s						
LAGR	Lagunnoye	4.57	257	*e*P	Pn	22 38 33.0	0.0
LAGR	Lagunnoye	4.57	257	*e*PN	Pn	22 38 33.1	0.0
GRPR	Tuman	4.60	257	*e*P	Pn	22 38 33.0	-0.5
GRPR	Tuman	4.60	257	PN	Pn	22 38 33.6	+0.1
NEM2	Nemuro 2	4.84	250	P	Pn	22 38 35.6	-1.2
NEM2				*e*S	Sn	22 39 29.0	-3.8
GLVR	Golovnino	4.85	255	*e*P	Pn	22 38 37.0	0.0
GLVR				*e*S	Sn	22 39 34.0	+1.0
GLVR	Golovnino	4.85	255	PN	Pn	22 38 37.2	+0.2
GLVR				*e*S	Sn	22 39 34.4	+1.4
JRA	Rausu	5.06	258	P	Pn	22 38 40.8	+1.0
JNK	Nakash	5.45	255	P	Pn	22 38 45.4	+0.2
JNK				*e*S	Sn	22 39 46.2	-1.6
JAK	Akkeshi	5.70	250	P	Pn	22 38 47.3	-1.2
JAK				*e*S	Sn	22 39 50.5	-3.2
JTKR	Abashiri--Toko	5.90	261	P	Pn	22 38 52.5	+1.2
SKR	Severo-Kuril's	6.13	25	*e*P	Pn	22 38 55.0	+0.5
SKR				AMB	AMB	22 38 59.0	
	comp=Z,158nm,0.6s						
SKR				*e*S	Sn	22 39 58.0	-6.4
SKR				A	A	22 40 09.0	
	comp=Z,179nm,0.7s						
SKR				AMS	AMS	22 41 28.0	
	comp=Z,11μm,13.0s						
SKR				AMS	AMS	22 41 28.0	
	comp=Z,6μm,13.0s						
SKR	Severo-Kuril's	6.13	25	*e*PN	Pn	22 38 55.4	+0.9
SKR				pmax	pmax		
	comp=Z,158nm,0.6s						
SKR				pmax	pmax		
	comp=Z,500nm,3.2s						
SKR				MLR	MLR		
	comp=E,11μm,13.0s						
SKR				MLR	MLR		
	comp=Z,6μm,13.0s						
JAR	Ashorobuto	6.20	255	P	Pn	22 38 55.6	+0.1
JMP	Maruseppu	6.27	262	P	Pn	22 38 58.3	+1.8
HRK	Horoka	6.58	258	*e*P	Pn	22 39 02.3	+1.5
YSS	Yuzh-Sakhalins	6.65	288	*e*P	Pn	22 39 04.3	+2.7
YSS				AMB	AMB	22 39 05.2	
	comp=Z,40nm,1.1s						
YSS				*e*S	Sn	22 40 20.0	+2.9
YSS				AMS	AMS	22 42 15.0	
	comp=Z,3μm,13.0s						
YSS				AMS	AMS	22 42 15.0	
	comp=Z,4μm,13.0s						
YSS				AMS	AMS	22 42 15.0	
	comp=Z,5μm,13.0s						
YSS	Yuzh-Sakhalins	6.65	288	*e*Pn	Pn	22 39 02.6	+1.1
YSS	Yuzh-Sakhalins	6.65	288	⇑*e*PN	Pn	22 39 04.3	+2.7
YSS				*e*S	Sn	22 40 20.0	+2.9
YSS				pmax	pmax		
	comp=Z,40nm,1.1s						
YSS				MLR	MLR		
	comp=Z,5μm,12.0s						
YSS				MLR	MLR		
	comp=N,3μm,14.0s						
YSS				MLR	MLR		
	comp=E,4μm,13.0s						
JKK2	Kamakawa 2	6.73	262	P	Pn	22 39 04.4	+1.6
JCH	Churui	6.75	250	P	Pn	22 39 02.6	-0.4
JCH				*e*S	Sn	22 40 16.1	-3.5
ASAJ	Asahikawa	6.78	264	Pn	Pn	22 39 03.5	0.0
	comp=E,2.0nm,0.3s,baz=81,slow=13,SNR=29						
ASAJ				LR	LR	22 42 26.4	
	comp=E,4μm,18.6s,baz=76,slow=45						
ASAJ	Asahikawa	6.78	264	*e*Pn	Pn	22 39 04.3	+0.8
ASAJ	Asahikawa	6.78	264	P	Pn	22 39 05.4	+1.9
MYR	Moyori	6.94	248	*e*P	Pn	22 39 05.1	-0.6
JFR	Furan	7.05	256	P	Pn	22 39 08.5	+1.3
ERM	Erimo	7.16	247	*e*P	Pn	22 39 10.3	+1.7
ERM	Erimo	7.16	247	*e*Pn	Pn	22 39 09.2	+0.6
ERM	Erimo	7.16	247	⇓*e*PN	Pn	22 39 10.3	+1.7
ERM				pmax	pmax		
	comp=Z,152nm,1.3s						
JAB	Ashibetsu	7.20	260	P	Pn	22 39 12.2	+3.0
JNBK	Urakawa-nobuka	7.30	250	P	Pn	22 39 09.8	-0.7
JBT2	Biratori 2	7.35	254	P	Pn	22 39 10.8	-0.5
UGL	Uglegorsk	7.78	303	*e*P	Pn	22 39 19.8	+2.7
UGL				AMS	AMS	22 43 35.0	
	comp=Z,5μm,15.0s						
UGL				AMS	AMS	22 43 35.0	
	comp=Z,5μm,15.0s						
JNB	Noboribetsu	8.37	255	P	Pn	22 39 25.9	+0.6
JNB				*e*S	Sn	22 40 56.2	-3.4
TYV	Tymovskoe	8.42	315	*e*PN	Pn	22 39 28.6	+2.7
TYV				pmax	pmax		
	comp=Z,700nm,6.0s						
TYV				pmax	pmax		
	comp=Z,58nm,1.1s						
JKB	Kayabe	8.62	251	P	Pn	22 39 27.9	-0.7
JKB				*e*S	Sn	22 40 58.9	-6.7
PEA0B	Petropavlovsk-	8.74	23	*e*Pn	Pn	22 39 29.4	-0.9
PETK	Petropavlovsk-	8.74	23	Pn	Pn	22 39 28.9	-1.3
	baz=205,slow=12						
PETK				LR	LR	22 43 39.0	
	comp=Z,2μm,19.7s,baz=207,slow=43						
PET	Petropavlovsk	8.95	27	*e*P	Pn	22 39 32.3	-0.8
PET	Petropavlovsk	8.95	27	*e*Pn	Pn	22 39 34.4	+1.2
PET	Petropavlovsk	8.95	27	*e*PN	Pn	22 39 41.6	+8.5
PET				pmax	pmax		
	comp=Z,35nm,1.1s						
PET				MLR	MLR		
	comp=Z,3μm,13.0s						
PET				MLR	MLR		
	comp=Z,3μm,14.0s						
JYM2	Yakumo 2	8.97	254	P	Pn	22 39 33.0	-0.4
JANG	Nango	9.09	241	P	Pn	22 39 32.4	-2.7
JANG				*e*S	Sn	22 41 07.1	-10
JTH	Tanohata	9.14	238	P	Pn	22 39 32.9	-2.9
JTM	Tenmabayashi	9.14	245	P	Pn	22 39 33.4	-2.4
JOSM	Okushiri--Mats	9.59	255	P	Pn	22 39 41.3	-0.7
OKH	Okha	10.21	328	⇑*i*PN	Pn	22 39 52.0	+1.7
OKH				pmax	pmax		
	comp=Z,600nm,8.3s						
JRG	Rokugo	10.22	239	P	Pn	22 39 48.2	-2.4
JIO	Ouri	10.41	233	P	Pn	22 39 50.5	-2.8
JIO				*e*S	Sn	22 41 38.2	-12
NKL	Nikolayevsk	10.84	321	*e*PN	Pn	22 40 00.5	+1.5
NKL				pmax	pmax		
	comp=N,600nm,7.0s						
NKL				pmax	pmax		
	comp=E,1μm,7.0s						
NKL				pmax	pmax		
	comp=Z,1μm,7.0s						
NKL				MLR	MLR		
	comp=N,6μm,15.0s						
NKL				MLR	MLR		
	comp=Z,6μm,15.0s						
TEY	Ternei	10.87	274	⇑*e*PN	Pn	22 40 01.8	+2.3
TEY				pmax	pmax		
	comp=Z,40nm,1.2s						
TEY				MLR	MLR		
	comp=Z,4μm,13.0s						
TEY				MLR	MLR		
	comp=E,3μm,13.0s						
TEY				MLR	MLR		
	comp=N,6μm,14.0s						
GRNR	Gornyy	11.80	304	*e*PN	Pn	22 40 16.1	+3.9
JFY	Yanaizu	12.08	234	P	Pn	22 40 14.3	-1.7
MAJO	Matsushiro	13.54	235	*e*Pn	Pn	22 40 34.7	-1.3
MAJO	Matsushiro	13.54	235	⇑*e*PN	Pn	22 40 34.0	-2.0
MAT	Matsushiro	13.54	235	P	Pn	22 40 33.3	-2.7
MAT				S	Sn	22 43 04.8	-1.4
MJAR	Matsushiro Arr	13.54	235	Pn	Pn	22 40 34.4	-1.6
	comp=N,0.4nm,0.3s,baz=29,slow=12,SNR=20						
MJAR				LR	LR	22 47 45.6	
	comp=N,2μm,19.3s,baz=55,slow=46						
MJB9	Matsu-Tunnel	13.54	235	*e*Pn	Pn	22 40 34.7	-1.3
USRK	Ussuriysk Ar.	14.25	273	Pn	Pn	22 40 45.2	-0.6
	baz=82,slow=13						
USRK				LR	LR	22 46 37.1	
	comp=N,2μm,18.9s,baz=73,slow=39						
KLR	Kul'dur	14.31	294	Pn	Pn	22 40 46.8	+0.3
	comp=N,0.0nm,0.3s,baz=97,slow=13,SNR=17						
KLR				LR	LR	22 47 10.6	
	comp=N,274nm,18.1s,baz=102,slow=41						
MA2	Magadan	14.40	358	LR	LR	22 46 31.0	
	comp=N,1μm,18.2s,baz=183,slow=38						
INU	Inuyama	15.06	234	*e*Pn	Pn	22 40 54.9	-1.8
	comp=N,48nm,1.1s						
MSHR	Mys Shultsa	15.24	267	*d e*P	Pn	22 40 57.3	-1.7
MDJ	Mudanjiang	15.87	276	P	Pn	22 41 03.9	-3.3
MDJ				pP	P	22 41 10.6	-0.3
MDJ				sP	sP	22 41 16.9	+0.5
MDJ				pmax	pmax		
	comp=N,250nm,2.0s						
MDJ				LR	LR		
	comp=N,4μm,12.7s						
MDJ				LR	LR		
	comp=N,2μm,13.5s						
MDJ				LR	LR		
	comp=N,4μm,13.8s						
MDJ	Mudanjiang	15.87	276	*e*Pn	Pn	22 41 06.7	-0.5
	comp=N,113nm,1.0s						
SEY	Seymchan	17.75	1	P	Pn	22 41 26.9	-4.0
	comp=N,0.3nm,0.3s,baz=171,slow=10,SNR=16						
SEY	Seymchan	17.75	1	*e*P	Pn	22 41 28.2	-2.7
SEY	Seymchan	17.75	1	*c i*P	Pn	22 41 28.2	-2.7
ZEA	Zeya	18.11	307	*e*P	Pn	22 41 34.0	-1.4
ZEA				pmax	pmax		
	comp=N,58nm,1.2s						
ZEA				pmax	pmax		
	comp=E,58nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,64nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,600nm,7.0s						
ZEA				pmax	pmax		
	comp=N,300nm,6.0s						
ZEA				pmax	pmax		
	comp=E,600nm,6.0s						
ZEA				MLR	MLR		
	comp=E,2μm,16.0s						
ZEA				MLR	MLR		
	comp=N,2μm,13.0s						
CN2	Changchun	18.95	275	⇓P	P	22 41 43.3	-1.7
CN2				*e*S	Sn	22 45 03.3	-14
CN2				pmax	pmax		
	comp=N,30nm,0.8s						
CN2				pmax	pmax		
	comp=N,200nm,4.0s						
KSRS	Korea Array	19.61	255	P	P	22 41 51.7	-0.5
	comp=N,0.3nm,0.3s,baz=58,slow=12,SNR=13						
KS01	Wonju Array Si	19.62	255	*e*P	P	22 41 52.2	-0.1
KSAR	Wonju Array Be	19.64	255	P	P	22 41 51.7	-0.9
KSAR	Wonju Array Be	19.64	255	P	P	22 41 51.7	-0.9
JNU	Nakatsue	20.27	241	LR	LR	22 51 38.2	
	comp=N,1μm,19.7s,baz=322,slow=42						
TJN	Taejon	20.56	253	⇓*e*P	Pn	22 42 03.7	-1.1
YAK	Yakutsk	21.22	330	P	P	22 42 09.5	0.0
	comp=N,15nm,0.3s,baz=120,slow=1.3,SNR=4.2						
YAK				LR	LR	22 51 14.0	
	comp=N,1μm,18.4s,baz=110,slow=39						
YAK	Yakutsk	21.22	330	*e*P	P	22 42 08.8	-0.7
YAK				*e**PP	sP	22 42 21.2	+6.2
YAK				*e*		22 42 26.9	
YAK				*e*S	S	22 45 56.4	-8.5
YAK				*e**SS	Sn	22 46 13.4	+1.5
YAK				pmax	pmax		
	comp=Z,37nm,1.8s						
YAK				pmax	pmax		
	comp=E,31nm,1.9s						
YAK				pmax	pmax		
	comp=N,29nm,1.8s						
YAK				pmax	pmax		
	comp=Z,236nm,2.3s						
YAK				pmax	pmax		
	comp=E,209nm,2.2s						
YAK				pmax	pmax		
	comp=N,210nm,2.3s						
YAK				smax	smax		
	comp=N,99nm,2.7s						
YAK				smax	smax		
	comp=E,96nm,2.3s						
YAK				MLR	MLR		
	comp=N,1μm,17.0s						
YAK				MLR	MLR		
	comp=Z,1μm,17.0s						
YAK				MLR	MLR		
	comp=E,1μm,18.0s						
KIWB	Kanaga Island	21.38	61	*e*P	P	22 42 13.0	+1.7
DL2	Dalian	23.31	265	P	P	22 42 31.1	-0.8
DL2				S	S	22 46 45.3	+1.3
DL2				pmax	pmax		
	comp=E,56nm,1.2s						
DL2				pmax	pmax		
	comp=E,400nm,4.9s						
DL2				LR	LR		
	comp=E,990nm,14.0s						
DL2				LR	LR		
	comp=E,950nm,14.5s						
DL2				LR	LR		
	comp=E,1μm,15.1s						
JOW	Kunigami	26.38	234	P	P	22 42 59.6	-0.7
	comp=E,16nm,0.9s,baz=24,slow=12,SNR=3.2						
BJI	Beijing	26.70	272	P	P	22 43 02.9	-0.1
BJI				S	S	22 47 40.5	+2.5
BJI				pmax	pmax		
	comp=E,35nm,2.0s						
BJI				LR	LR		
	comp=E,1μm,13.3s						
BJI				LR	LR		
	comp=E,2μm,13.4s						
BJI				LR	LR		
	comp=E,1μm,19.0s						
BJT	Baijiatuau	26.71	272	*e*P	P	22 43 03.9	+0.7
	comp=E,29nm,0.8s						
BJT	Baijiatuau	26.71	272	*e*P	P	22 43 03.9	+0.7
BJT				pmax	pmax		
	comp=Z,29nm,0.8s						
TIA	Tai'an	27.73	263	P	P	22 43 12.9	+0.5
TIA				pmax	pmax		
	comp=Z,13nm,1.4s						
TIA				pmax	pmax		
	comp=Z,310nm,7.9s						
TIA				LR	LR		
	comp=Z,1μm,16.7s						
TIA				LR	LR		
	comp=Z,690nm,16.1s						
TIA				LR	LR		
	comp=Z,490nm,12.2s						
TIXI	Tiksi	28.73	345	P	P	22 43 18.5	-2.4
	comp=Z,3.2nm,0.4s,baz=147,slow=8.9,SNR=6.8						
TIXI				LR	LR	22 54 47.8	
	comp=Z,954nm,19.9s,baz=144,slow=36						
TIXI	Tiksi	28.73	345	*c e*P	P	22 43 17.8	-3.1
TIXI				pmax	pmax		
	comp=Z,17nm,1.4s						
NJ2	Nanjing	28.81	254	*e*P	P	22 43 22.9	+0.9
NJ2				S	S	22 48 18.3	+7.0
NJ2				pmax	pmax		
	comp=Z,14nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,170nm,3.6s						
NJ2				LR	LR		
	comp=Z,2μm,17.1s						
NJ2				LR	LR		
	comp=Z,2μm,14.9s						
NJ2				LR	LR		
	comp=Z,3μm,16.6s						
HHC	Hu-ho-hao-te	29.64	276	*e*P	P	22 43 29.9	+0.5
HHC				pP	sP	22 43 34.8	-0.4
HHC				S	S	22 48 25.9	+1.4
HHC				sS	sS	22 48 34.8	+3.6
HHC				pmax	pmax		
	comp=Z,50nm,1.3s						
HHC				pmax	pmax		
	comp=Z,540nm,5.5s						
HHC				LR	LR		
	comp=Z,2μm,14.0s						
HHC				LR	LR		
	comp=Z,3μm,13.8s						
HHC				LR	LR		
	comp=Z,3μm,14.0s						
TIY	Taiyuan	30.33	270	*e*P	P	22 43 37.5	+2.0
TIY				S	S	22 48 41.9	+6.6
TIY				pmax	pmax		
	comp=Z,170nm,4.2s						
TIY				LR	LR		
	comp=Z,660nm,12.0s						
TIY				LR	LR		
	comp=Z,810nm,15.1s						
TIY				LR	LR		
	comp=Z,670nm,12.8s						
ULN	Ulaanbaatar	30.69	291	*e*P	P	22 43 37.5	-1.2
ULN	Ulaanbaatar	30.69	291	*e*P	P	22 43 38.0	-0.7
	comp=Z,15nm,1.0s						
ULN	Ulaanbaatar	30.69	291	*e*P	P	22 43 38.0	-0.7
ULN				pmax	pmax		
	comp=Z,15nm,1.0s						
BTO	Baotou	30.82	276	*e*P	P	22 43 39.8	0.0
SONA1	Songino Array	31.12	291	*e*P	P	22 43 41.8	-0.7
SONM	Songino Array	31.13	291	P	P	22 43 42.4	-0.2
	comp=Z,6.2nm,0.9s,baz=84,slow=9.7,SNR=35						
SONM				LR	LR	22 57 45.7	
	comp=Z,1μm,18.9s,baz=80,slow=39						
GUMO	Guam	32.10	193	LR	LR	22 56 28.4	
	comp=Z,1μm,19.7s,baz=20,slow=36						
TLY	Talaya	32.21	299	*c i*P	P	22 43 51.5	-0.4
TLY				*e*		22 45 01.6	
TLY				*e*PPP	PPP	22 45 09.8	
TLY				*e*S	S	22 49 06.9	+2.5
TLY				pmax	pmax		
	comp=Z,14nm,1.4s						
TLY				MLR	MLR		
	comp=Z,2μm,20.0s						
ZAK	Zakamensk	32.64	297	*e*P	P	22 43 54.7	-1.0
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.4s						
WHN	Wuhan	32.79	257	P	P	22 43 57.5	+0.4
WHN				S	S	22 49 17.6	+3.9
WHN				LR	LR		
	comp=Z,4μm,20.8s						
WHN				LR	LR		
	comp=Z,1μm,14.6s						
WHN				LR	LR		
	comp=Z,1μm,19.2s						
QZH	Quanzhou	33.65	244	⇑*i*P	P	22 44 04.4	-0.3
QZH				S	S	22 49 29.4	+2.3
QZH				LR	LR		
	comp=Z,750nm,17.1s						
QZH				LR	LR		
	comp=Z,490nm,17.1s						
QZH				LR	LR		
	comp=Z,790nm,14.2s						
XAN	Xi'an	34.61	266	P	P	22 44 13.4	+0.4
XAN				S	S	22 49 44.5	+2.5
XAN				pmax	pmax		
	comp=Z,18nm,1.6s						
XAN				pmax	pmax		
	comp=Z,170nm,4.9s						
XAN				LR	LR		
	comp=Z,460nm,14.4s						
XAN				LR	LR		
	comp=Z,830nm,14.4s						
XAN				LR	LR		
	comp=Z,1μm,13.9s						
KDAK	Kodiak Island	35.69	49	P	P	22 44 22.1	+0.1
	comp=Z,7.3nm,1.0s,baz=297,slow=11,SNR=3.1						
PPLA	Purkeypile	35.84	40	*e*P	P	22 44 23.0	-0.4
	comp=Z,31nm,1.2s						
CAST	Castle Rocks	35.91	39	*e*P	P	22 44 24.3	+0.4
	comp=Z,16nm,1.3s						
CNPM	China Poot	36.30	46	*e*P	P	22 44 27.8	+0.6
	comp=Z,39nm,1.3s						
ENH	Enshi	36.32	261	*e*P	P	22 44 27.8	+0.1

	comp=Z,14nm,1.1s						
KTH	**Kantishna Hill**	**36.44**	**39**	*e*P	**P**	**22 44 29.6**	**+1.2**
	comp=Z,38nm,1.2s						
BPAW	**Bear Paw Mtn.**	**36.44**	**38**	*e*P	**P**	**22 44 29.1**	**+0.7**
	comp=Z,11nm,1.0s						
MLY	**Manley**	**36.61**	**37**	*e*P	**P**	**22 44 31.2**	**+1.4**
	comp=Z,17nm,1.2s						
COLD	**Coldfoot**	**37.05**	**33**	*e*P	**P**	**22 44 34.0**	**+0.5**
	comp=Z,9.9nm,1.0s						
LZH	**Lanzhou**	**37.16**	**273**	⇑P	**P**	**22 44 35.9**	**+0.9**
LZH				pP	sP	22 44 40.9	+0.1
LZH				sP	pP	22 44 43.6	+4.5
LZH				PP	**PnPn**	**22 46 01.8**	**+1.8**
LZH				S	**S**	**22 50 21.3**	**0.0**
LZH				sS	sS	22 50 27.1	-0.9
LZH				SS	**SnSn**	**22 52 48.8**	**-7.0**
LZH				pmax	pmax		
	comp=Z,210nm,1.5s						
LZH				pmax	pmax		
	comp=Z,440nm,4.9s						
LZH				LR	LR		
	comp=Z,2µm,13.6s						
LZH				LR	LR		
	comp=Z,1µm,14.1s						
LZH				LR	LR		
	comp=Z,2µm,15.2s						
MCK	**McKinley**	**37.33**	**39**	*e*P	**P**	**22 44 36.7**	**+0.7**
	comp=Z,18nm,1.2s						
MCK	**McKinley**	**37.33**	**39**	*e*P	**P**	**22 44 36.7**	**+0.7**
MCK				pmax	pmax		
	comp=Z,18nm,1.1s						
GHO	**Glory Hole Cre**	**37.35**	**42**	*e*P	**P**	**22 44 36.5**	**+0.3**
	comp=Z,29nm,1.5s						
TOLK	**Toolik Lake Re**	**37.46**	**31**	P	**P**	**22 44 37.8**	**+0.7**
	baz=262						
TOLK	**Toolik Lake Re**	**37.46**	**31**	*e*P	**P**	**22 44 38.3**	**+1.3**
	comp=Z,38nm,1.4s						
SML	**Sawmill**	**37.63**	**42**	*e*P	**P**	**22 44 38.4**	**-0.1**
SML				*e*pP	**P**	**22 44 39.2**	**+0.7**
SML	**Sawmill**	**37.63**	**42**	*e*P	**P**	**22 44 38.4**	**-0.1**
MDM	**Murphy Dome**	**37.67**	**37**	*e*P	**P**	**22 44 38.4**	**-0.4**
	comp=Z,16nm,1.1s						
WRH	**Wood River Hil**	**37.72**	**38**	*e*P	**P**	**22 44 40.1**	**+0.9**
	comp=Z,22nm,1.3s						
KRAR	**Krasnoyarsk**	**37.90**	**308**	⇓*e*P	**P**	**22 44 41.1**	**+0.4**
DHY	**Denali Highway**	**38.04**	**40**	*e*P	**P**	**22 44 42.5**	**+0.4**
	comp=Z,26nm,1.4s						
IL1	**Eielson Array**	**38.24**	**37**	*e*P	**P**	**22 44 43.3**	**-0.3**
ILAR	**Eielson Array**	**38.24**	**37**	P	**P**	**22 44 43.5**	**-0.1**
	comp=Z,7.5nm,1.1s,baz=260,slow=6.4,SNR=34						
ILAR				LR	LR	23 02 01.5	
	comp=Z,531nm,20.6s,baz=286,slow=39						
ILB	**Eielson Array**	**38.24**	**37**	*e*P	**P**	**22 44 43.8**	**+0.2**
GTA	**Gaotai**	**38.45**	**280**	⇑P	**P**	**22 44 46.6**	**+0.8**
GTA				pP	sP	22 44 52.1	+0.6
GTA				sP	pP	22 44 55.3	+5.4
GTA				S	**S**	**22 50 43.4**	**+2.8**
GTA				sS	ScP	22 50 52.6	+6.3
GTA				pmax	pmax		
	comp=Z,69nm,1.3s						
GTA				pmax	pmax		
	comp=Z,410nm,6.8s						
GTA				LR	LR		
	comp=Z,1µm,13.7s						
GTA				LR	LR		
	comp=Z,1µm,14.3s						
GTA				LR	LR		
	comp=Z,2µm,13.6s						
KLU	**Klutina**	**38.80**	**43**	*e*P	**P**	**22 44 49.4**	**+1.0**
	comp=Z,20nm,1.1s						
DIV	**Divide**	**38.90**	**43**	*e*P	**P**	**22 44 50.3**	**+1.0**
	comp=Z,18nm,1.1s						
FYU	**Fort Yukon**	**38.95**	**34**	*e*P	**P**	**22 44 50.8**	**+1.2**
	comp=Z,69nm,1.3s						
BMRM	**Bremner River**	**39.48**	**43**	*e*P	**P**	**22 44 55.5**	**+1.4**
	comp=Z,31nm,1.4s						
RAGM	**Ragged Mountai**	**39.51**	**44**	*e*P	**P**	**22 44 55.1**	**+0.7**
	comp=Z,25nm,0.8s						
CD2	**Chengdu**	**39.97**	**266**	P	**P**	**22 44 58.5**	**0.0**
CD2				pP	sP	22 45 02.4	-1.9
CD2				sP	pP	22 45 04.1	+1.4
CD2				PP	**PP**	**22 46 30.1**	**-0.3**
CD2				S	**S**	**22 51 03.3**	**-0.3**
CD2				pmax	pmax		
	comp=Z,50nm,0.7s						
CD2				pmax	pmax		
	comp=Z,380nm,4.7s						
CD2				LR	LR		
	comp=Z,1µm,17.3s						
CD2				LR	LR		
	comp=Z,880nm,16.0s						
CD2				LR	LR		
	comp=Z,1µm,14.6s						
BALM	**Baldy**	**40.56**	**43**	*e*P	**P**	**22 45 04.0**	**+0.8**
	comp=Z,15nm,1.1s						
BALM	**Baldy**	**40.56**	**43**	*e*P	**P**	**22 45 04.0**	**+0.8**
BALM				pmax	pmax		
	comp=Z,15nm,1.0s						
GYA	**Guiyang**	**40.62**	**258**	⇑*i*P	**P**	**22 45 03.8**	**-0.2**
GYA				PP	**PnPn**	**22 46 41.4**	**-0.1**
GYA				S	**S**	**22 51 13.0**	**-0.4**
GYA				SS	**SS**	**22 54 05.6**	**-7.8**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,5.4s						
GYA				LR	LR		
	comp=Z,560nm,17.3s						
GYA				LR	LR		
	comp=Z,510nm,18.0s						
GYA				LR	LR		
	comp=Z,540nm,17.8s						
EGAK	**Eagle**	**40.69**	**37**	*e*P	**P**	**22 45 04.2**	**+0.1**
	comp=Z,35nm,1.3s						
DAWY	**Dawson**	**41.53**	**38**	*e*P	**P**	**22 45 12.1**	**+1.1**
	comp=Z,13nm,1.3s						
ZALV	**Zalesovo Beam**	**42.88**	**307**	P	**P**	**22 45 20.7**	**-1.3**
	comp=Z,1.1nm,0.5s,baz=90,slow=5.9,SNR=5.7						
ZALV				PcP	**PcP**	**22 47 12.7**	**0.0**
	comp=Z,1.1nm,0.5s,baz=65,slow=3.4,SNR=3.8						
ZALV				LR	LR	23 04 10.9	
	comp=Z,1µm,18.6s,baz=69,slow=38						
ZALV	**Zalesovo Beam**	**42.88**	**307**	*e*P	**P**	**22 45 20.2**	**-1.8**
ZALV				PcP	**PcP**	**22 47 12.7**	**0.0**
INK	**Inuvik**	**43.37**	**31**	P	**P**	**22 45 26.0**	**+0.2**
	comp=Z,15nm,1.0s,baz=280,slow=7.2,SNR=21						
INK	**Inuvik**	**43.37**	**31**	*e*P	**P**	**22 45 26.7**	**+0.9**
	comp=Z,32nm,1.2s						
INK	**Inuvik**	**43.37**	**31**	P	**P**	**22 45 26.0**	**+0.2**
INK				pmax	pmax		
	comp=Z,15nm,1.0s						
NVS	**Novosibirsk**	**43.51**	**308**	*e*P	**P**	**22 45 24.4**	**-2.7**
NVS				pmax	pmax		
	comp=Z,13nm,1.7s						
QIZ	**Qiongzhong**	**43.52**	**247**	P	**P**	**22 45 27.5**	**-0.1**
QIZ				S	**S**	**22 51 59.6**	**+3.4**
QIZ				LR	LR		
	comp=Z,650nm,16.5s						
QIZ				LR	LR		
	comp=Z,710nm,15.3s						
QIZ				LR	LR		
	comp=Z,670nm,19.2s						
KMI	**Kunming**	**44.19**	**260**	P	**P**	**22 45 33.5**	**+0.3**
KMI				pP	sP	22 45 38.5	-0.5
KMI				S	**S**	**22 52 02.8**	**-3.5**
KMI				SS	**SS**	**22 55 18.6**	**-5.5**
KMI				pmax	pmax		
	comp=Z,14nm,1.5s						
KMI				pmax	pmax		
	comp=Z,280nm,5.0s						
KMI				LR	LR		
	comp=Z,550nm,15.6s						
KMI				LR	LR		
	comp=Z,750nm,16.6s						
KMI				LR	LR		
	comp=Z,990nm,16.6s						
WMQ	**Urumqi**	**44.76**	**292**	P	**P**	**22 45 38.4**	**+1.0**
WMQ				sP	sP	22 45 46.1	+2.9
WMQ				S	**S**	**22 52 18.0**	**+4.1**
WMQ				ScS	**SS**	**22 55 29.6**	**-4.7**
WMQ				pmax	pmax		
	comp=Z,42nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,570nm,4.7s						
WMQ				LR	LR		
	comp=Z,2µm,16.7s						
WMQ				LR	LR		
	comp=Z,2µm,16.7s						
WMQ				LR	LR		
	comp=Z,1µm,18.5s						
MK31	**Makanchi Array**	**46.95**	**298**	*e*P	**P**	**22 45 54.3**	**-0.3**
MK31	**Makanchi Array**	**46.95**	**298**	*e*P	**P**	**22 45 54.3**	**-0.3**
MKAR	**Makanchi Array**	**46.95**	**298**	P	**P**	**22 45 54.1**	**-0.6**
	comp=Z,6.2nm,0.9s,baz=73,slow=7.5,SNR=25						
MKAR				PcP	**PcP**	**22 47 27.0**	**+0.1**
	comp=Z,2.4nm,0.8s,baz=64,slow=4.3,SNR=2.8						
MKAR				LR	LR	23 07 16.5	
	comp=Z,2µm,18.2s,baz=66,slow=38						
MKAR	**Makanchi Array**	**46.95**	**298**	*e*P	**P**	**22 45 54.3**	**-0.4**
	comp=Z,34nm,0.8s						
MKAR				PcP	**PcP**	**22 47 27.0**	**+0.1**
MK01	**Makanchi Array**	**46.96**	**298**	*e*P	**P**	**22 45 53.3**	**-1.3**
MAKZ	**Makanchi**	**47.14**	**298**	*e*P	**P**	**22 45 55.7**	**-0.4**
	comp=Z,8.1nm,1.1s						
MAKZ	**Makanchi**	**47.14**	**298**	*e*P	**P**	**22 45 55.7**	**-0.4**
MAKZ				pmax	pmax		
	comp=Z,8.0nm,1.1s						
DLBC	**Dease Lake**	**47.23**	**44**	P	**P**	**22 45 56.4**	**-0.3**
	comp=Z,2.7nm,1.0s,baz=299,slow=8.4,SNR=3.4						
DLBC	**Dease Lake**	**47.23**	**44**	*e*P	**P**	**22 45 59.2**	**+2.5**
	comp=Z,17nm,1.4s						
KURK	**Kurchatov**	**47.57**	**304**	P	**P**	**22 45 58.5**	**-0.7**
KURK	**Kurchatov**	**47.57**	**304**	P	**P**	**22 45 58.6**	**-0.7**
KURK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KURBB	**Kurchatov Arra**	**47.66**	**304**	P	**P**	**22 45 58.5**	**-1.4**
	comp=Z,7.3nm,0.8s,baz=72,slow=8.4,SNR=32						
SKNT	**Sakolnakorn**	**48.86**	**251**	P	**P**	**22 46 10.9**	**+1.2**
	comp=Z,12nm,1.2s						
ZIRO	**ZIRO**	**48.96**	**269**	*e*P	**P**	**22 46 10.7**	**+0.2**
JORH	**JORHAT**	**49.15**	**268**	*e*P	**P**	**22 46 07.7**	**-4.1**
MOKO	**MOKOCHONG**	**49.22**	**268**	*e*P	**P**	**22 46 12.7**	**+0.2**
SIJI	**Sorong**	**49.43**	**208**	P	**P**	**22 46 14.2**	**+0.2**
	comp=Z,3.0nm,0.4s,baz=31,slow=9.2,SNR=5.5						
LSA	**Lhasa**	**49.58**	**274**	*e*P	**P**	**22 46 16.6**	**+1.0**
	comp=Z,35nm,1.1s						
LSA	**Lhasa**	**49.58**	**274**	*e*P	**P**	**22 46 16.6**	**+1.0**
LSA				pmax	pmax		
	comp=Z,35nm,1.1s						
KOHI	**KOHIMA**	**49.88**	**267**	*e*P	**P**	**22 46 17.3**	**-0.3**
KHON	**Khomkaen**	**50.09**	**251**	P	**P**	**22 46 20.7**	**+1.7**
	comp=Z,15nm,1.0s,comp=Z,615nm						
CMAI	**Chiengmai2**	**50.17**	**258**	P	**P**	**22 46 21.7**	**+1.9**
	comp=Z,2.2nm,1.6s						
UTTA	**Uttaradit**	**50.63**	**255**	P	**P**	**22 46 24.8**	**+1.7**
	comp=Z,3.7nm,1.1s						
CMMT	**Chiang Mai**	**51.00**	**257**	P	**P**	**22 46 27.0**	**+1.1**
	comp=Z,16nm,1.3s						
CMMT	**Chiang Mai**	**51.00**	**257**	P	**P**	**22 46 27.0**	**+1.1**
	comp=Z,16nm,1.3s						
CHTO	**Chiang Mai**	**51.00**	**257**	*e*P	**P**	**22 46 26.4**	**+0.5**
	comp=Z,22nm,1.2s						
CHTO				*e*		22 46 39.4	
CHTO	**Chiang Mai**	**51.00**	**257**	*e*P	**P**	**22 46 26.4**	**+0.5**
CHTO				pmax	pmax		
	comp=Z,22nm,1.2s						
CHTO	**Chiang Mai**	**51.00**	**257**	P	**P**	**22 46 27.1**	**+1.2**
	comp=Z,71nm,1.3s						
CHTO	**Chiang Mai**	**51.00**	**257**	P	**P**	**22 46 27.1**	**+1.2**
	comp=Z,71nm,1.3s						
PBKT	**Sadao Pong**	**51.17**	**253**	P	**P**	**22 46 28.4**	**+1.2**
	comp=Z,14nm,1.3s,comp=Z,723nm						
BVAR	**Borovoye Array**	**51.23**	**310**	P	**P**	**22 46 26.0**	**-1.2**
	comp=Z,1.4nm,0.5s,baz=71,slow=6.6,SNR=9.8						
BVAR				PcP	**PcP**	**22 47 42.2**	**-0.1**
	comp=Z,1.1nm,0.5s,baz=66,slow=3.6,SNR=2.6						
BVAR				LR	LR	23 10 28.2	
	comp=Z,1µm,18.5s,baz=60,slow=39						
CMAR	**Chiang Mai Arr**	**51.24**	**257**	P	**P**	**22 46 27.7**	**-0.1**
	comp=Z,1.8nm,0.6s,baz=31,slow=8.6,SNR=20						
CM01	**Chiang Mai Arr**	**51.26**	**257**	*e*P	**P**	**22 46 28.2**	**+0.4**
CM01				*e*pP	**P**	**22 46 28.5**	**+0.6**
GUWA	**GUWAHATI**	**51.30**	**270**	*e*P	**P**	**22 46 27.8**	**-0.3**
PRZ	**Przheval'sk**	**51.40**	**295**	*e*P	**P**	**22 46 30.8**	**+1.8**
	comp=Z,82nm,1.3s						
PRZ	**Przheval'sk**	**51.40**	**295**	*e*P	**P**	**22 46 30.8**	**+1.8**
PRZ				pmax	pmax		
	comp=Z,82nm,1.2s						
SHL	**Shillong**	**51.55**	**269**	*e*P	**P**	**22 46 30.4**	**+0.2**
	comp=Z,58nm,1.1s						
SHL	**Shillong**	**51.55**	**269**	*e*P	**P**	**22 46 29.3**	**-0.9**
SHL	**Shillong**	**51.55**	**269**	⇑*i*P	**P**	**22 46 30.0**	**-0.2**
SHL	**Shillong**	**51.55**	**269**	*e*P	**P**	**22 46 30.4**	**+0.2**
SHL				pmax	pmax		
	comp=Z,58nm,1.0s						
SANI	**Sanana**	**52.43**	**214**	P	**P**	**22 46 40.3**	**+3.8**
	comp=Z,25nm,1.1s						
RES	**Resolute Bay**	**52.54**	**18**	P	**P**	**22 46 36.3**	**-0.3**
	comp=Z,5.0nm,0.9s,baz=291,slow=5.9,SNR=5.3						
RES	**Resolute Bay**	**52.54**	**18**	*e*P	**P**	**22 46 37.9**	**+1.3**
	comp=Z,8.8nm,0.9s						
RES	**Resolute Bay**	**52.54**	**18**	*e*P	**P**	**22 46 37.9**	**+1.3**
RES				pmax	pmax		
	comp=Z,9.0nm,0.9s						
YKW3	**Yellowknife Ar**	**52.59**	**36**	*e*P	**P**	**22 46 38.0**	**+0.8**
	comp=Z,17nm,1.1s						
YKA	**Yellowknife Ar**	**52.63**	**36**	P	**P**	**22 46 38.2**	**+0.8**
	comp=Z,2.1nm,0.7s,baz=298,slow=7.4,SNR=6.7						
TURI	**Tura**	**52.65**	**270**	*e*P	**P**	**22 46 38.7**	**+0.5**
TURI				IAmb	IAmb	22 46 40.1	
	comp=Z,12nm,0.5s						
SAIH	**SAIHA**	**52.71**	**265**	*e*P	**P**	**22 46 39.0**	**+0.2**
ULHL	**Ulahol**	**52.91**	**296**	P	**P**	**22 46 40.9**	**+0.7**
	SNR=22						
UTHA	**Uthaitani**	**52.92**	**254**	P	**P**	**22 46 42.6**	**+2.4**
	comp=Z,4.7nm,1.1s						
TKM2	**Tokmak 2**	**52.97**	**297**	P	**P**	**22 46 41.5**	**+0.9**
	SNR=22						
CHMS	**Chumysh**	**53.46**	**297**	P	**P**	**22 46 44.8**	**+0.7**
	SNR=8.9						
USP	**Ospenovka**	**53.48**	**297**	P	**P**	**22 46 45.0**	**+0.9**
	SNR=32						
KBK	**Karagaybulak**	**53.52**	**297**	P	**P**	**22 46 45.1**	**+0.6**
	SNR=17						
BRDH	**Bariadhala**	**53.54**	**266**	LR	LR	23 12 28.0	
	comp=Z,413nm,19.5s,baz=70,slow=39						
KZA	**Kyzart**	**53.62**	**296**	P	**P**	**22 46 47.3**	**+1.7**
	SNR=17						
FRU	**Bishkek**	**53.63**	**297**	⇓*e*P	**P**	**22 46 47.0**	**+1.7**
FRU				pmax	pmax		
	comp=Z,120nm,2.0s						
AAK	**Ala-Archa**	**53.81**	**297**	P	**P**	**22 46 47.3**	**+0.6**
	SNR=12						
KBS	**Kingsbay**	**53.89**	**351**	*e*P	**P**	**22 46 47.1**	**+0.5**
KBS	**Kingsbay**	**53.89**	**351**	*e*P	**P**	**22 46 46.7**	**+0.1**
	comp=Z,32nm,1.0s						
KBS	**Kingsbay**	**53.89**	**351**	*e*P	**P**	**22 46 46.7**	**+0.1**
KBS				pmax	pmax		
	comp=Z,32nm,1.0s						
ODAN	**Odare**	**53.92**	**273**	*e*P	**P**	**22 46 48.4**	**+0.6**
	comp=Z,65nm,1.3s						
SPA0	**Spitsbergen Ar**	**53.98**	**350**	*e*P	**P**	**22 46 47.7**	**+0.4**
SPITS	**Spitsbergen Ar**	**53.98**	**350**	P	**P**	**22 46 45.6**	**-1.7**
	comp=Z,5.9nm,0.8s,baz=41,slow=9.8,SNR=6.2						
SPITS				LR	LR	23 11 47.9	
	comp=Z,640nm,18.5s,baz=5.0,slow=38						
EKS2	**Erkin-Say**	**54.25**	**297**	P	**P**	**22 46 49.9**	**0.0**
	SNR=34						
JIRN	**Jiri**	**54.28**	**275**	*e*P	**P**	**22 46 51.7**	**+1.1**
	comp=Z,103nm,1.0s						
GUN	**Gumba**	**54.35**	**275**	*e*P	**P**	**22 46 51.7**	**+0.6**
	comp=Z,116nm,1.2s						
RAMN	**Ramite**	**54.43**	**274**	*e*P	**P**	**22 46 51.8**	**+0.3**
	comp=Z,129nm,1.1s						
KSH	**Kashi**	**54.51**	**293**	P	**P**	**22 46 56.0**	**+4.2**
KSH				*e*pP	sP	22 47 01.4	+3.7
KSH				*e*PcP	**PcP**	**22 47 58.6**	**+3.5**
KSH				PP	**PP**	**22 48 59.8**	**+6.0**
KSH				S	**S**	**22 54 34.3**	**+3.8**
KSH				ScS	**ScS**	**22 56 42.0**	**+1.2**
KSH				SS	**SS**	**22 58 16.3**	**+3.7**
KSH				pmax	pmax		
	comp=Z,320nm,2.4s						
KSH				LR	LR		
	comp=Z,470nm,12.3s						
KSH				LR	LR		
	comp=Z,610nm,14.3s						
KSH				LR	LR		
	comp=Z,950nm,15.6s						
PMG	**Port Moresby**	**54.54**	**186**	LR	LR	23 07 51.5	
	comp=Z,198nm,21.1s,baz=344,slow=34						
AML	**Almayashu**	**54.58**	**297**	P	**P**	**22 46 53.8**	**+1.2**
	SNR=13						
KKN	**Kakani**	**54.85**	**276**	*e*P	**P**	**22 46 55.4**	**+0.9**
	comp=Z,141nm,1.4s						
LLLB	**Lillooet**	**54.86**	**51**	*e*P	**P**	**22 46 55.5**	**+1.4**
	comp=Z,25nm,1.7s						
HNR	**Honiara**	**54.87**	**170**	LR	LR	23 13 06.7	
	comp=Z,417nm,18.0s,baz=328,slow=39						
HSPB	**Hornsund (broa**	**55.03**	**349**	*e*P	**P**	**22 46 54.7**	**-0.2**
HSPB				*e*		22 48 55.6	
HSPB				*e*S	**S**	**22 54 35.0**	**-1.2**
HSPB				*e*S	S	22 54 37.9	+1.7
HSPB				MLR	MLR		
	comp=Z,500nm,19.9s						
DMN	**Daman**	**55.08**	**276**	*e*P	**P**	**22 46 56.8**	**+0.6**
	comp=Z,230nm,1.7s						
GKN	**Gorkha**	**55.17**	**276**	*e*P	**P**	**22 46 57.3**	**+0.5**
	comp=Z,77nm,1.0s						
DANN	**Dangsing**	**55.58**	**277**	*e*P	**P**	**22 47 00.8**	**+0.9**
ARU	**Arti**	**55.61**	**318**	*e*P	**P**	**22 46 57.1**	**-2.2**
ARU	**Arti**	**55.61**	**318**	*e*P	**P**	**22 46 57.6**	**-1.8**
	comp=Z,15nm,0.9s						
ARU	**Arti**	**55.61**	**318***c*	*i*P	**P**	**22 46 56.9**	**-2.4**
ARU						22 47 54.8	
ARU				S	**S**	**22 54 43.5**	**-1.0**
ARU						22 56 41.5	
ARU				SS	**SS**	**22 58 28.6**	**-0.3**
ARU				pmax	pmax		
	comp=Z,34nm,1.7s						
ARU				MLR	MLR		
	comp=Z,844nm,18.0s						
KOLN	**Koldanda**	**56.04**	**277**	*e*P	**P**	**22 47 03.6**	**+0.5**
KK31	**Karatay Array**	**56.05**	**299**	*e*P	**P**	**22 47 02.6**	**-0.1**
KK31				*e*sP	**P**	**22 47 02.8**	**+0.1**
KK31	**Karatay Array**	**56.05**	**299**	*e*P	**P**	**22 47 02.6**	**-0.1**
KKAR	**Karatay Array**	**56.05**	**299**	*e*P	**P**	**22 47 02.8**	**+0.1**
KKAR	**Karatay Array**	**56.05**	**299**	*e*P	**P**	**22 47 02.8**	**+0.1**
PYUN	**Piuthan**	**56.27**	**277**	*e*P	**P**	**22 47 05.2**	**+0.5**
	comp=Z,102nm,0.8s						
SPSI	**Sidrap Palu**	**56.77**	**219**	P	**P**	**22 47 09.8**	**+1.8**
	comp=Z,6.6nm,1.6s						
BOK	**Bokaro**	**56.90**	**271**	*e*P	**P**	**22 47 07.5**	**-1.5**
I03D	**Drain, OR**	**57.68**	**59**	P	**P**	**22 47 16.3**	**+2.1**
	baz=304						
I04A	**Tendick Farm,**	**58.19**	**58**	P	**P**	**22 47 19.3**	**+1.4**
	baz=304						
PRGR	**Permogore**	**58.23**	**327**	*e*P	**P**	**22 47 16.2**	**-1.6**
PRGR				pmax	pmax		
	comp=Z,15nm,0.9s						
DDI	**Dehra Dun**	**58.36**	**283**	*e*P	**P**	**22 47 19.5**	**+0.2**
DHRM	**DHARAMSHALA**	**58.41**	**285**	*e*P	**P**	**22 47 19.6**	**-0.2**
SMLA	**Simla**	**58.49**	**284**	*e*P	**P**	**22 47 19.9**	**-0.1**
KEV	**Kevo**	**58.52**	**340**	*e*P	**P**	**22 47 19.4**	**-0.3**
	comp=Z,18nm,1.1s						
KEV	**Kevo**	**58.52**	**340**	*e*P	**P**	**22 47 19.4**	**-0.3**
KEV				pmax	pmax		
	comp=Z,18nm,1.1s						
ABKAR	**Akbulak array**	**58.80**	**310**	*e*P	**P**	**22 47 21.1**	**-0.9**
ARCES	**ARCESS Array B**	**59.04**	**341**	P	**P**	**22 47 22.3**	**-1.0**
	comp=Z,13nm,1.0s,baz=44,slow=5.6,SNR=19						
ARCES	**ARCESS Array B**	**59.04**	**341**	*e*P	**P**	**22 47 23.1**	**-0.3**
PINE	**Pine Mountain**	**59.07**	**57**	*e*P	**P**	**22 47 26.1**	**+1.9**
	comp=Z,24nm,1.5s						
AKTO	**Aktyubinsk**	**59.16**	**312**	P	**P**	**22 47 23.5**	**-1.0**
	comp=Z,2.5nm,0.7s,baz=51,slow=9.5,SNR=5.7						
AKTO				LR	LR	23 15 51.6	
	comp=Z,2µm,18.7s,baz=47,slow=39						
YBH	**Yreka Blue Hor**	**59.18**	**60**	LR	LR	23 09 40.5	
	comp=Z,244nm,21.4s,baz=311,slow=33						
J05D	**Fort Rock, OR**	**59.19**	**58**	P	**P**	**22 47 26.2**	**+1.3**
	baz=305						
G08A	**Pilot Rock**	**59.38**	**55**	*e*P	**P**	**22 47 26.4**	**+0.2**
	comp=Z,5.5nm,1.1s						
NIL	**Nilore**	**59.64**	**289**	*e*P	**P**	**22 47 27.9**	**-0.2**
	comp=Z,86nm,0.9s						
NIL	**Nilore**	**59.64**	**289**	*e*P	**P**	**22 47 27.9**	**-0.2**
NIL				pmax	pmax		
	comp=Z,86nm,0.9s						
M04C	**Macdoel**	**59.68**	**60**	P	**P**	**22 47 29.4**	**+1.0**
	baz=305						
WALA	**Waterton Lakes**	**60.03**	**49**	*e*P	**P**	**22 47 31.5**	**+0.9**
	comp=Z,12nm,1.1s						
HEF	**Hetta**	**60.33**	**340**	*e*P	**P**	**22 47 31.7**	**-0.6**
TRO	**Tromso**	**60.41**	**343**	*e*P	**P**	**22 47 33.0**	**+0.3**
MOD	**Modoc Plateau**	**60.55**	**59**	*e*P	**P**	**22 47 36.2**	**+1.9**
	comp=Z,10nm,1.1s						
O03D	**Paynes Creek**	**60.57**	**61**	P	**P**	**22 47 34.6**	**+0.2**
	baz=306						
BMO	**Blue Mountains**	**60.59**	**55**	*e*P	**P**	**22 47 35.7**	**+1.1**
	comp=Z,18nm,1.5s						
BMO	**Blue Mountains**	**60.59**	**55**	*e*P	**P**	**22 47 35.7**	**+1.1**
BMO				pmax	pmax		
	comp=Z,18nm,1.5s						
J08A	**Circle Bar Ran**	**60.79**	**57**	*e*P	**P**	**22 47 37.5**	**+1.5**
	comp=Z,11nm,1.3s						
KLMR	**Klimovskoe**	**61.01**	**329**	*e*P	**P**	**22 47 35.4**	**-1.5**
KLMR				pmax	pmax		
	comp=Z,8.0nm,1.2s						
KLMR	**Klimovskoe**	**61.01**	**329**	*e*P	**P**	**22 47 35.5**	**-1.5**
KLMR				AMP		22 47 43.4	
	comp=Z,8.0nm,1.2s						
KLMR				LQ	LQ	23 09 51.6	
KLMR				LQ	LQ	23 09 51.6	
KLMR				LR	LR	23 13 02.8	
WVOR	**Wild Horse Val**	**61.23**	**58**	*e*P	**P**	**22 47 40.1**	**+1.1**
	comp=Z,9.0nm,1.1s						
WVOR	**Wild Horse Val**	**61.23**	**58**	*e*P	**P**	**22 47 40.1**	**+1.1**
WVOR				pmax	pmax		
	comp=Z,9.0nm,1.1s						
MSO	**Missoula**	**61.33**	**51**	P	**P**	**22 47 39.6**	**+0.1**
	baz=307						
MSO	**Missoula**	**61.33**	**51**	*e*P	**P**	**22 47 39.9**	**+0.3**
	comp=Z,20nm,1.1s						
AFDM	**Forest Hills D**	**61.88**	**62**	*e*P	**P**	**22 47 41.3**	**-2.0**
	comp=Z,7.4nm,1.1s						
KBL	**Kabul**	**61.90**	**292**	*e*P	**P**	**22 47 43.3**	**-0.4**
	comp=Z,19nm,0.9s						
KBL	**Kabul**	**61.90**	**292**	*e*P	**P**	**22 47 43.3**	**-0.4**
KBL				pmax	pmax		
	comp=Z,19nm,0.9s						
SUMG	**Summit**	**62.28**	**4**	*e*P	**P**	**22 47 46.0**	**+0.1**
	comp=Z,74nm,1.1s						
SUMG	**Summit**	**62.28**	**4**	*e*P	**P**	**22 47 46.0**	**+0.1**
SUMG				pmax	pmax		
	comp=Z,74nm,1.1s						
PAHR	**Pah Rah Range**	**62.41**	**60**	*e*P	**P**	**22 47 48.0**	**+1.1**
	comp=Z,9.9nm,1.2s						
HRY	**Holter Researc**	**62.56**	**50**	*e*P	**P**	**22 47 49.5**	**+1.7**
PNTR	**Pine Nut**	**62.65**	**61**	*e*P	**P**	**22 47 49.7**	**+1.1**
	comp=Z,9.9nm,0.9s						
PSI	**Prapat**	**62.70**	**244**	LR	LR	23 16 20.6	
	comp=Z,136nm,20.0s,baz=86,slow=37						
LRM	**Limekiln Ridge**	**62.76**	**52**	*e*P	**P**	**22 47 50.2**	**+0.9**
CMB	**Columbia Colle**	**62.80**	**63**	*e*P	**P**	**22 47 51.1**	**+1.6**
	comp=Z,22nm,1.6s						
CMB	**Columbia Colle**	**62.80**	**63**	*e*P	**P**	**22 47 51.1**	**+1.6**
CMB				pmax	pmax		
	comp=Z,22nm,1.6s						
EGMT	**Eagleton**	**62.86**	**48**	P	**P**	**22 47 49.3**	**-0.5**
	baz=308						
EGMT	**Eagleton**	**62.86**	**48**	*e*P	**P**	**22 47 50.6**	**+0.8**
	comp=Z,20nm,1.3s						
DLMT	**Dillon**	**62.96**	**52**	*e*P	**P**	**22 47 51.3**	**+0.8**
	comp=Z,13nm,1.4s						
HLID	**Hailey**	**63.03**	**54**	P	**P**	**22 47 51.7**	**+0.6**
	baz=308						
HLID	**Hailey**	**63.03**	**54**	*e*P	**P**	**22 47 52.1**	**+1.0**
	comp=Z,7.3nm,1.2s						
MCMT	**McKenzie Canyo**	**63.15**	**53**	*e*P	**P**	**22 47 52.6**	**+0.7**
BHPL	**Bhopal**	**63.21**	**277**	*e*P	**P**	**22 47 51.6**	**-0.7**
BMN	**Battle Mountai**	**63.29**	**59**	*e*P	**P**	**22 47 53.6**	**+0.8**
	comp=Z,8.6nm,1.1s						
BMN	**Battle Mountai**	**63.29**	**59**	*e*P	**P**	**22 47 53.6**	**+0.8**
BMN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
BOZ	**Bozeman (W)**	**63.35**	**51**	P	**P**	**22 47 53.0**	**-0.2**
	baz=308						
BOZ	**Bozeman (W)**	**63.35**	**51**	*e*P	**P**	**22 47 53.8**	**+0.6**
	comp=Z,9.4nm,1.0s						
BOZ	**Bozeman (W)**	**63.35**	**51**	*e*P	**P**	**22 47 53.8**	**+0.6**
BOZ				pmax	pmax		
	comp=Z,9.0nm,1.0s						
RYN	**Ryan**	**63.60**	**61**	*e*P	**P**	**22 47 56.5**	**+1.6**
	comp=Z,8.0nm,1.0s						
KVN	**Kaiserville**	**63.60**	**60**	*e*P	**P**	**22 47 56.2**	**+1.2**
	comp=Z,8.3nm,1.1s						
KVN	**Kaiserville**	**63.60**	**60**	*e*P	**P**	**22 47 56.2**	**+1.2**

KVN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
NV01	Mina Array Sit	63.86	61	eP	P	22 47 57.3	+0.6
NVAR	Mina Array Bea	63.86	61	P	P	22 47 57.7	+1.0
	comp=Z,2.1nm,0.8s,baz=289,slow=6.7,SNR=12						
QLMT	Earthquake Lak	63.94	52	eP	P	22 47 58.9	+1.8
NV11	Mina Array Sit	63.95	61	eP	P	22 47 58.8	+1.6
	comp=Z,1.5nm,1.5s						
YHB	Horse Butte	64.12	52	eP	P	22 47 59.1	+0.8
	comp=Z,10nm,0.8s						
ELK	Elko	64.28	57	P	P	22 48 01.3	+1.8
	comp=Z,1.0nm,0.8s,baz=322,slow=7.5,SNR=3.5						
FLWY	Flagg Ranch	64.81	52	eP	P	22 48 04.2	+1.3
	comp=Z,53nm,2.0s						
FXWY	Fox Creek	64.91	53	eP	P	22 48 04.8	+1.3
	comp=Z,7.4nm,1.0s						
RLMT	Red Lodge	64.95	51	P	P	22 48 04.4	+0.7
	baz=310						
RLMT	Red Lodge	64.95	51	eP	P	22 48 05.0	+1.3
	comp=Z,19nm,1.4s						
TPAW	Teton Pass	65.05	53	eP	P	22 48 05.6	+1.1
	comp=Z,20nm,1.1s						
FIA1	FINESS Array S	65.08	335	eP	P	22 48 03.5	-0.5
	comp=Z,35nm,1.3s						
FINES	FINESS Array B	65.09	335	P	P	22 48 03.6	-0.4
	comp=Z,8.0nm,0.7s,baz=37,slow=7.1,SNR=33						
FINES				LR	LR	23 20 01.7	
	comp=Z,713nm,18.1s,baz=32,slow=39						
HVU	Hansel Valley	65.09	55	eP	P	22 48 06.3	+1.7
	comp=Z,6.9nm,1.1s						
HVU	Hansel Valley	65.09	55	eP	P	22 48 06.3	+1.7
HVU				pmax	pmax		
	comp=Z,7.0nm,1.0s						
LOHW	Long Hollow	65.17	53	eP	P	22 48 06.8	+1.6
	comp=Z,14nm,1.3s						
CTA	Charters Tower	65.20	186	P	P	22 48 03.1	-2.1
	comp=Z,2.6nm,0.8s,baz=346,slow=4.2,SNR=2.2						
CWC	Cottonwood Cre	65.23	63	P	P	22 48 05.7	+0.1
	baz=309						
DGMT	Dagmar	65.44	45	P	P	22 48 07.1	+0.4
	baz=311						
R11A	Troy Canyon, C	65.58	60	P	P	22 48 08.1	+0.2
	baz=309						
R11A	Troy Canyon, C	65.58	60	eP	P	22 48 08.6	+0.8
	comp=Z,7.8nm,1.2s						
MPMC	Manual Prospec	65.84	63	P	P	22 48 09.1	-0.5
	baz=309						
HWUT	Hardware Ranch	65.90	55	eP	P	22 48 11.0	+1.2
	comp=Z,9.9nm,1.1s						
FURC	Furnace Creek,	65.97	62	P	P	22 48 10.3	+0.1
	baz=310						
TPNV	Topopah Spring	66.05	61	P	P	22 48 11.5	+0.6
	baz=310						
TPNV	Topopah Spring	66.05	61	eP	P	22 48 11.8	+0.9
	comp=Z,18nm,1.4s						
TPNV	Topopah Spring	66.05	61	eP	P	22 48 11.8	+0.9
TPNV				pmax	pmax		
	comp=Z,18nm,1.3s						
DUG	Dugway, Tooele	66.07	57	P	P	22 48 11.5	+0.5
	baz=310						
DUG	Dugway, Tooele	66.07	57	eP	P	22 48 12.5	+1.6
	comp=Z,14nm,1.2s						
DUG	Dugway, Tooele	66.07	57	eP	P	22 48 12.5	+1.6
DUG				pmax	pmax		
	comp=Z,14nm,1.2s						
OBN	Obninsk	66.12	325	eP	P	22 48 09.6	-1.2
OBN	Obninsk	66.12	325	c iP	P	22 48 09.4	-1.4
OBN				e		22 48 40.6	
OBN				e		22 50 31.9	
OBN				pmax	pmax		
	comp=Z,21nm,1.5s						
OBN				MLR	MLR		
	comp=Z,519nm,17.0s						
HYB	Hyderabad	66.24	271	iP	P	22 48 12.0	-0.2
HYB	Hyderabad	66.24	271	eP	P	22 48 11.8	-0.4
EDW2	Edwards Air Fo	66.27	64	P	P	22 48 12.3	+0.1
	baz=310						
BW06	Boulder Array	66.30	53	P	P	22 48 12.8	+0.3
	baz=310						
BW06	Boulder Array	66.30	53	eP	P	22 48 13.0	+0.5
	comp=Z,10nm,1.1s						
PD31	Pinedale Array	66.30	53	eP	P	22 48 13.0	+0.5
PDAR	Pinedale Array	66.30	53	P	P	22 48 12.9	+0.5
	comp=Z,4.2nm,1.0s,baz=282,slow=2.9,SNR=23						
PDAR				LR	LR	23 17 28.4	
	comp=Z,145nm,19.3s,baz=345,slow=36						
PDAR	Pinedale Array	66.30	53	eP	P	22 48 12.2	-0.2
GEYT	Alibeck	66.71	301	P	P	22 48 16.0	+1.0
	comp=Z,13nm,1.0s,baz=51,slow=7.6,SNR=33						
GEYT				LR	LR	23 19 56.6	
	comp=Z,529nm,18.4s,baz=265,slow=38						
GYA0B	ALIBECK ARRAY	66.71	301	eP	P	22 48 16.2	+1.3
	comp=Z,36nm,1.1s						
WRAB	Tennant Creek	66.80	198	eP	P	22 48 16.3	+0.8
WB2	Warramunga Arr	66.81	198	eP	P	22 48 17.2	+1.7
	comp=Z,17nm,1.2s						
WRA	Warramunga Arr	66.81	198	P	P	22 48 14.9	-0.6
	comp=Z,4.1nm,0.9s,baz=17,slow=6.5,SNR=11						
WRA				LR	LR	23 15 42.6	
	comp=Z,288nm,21.9s,baz=190,slow=34						
SHPR	Sheep Range	67.01	61	eP	P	22 48 18.3	+1.3
	comp=Z,13nm,1.4s						
VSU	Vasula	67.20	332	ceP	P	22 48 16.6	-1.0
VSU				pmax	pmax		
	comp=Z,71nm,1.0s						
HEC	Hector,Ludlow	67.35	63	P	P	22 48 19.7	+0.6
	baz=310						
FITZ	Fitzroy Crossi	67.42	207	P	P	22 48 17.4	-2.0
	comp=Z,4.7nm,1.0s,baz=0.0,slow=8.1,SNR=4.1						
FITZ				LR	LR	23 18 25.3	
	comp=Z,53nm,19.6s,baz=22,slow=37						
CCUT	Cedar City	67.44	59	eP	P	22 48 21.2	+1.4
	comp=Z,11nm,1.3s						
GMRC	Granite Mounta	67.80	63	P	P	22 48 21.8	-0.2
	baz=310						
VSR	Storozhevoye	67.81	321	eP	P	22 48 19.6	-2.0
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VSR				MLR	MLR		
	comp=Z,1μm,16.0s						
MTPU	Mount Pierson	67.83	58	eP	P	22 48 24.3	+1.9
	comp=Z,7.6nm,1.1s						
LCMT	Little Creek M	67.86	59	eP	P	22 48 23.8	+1.4
	comp=Z,7.1nm,0.9s						
VORD	Divnogorie	67.93	321	eP	P	22 48 21.2	-1.2
VORD				pmax	pmax		
	comp=Z,20nm,1.9s						
P18A	Preston Nutter	67.94	56	eP	P	22 48 24.2	+1.1
	comp=Z,15nm,1.5s						
FRD	Ford Ranch, An	68.04	64	P	P	22 48 23.2	-0.3
	baz=311						
PFO	Pinyon Flats O	68.06	64	P	P	22 48 22.9	-0.8
	baz=311						
K22A	Casper	68.06	51	P	P	22 48 23.4	-0.2
	baz=312						
KNB	Kanab	68.11	59	eP	P	22 48 26.1	+2.1
	comp=Z,43nm,1.8s						
KNB	Kanab	68.11	59	eP	P	22 48 26.1	+2.1
KNB				pmax	pmax		
	comp=Z,43nm,1.7s						
SRU	San Rafael Swe	68.12	56	eP	P	22 48 25.0	+1.0
	comp=Z,12nm,1.1s						
SRU	San Rafael Swe	68.12	56	eP	P	22 48 25.0	+1.0
SRU				pmax	pmax		
	comp=Z,12nm,1.0s						
ULM	Lac du Bonnet	68.20	40	P	P	22 48 24.1	0.0
	comp=Z,1.8nm,0.5s,baz=288,slow=9.6,SNR=2.8						
ULM				LR	LR	23 19 34.3	
	comp=Z,346nm,20.6s,baz=337,slow=37						
DZM	Mont Dzumac	68.25	166	LR	LR	23 15 30.0	
	comp=Z,647nm,19.4s,baz=45,slow=34						
DZM	Mont Dzumac	68.25	166	eLR	LR	23 08 58.9	
	comp=Z,564nm,20.1s						
RSSD	Black Hills	68.42	49	P	P	22 48 25.8	-0.1
	baz=313						
RSSD	Black Hills	68.42	49	eP	P	22 48 26.2	+0.3
	comp=Z,13nm,1.1s						
RSSD	Black Hills	68.42	49	eP	P	22 48 26.2	+0.3
RSSD				pmax	pmax		
	comp=Z,13nm,1.1s						
IRM	Iron Mountain	68.53	63	P	P	22 48 26.9	+0.4
	baz=311						
BC3	Big Chuckawall	68.66	63	P	P	22 48 27.4	0.0
	baz=311						
O20A	White River Ci	68.77	54	P	P	22 48 28.1	0.0
	baz=312						
POO	Poona	68.81	275	eP	P	22 48 28.2	-0.2
POO				IAmb	IAmb	22 48 30.1	
	comp=Z,67nm,0.2s						
U15A	North Rim	68.82	59	eP	P	22 48 29.8	+1.2
PV09	Paradox Valley	69.34	56	eP	P	22 48 32.6	+0.8
NB2	NORSAR Subarra	69.42	341	P	P	22 48 30.7	-0.9
	comp=Z,93nm,1.4s,baz=30,slow=6.5						
NB2	NORSAR Subarra	69.42	341	P	P	22 48 30.7	-0.9
	baz=30,slow=6.5						
NOA	NORSAR Array B	69.42	341	LR	LR	23 23 18.4	
	comp=Z,393nm,18.6s,baz=25,slow=40						
MAK	Makhachkala	69.47	311	eP	P	22 48 32.0	-0.1
MAK				eS	S	22 57 41.1	+2.1
MAK				pmax	pmax		
	comp=Z,50nm,1.4s						
MAK				MLR	MLR		
	comp=Z,783nm,15.0s						
N23A	Red Feather La	69.56	52	P	P	22 48 34.1	+1.0
	baz=313						
AGMN	Agassiz Nation	69.60	41	P	P	22 48 31.2	-1.6
	baz=316						
AGMN	Agassiz Nation	69.60	41	eP	P	22 48 32.3	-0.6
	comp=Z,11nm,1.1s						
HFS	Hagfors	69.61	339	P	P	22 48 32.0	-0.7
	comp=Z,6.9nm,0.4s,baz=54,slow=5.7,SNR=54						
HFS				LR	LR	23 21 18.9	
	comp=Z,338nm,21.5s,baz=20,slow=38						
PV03	Paradox Valley	69.67	56	eP	P	22 48 34.3	+0.6
IDID	Didziasalis	69.68	330	eP	P	22 48 32.3	-0.9
IDID				IAmb	IAmb	22 48 35.4	
	comp=Z,9.2nm,1.2s						
IIGN	Ignalina	69.83	330	eP	P	22 48 33.0	-1.2
IIGN				IAmb	IAmb	22 48 35.5	
	comp=Z,18nm,1.3s						
MICGM	Minsk	69.91	329	eP	P	22 48 34.0	-0.6
MICGM				eLR	LR	23 19 25.0	
WUAZ	Wupatki	69.98	60	P	P	22 48 34.9	-0.7
	baz=312						
WUAZ	Wupatki	69.98	60	eP	P	22 48 36.9	+1.3
	comp=Z,7.4nm,0.9s						
NACGM	Naroch	69.99	330	e	P	22 48 32.0	-3.1
B34A	Aery, Baudette	70.02	41	P	P	22 48 35.1	-0.3
	baz=316						
SMCO	Snowmass	70.13	54	eP	P	22 48 37.4	+0.6
	comp=Z,11nm,1.4s						
GROC	Groznyy	70.21	312	eP	P	22 48 32.4	-4.3
GROC				e		22 48 51.5	
GROC				pmax	pmax		
	comp=Z,38nm,1.5s						
AKT	Akhty	70.36	309	⇑iP	P	22 48 38.2	+0.4
AKT				e		22 48 59.0	
AKT				pmax	pmax		
	comp=Z,48nm,0.8s						
ISCO	Idaho Springs	70.49	53	P	P	22 48 38.9	0.0
	baz=313						
ISCO	Idaho Springs	70.49	53	eP	P	22 48 39.7	+0.9
	comp=Z,16nm,1.5s						
ISCO	Idaho Springs	70.49	53	eP	P	22 48 39.7	+0.9
ISCO				pmax	pmax		
	comp=Z,16nm,1.5s						
AS01	Alice Springs	70.50	198	eP	P	22 48 39.1	+0.6
ASAR	Alice Springs	70.51	198	P	P	22 48 39.4	+0.8
	comp=Z,4.0nm,0.9s,baz=12,slow=5.9,SNR=14						
ASAR				LR	LR	23 17 47.7	
	comp=Z,266nm,21.7s,baz=20,slow=34						
B35A	Bob, Littlefor	70.54	40	P	P	22 48 37.3	-1.3
	baz=317						
MVCO	Mesa Verde	70.57	57	P	P	22 48 39.7	+0.4
	baz=313						
MVCO	Mesa Verde	70.57	57	eP	P	22 48 40.1	+0.8
	comp=Z,13nm,1.1s						
G32A	Webster	70.99	44	P	P	22 48 40.9	-0.5
	baz=316						
KONO	Kongsberg	71.03	341	ceP	P	22 48 41.0	-0.4
KONO				pmax	pmax		
	comp=Z,48nm,1.6s						
NCK	Nalchik	71.16	313	⇓iP	P	22 48 43.5	+1.0
NCK				pmax	pmax		
	comp=Z,66nm,1.2s						
S22A	4UR Ranch, Cre	71.19	55	P	P	22 48 43.6	+0.5
	baz=313						
S22A	4UR Ranch, Cre	71.19	55	eP	P	22 48 44.2	+1.1
	comp=Z,12nm,1.3s						
KIV	Kislovodsk	71.30	314	eP	P	22 48 44.0	+0.6
KIV	Kislovodsk	71.30	314	eP	P	22 48 44.6	+1.2
	comp=Z,87nm,1.2s						
KIV	Kislovodsk	71.30	314	c iP	P	22 48 44.0	+0.6
KIV				e		22 49 03.3	
KIV				e		22 51 28.5	
KIV				ePPP	PPP	22 53 04.6	
KIV				pmax	pmax		
	comp=Z,89nm,1.2s						
KIV				MLR	MLR		
	comp=Z,870nm,17.0s						
KBZ	Khabaz	71.35	314	P	P	22 48 44.5	+0.9
	comp=Z,31nm,1.0s,baz=56,slow=4.1,SNR=58						
KBZ				LR	LR	23 24 59.2	
	comp=Z,1μm,18.8s,baz=38,slow=40						
C36A	Pine Crest Far	71.39	40	P	P	22 48 43.2	-0.6
	baz=318						
ZEI	Tsey	71.50	312	eP	P	22 48 42.2	-2.6
ZEI				pmax	pmax		
	comp=Z,41nm,1.2s						
D36A	Goodland	71.67	41	P	P	22 48 44.7	-0.7
	baz=318						
NEY	Neytrino	71.78	313	⇓iP	P	22 48 47.7	+1.2
NEY				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TBLG	Delisi	71.80	311	eP	P	22 48 47.4	+1.0
	comp=Z,125nm,1.2s						
TBLG	Delisi	71.80	311	eP	P	22 48 47.4	+1.0
TBLG				pmax	pmax		
	comp=Z,120nm,1.2s						
EYMN	Ely	71.85	39	P	P	22 48 46.0	-0.6
	baz=318						
SDCO	Great Sand Dun	71.95	54	P	P	22 48 46.6	-1.2
	baz=314						
SDCO	Great Sand Dun	71.95	54	eP	P	22 48 47.7	-0.1
	comp=Z,11nm,1.6s						
SUW	Suwalki	71.96	331	eP	P	22 48 46.3	-0.8
SUW	Suwalki	71.96	331	eP	P	22 48 46.6	-0.5
	comp=Z,102nm,1.4s						
SUW	Suwalki	71.96	331	eP	P	22 48 46.6	-0.5
SUW				pmax	pmax		
	comp=Z,100nm,1.4s						
D37A	Cotton	72.02	40	P	P	22 48 46.3	-1.3
	baz=318						
E36A	McGregor	72.11	41	P	P	22 48 48.2	0.0
	baz=318						
C38A	Sawbill Land.	72.12	39	P	P	22 48 47.5	-0.8
	baz=319						
AKASG	Malin Array Be	72.38	326	P	P	22 48 48.9	-0.8
	comp=Z,5.7nm,0.6s,baz=37,slow=6.2,SNR=58						
AKASG				LR	LR	23 23 24.8	
	comp=Z,578nm,18.5s,baz=25,slow=38						
AKBB	Malin Array Si	72.38	326	eP	P	22 48 49.3	-0.3
KIEV	Kiev	72.39	326	eP	P	22 48 48.6	-1.1
KIEV	Kiev	72.39	326	eP	P	22 48 48.8	-0.9
	comp=Z,71nm,1.4s						
KIEV	Kiev	72.39	326	c iP	P	22 48 48.6	-1.1
KIEV				pmax	pmax		
	comp=Z,57nm,1.4s						
AK11	Malin Array Si	72.42	326	eP	P	22 48 49.4	-0.5
KLNR	Kaliningrad	72.46	333	⇑iP	P	22 48 50.1	+0.1
KLNR				pmax	pmax		
	comp=Z,77nm,0.9s						
TUC	Tucson	72.49	62	P	P	22 48 50.2	-0.6
	baz=313						
ECSD	EROS Data Cent	72.52	45	P	P	22 48 49.8	-0.8
	baz=317						
ECSD	EROS Data Cent	72.52	45	eP	P	22 48 50.5	-0.2
	comp=Z,14nm,1.3s						
AKH	Akhalkalaki	72.69	312	⇓iP	P	22 48 53.5	+1.6
AKH	Akhalkalaki	72.69	312	eP	P	22 48 53.8	+1.9
	comp=Z,68nm,1.5s						
AKH	Akhalkalaki	72.69	312	eP	P	22 48 53.8	+1.9
AKH				pmax	pmax		
	comp=Z,68nm,1.4s						
H35A	Sunnyside Ranc	72.70	43	P	P	22 48 51.7	+0.1
	baz=317						
E38A	The Farm, Brul	72.83	40	P	P	22 48 51.5	-0.9
	baz=319						
GNI	Garni	72.91	310	P	P	22 48 52.6	-0.7
	comp=Z,23nm,1.1s,baz=179,slow=4.0,SNR=24						
GNI				LR	LR	23 25 47.3	
	comp=Z,517nm,18.1s,baz=38,slow=40						
T25A	Trinidad	73.00	54	P	P	22 48 53.3	-0.5
	baz=314						
T25A	Trinidad	73.00	54	eP	P	22 48 53.4	-0.5
	comp=Z,9.8nm,1.1s						
SOC	Sochi	73.06	315	c iP	P	22 48 54.1	+0.3
SOC				ePPP	PPP	22 53 18.0	
SOC				eS	S	22 58 22.0	+1.4
SOC				eSS	SS	23 03 02.7	+2.2
SOC				pmax	pmax		
	comp=Z,11nm,0.4s						
SOC				MLR	MLR		
	comp=Z,615nm,19.0s						
F38A	Pierce - Schro	73.16	41	P	P	22 48 54.1	-0.4
	baz=319						
H36A	Jessenland, He	73.22	43	P	P	22 48 55.2	+0.4
	baz=318						
ANN	Anapa	73.28	317	eP	P	22 48 51.2	-3.9
ANN				e		22 51 35.0	
ANN				ePPP	PPP	22 53 21.3	
ANN				eS	S	22 58 18.8	-4.2
ANN				eSS	SS	23 03 03.4	-0.3
ANN				eSSS	SSS	23 06 19.5	
ANN				pmax	pmax		
	comp=Z,84nm,1.6s						
LAZ	Ladron	73.29	58	eP	P	22 48 56.9	+1.3
TASM	ASL Pad, Albuq	73.32	57	P	P	22 48 56.1	+0.3
	baz=314						
ANMO	Albuquerque	73.32	57	P	P	22 48 55.5	-0.3
	comp=Z,2.1nm,1.0s,baz=317,slow=10,SNR=5.2						
ANMO				LR	LR	23 18 01.8	
	comp=Z,148nm,20.9s,baz=334,slow=33						
ANMO	Albuquerque	73.32	57	P	P	22 48 55.9	+0.1
	baz=314						
ANMO	Albuquerque	73.32	57	eP	P	22 48 56.7	+0.9
	comp=Z,11nm,1.4s						
E39A	Mellen	73.45	40	P	P	22 48 55.9	-0.2
	baz=319						
F39A	Loretta	73.64	40	P	P	22 48 56.3	-0.9
	baz=319						
E40A	Wakefield	73.70	39	P	P	22 48 56.8	-0.8
	baz=320						
G38A	Ridgeland	73.77	41	P	P	22 48 56.4	-1.6
	baz=319						
D41A	Chassel	73.82	38	P	P	22 48 58.4	+0.2
	baz=320						
I37A	Lemond, Waseca	73.89	43	P	P	22 48 58.8	0.0
	baz=318						
F40A	Park Falls	74.00	40	P	P	22 48 58.8	-0.6
	baz=320						
319A	Douglas	74.06	62	eP	P	22 49 01.0	+0.9
	comp=Z,20nm,1.1s						
E41A	Kenton	74.10	39	P	P	22 48 59.9	0.0
	baz=320						
121A	Cookes Peak, D	74.19	60	P	P	22 49 02.0	+1.1
	baz=314						
J37A	Redenius Farm,	74.34	44	P	P	22 49 00.9	-0.5
	baz=318						
K36A	Gilmore City	74.40	45	P	P	22 49 00.7	-1.0
	baz=318						
G40A	Rib Lake	74.46	40	P	P	22 49 01.1	-0.9
	baz=320						
GKP	Gorka Klasztor	74.53	334	eP	P	22 49 02.1	-0.2
GKP	Gorka Klasztor	74.53	334	eP	P	22 49 02.1	-0.2
BEL	Belsk	74.58	331	eP	P	22 49 03.1	+0.5
BEL	Belsk	74.58	331	eP	P	22 49 03.1	+0.5
E42A	Champion	74.59	38	P	P	22 49 02.6	-0.2
	baz=321						
F41A	Three Lakes	74.59	39	P	P	22 49 02.4	-0.4
	baz=320						
K37A	Belmond	74.71	44	P	P	22 49 02.3	-1.2
	baz=318						
SIM	Simferopol’	74.72	319	ceP	P	22 49 03.3	-0.2
SIM				eS	S	22 58 43.0	+3.7
SIM				pmax	pmax		
	comp=Z,26nm,1.1s						
SIM				MLR	MLR		
	comp=Z,700nm,16.0s						
SORM	Soroca	74.75	325	⇑iP	P	22 49 03.1	-0.5
J38A	Wedel Dairy, R	74.86	43	P	P	22 49 04.1	-0.3
	baz=319						
H40A	Chili	74.86	41	P	P	22 49 04.0	-0.4
	baz=320						
I39A	Houston	74.91	42	P	P	22 49 04.0	-0.7
	baz=319						
SCHQ	Schefferville	75.03	22	P	P	22 49 05.3	+0.1
	comp=Z,4.1nm,0.8s,baz=240,slow=16,SNR=3.0						
SCHQ				LR	LR	23 27 21.4	
	comp=Z,255nm,18.1s,baz=344,slow=40						
LVV	L’vov	75.08	328	eP	P	22 49 05.4	-0.2
L37A	Phoenix Point,	75.13	45	P	P	22 49 05.9	-0.1
	baz=318						
J39A	Decorah	75.22	43	P	P	22 49 05.6	-0.9
	baz=319						
F43A	Flat Rock, Esc	75.38	38	P	P	22 49 07.3	0.0
	baz=321						
KIS	Kishinev	75.46	324	⇑iP	P	22 49 07.0	-0.7
	comp=Z,200nm,1.2s						
KIS				eS	S	22 58 50.0	+2.6
KIS				LRM	MLR	23 25 22.0	
	comp=Z,500nm,16.0s						
KIS	Kishinev	75.46	324	α iP	P	22 49 07.0	-0.7
KIS				eS	S	22 58 50.0	+2.6
KIS				e		22 59 10.0	
KIS				pmax	pmax		
	comp=Z,300nm,4.0s						
KIS				MLR	MLR		
	comp=N,1μm,16.0s						
KIS				MLR	MLR		
	comp=E,500nm,16.0s						
KIS				MLR	MLR		
	comp=Z,2μm,16.0s						
KIS				MLR	MLR		
	comp=Z,2μm,16.0s						
G43A	Wallace	75.60	39	P	P	22 49 08.1	-0.6
	baz=321						
K39A	Oelwein	75.61	43	P	P	22 49 08.0	-0.7
	baz=319						
KWP	Kalwaria Pacla	75.73	329	eP	P	22 49 09.7	+0.4
KWP	Kalwaria Pacla	75.73	329	eP	P	22 49 09.1	-0.2
	comp=Z,2μm,1.3s						
KWP	Kalwaria Pacla	75.73	329	eP	P	22 49 09.7	+0.4
M38A	Pleasantville	75.93	45	P	P	22 49 10.3	-0.3
	baz=319						
K40A	Colesburg	75.97	43	P	P	22 49 10.1	-0.7
	baz=320						
L39A	Vinton	75.99	44	P	P	22 49 09.9	-1.0
	baz=319						
J41A	Loganville	76.00	42	P	P	22 49 09.7	-1.3
	baz=320						
MATQ	Matagami	76.02	31	P	P	22 49 10.2	-0.7
	baz=326						
LEOM	Leova	76.11	324	⇓iP	P	22 49 12.5	+1.0
LEOM	Leova	76.11	324	⇓P	P	22 49 12.5	+1.0
WSAR	Wadi Sarin	76.14	289	P	P	22 49 09.9	-2.1
	comp=Z,5.2nm,0.8s,baz=59,slow=6.6,SNR=2.8						
WSAR				LR	LR	23 26 43.0	
	comp=Z,310nm,20.1s,baz=40,slow=39						
AMTX	Amarillo	76.16	54	P	P	22 49 12.6	+0.5
	baz=316						
AMTX	Amarillo	76.16	54	eP	P	22 49 13.2	+1.1
	comp=Z,12nm,1.0s						
MSTX	Muleshoe	76.17	56	P	P	22 49 11.5	-0.7
	baz=316						
MSTX	Muleshoe	76.17	56	eP	P	22 49 12.9	+0.7
	comp=Z,14nm,1.3s						
MNTX	Cornudas Mount	76.23	59	P	P	22 49 12.1	-0.4
	baz=315						
MNTX	Cornudas Mount	76.23	59	eP	P	22 49 12.8	+0.4
	comp=Z,22nm,1.8s						
OJC	Ojcow	76.27	331	eP	P	22 49 12.5	+0.1
OJC	Ojcow	76.27	331	eP	P	22 49 12.4	+0.1
	comp=Z,96nm,1.4s						
OJC	Ojcow	76.27	331	eP	P	22 49 12.5	+0.1
M39A	Webster	76.39	44	P	P	22 49 12.9	-0.3
	baz=319						
BUR08	Bucovina Ar. S	76.41	326	eP	P	22 49 13.4	+0.1
L40A	Anamosa	76.42	43	P	P	22 49 13.2	-0.1
	baz=320						
BUR04	Bucovina Ar. S	76.42	326	eP	P	22 49 11.3	-2.1
BURAR	Bucovina Array	76.42	326	⇓iP	P	22 49 13.6	+0.2
BURAR	Bucovina Array	76.42	326	⇓P	P	22 49 13.6	+0.2
BIZ	Bicaz	76.62	325	⇑iP	P	22 49 14.8	+0.4
N39A	Derby Farms, D	76.68	45	P	P	22 49 14.6	-0.3
	baz=319						
UZH	Uzhgorod	76.71	328	⇓iP	P	22 49 14.0	-0.8
UZH				e		22 49 25.4	
P37A	Lathrop	76.72	47	P	P	22 49 14.8	-0.2

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      baz=318
TESR  Tescani          76.74 325⇑iP    P      22 49 15.0 -0.1
NIE   Niedzica         76.77 330 eP    P      22 49 15.8 +0.5
NIE   Niedzica         76.77 330 eP    P      22 49 15.8 +0.5
CRVS  Cervenica-Dubn   76.79 329 eP    P      22 49 15.5 +0.2
CRVS                              pmax pmax
      comp=Z,67nm,1.8s
CRVS  Cervenica-Dubn   76.79 329 eP    P      22 49 15.5 +0.2
CRVS                             eL    L      23 27 11.7
KSP   Ksiaz            76.91 333 eP    P      22 49 15.8 -0.2
KSP   Ksiaz            76.91 333 eP    P      22 49 15.8 -0.2
TRPA  Tarpa            77.03 328⇑iP    P      22 49 17.1 +0.4
TRPA  Tarpa            77.03 328⇑eP    P      22 49 17.6 +0.9
CHGQ  Chibougamau      77.04  29  P    P      22 49 15.8 -0.9
      baz=328
P38A  Dawn             77.11  46  P    P      22 49 17.2 -0.1
      baz=319
OKC   Ostrava-Krasne   77.16 331  AMS  AMS    23 32 20.0
      comp=Z,400nm,15.1s
CFR   Carcaliu         77.19 323⇑iP    P      22 49 17.5 -0.1
CFR   Carcaliu         77.19 323 ⇑P    P      22 49 17.6 -0.1
ARCR  ARCALIA          77.20 326⇓iP    P      22 49 18.6 +1.0
VRI   Vrincioaia       77.23 324⇓iP    P      22 49 18.9 +1.0
VRI   Vrincioaia       77.23 324 ⇓P    P      22 49 18.9 +1.0
PLOR  Plostina         77.28 324⇑iP    P      22 49 18.6 +0.4
PLOR  Plostina         77.28 324 ⇑P    P      22 49 18.6 +0.4
LANS  Liptovska Anna   77.29 330 eP    P      22 49 19.1 +0.9
LANS  Liptovska Anna   77.29 330 eP    P      22 49 19.1 +0.9
UPC   Upice            77.29 333  AMS  AMS    23 28 20.0
      comp=Z,500nm,18.0s
STKA  Stephens Creek   77.31 189  LR   LR     23 23 09.9
      comp=Z,215nm,20.6s,baz=21,slow=36
DPC   Dobruska-Polom   77.33 333 eP    P      22 49 19.4 +1.0
DPC                              epP   sP     22 49 23.0 -1.3
DPC                               AMS  AMS    23 30 40.0
      comp=Z,500nm,16.3s
DPC   Dobruska-Polom   77.33 333 eP    P      22 49 19.4 +1.0
DPC                              e            22 49 23.0
DPC                               MLR  MLR
      comp=Z,500nm,16.3s
KRLC  Kraliky          77.42 332 eP    P      22 49 20.6 +1.7
MORC  Moravsky Berou   77.42 332⇑iP    P      22 49 19.5 +0.6
MORC  Moravsky Berou   77.42 332 eP    P      22 49 18.8 -0.1
      comp=Z,67nm,1.5s
MORC  Moravsky Berou   77.42 332 eP    P      22 49 18.8 -0.1
MORC                              pmax pmax
      comp=Z,67nm,1.5s
MORC  Moravsky Berou   77.42 332 eP    P      22 49 18.7 -0.1
CLL   Collm            77.53 335⇑iP    P      22 49 18.8 -0.6
      comp=Z,101nm,1.8s
CLL                              i (sP) PcP   22 49 31.6 +1.9
CLL                              eS    S      22 59 14.0 +4.1
CLL                              e            22 59 39.0
CLL                              e(SS)        23 04 48.0
CLL                              eSSS  SSS    23 07 30.0
CLL                               LmH         23 22 00.0
      comp=N,400nm,19.6s
CLL                               LmH         23 22 00.0
      comp=E,700nm,18.5s
CLL                               LmV         23 30 00.0
      comp=Z,400nm,18.4s
CLL   Collm            77.53 335 eP    P      22 49 19.1 -0.3
      comp=Z,34nm,1.2s
CLL   Collm            77.53 335⇑iP    P      22 49 18.8 -0.6
CLL                              i            22 49 31.6
CLL                              eS    S      22 59 14.0 +4.1
CLL                               pmax pmax
      comp=Z,101nm,1.8s
CLL                               MLR  MLR
      comp=Z,400nm,18.4s
Q38A  Cooks Store, C   77.56  47  P    P      22 49 19.0 -0.8
      baz=319
O40A  La Belle         77.57  45  P    P      22 49 18.1 -1.7
      baz=320
BELQ  Belleterre       77.60  33  P    P      22 49 18.8 -1.1
      baz=326
P39B  Salisbury        77.61  46  P    P      22 49 19.4 -0.6
      baz=319
BRG   Berggiesshubel   77.62 334 eP    P      22 49 19.9 -0.1
      comp=Z,58nm,1.9s
BRG                               S    S      22 59 12.0 +1.0
      comp=N,549nm,22.4s
      comp=E,219nm,18.4s
      comp=Z,577nm,18.5s
BRG   Berggiesshubel   77.62 334 eP    P      22 49 19.9 -0.1
BRG                               S    S      22 59 12.0 +1.0
BRG                               pmax pmax
      comp=Z,58nm,1.9s
BRG                               MLR  MLR
      comp=N,549nm,22.4s
BRG                               MLR  MLR
      comp=E,219nm,18.4s
BRG                               MLR  MLR
      comp=Z,577nm,18.5s
N41A  Harden Midland   77.63  44  P    P      22 49 19.7 -0.5
      baz=320
EKA   Eskdalemuir Ar   77.64 346  P    P      22 49 19.9  0.0
      comp=Z,1.8nm,0.5s,baz=23,slow=5.2,SNR=16
EKA                               LR   LR     23 29 00.1
      comp=Z,72nm,18.2s,baz=40,slow=40
TIRR  Tirgusor         77.65 322⇓iP    P      22 49 19.2 -1.0
TIRR  Tirgusor         77.65 322 ⇓P    P      22 49 19.2 -1.0
HARR  Harsova          77.67 323⇑iP    P      22 49 21.1 +0.8
HARR  Harsova          77.67 323 ⇑P    P      22 49 21.1 +0.8
TLB   Topalu           77.70 323⇓iP    P      22 49 21.4 +0.9
TLB   Topalu           77.70 323 ⇓P    P      22 49 21.4 +0.9
PVCC  Panska Ves       77.73 334  AMS  AMS    23 27 30.0
      comp=Z,700nm,19.8s
Q39A  Willow Grove F   77.83  46  P    P      22 49 20.9 -0.4
      baz=319
MLR   Muntele Rosu     77.86 324  P    P      22 49 22.3 +0.8
      comp=Z,2.0nm,0.7s,baz=30,slow=3.6,SNR=20
MLR                               LR   LR     23 26 55.1
      comp=Z,86nm,18.1s,baz=32,slow=38
MLR   Muntele Rosu     77.86 324⇑iP    P      22 49 21.0 -0.5
MLR   Muntele Rosu     77.86 324 eP    P      22 49 21.2 -0.3
      comp=Z,39nm,1.5s
MLR   Muntele Rosu     77.86 324 ⇑P    P      22 49 21.0 -0.5
LTVH  Lˆ'tavˆ'rtes,    77.89 328 eP    P      22 49 23.4 +1.9
ILGA  Ilgaz            77.89 317 eP    P      22 49 22.9 +1.0
      comp=Z,141nm,1.9s
WMOK  Wichita Mounta   77.91  53  P    P      22 49 20.6 -1.2
      baz=317
WMOK  Wichita Mounta   77.91  53 eP    P      22 49 21.8 -0.1
WMOK  Wichita Mounta   77.91  53 eP    P      22 49 21.8 -0.1
ISR   Istrita          77.91 324⇓iP    P      22 49 22.2 +0.5
ISR   Istrita          77.91 324 ⇓P    P      22 49 22.2 +0.5
P40A  Paris            77.93  45  P    P      22 49 20.5 -1.4
      baz=320
P40A  Paris            77.93  45 eP    P      22 49 21.8 -0.1
      comp=Z,26nm,1.6s
N42A  Yates City       77.93  43  P    P      22 49 21.2 -0.7
      baz=321
R38A  Fenwick Farm,    78.00  47  P    P      22 49 21.3 -1.0
      baz=319
O41A  Passleys Farm,   78.07  44  P    P      22 49 22.1 -0.5
      baz=320
VYHS  Vyhne            78.07 330 eP    P      22 49 22.8 +0.3
VYHS                              pmax pmax
      comp=Z,39nm,1.8s
VYHS  Vyhne            78.07 330 eP    P      22 49 22.8 +0.3
DRGR                   78.08 327⇑iP    P      22 49 22.5 -0.1
DRGR                   78.08 327 ⇑P    P      22 49 22.5 -0.1
VRAC  Vranov           78.14 332⇑iP    P      22 49 22.9  0.0
VRAC  Vranov           78.14 332 ⇑P    P      22 49 22.9  0.0
VRAC  Vranov           78.14 332 eP    P      22 49 23.3 +0.4
JAVC  Velka Javorina   78.16 331 eP    P      22 49 24.2 +1.1
PRA   Prague           78.17 334  AMS  AMS    23 27 50.0
      comp=Z,600nm,15.7s
PSZ   Piszkesteto      78.18 329⇓iP    P      22 49 24.0 +0.8
PSZ   Piszkesteto      78.18 329⇑eP    P      22 49 24.1 +0.8
PSZ   Piszkesteto      78.18 329 eP    P      22 49 24.2 +1.0
      comp=Z,108nm,1.9s
PSZ   Piszkesteto      78.18 329 ⇓P    P      22 49 24.0 +0.8
ICOR  Ion Corvin       78.18 322⇑iP    P      22 49 24.3 +1.1
GOPC  GO Pecny, Ondr   78.20 333 eP    P      22 49 23.9 +0.7
GOPC                             eS    S      22 59 13.7 -3.6
GOPC                              AMS  AMS    23 27 40.0
      comp=Z,600nm,17.0s
GOPC  GO Pecny, Ondr   78.20 333 eP    P      22 49 23.9 +0.7
GOPC                             eS    S      22 59 13.7 -3.6
GOPC                              MLR  MLR
      comp=Z,600nm,17.0s
PRU   Pruhonice        78.21 334 eP    P      22 49 24.2 +1.0
PRU                              eS    S      22 59 16.3 -1.1
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PRU                               AMS  AMS    23 28 00.0
      comp=Z,700nm,18.0s
PRU   Pruhonice        78.21 334 eP    P      22 49 24.2 +1.0
PRU                              eS    S      22 59 16.3 -1.1
PRU                               MLR  MLR
      comp=Z,700nm,18.0s
N43A  Stutzman Famil   78.26  43  P    P      22 49 23.5 -0.1
      baz=321
VOIR                   78.27 325⇓iP    P      22 49 23.3 -0.4
VOIR                   78.27 325 ⇓P    P      22 49 23.3 -0.4
P41A  Barry, Barry     78.31  45  P    P      22 49 23.9 -0.1
      baz=320
Q40A  Laux Farm, Aux   78.33  46  P    P      22 49 23.6 -0.4
      baz=320
R39A  Chumby, Stover   78.35  47  P    P      22 49 23.8 -0.4
      baz=319
S38A  Stockton         78.41  48  P    P      22 49 24.2 -0.4
      baz=319
KRUC  Moravsky         78.42 332 eP    P      22 49 24.5 +0.1
LPIG  La Paz           78.43  68  LR   LR     23 20 19.2
      comp=Z,137nm,18.6s,baz=252,slow=33
HDIL  Hopedale         78.50  43  P    P      22 49 23.8 -1.2
      baz=321
SMOL  Smolenice        78.54 331 eP    P      22 49 25.8 +0.7
SMOL  Smolenice        78.54 331 eP    P      22 49 25.8 +0.7
NKC   Novy Kostel      78.64 335  AMS  AMS    23 28 20.0
      comp=Z,600nm,14.4s
T38A  Diamond          78.66  48  P    P      22 49 25.0 -1.0
      baz=319
S39A  Bolivar          78.67  47  P    P      22 49 24.9 -1.2
      baz=319
S39A  Bolivar          78.67  47 eP    P      22 49 25.5 -0.5
      comp=Z,9.2nm,1.1s
KLBO  Killbear Provi   78.69  35  P    P      22 49 24.0 -1.9
      baz=326
MODS  Modra-Piesok     78.71 331 eP    P      22 49 26.5 +0.4
MODS                              pmax pmax
      comp=Z,148nm,2.3s
MODS  Modra-Piesok     78.71 331 eP    P      22 49 26.5 +0.4
P42A  Winchester       78.74  44  P    P      22 49 24.9 -1.4
      baz=321
R40A  Maddies Statio   78.76  46  P    P      22 49 25.5 -1.0
      baz=320
R40A  Maddies Statio   78.76  46 eP    P      22 49 26.4  0.0
      comp=Z,10nm,1.0s
LOT   Lotru            78.77 326⇑iP    P      22 49 27.4 +0.8
Q41A  Truxton          78.78  45  P    P      22 49 26.1 -0.4
      baz=320
TX31  Lajitas Ar. Si   78.94  60 eP    P      22 49 28.0 +0.2
TXAR  Lajitas Array    78.94  60  P    P      22 49 28.0 +0.2
      comp=Z,3.6nm,0.9s,baz=295,slow=3.9,SNR=23
TXAR  Lajitas Array    78.94  60  P    P      22 49 28.0 +0.2
TXAR                              pmax pmax
      comp=Z,3.0nm,0.9s
BR131 Keskin Array S   78.96 316 eP    P      22 49 28.5 +0.8
BRTR  Keskin Array B   78.96 316  P    P      22 49 28.4 +0.8
      comp=Z,4.6nm,1.0s,baz=60,slow=3.4,SNR=20
BRTR                              LR   LR     23 29 34.9
      comp=Z,375nm,19.1s,baz=56,slow=40
N45A  Kentland         79.12  42  P    P      22 49 28.1 -0.3
      baz=322
T39A  Clever           79.15  48  P    P      22 49 27.9 -0.8
      baz=319
Q42A  Golden Eagle     79.16  45  P    P      22 49 28.2 -0.5
      baz=321
S40A  Lebanon          79.17  47  P    P      22 49 27.9 -0.8
      baz=320
R41A  Rosebud          79.21  46  P    P      22 49 28.5 -0.4
      baz=320
CSKK  Csˆ‡kako         79.24 330⇓eP    P      22 49 30.0 +1.1
ANTO  Ankara           79.26 317 eP    P      22 49 30.5 +1.2
      comp=Z,12nm,0.7s
ANTO  Ankara           79.26 317 eP    P      22 49 30.5 +1.2
ANTO                              pmax pmax
      comp=Z,12nm,0.7s
KHC   Kasperske Hory   79.27 334 eP    P      22 49 29.7 +0.6
KHC                              epP   sP     22 49 33.2 -1.9
KHC                              eS    S      22 59 32.7 +3.9
KHC                               AMS  AMS    23 28 40.0
      comp=Z,900nm,16.0s
KHC   Kasperske Hory   79.27 334 eP    P      22 49 29.4 +0.3
      comp=Z,8.1nm,1.1s
KHC   Kasperske Hory   79.27 334 eP    P      22 49 29.7 +0.6
KHC                              e            22 49 33.2
KHC                              eS    S      22 59 32.7 +3.9
KHC                               MLR  MLR
      comp=Z,900nm,16.0s
RAR   Rarotonga        79.36 135  LR   LR     23 21 46.7
      comp=Z,364nm,18.8s,baz=305,slow=34
CCM   Cathedral Cave   79.46  46  P    P      22 49 29.9 -0.4
      baz=320
CCM   Cathedral Cave   79.46  46 eP    P      22 49 30.8 +0.5
      comp=Z,16nm,1.2s
CCM                              e            22 49 37.0
CCM   Cathedral Cave   79.46  46 eP    P      22 49 30.8 +0.5
CCM                               pmax pmax
      comp=Z,16nm,1.2s
BZS   Buzias           79.47 327⇑iP    P      22 49 30.3  0.0
BZS   Buzias           79.47 327 ⇑P    P      22 49 30.3  0.0
GEC2  GERESS Array S   79.48 333 eP    P      22 49 30.8 +0.4
GEC2  GERESS Array S   79.48 333 eP    P      22 49 30.8 +0.4
GERES GERESS Array B   79.48 333  P    P      22 49 30.4  0.0
      comp=Z,3.6nm,0.8s,baz=35,slow=4.9,SNR=19
GERES                             LR   LR     23 28 59.0
      comp=Z,507nm,18.3s,baz=45,slow=39
GEA0  GERESS Array S   79.49 333 eP    P      22 49 30.1 -0.3
GRFO  Grafenberg       79.49 335 eP    P      22 49 30.8 +0.5
      comp=Z,21nm,1.0s
GRFO  Grafenberg       79.49 335 eP    P      22 49 30.8 +0.5
GRFO                              pmax pmax
      comp=Z,21nm,1.0s
O45A  Potomac          79.49  42  P    P      22 49 29.9 -0.5
      baz=322
R42A  Luebbering       79.52  45  P    P      22 49 30.3 -0.3
      baz=320
S41A  Jillco Farms,    79.56  46  P    P      22 49 30.5 -0.5
      baz=320
CONA  Conrad Observa   79.58 332 i P   P      22 49 31.5 +0.6
      comp=Z,14nm,1.2s,SNR=9.4
U39A  Green Forest     79.58  48  P    P      22 49 30.4 -0.6
      baz=319
SZH   Strazhica        79.67 323 i P   P      22 49 30.9 -0.5
HERR  Herculane        79.78 326⇑iP    P      22 49 31.3 -0.6
V39A  Pettigrew        79.90  49  P    P      22 49 32.2 -0.7
      baz=319
S42A  Caledonia        79.91  46  P    P      22 49 32.3 -0.5
      baz=321
Q44A  Meyer Farm, Va   79.92  44  P    P      22 49 32.3 -0.5
      baz=321
U40A  Yellville        79.93  48  P    P      22 49 32.3 -0.6
      baz=320
T41A  Mountain View    79.97  47  P    P      22 49 31.9 -1.2
      baz=320
MEM   Membach          80.09 339 ⇑P    P      22 49 33.6 +0.1
      comp=Z,16nm,1.0s
MDVR  Moldovita        80.14 327⇓iP    P      22 49 33.0 -0.9
MOA   Molln            80.17 333 eP    P      22 49 35.3 +1.2
      comp=Z,8.5nm,1.1s
PLVO  Plevna           80.18  33  P    P      22 49 32.9 -1.2
      baz=327
ARSA  Arzberg          80.28 332 eP    P      22 49 34.7 +0.1
      comp=Z,7.4nm,1.3s
W39A  Magazine         80.31  49  P    P      22 49 34.2 -0.7
      baz=319
T42A  Van Buren        80.32  46  P    P      22 49 34.0 -1.0
      baz=320
Q45A  Warren Harvey,   80.34  43  P    P      22 49 34.8 -0.3
      baz=322
V40A  Witts Springs    80.36  48  P    P      22 49 34.1 -1.2
      baz=320
U41A  Viola            80.42  47  P    P      22 49 34.8 -0.8
      baz=320
S43A  Fulton Ridge,    80.42  45  P    P      22 49 35.6 +0.1
      baz=321
JCT   Junction City    80.43  56  P    P      22 49 35.3 -0.5
      baz=317
JCT   Junction City    80.43  56 eP    P      22 49 35.9 +0.1
      comp=Z,17nm,1.3s
JCT   Junction City    80.43  56 eP    P      22 49 35.9 +0.1
JCT                               pmax pmax
      comp=Z,17nm,1.3s
BCLA  Clavier          80.45 339 ⇓P    P      22 49 35.6 +0.2
ALFO  Alfred           80.51  31  P    P      22 49 35.1 -0.7
      baz=329
X39A  Fountain Ranch   80.65  50  P    P      22 49 36.6 -0.2
      baz=319
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O48A  Farmland         80.69  41  P    P      22 49 36.3 -0.6
      baz=323
T43A  Greenville       80.69  46  P    P      22 49 36.4 -0.6
      baz=321
W40A  Ferguson Farm,   80.70  49  P    P      22 49 36.7 -0.4
      baz=320
V41A  Mountainview     80.73  48  P    P      22 49 35.9 -1.4
      baz=320
MIAR  Mount Ida        80.91  50  P    P      22 49 37.5 -0.7
      baz=320
MIAR  Mount Ida        80.91  50 eP    P      22 49 38.1 -0.1
      comp=Z,13nm,1.1s
MIAR                             e            22 49 50.9
MIAR  Mount Ida        80.91  50 eP    P      22 49 38.1 -0.1
MIAR                              pmax pmax
      comp=Z,13nm,1.1s
DOU   Dourbes          80.92 339 ⇓P    P      22 49 38.3 +0.3
WLF   Walferdange      80.92 338 ⇑P    P      22 49 39.4 +1.4
SOKA  Soboth           80.94 332 i P   P      22 49 38.2  0.0
      comp=Z,18nm,1.1s,SNR=10
PERS  Pernice          80.95 332 i P   P      22 49 38.0 -0.3
S45A  Carrier Mills    81.09  44  P    P      22 49 39.0 -0.1
      baz=322
V42A  Cord             81.11  47  P    P      22 49 38.5 -0.8
      baz=320
O49A  Covington        81.12  40  P    P      22 49 38.5 -0.8
      baz=324
Q47A  Bedord North L   81.14  42  P    P      22 49 38.3 -1.1
      baz=323
W41B  Gary Mavity, V   81.14  48  P    P      22 49 38.5 -0.9
      baz=320
KBA   Koelnbreinsper   81.15 333 i P   P      22 49 39.9 +0.4
      comp=Z,34nm,1.1s,SNR=12
N50A  Nevada           81.18  39  P    P      22 49 39.3 -0.2
      baz=324
P48A  Milroy           81.20  41  P    P      22 49 38.7 -0.9
      baz=323
OBKA  Obir             81.25 332 eP    P      22 49 39.7 -0.2
      comp=Z,8.8nm,1.7s
X40A  Basin Creek Fa   81.36  49  P    P      22 49 40.6  0.0
      baz=320
VTS   Vitosha          81.36 324⇑iP    P      22 49 40.6 -0.1
VTS   Vitosha          81.36 324 eP    P      22 49 40.6 -0.1
      comp=Z,34nm,1.1s
VTS   Vitosha          81.36 324 i P   P      22 49 40.7  0.0
VTS   Vitosha          81.36 324  P    P      22 49 40.5 -0.1
VTS   Vitosha          81.36 324 eP    P      22 49 40.6 -0.1
VTS                               pmax pmax
      comp=Z,34nm,1.1s
DIVS  Divibare         81.38 327 eP    P      22 49 40.5 -0.1
MYKA  Terra Mystica    81.45 332 eP    P      22 49 40.3 -0.7
      comp=Z,9.2nm,1.1s
O50A  Cable            81.47  40  P    P      22 49 41.3 +0.1
      baz=324
RZN   Rozhen           81.48 323  P    P      22 49 42.0 +0.7
WATA  Walderalm        81.48 334 i P   P      22 49 42.3 +1.1
      comp=Z,29nm,1.1s,SNR=10
LEGS  Legarje          81.48 331 i P   P      22 49 40.6 -0.5
WTTA  Wattenberg       81.53 334 i P   P      22 49 42.1 +0.6
      comp=Z,27nm,1.1s,SNR=5.7
BFO   Black Forest     81.55 336 eP    P      22 49 41.0 -0.4
      comp=Z,2.2nm,1.0s
BFO   Black Forest     81.55 336 eP    P      22 49 41.0 -0.4
BFO                               pmax pmax
      comp=Z,2.0nm,1.0s
ALN   Alexandroupoli   81.55 322 eP    P      22 49 41.1 -0.3
ALN   Alexandroupoli   81.55 322 eP    P      22 49 41.1 -0.3
RDO   Rodhopi          81.57 322  P    P      22 49 41.4 -0.2
RDO   Rodhopi          81.57 322  P    P      22 49 41.4 -0.2
RETA  Reutte           81.59 335 i P   P      22 49 41.9 +0.2
      comp=Z,13nm,1.0s
R47A  Wooly Knot Far   81.60  43  P    P      22 49 41.3 -0.5
      baz=323
MOTA  Moosalm          81.62 334 i P   P      22 49 42.9 +1.0
      comp=Z,21nm,1.0s,SNR=14
ABTA  Abfaltersbach    81.71 333 eP    P      22 49 42.8 +0.5
      comp=Z,8.7nm,1.1s
WCI   Wyandotte Cave   81.77  43  P    P      22 49 41.4 -1.2
      baz=323
BOJS  Bojanci          81.89 331 i P   P      22 49 42.4 -0.8
PPT   Papeete          81.92 125  LR   LR     23 24 39.9
      comp=Z,450nm,18.1s,baz=12,slow=35
PPT2  Papeete2         81.93 125 eLR   LR     23 15 16.9
      comp=Z,456nm,21.2s
MMB   Musomiste        81.98 323 i P   P      22 49 44.1 +0.3
ECH   Echery           81.98 337 eP    P      22 49 43.6 -0.1
ECH   Echery           81.98 337 eP    P      22 49 43.6 -0.1
KKB   Krupnik          82.02 324 i P   P      22 49 44.1 +0.1
FETA  Feichten         82.02 334 eP    P      22 49 43.5 -0.6
      comp=Z,14nm,1.2s
DAVA  Damuels          82.04 335 i P   P      22 49 44.1  0.0
      comp=Z,17nm,1.3s
M54A  Oil Creek Stat   82.09  36  P    P      22 49 42.8 -1.6
      baz=326
NVR   Nevrokopi        82.12 323  P    P      22 49 44.3 -0.2
NVR   Nevrokopi        82.12 323  P    P      22 49 44.3 -0.2
SMTH  Samothraki Isl   82.12 322  P    P      22 49 43.8 -0.7
SMTH  Samothraki Isl   82.12 322  P    P      22 49 43.8 -0.7
S48A  Wiedeman Farm,   82.33  43  P    P      22 49 45.0 -0.7
      baz=323
T47A  Sharon Grove     82.35  44  P    P      22 49 45.5 -0.3
      baz=322
T47A  Sharon Grove     82.35  44 eP    P      22 49 46.0 +0.2
N54A  Moraine State    82.40  37  P    P      22 49 45.2 -0.8
      baz=326
SRS   Serrai           82.42 323  P    P      22 49 45.2 -0.9
SRS   Serrai           82.42 323  P    P      22 49 45.2 -0.9
SRS   Serrai           82.42 323  P    P      22 49 45.2 -0.9
DAVOX Davos/Dischmat   82.50 335  P    P      22 49 45.2 -1.3
      comp=Z,12nm,1.2s,baz=15,slow=12,SNR=4.3
DAVOX                             LR   LR     23 32 00.4
      comp=Z,276nm,18.6s,baz=48,slow=40
STIP  Stip             82.53 325 eP    P      22 49 44.9 -1.7
S49A  Springfield      82.60  42  P    P      22 49 46.9 -0.2
      baz=323
SKO   Skopje           82.60 325  P    P      22 49 46.7 -0.3
SKO   Skopje           82.60 325  P    P      22 49 46.7 -0.3
SKO   Skopje           82.60 325⇑eP    P      22 49 47.0 +0.1
SKO   Skopje           82.60 325  P    P      22 49 46.7 -0.3
WVT   Waverly          82.67  45  P    P      22 49 47.2 -0.3
      baz=322
KNT   Kendrikon        82.68 324  P    P      22 49 47.2 -0.2
KNT   Kendrikon        82.68 324  P    P      22 49 47.2 -0.2
KNT   Kendrikon        82.68 324  P    P      22 49 47.2 -0.2
VAY   Valandovo        82.68 324  P    P      22 49 47.3 -0.1
VAY   Valandovo        82.68 324  P    P      22 49 47.3 -0.1
VAY   Valandovo        82.68 324⇑iP    P      22 49 47.6 +0.2
VAY   Valandovo        82.68 324  P    P      22 49 47.3 -0.1
U47A  Clarksville      82.69  44  P    P      22 49 47.5 -0.1
      baz=322
V46A  Holladay         82.79  45  P    P      22 49 47.2 -0.8
      baz=322
CSS   Mathiatis        82.81 313 eP    P      22 49 47.7 -0.5
CSS   Mathiatis        82.81 313  P    P      22 49 48.0 -0.2
TUE   Stuetta          82.93 335 eP    P      22 49 49.0 +0.1
      comp=Z,27nm,1.1s
R51A  Hillsboro        82.98  41  P    P      22 49 49.0  0.0
      baz=324
U48A  Cassie Pea, Po   83.01  44  P    P      22 49 48.7 -0.5
      baz=323
SIGR  SIGRI            83.01 321  P    P      22 49 46.6 -2.5
SIGR  SIGRI            83.01 321  P    P      22 49 46.6 -2.5
T49A  Edmonton         83.02  43  P    P      22 49 49.3  0.0
      baz=323
GRG   Griva            83.06 324  P    P      22 49 48.4 -1.0
GRG   Griva            83.06 324  P    P      22 49 48.4 -1.0
ASF   Jabal al Asfar   83.06 309  P    P      22 49 49.0 -0.7
      comp=Z,5.9nm,0.9s,baz=34,slow=0.9,SNR=15
ASF   Jabal al Asfar   83.06 309  P    P      22 49 49.0 -0.7
ASF                               pmax pmax
      comp=Z,6.0nm,0.9s
V47A  Nunnelly         83.06  45  P    P      22 49 49.2 -0.3
      baz=322
PDG   Podgorica        83.08 327⇑iP    P      22 49 48.6 -0.8
TTG   Podgorica        83.08 327 eP    P      22 49 48.4 -1.0
      comp=Z,28nm,1.2s
TTG   Podgorica        83.08 327 eP    P      22 49 48.4 -1.0
TTG                               pmax pmax
      comp=Z,28nm,1.2s
OXF   Oxford           83.14  47  P    P      22 49 50.0 +0.1
      baz=322
KRUS  Krusevo          83.19 325 eP    P      22 49 49.8 -0.4
MMAI  Mount Meron Ar   83.23 311  P    P      22 49 51.0 +0.6
      comp=Z,18nm,1.0s,baz=57,slow=5.3,SNR=20
MMAI                              LR   LR     23 32 04.1
```

	comp=Z,808nm,19.2s,baz=35,slow=40						
PAIG	Paliouri	83.37	323	P	P	22 49 50.2	-0.8
PAIG	Paliouri	83.37	323	P	P	22 49 50.2	-0.8
PAIG	Paliouri	83.37	323	P	P	22 49 50.2	-0.8
U49A	Red Boiling Sp	83.38	43	P	P	22 49 51.1	0.0
	baz=323						
T50A	Nancy	83.42	42	P	P	22 49 50.8	-0.5
	baz=324						
V48A	Smith Brothers	83.48	44	P	P	22 49 51.0	-0.7
	baz=323						
Y45A	Yeager Farm, C	83.57	47	P	P	22 49 52.6	+0.5
	baz=322						
YER	Yerkesik	83.58	318	P	P	22 49 52.2	0.0
YER	Yerkesik	83.58	318	P	P	22 49 52.2	0.0
O56A	Blue Knob Stat	83.58	36	P	P	22 49 51.3	-0.9
	baz=327						
CHOS	Chios island	83.59	320	P	P	22 49 52.4	+0.1
CHOS	Chios island	83.59	320	P	P	22 49 52.4	+0.1
FNA	Florina	83.63	325	*e*P	P	22 49 52.1	-0.3
FNA	Florina	83.63	325	*e*P	P	22 49 52.1	-0.3
LIT	Litokhoron	83.73	323	*e*P	P	22 49 52.8	-0.1
LIT	Litokhoron	83.73	323	*e*P	P	22 49 52.8	-0.1
T51A	Gray	83.89	42	P	P	22 49 53.4	-0.4
	baz=324						
W48A	Pulaski	83.90	45	P	P	22 49 53.2	-0.7
	baz=323						
U50A	Jamestown	83.91	43	P	P	22 49 53.5	-0.4
	baz=324						
Y46A	Houston	83.91	47	P	P	22 49 53.8	-0.1
	baz=322						
AOS	Alonnisos	83.91	322	P	P	22 49 52.9	-0.9
AOS	Alonnisos	83.91	322	P	P	22 49 52.9	-0.9
NEST	Nestorio	84.07	325	P	P	22 49 54.2	-0.5
N59A	State Game Lan	84.18	34	P	P	22 49 54.1	-1.1
	baz=328						
W49A	Belvidere	84.25	44	P	P	22 49 55.1	-0.5
	baz=323						
V50A	Pikevile	84.38	43	P	P	22 49 55.7	-0.5
	baz=324						
SMIA	Simia	84.45	322	P	P	22 49 54.4	-2.2
U52A	Thorn Hill	84.63	42	P	P	22 49 57.5	0.0
	baz=324						
V51A	Loudon	84.64	43	P	P	22 49 56.5	-1.1
	baz=324						
X49A	Woodville	84.70	45	P	P	22 49 57.6	-0.3
	baz=323						
AGG	Agios Georgios	84.70	323	*e*P	P	22 49 57.1	-0.8
AGG	Agios Georgios	84.70	323	*e*P	P	22 49 57.1	-0.8
W51A	Cleveland	84.95	43	P	P	22 49 58.8	-0.3
	baz=324						
V52A	Sevierville	84.97	42	P	P	22 49 58.8	-0.4
	baz=324						
VILL	Villia	85.00	322	P	P	22 49 57.6	-1.8
U53A	Fall Branch	85.02	41	P	P	22 49 59.5	-0.1
	baz=325						
TKL	Tuckaleechee C	85.03	43	P	P	22 49 59.1	-0.4
	comp=Z,3.0nm,0.9s,baz=34,slow=3.6,SNR=2.9						
TKL				LR	LR	23 27 56.5	
	comp=Z,316nm,22.0s,baz=341,slow=36						
IGT	Igoumenitsa	85.11	325	P	P	22 49 57.9	-2.0
IGT	Igoumenitsa	85.11	325	P	P	22 49 57.9	-2.0
IGT	Igoumenitsa	85.11	325	P	P	22 49 57.9	-2.0
DSL	Palaion Diasel	85.13	324	P	P	22 49 58.3	-1.7
DSL	Palaion Diasel	85.13	324	P	P	22 49 58.3	-1.7
147A	Livingston	85.16	47	P	P	22 50 00.7	+0.5
	baz=322						
KEK	Kerkira	85.17	325	P	P	22 49 59.3	-0.9
KEK	Kerkira	85.17	325	P	P	22 49 59.3	-0.9
ANX	Ano Chora	85.24	323	P	P	22 49 59.9	-0.7
LTK	Loutraki	85.26	322	P	P	22 49 58.1	-2.6
LTK	Loutraki	85.26	322	P	P	22 49 58.1	-2.6
AQU	L'Aquila	85.30	331	*e*P	P	22 50 00.9	+0.1
AQU	L'Aquila	85.30	331	*e*P	P	22 50 00.9	+0.1
EFP	Efpalio	85.38	323	P	P	22 49 59.8	-1.4
KLV	Kalavryta, Ach	85.60	323	P	P	22 50 00.7	-1.7
KLV	Kalavryta, Ach	85.60	323	P	P	22 50 00.7	-1.7
Z50A	Ashland	85.91	45	P	P	22 50 03.4	-0.5
	baz=323						
Z50A	Ashland	85.91	45	*e*P	P	22 50 03.6	-0.4
ZKR	Zakros	86.19	318	P	P	22 50 04.3	-1.0
ZKR	Zakros	86.19	318	P	P	22 50 04.3	-1.0
ITM	Ithomi	86.42	322	*e*P	P	22 50 06.2	-0.3
LAST	Lasithi	86.50	319	P	P	22 50 06.4	-0.5
LAST	Lasithi	86.50	319	P	P	22 50 06.4	-0.5
TBI	Tubuai	86.56	128	*e*LR	LR	23 17 27.0	
	comp=Z,425nm,35.0s						
DYR	Agios Nikonas	86.59	322	P	P	22 50 06.8	-0.5
IDI	Anoyia	86.67	319	P	P	22 50 06.1	-1.7
	comp=Z,14nm,1.0s,baz=356,slow=4.1,SNR=7.7						
IDI				LR	LR	23 33 45.2	
	comp=Z,192nm,18.3s,baz=14,slow=39						
IDI	Anoyia	86.67	319	⇑*i*P	P	22 50 05.0	-2.7
IDI	Anoyia	86.67	319	*e*P	P	22 50 05.6	-2.2
Z52A	Williamson	86.71	44	P	P	22 50 07.9	0.0
	baz=324						
TIP	Timpagrande	86.84	327	⇓*i*P	P	22 50 07.7	-0.8
TIP	Timpagrande	86.84	327	*e*P	P	22 50 07.9	-0.6
IMMV	Iera Moni Meta	86.94	320	P	P	22 50 07.3	-1.7
Y54A	Tignall	87.01	43	P	P	22 50 09.5	+0.2
	baz=325						
Z54A	Sparta	87.44	43	P	P	22 50 11.5	0.0
	baz=325						
254A	Abbeville	88.27	44	P	P	22 50 15.1	-0.3
	baz=325						
VAE	Valguarnera	89.22	328	LR	LR	23 37 12.1	
	comp=Z,191nm,18.2s,baz=339,slow=40						
KEST	Kesra	92.62	330	P	P	22 50 35.5	-0.2
	comp=Z,5.2nm,0.9s,baz=63,slow=6.8,SNR=3.9						
KEST				LR	LR	23 36 58.2	
	comp=Z,275nm,18.4s,baz=314,slow=39						
KEST	Kesra	92.62	330	*e*P	P	22 50 36.5	+0.7
ES19	SONSECA Array	92.73	342	*e*P	P	22 50 35.8	-0.3
ESDC	Sonseca Array	92.77	342	P	P	22 50 35.4	-0.9
	comp=Z,0.2nm,0.4s,baz=46,slow=3.7,SNR=3.8						
ESDC				LR	LR	23 37 38.0	
	comp=Z,107nm,18.9s,baz=0.0,slow=39						
ATD	Arta Tunnel	94.97	292	LR	LR	23 39 38.6	
	comp=Z,331nm,18.1s,baz=24,slow=39						
MDT	Midelt	99.47	340	LR	LR	23 42 13.8	
	comp=Z,161nm,19.0s,baz=34,slow=39						
QSPA	South Pole Qui	134.95	180	PKP	PKPdf	22 56 42.5	+0.7
	comp=Z,3.5nm,1.0s,baz=58,slow=0.8,SNR=5.6						
SYO	Syowa Base	139.19	211	⇓*e*Pdiff	Pdif	22 54 06.0	+3.7
NVL	N'lazarevskaya	147.91	204	*e*PKIKP	PKPdf	22 57 04.3	-0.4
NVL				pmax	pmax		
	comp=Z,7.0nm,0.7s						
PLCA	Paso Flores	148.83	97	PKPbc	PKPbc	22 57 12.1	+0.9
	comp=Z,2.1nm,0.7s,baz=14,slow=1.1,SNR=5.0						
SNAA	Sanae	150.86	196	PKP	PKPbc	22 57 14.7	-0.5
SNAA	Sanae	150.86	196	PKPbc	PKPbc	22 57 14.3	-0.9
	comp=Z,5.6nm,1.0s,baz=180,slow=1.8,SNR=8.1						
VNA3	Neumayer Olymp	152.43	193	PKP	PKPbc	22 57 18.4	-0.3
VNA1	Neumayer--Stat	152.71	194	PKP	PKPbc	22 57 21.7	+2.4

IDC ***13*** *22:39:10.7±0.9, 17°.65S×173°.18W, h0^{km}, mb4.0/10, mb1 4.2/11, mb1mx4.0/56, mbtmp4.0/11, ML3.6/1, Error ellipse: s-maj=33.2km s-min=18.2km az=135.0*

ISCJB ***13*** *22:39:12.9±0.7, 17°.6S±0°.1×173°.2W±0°.1, h28^{km}, mb4.1/12, Error ellipse: s-maj=23.2km s-min=9.2km az=35.1*

NEIC ***13*** *22:39:12.2±0.4, 17°.64S×173°.20W, h10^{km}, mb4.3/2, Error ellipse: s-maj=15.4km s-min=7.7km az=132.0*

ISC 13 22:39:14.8±0.8**, 17°.5S**±0°.1×**173°.2W**±0°.2**, h28**^{km}**, n20, σ1^s.09**/23**, mb4.2**/12**, 1D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	3.83	21	Pn	Pn	22 40 12.2	+0.3
	4.5nm,0.3s,baz=29,slow=7.2,SNR=3.8						
AFI				Sn	Sn	22 40 54.5	-1.5
	17nm,0.3s,baz=96,slow=17,SNR=5.6						
AFI	Afiamalu	3.83	21	Pn	Pn	22 40 12.8	+0.9
AFI				*e*Pb	Pb	22 40 20.9	-0.8
AFI				Sn	Sn	22 40 54.5	-1.5
URZ	Urewera	22.35	200	P	P	22 44 08.5	-2.0
	5.7nm,0.4s,baz=1.7,slow=8.1,SNR=11						
CTA	Charters Tower	38.41	260	P	P	22 46 33.8	-0.4
	2.5nm,0.6s,baz=93,slow=11,SNR=5.1						
CTAO	Charters Tower	38.41	260	P	P	22 46 34.2	+0.1
	8.1nm,0.7s						
JAY	Jayapura	47.61	283	P	P	22 47 48.8	0.0
	2.2nm,0.7s,baz=108,slow=6.4,SNR=2.0						
WRAB	Tennant Creek	49.57	258	*e*P	P	22 48 03.0	-0.8
	1.2nm,0.6s						
WRA	Warramunga Arr	49.58	258	P	P	22 48 03.6	-0.3
	1.0nm,0.5s,baz=98,slow=6.5,SNR=44						
ASAR	Alice Springs	49.67	254	P	P	22 48 04.7	+0.1
	4.8nm,0.8s,baz=87,slow=8.5,SNR=33						
FITZ	Fitzroy Crossi	57.99	259	P	P	22 49 05.9	+0.5
	4.0nm,1.0s,baz=48,slow=7.1,SNR=5.7						
VNDA	Vanda	61.31	186	P	P	22 49 26.9	-0.4
	0.5nm,0.9s,baz=346,slow=5.7,SNR=2.6						
MBWA	Marble Bar	62.98	255	P	P	22 49 39.3	-0.1
	5.6nm,0.7s						
NVAR	Mina Array Bea	75.76	42	P	P	22 50 59.8	+1.4
	0.3nm,0.5s,baz=239,slow=6.9,SNR=3.3						
PDAR	Pinedale Array	83.70	42	P	P	22 51 40.9	-0.4
	0.5nm,0.8s,baz=186,slow=3.6,SNR=3.7						
ILAR	Eielson Array	84.46	11	P	P	22 51 45.9	+1.5
	0.5nm,0.9s,baz=232,slow=4.4,SNR=3.8						
MKAR	Makanchi Array	112.42	314	PKiKP	PKiKP	22 57 48.6	+0.4
	0.3nm,0.6s,baz=143,slow=1.0,SNR=2.9						
SPITS	Spitsbergen Ar	119.11	358	PKP	PKPdf	22 58 01.0	+0.8
	9.7nm,1.1s,baz=52,slow=2.4,SNR=2.2						
CLL	Collm	145.91	353	⇓*i*PKPbc	PKPab	22 58 54.3	+2.3
	comp=Z,9.0nm,1.1s						
BRTR	Keskin Array B	147.88	319	PKPbc	PKPbc	22 58 57.7	0.0
	comp=Z,0.8nm,0.8s,baz=151,slow=2.8,SNR=4.5						
GERES	GERESS Array B	148.24	351	PKPbc	PKPab	22 59 00.0	-1.3
	comp=Z,0.3nm,0.7s,baz=346,slow=2.8,SNR=4.3						

KRSC ***14*** *00:13:14.9±2.1, 50°.56N×157°.56E, h66^{km}±24^{km}, ML4.6*

BJI ***14*** *00:13:16.7, 50°.90N×156°.80E, h95^{km}, mb4.7/17, mB4.8/11*

MOS ***14*** *00:13:16.9±1.0, 50°.73N×156°.90E, h93^{km}, mb4.1/16, Error ellipse: s-maj=11.1km s-min=3.8km az=75.9*

SKHL ***14*** *00:13:17.1±0.2, 50°.68N×156°.94E, h93^{km}±2^{km}, mb5.7/2, msh6.4/2*

NEIC ***14*** *00:13:19.7±1.9, 50°.86N×156°.77E, h95^{km}±13^{km}, mb4.5/12, Error ellipse: s-maj=25.6km s-min=6.5km az=180.0*

IDC ***14*** *00:13:21.0±1.4, 50°.87N×156°.72E, h112^{km}±11^{km}, mb3.6/30, mb1 3.8/34, mb1mx3.7/74, mbtmp4.0/34, MS3.1/5, Ms1 3.1/5, ms1mx2.6/68, Error ellipse: s-maj=13.8km s-min=9.6km az=146.0*

ISC 14 00:13:15.8±0.8**, 50°.58N**±0°.06×**157°.19E**±0°.05**, h78**^{km}±5^{km}**, n184, σ1^s.83**/215**, mb4.3**/54**, 4C-1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.69	279	*i* P	Pn	00 13 32.0	+0.8
SKR				AMB	AMB	00 13 32.0	
	8μm,0.4s						
SKR				*e*S	Sn	00 13 43.0	+0.5
SKR				A	A	00 13 43.0	
	7μm,0.4s						
SKR				A	A	00 13 43.0	
	7μm,0.4s						
SKR	Severo-Kuril's	0.69	279	*i* P	Pn	00 13 32.0	+0.8
SKR				*e*S	Sn	00 13 43.1	+0.5
SKR	Severo-Kuril's	0.69	279	PN	Pn	00 13 32.0	+0.8
SKR				S	Sn	00 13 43.1	+0.5
PAU	Pauzhetka	0.92	345	*e*P	Pn	00 13 34.6	+0.8
PAU				AMB	AMB	00 13 35.8	
	2μm,0.3s						
PAU				*e*S	Sn	00 13 47.9	+0.8
PAU				A	A	00 13 48.2	
	14μm,0.4s						
PAU	Pauzhetka	0.92	345	*e*P	Pn	00 13 34.6	+0.8
PAU				*e*S	Sn	00 13 48.0	+0.8
PAU	Pauzhetka	0.92	345	PN	Pn	00 13 34.6	+0.8
PAU				S	Sn	00 13 48.0	+0.8
KDTR	Khodutka, Kamc	1.35	24	*i* P	Pn	00 13 39.3	+0.2
KDTR				*e*S	Sn	00 13 55.3	-1.4
MIPR	Malaya Ipel'ka	1.72	351	*e*P	Pn	00 13 45.4	+1.5
MIPR	Malaya Ipel'ka	1.72	351	PN	Pn	00 13 45.4	+1.5
ASAK	Asacha	1.86	14	*e*P	Pn	00 13 46.8	+0.9
ASAK	Asacha	1.86	14	PN	Pn	00 13 46.8	+0.9
MTVR	Mutnovka	2.00	18	*e*P	Pn	00 13 48.9	+1.0
MTVR				*e*S	Sn	00 14 11.8	-0.4
MTVR	Mutnovka	2.00	18	PN	Pn	00 13 48.9	+1.0
MTVR				S	Sn	00 14 11.8	-0.4
RUS	Russkaya	2.03	24	*e*P	Pn	00 13 48.3	+0.2
RUS				*e*S	Sn	00 14 11.8	-0.8
RUS	Russkaya	2.03	24	PN	Pn	00 13 48.3	+0.2
RUS				S	Sn	00 14 11.8	-0.8
GRL	Gorelyy	2.05	15	*e*P	Pn	00 13 49.9	+1.5
GRL				*e*S	Sn	00 14 14.3	+1.0
GRL	Gorelyy	2.05	15	PN	Pn	00 13 49.9	+1.5
GRL				S	Sn	00 14 14.3	+1.0
KRMR	Karymshinskiy	2.33	14	*e*P	Pn	00 13 53.7	+1.7
KRMR				*e*S	Sn	00 14 21.1	+1.4
KRMR	Karymshinskiy	2.33	14	PN	Pn	00 13 53.7	+1.7
KRMR				S	Sn	00 14 21.1	+1.4
APC	Apacha	2.35	360	*e*P	Pn	00 13 53.7	+1.4
APC	Apacha	2.35	360	PN	Pn	00 13 53.7	+1.4
PEA0B	Petropavlovsk-	2.55	7	*e*Pn	Pn	00 13 56.9	+1.8
PETK	Petropavlovsk-	2.55	7	P	Pn	00 13 56.8	+1.8
	baz=186,slow=11						
PETK				S	Sn	00 14 27.5	+2.3
	baz=174,slow=14						
PETK	Petropavlovsk-	2.55	7	*e*Pn	Pn	00 13 56.5	+1.5
PETK	Petropavlovsk-	2.55	7	*e*PN	Pn	00 13 56.6	+1.5
PET	Petropavlovsk	2.61	20	*e*P	Pn	00 13 57.1	+1.3
PET				*e*S	Sn	00 14 26.7	+0.2
PET	Petropavlovsk	2.61	20	*e*Pn	Pn	00 13 57.2	+1.3
PET	Petropavlovsk	2.61	20	⇑*i*PN	Pn	00 13 57.2	+1.3
PET				*e*S	Sn	00 14 27.3	+0.8
PET				pmax	pmax		
	comp=Z,76nm,0.5s						
PET				smax	smax		
	comp=E,396nm,0.5s						
PET				smax	smax		
	comp=N,418nm,0.4s						
DALK	Dalny	2.64	21	*e*P	Pn	00 13 57.6	+1.4
DALK				*e*S	Sn	00 14 27.5	+0.3
DALK	Dalny	2.64	21	PN	Pn	00 13 57.6	+1.4
DALK				S	Sn	00 14 27.5	+0.3
UGLR	Uglovaya	2.82	20	*e*P	Pn	00 14 00.5	+1.7
UGLR	Uglovaya	2.82	20	PN	Pn	00 14 00.5	+1.7
AVH	Avacha	2.86	19	*e*P	Pn	00 14 01.6	+2.4
AVH	Avacha	2.86	19	PN	Pn	00 14 01.6	+2.4
KOK	Koryaka	2.86	18	*e*P	Pn	00 14 02.0	+2.7
KOK	Koryaka	2.86	18	PN	Pn	00 14 02.0	+2.7
SMAR	Somma	2.87	20	*e*P	Pn	00 14 01.0	+1.5
SMAR	Somma	2.87	20	PN	Pn	00 14 01.0	+1.5
SDLR	Sedlovina	2.90	21	*e*P	Pn	00 14 01.0	+1.1
SDLR	Sedlovina	2.90	21	PN	Pn	00 14 01.0	+1.1
NLC	Nalytchevo	2.92	26	*e*P	Pn	00 13 59.5	-0.5
NLC				*e*S	Sn	00 14 31.7	-2.3
NLC	Nalytchevo	2.92	26	PN	Pn	00 13 59.5	-0.5
NLC				S	Sn	00 14 31.7	-2.3
KRX	Arik	2.93	17	*e*P	Pn	00 14 02.8	+2.6
KRX	Arik	2.93	17	PN	Pn	00 14 02.8	+2.6
SPN	Mys Shipunski	3.08	34	*e*P	Pn	00 14 02.9	+0.8
SPN				*e*S	Sn	00 14 36.5	-1.3
SPN	Mys Shipunski	3.08	34	PN	Pn	00 14 02.9	+0.8
SPN				S	Sn	00 14 36.5	-1.3
GNL	Ganaly	3.15	8	*e*P	Pn	00 14 05.5	+2.2
GNL	Ganaly	3.15	8	PN	Pn	00 14 05.5	+2.2
KII	Karymskiy	3.73	21	*e*P	Pn	00 14 12.9	+1.8
KII				*e*S	Sn	00 14 53.6	-0.2
KII	Karymskiy	3.73	21	PN	Pn	00 14 12.9	+1.8
KII				S	Sn	00 14 53.6	-0.2
MKZ	Mys Kozlova	4.85	33	*e*P	Pn	00 14 26.3	+0.1
MKZ				*e*S	Sn	00 15 18.7	-2.3
MKZ	Mys Kozlova	4.85	33	PN	Pn	00 14 26.3	+0.1
MKZ				S	Sn	00 15 18.7	-2.3
TUMR	Tumrok	5.04	20	*e*P	Pn	00 14 31.4	+2.5
TUMR	Tumrok	5.04	20	PN	Pn	00 14 31.4	+2.5
KMNR	Kamenistaya	5.50	18	*e*P	Pn	00 14 37.8	+2.6
KMNR	Kamenistaya	5.50	18	PN	Pn	00 14 37.8	+2.6
KPT	Kopyto	5.70	17	*e*P	Pn	00 14 39.6	+1.8
KPT	Kopyto	5.70	17	PN	Pn	00 14 39.6	+1.8
BZMR	Bezymyannaya	5.72	19	*e*P	Pn	00 14 39.7	+1.5
BZMR	Bezymyannaya	5.72	19	PN	Pn	00 14 39.7	+1.5
ZLN	Zelenaya	5.86	20	*e*P	Pn	00 14 42.8	+2.7
ZLN	Zelenaya	5.86	20	PN	Pn	00 14 42.8	+2.7
BDR	Baidarnaya	6.46	20	P	Pn	00 14 49.8	+1.6
BDR	Baidarnaya	6.46	20	PN	Pn	00 14 49.8	+1.6
SMKR	Semkarok	6.53	21	*e*P	Pn	00 14 50.8	+1.6
SMKR	Semkarok	6.53	21	PN	Pn	00 14 50.8	+1.6
SRKR	Sorokina	6.53	20	*e*P	Pn	00 14 50.6	+1.4
SRKR	Sorokina	6.53	20	PN	Pn	00 14 50.6	+1.4
KBTR	Krutoberegovo	6.57	29	*e*P	Pn	00 14 50.2	+0.6
KBTR	Krutoberegovo	6.57	29	PN	Pn	00 14 50.2	+0.6
BKI	Bering	7.05	46	*e*P	Pn	00 14 56.7	+0.5
BKI				*e*S	Sn	00 16 08.3	-6.4
BKI	Bering	7.05	46	PN	Pn	00 14 56.7	+0.5
KUR	Kuril'sk	8.23	233	*e*P	Pn	00 15 13.5	+1.1
TYV	Tymovskoe	9.22	277	*e*P	Pn	00 15 25.6	-0.3
SHO	Shikotan	9.72	230	*e*P	Pn	00 15 32.4	-0.3
SHO				AMB	AMB	00 15 38.2	
	comp=N,4.0nm,0.4s						
SHO				AMB	AMB	00 15 38.2	
	comp=N,7.0nm,0.4s						
SHO				AMB	AMB	00 15 38.2	
	comp=N,8.0nm,0.4s						
SHO				*e*S	Sn	00 17 15.0	-5.2
SHO	Shikotan	9.72	230	*e*PN	Pn	00 15 32.4	-0.3
SHO				pmax	pmax		
	comp=N,4.0nm,0.4s						
SHO				pmax	pmax		
	comp=Z,8.0nm,0.4s						
SHO				pmax	pmax		
	comp=E,7.0nm,0.5s						
MA2	Magadan	9.73	340	LR	LR	00 19 38.7	
	comp=E,24nm,20.1s,baz=314,slow=40						
YUK	Yuzh-Kuril'sk	10.09	234	*e*P	Pn	00 15 38.8	+1.0
ASAJ	Asahikawa	11.81	242	P	Pn	00 16 02.5	+1.3
	comp=E,0.8nm,0.3s,baz=70,slow=9.5,SNR=4.7						
ASAJ				LR	LR	00 19 59.8	
	comp=E,31nm,19.7s,baz=336,slow=34						
KLR	Kul'dur	16.42	275	P	P	00 17 02.3	-0.4
	comp=E,0.0nm,0.3s,baz=75,slow=12,SNR=2.8						
YAK	Yakutsk	18.91	318	P	Pn	00 17 28.9	-2.4
	comp=E,0.1nm,0.3s,baz=308,slow=3.3,SNR=6.6						
YAK				LR	LR	00 24 25.6	
	comp=E,56nm,18.8s,baz=94,slow=36						
YAK	Yakutsk	18.91	318	*e*P	Pn	00 17 29.1	-2.2
YAK	Yakutsk	18.91	318	*e*P	P	00 17 26.7	-3.2
YAK				pmax	pmax		
	comp=Z,24nm,1.0s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,9.0nm,1.1s						
MJA0	Matsu Arr-Jizo	19.55	231	*e*P	P	00 17 39.6	+2.5
MJA0				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR	Matsushiro Arr	19.57	231	P	P	00 17 38.4	+1.1
	comp=Z,0.6nm,0.3s,baz=23,slow=9.8,SNR=9.4						
MJAR	Matsushiro Arr	19.57	231	*e*P	P	00 17 39.6	+2.3
MAJO	Matsushiro	19.57	231	*e*P	P	00 17 39.2	+1.9
MAJO	Matsushiro	19.57	231	⇑*e*P	P	00 17 39.2	+1.9
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.6s						
MAT	Matsushiro	19.57	231	P	P	00 17 39.6	+2.3
KSRS	Korea Array	24.61	249	P	P	00 18 29.7	+1.1
	comp=Z,1.4nm,0.6s,baz=42,slow=9.9,SNR=6.5						
H11N2	WAKE ISLAND Hy	31.73	162	T	T	00 53 17.6	
	baz=348,slow=76,SNR=263						
H11N1	WAKE ISLAND Hy	31.75	162	T	T	00 53 19.0	
	baz=348,slow=76,SNR=208						
H11N3	WAKE ISLAND Hy	31.75	162	T	T	00 53 19.0	
	baz=348,slow=76,SNR=424						
ILAR	Eielson Array	31.88	42	P	P	00 19 34.9	+1.7
	comp=Z,0.3nm,0.5s,baz=258,slow=4.5,SNR=3.3						
ULN	Ulaanbaatar	32.35	285	*e*P	P	00 19 36.6	-1.1
ULN	Ulaanbaatar	32.35	285	⇑*e*P	P	00 19 36.6	-1.1
ULN				pmax	pmax		
	comp=Z,5.0nm,2.7s						
SONM	Songino Array	32.77	285	P	P	00 19 40.7	-0.6
	comp=Z,0.6nm,0.5s,baz=73,slow=6.8,SNR=2.6						
HHC	Hu-ho-hao-te	32.84	271	*e*P	P	00 19 40.9	-1.0
HHC				pP	pP	00 20 00.4	+0.2
HHC				S	S	00 24 53.0	-0.5
HHC				sS	sS	00 25 26.1	+1.1
HHC				pmax	pmax		
	comp=Z,12nm,1.0s						
HHC				pmax	pmax		
	comp=Z,94nm,6.2s						
H11S1	WAKE ISLAND Hy	32.89	163	T	T	00 54 43.6	
	baz=348,slow=76,SNR=1547						
H11S3	WAKE ISLAND Hy	32.90	163	T	T	00 54 39.1	
	baz=348,slow=76,SNR=652						
H11S2	WAKE ISLAND Hy	32.91	163	T	T	00 54 42.6	
	baz=348,slow=76,SNR=428						
NJ2	Nanjing	33.74	251	*e*P	P	00 19 45.6	-4.1
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
LZH	Lanzhou	40.52	270	*e*P	P	00 20 45.3	-2.0
LZH				*e*PP	PP	00 22 22.6	+0.8
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
LZH				pmax	pmax		
	comp=Z,56nm,5.4s						
LZH				LR	LR		
	comp=Z,230nm,13.2s						
LZH				LR	LR		
	comp=Z,240nm,13.5s						
LZH				LR	LR		
	comp=Z,320nm,16.9s						
ZALV	Zalesovo Beam	42.64	304	P	P	00 21 03.3	-0.8
	comp=Z,0.6nm,0.4s,baz=76,slow=7.1,SNR=3.6						
NVS	Novosibirsk	43.08	306	*e*P	P	00 21 07.6	0.0
GYA	Guiyang	45.19	257	*e*P	P	00 21 22.8	-2.2
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
WMQ	Urumqi	46.11	290	P	P	00 21 32.8	+0.8
YKA	Yellowknife Ar	46.24	40	P	P	00 21 34.4	+1.7
	comp=Z,0.2nm,0.4s,baz=303,slow=8.3,SNR=2.6						
KURK	Kurchatov	47.54	302	*e*P	P	00 21 42.3	-0.7
KURK	Kurchatov	47.54	302	*e*P	P	00 21 42.3	-0.7
	comp=Z,5.2nm,0.9s						
KURK	Kurchatov	47.54	302	*e*P	P	00 21 42.3	-0.7
MK31	Makanchi Array	47.63	296	*e*P	P	00 21 43.1	-0.7
MK31	Makanchi Array	47.63	296	*e*P	P	00 21 43.1	-0.7
MKAR	Makanchi Array	47.63	296	P	P	00 21 42.9	-0.9
	comp=Z,0.9nm,0.4s,baz=60,slow=6.4,SNR=29						
MKAR	Makanchi Array	47.63	296	*e*P	P	00 21 43.1	-0.6
	comp=Z,24nm,0.4s						
MK01	Makanchi Array	47.64	296	*e*P	P	00 21 42.8	-1.1
KURBB	Kurchatov Arra	47.64	302	P	P	00 21 42.9	-0.8
	comp=Z,2.0nm,0.4s,baz=63,slow=7.9,SNR=9.9						
MAKZ	Makanchi	47.80	296	*e*P	P	00 21 43.9	-1.2
	comp=Z,1.2nm,0.7s						
MAKZ	Makanchi	47.80	296	*e*P	P	00 21 43.9	-1.2
MAKZ				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KMI	Kunming	48.60	259	P	P	00 21 51.3	-0.4
KMI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SPITS	Spitsbergen Ar	49.31	350	P	P	00 21 54.7	-1.5
	comp=Z,1.2nm,0.5s,baz=38,slow=9.5,SNR=3.7						
GNW	Green Mountain	50.07	60	*e*P	P	00 22 05.3	+3.0
BVAR	Borovoye Array	50.54	309	P	P	00 22 04.4	-1.5
	comp=Z,1.0nm,0.4s,baz=60,slow=8.7,SNR=6.7						
BVAR				LR	LR	00 47 12.5	
	comp=Z,44nm,18.7s,baz=96,slow=40						
B08A	Colville Reser	51.52	58	*e*P	P	00 22 15.9	+2.6
	comp=Z,3.3nm,1.1s						
H04A	Detroit Lake	52.12	63	*e*P	P	00 22 21.3	+3.5
	comp=Z,6.6nm,0.8s						
ARU	Arti	54.02	317	*e*P	P	00 22 29.8	-1.7
ARU	Arti	54.02	317	*e*P	P	00 22 30.0	-1.5
	comp=Z,6.7nm,0.4s						
ARU	Arti	54.02	317*c*	*i*P	P	00 22 30.0	-1.5
ARU						00 23 31.3	
ARU				S	S	00 29 58.6	-2.7
ARU						00 32 04.8	
ARU				SS	SKiKP	00 33 34.6	-0.8
ARU				pmax	pmax		
	comp=Z,8.0nm,1.2s						
MOD	Modoc Plateau	54.93	65	*e*P	P	00 22 42.1	+3.6
	comp=Z,3.8nm,0.7s						
ARCES	ARCESS Array B	55.10	341	P	P	00 22 36.3	-2.9
	comp=Z,0.7nm,0.6s,baz=37,slow=9.1,SNR=5.5						
ARCES	ARCESS Array B	55.10	341	*e*P	P	00 22 38.1	-1.1
ARCES	ARCESS Array B	55.10	341	*e*P	P	00 22 38.1	-1.1
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
UTTA	Uttaradit	55.42	255	P	P	00 22 45.2	+3.1
	comp=Z,2.9nm,0.8s,comp=Z,56nm						
WVOR	Wild Horse Val	55.54	63	*e*P	P	00 22 46.0	+3.1
	comp=Z,5.3nm,1.0s						
WVOR	Wild Horse Val	55.54	63	*e*P	P	00 22 46.0	+3.1
WVOR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CMMT	Chiang Mai	55.61	257	P	P	00 22 45.7	+2.2
	comp=Z,15nm,1.0s						
CHTO	Chiang Mai	55.61	257	*e*P	P	00 22 45.7	+2.2

	comp=Z,3.6nm,0.7s						
CHTO	Chiang Mai	55.61	257	eP	P	00 22 45.7	+2.2
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CHTO	Chiang Mai	55.61	257	P	P	00 22 45.8	+2.3
	comp=Z,63nm,1.0s						
KSH	Kashi	55.70	292	eP	P	00 22 45.4	+1.4
KSH				ePcP	PcP	00 23 45.6	+3.1
KSH				PcS	PcS	00 27 44.1	+1.2
KSH				S	S	00 30 28.1	+3.7
KSH				ScS	ScS	00 32 27.1	+1.3
KSH				SS	SS	00 34 14.1	+3.9
CMAR	Chiang Mai Arr	55.88	257	P	P	00 22 45.8	+0.4
	comp=Z,4.6nm,0.7s,baz=28,slow=6.9,SNR=20						
CMAR	Chiang Mai Arr	55.88	257	eP	P	00 22 47.8	+2.4
CMAR	Chiang Mai Arr	55.88	257	eP	P	00 22 47.8	+2.4
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
SUMG	Summit	56.66	6	eP	P	00 22 52.0	+1.3
	comp=Z,7.7nm,1.2s						
SUMG	Summit	56.66	6	eP	P	00 22 52.0	+1.3
SUMG				pmax	pmax		
	comp=Z,8.0nm,1.2s						
SJH	Saint Joseph S	56.83	70	eP	P	00 22 54.8	+2.8
SAO	San Andreas Ge	57.59	70	eP	P	00 22 59.8	+2.4
	comp=Z,13nm,1.0s						
SAO	San Andreas Ge	57.59	70	eP	P	00 22 59.8	+2.4
SAO				pmax	pmax		
	comp=Z,13nm,1.0s						
ABKAR	Akbulak array	58.04	310	eP	P	00 22 59.2	-1.1
AKTO	Aktyubinsk	58.17	312	P	P	00 22 59.4	-1.8
	comp=Z,0.6nm,0.4s,baz=38,slow=12,SNR=2.2						
NV01	Mina Array Sit	58.35	67	eP	P	00 23 05.6	+2.7
NVAR	Mina Array Bea	58.35	67	P	P	00 23 06.1	+3.2
	comp=Z,0.9nm,0.5s,baz=292,slow=7.7,SNR=7.2						
PDAR	Pinedale Array	60.36	58	P	P	00 23 19.0	+2.3
	comp=Z,1.2nm,0.7s,baz=310,slow=2.0,SNR=13						
PDAR	Pinedale Array	60.36	58	eP	P	00 23 19.2	+2.5
NLU	North Lily Min	60.89	62	eP	P	00 23 23.3	+2.9
	comp=Z,10nm,1.0s						
FIA1	FINESS Array S	61.69	336	eP	P	00 23 26.0	+0.9
	comp=Z,53nm,1.8s						
FINES	FINESS Array B	61.69	336	P	P	00 23 23.6	-1.5
	comp=Z,1.0nm,0.5s,baz=36,slow=6.5,SNR=9.8						
PV02	Paradox Valley	63.97	61	eP	P	00 23 43.0	+2.0
	comp=Z,20nm,1.9s						
VSU	Vasula	64.02	334⇓	eP	P	00 23 41.8	+1.2
VSU				pmax	pmax		
	comp=Z,34nm,1.1s						
SMCO	Snowmass	64.26	59	eP	P	00 23 46.1	+3.1
	comp=Z,5.1nm,1.1s						
HFS	Hagfors	65.76	341	P	P	00 23 50.6	-1.3
	comp=Z,0.9nm,0.4s,baz=72,slow=4.7,SNR=12						
AKASG	Malin Array Be	69.81	328	P	P	00 24 15.0	-2.4
	comp=Z,0.5nm,0.4s,baz=34,slow=6.7,SNR=2.5						
AKASG	Malin Array Be	69.81	328	P	P	00 24 15.0	-2.4
KBZ	Khabaz	70.09	315	P	P	00 24 18.0	-1.2
	comp=Z,1.9nm,0.5s,baz=128,slow=2.8,SNR=4.1						
WRA	Warramunga Arr	73.05	202	P	P	00 24 38.9	+1.7
	comp=Z,0.4nm,0.5s,baz=19,slow=6.4,SNR=2.8						
EKA	Eskdalemuir Ar	73.19	348	P	P	00 24 37.6	-0.1
	comp=Z,0.6nm,0.3s,baz=19,slow=5.3,SNR=16						
TX31	Lajitas Ar. Si	73.32	64	eP	P	00 24 41.6	+2.6
TXAR	Lajitas Array	73.32	64	P	P	00 24 41.5	+2.5
	comp=Z,1.3nm,0.6s,baz=303,slow=5.0,SNR=15						
MLR	Muntele Rosu	75.41	327	P	P	00 24 50.9	-0.1
	comp=Z,0.2nm,0.3s,baz=97,slow=6.6,SNR=7.5						
GERES	GERESS Array B	76.12	336	P	P	00 24 54.4	-0.5
	comp=Z,0.5nm,0.4s,baz=35,slow=6.8,SNR=6.5						
GERES	GERESS Array B	76.12	336	eP	P	00 24 55.0	+0.1
GERES	GERESS Array B	76.12	336	eP	P	00 24 55.0	+0.1
GERES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
ASAR	Alice Springs	76.74	202	P	P	00 25 01.4	+2.9
	comp=Z,0.3nm,0.4s,baz=11,slow=5.1,SNR=3.2						
BRTR	Keskin Array B	77.37	319	P	P	00 25 01.2	-0.9
	comp=Z,0.4nm,0.7s,baz=210,slow=2.1,SNR=4.2						
BRTR				LR	LR	01 03 34.1	
	comp=Z,77nm,18.0s,baz=108,slow=39						
BRTR	Keskin Array B	77.37	319	eP	P	00 25 04.2	+2.1
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
DAVOX	Davos/Dischmat	78.99	338	P	P	00 25 10.6	-0.4
	comp=Z,1.7nm,0.5s,baz=24,slow=18,SNR=4.3						
MMAI	Mount Meron Ar	82.20	314	P	P	00 25 28.5	+0.2
	comp=Z,2.7nm,0.5s,baz=54,slow=7.3,SNR=8.1						
IDI	Anoyia	84.72	323	P	P	00 25 38.6	-2.5
	comp=Z,1.3nm,0.4s,baz=23,slow=13,SNR=10						
RAYN	Ar Rayn	84.86	301	eP	P	00 25 41.1	-0.9
	comp=Z,9.3nm,0.6s						
RAYN	Ar Rayn	84.86	301	eP	P	00 25 41.1	-0.9
RAYN				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ESDC	Sonseca Array	88.61	346	P	P	00 25 59.6	-0.4
	comp=Z,0.4nm,0.6s,baz=358,slow=4.2,SNR=5.9						
KEST	Kesra	89.50	334	P	P	00 26 03.0	-1.3
	comp=Z,2.2nm,0.6s,baz=311,slow=3.7,SNR=6.3						
PLCA	Paso Flores	145.75	92	PKPbc	PKPdf	00 32 46.7	+2.0
	comp=Z,1.7nm,1.0s,baz=231,slow=6.6,SNR=2.4						
NVL	N'lazarevskaya	154.25	206	ePKIKP	PKPdf	00 32 46.6	-10
NVL				pmax	pmax		
	comp=Z,7.0nm,0.7s						

IDC 14 00:16:24.6±2.2**, 4°.62S×152°.75E, h0^{km}, mb3.7**/6**, mb1 3.9**/6**, mb1mx3.6**/49**, mbtmp3.7**/6**, Error ellipse: s-maj=99.0km s-min=22.9km az=118.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.53	228	P	P	00 21 36.9	+0.3
	1.0nm,0.5s,baz=53,slow=10.0,SNR=16						
ASAR	Alice Springs	26.25	222	P	P	00 22 01.6	-0.1
	0.5nm,0.5s,baz=58,slow=9.1,SNR=8.5						
PETK	Petropavlovsk-	57.66	4	P	P	00 26 17.0	+0.4
	1.1nm,0.5s,baz=162,slow=6.7						
MKAR	Makanchi Array	80.16	319	P	P	00 28 37.2	+0.4
	0.2nm,0.6s,baz=105,slow=4.5,SNR=2.3						
ZALV	Zalesovo Beam	80.97	326	P	P	00 28 40.1	-0.8
	0.5nm,0.5s,baz=116,slow=8.2,SNR=2.2						
ILAR	Eielson Array	82.01	22	P	P	00 28 46.1	-0.2
	0.4nm,0.7s,baz=260,slow=5.0,SNR=3.1						
TORD	Torodi Ar. Bea	150.20	288	PKPbc	PKPbc	00 36 18.2	-0.5
	baz=56,slow=2.8						

*ISCJB **14** 00:39:37.6±0.4, 37°.22N±0°.02×28°.36E±0°.03, h0^{km}, Error ellipse: s-maj=3.5km s-min=2.7km az=31.2*
*CSEM **14** 00:39:37.7±0.1, 37°.22N×28°.36E, h1^{km}, ML2.0, Error ellipse: s-maj=3.3km s-min=2.6km az=29.0, Suspected Mining explosion.*
*DDA **14** 00:39:37.3, 37°.20N×28°.33E, h6^{km}, Ml2.5, Suspected Mining explosion.*
*ISK **14** 00:39:37.3, 37°.22N×28°.37E, h7^{km}, ML2.0/2*
ISC 14 00:39:37.1±0.8**, 37°.27N**±0°.03×**28°.39E**±0°.02**, h0^{km}, n37, σ0^s.67**/60**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	Yerkesik	0.16	213	PG	Pg	00 39 40.6	+0.4
YER				SG	Sg	00 39 42.5	+0.2
YER	Yerkesik	0.16	213	ePg	Pg	00 39 40.6	+0.4
YER				eSg	Sg	00 39 42.5	+0.2
TURN	Turunc	0.43	157	i P	Pg	00 39 45.3	-0.1
TURN				i S	Sg	00 39 52.1	+1.1
TURN	Turunc	0.43	157	P	Pg	00 39 45.3	-0.1
TURN				S	Sg	00 39 52.1	+1.1
TAVA	DENIZLI_Tavas	0.46	65	i P	Pb	00 39 47.4	-0.7
TAVA				i S	Sb	00 39 54.7	-0.8
TAVA	DENIZLI_Tavas	0.46	65	P	Pb	00 39 47.4	-0.7
TAVA				S	Sb	00 39 54.7	-0.8
MLSB	Milas	0.49	273	PG	Pg	00 39 46.8	+0.3
MLSB				SG	Sg	00 39 53.8	+0.9
MLSB	Milas	0.49	273	ePg	Pg	00 39 46.8	+0.3
MLSB				eSg	Sg	00 39 53.8	+0.9
DALY	Dalyan (Mu˜la	0.50	155	PG	Pg	00 39 46.7	0.0
DALY	Dalyan (Mu˜la	0.50	155	i P	Pg	00 39 46.2	-0.5
DALY				i S	Sg	00 39 53.4	+0.3
DALY	Dalyan (Mu˜la	0.50	155	P	Pg	00 39 46.2	-0.5
DALY	Dalyan (Mu˜la	0.50	155	ePg	Pg	00 39 46.7	0.0
DALY				S	Sg	00 39 53.4	+0.3
AYDN	Tasoluk	0.56	314	i P	Pb	00 39 49.5	-0.4
AYDN				i S	Sb	00 39 57.2	-1.3
AYDN	Tasoluk	0.56	314	P	Pb	00 39 49.5	-0.4
AYDN				S	Sb	00 39 57.2	-1.3
AYDB	Zeytinkoy-Aydi	0.78	330	PG	Pb	00 39 53.2	-0.5
AYDB				SG	Sb	00 40 05.9	+1.0
AYDB	Zeytinkoy-Aydi	0.78	330	ePg	Pb	00 39 53.2	-0.5
AYDB				eSg	Sb	00 40 05.9	+1.0
FETY	Fethiye	0.84	139	PG	Pg	00 39 53.5	+0.2
FETY	Fethiye	0.84	139	P	Pg	00 39 53.2	-0.1
FETY	Fethiye	0.84	139	ePg	Pg	00 39 53.5	+0.2
FETY				S	Sg	00 40 03.3	-0.9
DAT	Datca	0.85	230	PG	Pg	00 39 52.7	-0.7
DAT	Datca	0.85	230	i P	Pg	00 39 52.3	-1.0
DAT				i S	Sg	00 40 05.1	+0.7
DAT	Datca	0.85	230	P	Pg	00 39 52.3	-1.0
DAT	Datca	0.85	230	ePg	Pg	00 39 52.7	-0.7
DAT				S	Sg	00 40 05.1	+0.7
BODT	Bodrum	0.89	257	PG	Pg	00 39 53.9	-0.2
BODT	Bodrum	0.89	257	ePg	Pg	00 39 53.9	-0.2
GOLH	Golhisar	0.93	92	i P	Pb	00 39 56.6	+0.4
GOLH				i S	Sn	00 40 11.3	-0.4
GOLH	Golhisar	0.93	92	P	Pb	00 39 56.6	+0.4
GOLH				S	Sn	00 40 11.3	-0.4
ARG	Arkhangelos	1.08	192	PG	Pg	00 39 56.7	-1.0
ARG	Arkhangelos	1.08	192	ePg	Pg	00 39 56.7	-1.0
KULA	Kula-Manisa	1.26	10	PN	Pn	00 40 02.4	+0.4
KULA	Kula-Manisa	1.26	10	ePn	Pn	00 40 02.4	+0.4
ELL	Elmali	1.32	113	PN	Pg	00 40 02.4	0.0
ELL				SN	Sn	00 40 21.9	+0.6
ELL	Elmali	1.32	113	ePn	Pg	00 40 02.4	0.0
ELL				eSn	Sn	00 40 21.9	+0.6
AKAS	Kas	1.42	136	PN	Pn	00 40 03.8	-0.5
AKAS	Kas	1.42	136	i P	Pb	00 40 04.9	+0.3
AKAS				i S	Sn	00 40 24.9	+1.1
AKAS	Kas	1.42	136	ePn	Pn	00 40 03.8	-0.5
AKAS	Kas	1.42	136	P	Pb	00 40 04.9	+0.3
AKAS				S	Sn	00 40 24.9	+1.1

*NSSC **14** 00:54:53.2±1.0, 34°.70N×48°.19E, h0^{km}±999^{km}, ML3.6*
*BJI **14** 00:54:59.8, 34°.54N×47°.45E, h9^{km}, mb4.6/21, mB4.7/11, Ms4.4/2*
*ISN **14** 00:55:00.9±1.7, 34°.55N×47°.55E, h14^{km}±7^{km}, ML4.8*
*TEH **14** 00:55:00.6, 34°.60N×47°.51E, h6^{km}, ML4.4*
*IDC **14** 00:55:00.2±0.5, 34°.52N×47°.61E, h0^{km}, mb4.3/31, mb1 4.4/40, mb1mx4.3/60, mbtmp4.3/40, ML3.6/5, MS3.3/16, Ms1 3.3/16, ms1mx3.0/60, Error ellipse: s-maj=12.1km s-min=9.4km az=174.0*
*ISCJB **14** 00:55:00.7±0.1, 34°.46N±0°.02×47°.45E±0°.01, h10^{km}, mb4.5/97, MS3.5/12, Error ellipse: s-maj=2.4km s-min=1.7km az=16.7*
*DSN **14** 00:55:01.9±0.0, 34°.45N×47°.51E, h10^{km}, mb4.6/1, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*MOS **14** 00:55:02.6±1.0, 34°.44N×47°.51E, h28^{km}, mb4.6/38, Error ellipse: s-maj=6.4km s-min=3.7km az=122.5*
*THR **14** 00:55:02.8±1.2, 34°.67N×47°.51E, h15^{km}±9^{km}, ML4.2*
*CSEM **14** 00:55:03.3±0.1, 34°.48N×47°.48E, h15^{km}, mb4.6/61, Error ellipse: s-maj=3.4km s-min=2.2km az=18.0*
*NEIC **14** 00:55:03.5±0.0, 34°.61N×47°.42E, h10^{km}, mb4.6/55, MN4.3(TEH), After TEH.*
ISC 14 00:55:01.6±1.0**, 34°.49N**±0°.03×**47°.53E**±0°.02**, h7^{km}**±6^{km}**, n595, σ1^s.47**/611**, mb4.6**/101**, MS3.4**/12**, 35C-24D, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBZA	Bozab	0.27	94	e		00 55 12.5	
	comp=Z,24µm,0.1s						
IBZA				ePg	Pg	00 55 07.1	0.0
IKOM	Komasi	0.32	183	ePg	Pb	00 55 10.4	+0.8
IKOM				e		00 55 25.8	
	comp=Z,99nm,0.3s						
IKOM	Komasi	0.32	183	ePg	Pb	00 55 10.4	+0.8
KCHF	Cheshme Sefid,	0.46	242	ePg	Pb	00 55 12.2	+0.1
KCHF				e		00 55 26.3	
	comp=Z,99nm,0.2s						
KCHF	Cheshme Sefid,	0.46	242	ePg	Pb	00 55 12.2	+0.1
IVIS	Veis	0.56	274	ePg	Pg	00 55 12.6	+0.1
IVIS				eSg	Sb	00 55 22.3	+0.2
IVIS				e		00 55 26.2	
	comp=N,39µm,0.2s						
IVIS				e		00 55 27.9	
	comp=E,76µm,0.2s						
IVIS				e		00 55 30.4	
	comp=Z,38µm,0.2s						
SNGE	Sanandaj	0.62	346	ePg	Pg	00 55 11.1	-2.5
SNGE	Sanandaj	0.62	346	ePg	Pg	00 55 11.1	-2.5
ILIN	Lien	0.64	312	ePg	Pg	00 55 12.1	-1.8
ILIN				eSg	Sg	00 55 20.7	-1.5
ILIN				e		00 55 23.1	
	comp=N,70µm,0.1s						
ILIN				e		00 55 24.6	
	comp=E,8µm,0.2s						
ILIN				e		00 55 28.0	
	comp=Z,37µm,0.2s						
IKFM	Kafar-mosalman	1.00	165	ePg	Pb	00 55 22.0	+0.9
IKFM				e		00 55 44.1	
	comp=E,99nm,0.1s						
IKFM				e		00 55 48.9	
	comp=N,99nm,0.2s						
IKFM				e		00 56 01.7	
	comp=Z,99nm,0.8s						
IKFM	Kafar-mosalman	1.00	165	ePg	Pb	00 55 22.0	+0.9
ASAO	Ashtian	2.06	88	ePn	Pb	00 55 38.9	-0.5
ASAO				eSg	Sg	00 56 08.1	+0.3
ASAO				IAML		00 56 17.9	
	comp=E,2µm,0.6s						
ASAO	Ashtian	2.06	88	ePn	Pb	00 55 38.9	-0.5
ASAO	Ashtian	2.06	88	ePn	Pb	00 55 38.9	-0.5
ASAO				eSg	Sg	00 56 08.1	+0.3
QABG	Abgarm-Qazvin	2.07	54	ePn	Pn	00 55 38.0	+1.0
QABG				e		00 56 20.7	
	comp=Z,99nm,0.4s						
QABG	Abgarm-Qazvin	2.07	54	ePn	Pn	00 55 38.0	+1.0
KHMZ	Khomeyn	2.15	110	ePn	Pb	00 55 41.2	+0.3
KHMZ				IAML		00 56 20.2	
	comp=N,2µm,0.5s						
KHMZ				IAML		00 56 21.5	
	comp=E,1µm,0.4s						
KHMZ	Khomeyn	2.15	110	ePn	Pb	00 55 41.3	+0.3
KHMZ	Khomeyn	2.15	110	ePn	Pb	00 55 41.2	+0.3
IRAZ	Razeghan	2.17	64	ePn	Pn	00 55 39.4	+1.1
IRAZ				e		00 56 17.4	
	comp=N,28µm,0.3s						
IRAZ				e		00 56 17.8	
	comp=Z,37µm,0.3s						
IRAZ				e		00 56 19.3	
	comp=E,81µm,0.3s						
IRAZ	Razeghan	2.17	64	ePn	Pn	00 55 39.4	+1.1
ZNJK	Zanjan	2.37	23	ePn	Pn	00 55 41.8	+0.7
ZNJK	Zanjan	2.37	23	ePn	Pn	00 55 41.8	+0.7
ZNJK	Zanjan	2.37	23	ePn	Pn	00 55 41.8	+0.7
SHGR	Shooshtar-Gavs	2.60	156	ePn	Pb	00 55 48.8	+0.3
SHGR				IAML		00 56 37.3	
	comp=N,1µm,0.4s						
SHGR				IAML		00 56 41.3	
	comp=E,1µm,0.5s						
SHGR	Shooshtar-Gavs	2.60	156	ePn	Pb	00 55 48.8	+0.3
SHGR	Shooshtar-Gavs	2.60	156	ePn	Pb	00 55 48.8	+0.3
IMHD	Mahdasht	2.83	64	e		00 54 33.5	
	comp=Z,8µm,0.0s						
IMHD				e		00 56 36.3	
	comp=E,11µm,0.1s						
IMHD				e		00 56 44.7	
	comp=N,12µm,0.2s						
BHD	Baghdad	2.89	246	ePn	Pn	00 55 49.0	+1.0
	SNR=4.0						
BHD				eSn	Sn	00 56 24.0	+1.0
	SNR=4.0						
IGZV	Ghazvin	2.90	48	ePn	Pn	00 55 49.3	+1.0
IGZV				e		00 56 33.4	
	comp=N,51µm,0.4s						
IGZV				e		00 56 33.5	
	comp=Z,29µm,0.3s						
IGZV				e		00 56 34.9	
	comp=E,36µm,0.3s						
IGZV	Ghazvin	2.90	48	ePn	Pn	00 55 49.3	+1.0
THKV	Tehran--Karaj	3.09	62	ePn	Pn	00 55 52.5	+1.6
THKV	Tehran--Karaj	3.09	62	ePn	Pn	00 55 52.5	+1.6
THKV	Tehran--Karaj	3.09	62	ePn	Pn	00 55 52.5	+1.6
GHVR	GHOM	3.11	89	ePn	Pn	00 55 53.8	+2.7
GHVR				IAML		00 56 50.7	
	comp=N,602nm,0.5s						
GHVR				IAML		00 56 60.0	
	comp=E,734nm,0.6s						
GHVR	GHOM	3.11	89	ePn	Pn	00 55 53.8	+2.7
GHVR	GHOM	3.11	89	ePn	Pn	00 55 53.8	+2.7
QALM	Alamut, Qazvin	3.20	52	ePn	Pn	00 55 54.9	+2.5
QALM				e		00 56 44.3	
	comp=Z,99nm,0.3s						
QALM	Alamut, Qazvin	3.20	52	ePn	Pn	00 55 54.9	+2.5
IBST	Bostanabad	3.25	351	ePn	Pn	00 55 55.0	+1.9
IBST				e		00 56 08.0	
	comp=Z,5µm,0.4s						
IBST				e		00 56 48.7	
	comp=E,3µm,0.3s						
IBST				e		00 56 48.7	
	comp=N,4µm,0.3s						
IBST	Bostanabad	3.25	351	ePn	Pn	00 55 55.0	+1.9
CHTH	Charan	3.27	63	ePn	Pn	00 55 55.1	+1.7
CHTH	Charan	3.27	63	ePn	Pn	00 55 55.1	+1.7
CHTH	Charan	3.27	63	ePn	Pn	00 55 55.1	+1.7
IVRN	Varamin	3.49	81	ePn	Pn	00 55 59.8	+3.5
IVRN				e		00 56 15.5	
	comp=Z,5µm,0.2s						
IVRN				e		00 56 15.6	
	comp=E,4µm,0.2s						
IVRN	Varamin	3.49	81	ePn	Pn	00 55 59.8	+3.5
IKLH	Kolahrood	3.56	108	ePn	Pn	00 56 01.4	+3.9
IKLH				e		00 57 05.6	
	comp=Z,9µm,0.2s						
IKLH				e		00 57 12.3	
	comp=E,19µm,0.5s						
IKLH				e		00 57 16.6	
	comp=N,10µm,0.3s						
IKLH	Kolahrood	3.56	108	ePn	Pn	00 56 01.4	+3.9
ROKH	ROKH	3.63	125	ePn	Pn	00 56 01.3	+3.0
ROKH				e		00 57 14.7	
	comp=N,99nm,0.7s						
ROKH				e		00 57 14.7	
	comp=Z,99nm,0.7s						
ROKH				e		00 57 21.0	
	comp=E,99nm,0.6s						
ROKH	ROKH	3.63	125	ePn	Pn	00 56 01.3	+3.0
ZNGN	Zangian	3.65	129	ePn	Pn	00 56 02.1	+3.3
ZNGN				e		00 56 51.1	
	comp=E,99nm,0.2s						
ZNGN				e		00 57 16.3	
	comp=N,99nm,0.5s						
ZNGN				e		00 57 22.9	
	comp=Z,99nm,0.4s						
ZNGN	Zangian	3.65	129	ePn	Pn	00 56 02.1	+3.3
NSR	Nassriya	3.66	199	ePn	Pn	00 56 00.0	+1.4
	SNR=4.0						
NSR				eSn	Sn	00 56 43.0	+1.0
	SNR=4.0						
IAFJ	Afjeh	3.69	67	ePn	Pn	00 56 01.4	+2.2
IAFJ				e		00 56 11.5	
	comp=Z,6µm,0.2s						
IAFJ				e		00 57 11.8	
	comp=N,13µm,0.3s						
IAFJ	Afjeh	3.69	67	ePn	Pn	00 56 01.4	+2.2
IDMV	Damavand	3.85	72	e		00 56 16.0	
	comp=E,9µm,0.2s						
IDMV				ePn	Pn	00 56 03.8	+2.4
IDMV				e		00 56 16.0	
	comp=Z,7µm,0.3s						
IDMV				e		00 57 13.7	
	comp=N,9µm,0.3s						
ITBZ	Tabriz	3.90	344	e		00 56 16.5	
	comp=Z,3µm,0.3s						
ITBZ				ePn	Pn	00 56 03.9	+1.9
ITBZ				e		00 57 07.0	
	comp=E,4µm,0.3s						
ITBZ				e		00 57 09.5	
	comp=N,4µm,0.3s						
IBRJ	Brojen	4.05	128	ePn	Pn	00 56 06.5	+2.3
IBRJ				e		00 57 01.1	
	comp=E,3µm,0.3s						
IBRJ				e		00 57 36.0	
	comp=Z,2µm,0.4s						
IBRJ				e		00 57 42.7	
	comp=N,4µm,0.4s						
ISHB	Shabestar	4.09	338	ePn	Pn	00 56 06.1	+1.4
ISHB				e		00 57 14.7	
	comp=Z,7µm,0.4s						
ISHB				e		00 57 20.7	
	comp=E,15µm,0.4s						
ISHB				e		00 57 22.3	
	comp=N,19µm,0.4s						
IPRN	Peran	4.30	65	ePn	Pn	00 56 11.5	+4.0
IPRN				e		00 56 23.3	
	comp=Z,5µm,0.3s						
IPRN				e		00 56 24.5	
	comp=E,10µm,0.2s						
IPRN				e		00 57 29.0	
	comp=N,12µm,0.4s						
IZEF	Zefreh	4.30	110	ePn	Pn	00 56 11.4	+3.7
IZEF				e		00 57 24.4	
	comp=Z,3µm,0.4s						
IZEF				e		00 57 29.6	
	comp=N,2µm,0.3s						
IZEF				e		00 57 30.9	
	comp=E,3µm,0.3s						
IZEF	Zefreh	4.30	110	ePn	Pn	00 56 11.4	+3.7
IGAR	Gharneh	4.31	118	ePn	Pn	00 56 11.1	+3.4
IGAR				e		00 57 07.1	
	comp=N,4µm,0.2s						
IGAR				e		00 57 08.4	
	comp=Z,2µm,0.3s						
GRMI	Germi	4.32	4	ePn	Pn	00 56 08.6	+0.8
GRMI	Germi	4.32	4	ePn	Pn	00 56 08.6	+0.8
GRMI	Germi	4.32	4	ePn	Pn	00 56 08.6	+0.8
IFIR	Firoozkooh	4.43	74	ePn	Pn	00 56 12.1	+2.6
IFIR				e		00 56 14.9	
	comp=Z,2µm,0.1s						
IFIR				e		00 57 33.7	
	comp=N,4µm,0.4s						
IFIR				e		00 57 34.0	
	comp=E,4µm,0.3s						
IFIR	Firoozkooh	4.43	74	ePn	Pn	00 56 12.1	+2.6
ILAS	Lasjerd	4.55	77	ePn	Pn	00 56 13.7	+2.7
ILAS				e		00 57 38.0	
	comp=E,4µm,0.4s						
ILAS	Lasjerd	4.55	77	ePn	Pn	00 56 13.7	+2.7
IALA	Alasht	4.60	68	ePn	Pn	00 56 15.1	+3.3
IALA				e		00 56 35.8	
	comp=Z,3µm,0.3s						
IALA				e		00 57 15.8	
	comp=E,5µm,0.2s						
IALA	Alasht	4.60	68	ePn	Pn	00 56 15.1	+3.3
NASN	Na'in	4.71	109	ePn	Pn	00 56 16.8	+3.4
NASN	Na'in	4.71	109	ePn	Pn	00 56 16.8	+3.4
NASN	Na'in	4.71	109	ePn	Pn	00 56 16.8	+3.4
IRAM	Ramesheh	4.87	122	ePn	Pn	00 56 17.7	+2.3
IRAM				e		00 57 19.1	
	comp=N,2µm,0.2s						
IRAM				e		00 57 52.1	
	comp=E,2µm,0.3s						
IRAM				e		00 57 57.3	
	comp=Z,2µm,0.4s						
IRAM	Ramesheh	4.87	122	ePn	Pn	00 56 17.7	+2.3
ISHM	Shahmirzad	4.90	73	ePn	Pn	00 56 18.1	+2.2
ISHM				e		00 56 38.6	
	comp=Z,3µm,0.2s						
IANJ	Anjilo	5.33	78	ePn	Pn	00 56 23.9	+2.1
IANJ				e		00 58 15.0	
	comp=Z,2µm,0.4s						
IANJ	Anjilo	5.33	78	ePn	Pn	00 56 23.9	+2.1
IGLO	Ghaloghah	5.52	67	ePn	Pn	00 56 28.6	+4.3
IGLO				e		00 58 22.6	
	comp=N,9µm,0.5s						
IGLO				e		00 58 23.3	
	comp=Z,6µm,0.7s						
IGLO				e		00 58 26.6	
	comp=E,6µm,0.5s						
GNI	Garni	6.07	339	Pn	Pn	00 56 36.2	+4.3
	comp=E,0.2nm,0.3s,baz=296,slow=1.4,SNR=6.6						
GNI				Pg	Pb	00 56 51.8	+4.1
	comp=E,1.2nm,0.3s,baz=157,slow=2.0,SNR=14						
GNI				Lg	Lg	00 58 13.4	
	baz=268,slow=12,SNR=1.2						
GNI				LR	LR	00 58 56.4	
	comp=E,255nm,20.3s,baz=159,slow=39						
RTB	Rutbah	6.19	258	ePn	Pn	00 56 34.0	+0.6
	SNR=4.0						
RTB				eSn	Sn	00 57 43.0	-1.5

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      SNR=4.0
KFJS                      6.29 177   P      Pn      00 56 36.5 +1.8
KFJS                                 S      Sn      00 57 47.8 +0.9
AKT   Akhty               6.98   1  eP      Pn      00 56 46.1 +1.8
AKT                                 eS      Sn      00 58 07.4 +3.5
AKT                                  pmax   pmax
      comp=Z,31nm,0.6s
AKT                                  smax   smax
      comp=E,19nm,0.8s
AKT                                  smax   smax
      comp=E,18nm,0.7s
AKT                                  smax   smax
      comp=N,7.0nm,0.6s
AKT   Akhty               6.98   1  eP      Pn      00 56 46.1 +1.8
      comp=N,31nm,0.6s
AKT                                 eS      Sn      00 58 07.4 +3.5
      comp=N,7.0nm,0.6s
TBLG  Delisi              7.56 344  ePn     Pn      00 56 53.1 +1.0
TBLG  Delisi              7.56 344  eP      Pn      00 56 53.1 +1.0
TBLG  Delisi              7.56 344  eP      Pn      00 56 53.1 +1.0
SLMH  Al Salmeh           8.03 285  eP      Pn      00 56 59.5 +0.9
SLMH                                eS      Sn      00 58 29.5  -0.3
SLMH                                 AML    AML     00 59 32.2
      comp=E,88nm,0.7s
SLMH                                 AML    AML     00 59 57.6
      comp=N,70nm,0.7s
BOQSS                     8.74 169   P      Pn      00 57 10.2 +1.8
ZEI   Tsey                8.76 342  eP      Pn      00 57 14.9 +6.1
ZEI                                  pmax   pmax
      comp=Z,24nm,1.2s
GROC  Groznyy             8.80 352  eP      Pn      00 57 14.0 +4.8
GROC                                 S      Sn      00 59 01.3  +13
GROC                                 pmax   pmax
      comp=Z,9.0nm,0.4s
ASF   Jabal al Asfar      9.19 258   Pn     Pn      00 57 15.9 +1.2
      comp=Z,1.2nm,0.3s,baz=18,slow=6.0,SNR=10
ASF                                  Sn     Sn      00 58 59.0 +0.6
      comp=Z,0.6nm,0.3s,baz=184,slow=8.8,SNR=1.4
ASF                                  Lg     Lg      00 59 58.1
      comp=Z,0.8nm,0.3s,baz=99,slow=21,SNR=2.3
GEYT  Alibeck             9.22  65   Pn     Pn      00 57 18.4 +3.5
      comp=Z,0.6nm,0.3s,baz=248,slow=33,SNR=10
GEYT                                 Lg     Lg      00 59 50.9
      comp=Z,0.1nm,0.3s,baz=256,slow=40,SNR=2.5
GEYT                                 LR     LR      01 01 24.1
      comp=Z,104nm,18.1s,baz=290,slow=42
GYA0B ALIBECK ARRAY       9.22  65  ePn     Pn      00 57 17.1 +2.2
GYA0B ALIBECK ARRAY       9.22  65  ePn     Pn      00 57 17.1 +2.2
TOTH  TOTAH               9.30 266  eP      Pn      00 57 17.9 +1.8
TOTH                                eS      Sn      00 59 02.7 +1.8
TOTH                                 AML    AML     01 00 22.8
      comp=N,27nm,0.7s
TOTH                                 AML    AML     01 00 23.3
      comp=E,18nm,0.8s
IAKL  Akhelmad            9.39  74  e                00 57 42.5
      comp=Z,73nm,0.3s
IAKL                                e                00 57 46.3
      comp=E,99nm,0.3s
IAKL                                e                00 57 52.7
      comp=N,92nm,0.2s
QASN  Qassioun            9.39 267  eP      Pn      00 57 19.0 +1.6
QASN                                eS      Sn      00 59 04.5 +1.2
QASN                                 AML    AML     01 00 00.1
      comp=E,59nm,0.6s
QASN                                 AML    AML     01 00 03.7
      comp=N,46nm,0.6s
ITEG  Tejag               9.48  97  e                00 57 43.5
      comp=E,229nm,0.2s
ITEG                                e                00 57 46.4
      comp=N,348nm,0.2s
ITEG                                e                00 57 48.5
      comp=Z,309nm,0.3s
NCK   Nalchik             9.50 342⇑eP      Pn      00 57 20.1 +1.4
NCK                                  pmax   pmax
      comp=Z,3.0nm,0.3s
NCK   Nalchik             9.50 342  eP      Pn      00 57 20.1 +1.4
      comp=Z,3.0nm,0.3s
NEY   Neytrino            9.51 338⇓eP      Pn      00 57 22.3 +3.2
NEY   Neytrino            9.51 338  eP      Pn      00 57 22.3 +3.2
BRBR  Barbar              9.68 267  eP      Pn      00 57 22.8 +1.4
BRBR                                eS      Sn      00 59 11.4 +0.8
BRBR                                 AML    AML     01 00 00.8
      comp=N,27nm,0.7s
BRBR                                 AML    AML     01 00 33.5
      comp=E,17nm,0.7s
IKOO  Kooshah             9.80  99  e                00 57 53.6
      comp=E,171nm,0.2s
IKOO                                e                01 00 47.5
      comp=N,184nm,0.5s
KBZ   Khabaz              9.90 340   Pn     Pn      00 57 26.1 +1.9
      comp=N,0.1nm,0.3s,baz=168,slow=3.1,SNR=2.1
KBZ                                  LR     LR      01 00 50.8
      comp=N,82nm,18.1s,baz=142,slow=35
SLWS                     10.03 164   P      Pn      00 57 28.5 +2.4
KVAR  Kislovodsk Arr     10.17 340   Pn     Pn      00 57 34.5 +6.5
      baz=152,slow=17,SNR=8.9
KVAR                                 LR     LR      01 00 59.7
      comp=N,49nm,21.8s,baz=130,slow=35
KIV   Kislovodsk         10.17 340  ePn     Pn      00 57 29.7 +1.7
KIV   Kislovodsk         10.17 340⇓eP      Pn      00 57 26.3  -1.7
KIV                                 eS      Sn      00 59 35.1  +13
KIV                                  pmax   pmax
      comp=Z,14nm,1.2s
KIV                                  MLR    MLR
      comp=Z,205nm,17.0s
KIV   Kislovodsk         10.17 340  ePn     Pn      00 57 29.7 +1.7
MMAI  Mount Meron Ar     10.21 265   Pn     Pn      00 57 29.5 +1.0
      comp=Z,1.1nm,0.3s,baz=79,slow=18,SNR=9.8
MMAI                                 Lg     Lg      01 00 27.8
      comp=Z,1.0nm,0.3s,baz=84,slow=39,SNR=3.5
MMAI                                 LR     LR      01 02 39.9
      comp=Z,45nm,18.3s,baz=115,slow=45
BTHS                     10.80 164   P      Pn      00 57 37.4 +0.8
SOC   Sochi              10.92 329  eP      Pn      00 57 36.5  -1.7
SOC                                 e                00 59 44.1
SOC                                  pmax   pmax
      comp=Z,7.0nm,0.5s
SOC                                  MLR    MLR
      comp=Z,102nm,8.0s
RAYN  Ar Rayn            11.07 190  ePn     Pn      00 57 40.6 +0.2
      comp=Z,28nm,0.5s
RAYN  Ar Rayn            11.07 190  i P     Pn      00 57 40.3  -0.1
      SNR=55
RAYN  Ar Rayn            11.07 190  eP      Pn      00 57 40.6 +0.2
RAYN                                 pmax   pmax
      comp=Z,29nm,0.5s
RAYN  Ar Rayn            11.07 190  eP      Pn      00 57 40.6 +0.2
      comp=Z,29nm,0.5s
SHME  Shamm              11.23 136  i P     Pn      00 57 42.2  -0.3
      SNR=7.9
SHME  Shamm              11.23 136   P      Pn      00 57 43.7 +1.2
      SNR=8.0
UMQ   Umm Al-Quwin       11.37 140   P      Pn      00 57 44.2  -0.2
BANOM Banah              11.41 136   P      Pn      00 57 45.7 +0.7
      SNR=11
BANOM                                S      Sn      00 59 48.7  -4.2
BANOM Banah              11.41 136  i P     Pn      00 57 45.1   0.0
      SNR=13
BANOM Banah              11.41 136   P      Pn      00 57 45.7 +0.7
      SNR=11
CSS   Mathiatis          11.70 276  ePn     Pn      00 57 49.3 +0.4
CSS   Mathiatis          11.70 276  ePn     Pn      00 57 49.3 +0.4
EIL   Elat               11.70 249   Pn     Pn      00 57 55.4 +6.5
      comp=Z,0.5nm,0.3s,baz=175,slow=4.7,SNR=9.4
EIL                                  Lg     Lg      01 01 20.8
      comp=Z,0.2nm,0.3s,baz=116,slow=21,SNR=1.6
MSFE  Esma-Masafi        11.77 138  i P     Pn      00 57 49.6  -0.4
      SNR=20
MSFE  Esma-Masafi        11.77 138   P      Pn      00 57 50.4 +0.4
      SNR=20
NAZ   Nazwa, Dubai       11.81 141   P      Pn      00 57 52.0 +1.6
      SNR=31
NAZ                                  S      Sn      00 59 59.3  -3.1
NAZ   Nazwa, Dubai       11.81 141  i P     Pn      00 57 50.8 +0.4
      SNR=32
NAZ   Nazwa, Dubai       11.81 141   P      Pn      00 57 50.8 +0.4
      SNR=32
NAZ                                  S      Sn      00 59 59.3  -3.1
AJN   Ajban              11.83 145  i P     Pn      00 57 51.9 +1.3
      SNR=9.8
MDH   Madha              11.90 138  i P     Pn      00 57 51.3  -0.3
      SNR=8.5
MDH   Madha              11.90 138   P      Pn      00 57 52.0 +0.3
      SNR=8.9
ASUD  Al Ashush, Dub     11.94 143   P      Pn      00 57 53.9 +1.7
      SNR=32
ASUD  Al Ashush, Dub     11.94 143  i P     Pn      00 57 53.3 +1.1
      SNR=32
ASUD  Al Ashush, Dub     11.94 143   P      Pn      00 57 53.3 +1.1
      SNR=32
UOSS  Minazif            12.13 139  ePn     Pn      00 57 54.4  -0.4
UOSS                                eSn     Sn      01 00 03.2  -7.1
UOSS  Minazif            12.13 139   P      Pn      00 57 54.7  -0.1
      SNR=32
UOSS  Minazif            12.13 139  i P     Pn      00 57 54.4  -0.4
      SNR=8.7
UOSS  Minazif            12.13 139   P      Pn      00 57 54.7  -0.1
      SNR=32
UOSS                                eSn     Sn      01 00 03.2  -7.1
HATD  Hatta, Dubai       12.19 140   P      Pn      00 57 56.7 +1.1
      SNR=12
HATD  Hatta, Dubai       12.19 140  i P     Pn      00 57 55.7 +0.1
      SNR=12
HATD  Hatta, Dubai       12.19 140   P      Pn      00 57 56.7 +1.1
      SNR=12
BR131 Keskin Array S     12.26 299  ePn     Pn      00 57 59.1 +2.5
BR131 Keskin Array S     12.26 299  ePn     Pn      00 57 59.1 +2.5
BRTR  Keskin Array B     12.26 299   Pn     Pn      00 57 59.1 +2.5
      comp=Z,0.2nm,0.3s,baz=116,slow=13,SNR=27
ASHO  Ashiyiah           12.26 141   P      Pn      00 57 56.7   0.0
      SNR=32
ASHO  Ashiyiah           12.26 141  i P     Pn      00 57 56.4  -0.3
      SNR=32
ASHO  Ashiyiah           12.26 141   P      Pn      00 57 56.7   0.0
      SNR=32
ALNE  Al Ain             12.62 143  i P     Pn      00 58 01.4  -0.2
      SNR=20
ALNE  Al Ain             12.62 143   P      Pn      00 58 01.7 +0.1
      SNR=6.6
ANTO  Ankara             12.92 299  ePn     Pn      00 58 08.5 +2.9
ANTO  Ankara             12.92 299  eP      Pn      00 58 08.5 +2.9
ANTO  Ankara             12.92 299  eP      Pn      00 58 08.5 +2.9
HOQ   Hoqain             13.82 139   P      Pn      00 58 16.9  -1.0
SMDO  Samad              14.64 138   P      Pn      00 58 28.4  -0.9
SIM   Simferopol’        14.67 319  eP      Pn      00 58 26.5  -2.9
SIM                                  S      Sn      01 01 12.0  -0.1
SIM                                  pmax   pmax
      comp=Z,10µm,1.0s
WSAR  Wadi Sarin         14.83 136   Pn     Pn      00 58 30.0  -1.7
      comp=Z,3.6nm,0.3s,baz=318,slow=11,SNR=34
WSAR                                 Sn     Sn      01 01 07.7  -8.5
      comp=Z,1.3nm,0.3s,baz=139,slow=8.7,SNR=2.9
WSAR                                 LR     LR      01 04 44.5
      comp=Z,146nm,20.7s,baz=324,slow=40
WSAR  Wadi Sarin         14.83 136   P      Pn      00 58 29.5  -2.2
WBK   Wadi Bani Khal     15.51 137   P      Pn      00 58 41.1 +0.3
YER   Yerkesik           15.84 285   P      P       00 58 49.0 +0.1
YER   Yerkesik           15.84 285   P      P       00 58 49.0 +0.1
YER   Yerkesik           15.84 285   P      P       00 58 49.0 +0.1
YER   Yerkesik           15.84 285   P      P       00 58 49.0 +0.1
KARP  Karpathos          16.72 279  ePn     Pn      00 58 57.1 +0.8
      comp=Z,52nm,0.7s
KARP  Karpathos          16.72 279   P      P       00 58 59.8 +1.1
KARP  Karpathos          16.72 279  ePn     Pn      00 58 57.1 +0.8
      comp=Z,52nm,0.7s
VRH   Novokhopyorsk      17.23 348  eP      Pn      00 59 01.6  -0.9
VRH                                  pmax   pmax
      comp=Z,10.0nm,0.5s
VRH                                  MLR    MLR
      comp=Z,180nm,17.0s
ABKAR Akbulak array      17.37  28  ePn     Pn      00 59 04.5 +0.1
ABKAR Akbulak array      17.37  28  ePn     Pn      00 59 04.5 +0.1
VORD  Divnogorie         17.52 342  eP      Pn      00 59 06.1  -0.1
VORD                                 pmax   pmax
      comp=Z,10.0nm,0.5s
VORD  Divnogorie         17.52 342  eP      Pn      00 59 06.1  -0.1
      comp=Z,10.0nm,0.5s
AKTO  Aktyubinsk         17.68  23   P      Pn      00 59 06.8  -1.4
      comp=Z,0.5nm,0.3s,baz=195,slow=11,SNR=12
AKTO                                 S      Sn      01 02 21.9  -3.4
      comp=Z,0.1nm,0.3s,baz=284,slow=18,SNR=1.7
AKTO                                 LR     LR      01 08 17.8
      comp=Z,94nm,20.1s,baz=197,slow=45
TIRR  Tirgusor           17.77 310⇓iP      P       00 59 11.5 +1.4
TIRR  Tirgusor           17.77 310  ePn     P       00 59 09.9  -0.2
      comp=Z,6.5nm,0.8s
TIRR  Tirgusor           17.77 310 ⇓P      P       00 59 11.5 +1.4
TIRR  Tirgusor           17.77 310  ePn     P       00 59 09.9  -0.2
      comp=Z,6.5nm,0.8s
TIRR  Tirgusor           17.77 310   P      P       00 59 11.5 +1.4
VSR   Storozhevoye       17.79 343  eP      Pn      00 59 08.5  -0.9
VSR                                 eS      Sn      01 02 25.4  -2.3
VSR                                  pmax   pmax
      comp=Z,6.0nm,0.6s
VSR                                  smax   smax
      comp=E,9.0nm,1.4s
APE   Apeiranthos        18.03 285⇑iP      P       00 59 15.6 +2.4
APE   Apeiranthos        18.03 285 ⇑P      P       00 59 15.6 +2.4
APE   Apeiranthos        18.03 285   P      P       00 59 15.6 +2.4
TLB   Topalu             18.06 310⇑iP      P       00 59 14.5 +1.2
TLB   Topalu             18.06 310 ⇑P      P       00 59 14.5 +1.2
TLB   Topalu             18.06 310   P      P       00 59 14.5 +1.2
LAST  Lasithi            18.12 278   P      P       00 59 14.6 +0.5
LAST  Lasithi            18.12 278   P      P       00 59 14.6 +0.5
LAST  Lasithi            18.12 278   P      P       00 59 14.6 +0.5
ALN   Alexandroupoli     18.15 297  ePn     P       00 59 14.2  -0.1
      comp=E,13nm,0.8s
ALN   Alexandroupoli     18.15 297   P      P       00 59 14.8 +0.5
ALN   Alexandroupoli     18.15 297  eP      P       00 59 14.2  -0.1
ALN                                  pmax   pmax
      comp=Z,13nm,0.8s
ALN   Alexandroupoli     18.15 297  eP      P       00 59 14.2  -0.1
      comp=Z,13nm,0.8s
HARR  Harsova            18.18 310⇓iP      P       00 59 15.7 +1.1
HARR  Harsova            18.18 310 ⇓P      P       00 59 15.7 +1.1
HARR  Harsova            18.18 310   P      P       00 59 15.7 +1.1
CFR   Carcaliu           18.28 312⇓iP      P       00 59 16.7 +1.0
CFR   Carcaliu           18.28 312 ⇓P      P       00 59 16.7 +1.0
CFR   Carcaliu           18.28 312   P      P       00 59 16.7 +1.0
RDO   Rodhopi            18.58 297   P      Pn      00 59 20.3 +1.0
RDO   Rodhopi            18.58 297   P      Pn      00 59 20.3 +1.0
RDO   Rodhopi            18.58 297   P      Pn      00 59 20.3 +1.0
IDI   Anoyia             18.59 279   P      Pn      00 59 19.8 +0.2
      comp=Z,2.8nm,0.3s,baz=54,slow=15,SNR=39
IDI   Anoyia             18.59 279⇑iP      P       00 59 19.0  -0.3
IDI   Anoyia             18.59 279  eP      Pn      00 59 19.6 +0.1
      comp=Z,23nm,0.7s
IDI   Anoyia             18.59 279  eP      Pn      00 59 19.6 +0.1
      comp=Z,23nm,0.7s
SZH   Strazhica          18.92 304  i P     Pn      00 59 24.0 +0.6
VAM   Vamos              19.14 279   P      Pn      00 59 26.8 +0.6
VAM   Vamos              19.14 279   P      Pn      00 59 26.8 +0.6
VAM   Vamos              19.14 279   P      Pn      00 59 26.8 +0.6
VAM   Vamos              19.14 279   P      Pn      00 59 26.8 +0.6
ISR   Istrita            19.25 310⇑iP      Pn      00 59 27.6 +0.2
ISR   Istrita            19.25 310 ⇑P      Pn      00 59 27.6 +0.2
ISR   Istrita            19.25 310   P      Pn      00 59 27.6 +0.2
IMMV  Iera Moni Meta     19.32 280   P      Pn      00 59 28.4 +0.1
PTL   Penteli            19.40 287   P      Pn      00 59 30.3 +1.1
PTL   Penteli            19.40 287   P      Pn      00 59 30.3 +1.1
PTL   Penteli            19.40 287   P      Pn      00 59 30.3 +1.1
VLY   Voula,Athens       19.44 287   P      Pn      00 59 30.2 +0.4
VLY   Voula,Athens       19.44 287   P      Pn      00 59 30.2 +0.4
VLY   Voula,Athens       19.44 287   P      Pn      00 59 30.2 +0.4
ATHU  Athens Univers     19.46 287   P      Pn      00 59 30.9 +1.0
ATHU  Athens Univers     19.46 287   P      Pn      00 59 30.9 +1.0
ATHU  Athens Univers     19.46 287   P      Pn      00 59 30.9 +1.0
VRI   Vrincioaia         19.48 312⇑iP      Pn      00 59 29.7  -0.4
VRI   Vrincioaia         19.48 312 ⇑P      Pn      00 59 29.7  -0.4
VRI   Vrincioaia         19.48 312   P      Pn      00 59 29.7  -0.4
PLOR  Plostina           19.52 312⇑iP      Pn      00 59 30.9 +0.3
PLOR  Plostina           19.52 312 ⇑P      Pn      00 59 30.9 +0.3
PLOR  Plostina           19.52 312   P      Pn      00 59 30.9 +0.3
PAIG  Paliouri           19.73 293   P      Pn      00 59 32.6  -0.6
PAIG  Paliouri           19.73 293   P      Pn      00 59 32.6  -0.6
PAIG  Paliouri           19.73 293   P      Pn      00 59 32.6  -0.6
PAIG  Paliouri           19.73 293   P      Pn      00 59 32.6  -0.6
SORM  Soroca             19.76 319⇑iP      P       00 59 31.7  -0.2
SORM  Soroca             19.76 319 ⇑P      P       00 59 31.7  -0.2
SORM  Soroca             19.76 319   P      P       00 59 31.7  -0.2
MLR   Muntele Rosu       19.79 310   P      Pn      00 59 34.4 +0.4
      baz=90,slow=9.1
MLR   Muntele Rosu       19.79 310⇓iP      Pn      00 59 33.8  -0.2
MLR   Muntele Rosu       19.79 310  eP      Pn      00 59 33.6  -0.4
      comp=Z,12nm,0.8s
MLR   Muntele Rosu       19.79 310 ⇓P      Pn      00 59 33.8  -0.2
MLR   Muntele Rosu       19.79 310  eP      Pn      00 59 33.6  -0.4
      comp=Z,12nm,0.8s
KK31  Karatay Array      19.82  57  eP      Pn      00 59 34.6 +0.3
KK31  Karatay Array      19.82  57  eP      Pn      00 59 34.6 +0.3
KK31  Karatay Array      19.82  57  eP      Pn      00 59 34.6 +0.3
KKAR  Karatay Array      19.82  57  eP      Pn      00 59 34.4 +0.1
KKAR  Karatay Array      19.82  57  eP      Pn      00 59 34.4 +0.1
KKAR  Karatay Array      19.82  57  eP      Pn      00 59 34.4 +0.1
VILL  Villia             19.84 288   P      Pn      00 59 34.1  -0.4
TESR  Tescani            19.84 314⇓iP      Pn      00 59 33.6  -0.8
NVR   Nevrokopi          19.86 297   P      Pn      00 59 33.9  -0.8
NVR   Nevrokopi          19.86 297   P      Pn      00 59 33.9  -0.8
NVR   Nevrokopi          19.86 297   P      Pn      00 59 33.9  -0.8
DID   Didima             19.87 286   P      P       00 59 33.6 +0.3
DID   Didima             19.87 286   P      P       00 59 33.6 +0.3
DID   Didima             19.87 286   P      P       00 59 33.6 +0.3
KRND  KRANIDI            19.94 285   P      P       00 59 33.8  -0.2
SMIA  Simia              19.97 290   P      Pn      00 59 36.2 +0.1
PLG   Polygyros          19.98 294   P      P       00 59 34.9 +0.4
PLG   Polygyros          19.98 294   P      P       00 59 34.9 +0.4
PLG   Polygyros          19.98 294   P      P       00 59 34.9 +0.4
PLG   Polygyros          19.98 294   P      P       00 59 34.9 +0.4
MMB   Musomiste          20.01 298  i P     Pn      00 59 35.9  -0.6
SRS   Serrai             20.01 296   P      P       00 59 35.2 +0.5
SRS   Serrai             20.01 296   P      P       00 59 35.2 +0.5
SRS   Serrai             20.01 296   P      P       00 59 35.2 +0.5
SRS   Serrai             20.01 296   P      P       00 59 35.2 +0.5
HUMR  Humele             20.02 307⇓iP      Pn      00 59 36.2  -0.4
KTHR  Kythira            20.07 282   P      P       00 59 35.6 +0.2
LTK   Loutraki           20.11 287   P      P       00 59 36.6 +0.8
LTK   Loutraki           20.11 287   P      P       00 59 36.6 +0.8
LTK   Loutraki           20.11 287   P      P       00 59 36.6 +0.8
VLI   Veliai             20.11 283   P      P       00 59 34.9  -1.0
VLI   Veliai             20.11 283   P      P       00 59 34.9  -1.0
VLI   Veliai             20.11 283   P      P       00 59 34.9  -1.0
SOH   Sokhos             20.13 295   P      Pn      00 59 36.9  -1.0
SOH   Sokhos             20.13 295   P      Pn      00 59 36.9  -1.0
SOH   Sokhos             20.13 295   P      Pn      00 59 36.9  -1.0
SOH   Sokhos             20.13 295   P      Pn      00 59 36.9  -1.0
VOIR                     20.34 309⇑iP      Pn      00 59 39.7  -0.7
VOIR                     20.34 309 ⇑P      Pn      00 59 39.7  -0.7
VOIR                     20.34 309   P      Pn      00 59 39.7  -0.7
DOPR  Dopca              20.36 311⇑iP      Pn      00 59 39.9  -0.6
BIZ   Bicaz              20.38 314⇓iP      Pn      00 59 40.2  -0.6
MPEP  Malo Peshtene      20.46 303  i P     P       00 59 40.2 +0.5
DSF   Desfina            20.47 288   P      P       00 59 40.1 +0.2
DSF   Desfina            20.47 288   P      P       00 59 40.1 +0.2
DSF   Desfina            20.47 288   P      P       00 59 40.1 +0.2
PRAR  RASCA              20.52 315⇑iP      Pn      00 59 41.3  -1.1
KNT   Kendrikon          20.53 296   P      P       00 59 39.5  -0.9
KNT   Kendrikon          20.53 296   P      P       00 59 39.5  -0.9
KNT   Kendrikon          20.53 296   P      P       00 59 39.5  -0.9
KNT   Kendrikon          20.53 296   P      P       00 59 39.5  -0.9
KKB   Krupnik            20.54 298  i P     P       00 59 40.6 +0.1
VLX   Vlachokerasia      20.55 285   P      P       00 59 41.5 +0.7
VLX   Vlachokerasia      20.55 285   P      P       00 59 41.5 +0.7
VLX   Vlachokerasia      20.55 285   P      P       00 59 41.5 +0.7
DYR   Agios Nikonas      20.59 284   P      P       00 59 41.3 +0.1
GUR   Goura              20.59 287   P      P       00 59 40.8  -0.5
GUR   Goura              20.59 287   P      P       00 59 40.8  -0.5
GUR   Goura              20.59 287   P      P       00 59 40.8  -0.5
VTS   Vitosha            20.62 300⇑iP      P       00 59 42.2 +0.6
VTS   Vitosha            20.62 300  eP      P       00 59 41.5  -0.1
      comp=Z,14nm,0.8s
VTS   Vitosha            20.62 300   P      P       00 59 42.3 +0.6
VTS   Vitosha            20.62 300   P      P       00 59 42.1 +0.5
VTS   Vitosha            20.62 300 ⇑P      P       00 59 42.2 +0.6
VTS   Vitosha            20.62 300   P      P       00 59 42.2 +0.6
LIT   Litokhoron         20.66 293  eP      P       00 59 42.4 +0.5
      comp=Z,21nm,1.0s
LIT   Litokhoron         20.66 293   P      P       00 59 42.0 +0.1
LIT   Litokhoron         20.66 293  eP      P       00 59 42.4 +0.5
LIT                                  pmax   pmax
      comp=Z,21nm,1.0s
LIT   Litokhoron         20.66 293  eP      P       00 59 42.4 +0.5
      comp=Z,21nm,1.0s
AGG   Agios Georgios     20.67 290  eP      P       00 59 42.8 +0.8
      comp=Z,87nm,1.0s
AGG   Agios Georgios     20.67 290   P      P       00 59 42.6 +0.6
AGG   Agios Georgios     20.67 290  eP      P       00 59 42.8 +0.8
AGG                                  pmax   pmax
      comp=Z,87nm,1.0s
AGG   Agios Georgios     20.67 290  eP      P       00 59 42.8 +0.8
      comp=Z,87nm,1.0s
KLV   Kalavryta, Ach     20.75 287   P      P       00 59 42.5  -0.4
KLV   Kalavryta, Ach     20.75 287   P      P       00 59 42.5  -0.4
KLV   Kalavryta, Ach     20.75 287   P      P       00 59 42.5  -0.4
TRIZ  Trizonia           20.82 288   P      P       00 59 44.0 +0.4
SERG  Sergoula           20.84 288   P      P       00 59 43.6  -0.2
LAKA  Lakka              20.89 288   P      P       00 59 44.5 +0.1
LAKA  Lakka              20.89 288   P      P       00 59 44.5 +0.1
LAKA  Lakka              20.89 288   P      P       00 59 44.5 +0.1
ITM   Ithomi             20.91 285  eP      P       00 59 44.3  -0.3
      comp=Z,27nm,0.7s
ITM   Ithomi             20.91 285   P      P       00 59 43.8  -0.8
ITM   Ithomi             20.91 285  eP      P       00 59 44.3  -0.3
      comp=Z,27nm,0.7s
ANX   Ano Chora          20.96 289   P      P       00 59 45.1  -0.1
EFP   Efpalio            20.96 288   P      P       00 59 44.5  -0.6
THL   Klokotos Trika     20.96 291   P      P       00 59 45.4 +0.3
AKASG Malin Array Be     20.98 326   P      P       00 59 45.5 +0.3
      comp=Z,4.9nm,0.7s,baz=130,slow=11,SNR=12
AKASG                                LR     LR      01 08 47.2
      comp=Z,90nm,22.0s,baz=245,slow=39
AKBB  Malin Array Si     20.98 326  eP      Pn      00 59 46.8  -0.9
      comp=Z,16nm,0.9s
AKBB  Malin Array Si     20.98 326  eP      Pn      00 59 46.8  -0.9
AKBB                                 pmax   pmax
      comp=Z,16nm,0.9s
KIEV  Kiev               20.98 326  eP      Pn      00 59 46.8  -1.0
      comp=Z,15nm,0.9s
KIEV  Kiev               20.98 326⇓eP      P       00 59 46.1 +0.9
KIEV                                 pmax   pmax
      comp=Z,19nm,1.3s
KIEV  Kiev               20.98 326  eP      P       00 59 46.1 +0.9
      comp=Z,19nm,1.3s
EVR   Evrytania          21.07 290   P      P       00 59 45.8  -0.5
EVR   Evrytania          21.07 290   P      P       00 59 45.8  -0.5
EVR   Evrytania          21.07 290   P      P       00 59 45.8  -0.5
DRO   Drossia            21.09 287   P      P       00 59 47.4 +0.8
STIP  Stip               21.16 297⇑iP      P       00 59 44.9  -2.4
LOT   Lotru              21.17 308⇓iP      P       00 59 48.1 +0.7
BURAR Bucovina Array     21.24 315⇑iP      P       00 59 48.4 +0.3
BURAR Bucovina Array     21.24 315 ⇑P      P       00 59 48.4 +0.3
BUR04 Bucovina Ar. S     21.24 315  eP      P       00 59 47.9  -0.3
BUR04 Bucovina Ar. S     21.24 315  eP      P       00 59 47.9  -0.3
BUR08 Bucovina Ar. S     21.26 315  eP      P       00 59 48.2  -0.2
BUR08 Bucovina Ar. S     21.26 315  eP      P       00 59 48.2  -0.2
PVO   Paravola           21.27 289   P      P       00 59 49.7 +1.3
NIL   Nilore             21.31  85  eP      P       00 59 50.4 +1.5
      comp=Z,41nm,1.0s
NIL   Nilore             21.31  85  eP      P       00 59 50.4 +1.5
NIL                                  pmax   pmax
      comp=Z,41nm,1.0s
NIL   Nilore             21.31  85  eP      P       00 59 50.4 +1.5
      comp=Z,41nm,1.0s
ARCR  ARCALIA            21.50 313⇑iP      P       00 59 51.1 +0.3
PDO   Prodromos          21.53 289   P      P       00 59 51.5 +0.2
FNA   Florina            21.60 295  eP      P       00 59 52.6 +0.6
      comp=Z,25nm,0.7s
FNA   Florina            21.60 295   P      P       00 59 52.1 +0.1
FNA   Florina            21.60 295  eP      P       00 59 52.6 +0.6
FNA                                  pmax   pmax
      comp=Z,25nm,0.7s
FNA   Florina            21.60 295  eP      P       00 59 52.6 +0.6
      comp=Z,25nm,0.7s
DSL   Palaion Diasel     21.64 290   P      P       00 59 51.6  -0.8
DSL   Palaion Diasel     21.64 290   P      P       00 59 51.6  -0.8
DSL   Palaion Diasel     21.64 290   P      P       00 59 51.6  -0.8
BIA   Bitola             21.68 295  eP      P       00 59 53.2 +0.4
KRUS  Krusevo            21.79 296⇑eP      P       00 59 53.6  -0.5
KFL   Anninata           21.83 287   P      P       00 59 56.0 +1.6
HERR  Herculane          21.86 306⇓iP      P       00 59 55.1 +0.4
LKD2  Lefkada island     21.95 289   P      P       00 59 54.5  -1.3
LKD2  Lefkada island     21.95 289   P      P       00 59 54.5  -1.3
LKD2  Lefkada island     21.95 289   P      P       00 59 54.5  -1.3
VLS   Valsamata          21.98 287   P      P       00 59 55.2  -0.9
VLS   Valsamata          21.98 287   P      P       00 59 55.2  -0.9
VLS   Valsamata          21.98 287   P      P       00 59 55.2  -0.9
VLS   Valsamata          21.98 287   P      P       00 59 55.2  -0.9
OBN   Obninsk            21.99 343  eP      P       00 59 57.0 +1.1
      comp=Z,15nm,0.7s
OBN   Obninsk            21.99 343c iP      P       00 59 56.9 +1.0
OBN                                 e                01 00 19.4
OBN                                  pmax   pmax
      comp=Z,13nm,0.8s
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OBN                                  MLR     MLR
      comp=Z,115nm,17.0s
IGT   Igoumenitsa       22.25 291    P       P         00 59 56.9  -2.1
IGT   Igoumenitsa       22.25 291    P       P         00 59 56.9  -2.1
IGT   Igoumenitsa       22.25 291    P       P         00 59 56.9  -2.1
IGT   Igoumenitsa       22.25 291    P       P         00 59 56.9  -2.1
MOS   Moscow            22.32 345   eP       P         00 59 54.5  -5.0
MOS                                 e                  01 00 04.3
DRGR                    22.38 311⇑iP       P         01 00 01.0  +0.6
DRGR                    22.38 311 ⇑P       P         01 00 01.0  +0.6
DRGR                    22.38 311    P       P         01 00 01.0  +0.6
PHP   Peshkopia         22.44 297    P       P         01 00 01.9  +0.9
PHP   Peshkopia         22.44 297    P       P         01 00 01.9  +0.9
PHP   Peshkopia         22.44 297    P       P         01 00 01.9  +0.9
PHP   Peshkopia         22.44 297    P       P         01 00 01.9  +0.9
BZS   Buzias            22.64 307⇓iP       P         01 00 02.6  -0.4
BZS   Buzias            22.64 307 ⇓P       P         01 00 02.6  -0.4
BZS   Buzias            22.64 307    P       P         01 00 02.6  -0.4
KEK   Kerkira           22.68 291    P       P         01 00 01.1  -2.4
KEK   Kerkira           22.68 291    P       P         01 00 01.1  -2.4
KEK   Kerkira           22.68 291    P       P         01 00 01.1  -2.4
TRPA  Tarpa             23.07 314⇓iP       P         01 00 07.7  +0.2
ARU   Arti              23.21  16    P       P         01 00 08.2  -0.6
      comp=Z,3.5nm,0.7s,baz=219,slow=6.7,SNR=6.3
ARU   Arti              23.21  16   eP       P         01 00 10.5  +1.7
      comp=Z,70nm,1.6s
ARU   Arti              23.21  16d iP       P         01 00 09.2  +0.4
ARU                                                    01 00 35.7
ARU                                  PPP     PPP       01 00 45.6
ARU                                  S       S         01 04 24.8  +4.0
ARU                                  SS      SnSn      01 04 58.6  +4.5
ARU                                  SSS     SSS       01 05 17.6
ARU                                  pmax    pmax
      comp=Z,8.0nm,1.2s
KSH   Kashi             23.21  69   eP       P         01 00 03.1  -6.1
KSH                                  sP      pP        01 00 10.3  -1.1
KSH                                  PP      PnPn      01 00 31.3  -3.2
KSH                                  PcP     PcP       01 03 58.1  +0.9
KSH                                  S       S         01 04 04.8   -17
KSH                                  PcS     PcS       01 07 32.1  -4.4
KSH                                  pmax    pmax
      comp=Z,8.0nm,0.9s
KSH                                  pmax    pmax
      comp=Z,66nm,3.7s
ATD   Arta Tunnel       23.25 192    LR      LR        01 09 04.1
      comp=Z,89nm,20.2s,baz=338,slow=36
DIVS  Divibare          23.28 303   eP       P         01 00 08.5  -1.3
      comp=Z,7.0nm,0.8s
DIVS  Divibare          23.28 303   eP       P         01 00 08.5  -1.3
      comp=Z,7.0nm,0.8s
PDG   Podgorica         23.44 298⇑iP       P         01 00 10.6  -0.7
TTG   Podgorica         23.44 298   eP       P         01 00 10.7  -0.6
      comp=Z,5.8nm,0.8s
TTG   Podgorica         23.44 298   eP       P         01 00 10.7  -0.6
TTG                                  pmax    pmax
      comp=Z,6.0nm,0.8s
TTG   Podgorica         23.44 298   eP       P         01 00 10.7  -0.6
      comp=Z,5.8nm,0.8s
KWP   Kalwaria Pacla    23.69 317   eP       P         01 00 13.8   0.0
      comp=Z,143nm,1.3s
KWP   Kalwaria Pacla    23.69 317   eP       P         01 00 13.8   0.0
KWP                                  pmax    pmax
      comp=Z,143nm,1.3s
KWP   Kalwaria Pacla    23.69 317   eP       P         01 00 13.8   0.0
      comp=Z,143nm,1.3s
SVE   Sverdlovsk        24.06  18   eP       P         01 00 18.8  +1.6
SVE                                  pmax    pmax
      comp=Z,27nm,1.0s
PSZ   Piszkesteto       24.59 311⇓iP       P         01 00 22.7  +0.5
PSZ   Piszkesteto       24.59 311   eP       P         01 00 22.6  +0.4
      comp=Z,6.3nm,0.7s
PSZ   Piszkesteto       24.59 311 ⇓P       P         01 00 22.7  +0.5
BRVK  Borovoye          24.61  34   eP       P         01 00 24.2  +2.0
      comp=Z,12nm,0.9s
BRVK  Borovoye          24.61  34   eP       P         01 00 24.2  +2.0
      comp=Z,12nm,0.9s
BVAR  Borovoye Array    24.63  34    P       P         01 00 22.8  +0.3
      comp=Z,6.0nm,0.9s,baz=226,slow=7.8,SNR=11
BVAR                                 PcP     PcP       01 03 59.8   0.0
      comp=Z,0.9nm,0.6s,baz=233,slow=0.7,SNR=4.1
BVAR                                 LR      LR        01 12 04.2
      comp=Z,119nm,19.4s,baz=212,slow=42
TIP   Timpagrande       25.00 290⇑iP       P         01 00 25.4  -0.7
TIP   Timpagrande       25.00 290   eP       P         01 00 26.0  -0.1
      comp=Z,22nm,1.0s
TIP   Timpagrande       25.00 290   eP       P         01 00 26.0  -0.1
      comp=Z,22nm,1.0s
MATE  Matera            25.12 293⇑iP       P         01 00 26.1  -0.8
IDID  Didziasalis       25.32 332   eP       P         01 00 29.3  +0.7
IDID                                 IAmb    IAmb      01 00 34.1
      comp=Z,12nm,1.0s
LANS  Liptovska Anna    25.35 314   eP       P         01 00 30.3  +1.2
LANS  Liptovska Anna    25.35 314   eP       P         01 00 30.2  +1.2
CSKK  Csˆ‡kako          25.42 309   eP       P         01 00 30.4  +0.8
VYHS  Vyhne             25.46 312   eP       P         01 00 30.7  +0.6
VYHS                                 pmax    pmax
      comp=Z,3.0nm,1.0s
VYHS  Vyhne             25.46 312   eP       P         01 00 30.7  +0.6
VYHS  Vyhne             25.46 312   eP       P         01 00 30.7  +0.6
      comp=Z,3.0nm,1.0s
IIGN  Ignalina          25.55 331   eP       P         01 00 31.4  +0.7
IIGN                                 IAmb    IAmb      01 00 36.5
      comp=Z,8.5nm,0.6s
OJC   Ojcow             25.62 316   eP       P         01 00 31.3  -0.2
      comp=Z,11nm,0.9s
OJC   Ojcow             25.62 316   eP       P         01 00 31.3  -0.2
OJC                                  pmax    pmax
      comp=Z,11nm,0.9s
OJC   Ojcow             25.62 316   eP       P         01 00 31.3  -0.2
      comp=Z,11nm,0.9s
CEL   Celeste           25.68 288   eP       P         01 00 32.5  +0.3
      comp=Z,68nm,1.0s
CEL   Celeste           25.68 288   eP       P         01 00 32.5  +0.3
      comp=Z,68nm,1.0s
ISAL  Salakas           25.75 331   eP       P         01 00 33.2  +0.7
ISAL                                 IAmb    IAmb      01 00 36.2
      comp=Z,9.3nm,0.7s
CUC   Castrocucco       25.76 292   eP       P         01 00 33.1  +0.3
      comp=Z,14nm,0.8s
CUC   Castrocucco       25.76 292   eP       P         01 00 33.2  +0.3
      comp=Z,14nm,0.8s
IZAR  Zarasai           25.83 332   eP       P         01 00 34.0  +0.7
IZAR                                 IAmb    IAmb      01 00 38.7
      comp=Z,12nm,0.9s
JAVC  Velka Javorina    26.32 312   eP       P         01 00 38.9  +1.0
MODS  Modra-Piesok      26.39 311   eP       P         01 00 38.6  +0.2
MODS                                 pmax    pmax
      comp=Z,8.0nm,1.1s
MODS  Modra-Piesok      26.39 311   eP       P         01 00 38.6  +0.2
MODS  Modra-Piesok      26.39 311   eP       P         01 00 38.6  +0.2
      comp=Z,8.0nm,1.1s
OKC   Ostrava-Krasne    26.42 314   eP       P         01 00 38.7   0.0
OKC   Ostrava-Krasne    26.42 314   eP       P         01 00 38.7   0.0
MORC  Moravsky Berou    26.75 314⇑iP       P         01 00 41.0  -0.7
MORC  Moravsky Berou    26.75 314   eP       P         01 00 41.0  -0.7
      comp=Z,4.7nm,0.9s
MORC  Moravsky Berou    26.75 314 ⇑P       P         01 00 41.0  -0.7
MORC                                                   01 00 56.9
MORC  Moravsky Berou    26.75 314   eP       P         01 00 41.8  +0.1
KLMR  Klimovskoe        26.88 351   eP       P         01 00 42.9  +0.2
KLMR                                 pmax    pmax
      comp=Z,15nm,1.0s
KLMR  Klimovskoe        26.88 351   eP       P         01 00 43.0  +0.2
KLMR                                 AMP               01 00 45.4
      comp=Z,15nm,1.0s
VAE   Valguarnera       26.89 286    P       P         01 00 45.4  +2.3
      comp=Z,6.4nm,0.6s,baz=269,slow=4.1,SNR=4.2
CONA  Conrad Observa    27.13 309   eP       P         01 00 45.7  +0.4
      comp=Z,3.9nm,0.9s
VRAC  Vranov            27.14 312    P       P         01 00 45.5  +0.3
      comp=Z,1.1nm,0.4s,baz=99,slow=6.5,SNR=4.0
KURBB Kurchatov Arra    27.68  45    P       P         01 00 50.2  +0.1
      comp=Z,3.2nm,0.9s,baz=249,slow=9.1,SNR=15
KURBB                                PcP     PcP       01 04 06.5  -0.4
      comp=Z,0.5nm,0.5s,baz=246,slow=2.7,SNR=4.7
VSU   Vasula            27.70 336⇑eP       P         01 00 50.2  +0.2
VSU                                  pmax    pmax
      comp=Z,27nm,0.9s
DPC   Dobruska-Polom    27.70 314   eP       P         01 00 50.3   0.0
DPC   Dobruska-Polom    27.70 314   eP       P         01 00 50.3   0.0
AQU   L'Aquila          27.73 297   eP       P         01 00 51.0  +0.4
      comp=Z,23nm,1.1s
AQU   L'Aquila          27.73 297   eP       P         01 00 51.0  +0.4
AQU                                  pmax    pmax
      comp=Z,23nm,1.1s
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AQU   L'Aquila          27.73 297   eP       P         01 00 51.0  +0.4
      comp=Z,23nm,1.1s
KURK  Kurchatov         27.77  45   eP       P         01 00 51.1  +0.3
      comp=Z,4.3nm,0.9s
KURK                                 PcP     PcP       01 04 06.5  -0.6
KURK  Kurchatov         27.77  45    P       P         01 00 50.2  -0.6
KURK                                 pmax    pmax
      comp=Z,3.0nm,0.9s
MOA   Molln             28.14 308   eP       P         01 00 54.3  +0.1
      comp=Z,5.5nm,1.0s
MOA   Molln             28.14 308    P       P         01 00 54.3  +0.1
      comp=Z,5.5nm,1.0s
KBA   Koelnbreinsper    28.54 307   eP       P         01 00 58.4  +0.5
      comp=Z,6.3nm,0.8s
PRU   Pruhonice         28.63 313   eP       P         01 00 52.6  -5.9
PRU   Pruhonice         28.63 313   eP       P         01 00 52.6  -5.9
GEA0  GERESS Array S    28.78 310   eP       P         01 00 59.3  -0.7
GEC2  GERESS Array S    28.78 310   eP       P         01 00 60.0   0.0
      comp=Z,18nm,2.0s
GEC2  GERESS Array S    28.78 310   eP       P         01 01 00.0   0.0
GEC2                                 pmax    pmax
      comp=Z,18nm,2.0s
GERES GERESS Array B    28.78 310    P       P         01 00 59.2  -0.8
      comp=Z,0.9nm,0.5s,baz=108,slow=8.4,SNR=9.9
GERES                                PcP     PcP       01 04 09.2  -0.6
      comp=Z,0.6nm,0.7s,baz=107,slow=1.8,SNR=5.9
GERES                                LR      LR        01 14 10.5
      comp=Z,38nm,19.2s,baz=135,slow=40
MK31  Makanchi Array    28.86  54   eP       P         01 01 01.6  +1.0
MK31  Makanchi Array    28.86  54   eP       P         01 01 01.6  +1.0
MKAR  Makanchi Array    28.86  54    P       P         01 01 01.4  +0.7
      comp=Z,2.8nm,0.8s,baz=250,slow=8.0,SNR=19
MKAR                                 PcP     PcP       01 04 08.9  -1.0
      comp=Z,1.0nm,1.0s,baz=231,slow=3.8,SNR=3.8
MKAR  Makanchi Array    28.86  54   eP       P         01 01 01.6  +1.0
      comp=Z,17nm,0.6s
MKAR                                 PcP     PcP       01 04 08.9  -1.0
MK01  Makanchi Array    28.86  54   eP       P         01 01 01.2  +0.6
KHC   Kasperske Hory    28.95 311   eP       P         01 00 56.6  -4.8
KHC                                 ex       x         01 01 01.6
KHC   Kasperske Hory    28.95 311   eP       P         01 00 56.6  -4.8
KHC                                 e                  01 01 01.6
ABTA  Abfaltersbach     29.02 306   eP       P         01 01 01.4  -0.8
      comp=Z,6.6nm,0.9s,SNR=5.4
BRG   Berggiesshubel    29.30 314   eP       P         01 00 56.4  -8.0
      comp=Z,22nm,2.2s
BRG   Berggiesshubel    29.30 314   eP       P         01 00 56.4  -8.0
BRG                                  pmax    pmax
      comp=Z,22nm,2.2s
WTTA  Wattenberg        29.72 306   eP       P         01 01 08.2  -0.2
      comp=Z,5.1nm,0.7s
WTTA  Wattenberg        29.72 306    P       P         01 01 08.2  -0.2
      comp=Z,5.1nm,0.7s
WATA  Walderalm         29.77 306   i P      P         01 01 09.3  +0.4
      comp=Z,4.2nm,0.5s
CLL   Collm             30.01 315   i P      P         01 01 09.5  -1.2
      comp=Z,5.0nm,0.8s
CLL                                 ePPP     PPP       01 02 14.0
CLL   Collm             30.01 315   eP       P         01 01 10.8  +0.1
      comp=Z,3.8nm,0.8s
CLL   Collm             30.01 315   i P      P         01 01 09.5  -1.2
CLL                                  pmax    pmax
      comp=Z,5.0nm,0.8s
MOTA  Moosalm           30.09 306   eP       P         01 01 12.0  +0.3
      comp=Z,7.7nm,0.7s
MOTA  Moosalm           30.09 306    P       P         01 01 12.0  +0.3
      comp=Z,7.7nm,0.7s
FINES FINESS Array B    30.26 340    P       P         01 01 12.9  +0.1
      comp=Z,1.4nm,0.6s,baz=157,slow=8.6,SNR=7.7
FINES                                LR      LR        01 15 35.0
      comp=Z,42nm,18.6s,baz=128,slow=41
FETA  Feichten          30.28 306   eP       P         01 01 13.3  -0.1
      comp=Z,13nm,0.8s,SNR=5.7
DAVOX Davos/Dischmat    30.81 305    P       P         01 01 17.3  -0.7
      comp=Z,4.6nm,0.5s,baz=96,slow=9.2,SNR=13
DAVOX                                PcP     PcP       01 04 13.8  -1.4
      comp=Z,1.3nm,0.7s,baz=236,slow=7.1,SNR=2.6
PYUN  Piuthan           30.85  92   eP       P         01 01 19.9  +1.2
DAVA  Damuels           30.90 306   eP       P         01 01 18.3  -0.5
      comp=Z,14nm,0.5s,SNR=18
KEST  Kesra             31.14 283    P       P         01 01 23.1  +2.2
      comp=Z,8.9nm,0.8s,baz=292,slow=2.6,SNR=14
KEST                                 PcP     PcP       01 04 15.3  -0.8
      comp=Z,2.1nm,0.6s,baz=305,slow=4.0,SNR=4.2
KEST  Kesra             31.14 283   eP       P         01 01 21.4  +0.5
      comp=Z,9.4nm,0.8s
KEST                                 PcP     PcP       01 04 15.3  -0.8
KEST  Kesra             31.14 283   eP       P         01 01 21.4  +0.5
      comp=Z,9.4nm,0.8s
DANN  Dangsing          31.40  91   eP       P         01 01 24.7  +1.1
      comp=Z,48nm,1.0s
KOLN  Koldanda          31.47  92   eP       P         01 01 25.1  +1.0
      comp=Z,6.6nm,0.7s
THTN  Thala             31.69 283   eP       P         01 01 27.6  +1.8
      comp=Z,14nm,0.8s
THTN  Thala             31.69 283   eP       P         01 01 27.6  +1.8
      comp=Z,14nm,0.8s
WMQ   Urumqi            32.24  61    P       P         01 01 32.0  +1.5
GKN   Gorkha            32.25  91   eP       P         01 01 31.9  +1.0
      comp=Z,19nm,0.6s
SENIN Lac Senin/Sane    32.51 304   eP       P         01 01 32.8  -0.3
      comp=Z,9.4nm,1.0s
ZAA0  Zalesovo Array    32.53  42   eP       P         01 01 33.0  +0.1
      comp=Z,2.2nm,0.8s
ZALV  Zalesovo Beam     32.53  42    P       P         01 01 31.7  -1.1
      comp=Z,1.9nm,0.6s,baz=259,slow=9.4,SNR=7.0
ZALV  Zalesovo Beam     32.53  42   eP       P         01 01 33.0  +0.1
DMN   Daman             32.78  92   eP       P         01 01 36.9  +1.3
      comp=Z,29nm,1.0s
BNI   Bardonecchia      32.81 301   eP       P         01 01 35.3  -0.3
      comp=Z,44nm,0.7s
BNI   Bardonecchia      32.81 301   eP       P         01 01 35.3  -0.3
BNI                                  pmax    pmax
      comp=Z,44nm,0.7s
BNI   Bardonecchia      32.81 301   eP       P         01 01 35.3  -0.3
      comp=Z,44nm,0.7s
DGZ   Jazzator, Alta    32.84  50   eP       P         01 01 36.8  +0.9
DGZ                                  pmax    pmax
      comp=Z,1.0nm,0.8s
PKIN  Phulchoki         33.03  92   eP       P         01 01 38.6  +0.8
      comp=Z,17nm,0.7s
GUN   Gumba             33.30  91   eP       P         01 01 42.3  +1.9
      comp=Z,73nm,0.9s
JIRN  Jiri              33.65  91   eP       P         01 01 45.0  +1.6
      comp=Z,61nm,0.9s
HFS   Hagfors           33.76 330    P       P         01 01 42.7  -0.9
      comp=Z,5.5nm,0.7s,baz=127,slow=9.2,SNR=16
HFS                                  LR      LR        01 16 26.5
      comp=Z,84nm,21.8s,baz=134,slow=38
WLF   Walferdange       33.78 309   eP       P         01 01 43.6  -0.2
      comp=Z,13nm,1.1s
WLF   Walferdange       33.78 309   eP       P         01 01 43.7  -0.2
WLF                                  pmax    pmax
      comp=Z,13nm,1.1s
APA   Apatity           34.11 350⇑iP       P         01 01 43.7  -2.8
APA                                  MLR     MLR
      comp=Z,200nm,13.0s
RAMN  Ramite            34.25  92   eP       P         01 01 49.4  +0.9
      comp=Z,35nm,0.7s
ODAN  Odare             34.94  92   eP       P         01 01 55.4  +1.0
TAPN  Taplejung         35.02  91   eP       P         01 01 57.3  +2.1
NB2   NORSAR Subarra    35.28 330    P       P         01 01 55.1  -1.6
      comp=Z,1.5nm,0.8s,baz=122,slow=8.6
NOA   NORSAR Array B    35.28 330    LR      LR        01 17 12.7
      comp=Z,86nm,21.3s,baz=120,slow=38
KMBO  Kilima Mbogo      36.72 197    P       P         01 02 09.4  -0.3
      comp=Z,0.9nm,0.5s,baz=29,slow=19,SNR=2.4
LSA   Lhasa             37.05  85   eP       P         01 02 14.2  +1.4
      comp=Z,5.8nm,0.6s
LSA   Lhasa             37.05  85   eP       P         01 02 14.2  +1.4
LSA                                  pmax    pmax
      comp=Z,6.0nm,0.6s
LSA   Lhasa             37.05  85   eP       P         01 02 14.1  +1.4
      comp=Z,5.8nm,0.6s
ARCES ARCESS Array B    37.16 347    P       P         01 02 12.4  -0.3
      comp=Z,2.5nm,0.7s,baz=153,slow=8.2,SNR=5.3
ARCES ARCESS Array B    37.16 347   eP       P         01 02 13.9  +1.2
TAM   Tamanrasset       38.42 264   eP       P         01 02 25.8  +1.8
      comp=Z,5.9nm,0.8s
TAM   Tamanrasset       38.42 264   eP       P         01 02 25.8  +1.8
TAM                                  pmax    pmax
      comp=Z,6.0nm,0.8s
TAM   Tamanrasset       38.42 264   eP       P         01 02 25.8  +1.8
      comp=Z,5.9nm,0.8s
EKA   Eskdalemuir Ar    40.40 317    P       P         01 02 38.8  -1.2
      comp=Z,4.1nm,0.7s,baz=100,slow=8.0,SNR=19
EKA                                  PcP     PcP       01 04 42.2  -0.7
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      comp=Z,0.7nm,0.6s,baz=120,slow=4.2,SNR=3.8
ES19  SONSECA Array     40.89 293   eP       P         01 02 44.2  -0.2
ES19                                ePcP     PcP       01 04 45.3  +0.3
ES19  SONSECA Array     40.89 293   eP       P         01 02 44.2  -0.2
ESDC  Sonseca Array     40.95 293    P       P         01 02 44.4  -0.4
      comp=Z,2.5nm,0.6s,baz=65,slow=8.4,SNR=23
ESDC                                 PcP     PcP       01 04 44.9  -0.2
      comp=Z,0.7nm,0.7s,baz=56,slow=3.1,SNR=3.5
ESLA  Sonseca Array     40.95 293   eP       P         01 02 44.7  -0.1
      comp=Z,6.0nm,0.9s
ESLA  Sonseca Array     40.95 293   eP       P         01 02 44.7  -0.1
      comp=Z,6.0nm,0.9s
MDT   Midelt            43.04 283    P       P         01 03 02.1  +0.1
      comp=Z,5.4nm,0.8s,baz=75,slow=9.9,SNR=8.5
SONM  Songino Array     45.23  54    PcP     PcP       01 04 58.4  -1.0
      comp=Z,1.1nm,0.5s,baz=245,slow=2.9,SNR=4.2
LZH   Lanzhou           45.44  71   eP       P         01 03 21.3   0.0
LZH                                  pP      sP        01 03 24.5  -0.1
LZH                                  sP      pP        01 03 26.0  +2.3
LZH                                 ePP      PP        01 05 08.5  +1.0
LZH                                  pmax    pmax
      comp=Z,19nm,1.2s
LZH                                  pmax    pmax
      comp=Z,64nm,5.6s
LZH                                  LR      LR
      comp=Z,250nm,14.0s
LZH                                  LR      LR
      comp=Z,260nm,13.7s
ULN   Ulaanbaatar       45.66  54   eP       P         01 03 23.9  +1.0
      comp=Z,2.1nm,0.8s
ULN   Ulaanbaatar       45.66  54⇓iP       P         01 03 23.9  +1.0
ULN                                  pmax    pmax
      comp=Z,2.0nm,0.8s
SPA0  Spitsbergen Ar    45.79 351   eP       P         01 03 23.6  +0.3
SPITS Spitsbergen Ar    45.79 351    P       P         01 03 23.7  +0.4
      comp=Z,1.7nm,0.4s,baz=139,slow=9.4,SNR=11
SPITS                                LR      LR        01 23 20.2
      comp=Z,40nm,21.4s,baz=265,slow=37
TOA0  Torodi Ar. Sit    46.53 254   eP       P         01 03 30.7  +0.7
TORD  Torodi Ar. Bea    46.53 254    P       P         01 03 30.2  +0.3
      comp=Z,5.9nm,0.9s,baz=62,slow=7.0
TORD                                 PcP     PcP       01 05 04.3   0.0
      baz=54,slow=3.7
CHTO  Chiang Mai        48.03  95   eP       P         01 03 42.0  +0.3
      comp=Z,6.9nm,0.6s
CHTO  Chiang Mai        48.03  95   eP       P         01 03 42.0  +0.3
CHTO                                 pmax    pmax
      comp=Z,7.0nm,0.6s
CHTO  Chiang Mai        48.03  95    P       P         01 03 42.7  +1.1
      comp=Z,47nm,0.9s
CMMT  Chiang Mai        48.04  95    P       P         01 03 42.4  +0.7
      comp=Z,9.2nm,0.8s
CMAR  Chiang Mai Arr    48.21  96    P       P         01 03 43.4  +0.4
      comp=Z,5.0nm,0.6s,baz=297,slow=8.3,SNR=22
CMAR                                 PcP     PcP       01 05 10.9  +0.7
      comp=Z,1.5nm,0.3s,baz=282,slow=4.5,SNR=3.6
CM01  Chiang Mai Arr    48.24  96   eP       P         01 03 43.2   0.0
KMI   Kunming           48.30  86    P       P         01 03 44.4  +0.5
KMI                                  pmax    pmax
      comp=Z,8.0nm,0.6s
UTTA  Uttaradit         49.89  95    P       P         01 03 59.7  +3.8
      comp=Z,2.0nm,0.8s
XAN   Xi'an             50.02  72    P       P         01 03 57.1  +0.3
XAN                                  pP      sP        01 04 02.3  +2.3
XAN                                  pmax    pmax
      comp=Z,7.0nm,0.9s
HHC   Hu-ho-hao-te      50.09  63   eP       P         01 03 59.5  +2.3
HHC                                  pmax    pmax
      comp=Z,11nm,1.1s
HHC                                  pmax    pmax
      comp=Z,61nm,5.1s
KOWA  Kowa              50.38 260    P       P         01 04 00.2  +0.6
      comp=Z,11nm,0.6s,baz=55,slow=15,SNR=37
KOWA  Kowa              50.38 260   eP       P         01 04 00.5  +0.9
      comp=Z,13nm,0.7s
PBKT  Sadao Pong        50.83  97    P       P         01 04 06.1  +3.1
GYA   Guiyang           50.97  82   eP       P         01 04 05.0  +0.9
GYA                                  pmax    pmax
      comp=Z,10.0nm,0.9s
DBIC  Dimbokro          55.54 253    P       P         01 04 38.4  +0.6
      comp=Z,3.7nm,0.6s,baz=24,slow=8.9,SNR=11
KIC   Kosan Boka        55.64 252   eP       P         01 04 39.0  +0.5
      comp=Z,28nm,1.1s
TIC   Toumodi           55.69 253   eP       P         01 04 38.7  -0.1
LIC   Lamto             55.95 252   eP       P         01 04 40.6  -0.1
      comp=Z,86nm,2.0s
PSI   Prapat            57.17 112    LR      LR        01 33 20.2
      comp=Z,122nm,19.4s,baz=266,slow=40
NJ2   Nanjing           58.51  71   eP       P         01 04 57.6  -1.0
NJ2                                  pmax    pmax
      comp=Z,10.0nm,0.5s
NRS   Narsarsuaq        61.81 327   eP       P         01 05 21.1  +0.4
      comp=Z,33nm,0.7s
NRS   Narsarsuaq        61.81 327   eP       P         01 05 21.1  +0.4
NRS                                  pmax    pmax
      comp=Z,33nm,0.7s
KS01  Wonju Array Si    63.16  62   eP       P         01 05 31.0  +0.8
KSAR  Wonju Array Be    63.16  62    P       P         01 05 29.4  -0.8
KSAR  Wonju Array Be    63.16  62    P       P         01 05 29.4  -0.8
KSRS  Korea Array       63.19  62    P       P         01 05 29.4  -0.9
      comp=Z,2.2nm,0.6s,baz=286,slow=6.6,SNR=7.5
USRK  Ussuriysk Ar.     63.32  53    P       P         01 05 29.4  -1.7
      comp=Z,1.4nm,0.5s,baz=291,slow=4.5
SEY   Seymchan          66.15  29⇓eP       P         01 05 50.1  +0.9
BOSA  Boshof            66.20 201    P       P         01 05 50.1   0.0
      comp=Z,3.1nm,0.8s,baz=15,slow=12,SNR=3.9
JOW   Kunigami          68.17  72    P       P         01 06 01.2  -1.5
      comp=Z,22nm,1.0s,baz=297,slow=9.0,SNR=4.4
SCHQ  Schefferville     74.78 327    P       P         01 06 40.5  -1.6
      comp=Z,2.8nm,0.8s,baz=5.1,slow=3.1,SNR=3.6
TOLK  Toolik Lake Re    76.39   6   eP       P         01 06 50.2  -0.9
      comp=Z,26nm,1.5s
COLD  Coldfoot          77.70   7   eP       P         01 06 59.5  +1.0
      comp=Z,3.2nm,0.9s
MDM   Murphy Dome       80.11   7   eP       P         01 07 12.5  +0.7
      comp=Z,16nm,1.2s
IL1   Eielson Array     80.42   6   eP       P         01 07 13.0  -0.4
ILAR  Eielson Array     80.42   6    P       P         01 07 12.6  -0.9
      comp=Z,1.9nm,1.0s,baz=344,slow=4.6,SNR=11
BPAW  Bear Paw Mtn.     80.65   8   eP       P         01 07 15.3  +0.6
      comp=Z,15nm,1.4s
EGAK  Eagle             80.83   4   eP       P         01 07 16.1  +0.5
      comp=Z,7.8nm,1.1s
CAST  Castle Rocks      81.18   9   eP       P         01 07 18.0  +0.5
      comp=Z,13nm,1.1s
DAWY  Dawson            81.62   3   eP       P         01 07 20.3  +0.3
      comp=Z,5.1nm,1.1s
YKA   Yellowknife Ar    82.29 352    P       P         01 07 22.3  -1.0
      comp=Z,2.8nm,0.9s,baz=12,slow=5.6,SNR=7.8
SKT   Skwentna          82.64   9   eP       P         01 07 26.5  +1.3
      comp=Z,22nm,1.8s
SML   Sawmill           83.18   8   eP       P         01 07 28.4  +0.3
      comp=Z,45nm,1.9s
SML   Sawmill           83.18   8   eP       P         01 07 28.4  +0.3
SML                                  pmax    pmax
      comp=Z,45nm,1.9s
SUA   Susitna One       83.23   9   eP       P         01 07 28.9  +0.4
      comp=Z,6.1nm,0.7s
KLU   Klutina           83.73   6   eP       P         01 07 32.1  +1.1
      comp=Z,10.0nm,1.0s
DLBC  Dease Lake        87.40 359   eP       P         01 07 50.7  +1.4
      comp=Z,8.0nm,1.2s
WRA   Warramunga Arr    98.50 108    P       P         01 08 38.5  -2.6
      comp=Z,0.3nm,0.6s,baz=315,slow=4.2,SNR=4.0
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*NEIC **14** 00:57:20.3±0.0, 16°.25N×98°.37W, h5^{km}, MD4.0(MEX), After MEX.*

MEX 14 00:57:19.8±0.5, 16°.22N×98°.38W, h4^{km}±6^{km}, MD4.0, Near coast of Guerrero

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Code  Station Name          Δ°   AZ°   Phase ID          Time       Res
                                       Op      ISC       h  m  s    ISC
PNIG  Pinotepa             0.29  55   i P      Pg        00 57 25.3  -0.3
PNIG                                  i S      Sg        00 57 29.2  -0.2
PNIG  Pinotepa             0.29  55   i P      Pg        00 57 25.3  -0.3
PNIG                                  i S      Sg        00 57 29.2  -0.2
TLIG  Tlapa                1.35 352   i P      Pn        00 57 41.3  -4.1
TLIG                                  i S      Sg        00 57 58.5  -4.6
TLIG  Tlapa                1.35 352   i P      Pn        00 57 41.3  -4.1
TLIG                                  i S      Sg        00 57 58.5  -4.6
VHO   Vista Hermosa        1.79  62   i P      Pn        00 57 47.9  -3.7
VHO                                   i S      Sn        00 58 09.6  -5.3
VHO   Vista Hermosa        1.79  62   eP       Pn        00 57 50.1  -1.6
CAIG  El Cayaco            1.99 295   eP       Pn        00 57 51.1  -3.1
CAIG                                  eS       Sn        00 58 14.9  -4.6
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CAIG	El Cayaco	1.99	295	*e*P	Pn	00 57 51.1	-3.1
CAIG				*e*S	Sn	00 58 14.9	-4.6
MEIG	Mezcala	2.07	325	*e*P	Pn	00 57 52.7	-2.7
MEIG	Mezcala	2.07	325	*e*P	Pn	00 57 52.7	-2.7
HUIG	Huatulco	2.23	101	*e*P	Pn	00 57 54.5	-3.0
HUIG	Huatulco	2.23	101	*e*P	Pn	00 57 54.5	-3.0
PLIG	Platanillo	2.41	334	*e*P	Pn	00 57 57.7	-2.4
PLIG				*i* S	Sn	00 58 26.4	-3.7
PLIG	Platanillo	2.41	334	*e*P	Pn	00 57 58.3	-1.8
YAIG	Yautepec	2.71	346	*e*P	Pn	00 58 01.1	-3.1
YAIG				*i* S	Sn	00 58 34.4	-3.1
YAIG	Yautepec	2.71	346	*e*P	Pn	00 58 03.4	-0.8

KRSC 14 01:11:47.4±0.9, 52°.49N×159°.86E, h32^{km}±12^{km}, ML3.7, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	Mys Shipunski	0.62	9	*e*P	Pn	01 12 00.4	+0.5
SPN				*e*S	Sn	01 12 09.6	+0.9
NLC	Nalytchevo	0.75	336	*e*P	Pb	01 12 02.2	+0.2
NLC				*e*S	Sb	01 12 12.9	+1.0
RUS	Russkaya	0.82	266	*e*P	Pb	01 12 03.3	0.0
RUS				*e*S	Sb	01 12 14.4	+0.3
DALK	Dalny	0.86	309	*e*P	Pb	01 12 03.8	-0.1
DALK				*e*S	Sn	01 12 14.7	0.0
PET	Petropavlovsk	0.91	307	*e*P	Pb	01 12 04.3	-0.3
PET				*e*S	Sn	01 12 16.0	+0.2
UGLR	Uglovaya	0.95	319	*e*P	Pb	01 12 05.6	+0.1
UGLR				*e*S	Sb	01 12 18.4	+0.5
SDLR	Sedlovina	0.98	324	*e*P	Pb	01 12 05.6	-0.4
SMAR	Somma	1.00	321	*e*P	Pb	01 12 06.1	-0.3
MTVR	Mutnovka	1.02	270	*e*P	Pb	01 12 06.4	-0.3
MTVR				*e*S	Sb	01 12 20.0	+0.1
AVH	Avacha	1.03	319	*e*P	Pb	01 12 06.8	0.0
KOK	Koryaka	1.09	318	*e*P	Pb	01 12 07.6	-0.2
KRMR	Karymshinskiy	1.10	289	*e*P	Pb	01 12 07.4	-0.6
KRMR				*e*S	Sb	01 12 21.9	-0.1
KRX	Arik	1.14	320	*e*P	Pb	01 12 08.0	-0.6
ASAK	Asacha	1.20	266	*e*P	Pb	01 12 09.5	-0.2
ASAK				*e*S	Sb	01 12 25.3	+0.4
KDTR	Khodutka, Kamc	1.29	239	*e*P	Pb	01 12 10.5	-0.6
KDTR				*e*S	Sb	01 12 27.2	-0.1
KII	Karymskiy	1.57	351	*e*P	Pb	01 12 16.8	+1.0
KII				*e*S	Sb	01 12 35.6	+0.3
GNL	Ganaly	1.67	317	*e*P	Pb	01 12 16.2	-1.4
GNL				*e*S	Sb	01 12 36.6	-1.7
APC	Apacha	1.70	286	*e*P	Pb	01 12 16.9	-1.1
APC				*e*S	Sb	01 12 39.0	+0.1
TUMD	Tumrok D	2.74	7	*e*P	Pn	01 12 31.5	+2.5
TUMD				*e*S	Sn	01 13 04.0	+3.0
TUMR	Tumrok	2.80	3	*e*P	Pn	01 12 33.3	+3.3
TUMR				*e*S	Sb	01 13 07.8	-2.9
KBTR	Krutoberegovo	4.11	24	*e*P	Pn	01 12 50.9	+3.1
SMKR	Semkarok	4.21	12	*e*P	Pn	01 12 53.9	+4.6
SRKR	Sorokina	4.24	10	*e*P	Pn	01 12 53.4	+3.7

MEX 14 01:23:01.1±0.4, 16°.32N×98°.47W, h15^{km}, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.34	78	*i* P	Pg	01 23 07.3	-0.8
PNIG				*i* S	Sg	01 23 12.1	-0.7
TLIG	Tlapa	1.24	356	*i* P	Pn	01 23 20.3	-3.7
TLIG				*i* S	Sb	01 23 34.9	-5.2
MEIG	Mezcala	1.94	326	*i* P	Pn	01 23 31.0	-2.6
MEIG				*e*S	Sn	01 23 53.6	-4.2
PLIG	Platanillo	2.28	335	*e*P	Pn	01 23 36.2	-2.1
PLIG				*e*S	Sn	01 24 02.5	-3.8
YAIG	Yautepec	2.59	347	*i* P	Pn	01 23 39.5	-3.2
YAIG				*i* S	Sn	01 24 09.7	-4.3

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*ISCJB **14** 01:25:18.0±0.7, 43°.7S±0°.1×16°.2W±0°.2, h10^{km}, mb4.3/10, MS4.0/20, Error ellipse: s-maj=18.6km s-min=16.6km az=28.0*

*IDC **14** 01:25:18.2±0.8, 43°.68S×16°.15W, h0^{km}, mb4.3/9, mb1 4.3/9, mb1mx4.0/41, mbtmp4.3/9, MS3.9/20, Ms1 3.9/20, ms1mx3.8/32, Error ellipse: s-maj=23.8km s-min=22.4km az=77.0*

*NEIC **14** 01:25:19.7±0.5, 43°.70S×16°.15W, h10^{km}, mb4.2/1, Error ellipse: s-maj=13.8km s-min=12.2km az=27.0*

*GCMT **14** 01:25:19.7±0.4, 44°.11S×16°.15W, h20^{km}±1^{km}, MW4.9/72, Moment Tensor Solution. s17,c18; s72,c89; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.69±.23; $M_{\theta\theta}$0.80±.16; $M_{\phi\phi}$1.89±.15; $M_{r\theta}$0.69±.45; $M_{\theta\phi}$-0.48±.10; $M_{\phi r}$0.96±.27; Best double couple: $M_0$2.60400×10^{16} NP1:ϕ_s177.00000°, δ55.00000°, λ-73.00000°. NP2: ϕ_s329.00000°, δ38.00000°, λ-113.00000°. Principal axes: T 2.1720, Plg9.0000°, Azm255.0000°; N 0.8660, Plg14.0000°, Azm347.0000°; P -3.0370, Plg73.0000°, Azm134.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 14 01:25:19.7±0.8, 43°.7S±0°.2×16°.2W±0°.1, h10^{km}, n30, σ0^s.49/11, mb4.3/10, MS4.0/20, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10S2	ASCENSION HYDR	34.62	3	T	T	02 08 45.4	
	baz=182,slow=75,SNR=5.6						
H10S3	ASCENSION HYDR	34.63	3	T	T	02 08 45.8	
	baz=182,slow=75,SNR=6.5						
H10S1	ASCENSION HYDR	34.64	3	T	T	02 08 46.7	
	baz=182,slow=75,SNR=7.0						
BOSA	Boshof	36.26	79	LR	LR	01 44 48.7	
	comp=Z,132nm,18.5s,baz=206,slow=32						
CPUP	Villa Florida	37.48	284	P	P	01 32 33.3	-0.1
	3.5nm,0.9s,baz=116,slow=8.1,SNR=4.5						
CPUP				LR	LR	01 45 16.8	
	comp=Z,245nm,21.2s,baz=146,slow=32						
LBTB	Lobatse	38.69	75	P	P	01 32 44.2	+0.3
	5.9nm,1.2s,baz=234,slow=8.7,SNR=2.6						
PLCA	Paso Flores	39.80	255	LR	LR	01 45 48.2	
	comp=Z,269nm,21.7s,baz=153,slow=31						
MAW	Mawson	46.47	149	P	P	01 33 45.8	-0.5
	2.6nm,0.8s,baz=284,slow=7.8,SNR=4.4						
QSPA	South Pole Qui	46.57	180	P	P	01 33 47.8	+0.4
	6.2nm,1.0s,baz=204,slow=7.3,SNR=10						
SIV	San Ignacio	46.97	292	P	P	01 33 51.0	+0.1
	1.2nm,0.9s,baz=133,slow=18,SNR=5.6						
DBIC	Dimbokro	51.16	14	LR	LR	01 50 50.1	
	comp=Z,55nm,21.7s,baz=153,slow=30						
LPAZ	La Paz	51.62	285	LR	LR	01 55 56.5	
	comp=Z,329nm,19.4s,baz=126,slow=36						
SAML	Samuel	53.50	296	*e*P	P	01 34 40.9	+0.4
	2.2nm,0.8s						
TORD	Torodi Ar. Bea	58.87	20	P	P	01 35 18.9	+0.3
	3.6nm,1.0s,baz=208,slow=5.9						
TORD				LR	LR	01 56 27.8	
	comp=Z,59nm,18.3s,baz=250,slow=32						
KOWA	Kowa	58.96	14	P	P	01 35 19.4	+0.1
	2.2nm,0.7s,baz=189,slow=10.0,SNR=6.1						
KOWA				LR	LR	01 55 07.9	
	comp=Z,100nm,20.8s,baz=219,slow=30						
VNDA	Vanda	59.06	179	LR	LR	01 58 05.3	
	comp=Z,66nm,19.1s,baz=184,slow=33						
NNA	Nana	60.69	282	LR	LR	02 01 31.5	
	comp=Z,98nm,20.8s,baz=130,slow=36						
PCRV	Puerto La Cruz	69.36	308	LR	LR	02 04 55.2	
	comp=Z,185nm,21.9s,baz=95,slow=34						
ROSC	El Rosal	71.12	297	LR	LR	02 06 45.8	
	comp=Z,167nm,18.9s,baz=142,slow=35						
RPN	Rapa Nui	73.96	248	LR	LR	02 02 53.6	
	comp=Z,91nm,20.9s,baz=306,slow=30						
ATD	Arta Tunnel	76.73	60	LR	LR	02 09 06.4	
	comp=Z,121nm,19.5s,baz=210,slow=34						
MDT	Midelt	76.87	10	LR	LR	02 06 33.4	
	comp=Z,61nm,19.6s,baz=182,slow=32						
JTS	JuntasAbangare	82.19	292	LR	LR	02 14 43.2	
	comp=Z,42nm,19.5s,baz=182,slow=36						
KEST	Kesra	82.39	21	LR	LR	02 10 46.8	
	comp=Z,74nm,20.4s,baz=204,slow=33						
ESDC	Sonseca Array	83.71	9	P	P	01 37 47.4	-1.0
	2.0nm,1.0s,baz=180,slow=4.8,SNR=2.8						
MMAI	Mount Meron Ar	89.67	41	LR	LR	02 16 46.9	
	comp=Z,86nm,18.8s,baz=160,slow=34						
DAVOX	Davos/Dischmat	92.99	18	LR	LR	02 17 26.5	
	comp=Z,27nm,20.1s,baz=264,slow=34						
BRTR	Keskin Array B	94.42	36	P	P	01 38 39.9	+0.3
	3.5nm,1.1s,baz=193,slow=5.2,SNR=12						
BRTR				LR	LR	02 21 47.4	
	comp=Z,30nm,18.8s,baz=184,slow=36						
WSAR	Wadi Sarin	95.45	63	LR	LR	02 17 52.3	
	comp=Z,80nm,21.9s,baz=220,slow=33						
ILAR	Eielson Array	145.57	325	PKPbc	PKPdf	01 44 57.0	0.0
	1.8nm,0.9s,baz=98,slow=2.1,SNR=14						

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*IDC **14** 01:42:56.9±0.7, 44°.09N×151°.27E, h0^{km}, mb3.9/16, mb1 4.0/19, mb1mx3.8/69, mbtmp3.9/19, ML3.8/2, MS3.5/4, Ms1 3.5/4, ms1mx2.6/66, Error ellipse: s-maj=20.3km s-min=17.7km az=15.0*

*JMA **14** 01:43:00.7±0.6, 44°.55N×150°.99E, h30^{km}, M4.2*

*ISCJB **14** 01:43:01.8±0.5, 43°.98N±0°.07×150°.87E±0°.05, h42^{km}, mb4.0/21, MS3.6/6, Error ellipse: s-maj=9.9km s-min=3.9km az=161.2*

*NEIC **14** 01:43:02.6±1.4, 44°.09N×151°.24E, h39^{km}±11^{km}, mb4.2/2, Error ellipse: s-maj=11.3km s-min=10.6km az=110.0*

*SKHL **14** 01:43:02.4±1.0, 44°.12N×151°.00E, h49^{km}±8^{km}, mb4.4/4*

*MOS **14** 01:43:04.7±1.2, 44°.42N×150°.71E, h51^{km}, mb4.3/12, Error ellipse: s-maj=13.2km s-min=8.9km az=26.0*

ISC 14 01:43:03.3±0.7, 44°.04N±0°.07×150°.95E±0°.06, h42^{km}, n86, σ1^s.66/107, mb4.1/21, MS3.6/6, 4C-3D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.50	300	*e*P	Pn	01 43 40.0	-1.4
KUR				AMB	AMB	01 43 44.0	
	23nm,0.3s						
KUR				AMB	AMB	01 43 44.0	
	18nm,0.3s						
KUR				AMB	AMB	01 43 44.0	
	42nm,0.3s						
KUR				*i* S	Sn	01 44 08.7	-2.0
KUR				A	A	01 44 12.0	
	349nm,0.2s						
KUR				A	A	01 44 12.0	
	221nm,0.2s						
KUR	Kuril'sk	2.50	300	*e*PN	Pn	01 43 40.8	-0.6
KUR				*i* S	Sn	01 44 09.8	-0.9
KUR				pmax	pmax		
	comp=Z,42nm,0.1s						
KUR				pmax	pmax		
	comp=N,23nm,0.3s						
KUR				pmax	pmax		
	comp=E,18nm,0.3s						
KUR				smax	smax		
	comp=N,349nm,0.2s						
KUR				smax	smax		
	comp=E,221nm,0.2s						
SHO	Shikotan	2.98	268	*i* P	Pn	01 43 48.0	0.0
SHO				AMB	AMB	01 43 51.0	
	comp=E,18nm,0.3s						
SHO				*i* S	Sn	01 44 21.0	-1.4
SHO				A	A	01 44 24.0	
	comp=E,149nm,0.2s						
SHO				A	A	01 44 24.0	
	comp=E,31nm,0.2s						
SHO	Shikotan	2.98	268*c*	*i*PN	Pn	01 43 48.0	0.0
SHO				*i* S	Sn	01 44 21.8	-0.6
SHO				pmax	pmax		
	comp=Z,17µm,0.3s						
SHO				pmax	pmax		
	comp=E,12µm,0.4s						
SHO				pmax	pmax		
	comp=N,13µm,0.3s						
SHO				smax	smax		
	comp=N,149nm,0.2s						
SHO				smax	smax		
	comp=E,31nm,0.2s						
YUK	Yuzh-Kuril'sk	3.67	272	*e*P	Pn	01 43 57.0	-0.4
YUK				AMB	AMB	01 43 59.0	
	comp=E,78nm,0.3s						
YUK				*e*S	Sn	01 44 38.0	-1.4
YUK				A	A	01 44 40.0	
	comp=E,48nm,0.3s						
YUK				A	A	01 44 40.0	
	comp=E,143nm,0.3s						
YUK	Yuzh-Kuril'sk	3.67	272	*e*PN	Pn	01 43 57.5	+0.1
YUK				*e*S	Sn	01 44 38.7	-0.7
YUK				pmax	pmax		
	comp=Z,78nm,0.2s						
YUK				smax	smax		
	comp=N,48nm,0.2s						
YUK				smax	smax		
	comp=E,143nm,0.5s						
GRPR	Tuman	3.73	271	*e*P	Pn	01 43 59.0	+0.7
GRPR				AMB	AMB	01 44 03.0	
	comp=E,35nm,0.3s						
GRPR				AMB	AMB	01 44 03.0	
	comp=E,43nm,0.3s						
GRPR				*e*S	Sn	01 44 42.0	+1.0
GRPR				A	A	01 44 43.0	
	comp=E,176nm,0.3s						
GRPR				A	A	01 44 43.0	
	comp=E,49nm,0.3s						
GRPR	Tuman	3.73	271	PN	Pn	01 43 59.6	+1.3
GRPR				S	Sn	01 44 42.1	+1.0
GRPR				pmax	pmax		
	comp=Z,43nm,0.2s						
GRPR				pmax	pmax		
	comp=E,35nm,0.1s						
GRPR				smax	smax		
	comp=E,49nm,0.2s						
GRPR				smax	smax		
	comp=N,176nm,0.3s						
NEM2	Nemuro 2	3.83	262	P	Pn	01 43 58.8	-0.9
NEM2				*e*S	Sn	01 44 41.3	-2.2
GLVR	Golovnino	3.94	267	*e*P	Pn	01 44 02.0	+0.9
GLVR				*e*S	Sn	01 44 47.0	+1.1
GLVR	Golovnino	3.94	267	PN	Pn	01 44 02.4	+1.3
GLVR				*e*S	Sn	01 44 47.1	+1.1
JRA	Rausu	4.21	271	P	Pn	01 44 05.0	+0.2
JRA				*e*S	Sn	01 44 53.2	+0.6
JNK	Nakash	4.53	266	P	Pn	01 44 08.9	-0.4
JNK				*e*S	Sn	01 44 58.9	-1.8
JAK	Akkeshi	4.67	259	P	Pn	01 44 10.1	-1.0
JAK				*e*S	Sn	01 45 02.7	-1.2
JTKR	Abashiri--Toko	5.08	272	P	Pn	01 44 17.3	+0.5
JAR	Ashorobuto	5.26	264	P	Pn	01 44 19.5	+0.2
JAR				*e*S	Sn	01 45 18.4	-0.2
JOB	Onbets	5.30	260	P	Pn	01 44 19.8	0.0
JOB				*e*S	Sn	01 45 19.3	-0.3
JCH	Churui	5.71	258	P	Pn	01 44 25.0	-0.5
JCH				*e*S	Sn	01 45 29.5	-0.3
MYR	Moyori	5.87	255	*e*P	Pn	01 44 28.1	+0.4
MYR				*e*S	Sn	01 45 32.3	-1.4
JKK2	Kamakawa 2	5.92	271	P	Pn	01 44 29.7	+1.3
ASAJ	Asahikawa	6.02	274	Pn	Pn	01 44 31.2	+1.6
	comp=N,2.5nm,0.3s,baz=54,slow=12,SNR=7.9						
ERM	Erimo	6.06	253	*e*Pn	Pn	01 44 32.0	+1.8
ERM	Erimo	6.06	253	*e*PN	Pn	01 44 32.0	+1.8
JEM	Erimo	6.06	253	*e*S	Sn	01 45 40.0	+1.8
JFR	Furan	6.13	265	P	Pn	01 44 32.2	+0.9
JFR				*e*S	Sn	01 45 40.1	0.0
JNBK	Urakawa-nobuka	6.25	256	P	Pn	01 44 32.9	+0.1
JNBK				*e*S	Sn	01 45 41.0	-1.9
JBT2	Biratori 2	6.38	262	P	Pn	01 44 34.2	-0.5
YSS	Yuzh-Sakhalins	6.45	300	*e*P	Pn	01 44 34.7	-0.9
YSS	Yuzh-Sakhalins	6.45	300	*e*PN	Pn	01 44 32.0	-3.6
YSS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
JNB	Noboribetsu	7.40	261	*e*S	Sn	01 46 09.7	-1.6
JKB	Kayabe	7.58	257	P	Pn	01 44 51.2	0.0
JKB				*e*S	Sn	01 46 11.7	-4.1
JANG	Nango	7.90	246	*e*S	Sn	01 46 17.7	-5.9
JYM2	Yakumo 2	7.98	260	P	Pn	01 44 57.3	+0.7
JTM	Tenmabayashi	8.00	249	*e*S	Sn	01 46 21.3	-4.7
JSR	Shiriuchi	8.14	256	P	Pn	01 44 59.0	+0.2
JRG	Rokugo	9.00	242	*e*S	Sn	01 46 48.4	-2.2
JIO	Ouri	9.13	236	*e*S	Sn	01 46 46.0	-7.8
USRK	Ussuriysk Ar.	13.62	277	Pn	Pn	01 46 13.5	-0.3
	baz=85,slow=13						
KLR	Kul'dur	14.16	298	Pn	P	01 46 24.2	-3.5
	comp=Z,0.0nm,0.3s,baz=106,slow=15,SNR=6.6						
KLR				LR	LR	01 53 05.8	
	comp=Z,4.6nm,18.6s,baz=248,slow=42						
KLR	Kul'dur	14.16	298	*e*P	Pn	01 46 19.3	-1.7
KLR	Kul'dur	14.16	298⇓	*e*P	Pn	01 46 19.3	-1.7
SEY	Seymchan	18.95	2	P	P	01 47 18.3	-2.2
	comp=Z,0.2nm,0.3s,baz=198,slow=20,SNR=3.9						
HIA	Hailar	21.95	295	*e*P	P	01 47 52.1	-1.1
HIA	Hailar	21.95	295⇑	*e*P	P	01 47 52.1	-1.1
HIA				pmax	pmax		
	comp=Z,5.0nm,0.5s						
ULN	Ulaanbaatar	30.45	293	*e*P	P	01 49 13.1	+1.2
ULN	Ulaanbaatar	30.45	293	*e*P	P	01 49 13.1	+1.2
	comp=Z,1.1nm,0.6s						
ULN	Ulaanbaatar	30.45	293⇑	*i*P	P	01 49 13.1	+1.2
ULN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SONM	Songino Array	30.89	293	P	P	01 49 17.2	+1.5
	comp=Z,0.9nm,0.6s,baz=64,slow=7.2,SNR=3.8						
ZALV	Zalesovo Beam	43.01	308	P	P	01 50 58.4	+0.1
	comp=Z,0.5nm,0.3s,baz=66,slow=7.0,SNR=2.6						
NVS	Novosibirsk	43.67	309	*e*P	P	01 51 00.2	-3.4
MKAR	Makanchi Array	46.87	299	P	P	01 51 30.3	+1.2
	comp=Z,1.9nm,0.7s,baz=71,slow=8.2,SNR=20						
KURK	Kurchatov	47.63	305	*e*P	P	01 51 35.4	+0.5
KURK				PcP	PcP	01 53 04.2	+0.3
KURK	Kurchatov	47.63	305	*e*P	P	01 51 35.4	+0.5
KURK						01 53 04.3	
KURBB	Kurchatov Arra	47.72	305	P	P	01 51 36.7	+1.2
	comp=Z,4.1nm,0.7s,baz=71,slow=8.6,SNR=26						
KURBB				PcP	PcP	01 53 04.3	0.0
	comp=Z,0.2nm,0.4s,baz=76,slow=3.6,SNR=3.3						
BVAR	Borovoye Array	51.42	310	P	P	01 52 03.5	-0.3
	comp=Z,0.7nm,0.5s,baz=54,slow=8.4,SNR=7.0						
ARU	Arti	55.99	318	*e*P	P	01 52 37.7	+0.6
ARU	Arti	55.99	318	*e*P	P	01 52 37.4	+0.3
	comp=Z,3.5nm,0.5s						
ARU	Arti	55.99	318*d*	*i*P	P	01 52 37.7	+0.6
ARU						01 53 33.0	
ARU						01 54 40.4	
ARU				S	S	02 00 21.5	-0.5
ARU				SS	SS	02 04 09.7	+2.0
ARU				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AKTO	Aktyubinsk	59.40	312	P	P	01 53 02.3	+1.1
	comp=Z,0.5nm,0.5s,baz=61,slow=6.8,SNR=3.3						
ARCES	ARCESS Array B	59.91	341	P	P	01 53 04.1	-0.3
	comp=Z,2.3nm,0.9s,baz=34,slow=9.8,SNR=4.4						
ARCES	ARCESS Array B	59.91	341	*e*P	P	01 53 09.8	+5.4
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
YBH	Yreka Blue Hor	60.41	59	P	P	01 53 05.9	-2.3
	comp=Z,0.7nm,0.4s,baz=267,slow=17,SNR=4.3						
YBH	Yreka Blue Hor	60.41	59	P	P	01 53 06.0	-2.3
LEM	Lembang	63.95	229	LR	LR	02 23 33.2	
	comp=Z,62nm,18.5s,baz=238,slow=38						
NVAR	Mina Array Bea	65.08	60	P	P	01 53 39.3	-0.4
	comp=Z,0.4nm,0.6s,baz=300,slow=5.8,SNR=4.2						
WRA	Warramunga Arr	65.46	197	P	P	01 53 42.2	+0.3
	comp=Z,0.6nm,0.7s,baz=14,slow=6.9,SNR=4.9						
WRA	Warramunga Arr	65.46	197	*e*P	P	01 53 45.7	+3.8
WRA	Warramunga Arr	65.46	197	*e*P	P	01 53 45.7	+3.8
WRA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES	FINESS Array B	65.83	334	P	P	01 53 43.9	+0.1
	comp=Z,2.1nm,0.6s,baz=23,slow=10,SNR=8.1						
FINES				LR	LR	02 26 18.3	
	comp=Z,39nm,21.0s,baz=210,slow=40						
FINES	FINESS Array B	65.83	334	*e*P	P	01 53 44.2	+0.4
FINES	FINESS Array B	65.83	334	*e*P	P	01 53 44.2	+0.4
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
FITZ	Fitzroy Crossi	66.03	206	LR	LR	02 21 02.0	
	comp=Z,52nm,20.4s,baz=252,slow=34						
OBN	Obninsk	66.67	325⇑	*e*P	P	01 53 49.3	0.0
OBN				*e*		01 56 18.0	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,15nm,14.0s						
ASAR	Alice Springs	69.17	197	P	P	01 54 05.8	+0.5
	comp=Z,0.2nm,0.7s,baz=2.8,slow=7.6,SNR=2.8						
ASAR	Alice Springs	69.17	197	*e*P	P	01 54 11.3	+6.0
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NB2	NORSAR Subarra	70.28	340	P	P	01 54 11.9	+0.1
	comp=Z,4.0nm,1.2s,baz=29,slow=6.5						
HFS	Hagfors	70.45	339	P	P	01 54 12.5	-0.3
	comp=Z,2.7nm,0.8s,baz=44,slow=4.8,SNR=6.4						
KIV	Kislovodsk	71.58	314⇓	*e*P	P	01 54 22.1	+2.0
KIV				*e*		01 56 57.1	
KIV				*e*S	SKiKP	02 03 55.9	+0.6
KIV				*e*SS	SS	02 08 16.0	+5.1
KIV				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KIV				MLR	MLR		
	comp=Z,48nm,19.0s						
AKASG	Malin Array Be	72.93	326	P	P	01 54 27.9	0.0
	comp=Z,1.1nm,0.4s,baz=38,slow=6.3,SNR=5.4						
AKASG	Malin Array Be	72.93	326	*e*P	P	01 54 30.6	+2.7
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CLL	Collm	78.28	335	*e*sP	sP	01 55 15.0	-0.8
TXAR	Lajitas Array	80.18	59	P	P	01 55 08.1	-1.3
	comp=Z,0.3nm,0.6s,baz=330,slow=6.7,SNR=4.4						
TXAR				LR	LR	02 27 42.5	
	comp=Z,14nm,21.1s,baz=0.0,slow=34						
TXAR	Lajitas Array	80.18	59	*e*P	P	01 55 08.6	-0.8
TXAR	Lajitas Array	80.18	59	*e*P	P	01 55 08.6	-0.8
GERES	GERESS Array B	80.20	333	P	P	01 55 09.4	+0.3
	comp=Z,0.3nm,0.4s,baz=16,slow=5.1,SNR=2.6						
TORD	Torodi Ar. Bea	116.56	326	PKP	PKPdf	02 01 42.3	-0.7
	comp=Z,0.1nm,0.3s,baz=36,slow=2.5						

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*NIED **14** 02:06:00, 37°.00N×141°.00E, h80^{km}, Mw3.5 Best double couple: $M_0$2.07000×10^{14} NP1:ϕ_s147.00000°, δ41.00000°, λ-157.00000°. NP2:ϕ_s39.00000°, δ75.00000°, λ-51.00000°.*

*ISCJB **14** 02:06:16.7±0.6, 36°.93N±0°.04×141°.10E±0°.07, h97^{km}±3^{km}, mb3.5/7, Error ellipse: s-maj=10.3km s-min=5.7km az=23.1*

*JMA **14** 02:06:18.6±0.1, 36°.97N×141°.01E, h91^{km}±1^{km}, M3.8*

JMA Felt I J1.

*IDC **14** 02:06:19.8±2.8, 36°.76N×140°.93E, h116^{km}±29^{km}, mb3.2/7, mb1 3.2/10, mb1mx3.1/66, mbtmp3.6/10, Error ellipse: s-maj=33.4km s-min=20.5km az=61.0*

ISC 14 02:06:17.9±1.0, 36°.93N±0°.05×141°.06E±0°.07, h94^{km}±6^{km}, n31, σ1^s.18/37, mb3.5/8, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.27	310	P	Pn	02 06 31.9	+0.1
ONAJ				S	Sn	02 06 41.5	-0.6
JFFD	Fukushimafurud	0.43	292	P	Pn	02 06 33.0	+0.4
JFFD				*e*S	Sn	02 06 43.2	-0.4
JFK	Kawauchi	0.46	342	P	Pn	02 06 32.8	-0.1
JFK				S	Sn	02 06 43.1	-0.9
JHO	Hitachi	0.50	231	P	Pn	02 06 33.5	+0.3
JHO				*e*S	Sn	02 06 44.1	-0.4
JFT	Otama	0.82	316	P	Pn	02 06 36.1	+0.1
JFT				S	Sn	02 06 48.8	-0.8
JMM	Marumori	0.96	347	P	Pn	02 06 37.4	-0.1
JMM				S	Sn	02 06 51.1	-1.0
JFY	Yanaizu	1.18	294	P	Pn	02 06 40.0	0.0
JFY				*e*S	Sn	02 06 56.3	-0.3
JAG	Ashikaga	1.38	249	P	Pn	02 06 42.7	+0.3
JAG				*e*S	Sn	02 07 00.2	-0.8
JKT	Katashina	1.46	264	*e*S	Sn	02 07 03.8	+1.0
JOU	Okura	1.47	348	*e*S	Sn	02 07 02.0	-0.8
JYS	Shirataka	1.51	329	P	Pn	02 06 44.1	+0.1
JYS				*e*S	Sn	02 07 03.7	-0.1
JIO	Ouri	1.54	9	P	Pn	02 06 44.3	-0.1
JIO				*e*S	Sn	02 07 02.7	-1.7
JHK	Hiroka	1.66	282	P	Pn	02 06 46.3	+0.4
MJAR	Matsushiro Arr	2.32	261	P	Pn	02 06 55.0	+0.5
	13nm,0.3s,baz=85,slow=14,SNR=56						
MJAR				S	Sn	02 07 17.1	-5.3
	9.1nm,0.3s,baz=47,slow=47,SNR=7.0						
MAT	Matsushiro	2.32	261	P	Pn	02 06 55.5	+1.0
MAT				*e*S	Sn	02 07 22.2	-0.3
JHJ	Hachijo jima 2	3.94	196	P	Pn	02 07 16.3	+0.1
	10nm,0.3s,baz=68,slow=19,SNR=6.3						
JHJ				S	Sn	02 07 60.0	-1.5
	25nm,0.3s,baz=1.5,slow=23,SNR=8.9						
KSRS	Korea Array	10.49	277	P	Pn	02 08 46.9	+1.7
	0.2nm,0.3s,baz=94,slow=15,SNR=2.7						
SONM	Songino Array	27.61	304	P	P	02 11 56.6	+0.2

	0.5nm,0.5s,baz=87,slow=7.7,SNR=2.8						
H11N2	**WAKE ISLAND Hy**	28.34	120	T	T	02 42 21.0	
	baz=313,slow=75,SNR=17						
H11N1	**WAKE ISLAND Hy**	28.35	120	T	T	02 42 21.3	
	baz=313,slow=75,SNR=24						
H11N3	**WAKE ISLAND Hy**	28.36	120	T	T	02 42 23.1	
	baz=313,slow=75,SNR=16						
H11S1	**WAKE ISLAND Hy**	29.05	122	T	T	02 43 11.8	
	baz=315,slow=75,SNR=23						
H11S3	**WAKE ISLAND Hy**	29.05	122	T	T	02 43 11.8	
	baz=315,slow=75,SNR=16						
H11S2	**WAKE ISLAND Hy**	29.06	122	T	T	02 43 13.7	
	baz=315,slow=75,SNR=14						
ZALV	**Zalesovo Beam**	41.77	312	P	P	02 13 58.1	+0.3
	0.8nm,0.4s,baz=110,slow=6.6,SNR=2.8						
MKAR	**Makanchi Array**	43.93	302	P	P	02 14 14.5	-0.8
	0.3nm,0.6s,baz=91,slow=7.6,SNR=4.2						
KURBB	**Kurchatov Arra**	45.84	308	P	P	02 14 29.9	-0.5
	0.6nm,0.6s,baz=82,slow=7.9,SNR=6.3						
ILAR	**Eielson Array**	49.73	32	P	P	02 15 01.2	+1.0
	0.3nm,0.7s,baz=273,slow=6.8,SNR=4.4						
BVAR	**Borovoye Array**	50.43	312	P	P	02 15 05.7	+0.1
	0.2nm,0.3s,baz=90,slow=8.6,SNR=2.9						
WRA	**Warramunga Arr**	56.92	188	pP	pP	02 16 17.1	+0.6
	0.2nm,0.6s,baz=4.4,slow=7.6,SNR=2.0						
AKASG	**Malin Array Be**	74.20	322	P	P	02 17 44.1	-0.1
	0.3nm,0.3s,baz=41,slow=7.6,SNR=2.7						

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*SJA **14** 02:43:23.2±0.4, 27°.35S×71°.94W, h33^{km}, ML4.0, MW3.8*

*IDC **14** 02:43:25.2±0.9, 27°.48S×71°.10W, h0^{km}, mb3.9/3, mb1 4.0/5, mb1mx3.7/35, mbtmp3.8/5, ML3.4/2, MS3.1/4, Ms1 3.2/4, ms1mx2.8/33, Error ellipse: s-maj=37.0km s-min=27.2km az=73.0*

*NEIC **14** 02:43:29.0±0.0, 27°.50S×70°.85W, h84^{km}, mb3.5/2, ML3.9(GUC), After GUC.*

NEIC Felt [III] at Copiapo and Tierra Amarilla.

*GUC **14** 02:43:29.2±0.4, 27°.50S×70°.85W, h84^{km}±9^{km}, ML3.9*

ISC 14 02:43:25.7±2.0**, 27°.43S**±0°.04×**71°.29W**±0°.06**, h7**^{km}±12^{km}**, n48, σ1^{s}73**/54**, mb3.9**/4**, 2C-2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO03	**Copiap**	0.95	100	*e*Pn	Pb	02 43 44.5	-0.1
GO03				*e*Sn	Sb	02 43 55.9	-1.4
GO03	**Copiap**	0.95	100	⇓*i*P	Pn	02 43 44.9	-0.6
GO03				*i* S	Sb	02 43 56.2	-1.1
GO03				IAML		02 43 58.4	
	comp=N,6μm,0.3s						
VACH	**Vallenar**	1.24	158	*e*P	Pg	02 43 50.2	+0.8
VACH				*i* S	Sn	02 44 06.1	-0.2
LCO	**Las Campanas**	1.66	162	*e*Pn	Pb	02 43 56.8	0.0
LCO				*e*Sn	Sn	02 44 14.6	-2.6
LCO	**Las Campanas**	1.66	162	*e*P	Pb	02 43 56.8	0.0
LCO				*e*S	Sb	02 44 17.3	-0.7
LCO	**Las Campanas**	1.66	162	⇑*i*P	Pb	02 43 56.8	0.0
LCO				*i* S	Sn	02 44 17.2	0.0
LCO				IAML		02 44 22.8	
	comp=E,2μm,0.5s						
GO02	**Mina Guanaco**	2.72	34	*e*Pn	Pn	02 44 11.2	+1.0
GO02				*e*Sn	Sn	02 44 42.1	-1.3
GO02	**Mina Guanaco**	2.72	34	⇑*i*P	Pn	02 44 11.1	+1.0
GO02				*i* S	Sn	02 44 43.0	-0.4
TLL	**Tololo Astrono**	2.76	171	*e*P	Pn	02 44 12.2	+1.6
TLL				IAML		02 44 59.9	
	comp=E,765nm,0.7s						
GO04	**Tololo Observa**	2.77	171	*e*Pn	Pn	02 44 12.5	+1.8
GO04				*e*Sn	Sn	02 44 43.4	-1.1
GO04	**Tololo Observa**	2.77	171	*e*P	Pn	02 44 12.1	+1.4
GO04				*i* S	Sn	02 44 44.8	+0.2
VCA	**Vinchina**	3.02	116	*e*P	Pb	02 44 19.3	-0.6
VCA				IAML		02 45 06.3	
	comp=Z,274nm,0.3s						
VCA	**Vinchina**	3.02	116	IAML		02 45 15.8	
	comp=N,518nm,0.7s						
AROD	**Rodeo**	3.16	150	*e*P	Pb	02 44 20.1	-2.3
AROD				*e*S	Sb	02 45 01.6	+0.3
AGUA	**GUANDACOL**	3.21	130	*e*P	Pb	02 44 21.7	-1.3
ACDV	**Cuesta del Vie**	3.33	146	*e*P	Pb	02 44 22.6	-2.6
AMOG	**MOGNA**	4.27	146	*e*P	Pn	02 44 34.5	+3.4
RTLL	**Cerro Villicun**	4.60	148	IAML		02 45 54.4	
	comp=Z,88nm,0.5s						
CYA	**Choya**	4.96	103	*e*P	Pn	02 44 44.1	+3.5
CYA				IAML		02 45 48.3	
	comp=Z,46nm,0.7s						
RTCV	**Cerro Valdivia**	5.03	152	*e*P	Pn	02 44 44.8	+3.2
PB04	**IPOC Station P**	5.18	12	*e*Pn	Pn	02 44 41.8	-2.0
AHML	**Horco Molle**	5.34	84	*e*P	Pn	02 44 50.4	+4.5
ROC1	**El Roble**	5.54	178	*e*Pn	Pn	02 44 49.1	+0.4
PEL	**Peldehue**	5.72	175	*e*Pn	Pn	02 44 51.6	+0.5
ARCO	**CERRO ARCO**	5.77	160	*e*P	Pn	02 44 56.0	+4.1
ARCO				IAML		02 46 41.7	
	comp=Z,62nm,0.8s						
ACAN	**Cantantal**	6.00	145	⇓*e*P	Pn	02 44 56.9	+2.0
AAGR	**Agrelo**	6.03	160	*e*P	Pn	02 44 59.2	+3.9
PB01	**IPOC Station P**	6.56	15	*e*Pn	Pn	02 45 01.3	-1.5
MRA	**San Martin**	6.94	137	*e*P	Pn	02 45 09.3	+1.5
MRA				IAML		02 46 55.5	
	comp=Z,19nm,0.5s						
GO05	**HualaæØ**	7.58	184	*e*Pn	Pn	02 45 15.2	-1.4
LPAZ	**La Paz**	11.47	15	Pn	Pn	02 46 09.8	-0.7
	comp=Z,0.3nm,0.3s,baz=186,slow=7.0,SNR=11						
LPAZ				LR	LR	02 50 33.6	
	comp=Z,96nm,18.8s,baz=168,slow=37						
CPUP	**Villa Florida**	12.51	88	Pn	Pn	02 46 23.7	-0.4
	comp=Z,0.0nm,0.3s,baz=176,slow=19,SNR=2.3						
PLCA	**Paso Flores**	13.29	178	LR	LR	02 51 40.0	
	comp=Z,160nm,19.1s,baz=20,slow=37						
SIV	**San Ignacio**	14.81	42	Pn	Pn	02 46 51.1	-4.5
	comp=Z,0.1nm,0.3s,baz=235,slow=13,SNR=1.7						
SIV				LR	LR	02 52 29.4	
	comp=Z,110nm,20.0s,baz=222,slow=37						
NNA	**Nana**	16.22	340	LR	LR	02 52 35.0	
	comp=Z,29nm,21.1s,baz=166,slow=34						
SAML	**Samuel**	19.91	24	*e*P	P	02 47 58.0	0.0
	comp=Z,1.1nm,0.7s						
SNAA	**Sanae**	57.46	160	P	P	02 53 15.1	+0.2
	comp=Z,2.2nm,0.8s,baz=231,slow=6.9,SNR=5.8						
TXAR	**Lajitas Array**	64.40	329	P	P	02 54 04.5	+1.9
	comp=Z,0.3nm,0.8s,baz=155,slow=11,SNR=2.8						
HLID	**Hailey**	80.97	330	*e*P	P	02 55 42.0	+1.0
	comp=Z,0.7nm,0.7s						
TORD	**Torodi Ar. Bea**	81.38	70	P	P	02 55 42.6	-1.0
	comp=Z,1.2nm,0.7s,baz=242,slow=5.6						
TOA1	**Torodi Ar. Sit**	81.38	70	*e*P	P	02 55 42.6	-1.0
ASAR	**Alice Springs**	123.68	208	PKP	PKPdf	03 02 24.6	-0.2
	comp=Z,0.3nm,0.8s,baz=156,slow=2.5,SNR=1.8						
WRA	**Warramunga Arr**	126.77	211	PKP	PKPdf	03 02 30.5	-0.3
	comp=Z,0.2nm,0.5s,baz=147,slow=1.7,SNR=4.8						
KURK	**Kurchatov**	147.41	36	*e*PKPab	PKPbc	03 03 10.6	+0.6
KURBB	**Kurchatov Arra**	147.42	36	PKPbc	PKPbc	03 03 10.6	+0.6
	comp=Z,1.6nm,0.7s,baz=304,slow=3.1,SNR=14						
ZAA1	**Zalesovo Array**	148.20	27	*e*PKPbc	PKPbc	03 03 12.9	+0.9
ZALV	**Zalesovo Beam**	148.21	27	PKPbc	PKPbc	03 03 12.9	+0.9
	comp=Z,4.8nm,0.7s,baz=307,slow=3.7,SNR=10						
MKAR	**Makanchi Array**	151.62	40	PKPbc	PKPbc	03 03 21.1	+0.5
	comp=Z,1.7nm,0.8s,baz=327,slow=1.9,SNR=16						

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*ISCJB **14** 03:09:07.6±2.1, 12°.37N±0°.03×143°.99E±0°.05, h5^{km}±13^{km}, mb4.6/75, MS3.6/16, Error ellipse: s-maj=7.8km s-min=5.5km az=9.3*

*IDC **14** 03:09:07.8±0.5, 12°.39N×144°.05E, h0^{km}, mb4.4/25, mb1 4.4/27, mb1mx4.3/59, mbtmp4.4/27, ML4.1/2, MS3.5/15, Ms1 3.5/15, ms1mx3.3/59, Error ellipse: s-maj=17.0km s-min=10.6km az=96.0*

*BJI **14** 03:09:09.6, 12°.41N×144°.27E, h24^{km}, mb4.6/30, mB4.8/18, Ms4.3/5, Ms7 4.0/4*

*NEIC **14** 03:09:13.4±0.2, 12°.38N×143°.99E, h35^{km}, mb4.8/44, Error ellipse: s-maj=6.6km s-min=4.5km az=91.0*

*DJA **14** 03:09:13.5±0.7, 12°N±6°×14°4E±2°3, h57^{km}±22^{km}, M4.8/8, mB5.2/2, mb4.7/8, MLv4.8/1, Mw(mB)4.6/2*

*GCMT **14** 03:09:13.4±0.4, 12°.29N×144°.02E, h22^{km}±1^{km}, MW4.8/59, Moment Tensor Solution. s17,c21; s59,c81; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.48±.18; $M_{\theta\theta}$1.87±.12; $M_{\phi\phi}$-0.39±.12; $M_{r\theta}$0.37±.17; $M_{\theta\phi}$-0.70±.07; $M_{\phi r}$1.47±.24; Best double couple: $M_0$2.34200×10^{16} NP1:ϕ_s137.00000°, δ56.00000°, λ-44.00000°. NP2: ϕ_s255.00000°, δ55.00000°, λ-137.00000°. Principal axes: T 2.0710, Plg1.0000°, Azm196.0000°; N 0.5420, Plg37.0000°, Azm287.0000°; P -2.6140, Plg53.0000°, Azm105.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 14 03:09:10.0±2.9**, 12°.37N**±0°.05×**144°.16E**±0°.07**, h13**^{km}±17^{km}**, n135, σ1^{s}09**/136**, mb4.6**/75**, MS3.6**/16**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	1.40	30	Pn	Pn	03 09 35.6	+0.5
	606nm,0.3s,baz=58,slow=2.0,SNR=309						
GUMO				Sn	Sn	03 09 54.6	+1.1
	494nm,0.3s,baz=156,slow=23,SNR=13						
GUMO	**Guam**	1.40	30	*e*Pn	Pn	03 09 35.7	+0.5
GUMO				*e*Sn	Sn	03 09 53.4	-0.1
MANU	**Manus Island**	14.67	167	*e*Sn	Sn	03 15 22.5	+2.5
PATS	**Pohnpei**	14.99	110	*e*Pn	Pn	03 12 38.6	-3.2
	83nm,1.1s						
PATS				*e*Sn	Sn	03 15 18.0	-10
JAY	**Jayapura**	15.18	193	Pn	Pn	03 12 43.6	-0.6
	0.8nm,0.3s,baz=345,slow=12,SNR=7.8						
JAY	**Jayapura**	15.18	193	P	Pn	03 12 44.7	+0.4
GENI	**Genyem**	15.38	195	P	Pn	03 12 48.2	+1.3
SIJI	**Sorong**	18.35	225	P	P	03 13 23.7	-0.8
	0.5nm,0.3s,baz=31,slow=14,SNR=5.3						
SIJI				LR	LR	03 20 37.5	
	comp=Z,251nm,19.2s,baz=130,slow=38						
DAV	**Davao City (W)**	19.05	256	LR	LR	03 21 55.8	
	comp=Z,35nm,18.8s,baz=24,slow=40						
FAKI	**Fak Fak**	19.25	219	P	Pn	03 13 34.4	-1.0
JOW	**Kunigami**	20.73	316	P	P	03 13 48.9	-1.4
	6.7nm,0.6s,baz=135,slow=4.3,SNR=3.3						
MSAI	**Masohi**	21.75	225	P	P	03 14 02.8	+1.4
PMG	**Port Moresby**	21.84	172	LR	LR	03 21 34.1	
	comp=Z,130nm,20.0s,baz=34,slow=34						
H11S3	**WAKE ISLAND Hy**	22.54	72	T	T	03 37 46.8	
	baz=262,slow=78,SNR=20						
H11S1	**WAKE ISLAND Hy**	22.56	71	T	T	03 37 41.0	
	baz=262,slow=78,SNR=16						
H11S2	**WAKE ISLAND Hy**	22.56	72	T	T	03 37 48.2	
	baz=262,slow=78,SNR=31						
H11N1	**WAKE ISLAND Hy**	23.02	69	T	T	03 38 16.9	
	baz=256,slow=75						
H11N2	**WAKE ISLAND Hy**	23.03	69	T	T	03 38 16.7	
	baz=256,slow=75						
H11N3	**WAKE ISLAND Hy**	23.04	69	T	T	03 38 17.6	
	baz=256,slow=75						
MJAR	**Matsushiro Arr**	24.66	348	P	P	03 14 29.2	-1.4
	5.1nm,0.9s,baz=179,slow=9.4,SNR=10.0						
MJAR				PcP	PcP	03 18 08.1	+0.2
	1.6nm,0.7s,baz=180,slow=3.7,SNR=4.2						
MJAR				LR	LR	03 23 24.1	
	comp=Z,167nm,18.3s,baz=175,slow=35						
MAJO	**Matsushiro**	24.66	348	*e*P	P	03 14 29.9	-0.7
	5.6nm,0.5s						
MAT	**Matsushiro**	24.66	348	P	P	03 14 33.3	+2.8
MAT				S	S	03 18 51.2	-0.6
MRSI	**Marisa**	25.01	243	P	P	03 14 35.6	+1.7
HNR	**Honiara**	26.74	143	LR	LR	03 24 35.4	
	comp=Z,96nm,19.2s,baz=138,slow=35						
MTN	**Manton Dam**	28.19	208	*e*P	P	03 15 02.0	-0.5
	8.1nm,0.8s						
KSRS	**Korea Array**	28.90	333	P	P	03 15 08.8	+0.1
	3.8nm,1.1s,baz=136,slow=9.6,SNR=5.2						
KSAR	**Wonju Array Be**	28.91	333	P	P	03 15 08.8	0.0
BATI	**Baumata**	30.29	223	LR	LR	03 27 27.7	
	comp=Z,142nm,21.8s,baz=112,slow=36						
NJ2	**Nanjing**	30.40	314	*e*P	P	03 15 21.3	-0.8
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ASAJ	**Asahikawa**	31.66	358	P	P	03 15 34.2	+1.2
	4.1nm,0.7s,baz=211,slow=6.5,SNR=6.4						
ASAJ				LR	LR	03 30 07.6	
	comp=Z,74nm,18.9s,baz=177,slow=40						
CTA	**Charters Tower**	32.32	176	P	P	03 15 38.6	-0.4
	4.1nm,0.5s,baz=3.7,slow=11,SNR=6.8						
CTAO	**Charters Tower**	32.32	176	*e*P	P	03 15 38.7	-0.4
SBUM	**Sibu**	33.13	255	*e*P	P	03 15 46.3	+0.1
	5.7nm,0.7s						
USRK	**Ussuriysk Ar.**	33.40	344	P	P	03 15 47.9	-0.3
	1.9nm,0.6s,baz=147,slow=41						
WRAB	**Tennant Creek**	33.52	197	*e*P	P	03 15 49.3	-0.2
	2.6nm,0.5s						
WB2	**Warramunga Arr**	33.53	197	*e*P	P	03 15 49.5	-0.1
WRA	**Warramunga Arr**	33.53	197	P	P	03 15 48.9	-0.7
	5.5nm,0.8s,baz=21,slow=9.9,SNR=29						
WRA				PcP	PcP	03 18 30.9	+0.5
	1.1nm,0.7s,baz=15,slow=3.3,SNR=4.7						
WRA				LR	LR	03 29 33.2	
	comp=Z,196nm,18.9s,baz=355,slow=36						
FITZ	**Fitzroy Crossi**	35.36	211	P	P	03 16 05.6	+0.1
	2.0nm,0.7s,baz=16,slow=15,SNR=4.5						
FITZ				LR	LR	03 30 21.2	
	comp=Z,75nm,20.4s,baz=348,slow=36						
AS01	**Alice Springs**	37.18	196	*e*P	P	03 16 20.4	-0.6
AS01				*e*PcP	PcP	03 18 41.5	+0.4
ASAR	**Alice Springs**	37.19	196	P	P	03 16 20.6	-0.5
	2.0nm,0.7s,baz=20,slow=7.6,SNR=18						
ASAR				PcP	PcP	03 18 41.8	+0.7
	2.1nm,0.7s,baz=34,slow=2.7,SNR=9.3						
ASAR				LR	LR	03 31 58.4	
	comp=Z,135nm,20.5s,baz=18,slow=37						
GYA	**Guiyang**	37.88	297	*e*P	P	03 16 28.0	+0.8
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KLR	**Kul'dur**	38.16	347	LR	LR	03 31 49.6	
	comp=Z,9.5nm,19.0s,slow=36						
HHC	**Hu-ho-hao-te**	40.26	321	*e*P	P	03 16 46.9	0.0
HHC				S	S	03 22 53.1	-0.9
HHC				pmax	pmax		
	comp=Z,27nm,0.9s						
HHC				pmax	pmax		
	comp=Z,57nm,5.3s						
HHC				LR	LR		
	comp=N,160nm,13.6s						
HHC				LR	LR		
	comp=E,180nm,13.6s						
HHC				LR	LR		
	comp=Z,190nm,12.8s						
DZM	**Mont Dzumac**	40.61	147	LR	LR	03 31 35.0	
	comp=Z,68nm,18.7s,baz=346,slow=33						
LEM	**Lembang**	41.03	244	LR	LR	03 34 25.3	
	comp=Z,81nm,20.2s,baz=104,slow=37						
KMI	**Kunming**	41.06	294	P	P	03 16 54.3	+0.5
KMI				pmax	pmax		
	comp=Z,5.0nm,0.5s						
LZH	**Lanzhou**	43.26	310	*e*P	P	03 17 12.1	+0.5
LZH				pP	sP	03 17 21.0	+3.8
LZH				sP	pP	03 17 24.6	+9.0
LZH				*e*PP	PP	03 18 55.3	+3.2
LZH				pmax	pmax		
	comp=Z,20nm,1.1s						
LZH				pmax	pmax		
	comp=Z,75nm,5.3s						
LZH				LR	LR		
	comp=N,320nm,14.2s						
LZH				LR	LR		
	comp=E,330nm,13.8s						
LZH				LR	LR		
	comp=Z,420nm,17.0s						
CMAR	**Chiang Mai Arr**	43.92	284	P	P	03 17 16.4	-0.6
	3.0nm,0.6s,baz=83,slow=6.2,SNR=12						
CMAR				PcP	PcP	03 19 03.4	+0.4
	1.0nm,0.3s,baz=96,slow=2.7,SNR=3.8						
CMAR				LR	LR	03 34 39.3	
	comp=Z,90nm,20.1s,baz=60,slow=35						
STKA	**Stephens Creek**	44.06	183	P	P	03 17 16.3	-1.5
	2.8nm,0.8s,baz=320,slow=13,SNR=3.0						
STKA				LR	LR	03 36 26.6	
	comp=Z,94nm,20.6s,baz=21,slow=37						
ULN	**Ulaanbaatar**	47.00	326	*e*P	P	03 17 41.0	-0.1
	1.2nm,0.4s						
SONM	**Songino Array**	47.34	326	P	P	03 17 44.0	+0.3
	1.2nm,0.6s,baz=150,slow=7.9,SNR=5.9						
SONM				PcP	PcP	03 19 14.5	0.0
	1.2nm,0.6s,baz=114,slow=2.5,SNR=4.2						
SONA1	**Songino Array**	47.34	326	*e*P	P	03 17 45.0	+1.3
GTA	**Gaotai**	47.48	313	*e*P	P	03 17 46.3	+1.4
GTA				pP	sP	03 17 53.0	+2.4
GTA				sP	pP	03 17 56.3	+7.3
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
LSA	**Lhasa**	51.95	298	*e*P	P	03 18 20.4	+0.8
	4.6nm,0.3s						
WMQ	**Urumqi**	57.48	314	P	P	03 19 00.0	+1.0
WMQ				PcP	PcP	03 19 52.5	-0.1
WMQ				pmax	pmax		
	comp=Z,23nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,140nm,4.3s						
WMQ				LR	LR		
	comp=N,120nm,21.1s						
WMQ				LR	LR		
	comp=E,140nm,22.5s						
WMQ				LR	LR		
	comp=Z,110nm,25.3s						
MK01	**Makanchi Array**	61.88	317	*e*P	P	03 19 28.9	-0.3
MK31	**Makanchi Array**	61.89	317	*e*P	P	03 19 29.5	+0.2
MKAR	**Makanchi Array**	61.89	317	P	P	03 19 29.2	-0.1
	3.9nm,0.7s,baz=94,slow=8.8,SNR=41						
MAKZ	**Makanchi**	62.10	317	*e*P	P	03 19 31.0	+0.3
	5.9nm,0.8s						
ZALV	**Zalesovo Beam**	62.21	325	P	P	03 19 30.4	-0.8
	1.1nm,0.5s,baz=116,slow=7.7,SNR=4.6						
ZALV				PcP	PcP	03 20 09.7	-1.5
	2.9nm,0.6s,baz=134,slow=3.4,SNR=6.2						
KDJ	**Kajisay**	64.76	311	*e*P	P	03 19 49.0	+0.4
	3.4nm,0.8s						
KURK	**Kurchatov**	65.07	320	*e*P	P	03 19 49.6	-0.6
KURBB	**Kurchatov Arra**	65.11	320	P	P	03 19 50.0	-0.5
	3.0nm,0.6s,baz=104,slow=6.6,SNR=27						
KSH	**Kashi**	65.44	308	P	P	03 19 56.1	+3.1
CAST	**Castle Rocks**	67.39	26	*e*P	P	03 20 04.8	-0.1
	4.4nm,1.0s						
NIL	**Nilore**	67.42	301	*e*P	P	03 20 04.6	-1.0
BPAW	**Bear Paw Mtn.**	68.07	25	*e*P	P	03 20 09.3	+0.1
	5.5nm,1.2s						
TRF	**Thorofare Moun**	68.17	26	*e*P	P	03 20 09.3	-0.6
	7.2nm,1.2s						
MLY	**Manley**	68.45	24	*e*P	P	03 20 11.5	0.0
	2.6nm,0.9s						
COLD	**Coldfoot**	69.33	22	*e*P	P	03 20 17.4	+0.4
	3.6nm,0.9s						
WRH	**Wood River Hil**	69.38	25	*e*P	P	03 20 16.4	-0.9
	6.0nm,1.1s						
COLA	**College**	69.58	25	*e*PcP	PcP	03 20 39.8	-1.7
KK31	**Karatay Array**	69.73	311	*e*P	P	03 20 20.1	+0.2
KKAR	**Karatay Array**	69.73	311	*e*P	P	03 20 20.1	+0.2
ILAR	**Eielson Array**	69.96	25	P	P	03 20 19.2	-1.7
	2.3nm,0.5s,baz=250,slow=5.7,SNR=46						
ILB	**Eielson Array**	69.96	25	*e*P	P	03 20 19.1	-1.7
BVAR	**Borovoye Array**	70.45	322	P	P	03 20 23.6	-0.5
	4.5nm,0.4s,baz=106,slow=7.1,SNR=28						
BRVK	**Borovoye**	70.52	322	*e*P	P	03 20 24.0	-0.5
	8.6nm,0.4s						
INK	**Inuvik**	75.75	22	*e*P	P	03 20 54.0	-1.1
	2.9nm,0.6s						
WRAK	**Wrangell Islan**	76.20	35	*e*P	P	03 20 58.8	+0.9
	8.5nm,0.8s						
ABKAR	**Akbulak array**	76.98	318	*e*P	P	03 21 01.7	-0.8
ARU	**Arti**	77.37	325	*e*P	P	03 21 03.8	-0.8
	4.3nm,0.8s						
DLBC	**Dease Lake**	77.38	33	*e*P	P	03 21 05.5	+0.9
	4.7nm,0.6s						
AKTO	**Aktyubinsk**	78.13	319	P	P	03 21 07.9	-1.0
	2.1nm,0.6s,baz=84,slow=9.4,SNR=11						
YBH	**Yreka Blue Hor**	84.19	49	P	P	03 21 42.9	+1.4
	2.3nm,0.6s,baz=272,slow=2.5,SNR=8.2						
YKA	**Yellowknife Ar**	84.25	27	P	P	03 21 41.0	-0.2
	1.0nm,0.4s,baz=286,slow=5.4,SNR=11						
YKA	**Yellowknife Ar**	84.25	27	P	P	03 21 41.0	-0.2
PINE	**Pine Mountain**	85.05	46	*e*P	P	03 21 47.4	+1.5
	11nm,1.0s						
SPITS	**Spitsbergen Ar**	85.14	351	P	P	03 21 44.5	-0.9
	4.1nm,1.0s,baz=46,slow=8.3,SNR=4.0						
B08A	**Colville Reser**	85.14	42	*e*P	P	03 21 46.9	+0.8
	5.7nm,0.8s						
RES	**Resolute Bay**	85.89	13	*e*P	P	03 21 49.6	+0.4
	9.3nm,0.8s						
AFDM	**Forest Hills D**	86.07	51	*e*P	P	03 21 52.7	+1.8
	3.0nm,0.9s						
BEKR	**Beckworth**	86.33	50	*e*P	P	03 21 53.3	+1.0
	9.1nm,1.3s						
BMO	**Blue Mountains**	87.34	45	*e*P	P	03 21 57.6	+0.6
	5.8nm,0.9s						
ARCES	**ARCESS Array B**	88.03	342	P	P	03 21 59.1	-0.6
	2.2nm,0.9s,baz=60,slow=5.5,SNR=5.3						
NV01	**Mina Array Sit**	88.22	51	*e*P	P	03 22 02.6	+1.0
NVAR	**Mina Array Bea**	88.22	51	P	P	03 22 02.7	+1.1
	3.7nm,0.7s,baz=261,slow=5.8,SNR=32						
KVN	**Kaiserville**	88.22	51	*e*P	P	03 22 02.8	+1.3
	5.5nm,1.0s						
NV11	**Mina Array Sit**	88.33	51	*e*P	P	03 22 03.5	+1.5
	0.4nm,0.9s						
WALA	**Waterton Lakes**	88.43	40	*e*P	P	03 22 03.8	+1.6
	7.7nm,1.3s						
MFID	**Camas Ranch**	88.74	46	*e*P	P	03 22 04.8	+0.9
	9.8nm,1.0s						
HLID	**Hailey**	89.69	45	*e*P	P	03 22 08.9	+0.5
	3.4nm,0.9s						
TPNV	**Topopah Spring**	90.17	52	*e*P	P	03 22 11.8	+1.1
	4.6nm,0.8s						
GSC	**Goldstone, Bar**	90.17	54	*e*P	P	03 22 12.2	+1.6
	18nm,1.4s						
R11A	**Troy Canyon, C**	90.30	51	*e*P	P	03 22 12.4	+1.1
	10.0nm,1.6s						
SHPR	**Sheep Range**	91.14	52	*e*P	P	03 22 17.1	+1.9
	6.0nm,1.3s						
PSUT	**Pine Spring**	91.55	50	*e*P	P	03 22 18.4	+1.3
	3.0nm,0.7s						
LDFC	**Landfair**	91.57	54	*e*P	P	03 22 18.9	+1.7
	13nm,1.0s						
FINES	**FINESS Array B**	91.97	335	P	P	03 22 16.0	-2.3
	1.4nm,0.5s,baz=50,slow=4.3,SNR=15						
CCUT	**Cedar City**	92.21	51	*e*P	P	03 22 21.9	+1.6
	3.0nm,1.1s						
Y12C	**Blythe**	92.41	55	*e*P	P	03 22 22.2	+1.3
	8.1nm,0.8s						
W13A	**Hualapai Mount**	92.53	53	*e*P	P	03 22 23.1	+1.4
	3.0nm,0.8s						
FFC	**Flin Flon**	93.21	32	*e*P	P	03 22 24.0	-0.1
	2.8nm,0.7s						
U15A	**North Rim**	93.37	52	*e*P	P	03 22 27.3	+1.6
	7.1nm,1.6s						
Y14A	**Wickenburg**	93.56	54	*e*P	P	03 22 27.9	+1.6
	4.4nm,0.8s						
LAO	**LASA Array**	94.10	41	*e*P	P	03 22 29.4	+0.8
	7.4nm,0.8s						
WUAZ	**Wupatki**	94.36	52	*e*P	P	03 22 31.8	+1.7
	3.8nm,1.0s						
BRTR	**Keskin Array B**	97.39	313	P	P	03 22 41.3	-2.5
	0.8nm,0.7s,baz=73,slow=5.0,SNR=6.6						
CLL	**Collm**	103.77	331	*e*PP	PP	03 27 23.0	-4.8
LSZ	**Lusaka**	117.95	259	*e*PKPdf	PKPdf	03 27 58.1	+0.5
ESDC	**Sonseca Array**	120.33	332	PKP	PKPdf	03 28 01.3	-0.2
	0.3nm,0.5s,baz=12,slow=3.0,SNR=3.6						
TORD	**Torodi Ar. Bea**	134.97	303	PKP	PKPdf	03 28 29.8	-0.2
	0.7nm,0.5s,baz=19,slow=2.4						
PLCA	**Paso Flores**	138.48	139	PKP	PKPdf	03 28 36.2	+0.4
	1.9nm,0.7s,baz=286,slow=3.7,SNR=5.8						
KOWA	**Kowa**	138.69	309	PKP	PKPdf	03 28 36.9	+0.1
	2.2nm,0.5s,baz=336,slow=1.2,SNR=7.0						
LCO	**Las Campanas**	143.60	122	*e*PKPdf	PKPdf	03 28 46.2	+0.6
DBIC	**Dimbokro**	143.85	300	PKP	PKPbc	03 28 43.1	-0.7
	3.4nm,0.6s,baz=34,slow=4.3,SNR=6.6						
GO03	**Copiap**	144.45	120	*e*PKPdf	PKPdf	03 28 46.6	-0.3
TRQA	**Tornquist**	145.39	142	*e*PKPbc	PKPab	03 28 48.5	+0.2
GO02	**Mina Guanaco**	145.71	117	*e*PKPdf	PKPab	03 28 50.3	+0.1
PB11	**IPOC Station P**	146.73	107	*e*PKPdf	PKPbc	03 28 52.7	-0.2
MNMC	**Minye Minye**	146.86	106	*e*PKPdf	PKPbc	03 28 52.7	-0.6
LPAZ	**La Paz**	148.49	101	PKPbc	PKPbc	03 28 59.3	+1.0
	6.7nm,0.8s,baz=349,slow=1.3,SNR=25						
LPAZ	**La Paz**	148.49	101	*e*PKPbc	PKPbc	03 28 58.7	+0.4
SAML	**Samuel**	152.92	85	*e*PKPdf	PKPdf	03 29 00.6	-0.3
SAML				*e*PKPbc	PKPbc	03 29 08.4	+0.3
SAML				*e*PKPbc	PKiKP	03 29 08.6	+0.3
SAML				*e*PKPab	PKPab	03 29 19.0	-0.3
CPUP	**Villa Florida**	155.48	128	PKPab	PKPab	03 29 30.4	+0.7
	3.6nm,0.9s,baz=271,slow=7.6,SNR=5.5						

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*IDC **14** 03:15:40.7±0.6, 11°.58N×142°.25E, h0^{km}, mb4.1/17, mb1 4.3/19, mb1mx4.1/59, mbtmp4.1/19, ML4.0/2, Error ellipse: s-maj=22.4km s-min=13.1km az=80.0*

*ISCJB **14** 03:15:42.6±0.4, 11°.58N±0°.06×142°.28E±0°.08, h25^{km}, mb4.0/21, Error ellipse: s-maj=11.3km s-min=7.5km az=26.0*

*NEIC **14** 03:15:46.0±1.1, 11°.58N×142°.29E, h36^{km}±11^{km}, mb4.3/3, Error ellipse: s-maj=11.8km s-min=6.3km az=94.0*

ISC 14 03:15:44.6±0.5**, 11°.60N**±0°.07×**142°.3E**±0°.1**, h25**^{km}**, n26,**

σ0^{s}74/27,**mb4.1**/21,**South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**3.20**	**51**	Pn	**Pn**	**03 16 33.6**	**+0.4**
	32nm,0.3s,baz=261,slow=0.8,SNR=13						
GUMO				Sn	**Sn**	**03 17 10.0**	**-0.6**
	26nm,0.3s,baz=114,slow=20,SNR=2.9						
JAY	**Jayapura**	**14.11**	**187**	Pn	**Pn**	**03 19 03.6**	**+0.6**
	0.3nm,0.3s,baz=4.4,slow=13,SNR=3.0						
MJAR	**Matsushiro Arr**	**25.11**	**352**	P	**P**	**03 21 07.8**	**+0.3**
	0.9nm,0.7s,baz=153,slow=9.7,SNR=2.8						
CTA	**Charters Tower**	**31.73**	**173**	P	**P**	**03 22 06.5**	**-0.2**
	1.3nm,0.2s,baz=12,slow=13,SNR=5.8						
CTAO	**Charters Tower**	**31.73**	**173**	*e*P	**P**	**03 22 06.4**	**-0.3**
WRAB	**Tennant Creek**	**32.29**	**194**	*e*P	**P**	**03 22 11.3**	**-0.4**
	1.2nm,0.5s						
WRA	**Warramunga Arr**	**32.30**	**194**	P	**P**	**03 22 11.0**	**-0.8**
	0.8nm,0.4s,baz=16,slow=9.7,SNR=14						
ASAR	**Alice Springs**	**35.99**	**193**	P	**P**	**03 22 43.3**	**-0.5**
	1.2nm,0.5s,baz=20,slow=12,SNR=16						
KLR	**Kul'dur**	**38.53**	**349**	P	**P**	**03 23 06.8**	**+1.8**
	0.1nm,0.4s,baz=162,slow=9.6,SNR=2.6						
DZM	**Mont Dzumac**	**40.99**	**145**	P	**P**	**03 23 26.0**	**+0.1**
	2.8nm,0.5s,baz=264,slow=18,SNR=6.9						
CMAR	**Chiang Mai Arr**	**42.34**	**285**	P	**P**	**03 23 37.0**	**0.0**
	1.0nm,0.3s,baz=75,slow=7.0,SNR=5.4						
SONM	**Songino Array**	**46.98**	**327**	P	**P**	**03 24 13.9**	**+0.2**
	0.4nm,0.5s,baz=139,slow=7.3,SNR=2.7						
MKAR	**Makanchi Array**	**61.21**	**317**	P	**P**	**03 25 57.4**	**-0.1**
	0.8nm,0.8s,baz=95,slow=8.1,SNR=6.1						
KURK	**Kurchatov**	**64.51**	**321**	*e*P	**P**	**03 26 19.0**	**-0.3**
KURBB	**Kurchatov Arra**	**64.54**	**321**	P	**P**	**03 26 19.4**	**-0.1**
	1.6nm,0.6s,baz=107,slow=6.7,SNR=11						
BVAR	**Borovoye Array**	**69.94**	**322**	P	**P**	**03 26 53.7**	**0.0**
	1.2nm,0.4s,baz=110,slow=8.0,SNR=7.7						
ILAR	**Eielson Array**	**71.43**	**25**	P	**P**	**03 27 01.1**	**-1.5**
	2.8nm,0.6s,baz=250,slow=5.9,SNR=3.3						
INK	**Inuvik**	**77.15**	**22**	*e*P	**P**	**03 27 35.0**	**-0.7**
	3.4nm,1.0s						
AKTO	**Aktyubinsk**	**77.53**	**319**	P	**P**	**03 27 38.0**	**-0.3**
	0.9nm,0.5s,baz=95,slow=7.6,SNR=3.0						
YKA	**Yellowknife Ar**	**85.77**	**27**	P	**P**	**03 28 21.6**	**+0.1**
	0.4nm,0.5s,baz=288,slow=5.0,SNR=3.2						
RES	**Resolute Bay**	**87.05**	**13**	*e*P	**P**	**03 28 27.7**	**+0.2**
	2.4nm,0.6s						
ARCES	**ARCESS Array B**	**88.19**	**342**	P	**P**	**03 28 32.4**	**-0.8**
	1.6nm,0.8s,baz=61,slow=7.4,SNR=3.5						
VNDA	**Vanda**	**89.66**	**176**	P	**P**	**03 28 40.2**	**+0.4**
	0.5nm,0.7s,baz=347,slow=5.3,SNR=4.0						
NVAR	**Mina Array Bea**	**90.12**	**51**	P	**P**	**03 28 43.8**	**+0.6**
	1.8nm,0.7s,baz=263,slow=6.2,SNR=14						
FINES	**FINESS Array B**	**91.89**	**334**	P	**P**	**03 28 48.8**	**-1.8**
	1.2nm,0.7s,baz=71,slow=6.0,SNR=5.1						
LPAZ	**La Paz**	**150.12**	**102**	PKPbc	**PKPbc**	**03 35 35.6**	**+0.7**
	2.1nm,0.5s,baz=300,slow=2.1,SNR=18						

NIED **14** 03:43:00, 45°.50N×151°.90E, h20^{km}, Mw5.3 Best double couple: M$_0$9.34000×10^{16} NP1:ϕ_s233.00000°, δ32.00000°, λ108.00000°. NP2:ϕ_s32.00000°, δ59.00000°, λ79.00000°.

JMA **14** 03:43:57.0±0.9, 45°.47N×151°.90E, h30^{km}, M5.3

GCMT **14** 03:43:58.0±0.1, 45°.49N×151°.67E, h22^{km}, MW5.3/113, Moment Tensor Solution. s93,c159; s113,c221; Duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.05±.02; M$_{\theta\theta}$-0.50±.01; M$_{\phi\phi}$-0.54±.01; M$_{r\theta}$0.28±.03; M$_{\theta\phi}$-0.52±.01; M$_{\phi r}$0.55±.03; Best double couple: M$_0$1.21800×10^{17} NP1:ϕ_s36.00000°, δ60.00000°, λ82.00000°. NP2:ϕ_s232.00000°, δ31.00000°, λ104.00000°. Principal axes: T 1.2300, Plg73.0000°, Azm285.0000°; N -0.0260, Plg7.0000°, Azm40.0000°; P -1.2050, Plg15.0000°, Azm132.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.

NEIC **14** 03:43:58.0±0.1, 45°.54N×151°.33E, h10^{km}, mb5.2/300, MW5.2 Error ellipse: s-maj=3.9km s-min=2.1km az=160.0, Moment Tensor Solution. s82 Moment tensor: Scale 10^{16}Nm; M$_{rr}$5.46; M$_{\theta\theta}$-1.66; M$_{\phi\phi}$-3.80; M$_{r\theta}$3.15; M$_{\theta\phi}$-1.20; M$_{\phi r}$4.42; Best double couple: M$_0$7.40000×10^{16} NP1: ϕ_s201.00000°, δ21.00000°, λ79.00000°. NP2:ϕ_s32.00000°, δ69.00000°, λ94.00000°. Principal axes: T 7.9000, Plg66.0000°, Azm309.0000°; N -1.2000, Plg4.0000°, Azm211.0000°; P -6.7100, Plg24.0000°, Azm119.0000°;

ISCJB **14** 03:43:59.9±0.3, 45°.45N±0°.02×151°.48E±0°.02, h36^{km}±3^{km}, mb5.2/451, MS5.0/100 Error ellipse: s-maj=3.8km s-min=1.8km az=162.8

SKHL **14** 03:44:00.6±0.5, 45°.20N×151°.71E, h55^{km}±5^{km}, mb5.9/3, Ms5.3/7, msh5.4/5

MOS **14** 03:44:01.4±1.1, 45°.49N×151°.38E, h47^{km}, mb5.5/106, MS5.1/40, Error ellipse: s-maj=5.0km s-min=3.6km az=105.5

IDC **14** 03:44:02.8±0.4, 45°.51N×151°.45E, h46^{km}±4^{km}, mb4.8/45, mb1 4.8/54, mb1mx4.8/71, mbtmp5.0/54, MS4.8/62, Ms1 4.8/62, ms1mx4.7/74, Error ellipse: s-maj=9.9km s-min=7.5km az=129.0

BJI **14** 03:44:02.1, 45°.48N×151°.15E, h44^{km}, mb5.4/85, mB5.4/64, Ms5.3/90, Ms7 5.2/82

ISC 14 03:44:02.4±0.3,**45°.43N**±0°.03×**151°.50E**±0°.03,**h44**^{km}±2^{km}, **h44**^{km}**:pP-P,n1621,**σ**1^{s}30**/1715,**mb5.2**/490,**MS5.1**/111, **96C-32D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**2.57**	**267**	*i* P	**Pn**	**03 44 41.6**	**+0.1**
KUR				AMB	AMB	03 44 47.0	
	788nm,0.8s						
KUR				AMB	AMB	03 44 47.0	
	1μm,0.8s						
KUR				AMB	AMB	03 44 47.0	
	2μm,0.8s						
KUR				*i* S	**Sn**	**03 45 12.6**	**+1.1**
KUR				A	A	03 45 21.0	
	13μm,0.7s						
KUR				A	A	03 45 21.0	
	1μm,0.7s						
KUR				A	A	03 45 34.0	
	4μm,2.0s						
KUR				AMS	AMS	03 45 59.0	
	46μm,10.0s						
KUR				AMS	AMS	03 45 59.0	
	63μm,10.0s						
KUR				AMS	AMS	03 45 59.0	
	45μm,10.0s						
KUR	**Kuril'sk**	**2.57**	**267***c*	*i*PN	**Pn**	**03 44 41.3**	**-0.2**
KUR				*i* S	**Sn**	**03 45 12.9**	**+1.4**
KUR				pmax	pmax		
	comp=Z,2μm,0.8s						
KUR				pmax	pmax		
	comp=E,1μm,0.7s						
KUR				pmax	pmax		
	comp=N,788nm,0.3s						
KUR				smax	smax		
	comp=E,1μm,0.6s						
KUR				smax	smax		
	comp=N,13μm,0.9s						
KUR				MLR	MLR		
	comp=Z,27μm,12.0s						
SHO	**Shikotan**	**3.68**	**247**	*i* P	**Pn**	**03 44 56.2**	**-0.5**
SHO				AMB	AMB	03 44 58.0	
	comp=Z,2μm,3.0s						
SHO				AMB	AMB	03 44 59.0	
	comp=Z,297nm,0.8s						
SHO				AMB	AMB	03 44 59.0	
	comp=Z,332nm,0.8s						
SHO				AMB	AMB	03 44 59.0	
	comp=Z,1μm,0.8s						
SHO				*i* S	**Sn**	**03 45 38.0**	**-0.8**
SHO				A	A	03 45 41.8	
	comp=Z,4μm,4.0s						
SHO				A	A	03 46 00.5	
	comp=Z,6μm,0.7s						
SHO				A	A	03 46 00.5	
	comp=Z,6μm,0.7s						
SHO				AMS	AMS	03 46 28.0	
	comp=Z,22μm,13.0s						
SHO				AMS	AMS	03 46 28.0	
	comp=Z,17μm,13.0s						
SHO				AMS	AMS	03 46 28.0	
	comp=Z,19μm,13.0s						
SHO	**Shikotan**	**3.68**	**247***c*	*i*PN	**Pn**	**03 44 55.9**	**-0.8**
SHO				*i* S	**Sn**	**03 45 39.5**	**+0.7**
SHO				pmax	pmax		
	comp=N,297nm,0.8s						
SHO				pmax	pmax		
	comp=Z,1μm,0.8s						
SHO				pmax	pmax		
	comp=E,332nm,0.5s						
SHO				smax	smax		
	comp=N,6μm,1.0s						
SHO				smax	smax		
	comp=E,6μm,0.7s						
SHO				MLR	MLR		
	comp=Z,12μm,13.0s						
YUK	**Yuzh-Kuril'sk**	**4.25**	**253**	*i* P	**Pn**	**03 45 04.9**	**+0.3**
YUK				AMB	AMB	03 45 14.0	
	comp=Z,2μm,0.8s						
YUK				AMB	AMB	03 45 14.0	
	comp=Z,2μm,0.8s						
YUK				AMB	AMB	03 45 14.0	
	comp=Z,2μm,0.8s						
YUK				*i* S	**Sn**	**03 45 52.7**	**-0.2**
YUK				A	A	03 45 55.5	
	comp=Z,6μm,2.0s						
YUK				A	A	03 45 55.5	
	comp=Z,8μm,2.0s						
YUK				A	A	03 46 09.0	
	comp=Z,10μm,0.8s						
YUK				A	A	03 46 09.0	
	comp=Z,18μm,0.8s						
YUK				AMS	AMS	03 46 40.0	
	comp=Z,28μm,13.0s						
YUK				AMS	AMS	03 46 40.0	
	comp=Z,23μm,13.0s						
YUK				AMS	AMS	03 46 40.0	
	comp=Z,19μm,13.0s						
YUK	**Yuzh-Kuril'sk**	**4.25**	**253***d*	*i*PN	**Pn**	**03 45 04.8**	**+0.2**
YUK				*i* S	**Sn**	**03 45 56.0**	**+3.1**
YUK				pmax	pmax		
	comp=N,2μm,0.8s						
YUK				pmax	pmax		
	comp=Z,2μm,0.8s						
YUK				pmax	pmax		
	comp=E,2μm,0.7s						
YUK				smax	smax		
	comp=N,10μm,0.8s						
YUK				smax	smax		
	comp=E,18μm,0.8s						
YUK				MLR	MLR		
	comp=Z,10μm,19.0s						
YUK				smax	smax		
	comp=E,514nm,0.5s						
YUK				smax	smax		
	comp=N,69nm,0.3s						
LAGR	**Lagunnoye**	**4.30**	**253**	*e*P	**Pn**	**03 45 05.0**	**-0.2**
LAGR				AMB	AMB	03 45 19.0	
	comp=N,1μm,0.6s						
LAGR				AMB	AMB	03 45 19.0	
	comp=N,2μm,0.6s						
LAGR				AMB	AMB	03 45 19.0	
	comp=N,2μm,0.6s						
LAGR				*i* S	**Sn**	**03 45 56.0**	**+2.0**
LAGR				A	A	03 46 14.0	
	comp=N,9μm,0.7s						
LAGR				A	A	03 46 14.0	
	comp=N,13μm,0.7s						
LAGR	**Lagunnoye**	**4.30**	**253**	*e*PN	**Pn**	**03 45 05.3**	**+0.1**
LAGR				*i* S	**Sn**	**03 45 56.4**	**+2.4**
LAGR				pmax	pmax		
	comp=E,2μm,0.5s						
LAGR				pmax	pmax		
	comp=Z,2μm,0.5s						
LAGR				pmax	pmax		
	comp=N,1μm,0.6s						
LAGR				smax	smax		
	comp=E,13μm,0.7s						
LAGR				smax	smax		
	comp=N,9μm,0.5s						
GRPR	**Tuman**	**4.33**	**253**	*e*P	**Pn**	**03 45 05.0**	**-0.6**
GRPR				AMB	AMB	03 45 14.0	
	comp=N,482nm,0.5s						
GRPR				AMB	AMB	03 45 14.0	
	comp=N,945nm,0.5s						
GRPR				AMB	AMB	03 45 14.0	
	comp=N,1μm,0.5s						
GRPR				*e*S	**Sn**	**03 45 56.0**	**+1.2**
GRPR				A	A	03 46 11.0	
	comp=N,2μm,0.6s						
GRPR				A	A	03 46 11.0	
	comp=N,5μm,0.6s						
GRPR	**Tuman**	**4.33**	**253**	*e*PN	**Pn**	**03 45 05.4**	**-0.2**
GRPR				*e*S	**Sn**	**03 45 56.6**	**+1.8**
GRPR				pmax	pmax		
	comp=Z,1μm,0.3s						
GRPR				pmax	pmax		
	comp=N,482nm,0.2s						
GRPR				pmax	pmax		
	comp=E,945nm,0.5s						
GRPR				smax	smax		
	comp=E,5μm,0.5s						
GRPR				smax	smax		
	comp=N,2μm,0.6s						
GLVR	**Golovnino**	**4.59**	**251**	*e*P	**Pn**	**03 45 09.0**	**-0.3**
GLVR				AMB	AMB	03 45 13.0	
	comp=N,292nm,0.5s						
GLVR				AMB	AMB	03 45 13.0	
	comp=N,208nm,0.5s						
GLVR				AMB	AMB	03 45 13.0	
	comp=N,2μm,0.5s						
GLVR				*e*S	**Sn**	**03 46 03.4**	**+2.1**
GLVR				A	A	03 46 13.4	
	comp=N,5μm,0.5s						
GLVR				A	A	03 46 13.4	
	comp=N,2μm,0.5s						
GLVR	**Golovnino**	**4.59**	**251**	*e*PN	**Pn**	**03 45 09.6**	**+0.3**
GLVR				*e*S	**Sn**	**03 46 03.4**	**+2.1**
GLVR				pmax	pmax		
	comp=N,292nm,0.3s						
GLVR				pmax	pmax		
	comp=Z,2μm,0.3s						
GLVR				pmax	pmax		
	comp=E,208nm,0.4s						
GLVR				smax	smax		
	comp=E,2μm,0.3s						
GLVR				smax	smax		
	comp=N,5μm,0.5s						
NEM2	**Nemuro 2**	**4.61**	**246**	P	**Pn**	**03 45 07.6**	**-1.9**
NEM2				*e*S	**Sn**	**03 46 01.3**	**-0.5**
JRA	**Rausu**	**4.79**	**254**	P	**Pn**	**03 45 12.5**	**+0.6**
JNK	**Nakash**	**5.19**	**252**	P	**Pn**	**03 45 16.4**	**-1.1**
JNK				*e*S	**Sn**	**03 46 16.5**	**+0.5**
JAK	**Akkeshi**	**5.46**	**246**	P	**Pn**	**03 45 19.3**	**-1.9**
JTKR	**Abashiri--Toko**	**5.61**	**258**	P	**Pn**	**03 45 23.4**	**+0.2**
JAR	**Ashorobuto**	**5.94**	**252**	P	**Pn**	**03 45 27.5**	**-0.2**
JMP	**Maruseppu**	**5.97**	**259**	P	**Pn**	**03 45 29.1**	**+0.9**
SKR	**Severo-Kuril's**	**6.10**	**29**	*e*P	**Pn**	**03 45 30.9**	**+1.0**
SKR				AMB	AMB	03 45 32.0	
	comp=N,900nm,1.0s						
SKR				AMB	AMB	03 45 38.0	
	comp=N,1μm,0.8s						
SKR				*e*S	**Sn**	**03 46 36.0**	**-2.3**
SKR				A	A	03 46 45.0	
	comp=N,3μm,7.2s						
SKR				A	A	03 46 45.0	
	comp=N,6μm,7.2s						
SKR				AMS	AMS	03 47 31.0	
	comp=N,14μm,19.0s						
SKR				AMS	AMS	03 47 31.0	
	comp=N,13μm,19.0s						
SKR				AMS	AMS	03 47 31.0	
	comp=N,5μm,19.0s						
SKR	**Severo-Kuril's**	**6.10**	**29**	*e*PN	**Pn**	**03 45 29.6**	**-0.3**
SKR				pmax	pmax		
	comp=Z,900nm,1.0s						
SKR				pmax	pmax		
	comp=Z,1μm,0.8s						
SKR				MLR	MLR		
	comp=Z,12μm,11.0s						
YSS	**Yuzh-Sakhalins**	**6.26**	**287**	*e*P	**Pn**	**03 45 34.1**	**+2.0**
YSS				AMB	AMB	03 45 35.9	
	comp=Z,100nm,0.6s						
YSS				AMB	AMB	03 45 38.2	
	comp=Z,500nm,2.5s						
YSS				*e*S	**Sn**	**03 46 43.9**	**+1.6**
YSS				AMS	AMS	03 48 01.0	
	comp=Z,8μm,15.0s						
YSS				AMS	AMS	03 48 01.0	
	comp=Z,16μm,15.0s						
YSS				AMS	AMS	03 48 01.0	
	comp=Z,20μm,15.0s						
YSS	**Yuzh-Sakhalins**	**6.26**	**287**	*e*Pn	**Pn**	**03 45 34.2**	**+2.0**
YSS	**Yuzh-Sakhalins**	**6.26**	**287**α	*e*PN	**Pn**	**03 45 34.1**	**+2.0**
YSS				*e*S	**Sn**	**03 46 43.9**	**+1.6**
YSS				pmax	pmax		
	comp=Z,100nm,0.6s						
YSS				pmax	pmax		
	comp=E,90nm,0.5s						
YSS				pmax	pmax		
	comp=Z,500nm,2.5s						
YSS				pmax	pmax		
	comp=N,200nm,2.3s						
YSS				smax	smax		
	comp=N,190nm,0.8s						
YSS				smax	smax		
	comp=E,210nm,0.8s						
YSS				MLR	MLR		
	comp=Z,20μm,15.0s						
YSS				MLR	MLR		
	comp=E,16μm,15.0s						
HRK	**Horoka**	**6.31**	**255**	*e*P	**Pn**	**03 45 33.6**	**+0.8**
JSE	**Soyaes**	**6.32**	**269**	P	**Pn**	**03 45 35.2**	**+2.3**
JKK2	**Kamakawa 2**	**6.43**	**259**	P	**Pn**	**03 45 35.5**	**+0.9**
ASAJ	**Asahikawa**	**6.47**	**261**	P	**Pn**	**03 45 35.8**	**+0.7**
	comp=E,14nm,0.3s,baz=89,slow=14,SNR=108						
ASAJ				S	**Sn**	**03 46 55.6**	**+8.0**
	baz=72,slow=19,SNR=1.5						
ASAJ				LR	LR	03 48 20.9	
	comp=E,17μm,18.9s,baz=80,slow=40						
ASAJ	**Asahikawa**	**6.47**	**261**	P	**Pn**	**03 45 36.7**	**+1.6**
JCH	**Churui**	**6.51**	**247**	P	**Pn**	**03 45 34.1**	**-1.4**
JCH				*e*S	**Sn**	**03 46 46.2**	**-2.2**
MYR	**Moyori**	**6.72**	**245**	*e*P	**Pn**	**03 45 36.8**	**-1.6**
MYR				*e*S	**Sn**	**03 46 51.2**	**-2.3**
JWK2	**Keihoku**	**6.77**	**272**	P	**Pn**	**03 45 42.6**	**+3.5**
JFR	**Furan**	**6.78**	**254**	P	**Pn**	**03 45 39.6**	**+0.3**
JAB	**Ashibetsu**	**6.91**	**257**	P	**Pn**	**03 45 42.9**	**+1.8**
JSS	**Shosan**	**6.93**	**265**	P	**Pn**	**03 45 44.4**	**+3.1**
ERM	**Erimo**	**6.94**	**244**	*e*Pn	**Pn**	**03 45 40.9**	**-0.6**
ERM				*e*Sn	**Sn**	**03 46 56.4**	**-2.7**
ERM				*e*Lg	Lg	03 47 32.5	
ERM	**Erimo**	**6.94**	**244**	*e*PN	**Pn**	**03 45 40.9**	**-0.6**
JEM	**Erimo**	**6.94**	**244**	P	**Pn**	**03 45 39.9**	**-1.6**
JNBK	**Urakawa-nobuka**	**7.06**	**247**	P	**Pn**	**03 45 40.9**	**-2.3**
JBT2	**Biratori 2**	**7.09**	**251**	P	**Pn**	**03 45 42.2**	**-1.3**
JHR	**Hokuryu**	**7.18**	**260**	P	**Pn**	**03 45 46.5**	**+1.7**
UGL	**Uglegorsk**	**7.39**	**303**	*e*P	**Pn**	**03 45 51.1**	**+3.6**
UGL				AMB	AMB	03 45 52.5	
	comp=E,470nm,1.0s						
UGL				*e*S	**Sn**	**03 47 12.2**	**+2.3**
UGL				A	A	03 47 19.0	
	comp=E,450nm,0.7s						
UGL				A	A	03 47 19.0	
	comp=E,300nm,0.7s						
UGL				AMS	AMS	03 48 54.0	
	comp=E,11μm,15.0s						
UGL				AMS	AMS	03 48 54.0	
	comp=E,18μm,15.0s						
UGL				AMS	AMS	03 48 54.0	
	comp=E,22μm,15.0s						
JEW	**Eniwo**	**7.68**	**254**	P	**Pn**	**03 45 52.0**	**+0.4**
TYV	**Tymovskoe**	**8.03**	**316**	*e*P	**Pn**	**03 45 58.5**	**+2.1**
TYV				AMB	AMB	03 46 01.0	
	comp=E,2μm,3.4s						
TYV				*e*S	**Sn**	**03 47 26.7**	**+0.9**
TYV				A	A	03 47 38.8	
	comp=E,1μm,8.0s						
TYV				AMS	AMS	03 49 08.7	
	comp=E,9μm,15.0s						
TYV				AMS	AMS	03 49 08.7	
	comp=E,16μm,15.0s						
TYV	**Tymovskoe**	**8.03**	**316**	*e*PN	**Pn**	**03 45 58.5**	**+2.1**
TYV				pmax	pmax		
	comp=Z,158nm,0.9s						
TYV				pmax	pmax		
	comp=Z,2μm,3.4s						
TYV				MLR	MLR		
	comp=Z,16μm,14.0s						
JNB	**Noboribetsu**	**8.11**	**252**	P	**Pn**	**03 45 56.8**	**-0.7**
JNB				*e*S	**Sn**	**03 47 26.1**	**-1.7**
JKB	**Kayabe**	**8.37**	**249**	P	**Pn**	**03 45 59.4**	**-1.7**
JKB				*e*S	**Sn**	**03 47 28.6**	**-5.6**
PEA0B	**Petropavlovsk-**	**8.69**	**26**	*e*Pn	**Pn**	**03 46 04.6**	**-0.8**
PETK	**Petropavlovsk-**	**8.69**	**26**	P	**Pn**	**03 46 04.3**	**-1.1**
	baz=185,slow=12						
PETK				S	**Sn**	**03 47 45.1**	**+3.2**
	baz=188,slow=16						
JYM2	**Yakumo 2**	**8.71**	**252**	P	**Pn**	**03 46 04.6**	**-1.1**
JSH	**Shimam**	**8.71**	**255**	P	**Pn**	**03 46 06.8**	**+1.1**
JANG	**Nango**	**8.90**	**239**	P	**Pn**	**03 46 04.8**	**-3.5**
JANG				*e*S	Sn	03 47 37.1	-10
PET	**Petropavlovsk**	**8.92**	**29**	*e*P	**Pn**	**03 46 10.7**	**+2.1**
PET	**Petropavlovsk**	**8.92**	**29**	*e*Pn	**Pn**	**03 46 08.7**	**+0.1**
PET	**Petropavlovsk**	**8.92**	**29**	*e*PN	Pn	03 46 15.1	+6.5
PET				pmax	pmax		
	comp=Z,90nm,1.0s						
PET				MLR	MLR		
	comp=Z,4μm,20.0s						
JTM	**Tenmabayashi**	**8.93**	**242**	P	**Pn**	**03 46 06.1**	**-2.6**
JTM				*e*S	**Sn**	**03 47 42.0**	**-5.9**
JSR	**Shiriuchi**	**8.95**	**248**	P	**Pn**	**03 46 07.0**	**-2.0**
JTH	**Tanohata**	**8.97**	**236**	P	**Pn**	**03 46 05.4**	**-3.9**
JTH				*e*S	Sn	03 47 38.3	-11
JOSM	**Okushiri--Mats**	**9.32**	**253**	P	**Pn**	**03 46 12.7**	**-1.4**
OFUJ	**Ofunato**	**9.66**	**232**	P	**Pn**	**03 46 15.4**	**-3.3**
OFUJ				*e*S	Sn	03 47 56.2	-10
OKH	**Okha**	**9.85**	**329**⇑	*i*PN	**Pn**	**03 46 24.8**	**+3.5**
OKH				pmax	pmax		
	comp=Z,700nm,15.0s						
JRG	**Rokugo**	**10.04**	**237**	P	**Pn**	**03 46 21.2**	**-2.8**
JIO	**Ouri**	**10.28**	**231**	P	**Pn**	**03 46 22.8**	**-4.4**
JIO				*e*S	Sn	03 48 11.8	-9.2
NKL	**Nikolayevsk**	**10.46**	**321**	*i* PN	**Pn**	**03 46 31.0**	**+1.3**
NKL				*e*S	Sn	03 48 38.0	+13
NKL				pmax	pmax		
	comp=N,100nm,1.0s						
NKL				pmax	pmax		
	comp=E,95nm,1.0s						
NKL				pmax	pmax		
	comp=Z,170nm,1.0s						
NKL				pmax	pmax		
	comp=N,1μm,4.0s						
NKL				pmax	pmax		
	comp=E,2μm,4.0s						
NKL				pmax	pmax		
	comp=Z,2μm,4.0s						
NKL				smax	smax		
	comp=E,1μm,9.0s						
NKL				MLR	MLR		
	comp=N,4μm,16.0s						
NKL				MLR	MLR		
	comp=E,6μm,16.0s						
NKL				MLR	MLR		
	comp=Z,15μm,16.0s						
TEY	**Ternei**	**10.52**	**273**⇑	*e*PN	**Pn**	**03 46 32.9**	**+2.4**
TEY				pmax	pmax		
	comp=E,700nm,2.5s						
TEY				pmax	pmax		
	comp=Z,400nm,2.4s						
TEY				pmax	pmax		
	comp=Z,270nm,1.2s						
TEY				pmax	pmax		
	comp=E,240nm,1.1s						
TEY				pmax	pmax		
	comp=N,50nm,0.9s						
TEY				MLR	MLR		
	comp=E,8μm,14.0s						
TEY				MLR	MLR		
	comp=Z,10μm,16.0s						
JYA	**Atsumi**	**11.11**	**236**	P	**Pn**	**03 46 35.4**	**-3.2**
JFK	**Kawauchi**	**11.33**	**228**	*e*S	Sn	03 48 32.6	-14
GRNR	**Gornyy**	**11.41**	**303**	*e*PN	Pn	03 46 48.0	+5.4
GRNR				pmax	pmax		
	comp=Z,80nm,1.0s						
JFY	**Yanaizu**	**11.93**	**232**	P	**Pn**	**03 46 46.4**	**-3.5**
MAJO	**Matsushiro**	**13.39**	**233**	*e*Pn	**Pn**	**03 47 06.6**	**-3.1**
MAJO	**Matsushiro**	**13.39**	**233***c*	*e*PN	**Pn**	**03 47 06.1**	**-3.6**
MAJO				pmax	pmax		
	comp=Z,35nm,1.0s						
MAT	**Matsushiro**	**13.39**	**233**	P	**Pn**	**03 47 06.1**	**-3.6**
MAT				S	**Sn**	**03 49 37.6**	**+0.6**
MJAR	**Matsushiro Arr**	**13.39**	**233**	P	**Pn**	**03 47 06.5**	**-3.2**
	comp=Z,0.9nm,0.3s,baz=22,slow=13,SNR=32						
MJAR				S	Sn	03 49 26.9	-10
	comp=Z,0.2nm,0.3s,baz=31,slow=16,SNR=2.6						
MJAR				LR	LR	03 52 56.3	
	comp=Z,2μm,21.5s,baz=25,slow=40						

MJB9	**Matsu-Tunnel**	**13.39**	**233**	*e*Pn	**Pn**	**03 47 06.6**	**-3.1**
USRK	**Ussuriysk Ar.**	**13.91**	**272**	P	**Pn**	**03 47 16.0**	**-0.8**
	baz=77,slow=12						
USRK				LR	LR	03 52 40.9	
	comp=Z,7µm,18.7s,baz=72,slow=37						
KLR	**Kul'dur**	**13.92**	**293**	P	**Pn**	**03 47 17.8**	**+0.9**
	comp=Z,0.0nm,0.3s,baz=97,slow=13,SNR=35						
KLR				LR	LR	03 52 57.1	
	comp=Z,870nm,19.2s,baz=100,slow=39						
KLR	**Kul'dur**	**13.92**	**293**	*c i*P	**Pn**	**03 47 18.3**	**+1.4**
MA2	**Magadan**	**14.18**	**358**	P	**Pn**	**03 47 19.8**	**-0.5**
	comp=Z,3.9nm,0.3s,baz=167,slow=9.5,SNR=20						
MA2				LR	LR	03 52 58.1	
	comp=Z,4µm,18.2s,baz=182,slow=38						
MA2	**Magadan**	**14.18**	**358**	*e*P	**Pn**	**03 47 18.4**	**-1.9**
MA2	**Magadan**	**14.18**	**358**	*e*Pn	**Pn**	**03 47 19.4**	**-0.9**
MSHR	**Mys Shultsa**	**14.91**	**266**	*c i*P	**Pn**	**03 47 28.3**	**-1.9**
INU	**Inuyama**	**14.92**	**233**	*e*Pn	**Pn**	**03 47 27.2**	**-3.1**
JHJ	**Hachijo jima 2**	**15.26**	**220**	P	**Pn**	**03 47 36.8**	**+2.1**
	comp=Z,7.5nm,0.3s,baz=270,slow=20,SNR=2.2						
JHJ				S	Sn	03 50 10.7	-12
	comp=Z,12nm,0.3s,baz=72,slow=20,SNR=3.4						
JHJ				LR	LR	03 56 53.7	
	comp=Z,2µm,18.1s,baz=96,slow=50						
MDJ	**Mudanjiang**	**15.51**	**275**	P	**Pn**	**03 47 34.3**	**-3.7**
MDJ				pP	P	03 47 42.3	+0.6
MDJ				sP	pP	03 47 49.3	-2.9
MDJ				S	**Sn**	**03 50 26.9**	**-1.7**
MDJ				sS	S	03 50 40.8	-1.8
MDJ				pmax	pmax		
	comp=Z,83nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,1µm,5.3s						
MDJ				LR	LR		
	comp=Z,3µm,16.4s						
MDJ				LR	LR		
	comp=Z,6µm,16.6s						
MDJ				LR	LR		
	comp=Z,10µm,15.9s						
MDJ	**Mudanjiang**	**15.51**	**275**	*e*Pn	**Pn**	**03 47 36.8**	**-1.2**
	comp=Z,201nm,0.9s						
SMY	**Shemya**	**16.46**	**56**	*e*Pn	**Pn**	**03 47 50.3**	**+0.3**
	comp=Z,72nm,0.8s						
SMY				*e*Sn	**Sn**	**03 50 43.8**	**-7.8**
SMY	**Shemya**	**16.46**	**56**	*e*P	**Pn**	**03 47 50.3**	**+0.3**
SMY				*e*		03 50 43.8	
SMY				pmax	pmax		
	comp=Z,72nm,0.8s						
SEY	**Seymchan**	**17.55**	**1**	P	**Pn**	**03 48 01.3**	**-2.2**
	comp=Z,0.4nm,0.3s,baz=170,slow=8.9,SNR=15						
SEY	**Seymchan**	**17.55**	**1**	*ce*P	**Pn**	**03 48 00.7**	**-2.7**
ZEA	**Zeya**	**17.72**	**307**	*e*P	**Pn**	**03 48 05.1**	**-0.5**
ZEA				*e*S	**Sn**	**03 51 22.0**	**+0.1**
ZEA				pmax	pmax		
	comp=Z,1µm,4.0s						
ZEA				pmax	pmax		
	comp=E,900nm,5.0s						
ZEA				pmax	pmax		
	comp=N,500nm,4.0s						
ZEA				pmax	pmax		
	comp=N,190nm,1.2s						
ZEA				pmax	pmax		
	comp=E,190nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,250nm,1.2s						
ZEA				smax	smax		
	comp=N,600nm,8.0s						
ZEA				smax	smax		
	comp=Z,500nm,8.0s						
ZEA				MLR	MLR		
	comp=E,8µm,16.0s						
ZEA				MLR	MLR		
	comp=Z,12µm,16.0s						
ZEA				MLR	MLR		
	comp=N,2µm,14.0s						
CN2	**Changchun**	**18.60**	**274**	*e*P	**P**	**03 48 14.0**	**-1.8**
CN2				pmax	pmax		
	comp=N,110nm,1.0s						
CN2				pmax	pmax		
	comp=N,200nm,5.0s						
CN2				LR	LR		
	comp=N,4µm,21.0s						
CN2				LR	LR		
	comp=N,2µm,21.0s						
CN2				LR	LR		
	comp=N,2µm,22.0s						
KSRS	**Korea Array**	**19.34**	**254**	P	**P**	**03 48 22.8**	**-1.1**
	comp=N,1.1nm,0.3s,baz=63,slow=12,SNR=42						
KSRS				PcP	**PcP**	**03 52 45.8**	**+1.2**
	comp=N,0.0nm,0.3s,baz=194,slow=0.6,SNR=4.5						
KSRS				LR	LR	03 55 20.0	
	comp=N,2µm,20.4s,baz=60,slow=35						
KS01	**Wonju Array Si**	**19.35**	**254**	*e*P	**P**	**03 48 22.8**	**-1.3**
KS01				*e*PcP	**PcP**	**03 52 45.9**	**+1.3**
KS15	**Wonju Array Si**	**19.37**	**254**	*e*P	**P**	**03 48 24.1**	**-0.2**
KSAR	**Wonju Array Be**	**19.37**	**254**	P	**P**	**03 48 22.8**	**-1.5**
KSAR				PcP	**PcP**	**03 52 45.8**	**+1.1**
KSAR	**Wonju Array Be**	**19.37**	**254**	P	**P**	**03 48 22.8**	**-1.5**
CBIJ	**Chichi jima**	**19.75**	**205**	*e*P	**Pn**	**03 48 29.7**	**-0.6**
	comp=N,224nm,1.0s						
JCJ	**Chichijima**	**19.75**	**205**	P	**P**	**03 48 29.5**	**+1.0**
	baz=0.0,slow=20						
JNU	**Nakatsue**	**20.08**	**239**	P	**P**	**03 48 32.7**	**+0.7**
	comp=N,65nm,0.9s,baz=37,slow=9.3,SNR=12						
JNU				LR	LR	03 57 51.3	
	comp=N,4µm,18.7s,baz=340,slow=41						
JNU	**Nakatsue**	**20.08**	**239**	*e*P	**P**	**03 48 32.8**	**+0.7**
	comp=N,160nm,1.0s						
INCN	**Inchon**	**20.20**	**256**	*e*P	**P**	**03 48 33.9**	**+0.5**
	comp=N,56nm,0.8s						
INCN	**Inchon**	**20.20**	**256**	*e*P	**P**	**03 48 33.9**	**+0.5**
INCN				pmax	pmax		
	comp=Z,56nm,0.8s						
TJN	**Taejon**	**20.30**	**252**	*c i*P	**P**	**03 48 34.5**	**+0.1**
YAK	**Yakutsk**	**20.88**	**331**	P	**P**	**03 48 39.1**	**-1.3**
	comp=Z,32nm,0.3s,baz=211,slow=6.5,SNR=16						
YAK				LR	LR	03 56 50.4	
	comp=Z,3µm,18.4s,baz=82,slow=37						
YAK	**Yakutsk**	**20.88**	**331**	*e*P	**P**	**03 48 38.8**	**-1.6**
	comp=Z,228nm,0.8s						
YAK	**Yakutsk**	**20.88**	**331**	*e*P	**P**	**03 48 38.6**	**-1.8**
YAK				*e*		03 48 51.7	
YAK				*e*S	**S**	**03 52 32.9**	**+2.4**
YAK				*e**SS	**sS**	**03 52 47.3**	**-0.4**
YAK				*e*SS	**SnSn**	**03 52 57.3**	**+4.4**
YAK				pmax	pmax		
	comp=Z,142nm,1.1s						
YAK				pmax	pmax		
	comp=E,37nm,1.2s						
YAK				pmax	pmax		
	comp=N,34nm,1.1s						
YAK				smax	smax		
	comp=N,388nm,1.6s						
YAK				smax	smax		
	comp=E,170nm,1.5s						
YAK				MLR	MLR		
	comp=Z,2µm,17.0s						
YAK				MLR	MLR		
	comp=E,3µm,16.0s						
YAK				MLR	MLR		
	comp=N,7µm,18.0s						
KIWB	**Kanaga Island**	**21.57**	**61**	*e*P	**P**	**03 48 46.0**	**-2.0**
GSTR	**Great Sitkin T**	**22.27**	**61**	*e*P	**P**	**03 48 53.2**	**-2.2**
DL2	**Dalian**	**23.00**	**264**	⇑*i*P	**P**	**03 49 01.1**	**-2.1**
DL2				sP	**sP**	**03 49 18.3**	**-1.3**
DL2				S	**S**	**03 53 07.3**	**-3.0**
DL2				pmax	pmax		
	comp=N,74nm,1.1s						
DL2				pmax	pmax		
	comp=N,650nm,5.8s						
DL2				LR	LR		
	comp=N,850nm,16.5s						
DL2				LR	LR		
	comp=N,1µm,16.2s						
DL2				LR	LR		
	comp=N,2µm,18.0s						
ATKA	**Atka Island**	**23.42**	**61**	*e*P	**P**	**03 49 06.9**	**-0.3**
	comp=N,153nm,1.2s						
BOD	**Bodaibo**	**26.00**	**312**	*e*P	**P**	**03 49 28.7**	**-2.1**
BOD				pmax	pmax		
	comp=Z,22nm,1.0s						
JOW	**Kunigami**	**26.23**	**233**	P	**P**	**03 49 33.5**	**+0.3**
	comp=Z,52nm,0.9s,baz=45,slow=9.0,SNR=9.0						
JOW	**Kunigami**	**26.23**	**233**	*e*P	**P**	**03 49 33.7**	**+0.6**
	comp=Z,90nm,1.0s						
BJI	**Beijing**	**26.36**	**271**	P	**P**	**03 49 34.3**	**+0.1**
BJI				S	**S**	**03 54 07.3**	**+3.2**
BJI				pmax	pmax		
	comp=Z,150nm,1.5s						
BJI				pmax	pmax		
	comp=Z,1µm,3.6s						
BJI				LR	LR		
	comp=Z,5µm,14.2s						
BJI				LR	LR		
	comp=Z,7µm,15.4s						
BJT	**Baijiatuau**	**26.37**	**271**	*e*P	**P**	**03 49 34.1**	**-0.2**
	comp=Z,176nm,0.9s						
BJT	**Baijiatuau**	**26.37**	**271**	*e*P	**P**	**03 49 34.1**	**-0.2**
BJT				pmax	pmax		
	comp=Z,176nm,0.9s						
TIA	**Tai'an**	**27.42**	**263**	P	**P**	**03 49 43.9**	**+0.1**
TIA				pmax	pmax		
	comp=Z,26nm,1.5s						
TIA				pmax	pmax		
	comp=Z,440nm,5.0s						
TIA				LR	LR		
	comp=Z,1µm,16.5s						
TIA				LR	LR		
	comp=Z,1µm,14.0s						
TIA				LR	LR		
	comp=Z,1µm,15.0s						
SSE	**Sheshan**	**27.58**	**249**	P	**P**	**03 49 46.0**	**+0.8**
SSE				S	**S**	**03 54 24.4**	**+0.9**
SSE				pmax	pmax		
	comp=Z,40nm,0.9s						
SSE				pmax	pmax		
	comp=Z,220nm,4.1s						
SSE				LR	LR		
	comp=Z,820nm,16.8s						
SSE				LR	LR		
	comp=Z,1µm,16.8s						
NJ2	**Nanjing**	**28.54**	**253**	*e*P	**P**	**03 49 54.0**	**+0.2**
NJ2				pP	**pP**	**03 50 05.4**	**-0.2**
NJ2				sP	**sP**	**03 50 12.8**	**+1.9**
NJ2				PcP	**PcP**	**03 53 05.3**	**+0.9**
NJ2				S	**S**	**03 54 40.3**	**+1.6**
NJ2				sS	**sS**	**03 54 59.3**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,26nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,290nm,4.7s						
NJ2				LR	LR		
	comp=Z,5µm,15.7s						
NJ2				LR	LR		
	comp=Z,5µm,16.8s						
NJ2				LR	LR		
	comp=Z,4µm,17.3s						
H11N2	**WAKE ISLAND Hy**	**28.62**	**149**	T	T	04 20 30.3	
	baz=338,slow=74						
H11N1	**WAKE ISLAND Hy**	**28.63**	**149**	T	T	04 20 39.9	
	baz=338						
H11N3	**WAKE ISLAND Hy**	**28.63**	**149**	T	T	04 20 37.9	
	baz=338,slow=74						
HHC	**Hu-ho-hao-te**	**29.29**	**275**	*e*P	**P**	**03 50 01.0**	**+0.5**
HHC				pP	pP	03 50 11.5	-0.8
HHC				S	**S**	**03 54 46.5**	**-4.0**
HHC				sS	sS	03 55 06.3	-4.0
HHC				pmax	pmax		
	comp=Z,110nm,1.0s						
HHC				pmax	pmax		
	comp=Z,720nm,4.6s						
HHC				LR	LR		
	comp=Z,3µm,13.0s						
HHC				LR	LR		
	comp=Z,7µm,12.5s						
HHC				LR	LR		
	comp=Z,8µm,14.5s						
H11S1	**WAKE ISLAND Hy**	**29.67**	**150**	T	T	04 21 58.3	
	baz=338,slow=76						
H11S3	**WAKE ISLAND Hy**	**29.68**	**150**	T	T	04 22 02.5	
	baz=338,slow=76						
H11S2	**WAKE ISLAND Hy**	**29.69**	**150**	T	T	04 21 50.5	
	baz=338,slow=76						
TIY	**Taiyuan**	**29.99**	**269**	*e*P	**P**	**03 50 07.3**	**+0.6**
TIY				S	**S**	**03 54 59.9**	**-1.7**
TIY				pmax	pmax		
	comp=Z,57nm,0.8s						
TIY				LR	LR		
	comp=Z,1µm,18.2s						
TIY				LR	LR		
	comp=Z,2µm,14.6s						
TIY				LR	LR		
	comp=Z,2µm,15.7s						
ULN	**Ulaanbaatar**	**30.30**	**291**	*e*P	**P**	**03 50 08.9**	**-0.6**
	comp=Z,29nm,1.1s						
ULN				*e*PcP	**PcP**	**03 53 08.7**	**-0.1**
ULN	**Ulaanbaatar**	**30.30**	**291**	*ce*P	**P**	**03 50 08.3**	**-1.1**
ULN				pmax	pmax		
	comp=Z,27nm,1.0s						
BTO	**Baotou**	**30.46**	**276**	*e*P	**P**	**03 50 10.3**	**-0.6**
SONA1	**Songino Array**	**30.73**	**291**	*e*P	**P**	**03 50 11.7**	**-1.5**
SONM	**Songino Array**	**30.74**	**291**	P	**P**	**03 50 12.1**	**-1.2**
	comp=Z,17nm,1.0s,baz=74,slow=7.3,SNR=43						
SONM				PcP	**PcP**	**03 53 10.1**	**+0.1**
	comp=Z,4.5nm,0.8s,baz=56,slow=3.6,SNR=4.8						
SONM				LR	LR	04 03 40.8	
	comp=Z,5µm,18.1s,baz=80,slow=38						
TLY	**Talaya**	**31.81**	**299**	*e*P	**P**	**03 50 20.6**	**-2.0**
	comp=Z,7.6nm,0.7s						
TLY	**Talaya**	**31.81**	**299**	*e*P	**P**	**03 50 21.6**	**-1.0**
TLY				*e*		03 51 34.7	
TLY				pmax	pmax		
	comp=Z,17nm,1.3s						
TLY				MLR	MLR		
	comp=Z,6µm,17.0s						
GUMO	**Guam**	**32.23**	**192**	LR	LR	04 05 42.7	
	comp=Z,1µm,18.6s,baz=23,slow=40						
ZAK	**Zakamensk**	**32.24**	**297**	*e*P	**P**	**03 50 23.6**	**-2.9**
ZAK				*e*		03 53 13.2	
ZAK				pmax	pmax		
	comp=Z,13nm,1.1s						
WHN	**Wuhan**	**32.52**	**256**	⇑*i*P	**P**	**03 50 28.8**	**-0.1**
WHN				pP	**pP**	**03 50 40.1**	**-0.7**
WHN				S	**S**	**03 55 41.8**	**+0.9**
WHN				pmax	pmax		
	comp=Z,64nm,0.8s						
WHN				LR	LR		
	comp=Z,5µm,17.9s						
WHN				LR	LR		
	comp=Z,5µm,16.6s						
WHN				LR	LR		
	comp=Z,6µm,17.6s						
SSLB	**Suanglung**	**32.83**	**239**	*e*P	**P**	**03 50 30.7**	**-1.1**
	comp=Z,33nm,1.2s						
YULB	**Yu-li**	**32.92**	**238**	*e*P	**P**	**03 50 34.0**	**+1.6**
	comp=Z,24nm,1.0s						
TPUB	**Ta-pu**	**33.39**	**239**	*e*P	**P**	**03 50 37.3**	**+0.7**
	comp=Z,59nm,0.8s						
QZH	**Quanzhou**	**33.44**	**244**	⇑*i*P	**P**	**03 50 37.5**	**+0.5**
QZH				S	**S**	**03 55 55.1**	**-0.2**
QZH				pmax	pmax		
	comp=Z,270nm,3.9s						
QZH				LR	LR		
	comp=Z,690nm,19.9s						
QZH				LR	LR		
	comp=Z,2µm,16.6s						
QZH				LR	LR		
	comp=Z,1µm,17.1s						
MOY	**Mondy**	**33.45**	**299**	*e*P	**P**	**03 50 35.9**	**-1.1**
MOY				pmax	pmax		
	comp=Z,15nm,1.6s						
SVW2	**Sparrevohn**	**34.22**	**44**	*e*P	**P**	**03 50 44.1**	**+0.6**
	comp=Z,14nm,0.9s						
XAN	**Xi'an**	**34.29**	**266**	P	**P**	**03 50 44.3**	**-0.1**
XAN				pP	pP	03 50 58.6	+2.3
XAN				PcS	**PcS**	**03 57 05.8**	**-0.5**
XAN				pmax	pmax		
	comp=Z,63nm,1.1s						
XAN				LR	LR		
	comp=Z,2µm,15.4s						
XAN				LR	LR		
	comp=Z,1µm,14.4s						
XAN				LR	LR		
	comp=Z,2µm,14.9s						
OHAK	**Old Harbor**	**35.48**	**50**	*e*P	**P**	**03 50 53.0**	**-1.3**
	comp=Z,108nm,1.4s						
RSO	**Redoubt South**	**35.60**	**45**	*e*P	**P**	**03 50 56.2**	**+0.7**
KDAK	**Kodiak Island**	**35.81**	**49**	*e*P	**P**	**03 50 56.8**	**-0.3**
	comp=Z,64nm,0.9s						
KDAK	**Kodiak Island**	**35.81**	**49**	*e*P	**P**	**03 50 56.8**	**-0.3**
KDAK				pmax	pmax		
	comp=Z,64nm,0.9s						
PPLA	**Purkeypile**	**35.90**	**41**	*e*P	**P**	**03 50 59.2**	**+1.1**
	comp=Z,68nm,1.3s						
CAST	**Castle Rocks**	**35.97**	**40**	*e*P	**P**	**03 50 59.2**	**+0.7**
	comp=Z,22nm,1.0s						
ENH	**Enshi**	**36.03**	**260**	*e*P	**P**	**03 50 58.6**	**-0.8**
	comp=Z,45nm,0.9s						
SKT	**Skwentna**	**36.19**	**42**	*e*P	**P**	**03 51 00.9**	**+0.6**
	comp=Z,14nm,0.9s						
BPAW	**Bear Paw Mtn.**	**36.49**	**39**	*e*P	**P**	**03 51 03.2**	**+0.3**
	comp=Z,20nm,1.0s						
KTH	**Kantishna Hill**	**36.49**	**39**	*e*P	**P**	**03 51 03.5**	**+0.5**
	comp=Z,74nm,1.0s						
SUA	**Susitna One**	**36.56**	**43**	*e*P	**P**	**03 51 03.8**	**+0.1**
	comp=Z,20nm,1.0s						
MLY	**Manley**	**36.65**	**37**	*e*P	**P**	**03 51 04.8**	**+0.5**
	comp=Z,20nm,1.1s						
MLY				*e*PcP	**PcP**	**03 53 27.0**	**+0.7**
TRF	**Thorofare Moun**	**36.78**	**40**	*e*P	**P**	**03 51 06.1**	**+0.5**
	comp=Z,19nm,0.9s						
LZH	**Lanzhou**	**36.82**	**272**	⇑P	**P**	**03 51 07.4**	**+1.2**
LZH				pP	pP	03 51 19.8	+1.6
LZH				sP	sP	03 51 26.3	+2.9
LZH				PP	**PnPn**	**03 52 31.3**	**+0.5**
LZH				S	**S**	**03 56 46.8**	**-0.6**
LZH				sS	sS	03 57 07.3	-0.2
LZH				SS	**SnSn**	**03 59 15.1**	**-6.6**
LZH				pmax	pmax		
	comp=Z,450nm,1.0s						
LZH				pmax	pmax		
	comp=Z,1µm,4.9s						
LZH				LR	LR		
	comp=Z,3µm,14.1s						
LZH				LR	LR		
	comp=Z,3µm,14.2s						
LZH				LR	LR		
	comp=Z,4µm,16.3s						
COLD	**Coldfoot**	**37.06**	**33**	*e*P	**P**	**03 51 07.9**	**+0.3**
	comp=Z,14nm,1.0s						
RC01	**Rabbit Creek A**	**37.06**	**44**	*e*P	**P**	**03 51 08.0**	**+0.2**
	comp=Z,68nm,1.4s						
PMR	**Palmer**	**37.33**	**43**	*e*P	**P**	**03 51 09.3**	**-0.7**
	comp=Z,25nm,1.0s						
PMR	**Palmer**	**37.33**	**43**	*e*P	**P**	**03 51 09.3**	**-0.7**
PMR				pmax	pmax		
	comp=Z,25nm,1.0s						
MCK	**McKinley**	**37.38**	**39**	*e*P	**P**	**03 51 10.7**	**+0.2**
	comp=Z,35nm,1.1s						
MCK	**McKinley**	**37.38**	**39**	*e*P	**P**	**03 51 10.7**	**+0.2**
MCK				pmax	pmax		
	comp=Z,35nm,1.0s						
GHO	**Glory Hole Cre**	**37.42**	**42**	*e*P	**P**	**03 51 10.8**	**-0.2**
	comp=Z,21nm,0.9s						
TOLK	**Toolik Lake Re**	**37.46**	**31**	P	**P**	**03 51 10.9**	**-0.3**
	baz=263						
TOLK	**Toolik Lake Re**	**37.46**	**31**	*e*P	**P**	**03 51 11.4**	**+0.3**
	comp=Z,22nm,1.0s						
MDM	**Murphy Dome**	**37.71**	**37**	*e*P	**P**	**03 51 13.7**	**+0.4**
	comp=Z,28nm,1.0s						
WRH	**Wood River Hil**	**37.76**	**38**	*e*P	**P**	**03 51 14.2**	**+0.5**
	comp=Z,17nm,0.9s						
COLA	**College**	**37.87**	**37**	*e*P	**P**	**03 51 15.2**	**+0.7**
	comp=Z,36nm,0.8s						
COLA	**College**	**37.87**	**37**	*e*P	**P**	**03 51 15.2**	**+0.7**
COLA				pmax	pmax		
	comp=Z,36nm,0.9s						
CCB	**Clear Creek Bu**	**37.89**	**38**	*e*P	**P**	**03 51 14.5**	**-0.2**
	comp=Z,10nm,1.0s						
HVS	**Khovu-Aksy**	**38.02**	**300**	⇓*e*P	**P**	**03 51 15.2**	**-0.9**
HVS				pmax	pmax		
	comp=Z,16nm,0.9s						
GTA	**Gaotai**	**38.08**	**280**	⇑P	**P**	**03 51 17.6**	**+0.8**
GTA				pP	pP	03 51 29.8	+1.0
GTA				sP	sP	03 51 35.1	+1.0
GTA				PcP	**PcP**	**03 53 33.3**	**+2.1**
GTA				S	**S**	**03 57 05.5**	**-1.0**
GTA				sS	sS	03 57 23.6	-3.0
GTA				pmax	pmax		
	comp=Z,85nm,1.2s						
GTA				pmax	pmax		
	comp=Z,520nm,5.6s						
GTA				LR	LR		
	comp=Z,2µm,15.2s						
GTA				LR	LR		
	comp=Z,3µm,14.3s						
GTA				LR	LR		
	comp=Z,4µm,15.2s						
DHY	**Denali Highway**	**38.10**	**40**	*e*P	**P**	**03 51 15.8**	**-0.9**
	comp=Z,32nm,1.0s						
GZH	**Guangzhou**	**38.12**	**247**	P	**P**	**03 51 12.8**	**-4.3**
GZH				PP	**PP**	**03 52 43.1**	**-1.7**
GZH				S	**S**	**03 57 05.3**	**-1.7**
GZH				pmax	pmax		
	comp=Z,340nm,5.5s						
GZH				LR	LR		
	comp=Z,3µm,18.2s						
GZH				LR	LR		
	comp=Z,2µm,16.9s						
IL1	**Eielson Array**	**38.28**	**37**	*e*P	**P**	**03 51 17.4**	**-0.6**
ILAR	**Eielson Array**	**38.28**	**37**	P	**P**	**03 51 17.6**	**-0.5**
	comp=Z,14nm,1.1s,baz=256,slow=7.3,SNR=63						
ILAR				PcP	**PcP**	**03 53 30.2**	**-1.0**
	comp=Z,2.9nm,1.0s,baz=275,slow=3.7,SNR=2.6						
ILAR				LR	LR	04 08 49.4	
	comp=Z,925nm,20.4s,baz=278,slow=39						
ILB	**Eielson Array**	**38.28**	**37**	*e*P	**P**	**03 51 17.7**	**-0.3**
KLU	**Klutina**	**38.87**	**43**	*e*P	**P**	**03 51 23.9**	**+0.8**
	comp=Z,40nm,1.0s						
PAX	**Paxson**	**38.97**	**40**	*e*P	**P**	**03 51 25.5**	**+1.5**
	comp=Z,20nm,1.2s						
PAX	**Paxson**	**38.97**	**40**	*e*P	**P**	**03 51 25.5**	**+1.5**
PAX				pmax	pmax		
	comp=Z,20nm,1.2s						
FYU	**Fort Yukon**	**38.97**	**35**	*e*P	**P**	**03 51 25.3**	**+1.5**
	comp=Z,88nm,1.3s						
DIV	**Divide**	**38.98**	**43**	*e*P	**P**	**03 51 24.8**	**+0.8**
	comp=Z,35nm,1.0s						
HARP	**HAARP**	**39.16**	**41**	*e*P	**P**	**03 51 26.7**	**+1.3**
	comp=Z,39nm,1.0s						
BMRM	**Bremner River**	**39.56**	**43**	*e*P	**P**	**03 51 29.9**	**+1.0**
	comp=Z,35nm,0.9s						
RAGM	**Ragged Mountai**	**39.60**	**44**	*e*P	**P**	**03 51 30.5**	**+1.3**
	comp=Z,44nm,1.0s						
CD2	**Chengdu**	**39.65**	**265**	⇑P	**P**	**03 51 30.3**	**+0.3**
CD2				pP	pP	03 51 42.6	+0.6
CD2				sP	sP	03 51 48.3	+1.0
CD2				PP	**PP**	**03 53 01.5**	**0.0**
CD2				S	**S**	**03 57 29.6**	**-0.6**
CD2				sS	sS	03 57 51.0	+0.7
CD2				pmax	pmax		
	comp=Z,300nm,0.6s						
CD2				pmax	pmax		
	comp=Z,530nm,4.4s						
CD2				LR	LR		
	comp=Z,2µm,15.8s						
CD2				LR	LR		
	comp=Z,2µm,16.0s						
CD2				LR	LR		
	comp=Z,3µm,15.9s						
GYA	**Guiyang**	**40.33**	**258**	⇑*i*P	**P**	**03 51 35.3**	**-0.4**
GYA				pP	pP	03 51 50.0	+2.2
GYA				PP	**PnPn**	**03 53 14.8**	**+1.8**
GYA				PcP	**PcP**	**03 53 39.3**	**+0.8**
GYA				S	**S**	**03 57 40.0**	**-0.5**
GYA				sS	sS	03 58 02.1	+1.4
GYA				SS	**SS**	**04 00 33.0**	**-7.3**
GYA				pmax	pmax		
	comp=Z,40nm,0.9s						
GYA				pmax	pmax		
	comp=Z,130nm,5.4s						
GYA				LR	LR		
	comp=Z,2µm,16.5s						
GYA				LR	LR		
	comp=Z,1µm,19.3s						
GYA				LR	LR		
	comp=Z,2µm,17.1s						
TGL	**Tana Glacier**	**40.45**	**44**	*e*P	**P**	**03 51 37.4**	**+1.1**
	comp=Z,42nm,1.0s						
BALM	**Baldy**	**40.64**	**43**	*e*P	**P**	**03 51 38.3**	**+0.4**
	comp=Z,70nm,1.3s						
BALM	**Baldy**	**40.64**	**43**	*e*P	**P**	**03 51 38.3**	**+0.4**
BALM				pmax	pmax		
	comp=Z,70nm,1.3s						
EGAK	**Eagle**	**40.73**	**37**	*e*P	**P**	**03 51 38.3**	**-0.2**
	comp=Z,40nm,1.0s						
DAWY	**Dawson**	**41.57**	**38**	*e*P	**P**	**03 51 46.2**	**+0.8**
	comp=Z,14nm,1.1s						

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ZAA0  Zalesovo Array    42.49 307 eP        P         03 51 50.9 -2.0
      comp=Z,4.4nm,0.8s
ZAA0                              ePcP      PcP       03 53 45.4 +0.5
ZALV  Zalesovo Beam     42.49 307  P        P         03 51 50.5 -2.4
      comp=Z,2.6nm,0.5s,baz=71,slow=7.7,SNR=9.1
ZALV                               PcP      PcP       03 53 45.1 +0.2
      comp=Z,15nm,0.9s,baz=92,slow=3.1,SNR=14
ZALV                               LR       LR        04 10 35.9
      comp=Z,3µm,20.0s,baz=74,slow=38
ZALV  Zalesovo Beam     42.49 307 eP        P         03 51 50.4 -2.5
ZALV                              ePcP      PcP       03 53 44.8 -0.1
NVS   Novosibirsk       43.12 308 eP        P         03 51 55.7 -2.3
NVS                               e                   03 52 16.2
NVS                                pmax     pmax
      comp=Z,10.0nm,1.0s
NVS                                pmax     pmax
      comp=E,6.0nm,1.0s
QIZ   Qiongzhong        43.30 246  P        P         03 52 00.9 +1.1
QIZ                                sS       sS        03 58 44.8 +0.3
QIZ                                LR       LR
      comp=E,2µm,20.4s
QIZ                                LR       LR
      comp=E,1µm,21.6s
QIZ                                LR       LR
      comp=E,2µm,16.9s
INK   Inuvik            43.37  32 eP        P         03 52 00.5 +0.7
      comp=E,44nm,1.0s
INK   Inuvik            43.37  32 eP        P         03 52 00.5 +0.7
INK                                pmax     pmax
      comp=Z,44nm,1.0s
KMI   Kunming           43.90 259  P        P         03 52 05.3 +0.4
KMI                                pP       pP        03 52 16.9 -0.2
KMI                                sP       sP        03 52 22.1 -0.2
KMI                                PP       PcP       03 53 52.4 +1.9
KMI                                S        S         03 58 32.3 -1.0
KMI                                sS       sS        03 58 52.3 -1.4
KMI                                pmax     pmax
      comp=Z,40nm,1.1s
KMI                                pmax     pmax
      comp=Z,430nm,4.6s
KMI                                LR       LR
      comp=Z,2µm,18.7s
KMI                                LR       LR
      comp=Z,800nm,16.8s
KMI                                LR       LR
      comp=Z,1µm,18.5s
WMQ   Urumqi            44.37 292  P        P         03 52 09.8 +1.5
WMQ                                pP       pP        03 52 19.8 -0.7
WMQ                                sP       sP        03 52 27.3 +1.6
WMQ                                S        S         03 58 44.1 +4.6
WMQ                                sS       sS        03 58 58.9 -1.0
WMQ                                ScS      SS        04 02 00.3 +1.2
WMQ                                pmax     pmax
      comp=Z,110nm,1.1s
WMQ                                pmax     pmax
      comp=Z,940nm,4.1s
WMQ                                LR       LR
      comp=Z,5µm,16.9s
WMQ                                LR       LR
      comp=Z,4µm,13.3s
WMQ                                LR       LR
      comp=Z,4µm,21.7s
SKAG  Skagway           44.39  44 eP        P         03 52 10.4 +2.2
      comp=Z,31nm,1.2s
BESE  Bessie Mountai    44.87  45 eP        P         03 52 13.2 +1.1
      comp=Z,51nm,1.4s
JIS   Juneau Island     45.20  46 eP        P         03 52 16.9 +2.3
      comp=Z,36nm,1.0s
MK31  Makanchi Array    46.56 298 eP        P         03 52 24.4 -1.2
MK31  Makanchi Array    46.56 298 i P       P         03 52 23.8 -1.8
MK31                               pmax     pmax
      comp=Z,14nm,0.7s
MKAR  Makanchi Array    46.56 298  P        P         03 52 24.4 -1.1
      comp=Z,11nm,0.7s,baz=72,slow=7.8,SNR=73
MKAR                               PcP      PcP       03 53 59.7 +0.6
      comp=Z,7.6nm,0.8s,baz=65,slow=5.6,SNR=4.1
MKAR                               LR       LR        04 13 03.2
      comp=Z,6µm,18.3s,baz=70,slow=37
MKAR  Makanchi Array    46.56 298 eP        P         03 52 24.4 -1.1
MKAR                               pmax     pmax
      comp=Z,92nm,0.7s
MK01  Makanchi Array    46.56 298 eP        P         03 52 24.0 -1.6
MAKZ  Makanchi          46.75 298 eP        P         03 52 26.0 -1.1
      comp=Z,11nm,0.7s
MAKZ  Makanchi          46.75 298  P        P         03 52 25.4 -1.6
MAKZ                               pmax     pmax
      comp=Z,9.0nm,0.8s
CRAG  Craig             46.77  49 eP        P         03 52 28.4 +1.4
      comp=Z,42nm,1.4s
WRAK  Wrangell Islan    46.85  48 eP        P         03 52 29.1 +1.5
      comp=Z,28nm,1.1s
KURK  Kurchatov         47.17 304 eP        P         03 52 28.5 -1.7
      comp=Z,24nm,0.9s
KURK                               PcP      PcP       03 54 02.0 +0.9
KURK  Kurchatov         47.17 304 eP        P         03 52 28.5 -1.7
KURK                               pmax     pmax
      comp=Z,24nm,1.0s
KURBB Kurchatov Arra    47.26 304  P        P         03 52 29.1 -1.8
      comp=Z,19nm,0.9s,baz=68,slow=8.3,SNR=59
KURBB                              PcP      PcP       03 54 02.0 +0.5
      comp=Z,9.5nm,0.9s,baz=76,slow=3.4,SNR=9.0
DLBC  Dease Lake        47.32  45 eP        P         03 52 32.8 +1.4
      comp=Z,34nm,0.9s
LKP   Lekhapani         47.34 267 eP        P         03 52 33.4 +1.6
DIBR  DIBRUGARH         47.91 268 eP        P         03 52 36.8 +0.5
DIB   Dawson Inlet,     47.97  52 eP        P         03 52 37.7 +1.3
      comp=Z,113nm,2.0s
SKNT  Sakolnakorn       48.62 250  P        P         03 52 42.5 +0.7
      comp=Z,18nm,1.2s
ZIRO  ZIRO              48.62 269 eP        P         03 52 42.6 +0.6
MOKO  MOKOCHONG         48.89 267 eP        P         03 52 45.4 +1.4
LSA   Lhasa             49.23 273  P        P         03 52 48.8 +1.9
LSA                                pmax     pmax
      comp=Z,63nm,1.1s
LSA   Lhasa             49.23 273 eP        P         03 52 47.9 +1.0
      comp=Z,55nm,0.8s
LSA   Lhasa             49.23 273 i P       P         03 52 48.6 +1.6
      SNR=12
LSA   Lhasa             49.23 273 eP        P         03 52 47.9 +1.0
LSA                                pmax     pmax
      comp=Z,55nm,0.8s
MYLDM Lahad Datu        49.32 226 eP        P         03 52 48.4 +1.3
      comp=Z,59nm,1.2s
KOHI  KOHIMA            49.55 267 eP        P         03 52 48.6 -0.5
KHON  Khomkaen          49.84 251  P        P         03 52 52.5 +1.4
      comp=Z,23nm,0.8s
CMAI  Chiengmai2        49.88 257  P        P         03 52 53.3 +1.7
      comp=Z,6.2nm,1.0s
PDGK  Podgornoye        49.90 295  P        P         03 52 50.6 -0.9
PDGK                               pmax     pmax
      comp=Z,43nm,1.1s
UTTA  Uttaradit         50.37 254  P        P         03 52 56.1 +1.0
      comp=Z,6.0nm,0.9s,comp=Z,76nm
CMMT  Chiang Mai        50.72 256  P        P         03 52 58.6 +0.8
      comp=Z,52nm,1.1s,comp=Z,695nm
CHTO  Chiang Mai        50.72 256 eP        P         03 52 58.7 +0.9
      comp=Z,40nm,1.0s
CHTO  Chiang Mai        50.72 256 eP        P         03 52 58.7 +0.9
CHTO                               pmax     pmax
      comp=Z,40nm,1.0s
CHTO  Chiang Mai        50.72 256  P        P         03 52 58.7 +0.9
      comp=Z,228nm,1.1s,comp=Z,3µm
BVAR  Borovoye Array    50.84 310  P        P         03 52 56.8 -1.5
      comp=Z,4.1nm,0.5s,baz=67,slow=11,SNR=22
BVAR                               PcP      PcP       03 54 14.8 +0.4
      comp=Z,18nm,0.9s,baz=93,slow=2.9,SNR=8.5
BVAR                               LR       LR        04 16 05.2
      comp=Z,3µm,19.9s,baz=58,slow=38
BRVK  Borovoye          50.88 310 eP        P         03 52 57.0 -1.6
BRVK                              ePcP      PcP       03 54 14.8 +0.2
BRVK  Borovoye          50.88 310 eP        P         03 52 57.0 -1.6
BRVK                              e                   03 54 14.8
PBKT  Sadao Pong        50.91 253  P        P         03 53 00.0 +0.8
      comp=Z,15nm,1.6s
GUWA  GUWAHATI          50.96 269 eP        P         03 52 59.6 +0.1
CMAR  Chiang Mai Arr    50.97 256  P        P         03 53 00.4 +0.8
      comp=Z,13nm,0.9s,baz=36,slow=7.3,SNR=32
CMAR                               PcP      PcP       03 54 16.1 +0.7
      comp=Z,6.1nm,0.7s,baz=27,slow=2.6,SNR=6.5
CMAR                               LR       LR        04 16 32.8
      comp=Z,1µm,18.2s,baz=50,slow=38
CM01  Chiang Mai Arr    50.98 256 eP        P         03 53 00.6 +0.8
PRZ   Przheval'sk       51.01 294 eP        P         03 53 01.4 +1.4
PRZ   Przheval'sk       51.01 294 eP        P         03 53 01.4 +1.4
SILR  SILCHAR           51.06 267 eP        P         03 53 01.7 +1.4
FAKI  Fak Fak           51.09 205  P        P         03 53 00.8 +0.3
SUKH  Sukhothai         51.17 255  P        P         03 53 02.8 +1.6
      comp=Z,7.6nm,0.5s
SHL   Shillong          51.21 268 eP        P         03 53 00.8 -0.9
SHL   Shillong          51.21 268 eP        P         03 53 02.0 +0.3
SHL                               eS        S         04 00 19.0 +1.9
SHL   Shillong          51.21 268 eP        P         03 53 01.8 +0.1
SHL                                pmax     pmax
      comp=Z,180nm,0.8s
TURI  Tura              52.32 269 eP        P         03 53 10.1 +0.5
RES   Resolute Bay      52.44  18 eP        P         03 53 09.7 -0.2
      comp=Z,18nm,0.8s
RES   Resolute Bay      52.44  18 eP        P         03 53 09.7 -0.2
RES                                pmax     pmax
      comp=Z,18nm,0.9s
ULHL  Ulahol            52.51 295  P        P         03 53 12.5 +1.3
      SNR=9.3
TKM2  Tokmak 2          52.58 296  P        P         03 53 11.9 +0.3
      SNR=26
TKM2  Tokmak 2          52.58 296  P        P         03 53 11.6  0.0
TKM2                               pmax     pmax
      comp=Z,36nm,1.1s
UMPA  Umpang Tak        52.59 254  P        P         03 53 17.0 +5.2
      comp=Z,14nm,0.9s,comp=Z,954nm
YKW3  Yellowknife Ar    52.62  36 eP        P         03 53 11.7 +0.3
      comp=Z,28nm,1.0s
YKA   Yellowknife Ar    52.65  36  P        P         03 53 12.3 +0.7
      comp=Z,17nm,0.9s,baz=299,slow=7.4,SNR=47
YKA                                LR       LR        04 18 54.6
      comp=Z,49nm,18.4s,baz=300,slow=40
UTHA  Uthaitani         52.66 253  P        P         03 53 14.0 +1.8
      comp=Z,5.9nm,0.8s,comp=Z,66nm
TAPN  Taplejung         53.05 273 eP        P         03 53 16.6 +1.2
      comp=Z,58nm,0.8s
CHMS  Chumysh           53.07 297  P        P         03 53 15.7 +0.7
      SNR=5.7
USP   Ospenovka         53.09 297  P        P         03 53 15.6 +0.4
      SNR=41
KBK   Karagaybulak      53.12 296  P        P         03 53 16.4 +0.8
      SNR=24
BRDH  Bariadhala        53.22 266  P        P         03 53 17.2 +0.9
      comp=Z,114nm,0.6s,baz=62,slow=15,SNR=5.1
BRDH                               LR       LR        04 20 25.5
      comp=Z,606nm,18.1s,baz=112,slow=41
KZA   Kyzart            53.23 295  P        P         03 53 17.8 +1.1
      SNR=74
FRU   Bishkek           53.24 297 i P       P         03 53 17.5 +1.2
FRU                               i                   03 54 25.5
FRU                                pmax     pmax
      comp=Z,140nm,2.1s
FRU                                MLR      MLR
      comp=E,3µm,15.0s
AAK   Ala-Archa         53.42 296  P        P         03 53 18.0 +0.2
      SNR=27
AAK   Ala-Archa         53.42 296 eP        P         03 53 17.8  0.0
AAK   Ala-Archa         53.42 296 eP        P         03 53 18.0 +0.2
      comp=E,51nm,0.9s
AAK   Ala-Archa         53.42 296  P        P         03 53 17.8  0.0
AAK                                pmax     pmax
      comp=Z,53nm,0.9s
ODAN  Odare             53.58 273 eP        P         03 53 19.9 +0.7
      comp=Z,91nm,0.8s
KBS   Kingsbay          53.63 351 eP        P         03 53 18.5 -0.1
      comp=Z,58nm,0.8s
KBS   Kingsbay          53.63 351 eP        P         03 53 18.5 -0.1
KBS                                pmax     pmax
      comp=Z,57nm,0.9s
KBS   Kingsbay          53.63 351 eP        P         03 53 18.4 -0.1
KBS                                IAmb     IAmb      03 53 19.1
      comp=Z,64nm,0.9s
KBS                                IAMs_20  IAMs_20   04 21 34.6
      comp=Z,906nm,19.7s
SPA0  Spitsbergen Ar    53.71 350 eP        P         03 53 18.5 -0.8
SPA0  Spitsbergen Ar    53.71 350 eP        P         03 53 18.1 -1.1
SPA0                               IAmb     IAmb      03 53 19.9
      comp=Z,45nm,1.1s
SPA0                               IAMs_20  IAMs_20   04 19 06.5
      comp=Z,942nm,19.0s
SPITS Spitsbergen Ar    53.71 350  P        P         03 53 18.0 -1.3
      comp=Z,20nm,0.8s,baz=21,slow=6.2,SNR=20
SPITS                              LR       LR        04 16 27.4
      comp=Z,626nm,20.1s,baz=25,slow=36
SPITS Spitsbergen Ar    53.71 350  P        P         03 53 18.0 -1.3
SPITS                              pmax     pmax
      comp=Z,21nm,0.9s
SPITS                              MLR      MLR
      comp=Z,626nm,20.1s
EKS2  Erkin-Say         53.86 297  P        P         03 53 20.9 -0.1
      SNR=54
JIRN  Jiri              53.93 274 eP        P         03 53 23.0 +1.0
      comp=Z,337nm,0.7s
GUN   Gumba             54.00 275 eP        P         03 53 23.1 +0.7
      comp=Z,256nm,1.0s
SVE   Sverdlovsk        54.04 317⇑iP        P         03 53 20.5 -1.4
SVE                               e                   04 04 36.2
SVE                                pmax     pmax
      comp=Z,40nm,0.9s
SVE                                MLR      MLR
      comp=Z,2µm,15.0s
RAMN  Ramite            54.08 273 eP        P         03 53 23.5 +0.6
      comp=Z,390nm,1.0s
KSH   Kashi             54.12 292  P        P         03 53 27.1 +4.2
KSH                                sP       sP        03 53 45.0 +4.4
KSH                               ePcP      PcP       03 54 30.8 +3.6
KSH                                PP       PP        03 55 31.4 +6.9
KSH                                S        S         04 00 58.5 +2.1
KSH                                SS       SS        04 04 40.3 +2.3
KSH                                pmax     pmax
      comp=Z,100nm,1.3s
KSH                                pmax     pmax
      comp=Z,250nm,4.9s
KSH                                LR       LR
      comp=Z,620nm,15.1s
KSH                                LR       LR
      comp=Z,610nm,16.3s
KSH                                LR       LR
      comp=Z,990nm,21.0s
AML   Almayashu         54.19 296  P        P         03 53 24.4 +0.7
      SNR=14
KKN   Kakani            54.49 275 eP        P         03 53 26.8 +0.9
      comp=Z,146nm,0.7s
PKIN  Phulchoki         54.54 275 eP        P         03 53 27.5 +1.2
      comp=Z,172nm,0.7s
PMG   Port Moresby      54.72 185  LR       LR        04 15 13.3
      comp=Z,355nm,20.6s,baz=354,slow=34
DMN   Daman             54.72 275 eP        P         03 53 28.4 +0.8
      comp=Z,168nm,0.8s
MNAS  Manas             54.75 297  P        P         03 53 27.3 -0.1
MNAS                               pmax     pmax
      comp=Z,58nm,0.9s
HSPB  Hornsund (broa    54.76 349 eP        P         03 53 27.0 +0.2
HSPB                               MLR      MLR
      comp=Z,1µm,19.1s
HSPB  Hornsund (broa    54.76 349 eP        P         03 53 26.7 -0.1
HSPB                               IAmb     IAmb      03 53 27.1
      comp=Z,49nm,1.1s
HSPB                               IAMs_20  IAMs_20   04 19 10.2
      comp=Z,1µm,18.6s
GKN   Gorkha            54.81 276 eP        P         03 53 28.9 +0.8
      comp=Z,212nm,0.8s
LLLB  Lillooet          54.99  51 eP        P         03 53 31.3 +2.3
      comp=Z,27nm,1.1s
HNR   Honiara           55.13 170  LR       LR        04 19 35.6
      comp=Z,1µm,18.0s,baz=342,slow=39
DANN  Dangsing          55.22 277 eP        P         03 53 32.3 +1.1
      comp=Z,338nm,0.8s
ARU   Arti              55.23 318 eP        P         03 53 28.4 -2.1
      comp=Z,30nm,0.9s
ARU                               ePcP      PcP       03 54 30.6 -0.3
ARU   Arti              55.23 318c iP       P         03 53 28.2 -2.3
ARU                                *PP      pP        03 53 42.7 -0.3
ARU                                                   03 54 29.1
ARU                                PPP      PPP       03 56 45.1
ARU                                S        S         04 01 07.3 -3.2
ARU                                                   04 03 09.2
ARU                                SS       SS        04 04 52.7 -1.7
ARU                                pmax     pmax
      comp=Z,33nm,1.0s
ARU                                MLR      MLR
      comp=Z,2µm,16.0s
SFK   Sufi-Kurgan       55.45 294  P        P         03 53 32.5 -0.1
SFK                                pmax     pmax
      comp=Z,115nm,1.1s
NLWA  Neilton Lookou    55.55  55 eP        P         03 53 34.2 +1.2
      comp=Z,26nm,1.1s
TULEG Thule             55.64  11 eP        P         03 53 30.0 -3.1
      comp=Z,34nm,0.9s
KK31  Karatay Array     55.66 299 eP        P         03 53 33.5 -0.4
KK31  Karatay Array     55.66 299 i P       P         03 53 32.9 -0.9
KK31                               pmax     pmax
      comp=Z,42nm,0.8s
KKAR  Karatay Array     55.66 299 eP        P         03 53 33.5 -0.3
KKAR  Karatay Array     55.66 299 eP        P         03 53 33.5 -0.3
KOLN  Koldanda          55.68 276 eP        P         03 53 35.3 +0.9
      comp=Z,191nm,0.8s
PYUN  Piuthan           55.91 277 eP        P         03 53 37.1 +1.1
      comp=Z,425nm,1.0s
B05A  Bryant            56.10  53  P        P         03 53 37.0 +0.2
      baz=302
BOK   Bokaro            56.55 271 eP        P         03 53 40.8 +0.3
D05A  Enumclaw          56.74  55 eP        P         03 53 44.5 +3.0
      comp=Z,35nm,1.1s
G03D  McMinnville, O    57.07  57  P        P         03 53 43.9  0.0
      baz=304
B08A  Colville Reser    57.60  52 eP        P         03 53 48.2 +0.6
      comp=Z,19nm,1.1s
I03D  Drain, OR         57.86  59  P        P         03 53 49.7 +0.3
      baz=304
PRGR  Permogore         57.87 327 eP        P         03 53 48.3 -0.9
PRGR                              e*PP      pP        03 53 59.5 -2.3
PRGR                              e                   03 54 38.9
PRGR                              eS        S         04 02 01.0  +16
PRGR                               pmax     pmax
      comp=Z,46nm,0.9s
DAG   Danmarks Havn     57.92 357 i P       P         03 53 47.6 -1.7
      comp=Z,61nm,1.0s
DAG   Danmarks Havn     57.92 357 i P       P         03 53 47.6 -1.7
DAG                                pmax     pmax
      comp=Z,61nm,1.0s
DDI   Dehra Dun         57.98 282 eP        P         03 53 51.8 +1.2
H04A  Detroit Lake      58.00  57 eP        P         03 53 50.8 +0.3
      comp=Z,35nm,0.9s
DHRM  DHARAMSHALA       58.03 285 eP        P         03 53 51.3 +0.2
SKLT  Songkhla          58.07 245  P        P         03 53 53.3 +2.1
      comp=Z,52nm,1.1s,comp=Z,958nm
APA   Apatity           58.11 337⇑iP        P         03 53 48.9 -1.8
APA                                pmax     pmax
      comp=Z,7.0nm,0.7s
SMLA  Simla             58.11 283 eP        P         03 53 51.1 -0.2
G05D  Wamic, OR         58.20  56  P        P         03 53 52.1 +0.3
      baz=304,SNR=12
KEV   Kevo              58.21 340 eP        P         03 53 49.9 -1.6
      comp=Z,25nm,0.8s
KEV   Kevo              58.21 340 eP        P         03 53 49.9 -1.6
KEV                                pmax     pmax
      comp=Z,25nm,0.8s
HAMF  Hammerfest        58.31 342 eP        P         03 53 51.5 -0.6
HAMF                               IAmb     IAmb      03 53 51.8
      comp=Z,30nm,1.0s
HAMF                               IAMs_20  IAMs_20   04 21 02.0
      comp=Z,1µm,19.3s
I04A  Tendick Farm,     58.37  58  P        P         03 53 53.1  0.0
      baz=305
AB31  Akbulak array     58.41 310  P        P         03 53 51.6 -1.6
AB31                               pmax     pmax
      comp=Z,9.0nm,0.4s
ABKAR Akbulak array     58.41 310 eP        P         03 53 52.0 -1.1
C09A  Chrisman Ranch    58.50  52 eP        P         03 53 54.5 +0.7
      comp=Z,14nm,0.9s
D08A  Wollman Farm,     58.56  53 eP        P         03 53 56.3 +2.0
      comp=Z,32nm,1.5s
HAWA  Hanford           58.58  54 eP        P         03 53 55.4 +1.0
      comp=Z,26nm,1.1s
G06A  Carlson Farm,     58.60  56 eP        P         03 53 56.6 +1.9
      comp=Z,146nm,2.0s
F07A  Phinny Hill Vi    58.64  55 eP        P         03 53 56.8 +1.9
      comp=Z,23nm,0.7s
I05D  Terrebonne, OR    58.70  57  P        P         03 53 55.3 -0.1
      baz=305
ARCES ARCESS Array B    58.73 341  P        P         03 53 54.3 -0.8
      comp=Z,33nm,0.9s,baz=36,slow=8.4,SNR=40
ARCES                              PcP      PcP       03 54 44.8 +0.3
      comp=Z,14nm,0.8s,baz=31,slow=5.4,SNR=6.4
ARCES ARCESS Array B    58.73 341 eP        P         03 53 54.0 -1.1
KULLO Kullorsuaq        58.74   9 i P       P         03 53 53.9 -1.2
      comp=Z,28nm,0.6s
KULLO Kullorsuaq        58.74   9 i P       P         03 53 53.9 -1.2
KULLO                              pmax     pmax
      comp=Z,28nm,0.6s
AKTO  Aktyubinsk        58.77 312  LR       LR        04 21 37.3
      comp=Z,5µm,18.0s,baz=49,slow=38
AKTO  Aktyubinsk        58.77 312  P        P         03 53 53.8 -1.9
AKTO                               pmax     pmax
      comp=Z,8.0nm,0.6s
J04D  Umpqua Nationa    58.86  58  P        P         03 53 56.6 -0.1
      baz=305
BWNR  Bhubaneshwar      58.88 268 eP        P         03 53 57.4 +0.6
PINE  Pine Mountain     59.25  57 eP        P         03 54 01.1 +1.8
      comp=Z,179nm,2.0s
NIL   Nilore            59.26 288 eP        P         03 54 00.0 +0.7
NIL   Nilore            59.26 288 eP        P         03 54 00.0 +0.7
E09A  Wood Farm, Sta    59.30  53 eP        P         03 54 00.3 +0.9
      comp=Z,45nm,1.4s
J05D  Fort Rock, OR     59.36  58  P        P         03 54 00.2 +0.1
      baz=305,SNR=6.8
YBH   Yreka Blue Hor    59.37  60  P        P         03 54 00.3 +0.2
      comp=Z,6.1nm,0.9s,baz=296,slow=2.3,SNR=7.1
YBH                                LR       LR        04 14 29.1
      comp=Z,459nm,21.9s,baz=306,slow=31
YBH   Yreka Blue Hor    59.37  60 eP        P         03 54 02.3 +2.2
      comp=Z,21nm,1.1s
M02C  Callahan          59.48  61  P        P         03 54 01.0 +0.3
      baz=306
KULM  Kulim             59.49 244 eP        P         03 54 02.6 +1.6
      comp=Z,54nm,1.0s
G08A  Pilot Rock        59.54  55 eP        P         03 54 02.4 +1.1
      comp=Z,41nm,1.6s
COEN  Coen              59.58 189 eP        P         03 54 03.7 +2.1
COEN                              epP       pP        03 54 16.3 +2.1
KTK1  Kautokeino        59.66 341 eP        P         03 54 00.7 -0.8
N02D  Trinity Center    59.81  61  P        P         03 54 03.2 +0.1
      baz=306
M04C  Macdoel           59.87  60  P        P         03 54 03.6  0.0
      baz=306
TRO   Tromso            60.12 343 eP        P         03 54 04.0 -0.6
TRO                                IAmb     IAmb      03 54 04.7
      comp=Z,100nm,0.9s
TRO                                IAMs_20  IAMs_20   04 24 37.1
      comp=Z,908nm,18.8s
F10A  Beach Ranch, E    60.14  54 eP        P         03 54 07.6 +2.3
      comp=Z,13nm,0.6s
WDC   Whiskeytown Da    60.14  61 eP        P         03 54 07.0 +1.8
      comp=Z,24nm,1.1s
WDC   Whiskeytown Da    60.14  61 eP        P         03 54 07.0 +1.8
WDC                                pmax     pmax
      comp=Z,24nm,1.1s
WALA  Waterton Lakes    60.15  49 eP        P         03 54 06.2 +0.8
      comp=Z,22nm,0.8s
KLMR  Klimovskoe        60.66 329 eP        P         03 54 05.5 -2.9
KLMR                               pmax     pmax
      comp=Z,26nm,1.0s
KLMR  Klimovskoe        60.66 329 eP        P         03 54 05.6 -2.9
KLMR                               AMP                03 54 08.7
      comp=Z,26nm,1.0s
KLMR                               LQ       LQ        04 15 55.9
KLMR                               LQ       LQ        04 15 55.9
KLMR                               LR       LR        04 19 10.7
JTMT  Jette             60.73  50 eP        P         03 54 10.4 +1.1
      comp=Z,15nm,0.9s
MOD   Modoc Plateau     60.73  59 eP        P         03 54 09.7 +0.2
      comp=Z,84nm,1.8s
BMO   Blue Mountains    60.75  55 eP        P         03 54 10.6 +1.1
      comp=Z,44nm,1.8s
BMO   Blue Mountains    60.75  55 eP        P         03 54 10.6 +1.1
BMO                                pmax     pmax
      comp=Z,44nm,1.7s
O03D  Paynes Creek      60.76  61  P        P         03 54 09.7 +0.1
      baz=307,SNR=8.3
J08A  Circle Bar Ran    60.95  57 eP        P         03 54 12.2 +1.3
      comp=Z,42nm,1.3s
WVOR  Wild Horse Val    61.41  57 eP        P         03 54 15.1 +1.1
      comp=Z,19nm,0.8s
WVOR  Wild Horse Val    61.41  57 eP        P         03 54 15.1 +1.1
WVOR                               pmax     pmax
      comp=Z,19nm,0.9s
MSO   Missoula          61.46  51  P        P         03 54 13.9 -0.3
      baz=307,SNR=14
MSO   Missoula          61.46  51 eP        P         03 54 15.2 +0.9
      comp=Z,38nm,1.2s
KBL   Kabul             61.51 291 eP        P         03 54 14.5 -0.4
      comp=Z,132nm,0.9s
KBL   Kabul             61.51 291 eP        P         03 54 14.5 -0.4
KBL                                pmax     pmax
```

	comp=Z,130nm,0.9s						
BEKR	**Beckworth**	**61.91**	**61**	*e*P	**P**	**03 54 18.3**	**+0.8**
	comp=Z,28nm,1.1s						
AFDM	**Forest Hills D**	**62.08**	**62**	*e*P	**P**	**03 54 19.9**	**+1.4**
	comp=Z,26nm,1.3s						
SUMG	**Summit**	**62.09**	**3**	*e*P	**P**	**03 54 18.3**	**-0.2**
	comp=Z,229nm,1.5s						
SUMG	**Summit**	**62.09**	**3**	*i* P	**P**	**03 54 18.7**	**+0.2**
	comp=Z,207nm,1.5s						
SUMG	**Summit**	**62.09**	**3**	*i* P	**P**	**03 54 18.7**	**+0.2**
SUMG				pmax	pmax		
	comp=Z,210nm,1.5s						
STEI	**Steigen**	**62.29**	**343**	*e*P	**P**	**03 54 18.3**	**-1.0**
STEI				IAmb	IAmb	03 54 19.2	
	comp=Z,52nm,1.2s						
LOF	**Lofoten**	**62.46**	**344**	*e*P	**P**	**03 54 20.2**	**-0.3**
LOF				IAmb	IAmb	03 54 21.2	
	comp=Z,142nm,1.1s						
MFID	**Camas Ranch**	**62.46**	**55**	*e*P	**P**	**03 54 21.2**	**+0.2**
	comp=Z,28nm,1.5s						
FFC	**Flin Flon**	**62.47**	**39**	*e*P	**P**	**03 54 21.2**	**+0.4**
	comp=Z,21nm,0.9s						
FFC	**Flin Flon**	**62.47**	**39**	*e*P	**P**	**03 54 21.2**	**+0.4**
FFC				pmax	pmax		
	comp=Z,21nm,1.0s						
PSI	**Prapat**	**62.49**	**243**	P	**P**	**03 54 22.0**	**+0.4**
	comp=Z,14nm,0.9s,baz=359,slow=2.5,SNR=6.2						
PSI				LR	LR	04 23 10.8	
	comp=Z,253nm,18.1s,baz=88,slow=38						
PSI	**Prapat**	**62.49**	**243**	*e*P	**P**	**03 54 22.2**	**+0.6**
	comp=Z,21nm,1.0s						
PSI	**Prapat**	**62.49**	**243**	P	**P**	**03 54 22.0**	**+0.4**
PSI				pmax	pmax		
	comp=Z,14nm,0.9s						
PSI				MLR	MLR		
	comp=Z,253nm,18.1s						
PAHR	**Pah Rah Range**	**62.60**	**60**	*e*P	**P**	**03 54 22.9**	**+0.8**
	comp=Z,68nm,1.6s						
VCNR	**Virginia City**	**62.69**	**61**	*e*P	**P**	**03 54 25.3**	**+2.6**
	comp=Z,36nm,1.3s						
PNTR	**Pine Nut**	**62.84**	**61**	*e*P	**P**	**03 54 25.5**	**+1.7**
	comp=Z,28nm,0.8s						
BHPL	**Bhopal**	**62.85**	**276**	*e*P	**P**	**03 54 23.0**	**-0.8**
LRM	**Limekiln Ridge**	**62.89**	**51**	*e*P	**P**	**03 54 24.9**	**+0.8**
CMB	**Columbia Colle**	**63.00**	**62**	*e*P	**P**	**03 54 25.6**	**+0.9**
	comp=Z,24nm,1.1s						
CMB	**Columbia Colle**	**63.00**	**62**	*e*P	**P**	**03 54 25.6**	**+0.9**
CMB				pmax	pmax		
	comp=Z,24nm,1.1s						
JMIC	**Jan Mayen**	**63.01**	**353**	*e*P	**P**	**03 54 24.7**	**+0.6**
DLMT	**Dillon**	**63.10**	**52**	*e*P	**P**	**03 54 26.8**	**+1.5**
	comp=Z,58nm,1.9s						
YERR	**Yerington**	**63.13**	**61**	*e*P	**P**	**03 54 28.2**	**+2.5**
	comp=Z,51nm,1.1s						
HLID	**Hailey**	**63.19**	**54**	P	**P**	**03 54 25.8**	**-0.1**
	baz=308,SNR=10.0						
HLID	**Hailey**	**63.19**	**54**	*e*P	**P**	**03 54 26.8**	**+0.9**
	comp=Z,19nm,1.3s						
MCMT	**McKenzie Canyo**	**63.29**	**52**	*e*P	**P**	**03 54 27.8**	**+1.0**
WAKR	**Walker**	**63.30**	**61**	*e*P	**P**	**03 54 28.6**	**+1.8**
	comp=Z,16nm,0.9s						
BMN	**Battle Mountai**	**63.47**	**59**	*e*P	**P**	**03 54 28.9**	**+1.1**
	comp=Z,118nm,2.0s						
BMN	**Battle Mountai**	**63.47**	**59**	*e*P	**P**	**03 54 28.9**	**+1.1**
BMN				pmax	pmax		
	comp=Z,120nm,2.0s						
BOZ	**Bozeman (W)**	**63.48**	**51**	P	**P**	**03 54 27.6**	**-0.2**
	baz=309,SNR=19						
BOZ	**Bozeman (W)**	**63.48**	**51**	*e*P	**P**	**03 54 28.8**	**+0.9**
	comp=Z,21nm,1.1s						
BOZ	**Bozeman (W)**	**63.48**	**51**	*e*P	**P**	**03 54 28.8**	**+0.9**
BOZ				pmax	pmax		
	comp=Z,21nm,1.1s						
KVN	**Kaiserville**	**63.79**	**60**	*e*P	**P**	**03 54 30.1**	**+0.1**
	comp=Z,26nm,1.0s						
KVN	**Kaiserville**	**63.79**	**60**	*e*P	**P**	**03 54 30.2**	**+0.1**
KVN				pmax	pmax		
	comp=Z,26nm,1.0s						
RYN	**Ryan**	**63.79**	**61**	*e*P	**P**	**03 54 32.4**	**+2.4**
	comp=Z,75nm,1.9s						
MOR8	**Moi Rana**	**63.94**	**342**	*e*P	**P**	**03 54 28.2**	**-2.1**
MOR8				IAmb	IAmb	03 54 29.4	
	comp=Z,116nm,0.9s						
MOR8				IAMs_20	IAMs_20	04 24 53.8	
	comp=Z,1µm,19.9s						
KONS	**Konsvik**	**63.94**	**343**	*e*P	**P**	**03 54 29.9**	**-0.4**
KONS				IAmb	IAmb	03 54 30.7	
	comp=Z,21nm,0.8s						
NV01	**Mina Array Sit**	**64.05**	**61**	*e*P	**P**	**03 54 32.3**	**+0.5**
NVAR	**Mina Array Bea**	**64.05**	**61**	P	**P**	**03 54 32.5**	**+0.8**
	comp=Z,6.1nm,0.7s,baz=292,slow=6.9,SNR=30						
NVAR				pP	**pP**	**03 54 45.3**	**+0.8**
	comp=Z,10nm,0.7s,baz=294,slow=6.8,SNR=13						
NVAR				LR	LR	04 19 45.4	
	comp=Z,458nm,20.1s,baz=58,slow=33						
MDPB	**Devils Postpil**	**64.06**	**62**	*e*P	**P**	**03 54 33.7**	**+1.7**
	comp=Z,14nm,1.0s						
QLMT	**Earthquake Lak**	**64.07**	**52**	*e*P	**P**	**03 54 33.0**	**+1.2**
OMMB	**Old Mammoth Mi**	**64.12**	**62**	*e*P	**P**	**03 54 34.8**	**+2.4**
	comp=Z,19nm,1.3s						
NV11	**Mina Array Sit**	**64.14**	**61**	*e*P	**P**	**03 54 33.2**	**+1.0**
	comp=Z,3.0nm,1.5s						
YHB	**Horse Butte**	**64.25**	**52**	*e*P	**P**	**03 54 34.7**	**+1.6**
	comp=Z,18nm,1.1s						
GCMT	**Greycliff**	**64.43**	**50**	*e*P	**P**	**03 54 35.4**	**+1.3**
YMR	**Madison River**	**64.43**	**52**	*e*P	**P**	**03 54 36.4**	**+2.2**
	comp=Z,15nm,1.0s						
ELK	**Elko**	**64.46**	**57**	LR	LR	04 22 41.7	
	comp=Z,454nm,18.2s,baz=20,slow=36						
ILULI	**Ilulissat**	**64.46**	**9**	*e*P	**P**	**03 54 32.9**	**-0.8**
	comp=Z,27nm,0.7s						
ILULI	**Ilulissat**	**64.46**	**9**	*e*P	**P**	**03 54 32.9**	**-0.8**
ILULI				pmax	pmax		
	comp=Z,27nm,0.7s						
YFT	**Old Faithful**	**64.64**	**52**	*e*P	**P**	**03 54 39.8**	**+4.1**
	comp=Z,59nm,1.8s						
PUL	**Pulkovo**	**64.67**	**331**	*e*P	**P**	**03 54 35.9**	**+0.8**
PUL	**Pulkovo**	**64.67**	**331**⇓	*e*P	**P**	**03 54 35.9**	**+0.8**
PUL				pmax	pmax		
	comp=Z,102nm,0.9s						
FIA1	**FINESS Array S**	**64.75**	**334**	*e*P	**P**	**03 54 34.2**	**-1.4**
	comp=Z,64nm,0.8s						
FINES	**FINESS Array B**	**64.75**	**334**	P	**P**	**03 54 34.2**	**-1.5**
	comp=Z,55nm,0.9s,baz=31,slow=8.9,SNR=85						
FINES				LR	LR	04 27 29.6	
	comp=Z,1µm,18.5s,baz=30,slow=40						
MOS	**Moscow**	**64.89**	**325**	*e*P	**P**	**03 54 36.3**	**-0.4**
MOS				*e*		03 55 04.0	
MOS				MLR	MLR		
	comp=Z,1µm,16.0s						
IMW	**Indian Meadow**	**64.94**	**52**	*e*P	**P**	**03 54 39.2**	**+1.6**
	comp=Z,15nm,1.1s						
FLWY	**Flagg Ranch**	**64.95**	**52**	*e*P	**P**	**03 54 39.4**	**+1.8**
	comp=Z,26nm,1.4s						
FXWY	**Fox Creek**	**65.05**	**53**	*e*P	**P**	**03 54 39.7**	**+1.4**
	comp=Z,17nm,1.3s						
RLMT	**Red Lodge**	**65.07**	**50**	P	**P**	**03 54 38.1**	**-0.3**
	baz=310,SNR=6.8						
RLMT	**Red Lodge**	**65.07**	**50**	*e*P	**P**	**03 54 39.6**	**+1.2**
	comp=Z,30nm,1.4s						
MOOW	**Moose Ponds**	**65.14**	**52**	*e*P	**P**	**03 54 40.2**	**+1.3**
	comp=Z,24nm,1.4s						
VES	**Vestal, Richgr**	**65.18**	**64**	P	**P**	**03 54 39.2**	**+0.3**
	baz=309						
TPAW	**Teton Pass**	**65.19**	**53**	*e*P	**P**	**03 54 40.7**	**+1.5**
	comp=Z,22nm,1.0s						
HVU	**Hansel Valley**	**65.24**	**55**	*e*P	**P**	**03 54 42.7**	**+3.3**
	comp=Z,16nm,1.1s						
HVU	**Hansel Valley**	**65.24**	**55**	*e*P	**P**	**03 54 42.7**	**+3.3**
HVU				pmax	pmax		
	comp=Z,16nm,1.0s						
LOHW	**Long Hollow**	**65.31**	**52**	*e*P	**P**	**03 54 41.3**	**+1.4**
	comp=Z,35nm,1.5s						
SNOW	**Snow King Moun**	**65.32**	**53**	*e*P	**P**	**03 54 41.6**	**+1.6**
	comp=Z,45nm,1.5s						
REDW	**Red Top Meadow**	**65.33**	**53**	*e*P	**P**	**03 54 41.5**	**+1.4**
	comp=Z,23nm,1.2s						
CTA	**Charters Tower**	**65.37**	**185**	P	**P**	**03 54 40.2**	**+0.1**
	comp=Z,3.2nm,0.7s,baz=1.8,slow=9.6,SNR=5.7						
CTA				pP	**pP**	**03 54 53.7**	**+0.8**
	comp=Z,11nm,0.9s,baz=353,slow=10,SNR=8.0						
CTA				LR	LR	04 22 29.5	
	comp=Z,455nm,19.7s,baz=344,slow=35						
CTAO	**Charters Tower**	**65.37**	**185**	*e*P	**P**	**03 54 41.7**	**+1.6**
	comp=Z,16nm,0.9s						
CTAO	**Charters Tower**	**65.37**	**185**	*e*P	**P**	**03 54 41.7**	**+1.6**
CTAO				pmax	pmax		
	comp=Z,16nm,1.0s						
CWC	**Cottonwood Cre**	**65.43**	**62**	P	**P**	**03 54 40.9**	**+0.1**
	baz=310						
GRAC	**Grapevine Rang**	**65.53**	**62**	P	**P**	**03 54 41.1**	**-0.2**
	baz=310						
DGMT	**Dagmar**	**65.53**	**45**	P	**P**	**03 54 40.8**	**-0.2**
	baz=312						
DGMT	**Dagmar**	**65.53**	**45**	*e*P	**P**	**03 54 41.7**	**+0.7**
	comp=Z,26nm,1.0s						
AHID	**Auburn Hatcher**	**65.57**	**53**	*e*P	**P**	**03 54 41.8**	**+0.2**
	comp=Z,47nm,1.8s						
LAO	**LASA Array**	**65.67**	**48**	P	**P**	**03 54 41.4**	**-0.6**
	baz=311						
LAO	**LASA Array**	**65.67**	**48**	*e*P	**P**	**03 54 43.1**	**+1.1**
	comp=Z,20nm,0.9s						
ISA	**Isabella, Lake**	**65.68**	**63**	P	**P**	**03 54 42.5**	**+0.2**
	baz=310						
ISA	**Isabella, Lake**	**65.68**	**63**	*e*P	**P**	**03 54 43.4**	**+1.2**
	comp=Z,9.1nm,1.1s						
ISA	**Isabella, Lake**	**65.68**	**63**	*e*P	**P**	**03 54 43.4**	**+1.2**
ISA				pmax	pmax		
	comp=Z,9.0nm,1.1s						
R11A	**Troy Canyon, C**	**65.76**	**59**	P	**P**	**03 54 42.8**	**-0.1**
	baz=310,SNR=14						
R11A	**Troy Canyon, C**	**65.76**	**59**	*e*P	**P**	**03 54 43.0**	**+0.1**
	comp=Z,52nm,1.8s						
OBN	**Obninsk**	**65.76**	**325**	*e*P	**P**	**03 54 41.7**	**-0.6**
OBN	**Obninsk**	**65.76**	**325**⇑	*e*P	**P**	**03 54 41.4**	**-0.9**
OBN				*e*		03 55 12.7	
OBN				*i*		03 57 06.5	
OBN				*i* S	**S**	**04 03 19.1**	**-6.0**
OBN				pmax	pmax		
	comp=Z,42nm,1.1s						
OBN				MLR	MLR		
	comp=Z,1µm,16.0s						
DAC	**Darwin (Calif)**	**65.84**	**62**	*e*P	**P**	**03 54 45.0**	**+1.6**
	comp=Z,16nm,1.3s						
DAC	**Darwin (Calif)**	**65.84**	**62**	*e*P	**P**	**03 54 45.0**	**+1.6**
DAC				pmax	pmax		
	comp=Z,16nm,1.2s						
NSS	**Namsos**	**65.89**	**342**	*e*P	**P**	**03 54 42.2**	**-0.8**
NSS				IAmb	IAmb	03 54 43.0	
	comp=Z,38nm,0.9s						
NSS				IAMs_20	IAMs_20	04 26 51.9	
	comp=Z,2µm,19.4s						
HYB	**Hyderabad**	**65.90**	**271**	*e*P	**P**	**03 54 43.9**	**+0.1**
HYB				IAmb	IAmb	03 54 45.0	
	comp=Z,23nm,0.7s						
MPMC	**Manual Prospec**	**66.05**	**62**	P	**P**	**03 54 44.8**	**0.0**
	baz=310,SNR=7.9						
HWUT	**Hardware Ranch**	**66.05**	**55**	*e*P	**P**	**03 54 45.9**	**+1.2**
	comp=Z,22nm,1.3s						
FURC	**Furnace Creek,**	**66.17**	**62**	P	**P**	**03 54 45.5**	**+0.3**
	baz=310,SNR=10						
DUG	**Dugway, Tooele**	**66.23**	**56**	P	**P**	**03 54 45.4**	**-0.5**
	baz=310,SNR=8.5						
DUG	**Dugway, Tooele**	**66.23**	**56**	*e*P	**P**	**03 54 46.8**	**+1.0**
	comp=Z,35nm,1.3s						
DUG	**Dugway, Tooele**	**66.23**	**56**	*e*P	**P**	**03 54 46.8**	**+1.0**
DUG				pmax	pmax		
	comp=Z,35nm,1.2s						
TPNV	**Topopah Spring**	**66.25**	**61**	P	**P**	**03 54 46.0**	**+0.1**
	baz=310,SNR=14						
TPNV	**Topopah Spring**	**66.25**	**61**	*e*P	**P**	**03 54 46.3**	**+0.3**
	comp=Z,27nm,1.1s						
TPNV	**Topopah Spring**	**66.25**	**61**	*e*P	**P**	**03 54 46.3**	**+0.3**
TPNV				pmax	pmax		
	comp=Z,27nm,1.1s						
VRH	**Novokhopyorsk**	**66.30**	**320**	*e*P	**P**	**03 54 44.1**	**-1.7**
VRH				pmax	pmax		
	comp=Z,80nm,1.1s						
VRH				pmax	pmax		
	comp=Z,80nm,1.2s						
VRH				MLR	MLR		
	comp=Z,3µm,19.0s						
GEYT	**Alibeck**	**66.31**	**300**	P	**P**	**03 54 46.2**	**-0.1**
	comp=Z,41nm,0.9s,baz=70,slow=8.3,SNR=26						
GEYT				LR	LR	04 25 43.6	
	comp=Z,658nm,18.1s,baz=265,slow=38						
GYA0B	**ALIBECK ARRAY**	**66.31**	**300**	*e*P	**P**	**03 54 47.1**	**+0.9**
	comp=Z,92nm,0.9s						
BW06	**Boulder Array**	**66.44**	**53**	P	**P**	**03 54 46.4**	**-0.8**
	baz=311,SNR=9.1						
BW06	**Boulder Array**	**66.44**	**53**	*e*P	**P**	**03 54 47.0**	**-0.2**
	comp=Z,14nm,1.1s						
PD31	**Pinedale Array**	**66.44**	**53**	*e*P	**P**	**03 54 47.6**	**+0.4**
PDAR	**Pinedale Array**	**66.44**	**53**	P	**P**	**03 54 47.2**	**0.0**
	comp=Z,3.4nm,0.9s,baz=265,slow=1.8,SNR=23						
PDAR				LR	LR	04 24 32.1	
	comp=Z,282nm,19.4s,baz=341,slow=37						
TCUT	**Toone Canyon**	**66.46**	**55**	*e*P	**P**	**03 54 49.7**	**+2.4**
	comp=Z,60nm,1.7s						
EDW2	**Edwards Air Fo**	**66.48**	**64**	P	**P**	**03 54 47.7**	**+0.3**
	baz=310,SNR=6.6						
CTU	**Camp Tracy**	**66.53**	**55**	*e*P	**P**	**03 54 51.9**	**+4.1**
CTU				*e*pP	**pP**	**03 55 01.2**	**+0.6**
CTU				*e*PcP	**PcP**	**03 55 12.3**	**-4.7**
SFJD	**Kangerlussuaq**	**66.64**	**9**	LR	LR	04 27 56.4	
	comp=Z,645nm,18.4s,baz=342,slow=40						
PSUT	**Pine Spring**	**66.69**	**58**	*e*P	**P**	**03 54 50.5**	**+1.6**
	comp=Z,10nm,1.0s						
NLU	**North Lily Min**	**66.82**	**56**	*e*P	**P**	**03 54 52.0**	**+2.4**
	comp=Z,21nm,1.2s						
VSU	**Vasula**	**66.86**	**332***c*	*i*P	**P**	**03 54 48.4**	**-0.9**
VSU				pmax	pmax		
	comp=Z,147nm,0.9s						
WRAB	**Tennant Creek**	**66.89**	**198**	*e*P	**P**	**03 54 50.0**	**+0.1**
WRAB				*e*pP	**pP**	**03 55 03.4**	**+0.6**
WRAB	**Tennant Creek**	**66.89**	**198**	*e*P	**P**	**03 54 50.0**	**+0.1**
WRAB				pmax	pmax		
	comp=Z,80nm,1.0s						
SHOC	**Shoshone, Teco**	**66.90**	**62**	P	**P**	**03 54 50.0**	**0.0**
	baz=310						
WB2	**Warramunga Arr**	**66.90**	**198**	*e*P	**P**	**03 54 49.1**	**-0.8**
WRA	**Warramunga Arr**	**66.90**	**198**	P	**P**	**03 54 49.5**	**-0.4**
	comp=Z,12nm,0.8s,baz=17,slow=6.8,SNR=43						
WRA				pP	**pP**	**03 55 02.9**	**+0.1**
	comp=Z,56nm,0.9s,baz=16,slow=6.8,SNR=40						
WRA				LR	LR	04 22 40.3	
	comp=Z,340nm,21.7s,baz=10.0,slow=35						
GSC	**Goldstone, Bar**	**66.95**	**63**	P	**P**	**03 54 50.3**	**-0.1**
	baz=310						
MPU	**Maple Canyon**	**67.04**	**56**	*e*P	**P**	**03 54 52.1**	**+1.0**
	comp=Z,70nm,1.9s						
BFSC	**Mount Baldy Ra**	**67.10**	**64**	P	**P**	**03 54 51.3**	**-0.1**
	baz=310						
SHPR	**Sheep Range**	**67.20**	**61**	*e*P	**P**	**03 54 53.0**	**+1.0**
	comp=Z,25nm,1.1s						
TBLU	**Trondheim**	**67.38**	**342**	*e*P	**P**	**03 54 51.2**	**-1.3**
TBLU				IAmb	IAmb	03 54 51.8	
	comp=Z,61nm,0.9s						
TUQ	**Turquoise Moun**	**67.42**	**62**	P	**P**	**03 54 53.5**	**+0.1**
	baz=311,SNR=8.7						
VSR	**Storozhevoye**	**67.44**	**321**	*e*P	**P**	**03 54 51.2**	**-1.9**
VSR				pmax	pmax		
	comp=Z,60nm,1.1s						
VSR				MLR	MLR		
	comp=Z,4µm,20.0s						
FITZ	**Fitzroy Crossi**	**67.45**	**207**	P	**P**	**03 54 54.3**	**+0.9**
	comp=Z,7.5nm,0.9s,baz=75,slow=4.1,SNR=8.3						
FITZ				pP	**pP**	**03 55 07.8**	**+1.6**
	comp=Z,17nm,0.8s,baz=20,slow=7.6,SNR=12						
HEC	**Hector,Ludlow**	**67.56**	**63**	P	**P**	**03 54 54.4**	**+0.2**
	baz=311,SNR=6.3						
VORD	**Divnogorie**	**67.56**	**321**	*e*P	**P**	**03 54 52.0**	**-1.8**
VORD				pmax	pmax		
	comp=Z,30nm,0.7s						
VORD				MLR	MLR		
	comp=Z,4µm,17.0s						
CCUT	**Cedar City**	**67.62**	**59**	*e*P	**P**	**03 54 55.8**	**+1.0**
	comp=Z,13nm,1.0s						
MSU	**Marysvale**	**67.70**	**57**	*e*P	**P**	**03 54 56.6**	**+1.3**
MSU	**Marysvale**	**67.70**	**57**	*e*P	**P**	**03 54 56.6**	**+1.3**
SZCU	**Shurtz Canyon**	**67.75**	**59**	*e*P	**P**	**03 54 56.4**	**+0.8**
	comp=Z,38nm,1.7s						
AFI	**Afiamalu**	**67.76**	**141**	LR	LR	04 26 32.7	
	comp=Z,528nm,18.0s,baz=322,slow=38						
TMUT	**Trail Mountain**	**67.76**	**56**	*e*P	**P**	**03 54 57.0**	**+1.3**
	comp=Z,13nm,1.0s						
MURC	**Murrieta**	**67.81**	**64**	P	**P**	**03 54 56.1**	**+0.3**
	baz=311						
MTPU	**Mount Pierson**	**68.00**	**58**	*e*P	**P**	**03 54 58.8**	**+1.4**
	comp=Z,41nm,1.7s						
GMRC	**Granite Mounta**	**68.01**	**62**	P	**P**	**03 54 57.2**	**+0.1**
	baz=311						
LCMT	**Little Creek M**	**68.04**	**59**	*e*P	**P**	**03 54 58.1**	**+0.8**
	comp=Z,17nm,1.0s						
P18A	**Preston Nutter**	**68.10**	**55**	*e*P	**P**	**03 54 59.6**	**+1.7**
	comp=Z,48nm,1.7s						
LDFC	**Landfair**	**68.16**	**62**	*e*P	**P**	**03 54 58.5**	**+0.5**
	comp=Z,55nm,1.1s						
K22A	**Casper**	**68.19**	**51**	P	**P**	**03 54 57.8**	**-0.4**
	baz=312						
K22A	**Casper**	**68.19**	**51**	*e*P	**P**	**03 54 58.8**	**+0.5**
	comp=Z,48nm,1.5s						
FRD	**Ford Ranch, An**	**68.25**	**64**	P	**P**	**03 54 58.5**	**-0.2**
	baz=311						
ULM	**Lac du Bonnet**	**68.26**	**40**	P	**P**	**03 54 57.1**	**-1.2**
	comp=Z,4.8nm,0.8s,baz=314,slow=8.0,SNR=4.8						
ULM				LR	LR	04 27 42.7	
	comp=Z,557nm,18.7s,baz=333,slow=38						
ULM	**Lac du Bonnet**	**68.26**	**40**	*e*P	**P**	**03 54 57.8**	**-0.5**
	comp=Z,6.1nm,0.8s						
ULM	**Lac du Bonnet**	**68.26**	**40**	*e*P	**P**	**03 54 57.8**	**-0.5**
ULM				pmax	pmax		
	comp=Z,6.0nm,0.9s						
PFO	**Pinyon Flats O**	**68.27**	**64**	P	**P**	**03 54 58.9**	**+0.2**
	baz=311						
PFO	**Pinyon Flats O**	**68.27**	**64**	*e*P	**P**	**03 54 59.1**	**+0.3**
	comp=Z,22nm,1.9s						
PFO	**Pinyon Flats O**	**68.27**	**64**	*e*P	**P**	**03 54 59.1**	**+0.3**
PFO				pmax	pmax		
	comp=Z,22nm,1.9s						
SRU	**San Rafael Swe**	**68.28**	**56**	*e*P	**P**	**03 54 59.4**	**+0.5**
	comp=Z,19nm,1.0s						
SRU	**San Rafael Swe**	**68.28**	**56**	*e*P	**P**	**03 54 59.4**	**+0.5**
SRU				pmax	pmax		
	comp=Z,19nm,1.0s						
KNB	**Kanab**	**68.29**	**59**	*e*P	**P**	**03 55 00.2**	**+1.3**
	comp=Z,27nm,1.0s						
KNB	**Kanab**	**68.29**	**59**	*e*P	**P**	**03 55 00.3**	**+1.3**
KNB				pmax	pmax		
	comp=Z,27nm,1.0s						
BELC	**Belle Mtn. Jos**	**68.30**	**63**	P	**P**	**03 54 58.9**	**-0.1**
	baz=311						
PKCU	**Pink Cliffs**	**68.32**	**58**	*e*P	**P**	**03 55 01.3**	**+2.0**
	comp=Z,44nm,1.6s						
RWWY	**Rawlins**	**68.46**	**52**	*e*P	**P**	**03 55 01.6**	**+1.6**
RWWY				*e*PcP	**PcP**	**03 55 23.8**	**-1.3**
POO	**Poona**	**68.46**	**275**	*e*P	**P**	**03 54 59.8**	**-0.3**
POO				IAmb	IAmb	03 55 01.4	
	comp=Z,36nm,0.5s						
POO	**Poona**	**68.46**	**275**⇓	*i*P	**P**	**03 54 56.0**	**-4.1**
	comp=Z,100nm,1.0s						
RSSD	**Black Hills**	**68.54**	**49**	P	**P**	**03 54 59.9**	**-0.5**
	baz=313						
RSSD	**Black Hills**	**68.54**	**49**	*e*P	**P**	**03 55 00.1**	**-0.3**
	comp=Z,16nm,1.1s						
RSSD	**Black Hills**	**68.54**	**49**	*e*P	**P**	**03 55 00.1**	**-0.3**
RSSD				pmax	pmax		
	comp=Z,16nm,1.1s						
DZM	**Mont Dzumac**	**68.54**	**165**	LR	LR	04 24 28.2	
	comp=Z,1µm,18.2s,baz=24,slow=35						
DZM	**Mont Dzumac**	**68.54**	**165**	*e*S	**S**	**04 04 02.8**	**+3.5**
	comp=Z,146nm,24.6s						
DZM	**Mont Dzumac**	**68.54**	**165**	*e*LR	LR	04 15 49.9	
	comp=Z,1µm,23.3s						
MOL	**Molde**	**68.56**	**343**	*e*P	**P**	**03 55 00.4**	**+0.5**
MOL				IAmb	IAmb	03 55 00.6	
	comp=Z,126nm,1.8s						
DOMB	**Dombas**	**68.71**	**342**	*e*P	**P**	**03 55 00.5**	**-0.4**
DOMB				IAmb	IAmb	03 55 01.3	
	comp=Z,52nm,0.9s						
DOMB				IAMs_20	IAMs_20	04 29 05.4	
	comp=Z,1µm,19.3s						
IRM	**Iron Mountain**	**68.74**	**63**	P	**P**	**03 55 01.5**	**-0.1**
	baz=311,SNR=6.7						
MONP2	**Monument Peak**	**68.76**	**64**	P	**P**	**03 55 01.6**	**-0.3**
	baz=311						
BC3	**Big Chuckawall**	**68.87**	**63**	P	**P**	**03 55 02.2**	**-0.3**
	baz=311						
W13A	**Hualapai Mount**	**68.90**	**61**	*e*P	**P**	**03 55 03.5**	**+0.7**
	comp=Z,9.4nm,1.0s						
NC303	**NORSAR Array S**	**68.91**	**341**	*e*P	**P**	**03 55 01.5**	**-0.7**
NC303	**NORSAR Array S**	**68.91**	**341**	*e*P	**P**	**03 55 01.7**	**-0.5**
NC303				IAmb	IAmb	03 55 02.8	
	comp=Z,152nm,1.2s						
NC303				IAMs_20	IAMs_20	04 30 09.7	
	comp=Z,14µm,18.9s						
O20A	**White River Ci**	**68.92**	**54**	P	**P**	**03 55 02.1**	**-0.7**
	baz=312						
O20A	**White River Ci**	**68.92**	**54**	*e*P	**P**	**03 55 03.8**	**+1.0**
	comp=Z,22nm,1.4s						
NC405	**NORSAR Array S**	**68.93**	**340**	*e*P	**P**	**03 55 01.6**	**-0.6**
U15A	**North Rim**	**69.00**	**59**	*e*P	**P**	**03 55 04.5**	**+1.0**
	comp=Z,78nm,1.8s						
NC204	**NORSAR Array S**	**69.01**	**341**	*e*P	**P**	**03 55 02.2**	**-0.7**
NC204	**NORSAR Array S**	**69.01**	**341**	*e*P	**P**	**03 55 02.5**	**-0.4**
NC204				IAmb	IAmb	03 55 03.6	
	comp=Z,157nm,1.0s						
NC204				IAMs_20	IAMs_20	04 30 14.6	
	comp=Z,13µm,18.0s						
AKN	**Aaknes**	**69.02**	**343**	*e*P	**P**	**03 55 03.9**	**+1.0**
AKN				IAmb	IAmb	03 55 05.8	
	comp=Z,69nm,1.1s						
ANGG	**Ammassalik, Gr**	**69.07**	**4**	*e*P	**P**	**03 55 03.2**	**+0.2**
	comp=Z,22nm,0.9s						
NB201	**NORSAR Array S**	**69.08**	**341**	*e*P	**P**	**03 55 02.7**	**-0.6**
NB2	**NORSAR Subarra**	**69.11**	**341**	P	**P**	**03 55 02.6**	**-0.9**
	comp=Z,114nm,1.0s,baz=29,slow=6.5						
NB2	**NORSAR Subarra**	**69.11**	**341**	P	**P**	**03 55 02.6**	**-0.9**
	baz=29,slow=6.5						
NOA	**NORSAR Array B**	**69.11**	**341**	LR	LR	04 30 37.8	
	comp=Z,809nm,18.8s,baz=30,slow=40						
IKP	**In-Ko-Pah, Jac**	**69.12**	**64**	P	**P**	**03 55 03.8**	**-0.2**
	baz=311						
IZAR	**Zarasai**	**69.16**	**330**	*e*P	**P**	**03 55 03.7**	**-0.1**
IZAR				IAmb	IAmb	03 55 04.8	
	comp=Z,25nm,0.8s						
NBO00	**NORSAR Array S**	**69.22**	**341**	*e*P	**P**	**03 55 04.1**	**0.0**
PDMCI	**Parker Dam,Lak**	**69.27**	**62**	P	**P**	**03 55 04.6**	**-0.2**
	baz=312						
HFS	**Hagfors**	**69.30**	**339**	P	**P**	**03 55 03.9**	**-0.7**
	comp=Z,63nm,0.7s,baz=54,slow=5.7,SNR=114						
HFS				LR	LR	04 27 55.6	
	comp=Z,900nm,21.7s,baz=22,slow=38						
NC602	**NORSAR Array S**	**69.30**	**340**	*e*P	**P**	**03 55 04.0**	**-0.6**
IDID	**Didziasalis**	**69.33**	**330**	*e*P	**P**	**03 55 04.7**	**-0.1**
IDID				IAmb	IAmb	03 55 06.0	
	comp=Z,44nm,1.0s						
ISAL	**Salakas**	**69.34**	**330**	*e*P	**P**	**03 55 04.7**	**-0.2**
ISAL				IAmb	IAmb	03 55 06.2	
	comp=Z,43nm,1.0s						
NAO01	**NORSAR Array S**	**69.36**	**341**	*e*P	**P**	**03 55 04.2**	**-0.8**
Y12C	**Blythe**	**69.39**	**63**	P	**P**	**03 55 05.9**	**+0.3**
	baz=312						
Y12C	**Blythe**	**69.39**	**63**	*e*P	**P**	**03 55 06.9**	**+1.3**
	comp=Z,18nm,1.1s						
A33A	**Warroad**	**69.42**	**40**	P	**P**	**03 55 05.0**	**-0.5**
	baz=316,SNR=10						
IIGN	**Ignalina**	**69.48**	**330**	*e*P	**P**	**03 55 05.6**	**-0.1**
IIGN				IAmb	IAmb	03 55 07.0	
	comp=Z,59nm,1.1s						
PV09	**Paradox Valley**	**69.50**	**56**	*e*P	**P**	**03 55 07.2**	**+0.6**
MICGM	**Minsk**	**69.56**	**329**⇓	*e*P	**P**	**03 55 06.0**	**-0.2**
MICGM				PM		03 55 07.0	
	comp=Z,0.4nm,0.8s						
MNK	**Minsk**	**69.56**	**329**	*e*P	**P**	**03 55 06.0**	**-0.2**
NACGM	**Naroch**	**69.64**	**330**	*e*P	**P**	**03 55 03.0**	**-3.7**
NACGM				PM		03 55 07.0	
	comp=Z,0.3nm,1.0s						
AGMN	**Agassiz Nation**	**69.66**	**41**	P	**P**	**03 55 06.2**	**-0.8**
	baz=316,SNR=9.2						
AGMN	**Agassiz Nation**	**69.66**	**41**	*e*P	**P**	**03 55 06.5**	**-0.6**
	comp=Z,34nm,1.5s						
GLA	**Glamis**	**69.66**	**63**	P	**P**	**03 55 07.5**	**+0.2**
	baz=312						
GLA	**Glamis**	**69.66**	**63**	*e*P	**P**	**03 55 08.5**	**+1.2**
	comp=Z,17nm,0.9s						
GLA	**Glamis**	**69.66**	**63**	*e*P	**P**	**03 55 08.5**	**+1.2**
GLA				pmax	pmax		
	comp=Z,17nm,1.0s						
N23A	**Red Feather La**	**69.70**	**52**	P	**P**	**03 55 07.1**	**-0.6**
	baz=313						
N23A	**Red Feather La**	**69.70**	**52**	*e*P	**P**	**03 55 08.9**	**+1.1**
	comp=Z,22nm,1.1s						
GROC	**Groznyy**	**69.82**	**311**	*e*P	**P**	**03 55 07.7**	**-0.4**
GROC				*e*		03 55 28.7	
GROC				*e*S	**S**	**04 04 12.9**	**-1.2**
GROC				pmax	pmax		
	comp=Z,65nm,0.7s						
PV03	**Paradox Valley**	**69.83**	**56**	*e*P	**P**	**03 55 09.0**	**+0.5**
PV02	**Paradox Valley**	**69.92**	**56**	*e*P	**P**	**03 55 11.2**	**+2.1**
	comp=Z,81nm,2.0s						

AKT	Akhty	69.97	309	eP	P	03 55 09.9	+0.7
AKT				e		03 55 29.6	
AKT				pmax	pmax		
	comp=Z,208nm,0.9s						
B34A	Aery, Baudette	70.08	40	P	P	03 55 08.8	-0.8
	baz=317,SNR=5.9						
C33A	Trail	70.09	41	P	P	03 55 09.4	-0.4
	baz=317						
HYA	Hoyanger	70.11	343	eP	P	03 55 09.4	0.0
HYA				IAmb	IAmb	03 55 10.2	
	comp=Z,71nm,0.9s						
WUAZ	Wupatki	70.16	59	P	P	03 55 10.1	-0.4
	baz=312						
WUAZ	Wupatki	70.16	59	eP	P	03 55 12.1	+1.6
	comp=Z,49nm,1.7s						
OSL	Oslo	70.20	340	eP	P	03 55 10.2	+0.1
OSL				IAmb	IAmb	03 55 10.6	
	comp=Z,78nm,1.1s						
Y14A	Wickenburg	70.21	62	eP	P	03 55 11.4	+0.7
	comp=Z,18nm,1.1s						
SMCO	Snowmass	70.28	54	eP	P	03 55 11.9	+0.4
	comp=Z,11nm,1.1s						
EIDS	Eidsvold	70.46	180	eP	P	03 55 14.9	+3.0
	comp=Z,29nm,1.1s						
SUE	Sulen	70.50	344	eP	P	03 55 12.2	+0.3
C34A	RKJ Ranch, Bem	70.57	41	P	P	03 55 12.0	-0.7
	baz=317						
AS01	Alice Springs	70.59	197	eP	P	03 55 13.5	+0.6
B35A	Bob, Littlefor	70.60	40	P	P	03 55 12.3	-0.5
	baz=318						
B35A	Bob, Littlefor	70.60	40	eP	P	03 55 12.4	-0.3
	comp=Z,8.7nm,0.9s						
AS31	Alice Springs	70.60	197	eP	P	03 55 14.1	+1.1
	comp=Z,12nm,0.8s						
ASAR	Alice Springs	70.61	197	P	P	03 55 13.7	+0.7
	comp=Z,9.7nm,0.9s,baz=15,slow=5.6,SNR=38						
ASAR				pP	pP	03 55 27.1	+1.2
	comp=Z,42nm,0.9s,baz=15,slow=5.9,SNR=29						
ASAR				LR	LR	04 28 04.1	
	comp=Z,218nm,18.9s,baz=20,slow=37						
ISCO	Idaho Springs	70.63	53	P	P	03 55 13.1	-0.4
	baz=314,SNR=7.3						
ISCO	Idaho Springs	70.63	53	eP	P	03 55 14.4	+0.9
	comp=Z,8.2nm,0.9s						
ISCO	Idaho Springs	70.63	53	eP	P	03 55 14.4	+0.9
ISCO				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KONO	Kongsberg	70.72	341	eP	P	03 55 13.6	+0.3
	comp=Z,40nm,0.9s						
KONO	Kongsberg	70.72	341	⇓iP	P	03 55 12.7	-0.6
KONO				pmax	pmax		
	comp=Z,43nm,1.3s						
KONO	Kongsberg	70.72	341	eP	P	03 55 13.3	+0.1
MVCO	Mesa Verde	70.74	56	P	P	03 55 13.9	-0.2
	baz=313						
MVCO	Mesa Verde	70.74	56	eP	P	03 55 14.8	+0.6
	comp=Z,36nm,1.6s						
NCK	Nalchik	70.77	313	⇑eP	P	03 55 14.8	+0.9
NCK				pmax	pmax		
	comp=Z,152nm,0.8s						
X16A	Lo Mia Camp, P	70.86	60	eP	P	03 55 15.6	+0.8
	comp=Z,16nm,1.0s						
KIV	Kislovodsk	70.91	314	eP	P	03 55 15.4	+0.6
KIV	Kislovodsk	70.91	314	eP	P	03 55 15.8	+0.9
KIV	Kislovodsk	70.91	314	i P	P	03 55 15.5	+0.6
	SNR=41						
KIV	Kislovodsk	70.91	314	c iP	P	03 55 15.4	+0.6
KIV				i		03 55 34.4	
KIV				i		03 57 47.4	
KIV				i S	S	04 04 31.4	+4.4
KIV				pmax	pmax		
	comp=Z,236nm,1.0s						
KIV				MLR	MLR		
	comp=Z,3µm,17.0s						
ASK	Askoy	70.93	343	eP	P	03 55 15.0	+0.5
ASK				IAmb	IAmb	03 55 15.6	
	comp=Z,72nm,1.0s						
KBZ	Khabaz	70.96	313	P	P	03 55 16.1	+1.1
	comp=Z,181nm,0.9s,baz=52,slow=3.4,SNR=224						
KBZ				LR	LR	04 30 53.8	
	comp=Z,4µm,19.2s,baz=42,slow=40						
C35A	Jirik Farms, M	70.97	41	P	P	03 55 14.2	-0.8
	baz=318						
BER	Bergen	70.99	343	eP	P	03 55 15.3	+0.4
BER				IAmb	IAmb	03 55 15.9	
	comp=Z,79nm,0.9s						
G32A	Webster	71.07	44	P	P	03 55 15.1	-0.7
	baz=316						
G32A	Webster	71.07	44	eP	P	03 55 15.7	0.0
	comp=Z,26nm,0.9s						
ZEI	Tsey	71.11	312	eP	P	03 55 12.1	-4.1
ZEI				pmax	pmax		
	comp=Z,92nm,0.9s						
ODD1	Odda	71.15	342	eP	P	03 55 16.6	+0.7
ODD1				IAmb	IAmb	03 55 17.0	
	comp=Z,71nm,1.0s						
S22A	4UR Ranch, Cre	71.34	55	P	P	03 55 17.5	-0.4
	baz=314,SNR=7.6						
S22A	4UR Ranch, Cre	71.34	55	eP	P	03 55 18.8	+1.0
	comp=Z,57nm,1.8s						
D35A	Remer	71.39	41	P	P	03 55 16.8	-0.7
	baz=318						
NEY	Neytrino	71.39	313	⇑eP	P	03 55 18.9	+1.0
NEY				pmax	pmax		
	comp=Z,12nm,0.8s						
PALK	Pallekele	71.39	261	P	P	03 55 18.2	+0.1
	comp=Z,30nm,1.0s,baz=116,slow=2.4,SNR=5.4						
PALK				LR	LR	04 29 42.2	
	comp=Z,565nm,19.2s,baz=81,slow=38						
PALK	Pallekele	71.39	261	eP	P	03 55 18.0	-0.1
	comp=Z,30nm,1.0s						
PALK	Pallekele	71.39	261	P	P	03 55 18.1	+0.1
TBLG	Delisi	71.41	311	eP	P	03 55 18.9	+1.1
TBLG				pmax	pmax		
	comp=Z,250nm,0.8s						
C36A	Pine Crest Far	71.44	40	P	P	03 55 17.2	-0.7
	baz=318						
E35A	Pequot Lakes	71.61	42	P	P	03 55 18.2	-0.7
	baz=318						
SUW	Suwalki	71.61	331	eP	P	03 55 18.0	-0.8
SUW	Suwalki	71.61	331	eP	P	03 55 17.4	-1.4
	comp=Z,104nm,0.9s						
SUW	Suwalki	71.61	331	eP	P	03 55 17.4	-1.4
SUW				pmax	pmax		
	comp=Z,100nm,0.9s						
BLS5	Blasjo	71.63	342	eP	P	03 55 18.9	0.0
BLS5				IAmb	IAmb	03 55 19.8	
	comp=Z,63nm,1.1s						
BLS5				IAMs_20	IAMs_20	04 31 35.8	
	comp=Z,1µm,18.6s						
G33A	Ortonville	71.64	44	P	P	03 55 18.4	-0.7
	baz=317,SNR=13						
H32A	Carlson Farm,	71.65	45	P	P	03 55 18.6	-0.6
	baz=316						
214A	Organ Pipe Nat	71.66	63	P	P	03 55 19.5	0.0
	baz=313						
D36A	Goodland	71.73	40	P	P	03 55 18.8	-0.8
	baz=318						
C37A	Embarrass	71.76	40	P	P	03 55 19.1	-0.7
	baz=319						
F34A	Alexandria	71.77	43	P	P	03 55 19.2	-0.7
	baz=317						
OGNE	Ogallala	71.80	50	P	P	03 55 19.8	-0.5
	baz=315						
OGNE	Ogallala	71.80	50	eP	P	03 55 20.8	+0.5
EYMN	Ely	71.90	39	P	P	03 55 20.0	-0.7
	baz=319						
EYMN	Ely	71.90	39	eP	P	03 55 20.3	-0.3
	comp=Z,20nm,1.3s						
G34A	Benson	71.99	43	P	P	03 55 20.9	-0.4
	baz=317,SNR=6.7						
AKASG	Malin Array Be	72.01	326	P	P	03 55 20.3	-0.9
	comp=Z,12nm,0.4s,baz=36,slow=6.4,SNR=99						
AKASG				LR	LR	04 29 40.1	
	comp=Z,1µm,18.6s,baz=35,slow=38						
AKASG	Malin Array Be	72.01	326	P	P	03 55 20.3	-0.9
AKASG				pmax	pmax		
	comp=Z,11nm,0.4s						
AKASG				MLR	MLR		
	comp=Z,1µm,18.6s						
AKBB	Malin Array Si	72.01	326	eP	P	03 55 20.4	-0.8
	comp=Z,67nm,0.9s						
AKBB	Malin Array Si	72.01	326	eP	P	03 55 20.4	-0.8
AKBB				pmax	pmax		
	comp=Z,67nm,0.9s						
KIEV	Kiev	72.03	326	eP	P	03 55 19.7	-1.6
KIEV	Kiev	72.03	326	eP	P	03 55 20.3	-1.0
KIEV	Kiev	72.03	326	i P	P	03 55 20.4	-1.0
	SNR=12						
KIEV	Kiev	72.03	326	c iP	P	03 55 19.7	-1.6
KIEV				pmax	pmax		
	comp=Z,81nm,1.0s						
F35A	Swanville	72.05	42	P	P	03 55 21.0	-0.6
	baz=318						
AK11	Malin Array Si	72.05	326	eP	P	03 55 20.4	-1.1
D37A	Cotton	72.08	40	P	P	03 55 20.9	-0.8
	baz=319						
KMY	Karmoy	72.08	343	eP	P	03 55 22.1	+0.6
SDCO	Great Sand Dun	72.11	54	P	P	03 55 21.7	-0.7
	baz=314,SNR=5.6						
SDCO	Great Sand Dun	72.11	54	eP	P	03 55 22.2	-0.3
	comp=Z,13nm,1.4s						
KLNR	Kaliningrad	72.12	333	d iP	P	03 55 21.2	-0.6
KLNR				pmax	pmax		
	comp=Z,306nm,1.3s						
E36A	McGregor	72.17	41	P	P	03 55 21.7	-0.6
	baz=318,SNR=7.4						
C38A	Sawbill Land.	72.17	39	P	P	03 55 21.5	-0.8
	baz=319						
HOMB	Homborsund	72.21	340	eP	P	03 55 22.8	+0.6
STAV	Stavanger	72.24	342	eP	P	03 55 23.2	+0.8
STAV				IAmb	IAmb	03 55 24.0	
	comp=Z,81nm,1.0s						
AKH	Akhalkalaki	72.30	311	⇑iP	P	03 55 25.1	+1.7
AKH	Akhalkalaki	72.30	311	eP	P	03 55 25.1	+1.7
	comp=Z,97nm,0.9s						
AKH	Akhalkalaki	72.30	311	eP	P	03 55 25.1	+1.7
AKH				pmax	pmax		
	comp=Z,97nm,0.9s						
SNART	Snartemo	72.45	341	eP	P	03 55 24.2	+0.5
SNART				IAmb	IAmb	03 55 24.6	
	comp=Z,38nm,0.8s						
GNI	Garni	72.52	310	P	P	03 55 25.0	+0.3
	comp=Z,98nm,1.1s,baz=50,slow=7.1,SNR=67						
GNI				LR	LR	04 30 42.4	
	comp=Z,969nm,18.7s,baz=40,slow=39						
GNI	Garni	72.52	310	P	P	03 55 25.0	+0.3
GNI				pmax	pmax		
	comp=Z,98nm,1.1s						
GNI				MLR	MLR		
	comp=Z,969nm,18.7s						
IVI	Ivigtut	72.53	10	eP	P	03 55 24.7	+0.6
	comp=Z,44nm,1.0s						
F36A	Milaca	72.54	42	P	P	03 55 23.7	-0.8
	baz=318						
F36A	Milaca	72.54	42	eP	P	03 55 23.6	-0.8
	comp=Z,8.2nm,1.2s						
G35A	Watkins	72.56	43	P	P	03 55 24.0	-0.6
	baz=318						
G35A	Watkins	72.56	43	eP	P	03 55 24.9	+0.3
	comp=Z,18nm,0.8s						
ECSD	EROS Data Cent	72.61	45	P	P	03 55 24.3	-0.6
	baz=317,SNR=18						
ECSD	EROS Data Cent	72.61	45	eP	P	03 55 24.4	-0.6
	comp=Z,20nm,1.3s						
SOC	Sochi	72.67	315	c iP	P	03 55 25.2	-0.1
SOC				e*PP	pP	03 55 36.8	-1.5
SOC				e*SP	PcP	03 55 42.6	0.0
SOC				e		03 58 06.8	
SOC				eS	S	04 04 47.1	+0.1
SOC				eSS	SS	04 09 25.6	-0.5
SOC				eSSS	SSS	04 12 37.8	
SOC				pmax	pmax		
	comp=Z,85nm,0.7s						
TUC	Tucson	72.68	62	P	P	03 55 25.5	-0.2
	baz=313						
TUC	Tucson	72.68	62	eP	P	03 55 26.9	+1.2
	comp=Z,13nm,1.2s						
TUC	Tucson	72.68	62	eP	P	03 55 26.9	+1.2
TUC				pmax	pmax		
	comp=Z,13nm,1.2s						
H35A	Sunnyside Ranc	72.78	43	P	P	03 55 25.3	-0.6
	baz=318,SNR=12						
KSCO	Kaye Shedlock'	72.84	52	P	P	03 55 26.3	-0.3
	baz=315						
KSCO	Kaye Shedlock'	72.84	52	eP	P	03 55 28.1	+1.6
	comp=Z,43nm,1.5s						
E38A	The Farm, Brul	72.89	40	P	P	03 55 25.9	-0.7
	baz=319						
E38A	The Farm, Brul	72.89	40	eP	P	03 55 26.1	-0.5
	comp=Z,16nm,0.8s						
ANN	Anapa	72.89	317	eP	P	03 55 25.4	-1.2
ANN	Anapa	72.89	317	eP	P	03 55 25.4	-1.2
G36A	St. Michael	72.90	42	P	P	03 55 25.9	-0.7
	baz=318						
C40A	Isle Royale Na	72.95	38	P	P	03 55 26.1	-0.8
	baz=320						
F37A	Hinrichs Farm,	73.06	41	P	P	03 55 27.1	-0.5
	baz=319						
T25A	Trinidad	73.15	54	P	P	03 55 28.2	-0.3
	baz=315,SNR=7.7						
T25A	Trinidad	73.15	54	eP	P	03 55 29.6	+1.1
	comp=Z,51nm,1.8s						
F38A	Pierce - Schro	73.23	41	P	P	03 55 28.1	-0.4
	baz=319,SNR=12						
H36A	Jessenland, He	73.30	43	P	P	03 55 28.3	-0.7
	baz=318,SNR=10.0						
BSD	Bornholm Skovb	73.31	336	i P	P	03 55 27.9	-0.9
	comp=Z,69nm,0.9s						
BSD	Bornholm Skovb	73.31	336	i P	P	03 55 27.9	-0.9
BSD				pmax	pmax		
	comp=Z,69nm,0.9s						
SPMN	Marine on St.	73.35	42	P	P	03 55 28.6	-0.7
	baz=319						
SPMN	Marine on St.	73.35	42	eP	P	03 55 28.8	-0.5
	comp=Z,15nm,1.0s						
LAZ	Ladron	73.46	58	eP	P	03 55 31.6	+1.2
TASM	ASL Pad, Albuq	73.49	57	P	P	03 55 30.1	-0.4
	baz=314						
ANMO	Albuquerque	73.49	57	P	P	03 55 30.6	+0.1
	comp=Z,0.5nm,0.4s,baz=318,slow=12,SNR=4.8						
ANMO				LR	LR	04 24 10.7	
	comp=Z,297nm,21.8s,baz=335,slow=33						
ANMO	Albuquerque	73.49	57	P	P	03 55 30.1	-0.5
	baz=314						
ANMO	Albuquerque	73.49	57	eP	P	03 55 31.3	+0.7
	comp=Z,17nm,1.5s						
ANMO	Albuquerque	73.49	57	⇑eP	P	03 55 30.8	+0.2
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.5s						
TASL	Snake Pit, Alb	73.49	57	P	P	03 55 30.1	-0.4
	baz=314						
COP	Copenhagen	73.51	337	i P	P	03 55 29.8	-0.2
COP	Copenhagen	73.51	337	i P	P	03 55 29.8	-0.2
E39A	Mellen	73.51	40	P	P	03 55 29.4	-0.8
	baz=320,SNR=10.0						
BGNE	Belgrade	73.52	47	P	P	03 55 30.0	-0.4
	baz=317						
I36A	Fitzsimmons Fa	73.67	43	P	P	03 55 30.6	-0.6
	baz=318						
MUD	Monsted U'grnd	73.68	339	i P	P	03 55 31.0	0.0
MUD	Monsted U'grnd	73.68	339	i P	P	03 55 31.0	0.0
F39A	Loretta	73.70	40	P	P	03 55 30.6	-0.8
	baz=320,SNR=9.0						
E40A	Wakefield	73.75	39	P	P	03 55 31.2	-0.4
	baz=320,SNR=17						
H37A	Dierke Farm, C	73.78	42	P	P	03 55 31.4	-0.4
	baz=319,SNR=6.1						
G38A	Ridgeland	73.83	41	P	P	03 55 31.4	-0.7
	baz=319						
D41A	Chassel	73.86	38	P	P	03 55 31.6	-0.7
	baz=321						
D41A	Chassel	73.86	38	eP	P	03 55 32.5	+0.2
	comp=Z,63nm,1.5s						
LLD	Lille Linde	73.88	337	i P	P	03 55 32.0	-0.2
LLD	Lille Linde	73.88	337	i P	P	03 55 32.0	-0.2
BNM	Barren Site	73.94	58	eP	P	03 55 34.4	+1.1
I37A	Lemond, Waseca	73.97	43	P	P	03 55 32.5	-0.4
	baz=319,SNR=18						
I37A	Lemond, Waseca	73.97	43	eP	P	03 55 33.0	+0.1
	comp=Z,48nm,0.9s						
H38A	Maiden Rock	74.01	42	P	P	03 55 32.6	-0.6
	baz=319						
J36A	Seneca 1, Swea	74.03	44	P	P	03 55 32.7	-0.6
	baz=318						
J36A	Seneca 1, Swea	74.03	44	eP	P	03 55 33.1	-0.3
	comp=Z,16nm,1.2s						
F40A	Park Falls	74.05	40	P	P	03 55 32.8	-0.7
	baz=320						
G39A	Holcombe	74.06	41	P	P	03 55 32.7	-0.8
	baz=320						
E41A	Kenton	74.15	39	P	P	03 55 33.3	-0.7
	baz=321						
GKP	Gorka Klasztor	74.19	333	eP	P	03 55 33.8	-0.2
GKP	Gorka Klasztor	74.19	333	eP	P	03 55 33.8	-0.2
BEL	Belsk	74.23	331	eP	P	03 55 34.7	+0.4
BEL	Belsk	74.23	331	eP	P	03 55 34.7	+0.4
319A	Douglas	74.25	61	eP	P	03 55 36.3	+1.3
SIM	Simferopol'	74.34	319	eP	P	03 55 35.4	+0.3
SIM	Simferopol'	74.34	319	eP	P	03 55 34.3	-0.8
SIM				eS	S	04 05 10.0	+4.1
SIM				pmax	pmax		
	comp=Z,101nm,0.9s						
SIM				MLR	MLR		
	comp=Z,2µm,16.0s						
COWI	Conover	74.36	39	eP	P	03 55 34.7	-0.5
	comp=Z,11nm,1.0s						
121A	Cookes Peak, D	74.37	60	P	P	03 55 35.6	-0.1
	baz=314,SNR=6.7						
SORM	Soroca	74.38	324	⇑iP	P	03 55 34.8	-0.5
SORM	Soroca	74.38	324	⇑P	P	03 55 34.8	-0.5
J37A	Redenius Farm,	74.43	43	P	P	03 55 35.1	-0.5
	baz=319,SNR=5.3						
I38A	Scanlan Farm,	74.46	42	P	P	03 55 35.1	-0.8
	baz=319						
H39A	Augusta	74.47	41	P	P	03 55 35.3	-0.6
	baz=320						
K36A	Gilmore City	74.49	44	P	P	03 55 35.3	-0.8
	baz=318						
G40A	Rib Lake	74.52	40	P	P	03 55 35.4	-0.7
	baz=320,SNR=7.0						
G40A	Rib Lake	74.52	40	eP	P	03 55 35.7	-0.4
	comp=Z,33nm,1.7s						
E42A	Champion	74.64	38	P	P	03 55 36.0	-0.8
	baz=321,SNR=6.1						
F41A	Three Lakes	74.65	39	P	P	03 55 36.4	-0.5
	baz=321,SNR=9.3						
F41A	Three Lakes	74.65	39	eP	P	03 55 36.8	-0.1
	comp=Z,15nm,0.9s						
LVV	L'vov	74.73	328	d iP	P	03 55 37.2	0.0
LVV				eS	S	04 05 08.4	-1.6
LVV				MLR	MLR		
	comp=Z,900nm,16.0s						
K37A	Belmond	74.79	44	P	P	03 55 37.1	-0.6
	baz=319,SNR=7.5						
H40A	Chili	74.92	41	P	P	03 55 37.8	-0.7
	baz=320,SNR=6.0						
J38A	Wedel Dairy, R	74.94	43	P	P	03 55 37.8	-0.8
	baz=319,SNR=7.2						
SCHQ	Schefferville	74.96	22	P	P	03 55 37.5	-1.0
	comp=Z,16nm,0.9s,baz=356,slow=5.2,SNR=4.8						
SCHQ				LR	LR	04 31 37.0	
	comp=Z,559nm,20.1s,baz=342,slow=38						
SCHQ	Schefferville	74.96	22	eP	P	03 55 39.0	+0.5
	comp=Z,24nm,0.9s						
I39A	Houston	74.98	42	P	P	03 55 38.0	-0.8
	baz=320						
I39A	Houston	74.98	42	eP	P	03 55 38.2	-0.7
	comp=Z,16nm,0.9s						
E43A	Lone Tree Farm	75.08	38	P	P	03 55 38.5	-0.9
	baz=322						
KIS	Kishinev	75.09	323	⇑iP	P	03 55 39.5	+0.1
	comp=Z,400nm,1.5s						
KIS	Kishinev	75.09	323	ePcP	PcP	03 55 52.0	-0.8
KIS				eS	S	04 05 15.0	+0.9
KIS				eScS	SKSac	04 05 36.0	-8.7
KIS	Kishinev	75.09	323	α iP	P	03 55 39.5	+0.1
KIS				e		03 55 52.0	
KIS				eS	S	04 05 15.0	+0.9
KIS				e		04 05 36.0	
KIS				ePS	PnS	04 06 00.0	+6.5
KIS				pmax	pmax		
	comp=Z,400nm,1.5s						
KIS				pmax	pmax		
	comp=Z,400nm,4.0s						
KIS				MLR	MLR		
	comp=N,2µm,16.0s						
KIS				MLR	MLR		
	comp=Z,2µm,16.0s						
KIS				MLR	MLR		
	comp=Z,3µm,16.0s						
M36A	Felix, Anita	75.20	45	P	P	03 55 39.6	-0.6
	baz=318						
L37A	Phoenix Point,	75.22	44	P	P	03 55 39.6	-0.6
	baz=319						
H41A	Junction City	75.27	40	P	P	03 55 39.6	-0.8
	baz=321						
H41A	Junction City	75.27	40	eP	P	03 55 39.7	-0.8
	comp=Z,9.0nm,0.8s						
J39A	Decorah	75.29	42	P	P	03 55 39.8	-0.8
	baz=320,SNR=9.0						
G42A	Mountain	75.33	39	P	P	03 55 40.1	-0.8
	baz=321						
KWP	Kalwaria Pacla	75.37	328	eP	P	03 55 41.6	+0.6
KWP	Kalwaria Pacla	75.37	328	eP	P	03 55 41.4	+0.4
I40A	Norwalk	75.38	41	P	P	03 55 40.5	-0.7
	baz=320						
F43A	Flat Rock, Esc	75.43	38	P	P	03 55 40.7	-0.7
	baz=322						
BANOM	Banah	75.45	292	P	P	03 55 41.9	+0.1
IAS	Iasi	75.46	324	⇑iP	P	03 55 41.6	+0.1
IAS	Iasi	75.46	324	⇑P	P	03 55 41.6	+0.1
SHME	Shamm	75.47	292	i P	P	03 55 42.2	+0.3
	SNR=8.8						
ARMA	Armidale	75.48	180	eP	P	03 55 44.1	+2.3
ARMA				epP	pP	03 55 57.2	+2.4
L38A	Oak Wood Farm,	75.59	44	P	P	03 55 41.8	-0.6
	baz=319						
I41A	Arkdale	75.60	41	P	P	03 55 41.8	-0.6
	baz=321						
I41A	Arkdale	75.60	41	eP	P	03 55 42.1	-0.3
	comp=Z,7.6nm,0.8s						
F44A	Big Bay de Noc	75.64	38	P	P	03 55 41.8	-0.8
	baz=322						
SCIA	State Center	75.64	44	P	P	03 55 42.1	-0.6
	baz=319						
SCIA	State Center	75.64	44	eP	P	03 55 42.8	+0.1
G43A	Wallace	75.65	39	P	P	03 55 41.9	-0.7
	baz=322						
G43A	Wallace	75.65	39	eP	P	03 55 42.5	-0.1
	comp=Z,19nm,0.9s						
K39A	Oelwein	75.68	43	P	P	03 55 42.2	-0.7
	baz=320,SNR=6.4						
J40A	Soldiers Grove	75.70	42	P	P	03 55 42.1	-0.8
	baz=320						
LEOM	Leova	75.75	323	⇑iP	P	03 55 43.5	+0.4
LEOM	Leova	75.75	323	⇑P	P	03 55 43.5	+0.4
WSAR	Wadi Sarin	75.75	289	P	P	03 55 43.5	-0.1
	comp=Z,18nm,1.1s,baz=70,slow=6.2,SNR=4.0						
WSAR				LR	LR	04 33 06.4	
	comp=Z,856nm,20.5s,baz=68,slow=39						
H42A	Shiocton	75.86	40	P	P	03 55 43.3	-0.6
	baz=321						
H42A	Shiocton	75.86	40	eP	P	03 55 43.5	-0.3
	comp=Z,12nm,1.0s						
E45A	Wooded Hills,	75.86	37	P	P	03 55 43.1	-0.7
	baz=323						
PRAR	RASCA	75.86	325	⇑iP	P	03 55 44.1	+0.2
MDH	Madha	75.88	292	P	P	03 55 44.9	+0.6
OJC	Ojcow	75.93	330	eP	P	03 55 44.3	+0.2
OJC	Ojcow	75.93	330	eP	P	03 55 44.1	-0.1
	comp=Z,117nm,0.9s						
OJC	Ojcow	75.93	330	eP	P	03 55 44.3	+0.2
MSFE	Esma-Masafi	75.93	292	P	P	03 55 45.1	+0.5
N37A	Lee Faris, Mou	76.01	46	P	P	03 55 44.3	-0.5
	baz=319						
N37A	Lee Faris, Mou	76.01	46	eP	P	03 55 45.3	+0.5
	comp=Z,23nm,1.0s						
KSU1	Kansas State U	76.01	48	P	P	03 55 44.2	-0.6
	baz=318						
MATQ	Matagami	76.02	30	P	P	03 55 43.4	-1.3
	baz=327						
M38A	Pleasantville	76.02	44	P	P	03 55 44.2	-0.6
	baz=319						
K40A	Colesburg	76.05	42	P	P	03 55 44.1	-0.8
	baz=320,SNR=9.6						
BUR08	Bucovina Ar. S	76.05	326	eP	P	03 55 44.9	-0.2
BUR04	Bucovina Ar. S	76.06	326	eP	P	03 55 44.1	-1.0
J41A	Loganville	76.06	41	P	P	03 55 44.4	-0.6
	baz=321						
BURAR	Bucovina Array	76.06	326	⇓iP	P	03 55 45.1	0.0
BURAR	Bucovina Array	76.06	326	⇓P	P	03 55 45.1	0.0
L39A	Vinton	76.07	43	P	P	03 55 44.5	-0.6
	baz=320,SNR=10						
I42A	Draeger Farm,	76.16	40	P	P	03 55 44.8	-0.8
	baz=321						
I42A	Draeger Farm,	76.16	40	eP	P	03 55 45.1	-0.4
	comp=Z,7.4nm,0.8s						
UOSS	Minazif	76.19	291	eP	P	03 55 46.2	+0.2
	comp=Z,51nm,1.0s						

UOSS	Minazif	76.19	291	*i*P	P	03 55 46.1	+0.1
	SNR=8.8						
H43A	Windswept, Lux	76.23	39	P	P	03 55 45.2	-0.8
	baz=322						
BIZ	Bicaz	76.25	325	⇓*i*P	P	03 55 46.6	+0.5
F45A	CMU Biological	76.26	37	P	P	03 55 45.3	-0.8
	baz=323						
JFWS	Jewell Farm	76.30	42	P	P	03 55 45.8	-0.6
	baz=321						
AMTX	Amarillo	76.31	54	P	P	03 55 46.3	-0.4
	baz=316						
AMTX	Amarillo	76.31	54	*e*P	P	03 55 46.3	-0.4
	comp=Z,22nm,0.9s						
HATD	Hatta, Dubai	76.32	291	*i*P	P	03 55 47.5	+0.7
	SNR=12						
MSTX	Muleshoe	76.33	55	P	P	03 55 46.5	-0.4
	baz=316						
MSTX	Muleshoe	76.33	55	*e*P	P	03 55 47.7	+0.8
	comp=Z,33nm,1.4s						
UZH	Uzhgorod	76.35	328	⇓*i*P	P	03 55 46.9	+0.3
UZH				*i*		03 55 52.7	
TESR	Tescani	76.38	324	⇑*i*P	P	03 55 47.1	+0.3
MNTX	Cornudas Mount	76.41	59	P	P	03 55 46.9	-0.3
	baz=315,SNR=7.3						
MNTX	Cornudas Mount	76.41	59	*e*P	P	03 55 46.9	-0.3
	comp=Z,18nm,1.4s						
NIE	Niedzica	76.42	330	*e*P	P	03 55 47.8	+0.8
NIE	Niedzica	76.42	330	*e*P	P	03 55 47.8	+0.8
CRVS	Cervenica-Dubn	76.44	329	*e*P	P	03 55 47.0	-0.1
CRVS				pmax	pmax		
	comp=Z,54nm,1.2s						
CRVS	Cervenica-Dubn	76.44	329	*e*P	P	03 55 47.0	-0.1
CRVS				*e*L	L	04 30 33.4	
ASHO	Ashiyiah	76.46	291	P	P	03 55 48.4	+0.7
N38A	Joes South For	76.47	45	P	P	03 55 47.0	-0.4
	baz=319						
M39A	Webster	76.48	44	P	P	03 55 46.8	-0.6
	baz=320,SNR=9.0						
O37A	Wolven Farm, M	76.49	46	P	P	03 55 46.9	-0.6
	baz=319						
L40A	Anamosa	76.49	43	P	P	03 55 47.1	-0.4
	baz=320						
L40A	Anamosa	76.49	43	*e*P	P	03 55 46.9	-0.6
	comp=Z,12nm,0.9s						
F46A	Macinaw City C	76.50	37	P	P	03 55 46.7	-0.7
	baz=323						
K41A	Shullsburg	76.51	42	P	P	03 55 46.8	-0.8
	baz=321						
J42A	Columbus	76.51	41	P	P	03 55 46.7	-0.8
	baz=321						
I43A	Langenfeld Bro	76.52	40	P	P	03 55 46.9	-0.7
	baz=322						
TLCR		76.52	322	⇓*i*P	P	03 55 48.1	+0.5
TLCR		76.52	322	⇓P	P	03 55 48.1	+0.5
KSP	Ksiaz	76.57	333	*e*P	P	03 55 47.6	-0.2
KSP	Ksiaz	76.57	333	*e*P	P	03 55 47.6	-0.2
TRPA	Tarpa	76.68	328	⇑*i*P	P	03 55 49.1	+0.7
TRPA	Tarpa	76.68	328	⇑*e*P	P	03 55 48.9	+0.5
BMR	Baia Mare	76.69	327	⇓*i*P	P	03 55 49.6	+1.1
BMR	Baia Mare	76.69	327	⇓P	P	03 55 49.6	+1.1
PETR	Petresti	76.77	324	⇑*i*P	P	03 55 50.0	+1.0
N39A	Derby Farms, D	76.77	44	P	P	03 55 48.5	-0.6
	baz=320						
N39A	Derby Farms, D	76.77	44	*e*P	P	03 55 48.8	-0.3
	comp=Z,14nm,1.0s						
J43A	Natural Harves	76.79	40	P	P	03 55 48.2	-0.9
	baz=322						
OKC	Ostrava-Krasne	76.82	331	*e*P	P	03 55 49.7	+0.5
OKC				AMS	AMS	04 37 50.0	
	comp=Z,700nm,15.1s						
OKC	Ostrava-Krasne	76.82	331	*e*P	P	03 55 49.7	+0.5
OKC				MLR	MLR		
	comp=Z,700nm,15.1s						
P37A	Lathrop	76.82	46	P	P	03 55 48.8	-0.6
	baz=319,SNR=5.1						
CFR	Carcaliu	76.82	323	⇓*i*P	P	03 55 49.3	0.0
CFR	Carcaliu	76.82	323	⇓P	P	03 55 49.3	0.0
K42A	Prairie Point,	76.83	41	P	P	03 55 48.6	-0.8
	baz=321,SNR=5.8						
L41A	Preston	76.83	42	P	P	03 55 48.6	-0.8
	baz=321						
ARCR	ARCALIA	76.84	326	⇑*i*P	P	03 55 50.8	+1.5
M40A	Post Highland	76.85	44	P	P	03 55 48.9	-0.6
	baz=320,SNR=7.5						
O38A	Galt	76.86	46	P	P	03 55 49.1	-0.5
	baz=319						
VRI	Vrincioaia	76.86	324	⇑*i*P	P	03 55 50.3	+0.8
VRI	Vrincioaia	76.86	324	⇑P	P	03 55 50.3	+0.8
PLOR	Plostina	76.91	324	⇓*i*P	P	03 55 49.9	+0.1
PLOR	Plostina	76.91	324	⇓P	P	03 55 49.9	+0.1
LANS	Liptovska Anna	76.94	330	*e*P	P	03 55 51.3	+1.3
LANS	Liptovska Anna	76.94	330	*e*P	P	03 55 51.3	+1.3
UPC	Upice	76.95	333	*e*P	P	03 55 50.5	+0.6
UPC				AMS	AMS	04 33 50.0	
	comp=Z,1µm,17.5s						
UPC	Upice	76.95	333	*e*P	P	03 55 50.5	+0.6
UPC				MLR	MLR		
	comp=Z,1µm,17.5s						
ASUD	Al Ashush, Dub	76.98	292	*i*P	P	03 55 51.4	+0.9
	SNR=10						
DPC	Dobruska-Polom	76.99	332	*e*P	P	03 55 51.0	+0.8
DPC				AMS	AMS	04 33 50.0	
	comp=Z,1µm,18.2s						
DPC	Dobruska-Polom	76.99	332	*e*P	P	03 55 51.0	+0.8
DPC				MLR	MLR		
	comp=Z,1µm,18.2s						
CHGQ	Chibougamau	77.02	28	P	P	03 55 49.3	-1.0
	baz=329						
KRLC	Kraliky	77.07	332	*e*P	P	03 55 51.4	+0.7
KRLC	Kraliky	77.07	332	*e*P	P	03 55 51.4	+0.7
MORC	Moravsky Berou	77.08	331	⇑*i*P	P	03 55 51.3	+0.6
MORC	Moravsky Berou	77.08	331	*e*P	P	03 55 50.6	-0.1
	comp=Z,132nm,1.0s						
MORC	Moravsky Berou	77.08	331	⇑P	P	03 55 51.3	+0.6
MORC	Moravsky Berou	77.08	331	⇑*i*P	P	03 55 50.9	+0.2
KECS	Kecovo	77.14	329	*e*P	P	03 55 52.1	+1.1
KECS	Kecovo	77.14	329	*e*P	P	03 55 52.1	+1.1
CLL	Collm	77.19	335	⇑*i*P	P	03 55 51.0	-0.3
	comp=Z,153nm,1.1s						
CLL				*e*Pmax		03 55 52.0	
CLL				*i* pP	PcP	03 55 55.7	-6.2
CLL				*e*S	S	04 05 37.0	-0.1
CLL				*e*PS	PnS	04 06 20.0	-0.3
CLL				*e*		04 11 24.0	
CLL				*e*SSS	SSS	04 14 18.0	
CLL				LmH		04 29 00.0	
	comp=N,500nm,20.9s						
CLL				LmH		04 29 00.0	
	comp=E,1µm,20.4s						
CLL				Lmax		04 33 00.0	
CLL				LmV		04 34 00.0	
	comp=N,900nm,19.4s						
CLL				LmV		04 34 00.0	
	comp=E,500nm,20.9s						
CLL				LmV		04 34 00.0	
	comp=Z,1µm,19.7s						
CLL	Collm	77.19	335	*e*P	P	03 55 50.4	-0.9
	comp=Z,118nm,1.0s						
CLL	Collm	77.19	335	⇑*i*P	P	03 55 51.0	-0.3
CLL				*i*		03 55 55.7	
CLL				*e*S	S	04 05 37.0	-0.1
CLL				pmax	pmax		
	comp=Z,153nm,1.1s						
CLL				MLR	MLR		
	comp=Z,1µm,19.7s						
P38A	Dawn	77.21	46	P	P	03 55 50.8	-0.7
	baz=319						
P38A	Dawn	77.21	46	*e*P	P	03 55 51.4	-0.2
	comp=Z,75nm,1.9s						
N40A	Mertquake, Sal	77.22	44	P	P	03 55 51.0	-0.6
	baz=320						
O39A	Kirksville	77.22	45	P	P	03 55 51.0	-0.6
	baz=320						
AJN	Ajban	77.25	292	P	P	03 55 52.6	+0.6
L42A	Oliver, Polo	77.28	42	P	P	03 55 51.1	-0.8
	baz=321						
L42A	Oliver, Polo	77.28	42	*e*P	P	03 55 51.1	-0.8
	comp=Z,42nm,1.8s						
TIRR	Tirgusor	77.28	322	⇑*i*P	P	03 55 52.1	+0.3
TIRR	Tirgusor	77.28	322	*e*P	P	03 55 52.1	+0.3
	comp=Z,82nm,1.1s						
TIRR	Tirgusor	77.28	322	*e*P	P	03 55 52.1	+0.3
TIRR				pmax	pmax		
	comp=Z,82nm,1.1s						
BRG	Berggiesshubel	77.29	334	*i*P	P	03 55 51.8	0.0
	comp=Z,63nm,1.2s						
BRG				*i*		03 56 06.7	
	comp=Z,24nm,1.0s						
BRG				S	S	04 05 41.0	+2.9
BRG				SS	SS	04 10 36.0	+0.5
BRG				*e*PKPPKP	P'P'df	04 23 24.2	+19
	comp=Z,6.4nm,1.2s						
	comp=N,690nm,22.8s						
	comp=E,747nm,17.8s						
	comp=Z,1µm,16.0s						
BRG	Berggiesshubel	77.29	334	*i*P	P	03 55 51.8	0.0
BRG				*i*		03 56 06.7	
BRG				S	S	04 05 41.0	+2.9
BRG				SS	SS	04 10 36.0	+0.5
BRG				pmax	pmax		
	comp=Z,63nm,1.2s						
BRG				MLR	MLR		
	comp=N,690nm,22.8s						
BRG				MLR	MLR		
	comp=E,747nm,17.8s						
BRG				MLR	MLR		
	comp=Z,1µm,16.0s						
HARR	Harsova	77.30	322	⇑*i*P	P	03 55 52.5	+0.5
HARR	Harsova	77.30	322	⇑P	P	03 55 52.5	+0.5
Q37A	Longview Farm,	77.30	47	P	P	03 55 51.5	-0.6
	baz=319						
DOPR	Dopca	77.33	325	⇓*i*P	P	03 55 52.5	+0.3
TLB	Topalu	77.33	322	⇑*i*P	P	03 55 52.7	+0.6
TLB	Topalu	77.33	322	⇑P	P	03 55 52.7	+0.6
M41A	Milan	77.35	43	P	P	03 55 51.6	-0.7
	baz=321						
EKA	Eskdalemuir Ar	77.35	345	P	P	03 55 51.9	-0.2
	comp=Z,4.0nm,0.3s,baz=21,slow=4.8,SNR=79						
EKA				LR	LR	04 36 58.7	
	comp=Z,130nm,18.0s,baz=345,slow=41						
K43A	Burlington	77.35	41	P	P	03 55 51.5	-0.8
	baz=322						
K43A	Burlington	77.35	41	*e*P	P	03 55 57.1	+4.8
	comp=Z,26nm,1.1s						
ESK	Eskdalemuir	77.37	346	*e*P	P	03 55 52.6	+0.4
ESK	Eskdalemuir	77.37	346	*e*P	P	03 55 52.6	+0.4
ESK				pmax	pmax		
	comp=Z,30nm,1.0s						
PVCC	Panska Ves	77.39	333	*e*P	P	03 55 53.0	+0.6
PVCC				AMS	AMS	04 33 30.0	
	comp=Z,1µm,17.7s						
PVCC	Panska Ves	77.39	333	*e*P	P	03 55 53.0	+0.6
PVCC				MLR	MLR		
	comp=Z,1µm,17.7s						
CJR	Cluj-Napoca	77.44	326	⇓*i*P	P	03 55 54.1	+1.3
CJR	Cluj-Napoca	77.44	326	⇓P	P	03 55 54.1	+1.3
STKA	Stephens Creek	77.46	189	P	P	03 55 54.1	+1.4
	comp=Z,4.1nm,0.8s,baz=304,slow=9.8,SNR=2.9						
STKA				pP	pP	03 56 07.5	+1.7
	comp=Z,11nm,0.9s,baz=349,slow=9.1,SNR=7.6						
STKA				LR	LR	04 30 01.9	
	comp=Z,521nm,20.7s,baz=13,slow=36						
MLR	Muntele Rosu	77.49	324	P	P	03 55 53.7	+0.5
	comp=Z,15nm,0.9s,baz=35,slow=3.3,SNR=77						
MLR				LR	LR	04 32 49.2	
	comp=Z,239nm,18.3s,baz=34,slow=38						
MLR	Muntele Rosu	77.49	324	⇑*i*P	P	03 55 53.8	+0.6
MLR	Muntele Rosu	77.49	324	*e*P	P	03 55 53.1	-0.1
	comp=Z,83nm,0.9s						
ILGA	Ilgaz	77.51	317	*e*P	P	03 55 55.3	+1.7
	comp=Z,204nm,1.2s						
LTVH	Lˆ'tavˆ'rtes,	77.53	328	⇑*e*P	P	03 55 55.0	+1.8
ISR	Istrita	77.54	324	⇓*i*P	P	03 55 54.3	+0.9
ISR	Istrita	77.54	324	⇓P	P	03 55 54.3	+0.9
BELQ	Belleterre	77.60	32	P	P	03 55 52.3	-1.4
	baz=327						
O40A	La Belle	77.66	45	P	P	03 55 53.6	-0.5
	baz=320,SNR=9.2						
Q38A	Cooks Store, C	77.66	46	P	P	03 55 53.7	-0.4
	baz=319,SNR=7.4						
P39B	Salisbury	77.70	46	P	P	03 55 53.8	-0.5
	baz=320						
N41A	Harden Midland	77.71	44	P	P	03 55 53.8	-0.5
	baz=321						
N41A	Harden Midland	77.71	44	*e*P	P	03 55 54.1	-0.2
	comp=Z,86nm,1.6s						
DRGR		77.72	327	⇓*i*P	P	03 55 54.8	+0.4
DRGR		77.72	327	⇓P	P	03 55 54.8	+0.4
VYHS	Vyhne	77.72	330	*e*P	P	03 55 55.0	+0.7
VYHS				pmax	pmax		
	comp=Z,54nm,1.2s						
VYHS	Vyhne	77.72	330	*e*P	P	03 55 55.0	+0.7
VRAC	Vranov	77.80	332	⇑*i*P	P	03 55 55.6	+0.9
VRAC	Vranov	77.80	332	⇑P	P	03 55 55.6	+0.9
VRAC	Vranov	77.80	332	⇑*i*P	P	03 55 55.3	+0.6
ICOR	Ion Corvin	77.81	322	⇑*i*P	P	03 55 56.2	+1.4
JAVC	Velka Javorina	77.82	331	⇑*i*P	P	03 55 56.2	+1.3
PSZ	Piszkesteto	77.83	329	⇑*i*P	P	03 55 56.0	+1.1
PSZ	Piszkesteto	77.83	329	⇑*e*P	P	03 55 55.5	+0.5
PSZ	Piszkesteto	77.83	329	*e*P	P	03 55 55.6	+0.7
	comp=Z,103nm,1.1s						
PSZ	Piszkesteto	77.83	329	⇑P	P	03 55 56.1	+1.1
PRA	Prague	77.84	333	*e*P	P	03 55 55.8	+0.9
PRA				AMS	AMS	04 33 50.0	
	comp=Z,2µm,18.1s						
PRA	Prague	77.84	333	*e*P	P	03 55 55.8	+0.9
PRA				MLR	MLR		
	comp=Z,2µm,18.1s						
GOPC	GO Pecny, Ondr	77.86	333	*e*P	P	03 55 55.6	+0.5
GOPC				*e*pP	PcP	03 55 59.9	-4.9
GOPC				AMS	AMS	04 33 40.0	
	comp=Z,2µm,19.1s						
GOPC	GO Pecny, Ondr	77.86	333	*e*P	P	03 55 55.6	+0.5
GOPC				*e*		03 55 59.9	
GOPC				MLR	MLR		
	comp=Z,2µm,19.1s						
PRU	Pruhonice	77.88	333	*e*P	P	03 55 55.2	+0.1
PRU				*e*S	S	04 05 43.7	-0.8
PRU				AMS	AMS	04 33 40.0	
	comp=Z,2µm,18.2s						
PRU	Pruhonice	77.88	333	*e*P	P	03 55 55.2	+0.1
PRU				*e*S	S	04 05 43.7	-0.8
PRU				MLR	MLR		
	comp=Z,2µm,18.2s						
VOIR		77.90	325	⇑*i*P	P	03 55 56.4	+1.0
VOIR		77.90	325	⇑P	P	03 55 56.4	+1.0
Q39A	Willow Grove F	77.93	46	P	P	03 55 55.1	-0.5
	baz=320,SNR=10						
N42A	Yates City	78.01	43	P	P	03 55 55.4	-0.6
	baz=321						
SULR		78.02	323	⇓*i*P	P	03 55 56.4	+0.4
P40A	Paris	78.02	45	P	P	03 55 55.7	-0.4
	baz=320,SNR=9.2						
P40A	Paris	78.02	45	*e*P	P	03 55 55.9	-0.2
	comp=Z,24nm,1.3s						
WMOK	Wichita Mounta	78.05	52	P	P	03 55 56.0	-0.4
	baz=318						
WMOK	Wichita Mounta	78.05	52	*e*P	P	03 55 56.3	-0.1
	comp=Z,9.3nm,1.1s						
WMOK	Wichita Mounta	78.05	52	*e*P	P	03 55 56.3	-0.1
WMOK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
M43A	Waltham Townsh	78.05	42	P	P	03 55 55.8	-0.4
	baz=322						
KRUC	Moravsky	78.07	332	⇑*i*P	P	03 55 56.5	+0.3
R38A	Fenwick Farm,	78.10	47	P	P	03 55 55.9	-0.7
	baz=319,SNR=6.8						
O41A	Passleys Farm,	78.15	44	P	P	03 55 56.2	-0.6
	baz=321,SNR=8.7						
SMOL	Smolenice	78.19	331	*e*P	P	03 55 57.7	+0.8
SMOL	Smolenice	78.19	331	*e*P	P	03 55 57.7	+0.8
TOBO	Tobermory, Bru	78.29	35	P	P	03 55 55.6	-1.9
	baz=325						
NKC	Novy Kostel	78.31	335	*e*P	P	03 55 57.8	+0.3
NKC				*e*pP	PcP	03 56 01.9	-4.9
NKC				AMS	AMS	04 33 30.0	
	comp=Z,1µm,18.3s						
NKC	Novy Kostel	78.31	335	*e*P	P	03 55 57.8	+0.3
NKC				*e*		03 56 01.9	
NKC				MLR	MLR		
	comp=Z,1µm,18.3s						
WTSB	Winterswijk	78.33	339	*e*P	P	03 55 57.6	+0.1
	comp=Z,145nm,1.1s						
MODS	Modra-Piesok	78.37	331	*e*P	P	03 55 58.5	+0.6
MODS				pmax	pmax		
	comp=Z,129nm,1.2s						
MODS	Modra-Piesok	78.37	331	*e*P	P	03 55 58.5	+0.6
P41A	Barry, Barry	78.40	44	P	P	03 55 57.6	-0.6
	baz=321,SNR=9.1						
LOT	Lotru	78.41	325	⇑*i*P	P	03 55 58.4	+0.1
Q40A	Laux Farm, Aux	78.42	45	P	P	03 55 57.8	-0.6
	baz=320,SNR=5.5						
R39A	Chumby, Stover	78.45	46	P	P	03 55 57.8	-0.7
	baz=320,SNR=7.2						
BCAM	Yenicaga	78.49	318	*i*P	P	03 55 59.8	+1.0
BUD	Budapest	78.51	329	⇑*e*P	P	03 55 59.3	+0.7
M44A	Midewin, Midew	78.52	41	P	P	03 55 58.2	-0.6
	baz=322						
M44A	Midewin, Midew	78.52	41	*e*P	P	03 55 58.9	+0.1
	comp=Z,23nm,1.0s						
S38A	Stockton	78.52	47	P	P	03 55 58.3	-0.6
	baz=320,SNR=7.6						
CMDR	Camlidere-ANKA	78.54	317	*i*P	P	03 56 00.6	+1.5
BR131	Keskin Array S	78.57	316	*e*P	P	03 55 59.9	+0.6
BRTR	Keskin Array B	78.57	316	P	P	03 55 59.9	+0.5
	comp=Z,34nm,1.0s,baz=64,slow=3.4,SNR=128						
BRTR				LR	LR	04 35 58.8	
	comp=Z,1µm,18.9s,baz=44,slow=40						
BRTR	Keskin Array B	78.57	316	P	P	03 55 59.9	+0.5
BRTR				pmax	pmax		
	comp=Z,36nm,1.0s						
HDIL	Hopedale	78.58	43	P	P	03 55 58.5	-0.6
	baz=321,SNR=7.7						
HDIL	Hopedale	78.58	43	*e*P	P	03 55 59.0	-0.1
LPIG	La Paz	78.66	67	LR	LR	04 22 15.1	
	comp=Z,233nm,21.5s,baz=314,slow=29						
KLBO	Killbear Provi	78.71	34	P	P	03 55 57.8	-2.0
	baz=326						
PRD	Provadia	78.72	322	*i*P	P	03 55 59.6	-0.3
T38A	Diamond	78.77	48	P	P	03 55 59.7	-0.6
	baz=319,SNR=15						
S39A	Bolivar	78.78	47	P	P	03 55 59.8	-0.6
	baz=320,SNR=9.8						
S39A	Bolivar	78.78	47	*e*P	P	03 55 59.3	-1.0
	comp=Z,12nm,1.0s						
O43A	Sugar Creek Fa	78.78	43	P	P	03 55 59.6	-0.7
	baz=322						
TUL1	Leonard	78.82	50	P	P	03 55 60.0	-0.6
	baz=319						
TUL1	Leonard	78.82	50	*e*P	P	03 56 01.3	+0.7
	comp=Z,29nm,1.4s						
P42A	Winchester	78.82	44	P	P	03 55 60.0	-0.5
	baz=321,SNR=7.0						
P42A	Winchester	78.82	44	*e*P	P	03 56 00.3	-0.2
	comp=Z,20nm,1.1s						
R40A	Maddies Statio	78.86	46	P	P	03 56 00.0	-0.7
	baz=320,SNR=12						
R40A	Maddies Statio	78.86	46	*e*P	P	03 56 00.2	-0.5
	comp=Z,13nm,0.8s						
Q41A	Truxton	78.87	45	P	P	03 56 00.2	-0.6
	baz=321,SNR=12						
ANTO	Ankara	78.87	317	⇑*i*P	P	03 56 02.1	+1.2
ANTO	Ankara	78.87	317	*e*P	P	03 56 01.2	+0.3
ANTO	Ankara	78.87	317	P	P	03 56 03.2	+2.3
CSKK	Csˆ‡kako	78.89	330	⇑*e*P	P	03 56 01.3	+0.6
BR231	Keskin MP Arra	78.90	317	*e*P	P	03 56 02.1	+1.0
BMRO	Meriville Lake	78.93	35	P	P	03 56 00.3	-0.7
	baz=325						
KHC	Kasperske Hory	78.93	333	*e*P	P	03 56 01.3	+0.3
KHC				*e*pP	PcP	03 56 05.5	-4.0
KHC				*e*S	S	04 06 03.8	+7.9
KHC				AMS	AMS	04 34 50.0	
	comp=Z,2µm,16.6s						
KHC	Kasperske Hory	78.93	333	*e*P	P	03 56 00.8	-0.2
	comp=Z,49nm,1.1s						
KHC	Kasperske Hory	78.93	333	*e*P	P	03 56 01.3	+0.3
KHC				*e*		03 56 05.5	
KHC				*e*S	S	04 06 03.8	+7.9
KHC				MLR	MLR		
	comp=Z,2µm,16.6s						
N44A	Piper City	78.94	42	P	P	03 56 00.4	-0.7
	baz=322,SNR=5.8						
BUKO	Buck Lake	78.96	34	P	P	03 56 00.9	-0.3
	baz=326						
ABTX	Abilene, Hawle	79.11	54	P	P	03 56 01.9	-0.4
	baz=318						
BZS	Buzias	79.12	327	⇑*i*P	P	03 56 02.3	+0.3
BZS	Buzias	79.12	327	⇑P	P	03 56 02.3	+0.3
TX31	Lajitas Ar. Si	79.12	59	*e*P	P	03 56 02.7	+0.2
TXAR	Lajitas Array	79.13	59	P	P	03 56 02.6	+0.1
	comp=Z,5.7nm,1.0s,baz=300,slow=2.7,SNR=26						
TXAR				pP	pP	03 56 15.8	+0.2
	comp=Z,9.2nm,0.7s,baz=297,slow=4.0,SNR=15						
GEC2	GERESS Array S	79.14	333	*e*P	P	03 56 02.3	+0.1
	comp=Z,49nm,1.1s						
GEC2	GERESS Array S	79.14	333	*e*P	P	03 56 02.3	+0.1
GEC2				pmax	pmax		
	comp=Z,49nm,1.1s						
GERES	GERESS Array B	79.14	333	P	P	03 56 02.4	+0.1
	comp=Z,18nm,0.9s,baz=35,slow=4.9,SNR=61						
GERES				LR	LR	04 35 01.4	
	comp=Z,1µm,18.0s,baz=28,slow=39						
KAND	Kocaeli-Kandir	79.15	319	*i*P	P	03 56 01.3	-0.9
GEA0	GERESS Array S	79.15	333	*e*P	P	03 56 02.1	-0.1
GRFO	Grafenberg	79.16	335	*e*P	P	03 56 02.9	+0.7
GRFO	Grafenberg	79.16	335	*e*P	P	03 56 02.9	+0.7
GRFO				pmax	pmax		
	comp=Z,130nm,1.1s						
P43A	Skaggs, Pawnee	79.18	43	P	P	03 56 01.8	-0.7
	baz=321						
N45A	Kentland	79.19	41	P	P	03 56 01.9	-0.6
	baz=322						
CONA	Conrad Observa	79.23	331	*i* pP	P	03 56 03.5	+0.8
	comp=Z,65nm,1.0s,SNR=50						
Q42A	Golden Eagle	79.25	45	P	P	03 56 02.5	-0.3
	baz=321						
T39A	Clever	79.25	48	P	P	03 56 02.5	-0.5
	baz=320						
S40A	Lebanon	79.27	47	P	P	03 56 02.3	-0.7
	baz=320,SNR=11						
O44A	Mansfield	79.29	42	P	P	03 56 02.3	-0.7
	baz=322						
R41A	Rosebud	79.30	45	P	P	03 56 02.7	-0.5
	baz=321,SNR=8.2						
HERR	Herculane	79.42	326	⇑*i*P	P	03 56 03.6	-0.1
CLWO	Collingwood	79.42	35	P	P	03 56 02.1	-1.7
	baz=326						
AUMIH	MIHALICIK	79.50	317	*i*P	P	03 56 05.3	+0.9
HHAR	Hobbs	79.52	48	*e*P	P	03 56 03.5	-0.9
	comp=Z,16nm,1.2s						
CCM	Cathedral Cave	79.56	46	P	P	03 56 04.1	-0.5
	baz=321						
CCM	Cathedral Cave	79.56	46	*e*P	P	03 56 05.0	+0.4
	comp=Z,18nm,1.0s						
CCM	Cathedral Cave	79.56	46	*e*P	P	03 56 05.0	+0.4
CCM				pmax	pmax		
	comp=Z,18nm,1.0s						
O45A	Potomac	79.56	42	P	P	03 56 03.9	-0.6
	baz=322,SNR=7.6						
PEMO	Pembroke	79.59	32	P	P	03 56 02.9	-1.7
	baz=328						
T40A	Mansfield	79.60	47	P	P	03 56 04.3	-0.5
	baz=320						
R42A	Luebbering	79.61	45	P	P	03 56 04.2	-0.6
	baz=321,SNR=6.2						
HPIG		79.61	62	*e*P	P	03 56 05.6	+0.3
	comp=Z,11nm,1.1s						
Q43A	New Douglas	79.64	44	P	P	03 56 04.4	-0.6
	baz=321						
HGN	Heimansgroeve	79.66	339	*e*P	P	03 56 04.9	+0.1
	comp=Z,186nm,1.3s						
S41A	Jillco Farms,	79.66	46	P	P	03 56 04.5	-0.6
	baz=321,SNR=7.5						
U39A	Green Forest	79.69	48	P	P	03 56 04.7	-0.7
	baz=320,SNR=22						
BEBN	Eben Emael	79.69	339	⇑P	P	03 56 05.2	+0.2
RAR	Rarotonga	79.74	135	LR	LR	04 23 11.8	
	comp=Z,549nm,21.7s,baz=300,slow=29						
P44A	Sand Creek, Wi	79.75	43	P	P	03 56 05.1	-0.5
	baz=322,SNR=11						
SFIN	Lafayette	79.75	41	P	P	03 56 04.9	-0.7
	baz=323,SNR=6.0						
SFIN	Lafayette	79.75	41	*e*P	P	03 56 04.9	-0.7
	comp=Z,13nm,0.9s						
MDVR	Moldovita	79.78	326	⇑*i*P	P	03 56 05.7	0.0
MEM	Membach	79.78	338	⇑P	P	03 56 05.4	-0.1
	comp=Z,68nm,1.2s						
MOA	Molln	79.83	332	*i* pP	P	03 56 06.3	+0.4
	comp=Z,28nm,1.1s,SNR=12						
BANO	Bancroft	79.88	33	P	P	03 56 05.0	-1.2
	baz=327						
ARSA	Arzberg	79.94	331	*i* pP	P	03 56 07.0	+0.5
	comp=Z,45nm,1.2s,SNR=16						
BORA	Eskisehir	79.98	318	*i*P	P	03 56 07.5	+0.6
Q44A	Meyer Farm, Va	80.00	44	P	P	03 56 06.4	-0.5
	baz=322,SNR=6.6						
S42A	Caledonia	80.00	45	P	P	03 56 06.4	-0.6

	baz=321,SNR=18						
V39A	**Pettigrew**	**80.02**	**48**	P	**P**	**03 56 06.4**	**-0.7**
	baz=320,SNR=11						
UCC	**Uccle**	**80.02**	**340**	⇑P	**P**	**03 56 06.5**	**-0.3**
UCC	**Uccle**	**80.02**	**340**	*e*P	**P**	**03 56 07.4**	**+0.6**
	comp=Z,99nm,1.5s						
UCC	**Uccle**	**80.02**	**340**	*e*P	**P**	**03 56 07.4**	**+0.6**
UCC				pmax	pmax		
	comp=Z,99nm,1.5s						
FVM	**French Village**	**80.02**	**45**	*e*P	**P**	**03 56 08.0**	**+0.9**
	comp=Z,12nm,0.8s						
FVM	**French Village**	**80.02**	**45**	*e*P	**P**	**03 56 08.0**	**+0.9**
FVM				pmax	pmax		
	comp=Z,12nm,0.8s						
U40A	**Yellville**	**80.04**	**48**	P	**P**	**03 56 06.7**	**-0.5**
	baz=320,SNR=22						
ELFO	**Elginfield**	**80.04**	**36**	P	**P**	**03 56 06.6**	**-0.4**
	baz=326						
R43A	**Red Bud**	**80.04**	**45**	P	**P**	**03 56 06.5**	**-0.6**
	baz=321						
T41A	**Mountain View**	**80.07**	**47**	P	**P**	**03 56 06.7**	**-0.6**
	baz=321,SNR=10						
ESKT	**Eskisehir**	**80.08**	**318**	*i*P	**P**	**03 56 08.2**	**+0.7**
TRQ	**Mont Tremblant**	**80.11**	**30**	*e*P	**P**	**03 56 06.8**	**-0.7**
P45A	**Graceland, Par**	**80.12**	**42**	P	**P**	**03 56 07.0**	**-0.5**
	baz=322,SNR=6.3						
P45A	**Graceland, Par**	**80.12**	**42**	*e*P	**P**	**03 56 07.4**	**-0.2**
	comp=Z,16nm,0.9s						
BCLA	**Clavier**	**80.13**	**339**	⇑P	**P**	**03 56 07.5**	**+0.1**
	comp=Z,63nm,1.4s						
MPEP	**Malo Peshtene**	**80.15**	**324**	*i*P	**P**	**03 56 08.0**	**+0.3**
BEHE	**Becsehely**	**80.18**	**330**	⇑*e*P	**P**	**03 56 07.8**	**0.0**
PLVO	**Plevna**	**80.19**	**33**	P	**P**	**03 56 06.9**	**-1.0**
	baz=328						
PLVO	**Plevna**	**80.19**	**33**	*e*P	**P**	**03 56 07.2**	**-0.7**
	comp=Z,10.0nm,1.0s						
O47A	**Sheridan**	**80.30**	**41**	P	**P**	**03 56 07.9**	**-0.6**
	baz=323						
P46A	**Rosedale**	**80.31**	**42**	P	**P**	**03 56 08.2**	**-0.4**
	baz=323,SNR=7.7						
PKRO	**Pickering**	**80.32**	**34**	P	**P**	**03 56 07.3**	**-1.3**
	baz=327						
KOGS	**Kog**	**80.38**	**330**	*e*P	**P**	**03 56 08.0**	**-0.8**
DELO	**Deloro Mine**	**80.42**	**33**	P	**P**	**03 56 07.3**	**-1.8**
	baz=328						
Q45A	**Warren Harvey,**	**80.42**	**43**	P	**P**	**03 56 08.5**	**-0.7**
	baz=322,SNR=9.1						
T42A	**Van Buren**	**80.42**	**46**	P	**P**	**03 56 08.7**	**-0.6**
	baz=321,SNR=7.8						
T42A	**Van Buren**	**80.42**	**46**	*e*P	**P**	**03 56 08.7**	**-0.6**
	comp=Z,24nm,1.4s						
ORIO	**Orleans, Innes**	**80.43**	**31**	P	**P**	**03 56 07.9**	**-1.2**
	baz=329						
W39A	**Magazine**	**80.43**	**49**	P	**P**	**03 56 09.0**	**-0.3**
	baz=320						
W39A	**Magazine**	**80.43**	**49**	*e*P	**P**	**03 56 09.1**	**-0.2**
	comp=Z,40nm,1.7s						
V40A	**Witts Springs**	**80.47**	**48**	P	**P**	**03 56 08.8**	**-0.8**
	baz=320,SNR=6.6						
V40A	**Witts Springs**	**80.47**	**48**	*e*P	**P**	**03 56 09.0**	**-0.6**
	comp=Z,14nm,1.1s						
R44A	**Waltonville**	**80.48**	**44**	P	**P**	**03 56 08.9**	**-0.6**
	baz=322						
ALFO	**Alfred**	**80.50**	**31**	P	**P**	**03 56 08.5**	**-0.9**
	baz=329,SNR=8.6						
S43A	**Fulton Ridge,**	**80.52**	**45**	P	**P**	**03 56 09.2**	**-0.6**
	baz=321,SNR=6.1						
DRWO	**Darlington Wes**	**80.53**	**34**	P	**P**	**03 56 08.6**	**-1.0**
	baz=327						
U41A	**Viola**	**80.53**	**47**	P	**P**	**03 56 09.3**	**-0.6**
	baz=321,SNR=6.8						
STU	**Stuttgart**	**80.58**	**336**	*e*P	**P**	**03 56 10.3**	**+0.5**
	comp=Z,94nm,1.3s						
STU	**Stuttgart**	**80.58**	**336**	*e*P	**P**	**03 56 10.3**	**+0.5**
STU				pmax	pmax		
	comp=Z,95nm,1.3s						
OLIL	**Olney**	**80.58**	**43**	*e*P	**P**	**03 56 10.1**	**+0.1**
	comp=Z,15nm,0.8s						
JCT	**Junction City**	**80.59**	**56**	P	**P**	**03 56 09.8**	**-0.5**
	baz=318						
JCT	**Junction City**	**80.59**	**56**	*e*P	**P**	**03 56 10.2**	**-0.1**
	comp=Z,40nm,1.4s						
JCT	**Junction City**	**80.59**	**56**	*e*P	**P**	**03 56 10.2**	**-0.1**
JCT				pmax	pmax		
	comp=Z,40nm,1.4s						
SOKA	**Soboth**	**80.60**	**331**	*i*pP	**P**	**03 56 10.4**	**+0.2**
	comp=Z,78nm,1.3s,SNR=33						
WLF	**Walferdange**	**80.61**	**338**	⇓P	**P**	**03 56 10.4**	**+0.4**
WLF	**Walferdange**	**80.61**	**338**	*e*P	**P**	**03 56 10.2**	**+0.2**
	comp=Z,66nm,1.3s						
WLF	**Walferdange**	**80.61**	**338**	*e*P	**P**	**03 56 10.2**	**+0.2**
WLF				pmax	pmax		
	comp=Z,66nm,1.3s						
PERS	**Pernice**	**80.61**	**331**	*i*P	**P**	**03 56 10.2**	**0.0**
DOU	**Dourbes**	**80.61**	**339**	⇓P	**P**	**03 56 08.7**	**-1.3**
	comp=Z,30nm,1.6s						
PGB	**Panagyurishte**	**80.63**	**323**	*i*P	**P**	**03 56 10.7**	**+0.3**
BOLV	**Bolvadin**	**80.66**	**317**	*i*P	**P**	**03 56 11.5**	**+0.8**
O48A	**Farmland**	**80.75**	**40**	P	**P**	**03 56 10.1**	**-0.8**
	baz=324,SNR=8.9						
X39A	**Fountain Ranch**	**80.77**	**50**	P	**P**	**03 56 10.8**	**-0.4**
	baz=320,SNR=6.5						
T43A	**Greenville**	**80.79**	**46**	P	**P**	**03 56 10.6**	**-0.6**
	baz=321,SNR=7.1						
KBA	**Koelnbreinsper**	**80.81**	**332**	*i*pP	**P**	**03 56 11.9**	**+0.5**
	comp=Z,95nm,1.2s,SNR=32						
W40A	**Ferguson Farm,**	**80.81**	**49**	P	**P**	**03 56 10.9**	**-0.5**
	baz=320,SNR=6.1						
WHTX	**Lake Whitney,**	**80.82**	**53**	P	**P**	**03 56 11.3**	**-0.2**
	baz=319						
S44A	**Carbondale**	**80.83**	**45**	P	**P**	**03 56 10.8**	**-0.6**
	baz=322,SNR=7.8						
SIUC	**Southern Illin**	**80.83**	**44**	*e*P	**P**	**03 56 10.7**	**-0.7**
	comp=Z,28nm,0.9s						
R45A	**Skylar, Fairfi**	**80.84**	**44**	P	**P**	**03 56 11.1**	**-0.4**
	baz=322						
V41A	**Mountainview**	**80.84**	**48**	P	**P**	**03 56 10.8**	**-0.7**
	baz=321,SNR=8.5						
KDZ	**Kurdzhali**	**80.84**	**322**	*i*P	**P**	**03 56 12.4**	**+1.0**
P47A	**Martinsville**	**80.85**	**42**	P	**P**	**03 56 10.9**	**-0.6**
	baz=323,SNR=6.8						
U42A	**Revenden**	**80.87**	**47**	P	**P**	**03 56 11.0**	**-0.7**
	baz=321						
OBKA	**Obir**	**80.91**	**331**	*i*pP	**P**	**03 56 11.8**	**0.0**
	comp=Z,20nm,1.2s						
PBMO	**Poplar Bluff**	**80.95**	**46**	*e*P	**P**	**03 56 12.1**	**+0.1**
	comp=Z,55nm,1.4s						
KESN	**Edirne-Kesan**	**80.95**	**321**	*i*P	**P**	**03 56 12.5**	**0.0**
VTS	**Vitosha**	**81.00**	**324**	⇑*i*P	**P**	**03 56 12.9**	**+0.5**
VTS	**Vitosha**	**81.00**	**324**	*e*P	**P**	**03 56 12.5**	**0.0**
	comp=Z,166nm,1.2s						
VTS	**Vitosha**	**81.00**	**324**	*i*P	**P**	**03 56 12.4**	**0.0**
VTS	**Vitosha**	**81.00**	**324**	P	**P**	**03 56 11.1**	**-1.3**
VTS	**Vitosha**	**81.00**	**324**	*e*P	**P**	**03 56 12.5**	**0.0**
VTS				pmax	pmax		
	comp=Z,170nm,1.2s						
DIVS	**Divibare**	**81.02**	**327**	*e*P	**P**	**03 56 11.8**	**-0.7**
	comp=Z,64nm,1.4s						
MIAR	**Mount Ida**	**81.03**	**49**	P	**P**	**03 56 12.1**	**-0.4**
	baz=320,SNR=12						
MIAR	**Mount Ida**	**81.03**	**49**	*e*P	**P**	**03 56 12.5**	**-0.1**
	comp=Z,27nm,1.3s						
MIAR	**Mount Ida**	**81.03**	**49**	*e*P	**P**	**03 56 12.5**	**-0.1**
MIAR				pmax	pmax		
	comp=Z,27nm,1.2s						
GDZ	**Gediz**	**81.07**	**318**	*i*P	**P**	**03 56 13.5**	**+0.7**
MYKA	**Terra Mystica**	**81.11**	**332**	*i*P	**P**	**03 56 12.6**	**-0.2**
	comp=Z,30nm,1.4s,SNR=9.0						
DURS	**Dursunbey**	**81.13**	**319**	*i*P	**P**	**03 56 13.3**	**+0.2**
WATA	**Walderalm**	**81.14**	**334**	*i*pP	**P**	**03 56 14.5**	**+1.4**
	comp=Z,27nm,0.6s,SNR=17						
S45A	**Carrier Mills**	**81.17**	**44**	P	**P**	**03 56 12.6**	**-0.6**
	baz=322						
O49A	**Covington**	**81.17**	**40**	P	**P**	**03 56 12.4**	**-0.8**
	baz=324						
ALN	**Alexandroupoli**	**81.18**	**321**	*e*P	**P**	**03 56 13.7**	**+0.5**
	comp=Z,51nm,1.1s						
ALN	**Alexandroupoli**	**81.18**	**321**	P	**P**	**03 56 11.9**	**-1.3**
ALN	**Alexandroupoli**	**81.18**	**321**	*e*P	**P**	**03 56 13.7**	**+0.5**
ALN				pmax	pmax		
	comp=Z,51nm,1.1s						
WTTA	**Wattenberg**	**81.19**	**334**	*i*pP	**P**	**03 56 14.1**	**+0.7**
	comp=Z,72nm,1.2s,SNR=14						
CRES	**Cresnjev**	**81.19**	**331**	*i*P	**P**	**03 56 13.0**	**-0.2**
RDO	**Rodhopi**	**81.20**	**322**	P	**P**	**03 56 13.3**	**0.0**
RDO	**Rodhopi**	**81.20**	**322**	P	**P**	**03 56 13.3**	**0.0**
Q47A	**Bedord North L**	**81.21**	**42**	P	**P**	**03 56 12.9**	**-0.5**
	baz=323,SNR=8.1						
V42A	**Cord**	**81.22**	**47**	P	**P**	**03 56 13.3**	**-0.2**
	baz=321,SNR=5.9						
BFO	**Black Forest**	**81.22**	**336**	*e*P	**P**	**03 56 13.0**	**-0.4**
	comp=Z,4.6nm,0.9s						
BFO	**Black Forest**	**81.22**	**336**	*e*P	**P**	**03 56 13.0**	**-0.4**
BFO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
N50A	**Nevada**	**81.23**	**39**	P	**P**	**03 56 12.8**	**-0.7**
	baz=325						
W41B	**Gary Mavity, V**	**81.26**	**48**	P	**P**	**03 56 13.3**	**-0.4**
	baz=321,SNR=9.1						
W41B	**Gary Mavity, V**	**81.26**	**48**	*e*P	**P**	**03 56 13.3**	**-0.4**
	comp=Z,15nm,1.0s						
P48A	**Milroy**	**81.26**	**41**	P	**P**	**03 56 13.2**	**-0.5**
	baz=324						
RETA	**Reutte**	**81.26**	**334**	*i*pP	**P**	**03 56 14.0**	**+0.4**
	comp=Z,55nm,1.3s,SNR=22						
R46A	**Gibon Southern**	**81.27**	**43**	P	**P**	**03 56 13.5**	**-0.2**
	baz=323						
MOTA	**Moosalm**	**81.28**	**334**	*i*pP	**P**	**03 56 15.2**	**+1.3**
	comp=Z,73nm,1.1s,SNR=44						
U43A	**Rector**	**81.28**	**46**	P	**P**	**03 56 13.3**	**-0.5**
	baz=321						
PMOR	**Pomariorio Ree**	**81.29**	**122**	*e*T	T	05 25 56.0	
	comp=Z,10nm,0.2s						
LJU	**Ljubljana**	**81.32**	**331**	*i*P	**P**	**03 56 13.4**	**-0.5**
ABTA	**Abfaltersbach**	**81.37**	**333**	*i*P	**P**	**03 56 13.7**	**-0.5**
	comp=Z,31nm,1.2s,SNR=9.1						
OZLJ	**Ozalj**	**81.37**	**330**	P	**P**	**03 56 14.1**	**0.0**
USIN	**University of**	**81.39**	**43**	*e*P	**P**	**03 56 14.7**	**+0.4**
	comp=Z,51nm,1.3s						
X40A	**Basin Creek Fa**	**81.47**	**49**	P	**P**	**03 56 14.8**	**0.0**
	baz=320						
X40A	**Basin Creek Fa**	**81.47**	**49**	*e*P	**P**	**03 56 14.8**	**0.0**
	comp=Z,19nm,1.4s						
LONY	**Lake Ozonia**	**81.48**	**31**	P	**P**	**03 56 13.6**	**-1.2**
	baz=329						
TAOE	**Nuku Hiva Isla**	**81.48**	**112**	*e*LR	LR	04 21 39.5	
	comp=Z,1µm,23.8s						
BLY	**Banja Luka**	**81.51**	**329**	*e*P	**P**	**03 56 15.1**	**+0.2**
	comp=Z,10nm,0.7s						
P49A	**Miami Univ. Ec**	**81.53**	**41**	P	**P**	**03 56 14.3**	**-0.8**
	baz=324,SNR=6.7						
O50A	**Cable**	**81.53**	**39**	P	**P**	**03 56 14.3**	**-0.8**
	baz=324,SNR=7.8						
Q48A	**North Vernon**	**81.54**	**42**	P	**P**	**03 56 14.4**	**-0.8**
	baz=324,SNR=5.3						
ISP	**Isparta**	**81.58**	**317**	P	**P**	**03 56 15.2**	**-0.3**
ISP	**Isparta**	**81.58**	**317**	P	**P**	**03 56 15.2**	**-0.3**
ISP	**Isparta**	**81.58**	**317**	*c i*P	**P**	**03 56 15.2**	**-0.3**
ISP				pmax	pmax		
	comp=Z,21nm,1.2s						
S46A	**Don Dixon Farm**	**81.59**	**44**	P	**P**	**03 56 14.8**	**-0.6**
	baz=323						
MMB	**Musomiste**	**81.61**	**323**	*i*P	**P**	**03 56 15.8**	**+0.3**
JAVS	**Javornik**	**81.61**	**331**	*i*P	**P**	**03 56 14.4**	**-1.1**
X41A	**Kaden, Bauxite**	**81.64**	**49**	P	**P**	**03 56 15.2**	**-0.5**
	baz=320						
KKB	**Krupnik**	**81.65**	**324**	*i*P	**P**	**03 56 16.6**	**+0.9**
ECH	**Echery**	**81.66**	**337**	*e*P	**P**	**03 56 15.2**	**-0.5**
	comp=Z,104nm,1.5s						
ECH	**Echery**	**81.66**	**337**	*e*P	**P**	**03 56 15.2**	**-0.5**
ECH				pmax	pmax		
	comp=Z,100nm,1.5s						
R47A	**Wooly Knot Far**	**81.67**	**42**	P	**P**	**03 56 15.3**	**-0.6**
	baz=323,SNR=9.3						
FETA	**Feichten**	**81.69**	**334**	*i*pP	**P**	**03 56 16.5**	**+0.5**
	comp=Z,30nm,1.4s,SNR=13						
DAVA	**Damuels**	**81.71**	**335**	*i*pP	**P**	**03 56 16.4**	**+0.2**
	comp=Z,38nm,1.0s,SNR=14						
ACSO	**Alum Creek Sta**	**81.75**	**39**	P	**P**	**03 56 15.4**	**-0.8**
	baz=325						
ACSO	**Alum Creek Sta**	**81.75**	**39**	*e*P	**P**	**03 56 16.2**	**-0.1**
	comp=Z,12nm,0.8s						
NVR	**Nevrokopi**	**81.75**	**323**	P	**P**	**03 56 16.5**	**+0.2**
NVR	**Nevrokopi**	**81.75**	**323**	P	**P**	**03 56 16.5**	**+0.2**
SMTH	**Samothraki Isl**	**81.75**	**321**	P	**P**	**03 56 14.5**	**-1.8**
SMTH	**Samothraki Isl**	**81.75**	**321**	P	**P**	**03 56 14.5**	**-1.8**
ALLY	**Alegheny Colle**	**81.80**	**36**	*e*P	**P**	**03 56 16.6**	**0.0**
	comp=Z,19nm,0.8s						
MMNY	**Mt. Morris Dam**	**81.81**	**34**	*e*P	**P**	**03 56 16.0**	**-0.5**
	comp=Z,11nm,0.8s						
WCI	**Wyandotte Cave**	**81.84**	**42**	P	**P**	**03 56 16.5**	**-0.2**
	baz=323						
WCI	**Wyandotte Cave**	**81.84**	**42**	*e*P	**P**	**03 56 16.9**	**+0.1**
	comp=Z,17nm,0.9s						
WCI	**Wyandotte Cave**	**81.84**	**42**	*e*P	**P**	**03 56 16.9**	**+0.1**
WCI				pmax	pmax		
	comp=Z,17nm,1.0s						
U44B	**Burton Farm, H**	**81.84**	**45**	P	**P**	**03 56 16.4**	**-0.4**
	baz=322						
Q49A	**Aurora**	**81.87**	**41**	P	**P**	**03 56 16.5**	**-0.4**
	baz=324						
P50A	**Jamestown**	**81.89**	**40**	P	**P**	**03 56 16.2**	**-0.8**
	baz=324,SNR=5.7						
BRDR	**BURDUR-Merkez**	**81.90**	**317**	*i*P	**P**	**03 56 17.6**	**+0.4**
R48A	**Northridge Ran**	**81.90**	**42**	P	**P**	**03 56 16.5**	**-0.6**
	baz=324						
EZN	**Ezine**	**81.92**	**321**	P	**P**	**03 56 17.3**	**+0.2**
EZN	**Ezine**	**81.92**	**321**	P	**P**	**03 56 17.3**	**+0.2**
GLAT	**Glass**	**81.93**	**45**	*e*P	**P**	**03 56 19.0**	**+1.7**
	comp=Z,66nm,1.0s						
MANT	**Manisa**	**81.98**	**318**	*i*P	**P**	**03 56 18.4**	**+0.7**
MANT	**Manisa**	**81.98**	**318**	*e*P	**P**	**03 56 18.5**	**+0.7**
	comp=Z,100nm,0.9s						
THAS	**Thassos island**	**81.99**	**322**	P	**P**	**03 56 17.6**	**+0.1**
T46A	**Princeton**	**82.01**	**44**	P	**P**	**03 56 17.5**	**-0.2**
	baz=323,SNR=22						
SRS	**Serrai**	**82.06**	**323**	P	**P**	**03 56 17.6**	**-0.3**
SRS	**Serrai**	**82.06**	**323**	P	**P**	**03 56 17.6**	**-0.3**
Y41A	**Eaglette Beard**	**82.06**	**49**	P	**P**	**03 56 17.6**	**-0.3**
	baz=320						
S47A	**Hartford**	**82.06**	**43**	P	**P**	**03 56 17.4**	**-0.6**
	baz=323						
Z40A	**Long Farm, Mag**	**82.11**	**50**	P	**P**	**03 56 17.9**	**-0.3**
	baz=320						
M54A	**Oil Creek Stat**	**82.12**	**36**	P	**P**	**03 56 17.7**	**-0.5**
	baz=327						
M54A	**Oil Creek Stat**	**82.12**	**36**	*e*P	**P**	**03 56 18.1**	**-0.1**
	comp=Z,16nm,1.0s						
U45A	**Rockin P Farm,**	**82.13**	**45**	P	**P**	**03 56 18.0**	**-0.3**
	baz=322						
DAVOX	**Davos/Dischmat**	**82.16**	**334**	P	**P**	**03 56 18.8**	**+0.3**
	comp=Z,36nm,0.9s,baz=6.9,slow=4.9,SNR=18						
DAVOX				LR	LR	04 36 18.1	
	comp=Z,845nm,20.4s,baz=16,slow=38						
STIP	**Stip**	**82.17**	**324**	⇑*i*P	**P**	**03 56 17.1**	**-1.3**
UDBI	**Udbina**	**82.22**	**330**	P	**P**	**03 56 18.1**	**-0.6**
SKO	**Skopje**	**82.24**	**325**	P	**P**	**03 56 19.4**	**+0.6**
SKO	**Skopje**	**82.24**	**325**	P	**P**	**03 56 19.4**	**+0.6**
SKO	**Skopje**	**82.24**	**325**	⇑*i*P	**P**	**03 56 19.4**	**+0.6**
KNT	**Kendrikon**	**82.31**	**323**	P	**P**	**03 56 19.0**	**-0.2**
KNT	**Kendrikon**	**82.31**	**323**	P	**P**	**03 56 19.0**	**-0.2**
PPT	**Papeete**	**82.31**	**124**	LR	LR	04 25 28.0	
	comp=Z,868nm,20.3s,baz=348,slow=30						
VAY	**Valandovo**	**82.32**	**324**	P	**P**	**03 56 19.4**	**+0.2**
VAY	**Valandovo**	**82.32**	**324**	P	**P**	**03 56 19.4**	**+0.2**
VAY	**Valandovo**	**82.32**	**324**	⇑*i*P	**P**	**03 56 19.6**	**+0.4**
PPT2	**Papeete2**	**82.33**	**124**	*e*S	**S**	**04 06 34.6**	**+2.5**
	comp=Z,614nm,29.2s						
PPT2	**Papeete2**	**82.33**	**124**	*e*LR	LR	04 22 08.2	
	comp=Z,2µm,23.0s,baz=324						
PPT2	**Papeete2**	**82.33**	**124**	*e*T	T	05 27 20.6	
	comp=Z,2.7nm,0.3s						
LIA	**Limnos Island**	**82.37**	**321**	P	**P**	**03 56 19.5**	**0.0**
LIA	**Limnos Island**	**82.37**	**321**	P	**P**	**03 56 19.5**	**0.0**
SOH	**Sokhos**	**82.40**	**323**	P	**P**	**03 56 18.8**	**-0.9**
SOH	**Sokhos**	**82.40**	**323**	P	**P**	**03 56 18.8**	**-0.9**
S48A	**Wiedeman Farm,**	**82.41**	**43**	P	**P**	**03 56 19.2**	**-0.6**
	baz=323						
CSS	**Mathiatis**	**82.42**	**313**	*e*P	**P**	**03 56 20.2**	**+0.4**
	comp=Z,48nm,1.1s						
CSS	**Mathiatis**	**82.42**	**313**	P	**P**	**03 56 20.1**	**+0.2**
PRK	**Paraskevi**	**82.42**	**320**	P	**P**	**03 56 19.5**	**-0.3**
PRK	**Paraskevi**	**82.42**	**320**	P	**P**	**03 56 19.5**	**-0.3**
T47A	**Sharon Grove**	**82.44**	**44**	P	**P**	**03 56 19.3**	**-0.6**
	baz=323,SNR=9.5						
T47A	**Sharon Grove**	**82.44**	**44**	*e*P	**P**	**03 56 19.5**	**-0.4**
	comp=Z,18nm,1.0s						
N54A	**Moraine State**	**82.44**	**37**	P	**P**	**03 56 19.4**	**-0.5**
	baz=326,SNR=5.8						
N54A	**Moraine State**	**82.44**	**37**	*e*P	**P**	**03 56 19.9**	**+0.1**
	comp=Z,27nm,1.2s						
X43A	**Marvell**	**82.48**	**48**	P	**P**	**03 56 19.5**	**-0.6**
	baz=321						
GOLH	**Golhisar**	**82.50**	**317**	*i*P	**P**	**03 56 20.6**	**+0.3**
V45A	**Humboldt**	**82.50**	**46**	P	**P**	**03 56 19.6**	**-0.6**
	baz=322						
Y42A	**Garnett, Star**	**82.53**	**49**	P	**P**	**03 56 19.9**	**-0.5**
	baz=321						
OUR	**Ouranopolis**	**82.54**	**322**	P	**P**	**03 56 17.6**	**-2.7**
OUR	**Ouranopolis**	**82.54**	**322**	P	**P**	**03 56 17.6**	**-2.7**
OUR	**Ouranopolis**	**82.54**	**322**	P	**P**	**03 56 17.6**	**-2.7**
NATX	**Nacogdoches**	**82.56**	**52**	P	**P**	**03 56 20.3**	**-0.3**
	baz=320						
Q51A	**Peebles**	**82.56**	**40**	P	**P**	**03 56 19.7**	**-0.8**
	baz=325						
TUE	**Stuetta**	**82.60**	**335**	*e*P	**P**	**03 56 21.4**	**+0.5**
	comp=Z,109nm,1.4s						
SIGR	**SIGRI**	**82.64**	**320**	P	**P**	**03 56 18.7**	**-2.2**
SIGR	**SIGRI**	**82.64**	**320**	P	**P**	**03 56 18.7**	**-2.2**
S49A	**Springfield**	**82.67**	**42**	P	**P**	**03 56 20.5**	**-0.6**
	baz=324						
ASF	**Jabal al Asfar**	**82.67**	**309**	P	**P**	**03 56 22.0**	**+0.7**
	comp=Z,7.4nm,0.8s,baz=27,slow=2.1,SNR=16						
ASF				LR	LR	04 38 41.8	
	comp=Z,654nm,18.3s,baz=356,slow=40						
T48A	**Bowling Green**	**82.68**	**43**	P	**P**	**03 56 20.4**	**-0.8**
	baz=323,SNR=6.5						
GRG	**Griva**	**82.69**	**324**	P	**P**	**03 56 21.1**	**-0.1**
GRG	**Griva**	**82.69**	**324**	P	**P**	**03 56 21.1**	**-0.1**
HORT	**Hortiatis**	**82.70**	**323**	P	**P**	**03 56 20.5**	**-0.8**
HORT	**Hortiatis**	**82.70**	**323**	P	**P**	**03 56 20.5**	**-0.8**
R50A	**Paris**	**82.72**	**41**	P	**P**	**03 56 20.6**	**-0.8**
	baz=324						
PDG	**Podgorica**	**82.72**	**326**	⇑*i*P	**P**	**03 56 21.1**	**-0.1**
PDG	**Podgorica**	**82.72**	**326**	P	**P**	**03 56 20.7**	**-0.5**
TTG	**Podgorica**	**82.72**	**326**	*e*P	**P**	**03 56 20.5**	**-0.8**
	comp=Z,114nm,1.5s						
TTG	**Podgorica**	**82.72**	**326**	*e*P	**P**	**03 56 20.5**	**-0.8**
TTG				pmax	pmax		
	comp=Z,110nm,1.5s						
PLG	**Polygyros**	**82.73**	**323**	P	**P**	**03 56 21.0**	**-0.5**
PLG	**Polygyros**	**82.73**	**323**	P	**P**	**03 56 21.0**	**-0.5**
PLG	**Polygyros**	**82.73**	**323**	P	**P**	**03 56 21.0**	**-0.5**
WVT	**Waverly**	**82.76**	**45**	P	**P**	**03 56 20.9**	**-0.7**
	baz=323						
WVT	**Waverly**	**82.76**	**45**	*e*P	**P**	**03 56 21.6**	**0.0**
	comp=Z,12nm,1.1s						
WVT	**Waverly**	**82.76**	**45**	*e*P	**P**	**03 56 21.6**	**0.0**
WVT				pmax	pmax		
	comp=Z,12nm,1.1s						
U47A	**Clarksville**	**82.78**	**44**	P	**P**	**03 56 21.0**	**-0.7**
	baz=323,SNR=7.0						
KRUS	**Krusevo**	**82.82**	**325**	⇑*i*P	**P**	**03 56 21.8**	**-0.1**
MMAI	**Mount Meron Ar**	**82.83**	**310**	P	**P**	**03 56 22.7**	**+0.5**
	comp=Z,31nm,0.8s,baz=49,slow=6.5,SNR=68						
MMAI				LR	LR	04 37 58.2	
	comp=Z,2µm,19.6s,baz=35,slow=39						
W45A	**Hickory Valley**	**82.85**	**46**	P	**P**	**03 56 21.1**	**-0.9**
	baz=322						
141A	**Papa Simpson,**	**82.88**	**50**	P	**P**	**03 56 21.7**	**-0.6**
	baz=320						
ACCN	**Adirondack Com**	**82.88**	**31**	*e*P	**P**	**03 56 22.3**	**+0.2**
	comp=Z,13nm,1.1s						
V46A	**Holladay**	**82.88**	**45**	P	**P**	**03 56 21.5**	**-0.8**
	baz=322,SNR=10						
PHP	**Peshkopia**	**82.88**	**325**	P	**P**	**03 56 21.6**	**-0.6**
PHP	**Peshkopia**	**82.88**	**325**	P	**P**	**03 56 21.6**	**-0.6**
PHP	**Peshkopia**	**82.88**	**325**	P	**P**	**03 56 21.6**	**-0.6**
STON	**Ston**	**82.94**	**328**	P	**P**	**03 56 21.1**	**-1.2**
AYDN	**Tasoluk**	**82.96**	**318**	*i*P	**P**	**03 56 23.6**	**+0.8**
URLA	**Izmir**	**82.99**	**319**	*i*P	**P**	**03 56 21.1**	**-1.7**
PAIG	**Paliouri**	**83.00**	**322**	P	**P**	**03 56 22.3**	**-0.5**
PAIG	**Paliouri**	**83.00**	**322**	P	**P**	**03 56 22.3**	**-0.5**
PAIG	**Paliouri**	**83.00**	**322**	P	**P**	**03 56 22.3**	**-0.5**
R51A	**Hillsboro**	**83.05**	**41**	P	**P**	**03 56 22.5**	**-0.6**
	baz=325,SNR=6.4						
BIA	**Bitola**	**83.08**	**324**	⇑*e*P	**P**	**03 56 23.4**	**+0.1**
U48A	**Cassie Pea, Po**	**83.09**	**44**	P	**P**	**03 56 22.9**	**-0.5**
	baz=323,SNR=6.7						
T49A	**Edmonton**	**83.10**	**43**	P	**P**	**03 56 22.7**	**-0.6**
	baz=324,SNR=7.1						
T49A	**Edmonton**	**83.10**	**43**	*e*P	**P**	**03 56 23.5**	**+0.1**
	comp=Z,29nm,1.6s						
V47A	**Nunnelly**	**83.15**	**45**	P	**P**	**03 56 23.1**	**-0.6**
	baz=323,SNR=8.8						
S50A	**Richmond**	**83.17**	**41**	P	**P**	**03 56 23.0**	**-0.7**
	baz=324						
YER	**Yerkesik**	**83.20**	**318**	P	**P**	**03 56 24.7**	**+0.8**
YER	**Yerkesik**	**83.20**	**318**	P	**P**	**03 56 24.7**	**+0.8**
FETY	**Fethiye**	**83.21**	**317**	P	**P**	**03 56 23.8**	**-0.2**
FETY	**Fethiye**	**83.21**	**317**	P	**P**	**03 56 23.8**	**-0.2**
CHOS	**Chios island**	**83.22**	**320**	P	**P**	**03 56 23.9**	**-0.1**
CHOS	**Chios island**	**83.22**	**320**	P	**P**	**03 56 23.9**	**-0.1**
OHR	**Ohrid**	**83.22**	**325**	⇑*i*P	**P**	**03 56 23.6**	**-0.3**
OXF	**Oxford**	**83.24**	**47**	P	**P**	**03 56 23.6**	**-0.5**
	baz=322,SNR=8.0						
OXF	**Oxford**	**83.24**	**47**	*e*P	**P**	**03 56 23.1**	**-1.0**
	comp=Z,59nm,1.4s						
OXF	**Oxford**	**83.24**	**47**	*e*P	**P**	**03 56 23.1**	**-1.0**
OXF				pmax	pmax		
	comp=Z,59nm,1.4s						
Y44A	**Strider, Charl**	**83.26**	**47**	P	**P**	**03 56 23.7**	**-0.5**
	baz=322						
FNA	**Florina**	**83.26**	**324**	*e*P	**P**	**03 56 23.8**	**-0.4**
	comp=Z,172nm,1.9s						
FNA	**Florina**	**83.26**	**324**	P	**P**	**03 56 23.2**	**-1.0**
FNA	**Florina**	**83.26**	**324**	*e*P	**P**	**03 56 23.8**	**-0.4**
FNA				pmax	pmax		
	comp=Z,170nm,1.9s						
DALY	**Dalyan (Mu˜la**	**83.28**	**317**	*i*P	**P**	**03 56 24.0**	**-0.2**
W46A	**Michie**	**83.28**	**46**	P	**P**	**03 56 23.7**	**-0.6**
	baz=322						
SENIN	**Lac Senin/Sane**	**83.30**	**336**	*e*P	**P**	**03 56 25.2**	**+0.7**
	comp=Z,32nm,0.9s						
241A	**Mo Tay, Goldon**	**83.32**	**50**	P	**P**	**03 56 24.1**	**-0.4**
	baz=320						
X45A	**UM Field Stati**	**83.32**	**47**	P	**P**	**03 56 23.5**	**-1.0**
	baz=322						
KSL	**Kastellorizon**	**83.36**	**316**	P	**P**	**03 56 24.1**	**-0.6**
KSL	**Kastellorizon**	**83.36**	**316**	P	**P**	**03 56 24.1**	**-0.6**
LIT	**Litokhoron**	**83.37**	**323**	*e*P	**P**	**03 56 24.4**	**-0.3**
LIT	**Litokhoron**	**83.37**	**323**	P	**P**	**03 56 23.3**	**-1.4**
LIT	**Litokhoron**	**83.37**	**323**	*e*P	**P**	**03 56 24.4**	**-0.3**
R52A	**Catlettsburg**	**83.44**	**40**	P	**P**	**03 56 24.4**	**-0.7**
	baz=325						
U49A	**Red Boiling Sp**	**83.46**	**43**	P	**P**	**03 56 24.8**	**-0.4**
	baz=324,SNR=14						
SKY	**Skiros Island**	**83.49**	**321**	P	**P**	**03 56 25.2**	**-0.1**
SKY	**Skiros Island**	**83.49**	**321**	P	**P**	**03 56 25.2**	**-0.1**
KZN	**Kozani**	**83.50**	**324**	P	**P**	**03 56 24.2**	**-1.2**
KZN	**Kozani**	**83.50**	**324**	P	**P**	**03 56 24.2**	**-1.2**
KZN	**Kozani**	**83.50**	**324**	P	**P**	**03 56 24.2**	**-1.2**
T50A	**Nancy**	**83.50**	**42**	P	**P**	**03 56 25.0**	**-0.4**
	baz=324,SNR=14						
AOS	**Alonnisos**	**83.54**	**322**	P	**P**	**03 56 24.8**	**-0.8**
AOS	**Alonnisos**	**83.54**	**322**	P	**P**	**03 56 24.8**	**-0.8**
PLAL	**Pickwick Lake**	**83.55**	**45**	*e*P	**P**	**03 56 25.2**	**-0.4**
	comp=Z,52nm,2.0s						
V48A	**Smith Brothers**	**83.57**	**44**	P	**P**	**03 56 25.3**	**-0.4**
	baz=323,SNR=5.8						
V48A	**Smith Brothers**	**83.57**	**44**	*e*P	**P**	**03 56 25.6**	**-0.1**
	comp=Z,7.7nm,0.8s						
W47A	**Westpoint**	**83.57**	**45**	P	**P**	**03 56 25.4**	**-0.5**
	baz=323,SNR=5.8						
S51A	**Beattyville**	**83.58**	**41**	P	**P**	**03 56 25.0**	**-0.8**
	baz=325,SNR=5.1						
S51A	**Beattyville**	**83.58**	**41**	*e*P	**P**	**03 56 25.6**	**-0.2**
	comp=Z,13nm,0.8s						
SSPA	**Standing Stone**	**83.58**	**36**	P	**P**	**03 56 25.2**	**-0.6**
	baz=328						
SSPA	**Standing Stone**	**83.58**	**36**	*e*P	**P**	**03 56 24.9**	**-0.9**
	comp=Z,42nm,1.6s						
O56A	**Blue Knob Stat**	**83.61**	**36**	P	**P**	**03 56 25.3**	**-0.7**
	baz=327						
O56A	**Blue Knob Stat**	**83.61**	**36**	*e*P	**P**	**03 56 25.5**	**-0.5**
	comp=Z,12nm,1.1s						
X46A	**Booneville**	**83.62**	**46**	P	**P**	**03 56 25.2**	**-0.9**
	baz=322						
KBN	**Korca**	**83.64**	**325**	P	**P**	**03 56 25.9**	**-0.2**
KBN	**Korca**	**83.64**	**325**	P	**P**	**03 56 25.9**	**-0.2**
KBN	**Korca**	**83.64**	**325**	P	**P**	**03 56 25.9**	**-0.2**
KSPA	**Keystone Colle**	**83.65**	**34**	*e*P	**P**	**03 56 26.1**	**0.0**
	comp=Z,48nm,1.7s						
Z44A	**Pea Ridge, Bel**	**83.67**	**48**	P	**P**	**03 56 26.2**	**-0.2**
	baz=322						
Y45A	**Yeager Farm, C**	**83.68**	**47**	P	**P**	**03 56 26.2**	**-0.2**
	baz=322,SNR=7.3						
XOR	**Xorichti**	**83.68**	**322**	P	**P**	**03 56 25.5**	**-0.8**

XOR	Xorichti	83.68	322	P	P	03 56 25.5	-0.8
NEST	Nestorio	83.70	324	P	P	03 56 26.1	-0.4
BODT	Bodrum	83.71	318	P	P	03 56 25.5	-1.0
BODT	Bodrum	83.71	318	P	P	03 56 25.5	-1.0
NEO	Neokhori	83.71	322	P	P	03 56 25.6	-0.9
NEO	Neokhori	83.71	322	P	P	03 56 25.6	-0.9
SKIA	Skiathos	83.73	322	P	P	03 56 25.8	-0.7
FYTO	Fytoko, Volos	83.75	322	P	P	03 56 26.0	-0.7
FYTO	Fytoko, Volos	83.75	322	P	P	03 56 26.0	-0.7
DAT	Datca	83.86	318	iP	P	03 56 27.0	-0.4
NWAO	Narrogin (SRO)	83.95	208	P	P	03 56 27.8	+0.3
	comp=Z,12nm,0.8s,baz=34,slow=8.7,SNR=3.3						
NWAO				LR	LR	04 40 17.4	
	comp=Z,117nm,18.1s,baz=284,slow=40						
T51A	Gray	83.96	42	P	P	03 56 26.9	-0.9
	baz=325						
KPRO	Kipourio	83.96	324	P	P	03 56 26.8	-1.0
U50A	Jamestown	83.98	42	P	P	03 56 27.1	-0.8
	baz=324						
Z45A	Winona	83.99	48	P	P	03 56 27.5	-0.4
	baz=322						
W48A	Pulaski	83.99	45	P	P	03 56 27.5	-0.4
	baz=323,SNR=11						
V49A	McMinnville	83.99	44	P	P	03 56 27.1	-0.9
	baz=324,SNR=6.1						
Y46A	Houston	84.02	47	P	P	03 56 27.2	-0.9
	baz=322,SNR=9.9						
X47A	Russelville	84.02	46	P	P	03 56 27.2	-0.9
	baz=323						
RAYN	Ar Rayn	84.05	297	eP	P	03 56 29.0	+0.5
	comp=Z,24nm,0.7s						
RAYN	Ar Rayn	84.05	297	iP	P	03 56 29.0	+0.5
	SNR=34						
N59A	State Game Lan	84.20	34	P	P	03 56 27.9	-1.0
	baz=329						
N59A	State Game Lan	84.20	34	eP	P	03 56 28.9	0.0
	comp=Z,48nm,1.7s						
KARY	Karystos	84.24	321	P	P	03 56 28.4	-0.7
T52A	Hallie	84.29	41	P	P	03 56 28.8	-0.7
	baz=325						
AGG	Agios Georgios	84.33	323	eP	P	03 56 28.6	-1.1
AGG	Agios Georgios	84.33	323	P	P	03 56 27.6	-2.1
AGG	Agios Georgios	84.33	323	eP	P	03 56 28.6	-1.1
W49A	Belvidere	84.34	44	P	P	03 56 29.3	-0.4
	baz=324,SNR=13						
LKR	Lokris	84.36	322	P	P	03 56 28.6	-1.1
LKR	Lokris	84.36	322	P	P	03 56 28.6	-1.1
PAGS	Pennsylvania G	84.40	35	eP	P	03 56 30.3	+0.3
	comp=Z,24nm,1.5s						
U51A	La Follette	84.40	42	P	P	03 56 29.3	-0.8
	baz=325						
HRV	Adam Dziewonsk	84.41	30	P	P	03 56 28.9	-1.0
	baz=331						
SWET	Sewanee	84.42	44	eP	P	03 56 29.6	-0.6
	comp=Z,21nm,1.0s						
JAN	Janina	84.42	324	P	P	03 56 30.3	+0.2
JAN	Janina	84.42	324	P	P	03 56 30.3	+0.2
JAN	Janina	84.42	324	P	P	03 56 30.3	+0.2
V50A	Pikevile	84.46	43	P	P	03 56 29.5	-0.8
	baz=324,SNR=6.9						
PTL	Penteli	84.48	321	P	P	03 56 29.1	-1.3
PTL	Penteli	84.48	321	P	P	03 56 29.1	-1.3
X48A	Hartselle	84.48	45	P	P	03 56 29.8	-0.6
	baz=323						
X48A	Hartselle	84.48	45	eP	P	03 56 30.0	-0.5
	comp=Z,21nm,1.5s						
TZTN	Tazewell	84.49	42	P	P	03 56 29.9	-0.6
	baz=325						
TZTN	Tazewell	84.49	42	eP	P	03 56 30.6	+0.2
	comp=Z,26nm,1.5s						
244A	Avery, Jackson	84.50	49	P	P	03 56 30.5	-0.1
	baz=322						
Y47A	UCPARC, Winfie	84.51	46	P	P	03 56 30.3	-0.3
	baz=323,SNR=7.6						
APE	Apeiranthos	84.53	319	ceP	P	03 56 29.0	-1.7
APE				pmax	pmax		
	comp=Z,83nm,2.3s						
ZAIG	Zacatecas	84.56	63	eP	P	03 56 32.0	+0.6
	comp=Z,19nm,1.4s						
ATHU	Athens Univers	84.58	321	P	P	03 56 29.4	-1.5
ATHU	Athens Univers	84.58	321	P	P	03 56 29.4	-1.5
SRN	Sarande	84.59	325	P	P	03 56 29.1	-1.8
SRN	Sarande	84.59	325	P	P	03 56 29.1	-1.8
VILL	Villia	84.62	322	P	P	03 56 29.7	-1.5
LUPA	Lehigh Univers	84.62	34	eP	P	03 56 31.1	0.0
EVR	Evrytania	84.64	323	P	P	03 56 28.7	-2.6
EVR	Evrytania	84.64	323	P	P	03 56 28.7	-2.6
VLY	Voula,Athens	84.67	321	P	P	03 56 29.7	-1.7
VLY	Voula,Athens	84.67	321	P	P	03 56 29.7	-1.7
BNI	Bardonecchia	84.68	336	eP	P	03 56 32.3	+0.9
	comp=Z,46nm,1.2s						
BNI	Bardonecchia	84.68	336	eP	P	03 56 32.3	+0.9
BNI				pmax	pmax		
	comp=Z,46nm,1.2s						
U52A	Thorn Hill	84.70	42	P	P	03 56 30.9	-0.6
	baz=325						
V51A	Loudon	84.71	43	P	P	03 56 31.0	-0.6
	baz=324,SNR=7.8						
V51A	Loudon	84.71	43	eP	P	03 56 31.5	-0.1
	comp=Z,13nm,0.9s						
SGD	Sagiada	84.72	324	P	P	03 56 31.2	-0.3
W50A	Signal Mountai	84.73	43	P	P	03 56 31.4	-0.4
	baz=324						
W50A	Signal Mountai	84.73	43	eP	P	03 56 31.8	0.0
	comp=Z,66nm,2.0s						
IGT	Igoumenitsa	84.74	324	P	P	03 56 30.9	-0.8
IGT	Igoumenitsa	84.74	324	P	P	03 56 30.9	-0.8
IGT	Igoumenitsa	84.74	324	P	P	03 56 30.9	-0.8
DSF	Desfina	84.76	322	P	P	03 56 30.0	-1.9
DSF	Desfina	84.76	322	P	P	03 56 30.0	-1.9
DSL	Palaion Diasel	84.76	324	P	P	03 56 31.4	-0.4
DSL	Palaion Diasel	84.76	324	P	P	03 56 31.4	-0.4
X49A	Woodville	84.79	45	P	P	03 56 31.5	-0.5
	baz=324,SNR=8.8						
KEK	Kerkira	84.81	325	P	P	03 56 31.2	-0.8
KEK	Kerkira	84.81	325	P	P	03 56 31.2	-0.8
Y48A	Jasper	84.85	46	P	P	03 56 31.6	-0.7
	baz=323						
ANX	Ano Chora	84.87	323	P	P	03 56 31.4	-1.1
146A	Union	84.89	48	P	P	03 56 32.0	-0.5
	baz=322						
LTK	Loutraki	84.89	322	P	P	03 56 30.5	-2.0
LTK	Loutraki	84.89	322	P	P	03 56 30.5	-2.0
CPCT	Cooper Cave	84.92	43	eP	P	03 56 32.6	-0.1
	comp=Z,14nm,1.0s						
LOUT	Loutraki	84.92	322	P	P	03 56 30.5	-2.1
IOSP	Ios island	84.93	319	P	P	03 56 30.7	-2.0
245A	Little AP, Sta	84.93	48	P	P	03 56 32.3	-0.4
	baz=322						
344A	Westbrook Farm	84.94	49	P	P	03 56 32.2	-0.6
	baz=322						
AQU	L'Aquila	84.95	330	eP	P	03 56 33.5	+0.8
	comp=Z,57nm,1.0s						
AQU	L'Aquila	84.95	330	eP	P	03 56 33.5	+0.8
AQU				pmax	pmax		
	comp=Z,57nm,1.0s						
Z47A	Carrollton	84.96	47	P	P	03 56 32.4	-0.4
	baz=323,SNR=5.9						
SERG	Sergoula	84.96	322	P	P	03 56 30.7	-2.1
TRIZ	Trizonia	84.99	322	P	P	03 56 31.6	-1.3
KARP	Karpathos	85.01	317	eP	P	03 56 33.1	-0.1
	comp=Z,62nm,0.8s						
KARP	Karpathos	85.01	317	P	P	03 56 32.5	-0.7
EFP	Efpalio	85.01	323	P	P	03 56 32.0	-1.1
PVO	Paravola	85.02	323	P	P	03 56 32.5	-0.6
W51A	Cleveland	85.03	43	P	P	03 56 32.9	-0.3
	baz=324						
V52A	Sevierville	85.04	42	P	P	03 56 32.9	-0.3
	baz=325,SNR=9.0						
V52A	Sevierville	85.04	42	eP	P	03 56 33.4	+0.2
	comp=Z,22nm,1.2s						
Z48A	Northport	85.08	46	P	P	03 56 33.0	-0.4
	baz=323						
U53A	Fall Branch	85.09	41	P	P	03 56 33.1	-0.4
	baz=325,SNR=8.3						
TKL	Tuckaleechee C	85.10	42	P	P	03 56 32.8	-0.8
	comp=Z,9.4nm,0.8s,baz=320,slow=2.1,SNR=13						
TKL				LR	LR	04 33 42.3	
	comp=Z,661nm,21.8s,baz=338,slow=35						
TKL	Tuckaleechee C	85.10	42	eP	P	03 56 33.1	-0.5
	comp=Z,14nm,0.9s						
LAKA	Lakka	85.14	322	P	P	03 56 32.9	-0.8
LAKA	Lakka	85.14	322	P	P	03 56 32.9	-0.8
X50B	Fort Payne	85.16	44	P	P	03 56 33.4	-0.6
	baz=324,SNR=5.6						
PSUB	Penn St. - Bra	85.17	34	eP	P	03 56 34.8	+1.0
	comp=Z,38nm,1.9s						
PDO	Prodromos	85.18	323	P	P	03 56 33.3	-0.6
DID	Didima	85.20	321	P	P	03 56 31.2	-2.9
DID	Didima	85.20	321	P	P	03 56 31.2	-2.9
MATE	Matera	85.23	327	⇓iP	P	03 56 33.9	-0.2
KLV	Kalavryta, Ach	85.23	322	P	P	03 56 32.9	-1.3
KLV	Kalavryta, Ach	85.23	322	P	P	03 56 32.9	-1.3
GUR	Goura	85.24	322	P	P	03 56 32.8	-1.5
GUR	Goura	85.24	322	P	P	03 56 32.8	-1.5
147A	Livingston	85.27	47	P	P	03 56 34.0	-0.4
	baz=323						
147A	Livingston	85.27	47	eP	P	03 56 34.9	+0.4
	comp=Z,37nm,1.0s						
Y49A	Blount Mountai	85.27	45	P	P	03 56 33.8	-0.7
	baz=324						
Y49A	Blount Mountai	85.27	45	eP	P	03 56 34.1	-0.3
	comp=Z,9.9nm,0.9s						
BLA	Blacksburg	85.36	39	P	P	03 56 34.2	-0.7
	baz=326						
BLA	Blacksburg	85.36	39	eP	P	03 56 34.1	-0.8
	comp=Z,17nm,1.0s						
BLA	Blacksburg	85.36	39	eP	P	03 56 34.9	0.0
BLA				pmax	pmax		
	comp=Z,17nm,1.0s						
W52A	Murphy	85.49	43	P	P	03 56 34.8	-0.7
	baz=325						
W52A	Murphy	85.49	43	eP	P	03 56 35.7	+0.2
	comp=Z,13nm,1.2s						
DRO	Drossia	85.50	322	P	P	03 56 35.3	-0.2
RLS	Riolos of Patr	85.51	323	P	P	03 56 35.1	-0.4
RLS	Riolos of Patr	85.51	323	P	P	03 56 35.1	-0.4
V53A	Saluda	85.55	42	P	P	03 56 34.6	-1.2
	baz=325,SNR=5.6						
V53A	Saluda	85.55	42	eP	P	03 56 36.0	+0.1
	comp=Z,12nm,1.1s						
FSK	Fiskardo	85.56	323	P	P	03 56 34.8	-0.9
Y50A	Piedmont	85.58	45	P	P	03 56 35.2	-0.8
	baz=324,SNR=5.8						
247A	Quitman	85.58	48	P	P	03 56 35.4	-0.6
	baz=322						
LRAL	Lakeview Retre	85.63	46	P	P	03 56 35.6	-0.6
	baz=323						
LRAL	Lakeview Retre	85.63	46	eP	P	03 56 35.5	-0.8
148A	Greensboro	85.65	47	P	P	03 56 35.8	-0.5
	baz=323						
VLX	Vlachokerasia	85.69	322	P	P	03 56 35.2	-1.4
VLX	Vlachokerasia	85.69	322	P	P	03 56 35.2	-1.4
Z49A	Columbiana	85.74	46	P	P	03 56 36.3	-0.5
	baz=324						
CVRD	Centerville Ro	85.78	37	eP	P	03 56 36.5	-0.4
	comp=Z,20nm,1.1s						
VLS	Valsamata	85.78	323	P	P	03 56 35.5	-1.4
VLS	Valsamata	85.78	323	P	P	03 56 35.5	-1.4
VLS	Valsamata	85.78	323	P	P	03 56 35.5	-1.4
W53A	Cullowhee	85.79	42	P	P	03 56 36.3	-0.8
	baz=325,SNR=9.2						
ZKR	Zakros	85.81	318	P	P	03 56 36.9	-0.2
ZKR	Zakros	85.81	318	P	P	03 56 36.9	-0.2
AMT	Artemida-Makis	85.85	322	P	P	03 56 36.5	-0.8
X52A	Dahlonega	85.90	43	P	P	03 56 36.7	-0.9
	baz=325						
Y51A	Rockmart	85.90	44	P	P	03 56 37.0	-0.6
	baz=324,SNR=11						
VLI	Veliai	85.99	321	P	P	03 56 35.5	-2.5
VLI	Veliai	85.99	321	P	P	03 56 35.5	-2.5
Z50A	Ashland	86.00	45	P	P	03 56 37.5	-0.6
	baz=324,SNR=16						
Z50A	Ashland	86.00	45	eP	P	03 56 37.5	-0.6
	comp=Z,22nm,1.0s						
BG3	Lake Jocassee	86.04	42	eP	P	03 56 38.7	+0.4
	comp=Z,20nm,1.0s						
ITM	Ithomi	86.05	322	eP	P	03 56 37.4	-0.9
	comp=Z,71nm,0.9s						
149A	Jones	86.08	46	P	P	03 56 37.8	-0.7
	baz=323,SNR=6.6						
LAST	Lasithi	86.12	318	P	P	03 56 37.9	-0.8
LAST	Lasithi	86.12	318	P	P	03 56 37.9	-0.8
347A	Saraland	86.13	48	P	P	03 56 38.2	-0.5
	baz=323						
DYR	Agios Nikonas	86.22	321	P	P	03 56 37.8	-1.3
X53A	Estanollee	86.27	43	P	P	03 56 38.7	-0.7
	baz=325,SNR=11						
IDI	Anoyia	86.29	319	P	P	03 56 37.8	-1.7
	comp=Z,43nm,1.0s,baz=28,slow=9.2,SNR=19						
IDI				LR	LR	04 41 39.0	
	comp=Z,518nm,18.1s,baz=12,slow=40						
IDI	Anoyia	86.29	319	⇑iP	P	03 56 38.3	-1.2
IDI	Anoyia	86.29	319	eP	P	03 56 38.0	-1.6
	comp=Z,47nm,1.0s						
URVA	University of	86.31	37	eP	P	03 56 39.7	+0.2
Z51A	Franklin	86.32	45	P	P	03 56 39.1	-0.6
	baz=324						
PYL	PYLOS	86.37	322	P	P	03 56 36.3	-3.5
PYL	PYLOS	86.37	322	P	P	03 56 36.3	-3.5
249A	Camden	86.41	47	P	P	03 56 39.5	-0.6
	baz=323,SNR=6.0						
Y52A	Lilburn	86.42	43	P	P	03 56 39.7	-0.4
	baz=325						
Y52A	Lilburn	86.42	43	eP	P	03 56 40.5	+0.3
	comp=Z,13nm,1.1s						
150A	Eclectic	86.47	46	P	P	03 56 39.8	-0.6
	baz=324,SNR=5.5						
TIP	Timpagrande	86.48	326	⇑iP	P	03 56 40.6	+0.2
TIP	Timpagrande	86.48	326	eP	P	03 56 40.3	-0.2
	comp=Z,44nm,1.0s						
TIP	Timpagrande	86.48	326	P	P	03 56 39.4	-1.0
SIVA	Sivas	86.55	319	P	P	03 56 40.4	-0.3
SIVA	Sivas	86.55	319	P	P	03 56 40.4	-0.3
IMMV	Iera Moni Meta	86.56	320	P	P	03 56 40.2	-0.6
NCAT	North Carolina	86.59	39	eP	P	03 56 41.0	+0.1
	comp=Z,8.7nm,0.9s						
Y53A	Monroe	86.66	43	P	P	03 56 40.8	-0.5
	baz=325						
KMSC	Kings Mountain	86.66	41	P	P	03 56 40.7	-0.6
	baz=326,SNR=5.5						
KMSC	Kings Mountain	86.66	41	eP	P	03 56 41.3	0.0
	comp=Z,13nm,1.1s						
PAULI	Pauline	86.71	41	eP	P	03 56 42.0	+0.5
	comp=Z,7.1nm,1.0s						
Z52A	Williamson	86.79	44	P	P	03 56 41.4	-0.5
	baz=325,SNR=5.8						
250A	Grady	86.85	46	P	P	03 56 41.8	-0.5
	baz=324,SNR=5.7						
250A	Grady	86.85	46	eP	P	03 56 42.7	+0.4
	comp=Z,50nm,1.2s						
349A	Repton	86.87	47	P	P	03 56 41.8	-0.6
	baz=323						
151A	Opelika	86.88	45	P	P	03 56 42.0	-0.4
	baz=324						
TBI	Tubuai	86.95	128	eS	S	04 07 19.5	+1.8
	comp=Z,481nm,29.2s						
TBI	Tubuai	86.95	128	eLR	LR	04 23 44.1	
	comp=Z,1µm,22.2s,baz=325						
TBI	Tubuai	86.95	128	eT	T	05 33 06.5	
	comp=Z,9.9nm,0.3s						
HODGE	Hodges	86.98	42	eP	P	03 56 43.2	+0.4
	comp=Z,19nm,1.5s						
152A	Waverly Hall	87.07	45	P	P	03 56 42.6	-0.7
	baz=324						
152A	Waverly Hall	87.07	45	eP	P	03 56 43.1	-0.2
	comp=Z,22nm,1.4s						
GOGA	Godfrey	87.08	43	P	P	03 56 42.7	-0.7
	baz=325						
GOGA	Godfrey	87.08	43	eP	P	03 56 42.5	-0.8
	comp=Z,7.2nm,1.3s						
Y54A	Tignall	87.08	43	P	P	03 56 43.1	-0.2
	baz=325,SNR=21						
BRAL	Brewton	87.09	47	P	P	03 56 42.9	-0.6
	baz=323						
Z53A	Monticello	87.13	43	P	P	03 56 42.8	-0.8
	baz=325						
JSC	Jenkinsville	87.41	41	eP	P	03 56 45.2	+0.3
	comp=Z,7.6nm,0.9s						
Z54A	Sparta	87.52	43	P	P	03 56 45.2	-0.2
	baz=325						
252A	Lumpkin	87.60	45	P	P	03 56 45.3	-0.6
	baz=324						
253A	Americus	87.85	45	P	P	03 56 46.9	-0.1
	baz=325						
253A	Americus	87.85	45	eP	P	03 56 47.8	+0.7
	comp=Z,56nm,1.3s						
154A	Montrose	87.90	44	P	P	03 56 47.0	-0.3
	baz=325,SNR=6.5						
CNNC	Cliffs of the	88.13	38	eP	P	03 56 49.3	+0.9
	comp=Z,25nm,1.4s						
155A	Kite	88.20	43	P	P	03 56 48.1	-0.6
	baz=326						
254A	Abbeville	88.36	44	P	P	03 56 48.5	-1.0
	baz=325,SNR=8.3						
353A	Camilla	88.39	45	P	P	03 56 48.8	-0.8
	baz=325						
TIGA	Tifton	88.62	45	P	P	03 56 49.9	-0.8
	baz=325						
TIGA	Tifton	88.62	45	eP	P	03 56 51.4	+0.6
	comp=Z,61nm,1.4s						
156A	Sylvania	88.64	42	P	P	03 56 49.6	-1.2
	baz=326						
255A	Hazlehurst	88.77	43	P	P	03 56 50.7	-0.7
	baz=326						
VAE	Valguarnera	88.86	327	LR	LR	04 41 58.6	
	comp=Z,784nm,18.0s,baz=344,slow=39						
PGAV	Gavieira, Arco	91.14	345	eLR	LR	04 34 55.7	
	comp=Z,555nm,18.0s						
POLO	Lamas de Olo	91.62	345	eP	P	03 57 03.9	-0.8
	comp=Z,15nm,1.4s						
POLO	Lamas de Olo	91.62	345	eS	S	04 08 00.9	-0.5
MVO	Moncorvo	91.68	344	eP	P	03 57 04.2	-0.7
MVO	Moncorvo	91.68	344	eS	S	04 08 02.4	+0.5
MVO	Moncorvo	91.68	344	eLR	LR	04 35 49.3	
	comp=Z,381nm,20.0s						
PVRL	Vila Real	91.70	344	eP	P	03 57 04.2	-0.8
	comp=Z,33nm,1.1s						
KEST	Kesra	92.27	330	P	P	03 57 07.8	0.0
	comp=Z,35nm,1.0s,baz=306,slow=3.2,SNR=22						
KEST				LR	LR	04 43 03.7	
	comp=Z,530nm,18.5s,baz=341,slow=38						
PVIS	Viseu	92.28	344	eP	P	03 57 06.7	-1.0
	comp=Z,42nm,1.9s						
ES19	SONSECA Array	92.42	341	eP	P	03 57 07.8	-0.6
ESDC	Sonseca Array	92.46	341	P	P	03 57 07.1	-1.5
	comp=Z,6.2nm,1.0s,baz=9.9,slow=4.3,SNR=20						
ESLA	Sonseca Array	92.46	341	eP	P	03 57 07.9	-0.7
	comp=Z,23nm,1.6s						
MTE	Manteigas	92.51	344	eP	P	03 57 08.1	-0.7
	comp=Z,27nm,1.3s						
MTE	Manteigas	92.51	344	eS	S	04 08 23.2	+14
MTE	Manteigas	92.51	344	eLR	LR	04 35 53.9	
	comp=Z,499nm,18.0s						
COI	Coimbra	92.86	345	eP	P	03 57 09.8	-0.5
	comp=Z,47nm,1.1s						
PCAS	Casmilo, Conde	93.03	345	eS	S	04 08 21.5	+7.6
PCBR	Castelo Branco	93.04	344	eP	P	03 57 10.1	-1.0
	comp=Z,21nm,1.6s						
PMRV	Marv??o	93.42	344	eP	P	03 57 10.7	-2.2
	comp=Z,24nm,1.5s						
PMRV	Marv??o	93.42	344	eS	S	04 08 04.2	-13
PMRV	Marv??o	93.42	344	eLR	LR	04 36 32.3	
	comp=Z,360nm,18.0s						
PTOM	Tomar	93.44	345	eP	P	03 57 11.6	-1.4
	comp=Z,36nm,1.3s						
ALMR	Almeirim	93.92	345	eP	P	03 57 14.8	-0.4
	comp=Z,46nm,2.3s						
PESTR	Estremoz	94.00	344	eP	P	03 57 14.6	-1.0
	comp=Z,31nm,1.4s						
PESTR	Estremoz	94.00	344	eS	S	04 08 27.5	+5.0
ATD	Arta Tunnel	94.58	291	LR	LR	04 45 34.1	
	comp=Z,411nm,18.4s,baz=28,slow=39						
PBEJ	Beja	94.87	344	eP	P	03 57 20.1	+0.5
MESJ	Messejana	95.12	344	eP	P	03 57 20.5	-0.2
MESJ				AMS	AMS	04 48 29.0	
	comp=N,482nm,20.2s						
MESJ	Messejana	95.12	344	eP	P	03 57 20.5	-0.2
	comp=N,22nm,1.5s						
PCVE	Castro Verde	95.29	344	eP	P	03 57 20.9	-0.6
RKT	Rikitea	95.36	118	eLR	LR	04 27 50.9	
	comp=N,485nm,30.2s,baz=327						
PVAQ	Vaqueiros	95.44	344	eLR	LR	04 38 35.7	
	comp=N,432nm,18.0s						
MDT	Midelt	99.16	340	LR	LR	04 48 52.8	
	comp=N,382nm,19.1s,baz=32,slow=39						
TORD	Torodi Ar. Bea	115.62	327	PKP	PKPdf	04 02 38.6	-1.4
	comp=N,1.7nm,1.0s,baz=356,slow=3.0						
VNDA	Vanda	122.84	177	PKP	PKPdf	04 02 51.1	-0.8
	comp=N,1.2nm,0.9s,baz=327,slow=4.5,SNR=5.9						
DBIC	Dimbokro	123.98	331	PKP	PKPdf	04 02 54.9	-1.2
	comp=N,8.1nm,1.0s,baz=83,slow=1.2,SNR=4.4						
LSZ	Lusaka	124.00	283	ePKPdf	PKPdf	04 02 56.5	+0.4
SAML	Samuel	132.99	50	ePKPdf	PKPdf	04 03 13.1	-0.1
SAML	Samuel	132.99	50	ePKIKP	PKPdf	04 03 13.1	-0.1
LPAZ	La Paz	135.95	62	PKP	PKPdf	04 03 20.8	+1.4
	comp=N,1.9nm,0.9s,baz=336,slow=5.6,SNR=6.1						
NVL	N'lazarevskaya	147.97	204	⇓iPKP2	PKPbc	04 03 41.9	+0.5
NVL				pmax	pmax		
	comp=Z,40nm,0.9s						
NVL				MLR	MLR		
	comp=Z,517nm,22.0s						
PLCA	Paso Flores	149.19	96	PKPbc	PKPbc	04 03 46.0	+0.4
	comp=Z,5.9nm,0.8s,baz=282,slow=3.4,SNR=7.8						
PLCA	Paso Flores	149.19	96	PKP2	PKPbc	04 03 46.0	+0.4
PLCA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CPUP	Villa Florida	150.10	60	PKPbc	PKPbc	04 03 46.8	-1.4
	comp=Z,9.9nm,1.0s,baz=8.6,slow=4.1,SNR=10						
SNAA	Sanae	150.97	196	PKP	PKPbc	04 03 48.4	-0.5
SNAA	Sanae	150.97	196	PKPbc	PKPbc	04 03 48.3	-0.7
	comp=Z,11nm,0.9s,baz=105,slow=2.0,SNR=15						
VNA3	Neumayer Olymp	152.55	193	PKP	PKPbc	04 03 52.2	-0.3
VNA1	Neumayer--Stat	152.83	195	PKP	PKPbc	04 03 53.2	+0.2

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*ISCJB **14** 03:48:15.0±0.7, 29°.12S±0°.03×70°.30W±0°.05, h125^{km}±6^{km},*
Error ellipse: s-maj=7.1km s-min=5.1km az=174.6
*GUC **14** 03:48:15.7±0.4, 29°.17S×70°.02W, h88^{km}±16^{km}, ML3.2*
*SJA **14** 03:48:16.4±0.8, 29°.18S×70°.28W, h108^{km}±5^{km}, ML2.9, MW3.2*

ISC 14 03:48:14.3±1.7,**29°.07S**±0°.04×**70°.30W**±0°.06,
h130^{km}±11^{km},**n25**,σ1^{s}.**45**/48,**Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCO	Las Campanas	0.36	280	iP	Pn	03 48 33.5	+0.5
LCO				eS	Sn	03 48 46.3	-0.9
LCO	Las Campanas	0.36	280	eP	Pn	03 48 32.5	-0.6
LCO				eS	Sn	03 48 45.6	-1.5
LCO				IAML		03 48 46.7	
	comp=N,1µm,0.2s						
VACH	Vallenar	0.64	321	eP	Pn	03 48 35.1	+0.8
VACH				iS	Sn	03 48 48.9	-0.6
TLL	Tololo Astrono	1.18	202	eP	Pn	03 48 39.4	+0.2
TLL				iS	Sn	03 48 57.1	-1.1
TLL				IAML		03 48 59.5	
	comp=E,614nm,0.3s						
GO04	Tololo Observa	1.18	202	eP	Pn	03 48 39.5	+0.2
GO04				iS	Sn	03 48 57.2	-1.1
GO04				IAML		03 48 59.7	
	comp=E,1µm,0.4s						
AROD	Rodeo	1.31	147	eP	Pn	03 48 41.3	+0.6
AROD				eS	Sn	03 48 59.7	-1.0
GO03	Copiap	1.47	2	eP	Pn	03 48 43.5	+1.2
GO03				iS	Sn	03 49 04.3	+0.8
GO03				IAML		03 49 04.6	
	comp=E,348nm,0.2s						
ACDV	Cuesta del Vie	1.50	137	eP	Pn	03 48 43.6	+1.0
ACDV				eS	Sn	03 49 04.9	+0.7
AGUA	GUANDACOL	1.63	105	eP	Pn	03 48 45.6	+1.6
AGUA				eS	Sn	03 49 06.3	-0.4
VCA	Vinchina	1.86	80	eP	Pn	03 48 48.9	+2.1
VCA				eS	Sn	03 49 13.4	+1.8
VCA				IAML		03 49 15.1	
	comp=Z,140nm,0.4s						
AMOG	MOGNA	2.43	140	eP	Pn	03 48 54.4	+0.7
AMOG				eS	Sn	03 49 23.1	-0.9
RTLL	Cerro Villicun	2.75	145	eP	Pn	03 48 58.8	+1.0
RTLL				eS	Sn	03 49 31.3	+0.1
RTLL				IAML		03 49 33.5	
	comp=Z,45nm,0.3s						
ZON	Zonda	2.84	151	iP	Pn	03 48 59.9	+1.1
ZON				eS	Sn	03 49 32.5	-0.7
ZON				IAML		03 49 34.0	
	comp=Z,14nm,0.4s						
RTLS	Leoncito	2.85	163	iP	Pn	03 49 01.1	+1.8
RTLS				IAML		03 49 01.3	
	comp=Z,105nm,0.1s						
RTLS				eS	Sn	03 49 35.3	+1.3
RTCV	Cerro Valdivia	3.17	152	iP	Pn	03 49 04.3	+1.2
RTCV				eS	Sn	03 49 40.2	-0.7
AUSP	Uspallata	3.24	166	eP	Pn	03 49 06.2	+1.9
AUSP				eS	Sn	03 49 42.8	-0.1
ASAL	Salagasta	3.73	161	iP	Pn	03 49 12.2	+1.6
ASAL				eS	Sn	03 49 54.5	+0.4

ARCO	**CERRO ARCO**	3.94	163	*e*P	Pn	03 49 15.2	+1.8
ARCO				*e*S	Sn	03 49 59.6	+0.4
ARCO				IAML		03 50 08.1	
	comp=Z,11nm,0.2s						
ROC1	**El Roble**	3.94	189	*i* P	Pn	03 49 13.6	+0.1
ROC1				*e*S	Sn	03 49 58.2	-1.1
CYA	**Choya**	4.00	82	*i* P	Pn	03 49 14.1	0.0
CYA				*e*S	Sn	03 49 56.5	-3.9
ACAN	**Cantantal**	4.17	141	*e*P	Pn	03 49 17.4	+1.1
ACAN				*e*S	Sn	03 50 02.2	-2.3
AAGR	**Agrelo**	4.19	163	*e*P	Pn	03 49 18.3	+1.6
AAGR				*e*S	Sn	03 50 07.2	+2.0
MRA	**San Martin**	5.17	131	*e*P	Pn	03 49 29.7	0.0
MRA				*e*S	Sn	03 50 24.0	-4.4
MRA				IAML		03 50 27.0	
	comp=Z,8.9nm,0.4s						
TCA	**Tanti**	5.43	116	*i* P	Pn	03 49 32.5	-0.7
TCA				IAML		03 50 31.8	
	comp=Z,2.9nm,0.6s						
RFA	**San Rafael**	5.89	165	*i* P	Pn	03 49 39.1	-0.3

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*IDC **14** 04:04:27.4±1.1, 36°.92N×138°.37E, h0^{km}, mb3.6/4, mb1 3.8/5, mb1mx3.4/70, mbtmp3.7/5, ML3.7/1, Error ellipse: s-maj=9.3km s-min=7.6km az=56.0*

*ISCJB **14** 04:04:29.3±0.4, 36°.81N±0°.03×138°.33E±0°.04, h25^{km}±5^{km}, mb3.5/4, Error ellipse: s-maj=5.7km s-min=4.7km az=17.5*

*JMA **14** 04:04:30.1, 36°.83N×138°.37E, h8^{km}±2^{km}, M3.7 Broadband fault plane solution: P waves. NP1: ϕ_s336.00000°, δ51.00000°, λ-69.00000°. NP2: ϕ_s124.00000°, δ44.00000°, λ-114.00000°. Principal axes: T Plg4.0000°, Azm51.0000°; N Plg17.0000°, Azm142.0000°; P Plg73.0000°, Azm308.0000°;*

JMA Felt III J1.

ISC 14 04:04:29.2±1.1**, 36°.85N**±0°.05×**138°.38E**±0°.03**, h12**^{km}±9^{km}**, n17, σ0^{s}.46**/26**, mb3.6**/4**, 5C-2D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JJN	**Nakama**	0.31	327	⇓P	Pb	04 04 36.6	0.0
JJN				S	Sb	04 04 41.1	-0.5
MAT	**Matsushiro**	0.33	204	P	Pg	04 04 35.8	-0.1
MAT				S	Sg	04 04 40.1	-0.3
MAT	**Matsushiro**	0.33	204	P	Pg	04 04 35.8	-0.1
MAT				S	Sg	04 04 40.1	-0.3
MJAR	**Matsushiro Arr**	0.33	204	Pg	Pg	04 04 35.4	-0.5
	757nm,0.3s,baz=15,slow=17,SNR=324						
MJAR				Lg	Lg	04 04 40.6	
	1μm,0.3s,baz=12,slow=28,SNR=94						
JGK	**Kuni**	0.35	143	⇓P	Pb	04 04 37.2	-0.2
JGK				S	Sg	04 04 41.5	+0.4
JNG	**Nsakai**	0.49	207	⇑P	Pg	04 04 38.7	-0.1
JNG				S	Sg	04 04 45.1	-0.3
JHK	**Hiroka**	0.65	52	⇑P	Pb	04 04 42.3	-0.2
JHK				S	Sb	04 04 51.4	-0.1
JKT	**Katashina**	0.71	96	⇑P	Pb	04 04 43.6	+0.2
JKT				S	Sg	04 04 52.9	+0.7
JIZZ	**Izumozaki**	0.73	21	⇑P	Pn	04 04 45.0	-0.3
JIZZ				S	Sb	04 04 55.0	+1.1
JTT	**Ttatey**	0.87	254	P	Pb	04 04 47.0	+0.8
JRY	**Ryogami san**	0.93	153	⇑P	Pg	04 04 47.0	-0.1
JRY				S	Sg	04 04 59.5	+0.2
JAG	**Ashikaga**	0.96	116	P	Pb	04 04 48.2	+0.4
KSRS	**Korea Array**	8.37	277	Pn	Pn	04 06 31.0	+0.8
	1.0nm,0.3s,baz=93,slow=14,SNR=5.8						
SONM	**Songino Array**	25.89	305	P	P	04 10 01.0	+0.1
	0.8nm,0.8s,baz=98,slow=10,SNR=3.3						
KURBB	**Kurchatov Arra**	44.20	308	P	P	04 12 37.3	-0.5
	0.4nm,0.6s,baz=83,slow=7.9,SNR=3.9						
WRA	**Warramunga Arr**	56.61	185	P	P	04 14 11.7	-0.3
	0.4nm,0.4s,baz=0.3,slow=7.6,SNR=12						
AKASG	**Malin Array Be**	72.93	321	P	P	04 15 58.0	0.0
	0.3nm,0.3s,baz=48,slow=6.0,SNR=3.3						

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*NIED **14** 04:11:00, 45°.50N×151°.90E, h26^{km}, Mw4.4 Best double couple: $M_0$4.22000×10^{15} NP1:ϕ_s239.00000°, δ82.00000°, λ-176.00000°. NP2:ϕ_s148.00000°, δ86.00000°, λ-8.00000°.*

*IDC **14** 04:11:26.9±0.6, 45°.30N×151°.79E, h0^{km}, mb4.4/32, mb1 4.5/35, mb1mx4.3/73, mbtmp4.4/35, ML3.6/1, MS3.6/6, Ms1 3.6/6, ms1mx3.3/78, Error ellipse: s-maj=16.0km s-min=12.6km az=163.0*

*BJI **14** 04:11:28.1, 45°.48N×151°.92E, h19^{km}, mb4.9/46, mB5.0/22, Ms4.5/17, Ms7 4.3/17*

*SKHL **14** 04:11:28.2±0.2, 45°.05N×152°.16E, h35^{km}±1^{km}, mb5.2/6*

*JMA **14** 04:11:29.0±0.6, 45°.51N×151°.93E, h30^{km}, M4.9*

*ISCJB **14** 04:11:30.7±0.3, 45°.28N±0°.04×151°.79E±0°.04, h33^{km}, mb4.6/100, Error ellipse: s-maj=6.4km s-min=2.6km az=152.1*

*MOS **14** 04:11:30.9±1.1, 45°.37N×151°.80E, h32^{km}, mb4.8/46, Error ellipse: s-maj=6.5km s-min=5.1km az=113.8*

*NEIC **14** 04:11:31.6±1.8, 45°.39N×151°.79E, h25^{km}±12^{km}, mb4.7/49, Error ellipse: s-maj=8.3km s-min=4.3km az=157.0*

ISC 14 04:11:31.4±0.8**, 45°.30N**±0°.05×**151°.84E**±0°.05**, h27**^{km}±4^{km}**, n355, σ1^{s}.41**/380**, mb4.7**/112**, 21C-25D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	2.81	270	*e*P	Pn	04 12 14.0	-0.4
KUR				AMB	AMB	04 12 26.0	
	112nm,0.4s						
KUR				AMB	AMB	04 12 26.0	
	81nm,0.4s						
KUR				AMB	AMB	04 12 26.0	
	209nm,0.4s						
KUR				*e*S	Sn	04 12 48.2	+0.9
KUR				A	A	04 13 00.3	
	958nm,0.5s						
KUR				A	A	04 13 00.3	
	423nm,0.5s						
KUR	**Kuril'sk**	2.81	270	*e*PN	Pn	04 12 14.3	-0.1
KUR				*e*S	Sn	04 12 48.2	+0.9
KUR				pmax	pmax		
	comp=Z,209nm,0.4s						
KUR				pmax	pmax		
	comp=E,81nm,0.5s						
KUR				pmax	pmax		
	comp=N,112nm,0.6s						
KUR				smax	smax		
	comp=N,958nm,0.5s						
KUR				smax	smax		
	comp=E,423nm,0.5s						
SHO	**Shikotan**	3.85	250	*i* P	Pn	04 12 28.0	-0.8
SHO				AMB	AMB	04 12 38.0	
	comp=E,68nm,0.3s						
SHO				AMB	AMB	04 12 38.0	
	comp=E,54nm,0.3s						
SHO				AMB	AMB	04 12 38.0	
	comp=E,122nm,0.3s						
SHO				*i* S	Sn	04 13 13.0	-0.2
SHO				A	A	04 13 14.0	
	comp=E,291nm,0.5s						
SHO				A	A	04 13 14.0	
	comp=E,246nm,0.5s						
SHO	**Shikotan**	3.85	250*c*	*i*PN	Pn	04 12 28.1	-0.8
SHO				*i* S	Sn	04 13 13.8	+0.6
SHO				pmax	pmax		
	comp=E,122nm,0.5s						
SHO				pmax	pmax		
	comp=E,54nm,0.2s						
SHO				pmax	pmax		
	comp=N,68nm,0.3s						
SHO				smax	smax		
	comp=N,291nm,0.6s						
SHO				smax	smax		
	comp=E,246nm,0.4s						
YUK	**Yuzh-Kuril'sk**	4.45	256	*i* PN	Pn	04 12 37.4	+0.4
LAGR	**Lagunnoye**	4.49	256	*e*P	Pn	04 12 37.0	-0.6
LAGR				AMB	AMB	04 12 51.0	
	comp=E,207nm,0.5s						
LAGR				AMB	AMB	04 12 51.0	
	comp=E,252nm,0.5s						
LAGR				AMB	AMB	04 12 51.0	
	comp=E,323nm,0.5s						
LAGR				*e*S	Sn	04 13 29.0	+0.1
LAGR				A	A	04 13 38.0	
	comp=E,693nm,0.4s						
LAGR				A	A	04 13 38.0	
	comp=E,172nm,0.4s						
LAGR	**Lagunnoye**	4.49	256	*e*PN	Pn	04 12 37.4	-0.2
LAGR				*e*S	Sn	04 13 29.8	+0.9
LAGR				pmax	pmax		
	comp=Z,323nm,0.5s						
LAGR				pmax	pmax		
	comp=N,207nm,0.4s						
LAGR				pmax	pmax		
	comp=E,252nm,0.4s						
LAGR				smax	smax		
	comp=N,693nm,0.5s						
LAGR				smax	smax		
	comp=E,172nm,0.3s						
GRPR	**Tuman**	4.52	255	*e*P	Pn	04 12 37.0	-1.0
GRPR				AMB	AMB	04 12 47.0	
	comp=E,86nm,0.4s						
GRPR				AMB	AMB	04 12 47.0	
	comp=E,147nm,0.4s						
GRPR				AMB	AMB	04 12 47.0	
	comp=E,187nm,0.4s						
GRPR				*e*S	Sn	04 13 30.0	+0.3
GRPR				A	A	04 13 35.0	
	comp=E,267nm,0.4s						
GRPR				A	A	04 13 35.0	
	comp=E,413nm,0.4s						
GRPR	**Tuman**	4.52	255	*e*PN	Pn	04 12 37.9	-0.1
GRPR				pmax	pmax		
	comp=E,147nm,0.4s						
GRPR				pmax	pmax		
	comp=Z,187nm,0.4s						
GRPR				pmax	pmax		
	comp=N,86nm,0.2s						
GLVR	**Golovnino**	4.78	253	*e*P	Pn	04 12 41.0	-0.5
GLVR				AMB	AMB	04 12 57.0	
	comp=N,133nm,0.4s						
GLVR				AMB	AMB	04 12 57.0	
	comp=N,218nm,0.4s						
GLVR				AMB	AMB	04 12 57.0	
	comp=N,323nm,0.4s						
GLVR				*e*S	Sn	04 13 36.0	0.0
GLVR				A	A	04 13 41.0	
	comp=N,204nm,0.4s						
GLVR				A	A	04 13 41.0	
	comp=N,669nm,0.4s						
GLVR	**Golovnino**	4.78	253	*e*PN	Pn	04 12 41.5	0.0
GLVR				pmax	pmax		
	comp=E,218nm,0.4s						
GLVR				pmax	pmax		
	comp=Z,323nm,0.4s						
GLVR				pmax	pmax		
	comp=N,133nm,0.2s						
NEM2	**Nemuro 2**	4.78	248	P	Pn	04 12 40.2	-1.4
NEM2				*e*S	Sn	04 13 32.0	-4.0
JRA	**Rausu**	4.99	257	P	Pn	04 12 45.2	+0.9
JNK	**Nakash**	5.38	254	P	Pn	04 12 49.9	+0.1
JAK	**Akkeshi**	5.63	248	P	Pn	04 12 52.0	-1.2
JAK				*e*S	Sn	04 13 53.5	-3.5
JTKR	**Abashiri--Toko**	5.81	260	P	Pn	04 12 56.9	+1.2
SKR	**Severo-Kuril's**	6.10	27	*e*P	Pn	04 12 59.0	-0.7
SKR				AMB	AMB	04 13 00.0	
	comp=N,75nm,0.6s						
SKR				*e*S	Sn	04 14 06.4	-2.1
SKR				A	A	04 14 28.0	
	comp=N,229nm,1.0s						
SKR				A	A	04 14 28.0	
	comp=N,208nm,1.0s						
SKR	**Severo-Kuril's**	6.10	27	*e*PN	Pn	04 12 59.7	0.0
SKR				pmax	pmax		
	comp=Z,76nm,0.7s						
SKR				MLR	MLR		
	comp=Z,900nm,13.0s						
JAR	**Ashorobuto**	6.13	254	P	Pn	04 13 00.3	+0.2
JMP	**Maruseppu**	6.19	261	P	Pn	04 13 02.5	+1.6
HRK	**Horoka**	6.51	257	*e*P	Pn	04 13 06.5	+1.2
YSS	**Yuzh-Sakhalins**	6.53	288	*e*P	Pn	04 13 08.4	+2.9
YSS				*e*S	Sn	04 14 20.0	+1.0
YSS	**Yuzh-Sakhalins**	6.53	288	*e*Pn	Pn	04 13 04.5	-1.0
YSS	**Yuzh-Sakhalins**	6.53	288	*e*PN	Pn	04 13 08.4	+2.9
YSS				pmax	pmax		
	comp=Z,20nm,0.4s						
YSS				MLR	MLR		
	comp=E,1μm,16.0s						
YSS				MLR	MLR		
	comp=Z,1μm,16.0s						
JKK2	**Kamakawa 2**	6.65	261	P	Pn	04 13 08.6	+1.4
JCH	**Churui**	6.68	249	P	Pn	04 13 07.1	-0.5
JCH				*e*S	Sn	04 14 18.6	-4.2
ASAJ	**Asahikawa**	6.69	263	Pn	Pn	04 13 09.4	+1.6
	comp=Z,3.3nm,0.3s,baz=93,slow=17,SNR=18						
ASAJ				Sn	Sn	04 14 18.3	-4.8
	baz=233,slow=5.1,SNR=2.8						
ASAJ				LR	LR	04 15 35.8	
	comp=Z,367nm,19.5s,baz=80,slow=37						
ASAJ	**Asahikawa**	6.69	263	*e*Pn	Pn	04 13 09.8	+2.0
ASAJ				Sn	Sn	04 14 18.3	-4.8
MYR	**Moyori**	6.88	247	*e*P	Pn	04 13 09.8	-0.6
MYR				*e*S	Sn	04 14 23.0	-4.8
JFR	**Furan**	6.98	255	P	Pn	04 13 12.2	+0.5
ERM	**Erimo**	7.10	246	*e*P	Pn	04 13 13.8	+0.4
ERM	**Erimo**	7.10	246	*e*Pn	Pn	04 13 14.3	+0.9
ERM	**Erimo**	7.10	246	*e*PN	Pn	04 13 14.3	+0.9
JNBK	**Urakawa-nobuka**	7.24	249	P	Pn	04 13 13.2	-2.0
JBT2	**Biratori 2**	7.28	253	P	Pn	04 13 15.3	-0.5
TYV	**Tymovskoe**	8.29	315	*e*P	Pn	04 13 31.9	+2.2
TYV				*e*S	Sn	04 15 02.6	+0.3
TYV				A	A	04 15 03.4	
	comp=Z,11μm,5.4s						
TYV				A	A	04 15 03.4	
	comp=Z,300nm,5.4s						
TYV	**Tymovskoe**	8.29	315	*e*PN	Pn	04 13 31.9	+2.2
TYV				pmax	pmax		
	comp=Z,17nm,1.0s						
JNB	**Noboribetsu**	8.30	254	P	Pn	04 13 29.8	0.0
JKB	**Kayabe**	8.55	250	P	Pn	04 13 32.2	-1.1
JKB				*e*S	Sn	04 15 02.1	-6.7
PEA0B	**Petropavlovsk-**	8.70	24	*e*Pn	Pn	04 13 34.4	-0.9
PETK	**Petropavlovsk-**	8.70	24	Pn	Pn	04 13 34.7	-0.7
	baz=195,slow=10						
PETK				LR	LR	04 18 02.3	
	comp=Z,564nm,18.1s,baz=211,slow=45						
PETK	**Petropavlovsk-**	8.70	24	*e*Pn	Pn	04 13 34.8	-0.5
PETK	**Petropavlovsk-**	8.70	24	*e*PN	Pn	04 13 34.8	-0.5
PET	**Petropavlovsk**	8.92	28	*i* PN	Pn	04 13 34.5	-3.8
JANG	**Nango**	9.04	241	P	Pn	04 13 36.4	-3.6
JANG				*e*S	Sn	04 15 11.3	-10
JTM	**Tenmabayashi**	9.08	244	P	Pn	04 13 38.4	-2.2
JTM				*e*S	Sn	04 15 14.5	-7.4
JOSM	**Okushiri--Mats**	9.52	255	P	Pn	04 13 46.5	0.0
OFUJ	**Ofunato**	9.77	234	P	Pn	04 13 46.9	-3.1
OFUJ				*e*S	Sn	04 15 28.6	-10
JRG	**Rokugo**	10.17	238	P	Pn	04 13 52.9	-2.6
JIO	**Ouri**	10.38	232	P	Pn	04 13 55.2	-3.2
JIO				*e*S	Sn	04 15 43.6	-10
TEY	**Ternei**	10.77	274	*e*PN	Pn	04 14 07.1	+3.5
JFK	**Kawauchi**	11.43	230	*e*S	Sn	04 16 08.4	-11
GRNR	**Gornyy**	11.67	303	*e*PN	Pn	04 14 21.5	+5.5
MJAR	**Matsushiro Arr**	13.50	234	Pn	Pn	04 14 33.6	-7.5
	comp=Z,1.5nm,0.3s,baz=33,slow=35,SNR=18						
MAJO	**Matsushiro**	13.51	234	*e*Pn	Pn	04 14 38.8	-2.3
MAJO	**Matsushiro**	13.51	234	*e*P	Pn	04 14 38.8	-2.3
USRK	**Ussuriysk Ar.**	14.15	273	Pn	Pn	04 14 49.0	-0.9
	baz=84,slow=14						
USRK				LR	LR	04 20 19.0	
	comp=Z,511nm,18.6s,baz=50,slow=38						
KLR	**Kul'dur**	14.19	293	Pn	Pn	04 14 51.6	+1.3
	comp=Z,0.0nm,0.3s,baz=102,slow=16,SNR=5.2						
KLR				LR	LR	04 20 23.7	
	comp=Z,58nm,18.1s,baz=162,slow=38						
KLR	**Kul'dur**	14.19	293	*e*P	Pn	04 14 52.2	+1.9
KLR	**Kul'dur**	14.19	293	*de*P	Pn	04 14 52.2	+1.9
MA2	**Magadan**	14.31	358	LR	LR	04 20 26.0	
	comp=Z,252nm,18.5s,baz=202,slow=38						
MDJ	**Mudanjiang**	15.76	275	*e*Pn	Pn	04 15 09.9	-1.4
	comp=Z,33nm,0.8s						
SEY	**Seymchan**	17.67	1	P	Pn	04 15 33.0	-2.3
	comp=Z,0.2nm,0.3s,baz=169,slow=12,SNR=17						
SEY	**Seymchan**	17.67	1	*e*P	Pn	04 15 33.6	-1.6
SEY	**Seymchan**	17.67	1	⇑*i*P	Pn	04 15 33.6	-1.6
ZEA	**Zeya**	17.99	307	*e*P	Pn	04 15 39.1	-0.1
ZEA				pmax	pmax		
	comp=Z,64nm,1.8s						
CN2	**Changchun**	18.84	275	*e*P	P	04 15 46.9	-2.2
KSRS	**Korea Array**	19.54	255	P	Pn	04 15 57.9	-0.1
	comp=Z,0.3nm,0.3s,baz=57,slow=10,SNR=14						
KSRS				LR	LR	04 24 52.5	
	comp=Z,285nm,19.0s,baz=76,slow=41						
KSAR	**Wonju Array Be**	19.57	255	P	P	04 15 57.9	+0.9
KSAR	**Wonju Array Be**	19.57	255	P	P	04 15 57.9	+0.9
TJN	**Taejon**	20.49	253	⇑*e*P	P	04 16 07.3	+0.3
YAK	**Yakutsk**	21.10	330	P	P	04 16 13.4	0.0
	comp=Z,21nm,0.4s,baz=220,slow=1.6,SNR=5.2						
YAK	**Yakutsk**	21.10	330	*e*P	P	04 16 13.3	-0.1
YAK	**Yakutsk**	21.10	330	*e*P	P	04 16 12.8	-0.7
	comp=Z,33nm,0.6s						
YAK	**Yakutsk**	21.10	330	*e*P	P	04 16 12.1	-1.3
YAK				*e*		04 16 25.7	
YAK				*e*S	S	04 20 05.3	-1.4
YAK				*e**SS	Sn	04 20 13.9	+0.1
YAK				*e*SS	SnSn	04 20 26.8	-1.9
YAK				pmax	pmax		
	comp=Z,22nm,0.9s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.1s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,27nm,0.7s						
YAK				pmax	pmax		
	comp=N,10.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,14nm,1.3s						
YAK				smax	smax		
	comp=N,35nm,2.0s						
YAK				smax	smax		
	comp=E,16nm,1.6s						
YAK				MLR	MLR		
	comp=Z,346nm,15.0s						
YAK				MLR	MLR		
	comp=N,183nm,13.0s						
YAK				MLR	MLR		
	comp=E,158nm,16.0s						
H11N2	**WAKE ISLAND Hy**	28.39	149	T	T	04 48 03.0	
	baz=338						
H11N1	**WAKE ISLAND Hy**	28.40	149	T	T	04 48 03.1	
	baz=338						
H11N3	**WAKE ISLAND Hy**	28.40	149	T	T	04 48 09.9	
	baz=338						
NJ2	**Nanjing**	28.73	254	*e*P	P	04 17 27.8	+1.4
NJ2				pmax	pmax		
	comp=E,14nm,0.5s						
H11S1	**WAKE ISLAND Hy**	29.44	150	T	T	04 49 30.8	
	baz=339						
H11S3	**WAKE ISLAND Hy**	29.45	150	T	T	04 49 32.7	
	baz=339						
H11S2	**WAKE ISLAND Hy**	29.46	150	T	T	04 49 32.1	
	baz=339						
HHC	**Hu-ho-hao-te**	29.53	276	*e*P	P	04 17 34.0	+0.4
HHC				PP	PnPn	04 18 30.8	+2.5
HHC				S	S	04 22 26.6	-0.1
HHC				pmax	pmax		
	comp=E,27nm,1.1s						
HHC				pmax	pmax		
	comp=E,250nm,4.3s						
HHC				LR	LR		
	comp=E,380nm,12.2s						
HHC				LR	LR		
	comp=E,550nm,11.1s						
HHC				LR	LR		
	comp=E,480nm,13.7s						
ULN	**Ulaanbaatar**	30.57	291	*e*P	P	04 17 41.8	-0.9
ULN	**Ulaanbaatar**	30.57	291	*e*P	P	04 17 41.4	-1.2
	comp=E,4.6nm,0.8s						
ULN	**Ulaanbaatar**	30.57	291	⇓*e*P	P	04 17 41.8	-0.9
ULN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SONA1	**Songino Array**	31.00	291	*e*P	P	04 17 46.1	-0.3
SONM	**Songino Array**	31.00	291	P	P	04 17 45.6	-0.9
	comp=Z,4.3nm,0.7s,baz=75,slow=6.9,SNR=27						
TLY	**Talaya**	32.08	299	*e*P	P	04 17 55.3	-0.6
TLY	**Talaya**	32.08	299	*e*P	P	04 17 55.2	-0.6
	comp=Z,2.7nm,0.7s						
TLY	**Talaya**	32.08	299	*e*P	P	04 17 55.2	-0.6
TLY				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ZAK	**Zakamensk**	32.51	297	*e*P	P	04 17 58.3	-1.4
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.4s						
RDOG	**Red Dog Mine**	32.52	30	*e*P	P	04 17 57.9	-1.5
	comp=Z,9.9nm,0.8s						
KDAK	**Kodiak Island**	35.71	49	P	P	04 18 26.9	-0.3
	comp=Z,6.0nm,0.8s,baz=311,slow=7.2,SNR=5.5						
BPAW	**Bear Paw Mtn.**	36.44	38	*e*P	P	04 18 34.5	+1.1
	comp=Z,14nm,1.6s						
LZH	**Lanzhou**	37.06	273	*e*P	P	04 18 40.5	+1.3
LZH				pP	pP	04 18 47.8	+0.6
LZH				sP	sP	04 18 51.3	+0.8
LZH				*e*PP	PnPn	04 20 05.8	+1.7
LZH				pmax	pmax		
	comp=Z,21nm,1.2s						
LZH				pmax	pmax		
	comp=Z,76nm,5.0s						
LZH				LR	LR		
	comp=Z,330nm,13.0s						
LZH				LR	LR		
	comp=Z,340nm,13.3s						
LZH				LR	LR		
	comp=Z,420nm,16.7s						
BWN	**Browne**	37.11	38	*e*P	P	04 18 41.0	+2.0
	comp=Z,18nm,0.8s						
SML	**Sawmill**	37.64	42	*e*P	P	04 18 44.3	+0.7
SML	**Sawmill**	37.64	42	*e*P	P	04 18 44.3	+0.7
	comp=Z,12nm,0.7s						
SML	**Sawmill**	37.64	42	*e*P	P	04 18 44.3	+0.7
SML				pmax	pmax		
	comp=Z,12nm,0.7s						
MDM	**Murphy Dome**	37.67	37	*e*P	P	04 18 44.8	+1.0
	comp=Z,5.5nm,0.8s						
WRH	**Wood River Hil**	37.72	38	*e*P	P	04 18 44.9	+0.7
	comp=Z,17nm,1.8s						
CCB	**Clear Creek Bu**	37.84	38	*e*P	P	04 18 45.8	+0.6
	comp=Z,3.0nm,1.0s						
ILAR	**Eielson Array**	38.24	37	P	P	04 18 48.6	0.0
	comp=Z,2.3nm,0.9s,baz=260,slow=8.2,SNR=20						
ILB	**Eielson Array**	38.24	37	*e*P	P	04 18 48.9	+0.2
IL1	**Eielson Array**	38.24	37	*e*P	P	04 18 48.2	-0.4
HVS	**Khovu-Aksy**	38.29	300	⇓*e*P	P	04 18 51.7	+2.4
HVS				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GTA	**Gaotai**	38.34	280	⇑P	P	04 18 51.0	+1.1
GTA				pP	pP	04 18 58.3	+0.3
GTA				sP	sP	04 19 02.1	+0.8
GTA				pmax	pmax		
	comp=Z,34nm,0.8s						
GTA				pmax	pmax		
	comp=Z,270nm,6.0s						
CD2	**Chengdu**	39.88	266	P	P	04 19 02.8	0.0
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
EGAK	**Eagle**	40.69	37	*e*P	P	04 19 09.1	+0.1
	comp=Z,8.0nm,0.9s						
DGZ	**Jazzator, Alta**	42.55	300	*e*P	P	04 19 25.0	+0.4
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ZALV	**Zalesovo Beam**	42.75	307	P	P	04 19 23.8	-2.2
	comp=Z,1.8nm,0.7s,baz=100,slow=7.6,SNR=5.3						
ZALV				PcP	PcP	04 21 16.8	-0.3
	comp=Z,0.9nm,0.3s,baz=48,slow=2.3,SNR=3.7						
INK	**Inuvik**	43.35	31	P	P	04 19 31.5	+0.9
	comp=Z,6.9nm,0.8s,baz=260,slow=7.1,SNR=16						
INK	**Inuvik**	43.35	31	*e*P	P	04 19 31.8	+1.2
INK	**Inuvik**	43.35	31	*e*P	P	04 19 31.8	+1.2
	comp=Z,8.1nm,0.8s						
KMI	**Kunming**	44.11	260	P	P	04 19 39.3	+1.7
KMI				pmax	pmax		
	comp=Z,10.0nm,0.5s						
WMQ	**Urumqi**	44.63	292	P	P	04 19 43.0	+1.6
WMQ				pP	pP	04 19 47.8	-1.8
WMQ				sP	sP	04 19 53.0	+0.1
WMQ				pmax	pmax		
	comp=Z,34nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,740nm,11.6s						
WMQ				LR	LR		
	comp=Z,370nm,22.5s						
WMQ				LR	LR		
	comp=Z,530nm,17.5s						
WMQ				LR	LR		
	comp=Z,700nm,19.5s						
MK31	**Makanchi Array**	46.83	298	*e*P	P	04 19 58.1	-0.6
MK31	**Makanchi Array**	46.83	298	*e*P	P	04 19 58.1	-0.6
MKAR	**Makanchi Array**	46.83	298	P	P	04 19 57.8	-0.8
	comp=Z,5.9nm,0.8s,baz=70,slow=7.1,SNR=38						

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MKAR                                PcP     PcP     04 21 30.8 -0.5
      comp=Z,1.0nm,0.6s,baz=65,slow=5.1,SNR=3.1
MK01  Makanchi Array    46.83 298  eP      P       04 19 57.7 -1.0
MAKZ  Makanchi          47.02 298  eP      P       04 19 59.6 -0.5
      comp=Z,4.6nm,0.8s
MAKZ  Makanchi          47.02 298  eP      P       04 19 59.6 -0.5
MAKZ                                pmax    pmax
      comp=Z,5.0nm,0.8s
KURK  Kurchatov         47.44 304  eP      P       04 20 01.7 -1.5
KURK                                PcP     PcP     04 21 33.5 +0.2
KURK  Kurchatov         47.44 304  eP      P       04 20 01.7 -1.5
KURK                                                04 21 33.5
KURBB Kurchatov Arra    47.53 304   P      P       04 20 02.4 -1.6
      comp=Z,3.1nm,0.6s,baz=73,slow=8.5,SNR=24
KURBB                               PcP     PcP     04 21 33.5 -0.1
      comp=Z,0.9nm,0.9s,baz=66,slow=3.9,SNR=4.2
LSA   Lhasa             49.47 273  eP      P       04 20 21.3 +1.5
      comp=Z,6.6nm,0.5s
LSA   Lhasa             49.47 273  eP      P       04 20 21.3 +1.5
LSA                                 pmax    pmax
      comp=Z,7.0nm,0.5s
CHTO  Chiang Mai        50.92 257  eP      P       04 20 30.8 +0.5
      comp=Z,3.0nm,0.4s
BVAR  Borovoye Array    51.10 310   P      P       04 20 29.9 -1.4
      comp=Z,1.8nm,0.7s,baz=46,slow=8.3,SNR=9.2
BVAR                                PcP     PcP     04 21 46.1 -0.5
      comp=Z,1.8nm,0.7s,baz=60,slow=3.8,SNR=5.6
BRVK  Borovoye          51.14 310  eP      P       04 20 31.0 -0.6
BRVK  Borovoye          51.14 310  eP      P       04 20 31.0 -0.6
CMAR  Chiang Mai Arr    51.17 256   P      P       04 20 31.5 -0.6
      comp=Z,1.0nm,0.2s,baz=37,slow=8.0,SNR=5.8
RES   Resolute Bay      52.49  18  eP      P       04 20 41.1 -0.2
      comp=Z,2.1nm,0.8s
RES   Resolute Bay      52.49  18  eP      P       04 20 41.1 -0.2
RES                                 pmax    pmax
      comp=Z,2.0nm,0.8s
YKA   Yellowknife Ar    52.62  36   P      P       04 20 42.3  0.0
      comp=Z,1.8nm,0.9s,baz=298,slow=6.9,SNR=5.8
ULHL  Ulahol            52.78 295   P      P       04 20 44.9 +0.7
      SNR=32
TKM2  Tokmak 2          52.84 296   P      P       04 20 45.5 +0.9
      SNR=7.7
USP   Ospenovka         53.36 297   P      P       04 20 49.0 +0.7
      SNR=14
KBK   Karagaybulak      53.39 296   P      P       04 20 49.4 +0.8
      SNR=8.4
KZA   Kyzart            53.50 296   P      P       04 20 51.3 +1.6
      SNR=21
AAK   Ala-Archa         53.69 297   P      P       04 20 51.5 +0.7
      comp=Z,15nm,0.8s,baz=108,slow=3.0,SNR=9.8
AAK   Ala-Archa         53.69 297   P      P       04 20 51.4 +0.7
      SNR=10
AAK   Ala-Archa         53.69 297  eP      P       04 20 51.6 +0.8
AAK   Ala-Archa         53.69 297  eP      P       04 20 51.6 +0.8
      comp=Z,16nm,0.8s
KBS   Kingsbay          53.79 351  eP      P       04 20 50.9 +0.1
SPITS Spitsbergen Ar    53.88 350   P      P       04 20 50.1 -1.4
      comp=Z,1.0nm,0.4s,baz=2.1,slow=12,SNR=6.8
EKS2  Erkin-Say         54.12 297   P      P       04 20 54.8 +0.8
      SNR=29
JIRN  Jiri              54.18 275  eP      P       04 20 55.7 +0.9
      comp=Z,46nm,0.8s
GUN   Gumba             54.24 275  eP      P       04 20 56.0 +0.7
      comp=Z,29nm,0.8s
RAMN  Ramite            54.32 274  eP      P       04 20 56.3 +0.6
      comp=Z,42nm,0.8s
KSH   Kashi             54.39 293   P      P       04 21 00.6 +4.7
KSH                                 sP      sP      04 21 12.0 +4.5
KSH                                ePcP     PcP     04 22 04.1 +4.6
KSH                                 pmax    pmax
      comp=Z,10.0nm,0.8s
KSH                                 pmax    pmax
      comp=Z,780nm,13.7s
AML   Almayashu         54.46 297   P      P       04 20 57.5 +0.8
      SNR=15
KKN   Kakani            54.74 275  eP      P       04 20 59.5 +0.8
      comp=Z,23nm,0.7s
DMN   Daman             54.97 275  eP      P       04 21 01.3 +0.9
      comp=Z,30nm,0.8s
GKN   Gorkha            55.06 276  eP      P       04 21 01.7 +0.7
      comp=Z,25nm,0.6s
DANN  Dangsing          55.47 277  eP      P       04 21 05.4 +1.4
      comp=Z,25nm,0.5s
ARU   Arti              55.48 318  eP      P       04 21 03.0 -0.4
ARU   Arti              55.48 318  eP      P       04 21 01.6 -1.8
      comp=Z,4.8nm,0.9s
ARU   Arti              55.48 318d iP      P       04 21 00.2 -3.2
ARU                                                 04 22 01.5
ARU                                 S       S       04 28 42.2 -4.2
ARU                                 SS      SS      04 32 29.1 -1.6
ARU                                 pmax    pmax
      comp=Z,5.0nm,1.0s
KK31  Karatay Array     55.92 299  eP      P       04 21 07.0 +0.2
KK31  Karatay Array     55.92 299  eP      P       04 21 07.0 +0.2
KKAR  Karatay Array     55.92 299  eP      P       04 21 07.0 +0.2
KKAR  Karatay Array     55.92 299  eP      P       04 21 07.0 +0.2
KOLN  Koldanda          55.93 277  eP      P       04 21 08.0 +0.7
      comp=Z,24nm,0.7s
JCW   Jim Creek         56.12  54  eP      P       04 21 08.5 +0.4
PYUN  Piuthan           56.16 277  eP      P       04 21 09.7 +0.8
DAG   Danmarks Havn     58.06 357  i P     P       04 21 20.9 -0.4
      comp=Z,6.5nm,0.8s
DAG   Danmarks Havn     58.06 357  i P     P       04 21 20.9 -0.4
DAG                                 pmax    pmax
      comp=Z,7.0nm,0.8s
PRGR  Permogore         58.11 327  eP      P       04 21 20.7 -1.2
PRGR                                pmax    pmax
      comp=Z,5.0nm,0.6s
ABKAR Akbulak array     58.67 310  eP      P       04 21 25.2 -0.8
ARCES ARCESS Array B    58.93 341   P      P       04 21 27.1 -0.4
      comp=Z,6.8nm,0.8s,baz=35,slow=6.6,SNR=15
ARCES ARCESS Array B    58.93 341  eP      P       04 21 27.0 -0.5
ARCES ARCESS Array B    58.93 341  eP      P       04 21 27.0 -0.5
AKTO  Aktyubinsk        59.03 312   P      P       04 21 27.7 -0.9
      comp=Z,1.9nm,0.6s,baz=57,slow=6.4,SNR=5.3
NIL   Nilore            59.52 288  eP      P       04 21 32.9 +0.7
NIL   Nilore            59.52 288  eP      P       04 21 32.9 +0.7
MSO   Missoula          61.35  51  eP      P       04 21 45.4 +0.8
      comp=Z,27nm,1.9s
SUMG  Summit            62.20   3  eP      P       04 21 50.9 +0.6
      comp=Z,28nm,0.9s
SUMG  Summit            62.20   3  i P     P       04 21 50.9 +0.6
      comp=Z,31nm,1.0s
SUMG  Summit            62.20   3  i P     P       04 21 50.9 +0.6
SUMG                                pmax    pmax
      comp=Z,31nm,1.0s
FFC   Flin Flon         62.42  39  eP      P       04 21 52.3 +0.8
FFC   Flin Flon         62.42  39  eP      P       04 21 51.5  0.0
      comp=Z,3.3nm,0.7s
FFC   Flin Flon         62.42  39  eP      P       04 21 51.6  0.0
FFC                                 pmax    pmax
      comp=Z,3.0nm,0.7s
BOZ   Bozeman (W)       63.38  51  eP      P       04 21 58.5 +0.3
BOZ   Bozeman (W)       63.38  51  eP      P       04 21 58.5 +0.3
      comp=Z,3.2nm,0.8s
BOZ   Bozeman (W)       63.38  51  eP      P       04 21 58.6 +0.3
BOZ                                 pmax    pmax
      comp=Z,3.0nm,0.8s
NVAR  Mina Array Bea    63.90  61   P      P       04 22 01.4 -0.6
      comp=Z,0.4nm,0.4s,baz=299,slow=6.1,SNR=4.9
FIA1  FINESS Array S    64.97 335  eP      P       04 22 07.4 -0.8
      comp=Z,15nm,0.8s
FINES FINESS Array B    64.97 335   P      P       04 22 07.2 -1.0
      comp=Z,11nm,0.7s,baz=49,slow=6.5,SNR=35
CTAO  Charters Tower    65.27 186  eP      P       04 22 12.7 +2.1
CTAO  Charters Tower    65.27 186  eP      P       04 22 12.7 +2.1
R11A  Troy Canyon, C    65.62  60  eP      P       04 22 13.4 +0.4
      comp=Z,1.6nm,0.8s
PDAR  Pinedale Array    66.33  53   P      P       04 22 17.5 -0.1
      comp=Z,0.9nm,0.9s,baz=285,slow=3.5,SNR=8.4
GEYT  Alibeck           66.58 301   P      P       04 22 19.4 +0.3
      comp=Z,5.7nm,0.5s,baz=49,slow=6.6,SNR=6.5
WRA   Warramunga Arr    66.86 198   P      P       04 22 19.7 -1.0
      comp=Z,1.0nm,0.7s,baz=16,slow=6.6,SNR=7.4
WRA   Warramunga Arr    66.86 198  eP      P       04 22 22.0 +1.3
WRA   Warramunga Arr    66.86 198  eP      P       04 22 22.1 +1.3
WRA                                 pmax    pmax
      comp=Z,1.0nm,0.7s
VSU   Vasula            67.09 332ceP       P       04 22 21.4 -0.4
VSU                                 pmax    pmax
      comp=Z,20nm,0.8s
SRU   San Rafael Swe    68.15  56  eP      P       04 22 29.9 +0.7
      comp=Z,5.2nm,0.9s
SRU   San Rafael Swe    68.15  56  eP      P       04 22 29.9 +0.7
SRU                                 pmax    pmax
      comp=Z,5.0nm,0.9s
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NC405 NORSAR Array S    69.13 341  eP      P       04 22 35.2 +0.6
NC204 NORSAR Array S    69.20 341  eP      P       04 22 35.8 +0.6
NB2   NORSAR Subarra    69.31 341   P      P       04 22 35.3 -0.5
      comp=Z,11nm,0.9s,baz=30,slow=6.5
HFS   Hagfors           69.50 339   P      P       04 22 36.2 -0.7
      comp=Z,15nm,0.7s,baz=57,slow=5.3,SNR=43
NAO01 NORSAR Array S    69.56 341  eP      P       04 22 38.0 +0.8
ASAR  Alice Springs     70.56 197   P      P       04 22 44.4 +0.6
      comp=Z,0.7nm,0.7s,baz=21,slow=6.5,SNR=6.8
ASAR  Alice Springs     70.56 197  eP      P       04 22 45.5 +1.7
ASAR  Alice Springs     70.56 197  eP      P       04 22 45.5 +1.7
ASAR                                pmax    pmax
      comp=Z,1.0nm,0.7s
NCK   Nalchik           71.03 313⇓iP      P       04 22 48.0 +1.4
NCK                                 pmax    pmax
      comp=Z,23nm,0.6s
KIV   Kislovodsk        71.17 314  eP      P       04 22 49.2 +1.6
KIV   Kislovodsk        71.17 314  eP      P       04 22 48.7 +1.1
KIV   Kislovodsk        71.17 314c iP      P       04 22 48.4 +0.8
KIV                                e                04 23 06.3
KIV                                e                04 25 24.6
KIV                                 pmax    pmax
      comp=Z,31nm,1.0s
KBZ   Khabaz            71.22 314   P      P       04 22 48.9 +1.2
      comp=Z,20nm,0.8s,baz=76,slow=3.9,SNR=37
ZEI   Tsey              71.37 312  eP      P       04 22 48.5 -0.4
ZEI                                 pmax    pmax
      comp=Z,9.0nm,0.6s
NEY   Neytrino          71.65 313⇓eP      P       04 22 52.4 +1.8
NEY                                 pmax    pmax
      comp=Z,2.0nm,0.9s
AKASG Malin Array Be    72.25 326   P      P       04 22 53.1 -0.7
      comp=Z,3.5nm,0.5s,baz=34,slow=5.9,SNR=9.7
AKBB  Malin Array Si    72.25 326  eP      P       04 22 53.5 -0.3
      comp=Z,8.3nm,0.8s
KIEV  Kiev              72.26 326  eP      P       04 22 53.2 -0.7
KIEV  Kiev              72.26 326  eP      P       04 22 53.2 -0.7
      comp=Z,8.6nm,0.9s
KIEV  Kiev              72.26 326c iP      P       04 22 53.2 -0.7
KIEV                                pmax    pmax
      comp=Z,9.0nm,0.9s
AK11  Malin Array Si    72.29 326  eP      P       04 22 54.2 +0.2
AKH   Akhalkalaki       72.56 312⇓iP      P       04 22 57.9 +1.8
AKH   Akhalkalaki       72.56 312  eP      P       04 22 58.5 +2.5
      comp=Z,11nm,1.0s
AKH   Akhalkalaki       72.56 312  eP      P       04 22 58.5 +2.5
AKH                                 pmax    pmax
      comp=Z,11nm,1.0s
SOC   Sochi             72.93 315  eP      P       04 22 53.8 -4.2
SOC                                e*PP     pP      04 23 05.1 -1.5
SOC                                e                04 25 40.9
SOC                                 pmax    pmax
      comp=Z,10.0nm,0.4s
SOC                                 MLR     MLR
      comp=Z,212nm,14.0s
BEL   Belsk             74.46 331  eP      P       04 23 08.0 +1.2
BEL   Belsk             74.46 331  eP      P       04 23 08.0 +1.2
SORM  Soroca            74.62 325⇓iP      P       04 23 07.7 -0.1
SORM  Soroca            74.62 325 ⇓P      P       04 23 07.7 -0.1
LVV   L'vov             74.96 328  eP      P       04 23 10.7 +1.0
KWP   Kalwaria Pacla    75.61 329  eP      P       04 23 14.3 +0.8
KWP   Kalwaria Pacla    75.61 329  eP      P       04 23 14.3 +0.8
OJC   Ojcow             76.15 331  eP      P       04 23 16.9 +0.3
OJC   Ojcow             76.15 331  eP      P       04 23 16.9 +0.3
      comp=Z,15nm,0.9s
OJC   Ojcow             76.15 331  eP      P       04 23 16.9 +0.3
BUR08 Bucovina Ar. S    76.28 326  eP      P       04 23 17.9 +0.4
BUR04 Bucovina Ar. S    76.30 326  eP      P       04 23 17.9 +0.3
BURAR Bucovina Array    76.30 326⇓iP      P       04 23 18.0 +0.4
BURAR Bucovina Array    76.30 326 ⇓P      P       04 23 18.0 +0.4
BIZ   Bicaz             76.50 325⇓iP      P       04 23 19.3 +0.7
UZH   Uzhgorod          76.59 328  eP      P       04 23 18.5 -0.5
UZH                                e                04 23 32.7
TESR  Tescani           76.62 325⇓iP      P       04 23 19.9 +0.6
NIE   Niedzica          76.65 330  eP      P       04 23 20.7 +1.2
NIE   Niedzica          76.65 330  eP      P       04 23 20.7 +1.2
CRVS  Cervenica-Dubn    76.67 329  eP      P       04 23 20.0 +0.5
CRVS                                pmax    pmax
      comp=Z,5.0nm,1.0s
CRVS  Cervenica-Dubn    76.67 329  eP      P       04 23 20.0 +0.5
TLCR                    76.77 322⇑iP      P       04 23 20.2 +0.1
TLCR                    76.77 322 ⇑P      P       04 23 20.2 +0.1
TRPA  Tarpa             76.91 328⇑iP      P       04 23 21.9 +1.0
CFR   Carcaliu          77.07 323⇓iP      P       04 23 22.2 +0.4
CFR   Carcaliu          77.07 323 ⇓P      P       04 23 22.2 +0.4
VRI   Vrincioaia        77.11 324⇑iP      P       04 23 22.4 +0.3
VRI   Vrincioaia        77.11 324 ⇑P      P       04 23 22.4 +0.3
LANS  Liptovska Anna    77.17 330  eP      P       04 23 23.5 +1.1
LANS                               e                04 23 36.1
LANS  Liptovska Anna    77.17 330  eP      P       04 23 23.5 +1.1
LANS                               e                04 23 36.1
DPC   Dobruska-Polom    77.21 333  eP      P       04 23 23.6 +1.0
DPC   Dobruska-Polom    77.21 333  eP      P       04 23 23.6 +1.0
KRLC  Kraliky           77.30 332  eP      P       04 23 23.5 +0.4
KRLC  Kraliky           77.30 332  eP      P       04 23 23.5 +0.4
MORC  Moravsky Berou    77.30 332  eP      P       04 23 23.3 +0.2
      comp=Z,11nm,1.0s
MORC  Moravsky Berou    77.30 332  eP      P       04 23 23.3 +0.2
MORC                                pmax    pmax
      comp=Z,11nm,1.0s
MORC  Moravsky Berou    77.30 332  eP      P       04 23 23.7 +0.6
CLL   Collm             77.41 335  eP      P       04 23 23.0 -0.6
      comp=Z,18nm,1.4s
CLL                                esP      sP      04 23 36.0 +0.6
CLL   Collm             77.41 335  eP      P       04 23 23.8 +0.2
      comp=Z,23nm,1.4s
CLL   Collm             77.41 335  eP      P       04 23 23.0 -0.6
CLL                                e*SP     sP      04 23 36.0 +0.6
CLL                                 pmax    pmax
      comp=Z,18nm,1.4s
EKA   Eskdalemuir Ar    77.53 346   P      P       04 23 24.8 +0.6
      comp=Z,3.6nm,0.8s,baz=23,slow=5.2,SNR=9.7
ESK   Eskdalemuir       77.56 346  eP      P       04 23 24.8 +0.5
      comp=Z,5.6nm,0.8s
ESK   Eskdalemuir       77.56 346  eP      P       04 23 24.8 +0.5
ESK                                 pmax    pmax
      comp=Z,6.0nm,0.8s
TLB   Topalu            77.58 323⇓iP      P       04 23 21.5 -3.2
TLB   Topalu            77.58 323 ⇓P      P       04 23 21.5 -3.2
MLR   Muntele Rosu      77.73 324   P      P       04 23 26.2 +0.5
      comp=Z,1.2nm,0.7s,baz=0.0,slow=5.1,SNR=13
MLR   Muntele Rosu      77.73 324⇑iP      P       04 23 25.7  0.0
MLR   Muntele Rosu      77.73 324  eP      P       04 23 26.0 +0.3
      comp=Z,8.2nm,0.9s
MLR   Muntele Rosu      77.73 324 ⇑P      P       04 23 25.7  0.0
ILGA  Ilgaz             77.77 317  eP      P       04 23 28.1 +2.0
      comp=Z,15nm,1.1s
ISR   Istrita           77.79 324⇓iP      P       04 23 26.5 +0.6
ISR   Istrita           77.79 324 ⇓P      P       04 23 26.5 +0.6
VYHS  Vyhne             77.95 330  eP      P       04 23 27.5 +0.8
VYHS                               e                04 23 39.9
VYHS                                pmax    pmax
      comp=Z,4.0nm,1.1s
VYHS  Vyhne             77.95 330  eP      P       04 23 27.5 +0.8
VYHS                               e                04 23 39.9
DRGR                    77.95 327⇓iP      P       04 23 27.2 +0.3
DRGR                    77.95 327 ⇓P      P       04 23 27.2 +0.3
VRAC  Vranov            78.02 332⇑iP      P       04 23 25.4 -1.7
VRAC  Vranov            78.02 332 ⇑P      P       04 23 25.4 -1.7
VRAC  Vranov            78.02 332  eP      P       04 23 27.7 +0.6
JAVC  Velka Javorina    78.04 331  eP      P       04 23 28.8 +1.5
GOPC  GO Pecny, Ondr    78.08 333  eP      P       04 23 28.3 +0.9
GOPC  GO Pecny, Ondr    78.08 333  eP      P       04 23 28.3 +0.9
PRU   Pruhonice         78.09 333  eP      P       04 23 27.9 +0.4
PRU   Pruhonice         78.09 333  eP      P       04 23 27.9 +0.4
VOIR                    78.14 325⇑iP      P       04 23 28.8 +0.9
VOIR                    78.14 325 ⇑P      P       04 23 28.8 +0.9
KRUC  Moravsky          78.30 332  eP      P       04 23 29.3 +0.7
MODS  Modra-Piesok      78.59 331  eP      P       04 23 31.0 +0.7
MODS                               e                04 23 44.1
MODS                                pmax    pmax
      comp=Z,14nm,1.2s
MODS  Modra-Piesok      78.59 331  eP      P       04 23 31.0 +0.7
MODS                               e                04 23 44.1
BR131 Keskin Array S    78.83 316  eP      P       04 23 32.9 +0.9
BRTR  Keskin Array B    78.83 316   P      P       04 23 32.5 +0.5
      comp=Z,3.2nm,0.8s,baz=85,slow=4.4,SNR=20
TX31  Lajitas Ar. Si    78.98  59  eP      P       04 23 33.0 +0.1
TXAR  Lajitas Array     78.99  59   P      P       04 23 32.5 -0.4
      comp=Z,0.7nm,0.6s,baz=297,slow=4.0,SNR=9.5
TXAR  Lajitas Array     78.99  59  eP      P       04 23 32.9  0.0
TXAR  Lajitas Array     78.99  59  eP      P       04 23 32.9  0.0
TXAR                                pmax    pmax
```

```
      comp=Z,1.0nm,0.6s
ANTO  Ankara            79.13 317  eP      P       04 23 34.7 +1.3
      comp=Z,11nm,0.8s
KHC   Kasperske Hory    79.15 334  eP      P       04 23 34.3 +0.9
KHC                                ex       x       04 23 38.4
KHC                                ex       x       04 23 46.0
KHC   Kasperske Hory    79.15 334  eP      P       04 23 34.3 +0.9
      comp=Z,3.3nm,0.8s
KHC   Kasperske Hory    79.15 334  eP      P       04 23 34.3 +0.9
KHC                                e                04 23 46.0
BZS   Buzias            79.35 327⇓iP      P       04 23 34.7 +0.2
BZS   Buzias            79.35 327 ⇓P      P       04 23 34.7 +0.2
GEC2  GERESS Array S    79.36 333  eP      P       04 23 35.1 +0.5
      comp=Z,3.2nm,0.7s
GEC2  GERESS Array S    79.36 333  eP      P       04 23 35.1 +0.5
GEC2                                pmax    pmax
      comp=Z,3.0nm,0.7s
GERES GERESS Array B    79.36 333   P      P       04 23 34.3 -0.3
      comp=Z,2.9nm,0.7s,baz=35,slow=5.4,SNR=12
GERES GERESS Array B    79.36 333  eP      P       04 23 34.9 +0.3
GERES GERESS Array B    79.36 333  eP      P       04 23 34.9 +0.3
GERES                               pmax    pmax
      comp=Z,3.0nm,0.7s
GEA0  GERESS Array S    79.37 333  eP      P       04 23 34.6  0.0
GRFO  Grafenberg        79.37 335  eP      P       04 23 35.9 +1.4
      comp=Z,13nm,0.8s
GRFO  Grafenberg        79.37 335  eP      P       04 23 35.9 +1.4
GRFO                                pmax    pmax
      comp=Z,13nm,0.8s
CONA  Conrad Observa    79.46 332  i pP    P       04 23 36.0 +0.8
      comp=Z,5.3nm,0.7s
MEM   Membach           79.98 339 ⇓P      P       04 23 38.1 +0.3
      comp=Z,13nm,0.9s
MOA   Molln             80.05 333  i pP    P       04 23 39.4 +1.1
      comp=Z,5.7nm,0.8s
BCLA  Clavier           80.34 339 ⇑P      P       04 23 39.8 +0.1
SOKA  Soboth            80.82 331  i pP    P       04 23 43.1 +0.6
      comp=Z,8.2nm,0.9s,SNR=7.4
KBA   Koelnbreinsper    81.03 333  i pP    P       04 23 44.9 +1.2
      comp=Z,11nm,0.9s
VTS   Vitosha           81.24 324⇑iP      P       04 23 45.0 +0.1
VTS   Vitosha           81.24 324  eP      P       04 23 44.8 -0.1
      comp=Z,14nm,0.8s
VTS   Vitosha           81.24 324 ⇑P      P       04 23 45.0 +0.1
DIVS  Divibare          81.25 327  eP      P       04 23 44.4 -0.4
      comp=Z,6.5nm,0.8s
MYKA  Terra Mystica     81.33 332  i pP    P       04 23 45.7 +0.6
      comp=Z,3.5nm,0.6s
WATA  Walderalm         81.36 334  i pP    P       04 23 46.7 +1.3
      comp=Z,5.9nm,0.6s
WTTA  Wattenberg        81.41 334  i pP    P       04 23 46.4 +0.7
      comp=Z,6.5nm,0.7s
ALN   Alexandroupoli    81.42 322  eP      P       04 23 46.0 +0.3
      comp=Z,6.3nm,0.9s
ALN   Alexandroupoli    81.42 322  eP      P       04 23 46.0 +0.3
ALN                                 pmax    pmax
      comp=Z,6.0nm,0.9s
BFO   Black Forest      81.43 336  eP      P       04 23 45.1 -0.5
      comp=Z,1.1nm,0.8s
BFO   Black Forest      81.43 336  eP      P       04 23 45.1 -0.5
BFO                                 pmax    pmax
      comp=Z,1.0nm,0.8s
RETA  Reutte            81.48 334  i pP    P       04 23 46.3 +0.3
      comp=Z,9.1nm,1.2s
MOTA  Moosalm           81.50 334  i pP    P       04 23 47.3 +1.2
      comp=Z,11nm,0.8s
ABTA  Abfaltersbach     81.59 333  i pP    P       04 23 48.1 +1.5
      comp=Z,4.3nm,1.0s
ECH   Echery            81.86 337  eP      P       04 23 48.3 +0.4
      comp=Z,6.2nm,0.9s
ECH   Echery            81.86 337  eP      P       04 23 48.3 +0.4
ECH                                 pmax    pmax
      comp=Z,6.0nm,0.9s
FETA  Feichten          81.91 334  i pP    P       04 23 49.7 +1.4
      comp=Z,5.2nm,0.8s,SNR=4.9
DAVA  Damuels           81.92 335  i pP    P       04 23 48.7 +0.3
      comp=Z,9.2nm,0.8s
DAVOX Davos/Dischmat    82.38 335   P      P       04 23 51.7 +0.9
      comp=Z,4.1nm,0.7s,baz=12,slow=12,SNR=9.2
CSS   Mathiatis         82.68 313  eP      P       04 23 55.0 +2.6
      comp=Z,8.8nm,0.7s
TUE   Stuetta           82.82 335  eP      P       04 23 53.6 +0.5
      comp=Z,8.1nm,1.0s
ASF   Jabal al Asfar    82.94 309   P      P       04 23 54.2 +0.3
      comp=Z,2.7nm,0.8s,baz=353,slow=1.5,SNR=5.4
PDG   Podgorica         82.95 327⇓iP      P       04 23 53.4 -0.3
TTG   Podgorica         82.95 327  eP      P       04 23 53.4 -0.3
      comp=Z,10.0nm,0.8s
TTG   Podgorica         82.95 327  eP      P       04 23 53.4 -0.3
TTG                                 pmax    pmax
      comp=Z,10.0nm,0.8s
MMAI  Mount Meron Ar    83.10 311   P      P       04 23 54.7 +0.1
      comp=Z,10nm,0.8s,baz=24,slow=5.0,SNR=8.7
FNA   Florina           83.50 324  eP      P       04 23 56.9 +0.3
      comp=Z,6.8nm,0.7s
FNA   Florina           83.50 324  eP      P       04 23 56.9 +0.3
FNA                                 pmax    pmax
      comp=Z,7.0nm,0.7s
RAYN  Ar Rayn           84.32 298  eP      P       04 24 02.1 +1.0
      comp=Z,5.0nm,0.8s
RAYN  Ar Rayn           84.32 298  eP      P       04 24 02.1 +1.0
RAYN                                pmax    pmax
      comp=Z,5.0nm,0.8s
IDI   Anoyia            86.54 319   P      P       04 24 10.3 -1.7
      comp=Z,5.8nm,0.6s,baz=43,slow=11,SNR=9.3
NVL   N'lazarevskaya   147.95 204  ePKP2   PKPbc   04 31 13.1 +0.4
NVL                                 pmax    pmax
      comp=Z,4.0nm,0.6s
PLCA  Paso Flores      148.94  97   PKPbc  PKPbc   04 31 16.3  0.0
      comp=Z,1.1nm,0.7s,baz=283,slow=15,SNR=2.8
SNAA  Sanae            150.91 196   PKPbc  PKPbc   04 31 19.2 -0.9
      comp=Z,1.8nm,0.7s,baz=139,slow=19,SNR=3.9
```

IDC ***14*** *04:25:25.7±1.5, 9°.44S×113°.13E, h0km, mb4.0/8, mb1 4.0/9, mb1mx3.8/57, mbtmp4.0/9, ML3.9/1, Error ellipse: s-maj=71.7km s-min=16.3km az=53.0*

ISCJB ***14*** *04:25:28.7±0.5, 9°.88S±0°.04×112°.91E±0°.04, h35km, mb4.0/9, Error ellipse: s-maj=6.8km s-min=5.0km az=29.2*

NEIC ***14*** *04:25:29.5±1.1, 9°.72S×112°.91E, h35km, mb4.0/1, Error ellipse: s-maj=44.4km s-min=10.8km az=56.0*

DJA ***14*** *04:25:29.8±0.4, 10°S±3°×11°3E±°, h10km, M4.5/18, mB5.0/2, mb4.7/5, MLv4.4/18, Mw(mB)4.4/2*

ISC 14 04:25:30.1±0.8**, 9°.79S**±0°.07×**112°.92E**±0°.06**, h35**km**, n31, σ1**

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ISC 14 04:25:30.1±0.8, 9°.79S±0°.07×112°.92E±0°.06, h35km, n31,
    σ1s.54/35, mb4.2/9, South of Jawa
Code  Station Name       Δ°   AZ°    Phase ID          Time       Res
                                     Op      ISC       h  m  s    ISC
GMJI  Gumukmas           1.60  19    P       Pn      04 25 54.9 -1.0
GMJI                                 S       Sn      04 26 17.0 +1.6
JAGI  Jajag, Banyuwa     1.79  43    P       Pn      04 25 58.7 +0.1
JAGI                                 S       Sn      04 26 21.7 +1.5
PWJI  Pagerwojo          2.08 328    P       Pn      04 26 03.7 +1.2
PWJI                                 S       Sn      04 26 26.1 -1.0
BLJI  Banyuglugur        2.14  18    P       Pn      04 26 05.0 +1.6
PCJI  Pacitan            2.34 313    P       Pn      04 26 07.5 +1.4
IGBI  Denpasar           2.41  66    P       Pn      04 26 08.2 +1.2
DNP   Denpasar           2.52  64    P       Pn      04 26 09.5 +0.9
NGJI  Ngawi              2.81 329    P       Pn      04 26 14.2 +1.6
SRBI  Singaraja          2.83  53    P       Pn      04 26 13.9 +1.0
GRJI  Gresik             2.89 351    P       Pn      04 26 14.8 +1.1
UGM   Wanagama           3.01 308    P       Pn      04 26 17.3 +1.9
TWSI  Taliwang, Sumb     4.05  75    P       Pn      04 26 31.1 +1.4
KPJI  Karang Pucung      4.64 302    P       Pn      04 26 39.9 +2.2
CMJI  Cimerak            4.84 294    P       Pn      04 26 43.2 +2.6
PLAI  Plampang           4.89  79    P       Pn      04 26 42.6 +1.3
CGJI  Cibinong           7.82 293    P       Pn      04 27 24.3 +2.9
      33nm,0.4s,3μm
BKSI  Bulukumba          8.41  59    P       Pn      04 27 31.5 +1.9
      13nm,0.7s,271nm
EDFI  Ende, Flores       8.72  84    P       Pn      04 27 34.3 +0.3
MBWA  Marble Bar        13.06 151   ePn      Pn      04 28 32.0 -1.3
FITZ  Fitzroy Crossi    14.85 125    Pn      Pn      04 28 56.2 -1.4
      0.4nm,0.3s,baz=309,slow=8.4,SNR=18
FITZ                                 Sn      Sn      04 31 29.9  -11
      0.3nm,0.3s,baz=155,slow=21,SNR=6.0
WRA   Warramunga Arr    23.01 118    P       P       04 30 31.4 -0.8
      2.0nm,0.8s,baz=289,slow=12,SNR=16
WRAB  Tennant Creek     23.01 118   eP       P       04 30 32.7 +0.5
      1.9nm,0.4s
ASAR  Alice Springs     24.33 127    P       P       04 30 45.8 +0.9
      2.2nm,0.7s,baz=303,slow=8.8,SNR=32
ASAR                                 PcP     PcP     04 34 25.9 +1.7
      0.5nm,0.4s,baz=306,slow=2.1,SNR=6.0
STKA  Stephens Creek    34.47 134    P       P       04 32 16.9 +2.2
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	1.7nm,0.5s,baz=315,slow=10.0,SNR=4.8						
KSAR	Wonju Array Be	49.04	16	P	P	04 34 12.1	-1.6
KSRS	Korea Array	49.06	16	P	P	04 34 12.1	-1.8
	2.2nm,0.9s,baz=204,slow=8.6,SNR=5.2						
SONM	Songino Array	57.66	355	P	P	04 35 15.7	-1.4
	1.6nm,0.6s,baz=180,slow=7.7,SNR=8.6						
MKAR	Makanchi Array	62.62	337	P	P	04 35 50.1	-0.8
	1.4nm,0.5s,baz=148,slow=7.6,SNR=20						
KURBB	Kurchatov Arra	67.18	337	P	P	04 36 19.8	-0.7
	0.2nm,0.4s,baz=149,slow=5.9,SNR=4.3						
KURK	Kurchatov	67.22	337	*e*P	P	04 36 19.8	-0.9
ZALV	Zalesovo Beam	67.81	343	P	P	04 36 22.8	-1.6
	1.2nm,0.5s,baz=142,slow=5.1,SNR=3.7						

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*NIED **14** 04:30:00, 45°.50N×151°.90E, h20^{km}, Mw5.5 Best double couple: $M_0$2.07000×10^{17} NP1:ϕ_s238.00000°, δ30.00000°, λ102.00000°. NP2:ϕ_s45.00000°, δ61.00000°, λ83.00000°.*

*IDC **14** 04:30:57.1±0.3, 45°.53N×151°.44E, h0^{km}, mb5.1/46, mb1 5.1/51, mb1mx5.0/67, mbtmp5.0/51, ML4.5/4, MS4.9/19, Ms1 4.9/19, ms1mx4.8/31, Error ellipse: s-maj=10.7km s-min=8.8km az=120.0*

*JMA **14** 04:30:57.8±1.1, 45°.48N×151°.88E, h30^{km}, M5.6*

*NEIC **14** 04:30:58.8±0.1, 45°.52N×151°.32E, h10^{km}, mb5.2/298, MW5.4, Error ellipse: s-maj=3.7km s-min=2.0km az=160.0 Best double couple: NP1:ϕ_s253.00000°, δ23.00000°, λ124.00000°. NP2:ϕ_s37.00000°, δ71.00000°, λ76.00000°. Principal axes: T 1.4100, Plg62.0000°, Azm286.0000°; N 0.1300, Plg13.0000°, Azm41.0000°; P -1.5400, Plg25.0000°, Azm137.0000°;*

*GCMT **14** 04:30:58.8±0.1, 45°.54N×151°.58E, h23^{km}, MW5.5/124, Moment Tensor Solution. s111,c211; s124,c245; Duration: 1^{s}3 Moment tensor: Scale 10^{17}Nm; M_{rr}1.74±.03; $M_{\theta\theta}$-0.81±.02; $M_{\phi\phi}$-0.93±.02; $M_{r\theta}$0.33±.03; $M_{\theta\phi}$-0.95±.01; $M_{\phi r}$0.95±.03; Best double couple: $M_0$2.04700×10^{17} NP1:ϕ_s31.00000°, δ60.00000°, λ78.00000°. NP2:ϕ_s235.00000°, δ32.00000°, λ110.00000°. Principal axes: T 2.0450, Plg72.0000°, Azm272.0000°; N 0.0030, Plg11.0000°, Azm38.0000°; P -2.0500, Plg14.0000°, Azm130.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*ISCJB **14** 04:30:59.9±0.7, 45°.46N±0°.02×151°.47E±0°.02, h30^{km}±4^{km}, mb5.1/444, MS5.3/53 Error ellipse: s-maj=4.0km s-min=1.8km az=163.7*

*SKHL **14** 04:31:00.6±0.3, 45°.22N×151°.76E, h50^{km}±7^{km}, mb5.5/1, Ms5.4/4*

*MOS **14** 04:31:02.3±1.1, 45°.51N×151°.38E, h47^{km}, mb5.4/100, MS5.5/23, Error ellipse: s-maj=5.1km s-min=3.7km az=106.3*

*BJI **14** 04:31:03.3, 45°.50N×151°.05E, h42^{km}, mb5.5/84, mB5.5/63, Ms5.5/88, Ms7 5.4/81*

ISC 14 04:31:01.5±0.4**, 45°.40N**±0°.04×**151°.38E**±0°.03**, h31**^{km}±2^{km}**, h31**^{km}**:pP-P, n1643, σ1^{s}33**/1638**, mb5.2**/487**, MS5.4**/67**, 128C-33D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.48	267	*i* P	Pb	04 31 42.0	-3.4
KUR				AMB	AMB	04 31 45.0	
	765nm,0.3s						
KUR				AMB	AMB	04 31 45.0	
	963nm,0.2s						
KUR				AMB	AMB	04 31 45.0	
	1µm,0.2s						
KUR				*i* S	Sb	04 32 13.0	-2.5
KUR				A	A	04 32 19.0	
	14µm,0.4s						
KUR				AMS	AMS	04 33 07.0	
	47µm,12.0s						
KUR				A	A	04 33 07.0	
	10µm,0.5s						
KUR	Kuril'sk	2.48	267	c *i*PN	Pb	04 31 42.0	-3.4
KUR				*i* S	Sb	04 32 13.3	-2.2
KUR				pmax	pmax		
	comp=E,963nm,0.2s						
KUR				pmax	pmax		
	comp=Z,1µm,0.2s						
KUR				pmax	pmax		
	comp=N,765nm,0.3s						
KUR				smax	smax		
	comp=N,14µm,0.4s						
KUR				smax	smax		
	comp=E,10µm,0.5s						
KUR				MLR	MLR		
	comp=Z,47µm,12.0s						
SHO	Shikotan	3.59	246	*i* P	Pn	04 31 57.0	+2.1
SHO				AMB	AMB	04 32 01.0	
	comp=Z,878nm,0.5s						
SHO				AMB	AMB	04 32 01.0	
	comp=Z,420nm,0.3s						
SHO				AMB	AMB	04 32 01.0	
	comp=Z,525nm,0.6s						
SHO				*i* S	Sn	04 32 39.0	+2.8
SHO				A	A	04 32 44.0	
	comp=Z,252nm,0.4s						
SHO				A	A	04 32 44.0	
	comp=Z,144nm,0.4s						
SHO				AMS	AMS	04 33 39.0	
	comp=Z,39µm,17.0s						
SHO				AMS	AMS	04 33 39.0	
	comp=Z,30µm,17.0s						
SHO				AMS	AMS	04 33 39.0	
	comp=Z,28µm,17.0s						
SHO	Shikotan	3.59	246	c *i*PN	Pn	04 31 56.6	+1.7
SHO				*i* S	Sn	04 32 39.3	+3.1
SHO				pmax	pmax		
	comp=N,878nm,0.5s						
SHO				pmax	pmax		
	comp=E,525nm,0.6s						
SHO				smax	smax		
	comp=N,252nm,0.4s						
SHO				smax	smax		
	comp=E,144nm,0.4s						
YUK	Yuzh-Kuril'sk	4.16	253	*i* P	Pn	04 32 05.0	+2.2
YUK				AMB	AMB	04 32 13.0	
	comp=E,1µm,0.2s						
YUK				AMB	AMB	04 32 13.0	
	comp=E,820nm,0.2s						
YUK				AMB	AMB	04 32 13.0	
	comp=E,3µm,0.2s						
YUK				*e*S	Sn	04 32 53.6	+3.3
YUK				A	A	04 33 44.0	
	comp=E,9µm,0.5s						
YUK				A	A	04 33 44.0	
	comp=E,2µm,0.5s						
YUK				AMS	AMS	04 34 03.0	
	comp=E,31µm,11.0s						
YUK				AMS	AMS	04 34 03.0	
	comp=E,33µm,11.0s						
YUK				AMS	AMS	04 34 03.0	
	comp=E,23µm,11.0s						
YUK	Yuzh-Kuril'sk	4.16	253	c *i*PN	Pn	04 32 05.0	+2.2
YUK				*e*S	Sn	04 32 55.1	+4.8
YUK				pmax	pmax		
	comp=N,1µm,0.2s						
YUK				pmax	pmax		
	comp=E,820nm,0.2s						
YUK				pmax	pmax		
	comp=Z,3µm,0.2s						
YUK				smax	smax		
	comp=E,2µm,0.6s						
YUK				smax	smax		
	comp=N,9µm,0.5s						
LAGR	Lagunnoye	4.21	253	*e*P	Pn	04 32 06.0	+2.7
LAGR				AMB	AMB	04 32 24.0	
	comp=N,4µm,0.5s						
LAGR				AMB	AMB	04 32 24.0	
	comp=N,2µm,0.5s						
LAGR				AMB	AMB	04 32 24.0	
	comp=N,6µm,0.5s						
LAGR				*e*S	Sb	04 32 58.9	-6.1
LAGR				A	A	04 33 10.9	
	comp=N,15µm,0.9s						
LAGR				A	A	04 33 10.9	
	comp=N,14µm,0.9s						
LAGR	Lagunnoye	4.21	253	*e*PN	Pn	04 32 06.1	+2.7
LAGR				*e*S	Sb	04 32 58.9	-6.1
LAGR				pmax	pmax		
	comp=Z,6µm,0.5s						
LAGR				pmax	pmax		
	comp=E,2µm,0.6s						
LAGR				pmax	pmax		
	comp=N,4µm,0.4s						
LAGR				smax	smax		
	comp=E,14µm,0.5s						
LAGR				smax	smax		
	comp=N,15µm,0.9s						
GRPR	Tuman	4.24	253	*i* P	Pn	04 32 05.0	+1.2
GRPR				AMB	AMB	04 32 15.0	
	comp=N,901nm,0.8s						
GRPR				AMB	AMB	04 32 15.0	
	comp=N,1µm,0.8s						
GRPR				AMB	AMB	04 32 15.0	
	comp=N,3µm,0.8s						
GRPR				*e*S	Sb	04 32 59.0	-6.9
GRPR				A	A	04 33 05.0	
	comp=N,568nm,0.5s						
GRPR				A	A	04 33 05.0	
	comp=N,3µm,0.5s						
GRPR	Tuman	4.24	253	d *i*PN	Pn	04 32 05.0	+1.2
GRPR				*e*S	Sb	04 32 59.5	-6.4
GRPR				pmax	pmax		
	comp=N,901nm,0.8s						
GRPR				pmax	pmax		
	comp=Z,3µm,0.8s						
GRPR				pmax	pmax		
	comp=E,1µm,0.3s						
GRPR				smax	smax		
	comp=N,568nm,0.5s						
GRPR				smax	smax		
	comp=E,3µm,0.3s						
GLVR	Golovnino	4.50	250	*e*P	Pn	04 32 10.0	+2.5
GLVR				AMB	AMB	04 32 16.0	
	comp=E,1µm,0.5s						
GLVR				AMB	AMB	04 32 16.0	
	comp=E,1µm,0.5s						
GLVR				AMB	AMB	04 32 16.0	
	comp=E,3µm,0.5s						
GLVR				*e*S	Sn	04 33 02.0	+3.3
GLVR				A	A	04 33 14.0	
	comp=E,9µm,0.6s						
GLVR				A	A	04 33 14.0	
	comp=E,3µm,0.6s						
GLVR	Golovnino	4.50	250	*e*PN	Pn	04 32 10.6	+3.1
GLVR				*e*S	Sn	04 33 02.5	+3.8
GLVR				pmax	pmax		
	comp=Z,3µm,0.6s						
GLVR				pmax	pmax		
	comp=N,1µm,0.3s						
GLVR				pmax	pmax		
	comp=E,1µm,0.3s						
GLVR				smax	smax		
	comp=E,3µm,0.3s						
GLVR				smax	smax		
	comp=N,9µm,0.6s						
NEM2	Nemuro 2	4.52	245	⇑P	Pn	04 32 08.3	+0.6
NEM2				*e*S	Sn	04 33 01.9	+2.7
JRA	Rausu	4.70	254	⇑P	Pn	04 32 13.1	+3.0
JNK	Nakash	5.10	251	⇑P	Pn	04 32 17.8	+2.2
JNK				*e*S	Sn	04 33 18.9	+5.5
JAK	Akkeshi	5.37	246	P	Pn	04 32 20.0	+0.6
JTKR	Abashiri--Toko	5.51	258	⇑P	Pn	04 32 24.6	+3.3
JAR	Ashorobuto	5.85	252	⇑P	Pn	04 32 28.4	+2.5
JMP	Maruseppu	5.88	259	⇑P	Pn	04 32 29.9	+3.5
SKR	Severo-Kuril's	6.17	29	*e*P	Pn	04 32 30.0	-0.2
SKR				AMB	AMB	04 32 34.0	
	comp=N,1µm,0.6s						
SKR				AMB	AMB	04 32 39.0	
	comp=N,2µm,1.5s						
SKR				*e*S	Sn	04 33 34.0	-5.6
SKR				AMS	AMS	04 35 02.0	
	comp=N,14µm,14.0s						
SKR				AMS	AMS	04 35 02.0	
	comp=N,24µm,14.0s						
SKR				AMS	AMS	04 35 02.0	
	comp=N,13µm,14.0s						
SKR	Severo-Kuril's	6.17	29	*e*PN	Pn	04 32 30.0	-0.2
SKR				pmax	pmax		
	comp=Z,1µm,0.6s						
SKR				pmax	pmax		
	comp=Z,2µm,1.5s						
SKR				MLR	MLR		
	comp=E,24µm,13.0s						
SKR				MLR	MLR		
	comp=Z,13µm,13.0s						
SKR				MLR	MLR		
	comp=N,14µm,14.0s						
YSS	Yuzh-Sakhalins	6.18	288	*e*P	Pn	04 32 34.7	+4.2
YSS				AMB	AMB	04 32 37.2	
	comp=N,170nm,0.7s						
YSS				AMB	AMB	04 32 39.7	
	comp=N,1µm,7.4s						
YSS				*e*S	Sn	04 33 44.2	+4.1
YSS				AMS	AMS	04 35 01.0	
	comp=N,23µm,15.0s						
YSS				AMS	AMS	04 35 01.0	
	comp=N,32µm,15.0s						
YSS	Yuzh-Sakhalins	6.18	288	*e*Pn	Pn	04 32 34.5	+4.0
YSS	Yuzh-Sakhalins	6.18	288	α *i*PN	Pn	04 32 34.7	+4.2
YSS				*e*S	Sn	04 33 44.2	+4.1
YSS				pmax	pmax		
	comp=Z,170nm,0.7s						
YSS				pmax	pmax		
	comp=E,160nm,0.8s						
YSS				pmax	pmax		
	comp=Z,1µm,7.4s						
YSS				smax	smax		
	comp=N,270nm,0.7s						
YSS				smax	smax		
	comp=E,360nm,0.8s						
YSS				MLR	MLR		
	comp=E,23µm,15.0s						
YSS				MLR	MLR		
	comp=Z,32µm,15.0s						
HRK	Horoka	6.21	255	*e*P	Pn	04 32 34.2	+3.2
JSE	Soyaes	6.23	269	P	Pn	04 32 35.7	+4.5
JKK2	Kamakawa 2	6.34	259	⇑P	Pn	04 32 36.6	+3.8
ASAJ	Asahikawa	6.38	261	Pn	Pn	04 32 37.6	+4.3
	comp=Z,31nm,0.3s,baz=90,slow=15,SNR=130						
ASAJ				Sn	Sn	04 33 50.2	+5.2
	baz=217,slow=20,SNR=2.0						
ASAJ				LR	LR	04 35 21.1	
	comp=Z,28µm,18.6s,baz=79,slow=41						
ASAJ	Asahikawa	6.38	261	⇑P	Pn	04 32 37.4	+4.1
JCH	Churui	6.42	247	P	Pn	04 32 34.9	+1.2
JCH				*e*S	Sn	04 33 48.6	+2.8
MYR	Moyori	6.62	245	*e*P	Pn	04 32 37.8	+1.2
JWK2	Keihoku	6.68	273	P	Pn	04 32 43.3	+6.0
JFR	Furan	6.69	254	P	Pn	04 32 40.4	+2.9
JAB	Ashibetsu	6.82	257	P	Pn	04 32 43.5	+4.2
JSS	Shosan	6.84	265	P	Pn	04 32 44.6	+5.1
ERM	Erimo	6.85	243	*e*Pn	Pn	04 32 41.6	+1.9
ERM				*e*Sn	Sn	04 33 60.0	+3.4
ERM	Erimo	6.85	243	*e*PN	Pn	04 32 41.6	+1.9
JEM	Erimo	6.85	243	P	Pn	04 32 42.0	+2.3
JNBK	Urakawa-nobuka	6.97	246	P	Pn	04 32 41.9	+0.5
JBT2	Biratori 2	7.00	251	⇑P	Pn	04 32 43.4	+1.7
JHR	Hokuryu	7.09	260	P	Pn	04 32 47.3	+4.3
JEW	Eniwo	7.59	254	P	Pn	04 32 52.6	+2.8
JNB	Noboribetsu	8.02	252	P	Pn	04 32 57.5	+1.8
JNB				*e*S	Sn	04 34 25.8	+0.6
JKB	Kayabe	8.28	249	P	Pn	04 33 00.1	+0.8
JKB				*e*S	Sn	04 34 28.9	-2.8
JYM2	Yakumo 2	8.62	251	P	Pn	04 33 05.1	+1.2
JSH	Shimam	8.62	255	P	Pn	04 33 07.0	+3.1
PEA0B	Petropavlovsk-	8.75	26	*e*Pn	Pn	04 33 06.1	+0.4
PETK	Petropavlovsk-	8.75	26	Pn	Pn	04 33 05.9	+0.2
	baz=174,slow=12						
PETK				Sn	Sn	04 34 41.2	-1.9
	baz=197,slow=11						
PETK	Petropavlovsk-	8.75	26	*e*Pn	Pn	04 33 05.1	-0.6
PETK				Sn	Sn	04 34 41.2	-1.9
JANG	Nango	8.81	239	P	Pn	04 33 05.1	-1.5
JANG				*e*S	Sn	04 34 38.2	-6.5
JTM	Tenmabayashi	8.84	242	P	Pn	04 33 06.6	-0.4
JTH	Tanohata	8.88	235	P	Pn	04 33 06.1	-1.5
JTH				*e*S	Sn	04 34 39.6	-6.9
PET	Petropavlovsk	8.99	29	*e*P	Pn	04 33 08.4	-0.6
PET	Petropavlovsk	8.99	29	*e*Pn	Pn	04 33 08.3	-0.6
PET	Petropavlovsk	8.99	29	*e*PN	Pn	04 33 08.6	-0.3
PET				MLR	MLR		
	comp=Z,8µm,17.0s						
PET				MLR	MLR		
	comp=Z,7µm,14.0s						
JOSM	Okushiri--Mats	9.23	253	P	Pn	04 33 13.2	+0.9
OFUJ	Ofunato	9.57	232	P	Pn	04 33 15.6	-1.4
OFUJ				*e*S	Sn	04 34 57.2	-6.3
OKH	Okha	9.83	329	⇑*i*PN	Pn	04 33 25.5	+5.1
OKH				pmax	pmax		
	comp=Z,1µm,15.0s						
JRG	Rokugo	9.95	237	P	Pn	04 33 21.1	-1.1
JIO	Ouri	10.19	231	P	Pn	04 33 23.8	-1.7
JIO				*e*S	Sn	04 35 12.3	-6.4
NKL	Nikolayevsk	10.43	322	*i* PN	Pn	04 33 32.0	+3.3
NKL				*e*S	Sn	04 35 39.0	+15
NKL				pmax	pmax		
	comp=N,2µm,5.0s						
NKL				pmax	pmax		
	comp=E,2µm,5.0s						
NKL				pmax	pmax		
	comp=Z,2µm,5.0s						
NKL				pmax	pmax		
	comp=N,130nm,1.0s						
NKL				pmax	pmax		
	comp=E,90nm,1.0s						
NKL				pmax	pmax		
	comp=Z,260nm,1.0s						
NKL				smax	smax		
	comp=E,2µm,9.0s						
NKL				MLR	MLR		
	comp=N,8µm,16.0s						
NKL				MLR	MLR		
	comp=E,10µm,16.0s						
NKL				MLR	MLR		
	comp=Z,24µm,16.0s						
TEY	Ternei	10.43	273	c *e*PN	Pn	04 33 33.7	+4.9
TEY				*e*		04 35 31.4	
TEY				pmax	pmax		
	comp=E,60nm,0.9s						
TEY				pmax	pmax		
	comp=Z,60nm,0.9s						
TEY				pmax	pmax		
	comp=Z,2µm,6.9s						
TEY				pmax	pmax		
	comp=E,2µm,7.0s						
TEY				MLR	MLR		
	comp=N,5µm,15.0s						
TEY				MLR	MLR		
	comp=E,13µm,15.0s						
TEY				MLR	MLR		
	comp=Z,16µm,15.0s						
JYA	Atsumi	11.02	236	P	Pn	04 33 36.2	-0.7
JFK	Kawauchi	11.25	228	P	Pn	04 33 38.6	-1.4
JFK				*e*S	Sn	04 35 37.5	-7.1
GRNR	Gornyy	11.35	304	*e*PN	Pn	04 33 48.0	+6.7
GRNR				pmax	pmax		
	comp=Z,84nm,1.0s						
JFY	Yanaizu	11.85	232	P	Pn	04 33 48.6	+0.4
MAJO	Matsushiro	13.30	233	*e*Pn	Pn	04 34 07.3	-0.7
MAJO	Matsushiro	13.30	233	d *i*PN	Pn	04 34 07.4	-0.7
MAJO				pmax	pmax		
	comp=Z,35nm,1.0s						
MAT	Matsushiro	13.30	233	S	Pn	04 34 07.9	-0.2
MJAR	Matsushiro Arr	13.30	233	Pn	Pn	04 34 07.2	-0.9
	comp=Z,2.1nm,0.3s,baz=19,slow=12,SNR=28						
MJAR				Sn	Sn	04 36 32.8	-2.0
	comp=Z,0.2nm,0.3s,baz=54,slow=11,SNR=2.3						
MJAR				LR	LR	04 39 46.8	
	comp=Z,4µm,21.5s,baz=40,slow=40						
MJB9	Matsu-Tunnel	13.30	233	*e*Pn	Pn	04 34 07.4	-0.6
USRK	Ussuriysk Ar.	13.82	272	Pn	P	04 34 17.1	-5.9
	baz=84,slow=13						
USRK				LR	LR	04 39 41.1	
	comp=Z,11µm,18.6s,baz=72,slow=38						
KLR	Kul'dur	13.85	293	Pn	P	04 34 18.9	-4.5
	comp=Z,0.0nm,0.3s,baz=99,slow=13,SNR=34						
KLR				LR	LR	04 39 57.1	
	comp=Z,1µm,19.1s,baz=99,slow=39						
KLR	Kul'dur	13.85	293	*e*P	P	04 34 19.0	-4.3
KLR	Kul'dur	13.85	293	c *i*P	P	04 34 19.0	-4.3
MA2	Magadan	14.20	359	Pn	P	04 34 21.2	-6.0
	comp=Z,12nm,0.3s,baz=167,slow=12,SNR=32						
MA2				LR	LR	04 40 07.6	
	comp=Z,7µm,18.1s,baz=181,slow=39						
MA2	Magadan	14.20	359	*e*P	Pn	04 34 19.2	-1.0
MA2	Magadan	14.20	359	*e*Pn	P	04 34 21.4	-5.9
MSHR	Mys Shultsa	14.82	266	c *i*P	Pn	04 34 29.1	+0.4
INU	Inuyama	14.83	232	*e*Pn	Pn	04 34 28.4	-0.5
JHJ	Hachijo jima 2	15.18	220	Pn	P	04 34 36.5	-1.8
	comp=Z,10nm,0.3s,baz=48,slow=18,SNR=2.5						
JHJ				Sn	Sn	04 37 11.5	-9.0
	comp=Z,28nm,0.3s,baz=20,slow=16,SNR=4.5						
JHJ				LR	LR	04 43 54.8	
	comp=Z,3µm,18.0s,baz=62,slow=51						
MDJ	Mudanjiang	15.43	275	P	Pn	04 34 34.3	-2.4
MDJ				pP	pP	04 34 43.1	-6.1
MDJ				sP	sP	04 34 50.4	-2.8
MDJ				S	Sn	04 37 26.8	+0.4
MDJ				sS	S	04 37 40.9	-0.8
MDJ				pmax	pmax		
	comp=Z,230nm,0.8s						
MDJ				LR	LR		
	comp=Z,7µm,15.1s						
MDJ				LR	LR		
	comp=Z,11µm,17.7s						
MDJ				LR	LR		
	comp=Z,18µm,16.2s						
MDJ	Mudanjiang	15.43	275	*e*Pn	P	04 34 36.8	-4.1
	comp=Z,195nm,0.9s						
SMY	Shemya	16.55	56	*e*Pn	P	04 34 48.8	-4.5
	comp=Z,167nm,1.2s						
SMY	Shemya	16.55	56	*e*P	P	04 34 48.8	-4.5
SMY				pmax	pmax		
	comp=Z,167nm,1.2s						
SEY	Seymchan	17.58	2	P	P	04 35 01.2	-3.3
	comp=Z,1.2nm,0.3s,baz=180,slow=11,SNR=29						
SEY	Seymchan	17.58	2	*e*P	P	04 35 01.7	-2.9
SEY	Seymchan	17.58	2	c *i*P	P	04 35 01.7	-2.9
ZEA	Zeya	17.66	307	*e*P	P	04 35 06.0	+0.4
ZEA				*e*S	S	04 38 27.0	-0.2
ZEA				pmax	pmax		
	comp=N,600nm,4.0s						
ZEA				pmax	pmax		
	comp=Z,2µm,4.0s						
ZEA				pmax	pmax		
	comp=E,1µm,5.0s						
ZEA				pmax	pmax		
	comp=N,220nm,1.2s						
ZEA				pmax	pmax		
	comp=E,220nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,360nm,1.2s						
ZEA				smax	smax		
	comp=N,1µm,8.0s						
ZEA				MLR	MLR		
	comp=E,13µm,16.0s						
ZEA				MLR	MLR		
	comp=Z,19µm,16.0s						
ZEA				MLR	MLR		
	comp=N,2µm,13.0s						
CN2	Changchun	18.51	274	*e*P	Pn	04 35 14.9	-0.4
CN2				pmax	pmax		
	comp=N,100nm,1.0s						
CN2				pmax	pmax		
	comp=N,200nm,4.0s						
KSRS	Korea Array	19.25	254	P	Pn	04 35 24.1	-0.1
	comp=N,1.8nm,0.3s,baz=62,slow=10.0,SNR=45						
KSRS				LR	LR	04 43 04.0	
	comp=N,6µm,18.2s,baz=60,slow=38						
KS01	Wonju Array Si	19.26	254	*e*P	Pn	04 35 22.2	-2.1
KS15	Wonju Array Si	19.28	254	*e*P	Pn	04 35 24.8	+0.1
KSAR	Wonju Array Be	19.28	254	P	Pn	04 35 24.1	-0.5
KSAR	Wonju Array Be	19.28	254	P	Pn	04 35 24.2	-0.5
CBIJ	Chichi jima	19.69	205	*e*P	Pn	04 35 28.9	-0.7
	comp=N,252nm,1.1s						
JCJ	Chichijima	19.69	205	P	Pn	04 35 30.1	+0.5
	comp=N,2.5nm,0.3s,baz=3.5,slow=19,SNR=3.3						
JNU	Nakatsue	19.99	239	P	Pn	04 35 33.6	+0.4
	comp=N,72nm,0.9s,baz=38,slow=8.9,SNR=12						
JNU				LR	LR	04 44 52.1	
	comp=N,6µm,18.6s,baz=16,slow=42						
JNU	Nakatsue	19.99	239	*e*P	Pn	04 35 32.5	-0.7
	comp=N,175nm,1.0s						
INCN	Inchon	20.11	256	*e*P	Pn	04 35 34.6	+0.1
	comp=N,144nm,0.8s						
INCN	Inchon	20.11	256	*e*P	Pn	04 35 34.6	+0.1
INCN				pmax	pmax		
	comp=Z,144nm,0.8s						
TJN	Taejon	20.21	252	⇓*e*P	Pn	04 35 35.0	-0.7
YAK	Yakutsk	20.86	331	P	Pn	04 35 40.9	-2.1
	comp=Z,46nm,0.3s,baz=212,slow=6.5,SNR=20						
YAK				S	S	04 39 26.9	-4.1

	comp=Z,15nm,0.4s,baz=332,slow=15,SNR=2.5						
YAK				LR	LR	04 43 50.5	
	comp=Z,5μm,18.3s,baz=84,slow=37						
YAK	**Yakutsk**	**20.86**	**331**	*e*P	Pn	04 35 40.1	-2.9
	comp=Z,378nm,0.7s						
YAK				S	**S**	**04 39 26.9**	**-4.1**
YAK	**Yakutsk**	**20.86**	**331**	*e*P	Pn	04 35 39.2	-3.8
YAK				*e*		04 35 53.2	
YAK				*e*S	**S**	**04 39 29.6**	**-1.4**
YAK				*e*SS	**SnSn**	**04 39 48.0**	**-4.1**
YAK				pmax	pmax		
	comp=Z,134nm,1.1s						
YAK				pmax	pmax		
	comp=E,33nm,1.2s						
YAK				pmax	pmax		
	comp=N,38nm,1.2s						
YAK				smax	smax		
	comp=N,466nm,2.5s						
YAK				smax	smax		
	comp=E,394nm,2.6s						
YAK				MLR	MLR		
	comp=Z,5μm,19.0s						
YAK				MLR	MLR		
	comp=N,10μm,17.0s						
YAK				MLR	MLR		
	comp=E,3μm,15.0s						
KIWB	**Kanaga Island**	**21.66**	**61**	*e*P	**P**	**04 35 47.0**	**-2.2**
HIA	**Hailar**	**21.70**	**292**	*e*P	**P**	**04 35 48.0**	**-1.6**
	comp=E,57nm,0.9s						
HIA	**Hailar**	**21.70**	**292**	*e*P	**P**	**04 35 48.0**	**-1.6**
HIA				pmax	pmax		
	comp=Z,57nm,0.9s						
GSTR	**Great Sitkin T**	**22.36**	**61**	*e*P	**P**	**04 35 55.2**	**-1.4**
DL2	**Dalian**	**22.91**	**264**	⇓*i*P	**P**	**04 36 03.4**	**+0.9**
DL2				S	**S**	**04 40 11.1**	**+0.9**
DL2				pmax	pmax		
	comp=Z,63nm,1.1s						
DL2				pmax	pmax		
	comp=Z,1μm,5.6s						
DL2				LR	LR		
	comp=Z,2μm,14.4s						
DL2				LR	LR		
	comp=Z,2μm,15.3s						
DL2				LR	LR		
	comp=Z,3μm,17.7s						
ATKA	**Atka Island**	**23.51**	**61**	*e*P	**P**	**04 36 07.2**	**-1.2**
	comp=Z,226nm,1.6s						
BOD	**Bodaibo**	**25.96**	**312**	*e*P	**P**	**04 36 32.3**	**+1.5**
BOD				pmax	pmax		
	comp=Z,26nm,0.8s						
JOW	**Kunigami**	**26.15**	**233**	P	**P**	**04 36 34.2**	**+1.4**
	comp=Z,56nm,1.0s,baz=19,slow=3.6,SNR=7.2						
JOW	**Kunigami**	**26.15**	**233**	*e*P	**P**	**04 36 34.0**	**+1.2**
	comp=Z,113nm,1.0s						
BJI	**Beijing**	**26.27**	**271**	P	**P**	**04 36 34.9**	**+1.1**
BJI				S	**S**	**04 41 08.4**	**+4.2**
BJI				pmax	pmax		
	comp=Z,160nm,1.2s						
BJI				pmax	pmax		
	comp=Z,2μm,4.6s						
BJI				LR	LR		
	comp=Z,8μm,15.0s						
BJI				LR	LR		
	comp=Z,3μm,15.5s						
BJT	**Baijiatuau**	**26.28**	**271**	*e*P	**P**	**04 36 34.9**	**+0.9**
	comp=Z,198nm,1.0s						
BJT	**Baijiatuau**	**26.28**	**271**	*e*P	**P**	**04 36 34.9**	**+0.9**
BJT				pmax	pmax		
	comp=Z,198nm,1.0s						
TIA	**Tai’an**	**27.33**	**262**	P	**P**	**04 36 44.8**	**+1.4**
TIA				pmax	pmax		
	comp=Z,27nm,1.4s						
TIA				pmax	pmax		
	comp=Z,620nm,8.9s						
TIA				LR	LR		
	comp=Z,2μm,15.7s						
TIA				LR	LR		
	comp=Z,2μm,14.5s						
TIA				LR	LR		
	comp=Z,3μm,19.0s						
SSE	**Sheshan**	**27.49**	**249**	P	**P**	**04 36 47.1**	**+2.3**
SSE				S	**S**	**04 41 25.8**	**+2.3**
SSE				pmax	pmax		
	comp=Z,43nm,0.9s						
SSE				pmax	pmax		
	comp=Z,440nm,10.6s						
SSE				LR	LR		
	comp=Z,1μm,14.6s						
SSE				LR	LR		
	comp=Z,2μm,14.4s						
NJ2	**Nanjing**	**28.45**	**253**	*e*P	**P**	**04 36 54.8**	**+1.4**
NJ2				pP	**sP**	**04 37 05.8**	**-0.5**
NJ2				S	**S**	**04 41 39.8**	**+1.1**
NJ2				sS	**sS**	**04 41 59.3**	**+5.6**
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,330nm,4.3s						
NJ2				LR	LR		
	comp=Z,8μm,14.6s						
NJ2				LR	LR		
	comp=Z,8μm,16.3s						
NJ2				LR	LR		
	comp=Z,7μm,15.2s						
H11N2	**WAKE ISLAND Hy**	**28.64**	**148**	T	T	05 07 41.0	
	baz=338,slow=75,SNR=4160						
H11N1	**WAKE ISLAND Hy**	**28.66**	**148**	T	T	05 07 42.1	
	baz=338,slow=75,SNR=3802						
H11N3	**WAKE ISLAND Hy**	**28.66**	**148**	T	T	05 07 42.3	
	baz=338,slow=75,SNR=3048						
HHC	**Hu-ho-hao-te**	**29.20**	**275**	*e*P	**P**	**04 37 01.8**	**+1.7**
HHC				sP	sP	04 37 17.9	+4.8
HHC				PP	**PnPn**	**04 37 51.6**	**-1.9**
HHC				S	**S**	**04 41 48.4**	**-2.2**
HHC				sS	sS	04 42 06.9	+1.3
HHC				pmax	pmax		
	comp=Z,100nm,1.0s						
HHC				pmax	pmax		
	comp=Z,500nm,4.9s						
HHC				LR	LR		
	comp=Z,4μm,13.6s						
HHC				LR	LR		
	comp=Z,12μm,14.2s						
HHC				LR	LR		
	comp=Z,14μm,12.2s						
H11S1	**WAKE ISLAND Hy**	**29.69**	**150**	T	T	05 08 54.1	
	baz=339,slow=76,SNR=3040						
H11S3	**WAKE ISLAND Hy**	**29.70**	**150**	T	T	05 08 58.2	
	baz=339,slow=76,SNR=2174						
H11S2	**WAKE ISLAND Hy**	**29.71**	**150**	T	T	05 08 58.9	
	baz=339,slow=76,SNR=2411						
TIY	**Taiyuan**	**29.90**	**269**	*e*P	**P**	**04 37 08.3**	**+1.9**
TIY				S	**S**	**04 42 06.8**	**+5.2**
TIY				sS	**sS**	**04 42 21.9**	**+5.2**
TIY				SS	**SnSn**	**04 43 32.8**	**-1.0**
TIY				pmax	pmax		
	comp=Z,59nm,0.6s						
TIY				pmax	pmax		
	comp=Z,440nm,3.7s						
TIY				LR	LR		
	comp=Z,3μm,16.3s						
TIY				LR	LR		
	comp=Z,3μm,13.8s						
TIY				LR	LR		
	comp=Z,3μm,16.3s						
ULN	**Ulaanbaatar**	**30.22**	**291**	*e*P	**P**	**04 37 09.8**	**+0.6**
ULN	**Ulaanbaatar**	**30.22**	**291**	*e*P	**P**	**04 37 08.6**	**-0.6**
	comp=Z,26nm,0.8s						
ULN	**Ulaanbaatar**	**30.22**	**291**	P	**P**	**04 37 10.6**	**+1.4**
	SNR=18						
ULN	**Ulaanbaatar**	**30.22**	**291**	⇓*e*P	**P**	**04 37 09.8**	**+0.6**
ULN				pmax	pmax		
	comp=Z,21nm,1.0s						
BTO	**Baotou**	**30.38**	**276**	*e*P	**P**	**04 37 11.3**	**+0.7**
SONA1	**Songino Array**	**30.66**	**291**	*e*P	**P**	**04 37 12.9**	**-0.1**
SONM	**Songino Array**	**30.66**	**291**	P	**P**	**04 37 12.8**	**-0.3**
	comp=Z,9.5nm,0.7s,baz=76,slow=8.5,SNR=32						
TLY	**Talaya**	**31.75**	**299**	*e*P	**P**	**04 37 21.7**	**-0.7**
TLY	**Talaya**	**31.75**	**299**	*e*P	**P**	**04 37 21.8**	**-0.6**
	comp=Z,11nm,1.0s						
TLY	**Talaya**	**31.75**	**299**	*e*P	**P**	**04 37 22.2**	**-0.2**
TLY				*e*		04 38 30.8	
TLY				*e*PPP	PPP	04 38 45.9	
TLY				pmax	pmax		
	comp=Z,16nm,1.3s						
TLY				MLR	MLR		
	comp=Z,9μm,16.0s						
ZAK	**Zakamensk**	**32.17**	**297**	*e*P	**P**	**04 37 24.7**	**-1.6**
ZAK				pmax	pmax		
	comp=Z,13nm,1.1s						
GUMO	**Guam**	**32.19**	**192**	LR	LR	04 52 53.7	
	comp=Z,2μm,18.5s,baz=24,slow=41						
GUMO	**Guam**	**32.19**	**192**	*e*P	**P**	**04 37 25.3**	**-1.2**
	comp=Z,30nm,0.6s						
GUMO	**Guam**	**32.19**	**192**	*e*P	**P**	**04 37 25.3**	**-1.2**
GUMO				pmax	pmax		
	comp=Z,30nm,0.6s						
WHN	**Wuhan**	**32.42**	**256**	⇑*i*P	**P**	**04 37 29.5**	**+1.0**
WHN				sP	sP	04 37 48.4	+6.9
WHN				pmax	pmax		
	comp=Z,72nm,0.9s						
WHN				pmax	pmax		
	comp=Z,950nm,4.3s						
WHN				LR	LR		
	comp=Z,6μm,14.4s						
WHN				LR	LR		
	comp=Z,8μm,16.2s						
WHN				LR	LR		
	comp=Z,10μm,17.2s						
TPUB	**Ta-pu**	**33.30**	**239**	*e*P	**P**	**04 37 38.0**	**+1.7**
	comp=Z,136nm,0.9s						
QZH	**Quanzhou**	**33.35**	**243**	⇑*i*P	**P**	**04 37 38.5**	**+1.9**
QZH				pP	**sP**	**04 37 50.8**	**+1.2**
QZH				PP	**PP**	**04 38 53.3**	**+1.0**
QZH				S	**S**	**04 42 52.3**	**-3.1**
QZH				sS	**sS**	**04 43 10.8**	**+0.3**
QZH				LR	LR		
	comp=Z,2μm,17.5s						
QZH				LR	LR		
	comp=Z,720nm,20.4s						
QZH				LR	LR		
	comp=Z,2μm,17.1s						
MOY	**Mondy**	**33.38**	**299**	*e*P	**P**	**04 37 36.4**	**-0.4**
MOY				pmax	pmax		
	comp=Z,22nm,2.7s						
XAN	**Xi’an**	**34.20**	**266**	P	**P**	**04 37 45.3**	**+1.2**
XAN				pP	sP	04 38 01.3	+4.2
XAN				PcS	**PcS**	**04 44 07.1**	**+0.4**
XAN				pmax	pmax		
	comp=Z,58nm,1.0s						
XAN				pmax	pmax		
	comp=Z,550nm,5.4s						
XAN				LR	LR		
	comp=Z,4μm,16.3s						
XAN				LR	LR		
	comp=Z,2μm,14.9s						
XAN				LR	LR		
	comp=Z,4μm,15.4s						
SVW2	**Sparrevohn**	**34.30**	**44**	*e*P	**P**	**04 37 45.2**	**+0.6**
	comp=Z,9.2nm,0.7s						
OHAK	**Old Harbor**	**35.56**	**50**	*e*P	**P**	**04 37 53.7**	**-1.7**
	comp=Z,44nm,1.0s						
RSO	**Redoubt South**	**35.68**	**45**	*e*P	**P**	**04 37 57.5**	**+0.9**
KDAK	**Kodiak Island**	**35.90**	**49**	*e*P	**P**	**04 37 57.7**	**-0.6**
ENH	**Enshi**	**35.94**	**260**	*e*P	**P**	**04 37 59.0**	**0.0**
PPLA	**Purkeypile**	**35.98**	**41**	*e*P	P	04 38 00.6	+1.4
	comp=Z,49nm,1.2s						
CAST	**Castle Rocks**	**36.05**	**40**	*e*P	**P**	**04 38 00.4**	**+0.8**
	comp=Z,28nm,1.2s						
SKT	**Skwentna**	**36.26**	**42**	*e*P	**P**	**04 38 01.9**	**+0.4**
	comp=Z,13nm,1.0s						
CNPM	**China Poot**	**36.48**	**46**	*e*P	**P**	**04 38 03.4**	**+0.1**
	comp=Z,23nm,1.0s						
BPAW	**Bear Paw Mtn.**	**36.56**	**39**	*e*P	**P**	**04 38 04.6**	**+0.6**
	comp=Z,17nm,1.0s						
BRLK	**Bradley Lake**	**36.64**	**46**	*e*P	**P**	**04 38 04.9**	**+0.2**
	comp=Z,15nm,0.5s						
SUA	**Susitna One**	**36.64**	**43**	*e*P	**P**	**04 38 05.2**	**+0.4**
	comp=Z,26nm,1.2s						
LZH	**Lanzhou**	**36.73**	**272**	⇑P	**P**	**04 38 08.3**	**+2.4**
LZH				pP	sP	04 38 21.3	+2.4
LZH				sP	pP	04 38 26.8	+12
LZH				PP	**PnPn**	**04 39 33.6**	**+3.9**
LZH				S	**S**	**04 43 47.8**	**+0.2**
LZH				sS	ScP	04 44 07.8	-4.4
LZH				pmax	pmax		
	comp=Z,420nm,1.1s						
LZH				pmax	pmax		
	comp=Z,2μm,4.9s						
LZH				LR	LR		
	comp=Z,4μm,15.2s						
LZH				LR	LR		
	comp=Z,6μm,13.6s						
LZH				LR	LR		
	comp=Z,7μm,15.2s						
TRF	**Thorofare Moun**	**36.85**	**40**	*e*P	**P**	**04 38 06.5**	**-0.1**
	comp=Z,16nm,0.9s						
COLD	**Coldfoot**	**37.12**	**33**	*e*P	**P**	**04 38 08.7**	**0.0**
	comp=Z,21nm,1.0s						
RC01	**Rabbit Creek A**	**37.14**	**44**	*e*P	**P**	**04 38 09.3**	**+0.4**
	comp=Z,16nm,0.8s						
BWN	**Browne**	**37.23**	**38**	*e*P	**P**	**04 38 07.2**	**-2.4**
	comp=Z,137nm,1.0s						
PMR	**Palmer**	**37.41**	**43**	*e*P	**P**	**04 38 10.6**	**-0.6**
	comp=Z,23nm,1.1s						
PMR	**Palmer**	**37.41**	**43**	*e*P	**P**	**04 38 10.6**	**-0.6**
PMR				pmax	pmax		
	comp=Z,23nm,1.1s						
KRAR	**Krasnoyarsk**	**37.45**	**308**	⇑*e*P	**P**	**04 38 12.3**	**+0.8**
MCK	**McKinley**	**37.46**	**39**	*e*P	**P**	**04 38 12.0**	**+0.4**
	comp=Z,46nm,1.2s						
MCK	**McKinley**	**37.46**	**39**	*e*P	**P**	**04 38 12.0**	**+0.4**
MCK				pmax	pmax		
	comp=Z,46nm,1.2s						
TOLK	**Toolik Lake Re**	**37.53**	**31**	P	**P**	**04 38 11.9**	**-0.2**
	baz=263						
TOLK	**Toolik Lake Re**	**37.53**	**31**	*e*P	**P**	**04 38 12.8**	**+0.7**
	comp=Z,19nm,0.6s						
SML	**Sawmill**	**37.78**	**42**	*e*P	**P**	**04 38 14.6**	**+0.2**
	comp=Z,63nm,0.7s						
SML	**Sawmill**	**37.78**	**42**	*e*P	**P**	**04 38 14.6**	**+0.2**
SML				pmax	pmax		
	comp=Z,63nm,0.7s						
MDM	**Murphy Dome**	**37.78**	**37**	*e*P	**P**	**04 38 14.9**	**+0.6**
	comp=Z,22nm,0.8s						
WRH	**Wood River Hil**	**37.84**	**38**	*e*P	**P**	**04 38 15.1**	**+0.3**
	comp=Z,22nm,0.7s						
COLA	**College**	**37.94**	**37**	*e*P	**P**	**04 38 16.5**	**+0.9**
	comp=Z,38nm,0.6s						
COLA	**College**	**37.94**	**37**	*e*P	**P**	**04 38 16.5**	**+0.9**
COLA				pmax	pmax		
	comp=Z,38nm,0.6s						
HVS	**Khovu-Aksy**	**37.96**	**300**	⇑*e*P	P	04 38 18.6	+2.5
HVS				pmax	pmax		
	comp=Z,30nm,1.1s						
CCB	**Clear Creek Bu**	**37.96**	**38**	*e*P	**P**	**04 38 15.8**	**0.0**
	comp=Z,11nm,0.7s						
GTA	**Gaotai**	**38.00**	**280**	⇑P	**P**	**04 38 18.3**	**+1.7**
GTA				pP	sP	04 38 30.9	+1.3
GTA				sP	pP	04 38 36.0	+10
GTA				PcP	**PcP**	**04 40 32.9**	**+1.2**
GTA				S	**S**	**04 44 06.8**	**+0.1**
GTA				sS	sS	04 44 27.4	+5.5
GTA				SS	**SnSn**	**04 46 42.4**	**-7.6**
GTA				pmax	pmax		
	comp=Z,71nm,1.2s						
GTA				pmax	pmax		
	comp=Z,640nm,6.0s						
GTA				LR	LR		
	comp=Z,3μm,16.8s						
GTA				LR	LR		
	comp=Z,4μm,14.9s						
GTA				LR	LR		
	comp=Z,6μm,14.6s						
GZH	**Guangzhou**	**38.03**	**247**	P	**P**	**04 38 12.4**	**-4.4**
GZH				S	**S**	**04 44 00.3**	**-6.8**
GZH				LR	LR		
	comp=N,4μm,17.6s						
GZH				LR	LR		
	comp=E,3μm,17.1s						
IL1	**Eielson Array**	**38.35**	**37**	*e*P	**P**	**04 38 17.8**	**-1.3**
ILAR	**Eielson Array**	**38.35**	**37**	P	**P**	**04 38 18.9**	**-0.3**
	comp=E,8.0nm,0.9s,baz=265,slow=7.2,SNR=48						
ILAR				PcP	**PcP**	**04 40 30.6**	**-1.5**
	comp=E,1.2nm,0.5s,baz=296,slow=3.1,SNR=3.2						
ILAR				LR	LR	04 56 00.4	
	comp=E,2μm,19.8s,baz=276,slow=39						
ILB	**Eielson Array**	**38.35**	**37**	*e*P	**P**	**04 38 19.0**	**-0.1**
KLU	**Klutina**	**38.95**	**43**	*e*P	**P**	**04 38 24.5**	**+0.2**
	comp=E,24nm,0.9s						
FYU	**Fort Yukon**	**39.04**	**35**	*e*P	P	04 38 26.3	+1.5
	comp=E,64nm,1.1s						
DIV	**Divide**	**39.06**	**43**	*e*P	**P**	**04 38 25.7**	**+0.6**
	comp=E,27nm,0.6s						
HARP	**HAARP**	**39.23**	**41**	*e*P	P	04 38 28.1	+1.6
	comp=E,37nm,1.0s						
CD2	**Chengdu**	**39.56**	**265**	⇑P	**P**	**04 38 31.0**	**+1.3**
CD2				pP	sP	04 38 42.8	+0.1
CD2				sP	pP	04 38 48.1	+9.1
CD2				PP	**PnPn**	**04 40 02.3**	**-1.5**
CD2				S	**S**	**04 44 30.6**	**+0.3**
CD2				sS	sS	04 44 50.8	+5.2
CD2				pmax	pmax		
	comp=E,260nm,0.6s						
CD2				pmax	pmax		
	comp=E,810nm,3.2s						
CD2				LR	LR		
	comp=E,4μm,15.6s						
CD2				LR	LR		
	comp=E,3μm,15.6s						
CD2				LR	LR		
	comp=E,4μm,16.4s						
BMRM	**Bremner River**	**39.64**	**43**	*e*P	**P**	**04 38 30.5**	**+0.5**
	comp=E,66nm,1.2s						
RAGM	**Ragged Mountai**	**39.68**	**44**	*e*P	**P**	**04 38 31.4**	**+1.1**
	comp=E,36nm,0.5s						
TGL	**Tana Glacier**	**40.53**	**44**	*e*P	P	04 38 38.9	+1.5
	comp=E,42nm,1.1s						
EGAK	**Eagle**	**40.81**	**37**	*e*P	**P**	**04 38 39.2**	**-0.3**
	comp=E,48nm,1.2s						
DAWY	**Dawson**	**41.65**	**38**	*e*P	**P**	**04 38 46.7**	**+0.2**
	comp=E,30nm,1.5s						
ZAA0	**Zalesovo Array**	**42.43**	**307**	*e*P	**P**	**04 38 52.0**	**-0.9**
	comp=E,9.3nm,1.1s						
ZAA0				*e*PcP	**PcP**	**04 40 46.6**	**+1.1**
ZALV	**Zalesovo Beam**	**42.43**	**307**	P	**P**	**04 38 51.6**	**-1.3**
	comp=E,4.5nm,0.4s,baz=53,slow=5.7,SNR=11						
ZALV				PcP	**PcP**	**04 40 45.9**	**+0.4**
	comp=E,9.3nm,0.7s,baz=80,slow=3.2,SNR=11						
ZALV	**Zalesovo Beam**	**42.43**	**307**	*e*P	**P**	**04 38 51.2**	**-1.7**
ZALV				*e*PcP	**PcP**	**04 40 46.0**	**+0.5**
ZALV	**Zalesovo Beam**	**42.43**	**307**	*e*P	**P**	**04 38 51.2**	**-1.7**
ZALV				*e*		04 40 46.0	
NVS	**Novosibirsk**	**43.06**	**308**	*e*P	**P**	**04 38 55.2**	**-2.8**
NVS				*e*		04 40 48.2	
NVS				*e*		04 48 56.4	
NVS				pmax	pmax		
	comp=Z,15nm,1.1s						
NVS				pmax	pmax		
	comp=N,5.0nm,0.9s						
NVS				pmax	pmax		
	comp=E,7.0nm,1.3s						
QIZ	**Qiongzhong**	**43.20**	**246**	P	**P**	**04 39 01.8**	**+2.2**
QIZ				S	**S**	**04 45 23.3**	**-1.1**
QIZ				sS	sS	04 45 46.1	+6.3
QIZ				ScS	**ScS**	**04 48 59.8**	**+2.2**
QIZ				LR	LR		
	comp=E,3μm,18.6s						
QIZ				LR	LR		
	comp=E,2μm,21.6s						
QIZ				LR	LR		
	comp=E,3μm,16.7s						
INK	**Inuvik**	**43.44**	**32**	*e*P	**P**	**04 39 01.4**	**+0.5**
	comp=E,33nm,0.8s						
INK	**Inuvik**	**43.44**	**32**	*e*P	**P**	**04 39 01.4**	**+0.5**
INK				pmax	pmax		
	comp=Z,33nm,0.8s						
KMI	**Kunming**	**43.81**	**259**	P	**P**	**04 39 06.0**	**+1.3**
KMI				pP	sP	04 39 17.6	-0.2
KMI				sP	pP	04 39 22.9	+8.9
KMI				PP	**PcP**	**04 40 47.6**	**-3.3**
KMI				S	**S**	**04 45 29.8**	**-3.8**
KMI				sS	sS	04 45 52.3	+3.4
KMI				SS	**SS**	**04 48 43.3**	**-6.6**
KMI				pmax	pmax		
	comp=Z,36nm,1.6s						
KMI				pmax	pmax		
	comp=Z,630nm,5.8s						
KMI				LR	LR		
	comp=Z,3μm,16.1s						
KMI				LR	LR		
	comp=Z,1μm,17.3s						
KMI				LR	LR		
	comp=Z,2μm,16.9s						
WMQ	**Urumqi**	**44.29**	**292**	P	**P**	**04 39 10.3**	**+2.1**
WMQ				pP	pP	04 39 16.1	-1.5
WMQ				sP	sP	04 39 25.8	+4.5
WMQ				pmax	pmax		
	comp=Z,130nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,1μm,4.9s						
WMQ				LR	LR		
	comp=Z,9μm,16.7s						
WMQ				LR	LR		
	comp=Z,7μm,15.7s						
WMQ				LR	LR		
	comp=Z,6μm,20.1s						
SKAG	**Skagway**	**44.47**	**44**	*e*P	P	04 39 10.9	+1.6
	comp=Z,16nm,0.9s						
BESE	**Bessie Mountai**	**44.95**	**45**	*e*P	P	04 39 15.2	+1.9
	comp=Z,53nm,1.5s						
JIS	**Juneau Island**	**45.28**	**46**	*e*P	P	04 39 17.7	+2.0
	comp=Z,31nm,0.9s						
MK31	**Makanchi Array**	**46.49**	**298**	*e*P	**P**	**04 39 25.2**	**-0.3**
MK31	**Makanchi Array**	**46.49**	**298**	*i* P	**P**	**04 39 24.8**	**-0.7**
MK31				pmax	pmax		
	comp=Z,19nm,0.6s						
MKAR	**Makanchi Array**	**46.49**	**298**	P	**P**	**04 39 25.2**	**-0.4**
	comp=Z,16nm,0.6s,baz=72,slow=7.6,SNR=112						
MKAR				PcP	**PcP**	**04 41 00.1**	**+0.6**
	comp=Z,10nm,0.7s,baz=78,slow=3.8,SNR=3.9						
MKAR	**Makanchi Array**	**46.49**	**298**	P	**P**	**04 39 25.2**	**-0.4**
MKAR				pmax	pmax		
	comp=Z,15nm,0.6s						
MK01	**Makanchi Array**	**46.50**	**298**	*e*P	**P**	**04 39 24.7**	**-0.9**
MAKZ	**Makanchi**	**46.68**	**298**	*e*P	**P**	**04 39 26.3**	**-0.7**
	comp=Z,22nm,0.7s						
MAKZ	**Makanchi**	**46.68**	**298**	P	**P**	**04 39 26.0**	**-1.0**
MAKZ				pmax	pmax		
	comp=Z,17nm,0.6s						
WRAK	**Wrangell Islan**	**46.93**	**48**	*e*P	P	04 39 31.0	+2.3
	comp=Z,22nm,0.9s						
KURK	**Kurchatov**	**47.11**	**304**	*e*P	**P**	**04 39 29.2**	**-1.1**
KURK				PcP	**PcP**	**04 41 02.3**	**+0.6**
KURK	**Kurchatov**	**47.11**	**304**	*e*P	**P**	**04 39 29.2**	**-1.1**
KURK						04 41 02.3	
KURBB	**Kurchatov Arra**	**47.20**	**304**	P	**P**	**04 39 30.2**	**-0.7**
	comp=Z,18nm,0.6s,baz=71,slow=8.5,SNR=94						
KURBB				PcP	**PcP**	**04 41 02.3**	**+0.3**
	comp=Z,7.6nm,0.8s,baz=66,slow=2.9,SNR=5.2						
LKP	**Lekhapani**	**47.25**	**267**	*e*P	**P**	**04 39 32.6**	**+1.0**
DLBC	**Dease Lake**	**47.40**	**44**	*e*P	**P**	**04 39 33.6**	**+1.1**
	comp=Z,31nm,0.9s						
DIB	**Dawson Inlet,**	**48.06**	**52**	*e*P	P	04 39 39.7	+2.1
DIB				*e*pP	sP	04 39 51.6	+0.8
BAKI	**Biak**	**48.33**	**201**	P	P	04 39 55.5	+15
SKNT	**Sakolnakorn**	**48.52**	**250**	P	**P**	**04 39 43.6**	**+2.0**
	comp=Z,19nm,1.1s						
ZIRO	**ZIRO**	**48.53**	**269**	*e*P	**P**	**04 39 41.8**	**0.0**
JAY	**Jayapura**	**48.64**	**194**	P	**P**	**04 39 44.2**	**+1.7**
	comp=Z,7.9nm,0.9s,baz=5.2,slow=7.5,SNR=3.2						
MOKO	**MOKOCHONG**	**48.80**	**267**	*e*P	**P**	**04 39 45.0**	**+1.2**
LSA	**Lhasa**	**49.14**	**273**	P	P	04 39 49.6	+2.8
LSA				PP	**PP**	**04 41 39.9**	**-0.5**
LSA				SS	SS	04 50 17.8	-3.6
LSA				pmax	pmax		
	comp=Z,61nm,0.6s						
LSA				pmax	pmax		
	comp=Z,380nm,13.6s						
LSA				LR	LR		
	comp=Z,590nm,13.6s						
LSA				LR	LR		
	comp=Z,1μm,27.3s						
LSA				LR	LR		
	comp=Z,2μm,30.7s						
LSA	**Lhasa**	**49.14**	**273**	*e*P	**P**	**04 39 48.8**	**+2.0**
LSA	**Lhasa**	**49.14**	**273**	*i* P	P	04 39 49.5	+2.7
	SNR=16						
LSA	**Lhasa**	**49.14**	**273**	*e*P	**P**	**04 39 48.8**	**+2.0**
KOHI	**KOHIMA**	**49.46**	**267**	*e*P	**P**	**04 39 50.0**	**+1.1**
KHON	**Khomkaen**	**49.75**	**251**	P	**P**	**04 39 53.3**	**+2.4**
	comp=Z,28nm,0.8s						
CMAI	**Chiengmai2**	**49.79**	**257**	P	**P**	**04 39 47.9**	**-3.6**
	comp=Z,7.4nm,1.0s						
PDGK	**Podgornoye**	**49.83**	**295**	P	**P**	**04 39 51.9**	**+0.4**
PDGK				pmax	pmax		
	comp=Z,33nm,1.1s						

UTTA	Uttaradit	50.27	254	P	P	04 39 56.9	+2.0
	comp=Z,7.4nm,1.2s,comp=Z,81nm						
CMMT	Chiang Mai	50.62	256	P	P	04 39 59.5	+1.9
	comp=Z,38nm,1.1s,comp=Z,691nm						
CHTO	Chiang Mai	50.63	256	*e*P	P	04 39 59.3	+1.7
CHTO	Chiang Mai	50.63	256	P	P	04 39 59.8	+2.2
	SNR=12						
CHTO	Chiang Mai	50.63	256	P	P	04 39 59.5	+1.9
	comp=Z,173nm,1.1s,comp=Z,3µm						
BVA0	Borovoye Array	50.78	310	*i* P	P	04 39 57.2	-1.2
BVA0				pmax	pmax		
	comp=Z,7.0nm,0.5s						
BVAR	Borovoye Array	50.78	310	P	P	04 39 57.7	-0.7
	comp=Z,5.2nm,0.4s,baz=59,slow=8.6,SNR=25						
BVAR				PcP	PcP	04 41 16.2	+1.3
	comp=Z,7.7nm,0.6s,baz=90,slow=4.3,SNR=4.8						
PBKT	Sadao Pong	50.82	252	P	P	04 40 01.2	+2.2
	comp=Z,17nm,1.0s,comp=Z,809nm						
BRVK	Borovoye	50.83	310	*e*P	P	04 39 57.7	-1.0
	comp=Z,17nm,0.6s						
BRVK	Borovoye	50.83	310	P	P	04 39 58.6	-0.1
BRVK	Borovoye	50.83	310	*e*P	P	04 39 57.7	-1.0
BRVK				pmax	pmax		
	comp=Z,17nm,0.6s						
GUWA	GUWAHATI	50.87	269	*e*P	P	04 40 00.6	+1.2
CMAR	Chiang Mai Arr	50.87	256	P	P	04 40 01.4	+2.0
	comp=Z,13nm,0.9s,baz=36,slow=7.1,SNR=34						
CMAR				PcP	PcP	04 41 17.1	+1.3
	comp=Z,4.7nm,0.6s,baz=20,slow=2.4,SNR=4.3						
CM01	Chiang Mai Arr	50.89	256	*e*P	P	04 40 00.8	+1.3
PRZ	Przheval'sk	50.94	294	*e*P	P	04 40 02.2	+2.2
	comp=Z,253nm,1.8s						
PRZ	Przheval'sk	50.94	294	*e*P	P	04 40 02.2	+2.2
PRZ				pmax	pmax		
	comp=Z,253nm,1.8s						
SUKH	Sukhothai	51.08	254	P	P	04 40 03.5	+2.5
	comp=Z,6.8nm,0.9s						
SHL	Shillong	51.12	268	*e*P	P	04 40 01.2	-0.3
MRSI	Marisa	51.73	219	P	P	04 40 19.7	+14
KDJ	Kajisay	51.90	295	*e*P	P	04 40 08.1	+1.0
	comp=Z,43nm,0.7s						
TURI	Tura	52.23	269	*e*P	P	04 40 11.1	+1.5
SANI	Sanana	52.35	213	P	P	04 40 14.8	+4.4
ULHL	Ulahol	52.44	295	P	P	04 40 12.0	+0.8
	SNR=60						
RES	Resolute Bay	52.49	18	*e*P	P	04 40 10.9	+0.1
	comp=Z,31nm,0.7s						
RES	Resolute Bay	52.49	18	*e*P	P	04 40 10.9	+0.1
RES				pmax	pmax		
	comp=Z,31nm,0.7s						
UMPA	Umpang Tak	52.50	254	P	P	04 40 17.0	+5.3
	comp=Z,15nm,1.1s,comp=Z,2µm						
TKM2	Tokmak 2	52.51	296	P	P	04 40 12.7	+1.0
	SNR=31						
TKM2	Tokmak 2	52.51	296	P	P	04 40 12.5	+0.8
TKM2				pmax	pmax		
	comp=Z,32nm,1.1s						
UTHA	Uthaitani	52.56	253	P	P	04 40 14.8	+2.7
	comp=Z,8.6nm,0.8s,comp=Z,86nm						
CHBT	CHBT	52.69	248	P	P	04 40 29.8	+17
YKW3	Yellowknife Ar	52.69	36	*e*P	P	04 40 12.5	+0.1
	comp=Z,15nm,0.9s						
YKA	Yellowknife Ar	52.73	36	P	P	04 40 12.6	-0.1
	comp=Z,14nm,1.0s,baz=299,slow=7.5,SNR=34						
YKA	Yellowknife Ar	52.73	36	P	P	04 40 12.6	-0.1
YKA				pmax	pmax		
	comp=Z,13nm,1.0s						
MPSI	Mapaga	52.77	221	P	P	04 40 27.1	+14
TAPN	Taplejung	52.97	273	*e*P	P	04 40 17.4	+2.1
	comp=Z,50nm,0.5s						
CHMS	Chumysh	53.00	297	P	P	04 40 16.8	+1.7
	SNR=5.3						
USP	Ospenovka	53.02	297	P	P	04 40 16.2	+0.9
	SNR=41						
KBK	Karagaybulak	53.05	296	P	P	04 40 17.6	+1.9
	SNR=15						
APSI	Ampana	53.09	218	P	P	04 40 29.6	+14
BRDH	Bariadhala	53.13	266	P	P	04 40 18.1	+1.9
	comp=Z,140nm,0.6s,baz=89,slow=6.9,SNR=10						
KZA	Kyzart	53.16	295	P	P	04 40 18.4	+1.7
	SNR=39						
FRU	Bishkek	53.17	297	*i* P	P	04 40 18.5	+2.2
FRU				*e*		04 40 40.0	
FRU				pmax	pmax		
	comp=Z,125nm,2.1s						
FRU				MLR	MLR		
	comp=E,5µm,15.0s						
AAK	Ala-Archa	53.35	296	P	P	04 40 18.7	+0.9
	SNR=20						
AAK	Ala-Archa	53.35	296	*e*P	P	04 40 18.8	+0.9
AAK	Ala-Archa	53.35	296	*e*P	P	04 40 18.7	+0.9
	comp=E,36nm,0.8s						
AAK	Ala-Archa	53.35	296	P	P	04 40 18.8	+0.9
AAK				pmax	pmax		
	comp=Z,36nm,0.9s						
ODAN	Odare	53.49	273	*e*P	P	04 40 21.0	+1.9
	comp=Z,62nm,0.6s						
KBS	Kingsbay	53.64	351	*e*P	P	04 40 18.9	-0.3
KBS	Kingsbay	53.64	351	*e*P	P	04 40 19.6	+0.4
KBS	Kingsbay	53.64	351	*e*P	P	04 40 19.1	-0.1
KBS				IAmb	IAmb	04 40 20.1	
	comp=Z,38nm,0.8s						
SPA0	Spitsbergen Ar	53.72	350	*e*P	P	04 40 18.8	-1.0
SPA0	Spitsbergen Ar	53.72	350	*e*P	P	04 40 19.1	-0.7
SPA0				IAmb	IAmb	04 40 20.8	
	comp=Z,16nm,0.9s						
SPA0				IAMs_20	IAMs_20	05 06 07.4	
	comp=Z,2µm,18.1s						
SPITS	Spitsbergen Ar	53.72	350	P	P	04 40 17.9	-1.9
	comp=Z,5.4nm,0.4s,baz=40,slow=7.7,SNR=26						
EKS2	Erkin-Say	53.79	297	P	P	04 40 21.9	+1.0
	SNR=49						
JIRN	Jiri	53.84	274	*e*P	P	04 40 23.7	+1.8
	comp=Z,491nm,0.8s						
PCI	Palu	53.90	220	P	P	04 40 35.3	+13
GUN	Gumba	53.91	275	*e*P	P	04 40 23.9	+1.6
	comp=Z,255nm,0.6s						
RAMN	Ramite	53.99	273	*e*P	P	04 40 24.2	+1.4
	comp=Z,226nm,0.6s						
SVE	Sverdlovsk	54.00	317⇑	*e*P	P	04 40 21.2	-0.9
SVE				pmax	pmax		
	comp=Z,43nm,0.9s						
SVE				MLR	MLR		
	comp=Z,3µm,15.0s						
KSH	Kashi	54.05	292	P	P	04 40 28.0	+5.1
KSH				sP	sP	04 40 46.1	+10
KSH				*e*PcP	PcP	04 41 32.3	+4.7
KSH				S	S	04 48 00.3	+3.3
KSH				ScS	ScS	04 50 09.3	-0.6
KSH				SS	SS	04 51 41.5	+3.2
KSH				pmax	pmax		
	comp=Z,170nm,1.5s						
KSH				pmax	pmax		
	comp=Z,490nm,7.2s						
KSH				LR	LR		
	comp=Z,2µm,16.0s						
KSH				LR	LR		
	comp=Z,4µm,14.2s						
KSH				LR	LR		
	comp=Z,3µm,18.2s						
AML	Almayashu	54.12	296	P	P	04 40 25.5	+1.8
	SNR=24						
KKN	Kakani	54.41	275	*e*P	P	04 40 27.6	+1.8
	comp=Z,162nm,0.7s						
PKIN	Phulchoki	54.45	275	*e*P	P	04 40 28.2	+2.0
	comp=Z,89nm,0.5s						
DMN	Daman	54.64	275	*e*P	P	04 40 29.3	+1.8
	comp=Z,377nm,0.9s						
MNAS	Manas	54.68	297	*i* P	P	04 40 28.2	+0.7
MNAS				pmax	pmax		
	comp=Z,47nm,1.0s						
GKN	Gorkha	54.73	276	*e*P	P	04 40 29.5	+1.5
	comp=Z,223nm,0.7s						
HSPB	Hornsund (broa	54.77	349	*e*P	P	04 40 27.4	-0.1
LLLB	Lillooet	55.08	51	*e*P	P	04 40 31.0	+0.9
	comp=Z,34nm,1.4s						
HNR	Honiara	55.12	170	LR	LR	05 06 47.0	
	comp=Z,2µm,18.0s,baz=343,slow=39						
DANN	Dangsing	55.13	277	*e*P	P	04 40 33.1	+2.0
	comp=Z,187nm,0.5s						
ARU	Arti	55.19	317	P	P	04 40 29.8	-1.0
	comp=Z,25nm,0.3s,baz=70,slow=5.7,SNR=32						
ARU	Arti	55.19	317	*e*P	P	04 40 29.1	-1.7
ARU	Arti	55.19	317	*e*P	P	04 40 29.0	-1.7
ARU	Arti	55.19	317*c*	*i*P	P	04 40 29.0	-1.7
ARU				*PP	sP	04 40 44.2	+0.1
ARU				*e*		04 41 29.8	
ARU						04 42 31.5	
ARU				S	S	04 48 08.6	-3.0
ARU						04 50 07.0	
ARU				SS	SS	04 51 59.5	+4.3
ARU				SSS	SSS	04 54 00.4	
ARU				pmax	pmax		
	comp=Z,45nm,1.0s						
ARU				MLR	MLR		
	comp=Z,4µm,16.0s						
SFK	Sufi-Kurgan	55.38	294	P	P	04 40 33.0	+0.3
SFK				pmax	pmax		
	comp=Z,99nm,1.2s						
KK31	Karatay Array	55.59	299	*e*P	P	04 40 34.2	+0.3
KK31	Karatay Array	55.59	299	*i* P	P	04 40 34.2	+0.3
KK31				pmax	pmax		
	comp=Z,24nm,0.7s						
KKAR	Karatay Array	55.59	299	*e*P	P	04 40 34.2	+0.3
KKAR	Karatay Array	55.59	299	*e*P	P	04 40 34.2	+0.3
KOLN	Koldanda	55.59	276	*e*P	P	04 40 35.9	+1.5
NLWA	Neilton Lookou	55.63	55	*e*P	P	04 40 34.1	-0.1
	comp=Z,20nm,1.1s						
TULEG	Thule	55.68	11	*e*P	P	04 40 33.4	-0.6
	comp=Z,111nm,1.5s						
PYUN	Piuthan	55.82	277	*e*P	P	04 40 37.6	+1.6
	comp=Z,538nm,1.0s						
B05A	Bryant	56.19	53	P	P	04 40 37.3	-0.7
	baz=302						
MTKI	Muara Teweh, K	56.30	226	P	P	04 40 51.1	+12
BOK	Bokaro	56.47	271	*e*P	P	04 40 40.2	-0.2
SPSI	Sidrap Palu	56.64	219	P	P	04 40 56.6	+15
D05A	Enumclaw	56.82	54	*e*P	P	04 40 44.5	+1.9
	comp=Z,33nm,1.3s						
G03D	McMinnville, O	57.16	57	P	P	04 40 44.2	-0.8
	baz=304						
STKI	Sintang	57.23	230	P	P	04 40 56.5	+11
B08A	Colville Reser	57.68	52	*e*P	P	04 40 49.4	+0.6
	comp=Z,22nm,1.1s						
PRGR	Permogore	57.84	327	*e*P	P	04 40 49.5	0.0
PRGR				pmax	pmax		
	comp=Z,39nm,0.9s						
DDI	Dehra Dun	57.90	282	*e*P	P	04 40 52.7	+2.1
DAG	Danmarks Havn	57.94	357	*i* P	P	04 40 49.4	-0.6
	comp=Z,59nm,1.3s						
DAG	Danmarks Havn	57.94	357	*i* P	P	04 40 49.4	-0.6
DAG				pmax	pmax		
	comp=Z,59nm,1.3s						
I03D	Drain, OR	57.95	59	P	P	04 40 50.2	-0.4
	baz=304						
DHRM	DHARAMSHALA	57.95	285	*e*P	P	04 40 52.1	+1.1
SKLT	Songkhla	57.98	245	P	P	04 40 54.6	+3.5
	comp=Z,48nm,1.1s,comp=Z,1µm						
SMLA	Simla	58.03	283	*e*P	P	04 40 52.4	+1.1
H04A	Detroit Lake	58.09	57	*e*P	P	04 40 52.6	+1.0
	comp=Z,62nm,1.4s						
APA	Apatity	58.09	336⇓	*i*P	P	04 40 51.6	+0.4
APA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KEV	Kevo	58.21	340	*e*P	P	04 40 50.3	-1.7
	comp=Z,17nm,0.8s						
KEV	Kevo	58.21	340	*e*P	P	04 40 50.3	-1.7
KEV				pmax	pmax		
	comp=Z,17nm,0.8s						
G05D	Wamic, OR	58.29	56	P	P	04 40 52.6	-0.4
	baz=304						
HAMF	Hammerfest	58.30	342	*e*P	P	04 40 51.5	-1.1
HAMF				IAmb	IAmb	04 40 52.7	
	comp=Z,20nm,0.8s						
HAMF				IAMs_20	IAMs_20	05 07 52.4	
	comp=Z,2µm,19.3s						
AB31	Akbulak array	58.36	310	*e*P	P	04 40 53.3	-0.1
AB31				pmax	pmax		
	comp=Z,23nm,0.4s						
ABKAR	Akbulak array	58.36	310	*e*P	P	04 40 52.7	-0.7
I04A	Tendick Farm,	58.46	58	P	P	04 40 53.3	-0.9
	baz=305						
C09A	Chrisman Ranch	58.58	52	*e*P	P	04 40 55.4	+0.4
	comp=Z,24nm,1.1s						
D08A	Wollman Farm,	58.64	53	*e*P	P	04 40 55.9	+0.5
	comp=Z,15nm,1.1s						
L02D	Cave Junction,	58.66	60	P	P	04 40 55.1	-0.6
	baz=305						
HAWA	Hanford	58.67	54	*e*P	P	04 40 56.2	+0.6
	comp=Z,33nm,1.4s						
G06A	Carlson Farm,	58.69	56	*e*P	P	04 40 57.5	+1.6
	comp=Z,21nm,1.0s						
AKTO	Aktyubinsk	58.72	312	P	P	04 40 56.2	+0.4
	comp=Z,19nm,0.6s,baz=67,slow=7.3,SNR=51						
AKTO	Aktyubinsk	58.72	312	P	P	04 40 56.3	+0.4
AKTO				pmax	pmax		
	comp=Z,16nm,0.6s						
ARCES	ARCESS Array B	58.72	341	P	P	04 40 54.5	-1.1
	comp=Z,26nm,0.9s,baz=29,slow=7.2,SNR=53						
ARCES				PcP	PcP	04 41 46.2	+1.1
	comp=Z,7.5nm,0.7s,baz=34,slow=3.4,SNR=2.9						
KULLO	Kullorsuaq	58.78	9	*i* P	P	04 40 55.4	-0.5
KULLO	Kullorsuaq	58.78	9	*i* P	P	04 40 55.4	-0.5
I05D	Terrebonne, OR	58.78	57	P	P	04 40 56.1	-0.4
	baz=305						
BWNR	Bhubaneshwar	58.79	268	*e*P	P	04 40 57.7	+1.0
J04D	Umpqua Nationa	58.95	58	P	P	04 40 58.0	+0.1
	baz=305						
NIL	Nilore	59.18	288	*e*P	P	04 41 00.7	+1.3
NIL	Nilore	59.18	288	*e*P	P	04 41 00.7	+1.3
PINE	Pine Mountain	59.33	57	*e*P	P	04 41 02.6	+2.1
	comp=Z,20nm,0.8s						
E09A	Wood Farm, Sta	59.39	53	*e*P	P	04 41 01.5	+0.9
	comp=Z,19nm,0.9s						
J05D	Fort Rock, OR	59.45	58	P	P	04 41 01.2	-0.1
	baz=305,SNR=6.4						
YBH	Yreka Blue Hor	59.45	60	P	P	04 41 02.1	+0.9
	comp=Z,5.6nm,0.7s,baz=319,slow=6.8,SNR=13						
YBH	Yreka Blue Hor	59.45	60	*e*P	P	04 41 03.0	+1.8
	comp=Z,20nm,1.3s						
YBH	Yreka Blue Hor	59.45	60	*e*P	P	04 41 03.0	+1.8
YBH				pmax	pmax		
	comp=Z,20nm,1.3s						
COEN	Coen	59.54	189	*e*P	P	04 41 03.6	+1.7
	comp=Z,34nm,0.8s						
M02C	Callahan	59.56	60	P	P	04 41 01.6	-0.3
	baz=306						
G08A	Pilot Rock	59.63	55	*e*P	P	04 41 03.6	+1.2
	comp=Z,9.7nm,1.0s						
KTK1	Kautokeino	59.65	341	*e*P	P	04 41 01.3	-0.7
N02D	Trinity Center	59.90	61	P	P	04 41 03.5	-0.7
	baz=306						
M04C	Macdoel	59.96	60	P	P	04 41 04.4	-0.3
	baz=306						
K05A	Summer Lake	59.98	58	*e*P	P	04 41 06.4	+1.5
	comp=Z,30nm,1.0s						
SOEI	Soe	60.09	211	*e*P	P	04 41 07.4	+1.7
	comp=Z,61nm,0.9s						
TRO	Tromso	60.11	343	*e*P	P	04 41 04.8	-0.4
TRO				IAmb	IAmb	04 41 05.7	
	comp=Z,63nm,0.8s						
TRO				IAMs_20	IAMs_20	05 11 00.8	
	comp=Z,1µm,18.9s						
F10A	Beach Ranch, E	60.22	53	*e*P	P	04 41 07.8	+1.3
	comp=Z,15nm,0.9s						
WDC	Whiskeytown Da	60.23	61	*e*P	P	04 41 07.3	+0.9
	comp=Z,24nm,1.1s						
WDC	Whiskeytown Da	60.23	61	*e*P	P	04 41 07.3	+0.9
WDC				pmax	pmax		
	comp=Z,24nm,1.1s						
WALA	Waterton Lakes	60.23	49	*e*P	P	04 41 07.0	+0.5
	comp=Z,17nm,1.0s						
KLMR	Klimovskoe	60.63	329	*e*P	P	04 41 07.5	-1.3
KLMR				pmax	pmax		
	comp=Z,17nm,0.9s						
KLMR	Klimovskoe	60.63	329	*e*P	P	04 41 07.5	-1.3
KLMR				AMP		04 41 17.8	
	comp=Z,17nm,0.9s						
KLMR				LQ	LQ	05 03 11.2	
KLMR				LQ	LQ	05 03 11.2	
KLMR				LR	LR	05 06 18.8	
MTN	Manton Dam	60.80	203	*e*P	P	04 41 11.4	+1.0
	comp=Z,157nm,1.4s						
JTMT	Jette	60.81	50	*e*P	P	04 41 14.6	+4.1
	comp=Z,11nm,0.9s						
MOD	Modoc Plateau	60.81	59	*e*P	P	04 41 11.5	+0.9
	comp=Z,41nm,1.6s						
BMO	Blue Mountains	60.84	55	*e*P	P	04 41 11.6	+0.9
	comp=Z,8.0nm,0.9s						
BMO	Blue Mountains	60.84	55	*e*P	P	04 41 11.6	+0.9
BMO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
O03D	Paynes Creek	60.85	61	P	P	04 41 11.0	+0.2
	baz=307,SNR=13						
J08A	Circle Bar Ran	61.04	56	*e*P	P	04 41 13.1	+1.0
	comp=Z,18nm,1.1s						
KBL	Kabul	61.44	291	*e*P	P	04 41 15.2	+0.2
	comp=Z,98nm,0.8s						
KBL	Kabul	61.44	291	*e*P	P	04 41 15.2	+0.2
KBL				pmax	pmax		
	comp=Z,98nm,0.8s						
WVOR	Wild Horse Val	61.50	57	*e*P	P	04 41 15.3	+0.1
	comp=Z,15nm,1.0s						
WVOR	Wild Horse Val	61.50	57	*e*P	P	04 41 15.3	+0.1
WVOR				pmax	pmax		
	comp=Z,15nm,1.0s						
MSO	Missoula	61.55	51	P	P	04 41 15.1	-0.3
	baz=307,SNR=27						
MSO	Missoula	61.55	51	*e*P	P	04 41 15.6	+0.1
	comp=Z,19nm,0.8s						
BEKR	Beckworth	62.00	61	*e*P	P	04 41 19.1	+0.4
	comp=Z,15nm,0.9s						
SUMG	Summit	62.12	3	*e*P	P	04 41 19.5	+0.2
	comp=Z,94nm,0.6s						
SUMG	Summit	62.12	3⇑	*i*P	P	04 41 19.4	+0.2
SUMG	Summit	62.12	3⇑	*i*P	P	04 41 19.4	+0.2
AFDM	Forest Hills D	62.17	62	*e*P	P	04 41 20.9	+1.2
	comp=Z,11nm,1.1s						
STEI	Steigen	62.28	343	*e*P	P	04 41 18.8	-1.1
STEI				IAmb	IAmb	04 41 21.2	
	comp=Z,42nm,1.2s						
STEI				IAMs_20	IAMs_20	05 14 00.6	
	comp=Z,2µm,18.2s						
PSI	Prapat	62.40	243	P	P	04 41 23.1	+1.6
	comp=Z,11nm,0.9s,baz=0.3,slow=6.8,SNR=5.2						
PSI	Prapat	62.40	243	*e*P	P	04 41 23.7	+2.1
PSI				*e*pP	sP	04 41 35.8	+0.9
PSI	Prapat	62.40	243	*e*P	P	04 41 23.7	+2.1
PSI				*e**PP	sP	04 41 35.8	+0.9
LOF	Lofoten	62.46	344	*e*P	P	04 41 21.3	+0.2
LOF				IAmb	IAmb	04 41 22.6	
	comp=Z,97nm,1.2s						
FFC	Flin Flon	62.55	39	*e*P	P	04 41 21.6	-0.3
	comp=Z,18nm,0.8s						
FFC	Flin Flon	62.55	39	*e*P	P	04 41 21.6	-0.3
FFC				pmax	pmax		
	comp=Z,18nm,0.8s						
MFID	Camas Ranch	62.55	55	*e*P	P	04 41 22.7	+0.4
	comp=Z,7.8nm,1.0s						
PAHR	Pah Rah Range	62.69	60	*e*P	P	04 41 24.5	+1.2
	comp=Z,14nm,1.0s						
HRY	Holter Researc	62.77	50	*e*P	P	04 41 26.5	+2.9
BHPL	Bhopal	62.77	276	*e*P	P	04 41 24.7	+0.8
VCNR	Virginia City	62.78	61	*e*P	P	04 41 25.4	+1.5
	comp=Z,11nm,0.8s						
PNTR	Pine Nut	62.93	61	*e*P	P	04 41 26.6	+1.6
	comp=Z,22nm,0.7s						
LRM	Limekiln Ridge	62.98	51	*e*P	P	04 41 25.9	+0.7
NGP	Nagpur	62.98	273	*e*S	P	04 41 27.1	+1.8
JMIC	Jan Mayen	63.02	353	*e*P	P	04 41 25.7	+0.9
EGMT	Eagleton	63.06	48	P	P	04 41 25.4	-0.1
	baz=309,SNR=8.7						
EGMT	Eagleton	63.06	48	*e*P	P	04 41 26.0	+0.5
	comp=Z,24nm,1.0s						
CMB	Columbia Colle	63.09	62	*e*P	P	04 41 26.6	+0.7
	comp=Z,20nm,1.3s						
CMB	Columbia Colle	63.09	62	*e*P	P	04 41 26.6	+0.7
CMB				pmax	pmax		
	comp=Z,20nm,1.3s						
DLMT	Dillon	63.18	52	*e*P	P	04 41 27.7	+1.2
	comp=Z,14nm,1.1s						
YERR	Yerington	63.22	61	*e*P	P	04 41 27.7	+0.8
	comp=Z,24nm,1.1s						
HLID	Hailey	63.27	54	P	P	04 41 26.6	-0.5
	baz=308,SNR=8.2						
HLID	Hailey	63.27	54	*e*P	P	04 41 28.0	+0.8
	comp=Z,7.5nm,0.9s						
MCMT	McKenzie Canyo	63.37	52	*e*P	P	04 41 28.2	+0.3
WAKR	Walker	63.39	61	*e*P	P	04 41 29.6	+1.6
	comp=Z,10nm,0.9s						
BMN	Battle Mountai	63.56	58	*e*P	P	04 41 29.9	+0.9
	comp=Z,25nm,1.4s						
BMN	Battle Mountai	63.56	58	*e*P	P	04 41 29.9	+0.9
BMN				pmax	pmax		
	comp=Z,25nm,1.4s						
BOZ	Bozeman (W)	63.57	51	P	P	04 41 28.2	-0.9
	baz=309,SNR=23						
BOZ	Bozeman (W)	63.57	51	*e*P	P	04 41 29.4	+0.4
	comp=Z,14nm,0.8s						
BOZ	Bozeman (W)	63.57	51	*e*P	P	04 41 29.4	+0.4
BOZ				pmax	pmax		
	comp=Z,14nm,0.8s						
KVN	Kaiserville	63.88	60	*e*P	P	04 41 32.0	+0.8
	comp=Z,13nm,0.9s						
KVN	Kaiserville	63.88	60	*e*P	P	04 41 32.0	+0.8
KVN				pmax	pmax		
	comp=Z,13nm,0.9s						
RYN	Ryan	63.88	61	*e*P	P	04 41 32.6	+1.5
	comp=Z,16nm,0.9s						
MOR8	Moi Rana	63.94	342	*e*P	P	04 41 28.6	-2.3
MOR8				IAmb	IAmb	04 41 30.2	
	comp=Z,48nm,0.4s						
MOR8				IAMs_20	IAMs_20	05 14 32.7	
	comp=Z,2µm,18.5s						
KONS	Konsvik	63.94	343	*e*P	P	04 41 30.8	-0.1
KONS				IAmb	IAmb	04 41 31.6	
	comp=Z,15nm,0.9s						
NV01	Mina Array Sit	64.14	61	*e*P	P	04 41 33.2	+0.3
NVAR	Mina Array Bea	64.14	61	P	P	04 41 33.3	+0.4
	comp=Z,4.7nm,0.7s,baz=297,slow=7.0,SNR=20						
NVAR				PKP2ab		05 10 43.5	
	comp=Z,0.2nm,0.3s,baz=274,slow=5.8,SNR=3.7						
MDPB	Devils Postpil	64.15	62	*e*P	P	04 41 34.5	+1.3
	comp=Z,12nm,0.9s						
QLMT	Earthquake Lak	64.16	52	*e*P	P	04 41 34.0	+1.0
NV11	Mina Array Sit	64.23	61	*e*P	P	04 41 34.1	+0.6
	comp=Z,1.0nm,1.0s						
MLAC	Mammoth, Mammo	64.31	62	P	P	04 41 33.8	-0.3
	baz=309						
YHB	Horse Butte	64.34	52	*e*P	P	04 41 35.8	+1.6
	comp=Z,11nm,0.8s						
ILULI	Ilulissat	64.50	9	*e*P	P	04 41 34.4	-0.1
	comp=Z,39nm,0.9s						
ILULI	Ilulissat	64.50	9	*i* P	P	04 41 33.9	-0.6
ILULI	Ilulissat	64.50	9	*i* P	P	04 41 33.9	-0.6
GCMT	Greycliff	64.51	50	*e*P	P	04 41 36.2	+1.0
PUL	Pulkovo	64.65	331	*e*P	P	04 41 35.9	+0.3
PUL	Pulkovo	64.65	331⇓	*e*P	P	04 41 35.9	+0.3
PUL				pmax	pmax		
	comp=Z,84nm,1.1s						
FIA1	FINESS Array S	64.74	334	*e*P	P	04 41 35.1	-1.0
FINES	FINESS Array B	64.74	334	P	P	04 41 35.2	-0.9
	comp=Z,38nm,0.6s,baz=38,slow=7.0,SNR=156						
H17A	Grant Village	64.91	52	P	P	04 41 37.4	-0.5
	baz=310						
IMW	Indian Meadow	65.02	52	*e*P	P	04 41 40.3	+1.5
	comp=Z,15nm,1.0s						
FLWY	Flagg Ranch	65.04	52	*e*P	P	04 41 40.9	+2.2
	comp=Z,58nm,1.7s						
LEM	Lembang	65.07	229	LR	LR	05 11 38.2	
	comp=Z,136nm,21.2s,baz=34,slow=37						
FXWY	Fox Creek	65.14	52	*e*P	P	04 41 40.6	+1.2
	comp=Z,28nm,1.6s						
RLMT	Red Lodge	65.16	50	P	P	04 41 38.7	-0.8
	baz=310,SNR=6.2						
RLMT	Red Lodge	65.16	50	*e*P	P	04 41 39.5	0.0
	comp=Z,20nm,1.3s						
MOOW	Moose Ponds	65.23	52	*e*P	P	04 41 41.3	+1.3
	comp=Z,15nm,1.3s						
VES	Vestal, Richgr	65.27	63	P	P	04 41 39.9	-0.2
	baz=309						
TPAW	Teton Pass	65.28	53	*e*P	P	04 41 41.7	+1.3
	comp=Z,22nm,1.0s						
CTA	Charters Tower	65.34	185	P	P	04 41 42.4	+1.9
	comp=Z,3.0nm,0.6s,baz=5.4,slow=9.7,SNR=7.0						
CTA				LR	LR	05 09 32.0	
	comp=Z,591nm,19.4s,baz=360,slow=35						
CTAO	Charters Tower	65.34	185	*e*P	P	04 41 41.6	+1.1
	comp=Z,21nm,0.9s						
CTAO	Charters Tower	65.34	185	*e*P	P	04 41 41.6	+1.1
CTAO				pmax	pmax		
	comp=Z,21nm,0.9s						
LOHW	Long Hollow	65.39	52	*e*P	P	04 41 42.4	+1.3
	comp=Z,23nm,1.4s						
SNOW	Snow King Moun	65.40	52	*e*P	P	04 41 43.3	+2.1
	comp=Z,16nm,0.9s						
PKM	Mcpherson Peak	65.41	65	P	P	04 41 41.0	-0.3
	baz=310						
REDW	Red Top Meadow	65.41	53	*e*P	P	04 41 42.4	+1.2

	comp=Z,23nm,1.0s						
CWC	Cottonwood Cre	65.52	62	P	P	04 41 41.9	-0.1
	baz=310						
DGMT	Dagmar	65.61	45	P	P	04 41 41.5	-0.7
	baz=312						
DGMT	Dagmar	65.61	45	*e*P	P	04 41 42.9	+0.7
	comp=Z,20nm,0.8s						
GRAC	Grapevine Rang	65.62	62	P	P	04 41 42.5	+0.1
	baz=310						
AHID	Auburn Hatcher	65.66	53	*e*P	P	04 41 43.1	+0.3
	comp=Z,7.6nm,0.9s						
OBN	Obninsk	65.73	325	*e*P	P	04 41 42.6	-0.1
OBN	Obninsk	65.73	325*d*	*i*P	P	04 41 42.6	-0.1
OBN				*e*		04 42 12.9	
OBN				*e*		04 44 07.3	
OBN				*i* S	S	04 50 55.8	+29
OBN				pmax	pmax		
	comp=Z,21nm,0.7s						
OBN				MLR	MLR		
	comp=Z,2µm,16.0s						
LAO	LASA Array	65.76	48	P	P	04 41 42.6	-0.6
	baz=311						
LAO	LASA Array	65.76	48	*e*P	P	04 41 42.8	-0.4
	comp=Z,17nm,0.8s						
ISA	Isabella, Lake	65.77	63	P	P	04 41 42.9	-0.5
	baz=310						
ISA	Isabella, Lake	65.77	63	*e*P	P	04 41 44.5	+1.1
	comp=Z,13nm,1.4s						
ISA	Isabella, Lake	65.77	63	*e*P	P	04 41 44.5	+1.1
ISA				pmax	pmax		
	comp=Z,13nm,1.4s						
HYB	Hyderabad	65.81	271	*e*P	P	04 41 44.4	+0.6
HYB				IAmb	IAmb	04 41 45.0	
	comp=Z,20nm,0.7s						
R11A	Troy Canyon, C	65.85	59	P	P	04 41 43.6	-0.4
	baz=310,SNR=17						
R11A	Troy Canyon, C	65.85	59	*e*P	P	04 41 44.0	0.0
	comp=Z,15nm,1.3s						
ARVC	Arvin	65.88	64	P	P	04 41 43.8	-0.2
	baz=310						
NSS	Namsos	65.88	342	*e*P	P	04 41 42.2	-1.3
NSS				IAmb	IAmb	04 41 43.9	
	comp=Z,25nm,0.6s						
NSS				IAMs_20	IAMs_20	05 14 21.2	
	comp=Z,3µm,20.5s						
DAC	Darwin (Calif)	65.93	62	*e*P	P	04 41 44.8	+0.2
	comp=Z,12nm,1.4s						
DAC	Darwin (Calif)	65.93	62	*e*P	P	04 41 44.8	+0.2
DAC				pmax	pmax		
	comp=Z,12nm,1.4s						
MPMC	Manual Prospec	66.14	62	P	P	04 41 45.4	-0.5
	baz=310						
HWUT	Hardware Ranch	66.14	54	*e*P	P	04 41 45.6	-0.3
	comp=Z,22nm,1.4s						
GEYT	Alibeck	66.25	300	P	P	04 41 46.5	+0.1
	comp=Z,29nm,0.6s,baz=53,slow=7.6,SNR=28						
GYA0B	ALIBECK ARRAY	66.25	300	*e*P	P	04 41 48.2	+1.7
	comp=Z,68nm,0.7s						
VRH	Novokhopyorsk	66.26	320	*e*P	P	04 41 45.4	-0.8
VRH				pmax	pmax		
	comp=Z,60nm,0.7s						
VRH				pmax	pmax		
	comp=Z,80nm,0.8s						
VRH				MLR	MLR		
	comp=Z,4µm,20.0s						
FURC	Furnace Creek,	66.26	62	P	P	04 41 46.7	+0.2
	baz=310						
DUG	Dugway, Tooele	66.32	56	P	P	04 41 46.5	-0.5
	baz=310,SNR=10						
DUG	Dugway, Tooele	66.32	56	*e*P	P	04 41 47.9	+0.9
	comp=Z,15nm,1.0s						
TPNV	Topopah Spring	66.33	61	P	P	04 41 46.6	-0.6
	baz=310,SNR=15						
TPNV	Topopah Spring	66.33	61	*e*P	P	04 41 47.6	+0.4
	comp=Z,19nm,1.0s						
TPNV	Topopah Spring	66.33	61	*e*P	P	04 41 47.6	+0.4
TPNV				pmax	pmax		
	comp=Z,19nm,1.0s						
WSHM	Spangler Hills	66.42	63	*e*P	P	04 41 47.8	+0.2
BW06	Boulder Array	66.52	52	P	P	04 41 48.0	-0.3
	baz=311						
BW06	Boulder Array	66.52	52	*e*P	P	04 41 48.2	-0.2
	comp=Z,6.7nm,0.8s						
PDAR	Pinedale Array	66.52	52	P	P	04 41 48.5	+0.1
	comp=Z,1.6nm,0.8s,baz=298,slow=3.2,SNR=14						
PDAR				LR	LR	05 11 34.1	
	comp=Z,470nm,19.4s,baz=340,slow=37						
EDW2	Edwards Air Fo	66.57	64	P	P	04 41 48.2	-0.3
	baz=310						
CTU	Camp Tracy	66.62	55	*e*P	P	04 41 49.0	+0.1
	comp=Z,9.4nm,0.9s						
PSUT	Pine Spring	66.77	58	*e*P	P	04 41 51.1	+1.1
	comp=Z,25nm,1.6s						
VSU	Vasula	66.84	332*c*	*i*P	P	04 41 49.5	-0.3
VSU				pmax	pmax		
	comp=Z,120nm,1.0s						
WRAB	Tennant Creek	66.84	197	*e*P	P	04 41 50.8	+0.6
WRAB				*e*pP	sP	04 42 03.5	-0.1
WB2	Warramunga Arr	66.85	197	*e*P	P	04 41 50.9	+0.6
	comp=Z,52nm,0.8s						
JLU	Jordanelle	66.85	55	*e*P	P	04 41 52.5	+2.0
	comp=Z,34nm,1.7s						
WRA	Warramunga Arr	66.85	197	P	P	04 41 50.5	+0.2
	comp=Z,17nm,0.9s,baz=16,slow=6.7,SNR=47						
WRA				LR	LR	05 09 52.5	
	comp=Z,526nm,21.4s,baz=10.0,slow=35						
WRA				PKP2bc		05 10 21.7	
	comp=Z,2.2nm,1.2s,baz=193,slow=2.8,SNR=5.2						
NLU	North Lily Min	66.91	56	*e*P	P	04 41 52.5	+1.6
	comp=Z,18nm,1.2s						
SHOC	Shoshone, Teco	66.99	62	P	P	04 41 51.3	+0.1
	baz=310						
GSC	Goldstone, Bar	67.05	63	P	P	04 41 51.4	-0.2
	baz=310						
GSC	Goldstone, Bar	67.05	63	*e*P	P	04 41 52.4	+0.8
GSC	Goldstone, Bar	67.05	63	*e*P	P	04 41 52.4	+0.8
MPU	Maple Canyon	67.13	56	*e*P	P	04 41 53.6	+1.4
	comp=Z,15nm,1.2s						
BFSC	Mount Baldy Ra	67.19	64	P	P	04 41 52.5	-0.1
	baz=310						
SHPR	Sheep Range	67.29	61	*e*P	P	04 41 54.2	+1.0
	comp=Z,12nm,1.0s						
TBLU	Trondheim	67.37	342	*e*P	P	04 41 52.1	-1.0
FITZ	Fitzroy Crossi	67.39	207	P	P	04 41 54.9	+1.3
	comp=Z,12nm,0.8s,baz=42,slow=5.8,SNR=11						
VSR	Storozhevoye	67.40	321	*e*P	P	04 41 51.5	-2.0
VSR				pmax	pmax		
	comp=Z,40nm,0.6s						
VSR				pmax	pmax		
	comp=Z,50nm,0.8s						
VSR				MLR	MLR		
	comp=Z,10µm,27.0s						
TUQ	Turquoise Moun	67.51	62	P	P	04 41 54.8	+0.2
	baz=311						
VORD	Divnogorie	67.52	321	*e*P	P	04 41 54.0	-0.2
VORD				pmax	pmax		
	comp=Z,40nm,0.6s						
VORD				pmax	pmax		
	comp=Z,60nm,0.6s						
VORD				MLR	MLR		
	comp=Z,7µm,20.0s						
HEC	Hector,Ludlow	67.64	63	P	P	04 41 55.4	0.0
	baz=311						
CCUT	Cedar City	67.71	59	*e*P	P	04 41 56.7	+0.8
	comp=Z,10.0nm,1.1s						
MSU	Marysvale	67.79	57	*e*P	P	04 41 57.6	+1.2
MSU	Marysvale	67.79	57	*e*P	P	04 41 57.6	+1.2
AFI	Afiamalu	67.79	141	LR	LR	05 13 26.3	
	comp=Z,745nm,18.0s,baz=352,slow=38						
SZCU	Shurtz Canyon	67.84	59	*e*P	P	04 41 57.9	+1.1
	comp=Z,28nm,1.8s						
TMUT	Trail Mountain	67.84	56	*e*P	P	04 41 58.1	+1.2
	comp=Z,12nm,1.2s						
MURC	Murrieta	67.90	64	P	P	04 41 56.9	-0.1
	baz=311						
MTPU	Mount Pierson	68.09	58	*e*P	P	04 42 00.1	+1.6
	comp=Z,29nm,1.7s						
GMRC	Granite Mounta	68.10	62	P	P	04 41 57.9	-0.4
	baz=311						
LCMT	Little Creek M	68.13	59	*e*P	P	04 41 59.3	+0.8
	comp=Z,20nm,1.3s						
P18A	Preston Nutter	68.19	55	*e*P	P	04 42 00.4	+1.3
	comp=Z,9.3nm,1.0s						
LDFC	Landfair	68.25	62	*e*P	P	04 41 59.6	+0.3
	comp=Z,24nm,0.9s						
K22A	Casper	68.28	51	P	P	04 41 59.1	-0.3
	baz=312						
K22A	Casper	68.28	51	*e*P	P	04 41 59.5	+0.2
	comp=Z,51nm,1.6s						
MDND	Maddock	68.29	43	P	P	04 41 58.7	-0.4
	baz=314						
MDND	Maddock	68.29	43	*e*P	P	04 41 59.6	+0.5
	comp=Z,41nm,1.1s						
ULM	Lac du Bonnet	68.33	40	P	P	04 41 59.1	-0.3
	comp=Z,4.6nm,0.7s,baz=327,slow=7.3,SNR=4.6						
ULM	Lac du Bonnet	68.33	40	*e*P	P	04 41 59.3	0.0
	comp=Z,18nm,1.3s						
FRD	Ford Ranch, An	68.34	64	P	P	04 41 59.3	-0.5
	baz=311						
PFO	Pinyon Flats O	68.36	64	P	P	04 41 59.3	-0.6
	baz=311						
PFO	Pinyon Flats O	68.36	64	*e*P	P	04 41 58.8	-1.1
	comp=Z,12nm,1.4s						
PFO	Pinyon Flats O	68.36	64	*e*P	P	04 41 58.8	-1.1
PFO				pmax	pmax		
	comp=Z,12nm,1.4s						
SRU	San Rafael Swe	68.37	56	*e*P	P	04 42 00.6	+0.6
	comp=Z,12nm,0.9s						
POO	Poona	68.38	275	*e*P	P	04 42 01.2	+1.0
POO				IAmb	IAmb	04 42 01.8	
	comp=Z,34nm,0.6s						
KNB	Kanab	68.38	59	*e*P	P	04 42 01.2	+1.1
	comp=Z,18nm,1.0s						
BELC	Belle Mtn. Jos	68.39	63	P	P	04 41 59.9	-0.3
	baz=311						
DZM	Mont Dzumac	68.54	165	LR	LR	05 11 30.8	
	comp=Z,2µm,18.2s,baz=20,slow=36						
DZM	Mont Dzumac	68.54	165	*e*S	S	04 51 06.9	+5.9
	comp=Z,1µm,27.0s						
DZM	Mont Dzumac	68.54	165	*e*LR	LR	05 02 49.9	
	comp=Z,2µm,23.4s						
MOL	Molde	68.55	343	*e*P	P	04 42 01.8	+1.3
MOL				IAmb	IAmb	04 42 03.0	
	comp=Z,24nm,0.5s						
RSSD	Black Hills	68.62	48	P	P	04 42 00.9	-0.7
	baz=313						
RSSD	Black Hills	68.62	48	*e*P	P	04 42 01.1	-0.4
	comp=Z,32nm,1.5s						
RSSD	Black Hills	68.62	48	*e*P	P	04 42 01.1	-0.4
RSSD				pmax	pmax		
	comp=Z,32nm,1.5s						
DOMB	Dombas	68.70	342	*e*P	P	04 42 00.6	-1.0
DOMB				IAmb	IAmb	04 42 02.2	
	comp=Z,30nm,0.7s						
DOMB				IAMs_20	IAMs_20	05 13 29.6	
	comp=Z,2µm,20.3s						
IRM	Iron Mountain	68.83	63	P	P	04 42 02.6	-0.1
	baz=311						
BAR	Barrett	68.83	65	*e*P	P	04 42 03.0	+0.2
	comp=Z,11nm,1.0s						
MONP2	Monument Peak	68.85	64	P	P	04 42 02.8	-0.4
	baz=311						
NC303	NORSAR Array S	68.91	341	*e*P	P	04 42 02.5	-0.2
NC303	NORSAR Array S	68.91	341	*e*P	P	04 42 02.4	-0.4
NC303				IAmb	IAmb	04 42 03.3	
	comp=Z,44nm,0.6s						
NC303				IAMs_20	IAMs_20	05 17 11.1	
	comp=Z,20µm,18.5s						
NC405	NORSAR Array S	68.92	340	*e*P	P	04 42 02.5	-0.4
BC3	Big Chuckawall	68.96	63	P	P	04 42 03.4	-0.3
	baz=311						
W13A	Hualapai Mount	68.99	61	*e*P	P	04 42 04.9	+0.9
NC204	NORSAR Array S	69.00	341	*e*P	P	04 42 03.5	+0.1
NC204	NORSAR Array S	69.00	341	*e*P	P	04 42 03.1	-0.3
NC204				IAmb	IAmb	04 42 03.8	
	comp=Z,135nm,1.1s						
NC204				IAMs_20	IAMs_20	05 17 24.9	
	comp=Z,24µm,18.1s						
O20A	White River Ci	69.00	54	P	P	04 42 03.6	-0.4
	baz=312						
O20A	White River Ci	69.00	54	*e*P	P	04 42 05.3	+1.4
	comp=Z,11nm,1.1s						
AKN	Aaknes	69.02	343	*e*P	P	04 42 05.1	+1.6
AKN				IAmb	IAmb	04 42 05.2	
	comp=Z,117nm,1.4s						
AKN				IAMs_20	IAMs_20	05 16 58.2	
	comp=Z,2µm,20.7s						
MAK	Makhachkala	69.03	310	*e*P	P	04 42 05.2	+1.4
MAK				*e*S	S	04 51 06.6	+0.2
MAK				pmax	pmax		
	comp=Z,116nm,0.9s						
MAK				MLR	MLR		
	comp=Z,2µm,17.0s						
NB201	NORSAR Array S	69.08	340	*e*P	P	04 42 03.4	-0.4
U15A	North Rim	69.09	59	*e*P	P	04 42 05.5	+0.9
	comp=Z,19nm,1.1s						
NB2	NORSAR Subarra	69.10	341	P	P	04 42 03.4	-0.6
	comp=Z,30nm,0.5s,baz=29,slow=6.5						
NB2	NORSAR Subarra	69.10	341	P	P	04 42 03.4	-0.6
	baz=29,slow=6.5						
IZAR	Zarasai	69.14	330	*e*P	P	04 42 04.2	-0.1
IZAR				IAmb	IAmb	04 42 05.6	
	comp=Z,23nm,0.7s						
IKP	In-Ko-Pah, Jac	69.21	64	P	P	04 42 05.2	0.0
	baz=311						
SWSC	Sam W. Stewart	69.21	64	P	P	04 42 04.2	-0.8
	baz=311						
NBO00	NORSAR Array S	69.21	341	*e*P	P	04 42 04.9	+0.2
HFS	Hagfors	69.29	339	P	P	04 42 05.0	-0.1
	comp=Z,49nm,0.5s,baz=55,slow=5.5,SNR=269						
HFS	Hagfors	69.29	339	P	P	04 42 05.0	-0.1
HFS				pmax	pmax		
	comp=Z,49nm,0.5s						
NC602	NORSAR Array S	69.29	340	*e*P	P	04 42 04.3	-0.8
IDID	Didziasalis	69.31	330	*e*P	P	04 42 05.2	-0.1
IDID				IAmb	IAmb	04 42 07.8	
	comp=Z,23nm,0.8s						
ISAL	Salakas	69.32	330	*e*P	P	04 42 05.3	-0.1
ISAL				IAmb	IAmb	04 42 07.9	
	comp=Z,23nm,0.7s						
NAO01	NORSAR Array S	69.35	341	*e*P	P	04 42 05.3	-0.2
PDMCI	Parker Dam,Lak	69.36	62	P	P	04 42 06.1	+0.1
	baz=312						
IIGN	Ignalina	69.46	330	*e*P	P	04 42 06.2	-0.1
IIGN				IAmb	IAmb	04 42 07.7	
	comp=Z,32nm,0.6s						
Y12C	Blythe	69.48	63	P	P	04 42 06.5	-0.2
	baz=312						
Y12C	Blythe	69.48	63	*e*P	P	04 42 07.9	+1.1
	comp=Z,8.5nm,0.9s						
A33A	Warroad	69.50	40	P	P	04 42 05.9	-0.7
	baz=316,SNR=7.2						
MICGM	Minsk	69.53	329⇓	*e*P	P	04 42 06.0	-0.7
MICGM				PM		04 42 07.0	
	comp=Z,0.2nm,1.0s						
MICGM				*e*LR	LR	05 09 20.0	
MNK	Minsk	69.53	329	*e*P	P	04 42 06.0	-0.7
MNK				pmax	pmax		
	comp=Z,200nm,1.0s						
PV09	Paradox Valley	69.58	56	*e*P	P	04 42 10.1	+2.3
NACGM	Naroch	69.61	330	*e*P	P	04 42 06.0	-1.2
NACGM				*e*LR	LR	05 14 52.0	
AGMN	Agassiz Nation	69.74	41	P	P	04 42 07.4	-0.7
	baz=316,SNR=8.0						
AGMN	Agassiz Nation	69.74	41	*e*P	P	04 42 07.4	-0.7
	comp=Z,22nm,1.3s						
GLA	Glamis	69.75	63	P	P	04 42 08.7	+0.2
	baz=312						
GLA	Glamis	69.75	63	*e*P	P	04 42 09.6	+1.1
	comp=Z,10.0nm,1.0s						
GLA	Glamis	69.75	63	*e*P	P	04 42 09.6	+1.1
GLA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GROC	Groznyy	69.77	311	*e*P	P	04 42 09.3	+0.9
GROC				*e*		04 42 30.1	
GROC				pmax	pmax		
	comp=Z,71nm,1.0s						
N23A	Red Feather La	69.78	52	P	P	04 42 08.0	-0.9
	baz=313						
N23A	Red Feather La	69.78	52	*e*P	P	04 42 09.6	+0.7
	comp=Z,17nm,1.0s						
PV03	Paradox Valley	69.92	56	*e*P	P	04 42 10.6	+0.9
AKT	Akhty	69.92	309⇑	*i*P	P	04 42 10.8	+1.3
AKT				*e*		04 42 32.0	
AKT				pmax	pmax		
	comp=Z,105nm,0.5s						
PV02	Paradox Valley	70.01	56	*e*P	P	04 42 10.8	+0.5
	comp=Z,8.2nm,0.8s						
HYA	Hoyanger	70.10	343	*e*P	P	04 42 11.0	+0.9
HYA				IAmb	IAmb	04 42 11.2	
	comp=Z,50nm,0.7s						
B34A	Aery, Baudette	70.16	40	P	P	04 42 09.8	-0.9
	baz=317						
C33A	Trail	70.17	41	P	P	04 42 10.3	-0.5
	baz=317,SNR=7.9						
OSL	Oslo	70.19	340	*e*P	P	04 42 11.3	+0.6
OSL				IAmb	IAmb	04 42 11.4	
	comp=Z,48nm,1.0s						
WUAZ	Wupatki	70.25	59	P	P	04 42 11.6	0.0
	baz=312						
WUAZ	Wupatki	70.25	59	*e*P	P	04 42 12.6	+0.9
	comp=Z,8.3nm,1.0s						
Y14A	Wickenburg	70.30	61	*e*P	P	04 42 12.4	+0.5
	comp=Z,14nm,1.1s						
SMCO	Snowmass	70.37	54	*e*P	P	04 42 13.1	+0.4
	comp=Z,6.0nm,0.8s						
SUE	Sulen	70.49	344	*e*P	P	04 42 12.9	+0.4
SUE				IAmb	IAmb	04 42 14.8	
	comp=Z,51nm,0.8s						
SUE				IAMs_20	IAMs_20	05 16 58.3	
	comp=Z,1µm,19.1s						
AS01	Alice Springs	70.55	197	*e*P	P	04 42 12.7	-0.5
AS31	Alice Springs	70.56	197	*e*P	P	04 42 14.8	+1.5
	comp=Z,9.1nm,0.8s						
ASAR	Alice Springs	70.56	197	P	P	04 42 14.5	+1.2
	comp=Z,13nm,0.9s,baz=14,slow=5.4,SNR=45						
C34A	RKJ Ranch, Bem	70.65	41	P	P	04 42 12.3	-1.5
	baz=317						
B35A	Bob, Littlefor	70.67	40	P	P	04 42 13.3	-0.6
	baz=318						
B35A	Bob, Littlefor	70.67	40	*e*P	P	04 42 13.3	-0.6
	comp=Z,9.1nm,1.0s						
KONO	Kongsberg	70.71	341	*e*P	P	04 42 14.5	+0.6
	comp=Z,26nm,0.8s						
KONO	Kongsberg	70.71	341*c*	*i*P	P	04 42 13.6	-0.3
KONO				pmax	pmax		
	comp=Z,23nm,1.0s						
ISCO	Idaho Springs	70.71	53	P	P	04 42 13.8	-0.8
	baz=314						
ISCO	Idaho Springs	70.71	53	*e*P	P	04 42 14.0	-0.6
	comp=Z,9.3nm,0.9s						
ISCO	Idaho Springs	70.71	53	*e*P	P	04 42 14.0	-0.6
ISCO				pmax	pmax		
	comp=Z,9.0nm,0.9s						
NCK	Nalchik	70.72	313⇑	*e*P	P	04 42 15.5	+1.3
NCK				pmax	pmax		
	comp=Z,148nm,0.9s						
MVCO	Mesa Verde	70.82	56	P	P	04 42 14.8	-0.5
	baz=313						
MVCO	Mesa Verde	70.82	56	*e*P	P	04 42 15.8	+0.5
	comp=Z,11nm,1.0s						
KIV	Kislovodsk	70.86	314	*e*P	P	04 42 15.9	+0.7
KIV	Kislovodsk	70.86	314	*e*P	P	04 42 16.3	+1.1
KIV	Kislovodsk	70.86	314	P	P	04 42 16.9	+1.7
	SNR=58						
KIV	Kislovodsk	70.86	314	*i* P	P	04 42 16.6	+1.4
	SNR=30						
KIV	Kislovodsk	70.86	314*c*	*i*P	P	04 42 15.9	+0.7
KIV				*i*		04 42 34.4	
KIV				*e*		04 44 50.0	
KIV				pmax	pmax		
	comp=Z,183nm,0.8s						
KIV				MLR	MLR		
	comp=Z,4µm,17.0s						
F32A	Veblen	70.89	43	P	P	04 42 14.6	-0.7
	baz=316						
KBZ	Khabaz	70.92	313	P	P	04 42 16.9	+1.5
	comp=Z,150nm,1.0s,baz=56,slow=3.7,SNR=196						
ASK	Askoy	70.93	343	*e*P	P	04 42 15.7	+0.6
ASK				IAmb	IAmb	04 42 16.9	
	comp=Z,32nm,0.7s						
X16A	Lo Mia Camp, P	70.94	60	*e*P	P	04 42 16.6	+0.6
	comp=Z,11nm,0.9s						
BER	Bergen	70.99	343	*e*P	P	04 42 15.4	-0.1
BER				IAmb	IAmb	04 42 17.8	
	comp=Z,55nm,0.8s						
C35A	Jirik Farms, M	71.04	40	P	P	04 42 15.6	-0.6
	baz=318						
ZEI	Tsey	71.06	312	*e*P	P	04 42 14.9	-1.6
ZEI				pmax	pmax		
	comp=Z,63nm,0.7s						
ODD1	Odda	71.15	342	*e*P	P	04 42 17.6	+1.0
G32A	Webster	71.15	44	P	P	04 42 16.1	-0.8
	baz=316,SNR=8.0						
G32A	Webster	71.15	44	*e*P	P	04 42 16.6	-0.2
	comp=Z,39nm,0.9s						
PALK	Pallekele	71.30	261	P	P	04 42 18.3	+0.1
	comp=Z,27nm,0.9s,baz=114,slow=2.1,SNR=6.4						
PALK	Pallekele	71.30	261	*e*P	P	04 42 17.5	-0.7
	comp=Z,32nm,0.9s						
PALK	Pallekele	71.30	261	P	P	04 42 17.6	-0.7
PALK	Pallekele	71.30	261	*e*P	P	04 42 17.5	-0.7
PALK				pmax	pmax		
	comp=Z,32nm,0.9s						
NEY	Neytrino	71.34	313⇓	*e*P	P	04 42 18.1	-0.1
S22A	4UR Ranch, Cre	71.43	55	P	P	04 42 18.0	-1.0
	baz=314						
S22A	4UR Ranch, Cre	71.43	55	*e*P	P	04 42 19.8	+0.8
	comp=Z,12nm,1.1s						
C36A	Pine Crest Far	71.52	40	P	P	04 42 18.3	-0.6
	baz=318						
SUW	Suwalki	71.59	331	*e*P	P	04 42 18.0	-1.3
SUW	Suwalki	71.59	331	*e*P	P	04 42 18.2	-1.0
	comp=Z,107nm,1.0s						
SUW	Suwalki	71.59	331	*e*P	P	04 42 18.2	-1.0
SUW				pmax	pmax		
	comp=Z,107nm,1.0s						
BLS5	Blasjo	71.63	342	*e*P	P	04 42 19.7	+0.2
BLS5				IAmb	IAmb	04 42 20.8	
	comp=Z,49nm,1.2s						
BLS5				IAMs_20	IAMs_20	05 18 08.0	
	comp=Z,2µm,20.0s						
E35A	Pequot Lakes	71.69	42	P	P	04 42 19.4	-0.6
	baz=318						
G33A	Ortonville	71.72	44	P	P	04 42 19.6	-0.6
	baz=317,SNR=13						
H32A	Carlson Farm,	71.73	45	P	P	04 42 19.2	-1.1
	baz=316						
214A	Organ Pipe Nat	71.75	63	P	P	04 42 20.6	-0.1
	baz=313						
X18A	Snowflake	71.78	59	*e*P	P	04 42 21.9	+0.9
	comp=Z,15nm,1.4s						
D36A	Goodland	71.80	40	P	P	04 42 19.3	-1.4
	baz=318						
C37A	Embarrass	71.83	40	P	P	04 42 20.0	-0.9
	baz=319						
F34A	Alexandria	71.84	43	P	P	04 42 20.5	-0.5
	baz=317						
OGNE	Ogallala	71.89	50	P	P	04 42 20.7	-0.7
	baz=315						
OGNE	Ogallala	71.89	50	*e*P	P	04 42 21.1	-0.3
	comp=Z,50nm,1.2s						
EYMN	Ely	71.98	39	P	P	04 42 21.3	-0.4
	baz=319						
EYMN	Ely	71.98	39	*e*P	P	04 42 21.0	-0.8
	comp=Z,27nm,1.3s						
AKASG	Malin Array Be	71.98	326	P	P	04 42 21.2	-0.5
	comp=Z,18nm,0.4s,baz=37,slow=6.5,SNR=74						
AKBB	Malin Array Si	71.98	326	*e*P	P	04 42 20.3	-1.4
	comp=Z,47nm,0.8s						
AKBB	Malin Array Si	71.98	326	*e*P	P	04 42 20.3	-1.4
AKBB				pmax	pmax		
	comp=Z,47nm,0.8s						
KIEV	Kiev	72.00	326	*e*P	P	04 42 21.3	-0.4
KIEV	Kiev	72.00	326	*e*P	P	04 42 21.1	-0.6
KIEV	Kiev	72.00	326	*i* P	P	04 42 21.9	+0.2
	SNR=8.1						
KIEV	Kiev	72.00	326*c*	*i*P	P	04 42 21.3	-0.4
KIEV				pmax	pmax		
	comp=Z,44nm,0.7s						
AK11	Malin Array Si	72.02	326	*e*P	P	04 42 21.6	-0.4
G34A	Benson	72.07	43	P	P	04 42 22.0	-0.3
	baz=317						
KLNR	Kaliningrad	72.10	333*c*	*i*P	P	04 42 21.6	-0.7
KLNR				pmax	pmax		
	comp=Z,114nm,0.7s						
F35A	Swanville	72.12	42	P	P	04 42 21.8	-0.8
	baz=318						
D37A	Cotton	72.15	40	P	P	04 42 21.3	-1.5
	baz=319						
SDCO	Great Sand Dun	72.19	54	P	P	04 42 22.6	-1.0
	baz=314						
SDCO	Great Sand Dun	72.19	54	*e*P	P	04 42 23.1	-0.4
	comp=Z,30nm,2.0s						
HOMB	Homborsund	72.20	340	*e*P	P	04 42 23.4	+0.6
HOMB				IAmb	IAmb	04 42 24.0	
	comp=Z,28nm,0.8s						
STAV	Stavanger	72.24	342	*e*P	P	04 42 24.1	+1.1
STAV				IAmb	IAmb	04 42 24.8	
	comp=Z,66nm,1.1s						

STAV				IAMs_20	IAMs_20	05 14 10.5	
	comp=Z,1µm,19.9s						
AKH	Akhalkalaki	72.25	311	⇑iP	P	04 42 25.9	+2.2
AKH	Akhalkalaki	72.25	311	eP	P	04 42 25.9	+2.2
	comp=Z,71nm,0.9s						
AKH	Akhalkalaki	72.25	311	eP	P	04 42 25.9	+2.2
AKH				pmax	pmax		
	comp=Z,71nm,0.9s						
C38A	Sawbill Land.	72.25	39	P	P	04 42 22.6	-0.8
	baz=319,SNR=5.3						
E36A	McGregor	72.25	41	P	P	04 42 22.8	-0.6
	baz=318,SNR=7.0						
SNART	Snartemo	72.44	341	eP	P	04 42 24.8	+0.5
SNART				IAmb	IAmb	04 42 26.6	
	comp=Z,39nm,0.8s						
GNI	Garni	72.47	310	P	P	04 42 26.8	+1.8
	comp=Z,43nm,0.7s,baz=354,slow=3.8,SNR=42						
IVI	Ivigtut	72.57	10	eP	P	04 42 25.1	+0.2
	comp=Z,26nm,0.7s						
F36A	Milaca	72.61	42	P	P	04 42 24.4	-1.1
	baz=318						
F36A	Milaca	72.61	42	eP	P	04 42 25.1	-0.4
	comp=Z,17nm,1.4s						
SOC	Sochi	72.63	315	eP	P	04 42 25.2	-0.5
SOC				e*PP	sP	04 42 36.4	-2.8
SOC				e*SP	PcP	04 42 43.5	+0.4
SOC				e		04 45 15.5	
SOC				eS	S	04 51 43.6	-4.7
SOC				pmax	pmax		
	comp=Z,72nm,0.7s						
G35A	Watkins	72.64	43	P	P	04 42 24.9	-0.9
	baz=318						
G35A	Watkins	72.64	43	eP	P	04 42 25.7	0.0
	comp=Z,19nm,0.7s						
ECSD	EROS Data Cent	72.69	45	P	P	04 42 25.2	-0.9
	baz=317,SNR=16						
ECSD	EROS Data Cent	72.69	45	eP	P	04 42 25.7	-0.4
	comp=Z,10nm,0.8s						
TUC	Tucson	72.77	61	P	P	04 42 26.5	-0.4
	baz=313						
TUC	Tucson	72.77	61	eP	P	04 42 27.5	+0.6
	comp=Z,5.2nm,1.0s						
TUC	Tucson	72.77	61	eP	P	04 42 27.5	+0.6
TUC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
ANN	Anapa	72.85	317	c iP	P	04 42 26.6	-0.4
ANN				pmax	pmax		
	comp=Z,85nm,0.5s						
H35A	Sunnyside Ranc	72.86	43	P	P	04 42 26.6	-0.4
	baz=318,SNR=14						
KSCO	Kaye Shedlock’	72.92	52	P	P	04 42 27.0	-0.7
	baz=315						
E38A	The Farm, Brul	72.96	40	P	P	04 42 26.8	-0.8
	baz=319						
E38A	The Farm, Brul	72.96	40	eP	P	04 42 26.9	-0.7
	comp=Z,16nm,0.6s						
G36A	St. Michael	72.97	42	P	P	04 42 27.0	-0.7
	baz=318						
T25A	Trinidad	73.24	54	P	P	04 42 28.9	-0.8
	baz=315						
T25A	Trinidad	73.24	54	eP	P	04 42 30.1	+0.4
	comp=Z,35nm,1.8s						
BSD	Bornholm Skovb	73.30	336	i P	P	04 42 28.5	-0.9
	comp=Z,39nm,0.8s						
BSD	Bornholm Skovb	73.30	336	i P	P	04 42 28.5	-0.9
BSD				pmax	pmax		
	comp=Z,39nm,0.8s						
F38A	Pierce - Schro	73.30	41	P	P	04 42 28.9	-0.7
	baz=319,SNR=9.4						
H36A	Jessenland, He	73.38	43	P	P	04 42 29.5	-0.6
	baz=318,SNR=9.3						
SPMN	Marine on St.	73.43	42	P	P	04 42 29.6	-0.8
	baz=319						
SPMN	Marine on St.	73.43	42	eP	P	04 42 30.1	-0.3
	comp=Z,16nm,1.1s						
COP	Copenhagen	73.50	337	⇑iP	P	04 42 30.7	+0.1
COP	Copenhagen	73.50	337	⇑iP	P	04 42 30.7	+0.1
LAZ	Ladron	73.55	58	eP	P	04 42 33.1	+1.6
TASM	ASL Pad, Albuq	73.58	57	P	P	04 42 30.5	-1.2
	baz=314						
ANMO	Albuquerque	73.58	57	P	P	04 42 31.9	+0.2
	comp=Z,0.8nm,0.6s,baz=326,slow=9.1,SNR=4.8						
ANMO	Albuquerque	73.58	57	P	P	04 42 30.5	-1.2
	baz=314						
ANMO	Albuquerque	73.58	57	eP	P	04 42 31.9	+0.2
	comp=Z,4.3nm,0.8s						
ANMO	Albuquerque	73.58	57	⇑eP	P	04 42 31.8	+0.2
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.3s						
TASL	Snake Pit, Alb	73.58	57	P	P	04 42 30.4	-1.3
	baz=314						
E39A	Mellen	73.58	40	P	P	04 42 30.4	-0.9
	baz=320,SNR=7.4						
BGNE	Belgrade	73.60	47	P	P	04 42 30.7	-0.8
	baz=317						
BGNE	Belgrade	73.60	47	eP	P	04 42 31.2	-0.4
	comp=Z,16nm,0.9s						
MUD	Monsted U’grnd	73.67	339	i P	P	04 42 31.5	0.0
	comp=Z,57nm,1.2s						
MUD	Monsted U’grnd	73.67	339	i P	P	04 42 31.5	0.0
MUD				pmax	pmax		
	comp=Z,57nm,1.2s						
I36A	Fitzsimmons Fa	73.75	43	P	P	04 42 31.4	-0.9
	baz=318						
F39A	Loretta	73.77	40	P	P	04 42 31.4	-1.0
	baz=320,SNR=9.3						
E40A	Wakefield	73.83	39	P	P	04 42 31.9	-0.8
	baz=320,SNR=15						
H37A	Dierke Farm, C	73.86	42	P	P	04 42 32.3	-0.6
	baz=319						
LLD	Lille Linde	73.87	337	i P	P	04 42 33.2	+0.5
LLD	Lille Linde	73.87	337	i P	P	04 42 33.2	+0.5
G38A	Ridgeland	73.91	41	P	P	04 42 32.2	-1.0
	baz=319						
D41A	Chassel	73.94	38	P	P	04 42 31.9	-1.4
	baz=321						
D41A	Chassel	73.94	38	eP	P	04 42 33.1	-0.2
	comp=Z,35nm,1.3s						
I37A	Lemond, Waseca	74.05	43	P	P	04 42 33.6	-0.5
	baz=319,SNR=15						
I37A	Lemond, Waseca	74.05	43	eP	P	04 42 34.0	0.0
	comp=Z,47nm,0.6s						
H38A	Maiden Rock	74.08	42	P	P	04 42 33.0	-1.3
	baz=319						
J36A	Seneca 1, Swea	74.11	44	P	P	04 42 33.9	-0.6
	baz=318						
J36A	Seneca 1, Swea	74.11	44	eP	P	04 42 34.2	-0.3
	comp=Z,10nm,0.9s						
F40A	Park Falls	74.13	40	P	P	04 42 33.5	-1.0
	baz=320,SNR=6.0						
G39A	Holcombe	74.14	41	P	P	04 42 33.7	-0.8
	baz=320						
GKP	Gorka Klasztor	74.17	333	eP	P	04 42 34.7	+0.1
GKP	Gorka Klasztor	74.17	333	eP	P	04 42 34.7	+0.1
BEL	Belsk	74.21	331	eP	P	04 42 35.7	+0.9
BEL	Belsk	74.21	331	eP	P	04 42 35.7	+0.9
E41A	Kenton	74.22	39	P	P	04 42 34.2	-0.9
	baz=321,SNR=7.6						
SIM	Simferopol’	74.30	319	c eP	P	04 42 36.7	+1.2
SIM				S	SKiKP	04 51 59.0	-0.8
SIM				pmax	pmax		
	comp=Z,72nm,0.9s						
SIM				MLR	MLR		
	comp=Z,3µm,15.0s						
319A	Douglas	74.34	61	eP	P	04 42 36.6	+0.5
	comp=Z,21nm,0.8s						
SORM	Soroca	74.35	324	⇓iP	P	04 42 35.6	-0.1
SORM	Soroca	74.35	324	⇓P	P	04 42 35.6	-0.1
COWI	Conover	74.43	39	eP	P	04 42 35.8	-0.5
	comp=Z,15nm,1.3s						
121A	Cookes Peak, D	74.46	59	P	P	04 42 36.3	-0.6
	baz=314						
BIGH	Upper Bighouse	74.46	347	eP	P	04 42 36.5	+0.4
J37A	Redenius Farm,	74.50	43	P	P	04 42 36.2	-0.6
	baz=319						
I38A	Scanlan Farm,	74.54	42	P	P	04 42 36.0	-0.9
	baz=319,SNR=8.3						
H39A	Augusta	74.55	41	P	P	04 42 36.3	-0.6
	baz=320						
MLA1	Latheron	74.55	346	eP	P	04 42 37.1	+0.4
K36A	Gilmore City	74.57	44	P	P	04 42 36.3	-0.8
	baz=318						
G40A	Rib Lake	74.59	40	P	P	04 42 36.3	-0.9
	baz=320,SNR=6.6						
G40A	Rib Lake	74.59	40	eP	P	04 42 36.5	-0.7
	comp=Z,12nm,1.1s						
CBKS	Cedar Bluff	74.64	50	eP	P	04 42 38.1	+0.5
CBKS	Cedar Bluff	74.64	50	eP	P	04 42 38.2	+0.5
LVV	L’vov	74.70	328	⇓iP	P	04 42 38.1	+0.4
LVV				MLR	MLR		
	comp=Z,2µm,17.0s						
E42A	Champion	74.71	38	P	P	04 42 37.2	-0.7
	baz=321,SNR=5.5						
F41A	Three Lakes	74.72	39	P	P	04 42 37.3	-0.7
	baz=321,SNR=7.9						
F41A	Three Lakes	74.72	39	eP	P	04 42 37.7	-0.3
	comp=Z,17nm,1.0s						
K37A	Belmond	74.87	44	P	P	04 42 38.1	-0.8
	baz=319						
H40A	Chili	75.00	41	P	P	04 42 38.7	-0.8
	baz=320,SNR=5.6						
J38A	Wedel Dairy, R	75.02	43	P	P	04 42 38.9	-0.8
	baz=319,SNR=7.4						
SCHQ	Schefferville	75.02	22	P	P	04 42 40.1	+0.6
	comp=Z,8.1nm,0.5s,baz=291,slow=9.2,SNR=6.8						
SCHQ	Schefferville	75.02	22	eP	P	04 42 40.0	+0.6
	comp=Z,20nm,0.8s						
KIS	Kishinev	75.06	323	⇑iP	P	04 42 40.0	+0.2
	comp=Z,400nm,2.0s						
KIS	Kishinev	75.06	323	ePcP	PcP	04 42 57.0	+3.6
KIS				LRM	MLR	05 18 30.0	
	comp=Z,4µm,16.0s						
KIS	Kishinev	75.06	323	α iP	P	04 42 40.0	+0.2
KIS				e		04 42 57.0	
KIS				e		04 52 18.0	
KIS				e		04 52 36.0	
KIS				e		04 53 00.0	
KIS				pmax	pmax		
	comp=Z,400nm,2.0s						
KIS				pmax	pmax		
	comp=Z,800nm,4.0s						
KIS				MLR	MLR		
	comp=N,3µm,16.0s						
KIS				MLR	MLR		
	comp=E,1µm,16.0s						
KIS				MLR	MLR		
	comp=Z,4µm,16.0s						
KIS				MLR	MLR		
	comp=Z,4µm,16.0s						
I39A	Houston	75.06	42	P	P	04 42 38.9	-1.0
	baz=320,SNR=9.3						
I39A	Houston	75.06	42	eP	P	04 42 39.1	-0.8
	comp=Z,16nm,0.6s						
E43A	Lone Tree Farm	75.15	38	P	P	04 42 38.9	-1.5
	baz=322						
MCD	Coleburn Disti	75.22	346	eP	P	04 42 40.6	0.0
M36A	Felix, Anita	75.28	45	P	P	04 42 40.6	-0.7
	baz=318						
L37A	Phoenix Point,	75.30	44	P	P	04 42 40.6	-0.8
	baz=319						
H41A	Junction City	75.34	40	P	P	04 42 40.8	-0.7
	baz=321						
H41A	Junction City	75.34	40	eP	P	04 42 41.3	-0.3
	comp=Z,9.7nm,0.6s						
KWP	Kalwaria Pacla	75.35	328	eP	P	04 42 42.3	+0.8
KWP	Kalwaria Pacla	75.35	328	eP	P	04 42 42.3	+0.8
J39A	Decorah	75.37	42	P	P	04 42 40.5	-1.2
	baz=320,SNR=13						
BANOM	Banah	75.38	292	P	P	04 42 43.3	+1.2
BANOM	Banah	75.38	292	P	P	04 42 42.9	+0.8
K38A	Parkersburg	75.38	43	P	P	04 42 41.1	-0.7
	baz=319						
K38A	Parkersburg	75.38	43	eP	P	04 42 41.1	-0.7
	comp=Z,13nm,1.0s						
SHME	Shamm	75.40	292	i P	P	04 42 42.8	+0.6
	SNR=6.7						
G42A	Mountain	75.41	39	P	P	04 42 41.1	-0.9
	baz=321						
E44A	Grand Marais A	75.42	37	P	P	04 42 41.2	-0.7
	baz=322						
IAS	Iasi	75.42	324	⇓iP	P	04 42 42.8	+0.9
IAS	Iasi	75.42	324	⇓P	P	04 42 42.8	+0.9
I40A	Norwalk	75.45	41	P	P	04 42 41.3	-0.9
	baz=320						
ARMA	Armidale	75.46	180	eP	P	04 42 45.2	+2.9
	comp=Z,65nm,1.0s						
F43A	Flat Rock, Esc	75.50	38	P	P	04 42 41.7	-0.7
	baz=322						
MDO	Dochfour	75.54	347	eP	P	04 42 42.3	-0.1
L38A	Oak Wood Farm,	75.67	44	P	P	04 42 42.1	-1.3
	baz=319						
I41A	Arkdale	75.67	41	P	P	04 42 42.6	-0.8
	baz=321						
I41A	Arkdale	75.67	41	eP	P	04 42 43.0	-0.5
	comp=Z,11nm,1.1s						
WSAR	Wadi Sarin	75.68	289	P	P	04 42 45.4	+1.6
	comp=Z,17nm,0.9s,baz=102,slow=3.4,SNR=6.3						
F44A	Big Bay de Noc	75.71	38	P	P	04 42 42.7	-0.9
	baz=322						
LEOM	Leova	75.71	323	⇑iP	P	04 42 44.4	+0.8
LEOM	Leova	75.71	323	⇑P	P	04 42 44.4	+0.8
SCIA	State Center	75.72	44	eP	P	04 42 43.8	0.0
	comp=Z,22nm,0.8s						
G43A	Wallace	75.72	39	P	P	04 42 42.3	-1.4
	baz=322						
G43A	Wallace	75.72	39	eP	P	04 42 44.0	+0.4
	comp=Z,23nm,1.2s						
K39A	Oelwein	75.76	43	P	P	04 42 42.5	-1.5
	baz=320						
J40A	Soldiers Grove	75.78	42	P	P	04 42 42.7	-1.3
	baz=320						
MDH	Madha	75.81	292	P	P	04 42 45.2	+0.7
PRAR	RASCA	75.83	325	⇓iP	P	04 42 45.1	+0.8
KPL	Plockton	75.84	347	eP	P	04 42 44.5	+0.4
KPL				IAmb	IAmb	04 42 46.9	
	comp=Z,74nm,1.2s						
MSFE	Esma-Masafi	75.86	292	P	P	04 42 45.4	+0.6
OJC	Ojcow	75.90	330	eP	P	04 42 45.0	+0.4
OJC	Ojcow	75.90	330	eP	P	04 42 43.5	-1.2
	comp=Z,76nm,0.7s						
OJC	Ojcow	75.90	330	eP	P	04 42 43.5	-1.2
OJC				pmax	pmax		
	comp=Z,76nm,0.7s						
H42A	Shiocton	75.93	40	P	P	04 42 44.1	-0.8
	baz=321						
H42A	Shiocton	75.93	40	eP	P	04 42 44.9	0.0
	comp=Z,16nm,0.3s						
BUR08	Bucovina Ar. S	76.02	326	eP	P	04 42 46.0	+0.5
BUR04	Bucovina Ar. S	76.03	326	eP	P	04 42 45.0	-0.6
BURAR	Bucovina Array	76.03	326	⇑iP	P	04 42 46.2	+0.6
BURAR	Bucovina Array	76.03	326	⇑P	P	04 42 46.2	+0.6
MATQ	Matagami	76.08	30	P	P	04 42 45.0	-0.7
	baz=327						
N37A	Lee Faris, Mou	76.09	45	P	P	04 42 45.4	-0.5
	baz=319						
N37A	Lee Faris, Mou	76.09	45	eP	P	04 42 45.9	-0.1
	comp=Z,27nm,1.1s						
M38A	Pleasantville	76.10	44	P	P	04 42 45.0	-0.9
	baz=319,SNR=6.5						
UOSS	Minazif	76.11	291	eP	P	04 42 47.3	+1.1
	comp=Z,42nm,0.9s						
UOSS	Minazif	76.11	291	P	P	04 42 47.2	+1.0
UOSS	Minazif	76.11	291	i P	P	04 42 47.1	+0.8
	SNR=8.4						
K40A	Colesburg	76.12	42	P	P	04 42 45.0	-1.0
	baz=320,SNR=11						
J41A	Loganville	76.14	41	P	P	04 42 45.2	-0.9
	baz=321,SNR=6.5						
L39A	Vinton	76.15	43	P	P	04 42 45.3	-0.9
	baz=320,SNR=11						
BIZ	Bicaz	76.22	325	⇑iP	P	04 42 47.5	+1.0
I42A	Draeger Farm,	76.24	40	P	P	04 42 45.5	-1.2
	baz=321						
I42A	Draeger Farm,	76.24	40	eP	P	04 42 46.1	-0.6
	comp=Z,10nm,0.7s						
HATD	Hatta, Dubai	76.24	291	i P	P	04 42 48.1	+1.1
	SNR=9.1						
H43A	Windswept, Lux	76.30	39	P	P	04 42 45.6	-1.4
	baz=322						
UZH	Uzhgorod	76.33	328	⇓iP	P	04 42 47.2	+0.1
UZH				i		04 42 59.3	
F45A	CMU Biological	76.33	37	P	P	04 42 45.6	-1.5
	baz=323						
TESR	Tescani	76.35	324	⇑iP	P	04 42 48.0	+0.8
JFWS	Jewell Farm	76.38	42	P	P	04 42 46.5	-1.0
	baz=321						
ASHO	Ashiyiah	76.39	291	P	P	04 42 49.1	+1.2
ASHO	Ashiyiah	76.39	291	i P	P	04 42 48.6	+0.7
	SNR=6.7						
AMTX	Amarillo	76.39	54	P	P	04 42 47.1	-0.7
	baz=316						
AMTX	Amarillo	76.39	54	eP	P	04 42 48.2	+0.3
	comp=Z,16nm,0.8s						
NIE	Niedzica	76.40	330	eP	P	04 42 48.3	+0.8
NIE	Niedzica	76.40	330	eP	P	04 42 48.3	+0.8
CRVS	Cervenica-Dubn	76.41	329	eP	P	04 42 48.4	+0.8
CRVS				pmax	pmax		
	comp=Z,42nm,1.1s						
CRVS	Cervenica-Dubn	76.41	329	eP	P	04 42 48.4	+0.8
CRVS				eL	L	05 17 34.8	
MSTX	Muleshoe	76.42	55	P	P	04 42 47.3	-0.7
	baz=316						
MSTX	Muleshoe	76.42	55	eP	P	04 42 48.6	+0.6
	comp=Z,21nm,1.4s						
TLCR		76.49	322	⇓iP	P	04 42 48.8	+0.8
TLCR		76.49	322	⇓P	P	04 42 48.8	+0.8
MNTX	Cornudas Mount	76.49	59	P	P	04 42 47.9	-0.4
	baz=315						
MNTX	Cornudas Mount	76.49	59	eP	P	04 42 48.2	-0.2
	comp=Z,5.5nm,0.8s						
KSP	Ksiaz	76.55	333	eP	P	04 42 48.8	+0.5
KSP	Ksiaz	76.55	333	eP	P	04 42 48.8	+0.5
N38A	Joes South For	76.55	45	P	P	04 42 47.7	-0.8
	baz=319						
M39A	Webster	76.56	44	P	P	04 42 47.7	-0.8
	baz=320,SNR=13						
O37A	Wolven Farm, M	76.57	46	P	P	04 42 48.2	-0.4
	baz=319						
L40A	Anamosa	76.57	43	P	P	04 42 47.4	-1.2
	baz=320						
L40A	Anamosa	76.57	43	eP	P	04 42 47.8	-0.8
	comp=Z,25nm,1.4s						
F46A	Macinaw City C	76.58	37	P	P	04 42 47.8	-0.8
	baz=323						
J42A	Columbus	76.59	41	P	P	04 42 47.7	-1.0
	baz=321,SNR=6.3						
K41A	Shullsburg	76.59	42	P	P	04 42 47.9	-0.8
	baz=321						
I43A	Langenfeld Bro	76.59	40	P	P	04 42 47.4	-1.2
	baz=322						
TRPA	Tarpa	76.65	328	⇑iP	P	04 42 50.1	+1.2
TRPA	Tarpa	76.65	328	⇑ePKKPbc	P	04 42 49.7	+0.8
BMR	Baia Mare	76.66	327	⇓iP	P	04 42 50.8	+1.8
BMR	Baia Mare	76.66	327	⇓P	P	04 42 50.8	+1.8
ESY	Stoneypath	76.70	345	eP	P	04 42 48.8	-0.2
PETR	Petresti	76.74	323	⇑iP	P	04 42 51.8	+2.4
EAB	Aberfoyle	76.74	346	eP	P	04 42 49.3	+0.1
CFR	Carcaliu	76.79	323	⇑iP	P	04 42 50.4	+0.7
CFR	Carcaliu	76.79	323	⇑P	P	04 42 50.4	+0.7
EDI	Edinburgh	76.79	346	eP	P	04 42 49.9	+0.3
OKC	Ostrava-Krasne	76.80	331	eP	P	04 42 50.4	+0.7
OKC				AMS	AMS	05 25 50.0	
	comp=Z,1µm,15.2s						
OKC	Ostrava-Krasne	76.80	331	eP	P	04 42 50.4	+0.7
OKC				MLR	MLR		
	comp=Z,1µm,15.2s						
ARCR	ARCALIA	76.81	326	⇑iP	P	04 42 51.4	+1.6
VRI	Vrincioaia	76.83	324	⇑iP	P	04 42 51.2	+1.2
VRI	Vrincioaia	76.83	324	⇑P	P	04 42 51.2	+1.2
N39A	Derby Farms, D	76.85	44	P	P	04 42 49.7	-0.4
	baz=320						
N39A	Derby Farms, D	76.85	44	eP	P	04 42 49.8	-0.4
	comp=Z,11nm,0.8s						
J43A	Natural Harves	76.86	40	P	P	04 42 49.2	-1.0
	baz=322						
PLOR	Plostina	76.88	324	⇑iP	P	04 42 51.3	+1.0
PLOR	Plostina	76.88	324	⇑P	P	04 42 51.3	+1.0
P37A	Lathrop	76.90	46	P	P	04 42 49.8	-0.7
	baz=319						
K42A	Prairie Point,	76.90	41	P	P	04 42 49.6	-0.9
	baz=321						
L41A	Preston	76.91	42	P	P	04 42 49.7	-0.8
	baz=321						
ASUD	Al Ashush, Dub	76.91	292	P	P	04 42 51.3	+0.6
ASUD	Al Ashush, Dub	76.91	292	i P	P	04 42 51.7	+0.9
	SNR=7.5						
LANS	Liptovska Anna	76.92	330	eP	P	04 42 52.0	+1.5
LANS	Liptovska Anna	76.92	330	eP	P	04 42 52.0	+1.5
LANS				e		04 44 11.8	
M40A	Post Highland	76.93	43	P	P	04 42 49.9	-0.7
	baz=320,SNR=6.7						
UPC	Upice	76.93	333	eP	P	04 42 51.5	+1.0
UPC				ex	x	04 42 53.6	
UPC				AMS	AMS	05 20 40.0	
	comp=Z,2µm,17.8s						
UPC	Upice	76.93	333	eP	P	04 42 51.5	+1.0
UPC				MLR	MLR		
	comp=Z,2µm,17.8s						
O38A	Galt	76.94	45	P	P	04 42 50.1	-0.6
	baz=319						
DPC	Dobruska-Polom	76.97	332	eP	P	04 42 51.6	+0.9
DPC				AMS	AMS	05 20 30.0	
	comp=Z,2µm,18.0s						
DPC	Dobruska-Polom	76.97	332	eP	P	04 42 51.6	+0.9
DPC				MLR	MLR		
	comp=Z,2µm,18.0s						
KRLC	Kraliky	77.05	332	eP	P	04 42 51.9	+0.7
KRLC	Kraliky	77.05	332	eP	P	04 42 51.9	+0.7
MORC	Moravsky Berou	77.05	331	⇑iP	P	04 42 52.2	+1.0
MORC	Moravsky Berou	77.05	331	eP	P	04 42 51.4	+0.2
	comp=Z,95nm,1.0s						
MORC	Moravsky Berou	77.05	331	⇑P	P	04 42 52.2	+1.0
MORC	Moravsky Berou	77.05	331	⇑iP	P	04 42 51.9	+0.7
CHGQ	Chibougamau	77.08	28	P	P	04 42 50.4	-0.9
	baz=329						
KECS	Kecovo	77.12	329	eP	P	04 42 52.3	+0.8
KECS	Kecovo	77.12	329	eP	P	04 42 52.3	+0.8
PGBU	Glenifferbraes	77.12	346	eP	P	04 42 51.5	0.0
PGBU				IAmb	IAmb	04 42 53.1	
	comp=Z,56nm,0.6s						
CLL	Collm	77.18	335	⇑iP	P	04 42 51.7	-0.1
	comp=Z,145nm,1.3s						
CLL				ePmax		04 42 53.0	
CLL				i		04 43 08.5	
CLL				eS	S	04 52 43.0	+4.3
CLL				ePPS	PPS	04 53 37.0	
CLL				eSS	SS	04 57 54.0	+19
CLL				eSSS	SSS	05 01 12.0	
CLL				Lm	MLR	05 19 00.0	
	comp=N,2µm,19.1s						
CLL				Lm	MLR	05 19 00.0	
	comp=E,800nm,21.0s						
CLL				Lm	MLR	05 19 00.0	
	comp=Z,2µm,19.8s						
CLL				Lmax		05 20 00.0	
CLL	Collm	77.18	335	eP	P	04 42 51.1	-0.7
	comp=Z,74nm,0.9s						
CLL	Collm	77.18	335	⇑iP	P	04 42 51.7	-0.1
CLL				i *SP	sP	04 43 08.5	+3.1
CLL				eS	S	04 52 43.0	+4.3
CLL				pmax	pmax		
	comp=Z,145nm,1.3s						
CLL				MLR	MLR		
	comp=Z,2µm,19.8s						
TIRR	Tirgusor	77.24	322	⇑iP	P	04 42 53.0	+0.7
TIRR	Tirgusor	77.24	322	eP	P	04 42 52.8	+0.6
	comp=Z,86nm,1.3s						
TIRR	Tirgusor	77.24	322	⇑P	P	04 42 53.0	+0.7
HARR	Harsova	77.27	322	⇓iP	P	04 42 53.3	+0.9
HARR	Harsova	77.27	322	⇓P	P	04 42 53.3	+0.9
BRG	Berggiesshubel	77.27	334	i P	P	04 42 52.6	+0.2
	comp=Z,48nm,1.3s						
BRG				i		04 43 06.5	
	comp=Z,12nm,0.9s						
	comp=N,792nm,19.5s						
	comp=E,1µm,18.0s						
	comp=Z,1µm,18.3s						
BRG	Berggiesshubel	77.27	334	i P	P	04 42 52.6	+0.2
BRG				i		04 43 06.5	
BRG				pmax	pmax		
	comp=Z,48nm,1.3s						
BRG				MLR	MLR		
	comp=N,792nm,19.5s						
BRG				MLR	MLR		
	comp=E,1µm,18.0s						
BRG				MLR	MLR		
	comp=Z,1µm,18.3s						
P38A	Dawn	77.29	46	P	P	04 42 51.5	-1.1
	baz=319						
P38A	Dawn	77.29	46	eP	P	04 42 52.5	-0.2
	comp=Z,13nm,0.9s						
N40A	Mertquake, Sal	77.30	44	P	P	04 42 52.0	-0.6
	baz=320						
TLB	Topalu	77.30	322	⇑iP	P	04 42 53.4	+0.8
TLB	Topalu	77.30	322	⇑P	P	04 42 53.4	+0.8
DOPR	Dopca	77.30	325	⇑iP	P	04 42 54.8	+2.1
O39A	Kirksville	77.31	45	P	P	04 42 52.1	-0.6
	baz=320						

EKA	Eskdalemuir Ar	77.35	345	P	P	04 42 52.8	0.0
	comp=Z,16nm,0.4s,baz=18,slow=4.8,SNR=180						
L42A	Oliver, Polo	77.35	42	P	P	04 42 51.8	-1.1
	baz=321						
L42A	Oliver, Polo	77.35	42	*e*P	P	04 42 51.9	-1.1
	comp=Z,8.8nm,0.7s						
ESK	Eskdalemuir	77.38	345	*e*P	P	04 42 53.4	+0.5
ESK	Eskdalemuir	77.38	345	*e*P	P	04 42 52.8	0.0
ESK	Eskdalemuir	77.38	345	*e*P	P	04 42 53.4	+0.5
PVCC	Panska Ves	77.38	333	*e*P	P	04 42 53.6	+0.6
PVCC				AMS	AMS	05 20 30.0	
	comp=Z,3µm,18.3s						
PVCC	Panska Ves	77.38	333	*e*P	P	04 42 53.6	+0.6
PVCC				MLR	MLR		
	comp=Z,3µm,18.3s						
Q37A	Longview Farm,	77.38	47	P	P	04 42 52.1	-1.1
	baz=319						
CJR	Cluj-Napoca	77.41	326	⇓*i*P	P	04 42 55.1	+1.8
CJR	Cluj-Napoca	77.41	326	⇓P	P	04 42 55.1	+1.8
M41A	Milan	77.42	43	P	P	04 42 52.1	-1.2
	baz=321						
STKA	Stephens Creek	77.43	189	P	P	04 42 55.0	+1.8
	comp=Z,4.1nm,0.9s,baz=328,slow=9.5,SNR=3.0						
STKA	Stephens Creek	77.43	189	P	P	04 42 55.0	+1.8
STKA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
K43A	Burlington	77.43	41	P	P	04 42 52.0	-1.4
	baz=322						
EFOR	EFORIE	77.45	322	⇑*i*P	P	04 42 54.7	+1.3
MLR	Muntele Rosu	77.46	324	P	P	04 42 54.3	+0.6
	comp=Z,11nm,0.7s,baz=13,slow=3.0,SNR=64						
MLR	Muntele Rosu	77.46	324	⇑*i*P	P	04 42 54.7	+1.0
MLR	Muntele Rosu	77.46	324	*e*P	P	04 42 54.2	+0.6
	comp=Z,52nm,0.8s						
ILGA	Ilgaz	77.47	317	*e*P	P	04 42 56.0	+2.0
	comp=Z,250nm,1.4s						
LTVH	Lˆ'tavˆ'rtes,	77.51	328	⇑*e*PKKPbc	P	04 42 55.9	+2.2
ISR	Istrita	77.51	323	⇑*i*P	P	04 42 55.3	+1.4
ISR	Istrita	77.51	323	⇑P	P	04 42 55.4	+1.5
EDMD	Edmundbyers	77.61	345	*e*P	P	04 42 54.2	0.0
L43A	Garden Prairie	77.65	41	P	P	04 42 53.3	-1.3
	baz=322						
BELQ	Belleterre	77.67	32	P	P	04 42 53.6	-1.1
	baz=327						
DRGR		77.69	327	⇑*i*P	P	04 42 55.5	+0.6
DRGR		77.69	327	⇑P	P	04 42 55.5	+0.6
VYHS	Vyhne	77.70	330	*e*P	P	04 42 55.7	+0.9
VYHS				pmax	pmax		
	comp=Z,415nm,3.1s						
VYHS	Vyhne	77.70	330	*e*P	P	04 42 55.7	+0.9
VYHS				*e*		04 44 15.5	
M42A	Sheffield	77.74	42	P	P	04 42 54.4	-0.7
	baz=321						
O40A	La Belle	77.74	44	P	P	04 42 54.5	-0.7
	baz=320,SNR=15						
Q38A	Cooks Store, C	77.75	46	P	P	04 42 54.4	-0.8
	baz=319,SNR=9.1						
VRAC	Vranov	77.78	332	⇑*i*P	P	04 42 56.4	+1.2
VRAC	Vranov	77.78	332	⇑P	P	04 42 56.4	+1.2
VRAC	Vranov	77.78	332	⇑*i*P	P	04 42 56.1	+0.9
SECR		77.78	324	⇓*i*P	P	04 43 06.0	+11
ICOR	Ion Corvin	77.78	322	⇓*i*P	P	04 42 56.9	+1.6
P39B	Salisbury	77.78	45	P	P	04 42 54.7	-0.7
	baz=320						
JAVC	Velka Javorina	77.80	331	⇑*i*P	P	04 42 57.1	+1.7
PSZ	Piszkesteto	77.81	329	⇑*i*P	P	04 42 56.9	+1.4
PSZ	Piszkesteto	77.81	329	⇑*e*PKKPbc	P	04 42 56.3	+0.8
PSZ	Piszkesteto	77.81	329	*e*P	P	04 42 55.2	-0.3
	comp=Z,69nm,1.1s						
PSZ	Piszkesteto	77.81	329	⇑P	P	04 42 56.9	+1.4
PRA	Prague	77.82	333	*e*P	P	04 42 56.3	+0.9
PRA				AMS	AMS	05 20 50.0	
	comp=Z,3µm,17.6s						
PRA	Prague	77.82	333	*e*P	P	04 42 56.3	+0.9
PRA				MLR	MLR		
	comp=Z,3µm,17.6s						
GOPC	GO Pecny, Ondr	77.84	333	*e*P	P	04 42 56.4	+0.8
GOPC				AMS	AMS	05 20 40.0	
	comp=Z,3µm,18.5s						
GOPC	GO Pecny, Ondr	77.84	333	*e*P	P	04 42 56.4	+0.8
GOPC				MLR	MLR		
	comp=Z,3µm,18.5s						
PRU	Pruhonice	77.86	333	*e*P	P	04 42 55.7	+0.1
PRU				AMS	AMS	05 20 50.0	
	comp=Z,3µm,17.7s						
PRU	Pruhonice	77.86	333	*e*P	P	04 42 55.7	+0.1
PRU				MLR	MLR		
	comp=Z,3µm,17.7s						
VOIR		77.87	325	⇓*i*P	P	04 42 57.0	+1.1
VOIR		77.87	325	⇓P	P	04 42 57.1	+1.1
SULR		77.99	323	⇑*i*P	P	04 42 57.1	+0.7
Q39A	Willow Grove F	78.01	46	P	P	04 42 55.9	-0.8
	baz=320,SNR=9.9						
MTUR	Matau	78.04	324	⇑*i*P	P	04 42 58.3	+1.4
MTUR	Matau	78.04	324	⇑P	P	04 42 58.3	+1.4
KRUC	Moravsky	78.05	332	⇑*i*P	P	04 42 57.5	+0.7
GAL1	Galloway	78.07	346	*e*P	P	04 42 57.1	+0.4
GAL1				IAmb	IAmb	04 42 58.1	
	comp=Z,17nm,0.7s						
CLGH	Cloghs, Cushen	78.09	347	*e*P	P	04 42 57.4	+0.6
CLGH				IAmb	IAmb	04 42 58.5	
	comp=Z,34nm,0.6s						
N42A	Yates City	78.09	43	P	P	04 42 56.3	-0.8
	baz=321,SNR=8.1						
P40A	Paris	78.10	45	P	P	04 42 56.4	-0.8
	baz=320						
P40A	Paris	78.10	45	*e*P	P	04 42 57.0	-0.2
	comp=Z,20nm,1.1s						
M43A	Waltham Townsh	78.13	42	P	P	04 42 56.7	-0.6
	baz=322						
WMOK	Wichita Mounta	78.13	52	P	P	04 42 56.5	-1.0
	baz=318						
WMOK	Wichita Mounta	78.13	52	*e*P	P	04 42 57.3	-0.2
	comp=Z,5.7nm,0.8s						
WMOK	Wichita Mounta	78.13	52	*e*P	P	04 42 57.3	-0.2
WMOK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SMOL	Smolenice	78.17	331	*e*P	P	04 42 58.8	+1.4
SMOL	Smolenice	78.17	331	*e*P	P	04 42 58.8	+1.4
R38A	Fenwick Farm,	78.18	47	P	P	04 42 56.4	-1.2
	baz=319						
O41A	Passleys Farm,	78.23	44	P	P	04 42 57.2	-0.7
	baz=321						
NKC	Novy Kostel	78.29	334	*e*P	P	04 42 58.8	+0.7
NKC				*e*x	x	04 43 03.5	
NKC				AMS	AMS	05 20 10.0	
	comp=Z,2µm,18.2s						
NKC	Novy Kostel	78.29	334	*e*P	P	04 42 58.8	+0.7
NKC				*e*		04 43 03.5	
NKC				MLR	MLR		
	comp=Z,2µm,18.2s						
WTSB	Winterswijk	78.33	339	*i* P	P	04 42 58.4	+0.3
	comp=Z,88nm,0.9s						
MODS	Modra-Piesok	78.34	331	*e*P	P	04 42 59.7	+1.3
MODS	Modra-Piesok	78.34	331	*e*P	P	04 42 59.7	+1.3
TOBO	Tobermory, Bru	78.36	35	P	P	04 42 58.1	-0.4
	baz=325						
HPK	Haverah Park	78.37	344	*e*P	P	04 42 58.8	+0.4
N43A	Stutzman Famil	78.41	42	P	P	04 42 58.2	-0.7
	baz=321						
P41A	Barry, Barry	78.48	44	P	P	04 42 58.6	-0.7
	baz=321						
BUD	Budapest	78.49	329	⇑*e*P	P	04 43 00.1	+0.9
Q40A	Laux Farm, Aux	78.50	45	P	P	04 42 58.7	-0.7
	baz=320						
BR131	Keskin Array S	78.53	316	*e*P	P	04 43 00.9	+1.1
BRTR	Keskin Array B	78.53	316	P	P	04 43 00.6	+0.9
	comp=Z,32nm,1.0s,baz=60,slow=3.0,SNR=86						
R39A	Chumby, Stover	78.53	46	P	P	04 42 58.8	-0.8
	baz=320,SNR=10.0						
M44A	Midewin, Midew	78.59	41	P	P	04 42 58.6	-1.3
	baz=322						
M44A	Midewin, Midew	78.59	41	*e*P	P	04 42 59.5	-0.4
	comp=Z,15nm,0.8s						
S38A	Stockton	78.60	47	P	P	04 42 59.2	-0.8
	baz=320,SNR=11						
IOMK	Kirk Michael	78.62	346	*e*P	P	04 43 00.3	+0.5
IOMK				IAmb	IAmb	04 43 02.6	
	comp=Z,46nm,1.1s						
HDIL	Hopedale	78.66	43	P	P	04 42 59.5	-0.7
	baz=321,SNR=12						
HDIL	Hopedale	78.66	43	*e*P	P	04 42 59.5	-0.7
PRD	Provadia	78.69	322	*i* P	P	04 43 01.3	+1.0
FORT	Forrest	78.73	200	*e*P	P	04 43 02.1	+1.6
	comp=Z,43nm,0.8s						
WIM	Isle of Man	78.75	346	*e*P	P	04 43 01.2	+0.7
KLBO	Killbear Provi	78.78	34	P	P	04 42 59.2	-1.6
	baz=326						
ANTO	Ankara	78.83	316	⇑*i*P	P	04 43 03.1	+1.8
ANTO	Ankara	78.83	316	*e*P	P	04 43 02.8	+1.5
ANTO	Ankara	78.83	316	P	P	04 43 02.8	+1.5
	SNR=18						
ANTO	Ankara	78.83	316	⇑P	P	04 43 03.1	+1.8
T38A	Diamond	78.85	48	P	P	04 43 00.8	-0.6
	baz=319,SNR=12						
O43A	Sugar Creek Fa	78.86	43	P	P	04 43 00.5	-0.9
	baz=322						
S39A	Bolivar	78.86	47	P	P	04 43 00.3	-1.2
	baz=320,SNR=10.0						
S39A	Bolivar	78.86	47	*e*P	P	04 43 00.2	-1.2
	comp=Z,11nm,1.0s						
BR231	Keskin MP Arra	78.86	316	*e*P	P	04 43 02.6	+1.1
CSKK	Csˆ‡kako	78.86	330	⇓*e*P	P	04 43 02.7	+1.4
GMM	Mts of Mourne	78.87	347	*e*P	P	04 43 01.8	+0.7
P42A	Winchester	78.90	44	P	P	04 43 00.8	-0.8
	baz=321						
P42A	Winchester	78.90	44	*e*P	P	04 43 01.3	-0.3
	comp=Z,21nm,1.0s						
TUL1	Leonard	78.90	50	P	P	04 43 00.6	-1.1
	baz=319						
KHC	Kasperske Hory	78.91	333	*e*P	P	04 43 02.3	+0.7
KHC				*e*PCP	PcP	04 43 07.2	-2.9
KHC				*e*x	x	04 43 33.0	
KHC				*e*S	S	04 53 04.6	+7.0
KHC				AMS	AMS	05 21 50.0	
	comp=Z,3µm,17.2s						
KHC	Kasperske Hory	78.91	333	*e*P	P	04 43 02.2	+0.7
	comp=Z,43nm,1.2s						
KHC	Kasperske Hory	78.91	333	*e*P	P	04 43 02.3	+0.7
KHC				*e*		04 43 07.2	
KHC				*e*S	S	04 53 04.6	+7.0
KHC				MLR	MLR		
	comp=Z,3µm,17.2s						
LBWR	Ladybower, Pea	78.92	344	*e*P	P	04 43 01.9	+0.4
LBWR				IAmb	IAmb	04 43 04.7	
	comp=Z,100nm,1.0s						
R40A	Maddies Statio	78.94	46	P	P	04 43 01.0	-0.8
	baz=320,SNR=14						
R40A	Maddies Statio	78.94	46	*e*P	P	04 43 00.7	-1.1
	comp=Z,15nm,0.8s						
Q41A	Truxton	78.95	45	P	P	04 43 01.5	-0.4
	baz=321,SNR=14						
BMRO	Meriville Lake	79.00	35	P	P	04 43 01.3	-0.7
	baz=325						
N44A	Piper City	79.02	42	P	P	04 43 01.4	-0.8
	baz=322,SNR=7.3						
BUKO	Buck Lake	79.03	34	P	P	04 43 01.0	-1.2
	baz=326						
WACR	West Acre	79.08	342	*e*P	P	04 43 03.3	+1.0
WACR				IAmb	IAmb	04 43 03.8	
	comp=Z,244nm,1.3s						
BZS	Buzias	79.09	327	⇑*i*P	P	04 43 03.0	+0.5
BZS	Buzias	79.09	327	⇑P	P	04 43 03.0	+0.5
GEC2	GERESS Array S	79.12	333	*e*P	P	04 43 03.1	+0.3
	comp=Z,44nm,1.3s						
GEC2	GERESS Array S	79.12	333	*e*P	P	04 43 03.1	+0.3
GEC2				pmax	pmax		
	comp=Z,44nm,1.3s						
GERES	GERESS Array B	79.12	333	P	P	04 43 03.0	+0.2
	comp=Z,7.2nm,0.4s,baz=38,slow=5.8,SNR=70						
GERES	GERESS Array B	79.12	333	P	P	04 43 03.0	+0.2
GERES				pmax	pmax		
	comp=Z,7.0nm,0.4s						
GEA0	GERESS Array S	79.13	333	*e*P	P	04 43 02.3	-0.5
GRFO	Grafenberg	79.14	335	*e*P	P	04 43 03.7	+0.9
ABTX	Abilene, Hawle	79.20	54	P	P	04 43 02.9	-0.5
	baz=318						
CONA	Conrad Observa	79.21	331	*i* pP	P	04 43 04.3	+1.1
	comp=Z,42nm,0.8s,SNR=36						
TX31	Lajitas Ar. Si	79.21	59	*e*P	P	04 43 03.6	0.0
TXAR	Lajitas Array	79.21	59	P	P	04 43 03.3	-0.3
	comp=Z,3.3nm,0.6s,baz=302,slow=4.2,SNR=38						
TXAR				PKKPbc	PKKPbc	05 01 54.1	+2.0
	comp=Z,0.2nm,0.7s,baz=132,slow=5.0,SNR=3.6						
MZR	Muzera	79.25	292	*i* P	P	04 43 04.8	+1.1
	SNR=7.9						
P43A	Skaggs, Pawnee	79.26	43	P	P	04 43 02.7	-0.8
	baz=321						
N45A	Kentland	79.27	41	P	P	04 43 02.7	-0.9
	baz=322						
Q42A	Golden Eagle	79.33	44	P	P	04 43 03.5	-0.5
	baz=321						
T39A	Clever	79.34	47	P	P	04 43 03.3	-0.7
	baz=320						
S40A	Lebanon	79.35	47	P	P	04 43 03.3	-0.8
	baz=320,SNR=15						
O44A	Mansfield	79.36	42	P	P	04 43 03.2	-0.9
	baz=322						
R41A	Rosebud	79.38	45	P	P	04 43 03.5	-0.7
	baz=321,SNR=8.6						
HERR	Herculane	79.39	326	⇓*i*P	P	04 43 04.6	+0.4
BWLO	Walkerton	79.42	36	P	P	04 43 04.1	-0.3
	baz=326						
WPM1	Penmaenmawr	79.47	345	*e*P	P	04 43 04.8	+0.4
CWF	Charnwood Fore	79.47	344	*e*P	P	04 43 05.3	+0.9
CLWO	Collingwood	79.49	35	P	P	04 43 03.4	-1.4
	baz=326						
WLF1	Llynfaes	79.52	345	*e*P	P	04 43 04.8	+0.1
WLF1				IAmb	IAmb	04 43 05.3	
	comp=Z,140nm,1.5s						
HHAR	Hobbs	79.61	48	*e*P	P	04 43 04.9	-0.6
	comp=Z,8.8nm,0.8s						
JMB	Yambol	79.63	322	*i* P	P	04 43 06.4	+0.9
CCM	Cathedral Cave	79.64	45	P	P	04 43 04.9	-0.8
	baz=321						
CCM	Cathedral Cave	79.64	45	*e*P	P	04 43 04.4	-1.3
	comp=Z,15nm,0.9s						
CCM	Cathedral Cave	79.64	45	*e*P	P	04 43 04.4	-1.3
CCM				pmax	pmax		
	comp=Z,15nm,0.9s						
O45A	Potomac	79.64	42	P	P	04 43 04.8	-0.8
	baz=322,SNR=9.4						
HGN	Heimansgroeve	79.65	339	*e*S	S	04 53 16.1	+11
PEMO	Pembroke	79.66	32	P	P	04 43 04.4	-1.2
	baz=328						
BEBN	Eben Emael	79.68	339	⇑P	P	04 43 06.0	+0.4
FOEL	Foel Wylfa	79.69	345	*e*P	P	04 43 06.3	+0.6
R42A	Luebbering	79.69	45	P	P	04 43 05.1	-0.8
	baz=321						
Q43A	New Douglas	79.72	44	P	P	04 43 05.3	-0.8
	baz=321						
S41A	Jillco Farms,	79.74	46	P	P	04 43 05.5	-0.8
	baz=320,SNR=12						
MDVR	Moldovita	79.75	326	⇑*i*P	P	04 43 06.0	-0.2
MEM	Membach	79.77	338	⇑P	P	04 43 06.4	+0.3
	comp=Z,53nm,1.1s						
U39A	Green Forest	79.77	48	P	P	04 43 05.7	-0.8
	baz=320,SNR=18						
RAR	Rarotonga	79.79	134	LR	LR	05 09 50.3	
	comp=Z,830nm,21.7s,baz=323,slow=29						
LLW	Llanuwychllyn	79.81	345	*e*P	P	04 43 06.2	-0.1
MOA	Molln	79.81	332	*i* P	P	04 43 07.0	+0.5
	comp=Z,25nm,1.2s,SNR=11						
P44A	Sand Creek, Wi	79.83	43	P	P	04 43 05.9	-0.7
	baz=322,SNR=11						
SFIN	Lafayette	79.83	41	P	P	04 43 05.8	-0.8
	baz=323						
SFIN	Lafayette	79.83	41	*e*P	P	04 43 06.2	-0.5
	comp=Z,21nm,1.3s						
ARSA	Arzberg	79.91	331	*i* P	P	04 43 07.8	+0.8
	comp=Z,45nm,1.4s,SNR=13						
BANO	Bancroft	79.95	33	P	P	04 43 06.6	-0.6
	baz=327						
UCC	Uccle	80.01	339	⇑P	P	04 43 07.6	+0.2
UCC	Uccle	80.01	339	*e*P	P	04 43 08.7	+1.3
	comp=Z,57nm,1.4s						
UCC	Uccle	80.01	339	*e*P	P	04 43 08.7	+1.3
UCC				pmax	pmax		
	comp=Z,57nm,1.4s						
Q44A	Meyer Farm, Va	80.08	44	P	P	04 43 07.2	-0.8
	baz=322,SNR=7.3						
S42A	Caledonia	80.08	45	P	P	04 43 07.2	-0.8
	baz=321,SNR=25						
V39A	Pettigrew	80.10	48	P	P	04 43 07.5	-0.7
	baz=320,SNR=12						
FVM	French Village	80.10	45	*e*P	P	04 43 09.0	+0.8
	comp=Z,12nm,0.7s						
FVM	French Village	80.10	45	*e*P	P	04 43 09.0	+0.8
FVM				pmax	pmax		
	comp=Z,12nm,0.7s						
U40A	Yellville	80.12	48	P	P	04 43 07.7	-0.7
	baz=320,SNR=24						
R43A	Red Bud	80.12	44	P	P	04 43 07.5	-0.8
	baz=321						
BCLA	Clavier	80.12	339	⇑P	P	04 43 08.2	+0.2
T41A	Mountain View	80.15	46	P	P	04 43 07.3	-1.2
	baz=321,SNR=11						
BEHE	Becsehely	80.16	330	⇑*e*P	P	04 43 08.8	+0.5
TRQ	Mont Tremblant	80.18	30	*e*P	P	04 43 07.6	-0.9
P45A	Graceland, Par	80.20	42	P	P	04 43 07.8	-0.9
	baz=322,SNR=6.8						
P45A	Graceland, Par	80.20	42	*e*P	P	04 43 08.2	-0.5
	comp=Z,14nm,0.7s						
PLVO	Plevna	80.26	33	P	P	04 43 07.8	-1.1
	baz=328						
PLVO	Plevna	80.26	33	*e*P	P	04 43 08.5	-0.4
	comp=Z,9.9nm,1.0s						
SNF	Seneffe	80.30	339	⇓P	P	04 43 10.1	+1.1
KOGS	Kog	80.36	330	*i* P	P	04 43 09.4	0.0
O47A	Sheridan	80.37	41	P	P	04 43 08.3	-1.2
	baz=323						
P46A	Rosedale	80.38	42	P	P	04 43 09.2	-0.5
	baz=323,SNR=9.9						
PKRO	Pickering	80.39	34	P	P	04 43 08.6	-1.0
	baz=327						
DELO	Deloro Mine	80.49	33	P	P	04 43 08.4	-1.8
	baz=328						
MCH1	Michaelchurch	80.50	344	*e*P	P	04 43 10.3	+0.3
Q45A	Warren Harvey,	80.50	43	P	P	04 43 09.8	-0.5
	baz=322,SNR=6.0						
T42A	Van Buren	80.50	46	P	P	04 43 09.5	-0.8
	baz=321,SNR=10						
T42A	Van Buren	80.50	46	*e*P	P	04 43 09.6	-0.8
	comp=Z,8.2nm,0.7s						
W39A	Magazine	80.51	49	P	P	04 43 09.8	-0.6
	baz=320						
W39A	Magazine	80.51	49	*e*P	P	04 43 10.0	-0.4
	comp=Z,28nm,1.4s						
STRD	Stroud	80.55	344	*e*P	P	04 43 10.8	+0.5
STRD				IAmb	IAmb	04 43 13.8	
	comp=Z,235nm,1.5s						
V40A	Witts Springs	80.56	48	P	P	04 43 09.9	-0.8
	baz=320,SNR=8.1						
V40A	Witts Springs	80.56	48	*e*P	P	04 43 09.9	-0.8
	comp=Z,12nm,0.6s						
R44A	Waltonville	80.56	44	P	P	04 43 09.8	-0.8
	baz=322						
STU	Stuttgart	80.56	336	*e*P	P	04 43 10.9	+0.5
	comp=Z,77nm,1.3s						
ALFO	Alfred	80.57	31	P	P	04 43 09.3	-1.2
	baz=329,SNR=5.9						
SOKA	Soboth	80.58	331	*i* P	P	04 43 11.2	+0.5
	comp=Z,55nm,1.0s,SNR=24						
PERS	Pernice	80.59	331	*i* P	P	04 43 11.1	+0.4
WLF	Walferdange	80.59	338	⇑P	P	04 43 11.7	+1.1
WLF	Walferdange	80.59	338	*e*P	P	04 43 11.8	+1.2
	comp=Z,39nm,1.2s						
S43A	Fulton Ridge,	80.60	45	P	P	04 43 10.0	-0.8
	baz=321,SNR=13						
PGB	Panagyurishte	80.60	323	*i* P	P	04 43 11.5	+0.7
DOU	Dourbes	80.60	339	⇑P	P	04 43 10.7	+0.1
	comp=Z,20nm,1.5s						
U41A	Viola	80.61	47	P	P	04 43 10.4	-0.5
	baz=321						
MONM	Monmouth	80.61	344	*e*P	P	04 43 11.2	+0.5
OLIL	Olney	80.66	43	*e*P	P	04 43 11.0	-0.1
	comp=Z,22nm,1.0s						
JCT	Junction City	80.68	56	P	P	04 43 10.8	-0.7
	baz=318						
JCT	Junction City	80.68	56	*e*P	P	04 43 10.3	-1.2
	comp=Z,15nm,1.1s						
JCT	Junction City	80.68	56	*e*P	P	04 43 10.3	-1.2
JCT				pmax	pmax		
	comp=Z,15nm,1.1s						
WLVO	Wesleyville	80.69	34	P	P	04 43 11.0	-0.2
	baz=327						
KBA	Koelnbreinsper	80.79	332	*i* pP	P	04 43 12.8	+0.9
	comp=Z,127nm,1.2s,SNR=31						
O48A	Farmland	80.82	40	P	P	04 43 11.2	-0.8
	baz=324,SNR=6.2						
X39A	Fountain Ranch	80.86	50	P	P	04 43 11.8	-0.5
	baz=320						
T43A	Greenville	80.87	45	P	P	04 43 11.8	-0.5
	baz=321,SNR=9.6						
OBKA	Obir	80.89	331	*e*P	P	04 43 12.6	+0.2
	comp=Z,17nm,1.1s						
W40A	Ferguson Farm,	80.89	48	P	P	04 43 11.9	-0.6
	baz=320						
W40A	Ferguson Farm,	80.89	48	*e*P	P	04 43 12.1	-0.3
	comp=Z,20nm,0.9s						
S44A	Carbondale	80.91	44	P	P	04 43 11.8	-0.6
	baz=322,SNR=12						
SIUC	Southern Illin	80.91	44	*e*P	P	04 43 12.5	0.0
	comp=Z,26nm,0.8s						
R45A	Skylar, Fairfi	80.91	43	P	P	04 43 11.9	-0.6
	baz=322						
V41A	Mountainview	80.92	47	P	P	04 43 12.0	-0.7
	baz=321,SNR=12						
P47A	Martinsville	80.92	41	P	P	04 43 11.9	-0.7
	baz=323,SNR=7.2						
GOLS	Golise	80.95	330	*i* P	P	04 43 12.8	+0.2
U42A	Revenden	80.95	47	P	P	04 43 12.0	-0.8
	baz=321						
VTS	Vitosha	80.97	324	⇑*i*P	P	04 43 13.9	+1.0
VTS	Vitosha	80.97	324	*e*P	P	04 43 13.5	+0.6
	comp=Z,139nm,1.2s						
VTS	Vitosha	80.97	324	*i* P	P	04 43 13.2	+0.3
VTS	Vitosha	80.97	324	P	P	04 43 13.5	+0.6
VTS	Vitosha	80.97	324	⇑P	P	04 43 13.9	+1.0
DIVS	Divibare	80.99	327	*e*P	P	04 43 12.8	-0.1
	comp=Z,18nm,0.7s						
PBMO	Poplar Bluff	81.03	46	*e*P	P	04 43 13.0	-0.1
	comp=Z,77nm,1.6s						
BLO	Bloomington	81.06	42	*e*P	P	04 43 12.6	-0.6
	comp=Z,10nm,0.8s						
MYKA	Terra Mystica	81.09	332	*i* P	P	04 43 13.4	0.0
	comp=Z,11nm,0.5s,SNR=6.3						
MIAR	Mount Ida	81.12	49	P	P	04 43 13.2	-0.5
	baz=320,SNR=12						
MIAR	Mount Ida	81.12	49	*e*P	P	04 43 12.6	-1.1
	comp=Z,14nm,0.9s						
MIAR	Mount Ida	81.12	49	*e*P	P	04 43 12.6	-1.1
MIAR				pmax	pmax		
	comp=Z,14nm,0.9s						
WATA	Walderalm	81.13	334	*i* pP	P	04 43 15.4	+1.7
	comp=Z,39nm,0.5s,SNR=27						
ALN	Alexandroupoli	81.14	321	*e*P	P	04 43 14.4	+0.8
	comp=Z,51nm,1.3s						
ALN	Alexandroupoli	81.14	321	P	P	04 43 14.2	+0.5
RDO	Rodhopi	81.16	322	P	P	04 43 14.0	+0.2
RDO	Rodhopi	81.16	322	P	P	04 43 14.0	+0.2
WTTA	Wattenberg	81.17	334	*i* pP	P	04 43 14.7	+0.8
	comp=Z,49nm,0.6s,SNR=18						
BFO	Black Forest	81.21	336	*e*P	P	04 43 13.8	-0.1
	comp=Z,4.1nm,0.9s						
BFO	Black Forest	81.21	336	*e*P	P	04 43 13.8	-0.1
BFO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
T44A	Benton	81.22	45	P	P	04 43 13.6	-0.5
	baz=322						
RETA	Reutte	81.25	334	*i* P	P	04 43 14.8	+0.6
	comp=Z,62nm,1.3s,SNR=12						
O49A	Covington	81.25	40	P	P	04 43 13.5	-0.7
	baz=324						
S45A	Carrier Mills	81.25	44	P	P	04 43 13.5	-0.8
	baz=322						
MOTA	Moosalm	81.27	334	*i* pP	P	04 43 16.0	+1.6
	comp=Z,34nm,0.7s,SNR=35						
Q47A	Bedord North L	81.29	42	P	P	04 43 14.2	-0.3
	baz=323,SNR=8.3						
V42A	Cord	81.30	47	P	P	04 43 13.9	-0.7
	baz=321						
LJU	Ljubljana	81.30	331	*i* P	P	04 43 14.1	-0.3
N50A	Nevada	81.31	39	P	P	04 43 13.9	-0.7
	baz=325						
P48A	Milroy	81.34	41	P	P	04 43 14.1	-0.7
	baz=324						
W41B	Gary Mavity, V	81.34	48	P	P	04 43 14.2	-0.6
	baz=321,SNR=9.9						
W41B	Gary Mavity, V	81.34	48	*e*P	P	04 43 14.2	-0.6
	comp=Z,14nm,0.8s						
R46A	Gibon Southern	81.35	43	P	P	04 43 14.0	-0.8
	baz=323						
ABTA	Abfaltersbach	81.35	333	*i* P	P	04 43 14.6	-0.2
	comp=Z,26nm,1.3s,SNR=6.8						
OZLJ	Ozalj	81.35	330	P	P	04 43 14.6	-0.1
PMOR	Pomariorio Ree	81.36	121	*e*T	T	06 12 59.0	
	comp=Z,19nm,0.2s						

U43A	**Rector**	**81.36**	**46**	P	**P**	**04 43 14.2**	**-0.7**
	baz=321						
PARMO	**Parma**	**81.47**	**45**	*e*P	**P**	**04 43 16.1**	**+0.7**
	comp=Z,71nm,0.8s						
USIN	**University of**	**81.47**	**43**	*e*P	**P**	**04 43 15.7**	**+0.2**
	comp=Z,24nm,0.9s						
BLY	**Banja Luka**	**81.49**	**329**	⇑*i*P	**P**	**04 43 16.3**	**+0.8**
BLY	**Banja Luka**	**81.49**	**329**	*e*P	**P**	**04 43 15.9**	**+0.4**
	comp=Z,68nm,1.7s						
BOJS	**Bojanci**	**81.52**	**330**	*i* P	**P**	**04 43 15.6**	**0.0**
ISP	**Isparta**	**81.53**	**317**	P	**P**	**04 43 15.8**	**-0.2**
ISP	**Isparta**	**81.53**	**317**	P	**P**	**04 43 15.8**	**-0.2**
ISP	**Isparta**	**81.53**	**317**	*c i*P	**P**	**04 43 15.9**	**-0.1**
ISP				pmax	pmax		
	comp=Z,72nm,2.4s						
LONY	**Lake Ozonia**	**81.55**	**31**	P	**P**	**04 43 14.9**	**-0.9**
	baz=329						
LONY	**Lake Ozonia**	**81.55**	**31**	*e*P	**P**	**04 43 15.1**	**-0.7**
	comp=Z,9.0nm,1.0s						
ERPA	**Erie**	**81.55**	**36**	P	**P**	**04 43 15.0**	**-0.9**
	baz=326						
TAOE	**Nuku Hiva Isla**	**81.55**	**112**	*e*LR	LR	05 08 40.0	
	comp=Z,2µm,24.0s						
X40A	**Basin Creek Fa**	**81.56**	**49**	P	**P**	**04 43 15.5**	**-0.5**
	baz=320						
X40A	**Basin Creek Fa**	**81.56**	**49**	*e*P	**P**	**04 43 16.4**	**+0.4**
	comp=Z,14nm,1.2s						
MMB	**Musomiste**	**81.58**	**323**	*i* P	**P**	**04 43 16.6**	**+0.6**
P49A	**Miami Univ. Ec**	**81.60**	**40**	P	**P**	**04 43 15.6**	**-0.5**
	baz=324						
O50A	**Cable**	**81.61**	**39**	P	**P**	**04 43 15.3**	**-0.9**
	baz=324,SNR=6.1						
KKB	**Krupnik**	**81.62**	**324**	*i* P	**P**	**04 43 17.0**	**+0.8**
Q48A	**North Vernon**	**81.62**	**41**	P	**P**	**04 43 15.5**	**-0.7**
	baz=324						
ECH	**Echery**	**81.64**	**337**	*e*P	**P**	**04 43 15.3**	**-0.9**
	comp=Z,80nm,1.4s						
ECH	**Echery**	**81.64**	**337**	*e*P	**P**	**04 43 15.3**	**-0.9**
ECH				pmax	pmax		
	comp=Z,80nm,1.4s						
S46A	**Don Dixon Farm**	**81.67**	**43**	P	**P**	**04 43 16.3**	**-0.2**
	baz=323						
FETA	**Feichten**	**81.67**	**334**	*i* pP	**P**	**04 43 17.3**	**+0.7**
	comp=Z,32nm,1.5s,SNR=8.8						
DAVA	**Damuels**	**81.69**	**335**	*i* P	**P**	**04 43 17.2**	**+0.6**
	comp=Z,26nm,0.7s,SNR=9.4						
NVR	**Nevrokopi**	**81.72**	**323**	P	**P**	**04 43 17.3**	**+0.5**
NVR	**Nevrokopi**	**81.72**	**323**	P	**P**	**04 43 17.3**	**+0.5**
X41A	**Kaden, Bauxite**	**81.72**	**49**	P	**P**	**04 43 16.5**	**-0.3**
	baz=320						
VAL	**Valentia**	**81.75**	**349**	*i* S	S	04 53 34.5	+7.4
R47A	**Wooly Knot Far**	**81.75**	**42**	P	**P**	**04 43 16.2**	**-0.7**
	baz=323,SNR=7.4						
GADA	**Gvkgeada**	**81.78**	**321**	P	**P**	**04 43 17.0**	**-0.1**
GADA	**Gvkgeada**	**81.78**	**321**	P	**P**	**04 43 17.0**	**-0.1**
ACSO	**Alum Creek Sta**	**81.82**	**39**	P	**P**	**04 43 16.8**	**-0.4**
	baz=325						
ACSO	**Alum Creek Sta**	**81.82**	**39**	*e*P	**P**	**04 43 16.4**	**-0.9**
	comp=Z,23nm,1.2s						
ALLY	**Alegheny Colle**	**81.88**	**36**	*e*P	**P**	**04 43 17.4**	**-0.1**
	comp=Z,34nm,1.1s						
PLE	**Pljevlja**	**81.88**	**327**	⇑*i*P	**P**	**04 43 17.8**	**+0.1**
MMNY	**Mt. Morris Dam**	**81.88**	**34**	*e*P	**P**	**04 43 17.2**	**-0.4**
	comp=Z,14nm,0.9s						
WCI	**Wyandotte Cave**	**81.92**	**42**	P	**P**	**04 43 17.0**	**-0.8**
	baz=323						
WCI	**Wyandotte Cave**	**81.92**	**42**	*e*P	**P**	**04 43 16.7**	**-1.1**
	comp=Z,14nm,0.8s						
WCI	**Wyandotte Cave**	**81.92**	**42**	*e*P	**P**	**04 43 16.7**	**-1.1**
WCI				pmax	pmax		
	comp=Z,15nm,0.8s						
MANT	**Manisa**	**81.94**	**318**	*e*P	**P**	**04 43 19.3**	**+1.1**
	comp=Z,113nm,1.0s						
Q49A	**Aurora**	**81.95**	**41**	P	**P**	**04 43 17.3**	**-0.7**
	baz=324						
P50A	**Jamestown**	**81.96**	**40**	P	**P**	**04 43 17.6**	**-0.5**
	baz=324,SNR=6.2						
R48A	**Northridge Ran**	**81.98**	**42**	P	**P**	**04 43 17.6**	**-0.5**
	baz=324						
SRS	**Serrai**	**82.02**	**323**	P	**P**	**04 43 18.5**	**+0.1**
SRS	**Serrai**	**82.02**	**323**	P	**P**	**04 43 18.5**	**+0.1**
SRS	**Serrai**	**82.02**	**323**	P	**P**	**04 43 18.5**	**+0.1**
IVA	**Berane**	**82.07**	**326**	⇑*i*P	**P**	**04 43 18.5**	**-0.1**
T46A	**Princeton**	**82.09**	**44**	P	**P**	**04 43 18.5**	**-0.3**
	baz=322,SNR=23						
STIP	**Stip**	**82.13**	**324**	⇑*i*P	**P**	**04 43 17.9**	**-1.0**
DAVOX	**Davos/Dischmat**	**82.15**	**334**	P	**P**	**04 43 19.9**	**+0.8**
	comp=Z,18nm,0.5s,baz=90,slow=2.0,SNR=40						
UPM	**Unac-Piva**	**82.17**	**327**	⇑*i*P	**P**	**04 43 18.8**	**-0.5**
M54A	**Oil Creek Stat**	**82.19**	**36**	P	**P**	**04 43 18.6**	**-0.7**
	baz=327						
M54A	**Oil Creek Stat**	**82.19**	**36**	*e*P	**P**	**04 43 19.2**	**-0.1**
	comp=Z,21nm,1.1s						
UDBI	**Udbina**	**82.19**	**330**	P	**P**	**04 43 18.8**	**-0.5**
Z40A	**Long Farm, Mag**	**82.19**	**50**	P	**P**	**04 43 18.8**	**-0.6**
	baz=320						
SKO	**Skopje**	**82.21**	**325**	P	**P**	**04 43 20.1**	**+0.8**
SKO	**Skopje**	**82.21**	**325**	P	**P**	**04 43 20.1**	**+0.8**
SKO	**Skopje**	**82.21**	**325**	⇑*i*P	**P**	**04 43 20.1**	**+0.8**
KOME	**Kolasin**	**82.23**	**326**	⇑*i*P	**P**	**04 43 19.6**	**+0.1**
NCB	**Newcomb**	**82.23**	**31**	*e*P	**P**	**04 43 18.9**	**-0.5**
	comp=Z,8.2nm,1.1s						
PVY	**Plav**	**82.28**	**326**	⇑*i*P	**P**	**04 43 19.7**	**-0.1**
KNT	**Kendrikon**	**82.28**	**323**	P	**P**	**04 43 19.7**	**0.0**
KNT	**Kendrikon**	**82.28**	**323**	P	**P**	**04 43 19.7**	**0.0**
VAY	**Valandovo**	**82.28**	**324**	P	**P**	**04 43 20.2**	**+0.5**
VAY	**Valandovo**	**82.28**	**324**	P	**P**	**04 43 20.2**	**+0.5**
VAY	**Valandovo**	**82.28**	**324**	⇑*i*P	**P**	**04 43 20.2**	**+0.5**
LIA	**Limnos Island**	**82.34**	**321**	P	**P**	**04 43 20.1**	**+0.1**
LIA	**Limnos Island**	**82.34**	**321**	P	**P**	**04 43 20.1**	**+0.1**
SOH	**Sokhos**	**82.37**	**323**	P	**P**	**04 43 20.1**	**-0.1**
SOH	**Sokhos**	**82.37**	**323**	P	**P**	**04 43 20.1**	**-0.1**
CSS	**Mathiatis**	**82.37**	**313**	*e*P	**P**	**04 43 21.1**	**+0.9**
	comp=Z,210nm,1.9s						
CSS	**Mathiatis**	**82.37**	**313**	P	**P**	**04 43 18.0**	**-2.3**
PRK	**Paraskevi**	**82.38**	**320**	P	**P**	**04 43 20.5**	**+0.3**
PRK	**Paraskevi**	**82.38**	**320**	P	**P**	**04 43 20.5**	**+0.3**
PPT2	**Papeete2**	**82.39**	**124**	*e*S	**S**	**04 53 36.0**	**+1.5**
	comp=Z,895nm,27.8s						
PPT2	**Papeete2**	**82.39**	**124**	*e*LR	LR	05 09 12.5	
	comp=Z,3µm,23.0s,baz=324						
PPT2	**Papeete2**	**82.39**	**124**	*e*T	T	06 14 17.6	
	comp=Z,5.6nm,0.3s						
PAE	**Paea**	**82.44**	**124**	*e*T	T	06 14 21.7	
	comp=Z,1.2nm,0.2s						
VT1	**Waterbury**	**82.45**	**30**	*e*P	**P**	**04 43 20.4**	**-0.2**
	comp=Z,6.5nm,0.8s						
NKY	**Niksic**	**82.47**	**327**	⇑*i*P	**P**	**04 43 20.1**	**-0.7**
S48A	**Wiedeman Farm,**	**82.49**	**42**	P	**P**	**04 43 20.1**	**-0.7**
	baz=323,SNR=11						
U46A	**Springville**	**82.49**	**45**	P	**P**	**04 43 19.8**	**-1.1**
	baz=322						
Q50A	**Georgetown**	**82.50**	**40**	P	**P**	**04 43 20.0**	**-0.9**
	baz=324						
OUR	**Ouranopolis**	**82.50**	**322**	P	**P**	**04 43 18.6**	**-2.2**
OUR	**Ouranopolis**	**82.50**	**322**	P	**P**	**04 43 18.6**	**-2.2**
OUR	**Ouranopolis**	**82.50**	**322**	P	**P**	**04 43 18.6**	**-2.2**
N54A	**Moraine State**	**82.51**	**37**	P	**P**	**04 43 20.2**	**-0.7**
	baz=326,SNR=6.8						
N54A	**Moraine State**	**82.51**	**37**	*e*P	**P**	**04 43 20.9**	**0.0**
	comp=Z,20nm,1.0s						
T47A	**Sharon Grove**	**82.52**	**44**	P	**P**	**04 43 20.4**	**-0.6**
	baz=323,SNR=11						
T47A	**Sharon Grove**	**82.52**	**44**	*e*P	**P**	**04 43 20.7**	**-0.3**
	comp=Z,16nm,0.7s						
NKME	**Niksic**	**82.52**	**327**	*e*P	**P**	**04 43 20.4**	**-0.6**
X43A	**Marvell**	**82.56**	**47**	P	**P**	**04 43 20.5**	**-0.7**
	baz=321						
X43A	**Marvell**	**82.56**	**47**	*e*P	**P**	**04 43 21.8**	**+0.6**
	comp=Z,96nm,1.7s						
BRY	**Bratogost**	**82.57**	**327**	⇑*i*P	**P**	**04 43 20.6**	**-0.7**
TUE	**Stuetta**	**82.58**	**335**	*e*P	**P**	**04 43 22.1**	**+0.7**
	comp=Z,64nm,1.2s						
SIGR	**SIGRI**	**82.60**	**320**	P	**P**	**04 43 19.6**	**-1.7**
SIGR	**SIGRI**	**82.60**	**320**	P	**P**	**04 43 19.6**	**-1.7**
Y42A	**Garnett, Star**	**82.61**	**48**	P	**P**	**04 43 20.8**	**-0.7**
	baz=321						
ASF	**Jabal al Asfar**	**82.62**	**309**	P	**P**	**04 43 22.9**	**+1.2**
	comp=Z,6.0nm,0.8s,baz=90,slow=5.1,SNR=17						
Q51A	**Peebles**	**82.64**	**40**	P	**P**	**04 43 20.7**	**-0.9**
	baz=325						
NATX	**Nacogdoches**	**82.65**	**52**	P	**P**	**04 43 21.0**	**-0.7**
	baz=320						
NATX	**Nacogdoches**	**82.65**	**52**	*e*P	**P**	**04 43 22.1**	**+0.4**
	comp=Z,54nm,1.3s						
GRG	**Griva**	**82.66**	**324**	P	**P**	**04 43 21.8**	**+0.1**
GRG	**Griva**	**82.66**	**324**	P	**P**	**04 43 21.8**	**+0.1**
HORT	**Hortiatis**	**82.66**	**323**	P	**P**	**04 43 21.4**	**-0.4**
HORT	**Hortiatis**	**82.66**	**323**	P	**P**	**04 43 21.4**	**-0.4**
PDG	**Podgorica**	**82.69**	**326**	⇑*i*P	**P**	**04 43 21.8**	**0.0**
PDG	**Podgorica**	**82.69**	**326**	P	**P**	**04 43 21.4**	**-0.4**
TTG	**Podgorica**	**82.69**	**326**	⇑*i*P	**P**	**04 43 21.6**	**-0.1**
TTG	**Podgorica**	**82.69**	**326**	*e*P	**P**	**04 43 21.7**	**-0.1**
	comp=Z,40nm,0.5s						
TTG	**Podgorica**	**82.69**	**326**	*e*P	**P**	**04 43 21.7**	**0.0**
TTG				pmax	pmax		
	comp=Z,40nm,0.5s						
PLG	**Polygyros**	**82.70**	**323**	P	**P**	**04 43 21.9**	**0.0**
PLG	**Polygyros**	**82.70**	**323**	P	**P**	**04 43 21.9**	**0.0**
PLG	**Polygyros**	**82.70**	**323**	P	**P**	**04 43 21.9**	**0.0**
CEME	**Cevo**	**82.72**	**327**	⇑*i*P	**P**	**04 43 21.5**	**-0.5**
T48A	**Bowling Green**	**82.76**	**43**	P	**P**	**04 43 21.5**	**-0.8**
	baz=323						
MMAI	**Mount Meron Ar**	**82.78**	**310**	P	**P**	**04 43 23.5**	**+0.9**
	comp=Z,20nm,0.6s,baz=52,slow=7.5,SNR=43						
KRUS	**Krusevo**	**82.79**	**325**	⇑*e*P	**P**	**04 43 22.9**	**+0.5**
PKME	**Peaks-Kenny Pk**	**82.81**	**28**	P	**P**	**04 43 21.4**	**-0.9**
	baz=333						
PKME	**Peaks-Kenny Pk**	**82.81**	**28**	*e*P	**P**	**04 43 22.1**	**-0.3**
	comp=Z,26nm,1.3s						
WVT	**Waverly**	**82.84**	**44**	P	**P**	**04 43 22.2**	**-0.5**
	baz=323						
WVT	**Waverly**	**82.84**	**44**	*e*P	**P**	**04 43 22.0**	**-0.7**
	comp=Z,12nm,0.9s						
WVT	**Waverly**	**82.84**	**44**	*e*P	**P**	**04 43 22.0**	**-0.7**
WVT				pmax	pmax		
	comp=Z,12nm,0.9s						
PHP	**Peshkopia**	**82.85**	**325**	P	**P**	**04 43 22.4**	**-0.3**
PHP	**Peshkopia**	**82.85**	**325**	P	**P**	**04 43 22.4**	**-0.3**
U47A	**Clarksville**	**82.86**	**44**	P	**P**	**04 43 22.2**	**-0.6**
	baz=323,SNR=6.8						
STON	**Ston**	**82.91**	**328**	P	**P**	**04 43 22.1**	**-0.8**
DRME	**Dracevica, Mon**	**82.92**	**326**	⇑*i*P	**P**	**04 43 22.8**	**-0.2**
BUM	**Brajici-Budva**	**82.94**	**327**	⇑*i*P	**P**	**04 43 22.5**	**-0.7**
ACCN	**Adirondack Com**	**82.94**	**31**	*e*P	**P**	**04 43 22.7**	**-0.4**
	comp=Z,17nm,1.3s						
V46A	**Holladay**	**82.96**	**45**	P	**P**	**04 43 22.8**	**-0.5**
	baz=322,SNR=8.2						
Z42A	**Norrel Spur, H**	**82.96**	**49**	P	**P**	**04 43 23.1**	**-0.3**
	baz=321						
PAIG	**Paliouri**	**82.97**	**322**	P	**P**	**04 43 23.1**	**-0.2**
PAIG	**Paliouri**	**82.97**	**322**	P	**P**	**04 43 23.1**	**-0.2**
PAIG	**Paliouri**	**82.97**	**322**	P	**P**	**04 43 23.1**	**-0.2**
HCY	**Herceg Novi**	**82.97**	**327**	⇑*i*P	**P**	**04 43 22.5**	**-0.8**
BINY	**Binghamton**	**83.09**	**33**	P	**P**	**04 43 22.9**	**-1.0**
	baz=329						
ULC	**Ulcinj**	**83.09**	**326**	⇑*i*P	**P**	**04 43 23.5**	**-0.4**
R51A	**Hillsboro**	**83.12**	**40**	P	**P**	**04 43 23.3**	**-0.8**
	baz=325,SNR=6.1						
YER	**Yerkesik**	**83.16**	**318**	P	**P**	**04 43 25.4**	**+1.0**
YER	**Yerkesik**	**83.16**	**318**	P	**P**	**04 43 25.4**	**+1.0**
U48A	**Cassie Pea, Po**	**83.17**	**43**	P	**P**	**04 43 23.6**	**-0.8**
	baz=323,SNR=7.3						
FETY	**Fethiye**	**83.17**	**317**	P	**P**	**04 43 24.5**	**+0.1**
FETY	**Fethiye**	**83.17**	**317**	P	**P**	**04 43 24.5**	**+0.1**
T49A	**Edmonton**	**83.18**	**42**	P	**P**	**04 43 23.7**	**-0.7**
	baz=324,SNR=6.8						
T49A	**Edmonton**	**83.18**	**42**	*e*P	**P**	**04 43 24.2**	**-0.2**
	comp=Z,16nm,1.2s						
CHOS	**Chios island**	**83.18**	**320**	P	**P**	**04 43 24.7**	**+0.2**
CHOS	**Chios island**	**83.18**	**320**	P	**P**	**04 43 24.7**	**+0.2**
OHR	**Ohrid**	**83.19**	**325**	⇑*i*P	**P**	**04 43 24.3**	**-0.2**
FNA	**Florina**	**83.23**	**324**	*e*P	**P**	**04 43 24.7**	**0.0**
	comp=Z,117nm,1.8s						
FNA	**Florina**	**83.23**	**324**	P	**P**	**04 43 24.3**	**-0.4**
FNA	**Florina**	**83.23**	**324**	*e*P	**P**	**04 43 24.7**	**0.0**
FNA				pmax	pmax		
	comp=Z,117nm,1.8s						
V47A	**Nunnelly**	**83.23**	**44**	P	**P**	**04 43 24.0**	**-0.7**
	baz=323,SNR=11						
SENIN	**Lac Senin/Sane**	**83.29**	**336**	*e*P	**P**	**04 43 26.0**	**+0.9**
	comp=Z,26nm,0.9s						
KSL	**Kastellorizon**	**83.32**	**316**	P	**P**	**04 43 24.8**	**-0.3**
KSL	**Kastellorizon**	**83.32**	**316**	P	**P**	**04 43 24.8**	**-0.3**
OXF	**Oxford**	**83.32**	**47**	P	**P**	**04 43 24.6**	**-0.6**
	baz=322,SNR=5.7						
OXF	**Oxford**	**83.32**	**47**	*e*P	**P**	**04 43 25.2**	**0.0**
	comp=Z,35nm,1.0s						
OXF	**Oxford**	**83.32**	**47**	*e*P	**P**	**04 43 25.2**	**0.0**
OXF				pmax	pmax		
	comp=Z,35nm,1.0s						
LIT	**Litokhoron**	**83.33**	**323**	*e*P	**P**	**04 43 25.3**	**+0.1**
	comp=Z,52nm,1.4s						
LIT	**Litokhoron**	**83.33**	**323**	P	**P**	**04 43 24.6**	**-0.6**
Y44A	**Strider, Charl**	**83.34**	**47**	P	**P**	**04 43 24.3**	**-1.0**
	baz=322						
W46A	**Michie**	**83.36**	**45**	P	**P**	**04 43 24.8**	**-0.6**
	baz=322						
X45A	**UM Field Stati**	**83.40**	**47**	P	**P**	**04 43 24.8**	**-0.8**
	baz=322						
KZN	**Kozani**	**83.46**	**324**	P	**P**	**04 43 25.4**	**-0.5**
KZN	**Kozani**	**83.46**	**324**	P	**P**	**04 43 25.4**	**-0.5**
KZN	**Kozani**	**83.46**	**324**	P	**P**	**04 43 25.4**	**-0.5**
AOS	**Alonnisos**	**83.51**	**322**	P	**P**	**04 43 25.8**	**-0.3**
AOS	**Alonnisos**	**83.51**	**322**	P	**P**	**04 43 25.8**	**-0.3**
R52A	**Catlettsburg**	**83.52**	**40**	P	**P**	**04 43 25.4**	**-0.7**
	baz=325						
U49A	**Red Boiling Sp**	**83.53**	**43**	P	**P**	**04 43 25.6**	**-0.6**
	baz=324,SNR=14						
T50A	**Nancy**	**83.57**	**42**	P	**P**	**04 43 25.8**	**-0.6**
	baz=324,SNR=19						
PLAL	**Pickwick Lake**	**83.63**	**45**	*e*P	**P**	**04 43 26.1**	**-0.7**
	comp=Z,7.7nm,0.6s						
XOR	**Xorichti**	**83.64**	**322**	P	**P**	**04 43 26.1**	**-0.7**
XOR	**Xorichti**	**83.64**	**322**	P	**P**	**04 43 26.1**	**-0.7**
V48A	**Smith Brothers**	**83.65**	**44**	P	**P**	**04 43 26.2**	**-0.7**
	baz=323						
V48A	**Smith Brothers**	**83.65**	**44**	*e*P	**P**	**04 43 26.2**	**-0.7**
	comp=Z,12nm,0.9s						
S51A	**Beattyville**	**83.65**	**41**	P	**P**	**04 43 26.0**	**-0.8**
	baz=325						
S51A	**Beattyville**	**83.65**	**41**	*e*P	**P**	**04 43 26.3**	**-0.6**
	comp=Z,13nm,1.0s						
W47A	**Westpoint**	**83.65**	**45**	P	**P**	**04 43 26.2**	**-0.7**
	baz=323						
SSPA	**Standing Stone**	**83.66**	**35**	P	**P**	**04 43 26.0**	**-0.8**
	baz=328						
SSPA	**Standing Stone**	**83.66**	**35**	*e*P	**P**	**04 43 26.9**	**+0.1**
	comp=Z,30nm,1.5s						
MCWV	**Mont Chateau**	**83.66**	**37**	P	**P**	**04 43 25.9**	**-0.9**
	baz=327						
BODT	**Bodrum**	**83.67**	**318**	P	**P**	**04 43 26.6**	**-0.4**
BODT	**Bodrum**	**83.67**	**318**	P	**P**	**04 43 26.6**	**-0.4**
NEST	**Nestorio**	**83.67**	**324**	P	**P**	**04 43 27.0**	**0.0**
O56A	**Blue Knob Stat**	**83.68**	**36**	P	**P**	**04 43 26.0**	**-1.1**
	baz=327						
O56A	**Blue Knob Stat**	**83.68**	**36**	*e*P	**P**	**04 43 26.8**	**-0.2**
	comp=Z,94nm,2.0s						
143A	**Socs Landing,**	**83.69**	**49**	P	**P**	**04 43 26.4**	**-0.7**
	baz=321						
SKIA	**Skiathos**	**83.69**	**322**	P	**P**	**04 43 26.2**	**-0.8**
X46A	**Booneville**	**83.71**	**46**	P	**P**	**04 43 26.6**	**-0.5**
	baz=322						
FYTO	**Fytoko, Volos**	**83.72**	**322**	P	**P**	**04 43 26.8**	**-0.3**
FYTO	**Fytoko, Volos**	**83.72**	**322**	P	**P**	**04 43 26.8**	**-0.3**
KSPA	**Keystone Colle**	**83.72**	**34**	*e*P	**P**	**04 43 26.7**	**-0.4**
	comp=Z,33nm,1.7s						
Z44A	**Pea Ridge, Bel**	**83.76**	**48**	P	**P**	**04 43 26.7**	**-0.7**
	baz=322						
Y45A	**Yeager Farm, C**	**83.76**	**47**	P	**P**	**04 43 26.9**	**-0.5**
	baz=322,SNR=7.5						
NWAO	**Narrogin (SRO)**	**83.89**	**208**	P	**P**	**04 43 28.1**	**+0.3**
	comp=Z,5.9nm,0.6s,baz=245,slow=10,SNR=4.6						
NWAO	**Narrogin (SRO)**	**83.89**	**208**	*e*P	**P**	**04 43 28.4**	**+0.6**
NWAO	**Narrogin (SRO)**	**83.89**	**208**	*e*P	**P**	**04 43 28.4**	**+0.6**
KPRO	**Kipourio**	**83.93**	**324**	P	**P**	**04 43 27.7**	**-0.6**
ARG	**Arkhangelos**	**83.97**	**317**	P	**P**	**04 43 29.0**	**+0.5**
ARG	**Arkhangelos**	**83.97**	**317**	P	**P**	**04 43 29.0**	**+0.5**
RAYN	**Ar Rayn**	**83.99**	**297**	*e*P	**P**	**04 43 29.9**	**+1.1**
	comp=Z,30nm,1.0s						
RAYN	**Ar Rayn**	**83.99**	**297**	*i* P	**P**	**04 43 29.8**	**+1.0**
	SNR=27						
T51A	**Gray**	**84.04**	**41**	P	**P**	**04 43 28.0**	**-0.8**
	baz=325						
SMIA	**Simia**	**84.04**	**322**	P	**P**	**04 43 28.6**	**-0.2**
U50A	**Jamestown**	**84.06**	**42**	P	**P**	**04 43 28.1**	**-0.9**
	baz=324						
W48A	**Pulaski**	**84.07**	**45**	P	**P**	**04 43 28.4**	**-0.6**
	baz=323,SNR=15						
V49A	**McMinnville**	**84.07**	**43**	P	**P**	**04 43 28.2**	**-0.8**
	baz=324						
Y46A	**Houston**	**84.10**	**47**	P	**P**	**04 43 28.8**	**-0.4**
	baz=322,SNR=8.7						
X47A	**Russelville**	**84.10**	**46**	P	**P**	**04 43 28.6**	**-0.6**
	baz=323						
KARY	**Karystos**	**84.20**	**321**	P	**P**	**04 43 29.2**	**-0.4**
N59A	**State Game Lan**	**84.27**	**34**	P	**P**	**04 43 29.2**	**-0.8**
	baz=329						
N59A	**State Game Lan**	**84.27**	**34**	*e*P	**P**	**04 43 29.8**	**-0.2**
	comp=Z,13nm,0.9s						
AGG	**Agios Georgios**	**84.30**	**323**	*e*P	**P**	**04 43 29.4**	**-0.8**
	comp=Z,35nm,0.7s						
AGG	**Agios Georgios**	**84.30**	**323**	P	**P**	**04 43 28.8**	**-1.4**
AGG	**Agios Georgios**	**84.30**	**323**	*e*P	**P**	**04 43 29.4**	**-0.8**
AGG				pmax	pmax		
	comp=Z,35nm,0.7s						
LKR	**Lokris**	**84.32**	**322**	P	**P**	**04 43 29.2**	**-1.0**
LKR	**Lokris**	**84.32**	**322**	P	**P**	**04 43 29.2**	**-1.0**
JAN	**Janina**	**84.39**	**324**	P	**P**	**04 43 31.0**	**+0.4**
JAN	**Janina**	**84.39**	**324**	P	**P**	**04 43 31.0**	**+0.4**
JAN	**Janina**	**84.39**	**324**	P	**P**	**04 43 31.0**	**+0.4**
W49A	**Belvidere**	**84.42**	**44**	P	**P**	**04 43 30.5**	**-0.3**
	baz=324,SNR=12						
PTL	**Penteli**	**84.44**	**321**	P	**P**	**04 43 30.2**	**-0.7**
PTL	**Penteli**	**84.44**	**321**	P	**P**	**04 43 30.2**	**-0.7**
HRV	**Adam Dziewonsk**	**84.47**	**30**	P	**P**	**04 43 30.3**	**-0.6**
	baz=331						
PAGS	**Pennsylvania G**	**84.47**	**35**	*e*P	**P**	**04 43 31.2**	**+0.2**
	comp=Z,21nm,1.3s						
U51A	**La Follette**	**84.48**	**42**	P	**P**	**04 43 30.6**	**-0.5**
	baz=325						
SWET	**Sewanee**	**84.50**	**44**	*e*P	**P**	**04 43 30.7**	**-0.6**
	comp=Z,19nm,0.8s						
V50A	**Pikevile**	**84.54**	**43**	P	**P**	**04 43 30.9**	**-0.5**
	baz=324,SNR=6.2						
ATHU	**Athens Univers**	**84.54**	**321**	P	**P**	**04 43 29.5**	**-1.9**
ATHU	**Athens Univers**	**84.54**	**321**	P	**P**	**04 43 29.5**	**-1.9**
145A	**Houston Renfro**	**84.55**	**48**	P	**P**	**04 43 31.0**	**-0.4**
	baz=322						
SRN	**Sarande**	**84.56**	**325**	P	**P**	**04 43 31.0**	**-0.4**
SRN	**Sarande**	**84.56**	**325**	P	**P**	**04 43 31.0**	**-0.4**
X48A	**Hartselle**	**84.56**	**45**	P	**P**	**04 43 31.0**	**-0.6**
	baz=323						
X48A	**Hartselle**	**84.56**	**45**	*e*P	**P**	**04 43 30.9**	**-0.6**
	comp=Z,7.8nm,0.8s						
TZTN	**Tazewell**	**84.56**	**41**	P	**P**	**04 43 30.8**	**-0.8**
	baz=325						
TZTN	**Tazewell**	**84.56**	**41**	*e*P	**P**	**04 43 32.0**	**+0.5**
	comp=Z,7.5nm,0.8s						
244A	**Avery, Jackson**	**84.58**	**49**	P	**P**	**04 43 31.1**	**-0.6**
	baz=322						
VILL	**Villia**	**84.59**	**321**	P	**P**	**04 43 30.4**	**-1.3**
Y47A	**UCPARC, Winfie**	**84.59**	**46**	P	**P**	**04 43 31.3**	**-0.4**
	baz=323						
Z46A	**Louisville**	**84.60**	**47**	P	**P**	**04 43 31.3**	**-0.4**
	baz=322						
EVR	**Evrytania**	**84.61**	**323**	P	**P**	**04 43 30.8**	**-1.0**
EVR	**Evrytania**	**84.61**	**323**	P	**P**	**04 43 30.8**	**-1.0**
VLY	**Voula,Athens**	**84.63**	**321**	P	**P**	**04 43 30.4**	**-1.4**
VLY	**Voula,Athens**	**84.63**	**321**	P	**P**	**04 43 30.4**	**-1.4**
ZAIG	**Zacatecas**	**84.65**	**63**	*e*P	**P**	**04 43 33.0**	**+0.5**
	comp=Z,19nm,1.5s						
WES	**Weston**	**84.66**	**30**	*e*P	P	04 43 33.8	+1.9
	comp=Z,15nm,0.8s						
BNI	**Bardonecchia**	**84.66**	**336**	*e*P	**P**	**04 43 33.0**	**+0.9**
	comp=Z,36nm,1.2s						
IGT	**Igoumenitsa**	**84.71**	**324**	P	**P**	**04 43 31.7**	**-0.5**
IGT	**Igoumenitsa**	**84.71**	**324**	P	**P**	**04 43 31.7**	**-0.5**
IGT	**Igoumenitsa**	**84.71**	**324**	P	**P**	**04 43 31.7**	**-0.5**
DSF	**Desfina**	**84.72**	**322**	P	**P**	**04 43 30.9**	**-1.5**
DSF	**Desfina**	**84.72**	**322**	P	**P**	**04 43 30.9**	**-1.5**
DSL	**Palaion Diasel**	**84.73**	**323**	P	**P**	**04 43 32.1**	**-0.2**
DSL	**Palaion Diasel**	**84.73**	**323**	P	**P**	**04 43 32.1**	**-0.2**
U52A	**Thorn Hill**	**84.77**	**41**	P	**P**	**04 43 32.0**	**-0.6**
	baz=325						
KEK	**Kerkira**	**84.78**	**325**	P	**P**	**04 43 32.2**	**-0.3**
KEK	**Kerkira**	**84.78**	**325**	P	**P**	**04 43 32.2**	**-0.3**
V51A	**Loudon**	**84.79**	**42**	P	**P**	**04 43 32.1**	**-0.6**
	baz=324,SNR=6.1						
V51A	**Loudon**	**84.79**	**42**	*e*P	**P**	**04 43 32.6**	**-0.1**
	comp=Z,10nm,0.8s						
W50A	**Signal Mountai**	**84.81**	**43**	P	**P**	**04 43 32.1**	**-0.7**
	baz=324						
W50A	**Signal Mountai**	**84.81**	**43**	*e*P	**P**	**04 43 32.2**	**-0.7**
	comp=Z,9.4nm,0.8s						
MVL	**Millersville**	**84.82**	**35**	*e*P	**P**	**04 43 33.9**	**+1.2**
	comp=Z,10.0nm,1.0s						
LTK	**Loutraki**	**84.86**	**322**	P	**P**	**04 43 31.1**	**-1.9**
LTK	**Loutraki**	**84.86**	**322**	P	**P**	**04 43 31.1**	**-1.9**
X49A	**Woodville**	**84.87**	**44**	P	**P**	**04 43 32.3**	**-0.8**
	baz=324,SNR=16						
SERI	**Serifos**	**84.89**	**320**	P	**P**	**04 43 31.0**	**-2.2**
PAL	**Palisades**	**84.91**	**33**	P	**P**	**04 43 32.1**	**-1.0**
	baz=330						
AQU	**L'Aquila**	**84.93**	**330**	*e*P	**P**	**04 43 33.8**	**+0.5**
	comp=Z,65nm,1.2s						
AQU	**L'Aquila**	**84.93**	**330**	*e*P	**P**	**04 43 33.8**	**+0.5**
AQU				pmax	pmax		
	comp=Z,65nm,1.2s						
SERG	**Sergoula**	**84.93**	**322**	P	**P**	**04 43 31.9**	**-1.4**
Y48A	**Jasper**	**84.93**	**45**	P	**P**	**04 43 32.6**	**-0.8**
	baz=323						
TRIZ	**Trizonia**	**84.96**	**322**	P	**P**	**04 43 32.5**	**-0.9**
KARP	**Karpathos**	**84.97**	**317**	*e*P	**P**	**04 43 34.3**	**+0.7**
	comp=Z,59nm,0.7s						
146A	**Union**	**84.97**	**47**	P	**P**	**04 43 32.9**	**-0.7**
	baz=322						
EFP	**Efpalio**	**84.98**	**323**	P	**P**	**04 43 33.1**	**-0.5**
PVO	**Paravola**	**84.98**	**323**	P	**P**	**04 43 31.5**	**-2.1**
CPCT	**Cooper Cave**	**84.99**	**43**	*e*P	**P**	**04 43 33.5**	**-0.2**
	comp=Z,12nm,0.9s						
245A	**Little AP, Sta**	**85.01**	**48**	P	**P**	**04 43 32.6**	**-1.2**
	baz=322						
344A	**Westbrook Farm**	**85.02**	**49**	P	**P**	**04 43 33.2**	**-0.7**
	baz=322						
Z47A	**Carrollton**	**85.04**	**46**	P	**P**	**04 43 33.1**	**-0.8**
	baz=323,SNR=8.5						
SANT	**Santorini**	**85.10**	**319**	⇓*i*P	**P**	**04 43 34.2**	**0.0**
LAKA	**Lakka**	**85.11**	**322**	P	**P**	**04 43 33.6**	**-0.6**
LAKA	**Lakka**	**85.11**	**322**	P	**P**	**04 43 33.6**	**-0.6**
V52A	**Sevierville**	**85.11**	**42**	P	**P**	**04 43 33.6**	**-0.7**
	baz=325,SNR=8.8						
V52A	**Sevierville**	**85.11**	**42**	*e*P	**P**	**04 43 34.0**	**-0.3**
	comp=Z,12nm,0.7s						
PDO	**Prodromos**	**85.14**	**323**	P	**P**	**04 43 33.7**	**-0.7**
Z48A	**Northport**	**85.16**	**46**	P	**P**	**04 43 33.7**	**-0.8**
	baz=323						
U53A	**Fall Branch**	**85.16**	**41**	P	**P**	**04 43 33.9**	**-0.6**
	baz=325,SNR=7.9						
DID	**Didima**	**85.17**	**321**	P	**P**	**04 43 32.1**	**-2.5**
DID	**Didima**	**85.17**	**321**	P	**P**	**04 43 32.1**	**-2.5**
TKL	**Tuckaleechee C**	**85.18**	**42**	P	**P**	**04 43 34.3**	**-0.4**
	comp=Z,13nm,0.9s,baz=356,slow=1.2,SNR=13						
TKL	**Tuckaleechee C**	**85.18**	**42**	*e*P	**P**	**04 43 34.5**	**-0.2**
	comp=Z,14nm,0.9s						
TKL	**Tuckaleechee C**	**85.18**	**42**	*e*P	**P**	**04 43 34.5**	**-0.2**
TKL				pmax	pmax		
	comp=Z,14nm,0.9s						
KLV	**Kalavryta, Ach**	**85.19**	**322**	P	**P**	**04 43 33.7**	**-1.0**
KLV	**Kalavryta, Ach**	**85.19**	**322**	P	**P**	**04 43 33.7**	**-1.0**
GUR	**Goura**	**85.20**	**322**	P	**P**	**04 43 33.6**	**-1.2**
GUR	**Goura**	**85.20**	**322**	P	**P**	**04 43 33.6**	**-1.2**
MATE	**Matera**	**85.20**	**327**	⇑*i*P	**P**	**04 43 35.0**	**+0.4**
LKD2	**Lefkada island**	**85.20**	**324**	P	**P**	**04 43 34.3**	**-0.4**
LKD2	**Lefkada island**	**85.20**	**324**	P	**P**	**04 43 34.3**	**-0.4**
X50B	**Fort Payne**	**85.24**	**44**	P	**P**	**04 43 34.2**	**-0.8**
	baz=324						
147A	**Livingston**	**85.35**	**47**	P	**P**	**04 43 34.8**	**-0.7**
	baz=323						
Y49A	**Blount Mountai**	**85.35**	**45**	P	**P**	**04 43 34.7**	**-0.8**
	baz=324						
Y49A	**Blount Mountai**	**85.35**	**45**	*e*P	**P**	**04 43 35.2**	**-0.3**
	comp=Z,13nm,1.0s						
BLA	**Blacksburg**	**85.44**	**39**	P	**P**	**04 43 34.9**	**-1.0**
	baz=326						
BLA	**Blacksburg**	**85.44**	**39**	*e*P	**P**	**04 43 36.0**	**0.0**
	comp=Z,14nm,0.9s						
BLA	**Blacksburg**	**85.44**	**39**	*e*P	**P**	**04 43 36.0**	**0.0**
BLA				pmax	pmax		
	comp=Z,14nm,0.9s						
DRO	**Drossia**	**85.46**	**322**	P	**P**	**04 43 35.9**	**-0.1**
RLS	**Riolos of Patr**	**85.48**	**323**	P	**P**	**04 43 35.5**	**-0.5**
RLS	**Riolos of Patr**	**85.48**	**323**	P	**P**	**04 43 35.5**	**-0.5**
FSK	**Fiskardo**	**85.52**	**323**	P	**P**	**04 43 35.4**	**-0.9**
X51A	**Calhoun**	**85.55**	**43**	P	**P**	**04 43 35.7**	**-0.7**
	baz=324						

X51A	Calhoun	85.55	43	*e*P	P	04 43 36.4	-0.1
	comp=Z,24nm,0.3s						
V53A	Saluda	85.62	41	P	P	04 43 35.9	-1.0
	baz=325						
V53A	Saluda	85.62	41	*e*P	P	04 43 37.0	+0.1
	comp=Z,6.5nm,0.9s						
VLX	Vlachokerasia	85.66	322	P	P	04 43 36.0	-1.1
VLX	Vlachokerasia	85.66	322	P	P	04 43 36.0	-1.1
247A	Quitman	85.67	48	P	P	04 43 36.3	-0.7
	baz=322						
LRAL	Lakeview Retre	85.71	46	P	P	04 43 36.6	-0.7
	baz=323						
LRAL	Lakeview Retre	85.71	46	*e*P	P	04 43 36.5	-0.8
	comp=Z,5.8nm,0.8s						
KFL	Anninata	85.72	323	P	P	04 43 37.0	-0.3
148A	Greensboro	85.73	46	P	P	04 43 36.7	-0.7
	baz=323						
VLS	Valsamata	85.75	323	P	P	04 43 36.9	-0.5
VLS	Valsamata	85.75	323	P	P	04 43 36.9	-0.5
VLS	Valsamata	85.75	323	P	P	04 43 36.9	-0.5
ZKR	Zakros	85.77	318	P	P	04 43 37.7	+0.1
ZKR	Zakros	85.77	318	P	P	04 43 37.7	+0.1
AMT	Artemida-Makis	85.81	322	P	P	04 43 37.0	-0.8
Z49A	Columbiana	85.82	45	P	P	04 43 37.1	-0.7
	baz=324						
W53A	Cullowhee	85.87	42	P	P	04 43 37.6	-0.6
	baz=325,SNR=6.9						
VLI	Veliai	85.95	321	P	P	04 43 36.1	-2.4
VLI	Veliai	85.95	321	P	P	04 43 36.1	-2.4
X52A	Dahlonega	85.98	43	P	P	04 43 37.8	-0.9
	baz=325						
Y51A	Rockmart	85.98	44	P	P	04 43 37.9	-0.8
	baz=324,SNR=13						
ITM	Ithomi	86.01	322	P	P	04 43 37.9	-0.9
ITM	Ithomi	86.01	322	P	P	04 43 37.9	-0.9
LAST	Lasithi	86.08	318	P	P	04 43 38.7	-0.5
LAST	Lasithi	86.08	318	P	P	04 43 38.7	-0.5
Z50A	Ashland	86.08	45	P	P	04 43 38.5	-0.7
	baz=324,SNR=18						
Z50A	Ashland	86.08	45	*e*P	P	04 43 38.5	-0.7
	comp=Z,28nm,1.0s						
BG3	Lake Jocassee	86.12	42	*e*P	P	04 43 39.8	+0.5
	comp=Z,15nm,0.7s						
149A	Jones	86.17	46	P	P	04 43 39.3	-0.3
	baz=323						
DYR	Agios Nikonas	86.19	321	P	P	04 43 38.5	-1.1
347A	Saraland	86.22	48	P	P	04 43 39.3	-0.5
	baz=323						
IDI	Anoyia	86.25	319	P	P	04 43 38.7	-1.3
	comp=Z,31nm,0.9s,baz=30,slow=7.2,SNR=17						
IDI	Anoyia	86.25	319	⇑ *i*P	P	04 43 39.0	-1.0
IDI	Anoyia	86.25	319	*e*P	P	04 43 38.7	-1.3
	comp=Z,33nm,0.8s						
PYL	PYLOS	86.33	322	P	P	04 43 38.0	-2.3
PYL	PYLOS	86.33	322	P	P	04 43 38.0	-2.3
X53A	Estanollee	86.34	42	P	P	04 43 39.8	-0.6
	baz=325,SNR=13						
URVA	University of	86.39	37	*e*P	P	04 43 41.2	+0.6
Z51A	Franklin	86.40	44	P	P	04 43 40.0	-0.7
	baz=324						
TIP	Timpagrande	86.45	326	*e*P	P	04 43 41.2	+0.3
	comp=Z,33nm,0.8s						
TIP	Timpagrande	86.45	326	P	P	04 43 40.9	-0.1
249A	Camden	86.49	47	P	P	04 43 40.8	-0.3
	baz=323,SNR=8.0						
ANKY	Antikythira Is	86.50	320	P	P	04 43 40.3	-0.8
ANKY	Antikythira Is	86.50	320	P	P	04 43 40.3	-0.8
Y52A	Lilburn	86.50	43	P	P	04 43 40.3	-0.9
	baz=325						
Y52A	Lilburn	86.50	43	*e*P	P	04 43 41.5	+0.3
	comp=Z,8.8nm,0.8s						
IMMV	Iera Moni Meta	86.53	319	P	P	04 43 41.1	-0.2
150A	Eclectic	86.55	45	P	P	04 43 40.8	-0.6
	baz=324						
NCAT	North Carolina	86.67	39	*e*P	P	04 43 42.1	+0.1
	comp=Z,20nm,1.4s						
Y53A	Monroe	86.74	43	P	P	04 43 41.7	-0.7
	baz=325,SNR=7.2						
KMSC	Kings Mountain	86.74	41	P	P	04 43 41.5	-0.9
	baz=326,SNR=6.2						
KMSC	Kings Mountain	86.74	41	*e*P	P	04 43 42.7	+0.3
	comp=Z,18nm,1.2s						
PAULI	Pauline	86.78	41	*e*P	P	04 43 44.2	+1.7
	comp=Z,12nm,1.2s						
Z52A	Williamson	86.87	44	P	P	04 43 42.4	-0.6
	baz=324						
250A	Grady	86.93	46	P	P	04 43 42.7	-0.6
	baz=324						
349A	Repton	86.96	47	P	P	04 43 42.5	-1.0
	baz=323						
151A	Opelika	86.96	45	P	P	04 43 42.9	-0.6
	baz=324						
GVD	Gavdhos	86.99	319	P	P	04 43 43.0	-0.6
GVD	Gavdhos	86.99	319	P	P	04 43 43.0	-0.6
TBI	Tubuai	87.01	128	*e*S	S	04 54 21.1	+1.0
	comp=Z,713nm,29.2s						
TBI	Tubuai	87.01	128	*e*LR	LR	05 11 07.6	
	comp=Z,2μm,24.2s,baz=320						
TBI	Tubuai	87.01	128	*e*T	T	06 20 04.7	
	comp=Z,13nm,0.2s						
152A	Waverly Hall	87.15	44	P	P	04 43 44.1	-0.3
	baz=324						
152A	Waverly Hall	87.15	44	*e*P	P	04 43 44.1	-0.3
	comp=Z,9.0nm,1.0s						
GOGA	Godfrey	87.16	43	P	P	04 43 43.7	-0.7
	baz=325						
GOGA	Godfrey	87.16	43	*e*P	P	04 43 44.1	-0.3
	comp=Z,39nm,1.9s						
GOGA	Godfrey	87.16	43	*e*P	P	04 43 44.1	-0.3
GOGA				pmax	pmax		
	comp=Z,39nm,1.9s						
Y54A	Tignall	87.16	42	P	P	04 43 44.0	-0.4
	baz=325,SNR=26						
BRAL	Brewton	87.17	47	P	P	04 43 44.0	-0.5
	baz=323						
Z53A	Monticello	87.21	43	P	P	04 43 44.3	-0.3
	baz=325						
251A	Midway	87.27	45	P	P	04 43 44.4	-0.6
	baz=324						
350A	Dozier	87.34	46	P	P	04 43 45.1	-0.2
	baz=324						
Z54A	Sparta	87.60	43	P	P	04 43 45.9	-0.6
	baz=325						
252A	Lumpkin	87.68	45	P	P	04 43 46.6	-0.4
	baz=324						
450A	Crestview	87.70	47	P	P	04 43 46.7	-0.4
	baz=324						
351A	Pinckard	87.83	46	P	P	04 43 47.2	-0.4
	baz=324						
Z55A	Blythe	87.95	42	P	P	04 43 48.0	-0.2
	baz=326						
154A	Montrose	87.98	43	P	P	04 43 48.1	-0.3
	baz=325						
352A	Blakely	88.00	45	P	P	04 43 48.2	-0.3
	baz=324						
CNNC	Cliffs of the	88.20	38	P	P	04 43 48.6	-0.8
	baz=328						
155A	Kite	88.28	43	P	P	04 43 49.2	-0.6
	baz=326						
254A	Abbeville	88.44	44	P	P	04 43 50.0	-0.5
	baz=325,SNR=6.8						
353A	Camilla	88.47	45	P	P	04 43 50.4	-0.3
	baz=325						
TIGA	Tifton	88.70	44	P	P	04 43 51.3	-0.4
	baz=325						
TIGA	Tifton	88.70	44	*e*P	P	04 43 52.3	+0.5
	comp=Z,22nm,0.8s						
156A	Sylvania	88.72	42	P	P	04 43 51.2	-0.6
	baz=326						
255A	Hazlehurst	88.85	43	P	P	04 43 52.1	-0.4
	baz=326						
NHSC	New Hope	88.96	41	P	P	04 43 52.2	-0.8
	baz=327						
355A	Pearson	89.14	44	P	P	04 43 52.6	-1.3
	baz=325						
PGAV	Gavieira, Arco	91.14	345	*e*LR	LR	05 20 48.3	
	comp=Z,895nm,20.0s						
POLO	Lamas de Olo	91.62	344	*e*P	P	04 44 05.2	-0.2
	comp=Z,15nm,1.4s						
MVO	Moncorvo	91.67	344	*e*P	P	04 44 05.1	-0.5
	comp=Z,28nm,1.5s						
MVO	Moncorvo	91.67	344	*e*LR	LR	05 23 28.8	
	comp=Z,759nm,20.0s						
PVRL	Vila Real	91.70	344	*e*P	P	04 44 04.9	-0.8
	comp=Z,37nm,1.5s						
KEST	Kesra	92.25	330	P	P	04 44 08.7	+0.3
	comp=Z,29nm,1.0s,baz=273,slow=1.6,SNR=18						
PVIS	Viseu	92.28	344	*e*P	P	04 44 07.6	-0.8
ES19	SONSECA Array	92.42	341	*e*P	P	04 44 08.5	-0.5
ESDC	Sonseca Array	92.46	341	P	P	04 44 08.4	-0.8
	comp=Z,4.0nm,0.9s,baz=10,slow=3.8,SNR=18						
ESLA	Sonseca Array	92.46	341	*e*P	P	04 44 08.8	-0.5
	comp=Z,20nm,1.6s						
MTE	Manteigas	92.51	344	*e*P	P	04 44 08.9	-0.6
	comp=Z,29nm,1.8s						
MTE	Manteigas	92.51	344	*e*S	S	04 55 26.3	+15
MTE	Manteigas	92.51	344	*e*LR	LR	05 23 01.6	
	comp=Z,840nm,18.0s						
PAB	San Pablo	92.67	341	*e*P	P	04 44 09.7	-0.5
	comp=Z,22nm,1.6s						
PAB	San Pablo	92.67	341	*e*P	P	04 44 09.7	-0.5
PAB				pmax	pmax		
	comp=Z,22nm,1.6s						
COI	Coimbra	92.86	345	*e*P	P	04 44 10.7	-0.3
PMRV	Marv??o	93.42	344	*e*LR	LR	05 23 28.5	
	comp=Z,635nm,20.0s						
ALMR	Almeirim	93.92	345	*e*P	P	04 44 14.7	-1.1
	comp=Z,57nm,1.1s						
PCVE	Castro Verde	95.29	344	*e*P	P	04 44 22.5	+0.3
	comp=Z,36nm,2.1s						
PCVE	Castro Verde	95.29	344	*e*S	S	04 55 51.9	+16
RKT	Rikitea	95.42	117	*e*LR	LR	05 15 07.9	
	comp=Z,891nm,25.0s,baz=318						
PVAQ	Vaqueiros	95.44	343	*e*LR	LR	05 25 20.7	
	comp=Z,765nm,16.0s						
TORD	Torodi Ar. Bea	115.60	327	PKP	PKPdf	04 49 39.9	-0.8
	comp=Z,0.6nm,0.4s,baz=55,slow=1.6						
VNDA	Vanda	122.82	177	PKP	PKPdf	04 49 51.7	-0.9
	comp=Z,1.4nm,1.0s,baz=298,slow=2.7,SNR=5.4						
LSZ	Lusaka	123.92	283	*e*PKPdf	PKPdf	04 49 57.0	+0.3
LSZ	Lusaka	123.92	283	*e*PKIKP	PKPdf	04 49 57.1	+0.3
DBIC	Dimbokro	123.96	331	PKP	PKPdf	04 49 56.5	-0.3
	comp=Z,3.1nm,0.6s,baz=66,slow=2.1,SNR=5.7						
MAW	Mawson	130.43	210	PKP	PKPdf	04 50 08.9	+1.5
	comp=Z,2.8nm,1.1s,baz=43,slow=11,SNR=2.6						
SAML	Samuel	133.07	50	*e*PKPdf	PKPdf	04 50 13.9	-0.2
SAML	Samuel	133.07	50	*e*PKIKP	PKPdf	04 50 13.9	-0.2
BOSA	Boshof	134.69	273	PKP	PKPdf	04 50 17.5	+0.7
	comp=Z,2.5nm,0.7s,baz=27,slow=2.3,SNR=2.9						
QSPA	South Pole Qui	135.14	180	PKP	PKPdf	04 50 17.4	+1.0
	comp=Z,3.1nm,0.8s,baz=96,slow=0.9,SNR=5.7						
LPAZ	La Paz	136.04	62	PKP	PKPdf	04 50 20.3	0.0
	comp=Z,1.9nm,0.8s,baz=28,slow=3.8,SNR=6.8						
NVL	N'lazarevskaya	147.91	204	*e*PKP2	PKPab	04 50 42.3	-2.4
PLCA	Paso Flores	149.27	96	PKPbc	PKPab	04 50 46.7	-4.6
	comp=Z,5.5nm,0.6s,baz=270,slow=3.7,SNR=12						
CPUP	Villa Florida	150.19	60	PKPbc	PKPbc	04 50 48.6	-0.5
	comp=Z,8.2nm,0.6s,baz=336,slow=2.1,SNR=17						
SNAA	Sanae	150.92	196	PKP	PKPbc	04 50 49.8	+0.3
SNAA	Sanae	150.92	196	PKPbc	PKPbc	04 50 49.1	-0.5
	comp=Z,17nm,1.0s,baz=146,slow=3.2,SNR=15						
VNA3	Neumayer Olymp	152.51	193	PKP	PKPbc	04 50 52.8	-0.3
VNA3				x	x	04 51 04.3	
VNA1	Neumayer--Stat	152.78	195	PKP	PKPbc	04 50 54.2	+0.5
VNA1				x	x	04 51 04.0	

ISCJB ***14*** *04:32:23.5±1.0, 46°.6N±0°.1×151°.0E±0°.3, h10^{km}, mb4.8/14, Error ellipse: s-maj=27.6km s-min=17.4km az=20.9*

IDC ***14*** *04:32:23.5±1.2, 46°.68N×151°.05E, h0^{km}, mb4.9/14, mb1 5.1/15, mb1mx4.5/70, mbtmp4.9/15, ML4.5/1, Error ellipse: s-maj=42.2km s-min=21.3km az=89.0*

ISC 14 04:32:25.1±1.4**, 46°.7N**±0°.2×**151°.1E**±0°.2**, h10^{km}, n15,** σ**0^{s}98**/15**, mb5.0**/14**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAJ	Asahikawa	6.49	250	Pn	Pn	04 34 00.6	0.0
	9.2nm,0.3s,baz=142,slow=19,SNR=1.8						
MKAR	Makanchi Array	45.71	297	P	P	04 40 46.0	-0.1
	5.6nm,0.6s,baz=69,slow=6.6,SNR=2.1						
FINES	FINESS Array B	63.48	334	P	P	04 42 55.8	+1.0
	8.1nm,0.5s,baz=45,slow=8.1,SNR=3.6						
GEYT	Alibeck	65.41	300	P	P	04 43 07.3	-0.5
	6.2nm,0.6s,baz=79,slow=7.5,SNR=2.3						
HFS	Hagfors	68.00	339	P	P	04 43 24.3	+0.3
	18nm,0.5s,baz=57,slow=5.3,SNR=5.8						
WRA	Warramunga Arr	68.02	197	P	P	04 43 23.8	-0.7
	14nm,0.9s,baz=13,slow=6.9,SNR=3.9						
KBZ	Khabaz	69.87	313	P	P	04 43 37.0	+1.2
	42nm,0.8s,baz=92,slow=4.7,SNR=4.4						
AKASG	Malin Array Be	70.80	325	P	P	04 43 41.1	-0.3
	8.4nm,0.6s,baz=34,slow=6.2,SNR=4.1						
ASAR	Alice Springs	71.73	197	P	P	04 43 48.5	+1.2
	12nm,0.8s,baz=12,slow=5.7,SNR=4.5						
EKA	Eskdalemuir Ar	76.05	345	P	P	04 44 12.9	+0.7
	3.2nm,0.4s,baz=17,slow=5.1,SNR=6.4						
MLR	Muntele Rosu	76.29	324	P	P	04 44 15.2	+1.3
	4.4nm,0.8s,baz=353,slow=8.1,SNR=2.2						
BRTR	Keskin Array B	77.45	315	P	P	04 44 19.7	-0.9
	6.8nm,0.9s,baz=74,slow=3.8,SNR=2.5						
GERES	GERESS Array B	77.87	333	P	P	04 44 22.9	+0.1
	5.9nm,0.8s,baz=44,slow=5.9,SNR=3.5						
MMAI	Mount Meron Ar	81.78	310	P	P	04 44 43.5	-0.7
	6.8nm,0.6s,baz=38,slow=7.3,SNR=2.5						
ESDC	Sonseca Array	91.16	341	P	P	04 45 28.4	-1.8
	2.2nm,1.0s,baz=9.4,slow=3.7,SNR=3.2						

CSEM ***14*** *04:33:00.8±0.9, 49°.81N×18°.52E, h1^{km}, Error ellipse: s-maj=15.9km s-min=12.3km az=47.0*

PRU 14 04:33:02.0, 49°.85N×**18°.47E, h0^{km}, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.21	267	*e*PG	Pg	04 33 05.7	-0.3
OKC				*e*SG	Sg	04 33 09.1	+0.4
	comp=Z,6.7nm,0.5s						
OKC	Ostrava-Krasne	0.21	267	Pg	Pg	04 33 05.7	-0.3
OKC				Sg	Sg	04 33 09.1	+0.4
	6.7nm,0.5s						
MORC	Moravsky Berou	0.60	263	*e*Pg	Pg	04 33 13.4	-0.2
MORC				*e*Sg	Sg	04 33 21.6	+0.2
MORC	Moravsky Berou	0.60	263	*e*PG	Pg	04 33 13.4	-0.2
MORC				*e*SG	Sg	04 33 21.6	+0.2
VRAC	Vranov	1.34	247	*e*Pg	Pg	04 33 26.3	-1.3
VRAC				*e*Sg	Sg	04 33 44.3	-0.6
VRAC	Vranov	1.34	247	*e*PG	Pg	04 33 26.3	-1.3
VRAC				*e*SG	Sg	04 33 44.3	-0.6
DPC	Dobruska-Polom	1.47	291	*e*SG	Sg	04 33 48.5	-0.7
	1.7nm,0.6s						
DPC	Dobruska-Polom	1.47	291	Sg	Sg	04 33 48.5	-0.7
	1.7nm,0.6s						

NEIC ***14*** *04:37:29.7±0.3, 45°.53N×151°.58E, h10^{km}, mb4.4/8, Error ellipse: s-maj=8.8km s-min=5.7km az=157.0*

SKHL ***14*** *04:37:30.2±1.0, 45°.26N×151°.89E, h45^{km}±4^{km}, mb5.2/6*

ISCJB ***14*** *04:37:31.4±0.4, 45°.53N±0°.06×151°.57E±0°.06, h32^{km}, mb4.1/33, Error ellipse: s-maj=10.4km s-min=3.5km az=148.5*

MOS ***14*** *04:37:32.9±1.1, 45°.57N×151°.43E, h42^{km}, mb4.3/18, Error ellipse: s-maj=8.6km s-min=7.3km az=58.9*

IDC ***14*** *04:37:35.3±2.5, 45°.56N×151°.45E, h52^{km}±21^{km}, mb3.7/21, mb1 3.9/26, mb1mx3.7/77, mbtmp4.0/26, ML3.9/3, Error ellipse: s-maj=18.7km s-min=14.9km az=145.0*

ISC 14 04:37:33.4±0.6**, 45°.55N**±0°.09×**151°.54E**±0°.07**, h32^{km}, n118,** σ**1^{s}15**/130**, mb4.2**/33**, 16C-9D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.61	264	*i* P	Pn	04 38 13.0	-0.3
KUR				AMB	AMB	04 38 16.0	
	42nm,0.3s						
KUR				AMB	AMB	04 38 16.0	
	91nm,0.3s						
KUR				AMB	AMB	04 38 16.0	
	192nm,0.3s						
KUR				*i* S	Sn	04 38 45.0	+1.2
KUR				A	A	04 38 50.0	
	764nm,0.4s						
KUR				A	A	04 38 50.0	
	162nm,0.4s						
KUR	Kuril'sk	2.61	264	*d i*PN	Pn	04 38 13.4	+0.1
KUR				*i* S	Sn	04 38 45.0	+1.2
KUR				pmax	pmax		
	comp=Z,192nm,0.3s						
KUR				pmax	pmax		
	comp=E,91nm,0.2s						
KUR				pmax	pmax		
	comp=Z,42nm,0.3s						
KUR				smax	smax		
	comp=N,764nm,0.4s						
KUR				smax	smax		
	comp=E,162nm,0.4s						
SHO	Shikotan	3.75	245	*i* P	Pn	04 38 27.0	-2.0
SHO				AMB	AMB	04 38 31.0	
	comp=E,60nm,0.4s						
SHO				AMB	AMB	04 38 31.0	
	comp=E,61nm,0.4s						
SHO				AMB	AMB	04 38 31.0	
	comp=E,107nm,0.4s						
SHO				*e*S	Sn	04 39 12.0	-0.1
SHO				A	A	04 39 20.0	
	comp=E,202nm,0.3s						
SHO				A	A	04 39 20.0	
	comp=E,136nm,0.3s						
SHO	Shikotan	3.75	245	*c i*PN	Pn	04 38 27.9	-1.1
SHO				*e*S	Sn	04 39 12.2	+0.1
SHO				pmax	pmax		
	comp=N,60nm,0.4s						
SHO				pmax	pmax		
	comp=E,61nm,0.4s						
SHO				pmax	pmax		
	comp=Z,107nm,0.3s						
SHO				smax	smax		
	comp=N,202nm,0.3s						
SHO				smax	smax		
	comp=E,136nm,0.3s						
YUK	Yuzh-Kuril'sk	4.32	251	*e*P	Pn	04 38 37.0	+0.2
YUK				AMB	AMB	04 38 45.0	
	comp=E,267nm,0.4s						
YUK				AMB	AMB	04 38 45.0	
	comp=E,199nm,0.4s						
YUK				AMB	AMB	04 38 45.0	
	comp=E,142nm,0.4s						
YUK				*e*S	Sn	04 39 27.0	+1.0
YUK				A	A	04 39 40.0	
	comp=E,436nm,0.5s						
YUK				A	A	04 39 40.0	
	comp=E,558nm,0.5s						
YUK	Yuzh-Kuril'sk	4.32	251	*e*PN	Pn	04 38 37.0	+0.2
YUK				*e*S	Sn	04 39 27.4	+1.4
YUK				pmax	pmax		
	comp=N,267nm,0.5s						
YUK				pmax	pmax		
	comp=E,199nm,0.4s						
YUK				pmax	pmax		
	comp=E,142nm,0.3s						
YUK				smax	smax		
	comp=E,558nm,0.5s						
YUK				smax	smax		
	comp=N,436nm,0.6s						
LAGR	Lagunnoye	4.36	252	*e*P	Pn	04 38 37.0	-0.3
LAGR				AMB	AMB	04 38 46.0	
	comp=N,198nm,0.4s						
LAGR				AMB	AMB	04 38 46.0	
	comp=N,277nm,0.4s						
LAGR				AMB	AMB	04 38 46.0	
	comp=N,214nm,0.4s						
LAGR				*e*S	Sn	04 39 30.0	+3.0
LAGR				A	A	04 39 38.0	
	comp=N,726nm,0.6s						
LAGR				A	A	04 39 38.0	
	comp=N,395nm,0.6s						
LAGR	Lagunnoye	4.36	252	*e*PN	Pn	04 38 37.6	+0.3
LAGR				*e*S	Sn	04 39 30.3	+3.3
LAGR				pmax	pmax		
	comp=E,277nm,0.4s						
LAGR				pmax	pmax		
	comp=Z,214nm,0.4s						
LAGR				pmax	pmax		
	comp=N,198nm,0.3s						
LAGR				smax	smax		
	comp=E,395nm,0.6s						
LAGR				smax	smax		
	comp=N,726nm,0.5s						
GRPR	Tuman	4.39	251	*e*P	Pn	04 38 38.0	+0.2
GRPR				AMB	AMB	04 38 44.0	
	comp=N,84nm,0.3s						
GRPR				AMB	AMB	04 38 44.0	
	comp=N,198nm,0.3s						
GRPR				*e*S	Sn	04 39 28.0	+0.2
GRPR				A	A	04 39 36.0	
	comp=N,164nm,0.3s						
GRPR				A	A	04 39 36.0	
	comp=N,311nm,0.3s						
GRPR	Tuman	4.39	251	*e*PN	Pn	04 38 38.0	+0.2
GRPR				*e*S	Sn	04 39 28.7	+0.9
GRPR				pmax	pmax		
	comp=Z,198nm,0.3s						
GRPR				pmax	pmax		
	comp=N,84nm,0.2s						
GRPR				smax	smax		
	comp=N,164nm,0.3s						
GRPR				smax	smax		
	comp=E,311nm,0.4s						
GLVR	Golovnino	4.66	249	*e*P	Pn	04 38 41.0	-0.5
GLVR				AMB	AMB	04 38 44.0	
	comp=E,93nm,0.4s						
GLVR				AMB	AMB	04 38 44.0	
	comp=E,130nm,0.4s						
GLVR				AMB	AMB	04 38 44.0	
	comp=E,242nm,0.4s						
GLVR				*e*S	Sn	04 39 35.0	+0.5
GLVR	Golovnino	4.66	249	*e*PN	Pn	04 38 41.3	-0.2
GLVR				*e*S	Sn	04 39 35.9	+1.4
GLVR				pmax	pmax		
	comp=N,93nm,0.4s						
GLVR				pmax	pmax		
	comp=E,130nm,0.4s						
GLVR				pmax	pmax		
	comp=Z,242nm,0.4s						
ASAJ	Asahikawa	6.52	260	P	Pn	04 39 08.3	+1.3
	comp=Z,3.8nm,0.3s,baz=77,slow=14,SNR=5.2						
ASAJ				S	Sn	04 40 14.4	-5.8
	comp=Z,0.2nm,0.3s,baz=149,slow=18,SNR=1.4						
ERM	Erimo	7.02	243	*e*Pn	Pn	04 39 13.8	-0.1
ERM	Erimo	7.02	243	*e*PN	Pn	04 39 13.8	-0.1
PETK	Petropavlovsk-	8.56	26	P	Pn	04 39 38.0	+3.0
	baz=177,slow=9.5						
PEA1	Petropavlovsk-	8.57	26	*e*Pn	Pn	04 39 38.0	+2.9
MJAR	Matsushiro Arr	13.48	233	P	Pn	04 40 45.1	+2.7
	comp=Z,0.2nm,0.3s,baz=75,slow=10,SNR=3.0						
MAJO	Matsushiro	13.48	233	*e*Pn	Pn	04 40 45.1	+2.7
MAJO	Matsushiro	13.48	233	*e*PN	Pn	04 40 45.1	+2.7
KLR	Kul'dur	13.90	292	P	Pn	04 40 48.3	+0.3
	baz=105,slow=15,SNR=1.3						
USRK	Ussuriysk Ar.	13.93	271	P	Pn	04 40 48.1	-0.3
	baz=78,slow=13						
KSRS	Korea Array	19.40	254	P	P	04 41 55.7	-0.9
	comp=Z,0.3nm,0.3s,baz=63,slow=10,SNR=5.2						
KSAR	Wonju Array Be	19.43	254	P	P	04 41 55.7	-1.3
KSAR	Wonju Array Be	19.43	254	P	P	04 41 55.7	-1.3
YAK	Yakutsk	20.78	330	P	P	04 42 09.8	-1.7
	comp=Z,29nm,0.4s,baz=129,slow=0.6,SNR=3.4						
H11S1	WAKE ISLAND Hy	29.76	150	T	T	05 16 30.6	
	baz=338,slow=76,SNR=5.2						
H11S3	WAKE ISLAND Hy	29.77	150	T	T	05 16 35.6	
	baz=338,slow=76,SNR=3.9						
H11S2	WAKE ISLAND Hy	29.78	150	T	T	05 16 31.8	
	baz=338,slow=76,SNR=4.2						
SONA0	Songino Array	30.72	291	*e*P	P	04 43 45.3	0.0
SONM	Songino Array	30.72	291	P	P	04 43 45.3	0.0
	comp=Z,0.5nm,0.4s,baz=75,slow=8.5,SNR=3.0						
RDOG	Red Dog Mine	32.41	30	*e*P	P	04 43 59.1	-0.7
	comp=Z,9.3nm,0.7s						
KDAK	Kodiak Island	35.71	49	P	P	04 44 28.1	-0.4
	comp=Z,4.4nm,0.6s,baz=266,slow=6.6,SNR=6.1						
ILAR	Eielson Array	38.17	38	P	P	04 44 50.0	+0.6
	comp=Z,0.5nm,0.8s,baz=258,slow=7.0,SNR=3.7						
ILAR	Eielson Array	38.17	38	P	P	04 44 50.0	+0.6
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
EGAK	Eagle	40.62	37	*e*P	P	04 45 09.3	-0.5
	comp=Z,2.5nm,0.8s						
INK	Inuvik	43.25	32	*e*P	P	04 45 31.6	+0.4
	comp=Z,2.9nm,0.9s						
INK	Inuvik	43.25	32	*e*P	P	04 45 31.6	+0.4
INK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MK32	Makanchi Array	46.53	298	*e*P	P	04 45 57.6	0.0
MK32				*e*PcP	PcP	04 47 31.7	+0.2
MKAR	Makanchi Array	46.53	298	P	P	04 45 57.6	0.0
	comp=Z,1.2nm,0.5s,baz=67,slow=7.0,SNR=6.4						
MKAR				PcP	PcP	04 47 31.7	+0.2
	comp=Z,0.7nm,0.6s,baz=66,slow=1.1,SNR=4.0						

KURK	**Kurchatov**	**47.12**	**304**	P	**P**	**04 46 01.0**	**-1.2**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KURBB	**Kurchatov Arra**	**47.21**	**304**	P	**P**	**04 46 01.0**	**-1.9**
	comp=Z,0.8nm,0.3s,baz=74,slow=8.1,SNR=9.0						
BVAR	**Borovoye Array**	**50.78**	**310**	P	**P**	**04 46 29.1**	**-1.1**
	comp=Z,0.6nm,0.4s,baz=76,slow=8.0,SNR=3.3						
BRVK	**Borovoye**	**50.82**	**310**	*e*P	**P**	**04 46 30.5**	**0.0**
BRVK	**Borovoye**	**50.82**	**310**	*e*P	**P**	**04 46 30.5**	**0.0**
RES	**Resolute Bay**	**52.32**	**18**	*e*P	**P**	**04 46 41.9**	**+0.6**
	comp=Z,1.0nm,0.6s						
RES	**Resolute Bay**	**52.32**	**18**	*e*P	**P**	**04 46 41.9**	**+0.6**
RES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SPA0	**Spitsbergen Ar**	**53.60**	**350**	*e*P	**P**	**04 46 49.2**	**-1.6**
SPITS	**Spitsbergen Ar**	**53.60**	**350**	P	**P**	**04 46 49.2**	**-1.6**
	comp=Z,1.1nm,0.6s,baz=74,slow=11,SNR=2.8						
JIRN	**Jiri**	**53.95**	**274**	*e*P	**P**	**04 46 55.0**	**+0.5**
	comp=Z,16nm,0.4s						
GUN	**Gumba**	**54.01**	**275**	*e*P	**P**	**04 46 56.7**	**+1.8**
RAMN	**Ramite**	**54.10**	**273**	*e*P	**P**	**04 46 55.5**	**+0.1**
GKN	**Gorkha**	**54.83**	**276**	*e*P	**P**	**04 47 02.7**	**+2.1**
	comp=Z,11nm,0.4s						
DANN	**Dangsing**	**55.23**	**277**	*e*P	**P**	**04 47 05.1**	**+1.4**
	comp=Z,22nm,0.6s						
KOLN	**Koldanda**	**55.69**	**276**	*e*P	**P**	**04 47 08.1**	**+1.2**
	comp=Z,14nm,0.6s						
ABKAR	**Akbulak array**	**58.35**	**310**	*e*P	**P**	**04 47 24.8**	**-0.3**
HAWA	**Hanford**	**58.49**	**54**	*e*P	**P**	**04 47 25.1**	**-1.1**
ARA0	**ARCESS Array S**	**58.62**	**341**	*e*P	**P**	**04 47 26.5**	**-0.2**
ARCES	**ARCESS Array B**	**58.62**	**341**	P	**P**	**04 47 26.5**	**-0.2**
	comp=Z,2.9nm,1.0s,baz=34,slow=6.6,SNR=4.3						
AKTO	**Aktyubinsk**	**58.71**	**312**	P	**P**	**04 47 26.4**	**-1.2**
	comp=Z,1.1nm,0.5s,baz=75,slow=11,SNR=3.7						
NIL	**Nilore**	**59.24**	**288**	*e*P	**P**	**04 47 31.7**	**+0.1**
NIL	**Nilore**	**59.24**	**288**	*e*P	**P**	**04 47 31.7**	**+0.1**
NV01	**Mina Array Sit**	**63.97**	**61**	*e*P	**P**	**04 48 03.8**	**+0.1**
NVAR	**Mina Array Bea**	**63.97**	**61**	P	**P**	**04 48 03.8**	**+0.1**
	comp=Z,0.4nm,0.6s,baz=286,slow=8.0,SNR=3.0						
FIA0	**FINESS Array S**	**64.65**	**334**	*e*P	**P**	**04 48 06.4**	**-1.1**
FIA0	**FINESS Array S**	**64.65**	**334**	*e*P	**P**	**04 48 06.4**	**-1.1**
FINES	**FINESS Array B**	**64.65**	**334**	P	**P**	**04 48 06.4**	**-1.1**
	comp=Z,2.4nm,0.5s,baz=36,slow=6.7,SNR=12						
WRA	**Warramunga Arr**	**67.03**	**198**	P	**P**	**04 48 22.1**	**-1.1**
	comp=Z,1.0nm,1.0s,baz=14,slow=6.6,SNR=4.6						
NB2	**NORSAR Subarra**	**69.00**	**341**	P	**P**	**04 48 34.1**	**-1.1**
	comp=Z,1.3nm,0.5s,baz=28,slow=6.2						
HFS	**Hagfors**	**69.19**	**339**	P	**P**	**04 48 35.7**	**-0.6**
	comp=Z,4.6nm,0.5s,baz=46,slow=6.2,SNR=27						
AS31	**Alice Springs**	**70.73**	**197**	*e*P	**P**	**04 48 45.8**	**-0.4**
	comp=Z,3.4nm,1.4s						
ASAR	**Alice Springs**	**70.73**	**197**	P	**P**	**04 48 45.8**	**-0.4**
	comp=Z,0.5nm,0.7s,baz=18,slow=5.3,SNR=4.7						
KIV	**Kislovodsk**	**70.84**	**314**	*e*P	**P**	**04 48 46.5**	**-0.4**
KIV	**Kislovodsk**	**70.84**	**314**	*e*P	**P**	**04 48 46.5**	**-0.4**
KBZ	**Khabaz**	**70.90**	**313**	P	**P**	**04 48 47.6**	**+0.5**
	comp=Z,6.0nm,0.7s,baz=54,slow=5.9,SNR=7.3						
AKASG	**Malin Array Be**	**71.93**	**326**	P	**P**	**04 48 52.2**	**-0.9**
	comp=Z,1.3nm,0.4s,baz=38,slow=6.0,SNR=4.8						
AKBB	**Malin Array Si**	**71.93**	**326**	*e*P	**P**	**04 48 52.2**	**-0.9**
	comp=Z,4.2nm,0.5s						
KIEV	**Kiev**	**71.94**	**326**	*e*P	**P**	**04 48 52.2**	**-1.0**
	comp=Z,3.2nm,0.5s						
KIEV	**Kiev**	**71.94**	**326**	*e*P	**P**	**04 48 52.2**	**-1.0**
KIEV				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BUR08	**Bucovina Ar. S**	**75.96**	**326**	*e*P	**P**	**04 49 17.5**	**+0.5**
BUR04	**Bucovina Ar. S**	**75.97**	**326**	*e*P	**P**	**04 49 17.2**	**+0.1**
BURAR	**Bucovina Array**	**75.98**	**326**	⇑*i*P	**P**	**04 49 17.2**	**+0.1**
BURAR	**Bucovina Array**	**75.98**	**326**	⇑P	**P**	**04 49 17.2**	**+0.1**
BIZ	**Bicaz**	**76.17**	**325**	⇓*i*P	**P**	**04 49 18.5**	**+0.4**
TESR	**Tescani**	**76.29**	**324**	⇓*i*P	**P**	**04 49 18.8**	**0.0**
CRVS	**Cervenica-Dubn**	**76.34**	**329**	*e*P	**P**	**04 49 19.5**	**+0.5**
CRVS				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CRVS	**Cervenica-Dubn**	**76.34**	**329**	*e*P	**P**	**04 49 19.5**	**+0.5**
TRPA	**Tarpa**	**76.58**	**328**	⇑*i*P	**P**	**04 49 20.8**	**+0.5**
CFR	**Carcaliu**	**76.74**	**323**	⇓*i*P	**P**	**04 49 21.0**	**-0.2**
CFR	**Carcaliu**	**76.74**	**323**	⇓P	**P**	**04 49 21.1**	**-0.2**
MORC	**Moravsky Berou**	**76.98**	**331**	⇑*i*P	**P**	**04 49 22.7**	**+0.1**
MORC	**Moravsky Berou**	**76.98**	**331**	⇑P	**P**	**04 49 22.7**	**+0.1**
CLL	**Collm**	**77.09**	**335**	*i* P	**P**	**04 49 22.9**	**-0.3**
	comp=Z,4.0nm,0.7s						
TIRR	**Tirgusor**	**77.19**	**322**	⇑*i*P	**P**	**04 49 24.4**	**+0.6**
TIRR	**Tirgusor**	**77.19**	**322**	⇑P	**P**	**04 49 24.4**	**+0.6**
EKA	**Eskdalemuir Ar**	**77.24**	**346**	P	**P**	**04 49 24.1**	**+0.2**
	comp=Z,1.1nm,0.4s,baz=21,slow=4.7,SNR=15						
TLB	**Topalu**	**77.25**	**322**	⇓*i*P	**P**	**04 49 24.5**	**+0.4**
TLB	**Topalu**	**77.25**	**322**	⇓P	**P**	**04 49 24.6**	**+0.4**
MLR	**Muntele Rosu**	**77.41**	**324**	P	**P**	**04 49 25.0**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=74,slow=18,SNR=4.6						
MLR	**Muntele Rosu**	**77.41**	**324**	⇑*i*P	**P**	**04 49 25.9**	**+0.7**
MLR	**Muntele Rosu**	**77.41**	**324**	⇑P	**P**	**04 49 25.9**	**+0.7**
VYHS	**Vyhne**	**77.63**	**330**	*e*P	**P**	**04 49 26.8**	**+0.5**
VYHS				pmax	pmax		
	comp=Z,5.0nm,1.5s						
VYHS	**Vyhne**	**77.63**	**330**	*e*P	**P**	**04 49 26.8**	**+0.5**
DRGR		**77.63**	**327**	⇑*i*P	**P**	**04 49 26.5**	**+0.1**
DRGR		**77.63**	**327**	⇑P	**P**	**04 49 26.5**	**+0.1**
VRAC	**Vranov**	**77.70**	**332**	⇓*i*P	**P**	**04 49 27.2**	**+0.6**
VRAC	**Vranov**	**77.70**	**332**	⇓P	**P**	**04 49 27.2**	**+0.6**
VOIR		**77.82**	**325**	⇑*i*P	**P**	**04 49 28.3**	**+0.9**
VOIR		**77.82**	**325**	⇑P	**P**	**04 49 28.3**	**+0.9**
BR101	**Keskin Array S**	**78.50**	**316**	*e*P	**P**	**04 49 32.0**	**+0.6**
BRTR	**Keskin Array B**	**78.50**	**316**	P	**P**	**04 49 32.0**	**+0.6**
	comp=Z,0.9nm,0.7s,baz=48,slow=2.1,SNR=4.2						
TXAR	**Lajitas Array**	**79.04**	**59**	P	**P**	**04 49 34.3**	**-0.2**
	comp=Z,0.2nm,0.6s,baz=309,slow=5.3,SNR=4.2						
GEC2	**GERESS Array S**	**79.04**	**333**	*e*P	**P**	**04 49 34.3**	**+0.1**
	comp=Z,11nm,1.8s						
GERES	**GERESS Array B**	**79.04**	**333**	P	**P**	**04 49 34.3**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=46,slow=5.6,SNR=5.2						
VTS	**Vitosha**	**80.91**	**324**	⇑*i*P	**P**	**04 49 44.7**	**+0.2**
VTS	**Vitosha**	**80.91**	**324**	⇑P	**P**	**04 49 44.7**	**+0.2**
TOA1	**Torodi Ar. Sit**	**115.53**	**327**	*e*PKPdf	**PKPdf**	**04 56 10.9**	**-1.5**
TORD	**Torodi Ar. Bea**	**115.53**	**327**	PKP	**PKPdf**	**04 56 10.9**	**-1.5**
	comp=Z,0.7nm,1.2s,baz=26,slow=2.4						

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*IDC **14** 04:41:26.6±0.9, 45°.45N×151°.84E, h0^{km}, mb3.8/13, mb1 3.9/14, mb1mx3.7/74, mbtmp3.8/14, ML3.5/1, MS4.5/1, Ms1 4.5/1, ms1mx3.4/72, Error ellipse: s-maj=28.3km s-min=21.2km az=85.0*

*NEIC **14** 04:41:28.4±0.4, 45°.50N×151°.73E, h10^{km}, mb4.0/4, Error ellipse: s-maj=11.2km s-min=7.8km az=135.0*

*ISCJB **14** 04:41:29.9±0.5, 45°.40N±0°.08×151°.64E±0°.07, h32^{km}, mb3.8/17, MS4.5/1, Error ellipse: s-maj=12.6km s-min=4.9km az=152.4*

*SKHL **14** 04:41:29.4±0.3, 45°.62N×151°.71E, h39^{km}±6^{km}, mb4.7/3*

*MOS **14** 04:41:30.8±1.3, 45°.42N×151°.62E, h39^{km}, mb4.2/9, Error ellipse: s-maj=14.4km s-min=11.8km az=150.5*

ISC 14 04:41:32.0±0.7**, 45°.5N**±0°.1×**151°.62E**±0°.08**, h32^{km}, n48,** σ**1^{s}.09**/56**, mb3.8**/17**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.66**	**266**	*e*P	**Pn**	**04 42 11.0**	**-1.6**
KUR				AMB	AMB	04 42 14.0	
	29nm,0.3s						
KUR				AMB	AMB	04 42 14.0	
	21nm,0.3s						
KUR				AMB	AMB	04 42 14.0	
	77nm,0.3s						
KUR				*e*S	**Sn**	**04 42 42.0**	**-1.7**
KUR				A	A	04 42 48.0	
	887nm,0.4s						
KUR				A	A	04 42 48.0	
	265nm,0.4s						
KUR	**Kuril'sk**	**2.66**	**266**	*e*PN	**Pn**	**04 42 11.5**	**-1.1**
KUR				*e*S	**Sn**	**04 42 42.8**	**-0.9**
KUR				pmax	pmax		
	comp=N,29nm,0.3s						
KUR				pmax	pmax		
	comp=Z,77nm,0.3s						
KUR				pmax	pmax		
	comp=E,21nm,0.1s						
KUR				smax	smax		
	comp=N,887nm,0.5s						
KUR				smax	smax		
	comp=E,265nm,0.4s						
SHO	**Shikotan**	**3.78**	**246**	*e*P	**Pn**	**04 42 27.8**	**-0.2**
SHO				AMB	AMB	04 42 31.0	
	comp=E,8.0nm,0.3s						
SHO				AMB	AMB	04 42 31.0	
	comp=E,22nm,0.3s						
SHO				AMB	AMB	04 42 31.0	
	comp=E,41nm,0.3s						
SHO				*e*S	**Sn**	**04 43 10.6**	**-0.8**
SHO				A	A	04 43 17.0	
	comp=E,87nm,0.4s						
SHO				A	A	04 43 17.0	
	comp=E,143nm,0.4s						
SHO	**Shikotan**	**3.78**	**246**	*e*PN	**Pn**	**04 42 26.8**	**-1.2**
SHO				*e*S	**Sn**	**04 43 11.1**	**-0.3**
SHO				pmax	pmax		
	comp=Z,41nm,0.3s						
SHO				pmax	pmax		
	comp=N,8.0nm,0.2s						
SHO				pmax	pmax		
	comp=E,22nm,0.3s						
SHO				smax	smax		
	comp=N,87nm,0.4s						
SHO				smax	smax		
	comp=E,143nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**4.35**	**253**	*e*P	**Pn**	**04 42 35.0**	**-0.9**
YUK				*e*S	**Sn**	**04 43 24.4**	**-1.1**
YUK				A	A	04 43 37.0	
	comp=E,225nm,0.3s						
YUK				A	A	04 43 37.0	
	comp=E,480nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**4.35**	**253**	PN	**Pn**	**04 42 35.6**	**-0.3**
YUK				*e*S	**Sn**	**04 43 25.4**	**-0.1**
YUK				smax	smax		
	comp=E,480nm,0.3s						
YUK				smax	smax		
	comp=N,225nm,0.4s						
GRPR	**Tuman**	**4.43**	**252**	*e*P	**Pn**	**04 42 39.0**	**+2.1**
GRPR				AMB	AMB	04 42 46.0	
	comp=N,76nm,0.3s						
GRPR				AMB	AMB	04 42 46.0	
	comp=N,34nm,0.3s						
GRPR				AMB	AMB	04 42 46.0	
	comp=N,107nm,0.3s						
GRPR				*e*S	**Sn**	**04 43 29.0**	**+1.7**
GRPR				A	A	04 43 33.0	
	comp=N,182nm,0.4s						
GRPR				A	A	04 43 33.0	
	comp=N,214nm,0.4s						
GRPR	**Tuman**	**4.43**	**252**	*e*PN	**Pn**	**04 42 39.8**	**+2.9**
GRPR				*e*S	**Sn**	**04 43 29.2**	**+1.9**
GRPR				pmax	pmax		
	comp=E,34nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,107nm,0.3s						
GRPR				pmax	pmax		
	comp=N,76nm,0.2s						
GRPR				smax	smax		
	comp=N,182nm,0.4s						
GRPR				smax	smax		
	comp=E,214nm,0.5s						
ASAJ	**Asahikawa**	**6.56**	**261**	Pn	**Pn**	**04 43 07.1**	**+0.8**
	comp=E,0.9nm,0.3s,baz=93,slow=19,SNR=2.0						
ERM	**Erimo**	**7.04**	**243**	*e*Pn	**Pn**	**04 43 13.2**	**+0.4**
ERM				*e*Sn	**Sn**	**04 44 30.5**	**-1.2**
ERM	**Erimo**	**7.04**	**243**	*e*PN	**Pn**	**04 43 13.2**	**+0.4**
EGAK	**Eagle**	**40.63**	**37**	*e*P	**P**	**04 49 06.8**	**-1.8**
	comp=E,0.8nm,0.8s						
INK	**Inuvik**	**43.27**	**32**	*e*P	**P**	**04 49 31.1**	**+1.1**
	comp=E,0.9nm,0.5s						
INK	**Inuvik**	**43.27**	**32**	*e*P	**P**	**04 49 31.1**	**+1.1**
INK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MK32	**Makanchi Array**	**46.61**	**298**	*e*P	**P**	**04 49 56.3**	**-0.7**
MKAR	**Makanchi Array**	**46.61**	**298**	P	**P**	**04 49 56.3**	**-0.6**
	comp=Z,0.5nm,0.7s,baz=72,slow=8.7,SNR=3.0						
KURK	**Kurchatov**	**47.21**	**304**	P	**P**	**04 50 04.1**	**+2.6**
KURBB	**Kurchatov Arra**	**47.30**	**304**	P	**P**	**04 50 04.1**	**+1.9**
	comp=Z,0.4nm,0.4s,baz=76,slow=8.9,SNR=6.0						
JAY	**Jayapura**	**48.77**	**195**	LR	LR	05 08 15.5	
	comp=Z,480nm,20.4s,baz=270,slow=33						
BVAR	**Borovoye Array**	**50.86**	**310**	P	**P**	**04 50 31.2**	**+1.8**
	comp=Z,0.4nm,0.4s,baz=96,slow=5.5,SNR=2.8						
SPA0	**Spitsbergen Ar**	**53.67**	**350**	*e*P	**P**	**04 50 49.3**	**-0.7**
SPITS	**Spitsbergen Ar**	**53.67**	**350**	P	**P**	**04 50 49.3**	**-0.7**
	comp=Z,3.2nm,1.0s,baz=11,slow=10,SNR=2.1						
B017	**Montesano**	**55.83**	**55**	*e*P	**P**	**04 51 06.1**	**+0.1**
ABKAR	**Akbulak array**	**58.44**	**310**	*e*P	**P**	**04 51 24.2**	**-0.2**
NIL	**Nilore**	**59.32**	**288**	*e*P	**P**	**04 51 31.1**	**+0.3**
NIL	**Nilore**	**59.32**	**288**	*e*P	**P**	**04 51 31.1**	**+0.3**
FIA0	**FINESS Array S**	**64.74**	**334**	*e*P	**P**	**04 52 05.4**	**-1.2**
FIA0	**FINESS Array S**	**64.74**	**334**	*e*P	**P**	**04 52 05.4**	**-1.2**
FINES	**FINESS Array B**	**64.74**	**334**	P	**P**	**04 52 05.4**	**-1.2**
	comp=Z,0.5nm,0.4s,baz=55,slow=7.7,SNR=3.8						
WRA	**Warramunga Arr**	**66.99**	**198**	P	**P**	**04 52 20.7**	**-0.8**
	comp=Z,0.7nm,0.7s,baz=14,slow=6.8,SNR=3.6						
NB2	**NORSAR Subarra**	**69.08**	**341**	P	**P**	**04 52 33.7**	**-0.7**
	comp=Z,0.4nm,0.5s,baz=28,slow=6.2						
HFS	**Hagfors**	**69.27**	**339**	P	**P**	**04 52 34.8**	**-0.7**
	comp=Z,1.1nm,0.5s,baz=83,slow=6.0,SNR=6.4						
AS31	**Alice Springs**	**70.69**	**197**	*e*P	**P**	**04 52 44.1**	**-0.5**
	comp=Z,3.9nm,1.5s						
ASAR	**Alice Springs**	**70.69**	**197**	P	**P**	**04 52 44.1**	**-0.5**
	comp=Z,0.6nm,0.8s,baz=10,slow=7.8,SNR=4.1						
KBZ	**Khabaz**	**70.98**	**313**	P	**P**	**04 52 47.0**	**+0.7**
	comp=Z,2.4nm,0.8s,baz=69,slow=7.8,SNR=4.2						
KBZ	**Khabaz**	**70.98**	**313**	P	**P**	**04 52 47.0**	**+0.7**
KBZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MBWA	**Marble Bar**	**72.39**	**211**	*e*P	**P**	**04 52 54.9**	**+0.1**
BUR08	**Bucovina Ar. S**	**76.05**	**326**	*e*P	**P**	**04 53 16.2**	**+0.1**
BUR04	**Bucovina Ar. S**	**76.06**	**326**	*e*P	**P**	**04 53 16.1**	**-0.1**
EKA	**Eskdalemuir Ar**	**77.31**	**346**	P	**P**	**04 53 23.1**	**+0.1**
	comp=Z,0.4nm,0.4s,baz=30,slow=5.8,SNR=4.0						
BR101	**Keskin Array S**	**78.59**	**316**	*e*P	**P**	**04 53 30.9**	**+0.4**
BRTR	**Keskin Array B**	**78.59**	**316**	P	**P**	**04 53 30.9**	**+0.4**
	comp=Z,0.3nm,0.4s,baz=45,slow=4.7,SNR=3.2						
TXAR	**Lajitas Array**	**79.02**	**59**	P	**P**	**04 53 33.3**	**+0.3**
	comp=Z,0.2nm,0.6s,baz=302,slow=4.5,SNR=4.5						
GEC2	**GERESS Array S**	**79.13**	**333**	*e*P	**P**	**04 53 33.1**	**-0.2**
	comp=Z,3.9nm,1.2s						
GEC2	**GERESS Array S**	**79.13**	**333**	*e*P	**P**	**04 53 33.1**	**-0.2**
GEC2				pmax	pmax		
	comp=Z,4.0nm,1.2s						
GERES	**GERESS Array B**	**79.13**	**333**	P	**P**	**04 53 33.1**	**-0.2**
	comp=Z,0.4nm,0.6s,baz=10,slow=6.0,SNR=2.6						
TOA1	**Torodi Ar. Sit**	**115.62**	**327**	*e*PKPdf	**PKPdf**	**05 00 11.2**	**-0.1**
TORD	**Torodi Ar. Bea**	**115.62**	**327**	PKP	**PKPdf**	**05 00 11.2**	**-0.1**
	comp=Z,0.6nm,1.1s,baz=298,slow=3.1						

DJA 14 04:42:06.5±0.4**, 6°S**±5°×**10°5E**±°**, h10^{km}, M3.7**/7**, MLv3.7**/7**, Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CGJI	**Cibinong**	**0.53**	**150**	P	Pg	04 42 16.6	-0.3
SBJI	**Serang**	**0.71**	**88**	P	Pg	04 42 19.9	-0.3
BLSI	**Bandar Lampung**	**0.80**	**347**	P	Pg	04 42 21.2	-0.7
KASI	**Kota Agung**	**1.11**	**304**	P	Pb	04 42 26.8	-1.0
DBJI	**Dramaga**	**1.38**	**107**	P	Pn	04 42 32.1	+0.2
KLI	**Kotabumi**	**1.40**	**336**	P	Pb	04 42 32.4	-0.3
SKJI	**Sukabumi**	**1.41**	**127**	P	Pn	04 42 32.6	+0.3
MDSI	**Maura Dua**	**2.06**	**323**	P	Pn	04 42 42.2	+0.9
LEM	**Lembang**	**2.29**	**107**	P	Pn	04 42 44.3	-0.1
JCJI	**Jatiwangi**	**2.85**	**97**	P	Pg	04 43 01.5	+0.3

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*ISCJB **14** 04:43:42.7±0.5, 6°.17S±0°.08×105°.38E±0°.07, h26^{km}, mb3.9/10, Error ellipse: s-maj=14.2km s-min=4.7km az=39.0*

*DJA **14** 04:43:42.3±0.4, 6°S±5°×10°5E±°, h10^{km}, M4.4/13, MLv4.4/13*

*IDC **14** 04:43:48.4±2.1, 6°.19S×105°.29E, h71^{km}±14^{km}, mb3.7/10, mb1 4.0/13, mb1mx3.6/67, mbtmp4.1/13, Error ellipse: s-maj=39.5km s-min=8.3km az=37.0*

ISC 14 04:43:43.7±0.7**, 6°.16S**±0°.07×**105°.37E**±0°.06**, h26^{km}, n35,** σ**1^{s}.81**/38**, mb4.0**/10**, 2C-4D, Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CGJI	**Cibinong**	**0.55**	**145**	P	**Pb**	**04 43 52.3**	**-2.5**
SBJI	**Serang**	**0.75**	**87**	P	**Pb**	**04 43 55.2**	**-3.0**
BLSI	**Bandar Lampung**	**0.80**	**351**	P	**Pb**	**04 43 56.8**	**-2.2**
KASI	**Kota Agung**	**1.08**	**306**	P	**Pn**	**04 44 02.0**	**-1.1**
TNG	**Tangerang**	**1.27**	**91**	P	**Pb**	**04 44 04.7**	**-2.2**
KLI	**Kotabumi**	**1.39**	**338**	P	**Pn**	**04 44 07.6**	**+0.2**
DBJI	**Dramaga**	**1.42**	**106**	P	**Pb**	**04 44 07.6**	**-2.0**
SKJI	**Sukabumi**	**1.44**	**126**	P	**Pb**	**04 44 08.3**	**-1.6**
MDSI	**Maura Dua**	**2.05**	**324**	P	**Pn**	**04 44 17.7**	**+1.2**
LEM	**Lembang**	**2.33**	**107**	P	**Pb**	**04 44 25.1**	**+0.1**
	31nm,0.3s,baz=198,slow=3.0,SNR=17						
LEM				S	**Sb**	**04 44 55.1**	**+1.6**
	12nm,0.3s,baz=180,slow=20,SNR=2.2						
LEM	**Lembang**	**2.33**	**107**	P	**Pb**	**04 44 21.0**	**-4.1**
CISI	**Cisompet, Garu**	**2.79**	**120**	P	**Pn**	**04 44 27.1**	**+0.3**
JCJI	**Jatiwangi**	**2.90**	**97**	P	**Pn**	**04 44 28.8**	**+0.6**
CMJI	**Cimerak**	**3.45**	**118**	P	**Pn**	**04 44 36.4**	**+0.6**
KPJI	**Karang Pucung**	**3.72**	**108**	P	**Pb**	**04 44 44.7**	**-4.0**
MASI	**Maura Aman, Be**	**4.33**	**314**	P	**Pn**	**04 44 48.6**	**+0.6**
PSI	**Prapat**	**10.99**	**324**	P	**Pn**	**04 46 23.0**	**+3.6**
	0.5nm,0.3s,baz=181,slow=4.0,SNR=2.9						
BATI	**Baumata**	**18.54**	**104**	P	**Pn**	**04 48 01.6**	**+2.6**
	10nm,0.3s,baz=346,slow=6.3,SNR=3.3						
FITZ	**Fitzroy Crossi**	**23.06**	**123**	P	**P**	**04 48 49.6**	**+2.2**
	4.2nm,1.0s,baz=312,slow=8.3,SNR=4.6						
FITZ				S	**S**	**04 52 56.3**	**-0.6**
	1.8nm,0.8s,baz=274,slow=17,SNR=5.9						
CMAR	**Chiang Mai Arr**	**25.27**	**346**	P	**P**	**04 49 09.8**	**+1.7**
	2.1nm,0.8s,baz=177,slow=8.5,SNR=6.7						
WRA	**Warramunga Arr**	**31.29**	**119**	P	**P**	**04 50 00.9**	**-1.1**
	2.1nm,0.9s,baz=296,slow=9.6,SNR=12						
WRA				S	**S**	**04 55 05.4**	**-2.1**
	0.4nm,0.9s,baz=287,slow=25,SNR=2.8						
ASAR	**Alice Springs**	**32.49**	**125**	P	**P**	**04 50 12.3**	**-0.2**
	1.8nm,0.8s,baz=304,slow=8.0,SNR=13						
ASAR				S	**S**	**04 55 25.3**	**-0.8**
	1.0nm,0.9s,baz=298,slow=16,SNR=4.5						
CTA	**Charters Tower**	**42.01**	**113**	P	**P**	**04 51 33.2**	**-0.1**
	4.0nm,0.9s,baz=300,slow=14,SNR=3.4						
STKA	**Stephens Creek**	**42.40**	**132**	P	**P**	**04 51 37.0**	**+0.7**
	3.1nm,0.5s,baz=304,slow=7.6,SNR=6.9						
SONM	**Songino Array**	**53.77**	**1**	P	**P**	**04 53 02.9**	**-1.1**
	1.1nm,1.1s,baz=189,slow=9.5,SNR=4.4						
MKAR	**Makanchi Array**	**56.57**	**341**	P	**P**	**04 53 22.5**	**-1.6**
	0.3nm,0.5s,baz=150,slow=9.2,SNR=2.9						
BRTR	**Keskin Array B**	**80.07**	**312**	P	**P**	**04 55 50.6**	**-1.0**
	1.3nm,0.6s,baz=137,slow=7.1,SNR=6.6						
VRI	**Vrincioaia**	**86.53**	**317**	⇑*i*P	**P**	**04 56 24.9**	**+0.3**
PLOR	**Plostina**	**86.58**	**317**	⇓*i*P	**P**	**04 56 26.5**	**+1.6**
TESR	**Tescani**	**86.72**	**317**	⇓*i*P	**P**	**04 56 25.4**	**-0.1**
MLR	**Muntele Rosu**	**86.99**	**316**	P	**P**	**04 56 27.3**	**+0.3**
	0.7nm,0.6s,baz=39,slow=5.8,SNR=5.0						
MLR	**Muntele Rosu**	**86.99**	**316**	⇓*i*P	**P**	**04 56 27.4**	**+0.4**
VOIR		**87.60**	**316**	⇑*i*P	**P**	**04 56 29.5**	**-0.4**
BURAR	**Bucovina Array**	**87.91**	**318**	⇓*i*P	**P**	**04 56 32.2**	**+0.9**
TXAR	**Lajitas Array**	**144.20**	**46**	PKP	PKPbc	05 03 14.9	-1.4
	1.3nm,1.1s,baz=222,slow=1.2,SNR=4.4						

IDC 14 04:44:48.0±1.4**, 9°.25N**×**94°.14E, h78^{km}**±**8^{km}, mb3.5**/8**, mb1 3.6**/8**, mb1mx3.3**/69**, mbtmp3.8**/8**, Error ellipse: s-maj=58.8km s-min=16.5km az=57.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**38.76**	**347**	P	P	04 52 02.9	-2.0
	1.3nm,0.9s,baz=170,slow=8.8,SNR=5.2						
SONM	**Songino Array**	**39.83**	**13**	P	P	04 52 15.4	+1.5
	0.2nm,0.4s,baz=210,slow=8.3,SNR=2.0						
KURBB	**Kurchatov Arra**	**43.22**	**346**	P	P	04 52 41.0	-0.3
	0.9nm,0.8s,baz=159,slow=7.6,SNR=5.3						
ZALV	**Zalesovo Beam**	**45.20**	**352**	P	P	04 52 57.0	-0.2
	1.5nm,0.6s,baz=175,slow=8.8,SNR=5.2						
WRA	**Warramunga Arr**	**49.07**	**127**	P	P	04 53 26.9	-0.8
	1.3nm,0.7s,baz=305,slow=8.7,SNR=9.3						
WRA				pP	pP	04 53 46.8	-0.3
	3.7nm,0.7s,baz=305,slow=8.7,SNR=18						
ASAR	**Alice Springs**	**50.80**	**131**	P	P	04 53 40.2	-0.7
	1.0nm,0.8s,baz=307,slow=6.8,SNR=6.8						
ASAR				pP	pP	04 54 00.6	+0.2
	2.8nm,0.8s,baz=313,slow=7.6,SNR=13						
CTA	**Charters Tower**	**58.99**	**120**	P	P	04 54 41.5	+1.5
	2.0nm,0.8s,baz=302,slow=9.5,SNR=2.2						
CTA				pP	pP	04 54 59.8	-0.1
	4.4nm,1.0s,baz=314,slow=12,SNR=3.4						
BRTR	**Keskin Array B**	**61.54**	**310**	P	P	04 54 58.3	+1.0
	0.9nm,0.7s,baz=119,slow=8.4,SNR=3.7						

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*NEIC **14** 05:17:17.4±0.0, 16°.35N×98°.40W, h5^{km}, MD4.1(MEX), After MEX.*

MEX 14 05:17:17.5±0.8**, 16°.37N**×**98°.40W, h5^{km}, MD4.1, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.27**	**85**	*i* P	Pg	05 17 21.9	-0.7
PNIG				*e*S	Sg	05 17 26.3	+0.1
PNIG	**Pinotepa**	**0.27**	**85**	*i* P	Pg	05 17 21.9	-0.7
PNIG				*i* S	Sg	05 17 26.1	0.0
TLIG	**Tlapa**	**1.20**	**352**	*i* P	Pg	05 17 36.5	-4.0
TLIG				*i* S	Sg	05 17 51.8	-4.2
TLIG	**Tlapa**	**1.20**	**352**	*i* P	Pg	05 17 36.5	-4.0
VHO	**Vista Hermosa**	**1.75**	**66**	*e*P	Pn	05 17 45.8	-2.8
VHO				*i* S	Sn	05 18 06.5	-4.9
VHO	**Vista Hermosa**	**1.75**	**66**	*e*P	Pn	05 17 46.9	-1.7
CAIG	**El Cayaco**	**1.91**	**291**	*e*P	Pn	05 17 47.5	-3.2
CAIG				*i* S	Sn	05 18 10.4	-4.7
CAIG	**El Cayaco**	**1.91**	**291**	*e*P	Pn	05 17 47.5	-3.2
CAIG				*i* S	Sn	05 18 10.4	-4.7
MEIG	**Mezcala**	**1.94**	**323**	*e*P	Pn	05 17 47.7	-3.4
MEIG				*e*S	Sn	05 18 11.5	-4.4
MEIG	**Mezcala**	**1.94**	**323**	*e*P	Pn	05 17 47.7	-3.4
MEIG				*e*S	Sn	05 18 11.5	-4.4
PLIG	**Platanillo**	**2.27**	**333**	*e*P	Pn	05 17 53.3	-2.5
PLIG				*i* S	Sn	05 18 19.9	-4.2
PLIG	**Platanillo**	**2.27**	**333**	*e*P	Pn	05 17 53.9	-1.9
YAIG	**Yautepec**	**2.56**	**346**	*e*P	Pn	05 17 57.4	-2.4
YAIG				*i* S	Sn	05 18 26.6	-4.8
YAIG	**Yautepec**	**2.56**	**346**	*e*P	Pn	05 17 59.1	-0.7

MEX 14 05:22:39.2±0.4**, 19°.27N**×**98°.86W, h6^{km}**±4^{km}**, MD3.5, Central Mexico**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VCVM	**Valle de Chalc**	**0.10**	**287**	*e*P	Pg	05 22 41.0	-0.5
VCVM				*i* S	Sg	05 22 42.6	-0.6
AMVM	**AMECAMECA**	**0.15**	**154**	*e*P	Pg	05 22 42.2	-0.2
AMVM				*i* S	Sg	05 22 44.7	+0.1
PPM	**Popocatepetl**	**0.30**	**133**	*e*P	Pg	05 22 44.9	-0.3
PPM				*e*S	Sg	05 22 48.9	-0.3
YAIG	**Yautepec**	**0.45**	**206**	*e*P	Pg	05 22 47.6	-0.4
YAIG				*i* S	Sg	05 22 54.1	+0.1
MAVM	**Malinalco, Edo**	**0.68**	**243**	*e*P	Pg	05 22 51.4	-0.9
MAVM				*e*S	Sg	05 23 00.8	-0.3
PLIG	**Platanillo**	**1.07**	**215**	*e*P	Pg	05 22 59.8	+0.2

IDC 14 05:24:19.6±1.2**, 8°.47N**×**95°.12E, h0^{km}, mb3.9**/8**, mb1 4.0**/8**, mb1mx3.6**/71**, mbtmp3.9**/8**, Error ellipse: s-maj=51.2km s-min=18.2km az=54.0, Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**39.73**	**346**	P	P	05 31 52.5	-1.5
	1.0nm,0.8s,baz=169,slow=7.2,SNR=6.6						
SONM	**Songino Array**	**40.38**	**12**	P	P	05 32 00.1	+0.7
	0.3nm,0.3s,baz=212,slow=7.8,SNR=2.7						
KURBB	**Kurchatov Arra**	**44.22**	**345**	P	P	05 32 29.7	-0.8
	0.6nm,0.5s,baz=161,slow=8.0,SNR=3.5						
GEYT	**Alibeck**	**44.41**	**317**	P	P	05 32 31.6	-0.7
	3.4nm,0.3s,baz=147,slow=8.6,SNR=3.2						
ZALV	**Zalesovo Beam**	**46.10**	**352**	P	P	05 32 46.1	+0.7
	1.8nm,0.7s,baz=178,slow=9.7,SNR=3.4						
WRA	**Warramunga Arr**	**47.83**	**127**	P	P	05 32 59.1	-0.4
	1.3nm,0.7s,baz=306,slow=8.8,SNR=14						
ASAR	**Alice Springs**	**49.56**	**131**	P	P	05 33 12.7	-0.1
	0.9nm,0.7s,baz=312,slow=8.1,SNR=11						
BRTR	**Keskin Array B**	**62.78**	**310**	P	P	05 34 48.5	+1.2
	0.7nm,0.6s,baz=116,slow=8.4,SNR=4.6						

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*ISCJB **14** 05:27:34.7±0.5, 33°.32N±0°.02×35°.33E±0°.04, h6^{km}±4^{km}, Error ellipse: s-maj=6.7km s-min=2.8km az=23.8*

*CSEM **14** 05:27:34.8±0.2, 33°.33N×35°.34E, h5^{km}, MD2.4, Error ellipse: s-maj=5.3km s-min=1.9km az=114.0*

*GII **14** 05:27:34.4±0.0, 33°.28N×35°.37E, h2^{km}, MD2.4/8*

*GRAL **14** 05:27:35.9±0.3, 33°.30N×35°.36E, h0^{km}±4^{km}, MD3.0*

ISC 14 05:27:35.3±0.9**, 33°.31N**±0°.02×**35°.36E**±0°.03**, h13^{km}**±8^{km}**,**

n43,σ0^{s}.69/68,Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNTI	Hanita	0.27	214	Pg	Pg	05 27 40.5	-0.4
HNTI				Sg	Sg	05 27 44.9	+0.2
HNTI	Hanita	0.27	214	Pg	Pg	05 27 40.5	-0.4
HNTI				Sg	Sg	05 27 44.9	+0.2
KSDI	Kefar Szold	0.28	114	Pg	Pg	05 27 41.0	-0.1
KSDI				Sg	Sg	05 27 45.2	+0.2
KSDI	Kefar Szold	0.28	114	Pg	Pg	05 27 41.0	-0.1
KSDI				Sg	Sg	05 27 45.2	+0.2
MMA0B	Mount Meron ar	0.29	172	Pg	Pg	05 27 40.8	-0.6
MMA0B				Sg	Sb	05 27 46.0	-1.3
MMA0B	Mount Meron ar	0.29	172	Pg	Pg	05 27 40.8	-0.6
MMA0B				Sg	Sb	05 27 46.0	-1.3
NATI	Neve Ativ	0.32	98	Pg	Pg	05 27 41.6	-0.2
NATI				Sg	Sg	05 27 46.3	+0.1
SHBL	Chebaa	0.33	83	*e*P	Pg	05 27 41.7	-0.3
SHBL	Chebaa	0.33	83	*e*P	Pg	05 27 41.7	-0.3
QRWL	Qaraoun	0.36	49	*e*P	Pg	05 27 42.6	-0.1
QRWL	Qaraoun	0.36	49	*e*P	Pg	05 27 42.6	-0.1
DQRL	Deir Qamar	0.44	24	*e*P	Pg	05 27 43.7	-0.2
DQRL				*e*S	Sg	05 27 49.7	-0.1
DQRL	Deir Qamar	0.44	24	*e*P	Pg	05 27 43.7	-0.2
DQRL				*e*S	Sg	05 27 49.7	-0.1
RCY	Rachaya	0.44	65	*e*P	Pg	05 27 43.9	-0.2
KSHT	Keshet	0.50	130	Pg	Pb	05 27 45.3	-0.7
KSHT	Keshet	0.50	130	Pg	Pb	05 27 45.3	-0.7
BLGI	Bet Lehem HaGe	0.59	194	Pg	Pg	05 27 46.5	-0.3
BLGI				Sg	Sb	05 27 56.0	+0.3
BLGI	Bet Lehem HaGe	0.59	194	Pg	Pg	05 27 46.5	-0.3
BLGI				Sg	Sb	05 27 56.0	+0.3
BHL	Bhannes	0.65	23	*e*P	Pg	05 27 47.6	-0.3
BHL				*e*S	Sg	05 27 56.4	-0.1
BHL	Bhannes	0.65	23	*e*P	Pg	05 27 47.6	-0.3
BHL				*e*S	Sg	05 27 56.4	-0.1
OFRI	‘Ofer	0.75	205	Pg	Pg	05 27 49.3	-0.5
OFRI				Sg	Sb	05 28 00.9	+0.5
OFRI	‘Ofer	0.75	205	Pg	Pg	05 27 49.3	-0.5
OFRI				Sg	Sb	05 28 00.9	+0.5
MMLI	Mount Malkishu	0.87	176	Pg	Pg	05 27 51.3	-0.8
MMLI	Mount Malkishu	0.87	176	Pg	Pg	05 27 51.3	-0.8
HMDT	Nahal Hemdat	1.06	172	Pg	Pg	05 27 54.6	-1.1
HMDT				Sg	Sb	05 28 10.4	+1.1
HMDT	Nahal Hemdat	1.06	172	Pg	Pg	05 27 54.6	-1.1
HMDT				Sg	Sb	05 28 10.4	+1.1
HWQ	Hawqa	1.09	27	*e*P	Pg	05 27 55.5	-0.7
HWQ				*e*S	Sg	05 28 10.1	-0.3
HWQ	Hawqa	1.09	27	*e*P	Pg	05 27 55.5	-0.7
HWQ				*e*S	Sg	05 28 10.1	-0.3
SLTI	Sal’it	1.10	194	Pg	Pg	05 27 55.2	-1.2
SLTI				Sg	Sb	05 28 10.8	+0.5
SLTI	Sal’it	1.10	194	Pg	Pg	05 27 55.2	-1.2
SLTI				Sg	Sb	05 28 10.8	+0.5
FKH	Fakeheh	1.28	43	*e*P	Pg	05 27 58.9	-1.1
DSI	Dead Sea	1.73	179	Pn	Pn	05 28 05.4	+0.3
DSI				Sn	Sb	05 28 29.5	+0.9
DSI	Dead Sea	1.73	179	Pn	Pn	05 28 05.4	+0.3
DSI				Sn	Sb	05 28 29.5	+0.9
AMAZ	Amatzia	1.81	192	Pn	Pn	05 28 07.0	+0.9
AMAZ				Sn	Sb	05 28 31.4	+0.6
AMAZ	Amatzia	1.81	192	Pn	Pn	05 28 07.0	+0.9
AMAZ				Sn	Sb	05 28 31.4	+0.6
YTIR	Yattir	1.95	186	Pn	Pn	05 28 09.4	+1.3
YTIR	Yattir	1.95	186	Pn	Pn	05 28 09.4	+1.3
ZFRI	Zfri	2.75	183	Pn	Pn	05 28 19.6	+0.6
ZFRI	Zfri	2.75	183	Pn	Pn	05 28 19.6	+0.6
PRNI	Paran	2.96	186	Pn	Pn	05 28 22.9	+0.9
PRNI	Paran	2.96	186	Pn	Pn	05 28 22.9	+0.9
MBRI	Mt Berech	3.52	186	Pn	Pn	05 28 30.7	+0.9
MBRI	Mt Berech	3.52	186	Pn	Pn	05 28 30.7	+0.9

KRSC 14 05:36:36.7±1.6**,49°.46N×156°.66E,h16^{km}**±28^{km}**,ML3.7, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril’s	1.28	344	*e*P	Pn	05 36 58.5	-1.5
SKR				*e*S	Sb	05 37 15.3	-1.4
PAU	Pauzhetka	2.02	3	*e*P	Pn	05 37 11.4	+1.3
PAU				*e*S	Sb	05 37 37.1	-0.8
KDTR	Khodutka, Kamc	2.52	20	*e*P	Pb	05 37 19.7	-1.9
KDTR				*e*S	Sb	05 37 51.2	-1.2
MIPR	Malaya Ipel’ka	2.83	1	*e*P	Pn	05 37 22.8	+1.5
ASAK	Asacha	3.04	14	P	Pb	05 37 27.6	-2.8
MTVR	Mutnovka	3.18	17	*e*P	Pn	05 37 29.6	+3.3
MTVR				*e*S	Sn	05 38 07.7	+3.8
RUS	Russkaya	3.20	21	*e*P	Pn	05 37 29.5	+3.1
RUS				*e*S	Sn	05 38 08.0	+3.8
UGLR	Uglovaya	4.00	19	*e*P	Pn	05 37 41.6	+4.2
AVH	Avacha	4.03	18	P	Pn	05 37 42.6	+4.7
SDLR	Sedlovina	4.07	19	*e*P	Pn	05 37 41.4	+2.9
SPN	Mys Shipunski	4.21	29	*e*P	Pn	05 37 44.8	+4.5
SPN				*e*S	Sn	05 38 33.3	+4.1
GNL	Ganaly	4.32	10	*e*P	Pn	05 37 46.5	+4.6
MKZ	Mys Kozlova	5.99	30	*e*P	Pn	05 38 07.9	+3.3

*ISCJB **14** 05:50:23.8±0.9,31°.48N±0°.04×103°.22E±0°.09,h10^{km}, mb3.5/3,Error ellipse: s-maj=11.5km s-min=5.2km az=165.1*

*BJI **14** 05:50:29.5,31°.38N×103°.33E,h20^{km},ML3.6/16,Ms3.4/3, Ms7 3.3/2*

*IDC **14** 05:50:47.3±5.1,29°.28N×106°.49E,h0^{km},mb3.6/2, mb1 3.8/4,mb1mx3.3/72,mbtmp3.6/4,ML4.0/2,MS3.1/1, Ms1 3.3/1,ms1mx2.6/60,Error ellipse: s-maj=120.4km s-min=35.5km az=129.0*

ISC 14 05:50:27.1±0.8**,31°.38N**±0°.04×**103°.18E**±0°.07**,h10^{km},n10, σ2^{s}.75**/17**,mb3.6**/3**,2C,Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CD2	Chengdu	0.68	133	⇑*i*Pg	Pg	05 50 38.5	-1.8
CD2				Sg	Sg	05 50 47.6	-1.7
CD2				smax	smax		
	comp=N,9µm,0.7s						
CD2				smax	smax		
	comp=E,6µm,0.7s						
LZH	Lanzhou	4.73	7	*e*Pg	Pg	05 51 56.5	-1.3
LZH				Sg	Sg	05 52 57.3	-1.8
LZH				smax	smax		
	comp=N,85nm,1.1s						
LZH				smax	smax		
	comp=E,94nm,1.2s						
LZH				LR	LR		
	comp=N,380nm,5.2s						
LZH				LR	LR		
	comp=E,350nm,4.6s						
LZH				LR	LR		
	comp=Z,390nm,6.0s						
XAN	Xi’an	5.52	60	Pg	Pb	05 52 05.6	+1.9
XAN				Sn	Sn	05 52 50.8	-2.3
XAN				Sg	Sb	05 53 12.3	+2.3
XAN				smax	smax		
	comp=N,94nm,0.9s						
XAN				smax	smax		
	comp=E,74nm,0.8s						
GYA	Guiyang	5.78	147	Pn	Pn	05 51 55.0	+2.0
GYA				Pg	Pg	05 52 14.9	-2.9
GYA				Sn	Sn	05 52 55.3	-4.1
GYA				Sg	Sb	05 53 21.8	+4.4
GYA				smax	smax		
	comp=N,60nm,0.9s						
GYA				smax	smax		
	comp=E,90nm,0.9s						
GTA	Gaotai	8.47	342	⇑P	Pg	05 53 09.1	-0.2
GTA				pP	Pn	05 53 15.0	+45
GTA				sP		05 53 18.3	
GTA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
CMAR	Chiang Mai Arr	13.42	198	Pn	P	05 53 50.5	+3.3
	comp=Z,0.4nm,0.3s,baz=11,slow=10,SNR=4.7						
CMAR				LR	LR	05 59 27.2	
	comp=Z,86nm,18.7s,baz=239,slow=41						
WMQ	Urumqi	17.42	320	*e*P	Pn	05 54 27.8	-2.5
WMQ				smax	smax		
	comp=N,24nm,0.7s						
WMQ				smax	smax		
	comp=E,16nm,0.5s						
KSRS	Korea Array	21.27	67	P	P	05 55 17.1	+3.6
	comp=E,0.3nm,0.3s,baz=249,slow=9.6,SNR=5.9						
WRA	Warramunga Arr	59.15	145	P	P	06 00 26.7	-1.5
	comp=E,0.6nm,0.5s,baz=337,slow=7.6,SNR=12						
ASAR	Alice Springs	62.14	148	P	P	06 00 47.8	-0.8
	comp=E,0.3nm,0.7s,baz=339,slow=6.3,SNR=4.1						

JMA 14 05:56:06.9±1.0**,45°.63N×151°.63E,h30^{km},M4.1,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	4.78	244	P	Pn	05 57 16.0	-0.8
NEM2				*e*S	Sn	05 58 07.4	-3.8
JRA	Rausu	4.93	252	P	Pn	05 57 20.7	+1.8
JNK	Nakash	5.34	250	P	Pn	05 57 25.6	+1.1
JAK	Akkeshi	5.63	245	P	Pn	05 57 27.2	-1.3
JTKR	Abashiri--Toko	5.74	256	P	Pn	05 57 32.0	+2.0
JAR	Ashorobuto	6.09	250	P	Pn	05 57 36.3	+1.5
JAR				*e*S	Sn	05 58 41.3	-2.1
JMP	Maruseppu	6.10	258	P	Pn	05 57 37.8	+2.8
JKK2	Kamakawa 2	6.56	258	P	Pn	05 57 43.6	+2.3
ASAJ	Asahikawa	6.59	260	P	Pn	05 57 45.0	+3.3
JCH	Churui	6.67	246	P	Pn	05 57 43.4	+0.6
JCH				*e*S	Sn	05 58 53.3	-4.4
JNBK	Urakawa-nobuka	7.23	246	P	Pn	05 57 50.2	-0.2
JKB	Kayabe	8.53	248	P	Pn	05 58 07.8	-0.5
JKB				*e*S	Sn	05 59 35.9	-7.6

GUC 14 06:06:32.4±0.5**,24°.18S×67°.66W,h215^{km}**±10^{km}**,ML4.1, 2C-1D,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO02	Mina Guanaco	2.02	240	⇑*i*P	Pn	06 07 13.8	+1.3
GO02				*e*S	S	06 07 45.9	+2.4
GO02				IAML		06 07 47.3	
	comp=E,613nm,0.1s						
PB06	IPOC Station P	2.29	309	*e*P	Pn	06 07 17.0	+1.8
PB06				*e*S	S	06 07 49.8	+1.5
PB06				IAML		06 07 52.4	
	comp=E,717nm,0.3s						
PB14	IPOC Station P	2.54	259	*e*P	Pn	06 07 20.0	+2.0
PB14				*e*S	S	06 07 56.1	+2.8
PB14				IAML		06 07 57.5	
	comp=E,366nm,0.3s						
PB05	IPOC Station P	2.68	299	*e*P	Pn	06 07 21.6	+2.3
PB05				*e*S	S	06 07 58.2	+2.5
PB05				IAML		06 08 01.2	
	comp=E,305nm,0.3s						
PB10	IPOC Station P	2.73	283	*e*P	Pn	06 07 22.7	+2.9
PB10				*e*S	S	06 07 58.6	+2.0
PB10				IAML		06 08 03.4	
	comp=E,194nm,0.3s						
PB09	IPOC Station P	2.78	328	⇓*i*P	Pn	06 07 22.7	+2.1
PB09				*e*S	S	06 08 00.2	+2.2
PB09				IAML		06 08 01.0	
	comp=N,388nm,0.4s						
PB03	IPOC Station P	2.87	317	*e*P	Pn	06 07 23.3	+1.8
PB03				*i* S	S	06 08 01.2	+1.6
PB03				IAML		06 08 03.5	
	comp=N,644nm,0.2s						
PB04	IPOC Station P	2.94	308	*e*P	Pn	06 07 24.2	+1.9
PB04				*e*S	S	06 08 03.0	+2.0
PB07	IPOC Station P	3.19	319	⇑*i*P	Pn	06 07 27.1	+1.8
PB07				*i* S	S	06 08 07.6	+1.4

SJA 14 06:11:39.5±0.8**,27°.00S×66°.00W,h17^{km}**±13^{km}**,ML3.6, MW3.7,1D,Catamarca Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AHML	Horco Molle	0.64	70	⇓*i*P	Pb	06 11 52.3	+0.1
AHML				*i* S	Sb	06 12 01.4	+0.6
AHML				IAML		06 12 02.5	
	comp=Z,1µm,0.2s						
CYA	Choya	1.44	173	*e*P	Pg	06 12 07.2	-0.1
CYA				*e*S	Sg	06 12 26.7	+0.5
CYA				IAML		06 12 28.0	
	comp=Z,1µm,0.8s						
SLA	San Lorenzo	2.32	11	*e*P	Pb	06 12 19.3	-1.7
SLA				*e*S	Sb	06 12 49.9	+0.5
SLA				IAML		06 12 56.6	
	comp=Z,275nm,0.4s						
VCA	Vinchina	2.60	228	*i* P	Pb	06 12 23.7	-2.1
VCA				*i* S	Sg	06 13 00.8	-2.5
VCA				IAML		06 13 03.8	
	comp=Z,590nm,0.4s						
AGUA	GUANDACOL	3.31	221	*i* P	Pn	06 12 33.8	+3.2
AGUA				*i* S	Sb	06 13 21.2	+3.4
HJA	Humahuaca	3.82	8	*e*P	Pn	06 12 40.3	+2.4
HJA				IAML		06 14 01.2	
	comp=Z,39nm,0.4s						
ACDV	Cuesta del Vie	4.18	220	*i* P	Pn	06 12 46.0	+3.3
AROD	Rodeo	4.39	223	*i* P	Pn	06 12 49.1	+3.4
AMOG	MOGNA	4.49	209	*i* P	Pn	06 12 48.9	+2.1
TCA	Tanti	4.49	164	*i* P	Pn	06 12 48.5	+1.6
TCA				*e*S	Sg	06 13 58.2	-5.5
TCA				IAML		06 14 05.8	
	comp=Z,99nm,0.4s						
RTLL	Cerro Villicun	4.82	206	*i* P	Pn	06 12 54.2	+2.8
RTLL				*e*S	Sg	06 14 10.2	-4.2
RTLL				IAML		06 14 16.5	
	comp=Z,43nm,0.4s						
YJA	Yavi	4.83	5	*e*P	Pb	06 12 58.9	-5.0
YJA				IAML		06 14 23.6	
	comp=Z,11nm,0.8s						
RTCV	Cerro Valdivia	5.32	204	*i* P	Pn	06 13 00.3	+2.0
RTCV				*e*S	Sg	06 14 23.7	-6.7
ACAN	Cantantal	5.35	191	*i* P	Pn	06 13 01.6	+3.0
MRA	San Martin	5.40	177	*i* P	Pn	06 13 00.9	+1.5
MRA				*e*S	Sb	06 14 25.4	+7.3
MRA				IAML		06 14 44.3	
	comp=Z,61nm,0.3s						
RTLS	Leoncito	5.58	210	*i* P	Pn	06 13 05.3	+3.3
RTLS				IAML		06 13 06.6	
	comp=Z,14nm,0.4s						
AUSP	Uspallata	5.98	209	*i* P	Pn	06 13 10.8	+3.3
ASAL	Salagasta	6.09	203	*i* P	Pn	06 13 11.4	+2.6
ARCO	CERRO ARCO	6.35	203	*i* P	Pn	06 13 15.1	+2.6
ARCO				IAML		06 13 15.5	
	comp=Z,25nm,0.3s						
AAGR	Agrelo	6.54	201	*i* P	Pn	06 13 17.6	+2.6
RFA	San Rafael	8.03	195	*i* P	Pn	06 13 36.4	+1.0
RFA				IAML		06 13 36.5	
	comp=Z,8.2nm,0.4s						

*NIED **14** 06:13:00,45°.80N×151°.70E,h20^{km},Mw4.4 Best double couple: M$_0$4.42000×10^{15} NP1:ϕ_s214.00000°,δ32.00000°, λ86.00000°. NP2:ϕ_s39.00000°,δ58.00000°,λ93.00000°.*

*SKHL **14** 06:13:46.4±0.6,45°.13N×152°.00E,h39^{km}±5^{km},mb5.0/4*

*JMA **14** 06:13:46.2±0.9,45°.76N×151°.74E,h30^{km},M4.6*

*ISCJB **14** 06:13:48.3±0.5,45°.40N±0°.07×151°.60E±0°.07,h32^{km}, mb3.9/24,MS3.8/14,Error ellipse: s-maj=11.7km s-min=3.6km az=146.7*

*MOS **14** 06:13:50.4±1.2,45°.42N×151°.50E,h49^{km},mb4.2/11,Error ellipse: s-maj=9.7km s-min=7.7km az=59.5*

*IDC **14** 06:13:53.7±2.4,45°.63N×151°.27E,h60^{km}±21^{km},mb3.7/20, mb1 3.8/25,mb1mx3.7/75,mbtmp3.9/25,ML3.6/2,MS3.7/18, Ms1 3.7/18,ms1mx3.4/73,Error ellipse: s-maj=18.8km s-min=12.3km az=148.0*

ISC 14 06:13:50.4±0.6**,45°.42N**±0°.08×**151°.55E**±0°.06**,h32^{km},n110, σ1^{s}.93**/108**,mb3.9**/24**,MS3.8**/14**,8C-8D,Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril’sk	2.61	267	*e*P	Pn	06 14 31.0	+0.8
KUR				AMB	AMB	06 14 33.0	
	109nm,0.3s						
KUR				*e*S	Sn	06 15 04.0	+3.3
KUR				A	A	06 15 08.0	
	585nm,0.4s						
KUR				A	A	06 15 08.0	
	146nm,0.4s						
KUR	Kuril’sk	2.61	267	*e*PN	Pn	06 14 31.4	+1.1
KUR				*e*S	Sn	06 15 04.1	+3.3
KUR				pmax	pmax		
	comp=Z,109nm,0.3s						
KUR				smax	smax		
	comp=N,585nm,0.3s						
KUR				smax	smax		
	comp=E,146nm,0.4s						
SHO	Shikotan	3.71	247	*i* P	Pn	06 14 45.1	-0.4
SHO				AMB	AMB	06 14 55.0	
	comp=E,35nm,0.3s						
SHO				AMB	AMB	06 14 55.0	
	comp=E,39nm,0.3s						
SHO				AMB	AMB	06 14 55.0	
	comp=E,57nm,0.3s						
SHO				*e*S	Sn	06 15 29.6	+1.6
SHO				A	A	06 15 39.0	
	comp=E,118nm,0.3s						
SHO				A	A	06 15 39.0	
	comp=E,140nm,0.3s						
SHO	Shikotan	3.71	247	*c* *i*PN	Pn	06 14 45.0	-0.4
SHO				*e*S	Sn	06 15 30.8	+2.8
SHO				pmax	pmax		
	comp=Z,57nm,0.3s						
SHO				pmax	pmax		
	comp=N,35nm,0.4s						
SHO				pmax	pmax		
	comp=E,39nm,0.3s						
SHO				smax	smax		
	comp=N,118nm,0.3s						
SHO				smax	smax		
	comp=E,14nm,0.4s						
YUK	Yuzh-Kuril’sk	4.28	253	*i* P	Pn	06 14 53.0	-0.3
YUK				AMB	AMB	06 14 57.0	
	comp=E,20nm,0.3s						
YUK				AMB	AMB	06 14 57.0	
	comp=E,41nm,0.3s						
YUK				AMB	AMB	06 14 57.0	
	comp=E,164nm,0.3s						
YUK				*e*S	Sn	06 15 45.0	+2.8
YUK				A	A	06 16 01.0	
	comp=E,228nm,0.4s						
YUK				A	A	06 16 01.0	
	comp=E,232nm,0.4s						
YUK	Yuzh-Kuril’sk	4.28	253	*d* *i*PN	Pn	06 14 53.8	+0.5
YUK				*e*S	Sn	06 15 47.0	+4.8
YUK				pmax	pmax		
	comp=N,20nm,0.3s						
YUK				pmax	pmax		
	comp=Z,164nm,0.3s						
YUK				pmax	pmax		
	comp=E,41nm,0.1s						
YUK				smax	smax		
	comp=N,228nm,0.4s						
YUK				smax	smax		
	comp=E,232nm,0.5s						
LAGR	Lagunnoye	4.33	254	*e*P	Pn	06 14 55.0	+1.1
LAGR				*e*S	Sn	06 15 48.0	+4.8
LAGR				A	A	06 16 00.0	
	comp=E,539nm,0.4s						
LAGR				A	A	06 16 00.0	
	comp=E,378nm,0.4s						
LAGR	Lagunnoye	4.33	254	PN	Pn	06 14 55.2	+1.3
LAGR				*e*S	Sn	06 15 48.1	+4.8
LAGR				smax	smax		
	comp=N,539nm,0.5s						
LAGR				smax	smax		
	comp=E,378nm,0.4s						
GRPR	Tuman	4.36	253	*e*P	Pn	06 14 55.0	+0.6
GRPR				AMB	AMB	06 14 59.0	
	comp=E,61nm,0.3s						
GRPR				AMB	AMB	06 14 59.0	
	comp=E,155nm,0.3s						
GRPR				*e*S	Sn	06 15 47.0	+3.0
GRPR				A	A	06 15 48.7	
	comp=E,231nm,0.3s						
GRPR				A	A	06 15 48.7	
	comp=E,173nm,0.3s						
GRPR	Tuman	4.36	253	*e*PN	Pn	06 14 55.6	+1.2
GRPR				*e*S	Sn	06 15 47.7	+3.7
GRPR				pmax	pmax		
	comp=Z,155nm,0.3s						
GRPR				pmax	pmax		
	comp=E,61nm,0.2s						
GRPR				smax	smax		
	comp=E,173nm,0.3s						
GRPR				smax	smax		
	comp=N,231nm,0.4s						
GLVR	Golovnino	4.62	251	*e*P	Pn	06 14 58.0	0.0
GLVR				*e*S	Sn	06 15 54.0	+3.5
GLVR	Golovnino	4.62	251	*e*PN	Pn	06 14 58.5	+0.5
GLVR				*e*S	Sn	06 15 54.5	+4.0
NEM2	Nemuro 2	4.64	246	P	Pn	06 14 56.9	-1.3
NEM2				*e*S	Sn	06 15 49.7	-1.2
JRA	Rausu	4.82	254	P	Pn	06 15 01.8	+1.1
JNK	Nakash	5.22	252	P	Pn	06 15 06.4	+0.2
JAK	Akkeshi	5.49	246	P	Pn	06 15 08.5	-1.4
JAK				*e*S	Sn	06 16 11.7	-0.2
JTKR	Abashiri--Toko	5.64	258	P	Pn	06 15 13.1	+1.2
JAR	Ashorobuto	5.97	252	P	Pn	06 15 17.1	+0.6
JAR				*e*S	Sn	06 16 25.7	+2.0
SKR	Severo-Kuril’s	6.09	28	*i* PN	Pn	06 15 22.4	+4.3
YSS	Yuzh-Sakhalins	6.30	287	*e*PN	Pn	06 15 11.2	-10
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
YSS				MLR	MLR		
	comp=Z,700nm,15.0s						
JKK2	Kamakawa 2	6.47	259	P	Pn	06 15 24.8	+1.5
ASAJ	Asahikawa	6.51	262	P	Pn	06 15 26.1	+2.2
	comp=Z,1.6nm,0.3s,baz=5.8,slow=6.6,SNR=9.8						
ASAJ				LR	LR	06 18 09.8	
	comp=Z,672nm,18.8s,baz=19,slow=40						
ASAJ	Asahikawa	6.51	262	P	Pn	06 15 25.9	+2.0
MYR	Moyori	6.74	245	*e*P	Pn	06 15 27.4	+0.3
JFR	Furan	6.81	254	P	Pn	06 15 29.3	+1.2
JNBK	Urakawa-nobuka	7.09	247	P	Pn	06 15 30.8	-1.1
JBT2	Biratori 2	7.12	252	P	Pn	06 15 31.6	-0.7
JNB	Noboribetsu	8.14	252	P	Pn	06 15 47.4	+1.2
JKB	Kayabe	8.40	249	P	Pn	06 15 48.6	-1.2
JKB				*e*S	Sn	06 17 17.1	-6.4
PETK	Petropavlovsk-	8.68	25	P	Pn	06 15 56.1	+2.4
	baz=211,slow=11						
MAJO	Matsushiro	13.41	233	*i* PN	P	06 17 04.7	-2.7
MJAR	Matsushiro Arr	13.41	233	P	Pn	06 16 59.9	+1.5
	baz=34,slow=8.8,SNR=3.6						
MJAR				LR	LR	06 22 44.1	
	comp=Z,78nm,21.2s,baz=40,slow=40						
USRK	Ussuriysk Ar.	13.94	272	P	Pn	06 17 04.0	-1.7
	baz=81,slow=12						
USRK				LR	LR	06 22 30.4	
	comp=Z,251nm,19.0s,baz=54,slow=38						
KLR	Kul’dur	13.96	293	P	Pn	06 17 05.8	0.0
	comp=Z,0.0nm,0.3s,baz=102,slow=16,SNR=3.2						
MA2	Magadan	14.19	358	*e*P	Pn	06 17 08.2	-0.7
MA2	Magadan	14.19	358	*i* P	Pn	06 17 08.3	-0.7
MA2				pmax	pmax		
	comp=Z,12nm,1.0s						
ZEA	Zeya	17.75	307	*e*P	P	06 17 56.3	+0.8
ZEA				pmax	pmax		
	comp=Z,23nm,1.0s						
KSRS	Korea Array	19.37	254	P	P	06 18 11.9	-1.4
	comp=Z,0.1nm,0.3s,baz=54,slow=12,SNR=3.3						
KSRS				LR	LR	06 24 58.7	
	comp=Z,163nm,19.7s,baz=48,slow=34						
JNU	Nakatsue	20.10	240	LR	LR	06 27 30.9	
	comp=Z,191nm,18.4s,baz=297,slow=41						
H11N2	WAKE ISLAND Hy	28.59	149	T	T	06 50 20.7	
	baz=337,slow=74						
H11N1	WAKE ISLAND Hy	28.60	149	T	T	06 50 29.6	
	baz=337						
H11N3	WAKE ISLAND Hy	28.61	149	T	T	06 50 31.8	
	baz=337,slow=74						
H11S1	WAKE ISLAND Hy	29.64	150	T	T	06 51 49.1	
	baz=338						
H11S3	WAKE ISLAND Hy	29.65	150	T	T	06 51 44.8	
	baz=338,slow=74						
H11S2	WAKE ISLAND Hy	29.66	150	T	T	06 51 55.6	
	baz=338,slow=74						
ULN	Ulaanbaatar	30.33	291	*e*P	P	06 19 59.5	+0.5
ULN	Ulaanbaatar	30.33	291	*i* P	P	06 19 59.5	+0.5
ULN				pmax	pmax		
	comp=Z,1.0nm,1.0s						
SONM	Songino Array	30.77	291	LR	LR	06 33 29.5	
	comp=Z,176nm,18.6s,baz=56,slow=38						
TLY	Talaya	31.85	299	LR	LR	06 34 31.7	
	comp=Z,211nm,18.9s,baz=74,slow=39						
GUMO	Guam	32.23	192	LR	LR	06 34 15.7	
	comp=Z,53nm,18.7s,baz=18,slow=38						
KDAK	Kodiak Island	35.79	49	P	P	06 20 45.7	-0.6
	comp=Z,3.1nm,0.7s,baz=242,slow=12,SNR=3.4						
ILAR	Eielson Array	38.27	37	P	P	06 21 06.5	-0.8
	comp=Z,2.0nm,1.2s,baz=271,slow=7.0,SNR=9.2						

ILAR	Eielson Array	38.27	37	P	P	06 21 06.5	-0.8
ILAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ZALV	Zalesovo Beam	42.52	307	LR	LR	06 40 24.7	
	comp=Z,142nm,19.9s,baz=68,slow=38						
INK	Inuvik	43.36	32	P	P	06 21 49.9	+0.8
	comp=Z,2.0nm,0.9s,baz=244,slow=5.0,SNR=3.1						
MKAR	Makanchi Array	46.59	298	LR	LR	06 42 52.0	
	comp=Z,215nm,18.3s,baz=46,slow=38						
BVAR	Borovoye Array	50.87	310	LR	LR	06 45 31.7	
	comp=Z,116nm,20.1s,baz=28,slow=38						
CMAR	Chiang Mai Arr	51.00	256	P	P	06 22 49.6	+0.3
	comp=Z,1.0nm,0.4s,baz=35,slow=8.5,SNR=5.4						
CMAR				LR	LR	06 46 48.5	
	comp=Z,54nm,18.6s,baz=45,slow=39						
CMAR	Chiang Mai Arr	51.00	256	*e*P	P	06 22 51.5	+2.3
CMAR	Chiang Mai Arr	51.00	256	*e*P	P	06 22 51.6	+2.3
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
RES	Resolute Bay	52.44	18	LR	LR	06 49 09.0	
	comp=Z,45nm,18.8s,baz=246,slow=40						
YKA	Yellowknife Ar	52.64	36	P	P	06 23 00.9	0.0
	comp=Z,0.8nm,0.8s,baz=302,slow=7.6,SNR=5.2						
SPITS	Spitsbergen Ar	53.73	350	LR	LR	06 47 52.5	
	comp=Z,38nm,18.1s,baz=45,slow=38						
ARU	Arti	55.26	318	*e*P	P	06 23 21.2	+1.1
ARU	Arti	55.26	318	*c i*P	P	06 23 21.3	+1.1
ARU						06 25 19.7	
ARU				S	S	06 30 59.9	-1.5
ARU				SS	SS	06 34 40.4	-4.8
ARU				pmax	pmax		
	comp=Z,5.0nm,1.7s						
ARCES	ARCESS Array B	58.75	341	P	P	06 23 42.8	-1.9
	comp=Z,3.2nm,1.0s,baz=27,slow=8.1,SNR=4.1						
AKTO	Aktyubinsk	58.80	312	LR	LR	06 51 35.1	
	comp=Z,226nm,18.2s,baz=49,slow=39						
NVAR	Mina Array Bea	64.02	61	P	P	06 24 22.0	+0.9
	comp=Z,0.5nm,0.6s,baz=296,slow=6.9,SNR=2.4						
FINES	FINESS Array B	64.78	334	P	P	06 24 23.1	-2.2
	comp=Z,1.2nm,0.5s,baz=34,slow=7.0,SNR=8.3						
FINES	FINESS Array B	64.78	334	*e*P	P	06 24 25.6	+0.3
FINES	FINESS Array B	64.78	334	*e*P	P	06 24 25.6	+0.3
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
GEYT	Alibeck	66.35	300	P	P	06 24 33.1	-2.8
	comp=Z,2.4nm,0.3s,baz=76,slow=12,SNR=2.4						
PDAR	Pinedale Array	66.42	53	P	P	06 24 37.4	+0.9
	comp=Z,0.2nm,0.6s,baz=262,slow=6.3,SNR=2.3						
WRA	Warramunga Arr	66.91	198	P	P	06 24 40.3	+0.9
	comp=Z,1.4nm,1.1s,baz=15,slow=6.7,SNR=3.7						
NB2	NORSAR Subarra	69.13	341	P	P	06 24 51.5	-1.6
	comp=Z,2.4nm,0.7s,baz=28,slow=6.5						
NOA	NORSAR Array B	69.13	341	LR	LR	06 56 57.3	
	comp=Z,38nm,22.0s,baz=255,slow=38						
HFS	Hagfors	69.32	339	P	P	06 24 52.0	-2.1
	comp=Z,1.8nm,0.5s,baz=46,slow=6.2,SNR=13						
ASAR	Alice Springs	70.61	197	P	P	06 25 04.2	+1.7
	comp=Z,1.3nm,1.1s,baz=18,slow=5.3,SNR=4.0						
ASAR	Alice Springs	70.61	197	*e*P	P	06 25 06.9	+4.4
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KBZ	Khabaz	71.00	313	P	P	06 25 02.6	-2.0
	comp=Z,7.0nm,1.0s,baz=30,slow=3.6,SNR=8.2						
KBZ				LR	LR	07 00 23.2	
	comp=Z,194nm,19.8s,baz=72,slow=40						
AKASG	Malin Array Be	72.04	326	P	P	06 25 09.4	-1.4
	comp=Z,0.5nm,0.4s,baz=40,slow=7.5,SNR=4.9						
AKASG				LR	LR	06 59 38.6	
	comp=Z,59nm,18.5s,baz=200,slow=38						
AKASG	Malin Array Be	72.04	326	*e*P	P	06 25 11.1	+0.2
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BURAR	Bucovina Array	76.09	326	⇑*i*P	P	06 25 34.0	-0.7
BURAR	Bucovina Array	76.09	326	⇑P	P	06 25 34.0	-0.7
TRPA	Tarpa	76.70	328	⇓*i*P	P	06 25 38.5	+0.5
VRI	Vrincioaia	76.89	324	⇑*i*P	P	06 25 48.8	+10
MORC	Moravsky Berou	77.10	331	⇑*i*P	P	06 25 39.9	-0.4
MORC	Moravsky Berou	77.10	331	⇑P	P	06 25 39.9	-0.4
MORC	Moravsky Berou	77.10	331	*e*P	P	06 25 40.5	+0.2
CLL	Collm	77.22	335	*i* P	P	06 25 40.0	-0.9
	comp=Z,10.0nm,1.4s						
CLL	Collm	77.22	335	*i* P	P	06 25 40.0	-0.9
CLL				pmax	pmax		
	comp=Z,10.0nm,1.4s						
EKA	Eskdalemuir Ar	77.37	346	P	P	06 25 40.7	-0.9
	comp=Z,0.2nm,0.3s,baz=21,slow=4.9,SNR=6.2						
MLR	Muntele Rosu	77.52	324	P	P	06 25 42.1	-0.8
	comp=Z,0.7nm,0.8s,baz=132,slow=6.0,SNR=3.9						
MLR	Muntele Rosu	77.52	324	⇑*i*P	P	06 25 43.8	+0.9
VRAC	Vranov	77.82	332	⇓*i*P	P	06 25 44.5	+0.2
VRAC	Vranov	77.82	332	⇓P	P	06 25 44.5	+0.2
VRAC	Vranov	77.82	332	*e*P	P	06 25 44.7	+0.4
JAVC	Velka Javorina	77.84	331	*e*P	P	06 25 45.8	+1.3
VOIR		77.93	325	⇓*i*P	P	06 25 45.2	+0.1
VOIR		77.93	325	⇓P	P	06 25 45.2	+0.1
KRUC	Moravsky	78.10	332	*e*P	P	06 25 46.3	+0.4
BRTR	Keskin Array B	78.60	316	P	P	06 25 48.6	-0.4
	comp=Z,1.0nm,0.7s,baz=48,slow=2.1,SNR=4.4						
BRTR	Keskin Array B	78.60	316	*e*P	P	06 25 50.5	+1.5
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KHC	Kasperske Hory	78.95	333	*e*P	P	06 25 49.0	-1.6
KHC	Kasperske Hory	78.95	333	*e*P	P	06 25 49.0	-1.6
TXAR	Lajitas Array	79.10	59	P	P	06 25 51.4	-0.4
	comp=Z,0.1nm,0.6s,baz=301,slow=3.8,SNR=3.9						
TXAR	Lajitas Array	79.10	59	*e*P	P	06 26 00.4	+8.5
GERES	GERESS Array B	79.17	333	P	P	06 25 51.4	-0.5
	comp=Z,0.3nm,0.3s,baz=22,slow=8.0,SNR=2.9						
VTS	Vitosha	81.03	324	⇓*i*P	P	06 26 02.2	+0.1
VTS	Vitosha	81.03	324	⇓P	P	06 26 02.2	+0.1

SOME ***14*** *06:14:22.0, 44°.62N×82°.07E, h5^{km}*
ISCJB ***14*** *06:14:23.5±1.5, 44°.62N±0°.07×82°.3E±0°.1, h10^{km}, Error ellipse: s-maj=15.5km s-min=5.5km az=34.6*
NNC ***14*** *06:14:23.6±1.5, 44°.69N×82°.09E, h0^{km}, mb3.1, mpv2.7, Error ellipse: s-maj=21.9km s-min=3.4km az=117.0*
ISC 14 06:14:19.8±2.3**, 44°.61N**±0°.08×**82°.3E**±0°.1**, h10**^{km}**, n8, σ1^{s}.04**/16**, 2C-4D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DJR	Jarkent	1.82	262	*e*P	Pg	06 14 53.8	-1.0
	4.0nm,0.2s						
DJR				*e*S	Sg	06 15 17.9	-0.6
	5.0nm,0.2s						
MK31	Makanchi Array	2.18	360	⇑Pn	Pb	06 15 00.4	+0.9
	2.6nm,0.3s,baz=181,slow=14,SNR=54						
MK31				⇓Sn	Sg	06 15 28.8	-1.2
	3.2nm,0.5s,baz=185,slow=26,SNR=20						
KAPS	Kapalarasan	2.20	289	*e*P	Pb	06 14 60.0	+0.2
	2.8nm,0.2s						
KAPS				*e*S	Sb	06 15 27.6	+0.5
	6.7nm,0.4s						
MAKZ	Makanchi	2.21	354	⇓Pn	Pb	06 15 00.0	+0.1
	2.3nm,0.5s						
MAKZ				⇓Sn	Sb	06 15 28.2	+0.8
	2.3nm,0.3s						
PDGK	Podgornoye	2.41	239	⇑Pn	Pb	06 15 03.0	-0.2
	1.7nm,0.4s						
PDGK				⇓Sn	Sb	06 15 33.6	+0.6
	7.5nm,0.6s						
KPKS	Kokpek	2.85	248	*e*P	Pb	06 15 11.2	+0.3
	7.9nm,0.1s						
KPKS				*e*S	Sb	06 15 47.1	+1.2
	11nm,0.3s						
ARXS	Arharly	3.24	265	*e*P	Pb	06 15 17.0	-0.4
	2.0nm,0.2s						
ARXS				*e*S	Sb	06 15 57.4	+0.5
	4.7nm,0.3s						
KTBS	Karatobe	4.15	259	*e*P	Pb	06 15 33.6	+0.7
	0.2nm,0.1s						
KTBS				*e*S	Sb	06 16 25.7	+2.6
	1.3nm,0.4s						

SOME ***14*** *06:20:15.3, 44°.17N×81°.93E, h0^{km}*
IDC ***14*** *06:20:19.0±1.8, 44°.27N×81°.56E, h0^{km}, mb1 3.6/5, mb1mx3.3/68, mbtmp3.6/5, ML3.3/5, Error ellipse: s-maj=22.5km s-min=12.0km az=126.0*
NNC ***14*** *06:20:20.1±1.3, 44°.26N×81°.56E, h0^{km}, mb3.9, mpv3.5, Error ellipse: s-maj=17.1km s-min=4.3km az=123.0*
ISC 14 06:20:18.8±1.0**, 44°.14N**±0°.04×**81°.71E**±0°.05**, h10**^{km}**, n34, σ2^{s}.05**/60**, 10C-7D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	Ketmen	1.20	235	*e*P	Pb	06 20 41.2	-0.6
	69nm,0.2s						
KTMS				*e*S	Sn	06 21 00.5	+2.3
	50nm,0.4s						
DJR	Jarkent	1.39	278	*e*P	Pg	06 20 44.9	-0.6
	58nm,0.1s						
DJR				*e*S	Sg	06 21 06.0	+2.5
	26nm,0.2s						
PDGK	Podgornoye	1.80	244	⇑Pn	Pb	06 20 51.1	-0.8
	28nm,0.6s						
PDGK				⇓Sn	Sg	06 21 16.7	0.0
	74nm,0.6s						
SHLS	Shalkode	1.90	240	*e*P	Pn	06 20 49.3	-2.1
	118nm,0.3s						
SHLS				*e*S	Sn	06 21 13.6	-1.9
	167nm,0.6s						
UZB	Uzynbulak	2.19	244	*e*P	Pb	06 20 57.7	-0.8
	45nm,0.4s						
UZB				*e*S	Sg	06 21 28.9	-0.1
	70nm,0.5s						
KPKS	Kokpek	2.29	254	⇓*e*P	Pb	06 20 59.2	-1.1
	339nm,0.5s						
KPKS				*e*S	Sg	06 21 31.2	-1.2
	432nm,1.3s						
TDK	Taldyqorghan	2.51	291	*e*P	Pb	06 21 03.8	-0.1
	130nm,0.4s						
TDK				*e*S	Sg	06 21 38.8	-0.6
	182nm,0.4s						
ZHN	Zhinishke	2.57	249	*e*P	Pb	06 21 03.6	-1.4
	23nm,0.2s						
ZHN				*e*S	Sg	06 21 39.4	-1.8
	73nm,0.3s						
SATY	Saty	2.63	247	*e*P	Pb	06 21 05.2	-0.9
	38nm,0.2s						
SATY				*e*S	Sg	06 21 41.0	-2.3
	48nm,0.3s						
KURS	Kuram	2.64	257	*e*P	Pb	06 21 05.8	-0.4
	10nm,0.4s						
KURS				*e*S	Sg	06 21 41.9	-1.7
	13nm,0.3s						
MAKZ	Makanchi	2.67	4	⇑Pn	Pb	06 21 04.0	-2.8
	12nm,0.5s						
MAKZ				⇑Lg	Lg	06 21 40.6	
	13nm,0.5s						
MK31	Makanchi Array	2.68	9	⇓Pn	Pn	06 21 04.0	+2.0
	6.0nm,0.5s,baz=188,slow=13,SNR=455						
MK31				Lg	Lg	06 21 39.6	
	10nm,0.5s,baz=191,slow=28,SNR=16						
MKAR	Makanchi Array	2.68	9	Pn	Pb	06 21 04.2	-2.7
	4.3nm,0.3s,baz=189,slow=13,SNR=163						
MKAR				Lg	Lg	06 21 38.8	
	10nm,0.3s,baz=192,slow=27,SNR=21						
ARXS	Arharly	2.79	273	*e*P	Pb	06 21 08.1	-0.7
	13nm,0.3s						
ARXS				*e*S	Sg	06 21 45.8	-2.7
	84nm,0.5s						
CHKK	Chushkaly	3.42	267	*e*P	Pb	06 21 18.6	-0.8
	16nm,0.4s						
CHKK				*e*S	Sg	06 22 03.7	-4.8
	41nm,0.3s						
KOTS	Kotyrbulak	3.45	256	*e*P	Pb	06 21 20.3	+0.2
	14nm,0.3s						
KOTS				*e*S	Sg	06 22 06.9	-2.8
	30nm,0.5s						
MDOK	Medeo	3.52	255	Pn	Pn	06 21 15.5	+1.8
	10nm,0.4s						
MDOK				Lg	Lg	06 22 13.2	
	26nm,0.6s						
MDOK	Medeo	3.52	255	*e*P	Pg	06 21 23.1	-3.2
	23nm,0.4s						
MDOK				*e*S	Sg	06 22 11.6	-0.2
	28nm,0.6s						
TNSS	Tian-Shan	3.63	254	*e*P	Pb	06 21 24.6	+1.4
	15nm,0.3s						
TNSS				*e*S	Sg	06 22 14.6	-0.8
	11nm,0.5s						
KTBS	Karatobe	3.66	265	*e*P	Pb	06 21 23.8	+0.3
	0.6nm,0.1s						
KTBS				*e*S	Sg	06 22 12.7	-3.4
	20nm,0.5s						
IZV	Izvestkoviy	3.86	255	*e*P	Pg	06 21 29.2	-3.5
	12nm,0.4s						
IZV				*e*S	Sg	06 22 22.8	0.0
	16nm,0.4s						
KUU	Kurty	3.88	268	*e*P	Pb	06 21 26.2	-1.1
	11nm,0.4s						
KUU				*e*S	Sb	06 22 17.0	+2.7
	30nm,0.4s						
MTBS	Maitube	3.96	257	*e*P	Pb	06 21 30.0	+1.3
	10nm,0.3s						
MTBS				*e*S	Sg	06 22 23.6	-2.4
	12nm,0.3s						
ZSN	Zaisan	3.98	33	*e*P	Pb	06 21 27.9	-1.1
	1.8nm,0.3s						
ZSN				*e*S	Sb	06 22 20.6	+3.5
	3.8nm,0.7s						
KST	Kastek	4.31	257	*e*P	Pb	06 21 35.9	+1.1
	18nm,0.5s						
KST				*e*S	Sg	06 22 33.5	-3.8
	18nm,0.6s						
TKM2	Tokmak 2	4.61	257	⇓Pn	Pn	06 21 31.0	+2.3
	1.5nm,0.5s						
TKM2				⇑Pg	Pb	06 21 41.3	+1.5
	5.9nm,0.5s						
TKM2				⇑Lg	Lg	06 22 43.9	
	8.7nm,0.6s						
AAK	Ala-Archa	5.47	257	Pn	Pn	06 21 43.8	+3.4
	0.9nm,0.3s,baz=111,slow=12,SNR=3.4						
AAK				Lg	Lg	06 23 11.1	
	0.7nm,0.3s,baz=190,slow=20,SNR=7.4						
AAK	Ala-Archa	5.47	257	⇓Pg	Pb	06 21 55.0	+0.6
	3.8nm,0.5s						
AAK				⇑Lg	Lg	06 23 10.5	
	7.2nm,0.6s						
BTLS	Baital	5.54	282	*e*P	Pb	06 21 59.2	+3.6
	2.8nm,0.4s						
BTLS				*e*S	Sg	06 23 12.4	-4.3
	3.2nm,0.7s						
KURBB	Kurchatov Arra	6.83	343	Pn	Pn	06 21 59.4	+0.5
	0.4nm,0.3s,baz=166,slow=12,SNR=22						
KURBB				Sn	Sn	06 23 15.6	-1.1
	0.2nm,0.3s,baz=164,slow=21,SNR=8.9						
KURBB				Lg	Lg	06 23 51.0	
	0.2nm,0.3s,baz=160,slow=33,SNR=4.3						
KURBB	Kurchatov Arra	6.83	343	⇑Pn	Pn	06 21 59.6	+0.7
	3.6nm,0.5s						
KURBB				⇓Sn	Sn	06 23 17.6	+0.9
	18nm,0.7s						
KURBB				⇑Lg	Lg	06 23 51.2	
	25nm,0.7s						
KURK	Kurchatov	6.90	343	⇑Pn	Pn	06 22 00.2	+0.3
	2.3nm,0.5s						
KURK				⇑Sn	Sn	06 23 19.8	+1.4
	2.3nm,0.6s						
KURK				⇓Lg	Lg	06 23 53.5	
	12nm,0.6s						
ZALV	Zalesovo Beam	10.02	11	Pn	Pn	06 22 42.7	0.0
	0.8nm,0.3s,baz=198,slow=14,SNR=9.1						
SONM	Songino Array	17.52	69	P	P	06 24 26.4	+2.0
	0.2nm,0.3s,baz=271,slow=12,SNR=6.1						

SKHL ***14*** *06:42:59.3±0.8, 45°.77N×153°.48E, h47^{km}±12^{km}, mb4.8/4*
MOS ***14*** *06:42:59.0±3.1, 45°.80N×153°.50E, h47^{km}, mb4.2/5, Error ellipse: s-maj=14.4km s-min=10.4km az=144.8*
ISCJB ***14*** *06:43:00.5±0.7, 46°.69N±0°.10×152°.8E±0°.1, h40^{km}, mb3.7/11, Error ellipse: s-maj=16.7km s-min=4.7km az=143.1*
IDC ***14*** *06:43:07.8±2.6, 46°.83N×152°.34E, h89^{km}±23^{km}, mb3.4/11, mb1 3.6/15, mb1mx3.4/80, mbtmp3.9/15, Error ellipse: s-maj=24.7km s-min=15.3km az=149.0*
ISC 14 06:43:02.1±0.8**, 46°.6N**±0°.1×**152°.88E**±0°.09**, h40**^{km}**, n40, σ1^{s}.51**/41**, mb3.6**/11**, 1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	Kuril'sk	3.76	250	*e*P	Pn	06 43 58.0	+0.5
KUR				AMB	AMB	06 43 59.0	
	31nm,0.3s						
KUR				AMB	AMB	06 43 59.0	
	17nm,0.3s						
KUR				AMB	AMB	06 43 59.0	
	100nm,0.3s						
KUR				*e*S	Sn	06 44 41.3	+0.9
KUR				A	A	06 44 48.0	
	179nm,0.3s						
KUR				A	A	06 44 48.0	
	39nm,0.3s						
KUR	Kuril'sk	3.76	250	*e*PN	Pn	06 43 58.4	+0.9
KUR				pmax	pmax		
	comp=Z,100nm,0.1s						
KUR				pmax	pmax		
	comp=N,31nm,0.3s						
KUR				pmax	pmax		
	comp=E,17nm,0.3s						
SHO	Shikotan	5.07	240	*i* P	Pn	06 44 14.6	-0.9
SHO				AMB	AMB	06 44 18.0	
	comp=E,19nm,0.3s						
SHO				AMB	AMB	06 44 18.0	
	comp=E,20nm,0.3s						
SHO				AMB	AMB	06 44 18.0	
	comp=E,26nm,0.3s						
SHO				*e*S	Sn	06 45 11.6	-1.2
SHO				A	A	06 45 26.0	
	comp=E,89nm,0.3s						
SHO				A	A	06 45 26.0	
	comp=E,110nm,0.3s						
SHO	Shikotan	5.07	240	*d i*PN	Pn	06 44 15.1	-0.4
SHO				*e*S	Sn	06 45 14.4	+1.6
SHO				pmax	pmax		
	comp=Z,26nm,0.2s						
SHO				pmax	pmax		
	comp=N,19nm,0.3s						
SHO				pmax	pmax		
	comp=E,20nm,0.3s						
SHO				smax	smax		
	comp=N,62nm,0.5s						
SHO				smax	smax		
	comp=E,102nm,0.5s						
YUK	Yuzh-Kuril'sk	5.58	245	*e*P	Pn	06 44 23.0	+0.6
YUK				AMB	AMB	06 44 28.0	
	comp=E,56nm,0.3s						
YUK				*e*S	Sn	06 45 25.6	+0.4
YUK				A	A	06 45 32.0	
	comp=E,108nm,0.3s						
YUK				A	A	06 45 32.0	
	comp=E,49nm,0.3s						
YUK	Yuzh-Kuril'sk	5.58	245	*e*PN	Pn	06 44 23.5	+1.1
YUK				*e*S	Sn	06 45 27.6	+2.4
YUK				pmax	pmax		
	comp=Z,86nm,0.3s						
YUK				smax	smax		
	comp=N,108nm,0.3s						
YUK				smax	smax		
	comp=E,49nm,0.2s						
LAGR	Lagunnoye	5.61	246	*e*P	Pn	06 44 24.0	+1.1
LAGR				*e*S	Sn	06 45 28.0	+1.9
LAGR	Lagunnoye	5.61	246	*e*PN	Pn	06 44 24.1	+1.1
GRPR	Tuman	5.65	245	*e*P	Pn	06 44 23.0	-0.5
GRPR				AMB	AMB	06 44 27.0	
	comp=E,73nm,0.4s						
GRPR				AMB	AMB	06 44 27.0	
	comp=E,36nm,0.4s						
GRPR				AMB	AMB	06 44 27.0	
	comp=E,61nm,0.4s						
GRPR				*e*S	Sn	06 45 29.0	+1.9
GRPR				A	A	06 45 41.0	
	comp=E,101nm,0.4s						
GRPR				A	A	06 45 41.0	
	comp=E,113nm,0.4s						
GRPR	Tuman	5.65	245	*e*PN	Pn	06 44 23.7	+0.2
GRPR				pmax	pmax		
	comp=Z,61nm,0.3s						
GRPR				pmax	pmax		
	comp=N,73nm,0.2s						
GRPR				pmax	pmax		
	comp=E,36nm,0.2s						
GLVR	Golovnino	5.94	244	*e*P	Pn	06 44 27.0	-0.4
GLVR				*e*S	Sn	06 45 36.0	+1.9
GLVR	Golovnino	5.94	244	*e*PN	Pn	06 44 27.1	-0.4
GLVR				S	Sn	06 45 36.3	+2.2
YSS	Yuzh-Sakhalins	6.96	277	*e*PN	Pn	06 44 43.0	+1.5
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
PETK	Petropavlovsk-	7.22	24	P	Pn	06 44 50.0	+5.0
	baz=201,slow=12						
PETK	Petropavlovsk-	7.22	24	PN	Pn	06 44 50.0	+5.0
HRK	Horoka	7.58	249	*e*P	Pn	06 44 50.8	+0.7
ASAJ	Asahikawa	7.66	255	P	Pn	06 44 51.8	+0.8
	comp=Z,1.0nm,0.3s,baz=86,slow=14,SNR=7.5						
MYR	Moyori	8.10	241	*e*P	Pn	06 44 55.9	-1.2
MA2	Magadan	13.06	355	P	Pn	06 46 06.0	+1.2
	comp=Z,1.9nm,0.3s,baz=143,slow=18,SNR=6.7						
MA2	Magadan	13.06	355	P	Pn	06 46 06.0	+1.2
MA2				pmax	pmax		
	comp=Z,2.0nm,0.3s						
USRK	Ussuriysk Ar.	14.87	268	P	Pn	06 46 29.3	0.0
	baz=70,slow=13						
KSRS	Korea Array	20.60	253	P	P	06 47 37.6	0.0
	comp=Z,1.8nm,0.7s,baz=57,slow=12,SNR=5.9						
H11N2	WAKE ISLAND Hy	29.16	152	T	T	07 20 23.6	
	baz=340,slow=76,SNR=1065						
H11N1	WAKE ISLAND Hy	29.18	152	T	T	07 20 23.3	
	baz=340,slow=76,SNR=428						
H11N3	WAKE ISLAND Hy	29.18	152	T	T	07 20 24.9	
	baz=340,slow=76,SNR=383						
H11S1	WAKE ISLAND Hy	30.25	153	T	T	07 21 44.3	
	baz=340,slow=76,SNR=606						
H11S3	WAKE ISLAND Hy	30.25	153	T	T	07 21 47.7	
	baz=340,slow=76,SNR=378						
H11S2	WAKE ISLAND Hy	30.26	153	T	T	07 21 44.5	
	baz=340,slow=76,SNR=315						
ILAR	Eielson Array	36.77	38	P	P	06 50 06.3	+1.0
	comp=Z,0.3nm,0.8s,baz=257,slow=6.5,SNR=4.6						
INK	Inuvik	41.86	32	P	P	06 50 49.0	+1.3
	comp=Z,0.7nm,0.6s,baz=313,slow=6.9,SNR=4.4						
MKAR	Makanchi Array	46.87	297	P	P	06 51 24.0	-4.0
	comp=Z,0.4nm,0.5s,baz=72,slow=8.1,SNR=6.2						
KURK	Kurchatov	47.31	304	P	P	06 51 30.4	-1.0
KURBB	Kurchatov Arra	47.41	304	P	P	06 51 30.4	-1.7
	comp=Z,0.3nm,0.4s,baz=68,slow=8.7,SNR=2.9						
FINES	FINESS Array B	64.11	335	P	P	06 53 29.1	-2.5
	comp=Z,1.0nm,0.4s,baz=47,slow=4.4,SNR=12						
PDAR	Pinedale Array	64.96	54	P	P	06 53 38.9	+1.0
	comp=Z,0.3nm,0.8s,baz=240,slow=1.2,SNR=4.2						
NB2	NORSAR Subarra	68.32	341	P	P	06 53 56.8	-1.8
	comp=Z,0.6nm,0.5s,baz=26,slow=6.5						
HFS	Hagfors	68.54	339	P	P	06 53 58.3	-1.7
	comp=Z,1.7nm,0.4s,baz=47,slow=6.3,SNR=18						
AKASG	Malin Array Be	71.58	326	P	P	06 54 16.5	-2.2
	comp=Z,1.0nm,0.3s,baz=34,slow=6.3,SNR=2.2						
ASAR	Alice Springs	72.02	198	P	P	06 54 22.2	+0.6
	comp=Z,0.4nm,0.7s,baz=12,slow=5.6,SNR=5.1						
TXAR	Lajitas Array	77.70	60	P	P	06 54 56.5	+1.7
	comp=Z,0.4nm,0.5s,baz=294,slow=4.6,SNR=9.0						

ISCJB ***14*** *06:47:15.4±0.4, 3°.26N±0°.08×31°.31W±0°.06, h10^{km}, mb4.4/25, MS4.0/27, Error ellipse: s-maj=11.4km s-min=8.7km az=160.4*
IDC ***14*** *06:47:15.8±0.6, 3°.34N×31°.36W, h0^{km}, mb4.0/12, mb1 4.2/12, mb1mx3.9/68, mbtmp4.0/12, MS4.0/27, Ms1 4.0/27, ms1mx3.8/54, Error ellipse: s-maj=21.9km s-min=16.8km az=154.0*
NEIC ***14*** *06:47:17.3±0.2, 3°.31N×31°.34W, h10^{km}, mb4.7/16, Error ellipse: s-maj=7.7km s-min=6.2km az=166.0*
GCMT ***14*** *06:47:17.3±0.4, 3°.36N×31°.28W, h20^{km}±1^{km}, MW4.9/81, Moment Tensor Solution. s19,c20; s81,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.63±.20; $M_{\theta\theta}$0.40±.12; $M_{\phi\phi}$2.23±.14; $M_{r\theta}$0.50±.32; $M_{\theta\phi}$-0.51±.07; $M_{\phi r}$-0.71±.23; Best double couple: $M_0$2.64000×10^{16} NP1:ϕ_s339.00000°, δ54.00000°, λ-97.00000°. NP2: ϕ_s171.00000°, δ36.00000°, λ-81.00000°. Principal axes: T 2.4920, Plg9.0000°, Azm74.0000°; N 0.2960, Plg5.0000°, Azm343.0000°; P -2.7880, Plg79.0000°, Azm223.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISC 14 06:47:17.4±0.5**, 3°.28N**±0°.10×**31°.37W**±0°.09**, h10**^{km}**, n67, σ0^{s}.74**/40**, mb4.4**/25**, MS4.0**/27**, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RCBR	Riachuelo	10.12	207	*e*Pn	Pn	06 49 42.5	-0.4
H10N3	ASCENSION HYDR	20.13	123	T	T	07 12 51.7	
	baz=302,slow=75,SNR=364						
H10N2	ASCENSION HYDR	20.13	123	T	T	07 12 37.6	
	baz=302,slow=75,SNR=327						

H10N1	ASCENSION HYDR	20.15	123	T	T	07 12 53.1	
	baz=302,slow=75,SNR=326						
ASCN	Ascension	20.30	123	eP	P	06 51 52.8	-0.8
	158nm,1.0s						
H10S3	ASCENSION HYDR	20.61	126	T	T	07 13 19.3	
	baz=305,slow=75,SNR=269						
H10S1	ASCENSION HYDR	20.62	126	T	T	07 13 19.7	
	baz=305,slow=75,SNR=240						
H10S2	ASCENSION HYDR	20.63	126	T	T	07 13 20.8	
	baz=305,slow=75,SNR=209						
DBIC	Dimbokro	26.62	82	LR	LR	07 01 17.8	
	comp=Z,498nm,20.6s,baz=242,slow=32						
PTGA	Pitinga	28.86	263	LR	LR	07 03 06.0	
	comp=Z,324nm,20.5s,baz=70,slow=33						
KOWA	Kowa	29.18	66	LR	LR	07 03 27.6	
	comp=Z,664nm,21.6s,baz=248,slow=33						
H05S1	Guadeloupe/Mar	31.11	293	T	T	07 26 05.7	
H05N1	Guadeloupe/Mar	31.93	296	T	T	07 27 10.8	
SAML	Samuel	33.96	249	eP	P	06 54 02.4	+1.1
	6.1nm,1.1s						
TOA1	Torodi Ar. Sit	34.11	71	eP	P	06 54 01.7	-1.0
TOA0	Torodi Ar. Sit	34.11	71	eP	P	06 54 02.4	-0.3
	4.8nm,1.0s						
TORD	Torodi Ar. Bea	34.11	71	P	P	06 54 01.7	-1.0
	2.2nm,0.8s,baz=267,slow=8.9						
TORD				LR	LR	07 05 45.3	
	comp=Z,343nm,20.3s,baz=275,slow=32						
SIV	San Ignacio	35.07	236	P	P	06 54 12.1	+1.1
	1.8nm,0.8s,baz=92,slow=9.4,SNR=11						
MDT	Midelt	38.61	37	LR	LR	07 08 28.3	
	comp=Z,521nm,21.3s,baz=240,slow=33						
CPUP	Villa Florida	38.70	219	P	P	06 54 41.5	-0.2
	15nm,1.2s,baz=34,slow=8.7,SNR=7.8						
CPUP				LR	LR	07 10 11.8	
	comp=Z,339nm,18.4s,baz=52,slow=36						
CPUP	Villa Florida	38.70	219	eP	P	06 54 42.5	+0.9
	27nm,1.5s						
LPAZ	La Paz	41.21	241	P	P	06 55 03.0	-0.5
	1.3nm,0.9s,baz=33,slow=5.7,SNR=5.9						
LPAZ				LR	LR	07 11 30.1	
	comp=Z,489nm,21.4s,baz=46,slow=35						
LPAZ	La Paz	41.21	241	eP	P	06 55 03.2	-0.3
ROSC	El Rosal	42.87	274	P	P	06 55 16.0	-0.8
	4.8nm,0.8s,baz=143,slow=21,SNR=4.7						
ROSC				LR	LR	07 12 43.4	
	comp=Z,236nm,19.8s,baz=102,slow=36						
ROSC	El Rosal	42.87	274	eP	P	06 55 16.5	-0.3
	3.8nm,0.7s						
ESDC	Sonseca Array	43.93	31	P	P	06 55 24.4	-0.1
	0.1nm,0.3s,baz=214,slow=8.8,SNR=3.5						
ESDC				LR	LR	07 12 49.3	
	comp=Z,49nm,18.1s,baz=285,slow=35						
GO02	Mina Guanaco	46.63	230	eP	P	06 55 46.9	+0.3
	22nm,1.3s						
TUMC	Tumaco	47.33	269	eP	P	06 55 52.1	+0.3
	273nm,1.0s						
NNA	Nana	47.68	251	LR	LR	07 15 21.7	
	comp=Z,167nm,18.5s,baz=80,slow=35						
KEST	Kesra	49.55	44	LR	LR	07 16 22.4	
	comp=Z,298nm,20.6s,baz=331,slow=35						
059A	Moore Haven	53.05	301	eP	P	06 56 34.3	-0.8
	127nm,1.4s						
JTS	JuntasAbangare	53.61	280	LR	LR	07 20 08.0	
	comp=Z,74nm,21.1s,baz=164,slow=37						
DAVOX	Davos/Dischmat	56.14	33	LR	LR	07 17 53.7	
	comp=Z,73nm,21.3s,slow=33						
PLCA	Paso Flores	56.56	215	LR	LR	07 20 25.0	
	comp=Z,263nm,20.5s,baz=76,slow=35						
TKL	Tuckaleechee C	58.06	311	LR	LR	07 17 01.4	
	comp=Z,125nm,21.2s,baz=46,slow=31						
SWET	Sewanee	59.56	309	eP	P	06 57 22.5	+0.9
	6.0nm,0.9s						
IDI	Anoyia	60.90	51	LR	LR	07 25 13.7	
	comp=Z,71nm,19.5s,baz=271,slow=37						
BOSA	Boshof	62.88	124	P	P	06 57 44.9	+0.7
	3.3nm,0.8s,baz=288,slow=11,SNR=3.4						
BOSA				LR	LR	07 20 29.1	
	comp=Z,112nm,18.9s,baz=216,slow=32						
BOSA	Boshof	62.88	124	eP	P	06 57 45.6	+1.4
	34nm,1.5s						
NOA	NORSAR Array B	65.95	21	LR	LR	07 22 38.9	
	comp=Z,52nm,20.8s,baz=15,slow=32						
KMBO	Kilima Mbogo	68.73	92	LR	LR	07 24 52.9	
	comp=Z,150nm,20.8s,baz=268,slow=33						
BR101	Keskin Array S	68.81	49	eP	P	06 58 21.7	-0.6
BRTR	Keskin Array B	68.81	49	P	P	06 58 21.7	-0.6
	0.5nm,0.3s,baz=252,slow=6.7,SNR=3.6						
BRTR				LR	LR	07 28 24.1	
	comp=Z,70nm,21.7s,baz=320,slow=36						
833A	Chaparral WMA,	69.14	299	eP	P	06 58 24.5	+0.2
	7.8nm,1.0s						
JCT	Junction City	69.79	301	eP	P	06 58 28.2	-0.2
	7.2nm,1.1s						
ULM	Lac du Bonnet	71.37	322	LR	LR	07 24 32.4	
	comp=Z,74nm,21.1s,baz=345,slow=31						
FIA1	FINESS Array S	72.06	25	eP	P	06 58 43.9	+2.4
TXAR	Lajitas Array	72.98	300	P	P	06 58 47.7	-0.1
	1.3nm,0.9s,baz=115,slow=6.4,SNR=13						
TX31	Lajitas Ar. Si	72.98	300	eP	P	06 58 47.6	-0.2
ATD	Arta Tunnel	73.89	79	LR	LR	07 32 09.7	
	comp=Z,68nm,18.2s,baz=286,slow=36						
MNTX	Cornudas Mount	74.69	302	eP	P	06 58 57.5	-0.2
	2.7nm,1.3s						
ANMO	Albuquerque	75.91	305	LR	LR	07 28 49.5	
	comp=Z,95nm,20.4s,baz=55,slow=33						
DGMT	Dagmar	76.20	319	eP	P	06 59 06.3	+0.3
	20nm,1.4s						
N23A	Red Feather La	76.21	311	eP	P	06 59 06.4	-0.2
	4.4nm,1.2s						
SNAA	Sanae	77.08	171	P	P	06 59 10.7	+0.2
	2.0nm,0.7s,baz=339,slow=9.7,SNR=5.0						
LPIG	La Paz	78.58	294	LR	LR	07 35 55.7	
	comp=Z,19nm,18.1s,baz=223,slow=37						
PDAR	Pinedale Array	79.11	313	P	P	06 59 22.9	+0.2
	0.2nm,0.6s,baz=74,slow=9.5,SNR=2.6						
OPO	Ambohidratompo	80.22	109	LR	LR	07 31 40.2	
	comp=Z,78nm,19.3s,baz=203,slow=33						
YKA	Yellowknife Ar	83.98	332	P	P	06 59 47.3	-0.3
	0.7nm,0.8s,baz=89,slow=5.0,SNR=4.9						
BMO	Blue Mountains	84.82	315	eP	P	06 59 51.8	-0.7
	4.7nm,1.1s						
NVAR	Mina Array Bea	85.58	308	LR	LR	07 33 12.3	
	comp=Z,95nm,21.9s,baz=279,slow=32						
J08A	Circle Bar Ran	85.66	313	eP	P	06 59 56.3	-0.4
	5.5nm,1.1s						
YBH	Yreka Blue Hor	88.84	312	LR	LR	07 35 43.8	
	comp=Z,69nm,21.5s,baz=9.0,slow=33						
B017	Montesano	89.12	317	eP	P	07 00 12.0	-1.1
ASAR	Alice Springs	155.23	146	PKP	PKPdf	07 07 11.7	-0.3
	0.6nm,1.0s,baz=205,slow=4.1,SNR=4.0						
ASAR				PKPab	PKPab	07 07 36.9	+0.2
	1.6nm,0.9s,baz=217,slow=4.0,SNR=7.7						
WR1	Warramunga Arr	158.35	141	ePKPab	PKPab	07 07 50.1	0.0
WRA	Warramunga Arr	158.35	141	PKPab	PKPab	07 07 50.1	0.0
	1.1nm,0.9s,baz=211,slow=2.1,SNR=5.3						

NIED **14** *06:51:00, 45°.40N×151°.70E, h14^{km}, Mw4.8 Best double couple: $M_0$1.64000×10^{16} NP1:ϕ_s240.00000°,δ30.00000°, λ103.00000°. NP2:ϕ_s46.00000°,δ61.00000°,λ83.00000°.*

JMA **14** *06:51:36.8±0.6, 45°.44N×151°.74E, h30^{km}, M5.3*

GCMT **14** *06:51:36.7±0.5, 45°.45N×151°.57E, h30^{km}±1^{km}, MW4.9/61, Moment Tensor Solution. s31,c35; s61,c78; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.22±.16; $M_{\theta\theta}$-1.25±.11; $M_{\phi\phi}$-0.96±.11; $M_{r\theta}$0.38±.14; $M_{\theta\phi}$-1.32±.07; $M_{\phi r}$0.96±.12; Best double couple: $M_0$2.55100×10^{16} NP1:ϕ_s37.00000°,δ57.00000°,λ77.00000°. NP2: ϕ_s240.00000°,δ35.00000°,λ109.00000°. Principal axes: T 2.4870, Plg75.0000°, Azm271.0000°; N 0.1310, Plg11.0000°, Azm44.0000°; P -2.6160, Plg11.0000°, Azm136.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC **14** *06:51:36.7±0.2, 45°.45N×151°.37E, h10^{km}, mb4.9/103 Error ellipse: s-maj=5.3km s-min=2.9km az=152.0*

ISCJB **14** *06:51:37.1±0.7, 45°.38N±0°.03×151°.48E±0°.03, h26^{km}±5^{km}, mb4.8/167, MS4.3/58, Error ellipse: s-maj=5.4km s-min=2.4km az=153.6*

BJI **14** *06:51:38.9, 45°.40N×151°.43E, h40^{km}, mb5.0/61, mB5.0/43, Ms4.6/49, Ms7 4.4/47*

MOS **14** *06:51:39.8±0.9, 45°.45N×151°.42E, h46^{km}, mb5.0/56, MS4.4/20, Error ellipse: s-maj=6.0km s-min=4.4km az=102.1*

SKHL **14** *06:51:39.0±0.9, 45°.22N×151°.70E, h52^{km}±7^{km}, mb5.6/8, Ms4.5/4*

IDC **14** *06:51:41.3±2.0, 45°.52N×151°.39E, h44^{km}±18^{km}, mb4.3/35, mb1 4.4/42, mb1mx4.2/74, mbtmp4.5/42, ML4.4/3, MS4.1/40, Ms1 4.1/40, ms1mx3.9/76, Error ellipse: s-maj=13.4km s-min=10.1km az=151.0*

ISC 14 06:51:40.1±0.4**, 45°.36N**±0°.05×**151°.50E**±0°.04**, h37**^{km}±1^{km}**, n541,** σ**1^{s}35**/565**, mb4.9**/198**, MS4.4**/58**, 49C-25D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.57	268	iP	Pn	06 52 19.8	+0.7
KUR				AMB	AMB	06 52 20.0	
	252nm,0.3s						
KUR				AMB	AMB	06 52 20.0	
	142nm,0.3s						
KUR				AMB	AMB	06 52 20.0	
	981nm,0.3s						
KUR				eS	Sn	06 52 49.5	+0.5
KUR				A	A	06 52 54.0	
	4µm,0.4s						
KUR				A	A	06 52 54.0	
	1µm,0.4s						
KUR				AMS	AMS	06 53 36.0	
	7µm,11.0s						
KUR				AMS	AMS	06 53 36.0	
	10µm,11.0s						
KUR				AMS	AMS	06 53 36.0	
	7µm,11.0s						
KUR	Kuril'sk	2.57	268c	iPN	Pn	06 52 19.6	+0.5
KUR				eS	Sn	06 52 49.7	+0.7
KUR				pmax	pmax		
	comp=Z,981nm,0.3s						
KUR				pmax	pmax		
	comp=E,142nm,0.2s						
KUR				pmax	pmax		
	comp=N,252nm,0.4s						
KUR				smax	smax		
	comp=N,4µm,0.4s						
KUR				smax	smax		
	comp=E,1µm,0.5s						
KUR				MLR	MLR		
	comp=Z,6µm,15.0s						
SHO	Shikotan	3.65	248	iP	Pn	06 52 34.0	0.0
SHO				AMB	AMB	06 52 48.0	
	comp=Z,289nm,0.4s						
SHO				AMB	AMB	06 52 48.0	
	comp=Z,257nm,0.4s						
SHO				AMB	AMB	06 52 48.0	
	comp=Z,351nm,0.4s						
SHO				eS	Sn	06 53 16.0	+0.3
SHO				A	A	06 53 35.0	
	comp=Z,2µm,0.4s						
SHO				A	A	06 53 35.0	
	comp=Z,2µm,0.4s						
SHO				AMS	AMS	06 54 07.0	
	comp=Z,3µm,13.0s						
SHO				AMS	AMS	06 54 07.0	
	comp=Z,4µm,13.0s						
SHO				AMS	AMS	06 54 07.0	
	comp=Z,2µm,13.0s						
SHO	Shikotan	3.65	248c	iPN	Pn	06 52 34.5	+0.5
SHO				eS	Sn	06 53 16.3	+0.6
SHO				pmax	pmax		
	comp=Z,351nm,0.4s						
SHO				pmax	pmax		
	comp=E,257nm,0.3s						
SHO				pmax	pmax		
	comp=N,289nm,0.2s						
SHO				smax	smax		
	comp=E,124nm,0.7s						
SHO				smax	smax		
	comp=N,703nm,0.2s						
YUK	Yuzh-Kuril'sk	4.23	254	iP	Pn	06 52 43.0	+1.1
YUK				AMB	AMB	06 52 48.0	
	comp=N,244nm,0.2s						
YUK				AMB	AMB	06 52 48.0	
	comp=N,350nm,0.2s						
YUK				AMB	AMB	06 52 48.0	
	comp=N,1µm,0.2s						
YUK				eS	Sn	06 53 31.0	+0.9
YUK				A	A	06 54 20.0	
	comp=N,3µm,0.5s						
YUK				A	A	06 54 20.0	
	comp=N,2µm,0.5s						
YUK	Yuzh-Kuril'sk	4.23	254d	iPN	Pn	06 52 43.3	+1.4
YUK				eS	Sn	06 53 31.9	+1.8
YUK				pmax	pmax		
	comp=N,244nm,0.2s						
YUK				pmax	pmax		
	comp=Z,1µm,0.2s						
YUK				pmax	pmax		
	comp=E,350nm,0.1s						
YUK				smax	smax		
	comp=N,3µm,0.5s						
YUK				smax	smax		
	comp=E,2µm,0.5s						
LAGR	Lagunnoye	4.28	254	eP	Pn	06 52 43.0	+0.5
LAGR				AMB	AMB	06 52 52.0	
	comp=E,589nm,0.5s						
LAGR				AMB	AMB	06 52 52.0	
	comp=E,540nm,0.5s						
LAGR				AMB	AMB	06 52 52.0	
	comp=E,1µm,0.5s						
LAGR				eS	Sn	06 53 33.0	+1.9
LAGR				A	A	06 53 48.0	
	comp=E,5µm,0.5s						
LAGR				A	A	06 53 48.0	
	comp=E,2µm,0.5s						
LAGR	Lagunnoye	4.28	254	ePN	Pn	06 52 43.9	+1.4
LAGR				eS	Sn	06 53 33.3	+2.2
LAGR				pmax	pmax		
	comp=Z,1µm,0.3s						
LAGR				pmax	pmax		
	comp=N,589nm,0.4s						
LAGR				pmax	pmax		
	comp=E,540nm,0.2s						
LAGR				smax	smax		
	comp=E,2µm,0.4s						
LAGR				smax	smax		
	comp=N,5µm,0.5s						
GRPR	Tuman	4.31	254	eP	Pn	06 52 44.0	+1.0
GRPR				AMB	AMB	06 52 51.0	
	comp=N,383nm,0.5s						
GRPR				AMB	AMB	06 52 51.0	
	comp=N,371nm,0.5s						
GRPR				AMB	AMB	06 52 51.0	
	comp=N,1µm,0.5s						
GRPR				eS	Sn	06 53 33.0	+1.1
GRPR				A	A	06 53 37.0	
	comp=N,884nm,0.5s						
GRPR				A	A	06 53 37.0	
	comp=N,2µm,0.5s						
GRPR	Tuman	4.31	254	ePN	Pn	06 52 44.8	+1.8
GRPR				eS	Sn	06 53 33.7	+1.8
GRPR				pmax	pmax		
	comp=E,371nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,1µm,0.3s						
GRPR				pmax	pmax		
	comp=N,383nm,0.4s						
GRPR				smax	smax		
	comp=N,884nm,0.3s						
GRPR				smax	smax		
	comp=E,2µm,0.5s						
GLVR	Golovnino	4.57	251	eP	Pn	06 52 48.0	+1.4
GLVR				AMB	AMB	06 52 51.0	
	comp=E,331nm,0.5s						
GLVR				AMB	AMB	06 52 51.0	
	comp=E,196nm,0.5s						
GLVR				AMB	AMB	06 52 51.0	
	comp=E,910nm,0.5s						
GLVR				eS	Sn	06 53 38.0	-0.4
GLVR				A	A	06 53 45.0	
	comp=E,2µm,0.3s						
GLVR				A	A	06 53 45.0	
	comp=E,196nm,0.3s						
GLVR	Golovnino	4.57	251	ePN	Pn	06 52 48.0	+1.4
GLVR				eS	Sn	06 53 38.8	+0.4
GLVR				pmax	pmax		
	comp=N,331nm,0.5s						
GLVR				pmax	pmax		
	comp=Z,910nm,0.5s						
GLVR				pmax	pmax		
	comp=E,196nm,0.2s						
GLVR				smax	smax		
	comp=E,196nm,0.2s						
GLVR				smax	smax		
	comp=N,2µm,0.3s						
NEM2	Nemuro 2	4.58	246	P	Pn	06 52 45.9	-0.9
NEM2				eS	Sn	06 53 38.7	0.0
JRA	Rausu	4.77	255	P	Pn	06 52 50.7	+1.4
JNK	Nakash	5.17	252	P	Pn	06 52 55.5	+0.7
JNK				eS	Sn	06 53 52.7	-0.4
JAK	Akkeshi	5.43	247	P	Pn	06 52 57.7	-0.7
JTKR	Abashiri--Toko	5.59	258	P	Pn	06 53 02.2	+1.6
JAR	Ashorobuto	5.92	252	P	Pn	06 53 06.0	+0.9
JAR				eS	Sn	06 54 11.6	0.0
JMP	Maruseppu	5.96	260	P	Pn	06 53 07.6	+1.9
JOB	Onbets	6.04	249	P	Pn	06 53 07.0	+0.3
SKR	Severo-Kuril's	6.16	29	eP	Pn	06 53 08.0	-0.4
SKR				AMB	AMB	06 53 09.0	
	comp=N,158nm,0.5s						
SKR				AMB	AMB	06 53 11.0	
	comp=N,400nm,1.0s						
SKR				eS	Sn	06 54 16.8	-0.7
SKR				A	A	06 54 49.0	
	comp=N,615nm,1.0s						
SKR				A	A	06 54 49.0	
	comp=N,488nm,1.0s						
SKR				AMS	AMS	06 55 36.0	
	comp=N,1µm,15.0s						
SKR	Severo-Kuril's	6.16	29	ePN	Pn	06 53 08.3	-0.1
SKR				pmax	pmax		
	comp=Z,158nm,0.5s						
SKR				pmax	pmax		
	comp=Z,400nm,0.8s						
SKR				MLR	MLR		
	comp=Z,1µm,15.0s						
SKR				MLR	MLR		
	comp=Z,1µm,13.0s						
YSS	Yuzh-Sakhalins	6.28	288	eP	Pn	06 53 12.6	+2.5
YSS				AMB	AMB	06 53 14.2	
	comp=Z,40nm,0.6s						
YSS				AMB	AMB	06 53 16.2	
	comp=Z,300nm,3.3s						
YSS				eS	Sn	06 54 22.2	+1.7
YSS				AMS	AMS	06 55 38.0	
	comp=Z,1µm,15.0s						
YSS				AMS	AMS	06 55 38.0	
	comp=Z,2µm,15.0s						
YSS				AMS	AMS	06 55 38.0	
	comp=Z,3µm,15.0s						
YSS	Yuzh-Sakhalins	6.28	288	ePn	Pn	06 53 13.3	+3.2
YSS	Yuzh-Sakhalins	6.28	288⇓	ePN	Pn	06 53 12.6	+2.5
YSS				pmax	pmax		
	comp=Z,40nm,0.6s						
YSS				pmax	pmax		
	comp=Z,300nm,3.3s						
YSS				MLR	MLR		
	comp=Z,3µm,15.0s						
YSS				MLR	MLR		
	comp=N,1µm,14.0s						
YSS				MLR	MLR		
	comp=E,2µm,16.0s						
HRK	Horoka	6.29	255	eP	Pn	06 53 11.9	+1.7
HRK				eS	Sn	06 54 23.1	+2.3
JSE	Soyaes	6.32	270	P	Pn	06 53 13.3	+2.7
JKK2	Kamakawa 2	6.42	260	P	Pn	06 53 14.2	+2.2
ASAJ	Asahikawa	6.46	262	P	Pn	06 53 14.9	+2.4
	comp=E,17nm,0.3s,baz=71,slow=15,SNR=81						
ASAJ				S	Sn	06 54 36.3	+11
	baz=356,slow=14,SNR=1.0						
ASAJ				LR	LR	06 55 57.7	
	comp=E,2µm,18.6s,baz=79,slow=40						
ASAJ	Asahikawa	6.46	262	P	Pn	06 53 15.1	+2.5
JCH	Churui	6.48	248	P	Pn	06 53 12.4	-0.4
JCH				eS	Sn	06 54 23.2	-2.2
MYR	Moyori	6.69	246	eP	Pn	06 53 15.4	-0.2
JFR	Furan	6.76	254	P	Pn	06 53 17.8	+1.1
JWK2	Keihoku	6.77	273	P	Pn	06 53 21.4	+4.6
JAB	Ashibetsu	6.89	258	P	Pn	06 53 21.0	+2.5
JEM	Erimo	6.91	244	P	Pn	06 53 19.4	+0.7
ERM	Erimo	6.91	244	ePn	Pn	06 53 20.0	+1.3
ERM	Erimo	6.91	244	ePN	Pn	06 53 20.0	+1.3
JSS	Shosan	6.92	265	P	Pn	06 53 23.4	+4.5
JNBK	Urakawa-nobuka	7.04	247	P	Pn	06 53 19.4	-1.0
JNBK				eS	Sn	06 54 35.6	-3.5
JBT2	Biratori 2	7.07	252	P	Pn	06 53 21.0	+0.1
JHR	Hokuryu	7.17	260	P	Pn	06 53 24.8	+2.5
TYV	Tymovskoe	8.08	316	eP	Pn	06 53 36.8	+2.1
TYV				AMB	AMB	06 53 39.2	
	comp=E,200nm,3.0s						
TYV				eS	Sn	06 55 05.6	+0.9
TYV				A	A	06 55 10.5	
	comp=E,200nm,2.5s						
TYV				AMS	AMS	06 56 29.6	
	comp=E,2µm,19.0s						
TYV				AMS	AMS	06 56 29.6	
	comp=E,2µm,19.0s						
TYV	Tymovskoe	8.08	316	ePN	Pn	06 53 36.8	+2.1
TYV				pmax	pmax		
	comp=Z,49nm,1.0s						
TYV				pmax	pmax		
	comp=Z,200nm,2.9s						
JNB	Noboribetsu	8.09	253	P	Pn	06 53 34.8	-0.1
JNB				eS	Sn	06 55 02.8	-2.1
JKB	Kayabe	8.35	249	P	Pn	06 53 37.7	-0.7
JKB				eS	Sn	06 55 05.5	-5.8
JYM2	Yakumo 2	8.68	252	P	Pn	06 53 42.3	-0.8
JYM2				eS	Sn	06 55 16.9	-2.7
JSH	Shimam	8.69	256	P	Pn	06 53 44.3	+1.1
PEA0B	Petropavlovsk-	8.75	25	ePn	Pn	06 53 45.9	+2.0
PETK	Petropavlovsk-	8.75	25	P	Pn	06 53 43.4	-0.5
	baz=174,slow=10						
PETK				S	Sn	06 55 31.6	+10
PETK	Petropavlovsk-	8.75	25	ePn	Pn	06 53 44.7	+0.8
PETK				S	Sn	06 55 31.6	+10
PETK	Petropavlovsk-	8.75	25	ePN	Pn	06 53 44.7	+0.8
PETK				S	Sn	06 55 31.6	+10
JANG	Nango	8.86	239	P	Pn	06 53 41.9	-3.6
JANG				eS	Sn	06 55 14.7	-9.3
JTM	Tenmabayashi	8.89	243	P	Pn	06 53 44.1	-1.9
JTM				eS	Sn	06 55 17.7	-7.1
JSR	Shiriuchi	8.92	249	P	Pn	06 53 45.0	-1.3
JSR				eS	Sn	06 55 18.8	-6.7
JTH	Tanohata	8.93	236	P	Pn	06 53 43.7	-2.7
JTH				eS	Sn	06 55 15.1	-11
PET	Petropavlovsk	8.98	29	ePN	Pn	06 53 46.7	-0.4
PET				MLR	MLR		
	comp=Z,700nm,18.0s						
PET				MLR	MLR		
	comp=Z,600nm,14.0s						
JOSM	Okushiri--Mats	9.30	254	P	Pn	06 53 51.1	-0.4
OFUJ	Ofunato	9.62	233	P	Pn	06 53 53.4	-2.4
OFUJ				eS	Sn	06 55 33.9	-8.6
OKH	Okha	9.91	329	ePN	Pn	06 54 02.2	+2.5
OKH				pmax	pmax		
	comp=Z,100nm,15.6s						
JRG	Rokugo	10.00	237	P	Pn	06 53 59.1	-2.0
JRG				eS	Sn	06 55 44.7	-7.3
JIO	Ouri	10.23	231	P	Pn	06 54 01.4	-2.9
JIO				eS	Sn	06 55 47.7	-10
NKL	Nikolayevsk	10.52	322	ePN	Pn	06 54 10.0	+1.9
NKL				pmax	pmax		
	comp=Z,350nm,2.0s						
NKL				MLR	MLR		
	comp=N,500nm,15.0s						
NKL				MLR	MLR		
	comp=E,1µm,15.0s						
NKL				MLR	MLR		
	comp=Z,2µm,15.0s						
TEY	Ternei	10.52	274	ePN	Pn	06 54 11.1	+2.9
JYA	Atsumi	11.07	236	P	Pn	06 54 13.9	-1.8
GRNR	Gornyy	11.44	304	ePN	Pn	06 54 27.6	+6.8
JFY	Yanaizu	11.89	232	P	Pn	06 54 26.1	-0.9
MJAR	Matsushiro Arr	13.35	233	P	Pn	06 54 45.5	-1.3
	comp=Z,0.9nm,0.3s,baz=84,slow=15,SNR=10						
MJAR				LR	LR	07 00 23.3	
	comp=Z,340nm,21.4s,baz=40,slow=39						
MJB9	Matsu-Tunnel	13.35	233	ePn	Pn	06 54 45.3	-1.5
MAJO	Matsushiro	13.35	233	eP	Pn	06 54 44.8	-2.1
MAJO	Matsushiro	13.35	233	ePn	Pn	06 54 45.1	-1.7
MAJO	Matsushiro	13.35	233⇑	iPN	Pn	06 54 44.8	-2.1
MAJO				pmax	pmax		
	comp=Z,15nm,1.3s						
MAT	Matsushiro	13.35	233	P	Pn	06 54 44.6	-2.3
MAT				eS	Sn	06 57 08.4	-5.5
USRK	Ussuriysk Ar.	13.91	272	P	Pn	06 54 53.8	-0.7
	baz=86,slow=13						
USRK				LR	LR	07 00 17.7	

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       comp=Z,895nm,18.8s,baz=70,slow=37
KLR    Kul’dur           13.94 293   P      Pn     06 54 55.8 +0.9
       comp=Z,0.0nm,0.3s,baz=95,slow=13,SNR=17
KLR                                  LR     LR     07 00 33.9
       comp=Z,116nm,19.0s,baz=102,slow=38
KLR    Kul’dur           13.94 293  eP      Pn     06 54 56.7 +1.8
KLR    Kul’dur           13.94 293ceP       Pn     06 54 56.7 +1.8
MA2    Magadan           14.25 358   P      Pn     06 54 57.7 -1.3
       comp=Z,4.0nm,0.3s,baz=180,slow=12,SNR=14
MA2                                  LR     LR     07 00 45.0
       comp=Z,635nm,18.1s,baz=180,slow=39
MA2    Magadan           14.25 358  eP      Pn     06 54 59.3 +0.3
MA2    Magadan           14.25 358  ePn     Pn     06 54 59.3 +0.3
MA2    Magadan           14.25 358  eP      Pn     06 54 59.3 +0.3
INU    Inuyama           14.87 233  ePn     Pn     06 55 07.0 -0.6
MSHR   Mys Shultsa       14.91 266⇓iP       Pn     06 55 07.2 -0.8
JHJ    Hachijo jima 2    15.20 221   LR     LR     07 04 22.3
       comp=Z,205nm,18.1s,baz=84,slow=50
MDJ    Mudanjiang        15.52 275   P      Pn     06 55 14.0 -2.0
MDJ                                  pP     P      06 55 22.5 +2.6
MDJ                                  sP     pP     06 55 29.0 -0.4
MDJ                                  S      Sn     06 58 07.9 +1.3
MDJ                                  sS     S      06 58 20.4 -0.8
MDJ                                  PcS    PcS    07 03 48.3 -3.8
MDJ                                  pmax   pmax
       comp=Z,79nm,0.9s
MDJ                                  LR     LR
       comp=Z,680nm,15.8s
MDJ                                  LR     LR
       comp=Z,970nm,18.2s
MDJ                                  LR     LR
       comp=Z,2µm,18.3s
SMY    Shemya            16.50  55  ePn     Pn     06 55 30.6 +2.1
       comp=Z,94nm,1.5s
SMY    Shemya            16.50  55  eP      Pn     06 55 30.6 +2.1
SMY                                  pmax   pmax
       comp=Z,94nm,1.5s
SEY    Seymchan          17.62   1   P      Pn     06 55 40.3 -2.1
       comp=Z,0.2nm,0.3s,baz=166,slow=9.4,SNR=6.2
SEY    Seymchan          17.62   1  eP      Pn     06 55 42.3  0.0
SEY    Seymchan          17.62   1⇑iP       Pn     06 55 42.3  0.0
ZEA    Zeya              17.76 307  eP      Pn     06 55 43.5 -0.7
ZEA                                  pmax   pmax
       comp=Z,500nm,5.0s
ZEA                                  pmax   pmax
       comp=E,300nm,4.0s
ZEA                                  pmax   pmax
       comp=N,59nm,1.0s
ZEA                                  pmax   pmax
       comp=E,59nm,1.0s
ZEA                                  pmax   pmax
       comp=Z,75nm,1.2s
ZEA                                  MLR    MLR
       comp=Z,2µm,15.0s
ZEA                                  MLR    MLR
       comp=E,1µm,16.0s
ZEA                                  MLR    MLR
       comp=N,300nm,13.0s
KSRS   Korea Array       19.32 254   P      P      06 56 00.8 -1.1
       comp=N,1.2nm,0.3s,baz=62,slow=10,SNR=30
KSRS                                 LR     LR     07 02 46.8
       comp=N,379nm,21.9s,baz=61,slow=34
KS01   Wonju Array Si    19.33 254  eP      P      06 56 02.3 +0.3
KS15   Wonju Array Si    19.35 254  eP      P      06 56 03.9 +1.6
KSAR   Wonju Array Be    19.35 254   P      P      06 56 00.8 -1.4
KSAR   Wonju Array Be    19.35 254   P      P      06 56 00.9 -1.4
CBIJ   Chichi jima       19.69 205  eP      P      06 56 07.5 +1.5
       comp=N,47nm,0.7s
JNU    Nakatsue          20.04 240   P      Pn     06 56 13.8 +1.9
       comp=N,52nm,1.0s,baz=44,slow=2.1,SNR=6.6
JNU                                  LR     LR     07 05 28.9
       comp=N,500nm,18.6s,baz=305,slow=41
TJN    Taejon            20.28 252⇑eP       P      06 56 12.5 +0.1
YAK    Yakutsk           20.93 331   P      P      06 56 19.5 +0.3
       comp=N,24nm,0.3s,baz=196,slow=3.4,SNR=9.1
YAK                                  LR     LR     07 04 27.8
       comp=N,348nm,18.6s,baz=82,slow=37
YAK    Yakutsk           20.93 331  eP      P      06 56 17.2 -2.1
YAK                                 e              06 56 30.6
YAK                                 eS      S      07 00 07.2 -3.1
YAK                                 e*SS    sS     07 00 26.0 +0.4
YAK                                  pmax   pmax
       comp=Z,27nm,1.0s
YAK                                  pmax   pmax
       comp=N,6.0nm,1.0s
YAK                                  pmax   pmax
       comp=E,6.0nm,1.1s
YAK                                  smax   smax
       comp=N,87nm,2.5s
YAK                                  smax   smax
       comp=E,76nm,2.5s
YAK                                  MLR    MLR
       comp=Z,339nm,18.0s
YAK                                  MLR    MLR
       comp=N,1µm,21.0s
YAK                                  MLR    MLR
       comp=E,370nm,15.0s
KIWB   Kanaga Island     21.61  61  eP      P      06 56 25.6 -1.0
GSTR   Great Sitkin T    22.30  61  eP      P      06 56 33.3 -0.7
DL2    Dalian            22.99 264   P      P      06 56 38.3 -3.1
DL2                                  pmax   pmax
       comp=E,14nm,0.9s
BJI    Beijing           26.36 271   P      P      06 57 13.8 +1.3
BJI                                  S      S      07 01 46.8 +3.7
BJI                                  pmax   pmax
       comp=E,38nm,1.2s
BJI                                  LR     LR
       comp=E,630nm,14.8s
BJI                                  LR     LR
       comp=E,1µm,16.3s
BJI                                  LR     LR
       comp=E,630nm,16.6s
TIA    Tai’an            27.41 263   P      P      06 57 24.8 +2.7
TIA                                  pmax   pmax
       comp=E,9.0nm,0.7s
NJ2    Nanjing           28.52 254  eP      P      06 57 32.5 +0.5
NJ2                                  S      S      07 02 18.8 +1.5
NJ2                                  pmax   pmax
       comp=E,11nm,0.6s
NJ2                                  LR     LR
       comp=E,620nm,14.1s
NJ2                                  LR     LR
       comp=E,700nm,13.6s
NJ2                                  LR     LR
       comp=E,640nm,15.2s
H11N2  WAKE ISLAND Hy    28.56 148   T      T      07 28 11.5
       baz=337
H11N1  WAKE ISLAND Hy    28.57 148   T      T      07 28 18.6
       baz=337
H11N3  WAKE ISLAND Hy    28.58 148   T      T      07 28 20.3
       baz=337
HHC    Hu-ho-hao-te      29.29 275  eP      P      06 57 39.3 +0.4
HHC                                  sP     pP     06 57 54.8 +5.5
HHC                                  S      S      07 02 25.4 -4.1
HHC                                  sS     sS     07 02 48.9 +2.1
HHC                                  pmax   pmax
       comp=E,29nm,0.9s
HHC                                  pmax   pmax
       comp=E,130nm,4.9s
HHC                                  LR     LR
       comp=E,350nm,13.2s
HHC                                  LR     LR
       comp=E,1µm,12.7s
HHC                                  LR     LR
       comp=E,1µm,13.6s
H11S1  WAKE ISLAND Hy    29.61 150   T      T      07 29 34.2
       baz=330
H11S3  WAKE ISLAND Hy    29.62 150   T      T      07 29 42.3
       baz=330,slow=74
H11S2  WAKE ISLAND Hy    29.63 150   T      T      07 29 37.1
       baz=330,slow=74
ULN    Ulaanbaatar       30.32 291  eP      P      06 57 48.6 +0.6
ULN    Ulaanbaatar       30.32 291  eP      P      06 57 48.4 +0.4
       comp=E,5.7nm,0.8s
ULN    Ulaanbaatar       30.32 291ceP       P      06 57 48.6 +0.6
ULN                                  pmax   pmax
       comp=Z,8.0nm,1.0s
SONA1  Songino Array     30.75 291  eP      P      06 57 51.9 +0.1
SONM   Songino Array     30.76 291   P      P      06 57 50.7 -1.1
       comp=Z,2.1nm,0.6s,baz=74,slow=8.4,SNR=13
SONM                                 LR     LR     07 11 17.8
       comp=Z,668nm,18.4s,baz=66,slow=38
GUMO   Guam              32.16 192   LR     LR     07 13 30.6
       comp=Z,172nm,18.5s,baz=24,slow=40
ZAK    Zakamensk         32.27 297  eP      P      06 58 01.5 -3.6
ZAK                                  pmax   pmax
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       comp=Z,3.0nm,1.2s
WHN    Wuhan             32.50 256   P      P      06 58 06.8 -0.3
WHN                                  LR     LR
       comp=Z,510nm,11.7s
WHN                                  LR     LR
       comp=Z,2µm,19.7s
WHN                                  LR     LR
       comp=Z,920nm,16.4s
QZH    Quanzhou          33.41 244  eP      P      06 58 17.3 +2.2
QZH                                 eS      S      07 03 36.9 +3.1
QZH                                  LR     LR
       comp=Z,230nm,17.5s
SVW2   Sparrevohn        34.27  43  eP      P      06 58 23.5 +1.2
       comp=Z,5.0nm,1.0s
XAN    Xi’an             34.28 266   P      P      06 58 22.9 +0.2
XAN                                  pP     pP     06 58 34.0 +0.7
XAN                                  pmax   pmax
       comp=Z,12nm,0.8s
XAN                                  LR     LR
       comp=Z,340nm,14.4s
XAN                                  LR     LR
       comp=Z,210nm,13.9s
XAN                                  LR     LR
       comp=Z,330nm,13.4s
KDAK   Kodiak Island     35.86  49   P      P      06 58 35.4 -0.5
       comp=Z,10.0nm,0.7s,baz=290,slow=3.5,SNR=15
KDAK   Kodiak Island     35.86  49  eP      P      06 58 35.4 -0.5
       comp=Z,24nm,0.9s
PPLA   Purkeypile        35.95  40  eP      P      06 58 38.3 +1.4
       comp=Z,18nm,1.3s
CAST   Castle Rocks      36.02  40  eP      P      06 58 38.4 +1.1
       comp=Z,5.2nm,1.0s
SKT    Skwentna          36.24  42  eP      P      06 58 39.8 +0.6
       comp=Z,3.3nm,0.9s
CNPM   China Poot        36.44  46  eP      P      06 58 41.4 +0.4
       comp=Z,27nm,1.4s
BPAW   Bear Paw Mtn.     36.54  38  eP      P      06 58 42.7 +0.9
       comp=Z,3.9nm,1.0s
KTH    Kantishna Hill    36.55  39  eP      P      06 58 43.2 +1.3
       comp=Z,13nm,1.0s
MLY    Manley            36.70  37  eP      P      06 58 44.2 +1.0
       comp=Z,3.4nm,0.8s
LZH    Lanzhou           36.82 273 ⇑P       P      06 58 45.8 +1.2
LZH                                  pP     pP     06 58 58.0 +2.8
LZH                                  PP     PnPn   07 00 11.3 +2.4
LZH                                 eS      S      07 04 25.4 -1.0
LZH                                  sS     ScP    07 04 45.6 -4.2
LZH                                 eSS     SnSn   07 06 55.6 -4.0
LZH                                  pmax   pmax
       comp=Z,59nm,1.0s
LZH                                  pmax   pmax
       comp=Z,230nm,5.3s
LZH                                  LR     LR
       comp=Z,570nm,13.6s
LZH                                  LR     LR
       comp=Z,550nm,13.1s
LZH                                  LR     LR
       comp=Z,750nm,15.2s
TRF    Thorofare Moun    36.83  40  eP      P      06 58 45.2 +0.8
       comp=Z,4.1nm,0.8s
RC01   Rabbit Creek A    37.11  44  eP      P      06 58 46.8 +0.2
       comp=Z,9.4nm,0.9s
COLD   Coldfoot          37.11  33  eP      P      06 58 46.9 +0.3
       comp=Z,4.7nm,1.0s
BWN    Browne            37.21  38  eP      P      06 58 49.2 +1.7
       comp=Z,42nm,1.2s
PMR    Palmer            37.38  43  eP      P      06 58 49.5 +0.6
       comp=Z,4.4nm,0.7s
PMR    Palmer            37.38  43  eP      P      06 58 49.5 +0.6
PMR                                  pmax   pmax
       comp=Z,4.0nm,0.7s
MCK    McKinley          37.44  39  eP      P      06 58 50.2 +0.8
       comp=Z,8.9nm,1.1s
MCK    McKinley          37.44  39  eP      P      06 58 50.2 +0.8
MCK                                  pmax   pmax
       comp=Z,9.0nm,1.1s
TOLK   Toolik Lake Re    37.52  31  eP      P      06 58 49.7 -0.3
       comp=Z,5.5nm,1.0s
SML    Sawmill           37.75  42  eP      P      06 58 52.5 +0.4
       comp=Z,23nm,0.7s
SML    Sawmill           37.75  42  eP      P      06 58 52.5 +0.4
SML                                  pmax   pmax
       comp=Z,23nm,0.7s
MDM    Murphy Dome       37.77  37  eP      P      06 58 52.8 +0.6
       comp=Z,5.1nm,0.9s
WRH    Wood River Hil    37.82  38  eP      P      06 58 53.3 +0.8
       comp=Z,3.7nm,0.6s
GTA    Gaotai            38.09 280 ⇑P       P      06 58 56.1 +0.8
GTA                                  pP     pP     06 59 06.4 +0.5
GTA                                  sP     sP     06 59 10.8 +0.5
GTA                                  PcP    PcP    07 01 10.8 +1.0
GTA                                  S      S      07 04 47.8 +2.2
GTA                                  sS     sS     07 05 02.3 -0.8
GTA                                  SS     SnSn   07 07 25.5 -4.7
GTA                                  pmax   pmax
       comp=Z,16nm,1.2s
GTA                                  pmax   pmax
       comp=Z,100nm,5.2s
GTA                                  LR     LR
       comp=Z,260nm,15.9s
GTA                                  LR     LR
       comp=Z,340nm,14.3s
GTA                                  LR     LR
       comp=Z,530nm,14.9s
IL1    Eielson Array     38.34  37  eP      P      06 58 57.6 +0.6
ILAR   Eielson Array     38.34  37   P      P      06 58 56.7 -0.2
       comp=Z,3.5nm,1.1s,baz=265,slow=7.0,SNR=20
ILAR                                 LR     LR     07 16 37.9
       comp=Z,140nm,19.6s,baz=283,slow=39
ILB    Eielson Array     38.34  37  eP      P      06 58 57.3 +0.4
MID    Middleton Isla    38.94  46  eP      P      06 59 03.4 +1.4
       comp=Z,200nm,1.4s
MID    Middleton Isla    38.94  46  eP      P      06 59 03.4 +1.4
DIV    Divide            39.03  43  eP      P      06 59 03.6 +0.8
       comp=Z,7.1nm,0.6s
BMRM   Bremner River     39.61  43  eP      P      06 59 08.7 +1.0
       comp=Z,12nm,1.0s
CD2    Chengdu           39.65 266   P      P      06 59 08.8 +0.5
CD2                                  pP     pP     06 59 20.8 +1.8
CD2                                  sP     sP     06 59 26.3 +2.9
CD2                                  PP     PP     07 00 40.3 +0.7
CD2                                  S      S      07 05 08.8 -0.2
CD2                                  pmax   pmax
       comp=Z,80nm,0.7s
CD2                                  pmax   pmax
       comp=Z,220nm,5.2s
CD2                                  LR     LR
       comp=Z,330nm,15.5s
CD2                                  LR     LR
       comp=Z,360nm,14.6s
CD2                                  LR     LR
       comp=Z,360nm,13.4s
RAGM   Ragged Mountai    39.65  44  eP      P      06 59 09.2 +1.2
       comp=Z,22nm,1.2s
GYA    Guiyang           40.32 258   P      P      06 59 14.8 +0.8
GYA                                  pP     pP     06 59 27.8 +3.1
GYA                                  PP     PnPn   07 00 53.3 +2.3
GYA                                  S      S      07 05 20.0 +0.7
GYA                                  sS     sS     07 05 40.5 +3.6
GYA                                  pmax   pmax
       comp=Z,20nm,0.8s
GYA                                  pmax   pmax
       comp=Z,120nm,5.0s
GYA                                  LR     LR
       comp=Z,1µm,16.7s
GYA                                  LR     LR
       comp=Z,1µm,19.4s
GYA                                  LR     LR
       comp=Z,2µm,17.2s
BALM   Baldy             40.69  43  eP      P      06 59 17.9 +1.2
       comp=Z,15nm,1.2s
BALM   Baldy             40.69  43  eP      P      06 59 17.9 +1.2
BALM                                 pmax   pmax
       comp=Z,15nm,1.2s
EGAK   Eagle             40.79  37  eP      P      06 59 17.4 +0.1
       comp=Z,14nm,1.4s
DAWY   Dawson            41.63  38  eP      P      06 59 24.8 +0.5
       comp=Z,3.6nm,1.1s
ZAA0   Zalesovo Array    42.52 307  ePcP    PcP    07 01 24.3 +0.7
ZALV   Zalesovo Beam     42.52 307   P      P      06 59 29.1 -2.6
       comp=Z,1.3nm,0.5s,baz=98,slow=7.6,SNR=4.2
ZALV                                 PcP    PcP    07 01 23.3 -0.3
       comp=Z,3.0nm,0.7s,baz=76,slow=3.2,SNR=7.8
ZALV                                 LR     LR     07 18 12.8
       comp=Z,409nm,20.8s,baz=73,slow=38
INK    Inuvik            43.43  31   P      P      06 59 38.0 -0.7
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       comp=Z,6.8nm,1.0s,baz=266,slow=8.4,SNR=16
INK    Inuvik            43.43  31  eP      P      06 59 38.4 -0.3
       comp=Z,7.5nm,0.9s
KMI    Kunming           43.88 260   P      P      06 59 43.5 +0.3
KMI                                  pP     pP     06 59 55.4 +1.4
KMI                                  sP     sP     07 00 01.3 +3.0
KMI                                  pmax   pmax
       comp=Z,9.0nm,1.0s
KMI                                  pmax   pmax
       comp=Z,92nm,3.9s
KMI                                  LR     LR
       comp=Z,270nm,16.6s
KMI                                  LR     LR
       comp=Z,150nm,16.1s
KMI                                  LR     LR
       comp=Z,200nm,15.6s
WMQ    Urumqi            44.39 292   P      P      06 59 48.0 +1.1
WMQ                                  pP     pP     06 59 57.0 -0.7
WMQ                                  sP     sP     07 00 08.3 +6.3
WMQ                                  pmax   pmax
       comp=Z,46nm,0.7s
WMQ                                  pmax   pmax
       comp=Z,250nm,3.6s
WMQ                                  LR     LR
       comp=Z,920nm,16.1s
WMQ                                  LR     LR
       comp=Z,540nm,14.3s
WMQ                                  LR     LR
       comp=Z,510nm,20.1s
BESE   Bessie Mountai    44.92  45  epP     pP     07 00 00.1 -1.6
MK31   Makanchi Array    46.59 298  eP      P      07 00 03.7 -0.5
MK31   Makanchi Array    46.59 298  eP      P      07 00 03.7 -0.5
MKAR   Makanchi Array    46.59 298   P      P      07 00 03.5 -0.8
       comp=Z,3.8nm,0.5s,baz=72,slow=7.7,SNR=49
MKAR                                 PcP    PcP    07 01 38.2 +0.4
       comp=Z,1.9nm,0.6s,baz=74,slow=3.4,SNR=4.4
MKAR                                 LR     LR     07 20 40.2
       comp=Z,788nm,18.2s,baz=66,slow=37
MKAR   Makanchi Array    46.59 298  eP      P      07 00 03.7 -0.5
       comp=Z,51nm,0.5s
MKAR                                 PcP    PcP    07 01 38.2 +0.4
MK01   Makanchi Array    46.59 298  eP      P      07 00 03.9 -0.4
MAKZ   Makanchi          46.78 298  eP      P      07 00 05.9 +0.2
       comp=Z,4.0nm,0.6s
MAKZ   Makanchi          46.78 298  eP      P      07 00 05.9 +0.2
MAKZ                                 pmax   pmax
       comp=Z,4.0nm,0.6s
KURK   Kurchatov         47.21 304  eP      P      07 00 07.2 -1.7
       comp=Z,8.7nm,0.5s
KURK   Kurchatov         47.21 304   P      P      07 00 07.4 -1.5
KURK                                 pmax   pmax
       comp=Z,2.0nm,0.4s
KURBB  Kurchatov Arra    47.30 304   P      P      07 00 07.4 -2.2
       comp=Z,2.4nm,0.4s,baz=72,slow=8.8,SNR=19
DLBC   Dease Lake        47.37  44   P      P      07 00 10.6 +0.3
       comp=Z,5.0nm,0.9s,baz=261,slow=7.2,SNR=9.4
DLBC   Dease Lake        47.37  44  eP      P      07 00 11.9 +1.7
       comp=Z,4.8nm,0.8s
SKNT   Sakolnakorn       48.59 250   P      P      07 00 22.3 +2.3
       comp=Z,1.8nm,1.2s,comp=Z,593nm
CMMT   Chiang Mai        50.70 256   P      P      07 00 38.1 +2.0
       comp=Z,12nm,0.7s
CHTO   Chiang Mai        50.70 256  eP      P      07 00 37.4 +1.4
       comp=Z,8.1nm,0.8s
CHTO   Chiang Mai        50.70 256   P      P      07 00 38.2 +2.1
       comp=Z,55nm,0.8s
BVAR   Borovoye Array    50.88 310   P      P      07 00 36.1 -0.9
       comp=Z,1.3nm,0.4s,baz=58,slow=8.7,SNR=8.9
BVAR                                 PcP    PcP    07 01 53.2 +0.1
       comp=Z,3.7nm,0.7s,baz=75,slow=2.2,SNR=6.6
BVAR                                 LR     LR     07 23 42.2
       comp=Z,400nm,20.0s,baz=54,slow=38
BRVK   Borovoye          50.92 310  eP      P      07 00 35.7 -1.6
       comp=Z,3.2nm,0.6s
BRVK   Borovoye          50.92 310  eP      P      07 00 35.7 -1.6
BRVK                                 pmax   pmax
       comp=Z,3.0nm,0.6s
CMAR   Chiang Mai Arr    50.95 256   P      P      07 00 39.0 +1.1
       comp=Z,2.0nm,0.4s,baz=35,slow=8.0,SNR=9.4
CMAR                                 LR     LR     07 24 37.6
       comp=Z,167nm,18.1s,baz=47,slow=39
SHL    Shillong          51.21 268  eP      P      07 00 40.2 +0.1
       comp=Z,47nm,0.7s
SHL    Shillong          51.21 268  eP      P      07 00 40.2 +0.1
SHL                                  pmax   pmax
       comp=Z,47nm,0.7s
KDJ    Kajisay           52.00 295  eP      P      07 00 45.5 -0.3
       comp=Z,11nm,0.7s
RES    Resolute Bay      52.51  18  eP      P      07 00 48.8  0.0
       comp=Z,8.2nm,1.0s
RES    Resolute Bay      52.51  18  eP      P      07 00 48.8  0.0
RES                                  pmax   pmax
       comp=Z,8.0nm,1.0s
ULHL   Ulahol            52.54 295   P      P      07 00 50.6 +0.8
       SNR=8.1
TKM2   Tokmak 2          52.60 296   P      P      07 00 50.7 +0.4
       SNR=7.1
YKA    Yellowknife Ar    52.71  36   P      P      07 00 51.0 +0.5
       comp=Z,3.0nm,0.9s,baz=301,slow=7.6,SNR=12
YKA    Yellowknife Ar    52.71  36   P      P      07 00 51.0 +0.5
YKA    Yellowknife Ar    52.71  36   P      P      07 00 51.0 +0.5
YKA                                  pmax   pmax
       comp=Z,3.0nm,0.9s
USP    Ospenovka         53.12 297   P      P      07 00 54.3 +0.4
       SNR=7.5
KBK    Karagaybulak      53.15 296   P      P      07 00 55.2 +0.9
       SNR=5.1
KZA    Kyzart            53.26 296   P      P      07 00 56.6 +1.2
       SNR=12
AAK    Ala-Archa         53.45 296   LR     LR     07 25 01.6
       comp=Z,395nm,18.4s,baz=48,slow=38
AAK    Ala-Archa         53.45 296   P      P      07 00 57.2 +0.7
       SNR=5.3
ODAN   Odare             53.58 273  eP      P      07 00 58.3 +0.6
       comp=Z,16nm,0.5s
KBS    Kingsbay          53.70 351  eP      P      07 00 57.3 -0.2
       comp=Z,14nm,0.8s
SPA0   Spitsbergen Ar    53.78 350  eP      P      07 00 56.7 -1.5
SPITS  Spitsbergen Ar    53.78 350   P      P      07 00 55.5 -2.7
       comp=Z,1.3nm,0.4s,baz=41,slow=7.7,SNR=10
EKS2   Erkin-Say         53.88 297   P      P      07 01 00.1 +0.5
       SNR=9.7
JIRN   Jiri              53.94 274  eP      P      07 01 01.3 +0.8
       comp=Z,117nm,0.6s
GUN    Gumba             54.00 275  eP      P      07 01 02.0 +1.1
       comp=Z,57nm,0.4s
RAMN   Ramite            54.08 273  eP      P      07 01 02.0 +0.6
       comp=Z,78nm,0.6s
SVE    Sverdlovsk        54.09 317⇓eP       P      07 00 59.4 -1.3
SVE                                  pmax   pmax
       comp=Z,11nm,0.8s
KSH    Kashi             54.14 292   P      P      07 01 05.5 +4.0
KSH                                  sP     sP     07 01 23.3 +6.5
KSH                                 ePcP    PcP    07 02 09.8 +4.0
KSH                                  PP     PP     07 03 08.8 +5.7
KSH                                  S      S      07 08 36.8 +1.0
KSH                                  pmax   pmax
       comp=Z,36nm,1.4s
KSH                                  pmax   pmax
       comp=Z,140nm,4.6s
KSH                                  LR     LR
       comp=Z,800nm,17.8s
KSH                                  LR     LR
       comp=Z,1µm,20.9s
KKN    Kakani            54.49 275  eP      P      07 01 05.1 +0.8
       comp=Z,39nm,0.6s
PKIN   Phulchoki         54.54 275  eP      P      07 01 06.0 +1.2
       comp=Z,60nm,0.7s
PMG    Port Moresby      54.65 185   LR     LR     07 25 30.7
       comp=Z,28nm,18.8s,baz=31,slow=37
DMN    Daman             54.73 275  eP      P      07 01 07.1 +1.0
       comp=Z,67nm,0.7s
GKN    Gorkha            54.82 276  eP      P      07 01 07.3 +0.7
       comp=Z,66nm,0.5s
HNR    Honiara           55.07 170   LR     LR     07 27 24.0
       comp=Z,157nm,18.0s,baz=340,slow=39
DANN   Dangsing          55.22 277  eP      P      07 01 10.9 +1.2
       comp=Z,84nm,0.5s
ARU    Arti              55.28 318   LR     LR     07 26 33.5
       comp=Z,197nm,20.1s,baz=46,slow=38
ARU    Arti              55.28 318  eP      P      07 01 08.1 -1.3
       comp=Z,13nm,0.4s
ARU    Arti              55.28 318c iP      P      07 01 07.9 -1.4
ARU                                                07 02 03.5
ARU                                  S      S      07 08 51.0 +0.8
ARU                                  SS     SS     07 12 28.3 -5.8
ARU                                  pmax   pmax
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	comp=Z,12nm,1.0s						
ARU				MLR	MLR		
	comp=Z,355nm,17.0s						
NLWA	Neilton Lookou	55.59	55	eP	P	07 01 11.4	-0.3
	comp=Z,15nm,1.3s						
KK31	Karatay Array	55.69	299	eP	P	07 01 11.8	-0.7
KK31	Karatay Array	55.69	299	eP	P	07 01 11.8	-0.7
KKAR	Karatay Array	55.69	299	eP	P	07 01 12.0	-0.5
KKAR	Karatay Array	55.69	299	eP	P	07 01 12.0	-0.5
KOLN	Koldanda	55.69	276	eP	P	07 01 13.8	+0.9
	comp=Z,34nm,0.6s						
TULEG	Thule	55.70	11	eP	P	07 01 10.8	-1.3
	comp=Z,17nm,1.2s						
PYUN	Piuthan	55.91	277	eP	P	07 01 15.4	+0.8
	comp=Z,112nm,1.0s						
PRGR	Permogore	57.93	327	eP	P	07 01 27.5	-0.5
PRGR				pmax	pmax		
	comp=Z,8.0nm,0.6s						
H04A	Detroit Lake	58.04	57	eP	P	07 01 30.5	+1.3
	comp=Z,16nm,1.1s						
ARCES	ARCESS Array B	58.79	341	P	P	07 01 32.8	-1.2
	comp=Z,5.3nm,0.8s,baz=37,slow=6.7,SNR=9.2						
ARCES	ARCESS Array B	58.79	341	eP	P	07 01 33.9	-0.1
AKTO	Aktyubinsk	58.81	312	P	P	07 01 33.2	-1.2
	comp=Z,3.8nm,0.5s,baz=64,slow=7.4,SNR=17						
AKTO				LR	LR	07 29 23.4	
	comp=Z,798nm,18.1s,baz=50,slow=39						
COEN	Coen	59.52	189	eP	P	07 01 40.8	+1.2
	comp=Z,8.9nm,0.8s						
K05A	Summer Lake	59.93	58	eP	P	07 01 44.0	+1.5
	comp=Z,6.9nm,1.0s						
TRO	Tromso	60.18	343	eP	P	07 01 42.2	-1.3
TRO				IAmb	IAmb	07 01 43.3	
	comp=Z,21nm,0.8s						
WALA	Waterton Lakes	60.20	49	eP	P	07 01 44.2	+0.1
	comp=Z,11nm,1.2s						
MOD	Modoc Plateau	60.76	59	eP	P	07 01 49.7	+1.6
MOD				epP	pP	07 01 58.7	-0.6
J08A	Circle Bar Ran	60.99	57	eP	P	07 01 51.4	+1.7
	comp=Z,6.3nm,1.0s						
KBL	Kabul	61.53	291	eP	P	07 01 53.2	-0.3
	comp=Z,27nm,0.7s						
KBL	Kabul	61.53	291	eP	P	07 01 53.2	-0.3
KBL				pmax	pmax		
	comp=Z,27nm,0.7s						
BEKR	Beckworth	61.94	61	eP	P	07 01 56.9	+0.7
	comp=Z,3.3nm,0.9s						
SUMG	Summit	62.16	3	eP	P	07 01 57.4	0.0
	comp=Z,26nm,1.0s						
SUMG	Summit	62.16	3	eP	P	07 01 57.4	0.0
SUMG				pmax	pmax		
	comp=Z,26nm,1.0s						
STEI	Steigen	62.35	343	eP	P	07 01 56.5	-1.7
STEI				IAmb	IAmb	07 01 57.4	
	comp=Z,11nm,0.9s						
LOF	Lofoten	62.53	344	eP	P	07 01 56.4	-3.0
LOF				IAmb	IAmb	07 01 59.7	
	comp=Z,50nm,1.3s						
FFC	Flin Flon	62.53	39	eP	P	07 02 00.7	+1.1
FFC	Flin Flon	62.53	39	eP	P	07 01 58.0	-1.6
	comp=Z,2.6nm,0.8s						
FFC	Flin Flon	62.53	39	eP	P	07 01 58.0	-1.6
FFC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PNTR	Pine Nut	62.88	61	eP	P	07 02 04.0	+1.5
	comp=Z,5.5nm,0.7s						
LRM	Limekiln Ridge	62.94	51	eP	P	07 02 03.7	+0.9
EGMT	Eagleton	63.02	48	eP	P	07 02 03.9	+0.8
	comp=Z,64nm,0.8s						
HLID	Hailey	63.23	54	eP	P	07 02 05.6	+0.9
	comp=Z,3.9nm,1.2s						
BOZ	Bozeman (W)	63.53	51	eP	P	07 02 07.5	+0.9
	comp=Z,14nm,1.4s						
BOZ	Bozeman (W)	63.53	51	eP	P	07 02 07.5	+0.9
BOZ				pmax	pmax		
	comp=Z,14nm,1.4s						
KVN	Kaiserville	63.82	60	eP	P	07 02 09.9	+1.1
	comp=Z,3.3nm,1.0s						
KVN	Kaiserville	63.82	60	eP	P	07 02 09.9	+1.1
KVN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
NV01	Mina Array Sit	64.08	61	eP	P	07 02 11.2	+0.7
NVAR	Mina Array Bea	64.08	61	P	P	07 02 11.6	+1.1
	comp=Z,1.3nm,0.7s,baz=292,slow=6.7,SNR=9.1						
FIA1	FINESS Array S	64.81	334	eP	P	07 02 13.6	-1.0
	comp=Z,24nm,1.4s						
FINES	FINESS Array B	64.81	334	P	P	07 02 12.8	-1.8
	comp=Z,8.0nm,0.5s,baz=50,slow=6.2,SNR=38						
FINES				LR	LR	07 33 05.3	
	comp=Z,185nm,19.1s,baz=36,slow=38						
NSS	Namsos	65.95	342	eP	P	07 02 20.7	-1.2
NSS				IAmb	IAmb	07 02 21.8	
	comp=Z,11nm,0.9s						
DUG	Dugway, Tooele	66.27	56	eP	P	07 02 25.3	+0.7
	comp=Z,5.9nm,1.2s						
DUG	Dugway, Tooele	66.27	56	eP	P	07 02 25.3	+0.7
DUG				pmax	pmax		
	comp=Z,6.0nm,1.2s						
GEYT	Alibeck	66.35	300	P	P	07 02 24.3	-0.7
	comp=Z,7.0nm,0.6s,baz=62,slow=6.9,SNR=15						
GYA0B	ALIBECK ARRAY	66.35	300	eP	P	07 02 25.8	+0.9
	comp=Z,18nm,0.8s						
VRH	Novokhopyorsk	66.35	320	eP	P	07 02 23.0	-1.6
VRH				pmax	pmax		
	comp=Z,20nm,0.8s						
VRH				MLR	MLR		
	comp=Z,360nm,19.0s						
PDAR	Pinedale Array	66.48	52	P	P	07 02 25.7	-0.3
	comp=Z,0.5nm,0.7s,baz=270,slow=4.0,SNR=3.9						
PDAR	Pinedale Array	66.48	52	eP	P	07 02 26.6	+0.6
SFJD	Kangerlussuaq	66.71	9	LR	LR	07 35 35.0	
	comp=Z,116nm,18.6s,baz=340,slow=40						
WB2	Warramunga Arr	66.84	198	eP	P	07 02 28.6	+0.6
	comp=Z,9.8nm,0.7s						
WRA	Warramunga Arr	66.84	198	P	P	07 02 28.6	+0.5
	comp=Z,3.3nm,0.7s,baz=16,slow=6.7,SNR=23						
WRA				LR	LR	07 27 19.1	
	comp=Z,59nm,21.3s,baz=235,slow=32						
FITZ	Fitzroy Crossi	67.39	207	P	P	07 02 31.9	+0.3
	comp=Z,2.9nm,0.8s,baz=190,slow=13,SNR=3.8						
VSR	Storozhevoye	67.49	321	eP	P	07 02 30.9	-1.0
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VSR				MLR	MLR		
	comp=Z,620nm,22.0s						
VORD	Divnogorie	67.61	321	eP	P	07 02 30.9	-1.8
VORD				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MSU	Marysvale	67.74	57	eP	P	07 02 33.0	-1.0
MSU	Marysvale	67.74	57	eP	P	07 02 33.0	-1.0
LCMT	Little Creek M	68.08	59	eP	P	07 02 37.3	+1.3
	comp=Z,1.9nm,0.8s						
DZM	Mont Dzumac	68.47	165	LR	LR	07 32 44.5	
	comp=Z,190nm,18.1s,baz=19,slow=36						
DZM	Mont Dzumac	68.47	165	eLR	LR	07 23 28.1	
	comp=Z,124nm,20.8s						
MOL	Molde	68.62	343	eP	P	07 02 38.3	-0.5
MOL				IAmb	IAmb	07 02 39.8	
	comp=Z,8.0nm,0.4s						
DOMB	Dombas	68.77	342	eP	P	07 02 39.4	-0.4
DOMB				IAmb	IAmb	07 02 39.7	
	comp=Z,30nm,1.2s						
NC303	NORSAR Array S	68.97	341	eP	P	07 02 40.1	-1.0
NC303	NORSAR Array S	68.97	341	eP	P	07 02 40.4	-0.6
NC303				IAmb	IAmb	07 02 40.8	
	comp=Z,17nm,0.6s						
NC405	NORSAR Array S	68.99	340	eP	P	07 02 40.2	-0.9
NC204	NORSAR Array S	69.07	341	eP	P	07 02 41.1	-0.6
NC204	NORSAR Array S	69.07	341	eP	P	07 02 41.2	-0.6
NC204				IAmb	IAmb	07 02 41.8	
	comp=Z,69nm,1.2s						
AKN	Aaknes	69.09	343	eP	P	07 02 41.5	-0.3
AKN				IAmb	IAmb	07 02 43.0	
	comp=Z,45nm,1.4s						
MAK	Makhachkala	69.12	310	eP	P	07 02 41.4	-0.8
MAK				eS	S	07 11 47.8	+2.9
MAK				pmax	pmax		
	comp=Z,33nm,0.5s						
MAK				MLR	MLR		
	comp=Z,241nm,18.0s						
NB201	NORSAR Array S	69.15	341	eP	P	07 02 41.2	-1.0
NB201	NORSAR Array S	69.15	341	eP	P	07 02 41.7	-0.5
NB201				IAmb	IAmb	07 02 41.9	
	comp=Z,33nm,0.7s						
NB2	NORSAR Subarra	69.17	341	P	P	07 02 41.1	-1.2
	comp=Z,8.3nm,0.5s,baz=28,slow=6.2						
NB2	NORSAR Subarra	69.17	341	P	P	07 02 41.1	-1.2
	baz=28,slow=6.2						
NOA	NORSAR Array B	69.17	341	LR	LR	07 38 07.1	
	comp=Z,112nm,18.3s,baz=20,slow=40						
NBO00	NORSAR Array S	69.28	341	eP	P	07 02 42.6	-0.4
NBO00	NORSAR Array S	69.28	341	eP	P	07 02 42.5	-0.4
NBO00				IAmb	IAmb	07 02 44.8	
	comp=Z,26nm,1.1s						
HFS	Hagfors	69.36	339	P	P	07 02 42.3	-1.2
	comp=Z,26nm,0.7s,baz=53,slow=5.6,SNR=104						
NC602	NORSAR Array S	69.36	340	eP	P	07 02 42.4	-1.0
NC602	NORSAR Array S	69.36	340	eP	P	07 02 42.9	-0.6
NC602				IAmb	IAmb	07 02 43.6	
	comp=Z,84nm,0.6s						
IDID	Didziasalis	69.39	330	eP	P	07 02 42.7	-1.0
IDID				IAmb	IAmb	07 02 45.2	
	comp=Z,6.9nm,0.7s						
ISAL	Salakas	69.40	330	eP	P	07 02 43.0	-0.7
ISAL				IAmb	IAmb	07 02 45.4	
	comp=Z,7.9nm,0.7s						
NAO01	NORSAR Array S	69.42	341	eP	P	07 02 43.3	-0.5
NAO01	NORSAR Array S	69.42	341	eP	P	07 02 43.5	-0.4
NAO01				IAmb	IAmb	07 02 44.4	
	comp=Z,26nm,1.1s						
IIGN	Ignalina	69.54	330	eP	P	07 02 43.9	-0.7
IIGN				IAmb	IAmb	07 02 45.2	
	comp=Z,9.4nm,0.5s						
BORG	Borgarnes	70.09	357	eP	P	07 02 49.4	+1.6
	comp=Z,26nm,1.1s						
BORG	Borgarnes	70.09	357	eP	P	07 02 49.4	+1.6
BORG				pmax	pmax		
	comp=Z,26nm,1.1s						
HYA	Hoyanger	70.17	343	eP	P	07 02 48.0	-0.4
HYA				IAmb	IAmb	07 02 48.4	
	comp=Z,15nm,0.7s						
AS01	Alice Springs	70.53	197	eP	P	07 02 52.1	+1.1
ASAR	Alice Springs	70.54	197	P	P	07 02 52.5	+1.5
	comp=Z,2.2nm,0.7s,baz=13,slow=6.2,SNR=24						
SUE	Sulen	70.56	344	eP	P	07 02 50.5	-0.2
SUE				IAmb	IAmb	07 02 51.2	
	comp=Z,20nm,0.8s						
NCK	Nalchik	70.81	313	⇑iP	P	07 02 53.8	+1.1
KVAR	Kislovodsk Arr	70.95	314	LR	LR	07 38 38.0	
	comp=Z,344nm,18.6s,slow=40						
KIV	Kislovodsk	70.95	314	eP	P	07 02 54.5	+0.9
KIV	Kislovodsk	70.95	314	eP	P	07 02 54.6	+0.9
	comp=Z,43nm,0.8s						
KIV	Kislovodsk	70.95	314	ceP	P	07 02 54.0	+0.4
KIV				e		07 03 11.9	
KIV				e		07 05 31.2	
KIV				eS	SKiKP	07 12 24.9	-7.3
KIV				pmax	pmax		
	comp=Z,58nm,1.0s						
KIV				MLR	MLR		
	comp=Z,328nm,17.0s						
ASK	Askoy	71.00	343	eP	P	07 02 52.9	-0.5
ASK				IAmb	IAmb	07 02 53.6	
	comp=Z,12nm,0.7s						
KBZ	Khabaz	71.01	313	P	P	07 02 54.6	+0.9
	comp=Z,40nm,0.8s,baz=64,slow=4.1,SNR=71						
BER	Bergen	71.06	343	eP	P	07 02 53.5	-0.3
BER				IAmb	IAmb	07 02 54.0	
	comp=Z,20nm,0.8s						
ZEI	Tsey	71.15	312	eP	P	07 02 54.2	-0.8
ZEI				pmax	pmax		
	comp=Z,18nm,0.6s						
ODD1	Odda	71.21	342	eP	P	07 02 54.2	-0.6
ODD1				IAmb	IAmb	07 02 55.5	
	comp=Z,12nm,0.8s						
NEY	Neytrino	71.44	313	ceP	P	07 02 58.1	+1.4
NEY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TBLG	Delisi	71.45	311	eP	P	07 02 58.0	+1.4
	comp=Z,62nm,0.7s						
TBLG	Delisi	71.45	311	eP	P	07 02 58.0	+1.4
TBLG				pmax	pmax		
	comp=Z,62nm,0.7s						
EYMN	Ely	71.96	39	eP	P	07 02 59.2	-0.3
	comp=Z,4.3nm,1.0s						
AKASG	Malin Array Be	72.07	326	P	P	07 02 59.3	-0.7
	comp=Z,5.9nm,0.4s,baz=35,slow=6.3,SNR=21						
AKASG				LR	LR	07 37 17.3	
	comp=Z,205nm,19.0s,baz=20,slow=38						
AKBB	Malin Array Si	72.07	326	eP	P	07 02 59.1	-1.0
	comp=Z,18nm,1.0s						
AKBB	Malin Array Si	72.07	326	eP	P	07 02 59.1	-1.0
AKBB				pmax	pmax		
	comp=Z,18nm,1.0s						
KIEV	Kiev	72.08	326	eP	P	07 02 59.1	-1.0
KIEV	Kiev	72.08	326	eP	P	07 02 59.5	-0.7
	comp=Z,17nm,1.0s						
KIEV	Kiev	72.08	326	ceP	P	07 02 59.1	-1.0
KIEV				pmax	pmax		
	comp=Z,18nm,1.0s						
AK11	Malin Array Si	72.11	326	eP	P	07 02 59.5	-0.8
AKH	Akhalkalaki	72.34	311	⇑iP	P	07 03 03.6	+1.5
SNART	Snartemo	72.51	341	eP	P	07 03 02.4	-0.2
SNART				IAmb	IAmb	07 03 03.1	
	comp=Z,12nm,0.7s						
GNI	Garni	72.56	310	P	P	07 03 03.9	+0.4
	comp=Z,12nm,0.5s,baz=153,slow=3.6,SNR=11						
GNI				LR	LR	07 39 38.8	
	comp=Z,138nm,19.1s,baz=16,slow=40						
ECSD	EROS Data Cent	72.66	45	eP	P	07 03 03.2	-0.6
	comp=Z,14nm,1.5s						
SOC	Sochi	72.72	315	eP	P	07 03 04.7	+0.6
SOC	Sochi	72.72	315	eP	P	07 03 02.5	-1.6
SOC				e		07 05 46.0	
SOC				ePPP	PPP	07 07 25.6	
SOC				eS	S	07 12 25.7	-1.0
SOC				eSS	SS	07 17 06.4	+0.7
SOC				pmax	pmax		
	comp=Z,24nm,0.7s						
E38A	The Farm, Brul	72.94	40	eP	P	07 03 05.1	-0.3
	comp=Z,18nm,1.3s						
ANN	Anapa	72.94	317	eP	P	07 03 05.6	+0.2
ANN	Anapa	72.94	317	eP	P	07 03 04.8	-0.6
ANN				i *PP	pP	07 03 14.4	-2.3
ANN				e		07 05 46.4	
ANN				eS	S	07 12 29.5	+0.3
ANN				pmax	pmax		
	comp=Z,31nm,0.6s						
ANMO	Albuquerque	73.53	57	⇑iP	P	07 03 08.8	-0.5
I37A	Lemond, Waseca	74.02	43	eP	P	07 03 11.9	+0.2
	comp=Z,15nm,0.8s						
BEL	Belsk	74.29	331	eP	P	07 03 13.8	+0.7
BEL	Belsk	74.29	331	eP	P	07 03 13.8	+0.7
SIM	Simferopol’	74.39	319	ceP	P	07 03 13.7	-0.2
SIM				pmax	pmax		
	comp=Z,23nm,0.9s						
SIM				MLR	MLR		
	comp=Z,300nm,15.0s						
COWI	Conover	74.41	39	eP	P	07 03 14.0	0.0
	comp=Z,4.1nm,1.1s						
SORM	Soroca	74.44	324	⇑iP	P	07 03 13.5	-0.6
SORM	Soroca	74.44	324	⇑P	P	07 03 13.5	-0.6
SCHQ	Schefferville	75.02	22	P	P	07 03 17.0	-0.4
	comp=Z,1.8nm,0.4s,baz=282,slow=7.3,SNR=4.8						
SCHQ				LR	LR	07 40 25.9	
	comp=Z,86nm,19.6s,baz=7.0,slow=39						
KIS	Kishinev	75.14	323	eP	P	07 03 17.0	-1.2
KIS	Kishinev	75.14	323	eP	P	07 03 17.0	-1.2
KIS				e		07 13 40.0	
KIS				MLR	MLR		
	comp=Z,500nm,16.0s						
KIS				MLR	MLR		
	comp=Z,600nm,16.0s						
KWP	Kalwaria Pacla	75.43	328	eP	P	07 03 20.3	+0.5
KWP	Kalwaria Pacla	75.43	328	eP	P	07 03 20.3	+0.5
OJC	Ojcow	75.98	330	eP	P	07 03 23.1	+0.2
OJC	Ojcow	75.98	330	eP	P	07 03 23.0	0.0
	comp=Z,60nm,1.3s						
OJC	Ojcow	75.98	330	eP	P	07 03 23.0	0.0
OJC				pmax	pmax		
	comp=Z,60nm,1.3s						
BUR08	Bucovina Ar. S	76.10	326	eP	P	07 03 23.8	0.0
BUR04	Bucovina Ar. S	76.12	326	eP	P	07 03 23.8	-0.1
BURAR	Bucovina Array	76.12	326	⇑iP	P	07 03 23.8	-0.1
BURAR	Bucovina Array	76.12	326	⇑P	P	07 03 23.8	-0.1
BIZ	Bicaz	76.31	325	⇑iP	P	07 03 25.3	+0.4
UZH	Uzhgorod	76.41	328	eP	P	07 03 24.7	-0.7
UZH				e		07 03 36.0	
TESR	Tescani	76.43	324	⇑iP	P	07 03 25.5	-0.1
NIE	Niedzica	76.48	330	eP	P	07 03 26.5	+0.7
NIE	Niedzica	76.48	330	eP	P	07 03 26.5	+0.7
CRVS	Cervenica-Dubn	76.49	329	eP	P	07 03 26.1	+0.2
CRVS				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CRVS	Cervenica-Dubn	76.49	329	eP	P	07 03 26.1	+0.2
TLCR		76.58	322	⇓iP	P	07 03 26.5	+0.1
TLCR		76.58	322	⇓P	P	07 03 26.5	+0.1
KSP	Ksiaz	76.63	333	eP	P	07 03 27.1	+0.4
KSP	Ksiaz	76.63	333	eP	P	07 03 27.1	+0.4
TRPA	Tarpa	76.73	328	⇓iP	P	07 03 27.7	+0.5
TRPA	Tarpa	76.73	328	⇑eP	P	07 03 27.8	+0.5
CFR	Carcaliu	76.87	323	⇓iP	P	07 03 27.8	-0.3
CFR	Carcaliu	76.87	323	⇓P	P	07 03 27.8	-0.3
OKC	Ostrava-Krasne	76.88	331	eP	P	07 03 28.3	+0.3
OKC	Ostrava-Krasne	76.88	331	eP	P	07 03 28.3	+0.3
VRI	Vrincioaia	76.92	324	⇓iP	P	07 03 28.3	-0.1
VRI	Vrincioaia	76.92	324	⇓P	P	07 03 28.3	-0.1
PLOR	Plostina	76.96	324	⇑iP	P	07 03 28.9	+0.3
PLOR	Plostina	76.96	324	⇑P	P	07 03 28.9	+0.3
LANS	Liptovska Anna	77.00	330	eP	P	07 03 29.7	+0.9
LANS	Liptovska Anna	77.00	330	eP	P	07 03 29.7	+0.9
UPC	Upice	77.01	333	eP	P	07 03 28.8	0.0
UPC				AMS	AMS	07 41 30.0	
	comp=Z,200nm,18.8s						
UPC	Upice	77.01	333	eP	P	07 03 28.8	0.0
UPC				MLR	MLR		
	comp=Z,200nm,18.8s						
DPC	Dobruska-Polom	77.05	332	eP	P	07 03 29.1	0.0
DPC				AMS	AMS	07 40 00.0	
	comp=Z,200nm,19.4s						
DPC	Dobruska-Polom	77.05	332	eP	P	07 03 29.1	0.0
DPC				MLR	MLR		
	comp=Z,200nm,19.4s						
KRLC	Kraliky	77.13	332	eP	P	07 03 29.6	+0.1
KRLC	Kraliky	77.13	332	eP	P	07 03 29.6	+0.1
MORC	Moravsky Berou	77.13	331	⇑iP	P	07 03 29.3	-0.2
MORC	Moravsky Berou	77.13	331	eP	P	07 03 29.8	+0.2
	comp=Z,30nm,1.0s						
MORC	Moravsky Berou	77.13	331	⇑P	P	07 03 29.3	-0.2
MORC	Moravsky Berou	77.13	331	⇑iP	P	07 03 29.7	+0.2
KECS	Kecovo	77.20	329	eP	P	07 03 29.6	-0.3
KECS	Kecovo	77.20	329	eP	P	07 03 29.6	-0.3
CLL	Collm	77.25	335	i P	P	07 03 29.4	-0.7
	comp=Z,38nm,1.2s						
CLL				e		07 03 44.0	
CLL				LmV		07 40 00.0	
	comp=Z,200nm,19.3s						
CLL	Collm	77.25	335	eP	P	07 03 30.0	-0.2
	comp=Z,41nm,1.2s						
CLL	Collm	77.25	335	i P	P	07 03 29.4	-0.7
CLL				e		07 03 44.0	
CLL				pmax	pmax		
	comp=Z,38nm,1.2s						
TIRR	Tirgusor	77.33	322	⇓iP	P	07 03 30.6	0.0
TIRR	Tirgusor	77.33	322	eP	P	07 03 30.1	-0.5
	comp=Z,20nm,1.1s						
TIRR	Tirgusor	77.33	322	⇓P	P	07 03 30.6	0.0
BRG	Berggiesshubel	77.35	334	eP	P	07 03 30.4	-0.3
	comp=Z,16nm,1.2s						
BRG	Berggiesshubel	77.35	334	eP	P	07 03 30.4	-0.3
BRG				pmax	pmax		
	comp=Z,16nm,1.2s						
HARR	Harsova	77.35	322	⇓iP	P	07 03 31.1	+0.3
HARR	Harsova	77.35	322	⇓P	P	07 03 31.1	+0.3
TLB	Topalu	77.39	322	⇓iP	P	07 03 31.2	+0.2
TLB	Topalu	77.39	322	⇓P	P	07 03 31.2	+0.2
STKA	Stephens Creek	77.40	189	LR	LR	07 37 30.6	
	comp=Z,71nm,20.7s,baz=27,slow=36						
EKA	Eskdalemuir Ar	77.41	345	P	P	07 03 30.7	-0.3
	comp=Z,3.8nm,0.4s,baz=15,slow=4.9,SNR=58						
ESK	Eskdalemuir	77.44	346	eP	P	07 03 30.8	-0.3
	comp=Z,29nm,1.3s						
ESK	Eskdalemuir	77.44	346	eP	P	07 03 30.8	-0.3
ESK				pmax	pmax		
	comp=Z,29nm,1.3s						
PVCC	Panska Ves	77.45	333	AMS	AMS	07 41 30.0	
	comp=Z,300nm,20.9s						
MLR	Muntele Rosu	77.54	324	P	P	07 03 31.6	-0.4
	comp=Z,2.8nm,0.6s,baz=112,slow=2.3,SNR=24						
MLR				LR	LR	07 39 57.9	
	comp=Z,29nm,18.1s,baz=18,slow=37						
MLR	Muntele Rosu	77.54	324	⇑iP	P	07 03 32.7	+0.7
MLR	Muntele Rosu	77.54	324	eP	P	07 03 32.5	+0.4
	comp=Z,20nm,0.9s						
ILGA	Ilgaz	77.56	317	eP	P	07 03 33.6	+1.3
	comp=Z,47nm,1.2s						
LTVH	Lˆ'tavˆ'rtes,	77.59	328	⇑eP	P	07 03 33.8	+1.7
ISR	Istrita	77.60	324	⇓iP	P	07 03 32.7	+0.5
ISR	Istrita	77.60	324	⇓P	P	07 03 32.7	+0.5
DRGR		77.77	327	⇑iP	P	07 03 33.3	+0.1
DRGR		77.77	327	⇑P	P	07 03 33.3	+0.1
VYHS	Vyhne	77.78	330	eP	P	07 03 33.3	+0.2
VYHS				pmax	pmax		
	comp=Z,12nm,1.3s						
VYHS	Vyhne	77.78	330	eP	P	07 03 33.3	+0.2
VRAC	Vranov	77.85	332	⇑iP	P	07 03 34.1	+0.5
VRAC	Vranov	77.85	332	⇑P	P	07 03 34.1	+0.5
VRAC	Vranov	77.85	332	⇑iP	P	07 03 34.0	+0.5
JAVC	Velka Javorina	77.87	331	⇑iP	P	07 03 35.0	+1.3
PSZ	Piszkesteto	77.89	329	⇑iP	P	07 03 34.1	+0.3
PSZ	Piszkesteto	77.89	329	⇓eP	P	07 03 35.2	+1.4
PSZ	Piszkesteto	77.89	329	eP	P	07 03 34.0	+0.3
	comp=Z,21nm,1.1s						
PSZ	Piszkesteto	77.89	329	⇑P	P	07 03 34.1	+0.3
GOPC	GO Pecny, Ondr	77.92	333	eP	P	07 03 34.1	+0.2
GOPC				AMS	AMS	07 41 10.0	
	comp=Z,200nm,19.3s						
GOPC	GO Pecny, Ondr	77.92	333	eP	P	07 03 34.1	+0.2
GOPC				MLR	MLR		
	comp=Z,200nm,19.3s						
PRU	Pruhonice	77.93	333	eP	P	07 03 34.1	+0.2
PRU				AMS	AMS	07 41 30.0	
	comp=Z,300nm,20.2s						
PRU	Pruhonice	77.93	333	eP	P	07 03 34.1	+0.2
PRU				MLR	MLR		
	comp=Z,300nm,20.2s						
VOIR		77.96	325	⇑iP	P	07 03 35.1	+0.8
VOIR		77.96	325	⇑P	P	07 03 35.1	+0.8
KRUC	Moravsky	78.13	332	⇑iP	P	07 03 35.4	+0.3
NKC	Novy Kostel	78.37	335	eP	P	07 03 41.0	+4.6
NKC	Novy Kostel	78.37	335	eP	P	07 03 41.0	+4.6
MODS	Modra-Piesok	78.42	331	eP	P	07 03 37.2	+0.5
MODS				pmax	pmax		
	comp=Z,27nm,1.1s						
MODS	Modra-Piesok	78.42	331	eP	P	07 03 37.2	+0.5
BUD	Budapest	78.57	329	⇓eP	P	07 03 38.9	+1.4
BR131	Keskin Array S	78.62	316	eP	P	07 03 38.8	+0.7
BRTR	Keskin Array B	78.62	316	P	P	07 03 38.4	+0.2
	comp=Z,4.5nm,0.8s,baz=57,slow=4.6,SNR=21						
HDIL	Hopedale	78.63	43	eP	P	07 03 37.5	-0.5
	comp=Z,10nm,0.6s						
CSKK	Csˆ‡kako	78.94	330	eP	P	07 03 40.0	+0.4
KHC	Kasperske Hory	78.99	333	eP	P	07 03 39.7	-0.1
KHC				ex	x	07 03 48.4	
KHC				AMS	AMS	07 42 20.0	
	comp=Z,300nm,14.9s						
KHC	Kasperske Hory	78.99	333	eP	P	07 03 40.0	+0.1
	comp=Z,9.1nm,1.0s						
KHC	Kasperske Hory	78.99	333	eP	P	07 03 39.7	-0.1
KHC				e		07 03 48.4	
KHC				MLR	MLR		
	comp=Z,300nm,14.9s						
TX31	Lajitas Ar. Si	79.16	59	eP	P	07 03 41.2	0.0
TXAR	Lajitas Array	79.16	59	P	P	07 03 41.4	+0.1
	comp=Z,0.6nm,0.5s,baz=301,slow=3.6,SNR=14						
BZS	Buzias	79.17	327	⇓iP	P	07 03 41.0	+0.2
BZS	Buzias	79.17	327	⇓P	P	07 03 41.0	+0.2
GEC2	GERESS Array S	79.20	333	eP	P	07 03 41.2	+0.1
	comp=Z,6.5nm,0.8s						
GEC2	GERESS Array S	79.20	333	eP	P	07 03 41.2	+0.1
GEC2				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GERES	GERESS Array B	79.20	333	P	P	07 03 40.8	-0.3
	comp=Z,3.0nm,0.6s,baz=4.3,slow=5.4,SNR=14						
GERES				LR	LR	07 42 29.7	
	comp=Z,144nm,18.1s,baz=359,slow=39						
GEA0	GERESS Array S	79.21	333	eP	P	07 03 40.8	-0.3
CONA	Conrad Observa	79.29	331	i pP	P	07 03 42.0	+0.5
	comp=Z,9.4nm,0.8s,SNR=11						
RAR	Rarotonga	79.70	135	LR	LR	07 34 43.5	
	comp=Z,61nm,20.4s,baz=322,slow=32						
MEM	Membach	79.84	338	⇑P	P	07 03 44.2	-0.2
	comp=Z,18nm,1.2s						
MOA	Molln	79.89	332	i P	P	07 03 44.7	-0.1
	comp=Z,7.2nm,1.1s						

DSB	Dublin	79.96	347	eP	P	07 03 45.0	0.0
	comp=Z,63nm,1.5s						
ARSA	Arzberg	79.99	331	epP	P	07 03 45.5	+0.2
	comp=Z,8.2nm,1.3s						
BCLA	Clavier	80.19	339	⇓P	P	07 03 46.4	+0.1
SOKA	Soboth	80.66	331	i P	P	07 03 48.9	-0.1
	comp=Z,16nm,1.0s,SNR=8.5						
KBA	Koelnbreinsper	80.87	332	i pP	P	07 03 50.6	+0.4
	comp=Z,7.9nm,0.5s,SNR=9.7						
VTS	Vitosha	81.05	324	⇑iP	P	07 03 51.2	0.0
VTS	Vitosha	81.05	324	eP	P	07 03 50.9	-0.3
	comp=Z,35nm,1.1s						
VTS	Vitosha	81.05	324	⇑P	P	07 03 51.2	0.0
DIVS	Divibare	81.08	327	eP	P	07 03 50.6	-0.6
	comp=Z,6.1nm,0.9s						
WATA	Walderalm	81.20	334	i pP	P	07 03 53.2	+1.2
	comp=Z,9.8nm,0.4s,SNR=8.4						
ALN	Alexandroupoli	81.23	321	eP	P	07 03 52.4	+0.4
	comp=Z,14nm,1.2s						
ALN	Alexandroupoli	81.23	321	eP	P	07 03 52.4	+0.4
ALN				pmax	pmax		
	comp=Z,14nm,1.2s						
WTTA	Wattenberg	81.25	334	i pP	P	07 03 52.6	+0.4
	comp=Z,8.3nm,0.4s						
PMOR	Pomariorio Ree	81.26	122	eT	T	08 33 32.7	
	comp=Z,7.3nm,0.2s						
RETA	Reutte	81.32	334	i pP	P	07 03 52.7	+0.2
	comp=Z,14nm,1.2s						
MOTA	Moosalm	81.34	334	epP	P	07 03 53.8	+1.1
	comp=Z,6.7nm,0.6s,SNR=7.7						
ECH	Echery	81.72	337	eP	P	07 03 54.1	-0.4
	comp=Z,6.3nm,0.7s						
ECH	Echery	81.72	337	eP	P	07 03 54.1	-0.4
ECH				pmax	pmax		
	comp=Z,6.0nm,0.7s						
FETA	Feichten	81.75	334	epP	P	07 03 55.1	+0.2
	comp=Z,12nm,1.2s						
DAVA	Damuels	81.77	335	i pP	P	07 03 54.9	-0.1
	comp=Z,15nm,1.2s						
MMNY	Mt. Morris Dam	81.87	34	eP	P	07 03 54.8	-0.6
	comp=Z,4.6nm,0.7s						
STIP	Stip	82.22	324	⇑iP	P	07 03 55.5	-1.8
DAVOX	Davos/Dischmat	82.22	334	P	P	07 03 57.7	+0.3
	comp=Z,7.3nm,0.8s,baz=330,slow=8.2,SNR=11						
PPT	Papeete	82.28	124	LR	LR	07 38 45.3	
	comp=Z,137nm,18.2s,baz=358,slow=34						
SKO	Skopje	82.29	325	⇑iP	P	07 03 57.8	+0.2
PPT2	Papeete2	82.29	124	eLR	LR	07 29 51.3	
	comp=Z,269nm,23.0s,baz=323						
PPT2	Papeete2	82.29	124	eT	T	08 34 52.5	
	comp=Z,1.7nm,0.3s						
VAY	Valandovo	82.37	324	⇑iP	P	07 03 58.1	+0.1
CSS	Mathiatis	82.46	313	eP	P	07 03 59.6	+1.0
	comp=Z,7.0nm,0.7s						
TUE	Stuetta	82.66	335	eP	P	07 04 00.2	+0.5
	comp=Z,23nm,1.5s						
PDG	Podgorica	82.77	326	⇑iP	P	07 03 59.5	-0.6
TTG	Podgorica	82.77	326	eP	P	07 04 00.2	+0.1
	comp=Z,9.6nm,0.5s						
TTG	Podgorica	82.77	326	eP	P	07 04 00.2	+0.1
TTG				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KRUS	Krusevo	82.88	325	i P	P	07 04 00.4	-0.4
MMAI	Mount Meron Ar	82.88	310	P	P	07 04 01.5	+0.6
	comp=Z,5.0nm,0.6s,baz=38,slow=7.3,SNR=10						
MMAI				LR	LR	07 45 35.6	
	comp=Z,225nm,20.0s,baz=25,slow=39						
FNA	Florina	83.31	324	eP	P	07 04 02.6	-0.4
	comp=Z,6.6nm,0.9s						
FNA	Florina	83.31	324	eP	P	07 04 02.6	-0.4
FNA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SENIN	Lac Senin/Sane	83.36	336	eP	P	07 04 04.4	+1.0
	comp=Z,14nm,1.1s						
LIT	Litokhoron	83.42	323	eP	P	07 04 02.8	-0.7
	comp=Z,5.8nm,0.8s						
LIT	Litokhoron	83.42	323	eP	P	07 04 02.8	-0.7
LIT				pmax	pmax		
	comp=Z,6.0nm,0.8s						
N59A	State Game Lan	84.25	34	eP	P	07 04 07.5	-0.3
	comp=Z,12nm,1.4s						
AGG	Agios Georgios	84.39	323	eP	P	07 04 07.3	-1.2
	comp=Z,15nm,0.9s						
AGG	Agios Georgios	84.39	323	eP	P	07 04 07.3	-1.2
AGG				pmax	pmax		
	comp=Z,15nm,0.9s						
VLC	Villacollemand	84.41	333	eP	P	07 04 09.6	+1.1
	comp=Z,31nm,1.3s						
BNI	Bardonecchia	84.74	336	eP	P	07 04 10.9	+0.6
	comp=Z,13nm,1.3s						
BNI	Bardonecchia	84.74	336	eP	P	07 04 10.9	+0.6
BNI				pmax	pmax		
	comp=Z,13nm,1.3s						
KARP	Karpathos	85.06	317	eP	P	07 04 11.7	-0.2
	comp=Z,29nm,0.8s						
TKL	Tuckaleechee C	85.15	42	LR	LR	07 41 21.7	
	comp=Z,102nm,21.9s,baz=354,slow=35						
TKL	Tuckaleechee C	85.15	42	eP	P	07 04 12.3	-0.1
	comp=Z,12nm,1.4s						
TKL	Tuckaleechee C	85.15	42	eP	P	07 04 12.3	-0.1
TKL				pmax	pmax		
	comp=Z,12nm,1.4s						
Z50A	Ashland	86.05	45	eP	P	07 04 16.4	-0.4
	comp=Z,5.8nm,0.8s						
ITM	Ithomi	86.10	322	eP	P	07 04 16.3	-0.8
	comp=Z,17nm,0.8s						
IDI	Anoyia	86.34	319	P	P	07 04 16.4	-2.0
	comp=Z,5.8nm,0.6s,baz=63,slow=9.0,SNR=6.1						
IDI	Anoyia	86.34	319	⇓iP	P	07 04 17.0	-1.3
TIP	Timpagrande	86.53	326	eP	P	07 04 19.6	+0.4
	comp=Z,26nm,1.5s						
TBI	Tubuai	86.91	128	eT	T	08 40 38.3	
	comp=Z,4.2nm,0.3s						
KEST	Kesra	92.33	330	P	P	07 04 46.1	-0.5
	comp=Z,5.9nm,0.9s,baz=312,slow=6.2,SNR=5.7						
KEST				LR	LR	07 51 03.9	
	comp=Z,77nm,18.8s,baz=268,slow=39						
ESDC	Sonseca Array	92.53	341	P	P	07 04 45.9	-1.5
	comp=Z,0.1nm,0.3s,baz=355,slow=5.1,SNR=4.4						
ESDC				LR	LR	07 52 23.5	
	comp=Z,61nm,18.6s,baz=320,slow=39						
MDT	Midelt	99.23	340	LR	LR	07 57 01.2	
	comp=Z,59nm,18.2s,baz=35,slow=40						
QSPA	South Pole Qui	135.09	180	ePKPdf	PKPdf	07 10 55.3	+1.1
LPAZ	La Paz	135.99	62	PKP	PKPdf	07 10 57.7	-0.3
	comp=Z,0.7nm,0.8s,baz=2.4,slow=6.4,SNR=4.2						
BDFB	Brasilia	146.13	35	ePKPdf	PKPbc	07 11 16.8	+0.2
BDFB	Brasilia	146.13	35	ePKP2	PKPbc	07 11 16.8	+0.2
PLCA	Paso Flores	149.18	97	PKPbc	PKPbc	07 11 24.4	+0.2
	comp=Z,2.0nm,0.7s,baz=324,slow=3.0,SNR=5.1						
PLCA	Paso Flores	149.18	97	ePKPbc	PKPbc	07 11 24.7	+0.5
CPUP	Villa Florida	150.13	60	PKPbc	PKPbc	07 11 26.6	-0.2
	comp=Z,1.6nm,0.6s,baz=353,slow=2.3,SNR=5.0						
CPUP	Villa Florida	150.13	60	ePKPbc	PKPbc	07 11 26.9	+0.1
CPUP	Villa Florida	150.13	60	ePKIKP	PKPbc	07 11 26.9	+0.1
SNAA	Sanae	150.90	196	PKP	PKPbc	07 11 27.4	-0.1
SNAA	Sanae	150.90	196	PKPbc	PKPbc	07 11 27.3	-0.1
	comp=Z,2.1nm,0.6s,baz=212,slow=9.6,SNR=5.4						
SNAA	Sanae	150.90	196	ePKPbc	PKPbc	07 11 28.0	+0.6
SNAA	Sanae	150.90	196	ePKIKP	PKPbc	07 11 28.0	+0.6
VNA3	Neumayer Olymp	152.49	193	PKP	PKPbc	07 11 30.7	-0.2
VNA1	Neumayer--Stat	152.76	195	PKP	PKPbc	07 11 31.2	-0.3

IDC 14 07:09:00.7±6.7**, 10°.71N**×**93°.86E, h0^{km}, mb3.5**/4**, mb1 3.7**/4**, mb1mx3.3**/71**, mbtmp3.5**/4**, Error ellipse: s-maj=387.0km s-min=22.9km az=59.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	37.28	347	P	P	07 16 13.7	-0.6
	0.2nm,0.3s,baz=147,slow=8.1,SNR=4.5						
KURBB	Kurchatov Arra	41.74	345	P	P	07 16 51.8	+0.3
	0.3nm,0.7s,baz=157,slow=6.8,SNR=2.7						
WRA	Warramunga Arr	50.16	127	P	P	07 17 57.9	-0.5
	0.6nm,0.6s,baz=306,slow=8.8,SNR=7.0						
ASAR	Alice Springs	51.97	131	P	P	07 18 12.3	+0.3
	0.8nm,0.7s,baz=308,slow=7.5,SNR=7.7						

NNC 14 07:14:55.6±3.6**, 38°.37N**×**71°.33E, h0^{km}, mb3.8, mpv3.4, 5C-6D, Error ellipse: s-maj=30.2km s-min=28.8km az=105.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	2.35	45	⇓Pn	Pn	07 15 35.1	-0.6
	11nm,0.3s						
SFK				⇑Lg	Lg	07 16 11.2	
	46nm,0.4s						
MNAS	Manas	4.21	12	⇓Pg	Pb	07 16 10.8	+0.3
	9.2nm,1.1s						
MNAS				⇓Lg	Lg	07 17 09.0	
	8.2nm,0.8s						
KK31	Karatay Array	4.77	353	⇑Pg	Pb	07 16 21.7	+1.7
	0.9nm,0.3s,baz=149,slow=11,SNR=14						
KK31				⇑Lg	Lg	07 17 28.5	
	10nm,0.9s,baz=155,slow=23,SNR=4.7						
AAK	Ala-Archa	4.90	29	⇓Pn	Pn	07 16 12.9	+2.3
	5.0nm,0.8s						
AAK				⇑Lg	Lg	07 17 33.7	
	12nm,1.0s						
TKM2	Tokmak 2	5.58	34	⇑Pn	Pn	07 16 21.8	+1.7
	1.5nm,0.6s						
TKM2				⇓Pg	Pb	07 16 34.5	+0.4
	7.3nm,1.1s						
TKM2				⇓Lg	Lg	07 17 52.6	
	4.3nm,0.7s						

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*IDC **14** 07:19:54.2±1.3, 25°.51N×128°.32E, h0^{km}, mb3.7/6, mb1 3.8/6, mb1mx3.5/67, mbtmp3.7/6, Error ellipse: s-maj=60.2km s-min=17.6km az=74.0*

*JMA **14** 07:19:57.4±0.3, 25°.58N×128°.35E, h63^{km}±4^{km}, M3.5*

ISC 14 07:19:56.0±3.5**, 25°.58N**±0°.06×**128°.47E**±0°.05**, h18^{km}**±23^{km}**, n18,** σ**1^s.47**/28**, mb3.8**/6**, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JJT3	Tamagusuku3	0.84	313	P	Pn	07 20 12.7	-0.3
JJT3				eS	Sn	07 20 24.3	-0.6
JNTH	Nagotoyohara	1.02	337	P	Pn	07 20 15.3	-0.2
JNTH				S	Sb	07 20 28.8	+0.5
JOW	Kunigami	1.26	352	Pn	Pb	07 20 19.4	0.0
	52nm,0.3s,baz=119,slow=27,SNR=372						
JOW				Sn	Sb	07 20 30.4	-4.9
	87nm,0.3s,baz=24,slow=20,SNR=11						
JOW				LR	LR	07 20 59.9	
	comp=Z,97nm,19.4s,baz=311,slow=50						
JOW	Kunigami	1.26	352	P	Pb	07 20 19.3	-0.1
JOW				S	Sb	07 20 34.9	-0.4
JYRO	Yoronjima	1.44	359	P	Pn	07 20 21.7	+0.4
JYRO				S	Sn	07 20 39.6	-0.3
JAGN	Aguni-jima	1.49	313	P	Pn	07 20 22.0	0.0
JAGN				S	Sn	07 20 39.8	-1.3
JIH	Iheya	1.52	343	P	Pb	07 20 23.4	-0.3
JIH				S	Sn	07 20 41.3	-0.5
JKE	Kume jima 2	1.69	297	P	Pn	07 20 23.7	-1.0
JKE				S	Sn	07 20 43.5	-2.4
JOKE	Okinoerabujima	1.78	3	P	Pn	07 20 26.7	+0.7
JTK	Tokunoshima	2.24	11	P	Pn	07 20 32.8	+0.5
JTK				eS	Sn	07 20 58.4	-1.2
JMZ	Minamidaito 2	2.50	84	P	Pn	07 20 35.3	-0.5
JMZ				S	Sn	07 21 03.2	-2.7
JAMN	Amaminishikomi	2.73	13	P	Pn	07 20 40.2	+1.2
SONM	Songino Array	28.22	328	P	P	07 25 50.5	+2.5
	0.3nm,0.5s,baz=132,slow=9.3,SNR=3.5						
MKAR	Makanchi Array	42.13	312	P	P	07 27 47.4	0.0
	0.9nm,0.5s,baz=121,slow=8.3,SNR=1.3						
KURBB	Kurchatov Arra	45.47	317	P	P	07 28 14.1	+0.1
	0.8nm,0.5s,baz=104,slow=9.4,SNR=3.9						
WRA	Warramunga Arr	45.60	172	P	P	07 28 15.7	+0.3
	1.0nm,0.7s,baz=352,slow=8.4,SNR=8.8						
ASAR	Alice Springs	49.23	173	P	P	07 28 44.1	+0.5
	0.5nm,0.8s,baz=7.5,slow=9.4,SNR=6.4						
BVAR	Borovoye Array	50.90	319	P	P	07 28 56.5	+0.4
	0.9nm,0.5s,baz=72,slow=9.3,SNR=4.4						

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*IDC **14** 07:23:40.2±2.4, 24°.31S×179°.99E, h493^{km}±23^{km}, mb3.6/6, mb1 3.7/7, mb1mx3.1/54, mbtmp4.4/7, Error ellipse: s-maj=36.6km s-min=22.4km az=165.0*

*ISCJB **14** 07:23:41.6±1.3, 24°.3S±0°.1×179°.9E±0°.2, h517^{km}, mb4.1/6, Error ellipse: s-maj=23.4km s-min=14.6km az=170.3*

ISC 14 07:23:42.5±1.2**, 24°.5S**±0°.1×**180°.0E**±0°.2**, h517^{km}, n9,** σ**1^s.28**/11**, mb4.0**/6**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	13.95	189	P	P	07 26 40.5	-0.7
	0.4nm,0.3s,baz=4.4,slow=13,SNR=3.9						
URZ				S	S	07 29 09.3	+0.7
	0.3nm,0.3s,baz=51,slow=23,SNR=8.5						
CTA	Charters Tower	31.45	271	P	P	07 29 21.9	+0.4
	11nm,0.4s,baz=107,slow=9.5,SNR=38						
STKA	Stephens Creek	34.48	249	P	P	07 29 47.3	+0.3
	2.4nm,0.5s,baz=110,slow=7.7,SNR=5.9						
ASAR	Alice Springs	41.91	261	P	P	07 30 47.1	-0.6
	1.8nm,0.5s,baz=95,slow=7.1,SNR=32						
ASAR				ScP	ScP	07 35 34.6	+2.2
	0.6nm,0.8s,baz=101,slow=4.8,SNR=3.9						
WRA	Warramunga Arr	42.34	267	P	P	07 30 50.0	-1.1
	6.2nm,0.5s,baz=103,slow=8.1,SNR=80						
WRA				ScP	ScP	07 35 36.2	+2.1
	0.6nm,0.9s,baz=103,slow=3.8,SNR=12						
FITZ	Fitzroy Crossi	50.76	266	P	P	07 31 54.5	-0.3
	4.2nm,0.6s,baz=121,slow=10.0,SNR=12						
TXAR	Lajitas Array	90.76	58	P	P	07 35 50.8	+0.2
	0.7nm,0.8s,baz=213,slow=6.5,SNR=10						
HFS	Hagfors	143.11	349	PKhKP	PKPpre	07 42 12.9	
	1.0nm,0.4s,baz=33,slow=3.4,SNR=12						
AKASG	Malin Array Be	145.44	327	PKPbc	PKPdf	07 42 20.0	-1.1
	0.3nm,0.3s,baz=50,slow=4.6,SNR=2.8						

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*ISCJB **14** 07:40:35.0±1.1, 10°.3N±0°.3×93°.9E±0°.3, h10^{km}, mb3.7/7, Error ellipse: s-maj=56.1km s-min=15.3km az=141.9*

*IDC **14** 07:40:35.8±1.2, 10°.34N×94°.09E, h0^{km}, mb3.7/7, mb1 3.8/7, mb1mx3.5/67, mbtmp3.7/7, Error ellipse: s-maj=63.8km s-min=20.0km az=52.0*

ISC 14 07:40:37.4±1.3**, 10°.4N**±0°.3×**94°.2E**±0°.4**, h10^{km}, n11,** σ**0^s.76**/7**, mb3.8**/7**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBA	Port Blair	1.88	313	eP	Pn	07 41 02.7	-6.8
PBA				eS	Sn	07 41 23.0	-10
PBA				AML	AML	07 41 33.1	
	comp=E,6µm,0.3s						
PBA				AML	AML	07 41 34.3	
	comp=N,8µm,0.4s						
H08S3	Diego Garcia H	28.02	231	T	T	08 15 31.7	
	baz=49,slow=74						
H08S2	Diego Garcia H	28.02	231	T	T	08 15 32.6	
	baz=49,slow=74						
H08S1	Diego Carcia H	28.03	231	T	T	08 15 35.1	
	baz=49						
MKAR	Makanchi Array	37.67	347	P	P	07 47 52.1	-0.8
	comp=N,0.2nm,0.3s,baz=170,slow=8.5,SNR=5.1						
KURBB	Kurchatov Arra	42.14	345	P	P	07 48 30.3	+0.4
	comp=N,0.7nm,1.0s,baz=165,slow=8.7,SNR=4.3						
GEYT	Alibeck	42.38	316	P	P	07 48 32.9	+0.8
	comp=N,0.9nm,0.4s,baz=161,slow=6.3,SNR=4.2						
ZALV	Zalesovo Beam	44.10	352	P	P	07 48 45.9	+0.3
	comp=N,1.8nm,0.3s,baz=185,slow=8.7,SNR=2.0						
WRA	Warramunga Arr	49.73	127	P	P	07 49 29.9	-0.3
	comp=N,0.8nm,0.8s,baz=303,slow=9.3,SNR=6.0						
ASAR	Alice Springs	51.53	132	P	P	07 49 44.2	+0.4
	comp=N,0.6nm,0.8s,baz=306,slow=7.0,SNR=4.7						
BRTR	Keskin Array B	60.83	310	P	P	07 50 49.4	-0.8
	comp=N,0.5nm,0.5s,baz=126,slow=7.4,SNR=3.3						

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*JMA **14** 07:44:56.1±0.9, 45°.71N×151°.71E, h30^{km}, M4.1*

SKHL 14 07:44:54.5±0.5**, 45°.17N**×**152°.06E, h45^{km}, mb4.2**/2**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.96	273	eP	Pn	07 45 39.0	0.0
KUR				AMB	AMB	07 45 42.0	
	32nm,0.4s						
KUR				AMB	AMB	07 45 42.0	
	22nm,0.4s						
KUR				AMB	AMB	07 45 42.0	
	67nm,0.4s						
KUR				eS	Sn	07 46 12.0	-1.3
KUR				A	A	07 46 17.0	
	188nm,0.4s						
KUR				A	A	07 46 17.0	
	69nm,0.4s						
SHO	Shikotan	3.96	253	eP	Pn	07 45 54.0	+1.3
SHO				AMB	AMB	07 45 58.0	
	10.0nm,0.4s						
SHO				AMB	AMB	07 45 58.0	
	15nm,0.4s						
SHO				AMB	AMB	07 45 58.0	
	21nm,0.4s						
SHO				eS	Sn	07 46 39.0	+1.2
SHO				A	A	07 46 46.0	
	56nm,0.3s						
SHO				A	A	07 46 46.0	
	78nm,0.3s						
NEM2	Nemuro 2	4.88	251	P	Pn	07 46 06.2	+0.9
NEM2				eS	Sn	07 46 58.4	-2.1
JNK	Nakash	5.50	256	P	Pn	07 46 15.7	+2.0
JAK	Akkeshi	5.73	250	P	Pn	07 46 18.2	+1.2
JTKR	Abashiri--Toko	5.95	261	P	Pn	07 46 22.6	+2.7
JAR	Ashorobuto	6.24	255	P	Pn	07 46 26.1	+2.1
JAR				eS	Sn	07 47 33.8	-0.2
JMP	Maruseppu	6.32	262	P	Pn	07 46 28.5	+3.4
JKK2	Kamakawa 2	6.78	262	P	Pn	07 46 34.5	+3.1
JCH	Churui	6.78	251	P	Pn	07 46 33.7	+2.3
JCH				eS	Sn	07 47 44.3	-3.0
MYR	Moyori	6.98	249	eP	Pn	07 46 35.2	+1.1
JBT2	Biratori 2	7.39	255	P	Pn	07 46 43.4	+3.6
JKB	Kayabe	8.66	252	P	Pn	07 46 58.4	+1.3
JKB				eS	Sn	07 48 27.1	-6.2

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*IDC **14** 07:53:05.9±3.7, 36°.12S×178°.89W, h0^{km}, mb3.9/2, mb1 4.1/3, mb1mx3.6/47, mbtmp3.9/3, ML3.7/1, Error ellipse: s-maj=97.7km s-min=47.4km az=141.0*

*WEL **14** 07:53:10.5±1.0, 36°S±11°×17°9W±1°0, h33^{km}, ML4.4/25*

ISC 14 07:53:07.2±1.9**, 36°.33S**±0°.10×**178°.9W**±0°.1**, h10^{km}, n42,** σ**0^s.95**/51**, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.54	240	P	Pn	07 53 48.4	-0.1
MXZ				S	Sn	07 54 17.8	-1.8
WMGZ	Waiomatatini S	2.60	234	P	Pn	07 53 50.2	+0.9
WMGZ				S	Sn	07 54 21.4	+0.4
PUZ	Puketiti	2.85	232	P	Pn	07 53 53.7	+0.9
PUZ				S	Sn	07 54 27.0	-0.1
PKGZ	Pakihiroa	2.87	236	P	Pn	07 53 53.4	+0.4
PKGZ				S	Sn	07 54 27.4	-0.2
HAZ	Te Kaha	3.00	241	P	Pn	07 53 55.6	+0.7
HAZ				S	Sn	07 54 31.9	+1.0
TWGZ	Tauwhareparae	3.09	232	P	Pn	07 53 57.1	+1.0
TWGZ				S	Sn	07 54 33.6	+0.5
CNGZ	Carnagh Statio	3.14	226	P	Pn	07 53 58.1	+1.3
RUGZ	Raukumara Rang	3.18	238	P	Pn	07 53 57.8	+0.5
TKGZ	Te Karaka	3.33	230	P	Pn	07 54 00.2	+0.9
TKGZ				S	Sn	07 54 38.5	-0.5
MWZ	Matawai	3.47	234	P	Pn	07 54 01.8	+0.4
MWZ				S	Sn	07 54 40.9	-1.6
RIGZ	Rimuhau	3.55	227	P	Pn	07 54 03.3	+0.9
PRGZ	Paritu Road	3.63	224	P	Pn	07 54 04.3	+0.8
URZ	Urewera	3.71	238	Pn	Pn	07 54 05.1	+0.6
	5.1nm,0.3s,baz=284,slow=2.2,SNR=36						
URZ				Sn	Sn	07 54 46.3	-2.0
	16nm,0.3s,baz=239,slow=22,SNR=12						
URZ	Urewera	3.71	238	P	Pn	07 54 04.9	+0.3
MHGZ	Mahia Peninsul	3.78	221	P	Pn	07 54 06.1	+0.6
KNZ	Kokohu	3.82	224	P	Pn	07 54 06.1	+0.1
SNGZ	Shannon Statio	3.85	229	P	Pn	07 54 07.7	+1.1
OPRZ	Ohinepanea	3.93	246	P	Pn	07 54 08.2	+0.7
RTZ	Ruatahuna	3.98	234	P	Pn	07 54 09.4	+1.0
MUGZ	Murupara	4.05	237	P	Pn	07 54 09.8	+0.6
WHHZ	Waihua	4.11	227	P	Pn	07 54 10.5	+0.5
TGRZ	Tauranga	4.11	249	P	Pn	07 54 09.7	-0.3
MTHZ	Maungataniwha	4.21	232	P	Pn	07 54 12.6	+1.1
KUZ	Kuaotunu	4.34	263	P	Pn	07 54 12.8	-0.4
ARHZ	Aropaoanui	4.37	227	P	Pn	07 54 14.0	+0.5
NMHZ	Naumai	4.38	230	P	Pn	07 54 15.8	+2.0
ALRZ	Allen Road	4.38	238	P	Pn	07 54 14.4	+0.6
KMRZ	Kaimai	4.38	248	P	Pn	07 54 14.3	+0.5
BKZ	Black Stump Fm	4.61	231	P	Pn	07 54 16.9	-0.1
MCHZ	McNeill Hill	4.66	227	P	Pn	07 54 18.4	+0.7
TOZ	Tahuroa Road	4.68	251	P	Pn	07 54 18.2	+0.2
MKAZ	Moumakai	4.82	259	P	Pn	07 54 19.9	+0.1
ETAZ	East Tamaki Re	4.99	261	P	Pn	07 54 22.8	+0.6
BHHZ	Black Hill Sta	5.07	230	P	Pn	07 54 24.3	+0.9
FWVZ	Far West T-bar	5.27	235	P	Pn	07 54 28.1	+1.9
HIZ	Hauiti	5.42	244	P	Pn	07 54 29.4	+1.4
WCZ	Waipu Caves	5.47	272	P	Pn	07 54 29.2	+0.5
TSZ	Takapari Road	5.49	226	P	Pn	07 54 28.5	-0.5
BFZ	Birch Farm	5.77	220	P	Pn	07 54 30.6	-2.2
ASAR	Alice Springs	42.38	274	P	P	08 01 02.5	+0.5
	0.8nm,0.5s,baz=117,slow=7.4,SNR=12						
WRA	Warramunga Arr	43.90	279	P	P	08 01 14.2	0.0
	0.9nm,0.5s,baz=120,slow=7.8,SNR=20						
FINES	FINESS Array B	150.34	336	PKPbc	PKPbc	08 12 57.2	-0.6
	1.2nm,0.8s,baz=64,slow=4.4,SNR=3.4						

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*NIED **14** 07:58:00, 45°.70N×151°.60E, h14^{km}, Mw4.1 Best double couple: $M_0$1.84000×10^{15} NP1:ϕ_s210.00000°, δ24.00000°, λ75.00000°. NP2:ϕ_s46.00000°, δ67.00000°, λ96.00000°.*

*SKHL **14** 07:58:39.7±0.3, 45°.08N×152°.05E, h36^{km}±3^{km}, mb4.8/6*

*NEIC **14** 07:58:41.0±0.6, 45°.65N×151°.71E, h10^{km}, mb4.6/6, Error ellipse: s-maj=14.9km s-min=11.3km az=162.0*

*ISCJB **14** 07:58:41.8±0.4, 45°.41N±0°.06×151°.60E±0°.06, h32^{km}, mb4.2/40, MS3.6/11, Error ellipse: s-maj=9.5km s-min=3.5km az=148.3*

*JMA **14** 07:58:41.8±0.9, 45°.65N×151°.63E, h30^{km}, M4.5*

*BJI **14** 07:58:42.6, 45°.56N×151°.70E, h49^{km}, mb4.7/23, mB4.8/14, Ms4.3/9, Ms7 4.2/9*

*MOS **14** 07:58:43.6±0.9, 45°.40N×151°.53E, h47^{km}, mb4.2/14, Error ellipse: s-maj=8.5km s-min=7.5km az=142.9*

*IDC **14** 07:58:46.6±2.4, 45°.48N×151°.40E, h55^{km}±21^{km}, mb3.5/18, mb1 3.7/23, mb1mx3.6/74, mbtmp3.8/23, ML3.6/3, MS3.3/11, Ms1 3.3/11, ms1mx3.0/72, Error ellipse: s-maj=19.0km s-min=12.6km az=157.0*

ISC 14 07:58:43.5±0.6**, 45°.33N**±0°.08×**151°.60E**±0°.06**, h32^{km}, n143,** σ**1^s.85**/151**, mb4.3**/40**, MS3.8**/11**, 10C-12D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.63	269	eP	Pn	07 59 24.0	+0.2
KUR				AMB	AMB	07 59 26.0	
	48nm,0.4s						
KUR				AMB	AMB	07 59 26.0	
	23nm,0.4s						
KUR				AMB	AMB	07 59 26.0	
	131nm,0.4s						
KUR				eS	Sn	07 59 57.0	+2.4
KUR				A	A	08 00 01.0	
	1µm,0.4s						
KUR				A	A	08 00 01.0	
	285nm,0.4s						
KUR	Kuril'sk	2.63	269	ePN	Pn	07 59 24.4	+0.6
KUR				eS	Sn	07 59 57.8	+3.2
KUR				pmax	pmax		
	comp=Z,131nm,0.4s						
KUR				pmax	pmax		
	comp=E,23nm,0.2s						
KUR				pmax	pmax		
	comp=N,48nm,0.3s						
KUR				smax	smax		
	comp=E,285nm,0.5s						
KUR				smax	smax		
	comp=N,1µm,0.4s						
SHO	Shikotan	3.71	248	eP	Pn	07 59 38.0	-0.5
SHO				AMB	AMB	07 59 42.0	
	comp=N,21nm,0.4s						
SHO				AMB	AMB	07 59 42.0	
	comp=N,40nm,0.4s						
SHO				AMB	AMB	07 59 42.0	
	comp=N,74nm,0.4s						
SHO				eS	Sn	08 00 22.0	+1.0
SHO				A	A	08 00 34.0	
	comp=N,236nm,0.4s						
SHO				A	A	08 00 34.0	
	comp=N,16nm,0.4s						
SHO	Shikotan	3.71	248	ePN	Pn	07 59 38.8	+0.3
SHO				eS	Sn	08 00 23.8	+2.8
SHO				pmax	pmax		
	comp=N,21nm,0.4s						
SHO				pmax	pmax		
	comp=E,40nm,0.4s						

SHO				pmax	pmax		
	comp=Z,74nm,0.4s						
SHO				smax	smax		
	comp=E,236nm,0.4s						
SHO				smax	smax		
	comp=E,16nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**4.29**	**254**	*e*P	**Pn**	**07 59 47.0**	**+0.5**
YUK				AMB	AMB	07 59 53.0	
	comp=E,162nm,0.3s						
YUK				AMB	AMB	07 59 53.0	
	comp=E,81nm,0.3s						
YUK				*e*S	**Sn**	**08 00 39.0**	**+3.5**
YUK				A	A	08 00 52.0	
	comp=E,567nm,0.5s						
YUK				A	A	08 00 52.0	
	comp=E,313nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**4.29**	**254**	*e*PN	**Pn**	**07 59 47.8**	**+1.3**
YUK				*e*S	**Sn**	**08 00 39.5**	**+4.0**
YUK				pmax	pmax		
	comp=N,81nm,0.3s						
YUK				smax	smax		
	comp=N,567nm,0.5s						
YUK				smax	smax		
	comp=E,313nm,0.5s						
LAGR	**Lagunnoye**	**4.33**	**255**	*e*P	**Pn**	**07 59 47.0**	**-0.2**
LAGR				*e*S	**Sn**	**08 00 41.0**	**+4.5**
LAGR	**Lagunnoye**	**4.33**	**255**	*e*PN	**Pn**	**07 59 47.9**	**+0.7**
LAGR				*e*S	**Sn**	**08 00 41.5**	**+5.0**
GRPR	**Tuman**	**4.37**	**254**	*e*P	**Pn**	**07 59 49.0**	**+1.4**
GRPR				AMB	AMB	07 59 55.0	
	comp=E,141nm,0.4s						
GRPR				AMB	AMB	07 59 55.0	
	comp=E,104nm,0.4s						
GRPR				AMB	AMB	07 59 55.0	
	comp=E,180nm,0.4s						
GRPR				*e*S	**Sn**	**08 00 41.0**	**+3.7**
GRPR				A	A	08 00 54.0	
	comp=E,193nm,0.4s						
GRPR				A	A	08 00 54.0	
	comp=E,377nm,0.4s						
GRPR	**Tuman**	**4.37**	**254**	*e*PN	**Pn**	**07 59 49.2**	**+1.6**
GRPR				*e*S	**Sn**	**08 00 41.7**	**+4.4**
GRPR				pmax	pmax		
	comp=E,104nm,0.4s						
GRPR				pmax	pmax		
	comp=Z,180nm,0.4s						
GRPR				pmax	pmax		
	comp=N,141nm,0.3s						
GRPR				smax	smax		
	comp=N,193nm,0.3s						
GRPR				smax	smax		
	comp=E,377nm,0.4s						
GLVR	**Golovnino**	**4.63**	**252**	*e*P	**Pn**	**07 59 52.0**	**+0.8**
GLVR				AMB	AMB	07 59 55.0	
	comp=E,37nm,0.5s						
GLVR				AMB	AMB	07 59 55.0	
	comp=E,43nm,0.5s						
GLVR				AMB	AMB	07 59 55.0	
	comp=E,149nm,0.5s						
GLVR				*e*S	**Sn**	**08 00 48.0**	**+4.2**
GLVR				A	A	08 00 53.0	
	comp=E,263nm,0.4s						
GLVR				A	A	08 00 53.0	
	comp=E,283nm,0.4s						
GLVR	**Golovnino**	**4.63**	**252**	*e*PN	**Pn**	**07 59 52.3**	**+1.1**
GLVR				*e*S	**Sn**	**08 00 48.4**	**+4.6**
GLVR				pmax	pmax		
	comp=Z,149nm,0.5s						
GLVR				pmax	pmax		
	comp=N,37nm,0.4s						
GLVR				pmax	pmax		
	comp=E,43nm,0.1s						
GLVR				smax	smax		
	comp=E,283nm,0.4s						
GLVR				smax	smax		
	comp=N,263nm,0.3s						
NEM2	**Nemuro 2**	**4.64**	**247**	P	**Pn**	**07 59 51.0**	**-0.3**
NEM2				*e*S	**Sn**	**08 00 42.7**	**-1.3**
JRA	**Rausu**	**4.83**	**255**	P	**Pn**	**07 59 55.6**	**+1.7**
JNK	**Nakash**	**5.22**	**253**	P	**Pn**	**08 00 00.1**	**+0.7**
JAK	**Akkeshi**	**5.49**	**247**	P	**Pn**	**08 00 02.2**	**-0.8**
JAK				*e*S	**Sn**	**08 01 02.4**	**-2.5**
JTKR	**Abashiri--Toko**	**5.65**	**259**	P	**Pn**	**08 00 06.7**	**+1.5**
JAR	**Ashorobuto**	**5.97**	**253**	P	**Pn**	**08 00 10.9**	**+1.2**
JMP	**Maruseppu**	**6.02**	**260**	P	**Pn**	**08 00 12.5**	**+2.1**
SKR	**Severo-Kuril's**	**6.15**	**28**	*e*P	**Pn**	**08 00 12.7**	**+0.6**
SKR	**Severo-Kuril's**	**6.15**	**28**	*i* PN	**Pn**	**08 00 12.7**	**+0.6**
HRK	**Horoka**	**6.35**	**256**	*e*P	**Pn**	**08 00 17.2**	**+2.3**
YSS	**Yuzh-Sakhalins**	**6.35**	**288**	*e*P	**Pn**	**08 00 15.0**	**+0.1**
YSS				AMB	AMB	08 00 16.4	
	comp=N,20nm,0.5s						
YSS	**Yuzh-Sakhalins**	**6.35**	**288**	*e*Pn	**Pn**	**08 00 15.9**	**+1.0**
YSS	**Yuzh-Sakhalins**	**6.35**	**288**	⇓*e*PN	**Pn**	**08 00 15.0**	**+0.1**
YSS				pmax	pmax		
	comp=Z,20nm,0.5s						
YSS				MLR	MLR		
	comp=Z,500nm,12.0s						
JKK2	**Kamakawa 2**	**6.48**	**260**	P	**Pn**	**08 00 18.6**	**+1.9**
ASAJ	**Asahikawa**	**6.53**	**262**	P	**Pn**	**08 00 20.1**	**+2.8**
	comp=Z,1.6nm,0.3s,baz=106,slow=17,SNR=16						
ASAJ				S	**Sn**	**08 01 39.5**	**+8.9**
	comp=Z,0.2nm,0.3s,baz=310,slow=13,SNR=1.2						
ASAJ				LR	LR	08 03 03.1	
	comp=Z,313nm,18.9s,baz=52,slow=40						
ASAJ	**Asahikawa**	**6.53**	**262**	*e*Pn	**Pn**	**08 00 19.9**	**+2.6**
ASAJ	**Asahikawa**	**6.53**	**262**	P	**Pn**	**08 00 20.0**	**+2.8**
JCH	**Churui**	**6.53**	**248**	P	**Pn**	**08 00 17.4**	**+0.1**
JCH				*e*S	**Sn**	**08 01 29.2**	**-1.5**
MYR	**Moyori**	**6.74**	**246**	*e*P	**Pn**	**08 00 20.3**	**+0.1**
ERM	**Erimo**	**6.96**	**245**	*e*P	**Pn**	**08 00 26.0**	**+2.9**
ERM	**Erimo**	**6.96**	**245**	*e*Pn	**Pn**	**08 00 26.1**	**+2.9**
ERM	**Erimo**	**6.96**	**245**	*e*PN	**Pn**	**08 00 26.1**	**+2.9**
JBT2	**Biratori 2**	**7.12**	**252**	P	**Pn**	**08 00 25.1**	**-0.4**
JNB	**Noboribetsu**	**8.14**	**253**	P	**Pn**	**08 00 40.9**	**+1.5**
JKB	**Kayabe**	**8.40**	**250**	P	**Pn**	**08 00 42.6**	**-0.4**
JKB				*e*S	**Sn**	**08 02 11.2**	**-5.5**
JYM2	**Yakumo 2**	**8.74**	**252**	P	**Pn**	**08 00 48.1**	**+0.5**
PETK	**Petropavlovsk-**	**8.74**	**25**	P	**Pn**	**08 00 49.6**	**+1.9**
	baz=193,slow=12						
PETK				S	Sn	08 02 32.5	+7.5
JANG	**Nango**	**8.91**	**240**	*e*S	Sn	08 02 20.4	-8.7
MJAR	**Matsushiro Arr**	**13.38**	**234**	P	**Pn**	**08 01 51.9**	**+0.7**
	comp=Z,0.2nm,0.3s,baz=26,slow=14,SNR=3.2						
USRK	**Ussuriysk Ar.**	**13.98**	**272**	P	**Pn**	**08 01 58.8**	**-0.4**
	baz=72,slow=14						
KLR	**Kul'dur**	**14.02**	**293**	P	**Pn**	**08 02 01.7**	**+2.0**
	comp=Z,0.0nm,0.3s,baz=92,slow=13,SNR=4.7						
KLR				LR	LR	08 07 39.0	
	comp=Z,17nm,18.8s,baz=106,slow=38						
MA2	**Magadan**	**14.28**	**358**	LR	LR	08 07 57.4	
	comp=Z,89nm,18.2s,baz=180,slow=39						
MSHR	**Mys Shultsa**	**14.97**	**267**	⇓*e*P	**Pn**	**08 02 14.2**	**+1.5**
KSRS	**Korea Array**	**19.38**	**254**	P	**P**	**08 03 06.3**	**-0.3**
	comp=Z,0.2nm,0.3s,baz=57,slow=11,SNR=5.4						
KSRS				LR	LR	08 11 29.6	
	comp=Z,72nm,18.2s,baz=44,slow=40						
YAK	**Yakutsk**	**20.99**	**331**	LR	LR	08 11 02.5	
	comp=Z,69nm,20.9s,baz=94,slow=35						
YAK	**Yakutsk**	**20.99**	**331**	*e*P	Pn	08 03 31.0	+4.5
YAK				*e*		08 03 56.8	
YAK				*e*S	Sn	08 07 26.6	+4.1
YAK				e*SS	pS	08 07 44.3	+15
YAK				*e*SS	SnSn	08 07 59.8	+22
YAK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.1s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,10.0nm,0.6s						
YAK				pmax	pmax		
	comp=N,11nm,1.2s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.2s						
YAK				MLR	MLR		
	comp=Z,50nm,8.0s						
YAK				MLR	MLR		
	comp=N,223nm,22.0s						
YAK				MLR	MLR		
	comp=E,107nm,23.0s						
H11N2	**WAKE ISLAND Hy**	**28.50**	**149**	T	T	08 35 12.1	
	baz=338,slow=75,SNR=58						
H11N1	**WAKE ISLAND Hy**	**28.52**	**149**	T	T	08 35 22.5	
	baz=338,slow=75,SNR=41						
H11N3	**WAKE ISLAND Hy**	**28.52**	**149**	T	T	08 35 23.0	
	baz=338,slow=75,SNR=31						
NJ2	**Nanjing**	**28.58**	**254**	*e*P	**P**	**08 04 35.4**	**-1.1**
NJ2				pmax	pmax		
	comp=E,13nm,0.6s						
HHC	**Hu-ho-hao-te**	**29.36**	**276**	*e*P	**P**	**08 04 43.8**	**+0.2**
HHC				pP	sP	08 04 55.9	-0.8
HHC				S	**S**	**08 09 31.3**	**-3.7**
HHC				sS	sS	08 09 55.1	+4.8
HHC				pmax	pmax		
	comp=E,29nm,1.2s						
HHC				pmax	pmax		
	comp=E,110nm,4.4s						
HHC				LR	LR		
	comp=E,130nm,11.6s						
HHC				LR	LR		
	comp=E,140nm,12.5s						
HHC				LR	LR		
	comp=E,95nm,11.4s						
H11S1	**WAKE ISLAND Hy**	**29.56**	**150**	T	T	08 36 37.1	
	baz=338,slow=76,SNR=32						
H11S3	**WAKE ISLAND Hy**	**29.56**	**150**	T	T	08 36 47.9	
	baz=338,slow=76,SNR=19						
H11S2	**WAKE ISLAND Hy**	**29.57**	**150**	T	T	08 36 38.3	
	baz=338,slow=76,SNR=21						
ULN	**Ulaanbaatar**	**30.39**	**291**	*e*P	**P**	**08 04 52.8**	**+0.1**
ULN	**Ulaanbaatar**	**30.39**	**291**	⇑*i*P	**P**	**08 04 52.8**	**+0.1**
ULN				i *PP	**sP**	**08 05 05.3**	**-0.5**
ULN				e*SP	pP	08 05 12.3	+10
ULN				pmax	pmax		
	comp=Z,2.0nm,1.1s						
SONM	**Songino Array**	**30.83**	**291**	LR	LR	08 18 14.2	
	comp=Z,77nm,19.4s,baz=58,slow=38						
WHN	**Wuhan**	**32.56**	**256**	P	**P**	**08 05 15.1**	**+3.4**
KDAK	**Kodiak Island**	**35.82**	**49**	P	**P**	**08 05 40.4**	**+0.7**
	comp=Z,3.0nm,1.0s,baz=17,slow=20,SNR=2.3						
LZH	**Lanzhou**	**36.89**	**273**	*e*P	**P**	**08 05 45.3**	**-3.9**
LZH				pP	pP	08 05 58.5	-0.1
LZH				sP	sP	08 06 05.0	+2.5
LZH				*e*PP	**PP**	**08 07 10.4**	**-3.0**
LZH				pmax	pmax		
	comp=Z,18nm,1.2s						
LZH				pmax	pmax		
	comp=Z,69nm,4.9s						
LZH				LR	LR		
	comp=Z,300nm,12.9s						
LZH				LR	LR		
	comp=Z,310nm,13.2s						
LZH				LR	LR		
	comp=Z,380nm,16.3s						
SML	**Sawmill**	**37.73**	**42**	*e*P	**P**	**08 05 56.5**	**+0.6**
SML	**Sawmill**	**37.73**	**42**	*e*P	**P**	**08 05 56.5**	**+0.6**
	comp=Z,4.8nm,0.8s						
SML	**Sawmill**	**37.73**	**42**	*e*P	**P**	**08 05 56.5**	**+0.6**
SML				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ILAR	**Eielson Array**	**38.31**	**37**	P	**P**	**08 06 01.1**	**+0.3**
	comp=Z,0.5nm,0.9s,baz=264,slow=8.1,SNR=5.3						
GYA	**Guiyang**	**40.38**	**258**	*e*P	**P**	**08 06 19.0**	**+0.4**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ZALV	**Zalesovo Beam**	**42.59**	**307**	LR	LR	08 24 32.4	
	comp=Z,32nm,21.3s,baz=70,slow=36						
KMI	**Kunming**	**43.95**	**260**	P	**P**	**08 06 49.3**	**+1.5**
KMI				pmax	pmax		
	comp=Z,5.0nm,0.5s						
WMQ	**Urumqi**	**44.46**	**292**	P	**P**	**08 06 52.3**	**+0.8**
WMQ				sP	sP	08 07 11.1	+6.2
WMQ				pmax	pmax		
	comp=Z,22nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,280nm,4.7s						
WMQ				LR	LR		
	comp=Z,120nm,29.5s						
WMQ				LR	LR		
	comp=Z,310nm,25.7s						
WMQ				LR	LR		
	comp=Z,67nm,25.7s						
MK31	**Makanchi Array**	**46.66**	**298**	*e*P	**P**	**08 07 08.3**	**-0.6**
MK31	**Makanchi Array**	**46.66**	**298**	*e*P	**P**	**08 07 08.2**	**-0.6**
MKAR	**Makanchi Array**	**46.66**	**298**	P	**P**	**08 07 08.8**	**-0.1**
	comp=Z,0.9nm,0.6s,baz=72,slow=7.5,SNR=12						
MKAR				LR	LR	08 27 45.8	
	comp=Z,94nm,19.5s,baz=69,slow=37						
MKAR	**Makanchi Array**	**46.66**	**298**	*e*P	**P**	**08 07 08.5**	**-0.3**
MKAR	**Makanchi Array**	**46.66**	**298**	*e*P	**P**	**08 07 08.5**	**-0.3**
	comp=Z,10nm,0.6s						
MKAR	**Makanchi Array**	**46.66**	**298**	*e*P	**P**	**08 07 08.5**	**-0.3**
MK01	**Makanchi Array**	**46.67**	**298**	*e*P	**P**	**08 07 08.5**	**-0.4**
KURK	**Kurchatov**	**47.28**	**304**	P	**P**	**08 07 11.8**	**-1.7**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
DLBC	**Dease Lake**	**47.34**	**44**	P	**P**	**08 07 13.2**	**-0.8**
	comp=Z,1.3nm,0.8s,baz=225,slow=14,SNR=3.5						
KURBB	**Kurchatov Arra**	**47.37**	**304**	P	**P**	**08 07 11.8**	**-2.5**
	comp=Z,0.5nm,0.5s,baz=71,slow=8.5,SNR=6.1						
YKA	**Yellowknife Ar**	**52.69**	**36**	P	**P**	**08 07 53.5**	**-1.0**
	comp=Z,0.9nm,0.9s,baz=295,slow=7.4,SNR=2.9						
KBS	**Kingsbay**	**53.73**	**351**	*e*P	**P**	**08 08 01.2**	**-0.7**
SFK	**Sufi-Kurgan**	**55.55**	**294**	P	**P**	**08 08 16.5**	**+0.6**
KK31	**Karatay Array**	**55.76**	**299**	*e*P	**P**	**08 08 16.2**	**-1.0**
KK31	**Karatay Array**	**55.76**	**299**	*e*P	**P**	**08 08 16.1**	**-1.0**
KKAR	**Karatay Array**	**55.76**	**299**	*e*P	**P**	**08 08 16.2**	**-0.9**
KKAR	**Karatay Array**	**55.76**	**299**	*e*P	**P**	**08 08 16.2**	**-0.9**
KNTN	**Kanton**	**57.93**	**135**	*e*P	**P**	**08 08 34.5**	**+1.8**
	comp=Z,285nm,0.8s						
ABKAR	**Akbulak array**	**58.52**	**310**	*e*P	**P**	**08 08 35.5**	**-0.9**
AKTO	**Aktyubinsk**	**58.88**	**312**	LR	LR	08 36 45.4	
	comp=Z,80nm,18.2s,baz=66,slow=39						
YBH	**Yreka Blue Hor**	**59.35**	**60**	LR	LR	08 30 45.5	
	comp=Z,21nm,20.7s,baz=240,slow=32						
NVAR	**Mina Array Bea**	**64.04**	**61**	P	**P**	**08 09 15.8**	**+1.5**
	comp=Z,0.5nm,0.6s,baz=299,slow=7.7,SNR=5.2						
FIA1	**FINESS Array S**	**64.86**	**334**	*e*P	**P**	**08 09 17.1**	**-1.9**
FINES	**FINESS Array B**	**64.87**	**334**	P	**P**	**08 09 16.4**	**-2.6**
	comp=Z,1.7nm,0.6s,baz=74,slow=6.9,SNR=9.6						
GEYT	**Alibeck**	**66.42**	**301**	P	**P**	**08 09 29.3**	**-0.2**
	comp=Z,3.7nm,0.3s,baz=69,slow=8.2,SNR=2.2						
PDAR	**Pinedale Array**	**66.44**	**53**	P	**P**	**08 09 32.3**	**+2.5**
	comp=Z,0.4nm,0.9s,baz=0.0,slow=0.9,SNR=3.1						
WRA	**Warramunga Arr**	**66.83**	**198**	P	**P**	**08 09 32.2**	**0.0**
	comp=Z,0.6nm,0.9s,baz=13,slow=6.4,SNR=4.8						
NB2	**NORSAR Subarra**	**69.22**	**341**	P	**P**	**08 09 45.4**	**-1.3**
	comp=Z,0.9nm,0.6s,baz=28,slow=6.2						
HFS	**Hagfors**	**69.41**	**339**	P	**P**	**08 09 46.5**	**-1.3**
	comp=Z,3.6nm,0.6s,baz=46,slow=4.2,SNR=14						
HFS				LR	LR	08 43 52.8	
	comp=Z,24nm,19.9s,baz=321,slow=39						
AS01	**Alice Springs**	**70.53**	**197**	*e*P	**P**	**08 09 57.1**	**+2.0**
ASAR	**Alice Springs**	**70.54**	**197**	P	**P**	**08 09 56.5**	**+1.3**
	comp=Z,0.4nm,0.7s,baz=6.9,slow=5.5,SNR=6.4						
NCK	**Nalchik**	**70.88**	**313**	⇑*e*P	**P**	**08 09 57.1**	**-0.1**
NCK				i *PP	**sP**	**08 10 10.2**	**-0.7**
NCK				*i*		08 12 32.7	
NCK				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KIV	**Kislovodsk**	**71.02**	**314**	*e*P	**P**	**08 09 56.8**	**-1.3**
KIV	**Kislovodsk**	**71.02**	**314**	⇓*e*P	**P**	**08 09 56.6**	**-1.5**
KIV				*e*		08 10 13.9	
KIV				*e*		08 12 36.4	
KIV				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KIV				MLR	MLR		
	comp=Z,62nm,18.0s						
KBZ	**Khabaz**	**71.08**	**313**	P	**P**	**08 09 59.0**	**+0.7**
	comp=Z,8.7nm,0.9s,baz=68,slow=4.4,SNR=14						
KBZ	**Khabaz**	**71.08**	**313**	P	**P**	**08 09 59.0**	**+0.7**
KBZ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
NEY	**Neytrino**	**71.50**	**313**	⇑*i*P	**P**	**08 10 00.9**	**-0.3**
NEY				e*PP	**pP**	**08 10 11.1**	**-0.1**
NEY				*i*		08 10 20.5	
NEY				pmax	pmax		
	comp=Z,1.0nm,0.8s						
TBLG	**Delisi**	**71.52**	**311**	*e*P	**P**	**08 10 01.8**	**+0.7**
	comp=Z,11nm,0.6s						
TBLG	**Delisi**	**71.52**	**311**	*e*P	**P**	**08 10 01.8**	**+0.7**
TBLG				pmax	pmax		
	comp=Z,11nm,0.6s						
AKASG	**Malin Array Be**	**72.13**	**326**	P	**P**	**08 10 03.1**	**-1.4**
	comp=Z,1.3nm,0.4s,baz=34,slow=6.0,SNR=4.1						
KIEV	**Kiev**	**72.14**	**326**	*e*P	**P**	**08 10 03.8**	**-0.8**
KIEV	**Kiev**	**72.14**	**326**	*i* P	**P**	**08 10 03.8**	**-0.8**
KIEV				pmax	pmax		
	comp=Z,4.0nm,1.2s						
OJC	**Ojcow**	**76.04**	**330**	*e*P	**P**	**08 10 26.9**	**-0.5**
	comp=Z,5.4nm,0.7s						
OJC	**Ojcow**	**76.04**	**330**	*e*P	**P**	**08 10 26.9**	**-0.5**
OJC				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BUR08	**Bucovina Ar. S**	**76.16**	**326**	*e*P	**P**	**08 10 27.6**	**-0.7**
BUR04	**Bucovina Ar. S**	**76.18**	**326**	*e*P	**P**	**08 10 27.6**	**-0.7**
BURAR	**Bucovina Array**	**76.18**	**326**	⇓*i*P	**P**	**08 10 27.7**	**-0.7**
BURAR	**Bucovina Array**	**76.18**	**326**	⇓P	**P**	**08 10 27.7**	**-0.7**
BIZ	**Bicaz**	**76.37**	**325**	⇓*i*P	**P**	**08 10 29.1**	**-0.2**
TESR	**Tescani**	**76.49**	**324**	⇑*i*P	**P**	**08 10 29.4**	**-0.6**
CFR	**Carcaliu**	**76.94**	**323**	⇓*i*P	**P**	**08 10 32.0**	**-0.5**
CFR	**Carcaliu**	**76.94**	**323**	⇓P	**P**	**08 10 32.1**	**-0.5**
MORC	**Moravsky Berou**	**77.19**	**331**	⇓*i*P	**P**	**08 10 33.8**	**-0.2**
MORC	**Moravsky Berou**	**77.19**	**331**	*e*P	**P**	**08 10 33.8**	**-0.2**
	comp=Z,3.6nm,0.8s						
MORC	**Moravsky Berou**	**77.19**	**331**	⇓P	**P**	**08 10 33.9**	**-0.1**
CLL	**Collm**	**77.31**	**335**	*e*P	**P**	**08 10 34.0**	**-0.5**
	comp=Z,5.0nm,0.8s						
CLL	**Collm**	**77.31**	**335**	*e*P	**P**	**08 10 34.0**	**-0.5**
CLL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
EKA	**Eskdalemuir Ar**	**77.46**	**346**	P	**P**	**08 10 34.7**	**-0.6**
	comp=Z,0.8nm,0.5s,baz=17,slow=4.7,SNR=5.7						
MLR	**Muntele Rosu**	**77.61**	**324**	P	**P**	**08 10 37.0**	**+0.5**
	comp=Z,0.7nm,0.7s,baz=201,slow=8.6,SNR=5.5						
MLR	**Muntele Rosu**	**77.61**	**324**	⇑*i*P	**P**	**08 10 37.2**	**+0.7**
MLR	**Muntele Rosu**	**77.61**	**324**	⇑P	**P**	**08 10 37.2**	**+0.7**
VRAC	**Vranov**	**77.91**	**332**	⇑*i*P	**P**	**08 10 38.0**	**+0.1**
VRAC	**Vranov**	**77.91**	**332**	⇑P	**P**	**08 10 38.1**	**+0.1**
VOIR		**78.02**	**325**	⇓*i*P	**P**	**08 10 39.2**	**+0.5**
VOIR		**78.02**	**325**	⇓P	**P**	**08 10 39.2**	**+0.5**
BRTR	**Keskin Array B**	**78.69**	**316**	P	**P**	**08 10 42.5**	**-0.1**
	comp=Z,1.2nm,0.9s,baz=104,slow=2.5,SNR=5.9						
KHC	**Kasperske Hory**	**79.04**	**333**	*e*P	**P**	**08 10 43.7**	**-0.6**
KHC	**Kasperske Hory**	**79.04**	**333**	*e*P	**P**	**08 10 43.7**	**-0.6**
	comp=Z,1.6nm,1.1s						
KHC	**Kasperske Hory**	**79.04**	**333**	*e*P	**P**	**08 10 43.7**	**-0.6**
KHC				pmax	pmax		
	comp=Z,2.0nm,1.1s						
TXAR	**Lajitas Array**	**79.12**	**59**	P	**P**	**08 10 45.6**	**+0.5**
	comp=Z,0.3nm,0.9s,baz=303,slow=4.8,SNR=3.0						
GERES	**GERESS Array B**	**79.25**	**333**	P	**P**	**08 10 44.0**	**-1.5**
	comp=Z,0.5nm,0.7s,baz=46,slow=7.6,SNR=3.7						
VTS	**Vitosha**	**81.11**	**324**	⇑*i*P	**P**	**08 10 55.1**	**-0.6**
VTS	**Vitosha**	**81.11**	**324**	⇑P	**P**	**08 10 55.1**	**-0.6**

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*NEIC **14** 08:02:09.6±0.0, 44°.52S×167°.95E, h5^{km}, ML4.0(WEL), After WEL.*

NEIC Felt in Queenstown.

WEL 14 08:02:10.0, 45°S±4°×**16°8E**±°**, h5^{km}, ML4.1**/14**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCZ	**Jackson Bay**	**0.71**	**48**	P*	Pg	08 02 23.8	+0.2
JCZ				S*	Sb	08 02 34.9	0.0
JCZ	**Jackson Bay**	**0.71**	**48**	P	Pg	08 02 23.9	+0.3
JCZ				S	Sb	08 02 35.2	+0.3
WKZ	**Wanaka**	**0.74**	**112**	P*	Pb	08 02 25.8	+0.4
WKZ	**Wanaka**	**0.74**	**112**	P	Pb	08 02 25.8	+0.4
WKZ				S	Sn	08 02 37.7	-1.0
MLZ	**Mavora Lakes**	**0.82**	**177**	P*	Pg	08 02 24.7	-1.0
MLZ				S*	Sb	08 02 38.3	+0.3
MLZ	**Mavora Lakes**	**0.82**	**177**	P	Pg	08 02 24.8	-0.9
MLZ				S	Sb	08 02 39.2	+1.2
EAZ	**Earnscleugh**	**1.12**	**128**	P*	Pb	08 02 31.9	+0.1
EAZ	**Earnscleugh**	**1.12**	**128**	P	Pb	08 02 32.0	+0.2
EAZ				S	Sb	08 02 47.3	+0.6
LBZ	**Lake Benmore**	**1.53**	**85**	Pn	Pg	08 02 39.3	-0.1
LBZ	**Lake Benmore**	**1.53**	**85**	P	Pg	08 02 39.3	0.0
FOZ	**Fox Glacier**	**1.63**	**52**	Pn	Pn	08 02 37.3	-1.9
FOZ	**Fox Glacier**	**1.63**	**52**	P	Pn	08 02 37.9	-1.4
FOZ				S	Sg	08 03 02.9	+0.7
TUZ	**Tuapeka**	**1.79**	**142**	Pn	Pn	08 02 42.1	+0.6
TUZ	**Tuapeka**	**1.79**	**142**	P	Pn	08 02 42.2	+0.7
ODZ	**Otahua Downs**	**1.91**	**106**	Pn	Pn	08 02 43.9	+0.7
ODZ	**Otahua Downs**	**1.91**	**106**	P	Pn	08 02 43.7	+0.5
SYZ	**Scrubby Hill**	**2.13**	**159**	Pn	Pn	08 02 46.2	+0.1
SYZ	**Scrubby Hill**	**2.13**	**159**	P	Pn	08 02 46.3	+0.2
HHSZ	**Highcliff Hill**	**2.24**	**127**	Pn	Pn	08 02 48.9	+1.2
HHSZ	**Highcliff Hill**	**2.24**	**127**	P	Pn	08 02 49.1	+1.4
APZ	**The Paps**	**2.28**	**181**	Pn	Pn	08 02 48.3	-0.1
APZ	**The Paps**	**2.28**	**181**	P	Pn	08 02 48.2	-0.1
RPZ	**Rata Peaks**	**2.31**	**70**	Pn	Pn	08 02 48.9	+0.1
RPZ	**Rata Peaks**	**2.31**	**70**	P	Pn	08 02 49.0	+0.2
WVZ	**Waitaha Valley**	**2.44**	**54**	Pn	Pn	08 02 49.1	-1.3
WVZ	**Waitaha Valley**	**2.44**	**54**	P	Pn	08 02 49.4	-1.0
INZ	**Inchbonnie**	**3.06**	**55**	P	Pn	08 03 00.5	+1.5
OXZ	**Oxford**	**3.12**	**68**	Pn	Pn	08 02 58.1	-1.7
OXZ	**Oxford**	**3.12**	**68**	P	Pn	08 02 58.3	-1.5
EYCZ	**Eyrewell**	**3.30**	**71**	P	Pn	08 03 02.7	+0.4
MQZ	**McQueen's Vall**	**3.42**	**77**	P	Pn	08 03 03.8	0.0
LTZ	**Lake Taylor**	**3.53**	**61**	Pn	Pn	08 03 03.4	-2.1
LTZ	**Lake Taylor**	**3.53**	**61**	P	Pn	08 03 04.6	-0.9
AKCZ	**Akaroa Harbour**	**3.55**	**81**	P	Pn	08 03 05.3	-0.5
OKCZ	**Okains Bay**	**3.69**	**79**	P	Pn	08 03 08.3	+0.6
DSZ	**Denniston Nort**	**3.92**	**46**	P	Pn	08 03 11.1	+0.2
THZ	**Tophouse**	**4.51**	**54**	Pn	Pn	08 03 18.9	0.0
THZ	**Tophouse**	**4.51**	**54**	P	Pn	08 03 19.0	0.0
KHZ	**Kahutara**	**4.52**	**64**	P	Pn	08 03 18.6	-0.4
QRZ	**Quartz Range**	**4.97**	**43**	P	Pn	08 03 25.3	0.0
TUWZ	**Tuamarina**	**5.33**	**56**	P	Pn	08 03 30.5	+0.4
DUWZ	**D'Urville Isla**	**5.72**	**51**	P	Pn	08 03 36.1	+0.6
MRZ	**Mangatainoka R**	**6.77**	**58**	P	Pn	08 03 49.2	-0.8
VRZ	**Vera Road**	**7.38**	**45**	P	Pn	08 03 59.3	+1.0

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*BJI **14** 08:05:25.9, 16°.07S×177°.55W, h398^{km}, mb4.8/25, mB4.9/19*

*IDC **14** 08:05:25.6±0.9, 16°.28S×177°.66W, h389^{km}±8^{km}, mb4.4/32, mb1 4.4/35, mb1mx4.3/52, mbtmp5.1/35, Error ellipse: s-maj=9.7km s-min=7.7km az=139.0*

*MOS **14** 08:05:26.5±0.8, 16°.18S×177°.76W, h404^{km}, mb4.7/39, Error ellipse: s-maj=8.5km s-min=6.9km az=137.5*

*ISCJB **14** 08:05:26.3±0.6, 16°.28S±0°.03×177°.75W±0°.03, h406^{km}±6^{km}, mb4.8/271, Error ellipse: s-maj=4.8km s-min=3.1km az=42.9*

*GCMT **14** 08:05:27.1±0.3, 16°.18S×177°.53W, h425^{km}±1^{km}, MW5.3/86, Moment Tensor Solution. s86,c121; Duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.78±.03; M$_{\theta\theta}$0.96±.05; M$_{\phi\phi}$-0.17±.05; M$_{r\theta}$0.31±.04; M$_{\theta\phi}$-0.30±.04; M$_{\phi r}$0.30±.05; Best double couple: M$_0$1.02700×10^{17} NP1:φ$_s$260.00000°, δ57.00000°, λ-121.00000°. NP2:φ$_s$128.00000°, δ44.00000°, λ-51.00000°. Principal axes: T 1.0640, Plg8.0000°, Azm12.0000°; N -0.0740, Plg26.0000°, Azm278.0000°; P -0.9900, Plg63.0000°, Azm117.0000°; nsta1 refers to body waves, cutoff=40s.*

*WEL **14** 08:05:27.0, 16°.29S×177°.73W, h403^{km}*

*NEIC **14** 08:05:27.1±0.5, 16°.29S×177°.73W, h403^{km}±5^{km}, mb4.8/235, Error ellipse: s-maj=4.1km s-min=2.5km az=138.0*

ISC 14 08:05:28.4±0.7**, 16°.29S**±0°.04×**177°.67W**±0°.05**, h418^{km}**±6^{km}**, n963, σ0^{s}94**/970**, mb4.8**/269**, 39C-64D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**6.16**	**68**	P	P	08 07 00.3	-3.1
	24nm,0.3s,baz=149,slow=1.3,SNR=24						
AFI				S	**S**	**08 08 20.0**	**-1.1**
	8.0nm,0.3s,baz=115,slow=21,SNR=1.2						
FUNA	**Funafuti**	**8.31**	**338**	*e*Pn	**P**	**08 07 25.2**	**-2.0**
RAO	**Raoul Island**	**12.90**	**181**	S	**S**	**08 10 34.9**	**-2.3**
	112nm,0.3s,baz=91,slow=23,SNR=3.7						
DZM	**Mont Dzumac**	**16.07**	**247**	P	**P**	**08 08 51.3**	**-0.7**
	0.4nm,0.3s,baz=88,slow=19,SNR=5.1						
DZM	**Mont Dzumac**	**16.07**	**247**	*e*P	**P**	**08 08 54.3**	**+2.3**
	95nm,1.1s						
DZM	**Mont Dzumac**	**16.07**	**247**	*e*P	**P**	**08 08 52.8**	**+0.9**
	45nm,0.9s						
RAR	**Rarotonga**	**17.63**	**109**	P	**P**	**08 09 06.6**	**-1.8**
	1.5nm,0.3s,baz=182,slow=4.8,SNR=4.3						
RAR	**Rarotonga**	**17.63**	**109**	*e*P	**P**	**08 09 08.9**	**+0.4**
	138nm,1.0s						
RAR	**Rarotonga**	**17.63**	**109**	*e*P	**P**	**08 09 08.9**	**+0.4**
RAR				pmax	pmax		
	comp=Z,138nm,1.0s						

TARA	**Tarawa**	**19.85**	**331**	*e*P	**P**	**08 09 29.6**	**-0.9**
	comp=Z,416nm,0.7s						
OUZ	**Omahuta**	**20.41**	**201**	*e*P	**P**	**08 09 37.6**	**+2.3**
	comp=Z,140nm,0.9s						
MXZ	**Matakaoa Point**	**21.48**	**189**	*e*P	**P**	**08 09 44.3**	**-0.8**
	comp=Z,46nm,0.6s						
MXZ	**Matakaoa Point**	**21.48**	**189**	P	**P**	**08 09 44.9**	**-0.2**
WMGZ	**Waiomatatini S**	**21.72**	**188**	P	**P**	**08 09 47.7**	**+0.4**
HAZ	**Te Kaha**	**21.75**	**190**	P	**P**	**08 09 46.3**	**-1.2**
PKGZ	**Pakihiroa**	**21.84**	**189**	P	**P**	**08 09 51.5**	**+3.1**
RUGZ	**Raukumara Rang**	**21.98**	**190**	P	**P**	**08 09 49.4**	**-0.4**
PUZ	**Puketiti**	**21.99**	**189**	P	**P**	**08 09 50.3**	**+0.6**
TGRZ	**Tauranga**	**22.02**	**193**	P	**P**	**08 09 51.8**	**+1.9**
OPRZ	**Ohinepanea**	**22.07**	**192**	P	**P**	**08 09 48.3**	**-2.1**
TWGZ	**Tauwhareparae**	**22.13**	**189**	P	**P**	**08 09 52.0**	**+0.9**
TWGZ				S	**S**	**08 13 22.8**	**-1.7**
TOZ	**Tahuroa Road**	**22.19**	**194**	P	**P**	**08 09 53.0**	**+1.4**
KMRZ	**Kaimai**	**22.20**	**193**	P	**P**	**08 09 53.4**	**+1.8**
OMRZ	**Omania**	**22.36**	**192**	P	**P**	**08 09 55.7**	**+2.6**
MWZ	**Matawai**	**22.36**	**190**	P	**P**	**08 09 52.4**	**-0.7**
MWZ				S	**S**	**08 13 24.8**	**-3.2**
URZ	**Urewera**	**22.36**	**191**	P	**P**	**08 09 50.5**	**-2.6**
	comp=Z,99nm,0.7s,baz=25,slow=1.4,SNR=61						
URZ				S	**S**	**08 13 22.2**	**-5.7**
	comp=Z,6.3nm,0.5s,baz=242,slow=23,SNR=1.8						
URZ	**Urewera**	**22.36**	**191**	*e*P	**P**	**08 09 51.7**	**-1.4**
	comp=Z,103nm,0.7s						
URZ				S	**S**	**08 13 22.2**	**-5.7**
URZ				*e*S	S	08 13 33.4	+5.5
URZ	**Urewera**	**22.36**	**191**	P	**P**	**08 09 52.0**	**-1.1**
URZ				S	**S**	**08 13 22.8**	**-5.1**
NGRZ	**Ngongotaha**	**22.39**	**193**	P	**P**	**08 09 55.6**	**+2.2**
CNGZ	**Carnagh Statio**	**22.40**	**189**	P	**P**	**08 09 53.8**	**+0.3**
TKGZ	**Te Karaka**	**22.41**	**189**	P	**P**	**08 09 53.7**	**+0.2**
HLRZ	**Highlands Stat**	**22.50**	**192**	P	**P**	**08 09 56.5**	**+2.1**
MUGZ	**Murupara**	**22.63**	**191**	P	**P**	**08 09 55.5**	**0.0**
HRRZ	**Handcock Road**	**22.65**	**192**	P	**P**	**08 09 56.6**	**+0.8**
TLZ	**Tolley Road**	**22.75**	**194**	P	**P**	**08 09 58.9**	**+2.2**
ALRZ	**Allen Road**	**22.80**	**192**	P	**P**	**08 09 57.5**	**+0.4**
HNR	**Honiara**	**22.85**	**285**	*e*P	**P**	**08 09 55.0**	**-2.8**
	comp=Z,321nm,1.0s						
HNR	**Honiara**	**22.85**	**285**	*e*P	**P**	**08 09 55.0**	**-2.8**
HNR				pmax	pmax		
	comp=Z,321nm,1.0s						
HIZ	**Hauiti**	**23.09**	**195**	*e*P	**P**	**08 10 02.6**	**+3.0**
	comp=Z,266nm,1.5s						
BKZ	**Black Stump Fm**	**23.35**	**192**	*e*P	**P**	**08 10 00.5**	**-1.6**
	comp=Z,33nm,0.6s						
BFZ	**Birch Farm**	**24.87**	**191**	*e*P	**P**	**08 10 13.9**	**-1.7**
	comp=Z,39nm,0.9s						
SNZO	**South Karori**	**25.79**	**193**	*e*P	**P**	**08 10 22.0**	**-1.7**
	comp=Z,92nm,1.1s						
THZ	**Tophouse**	**26.65**	**196**	*e*P	**P**	**08 10 31.3**	**-0.1**
	comp=Z,34nm,0.8s						
THZ				*e*S	**S**	**08 14 35.3**	**-0.3**
PAE	**Paea**	**26.89**	**97**	*e*P	**P**	**08 10 34.5**	**+0.7**
	comp=Z,7.2nm,0.6s						
PPT2	**Papeete2**	**26.89**	**97**	*e*P	**P**	**08 10 34.5**	**+0.6**
	comp=Z,28nm,0.8s						
PPT	**Papeete**	**26.89**	**97**	*e*P	**P**	**08 10 34.0**	**+0.1**
PPT	**Papeete**	**26.89**	**97**	*e*P	**P**	**08 10 34.0**	**+0.1**
PPTF	**Pamatai, Papee**	**26.90**	**97**	*e*P	**P**	**08 10 34.0**	**0.0**
	comp=Z,76nm,0.9s						
KHZ	**Kahutara**	**27.11**	**194**	*e*P	**P**	**08 10 33.2**	**-2.2**
	comp=Z,43nm,0.8s						
TVO	**Taravao**	**27.20**	**97**	*e*P	**P**	**08 10 36.5**	**-0.1**
	comp=Z,20nm,0.6s						
TBI	**Tubuai**	**27.41**	**109**	*e*P	**P**	**08 10 39.3**	**+1.0**
	comp=Z,73nm,0.7s						
LTZ	**Lake Taylor**	**27.77**	**196**	*e*P	**P**	**08 10 39.1**	**-2.2**
	comp=Z,55nm,0.7s						
OXZ	**Oxford**	**28.34**	**196**	*e*P	**P**	**08 10 44.9**	**-1.3**
	comp=Z,38nm,0.9s						
OXZ				*e*PcP	**PcP**	**08 13 46.8**	**+0.2**
MQZ	**McQueen’s Vall**	**28.54**	**195**	*e*P	**P**	**08 10 46.5**	**-1.4**
	comp=Z,57nm,1.5s						
MQZ				*e*PcP	**PcP**	**08 13 48.1**	**+1.1**
PMOR	**Pomariorio Ree**	**28.69**	**92**	*e*P	**P**	**08 10 49.3**	**-0.3**
	comp=Z,43nm,0.6s						
RPZ	**Rata Peaks**	**28.97**	**197**	P	**P**	**08 10 49.4**	**-2.4**
	comp=Z,10nm,0.7s,baz=257,slow=3.2,SNR=9.8						
RPZ	**Rata Peaks**	**28.97**	**197**	*e*P	**P**	**08 10 51.1**	**-0.7**
	comp=Z,52nm,1.3s						
RPZ				*e*PcP	**PcP**	**08 13 48.5**	**+0.4**
FOZ	**Fox Glacier**	**29.17**	**199**	*e*P	**P**	**08 10 52.7**	**-0.8**
	comp=Z,118nm,1.0s						
FOZ				*e*PcP	**PcP**	**08 13 48.4**	**-0.3**
LBZ	**Lake Benmore**	**29.83**	**198**	*e*P	**P**	**08 10 57.7**	**-1.6**
	comp=Z,47nm,1.0s						
LBZ				*e*PcP	**PcP**	**08 13 51.4**	**+1.0**
ODZ	**Otahua Downs**	**30.30**	**197**	*e*P	**P**	**08 11 03.2**	**-0.2**
	comp=Z,2.3nm,0.4s						
EIDS	**Eidsvold**	**30.51**	**248**	*e*P	**P**	**08 11 05.1**	**-0.4**
	comp=Z,17nm,0.9s						
EIDS				*e*PcP	**PcP**	**08 13 53.9**	**+1.3**
WKZ	**Wanaka**	**30.58**	**199**	*e*P	**P**	**08 11 04.8**	**-1.1**
	comp=Z,82nm,1.2s						
MLZ	**Mavora Lakes**	**31.35**	**199**	*e*P	**P**	**08 11 12.3**	**-0.2**
	comp=Z,170nm,1.2s						
ARMA	**Armidale**	**31.38**	**238**	*e*P	**P**	**08 11 14.4**	**+1.3**
	comp=Z,24nm,0.6s						
JOHN	**Johnston Islan**	**33.78**	**14**	*e*P	**P**	**08 11 32.6**	**-1.0**
	comp=Z,232nm,0.8s						
CTA	**Charters Tower**	**34.44**	**258**	P	**P**	**08 11 37.7**	**-1.6**
	comp=Z,6.8nm,0.5s,baz=85,slow=9.8,SNR=25						
CTA				PcP	**PcP**	**08 14 04.3**	**+0.7**
	comp=Z,14nm,0.6s,baz=40,slow=1.7,SNR=8.4						
CTAO	**Charters Tower**	**34.44**	**258**	*e*P	**P**	**08 11 39.2**	**-0.1**
	comp=Z,14nm,1.1s						
CTAO				*e*PcP	**PcP**	**08 14 04.2**	**+0.5**
CTAO	**Charters Tower**	**34.44**	**258**	*e*P	**P**	**08 11 39.2**	**-0.1**
CTAO				*e*		08 14 04.2	
CTAO				pmax	pmax		
	comp=Z,14nm,1.1s						
PMG	**Port Moresby**	**34.93**	**277**	P	**P**	**08 11 43.2**	**-0.3**
	comp=Z,21nm,0.8s,baz=79,slow=2.9,SNR=6.7						
CAN	**Canberra**	**35.26**	**231**	*e*P	**P**	**08 11 46.8**	**+0.8**
	comp=Z,40nm,1.3s						
CAN	**Canberra**	**35.26**	**231**	*e*P	**P**	**08 11 46.8**	**+0.8**
CAN				pmax	pmax		
	comp=Z,40nm,1.3s						
COEN	**Coen**	**37.84**	**268**	*e*P	**P**	**08 12 08.7**	**+1.0**
	comp=Z,26nm,0.9s						
COEN				*e*PcP	**PcP**	**08 14 14.9**	**+0.8**
WAKE	**Wake Island**	**38.57**	**336**	*e*P	**P**	**08 12 13.1**	**-0.5**
	comp=Z,145nm,0.8s						
TAU	**Tasmania Unive**	**39.91**	**221**	*e*P	**P**	**08 12 24.5**	**+0.3**
	comp=Z,50nm,1.5s						
TAU				*e*PcP	**PcP**	**08 14 22.4**	**+2.2**
TAU	**Tasmania Unive**	**39.91**	**221**	*e*P	**P**	**08 12 24.5**	**+0.3**
TAU				*e*		08 14 22.4	
TAU				pmax	pmax		
	comp=Z,50nm,1.5s						
STKA	**Stephens Creek**	**40.04**	**240**	P	**P**	**08 12 25.7**	**+0.3**
	comp=Z,22nm,0.5s,baz=92,slow=10,SNR=62						
STKA				PcP	**PcP**	**08 14 20.8**	**0.0**
	comp=Z,16nm,0.9s,baz=60,slow=4.1,SNR=4.7						
STKA	**Stephens Creek**	**40.04**	**240**	*e*P	**P**	**08 12 25.8**	**+0.3**
	comp=Z,5.4nm,0.6s						
STKA				PcP	**PcP**	**08 14 20.8**	**0.0**
STKA	**Stephens Creek**	**40.04**	**240**	*e*P	**P**	**08 12 25.8**	**+0.3**
STKA						08 14 20.8	
STKA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KKH	**Kailua Kona**	**41.58**	**32**	*e*P	**P**	**08 12 38.5**	**+0.5**
KKH	**Kailua Kona**	**41.58**	**32**	*e*P	**P**	**08 12 38.5**	**+0.5**
KHLU	**Kahalu‘u**	**41.59**	**32**	*e*P	**P**	**08 12 38.1**	**-0.1**
	comp=Z,150nm,1.1s						
HUH	**Hualalai**	**41.70**	**32**	*e*P	**P**	**08 12 39.4**	**+0.2**
	comp=Z,198nm,1.5s						
HMH	**Humu‘ula Sheep**	**41.81**	**32**	*e*P	**P**	**08 12 40.9**	**+0.8**
	comp=Z,213nm,1.1s						
KEKH	**Kekaha**	**41.91**	**25**	*e*P	**P**	**08 12 40.5**	**0.0**
	comp=Z,119nm,0.8s						
POHA	**Pohakuloa**	**41.91**	**32**	*e*P	**P**	**08 12 40.4**	**-0.5**
	comp=Z,79nm,0.8s						
HPAH	**Hawaii Prepara**	**42.06**	**32**	*e*P	**P**	**08 12 41.9**	**+0.1**
	comp=Z,96nm,0.8s						
MHA	**Mahukona**	**42.09**	**31**	*e*P	**P**	**08 12 42.7**	**+0.7**
KIP	**Kipapa**	**42.15**	**28**	*e*P	**P**	**08 12 42.3**	**-0.1**
	comp=Z,160nm,1.5s						
KIP	**Kipapa**	**42.15**	**28**	*e*P	**P**	**08 12 42.3**	**-0.1**
KIP				pmax	pmax		
	comp=Z,160nm,1.5s						
HLK	**Haleakala**	**42.40**	**30**	*e*P	**P**	**08 12 45.1**	**+0.3**
	comp=Z,338nm,1.4s						
JAY	**Jayapura**	**43.17**	**284**	P	**P**	**08 12 51.2**	**+0.4**
	comp=Z,122nm,0.9s						
BBOO	**Buckleboo**	**44.82**	**240**	*e*P	**P**	**08 13 03.1**	**-0.3**
	comp=Z,30nm,0.8s						
WB2	**Warramunga Arr**	**45.63**	**258**	*e*P	**P**	**08 13 09.2**	**-0.7**
	comp=Z,30nm,0.8s						
WRAB	**Tennant Creek**	**45.63**	**258**	*e*P	**P**	**08 13 09.3**	**-0.6**
	comp=Z,24nm,0.7s						
WRAB	**Tennant Creek**	**45.63**	**258**	*e*P	**P**	**08 13 09.0**	**-0.9**
WRA	**Warramunga Arr**	**45.64**	**258**	P	**P**	**08 13 09.1**	**-0.9**
	comp=Z,19nm,0.6s,baz=90,slow=6.7,SNR=254						
WRA				PcP	**PcP**	**08 14 40.5**	**+0.4**
	comp=Z,19nm,0.8s,baz=88,slow=3.7,SNR=16						
WRA				ScP	**ScP**	**08 17 54.5**	**+2.0**
	comp=Z,3.0nm,0.8s,baz=88,slow=4.4,SNR=5.3						
WRA				S	**S**	**08 19 21.1**	**0.0**
	comp=Z,3.6nm,1.1s,baz=98,slow=13,SNR=6.4						
AS01	**Alice Springs**	**45.89**	**253**	*e*P	**P**	**08 13 11.4**	**-0.4**
AS01				*e*PcP	**PcP**	**08 14 41.2**	**+0.3**
AS31	**Alice Springs**	**45.93**	**253**	*e*P	**P**	**08 13 11.7**	**-0.5**
	comp=Z,16nm,0.5s						
AS31				*e*S	**S**	**08 19 23.4**	**-1.7**
ASAR	**Alice Springs**	**45.93**	**253**	P	**P**	**08 13 11.8**	**-0.4**
	comp=Z,38nm,0.4s,baz=84,slow=8.5,SNR=326						
ASAR				PcP	**PcP**	**08 14 41.4**	**+0.3**
	comp=Z,16nm,0.8s,baz=98,slow=4.2,SNR=10						
ASAR				ScP	**ScP**	**08 17 56.5**	**+2.9**
	comp=Z,4.1nm,0.8s,baz=97,slow=4.3,SNR=7.5						
ASAR				S	**S**	**08 19 22.9**	**-2.1**
	comp=Z,5.9nm,0.8s,baz=86,slow=16,SNR=14						
ASAR				PKiKP	**PKiKP**	**08 21 34.3**	**-1.7**
	comp=Z,0.3nm,0.5s,baz=108,slow=1.6,SNR=4.6						
GUMO	**Guam**	**47.46**	**307**	P	**P**	**08 13 21.6**	**-2.3**
	comp=Z,22nm,0.5s,baz=116,slow=5.0,SNR=3.7						
GUMO	**Guam**	**47.46**	**307**	*e*P	**P**	**08 13 24.8**	**+0.9**
	comp=Z,123nm,1.3s						
GUMO	**Guam**	**47.46**	**307**	*e*P	**P**	**08 13 24.8**	**+0.9**
GUMO				pmax	pmax		
	comp=Z,123nm,1.3s						
MTN	**Manton Dam**	**49.58**	**267**	*e*P	**P**	**08 13 39.6**	**-0.2**
	comp=Z,37nm,0.8s						
FAKI	**Fak Fak**	**50.99**	**280**	*e*P	**P**	**08 13 50.2**	**0.0**
	comp=Z,59nm,1.3s						
FORT	**Forrest**	**51.35**	**243**	*e*P	**P**	**08 13 51.9**	**-0.8**
	comp=Z,64nm,0.9s						
FITZ	**Fitzroy Crossi**	**54.01**	**259**	P	**P**	**08 14 12.1**	**+0.1**
	comp=Z,15nm,0.5s,baz=100,slow=11,SNR=18						
SOEI	**Soe**	**56.80**	**269**	P	**P**	**08 14 33.5**	**+1.7**
	comp=Z,264nm,0.9s,comp=Z,2µm						
SOEI	**Soe**	**56.80**	**269**	*e*P	**P**	**08 14 33.5**	**+1.7**
	comp=Z,184nm,0.8s						
BATI	**Baumata**	**57.27**	**268**	P	**P**	**08 14 35.7**	**+0.7**
	comp=Z,65nm,0.5s,baz=122,slow=1.5,SNR=4.7						
BATI	**Baumata**	**57.27**	**268**	P	**P**	**08 14 36.9**	**+1.9**
	comp=Z,48nm,0.8s						
MBWA	**Marble Bar**	**59.17**	**255**	*e*P	**P**	**08 14 47.4**	**-0.5**
	comp=Z,41nm,1.0s						
EDFI	**Ende, Flores**	**59.50**	**269**	P	**P**	**08 14 50.1**	**-0.2**
	comp=Z,114nm,0.8s,comp=Z,809nm						
NWAO	**Narrogin (SRO)**	**60.60**	**241**	P	**P**	**08 14 56.6**	**-0.6**
	comp=Z,13nm,0.7s,baz=301,slow=17,SNR=3.4						
NWAO	**Narrogin (SRO)**	**60.60**	**241**	*e*P	**P**	**08 14 56.7**	**-0.6**
	comp=Z,22nm,0.8s						
NWAO	**Narrogin (SRO)**	**60.60**	**241**	*e*P	**P**	**08 14 56.7**	**-0.6**
NWAO				pmax	pmax		
	comp=Z,22nm,0.8s						
SBA	**Scott Base**	**62.07**	**184**	*e*P	**P**	**08 15 08.1**	**+2.0**
	comp=Z,21nm,0.8s						
SBA				*e*PcP	**PcP**	**08 15 43.9**	**+1.9**
VNDA	**Vanda**	**62.10**	**185**	P	**P**	**08 15 07.4**	**+1.0**
	comp=Z,6.3nm,0.5s,baz=356,slow=7.6,SNR=102						
VNDA	**Vanda**	**62.10**	**185**	*e*P	**P**	**08 15 07.6**	**+1.2**
	comp=Z,9.9nm,0.9s						
VNDA	**Vanda**	**62.10**	**185**	*e*P	**P**	**08 15 07.6**	**+1.2**
VNDA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MPSI	**Mapaga**	**63.72**	**279**	P	**P**	**08 15 18.1**	**+0.1**
	comp=Z,14nm,0.8s						
JHJ2	**Mitsune**	**63.74**	**321**	*e*P	**P**	**08 15 17.7**	**0.0**
	comp=Z,225nm,1.1s						
JHJ	**Hachijo jima 2**	**63.76**	**321**	P	**P**	**08 15 16.8**	**-1.1**
	comp=Z,115nm,0.8s,baz=242,slow=22,SNR=6.7						
TWSI	**Taliwang, Sumb**	**64.12**	**268**	P	**P**	**08 15 20.3**	**-0.3**
	comp=Z,106nm,0.8s,comp=Z,1µm						
JAGI	**Jajag, Banyuwa**	**66.81**	**268**	*e*P	**P**	**08 15 36.5**	**-1.1**
	comp=Z,76nm,1.0s						
MJAR	**Matsushiro Arr**	**67.06**	**322**	P	**P**	**08 15 37.9**	**-0.8**
	comp=Z,10.0nm,0.9s,baz=165,slow=6.2,SNR=16						
MAJO	**Matsushiro**	**67.06**	**322**	*e*P	**P**	**08 15 38.4**	**-0.2**
	comp=Z,21nm,1.2s						
MAJO	**Matsushiro**	**67.06**	**322**	*ce*P	**P**	**08 15 38.0**	**-0.6**
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MAT	**Matsushiro**	**67.06**	**322**	P	**P**	**08 15 37.8**	**-0.8**
MAT				S	S	08 23 44.4	-14
MJB9	**Matsu-Tunnel**	**67.06**	**322**	*e*P	**P**	**08 15 38.4**	**-0.2**
	comp=Z,19nm,1.1s						
KIWB	**Kanaga Island**	**67.86**	**0**	*e*P	**P**	**08 15 41.9**	**-1.3**
CASY	**Casey**	**67.89**	**205**	*e*P	**P**	**08 15 43.2**	**-0.1**
	comp=Z,33nm,1.1s						
GSTR	**Great Sitkin T**	**68.11**	**1**	*e*P	**P**	**08 15 43.4**	**-1.4**
ATKA	**Atka Island**	**68.27**	**2**	*e*P	**P**	**08 15 44.7**	**-1.0**
	comp=Z,55nm,1.0s						
KKM	**Kota Kinabalu**	**69.06**	**283**	*e*P	**P**	**08 15 51.8**	**+0.4**
	comp=Z,20nm,0.6s						
SMY	**Shemya**	**69.10**	**355**	*e*P	**P**	**08 15 50.2**	**-0.6**
	comp=Z,65nm,1.0s						
SMY	**Shemya**	**69.10**	**355**	*e*P	**P**	**08 15 50.2**	**-0.6**
SMY				pmax	pmax		
	comp=Z,65nm,1.0s						
WOJI	**Wonogiri, Jawa**	**70.06**	**267**	P	**P**	**08 15 57.8**	**+0.4**
	comp=Z,83nm,0.9s						
ASAJ	**Asahikawa**	**70.22**	**331**	P	**P**	**08 15 57.8**	**+0.1**
	comp=Z,11nm,0.7s,baz=226,slow=6.9,SNR=11						
ASAJ	**Asahikawa**	**70.22**	**331**	*e*P	**P**	**08 15 58.9**	**+1.3**
	comp=Z,12nm,0.8s						
UGM	**Wanagama**	**70.42**	**267**	*e*P	**P**	**08 15 59.7**	**+0.1**
	comp=Z,100nm,0.6s						
UNV	**Unalaska Valle**	**70.51**	**7**	*e*P	**P**	**08 15 58.0**	**-1.2**
	comp=Z,14nm,0.8s						
PET	**Petropavlovsk**	**72.00**	**345**	*i* P	**P**	**08 16 07.0**	**-1.0**
PET				pmax	pmax		
	comp=Z,40nm,1.6s						
YSS	**Yuzh-Sakhalins**	**72.31**	**333⇓**	*e*P	**P**	**08 16 10.7**	**+0.8**
YSS				*e*		08 16 27.1	
YSS				pmax	pmax		
	comp=Z,20nm,0.7s						
PETK	**Petropavlovsk-**	**72.31**	**345**	P	**P**	**08 16 09.6**	**-0.3**
	comp=Z,9.2nm,0.6s,baz=128,slow=7.7						
LEM	**Lembang**	**73.48**	**268**	P	**P**	**08 16 18.4**	**+0.6**
	comp=Z,90nm,0.8s,baz=89,slow=9.0,SNR=4.4						
TJN	**Taejon**	**73.73**	**316**	*i* P	**P**	**08 16 18.1**	**-0.3**
QSPA	**South Pole Qui**	**73.75**	**180**	P	**P**	**08 16 18.9**	**+0.6**
	comp=Z,31nm,0.7s,baz=34,slow=1.4,SNR=68						
QSPA	**South Pole Qui**	**73.75**	**180**	*e*P	**P**	**08 16 19.1**	**+0.8**
	comp=Z,33nm,0.7s						
KSRS	**Korea Array**	**73.98**	**318**	P	**P**	**08 16 20.8**	**+1.0**
	comp=Z,0.4nm,0.4s,baz=152,slow=11,SNR=3.7						
KSAR	**Wonju Array Be**	**74.00**	**318**	P	**P**	**08 16 20.8**	**+0.8**
KSAR	**Wonju Array Be**	**74.00**	**318**	P	**P**	**08 16 20.8**	**+0.8**
CHGN	**Chignik**	**74.11**	**11**	*e*P	**P**	**08 16 19.4**	**-0.7**
	comp=Z,45nm,1.2s						
SCI2	**San Clemente I**	**74.74**	**48**	P	**P**	**08 16 25.1**	**+0.8**
	baz=239						
SAO	**San Andreas Ge**	**74.77**	**44**	*e*P	**P**	**08 16 25.4**	**+1.0**
	comp=Z,30nm,0.8s						
SAO	**San Andreas Ge**	**74.77**	**44**	*e*P	**P**	**08 16 25.4**	**+1.0**
SAO				pmax	pmax		
	comp=Z,30nm,0.8s						
PKM	**Mcpherson Peak**	**74.85**	**46**	P	**P**	**08 16 25.3**	**+0.2**
	baz=237						
PMPB	**Monarch Peak**	**74.90**	**45**	*e*P	**P**	**08 16 26.4**	**+1.2**
	comp=Z,25nm,0.9s						
MIR	**Mirnyy**	**74.92**	**204⇑**	*i*P	**P**	**08 16 27.0**	**+2.3**
MIR				pmax	pmax		
	comp=Z,42nm,1.0s						
SMMC	**Simmler**	**74.95**	**46**	P	**P**	**08 16 26.4**	**+0.9**
	baz=237						
HOPS	**Hopland Field**	**75.00**	**41**	*e*P	**P**	**08 16 26.3**	**+0.6**
	comp=Z,21nm,1.1s						
KMRM	**Mail Ridge**	**75.33**	**40**	*e*P	**P**	**08 16 29.1**	**+1.5**
	comp=Z,60nm,0.8s						
ARVC	**Arvin**	**75.66**	**46**	P	**P**	**08 16 30.3**	**+0.9**
	baz=238						
MWC	**Mount Wilson**	**75.73**	**48**	*e*P	**P**	**08 16 30.5**	**+0.4**
	comp=Z,23nm,0.9s						
MWC	**Mount Wilson**	**75.73**	**48**	*e*P	**P**	**08 16 30.5**	**+0.4**
MWC				pmax	pmax		
	comp=Z,23nm,0.9s						
109C	**Camp Elliot, M**	**75.73**	**49**	P	**P**	**08 16 30.3**	**+0.4**
	baz=240						
VES	**Vestal, Richgr**	**75.86**	**46**	P	**P**	**08 16 31.0**	**+0.4**
	baz=238						
BAR	**Barrett**	**75.94**	**49**	*e*P	**P**	**08 16 31.3**	**+0.2**
	comp=Z,6.4nm,0.9s						
BFSC	**Mount Baldy Ra**	**76.02**	**48**	P	**P**	**08 16 31.9**	**+0.2**
	baz=239,SNR=5.6						
MURC	**Murrieta**	**76.03**	**48**	P	**P**	**08 16 32.1**	**+0.5**
	baz=239,SNR=6.0						
EDW2	**Edwards Air Fo**	**76.12**	**47**	P	**P**	**08 16 32.6**	**+0.6**
	baz=239,SNR=13						
CMB	**Columbia Colle**	**76.18**	**43**	*e*P	**P**	**08 16 32.6**	**+0.3**
	comp=Z,16nm,0.9s						
CMB	**Columbia Colle**	**76.18**	**43**	*e*P	**P**	**08 16 32.6**	**+0.3**
CMB				pmax	pmax		
	comp=Z,16nm,0.9s						
ISA	**Isabella, Lake**	**76.19**	**46**	P	**P**	**08 16 33.1**	**+0.7**
	baz=238,SNR=12						
ISA	**Isabella, Lake**	**76.19**	**46**	*e*P	**P**	**08 16 32.9**	**+0.4**
	comp=Z,24nm,1.2s						
ISA	**Isabella, Lake**	**76.19**	**46**	*e*P	**P**	**08 16 32.9**	**+0.4**
ISA				pmax	pmax		
	comp=Z,24nm,1.2s						
MONP2	**Monument Peak**	**76.23**	**49**	P	**P**	**08 16 33.5**	**+0.6**
	baz=240,SNR=18						
WDC	**Whiskeytown Da**	**76.26**	**40**	*e*P	**P**	**08 16 32.9**	**+0.3**
	comp=Z,14nm,1.0s						
WDC	**Whiskeytown Da**	**76.26**	**40**	*e*P	**P**	**08 16 32.9**	**+0.3**
WDC				pmax	pmax		
	comp=Z,14nm,1.0s						
AFDM	**Forest Hills D**	**76.31**	**42**	*e*P	**P**	**08 16 32.7**	**-0.3**
	comp=Z,14nm,0.9s						
IKP	**In-Ko-Pah, Jac**	**76.34**	**50**	P	**P**	**08 16 34.1**	**+0.7**
	baz=240,SNR=12						
N02D	**Trinity Center**	**76.39**	**40**	P	**P**	**08 16 34.0**	**+0.5**
	baz=234						
FRD	**Ford Ranch, An**	**76.40**	**49**	P	**P**	**08 16 34.4**	**+0.6**
	baz=240,SNR=15						
M02C	**Callahan**	**76.54**	**39**	P	**P**	**08 16 35.2**	**+0.9**
	baz=234						
L02D	**Cave Junction,**	**76.55**	**38**	P	**P**	**08 16 35.0**	**+0.7**
	baz=233						
O03D	**Paynes Creek**	**76.55**	**41**	P	**P**	**08 16 34.8**	**+0.4**
	baz=235,SNR=6.6						
PFO	**Pinyon Flats O**	**76.56**	**49**	P	**P**	**08 16 35.3**	**+0.7**
	baz=240,SNR=8.1						
PFO	**Pinyon Flats O**	**76.56**	**49**	*e*P	**P**	**08 16 35.2**	**+0.6**
	comp=Z,12nm,1.0s						
LRMC	**Laurel Mtn Rad**	**76.64**	**47**	P	**P**	**08 16 35.5**	**+0.4**
	baz=239,SNR=8.9						
KDAK	**Kodiak Island**	**76.67**	**13**	P	**P**	**08 16 34.1**	**-0.4**
	comp=Z,6.0nm,0.8s,baz=247,slow=4.2,SNR=6.9						
KDAK	**Kodiak Island**	**76.67**	**13**	*e*P	**P**	**08 16 34.6**	**+0.1**
	comp=Z,15nm,0.9s						
KDAK	**Kodiak Island**	**76.67**	**13**	*e*P	**P**	**08 16 34.6**	**+0.1**
KDAK				pmax	pmax		
	comp=Z,15nm,0.9s						
SWSC	**Sam W. Stewart**	**76.71**	**50**	P	**P**	**08 16 36.0**	**+0.7**
	baz=240,SNR=8.2						
MDPB	**Devils Postpil**	**76.83**	**44**	*e*P	**P**	**08 16 36.6**	**+0.4**
	comp=Z,19nm,0.8s						
YBH	**Yreka Blue Hor**	**76.83**	**39**	P	**P**	**08 16 36.1**	**+0.2**
	comp=Z,13nm,1.0s,baz=158,slow=3.5,SNR=18						
YBH	**Yreka Blue Hor**	**76.83**	**39**	*e*P	**P**	**08 16 37.0**	**+1.1**
	comp=Z,14nm,0.9s						
YBH	**Yreka Blue Hor**	**76.83**	**39**	*e*P	**P**	**08 16 37.0**	**+1.1**
YBH				pmax	pmax		
	comp=Z,14nm,0.9s						
CWC	**Cottonwood Cre**	**76.87**	**46**	P	**P**	**08 16 36.6**	**+0.3**
	baz=238						
OMMB	**Old Mammoth Mi**	**76.87**	**44**	*e*P	**P**	**08 16 37.2**	**+0.7**
	comp=Z,26nm,1.4s						
MLAC	**Mammoth, Mammo**	**76.99**	**44**	P	**P**	**08 16 37.7**	**+0.7**
	baz=237						
WAKR	**Walker**	**77.06**	**43**	*e*P	**P**	**08 16 38.1**	**+0.7**
	comp=Z,18nm,1.0s						
MPMC	**Manual Prospec**	**77.08**	**46**	P	**P**	**08 16 38.1**	**+0.5**
	baz=239,SNR=19						
BELC	**Belle Mtn. Jos**	**77.09**	**49**	P	**P**	**08 16 38.0**	**+0.4**
	baz=240,SNR=18						
TIN	**Tinemaha, Big**	**77.09**	**45**	P	**P**	**08 16 38.2**	**+0.7**
	baz=238						
DAC	**Darwin (Calif)**	**77.12**	**46**	*e*P	**P**	**08 16 38.3**	**+0.5**
	comp=Z,14nm,1.3s						
DAC	**Darwin (Calif)**	**77.12**	**46**	*e*P	**P**	**08 16 38.3**	**+0.5**
DAC				pmax	pmax		
	comp=Z,14nm,1.3s						
SLBS	**Sierra La Lagu**	**77.15**	**60**	*e*P	**P**	**08 16 38.9**	**+0.8**
	comp=Z,19nm,0.9s						
GSC	**Goldstone, Bar**	**77.17**	**47**	P	**P**	**08 16 38.4**	**+0.6**
	baz=239,SNR=14						
GSC	**Goldstone, Bar**	**77.17**	**47**	*e*P	**P**	**08 16 38.5**	**+0.6**
	comp=Z,19nm,1.1s						
GSC	**Goldstone, Bar**	**77.17**	**47**	*e*P	**P**	**08 16 38.5**	**+0.6**
GSC				pmax	pmax		
	comp=Z,19nm,1.1s						
HUMO	**Hull Mountain**	**77.20**	**38**	*e*P	**P**	**08 16 39.0**	**+1.2**
	comp=Z,9.9nm,0.9s						
BEKR	**Beckworth**	**77.22**	**42**	*e*P	**P**	**08 16 38.6**	**+0.4**
	comp=Z,9.4nm,0.8s						
HEC	**Hector,Ludlow**	**77.26**	**48**	P	**P**	**08 16 38.6**	**+0.2**
	baz=240,SNR=25						
PNTR	**Pine Nut**	**77.28**	**43**	*e*P	**P**	**08 16 39.5**	**+0.9**
	comp=Z,31nm,0.8s						
BC3	**Big Chuckawall**	**77.31**	**49**	P	**P**	**08 16 39.3**	**+0.6**
	baz=240,SNR=14						
VCNR	**Virginia City**	**77.36**	**42**	*e*P	**P**	**08 16 39.7**	**+0.7**
	comp=Z,11nm,0.8s						
M04C	**Macdoel**	**77.39**	**39**	P	**P**	**08 16 39.5**	**+0.5**
	baz=234						
YERR	**Yerington**	**77.45**	**43**	*e*P	**P**	**08 16 40.0**	**+0.4**
	comp=Z,21nm,0.9s						
GLA	**Glamis**	**77.48**	**50**	P	**P**	**08 16 40.2**	**+0.7**
	baz=241,SNR=22						
GLA	**Glamis**	**77.48**	**50**	*e*P	**P**	**08 16 40.8**	**+1.2**
	comp=Z,26nm,0.9s						
GLA	**Glamis**	**77.48**	**50**	*e*P	**P**	**08 16 40.8**	**+1.2**
GLA				pmax	pmax		
	comp=Z,26nm,0.9s						
NJ2	**Nanjing**	**77.48**	**309**	*e*P	**P**	**08 16 41.0**	**+1.5**
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
GRAC	**Grapevine Rang**	**77.65**	**45**	P	**P**	**08 16 41.2**	**+0.7**
	baz=239,SNR=26						
GMRC	**Granite Mounta**	**77.72**	**48**	P	**P**	**08 16 41.3**	**+0.3**
	baz=240,SNR=7.9						
FURC	**Furnace Creek,**	**77.72**	**46**	P	**P**	**08 16 41.2**	**+0.4**
	baz=239,SNR=15						
RYN	**Ryan**	**77.73**	**43**	*e*P	**P**	**08 16 41.6**	**+0.6**
	comp=Z,14nm,0.9s						
PAHR	**Pah Rah Range**	**77.76**	**42**	*e*P	**P**	**08 16 41.5**	**+0.4**
	comp=Z,16nm,1.0s						
NV01	**Mina Array Sit**	**77.77**	**44**	*e*P	**P**	**08 16 42.0**	**+0.7**
NVAR	**Mina Array Bea**	**77.77**	**44**	P	**P**	**08 16 41.6**	**+0.3**
	comp=Z,12nm,0.7s,baz=226,slow=9.0,SNR=113						
IRM	**Iron Mountain**	**77.78**	**49**	P	**P**	**08 16 41.8**	**+0.6**
	baz=241,SNR=17						
SHOC	**Shoshone, Teco**	**77.84**	**47**	P	**P**	**08 16 42.2**	**+0.7**
	baz=240						
TUQ	**Turquoise Moun**	**77.86**	**47**	P	**P**	**08 16 42.1**	**+0.4**
	baz=240,SNR=5.1						
NV11	**Mina Array Sit**	**77.87**	**44**	*e*P	**P**	**08 16 42.2**	**+0.5**
	comp=Z,2.8nm,1.2s						
Y12C	**Blythe**	**78.03**	**49**	P	**P**	**08 16 43.3**	**+0.7**
	baz=241,SNR=8.1						
Y12C	**Blythe**	**78.03**	**49**	*e*P	**P**	**08 16 43.2**	**+0.7**
	comp=Z,20nm,0.8s						
J04D	**Umpqua Nationa**	**78.08**	**38**	P	**P**	**08 16 43.5**	**+0.7**
	baz=234						
113A	**Mohawk Valley,**	**78.12**	**51**	*e*P	**P**	**08 16 43.7**	**+0.6**
	comp=Z,23nm,0.8s						
I04A	**Tendick Farm,**	**78.22**	**37**	P	**P**	**08 16 44.5**	**+1.1**
	baz=234						
KVN	**Kaiserville**	**78.24**	**43**	*e*P	**P**	**08 16 44.2**	**+0.4**
	comp=Z,19nm,0.9s						
KVN	**Kaiserville**	**78.24**	**43**	*e*P	**P**	**08 16 44.2**	**+0.4**
KVN				pmax	pmax		
	comp=Z,19nm,0.9s						
LDFC	**Landfair**	**78.26**	**48**	*e*P	**P**	**08 16 45.0**	**+1.1**
	comp=Z,44nm,0.9s						
TPNV	**Topopah Spring**	**78.39**	**46**	P	**P**	**08 16 44.9**	**+0.3**
	baz=239,SNR=26						
TPNV	**Topopah Spring**	**78.39**	**46**	*e*P	**P**	**08 16 45.1**	**+0.5**
	comp=Z,18nm,0.8s						

TPNV	Topopah Spring	78.39	46	*e*P	P	08 16 45.1	+0.5
TPNV				pmax	pmax		
	comp=Z,18nm,0.8s						
MOD	Modoc Plateau	78.40	40	*e*P	P	08 16 45.2	+0.6
	comp=Z,9.0nm,0.8s						
NEE2	Needles Airpor	78.46	49	P	P	08 16 45.5	+0.7
	baz=241						
214A	Organ Pipe Nat	78.46	52	P	P	08 16 46.0	+1.0
	baz=242,SNR=11						
K05A	Summer Lake	78.50	39	*e*P	P	08 16 45.9	+0.8
	comp=Z,39nm,1.3s						
PDMCI	Parker Dam,Lak	78.58	49	P	P	08 16 46.2	+0.8
	baz=241,SNR=8.9						
G03D	McMinnville, O	78.58	36	P	P	08 16 45.9	+0.7
	baz=233						
J05D	Fort Rock, OR	78.62	38	P	P	08 16 46.4	+0.7
	baz=235						
H04A	Detroit Lake	78.88	37	*e*P	P	08 16 46.9	0.0
	comp=Z,12nm,0.8s						
SHPR	Sheep Range	78.93	47	*e*P	P	08 16 48.5	+0.9
	comp=Z,12nm,1.0s						
PINE	Pine Mountain	79.09	38	*e*P	P	08 16 49.2	+0.9
	comp=Z,25nm,1.0s						
KLR	Kul’dur	79.10	329	*i* P	P	08 16 48.1	+0.2
W13A	Hualapai Mount	79.15	49	*e*P	P	08 16 49.3	+0.5
	comp=Z,9.9nm,1.1s						
I05D	Terrebonne, OR	79.17	37	P	P	08 16 49.1	+0.6
	baz=234						
E03A	Lebam	79.23	35	*e*P	P	08 16 49.2	+0.5
	comp=Z,20nm,0.8s						
Y14A	Wickenburg	79.24	50	*e*P	P	08 16 49.6	+0.5
	comp=Z,18nm,1.2s						
BMN	Battle Mountai	79.54	42	*e*P	P	08 16 50.5	-0.2
	comp=Z,18nm,0.9s						
BMN	Battle Mountai	79.54	42	*e*P	P	08 16 50.5	-0.2
BMN				pmax	pmax		
	comp=Z,18nm,0.9s						
R11A	Troy Canyon, C	79.56	45	P	P	08 16 51.0	+0.1
	baz=240,SNR=6.7						
R11A	Troy Canyon, C	79.56	45	*e*P	P	08 16 51.0	+0.1
	comp=Z,6.6nm,0.9s						
NLWA	Neilton Lookou	79.58	34	*e*P	P	08 16 50.8	+0.2
	comp=Z,15nm,1.1s						
G05D	Wamic, OR	79.71	37	P	P	08 16 51.8	+0.5
	baz=234						
WVOR	Wild Horse Val	79.72	40	*e*P	P	08 16 52.3	+0.7
	comp=Z,18nm,1.0s						
WVOR	Wild Horse Val	79.72	40	*e*P	P	08 16 52.3	+0.7
WVOR				pmax	pmax		
	comp=Z,17nm,1.0s						
MA2	Magadan	79.84	344	*i* P	P	08 16 52.5	+0.9
MA2				pmax	pmax		
	comp=Z,9.0nm,1.1s						
TUC	Tucson	80.16	52	P	P	08 16 55.1	+1.1
	baz=244						
WHN	Wuhan	80.24	306	P	P	08 16 55.4	+1.0
LON	Longmire	80.32	35	*e*P	P	08 16 54.4	-0.1
	comp=Z,3.8nm,0.7s						
LON	Longmire	80.32	35	*e*P	P	08 16 54.4	-0.1
LON				pmax	pmax		
	comp=Z,4.0nm,0.7s						
J08A	Circle Bar Ran	80.33	39	*e*P	P	08 16 55.3	+0.6
	comp=Z,24nm,1.3s						
SUA	Susitna One	80.41	13	*e*P	P	08 16 55.0	+0.2
	comp=Z,9.8nm,0.9s						
D05A	Enumclaw	80.48	35	*e*P	P	08 16 56.3	+1.1
	comp=Z,16nm,0.9s						
LCMT	Little Creek M	80.52	47	*e*P	P	08 16 55.6	-0.3
	comp=Z,8.2nm,1.0s						
BBB	Bella Bella	80.57	28	*e*P	P	08 16 55.6	0.0
	comp=Z,81nm,1.4s						
X16A	Lo Mia Camp, P	80.61	50	*e*P	P	08 16 57.4	+0.9
	comp=Z,12nm,0.8s						
CCUT	Cedar City	80.69	47	*e*P	P	08 16 58.1	+1.1
	comp=Z,11nm,1.0s						
CRAG	Craig	80.76	24	*e*P	P	08 16 58.4	+1.9
	comp=Z,23nm,1.4s						
KNB	Kanab	80.82	47	*e*P	P	08 16 58.4	+0.8
	comp=Z,9.0nm,0.8s						
PSUT	Pine Spring	80.83	45	*e*P	P	08 16 58.2	+0.7
	comp=Z,9.3nm,0.7s						
PMR	Palmer	80.88	13	*e*P	P	08 16 56.4	-0.6
	comp=Z,5.8nm,0.8s						
PMR	Palmer	80.88	13	*e*P	P	08 16 56.4	-0.6
PMR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
319A	Douglas	80.90	54	*e*P	P	08 16 59.5	+1.5
	comp=Z,55nm,0.8s						
SZCU	Shurtz Canyon	80.91	47	*e*P	P	08 16 59.1	+1.1
	comp=Z,17nm,1.2s						
U15A	North Rim	80.92	48	*e*P	P	08 16 59.1	+0.9
	comp=Z,18nm,0.9s						
A04D	Lummi Island	81.01	33	P	P	08 16 58.6	+0.6
	baz=233,SNR=6.1						
B05A	Bryant	81.06	34	P	P	08 16 58.8	+0.5
	baz=233,SNR=9.7						
GHO	Glory Hole Cre	81.08	13	*e*P	P	08 16 57.8	-0.4
	comp=Z,8.7nm,0.8s						
G08A	Pilot Rock	81.11	38	*e*P	P	08 16 59.4	+0.6
	comp=Z,31nm,1.4s						
WUAZ	Wupatki	81.16	49	P	P	08 16 59.7	+0.4
	baz=243						
WUAZ	Wupatki	81.16	49	*e*P	P	08 16 59.7	+0.4
	comp=Z,17nm,1.2s						
LTY	Liberty	81.25	35	*e*P	P	08 16 59.5	+0.1
	comp=Z,4.0nm,0.7s						
HAWA	Hanford	81.39	36	*e*P	P	08 17 00.8	+0.8
	comp=Z,17nm,0.9s						
PPLA	Purkeypile	81.42	11	*e*P	P	08 17 00.4	+0.4
	comp=Z,8.5nm,1.4s						
BMRM	Bremner River	81.42	16	*e*P	P	08 16 59.0	-0.9
	comp=Z,6.6nm,0.9s						
E08A	Dider Farm, El	81.72	37	*e*P	P	08 17 02.1	+0.4
	comp=Z,14nm,0.8s						
MTPU	Mount Pierson	81.75	47	*e*P	P	08 17 04.1	+1.5
	comp=Z,22nm,1.0s						
X18A	Snowflake	81.76	51	*e*P	P	08 17 03.4	+0.9
	comp=Z,12nm,0.8s						
TCRU	Three Creeks R	81.83	46	*e*P	P	08 17 04.3	+1.5
	comp=Z,21nm,0.9s						
BMO	Blue Mountains	81.85	39	*e*P	P	08 17 02.5	-0.1
BMO	Blue Mountains	81.85	39	*e*P	P	08 17 02.5	-0.1
CAST	Castle Rocks	81.92	11	*e*P	P	08 17 00.8	-1.6
	comp=Z,4.6nm,1.0s						
MSU	Marysvale	81.97	46	*e*P	P	08 17 04.8	+1.2
MFID	Camas Ranch	81.99	40	*e*P	P	08 17 03.6	+0.3
	comp=Z,22nm,1.1s						
HPIG		81.99	59	*e*P	P	08 17 03.9	0.0
	comp=Z,12nm,1.0s						
BALM	Baldy	82.08	17	*e*P	P	08 17 03.3	-0.1
	comp=Z,5.8nm,0.8s						
BALM	Baldy	82.08	17	*e*P	P	08 17 03.3	-0.1
BALM				pmax	pmax		
	comp=Z,6.0nm,0.8s						
D08A	Wollman Farm,	82.11	36	*e*P	P	08 17 04.1	+0.3
	comp=Z,12nm,0.8s						
W18A	Petrified Fore	82.17	50	P	P	08 17 05.0	+0.4
	baz=244						
W18A	Petrified Fore	82.17	50	*e*P	P	08 17 05.7	+1.1
	comp=Z,37nm,1.4s						
E09A	Wood Farm, Sta	82.25	37	*e*P	P	08 17 04.8	+0.3
	comp=Z,6.7nm,0.7s						
TRF	Thorofare Moun	82.29	12	*e*P	P	08 17 03.9	-0.6
	comp=Z,6.6nm,0.7s						
DUG	Dugway, Tooele	82.34	44	P	P	08 17 05.5	+0.3
	baz=241						
DUG	Dugway, Tooele	82.34	44	*e*P	P	08 17 05.8	+0.5
	comp=Z,15nm,1.1s						
DUG	Dugway, Tooele	82.34	44	*e*P	P	08 17 05.8	+0.5
DUG				pmax	pmax		
	comp=Z,15nm,1.1s						
SEY	Seymchan	82.37	347	*i* P	P	08 17 04.6	-0.1
F10A	Beach Ranch, E	82.50	38	*e*P	P	08 17 05.6	-0.2
	comp=Z,22nm,0.9s						
121A	Cookes Peak, D	82.54	53	P	P	08 17 07.3	+0.8
	baz=245,SNR=24						
BGU	Big Grassy Mou	82.54	44	*e*P	P	08 17 06.8	+0.5
	comp=Z,5.5nm,0.9s						
B08A	Colville Reser	82.62	35	*e*P	P	08 17 06.1	-0.2
	comp=Z,8.9nm,0.8s						
HLID	Hailey	82.95	41	P	P	08 17 08.8	+0.5
	baz=240						
HLID	Hailey	82.95	41	*e*P	P	08 17 09.0	+0.7
	comp=Z,24nm,0.8s						
TMUT	Trail Mountain	83.00	46	*e*P	P	08 17 09.8	+0.9
	comp=Z,37nm,0.7s						
ZAIG	Zacatecas	83.07	64	*e*P	P	08 17 11.1	+1.5
	comp=Z,36nm,1.4s						
HVU	Hansel Valley	83.12	43	*e*P	P	08 17 09.7	+0.5
	comp=Z,18nm,0.7s						
HVU	Hansel Valley	83.12	43	*e*P	P	08 17 09.7	+0.5
HVU				pmax	pmax		
	comp=Z,18nm,0.7s						
SRU	San Rafael Swe	83.39	46	*e*P	P	08 17 11.2	+0.5
	comp=Z,29nm,0.8s						
SRU	San Rafael Swe	83.39	46	*e*P	P	08 17 11.2	+0.5
SRU				pmax	pmax		
	comp=Z,29nm,0.8s						
JLU	Jordanelle	83.45	45	*e*P	P	08 17 11.4	+0.4
	comp=Z,15nm,0.8s						
MLY	Manley	83.63	11	*e*P	P	08 17 10.0	-1.1
	comp=Z,3.9nm,0.8s						
WRH	Wood River Hil	83.65	12	*e*P	P	08 17 10.3	-0.9
	comp=Z,17nm,1.3s						
TCUT	Toone Canyon	83.71	44	*e*P	P	08 17 13.0	+0.6
	comp=Z,50nm,0.8s						
LAZ	Ladron	83.81	52	*e*P	P	08 17 14.0	+1.1
P18A	Preston Nutter	83.82	46	*e*P	P	08 17 13.3	+0.3
	comp=Z,10nm,0.7s						
LENM	Lemitar	83.83	52	*e*P	P	08 17 13.6	+0.6
HWUT	Hardware Ranch	83.84	44	*e*P	P	08 17 12.7	-0.2
	comp=Z,6.7nm,0.8s						
CCB	Clear Creek Bu	83.86	12	*e*P	P	08 17 11.2	-1.0
	comp=Z,10.0nm,0.8s						
PV05	Paradox Valley	83.93	48	*e*P	P	08 17 15.1	+1.6
MVCO	Mesa Verde	83.98	49	P	P	08 17 14.0	+0.2
	baz=244						
MVCO	Mesa Verde	83.98	49	*e*P	P	08 17 14.2	+0.5
	comp=Z,4.8nm,0.9s						
MDM	Murphy Dome	84.05	12	*e*P	P	08 17 12.0	-1.2
	comp=Z,7.1nm,0.9s						
COLA	College	84.05	12	*e*P	P	08 17 12.5	-0.6
	comp=Z,15nm,0.7s						
COLA	College	84.05	12	*e*P	P	08 17 12.5	-0.6
COLA				pmax	pmax		
	comp=Z,15nm,0.7s						
MNTX	Cornudas Mount	84.07	55	P	P	08 17 14.8	+0.8
	baz=247,SNR=29						
MNTX	Cornudas Mount	84.07	55	*e*P	P	08 17 14.8	+0.8
	comp=Z,24nm,1.1s						
DLBC	Dease Lake	84.08	23	*e*P	P	08 17 13.7	+0.2
	comp=Z,6.1nm,1.0s						
PV09	Paradox Valley	84.09	47	*e*P	P	08 17 15.3	+1.0
PV10	Paradox Valley	84.11	47	*e*P	P	08 17 14.9	+0.5
IL1	Eielson Array	84.16	13	*e*P	P	08 17 13.0	-0.7
ILAR	Eielson Array	84.16	13	P	P	08 17 12.6	-1.1
	comp=Z,5.0nm,0.9s,baz=232,slow=6.1,SNR=51						
ILAR				PP	PP	08 20 32.1	-3.3
	comp=Z,3.3nm,1.1s,baz=227,slow=7.7,SNR=4.7						
ILB	Eielson Array	84.16	13	*e*P	P	08 17 12.9	-0.8
PV03	Paradox Valley	84.19	48	*e*P	P	08 17 15.1	+0.4
PV02	Paradox Valley	84.25	48	*e*P	P	08 17 15.5	+0.5
	comp=Z,10nm,0.9s						
PV01	Paradox Valley	84.33	48	*e*P	P	08 17 15.7	+0.2
PSI	Prapat	84.46	275	P	P	08 17 15.8	-0.7
	comp=Z,30nm,1.1s,baz=180,slow=6.1,SNR=7.2						
TX31	Lajitas Ar. Si	84.53	57	*e*P	P	08 17 17.9	+1.4
TXAR	Lajitas Array	84.53	57	P	P	08 17 17.8	+1.3
	comp=Z,30nm,0.8s,baz=222,slow=6.3,SNR=333						
TASM	ASL Pad, Albuq	84.54	51	P	P	08 17 16.9	+0.3
	baz=246,SNR=26						
ANMO	Albuquerque	84.54	51	P	P	08 17 16.9	+0.4
	comp=Z,12nm,0.9s,baz=218,slow=5.8,SNR=44						
ANMO	Albuquerque	84.54	51	P	P	08 17 16.9	+0.4
	baz=246						
ANMO	Albuquerque	84.54	51	*e*P	P	08 17 17.3	+0.8
	comp=Z,14nm,0.9s						
ANMO	Albuquerque	84.54	51	*ce*P	P	08 17 16.4	-0.1
ANMO				pmax	pmax		
	comp=Z,15nm,1.0s						
TASL	Snake Pit, Alb	84.54	51	P	P	08 17 16.9	+0.3
	baz=246,SNR=25						
MCMT	McKenzie Canyo	84.56	40	*e*P	P	08 17 17.4	+1.0
AHID	Auburn Hatcher	84.69	43	*e*P	P	08 17 17.1	+0.1
	comp=Z,11nm,1.1s						
RDOG	Red Dog Mine	84.80	6	*e*P	P	08 17 19.2	+2.4
	comp=Z,3.3nm,1.0s						
GYA	Guiyang	84.86	299	*e*P	P	08 17 19.0	+0.8
GYA				pP	pP	08 18 52.3	-0.8
GYA				PP	PP	08 20 44.4	+2.4
GYA				SKS	SKSac	08 27 01.3	-1.0
GYA				S	S	08 27 12.8	+1.6
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
MSO	Missoula	84.88	38	P	P	08 17 18.3	+0.5
	baz=240,SNR=6.5						
MSO	Missoula	84.88	38	*e*P	P	08 17 17.7	-0.1
	comp=Z,5.2nm,0.8s						
DLMT	Dillon	84.97	40	*e*P	P	08 17 19.0	+0.7
	comp=Z,24nm,0.8s						
PMSA	Palmer Station	85.00	157	*e*P	P	08 17 19.7	+1.7
	comp=Z,214nm,1.4s						
GDL2	Guadalupe Moun	85.06	55	*e*P	P	08 17 20.3	+1.3
TPAW	Teton Pass	85.12	42	*e*P	P	08 17 19.8	+0.6
	comp=Z,24nm,1.3s						
REDW	Red Top Meadow	85.12	42	*e*P	P	08 17 19.6	+0.3
	comp=Z,22nm,1.0s						
FXWY	Fox Creek	85.14	42	*e*P	P	08 17 19.6	+0.3
	comp=Z,11nm,0.9s						
TRTT	Trang	85.18	280	P	P	08 17 21.6	+1.8
SNOW	Snow King Moun	85.23	42	*e*P	P	08 17 20.6	+0.8
	comp=Z,24nm,1.0s						
LRM	Limekiln Ridge	85.28	40	*e*P	P	08 17 20.0	0.0
IMW	Indian Meadow	85.32	42	*e*P	P	08 17 20.8	+0.6
	comp=Z,22nm,0.9s						
GSI	Gunungsitoli	85.33	273	*e*P	P	08 17 21.8	+1.2
	comp=Z,87nm,0.7s						
DAWY	Dawson	85.35	16	*e*P	P	08 17 19.5	-0.1
	comp=Z,5.8nm,0.9s						
MOOW	Moose Ponds	85.37	42	*e*P	P	08 17 20.7	+0.3
	comp=Z,9.0nm,1.1s						
LOHW	Long Hollow	85.40	42	*e*P	P	08 17 20.9	+0.3
	comp=Z,7.2nm,0.8s						
S22A	4UR Ranch, Cre	85.42	49	P	P	08 17 21.3	+0.4
	baz=246,SNR=24						
S22A	4UR Ranch, Cre	85.42	49	*e*P	P	08 17 21.3	+0.4
	comp=Z,17nm,1.1s						
O20A	White River Ci	85.43	46	P	P	08 17 20.9	+0.1
	baz=244,SNR=7.9						
O20A	White River Ci	85.43	46	*e*P	P	08 17 20.9	+0.1
	comp=Z,9.3nm,0.8s						
QLMT	Earthquake Lak	85.44	41	*e*P	P	08 17 21.7	+0.9
EGAK	Eagle	85.48	15	*e*P	P	08 17 20.3	+0.2
	comp=Z,5.6nm,0.8s						
YHB	Horse Butte	85.55	41	*e*P	P	08 17 22.4	+1.1
	comp=Z,34nm,0.9s						
FLWY	Flagg Ranch	85.56	42	*e*P	P	08 17 22.2	+0.9
	comp=Z,18nm,0.8s						
MAW	Mawson	85.61	200	P	P	08 17 21.4	+0.5
	comp=Z,22nm,0.6s,baz=134,slow=5.6,SNR=118						
MAW	Mawson	85.61	200	*e*P	P	08 17 21.3	+0.4
	comp=Z,5.4nm,0.6s						
MAW	Mawson	85.61	200	*e*P	P	08 17 21.3	+0.4
MAW				pmax	pmax		
	comp=Z,5.0nm,0.6s						
YMR	Madison River	85.66	41	*e*P	P	08 17 23.0	+1.1
	comp=Z,25nm,0.7s						
BOZ	Bozeman (W)	85.68	40	P	P	08 17 22.3	+0.4
	baz=242,SNR=29						
BOZ	Bozeman (W)	85.68	40	*e*P	P	08 17 22.2	+0.4
	comp=Z,20nm,1.1s						
BOZ	Bozeman (W)	85.68	40	*e*P	P	08 17 22.2	+0.4
BOZ				pmax	pmax		
	comp=Z,20nm,1.1s						
BW06	Boulder Array	85.70	43	P	P	08 17 21.9	-0.1
	baz=243,SNR=14						
BW06	Boulder Array	85.70	43	*e*P	P	08 17 22.0	-0.1
	comp=Z,19nm,1.4s						
PD31	Pinedale Array	85.70	43	*e*P	P	08 17 21.8	-0.4
PDAR	Pinedale Array	85.70	43	P	P	08 17 21.6	-0.4
	comp=Z,5.5nm,0.7s,baz=212,slow=3.4,SNR=56						
PDAR	Pinedale Array	85.70	43	*e*P	P	08 17 21.9	-0.1
H17A	Grant Village	85.78	41	P	P	08 17 23.5	+1.1
	baz=242,SNR=12						
H17A	Grant Village	85.78	41	*e*P	P	08 17 24.2	+1.7
	comp=Z,19nm,0.8s						
SMCO	Snowmass	85.91	47	*e*P	P	08 17 23.5	+0.1
	comp=Z,5.5nm,0.6s						
WALA	Waterton Lakes	86.02	36	*e*P	P	08 17 23.5	+0.1
	comp=Z,15nm,0.9s						
HRY	Holter Researc	86.09	39	*e*P	P	08 17 24.6	+0.8
SDCO	Great Sand Dun	86.38	49	P	P	08 17 25.5	0.0
	baz=246,SNR=15						
SDCO	Great Sand Dun	86.38	49	*e*P	P	08 17 25.8	+0.3
	comp=Z,6.2nm,0.9s						
LNIG	Linares	86.47	63	*e*P	P	08 17 26.2	+0.3
	comp=Z,46nm,0.8s						
HHC	Hu-ho-hao-te	86.66	314	*e*P	P	08 17 25.0	-1.5
HHC				pP	pP	08 18 56.6	-5.3
HHC				SKS	SKSac	08 27 10.4	-2.4
HHC				S	S	08 27 24.4	-3.4
HHC				pmax	pmax		
	comp=Z,20nm,1.0s						
HHC				pmax	pmax		
	comp=Z,170nm,7.5s						
T25A	Trinidad	86.93	50	P	P	08 17 28.1	0.0
	baz=247,SNR=7.6						
T25A	Trinidad	86.93	50	*e*P	P	08 17 28.0	0.0
	comp=Z,5.7nm,0.9s						
RLMT	Red Lodge	86.94	41	P	P	08 17 28.5	+0.5
	baz=243,SNR=22						
MSTX	Muleshoe	86.97	53	P	P	08 17 28.2	+0.1
	baz=248						
Q24A	Divide	87.12	48	P	P	08 17 29.2	+0.2
	baz=246,SNR=5.5						
ISCO	Idaho Springs	87.12	47	P	P	08 17 29.3	+0.3
	baz=246						
ISCO	Idaho Springs	87.12	47	*e*P	P	08 17 28.8	-0.2
	comp=Z,2.0nm,0.8s						
ISCO	Idaho Springs	87.12	47	*e*P	P	08 17 28.8	-0.2
ISCO				pmax	pmax		
	comp=Z,2.0nm,0.8s						
N23A	Red Feather La	87.33	46	P	P	08 17 30.2	+0.3
	baz=246,SNR=5.9						
K22A	Casper	87.66	44	P	P	08 17 31.4	+0.1
	baz=245						
K22A	Casper	87.66	44	*e*P	P	08 17 31.5	+0.1
	comp=Z,6.1nm,0.9s						
833A	Chaparral WMA,	87.68	60	P	P	08 17 31.9	+0.4
	baz=250						
833A	Chaparral WMA,	87.68	60	*e*P	P	08 17 32.9	+1.4
	comp=Z,25nm,0.8s						
KMI	Kunming	87.74	297	P	P	08 17 33.8	+1.7
KMI				pmax	pmax		
	comp=Z,19nm,0.8s						
EGMT	Eagleton	87.95	38	P	P	08 17 32.6	+0.2
	baz=243						
EGMT	Eagleton	87.95	38	*e*P	P	08 17 32.9	+0.4
	comp=Z,4.1nm,0.8s						
JCT	Junction City	88.08	58	P	P	08 17 33.5	+0.1
	baz=250						
JCT	Junction City	88.08	58	*e*P	P	08 17 33.2	-0.2
	comp=Z,12nm,0.9s						
JCT	Junction City	88.08	58	*e*P	P	08 17 33.2	-0.2
JCT				pmax	pmax		
	comp=Z,12nm,0.9s						
AMTX	Amarillo	88.14	53	P	P	08 17 33.8	+0.1
	baz=249						
AMTX	Amarillo	88.14	53	*e*P	P	08 17 33.4	-0.2
	comp=Z,14nm,0.9s						
CD2	Chengdu	88.80	303	*e*P	P	08 17 37.0	+0.2
ABTX	Abilene, Hawle	88.94	56	P	P	08 17 37.5	+0.2
	baz=250						
ABTX	Abilene, Hawle	88.94	56	*e*P	P	08 17 37.6	+0.3
	comp=Z,36nm,1.2s						
KSCO	Kaye Shedlock’	88.95	49	P	P	08 17 37.6	+0.2
	baz=248						
CMAR	Chiang Mai Arr	89.02	289	P	P	08 17 39.0	+1.1
	comp=Z,3.7nm,0.8s,baz=103,slow=3.1,SNR=15						
CMAR				PKKPbc	PKKPbc	08 35 14.8	+0.9
	comp=Z,1.3nm,0.5s,baz=282,slow=5.4,SNR=4.7						
CMAI	Chiengmai2	89.36	291	P	P	08 17 41.2	+1.4
CMAI	Chiengmai2	89.36	291	P	P	08 17 41.2	+1.4
LAO	LASA Array	89.53	41	P	P	08 17 40.6	+0.8
	baz=246						
LAO	LASA Array	89.53	41	*e*P	P	08 17 41.1	+1.3
	comp=Z,16nm,0.8s						
RSSD	Black Hills	89.91	44	P	P	08 17 41.7	-0.1
	baz=247						
RSSD	Black Hills	89.91	44	*e*P	P	08 17 42.0	+0.1
	comp=Z,25nm,1.1s						
RSSD	Black Hills	89.91	44	*e*P	P	08 17 42.0	+0.1
RSSD				pmax	pmax		
	comp=Z,25nm,1.1s						
435B	Jarrell	89.98	58	P	P	08 17 42.9	+0.8
	baz=251						
INK	Inuvik	90.15	15	P	P	08 17 41.3	-0.7
	comp=Z,2.1nm,0.8s,baz=305,slow=3.2,SNR=8.1						
INK	Inuvik	90.15	15	*e*P	P	08 17 42.0	0.0
	comp=Z,5.1nm,1.3s						
INK	Inuvik	90.15	15	*e*P	P	08 17 42.0	0.0
INK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
WMOK	Wichita Mounta	90.33	54	P	P	08 17 43.8	+0.1
	baz=250						
WHTX	Lake Whitney,	90.47	57	P	P	08 17 44.6	+0.2
	baz=251						
WHTX	Lake Whitney,	90.47	57	*e*P	P	08 17 45.1	+0.6
	comp=Z,11nm,0.8s						
LZH	Lanzhou	90.48	307	⇑P	P	08 17 45.0	+0.4
LZH				pP	pP	08 19 19.3	-1.3
LZH				sP	sP	08 20 00.3	-3.4
LZH				PP	PP	08 21 29.5	+3.1
LZH				pmax	pmax		
	comp=Z,18nm,1.4s						
LZH				pmax	pmax		
	comp=Z,86nm,9.3s						
SYO	Syowa Base	90.88	193	⇑*e*P	P	08 17 44.0	-1.6
CBKS	Cedar Bluff	90.98	50	P	P	08 17 47.5	+0.9
	baz=250						
HKT	Hockley	91.15	59	*e*P	P	08 17 48.6	+1.1
	comp=Z,32nm,1.4s						
HKT	Hockley	91.15	59	*e*P	P	08 17 48.6	+1.1
HKT				pmax	pmax		
	comp=Z,32nm,1.4s						
DGMT	Dagmar	91.50	40	P	P	08 17 49.6	+0.7
	baz=247,SNR=13						
DGMT	Dagmar	91.50	40	*e*P	P	08 17 49.7	+0.9
	comp=Z,43nm,0.8s						
PLCA	Paso Flores	91.92	133	P	P	08 17 52.2	+1.0
	comp=Z,13nm,1.0s,baz=256,slow=5.0,SNR=11						
SNAA	Sanae	92.18	178	P	P	08 17 51.5	-0.2
SNAA	Sanae	92.18	178	*e*P	P	08 17 51.8	+0.1
	comp=Z,30nm,0.8s						
SNAA	Sanae	92.18	178	*d i*P	P	08 17 51.2	-0.5
VNA3	Neumayer Olymp	92.30	176	P	P	08 17 52.1	-0.1
ULN	Ulaanbaatar	92.40	319	*e*P	P	08 17 53.3	+0.1
	comp=Z,3.0nm,0.8s						
ULN	Ulaanbaatar	92.40	319	*ce*P	P	08 17 52.4	-0.8
ULN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
YKA	Yellowknife Ar	92.58	24	P	P	08 17 52.8	-0.6
	comp=Z,4.2nm,0.6s,baz=242,slow=4.4,SNR=23						
YKA				PKKPbc	PKKPdf	08 35 03.6	-0.6
	comp=Z,0.5nm,0.5s,baz=22,slow=1.8,SNR=4.5						
YKW3	Yellowknife Ar	92.61	24	*e*P	P	08 17 53.0	-0.5
	comp=Z,4.4nm,0.6s						
NATX	Nacogdoches	92.66	58	P	P	08 17 55.2	+0.7
	baz=253,SNR=7.1						
NATX	Nacogdoches	92.66	58	*e*P	P	08 17 55.5	+1.0
	comp=Z,40nm,0.8s						
SONM	Songino Array	92.80	319	P	P	08 17 54.5	-0.5
	comp=Z,0.6nm,0.5s,baz=145,slow=5.4,SNR=5.0						
SONM				PP	PP	08 21 43.1	-1.1
	comp=Z,0.9nm,0.8s,baz=116,slow=6.8,SNR=4.3						
NVL	N’lazarevskaya	92.91	183	⇑*i*P	P	08 17 55.2	+0.3
NVL				pmax	pmax		
	comp=Z,17nm,0.7s						
VNA1	Neumayer--Stat	92.97	176	P	P	08 17 55.4	+0.2
BGNE	Belgrade	93.00	48	P	P	08 17 56.4	+0.5
	baz=251						
TUL1	Leonard	93.02	54	P	P	08 17 56.3	+0.2
	baz=252						
TUL1	Leonard	93.02	54	*e*P	P	08 17 56.5	+0.4
	comp=Z,16nm,0.9s						
KSU1	Kansas State U	93.38	50	P	P	08 17 58.2	+0.6
	baz=252						
KSU1	Kansas State U	93.38	50	*e*P	P	08 17 58.0	+0.3
	comp=Z,25nm,0.8s						
341A	Kurthwood	93.75	59	P	P	08 17 59.7	+0.1
	baz=253						
140A	Cam and Jess,	93.80	57	P	P	08 18 00.0	+0.3
	baz=253						
X39A	Fountain Ranch	93.91	55	P	P	08 18 00.1	-0.1
	baz=253,SNR=5.5						
241A	Mo Tay, Goldon	94.15	58	P	P	08 18 02.0	+0.6
	baz=254						
MIAR	Mount Ida	94.34	55	P	P	08 18 02.3	+0.2
	baz=253,SNR=6.0						
MIAR	Mount Ida	94.34	55	*e*P	P	08 18 02.4	+0.2
	comp=Z,5.1nm,0.8s						
MIAR	Mount Ida	94.34	55	*e*P	P	08 18 02.4	+0.2

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MIAR                                 pmax     pmax
       comp=Z,5.0nm,0.8s
W39A   Magazine          94.37  55    P       P         08 18 02.3 +0.1
       baz=253
W39A   Magazine          94.37  55   eP       P         08 18 02.8 +0.6
       comp=Z,4.9nm,0.7s
EFI    East Falkland     94.43 147   eP       P         08 18 03.1 +0.8
       comp=Z,76nm,1.2s
EFI    East Falkland     94.43 147   eP       P         08 18 03.1 +0.8
EFI                                  pmax     pmax
       comp=Z,76nm,1.2s
Y40A   Okolona           94.43  56    P       P         08 18 03.1 +0.6
       baz=253,SNR=5.2
H32A   Carlson Farm,     94.48  45    P       P         08 18 02.1  -0.5
       baz=252,SNR=9.1
T38A   Diamond           94.50  53    P       P         08 18 03.1 +0.3
       baz=253,SNR=9.5
GTA    Gaotai            94.56 310   eP       P         08 17 57.9  -5.3
GTA                                  pP       PcP       08 18 03.8 +0.4
GTA                                  sP       sP        08 18 06.9 -136
GTA                                  pmax     pmax
       comp=Z,3.0nm,1.0s
HHAR   Hobbs             94.56  54   eP       P         08 18 03.1   0.0
       comp=Z,4.8nm,0.8s
Z41A   Richland Creek    94.60  57    P       P         08 18 03.4 +0.1
       baz=254,SNR=5.0
Z41A   Richland Creek    94.60  57   eP       P         08 18 04.1 +0.7
       comp=Z,19nm,0.7s
V39A   Pettigrew         94.66  54    P       P         08 18 03.8 +0.2
       baz=253
G32A   Webster           94.68  44    P       P         08 18 02.9  -0.6
       baz=252,SNR=5.5
G32A   Webster           94.68  44   eP       P         08 18 02.9  -0.6
       comp=Z,15nm,0.8s
PEL    Peldehue          94.79 126   eP       P         08 18 05.9 +1.4
       comp=Z,13nm,1.0s
PEL    Peldehue          94.79 126   eP       P         08 18 05.9 +1.4
PEL                                  pmax     pmax
       comp=Z,13nm,1.0s
ECSD   EROS Data Cent    94.81  46    P       P         08 18 03.4  -0.6
       baz=252,SNR=12
ECSD   EROS Data Cent    94.81  46   eP       P         08 18 03.5  -0.6
X40A   Basin Creek Fa    94.92  56    P       P         08 18 04.6  -0.2
       baz=254
Q37A   Longview Farm,    94.92  51    P       P         08 18 04.8 +0.1
       baz=253
Y41A   Eaglette Beard    94.92  56    P       P         08 18 05.1 +0.3
       baz=254
W40A   Ferguson Farm,    94.93  55    P       P         08 18 04.5  -0.3
       baz=254
W40A   Ferguson Farm,    94.93  55   eP       P         08 18 05.6 +0.8
       comp=Z,9.5nm,0.8s
U39A   Green Forest      94.94  54    P       P         08 18 04.5  -0.4
       baz=254,SNR=7.5
S38A   Stockton          94.97  52    P       P         08 18 04.8  -0.2
       baz=253,SNR=6.3
N36A   Muff Farm, Cla    95.11  49    P       P         08 18 05.8 +0.2
       baz=253,SNR=8.4
R38A   Fenwick Farm,     95.13  52    P       P         08 18 05.7   0.0
       baz=253,SNR=22
X41A   Kaden, Bauxite    95.17  56    P       P         08 18 06.0 +0.1
       baz=254,SNR=13
P37A   Lathrop           95.20  50    P       P         08 18 05.9  -0.1
       baz=253,SNR=12
T39A   Clever            95.20  53    P       P         08 18 05.9  -0.2
       baz=254,SNR=7.8
V40A   Witts Springs     95.29  54    P       P         08 18 06.3  -0.2
       baz=254,SNR=15
V40A   Witts Springs     95.29  54   eP       P         08 18 06.8 +0.3
       comp=Z,14nm,0.7s
G33A   Ortonville        95.37  45    P       P         08 18 06.1  -0.4
       baz=252,SNR=6.6
M36A   Felix, Anita      95.41  49    P       P         08 18 06.9   0.0
       baz=253
U40A   Yellville         95.42  54    P       P         08 18 06.8  -0.3
       baz=254,SNR=7.3
S39A   Bolivar           95.43  52    P       P         08 18 07.3 +0.2
       baz=254,SNR=8.7
S39A   Bolivar           95.43  52   eP       P         08 18 07.2 +0.2
       comp=Z,14nm,1.1s
O37A   Wolven Farm, M    95.51  50    P       P         08 18 07.3   0.0
       baz=253
Q38A   Cooks Store, C    95.56  51    P       P         08 18 07.4  -0.2
       baz=254,SNR=6.2
W41B   Gary Mavity, V    95.57  55    P       P         08 18 07.7   0.0
       baz=254,SNR=10
W41B   Gary Mavity, V    95.57  55   eP       P         08 18 08.1 +0.4
       comp=Z,11nm,0.9s
Y42A   Garnett, Star     95.57  57    P       P         08 18 07.6  -0.1
       baz=254
N37A   Lee Faris, Mou    95.64  49    P       P         08 18 07.9   0.0
       baz=254
L36A   Harm Buss Farm    95.69  48    P       P         08 18 08.2 +0.1
       baz=253
V41A   Mountainview      95.81  55    P       P         08 18 08.5  -0.3
       baz=254,SNR=5.3
P38A   Dawn              95.81  51    P       P         08 18 08.7  -0.1
       baz=254
R39A   Chumby, Stover    95.82  52    P       P         08 18 08.7  -0.1
       baz=254,SNR=23
M37A   Trindle Farm,     95.93  49    P       P         08 18 09.4 +0.2
       baz=254,SNR=11
O38A   Galt              96.00  50    P       P         08 18 09.6   0.0
       baz=254,SNR=5.5
S40A   Lebanon           96.03  53    P       P         08 18 09.6  -0.1
       baz=254,SNR=5.1
Q39A   Willow Grove F    96.07  51    P       P         08 18 10.0 +0.1
       baz=254,SNR=6.2
U41A   Viola             96.14  54    P       P         08 18 10.2  -0.1
       baz=254,SNR=14
W42A   Bald Knob         96.17  55    P       P         08 18 10.7 +0.3
       baz=254
J36A   Seneca 1, Swea    96.27  47    P       P         08 18 10.5  -0.2
       baz=254
J36A   Seneca 1, Swea    96.27  47   eP       P         08 18 10.9 +0.2
       comp=Z,25nm,1.4s
Y43A   Makayla and Ka    96.28  57    P       P         08 18 11.1 +0.2
       baz=255
L37A   Phoenix Point,    96.35  48    P       P         08 18 11.4 +0.3
       baz=254
P39B   Salisbury         96.35  51    P       P         08 18 11.0  -0.2
       baz=254,SNR=5.5
R40A   Maddies Statio    96.40  52    P       P         08 18 11.3  -0.1
       baz=254,SNR=5.2
R40A   Maddies Statio    96.40  52   eP       P         08 18 12.1 +0.7
       comp=Z,20nm,1.5s
V42A   Cord              96.41  55    P       P         08 18 11.1  -0.4
       baz=255,SNR=6.2
T41A   Mountain View     96.45  53    P       P         08 18 11.7   0.0
       baz=255,SNR=15
M38A   Pleasantville     96.55  49    P       P         08 18 12.2 +0.1
       baz=254,SNR=13
C33A   Trail             96.57  42    P       P         08 18 11.1  -0.8
       baz=253
E34A   Wadena            96.61  44    P       P         08 18 11.6  -0.6
       baz=253
K37A   Belmond           96.61  48    P       P         08 18 12.1  -0.1
       baz=254,SNR=7.0
S41A   Jillco Farms,     96.61  53    P       P         08 18 12.3  -0.1
       baz=255,SNR=11
U42A   Revenden          96.67  54    P       P         08 18 12.4  -0.2
       baz=255
I36A   Fitzsimmons Fa    96.69  46    P       P         08 18 12.9 +0.3
       baz=254
G35A   Watkins           96.70  45    P       P         08 18 12.5  -0.1
       baz=254
G35A   Watkins           96.70  45   eP       P         08 18 12.7 +0.1
       comp=Z,8.8nm,0.7s
Q40A   Laux Farm, Aux    96.73  51    P       P         08 18 12.6  -0.3
       baz=255
F35A   Swanville         96.82  44    P       P         08 18 13.0  -0.1
       baz=254,SNR=6.0
P40A   Paris             96.89  51    P       P         08 18 13.5  -0.1
       baz=255,SNR=5.6
P40A   Paris             96.89  51   eP       P         08 18 13.7 +0.1
       comp=Z,10nm,0.8s
N39A   Derby Farms, D    96.91  50    P       P         08 18 13.7   0.0
       baz=255
L38A   Oak Wood Farm,    96.92  48    P       P         08 18 13.7 +0.1
       baz=254
T42A   Van Buren         96.96  54    P       P         08 18 14.1 +0.2
       baz=255
C34A   RKJ Ranch, Bem    97.10  43    P       P         08 18 13.4  -0.9
       baz=254
I37A   Lemond, Waseca    97.11  46    P       Pdif      08 18 14.6 +0.1
       baz=254
A33A   Warroad           97.15  41    P       P         08 18 14.0  -0.5
       baz=254
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O40A   La Belle          97.18  50    P       Pdif      08 18 15.2 +0.4
       baz=255,SNR=6.0
M39A   Webster           97.31  49    P       Pdif      08 18 15.7 +0.3
       baz=255
Q41A   Truxton           97.35  52    P       P         08 18 15.5  -0.2
       baz=255
B34A   Aery, Baudette    97.50  42    P       P         08 18 15.1  -1.0
       baz=254
F36A   Milaca            97.52  45    P       Pdif      08 18 16.5 +0.2
       baz=254
F36A   Milaca            97.52  45   eP       P         08 18 16.1  -0.2
       comp=Z,4.7nm,0.8s
T43A   Greenville        97.60  54    P       Pdif      08 18 17.1 +0.3
       baz=255
L39A   Vinton            97.60  48    P       Pdif      08 18 17.1 +0.3
       baz=255
P41A   Barry, Barry      97.67  51    P       Pdif      08 18 17.3 +0.2
       baz=255,SNR=10.0
M40A   Post Highland     97.77  49    P       Pdif      08 18 17.6 +0.1
       baz=255
SPMN   Marine on St.     97.84  45    P       Pdif      08 18 17.8 +0.1
       baz=255
I38A   Scanlan Farm,     97.86  47    P       P         08 18 17.6  -0.2
       baz=255
O41A   Passleys Farm,    97.91  51    P       Pdif      08 18 18.2 +0.1
       baz=256,SNR=13
Y46A   Houston           97.94  57    P       Pdif      08 18 18.6 +0.2
       baz=256
D36A   Goodland          98.11  43    P       P         08 18 18.4  -0.5
       baz=255
D36A   Goodland          98.11  43   eP       P         08 18 18.4  -0.5
       comp=Z,7.6nm,0.8s
J39A   Decorah           98.12  47    P       Pdif      08 18 19.0   0.0
       baz=255
L40A   Anamosa           98.15  49    P       Pdif      08 18 19.8 +0.7
       baz=256
L40A   Anamosa           98.15  49   eP       Pdif      08 18 20.0 +0.9
       comp=Z,11nm,0.9s
P42A   Winchester        98.18  51    P       Pdif      08 18 19.7 +0.3
       baz=256,SNR=5.9
P42A   Winchester        98.18  51   eP       Pdif      08 18 19.9 +0.5
       comp=Z,14nm,0.8s
F38A   Pierce - Schro    98.66  45    P       Pdif      08 18 21.2  -0.1
       baz=256
P43A   Skaggs, Pawnee    98.81  51    P       P         08 18 22.7 +0.6
       baz=256
J40A   Soldiers Grove    98.82  47    P       Pdif      08 18 21.8  -0.3
       baz=256
K41A   Shullsburg        98.94  48    P       P         08 18 22.9 +0.2
       baz=256
JFWS   Jewell Farm       99.05  48    P       Pdif      08 18 23.4 +0.3
       baz=256
O43A   Sugar Creek Fa    99.12  51    P       Pdif      08 18 23.7 +0.3
       baz=256
W47A   Westpoint         99.28  56    P       Pdif      08 18 24.8 +0.4
       baz=257
J41A   Loganville        99.33  48    P       Pdif      08 18 24.4 +0.1
       baz=256
H40A   Chili             99.36  46    P       Pdif      08 18 24.0  -0.4
       baz=256
K42A   Prairie Point,    99.67  48    P       Pdif      08 18 26.1 +0.2
       baz=257
J42A   Columbus          99.95  48    P       Pdif      08 18 27.2 +0.1
       baz=257
W50A   Signal Mountai   101.09  56    P       Pdif      08 18 32.2  -0.3
       baz=258,SNR=5.3
ZALV   Zalesovo Beam    107.41 322    PKiKP   PKiKP     08 23 04.5  -1.5
       comp=Z,3.5nm,0.6s,baz=168,slow=1.4,SNR=13
MKAR   Makanchi Array   108.52 314    PKiKP   PKiKP     08 23 07.5  -0.9
       comp=Z,3.8nm,0.7s,baz=77,slow=1.0,SNR=31
MKAR                                  PKKPbc  PKKPbc    08 34 19.6  -1.0
       comp=Z,3.0nm,0.7s,baz=271,slow=3.4,SNR=20
MKAR                                  PKKPab  PKKPab    08 34 33.2 +0.2
       comp=Z,0.7nm,0.7s,baz=289,slow=3.7,SNR=3.9
KURK   Kurchatov        111.10 319   eP       PKiKP     08 23 11.9  -1.2
KURK                                  PKKPbc  PKKPbc    08 34 11.7  -0.8
KURK   Kurchatov        111.10 319   ePKIKP   PKiKP     08 23 11.9  -1.2
KURBB  Kurchatov Arra   111.16 318    PKiKP   PKiKP     08 23 12.4  -0.7
       comp=Z,4.6nm,0.7s,baz=103,slow=1.6,SNR=48
KURBB                                 PKKPbc  PKKPbc    08 34 11.7  -0.7
       comp=Z,3.9nm,0.9s,baz=269,slow=3.7,SNR=25
KSH    Kashi            112.70 306   ePKP     PKiKP     08 23 17.3 +0.6
KSH                                   PP      PP        08 24 18.0 +6.2
HUMP   Col San Antoni   115.19  77   ePKPdf   PKPdf     08 23 20.9  -1.0
BVAR   Borovoye Array   116.04 321    PKP     PKPdf     08 23 21.7  -0.8
       comp=Z,4.7nm,0.5s,baz=101,slow=1.5,SNR=37
STVI   Saint Thomas     116.07  77   ePKPdf   PKPdf     08 23 23.0  -0.5
BRVK   Borovoye         116.10 321   ePKPdf   PKPdf     08 23 22.6   0.0
BRVK   Borovoye         116.10 321   ePKIKP   PKPdf     08 23 22.6   0.0
PTGA   Pitinga          116.28  99   ePKPdf   PKPdf     08 23 23.9  -0.3
KK31   Karatay Array    116.83 310   ePKPdf   PKPdf     08 23 23.8  -0.6
KK31   Karatay Array    116.83 310   ePKIKP   PKPdf     08 23 23.8  -0.6
KKAR   Karatay Array    116.83 310   ePKPdf   PKPdf     08 23 23.8  -0.6
KKAR   Karatay Array    116.83 310   ePKIKP   PKPdf     08 23 23.8  -0.6
KBS    Kingsbay         117.17 358   ePKPdf   PKPdf     08 23 24.0   0.0
KBS    Kingsbay         117.17 358   ePKIKP   PKPdf     08 23 24.0   0.0
SPA0   Spitsbergen Ar   117.71 357   ePKPdf   PKPdf     08 23 24.6  -0.5
SPITS  Spitsbergen Ar   117.71 357    PKP     PKPdf     08 23 24.1  -1.0
       comp=Z,14nm,0.9s,baz=66,slow=4.9,SNR=7.8
KBL    Kabul            118.09 301   ePKPdf   PKPdf     08 23 27.6 +0.3
KBL    Kabul            118.09 301   ePKIKP   PKPdf     08 23 27.6 +0.3
FDF    Fort de France   119.03  82   ePKPdf   PKPdf     08 23 29.1  -0.3
FDF    Fort de France   119.03  82   ePKIKP   PKPdf     08 23 29.1  -0.3
BDFB   Brasilia         121.04 120   ePKPdf   PKPdf     08 23 33.1  -0.3
BDFB   Brasilia         121.04 120   ePKIKP   PKPdf     08 23 33.1  -0.3
ARU    Arti             121.90 327   ePKPdf   PKPdf     08 23 33.3  -0.3
ARU    Arti             121.90 327   i PKIKP  PKPdf     08 23 33.0  -0.7
ARU                                                     08 25 09.3
ARU                                                     08 30 05.7
ABPO   Ambohimpanom     123.60 233   ePKPdf   PKPdf     08 23 39.2 +0.9
OPO    Ambohidratompo123.89 234       PKP     PKPdf     08 23 39.2 +0.4
       comp=Z,10.0nm,0.7s,baz=101,slow=9.3,SNR=10
AKTO   Aktyubinsk       124.10 320    PKP     PKPdf     08 23 37.7  -0.4
       comp=Z,9.2nm,0.8s,baz=28,slow=2.4,SNR=18
KEV    Kevo             124.41 350   ePKPdf   PKPdf     08 23 37.9  -0.2
KEV    Kevo             124.41 350   ePKIKP   PKPdf     08 23 37.9  -0.2
ARCES  ARCESS Array B   124.86 350    PKP     PKPdf     08 23 38.5  -0.5
       comp=Z,19nm,0.7s,baz=11,slow=1.5,SNR=50
ARCES                                 PKKPbc  PKKPab    08 33 20.2  -0.6
       comp=Z,8.7nm,0.8s,baz=230,slow=3.0,SNR=19
PRGR   Permogore        125.36 336   ePKIKP   PKPdf     08 23 38.9  -1.2
PRGR                                  pmax    pmax
       comp=Z,12nm,0.6s
GEYT   Alibeck          126.71 305    PKP     PKPdf     08 23 43.1  -0.5
       comp=Z,3.3nm,0.3s,baz=262,slow=7.3,SNR=5.5
KLMR   Klimovskoe       128.15 338   ePKIKP   PKPdf     08 23 44.1  -1.4
KLMR                                  pmax    pmax
       comp=Z,20nm,1.0s
KLMR   Klimovskoe       128.15 338   ePKPdf   PKPdf     08 23 44.1  -1.4
KLMR                                  AMP               08 23 45.8
       comp=Z,20nm,1.0s
UOSS   Minazif          129.12 289   ePKPdf   PKPdf     08 23 48.0  -0.4
BOSA   Boshof           130.15 207    PKP     PKPdf     08 23 50.2  -0.4
       comp=Z,8.8nm,0.7s,baz=185,slow=2.1,SNR=12
BOSA   Boshof           130.15 207   ePKPdf   PKPdf     08 23 51.7 +1.1
FIA1   FINESS Array S   131.83 345   ePKPdf   PKPdf     08 23 53.0 +0.5
FINES  FINESS Array B   131.83 345    PKhKP   PKPpre    08 23 42.4
       comp=Z,1.1nm,0.7s,baz=25,slow=5.0,SNR=4.4
FINES                                 PKP     PKPdf     08 23 52.1  -0.4
       comp=Z,8.0nm,0.6s,baz=25,slow=5.0,SNR=19
FINES                                 SKPbc   SKPbc     08 26 40.8 +2.2
       comp=Z,8.5nm,0.7s,baz=43,slow=3.6,SNR=16
LBTB   Lobatse          133.10 209   ePKPdf   PKPdf     08 23 57.3 +1.1
LBTB   Lobatse          133.10 209   ePKIKP   PKPdf     08 23 57.3 +1.1
VRH    Novokhopyorsk    133.13 327   ePKIKP   PKPdf     08 23 53.9  -1.3
VRH                                   pmax    pmax
       comp=Z,20nm,0.7s
OBN    Obninsk          133.19 334c iPKIKP   PKPdf     08 23 55.7 +0.5
OBN                                  e                  08 25 33.3
OBN                                  e                  08 26 23.4
OBN                                   pmax    pmax
       comp=Z,10.0nm,0.5s
VSR    Storozhevoye     134.44 328   ePKIKP   PKPdf     08 23 56.7  -1.0
VSR                                   pmax    pmax
       comp=Z,10.0nm,0.8s
VORD   Divnogorie       134.53 328   ePKIKP   PKPdf     08 23 56.7  -1.1
VORD                                  pmax    pmax
       comp=Z,8.0nm,0.8s
NC303  NORSAR Array S 134.66 354     ePKPdf   PKPdf     08 23 58.8 +1.0
NB2    NORSAR Subarra134.86 354       PKP     PKPdf     08 23 57.4  -0.8
       comp=Z,4.4nm,0.7s,baz=12,slow=4.0
HFS    Hagfors          135.45 352    PKP     PKPdf     08 23 58.7  -0.5
       comp=Z,6.0nm,0.8s,baz=162,slow=0.5,SNR=8.4
HFS                                   SKPbc   SKPab     08 26 51.8  -3.8
       comp=Z,5.8nm,0.8s,baz=82,slow=3.1,SNR=8.7
ZEI    Tsey             135.86 315   i PKIKP  PKPdf     08 23 59.7  -1.2
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KBZ    Khabaz             136.13 317    PKP      PKPdf     08 24 00.8  -0.2
       comp=Z,2.2nm,0.8s,baz=277,slow=1.5,SNR=5.0
KBZ                                     SKPbc    SKiKP     08 26 55.2  -3.3
       comp=Z,2.8nm,0.7s,baz=204,slow=1.3,SNR=4.8
KIV    Kislovodsk         136.17 318⇓iPKIKP    PKPdf     08 24 00.8  -0.5
KIV                                    e                   08 26 48.6
KIV                                     pmax     pmax
       comp=Z,11nm,1.3s
NEY    Neytrino           136.46 317c iPKIKP   PKPdf     08 24 02.6 +0.7
RAYN   Ar Rayn            138.90 287   ePKPdf    PKPdf     08 24 07.8 +1.0
AKASG  Malin Array Be     139.45 334    PKP      PKPdf     08 24 04.6  -2.3
       comp=Z,8.0nm,0.8s,baz=36,slow=2.5,SNR=8.6
AKASG                                   SKPbc    SKiKP     08 27 04.4  -0.7
       comp=Z,2.9nm,0.6s,baz=41,slow=3.0,SNR=4.8
AKBB   Malin Array Si     139.45 334   ePKPpre   PKPpre    08 24 00.5
KIEV   Kiev               139.46 334   ePKPpre   PKPpre    08 24 00.4
KIEV   Kiev               139.46 334   i PKIKP   PKPdf     08 24 06.6  -0.3
AK11   Malin Array Si     139.49 334   ePKPdf    PKPdf     08 24 09.1 +2.1
EKA    Eskdalemuir Ar     140.81   5    PKhKP    PKPpre    08 24 02.6
       comp=Z,1.5nm,0.6s,baz=349,slow=2.5,SNR=7.6
EKA                                     PKP      PKPdf     08 24 09.8 +0.5
       comp=Z,2.2nm,0.5s,baz=347,slow=1.8,SNR=11
TSUM   Tsumeb             141.67 204   ePKPpre   PKPpre    08 24 08.4
SORM   Soroca             141.73 332⇓iP        PKPdf     08 24 11.9 +0.8
SORM   Soroca             141.73 332  ⇓PKIKP    PKPdf     08 24 12.0 +0.8
KWP    Kalwaria Pacla     142.87 338   ePKP      PKPdf     08 24 10.6  -2.5
KWP    Kalwaria Pacla     142.87 338   ePKIKP    PKPdf     08 24 10.6  -2.5
OJC    Ojcow              143.34 341   ePKP      PKPab     08 24 11.5  -0.1
OJC    Ojcow              143.34 341   ePKPpre   PKPbc     08 24 11.7  -0.1
OJC    Ojcow              143.34 341   ePKIKP    PKPbc     08 24 11.7  -0.1
ILGA   Ilgaz              143.37 319   ePKPdf    PKPdf     08 24 13.7  -0.9
BUR04  Bucovina Ar. S     143.51 334   ePKPdf    PKPdf     08 24 13.4  -1.0
BURAR  Bucovina Array     143.51 334⇓iP        PKPbc     08 24 13.1 +0.5
BURAR  Bucovina Array     143.51 334  ⇓PKIKP    PKPbc     08 24 13.1 +0.5
TLCR                      143.61 328⇓iP        PKPbc     08 24 12.8   0.0
TLCR                      143.61 328  ⇓PKIKP    PKPbc     08 24 12.8   0.0
BIZ    Bicaz              143.64 332⇑iP        PKPbc     08 24 13.3 +0.4
TESR   Tescani            143.71 331⇓iP        PKPab     08 24 12.9  -0.2
KSP    Ksiaz              143.76 345   ePKP      PKPbc     08 24 13.2 +0.1
KSP    Ksiaz              143.76 345   ePKIKP    PKPbc     08 24 13.2 +0.1
UZH    Uzhgorod           143.85 337   ePKHKP    PKPpre    08 24 10.4
UZH                                    i                   08 24 13.8
NIE    Niedzica           143.88 340   ePKPdf    PKPbc     08 24 13.8 +0.2
NIE    Niedzica           143.88 340⇓ePKIKP    PKPbc     08 24 13.8 +0.2
CRVS   Cervenica-Dubn     143.92 338   ePKIKP    PKPab     08 24 13.5  -0.3
CRVS   Cervenica-Dubn     143.92 338   ePKP      PKPab     08 24 13.5  -0.3
CFR    Carcaliu           143.96 328⇓iP        PKPab     08 24 14.0   0.0
CFR    Carcaliu           143.96 328  ⇓PKIKP    PKPab     08 24 14.0   0.0
CLL    Collm              144.04 349   ePKPpre   PKPpre    08 24 12.0
CLL                                 ⇓iPKPdf    PKPbc     08 24 13.2  -0.8
       comp=Z,14nm,0.6s
CLL                                    i PKiKP   PKiKP     08 24 18.3  -0.5
       comp=Z,11nm,0.7s
CLL                                    i SKPbc   SKiKP     08 27 17.2 +2.7
       comp=Z,9.0nm,1.0s
CLL    Collm              144.04 349   ePKPbc    PKPab     08 24 14.0  -0.1
CLL    Collm              144.04 349⇓ePKHKP    PKPpre    08 24 12.0
CLL                                    i                   08 24 13.2
CLL                                     pmax     pmax
       comp=Z,14nm,0.6s
BR131  Keskin Array S     144.13 317   ePKPbc    PKPdf     08 24 15.3  -0.5
BRTR   Keskin Array B     144.13 317    PKP      PKPab     08 24 15.1 +0.1
       comp=Z,61nm,0.8s,baz=96,slow=2.5,SNR=204
BRTR                                    SKPbc    SKPbc     08 27 17.1 +2.6
       comp=Z,2.0nm,0.8s,baz=169,slow=2.9,SNR=4.0
UPC    Upice              144.13 345   ePKP      PKPdf     08 24 14.8  -0.5
UPC    Upice              144.13 345   ePKIKP    PKPdf     08 24 14.8  -0.5
VRI    Vrincioaia         144.15 330⇓iP        PKPbc     08 24 14.4  -0.2
VRI    Vrincioaia         144.15 330  ⇓PKIKP    PKPbc     08 24 14.4  -0.2
BMR    Baia Mare          144.17 335⇓iP        PKPab     08 24 14.5  -0.2
BMR    Baia Mare          144.17 335  ⇓PKIKP    PKPab     08 24 14.5  -0.2
OKC    Ostrava-Krasne     144.17 342   ePKP      PKPab     08 24 14.6   0.0
OKC    Ostrava-Krasne     144.17 342   ePKIKP    PKPab     08 24 14.6   0.0
TRPA   Tarpa              144.17 337⇓iP        PKPbc     08 24 14.3  -0.2
TRPA   Tarpa              144.17 337⇓ex        PKPab     08 24 14.7 +0.1
DPC    Dobruska-Polom     144.20 345   ePKP      PKPdf     08 24 15.0  -0.5
DPC    Dobruska-Polom     144.20 345   ePKIKP    PKPdf     08 24 15.0  -0.5
PLOR   Plostina           144.20 331⇑iP        PKPbc     08 24 14.6  -0.2
PLOR   Plostina           144.20 331  ⇑PKIKP    PKPbc     08 24 14.6  -0.2
WTSB   Winterswijk        144.23 355   ePKP      PKPbc     08 24 14.3  -0.3
BRG    Berggiesshubel     144.27 347   i PKP     PKPbc     08 24 14.5  -0.3
       comp=Z,13nm,1.0s
BRG                                    i                   08 24 19.4
       comp=Z,7.6nm,0.6s
BRG                                    epPKP     pPKPdf    08 25 58.0 +0.7
       comp=Z,8.3nm,1.5s
BRG                                    eSKP                08 27 17.6
       comp=Z,9.2nm,1.3s
BRG    Berggiesshubel     144.27 347   i PKIKP   PKPbc     08 24 14.5  -0.3
BRG                                     pmax     pmax
       comp=Z,13nm,1.0s
BRG                                     pmax     pmax
       comp=N,9.0nm,1.3s
ARCR   ARCALIA            144.29 334⇑iP        PKPdf     08 24 15.4  -0.3
TIRR   Tirgusor           144.32 327⇑iP        PKPab     08 24 15.2  -0.1
TIRR   Tirgusor           144.32 327   ePKPbc    PKPab     08 24 15.3   0.0
TIRR   Tirgusor           144.32 327  ⇑PKIKP    PKPab     08 24 15.2  -0.1
KRLC   Kraliky            144.33 344   ePKP      PKPdf     08 24 15.5  -0.2
KRLC   Kraliky            144.33 344   ePKIKP    PKPdf     08 24 15.5  -0.2
LANS   Liptovska Anna     144.38 341   ePKIKP    PKPdf     08 24 16.1 +0.3
LANS   Liptovska Anna     144.38 341   ePKP      PKPdf     08 24 16.1 +0.3
MORC   Moravsky Berou     144.40 343⇓iP        PKPab     08 24 15.3  -0.2
MORC   Moravsky Berou     144.40 343   ePKPbc    PKPab     08 24 15.3  -0.2
MORC   Moravsky Berou     144.40 343   ePKIKP    PKPab     08 24 15.3  -0.2
MORC   Moravsky Berou     144.40 343   ePKP      PKPab     08 24 15.4  -0.1
HARR   Harsova            144.41 328⇑iP        PKPdf     08 24 15.9   0.0
HARR   Harsova            144.41 328  ⇑PKIKP    PKPdf     08 24 15.9   0.0
TLB    Topalu             144.43 328⇑iP        PKPdf     08 24 15.8  -0.1
TLB    Topalu             144.43 328  ⇑PKIKP    PKPdf     08 24 15.8  -0.1
PVCC   Panska Ves         144.46 347   ePKP      PKPdf     08 24 15.8   0.0
PVCC   Panska Ves         144.46 347   ePKIKP    PKPdf     08 24 15.8   0.0
ANTO   Ankara             144.60 318⇑iP        PKPab     08 24 16.6  -0.1
ANTO   Ankara             144.60 318   ePKPbc    PKPab     08 24 16.7   0.0
ANTO   Ankara             144.60 318  ⇑PKIKP    PKPab     08 24 16.6   0.0
KECS   Kecovo             144.62 339   ePKIKP    PKPab     08 24 16.2  -0.1
KECS   Kecovo             144.62 339   ePKP      PKPab     08 24 16.2  -0.1
DOPR   Dopca              144.70 332⇓iP        PKPab     08 24 17.1 +0.4
ISR    Istrita            144.79 330⇓iP        PKPab     08 24 17.1  -0.1
ISR    Istrita            144.79 330  ⇓PKIKP    PKPab     08 24 17.1  -0.1
MLR    Muntele Rosu       144.80 331    PKP      PKPdf     08 24 16.4  -0.3
       comp=N,11nm,0.7s,baz=37,slow=1.8,SNR=65
MLR    Muntele Rosu       144.80 331⇓iP        PKPdf     08 24 16.5  -0.3
MLR    Muntele Rosu       144.80 331   ePKPbc    PKPbc     08 24 16.6  -0.2
MLR    Muntele Rosu       144.80 331   ePKIKP    PKPbc     08 24 16.6  -0.3
CJR    Cluj-Napoca        144.90 334⇓iP        PKPab     08 24 17.2  -0.3
CJR    Cluj-Napoca        144.90 334  ⇓PKIKP    PKPab     08 24 17.2  -0.3
ASF    Jabal al Asfar     144.93 303    PKP      PKPbc     08 24 17.5  -0.1
       comp=N,19nm,0.8s,baz=19,slow=2.6,SNR=40
PRU    Pruhonice          144.97 346   ePKP      PKPbc     08 24 16.7  -0.3
PRU    Pruhonice          144.97 346   ePKIKP    PKPbc     08 24 16.7  -0.3
GOPC   GO Pecny, Ondr     144.98 346   ePKP      PKPbc     08 24 17.2 +0.1
GOPC   GO Pecny, Ondr     144.98 346   ePKIKP    PKPbc     08 24 17.2 +0.1
LTVH   Lˆ'tavˆ'rtes,      145.03 337⇓ex        PKPab     08 24 19.0 +1.1
VRAC   Vranov             145.08 344⇑iP        PKPbc     08 24 17.2  -0.3
VRAC   Vranov             145.08 344  ⇑PKIKP    PKPbc     08 24 17.2  -0.3
VRAC   Vranov             145.08 344   ePKP      PKPab     08 24 17.6  -0.5
VYHS   Vyhne              145.15 341   ePKP2     PKPab     08 24 17.9  -0.5
VYHS   Vyhne              145.15 341   ePKP      PKPab     08 24 17.9  -0.5
NKC    Novy Kostel        145.17 349   ePKP      PKPab     08 24 18.1  -0.3
NKC    Novy Kostel        145.17 349   ePKP2     PKPab     08 24 18.1  -0.3
JAVC   Velka Javorina     145.19 342   ePKP      PKPab     08 24 19.1 +0.6
DRGR                      145.20 335⇑iP        PKPdf     08 24 17.4 +0.1
DRGR                      145.20 335  ⇑PKIKP    PKPdf     08 24 17.4 +0.1
VOIR                      145.26 332⇑iP        PKPbc     08 24 18.3 +0.1
VOIR                      145.26 332  ⇑PKP2     PKPbc     08 24 18.3 +0.1
PSZ    Piszkesteto        145.31 339⇑iP        PKPbc     08 24 17.9  -0.4
PSZ    Piszkesteto        145.31 339⇓ex        PKPbc     08 24 18.5 +0.2
PSZ    Piszkesteto        145.31 339  ⇑PKP2     PKPbc     08 24 17.9  -0.4
KRUC   Moravsky           145.36 344   ePKP      PKPbc     08 24 18.4 +0.1
HGN    Heimansgroeve      145.49 356   ePKP      PKPbc     08 24 18.6   0.0
MEM    Membach            145.64 356  ⇓PKP      PKPdf     08 24 17.3  -0.5
MODS   Modra-Piesok       145.74 342   ePKP2     PKPab     08 24 19.9  -0.7
MODS   Modra-Piesok       145.74 342   ePKP      PKPab     08 24 19.9  -0.7
MMAI   Mount Meron Ar     145.83 305    PKPbc    PKPab     08 24 20.8  -0.8
       comp=N,65nm,0.7s,baz=72,slow=5.0,SNR=71
SNF    Seneffe            145.83 358  ⇑PKP      PKPbc     08 24 19.7 +0.1
BCLA   Clavier            145.88 357  ⇓PKP      PKPbc     08 24 19.2  -0.5
GRFO   Grafenberg         145.92 350   ePKPdf    PKPbc     08 24 20.2 +0.3
BUD    Budapest           145.98 340⇓ex        PKPab     08 24 20.3  -1.2
KHC    Kasperske Hory     145.99 347   ePKP      PKPdf     08 24 18.7 +0.1
KHC    Kasperske Hory     145.99 347   ePKPdf    PKPdf     08 24 18.6   0.0
KHC                                    ePKPbc    PKPab     08 24 20.8  -0.9
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KHC	Kasperske Hory	145.99	347	ePKIKP	PKPdf	08 24 18.6	0.0
KHC				e		08 24 20.8	
GEC2	GERESS Array S	146.23	346	ePKPdf	PKPbc	08 24 20.8	-0.1
GERES	GERESS Array B	146.23	346	PKPbc	PKPbc	08 24 20.4	-0.5
	comp=N,13nm,0.6s,baz=48,slow=2.0,SNR=40						
DOU	Dourbes	146.23	357	⇓PKP	PKPbc	08 24 20.6	-0.2
DOU				⇑APKP	pPKPab	08 25 57.4	-3.3
GEA0	GERESS Array S	146.24	346	ePKPbc	PKPbc	08 24 21.1	+0.2
CSKK	Csˆ‡kako	146.33	340	⇓ex	PKPbc	08 24 21.2	+0.1
SZH	Strazhica	146.44	328	i P	PKPbc	08 24 21.6	0.0
ZIMR		146.44	329	⇑iP	PKPbc	08 24 21.9	+0.4
ZIMR		146.44	329	PKP2	PKPbc	08 24 21.9	+0.4
CONA	Conrad Observa	146.54	343	i PKPab	PKPbc	08 24 22.1	+0.3
	comp=N,30nm,0.7s,SNR=19						
WLF	Walferdange	146.57	355	⇑PKP	PKPbc	08 24 22.1	+0.4
WLF				⇑APKP	pPKPdf	08 26 01.6	+0.3
WLF	Walferdange	146.57	355	ePKPdf	PKPdf	08 24 19.8	+0.3
WLF				ePKPbc	PKPbc	08 24 22.5	+0.8
WLF	Walferdange	146.57	355	ePKIKP	PKPdf	08 24 19.8	+0.3
WLF				e		08 24 22.5	
BZS	Buzias	146.60	335	⇓iP	PKPbc	08 24 21.7	-0.2
BZS	Buzias	146.60	335	⇓PKP2	PKPbc	08 24 21.7	-0.2
CSS	Mathiatis	146.63	310	ePKPbc	PKPbc	08 24 22.2	-0.2
CSS	Mathiatis	146.63	310	P	PKPbc	08 24 22.1	-0.3
SRE	Strehaia	146.69	332	⇓iP	PKPbc	08 24 22.5	+0.3
SRE	Strehaia	146.69	332	⇓PKP2	PKPbc	08 24 22.5	+0.3
HERR	Herculane	146.86	333	⇓iP	PKPbc	08 24 22.1	-0.6
MOA	Molln	147.03	345	i PKPbc	PKPbc	08 24 23.0	-0.1
	comp=N,31nm,0.9s,SNR=16						
STU	Stuttgart	147.13	352	ePKPbc	PKPbc	08 24 23.4	+0.1
STU	Stuttgart	147.13	352	ePKP2	PKPbc	08 24 23.4	+0.1
ISP	Isparta	147.20	316	⇓iP	PKPbc	08 24 23.0	-1.0
ISP	Isparta	147.20	316	ePKPbc	PKPbc	08 24 23.5	-0.5
ISP	Isparta	147.20	316c	iPKIKP	PKPbc	08 24 22.6	-1.4
ISP				pmax	pmax		
	comp=Z,18nm,0.6s						
MDVR	Moldovita	147.24	334	⇑iP	PKPbc	08 24 23.3	-0.5
ARSA	Arzberg	147.26	343	i PKPbc	PKPbc	08 24 23.3	-0.4
	comp=Z,18nm,1.0s,SNR=6.1						
MBAR	Mbarara	147.33	242	ePKPbc	PKPbc	08 24 25.7	+0.7
BEHE	Becsehely	147.60	341	⇓ex	PKPbc	08 24 24.6	0.0
PGB	Panagyurishte	147.84	329	i P	PKPbc	08 24 26.8	+1.4
KDZ	Kurdzhali	147.85	326	i P	PKPbc	08 24 25.8	+0.4
SOKA	Soboth	147.91	343	i PKPbc	PKPbc	08 24 24.9	-0.6
	comp=Z,21nm,0.9s,SNR=8.4						
ECH	Echery	147.92	354	ePKPbc	PKPbc	08 24 25.6	+0.2
PERS	Pernice	147.93	343	i P	PKPbc	08 24 24.7	-0.8
KBA	Koelnbreinsper	147.97	346	i PKPbc	PKPbc	08 24 24.9	-0.9
	comp=Z,19nm,0.6s,SNR=8.6						
ALN	Alexandroupoli	148.04	325	ePKPbc	PKPbc	08 24 25.3	-0.6
ALN	Alexandroupoli	148.04	325	P	PKPbc	08 24 25.2	-0.7
MANT	Manisa	148.09	319	ePKPbc	PKPbc	08 24 26.3	-0.1
WATA	Walderalm	148.12	348	i PKiKP	PKiKP	08 24 26.6	-0.9
	comp=Z,10.0nm,0.5s,SNR=10						
RETA	Reutte	148.12	349	i PKPbc	PKPbc	08 24 25.8	-0.2
	comp=Z,12nm,0.6s,SNR=5.3						
RDO	Rodhopi	148.14	326	P	PKPbc	08 24 24.7	-1.4
RDO	Rodhopi	148.14	326	P	PKPbc	08 24 24.7	-1.4
WTTA	Wattenberg	148.17	348	i PKPbc	PKPbc	08 24 26.1	-0.2
	comp=Z,33nm,0.7s,SNR=9.6						
MOTA	Moosalm	148.20	349	i PKiKP	PKiKP	08 24 26.8	-0.8
	comp=Z,22nm,0.9s,SNR=7.6						
OBKA	Obir	148.20	344	i PKPbc	PKPbc	08 24 25.3	-0.9
	comp=Z,9.3nm,0.8s						
VTS	Vitosha	148.28	330	⇓iP	PKPbc	08 24 26.6	-0.1
VTS	Vitosha	148.28	330	ePKPbc	PKPbc	08 24 26.7	+0.1
VTS	Vitosha	148.28	330	i P	PKPbc	08 24 27.5	+0.8
VTS	Vitosha	148.28	330	P	PKPbc	08 24 26.6	-0.1
VTS	Vitosha	148.28	330	⇓PKP2	PKPbc	08 24 26.6	-0.1
MYKA	Terra Mystica	148.32	345	i PKPbc	PKPbc	08 24 25.6	-1.0
	comp=Z,22nm,0.6s,SNR=8.3						
DAVA	Damuels	148.47	350	i PKPbc	PKPbc	08 24 26.8	-0.2
	comp=Z,31nm,0.8s,SNR=8.9						
ABTA	Abfaltersbach	148.48	347	i PKPdf	PKPdf	08 24 21.8	-1.0
	comp=Z,14nm,1.1s,SNR=20						
ABTA				i PKPbc	PKPbc	08 24 26.1	-0.9
	comp=Z,37nm,0.6s						
PDKS	Podkum	148.49	343	i P	PKPbc	08 24 26.4	-0.5
DIVS	Divibare	148.50	335	ePKPbc	PKPbc	08 24 27.1	0.0
FETA	Feichten	148.58	349	i PKPdf	PKPdf	08 24 22.7	-0.4
	comp=Z,10nm,0.8s,SNR=14						
FETA				i PKPbc	PKPbc	08 24 27.2	-0.1
	comp=Z,43nm,1.5s						
SMTH	Samothraki Isl	148.61	325	P	PKPbc	08 24 25.9	-1.5
SMTH	Samothraki Isl	148.61	325	P	PKPbc	08 24 25.9	-1.5
LJU	Ljubljana	148.64	344	i P	PKPbc	08 24 27.0	-0.2
KSL	Kastellorizon	148.73	314	P	PKPbc	08 24 27.2	-0.6
FETY	Fethiye	148.81	316	P	PKPbc	08 24 27.7	-0.3
NVR	Nevrokopi	148.88	328	P	PKPbc	08 24 27.6	-0.5
NVR	Nevrokopi	148.88	328	P	PKPbc	08 24 27.6	-0.5
BOJS	Bojanci	148.93	342	i P	PKPbc	08 24 28.0	0.0
DAVOX	Davos/Dischmat	148.96	350	PKPbc	PKPbc	08 24 28.6	+0.3
	comp=Z,56nm,0.6s,baz=315,slow=1.4,SNR=71						
BLY	Banja Luka	148.99	339	⇓iP	PKPbc	08 24 28.1	-0.1
BLY	Banja Luka	148.99	339	ePKPbc	PKPbc	08 24 28.9	+0.8
YER	Yerkesik	149.06	317	P	PKPbc	08 24 28.6	-0.1
TRI	Trieste	149.15	344	ePKPbc	PKPbc	08 24 28.6	+0.2
SRS	Serrai	149.19	328	P	PKPbc	08 24 27.5	-1.3
SRS	Serrai	149.19	328	P	PKPbc	08 24 27.5	-1.3
LIA	Limnos Island	149.20	324	P	PKPbc	08 24 28.0	-0.8
LIA	Limnos Island	149.20	324	P	PKPbc	08 24 28.0	-0.8
TUE	Stuetta	149.35	350	ePKPdf	PKPdf	08 24 24.6	+0.2
TUE				ePKPbc	PKPbc	08 24 29.4	+0.2
PLE	Pljevlja	149.38	335	⇓iPKP	PKPbc	08 24 29.3	0.0
STIP	Stip	149.46	330	i PKP	PKPbc	08 24 27.6	-1.8
OUR	Ouranopolis	149.55	326	P	PKPdf	08 24 26.3	+1.7
OUR	Ouranopolis	149.55	326	P	PKPdf	08 24 26.3	+1.7
VAY	Valandovo	149.55	329	i PKP	PKPbc	08 24 28.4	-1.2
IVA	Berane	149.56	334	⇓iPKP	PKPbc	08 24 29.2	-0.5
SKO	Skopje	149.59	331	i PKP	PKPbc	08 24 29.4	-0.4
SMG	Samos	149.64	319	P	PKPbc	08 24 29.3	-0.7
UDBI	Udbina	149.65	341	P	PKPbc	08 24 29.3	-0.5
UPM	Unac-Piva	149.69	336	⇓iPKP	PKPbc	08 24 29.2	-0.9
CHOS	Chios island	149.70	321	P	PKPbc	08 24 29.8	-0.4
KOME	Kolasin	149.73	334	⇓iPKP	PKPbc	08 24 29.8	-0.3
SENIN	Lac Senin/Sane	149.73	353	ePKPbc	PKPbc	08 24 30.6	+0.4
PVY	Plav	149.75	334	⇓iPKP	PKPbc	08 24 29.6	-0.7
NKY	Niksic	149.98	335	⇓iPKP	PKPbc	08 24 30.4	-0.3
NKME	Niksic	150.03	335	⇓iPKP	PKPbc	08 24 30.3	-0.5
BRY	Bratogost	150.08	336	⇓iPKP	PKPbc	08 24 30.3	-0.7
KRUS	Krusevo	150.15	331	⇓iPKP	PKPbc	08 24 30.5	-0.7
PDG	Podgorica	150.19	334	⇑iP	PKPbc	08 24 30.7	-0.4
TTG	Podgorica	150.19	334	⇓iPKP	PKPbc	08 24 30.7	-0.4
TTG	Podgorica	150.19	334	ePKPdf	PKPdf	08 24 23.8	-1.7
TTG				ePKPbc	PKPbc	08 24 30.9	-0.2
TTG	Podgorica	150.19	334	ePKIKP	PKPdf	08 24 23.8	-1.7
CEME	Cevo	150.23	335	⇓iPKP	PKPbc	08 24 30.4	-0.9
PHP	Peshkopia	150.28	332	P	PKPbc	08 24 30.8	-0.6
BIA	Bitola	150.39	330	i PKP	PKPbc	08 24 31.8	+0.1
DRME	Dracevica, Mon	150.42	334	⇓iPKP	PKPbc	08 24 31.1	-0.6
STON	Ston	150.43	337	P	PKPbc	08 24 30.7	-0.9
BUM	Brajici-Budva	150.44	335	⇓iPKP	PKPbc	08 24 31.1	-0.7
HCY	Herceg Novi	150.48	335	⇓iPKP	PKPbc	08 24 31.0	-0.8
LIT	Litokhoron	150.51	328	ePKPdf	PKPdf	08 24 26.5	+0.3
LIT				ePKPbc	PKPbc	08 24 31.3	-0.7
LIT	Litokhoron	150.51	328	P	PKPbc	08 24 30.8	-1.2
LIT	Litokhoron	150.51	328	ePKIKP	PKPdf	08 24 26.5	+0.3
FNA	Florina	150.55	330	ePKPbc	PKPbc	08 24 31.6	-0.5
FNA	Florina	150.55	330	P	PKPbc	08 24 31.4	-0.7
FNA	Florina	150.55	330	ePKIKP	PKPbc	08 24 31.6	-0.5
OHR	Ohrid	150.57	331	⇓iPKP	PKPbc	08 24 31.5	-0.6
ULC	Ulcinj	150.57	334	⇓iPKP	PKPbc	08 24 31.2	-0.9
XOR	Xorichti	150.67	326	P	PKPbc	08 24 31.1	-1.3
XOR	Xorichti	150.67	326	P	PKPbc	08 24 31.1	-1.3
KARP	Karpathos	150.71	316	ePKPbc	PKPbc	08 24 32.6	0.0
KARP	Karpathos	150.71	316	P	PKPbc	08 24 32.2	-0.4
APE	Apeiranthos	150.85	320	⇓iP	PKPbc	08 24 31.7	-1.2
APE	Apeiranthos	150.85	320	⇓PKIKP	PKPbc	08 24 31.7	-1.2
NEST	Nestorio	150.99	330	P	PKPbc	08 24 32.8	-0.4
BNI	Bardonecchia	151.10	354	ePKPbc	PKPbc	08 24 34.0	+0.7
KPRO	Kipourio	151.19	329	P	PKPbc	08 24 33.2	-0.4
PTL	Penteli	151.21	323	P	PKPbc	08 24 32.1	-1.6
LKR	Lokris	151.28	325	P	PKPbc	08 24 32.6	-1.1
ATHU	Athens Univers	151.31	323	P	PKPbc	08 24 32.6	-1.3
SANT	Santorini	151.34	319	⇓iP	PKPbc	08 24 32.4	-1.6
SANT	Santorini	151.34	319	ePKPbc	PKPbc	08 24 32.9	-1.1
AGG	Agios Georgios	151.38	326	ePKPbc	PKPbc	08 24 33.3	-0.7
AGG	Agios Georgios	151.38	326	P	PKPbc	08 24 32.8	-1.2
AGG	Agios Georgios	151.38	326	ePKIKP	PKPbc	08 24 33.3	-0.7
VLC	Villacollemand	151.40	348	ePKPbc	PKPbc	08 24 33.7	-0.1
VILL	Villia	151.45	324	P	PKPbc	08 24 32.8	-1.4
DSF	Desfina	151.71	325	P	PKPbc	08 24 33.5	-1.3
DSF	Desfina	151.71	325	P	PKPbc	08 24 33.5	-1.3
EVR	Evrytania	151.74	327	P	PKPbc	08 24 34.7	-0.2
LTK	Loutraki	151.74	324	P	PKPbc	08 24 33.5	-1.3
ANX	Ano Chora	151.91	326	P	PKPbc	08 24 35.1	-0.2
DSL	Palaion Diasel	151.94	328	P	PKPbc	08 24 35.0	-0.3
DSL	Palaion Diasel	151.94	328	P	PKPbc	08 24 35.0	-0.3
DID	Didima	151.95	323	P	PKPbc	08 24 33.8	-1.5
SERG	Sergoula	151.97	326	P	PKPbc	08 24 34.9	-0.5
TRIZ	Trizonia	152.00	326	P	PKPbc	08 24 34.9	-0.4
EFP	Efpalio	152.04	326	P	PKPbc	08 24 35.5	+0.1
LAST	Lasithi	152.05	317	P	PKPbc	08 24 35.7	0.0
KEK	Kerkira	152.14	330	P	PKPbc	08 24 35.2	-0.4
LAKA	Lakka	152.14	326	P	PKPbc	08 24 35.7	0.0
LAKA	Lakka	152.14	326	P	PKPbc	08 24 35.7	0.0
GUR	Goura	152.15	325	P	PKPbc	08 24 35.2	-0.7
GUR	Goura	152.15	325	P	PKPbc	08 24 35.2	-0.7
KLV	Kalavryta, Ach	152.18	325	P	PKPbc	08 24 35.4	-0.5
KLV	Kalavryta, Ach	152.18	325	P	PKPbc	08 24 35.4	-0.5
PDO	Prodromos	152.30	327	P	PKPbc	08 24 35.5	-0.5
AQU	L’Aquila	152.35	342	ePKPbc	PKPbc	08 24 36.7	+0.6
IDI	Anoyia	152.36	317	PKPbc	PKPbc	08 24 35.8	-0.5
	comp=Z,18nm,0.4s,baz=27,slow=2.3,SNR=36						
IDI	Anoyia	152.36	317	⇑iP	PKPbc	08 24 35.3	-1.1
IDI	Anoyia	152.36	317	ePKPbc	PKPbc	08 24 36.1	-0.3
MATE	Matera	152.72	336	⇑iP	PKPbc	08 24 36.3	-0.5
VAM	Vamos	152.73	318	P	PKPbc	08 24 37.1	0.0
PGAV	Gavieira, Arco	152.84	17	ePKPdf	PKPdf	08 24 29.4	-0.3
PGAV	Gavieira, Arco	152.84	17	ePKPbc	PKPbc	08 24 37.4	+0.2
ITM	Ithomi	152.92	324	ePKPbc	PKPbc	08 24 37.1	-0.4
PCAB	Cabril	153.14	17	ePKPbc	PKPbc	08 24 38.0	+0.2
PBRG	Braganca	153.40	15	ePKPab	PKPab	08 24 52.4	0.0
POLO	Lamas de Olo	153.52	17	ePKPdf	PKPdf	08 24 31.3	+0.6
POLO	Lamas de Olo	153.52	17	ePKPbc	PKPbc	08 24 38.7	0.0
POLO	Lamas de Olo	153.52	17	ePKPab	PKPab	08 24 53.0	0.0
MVO	Moncorvo	153.93	16	ePKPdf	PKPdf	08 24 32.0	+0.8
MVO	Moncorvo	153.93	16	ePKPbc	PKPbc	08 24 39.6	0.0
TIP	Timpagrande	153.94	334	ePKPbc	PKPbc	08 24 39.5	-0.1
MTE	Manteigas	154.49	18	ePKPdf	PKPdf	08 24 32.4	+0.4
PCAS	Casmilo, Conde	154.52	20	ePKPdf	PKPdf	08 24 32.3	+0.3
PTOM	Tomar	154.94	20	ePKPdf	PKPdf	08 24 33.2	+0.6
PTOM	Tomar	154.94	20	ePKPab	PKPab	08 24 59.0	0.0
PCBR	Castelo Branco	155.03	18	ePKPdf	PKPdf	08 24 33.0	+0.3
PMRV	Marv??o	155.43	18	ePKPdf	PKPdf	08 24 33.9	+0.6
PMRV	Marv??o	155.43	18	ePKPab	PKPab	08 25 01.0	-0.1
ESDC	Sonseca Array	156.06	12	PKP	PKPdf	08 24 33.5	-0.6
	comp=Z,0.9nm,0.7s,baz=360,slow=2.7,SNR=6.3						
PAB	San Pablo	156.11	13	ePKPdf	PKPdf	08 24 35.3	+1.1
PAB	San Pablo	156.11	13	ePKIKP	PKPdf	08 24 35.3	+1.1
MESJ	Messejana	156.60	21	ePKPdf	PKPdf	08 24 35.8	+1.0
MDT	Midelt	162.39	20	PKP	PKPdf	08 24 41.7	0.0
	comp=Z,9.7nm,0.9s,baz=77,slow=0.9,SNR=12						
MDT				PKPab	PKPab	08 25 31.9	+0.2
	comp=Z,3.0nm,0.8s,baz=340,slow=7.2,SNR=3.2						
LIC	Lamto	167.66	143	ePKIKP	PKPdf	08 24 45.0	-1.5
	comp=Z,70nm,0.8s						
KIC	Kosan Boka	167.94	144	ePKIKP	PKPdf	08 24 44.8	-1.9
	comp=Z,49nm,0.9s						
TIC	Toumodi	168.01	142	ePKIKP	PKPdf	08 24 45.1	-1.6
DBIC	Dimbokro	168.12	143	PKP	PKPdf	08 24 46.0	-0.7
	comp=Z,11nm,0.8s,baz=118,slow=1.0,SNR=10						
DBIC				PKPab	PKPab	08 25 57.0	-0.4
	comp=Z,3.8nm,0.7s,baz=182,slow=6.0,SNR=3.6						
KOWA	Kowa	173.62	105	PKP	PKPdf	08 24 48.5	-1.0
	comp=Z,10nm,0.9s,baz=266,slow=0.9,SNR=18						
KOWA				PKPab	PKPab	08 26 20.3	-1.7
	comp=Z,10nm,0.7s,baz=284,slow=4.9,SNR=18						
KOWA	Kowa	173.62	105	ePKPdf	PKPdf	08 24 48.5	-1.0
KOWA				ePKPab	PKPab	08 26 22.0	0.0
TOA0	Torodi Ar. Sit	176.81	169	ePKPdf	PKPdf	08 24 49.8	-0.6
TORD	Torodi Ar. Bea	176.81	169	PKP	PKPdf	08 24 48.3	-2.2
	comp=Z,9.2nm,0.8s,baz=334,slow=2.3						
TORD				PKPab	PKPab	08 26 35.4	-0.3
	baz=180,slow=3.7						

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*CSEM **14** 08:21:28.8±0.3, 50°.34N×19°.00E, h1^{km}, Error ellipse: s-maj=14.7km s-min=3.3km az=179.0*

PRU 14 08:21:29.9, 50°.23N×19°.03E, h0^{km}, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHZP	Chorzow	0.07	338	ePg	Pg	08 21 32.2	+1.1
CHZP				eSg	Sg	08 21 34.2	+2.1
OJC	Ojcow	0.49	91	ePg	Pg	08 21 39.0	-0.3
OJC				eSg	Sg	08 21 45.6	-0.2
OJC	Ojcow	0.49	91	ePg	Pg	08 21 39.0	-0.3
OJC				eSg	Sg	08 21 45.6	-0.1
MORC	Moravsky Berou	1.06	245	ePg	Pg	08 21 50.4	+0.2
MORC				eSg	Sg	08 22 04.2	+0.2
MORC	Moravsky Berou	1.06	245	ePG	Pg	08 21 50.4	+0.2
MORC				eSG	Sg	08 22 04.2	+0.2
KRLC	Kraliky	1.45	265	ePG	Pn	08 21 56.1	-1.4
KRLC				eSG	Sg	08 22 15.9	-0.7
KRLC	Kraliky	1.45	265	Pg	Pn	08 21 56.1	-1.4
KRLC				Sg	Sg	08 22 15.9	-0.7
DPC	Dobruska-Polom	1.74	275	ePG	Pn	08 22 02.0	+0.6
DPC				eSG	Sg	08 22 25.7	-0.1
	comp=Z,2.2nm,0.3s						
DPC	Dobruska-Polom	1.74	275	Pg	Pn	08 22 02.0	+0.6
DPC				Sg	Sg	08 22 25.7	-0.1
	2.2nm,0.3s						
PRU	Pruhonice	2.90	267	eSG	Sg	08 23 01.2	-1.8
PRU	Pruhonice	2.90	267	Sg	Sg	08 23 01.2	-1.8
KHC	Kasperske Hory	3.71	255	eSG	Sg	08 23 27.7	-1.2
KHC	Kasperske Hory	3.71	255	Sg	Sg	08 23 27.7	-1.2

WEL 14 08:32:26.1, 45°S±9°×16°8E±°, h5^{km}, ML3.6/12, South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCZ	Jackson Bay	0.71	48	P	Pb	08 32 40.3	-0.6
JCZ				S	Sb	08 32 51.7	+0.7
WKZ	Wanaka	0.74	112	P	Pb	08 32 42.0	+0.6
WKZ				S	Sn	08 32 54.0	-0.9
MLZ	Mavora Lakes	0.82	177	P	Pg	08 32 41.1	-0.6
EAZ	Earnscleugh	1.12	128	P	Pn	08 32 48.2	-0.2
EAZ				S	Sn	08 33 03.8	-0.4
LBZ	Lake Benmore	1.53	85	P	Pg	08 32 55.7	+0.3
LBZ				S	Sg	08 33 17.8	+2.5
FOZ	Fox Glacier	1.63	52	P	Pn	08 32 53.9	-1.5
FOZ				S	Sg	08 33 19.4	+1.1
TUZ	Tuapeka	1.79	142	P	Pb	08 32 58.6	-0.7
TUZ				S	Sb	08 33 22.7	+0.7
ODZ	Otahua Downs	1.91	106	P	Pn	08 33 00.2	+1.0
SYZ	Scrubby Hill	2.13	159	P	Pn	08 33 02.6	+0.3
SYZ				S	Sb	08 33 30.8	-0.9
HHSZ	Highcliff Hill	2.24	127	P	Pb	08 33 05.4	-1.6
APZ	The Paps	2.28	181	P	Pn	08 33 04.6	+0.2
RPZ	Rata Peaks	2.31	70	P	Pn	08 33 05.2	+0.3
WVZ	Waitaha Valley	2.44	54	P	Pn	08 33 05.8	-0.7
OXZ	Oxford	3.12	68	P	Pn	08 33 14.4	-1.6
MQZ	McQueen’s Vall	3.42	77	P	Pn	08 33 19.2	-0.7
LTZ	Lake Taylor	3.53	61	P	Pn	08 33 20.3	-1.3
OKCZ	Okains Bay	3.69	79	P	Pn	08 33 25.2	+1.4
THZ	Tophouse	4.51	54	P	Pn	08 33 35.6	+0.5

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*ISCJB **14** 08:36:27.2±0.7, 22°.46N±0°.07×142°.9E±0°.2, h150^{km}, mb3.5/12, Error ellipse: s-maj=26.4km s-min=9.5km az=178.2*

*IDC **14** 08:36:30.0±2.1, 22°.52N×142°.96E, h160^{km}±18^{km}, mb3.2/12, mb1 3.4/13, mb1mx3.2/64, mbtmp3.7/13, Error ellipse: s-maj=25.1km s-min=12.4km az=92.0*

ISC 14 08:36:28.9±0.9, 22°.45N±0°.09×143°.0E±0°.2, h150^{km}, n13, σ0^{s}.89/14, mb3.5/12, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	Chichijima	4.68	351	P	Pn	08 37 39.7	+1.7
	26nm,0.3s,baz=274,slow=15,SNR=38						
JCJ				S	Sn	08 38 31.6	-0.3
	baz=287,slow=19						
KLR	Kul’dur	28.16	344	P	P	08 42 06.9	-0.1
	0.1nm,0.7s,baz=105,slow=4.2,SNR=3.9						
WRA	Warramunga Arr	42.98	192	P	P	08 44 13.8	+0.5
	0.4nm,0.4s,baz=6.7,slow=8.7,SNR=12						
FITZ	Fitzroy Crossi	43.73	204	P	P	08 44 19.6	+0.3
	0.8nm,0.5s,baz=31,slow=11,SNR=4.6						
ASAR	Alice Springs	46.69	191	P	P	08 44 43.1	+0.5
	0.2nm,0.4s,baz=12,slow=7.1,SNR=6.2						
ZALV	Zalesovo Beam	53.50	321	P	P	08 45 32.8	-0.9
	0.8nm,0.4s,baz=107,slow=8.3,SNR=3.4						
MKAR	Makanchi Array	54.05	312	P	P	08 45 38.1	+0.3
	0.2nm,0.3s,baz=92,slow=8.7,SNR=3.4						
KURBB	Kurchatov Arra	56.85	317	P	P	08 45 57.6	-0.1
	1.2nm,0.6s,baz=95,slow=7.1,SNR=12						
ILAR	Eielson Array	61.45	27	P	P	08 46 28.1	-1.1
	0.3nm,0.7s,baz=261,slow=6.7,SNR=4.3						
BVAR	Borovoye Array	61.98	319	P	P	08 46 32.7	-0.1
	1.0nm,0.4s,baz=88,slow=7.4,SNR=5.9						
INK	Inuvik	66.95	24	P	P	08 47 05.2	+0.4
	0.3nm,0.5s,baz=303,slow=4.4,SNR=3.0						
FINES	FINESS Array B	82.42	334	P	P	08 48 32.3	-1.7
	2.4nm,1.1s,baz=48,slow=2.8,SNR=4.1						
NVAR	Mina Array Bea	82.82	51	P	P	08 48 37.1	+0.2
	0.3nm,0.6s,baz=297,slow=5.8,SNR=3.8						

SJA 14 09:38:39.3±0.8, 23°.87S×64°.56W, h205^{km}±13^{km}, ML3.7, MW3.6, Jujuy Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YJA	Yavi	1.90	332	eP	Pn	09 39 18.4	+0.7
YJA				eS	S	09 39 48.0	+1.0
YJA				IAML		09 39 49.8	
	comp=Z,461nm,0.3s						
AHML	Horco Molle	2.99	193	eP	Pn	09 39 30.1	+0.9
AHML				eS	S	09 40 06.7	-1.0
AHML				IAML		09 40 17.1	
	comp=Z,166nm,0.4s						
CYA	Choya	4.69	193	eP	Pn	09 40 04.2	+14
CYA				eS	S	09 40 59.3	+14
CYA				IAML		09 41 05.9	
	comp=Z,35nm,0.4s						
VCA	Vinchina	5.85	213	eP	Pn	09 40 05.5	+0.7
VCA				IAML		09 41 48.7	
	comp=Z,23nm,0.4s						

MAN 14 09:42:41.1, 9°.59N×125°.78E, h21^{km}, mb3.8, ML2.5, MS2.1, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	Surigao	0.34	304	⇑eP	Pn	09 42 52.1	+1.2
SCPH				eS	Sn	09 42 58.4	+1.2
BUTP	Butuan	0.64	194	eP	Pb	09 42 53.5	-0.2
BUTP				eS	Sb	09 43 01.8	-0.4
BUKP	Musuan	1.84	203	eP	Pn	09 43 11.8	+0.2
BUKP				eS	Sn	09 43 35.4	+1.0

MEX 14 09:44:45.4±0.7, 16°.17N×98°.03W, h5^{km}, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.24	337	i P	Pg	09 44 49.3	-0.7
PNIG				i S	Sg	09 44 53.0	-0.2
TLIG	Tlapa	1.47	340	eP	Pn	09 45 09.6	-3.1
TLIG				i S	Sb	09 45 27.7	-4.8
VHO	Vista Hermosa	1.53	54	eP	Pn	09 45 09.5	-4.1
VHO				eS	Sn	09 45 29.4	-4.6
HUIG	Huatulco	1.89	102	eP	Pn	09 45 14.6	-3.8
PLIG	Platanillo	2.62	328	eP	Pn	09 45 25.1	-3.4
PLIG				i S	Sn	09 45 56.7	-3.9
YAIG	Yautepec	2.85	340	i P	Pn	09 45 29.8	-1.9
YAIG				i S	Sn	09 46 02.9	-3.6

MAN 14 10:11:17.2, 16°.12N×119°.80E, h31^{km}, mb4.1, ML2.9, MS2.6, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOLP	Bolinao	0.28	23	eP	Pn	10 11 25.6	+0.3
BOLP				eS	Sn	10 11 32.2	+1.7
SCZP	Santa Cruz	0.36	162	eP	Pn	10 11 27.3	+1.1
SCZP				eS	Sn	10 11 33.4	+1.2

HLW 14 10:27:59.0, 23°.10N×37°.31E, h10^{km}±16^{km}, Md3.4, Ml3.5, Red Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HSHL	Bi’r Shalatayn	1.76	271	P	Pn	10 28 26.4	-3.1
	baz=271						
HAGS	Hagol	2.48	301	P	Pn	10 28 37.1	-2.4
	baz=302						
BRNS	Bernies	3.03	285	P	Pn	10 28 45.6	-1.4
	baz=286						
BRNS				AMP		10 29 00.0	
	baz=286						
BRNS				S	Sn	10 29 18.0	-5.4
	baz=286						
HQSR		3.75	315	P	Pn	10 28 54.4	-2.6
	baz=316						

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*ISCJB **14** 10:30:16.4±0.6, 11°.95N±0°.07×86°.54W±0°.06, h200^{km}, mb4.3/81, Error ellipse: s-maj=11.2km s-min=6.4km az=40.2*

*IDC **14** 10:30:19.5±1.5, 12°.16N×86°.29W, h201^{km}±15^{km}, mb3.6/7, mb1 3.8/9, mb1mx3.3/48, mbtmp4.1/9, Error ellipse: s-maj=22.4km s-min=17.2km az=75.0*

*NEIC **14** 10:30:19.0±0.5, 11°.98N×86°.45W, h213^{km}±5^{km}, mb4.4/84, Error ellipse: s-maj=11.9km s-min=7.2km az=208.0*

ISC 14 10:30:18.9±0.6, 12°.07N±0°.08×86°.42W±0°.10, h200^{km}, n296, σ0^{s}.82/300, mb4.4/81, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESTN	Estel	1.03	3	ePn	Pn	10 30 49.8	+0.8
ESTN				eSn	Sn	10 31 13.7	+1.2
ESPN	Las Esperanzas	2.07	86	ePn	Pn	10 30 58.7	+0.6
JTS	JuntasAbangare	2.28	141	P	Pn	10 31 01.3	+0.9
	24nm,0.3s,baz=47,slow=2.8,SNR=124						
JTS				S	Sn	10 31 31.1	-1.6
	38nm,0.3s,baz=209,slow=22,SNR=18						
JTS	JuntasAbangare	2.28	141	ePn	Pn	10 31 00.9	+0.5
JTS				eSn	Sn	10 31 32.1	-0.6
HDC	Heredia	3.05	132	ePn	Pn	10 31 11.5	+2.2
HDC				eSn	Sn	10 31 52.2	+3.5
CMIG	Matias Romero	9.60	302	P	Pn	10 32 32.9	0.0
	0.7nm,0.3s,baz=135,slow=10,SNR=13						
CMIG				S	Sn	10 34 11.7	-8.7
	0.2nm,0.3s,baz=304,slow=10,SNR=3.9						
LNIG	Linares	17.76	318	eP	P	10 34 12.9	+0.8
	5.5nm,0.9s						
555A	McAlpin	18.25	10	eP	P	10 34 19.4	+2.1
	28nm,0.8s						
454A	Quitman	18.73	7	P	P	10 34 23.6	+0.9
	baz=189						
351A	Pinckard	19.13	2	P	P	10 34 27.9	+1.1
	baz=182						
349A	Repton	19.20	358	P	P	10 34 28.6	+0.9
	baz=178						
252A	Lumpkin	19.89	4	P	P	10 34 36.1	+1.0
	baz=185						
251A	Midway	19.95	3	P	P	10 34 36.9	+1.2
	baz=183						
248A	Dixon Mills	19.97	357	P	P	10 34 36.8	+0.9
	baz=176						
254A	Abbeville	19.99	8	P	P	10 34 37.1	+1.0
	baz=189						
247A	Quitman	19.99	355	P	P	10 34 37.0	+0.9
	baz=174						
341A	Kurthwood	20.16	343	P	P	10 34 39.1	+1.1
	baz=161						
151A	Opelika	20.39	3	P	P	10 34 41.6	+1.2
	baz=183						
149A	Jones	20.44	359	P	P	10 34 42.1	+1.2
	baz=179,SNR=7.4						
150A	Eclectic	20.45	1	P	P	10 34 42.3	+1.3
	baz=181,SNR=11						
148A	Greensboro	20.51	357	P	P	10 34 42.5	+0.9
	baz=177						
152A	Waverly Hall	20.56	4	P	P	10 34 43.4	+1.1
	baz=185,SNR=14						
152A	Waverly Hall	20.56	4	eP	P	10 34 43.2	+0.9
	18nm,0.7s						
147A	Livingston	20.58	356	P	P	10 34 43.4	+1.0
	baz=175						

147A	**Livingston** 18nm,0.6s	**20.58**	**356**	*e*P	**P**	**10 34 43.8**	**+1.4**
242A	**Grayson** baz=164	**20.59**	**346**	P	**P**	**10 34 43.2**	**+0.7**
146A	**Union** 71nm,1.9s	**20.61**	**354**	*e*P	**P**	**10 34 44.0**	**+1.2**
154A	**Montrose** baz=189	**20.67**	**8**	P	**P**	**10 34 44.2**	**+0.8**
154A	**Montrose** 26nm,0.7s	**20.67**	**8**	*e*P	**P**	**10 34 44.2**	**+0.8**
CBYP	**Canovanas** 22nm,0.9s	**20.77**	**70**	*e*P	**P**	**10 34 44.1**	**-0.6**
155A	**Kite** baz=191	**20.78**	**9**	P	**P**	**10 34 45.3**	**+0.8**
LRAL	**Lakeview Retre** baz=178,SNR=8.5	**20.88**	**359**	P	**P**	**10 34 46.3**	**+0.7**
LRAL	**Lakeview Retre** 6.0nm,0.7s	**20.88**	**359**	*e*P	**P**	**10 34 46.5**	**+1.0**
NATX	**Nacogdoches** baz=157	**21.02**	**340**	P	**P**	**10 34 47.6**	**+0.5**
NATX	**Nacogdoches** 10nm,0.8s	**21.02**	**340**	*e*P	**P**	**10 34 48.5**	**+1.5**
Z49A	**Columbiana** baz=180,SNR=10	**21.03**	**360**	P	**P**	**10 34 47.9**	**+0.8**
Z47A	**Carrollton** baz=176	**21.09**	**356**	P	**P**	**10 34 48.6**	**+0.8**
Z50A	**Ashland** baz=181,SNR=7.4	**21.09**	**1**	P	**P**	**10 34 48.7**	**+0.8**
Z50A	**Ashland** 8.6nm,1.0s	**21.09**	**1**	*e*P	**P**	**10 34 47.8**	**-0.1**
Z52A	**Williamson** baz=186,SNR=5.2	**21.10**	**5**	P	**P**	**10 34 48.9**	**+0.9**
Z46A	**Louisville** baz=173	**21.15**	**354**	P	**P**	**10 34 49.4**	**+0.9**
Z51A	**Franklin** baz=183	**21.18**	**3**	P	**P**	**10 34 49.6**	**+0.8**
Z48A	**Northport** baz=177	**21.23**	**357**	P	**P**	**10 34 50.0**	**+0.7**
Z53A	**Monticello** baz=188,SNR=6.3	**21.27**	**7**	P	**P**	**10 34 50.5**	**+0.8**
CUPR	**Culebra, Puert** 1.1nm,0.7s	**21.31**	**70**	*e*P	**P**	**10 34 50.2**	**0.0**
Z54A	**Sparta** baz=190	**21.32**	**8**	P	**P**	**10 34 50.6**	**+0.4**
Z45A	**Winona** baz=171	**21.41**	**352**	P	**P**	**10 34 52.0**	**+0.8**
Z45A	**Winona** 26nm,0.6s	**21.41**	**352**	*e*P	**P**	**10 34 51.9**	**+0.8**
GOGA	**Godfrey** baz=188	**21.41**	**7**	P	**P**	**10 34 52.1**	**+0.9**
GOGA	**Godfrey** 9.3nm,1.0s	**21.41**	**7**	*e*P	**P**	**10 34 51.3**	**+0.2**
Z44A	**Pea Ridge, Bel** baz=169	**21.43**	**351**	P	**P**	**10 34 52.1**	**+0.8**
Y49A	**Blount Mountai** baz=180,SNR=14	**21.69**	**0**	P	**P**	**10 34 54.7**	**+0.7**
Y49A	**Blount Mountai** 17nm,0.6s	**21.69**	**0**	*e*P	**P**	**10 34 54.1**	**+0.1**
Y50A	**Piedmont** baz=182,SNR=11	**21.73**	**2**	P	**P**	**10 34 55.1**	**+0.7**
Y48A	**Jasper** baz=178,SNR=6.8	**21.76**	**358**	P	**P**	**10 34 55.4**	**+0.7**
Y51A	**Rockmart** baz=184,SNR=9.5	**21.77**	**3**	P	**P**	**10 34 55.5**	**+0.7**
Y47A	**UCPARC, Winfie** baz=176,SNR=5.6	**21.77**	**357**	P	**P**	**10 34 55.4**	**+0.6**
Y52A	**Lilburn** baz=186	**21.80**	**5**	P	**P**	**10 34 55.8**	**+0.7**
Y52A	**Lilburn** 6.8nm,0.7s	**21.80**	**5**	*e*P	**P**	**10 34 55.5**	**+0.3**
Y46A	**Houston** baz=174,SNR=6.9	**21.83**	**355**	P	**P**	**10 34 56.0**	**+0.6**
Y53A	**Monroe** baz=188,SNR=5.3	**21.84**	**6**	P	**P**	**10 34 56.1**	**+0.6**
Y45A	**Yeager Farm, C** baz=172	**21.89**	**353**	P	**P**	**10 34 56.5**	**+0.6**
Z41A	**Richland Creek** 16nm,1.1s	**21.89**	**346**	*e*P	**P**	**10 34 56.1**	**+0.1**
Y54A	**Tignall** baz=190	**21.96**	**8**	P	**P**	**10 34 57.3**	**+0.6**
JCT	**Junction City** 2.7nm,0.8s	**22.12**	**328**	*e*P	**P**	**10 34 58.7**	**+0.4**
WHTX	**Lake Whitney,** baz=151	**22.28**	**335**	P	**P**	**10 34 59.6**	**-0.1**
WHTX	**Lake Whitney,** 4.1nm,0.6s	**22.28**	**335**	*e*P	**P**	**10 34 58.8**	**-0.9**
X48A	**Hartselle** baz=178	**22.29**	**359**	P	**P**	**10 35 00.1**	**+0.4**
X48A	**Hartselle** 8.3nm,1.4s	**22.29**	**359**	*e*P	**P**	**10 34 59.1**	**-0.6**
CCAR	**Cane Creek** 10nm,1.0s	**22.29**	**348**	*e*P	**P**	**10 34 59.2**	**-0.6**
X50B	**Fort Payne** baz=182	**22.30**	**2**	P	**P**	**10 35 00.2**	**+0.3**
X49A	**Woodville** baz=180,SNR=5.1	**22.34**	**0**	P	**P**	**10 35 00.7**	**+0.4**
X47A	**Russelville** baz=176,SNR=8.2	**22.39**	**357**	P	**P**	**10 35 01.1**	**+0.4**
X45A	**UM Field Stati** baz=172	**22.42**	**354**	P	**P**	**10 35 01.1**	**+0.2**
X51A	**Calhoun** baz=184	**22.44**	**3**	P	**P**	**10 35 01.6**	**+0.5**
X51A	**Calhoun** 11nm,1.0s	**22.44**	**3**	*e*P	**P**	**10 35 00.9**	**-0.3**
X46A	**Booneville** baz=175	**22.47**	**355**	P	**P**	**10 35 01.7**	**+0.2**
OXF	**Oxford** baz=172	**22.51**	**354**	P	**P**	**10 35 01.9**	**+0.2**
OXF	**Oxford** 19nm,0.9s	**22.51**	**354**	*e*P	**P**	**10 35 00.9**	**-0.8**
X53A	**Estanollee** baz=188	**22.51**	**7**	P	**P**	**10 35 02.2**	**+0.4**
X52A	**Dahlonega** baz=186	**22.55**	**5**	P	**P**	**10 35 02.3**	**+0.1**
JSC	**Jenkinsville** 13nm,0.8s	**22.61**	**11**	*e*P	**P**	**10 35 03.4**	**+0.7**
PLAL	**Pickwick Lake** 8.4nm,0.8s	**22.86**	**356**	*e*P	**P**	**10 35 05.2**	**+0.3**
W49A	**Belvidere** baz=180,SNR=12	**22.95**	**0**	P	**P**	**10 35 06.2**	**+0.4**
W48A	**Pulaski** baz=179,SNR=17	**22.97**	**359**	P	**P**	**10 35 06.3**	**+0.3**
W46A	**Michie** baz=175	**23.03**	**356**	P	**P**	**10 35 06.9**	**+0.5**
W52A	**Murphy** 9.1nm,0.9s	**23.03**	**5**	*e*P	**P**	**10 35 06.5**	**0.0**
BG3	**Lake Jocassee** 7.5nm,0.9s	**23.04**	**7**	*e*P	**P**	**10 35 07.5**	**+0.9**
SWET	**Sewanee** 7.7nm,0.8s	**23.05**	**1**	*e*P	**P**	**10 35 06.9**	**+0.2**
W50A	**Signal Mountai** baz=183,SNR=8.7	**23.05**	**2**	P	**P**	**10 35 07.1**	**+0.4**
W50A	**Signal Mountai** 11nm,0.8s	**23.05**	**2**	*e*P	**P**	**10 35 06.9**	**+0.2**
X40A	**Basin Creek Fa** 7.8nm,1.4s	**23.07**	**346**	*e*P	**P**	**10 35 06.7**	**-0.1**
W47A	**Westpoint** baz=177,SNR=20	**23.10**	**358**	P	**P**	**10 35 07.5**	**+0.4**
UALR	**University of** 7.1nm,0.8s	**23.24**	**348**	*e*P	**P**	**10 35 07.7**	**-0.6**
MIAR	**Mount Ida** baz=162,SNR=6.5	**23.30**	**345**	P	**P**	**10 35 09.3**	**+0.3**
MIAR	**Mount Ida** 5.7nm,0.8s	**23.30**	**345**	*e*P	**P**	**10 35 08.3**	**-0.6**
CPCT	**Cooper Cave** 11nm,0.8s	**23.34**	**4**	*e*P	**P**	**10 35 09.5**	**+0.2**
X39A	**Fountain Ranch** baz=161	**23.41**	**344**	P	**P**	**10 35 10.1**	**+0.2**
KMSC	**Kings Mountain** baz=193	**23.43**	**11**	P	**P**	**10 35 10.7**	**+0.6**
KMSC	**Kings Mountain** 8.9nm,1.0s	**23.43**	**11**	*e*P	**P**	**10 35 10.8**	**+0.6**
TXAR	**Lajitas Array** 5.2nm,0.8s,baz=144,slow=9.5,SNR=42	**23.51**	**320**	P	**P**	**10 35 11.7**	**+0.7**
TX31	**Lajitas Ar. Si**	**23.52**	**320**	*e*P	**P**	**10 35 11.8**	**+0.7**
V50A	**Pikevile** baz=183	**23.53**	**3**	P	**P**	**10 35 11.5**	**+0.5**
V48A	**Smith Brothers** baz=179	**23.57**	**359**	P	**P**	**10 35 11.7**	**+0.4**
V48A	**Smith Brothers** 18nm,1.6s	**23.57**	**359**	*e*P	**P**	**10 35 11.4**	**0.0**
V49A	**McMinnville** baz=181,SNR=7.7	**23.60**	**1**	P	**P**	**10 35 11.8**	**+0.1**
W41B	**Gary Mavity, V** baz=166	**23.60**	**348**	P	**P**	**10 35 11.7**	**0.0**
W41B	**Gary Mavity, V** 5.8nm,0.9s	**23.60**	**348**	*e*P	**P**	**10 35 10.8**	**-0.9**
TKL	**Tuckaleechee C** 5.1nm,0.4s,baz=124,slow=5.0,SNR=18	**23.61**	**5**	P	**P**	**10 35 12.4**	**+0.7**
TKL	**Tuckaleechee C** 9.9nm,1.0s	**23.61**	**5**	*e*P	**P**	**10 35 10.5**	**-1.2**
V47A	**Nunnelly** baz=177,SNR=7.0	**23.68**	**358**	P	**P**	**10 35 12.5**	**+0.1**
V46A	**Holladay** baz=176	**23.68**	**357**	P	**P**	**10 35 12.7**	**+0.4**
V51A	**Loudon** baz=185	**23.70**	**4**	P	**P**	**10 35 12.9**	**+0.3**
V53A	**Saluda** baz=189,SNR=6.7	**23.72**	**7**	P	**P**	**10 35 13.4**	**+0.5**
V53A	**Saluda** 9.8nm,0.7s	**23.72**	**7**	*e*P	**P**	**10 35 13.3**	**+0.5**
ABTX	**Abilene, Hawle** 4.3nm,0.7s	**23.79**	**331**	*e*P	**P**	**10 35 13.9**	**+0.4**
W40A	**Ferguson Farm,** baz=164	**23.80**	**346**	P	**P**	**10 35 13.3**	**-0.2**
W40A	**Ferguson Farm,** 7.3nm,0.7s	**23.80**	**346**	*e*P	**P**	**10 35 13.1**	**-0.3**
V52A	**Sevierville** baz=187	**23.81**	**6**	P	**P**	**10 35 14.0**	**+0.5**
V52A	**Sevierville** 4.9nm,0.6s	**23.81**	**6**	*e*P	**P**	**10 35 13.6**	**0.0**
W39A	**Magazine** baz=162	**23.98**	**345**	P	**P**	**10 35 15.2**	**+0.2**
W39A	**Magazine** 22nm,1.7s	**23.98**	**345**	*e*P	**P**	**10 35 15.3**	**+0.2**
V41A	**Mountainview** baz=166,SNR=5.2	**24.18**	**349**	P	**P**	**10 35 16.7**	**-0.2**
U47A	**Clarksville** baz=178	**24.28**	**358**	P	**P**	**10 35 17.6**	**-0.2**
U50A	**Jamestown** baz=184	**24.28**	**3**	P	**P**	**10 35 18.2**	**+0.3**
U44B	**Burton Farm, H** baz=173	**24.31**	**354**	P	**P**	**10 35 18.3**	**+0.3**
V40A	**Witts Springs** baz=165	**24.33**	**347**	P	**P**	**10 35 18.3**	**-0.1**
V40A	**Witts Springs** 3.8nm,0.7s	**24.33**	**347**	*e*P	**P**	**10 35 17.6**	**-0.7**
U49A	**Red Boiling Sp** baz=182	**24.35**	**1**	P	**P**	**10 35 18.5**	**+0.1**
U52A	**Thorn Hill** baz=187	**24.38**	**6**	P	**P**	**10 35 18.9**	**+0.2**
U53A	**Fall Branch** baz=189,SNR=6.8	**24.44**	**8**	P	**P**	**10 35 19.6**	**+0.3**
TZTN	**Tazewell** baz=187	**24.51**	**6**	P	**P**	**10 35 19.7**	**-0.2**
V39A	**Pettigrew** baz=163	**24.55**	**346**	P	**P**	**10 35 20.4**	**0.0**
U42A	**Revenden** baz=169	**24.57**	**351**	P	**P**	**10 35 20.2**	**-0.1**
NCAT	**North Carolina** 9.1nm,1.1s	**24.65**	**13**	*e*P	**P**	**10 35 22.1**	**+0.9**
T47A	**Sharon Grove** baz=178	**24.82**	**359**	P	**P**	**10 35 22.4**	**-0.3**
T47A	**Sharon Grove** 5.8nm,0.6s	**24.82**	**359**	*e*P	**P**	**10 35 22.4**	**-0.3**
PBMO	**Poplar Bluff** 4.2nm,0.6s	**24.87**	**352**	*e*P	**P**	**10 35 23.0**	**-0.1**
U40A	**Yellville** baz=165	**24.87**	**348**	P	**P**	**10 35 23.0**	**-0.1**
T50A	**Nancy** baz=184	**24.89**	**3**	P	**P**	**10 35 23.5**	**+0.2**
T51A	**Gray** baz=186	**24.89**	**5**	P	**P**	**10 35 23.4**	**+0.1**
T46A	**Princeton** baz=177	**24.90**	**357**	P	**P**	**10 35 23.4**	**0.0**
T49A	**Edmonton** baz=182	**24.94**	**2**	P	**P**	**10 35 23.8**	**0.0**
T49A	**Edmonton** 3.9nm,0.8s	**24.94**	**2**	*e*P	**P**	**10 35 23.2**	**-0.6**
U39A	**Green Forest** baz=164	**25.03**	**346**	P	**P**	**10 35 24.2**	**-0.5**
T52A	**Hallie** baz=188	**25.12**	**6**	P	**P**	**10 35 25.6**	**+0.1**
T43A	**Greenville** baz=171	**25.15**	**353**	P	**P**	**10 35 25.4**	**-0.2**
TUL1	**Leonard** baz=158	**25.20**	**342**	P	**P**	**10 35 25.6**	**-0.5**
TUL1	**Leonard** 3.9nm,0.6s	**25.20**	**342**	*e*P	**P**	**10 35 25.1**	**-1.1**
T42A	**Van Buren** baz=169	**25.21**	**351**	P	**P**	**10 35 25.8**	**-0.4**
T42A	**Van Buren** 3.4nm,0.7s	**25.21**	**351**	*e*P	**P**	**10 35 25.9**	**-0.2**
WMOK	**Wichita Mounta** baz=151,SNR=5.6	**25.21**	**336**	P	**P**	**10 35 26.1**	**-0.2**
WMOK	**Wichita Mounta** 3.9nm,0.9s	**25.21**	**336**	*e*P	**P**	**10 35 29.2**	**+2.9**
T41A	**Mountain View** baz=168,SNR=5.2	**25.33**	**350**	P	**P**	**10 35 27.3**	**0.0**
S43A	**Fulton Ridge,** baz=172	**25.61**	**353**	P	**P**	**10 35 30.0**	**+0.2**
BLA	**Blacksburg** baz=194	**25.61**	**11**	P	**P**	**10 35 30.2**	**+0.4**
SIUC	**Southern Illin** 7.3nm,0.7s	**25.66**	**355**	*e*P	**P**	**10 35 29.8**	**-0.4**
T38A	**Diamond** baz=162	**25.85**	**345**	P	**P**	**10 35 31.7**	**-0.3**
S41A	**Jillco Farms,** baz=168	**25.86**	**350**	P	**P**	**10 35 31.6**	**-0.5**
S42A	**Caledonia** baz=170	**25.89**	**352**	P	**P**	**10 35 31.8**	**-0.6**
S40A	**Lebanon** baz=166	**26.00**	**349**	P	**P**	**10 35 33.0**	**-0.3**
WCI	**Wyandotte Cave** baz=180	**26.05**	**0**	P	**P**	**10 35 33.6**	**-0.2**
WCI	**Wyandotte Cave** 6.9nm,0.9s	**26.05**	**0**	*e*P	**P**	**10 35 33.5**	**-0.3**
R46A	**Gibon Southern** baz=178	**26.05**	**358**	P	**P**	**10 35 34.1**	**+0.3**
R47A	**Wooly Knot Far** baz=180	**26.12**	**360**	P	**P**	**10 35 34.7**	**+0.3**
CCM	**Cathedral Cave** baz=169	**26.24**	**351**	P	**P**	**10 35 35.5**	**+0.1**
CCM	**Cathedral Cave** 3.5nm,0.7s	**26.24**	**351**	*e*P	**P**	**10 35 34.4**	**-1.1**
R51A	**Hillsboro** baz=186	**26.25**	**5**	P	**P**	**10 35 35.9**	**+0.4**
S39A	**Bolivar** baz=165	**26.25**	**348**	P	**P**	**10 35 35.3**	**-0.3**
S39A	**Bolivar** 3.7nm,1.0s	**26.25**	**348**	*e*P	**P**	**10 35 34.4**	**-1.2**
R40A	**Maddies Statio** baz=167	**26.63**	**350**	P	**P**	**10 35 38.4**	**-0.6**
Q47A	**Bedord North L** baz=180	**26.76**	**360**	P	**P**	**10 35 40.0**	**-0.1**
Q48A	**North Vernon** baz=182	**26.76**	**1**	P	**P**	**10 35 40.2**	**+0.2**
Q45A	**Warren Harvey,** baz=176	**26.76**	**357**	P	**P**	**10 35 40.4**	**+0.3**
R39A	**Chumby, Stover** baz=166	**26.80**	**348**	P	**P**	**10 35 39.8**	**-0.7**
Q44A	**Meyer Farm, Va** baz=174	**26.82**	**356**	P	**P**	**10 35 40.3**	**-0.4**
R38A	**Fenwick Farm,** baz=164	**26.86**	**347**	P	**P**	**10 35 40.4**	**-0.5**
Q49A	**Aurora** baz=183	**26.86**	**3**	P	**P**	**10 35 41.4**	**+0.4**
Q51A	**Peebles** baz=187,SNR=8.7	**26.99**	**5**	P	**P**	**10 35 42.7**	**+0.5**
BLO	**Bloomington** 12nm,1.3s	**26.99**	**360**	*e*P	**P**	**10 35 41.1**	**-1.1**
Q41A	**Truxton** baz=170	**27.12**	**352**	P	**P**	**10 35 43.0**	**-0.3**
P48A	**Milroy** baz=182	**27.30**	**2**	P	**P**	**10 35 45.0**	**+0.2**
P45A	**Graceland, Par** baz=177	**27.37**	**358**	P	**P**	**10 35 45.8**	**+0.2**
P45A	**Graceland, Par** 8.7nm,0.9s	**27.37**	**358**	*e*P	**P**	**10 35 45.0**	**-0.5**
Q39A	**Willow Grove F** baz=166	**27.49**	**349**	P	**P**	**10 35 46.0**	**-0.6**
O44A	**Mansfield** baz=176	**28.03**	**357**	P	**P**	**10 35 51.4**	**0.0**
O49A	**Covington** baz=184	**28.07**	**3**	P	**P**	**10 35 51.8**	**+0.1**
O50A	**Cable** baz=186,SNR=6.9	**28.08**	**5**	P	**P**	**10 35 52.0**	**+0.2**
O48A	**Farmland** baz=183	**28.10**	**2**	P	**P**	**10 35 51.8**	**-0.1**
P38A	**Dawn** baz=165	**28.16**	**348**	P	**P**	**10 35 52.0**	**-0.5**
SFIN	**Lafayette** baz=179	**28.20**	**359**	P	**P**	**10 35 52.6**	**-0.3**
SFIN	**Lafayette** 8.5nm,0.8s	**28.20**	**359**	*e*P	**P**	**10 35 51.9**	**-1.1**
ACSO	**Alum Creek Sta** baz=187,SNR=5.6	**28.21**	**6**	P	**P**	**10 35 53.1**	**+0.1**
ACSO	**Alum Creek Sta** 13nm,0.6s	**28.21**	**6**	*e*P	**P**	**10 35 52.9**	**-0.1**
HDIL	**Hopedale** baz=174	**28.49**	**355**	P	**P**	**10 35 55.6**	**+0.2**
HDIL	**Hopedale** 12nm,0.6s	**28.49**	**355**	*e*P	**P**	**10 35 55.2**	**-0.2**
N42A	**Yates City** baz=173	**28.82**	**354**	P	**P**	**10 35 58.2**	**-0.2**
N43A	**Stutzman Famil** baz=174	**28.86**	**356**	P	**P**	**10 35 58.8**	**0.0**
N39A	**Derby Farms, D** 4.4nm,0.8s	**29.19**	**351**	*e*P	**P**	**10 36 01.0**	**-0.6**
PAGS	**Pennsylvania G** 20nm,0.8s	**29.32**	**15**	*e*P	**P**	**10 36 02.8**	**0.0**
SSPA	**Standing Stone** baz=197	**29.43**	**13**	P	**P**	**10 36 04.1**	**+0.4**
SSPA	**Standing Stone** 13nm,0.8s	**29.43**	**13**	*e*P	**P**	**10 36 04.2**	**+0.4**
M54A	**Oil Creek Stat** baz=193	**29.92**	**10**	P	**P**	**10 36 08.5**	**+0.4**
L42A	**Oliver, Polo** baz=174	**29.96**	**355**	P	**P**	**10 36 07.8**	**-0.6**
L42A	**Oliver, Polo** 18nm,0.8s	**29.96**	**355**	*e*P	**P**	**10 36 07.3**	**-1.0**
ALLY	**Alegheny Colle** 12nm,0.9s	**29.98**	**9**	*e*P	**P**	**10 36 08.7**	**+0.1**
L43A	**Garden Prairie** baz=176	**30.07**	**357**	P	**P**	**10 36 09.1**	**-0.3**
L40A	**Anamosa** 7.7nm,1.0s	**30.17**	**353**	*e*P	**P**	**10 36 09.8**	**-0.5**
N59A	**State Game Lan** baz=201,SNR=8.3	**30.22**	**16**	P	**P**	**10 36 11.1**	**+0.4**
N59A	**State Game Lan** 19nm,0.6s	**30.22**	**16**	*e*P	**P**	**10 36 11.0**	**+0.2**
ERPA	**Erie** baz=192	**30.46**	**9**	P	**P**	**10 36 12.3**	**-0.5**
ERPA	**Erie** 20nm,0.7s	**30.46**	**9**	*e*P	**P**	**10 36 12.7**	**-0.1**
L38A	**Oak Wood Farm,** baz=168	**30.50**	**350**	P	**P**	**10 36 12.5**	**-0.7**
K41A	**Shullsburg** baz=173	**30.61**	**354**	P	**P**	**10 36 13.5**	**-0.6**
K42A	**Prairie Point,** baz=174	**30.70**	**356**	P	**P**	**10 36 14.3**	**-0.6**
K39A	**Oelwein** baz=170	**30.89**	**352**	P	**P**	**10 36 15.8**	**-0.8**
JFWS	**Jewell Farm** baz=173	**30.91**	**355**	P	**P**	**10 36 16.3**	**-0.5**
JFWS	**Jewell Farm** 7.7nm,0.8s	**30.91**	**355**	*e*P	**P**	**10 36 16.0**	**-0.8**
K37A	**Belmond** baz=166,SNR=5.3	**31.22**	**350**	P	**P**	**10 36 18.9**	**-0.6**
J42A	**Columbus** baz=175	**31.22**	**356**	P	**P**	**10 36 19.5**	**-0.1**
J41A	**Loganville** baz=173	**31.34**	**355**	P	**P**	**10 36 20.0**	**-0.6**
BINY	**Binghamton** baz=200,SNR=8.9	**31.37**	**15**	P	**P**	**10 36 21.1**	**+0.3**
BINY	**Binghamton** 15nm,0.8s	**31.37**	**15**	*e*P	**P**	**10 36 20.2**	**-0.6**
MMNY	**Mt. Morris Dam** 8.4nm,0.7s	**31.43**	**12**	*e*P	**P**	**10 36 21.2**	**-0.1**
J40A	**Soldiers Grove** baz=172	**31.44**	**354**	P	**P**	**10 36 21.1**	**-0.3**
J39A	**Decorah** baz=170	**31.49**	**353**	P	**P**	**10 36 22.1**	**+0.3**
J38A	**Wedel Dairy, R** baz=169	**31.58**	**352**	P	**P**	**10 36 21.9**	**-0.7**
I43A	**Langenfeld Bro** baz=177	**31.74**	**358**	P	**P**	**10 36 23.5**	**-0.5**
I42A	**Draeger Farm,** baz=175	**31.78**	**357**	P	**P**	**10 36 23.8**	**-0.6**
I42A	**Draeger Farm,** 12nm,1.0s	**31.78**	**357**	*e*P	**P**	**10 36 23.2**	**-1.2**
J36A	**Seneca 1, Swea** baz=165	**31.89**	**349**	P	**P**	**10 36 25.0**	**-0.4**
J36A	**Seneca 1, Swea** 7.2nm,0.8s	**31.89**	**349**	*e*P	**P**	**10 36 24.5**	**-0.9**
ACTO	**Acton** baz=192	**31.90**	**9**	P	**P**	**10 36 25.7**	**+0.2**
I40A	**Norwalk** baz=172	**31.92**	**354**	P	**P**	**10 36 24.8**	**-0.8**
I39A	**Houston** baz=171	**31.98**	**353**	P	**P**	**10 36 26.1**	**0.0**
I39A	**Houston** 11nm,0.6s	**31.98**	**353**	*e*P	**P**	**10 36 24.8**	**-1.3**
I41A	**Arkdale** baz=174	**32.02**	**355**	P	**P**	**10 36 25.9**	**-0.6**
I41A	**Arkdale** 8.3nm,0.8s	**32.02**	**355**	*e*P	**P**	**10 36 25.4**	**-1.0**
H43A	**Windswept, Lux** 12nm,0.9s	**32.31**	**358**	*e*P	**P**	**10 36 27.9**	**-1.0**
DRWO	**Darlington Wes** baz=194	**32.38**	**10**	P	**P**	**10 36 29.3**	**-0.2**
DRCO	**St. Marys Ceme** baz=194	**32.38**	**10**	P	**P**	**10 36 29.6**	**0.0**
I37A	**Lemond, Waseca** baz=167	**32.40**	**351**	P	**P**	**10 36 29.1**	**-0.6**
I37A	**Lemond, Waseca** 8.9nm,0.6s	**32.40**	**351**	*e*P	**P**	**10 36 28.9**	**-0.9**
WLVO	**Wesleyville** baz=195	**32.49**	**11**	P	**P**	**10 36 30.4**	**-0.1**
H41A	**Junction City** baz=174	**32.55**	**356**	P	**P**	**10 36 31.2**	**+0.1**
H40A	**Chili** baz=173	**32.62**	**355**	P	**P**	**10 36 30.9**	**-0.7**
CLWO	**Collingwood** baz=191	**32.69**	**8**	P	**P**	**10 36 32.0**	**-0.3**
BMRO	**Meriville Lake** baz=190	**32.72**	**7**	P	**P**	**10 36 32.2**	**-0.3**
ECSD	**EROS Data Cent** baz=162	**32.76**	**346**	P	**P**	**10 36 32.9**	**0.0**
H39A	**Augusta** baz=171	**32.76**	**354**	P	**P**	**10 36 32.2**	**-0.8**
H38A	**Maiden Rock** baz=170	**32.88**	**352**	P	**P**	**10 36 33.3**	**-0.6**
SADO	**Sadowa** 4.4nm,0.5s,baz=207,slow=8.7,SNR=11	**33.18**	**9**	P	**P**	**10 36 35.8**	**-0.7**
SADO	**Sadowa** 11nm,1.0s	**33.18**	**9**	*e*P	**P**	**10 36 36.1**	**-0.4**
G40A	**Rib Lake** baz=173	**33.24**	**355**	P	**P**	**10 36 36.4**	**-0.7**
G40A	**Rib Lake** 11nm,1.4s	**33.24**	**355**	*e*P	**P**	**10 36 36.6**	**-0.5**
H35A	**Sunnyside Ranc** baz=165	**33.31**	**349**	P	**P**	**10 36 36.9**	**-0.8**
G39A	**Holcombe** baz=172	**33.35**	**354**	P	**P**	**10 36 37.3**	**-0.7**
SPMN	**Marine on St.** baz=169	**33.49**	**352**	P	**P**	**10 36 38.4**	**-0.8**
SPMN	**Marine on St.** 6.9nm,0.6s	**33.49**	**352**	*e*P	**P**	**10 36 37.6**	**-1.6**
F41A	**Three Lakes** baz=175	**33.63**	**357**	P	**P**	**10 36 39.7**	**-0.8**
F43A	**Flat Rock, Esc** baz=179	**33.66**	**359**	P	**P**	**10 36 39.9**	**-0.7**
F44A	**Big Bay de Noc** baz=180,SNR=5.6	**33.79**	**360**	P	**P**	**10 36 41.1**	**-0.6**
F40A	**Park Falls** baz=174	**33.88**	**355**	P	**P**	**10 36 41.8**	**-0.8**
F39A	**Loretta** baz=172	**33.95**	**354**	P	**P**	**10 36 42.7**	**-0.4**
LONY	**Lake Ozonia** baz=201	**33.99**	**15**	P	**P**	**10 36 43.5**	**-0.1**
LONY	**Lake Ozonia** 8.0nm,0.9s	**33.99**	**15**	*e*P	**P**	**10 36 43.3**	**-0.3**
COWI	**Conover** 3.7nm,0.7s	**34.00**	**357**	*e*P	**P**	**10 36 42.4**	**-1.2**
F38A	**Pierce - Schro** baz=171	**34.09**	**353**	P	**P**	**10 36 43.8**	**-0.6**
E43A	**Lone Tree Farm** baz=179	**34.20**	**359**	P	**P**	**10 36 44.5**	**-0.7**
E43A	**Lone Tree Farm** 7.1nm,0.7s	**34.20**	**359**	*e*P	**P**	**10 36 44.0**	**-1.2**
F36A	**Milaca** baz=168	**34.22**	**351**	P	**P**	**10 36 44.9**	**-0.6**
F36A	**Milaca** 5.2nm,1.0s	**34.22**	**351**	*e*P	**P**	**10 36 44.1**	**-1.3**
E41A	**Kenton** baz=176	**34.35**	**357**	P	**P**	**10 36 45.8**	**-0.8**
E39A	**Mellen** baz=173	**34.38**	**355**	P	**P**	**10 36 46.3**	**-0.5**
E40A	**Wakefield** baz=174	**34.39**	**356**	P	**P**	**10 36 46.4**	**-0.5**
PEMO	**Pembroke** baz=196	**34.39**	**11**	P	**P**	**10 36 46.5**	**-0.4**
G32A	**Webster** baz=161	**34.40**	**346**	P	**P**	**10 36 46.3**	**-0.8**

G32A	**Webster**	**34.40**	**346**	*e*P	**P**	**10 36 45.4**	**-1.7**
	11nm,0.8s						
ALFO	**Alfred**	**34.86**	**14**	P	**P**	**10 36 50.8**	**-0.2**
	baz=200						
PDAR	**Pinedale Array**	**36.59**	**331**	P	**P**	**10 37 06.0**	**-0.1**
	0.1nm,0.3s,baz=137,slow=5.8,SNR=3.0						
AGMN	**Agassiz Nation**	**36.97**	**350**	P	**P**	**10 37 08.0**	**-0.9**
	baz=165						
A33A	**Warroad**	**37.51**	**350**	P	**P**	**10 37 12.7**	**-0.6**
	baz=166						
MATQ	**Matagami**	**38.27**	**9**	P	**P**	**10 37 18.8**	**-0.9**
	baz=194						
NVAR	**Mina Array Bea**	**38.66**	**318**	P	**P**	**10 37 24.9**	**+1.5**
	1.0nm,0.8s,baz=128,slow=6.9,SNR=8.7						
CHGQ	**Chibougamau**	**39.02**	**12**	P	**P**	**10 37 24.8**	**-1.1**
	baz=199						
HAWA	**Hanford**	**44.19**	**327**	*e*P	**P**	**10 38 12.3**	**+4.3**
	6.3nm,0.6s						
SCHQ	**Schefferville**	**45.36**	**16**	P	**P**	**10 38 15.8**	**-1.3**
	3.4nm,0.4s,baz=225,slow=10.0,SNR=5.8						
SPITS	**Spitsbergen Ar**	**80.87**	**12**	P	**P**	**10 42 09.7**	**-0.4**
	0.4nm,0.4s,baz=294,slow=11,SNR=5.2						
WMQ	**Urumqi**	**124.12**	**5**	P	**PKPdf**	**10 48 53.1**	**-0.8**
WMQ				LR	LR		
	comp=N,180nm,39.2s						
WMQ				LR	LR		
	comp=E,390nm,39.0s						
WMQ				LR	LR		
	comp=Z,56nm,24.3s						
HHC	**Hu-ho-hao-te**	**124.78**	**343**	*e*P	**PKPdf**	**10 48 51.8**	**-3.5**
KSH	**Kashi**	**126.12**	**17**	*e*PKP	**PKPdf**	**10 48 53.6**	**-4.4**
LZH	**Lanzhou**	**131.13**	**349**	*e*PKP	**PKPdf**	**10 49 07.5**	**-0.1**
LZH				sPKP		10 49 21.9	
LZH				pPKP	pPKPdf	10 49 58.8	-0.7
ASAR	**Alice Springs**	**140.06**	**248**	PKhKP	PKPpre	10 49 17.5	
	comp=Z,0.6nm,0.9s,baz=101,slow=3.5,SNR=4.8						
ASAR				PKP	**PKPdf**	**10 49 24.4**	**+0.1**
	comp=Z,0.7nm,0.6s,baz=117,slow=3.7,SNR=4.5						
WRA	**Warramunga Arr**	**140.13**	**253**	PKhKP	PKPpre	10 49 19.4	
	comp=Z,0.3nm,0.5s,baz=91,slow=2.5,SNR=4.9						
WRA				PKP	**PKPdf**	**10 49 25.1**	**+0.5**
	comp=Z,1.4nm,0.5s,baz=90,slow=2.4,SNR=16						
FITZ	**Fitzroy Crossi**	**148.50**	**255**	PKPbc	**PKPbc**	**10 49 43.3**	**+0.5**
	comp=Z,2.6nm,0.8s,baz=126,slow=5.0,SNR=5.0						
NWAO	**Narrogin (SRO)**	**149.99**	**222**	PKPbc	**PKPbc**	**10 49 46.5**	**+0.4**
	comp=Z,6.1nm,0.7s,baz=270,slow=1.0,SNR=4.6						

IDC 14 10:31:04.8±1.5, 11°.94N×141°.70E, h0^{km}, mb3.4/4, mb1 3.8/5, mb1mx3.4/56, mbtmp3.5/5, ML3.8/1, MS3.6/1, Ms1 3.6/1, ms1mx2.3/34, Error ellipse: s-maj=82.0km s-min=22.4km az=117.0, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUMO	**Guam**	**3.50**	**62**	Pn	Pn	10 31 59.5	-1.0
	8.5nm,0.3s,baz=214,slow=7.3,SNR=6.2						
GUMO				Sn	Sn	10 32 35.1	-7.6
	4.5nm,0.3s,baz=311,slow=20,SNR=2.1						
WRA	**Warramunga Arr**	**32.50**	**193**	P	P	10 37 36.6	-0.9
	0.3nm,0.8s,baz=10,slow=9.8,SNR=3.1						
ASAR	**Alice Springs**	**36.20**	**192**	P	P	10 38 10.1	+0.5
	0.2nm,0.5s,baz=25,slow=11,SNR=6.9						
LEM	**Lembang**	**38.69**	**243**	LR	LR	10 55 10.1	
	comp=Z,77nm,18.8s,baz=170,slow=37						
ILAR	**Eielson Array**	**71.38**	**25**	P	P	10 42 26.3	-0.2
	0.4nm,0.7s,baz=246,slow=5.7,SNR=6.1						
NVAR	**Mina Array Bea**	**90.36**	**51**	P	P	10 44 09.3	+0.6
	0.2nm,0.5s,baz=257,slow=6.4,SNR=3.3						

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*ISCJB **14** 10:36:19.4±1.5, 36°.5S±0°.3×52°.4E±0°.3, h10^{km}, mb3.7/4, MS3.4/5, Error ellipse: s-maj=49.5km s-min=20.3km az=136.0*

*IDC **14** 10:36:19.8±1.5, 36°.48S×52°.47E, h0^{km}, mb3.9/4, mb1 4.1/5, mb1mx3.6/60, mbtmp3.9/5, ML3.8/1, MS3.4/5, Ms1 3.4/5, ms1mx2.9/53, Error ellipse: s-maj=60.7km s-min=27.0km az=32.0*

ISC 14 10:36:21.2±1.7, 36°.5S±0°.3×52°.5E±0°.3, h10^{km}, n14, σ0^{s}70/7, mb4.0/4, MS3.5/5, Southwest Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	**Ambohidratompo**	**18.45**	**344**	P	**P**	**10 40 37.6**	**+0.4**
	0.3nm,0.3s,baz=162,slow=13,SNR=3.1						
BOSA	**Boshof**	**24.18**	**281**	LR	LR	10 48 45.5	
	comp=Z,55nm,21.9s,baz=22,slow=31						
KMBO	**Kilima Mbogo**	**37.90**	**335**	LR	LR	10 57 21.0	
	comp=Z,96nm,19.3s,baz=113,slow=33						
H01W2	**Cape Leeuwin H**	**49.35**	**107**	T	T	11 38 06.4	
	baz=252,slow=75,SNR=4.6						
H01W3	**Cape Leeuwin H**	**49.35**	**107**	T	T	11 38 09.9	
	baz=252						
H01W1	**Cape Leeuwin H**	**49.37**	**107**	T	T	11 38 12.1	
	baz=252,slow=75,SNR=4.9						
TORD	**Torodi Ar. Bea**	**68.73**	**306**	P	**P**	**10 47 25.4**	**0.0**
	1.3nm,1.0s,baz=137,slow=6.9						
TORD				LR	LR	11 17 17.5	
	comp=Z,27nm,18.4s,baz=65,slow=36						
ASAR	**Alice Springs**	**69.75**	**105**	P	**P**	**10 47 31.4**	**-0.4**
	0.3nm,0.5s,baz=220,slow=7.6,SNR=5.6						
CMAR	**Chiang Mai Arr**	**70.11**	**47**	P	**P**	**10 47 33.4**	**-0.4**
	0.5nm,0.4s,baz=224,slow=6.3,SNR=4.2						
WRA	**Warramunga Arr**	**72.08**	**102**	P	**P**	**10 47 47.1**	**+1.1**
	1.0nm,0.9s,baz=233,slow=5.4,SNR=5.2						
KOWA	**Kowa**	**73.51**	**303**	LR	LR	11 21 28.1	
	comp=Z,33nm,18.1s,baz=228,slow=37						
IDI	**Anoyia**	**75.89**	**337**	LR	LR	11 23 28.6	
	comp=Z,14nm,18.6s,baz=22,slow=37						
INK	**Inuvik**	**147.96**	**4**	PKPbc	**PKPbc**	**10 56 05.7**	**0.0**
	1.1nm,0.8s,baz=359,slow=4.5,SNR=4.4						
ILAR	**Eielson Array**	**149.42**	**16**	PKPbc	**PKPbc**	**10 56 09.0**	**-0.6**
	1.5nm,1.0s,baz=309,slow=3.1,SNR=11						

IDC 14 10:39:44.1±3.2, 7°.51S×128°.57E, h109^{km}±43^{km}, mb3.1/2, mb1 3.3/6, mb1mx3.1/51, mbtmp3.5/6, Error ellipse: s-maj=71.1km s-min=22.7km az=92.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIJI	**Sorong**	**7.12**	**22**	P	Pn	10 41 25.9	+0.2
	0.6nm,0.3s,baz=263,slow=17,SNR=2.5						
SIJI				S	Sn	10 42 41.6	-3.6
	0.7nm,0.3s,baz=90,slow=17,SNR=2.4						
FITZ	**Fitzroy Crossi**	**10.91**	**195**	P	Pn	10 42 17.2	+0.1
	0.6nm,0.3s,baz=22,slow=12,SNR=48						
FITZ				S	Sn	10 44 12.5	-4.7
	0.3nm,0.3s,baz=353,slow=16,SNR=3.2						
WRA	**Warramunga Arr**	**13.57**	**156**	P	Pn	10 42 50.4	-1.9
	0.3nm,0.3s,baz=333,slow=13,SNR=11						
WRA				S	Sn	10 45 12.3	-10
	0.5nm,0.3s,baz=334,slow=22,SNR=9.0						
ASAR	**Alice Springs**	**16.86**	**163**	P	P	10 43 35.4	+1.4
	0.1nm,0.3s,baz=337,slow=9.9,SNR=15						
ASAR				S	Sn	10 46 33.5	-7.8
	0.1nm,0.3s,baz=310,slow=17,SNR=5.9						
MKAR	**Makanchi Array**	**67.88**	**328**	P	P	10 50 31.3	+0.3
	0.2nm,0.4s,baz=124,slow=6.6,SNR=2.2						
KURBB	**Kurchatov Arra**	**72.20**	**329**	P	P	10 50 56.8	-0.4
	0.2nm,0.6s,baz=124,slow=5.5,SNR=2.0						

DJA 14 10:58:29.6±3.2, 3°S±4°×12°3E±°, h21^{km}±34^{km}, M3.6/9, MLv3.6/9, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KDI	**Kendari**	**1.01**	**175**	P	Pb	10 58 48.1	-0.4
LUWI	**Luwuk**	**1.90**	**7**	P	Pn	10 59 01.1	+0.3
APSI	**Ampana**	**2.20**	**336**	P	Pn	10 59 04.3	-0.6
TTSI	**Tana Toraja**	**2.71**	**268**	P	Pn	10 59 11.7	-0.2
SPSI	**Sidrap Palu**	**2.94**	**250**	P	Pn	10 59 15.1	0.0
BKSI	**Bulukumba**	**3.37**	**225**	P	Pn	10 59 21.2	+0.2
MRSI	**Marisa**	**3.44**	**350**	P	Pn	10 59 22.2	+0.1
SANI	**Sanana**	**3.57**	**76**	P	Pn	10 59 23.3	-0.4
MPSI	**Mapaga**	**4.19**	**321**	P	Pn	10 59 31.7	-0.6

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*NIED **14** 11:17:00, 45°.60N×151°.60E, h14^{km}, Mw3.8 Best double couple: M$_0$5.11000×10^{14} NP1:φ$_s$239.00000°, δ38.00000°, λ120.00000°. NP2:φ$_s$23.00000°, δ58.00000°, λ69.00000°.*

*JMA **14** 11:17:51.6±0.9, 45°.55N×151°.58E, h30^{km}, M4.2*

*SKHL **14** 11:17:53.0±0.6, 45°.02N×151°.73E, h46^{km}±8^{km}, mb4.6/4*

*MOS **14** 11:17:53.2±0.8, 45°.48N×151°.49E, h51^{km}, mb4.2/5, Error ellipse: s-maj=18.2km s-min=11.2km az=147.2*

*IDC **14** 11:17:55.6±3.3, 45°.49N×151°.48E, h55^{km}±29^{km}, mb3.4/9, mb1 3.6/11, mb1mx3.3/72, mbtmp3.7/11, ML3.4/1, MS2.8/9, Ms1 2.8/9, ms1mx2.6/52, Error ellipse: s-maj=25.5km s-min=19.5km az=102.0*

ISC 14 11:17:52.2±0.9, 45°.07N±0°.09×151°.70E±0°.08, h36^{km}, n59, σ2^{s}35/66, mb3.9/10, MS3.3/3, 1D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.72**	**275**	*i* P	**Pn**	**11 18 34.0**	**+0.7**
KUR				AMB	AMB	11 18 37.0	
	19nm,0.4s						
KUR				AMB	AMB	11 18 37.0	
	10.0nm,0.4s						
KUR				AMB	AMB	11 18 37.0	
	69nm,0.4s						
KUR				*e*S	**Sn**	**11 19 04.7**	**-0.2**
KUR				A	A	11 19 06.0	
	349nm,0.4s						
KUR				A	A	11 19 06.0	
	302nm,0.4s						
KUR	**Kuril'sk**	**2.72**	**275**	*d* *i*PN	**Pn**	**11 18 34.0**	**+0.7**
KUR				*e*S	**Sn**	**11 19 04.0**	**-0.9**
KUR				pmax	pmax		
	comp=N,69nm,0.4s						
KUR				pmax	pmax		
	comp=N,19nm,0.1s						
KUR				pmax	pmax		
	comp=E,10.0nm,0.1s						
KUR				smax	smax		
	comp=N,349nm,0.4s						
KUR				smax	smax		
	comp=E,302nm,0.5s						
SHO	**Shikotan**	**3.69**	**253**	*e*P	**Pn**	**11 18 48.0**	**+1.4**
SHO				AMB	AMB	11 18 52.0	
	comp=E,8.0nm,0.3s						
SHO				AMB	AMB	11 18 52.0	
	comp=E,17nm,0.3s						
SHO				*e*S	**Sn**	**11 19 29.8**	**+1.0**
SHO				A	A	11 19 35.0	
	comp=E,67nm,0.3s						
SHO				A	A	11 19 35.0	
	comp=E,103nm,0.3s						
SHO	**Shikotan**	**3.69**	**253**	*e*PN	**Pn**	**11 18 48.6**	**+2.0**
SHO				*e*S	**Sn**	**11 19 30.2**	**+1.4**
SHO				pmax	pmax		
	comp=Z,17nm,0.5s						
SHO				pmax	pmax		
	comp=N,8.0nm,0.4s						
SHO				pmax	pmax		
	comp=Z,15nm,0.4s						
SHO				smax	smax		
	comp=N,37nm,0.2s						
SHO				smax	smax		
	comp=E,103nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**4.30**	**258**	*e*P	**Pn**	**11 18 57.0**	**+2.0**
YUK				AMB	AMB	11 19 02.0	
	comp=E,8.0nm,0.3s						
YUK				AMB	AMB	11 19 02.0	
	comp=E,37nm,0.3s						
YUK				AMB	AMB	11 19 02.0	
	comp=E,73nm,0.3s						
YUK				*e*S	**Sn**	**11 19 45.0**	**+1.1**
YUK				A	A	11 19 53.0	
	comp=E,136nm,0.4s						
YUK				A	A	11 19 53.0	
	comp=E,105nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**4.30**	**258**	*e*PN	**Pn**	**11 18 57.6**	**+2.6**
YUK				*e*S	**Sn**	**11 19 45.7**	**+1.8**
YUK				pmax	pmax		
	comp=E,37nm,0.2s						
YUK				pmax	pmax		
	comp=Z,73nm,0.2s						
YUK				pmax	pmax		
	comp=N,8.0nm,0.1s						
YUK				smax	smax		
	comp=N,136nm,0.4s						
YUK				smax	smax		
	comp=E,105nm,0.4s						
LAGR	**Lagunnoye**	**4.35**	**259**	*e*P	**Pn**	**11 18 58.0**	**+2.3**
LAGR				*e*S	**Sn**	**11 19 46.0**	**+1.0**
LAGR				A	A	11 19 55.0	
	comp=E,266nm,0.3s						
LAGR				A	A	11 19 55.0	
	comp=E,160nm,0.3s						
LAGR	**Lagunnoye**	**4.35**	**259**	*e*PN	**Pn**	**11 18 58.8**	**+3.1**
LAGR				S	**Sn**	**11 19 46.7**	**+1.7**
LAGR				smax	smax		
	comp=E,160nm,0.3s						
LAGR				smax	smax		
	comp=N,266nm,0.5s						
GRPR	**Tuman**	**4.37**	**258**	*e*P	**Pn**	**11 18 58.0**	**+1.9**
GRPR				AMB	AMB	11 19 04.0	
	comp=N,38nm,0.4s						
GRPR				AMB	AMB	11 19 04.0	
	comp=N,61nm,0.4s						
GRPR				*e*S	**Sn**	**11 19 47.0**	**+1.3**
GRPR				A	A	11 19 52.0	
	comp=N,68nm,0.4s						
GRPR				A	A	11 19 52.0	
	comp=N,161nm,0.4s						
GRPR	**Tuman**	**4.37**	**258**	*e*PN	**Pn**	**11 18 58.0**	**+1.9**
GRPR				*e*S	**Sn**	**11 19 47.2**	**+1.5**
GRPR				pmax	pmax		
	comp=Z,61nm,0.3s						
GRPR				pmax	pmax		
	comp=E,38nm,0.3s						
GRPR				smax	smax		
	comp=E,161nm,0.4s						
GRPR				smax	smax		
	comp=N,68nm,0.3s						
NEM2	**Nemuro 2**	**4.61**	**250**	P	**Pn**	**11 18 59.8**	**+0.5**
NEM2				*e*S	**Sn**	**11 19 50.2**	**-1.3**
GLVR	**Golovnino**	**4.62**	**255**	*e*P	**Pn**	**11 19 01.0**	**+1.5**
GLVR				*e*S	**Sn**	**11 19 53.0**	**+1.1**
GLVR	**Golovnino**	**4.62**	**255**	*e*PN	**Pn**	**11 19 01.8**	**+2.3**
GLVR				S	**Sn**	**11 19 53.3**	**+1.4**
JRA	**Rausu**	**4.84**	**259**	P	**Pn**	**11 19 04.3**	**+1.8**
JNK	**Nakash**	**5.22**	**256**	P	**Pn**	**11 19 09.3**	**+1.5**
JAK	**Akkeshi**	**5.46**	**250**	P	**Pn**	**11 19 11.5**	**+0.5**
JAK				*e*S	**Sn**	**11 20 10.1**	**-2.4**
JTKR	**Abashiri--Toko**	**5.68**	**262**	P	**Pn**	**11 19 16.0**	**+2.0**
JAR	**Ashorobuto**	**5.97**	**255**	P	**Pn**	**11 19 19.9**	**+1.9**
JAR				*e*S	**Sn**	**11 20 26.2**	**+1.1**
JMP	**Maruseppu**	**6.06**	**263**	P	**Pn**	**11 19 21.7**	**+2.5**
JMP				*e*S	**Sn**	**11 20 24.0**	**-3.2**
JOB	**Onbets**	**6.07**	**252**	*e*S	**Sn**	**11 20 26.2**	**-1.4**
YSS	**Yuzh-Sakhalins**	**6.51**	**290**	*e*PN	Pn	11 19 18.7	-6.6
YSS				MLR	MLR		
	comp=Z,400nm,12.0s						
JCH	**Churui**	**6.51**	**251**	P	**Pn**	**11 19 27.1**	**+1.7**
JCH				*e*S	**Sn**	**11 20 36.5**	**-1.9**
JKK2	**Kamakawa 2**	**6.52**	**263**	P	**Pn**	**11 19 27.4**	**+1.9**
ASAJ	**Asahikawa**	**6.57**	**265**	P	**Pn**	**11 19 28.4**	**+2.1**
	comp=Z,0.8nm,0.3s,baz=71,slow=22,SNR=10						
ASAJ				S	Sn	11 20 50.0	+10
	baz=109,slow=18,SNR=1.5						
ASAJ				LR	LR	11 22 12.9	
	comp=Z,108nm,18.8s,baz=85,slow=40						
ASAJ	**Asahikawa**	**6.57**	**265**	P	**Pn**	**11 19 28.7**	**+2.5**
MYR	**Moyori**	**6.70**	**248**	*e*P	**Pn**	**11 19 30.4**	**+2.3**
JFR	**Furan**	**6.83**	**257**	P	**Pn**	**11 19 33.5**	**+3.7**
JEM	**Erimo**	**6.92**	**247**	*e*S	**Sn**	**11 20 47.8**	**-0.6**
JNBK	**Urakawa-nobuka**	**7.06**	**250**	P	**Pn**	**11 19 35.4**	**+2.4**
JNBK				*e*S	**Sn**	**11 20 50.6**	**-1.3**
JNB	**Noboribetsu**	**8.14**	**255**	P	**Pn**	**11 19 50.1**	**+2.3**
JNB				*e*S	**Sn**	**11 21 16.5**	**-2.0**
JKB	**Kayabe**	**8.38**	**251**	P	**Pn**	**11 19 51.8**	**+0.7**
JKB				*e*S	**Sn**	**11 21 19.2**	**-5.2**
JANG	**Nango**	**8.84**	**241**	*e*S	**Sn**	**11 21 29.2**	**-6.6**
JTH	**Tanohata**	**8.89**	**238**	*e*S	**Sn**	**11 21 30.2**	**-6.7**
JTM	**Tenmabayashi**	**8.90**	**245**	*e*S	**Sn**	**11 21 32.1**	**-4.9**
PETK	**Petropavlovsk-**	**8.95**	**24**	P	**Pn**	**11 19 58.0**	**-0.8**
	baz=190,slow=11						
PETK				LR	LR	11 23 31.6	
	comp=Z,35nm,19.2s,baz=210,slow=39						
PETK	**Petropavlovsk-**	**8.95**	**24**	PN	**Pn**	**11 19 58.0**	**-0.8**
PETK				MLR	MLR		
	comp=Z,35nm,19.2s						
USRK	**Ussuriysk Ar.**	**14.06**	**273**	LR	LR	11 26 59.7	
	comp=Z,72nm,18.4s,baz=300,slow=39						
KLR	**Kul'dur**	**14.19**	**294**	LR	LR	11 26 28.0	
	comp=Z,4.7nm,20.8s,baz=130,slow=37						
MA2	**Magadan**	**14.54**	**358**	LR	LR	11 26 24.8	
	comp=Z,29nm,18.9s,baz=179,slow=36						
ZEA	**Zeya**	**18.04**	**307**	*e*P	**P**	**11 22 00.5**	**+0.5**
KSRS	**Korea Array**	**19.38**	**255**	LR	LR	11 29 20.7	
	comp=Z,13nm,18.8s,baz=220,slow=35						
H11N2	**WAKE ISLAND Hy**	**28.24**	**149**	T	T	11 54 27.0	
	baz=338,slow=75,SNR=27						
H11N1	**WAKE ISLAND Hy**	**28.26**	**149**	T	T	11 54 28.0	
	baz=338,slow=75,SNR=18						
H11N3	**WAKE ISLAND Hy**	**28.26**	**149**	T	T	11 54 28.3	
	baz=338,slow=75,SNR=18						
H11S1	**WAKE ISLAND Hy**	**29.30**	**150**	T	T	11 55 46.7	
	baz=339,slow=76,SNR=14						
H11S3	**WAKE ISLAND Hy**	**29.30**	**150**	T	T	11 55 49.7	
	baz=339,slow=76,SNR=14						
H11S2	**WAKE ISLAND Hy**	**29.31**	**150**	T	T	11 55 41.5	
	baz=339,slow=76,SNR=17						
TLY	**Talaya**	**32.11**	**299**	LR	LR	11 37 59.5	
	comp=Z,35nm,20.0s,baz=114,slow=38						
MKAR	**Makanchi Array**	**46.85**	**298**	P	**P**	**11 26 17.5**	**-1.0**
	comp=Z,0.2nm,0.5s,baz=76,slow=7.6,SNR=2.9						
MKAR				LR	LR	11 47 03.2	
	comp=Z,33nm,18.3s,baz=82,slow=38						
KURK	**Kurchatov**	**47.48**	**304**	P	**P**	**11 26 22.1**	**-1.2**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURBB	**Kurchatov Arra**	**47.57**	**304**	P	**P**	**11 26 22.1**	**-1.9**
	comp=Z,1.1nm,0.6s,baz=72,slow=8.7,SNR=2.9						
AKTO	**Aktyubinsk**	**59.11**	**312**	LR	LR	11 55 20.4	
	comp=Z,37nm,18.0s,baz=116,slow=38						
FINES	**FINESS Array B**	**65.13**	**334**	P	**P**	**11 28 26.0**	**-2.8**
	comp=Z,1.4nm,0.8s,baz=39,slow=7.1,SNR=3.7						
WRA	**Warramunga Arr**	**66.61**	**198**	P	**P**	**11 28 41.8**	**+3.0**
	comp=Z,0.8nm,1.0s,baz=15,slow=6.9,SNR=3.2						
HFS	**Hagfors**	**69.68**	**339**	P	**P**	**11 28 56.2**	**-1.5**
	comp=Z,0.8nm,0.5s,baz=54,slow=7.3,SNR=5.1						
ASAR	**Alice Springs**	**70.31**	**197**	P	**P**	**11 29 05.9**	**+4.0**
	comp=Z,0.3nm,0.8s,baz=27,slow=6.3,SNR=3.3						
KBZ	**Khabaz**	**71.31**	**314**	P	**P**	**11 29 07.7**	**-0.1**
	comp=Z,1.7nm,0.6s,baz=86,slow=2.8,SNR=3.9						
EKA	**Eskdalemuir Ar**	**77.73**	**346**	P	**P**	**11 29 44.4**	**-0.5**
	comp=Z,0.3nm,0.4s,baz=24,slow=5.5,SNR=3.3						
TXAR	**Lajitas Array**	**79.19**	**59**	P	**P**	**11 29 54.5**	**+0.9**
	comp=Z,0.3nm,1.0s,baz=317,slow=4.9,SNR=3.1						

IDC 14 11:32:22.4±1.5, 4°.46N×124°.03E, h0^{km}, mb3.8/5, mb1 4.0/5, mb1mx3.5/57, mbtmp3.9/5, MS2.8/1, Ms1 3.0/1, ms1mx2.2/57, Error ellipse: s-maj=123.5km s-min=19.2km az=67.0, Celebes Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**22.48**	**176**	P	P	11 37 22.4	-1.0
	2.7nm,1.0s,baz=347,slow=11,SNR=6.3						
WRA	**Warramunga Arr**	**26.29**	**158**	P	P	11 38 00.6	+0.8
	1.0nm,0.3s,baz=338,slow=9.4,SNR=17						
CMAR	**Chiang Mai Arr**	**28.19**	**302**	LR	LR	11 50 39.8	
	comp=Z,17nm,19.4s,baz=215,slow=39						
ASAR	**Alice Springs**	**29.57**	**161**	P	P	11 38 29.0	-0.2
	0.6nm,0.5s,baz=339,slow=7.3,SNR=17						
MKAR	**Makanchi Array**	**55.44**	**326**	P	P	11 41 59.3	+0.5
	0.9nm,0.5s,baz=126,slow=7.9,SNR=7.3						
KURBB	**Kurchatov Arra**	**59.69**	**328**	P	P	11 42 28.0	-0.6
	0.3nm,0.3s,baz=121,slow=7.9,SNR=5.4						

JMA 14 11:45:03.7±0.2, 38°.25N×144°.36E, h49^{km}, M3.5, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	**2.26**	**292**	P	Pn	11 45 39.9	+1.3
OFUJ				*e*S	Sn	11 46 06.4	+1.1
JIO	**Ouri**	**2.38**	**276**	P	Pn	11 45 41.3	+1.1
JIO				S	Sn	11 46 08.9	+0.8
MIYJ	**Miyakonagasawa**	**2.38**	**305**	P	Pn	11 45 41.2	+0.9
MIYJ				*e*S	Sn	11 46 09.4	+1.1
JMK	**Ichinoseki**	**2.56**	**287**	P	Pn	11 45 44.2	+1.6
JMK				*e*S	Sn	11 46 14.1	+1.6
JOM	**Ohasama**	**2.69**	**298**	P	Pn	11 45 46.0	+1.6
JOM				S	Sn	11 46 17.7	+1.9
JANG	**Nango**	**3.06**	**315**	P	Pn	11 45 50.5	+0.9
JYK	**Kaneyama**	**3.21**	**283**	P	Pn	11 45 53.8	+2.3
JYK				*e*S	Sn	11 46 31.0	+2.5
JFT	**Otama**	**3.27**	**258**	P	Pn	11 45 54.2	+1.8
JFT				S	Sn	11 46 31.5	+1.5
JOT	**Ohata**	**4.04**	**322**	P	Pn	11 46 04.2	+1.3
JCH	**Churui**	**4.43**	**350**	P	Pn	11 46 07.8	-0.5
JKB	**Kayabe**	**4.44**	**326**	P	Pn	11 46 10.2	+1.8
JRY	**Ryogami san**	**4.90**	**245**	P	Pn	11 46 15.6	+0.8
JRY				*e*S	Sn	11 47 09.3	-0.9
NEM2	**Nemuro 2**	**5.22**	**11**	P	Pn	11 46 16.6	-2.5
NEM2				S	Sn	11 47 11.7	-6.2
JTKR	**Abashiri--Toko**	**5.73**	**357**	P	Pn	11 46 25.6	-0.5
JTKR				*e*S	Sn	11 47 26.8	-3.6

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*TIR **14** 12:02:02.1, 41°.94N×20°.34E, h4^{km}, Md2.5/3*

CSEM 14 12:02:09.8±0.4, 41°.94N×20°.40E, h5^{km}, ML1.7, Error ellipse: s-maj=8.8km s-min=8.0km az=69.0, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PHP	**Peshkopia**	**0.26**	**172**	*i* Pg	Pg	12 02 15.2	+0.3
PHP				*i* Sg	Sb	12 02 26.1	+4.3
PHP	**Peshkopia**	**0.26**	**172**	*i* PG	Pg	12 02 15.2	+0.3
PHP				*i* SG	Sb	12 02 26.1	+4.3
PRZK	**Prizren**	**0.38**	**45**	P	Pg	12 02 17.6	+0.4
PRZK				S	Sg	12 02 20.2	-2.0
PUK	**Puka**	**0.39**	**285**	*i* Pg	Pg	12 02 17.1	-0.2
PUK				*i* Sg	Sg	12 02 22.4	0.0
PUK	**Puka**	**0.39**	**285**	*i* PG	Pg	12 02 17.1	-0.2
PUK				*i* SG	Sg	12 02 22.4	-0.1
BCI	**Bajram Curri**	**0.49**	**330**	*i* Pg	Pg	12 02 18.5	-0.7
BCI				*i* Sg	Sb	12 02 27.7	-0.7
BCI	**Bajram Curri**	**0.49**	**330**	*i* PG	Pg	12 02 18.5	-0.8
BCI				*i* SG	Sb	12 02 27.7	-0.7
PEJK	**Peje**	**0.70**	**353**	P	Pb	12 02 24.0	-0.6
PEJK				S	Sg	12 02 26.7	-5.8

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*IDC **14** 12:12:06.6±1.3, 9°.86N×126°.31E, h0^{km}, mb4.0/9, mb1 4.1/9, mb1mx3.7/59, mbtmp4.0/9, MS2.7/1, Ms1 2.7/1, ms1mx2.3/52, Error ellipse: s-maj=119.6km s-min=16.5km az=71.0*

*MAN **14** 12:12:09.3, 9°.84N×126°.48E, h7^{km}, mb4.6, ML3.4, MS3.3*

ISC 14 12:12:08.4±1.6, 9°.94N±0°.03×126°.50E±0°.06, h11^{km}±10^{km}, n31, σ1^{s}66/37, mb4.0/9, 4C-2D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	**1.01**	**261**	⇓ *e*P	**Pb**	**12 12 27.7**	**-0.3**
SCPH				*e*S	**Sg**	**12 12 39.2**	**-1.9**
BUTP	**Butuan**	**1.30**	**222**	*e*P	**Pn**	**12 12 31.5**	**-1.0**
BUTP				*e*S	**Sg**	**12 12 49.0**	**-1.3**
MSLP	**Maasin**	**1.63**	**277**	*e*P	**Pb**	**12 12 38.2**	**-0.3**
MSLP				*e*S	**Sg**	**12 13 00.9**	**0.0**
BIPH	**Bislig**	**1.75**	**185**	⇓ *e*P	**Pg**	**12 12 43.6**	**+1.6**
BIPH				*e*S	**Sb**	**12 13 02.5**	**-0.1**
PLP	**Palo**	**1.93**	**309**	⇑ *e*P	**Pb**	**12 12 43.0**	**-0.6**
PLP				*i* S	**Sg**	**12 13 09.3**	**-1.1**
OCLP	**Ormoc**	**2.17**	**301**	*e*P	**Pb**	**12 12 47.3**	**-0.3**
OCLP				*e*S	**Sg**	**12 13 18.9**	**+0.9**
CGP	**Cagayan de Oro**	**2.32**	**231**	⇑ *e*P	**Pn**	**12 12 47.6**	**+1.1**
CGP				*i* S	**Sn**	**12 13 15.2**	**+0.2**
BUKP	**Musuan**	**2.50**	**215**	*e*P	**Pn**	**12 12 50.5**	**+1.5**
BUKP				*e*S	**Sn**	**12 13 21.7**	**+2.2**
LLP	**Lapu-Lapu**	**2.53**	**279**	⇑ *e*P	**Pb**	**12 12 52.2**	**-1.5**
LLP				*e*S	**Sn**	**12 13 23.3**	**+3.1**
TBP	**Tagbilaran**	**2.62**	**265**	*e*P	**Pb**	**12 12 54.6**	**-0.7**
CNP	**Catarman**	**3.13**	**325**	*e*P	**Pb**	**12 13 00.5**	**-3.5**
CNP				*e*S	**Sg**	**12 13 50.2**	**+1.3**
PAGZ	**Pagadian**	**3.72**	**236**	*e*P	**Pn**	**12 13 06.5**	**+0.6**
PAGZ				*e*S	**Sn**	**12 13 49.3**	**-0.4**
GUIM	**Jordan**	**3.91**	**280**	*e*P	**Pn**	**12 13 08.7**	**+0.3**
GUIM				*e*S	**Sn**	**12 13 51.3**	**-3.1**
RCP	**Roxas**	**4.03**	**294**	⇑ *e*P	**Pn**	**12 13 13.7**	**+3.7**
PVCP	**Virac**	**4.30**	**328**	*e*P	**Pn**	**12 13 16.7**	**+3.0**
PVCP				*e*S	**Sg**	**12 14 23.6**	**-2.9**
SIJI	**Sorong**	**11.74**	**156**	LR	LR	12 20 22.8	
	comp=Z,39nm,20.3s,baz=333,slow=42						
FITZ	**Fitzroy Crossi**	**27.88**	**182**	P	**P**	**12 17 57.8**	**-0.5**
	1.5nm,0.5s,baz=359,slow=8.0,SNR=7.3						
WRA	**Warramunga Arr**	**30.68**	**165**	P	**P**	**12 18 22.4**	**-0.9**

	0.3nm,0.6s,baz=343,slow=9.1,SNR=3.9						
ASAR	Alice Springs	34.18	168	P	P	12 18 53.0	-1.0
	0.3nm,0.4s,baz=351,slow=7.3,SNR=9.4						
H11S3	WAKE ISLAND Hy	39.79	73	T	T	13 02 35.4	
	baz=262						
H11S1	WAKE ISLAND Hy	39.81	73	T	T	13 02 37.5	
	baz=262						
H11S2	WAKE ISLAND Hy	39.81	73	T	T	13 02 39.3	
	baz=262						
H11N1	WAKE ISLAND Hy	40.14	71	T	T	13 03 04.5	
	baz=263,slow=74,SNR=21						
H11N2	WAKE ISLAND Hy	40.15	71	T	T	13 03 04.9	
	baz=263,slow=74,SNR=19						
H11N3	WAKE ISLAND Hy	40.16	71	T	T	13 03 05.8	
	baz=263,slow=74,SNR=24						
STKA	Stephens Creek	44.02	161	P	P	12 20 16.8	+0.7
	1.1nm,0.5s,baz=342,slow=6.4,SNR=2.8						
MKAR	Makanchi Array	52.43	323	P	P	12 21 20.4	-0.6
	1.0nm,0.6s,baz=121,slow=7.4,SNR=10						
KURBB	Kurchatov Arra	56.47	325	P	P	12 21 50.0	-0.3
	0.8nm,0.2s,baz=123,slow=7.0,SNR=4.9						
ARCES	ARCESS Array B	84.58	340	P	P	12 24 41.8	+0.3
	1.2nm,0.6s,baz=72,slow=7.8,SNR=5.9						
FINES	FINESS Array B	86.29	332	P	P	12 24 50.0	-0.2
	1.5nm,0.7s,baz=90,slow=5.7,SNR=10						
HFS	Hagfors	92.44	332	P	P	12 25 18.8	-0.4
	0.8nm,0.5s,baz=99,slow=8.9,SNR=4.3						

MOS ***14*** *12:14:17.6±0.8, 4°.78N×126°.57E, h33^{km}, mb5.1/20, Error ellipse: s-maj=17.2km s-min=6.4km az=119.6*

MAN ***14*** *12:14:19.5, 4°.26N×126°.76E, h80^{km}, mb5.0, ML3.9, MS4.0*

ISCJB ***14*** *12:14:22.6±0.2, 4°.76N±0°.02×126°.80E±0°.03, h81^{km}, mb4.5/77, Error ellipse: s-maj=4.9km s-min=2.6km az=156.3*

BJI ***14*** *12:14:22.4, 4°.73N×126°.66E, h73^{km}, mb4.6/34, mB4.8/18, Ms4.4/4, Ms7 4.1/4*

IDC ***14*** *12:14:23.0±2.3, 4°.73N×126°.61E, h69^{km}±21^{km}, mb4.1/26, mb1 4.2/29, mb1mx4.1/58, mbtmp4.5/29, MS3.2/8, Ms1 3.2/8, ms1mx2.9/57, Error ellipse: s-maj=20.6km s-min=9.7km az=75.0*

NEIC ***14*** *12:14:24.4±0.8, 4°.77N×126°.75E, h82^{km}±7^{km}, mb4.6/33, Error ellipse: s-maj=7.1km s-min=4.2km az=63.0*

DJA ***14*** *12:14:26.4±0.4, 5°N±4°×12°7E±°, h83^{km}±5^{km}, M4.7/15, mb4.8/15, mB5.0/7, MLv5.0/9, Mw(mB)4.3/7*

ISC 14 12:14:24.2±0.3, **4°.72N**±0°.04×**126°.83E**±0°.05, **h81**^{km}, **n212**, σ**2^{s}00**/235, **mb4.6**/77, **6C-5D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	2.28	346	eP	Pn	12 14 57.9	-2.0
MATI				eS	Sn	12 15 32.9	+5.7
GSPH	General Santos	2.31	306 ⇓	iP	Pn	12 14 57.9	-2.5
DAV	Davao City (W)	2.64	332	P	Pn	12 15 06.6	+1.8
	191nm,0.3s,baz=94,slow=16,SNR=8.1						
DAV				S	Sn	12 15 38.6	+2.7
	116nm,0.3s,baz=288,slow=7.6,SNR=3.9						
DAV				LR	LR	12 16 25.7	
	comp=Z,615nm,20.6s,baz=161,slow=48						
DAV	Davao City (W)	2.64	332	ePn	Pn	12 15 06.0	+1.2
DAV				S	Sn	12 15 38.6	+2.7
DMPH	Davao City--Mi	2.69	331 ⇓	eP	Pn	12 15 10.7	+5.3
DMPH				eS	Sn	12 15 50.2	+13
SKMP	Bagumbayan, Su	2.89	308	eP	Pn	12 15 08.1	0.0
SKMP				eS	Sn	12 15 46.1	+4.2
BIPH	Bislig	3.47	352 ⇓	eP	Pn	12 15 20.3	+4.3
BIPH				eS	Sn	12 16 12.7	+17
CTBH	Cotabato--PC H	3.57	314 ⇑	eP	Pn	12 15 15.8	-1.6
CTBH				i S	Sn	12 15 58.4	-0.1
BUKP	Musuan	3.59	331	eP	Pn	12 15 17.7	0.0
BUKP				eS	Sn	12 16 05.1	+6.0
TNTI	Ternate	3.96	172	P	Pn	12 15 22.1	-0.6
TNTI	Ternate	3.96	172	ePn	Pn	12 15 21.9	-0.8
TNTI				eSn	Sn	12 16 09.4	+1.4
CGP	Cagayan de Oro	4.27	330 ⇓	eP	Pn	12 15 31.2	+4.3
CGP				eS	Sn	12 16 22.3	+6.8
BUTP	Butuan	4.38	344	eP	Pn	12 15 31.3	+2.9
BUTP				eS	Sn	12 16 30.2	+12
PAGZ	Pagadian	4.62	312	eP	Pn	12 15 29.8	-1.9
PAGZ				eS	Sn	12 16 28.9	+4.8
KMSI	Cibinong	5.01	215	P	Pn	12 15 39.1	+2.2
LBMI	Labuha	5.37	173	P	Pn	12 15 41.6	-0.2
LLP	Lapu-Lapu	6.24	333	eP	Pn	12 15 54.8	+1.1
LLP				eS	Sn	12 17 07.5	+3.8
MRSI	Marisa	6.45	229	P	Pn	12 15 56.6	0.0
SANI	Sanana	6.78	187	P	Pn	12 15 57.5	-3.6
LUWI	Luwuk	7.02	215	P	Pn	12 16 06.5	+2.2
LUWI	Luwuk	7.02	215	ePn	Pn	12 16 04.3	0.0
SWI	Sorong	7.10	141	P	Pn	12 16 06.6	+1.1
SIJI	Sorong	7.11	141	P	Pn	12 16 04.9	-0.7
	23nm,0.3s,baz=331,slow=20,SNR=51						
SIJI				S	Sn	12 17 23.3	-1.6
	6.1nm,0.3s,baz=354,slow=23,SNR=4.1						
APSI	Ampana	7.62	223	P	Pn	12 16 15.1	+2.5
RCP	Roxas	7.90	329 ⇑	eP	Pn	12 16 19.5	+3.1
PALU	Palau	8.04	71	P	Pn	12 16 17.4	-0.9
	baz=8.1,SNR=8.5						
MPSI	Mapaga	8.18	238	P	Pn	12 16 19.2	-1.0
MYLDM	Lahad Datu	8.31	273	ePn	Pn	12 16 23.9	+1.9
MYLDM				eSn	Sn	12 17 59.9	+5.6
AAI	Ambon	8.46	171	P	Pn	12 16 23.8	-0.3
PCI	Palu	8.95	232	P	Pn	12 16 43.7	+13
FAKI	Fak Fak	9.32	144	ePn	Pn	12 16 36.2	+0.4
FAKI				eSn	Sn	12 18 19.4	+0.3
RKPI	Ransiki, Papua	9.61	130	P	Pn	12 16 42.4	+2.7
TTSI	Tana Toraja	10.42	222	P	Pn	12 16 51.6	+0.8
BAKI	Biak	10.97	122	P	Pn	12 17 01.7	+3.3
TGY	Tagaytay City	10.98	328	LR	LR	12 21 55.4	
	comp=Z,92nm,20.5s,baz=144,slow=42						
MTKI	Muara Teweh, K	13.18	245	P	P	12 17 33.0	-2.2
SBUM	Sibu	14.75	262	ePn	P	12 17 54.4	+1.7
BATI	Baumata	15.16	192	P	Pn	12 17 53.5	-0.5
	1.5nm,0.3s,baz=37,slow=3.2,SNR=1.9						
JAY	Jayapura	15.62	117	P	P	12 18 01.9	-0.5
	0.4nm,0.3s,baz=270,slow=2.0,SNR=2.3						
KSM	Kuching	16.81	259	eP	P	12 18 15.5	0.0
	29nm,0.7s						
PBKI	Pangkalan Bun	16.85	244	P	P	12 18 18.3	+2.4
	108nm,1.1s						
MTN	Manton Dam	17.97	166	eP	P	12 18 25.8	-2.5
	29nm,0.4s						
KDU	Kakadu	18.18	162	P	P	12 18 28.8	-1.8
	baz=18,SNR=6.0						
JAGI	Jajag, Banyuwa	18.21	224	P	Pn	12 18 31.7	0.0
TWG	Pinlang	18.83	343	eP	P	12 18 35.6	-2.1
	80nm,0.5s						
YULB	Yu-li	19.31	344	eP	P	12 18 41.1	-1.8
	12nm,0.6s						
TPUB	Ta-pu	19.41	343	eP	P	12 18 43.1	-0.9
	45nm,0.6s						
SSLB	Suanglung	19.78	344	eP	P	12 18 46.8	-1.3
	17nm,0.6s						
KNRA	Kununurra	20.36	175	P	P	12 18 55.0	+0.7
	baz=20,SNR=9.4						
YHNB	Yeheng	20.51	346	eP	P	12 18 55.7	-0.4
	188nm,1.9s						
FITZ	Fitzroy Crossi	22.71	183	P	P	12 19 20.1	+0.7
	3.8nm,0.5s,baz=8.2,slow=11,SNR=19						
MYKOM	Kota Tinggi	23.12	264	eP	P	12 19 23.4	-0.3
	81nm,1.8s						
COEN	Coen	24.65	139	P	P	12 19 37.8	+0.3
	baz=25,SNR=19						
COEN	Coen	24.65	139	eP	P	12 19 36.8	-0.7
	13nm,0.6s						
SKNT	Sakolnakorn	25.49	300	P	P	12 19 50.1	+5.0
	3.3nm,0.8s,1µm						
WRAB	Tennant Creek	25.59	163	eP	P	12 19 46.6	+0.5
	20nm,0.9s						
WRAB	Tennant Creek	25.59	163	eP	P	12 19 47.6	+1.6
WRA	Warramunga Arr	25.60	163	P	P	12 19 46.3	+0.2
	8.1nm,0.5s,baz=344,slow=10.0,SNR=58						
WB2	Warramunga Arr	25.60	163	eP	P	12 19 46.8	+0.7
	14nm,0.6s						
SKLT	Songkhla	26.18	277	P	P	12 19 52.1	+0.7
	21nm,0.7s						
CBIJ	Chichi jima	26.64	32	eP	P	12 19 54.2	-1.3
	92nm,1.0s						
MBWA	Marble Bar	26.65	195	eP	P	12 19 55.3	-0.2
	22nm,0.6s						
PBKT	Sadao Pong	27.96	297	P	P	12 20 07.6	+0.2
	6.1nm,0.7s,604nm						
QIS	Mount Isa	28.08	154	P	P	12 20 09.0	+0.6
	baz=28,SNR=13						
NJ2	Nanjing	28.20	346	eP	P	12 20 11.0	+1.8
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
WHN	Wuhan	28.25	337	P	P	12 20 09.8	+0.1
MTSU	Mount Surprise	28.52	143	P	P	12 20 14.6	+2.3
	baz=29,SNR=6.7						
GYA	Guiyang	28.96	320	eP	P	12 20 18.0	+1.7
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
AS31	Alice Springs	29.05	167	eP	P	12 20 20.0	+3.0
	2.5nm,0.6s						
ASAR	Alice Springs	29.05	167	P	P	12 20 16.6	-0.3
	4.7nm,0.4s,baz=352,slow=7.3,SNR=51						
ASAR				PcP	PcP	12 23 24.6	+1.0
	0.5nm,0.5s,baz=352,slow=2.9,SNR=3.0						
ASAR				ScP	ScP	12 27 00.5	+2.4
	1.1nm,1.0s,baz=20,slow=3.0,SNR=4.4						
AS01	Alice Springs	29.06	166	eP	P	12 20 19.7	+2.6
GSI	Gunungsitoli	29.41	264	eP	P	12 20 19.1	-1.2
	14nm,0.7s						
ENH	Enshi	30.23	329	eP	P	12 20 26.9	-0.4
	5.5nm,0.5s						
CM01	Chiang Mai Arr	30.44	299	eP	P	12 20 29.1	-0.2
CM31	Chiang Mai Arr	30.47	299	eP	P	12 20 29.6	0.0
CMAR	Chiang Mai Arr	30.47	299	P	P	12 20 29.1	-0.5
	1.2nm,0.4s,baz=106,slow=6.2,SNR=9.5						
CMAR				LR	LR	12 35 28.8	
	comp=Z,76nm,18.3s,baz=198,slow=42						
CHTO	Chiang Mai	30.61	300	eP	P	12 20 30.7	-0.2
	5.5nm,1.2s						
CHTO	Chiang Mai	30.61	300	eP	P	12 20 30.7	-0.2
CHTO				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KMI	Kunming	30.76	314	P	P	12 20 32.5	+0.1
KMI				pmax	pmax		
	comp=Z,16nm,0.8s						
CTA	Charters Tower	31.18	143	P	P	12 20 37.3	+1.4
	comp=Z,3.4nm,0.6s,baz=319,slow=13,SNR=6.4						
CTAO	Charters Tower	31.18	143	eP	P	12 20 37.5	+1.7
	comp=Z,19nm,0.6s						
CTAO	Charters Tower	31.18	143	eP	P	12 20 37.6	+1.7
CTAO				pmax	pmax		
	comp=Z,19nm,0.6s						
TJN	Taejon	31.51	1	i P	P	12 20 37.2	-1.3
MEEK	Meekatharra	32.17	194	P	P	12 20 44.4	-0.1
	baz=32,SNR=9.4						
KSAR	Wonju Array Be	32.58	2	P	P	12 20 48.3	+0.4
KSAR	Wonju Array Be	32.58	2	P	P	12 20 48.3	+0.4
KSRS	Korea Array	32.59	2	P	P	12 20 48.3	+0.3
	comp=Z,1.0nm,0.8s,baz=185,slow=9.9,SNR=4.4						
MJAR	Matsushiro Arr	33.35	17	LR	LR	12 35 35.6	
	comp=Z,10.0nm,20.1s,baz=185,slow=38						
XAN	Xi’an	33.58	333	P	P	12 20 55.3	-1.5
XAN				pmax	pmax		
	comp=Z,9.0nm,0.6s						
CD2	Chengdu	33.91	323	eP	P	12 20 59.0	-0.7
MORW	Morawa	35.16	197	P	P	12 21 10.3	-0.1
	baz=35,SNR=3.4						
QLP	Quilpie	35.39	152	P	P	12 21 12.6	+0.2
	baz=36,SNR=7.9						
BJT	Baijiatuau	36.43	346	eP	P	12 21 22.3	+1.2
	comp=Z,12nm,0.5s						
BJT				epP	pP	12 21 38.4	-1.9
BJT	Baijiatuau	36.43	346	eP	P	12 21 22.3	+1.2
BJT				e*PP	pP	12 21 38.4	-1.9
BJT				pmax	pmax		
	comp=Z,12nm,0.5s						
BLDU	Ballidu	36.45	195	P	P	12 21 21.2	-0.1
	baz=37,SNR=12						
KLBR	Kellerberrin	37.13	193	P	P	12 21 26.8	-0.4
	baz=37,SNR=7.2						
RMQ	Roma	37.60	147	P	P	12 21 31.9	+0.7
	baz=38,SNR=6.5						
LZH	Lanzhou	37.71	329	eP	P	12 21 32.5	+0.3
LZH				pP	pP	12 21 48.8	-2.6
LZH				sP	sP	12 21 56.6	-4.2
LZH				ePP	PP	12 22 58.4	-1.4
LZH				pmax	pmax		
	comp=Z,19nm,1.3s						
LZH				pmax	pmax		
	comp=Z,72nm,4.7s						
LZH				LR	LR		
	comp=Z,320nm,13.0s						
LZH				LR	LR		
	comp=Z,320nm,13.4s						
LZH				LR	LR		
	comp=Z,380nm,16.5s						
MUN	Mundaring	37.87	195	P	P	12 21 33.6	+0.2
	baz=38,SNR=4.9						
EIDS	Eidsvold	38.07	143	P	P	12 21 35.9	+0.7
	baz=38,SNR=4.4						
EIDS	Eidsvold	38.07	143	eP	P	12 21 36.1	+0.9
	comp=Z,17nm,0.8s						
BBOO	Buckleboo	38.34	167	P	P	12 21 37.8	+0.5
	baz=38,SNR=9.8						
HHC	Hu-ho-hao-te	38.49	341	eP	P	12 21 39.4	+0.7
HHC				sP	sP	12 22 06.3	-1.0
HHC				PP	PnPn	12 23 11.8	+0.8
HHC				S	S	12 27 30.6	+2.2
HHC				pmax	pmax		
	comp=Z,26nm,1.1s						
HHC				pmax	pmax		
	comp=Z,95nm,5.3s						
NWAO	Narrogin (SRO)	38.53	193	P	P	12 21 39.8	+0.8
	baz=39,SNR=3.8						
STKA	Stephens Creek	39.02	160	P	P	12 21 43.9	+0.9
	baz=39,SNR=43						
STKA	Stephens Creek	39.02	160	P	P	12 21 43.8	+0.9
	comp=Z,26nm,0.7s,baz=339,slow=8.5,SNR=27						
STKA	Stephens Creek	39.02	160	eP	P	12 21 44.0	+0.9
	comp=Z,5.5nm,0.8s						
STKA	Stephens Creek	39.02	160	eP	P	12 21 44.5	+1.5
USRK	Ussuriysk Ar.	39.58	6	P	P	12 21 47.8	+0.3
	comp=Z,1.4nm,0.6s,baz=203,slow=8.8						
HTT	Hallett	39.64	164	P	P	12 21 49.3	+1.1
	baz=40,SNR=5.1						
CMSA	Cobar Meteorol	40.30	155	P	P	12 21 54.4	+0.8
	baz=40,SNR=17						
ASAJ	Asahikawa	41.62	17	P	P	12 22 05.5	+1.1
	comp=Z,1.6nm,0.6s,baz=122,slow=1.7,SNR=4.4						
ARMA	Armidale	42.24	147	P	P	12 22 10.7	+0.9
	baz=42,SNR=27						
ARMA	Armidale	42.24	147	eP	P	12 22 11.2	+1.4
	comp=Z,29nm,0.7s						
GTA	Gaotai	42.30	328	eP	P	12 22 11.3	+1.1
GTA				pP	pP	12 22 23.0	-6.7
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ODAN	Odare	43.58	305	eP	P	12 22 19.8	-1.0
	comp=Z,24nm,0.5s						
ARPS	Mount Arapiles	43.60	162	P	P	12 22 21.9	+1.4
	baz=44,SNR=12						
YNG	Young	43.83	154	P	P	12 22 24.1	+1.8
	baz=44,SNR=5.4						
YSS	Yuzh-Sakhalins	44.27	16	eP	P	12 22 37.6	+12
YSS				pmax	pmax		
	comp=Z,20nm,1.2s						
RAMN	Ramite	44.27	304	eP	P	12 22 25.4	-0.9
	comp=Z,20nm,0.6s						
KLR	Kul’dur	44.55	5	P	P	12 22 27.4	-0.5
	comp=Z,0.1nm,0.4s,baz=194,slow=12,SNR=4.7						
KLR	Kul’dur	44.55	5	i P	P	12 22 27.2	-0.7
JIRN	Jiri	44.88	305	eP	P	12 22 30.5	-0.8
	comp=Z,36nm,0.6s						
GUN	Gumba	45.23	305	eP	P	12 22 32.7	-1.4
	comp=Z,32nm,0.5s						
PKIN	Phulchoki	45.50	305	eP	P	12 22 34.4	-1.7
	comp=Z,4.6nm,0.4s						
TOO	Toolangi	45.52	159	P	P	12 22 38.5	+2.6
	baz=46,SNR=3.7						
ULN	Ulaanbaatar	46.21	342	eP	P	12 22 41.2	-0.1
	comp=Z,5.0nm,0.9s						
ULN				epP	pP	12 22 54.3	-6.7
ULN	Ulaanbaatar	46.21	342 c	eP	P	12 22 41.7	+0.4
ULN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GKN	Gorkha	46.28	305	eP	P	12 22 40.4	-1.8
	comp=Z,13nm,0.6s						
SONM	Songino Array	46.40	341	P	P	12 22 42.4	-0.3
	comp=Z,2.2nm,0.5s,baz=154,slow=8.9,SNR=11						
SONM				LR	LR	12 43 07.7	
	comp=Z,41nm,18.1s,baz=229,slow=37						
SONA1	Songino Array	46.40	341	eP	P	12 22 42.7	-0.1
KOLN	Koldanda	47.05	304	eP	P	12 22 46.7	-1.5
	comp=Z,25nm,0.5s						
DANN	Dangsing	47.13	305	eP	P	12 22 47.7	-1.2
	comp=Z,44nm,0.6s						
WMQ	Urumqi	51.98	325	P	P	12 23 26.9	+1.6
WMQ				pP	pP	12 23 43.3	-2.1
WMQ				pmax	pmax		
	comp=Z,21nm,0.8s						
WMQ				pmax	pmax		
	comp=Z,270nm,5.1s						
WMQ				LR	LR		
	comp=Z,150nm,27.9s						
WMQ				LR	LR		
	comp=Z,190nm,34.7s						
WMQ				LR	LR		
	comp=Z,130nm,24.7s						
PETK	Petropavlovsk-	54.48	22	P	P	12 23 44.5	+1.1
	comp=Z,1.2nm,0.5s,baz=197,slow=4.4						
DGZ	Jazzator, Alta	55.79	330	i P	P	12 23 52.8	-0.2
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MK01	Makanchi Array	56.78	325	eP	P	12 23 59.2	-0.8
MK31	Makanchi Array	56.80	325	eP	P	12 23 59.3	-0.9
MK31	Makanchi Array	56.80	325	eP	P	12 23 59.3	-0.9
MKAR	Makanchi Array	56.80	325	P	P	12 23 59.8	-0.4
	comp=Z,4.4nm,0.5s,baz=120,slow=8.4,SNR=56						
MKAR				LR	LR	12 49 58.4	
	comp=Z,41nm,19.6s,baz=150,slow=38						
MKAR	Makanchi Array	56.80	325	eP	P	12 23 59.8	-0.4
	comp=Z,34nm,0.5s						
MKAR	Makanchi Array	56.80	325	eP	P	12 23 59.8	-0.4
MKAR				pmax	pmax		
	comp=Z,34nm,0.5s						
MAKZ	Makanchi	56.99	325	eP	P	12 24 00.9	-0.6
	comp=Z,4.6nm,0.8s						
MAKZ	Makanchi	56.99	325	eP	P	12 24 00.9	-0.6
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
YAK	Yakutsk	57.22	2	i P	P	12 24 02.8	+0.1
YAK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KSH	Kashi	57.42	315	eP	P	12 24 09.0	+4.2
KSH				ePcP	PcP	12 25 01.6	+3.8
KDJ	Kajisay	57.68	318	eP	P	12 24 05.9	-0.7
	comp=Z,4.9nm,0.6s						
KDJ	Kajisay	57.68	318	eP	P	12 24 05.9	-0.7
KDJ				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ZALV	Zalesovo Beam	59.75	333	P	P	12 24 19.7	-0.9
	comp=Z,1.1nm,0.4s,baz=112,slow=6.5,SNR=4.3						
ZALV				LR	LR	12 51 34.4	
	comp=Z,15nm,19.8s,baz=66,slow=37						
KURBB	Kurchatov Arra	60.96	327	P	P	12 24 28.1	-0.8
	comp=Z,4.5nm,0.5s,baz=125,slow=6.8,SNR=4.6						
KURK	Kurchatov	60.96	327	eP	P	12 24 28.0	-0.8
	comp=Z,12nm,0.6s						
KURK	Kurchatov	60.96	327	eP	P	12 24 28.0	-0.8
KURK				pmax	pmax		
	comp=Z,12nm,0.6s						
KK31	Karatay Array	62.58	317	eP	P	12 24 38.8	-1.1
KK31	Karatay Array	62.58	317	eP	P	12 24 38.8	-1.1
KKAR	Karatay Array	62.58	317	eP	P	12 24 39.2	-0.7
KKAR	Karatay Array	62.58	317	eP	P	12 24 39.2	-0.7
BVAR	Borovoye Array	66.55	327	P	P	12 25 04.4	-1.1
	comp=Z,4.2nm,0.6s,baz=120,slow=8.5,SNR=21						
BRVK	Borovoye	66.62	327	eP	P	12 25 05.5	-0.5
	comp=Z,12nm,0.9s						
BRVK				epP	pP	12 25 20.1	-6.8
BRVK	Borovoye	66.62	327	eP	P	12 25 05.5	-0.5
BRVK				e*PP	pP	12 25 20.1	-6.8
BRVK				pmax	pmax		
	comp=Z,12nm,0.9s						
ABKAR	Akbulak array	71.45	321	eP	P	12 25 35.2	-0.8
AKTO	Aktyubinsk	72.95	321	P	P	12 25 44.1	-0.8
	comp=Z,4.8nm,0.6s,baz=98,slow=13,SNR=17						
SVE	Sverdlovsk	73.17	328	eP	P	12 25 45.9	-0.2
SVE				pmax	pmax		
	comp=Z,11nm,0.8s						
ARU	Arti	74.16	328	eP	P	12 25 51.1	-0.8
	comp=Z,8.6nm,0.6s						
ARU	Arti	74.16	328 c	iP	P	12 25 50.9	-0.9
ARU						12 28 30.9	
ARU				S	S	12 35 23.3	+4.7
ARU				pmax	pmax		
	comp=Z,7.0nm,0.6s						
RAYN	Ar Rayn	80.19	293	eP	P	12 26 25.0	-1.4
	comp=Z,5.6nm,1.3s						
RAYN	Ar Rayn	80.19	293	eP	P	12 26 25.0	-1.4
RAYN				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KDAK	Kodiak Island	81.00	32	i P	P	12 26 31.1	+1.2
RSO	Redoubt South	81.18	30	eP	P	12 26 35.1	+3.9
ZEI	Tsey	81.62	312	eP	P	12 26 32.9	-1.0
PRGR	Permogore	81.68	332	eP	P	12 26 32.6	-0.8
PRGR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
OPO	Ambohidratompo	81.72	251	P	P	12 26 33.2	-1.5
	comp=Z,1.5nm,0.5s,baz=114,slow=12,SNR=4.3						
CAST	Castle Rocks	81.81	27	eP	P	12 26 35.8	+1.6
	comp=Z,3.4nm,0.6s						
BPAW	Bear Paw Mtn.	82.36	26	eP	P	12 26 38.8	+1.8
	comp=Z,3.3nm,0.6s						
KIV	Kislovodsk	82.53	314 ⇑	eP	P	12 26 39.0	+0.6
KIV				e		12 29 51.9	
KIV				eS	S	12 36 41.3	-7.7
KIV				pmax	pmax		
	comp=Z,3.0nm,0.5s						
MLY	Manley	82.54	25	eP	P	12 26 39.4	+1.4
	comp=Z,8.7nm,1.4s						
COLD	Coldfoot	82.94	23	eP	P	12 26 41.9	+1.9
	comp=Z,6.6nm,1.3s						
MCK	McKinley	83.23	26	eP	P	12 26 42.6	+1.0
	comp=Z,4.8nm,0.9s						
VRH	Novokhopyorsk	83.28	321	eP	P	12 26 41.7	-0.3
VRH				pmax	pmax		
	comp=Z,8.0nm,0.5s						
SML	Sawmill	83.42	28	eP	P	12 26 39.1	-3.5
	comp=Z,17nm,0.9s						
SML	Sawmill	83.42	28	eP	P	12 26 39.1	-3.5
SML				pmax	pmax		
	comp=Z,17nm,0.9s						
CCB	Clear Creek Bu	83.77	26	eP	P	12 26 44.8	+0.6
	comp=Z,4.8nm,1.3s						
ILAR	Eielson Array	84.17	25	P	P	12 26 46.0	-0.3
	comp=Z,0.8nm,0.6s,baz=247,slow=6.0,SNR=15						
ILAR	Eielson Array	84.17	25	P	P	12 26 46.0	-0.3
ILB	Eielson Array	84.17	25	eP	P	12 26 46.7	+0.4
VNDA	Vanda	84.39	173	P	P	12 26 48.0	+0.9
	comp=Z,0.7nm,0.6s,baz=327,slow=6.7,SNR=5.0						
KLMR	Klimovskoe	84.59	331	eP	P	12 26 47.1	-1.4
KLMR				pmax	pmax		
	comp=Z,22nm,0.8s						
KLMR	Klimovskoe	84.59	331	eP	P	12 26 47.2	-1.3
KLMR				AMP		12 26 48.9	
	comp=Z,22nm,0.8s						
VORD	Divnogorie	84.81	321	eP	P	12 26 49.2	-0.6
VORD				pmax	pmax		
	comp=Z,9.0nm,0.9s						
VSR	Storozhevoye	84.89	321	eP	P	12 26 48.9	-1.2
VSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MOS	Moscow	85.68	325	eP	P	12 26 54.0	0.0
OBN	Obninsk	86.31	325 d	eP	P	12 26 56.6	-0.5
OBN				e		12 30 12.4	
OBN				eS	SKSac	12 37 10.5	-5.6
OBN				pmax	pmax		
	comp=Z,60nm,1.5s						
BRTR	Keskin Array B	89.47	310	P	P	12 27 11.6	-1.2
	comp=Z,0.7nm,0.6s,baz=104,slow=5.2,SNR=4.3						
SPITS	Spitsbergen Ar	89.53	349	P	P	12 27 12.1	0.0
	comp=Z,5.6nm,0.9s,baz=57,slow=5.3,SNR=6.2						
ARCES	ARCESS Array B	89.56	340	P	P	12 27 11.5	-0.8
	comp=Z,1.6nm,0.5s,baz=76,slow=6.3,SNR=13						
FINES	FINESS Array B	91.01	332	P	P	12 27 17.9	-1.4
	comp=Z,1.2nm,0.5s,baz=47,slow=6.1,SNR=15						
AKASG	Malin Array Be	91.19	321	P	P	12 27 19.3	-1.0
	comp=Z,2.8nm,0.3s,baz=68,slow=4.8,SNR=3.7						
KIEV	Kiev	91.20	321	i P	P	12 27 19.4	-1.0
KIEV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
VSU	Vasula	91.27	329	i P	P	12 27 19.7	-0.8
SYO	Syowa Base	93.38	201 ⇑	eP	P	12 27 33.4	+3.4
MLR	Muntele Rosu	94.26	316	P	P	12 27 33.1	-1.7
	comp=Z,0.5nm,0.5s,baz=76,slow=8.2,SNR=5.8						
MLR	Muntele Rosu	94.26	316	eP	P	12 27 34.4	-0.4
	comp=Z,5.7nm,1.0s						
MLR	Muntele Rosu	94.26	316	eP	P	12 27 34.4	-0.4
MLR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BUR04	Bucovina Ar. S	94.33	318	eP	P	12 27 34.8	-0.3

BUR08	Bucovina Ar. S	94.33	318	eP	P	12 27 35.2	+0.1
CRVS	Cervenica-Dubn	96.48	320	eP	P	12 27 44.1	-0.6
CRVS	Cervenica-Dubn	96.48	320	eP	P	12 27 44.0	-0.6
HFS	Hagfors	97.19	332	P	P	12 27 46.4	-1.3
	comp=Z,1.7nm,0.8s,baz=116,slow=6.6,SNR=3.3						
NOA	NORSAR Array B	97.95	334	LR	LR	13 15 24.2	
	comp=Z,9.5nm,20.3s,baz=75,slow=37						
VYHS	Vyhne	98.26	320	eP	P	12 27 51.6	-1.1
VYHS	Vyhne	98.26	320	ePDIFF	P	12 27 51.6	-1.1
GERES	GERESS Array B	101.37	322	P	Pdif	12 28 06.8	0.0
	comp=Z,0.4nm,0.2s,baz=28,slow=4.4,SNR=4.1						
TORD	Torodi Ar. Bea	122.70	289	PKP	PKPdf	12 33 10.7	-1.1
	comp=Z,0.6nm,0.6s,baz=29,slow=3.3						

GUC 14 12:42:18.8±0.4, 36°.12S×72°.02W, h135^{km}±4^{km}, ML3.8, 2C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCHI	Chillan	0.48	185	i P	Pn	12 42 38.1	-0.2
CCHI				eS	Sn	12 42 52.4	-0.7
GO05	HualaæØ	1.11	4	⇑iP	Pn	12 42 43.0	-0.2
GO05				i S	Sn	12 43 01.4	-0.4
GO05				IAML		12 43 01.9	
	comp=E,4μm,0.3s						
NICH	Los Niches	1.29	30	⇑iP	Pn	12 42 39.6	-5.4
NICH				i S	Sn	12 42 55.3	-10
CLCH	Cerro Calan	2.98	25	eP	Pn	12 43 05.3	-0.2
CLCH				eS	Sn	12 43 41.0	-0.4
CLCH				IAML		12 43 54.9	
	comp=E,213nm,0.7s						
FCH	Farellones	3.13	28	eP	Pn	12 43 08.2	+0.5
FCH				eS	Sn	12 43 46.0	+0.7
FCH				IAML		12 43 50.2	
	comp=N,112nm,0.2s						
PEL	Peldehue	3.17	21	eP	Pn	12 43 07.7	-0.1
PEL				eS	Sn	12 43 45.7	0.0
PEL				IAML		12 43 51.5	
	comp=E,141nm,0.6s						
ROCH	El Roble	3.25	15	IAML		12 43 53.5	
	comp=E,133nm,0.6s						

TIR ***14*** *12:44:44.0, 42°.09N×20°.41E, h2^{km}, Md2.7/3*

CSEM 14 12:44:55.7±0.3, 42°.10N×20°.40E, h5^{km}, ML2.7, Error ellipse: s-maj=7.4km s-min=6.6km az=42.0, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZK	Prizren	0.29	68	P	Pg	12 45 02.2	+0.8
PRZK				S	Sg	12 45 05.4	+0.2
BCI	Bajram Curri	0.36	318	i Pg	Pg	12 45 02.3	-0.4
BCI				i Sg	Sg	12 45 08.7	+1.3
BCI	Bajram Curri	0.36	318	i PG	Pg	12 45 02.3	-0.4
BCI				i SG	Sg	12 45 08.7	+1.3
PUK	Puka	0.38	261	i Pg	Pg	12 45 03.6	+0.6
PUK				i Sg	Sb	12 45 16.1	+4.9
PUK	Puka	0.38	261	i PG	Pg	12 45 03.6	+0.6
PUK				i SG	Sb	12 45 16.1	+4.9
PHP	Peshkopia	0.42	175	i Pg	Pg	12 44 58.5	-5.3
PHP				i Sg	Sg	12 45 08.1	-1.1
PHP	Peshkopia	0.42	175	i PG	Pg	12 44 58.5	-5.2
PHP				i SG	Sg	12 45 08.1	-1.1
PEJK	Peje	0.55	351	P	Pg	12 45 05.9	-0.4
PEJK				S	Sg	12 45 09.3	-4.1
BEY	Berane	0.85	334	P	Pg	12 45 11.9	-0.2

BJI ***14*** *12:46:34.8, 2°.58N×128°.73E, h62^{km}, mb4.7/44, mB4.9/26, Ms4.2/13, Ms7 4.0/13*

MOS ***14*** *12:46:36.0±0.9, 2°.97N×128°.47E, h45^{km}, mb5.0/9, Error ellipse: s-maj=14.0km s-min=7.3km az=100.1*

ISCJB ***14*** *12:46:37.0±0.5, 2°.93N±0°.02×128°.45E±0°.03, h51^{km}±5^{km}, mb4.7/67, MS3.7/26, Error ellipse: s-maj=5.8km s-min=3.5km az=164.0*

DJA ***14*** *12:46:38.1±0.7, 3°N±7°×12°8E±°, h10^{km}, M4.7/21, mb5.0/21, mB5.1/10, MLv4.9/11, Mw(mB)4.5/10*

NEIC ***14*** *12:46:39.2±0.6, 2°.87N×128°.42E, h60^{km}±6^{km}, mb4.8/30, Error ellipse: s-maj=6.0km s-min=3.6km az=80.0*

IDC ***14*** *12:46:39.0±1.3, 2°.89N×128°.42E, h55^{km}±11^{km}, mb4.3/20, mb1 4.4/22, mb1mx4.1/57, mbtmp4.6/22, MS3.6/25, Ms1 3.6/25, ms1mx3.4/57, Error ellipse: s-maj=18.5km s-min=7.3km az=69.0*

ISC 14 12:46:39.7±0.8**, 2°.87N**±0°.04×**128°.44E**±0°.06**, h60**^{km}±7^{km}**, n183, σ1^{s}.52**/184**, mb4.7**/67**, MS3.7**/26**, 1C-2D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	2.35	207	P	Pn	12 47 14.3	-1.6
TNTI	Ternate	2.35	207	ePn	Pn	12 47 14.4	-1.5
LBMI	Labuha	3.61	195	P	Pn	12 47 33.5	+0.2
MATI	Mati	4.59	332	eP	Pn	12 47 46.9	+0.3
MATI				eS	Sn	12 48 44.7	+6.0
SWI	Sorong	4.66	143	P	Pn	12 47 49.2	+1.5
SIJI	Sorong	4.67	143	P	Pn	12 47 49.1	+1.3
	50nm,0.3s,baz=332,slow=13,SNR=112						
SIJI				S	Sn	12 48 41.0	+0.3
	16nm,0.3s,baz=192,slow=20,SNR=4.4						
SIJI				LR	LR	12 49 41.2	
	comp=Z,564nm,21.2s,baz=36,slow=39						
KMSI	Cibinong	5.00	243	P	Pn	12 47 53.0	+0.7
DAV	Davao City (W)	5.05	326	P	Pn	12 47 53.1	+0.2
	30nm,0.3s,baz=233,slow=20,SNR=1.9						
DAV				S	Sn	12 48 50.0	+0.1
	72nm,0.3s,baz=177,slow=17,SNR=4.0						
SKMP	Bagumbayan, Su	5.31	313	eP	Pn	12 47 55.2	-1.3
SKMP				eS	Sn	12 48 54.0	-2.3
SANI	Sanana	5.47	207	P	Pn	12 47 58.4	-0.3
BUKP	Musuan	6.00	326	eP	Pn	12 48 05.7	-0.3
BUKP				eS	Sn	12 49 18.5	+5.1
CTBH	Cotabato--PC H	6.00	316	⇑iP	Pn	12 48 05.2	-0.8
CTBH				i S	Sn	12 48 55.4	-18
BUTP	Butuan	6.67	335	eP	Pn	12 48 14.6	-0.5
BUTP				eS	Sn	12 49 33.7	+3.8
CGP	Cagayan de Oro	6.68	326	⇓eP	Pn	12 48 20.4	+5.2
LUWI	Luwuk	6.87	236	P	Pn	12 48 17.6	-0.3
LUWI	Luwuk	6.87	236	ePn	Pn	12 48 17.2	-0.6
FAKI	Fak Fak	6.90	146	P	Pn	12 48 19.7	+1.3
FAKI	Fak Fak	6.90	146	ePn	Pn	12 48 18.7	+0.3
MRSI	Marisa	6.91	250	P	Pn	12 48 17.3	-1.2
PAGZ	Pagadian	7.05	315	eP	Pn	12 48 16.2	-4.2
PAGZ				eS	Sn	12 49 38.2	-0.9
RKPI	Ransiki, Papua	7.21	127	P	Pn	12 48 29.5	+7.0
APSI	Ampana	7.76	241	P	Pn	12 48 28.0	-2.0
MSLP	Maasin	8.04	334	eP	Pn	12 48 32.7	-1.2
MSLP				eS	Sn	12 50 02.4	-1.0
BAKI	Biak	8.67	118	P	Pn	12 48 52.8	+10
MPSI	Mapaga	8.90	254	P	Pn	12 48 45.9	+0.2
KDI	Kendari	8.94	221	P	Pn	12 48 44.8	-1.4
MYLDM	Lahad Datu	10.17	283	ePn	Pn	12 49 03.5	+0.4
TTSI	Tana Toraja	10.43	236	P	Pn	12 49 05.9	-0.7
SPSI	Sidrap Palu	11.01	232	P	Pn	12 49 14.2	-0.3
BKSI	Bulukumba	11.63	226	P	Pn	12 49 24.3	+1.3
GENI	Genyem	12.93	115	P	P	12 49 56.6	+7.2
SOEI	Soe	13.22	198	P	P	12 49 53.9	+1.1
SOEI	Soe	13.22	198	ePn	Pn	12 49 43.2	-1.6
EDFI	Ende, Flores	13.36	210	P	Pn	12 49 47.0	+0.2
JAY	Jayapura	13.38	113	LR	LR	12 54 18.3	
	comp=Z,196nm,18.1s,baz=312,slow=34						
TGY	Tagaytay City	13.39	327	LR	LR	12 55 53.3	
	comp=Z,217nm,21.7s,baz=150,slow=42						
BATI	Baumata	13.84	200	P	Pn	12 49 55.1	+2.0
	2.2nm,0.3s,baz=338,slow=5.4,SNR=3.8						
BATI				LR	LR	12 56 18.7	
	comp=Z,194nm,20.5s,baz=16,slow=42						
MTKI	Muara Teweh, K	14.06	255	P	Pn	12 49 54.7	-1.3
PLAI	Plampang	15.75	222	P	P	12 50 20.9	+0.1
MTN	Manton Dam	15.84	170	ePn	Pn	12 50 17.2	-1.9
	22nm,0.8s						
SBUM	Sibu	16.20	269	ePn	Pn	12 50 22.9	-0.8
TWSI	Taliwang, Sumb	16.30	225	P	P	12 50 26.7	-0.2
JAGI	Jajag, Banyuwa	18.16	232	P	Pn	12 50 50.3	+2.4
JAGI	Jajag, Banyuwa	18.16	232	eP	P	12 50 46.7	-0.9
	74nm,0.9s						
KSM	Kuching	18.17	266	eP	P	12 50 47.0	-0.6
	17nm,0.9s						
GMJI	Gumukmas	18.61	233	P	Pn	12 50 54.9	+1.7
GUMO	Guam	19.42	56	LR	LR	12 57 20.6	
	comp=Z,280nm,21.4s,baz=236,slow=33						
GUMO	Guam	19.42	56	eP	P	12 51 00.5	-0.8
	78nm,1.2s						
GUMO	Guam	19.42	56	eP	P	12 51 00.5	-0.8
GUMO				pmax	pmax		
	comp=Z,78nm,1.2s						
NGJI	Ngawi	19.76	239	P	Pn	12 51 13.1	+6.1
PWJI	Pagerwojo	19.81	237	P	Pn	12 51 09.8	+2.2
	comp=Z,85nm,1.0s						
PCJI	Pacitan	20.43	237	P	Pn	12 51 13.9	-0.9
UGM	Wanagama	20.84	239	P	Pn	12 51 19.4	-0.3
FITZ	Fitzroy Crossi	21.02	187	P	P	12 51 16.9	-1.7
	comp=Z,4.4nm,0.4s,baz=5.2,slow=8.9,SNR=28						
TWG	Pinlang	21.07	341	eP	P	12 51 15.2	-3.9
	comp=Z,75nm,0.9s						
YULB	Yu-li	21.54	342	eP	P	12 51 24.1	-0.1
	comp=Z,9.8nm,0.9s						
TPUB	Ta-pu	21.67	340	eP	P	12 51 22.8	-2.8
KPJI	Karang Pucung	21.95	242	P	P	12 51 30.8	+2.2
	comp=Z,70nm,0.8s						
SSLB	Suanglung	22.01	341	eP	P	12 51 30.1	+0.8
	comp=Z,18nm,0.8s						
NACB	Ninganchiao	22.18	343	eP	P	12 51 30.2	-0.8
	comp=Z,21nm,0.9s						
PMG	Port Moresby	22.29	123	LR	LR	13 01 20.3	
	comp=Z,114nm,18.8s,baz=330,slow=40						
YHNB	Yeheng	22.71	343	eP	P	12 51 35.9	-0.9
	comp=Z,54nm,1.1s						
LEM	Lembang	22.91	245	P	P	12 51 38.8	-0.2
	comp=Z,15nm,0.5s,baz=80,slow=12,SNR=3.2						
CISI	Cisompet, Garu	23.04	243	eP	P	12 51 38.0	-2.2
	comp=Z,30nm,0.7s						
WRAB	Tennant Creek	23.40	166	eP	P	12 51 43.1	-0.4
	comp=Z,96nm,0.9s						
WRAB	Tennant Creek	23.40	166	eP	P	12 51 43.1	-0.4
WRA	Warramunga Arr	23.40	166	P	P	12 51 43.5	-0.1
	comp=Z,60nm,0.6s,baz=344,slow=10,SNR=244						
WRA				PcP	PcP	12 55 28.7	0.0
	comp=Z,0.7nm,0.7s,baz=317,slow=2.4,SNR=3.0						
WRA				S	S	12 55 53.1	+0.7
	comp=Z,1.4nm,0.9s,baz=351,slow=17,SNR=3.5						
WRA				ScP	ScP	12 59 02.5	+0.6
	comp=Z,0.7nm,0.6s,baz=341,slow=3.0,SNR=7.3						
WB2	Warramunga Arr	23.41	166	eP	P	12 51 43.4	-0.3
	comp=Z,95nm,0.9s						
JOW	Kunigami	23.82	360	LR	LR	13 00 16.4	
	comp=Z,248nm,21.2s,baz=191,slow=34						
MYKOM	Kota Tinggi	24.59	268	eP	P	12 51 53.3	-1.2
	comp=Z,26nm,1.1s						
MDSI	Maura Dua	25.32	253	P	P	12 52 04.2	+3.1
MBWA	Marble Bar	25.36	199	eP	P	12 52 00.4	-1.0
	comp=Z,39nm,1.4s						
AS31	Alice Springs	26.91	169	eP	P	12 52 14.2	-1.2
	comp=Z,4.7nm,0.6s						
ASAR	Alice Springs	26.91	169	P	P	12 52 15.0	-0.5
	comp=Z,4.6nm,0.4s,baz=349,slow=7.6,SNR=168						
ASAR				PcP	PcP	12 55 36.5	-0.1
	comp=Z,2.9nm,0.6s,baz=359,slow=2.1,SNR=8.3						
ASAR				ScP	ScP	12 59 12.4	+0.7
	comp=Z,2.1nm,0.8s,baz=3.0,slow=2.1,SNR=12						
ASAR				LR	LR	13 04 09.4	
	comp=Z,110nm,21.2s,baz=315,slow=39						
AS01	Alice Springs	26.92	169	eP	P	12 52 14.7	-0.8
AS01				ePcP	PcP	12 55 36.3	-0.2
KHON	Khomkaen	28.52	300	P	P	12 52 31.3	+1.4
CTA	Charters Tower	28.75	143	P	P	12 52 35.7	+3.8
	comp=Z,2.3nm,0.9s,baz=305,slow=14,SNR=4.8						
JNU	Nakatsue	30.18	4	LR	LR	13 03 47.4	
	comp=Z,180nm,21.2s,baz=123,slow=34						
NJ2	Nanjing	30.39	344	eP	P	12 52 46.8	+0.6
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
WHN	Wuhan	30.58	336	P	P	12 52 50.5	+2.6
GSI	Gunungsitoli	30.88	268	eP	P	12 52 49.0	-1.9
	comp=Z,28nm,1.3s						
GYA	Guiyang	31.40	320	eP	P	12 52 56.8	+1.4
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ENH	Enshi	32.63	329	eP	P	12 53 05.5	-0.5
	comp=Z,7.7nm,0.7s						
CM01	Chiang Mai Arr	32.74	300	eP	P	12 53 07.2	+0.1
CM31	Chiang Mai Arr	32.77	300	eP	P	12 53 07.1	-0.3
CMAR	Chiang Mai Arr	32.77	300	P	P	12 53 07.4	0.0
	comp=Z,4.4nm,0.8s,baz=116,slow=7.3,SNR=18						
CHTO	Chiang Mai	32.92	301	eP	P	12 53 08.1	-0.6
	comp=Z,7.4nm,0.9s						
CHTO	Chiang Mai	32.92	301	eP	P	12 53 08.1	-0.6
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KMI	Kunming	33.19	314	P	P	12 53 12.8	+1.6
KMI				pP	pP	12 53 26.8	+0.7
KMI				pmax	pmax		
	comp=Z,11nm,0.6s						
INU	Inuyama	33.28	13	eP	P	12 53 11.1	-0.5
	comp=Z,17nm,0.7s						
CMAI	Chiengmai2	33.32	303	P	P	12 53 14.6	+2.2
TJN	Taejon	33.35	358	i P	P	12 53 10.6	-1.6
FORT	Forrest	33.47	181	eP	P	12 53 12.3	-1.0
	comp=Z,67nm,1.4s						
HNR	Honiara	33.70	112	LR	LR	13 05 53.1	
	comp=Z,58nm,21.5s,baz=285,slow=34						
KSAR	Wonju Array Be	34.41	359	P	P	12 53 20.8	-0.5
KSAR	Wonju Array Be	34.41	359	P	P	12 53 20.8	-0.5
KSRS	Korea Array	34.42	359	P	P	12 53 20.8	-0.6
	comp=Z,3.9nm,0.6s,baz=176,slow=9.5,SNR=16						
KSRS				LR	LR	13 06 28.3	
	comp=Z,94nm,21.4s,baz=180,slow=35						
KS01	Wonju Array Si	34.44	359	eP	P	12 53 20.9	-0.7
MAJO	Matsushiro	34.70	14	eP	P	12 53 23.0	-0.9
	comp=Z,10nm,0.8s						
MAJO	Matsushiro	34.70	14	i P	P	12 53 22.9	-0.9
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
MAT	Matsushiro	34.70	14	P	P	12 53 21.9	-2.0
MAT				eS	S	12 58 44.0	-5.7
MJAR	Matsushiro Arr	34.70	14	P	P	12 53 21.6	-2.3
	comp=Z,6.9nm,0.8s,baz=189,slow=9.7,SNR=22						
MJAR				LR	LR	13 05 23.8	
	comp=Z,168nm,21.2s,baz=190,slow=32						
MJB9	Matsu-Tunnel	34.70	14	eP	P	12 53 23.0	-0.9
	comp=Z,11nm,0.8s						
TIA	Tai’an	34.78	344	P	P	12 53 25.6	+1.0
TIA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
XAN	Xi’an	35.95	332	P	P	12 53 34.0	-0.8
XAN				pP	pP	12 53 47.9	-1.9
XAN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CD2	Chengdu	36.34	323	eP	P	12 53 38.0	-0.1
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
STKA	Stephens Creek	36.75	161	P	P	12 53 41.6	+0.1
	comp=Z,19nm,0.4s,baz=344,slow=7.1,SNR=70						
STKA				PcP	PcP	12 56 03.0	0.0
	comp=Z,3.3nm,0.8s,baz=334,slow=5.4,SNR=4.0						
STKA				LR	LR	13 10 17.9	
	comp=Z,76nm,20.6s,baz=7.2,slow=39						
STKA	Stephens Creek	36.75	161	eP	P	12 53 40.6	-1.0
	comp=Z,4.3nm,0.5s						
STKA				PcP	PcP	12 56 03.0	0.0
STKA	Stephens Creek	36.75	161	eP	P	12 53 40.5	-1.0
NWAO	Narrogin (SRO)	37.15	196	LR	LR	13 10 21.2	
	comp=Z,135nm,18.4s,baz=133,slow=38						
MSHR	Mys Shultsa	39.61	3	i P	P	12 54 05.6	+0.2
LZH	Lanzhou	40.11	328	eP	P	12 54 10.1	+0.2
LZH				pP	pP	12 54 25.4	+0.3
LZH				sP	sP	12 54 32.8	+0.8
LZH				ePP	PnPn	12 55 47.3	+0.2
LZH				pmax	pmax		
	comp=Z,22nm,1.3s						
LZH				pmax	pmax		
	comp=Z,93nm,5.2s						
LZH				LR	LR		
	comp=Z,370nm,13.5s						
LZH				LR	LR		
	comp=Z,380nm,13.7s						
LZH				LR	LR		
	comp=Z,460nm,16.8s						
H11S3	WAKE ISLAND Hy	40.53	65	T	T	13 37 35.1	
	baz=252,slow=75,SNR=43						
H11S2	WAKE ISLAND Hy	40.55	65	T	T	13 37 35.1	
	baz=252,slow=75,SNR=32						
H11S1	WAKE ISLAND Hy	40.55	65	T	T	13 37 32.8	
	baz=252,slow=75,SNR=30						
HHC	Hu-ho-hao-te	40.76	340	eP	P	12 54 15.4	+0.3
HHC				sP	sP	12 54 42.3	+5.0
HHC				PP	PnPn	12 55 54.3	-0.3
HHC				S	S	13 00 23.5	+1.9
HHC				pmax	pmax		
	comp=Z,25nm,1.1s						
HHC				pmax	pmax		
	comp=Z,120nm,4.7s						
HHC				LR	LR		
	comp=Z,110nm,10.2s						
HHC				LR	LR		
	comp=Z,72nm,12.0s						
HHC				LR	LR		
	comp=Z,130nm,14.7s						
H11N1	WAKE ISLAND Hy	41.10	63	T	T	13 38 10.2	
	baz=250,slow=75,SNR=52						
H11N2	WAKE ISLAND Hy	41.11	63	T	T	13 38 10.9	
	baz=250,slow=75,SNR=20						
H11N3	WAKE ISLAND Hy	41.12	63	T	T	13 38 11.8	
	baz=250,slow=75,SNR=26						
USRK	Ussuriysk Ar.	41.27	4	P	P	12 54 19.5	+0.4
	comp=Z,18nm,0.7s,baz=172,slow=5.1						
USRK				LR	LR	13 09 37.1	
	comp=Z,91nm,21.4s,baz=185,slow=33						
MDJ	Mudanjiang	41.58	1	eP	P	12 54 21.1	-0.5
	comp=Z,26nm,1.1s						
SHL	Shillong	41.75	306	eP	P	12 54 23.0	-0.6
	comp=Z,18nm,0.5s						
SHL	Shillong	41.75	306	eP	P	12 54 23.0	-0.6
SHL				pmax	pmax		
	comp=Z,18nm,0.5s						
ASAJ	Asahikawa	42.94	15	LR	LR	13 10 46.1	
	comp=Z,113nm,21.4s,baz=211,slow=34						
ASAJ	Asahikawa	42.94	15	eP	P	12 54 32.5	-0.2
	comp=Z,17nm,1.0s						
GTA	Gaotai	44.71	328	⇓P	P	12 54 47.3	+0.1
GTA				pP	pP	12 55 02.9	+0.3
GTA				sP	sP	12 55 09.9	+0.4
GTA				S	S	13 01 21.8	+2.1
GTA				pmax	pmax		
	comp=Z,7.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,67nm,5.4s						
GTA				LR	LR		
	comp=Z,120nm,22.2s						
GTA				LR	LR		
	comp=Z,120nm,21.9s						
GTA				LR	LR		
	comp=Z,140nm,22.5s						
YSS	Yuzh-Sakhalins	45.64	14	eP	P	12 54 53.6	-0.6
	comp=Z,10nm,0.7s						
YSS	Yuzh-Sakhalins	45.64	14	eP	P	12 54 53.8	-0.4
YSS				e		12 55 07.9	
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
KLR	Kul’dur	46.27	3	i P	P	12 54 57.9	-1.3
RAMN	Ramite	46.63	305	eP	P	12 55 03.0	+0.3
	comp=Z,17nm,0.7s						
JIRN	Jiri	47.25	306	eP	P	12 55 08.1	+0.4
GUN	Gumba	47.60	306	eP	P	12 55 10.4	0.0
PKIN	Phulchoki	47.86	305	eP	P	12 55 12.3	0.0
DMN	Daman	48.11	305	eP	P	12 55 14.8	+0.6
ULN	Ulaanbaatar	48.47	341	eP	P	12 55 15.8	-0.7
	comp=Z,4.6nm,0.8s						
ULN	Ulaanbaatar	48.47	341	i P	P	12 55 14.6	-1.9
ULN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SONM	Songino Array	48.66	340	P	P	12 55 17.2	-0.7
	comp=Z,2.0nm,0.9s,baz=154,slow=8.9,SNR=5.4						
SONM				PcP	PcP	12 56 42.0	-0.5
	comp=Z,1.3nm,0.7s,baz=180,slow=4.3,SNR=2.8						
SONA1	Songino Array	48.67	340	eP	P	12 55 17.5	-0.5
KOLN	Koldanda	49.41	305	eP	P	12 55 24.0	-0.1
	comp=Z,28nm,0.7s						
DANN	Dangsing	49.49	305	eP	P	12 55 25.2	+0.3
	comp=Z,27nm,0.6s						
PYUN	Piuthan	50.03	305	eP	P	12 55 29.2	+0.4
	comp=Z,23nm,0.6s						
ZEA	Zeya	50.71	359	eP	P	12 55 32.6	-0.6
ZEA				pmax	pmax		
	comp=Z,12nm,1.0s						
ZAK	Zakamensk	51.90	340	eP	P	12 55 40.4	-1.9
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.4s						
TLY	Talaya	52.88	341	eP	P	12 55 49.9	+0.4
TLY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TLY				MLR	MLR		
	comp=Z,42nm,19.0s						
WMQ	Urumqi	54.40	324	P	P	12 56 01.3	+0.5
WMQ				pP	pP	12 56 16.4	-0.2
WMQ				pmax	pmax		
	comp=Z,29nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,160nm,3.9s						
WMQ				LR	LR		
	comp=Z,160nm,21.3s						
WMQ				LR	LR		
	comp=Z,120nm,24.9s						
WMQ				LR	LR		
	comp=Z,180nm,24.9s						
PETK	Petropavlovsk-	55.60	21	P	P	12 56 10.1	+1.0
	comp=Z,13nm,0.9s,baz=213,slow=4.1						
PETK				LR	LR	13 22 23.7	
	comp=Z,34nm,18.8s,baz=206,slow=39						
PETK	Petropavlovsk-	55.60	21	eP	P	12 56 09.6	+0.4
PETK	Petropavlovsk-	55.60	21	eP	P	12 56 09.6	+0.4
DGZ	Jazzator, Alta	58.18	330	i P	P	12 56 26.3	-1.4
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
YAK	Yakutsk	59.02	1	eP	P	12 56 33.2	+0.1
	comp=Z,20nm,0.7s						
YAK	Yakutsk	59.02	1	eP	P	12 56 33.2	+0.1
YAK				pmax	pmax		
	comp=Z,20nm,0.7s						
MK01	Makanchi Array	59.21	325	eP	P	12 56 34.0	-0.8
MK31	Makanchi Array	59.23	325	eP	P	12 56 34.6	-0.3
MK31	Makanchi Array	59.23	325	eP	P	12 56 34.6	-0.3
MKAR	Makanchi Array	59.23	325	P	P	12 56 34.6	-0.4
	comp=Z,4.3nm,0.6s,baz=124,slow=8.0,SNR=30						
MKAR				ScP	ScP	13 01 19.1	+0.7
	comp=Z,0.8nm,0.8s,baz=108,slow=4.0,SNR=5.5						
MAKZ	Makanchi	59.42	325	eP	P	12 56 35.6	-0.6
	comp=Z,8.7nm,0.9s						
MAKZ	Makanchi	59.42	325	eP	P	12 56 35.6	-0.6
MAKZ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
KSH	Kashi	59.85	315	eP	P	12 56 41.9	+2.4
KSH				ePcP	PcP	12 57 27.8	+2.3
KSH				ePP	PP	12 58 56.4	+4.3
KSH				S	S	13 04 48.3	+1.4
KSH				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KSH				pmax	pmax		
	comp=Z,100nm,4.8s						
ZALV	Zalesovo Beam	62.12	333	P	P	12 56 53.0	-1.4
	comp=Z,0.7nm,0.3s,baz=108,slow=4.8,SNR=4.8						
ZALV				LR	LR	13 26 08.5	
	comp=Z,36nm,19.0s,baz=70,slow=38						
SEY	Seymchan	62.49	12	i P	P	12 56 56.3	-0.4
KURK	Kurchatov	63.38	327	eP	P	12 57 01.8	-1.1
	comp=Z,11nm,1.0s						
KURK	Kurchatov	63.38	327	eP	P	12 57 01.7	-1.1
KURBB	Kurchatov Arra	63.38	327	P	P	12 57 01.9	-0.9
	comp=Z,3.0nm,0.6s,baz=126,slow=6.1,SNR=31						
BVAR	Borovoye Array	68.96	327	P	P	12 57 37.9	-0.7
	comp=Z,1.1nm,0.4s,baz=117,slow=8.3,SNR=9.6						
BRVK	Borovoye	69.03	327	eP	P	12 57 38.5	-0.5
	comp=Z,29nm,1.3s						
BRVK	Borovoye	69.03	327	eP	P	12 57 38.5	-0.5
BRVK				pmax	pmax		
	comp=Z,29nm,1.3s						
CASY	Casey	70.19	188	eP	P	12 57 46.9	+1.1
AKTO	Aktyubinsk	75.38	321	LR	LR	13 34 17.6	
	comp=Z,50nm,19.5s,baz=88,slow=38						
SVE	Sverdlovsk	75.58	328	eP	P	12 58 24.2	+6.2
VNDA	Vanda	82.37	173	P	P	12 58 54.2	-0.5
	comp=Z,5.2nm,0.6s,baz=319,slow=6.2,SNR=71						
VNDA				LR	LR	13 33 37.8	
	comp=Z,31nm,19.6s,baz=316,slow=34						
MAW	Mawson	83.55	201	P	P	12 59 02.3	+1.3
	comp=Z,3.5nm,0.9s,baz=73,slow=5.1,SNR=4.3						
KBZ	Khabaz	84.80	313	LR	LR	13 41 09.4	
	comp=Z,32nm,19.9s,baz=112,slow=39						
ILAR	Eielson Array	85.14	25	P	P	12 59 09.3	+0.1
	comp=Z,0.7nm,0.5s,baz=247,slow=5.5,SNR=14						
ILAR				LR	LR	13 33 04.2	
	comp=Z,22nm,21.7s,baz=224,slow=33						
DAWY	Dawson	88.39	26	eP	P	12 59 26.1	+1.0

	comp=Z,3.4nm,1.1s						
OBN	**Obninsk**	**88.73**	**325**	*e*P	**P**	**12 59 26.4**	**-0.3**
OBN				*e*S	**S**	**13 10 06.6**	**-2.4**
OBN				pmax	pmax		
	comp=Z,4.0nm,0.6s						
OBN				MLR	MLR		
	comp=Z,40nm,19.0s						
INK	**Inuvik**	**90.33**	**22**	*e*P	**P**	**12 59 34.3**	**+0.4**
INK	**Inuvik**	**90.33**	**22**	*e*P	**P**	**12 59 34.3**	**+0.4**
MMAI	**Mount Meron Ar**	**91.00**	**303**	LR	LR	13 46 53.8	
	comp=Z,25nm,18.8s,baz=205,slow=40						
ARCES	**ARCESS Array B**	**91.83**	**340**	P	**P**	**12 59 41.5**	**+0.5**
	comp=Z,1.1nm,0.5s,baz=81,slow=7.6,SNR=4.2						
QSPA	**South Pole Qui**	**92.79**	**180**	P	**P**	**12 59 45.2**	**-0.3**
	comp=Z,4.3nm,0.8s,baz=46,slow=2.8,SNR=11						
FINES	**FINESS Array B**	**93.38**	**332**	P	**P**	**12 59 46.7**	**-1.5**
	comp=Z,1.2nm,0.7s,baz=18,slow=4.8,SNR=2.7						
FINES				LR	LR	13 46 28.3	
	comp=Z,50nm,18.9s,baz=348,slow=38						
HFS	**Hagfors**	**99.56**	**333**	LR	LR	13 50 20.3	
	comp=Z,46nm,18.6s,baz=78,slow=38						
TORD	**Torodi Ar. Bea**	**124.80**	**288**	PKP	**PKPdf**	**13 05 33.2**	**-0.7**
	comp=Z,1.6nm,0.9s,baz=84,slow=2.1						

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*MOS **14** 12:52:05.8±1.0, 42°.65N×23°.01E, h10^{km}, mb4.4/17, Error ellipse: s-maj=5.6km s-min=3.2km az=78.2*

*BJI **14** 12:52:05.8, 42°.70N×23°.10E, h8^{km}, mb4.7/15, mB4.9/11, Ms4.4/5, Ms7 4.1/5*

*IDC **14** 12:52:05.7±0.5, 42°.64N×22°.99E, h0^{km}, mb4.1/20, mb1 4.1/30, mb1mx4.0/71, mbtmp4.0/30, ML3.6/10, MS3.2/12, Ms1 3.2/12, ms1mx2.9/64, Error ellipse: s-maj=9.9km s-min=8.5km az=29.0*

*ISCJB **14** 12:52:05.6±0.3, 42°.628N±0°.009×23°.10E±0°.01, h4^{km}±2^{km}, mb4.3/39, MS3.6/8, Error ellipse: s-maj=1.6km s-min=1.5km az=150.1*

*PRU **14** 12:52:06.7, 42°.62N×23°.00E, h0^{km}, M4.6*

*SKO **14** 12:52:07.0, 42°.63N×23°.03E, h5^{km}, M4.2, ML4.4*

*BEO **14** 12:52:07.5±0.2, 42°.65N×23°.05E, h0^{km}, ML4.1/22*

*PDG **14** 12:52:07.0±0.7, 42°.62N×23°.06E, h10^{km}±1^{km}, MD4.0/2, ML4.0/13, Error ellipse: s-maj=0.6km s-min=0.7km az=0.0*

*NEIC **14** 12:52:07.7±0.9, 42°.67N×23°.07E, h10^{km}±6^{km}, mb4.6/10, ML4.5(SOF), Error ellipse: s-maj=4.2km s-min=3.9km az=85.0*

NEIC Felt [III] at Sofia and Pernik. Also felt at Blagoevgrad, Dupnica, Elin Pelin, Kyustendil, Montana, Plovdiv and Samokov.

*CSEM **14** 12:52:07.1±0.1, 42°.62N×23°.08E, h5^{km}, mb4.4/24, Error ellipse: s-maj=1.7km s-min=1.5km az=91.0*

*ATH **14** 12:52:10.3, 42°.41N×23°.10E, h34^{km}±9^{km}, ML4.3/10, Error ellipse: s-maj=10.8km s-min=1.2km az=343.0*

ISC 14 12:52:07.4±0.7, **42°.62N**±0°.02×**23°.09E**±0°.02, **h11**^{km}±4^{km}, **n654**, **σ1^{s}.51**/788, **mb4.4**/39, **MS3.7**/8, **85C-59D, Bulgaria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VTS	**Vitosha**	**0.10**	**109**	*e*Pg	**Pg**	**12 52 10.2**	**-0.1**
VTS				*e*Sg	**Sg**	**12 52 11.7**	**-0.6**
VTS	**Vitosha**	**0.10**	**109**	⇑*i*P	**Pg**	**12 52 10.1**	**-0.2**
VTS				S	**Sg**	**12 52 12.2**	**-0.1**
VTS	**Vitosha**	**0.10**	**109**	*e*Pg	**Pg**	**12 52 10.0**	**-0.2**
VTS				*e*Sg	**Sg**	**12 52 12.2**	**-0.1**
VTS	**Vitosha**	**0.10**	**109**	⇑P	**Pg**	**12 52 10.1**	**-0.2**
VTS				S	**Sg**	**12 52 12.2**	**-0.1**
VTS	**Vitosha**	**0.10**	**109**	P	**Pg**	**12 52 10.1**	**-0.2**
VTS				*e*Sg	**Sg**	**12 52 11.7**	**-0.6**
VTS				S		12 52 12.2	
ZAPS	**Zavoj**	**0.73**	**333**	*e*Pg	**Pg**	**12 52 20.6**	**-1.0**
ZAPS				*e*Sg	**Sg**	**12 52 28.6**	**-2.5**
BARS	**Barje**	**0.95**	**282**	*e*Pg	**Pg**	**12 52 25.0**	**-0.8**
BARS				*e*Sg	**Sg**	**12 52 36.4**	**-1.9**
BARS	**Barje**	**0.95**	**282**	*e*Pg	**Pg**	**12 52 25.0**	**-0.8**
BARS				*e*Sg	**Sg**	**12 52 36.4**	**-1.9**
STIP	**Stip**	**1.14**	**216**	*i* Pg	Pb	12 52 23.3	-5.9
STIP				*i* Sg	**Sb**	**12 52 37.6**	**-6.4**
PLD	**Plovdiv**	**1.31**	**113**	*e*Pg	**Pn**	**12 52 31.4**	**-0.2**
PLD				*e*Sg	**Sg**	**12 52 49.8**	**+0.3**
PLD	**Plovdiv**	**1.31**	**113**	*e*Pg	**Pn**	**12 52 31.4**	**-0.2**
PLD				*e*Sg	**Sg**	**12 52 49.8**	**+0.3**
ZAGS	**Zajecar**	**1.34**	**333**	*e*Pn	**Pg**	**12 52 32.8**	**-0.4**
ZAGS				*e*Sn	**Sg**	**12 52 51.8**	**+1.2**
ZAGS	**Zajecar**	**1.34**	**333**	*e*Pn	**Pg**	**12 52 32.8**	**-0.4**
ZAGS				*e*Sn	**Sg**	**12 52 51.8**	**+1.2**
VAY	**Valandovo**	**1.36**	**197**	*e*Pg	**Pn**	**12 52 32.4**	**+0.1**
VAY				*e*Sg	**Sg**	**12 52 51.7**	**+0.7**
VAY	**Valandovo**	**1.36**	**197**	P	**Pn**	**12 52 31.0**	**-1.3**
VAY	**Valandovo**	**1.36**	**197**	*i* Pg	**Pn**	**12 52 31.2**	**-1.1**
VAY				*i* Sg	**Sb**	**12 52 49.7**	**-0.4**
VAY				*e*Lg	Lg	12 52 51.7	
	comp=N,5µm,0.5s						
VAY				*e*Lg	Lg	12 52 52.4	
	comp=E,4µm,0.4s						
VAY	**Valandovo**	**1.36**	**197**	P	**Pn**	**12 52 31.0**	**-1.3**
VAY	**Valandovo**	**1.36**	**197**	*e*Pg	**Pn**	**12 52 32.4**	**+0.1**
VAY				*e*Sg	**Sg**	**12 52 51.7**	**+0.7**
SKO	**Skopje**	**1.38**	**243**	P	**Pn**	**12 52 32.0**	**-0.6**
SKO	**Skopje**	**1.38**	**243**	*i* Pg	**Pn**	**12 52 32.0**	**-0.6**
SKO				*i* Sg	**Sb**	**12 52 49.2**	**-1.7**
SKO	**Skopje**	**1.38**	**243**	P	**Pn**	**12 52 32.0**	**-0.6**
NVR	**Nevrokopi**	**1.40**	**155**	P	**Pn**	**12 52 32.9**	**0.0**
NVR				S	**Sn**	**12 52 49.7**	**-1.6**
NVR				AML	AML	12 52 53.6	
	comp=E,31000µm,0.6s						
NVR				AML	AML	12 52 55.4	
	comp=N,18097µm,0.2s						
NVR	**Nevrokopi**	**1.40**	**155**	P	**Pn**	**12 52 32.5**	**-0.4**
NVR	**Nevrokopi**	**1.40**	**155**	P	**Pn**	**12 52 32.7**	**-0.2**
NVR				S	**Sn**	**12 52 49.2**	**-2.1**
BOVS	**Bovan**	**1.43**	**316**	*e*Pg	**Pn**	**12 52 32.3**	**-1.0**
BOVS				*e*Sg	**Sn**	**12 52 51.8**	**-0.2**
KNT	**Kendrikon**	**1.47**	**186**	P	**Pn**	**12 52 33.1**	**-0.7**
KNT				S	**Sn**	**12 52 49.9**	**-3.1**
KNT				AML	AML	12 52 54.6	
	comp=N,19071µm,0.4s						
KNT				AML	AML	12 52 54.7	
	comp=E,17943µm,0.7s						
KNT	**Kendrikon**	**1.47**	**186**	P	**Pn**	**12 52 33.0**	**-0.7**
KNT	**Kendrikon**	**1.47**	**186**	P	**Pn**	**12 52 33.1**	**-0.7**
KNT				S	**Sn**	**12 52 49.9**	**-3.1**
SRS	**Serrai**	**1.55**	**166**	P	**Pn**	**12 52 35.0**	**0.0**
SRS				S	**Sn**	**12 52 52.6**	**-2.4**
SRS				AML	AML	12 52 58.2	
	comp=E,21386µm,0.3s						
SRS				AML	AML	12 53 01.2	
	comp=N,26122µm,0.6s						
SRS	**Serrai**	**1.55**	**166**	P	**Pn**	**12 52 34.8**	**-0.2**
SRS	**Serrai**	**1.55**	**166**	P	**Pn**	**12 52 34.8**	**-0.2**
SRS				S	**Sn**	**12 52 52.4**	**-2.7**
SELS	**Selova**	**1.56**	**293**	*e*Pg	**Pn**	**12 52 34.3**	**-0.8**
SELS				*e*Sn	**Sb**	**12 52 56.1**	**0.0**
GRG	**Griva**	**1.74**	**197**	P	**Pn**	**12 52 37.0**	**-0.5**
GRG	**Griva**	**1.74**	**197**	P	**Pn**	**12 52 37.1**	**-0.5**
GRG	**Griva**	**1.74**	**197**	P	**Pn**	**12 52 37.1**	**-0.5**
PRZK	**Prizren**	**1.77**	**257**	P	**Pn**	**12 52 38.1**	**+0.1**
CRAR	**CRAIOVA**	**1.78**	**17**	⇓*i*P	**Pn**	**12 52 38.0**	**-0.1**
CRAR	**CRAIOVA**	**1.78**	**17**	⇓P	**Pn**	**12 52 38.0**	**-0.1**
CRAR	**CRAIOVA**	**1.78**	**17**	P	**Pn**	**12 52 38.0**	**-0.1**
CRAR				S	**Sn**	**12 53 01.3**	**+0.6**
SOH	**Sokhos**	**1.81**	**174**	P	**Pn**	**12 52 38.8**	**+0.2**
SOH	**Sokhos**	**1.81**	**174**	P	**Pn**	**12 52 38.5**	**-0.1**
SOH	**Sokhos**	**1.81**	**174**	P	**Pn**	**12 52 38.4**	**-0.1**
KRUS	**Krusevo**	**1.86**	**228**	⇑*i*Pn	**Pn**	**12 52 39.1**	**-0.1**
KAVA	**Kavala**	**1.94**	**146**	P	**Pn**	**12 52 41.2**	**+0.8**
KAVA	**Kavala**	**1.94**	**146**	P	**Pn**	**12 52 40.8**	**+0.5**
KAVA	**Kavala**	**1.94**	**146**	P	**Pn**	**12 52 40.8**	**+0.5**
KVLA	**Kavala**	**1.94**	**150**	P	**Pb**	**12 52 42.5**	**-0.4**
KVLA				S	**Sn**	**12 53 02.4**	**-2.3**
KVLA				AML	AML	12 53 12.8	
	comp=N,20232µm,0.3s						
KVLA				AML	AML	12 53 12.9	
	comp=E,13489µm,0.4s						
KVLA	**Kavala**	**1.94**	**150**	P	**Pn**	**12 52 41.4**	**+1.1**
KVLA				S	**Sn**	**12 53 02.3**	**-2.4**
ZIMR		**1.96**	**57**	⇓*i*P	**Pn**	**12 52 41.9**	**+1.3**
ZIMR		**1.96**	**57**	S	**Sg**	**12 53 11.5**	**+1.0**
ZIMR		**1.96**	**57**	⇓P	**Pn**	**12 52 41.9**	**+1.3**
THE	**Thessaloniki**	**1.99**	**183**	P	**Pn**	**12 52 40.9**	**0.0**
THE	**Thessaloniki**	**1.99**	**183**	P	**Pn**	**12 52 40.7**	**-0.3**
THE	**Thessaloniki**	**1.99**	**183**	P	**Pn**	**12 52 40.7**	**-0.3**
HORT	**Hortiatis**	**2.02**	**180**	P	**Pn**	**12 52 41.4**	**-0.1**
HORT				S	**Sn**	**12 53 02.9**	**-4.0**
HORT				AML	AML	12 53 12.8	
	comp=N,8340µm,0.7s						
HORT				AML	AML	12 53 13.6	
	comp=E,5834µm,0.4s						
HORT	**Hortiatis**	**2.02**	**180**	P	**Pn**	**12 52 40.9**	**-0.6**
HORT	**Hortiatis**	**2.02**	**180**	P	**Pn**	**12 52 41.2**	**-0.3**
HORT				S	**Sn**	**12 53 03.1**	**-3.7**
SRE	**Strehaia**	**2.04**	**2**	⇑*i*P	**Pn**	**12 52 41.7**	**0.0**
SRE	**Strehaia**	**2.04**	**2**	⇑P	**Pn**	**12 52 41.7**	**0.0**
SRE	**Strehaia**	**2.04**	**2**	P	**Pn**	**12 52 41.7**	**0.0**
KUBS	**Kucevo**	**2.06**	**331**	*e*Pn	**Pn**	**12 52 42.3**	**+0.3**
KUBS				*e*Sn	**Sb**	**12 53 09.0**	**-1.5**
KUBS	**Kucevo**	**2.06**	**331**	*e*Pn	**Pn**	**12 52 42.3**	**+0.3**
KUBS				*e*Sn	**Sb**	**12 53 09.0**	**-1.5**
PEJK	**Peje**	**2.07**	**271**	P	**Pn**	**12 52 42.3**	**+0.1**
BIA	**Bitola**	**2.07**	**220**	P	**Pn**	**12 52 42.8**	**+0.6**
BIA	**Bitola**	**2.07**	**220**	*e*Pn	**Pn**	**12 52 42.5**	**+0.3**
BIA	**Bitola**	**2.07**	**220**	P	**Pn**	**12 52 42.8**	**+0.6**
DJES	**Djerdap**	**2.08**	**349**	*e*Pn	**Pn**	**12 52 42.9**	**+0.6**
DJES				*e*Sn	**Sn**	**12 53 08.8**	**+0.6**
SVIS	**Svilajnac**	**2.13**	**321**	*e*Pn	**Pn**	**12 52 43.7**	**+0.8**
SVIS				*e*Sn	**Sb**	**12 53 11.3**	**-1.2**
GRUS	**Gruza**	**2.14**	**307**	*e*Pn	**Pn**	**12 52 43.8**	**+0.7**
GRUS				*e*Sn	**Sn**	**12 53 10.7**	**+1.0**
GRUS	**Gruza**	**2.14**	**307**	*e*Pn	**Pn**	**12 52 43.8**	**+0.7**
GRUS				*e*Sn	**Sn**	**12 53 10.7**	**+1.0**
PHP	**Peshkopia**	**2.18**	**245**	P	**Pn**	**12 52 43.5**	**-0.1**
PHP	**Peshkopia**	**2.18**	**245**	*i* Pn	**Pn**	**12 52 43.2**	**-0.4**
PHP	**Peshkopia**	**2.18**	**245**	P	**Pn**	**12 52 43.5**	**-0.1**
PHP				*i* Sn	**Sb**	**12 53 13.5**	**-0.3**
PHP	**Peshkopia**	**2.18**	**245**	*i* PN	**Pn**	**12 52 43.2**	**-0.4**
PHP				*i* SN	**Sb**	**12 53 13.5**	**-0.3**
FNA	**Florina**	**2.24**	**215**	P	**Pn**	**12 52 44.1**	**-0.4**
FNA	**Florina**	**2.24**	**215**	*e*Pn	**Pn**	**12 52 44.6**	**+0.1**
FNA	**Florina**	**2.24**	**215**	P	**Pn**	**12 52 44.6**	**+0.1**
FNA	**Florina**	**2.24**	**215**	*e*P	**Pn**	**12 52 44.6**	**+0.1**
FNA	**Florina**	**2.24**	**215**	*e*P	**Pn**	**12 52 44.6**	**+0.1**
BCI	**Bajram Curri**	**2.25**	**264**	*i* Pn	**Pb**	**12 52 48.4**	**+0.4**
BCI	**Bajram Curri**	**2.25**	**264**	*i* PN	**Pb**	**12 52 48.4**	**+0.4**
BCI				*i* SN	**Sg**	**12 53 19.5**	**-0.1**
PLG	**Polygyros**	**2.26**	**173**	P	**Pn**	**12 52 44.8**	**0.0**
PLG				S	**Sn**	**12 53 09.7**	**-2.9**
PLG				AML	AML	12 53 21.9	
	comp=N,3301µm,0.4s						
PLG				AML	AML	12 53 22.6	
	comp=E,3064µm,0.6s						
PLG	**Polygyros**	**2.26**	**173**	P	**Pn**	**12 52 44.8**	**0.0**
PLG	**Polygyros**	**2.26**	**173**	P	**Pn**	**12 52 44.6**	**-0.2**
PLG				S	**Sn**	**12 53 09.5**	**-3.2**
OHR	**Ohrid**	**2.28**	**229**	*e*Pn	**Pn**	**12 52 44.9**	**-0.1**
PVY	**Plav**	**2.31**	**270**	⇓*i*Pn	**Pn**	**12 52 45.8**	**+0.3**
PVY				*e*Sn	**Sb**	**12 53 16.4**	**-1.3**
HERR	**Herculane**	**2.31**	**348**	⇓*i*P	**Pn**	**12 52 44.8**	**-0.6**
HERR	**Herculane**	**2.31**	**348**	⇓*i*P	**Pn**	**12 52 44.8**	**-0.6**
HERR				S	**Sn**	**12 53 13.1**	**-0.6**
KTI	**Kastanea**	**2.34**	**198**	P	**Pn**	**12 52 45.7**	**-0.3**
KTI	**Kastanea**	**2.34**	**198**	P	**Pn**	**12 52 45.7**	**-0.3**
HUMR	**Humele**	**2.35**	**35**	⇓*i*P	**Pn**	**12 52 46.5**	**+0.6**
HUMR	**Humele**	**2.35**	**35**	⇓*i*P	**Pn**	**12 52 46.5**	**+0.6**
IVAS	**Ivanjica**	**2.35**	**295**	*e*Pn	**Pn**	**12 52 46.7**	**+0.7**
IVAS				*e*Sn	**Sn**	**12 53 16.3**	**+1.4**
IVAS	**Ivanjica**	**2.35**	**295**	*e*Pn	**Pn**	**12 52 46.7**	**+0.7**
IVAS				*e*Sn	**Sn**	**12 53 16.3**	**+1.4**
RDO	**Rodhopi**	**2.35**	**128**	P	**Pn**	**12 52 46.4**	**+0.5**
RDO				S	**Sn**	**12 53 13.1**	**-1.7**
RDO				AML	AML	12 53 25.3	
	comp=E,27130µm,0.5s						
RDO				AML	AML	12 53 26.1	
	comp=N,35345µm,0.3s						
RDO	**Rodhopi**	**2.35**	**128**	P	**Pn**	**12 52 46.5**	**+0.6**
RDO	**Rodhopi**	**2.35**	**128**	P	**Pn**	**12 52 46.6**	**+0.6**
RDO				S	**Sn**	**12 53 13.3**	**-1.5**
THAS	**Thassos island**	**2.36**	**148**	P	**Pn**	**12 52 46.1**	**+0.1**
THAS	**Thassos island**	**2.36**	**148**	P	**Pn**	**12 52 46.0**	**0.0**
THAS	**Thassos island**	**2.36**	**148**	P	**Pn**	**12 52 46.1**	**+0.1**
BEY	**Berane**	**2.36**	**277**	P	**Pn**	**12 52 46.5**	**+0.3**
BEY				*e*Sn	**Sb**	**12 53 17.5**	**-1.8**
IVA	**Berane**	**2.36**	**277**	⇓*i*Pn	**Pn**	**12 52 46.6**	**+0.3**
IVA				*e*Sn	**Sb**	**12 53 17.5**	**-1.8**
SJES	**Sjenica**	**2.37**	**287**	*e*Pn	**Pn**	**12 52 47.1**	**+0.8**
SJES				*e*Sn	**Sn**	**12 53 16.4**	**+0.9**
MDVR	**Moldovita**	**2.38**	**336**	⇓*i*P	**Pn**	**12 52 46.3**	**0.0**
MDVR	**Moldovita**	**2.38**	**336**	⇓*i*P	**Pn**	**12 52 46.3**	**0.0**
OUR	**Ouranopolis**	**2.38**	**163**	P	**Pn**	**12 52 41.9**	**-4.5**
OUR	**Ouranopolis**	**2.38**	**163**	P	**Pn**	**12 52 43.7**	**-2.7**
OUR	**Ouranopolis**	**2.38**	**163**	P	**Pn**	**12 52 44.0**	**-2.4**
PUK	**Puka**	**2.44**	**257**	*i* Pn	**Pn**	**12 52 44.1**	**-3.1**
PUK				*i* Sn	**Sn**	**12 53 14.1**	**-2.9**
PUK	**Puka**	**2.44**	**257**	*i* PN	**Pn**	**12 52 44.1**	**-3.1**
PUK				*i* SN	**Sn**	**12 53 14.1**	**-2.9**
KZN	**Kozani**	**2.52**	**204**	P	**Pn**	**12 52 48.4**	**+0.1**
KZN	**Kozani**	**2.52**	**204**	P	**Pn**	**12 52 48.4**	**+0.1**
KZN	**Kozani**	**2.52**	**204**	P	**Pn**	**12 52 48.3**	**+0.1**
TRUS	**Trudelj**	**2.52**	**310**	*e*Pn	**Pn**	**12 52 49.3**	**+1.0**
TRUS				*e*Sn	**Sn**	**12 53 20.3**	**+1.2**
TRUS	**Trudelj**	**2.52**	**310**	*e*Pn	**Pn**	**12 52 49.3**	**+1.0**
TRUS				*e*Sn	**Sn**	**12 53 20.3**	**+1.2**
LIT	**Litokhoron**	**2.56**	**190**	P	**Pn**	**12 52 47.1**	**-1.7**
LIT	**Litokhoron**	**2.56**	**190**	*e*Pn	**Pn**	**12 52 48.0**	**-0.8**
LIT	**Litokhoron**	**2.56**	**190**	P	**Pn**	**12 52 47.7**	**-1.1**
LIT	**Litokhoron**	**2.56**	**190**	*e*P	**Pn**	**12 52 48.1**	**-0.8**
LIT	**Litokhoron**	**2.56**	**190**	*e*P	**Pn**	**12 52 48.1**	**-0.8**
GOLR		**2.60**	**31**	⇑*i*P	**Pn**	**12 52 50.5**	**+1.1**
GOLR		**2.60**	**31**	⇑*i*P	**Pn**	**12 52 50.5**	**+1.1**
KBN	**Korca**	**2.64**	**222**	P	**Pn**	**12 52 50.2**	**+0.2**
KBN	**Korca**	**2.64**	**222**	P	**Pn**	**12 52 50.2**	**+0.2**
KOME	**Kolasin**	**2.64**	**276**	⇑*i*Pn	**Pn**	**12 52 50.3**	**+0.3**
KOME				*e*Sn	**Sb**	**12 53 24.4**	**-2.8**
KOME	**Kolasin**	**2.64**	**276**	⇑*i*Pn	**Pn**	**12 52 50.3**	**+0.3**
KOME				*e*Sn	**Sb**	**12 53 24.4**	**-2.8**
SGRR	**Singureni**	**2.64**	**52**	⇑*i*P	**Pn**	**12 52 51.0**	**+1.1**
SGRR	**Singureni**	**2.64**	**52**	⇑*i*P	**Pn**	**12 52 51.0**	**+1.1**
SGRR				S	**Sn**	**12 53 24.6**	**+2.6**
NEST	**Nestorio**	**2.68**	**215**	P	**Pn**	**12 52 51.3**	**+0.7**
NEST	**Nestorio**	**2.68**	**215**	P	**Pn**	**12 52 51.0**	**+0.4**
NEST	**Nestorio**	**2.68**	**215**	P	**Pn**	**12 52 51.1**	**+0.4**
DIVS	**Divibare**	**2.69**	**304**	*e*Pn	**Pn**	**12 52 51.2**	**+0.4**
DIVS	**Divibare**	**2.69**	**304**	*e*Pn	**Pn**	**12 52 50.2**	**-0.5**
DIVS	**Divibare**	**2.69**	**304**	*e*Pn	**Pn**	**12 52 51.2**	**+0.4**
PAIG	**Paliouri**	**2.73**	**170**	P	**Pn**	**12 52 50.8**	**-0.4**
PAIG				S	**Sn**	**12 53 19.6**	**-4.5**
PAIG				AML	AML	12 53 39.0	
	comp=E,1769µm,0.7s						
PAIG				AML	AML	12 53 39.1	
	comp=N,1655µm,0.7s						
PAIG	**Paliouri**	**2.73**	**170**	P	**Pn**	**12 52 50.7**	**-0.4**
PAIG	**Paliouri**	**2.73**	**170**	P	**Pn**	**12 52 50.8**	**-0.4**
PAIG				S	**Sn**	**12 53 20.0**	**-4.1**
BUC1	**Bucharest**	**2.75**	**50**	⇑*i*P	**Pn**	**12 52 53.6**	**+2.2**
BUC1	**Bucharest**	**2.75**	**50**	⇑P	**Pn**	**12 52 53.6**	**+2.2**
BUC1	**Bucharest**	**2.75**	**50**	P	**Pn**	**12 52 53.6**	**+2.2**
PLE	**Pljevlja**	**2.80**	**286**	⇓*i*Pn	**Pn**	**12 52 52.8**	**+0.5**
PLE				*e*Sn	**Sn**	**12 53 28.4**	**+2.3**
PLE	**Pljevlja**	**2.80**	**286**	⇓*i*Pn	**Pn**	**12 52 52.8**	**+0.5**
PLE				*e*Sn	**Sn**	**12 53 28.4**	**+2.3**
ALN	**Alexandroupoli**	**2.81**	**127**	P	**Pn**	**12 52 52.9**	**+0.7**
ALN				S	**Sn**	**12 53 25.3**	**-0.7**
ALN				AML	AML	12 53 43.5	
	comp=E,17775µm,0.8s						
ALN				AML	AML	12 53 44.4	
	comp=N,8438µm,0.7s						
ALN	**Alexandroupoli**	**2.81**	**127**	*e*Pn	**Pb**	**12 52 59.2**	**+1.7**
ALN				*e*Sn	**Sg**	**12 53 36.7**	**-0.8**
ALN	**Alexandroupoli**	**2.81**	**127**	P	**Pn**	**12 52 53.1**	**+0.9**
ALN	**Alexandroupoli**	**2.81**	**127**	*e*P	**Pb**	**12 52 59.2**	**+1.7**
ALN				*e*		12 53 36.7	
ALN	**Alexandroupoli**	**2.81**	**127**	P	**Pn**	**12 52 53.1**	**+0.9**
ALN	**Alexandroupoli**	**2.81**	**127**	*e*Pn	**Pb**	**12 52 59.2**	**+1.7**
ALN				S	**Sn**	**12 53 25.0**	**-1.0**
ALN				*e*Sn	**Sg**	**12 53 36.7**	**-0.8**
SMTH	**Samothraki Isl**	**2.83**	**139**	P	**Pn**	**12 52 52.2**	**-0.3**
SMTH				S	**Sn**	**12 53 23.0**	**-3.5**
SMTH				AML	AML	12 53 41.9	
	comp=N,2813µm,0.7s						
SMTH				AML	AML	12 53 44.4	
	comp=E,3775µm,0.5s						
SMTH	**Samothraki Isl**	**2.83**	**139**	P	**Pn**	**12 52 52.6**	**+0.1**
SMTH	**Samothraki Isl**	**2.83**	**139**	P	**Pn**	**12 52 52.6**	**+0.1**
SMTH				S	**Sn**	**12 53 23.6**	**-2.9**
PDG	**Podgorica**	**2.84**	**267**	⇑*i*P	**Pn**	**12 52 52.4**	**-0.2**
PDG	**Podgorica**	**2.84**	**267**	P	**Pn**	**12 52 53.1**	**+0.5**
PDG	**Podgorica**	**2.84**	**267**	P	**Pn**	**12 52 53.1**	**+0.5**
PDG				S	**Sn**	**12 53 25.6**	**-1.1**
PDG				*e*Sn	**Sn**	**12 53 29.2**	**+2.5**
TTG	**Podgorica**	**2.84**	**267**	⇓*i*Pn	**Pn**	**12 52 53.1**	**+0.5**
TTG				*e*Sn	**Sn**	**12 53 29.2**	**+2.5**
TTG	**Podgorica**	**2.84**	**267**	*e*Pn	**Pn**	**12 52 53.1**	**+0.5**
TTG	**Podgorica**	**2.84**	**267**	*e*P	**Pn**	**12 52 53.1**	**+0.5**
TTG	**Podgorica**	**2.84**	**267**	*e*P	**Pn**	**12 52 53.1**	**+0.5**
LOT	**Lotru**	**2.87**	**10**	⇓*i*P	**Pn**	**12 52 53.3**	**+0.1**
LOT	**Lotru**	**2.87**	**10**	⇓*i*P	**Pn**	**12 52 53.3**	**+0.1**
LOT				S	**Sn**	**12 53 27.6**	**-0.1**
BEO	**Beograd**	**2.89**	**320**	*e*Pn	**Pn**	**12 52 54.5**	**+1.1**
DRME	**Dracevica, Mon**	**2.92**	**263**	*e*Pn	**Pn**	**12 52 54.8**	**+1.0**
DRME				*e*Sn	**Sn**	**12 53 30.9**	**+2.0**
DRME	**Dracevica, Mon**	**2.92**	**263**	*e*Pn	**Pn**	**12 52 54.8**	**+1.0**
DRME				*e*Sn	**Sn**	**12 53 30.9**	**+2.0**
ULC	**Ulcinj**	**2.92**	**258**	*e*Pn	**Pn**	**12 52 55.3**	**+1.4**
ULC				*e*Sn	**Sn**	**12 53 31.0**	**+2.0**
ULC	**Ulcinj**	**2.92**	**258**	*e*Pn	**Pn**	**12 52 55.3**	**+1.4**
ULC	**Ulcinj**	**2.92**	**258**	P	**Pn**	**12 52 56.3**	**+2.4**
ULC				*e*Sn	**Sn**	**12 53 31.0**	**+2.0**
BBLS	**Lazići**	**2.96**	**296**	*e*Pn	**Pn**	**12 52 55.3**	**+0.9**
BBLS				*e*Sn	**Sn**	**12 53 30.8**	**+0.8**
BBLS	**Lazići**	**2.96**	**296**	*e*Pn	**Pn**	**12 52 55.3**	**+0.9**
BBLS				*e*Sn	**Sn**	**12 53 30.8**	**+0.8**
KPRO	**Kipourio**	**2.96**	**207**	P	**Pn**	**12 52 55.8**	**+1.4**
KPRO	**Kipourio**	**2.96**	**207**	P	**Pn**	**12 52 54.9**	**+0.5**
KPRO	**Kipourio**	**2.96**	**207**	P	**Pn**	**12 52 55.2**	**+0.8**
MTUR	**Matau**	**2.97**	**28**	⇑*i*P	**Pn**	**12 52 55.5**	**+1.0**
MTUR	**Matau**	**2.97**	**28**	⇑P	**Pn**	**12 52 55.5**	**+1.0**
MTUR	**Matau**	**2.97**	**28**	P	**Pn**	**12 52 55.5**	**+1.0**
NKY	**Niksic**	**3.02**	**275**	⇓*i*Pn	**Pn**	**12 52 55.9**	**+0.6**
NKY				*e*Sn	**Sn**	**12 53 33.6**	**+2.1**
NKY	**Niksic**	**3.02**	**275**	⇓*i*Pn	**Pn**	**12 52 55.9**	**+0.6**
NKY				*e*Sn	**Sn**	**12 53 33.6**	**+2.1**
NKME	**Niksic**	**3.05**	**274**	⇓*i*Pn	**Pn**	**12 52 55.9**	**+0.3**
NKME				*e*Sn	**Sn**	**12 53 34.0**	**+1.9**
NKME	**Niksic**	**3.05**	**274**	⇓*i*Pn	**Pn**	**12 52 55.9**	**+0.3**
NKME				*e*Sn	**Sn**	**12 53 34.0**	**+1.9**
CEME	**Cevo**	**3.08**	**270**	⇑*i*Pn	**Pn**	**12 52 56.9**	**+0.9**
CEME				*e*Sn	**Sn**	**12 53 34.9**	**+2.1**
CEME	**Cevo**	**3.08**	**270**	⇑*i*Pn	**Pn**	**12 52 56.9**	**+0.9**
CEME				*e*Sn	**Sn**	**12 53 34.9**	**+2.1**
SULR		**3.08**	**47**	⇑*i*P	**Pn**	**12 52 56.6**	**+0.6**
SULR		**3.08**	**47**	⇑*i*P	**Pn**	**12 52 56.6**	**+0.6**
BANR	**Banloc**	**3.10**	**334**	⇓*i*P	**Pn**	**12 52 55.4**	**-0.8**
BANR	**Banloc**	**3.10**	**334**	⇓*i*P	**Pn**	**12 52 55.4**	**-0.8**
BUM	**Brajici-Budva**	**3.12**	**265**	⇓*i*Pn	**Pn**	**12 52 57.8**	**+1.2**
BUM				*e*Sn	**Sn**	**12 53 35.5**	**+1.7**
BUM	**Brajici-Budva**	**3.12**	**265**	⇓*i*Pn	**Pn**	**12 52 57.8**	**+1.2**
BUM				*e*Sn	**Sn**	**12 53 35.5**	**+1.7**
UPM	**Unac-Piva**	**3.12**	**282**	⇓*i*Pn	**Pn**	**12 52 57.0**	**+0.2**
UPM				*e*Sn	**Sn**	**12 53 36.1**	**+2.0**
UPM	**Unac-Piva**	**3.12**	**282**	P	**Pn**	**12 52 57.0**	**+0.2**
UPM				*e*Sn	**Sn**	**12 53 36.1**	**+2.0**
LIA	**Limnos Island**	**3.15**	**149**	P	**Pn**	**12 52 57.0**	**+0.1**
LIA	**Limnos Island**	**3.15**	**149**	P	**Pn**	**12 52 56.9**	**+0.1**
LIA	**Limnos Island**	**3.15**	**149**	P	**Pn**	**12 52 57.1**	**+0.2**
VOIR		**3.15**	**26**	⇓*i*P	**Pn**	**12 52 57.5**	**+0.5**
VOIR		**3.15**	**26**	⇓P	**Pn**	**12 52 57.5**	**+0.5**
VOIR		**3.15**	**26**	P	**Pn**	**12 52 57.5**	**+0.5**
THL	**Klokotos Trika**	**3.16**	**195**	P	**Pn**	**12 52 56.4**	**-0.6**
THL	**Klokotos Trika**	**3.16**	**195**	P	**Pn**	**12 52 56.8**	**-0.3**
THL	**Klokotos Trika**	**3.16**	**195**	P	**Pn**	**12 52 56.8**	**-0.3**
BZS	**Buzias**	**3.17**	**341**	*e*Pn	**Pn**	**12 52 57.5**	**+0.2**
BZS				*e*Sn	**Sn**	**12 53 36.5**	**+1.4**
BZS	**Buzias**	**3.17**	**341**	⇑*i*P	**Pn**	**12 52 56.8**	**-0.5**
BZS	**Buzias**	**3.17**	**341**	⇑P	**Pn**	**12 52 56.8**	**-0.5**
BZS	**Buzias**	**3.17**	**341**	P	**Pn**	**12 52 56.8**	**-0.5**
BZS	**Buzias**	**3.17**	**341**	*e*Pn	**Pn**	**12 52 57.5**	**+0.2**
BZS				*e*Sn	**Sn**	**12 53 36.5**	**+1.4**
FYTO	**Fytoko, Volos**	**3.21**	**182**	P	**Pn**	**12 52 57.3**	**-0.5**
FYTO	**Fytoko, Volos**	**3.21**	**182**	P	**Pn**	**12 52 57.3**	**-0.5**
GADA	**Gvkgeada**	**3.22**	**138**	P	**Pn**	**12 52 58.5**	**+0.6**
GADA	**Gvkgeada**	**3.22**	**138**	P	**Pn**	**12 52 58.5**	**+0.6**
TEKS	**Tekeris**	**3.22**	**308**	*e*Pn	**Pn**	**12 52 58.3**	**+0.4**
TEKS				*e*Sn	**Sn**	**12 53 37.2**	**+0.9**
TEKS	**Tekeris**	**3.22**	**308**	*e*Pn	**Pn**	**12 52 58.3**	**+0.4**
TEKS				*e*Sn	**Sn**	**12 53 37.2**	**+0.9**
SECR		**3.24**	**41**	⇑*i*P	**Pn**	**12 53 00.1**	**+2.0**
SECR		**3.24**	**41**	⇑*i*P	**Pn**	**12 53 00.1**	**+2.0**
XOR	**Xorichti**	**3.25**	**179**	P	**Pn**	**12 52 57.9**	**-0.5**
XOR	**Xorichti**	**3.25**	**179**	P	**Pn**	**12 52 58.0**	**-0.3**
XOR	**Xorichti**	**3.25**	**179**	P	**Pn**	**12 52 58.1**	**-0.3**
DEV	**Deva**	**3.26**	**358**	⇑*i*P	**Pn**	**12 52 59.2**	**+0.7**
DEV	**Deva**	**3.26**	**358**	⇑P	**Pn**	**12 52 59.2**	**+0.7**
DEV	**Deva**	**3.26**	**358**	P	**Pn**	**12 52 59.2**	**+0.7**
NEO	**Neokhori**	**3.31**	**178**	P	**Pn**	**12 52 58.8**	**-0.4**
NEO	**Neokhori**	**3.31**	**178**	P	**Pn**	**12 52 58.6**	**-0.6**
NEO	**Neokhori**	**3.31**	**178**	P	**Pn**	**12 52 59.0**	**-0.2**
HAPS	**Han Pijesak,BI**	**3.35**	**297**	*e*Pn	**Pn**	**12 52 58.1**	**-1.7**
BRY	**Bratogost**	**3.36**	**276**	⇓*i*Pn	**Pn**	**12 53 00.6**	**+0.7**
BRY				*e*Sn	**Sn**	**12 53 41.8**	**+1.9**
BRY	**Bratogost**	**3.36**	**276**	⇓*i*Pn	**Pn**	**12 53 00.6**	**+0.7**
BRY				*e*Sn	**Sn**	**12 53 41.8**	**+1.9**
HCY	**Herceg Novi**	**3.40**	**269**	⇓*i*Pn	**Pn**	**12 53 01.4**	**+1.1**
HCY				*e*Sn	**Sn**	**12 53 42.5**	**+1.9**
HCY	**Herceg Novi**	**3.40**	**269**	⇓*i*Pn	**Pn**	**12 53 01.4**	**+1.1**
HCY				*e*Sn	**Sn**	**12 53 42.5**	**+1.9**
JAN	**Janina**	**3.41**	**210**	P	**Pn**	**12 53 02.0**	**+1.5**
JAN	**Janina**	**3.41**	**210**	P	**Pn**	**12 53 01.4**	**+0.9**
JAN	**Janina**	**3.41**	**210**	P	**Pn**	**12 53 01.5**	**+0.9**
FGSL	**Fruska Gora**	**3.47**	**318**	*e*Pn	**Pn**	**12 53 02.5**	**+1.2**
FGSL				*e*Sn	**Sn**	**12 53 43.5**	**+1.2**
FRGS	**Fruska Gora**	**3.47**	**318**	*e*Pn	**Pn**	**12 53 02.5**	**+1.2**
FRGS				*e*Sn	**Sn**	**12 53 43.5**	**+1.1**
TREB	**Trebinje**	**3.49**	**273**	*e*Pn	**Pn**	**12 53 03.2**	**+1.6**
AOS	**Alonnisos**	**3.50**	**170**	P	**Pn**	**12 52 59.8**	**-2.0**
AOS	**Alonnisos**	**3.50**	**170**	P	**Pn**	**12 53 00.9**	**-0.9**
AOS	**Alonnisos**	**3.50**	**170**	P	**Pn**	**12 53 00.8**	**-1.0**
MLR	**Muntele Rosu**	**3.53**	**35**	Pn	**Pn**	**12 53 04.2**	**+1.9**
	comp=E,11nm,0.3s,baz=295,slow=3.6,SNR=147						
MLR				Sn	**Sb**	**12 53 49.0**	**-3.9**
	comp=E,10nm,0.3s,baz=286,slow=22,SNR=10						
MLR				Lg	Lg	12 54 03.5	
	comp=E,10nm,0.3s,baz=302,slow=14,SNR=7.8						
MLR	**Muntele Rosu**	**3.53**	**35**	⇑*i*P	**Pn**	**12 53 03.9**	**+1.6**
MLR	**Muntele Rosu**	**3.53**	**35**	*e*Pn	**Pn**	**12 53 02.8**	**+0.5**
MLR				Sn	**Sb**	**12 53 49.0**	**-3.9**
MLR				Lg	Lg	12 54 03.5	
MLR	**Muntele Rosu**	**3.53**	**35**	⇑P	**Pn**	**12 53 03.9**	**+1.6**
MLR	**Muntele Rosu**	**3.53**	**35**	*e*Pn	**Pn**	**12 53 02.8**	**+0.5**
MLR	**Muntele Rosu**	**3.53**	**35**	P	**Pn**	**12 53 03.9**	**+1.6**
MLR				Sn	**Sb**	**12 53 49.0**	**-3.9**
ISR	**Istrita**	**3.53**	**44**	⇑*i*P	**Pn**	**12 53 04.2**	**+2.0**
ISR	**Istrita**	**3.53**	**44**	⇑P	**Pn**	**12 53 04.2**	**+2.0**
ISR	**Istrita**	**3.53**	**44**	P	**Pn**	**12 53 04.2**	**+2.0**
SRN	**Sarande**	**3.59**	**221**	P	**Pn**	**12 53 04.5**	**+1.5**
SRN	**Sarande**	**3.59**	**221**	P	**Pn**	**12 53 04.5**	**+1.5**
AGG	**Agios Georgios**	**3.64**	**189**	P	**Pn**	**12 53 03.6**	**-0.1**
AGG	**Agios Georgios**	**3.64**	**189**	*e*Pn	**Pn**	**12 53 03.8**	**+0.1**
AGG	**Agios Georgios**	**3.64**	**189**	P	**Pn**	**12 53 03.6**	**-0.1**
AGG	**Agios Georgios**	**3.64**	**189**	*e*P	**Pn**	**12 53 03.8**	**+0.1**
AGG	**Agios Georgios**	**3.64**	**189**	*e*P	**Pn**	**12 53 03.8**	**+0.1**
AMRR	**Amara**	**3.67**	**56**	⇑*i*P	**Pn**	**12 53 06.0**	**+1.9**
AMRR	**Amara**	**3.67**	**56**	⇑P	**Pn**	**12 53 06.0**	**+1.9**
AMRR	**Amara**	**3.67**	**56**	P	**Pn**	**12 53 06.0**	**+1.9**
AMRR				S	**Sn**	**12 53 50.6**	**+3.3**
SGD	**Sagiada**	**3.70**	**217**	P	**Pn**	**12 53 06.2**	**+1.7**
SGD	**Sagiada**	**3.70**	**217**	P	**Pn**	**12 53 06.2**	**+1.7**
EZN	**Ezine**	**3.71**	**138**	P	**Pn**	**12 53 05.3**	**+0.7**
EZN	**Ezine**	**3.71**	**138**	P	**Pn**	**12 53 05.3**	**+0.7**
IGT	**Igoumenitsa**	**3.72**	**215**	P	**Pn**	**12 53 08.1**	**+3.3**
IGT	**Igoumenitsa**	**3.72**	**215**	P	**Pn**	**12 53 06.9**	**+2.1**
IGT	**Igoumenitsa**	**3.72**	**215**	P	**Pn**	**12 53 06.9**	**+2.1**
DOPR	**Dopca**	**3.73**	**26**	⇑*i*P	**Pn**	**12 53 07.2**	**+2.3**
DOPR	**Dopca**	**3.73**	**26**	⇑*i*P	**Pn**	**12 53 07.2**	**+2.3**
SMIA	**Simia**	**3.74**	**179**	P	**Pn**	**12 53 04.8**	**-0.3**
SMIA	**Simia**	**3.74**	**179**	P	**Pn**	**12 53 04.8**	**-0.3**
ICOR	**Ion Corvin**	**3.75**	**65**	⇓*i*P	**Pn**	**12 53 06.6**	**+1.5**
ICOR	**Ion Corvin**	**3.75**	**65**	⇓*i*P	**Pn**	**12 53 06.6**	**+1.5**
DSL	**Palaion Diasel**	**3.80**	**204**	P	**Pn**	**12 53 06.7**	**+0.8**
DSL	**Palaion Diasel**	**3.80**	**204**	P	**Pn**	**12 53 06.7**	**+0.8**
KEK	**Kerkira**	**3.82**	**222**	P	**Pn**	**12 53 07.1**	**+0.9**
KEK	**Kerkira**	**3.82**	**222**	P	**Pn**	**12 53 07.1**	**+0.9**
EVR	**Evrytania**	**3.83**	**195**	P	**Pn**	**12 53 06.4**	**+0.1**

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EVR   Evrytania         3.83 195   P      Pn     12 53 06.4 +0.1
SKY   Skiros Island     3.90 163   P      Pn     12 53 08.1 +0.8
SKY   Skiros Island     3.90 163   P      Pn     12 53 07.8 +0.5
GRER                    3.93  44⇓iP       Pn     12 53 10.9 +3.2
GRER                    3.93  44⇓iP       Pn     12 53 10.9 +3.2
LKR   Lokris            3.97 181   P      Pn     12 53 07.6 -0.6
LKR   Lokris            3.97 181   P      Pn     12 53 07.6 -0.6
STON  Ston              3.97 275  ePn     Pn     12 53 10.7 +2.5
STON                               Sn     Sn     12 53 55.8 +1.0
STON  Ston              3.97 275  ePn     Pn     12 53 09.0 +0.8
CVDA  Cernavoda         3.99  63⇑iP       Pn     12 53 10.7 +2.3
CVDA  Cernavoda         3.99  63⇑iP       Pn     12 53 10.7 +2.3
SIGR  SIGRI             4.00 147   P      Pn     12 53 05.8 -2.8
SIGR  SIGRI             4.00 147   P      Pn     12 53 07.6 -1.1
SIGR  SIGRI             4.00 147   P      Pn     12 53 07.5 -1.1
HARR  Harsova           4.08  58⇓iP       Pn     12 53 11.2 +1.5
HARR  Harsova           4.08  58 ⇓P       Pn     12 53 11.2 +1.5
HARR  Harsova           4.08  58   P      Pn     12 53 11.2 +1.5
TLB   Topalu            4.10  60⇓iP       Pn     12 53 11.4 +1.4
TLB   Topalu            4.10  60 ⇓P       Pn     12 53 11.4 +1.4
TLB   Topalu            4.10  60   P      Pn     12 53 11.4 +1.4
CJR   Cluj-Napoca       4.11   5⇑iP       Pn     12 53 10.5 +0.4
CJR   Cluj-Napoca       4.11   5 ⇑P       Pn     12 53 10.5 +0.4
CJR   Cluj-Napoca       4.11   5   P      Pn     12 53 10.5 +0.4
PLOR  Plostina          4.12  37⇑iP       Pn     12 53 12.6 +2.3
PLOR  Plostina          4.12  37 ⇑P       Pn     12 53 12.6 +2.3
PLOR  Plostina          4.12  37   P      Pn     12 53 12.6 +2.3
PLOR                               S      Sn     12 54 01.5 +3.0
ANX   Ano Chora         4.12 193   P      Pn     12 53 10.8 +0.4
ANX   Ano Chora         4.12 193   P      Pn     12 53 10.8 +0.4
PRK   Paraskevi         4.15 143   P      Pn     12 53 11.9 +1.3
PRK   Paraskevi         4.15 143   P      Pn     12 53 11.6 +1.0
PRK   Paraskevi         4.15 143   P      Pn     12 53 11.7 +1.1
VRI   Vrincioaia        4.17  38⇑iP       Pn     12 53 13.3 +2.4
VRI   Vrincioaia        4.17  38 ⇑P       Pn     12 53 13.3 +2.4
VRI   Vrincioaia        4.17  38   P      Pn     12 53 13.3 +2.4
PVO   Paravola          4.17 197   P      Pn     12 53 12.2 +1.2
PVO   Paravola          4.17 197   P      Pn     12 53 12.2 +1.2
DRGR                    4.18 356  ePn     Pn     12 53 11.8 +0.7
DRGR                              eSn     Sn     12 54 00.1 +0.2
DRGR                    4.18 356⇓iP       Pn     12 53 10.8 -0.3
DRGR                    4.18 356   S      Sn     12 54 03.8 +3.9
DRGR                    4.18 356 ⇓P       Pn     12 53 10.8 -0.3
DRGR                    4.18 356   P      Pn     12 53 10.8 -0.3
DRGR                    4.18 356  ePn     Pn     12 53 11.8 +0.7
DRGR                              eSn     Sn     12 54 00.1 +0.2
DOB   Doboj             4.19 302  ePn     Pn     12 53 09.8 -1.3
MANR  Mangalia          4.20  72⇑iP       Pn     12 53 12.7 +1.4
MANR  Mangalia          4.20  72   S      Sg     12 54 17.8 -4.3
MANR  Mangalia          4.20  72⇑iP       Pn     12 53 12.7 +1.4
DSF   Desfina           4.23 186   P      Pn     12 53 11.0 -0.9
DSF   Desfina           4.23 186   P      Pn     12 53 11.7 -0.1
DSF   Desfina           4.23 186   P      Pn     12 53 11.5 -0.3
LKD2  Lefkada island    4.25 207   P      Pn     12 53 14.1 +2.0
LKD2  Lefkada island    4.25 207   P      Pn     12 53 13.4 +1.3
LKD2  Lefkada island    4.25 207   P      Pn     12 53 13.4 +1.3
PDO   Prodromos         4.27 200   P      Pn     12 53 14.3 +1.9
PDO   Prodromos         4.27 200   P      Pn     12 53 14.3 +1.9
SERG  Sergoula          4.28 191   P      Pn     12 53 12.5  0.0
SERG  Sergoula          4.28 191   P      Pn     12 53 12.5  0.0
TIRR  Tirgusor          4.29  63⇓iP       Pn     12 53 13.6 +1.1
TIRR  Tirgusor          4.29  63  ePn     Pn     12 53 13.6 +1.1
TIRR  Tirgusor          4.29  63 ⇓P       Pn     12 53 13.6 +1.1
TIRR  Tirgusor          4.29  63   P      Pn     12 53 13.6 +1.1
EFP   Efpalio           4.29 192   P      Pn     12 53 12.7 +0.2
EFP   Efpalio           4.29 192   P      Pn     12 53 12.7 +0.2
EFOR  EFORIE            4.30  68⇑iP       Pn     12 53 14.9 +2.2
EFOR  EFORIE            4.30  68⇑iP       Pn     12 53 14.9 +2.2
EFOR                               S      Sn     12 54 03.5 +0.7
PETR  Petresti          4.30  42⇑iP       Pn     12 53 15.2 +2.5
PETR  Petresti          4.30  42⇑iP       Pn     12 53 15.2 +2.5
TRIZ  Trizonia          4.32 191   P      Pn     12 53 13.1 +0.1
TRIZ  Trizonia          4.32 191   P      Pn     12 53 13.1 +0.1
EVGI  Lefkada island    4.40 206   P      Pn     12 53 15.4 +1.2
EVGI  Lefkada island    4.40 206   P      Pn     12 53 15.4 +1.2
ALIK  Aliki, Aigiali    4.42 190   P      Pn     12 53 18.4 +4.0
ALIK  Aliki, Aigiali    4.42 190   P      Pn     12 53 18.4 +4.0
CFR   Carcaliu          4.46  53⇑iP       Pn     12 53 16.0 +1.2
CFR   Carcaliu          4.46  53 ⇑P       Pn     12 53 16.0 +1.2
CFR   Carcaliu          4.46  53   P      Pn     12 53 16.0 +1.2
CFR                                S      Sn     12 54 07.3 +0.7
LAKA  Lakka             4.46 191   P      Pn     12 53 15.2 +0.2
LAKA  Lakka             4.46 191   P      Pn     12 53 15.2 +0.2
ARCR  ARCALIA           4.55  11⇓iP       Pn     12 53 16.6 +0.4
ARCR  ARCALIA           4.55  11⇓iP       Pn     12 53 16.6 +0.4
FSK   Fiskardo          4.58 206   P      Pn     12 53 17.1 +0.5
LTK   Loutraki          4.60 181   P      Pn     12 53 17.1 +0.3
LTK   Loutraki          4.60 181   P      Pn     12 53 17.1 +0.3
PTL   Penteli           4.61 172   P      Pn     12 53 17.3 +0.3
PTL   Penteli           4.61 172   P      Pn     12 53 17.3 +0.3
KLV   Kalavryta, Ach    4.63 189   P      Pn     12 53 16.9 -0.5
KLV   Kalavryta, Ach    4.63 189   P      Pn     12 53 17.4 +0.1
KLV   Kalavryta, Ach    4.63 189   P      Pn     12 53 17.3  0.0
CGL1  Ceglie Messapi    4.64 247  eP      Pg     12 53 35.8 -0.5
TESR  Tescani           4.65  32⇓iP       Pn     12 53 18.7 +1.2
TESR  Tescani           4.65  32⇓iP       Pn     12 53 18.7 +1.2
GIUM  Giurgiulesti      4.67  50⇑iP       Pn     12 53 19.3 +1.5
GIUM  Giurgiulesti      4.67  50⇑iP       Pn     12 53 19.3 +1.5
ATHU  Athens Univers    4.68 173   P      Pn     12 53 19.2 +1.2
ATHU  Athens Univers    4.68 173   P      Pn     12 53 18.8 +0.8
GUR   Goura             4.72 187   P      Pn     12 53 19.2 +0.6
GUR   Goura             4.72 187   P      Pn     12 53 19.2 +0.6
BLY   Banja Luka        4.78 298⇓iP       Pn     12 53 18.7 -0.6
BLY   Banja Luka        4.78 298  ePn     Pn     12 53 19.2 -0.1
BLY   Banja Luka        4.78 298⇓iP       Pn     12 53 18.7 -0.6
BLY   Banja Luka        4.78 298  ePn     Pn     12 53 19.2 -0.1
DRO   Drossia           4.78 193   P      Pn     12 53 21.9 +2.5
DRO   Drossia           4.78 193   P      Pn     12 53 21.9 +2.5
VLY   Voula,Athens      4.80 173   P      Pn     12 53 20.5 +0.9
VLY   Voula,Athens      4.80 173   P      Pn     12 53 20.5 +0.9
CHOS  Chios island      4.80 151   P      Pn     12 53 21.2 +1.5
CHOS  Chios island      4.80 151   P      Pn     12 53 20.6 +0.9
CHOS  Chios island      4.80 151   P      Pn     12 53 20.8 +1.1
BIZ   Bicaz             4.82  25⇓iP       Pn     12 53 21.6 +1.7
BIZ   Bicaz             4.82  25⇓iP       Pn     12 53 21.6 +1.7
LTVH  Lˆ'tavˆ'rtes,     4.83 350  ePn     Pn     12 53 12.5 -7.6
LTVH                              eSn     Sn     12 54 17.2 +1.2
KFL   Anninata          4.84 202   P      Pn     12 53 20.8 +0.7
KFL   Anninata          4.84 202   P      Pn     12 53 20.8 +0.7
TLCR                    4.87  56⇑iP       Pn     12 53 22.1 +1.6
TLCR                    4.87  56 ⇑P       Pn     12 53 22.1 +1.6
TLCR                    4.87  56   P      Pn     12 53 22.1 +1.6
BAI   Bari              4.88 254  eP      Pn     12 53 25.4 +4.8
BAI   Bari              4.88 254  eP      Pn     12 53 25.4 +4.8
GIRR  Girov             4.97  28⇑iP       Pn     12 53 22.9 +1.0
GIRR  Girov             4.97  28⇑iP       Pn     12 53 22.9 +1.0
DID   Didima            5.11 179   P      Pn     12 53 23.8 -0.1
DID   Didima            5.11 179   P      Pn     12 53 23.8 -0.1
SG1   Sgolgore (BA)     5.11 252  eP      Pn     12 53 23.7 -0.2
SG1   Sgolgore (BA)     5.11 252  eP      Pn     12 53 23.7 -0.2
MATE  Matera            5.17 250⇑iP       Pn     12 53 23.6 -1.1
MATE  Matera            5.17 250⇑iP       Pn     12 53 23.6 -1.1
AMT   Artemida-Makis    5.19 192   P      Pn     12 53 29.7 +4.7
AMT   Artemida-Makis    5.19 192   P      Pn     12 53 29.7 +4.7
BURAR Bucovina Array    5.21  16⇑iP       Pn     12 53 26.4 +1.0
BURAR Bucovina Array    5.21  16 ⇑P       Pn     12 53 26.4 +1.0
BURAR Bucovina Array    5.21  16⇑iP       Pn     12 53 26.4 +1.0
BURAR                              S      Sn     12 54 26.7 +1.2
BUR04 Bucovina Ar. S    5.22  16  ePn     Pn     12 53 25.5 +0.1
BUR04 Bucovina Ar. S    5.22  16  ePn     Pn     12 53 25.5 +0.1
ZKS   Zakynthos         5.23 200   P      Pn     12 53 28.0 +2.5
ZKS   Zakynthos         5.23 200   P      Pn     12 53 28.0 +2.5
KRND  KRANIDI           5.23 179   P      Pn     12 53 25.4 -0.2
KRND  KRANIDI           5.23 179   P      Pn     12 53 25.4 -0.2
BUR08 Bucovina Ar. S    5.24  16  ePn     Pn     12 53 26.2 +0.5
BUR08 Bucovina Ar. S    5.24  16  ePn     Pn     12 53 26.2 +0.5
VLX   Vlachokerasia     5.27 186   P      Pn     12 53 26.6 +0.4
VLX   Vlachokerasia     5.27 186   P      Pn     12 53 26.6 +0.4
LEOM  Leova             5.33  42⇑iP       Pn     12 53 27.8 +0.9
LEOM  Leova             5.33  42 ⇑P       Pn     12 53 27.8 +0.9
LEOM  Leova             5.33  42   P      Pn     12 53 27.8 +0.9
LEOM                               S      Sn     12 54 27.5 -0.7
MS1   Monte Sant'Ang    5.39 263  eP      Pn     12 53 29.7 +2.0
MS1   Monte Sant'Ang    5.39 263  eP      Pn     12 53 29.7 +2.0
ITM   Ithomi            5.51 190  ePn     Pn     12 53 33.3 +3.9
ITM   Ithomi            5.51 190  ePn     Pn     12 53 33.3 +3.9
TRPA  Tarpa             5.52 356⇑iP       Pn     12 53 29.0 -0.5
TRPA  Tarpa             5.52 356⇑iP       Pn     12 53 29.0 -0.5
IAS   Iasi              5.57  33⇓iP       Pn     12 53 31.0 +0.9
IAS   Iasi              5.57  33 ⇓P       Pn     12 53 31.0 +0.9
IAS   Iasi              5.57  33   P      Pn     12 53 31.0 +0.9
BUD   Budapest          5.65 331  ePn     Pn     12 53 30.8 -0.4
BUD                               eSn     Sn     12 54 36.5 +0.5
SMG   Samos             5.69 148   P      Pn     12 53 32.3 +0.5
SMG   Samos             5.69 148   P      Pn     12 53 32.7 +0.9
PSZ   Piszkesteto       5.75 338⇑iP       Pn     12 53 32.6 -0.2
PSZ   Piszkesteto       5.75 338  ePn     Pn     12 53 32.6 -0.2
PSZ                               eSn     Sn     12 54 36.7 -2.1
PSZ   Piszkesteto       5.75 338  ePn     Pn     12 53 31.6 -1.2
PSZ   Piszkesteto       5.75 338 ⇑P       Pn     12 53 32.6 -0.2
PSZ   Piszkesteto       5.75 338  ePn     Pn     12 53 31.5 -1.2
PSZ   Piszkesteto       5.75 338   P      Pn     12 53 32.6 -0.2
PYL   PYLOS             5.81 191   P      Pn     12 53 34.8 +1.3
PYL   PYLOS             5.81 191   P      Pn     12 53 34.8 +1.3
CSKK  Csˆ‡kako          5.84 326  eSn     Sn     12 54 36.7 -4.2
APE   Apeiranthos       5.86 160⇑iP       Pn     12 53 34.2  0.0
APE   Apeiranthos       5.86 160 ⇑P       Pn     12 53 34.2  0.0
APE   Apeiranthos       5.86 160   P      Pn     12 53 34.2  0.0
MANT  Manisa            5.87 133  ePn     Pn     12 53 36.9 +2.5
MANT  Manisa            5.87 133  ePn     Pn     12 53 36.9 +2.5
DYR   Agios Nikonas     5.88 186   P      Pn     12 53 36.8 +2.3
DYR   Agios Nikonas     5.88 186   P      Pn     12 53 36.8 +2.3
VLI   Veliai            5.90 181   P      Pn     12 53 34.0 -0.7
VLI   Veliai            5.90 181   P      Pn     12 53 34.0 -0.7
TIP   Timpagrande       5.90 236⇑iP       Pn     12 53 34.1 -0.7
TIP   Timpagrande       5.90 236  ePn     Pn     12 53 36.1 +1.3
TIP   Timpagrande       5.90 236⇑iP       Pn     12 53 34.1 -0.7
TIP   Timpagrande       5.90 236  ePn     Pn     12 53 36.1 +1.3
BEHE  Becsehely         5.92 313  ePn     Pn     12 53 36.4 +1.4
BEHE  Becsehely         5.92 313  ePn     Pn     12 53 35.4 +0.4
KIS   Kishinev          5.98  41  eP      Pn     12 53 38.0 +2.2
KIS                               eS      Sn     12 54 49.0 +4.8
KIS                                LRM    MLR    12 56 40.0
      comp=E,500nm,8.0s
KIS   Kishinev          5.98  41  eP      Pn     12 53 38.0 +2.2
KIS                               eS      Sn     12 54 49.0 +4.8
KIS                                MLR    MLR
      comp=Z,500nm,8.0s
KIS                                MLR    MLR
      comp=Z,500nm,8.0s
KIS   Kishinev          5.98  41  eP      Pn     12 53 38.0 +2.2
UZH   Uzhgorod          6.03 355  eP      Pn     12 53 37.7 +1.2
UZH                               eS      Sn     12 54 49.7 +4.2
UZH   Uzhgorod          6.03 355  eP      Pn     12 53 37.7 +1.2
CUC   Castrocucco       6.07 247  ePn     Pn     12 53 37.6 +0.5
CUC   Castrocucco       6.07 247  ePn     Pn     12 53 37.6 +0.5
NVLJ  Novalja           6.27 291  ePn     Pn     12 53 40.1 +0.3
NVLJ                               Sn     Sn     12 54 48.6 -2.8
CRES  Cresnjev          6.35 303  ePn     Pn     12 53 39.7 -1.1
CRVS  Cervenica-Dubn    6.38 350  eP      Pn     12 53 44.3 +3.0
CRVS  Cervenica-Dubn    6.38 350  ePN     Pn     12 53 44.3 +3.0
CRVS                              eSG     Sg     12 55 28.8 -3.3
CRVS  Cervenica-Dubn    6.38 350  eP      Pn     12 53 44.3 +3.0
VYHS  Vyhne             6.58 335  eP      Pn     12 53 44.2 +0.1
VYHS  Vyhne             6.58 335  ePN     Pn     12 53 44.2 +0.1
VYHS  Vyhne             6.58 335  eP      Pn     12 53 44.2 +0.1
SORM  Soroca            6.64  32⇑iP       Pn     12 53 45.2 +0.3
SORM  Soroca            6.64  32 ⇑P       Pn     12 53 45.2 +0.3
SORM  Soroca            6.64  32   P      Pn     12 53 45.2 +0.3
CEY   Cerknica          6.96 300  ePn     Pn     12 53 48.1 -1.2
LANS  Liptovska Anna    7.00 340  eP      Pn     12 53 50.4 +0.6
LANS  Liptovska Anna    7.00 340  ePN     Pn     12 53 50.4 +0.6
LANS  Liptovska Anna    7.00 340  eP      Pn     12 53 50.4 +0.6
SOKA  Soboth            7.03 308  ePn     Pn     12 53 50.4 +0.1
      comp=Z,7.3nm,0.3s,SNR=17
SOKA                              eSn     Sn     12 55 06.1 -4.0
      comp=Z,8.4nm,0.4s
SOKA  Soboth            7.03 308   Pn     Pn     12 53 50.4 +0.1
      comp=Z,7.3nm,0.3s,SNR=17
MODS  Modra-Piesok      7.05 327  eP      Pn     12 53 51.8 +1.3
MODS  Modra-Piesok      7.05 327  ePN     Pn     12 53 51.8 +1.3
MODS  Modra-Piesok      7.05 327  eP      Pn     12 53 51.8 +1.3
NIE   Niedzica          7.07 345  ePn     Pn     12 53 51.7 +1.0
NIE   Niedzica          7.07 345  eP      Pn     12 53 51.7 +1.0
NIE   Niedzica          7.07 345  eP      Pn     12 53 51.7 +1.0
ARSA  Arzberg           7.08 313  i Pn    Pn     12 53 51.3 +0.3
      comp=Z,8.4nm,0.3s
ARSA                              i Sn    Sn     12 55 07.3 -4.1
      comp=Z,7.8nm,0.5s
ARSA  Arzberg           7.08 313   Pn     Pn     12 53 51.3 +0.3
      comp=Z,8.4nm,0.3s
AQU   L'Aquila          7.16 271  ePn     Pn     12 53 52.6 +0.5
AQU   L'Aquila          7.16 271  eP      Pn     12 53 52.6 +0.5
AQU   L'Aquila          7.16 271  eP      Pn     12 53 52.6 +0.5
LVV   L'vov             7.23   5  eP      Pn     12 53 55.9 +3.0
LVV                               eS      Sn     12 55 24.2 +9.3
LVV   L'vov             7.23   5  eP      Pn     12 53 55.9 +3.0
OBKA  Obir              7.23 305  ePn     Pn     12 53 54.3 +1.3
      comp=Z,6.7nm,0.4s,SNR=5.8
OBKA  Obir              7.23 305   Pn     Pn     12 53 54.3 +1.3
      comp=Z,6.7nm,0.4s,SNR=5.8
CONA  Conrad Observa    7.35 319  i Pn    Pn     12 53 54.8 +0.1
      comp=Z,8.2nm,0.3s,SNR=23
CONA  Conrad Observa    7.35 319   Pn     Pn     12 53 54.8 +0.1
      comp=Z,8.2nm,0.3s,SNR=23
ISP   Isparta           7.44 128⇑eP       Pn     12 53 58.9 +2.9
IDI   Anoyia            7.46 169   Pn     Pn     12 53 56.8 +0.6
      comp=Z,2.0nm,0.3s,baz=334,slow=11,SNR=20
IDI                                LR     LR     12 57 10.5
      comp=Z,111nm,20.6s,baz=311,slow=41
IDI   Anoyia            7.46 169⇑iP       Pn     12 53 57.2 +1.0
IDI   Anoyia            7.46 169  ePn     Pn     12 53 57.6 +1.4
IDI   Anoyia            7.46 169⇑iP       Pn     12 53 57.2 +1.0
IDI   Anoyia            7.46 169  ePn     Pn     12 53 57.6 +1.4
KARP  Karpathos         7.74 155  ePn     Pn     12 54 00.4 +0.3
KARP  Karpathos         7.74 155  ePn     Pn     12 54 00.4 +0.3
MYKA  Terra Mystica     7.84 304  ePn     Pn     12 54 00.7 -0.6
      comp=Z,5.5nm,0.4s
MYKA  Terra Mystica     7.84 304   Pn     Pn     12 54 00.7 -0.6
      comp=Z,5.5nm,0.4s
SEV   Sevastopol'       7.92  72⇓eP       Pn     12 54 01.9 -0.5
SEV                               eS      Sn     12 55 27.7 -4.3
SEV                                pmax   pmax
      comp=Z,95nm,0.7s
SEV                                smax   smax
      comp=N,62nm,0.7s
SEV                                smax   smax
      comp=E,10.0nm,0.7s
SEV   Sevastopol'       7.92  72  eP      Pn     12 54 01.9 -0.5
      comp=E,95nm,0.7s
OJC   Ojcow             7.93 345  ePn     Pn     12 54 06.2 +3.6
OJC   Ojcow             7.93 345  ePn     Pn     12 54 02.3 -0.3
OJC   Ojcow             7.93 345  eP      Pn     12 54 02.3 -0.3
OJC   Ojcow             7.93 345  eP      Pn     12 54 02.3 -0.3
KRUC  Moravsky          7.95 326  ePn     Pn     12 54 03.1 +0.2
KRUC  Moravsky          7.95 326  ePN     Pn     12 54 03.1 +0.2
OKC   Ostrava-Krasne    7.99 336   AMS    AMS    12 57 50.0
      comp=E,300nm,10.6s
VRAC  Vranov            8.07 328   Pn     Pn     12 54 03.6 -0.8
      comp=E,0.2nm,0.3s,baz=150,slow=13,SNR=3.0
VRAC                               Sn     Sn     12 55 33.4 -2.3
      comp=E,0.4nm,0.3s,baz=225,slow=17,SNR=2.3
VRAC                               LR     LR     12 57 26.7
      comp=E,106nm,18.6s,baz=158,slow=40
VRAC  Vranov            8.07 328  ePN     Pn     12 54 05.1 +0.6
MORC  Moravsky Berou    8.12 334  ePn     Pn     12 54 04.3 -0.9
MORC  Moravsky Berou    8.12 334  eP      Pn     12 54 04.3 -0.9
MORC  Moravsky Berou    8.12 334  eP      Pn     12 54 04.3 -0.9
MOA   Molln             8.12 313  i Pn    Pn     12 54 06.5 +1.2
      comp=E,2.0nm,0.3s
MOA                               eSn     Sn     12 55 35.2 -1.8
      comp=E,14nm,0.7s
MOA   Molln             8.12 313   Pn     Pn     12 54 06.5 +1.2
      comp=E,2.0nm,0.3s
YAL   Yalta             8.25  73⇓eP       Pn     12 54 07.0  0.0
YAL                               eS      Sn     12 55 39.8 -0.3
YAL                                pmax   pmax
      comp=Z,37nm,0.2s
YAL                                smax   smax
      comp=E,26nm,0.3s
YAL                                smax   smax
      comp=N,18nm,0.2s
YAL   Yalta             8.25  73  eP      Pn     12 54 07.0  0.0
      comp=N,37nm,0.2s
YAL                               eS      Sn     12 55 39.8 -0.3
      comp=N,18nm,0.2s
SIM   Simferopol'       8.31  70  eP      Pn     12 54 08.3 +0.5
SIM                               eS      Sn     12 55 41.4 -0.2
SIM                                pmax   pmax
      comp=Z,42nm,0.9s
SIM                                smax   smax
      comp=N,34nm,1.0s
SIM                                smax   smax
      comp=E,20nm,1.0s
SIM                                smax   smax
      comp=N,45nm,1.0s
SIM                                MLR    MLR
      comp=Z,600nm,16.0s
SIM   Simferopol'       8.31  70  eP      Pn     12 54 08.3 +0.5
      comp=Z,42nm,0.9s
SIM                               eS      Sn     12 55 41.4 -0.2
      comp=Z,600nm,16.0s
ALU   Alushta           8.46  72⇓eP       Pn     12 54 10.2 +0.4
ALU                               eS      Sn     12 55 46.3 +1.0
ALU                                pmax   pmax
      comp=Z,260nm,0.3s
ALU                                smax   smax
      comp=E,75nm,0.5s
ALU                                smax   smax
      comp=N,36nm,0.4s
ALU   Alushta           8.46  72  eP      Pn     12 54 10.2 +0.4
      comp=N,260nm,0.3s
ALU                               eS      Sn     12 55 46.3 +1.0
      comp=N,36nm,0.4s
BR131 Keskin Array S    8.47 106  ePn     Pn     12 54 13.1 +3.0
BR131 Keskin Array S    8.47 106  ePn     Pn     12 54 13.1 +3.0
BRTR  Keskin Array B    8.47 106   Pn     Pn     12 54 11.0 +0.9
      comp=N,0.4nm,0.3s,baz=291,slow=13,SNR=3.8
ABTA  Abfaltersbach     8.59 302  i Pn    Pn     12 54 13.6 +1.9
      comp=N,2.8nm,0.2s,SNR=10
ABTA                              eSn     Sn     12 55 45.7 -2.7
      comp=N,4.1nm,0.3s
ABTA  Abfaltersbach     8.59 302   Pn     Pn     12 54 13.6 +1.9
      comp=N,2.8nm,0.2s,SNR=10
SUDU  Sudak             8.92  71⇓eP       Pn     12 54 16.7 +0.6
SUDU                              eS      Sn     12 55 54.1 -2.4
SUDU                               pmax   pmax
      comp=Z,25nm,0.6s
SUDU                               smax   smax
      comp=N,31nm,0.6s
SUDU                               smax   smax
      comp=E,78nm,0.6s
SUDU  Sudak             8.92  71  eP      Pn     12 54 16.7 +0.6
      comp=E,25nm,0.6s
DPC   Dobruska-Polom    9.02 331  ePN     Pn     12 54 17.8 +0.2
DPC                                AMS    AMS    12 58 30.0
      comp=E,300nm,8.8s
DPC   Dobruska-Polom    9.02 331  eP      Pn     12 54 17.8 +0.2
DPC                                MLR    MLR
      comp=Z,300nm,8.8s
DPC   Dobruska-Polom    9.02 331   Pn     Pn     12 54 17.8 +0.2
GEA0  GERESS Array S    9.03 317  ePn     Pn     12 54 19.2 +1.4
GEA0  GERESS Array S    9.03 317  ePn     Pn     12 54 19.2 +1.4
GERES GERESS Array B    9.04 317   Pn     Pn     12 54 17.5 -0.3
      comp=Z,0.4nm,0.3s,baz=133,slow=14,SNR=8.1
GERES                              Sn     Sn     12 56 03.0 +3.4
      comp=Z,0.2nm,0.3s,baz=131,slow=20,SNR=2.3
GERES                              LR     LR     12 57 41.3
      comp=Z,134nm,20.1s,baz=118,slow=37
CLTB  Caltabellotta     9.08 240  ePn     Pn     12 54 21.2 +2.7
CLTB  Caltabellotta     9.08 240  ePn     Pn     12 54 21.2 +2.7
KIEV  Kiev              9.10  25  ePn     Pn     12 54 18.6 -0.1
KIEV  Kiev              9.10  25c iP      Pn     12 54 18.1 -0.5
KIEV                               pmax   pmax
      comp=Z,6.0nm,0.8s
KIEV  Kiev              9.10  25  i P     Pn     12 54 18.1 -0.5
      comp=Z,6.0nm,0.8s
KIEV  Kiev              9.10  25  ePn     Pn     12 54 18.5 -0.1
AKASG Malin Array Be    9.11  25   Pn     Pn     12 54 17.9 -0.8
      comp=Z,1.9nm,0.3s,baz=215,slow=13,SNR=2.9
AKASG                              Sn     Sn     12 56 02.7 +1.4
      comp=Z,1.0nm,0.3s,baz=209,slow=30,SNR=2.7
AKASG                              Lg     Lg     12 56 53.8
      comp=Z,0.7nm,0.3s,baz=196,slow=28,SNR=2.7
AKBB  Malin Array Si    9.11  25  ePn     Pn     12 54 18.6 -0.2
AKBB  Malin Array Si    9.11  25  eP      Pn     12 54 18.6 -0.2
AKBB  Malin Array Si    9.11  25  eP      Pn     12 54 18.6 -0.2
UPC   Upice             9.27 331   AMS    AMS    12 58 30.0
      comp=Z,300nm,7.7s
GOPC  GO Pecny, Ondr    9.28 325   AMS    AMS    12 58 50.0
      comp=Z,200nm,8.8s
KHC   Kasperske Hory    9.29 318  ePN     Pn     12 54 21.6 +0.4
KHC                                AMS    AMS    12 58 10.0
      comp=Z,300nm,9.7s
KHC   Kasperske Hory    9.29 318  ePn     Pn     12 54 23.9 +2.7
KHC   Kasperske Hory    9.29 318  eP      Pn     12 54 21.6 +0.4
KHC                                MLR    MLR
      comp=Z,300nm,9.7s
KHC   Kasperske Hory    9.29 318   Pn     Pn     12 54 21.6 +0.4
WTTA  Wattenberg        9.35 304  ePn     Pn     12 54 25.2 +3.0
      comp=Z,1.4nm,0.2s
WTTA  Wattenberg        9.35 304   Pn     Pn     12 54 25.2 +3.0
      comp=Z,1.4nm,0.2s
WATA  Walderalm         9.42 304   Pn     Pn     12 54 25.6 +2.5
      comp=Z,3.1nm,0.3s
WATA  Walderalm         9.42 304   Pn     Pn     12 54 25.6 +2.5
      comp=Z,3.1nm,0.3s
PRU   Pruhonice         9.44 324   AMS    AMS    12 58 40.0
      comp=Z,200nm,8.9s
MOTA  Moosalm           9.71 303  i Pn    Pn     12 54 28.9 +1.8
      comp=Z,8.3nm,0.4s
MOTA  Moosalm           9.71 303   Pn     Pn     12 54 28.9 +1.8
      comp=Z,8.3nm,0.4s
FETA  Feichten          9.82 301  i Pn    Pn     12 54 30.6 +2.0
      comp=Z,5.1nm,0.4s,SNR=8.3
FETA                              i Sn    Sn     12 56 17.2 -1.6
      comp=Z,3.2nm,0.6s
FETA  Feichten          9.82 301   Pn     Pn     12 54 30.6 +2.0
      comp=Z,5.1nm,0.4s,SNR=8.3
FETA                               Sn     Sn     12 56 17.2 -1.6
      comp=Z,3.2nm,0.6s
RETA  Reutte            9.98 303  ePn     Pn     12 54 30.9 +0.2
      comp=Z,1.2nm,0.2s
RETA  Reutte            9.98 303   Pn     Pn     12 54 30.9 +0.2
      comp=Z,1.2nm,0.2s
DAVOX Davos/Dischmat   10.28 298   Pn     Pn     12 54 35.0 +0.1
      comp=Z,0.8nm,0.3s,baz=152,slow=14,SNR=13
DAVOX                              Sn     Sn     12 56 29.5 -0.7
      comp=Z,0.2nm,0.3s,baz=270,slow=20,SNR=3.5
DAVOX                              LR     LR     12 59 10.6
      comp=Z,40nm,18.6s,baz=87,slow=42
DAVA  Damuels          10.45 301  i Pn    Pn     12 54 37.1 -0.2
      comp=Z,1.3nm,0.3s
DAVA  Damuels          10.45 301   Pn     Pn     12 54 37.1 -0.2
      comp=Z,1.3nm,0.3s
TUE   Stuetta          10.53 296  ePn     Pn     12 54 41.5 +3.1
TUE   Stuetta          10.53 296  ePn     Pn     12 54 41.5 +3.1
CLL   Collm            11.08 325  eP      Pn     12 54 46.0 +0.4
CLL                               e              12 57 35.0
CLL   Collm            11.08 325  eP      Pn     12 54 46.0 +0.4
CLL   Collm            11.08 325  eP      Pn     12 54 46.0 +0.4
MMAI  Mount Meron Ar   13.65 131   LR     LR     13 00 46.6
      comp=Z,70nm,20.5s,baz=75,slow=38
VORD  Divnogorie       13.87  47  eP      Pn     12 55 22.6 -1.1
VORD                               pmax   pmax
      comp=Z,10.0nm,0.6s
VORD  Divnogorie       13.87  47  eP      Pn     12 55 22.6 -1.1
      comp=Z,10.0nm,0.6s
VSR   Storozhevoye     13.93  46  eP      Pn     12 55 22.6 -2.0
VSR                                pmax   pmax
      comp=Z,10.0nm,0.4s
NCK   Nalchik          15.02  80⇑eP       Pn     12 55 40.0 +0.5
NCK                                pmax   pmax
      comp=Z,2.0nm,0.6s
OBN   Obninsk          15.29  31⇑iP       Pn     12 55 39.7 -3.3
OBN                               i S     Sn     12 58 26.8 -5.4
OBN                                pmax   pmax
      comp=Z,11nm,0.8s
OBN                                MLR    MLR
      comp=Z,66nm,14.0s
VRH   Novokhopyorsk    15.32  50  eP      Pn     12 55 41.0 -2.4
VRH                               eS      Sn     12 58 26.9 -6.1
VRH                                pmax   pmax
      comp=Z,10.0nm,1.0s
VRH                                smax   smax
      comp=N,30nm,0.9s
VSU   Vasula           16.02   7⇑eP       Pn     12 55 53.4 +0.9
VSU                                pmax   pmax
      comp=Z,59nm,0.9s
EIL   Elat             16.07 140   Pn     Pn     12 55 52.5 -0.8
      comp=Z,0.1nm,0.3s,baz=315,slow=15,SNR=2.0
HFS   Hagfors          18.45 345   P      P      12 56 20.6 -2.2
      comp=Z,0.5nm,0.3s,baz=172,slow=12,SNR=14
HFS                                LR     LR     13 04 04.9
      comp=Z,85nm,19.2s,baz=135,slow=39
FINES FINESS Array B   18.94   4   P      P      12 56 26.3 -1.8
      comp=Z,0.3nm,0.3s,baz=176,slow=11,SNR=12
KONO  Kongsberg        18.97 339  eP      Pn     12 56 29.1  0.0
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KONO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NC602	**NORSAR Array S**	**19.44**	**343**	*e*P	**P**	**12 56 33.4**	**-0.3**
NAO01	**NORSAR Array S**	**19.69**	**342**	*e*P	**P**	**12 56 36.8**	**+0.4**
NC405	**NORSAR Array S**	**19.75**	**344**	*e*P	**P**	**12 56 36.2**	**-0.8**
NB201	**NORSAR Array S**	**19.78**	**343**	*e*P	**P**	**12 56 37.1**	**-0.3**
NB2	**NORSAR Subarra**	**19.79**	**343**	P	**P**	**12 56 36.4**	**-1.1**
	comp=Z,5.8nm,0.6s,baz=153,slow=11						
NOA	**NORSAR Array B**	**19.79**	**343**	LR	LR	13 04 19.8	
	comp=Z,38nm,21.9s,baz=85,slow=37						
NBO00	**NORSAR Array S**	**19.88**	**342**	*e*P	**P**	**12 56 38.5**	**+0.1**
NC303	**NORSAR Array S**	**19.92**	**343**	*e*P	**P**	**12 56 39.0**	**+0.1**
NC204	**NORSAR Array S**	**20.10**	**343**	*e*P	**P**	**12 56 41.0**	**+0.1**
ES19	**SONSECA Array**	**20.49**	**271**	*e*P	**P**	**12 56 46.1**	**+0.8**
ES19	**SONSECA Array**	**20.49**	**271**	*e*P	**P**	**12 56 46.1**	**+0.8**
ESDC	**Sonseca Array**	**20.55**	**271**	P	**P**	**12 56 45.3**	**-0.6**
	comp=Z,2.1nm,0.8s,baz=72,slow=11,SNR=10						
KLMR	**Klimovskoe**	**20.79**	**23**	*e*P	**P**	**12 56 45.7**	**-2.6**
KLMR				pmax	pmax		
	comp=Z,44nm,0.8s						
KLMR	**Klimovskoe**	**20.79**	**23**	*e*P	**P**	**12 56 45.7**	**-2.6**
KLMR				AMP		12 56 48.3	
	comp=Z,44nm,0.8s						
EKA	**Eskdalemuir Ar**	**21.25**	**316**	P	**P**	**12 56 52.8**	**-0.6**
	comp=Z,12nm,0.8s,baz=112,slow=11,SNR=21						
PRGR	**Permogore**	**23.32**	**28**	*e*P	**P**	**12 57 14.8**	**-0.3**
PRGR				pmax	pmax		
	comp=Z,15nm,0.6s						
MDT	**Midelt**	**23.91**	**255**	P	**P**	**12 57 22.4**	**+1.1**
	comp=Z,2.3nm,0.8s,baz=91,slow=11,SNR=3.0						
MDT				LR	LR	13 07 57.4	
	comp=Z,26nm,18.1s,baz=146,slow=40						
AKTO	**Aktyubinsk**	**25.09**	**60**	P	**P**	**12 57 31.8**	**0.0**
	comp=Z,2.5nm,0.6s,baz=262,slow=11,SNR=8.9						
APA	**Apatity**	**25.62**	**9⇑**	*i*P	**P**	**12 57 35.1**	**-1.3**
APA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
APA				MLR	MLR		
	comp=Z,100nm,10.0s						
ABKAR	**Akbulak array**	**26.28**	**63**	*e*P	**P**	**12 57 43.2**	**+0.6**
ARU	**Arti**	**26.50**	**46**	P	**P**	**12 57 44.6**	**+0.1**
	comp=Z,2.1nm,0.3s,baz=260,slow=5.0,SNR=8.7						
ARU	**Arti**	**26.50**	**46**	*e*P	**P**	**12 57 45.1**	**+0.6**
	comp=Z,8.2nm,0.8s						
ARU	**Arti**	**26.50**	**46*d***	*i*P	**P**	**12 57 45.5**	**+1.0**
ARU				S	**S**	**13 02 20.2**	**+1.9**
ARU				pmax	pmax		
	comp=Z,11nm,1.0s						
GEYT	**Alibeck**	**27.01**	**88**	P	**P**	**12 57 51.0**	**+1.7**
	comp=Z,1.1nm,0.3s,baz=286,slow=10,SNR=3.7						
SVE	**Sverdlovsk**	**27.71**	**46**	*e*P	**P**	**12 57 56.3**	**+0.9**
BVAR	**Borovoye Array**	**32.86**	**55**	P	**P**	**12 58 42.4**	**+1.4**
	comp=Z,3.7nm,0.8s,baz=282,slow=7.2,SNR=4.5						
TOA0	**Torodi Ar. Sit**	**34.72**	**219**	*e*P	**P**	**12 58 58.2**	**+0.8**
TOA0	**Torodi Ar. Sit**	**34.72**	**219**	*e*P	**P**	**12 58 58.2**	**+0.8**
TORD	**Torodi Ar. Bea**	**34.72**	**219**	P	**P**	**12 58 56.6**	**-0.8**
	comp=Z,6.6nm,1.0s,baz=27,slow=9.7						
SPITS	**Spitsbergen Ar**	**35.77**	**358**	LR	LR	13 14 34.4	
	comp=Z,38nm,21.0s,baz=35,slow=38						
KURBB	**Kurchatov Arra**	**38.11**	**58**	P	**P**	**12 59 26.7**	**+0.6**
	comp=Z,0.6nm,0.6s,baz=288,slow=10,SNR=3.4						
KURBB				PP	**PP**	**13 00 52.5**	**-0.6**
	comp=Z,0.6nm,0.7s,baz=289,slow=12,SNR=2.7						
KURK	**Kurchatov**	**38.16**	**58**	P	**P**	**12 59 26.7**	**+0.2**
KURK				PP	**PP**	**13 00 52.5**	**-1.0**
KURK	**Kurchatov**	**38.16**	**58**	P	**P**	**12 59 26.7**	**+0.2**
KURK						13 00 52.5	
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KSH	**Kashi**	**39.46**	**76**	*e*P	**P**	**12 59 39.8**	**+2.1**
KSH				PcP	**PcP**	**13 01 48.1**	**+2.6**
KSH				PcS	**PcS**	**13 05 37.1**	**+1.6**
KSH				S	**S**	**13 05 39.1**	**-0.4**
KSH				ScS	**ScS**	**13 09 47.1**	**+1.0**
NVS	**Novosibirsk**	**40.28**	**51**	*e*P	**P**	**12 59 45.6**	**+1.4**
NVS				pmax	pmax		
	comp=Z,17nm,1.6s						
NVS				pmax	pmax		
	comp=E,4.0nm,1.0s						
ZAA0	**Zalesovo Array**	**41.34**	**52**	*e*P	**P**	**12 59 53.8**	**+0.8**
	comp=E,5.1nm,0.8s						
ZALV	**Zalesovo Beam**	**41.34**	**52**	P	**P**	**12 59 53.5**	**+0.5**
	comp=E,6.0nm,0.7s,baz=279,slow=9.7,SNR=16						
ZALV				PP	**PP**	**13 01 26.9**	**-1.2**
	comp=E,0.8nm,0.6s,baz=271,slow=8.1,SNR=2.9						
MKAR	**Makanchi Array**	**41.42**	**63**	P	**P**	**12 59 54.5**	**+0.8**
	comp=E,1.5nm,0.8s,baz=288,slow=8.4,SNR=5.7						
DBIC	**Dimbokro**	**43.49**	**223**	P	**P**	**13 00 10.5**	**-0.3**
	comp=E,1.9nm,0.4s,baz=9.5,slow=11,SNR=5.9						
SFJD	**Kangerlussuaq**	**45.43**	**328**	LR	LR	13 19 32.4	
	comp=E,26nm,19.6s,baz=98,slow=36						
WMQ	**Urumqi**	**46.00**	**65**	P	**P**	**13 00 32.1**	**+1.4**
WMQ				pP	sP	13 00 37.4	+1.8
WMQ				sP	pP	13 00 39.9	+5.7
WMQ				pmax	pmax		
	comp=E,23nm,0.7s						
WMQ				pmax	pmax		
	comp=E,260nm,3.7s						
WMQ				LR	LR		
	comp=E,160nm,23.7s						
WMQ				LR	LR		
	comp=E,120nm,28.1s						
WMQ				LR	LR		
	comp=E,180nm,24.5s						
SONA1	**Songino Array**	**56.18**	**54**	*e*P	**P**	**13 01 48.0**	**+0.7**
SONM	**Songino Array**	**56.19**	**54**	P	**P**	**13 01 47.9**	**+0.6**
	comp=E,1.2nm,0.7s,baz=297,slow=9.7,SNR=7.8						
ULN	**Ulaanbaatar**	**56.56**	**53⇑**	*e*P	**P**	**13 01 51.2**	**+1.3**
LZH	**Lanzhou**	**60.55**	**67**	*e*P	**P**	**13 02 17.8**	**-0.1**
LZH				*e*PP	**PP**	**13 04 33.0**	**+1.9**
LZH				pmax	pmax		
	comp=E,20nm,1.1s						
LZH				pmax	pmax		
	comp=E,68nm,7.3s						
LZH				LR	LR		
	comp=E,250nm,14.5s						
LZH				LR	LR		
	comp=E,250nm,15.0s						
LZH				LR	LR		
	comp=E,340nm,18.3s						
HHC	**Hu-ho-hao-te**	**62.97**	**58**	*e*P	**P**	**13 02 35.3**	**+1.2**
HHC				pmax	pmax		
	comp=E,11nm,1.0s						
HHC				pmax	pmax		
	comp=E,100nm,5.6s						
KMI	**Kunming**	**66.11**	**77**	P	**P**	**13 02 54.9**	**-0.1**
KMI				pmax	pmax		
	comp=E,6.0nm,0.9s						
SEY	**Seymchan**	**67.29**	**23⇑**	*e*P	**P**	**13 03 02.5**	**+0.9**
LBTB	**Lobatse**	**67.34**	**178**	P	**P**	**13 03 03.3**	**+0.9**
	comp=E,3.4nm,0.8s,baz=330,slow=6.7,SNR=3.6						
CMAR	**Chiang Mai Arr**	**67.45**	**85**	P	**P**	**13 03 03.0**	**-0.4**
	comp=E,0.5nm,0.5s,baz=311,slow=6.5,SNR=4.2						
CMAR	**Chiang Mai Arr**	**67.45**	**85**	P	**P**	**13 03 03.0**	**-0.4**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
CMAR	**Chiang Mai Arr**	**67.45**	**85**	P	**P**	**13 03 03.0**	**-0.4**
	comp=Z,1.0nm,0.5s						
GYA	**Guiyang**	**68.10**	**74**	*e*P	**P**	**13 03 07.8**	**+0.3**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KLR	**Kul'dur**	**69.23**	**42*c***	*e*P	**P**	**13 03 14.7**	**+0.7**
YKA	**Yellowknife Ar**	**69.87**	**341**	P	**P**	**13 03 17.1**	**-0.6**
	comp=Z,2.3nm,0.7s,baz=35,slow=5.6,SNR=7.4						
ILAR	**Eielson Array**	**72.66**	**356**	P	**P**	**13 03 34.9**	**+0.3**
	comp=Z,0.5nm,0.8s,baz=1.9,slow=4.4,SNR=5.0						
DAWY	**Dawson**	**72.75**	**352**	*e*P	**P**	**13 03 35.2**	**0.0**
	comp=Z,4.3nm,1.0s						
NJ2	**Nanjing**	**72.94**	**62**	*e*P	**P**	**13 03 37.4**	**+0.6**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
YSS	**Yuzh-Sakhalins**	**76.04**	**38**	*e*P	**P**	**13 03 50.5**	**-4.0**
YSS				*e*		13 03 55.4	
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
EGMT	**Eagleton**	**80.61**	**330**	*e*P	**P**	**13 04 20.6**	**+0.7**
	comp=Z,7.3nm,0.9s						
LRAL	**Lakeview Retre**	**81.19**	**307**	*e*P	**P**	**13 04 22.6**	**-0.6**
	comp=Z,7.9nm,0.8s						
WALA	**Waterton Lakes**	**81.19**	**333**	*e*P	**P**	**13 04 23.1**	**0.0**
	comp=Z,5.4nm,0.9s						
PHWY	**Pilot Hill**	**84.43**	**324**	*e*P	**P**	**13 04 42.8**	**+2.5**
	comp=Z,3.6nm,0.8s						
IMW	**Indian Meadow**	**84.53**	**329**	*e*P	**P**	**13 04 42.2**	**+1.5**
	comp=Z,3.6nm,1.0s						
FXWY	**Fox Creek**	**84.78**	**328**	*e*P	**P**	**13 04 43.6**	**+1.7**
	comp=Z,2.9nm,1.1s						
PDAR	**Pinedale Array**	**84.94**	**327**	P	**P**	**13 04 42.6**	**-0.1**
	comp=Z,1.0nm,0.7s,baz=49,slow=4.6,SNR=13						
PDAR				LR	LR	13 43 15.8	
	comp=Z,55nm,21.2s,baz=314,slow=36						
PDAR	**Pinedale Array**	**84.94**	**327**	*e*P	**P**	**13 04 41.7**	**-1.0**
MFID	**Camas Ranch**	**86.75**	**331**	*e*P	**P**	**13 04 50.4**	**-1.2**
	comp=Z,6.9nm,0.3s						
ANMO	**Albuquerque**	**90.07**	**321*c***	*e*P	**P**	**13 05 09.1**	**+1.5**
ANMO				pmax	pmax		
	comp=Z,1.0nm,1.3s						
NVAR	**Mina Array Bea**	**92.03**	**331**	P	**P**	**13 05 16.9**	**+0.3**
	comp=Z,0.2nm,0.5s,baz=29,slow=4.5,SNR=4.3						
NVAR				LR	LR	13 48 35.9	
	comp=Z,30nm,18.5s,baz=280,slow=37						
TXAR	**Lajitas Array**	**93.25**	**316**	P	**P**	**13 05 22.2**	**-0.1**
	comp=Z,0.7nm,0.9s,baz=76,slow=3.8,SNR=5.0						
ASAR	**Alice Springs**	**120.65**	**95**	PKP	**PKPdf**	**13 10 57.9**	**-1.6**
	comp=Z,0.4nm,0.8s,baz=301,slow=1.4,SNR=5.0						

JMA 14 13:00:30.1±0.9**, 45°.76N**×**151°.37E, h30^{km}, M3.7, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**4.68**	**241**	P	Pn	13 01 37.8	-0.8
NEM2				*e*S	Sn	13 02 27.2	-4.7
JRA	**Rausu**	**4.80**	**250**	P	Pn	13 01 42.4	+2.1
JNK	**Nakash**	**5.22**	**248**	P	Pn	13 01 47.0	+1.0
JNK				*e*S	Sn	13 02 43.3	-1.9
JAK	**Akkeshi**	**5.52**	**242**	P	Pn	13 01 49.6	-0.6
JAK				*e*S	Sn	13 02 48.9	-3.8
JTKR	**Abashiri--Toko**	**5.60**	**254**	P	Pn	13 01 53.5	+2.3
JMP	**Maruseppu**	**5.96**	**256**	P	Pn	13 01 59.5	+3.3
JAR	**Ashorobuto**	**5.96**	**248**	P	Pn	13 01 57.8	+1.5
JAR				*e*S	Sn	13 03 02.8	-0.8
JCH	**Churui**	**6.56**	**244**	P	Pn	13 02 04.7	+0.3
JCH				*e*S	Sn	13 03 15.3	-2.9
JKB	**Kayabe**	**8.41**	**246**	P	Pn	13 02 29.6	-0.3
JKB				*e*S	Sn	13 03 57.5	-6.3

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*GII **14** 13:08:25.1±0.4, 37°.66N×36°.73E, h10^{km}, MD3.3/2*
*ISN **14** 13:08:25.0±1.5, 35°.05N×36°.86E, h0^{km}±35^{km}, ML3.9*
*NSSC **14** 13:08:28.6±0.9, 37°.43N×36°.99E, h18^{km}±69^{km}, ML3.6*
*ISK **14** 13:08:30.4, 36°.99N×36°.73E, h7^{km}, ML3.9/8*
*DDA **14** 13:08:31.1, 37°.01N×36°.75E, h20^{km}, Ml3.9*
*CSEM **14** 13:08:32.0±0.1, 37°.03N×36°.72E, h10^{km}, ML3.9, Error ellipse: s-maj=4.4km s-min=3.1km az=140.0*
ISC 14 13:08:30.8±1.1**, 37°.05N**±0°.02×**36°.74E**±0°.02**, h1**^{km}±10^{km}**, n138,** σ1^s**.40**/162**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUZU	**Kuzuini**	**0.39**	**136**	*i* P	**Pg**	**13 08 38.8**	**+0.6**
KUZU				*i* S	**Sg**	**13 08 44.3**	**+1.0**
KUZU	**Kuzuini**	**0.39**	**136**	P	**Pg**	**13 08 38.8**	**+0.6**
KUZU				S	**Sg**	**13 08 44.3**	**+1.0**
GAZ	**Gaziantep**	**0.40**	**72**	PG	**Pb**	**13 08 39.4**	**-1.3**
GAZ				SG	**Sb**	**13 08 45.1**	**-2.2**
GAZ	**Gaziantep**	**0.40**	**72**	*e*Pg	**Pb**	**13 08 39.4**	**-1.3**
GAZ				*e*Sg	**Sb**	**13 08 45.1**	**-2.2**
KMRS	**Kahramanmaras**	**0.47**	**16**	PG	**Pb**	**13 08 41.1**	**-0.8**
KMRS				SG	**Sb**	**13 08 48.3**	**-1.1**
KMRS	**Kahramanmaras**	**0.47**	**16**	*e*Pg	**Pb**	**13 08 41.1**	**-0.8**
KMRS				*e*Sg	**Sb**	**13 08 48.3**	**-1.1**
ANDN	**Andirin**	**0.61**	**329**	*i* P	**Pb**	**13 08 43.9**	**-0.6**
ANDN				*i* S	**Sb**	**13 08 53.0**	**-0.6**
ANDN	**Andirin**	**0.61**	**329**	P	**Pb**	**13 08 43.8**	**-0.6**
ANDN				S	**Sb**	**13 08 53.0**	**-0.6**
TAHT	**Tahtakopru-Hat**	**0.81**	**214**	PG	**Pg**	**13 08 45.7**	**-0.6**
TAHT				SG	**Sg**	**13 08 56.2**	**-0.6**
TAHT	**Tahtakopru-Hat**	**0.81**	**214**	*e*Pg	**Pg**	**13 08 45.7**	**-0.6**
TAHT				*e*Sg	**Sg**	**13 08 56.2**	**-0.6**
YURE	**YUREGIR**	**0.92**	**256**	PG	**Pg**	**13 08 48.4**	**0.0**
YURE	**YUREGIR**	**0.92**	**256**	*i* P	**Pn**	**13 08 49.4**	**-1.5**
YURE	**YUREGIR**	**0.92**	**256**	*e*Pg	**Pg**	**13 08 48.4**	**0.0**
YURE	**YUREGIR**	**0.92**	**256**	P	**Pn**	**13 08 49.4**	**-1.5**
SAIM	**ADANA**	**1.06**	**331**	*i* P	**Pn**	**13 08 51.9**	**-1.0**
SAIM				*i* S	**Sn**	**13 09 08.3**	**-0.1**
SAIM	**ADANA**	**1.06**	**331**	P	**Pn**	**13 08 51.9**	**-1.0**
SAIM				S	**Sn**	**13 09 08.3**	**-0.1**
YAYL	**Yayladag**	**1.14**	**207**	PN	**Pb**	**13 08 51.7**	**-1.6**
YAYL	**Yayladag**	**1.14**	**207**	*i* P	**Pb**	**13 08 52.1**	**-1.3**
YAYL				*i* S	**Sb**	**13 09 08.0**	**-0.6**
YAYL	**Yayladag**	**1.14**	**207**	*e*Pn	**Pb**	**13 08 51.7**	**-1.6**
YAYL	**Yayladag**	**1.14**	**207**	P	**Pb**	**13 08 52.1**	**-1.3**
YAYL				S	**Sb**	**13 09 08.0**	**-0.6**
KRTD	**Karatas-Adana**	**1.16**	**247**	PN	**Pb**	**13 08 52.5**	**-1.1**
KRTD	**Karatas-Adana**	**1.16**	**247**	*e*Pn	**Pb**	**13 08 52.5**	**-1.1**
KRTS	**Karatas**	**1.20**	**247**	PN	**Pb**	**13 08 53.2**	**-1.0**
KRTS	**Karatas**	**1.20**	**247**	*e*Pn	**Pb**	**13 08 53.2**	**-1.0**
SLMH	**Al Salmeh**	**1.27**	**131**	*e*P	**Pn**	**13 08 54.4**	**-1.3**
SLMH				*e*S	**Sb**	**13 09 11.4**	**-1.0**
SLMH				AML	AML	13 09 13.4	
	comp=E,3µm,0.9s						
SLMH				AML	AML	13 09 17.2	
	comp=N,2µm,0.5s						
ELBS	**KAHRAMANMARAS_**	**1.31**	**14**	*i* P	**Pg**	**13 08 57.5**	**+1.6**
ELBS				*i* S	**Sg**	**13 09 17.0**	**+4.2**
ELBS	**KAHRAMANMARAS_**	**1.31**	**14**	P	**Pg**	**13 08 57.5**	**+1.6**
ATAB	**Bozova**	**1.31**	**71**	*i* P	**Pg**	**13 08 56.7**	**+0.8**
ATAB				*i* S	**Sg**	**13 09 14.7**	**+1.8**
ATAB	**Bozova**	**1.31**	**71**	P	**Pg**	**13 08 56.7**	**+0.8**
ATAB				S	**Sg**	**13 09 14.7**	**+1.8**
KARA	**Karaisali**	**1.36**	**279**	PN	**Pb**	**13 08 56.4**	**-0.7**
KARA	**Karaisali**	**1.36**	**279**	*e*Pn	**Pb**	**13 08 56.4**	**-0.7**
SARI	**SarD1z-Kayseri**	**1.38**	**349**	PN	**Pg**	**13 08 57.6**	**+0.4**
YAHY	**KAYSERI_Yahyal**	**1.51**	**314**	*i* P	**Pg**	**13 09 00.3**	**+0.5**
YAHY	**KAYSERI_Yahyal**	**1.51**	**314**	P	**Pg**	**13 09 00.3**	**+0.5**
SURC	**SANLIURFA_SURC**	**1.51**	**96**	*i* P	**Pn**	**13 08 58.0**	**-1.1**
SURC				*i* S	**Sg**	**13 09 18.7**	**-0.7**
SURC	**SANLIURFA_SURC**	**1.51**	**96**	P	**Pn**	**13 08 58.0**	**-1.1**
SURC				S	**Sg**	**13 09 18.7**	**-0.7**
AKCD	**Akcadag**	**1.56**	**37**	*i* P	**Pg**	**13 09 00.9**	**+0.2**
AKCD	**Akcadag**	**1.56**	**37**	P	**Pg**	**13 09 00.9**	**+0.2**
GULE	**Gulek**	**1.58**	**279**	*i* P	**Pb**	**13 09 00.2**	**-0.8**
GULE	**Gulek**	**1.58**	**279**	P	**Pb**	**13 09 00.2**	**-0.8**
DARE	**Darende-Malaty**	**1.63**	**21**	PN	**Pb**	**13 09 01.1**	**-0.6**
DARE	**Darende-Malaty**	**1.63**	**21**	*e*Pn	**Pb**	**13 09 01.1**	**-0.6**
URFA	**Urfa**	**1.71**	**76**	PN	**Pb**	**13 09 01.5**	**-1.5**
URFA	**Urfa**	**1.71**	**76**	*e*Pn	**Pb**	**13 09 01.5**	**-1.5**
CUGUR	**Gurin_S˜VAS**	**1.72**	**14**	*i* P	**Pg**	**13 09 04.9**	**+1.1**
CUGUR	**Gurin_S˜VAS**	**1.72**	**14**	P	**Pg**	**13 09 04.9**	**+1.1**
MERS	**Mersin**	**1.79**	**265**	PN	**Pn**	**13 09 02.2**	**-0.7**
MERS	**Mersin**	**1.79**	**265**	*e*Pn	**Pn**	**13 09 02.2**	**-0.7**
SANL	**SANLIURFA_Merk**	**1.80**	**86**	*i* P	**Pn**	**13 09 02.2**	**-0.9**
SANL	**SANLIURFA_Merk**	**1.80**	**86**	P	**Pn**	**13 09 02.2**	**-0.9**
MALT	**Malatya**	**1.84**	**46**	PN	**Pb**	**13 09 04.2**	**-1.1**
MALT	**Malatya**	**1.84**	**46**	*e*Pn	**Pb**	**13 09 04.2**	**-1.1**
BNN	**Bunyan**	**1.93**	**339**	PN	**Pb**	**13 09 05.3**	**-1.6**
BNN	**Bunyan**	**1.93**	**339**	*e*Pn	**Pb**	**13 09 05.3**	**-1.6**
HEKM	**Malatya_Hekimh**	**2.06**	**27**	*i* P	**Pg**	**13 09 09.9**	**-0.5**
HEKM	**Malatya_Hekimh**	**2.06**	**27**	P	**Pg**	**13 09 09.9**	**-0.5**
KERG	**Konya-Eregli**	**2.12**	**281**	*i* P	**Pb**	**13 09 08.3**	**-1.8**
KERG	**Konya-Eregli**	**2.12**	**281**	P	**Pb**	**13 09 08.3**	**-1.8**
KIZK	**Mersin**	**2.16**	**255**	PN	**Pn**	**13 09 07.9**	**-0.1**
KIZK	**Mersin**	**2.16**	**255**	*i* P	**Pn**	**13 09 06.0**	**-2.0**
KIZK	**Mersin**	**2.16**	**255**	P	**Pn**	**13 09 06.0**	**-2.0**
CUALT	**Altinyayla-SIV**	**2.22**	**0**	*i* P	**Pg**	**13 09 13.9**	**+0.6**
ELZG	**Elazig**	**2.29**	**50**	*i* P	**Pb**	**13 09 10.4**	**-2.6**
ELZG	**Elazig**	**2.29**	**50**	P	**Pb**	**13 09 10.4**	**-2.6**
CUKAN	**kangal_SIVAS**	**2.33**	**14**	*i* P	**Pn**	**13 09 09.8**	**-0.7**
CUKAN	**kangal_SIVAS**	**2.33**	**14**	P	**Pn**	**13 09 09.8**	**-0.7**
CUSAR	**Sarkisla-SIVAS**	**2.39**	**351**	*i* P	**Pg**	**13 09 16.7**	**0.0**
SVRC	**Sivrice-ELAZID**	**2.43**	**56**	PN	**Pn**	**13 09 11.8**	**0.0**
SVRC	**Sivrice-ELAZID**	**2.43**	**56**	*e*Pn	**Pn**	**13 09 11.8**	**0.0**
KEBE	**Keben-Mersin**	**2.50**	**257**	PN	**Pn**	**13 09 12.6**	**-0.1**
KEBE	**Keben-Mersin**	**2.50**	**257**	*e*Pn	**Pn**	**13 09 12.6**	**-0.1**
IKL	**Isikli**	**2.59**	**253**	PN	**Pn**	**13 09 13.1**	**-0.7**
IKL	**Isikli**	**2.59**	**253**	*e*Pn	**Pn**	**13 09 13.1**	**-0.7**
KEMA	**Kemaliye**	**2.61**	**31**	*i* P	**Pb**	**13 09 15.3**	**-3.2**
KEMA	**Kemaliye**	**2.61**	**31**	P	**Pb**	**13 09 15.3**	**-3.2**
TEPE	**Tepekoy-Mersin**	**2.69**	**253**	PN	**Pn**	**13 09 14.8**	**-0.4**
TEPE	**Tepekoy-Mersin**	**2.69**	**253**	*e*Pn	**Pn**	**13 09 14.8**	**-0.4**
GULN	**MERSIN_Gulnar**	**2.71**	**252**	*i* P	**Pn**	**13 09 15.0**	**-0.5**
GULN	**MERSIN_Gulnar**	**2.71**	**252**	P	**Pn**	**13 09 15.0**	**-0.5**
AKKU	**Akkuyu-Mersin**	**2.72**	**252**	PN	**Pn**	**13 09 14.8**	**-0.8**
AKKU	**Akkuyu-Mersin**	**2.72**	**252**	*e*Pn	**Pn**	**13 09 14.8**	**-0.8**
TEVE	**Tevekalti-Mers**	**2.72**	**258**	PN	**Pn**	**13 09 15.2**	**-0.5**
TEVE	**Tevekalti-Mers**	**2.72**	**258**	*e*Pn	**Pn**	**13 09 15.2**	**-0.5**
AKK2	**Akkuyu-Mersin**	**2.73**	**251**	PN	**Pn**	**13 09 15.6**	**-0.1**
AKK2	**Akkuyu-Mersin**	**2.73**	**251**	*e*Pn	**Pn**	**13 09 15.6**	**-0.1**
PTK	**Pertek**	**2.79**	**48**	PN	**Pn**	**13 09 17.4**	**+0.6**
PTK	**Pertek**	**2.79**	**48**	*e*Pn	**Pn**	**13 09 17.4**	**+0.6**
SULT	**Sultanhani-AKS**	**2.80**	**295**	PN	**Pn**	**13 09 17.4**	**+0.5**
SULT	**Sultanhani-AKS**	**2.80**	**295**	*e*Pn	**Pn**	**13 09 17.4**	**+0.5**
YOZ	**Yozgat**	**2.81**	**337**	PN	**Pn**	**13 09 18.3**	**+1.2**
YOZ	**Yozgat**	**2.81**	**337**	*e*Pn	**Pn**	**13 09 18.3**	**+1.2**
HWQ	**Hawqa**	**2.84**	**193**	*e*P	**Pn**	**13 09 17.6**	**+0.2**
DYBB	**Diyarbakir**	**2.85**	**71**	PN	**Pn**	**13 09 18.2**	**+0.7**
SVSK	**Karacayir**	**2.87**	**4**	PN	**Pn**	**13 09 18.9**	**+1.3**
SVSK	**Karacayir**	**2.87**	**4**	*e*Pn	**Pn**	**13 09 18.9**	**+1.3**
DIY	**Diyarbakir**	**2.90**	**72**	*e*Pn	**Pn**	**13 09 18.2**	**0.0**
MAZI	**Mazidag**	**2.99**	**81**	PN	**Pn**	**13 09 19.7**	**+0.3**
MAZI	**Mazidag**	**2.99**	**81**	*e*Pn	**Pn**	**13 09 19.7**	**+0.3**
ERMK	**Ermenek**	**3.10**	**264**	*i* P	**Pn**	**13 09 21.4**	**+0.4**
ERMK	**Ermenek**	**3.10**	**264**	P	**Pn**	**13 09 21.4**	**+0.4**
HANI	**Diyarbakir_Han**	**3.20**	**64**	*i* P	**Pn**	**13 09 22.8**	**+0.4**
HANI	**Diyarbakir_Han**	**3.20**	**64**	P	**Pn**	**13 09 22.8**	**+0.4**
MARD	**Mardin**	**3.24**	**84**	*i* P	**Pn**	**13 09 22.0**	**-0.9**
BHL	**Bhannes**	**3.26**	**196**	*e*P	**Pn**	**13 09 24.4**	**+1.2**
CSS	**Mathiatis**	**3.46**	**234**	P	**Pb**	**13 09 30.7**	**-2.2**
BINT	**Bingol**	**3.48**	**57**	*e*Pn	**Pb**	**13 09 30.1**	**-3.2**
QASN	**Qassioun**	**3.53**	**186**	*e*P	**Pn**	**13 09 29.2**	**+2.2**
QASN				*e*S	**Sn**	**13 10 11.9**	**+2.5**
QASN				AML	AML	13 10 21.7	
	comp=N,538nm,0.4s						
QASN				AML	AML	13 10 25.6	
	comp=E,746nm,0.5s						
BNGB	**Bingˆ¶l**	**3.66**	**57**	PN	**Pn**	**13 09 30.1**	**+1.4**
BRBR	**Barbar**	**3.69**	**190**	*e*P	**Pn**	**13 09 30.5**	**+1.3**
BRBR				*e*S	**Sn**	**13 10 16.5**	**+3.1**
BRBR				AML	AML	13 10 29.8	
	comp=E,194nm,0.5s						
BRBR				AML	AML	13 10 32.9	
	comp=N,115nm,0.5s						
TOTH	**TOTAH**	**3.69**	**184**	*e*P	**Pn**	**13 09 31.1**	**+2.0**
TOTH				*e*S	**Sn**	**13 10 15.7**	**+2.4**
TOTH				AML	AML	13 10 30.0	
	comp=N,358nm,0.6s						
TOTH				AML	AML	13 10 30.5	
	comp=E,105nm,0.6s						
SVAN	**Silvan-Diyarba**	**3.71**	**71**	PN	**Pn**	**13 09 30.6**	**+1.3**
SVAN	**Silvan-Diyarba**	**3.71**	**71**	*e*Pn	**Pn**	**13 09 30.6**	**+1.3**
ALFC	**Alefka**	**3.85**	**242**	P	**Pn**	**13 09 27.7**	**-3.5**
NATI	**Neve Ativ**	**3.87**	**193**	Pn	**Pn**	**13 09 32.7**	**+1.3**
NATI				Sn	**Sb**	**13 10 25.9**	**-1.3**
SZAC	**Souni**	**3.88**	**235**	P	**Pn**	**13 09 32.8**	**+1.2**
KSDI	**Kefar Szold**	**3.95**	**193**	Pn	**Pn**	**13 09 32.8**	**+0.2**
KSDI	**Kefar Szold**	**3.95**	**193**	Pn	**Pn**	**13 09 32.8**	**+0.2**
AKMC	**Akamas**	**4.11**	**242**	P	**Pn**	**13 09 36.1**	**+1.4**
KSHT	**Keshet**	**4.13**	**191**	Pn	**Pn**	**13 09 36.7**	**+1.6**
KSHT	**Keshet**	**4.13**	**191**	Pn	**Pn**	**13 09 36.7**	**+1.6**
PPCY	**Paphos**	**4.17**	**240**	P	**Pn**	**13 09 35.6**	**0.0**
MMA0B	**Mount Meron ar**	**4.17**	**196**	Pn	**Pn**	**13 09 35.5**	**-0.2**
MMA0B	**Mount Meron ar**	**4.17**	**196**	Pn	**Pn**	**13 09 35.8**	**+0.1**
MMA0B	**Mount Meron ar**	**4.17**	**196**	Pn	**Pn**	**13 09 35.5**	**-0.2**
BLGI	**Bet Lehem HaGe**	**4.49**	**197**	Pn	**Pn**	**13 09 42.1**	**+2.1**
BLGI	**Bet Lehem HaGe**	**4.49**	**197**	Pn	**Pn**	**13 09 42.1**	**+2.1**
OFRI	**'Ofer**	**4.65**	**199**	Pn	**Pn**	**13 09 43.5**	**+1.3**
OFRI	**'Ofer**	**4.65**	**199**	Pn	**Pn**	**13 09 43.5**	**+1.3**
MMLI	**Mount Malkishu**	**4.73**	**194**	Pn	**Pn**	**13 09 45.4**	**+2.1**
MMLI	**Mount Malkishu**	**4.73**	**194**	Pn	**Pn**	**13 09 45.4**	**+2.1**
HMDT	**Nahal Hemdat**	**4.89**	**192**	Pn	**Pn**	**13 09 48.4**	**+2.9**
HMDT	**Nahal Hemdat**	**4.89**	**192**	Pn	**Pn**	**13 09 48.4**	**+2.9**
SLTI	**Sal'it**	**5.00**	**197**	Pn	**Pn**	**13 09 48.7**	**+1.7**
SLTI	**Sal'it**	**5.00**	**197**	Pn	**Pn**	**13 09 48.7**	**+1.7**
AMAZ	**Amatzia**	**5.71**	**196**	Pn	**Pn**	**13 09 59.8**	**+3.0**
PRNI	**Paran**	**6.84**	**193**	Pn	**Pn**	**13 10 15.0**	**+2.7**
HRFI	**Mount Harif**	**7.14**	**192**	Pn	**Pn**	**13 10 18.5**	**+2.1**
HRFI	**Mount Harif**	**7.14**	**192**	Pn	**Pn**	**13 10 18.5**	**+2.1**

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*ISCJB **14** 13:08:53.8±1.0, 71°.48N±0°.03×9°.2W±0°.3, h10^{km}, Error ellipse: s-maj=14.6km s-min=4.5km az=171.0*
*NAO **14** 13:08:55.0±8.4, 71°.36N×9°.44W, ML3.6*
*BER **14** 13:08:56.2±2.8, 71°.25N×9°.89W, h0^{km}±12^{km}, ML3.3, ML3.6(NAO)*
ISC 14 13:08:54.4±1.1**, 71°.44N**±0°.05×**9°.24W**±0°.10**, h10**^{km}**, n20,** σ**2**^{s}**.59**/28**, 4C, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNW	**Jan Mayen West**	**0.49**	**147⇑**	*e*P	**Pb**	**13 09 05.5**	**+0.4**
JNW				*e*S	**Sb**	**13 09 11.9**	**-0.4**
JNW				IAML		13 09 13.7	
	comp=Z,4µm,0.2s						
JMIC	**Jan Mayen**	**0.51**	**152⇑**	*e*P	**Pb**	**13 09 05.5**	**-0.1**
JMIC				*e*S	**Sb**	**13 09 12.1**	**-0.9**
JMIC				IAML		13 09 15.3	
	comp=Z,2µm,0.3s						
JMI	**Jan Mayen**	**0.54**	**162⇑**	*e*P	**Pb**	**13 09 05.7**	**-0.2**
JMI				*e*S	**Sg**	**13 09 12.5**	**+0.5**
JMI				IAML		13 09 14.4	
	comp=Z,1µm,0.2s						
JNE	**Jan Mayen East**	**0.55**	**146⇑**	*e*P	**Pb**	**13 09 06.2**	**+0.1**
JNE				*e*S	**Sb**	**13 09 13.4**	**-0.5**
JNE				IAML		13 09 15.0	
	comp=Z,4µm,0.1s						
DAG	**Danmarks Havn**	**5.94**	**339**	*i* P	**Pn**	**13 10 22.5**	**+0.3**
DAG				*i* S	**Sn**	**13 11 24.7**	**-5.5**
STEI	**Steigen**	**9.17**	**101**	*e*P	**Pn**	**13 11 07.8**	**+1.3**
STEI				*e*S	**Sn**	**13 12 45.8**	**-3.7**
KBS	**Kingsbay**	**9.18**	**26**	Pn	**Pn**	**13 11 08.9**	**+2.3**
KBS	**Kingsbay**	**9.18**	**26**	*e*P	**Pn**	**13 11 09.4**	**+2.8**
KBS				*e*S	**Sn**	**13 12 47.3**	**-2.4**
KONS	**Konsvik**	**9.39**	**111**	*e*P	**Pn**	**13 11 10.2**	**+0.6**
KONS				*e*S	**Sn**	**13 12 48.9**	**-6.1**
KONS				IAML		13 12 54.9	
	comp=Z,5.3nm,0.4s						
SPA0	**Spitsbergen Ar**	**9.41**	**33**	Pn	**Pn**	**13 11 13.7**	**+3.8**
	baz=243,slow=16						
SPA0	**Spitsbergen Ar**	**9.41**	**33**	Pn	**Pn**	**13 11 13.7**	**+3.8**
	baz=243,slow=16						
SPA0				*e*P		13 11 13.9	
TRO	**Tromso**	**9.52**	**87**	*e*P	**Pn**	**13 11 12.8**	**+1.5**
HAMF	**Hammerfest**	**10.66**	**79**	*e*P	**Pn**	**13 11 28.5**	**+1.6**
AKN	**Aaknes**	**11.23**	**138**	Pn	**Pn**	**13 11 35.8**	**+1.0**
AKN	**Aaknes**	**11.23**	**138**	Pn	**Pn**	**13 11 35.8**	**+1.0**
ARA0	**ARCESS Array S**	**11.66**	**83**	Pn	**Pn**	**13 11 43.8**	**+3.1**
	baz=311,slow=11						
ARA0	**ARCESS Array S**	**11.66**	**83**	Pn	**Pn**	**13 11 43.8**	**+3.1**
	baz=311,slow=11						
FIA0	**FINESS Array S**	**16.99**	**108**	P	**P**	**13 12 55.0**	**+1.3**
	baz=328,slow=14						
FIA0	**FINESS Array S**	**16.99**	**108**	Pn	**P**	**13 12 55.0**	**+1.3**
	baz=328,slow=14						
KLMR	**Klimovskoe**	**21.66**	**94**	*e*P	**P**	**13 13 46.7**	**+2.1**
KLMR				AMP		13 13 48.0	
	comp=Z,10.0nm,1.3s						

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*IDC **14** 13:11:30.6±2.2, 21°.01S×69°.44W, h0^{km}, mb4.1/1, mb1 3.8/2, mb1mx3.4/37, mbtmp3.7/2, ML3.0/1, Error ellipse: s-maj=89.1km s-min=49.8km az=107.0*
*ISCJB **14** 13:11:37.2±1.2, 19°.85S±0°.05×70°.54W±0°.10, h47^{km}±17^{km}, mb4.0/1, Error ellipse: s-maj=15.9km s-min=7.8km az=165.6*
*GUC **14** 13:11:37.2±0.6, 19°.81S×70°.45W, h54^{km}±5^{km}, ML3.5*
ISC 14 13:11:37.2±1.4**, 19°.82S**±0°.05×**70°.5W**±0°.1**, h54**^{km}±11^{km}**, n11,** σ**0**^{s}**.80**/16**, 2C-2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	**Pisagua**	**0.42**	**58⇓**	*i*P	**Pn**	**13 11 47.9**	**-0.1**
PSGC				*e*S	**Sn**	**13 11 55.3**	**-0.5**
PSGC				IAML		13 11 55.7	
	comp=N,3µm,0.5s						
PB11	**IPOC Station P**	**0.80**	**86⇑**	*i*P	**Pn**	**13 11 52.7**	**+0.1**
PB11				*e*S	**Sn**	**13 12 03.8**	**0.0**
PB11				IAML		13 12 04.0	
	comp=N,7µm,0.3s						
MNMC	**Minye Minye**	**1.10**	**51**	*e*P	**Pn**	**13 11 57.1**	**+0.5**
MNMC				*e*S	**Sn**	**13 12 11.9**	**+1.0**
MNMC				IAML		13 12 13.1	
	comp=N,4µm,0.2s						
PB12	**IPOC Station P**	**1.21**	**8⇓**	*i*P	**Pn**	**13 11 58.4**	**+0.3**
PB12				*e*S	**Sn**	**13 12 14.1**	**+0.6**

PB12				IAML		13 12 16.5	
	comp=E,2µm,0.3s						
PB08	**IPOC Station P**	**1.31**	**104**	⇑*i*P	**Pn**	**13 12 00.1**	**+0.5**
PB08				*e*S	**Sn**	**13 12 16.9**	**+0.7**
PB08				IAML		13 12 19.5	
	comp=N,1µm,0.4s						
PB01	**IPOC Station P**	**1.54**	**142**	*e*P	**Pn**	**13 12 02.8**	**+0.3**
PB01				*e*S	**Sn**	**13 12 21.5**	**+0.1**
PB01				IAML		13 12 22.8	
	comp=N,661nm,0.1s						
PB07	**IPOC Station P**	**1.98**	**163**	*e*P	**Pn**	**13 12 09.0**	**+0.5**
LPAZ	**La Paz**	**4.17**	**33**	Pn	Pn	13 12 46.0	+7.0
	comp=N,0.4nm,0.3s,baz=211,slow=9.3,SNR=13						
TORD	**Torodi Ar. Bea**	**78.21**	**71**	P	**P**	**13 23 29.7**	**-1.9**
	comp=N,1.0nm,0.5s,baz=252,slow=5.8						
WRA	**Warramunga Arr**	**133.59**	**213**	PKP	**PKPdf**	**13 30 49.2**	**+0.7**
	comp=N,0.2nm,0.4s,baz=151,slow=1.7,SNR=4.0						
MKAR	**Makanchi Array**	**145.10**	**33**	PKPbc	**PKPdf**	**13 31 09.5**	**+0.9**
	comp=N,1.9nm,1.0s,baz=324,slow=3.9,SNR=9.0						

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*IDC **14** 13:26:32.2±1.8, 10.°46N×92.°19E, h0^{km}, mb3.7/6, mb1 3.9/7, mb1mx3.5/67, mbtmp3.7/7, ML4.1/1, MS3.3/1, Ms1 3.3/1, ms1mx2.4/67, Error ellipse: s-maj=62.2km s-min=18.2km az=65.0*

*ISCJB **14** 13:26:34.2±1.1, 10.°39N±0.°08×92.°1E±0.°2, h29^{km}, mb3.6/6, MS3.2/1, Error ellipse: s-maj=24.4km s-min=10.7km az=4.8*

ISC 14 13:26:36.7±1.6**, 10.°5N**±0.°1×**92.°3E**±0.°3**, h29^{km}, n12, σ0.^{s}66**/7**, mb3.7**/6**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBA	**Port Blair**	**1.23**	**21**	*e*P	Pn	13 26 58.2	+0.3
PBA				*e*S	Sb	13 27 16.0	+1.2
PBA				AML	AML	13 27 18.1	
	comp=E,19µm,0.2s						
PBA				AML	AML	13 27 22.1	
	comp=N,25µm,0.3s						
CMAR	**Chiang Mai Arr**	**10.20**	**38**	Pn	**Pn**	**13 29 01.2**	**-0.1**
	comp=N,0.5nm,0.3s,baz=233,slow=14,SNR=7.9						
H08S3	**Diego Garcia H**	**26.71**	**228**	T	T	13 59 52.0	
	baz=46,slow=75,SNR=38						
H08S2	**Diego Garcia H**	**26.71**	**228**	T	T	13 59 52.0	
	baz=46,slow=75,SNR=7.9						
H08S1	**Diego Carcia H**	**26.73**	**228**	T	T	13 59 52.5	
	baz=46,slow=75,SNR=4.9						
MKAR	**Makanchi Array**	**37.15**	**349**	P	**P**	**13 33 44.6**	**-0.4**
	comp=N,0.3nm,0.4s,baz=152,slow=6.5,SNR=6.0						
SONM	**Songino Array**	**39.06**	**15**	P	**P**	**13 34 01.5**	**+0.3**
	comp=N,0.3nm,0.3s,baz=187,slow=8.4,SNR=3.3						
KURBB	**Kurchatov Arra**	**41.58**	**347**	P	**P**	**13 34 21.9**	**+0.2**
	comp=N,0.1nm,0.4s,baz=172,slow=7.9,SNR=3.3						
FITZ	**Fitzroy Crossi**	**43.49**	**131**	P	**P**	**13 34 37.0**	**-0.8**
	comp=N,2.4nm,1.1s,baz=311,slow=9.3,SNR=5.1						
ZALV	**Zalesovo Beam**	**43.74**	**354**	LR	LR	13 57 49.8	
	comp=N,30nm,18.3s,baz=247,slow=43						
WRA	**Warramunga Arr**	**51.27**	**126**	P	**P**	**13 35 38.9**	**+0.5**
	comp=N,1.3nm,0.4s,baz=306,slow=8.4,SNR=37						
ASAR	**Alice Springs**	**52.99**	**130**	P	**P**	**13 35 51.9**	**+0.7**
	comp=N,1.8nm,0.8s,baz=304,slow=6.8,SNR=18						

IDC 14 13:36:46.5±6.9**, 20.°76S**×**178.°94W, h640^{km}**±**80^{km}, mb3.0**/6**, mb1 3.2**/6**, mb1mx2.8**/48**, mbtmp4.0**/6**, Error ellipse: s-maj=43.8km s-min=27.4km az=61.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**32.59**	**265**	P	P	13 42 28.4	+0.1
	5.3nm,0.4s,baz=89,slow=12,SNR=13						
ASAR	**Alice Springs**	**43.60**	**257**	P	P	13 43 57.0	+0.1
	3.2nm,0.8s,baz=94,slow=8.0,SNR=37						
ASAR				PcP	PcP	13 45 29.4	-0.1
	0.2nm,0.3s,baz=100,slow=4.1,SNR=2.7						
WRA	**Warramunga Arr**	**43.70**	**263**	P	P	13 43 57.4	-0.2
	1.1nm,0.3s,baz=96,slow=6.9,SNR=51						
FITZ	**Fitzroy Crossi**	**52.12**	**263**	P	P	13 45 00.4	+0.5
	1.5nm,0.8s,baz=74,slow=5.2,SNR=7.9						
VNDA	**Vanda**	**57.57**	**185**	P	P	13 45 36.8	0.0
	0.3nm,0.6s,baz=21,slow=6.1,SNR=4.0						
ILAR	**Eielson Array**	**88.77**	**13**	P	P	13 48 33.6	+0.3
	0.2nm,0.5s,baz=220,slow=3.8,SNR=3.5						
HFS	**Hagfors**	**139.66**	**350**	PKhKP	PKPpre	13 54 57.8	
	1.0nm,0.8s,baz=66,slow=1.7,SNR=4.0						
AKASG	**Malin Array Be**	**142.81**	**330**	PKP	PKPdf	13 55 07.2	-1.2
	0.7nm,0.4s,baz=39,slow=4.0,SNR=5.5						

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*MOS **14** 13:41:16.8±3.0, 53.°43N×109.°22E, h10^{km}, mb4.2/1, Error ellipse: s-maj=32.3km s-min=16.9km az=46.9*

BYKL 14 13:41:13.5±0.2**, 53.°18N**×**109.°04E, h28^{km}**±3^{km}**, 8C-2D, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXMB	**Maximikha**	**0.20**	**295**	⇑*i*Pg	Pb	13 41 20.0	+0.5
MXMB				*e*Sg	Sb	13 41 24.0	+0.5
KELR	**Kotokel**	**0.72**	**234**	⇑*i*Pg	Pb	13 41 27.3	-0.1
KELR				*i* Sg	Sn	13 41 37.4	-0.5
KELR				*e*		13 41 40.2	
SYVR	**Suvo**	**0.75**	**50**	⇑*i*Pg	Pb	13 41 27.8	-0.2
SYVR				*e*Sg	Sn	13 41 38.4	-0.2
SYVR				Pmax			
	267nm,0.3s						
SYVR				Smax			
	516nm,0.4s						
SYVR	**Suvo**	**0.75**	**50**	*e*PG	Pb	13 41 27.5	-0.5
SYVR				*e*		13 41 38.4	
SYVR				pmax	pmax		
	comp=Z,288nm,0.2s						
SYVR				smax	smax		
	comp=E,533nm,0.4s						
OGRR	**Ongureny**	**0.98**	**299**	⇑*i*Pg	Pb	13 41 32.4	+0.5
	comp=E,67nm,0.4s						
OGRR				⇓*i*Pg	Pb	13 41 32.4	+0.5
	comp=E,84nm,0.4s						
OGRR				⇑*i*Pg	Pb	13 41 32.4	+0.5
	comp=E,124nm,0.4s						
OGRR				*i* Sg	Sb	13 41 45.3	+0.8
OGRR				Pmax			
	comp=E,151nm,0.3s						
OGRR				Smax			
	comp=E,120nm,0.2s						
OGRR	**Ongureny**	**0.98**	**299**	⇑*i*PG	Pb	13 41 32.5	+0.6
OGRR				*e*		13 41 45.3	
OGRR				pmax	pmax		
	comp=Z,152nm,0.3s						
OGRR				smax	smax		
	comp=E,824nm,0.4s						
ZRHB	**Zarechye**	**1.30**	**242**	*e*Pg	Pb	13 41 38.1	+0.7
ZRHB				*e*Sg	Sb	13 41 56.2	+2.5
ZRHB				Pmax			
	comp=E,309nm,0.5s						
ZRHB				Smax			
	comp=E,1µm,0.4s						
UUDB	**Ulan-Yde**	**1.56**	**213**	⇑*i*Pg	Pb	13 41 41.8	+0.1
UUDB				*i* Sg	Sb	13 42 03.1	+2.0
UUDB				Pmax			
	comp=E,169nm,0.2s						
UUDB				Smax			
	comp=E,719nm,0.5s						
TRG	**Tyrgan**	**1.68**	**257**	⇑*i*Pn	Pn	13 41 41.6	+0.5
TRG				*e*Pg	Pb	13 41 43.2	-0.6
TRG				*e*Sg	Sb	13 42 06.8	+2.3
TRG				*e*Sn	Sn	13 43 03.3	+62
TRG				Pmax			
	comp=E,60nm,0.2s						
TRG				Smax			
	comp=E,232nm,0.3s						
FFNB	**Fofonovo**	**1.79**	**232**	⇓*i*Pg	Pb	13 41 45.8	+0.1
FFNB				*i* Sg	Sb	13 42 09.9	+2.2
FFNB				Pmax			
	comp=E,132nm,0.2s						
FFNB				Smax			
	comp=E,492nm,0.5s						
KAB	**Kabansk**	**1.84**	**233**	*e*Pg	Pb	13 41 46.4	-0.1
KAB				*e*Sg	Sb	13 42 12.1	+3.0
KAB				Pmax			
	comp=E,160nm,0.4s						
KAB				Smax			
	comp=E,1µm,0.4s						
STDB	**Stepnoy Dvoret**	**1.92**	**239**	*e*Pg	Pb	13 41 48.0	+0.2
STDB				*e*Sg	Sb	13 42 13.9	+2.6
STDB				*e*		13 42 17.9	
STDB				Pmax			
	comp=E,102nm,0.5s						
STDB				max			
	comp=E,771nm,0.3s						
HRMR	**Khuramsha**	**2.01**	**220**	*e*Pn	Pn	13 41 46.7	+1.1
HRMR				*e*Pg	Pb	13 41 49.2	-0.2
HRMR				*e*		13 41 56.1	
HRMR				*e*Sg	Sb	13 42 16.9	+2.9
HRMR				Pmax			
	comp=E,121nm,0.2s						
HRMR				Smax			
	comp=E,922nm,0.3s						
YLYR	**Ulyunkhan**	**2.11**	**36**	*e*Pn	Pn	13 41 48.3	+1.4
YLYR				*e*Pg	Pb	13 41 51.1	0.0
YLYR				*e*		13 41 53.0	
YLYR				*e*		13 42 15.6	
YLYR				*e*Sg	Sb	13 42 19.9	+3.1
YLYR				max			
	comp=E,30nm,0.8s						
YLYR				Smax			
	comp=E,167nm,0.4s						
YLYR	**Ulyunkhan**	**2.11**	**36**	*e*PN	Pn	13 41 48.5	+1.6
YLYR				*e*		13 41 51.0	
YLYR				*e*S	Sb	13 42 16.0	-0.8
YLYR				*e*		13 42 18.5	
YLYR				pmax	pmax		
	comp=Z,25nm,0.5s						
YLYR				smax	smax		
	comp=N,169nm,0.4s						
BGT	**Bolshoye Golou**	**2.49**	**244**	*e*Pn	Pn	13 41 53.1	+1.0
BGT				*e*Pg	Pb	13 41 57.9	+0.4
BGT				*e*Sn	Sn	13 42 20.9	-0.7
BGT				*e*Sg	Sb	13 42 32.0	+4.3
BGT				max			
	comp=N,13nm,0.2s						
BGT				Smax			
	comp=N,80nm,0.6s						
NIZ	**Nizh Angarsk**	**2.62**	**6**	*e*Pn	Pn	13 41 55.8	+1.9
NIZ				*e*Pg	Pb	13 41 59.5	-0.2
NIZ				*e*		13 42 04.3	
NIZ				*e*Sg	Sb	13 42 33.9	+2.5
NIZ				max			
	comp=N,9.0nm,0.4s						
NIZ				Smax			
	comp=N,44nm,0.4s						
LSTR	**Listvyanka**	**2.89**	**245**	*e*Pn	Pn	13 41 58.1	+0.5
LSTR				*e*Pg	Pb	13 42 04.4	+0.1
LSTR				*e*Sn	Sn	13 42 31.8	+0.4
LSTR				*e*Sg	Sb	13 42 41.9	+2.8
LSTR				Pmax			
	comp=N,8.0nm,0.4s						
LSTR				Smax			
	comp=N,46nm,0.3s						
CIT	**Chita**	**2.99**	**111**	*e*	Pb	13 42 08.6	+2.6
CIT				*e*Sg	Sb	13 42 45.9	+3.9
CIT				Smax			
	comp=N,158nm,0.2s						
KMO	**Kumora**	**2.99**	**24**	*e*Pn	Pn	13 41 58.9	-0.1
KMO				Pg	Pb	13 42 05.9	-0.1
KMO				*e*Sg	Sb	13 42 46.2	+4.1
KMO				*e*SgSg	SnSn	13 42 52.2	+7.2
KMO				Pmax			
	comp=N,25nm,0.5s						
KMO				max			
	comp=N,145nm,1.5s						
KMO	**Kumora**	**2.99**	**24**	*e*PN	Pb	13 42 05.7	-0.3
KMO				*e*		13 42 45.9	
KMO				pmax	pmax		
	comp=Z,24nm,0.3s						
KMO				smax	smax		
	comp=N,145nm,1.5s						
IRK	**Irkutsk**	**3.05**	**254**	*e*Sg	Sb	13 42 47.4	+3.6
IRK				Smax			
	comp=N,186nm,0.3s						
IRK	**Irkutsk**	**3.05**	**254**	*e*PN	Pb	13 42 08.4	+1.4
IRK				*e*		13 42 47.3	
IRK				pmax	pmax		
	comp=Z,67nm,0.1s						
IRK				smax	smax		
	comp=E,175nm,0.4s						
IVK	**Ivanovka**	**3.15**	**246**	*e*Pn	Pn	13 42 01.9	+0.7
IVK				*e*Pg	Pb	13 42 08.9	+0.2
IVK				*e*Sn	Sn	13 42 36.6	-1.2
IVK				*e*Sg	Sb	13 42 50.7	+4.1
IVK				Pmax			
	comp=E,8.0nm,0.2s						
IVK				Smax			
	comp=E,65nm,0.2s						
YOA	**Uoyan**	**3.34**	**27**	*e*	Pb	13 42 33.2	+21
YOA				*e*Sg	Sb	13 42 58.8	+6.5
YOA				Smax			
	comp=E,356nm,1.1s						
UKT	**Uakit**	**3.54**	**47**	*e*Pn	Pn	13 42 08.5	+1.8
UKT				Pg	Pb	13 42 16.7	+1.2
UKT				*i* Sg	Sb	13 43 03.5	+5.4
UKT				Smax			
	comp=E,115nm,1.6s						
TLY	**Talaya**	**3.63**	**248**	*e*Pn	Pn	13 42 08.4	+0.6
TLY				*e*Pg	Pb	13 42 17.1	+0.2
TLY				*e*Sn	Sn	13 42 49.9	+0.2
TLY				*e*Sg	Sb	13 43 04.6	+4.2
TLY				Pmax			
	comp=E,5.0nm,0.4s						
TLY				Smax			
	comp=E,33nm,0.3s						
ARS	**Arshan**	**4.23**	**255**	*e*Pn	Pn	13 42 16.8	+0.7
ARS				*e*		13 42 20.4	
ARS				*e*Pg	Pb	13 42 27.7	+0.5
ARS				*e*Sn	Sn	13 43 03.6	-1.0
ARS				*e*Sg	Sb	13 43 22.4	+4.6
ARS				Pmax			
	comp=E,21nm,0.5s						
ARS				Smax			
	comp=E,112nm,0.5s						
ARS	**Arshan**	**4.23**	**255**	*e*PN	Pb	13 42 29.3	+2.1
ARS				pmax	pmax		
	comp=Z,21nm,0.6s						
ZAK	**Zakamensk**	**4.54**	**234**	Pn	Pn	13 42 23.0	+2.6
ZAK				*e*Sg	Sb	13 43 34.9	+8.1
ZAK				*e*		13 43 38.9	
ZAK				max			
	comp=Z,4.0nm,0.3s						
ZAK				max			
	comp=Z,36nm,1.2s						
NLYR	**Nelyaty**	**5.08**	**47**	*e*Sg	Sb	13 43 50.9	+8.7
NLYR				Smax			
	comp=Z,85nm,1.0s						
MOY	**Mondy**	**5.15**	**256**	*e*Pn	Pn	13 42 31.3	+2.5
MOY				*e*Pg	Pb	13 42 45.3	+2.4
MOY				*e*		13 43 29.8	
MOY				*e*Sg	Sb	13 43 52.3	+8.0
MOY				Pmax			
	comp=Z,9.0nm,0.9s						
MOY				Smax			
	comp=Z,30nm,1.2s						
BOD	**Bodaibo**	**5.44**	**29**	*e*Sg	Sb	13 44 01.4	+9.1
BOD				Smax			
	comp=Z,21nm,0.7s						
ULN	**Ulaanbaatar**	**5.47**	**194**	*e*	Pn	13 42 39.6	+6.4
ULN				*e*Sg	Sb	13 44 03.1	+10
TUP	**Tupik**	**6.59**	**75**	*e*Pn	Pn	13 42 49.9	+1.5
TUP				*e*		13 42 58.6	
TUP				*e*Pg	Pb	13 43 10.9	+3.7
TUP				*e*Sg	Sb	13 44 36.9	+12
TUP				*e*		13 44 47.8	
TUP				Pmax			
	comp=Z,2.0nm,0.5s						
TUP				max			
	comp=Z,38nm,1.3s						
TUP	**Tupik**	**6.59**	**75**	*e*PN	Pn	13 42 52.4	+4.0
TUP				*e*		13 43 12.8	
TUP				*e*S	Sn	13 44 04.4	+1.9
TUP				*e*		13 44 36.7	
TUP				pmax	pmax		
	comp=Z,7.0nm,0.6s						
TUP				smax	smax		
	comp=N,38nm,1.4s						
KNGR	**Kungurtug, Tuv**	**7.58**	**255**	Sg	Sb	13 45 07.9	+14

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*CSEM **14** 13:44:41.9±0.1, 40.°33N×3.°83W, h2^{km}, ML2.9/17, Error ellipse: s-maj=2.1km s-min=1.6km az=152.0*

*MDD **14** 13:44:43.9±0.4, 40.°32N×3.°80W, h5^{km}±3^{km}, mbLg2.4/37, Error ellipse: s-maj=3.1km s-min=2.4km az=162.0, PRXIMO*

MDD EMS: II INTENSIDAD MAXIMA.

*SFS **14** 13:44:44.0, 40.°30N×3.°82W, h0^{km}, ML2.5*

*INMG **14** 13:44:44.1±1.6, 40.°33N×3.°80W, h4^{km}±3^{km}, ML2.5, Error ellipse: s-maj=2.2km s-min=1.8km az=124.0*

*LDG **14** 13:44:45.1±0.1, 40.°27N×3.°81W, h11^{km}, Ml2.7/6, Error ellipse: s-maj=2.9km s-min=2.4km az=135.0*

*CNRM **14** 13:44:47.9, 35.°60N×2.°99W, h30^{km}, ML3.6*

ISC 14 13:44:42.8±1.1**, 40.°33N**±0.°02×**3.°80W**±0.°01**, h8^{km}**±9^{km}**, n136, σ1.^{s}43**/212**, 1C, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UCM	**Universidad Co**	**0.43**	**93**	*i* P	**Pg**	**13 44 51.7**	**+0.6**
UCM				*i* S	**Sg**	**13 44 57.4**	**+0.7**
ESDC	**Sonseca Array**	**0.67**	**191**	Pg	**Pg**	**13 44 55.8**	**+0.2**
	60nm,0.1s,baz=9.7,slow=18,SNR=51						
ESDC				Lg	Lg	13 45 05.6	
	72nm,0.1s,baz=10.0,slow=30,SNR=7.9						
ESDC	**Sonseca Array**	**0.67**	**191**	Pg	**Pg**	**13 44 55.8**	**+0.2**
	60nm,0.1s,SNR=51						
ESDC				Lg	Lg	13 45 05.6	
	72nm,0.1s,SNR=7.9						
PAB	**San Pablo**	**0.89**	**208**	⇑Pg	**Pg**	**13 45 00.0**	**+0.1**
	11nm,0.1s,SNR=18						
PAB				Lg	Lg	13 45 12.1	
	103nm,0.2s,SNR=7.9						
PAB	**San Pablo**	**0.89**	**208**	Pg	**Pg**	**13 45 00.0**	**+0.1**
	11nm,0.1s,SNR=18						
PAB				Lg	Lg	13 45 12.1	
	103nm,0.2s,SNR=7.9						
ETOR	**Torete**	**1.42**	**69**	Pg	**Pg**	**13 45 09.9**	**-0.1**
	0.5nm,0.1s,SNR=18						
ETOR				Lg	Lg	13 45 28.9	
	32nm,0.2s,SNR=5.0						
ETOR	**Torete**	**1.42**	**69**	Pg	**Pg**	**13 45 09.9**	**-0.1**
	0.5nm,0.1s,SNR=18						
ETOR				Lg	Lg	13 45 28.9	
	32nm,0.2s,SNR=5.0						
EPLA	**Plasencia**	**1.77**	**262**	Pn	**Pn**	**13 45 14.0**	**+0.3**
	1.5nm,0.1s,SNR=20						
EPLA				Pg	**Pb**	**13 45 16.1**	**+0.6**
	1.5nm,0.1s,SNR=7.9						
EPLA				Lg	Lg	13 45 38.9	
	17nm,0.1s,SNR=5.0						
EPLA	**Plasencia**	**1.77**	**262**	Pn	**Pn**	**13 45 14.0**	**+0.3**
	1.5nm,0.1s,SNR=20						
EADA	**Adamuz**	**2.24**	**196**	Pg	**Pb**	**13 45 24.2**	**+0.6**
	3.3nm,0.1s,SNR=19						
EADA				Lg	Lg	13 45 52.9	
	10nm,0.1s,SNR=5.5						
EADA	**Adamuz**	**2.24**	**196**	Pg	**Pb**	**13 45 24.2**	**+0.6**
	3.3nm,0.1s,SNR=19						
EADA				Lg	Lg	13 45 52.9	
	10nm,0.1s,SNR=5.5						
ECHE	**Chera**	**2.30**	**108**	Pg	**Pg**	**13 45 26.3**	**-0.6**
	3.1nm,0.3s,SNR=7.9						
ECHE				Lg	Lg	13 45 56.6	
	9.8nm,0.5s,SNR=7.9						
ECHE	**Chera**	**2.30**	**108**	Pg	**Pg**	**13 45 26.3**	**-0.6**
	3.1nm,0.3s,SNR=7.9						
ECHE				Lg	Lg	13 45 56.6	
	9.8nm,0.5s,SNR=7.9						
SESP	**Santiago Espad**	**2.41**	**156**	Pg	**Pg**	**13 45 28.4**	**-0.6**
	1.0nm,0.1s,SNR=7.9						
SESP				Sn	**Sn**	**13 45 49.8**	**-2.7**
	2.6nm,0.1s,SNR=4.0						
SESP				Lg	Lg	13 45 59.7	
	36nm,0.2s,SNR=7.9						
SESP	**Santiago Espad**	**2.41**	**156**	P	**Pb**	**13 45 26.8**	**+0.2**
SESP	**Santiago Espad**	**2.41**	**156**	Pg	**Pg**	**13 45 28.4**	**-0.6**
	1.0nm,0.1s,SNR=7.9						
SESP				S	**Sb**	**13 45 58.5**	**+2.0**
SESP				Lg	Lg	13 45 59.7	
	36nm,0.2s,SNR=7.9						
ETOB	**Tobarra**	**2.42**	**133**	Pn	**Pn**	**13 45 23.4**	**+0.6**
	0.4nm,0.2s,SNR=7.9						
ETOB				Pg	**Pg**	**13 45 28.8**	**-0.4**
	0.0nm,0.0s,SNR=13						
ETOB				Sn	**Sn**	**13 45 49.9**	**-2.8**
	1.2nm,0.1s,SNR=7.9						
ETOB				Lg	Lg	13 46 00.0	
	18nm,0.2s,SNR=6.4						
ETOB	**Tobarra**	**2.42**	**133**	Pn	**Pn**	**13 45 23.4**	**+0.6**
	0.4nm,0.2s,SNR=7.9						
EMOS	**Mosqueruela**	**2.54**	**88**	Pn	**Pn**	**13 45 25.6**	**+1.0**
	1.0nm,0.1s,SNR=8.9						
EMOS				Pg	**Pg**	**13 45 31.1**	**-0.5**
	1.5nm,0.3s,SNR=4.0						
EMOS				Sn	**Sn**	**13 45 54.4**	**-1.5**
	2.2nm,0.2s,SNR=7.9						
EMOS				Lg	Lg	13 46 04.5	
	4.9nm,0.3s,SNR=7.9						
EMOS	**Mosqueruela**	**2.54**	**88**	Pn	**Pn**	**13 45 25.6**	**+1.0**
	1.0nm,0.1s,SNR=8.9						
ECAB	**El Cabril**	**2.58**	**210**	Pn	**Pn**	**13 45 24.3**	**-0.6**
	0.1nm,0.1s,SNR=29						
ECAB				Pg	**Pb**	**13 45 29.7**	**+0.4**
	3.2nm,0.2s,SNR=13						
ECAB				Sn	**Sn**	**13 45 53.5**	**-3.0**
	1.6nm,0.1s,SNR=7.9						
ECAB				Lg	Lg	13 46 01.9	
	5.6nm,0.2s,SNR=12						
ECAB	**El Cabril**	**2.58**	**210**	Pn	**Pn**	**13 45 24.3**	**-0.6**
	0.1nm,0.1s,SNR=29						
EQES	**Quesada**	**2.59**	**167**	Pg	**Pb**	**13 45 31.0**	**+1.5**
	2.2nm,0.2s,SNR=19						
EQES				Lg	Lg	13 46 04.4	
	4.8nm,0.2s,SNR=7.9						
EQES	**Quesada**	**2.59**	**167**	Pg	**Pb**	**13 45 31.0**	**+1.5**
	2.2nm,0.2s,SNR=19						
EQES				Lg	Lg	13 46 04.4	
	4.8nm,0.2s,SNR=7.9						
MVO	**Moncorvo**	**2.59**	**290**	*e*Pn	**Pn**	**13 45 26.1**	**+1.0**
MVO				*e*Sn	**Sn**	**13 45 57.1**	**+0.3**
MVO				A	A	13 46 11.5	
	9.6nm,0.5s						
MVO	**Moncorvo**	**2.59**	**290**	Pn	**Pn**	**13 45 25.5**	**+0.4**
	6.6nm,0.3s,SNR=7.1						
MVO				Pg	**Pg**	**13 45 31.5**	**-0.9**
	1.0nm,0.1s,SNR=7.9						
MVO				Sn	**Sn**	**13 45 55.8**	**-1.1**
	1.0nm,0.1s,SNR=5.7						
MVO				Lg	Lg	13 46 06.2	
	4.0nm,0.1s,SNR=7.9						
MVO	**Moncorvo**	**2.59**	**290**	Pn	**Pn**	**13 45 25.5**	**+0.4**
	6.6nm,0.3s,SNR=7.1						
PBRG	**Braganca**	**2.67**	**305**	*e*Sg	**Sg**	**13 46 07.0**	**-1.5**
PBRG				A	A	13 46 10.3	
	10.0nm,0.6s						
PBRG	**Braganca**	**2.67**	**305**	Lg	Lg	13 46 07.0	
	5.0nm,0.6s						
PBRG	**Braganca**	**2.67**	**305**	*e*Sg	**Sg**	**13 46 07.0**	**-1.5**
HORN	**Hornachuelos**	**2.73**	**205**	P	**Pb**	**13 45 32.5**	**+0.7**
HORN				S	**Sb**	**13 46 06.0**	**+0.6**
MTE	**Manteigas**	**2.86**	**273**	*e*Sg	**Sb**	**13 46 11.8**	**+2.5**
MTE				A	A	13 46 18.7	
	15nm,0.5s						
MTE	**Manteigas**	**2.86**	**273**	Lg	Lg	13 46 11.8	
	7.4nm,0.5s						
MTE	**Manteigas**	**2.86**	**273**	*e*Sg	**Sb**	**13 46 11.8**	**+2.5**
PCBR	**Castelo Branco**	**2.86**	**261**	*e*Sg	**Sb**	**13 46 11.7**	**+2.4**
PCBR				A	A	13 46 17.8	
	10nm,0.5s						
PCBR	**Castelo Branco**	**2.86**	**261**	Lg	Lg	13 46 11.7	
	5.2nm,0.5s						
PCBR	**Castelo Branco**	**2.86**	**261**	*e*Sg	**Sb**	**13 46 11.7**	**+2.4**
ESAC	**San Caprasio**	**2.88**	**60**	Sn	**Sn**	**13 46 04.0**	**+0.1**
	17nm,0.3s,SNR=7.9						
ESAC	**San Caprasio**	**2.88**	**60**	Sn	**Sn**	**13 46 04.0**	**+0.1**
	17nm,0.3s,SNR=7.9						
PMRV	**Marv??o**	**2.91**	**253**	*e*Pn	**Pn**	**13 45 29.8**	**+0.4**
PMRV				*e*Sn	**Sn**	**13 46 04.2**	**-0.3**
PMRV				*e*Sg	**Sb**	**13 46 13.2**	**+2.6**
PMRV				A	A	13 46 17.6	
	19nm,0.2s						
PMRV	**Marv??o**	**2.91**	**253**	Pn	**Pn**	**13 45 29.8**	**+0.4**
PMRV				Sn	**Sn**	**13 46 04.2**	**-0.3**
PMRV				Lg	Lg	13 46 13.2	
	19nm,0.2s						
PMRV	**Marv??o**	**2.91**	**253**	Pn	**Pn**	**13 45 29.8**	**+0.4**
PMRV				Sn	**Sn**	**13 46 04.2**	**-0.3**
PMRV				*e*Sg	**Sb**	**13 46 13.2**	**+2.6**
ELAN	**Lanestosa**	**2.91**	**5**	Pn	**Pn**	**13 45 29.6**	**+0.1**

	42nm,1.3s						
ELAN				Pg	Pg	13 45 37.3	-1.3
	0.5nm,0.1s,SNR=14						
ELAN				Sn	Sn	13 46 04.2	-0.5
	SNR=7.9						
ELAN				Lg	Lg	13 46 15.0	
	5.6nm,0.2s,SNR=4.9						
ELAN	Lanestosa	2.91	5	Pn	Pn	13 45 29.6	+0.1
	42nm,1.3s						
EBAD	Badajoz	2.94	239	Pn	Pn	13 45 29.8	0.0
	0.2nm,0.1s,SNR=7.9						
EBAD				Pg	Pg	13 45 37.9	-1.2
	1.0nm,0.2s,SNR=7.9						
EBAD				Sn	Sn	13 46 03.7	-1.6
	6.2nm,0.2s,SNR=5.3						
EBAD				Lg	Lg	13 46 13.2	
	16nm,0.2s,SNR=5.9						
EBAD	Badajoz	2.94	239	Pn	Pn	13 45 29.8	0.0
	0.2nm,0.1s,SNR=7.9						
AFON	Font Roja	3.02	122	Lg	Lg	13 46 20.1	
	SNR=7.9						
AFON	Font Roja	3.02	122	Lg	Lg	13 46 20.1	
	SNR=7.9						
PVRL	Vila Real	3.12	289	*e*Sg	Sg	13 46 21.5	-1.4
PVRL	Vila Real	3.12	289	Lg	Lg	13 46 21.5	
PVRL	Vila Real	3.12	289	*e*Sg	Sg	13 46 21.5	-1.4
EQUE	Quentar	3.13	175	Pg	Pg	13 45 41.5	-1.3
	0.4nm,0.2s,SNR=7.9						
EQUE				Sn	Sn	13 46 07.7	-2.5
	2.1nm,0.3s,SNR=7.9						
EQUE				Lg	Lg	13 46 22.8	
	2.4nm,0.2s,SNR=6.3						
EQUE	Quentar	3.13	175	Pg	Pg	13 45 41.5	-1.3
	0.4nm,0.2s,SNR=7.9						
EQUE				Sn	Sn	13 46 07.7	-2.5
	2.1nm,0.3s,SNR=7.9						
EQUE				Lg	Lg	13 46 22.8	
	2.4nm,0.2s,SNR=6.3						
PVIS	Viseu	3.14	278	*e*Pn	Pn	13 45 32.8	+0.1
PVIS				*e*Sn	Sn	13 46 10.3	-0.2
PVIS				*e*Sg	Sg	13 46 24.0	+0.2
PVIS				A	A	13 46 24.8	
	5.4nm,0.5s						
PVIS	Viseu	3.14	278	Pn	Pn	13 45 32.8	+0.1
PVIS				Sn	Sn	13 46 10.3	-0.2
PVIS				Lg	Lg	13 46 24.0	
	2.7nm,0.5s						
PVIS	Viseu	3.14	278	Pn	Pn	13 45 32.8	+0.1
PVIS				Sn	Sn	13 46 10.3	-0.2
PVIS				*e*Sg	Sg	13 46 24.0	+0.2
EARI	Arriondas	3.15	341	Pn	Pn	13 45 33.0	+0.2
	0.2nm,0.1s,SNR=7.9						
EARI				Pg	Pg	13 45 41.3	-1.8
	1.3nm,0.2s,SNR=4.7						
EARI				Sn	Sn	13 46 09.4	-1.2
	1.8nm,0.2s,SNR=6.2						
EARI				Lg	Lg	13 46 21.6	
	6.4nm,0.3s,SNR=12						
EARI	Arriondas	3.15	341	Pn	Pn	13 45 33.0	+0.2
	0.2nm,0.1s,SNR=7.9						
IELO	Elcoad	3.16	37	Pn	Pn	13 45 33.6	+0.6
	0.3nm,0.1s,SNR=7.9						
IELO				Pg	Pg	13 45 42.3	-1.1
	6.1nm,0.5s,SNR=7.9						
IELO				Sn	Sn	13 46 10.0	-1.0
	6.9nm,0.2s,SNR=7.9						
IELO				Lg	Lg	13 46 24.0	
	2.9nm,0.2s,SNR=7.9						
IELO	Elcoad	3.16	37	Pn	Pn	13 45 33.6	+0.6
	0.3nm,0.1s,SNR=7.9						
IELO	Elcoad	3.16	37	Pg	Pg	13 45 42.3	-1.1
	6.1nm,0.5s,SNR=7.9						
IELO				Sn	Sn	13 46 10.0	-1.0
	6.9nm,0.2s,SNR=7.9						
IELO				Lg	Lg	13 46 24.0	
	2.9nm,0.2s,SNR=7.9						
EORO	Oroz-Betelu	3.17	35	Pn	Pn	13 45 34.0	+0.9
	9.1nm,1.1s,SNR=7.3						
EORO				Pg	Pg	13 45 41.7	-1.8
	2.9nm,0.5s,SNR=7.9						
EORO				Sn	Sn	13 46 11.4	+0.2
	4.0nm,0.2s,SNR=5.8						
EORO				Lg	Lg	13 46 25.1	
	7.4nm,0.3s,SNR=7.9						
EORO	Oroz-Betelu	3.17	35	Pn	Pn	13 45 34.0	+0.9
	9.1nm,1.1s,SNR=7.3						
EMUR	La Murta	3.18	140	Pg	Pg	13 45 43.2	-0.6
	1.1nm,0.2s,SNR=8.6						
EMUR				Lg	Lg	13 46 24.8	
	25nm,0.4s,SNR=31						
EMUR	La Murta	3.18	140	Pg	Pg	13 45 43.2	-0.6
	1.1nm,0.2s,SNR=8.6						
EMUR				Lg	Lg	13 46 24.8	
	25nm,0.4s,SNR=31						
POLO	Lamas de Olo	3.20	290	*e*Pn	Pn	13 45 34.1	+0.5
POLO				*e*Sn	Sn	13 46 10.8	-1.2
POLO				*e*Sg	Sg	13 46 24.1	-1.6
POLO				A	A	13 46 27.7	
	2.9nm,0.4s						
POLO	Lamas de Olo	3.20	290	*e*Pn	Pn	13 45 34.1	+0.5
POLO				*e*Sn	Sn	13 46 10.8	-1.2
POLO				*e*Sg	Sg	13 46 24.1	-1.6
ERTA	Horta de San J	3.21	77	Pn	Pn	13 45 33.7	+0.1
	0.4nm,0.1s,SNR=7.9						
ERTA				Sn	Sn	13 46 11.9	-0.1
	3.2nm,0.3s,SNR=6.3						
ERTA				Lg	Lg	13 46 24.4	
	12nm,0.4s,SNR=7.9						
ERTA	Horta de San J	3.21	77	Pn	Pn	13 45 33.7	+0.1
	0.4nm,0.1s,SNR=7.9						
ERTA				Sn	Sn	13 46 11.9	-0.1
	3.2nm,0.3s,SNR=6.3						
ERTA				Lg	Lg	13 46 24.4	
	12nm,0.4s,SNR=7.9						
EGOR	Sierra Gorda,	3.22	184	Pg	Pg	13 45 44.8	+0.2
	SNR=7.9						
EGOR				Sn	Sn	13 46 11.5	-1.0
	2.4nm,0.4s,SNR=7.9						
EGOR				Lg	Lg	13 46 25.4	
	4.2nm,0.3s,SNR=7.9						
EGOR	Sierra Gorda,	3.22	184	Pg	Pg	13 45 44.8	+0.2
	SNR=7.9						
EGOR				Sn	Sn	13 46 11.5	-1.0
	2.4nm,0.4s,SNR=7.9						
EGOR				Lg	Lg	13 46 25.4	
	4.2nm,0.3s,SNR=7.9						
PESTR	Estremoz	3.27	245	*e*Pn	Pn	13 45 35.5	+1.1
PESTR				*e*Sg	Sb	13 46 24.1	+3.0
PESTR				A	A	13 46 31.4	
	9.5nm,0.5s						
PESTR	Estremoz	3.27	245	*e*Pn	Pn	13 45 35.5	+1.1
PESTR				*e*Sg	Sb	13 46 24.1	+3.0
PBAR	Barrancos	3.31	230	*e*Pn	Pn	13 45 35.9	+1.0
PBAR				*e*Sn	Sn	13 46 13.7	-0.7
PBAR				*e*Sg	Sb	13 46 25.6	+3.5
PBAR				A	A	13 46 30.2	
	29nm,0.5s						
PBAR	Barrancos	3.31	230	Pn	Pn	13 45 35.9	+1.0
PBAR				Sn	Sn	13 46 13.7	-0.7
PBAR				Lg	Lg	13 46 25.6	
	29nm,0.5s						
PBAR	Barrancos	3.31	230	Pn	Pn	13 45 35.9	+1.0
PBAR				Sn	Sn	13 46 13.7	-0.7
PBAR				*e*Sg	Sb	13 46 25.6	+3.5
EALK	Alkurruntz	3.36	30	Pn	Pn	13 45 36.3	+0.6
	0.8nm,0.1s,SNR=13						
EALK				Sn	Sn	13 46 14.9	-0.9
	12nm,0.2s,SNR=7.9						
EALK	Alkurruntz	3.36	30	Pn	Pn	13 45 36.3	+0.6
	0.8nm,0.1s,SNR=13						
EALK				Sn	Sn	13 46 14.9	-0.9
	12nm,0.2s,SNR=7.9						
SJPF	Ste Jean	3.38	34	*e*Pn	Pn	13 45 36.3	+0.3
SJPF				*e*Sn	Sn	13 46 14.1	-2.3
	7.2nm,0.3s						
SJPF				*e*Sg	Sg	13 46 31.5	0.0
	6.3nm,0.3s						
SJPF	Ste Jean	3.38	34	Pn	Pn	13 45 36.3	+0.3
SJPF				Sn	Sn	13 46 14.1	-2.3
	3.6nm,0.3s						
SJPF				Lg	Lg	13 46 31.5	
	3.2nm,0.3s						
SJPF	Ste Jean	3.38	34	Pn	Pn	13 45 36.3	+0.3
SJPF				*e*Sn	Sn	13 46 14.1	-2.3
	3.6nm,0.3s						
SJPF				*e*Sg	Sg	13 46 31.5	0.0
	3.2nm,0.3s						
EMIN	Mina Concepcio	3.40	222	Pn	Pn	13 45 36.4	+0.3
	0.1nm,0.1s,SNR=7.9						
EMIN				Pg	Pb	13 45 45.0	+1.7
	0.8nm,0.2s,SNR=7.9						
EMIN				Sn	Sn	13 46 12.7	-3.9
	1.0nm,0.2s,SNR=7.9						
EMIN				Lg	Lg	13 46 28.3	
	2.3nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	3.40	222	Pn	Pn	13 45 36.4	+0.3
	0.1nm,0.1s,SNR=7.9						
EMIN	Mina Concepcio	3.40	222	Pg	Pb	13 45 45.0	+1.7
	0.8nm,0.2s,SNR=7.9						
EMIN				Lg	Lg	13 46 28.3	
	2.3nm,0.2s,SNR=7.9						
ELGU	Los Guajares,	3.46	178	Lg	Lg	13 46 33.1	
	1.8nm,0.3s,SNR=7.9						
ELGU	Los Guajares,	3.46	178	Lg	Lg	13 46 33.1	
	1.8nm,0.3s,SNR=7.9						
PCAB	Cabril	3.48	295	*e*Sn	Sn	13 46 18.0	-0.8
PCAB				*e*Sg	Sg	13 46 33.1	-1.5
PCAB				A	A	13 46 36.1	
	7.2nm,0.4s						
PCAB	Cabril	3.48	295	Sn	Sn	13 46 18.0	-0.8
PCAB				Lg	Lg	13 46 33.1	
	3.6nm,0.4s						
PCAB	Cabril	3.48	295	Sn	Sn	13 46 18.0	-0.8
PCAB				*e*Sg	Sg	13 46 33.1	-1.5
EBER	Berja	3.50	168	Pg	Pg	13 45 48.4	-1.5
	2.2nm,0.3s,SNR=7.9						
EBER				Lg	Lg	13 46 33.6	
	31nm,0.7s,SNR=7.9						
EBER	Berja	3.50	168	Pg	Pg	13 45 48.4	-1.5
	2.2nm,0.3s,SNR=7.9						
EBER				Lg	Lg	13 46 33.6	
	31nm,0.7s,SNR=7.9						
ETSF	Etsaut	3.54	42	*e*Pn	Pn	13 45 38.6	+0.5
ETSF				*e*Sn	Sn	13 46 17.7	-2.5
	4.4nm,0.3s						
ETSF				*e*Sg	Sg	13 46 36.4	+0.1
	4.3nm,0.4s						
ETSF	Etsaut	3.54	42	Pn	Pn	13 45 38.6	+0.5
ETSF				Sn	Sn	13 46 17.7	-2.5
	2.2nm,0.3s						
ETSF				Lg	Lg	13 46 36.4	
	2.2nm,0.4s						
ETSF	Etsaut	3.54	42	Pn	Pn	13 45 38.6	+0.5
ETSF				*e*Sn	Sn	13 46 17.7	-2.5
	2.2nm,0.3s						
ETSF				*e*Sg	Sg	13 46 36.4	+0.1
	2.2nm,0.4s						
ELOB	Lobios	3.57	297	Pn	Pn	13 45 39.2	+0.6
	0.8nm,0.2s,SNR=7.6						
ELOB				Sn	Sn	13 46 19.1	-1.8
	1.3nm,0.2s,SNR=7.9						
ELOB				Lg	Lg	13 46 36.3	
	2.4nm,0.2s,SNR=7.9						
ELOB	Lobios	3.57	297	Pn	Pn	13 45 39.2	+0.6
	0.8nm,0.2s,SNR=7.6						
ELOB				Sn	Sn	13 46 19.1	-1.8
	1.3nm,0.2s,SNR=7.9						
ELOB				Lg	Lg	13 46 36.3	
	2.4nm,0.2s,SNR=7.9						
PCAS	Casmilo, Conde	3.61	267	*e*Sn	Sn	13 46 21.8	0.0
PCAS				*e*Sg	Sg	13 46 37.8	-0.9
PCAS				A	A	13 46 38.7	
	9.0nm,0.5s						
PCAS	Casmilo, Conde	3.61	267	*e*Sn	Sn	13 46 21.8	0.0
PCAS				*e*Sg	Sg	13 46 37.8	-0.9
PMTG	Montargil	3.64	251	*e*Sn	Sn	13 46 21.7	-0.8
PMTG				*e*Sg	Sb	13 46 33.5	+1.9
PMTG				A	A	13 46 41.1	
	8.1nm,0.5s						
PMTG	Montargil	3.64	251	*e*Sn	Sn	13 46 21.7	-0.8
PMTG				*e*Sg	Sb	13 46 33.5	+1.9
EVO	Evora	3.72	243	*e*Sn	Sn	13 46 24.1	-0.5
EVO				A	A	13 46 44.4	
	13nm,0.4s						
EVO	Evora	3.72	243	Sn	Sn	13 46 24.1	-0.5
	13nm,0.4s						
EVO	Evora	3.72	243	Sn	Sn	13 46 24.1	-0.5
	13nm,0.4s						
PGAV	Gavieira, Arco	3.75	297	*e*Pn	Pn	13 45 41.6	+0.5
PGAV				*e*Sn	Sn	13 46 25.0	-0.4
PGAV				*e*Sg	Sg	13 46 41.5	-1.7
PGAV				A	A	13 46 52.4	
	4.5nm,0.5s						
PGAV	Gavieira, Arco	3.75	297	*e*Pn	Pn	13 45 41.6	+0.5
PGAV				*e*Sn	Sn	13 46 25.0	-0.4
PGAV				*e*Sg	Sg	13 46 41.5	-1.7
EPOB	Poblet	3.84	73	Pn	Pn	13 45 41.5	-0.8
	0.2nm,0.2s,SNR=7.9						
EPOB				Sn	Sn	13 46 25.6	-2.1
	1.6nm,0.3s,SNR=7.9						
EPOB				Lg	Lg	13 46 43.7	
	2.9nm,0.3s,SNR=7.9						
EPOB	Poblet	3.84	73	Pn	Pn	13 45 41.5	-0.8
	0.2nm,0.2s,SNR=7.9						
EPOB				Lg	Lg	13 46 43.7	
	2.9nm,0.3s,SNR=7.9						
EPON	Pontenova	3.90	321	Sn	Sn	13 46 26.4	-2.7
	0.1nm,0.2s,SNR=7.9						
EPON				Lg	Lg	13 46 46.2	
	2.3nm,0.2s,SNR=7.9						
PBEJ	Beja	3.91	235	*e*Sg	Sg	13 46 46.4	-1.9
PBEJ				A	A	13 46 52.6	
	7.5nm,0.8s						
PBEJ	Beja	3.91	235	Lg	Lg	13 46 46.4	
	3.8nm,0.8s						
PBEJ	Beja	3.91	235	*e*Sg	Sg	13 46 46.4	-1.9
EGRO	El Granado	4.00	227	Lg	Lg	13 46 49.2	
	11nm,0.3s,SNR=7.9						
EGRO	El Granado	4.00	227	Lg	Lg	13 46 49.2	
	11nm,0.3s,SNR=7.9						
EAGO	Agolada(Pontev	4.06	309	Sn	Sn	13 46 32.2	-0.7
	0.1nm,0.1s,SNR=7.9						
EAGO				Lg	Lg	13 46 51.2	
	4.4nm,0.2s,SNR=7.9						
EAGO	Agolada(Pontev	4.06	309	Sn	Sn	13 46 32.2	-0.7
	0.1nm,0.1s,SNR=7.9						
EAGO				Lg	Lg	13 46 51.2	
	4.4nm,0.2s,SNR=7.9						
EPF	Esparros	4.11	48	*e*Pn	Pn	13 45 46.4	+0.4
EPF				*e*Sn	Sn	13 46 32.1	-2.2
	12nm,0.5s						
EPF	Esparros	4.11	48	Pn	Pn	13 45 46.4	+0.4
EPF				Sn	Sn	13 46 32.1	-2.2
	6.2nm,0.5s						
EPF	Esparros	4.11	48	Pn	Pn	13 45 46.4	+0.4
EPF				*e*Sn	Sn	13 46 32.1	-2.2
	6.2nm,0.5s						
PVAQ	Vaqueiros	4.23	228	*e*Sn	Sn	13 46 35.7	-1.4
PVAQ				*e*Sg	Sg	13 46 55.3	-3.2
PVAQ				A	A	13 47 07.9	
	7.2nm,0.6s						
PVAQ	Vaqueiros	4.23	228	Sn	Sn	13 46 35.7	-1.4
PVAQ				Lg	Lg	13 46 55.3	
	7.2nm,0.6s						
PVAQ	Vaqueiros	4.23	228	Sn	Sn	13 46 35.7	-1.4
PVAQ				*e*Sg	Sg	13 46 55.3	-3.2
MESJ	Messejana	4.24	236	*e*Sn	Sn	13 46 35.0	-2.4
MESJ				*e*Sg	Sg	13 46 55.9	-3.1
MESJ				A	A	13 47 06.3	
	11nm,0.6s						
MESJ	Messejana	4.24	236	Sn	Sn	13 46 35.0	-2.4
MESJ				Lg	Lg	13 46 55.9	
	11nm,0.6s						
MESJ	Messejana	4.24	236	Sn	Sn	13 46 35.0	-2.4
MESJ				*e*Sg	Sg	13 46 55.9	-3.1
PCVE	Castro Verde	4.26	232	*e*Pn	Pn	13 45 49.9	+1.9
PCVE				*e*Sg	Sg	13 46 57.2	-2.4
PCVE				A	A	13 47 05.4	
	7.9nm,0.4s						
PCVE	Castro Verde	4.26	232	Pn	Pn	13 45 49.9	+1.9
PCVE				Lg	Lg	13 46 57.2	
	7.9nm,0.4s						
PCVE	Castro Verde	4.26	232	*e*Pn	Pn	13 45 49.9	+1.9
PCVE				*e*Sg	Sg	13 46 57.2	-2.4
PBDV	Barranco-do-Ve	4.46	228	*e*Sg	Sg	13 47 07.1	+1.0
PBDV	Barranco-do-Ve	4.46	228	Lg	Lg	13 47 07.1	
PBDV	Barranco-do-Ve	4.46	228	Lg	Lg	13 47 07.1	
PTEO	Sao Teotonio	4.74	236	*e*Sg	Sg	13 47 14.9	0.0
PTEO				A	A	13 47 22.3	
	13nm,0.7s						
PTEO	Sao Teotonio	4.74	236	Lg	Lg	13 47 14.9	
	6.3nm,0.7s						
PTEO	Sao Teotonio	4.74	236	*e*Sg	Sg	13 47 14.9	0.0
MTLF	Montolieu	5.41	54	*e*Pn	Pn	13 46 04.1	+0.3
MTLF				*e*Sn	Sn	13 47 03.3	-3.0
	0.4nm,0.2s						
MTLF	Montolieu	5.41	54	Pn	Pn	13 46 04.1	+0.3
MTLF				Sn	Sn	13 47 03.3	-3.0
	0.2nm,0.2s						
MTLF	Montolieu	5.41	54	Pn	Pn	13 46 04.1	+0.3

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*IDC **14** 13:49:54.1±1.7, 34°.92N×141°.71E, h0^{km}, mb3.4/3, mb1 3.5/6, mb1mx3.2/73, mbtmp3.4/6, ML3.2/3, Error ellipse: s-maj=45.9km s-min=22.1km az=78.0*

*ISCJB **14** 13:49:56.7±1.2, 34°.87N±0°.06×141°.4E±0°.1, h27^{km}, mb3.5/3, Error ellipse: s-maj=12.8km s-min=8.4km az=174.2*

*JMA **14** 13:49:57.4±0.2, 34°.98N×141°.32E, h40^{km}, M2.7*

ISC 14 13:49:55.3±1.1**, 35°.03N**±0°.05×**141°.36E**±0°.08**, h27^{km}, n21, σ2^{s}42**/20**, mb3.4**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	0.49	220	P	Pn	13 50 07.0	+0.9
BSO1				X		13 50 14.1	
BSO3	Boso 3	0.73	252	P	Pb	13 50 11.1	+1.8
BSO3				X		13 50 22.5	
CHOJ	Chosi	0.78	329	P	Pb	13 50 12.8	+2.4
BSO4	Boso 4	0.84	267	P	Pb	13 50 13.0	+1.8
BSO4				*e*X		13 50 24.8	
KTR	Katsuura	0.86	278	P	Pb	13 50 13.0	+1.3
JIM2	Oshima 3	1.61	259	P	Pn	13 50 22.8	+0.8
JIM2				*e*S	Sn	13 50 40.1	-1.9
JMKN	Mikurajimanish	1.85	233	P	Pn	13 50 26.0	+0.7
JMKN				S	Sn	13 50 46.5	-1.2
JOD2	Odawara 2	1.87	278	P	Pn	13 50 26.9	+1.3
JHJ	Hachijo jima 2	2.31	215	Pn	Pb	13 50 34.1	-2.2
	12nm,0.3s,baz=155,slow=14,SNR=10						
JHJ				Sn	Sn	13 50 56.5	-2.7
	16nm,0.3s,baz=331,slow=23,SNR=5.9						
MJAR	Matsushiro Arr	2.97	301	Pn	Pb	13 50 45.5	-2.1
	1.4nm,0.3s,baz=100,slow=14,SNR=16						
MJAR				Sn	Sb	13 51 22.7	-0.7
	0.8nm,0.3s,baz=122,slow=12,SNR=3.7						
MAT	Matsushiro	2.97	301	P	Pb	13 50 46.0	-1.6
MAT				*e*S	Sn	13 51 13.5	-2.0
ASAJ	Asahikawa	9.12	6	Pn	Pn	13 52 06.2	+1.1
	0.4nm,0.3s,baz=218,slow=11,SNR=6.8						
ASAJ				Sn	Sn	13 53 40.5	-6.4
	0.1nm,0.3s,baz=339,slow=8.6,SNR=2.5						
H11N2	WAKE ISLAND Hy	27.22	117	T	T	14 23 10.1	
	baz=311,slow=75,SNR=6.3						
H11N1	WAKE ISLAND Hy	27.23	117	T	T	14 23 10.0	
	baz=311,slow=75,SNR=7.4						
H11N3	WAKE ISLAND Hy	27.24	117	T	T	14 23 11.9	
	baz=311,slow=75,SNR=8.1						
H11S3	WAKE ISLAND Hy	27.86	120	T	T	14 23 54.3	
	baz=312,slow=75,SNR=4.8						
H11S1	WAKE ISLAND Hy	27.86	120	T	T	14 23 49.5	
	baz=312,slow=75,SNR=3.5						
H11S2	WAKE ISLAND Hy	27.88	120	T	T	14 23 52.7	
	baz=312,slow=75,SNR=3.3						
KURBB	Kurchatov Arra	47.21	309	P	P	13 58 31.8	+6.1
	0.2nm,0.5s,baz=85,slow=7.5,SNR=3.3						
WRA	Warramunga Arr	55.08	188	P	P	13 59 27.2	+2.2
	0.9nm,0.6s,baz=3.4,slow=7.4,SNR=18						
ASAR	Alice Springs	58.80	188	P	P	13 59 53.7	+2.4
	0.1nm,0.5s,baz=0.8,slow=6.5,SNR=3.7						

KRSC 14 13:52:00.1±1.1**, 52°.16N**×**170°.24E, h101^{km}**±44^{km}**, ML3.8, Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BKI	Bering	3.97	322	*e*S	Sn	13 53 46.0	+1.8
KBTR	Krutoberegovo	5.95	316	*e*P	Pn	13 53 27.8	+2.2
KBTR				*e*S	Sn	13 54 33.1	+0.8
SPN	Mys Shipunski	6.29	283	*e*P	Pn	13 53 32.1	+1.9
SPN				*e*S	Sn	13 54 41.0	+0.4
NLC	Nalytchevo	6.71	283	*e*S	Sn	13 54 52.7	+2.1
TUMR	Tumrok	6.76	302	*e*P	Pn	13 53 39.8	+3.1
SDLR	Sedlovina	6.99	284	*e*P	Pn	13 53 43.1	+3.3
UGLR	Uglovaya	7.02	283	*e*P	Pn	13 53 43.5	+3.2
SMAR	Somma	7.04	284	*e*P	Pn	13 53 42.8	+2.2
DALK	Dalny	7.05	282	*e*P	Pn	13 53 43.4	+2.8
DALK				*e*S	Sn	13 55 00.0	+0.9
AVH	Avacha	7.08	284	*e*P	Pn	13 53 44.1	+3.1
RUS	Russkaya	7.20	277	*e*P	Pn	13 53 45.7	+3.2
KRMR	Karymshinskiy	7.43	280	*e*P	Pn	13 53 48.9	+3.3
KRMR				*e*S	Sn	13 55 10.3	+2.1
KDTR	Khodutka, Kamc	7.52	272	*e*P	Pn	13 53 49.7	+2.8
KDTR				*e*S	Sn	13 55 11.2	+0.7
ASAK	Asacha	7.58	277	*e*P	Pn	13 53 50.4	+2.6
GNL	Ganaly	7.59	287	*e*P	Pn	13 53 51.2	+3.2
GNL				*e*S	Sn	13 55 13.2	+0.8

IDC 14 13:56:50.0±452.0**, 47°.83N**×**47°.14E, h0^{km}, Error ellipse: s-maj=201.8km s-min=142.5km az=171.0, Ukraine-Moldova-Southwestern Russia region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I31KZ	AKTYUBINSK INF	7.60	66	*i*		14 45 20.0	
	baz=254,slow=294,SNR=24						
I43RU	DUBNA INFRASON	10.77	329	*i*		14 58 00.0	
	baz=142,slow=322,SNR=1.8						
I26DE	FREYUNG INFRAS	22.15	285	*i*		16 14 10.0	
	baz=82,slow=325,SNR=0.9						

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*ISCJB **14** 14:19:49.2±0.8, 37°.10N±0°.05×71°.78E±0°.10, h109^{km}, Error ellipse: s-maj=11.8km s-min=5.5km az=159.3*

*NNC **14** 14:19:57.6±4.8, 37°.60N×71°.43E, h121^{km}±84^{km}, mb2.7, mpv3.4, Error ellipse: s-maj=42.5km s-min=38.0km az=63.0*

ISC 14 14:19:50.0±1.3**, 37°.10N**±0°.09×**71°.7E**±0°.1**, h109^{km}, n13, σ2^{s}45**/19**, 7C-7D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.24	26	⇑P	Pn	14 20 43.0	+3.6
	4.9nm,0.3s						
SFK				⇓S	Sn	14 21 18.4	+0.9
	22nm,0.4s						
MNAS	Manas	5.42	7	⇑P	Pn	14 21 11.1	+2.5
	3.9nm,0.4s						
MNAS				⇓S	Sn	14 22 07.8	-2.0
	18nm,0.5s						
AAK	Ala-Archa	5.94	21	⇑P	Pn	14 21 17.3	+1.7
	1.4nm,0.3s						
AAK				⇓S	Sn	14 22 19.2	-3.2
	2.6nm,0.3s						
KK31	Karatay Array	6.06	352	⇓P	Pn	14 21 20.3	+3.1
	1.6nm,0.3s,baz=170,slow=10,SNR=38						
KK31				⇑S	Sn	14 22 22.8	-2.4
	32nm,0.6s,baz=181,slow=26,SNR=27						
TKM2	Tokmak 2	6.55	26	⇑P	Pn	14 21 25.5	+1.6
	0.7nm,0.5s						
TKM2				⇓S	Sn	14 22 36.2	-1.0
	1.5nm,0.5s						
DANN	Dangsing	13.39	127	*e*P	Pn	14 22 54.7	-1.3
KOLN	Koldanda	13.70	129	*e*P	Pn	14 22 58.1	-1.8
	5.4nm,0.5s						
GKN	Gorkha	14.19	126	*e*P	Pn	14 23 04.4	-1.8
	5.6nm,0.3s						
AB31	Akbulak array	14.84	329	⇓P	Pn	14 23 15.2	+1.1
	0.5nm,0.5s,baz=131,slow=11,SNR=12						
AB31				⇓S	Sn	14 25 48.0	-10
	1.7nm,0.6s,baz=144,slow=22,SNR=13						
PKIN	Phulchoki	14.97	125	*e*P	Pn	14 23 15.3	-0.9
	3.2nm,0.2s						
JIRN	Jiri	15.44	123	*e*P	Pn	14 23 21.2	-1.0
	14nm,0.3s						
RAMN	Ramite	16.18	124	*e*P	Pn	14 23 30.3	-1.0
	9.2nm,0.5s						
AKTO	Aktyubinsk	16.55	328	⇑P	P	14 23 37.3	+1.3
	1.9nm,0.8s						
AKTO				⇑S	Sn	14 26 33.8	-5.2
	1.8nm,0.7s						

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*IDC **14** 14:22:21.1±0.5, 49°.04S×124°.64E, h0^{km}, mb4.8/18, mb1 4.9/19, mb1mx4.7/44, mbtmp4.8/19, ML2.9/1, MS4.8/41, Ms1 4.8/41, ms1mx4.8/42, Error ellipse: s-maj=21.9km*

s-min=12.0km az=110.0

ISCJB ***14*** *14:22:21.7±0.3, 49°.08S±0°.04×124°.74E±0°.09, h10^{km}, mb4.9/45, MS4.8/51, Error ellipse: s-maj=8.8km s-min=6.0km az=18.5*

GCMT ***14*** *14:22:22.6±0.1, 49°.08S×124°.88E, h12^{km}, MW5.5/115, Moment Tensor Solution. s90,c139; s115,c225; Duration: 1^{s}3 Moment tensor: Scale 10^{17}Nm; M_{rr}-1.79±.02; $M_{\theta\theta}$1.62±.02; $M_{\phi\phi}$0.17±.02; $M_{r\theta}$0.29±.06; $M_{\theta\phi}$-0.63±.02; $M_{\phi r}$0.32±.06; Best double couple: $M_0$1.87500×10^{17} NP1:ϕ_s278.00000°,δ49.00000°, λ-106.00000°. NP2:ϕ_s123.00000°,δ44.00000°, λ-72.00000°. Principal axes: T 1.8650, Plg3.0000°, Azm20.0000°; N 0.0220, Plg12.0000°, Azm290.0000°; P -1.8840, Plg77.0000°, Azm122.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

BJI ***14*** *14:22:22.7, 49°.00S×124°.21E, h6^{km}, mb5.0/37, mB5.3/30, Ms5.0/30, Ms7 4.8/29*

MOS ***14*** *14:22:22.1±1.5, 49°.03S×124°.86E, h10^{km}, mb5.2/12, Error ellipse: s-maj=20.8km s-min=9.0km az=80.6*

NEIC ***14*** *14:22:22.6±0.3, 49°.04S×124°.64E, h10^{km}, mb5.0/21, Error ellipse: s-maj=11.8km s-min=7.1km az=112.0*

ISC 14 14:22:23.4±0.3**, 49°.20S**±0°.05×**124°.75E**±0°.07**, h10^{km}, n310, σ1^{s}59**/276**, mb5.0**/45**, MS4.8**/52**, 3C-2D, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RKGY	**Rocky Gully**	15.67	336	P	**Pn**	**14 25 58.7**	**-5.4**
	baz=15,SNR=10						
H01W1	**Cape Leeuwin H**	16.29	327	T	T	14 42 43.9	
	baz=152,slow=74,SNR=636						
H01W2	**Cape Leeuwin H**	16.29	327	T	T	14 42 45.5	
	baz=152,slow=74,SNR=628						
H01W3	**Cape Leeuwin H**	16.31	327	T	T	14 42 45.5	
	baz=152,slow=74,SNR=650						
TAU	**Tasmania Unive**	16.85	77	*e*Pn	**Pn**	**14 26 18.3**	**-0.9**
	180nm,1.5s						
TAU	**Tasmania Unive**	16.85	77	*e*P	**Pn**	**14 26 18.3**	**-0.9**
TAU				pmax	pmax		
	comp=Z,181nm,1.5s						
NWAO	**Narrogin (SRO)**	17.20	338	P	**Pn**	**14 26 23.7**	**+0.1**
	baz=17,SNR=12						
NWAO	**Narrogin (SRO)**	17.20	338	P	**Pn**	**14 26 22.1**	**-1.6**
	comp=Z,2.3nm,0.3s,baz=73,slow=10,SNR=13						
NWAO				LR	LR	14 31 24.3	
	comp=Z,7μm,19.5s,baz=30,slow=32						
MUN	**Mundaring**	18.36	336	P	**Pn**	**14 26 37.3**	**-0.8**
	baz=18,SNR=8.1						
BBOO	**Buckleboo**	18.43	32	P	**P**	**14 26 35.3**	**-3.5**
	baz=18,SNR=5.3						
BBOO	**Buckleboo**	18.43	32	*e*Pn	**P**	**14 26 38.5**	**-0.3**
	comp=Z,76nm,1.2s						
FORT	**Forrest**	18.57	9	P	**P**	**14 26 39.2**	**-1.1**
	baz=18,SNR=7.8						
FORT	**Forrest**	18.57	9	*e*P	**P**	**14 26 38.2**	**-2.1**
	comp=Z,113nm,1.0s						
CASY	**Casey**	18.64	198	*e*P	**P**	**14 26 38.6**	**-2.3**
TOO	**Toolangi**	18.97	60	P	**Pn**	**14 26 48.2**	**+2.8**
	baz=19,SNR=4.4						
MORW	**Morawa**	21.18	338	P	**P**	**14 27 05.8**	**-3.0**
	baz=21,SNR=5.6						
STKA	**Stephens Creek**	21.44	42	P	**P**	**14 27 10.9**	**-0.7**
	baz=21,SNR=9.0						
STKA	**Stephens Creek**	21.44	42	P	**P**	**14 27 10.4**	**-1.2**
	comp=Z,25nm,0.8s,baz=206,slow=12,SNR=17						
STKA				LR	LR	14 33 58.3	
	comp=Z,5μm,20.6s,baz=204,slow=33						
STKA	**Stephens Creek**	21.44	42	*e*P	**P**	**14 27 09.8**	**-1.9**
	comp=Z,16nm,1.1s						
STKA	**Stephens Creek**	21.44	42	*e*P	**P**	**14 27 11.6**	**0.0**
CAN	**Canberra**	22.56	61	*e*P	**P**	**14 27 24.1**	**+0.5**
	comp=Z,130nm,1.4s						
CAN	**Canberra**	22.56	61	*e*P	**P**	**14 27 24.1**	**+0.5**
CAN				pmax	pmax		
	comp=Z,130nm,1.4s						
MEEK	**Meekatharra**	23.02	346	P	**P**	**14 27 25.6**	**-2.9**
	baz=22,SNR=3.7						
CMSA	**Cobar Meteorol**	23.66	50	P	**P**	**14 27 34.2**	**-0.7**
	baz=23,SNR=8.9						
MIR	**Mirnyy**	23.79	211	⇑*i*P	**P**	**14 27 39.0**	**+3.2**
MIR				*e*		14 28 28.0	
MIR				pmax	pmax		
	comp=Z,135nm,1.5s						
MIR				MLR	MLR		
	comp=N,4μm,18.0s						
MIR				MLR	MLR		
	comp=E,3μm,18.0s						
MIR				MLR	MLR		
	comp=Z,7μm,18.0s						
WRKA	**Warakurna**	24.28	8	P	**P**	**14 27 37.8**	**-3.0**
	baz=24,SNR=6.4						
ASAR	**Alice Springs**	26.49	19	P	**P**	**14 27 57.8**	**-3.0**
	comp=Z,19nm,0.9s,baz=196,slow=7.5,SNR=74						
ASAR				PcP	**PcP**	**14 31 23.4**	**-2.2**
	comp=Z,0.7nm,0.6s,baz=191,slow=2.0,SNR=7.2						
ASAR				LR	LR	14 37 10.8	
	comp=Z,10μm,21.9s,baz=199,slow=34						
AS31	**Alice Springs**	26.49	19	*e*P	**P**	**14 27 58.0**	**-2.8**
	comp=Z,7.1nm,1.0s						
AS01	**Alice Springs**	26.50	19	*e*P	**P**	**14 27 57.5**	**-3.4**
QLP	**Quilpie**	27.17	41	P	**P**	**14 28 05.7**	**-1.1**
	baz=27,SNR=27						
ARMA	**Armidale**	27.67	57	*e*P	**P**	**14 28 11.3**	**-0.2**
	comp=Z,39nm,1.4s						
RMQ	**Roma**	29.33	48	P	**P**	**14 28 26.2**	**+0.1**
	baz=29,SNR=9.0						
WRA	**Warramunga Arr**	30.19	18	P	**P**	**14 28 30.7**	**-3.1**
	comp=Z,6.9nm,1.0s,baz=196,slow=8.9,SNR=20						
WRA				PcP	**PcP**	**14 31 32.6**	**-2.1**
	comp=Z,1.3nm,0.9s,baz=204,slow=2.7,SNR=4.8						
WRA				LR	LR	14 39 26.2	
	comp=Z,10μm,21.4s,baz=190,slow=34						
WB2	**Warramunga Arr**	30.19	18	*e*P	**P**	**14 28 29.4**	**-4.4**
	comp=Z,15nm,1.1s						
WRAB	**Tennant Creek**	30.20	18	*e*P	**P**	**14 28 30.4**	**-3.5**
	comp=Z,1.9nm,0.6s						
WRAB	**Tennant Creek**	30.20	18	*e*P	**P**	**14 28 33.4**	**-0.5**
QIS	**Mount Isa**	30.95	28	P	**P**	**14 28 39.5**	**-1.0**
	baz=30,SNR=13						
FITZ	**Fitzroy Crossi**	31.03	2	P	**P**	**14 28 38.1**	**-3.1**
	comp=Z,20nm,1.1s,baz=189,slow=12,SNR=8.3						
FITZ				LR	LR	14 40 11.3	
	comp=Z,3μm,20.1s,baz=178,slow=35						
VNDA	**Vanda**	31.73	166	P	**P**	**14 28 47.8**	**+0.9**
	comp=Z,5.4nm,1.1s,baz=306,slow=8.4,SNR=11						
VNDA				LR	LR	14 40 43.8	
	comp=Z,4μm,19.0s,baz=324,slow=35						
VNDA	**Vanda**	31.73	166	*e*P	**P**	**14 28 47.2**	**+0.3**
	comp=Z,39nm,1.4s						
VNDA	**Vanda**	31.73	166	*e*P	**P**	**14 28 47.2**	**+0.3**
VNDA				pmax	pmax		
	comp=Z,39nm,1.4s						
SBA	**Scott Base**	32.76	165	*e*P	**P**	**14 28 57.9**	**+2.0**
	comp=Z,29nm,1.3s						
SBA	**Scott Base**	32.76	165	*e*P	**P**	**14 28 57.9**	**+2.0**
SBA				pmax	pmax		
	comp=Z,29nm,1.3s						
KNRA	**Kununurra**	33.59	7	P	**P**	**14 29 02.3**	**-1.3**
	baz=33,SNR=5.3						
CTA	**Charters Tower**	33.77	38	P	**P**	**14 29 02.7**	**-2.6**
	comp=Z,15nm,1.0s,baz=210,slow=13,SNR=12						
CTA				LR	LR	14 42 36.9	
	comp=Z,4μm,18.3s,baz=197,slow=36						
CTAO	**Charters Tower**	33.77	38	*e*P	**P**	**14 29 03.3**	**-1.9**
	comp=Z,24nm,1.1s						
CTAO	**Charters Tower**	33.77	38	*e*P	**P**	**14 29 03.3**	**-1.9**
CTAO				pmax	pmax		
	comp=Z,25nm,1.1s						
MTSU	**Mount Surprise**	34.79	34	P	**P**	**14 29 14.1**	**0.0**
	baz=34,SNR=6.6						
MAW	**Mawson**	35.34	216	P	**P**	**14 29 18.1**	**-0.3**
	comp=Z,20nm,1.2s,baz=86,slow=11,SNR=16						
MAW				LR	LR	14 41 41.4	
	comp=Z,1μm,19.6s,baz=82,slow=33						
MAW	**Mawson**	35.34	216	*e*P	**P**	**14 29 19.5**	**+1.1**
	comp=Z,8.1nm,1.2s						
MAW	**Mawson**	35.34	216	*e*P	**P**	**14 29 19.5**	**+1.1**
MAW				pmax	pmax		
	comp=Z,8.0nm,1.2s						
MTN	**Manton Dam**	36.63	10	P	**P**	**14 29 29.1**	**-0.8**
	baz=36,SNR=4.7						
MTN	**Manton Dam**	36.63	10	*e*P	**P**	**14 29 27.2**	**-2.7**
	comp=Z,17nm,1.1s						
KDU	**Kakadu**	36.96	13	P	**P**	**14 29 30.8**	**-1.8**
	baz=36,SNR=11						
COEN	**Coen**	38.27	30	*e*P	**P**	**14 29 43.8**	**0.0**
	comp=Z,48nm,1.4s						
URZ	**Urewera**	38.67	94	P	**P**	**14 29 47.7**	**+0.7**
	comp=Z,6.8nm,0.9s,baz=284,slow=19,SNR=3.2						
BATI	**Baumata**	38.88	358	LR	LR	14 46 05.0	
	comp=Z,4μm,18.3s,baz=204,slow=37						
QSPA	**South Pole Qui**	40.92	180	P	**P**	**14 30 05.0**	**-0.6**
	comp=Z,10nm,1.1s,baz=330,slow=5.8,SNR=11						
QSPA				LR	LR	14 46 18.0	
	comp=Z,5μm,19.7s,baz=346,slow=35						
DZM	**Mont Dzumac**	42.58	66	LR	LR	14 45 35.5	
	comp=Z,1μm,18.6s,baz=214,slow=33						
DZM	**Mont Dzumac**	42.58	66	*e*S	**S**	**14 36 43.8**	**+1.5**
	comp=Z,335nm,28.5s						
DZM				*e*LR	LR	14 42 07.7	
	comp=Z,3μm,28.4s						
COCO	**West Island**	43.52	318	*i* P	**P**	**14 30 26.4**	**-0.7**
PMG	**Port Moresby**	43.87	33	LR	LR	14 49 32.5	
	comp=Z,2μm,18.7s,baz=196,slow=37						
LEM	**Lembang**	44.63	335	LR	LR	14 48 48.8	
	comp=Z,765nm,18.2s,baz=164,slow=36						
HNR	**Honiara**	49.33	49	LR	LR	14 49 58.1	
	comp=Z,2μm,21.6s,baz=208,slow=34						
NVL	**N'lazarevskaya**	51.13	203	*e*P	**P**	**14 31 28.5**	**+2.8**
NVL				*e*S	**S**	**14 38 43.6**	**+0.5**
NVL				pmax	pmax		
	comp=Z,49nm,1.2s						
SNAA	**Sanae**	53.88	198	P	**P**	**14 31 46.6**	**+0.3**
SNAA	**Sanae**	53.88	198	P	**P**	**14 31 46.8**	**+0.6**
	comp=Z,47nm,1.0s,baz=141,slow=7.8,SNR=45						
SNAA				LR	LR	14 53 27.6	
	comp=Z,5μm,20.4s,baz=135,slow=35						
SNAA	**Sanae**	53.88	198	*e*P	**P**	**14 31 46.1**	**-0.1**
	comp=Z,113nm,1.1s						
SNAA	**Sanae**	53.88	198	*c i*P	**P**	**14 31 46.5**	**+0.3**
VNA3	**Neumayer Olymp**	55.55	196	P	**P**	**14 31 58.1**	**-0.1**
VNA1	**Neumayer--Stat**	55.77	197	P	**P**	**14 32 00.3**	**+0.6**
DAV	**Davao City (W)**	56.04	1	LR	LR	14 59 11.1	
	comp=Z,599nm,18.3s,baz=164,slow=40						
PSI	**Prapat**	56.42	329	LR	LR	14 55 46.0	
	comp=Z,351nm,18.0s,baz=91,slow=36						
H08N1	**Diego Carcia H**	62.06	295	T	T	15 39 51.1	
	baz=143,slow=75,SNR=18						
H08N3	**Diego Garcia H**	62.07	295	T	T	15 39 51.8	
	baz=143,slow=75,SNR=9.0						
H08N2	**Diego Garcia H**	62.08	295	T	T	15 39 50.1	
	baz=143,slow=75,SNR=24						
AFI	**Afiamalu**	62.31	79	LR	LR	14 54 05.2	
	comp=Z,608nm,21.7s,baz=202,slow=30						
TGY	**Tagaytay City**	63.11	356	LR	LR	15 00 02.1	
	comp=Z,227nm,21.8s,baz=172,slow=36						
RAR	**Rarotonga**	64.85	94	LR	LR	14 56 25.2	
	comp=Z,162nm,20.4s,baz=225,slow=32						
GUMO	**Guam**	65.00	22	P	**P**	**14 33 03.2**	**-0.2**
	comp=Z,147nm,1.3s,baz=130,slow=1.8,SNR=5.2						
GUMO				LR	LR	15 01 27.3	
	comp=Z,834nm,19.6s,baz=180,slow=36						
PMSA	**Palmer Station**	66.16	176	LR	LR	15 00 57.1	
	comp=Z,1μm,22.0s,baz=190,slow=35						
OPO	**Ambohidratompo**	68.10	267	P	**P**	**14 33 22.5**	**-1.1**
	comp=Z,4.6nm,0.4s,baz=137,slow=11,SNR=7.4						
OPO				LR	LR	14 57 37.8	
	comp=Z,727nm,18.9s,baz=156,slow=31						
PALK	**Pallekele**	68.11	312	LR	LR	14 59 03.9	
	comp=Z,362nm,18.9s,baz=76,slow=32						
QIZ	**Qiongzhong**	69.20	345	P	**P**	**14 33 31.6**	**+1.5**
QIZ				S	**S**	**14 42 38.5**	**+2.5**
QIZ				sS	**sS**	**14 42 44.3**	**+3.0**
QIZ				LR	LR		
	comp=Z,340nm,25.5s						
QIZ				LR	LR		
	comp=Z,250nm,18.1s						
QIZ				LR	LR		
	comp=Z,500nm,27.5s						
TBI	**Tubuai**	70.02	103	*e*S	**S**	**14 42 47.8**	**+2.0**
	comp=Z,245nm,35.0s						
TBI	**Tubuai**	70.02	103	*e*LR	LR	14 54 50.7	
	comp=Z,462nm,23.5s						
CM01	**Chiang Mai Arr**	71.11	334	*e*P	**P**	**14 33 40.3**	**-1.5**
CMAR	**Chiang Mai Arr**	71.16	334	P	**P**	**14 33 40.6**	**-1.5**
	comp=Z,7.4nm,1.1s,baz=186,slow=5.6,SNR=21						
CMAR				LR	LR	15 03 27.3	
	comp=Z,389nm,20.3s,baz=170,slow=35						
CHTO	**Chiang Mai**	71.49	334	*e*P	**P**	**14 33 46.0**	**+1.9**
	comp=Z,13nm,1.4s						
CHTO	**Chiang Mai**	71.49	334	*e*P	**P**	**14 33 46.0**	**+1.9**
CHTO				pmax	pmax		
	comp=Z,13nm,1.4s						
TPUB	**Ta-pu**	72.26	356	*e*P	**P**	**14 33 51.1**	**+2.4**
	comp=Z,61nm,1.3s						
SSLB	**Suanglung**	72.73	356	*e*P	P	14 33 43.1	-8.3
	comp=Z,51nm,1.4s						
QZH	**Quanzhou**	74.01	354	P	**P**	**14 34 00.0**	**+1.1**
QZH				S	**S**	**14 43 33.1**	**+2.0**
QZH				LR	LR		
	comp=Z,410nm,19.2s						
QZH				LR	LR		
	comp=Z,260nm,18.0s						
QZH				LR	LR		
	comp=Z,470nm,22.0s						
PPT2	**Papeete2**	74.11	99	*e*S	**S**	**14 43 33.9**	**+0.9**
	comp=Z,170nm,32.0s						
PPT2	**Papeete2**	74.11	99	*e*LR	LR	14 56 47.4	
	comp=Z,286nm,22.2s						
PPT	**Papeete**	74.12	99	LR	LR	15 00 06.2	
	comp=Z,179nm,19.7s,baz=192,slow=30						
BOSA	**Boshof**	74.66	244	P	**P**	**14 34 02.0**	**-1.1**
	comp=Z,13nm,1.1s,baz=134,slow=4.8,SNR=10						
BOSA				LR	LR	15 01 17.0	
	comp=Z,613nm,18.4s,baz=153,slow=31						
JOW	**Kunigami**	75.75	3	LR	LR	15 06 54.2	
	comp=Z,376nm,21.8s,baz=167,slow=35						
KMI	**Kunming**	76.55	340	P	**P**	**14 34 16.6**	**+2.8**
KMI				pP	sP	14 34 19.8	+1.5
KMI				sP	PcP	14 34 22.3	-3.1
KMI				S	**S**	**14 44 02.9**	**+3.0**
KMI				sS	sS	14 44 08.9	+3.6
KMI				pmax	pmax		
	comp=Z,21nm,1.3s						
KMI				pmax	pmax		
	comp=Z,170nm,4.4s						
KMI				LR	LR		
	comp=Z,250nm,18.5s						
KMI				LR	LR		
	comp=Z,290nm,21.7s						
KMI				LR	LR		
	comp=Z,360nm,26.1s						
GYA	**Guiyang**	77.03	343	*e*P	**P**	**14 34 19.0**	**+2.6**
GYA				PP	**PP**	**14 37 14.4**	**+4.2**
GYA				S	**S**	**14 44 06.8**	**+2.0**
GYA				SKS	**SKSac**	**14 44 26.3**	**-2.4**
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,100nm,5.4s						
BRDH	**Bariadhala**	77.40	329	LR	LR	15 06 47.1	
	comp=Z,330nm,20.3s,baz=170,slow=34						
RKT	**Rikitea**	79.23	113	*e*LR	LR	14 59 13.4	
	comp=Z,503nm,32.0s						
WHN	**Wuhan**	79.92	351	⇓*i*P	**P**	**14 34 34.1**	**+2.0**
WHN				pP	**PcP**	**14 34 40.4**	**+0.8**
WHN				S	**S**	**14 44 38.5**	**+3.1**
WHN				LR	LR		
	comp=Z,1μm,23.1s						
NJ2	**Nanjing**	81.06	355	*e*P	**P**	**14 34 40.3**	**+2.2**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
CD2	**Chengdu**	81.92	342	*e*P	**P**	**14 34 43.8**	**+1.0**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
JNU	**Nakatsue**	82.14	5	LR	LR	15 10 05.9	
	comp=Z,365nm,21.4s,baz=123,slow=35						
JHJ	**Hachijo jima 2**	83.04	13	LR	LR	15 08 57.2	
	comp=Z,550nm,20.4s,baz=46,slow=34						
XAN	**Xi'an**	84.06	347	P	**P**	**14 34 55.8**	**+2.0**
XAN				pmax	pmax		
	comp=Z,13nm,1.3s						
TIA	**Tai'an**	85.31	354	P	**P**	**14 35 01.8**	**+1.8**
TIA				pmax	pmax		
	comp=Z,15nm,1.1s						
MAJO	**Matsushiro**	86.20	11	*e*P	**P**	**14 35 01.7**	**-2.7**
	comp=Z,24nm,1.2s						
MAJO	**Matsushiro**	86.20	11	*i* P	**P**	**14 35 03.9**	**-0.6**
MAJO				pmax	pmax		
	comp=Z,14nm,1.1s						
MAT	**Matsushiro**	86.20	11	P	**P**	**14 35 05.2**	**+0.7**
MAT				S	**S**	**14 45 32.0**	**-7.0**
MJAR	**Matsushiro Arr**	86.20	11	P	**P**	**14 35 03.0**	**-1.4**
	comp=Z,12nm,1.1s,baz=197,slow=7.5,SNR=17						
MJAR				LR	LR	15 11 29.9	
	comp=Z,356nm,21.1s,baz=165,slow=34						
MJB9	**Matsu-Tunnel**	86.20	11	*e*P	**P**	**14 35 03.4**	**-1.1**
	comp=Z,24nm,1.2s						
KSAR	**Wonju Array Be**	86.31	3	P	**P**	**14 35 05.2**	**+0.3**
KSAR	**Wonju Array Be**	86.31	3	P	**P**	**14 35 05.3**	**+0.3**
KSRS	**Korea Array**	86.32	3	P	**P**	**14 35 05.2**	**+0.3**
	comp=Z,4.9nm,1.0s,baz=170,slow=5.4,SNR=11						
KSRS				LR	LR	15 12 43.8	
	comp=Z,268nm,21.8s,baz=164,slow=35						
KS01	**Wonju Array Si**	86.34	3	*e*P	**P**	**14 35 05.0**	**-0.1**
LZH	**Lanzhou**	86.92	343	*e*P	**P**	**14 35 08.8**	**+0.6**
LZH				pP	pP	14 35 12.0	+0.5
LZH				sP	sP	14 35 13.5	+0.8
LZH				PP	**PP**	**14 38 34.6**	**+2.9**
LZH				SKS	**SKSac**	**14 45 32.9**	**-2.1**
LZH				*e*S	**S**	**14 45 47.0**	**+0.6**
LZH				sS	ScS	14 45 54.8	+0.7
LZH				SS	**SS**	**14 51 31.9**	**+2.1**
LZH				pmax	pmax		
	comp=Z,43nm,1.4s						
LZH				pmax	pmax		
	comp=Z,470nm,8.2s						
LZH				LR	LR		
	comp=Z,580nm,17.9s						
LZH				LR	LR		
	comp=Z,560nm,17.3s						
LZH				LR	LR		
	comp=Z,1μm,19.2s						
TIY	**Taiyuan**	87.22	350	*e*P	P	14 35 17.8	+8.3
TIY	**Taiyuan**	87.22	350	SKS	**SKSac**	**14 45 40.8**	**+4.2**
TIY	**Taiyuan**	87.22	350	S	**S**	**14 45 51.8**	**+2.8**
TIY				pmax	pmax		
	comp=Z,23nm,0.5s						
TIY				pmax	pmax		
	comp=Z,210nm,4.6s						
TIY				LR	LR		
	comp=N,230nm,16.6s						
TIY				LR	LR		
	comp=E,80nm,4.1s						
TIY				LR	LR		
	comp=Z,170nm,23.7s						
KMBO	**Kilima Mbogo**	87.51	271	LR	LR	15 07 17.2	
	comp=Z,362nm,20.6s,baz=98,slow=31						
PLCA	**Paso Flores**	89.44	168	LR	LR	15 12 19.2	
	comp=Z,566nm,20.6s,baz=205,slow=34						
RPN	**Rapa Nui**	90.04	134	LR	LR	15 08 07.4	
	comp=Z,108nm,18.9s,baz=202,slow=30						
BTO	**Baotou**	90.36	349	*e*P	**P**	**14 35 23.6**	**-0.7**
HHC	**Hu-ho-hao-te**	90.42	350	*e*P	**P**	**14 35 25.8**	**+1.2**
HHC				sP	sP	14 35 36.8	+7.7
HHC				PP	**PP**	**14 38 56.9**	**-2.7**
HHC				S	**S**	**14 46 18.0**	**-1.1**
HHC				pmax	pmax		
	comp=Z,26nm,1.0s						
HHC				pmax	pmax		
	comp=Z,120nm,6.3s						
HHC				LR	LR		
	comp=Z,330nm,19.4s						
HHC				LR	LR		
	comp=Z,160nm,18.6s						
HHC				LR	LR		
	comp=Z,530nm,17.6s						
GTA	**Gaotai**	90.94	341	*e*P	**P**	**14 35 28.6**	**+1.5**
GTA				pP	sP	14 35 34.3	+2.7
GTA				sP	pP	14 35 37.0	+6.6
GTA				S	**S**	**14 46 28.1**	**+4.1**
GTA				pmax	pmax		
	comp=Z,5.0nm,1.7s						
GTA				pmax	pmax		
	comp=Z,100nm,6.0s						
GTA				LR	LR		
	comp=Z,310nm,23.5s						
GTA				LR	LR		
	comp=Z,260nm,21.0s						
GTA				LR	LR		
	comp=Z,560nm,22.8s						
MSHR	**Mys Shultsa**	91.57	5	*i* P	**P**	**14 35 27.0**	**-2.7**
WSAR	**Wadi Sarin**	92.97	303	LR	LR	15 11 15.4	
	comp=Z,405nm,18.9s,baz=150,slow=32						
USRK	**Ussuriysk Ar.**	93.23	5	P	**P**	**14 35 35.5**	**-1.9**
	comp=Z,3.3nm,1.0s,baz=170,slow=2.5						
USRK				LR	LR	15 14 47.7	
	comp=Z,368nm,21.9s,baz=163,slow=34						
ATD	**Arta Tunnel**	93.40	284	LR	LR	15 10 45.4	
	comp=Z,157nm,19.3s,baz=74,slow=31						
ASAJ	**Asahikawa**	94.24	13	LR	LR	15 18 57.4	
	comp=Z,145nm,19.0s,baz=198,slow=36						
YSS	**Yuzh-Sakhalins**	97.04	12	*e*P	Pdif	14 35 56.5	+1.7
YSS				*e*		14 36 03.3	
YSS				*e*		14 39 55.1	
YSS				*e*		14 46 31.0	
YSS				*e*S	**S**	**14 47 19.5**	**+2.6**
YSS				*e*SS	**SS**	**14 54 02.0**	**+7.3**
YSS				*e*SSS	SSS	14 57 44.0	
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YSS				MLR	MLR		
	comp=Z,300nm,15.0s						
YSS				MLR	MLR		
	comp=N,200nm,13.0s						
ULN	**Ulaanbaatar**	97.89	348	*i* P	**P**	**14 35 58.3**	**-0.4**
ULN				pmax	pmax		
	comp=Z,1.0nm,1.1s						
SONM	**Songino Array**	97.95	348	P	**P**	**14 35 57.5**	**-1.5**
	comp=Z,1.5nm,1.1s,baz=168,slow=7.6,SNR=6.6						
SONA1	**Songino Array**	97.96	348	*e*P	P	14 35 50.8	-8.2
WMQ	**Urumqi**	98.16	334	P	Pdif	14 36 02.8	+2.8
WMQ				sP	sP	14 36 10.4	+5.9
WMQ				SKS	**SKSac**	**14 46 40.0**	**+2.8**
WMQ				SS	**SS**	**14 54 09.6**	**-1.2**
WMQ				LR	LR		
	comp=Z,490nm,28.9s						
WMQ				LR	LR		
	comp=Z,350nm,31.1s						
WMQ				LR	LR		
	comp=Z,610nm,39.3s						
KLR	**Kul'dur**	98.23	5	LR	LR	15 18 45.7	
	comp=Z,44nm,20.8s,baz=180,slow=34						
KLR	**Kul'dur**	98.23	5	*e*P	**P**	**14 35 57.3**	**-2.7**
KSH	**Kashi**	98.28	324	*e*P	**P**	**14 35 58.9**	**-1.8**
H10S2	**ASCENSION HYDR**	112.04	224	T	T	16 43 38.8	
	baz=151,slow=75,SNR=60						
H10S3	**ASCENSION HYDR**	112.05	224	T	T	16 43 37.6	
	baz=151,slow=75,SNR=72						
H10S1	**ASCENSION HYDR**	112.05	224	T	T	16 43 38.8	
	baz=151,slow=75,SNR=65						
KIV	**Kislovodsk**	117.17	306	⇓*e*PKIKP	**PKPdf**	**14 41 07.4**	**-0.7**
KIV				*e*		14 42 18.2	
KIV				pmax	pmax		
	comp=Z,2.0nm,0.9s						
TORD	**Torodi Ar. Bea**	121.27	253	PKP	**PKPdf**	**14 41 16.0**	**-0.7**
	comp=Z,0.6nm,0.8s,baz=141,slow=1.8						
IDI	**Anoyia**	121.73	289	PKP	**PKPdf**	**14 41 17.1**	**-0.1**
	comp=Z,4.2nm,0.8s,baz=158,slow=5.4,SNR=2.7						
OBN	**Obninsk**	127.29	314	⇑*e*PKIKP	**PKPdf**	**14 41 27.4**	**+0.4**
OBN				*e*		14 43 27.9	
OBN				*e*		14 48 39.7	
OBN				*i* SS	SS	15 00 40.9	+4.2
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KIEV	**Kiev**	128.52	306	*e*PKIKP	**PKPdf**	**14 41 28.0**	**-1.5**
KLMR	**Klimovskoe**	129.16	321	*e*PKIKP	**PKPdf**	**14 41 30.6**	**+0.2**
KLMR				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KLMR	**Klimovskoe**	129.16	321	*e*PKPdf	**PKPdf**	**14 41 30.7**	**+0.3**
KLMR				AMP		14 41 38.4	
	comp=Z,9.0nm,1.3s						
ILAR	**Eielson Array**	132.37	35	PKP	**PKPdf**	**14 41 35.5**	**-0.9**
	comp=Z,0.3nm,0.7s,baz=260,slow=2.7,SNR=4.0						
CWC	**Cottonwood Cre**	133.47	81	P	**PKPdf**	**14 41 38.7**	**-0.9**
	baz=234						
VSU	**Vasula**	133.64	314	*e*PKIKP	**PKPdf**	**14 41 40.7**	**+1.8**
NVAR	**Mina Array Bea**	134.48	79	PKP	**PKPdf**	**14 41 42.6**	**+1.1**
	comp=Z,0.3nm,0.4s,baz=216,slow=4.5,SNR=2.9						
TPNV	**Topopah Spring**	134.96	82	P	**PKPdf**	**14 41 41.8**	**-0.6**
	baz=234						
R11A	**Troy Canyon, C**	136.19	81	P	**PKPdf**	**14 41 43.4**	**-1.3**
	baz=236						
GERES	**GERESS Array B**	136.24	297	PKP	**PKPdf**	**14 41 43.4**	**-0.9**
	comp=Z,0.6nm,0.7s,baz=90,slow=1.3,SNR=4.0						

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DAVOX Davos/Dischmat  137.55 293  PKP     PKPdf   14 41 47.0 +0.1
      comp=Z,2.1nm,0.4s,baz=43,slow=9.4,SNR=4.4
TXAR  Lajitas Array   138.42 100  PKhKP   PKPpre  14 41 40.3
      comp=Z,0.6nm,0.8s,baz=202,slow=6.5,SNR=5.6
MNTX  Cornudas Mount  138.86  96  P       PKPdf   14 41 48.6 -1.0
      baz=230
JCT   Junction City   141.68 102  P       PKPdf   14 41 54.0 -0.7
      baz=228
MSTX  Muleshoe        142.00  95  P       PKPdf   14 41 53.8 -1.5
      baz=232
BOZ   Bozeman (W)     142.42  73  P       PKPdf   14 41 54.5 -1.3
      baz=244
PDAR  Pinedale Array  142.42  79  PKhKP   PKPpre  14 41 52.1
      comp=Z,0.8nm,0.9s,baz=202,slow=2.7,SNR=5.6
SDCO  Great Sand Dun  142.43  88  P       PKPdf   14 41 54.8 -1.4
      baz=236
ESDC  Sonseca Array   142.80 275  PKhKP   PKPpre  14 41 49.6
      comp=Z,0.2nm,0.4s,baz=120,slow=1.8,SNR=4.1
ESDC                              PKP     PKPdf   14 41 55.0 -1.5
      comp=Z,0.1nm,0.3s,baz=60,slow=1.2,SNR=5.3
T25A  Trinidad        142.81  90  P       PKPdf   14 41 55.9 -0.9
      baz=235
ABTX  Abilene, Hawle  143.18 100  P       PKPdf   14 41 56.3 -1.0
      baz=230
ISCO  Idaho Springs   143.48  85  P       PKPbc   14 41 56.8 +1.5
      baz=238
RLMT  Red Lodge       143.70  75  P       PKPdf   14 41 57.6 -0.6
      baz=244
PVAQ  Vaqueiros       144.02 269 eSS      SS      15 04 14.9  +17
PVAQ  Vaqueiros       144.02 269 eLR      LR      15 33 48.7
      comp=Z,215nm,22.0s
PBDV  Barranco-do-Ve  144.07 269 eSS      SS      15 04 02.3 +4.0
WHTX  Lake Whitney,   144.18 103  P       PKPbc   14 41 58.2 +1.0
      baz=229
K22A  Casper          144.32  81  P       PKPdf   14 41 59.0 -0.2
      baz=242
MORF  Marmelete       144.57 268 ePKP     PKPbc   14 41 59.1 +0.7
MORF  Marmelete       144.57 268 ePKIKP   PKPbc   14 41 59.0 +0.6
MESJ  Messejana       144.59 269 ePKP     PKPbc   14 41 59.0 +0.6
MESJ                              AMS     AMS     15 48 42.9
      comp=Z,216nm,20.3s
MESJ  Messejana       144.59 269 ePKIKP   PKPbc   14 41 59.0 +0.6
EGMT  Eagleton        144.60  71  P       PKPab   14 41 57.8 -0.3
      baz=247,SNR=6.9
PESTR Estremoz        144.75 271 ePKPdf   PKPab   14 41 58.6 -0.1
EVO   Evora           144.84 271 ePKPdf   PKPab   14 41 59.0 -0.1
PMRV  Marv??o         144.92 272 ePKPdf   PKPab   14 41 58.8 -0.6
PMRV  Marv??o         144.92 272 eLR      LR      15 36 57.8
      comp=Z,196nm,22.0s
KSCO  Kaye Shedlock'  145.01  89  P       PKPdf   14 42 03.7 +3.2
      baz=238
WMOK  Wichita Mounta  145.07  98  P       PKPbc   14 41 59.2 -0.8
      baz=232
PCBR  Castelo Branco  145.19 273 ePKPdf   PKPbc   14 41 59.4 -0.8
PMTG  Montargil       145.27 271 ePKPdf   PKPbc   14 41 59.9 -0.6
YKA   Yellowknife Ar  145.47  45  PKPbc   PKPdf   14 41 58.9 -1.3
      comp=Z,11nm,1.0s,baz=266,slow=3.3,SNR=16
YKA   Yellowknife Ar  145.47  45  PKIKP   PKPdf   14 41 59.0 -1.3
MTE   Manteigas       145.52 274 ePKPab   PKPab   14 42 03.2 +1.6
MTE   Manteigas       145.52 274 eSS      SS      15 03 27.6  -47
MTE   Manteigas       145.52 274 eLR      LR      15 34 23.2
      comp=Z,337nm,20.0s
ALMR  Almeirim        145.55 271 ePKP     PKPdf   14 42 00.7 -0.5
ALMR  Almeirim        145.55 271 ePKIKP   PKPdf   14 42 00.7 -0.5
MVO   Moncorvo        145.57 275 ePKPab   PKPab   14 42 03.3 +1.5
MVO   Moncorvo        145.57 275 eSS      SS      15 04 22.7 +7.0
MVO   Moncorvo        145.57 275 eLR      LR      15 42 50.6
      comp=Z,290nm,20.0s
PBRG  Braganca        145.70 276 ePKPab   PKPab   14 42 02.6 +0.4
NATX  Nacogdoches     145.80 106  P       PKPdf   14 42 01.1 -0.8
      baz=228
PVIS  Viseu           145.91 274 ePKPab   PKPab   14 42 04.0 +0.9
PVRL  Vila Real       146.08 275 ePKPab   PKPab   14 42 04.7 +1.0
POLO  Lamas de Olo    146.18 275 ePKPab   PKPab   14 42 04.4 +0.3
341A  Kurthwood       146.45 108  P       PKPab   14 42 06.6 +1.3
      baz=227
RSSD  Black Hills     146.61  80  P       PKPab   14 42 06.8 +0.9
      baz=244
PGAV  Gavieira, Arco  146.78 276 eLR      LR      15 34 57.1
      comp=Z,289nm,22.0s
CBKS  Cedar Bluff     146.80  91  P       PKPdf   14 42 03.2 -0.3
      baz=237
342A  Flagon Creek P  147.00 109  P       PKPab   14 42 07.6 +0.2
      baz=227
140A  Cam and Jess,   147.07 106  P       PKPab   14 42 08.0 +0.4
      baz=229
Z40A  Long Farm, Mag  147.59 105  P       PKPbc   14 42 08.6 +1.1
      baz=229
TUL1  Leonard         147.72  99  P       PKPbc   14 42 09.0 +1.2
      baz=233
X39A  Fountain Ranch  147.94 103  P       PKPbc   14 42 09.4 +1.0
      baz=231
344A  Westbrook Farm  148.04 110  P       PKPbc   14 42 09.7 +0.9
      baz=226
Y40A  Okolona         148.16 104  P       PKPbc   14 42 09.6 +0.6
      baz=230
EKA   Eskdalemuir Ar  148.18 301  PKPbc   PKPdf   14 42 06.9 +1.8
      comp=Z,3.3nm,0.7s,baz=107,slow=2.8,SNR=11
DGMT  Dagmar          148.22  72  P       PKPbc   14 42 10.0 +1.2
      baz=250
244A  Avery, Jackson  148.48 110  P       PKPbc   14 42 10.9 +0.9
      baz=227
143A  Socs Landing,   148.48 108  P       PKPbc   14 42 10.3 +0.4
      baz=228
Y41A  Eaglette Beard  148.50 105  P       PKPbc   14 42 10.7 +0.8
      baz=230
W39A  Magazine        148.58 102  P       PKPbc   14 42 10.8 +0.7
      baz=232
KSU1  Kansas State U  149.01  93  P       PKPbc   14 42 11.8 +0.7
      baz=238
W40A  Ferguson Farm,  149.03 103  P       PKPbc   14 42 11.6 +0.3
      baz=232
V39A  Pettigrew       149.06 101  P       PKPbc   14 42 11.4  0.0
      baz=233
BGNE  Belgrade        149.19  88  P       PKPbc   14 42 12.0 +0.5
      baz=241
145A  Houston Renfro  149.33 110  P       PKPbc   14 42 12.7 +0.6
      baz=227
T38A  Diamond         149.36  99  P       PKPbc   14 42 12.3 +0.3
      baz=234
U39A  Green Forest    149.50 100  P       PKPbc   14 42 11.6 -0.8
      baz=233,SNR=7.7
W41B  Gary Mavity, V  149.55 103  P       PKPbc   14 42 12.2 -0.3
      baz=231,SNR=10
V40A  Witts Springs   149.57 102  P       PKPbc   14 42 12.5 -0.2
      baz=232
146A  Union           149.89 111  P       PKPbc   14 42 12.4 -1.0
      baz=227
U40A  Yellville       149.89 101  P       PKPbc   14 42 12.3 -1.1
      baz=233,SNR=12
T39A  Clever          149.94  99  P       PKPbc   14 42 12.8 -0.7
      baz=234,SNR=6.9
S38A  Stockton        149.95  98  P       PKPbc   14 42 12.4 -1.0
      baz=235,SNR=7.5
V41A  Mountainview    149.99 103  P       PKPbc   14 42 12.7 -0.9
      baz=232,SNR=7.2
SUSD  Miller          150.04  82  P       PKPbc   14 42 13.2 -0.3
      baz=245
W42A  Bald Knob       150.07 104  P       PKPbc   14 42 13.6 -0.2
      baz=231
R38A  Fenwick Farm,   150.27  97  P       PKPbc   14 42 13.9 -0.3
      baz=236
Q37A  Longview Farm,  150.30  95  P       PKPbc   14 42 13.7 -0.6
      baz=237
S39A  Bolivar         150.37  98  P       PKPbc   14 42 13.6 -0.8
      baz=235,SNR=10
Y45A  Yeager Farm, C  150.41 108  P       PKPbc   14 42 14.3 -0.3
      baz=229
U41A  Viola           150.48 102  P       PKPbc   14 42 14.0 -0.8
      baz=233
V42A  Cord            150.49 103  P       PKPbc   14 42 14.0 -0.7
      baz=232
249A  Camden          150.60 114  P       PKPbc   14 42 14.9 -0.3
      baz=225
P37A  Lathrop         150.75  94  P       PKPbc   14 42 14.8 -0.5
      baz=238
148A  Greensboro      150.80 112  P       PKPbc   14 42 14.8 -0.8
      baz=226
S40A  Lebanon         150.85  99  P       PKPbc   14 42 15.0 -0.6
      baz=235,SNR=9.6
X45A  UM Field Stati  150.87 108  P       PKPbc   14 42 15.4 -0.3
      baz=229
Q38A  Cooks Store, C  150.89  96  P       PKPbc   14 42 15.1 -0.5
      baz=237
R39A  Chumby, Stover  150.91  98  P       PKPbc   14 42 15.0 -0.7
      baz=236,SNR=7.6
MDND  Maddock         150.91  76  P       PKPbc   14 42 14.9 -0.5
      baz=251
OXF   Oxford          150.92 107  P       PKPbc   14 42 15.1 -0.7
      baz=229
U42A  Revenden        150.92 103  P       PKPbc   14 42 15.1 -0.7
      baz=233
T41A  Mountain View   151.00 101  P       PKPbc   14 42 15.3 -0.6
      baz=234,SNR=7.0
H32A  Carlson Farm,   151.06  83  P       PKPbc   14 42 15.3 -0.5
      baz=246
250A  Grady           151.11 115  P       PKPbc   14 42 16.2 -0.1
      baz=224
149A  Jones           151.24 113  P       PKPbc   14 42 16.6 -0.1
      baz=226
ECSD  EROS Data Cent  151.27  85  P       PKPbc   14 42 16.5 +0.1
      baz=245,SNR=8.0
P38A  Dawn            151.30  95  P       PKPbc   14 42 16.7 +0.2
      baz=238
Z48A  Northport       151.31 111  P       PKPbc   14 42 16.6 -0.2
      baz=227
G32A  Webster         151.32  82  P       PKPbc   14 42 16.6 +0.1
      baz=247,SNR=7.1
S41A  Jillco Farms,   151.33 100  P       PKPbc   14 42 16.6 -0.2
      baz=235
Q39A  Willow Grove F  151.35  96  P       PKPbc   14 42 16.3 -0.4
      baz=237,SNR=6.8
R40A  Maddies Statio  151.39  98  P       PKPbc   14 42 16.4 -0.4
      baz=236
LRAL  Lakeview Retre  151.42 113  P       PKPbc   14 42 16.3 -0.8
      baz=226
T42A  Van Buren       151.42 102  P       PKPbc   14 42 16.1 -0.8
      baz=234
X46A  Booneville      151.47 108  P       PKPbc   14 42 16.6 -0.5
      baz=229
W45A  Hickory Valley  151.48 107  P       PKPbc   14 42 16.6 -0.5
      baz=230
Y47A  UCPARC, Winfie  151.49 110  P       PKPbc   14 42 16.5 -0.7
      baz=228
251A  Midway          151.70 116  P       PKPbc   14 42 18.0 +0.2
      baz=224
150A  Eclectic        151.71 114  P       PKPbc   14 42 17.6 -0.1
      baz=225
P39B  Salisbury       151.74  96  P       PKPbc   14 42 17.9 +0.3
      baz=238
Z49A  Columbiana      151.81 113  P       PKPbc   14 42 18.0 +0.1
      baz=226
353A  Camilla         151.86 119  P       PKPbc   14 42 17.5 -0.6
      baz=222
Q40A  Laux Farm, Aux  151.91  97  P       PKPbc   14 42 17.2 -0.8
      baz=237
CCM   Cathedral Cave  151.92 100  P       PKPbc   14 42 17.2 -0.8
      baz=235
R41A  Rosebud         151.97  99  P       PKPbc   14 42 17.5 -0.7
      baz=236
252A  Lumpkin         152.03 117  P       PKPbc   14 42 18.0 -0.5
      baz=224
S42A  Caledonia       152.05 101  P       PKPbc   14 42 17.9 -0.4
      baz=235
151A  Opelika         152.06 115  P       PKPbc   14 42 18.0 -0.6
      baz=225
K36A  Gilmore City    152.19  89  P       PKPbc   14 42 18.7 +0.2
      baz=243
Z50A  Ashland         152.22 114  P       PKPbc   14 42 18.7 -0.2
      baz=226
P40A  Paris           152.22  96  P       PKPbc   14 42 18.8 +0.1
      baz=238
X48A  Hartselle       152.35 110  P       PKPbc   14 42 19.1  0.0
      baz=228
S43A  Fulton Ridge,   152.40 102  P       PKPbc   14 42 19.6 +0.5
      baz=234
Q41A  Truxton         152.44  98  P       PKPbc   14 42 19.0 -0.2
      baz=237
M38A  Pleasantville   152.44  92  P       PKPbc   14 42 19.7 +0.6
      baz=241
W47A  Westpoint       152.53 108  P       PKPbc   14 42 18.9 -0.6
      baz=230
V46A  Holladay        152.56 107  P       PKPbc   14 42 20.1 +0.6
      baz=231
J36A  Seneca 1, Swea  152.58  87  P       PKPbc   14 42 19.9 +0.5
      baz=244
K37A  Belmond         152.79  89  P       PKPbc   14 42 19.7 -0.2
      baz=243
X49A  Woodville       152.83 111  P       PKPbc   14 42 19.5 -0.7
      baz=228
W48A  Pulaski         152.87 109  P       PKPbc   14 42 19.3 -0.9
      baz=229
P41A  Barry, Barry    152.94  97  P       PKPbc   14 42 19.7 -0.6
      baz=238
V47A  Nunnelly        152.95 107  P       PKPbc   14 42 20.2 -0.2
      baz=230
S44A  Carbondale      152.99 102  P       PKPbc   14 42 19.9 -0.6
      baz=234
Z52A  Williamson      153.07 116  P       PKPbc   14 42 20.3 -0.5
      baz=225
J37A  Redenius Farm,  153.09  88  P       PKPbc   14 42 20.2 -0.3
      baz=244
M39A  Webster         153.14  93  P       PKPbc   14 42 20.3 -0.4
      baz=241
W49A  Belvidere       153.27 110  P       PKPbc   14 42 20.6 -0.6
      baz=229
O41A  Passleys Farm,  153.29  96  P       PKPbc   14 42 21.5 +0.4
      baz=238
V48A  Smith Brothers  153.33 108  P       PKPbc   14 42 20.9 -0.4
      baz=230
P42A  Winchester      153.36  98  P       PKPbc   14 42 20.7 -0.5
      baz=238
T46A  Princeton       153.47 105  P       PKPbc   14 42 21.3 -0.2
      baz=233
I37A  Lemond, Waseca  153.49  87  P       PKPbc   14 42 20.9 -0.5
      baz=246
155A  Kite            153.80 119  P       PKPbc   14 42 22.0 -0.3
      baz=223
V49A  McMinnville     153.92 109  P       PKPbc   14 42 22.6 +0.1
      baz=230
R45A  Skylar, Fairfi  153.97 102  P       PKPbc   14 42 22.3 -0.2
      baz=235
V50A  Pikevile        154.35 111  P       PKPbc   14 42 23.1 -0.3
      baz=229
Q45A  Warren Harvey,  154.39 101  P       PKPbc   14 42 22.7 -0.7
      baz=236
```

NEIC ***14*** *14:43:08.3±0.0, 37.°56S×177.°19E, h102km, ML4.0(WEL), After WEL.*

WEL 14 14:43:05.8, 37°S±2°×17°7E±°, h123km±3km, Off east coast of North Island

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Code  Station Name       Δ°  AZ°   Phase ID        Time      Res
                                  Op      ISC      h  m  s    ISC
WHRZ  Whale Island      0.43 203  P       Pn      14 43 24.0 +0.3
HAZ   Te Kaha           0.56 123  P       Pn      14 43 24.4  0.0
HAZ                               S       Sn      14 43 38.3 -0.1
RUGZ  Raukumara Rang    0.64 143  P       Pn      14 43 24.5 -0.6
RUGZ                              S       Sn      14 43 39.1 -0.6
OPRZ  Ohinepanea        0.64 232  Pn      Pn      14 43 24.8 -0.2
OPRZ  Ohinepanea        0.64 232  P       Pn      14 43 24.8 -0.1
MARZ  Manawahe          0.67 218  P       Pn      14 43 25.2  0.0
EDRZ  Edgecumbe         0.74 209  Pn      Pn      14 43 26.1 +0.2
EDRZ                              Sn      Sn      14 43 36.1 -4.8
EDRZ  Edgecumbe         0.74 209  P       Pn      14 43 26.0 +0.2
TGRZ  Tauranga          0.79 250  Pn      Pn      14 43 26.1  0.0
TGRZ  Tauranga          0.79 250  P       Pn      14 43 26.2 +0.1
URZ   Urewera           0.80 185  Pn      Pn      14 43 25.9 -0.4
URZ   Urewera           0.80 185  P       Pn      14 43 26.2  0.0
URZ                               S       Sn      14 43 42.2 +0.5
PKGZ  Pakihiroa         0.82 122  P       Pn      14 43 26.8 +0.3
MXZ   Matakaoa Point    0.89  97  Pn      Pn      14 43 27.4 +0.4
MXZ   Matakaoa Point    0.89  97  P       Pn      14 43 27.6 +0.6
MXZ                               S       Sn      14 43 43.8 +0.8
MWZ   Matawai           0.92 163  Pn      Pn      14 43 27.2 -0.1
MWZ   Matawai           0.92 163  P       Pn      14 43 27.3  0.0
MWZ                               S       Sn      14 43 44.3 +0.7
OMRZ  Omania            0.92 225  P       Pn      14 43 27.6 +0.3
KARZ  Kaharoa           0.94 233  Pn      Pn      14 43 27.7 +0.2
KARZ  Kaharoa           0.94 233  P       Pn      14 43 27.7 +0.2
TARZ  Mount Tarawera    0.95 215  Pn      Pn      14 43 28.2 +0.6
TARZ  Mount Tarawera    0.95 215  P       Pn      14 43 28.5 +0.9
TWGZ  Tauwhareparae     0.95 139  Pn      Pn      14 43 28.0 +0.4
TWGZ  Tauwhareparae     0.95 139  P       Pn      14 43 28.1 +0.5
RRRZ  Republican Roa    1.03 211  Pn      Pn      14 43 28.5 +0.1
RRRZ  Republican Roa    1.03 211  P       Pn      14 43 28.6 +0.2
WMGZ  Waiomatatini S    1.03 111  Pn      Pn      14 43 28.8 +0.4
WMGZ  Waiomatatini S    1.03 111  P       Pn      14 43 28.8 +0.5
HLRZ  Highlands Stat    1.04 220  P       Pn      14 43 29.0 +0.5
PUZ   Puketiti          1.04 126  Pn      Pn      14 43 28.4 -0.1
PUZ   Puketiti          1.04 126  P       Pn      14 43 28.5  0.0
RAGZ  Rawiri            1.05 170  Pn      Pn      14 43 28.9 +0.2
RAGZ  Rawiri            1.05 170  P       Pn      14 43 29.2 +0.6
KMRZ  Kaimai            1.07 248  P       Pn      14 43 29.1 +0.4
UTU   Utuhina           1.07 227  P       Pn      14 43 29.6 +0.9
MUGZ  Murupara          1.07 198  P       Pn      14 43 28.9 +0.1
TKGZ  Te Karaka         1.11 152  Pn      Pn      14 43 28.9 -0.3
TKGZ  Te Karaka         1.11 152  P       Pn      14 43 28.9 -0.2
TKGZ                              P               14 43 31.7
TKGZ                              S       Sn      14 43 46.9 +0.1
HSRZ  Hossack Road      1.14 221  P       Pn      14 43 30.5 +1.1
HRRZ  Handcock Road     1.18 217  P       Pn      14 43 30.6 +0.7
PRRZ  Plateau Road      1.22 211  Pn      Pn      14 43 30.7 +0.4
PRRZ  Plateau Road      1.22 211  P       Pn      14 43 30.7 +0.4
GRRZ  Galatos Road      1.24 224  P       Pn      14 43 31.4 +0.9
ALRZ  Allen Road        1.29 211  Pn      Pn      14 43 31.5 +0.4
ALRZ  Allen Road        1.29 211  P       Pn      14 43 31.6 +0.5
CNGZ  Carnagh Statio    1.30 142  Pn      Pn      14 43 31.3 +0.1
CNGZ  Carnagh Statio    1.30 142  P       Pn      14 43 31.4 +0.2
RIGZ  Rimuhau           1.33 160  P       Pn      14 43 31.2 -0.3
RIGZ                              S       Sn      14 43 51.9 +0.9
SNGZ  Shannon Statio    1.33 175  Pn      Pn      14 43 31.4 -0.1
SNGZ  Shannon Statio    1.33 175  P       Pn      14 43 31.4 -0.1
WPRZ  Whakapapatarin    1.34 217  Pn      Pn      14 43 32.3 +0.7
WPRZ  Whakapapatarin    1.34 217  P       Pn      14 43 32.8 +1.2
TOZ   Tahuroa Road      1.37 258  P       Pn      14 43 32.5 +0.6
KUZ   Kuaotunu          1.38 301  Pn      Pn      14 43 31.8 -0.1
KUZ   Kuaotunu          1.38 301  P       Pn      14 43 31.9 -0.1
MTHZ  Maungataniwha     1.42 191  P       Pn      14 43 33.2 +0.7
RAHZ  Arahi             1.46 183  P       Pn      14 43 34.6 +1.6
KUTZ  Kaahu Road        1.50 226  Pn      Pn      14 43 34.1 +0.7
KUTZ  Kaahu Road        1.50 226  P       Pn      14 43 34.2 +0.8
PRGZ  Paritu Road       1.56 160  Pn      Pn      14 43 34.1  0.0
PRGZ  Paritu Road       1.56 160  P       Pn      14 43 34.3 +0.2
TLZ   Tolley Road       1.57 236  Pn      Pn      14 43 34.9 +0.7
TLZ                               Sn      Pn      14 43 36.0 +1.8
TLZ   Tolley Road       1.57 236  P       Pn      14 43 35.2 +0.9
KNZ   Kokohu            1.61 167  Pn      Pn      14 43 33.9 -0.7
KNZ   Kokohu            1.61 167  P       Pn      14 43 33.9 -0.7
WHHZ  Waihua            1.62 179  P       Pn      14 43 34.7 -0.1
MKAZ  Moumakai          1.66 282  P       Pn      14 43 36.0 +0.8
NMHZ  Naumai            1.67 190  Pn      Pn      14 43 36.4 +1.0
NMHZ  Naumai            1.67 190  P       Pn      14 43 36.3 +0.9
WATZ  Wairara           1.70 222  P       Pn      14 43 36.6 +0.8
MHGZ  Mahia Peninsul    1.78 162  Pn      Pn      14 43 36.9 +0.1
MHGZ  Mahia Peninsul    1.78 162  P       Pn      14 43 36.9 +0.2
BKZ   Black Stump Fm    1.79 198  Pn      Pn      14 43 36.6 -0.3
BKZ   Black Stump Fm    1.79 198  P       Pn      14 43 36.6 -0.3
RATZ  Rangitukua        1.80 218  P       Pn      14 43 38.1 +1.2
ARHZ  Aropaoanui        1.81 185  Pn      Pn      14 43 37.0  0.0
ARHZ  Aropaoanui        1.81 185  P       Pn      14 43 37.1  0.0
GRZ   Great Barrier     1.84 310  P       Pn      14 43 37.7 +0.2
RITZ  Rihia Road        1.85 214  Pn      Pn      14 43 38.5 +1.0
RITZ  Rihia Road        1.85 214  P       Pn      14 43 38.6 +1.0
KBAZ  Karaka Road Bo    1.87 280  P       Pn      14 43 39.2 +1.4
ETAZ  East Tamaki Re    1.88 285  P       Pn      14 43 39.0 +1.1
KATZ  Kakaramea         1.92 217  Pn      Pn      14 43 39.9 +1.4
KATZ  Kakaramea         1.92 217  P       Pn      14 43 39.9 +1.4
MCHZ  McNeill Hill      2.02 191  Pn      Pn      14 43 39.6  0.0
MCHZ  McNeill Hill      2.02 191  P       Pn      14 43 39.7 +0.1
KRVZ  Karewarewa        2.04 216  Pn      Pn      14 43 40.7 +0.7
KRVZ  Karewarewa        2.04 216  P       Pn      14 43 40.9 +0.8
KWHZ  Kaweka Forest     2.06 197  P       Pn      14 43 39.8 -0.3
AWAZ  Awhitu Peninsu    2.07 280  P       Pn      14 43 41.4 +1.1
WTVZ  West Tongariro    2.08 217  Pn      Pn      14 43 41.1 +0.6
WTVZ  West Tongariro    2.08 217  P       Pn      14 43 41.3 +0.8
OTVZ  Oturere           2.09 215  Pn      Pn      14 43 41.1 +0.5
TWVZ  Taurewa           2.12 220  Pn      Pn      14 43 41.7 +0.7
TWVZ  Taurewa           2.12 220  P       Pn      14 43 41.8 +0.8
HIZ   Hauiti            2.13 240  Pn      Pn      14 43 42.0 +1.0
HIZ   Hauiti            2.13 240  P       Pn      14 43 42.0 +1.1
COVZ  Chateau Observ    2.17 216  P       Pn      14 43 42.1 +0.5
RVAZ  Riverhead Bore    2.20 287  P       Pn      14 43 42.8 +0.9
CKHZ  Cape Kidnapper    2.20 182  Pn      Pn      14 43 41.3 -0.6
CKHZ  Cape Kidnapper    2.20 182  P       Pn      14 43 41.6 -0.3
FWVZ  Far West T-bar    2.21 215  Pn      Pn      14 43 42.6 +0.4
FWVZ  Far West T-bar    2.21 215  P       Pn      14 43 42.7 +0.5
BHHZ  Black Hill Sta    2.22 203  Pn      Pn      14 43 41.4 -0.7
BHHZ  Black Hill Sta    2.22 203  P       Pn      14 43 41.4 -0.7
WHVZ  Whangaehu Hut     2.22 214  Pn      Pn      14 43 42.6 +0.3
WHVZ  Whangaehu Hut     2.22 214  P       Pn      14 43 42.6 +0.3
WHVZ                              P       Pn      14 43 42.6 +0.3
DRZ   Dome Shelter      2.22 215  P       Pn      14 43 43.1 +0.7
TRVZ  Turoa             2.25 215  P       Pn      14 43 43.2 +0.4
WNVZ  Wahianoa          2.25 213  Pn      Pn      14 43 42.7 +0.1
MOVZ  Moawhango         2.25 210  Pn      Pn      14 43 42.0 -0.6
MOVZ  Moawhango         2.25 210  P       Pn      14 43 42.1 -0.5
KRHZ  Kereru            2.28 196  P       Pn      14 43 41.8 -1.1
KAHZ  Kahuranaki        2.35 186  Pn      Pn      14 43 42.9 -0.9
KAHZ  Kahuranaki        2.35 186  P       Pn      14 43 43.2 -0.6
MTVZ  Mangateitei       2.35 215  Pn      Pn      14 44 02.2  +18
MTVZ  Mangateitei       2.35 215  P       Pn      14 43 44.2 +0.3
VRZ   Vera Road         2.54 228  Pn      Pn      14 43 45.8 -0.4
VRZ   Vera Road         2.54 228  P       Pn      14 43 45.6 -0.5
PNHZ  Pukenui           2.57 197  Pn      Pn      14 43 45.1 -1.6
PNHZ  Pukenui           2.57 197  P       Pn      14 43 45.1 -1.6
PXZ   Pawanui           2.58 186  Pn      Pn      14 43 45.5 -1.2
PXZ   Pawanui           2.58 186  P       Pn      14 43 45.7 -1.0
WPHZ  Waipukurau        2.67 193  Pn      Pn      14 43 47.0 -0.9
WPHZ  Waipukurau        2.67 193  P       Pn      14 43 46.9 -1.0
WCZ   Waipu Caves       2.75 303  P       Pn      14 43 49.6 +0.8
TSZ   Takapari Road     2.77 200  Pn      Pn      14 43 47.3 -1.9
TSZ   Takapari Road     2.77 200  P       Pn      14 43 47.4 -1.8
PRHZ  Porangahau        2.84 189  Pn      Pn      14 43 49.0 -1.1
PRHZ  Porangahau        2.84 189  P       Pn      14 43 48.8 -1.2
WAZ   Wanganui          2.87 216  Pn      Pn      14 43 50.5 -0.1
WAZ   Wanganui          2.87 216  P       Pn      14 43 50.6 +0.1
DVHZ  Dannevirke        2.95 195  Pn      Pn      14 43 49.6 -1.9
DVHZ  Dannevirke        2.95 195  P       Pn      14 43 49.6 -1.9
LREZ  Lake Rotokare     2.97 227  P       Pn      14 43 52.8 +1.1
ANWZ  Angora Road       3.05 190  P       Pn      14 43 51.2 -1.6
POWZ  Post Office Ro    3.13 200  Pn      Pn      14 43 52.3 -1.6
POWZ  Post Office Ro    3.13 200  P       Pn      14 43 52.2 -1.7
PRWZ  Pori Road         3.24 197  Pn      Pn      14 43 53.6 -1.6
PRWZ  Pori Road         3.24 197  P       Pn      14 43 53.6 -1.6
BFZ   Birch Farm        3.30 193  Pn      Pn      14 43 53.9 -2.3
BFZ   Birch Farm        3.30 193  P       Pn      14 43 53.9 -2.3
MRZ   Mangatainoka R    3.44 201  Pn      Pn      14 43 55.4 -2.5
MRZ   Mangatainoka R    3.44 201  P       Pn      14 43 55.0 -2.9
TIWZ  Tintock           3.47 197  Pn      Pn      14 43 56.1 -2.2
TIWZ  Tintock           3.47 197  P       Pn      14 43 56.2 -2.2
CPWZ  Castlepoint       3.53 192  Pn      Pn      14 43 57.7 -1.5
CPWZ  Castlepoint       3.53 192  P       Pn      14 43 57.4 -1.8
OUZ   Omahuta           3.66 306  P       Pn      14 44 02.0 +1.1
HOWZ  Holdsworth Sta    3.68 200  Pn      Pn      14 43 58.1 -3.0
HOWZ  Holdsworth Sta    3.68 200  P       Pn      14 43 58.2 -2.9
OGWZ  Otaki Gorge       3.71 204  Pn      Pn      14 43 58.7 -2.7
OGWZ  Otaki Gorge       3.71 204  P       Pn      14 43 58.6 -2.8
TMWZ  Te Maipa          3.78 195  Pn      Pn      14 43 59.8 -2.7
TMWZ  Te Maipa          3.78 195  P       Pn      14 43 59.8 -2.7
KIW   Kapiti Island     3.83 207  Pn      Pn      14 44 00.6 -2.5
KIW   Kapiti Island     3.83 207  P       Pn      14 44 00.7 -2.5
MTW   Mount Morrison    3.92 199  Pn      Pn      14 44 00.8 -3.5
MTW   Mount Morrison    3.92 199  P       Pn      14 44 00.9 -3.5
CAW   Cannon Point      4.00 204  Pn      Pn      14 44 02.1 -3.3
CAW   Cannon Point      4.00 204  P       Pn      14 44 02.1 -3.3
TRWZ  Traveller         4.11 196  Pn      Pn      14 44 03.4 -3.4
TRWZ  Traveller         4.11 196  P       Pn      14 44 03.4 -3.3
DUWZ  D'Urville Isla    4.20 216  Pn      Pn      14 44 05.3 -2.7
MSWZ  Moikau Station    4.23 200  Pn      Pn      14 44 04.7 -3.8
MSWZ  Moikau Station    4.23 200  P       Pn      14 44 04.7 -3.8
BHW   Baring Head       4.34 204  Pn      Pn      14 44 06.2 -3.6
BHW   Baring Head       4.34 204  P       Pn      14 44 06.2 -3.6
PLWZ  Palliser          4.37 199  Pn      Pn      14 44 06.5 -3.9
PLWZ  Palliser          4.37 199  P       Pn      14 44 06.7 -3.7
TCW   Tory Channel      4.38 210  Pn      Pn      14 44 07.2 -3.2
TCW   Tory Channel      4.38 210  P       Pn      14 44 07.2 -3.2
TUWZ  Tuamarina         4.70 211  Pn      Pn      14 44 11.2 -3.5
TUWZ  Tuamarina         4.70 211  P       Pn      14 44 11.2 -3.4
NNZ   Nelson            4.78 217  Pn      Pn      14 44 12.4 -3.4
NNZ   Nelson            4.78 217  P       Pn      14 44 12.4 -3.4
BSWZ  Blackbirch Sta    4.96 210  Pn      Pn      14 44 15.0 -3.3
BSWZ  Blackbirch Sta    4.96 210  P       Pn      14 44 14.8 -3.4
THZ   Tophouse          5.43 216  Pn      Pn      14 44 20.8 -3.7
THZ   Tophouse          5.43 216  P       Pn      14 44 20.7 -3.8
KHZ   Kahutara          5.69 208  Pn      Pn      14 44 23.8 -4.2
KHZ   Kahutara          5.69 208  P       Pn      14 44 23.8 -4.2
LTZ   Lake Taylor       6.52 214  Pn      Pn      14 44 34.5 -4.8
LTZ   Lake Taylor       6.52 214  P       Pn      14 44 34.6 -4.6
OKCZ  Okains Bay        7.00 205  P       Pn      14 44 40.9 -4.8
OXZ   Oxford            7.06 212  Pn      Pn      14 44 41.3 -5.2
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OXZ	Oxford	7.06	212	P	Pn	14 44 40.2	-6.3
MQZ	McQueen's Vall	7.13	208	Pn	Pn	14 44 41.4	-6.0
MQZ	McQueen's Vall	7.13	208	P	Pn	14 44 41.3	-6.1
RPZ	Rata Peaks	7.80	215	Pn	Pn	14 44 52.1	-4.4
RPZ	Rata Peaks	7.80	215	P	Pn	14 44 52.0	-4.6
CTZ	Chatham Island	7.84	145	Pn	Pn	14 44 58.8	+1.7
ODZ	Otahua Downs	9.04	211	Pn	Pn	14 45 07.5	-5.7
ODZ	Otahua Downs	9.04	211	P	Pn	14 45 07.7	-5.5

*NIED **14** 14:49:00,39°.10N×142°.40E,h35^{km},Mw3.9 Best double couple: M$_0$7.90000×10^{14} NP1:φ$_s$355.00000°,δ16.00000°,λ-100.00000°. NP2:φ$_s$185.00000°,δ74.00000°,λ-87.00000°.*

*ISCJB **14** 14:49:32.0±1.0,39°.09N±0°.03×142°.40E±0°.09,h41^{km}±8^{km},mb3.9/14,MS4.3/3,Error ellipse: s-maj=11.5km s-min=5.4km az=11.8*

*JMA **14** 14:49:32.1±0.1,39°.13N×142°.40E,h34^{km}±1^{km},M4.1*

JMA Felt II J1.

*IDC **14** 14:49:36.2±2.4,39°.04N×142°.36E,h66^{km}±21^{km},mb3.6/14,mb1 3.7/18,mb1mx3.5/70,mbtmp3.9/18,MS3.7/5,Ms1 3.7/5,ms1mx3.1/63,Error ellipse: s-maj=19.2km s-min=14.0km az=87.0*

ISC 14 14:49:31.8±1.9,**39°.09N**±0°.04×**142°.45E**±0°.08,**h24**^{km}±12^{km},**n38,**σ**1^s.88**/41,**mb4.0**/14,**MS4.2**/3,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	0.61	269	P	Pb	14 49 43.6	-0.2
OFUJ				S	Sb	14 49 51.5	-0.5
MIYJ	Miyakonagasawa	0.69	315	P	Pb	14 49 44.3	-0.9
MIYJ				S	Sb	14 49 52.9	-1.4
JTH	Tanohata	0.96	332	S	Sb	14 50 00.9	-1.1
JMK	Ichinoseki	0.97	262	P	Pn	14 49 48.9	-1.0
JMK				S	Sb	14 50 01.1	-1.1
JOM	Ohasama	0.97	293	P	Pn	14 49 49.0	-1.0
JOM				*i* S	Sn	14 50 01.3	-1.8
JIO	Ouri	1.07	234	P	Pn	14 49 50.0	-1.3
JIO				S	Sn	14 50 03.1	-2.3
JKZ	Kuzumaki	1.24	316	P	Pn	14 49 53.1	-0.6
JKZ				S	Sn	14 50 08.2	-1.6
JRG	Rokugo	1.44	283	P	Pn	14 49 56.0	-0.4
JANG	Nango	1.47	331	P	Pn	14 49 56.0	-0.8
JANG				S	Sn	14 50 14.2	-1.1
JOU	Okura	1.57	243	P	Pn	14 49 58.1	-0.2
MAT	Matsushiro	4.21	234	P	Pn	14 50 36.6	+2.0
MAT				*e*S	Sn	14 51 27.9	+4.9
MJAR	Matsushiro Arr	4.21	234	P	Pn	14 50 36.5	+2.0
	2.6nm,0.3s,baz=39,slow=11,SNR=82						
ASAJ	Asahikawa	5.02	1	P	Pn	14 50 45.9	+0.2
	0.8nm,0.3s,baz=190,slow=5.8,SNR=20						
ASAJ				S	Sn	14 51 44.9	+2.0
	0.9nm,0.3s,baz=170,slow=12,SNR=2.9						
JHJ	Hachijo jima 2	6.34	201	P	Pn	14 51 04.2	+0.5
	8.6nm,0.3s,baz=354,slow=23,SNR=8.1						
JHJ				S	Sn	14 52 10.6	-4.8
	4.1nm,0.3s,baz=90,slow=20,SNR=4.4						
USRK	Ussuriysk Ar.	9.34	306	P	Pn	14 51 47.9	+3.0
	baz=114,slow=15						
USRK				LR	LR	14 55 13.8	
	comp=Z,79nm,19.7s,baz=52,slow=36						
KSRS	Korea Array	11.54	266	P	Pn	14 52 19.1	+4.1
	0.2nm,0.3s,baz=67,slow=14,SNR=2.8						
KSRS				LR	LR	14 55 42.5	
	comp=Z,44nm,20.1s,baz=185,slow=32						
KLR	Kul'dur	12.70	326	P	Pn	14 52 34.9	+4.0
	0.0nm,0.3s,baz=161,slow=16,SNR=2.6						
KLR				LR	LR	14 57 23.4	
	comp=Z,9.1nm,20.3s,baz=222,slow=37						
SEY	Seymchan	24.62	11	P	P	14 54 50.4	+0.4
	0.7nm,0.6s,baz=179,slow=9.9,SNR=6.8						
SONM	Songino Array	27.38	300	P	P	14 55 14.7	-0.6
	0.9nm,0.5s,baz=96,slow=8.7,SNR=5.5						
H11N2	WAKE ISLAND Hy	28.59	125	T	T	15 25 49.3	
	baz=317,slow=75,SNR=602						
H11N1	WAKE ISLAND Hy	28.59	125	T	T	15 25 49.3	
	baz=317,slow=75,SNR=466						
H11N3	WAKE ISLAND Hy	28.60	125	T	T	15 25 50.4	
	baz=317,slow=75,SNR=495						
H11S1	WAKE ISLAND Hy	29.37	127	T	T	15 26 49.0	
	baz=318,slow=76,SNR=46						
H11S3	WAKE ISLAND Hy	29.38	127	T	T	15 26 48.9	
	baz=318,slow=76,SNR=53						
H11S2	WAKE ISLAND Hy	29.39	127	T	T	15 26 50.3	
	baz=318,slow=76,SNR=46						
ZALV	Zalesovo Beam	41.16	311	P	P	14 57 13.5	-0.5
	1.6nm,0.4s,baz=96,slow=7.7,SNR=6.9						
CMAR	Chiang Mai Arr	42.83	254	P	P	14 57 27.7	-0.3
	0.4nm,0.6s,baz=49,slow=9.8,SNR=3.8						
MKAR	Makanchi Array	43.75	300	P	P	14 57 34.7	-0.5
	2.0nm,0.8s,baz=86,slow=9.7,SNR=18						
KURBB	Kurchatov Arra	45.41	307	P	P	14 57 47.7	-0.7
	5.8nm,0.5s,baz=80,slow=8.4,SNR=40						
ILAR	Eielson Array	47.33	33	P	P	14 58 03.6	+0.4
	0.8nm,0.7s,baz=269,slow=5.9,SNR=11						
BVAR	Borovoye Array	49.81	311	P	P	14 58 21.7	-0.8
	1.8nm,0.5s,baz=66,slow=7.7,SNR=13						
AKTO	Aktyubinsk	57.92	311	P	P	14 59 21.8	0.0
	0.6nm,0.4s,baz=62,slow=11,SNR=4.6						
AKTO				LR	LR	15 25 08.3	
	comp=Z,176nm,20.9s,baz=130,slow=37						
WRA	Warramunga Arr	59.21	189	P	P	14 59 29.8	-1.3
	1.0nm,0.5s,baz=6.8,slow=7.0,SNR=21						
ASAR	Alice Springs	62.94	189	P	P	14 59 55.8	-0.5
	0.3nm,0.7s,baz=2.3,slow=4.6,SNR=4.0						
FINES	FINESS Array B	67.38	332	P	P	15 00 23.7	-0.9
	2.2nm,1.0s,baz=40,slow=13,SNR=2.7						
HFS	Hagfors	72.55	336	P	P	15 00 55.3	-1.2
	1.0nm,0.7s,baz=2.9,slow=8.7,SNR=2.8						
NVAR	Mina Array Bea	73.11	54	P	P	15 01 01.0	+0.5
	0.2nm,0.5s,baz=316,slow=7.7,SNR=3.4						
NVAR				LR	LR	15 30 35.5	
	comp=Z,220nm,19.8s,baz=105,slow=34						
AKASG	Malin Array Be	73.17	322	LR	LR	15 34 59.2	
	comp=Z,133nm,21.6s,baz=100,slow=37						

*IDC **14** 15:09:49.8±1.8,1°.56N×96°.25E,h0^{km},mb3.6/6,mb1 3.7/8,mb1mx3.4/74,mbtmp3.5/8,ML3.3/2,Error ellipse: s-maj=53.2km s-min=20.3km az=56.0*

*DJA **14** 15:09:55.3±0.5,2°N±3°×9°7E±°,h10^{km},M3.3/5,MLv3.3/5*

ISC 14 15:09:54.0±1.8,**1°.90N**±0°.06×**96°.63E**±0°.07,**h17**^{km}±12^{km},**n20,**σ**0^s.75**/19,**mb3.6**/6,**Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNSI	Sinabang, Aceh	0.59	329	P	Pn	15 10 08.1	+0.4
SNSI				S	Sn	15 10 17.3	+0.3
GSI	Gunungsitoli	1.11	122	P	Pg	15 10 15.4	-0.2
GSI				S	Sb	15 10 29.4	+0.3
TPTI		1.46	22	P	Pn	15 10 18.8	-0.9
TPTI				S	Sn	15 10 37.9	-0.5
KCSI	Kotacane, Aceh	1.98	35	P	Pn	15 10 27.1	+0.3
KCSI				S	Sb	15 10 53.4	-0.6
MLSI	Meulaboh, Aceh	2.37	355	P	Pg	15 10 39.5	0.0
MLSI				S	Sb	15 11 05.0	-0.2
PSI	Prapat	2.46	69	Pn	Pb	15 10 38.1	+0.2
	0.8nm,0.3s,baz=181,slow=3.4,SNR=4.2						
PSI				Sn	Sb	15 11 10.0	+1.9
	2.3nm,0.3s,baz=351,slow=0.3,SNR=7.1						
TSI	Tuntungan	2.50	50	P	Pg	15 10 48.1	+6.0
CMAR	Chiang Mai Arr	16.61	8	Pn	P	15 13 48.1	-0.6
	0.1nm,0.3s,baz=196,slow=12,SNR=13						
H08S2	Diego Garcia H	25.88	248	T	T	15 42 11.7	
	baz=69,slow=75,SNR=32						
H08S3	Diego Garcia H	25.88	248	T	T	15 42 10.6	
	baz=69,slow=75,SNR=63						
H08S1	Diego Carcia H	25.89	248	T	T	15 42 09.1	
	baz=69,slow=75,SNR=14						
H01W3	Cape Leeuwin H	40.10	157	T	T	16 00 04.8	
	baz=333,slow=76,SNR=4.1						
H01W2	Cape Leeuwin H	40.11	157	T	T	16 00 05.5	
	baz=333,slow=76,SNR=3.6						
H01W1	Cape Leeuwin H	40.12	157	T	T	16 00 10.6	
	baz=333,slow=76,SNR=3.7						
WRA	Warramunga Arr	42.88	122	P	P	15 17 51.7	-0.3
	0.4nm,0.6s,baz=300,slow=9.2,SNR=3.0						
ASAR	Alice Springs	44.27	127	P	P	15 18 01.9	-1.3
	0.2nm,0.6s,baz=294,slow=7.1,SNR=2.6						
MKAR	Makanchi Array	46.44	346	P	P	15 18 20.2	+0.2
	0.4nm,0.5s,baz=155,slow=9.5,SNR=6.5						
SONM	Songino Array	46.54	9	P	P	15 18 21.2	+0.4
	0.4nm,0.4s,baz=207,slow=6.1,SNR=3.2						
KURBB	Kurchatov Arra	50.92	345	P	P	15 18 54.8	+0.5
	0.4nm,0.7s,baz=163,slow=7.0,SNR=4.2						
ZALV	Zalesovo Beam	52.79	351	P	P	15 19 08.8	+0.6
	1.4nm,0.6s,baz=174,slow=8.0,SNR=6.1						

*ISCJB **14** 15:11:40.4±0.4,37°.22N±0°.03×28°.21E±0°.03,h0^{km},Error ellipse: s-maj=4.3km s-min=3.3km az=37.1*

*CSEM **14** 15:11:40.5±0.1,37°.22N×28°.21E,h1^{km},ML2.5,Error ellipse: s-maj=3.5km s-min=2.6km az=45.0,Suspected Mining explosion.*

*DDA **14** 15:11:40.5,37°.23N×28°.21E,h7^{km},Ml2.3,Suspected Mining explosion.*

*ISK **14** 15:11:40.0,37°.21N×28°.21E,h10^{km},ML2.5/3*

ISC 14 15:11:39.4±0.8,**37°.25N**±0°.02×**28°.13E**±0°.03,**h0**^{km}**,n33,**σ**0^s.49**/51,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YER	Yerkesik	0.16	132	PG	Pg	15 11 43.1	+0.6
YER				SG	Sg	15 11 44.7	+0.1
YER	Yerkesik	0.16	132	*i* Pg	Pg	15 11 43.1	+0.6
YER				*e*Sg	Sg	15 11 44.7	+0.1
MLSB	Milas	0.29	280	PG	Pb	15 11 47.3	-0.1
MLSB				SG	Sb	15 11 53.2	+0.4
MLSB	Milas	0.29	280	*e*Pg	Pb	15 11 47.3	-0.1
MLSB				*e*Sg	Sb	15 11 53.2	+0.4
AYDN	Tasoluk	0.46	334	*i* P	Pb	15 11 50.5	+0.1
AYDN				*i* S	Sb	15 11 57.8	0.0
AYDN	Tasoluk	0.46	334	P	Pb	15 11 50.5	+0.1
AYDN				S	Sb	15 11 57.8	0.0
TURN	Turunc	0.53	134	PG	Pg	15 11 49.2	-0.3
TURN				SG	Sg	15 11 55.3	-1.1
TURN	Turunc	0.53	134	*i* P	Pg	15 11 48.9	-0.6
TURN				*i* S	Sg	15 11 56.4	0.0
TURN	Turunc	0.53	134	P	Pg	15 11 48.9	-0.6
TURN	Turunc	0.53	134	*e*Pg	Pg	15 11 49.2	-0.3
TURN				*e*Sg	Sg	15 11 55.3	-1.1
TURN				S	Sg	15 11 56.4	0.0
DALY	Dalyan (Mu˜la	0.60	136	PG	Pg	15 11 51.2	+0.4
DALY	Dalyan (Mu˜la	0.60	136	*i* P	Pg	15 11 51.5	+0.7
DALY				*i* S	Sb	15 12 02.4	+0.7
DALY	Dalyan (Mu˜la	0.60	136	*e*Pg	Pg	15 11 51.2	+0.4
DALY	Dalyan (Mu˜la	0.60	136	P	Pg	15 11 51.5	+0.7
DALY				S	Sb	15 12 02.3	+0.7
TAVA	DENIZLI_Tavas	0.66	70	*i* P	Pg	15 11 52.5	+0.5
TAVA				*i* S	Sg	15 12 01.2	+0.6
TAVA	DENIZLI_Tavas	0.66	70	P	Pg	15 11 52.5	+0.5
TAVA				S	Sg	15 12 01.2	+0.6
DAT	Datca	0.68	221	PG	Pb	15 11 54.8	+0.6
DAT	Datca	0.68	221	*i* P	Pb	15 11 54.9	+0.7
DAT				*i* S	Sn	15 12 07.6	-0.1
DAT	Datca	0.68	221	*e*Pg	Pb	15 11 54.8	+0.6
DAT				S	Sn	15 12 07.6	-0.1
BODT	Bodrum	0.68	255	PG	Pb	15 11 54.7	+0.6
BODT	Bodrum	0.68	255	*e*Pg	Pb	15 11 54.7	+0.6
AYDB	Zeytinkoy-Aydi	0.73	345	PG	Pb	15 11 55.1	+0.1
AYDB	Zeytinkoy-Aydi	0.73	345	*e*Pg	Pb	15 11 55.1	+0.1
DNZL	Cakiroluk	0.85	58	*i* P	Pg	15 11 56.1	+0.5
DNZL				*i* S	Sb	15 12 09.1	-0.1
DNZL	Cakiroluk	0.85	58	P	Pg	15 11 56.2	+0.5
DNZL				S	Sb	15 12 09.1	-0.1
FETY	Fethiye	0.98	128	PG	Pg	15 11 57.9	-0.2
FETY	Fethiye	0.98	128	*e*Pg	Pg	15 11 57.9	-0.2
ARG	Arkhangelos	1.03	180	PG	Pg	15 11 59.2	+0.2
ARG	Arkhangelos	1.03	180	*e*Pg	Pg	15 11 59.2	+0.2
KULA	Kula-Manisa	1.33	18	PN	Pg	15 12 05.2	+0.2
KULA	Kula-Manisa	1.33	18	*e*Pn	Pg	15 12 05.2	+0.2
AKAS	Kas	1.56	130	PN	Pn	15 12 07.6	-0.8
AKAS	Kas	1.56	130	*e*Pn	Pn	15 12 07.6	-0.8

*ISCJB **14** 15:14:11.3±0.8,16°.24N±0°.09×145°.5E±0°.2,h400^{km},mb3.6/10,Error ellipse: s-maj=29.5km s-min=11.6km az=0.4*

*IDC **14** 15:14:11.4±1.0,16°.25N×145°.66E,h386^{km}±10^{km},mb3.3/10,mb1 3.4/11,mb1mx3.0/65,mbtmp4.0/11,Error ellipse: s-maj=23.7km s-min=13.4km az=83.0*

ISC 14 15:14:12.2±0.8,**16°.2N**±0°.1×**145°.6E**±0°.2,**h400**^{km}**,n12,**σ**0^s.97**/13,**mb3.6**/10,**Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	2.66	194	P	Pn	15 15 13.1	+0.2
	14nm,0.3s,baz=45,slow=4.3,SNR=58						
GUMO				S	S	15 16 00.0	-1.8
	23nm,0.3s,baz=173,slow=23,SNR=12						
WRA	Warramunga Arr	37.55	197	P	P	15 20 51.2	+0.9
	1.0nm,0.3s,baz=20,slow=8.1,SNR=15						
ASAR	Alice Springs	41.21	196	P	P	15 21 21.0	+0.8
	0.8nm,0.5s,baz=17,slow=6.7,SNR=28						
SONM	Songino Array	45.03	323	P	P	15 21 49.8	-0.4
	0.5nm,0.5s,baz=136,slow=7.1,SNR=3.2						
ZALV	Zalesovo Beam	59.92	323	P	P	15 23 37.4	-0.3
	0.8nm,0.4s,baz=74,slow=6.3,SNR=4.0						
MKAR	Makanchi Array	60.11	315	P	P	15 23 40.4	+1.2
	0.8nm,0.4s,baz=90,slow=8.7,SNR=16						
KURBB	Kurchatov Arra	63.09	319	P	P	15 23 59.5	+0.9
	4.8nm,0.6s,baz=97,slow=7.2,SNR=55						
ILAR	Eielson Array	65.96	26	P	P	15 24 16.6	-0.1
	0.5nm,0.4s,baz=246,slow=5.7,SNR=11						
BVAR	Borovoye Array	68.32	321	P	P	15 24 32.4	+0.8
	1.3nm,0.3s,baz=104,slow=6.9,SNR=13						
NVAR	Mina Array Bea	84.80	52	P	P	15 26 03.9	+0.4
	0.3nm,0.6s,baz=275,slow=4.9,SNR=3.6						
FINES	FINESS Array B	89.09	335	P	P	15 26 21.9	-1.2
	1.3nm,0.8s,baz=20,slow=4.4,SNR=3.6						
PTGA	Pitinga	150.53	61	PKPbc	PKPbc	15 33 18.2	-0.3
	1.4nm,0.5s,baz=270,slow=20,SNR=3.3						

MAN 14 15:21:39.0,18°.24N×120°.72E,h65^{km},mb4.4,ML3.3,MS3.1,1D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABRA	Dolores	0.59	181	*e*P	Pn	15 21 54.4	+2.1
ABRA				*e*S	Sn	15 22 05.3	+3.2
APYP	Conner	0.62	127	*e*P	Pn	15 21 54.5	+1.8
APYP				*e*S	Sn	15 22 05.9	+3.2
CVP	Callao Caves	1.18	117	⇓*i*P	Pn	15 22 00.7	+1.2
CVP				*i* S	Sn	15 22 19.9	+5.1
SGCP	Mt. Cagua	1.26	90	*e*P	Pn	15 22 02.0	+1.4
SGCP				*e*S	Sn	15 22 18.0	+1.3
CAUP	Cauayan	1.67	141	*e*P	Pn	15 22 07.8	+1.8
CAUP				*e*S	Sn	15 22 29.0	+2.5
BOLP	Bolinao	2.01	203	*e*P	Pn	15 22 11.1	+0.4
BOLP				*e*S	Sn	15 22 35.6	+0.9
BALP	Baler	2.62	162	*e*P	Pn	15 22 18.8	-0.2
BALP				*e*S	Sn	15 22 52.7	+3.1

IDC 14 16:34:03.6±7.5,**4°.49S**×**152°.25E,h110**^{km}±52^{km}**,mb3.3**/5,**mb1 3.4**/6,**mb1mx3.2**/53,**mbtmp3.7**/6,**Error ellipse: s-maj=87.3km s-min=34.0km az=107.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	7.03	226	P	Pn	16 35 43.5	-0.4
	0.8nm,0.3s,baz=352,slow=14,SNR=3.6						
PMG				S	Sn	16 37 03.7	+1.3
	1.1nm,0.3s,baz=356,slow=19,SNR=2.8						
WRA	Warramunga Arr	23.25	227	P	P	16 39 01.7	+0.2
	1.9nm,0.5s,baz=52,slow=9.8,SNR=25						
ASAR	Alice Springs	26.02	221	P	P	16 39 26.6	+0.1
	0.3nm,0.4s,baz=48,slow=9.7,SNR=11						
FITZ	Fitzroy Crossi	29.33	240	P	P	16 39 56.5	+0.3
	1.8nm,0.7s,baz=47,slow=9.5,SNR=6.9						
MKAR	Makanchi Array	79.73	319	P	P	16 46 00.2	+0.8
	0.4nm,0.7s,baz=103,slow=6.4,SNR=3.7						
KURBB	Kurchatov Arra	83.22	322	P	P	16 46 17.8	+0.1
	0.2nm,0.7s,baz=123,slow=3.4,SNR=3.3						
TORD	Torodi Ar. Bea	149.69	288	PKPbc	PKPbc	16 53 40.0	-1.6
	baz=87,slow=2.7						

*ISK **14** 17:16:03.8,38°.66N×43°.21E,h12^{km}±2^{km},ML2.4/2*

*ISCJB **14** 17:16:04.9±0.6,38°.66N±0°.03×43°.21E±0°.03,h13^{km}±6^{km},Error ellipse: s-maj=5.6km s-min=4.2km az=162.8*

*CSEM **14** 17:16:04.6±0.2,38°.66N×43°.22E,h10^{km},ML2.4,Error ellipse: s-maj=5.2km s-min=4.4km az=151.0*

*DDA **14** 17:16:05.1,38°.67N×43°.26E,h7^{km},Ml3.0*

ISC 14 17:16:04.9±0.9,**38°.66N**±0°.03×**43°.22E**±0°.03,**h14**^{km}±8^{km},**n20,**σ**0^s.73**/39,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VANB	Van	0.15	115	PG	Pg	17 16 08.7	-0.1
VANB				SG	Sg	17 16 12.4	+1.0
VANB	Van	0.15	115	*i* Pg	Pg	17 16 08.7	-0.1
VANB				*e*Sg	Sg	17 16 12.4	+1.0
TVAN	Van	0.20	131	*i* P	Pg	17 16 08.7	-0.8
TVAN				*i* S	Sg	17 16 12.4	-0.3
TVAN	Van	0.20	131	P	Pg	17 16 08.7	-0.8
TVAN				S	Sg	17 16 12.4	-0.3
GEVA	Gevas	0.37	200	*i* P	Pg	17 16 12.1	-0.3
GEVA				*i* S	Sb	17 16 19.4	+0.4
GEVA	Gevas	0.37	200	P	Pg	17 16 12.1	-0.3
GEVA				S	Sb	17 16 19.4	+0.4
ADCV	BITLIS_Adilcev	0.41	291	*i* P	Pb	17 16 13.8	-0.3
ADCV				*i* S	Sb	17 16 21.1	+0.7
ADCV	BITLIS_Adilcev	0.41	291	P	Pb	17 16 13.8	-0.3
ADCV				S	Sb	17 16 21.1	+0.7
VMUR	Van-Muradiye	0.43	40	*i* P	Pg	17 16 13.6	0.0
VMUR				*i* S	Sb	17 16 21.2	+0.3
VMUR	Van-Muradiye	0.43	40	P	Pg	17 16 13.6	0.0
VMUR				S	Sb	17 16 21.2	+0.3
CLDR	Caldiran	0.73	48	PG	Pg	17 16 18.4	-0.8
CLDR				SG	Sb	17 16 29.0	-0.5
CLDR	Caldiran	0.73	48	*i* P	Pg	17 16 18.6	-0.6
CLDR				*i* S	Sb	17 16 29.6	0.0
CLDR	Caldiran	0.73	48	*e*Pg	Pg	17 16 18.4	-0.8
CLDR	Caldiran	0.73	48	P	Pg	17 16 18.6	-0.6
CLDR				*e*Sg	Sb	17 16 29.0	-0.5
AGRB	Hanur-Agry	0.93	349	PG	Pg	17 16 22.2	-0.8
AGRB				SG	Sb	17 16 35.6	+0.2
AGRB	Hanur-Agry	0.93	349	*e*Pg	Pg	17 16 22.2	-0.8
AGRB				*e*Sg	Sb	17 16 35.6	+0.2
GURO	Guroymak-BITLI	0.94	264	PG	Pg	17 16 22.2	-0.8
GURO				SG	Sb	17 16 35.4	+0.1
GURO	Guroymak-BITLI	0.94	264	*e*Pg	Pg	17 16 22.2	-0.8
GURO				*e*Sg	Sb	17 16 35.4	+0.1
EATA	Eleskirt	1.33	335	*i* P	Pn	17 16 28.7	-0.7
EATA				*i* S	Sn	17 16 48.9	+1.9
EATA	Eleskirt	1.33	335	P	Pn	17 16 28.7	-0.7
EATA				S	Sn	17 16 48.9	+1.9

*IDC **14** 17:18:12.8±1.4,3°.04S×136°.34E,h0^{km},mb3.6/4,mb1 3.7/6,mb1mx3.4/44,mbtmp3.6/6,ML3.4/2,Error ellipse: s-maj=62.7km s-min=24.3km az=94.0*

*ISCJB **14** 17:18:16.8±0.6,3°.21S±0°.06×136°.04E±0°.08,h33^{km},mb3.6/3,Error ellipse: s-maj=11.6km s-min=7.7km az=30.0*

*DJA **14** 17:18:18.8±0.8,3°S±10°×13°6E±°,h131^{km}±19^{km},M4.0/7,MLv4.0/7*

ISC 14 17:18:17.8±0.8,**3°.17S**±0°.07×**136°.03E**±0°.07,**h33**^{km}**,n12,**σ**2^s.26**/13,**mb3.7**/3,**Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRPI	Serui, Papua	1.31	9	P	Pb	17 18 42.2	+0.2
BAKI	Biak	1.97	2	P	Pn	17 18 47.1	-1.8
RKPI	Ransiki, Papua	2.48	312	P	Pb	17 19 15.1	+13
FAKI	Fak Fak	3.78	274	P	Pn	17 19 15.2	+1.4
GENI	Genyem	4.18	82	P	Pn	17 19 20.4	+1.1
JAY	Jayapura	4.72	82	P	Pn	17 19 26.7	-0.1
WRA	Warramunga Arr	16.75	186	Pn	Pn	17 22 09.3	-0.8
	0.1nm,0.3s,baz=14,slow=13,SNR=6.1						
WRA				Sn	Sn	17 25 06.0	-9.2
	0.1nm,0.3s,baz=8.0,slow=22,SNR=3.6						
FITZ	Fitzroy Crossi	17.99	214	P	P	17 22 28.1	+2.3
	0.1nm,0.3s,baz=40,slow=16,SNR=4.8						
FITZ				S	Sn	17 25 40.1	-5.1
	0.1nm,0.3s,baz=105,slow=20,SNR=4.2						
ASAR	Alice Springs	20.48	186	P	P	17 22 55.0	+1.9
	1.0nm,0.5s,baz=10.0,slow=11,SNR=37						
ASAR				S	S	17 26 38.0	-2.6
	0.5nm,0.9s,baz=12,slow=23,SNR=3.0						
MKAR	Makanchi Array	68.54	323	P	P	17 29 17.5	+0.3
	0.4nm,0.6s,baz=104,slow=8.1,SNR=5.3						
BVAR	Borovoye Array	78.17	326	P	P	17 30 14.7	+0.8
	0.5nm,0.5s,baz=120,slow=8.5,SNR=4.5						
ILAR	Eielson Array	87.37	25	P	P	17 31 00.6	-0.8
	0.2nm,0.5s,baz=232,slow=5.6,SNR=3.3						

*NIED **14** 17:22:00,28°.60N×129°.60E,h23^{km},Mw3.9 Best double couple: M$_0$7.73000×10^{14} NP1:φ$_s$79.00000°,δ64.00000°,λ-177.00000°. NP2:φ$_s$348.00000°,δ88.00000°,λ-26.00000°.*

*ISCJB **14** 17:22:46.8±0.4,28°.64N±0°.02×129°.65E±0°.04,h28^{km}±3^{km},mb3.5/6,Error ellipse: s-maj=6.6km s-min=3.4km az=19.5*

*JMA **14** 17:22:47.2±0.1,28°.65N×129°.59E,h15^{km}±3^{km},M3.8*

JMA Felt II J1.

*IDC **14** 17:22:49.0±1.7,28°.69N×129°.76E,h44^{km}±18^{km},mb3.3/6,mb1 3.5/10,mb1mx3.2/66,mbtmp3.6/10,ML3.2/4,MS2.6/1,Ms1 2.6/1,ms1mx2.2/30,Error ellipse: s-maj=27.7km s-min=11.4km az=112.0*

ISC 14 17:22:46.3±1.0,**28°.65N**±0°.03×**129°.63E**±0°.04,**h24**^{km}±8^{km},**n34,**σ**1^s.33**/41,**mb3.6**/6,**Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAM	Amami Oshima	0.23	185	P	Pb	17 22 52.3	0.0
JAM				S	Sb	17 22 56.1	-0.2
JZK	Kikaishima	0.45	137	P	Pn	17 22 56.7	-0.6
JZK				S	Sn	17 23 04.1	-0.5
JAMN	Amaminishikomi	0.57	225	P	Pb	17 22 58.0	+0.4
JAMN				*e*S	Sn	17 23 06.2	-1.3
JTAJ	Takarajima	0.63	324	P	Pn	17 22 59.1	-0.7
JTAJ				*e*S	Sn	17 23 07.9	-1.2
JTK	Tokunoshima	1.04	215	P	Pn	17 23 05.3	-0.2
JTK				*e*S	Sn	17 23 19.6	+0.3
JNN	Nakanoshima	1.21	10	P	Pn	17 23 07.3	-0.5
JNN				*e*S	Sn	17 23 23.4	-0.1
JOKE	Okinoerabujima	1.58	216	P	Pb	17 23 14.1	-0.8
JOKE				*e*S	Sb	17 23 34.2	-0.3
JYAK	Yakushimahirau	1.76	26	P	Pb	17 23 17.4	-0.5
JYAK				*e*S	Sb	17 23 39.7	+0.1
JKC	Kuchinoerabu	1.88	15	P	Pn	17 23 16.6	-0.3
JKC				*e*S	Sn	17 23 38.9	-0.9
JYRO	Yoronjima	1.92	213	P	Pb	17 23 19.1	-1.6
JYRO				*e*S	Sb	17 23 43.4	-0.8
JMTN	Minamitane	2.07	32	P	Pb	17 23 21.9	-1.2
JOW	Kunigami	2.17	214	P	Pb	17 23 23.4	-1.4
	20nm,0.3s,baz=86,slow=17,SNR=61						
JOW				S	Sb	17 23 51.2	-0.2
	50nm,0.3s,baz=173,slow=29,SNR=9.6						
JOW	Kunigami	2.17	214	P	Pb	17 23 23.5	-1.4
JIH	Iheya	2.18	223	P	Pn	17 23 22.0	+0.9
JIH				*e*S	Sn	17 23 47.3	0.0
JTN	Tanegashima 3	2.32	30	P	Pb	17 23 25.6	-1.9
JNTH	Nagotoyohara	2.55	214	P	Pb	17 23 28.8	-2.6
JMZ	Minamidaito 2	3.15	153	P	Pn	17 23 35.9	+1.4
JMZ				*e*S	Sn	17 24 10.2	-1.1
JKE	Kume jima 2	3.42	228	P	Pn	17 23 39.9	+1.7
JNU	Nakatsue	4.59	13	P	Pn	17 23 56.8	+2.5
	1.6nm,0.3s,baz=208,slow=2.1,SNR=11						
JNU				S	Sn	17 24 51.1	+4.2
	0.6nm,0.3s,baz=278,slow=7.1,SNR=2.1						
KSRS	Korea Array	8.90	351	LR	LR	17 28 27.8	
	comp=Z,44nm,20.6s,baz=175,slow=38						
MJAR	Matsushiro Arr	10.69	40	P	Pn	17 25 18.1	+0.1
	0.2nm,0.3s,baz=224,slow=14,SNR=4.2						
ASAJ	Asahikawa	18.60	30	P	P	17 27 01.4	-0.4
	0.1nm,0.3s,baz=243,slow=4.5,SNR=2.3						
H11N2	WAKE ISLAND Hy	35.02	96	T	T	18 06 29.8	
	baz=290,slow=75,SNR=9.9						
H11N1	WAKE ISLAND Hy	35.02	96	T	T	18 06 29.0	
	baz=290,slow=75,SNR=8.6						
H11N3	WAKE ISLAND Hy	35.03	96	T	T	18 06 31.2	
	baz=290,slow=75,SNR=9.9						
H11S3	WAKE ISLAND Hy	35.31	98	T	T	18 06 52.5	
	baz=290,slow=76,SNR=7.4						
H11S1	WAKE ISLAND Hy	35.32	98	T	T	18 06 55.7	
	baz=290,slow=76,SNR=3.8						
H11S2	WAKE ISLAND Hy	35.33	98	T	T	18 06 53.6	
	baz=290						
MKAR	Makanchi Array	40.91	310	P	P	17 30 27.6	+0.9

	0.2nm,0.6s,baz=100,slow=9.5,SNR=2.5						
KURBB	**Kurchatov Arra**	**44.01**	**314**	P	**P**	**17 30 52.7**	**+0.9**
	0.2nm,0.5s,baz=103,slow=8.9,SNR=3.2						
FITZ	**Fitzroy Crossi**	**46.63**	**185**	P	**P**	**17 31 12.8**	**-0.1**
	1.1nm,0.7s,baz=5.7,slow=9.5,SNR=3.5						
WRA	**Warramunga Arr**	**48.52**	**174**	P	**P**	**17 31 28.3**	**+0.8**
	0.7nm,0.7s,baz=355,slow=8.0,SNR=5.5						
ASAR	**Alice Springs**	**52.17**	**175**	P	**P**	**17 31 56.4**	**+1.3**
	0.5nm,0.7s,baz=7.1,slow=13,SNR=19						
ILAR	**Eielson Array**	**61.73**	**29**	P	**P**	**17 33 00.5**	**-1.9**
	0.3nm,0.6s,baz=260,slow=5.4,SNR=3.3						

JMA 14 17:32:56.3±0.7**, 45°.51N**×**151°.90E, h30**^{km}**, M4.2, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**4.90**	**246**	P	Pn	17 34 07.1	-0.8
NEM2				*e*S	Sn	17 35 00.3	-3.3
JRA	**Rausu**	**5.08**	**254**	P	Pn	17 34 12.3	+2.0
JNK	**Nakash**	**5.48**	**252**	P	Pn	17 34 16.5	+0.6
JAK	**Akkeshi**	**5.75**	**247**	P	Pn	17 34 18.6	-0.9
JAK				*e*S	Sn	17 35 19.8	-4.7
JTKR	**Abashiri--Toko**	**5.90**	**258**	P	Pn	17 34 24.1	+2.6
JAR	**Ashorobuto**	**6.23**	**252**	P	Pn	17 34 27.3	+1.2
JCH	**Churui**	**6.80**	**248**	P	Pn	17 34 33.7	-0.2
JKB	**Kayabe**	**8.66**	**249**	P	Pn	17 34 59.1	-0.4
JKB				*e*S	Sn	17 36 28.9	-7.2

NIED **14** *17:36:00, 45°.40N×152°.10E, h23^{km}, Mw4.8 Best double couple: $M_0$1.51000×10^{16} NP1:ϕ_s337.00000°, δ63.00000°, λ16.00000°. NP2:ϕ_s240.00000°, δ76.00000°, λ152.00000°.*

ISCJB **14** *17:36:20.8±0.7, 45°.30N±0°.03×151°.95E±0°.02, h8^{km}±4^{km}, mb4.9/302, MS4.5/79, Error ellipse: s-maj=4.7km s-min=1.8km az=161.8*

GCMT **14** *17:36:22.6±0.4, 45°.29N×152°.15E, h21^{km}, MW4.8/64, Moment Tensor Solution. s39,c45; s64,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.25±.14; $M_{\theta\theta}$-1.16±.09; $M_{\phi\phi}$-1.09±.09; $M_{r\theta}$0.48±.15; $M_{\theta\phi}$-0.97±.05; $M_{\phi r}$0.54±.14; Best double couple: $M_0$2.29000×10^{16} NP1:ϕ_s45.00000°, δ54.00000°, λ89.00000°. NP2: ϕ_s227.00000°, δ36.00000°, λ92.00000°. Principal axes: T 2.3690, Plg81.0000°, Azm309.0000°; N -0.1570, Plg1.0000°, Azm46.0000°; P -2.2120, Plg9.0000°, Azm136.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC **14** *17:36:22.6±1.4, 45°.38N×151°.88E, h6^{km}±8^{km}, mb5.0/204 Error ellipse: s-maj=4.1km s-min=2.1km az=162.0*

BJI **14** *17:36:22.5, 45°.33N×151°.66E, h10^{km}, mb5.1/76, mB5.0/59, Ms4.8/79, Ms7 4.6/72*

SKHL **14** *17:36:22.6±0.7, 45°.13N×152°.30E, h40^{km}±10^{km}, mb5.5/8, Ms4.8/6*

JMA **14** *17:36:23.0±0.7, 45°.37N×152°.13E, h30^{km}, M5.1*

MOS **14** *17:36:24.7±1.1, 45°.32N×151°.91E, h33^{km}, mb5.3/87, MS4.6/35, Error ellipse: s-maj=5.2km s-min=3.9km az=104.1*

IDC **14** *17:36:25.6±2.8, 45°.38N×151°.92E, h26^{km}±18^{km}, mb4.6/42, mb1 4.7/47, mb1mx4.6/73, mbtmp4.7/47, ML4.0/3, MS4.3/47, Ms1 4.3/47, ms1mx4.2/73, Error ellipse: s-maj=11.8km s-min=9.2km az=153.0*

ISC 14 17:36:24.3±0.5**, 45°.31N**±0°.04×**151°.97E**±0°.03**, h20**^{km}±2^{km}**, h19**^{km}**:pP-P, n977,** σ1^{s}**34**/1024**, mb5.0**/324**, MS4.6**/81**, 64C-31D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.90**	**270**	*i* P	**Pn**	**17 37 10.0**	**+0.7**
KUR				AMB	AMB	17 37 18.0	
	654nm,0.5s						
KUR				*i* S	**Sn**	**17 37 45.0**	**+1.4**
KUR				A	A	17 38 01.0	
	3µm,0.3s						
KUR				A	A	17 38 01.0	
	348nm,0.3s						
KUR				AMS	AMS	17 38 54.0	
	15µm,14.0s						
KUR				AMS	AMS	17 38 54.0	
	10µm,14.0s						
KUR				AMS	AMS	17 38 54.0	
	11µm,14.0s						
KUR	**Kuril'sk**	**2.90**	**270**	*i* PN	**Pn**	**17 37 10.3**	**+1.0**
KUR				*i* S	**Sn**	**17 37 44.9**	**+1.4**
KUR				pmax	pmax		
	comp=Z,654nm,0.5s						
KUR				smax	smax		
	comp=E,348nm,0.3s						
KUR				smax	smax		
	comp=N,3µm,0.6s						
SHO	**Shikotan**	**3.95**	**250**	*i* P	**Pn**	**17 37 23.7**	**0.0**
SHO				AMB	AMB	17 37 39.0	
	comp=N,219nm,0.6s						
SHO				AMB	AMB	17 37 39.0	
	comp=N,322nm,0.6s						
SHO				AMB	AMB	17 37 39.0	
	comp=N,355nm,0.6s						
SHO				*i* S	**Sn**	**17 38 09.0**	**-0.4**
SHO				A	A	17 38 10.0	
	comp=N,940nm,0.3s						
SHO				A	A	17 38 10.0	
	comp=N,680nm,0.3s						
SHO				AMS	AMS	17 39 40.0	
	comp=N,7µm,18.0s						
SHO				AMS	AMS	17 39 40.0	
	comp=N,10µm,18.0s						
SHO				AMS	AMS	17 39 40.0	
	comp=N,4µm,18.0s						
SHO	**Shikotan**	**3.95**	**250**	*i* PN	**Pn**	**17 37 23.2**	**-0.5**
SHO				*i* S	**Sn**	**17 38 09.0**	**-0.4**
SHO				pmax	pmax		
	comp=Z,355nm,0.6s						
SHO				pmax	pmax		
	comp=E,322nm,0.4s						
SHO				pmax	pmax		
	comp=N,219nm,0.3s						
SHO				smax	smax		
	comp=N,614nm,0.5s						
SHO				smax	smax		
	comp=E,99nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**4.54**	**256**	*i* P	**Pn**	**17 37 32.0**	**+0.1**
YUK				AMB	AMB	17 37 41.0	
	comp=E,589nm,0.4s						
YUK				*i* S	**Sn**	**17 38 24.7**	**+0.7**
YUK				A	A	17 38 48.5	
	comp=E,3µm,0.9s						
YUK				A	A	17 38 48.5	
	comp=E,4µm,0.9s						
YUK				AMS	AMS	17 39 40.0	
	comp=E,6µm,15.0s						
YUK				AMS	AMS	17 39 40.0	
	comp=E,7µm,15.0s						
YUK				AMS	AMS	17 39 40.0	
	comp=E,2µm,15.0s						
YUK	**Yuzh-Kuril'sk**	**4.54**	**256**	*i* PN	**Pn**	**17 37 32.5**	**+0.6**
YUK				*i* S	**Sn**	**17 38 25.5**	**+1.5**
YUK				pmax	pmax		
	comp=Z,589nm,0.4s						
YUK				smax	smax		
	comp=N,583nm,0.4s						
YUK				smax	smax		
	comp=E,286nm,0.5s						
LAGR	**Lagunnoye**	**4.59**	**256**	*i* P	**Pn**	**17 37 33.0**	**+0.5**
LAGR				AMB	AMB	17 37 48.0	
	comp=E,540nm,0.5s						
LAGR				AMB	AMB	17 37 48.0	
	comp=E,255nm,0.5s						
LAGR				AMB	AMB	17 37 48.0	
	comp=E,609nm,0.5s						
LAGR				*i* S	**Sn**	**17 38 26.0**	**+0.8**
LAGR				A	A	17 39 03.0	
	comp=E,3µm,0.8s						
LAGR				A	A	17 39 03.0	
	comp=E,5µm,0.8s						
LAGR	**Lagunnoye**	**4.59**	**256**	*i* PN	**Pn**	**17 37 33.0**	**+0.5**
LAGR				*i* S	**Sn**	**17 38 26.0**	**+0.8**
LAGR				pmax	pmax		
	comp=Z,609nm,0.4s						
LAGR				pmax	pmax		
	comp=N,540nm,0.5s						
LAGR				pmax	pmax		
	comp=E,255nm,0.5s						
LAGR				smax	smax		
	comp=N,3µm,0.7s						
LAGR				smax	smax		
	comp=E,5µm,0.8s						
GRPR	**Tuman**	**4.62**	**256**	*i* P	**Pn**	**17 37 33.0**	**+0.1**
GRPR				AMB	AMB	17 37 46.0	
	comp=E,85nm,0.4s						
GRPR				AMB	AMB	17 37 46.0	
	comp=E,222nm,0.4s						
GRPR				AMB	AMB	17 37 46.0	
	comp=E,519nm,0.4s						
GRPR				*i* S	**Sn**	**17 38 26.0**	**+0.1**
GRPR				A	A	17 38 52.0	
	comp=E,1µm,0.5s						
GRPR				A	A	17 38 52.0	
	comp=E,1µm,0.5s						
GRPR	**Tuman**	**4.62**	**256**	*i* PN	**Pn**	**17 37 33.4**	**+0.5**
GRPR				*i* S	**Sn**	**17 38 26.2**	**+0.3**
GRPR				pmax	pmax		
	comp=Z,519nm,0.2s						
GRPR				pmax	pmax		
	comp=N,85nm,0.4s						
GRPR				pmax	pmax		
	comp=E,222nm,0.3s						
GRPR				smax	smax		
	comp=N,1µm,0.5s						
GRPR				smax	smax		
	comp=E,1µm,0.5s						
NEM2	**Nemuro 2**	**4.87**	**249**	P	**Pn**	**17 37 35.3**	**-1.1**
NEM2				*e*S	**Sn**	**17 38 29.3**	**-2.9**
GLVR	**Golovnino**	**4.88**	**253**	*i* P	**Pn**	**17 37 36.0**	**-0.4**
GLVR				AMB	AMB	17 37 55.0	
	comp=E,308nm,0.5s						
GLVR				AMB	AMB	17 37 55.0	
	comp=E,528nm,0.5s						
GLVR				*i* S	**Sn**	**17 38 33.0**	**+0.8**
GLVR				A	A	17 39 07.0	
	comp=E,314nm,0.6s						
GLVR				A	A	17 39 07.0	
	comp=E,2µm,0.6s						
JRA	**Rausu**	**5.08**	**257**	P	**Pn**	**17 37 40.4**	**+1.2**
JNK	**Nakash**	**5.47**	**254**	P	**Pn**	**17 37 44.9**	**+0.2**
JAK	**Akkeshi**	**5.72**	**249**	P	**Pn**	**17 37 46.9**	**-1.2**
JTKR	**Abashiri--Toko**	**5.91**	**260**	P	**Pn**	**17 37 52.0**	**+1.4**
SKR	**Severo-Kuril's**	**6.05**	**26**	*e*P	**Pn**	**17 37 53.0**	**+0.5**
SKR				AMB	AMB	17 37 54.0	
	comp=E,100nm,1.0s						
SKR				AMB	AMB	17 38 01.0	
	comp=E,492nm,0.7s						
SKR				*e*S	**Sn**	**17 38 57.8**	**-3.3**
SKR				A	A	17 39 28.0	
	comp=E,472nm,0.8s						
SKR				A	A	17 39 28.0	
	comp=E,509nm,0.8s						
SKR				AMS	AMS	17 40 35.0	
	comp=E,9µm,13.0s						
SKR				AMS	AMS	17 40 35.0	
	comp=E,5µm,13.0s						
SKR	**Severo-Kuril's**	**6.05**	**26**	*e*PN	**Pn**	**17 37 53.7**	**+1.2**
SKR				pmax	pmax		
	comp=Z,100nm,0.8s						
SKR				pmax	pmax		
	comp=Z,492nm,0.7s						
SKR				MLR	MLR		
	comp=E,9µm,14.0s						
SKR				MLR	MLR		
	comp=Z,5µm,13.0s						
JAR	**Ashorobuto**	**6.22**	**254**	P	**Pn**	**17 37 55.6**	**+0.7**
JMP	**Maruseppu**	**6.28**	**261**	P	**Pn**	**17 37 57.4**	**+1.6**
JOB	**Onbets**	**6.33**	**251**	P	**Pn**	**17 37 56.4**	**-0.1**
HRK	**Horoka**	**6.60**	**257**	*e*P	**Pn**	**17 38 01.8**	**+1.6**
HRK				*e*S	**Sn**	**17 39 15.8**	**+0.9**
YSS	**Yuzh-Sakhalins**	**6.61**	**288**	*e*P	**Pn**	**17 38 02.9**	**+2.6**
YSS				AMB	AMB	17 38 04.6	
	comp=Z,400nm,5.2s						
YSS				*e*S	**Sn**	**17 39 16.7**	**+1.7**
YSS				AMS	AMS	17 41 48.0	
	comp=Z,1µm,13.0s						
YSS				AMS	AMS	17 41 48.0	
	comp=Z,2µm,13.0s						
YSS				AMS	AMS	17 41 48.0	
	comp=Z,2µm,13.0s						
YSS	**Yuzh-Sakhalins**	**6.61**	**288**	*e*Pn	**Pn**	**17 38 02.4**	**+2.2**
YSS	**Yuzh-Sakhalins**	**6.61**	**288**	⇓ *e*PN	**Pn**	**17 38 02.9**	**+2.6**
YSS				pmax	pmax		
	comp=Z,400nm,5.2s						
YSS				pmax	pmax		
	comp=N,100nm,7.4s						
YSS				pmax	pmax		
	comp=E,400nm,8.0s						
YSS				pmax	pmax		
	comp=Z,20nm,1.1s						
YSS				pmax	pmax		
	comp=N,20nm,0.8s						
YSS				pmax	pmax		
	comp=E,20nm,0.9s						
YSS				MLR	MLR		
	comp=Z,2µm,13.0s						
YSS				MLR	MLR		
	comp=E,2µm,13.0s						
JKK2	**Kamakawa 2**	**6.74**	**261**	P	**Pn**	**17 38 04.0**	**+1.9**
ASAJ	**Asahikawa**	**6.79**	**263**	Pn	**Pn**	**17 38 05.0**	**+2.3**
	comp=E,4.1nm,0.3s,baz=87,slow=16,SNR=52						
ASAJ				LR	LR	17 41 07.3	
	comp=E,2µm,19.8s,baz=76,slow=42						
ASAJ	**Asahikawa**	**6.79**	**263**	*e*Pn	**Pn**	**17 38 04.8**	**+2.1**
ASAJ	**Asahikawa**	**6.79**	**263**	P	**Pn**	**17 38 05.0**	**+2.3**
ASAJ	**Asahikawa**	**6.79**	**263**	PN	**Pn**	**17 38 05.0**	**+2.3**
ASAJ				pmax	pmax		
	comp=Z,4.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,2µm,19.8s						
MYR	**Moyori**	**6.97**	**247**	*e*P	**Pn**	**17 38 04.7**	**-0.6**
JFR	**Furan**	**7.07**	**256**	P	**Pn**	**17 38 07.7**	**+1.1**
JWK2	**Keihoku**	**7.10**	**274**	P	**Pn**	**17 38 11.2**	**+4.2**
JEM	**Erimo**	**7.19**	**246**	P	**Pn**	**17 38 09.0**	**+0.8**
ERM	**Erimo**	**7.19**	**246**	*e*P	**Pn**	**17 38 10.3**	**+2.1**
ERM	**Erimo**	**7.19**	**246**	*e*Pn	**Pn**	**17 38 10.1**	**+1.9**
ERM	**Erimo**	**7.19**	**246**	⇑ *i*PN	**Pn**	**17 38 10.3**	**+2.1**
ERM				pmax	pmax		
	comp=Z,150nm,1.7s						
JAB	**Ashibetsu**	**7.21**	**259**	P	**Pn**	**17 38 10.7**	**+2.2**
JNBK	**Urakawa-nobuka**	**7.33**	**249**	P	**Pn**	**17 38 09.1**	**-1.0**
JBT2	**Biratori 2**	**7.37**	**253**	P	**Pn**	**17 38 10.5**	**-0.2**
JHR	**Hokuryu**	**7.49**	**262**	P	**Pn**	**17 38 14.7**	**+2.4**
JEW	**Eniwo**	**7.97**	**256**	P	**Pn**	**17 38 20.4**	**+1.5**
TYV	**Tymovskoe**	**8.35**	**315**	*e*P	**Pn**	**17 38 26.6**	**+2.5**
TYV				AMB	AMB	17 38 29.1	
	comp=Z,500nm,4.0s						
TYV				*e*S	**Sn**	**17 39 59.5**	**+1.9**
TYV				A	A	17 40 06.7	
	comp=Z,500nm,4.0s						
TYV				AMS	AMS	17 42 03.8	
	comp=Z,3µm,15.0s						
TYV				AMS	AMS	17 42 03.8	
	comp=Z,3µm,15.0s						
TYV	**Tymovskoe**	**8.35**	**315**	*e*PN	**Pn**	**17 38 26.0**	**+1.9**
TYV				pmax	pmax		
	comp=Z,27nm,0.9s						
TYV				pmax	pmax		
	comp=Z,500nm,4.0s						
TYV				MLR	MLR		
	comp=N,3µm,15.0s						
TYV				MLR	MLR		
	comp=Z,3µm,15.0s						
JNB	**Noboribetsu**	**8.39**	**254**	P	**Pn**	**17 38 24.7**	**0.0**
JKB	**Kayabe**	**8.64**	**251**	P	**Pn**	**17 38 27.5**	**-0.7**
JKB				*e*S	**Sn**	**17 39 57.6**	**-7.4**
PEA0B	**Petropavlovsk-**	**8.65**	**24**	*e*Pn	**Pn**	**17 38 27.7**	**-0.6**
PETK	**Petropavlovsk-**	**8.65**	**24**	Pn	**Pn**	**17 38 27.6**	**-0.6**
	baz=189,slow=11						
PETK				LR	LR	17 42 36.1	
	comp=Z,1µm,19.7s,baz=206,slow=43						
PETK	**Petropavlovsk-**	**8.65**	**24**	*e*Pn	**Pn**	**17 38 27.0**	**-1.2**
PET	**Petropavlovsk**	**8.87**	**27**	*e*P	**Pn**	**17 38 30.2**	**-1.0**
PET	**Petropavlovsk**	**8.87**	**27**	*e*Pn	**Pn**	**17 38 27.5**	**-3.7**
PET	**Petropavlovsk**	**8.87**	**27**	⇑ *i*PN	**Pn**	**17 38 30.9**	**-0.3**
PET				pmax	pmax		
	comp=Z,78nm,0.8s						
PET				pmax	pmax		
	comp=Z,200nm,1.8s						
PET				MLR	MLR		
	comp=Z,2µm,14.0s						
PET				MLR	MLR		
	comp=Z,2µm,15.0s						
JOT	**Ohata**	**8.88**	**248**	P	**Pn**	**17 38 29.6**	**-1.7**
JYM2	**Yakumo 2**	**8.99**	**253**	P	**Pn**	**17 38 32.3**	**-0.6**
JSH	**Shimam**	**9.00**	**257**	P	**Pn**	**17 38 34.9**	**+1.8**
JANG	**Nango**	**9.13**	**241**	P	**Pn**	**17 38 32.3**	**-2.5**
JANG				*e*S	Sn	17 40 06.9	-10
JTM	**Tenmabayashi**	**9.17**	**244**	P	**Pn**	**17 38 33.7**	**-1.7**
JTH	**Tanohata**	**9.18**	**238**	P	**Pn**	**17 38 32.7**	**-2.9**
JTH				*e*S	Sn	17 40 07.3	-11
JSR	**Shiriuchi**	**9.22**	**250**	P	**Pn**	**17 38 34.9**	**-1.1**
JOSM	**Okushiri--Mats**	**9.61**	**255**	P	**Pn**	**17 38 40.5**	**-0.9**
JOM	**Ohasama**	**9.82**	**237**	P	**Pn**	**17 38 41.5**	**-2.8**
OFUJ	**Ofunato**	**9.86**	**234**	P	**Pn**	**17 38 42.0**	**-2.8**
OFUJ				*e*S	Sn	17 40 24.1	-11
OKH	**Okha**	**10.12**	**328**	⇑ *i*PN	**Pn**	**17 38 51.8**	**+3.5**
OKH				*i* S	Sn	17 40 53.5	+12
OKH				pmax	pmax		
	comp=Z,300nm,9.2s						
OKH				smax	smax		
	comp=N,300nm,13.0s						
JRG	**Rokugo**	**10.26**	**239**	P	**Pn**	**17 38 47.9**	**-2.4**
JIO	**Ouri**	**10.47**	**233**	P	**Pn**	**17 38 49.9**	**-3.3**
JIO				*e*S	Sn	17 40 37.7	-12
NKL	**Nikolayevsk**	**10.76**	**321**	*e*PN	**Pn**	**17 39 00.5**	**+3.4**
NKL				*e*		17 41 10.0	
NKL				pmax	pmax		
	comp=N,450nm,11.0s						
NKL				pmax	pmax		
	comp=E,500nm,11.0s						
NKL				pmax	pmax		
	comp=Z,850nm,11.0s						
NKL				pmax	pmax		
	comp=N,70nm,1.3s						
NKL				pmax	pmax		
	comp=Z,86nm,1.3s						
NKL				MLR	MLR		
	comp=N,3µm,15.0s						
NKL				MLR	MLR		
	comp=E,700nm,15.0s						
NKL				MLR	MLR		
	comp=Z,4µm,15.0s						
TEY	**Ternei**	**10.86**	**274**	⇑ *e*PN	**Pn**	**17 39 00.0**	**+1.5**
TEY				pmax	pmax		
	comp=E,60nm,0.8s						
TEY				pmax	pmax		
	comp=Z,50nm,0.8s						
JYA	**Atsumi**	**11.32**	**238**	P	**Pn**	**17 39 03.1**	**-1.8**
GRNR	**Gornyy**	**11.74**	**303**	*e*PN	Pn	17 39 16.5	+5.9
GRNR				pmax	pmax		
	comp=Z,52nm,1.0s						
JFY	**Yanaizu**	**12.13**	**234**	P	**Pn**	**17 39 13.6**	**-2.3**
JSD	**Sado**	**12.56**	**239**	P	**Pn**	**17 39 19.5**	**-2.2**
JYT	**Yasato**	**12.72**	**229**	P	**Pn**	**17 39 21.1**	**-2.8**
JRY	**Ryogami san**	**13.57**	**231**	P	**Pn**	**17 39 33.9**	**-1.8**
MAJO	**Matsushiro**	**13.59**	**235**	*e*P	**Pn**	**17 39 35.2**	**-0.7**
MAJO	**Matsushiro**	**13.59**	**235**	*e*Pn	**Pn**	**17 39 32.7**	**-3.1**
MAJO	**Matsushiro**	**13.59**	**235**	*c i*P	**Pn**	**17 39 35.2**	**-0.7**
MAT	**Matsushiro**	**13.59**	**235**	P	**Pn**	**17 39 32.1**	**-3.8**
MAT	**Matsushiro**	**13.59**	**235**	P	**Pn**	**17 39 33.0**	**-2.9**
MAT				*e*S	**Sn**	**17 42 04.2**	**-2.0**
MJAR	**Matsushiro Arr**	**13.59**	**235**	Pn	**Pn**	**17 39 34.4**	**-1.4**
	comp=Z,0.4nm,0.3s,baz=30,slow=11,SNR=17						
MJB9	**Matsu-Tunnel**	**13.59**	**235**	*e*Pn	**Pn**	**17 39 32.3**	**-3.5**
USRK	**Ussuriysk Ar.**	**14.24**	**273**	Pn	**Pn**	**17 39 44.5**	**-0.2**
	baz=86,slow=12						
USRK				LR	LR	17 45 37.3	
	comp=Z,1µm,18.8s,baz=74,slow=39						
KLR	**Kul'dur**	**14.27**	**293**	Pn	**Pn**	**17 39 47.0**	**+1.9**
	comp=Z,0.0nm,0.3s,baz=104,slow=15,SNR=28						
KLR				LR	LR	17 46 00.7	
	comp=Z,180nm,18.1s,baz=100,slow=40						
MA2	**Magadan**	**14.30**	**358**	Pn	**Pn**	**17 39 46.1**	**+0.6**
	comp=Z,3.5nm,0.3s,baz=179,slow=10,SNR=17						
MA2				LR	LR	17 45 28.8	
	comp=Z,970nm,18.1s,baz=182,slow=38						
MA2	**Magadan**	**14.30**	**358**	*e*Pn	**Pn**	**17 39 45.3**	**-0.2**
INU	**Inuyama**	**15.11**	**234**	*e*Pn	**Pn**	**17 39 54.5**	**-2.0**
	comp=Z,34nm,0.9s						
MSHR	**Mys Shultsa**	**15.24**	**267**	*ce*P	**Pn**	**17 39 57.6**	**-0.5**
MDJ	**Mudanjiang**	**15.85**	**275**	P	**Pn**	**17 40 02.9**	**-3.3**
MDJ				pP	P	17 40 06.4	-3.4
MDJ				sP	pP	17 40 11.3	-4.0
MDJ				S	**Sn**	**17 42 59.6**	**-1.6**
MDJ				sS	S	17 43 08.5	-6.9
MDJ				PcS	**PcS**	**17 48 35.3**	**-4.3**
MDJ				pmax	pmax		
	comp=Z,44nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,420nm,11.1s						
MDJ				LR	LR		
	comp=Z,2µm,13.3s						
MDJ				LR	LR		
	comp=Z,580nm,16.9s						
MDJ				LR	LR		
	comp=Z,2µm,17.1s						
MDJ	**Mudanjiang**	**15.85**	**275**	*e*Pn	**Pn**	**17 40 05.3**	**-0.8**
	comp=Z,124nm,0.9s						
JWT	**Wachi**	**16.10**	**237**	P	**Pn**	**17 40 08.0**	**-1.4**
SMY	**Shemya**	**16.26**	**55**	*e*Pn	**Pn**	**17 40 12.2**	**+0.9**
	comp=Z,93nm,1.3s						
SMY	**Shemya**	**16.26**	**55**	*e*P	**Pn**	**17 40 12.2**	**+0.9**
SMY				pmax	pmax		
	comp=Z,93nm,1.3s						
JWZ	**Kozaga**	**17.17**	**232**	P	**P**	**17 40 27.6**	**+3.1**
SEY	**Seymchan**	**17.66**	**1**	Pn	**Pn**	**17 40 26.6**	**-2.2**
	comp=Z,0.5nm,0.3s,baz=173,slow=9.6,SNR=42						
SEY	**Seymchan**	**17.66**	**1**	*e*P	**Pn**	**17 40 27.0**	**-1.8**
SEY	**Seymchan**	**17.66**	**1**	⇑ *i*P	**Pn**	**17 40 27.0**	**-1.8**
ZEA	**Zeya**	**18.05**	**307**	*e*P	**Pn**	**17 40 33.2**	**-0.5**
ZEA				pmax	pmax		
	comp=N,47nm,1.0s						
ZEA				pmax	pmax		
	comp=E,43nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,57nm,1.2s						
ZEA				pmax	pmax		
	comp=E,500nm,8.0s						
ZEA				pmax	pmax		
	comp=Z,600nm,8.0s						
ZEA				pmax	pmax		
	comp=Z,500nm,7.0s						
ZEA				MLR	MLR		
	comp=E,1µm,16.0s						
ZEA				MLR	MLR		
	comp=N,700nm,11.0s						
CN2	**Changchun**	**18.94**	**275**	*e*P	**P**	**17 40 42.0**	**-1.9**
CN2				pmax	pmax		
	comp=N,100nm,0.9s						
CN2				pmax	pmax		
	comp=N,200nm,4.0s						
CN2				LR	LR		
	comp=N,860nm,20.0s						
CN2				LR	LR		
	comp=N,970nm,20.0s						
CN2				LR	LR		
	comp=N,1µm,20.0s						
KSRS	**Korea Array**	**19.63**	**255**	P	**P**	**17 40 51.9**	**+0.4**
	comp=N,0.4nm,0.3s,baz=59,slow=11,SNR=32						
KS01	**Wonju Array Si**	**19.64**	**255**	*e*P	**P**	**17 40 52.1**	**+0.6**
KS15	**Wonju Array Si**	**19.66**	**255**	*e*P	**Pn**	**17 40 53.7**	**+0.4**
KSAR	**Wonju Array Be**	**19.66**	**255**	P	**P**	**17 40 51.9**	**0.0**
KSAR	**Wonju Array Be**	**19.66**	**255**	P	**P**	**17 40 51.9**	**0.0**
JNU	**Nakatsue**	**20.31**	**240**	P	**P**	**17 41 00.3**	**+1.4**
	comp=N,17nm,0.8s,baz=52,slow=11,SNR=2.6						
JNU				LR	LR	17 51 10.7	
	comp=N,610nm,18.1s,baz=301,slow=44						
JNU	**Nakatsue**	**20.31**	**240**	*e*P	Pn	17 41 02.3	+1.2
	comp=N,230nm,1.8s						
INCN	**Inchon**	**20.50**	**256**	*e*P	**P**	**17 41 02.1**	**+1.1**
	comp=N,50nm,0.8s						
INCN	**Inchon**	**20.50**	**256**	*e*P	**P**	**17 41 02.1**	**+1.1**
INCN				pmax	pmax		
	comp=Z,50nm,0.8s						
TJN	**Taejon**	**20.58**	**253**	⇑ *i*P	**P**	**17 41 01.4**	**-0.4**
YAK	**Yakutsk**	**21.14**	**330**	P	**P**	**17 41 06.1**	**-1.5**
	comp=Z,83nm,0.7s,baz=178,slow=0.8,SNR=16						
YAK				LR	LR	17 50 12.3	
	comp=Z,606nm,18.6s,baz=106,slow=39						
YAK	**Yakutsk**	**21.14**	**330**	*e*P	**P**	**17 41 06.1**	**-1.5**
	comp=Z,112nm,0.8s						
YAK	**Yakutsk**	**21.14**	**330**	*e*P	**P**	**17 41 05.0**	**-2.6**
YAK				*e**PP	**sP**	**17 41 16.4**	**+0.6**
YAK				*e*S	**S**	**17 44 57.4**	**-4.3**
YAK				*e**SS	**pS**	**17 45 10.8**	**-1.0**
YAK				*e*SS	**SnSn**	**17 45 17.6**	**-5.8**
YAK				pmax	pmax		

	comp=Z,103nm,0.9s						
YAK				pmax	pmax		
	comp=N,17nm,1.4s						
YAK				pmax	pmax		
	comp=E,22nm,1.0s						
YAK				smax	smax		
	comp=N,67nm,1.5s						
YAK				smax	smax		
	comp=E,65nm,1.7s						
YAK				MLR	MLR		
	comp=Z,667nm,18.0s						
YAK				MLR	MLR		
	comp=N,701nm,18.0s						
YAK				MLR	MLR		
	comp=E,596nm,18.0s						
GSTR	Great Sitkin T	22.03	61	eP	P	17 41 15.2	-2.1
HIA	Hailar	22.12	292	eP	P	17 41 14.7	-3.7
	comp=E,22nm,0.9s						
HIA	Hailar	22.12	292	eP	P	17 41 14.7	-3.7
HIA				pmax	pmax		
	comp=Z,22nm,0.9s						
DL2	Dalian	23.31	265	P	P	17 41 31.4	+0.5
DL2				S	S	17 45 43.8	+1.4
DL2				pmax	pmax		
	comp=Z,39nm,1.2s						
DL2				pmax	pmax		
	comp=Z,230nm,3.6s						
DL2				LR	LR		
	comp=Z,580nm,14.7s						
DL2				LR	LR		
	comp=Z,370nm,16.1s						
DL2				LR	LR		
	comp=Z,690nm,15.3s						
BJI	Beijing	26.69	271	P	P	17 42 02.1	+0.2
BJI				pmax	pmax		
	comp=Z,22nm,0.9s						
BJI				LR	LR		
	comp=Z,1µm,13.6s						
BJI				LR	LR		
	comp=Z,1µm,14.4s						
BJI				LR	LR		
	comp=Z,990nm,20.8s						
BJT	Baijiatuau	26.70	271	eP	P	17 42 00.3	-1.8
	comp=Z,52nm,1.0s						
BJT	Baijiatuau	26.70	271	eP	P	17 42 00.3	-1.8
BJT				pmax	pmax		
	comp=Z,52nm,1.0s						
TIA	Tai’an	27.74	263	P	P	17 42 16.4	+5.0
TIA				S	S	17 46 57.3	+4.5
TIA				pmax	pmax		
	comp=Z,26nm,0.8s						
TIA				pmax	pmax		
	comp=Z,160nm,5.7s						
TIA				LR	LR		
	comp=Z,620nm,14.9s						
TIA				LR	LR		
	comp=Z,310nm,15.3s						
TIA				LR	LR		
	comp=Z,320nm,14.2s						
SSE	Sheshan	27.85	250	P	P	17 42 11.6	-0.8
SSE				S	S	17 46 56.4	+1.8
SSE				pmax	pmax		
	comp=Z,42nm,0.7s						
SSE				pmax	pmax		
	comp=Z,250nm,10.6s						
SSE				LR	LR		
	comp=Z,340nm,13.6s						
SSE				LR	LR		
	comp=Z,420nm,13.3s						
H11N2	WAKE ISLAND Hy	28.35	149	T	T	18 12 58.7	
	baz=338,slow=75,SNR=45						
H11N1	WAKE ISLAND Hy	28.36	149	T	T	18 12 59.3	
	baz=338,slow=75,SNR=49						
H11N3	WAKE ISLAND Hy	28.37	149	T	T	18 12 59.9	
	baz=338,slow=75,SNR=52						
NJ2	Nanjing	28.83	254	eP	P	17 42 21.0	-0.1
NJ2				sP	sP	17 42 29.5	0.0
NJ2				S	S	17 47 11.5	+1.5
NJ2				pmax	pmax		
	comp=Z,14nm,0.6s						
NJ2				LR	LR		
	comp=Z,1µm,14.1s						
NJ2				LR	LR		
	comp=Z,1µm,12.5s						
NJ2				LR	LR		
	comp=Z,2µm,15.2s						
H11S1	WAKE ISLAND Hy	29.41	151	T	T	18 14 18.8	
	baz=338,slow=76,SNR=36						
H11S3	WAKE ISLAND Hy	29.42	151	T	T	18 14 19.3	
	baz=338,slow=76,SNR=23						
H11S2	WAKE ISLAND Hy	29.43	151	T	T	18 14 18.8	
	baz=338,slow=76,SNR=46						
HHC	Hu-ho-hao-te	29.62	276	eP	P	17 42 29.5	+1.2
HHC				PP	PnPn	17 43 22.3	-0.9
HHC				S	S	17 47 21.5	-1.1
HHC				sS	sS	17 47 34.4	+1.9
HHC				SS	SnSn	17 48 46.8	-4.6
HHC				pmax	pmax		
	comp=Z,100nm,1.0s						
HHC				pmax	pmax		
	comp=Z,290nm,4.1s						
HHC				LR	LR		
	comp=Z,1µm,12.8s						
HHC				LR	LR		
	comp=Z,2µm,12.8s						
HHC				LR	LR		
	comp=Z,2µm,11.7s						
TIY	Taiyuan	30.32	270	eP	P	17 42 35.8	+1.4
TIY				S	S	17 47 36.9	+3.3
TIY				pmax	pmax		
	comp=Z,42nm,0.8s						
TIY				pmax	pmax		
	comp=Z,140nm,5.5s						
TIY				LR	LR		
	comp=Z,270nm,11.8s						
TIY				LR	LR		
	comp=Z,450nm,12.9s						
TIY				LR	LR		
	comp=Z,490nm,13.4s						
ULN	Ulaanbaatar	30.65	291	eP	P	17 42 36.8	-0.5
ULN	Ulaanbaatar	30.65	291	eP	P	17 42 36.1	-1.2
	comp=Z,18nm,0.8s						
ULN	Ulaanbaatar	30.65	291	⇑iP	P	17 42 36.8	-0.5
ULN				pmax	pmax		
	comp=Z,26nm,1.0s						
BTO	Baotou	30.80	276	eP	P	17 42 37.8	-0.9
SONA1	Songino Array	31.08	291	eP	P	17 42 39.4	-1.7
SONM	Songino Array	31.09	291	P	P	17 42 40.6	-0.5
	comp=Z,15nm,0.8s,baz=75,slow=6.7,SNR=80						
SONM				LR	LR	17 56 44.5	
	comp=Z,1µm,18.2s,baz=72,slow=39						
TLY	Talaya	32.16	299	eP	P	17 42 49.4	-0.9
	comp=Z,14nm,0.8s						
TLY	Talaya	32.16	299	eP	P	17 42 49.5	-0.9
TLY				pmax	pmax		
	comp=Z,14nm,0.9s						
TLY				MLR	MLR		
	comp=Z,1µm,19.0s						
GUMO	Guam	32.19	193	LR	LR	17 55 29.0	
	comp=Z,410nm,19.4s,baz=20,slow=36						
RDOG	Red Dog Mine	32.46	30	eP	P	17 42 53.8	+1.0
	comp=Z,11nm,0.8s						
ZAK	Zakamensk	32.59	297	eP	P	17 42 53.2	-1.1
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.2s						
WHN	Wuhan	32.81	256	P	P	17 42 56.3	+0.1
WHN				sP	sP	17 43 10.8	+6.1
WHN				S	S	17 48 17.6	+5.3
WHN				LR	LR		
	comp=Z,1µm,11.8s						
WHN				LR	LR		
	comp=Z,3µm,17.6s						
WHN				LR	LR		
	comp=Z,3µm,17.8s						
TPUB	Ta-pu	33.62	240	eP	P	17 43 04.0	+0.6
	comp=Z,40nm,1.2s						
QZH	Quanzhou	33.69	244	⇑iP	P	17 43 03.8	-0.1
QZH				S	S	17 48 25.3	-0.7
QZH				pmax	pmax		
	comp=Z,190nm,4.4s						
QZH				LR	LR		
	comp=Z,460nm,17.0s						
QZH				LR	LR		
	comp=Z,310nm,16.7s						
QZH				LR	LR		
	comp=Z,430nm,15.8s						
TWG	Pinlang	33.71	239	eP	P	17 43 04.5	+0.4
	comp=Z,155nm,1.0s						
SVW2	Sparrevohn	34.08	43	eP	P	17 43 08.3	+1.3
	comp=Z,4.8nm,0.8s						
XAN	Xi’an	34.61	266	P	P	17 43 12.3	+0.3
XAN				pmax	pmax		
	comp=Z,110nm,0.9s						
XAN				pmax	pmax		
	comp=Z,120nm,4.8s						
XAN				LR	LR		
	comp=Z,350nm,15.3s						
XAN				LR	LR		
	comp=Z,670nm,14.9s						
XAN				LR	LR		
	comp=Z,630nm,13.9s						
RSO	Redoubt South	35.45	45	eP	P	17 43 20.1	+1.1
KDAK	Kodiak Island	35.63	49	P	P	17 43 19.9	-0.5
	comp=Z,13nm,0.8s,baz=327,slow=0.8,SNR=8.7						
KDAK	Kodiak Island	35.63	49	eP	P	17 43 20.2	-0.2
KDAK	Kodiak Island	35.63	49	eP	P	17 43 19.9	-0.5
	comp=Z,14nm,0.8s						
KDAK	Kodiak Island	35.63	49	i P	P	17 43 20.2	-0.2
PPLA	Purkeypile	35.77	40	eP	P	17 43 23.1	+1.4
	comp=Z,22nm,1.1s						
SPU	Mount Spurr	35.79	43	eP	P	17 43 22.9	+1.1
CAST	Castle Rocks	35.85	40	eP	P	17 43 23.4	+1.1
	comp=Z,5.2nm,0.9s						
SKT	Skwentna	36.05	42	eP	P	17 43 25.3	+1.3
	comp=Z,8.1nm,1.1s						
CNPM	China Poot	36.23	46	eP	P	17 43 25.8	+0.2
	comp=Z,14nm,1.0s						
ENH	Enshi	36.33	260	eP	P	17 43 26.0	-0.8
	comp=Z,30nm,1.3s						
BPAW	Bear Paw Mtn.	36.37	38	eP	P	17 43 27.6	+0.8
	comp=Z,8.6nm,1.0s						
KTH	Kantishna Hill	36.37	39	eP	P	17 43 27.7	+0.9
	comp=Z,26nm,1.1s						
BRLK	Bradley Lake	36.40	46	eP	P	17 43 27.4	+0.4
	comp=Z,21nm,1.3s						
SUA	Susitna One	36.42	43	eP	P	17 43 26.3	-1.0
	comp=Z,47nm,2.0s						
MLY	Manley	36.54	37	eP	P	17 43 28.3	+0.1
	comp=Z,6.4nm,1.0s						
TRF	Thorofare Moun	36.65	40	eP	P	17 43 29.7	+0.4
	comp=Z,9.1nm,1.0s						
RC01	Rabbit Creek A	36.91	43	eP	P	17 43 31.0	-0.3
	comp=Z,8.3nm,0.8s						
COLD	Coldfoot	36.97	33	eP	P	17 43 32.1	+0.4
	comp=Z,14nm,1.1s						
BWN	Browne	37.04	38	eP	P	17 43 34.0	+1.6
	comp=Z,43nm,1.0s						
LZH	Lanzhou	37.15	273	⇑P	P	17 43 35.3	+1.4
LZH				pP	sP	17 43 42.8	+0.4
LZH				sP	pP	17 43 44.8	+4.9
LZH				PP	PnPn	17 45 02.6	+3.6
LZH				eS	S	17 49 19.3	-0.1
LZH				sS	sS	17 49 29.4	0.0
LZH				pmax	pmax		
	comp=Z,59nm,1.0s						
LZH				pmax	pmax		
	comp=Z,320nm,4.9s						
LZH				LR	LR		
	comp=Z,1µm,13.0s						
LZH				LR	LR		
	comp=Z,860nm,13.2s						
LZH				LR	LR		
	comp=Z,1µm,15.3s						
PMR	Palmer	37.19	43	eP	P	17 43 33.9	+0.2
	comp=Z,6.3nm,0.9s						
PMR	Palmer	37.19	43	eP	P	17 43 33.9	+0.2
PMR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MCK	McKinley	37.26	39	eP	P	17 43 34.7	+0.4
	comp=Z,9.9nm,1.0s						
MCK	McKinley	37.26	39	eP	P	17 43 34.7	+0.4
MCK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GHO	Glory Hole Cre	37.28	42	eP	P	17 43 34.8	+0.2
	comp=Z,13nm,1.0s						
TOLK	Toolik Lake Re	37.38	31	P	P	17 43 36.2	+0.9
	baz=262						
TOLK	Toolik Lake Re	37.38	31	eP	P	17 43 35.1	-0.2
	comp=Z,11nm,0.8s						
SML	Sawmill	37.56	42	eP	P	17 43 37.3	+0.4
	comp=Z,42nm,1.1s						
SML	Sawmill	37.56	42	eP	P	17 43 37.3	+0.4
SML				pmax	pmax		
	comp=Z,42nm,1.1s						
MDM	Murphy Dome	37.60	37	eP	P	17 43 37.8	+0.6
	comp=Z,10nm,0.9s						
WRH	Wood River Hil	37.65	38	eP	P	17 43 37.7	+0.2
	comp=Z,7.8nm,1.0s						
COLA	College	37.76	37	eP	P	17 43 38.7	+0.3
	comp=Z,29nm,1.2s						
COLA	College	37.76	37	eP	P	17 43 38.7	+0.3
COLA				pmax	pmax		
	comp=Z,29nm,1.2s						
CCB	Clear Creek Bu	37.77	38	eP	P	17 43 39.3	+0.7
	comp=Z,11nm,1.3s						
DHY	Denali Highway	37.97	40	eP	P	17 43 40.5	0.0
	comp=Z,42nm,1.9s						
SCM	Sheep Creek Mo	38.04	42	eP	P	17 43 41.3	+0.3
	comp=Z,17nm,1.0s						
SCM	Sheep Creek Mo	38.04	42	eP	P	17 43 41.3	+0.3
SCM				pmax	pmax		
	comp=Z,17nm,1.0s						
HDA	Harding Lake	38.14	38	eP	P	17 43 42.1	+0.4
	comp=Z,7.3nm,0.9s						
IL1	Eielson Array	38.17	37	eP	P	17 43 41.1	-0.8
ILAR	Eielson Array	38.17	37	P	P	17 43 42.1	+0.1
	comp=Z,9.6nm,1.2s,baz=252,slow=7.2,SNR=34						
ILAR				LR	LR	18 00 57.8	
	comp=Z,315nm,20.1s,baz=295,slow=39						
ILB	Eielson Array	38.17	37	eP	P	17 43 42.1	+0.1
GZH	Guangzhou	38.38	248	P	P	17 43 40.4	-3.7
GZH				S	S	17 49 30.8	-7.1
GZH				LR	LR		
	comp=Z,700nm,14.6s						
GZH				LR	LR		
	comp=Z,520nm,14.5s						
GTA	Gaotai	38.42	280	⇑P	P	17 43 45.8	+1.2
GTA				pP	sP	17 43 52.9	-0.2
GTA				sP	pP	17 43 57.6	+7.0
GTA				S	S	17 49 42.3	+3.7
GTA				sS	sS	17 49 53.0	+4.4
GTA				pmax	pmax		
	comp=Z,100nm,0.9s						
GTA				pmax	pmax		
	comp=Z,190nm,5.4s						
GTA				LR	LR		
	comp=Z,660nm,14.6s						
GTA				LR	LR		
	comp=Z,680nm,13.6s						
GTA				LR	LR		
	comp=Z,950nm,13.6s						
KLU	Klutina	38.73	43	eP	P	17 43 47.2	+0.4
	comp=Z,14nm,1.0s						
DIV	Divide	38.83	43	eP	P	17 43 48.4	+0.8
	comp=Z,14nm,0.9s						
FYU	Fort Yukon	38.88	35	eP	P	17 43 49.5	+1.6
	comp=Z,27nm,1.0s						
EYAK	Cordova Ski Ar	38.90	44	eP	P	17 43 48.8	+0.6
	comp=Z,0.3nm,1.0s						
HARP	HAARP	39.02	41	eP	P	17 43 49.6	+0.4
	comp=Z,19nm,1.0s						
BMRM	Bremner River	39.42	43	eP	P	17 43 52.5	0.0
	comp=Z,12nm,0.9s						
RAGM	Ragged Mountai	39.45	44	eP	P	17 43 53.6	+0.8
	comp=Z,42nm,1.5s						
CD2	Chengdu	39.98	266	⇑P	P	17 43 58.0	+0.5
CD2				pP	sP	17 44 04.6	-1.4
CD2				sP	pP	17 44 07.4	+3.8
CD2				PP	PP	17 45 29.8	+0.4
CD2				S	S	17 50 02.0	+0.1
CD2				sS	sS	17 50 13.3	+1.4
CD2				pmax	pmax		
	comp=Z,70nm,0.6s						
CD2				pmax	pmax		
	comp=Z,170nm,6.4s						
CD2				LR	LR		
	comp=Z,620nm,18.9s						
CD2				LR	LR		
	comp=Z,580nm,14.5s						
CD2				LR	LR		
	comp=Z,450nm,14.0s						
TGL	Tana Glacier	40.30	44	eP	P	17 43 59.6	-0.4
	comp=Z,23nm,1.3s						
BALM	Baldy	40.50	43	eP	P	17 44 02.5	+1.0
	comp=Z,11nm,1.0s						
BALM	Baldy	40.50	43	eP	P	17 44 02.6	+1.0
BALM				pmax	pmax		
	comp=Z,11nm,1.0s						
EGAK	Eagle	40.62	37	eP	P	17 44 02.2	-0.1
GYA	Guiyang	40.63	258	⇑iP	P	17 44 03.1	0.0
GYA				pP	sP	17 44 11.3	-0.3
GYA				PP	PnPn	17 45 41.0	+0.3
GYA				S	S	17 50 11.8	-0.2
GYA				sS	sS	17 50 22.6	+0.6
GYA				SS	SS	17 53 05.5	-6.7
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,5.0s						
GYA				LR	LR		
	comp=Z,240nm,16.2s						
GYA				LR	LR		
	comp=Z,250nm,16.2s						
GYA				LR	LR		
	comp=Z,380nm,18.7s						
DAWY	Dawson	41.46	38	eP	P	17 44 10.2	+0.9
	comp=Z,6.3nm,1.0s						
ZAA0	Zalesovo Array	42.82	307	eP	P	17 44 19.1	-1.4
	comp=Z,5.0nm,1.0s						
ZALV	Zalesovo Beam	42.82	307	P	P	17 44 18.5	-2.0
	comp=Z,4.3nm,0.8s,baz=75,slow=6.7,SNR=12						
ZALV				PcP	PcP	17 46 10.6	-0.8
	comp=Z,2.2nm,0.6s,baz=99,slow=2.6,SNR=4.1						
ZALV				LR	LR	18 03 28.0	
	comp=Z,1µm,18.3s,baz=70,slow=38						
JOHN	Johnston Islan	42.95	119	eP	P	17 44 23.0	+1.1
	comp=Z,172nm,0.9s						
INK	Inuvik	43.29	31	P	P	17 44 25.2	+1.1
	comp=Z,12nm,0.9s,baz=272,slow=8.0,SNR=22						
INK	Inuvik	43.29	31	eP	P	17 44 24.8	+0.7
	comp=Z,19nm,1.1s						
INK	Inuvik	43.29	31	eP	P	17 44 24.8	+0.7
INK				pmax	pmax		
	comp=Z,19nm,1.1s						
NVS	Novosibirsk	43.44	308	eP	P	17 44 25.4	-0.1
NVS				e		17 46 05.5	
NVS				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KMI	Kunming	44.20	260	P	P	17 44 32.8	+0.5
KMI				pP	sP	17 44 39.5	-1.3
KMI				PP	PP	17 46 16.3	+1.0
KMI				S	S	17 51 03.6	-1.2
KMI				SS	SS	17 54 14.6	-8.2
KMI				pmax	pmax		
	comp=Z,13nm,1.0s						
KMI				pmax	pmax		
	comp=Z,75nm,3.8s						
KMI				LR	LR		
	comp=Z,320nm,15.7s						
KMI				LR	LR		
	comp=Z,410nm,14.9s						
KMI				LR	LR		
	comp=Z,530nm,16.5s						
WMQ	Urumqi	44.72	292	P	P	17 44 37.5	+1.5
WMQ				pP	sP	17 44 43.6	-1.0
WMQ				S	S	17 51 11.3	-0.3
WMQ				ScS	ScS	17 54 34.3	+1.9
WMQ				pmax	pmax		
	comp=Z,49nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,280nm,3.6s						
WMQ				LR	LR		
	comp=Z,2µm,14.9s						
WMQ				LR	LR		
	comp=Z,860nm,14.9s						
WMQ				LR	LR		
	comp=Z,690nm,18.1s						
BESE	Bessie Mountai	44.72	45	eP	P	17 44 35.2	-0.6
	comp=Z,8.0nm,1.0s						
JIS	Juneau Island	45.04	46	eP	P	17 44 39.4	+1.2
	comp=Z,14nm,1.1s						
MK31	Makanchi Array	46.91	298	eP	P	17 44 52.1	-1.1
MK31	Makanchi Array	46.91	298	eP	P	17 44 52.1	-1.1
MKAR	Makanchi Array	46.91	298	P	P	17 44 52.5	-0.6
	comp=Z,19nm,0.9s,baz=70,slow=7.0,SNR=49						
MKAR				ScP	ScP	17 50 16.9	-1.3
	comp=Z,0.8nm,0.8s,baz=57,slow=4.5,SNR=4.4						
MKAR				LR	LR	18 06 06.4	
	comp=Z,1µm,18.1s,baz=68,slow=38						
MKAR	Makanchi Array	46.91	298	eP	P	17 44 52.4	-0.8
	comp=Z,101nm,0.8s						
MKAR				ScP	ScP	17 50 16.9	-1.3
MK01	Makanchi Array	46.91	298	eP	P	17 44 52.0	-1.2
MAKZ	Makanchi	47.09	298	eP	P	17 44 53.6	-1.1
	comp=Z,13nm,0.8s						
MAKZ	Makanchi	47.09	298	eP	P	17 44 53.6	-1.1
MAKZ				pmax	pmax		
	comp=Z,13nm,0.8s						
DLBC	Dease Lake	47.17	45	P	P	17 44 55.1	0.0
	comp=Z,4.4nm,0.7s,baz=269,slow=9.3,SNR=5.2						
DLBC	Dease Lake	47.17	45	eP	P	17 44 56.3	+1.2
	comp=Z,7.4nm,0.9s						
KURK	Kurchatov	47.51	304	eP	P	17 44 56.2	-1.5
KURK	Kurchatov	47.51	304	eP	P	17 44 56.0	-1.8
	comp=Z,12nm,0.8s						
KURK				PcP	PcP	17 46 27.8	+0.2
KURK	Kurchatov	47.51	304	c iP	P	17 44 56.2	-1.5
KURK				pmax	pmax		
	comp=Z,14nm,0.8s						
KURBB	Kurchatov Arra	47.60	304	P	P	17 44 57.0	-1.5
	comp=Z,11nm,0.9s,baz=71,slow=8.6,SNR=41						
KURBB				PcP	PcP	17 46 27.8	-0.1
	comp=Z,2.2nm,0.8s,baz=68,slow=3.8,SNR=3.1						
NONG	Nongkai	48.68	252	P	P	17 45 08.5	+1.3
	comp=Z,0.5nm,0.8s						
SKNT	Sakolnakorn	48.89	251	P	P	17 45 10.1	+1.3
	comp=Z,7.3nm,1.1s						
ZIRO	ZIRO	48.95	269	eP	P	17 45 10.5	+1.0
MOKO	MOKOCHONG	49.22	268	eP	P	17 45 12.5	+1.1
ITAN	ITANAGAR	49.27	269	eP	P	17 45 12.1	+0.5
LSA	Lhasa	49.56	274	eP	P	17 45 15.8	+1.4
	comp=Z,20nm,0.8s						
LSA	Lhasa	49.56	274	i P	P	17 45 16.3	+1.9
	SNR=14						
LSA	Lhasa	49.56	274	eP	P	17 45 15.8	+1.4
LSA				pmax	pmax		
	comp=Z,20nm,0.8s						
KOHI	KOHIMA	49.88	267	eP	P	17 45 17.1	+0.6
PAYA	Payao	50.01	257	P	P	17 45 19.5	+2.2
	comp=Z,7.7nm,0.8s						
KHON	Khomkaen	50.12	251	P	P	17 45 19.8	+1.6
	comp=Z,7.3nm,0.5s,comp=Z,2µm						
CMAI	Chiengmai2	50.18	258	P	P	17 45 19.9	+1.0
	comp=Z,2.1nm,1.2s,comp=Z,2µm						
PDGK	Podgornoye	50.25	295	P	P	17 45 18.8	-0.3
PDGK				pmax	pmax		
	comp=Z,30nm,1.0s						
TEZP	TEZPUR	50.25	269	eP	P	17 45 19.6	+0.5
LAMP	Lampang	50.74	256	P	P	17 45 26.5	+3.6
	comp=Z,6.6nm,0.8s,comp=Z,66nm						
CMMT	Chiang Mai	51.01	257	P	P	17 45 26.1	+1.1
	comp=Z,17nm,1.3s						
CHTO	Chiang Mai	51.01	257	eP	P	17 45 24.9	0.0
	comp=Z,58nm,1.6s						
CHTO	Chiang Mai	51.01	257	eP	P	17 45 25.2	+0.2
CHTO				pmax	pmax		
	comp=Z,57nm,1.6s						
CHTO	Chiang Mai	51.01	257	P	P	17 45 26.1	+1.1
	comp=Z,77nm,1.4s						
BVA0	Borovoye Array	51.16	310	i P	P	17 45 23.7	-2.0
BVA0				pmax	pmax		
	comp=Z,9.0nm,1.1s						
BVAR	Borovoye Array	51.16	310	P	P	17 45 24.7	-1.0
	comp=Z,4.7nm,0.7s,baz=50,slow=7.7,SNR=27						
BVAR				PcP	PcP	17 46 41.2	+0.3
	comp=Z,2.9nm,0.7s,baz=66,slow=3.5,SNR=3.6						
BVAR				ScP	ScP	17 50 34.9	-1.2
	comp=Z,0.7nm,0.8s,baz=72,slow=0.5,SNR=3.0						
BVAR				LR	LR	18 09 26.5	
	comp=Z,641nm,18.3s,baz=60,slow=39						
PBKT	Sadao Pong	51.20	253	P	P	17 45 28.2	+1.9
	comp=Z,7.4nm,1.4s						
BRVK	Borovoye	51.20	310	eP	P	17 45 24.7	-1.3
BRVK	Borovoye	51.20	310	eP	P	17 45 24.6	-1.3
	comp=Z,12nm,1.0s						
BRVK	Borovoye	51.20	310	⇓iP	P	17 45 24.7	-1.3
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CMAR	Chiang Mai Arr	51.26	256	P	P	17 45 27.9	+1.0
	comp=Z,3.0nm,0.7s,baz=40,slow=7.3,SNR=28						

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CMAR                                    LR       LR        18 10 23.1
       comp=Z,348nm,18.1s,baz=44,slow=40
CM01   Chiang Mai Arr    51.27 256  eP      P         17 45 27.2 +0.3
GUWA   GUWAHATI          51.29 270  eP      P         17 45 27.1 +0.1
PRZ    Przheval'sk       51.36 295  eP      P         17 45 29.0 +1.5
       comp=Z,51nm,0.8s
PRZ    Przheval'sk       51.36 295  eP      P         17 45 29.0 +1.5
PRZ                                 pmax    pmax
       comp=Z,51nm,0.8s
SHL    Shillong          51.54 269  eP      P         17 45 29.2 +0.1
       comp=Z,68nm,0.9s
SHL    Shillong          51.54 269  eP      P         17 45 28.8  -0.3
SHL    Shillong          51.54 269  eP      P         17 45 29.2 +0.1
SHL                                 pmax    pmax
       comp=Z,68nm,0.9s
SRAK   Srakaew           52.31 250  P       P         17 45 33.2  -1.4
       comp=Z,41nm,0.9s,comp=Z,454nm
KDJ    Kajisay           52.32 295  eP      P         17 45 35.5 +0.8
       comp=Z,66nm,0.8s
RES    Resolute Bay      52.45  18  P       P         17 45 33.8  -1.1
       comp=Z,10.0nm,0.9s,baz=318,slow=11,SNR=3.9
RES    Resolute Bay      52.45  18  eP      P         17 45 34.5  -0.4
       comp=Z,14nm,1.0s
YKW3   Yellowknife Ar    52.52  36  eP      P         17 45 36.3 +0.7
       comp=Z,11nm,0.9s
YKA    Yellowknife Ar    52.55  36  P       P         17 45 37.3 +1.5
       comp=Z,5.2nm,0.9s,baz=300,slow=7.3,SNR=12
TURI   Tura              52.65 270  eP      P         17 45 38.1 +1.0
GTK    Tadong            52.78 273  eP      P         17 45 39.6 +1.4
ULHL   Ulahol            52.86 295  P       P         17 45 39.9 +1.2
       SNR=10
UMPA   Umpang Tak        52.88 255  P       P         17 45 43.3 +4.4
       comp=Z,6.3nm,0.9s
TKM2   Tokmak 2          52.92 297  P       P         17 45 40.0 +0.8
       SNR=36
TKM2   Tokmak 2          52.92 297  P       P         17 45 39.7 +0.5
TKM2                                pmax    pmax
       comp=Z,36nm,1.2s
CHMS   Chumysh           53.41 297  P       P         17 45 42.9 +0.3
       SNR=16
USP    Ospenovka         53.43 297  P       P         17 45 43.5 +0.8
       SNR=44
KBK    Karagaybulak      53.47 297  P       P         17 45 43.7 +0.6
       SNR=30
BRDH   Bariadhala        53.54 266  LR      LR        18 11 19.6
       comp=Z,190nm,18.1s,baz=72,slow=39
KZA    Kyzart            53.58 296  P       P         17 45 45.9 +1.6
       SNR=78
FRU    Bishkek           53.58 297  eP      P         17 45 45.0 +1.2
FRU                                 i                 17 45 57.0
FRU                                 pmax    pmax
       comp=Z,60nm,1.4s
FRU                                 MLR     MLR
       comp=E,2µm,14.0s
AAK    Ala-Archa         53.76 297  P       P         17 45 45.7 +0.4
       SNR=28
AAK    Ala-Archa         53.76 297  eP      P         17 45 45.8 +0.5
       comp=E,42nm,0.8s
AAK    Ala-Archa         53.76 297  P       P         17 45 45.7 +0.4
AAK                                 pmax    pmax
       comp=Z,45nm,0.8s
KBS    Kingsbay          53.79 351  eP      P         17 45 44.7  -0.1
KBS    Kingsbay          53.79 351  eP      P         17 45 43.8  -1.0
       comp=Z,47nm,0.9s
KBS    Kingsbay          53.79 351  eP      P         17 45 43.5  -1.3
KBS                                 pmax    pmax
       comp=Z,47nm,0.9s
SPA0   Spitsbergen Ar    53.88 350  eP      P         17 45 45.7 +0.2
SPITS  Spitsbergen Ar    53.88 350  P       P         17 45 44.2  -1.3
       comp=Z,9.6nm,0.7s,baz=58,slow=8.7,SNR=9.1
ODAN   Odare             53.91 273  eP      P         17 45 47.6 +0.9
       comp=Z,40nm,0.8s
EKS2   Erkin-Say         54.20 297  P       P         17 45 49.1 +0.6
       SNR=74
JIRN   Jiri              54.27 275  eP      P         17 45 50.5 +1.1
       comp=Z,144nm,0.8s
GUN    Gumba             54.34 275  eP      P         17 45 50.7 +0.8
       comp=Z,80nm,0.6s
SVE    Sverdlovsk        54.35 317⇓eP      P         17 45 48.0  -1.1
SVE                                 pmax    pmax
       comp=Z,22nm,1.2s
SVE                                 MLR     MLR
       comp=Z,448nm,16.0s
RAMN   Ramite            54.41 274  eP      P         17 45 51.1 +0.8
       comp=Z,162nm,0.9s
KSH    Kashi             54.47 293  eP      P         17 45 54.8 +4.4
KSH                                 sP      sP        17 46 03.3 +4.2
KSH                                 ePcP    PcP       17 46 57.6 +3.8
KSH                                 PP      PP        17 47 58.8 +6.4
KSH                                 S       S         17 53 31.5 +3.3
KSH                                 ScS     ScS       17 55 39.9 +1.2
KSH                                 SS      SS        17 57 14.6 +4.3
KSH                                 pmax    pmax
       comp=Z,37nm,1.1s
KSH                                 pmax    pmax
       comp=Z,200nm,6.1s
KSH                                 LR      LR
       comp=Z,330nm,14.3s
KSH                                 LR      LR
       comp=Z,230nm,12.2s
KSH                                 LR      LR
       comp=Z,570nm,14.5s
AML    Almayashu         54.53 297  P       P         17 45 52.6 +1.4
       SNR=39
PMG    Port Moresby      54.64 186  LR      LR        18 05 47.0
       comp=Z,96nm,21.6s,baz=324,slow=32
PHET   Kaeng Krachan     54.72 251  P       P         17 45 54.9 +2.6
       comp=Z,10nm,0.8s,comp=Z,126nm
KKN    Kakani            54.83 276  eP      P         17 45 54.3 +1.0
       comp=Z,34nm,0.5s
PKIN   Phulchoki         54.88 275  eP      P         17 45 54.2 +0.5
       comp=Z,46nm,0.9s
HNR    Honiara           54.96 170  LR      LR        18 12 06.2
       comp=Z,221nm,18.0s,baz=354,slow=39
DMN    Daman             55.06 275  eP      P         17 45 56.1 +1.0
       comp=Z,106nm,0.8s
MNAS   Manas             55.09 298  P       P         17 45 55.6 +0.7
MNAS                                pmax    pmax
       comp=Z,39nm,0.8s
GKN    Gorkha            55.15 276  eP      P         17 45 56.4 +0.8
       comp=Z,64nm,0.6s
ARU    Arti              55.54 318  eP      P         17 45 55.8  -1.9
       comp=Z,41nm,1.3s
ARU    Arti              55.54 318c iP      P         17 45 56.1  -1.6
ARU                                                   17 46 58.3
ARU                                 S       S         17 53 38.8  -3.0
ARU                                                   17 55 35.5
ARU                                 pmax    pmax
       comp=Z,26nm,1.0s
ARU                                 MLR     MLR
       comp=Z,543nm,17.0s
DANN   Dangsing          55.56 277  eP      P         17 45 59.3 +0.7
       comp=Z,130nm,0.8s
TULEG  Thule             55.69  11  eP      P         17 45 57.5  -1.0
       comp=Z,30nm,0.8s
SFK    Sufi-Kurgan       55.80 295  P       P         17 46 00.3 +0.2
SFK                                 pmax    pmax
       comp=Z,71nm,1.0s
B05A   Bryant            55.90  54  P       P         17 46 00.8 +0.3
       baz=302
KK31   Karatay Array     56.00 299  eP      P         17 46 01.1  -0.2
KK31   Karatay Array     56.00 299  i P     P         17 46 01.1  -0.2
KK31                                pmax    pmax
       comp=Z,26nm,0.8s
KKAR   Karatay Array     56.00 299  eP      P         17 46 01.1  -0.2
KKAR   Karatay Array     56.00 299  eP      P         17 46 01.1  -0.2
KOLN   Koldanda          56.02 277  eP      P         17 46 02.8 +0.9
       comp=Z,59nm,0.8s
PYUN   Piuthan           56.25 277  eP      P         17 46 04.4 +0.9
       comp=Z,176nm,0.9s
BOK    Bokaro            56.89 271  eP      P         17 46 08.4 +0.6
BOK                                 IAmb    IAmb      17 46 09.2
       comp=Z,18nm,0.5s
B08A   Colville Reser    57.41  52  eP      P         17 46 11.2   0.0
       comp=Z,7.2nm,1.0s
I03D   Drain, OR         57.64  59  P       P         17 46 13.8 +0.9
       baz=304
G05D   Wamic, OR         57.99  56  P       P         17 46 16.4 +1.1
       baz=304
DAG    Danmarks Havn     58.05 357  i P     P         17 46 13.9  -1.3
DAG    Danmarks Havn     58.05 357  i P     P         17 46 13.9  -1.3
PRGR   Permogore         58.15 327  eP      P         17 46 14.8  -1.3
PRGR                                pmax    pmax
       comp=Z,29nm,0.9s
I04A   Tendick Farm,     58.15  58  P       P         17 46 17.6 +1.1
       baz=304
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APA    Apatity           58.34 337⇓iP      P         17 46 18.5 +1.1
APA                                 pmax    pmax
       comp=Z,7.0nm,0.7s
APA                                 MLR     MLR
       comp=Z,400nm,15.0s
DHRM   DHARAMSHALA       58.38 285  eP      P         17 46 19.0 +0.5
KEV    Kevo              58.43 340  eP      P         17 46 17.2  -0.8
       comp=Z,38nm,0.8s
KEV    Kevo              58.43 340  eP      P         17 46 17.2  -0.8
KEV                                 pmax    pmax
       comp=Z,38nm,0.8s
SMLA   Simla             58.46 284  eP      P         17 46 19.3 +0.5
I05D   Terrebonne, OR    58.48  57  P       P         17 46 19.9 +1.1
       baz=304
AB31   Akbulak array     58.74 310  P       P         17 46 19.5  -1.0
AB31                                pmax    pmax
       comp=Z,8.0nm,0.6s
ABKAR  Akbulak array     58.74 310  eP      P         17 46 19.7  -0.7
KULLO  Kullorsuaq        58.80   9  i P     P         17 46 20.1  -0.4
KULLO  Kullorsuaq        58.80   9  i P     P         17 46 20.1  -0.4
ARCES  ARCESS Array B    58.95 341  P       P         17 46 21.4  -0.3
       comp=Z,38nm,0.9s,baz=43,slow=5.7,SNR=39
ARCES  ARCESS Array B    58.95 341  eP      P         17 46 21.0  -0.6
ARCES  ARCESS Array B    58.95 341  eP      P         17 46 21.1  -0.5
ARCES  ARCESS Array B    58.95 341  eP      P         17 46 21.0  -0.6
PINE   Pine Mountain     59.03  58  eP      P         17 46 24.2 +1.4
       comp=Z,12nm,0.9s
AKTO   Aktyubinsk        59.09 312  P       P         17 46 22.2  -0.7
       comp=Z,6.3nm,1.0s,baz=59,slow=6.3,SNR=17
AKTO                                LR      LR        18 14 50.0
       comp=Z,1µm,18.5s,baz=46,slow=39
AKTO   Aktyubinsk        59.09 312  P       P         17 46 21.0  -1.9
AKTO                                pmax    pmax
       comp=Z,5.0nm,0.8s
E09A   Wood Farm, Sta    59.10  54  eP      P         17 46 23.6 +0.6
       comp=Z,11nm,0.9s
YBH    Yreka Blue Hor    59.13  60  P       P         17 46 24.4 +0.9
       comp=Z,2.2nm,0.7s,baz=326,slow=14,SNR=4.9
J05D   Fort Rock, OR     59.14  58  P       P         17 46 24.3 +0.7
       baz=305
M02C   Callahan          59.24  61  P       P         17 46 25.8 +1.6
       baz=305
N02D   Trinity Center    59.58  61  P       P         17 46 27.9 +1.4
       baz=306
NIL    Nilore            59.60 288  eP      P         17 46 27.8 +1.0
       comp=Z,50nm,0.8s
NIL    Nilore            59.60 288  eP      P         17 46 27.8 +1.0
NIL                                 pmax    pmax
       comp=Z,50nm,0.8s
M04C   Macdoel           59.64  60  P       P         17 46 28.5 +1.5
       baz=306
K05A   Summer Lake       59.67  59  eP      P         17 46 28.4 +1.1
       comp=Z,13nm,0.9s
KTK1   Kautokeino        59.87 341  eP      P         17 46 27.6  -0.4
F10A   Beach Ranch, E    59.94  54  eP      P         17 46 29.9 +1.0
       comp=Z,15nm,1.3s
WALA   Waterton Lakes    59.97  49  eP      P         17 46 29.3 +0.1
       comp=Z,6.9nm,0.8s
HEF    Hetta             60.24 340  eP      P         17 46 30.2  -0.3
TRO    Tromso            60.32 343  eP      P         17 46 31.0   0.0
TRO                                 IAmb    IAmb      17 46 31.9
       comp=Z,74nm,0.9s
KIF    Kilpisjarvi       60.42 342  eP      P         17 46 31.2  -0.5
MOD    Modoc Plateau     60.50  59  eP      P         17 46 33.9 +0.9
       comp=Z,10nm,0.9s
O03D   Paynes Creek      60.53  61  P       P         17 46 33.7 +0.6
       baz=306
BMO    Blue Mountains    60.55  55  eP      P         17 46 33.8 +0.7
       comp=Z,16nm,1.5s
BMO    Blue Mountains    60.55  55  eP      P         17 46 34.1 +1.0
BMO                                 pmax    pmax
       comp=Z,16nm,1.5s
J08A   Circle Bar Ran    60.74  57  eP      P         17 46 35.6 +1.1
       comp=Z,13nm,1.0s
KLMR   Klimovskoe        60.92 329  eP      P         17 46 33.2  -2.0
KLMR                                pmax    pmax
       comp=Z,18nm,0.8s
KLMR   Klimovskoe        60.92 329  eP      P         17 46 33.3  -2.0
KLMR                                AMP               17 46 35.5
       comp=Z,18nm,0.8s
KLMR                                LQ      LQ        18 08 46.7
KLMR                                LQ      LQ        18 08 46.7
KLMR                                LR      LR        18 11 50.6
WVOR   Wild Horse Val    61.19  58  eP      P         17 46 38.0 +0.4
       comp=Z,17nm,1.2s
WVOR   Wild Horse Val    61.19  58  eP      P         17 46 38.0 +0.4
WVOR                                pmax    pmax
       comp=Z,17nm,1.2s
MSO    Missoula          61.27  51  P       P         17 46 38.7 +0.7
       baz=307
MSO    Missoula          61.27  51  eP      P         17 46 38.7 +0.7
       comp=Z,22nm,1.1s
AFDM   Forest Hills D    61.84  62  eP      P         17 46 41.9   0.0
       comp=Z,6.3nm,1.0s
KBL    Kabul             61.86 292  eP      P         17 46 42.0  -0.3
       comp=Z,24nm,0.8s
KBL    Kabul             61.86 292  eP      P         17 46 42.3   0.0
KBL                                 pmax    pmax
       comp=Z,24nm,0.8s
SUMG   Summit            62.19   4  eP      P         17 46 44.5 +0.4
       comp=Z,106nm,0.9s
SUMG   Summit            62.19   4  i P     P         17 46 44.3 +0.2
SUMG   Summit            62.19   4  eP      P         17 46 44.5 +0.4
SUMG                                pmax    pmax
       comp=Z,106nm,0.9s
MFID   Camas Ranch       62.26  55  eP      P         17 46 45.2 +0.5
       comp=Z,6.8nm,1.0s
FFC    Flin Flon         62.35  39  eP      P         17 46 45.7 +0.7
       comp=Z,12nm,0.8s
FFC    Flin Flon         62.35  39  eP      P         17 46 45.7 +0.7
FFC                                 pmax    pmax
       comp=Z,12nm,0.8s
PAHR   Pah Rah Range     62.37  61  eP      P         17 46 46.2 +0.6
       comp=Z,14nm,1.2s
VCNR   Virginia City     62.45  61  eP      P         17 46 47.1 +0.8
       comp=Z,10nm,1.1s
HRY    Holter Researc    62.50  50  eP      P         17 46 47.2 +0.9
PNTR   Pine Nut          62.61  61  eP      P         17 46 48.1 +0.8
       comp=Z,14nm,1.0s
LOF    Lofoten           62.66 344  eP      P         17 46 46.4  -0.5
LOF                                 IAmb    IAmb      17 46 47.9
       comp=Z,54nm,1.1s
LRM    Limekiln Ridge    62.70  52  eP      P         17 46 48.6 +0.8
PSI    Prapat            62.74 244  LR      LR        18 16 39.8
       comp=Z,167nm,18.5s,baz=271,slow=38
CMB    Columbia Colle    62.76  63  eP      P         17 46 48.7 +0.6
       comp=Z,12nm,1.1s
CMB    Columbia Colle    62.76  63  eP      P         17 46 49.0 +0.9
EGMT   Eagleton          62.80  48  P       P         17 46 48.9 +0.6
       baz=308
EGMT   Eagleton          62.80  48  eP      P         17 46 49.2 +1.0
       comp=Z,12nm,1.0s
YERR   Yerington         62.90  61  eP      P         17 46 49.7 +0.6
       comp=Z,16nm,1.0s
DLMT   Dillon            62.91  52  eP      P         17 46 50.9 +1.8
       comp=Z,8.8nm,1.2s
HLID   Hailey            62.98  55  P       P         17 46 49.8 +0.1
       baz=308
HLID   Hailey            62.98  55  eP      P         17 46 50.6 +1.0
       comp=Z,9.3nm,1.1s
WAKR   Walker            63.07  62  eP      P         17 46 51.1 +0.8
       comp=Z,21nm,1.3s
MCMT   McKenzie Canyo    63.09  53  eP      P         17 46 51.5 +1.0
BHPL   Bhopal            63.19 277  eP      P         17 46 51.7 +0.6
BHPL                                IAmb    IAmb      17 46 52.5
       comp=Z,15nm,0.8s
BMN    Battle Mountai    63.24  59  eP      P         17 46 52.3 +0.9
       comp=Z,12nm,1.0s
BMN    Battle Mountai    63.24  59  eP      P         17 46 52.3 +0.9
BMN                                 pmax    pmax
       comp=Z,12nm,1.0s
BOZ    Bozeman (W)       63.30  51  P       P         17 46 51.8 +0.1
       baz=308
BOZ    Bozeman (W)       63.30  51  eP      P         17 46 52.4 +0.7
       comp=Z,42nm,1.8s
BOZ    Bozeman (W)       63.30  51  eP      P         17 46 52.4 +0.7
BOZ                                 pmax    pmax
       comp=Z,42nm,1.8s
KVN    Kaiserville       63.56  60  eP      P         17 46 54.4 +0.8
       comp=Z,24nm,1.4s
KVN    Kaiserville       63.56  60  eP      P         17 46 54.4 +0.8
KVN                                 pmax    pmax
       comp=Z,24nm,1.4s
RYN    Ryan              63.56  61  eP      P         17 46 54.1 +0.6
       comp=Z,8.1nm,1.0s
NV01   Mina Array Sit    63.81  61  eP      P         17 46 55.8 +0.5
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NVAR   Mina Array Bea    63.81  61  P       P         17 46 56.2 +0.9
       comp=Z,5.1nm,0.7s,baz=289,slow=6.7,SNR=40
NVAR                                LR      LR        18 11 31.3
       comp=Z,127nm,20.3s,baz=84,slow=33
MDPB   Devils Postpil    63.83  62  eP      P         17 46 56.3 +0.9
       comp=Z,15nm,1.4s
QLMT   Earthquake Lak    63.88  52  eP      P         17 46 56.7 +1.1
NV11   Mina Array Sit    63.91  61  eP      P         17 46 56.3 +0.5
       comp=Z,0.8nm,1.2s
YHB    Horse Butte       64.06  52  eP      P         17 46 57.9 +1.0
       comp=Z,18nm,1.2s
BENR   Benton            64.09  62  eP      P         17 47 01.9 +4.7
MOR8   Moi Rana          64.15 342  eP      P         17 46 55.7  -1.1
MOR8                                IAmb    IAmb      17 46 57.1
       comp=Z,58nm,1.2s
GCMT   Greycliff         64.25  50  eP      P         17 46 58.8 +0.9
ILULI  Ilulissat         64.52   9  eP      P         17 46 58.8  -0.4
       comp=Z,28nm,0.8s
ILULI  Ilulissat         64.52   9  i P     P         17 46 58.2  -0.9
ILULI  Ilulissat         64.52   9  eP      P         17 46 58.7  -0.4
ILULI                               pmax    pmax
       comp=Z,28nm,0.8s
H17A   Grant Village     64.63  52  P       P         17 47 03.4 +2.8
       baz=310
IMW    Indian Meadow     64.75  52  eP      P         17 47 02.5 +1.1
       comp=Z,13nm,1.0s
FLWY   Flagg Ranch       64.76  52  eP      P         17 47 03.1 +1.7
       comp=Z,9.4nm,1.1s
FXWY   Fox Creek         64.86  53  eP      P         17 47 03.4 +1.3
       comp=Z,9.3nm,1.2s
RLMT   Red Lodge         64.89  51  P       P         17 47 03.8 +1.5
       baz=310
RLMT   Red Lodge         64.89  51  eP      P         17 47 02.6 +0.3
       comp=Z,9.8nm,1.0s
MOOW   Moose Ponds       64.95  53  eP      P         17 47 03.4 +0.8
       comp=Z,9.9nm,1.1s
TPAW   Teton Pass        65.00  53  eP      P         17 47 04.3 +1.2
       comp=Z,24nm,1.1s
FINES  FINESS Array B    65.00 335  P       P         17 47 01.4  -0.9
       comp=Z,34nm,0.7s,baz=44,slow=7.2,SNR=78
FINES                               LR      LR        18 18 59.8
       comp=Z,384nm,18.3s,baz=33,slow=39
FINES  FINESS Array B    65.00 335  eP      P         17 47 00.6  -1.7
FINES  FINESS Array B    65.00 335  eP      P         17 47 00.7  -1.6
LOHW   Long Hollow       65.11  53  eP      P         17 47 04.9 +1.2
       comp=Z,18nm,1.3s
REDW   Red Top Meadow    65.13  53  eP      P         17 47 04.9 +1.0
       comp=Z,16nm,1.1s
CWC    Cottonwood Cre    65.19  63  P       P         17 47 04.3 +0.1
       baz=309
CTA    Charters Tower    65.29 186  P       P         17 47 04.5  -0.2
       comp=Z,1.4nm,0.6s,baz=357,slow=12,SNR=5.1
R11A   Troy Canyon, C    65.53  60  P       P         17 47 07.0 +0.4
       baz=309
R11A   Troy Canyon, C    65.53  60  eP      P         17 47 06.9 +0.4
       comp=Z,10nm,1.1s
MPMC   Manual Prospec    65.80  63  P       P         17 47 08.3   0.0
       baz=310
HWUT   Hardware Ranch    65.85  55  eP      P         17 47 08.7 +0.2
       comp=Z,13nm,1.2s
FURC   Furnace Creek,    65.94  62  P       P         17 47 09.4 +0.6
       baz=310
TPNV   Topopah Spring    66.01  61  P       P         17 47 09.9 +0.3
       baz=310
TPNV   Topopah Spring    66.01  61  eP      P         17 47 09.7 +0.1
       comp=Z,16nm,1.2s
TPNV   Topopah Spring    66.01  61  eP      P         17 47 09.7 +0.1
TPNV                                pmax    pmax
       comp=Z,16nm,1.2s
DUG    Dugway, Tooele    66.02  57  P       P         17 47 09.0  -0.6
       baz=310
DUG    Dugway, Tooele    66.02  57  eP      P         17 47 10.4 +0.8
       comp=Z,14nm,1.0s
DUG    Dugway, Tooele    66.02  57  eP      P         17 47 10.6 +1.0
DUG                                 pmax    pmax
       comp=Z,14nm,1.0s
OBN    Obninsk           66.04 325  eP      P         17 47 08.0  -1.2
OBN    Obninsk           66.04 325⇓eP      P         17 47 07.9  -1.2
OBN                                 e                 17 47 35.2
OBN                                 i S     S         17 55 52.1  -3.7
OBN                                 i SS    SS        18 00 14.6 +4.3
OBN                                 pmax    pmax
       comp=Z,7.0nm,0.4s
OBN                                 MLR     MLR
       comp=Z,350nm,16.0s
HYB    Hyderabad         66.23 271  eP      P         17 47 10.6  -0.5
HYB                                 IAmb    IAmb      17 47 11.8
       comp=Z,9.4nm,0.7s
EDW2   Edwards Air Fo    66.23  64  P       P         17 47 10.3  -0.5
       baz=310
BW06   Boulder Array     66.24  53  P       P         17 47 11.3 +0.3
       baz=310
BW06   Boulder Array     66.24  53  eP      P         17 47 11.8 +0.7
       comp=Z,9.5nm,1.1s
PD31   Pinedale Array    66.24  53  eP      P         17 47 11.4 +0.3
PDAR   Pinedale Array    66.24  53  P       P         17 47 11.6 +0.6
       comp=Z,3.0nm,0.8s,baz=279,slow=2.9,SNR=21
PDAR                                LR      LR        18 16 25.0
       comp=Z,82nm,19.0s,baz=346,slow=36
PDAR   Pinedale Array    66.24  53  eP      P         17 47 11.4 +0.3
PSUT   Pine Spring       66.46  59  eP      P         17 47 12.8 +0.4
       comp=Z,4.3nm,0.9s
VRH    Novokhopyorsk     66.60 320  eP      P         17 47 11.1  -1.7
VRH                                 pmax    pmax
       comp=Z,8.0nm,0.5s
VRH                                 MLR     MLR
       comp=Z,950nm,23.0s
NLU    North Lily Min    66.61  56  eP      P         17 47 13.9 +0.5
       comp=Z,15nm,1.0s
GEYT   Alibeck           66.66 301  P       P         17 47 14.3 +0.8
       comp=Z,29nm,0.9s,baz=291,slow=4.5,SNR=61
GYA0B  ALIBECK ARRAY     66.66 301  eP      P         17 47 14.1 +0.6
       comp=Z,47nm,0.8s
SHOC   Shoshone, Teco    66.66  62  P       P         17 47 13.6   0.0
       baz=310
GSC    Goldstone, Bar    66.71  63  P       P         17 47 14.4 +0.4
       baz=310
MPU    Maple Canyon      66.83  56  eP      P         17 47 15.3 +0.5
       comp=Z,11nm,1.3s
BFSC   Mount Baldy Ra    66.85  64  P       P         17 47 14.3  -0.6
       baz=310
WRA    Warramunga Arr    66.90 198  P       P         17 47 15.0   0.0
       comp=Z,1.0nm,0.6s,baz=17,slow=6.7,SNR=7.8
WRA                                 LR      LR        18 14 42.9
       comp=Z,142nm,21.8s,baz=5.0,slow=34
WRA    Warramunga Arr    66.90 198  P       P         17 47 15.0   0.0
WRA                                 pmax    pmax
       comp=Z,1.0nm,0.6s
WRA                                 MLR     MLR
       comp=Z,142nm,21.8s
SHPR   Sheep Range       66.97  61  eP      P         17 47 16.5 +0.8
       comp=Z,14nm,1.1s
VSU    Vasula            67.12 332d iP      P         17 47 16.0   0.0
VSU                                 pmax    pmax
       comp=Z,51nm,0.7s
TUQ    Turquoise Moun    67.18  62  P       P         17 47 17.4 +0.4
       baz=310
HEC    Hector,Ludlow     67.31  63  P       P         17 47 18.3 +0.5
       baz=310
CCUT   Cedar City        67.39  59  eP      P         17 47 19.2 +0.7
       comp=Z,9.5nm,1.1s
FITZ   Fitzroy Crossi    67.50 207  P       P         17 47 19.9 +1.1
       comp=Z,3.3nm,1.0s,baz=45,slow=4.3,SNR=4.1
TMUT   Trail Mountain    67.55  56  eP      P         17 47 20.4 +0.9
       comp=Z,8.7nm,1.1s
MURC   Murrieta          67.56  65  P       P         17 47 18.6  -0.7
       baz=310
VSR    Storozhevoye      67.73 321  eP      P         17 47 19.1  -1.0
VSR                                 pmax    pmax
       comp=Z,4.0nm,0.5s
GMRC   Granite Mounta    67.76  63  P       P         17 47 20.9 +0.1
       baz=311
MTPU   Mount Pierson     67.78  58  eP      P         17 47 22.3 +1.2
       comp=Z,5.0nm,0.9s
LCMT   Little Creek M    67.81  59  eP      P         17 47 21.8 +0.8
       comp=Z,9.3nm,1.0s
VORD   Divnogorie        67.86 321  eP      P         17 47 23.2 +2.4
VORD                                pmax    pmax
       comp=Z,140nm,0.7s
P18A   Preston Nutter    67.89  56  eP      P         17 47 22.7 +1.0
       comp=Z,7.2nm,1.2s
FRD    Ford Ranch, An    68.00  64  P       P         17 47 22.4 +0.2
       baz=311
K22A   Casper            68.00  51  P       P         17 47 22.8 +0.6
       baz=312
K22A   Casper            68.00  51  eP      P         17 47 23.4 +1.2
       comp=Z,11nm,0.9s
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PFO	Pinyon Flats O	68.02	64	LR	LR	18 11 48.8	
	comp=Z,24nm,21.9s,baz=116,slow=31						
PFO	Pinyon Flats O	68.02	64	P	P	17 47 24.3	+2.0
	baz=311						
BELC	Belle Mtn. Jos	68.06	64	P	P	17 47 22.2	-0.4
	baz=311						
KNB	Kanab	68.07	59	eP	P	17 47 23.4	+0.8
	comp=Z,29nm,1.5s						
KNB	Kanab	68.07	59	eP	P	17 47 23.4	+0.8
KNB				pmax	pmax		
	comp=Z,29nm,1.5s						
SRU	San Rafael Swe	68.07	56	eP	P	17 47 23.1	+0.5
	comp=Z,10nm,0.9s						
SRU	San Rafael Swe	68.07	56	eP	P	17 47 23.1	+0.5
SRU				pmax	pmax		
	comp=Z,11nm,0.9s						
RWWY	Rawlins	68.27	52	eP	P	17 47 24.1	+0.1
	comp=Z,7.7nm,0.9s						
DZM	Mont Dzumac	68.34	166	LR	LR	18 14 29.2	
	comp=Z,310nm,18.2s,baz=32,slow=33						
DZM	Mont Dzumac	68.34	166	eLR	LR	18 08 14.0	
	comp=Z,241nm,20.1s						
RSSD	Black Hills	68.36	49	P	P	17 47 24.0	-0.4
	baz=313						
RSSD	Black Hills	68.36	49	eP	P	17 47 24.5	0.0
	comp=Z,18nm,1.3s						
RSSD	Black Hills	68.36	49	eP	P	17 47 25.0	+0.6
RSSD				pmax	pmax		
	comp=Z,18nm,1.3s						
IRM	Iron Mountain	68.50	63	P	P	17 47 25.7	+0.5
	baz=311						
BC3	Big Chuckawall	68.63	63	P	P	17 47 26.3	+0.1
	baz=311						
O20A	White River Ci	68.72	54	P	P	17 47 27.0	+0.3
	baz=312						
U15A	North Rim	68.77	59	eP	P	17 47 27.9	+0.6
	comp=Z,8.6nm,0.9s						
POO	Poona	68.80	275	eP	P	17 47 27.4	+0.2
POO	Poona	68.80	275	eP	P	17 47 21.0	-6.3
PDMCI	Parker Dam,Lak	69.03	62	P	P	17 47 28.3	-0.1
	baz=311						
NC303	NORSAR Array S	69.13	341	eP	P	17 47 28.4	-0.3
NC303	NORSAR Array S	69.13	341	eP	P	17 47 28.5	-0.1
NC303				IAmb	IAmb	17 47 28.9	
	comp=Z,66nm,1.2s						
NC405	NORSAR Array S	69.14	341	eP	P	17 47 28.5	-0.3
Y12C	Blythe	69.15	63	P	P	17 47 30.0	+0.8
	baz=311						
ANGG	Ammassalik, Gr	69.16	4	eP	P	17 47 29.9	+1.3
	comp=Z,28nm,1.1s						
NC204	NORSAR Array S	69.22	341	eP	P	17 47 29.1	-0.2
NC204	NORSAR Array S	69.22	341	i P	P	17 47 29.3	+0.1
NC204				IAmb	IAmb	17 47 30.1	
	comp=Z,57nm,1.0s						
NC204				eP	pP	17 47 30.6	-5.1
A33A	Warroad	69.29	41	P	P	17 47 29.7	-0.2
	baz=316						
NB201	NORSAR Array S	69.30	341	eP	P	17 47 29.4	-0.3
NB2	NORSAR Subarra	69.33	341	P	P	17 47 29.4	-0.5
	comp=Z,57nm,1.2s,baz=29,slow=6.2						
NB2	NORSAR Subarra	69.33	341	P	P	17 47 29.4	-0.5
	baz=29,slow=6.2						
NOA	NORSAR Array B	69.33	341	LR	LR	18 22 16.6	
	comp=Z,255nm,18.6s,baz=35,slow=40						
GLA	Glamis	69.42	64	P	P	17 47 31.0	+0.1
	baz=311						
NBO00	NORSAR Array S	69.44	341	eP	P	17 47 30.3	-0.3
NBO00	NORSAR Array S	69.44	341	eP	P	17 47 30.0	-0.5
NBO00				IAmb	IAmb	17 47 31.3	
	comp=Z,60nm,1.1s						
N23A	Red Feather La	69.50	52	P	P	17 47 32.4	+0.8
	baz=313						
N23A	Red Feather La	69.50	52	eP	P	17 47 32.9	+1.2
	comp=Z,12nm,1.0s						
NC602	NORSAR Array S	69.52	340	eP	P	17 47 30.6	-0.4
NC602	NORSAR Array S	69.52	340	eP	P	17 47 30.5	-0.5
NC602				IAmb	IAmb	17 47 31.4	
	comp=Z,200nm,0.8s						
HFS	Hagfors	69.52	339	P	P	17 47 30.6	-0.5
	comp=Z,27nm,0.8s,baz=62,slow=4.3,SNR=70						
HFS				LR	LR	18 20 16.2	
	comp=Z,256nm,21.2s,baz=18,slow=38						
AGMN	Agassiz Nation	69.53	41	P	P	17 47 30.9	-0.4
	baz=316						
AGMN	Agassiz Nation	69.53	41	eP	P	17 47 31.1	-0.2
	comp=Z,23nm,1.5s						
NAO01	NORSAR Array S	69.58	341	eP	P	17 47 31.0	-0.4
NAO01	NORSAR Array S	69.58	341	eP	P	17 47 30.9	-0.4
NAO01				IAmb	IAmb	17 47 32.0	
	comp=Z,66nm,1.1s						
IDID	Didziasalis	69.59	330	eP	P	17 47 31.6	0.0
IDID				IAmb	IAmb	17 47 32.9	
	comp=Z,14nm,0.8s						
ISAL	Salakas	69.60	331	eP	P	17 47 31.6	0.0
ISAL				IAmb	IAmb	17 47 33.0	
	comp=Z,16nm,1.1s						
PV03	Paradox Valley	69.62	56	eP	P	17 47 33.1	+0.7
IIGN	Ignalina	69.74	330	eP	P	17 47 32.5	0.0
IIGN				IAmb	IAmb	17 47 33.8	
	comp=Z,16nm,0.7s						
NACGM	Naroch	69.90	330	eP	P	17 47 32.0	-1.5
WUAZ	Wupatki	69.93	60	P	P	17 47 34.2	0.0
	baz=312						
SMCO	Snowmass	70.08	54	eP	P	17 47 35.9	+0.5
	comp=Z,9.4nm,0.9s						
BORG	Borgarnes	70.15	357	eP	P	17 47 36.4	+1.5
	comp=Z,38nm,0.9s						
BORG	Borgarnes	70.15	357	eP	P	17 47 36.4	+1.5
BORG				pmax	pmax		
	comp=Z,38nm,0.9s						
AKT	Akhty	70.30	309	eP	P	17 47 37.2	+0.9
AKT				e		17 47 56.7	
AKT				pmax	pmax		
	comp=Z,70nm,0.9s						
ISCO	Idaho Springs	70.43	53	P	P	17 47 38.2	+0.8
	baz=313						
ISCO	Idaho Springs	70.43	53	eP	P	17 47 38.2	+0.8
	comp=Z,4.5nm,0.8s						
ISCO	Idaho Springs	70.43	53	eP	P	17 47 38.2	+0.8
ISCO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MVCO	Mesa Verde	70.52	57	P	P	17 47 38.4	+0.5
	baz=313						
MVCO	Mesa Verde	70.52	57	eP	P	17 47 38.8	+0.8
	comp=Z,6.6nm,0.8s						
AS01	Alice Springs	70.58	198	eP	P	17 47 38.5	+0.6
ASAR	Alice Springs	70.60	198	P	P	17 47 39.0	+0.9
	comp=Z,2.0nm,0.9s,baz=19,slow=5.0,SNR=10						
ASAR				LR	LR	18 16 59.0	
	comp=Z,139nm,21.6s,baz=358,slow=34						
ASAR	Alice Springs	70.60	198	P	P	17 47 39.0	+0.9
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ASAR				MLR	MLR		
	comp=Z,139nm,21.6s						
X16A	Lo Mia Camp, P	70.62	61	eP	P	17 47 39.4	+0.9
	comp=Z,10.0nm,1.1s						
G32A	Webster	70.92	44	P	P	17 47 40.5	+0.5
	baz=316						
G32A	Webster	70.92	44	eP	P	17 47 40.1	+0.2
	comp=Z,20nm,1.0s						
KONO	Kongsberg	70.94	341	eP	P	17 47 39.9	+0.1
	comp=Z,28nm,1.0s						
KONO	Kongsberg	70.94	341	d iP	P	17 47 40.5	+0.8
KONO				pmax	pmax		
	comp=Z,40nm,1.7s						
STRU	Stroemstad	71.11	340	eP	P	17 47 41.5	+0.8
S22A	4UR Ranch, Cre	71.14	55	P	P	17 47 42.7	+1.0
	baz=313						
S22A	4UR Ranch, Cre	71.14	55	eP	P	17 47 42.8	+1.0
	comp=Z,4.9nm,0.9s						
KIV	Kislovodsk	71.23	314	eP	P	17 47 42.6	+0.7
KIV	Kislovodsk	71.23	314	eP	P	17 47 43.1	+1.2
	comp=Z,66nm,0.9s						
KIV	Kislovodsk	71.23	314	i P	P	17 47 43.3	+1.4
	SNR=12						
KIV	Kislovodsk	71.23	314	c iP	P	17 47 42.6	+0.7
KIV				e		17 48 02.2	
KIV				e		17 50 15.2	
KIV				i S	S	17 57 00.9	+2.9
KIV				eSS	SS	18 01 31.1	+0.1
KIV				pmax	pmax		
	comp=Z,85nm,1.0s						
KIV				MLR	MLR		
	comp=Z,533nm,18.0s						
KBZ	Khabaz	71.28	314	P	P	17 47 43.5	+1.4
	comp=Z,56nm,0.9s,baz=52,slow=3.3,SNR=66						
KBZ				LR	LR	18 23 57.5	
	comp=Z,757nm,18.3s,baz=38,slow=40						
C36A	Pine Crest Far	71.32	40	P	P	17 47 41.8	-0.4
	baz=318						
ZEI	Tsey	71.43	312	eP	P	17 47 41.5	-1.8
ZEI				pmax	pmax		
	comp=Z,28nm,0.8s						
G33A	Ortonville	71.49	44	P	P	17 47 43.4	+0.1
	baz=316						
DUS	Dusheti	71.50	311	eP	P	17 47 45.1	+1.5
D36A	Goodland	71.60	41	P	P	17 47 44.0	0.0
	baz=318						
OGNE	Ogallala	71.62	50	P	P	17 47 45.4	+1.1
	baz=315						
C37A	Embarrass	71.63	40	P	P	17 47 44.0	-0.2
	baz=318						
TBLG	Delisi	71.73	311	eP	P	17 47 46.2	+1.3
	comp=Z,85nm,1.0s						
TBLG	Delisi	71.73	311	eP	P	17 47 45.9	+1.0
EYMN	Ely	71.78	39	P	P	17 47 44.8	-0.3
	baz=318						
ONI	Oni	71.80	313	eP	P	17 47 46.4	+1.0
SUW	Suwalki	71.87	331	eP	P	17 47 44.8	-0.7
SUW	Suwalki	71.87	331	eP	P	17 47 45.0	-0.5
	comp=Z,66nm,1.2s						
SUW	Suwalki	71.87	331	eP	P	17 47 45.3	-0.2
SUW				pmax	pmax		
	comp=Z,66nm,1.2s						
SDCO	Great Sand Dun	71.90	54	P	P	17 47 46.5	+0.1
	baz=314						
D37A	Cotton	71.95	40	P	P	17 47 46.2	+0.1
	baz=318						
E36A	McGregor	72.04	41	P	P	17 47 46.7	+0.1
	baz=318						
C38A	Sawbill Land.	72.05	39	P	P	17 47 46.2	-0.5
	baz=319						
AKASG	Malin Array Be	72.29	326	P	P	17 47 47.6	-0.5
	comp=Z,29nm,1.0s,baz=37,slow=6.4,SNR=57						
AKASG				LR	LR	18 22 23.3	
	comp=Z,353nm,18.5s,baz=20,slow=38						
AKBB	Malin Array Si	72.29	326	eP	P	17 47 47.6	-0.4
	comp=Z,36nm,1.0s						
AKBB	Malin Array Si	72.29	326	eP	P	17 47 47.6	-0.4
AKBB				pmax	pmax		
	comp=Z,36nm,1.0s						
KIEV	Kiev	72.30	326	eP	P	17 47 47.5	-0.6
KIEV	Kiev	72.30	326	eP	P	17 47 47.1	-1.0
	comp=Z,35nm,1.0s						
KIEV	Kiev	72.30	326	i P	P	17 47 48.0	-0.1
	SNR=6.6						
KIEV	Kiev	72.30	326	c iP	P	17 47 47.5	-0.6
KIEV				pmax	pmax		
	comp=Z,44nm,1.1s						
AK11	Malin Array Si	72.33	326	eP	P	17 47 47.7	-0.5
F36A	Milaca	72.40	42	P	P	17 47 48.3	-0.5
	baz=318						
TUC	Tucson	72.45	62	P	P	17 47 49.7	+0.3
	baz=313						
TUC	Tucson	72.45	62	eP	P	17 47 49.5	+0.1
	comp=Z,14nm,1.4s						
TUC	Tucson	72.45	62	eP	P	17 47 49.5	+0.1
TUC				pmax	pmax		
	comp=Z,13nm,1.4s						
ECSD	EROS Data Cent	72.46	45	P	P	17 47 49.0	-0.2
	baz=317						
ECSD	EROS Data Cent	72.46	45	eP	P	17 47 49.0	-0.2
	comp=Z,23nm,1.6s						
AKH	Akhalkalaki	72.62	312	⇓iP	P	17 47 52.4	+1.9
AKH	Akhalkalaki	72.62	312	eP	P	17 47 52.3	+1.9
	comp=Z,34nm,1.0s						
AKH	Akhalkalaki	72.62	312	eP	P	17 47 52.3	+1.9
AKH				pmax	pmax		
	comp=Z,34nm,1.0s						
H35A	Sunnyside Ranc	72.63	43	P	P	17 47 50.3	+0.1
	baz=317						
LRW	Lerwick	72.64	346	eP	P	17 47 50.8	+0.9
E38A	The Farm, Brul	72.76	40	P	P	17 47 50.2	-0.7
	baz=319						
E38A	The Farm, Brul	72.76	40	eP	P	17 47 51.5	+0.6
	comp=Z,9.1nm,0.6s						
GNI	Garni	72.85	310	P	P	17 47 52.3	+0.6
	comp=Z,24nm,1.0s,baz=315,slow=1.4,SNR=8.4						
GNI				LR	LR	18 24 45.9	
	comp=Z,345nm,18.1s,baz=31,slow=40						
T25A	Trinidad	72.95	54	P	P	17 47 52.9	+0.4
	baz=314						
T25A	Trinidad	72.95	54	eP	P	17 47 53.3	+0.8
	comp=Z,5.9nm,0.9s						
SOC	Sochi	72.99	315	eP	P	17 47 50.8	-1.5
SOC				e		17 50 34.3	
SOC				ePPP	PPP	17 52 18.6	
SOC				eS	S	17 57 16.1	-1.9
SOC				eSS	SS	18 02 02.5	+4.8
SOC				pmax	pmax		
	comp=Z,31nm,0.8s						
SOC				MLR	MLR		
	comp=Z,419nm,20.0s						
F38A	Pierce - Schro	73.10	41	P	P	17 47 53.1	+0.2
	baz=319						
H36A	Jessenland, He	73.16	43	P	P	17 47 55.3	+2.0
	baz=318						
ANN	Anapa	73.20	317	eP	P	17 47 53.0	-0.5
ANN				pmax	pmax		
	comp=Z,66nm,1.4s						
TASM	ASL Pad, Albuq	73.27	57	P	P	17 47 54.6	+0.2
	baz=314						
ANMO	Albuquerque	73.28	57	P	P	17 47 54.1	-0.4
	comp=Z,1.5nm,0.5s,baz=346,slow=18,SNR=4.7						
ANMO	Albuquerque	73.28	57	P	P	17 47 54.0	-0.4
	baz=314						
ANMO	Albuquerque	73.28	57	eP	P	17 47 54.5	0.0
	comp=Z,3.7nm,0.9s						
ANMO	Albuquerque	73.28	57	ceP	P	17 47 54.7	+0.3
ANMO				pmax	pmax		
	comp=Z,8.0nm,2.5s						
TASL	Snake Pit, Alb	73.28	57	P	P	17 47 54.7	+0.3
	baz=314						
E39A	Mellen	73.38	40	P	P	17 47 54.0	-0.6
	baz=319						
F39A	Loretta	73.57	40	P	P	17 47 55.2	-0.5
	baz=319						
E40A	Wakefield	73.63	39	P	P	17 47 56.0	-0.1
	baz=320						
G38A	Ridgeland	73.70	41	P	P	17 47 56.1	-0.4
	baz=319						
I37A	Lemond, Waseca	73.83	43	P	P	17 47 56.8	-0.5
	baz=318						
I37A	Lemond, Waseca	73.83	43	eP	P	17 47 57.5	+0.2
	comp=Z,32nm,1.1s						
F40A	Park Falls	73.93	40	P	P	17 47 57.3	-0.5
	baz=320						
319A	Douglas	74.02	62	eP	P	17 47 59.5	+0.8
	comp=Z,18nm,0.9s						
E41A	Kenton	74.03	39	P	P	17 47 57.7	-0.8
	baz=320						
121A	Cookes Peak, D	74.14	60	P	P	17 47 59.7	+0.2
	baz=314						
J37A	Redenius Farm,	74.28	44	P	P	17 48 00.2	+0.3
	baz=318						
I38A	Scanlan Farm,	74.32	42	P	P	17 48 00.1	-0.1
	baz=319						
G40A	Rib Lake	74.39	40	P	P	17 47 59.8	-0.8
	baz=320						
BEL	Belsk	74.49	331	eP	P	17 48 01.8	+0.8
BEL	Belsk	74.49	331	eP	P	17 48 01.8	+0.8
E42A	Champion	74.52	38	P	P	17 48 01.0	-0.3
	baz=321						
F41A	Three Lakes	74.53	39	P	P	17 48 01.6	+0.3
	baz=320						
K37A	Belmond	74.64	44	P	P	17 48 02.3	+0.3
	baz=318						
SIM	Simferopol’	74.64	319	eP	P	17 48 02.4	+0.4
SIM	Simferopol’	74.64	319	d iP	P	17 48 02.9	+0.9
SIM				S	SKSac	17 58 25.0	+16
SIM				pmax	pmax		
	comp=Z,42nm,0.9s						
SIM				MLR	MLR		
	comp=Z,600nm,16.0s						
SORM	Soroca	74.67	325	⇓iP	P	17 48 02.1	+0.1
SORM	Soroca	74.67	325	⇓P	P	17 48 02.1	+0.1
J38A	Wedel Dairy, R	74.80	43	P	P	17 48 02.7	-0.2
	baz=319						
SCHQ	Schefferville	74.94	22	LR	LR	18 26 01.7	
	comp=Z,129nm,18.2s,baz=310,slow=40						
LVV	L’vov	75.00	328	eP	P	17 48 04.0	0.0
LVV				eS	S	17 57 40.0	-0.4
LVV				MLR	MLR		
	comp=Z,500nm,16.0s						
L37A	Phoenix Point,	75.06	45	P	P	17 48 04.2	-0.3
	baz=318						
J39A	Decorah	75.15	43	P	P	17 48 04.2	-0.8
	baz=319						
KIS	Kishinev	75.38	324	⇑iP	P	17 48 06.0	-0.2
	comp=Z,200nm,1.0s						
KIS				LRM	MLR	18 24 04.0	
	comp=Z,600nm,18.0s						
KIS	Kishinev	75.38	324	αiP	P	17 48 06.0	-0.2
KIS				e		17 52 44.0	
KIS				pmax	pmax		
	comp=Z,200nm,1.0s						
KIS				pmax	pmax		
	comp=Z,200nm,1.0s						
L38A	Oak Wood Farm,	75.44	44	P	P	17 48 06.5	-0.2
	baz=319						
G43A	Wallace	75.53	39	P	P	17 48 07.0	-0.1
	baz=321						
G43A	Wallace	75.53	39	eP	P	17 48 08.3	+1.2
	comp=Z,12nm,0.9s						
K39A	Oelwein	75.54	43	P	P	17 48 06.4	-0.8
	baz=319						
KWP	Kalwaria Pacla	75.64	329	eP	P	17 48 08.5	+0.9
KWP	Kalwaria Pacla	75.64	329	eP	P	17 48 08.2	+0.5
	comp=Z,1µm,1.0s						
KWP	Kalwaria Pacla	75.64	329	eP	P	17 48 08.2	+0.5
IAS	Iasi	75.74	325	⇑iP	P	17 48 08.6	+0.3
IAS	Iasi	75.74	325	⇑P	P	17 48 08.6	+0.3
BANOM	Banah	75.80	292	P	P	17 48 09.6	+0.6
SHME	Shamm	75.82	293	P	P	17 48 09.8	+0.7
L39A	Vinton	75.93	44	P	P	17 48 08.4	-1.0
	baz=319						
MATQ	Matagami	75.94	31	P	P	17 48 07.8	-1.6
	baz=326						
LEOM	Leova	76.03	324	⇑iP	P	17 48 10.6	+0.7
LEOM	Leova	76.03	324	⇑P	P	17 48 10.6	+0.7
WSAR	Wadi Sarin	76.10	289	LR	LR	18 25 31.5	
	comp=Z,209nm,19.9s,baz=40,slow=39						
AMTX	Amarillo	76.11	54	P	P	17 48 11.0	+0.3
	baz=316						
MSTX	Muleshoe	76.12	56	P	P	17 48 11.0	+0.2
	baz=316						
MNTX	Cornudas Mount	76.18	59	P	P	17 48 11.2	+0.2
	baz=315						
MNTX	Cornudas Mount	76.18	59	eP	P	17 48 11.3	+0.2
	comp=Z,4.8nm,0.9s						
OJC	Ojcow	76.19	331	eP	P	17 48 11.3	+0.5
OJC	Ojcow	76.19	331	eP	P	17 48 11.0	+0.3
	comp=Z,54nm,1.0s						
OJC	Ojcow	76.19	331	eP	P	17 48 11.2	+0.5
OJC				pmax	pmax		
	comp=Z,54nm,1.0s						
BUR08	Bucovina Ar. S	76.33	326	eP	P	17 48 11.8	+0.1
M39A	Webster	76.33	44	P	P	17 48 11.2	-0.5
	baz=319						
BUR04	Bucovina Ar. S	76.34	326	eP	P	17 48 11.8	-0.1
BURAR	Bucovina Array	76.34	326	⇑iP	P	17 48 12.3	+0.5
BURAR	Bucovina Array	76.34	326	⇑P	P	17 48 12.3	+0.5
L40A	Anamosa	76.35	43	P	P	17 48 11.2	-0.7
	baz=320						
UOSS	Minazif	76.53	292	eP	P	17 48 13.4	+0.2
	comp=Z,21nm,0.8s						
UOSS	Minazif	76.53	292	P	P	17 48 13.6	+0.4
UZH	Uzhgorod	76.62	328	⇓iP	P	17 48 12.9	-0.3
UZH				i		17 48 21.7	
TESR	Tescani	76.66	325	⇑iP	P	17 48 14.1	+0.6
HATD	Hatta, Dubai	76.67	292	P	P	17 48 14.8	+0.8
NIE	Niedzica	76.69	330	eP	P	17 48 14.4	+0.7
NIE	Niedzica	76.69	330	eP	P	17 48 14.4	+0.7
CRVS	Cervenica-Dubn	76.70	329	eP	P	17 48 14.4	+0.7
CRVS				pmax	pmax		
	comp=Z,27nm,1.5s						
CRVS	Cervenica-Dubn	76.70	329	eP	P	17 48 14.4	+0.7
TLCR		76.81	323	⇓iP	P	17 48 15.0	+0.6
TLCR		76.81	323	⇓P	P	17 48 15.0	+0.6
KSP	Ksiaz	76.82	333	eP	P	17 48 14.8	+0.4
KSP	Ksiaz	76.82	333	eP	P	17 48 14.8	+0.4
TRPA	Tarpa	76.95	328	⇑iP	P	17 48 15.8	+0.7
CHGQ	Chibougamau	76.96	29	P	P	17 48 14.0	-1.1
	baz=329						
N40A	Mertquake, Sal	77.07	44	P	P	17 48 15.9	0.0
	baz=320						
OKC	Ostrava-Krasne	77.08	331	eP	P	17 48 16.8	+1.0
OKC				AMS	AMS	18 30 40.0	
	comp=Z,300nm,16.5s						
OKC	Ostrava-Krasne	77.08	331	eP	P	17 48 16.8	+1.0
OKC				MLR	MLR		
	comp=Z,300nm,16.5s						
CFR	Carcaliu	77.11	323	⇑iP	P	17 48 16.4	+0.4
CFR	Carcaliu	77.11	323	⇑P	P	17 48 16.4	+0.4
ARCR	ARCALIA	77.11	326	⇓iP	P	17 48 15.7	-0.4
VRI	Vrincioaia	77.15	324	⇑iP	P	17 48 17.0	+0.7
VRI	Vrincioaia	77.15	324	⇑P	P	17 48 17.0	+0.7
PLOR	Plostina	77.19	324	⇑iP	P	17 48 16.5	-0.1
PLOR	Plostina	77.19	324	⇑P	P	17 48 16.5	-0.1
UPC	Upice	77.20	333	eP	P	17 48 17.2	+0.7
UPC				AMS	AMS	18 27 30.0	
	comp=Z,300nm,15.6s						
UPC	Upice	77.20	333	eP	P	17 48 17.2	+0.7
UPC				MLR	MLR		
	comp=Z,300nm,15.6s						
LANS	Liptovska Anna	77.21	330	eP	P	17 48 17.9	+1.3
LANS	Liptovska Anna	77.21	330	eP	P	17 48 17.9	+1.3
DPC	Dobruska-Polom	77.24	333	eP	P	17 48 17.4	+0.6
DPC				AMS	AMS	18 29 40.0	
	comp=Z,300nm,14.4s						
DPC	Dobruska-Polom	77.24	333	eP	P	17 48 17.4	+0.6
DPC				MLR	MLR		
	comp=Z,300nm,14.4s						
KRLC	Kraliky	77.33	332	eP	P	17 48 17.9	+0.6
KRLC	Kraliky	77.33	332	eP	P	17 48 17.9	+0.6
ASUD	Al Ashush, Dub	77.33	292	P	P	17 48 18.4	+0.8
MORC	Moravsky Berou	77.33	332	⇑iP	P	17 48 17.0	-0.3
MORC	Moravsky Berou	77.33	332	eP	P	17 48 17.6	+0.3
	comp=Z,39nm,1.0s						
MORC	Moravsky Berou	77.33	332	eP	P	17 48 17.9	+0.6
MORC				pmax	pmax		
	comp=Z,39nm,1.0s						
MORC	Moravsky Berou	77.33	332	⇑iP	P	17 48 17.9	+0.6
STKA	Stephens Creek	77.40	189	P	P	17 48 18.3	+0.7
	comp=Z,0.8nm,0.5s,baz=341,slow=3.5,SNR=3.4						
STKA				LR	LR	18 21 60.0	
	comp=Z,104nm,20.9s,baz=313,slow=35						
STKA	Stephens Creek	77.40	189	P	P	17 48 18.3	+0.7
STKA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
STKA				MLR	MLR		
	comp=Z,104nm,20.9s						
CLL	Collm	77.44	335	⇑iP	P	17 48 17.8	0.0
	comp=Z,38nm,0.9s						
CLL				e		17 48 33.0	
CLL				LmH		18 21 00.0	
	comp=N,200nm,19.0s						
CLL				LmH		18 21 00.0	
	comp=E,500nm,19.7s						
CLL				LmV		18 29 00.0	
	comp=Z,300nm,18.1s						
CLL	Collm	77.44	335	eP	P	17 48 17.4	-0.4
	comp=Z,33nm,0.9s						
CLL	Collm	77.44	335	⇑iP	P	17 48 17.8	0.0
CLL				e*PP	sP	17 48 25.0	-1.6
CLL				pmax	pmax		
	comp=Z,38nm,0.9s						
CLL				MLR	MLR		
	comp=Z,300nm,18.1s						
Q38A	Cooks Store, C	77.50	47	P	P	17 48 17.9	-0.5
	baz=319						
O40A	La Belle	77.51	45	P	P	17 48 17.8	-0.6
	baz=320						
BRG	Berggiesshubel	77.53	334	eP	P	17 48 18.4	0.0
	comp=Z,15nm,1.2s						
BRG				S	S	17 58 09.0	+0.7
	comp=N,320nm,15.3s						
	comp=E,186nm,20.3s						
	comp=Z,286nm,16.8s						
BRG	Berggiesshubel	77.53	334	eP	P	17 48 18.4	0.0
BRG				S	S	17 58 09.0	+0.7
BRG				pmax	pmax		
	comp=Z,15nm,1.2s						
BRG				MLR	MLR		
	comp=N,320nm,15.3s						
BRG				MLR	MLR		
	comp=E,186nm,20.3s						

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BRG                                  MLR     MLR
       comp=Z,286nm,16.8s
EKA    Eskdalemuir Ar    77.54 346   P       P          17 48 18.3   0.0
       comp=Z,9.9nm,0.8s,baz=21,slow=5.5,SNR=16
EKA                                  LR      LR         18 28 07.2
       comp=Z,70nm,18.1s,baz=50,slow=40
ESK    Eskdalemuir       77.56 346  eP       P          17 48 18.7 +0.3
       comp=Z,23nm,1.0s
ESK    Eskdalemuir       77.56 346  eP       P          17 48 18.9 +0.5
ESK                                  pmax    pmax
       comp=Z,23nm,1.0s
TIRR   Tirgusor          77.57 322⇑iP        P          17 48 19.3 +0.7
TIRR   Tirgusor          77.57 322 ⇑P        P          17 48 19.3 +0.7
TLB    Topalu            77.63 323⇑iP        P          17 48 19.8 +0.9
TLB    Topalu            77.63 323 ⇑P        P          17 48 19.8 +0.9
PVCC   Panska Ves        77.64 334  eP       P          17 48 19.6 +0.6
PVCC                                 AMS     AMS        18 26 30.0
       comp=Z,400nm,18.0s
PVCC   Panska Ves        77.64 334  eP       P          17 48 19.6 +0.6
PVCC                                 MLR     MLR
       comp=Z,400nm,18.0s
CJR    Cluj-Napoca       77.72 326⇑iP        P          17 48 20.5 +1.0
CJR    Cluj-Napoca       77.72 326 ⇑P        P          17 48 20.5 +1.0
MLR    Muntele Rosu      77.78 324   P       P          17 48 20.6 +0.7
       comp=Z,3.2nm,0.6s,baz=300,slow=3.9,SNR=24
MLR    Muntele Rosu      77.78 324⇑iP        P          17 48 20.5 +0.5
MLR    Muntele Rosu      77.78 324  eP       P          17 48 20.1 +0.2
       comp=Z,17nm,0.7s
ILGA   Ilgaz             77.82 317  eP       P          17 48 22.3 +1.9
       comp=Z,22nm,0.9s
ISR    Istrita           77.83 324⇓iP        P          17 48 21.3 +1.1
ISR    Istrita           77.83 324 ⇓P        P          17 48 21.3 +1.1
WMOK   Wichita Mounta    77.86  53   P       P          17 48 20.5   0.0
       baz=317
WMOK   Wichita Mounta    77.86  53  eP       P          17 48 21.2 +0.8
       comp=Z,6.3nm,1.3s
WMOK   Wichita Mounta    77.86  53  eP       P          17 48 21.2 +0.8
WMOK                                 pmax    pmax
       comp=Z,6.0nm,1.3s
N42A   Yates City        77.87  43   P       P          17 48 20.1  -0.3
       baz=321
P40A   Paris             77.87  45   P       P          17 48 20.2  -0.2
       baz=320
R38A   Fenwick Farm,     77.94  47   P       P          17 48 19.6  -1.2
       baz=319
VYHS   Vyhne             77.98 330  eP       P          17 48 21.6 +0.7
VYHS                                 pmax    pmax
       comp=Z,12nm,1.1s
VYHS   Vyhne             77.98 330  eP       P          17 48 21.6 +0.7
DRGR                     77.99 327⇓iP        P          17 48 21.5 +0.4
DRGR                     77.99 327 ⇓P        P          17 48 21.5 +0.4
VRAC   Vranov            78.05 332⇑iP        P          17 48 21.9 +0.7
VRAC   Vranov            78.05 332 ⇑P        P          17 48 21.9 +0.7
VRAC   Vranov            78.05 332⇑iP        P          17 48 22.0 +0.7
JAVC   Velka Javorina    78.08 331⇑iP        P          17 48 23.0 +1.5
PSZ    Piszkesteto       78.10 329  eP       P          17 48 22.2 +0.6
       comp=Z,13nm,0.9s
PSZ    Piszkesteto       78.10 329  eP       P          17 48 22.2 +0.6
PSZ                                  pmax    pmax
       comp=Z,13nm,0.9s
GOPC   GO Pecny, Ondr    78.11 333  eP       P          17 48 22.2 +0.6
GOPC                                 AMS     AMS        18 26 50.0
       comp=Z,400nm,16.9s
GOPC   GO Pecny, Ondr    78.11 333  eP       P          17 48 22.2 +0.6
GOPC                                 MLR     MLR
       comp=Z,400nm,16.9s
PRU    Pruhonice         78.12 333  eP       P          17 48 22.3 +0.7
PRU                                  AMS     AMS        18 26 50.0
       comp=Z,400nm,15.2s
PRU    Pruhonice         78.12 333  eP       P          17 48 22.3 +0.7
PRU                                  MLR     MLR
       comp=Z,400nm,15.2s
VOIR                     78.19 325⇑iP        P          17 48 23.0 +0.8
VOIR                     78.19 325 ⇑P        P          17 48 23.0 +0.8
KRUC   Moravsky          78.33 332⇑iP        P          17 48 23.4 +0.6
S38A   Stockton          78.35  48   P       P          17 48 22.8  -0.3
       baz=319
HDIL   Hopedale          78.44  43   P       P          17 48 22.6  -0.9
       baz=321
HDIL   Hopedale          78.44  43  eP       P          17 48 23.8 +0.3
       comp=Z,20nm,0.8s
NKC    Novy Kostel       78.55 335  eP       P          17 48 24.6 +0.6
NKC    Novy Kostel       78.55 335  eP       P          17 48 24.6 +0.6
WTSB   Winterswijk       78.56 339  eP       P          17 48 24.3 +0.4
       comp=Z,33nm,0.9s
T38A   Diamond           78.60  48   P       P          17 48 24.8 +0.3
       baz=319
S39A   Bolivar           78.61  47   P       P          17 48 24.1  -0.5
       baz=319
MODS   Modra-Piesok      78.63 331  eP       P          17 48 25.5 +1.0
MODS                                 pmax    pmax
       comp=Z,33nm,1.0s
MODS   Modra-Piesok      78.63 331  eP       P          17 48 25.5 +1.0
P42A   Winchester        78.67  44   P       P          17 48 24.0  -0.9
       baz=321
R40A   Maddies Statio    78.70  46   P       P          17 48 24.3  -0.7
       baz=320
R40A   Maddies Statio    78.70  46  eP       P          17 48 24.9  -0.1
       comp=Z,7.1nm,0.9s
Q41A   Truxton           78.72  45   P       P          17 48 24.3  -0.8
       baz=320
BUD    Budapest          78.78 330⇓ex        P          17 48 27.0 +1.7
BR131  Keskin Array S    78.88 316  eP       P          17 48 26.8 +0.6
BRTR   Keskin Array B    78.88 316   P       P          17 48 26.9 +0.8
       comp=Z,8.7nm,0.8s,baz=77,slow=4.4,SNR=43
BRTR                                 LR      LR         18 28 33.5
       comp=Z,236nm,19.2s,baz=34,slow=40
BRTR   Keskin Array B    78.88 316   P       P          17 48 27.0 +0.8
BRTR                                 pmax    pmax
       comp=Z,9.0nm,0.8s
BRTR                                 MLR     MLR
       comp=Z,236nm,19.2s
TX31   Lajitas Ar. Si    78.90  60  eP       P          17 48 26.4   0.0
TXAR   Lajitas Array     78.90  60   P       P          17 48 26.6 +0.1
       comp=Z,4.0nm,0.7s,baz=295,slow=3.7,SNR=40
Q42A   Golden Eagle      79.10  45   P       P          17 48 27.3 +0.1
       baz=321
S40A   Lebanon           79.11  47   P       P          17 48 25.9  -1.4
       baz=320
R41A   Rosebud           79.14  46   P       P          17 48 26.4  -1.1
       baz=320
CSKK   Csˆ‡kako          79.15 330⇓ex        P          17 48 28.4 +1.0
KHC    Kasperske Hory    79.18 334  eP       P          17 48 28.4 +0.9
KHC                                 ex       x          17 48 34.5
KHC                                 eS       S          17 58 30.3 +4.2
KHC                                  AMS     AMS        18 27 20.0
       comp=Z,500nm,18.3s
KHC    Kasperske Hory    79.18 334  eP       P          17 48 27.9 +0.3
       comp=Z,8.8nm,0.7s
KHC    Kasperske Hory    79.18 334  eP       P          17 48 27.5   0.0
KHC                                  pmax    pmax
       comp=Z,9.0nm,0.7s
ANTO   Ankara            79.18 317⇑iP        P          17 48 28.5 +0.7
ANTO   Ankara            79.18 317  eP       P          17 48 29.0 +1.2
       comp=Z,24nm,0.8s
ANTO   Ankara            79.18 317  eP       P          17 48 29.0 +1.2
ANTO                                 pmax    pmax
       comp=Z,24nm,0.8s
BR231  Keskin MP Arra    79.21 317  eP       P          17 48 29.1 +1.2
GEC2   GERESS Array S    79.39 333  eP       P          17 48 29.2 +0.4
       comp=Z,9.3nm,0.8s
GEC2   GERESS Array S    79.39 333  eP       P          17 48 29.2 +0.4
GEC2                                 pmax    pmax
       comp=Z,9.0nm,0.8s
GERES  GERESS Array B    79.39 333   P       P          17 48 29.1 +0.3
       comp=Z,8.6nm,0.8s,baz=32,slow=5.2,SNR=65
GERES                                LR      LR         18 27 57.0
       comp=Z,287nm,18.4s,baz=56,slow=39
BZS    Buzias            79.39 327⇓iP        P          17 48 29.4 +0.7
BZS    Buzias            79.39 327 ⇓P        P          17 48 29.4 +0.7
GEA0   GERESS Array S    79.40 333  eP       P          17 48 28.7  -0.1
CCM    Cathedral Cave    79.40  46   P       P          17 48 29.0 +0.1
       baz=320
CCM    Cathedral Cave    79.40  46  eP       P          17 48 29.9 +1.1
       comp=Z,7.4nm,0.9s
CCM    Cathedral Cave    79.40  46  eP       P          17 48 30.0 +1.1
CCM                                  pmax    pmax
       comp=Z,7.0nm,0.9s
GRFO   Grafenberg        79.40 335  eP       P          17 48 29.2 +0.5
       comp=Z,33nm,0.7s
GRFO   Grafenberg        79.40 335  eP       P          17 48 29.2 +0.5
GRFO                                 pmax    pmax
       comp=Z,33nm,0.7s
RAR    Rarotonga         79.43 135   LR      LR         18 19 50.9
       comp=Z,186nm,19.1s,baz=324,slow=33
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T40A   Mansfield         79.44  47   P       P          17 48 28.5  -0.6
       baz=320
CONA   Conrad Observa    79.49 332  i P      P          17 48 30.2 +0.9
       comp=Z,18nm,0.8s,SNR=15
S41A   Jillco Farms,     79.50  46   P       P          17 48 28.9  -0.6
       baz=320
U39A   Green Forest      79.52  48   P       P          17 48 29.2  -0.3
       baz=320
MZR    Muzera            79.67 292  i P      P          17 48 31.7 +1.1
       SNR=8.6
HERR   Herculane         79.70 326⇓iP        P          17 48 30.3  -0.1
BANO   Bancroft          79.79  33   P       P          17 48 30.3  -0.6
       baz=327
V39A   Pettigrew         79.84  49   P       P          17 48 31.1  -0.3
       baz=320
S42A   Caledonia         79.85  46   P       P          17 48 31.2  -0.1
       baz=321
U40A   Yellville         79.87  48   P       P          17 48 30.9  -0.6
       baz=320
HGN    Heimansgroeve     79.88 339  i P      P          17 48 31.5 +0.3
       comp=Z,34nm,1.0s
T41A   Mountain View     79.91  47   P       P          17 48 31.1  -0.6
       baz=320
BEBN   Eben Emael        79.92 339 ⇓P        P          17 48 32.2 +0.8
JMB    Yambol            79.96 322  i P      P          17 48 39.6 +7.8
P45A   Graceland, Par    79.98  43   P       P          17 48 31.1  -0.9
       baz=322
MEM    Membach           80.00 339 ⇑P        P          17 48 32.2 +0.3
       comp=Z,34nm,0.9s
MDVR   Moldovita         80.05 327⇓iP        P          17 48 32.5 +0.1
MOA    Molln             80.08 333  i pP     P          17 48 32.9 +0.5
       comp=Z,15nm,0.8s,SNR=10
ARSA   Arzberg           80.19 332  epP      P          17 48 33.5 +0.5
       comp=Z,8.5nm,1.0s
T42A   Van Buren         80.26  46   P       P          17 48 32.8  -0.8
       baz=321
Q45A   Warren Harvey,    80.28  43   P       P          17 48 33.2  -0.4
       baz=322
V40A   Witts Springs     80.30  48   P       P          17 48 33.5  -0.4
       baz=320
BCLA   Clavier           80.36 339 ⇑P        P          17 48 34.0 +0.2
       comp=Z,14nm,0.8s
ALFO   Alfred            80.43  31   P       P          17 48 33.5  -0.8
       baz=329
MPEP   Malo Peshtene     80.43 324  i P      P          17 48 34.8 +0.4
BEHE   Becsehely         80.44 330⇓ex        P          17 48 30.8  -3.6
X39A   Fountain Ranch    80.59  50   P       P          17 48 35.1  -0.3
       baz=319
W40A   Ferguson Farm,    80.64  49   P       P          17 48 36.2 +0.6
       baz=320
V41A   Mountainview      80.67  48   P       P          17 48 35.3  -0.5
       baz=320
S44A   Carbondale        80.68  45   P       P          17 48 35.9 +0.1
       baz=321
P47A   Martinsville      80.71  42   P       P          17 48 35.9  -0.1
       baz=323
DIM    Dimitrovgrad      80.75 323  i P      P          17 48 36.7 +0.6
STU    Stuttgart         80.81 336  eP       P          17 48 36.5 +0.1
       comp=Z,18nm,0.9s
STU    Stuttgart         80.81 336  eP       P          17 48 36.2  -0.1
STU                                  pmax    pmax
       comp=Z,18nm,0.9s
DOU    Dourbes           80.83 339 ⇓P        P          17 48 36.9 +0.5
       comp=Z,8.0nm,1.0s
WLF    Walferdange       80.83 338 ⇑P        P          17 48 36.3  -0.1
WLF    Walferdange       80.83 338  eP       P          17 48 37.5 +1.1
       comp=Z,16nm,0.9s
WLF    Walferdange       80.83 338  eP       P          17 48 38.7 +2.3
WLF                                  pmax    pmax
       comp=Z,16nm,0.9s
SOKA   Soboth            80.86 332  i pP     P          17 48 37.0 +0.3
       comp=Z,26nm,1.0s,SNR=14
MIAR   Mount Ida         80.86  50   P       P          17 48 35.3  -1.5
       baz=320
MIAR   Mount Ida         80.86  50  eP       P          17 48 37.5 +0.7
       comp=Z,8.2nm,1.0s
MIAR   Mount Ida         80.86  50  eP       P          17 48 37.5 +0.7
MIAR                                 pmax    pmax
       comp=Z,8.0nm,1.0s
PERS   Pernice           80.86 331  i P      P          17 48 36.9 +0.2
PGB    Panagyurishte     80.92 324  i P      P          17 48 38.0 +0.9
V42A   Cord              81.05  47   P       P          17 48 35.7  -2.1
       baz=320
KBA    Koelnbreinsper    81.06 333  i P      P          17 48 38.7 +0.8
       comp=Z,55nm,1.1s
Q47A   Bedord North L    81.08  42   P       P          17 48 37.5  -0.4
       baz=323
W41B   Gary Mavity, V    81.09  48   P       P          17 48 37.4  -0.6
       baz=320
W41B   Gary Mavity, V    81.09  48  eP       P          17 48 38.3 +0.3
       comp=Z,6.7nm,0.9s
P48A   Milroy            81.13  41   P       P          17 48 36.5  -1.7
       baz=323
OBKA   Obir              81.17 332  i pP     P          17 48 38.3  -0.1
       comp=Z,5.4nm,0.7s
VTS    Vitosha           81.28 324⇓iP        P          17 48 39.5 +0.4
VTS    Vitosha           81.28 324  eP       P          17 48 39.2 +0.1
       comp=Z,49nm,0.9s
VTS    Vitosha           81.28 324  i P      P          17 48 39.4 +0.4
VTS    Vitosha           81.28 324   P       P          17 48 39.6 +0.4
VTS    Vitosha           81.28 324  eP       P          17 48 39.2 +0.1
VTS                                  pmax    pmax
       comp=Z,49nm,0.9s
DIVS   Divibare          81.29 327  eP       P          17 48 38.7  -0.3
       comp=Z,18nm,0.9s
MYKA   Terra Mystica     81.36 332  i pP     P          17 48 39.1  -0.2
       comp=Z,9.3nm,0.8s
WATA   Walderalm         81.39 334  i P      P          17 48 41.3 +1.7
       comp=Z,24nm,0.7s,SNR=18
P49A   Miami Univ. Ec    81.40  41   P       P          17 48 38.6  -1.1
       baz=324
O50A   Cable             81.41  40   P       P          17 48 39.3  -0.4
       baz=324
Q48A   North Vernon      81.41  42   P       P          17 48 38.9  -0.8
       baz=323
WTTA   Wattenberg        81.44 334  i P      P          17 48 40.7 +0.8
       comp=Z,26nm,0.7s,SNR=7.9
CRES   Cresnjev          81.45 331  i P      P          17 48 39.5  -0.3
BFO    Black Forest      81.46 336  eP       P          17 48 39.9 +0.1
       comp=Z,19nm,0.9s
BFO    Black Forest      81.46 336  i P      P          17 48 40.5 +0.7
ALN    Alexandroupoli    81.47 322  eP       P          17 48 40.4 +0.4
       comp=Z,14nm,1.0s
ALN    Alexandroupoli    81.47 322   P       P          17 48 40.2 +0.3
ALN    Alexandroupoli    81.47 322  eP       P          17 48 40.4 +0.4
ALN                                  pmax    pmax
       comp=Z,14nm,1.0s
RDO    Rodhopi           81.49 322   P       P          17 48 40.6 +0.6
RETA   Reutte            81.50 335  i pP     P          17 48 40.7 +0.6
       comp=Z,18nm,0.9s,SNR=10
MOTA   Moosalm           81.53 334  i P      P          17 48 41.7 +1.4
       comp=Z,35nm,0.9s,SNR=30
R47A   Wooly Knot Far    81.53  43   P       P          17 48 39.2  -1.1
       baz=323
LJU    Ljubljana         81.58 332  i P      P          17 48 40.1  -0.4
ABTA   Abfaltersbach     81.62 333  i pP     P          17 48 41.4 +0.6
       comp=Z,12nm,0.9s,SNR=5.6
ACSO   Alum Creek Sta    81.62  39   P       P          17 48 39.7  -1.1
       baz=324
VISS   Visnje            81.69 331  i P      P          17 48 40.7  -0.3
WCI    Wyandotte Cave    81.70  43   P       P          17 48 41.2   0.0
       baz=323
P50A   Jamestown         81.76  40   P       P          17 48 40.8  -0.7
       baz=324
T46A   Princeton         81.86  44   P       P          17 48 42.1   0.0
       baz=322
ECH    Echery            81.89 337  eP       P          17 48 41.8  -0.3
       comp=Z,18nm,0.8s
ECH    Echery            81.89 337  eP       P          17 48 41.8  -0.3
ECH                                  pmax    pmax
       comp=Z,18nm,0.8s
MMB    Musomiste         81.90 323  i P      P          17 48 42.0  -0.2
FETA   Feichten          81.93 334  i pP     P          17 48 43.0 +0.5
       comp=Z,18nm,1.0s,SNR=7.7
KKB    Krupnik           81.94 324  i P      P          17 48 42.9 +0.5
PPT    Papeete           81.98 125   LR      LR         18 22 15.8
       comp=Z,219nm,19.1s,baz=346,slow=34
PPT2   Papeete2          81.99 125  eS       S          17 58 58.0 +1.9
       comp=Z,1µm,39.5s
PPT2   Papeete2          81.99 125  eLR      LR         18 14 29.8
       comp=Z,228nm,21.2s,baz=323
NVR    Nevrokopi         82.04 323   P       P          17 48 43.4 +0.4
SMTH   Samothraki Isl    82.05 322   P       P          17 48 42.6  -0.4
T47A   Sharon Grove      82.29  44   P       P          17 48 44.0  -0.3
       baz=323
T47A   Sharon Grove      82.29  44  eP       P          17 48 44.0  -0.3
       comp=Z,10nm,1.1s
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N54A   Moraine State     82.33  37   P       P          17 48 44.5   0.0
       baz=326
SRS    Serrai            82.34 323   P       P          17 48 44.0  -0.6
DAVOX  Davos/Dischmat    82.41 335   P       P          17 48 45.7 +0.7
       comp=Z,7.6nm,0.7s,baz=25,slow=11,SNR=5.4
DAVOX                                LR      LR         18 30 38.9
       comp=Z,164nm,19.0s,baz=76,slow=40
STIP   Stip              82.45 325⇑iP        P          17 48 43.8  -1.3
SKO    Skopje            82.52 325⇑iP        P          17 48 46.1 +0.6
S49A   Springfield       82.53  42   P       P          17 48 45.4  -0.2
       baz=323
T48A   Bowling Green     82.54  43   P       P          17 48 45.1  -0.5
       baz=323
KNT    Kendrikon         82.60 324   P       P          17 48 45.5  -0.4
VAY    Valandovo         82.60 324⇑iP        P          17 48 46.2 +0.4
WVT    Waverly           82.61  45   P       P          17 48 45.2  -0.8
       baz=322
LIA    Limnos Island     82.67 322   P       P          17 48 46.4 +0.2
V46A   Holladay          82.72  45   P       P          17 48 46.6   0.0
       baz=322
CSS    Mathiatis         82.74 313  eP       P          17 48 46.6  -0.1
       comp=Z,19nm,0.7s
TUE    Stuetta           82.84 335  eP       P          17 48 47.6 +0.2
       comp=Z,25nm,0.8s
U48A   Cassie Pea, Po    82.94  44   P       P          17 48 48.0 +0.2
       baz=323
PDG    Podgorica         83.00 327⇑iP        P          17 48 47.8  -0.1
TTG    Podgorica         83.00 327  eP       P          17 48 47.4  -0.5
       comp=Z,25nm,0.8s
TTG    Podgorica         83.00 327  eP       P          17 48 47.7  -0.1
TTG                                  pmax    pmax
       comp=Z,25nm,0.8s
ASF    Jabal al Asfar    83.00 309   P       P          17 48 49.3 +1.1
       comp=Z,8.4nm,0.8s,baz=135,slow=1.4,SNR=11
V47A   Nunnelly          83.00  45   P       P          17 48 47.7  -0.4
       baz=322
KRUS   Krusevo           83.10 325⇑eP        P          17 48 48.4  -0.2
MMAI   Mount Meron Ar    83.16 311   P       P          17 48 50.0 +0.9
       comp=Z,28nm,0.8s,baz=28,slow=6.5,SNR=17
MMAI                                 LR      LR         18 30 53.1
       comp=Z,461nm,19.2s,baz=35,slow=39
PHP    Peshkopia         83.16 326   P       P          17 48 48.2  -0.7
T50A   Nancy             83.36  42   P       P          17 48 49.4  -0.5
       baz=324
V48A   Smith Brothers    83.42  44   P       P          17 48 50.0  -0.3
       baz=323
OHR    Ohrid             83.50 325⇑iP        P          17 48 50.2  -0.5
FETY   Fethiye           83.52 317   P       P          17 48 50.5  -0.3
SENIN  Lac Senin/Sane    83.54 336  eP       P          17 48 51.2 +0.2
       comp=Z,13nm,0.8s
FNA    Florina           83.55 325  eP       P          17 48 50.4  -0.5
       comp=Z,21nm,0.8s
FNA    Florina           83.55 325  eP       P          17 48 50.8  -0.1
FNA                                  pmax    pmax
       comp=Z,21nm,0.8s
LIT    Litokhoron        83.66 323  eP       P          17 48 51.1  -0.3
       comp=Z,20nm,1.0s
LIT    Litokhoron        83.66 323   P       P          17 48 50.7  -0.7
LIT    Litokhoron        83.66 323  eP       P          17 48 51.1  -0.3
LIT                                  pmax    pmax
       comp=Z,20nm,1.0s
T51A   Gray              83.83  42   P       P          17 48 52.0  -0.3
       baz=324
AOS    Alonnisos         83.83 322   P       P          17 48 51.1  -1.2
W48A   Pulaski           83.84  45   P       P          17 48 51.9  -0.5
       baz=323
U50A   Jamestown         83.84  43   P       P          17 48 52.3  -0.1
       baz=324
Y46A   Houston           83.85  47   P       P          17 48 52.4  -0.1
       baz=322
XOR    Xorichti          83.97 323   P       P          17 48 52.1  -0.9
W49A   Belvidere         84.19  44   P       P          17 48 54.5 +0.4
       baz=323
TZTN   Tazewell          84.35  42   P       P          17 48 55.2 +0.2
       baz=324
Y47A   UCPARC, Winfie    84.35  46   P       P          17 48 56.8 +1.7
       baz=322
RAYN   Ar Rayn           84.40 298  eP       P          17 48 55.8 +0.3
       comp=Z,13nm,1.0s
RAYN   Ar Rayn           84.40 298  i P      P          17 48 55.9 +0.4
       SNR=14
U52A   Thorn Hill        84.56  42   P       P          17 48 56.1   0.0
       baz=325
AGG    Agios Georgios    84.62 323  eP       P          17 48 55.3  -1.0
       comp=Z,27nm,0.8s
AGG    Agios Georgios    84.62 323  eP       P          17 48 55.6  -0.8
AGG                                  pmax    pmax
       comp=Z,27nm,0.8s
V52A   Sevierville       84.90  42   P       P          17 48 57.2  -0.5
       baz=324
BNI    Bardonecchia      84.91 336  eP       P          17 48 57.9 +0.1
       comp=Z,13nm,1.0s
BNI    Bardonecchia      84.91 336  eP       P          17 48 58.8 +1.0
BNI                                  pmax    pmax
       comp=Z,13nm,1.0s
U53A   Fall Branch       84.95  41   P       P          17 48 58.2 +0.1
       baz=325
TKL    Tuckaleechee C    84.96  43   P       P          17 48 57.8  -0.3
       comp=Z,2.3nm,0.7s,baz=270,slow=1.0,SNR=3.2
TKL                                  LR      LR         18 26 53.2
       comp=Z,187nm,21.8s,baz=332,slow=36
DSL    Palaion Diasel    85.05 324   P       P          17 48 56.9  -1.6
DSF    Desfina           85.05 322   P       P          17 48 56.7  -1.8
AQU    L’Aquila          85.21 331  eP       P          17 48 59.6 +0.4
       comp=Z,20nm,0.8s
AQU    L’Aquila          85.21 331  eP       P          17 49 00.9 +1.6
AQU                                  pmax    pmax
       comp=Z,21nm,0.8s
SERG   Sergoula          85.25 323   P       P          17 48 58.3  -1.2
EFP    Efpalio           85.30 323   P       P          17 48 59.7   0.0
LAKA   Lakka             85.43 323   P       P          17 48 58.1  -2.3
PDO    Prodromos         85.47 323   P       P          17 48 58.9  -1.6
MATE   Matera            85.50 328⇓iP        P          17 49 00.8 +0.2
W53A   Cullowhee         85.65  42   P       P          17 49 02.1 +0.4
       baz=325
Y51A   Rockmart          85.75  44   P       P          17 49 02.4 +0.3
       baz=324
DRO    Drossia           85.79 323   P       P          17 49 01.5  -0.7
Z50A   Ashland           85.84  45   P       P          17 49 02.4  -0.1
       baz=323
Z50A   Ashland           85.84  45  eP       P          17 49 02.0  -0.5
       comp=Z,10nm,0.9s
BG3    Lake Jocassee     85.90  42  eP       P          17 49 03.1 +0.3
       comp=Z,28nm,1.7s
AMT    Artemida-Makis    86.14 323   P       P          17 49 03.6  -0.3
ITM    Ithomi            86.34 322  eP       P          17 49 03.9  -1.0
       comp=Z,46nm,0.9s
ITM    Ithomi            86.34 322   P       P          17 49 03.4  -1.5
CUC    Castrocucco       86.41 328  eP       P          17 49 05.6 +0.3
       comp=Z,13nm,1.0s
LAST   Lasithi           86.42 319   P       P          17 49 04.3  -1.1
DYR    Agios Nikonas     86.52 322   P       P          17 49 04.4  -1.4
IDI    Anoyia            86.59 319   P       P          17 49 05.7  -0.6
       comp=Z,12nm,0.6s,baz=24,slow=13,SNR=16
IDI                                  LR      LR         18 32 34.1
       comp=Z,115nm,18.5s,baz=47,slow=39
IDI    Anoyia            86.59 319⇓iP        P          17 49 06.3 +0.1
IDI    Anoyia            86.59 319  eP       P          17 49 06.0  -0.3
       comp=Z,21nm,0.9s
PYL    PYLOS             86.66 322   P       P          17 49 03.9  -2.6
TIP    Timpagrande       86.75 327  eP       P          17 49 06.3  -0.6
       comp=Z,39nm,1.2s
TIP    Timpagrande       86.75 327   P       P          17 49 06.4  -0.6
Y54A   Tignall           86.94  43   P       P          17 49 07.6  -0.3
       baz=325
CEL    Celeste           87.89 327  eP       P          17 49 11.8  -0.6
       comp=Z,24nm,1.0s
VAE    Valguarnera       89.14 328   LR      LR         18 36 09.8
       comp=Z,141nm,18.1s,baz=336,slow=40
POLO   Lamas de Olo      91.82 345  eP       P          17 49 30.3  -0.5
       comp=Z,20nm,1.8s
PVRL   Vila Real         91.90 345  eP       P          17 49 31.0  -0.1
KEST   Kesra             92.53 330   P       P          17 49 33.5  -0.8
       comp=Z,12nm,0.9s,baz=314,slow=4.4,SNR=9.7
KEST                                 LR      LR         18 36 47.0
       comp=Z,134nm,18.7s,baz=236,slow=39
KEST   Kesra             92.53 330  eP       P          17 49 34.5 +0.3
       comp=Z,11nm,0.8s
ES19   SONSECA Array     92.64 342  eP       P          17 49 33.5  -1.1
ESDC   Sonseca Array     92.67 342   P       P          17 49 29.4  -5.4
       comp=Z,0.2nm,0.4s,baz=352,slow=3.9,SNR=2.9
ESDC                                 LR      LR         18 36 35.6
       comp=Z,69nm,18.4s,baz=35,slow=39
THTN   Thala             92.92 331  eP       P          17 49 38.8 +2.8
       comp=Z,18nm,1.1s
ATD    Arta Tunnel       94.92 292   LR      LR         18 38 28.9
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	comp=Z,174nm,18.5s,baz=352,slow=39						
MDT	**Midelt**	**99.38**	**340**	LR	LR	18 41 54.1	
	comp=Z,146nm,18.6s,baz=353,slow=40						
NVL	**N'lazarevskaya**	**148.00**	**204**	*e*PKP2	**PKPab**	**17 56 15.0**	**+5.4**
NVL				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PLCA	**Paso Flores**	**148.85**	**97**	PKPbc	**PKPbc**	**17 56 09.8**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=25,slow=3.7,SNR=3.2						
CPUP	**Villa Florida**	**149.86**	**61**	PKPbc	**PKPbc**	**17 56 12.2**	**-0.8**
	comp=Z,2.3nm,1.0s,baz=281,slow=5.2,SNR=2.1						
SNAA	**Sanae**	**150.95**	**196**	PKPbc	**PKPbc**	**17 56 13.7**	**-0.6**
	comp=Z,2.4nm,0.9s,baz=176,slow=16,SNR=9.9						

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*ISK **14** 17:45:17.2,38°.62N×43°.14E,h5^{km},ML2.9/3*

*ISCJB **14** 17:45:18.4±0.4,38°.64N±0°.02×43°.13E±0°.03,h2^{km}±5^{km}, Error ellipse: s-maj=4.0km s-min=3.8km az=22.0*

*DDA **14** 17:45:18.5,38°.64N×43°.18E,h7^{km},Ml3.0*

*CSEM **14** 17:45:18.2±0.2,38°.63N×43°.16E,h5^{km},ML2.9,Error ellipse: s-maj=5.2km s-min=4.2km az=136.0*

ISC 14 17:45:18.3±1.1,38°.63N±0°.02×43°.14E±0°.02,h2^{km}±10^{km}, n43,σ0^{s}83/67,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VANB	**Van**	**0.20**	**100**	PG	**Pg**	**17 45 22.2**	**0.0**
VANB				SG	**Sg**	**17 45 25.9**	**+1.1**
VANB	**Van**	**0.20**	**100**	*i* Pg	**Pg**	**17 45 22.2**	**0.0**
VANB				*e*Sg	**Sg**	**17 45 25.9**	**+1.1**
TVAN	**Van**	**0.23**	**116**	*i* P	**Pg**	**17 45 22.2**	**-0.6**
TVAN				*i* S	**Sg**	**17 45 26.3**	**+0.4**
TVAN	**Van**	**0.23**	**116**	P	**Pg**	**17 45 22.2**	**-0.6**
TVAN				S	**Sg**	**17 45 26.3**	**+0.4**
GEVA	**Gevas**	**0.32**	**191**	*i* P	**Pg**	**17 45 24.2**	**-0.4**
GEVA				*i* S	**Sb**	**17 45 31.5**	**-1.2**
GEVA	**Gevas**	**0.32**	**191**	P	**Pg**	**17 45 24.2**	**-0.4**
GEVA				S	**Sb**	**17 45 31.5**	**-1.2**
ADCV	**BITLIS_Adilcev**	**0.37**	**299**	*i* P	**Pg**	**17 45 26.1**	**+0.6**
ADCV				*i* S	**Sb**	**17 45 33.0**	**-1.1**
ADCV	**BITLIS_Adilcev**	**0.37**	**299**	P	**Pg**	**17 45 26.1**	**+0.6**
ADCV				S	**Sb**	**17 45 33.0**	**-1.1**
ERCV	**ERCIS-VAN**	**0.42**	**22**	PG	**Pg**	**17 45 26.2**	**-0.2**
ERCV	**ERCIS-VAN**	**0.42**	**22**	*e*Pg	**Pg**	**17 45 26.2**	**-0.2**
VMUR	**Van-Muradiye**	**0.49**	**43**	*i* P	**Pg**	**17 45 28.1**	**+0.2**
VMUR				*i* S	**Sb**	**17 45 36.8**	**-0.8**
VMUR	**Van-Muradiye**	**0.49**	**43**	P	**Pg**	**17 45 28.0**	**+0.2**
VMUR				S	**Sb**	**17 45 36.8**	**-0.8**
CLDR	**Caldiran**	**0.79**	**50**	PG	**Pg**	**17 45 33.4**	**-0.2**
CLDR	**Caldiran**	**0.79**	**50**	*i* P	**Pg**	**17 45 33.0**	**-0.6**
CLDR				*i* S	**Sb**	**17 45 45.2**	**-1.1**
CLDR	**Caldiran**	**0.79**	**50**	P	**Pg**	**17 45 33.0**	**-0.6**
CLDR	**Caldiran**	**0.79**	**50**	*e*Pg	**Pg**	**17 45 33.4**	**-0.2**
CLDR				S	**Sb**	**17 45 45.2**	**-1.1**
TUTA	**Tutak**	**0.81**	**342**	*i* P	**Pg**	**17 45 33.5**	**-0.4**
TUTA				*i* S	**Sg**	**17 45 45.4**	**+0.9**
TUTA	**Tutak**	**0.81**	**342**	P	**Pg**	**17 45 33.5**	**-0.4**
TUTA				S	**Sg**	**17 45 45.4**	**+0.9**
GURO	**Guroymak-BITLI**	**0.87**	**265**	PG	**Pg**	**17 45 34.4**	**-0.7**
GURO				SG	**Sg**	**17 45 46.5**	**+0.1**
GURO	**Guroymak-BITLI**	**0.87**	**265**	*e*Pg	**Pg**	**17 45 34.4**	**-0.7**
GURO				*e*Sg	**Sg**	**17 45 46.5**	**+0.1**
AGRB	**Hanur-Agry**	**0.95**	**353**	PG	**Pg**	**17 45 36.0**	**-0.6**
AGRB	**Hanur-Agry**	**0.95**	**353**	*e*Pg	**Pg**	**17 45 36.0**	**-0.6**
EKAR	**Karacoban**	**1.05**	**307**	*i* P	**Pb**	**17 45 39.6**	**+0.3**
EKAR				*i* S	**Sn**	**17 45 56.8**	**+1.2**
EKAR	**Karacoban**	**1.05**	**307**	P	**Pb**	**17 45 39.6**	**+0.3**
EKAR				S	**Sn**	**17 45 56.8**	**+1.2**
SRTM	**Siirt_Merkez**	**1.15**	**237**	*i* P	**Pn**	**17 45 42.7**	**+1.1**
SRTM				*i* S	**Sg**	**17 45 55.9**	**+0.6**
SRTM	**Siirt_Merkez**	**1.15**	**237**	P	**Pn**	**17 45 42.7**	**+1.1**
SRTM				S	**Sg**	**17 45 55.9**	**+0.6**
SIRT	**Sirnak**	**1.26**	**206**	PN	**Pg**	**17 45 41.9**	**-0.5**
SIRT	**Sirnak**	**1.26**	**206**	*e*Pn	**Pg**	**17 45 41.9**	**-0.5**
SIRN	**S˜–rnak**	**1.27**	**207**	*i* P	**Pn**	**17 45 43.5**	**+0.3**
SIRN				*i* S	**Sn**	**17 46 02.7**	**+1.9**
SIRN	**S˜–rnak**	**1.27**	**207**	P	**Pn**	**17 45 43.5**	**+0.3**
SIRN				S	**Sn**	**17 46 02.7**	**+1.9**
EATA	**Eleskirt**	**1.33**	**338**	*i* P	**Pg**	**17 45 43.0**	**-0.8**
EATA				*i* S	**Sg**	**17 46 01.3**	**+0.2**
EATA	**Eleskirt**	**1.33**	**338**	P	**Pg**	**17 45 43.0**	**-0.8**
EATA				S	**Sg**	**17 46 01.3**	**+0.2**
CUKT	**Cukurca**	**1.43**	**165**	PN	**Pn**	**17 45 44.3**	**-1.1**
CUKT	**Cukurca**	**1.43**	**165**	*e*Pn	**Pn**	**17 45 44.3**	**-1.1**
IGDI	**IGDIR**	**1.44**	**30**	*i* P	**Pg**	**17 45 45.8**	**-0.1**
SVAN	**Silvan-Diyarba**	**1.60**	**253**	PN	**Pn**	**17 45 47.0**	**-0.7**
SVAN	**Silvan-Diyarba**	**1.60**	**253**	*i* P	**Pb**	**17 45 48.7**	**+0.1**
SVAN	**Silvan-Diyarba**	**1.60**	**253**	*e*Pn	**Pn**	**17 45 47.0**	**-0.7**
SVAN	**Silvan-Diyarba**	**1.60**	**253**	P	**Pb**	**17 45 48.7**	**+0.1**
DIGO	**Kars**	**1.79**	**6**	*i* P	**Pg**	**17 45 52.6**	**-0.1**
DIGO	**Kars**	**1.79**	**6**	P	**Pg**	**17 45 52.6**	**-0.1**
BNGB	**Bingˆ¶l**	**1.96**	**281**	PN	**Pn**	**17 45 52.1**	**-0.6**
BINT	**Bingol**	**2.09**	**278**	*e*Pn	**Pn**	**17 45 52.1**	**-2.4**

MAN 14 17:49:39.2,6°.22N×126°.66E,h54^{km},mb4.8,ML3.7,MS3.7, 2C,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	**Mati**	**0.82**	**331**	*e*P	Pn	17 49 55.1	+0.4
MATI				*e*S	Sn	17 50 08.7	+2.6
DMPH	**Davao City--Mi**	**1.43**	**307⇑**	*e*P	Pn	17 50 07.1	+4.3
DMPH				*e*S	Sn	17 50 28.6	+8.1
GSPH	**General Santos**	**1.70**	**266⇑**	*i*P	Pn	17 50 04.6	-2.0
GSPH				*i* S	Sn	17 50 22.3	-5.1
SKMP	**Bagumbayan, Su**	**2.12**	**278**	*e*P	Pn	17 50 10.8	-1.4
SKMP				*e*S	Sn	17 50 37.9	+0.4
BUKP	**Musuan**	**2.29**	**316**	*e*P	Pn	17 50 15.8	+1.3
BUKP				*e*S	Sn	17 50 43.1	+1.6

IDC 14 18:00:41.7±10.0,17°.89S×177°.85W,h341^{km}±98^{km}, mb3.6/7,mb1 3.7/7,mb1mx3.2/51,mbtmp4.3/7,Error ellipse: s-maj=51.1km s-min=32.5km az=119.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**33.98**	**260**	P	P	18 06 55.0	+0.4
	5.1nm,0.7s,baz=88,slow=14,SNR=13						
STKA	**Stephens Creek**	**39.11**	**241**	P	P	18 07 38.7	+1.3
	3.3nm,0.4s,baz=96,slow=11,SNR=5.6						
JAY	**Jayapura**	**43.42**	**286**	P	P	18 08 11.3	-1.1
	6.8nm,0.9s,baz=158,slow=11,SNR=4.7						
WRA	**Warramunga Arr**	**45.16**	**259**	P	P	18 08 24.7	-1.3
	1.5nm,0.5s,baz=95,slow=7.0,SNR=30						
ASAR	**Alice Springs**	**45.31**	**254**	P	P	18 08 26.9	-0.3
	16nm,0.6s,baz=89,slow=8.0,SNR=507						
ASAR				PcP	PcP	18 09 58.9	-1.6
	0.4nm,0.5s,baz=100,slow=4.0,SNR=3.7						
MJAR	**Matsushiro Arr**	**68.21**	**323**	P	P	18 11 06.7	+0.3
	0.6nm,0.6s,baz=160,slow=6.5,SNR=3.9						
PDAR	**Pinedale Array**	**86.97**	**43**	P	P	18 12 48.3	-1.0
	0.1nm,0.3s,baz=221,slow=8.1,SNR=1.8						
BRTR	**Keskin Array B**	**145.15**	**315**	PKPbc	PKPdf	18 19 39.4	0.0
	0.4nm,0.5s,baz=118,slow=5.0,SNR=3.5						
GERES	**GERESS Array B**	**147.73**	**346**	PKPbc	PKPbc	18 19 47.0	+0.3
	0.5nm,0.5s,baz=30,slow=3.2,SNR=6.1						

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*IDC **14** 18:10:50.4±0.9,11°.60N×142°.77E,h0^{km},mb3.8/12, mb1 4.0/13,mb1mx3.8/58,mbtmp3.8/13,ML3.6/1,Error ellipse: s-maj=24.7km s-min=18.7km az=110.0*

*ISCJB **14** 18:10:53.4±0.7,11°.6N±0°.1×142°.7E±0°.1,h32^{km},mb3.8/12, Error ellipse: s-maj=18.7km s-min=9.4km az=138.4*

ISC 14 18:10:55.1±0.9,11°.6N±0°.1×142°.7E±0°.1,h32^{km},n13, σ0^{s}89/14,mb3.8/12,South of Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.88**	**47**	Pn	**Pn**	**18 11 38.9**	**+0.2**
	8.8nm,0.3s,baz=82,slow=3.0,SNR=10						
GUMO				Sn	**Sn**	**18 12 12.2**	**-0.1**
	14nm,0.3s,baz=242,slow=22,SNR=3.7						
WRA	**Warramunga Arr**	**32.42**	**195**	P	**P**	**18 17 22.2**	**-0.2**
	1.0nm,0.8s,baz=18,slow=9.6,SNR=6.5						
ASAR	**Alice Springs**	**36.10**	**194**	P	**P**	**18 17 54.2**	**-0.1**
	0.4nm,0.8s,baz=22,slow=11,SNR=7.2						
CMAR	**Chiang Mai Arr**	**42.74**	**285**	P	**P**	**18 18 50.0**	**+0.2**
	0.3nm,0.3s,baz=93,slow=3.6,SNR=3.9						
SONM	**Songino Array**	**47.19**	**327**	P	**P**	**18 19 23.8**	**-1.1**
	0.2nm,0.5s,baz=145,slow=6.9,SNR=2.5						
MKAR	**Makanchi Array**	**61.48**	**317**	P	**P**	**18 21 10.4**	**+1.6**
	0.2nm,0.6s,baz=101,slow=6.0,SNR=3.0						
ZALV	**Zalesovo Beam**	**62.03**	**325**	P	**P**	**18 21 13.6**	**+1.3**
	0.4nm,0.3s,baz=105,slow=4.5,SNR=2.3						
KURBB	**Kurchatov Arra**	**64.80**	**321**	P	**P**	**18 21 31.3**	**+0.6**
	0.8nm,0.3s,baz=108,slow=6.6,SNR=3.2						
BVAR	**Borovoye Array**	**70.19**	**322**	P	**P**	**18 22 05.4**	**+0.6**
	0.5nm,0.3s,baz=101,slow=7.5,SNR=8.3						
ILAR	**Eielson Array**	**71.24**	**25**	P	**P**	**18 22 10.2**	**-0.7**
	0.7nm,0.7s,baz=244,slow=6.1,SNR=5.8						
ARCES	**ARCESS Array B**	**88.31**	**342**	P	**P**	**18 23 43.2**	**0.0**
	3.7nm,0.9s,baz=39,slow=7.8,SNR=4.8						
NVAR	**Mina Array Bea**	**89.79**	**51**	P	**P**	**18 23 51.9**	**+0.8**
	0.2nm,0.5s,baz=291,slow=5.4,SNR=2.5						
FINES	**FINESS Array B**	**92.05**	**335**	P	**P**	**18 23 59.7**	**-1.1**
	3.1nm,1.0s,baz=90,slow=1.9,SNR=4.5						

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*NIED **14** 18:48:00,45°.40N×152°.20E,h20^{km},Mw4.7 Best double couple: M$_0$1.07000×10^{16} NP1:φ$_s$157.00000°,δ48.00000°, λ15.00000°. NP2:φ$_s$56.00000°,δ79.00000°,λ137.00000°.*

*ISCJB **14** 18:48:27.8±0.8,45°.32N±0°.03×151°.93E±0°.02,h0^{km}±5^{km}, mb4.8/231,MS4.4/56,Error ellipse: s-maj=5.2km s-min=2.2km az=155.9*

*IDC **14** 18:48:29.3±0.5,45°.36N×151°.89E,h0^{km},mb4.5/35, mb1 4.6/40,mb1mx4.5/72,mbtmp4.5/40,ML3.8/3,MS4.1/32, Ms1 4.1/32,ms1mx3.9/77,Error ellipse: s-maj=14.1km s-min=11.0km az=149.0*

*BJI **14** 18:48:29.6,45°.41N×151°.78E,h6^{km},mb4.9/63,mB5.0/49, Ms4.6/58,Ms7 4.4/55*

*NEIC **14** 18:48:30.8±1.3,45°.31N×151°.87E,h9^{km}±8^{km},mb4.8/169, Error ellipse: s-maj=4.3km s-min=2.2km az=158.0*

*GCMT **14** 18:48:30.8±0.6,45°.44N×152°.17E,h23^{km}±1^{km},MW4.8/54, Moment Tensor Solution. s26,c35; s54,c78; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.13±.15; M$_{\theta\theta}$-0.96±.10; M$_{\phi\phi}$-1.16±.09; M$_{r\theta}$0.05±.15; M$_{\theta\phi}$-0.55±.05; M$_{\phi r}$0.04±.15; Best double couple: M$_0$1.87700×10^{16} NP1:φ$_s$40.00000°,δ46.00000°,λ90.00000°. NP2: φ$_s$220.00000°,δ44.00000°,λ90.00000°. Principal axes: T 2.1310, Plg89.0000°, Azm330.0000°; N -0.5020, Plg0.0000°, Azm220.0000°; P -1.6230, Plg1.0000°, Azm130.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*SKHL **14** 18:48:30.3±0.8,44°.97N×152°.39E,h50^{km}±8^{km},mb5.2/8, Ms4.6/6*

*JMA **14** 18:48:30.7±0.7,45°.37N×152°.18E,h30^{km},M4.9*

*MOS **14** 18:48:33.7±1.0,45°.33N×151°.86E,h40^{km},mb5.1/62, MS4.5/22,Error ellipse: s-maj=5.9km s-min=4.5km az=113.1*

ISC 14 18:48:31.8±0.6,45°.21N±0°.05×152°.03E±0°.04,h19^{km}±2^{km}, h20^{km}:pP-P,n648,σ1^{s}66/701,mb4.8/258,MS4.5/56, 57C-18D,East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**2.94**	**272**	*i* P	**Pn**	**18 49 18.0**	**+0.6**
KUR				AMB	AMB	18 49 25.0	
	143nm,0.4s						
KUR				AMB	AMB	18 49 25.0	
	81nm,0.4s						
KUR				AMB	AMB	18 49 25.0	
	272nm,0.4s						
KUR				*i* S	**Sn**	**18 49 53.0**	**+0.8**
KUR				A	A	18 50 09.0	
	1μm,0.4s						
KUR				A	A	18 50 09.0	
	257nm,0.4s						
KUR				AMS	AMS	18 51 09.3	
	8μm,9.0s						
KUR				AMS	AMS	18 51 09.3	
	5μm,9.0s						
KUR				AMS	AMS	18 51 09.3	
	6μm,9.0s						
KUR	**Kuril'sk**	**2.94**	**272**	*i* PN	**Pn**	**18 49 18.2**	**+0.8**
KUR				*i* S	**Sn**	**18 49 53.2**	**+1.0**
KUR				pmax	pmax		
	comp=E,81nm,0.4s						
KUR				pmax	pmax		
	comp=Z,272nm,0.4s						
KUR				pmax	pmax		
	comp=N,143nm,0.3s						
KUR				smax	smax		
	comp=N,1μm,0.7s						
KUR				smax	smax		
	comp=E,257nm,0.4s						
SHO	**Shikotan**	**3.95**	**252**	*i* P	**Pn**	**18 49 31.0**	**-0.3**
SHO				AMB	AMB	18 49 41.0	
	comp=E,47nm,0.4s						
SHO				AMB	AMB	18 49 41.0	
	comp=E,83nm,0.4s						
SHO				AMB	AMB	18 49 41.0	
	comp=E,147nm,0.4s						
SHO				*i* S	**Sn**	**18 50 17.0**	**-0.1**
SHO				A	A	18 50 20.0	
	comp=E,326nm,0.4s						
SHO				A	A	18 50 20.0	
	comp=E,445nm,0.4s						
SHO				AMS	AMS	18 51 34.0	
	comp=E,4μm,18.0s						
SHO				AMS	AMS	18 51 34.0	
	comp=E,6μm,18.0s						
SHO				AMS	AMS	18 51 34.0	
	comp=E,3μm,18.0s						
SHO	**Shikotan**	**3.95**	**252**	*i* PN	**Pn**	**18 49 31.9**	**+0.6**
SHO				*i* S	**Sn**	**18 50 17.8**	**+0.7**
SHO				pmax	pmax		
	comp=Z,147nm,0.4s						
SHO				pmax	pmax		
	comp=E,83nm,0.3s						
SHO				pmax	pmax		
	comp=N,47nm,0.4s						
SHO				smax	smax		
	comp=N,326nm,0.4s						
SHO				smax	smax		
	comp=E,445nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**4.56**	**257**	*i* P	**Pn**	**18 49 40.0**	**+0.4**
YUK				AMB	AMB	18 49 42.0	
	comp=E,58nm,0.3s						
YUK				AMB	AMB	18 49 42.0	
	comp=E,93nm,0.3s						
YUK				AMB	AMB	18 49 42.0	
	comp=E,262nm,0.3s						
YUK				*i* S	**Sn**	**18 50 32.0**	**0.0**
YUK				A	A	18 50 59.0	
	comp=E,551nm,0.5s						
YUK				A	A	18 50 59.0	
	comp=E,1μm,0.5s						
YUK				AMS	AMS	18 52 56.0	
	comp=E,4μm,10.0s						
YUK				AMS	AMS	18 52 56.0	
	comp=E,5μm,10.0s						
YUK				AMS	AMS	18 52 56.0	
	comp=E,2μm,10.0s						
YUK	**Yuzh-Kuril'sk**	**4.56**	**257**	*i* PN	**Pn**	**18 49 40.1**	**+0.4**
YUK				*i* S	**Sn**	**18 50 32.4**	**+0.4**
YUK				pmax	pmax		
	comp=Z,262nm,0.3s						
YUK				pmax	pmax		
	comp=N,58nm,0.4s						
YUK				pmax	pmax		
	comp=E,93nm,0.3s						
YUK				smax	smax		
	comp=E,1μm,0.5s						
YUK				smax	smax		
	comp=N,551nm,0.4s						
LAGR	**Lagunnoye**	**4.61**	**258**	*i* P	**Pn**	**18 49 40.0**	**-0.3**
LAGR				AMB	AMB	18 49 52.0	
	comp=N,175nm,0.4s						
LAGR				AMB	AMB	18 49 52.0	
	comp=N,241nm,0.4s						
LAGR				AMB	AMB	18 49 52.0	
	comp=N,220nm,0.4s						
LAGR				*i* S	**Sn**	**18 50 33.0**	**-0.2**
LAGR				A	A	18 50 56.0	
	comp=N,1μm,0.7s						
LAGR				A	A	18 50 56.0	
	comp=N,751nm,0.7s						
LAGR	**Lagunnoye**	**4.61**	**258**	*i* PN	**Pn**	**18 49 40.9**	**+0.6**
LAGR				*i* S	**Sn**	**18 50 33.4**	**+0.2**
LAGR				pmax	pmax		
	comp=N,175nm,0.4s						
LAGR				pmax	pmax		
	comp=E,241nm,0.4s						
LAGR				pmax	pmax		
	comp=Z,220nm,0.4s						
LAGR				smax	smax		
	comp=N,1μm,0.7s						
LAGR				smax	smax		
	comp=E,751nm,0.9s						
GRPR	**Tuman**	**4.63**	**257**	*i* P	**Pn**	**18 49 41.0**	**+0.3**
GRPR				AMB	AMB	18 49 51.0	
	comp=E,127nm,0.4s						
GRPR				AMB	AMB	18 49 51.0	
	comp=E,116nm,0.4s						
GRPR				AMB	AMB	18 49 51.0	
	comp=E,240nm,0.4s						
GRPR	**Tuman**	**4.63**	**257**	*i* PN	**Pn**	**18 49 41.4**	**+0.7**
GRPR				pmax	pmax		
	comp=Z,240nm,0.4s						
GRPR				pmax	pmax		
	comp=E,116nm,0.3s						
GRPR				pmax	pmax		
	comp=N,127nm,0.4s						
NEM2	**Nemuro 2**	**4.88**	**250**	P	**Pn**	**18 49 43.5**	**-0.5**
NEM2				*e*S	**Sn**	**18 50 36.1**	**-3.8**
GLVR	**Golovnino**	**4.89**	**255**	*i* P	**Pn**	**18 49 45.0**	**+0.9**
GLVR				AMB	AMB	18 50 00.0	
	comp=N,144nm,0.5s						
GLVR				AMB	AMB	18 50 00.0	
	comp=N,389nm,0.5s						
GLVR				*i* S	**Sn**	**18 50 41.0**	**+0.9**
GLVR				A	A	18 50 50.0	
	comp=N,468nm,0.5s						
GLVR				A	A	18 50 50.0	
	comp=N,820nm,0.5s						
JRA	**Rausu**	**5.10**	**258**	P	**Pn**	**18 49 48.6**	**+1.6**
JNK	**Nakash**	**5.49**	**255**	P	**Pn**	**18 49 53.0**	**+0.6**
JAK	**Akkeshi**	**5.73**	**250**	P	**Pn**	**18 49 55.1**	**-0.6**
JAK				*e*S	**Sn**	**18 50 57.7**	**-3.1**
JTKR	**Abashiri--Toko**	**5.93**	**261**	P	**Pn**	**18 50 00.2**	**+1.7**
SKR	**Severo-Kuril's**	**6.13**	**25**	*e*P	**Pn**	**18 50 01.7**	**+0.6**
SKR				AMB	AMB	18 50 02.0	
	comp=N,162nm,0.6s						
SKR				*e*S	**Sn**	**18 51 08.6**	**-2.0**
SKR				A	A	18 51 20.0	
	comp=N,256nm,0.7s						
SKR				A	A	18 51 20.0	
	comp=N,212nm,0.7s						
SKR				AMS	AMS	18 52 41.0	
	comp=N,6μm,14.0s						
SKR				AMS	AMS	18 52 41.0	
	comp=N,3μm,14.0s						
SKR	**Severo-Kuril's**	**6.13**	**25**	*e*PN	**Pn**	**18 50 01.7**	**+0.6**
SKR				pmax	pmax		
	comp=Z,100nm,0.6s						
SKR				pmax	pmax		
	comp=Z,162nm,0.6s						
SKR				MLR	MLR		
	comp=Z,3μm,12.0s						
SKR				MLR	MLR		
	comp=E,6μm,14.0s						
JAR	**Ashorobuto**	**6.23**	**255**	P	**Pn**	**18 50 03.7**	**+1.0**
JMP	**Maruseppu**	**6.31**	**262**	P	**Pn**	**18 50 05.5**	**+1.8**
JOB	**Onbets**	**6.34**	**252**	P	**Pn**	**18 50 04.4**	**+0.3**
HRK	**Horoka**	**6.62**	**258**	*e*P	**Pn**	**18 50 09.7**	**+1.7**
YSS	**Yuzh-Sakhalins**	**6.69**	**288**	*e*P	**Pn**	**18 50 12.2**	**+3.4**
YSS				AMB	AMB	18 50 14.2	
	comp=E,20nm,0.9s						
YSS				*e*S	**Sn**	**18 51 27.0**	**+2.6**
YSS				AMS	AMS	18 53 56.0	
	comp=E,700nm,13.0s						
YSS				AMS	AMS	18 53 56.0	
	comp=E,1μm,13.0s						
YSS				AMS	AMS	18 53 56.0	
	comp=E,2μm,13.0s						
YSS	**Yuzh-Sakhalins**	**6.69**	**288**	*e*Pn	**Pn**	**18 50 11.8**	**+3.0**
YSS	**Yuzh-Sakhalins**	**6.69**	**288⇑**	*e*PN	**Pn**	**18 50 12.2**	**+3.4**
YSS				*e*S	**Sn**	**18 51 28.7**	**+4.3**
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
YSS				pmax	pmax		
	comp=N,10.0nm,0.6s						
YSS				pmax	pmax		
	comp=E,20nm,1.1s						
YSS				smax	smax		
	comp=N,20nm,0.4s						
YSS				smax	smax		
	comp=E,20nm,0.5s						
YSS				MLR	MLR		
	comp=Z,2μm,14.0s						
YSS				MLR	MLR		
	comp=E,1μm,12.0s						
JSE	**Soyaes**	**6.70**	**271**	P	**Pn**	**18 50 11.4**	**+2.4**
JKK2	**Kamakawa 2**	**6.77**	**262**	P	**Pn**	**18 50 12.1**	**+2.1**
JCH	**Churui**	**6.78**	**251**	P	**Pn**	**18 50 09.9**	**-0.2**
JCH				*e*S	**Sn**	**18 51 23.6**	**-3.1**
ASAJ	**Asahikawa**	**6.82**	**264**	Pn	**Pn**	**18 50 13.1**	**+2.4**
	comp=E,5.2nm,0.3s,baz=92,slow=16,SNR=62						
ASAJ				LR	LR	18 53 15.6	
	comp=E,1μm,20.3s,baz=76,slow=42						
ASAJ	**Asahikawa**	**6.82**	**264**	*e*Pn	**Pn**	**18 50 12.7**	**+2.1**
ASAJ	**Asahikawa**	**6.82**	**264**	P	**Pn**	**18 50 13.0**	**+2.4**
MYR	**Moyori**	**6.97**	**248**	*e*P	**Pn**	**18 50 13.1**	**+0.3**
MYR				*e*S	**Sn**	**18 51 28.7**	**-2.8**
JFR	**Furan**	**7.09**	**257**	P	**Pn**	**18 50 15.8**	**+1.4**
JWK2	**Keihoku**	**7.15**	**274**	P	**Pn**	**18 50 19.5**	**+4.2**
ERM	**Erimo**	**7.19**	**247**	*e*P	**Pn**	**18 50 17.3**	**+1.6**
ERM	**Erimo**	**7.19**	**247**	*e*Pn	**Pn**	**18 50 17.2**	**+1.4**
ERM	**Erimo**	**7.19**	**247**	*i* PN	**Pn**	**18 50 17.3**	**+1.6**
JAB	**Ashibetsu**	**7.24**	**260**	P	**Pn**	**18 50 17.8**	**+1.4**
JNBK	**Urakawa-nobuka**	**7.33**	**250**	P	**Pn**	**18 50 17.3**	**-0.4**
JBT2	**Biratori 2**	**7.38**	**254**	P	**Pn**	**18 50 18.6**	**+0.2**
JHR	**Hokuryu**	**7.52**	**262**	P	**Pn**	**18 50 23.3**	**+3.0**
JEW	**Eniwo**	**7.99**	**257**	P	**Pn**	**18 50 28.4**	**+1.7**
JNB	**Noboribetsu**	**8.40**	**255**	P	**Pn**	**18 50 32.7**	**+0.3**
JNB				*e*S	**Sn**	**18 52 03.6**	**-3.1**
TYV	**Tymovskoe**	**8.45**	**315**	*e*P	**Pn**	**18 50 34.8**	**+1.7**
TYV				AMB	AMB	18 50 36.8	
	comp=E,400nm,4.5s						
TYV				*e*S	**Sn**	**18 52 08.4**	**+0.6**
TYV				AMS	AMS	18 54 18.6	
	comp=E,2μm,16.0s						
TYV	**Tymovskoe**	**8.45**	**315**	*e*PN	**Pn**	**18 50 34.8**	**+1.7**
TYV				pmax	pmax		
	comp=Z,16nm,0.8s						
TYV				pmax	pmax		
	comp=Z,400nm,4.5s						
JSK	**Shakotan**	**8.50**	**261**	P	**Pn**	**18 50 38.0**	**+4.3**
JKB	**Kayabe**	**8.65**	**251**	P	**Pn**	**18 50 35.4**	**-0.4**
JKB				*e*S	**Sn**	**18 52 06.2**	**-6.5**
PEA0B	**Petropavlovsk-**	**8.73**	**23**	*e*Pn	**Pn**	**18 50 34.8**	**-2.2**
PETK	**Petropavlovsk-**	**8.73**	**23**	Pn	**Pn**	**18 50 35.7**	**-1.2**
	baz=192,slow=12						
PETK				Sn	**Sn**	**18 52 13.6**	**-1.2**
	baz=203,slow=25						
PETK				LR	LR	18 53 49.3	
	comp=Z,512nm,18.5s,baz=206,slow=37						
PETK	**Petropavlovsk-**	**8.73**	**23**	*e*Pn	**Pn**	**18 50 35.3**	**-1.6**
PETK				Sn	**Sn**	**18 52 13.6**	**-1.2**
PETK	**Petropavlovsk-**	**8.73**	**23**	*e*PN	**Pn**	**18 50 35.3**	**-1.6**
PEA1	**Petropavlovsk-**	**8.74**	**23**	*e*Pn	**Pn**	**18 50 35.7**	**-1.3**
PEA1				*e*Sn	**Sn**	**18 52 13.6**	**-1.3**
PET	**Petropavlovsk**	**8.94**	**27**	*e*P	**Pn**	**18 50 39.6**	**-0.2**
PET	**Petropavlovsk**	**8.94**	**27**	*e*Pn	**Pn**	**18 50 39.7**	**0.0**
PET	**Petropavlovsk**	**8.94**	**27**	*e*PN	**Pn**	**18 50 39.6**	**-0.2**
PET				pmax	pmax		
	comp=Z,38nm,0.7s						
PET				MLR	MLR		
	comp=Z,1μm,14.0s						
PET				MLR	MLR		
	comp=Z,1μm,14.0s						
JYM2	**Yakumo 2**	**9.00**	**254**	P	**Pn**	**18 50 40.6**	**0.0**
JANG	**Nango**	**9.11**	**242**	P	**Pn**	**18 50 40.2**	**-2.0**
JANG				*e*S	**Sn**	**18 52 15.5**	**-8.7**
JTH	**Tanohata**	**9.16**	**238**	P	**Pn**	**18 50 40.2**	**-2.6**
JTH				*e*S	Sn	18 52 14.3	-11
JTM	**Tenmabayashi**	**9.17**	**245**	P	**Pn**	**18 50 41.8**	**-1.1**
JTM				*e*S	**Sn**	**18 52 17.9**	**-7.5**
JSR	**Shiriuchi**	**9.22**	**251**	P	**Pn**	**18 50 42.8**	**-0.8**
JOSM	**Okushiri--Mats**	**9.62**	**255**	P	**Pn**	**18 50 48.8**	**-0.3**
JOSM				*e*S	**Sn**	**18 52 32.9**	**-3.8**
OKH	**Okha**	**10.24**	**328**	*e*PN	Pn	18 50 44.3	-13
OKH				pmax	pmax		
	comp=Z,200nm,11.3s						
JIO	**Ouri**	**10.44**	**233**	P	**Pn**	**18 50 58.4**	**-1.9**
JIO				*e*S	Sn	18 52 46.3	-10

NKL	**Nikolayevsk**	**10.87**	**321**	*e*PN	**Pn**	**18 51 06.5**	**+0.4**
NKL				pmax	pmax		
	comp=E,400nm,7.0s						
NKL				pmax	pmax		
	comp=Z,500nm,7.0s						
NKL				MLR	MLR		
	comp=N,2µm,15.0s						
NKL				MLR	MLR		
	comp=E,600nm,15.0s						
NKL				MLR	MLR		
	comp=Z,2µm,15.0s						
TEY	**Ternei**	**10.91**	**275**	⇑*e*PN	**Pn**	**18 51 08.1**	**+1.4**
TEY				pmax	pmax		
	comp=Z,40nm,0.7s						
TEY				pmax	pmax		
	comp=E,30nm,0.7s						
GRNR	**Gornyy**	**11.84**	**304**	*e*PN	Pn	18 51 24.3	+4.8
GRNR				pmax	pmax		
	comp=Z,31nm,1.0s						
MJAR	**Matsushiro Arr**	**13.56**	**235**	Pn	**Pn**	**18 51 41.8**	**-1.2**
	comp=Z,0.4nm,0.3s,baz=29,slow=12,SNR=14						
MJAR				Sn	**Sn**	**18 54 17.8**	**+4.7**
	comp=Z,0.3nm,0.3s,baz=130,slow=6.3,SNR=3.7						
MJAR				LR	LR	18 58 45.2	
	comp=Z,645nm,19.1s,baz=50,slow=45						
MJB9	**Matsu-Tunnel**	**13.56**	**235**	*e*Pn	**Pn**	**18 51 42.1**	**-1.0**
MAJO	**Matsushiro**	**13.56**	**235**	*e*Pn	**Pn**	**18 51 41.8**	**-1.2**
MAJO				*e*Sn	**Sn**	**18 54 17.8**	**+4.6**
MAJO	**Matsushiro**	**13.56**	**235**	*ce*P	**Pn**	**18 51 42.2**	**-0.8**
MAJO				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MAT	**Matsushiro**	**13.56**	**235**	P	**Pn**	**18 51 41.5**	**-1.5**
MAT				*e*S	**Sn**	**18 54 07.8**	**-5.3**
USA0B	**Ussuriysk Arra**	**14.29**	**273**	*e*Pn	**Pn**	**18 51 52.6**	**-0.4**
USRK	**Ussuriysk Ar.**	**14.29**	**273**	Pn	**Pn**	**18 51 51.4**	**-1.5**
	baz=82,slow=12						
USRK				LR	LR	18 57 45.6	
	comp=Z,799nm,19.2s,baz=73,slow=39						
KLR	**Kul’dur**	**14.35**	**294**	Pn	**Pn**	**18 51 54.5**	**+0.7**
	comp=Z,0.0nm,0.3s,baz=103,slow=15,SNR=12						
KLR				LR	LR	18 57 59.9	
	comp=Z,104nm,18.4s,baz=102,slow=40						
KLR	**Kul’dur**	**14.35**	**294**	*e*P	**Pn**	**18 51 53.1**	**-0.6**
KLR	**Kul’dur**	**14.35**	**294**	*ce*P	**Pn**	**18 51 53.1**	**-0.6**
MA2	**Magadan**	**14.41**	**357**	Pn	**Pn**	**18 51 52.9**	**-1.6**
	comp=Z,1.4nm,0.3s,baz=203,slow=11,SNR=9.7						
MA2				LR	LR	18 57 36.7	
	comp=Z,576nm,18.4s,baz=182,slow=38						
MA2	**Magadan**	**14.41**	**357**	*e*P	**Pn**	**18 51 54.1**	**-0.4**
MA2	**Magadan**	**14.41**	**357**	*e*Pn	**Pn**	**18 51 54.2**	**-0.3**
MA2	**Magadan**	**14.41**	**357**	*e*P	**Pn**	**18 51 54.2**	**-0.3**
INU	**Inuyama**	**15.09**	**234**	*e*Pn	**Pn**	**18 52 02.8**	**-0.9**
	comp=Z,19nm,0.8s						
MSHR	**Mys Shultsa**	**15.27**	**267**	*i* P	**Pn**	**18 52 04.5**	**-1.7**
MDJ	**Mudanjiang**	**15.90**	**276**	*e*Pn	**Pn**	**18 52 13.5**	**-0.9**
	comp=Z,63nm,0.9s						
SMY	**Shemya**	**16.28**	**55**	*e*Pn	**P**	**18 52 21.2**	**-0.8**
	comp=Z,115nm,1.7s						
SMY	**Shemya**	**16.28**	**55**	*e*P	**P**	**18 52 21.2**	**-0.8**
SMY				pmax	pmax		
	comp=Z,115nm,1.7s						
SEY	**Seymchan**	**17.76**	**1**	P	**Pn**	**18 52 34.9**	**-2.7**
	comp=Z,0.4nm,0.3s,baz=167,slow=6.9,SNR=32						
SEY	**Seymchan**	**17.76**	**1**	*e*P	**Pn**	**18 52 33.7**	**-3.9**
ZEA	**Zeya**	**18.15**	**307**	*e*P	**Pn**	**18 52 41.5**	**-1.0**
ZEA				pmax	pmax		
	comp=N,24nm,1.0s						
ZEA				pmax	pmax		
	comp=E,24nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,29nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,400nm,10.0s						
ZEA				pmax	pmax		
	comp=E,200nm,8.0s						
ZEA				MLR	MLR		
	comp=N,400nm,10.0s						
CN2	**Changchun**	**18.99**	**275**	*e*P	**P**	**18 52 50.4**	**-1.6**
CN2				*e*S	**S**	**18 56 27.5**	**+0.8**
CN2				pmax	pmax		
	comp=N,60nm,1.0s						
CN2				pmax	pmax		
	comp=N,200nm,4.0s						
CN2				LR	LR		
	comp=N,1µm,14.0s						
CN2				LR	LR		
	comp=N,1µm,14.0s						
CN2				LR	LR		
	comp=N,1µm,15.0s						
KSRS	**Korea Array**	**19.64**	**255**	P	**Pn**	**18 53 00.6**	**0.0**
	comp=N,0.3nm,0.3s,baz=60,slow=10,SNR=19						
KS01	**Wonju Array Si**	**19.65**	**255**	*e*P	**P**	**18 52 57.7**	**-1.6**
KS15	**Wonju Array Si**	**19.68**	**255**	*e*P	**P**	**18 52 58.7**	**-0.8**
KSAR	**Wonju Array Be**	**19.68**	**255**	P	**Pn**	**18 53 00.6**	**-0.4**
KSAR	**Wonju Array Be**	**19.68**	**255**	P	**Pn**	**18 53 00.6**	**-0.4**
CBIJ	**Chichi jima**	**19.72**	**207**	*e*P	**P**	**18 53 01.0**	**+0.9**
	comp=N,135nm,1.0s						
JNU	**Nakatsue**	**20.29**	**241**	P	**P**	**18 53 07.2**	**+0.9**
	comp=N,4.2nm,0.5s,baz=110,slow=17,SNR=2.4						
JNU				LR	LR	19 02 47.2	
	comp=N,354nm,18.4s,baz=310,slow=42						
JNU	**Nakatsue**	**20.29**	**241**	*e*P	**P**	**18 53 06.6**	**+0.2**
	comp=N,147nm,1.8s						
TJN	**Taejon**	**20.59**	**253**	*i* P	**P**	**18 53 09.8**	**+0.3**
YAK	**Yakutsk**	**21.25**	**330**	P	**P**	**18 53 13.8**	**-2.6**
	comp=N,31nm,0.3s,baz=229,slow=2.8,SNR=25						
YAK				LR	LR	19 02 20.3	
	comp=N,422nm,18.7s,baz=104,slow=39						
YAK	**Yakutsk**	**21.25**	**330**	*e*P	**P**	**18 53 14.0**	**-2.4**
	comp=N,71nm,0.8s						
YAK	**Yakutsk**	**21.25**	**330**	*e*P	**P**	**18 53 12.2**	**-4.2**
YAK				*e*		18 53 24.7	
YAK				*e*S	**S**	**18 57 05.5**	**-6.0**
YAK				*e**SS	pS	18 57 30.9	+10
YAK				*e*SS	**SnSn**	**18 57 46.2**	**+12**
YAK				pmax	pmax		
	comp=Z,36nm,0.8s						
YAK				pmax	pmax		
	comp=E,8.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,9.0nm,1.4s						
YAK				smax	smax		
	comp=N,42nm,1.6s						
YAK				smax	smax		
	comp=E,54nm,2.0s						
YAK				MLR	MLR		
	comp=Z,355nm,15.0s						
YAK				MLR	MLR		
	comp=N,307nm,20.0s						
YAK				MLR	MLR		
	comp=E,517nm,18.0s						
GSTR	**Great Sitkin T**	**22.05**	**60**	*e*P	**P**	**18 53 23.4**	**-1.7**
HIA	**Hailar**	**22.20**	**292**	*e*P	**P**	**18 53 22.4**	**-4.4**
	comp=E,9.3nm,0.7s						
HIA	**Hailar**	**22.20**	**292**	*e*P	**P**	**18 53 22.4**	**-4.4**
HIA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
ATKA	**Atka Island**	**23.20**	**60**	*e*P	**P**	**18 53 38.5**	**+1.3**
	comp=Z,43nm,1.2s						
SPIA	**Saint Paul Isl**	**26.14**	**49**	*e*P	**P**	**18 54 05.3**	**+1.0**
	comp=Z,103nm,1.3s						
JOW	**Kunigami**	**26.40**	**234**	*e*P	**P**	**18 54 06.5**	**-0.5**
	comp=Z,46nm,1.4s						
BJI	**Beijing**	**26.74**	**272**	P	**P**	**18 54 11.9**	**+2.0**
BJI				pmax	pmax		
	comp=Z,14nm,0.8s						
BJI				LR	LR		
	comp=Z,770nm,11.9s						
BJI				LR	LR		
	comp=Z,810nm,15.3s						
BJI				LR	LR		
	comp=Z,550nm,19.4s						
BJT	**Baijiatuau**	**26.75**	**272**	*e*P	**P**	**18 54 09.1**	**-1.0**
	comp=Z,27nm,1.0s						
BJT	**Baijiatuau**	**26.75**	**272**	*e*P	**P**	**18 54 09.1**	**-1.0**
BJT				pmax	pmax		
	comp=Z,27nm,1.0s						
GAMB	**Gambell**	**27.52**	**35**	*e*P	**P**	**18 54 18.8**	**+2.1**
	comp=Z,16nm,1.5s						
TIA	**Tai’an**	**27.77**	**263**	P	**P**	**18 54 23.9**	**+4.7**
TIA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
H11N2	**WAKE ISLAND Hy**	**28.23**	**149**	T	T	19 25 10.4	
	baz=338,slow=75,SNR=59						
H11N1	**WAKE ISLAND Hy**	**28.25**	**149**	T	T	19 25 15.0	
	baz=338,slow=75,SNR=44						
H11N3	**WAKE ISLAND Hy**	**28.25**	**149**	T	T	19 25 31.9	
	baz=338,slow=75,SNR=41						
NJ2	**Nanjing**	**28.84**	**254**	*e*P	**P**	**18 54 28.8**	**0.0**
NJ2				pP	**pP**	**18 54 32.8**	**-1.8**
NJ2				sP	**sP**	**18 54 34.8**	**-2.2**
NJ2				S	**S**	**18 59 21.3**	**+3.5**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.8s						
NJ2				LR	LR		
	comp=Z,690nm,14.1s						
NJ2				LR	LR		
	comp=Z,820nm,11.9s						
NJ2				LR	LR		
	comp=Z,900nm,13.0s						
H11S1	**WAKE ISLAND Hy**	**29.29**	**151**	T	T	19 26 23.8	
	baz=339						
H11S3	**WAKE ISLAND Hy**	**29.30**	**151**	T	T	19 26 19.0	
	baz=339,slow=74						
H11S2	**WAKE ISLAND Hy**	**29.31**	**151**	T	T	19 26 22.2	
	baz=339,slow=74						
HHC	**Hu-ho-hao-te**	**29.68**	**276**	*e*P	**P**	**18 54 37.3**	**+1.0**
HHC				sP	sP	18 54 49.3	+4.7
HHC				S	**S**	**18 59 32.0**	**+0.9**
HHC				SS	**SnSn**	**19 00 58.8**	**-1.5**
HHC				pmax	pmax		
	comp=Z,60nm,1.1s						
HHC				pmax	pmax		
	comp=Z,99nm,4.6s						
HHC				LR	LR		
	comp=Z,700nm,12.1s						
HHC				LR	LR		
	comp=Z,900nm,13.2s						
HHC				LR	LR		
	comp=Z,1µm,12.7s						
TIY	**Taiyuan**	**30.36**	**270**	*e*P	**P**	**18 54 37.8**	**-4.6**
TIY				pP	sP	18 55 07.0	+16
TIY				PP	**PP**	**18 55 52.1**	**+1.2**
TIY				S	**S**	**18 59 39.5**	**-2.3**
TIY				sS	sS	19 00 08.1	+17
TIY				pmax	pmax		
	comp=Z,120nm,4.0s						
TIY				LR	LR		
	comp=N,250nm,11.9s						
TIY				LR	LR		
	comp=E,410nm,18.8s						
TIY				LR	LR		
	comp=Z,370nm,14.5s						
ULN	**Ulaanbaatar**	**30.73**	**291**	*e*P	**P**	**18 54 44.8**	**-0.7**
	comp=Z,11nm,0.8s						
ULN	**Ulaanbaatar**	**30.73**	**291**	*ce*P	**P**	**18 54 43.4**	**-2.2**
ULN				pmax	pmax		
	comp=Z,15nm,1.0s						
SONA1	**Songino Array**	**31.16**	**291**	*e*P	**P**	**18 54 48.2**	**-1.1**
SONA0	**Songino Array**	**31.17**	**291**	*e*P	**P**	**18 54 48.3**	**-1.1**
SONM	**Songino Array**	**31.17**	**291**	P	**P**	**18 54 48.3**	**-1.1**
	comp=Z,8.7nm,0.8s,baz=75,slow=7.3,SNR=50						
SONM				LR	LR	19 08 43.7	
	comp=Z,511nm,19.2s,baz=74,slow=39						
GUMO	**Guam**	**32.10**	**193**	LR	LR	19 07 37.2	
	comp=Z,264nm,19.2s,baz=14,slow=36						
TLY	**Talaya**	**32.25**	**299**	*e*P	**P**	**18 54 57.4**	**-1.4**
	comp=Z,8.2nm,0.9s						
TLY	**Talaya**	**32.25**	**299**	*e*P	**P**	**18 54 57.8**	**-0.9**
TLY				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TLY				MLR	MLR		
	comp=Z,653nm,17.0s						
ZAK	**Zakamensk**	**32.68**	**297**	*e*P	**P**	**18 55 01.2**	**-1.4**
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
WHN	**Wuhan**	**32.83**	**257**	P	**P**	**18 55 04.8**	**+0.9**
WHN				S	S	19 00 29.9	+10
WHN				LR	LR		
	comp=Z,1µm,15.6s						
WHN				LR	LR		
	comp=Z,1µm,14.4s						
WHN				LR	LR		
	comp=Z,2µm,16.1s						
TPUB	**Ta-pu**	**33.60**	**240**	*e*P	**P**	**18 55 11.4**	**+0.6**
	comp=Z,32nm,1.1s						
MOY	**Mondy**	**33.88**	**300**	*e*P	**P**	**18 55 12.5**	**-0.6**
XAN	**Xi’an**	**34.65**	**266**	P	**P**	**18 55 20.0**	**+0.1**
XAN				S	**S**	**19 00 56.8**	**+8.3**
XAN				pmax	pmax		
	comp=Z,9.0nm,0.8s						
XAN				LR	LR		
	comp=Z,250nm,14.4s						
XAN				LR	LR		
	comp=Z,430nm,15.4s						
XAN				LR	LR		
	comp=Z,370nm,13.9s						
KDAK	**Kodiak Island**	**35.67**	**49**	*e*P	**P**	**18 55 28.1**	**-0.2**
	comp=Z,21nm,1.0s						
KDAK	**Kodiak Island**	**35.67**	**49**	*e*P	**P**	**18 55 28.1**	**-0.2**
KDAK				pmax	pmax		
	comp=Z,21nm,1.0s						
PPLA	**Purkeypile**	**35.82**	**40**	*e*P	**P**	**18 55 31.3**	**+1.5**
	comp=Z,15nm,1.2s						
CAST	**Castle Rocks**	**35.90**	**39**	*e*P	**P**	**18 55 31.9**	**+1.6**
	comp=Z,6.0nm,1.1s						
SKT	**Skwentna**	**36.10**	**42**	*e*P	**P**	**18 55 33.5**	**+1.5**
	comp=Z,6.8nm,1.1s						
CNPM	**China Poot**	**36.28**	**46**	*e*P	**P**	**18 55 33.6**	**+0.1**
	comp=Z,12nm,0.8s						
ENH	**Enshi**	**36.36**	**261**	*e*P	**P**	**18 55 33.5**	**-1.1**
	comp=Z,17nm,1.4s						
KTH	**Kantishna Hill**	**36.43**	**39**	*e*P	**P**	**18 55 36.4**	**+1.6**
	comp=Z,18nm,1.1s						
BPAW	**Bear Paw Mtn.**	**36.43**	**38**	*e*P	**P**	**18 55 36.2**	**+1.5**
	comp=Z,7.4nm,1.2s						
SUA	**Susitna One**	**36.47**	**43**	*e*P	**P**	**18 55 38.7**	**+3.5**
	comp=Z,5.5nm,0.8s						
MLY	**Manley**	**36.60**	**37**	*e*P	**P**	**18 55 37.0**	**+0.7**
	comp=Z,5.5nm,0.9s						
TRF	**Thorofare Moun**	**36.71**	**39**	*e*P	**P**	**18 55 38.7**	**+1.3**
	comp=Z,6.5nm,1.1s						
RC01	**Rabbit Creek A**	**36.96**	**43**	*e*P	**P**	**18 55 39.8**	**+0.5**
	comp=Z,10nm,1.1s						
COLD	**Coldfoot**	**37.03**	**33**	*e*P	**P**	**18 55 40.2**	**+0.3**
	comp=Z,5.6nm,0.8s						
BWN	**Browne**	**37.10**	**38**	*e*P	**P**	**18 55 41.9**	**+1.4**
	comp=Z,69nm,1.3s						
LZH	**Lanzhou**	**37.20**	**273**	⇑P	**P**	**18 55 43.6**	**+1.7**
LZH				pP	pP	18 55 47.3	-0.5
LZH				sP	sP	18 55 49.3	-0.9
LZH				PP	**PnPn**	**18 57 09.8**	**+2.7**
LZH				*e*S	**S**	**19 01 28.6**	**+0.8**
LZH				sS	pS	19 01 35.6	+1.0
LZH				*e*SS	**SnSn**	**19 03 56.6**	**-6.4**
LZH				pmax	pmax		
	comp=Z,29nm,1.0s						
LZH				pmax	pmax		
	comp=Z,190nm,5.4s						
LZH				LR	LR		
	comp=Z,650nm,13.0s						
LZH				LR	LR		
	comp=Z,510nm,12.6s						
LZH				LR	LR		
	comp=Z,920nm,14.7s						
PMR	**Palmer**	**37.24**	**43**	*e*P	**P**	**18 55 43.0**	**+1.3**
	comp=Z,6.0nm,0.9s						
MCK	**McKinley**	**37.32**	**39**	*e*P	**P**	**18 55 42.4**	**0.0**
	comp=Z,9.6nm,1.0s						
MCK	**McKinley**	**37.32**	**39**	*e*P	**P**	**18 55 42.4**	**0.0**
MCK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GHO	**Glory Hole Cre**	**37.33**	**42**	*e*P	**P**	**18 55 44.0**	**+1.5**
	comp=Z,8.1nm,1.1s						
TOLK	**Toolik Lake Re**	**37.45**	**31**	*e*P	**P**	**18 55 42.9**	**-0.6**
	comp=Z,17nm,1.4s						
SML	**Sawmill**	**37.61**	**42**	*e*P	**P**	**18 55 45.3**	**+0.4**
	comp=Z,17nm,0.8s						
SML	**Sawmill**	**37.61**	**42**	*e*P	**P**	**18 55 45.3**	**+0.4**
SML				pmax	pmax		
	comp=Z,17nm,0.8s						
MDM	**Murphy Dome**	**37.66**	**37**	*e*P	**P**	**18 55 46.3**	**+1.0**
	comp=Z,5.5nm,0.8s						
WRH	**Wood River Hil**	**37.71**	**38**	*e*P	**P**	**18 55 46.1**	**+0.5**
	comp=Z,5.4nm,1.0s						
COLA	**College**	**37.82**	**37**	*e*P	**P**	**18 55 47.0**	**+0.5**
	comp=Z,28nm,0.3s						
COLA	**College**	**37.82**	**37**	*e*P	**P**	**18 55 47.0**	**+0.5**
COLA				pmax	pmax		
	comp=Z,28nm,0.3s						
CCB	**Clear Creek Bu**	**37.83**	**38**	*e*P	**P**	**18 55 47.5**	**+0.8**
	comp=Z,6.1nm,1.1s						
DHY	**Denali Highway**	**38.02**	**40**	*e*P	**P**	**18 55 48.6**	**+0.1**
	comp=Z,7.1nm,1.0s						
SCM	**Sheep Creek Mo**	**38.09**	**42**	*e*P	**P**	**18 55 48.2**	**-0.7**
	comp=Z,6.7nm,0.8s						
SCM	**Sheep Creek Mo**	**38.09**	**42**	*e*P	**P**	**18 55 48.3**	**-0.7**
SCM				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HDA	**Harding Lake**	**38.20**	**38**	*e*P	**P**	**18 55 49.2**	**-0.5**
	comp=Z,4.8nm,0.9s						
ILAR	**Eielson Array**	**38.23**	**37**	P	**P**	**18 55 50.0**	**0.0**
	comp=Z,1.4nm,0.6s,baz=258,slow=6.9,SNR=17						
ILB	**Eielson Array**	**38.23**	**37**	*e*P	**P**	**18 55 49.7**	**-0.3**
IL1	**Eielson Array**	**38.23**	**37**	*e*P	**P**	**18 55 50.0**	**0.0**
GTA	**Gaotai**	**38.49**	**280**	⇑P	**P**	**18 55 54.0**	**+1.4**
GTA				pP	sP	18 56 01.3	+0.3
GTA				sP	pP	18 56 05.0	+6.4
GTA				S	**S**	**19 01 50.3**	**+3.2**
GTA				pmax	pmax		
	comp=Z,61nm,0.8s						
GTA				pmax	pmax		
	comp=Z,150nm,5.4s						
GTA				LR	LR		
	comp=Z,380nm,14.9s						
GTA				LR	LR		
	comp=Z,500nm,13.0s						
GTA				LR	LR		
	comp=Z,570nm,13.6s						
KLU	**Klutina**	**38.78**	**43**	*e*P	**P**	**18 55 55.8**	**+1.1**
	comp=Z,9.8nm,1.0s						
DIV	**Divide**	**38.88**	**43**	*e*P	**P**	**18 55 55.5**	**-0.2**
	comp=Z,8.5nm,1.0s						
PAX	**Paxson**	**38.90**	**40**	*e*P	**P**	**18 55 57.6**	**+1.8**
	comp=Z,7.3nm,1.3s						
PAX	**Paxson**	**38.90**	**40**	*e*P	**P**	**18 55 57.6**	**+1.8**
PAX				pmax	pmax		
	comp=Z,7.0nm,1.3s						
FYU	**Fort Yukon**	**38.94**	**34**	*e*P	**P**	**18 55 57.5**	**+1.6**
	comp=Z,53nm,1.5s						
EYAK	**Cordova Ski Ar**	**38.95**	**44**	*e*P	**P**	**18 55 56.7**	**+0.7**
	comp=Z,0.4nm,0.6s						
HARP	**HAARP**	**39.08**	**41**	*e*P	**P**	**18 55 57.3**	**+0.1**
	comp=Z,37nm,1.6s						
BMRM	**Bremner River**	**39.46**	**43**	*e*P	**P**	**18 56 01.3**	**+0.8**
	comp=Z,7.7nm,0.9s						
RAGM	**Ragged Mountai**	**39.49**	**44**	*e*P	**P**	**18 56 01.7**	**+1.0**
	comp=Z,16nm,1.2s						
CD2	**Chengdu**	**40.01**	**266**	*e*P	**P**	**18 56 05.0**	**-0.4**
CRQM	**Cirque**	**40.20**	**44**	*e*P	**P**	**18 56 07.9**	**+1.2**
	comp=Z,15nm,0.8s						
TGL	**Tana Glacier**	**40.35**	**43**	*e*P	**P**	**18 56 08.5**	**+0.6**
	comp=Z,14nm,1.2s						
BALM	**Baldy**	**40.55**	**43**	*e*P	**P**	**18 56 10.8**	**+1.3**
	comp=Z,6.3nm,0.9s						
BALM	**Baldy**	**40.55**	**43**	*e*P	**P**	**18 56 10.8**	**+1.3**
BALM				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GYA	**Guiyang**	**40.65**	**258**	⇑*i*P	**P**	**18 56 10.9**	**+0.1**
GYA				pP	pP	18 56 16.4	-0.4
GYA				PP	**PnPn**	**18 57 49.0**	**+0.5**
GYA				S	**S**	**19 02 21.3**	**+1.4**
GYA				SS	**SS**	**19 05 14.8**	**-5.4**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,110nm,5.1s						
GYA				LR	LR		
	comp=Z,390nm,16.2s						
GYA				LR	LR		
	comp=Z,280nm,16.2s						
GYA				LR	LR		
	comp=Z,380nm,18.7s						
EGAK	**Eagle**	**40.68**	**37**	*e*P	**P**	**18 56 10.4**	**0.0**
	comp=Z,11nm,1.1s						
DAWY	**Dawson**	**41.52**	**38**	*e*P	**P**	**18 56 18.9**	**+1.6**
	comp=Z,17nm,2.0s						
YKU2	**Yakutat**	**42.12**	**45**	*e*P	**P**	**18 56 22.4**	**+0.1**
DGZ	**Jazzator, Alta**	**42.71**	**300**	*i* P	**P**	**18 56 26.8**	**-0.6**
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ZAA1	**Zalesovo Array**	**42.92**	**307**	*e*P	**P**	**18 56 26.5**	**-2.3**
ZAA1				*e*PcP	**PcP**	**18 58 18.5**	**-0.8**
ZAA0	**Zalesovo Array**	**42.92**	**307**	*e*P	**P**	**18 56 26.7**	**-2.1**
	comp=Z,2.8nm,0.8s						
ZALV	**Zalesovo Beam**	**42.92**	**307**	P	**P**	**18 56 26.5**	**-2.3**
	comp=Z,2.3nm,0.8s,baz=83,slow=6.2,SNR=7.0						
ZALV				PcP	**PcP**	**18 58 18.5**	**-0.8**
	comp=Z,1.6nm,0.7s,baz=83,slow=4.5,SNR=4.1						
ZALV				LR	LR	19 15 36.1	
	comp=Z,684nm,18.4s,baz=69,slow=38						
ZALV	**Zalesovo Beam**	**42.92**	**307**	*e*P	**P**	**18 56 27.9**	**-0.9**
ZALV				PcP	**PcP**	**18 58 18.5**	**-0.8**
ZALV	**Zalesovo Beam**	**42.92**	**307**	*e*P	**P**	**18 56 28.0**	**-0.9**
ZALV						18 58 18.5	
INK	**Inuvik**	**43.36**	**31**	P	**P**	**18 56 32.9**	**+0.6**
	comp=Z,2.9nm,0.6s,baz=292,slow=11,SNR=9.6						
INK				LR	LR	19 16 26.0	
	comp=Z,167nm,19.2s,baz=310,slow=39						
INK	**Inuvik**	**43.36**	**31**	*e*P	**P**	**18 56 33.0**	**+0.8**
	comp=Z,5.7nm,0.9s						
KMI	**Kunming**	**44.23**	**260**	P	**P**	**18 56 42.1**	**+2.1**
KMI				sP	pP	18 56 46.5	+0.5
KMI				S	**S**	**19 03 16.8**	**+4.1**
KMI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KMI				pmax	pmax		
	comp=Z,96nm,4.0s						
KMI				LR	LR		
	comp=Z,190nm,14.1s						
KMI				LR	LR		
	comp=Z,270nm,13.5s						
KMI				LR	LR		
	comp=Z,310nm,16.1s						
WMQ	**Urumqi**	**44.80**	**292**	P	**P**	**18 56 44.8**	**+0.6**
WMQ				pP	pP	18 56 48.9	-1.3
WMQ				S	**S**	**19 03 26.6**	**+6.2**
WMQ				pmax	pmax		
	comp=Z,28nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,220nm,3.7s						
WMQ				LR	LR		
	comp=Z,950nm,14.9s						
WMQ				LR	LR		
	comp=Z,540nm,16.7s						
WMQ				LR	LR		
	comp=Z,850nm,14.9s						
MK31	**Makanchi Array**	**46.99**	**298**	*e*P	**P**	**18 57 00.3**	**-1.1**
MK31	**Makanchi Array**	**46.99**	**298**	*e*P	**P**	**18 57 00.3**	**-1.1**
MK32	**Makanchi Array**	**46.99**	**298**	*e*P	**P**	**18 57 00.5**	**-0.9**
MK32				*e*PcP	**PcP**	**18 58 32.8**	**-0.7**
MK32				*e*ScP	**ScP**	**19 02 25.5**	**-0.6**
MKAR	**Makanchi Array**	**46.99**	**298**	P	**P**	**18 57 00.5**	**-1.0**
	comp=Z,6.6nm,0.8s,baz=66,slow=6.2,SNR=38						
MKAR				PcP	**PcP**	**18 58 32.8**	**-0.7**
	comp=Z,2.0nm,0.8s,baz=76,slow=6.1,SNR=3.0						
MKAR				ScP	**ScP**	**19 02 25.5**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=84,slow=4.5,SNR=3.4						
MKAR				LR	LR	19 18 14.6	
	comp=Z,647nm,18.2s,baz=67,slow=38						
MKAR	**Makanchi Array**	**46.99**	**298**	*e*P	**P**	**18 57 00.4**	**-1.0**
	comp=Z,45nm,0.8s						
MKAR				PcP	**PcP**	**18 58 32.8**	**-0.7**
MKAR				ScP	**ScP**	**19 02 25.5**	**-0.6**
MKAR	**Makanchi Array**	**46.99**	**298**	*e*P	**P**	**18 57 00.4**	**-1.0**
MKAR						18 58 32.8	
MKAR				pmax	pmax		
	comp=Z,45nm,0.8s						
MK01	**Makanchi Array**	**47.00**	**298**	*e*P	**P**	**18 57 00.1**	**-1.4**
MAKZ	**Makanchi**	**47.18**	**298**	*e*P	**P**	**18 57 01.8**	**-1.1**
	comp=Z,6.6nm,0.8s						
MAKZ	**Makanchi**	**47.18**	**298**	*e*P	**P**	**18 57 01.8**	**-1.1**
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.8s						
DLBC	**Dease Lake**	**47.22**	**44**	*e*P	**P**	**18 57 05.2**	**+2.2**
	comp=Z,7.6nm,1.3s						
KURK	**Kurchatov**	**47.60**	**304**	*e*P	**P**	**18 57 04.4**	**-1.6**
KURK	**Kurchatov**	**47.60**	**304**	*e*P	**P**	**18 57 04.1**	**-2.0**
	comp=Z,7.6nm,0.9s						
KURK				*e*PcP	**PcP**	**18 58 36.3**	**+0.8**
KURK	**Kurchatov**	**47.60**	**304**	*ce*P	**P**	**18 57 04.4**	**-1.6**
KURK				pmax	pmax		
	comp=Z,50nm,0.8s						
KURBB	**Kurchatov Arra**	**47.69**	**304**	P	**P**	**18 57 04.9**	**-1.8**
	comp=Z,6.3nm,0.8s,baz=69,slow=8.3,SNR=20						
KURBB				PcP	**PcP**	**18 58 36.3**	**+0.4**
	comp=Z,1.0nm,0.6s,baz=70,slow=3.2,SNR=3.5						
NONG	**Nongkai**	**48.69**	**253**	P	**P**	**18 57 16.7**	**+1.9**

	comp=Z,0.3nm,1.2s						
LSA	Lhasa	49.61	274	eP	P	18 57 23.0	+0.6
	comp=Z,12nm,0.8s						
LSA	Lhasa	49.61	274	eP	P	18 57 23.0	+0.6
LSA				pmax	pmax		
	comp=Z,12nm,0.8s						
KHON	Khomkaen	50.12	251	P	P	18 57 28.0	+2.2
	comp=Z,3.2nm,0.7s,comp=Z,422nm						
CMAI	Chiengmai2	50.20	258	P	P	18 57 18.6	-8.0
BBB	Bella Bella	50.65	52	LR	LR	19 19 07.8	
	comp=Z,117nm,18.9s,baz=285,slow=36						
CMMT	Chiang Mai	51.03	257	P	P	18 57 34.4	+1.7
	comp=Z,5.4nm,0.8s,comp=Z,372nm						
CHTO	Chiang Mai	51.03	257	eP	P	18 57 33.8	+1.2
	comp=Z,8.7nm,1.0s						
CHTO	Chiang Mai	51.03	257	P	P	18 57 34.9	+2.2
	comp=Z,24nm,0.8s						
BVAR	Borovoye Array	51.27	310	P	P	18 57 32.9	-1.1
	comp=Z,2.9nm,0.7s,baz=56,slow=8.9,SNR=12						
BVAR				PcP	PcP	18 58 49.4	+0.5
	comp=Z,1.6nm,0.8s,baz=90,slow=3.5,SNR=3.0						
BVAR				LR	LR	19 21 34.6	
	comp=Z,404nm,18.4s,baz=60,slow=39						
CM31	Chiang Mai Arr	51.28	257	eP	P	18 57 33.2	-1.3
CMAR	Chiang Mai Arr	51.28	257	P	P	18 57 35.1	+0.6
	comp=Z,1.9nm,0.7s,baz=40,slow=7.5,SNR=18						
CMAR				LR	LR	19 21 29.3	
	comp=Z,147nm,19.0s,baz=46,slow=39						
CM01	Chiang Mai Arr	51.29	257	eP	P	18 57 34.4	-0.2
BRVK	Borovoye	51.31	310	eP	P	18 57 33.0	-1.3
BRVK	Borovoye	51.31	310	eP	P	18 57 32.5	-1.8
	comp=Z,4.5nm,0.8s						
BRVK	Borovoye	51.31	310	ceP	P	18 57 33.0	-1.3
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PRZ	Przheval'sk	51.44	295	eP	P	18 57 36.5	+0.8
	comp=Z,32nm,0.8s						
PRZ	Przheval'sk	51.44	295	eP	P	18 57 36.5	+0.8
PRZ				pmax	pmax		
	comp=Z,32nm,0.8s						
SHL	Shillong	51.58	269	eP	P	18 57 37.0	+0.1
	comp=Z,36nm,0.8s						
SHL	Shillong	51.58	269	eP	P	18 57 37.0	+0.1
SHL				pmax	pmax		
	comp=Z,36nm,0.8s						
SRAK	Srakaew	52.31	250	P	P	18 57 42.1	-0.1
	comp=Z,37nm,1.1s,comp=Z,377nm						
KDJ	Kajisay	52.40	295	eP	P	18 57 43.2	+0.3
	comp=Z,39nm,0.8s						
RES	Resolute Bay	52.54	18	LR	LR	19 23 01.2	
	comp=Z,123nm,19.0s,baz=290,slow=40						
RES	Resolute Bay	52.54	18	eP	P	18 57 45.5	+2.4
	comp=Z,9.9nm,1.2s						
YKW3	Yellowknife Ar	52.58	36	eP	P	18 57 44.0	+0.4
	comp=Z,5.8nm,0.8s						
YKA	Yellowknife Ar	52.62	36	P	P	18 57 44.7	+0.8
	comp=Z,1.7nm,0.6s,baz=296,slow=7.7,SNR=7.1						
ULHL	Ulahol	52.94	296	P	P	18 57 48.0	+1.1
	SNR=12						
TKM2	Tokmak 2	53.01	297	P	P	18 57 48.0	+0.7
	SNR=18						
CHMS	Chumysh	53.50	297	P	P	18 57 51.6	+0.9
	SNR=8.5						
USP	Ospenovka	53.52	297	P	P	18 57 51.6	+0.6
	SNR=26						
KBK	Karagaybulak	53.55	297	P	P	18 57 52.1	+0.8
	SNR=13						
KZA	Kyzart	53.66	296	P	P	18 57 53.9	+1.5
	SNR=44						
FRU	Bishkek	53.67	297	eP	P	18 57 53.5	+1.5
FRU1	Bishkek	53.67	297	eP	P	18 57 52.5	+0.5
	comp=Z,30nm,0.7s						
AAK	Ala-Archa	53.85	297	P	P	18 57 54.2	+0.8
	SNR=16						
AAK	Ala-Archa	53.85	297	eP	P	18 57 54.0	+0.5
	comp=Z,24nm,0.8s						
KBS	Kingsbay	53.91	351	eP	P	18 57 51.6	-1.6
KBS	Kingsbay	53.91	351	eP	P	18 57 52.7	-0.4
	comp=Z,27nm,0.9s						
KBS	Kingsbay	53.91	351	eP	P	18 57 52.8	-0.4
KBS				IAmb	IAmb	18 57 53.7	
	comp=Z,18nm,0.9s						
ODAN	Odare	53.96	273	eP	P	18 57 55.7	+1.1
SPA0	Spitsbergen Ar	54.00	350	eP	P	18 57 53.7	-0.2
SPA0	Spitsbergen Ar	54.00	350	eP	P	18 57 52.6	-1.3
SPA0				IAmb	IAmb	18 57 54.2	
	comp=Z,14nm,1.0s						
SPITS	Spitsbergen Ar	54.00	350	P	P	18 57 52.7	-1.2
	comp=Z,4.3nm,0.6s,baz=147,slow=8.6,SNR=7.9						
SPITS				LR	LR	19 22 53.2	
	comp=Z,253nm,18.3s,baz=10.0,slow=38						
EKS2	Erkin-Say	54.29	297	P	P	18 57 57.1	+0.5
	SNR=45						
JIRN	Jiri	54.32	275	eP	P	18 57 58.5	+1.1
	comp=Z,70nm,0.6s						
GUN	Gumba	54.39	275	eP	P	18 57 58.8	+1.0
	comp=Z,31nm,0.6s						
SVE	Sverdlovsk	54.45	318	eP	P	18 57 56.2	-1.3
SVE				pmax	pmax		
	comp=Z,14nm,1.3s						
SVE				MLR	MLR		
	comp=Z,339nm,16.0s						
RAMN	Ramite	54.47	274	eP	P	18 57 59.0	+0.7
	comp=Z,74nm,0.9s						
KSH	Kashi	54.55	293	P	P	18 58 02.9	+4.3
KSH				sP	sP	18 58 09.5	+2.4
KSH				ePcP	PcP	18 59 05.3	+3.6
KSH				PP	PP	19 00 06.3	+5.6
KSH				S	S	19 05 40.9	+4.0
KSH				ScS	ScS	19 07 48.6	+1.7
KSH				SS	SS	19 09 22.5	+3.3
KSH				pmax	pmax		
	comp=Z,24nm,1.1s						
KSH				pmax	pmax		
	comp=Z,97nm,5.7s						
KSH				LR	LR		
	comp=Z,280nm,15.9s						
KSH				LR	LR		
	comp=Z,370nm,14.5s						
KSH				LR	LR		
	comp=Z,360nm,16.4s						
AML	Almayashu	54.62	297	P	P	18 58 00.5	+1.1
	SNR=24						
HNR	Honiara	54.85	170	LR	LR	19 24 23.6	
	comp=Z,125nm,18.0s,baz=1.0,slow=39						
KKN	Kakani	54.88	276	eP	P	18 58 02.2	+0.9
	comp=Z,26nm,0.6s						
PKIN	Phulchoki	54.93	275	eP	P	18 58 02.2	+0.5
	comp=Z,26nm,0.9s						
DMN	Daman	55.12	276	eP	P	18 58 04.1	+1.1
	comp=Z,55nm,0.8s						
GKN	Gorkha	55.21	276	eP	P	18 58 04.4	+0.9
	comp=Z,52nm,0.8s						
DANN	Dangsing	55.61	277	eP	P	18 58 07.9	+1.3
	comp=Z,76nm,0.8s						
ARU	Arti	55.65	318	eP	P	18 58 04.2	-1.9
ARU	Arti	55.65	318	eP	P	18 58 03.7	-2.3
	comp=Z,19nm,1.2s						
ARU	Arti	55.65	318	c iP	P	18 58 04.2	-1.9
ARU						18 59 04.0	
ARU						19 00 04.9	
ARU				PPP	PPP	19 01 21.0	
ARU				S	S	19 05 46.1	-4.7
ARU						19 07 52.3	
ARU				SS	SS	19 09 24.6	-11
ARU				pmax	pmax		
	comp=Z,14nm,1.0s						
ARU				MLR	MLR		
	comp=Z,328nm,16.0s						
KOLN	Koldanda	56.08	277	eP	P	18 58 10.9	+1.1
	comp=Z,23nm,0.7s						
KK31	Karatay Array	56.09	299	eP	P	18 58 09.1	-0.4
KK31	Karatay Array	56.09	299	eP	P	18 58 09.1	-0.4
KKAR	Karatay Array	56.09	299	eP	P	18 58 09.2	-0.3
KKAR	Karatay Array	56.09	299	eP	P	18 58 09.2	-0.3
PYUN	Piuthan	56.30	277	eP	P	18 58 12.3	+0.8
	comp=Z,102nm,0.9s						
PRGR	Permogore	58.26	327	eP	P	18 58 21.6	-2.9
PRGR				e*SP	sP	18 58 36.6	+3.6
PRGR				pmax	pmax		
	comp=Z,26nm,1.1s						
ABKAR	Akbulak array	58.84	310	eP	P	18 58 27.7	-1.1
PINE	Pine Mountain	59.05	57	eP	P	18 58 31.3	+0.8
	comp=Z,12nm,1.2s						
ARA0	ARCESS Array S	59.06	341	eP	P	18 58 29.2	-0.8
ARCES	ARCESS Array B	59.06	341	P	P	18 58 29.2	-0.8
	comp=Z,25nm,0.9s,baz=46,slow=8.7,SNR=22						
ARCES	ARCESS Array B	59.06	341	eP	P	18 58 29.0	-1.0
ARCES	ARCESS Array B	59.06	341	eP	P	18 58 29.0	-1.0
ARCES	ARCESS Array B	59.06	341	eP	P	18 58 29.0	-1.0
YBH	Yreka Blue Hor	59.15	60	LR	LR	19 20 45.2	
	comp=Z,79nm,21.3s,baz=318,slow=33						
AKTO	Aktyubinsk	59.20	312	P	P	18 58 30.4	-0.9
	comp=Z,2.4nm,0.5s,baz=38,slow=12,SNR=12						
AKTO				LR	LR	19 26 48.8	
	comp=Z,742nm,18.5s,baz=46,slow=39						
NIL	Nilore	59.68	289	eP	P	18 58 35.6	+0.8
	comp=Z,28nm,0.8s						
NIL	Nilore	59.68	289	eP	P	18 58 35.6	+0.8
NIL				pmax	pmax		
	comp=Z,28nm,0.8s						
K05A	Summer Lake	59.69	58	eP	P	18 58 36.3	+1.3
	comp=Z,46nm,1.8s						
F10A	Beach Ranch, E	59.97	54	eP	P	18 58 37.0	+0.3
	comp=Z,7.4nm,1.1s						
KTK1	Kautokeino	59.99	341	eP	P	18 58 35.7	-0.7
HEF	Hetta	60.36	340	eP	P	18 58 37.9	-1.0
TRO	Tromso	60.44	343	eP	P	18 58 38.2	-1.1
TRO				IAmb	IAmb	18 58 39.9	
	comp=Z,60nm,0.9s						
MOD	Modoc Plateau	60.52	59	eP	P	18 58 41.4	+0.8
	comp=Z,6.8nm,1.0s						
KIF	Kilpisjarvi	60.54	342	eP	P	18 58 39.2	-0.9
J08A	Circle Bar Ran	60.76	57	eP	P	18 58 43.1	+0.8
	comp=Z,7.8nm,1.0s						
NMTM	Middletown	61.02	63	eP	P	18 58 42.1	-1.8
KLMR	Klimovskoe	61.04	329	eP	P	18 58 41.5	-2.1
KLMR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KLMR	Klimovskoe	61.04	329	eP	P	18 58 41.6	-2.1
KLMR				AMP		18 58 43.5	
	comp=Z,10.0nm,0.8s						
KLMR				LQ	LQ	19 20 55.3	
KLMR				LQ	LQ	19 20 55.3	
GARM	Arbuckle	61.05	63	eP	P	18 58 46.5	+2.4
WVOR	Wild Horse Val	61.21	58	eP	P	18 58 46.2	+1.0
	comp=Z,13nm,1.4s						
WVOR	Wild Horse Val	61.21	58	eP	P	18 58 46.3	+1.0
WVOR				pmax	pmax		
	comp=Z,13nm,1.4s						
MSO	Missoula	61.31	51	eP	P	18 58 46.6	+0.7
	comp=Z,9.9nm,0.9s						
KBL	Kabul	61.94	292	eP	P	18 58 49.0	-1.4
	comp=Z,17nm,0.9s						
KBL	Kabul	61.94	292	eP	P	18 58 49.0	-1.4
KBL				pmax	pmax		
	comp=Z,17nm,0.9s						
SUMG	Summit	62.29	4	eP	P	18 58 52.1	-0.2
	comp=Z,53nm,0.9s						
SUMG	Summit	62.29	4	eP	P	18 58 52.2	-0.2
SUMG				pmax	pmax		
	comp=Z,53nm,0.9s						
PAHR	Pah Rah Range	62.38	60	eP	P	18 58 53.9	+0.6
	comp=Z,8.0nm,1.1s						
FFC	Flin Flon	62.41	39	eP	P	18 58 53.3	+0.3
	comp=Z,8.3nm,0.9s						
FFC	Flin Flon	62.41	39	eP	P	18 58 53.3	+0.3
FFC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
STEI	Steigen	62.61	343	eP	P	18 58 53.1	-0.9
STEI				IAmb	IAmb	18 59 02.8	
	comp=Z,144nm,1.6s						
LRM	Limekiln Ridge	62.74	52	eP	P	18 58 56.8	+1.1
LOF	Lofoten	62.78	344	eP	P	18 58 54.6	-0.6
LOF				IAmb	IAmb	18 58 55.8	
	comp=Z,29nm,1.0s						
EGMT	Eagleton	62.84	48	eP	P	18 58 56.6	+0.5
	comp=Z,6.2nm,0.9s						
YERR	Yerington	62.91	61	eP	P	18 58 57.8	+1.0
	comp=Z,10nm,1.1s						
HLID	Hailey	63.01	55	eP	P	18 58 58.0	+0.6
	comp=Z,3.8nm,1.0s						
WAKR	Walker	63.08	62	eP	P	18 58 59.4	+1.4
	comp=Z,6.7nm,1.0s						
BMN	Battle Mountai	63.26	59	eP	P	18 59 00.4	+1.3
	comp=Z,6.5nm,1.0s						
BMN	Battle Mountai	63.26	59	eP	P	18 59 00.4	+1.3
BMN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
RYN	Ryan	63.57	61	eP	P	18 59 01.8	+0.6
	comp=Z,5.8nm,1.0s						
KVN	Kaiserville	63.57	60	eP	P	18 59 02.1	+0.9
	comp=Z,7.6nm,1.0s						
KVN	Kaiserville	63.57	60	eP	P	18 59 02.1	+0.9
KVN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
NV01	Mina Array Sit	63.83	61	eP	P	18 59 03.5	+0.5
NVAR	Mina Array Bea	63.83	61	P	P	18 59 04.0	+1.0
	comp=Z,4.4nm,0.8s,baz=289,slow=6.9,SNR=28						
QLMT	Earthquake Lak	63.92	52	eP	P	18 59 04.2	+0.8
NV11	Mina Array Sit	63.92	61	eP	P	18 59 04.2	+0.8
	comp=Z,0.3nm,1.0s						
ELK	Elko	64.26	57	LR	LR	19 25 57.9	
	comp=Z,64nm,18.9s,baz=44,slow=35						
MOR8	Moi Rana	64.27	342	eP	P	18 59 03.1	-2.0
MOR8				IAmb	IAmb	18 59 04.5	
	comp=Z,50nm,1.4s						
ILULI	Ilulissat	64.62	9	eP	P	18 59 08.5	+1.2
	comp=Z,17nm,0.8s						
ILULI	Ilulissat	64.62	9	eP	P	18 59 08.5	+1.2
ILULI				pmax	pmax		
	comp=Z,17nm,0.8s						
IMW	Indian Meadow	64.78	52	eP	P	18 59 10.5	+1.3
	comp=Z,7.4nm,1.1s						
FXWY	Fox Creek	64.89	53	eP	P	18 59 11.0	+1.1
	comp=Z,5.8nm,1.1s						
RLMT	Red Lodge	64.92	51	eP	P	18 59 11.8	+1.8
	comp=Z,9.0nm,1.3s						
MOOW	Moose Ponds	64.98	53	eP	P	18 59 11.7	+1.3
	comp=Z,8.0nm,1.4s						
TPAW	Teton Pass	65.03	53	eP	P	18 59 12.1	+1.3
	comp=Z,9.9nm,1.0s						
FIA1	FINESS Array S	65.11	335	eP	P	18 59 09.4	-1.3
	comp=Z,28nm,0.8s						
FIA0	FINESS Array S	65.11	335	eP	P	18 59 09.2	-1.5
FIA0	FINESS Array S	65.11	335	eP	P	18 59 09.2	-1.5
FINES	FINESS Array B	65.11	335	P	P	18 59 09.2	-1.5
	comp=Z,21nm,0.7s,baz=45,slow=6.2,SNR=83						
FINES				LR	LR	19 31 07.8	
	comp=Z,245nm,18.3s,baz=22,slow=39						
FINES	FINESS Array B	65.11	335	eP	P	18 59 08.7	-2.0
FINES	FINESS Array B	65.11	335	eP	P	18 59 08.7	-2.0
LOHW	Long Hollow	65.14	53	eP	P	18 59 13.0	+1.5
	comp=Z,4.1nm,0.9s						
REDW	Red Top Meadow	65.16	53	eP	P	18 59 13.1	+1.5
	comp=Z,16nm,1.1s						
R11A	Troy Canyon, C	65.55	60	eP	P	18 59 14.6	+0.5
	comp=Z,5.6nm,1.0s						
HWUT	Hardware Ranch	65.87	55	eP	P	18 59 17.0	+0.8
	comp=Z,8.1nm,1.2s						
TPNV	Topopah Spring	66.03	61	eP	P	18 59 17.6	+0.4
	comp=Z,8.5nm,1.1s						
TPNV	Topopah Spring	66.03	61	eP	P	18 59 17.6	+0.4
TPNV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
DUG	Dugway, Tooele	66.04	57	eP	P	18 59 18.2	+0.9
	comp=Z,9.3nm,1.0s						
DUG	Dugway, Tooele	66.04	57	eP	P	18 59 18.2	+0.9
DUG				pmax	pmax		
	comp=Z,9.0nm,1.0s						
OBN	Obninsk	66.16	325	eP	P	18 59 15.6	-1.9
OBN	Obninsk	66.16	325	⇓eP	P	18 59 15.9	-1.6
OBN				e		18 59 46.8	
OBN				e		19 01 39.4	
OBN				i S	S	19 08 37.4	+33
OBN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
OBN				MLR	MLR		
	comp=Z,215nm,16.0s						
NSS	Namsos	66.21	342	eP	P	18 59 16.9	-0.8
NSS				IAmb	IAmb	18 59 21.5	
	comp=Z,43nm,1.8s						
BW06	Boulder Array	66.27	53	eP	P	18 59 18.9	+0.1
	comp=Z,5.9nm,1.0s						
PD31	Pinedale Array	66.27	53	eP	P	18 59 19.3	+0.6
PDAR	Pinedale Array	66.27	53	P	P	18 59 19.4	+0.6
	comp=Z,2.8nm,0.9s,baz=267,slow=1.5,SNR=20						
PDAR	Pinedale Array	66.27	53	eP	P	18 59 18.5	-0.3
VRH	Novokhopyorsk	66.71	320	eP	P	18 59 19.9	-1.2
VRH				pmax	pmax		
	comp=Z,4.0nm,0.5s						
VRH				MLR	MLR		
	comp=Z,490nm,18.0s						
GEYT	Alibeck	66.75	301	P	P	18 59 22.4	+0.7
	comp=Z,15nm,0.8s,baz=286,slow=6.0,SNR=33						
GYA0B	ALIBECK ARRAY	66.75	301	eP	P	18 59 22.3	+0.7
	comp=Z,28nm,0.8s						
WR1	Warramunga Arr	66.81	198	eP	P	18 59 23.0	+1.0
	comp=Z,7.5nm,1.0s						
WRA	Warramunga Arr	66.81	198	P	P	18 59 23.0	+1.0
	comp=Z,1.5nm,0.9s,baz=23,slow=6.9,SNR=6.4						
MPU	Maple Canyon	66.85	56	eP	P	18 59 23.6	+1.1
	comp=Z,4.9nm,0.9s						
SHPR	Sheep Range	66.98	61	eP	P	18 59 24.3	+0.9
	comp=Z,8.0nm,1.1s						
VSU	Vasula	67.23	332	ceP	P	18 59 23.8	-0.5
VSU				pmax	pmax		
	comp=Z,38nm,0.6s						
CCUT	Cedar City	67.41	59	eP	P	18 59 27.6	+1.5
	comp=Z,6.5nm,1.1s						
FITZ	Fitzroy Crossi	67.42	207	P	P	18 59 27.9	+1.9
	comp=Z,2.7nm,1.0s,baz=9.5,slow=6.1,SNR=2.6						
MTPU	Mount Pierson	67.80	58	eP	P	18 59 29.9	+1.2
	comp=Z,3.3nm,0.8s						
LCMT	Little Creek M	67.83	59	eP	P	18 59 29.8	+1.2
	comp=Z,6.0nm,0.9s						
VSR	Storozhevoye	67.85	321	eP	P	18 59 25.9	-2.4
VSR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
VSR				MLR	MLR		
	comp=Z,630nm,21.0s						
P18A	Preston Nutter	67.92	56	eP	P	18 59 31.0	+1.6
	comp=Z,8.7nm,1.4s						
VORD	Divnogorie	67.97	321	eP	P	18 59 29.0	-0.1
VORD				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KNB	Kanab	68.08	59	eP	P	18 59 31.1	+0.8
	comp=Z,12nm,1.2s						
KNB	Kanab	68.08	59	eP	P	18 59 31.1	+0.8
KNB				pmax	pmax		
	comp=Z,12nm,1.2s						
SRU	San Rafael Swe	68.09	56	eP	P	18 59 31.1	+0.8
	comp=Z,11nm,1.1s						
SRU	San Rafael Swe	68.09	56	eP	P	18 59 31.1	+0.8
SRU				pmax	pmax		
	comp=Z,11nm,1.1s						
DZM	Mont Dzumac	68.23	166	LR	LR	19 28 03.8	
	comp=Z,128nm,18.1s,baz=16,slow=35						
DZM	Mont Dzumac	68.23	166	eLR	LR	19 20 10.0	
	comp=Z,141nm,20.6s						
U15A	North Rim	68.79	59	eP	P	18 59 36.0	+1.2
	comp=Z,8.9nm,1.3s						
NC303	NORSAR Array S	69.24	341	eP	P	18 59 36.7	-0.2
NC303	NORSAR Array S	69.24	341	eP	P	18 59 36.8	-0.1
NC303				IAmb	IAmb	18 59 37.2	
	comp=Z,20nm,0.3s						
NC405	NORSAR Array S	69.26	341	eP	P	18 59 36.5	-0.5
NC204	NORSAR Array S	69.34	341	eP	P	18 59 37.0	-0.6
NC204	NORSAR Array S	69.34	341	eP	P	18 59 36.7	-0.9
NC204				IAmb	IAmb	18 59 37.6	
	comp=Z,36nm,1.1s						
NB201	NORSAR Array S	69.42	341	eP	P	18 59 37.9	-0.1
NB201	NORSAR Array S	69.42	341	eP	P	18 59 37.6	-0.4
NB201				IAmb	IAmb	18 59 38.5	
	comp=Z,46nm,1.0s						
NB2	NORSAR Subarra	69.44	341	P	P	18 59 37.4	-0.8
	comp=Z,33nm,1.2s,baz=28,slow=6.2						
NB2	NORSAR Subarra	69.44	341	P	P	18 59 37.4	-0.8
	baz=28,slow=6.2						
PV22	Blue Mesa, Par	69.49	56	eP	P	18 59 40.1	+1.0
	comp=Z,8.6nm,1.1s						
PV20	West Nyswonger	69.51	56	eP	P	18 59 40.0	+0.7
	comp=Z,7.4nm,0.9s						
NBO00	NORSAR Array S	69.55	341	eP	P	18 59 38.7	-0.1
NBO00	NORSAR Array S	69.55	341	eP	P	18 59 37.5	-1.3
NBO00				IAmb	IAmb	18 59 39.4	
	comp=Z,42nm,1.1s						
PV17	East Wray Mesa	69.56	56	eP	P	18 59 40.2	+0.7
	comp=Z,15nm,0.9s						
PV16	Nyswonger Mesa	69.56	56	eP	P	18 59 40.0	+0.4
	comp=Z,14nm,1.4s						
PV11	David Mesa, Pa	69.60	56	eP	P	18 59 39.4	-0.4
	comp=Z,7.3nm,0.7s						
PV18	Skein Mesa, Pa	69.61	56	eP	P	18 59 40.8	+1.0
	comp=Z,7.5nm,0.8s						
PV12	Saucer Basin,	69.63	56	eP	P	18 59 42.0	+2.0
	comp=Z,8.8nm,1.0s						
NC602	NORSAR Array S	69.63	341	eP	P	18 59 38.8	-0.5
NC602	NORSAR Array S	69.63	341	eP	P	18 59 38.6	-0.7
NC602				IAmb	IAmb	18 59 39.1	
	comp=Z,100nm,0.8s						
HFS	Hagfors	69.64	339	P	P	18 59 38.5	-0.8
	comp=Z,16nm,0.8s,baz=53,slow=7.4,SNR=52						
PV03	Paradox Valley	69.64	56	eP	P	18 59 39.9	-0.1
NAO01	NORSAR Array S	69.69	341	eP	P	18 59 38.9	-0.8
NAO01	NORSAR Array S	69.69	341	eP	P	18 59 39.2	-0.4
NAO01				IAmb	IAmb	18 59 39.9	
	comp=Z,40nm,1.1s						
IDID	Didziasalis	69.71	330	eP	P	18 59 39.9	+0.1
IDID				IAmb	IAmb	18 59 40.8	
	comp=Z,8.0nm,0.9s						
ISAL	Salakas	69.72	331	eP	P	18 59 40.0	+0.1
ISAL				IAmb	IAmb	18 59 53.2	
	comp=Z,9.8nm,0.9s						
PV13	Radium Mtn., P	69.72	56	eP	P	18 59 41.2	+0.6
	comp=Z,12nm,1.2s						
IIGN	Ignalina	69.86	330	eP	P	18 59 40.9	+0.1
IIGN				IAmb	IAmb	18 59 41.8	
	comp=Z,12nm,0.7s						
NACGM	Naroch	70.02	330	e	P	18 59 38.0	-3.7
SMCO	Snowmass	70.11	54	eP	P	18 59 43.7	+0.6
	comp=Z,6.1nm,1.0s						
AKT	Akhty	70.40	309	eP	P	18 59 45.2	+0.7
AKT				e		19 00 04.8	
AKT				pmax	pmax		
	comp=Z,37nm,0.9s						
ISCO	Idaho Springs	70.46	53	eP	P	18 59 46.0	+0.8
	comp=Z,3.0nm,0.8s						
AS01	Alice Springs	70.50	198	eP	P	18 59 46.9	+1.9
AS31	Alice Springs	70.50	198	eP	P	18 59 46.8	+1.7
	comp=Z,1.0nm,0.8s						
ASAR	Alice Springs	70.51	198	P	P	18 59 45.9	+0.8
	comp=Z,1.9nm,0.9s,baz=18,slow=6.6,SNR=9.2						
MVCO	Mesa Verde	70.55	57	eP	P	18 59 45.6	0.0
	comp=Z,6.8nm,1.0s						
X16A	Lo Mia Camp, P	70.64	61	eP	P	18 59 47.3	+1.1
	comp=Z,5.3nm,1.0s						
S22A	4UR Ranch, Cre	71.16	55	eP	P	18 59 50.4	+1.0
	comp=Z,5.9nm,1.2s						
KIV	Kislovodsk	71.33	314	eP	P	18 59 50.5	+0.4
	comp=Z,39nm,0.9s						
KIV	Kislovodsk	71.33	314	deP	P	18 59 51.2	+1.1
KIV				e		19 00 09.2	
KIV				pmax	pmax		
	comp=Z,36nm,0.9s						
KIV				MLR	MLR		
	comp=Z,315nm,18.0s						
KBZ	Khabaz	71.39	314	P	P	18 59 51.3	+1.0
	comp=Z,30nm,0.8s,baz=48,slow=3.1,SNR=38						
KBZ				LR	LR	19 36 05.7	
	comp=Z,463nm,18.6s,baz=41,slow=40						
ZEI	Tsey	71.53	312	eP	P	18 59 50.9	-0.6
ZEI				pmax	pmax		
	comp=Z,17nm,0.7s						
TBLG	Delisi	71.84	311	eP	P	18 59 54.2	+1.1
	comp=Z,44nm,0.9s						
TBLG	Delisi	71.84	311	eP	P	18 59 54.2	+1.1
TBLG				pmax	pmax		
	comp=Z,44nm,0.9s						
AKASG	Malin Array Be	72.41	326	P	P	18 59 55.6	-0.7
	comp=Z,2.1nm,0.3s,baz=37,slow=6.5,SNR=12						
AKASG				LR	LR	19 34 31.5	
	comp=Z,236nm,18.6s,baz=25,slow=38						
AKBB	Malin Array Si	72.41	326	eP	P	18 59 55.7	-0.6
	comp=Z,23nm,1.0s						
KIEV	Kiev	72.42	326	eP	P	18 59 55.4	-0.9
KIEV	Kiev	72.42	326	eP	P	18 59 55.6	-0.8
	comp=Z,24nm,1.1s						
KIEV	Kiev	72.42	326	ceP	P	18 59 55.4	-0.9
KIEV				pmax	pmax		
	comp=Z,29nm,1.3s						
AK11	Malin Array Si	72.45	326	eP	P	18 59 55.4	-1.1
AKH	Akhalkalaki	72.72	312	⇓iP	P	18 59 58.0	-0.6
AKH	Akhalkalaki	72.72	312	eP	P	18 59 58.8	+0.2
	comp=Z,19nm,1.1s						
AKH	Akhalkalaki	72.72	312	eP	P	18 59 58.8	+0.2
AKH				pmax	pmax		
	comp=Z,19nm,1.1s						

GNI	**Garni**	**72.95**	**310**	LR	LR	19 36 54.2	
	comp=Z,213nm,18.1s,baz=39,slow=40						
SOC	**Sochi**	**73.09**	**315**	*e*P	**P**	**18 59 59.2**	**-1.3**
SOC				*e*		19 02 39.5	
SOC				*e*S	**S**	**19 09 23.9**	**-2.9**
SOC				*e*SS	**SS**	**19 14 07.7**	**+0.7**
SOC				*e*SSS	SSS	19 17 23.1	
SOC				pmax	pmax		
	comp=Z,15nm,0.6s						
SOC				MLR	MLR		
	comp=Z,234nm,19.0s						
ANMO	**Albuquerque**	**73.30**	**57**	P	**P**	**19 00 02.9**	**+0.8**
	comp=Z,1.2nm,0.6s,baz=352,slow=17,SNR=6.7						
ANMO				LR	LR	19 29 16.9	
	comp=Z,53nm,20.5s,baz=330,slow=33						
ANMO	**Albuquerque**	**73.30**	**57**	*e*P	**P**	**19 00 02.9**	**+0.8**
	comp=Z,3.9nm,1.1s						
ANMO	**Albuquerque**	**73.30**	**57**	*ce*P	**P**	**19 00 03.2**	**+1.1**
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.0s						
ANN	**Anapa**	**73.31**	**317**	*e*P	**P**	**19 00 01.4**	**-0.3**
ANN				*e*S	**S**	**19 09 24.6**	**-4.6**
ANN				pmax	pmax		
	comp=Z,17nm,0.6s						
319A	**Douglas**	**74.03**	**62**	*e*P	**P**	**19 00 07.3**	**+0.9**
	comp=Z,11nm,0.8s						
GKP	**Gorka Klasztor**	**74.56**	**334**	*e*P	**P**	**19 00 09.2**	**+0.4**
GKP	**Gorka Klasztor**	**74.56**	**334**	*e*P	**P**	**19 00 09.2**	**+0.4**
BEL	**Belsk**	**74.61**	**331**	*e*P	**P**	**19 00 09.8**	**+0.6**
BEL	**Belsk**	**74.61**	**331**	*e*P	**P**	**19 00 09.8**	**+0.6**
SIM	**Simferopol’**	**74.75**	**319**	*de*P	**P**	**19 00 10.5**	**+0.3**
SIM				pmax	pmax		
	comp=Z,24nm,0.9s						
SIM				MLR	MLR		
	comp=Z,300nm,16.0s						
SORM	**Soroca**	**74.78**	**325**	⇓*i*P	**P**	**19 00 09.9**	**-0.4**
SORM	**Soroca**	**74.78**	**325**	⇓P	**P**	**19 00 09.9**	**-0.4**
LVV	**L’vov**	**75.11**	**328**	*e*P	**P**	**19 00 12.0**	**-0.2**
LVV				MLR	MLR		
	comp=N,150nm,16.0s						
LVV				MLR	MLR		
	comp=E,100nm,16.0s						
LVV				MLR	MLR		
	comp=Z,160nm,16.0s						
KIS	**Kishinev**	**75.49**	**324**	*e*P	**P**	**19 00 17.0**	**+2.6**
KIS				LRM	MLR	19 36 30.0	
	comp=Z,500nm,16.0s						
KIS	**Kishinev**	**75.49**	**324**	*e*P	**P**	**19 00 17.0**	**+2.6**
KIS				MLR	MLR		
	comp=Z,500nm,16.0s						
KIS				MLR	MLR		
	comp=Z,500nm,16.0s						
KWP	**Kalwaria Pacla**	**75.76**	**329**	*e*P	**P**	**19 00 16.5**	**+0.6**
KWP	**Kalwaria Pacla**	**75.76**	**329**	*e*P	**P**	**19 00 15.9**	**0.0**
	comp=Z,625nm,1.0s						
KWP	**Kalwaria Pacla**	**75.76**	**329**	*e*P	**P**	**19 00 15.9**	**0.0**
LEOM	**Leova**	**76.14**	**324**	⇑*i*P	**P**	**19 00 18.7**	**+0.6**
LEOM	**Leova**	**76.14**	**324**	⇑P	**P**	**19 00 18.7**	**+0.6**
MNTX	**Cornudas Mount**	**76.20**	**59**	*e*P	**P**	**19 00 19.2**	**+0.4**
	comp=Z,3.0nm,0.9s						
OJC	**Ojcow**	**76.30**	**331**	*e*P	**P**	**19 00 19.3**	**+0.3**
OJC	**Ojcow**	**76.30**	**331**	*e*P	**P**	**19 00 18.8**	**-0.2**
	comp=Z,21nm,0.8s						
OJC	**Ojcow**	**76.30**	**331**	*e*P	**P**	**19 00 18.8**	**-0.2**
OJC				pmax	pmax		
	comp=Z,21nm,0.8s						
BUR08	**Bucovina Ar. S**	**76.44**	**326**	*e*P	**P**	**19 00 20.1**	**+0.1**
BUR04	**Bucovina Ar. S**	**76.45**	**326**	*e*P	**P**	**19 00 19.8**	**-0.3**
BURAR	**Bucovina Array**	**76.46**	**326**	⇑*i*P	**P**	**19 00 20.5**	**+0.5**
BURAR	**Bucovina Array**	**76.46**	**326**	⇑P	**P**	**19 00 20.5**	**+0.5**
BIZ	**Bicaz**	**76.65**	**325**	⇑*i*P	**P**	**19 00 21.7**	**+0.7**
TESR	**Tescani**	**76.77**	**325**	⇓*i*P	**P**	**19 00 22.0**	**+0.3**
NIE	**Niedzica**	**76.80**	**330**	*e*P	**P**	**19 00 22.5**	**+0.6**
NIE	**Niedzica**	**76.80**	**330**	*e*P	**P**	**19 00 22.5**	**+0.6**
CRVS	**Cervenica-Dubn**	**76.82**	**329**	*e*P	**P**	**19 00 22.3**	**+0.4**
CRVS				pmax	pmax		
	comp=Z,12nm,1.1s						
CRVS	**Cervenica-Dubn**	**76.82**	**329**	*e*P	**P**	**19 00 22.3**	**+0.4**
TLCR		**76.93**	**323**	⇑*i*P	**P**	**19 00 22.6**	**0.0**
TLCR		**76.93**	**323**	⇑P	**P**	**19 00 22.7**	**+0.1**
KSP	**Ksiaz**	**76.94**	**333**	*e*P	**P**	**19 00 22.8**	**+0.2**
KSP	**Ksiaz**	**76.94**	**333**	*e*P	**P**	**19 00 22.8**	**+0.2**
TRPA	**Tarpa**	**77.06**	**328**	⇑*i*P	**P**	**19 00 24.0**	**+0.8**
TRPA	**Tarpa**	**77.06**	**328**	⇑*e*P	**P**	**19 00 24.1**	**+0.8**
OKC	**Ostrava-Krasne**	**77.19**	**331**	AMS	AMS	19 42 40.0	
	comp=Z,200nm,14.2s						
CFR	**Carcaliu**	**77.22**	**323**	⇑*i*P	**P**	**19 00 24.4**	**+0.2**
CFR	**Carcaliu**	**77.22**	**323**	⇑P	**P**	**19 00 24.4**	**+0.2**
ARCR	**ARCALIA**	**77.23**	**326**	⇑*i*P	**P**	**19 00 25.2**	**+0.9**
VRI	**Vrincioaia**	**77.26**	**324**	⇑*i*P	**P**	**19 00 24.9**	**+0.4**
VRI	**Vrincioaia**	**77.26**	**324**	⇑P	**P**	**19 00 24.9**	**+0.4**
UPC	**Upice**	**77.32**	**333**	*e*P	**P**	**19 00 25.4**	**+0.7**
UPC				AMS	AMS	19 39 40.0	
	comp=Z,200nm,19.2s						
UPC	**Upice**	**77.32**	**333**	*e*P	**P**	**19 00 25.4**	**+0.7**
UPC				MLR	MLR		
	comp=Z,200nm,19.2s						
LANS	**Liptovska Anna**	**77.32**	**330**	*e*P	**P**	**19 00 25.4**	**+0.6**
LANS	**Liptovska Anna**	**77.32**	**330**	*e*P	**P**	**19 00 25.4**	**+0.6**
DPC	**Dobruska-Polom**	**77.36**	**333**	*e*P	**P**	**19 00 25.7**	**+0.7**
DPC				AMS	AMS	19 39 20.0	
	comp=Z,200nm,16.7s						
DPC	**Dobruska-Polom**	**77.36**	**333**	*e*P	**P**	**19 00 25.7**	**+0.7**
DPC				MLR	MLR		
	comp=Z,200nm,16.7s						
KRLC	**Kraliky**	**77.44**	**332**	*e*P	**P**	**19 00 25.6**	**+0.1**
KRLC	**Kraliky**	**77.44**	**332**	*e*P	**P**	**19 00 25.6**	**+0.1**
MORC	**Moravsky Berou**	**77.45**	**332**	⇑*i*P	**P**	**19 00 26.4**	**+0.9**
MORC	**Moravsky Berou**	**77.45**	**332**	*e*P	**P**	**19 00 25.3**	**-0.2**
	comp=Z,22nm,1.0s						
MORC	**Moravsky Berou**	**77.45**	**332**	⇑P	**P**	**19 00 26.4**	**+0.9**
MORC	**Moravsky Berou**	**77.45**	**332**	*e*P	**P**	**19 00 25.9**	**+0.4**
CLL	**Collm**	**77.55**	**335**	⇑*i*P	**P**	**19 00 25.6**	**-0.4**
	comp=Z,22nm,0.9s						
CLL				*i* (sP)	**pP**	**19 00 33.0**	**+0.7**
CLL				*e*PcP	**PcP**	**19 00 38.0**	**+1.8**
CLL				*e*		19 01 00.0	
CLL				*e*(PP)		19 03 14.0	
CLL				*e*SSS	SSS	19 18 42.0	
CLL				LmH		19 32 00.0	
	comp=N,100nm,20.4s						
CLL				LmH		19 32 00.0	
	comp=E,300nm,20.9s						
CLL				LmV		19 41 00.0	
	comp=Z,200nm,18.7s						
CLL	**Collm**	**77.55**	**335**	*e*P	**P**	**19 00 25.5**	**-0.5**
	comp=Z,20nm,0.9s						
CLL	**Collm**	**77.55**	**335**	⇑*i*P	**P**	**19 00 25.6**	**-0.4**
CLL				*i* *PP	**pP**	**19 00 33.0**	**+0.7**
CLL				pmax	pmax		
	comp=Z,22nm,0.9s						
BRG	**Berggiesshubel**	**77.65**	**334**	*e*P	**P**	**19 00 26.2**	**-0.4**
	comp=Z,5.9nm,0.9s						
BRG	**Berggiesshubel**	**77.65**	**334**	*e*P	**P**	**19 00 26.2**	**-0.4**
BRG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
EKA	**Eskdalemuir Ar**	**77.66**	**346**	P	**P**	**19 00 26.3**	**-0.2**
	comp=Z,2.7nm,0.5s,baz=24,slow=7.1,SNR=12						
HARR	**Harsova**	**77.70**	**323**	⇑*i*P	**P**	**19 00 27.4**	**+0.5**
HARR	**Harsova**	**77.70**	**323**	⇑P	**P**	**19 00 27.4**	**+0.5**
TLB	**Topalu**	**77.74**	**323**	⇓*i*P	**P**	**19 00 27.5**	**+0.4**
TLB	**Topalu**	**77.74**	**323**	⇓P	**P**	**19 00 27.5**	**+0.4**
PVCC	**Panska Ves**	**77.76**	**334**	*e*P	**P**	**19 00 27.6**	**+0.4**
PVCC	**Panska Ves**	**77.76**	**334**	*e*P	**P**	**19 00 27.6**	**+0.4**
WMOK	**Wichita Mounta**	**77.89**	**53**	*e*P	**P**	**19 00 28.9**	**+0.7**
	comp=Z,3.2nm,0.9s						
WMOK	**Wichita Mounta**	**77.89**	**53**	*e*P	**P**	**19 00 28.9**	**+0.7**
WMOK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MLR	**Muntele Rosu**	**77.89**	**324**	P	**P**	**19 00 28.8**	**+0.6**
	comp=Z,2.2nm,0.7s,baz=240,slow=5.5,SNR=27						
MLR	**Muntele Rosu**	**77.89**	**324**	⇓*i*P	**P**	**19 00 28.6**	**+0.4**
MLR	**Muntele Rosu**	**77.89**	**324**	*e*P	**P**	**19 00 28.5**	**+0.4**
	comp=Z,11nm,0.8s						
MLR	**Muntele Rosu**	**77.89**	**324**	⇓P	**P**	**19 00 28.6**	**+0.4**
ILGA	**Ilgaz**	**77.93**	**317**	*e*P	**P**	**19 00 29.7**	**+1.1**
	comp=Z,106nm,1.9s						
ISR	**Istrita**	**77.94**	**324**	⇑*i*P	**P**	**19 00 28.8**	**+0.4**
ISR	**Istrita**	**77.94**	**324**	⇑P	**P**	**19 00 28.8**	**+0.4**
VYHS	**Vyhne**	**78.10**	**330**	*e*P	**P**	**19 00 29.7**	**+0.6**
VYHS				pmax	pmax		
	comp=Z,9.0nm,1.2s						
VYHS	**Vyhne**	**78.10**	**330**	*e*P	**P**	**19 00 29.7**	**+0.6**
DRGR		**78.11**	**327**	⇑*i*P	**P**	**19 00 29.4**	**+0.1**
DRGR		**78.11**	**327**	⇑P	**P**	**19 00 29.4**	**+0.1**
VRAC	**Vranov**	**78.17**	**332**	⇑*i*P	**P**	**19 00 29.5**	**0.0**
VRAC	**Vranov**	**78.17**	**332**	⇑P	**P**	**19 00 29.5**	**0.0**
VRAC	**Vranov**	**78.17**	**332**	*e*P	**P**	**19 00 30.2**	**+0.7**
JAVC	**Velka Javorina**	**78.19**	**331**	*e*P	**P**	**19 00 31.1**	**+1.4**
PSZ	**Piszkesteto**	**78.21**	**329**	⇑*e*P	**P**	**19 00 30.8**	**+1.0**
ICOR	**Ion Corvin**	**78.22**	**323**	⇑*i*P	**P**	**19 00 29.9**	**+0.1**
GOPC	**GO Pecny, Ondr**	**78.23**	**333**	*e*P	**P**	**19 00 30.1**	**+0.3**
GOPC				*e*pP	**pP**	**19 00 35.2**	**-0.9**
GOPC				AMS	AMS	19 38 50.0	
	comp=Z,200nm,15.6s						
GOPC	**GO Pecny, Ondr**	**78.23**	**333**	*e*P	**P**	**19 00 30.1**	**+0.3**
GOPC				*e*		19 00 35.2	
GOPC				MLR	MLR		
	comp=Z,200nm,15.6s						
PRU	**Pruhonice**	**78.24**	**334**	*e*P	**P**	**19 00 29.4**	**-0.4**
PRU				*e*pP	**pP**	**19 00 35.3**	**-0.9**
PRU				AMS	AMS	19 39 10.0	
	comp=Z,300nm,15.1s						
PRU	**Pruhonice**	**78.24**	**334**	*e*P	**P**	**19 00 29.4**	**-0.4**
PRU				*e*		19 00 35.3	
PRU				MLR	MLR		
	comp=Z,300nm,15.1s						
VOIR		**78.30**	**325**	⇓*i*P	**P**	**19 00 31.1**	**+0.7**
VOIR		**78.30**	**325**	⇓P	**P**	**19 00 31.1**	**+0.7**
KRUC	**Moravsky**	**78.44**	**332**	*e*P	**P**	**19 00 31.5**	**+0.5**
NKC	**Novy Kostel**	**78.67**	**335**	*e*P	**P**	**19 00 32.4**	**+0.2**
NKC				AMS	AMS	19 39 30.0	
	comp=Z,200nm,20.6s						
NKC	**Novy Kostel**	**78.67**	**335**	*e*P	**P**	**19 00 32.4**	**+0.2**
NKC				MLR	MLR		
	comp=Z,200nm,20.6s						
MODS	**Modra-Piesok**	**78.74**	**331**	*e*P	**P**	**19 00 33.6**	**+0.9**
MODS				pmax	pmax		
	comp=Z,20nm,1.0s						
MODS	**Modra-Piesok**	**78.74**	**331**	*e*P	**P**	**19 00 33.6**	**+0.9**
TX31	**Lajitas Ar. Si**	**78.92**	**60**	*e*P	**P**	**19 00 34.1**	**+0.1**
TXAR	**Lajitas Array**	**78.92**	**60**	P	**P**	**19 00 34.6**	**+0.6**
	comp=Z,4.7nm,0.8s,baz=297,slow=3.9,SNR=45						
BR101	**Keskin Array S**	**78.99**	**316**	*e*P	**P**	**19 00 34.9**	**+0.5**
BR131	**Keskin Array S**	**78.99**	**316**	*e*P	**P**	**19 00 34.5**	**+0.1**
BRTR	**Keskin Array B**	**78.99**	**316**	P	**P**	**19 00 34.9**	**+0.5**
	comp=Z,5.3nm,0.8s,baz=76,slow=4.1,SNR=33						
CSKK	**Csˆ‡kako**	**79.27**	**330**	⇑*e*P	**P**	**19 00 36.4**	**+0.9**
ANTO	**Ankara**	**79.29**	**317**	⇑*i*P	**P**	**19 00 36.5**	**+0.6**
ANTO	**Ankara**	**79.29**	**317**	*e*P	**P**	**19 00 36.4**	**+0.5**
	comp=Z,14nm,0.7s						
ANTO	**Ankara**	**79.29**	**317**	⇑P	**P**	**19 00 36.5**	**+0.6**
KHC	**Kasperske Hory**	**79.29**	**334**	*e*P	**P**	**19 00 36.2**	**+0.5**
KHC				*e*pP	**pP**	**19 00 40.1**	**-2.0**
KHC				AMS	AMS	19 39 40.0	
	comp=Z,300nm,18.7s						
KHC	**Kasperske Hory**	**79.29**	**334**	*e*P	**P**	**19 00 35.8**	**0.0**
	comp=Z,5.8nm,0.8s						
KHC	**Kasperske Hory**	**79.29**	**334**	*e*P	**P**	**19 00 36.2**	**+0.5**
KHC				*e*		19 00 40.1	
KHC				MLR	MLR		
	comp=Z,300nm,18.7s						
BR231	**Keskin MP Arra**	**79.32**	**317**	*e*P	**P**	**19 00 36.7**	**+0.6**
RAR	**Rarotonga**	**79.32**	**135**	LR	LR	19 34 33.8	
	comp=Z,102nm,19.0s,baz=322,slow=35						
BZS	**Buzias**	**79.51**	**327**	⇑*i*P	**P**	**19 00 37.6**	**+0.7**
BZS	**Buzias**	**79.51**	**327**	⇑P	**P**	**19 00 37.6**	**+0.7**
GEC2	**GERESS Array S**	**79.51**	**333**	*e*P	**P**	**19 00 36.7**	**-0.3**
	comp=Z,6.0nm,0.8s						
GEC2	**GERESS Array S**	**79.51**	**333**	*e*P	**P**	**19 00 36.7**	**-0.3**
GEC2				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GERES	**GERESS Array B**	**79.51**	**333**	P	**P**	**19 00 36.9**	**0.0**
	comp=Z,4.9nm,0.7s,baz=33,slow=5.1,SNR=44						
GEA0	**GERESS Array S**	**79.51**	**333**	*e*P	**P**	**19 00 36.3**	**-0.7**
GRFO	**Grafenberg**	**79.52**	**335**	*e*P	**P**	**19 00 37.0**	**+0.1**
	comp=Z,19nm,0.7s						
GRFO	**Grafenberg**	**79.52**	**335**	*e*P	**P**	**19 00 37.0**	**+0.1**
GRFO				pmax	pmax		
	comp=Z,19nm,0.7s						
CONA	**Conrad Observa**	**79.61**	**332**	*i* pP	**P**	**19 00 38.2**	**+0.7**
	comp=Z,10nm,0.6s,SNR=8.3						
SZH	**Strazhica**	**79.70**	**323**	*e*P	**P**	**19 00 37.8**	**-0.2**
HERR	**Herculane**	**79.81**	**326**	⇓*i*P	**P**	**19 00 38.0**	**-0.5**
BEBN	**Eben Emael**	**80.03**	**339**	⇓P	**P**	**19 00 40.2**	**+0.6**
MEM	**Membach**	**80.12**	**339**	⇓P	**P**	**19 00 40.5**	**+0.4**
	comp=Z,18nm,0.9s						
MDVR	**Moldovita**	**80.17**	**327**	⇓*i*P	**P**	**19 00 40.5**	**-0.1**
MOA	**Molln**	**80.20**	**333**	*e*pP	**P**	**19 00 41.2**	**+0.5**
	comp=Z,11nm,0.8s,SNR=5.5						
ARSA	**Arzberg**	**80.31**	**332**	*e*pP	**P**	**19 00 41.6**	**+0.4**
	comp=Z,7.0nm,1.3s						
BCLA	**Clavier**	**80.47**	**339**	⇑P	**P**	**19 00 41.9**	**-0.1**
	comp=Z,12nm,1.0s						
MPEP	**Malo Peshtene**	**80.54**	**325**	*e*P	**P**	**19 00 42.8**	**+0.3**
SNF	**Seneffe**	**80.64**	**340**	⇑P	**P**	**19 00 40.9**	**-2.0**
W40A	**Ferguson Farm,**	**80.68**	**49**	*e*P	**P**	**19 00 42.7**	**-0.7**
	comp=Z,11nm,0.8s						
DOU	**Dourbes**	**80.95**	**339**	⇑P	**P**	**19 00 43.4**	**-1.2**
WLF	**Walferdange**	**80.95**	**338**	⇑AP	pP	19 00 50.0	-0.9
SOKA	**Soboth**	**80.97**	**332**	*i* pP	**P**	**19 00 45.0**	**+0.2**
	comp=Z,15nm,1.0s,SNR=9.4						
PERS	**Pernice**	**80.98**	**332**	*i* P	**P**	**19 00 44.8**	**-0.1**
KBA	**Koelnbreinsper**	**81.18**	**333**	*e*pP	**P**	**19 00 46.5**	**+0.4**
	comp=Z,27nm,0.8s						
VTS	**Vitosha**	**81.39**	**324**	⇑*i*P	**P**	**19 00 47.5**	**+0.2**
VTS	**Vitosha**	**81.39**	**324**	*e*P	**P**	**19 00 47.4**	**+0.2**
	comp=Z,23nm,0.8s						
VTS	**Vitosha**	**81.39**	**324**	*e*P	**P**	**19 00 47.5**	**+0.2**
VTS	**Vitosha**	**81.39**	**324**	P	**P**	**19 00 47.5**	**+0.2**
VTS	**Vitosha**	**81.39**	**324**	⇑P	**P**	**19 00 47.5**	**+0.2**
DIVS	**Divibare**	**81.41**	**327**	*e*P	**P**	**19 00 46.5**	**-0.8**
	comp=Z,8.8nm,0.8s						
GCIS	**Gornji Cirnik**	**81.47**	**331**	*i* P	**P**	**19 00 47.3**	**-0.2**
MYKA	**Terra Mystica**	**81.47**	**332**	*e*pP	**P**	**19 00 48.1**	**+0.5**
	comp=Z,6.3nm,1.0s						
WATA	**Walderalm**	**81.51**	**334**	*i* pP	**P**	**19 00 49.2**	**+1.4**
	comp=Z,13nm,0.6s,SNR=12						
WTTA	**Wattenberg**	**81.55**	**334**	*i* pP	**P**	**19 00 48.8**	**+0.7**
	comp=Z,16nm,0.7s						
BFO	**Black Forest**	**81.57**	**336**	*e*P	**P**	**19 00 47.8**	**-0.2**
	comp=Z,10nm,0.9s						
BFO	**Black Forest**	**81.57**	**336**	*i* P	**P**	**19 00 48.6**	**+0.6**
ALN	**Alexandroupoli**	**81.58**	**322**	*e*P	**P**	**19 00 48.3**	**+0.2**
	comp=Z,7.4nm,1.0s						
ALN	**Alexandroupoli**	**81.58**	**322**	*e*P	**P**	**19 00 48.3**	**+0.2**
ALN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
RDO	**Rodhopi**	**81.60**	**322**	P	**P**	**19 00 48.7**	**+0.5**
RETA	**Reutte**	**81.62**	**335**	*e*pP	**P**	**19 00 48.5**	**+0.3**
	comp=Z,12nm,1.1s						
MOTA	**Moosalm**	**81.64**	**334**	*i* pP	**P**	**19 00 49.8**	**+1.3**
	comp=Z,12nm,0.7s,SNR=18						
ABTA	**Abfaltersbach**	**81.73**	**333**	*e*pP	**P**	**19 00 49.3**	**+0.4**
	comp=Z,10.0nm,1.2s						
PPT	**Papeete**	**81.88**	**125**	LR	LR	19 31 05.4	
	comp=Z,164nm,21.0s,baz=3.5,slow=31						
PPT2	**Papeete2**	**81.90**	**125**	*e*LR	LR	19 26 25.1	
	comp=Z,143nm,21.2s						
ECH	**Echery**	**82.00**	**337**	*e*P	**P**	**19 00 50.1**	**-0.2**
	comp=Z,12nm,0.9s						
ECH	**Echery**	**82.00**	**337**	*e*P	**P**	**19 00 50.1**	**-0.2**
ECH				pmax	pmax		
	comp=Z,13nm,0.9s						
FETA	**Feichten**	**82.05**	**334**	*e*pP	**P**	**19 00 51.9**	**+1.2**
	comp=Z,9.0nm,1.1s						
DAVA	**Damuels**	**82.07**	**335**	*i* pP	**P**	**19 00 50.9**	**+0.2**
	comp=Z,15nm,1.1s						
NVR	**Nevrokopi**	**82.15**	**323**	P	**P**	**19 00 51.3**	**+0.2**
SRS	**Serrai**	**82.46**	**323**	P	**P**	**19 00 52.4**	**-0.3**
DAVOX	**Davos/Dischmat**	**82.52**	**335**	P	**P**	**19 00 53.8**	**+0.6**
	comp=Z,9.1nm,1.0s,baz=249,slow=8.6,SNR=8.0						
STIP	**Stip**	**82.56**	**325**	⇑*i*P	**P**	**19 00 51.7**	**-1.6**
SKO	**Skopje**	**82.63**	**325**	*i* P	**P**	**19 00 54.1**	**+0.5**
VAY	**Valandovo**	**82.72**	**324**	⇑*i*P	**P**	**19 00 54.4**	**+0.3**
CSS	**Mathiatis**	**82.84**	**313**	*e*P	**P**	**19 00 54.9**	**+0.1**
	comp=Z,12nm,0.7s						
TUE	**Stuetta**	**82.96**	**335**	*e*P	**P**	**19 00 55.6**	**+0.1**
	comp=Z,17nm,0.9s						
ASF	**Jabal al Asfar**	**83.10**	**309**	P	**P**	**19 00 57.1**	**+0.8**
	comp=Z,4.2nm,0.8s,baz=239,slow=14,SNR=8.0						
PDG	**Podgorica**	**83.11**	**327**	⇑*i*P	**P**	**19 00 55.8**	**-0.2**
TTG	**Podgorica**	**83.11**	**327**	*e*P	**P**	**19 00 55.2**	**-0.8**
	comp=Z,12nm,0.8s						
TTG	**Podgorica**	**83.11**	**327**	*e*P	**P**	**19 00 55.2**	**-0.8**
TTG				pmax	pmax		
	comp=Z,12nm,0.8s						
KRUS	**Krusevo**	**83.22**	**325**	*i* P	**P**	**19 00 55.9**	**-0.9**
MMAI	**Mount Meron Ar**	**83.26**	**311**	P	**P**	**19 00 57.4**	**+0.3**
	comp=Z,9.0nm,0.6s,baz=53,slow=5.6,SNR=14						
MMAI				LR	LR	19 43 01.2	
	comp=Z,275nm,19.3s,baz=25,slow=39						
OHR	**Ohrid**	**83.62**	**325**	*e*P	**P**	**19 00 59.7**	**+0.9**
SENIN	**Lac Senin/Sane**	**83.65**	**336**	*e*P	**P**	**19 01 00.3**	**+1.2**
	comp=Z,5.8nm,0.8s						
FNA	**Florina**	**83.66**	**325**	*e*P	**P**	**19 00 58.2**	**-0.8**
	comp=Z,12nm,0.8s						
FNA	**Florina**	**83.66**	**325**	*e*P	**P**	**19 00 58.2**	**-0.8**
FNA				pmax	pmax		
	comp=Z,13nm,0.8s						
LIT	**Litokhoron**	**83.77**	**323**	*e*P	**P**	**19 00 59.7**	**+0.2**
	comp=Z,9.8nm,0.9s						
LIT	**Litokhoron**	**83.77**	**323**	*e*P	**P**	**19 00 59.7**	**+0.2**
LIT				pmax	pmax		
	comp=Z,10.0nm,0.9s						
RAYN	**Ar Rayn**	**84.49**	**298**	*e*P	**P**	**19 01 03.8**	**+0.3**
	comp=Z,7.4nm,0.9s						
RAYN	**Ar Rayn**	**84.49**	**298**	*e*P	**P**	**19 01 03.8**	**+0.3**
RAYN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
AGG	**Agios Georgios**	**84.74**	**323**	*e*P	**P**	**19 01 04.1**	**-0.4**
	comp=Z,17nm,0.8s						
AGG	**Agios Georgios**	**84.74**	**323**	*e*P	**P**	**19 01 04.1**	**-0.4**
AGG				pmax	pmax		
	comp=Z,17nm,0.8s						
TKL	**Tuckaleechee C**	**85.01**	**43**	LR	LR	19 38 50.0	
	comp=Z,118nm,21.7s,baz=338,slow=36						
BNI	**Bardonecchia**	**85.03**	**336**	*e*P	**P**	**19 01 05.9**	**-0.1**
	comp=Z,22nm,1.3s						
BNI	**Bardonecchia**	**85.03**	**336**	*e*P	**P**	**19 01 05.9**	**-0.1**
BNI				pmax	pmax		
	comp=Z,22nm,1.3s						
DSF	**Desfina**	**85.16**	**323**	P	**P**	**19 01 04.7**	**-2.0**
ANX	**Ano Chora**	**85.27**	**323**	P	**P**	**19 01 06.4**	**-0.8**
AQU	**L’Aquila**	**85.33**	**331**	*e*P	**P**	**19 01 08.3**	**+0.9**
	comp=Z,16nm,1.0s						
AQU	**L’Aquila**	**85.33**	**331**	*e*P	**P**	**19 01 08.3**	**+0.9**
AQU				pmax	pmax		
	comp=Z,17nm,1.0s						
EFP	**Efpalio**	**85.42**	**323**	P	**P**	**19 01 07.7**	**-0.1**
KARP	**Karpathos**	**85.42**	**318**	*e*P	**P**	**19 01 07.4**	**-0.6**
	comp=Z,26nm,0.9s						
PDO	**Prodromos**	**85.58**	**324**	P	**P**	**19 01 08.0**	**-0.6**
DRO	**Drossia**	**85.90**	**323**	P	**P**	**19 01 10.3**	**0.0**
AMT	**Artemida-Makis**	**86.25**	**323**	P	**P**	**19 01 11.4**	**-0.6**
ITM	**Ithomi**	**86.45**	**322**	*e*P	**P**	**19 01 12.4**	**-0.6**
	comp=Z,24nm,0.8s						
CUC	**Castrocucco**	**86.52**	**328**	*e*P	**P**	**19 01 13.0**	**-0.3**
	comp=Z,6.3nm,1.0s						
LAST	**Lasithi**	**86.53**	**319**	P	**P**	**19 01 13.6**	**+0.1**
DYR	**Agios Nikonas**	**86.63**	**322**	P	**P**	**19 01 10.8**	**-3.1**
IDI	**Anoyia**	**86.70**	**319**	P	**P**	**19 01 13.9**	**-0.4**
	comp=Z,8.5nm,0.7s,baz=288,slow=12,SNR=9.5						
IDI	**Anoyia**	**86.70**	**319**	⇓*i*P	**P**	**19 01 13.7**	**-0.6**
IDI	**Anoyia**	**86.70**	**319**	*e*P	**P**	**19 01 13.8**	**-0.6**
	comp=Z,14nm,0.8s						
PYL	**PYLOS**	**86.77**	**322**	P	**P**	**19 01 14.7**	**+0.1**
TIP	**Timpagrande**	**86.87**	**327**	⇑*i*P	**P**	**19 01 15.7**	**+0.6**
TIP	**Timpagrande**	**86.87**	**327**	*e*P	**P**	**19 01 15.5**	**+0.4**
	comp=Z,29nm,1.3s						
KEST	**Kesra**	**92.65**	**330**	P	**P**	**19 01 41.7**	**-0.7**
	comp=Z,5.9nm,0.8s,baz=247,slow=3.2,SNR=7.3						
KEST	**Kesra**	**92.65**	**330**	*e*P	**P**	**19 01 43.4**	**+1.1**
	comp=Z,7.8nm,0.9s						
ESDC	**Sonseca Array**	**92.79**	**342**	P	**P**	**19 01 42.3**	**-0.6**
	comp=Z,0.5nm,0.6s,baz=139,slow=22,SNR=3.8						
PLCA	**Paso Flores**	**148.79**	**97**	PKPbc	**PKPbc**	**19 08 17.2**	**-0.3**
	comp=Z,4.2nm,1.0s,baz=267,slow=3.0,SNR=4.0						
SNAA	**Sanae**	**150.86**	**196**	PKPbc	**PKPbc**	**19 08 21.4**	**-0.2**
	comp=Z,1.1nm,0.7s,baz=343,slow=2.3,SNR=7.6						

MAN 14 18:57:48.5, 16°.47N×120°.72E, h41^{km}, mb4.1, ML2.9, MS2.6, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALP	**Baler**	**1.10**	**131**	*e*P	Pn	18 58 07.7	+0.3
BALP				*e*S	Sn	18 58 21.8	+0.5
CAUP	**Cauayan**	**1.16**	**66**	*e*P	Pn	18 58 08.3	+0.1
CAUP				*e*S	Sn	18 58 24.4	+1.6
ABRA	**Dolores**	**1.18**	**360**	*e*P	Pn	18 58 09.5	+1.0
ABRA				*e*S	Sn	18 58 24.2	+0.9
APYP	**Conner**	**1.48**	**20**	*e*P	Pn	18 58 13.9	+1.3
APYP				*e*S	Sn	18 58 30.9	+0.3

IDC 14 18:59:26.9±1.6, 0°.65S×133°.44E, h0^{km}, mb3.6/3, mb1 3.9/6, mb1mx3.5/51, mbtmp3.7/6, ML3.7/3, Error ellipse: s-maj=44.6km s-min=21.5km az=77.0, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	**Sorong**	**2.19**	**264**	Pn	Pn	19 00 04.5	0.0
	80nm,0.3s,baz=81,slow=19,SNR=528						
SIJI				Sn	Sn	19 00 29.6	-2.8
	28nm,0.3s,baz=284,slow=21,SNR=3.8						
FITZ	**Fitzroy Crossi**	**18.96**	**203**	P	P	19 03 48.5	-1.4
	0.1nm,0.3s,baz=36,slow=14,SNR=3.5						
FITZ				S	Sn	19 07 06.5	-17
	0.1nm,0.3s,baz=204,slow=20,SNR=2.7						
WRA	**Warramunga Arr**	**19.19**	**177**	P	Pn	19 03 53.0	-0.3
	0.2nm,0.3s,baz=359,slow=11,SNR=9.4						
WRA				S	Sn	19 07 21.6	-7.5
	0.1nm,0.3s,baz=359,slow=24,SNR=4.4						
ASAR	**Alice Springs**	**22.88**	**179**	P	P	19 04 32.8	+0.5
	1.9nm,0.5s,baz=358,slow=11,SNR=34						
MKAR	**Makanchi Array**	**64.99**	**324**	P	P	19 10 08.3	-0.5
	0.3nm,0.6s,baz=128,slow=8.0,SNR=4.2						
KURBB	**Kurchatov Arra**	**69.06**	**326**	P	P	19 10 34.9	+0.3
	0.2nm,0.4s,baz=118,slow=6.1,SNR=3.2						

ROM 14 18:59:39.5±0.2, 44°.069N±0°.010×11°.05E±0°.01, h11^{km}, ML1.8/4, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PTF	**Prato**	**0.11**	**172**	P	Pg	18 59 42.5	+0.2
PTF				S	Sg	18 59 45.2	+0.8
ZCCA	**Zocca**	**0.29**	**349**	P	Pg	18 59 45.9	+0.6
ZCCA				AML	AML		
	comp=E,240µm,1.3s						
ZCCA				AML	AML		
	comp=N,208µm,0.9s						
ZCCA				AML	AML		
	comp=E,240µm,1.3s						
ZCCA				AML	AML		
	comp=N,208µm,0.9s						
BDI	**Bagni Di Lucca**	**0.33**	**269**	P	Pg	18 59 46.1	0.0
BDI				S	Sg	18 59 51.2	+0.8
BDI				AML	AML		
	comp=E,362µm,0.4s						
BDI				AML	AML		
	comp=N,402µm,0.4s						
BDI				AML	AML		
	comp=E,412µm,0.2s						
BDI				AML	AML		
	comp=N,358µm,0.4s						
BDI				AML	AML		
	comp=N,358µm,0.4s						
BDI				AML	AML		
	comp=N,402µm,0.4s						
BDI				AML	AML		
	comp=E,412µm,0.2s						
BDI				AML	AML		
	comp=E,362µm,0.4s						
MAIM	**Mastiano**	**0.43**	**249**	P	Pg	18 59 48.4	+0.4
MAIM				S	Sb	18 59 54.8	-0.9
MAIM				AML	AML		
	comp=E,209µm,0.7s						
MAIM				AML	AML		
	comp=N,222µm,0.5s						
MAIM				AML	AML		
	comp=N,222µm,0.5s						
MAIM				AML	AML		
	comp=E,209µm,0.7s						
VLC	**Villacollemand**	**0.49**	**281**	P	Pg	18 59 49.4	+0.4
VLC				S	Sb	18 59 56.8	-0.5
VLC				AML	AML		
	comp=E,71µm,1.6s						
VLC				AML	AML		
	comp=N,112µm,0.7s						
VLC				AML	AML		
	comp=N,112µm,0.7s						

VLC				AML	AML		
	comp=E,71µm,1.6s						
ASQU	Asqua	0.60	117	P	Pg	18 59 51.2	+0.1
ASQU				S	Sg	18 59 59.4	+0.3
CSNT	Castellina Chi	0.62	164	P	Pb	18 59 52.2	-0.2
CSNT				S	Sg	19 00 00.3	+0.6
CSNT				AML	AML		
	comp=E,138µm,0.7s						
CSNT				AML	AML		
	comp=N,137µm,0.8s						
PLMA	Palmaria, Port	0.86	269	P	Pg	18 59 56.2	0.0

ISCJB **14** *19:18:47.0±0.3, 12°.23S±0°.05×65°.61E±0°.04, h10km, mb4.6/106, MS4.2/20, Error ellipse: s-maj=7.2km s-min=6.0km az=16.1*

IDC **14** *19:18:47.6±0.6, 12°.19S×65°.64E, h0km, mb4.1/24, mb1 4.2/25, mb1mx4.1/68, mbtmp4.1/25, ML3.5/1, MS4.1/19, Ms1 4.0/19, ms1mx3.6/68, Error ellipse: s-maj=16.8km s-min=16.2km az=65.0*

MOS **14** *19:18:48.0±1.1, 12°.06S×65°.60E, h10km, mb5.0/40, Error ellipse: s-maj=9.6km s-min=5.7km az=103.8*

NEIC **14** *19:18:48.8±0.2, 12°.22S×65°.59E, h10km, mb4.9/61, Error ellipse: s-maj=6.1km s-min=5.4km az=209.0*

GCMT **14** *19:18:48.8±0.3, 12°.15S×65°.60E, h12km, MW4.8/70, Moment Tensor Solution. s18,c18; s70,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.91±.08; $M_{\theta\theta}$0.24±.08; $M_{\phi\phi}$1.67±.07; $M_{r\theta}$0.64±.32; $M_{\theta\phi}$-0.65±.07; $M_{\phi r}$0.53±.27; Best double couple: $M_0$2.07500×10^{16} NP1:ϕ_s178.00000°,δ52.00000°,λ-65.00000°. NP2: ϕ_s321.00000°,δ44.00000°,λ-119.00000°. Principal axes: T 1.9430, Plg4.0000°, Azm250.0000°; N 0.2710, Plg19.0000°, Azm342.0000°; P -2.2080, Plg70.0000°, Azm149.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 14 19:18:49.1±0.4**, 12°.28S**±0°.07×**65°.60E**±0°.07**, h10km, n266,** $\sigma 1^{s}.$**23**/248**, mb4.8**/106**, MS4.1**/20**, 23C-15D, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08N3	Diego Garcia H	7.94	43	T	T	19 28 51.6	
	baz=221,slow=75,SNR=892						
H08N1	Diego Carcia H	7.96	43	T	T	19 28 38.2	
	baz=221,slow=75,SNR=708						
H08N2	Diego Garcia H	7.96	43	T	T	19 28 56.9	
	baz=221,slow=75,SNR=745						
H08S1	Diego Carcia H	8.19	56	T	T	19 29 07.1	
	baz=236,slow=74,SNR=34						
H08S2	Diego Garcia H	8.20	57	T	T	19 29 15.9	
	baz=236,slow=74,SNR=42						
H08S3	Diego Garcia H	8.21	56	T	T	19 29 02.3	
	baz=236,slow=74,SNR=63						
DGAR	Diego Garcia	8.30	55	i P	Pn	19 20 52.0	+2.3
MSEY	Mahe Island	12.53	306	ePn	Pn	19 21 49.5	+1.9
MSEY	Mahe Island	12.53	306	eP	Pn	19 21 49.6	+1.9
RER	Riviere de l'E	12.92	226	ePn	Pn	19 21 52.4	-0.6
OPO	Ambohidratompo	18.81	248	P	Pn	19 23 10.8	+1.1
	0.2nm,0.3s,baz=110,slow=12,SNR=1.8						
OPO				LR	LR	19 28 38.8	
	comp=Z,784nm,19.8s,baz=30,slow=31						
ABPO	Ambohimpanom	18.91	247	eP	Pn	19 23 14.7	+3.8
	46nm,2.0s						
ABPO	Ambohimpanom	18.91	247	eP	Pn	19 23 14.7	+3.8
ABPO				pmax	pmax		
	comp=Z,46nm,2.0s						
PALK	Pallekele	24.55	38	LR	LR	19 29 53.8	
	comp=Z,63nm,20.5s,baz=297,slow=27						
KMBO	Kilima Mbogo	30.21	289	LR	LR	19 35 48.2	
	comp=Z,321nm,18.6s,baz=94,slow=34						
PSI	Prapat	36.34	68	LR	LR	19 37 52.7	
	comp=Z,428nm,21.1s,baz=269,slow=32						
LSZ	Lusaka	36.43	261	P	P	19 25 55.2	+0.7
	comp=Z,4.2nm,0.7s,baz=101,slow=7.5,SNR=10						
LSZ	Lusaka	36.43	261	eP	P	19 25 55.1	+0.7
	comp=Z,18nm,1.2s						
LSZ	Lusaka	36.43	261	eP	P	19 25 55.2	+0.7
LSZ				pmax	pmax		
	comp=Z,18nm,1.2s						
RAYN	Ar Rayn	40.65	331	eP	P	19 26 28.8	-0.9
	comp=Z,11nm,1.2s						
RAYN	Ar Rayn	40.65	331	eP	P	19 26 28.8	-0.9
RAYN				pmax	pmax		
	comp=Z,11nm,1.2s						
BOSA	Boshof	40.92	240	LR	LR	19 41 31.6	
	comp=Z,424nm,18.8s,baz=30,slow=33						
LEM	Lembang	41.75	87	LR	LR	19 40 56.9	
	comp=Z,198nm,19.9s,baz=230,slow=32						
CM01	Chiang Mai Arr	44.87	48	eP	P	19 27 03.9	-0.2
CM31	Chiang Mai Arr	44.88	48	eP	P	19 27 04.5	+0.3
CMAR	Chiang Mai Arr	44.88	48	P	P	19 27 05.0	+0.9
	comp=Z,0.9nm,0.8s,baz=236,slow=8.3,SNR=9.7						
CHTO	Chiang Mai	45.11	47	eP	P	19 27 07.2	+1.2
	comp=Z,12nm,1.6s						
CHTO	Chiang Mai	45.11	47	eP	P	19 27 07.2	+1.2
CHTO				pmax	pmax		
	comp=Z,12nm,1.6s						
SHL	Shillong	45.50	34	eP	P	19 27 10.7	+1.5
	comp=Z,29nm,1.2s						
SHL	Shillong	45.50	34	eP	P	19 27 10.7	+1.5
SHL				pmax	pmax		
	comp=Z,29nm,1.2s						
KBL	Kabul	46.67	4	eP	P	19 27 18.5	+0.2
	comp=Z,24nm,1.4s						
KBL	Kabul	46.67	4	eP	P	19 27 18.5	+0.2
KBL				pmax	pmax		
	comp=Z,24nm,1.4s						
LSA	Lhasa	48.46	30	eP	P	19 27 32.9	+0.3
	comp=Z,19nm,1.3s						
LSA	Lhasa	48.46	30	eP	P	19 27 32.9	+0.3
LSA				pmax	pmax		
	comp=Z,19nm,1.3s						
SBUM	Sibu	48.57	76	eP	P	19 27 32.6	-0.6
H01W3	Cape Leeuwin H	49.28	126	T	T	20 20 49.1	
	baz=285,slow=75,SNR=19						
H01W2	Cape Leeuwin H	49.28	126	T	T	20 20 52.0	
	baz=285,slow=75,SNR=18						
H01W1	Cape Leeuwin H	49.30	126	T	T	20 20 31.2	
	baz=285,slow=75,SNR=21						
GYA0B	ALIBECK ARRAY	50.43	352	eP	P	19 27 46.6	-0.4
	comp=Z,3.8nm,0.9s						
NWAO	Narrogin (SRO)	51.36	122	LR	LR	19 45 27.3	
	comp=Z,144nm,19.2s,baz=129,slow=31						
KSH	Kashi	52.42	10	P	P	19 27 58.3	-3.7
KSH				ePcP	PcP	19 29 10.3	-2.4
KSH				pmax	pmax		
	comp=Z,37nm,1.4s						
KSH				pmax	pmax		
	comp=Z,240nm,13.5s						
KDJ	Kajisay	55.17	10	eP	P	19 28 20.1	-2.1
	comp=Z,5.5nm,1.0s						
KDJ	Kajisay	55.17	10	eP	P	19 28 20.1	-2.1
KDJ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
AAK	Ala-Archa	55.25	8	eP	P	19 28 22.7	+0.1
	comp=Z,6.2nm,1.3s						
KK31	Karatay Array	55.29	4	eP	P	19 28 21.9	-0.9
KK31	Karatay Array	55.29	4	eP	P	19 28 21.9	-0.9
KKAR	Karatay Array	55.29	4	eP	P	19 28 21.9	-0.9
KKAR	Karatay Array	55.29	4	eP	P	19 28 21.9	-0.9
MAW	Mawson	55.30	181	P	P	19 28 23.0	+0.5
	comp=Z,3.2nm,1.0s,baz=360,slow=9.2,SNR=4.1						
MAW				LR	LR	19 46 12.7	
	comp=Z,105nm,21.5s,baz=54,slow=30						
MAW	Mawson	55.30	181	eP	P	19 28 23.8	+1.3
	comp=Z,1.9nm,1.3s						
MAW	Mawson	55.30	181	eP	P	19 28 23.8	+1.3
MAW				pmax	pmax		
	comp=Z,2.0nm,1.3s						
GNI	Garni	55.64	341	P	P	19 28 26.0	+0.5
	comp=Z,5.7nm,0.4s,baz=336,slow=20,SNR=5.7						
GNI	Garni	55.64	341	eP	P	19 28 26.0	+0.5
BATI	Baumata	56.90	94	LR	LR	19 49 15.8	
	comp=Z,240nm,20.6s,baz=244,slow=32						
TBLG	Delisi	57.07	341	eP	P	19 28 34.8	-0.7
	comp=Z,4.9nm,0.5s						
TBLG	Delisi	57.07	341	eP	P	19 28 34.8	-0.7
TBLG				pmax	pmax		
	comp=Z,5.0nm,0.5s						
AKH	Akhalkalaki	57.18	340	eP	P	19 28 36.7	+0.2
	comp=Z,28nm,1.8s						
AKH	Akhalkalaki	57.18	340	eP	P	19 28 36.7	+0.2
AKH				pmax	pmax		
	comp=Z,28nm,1.8s						
FITZ	Fitzroy Crossi	58.03	104	LR	LR	19 49 14.9	
	comp=Z,160nm,21.3s,baz=271,slow=32						
KBZ	Khabaz	59.46	341	P	P	19 28 53.1	+1.0
	comp=Z,1.5nm,0.7s,baz=184,slow=3.6,SNR=4.8						
BR101	Keskin Array S	59.66	332	eP	P	19 28 53.9	+0.1
BR131	Keskin Array S	59.66	332	eP	P	19 28 52.4	-1.5
BRTR	Keskin Array B	59.66	332	P	P	19 28 53.9	+0.1
	comp=Z,1.1nm,0.8s,baz=144,slow=8.6,SNR=7.1						
KIV	Kislovodsk	59.73	341	eP	P	19 28 52.7	-1.4
	comp=Z,6.4nm,1.0s						
KIV	Kislovodsk	59.73	341	⇓eP	P	19 28 54.5	+0.4
KIV				e		19 29 42.1	
KIV				e		19 31 04.8	
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
ENH	Enshi	59.77	44	eP	P	19 28 53.4	-1.2
	comp=Z,19nm,1.5s						
FORT	Forrest	60.23	118	eP	P	19 28 56.6	-1.2
	comp=Z,24nm,1.0s						
GTA	Gaotai	60.49	30	⇑P	P	19 29 00.0	+0.5
GTA				pP	sP	19 29 07.3	+3.3
GTA				sP	pP	19 29 11.1	+8.4
GTA				S	S	19 37 21.3	+6.1
GTA				pmax	pmax		
	comp=Z,8.0nm,1.5s						
GTA				pmax	pmax		
	comp=Z,69nm,5.7s						
GTA				LR	LR		
	comp=N,110nm,20.0s						
GTA				LR	LR		
	comp=E,140nm,19.4s						
GTA				LR	LR		
	comp=Z,240nm,18.7s						
MAKZ	Makanchi	60.62	13	eP	P	19 28 57.7	-2.4
	comp=Z,5.2nm,1.3s						
MAKZ	Makanchi	60.62	13	eP	P	19 28 57.7	-2.4
MAKZ				pmax	pmax		
	comp=Z,5.0nm,1.3s						
MK01	Makanchi Array	60.65	13	eP	P	19 28 59.2	-1.1
MK31	Makanchi Array	60.67	13	eP	P	19 28 58.8	-1.7
MK31	Makanchi Array	60.67	13	eP	P	19 28 58.8	-1.7
MK32	Makanchi Array	60.67	13	eP	P	19 28 58.9	-1.6
MKAR	Makanchi Array	60.67	13	P	P	19 28 58.9	-1.6
	comp=Z,0.6nm,0.6s,baz=206,slow=8.7,SNR=7.0						
MKAR	Makanchi Array	60.67	13	eP	P	19 28 58.8	-1.7
	comp=Z,17nm,1.3s						
MKAR	Makanchi Array	60.67	13	eP	P	19 28 58.8	-1.7
MKAR				pmax	pmax		
	comp=Z,17nm,1.3s						
ILGA	Ilgaz	60.69	333	eP	P	19 29 00.9	-0.1
	comp=Z,6.5nm,0.6s						
ABKAR	Akbulak array	61.46	356	eP	P	19 29 04.5	-1.2
CASY	Casey	61.77	161	eP	P	19 29 07.7	+0.1
	comp=Z,9.5nm,1.3s						
XAN	Xi'an	61.79	40	P	P	19 29 08.1	-0.2
XAN				pP	sP	19 29 14.8	+2.0
XAN				pmax	pmax		
	comp=Z,10.0nm,1.6s						
AKTO	Aktyubinsk	62.79	355	P	P	19 29 13.8	-0.9
	comp=Z,5.0nm,0.9s,baz=176,slow=8.7,SNR=11						
KURBB	Kurchatov Arra	63.64	9	P	P	19 29 19.4	-0.9
	comp=Z,0.5nm,0.4s,baz=7.0,slow=16,SNR=10						
KURK	Kurchatov	63.75	9	eP	P	19 29 19.4	-1.6
KURK	Kurchatov	63.75	9	eP	P	19 29 19.4	-1.6
DGZ	Jazzator, Alta	64.63	16	i P	P	19 29 27.0	0.0
DGZ				pmax	pmax		
	comp=Z,3.0nm,1.3s						
AGG	Agios Georgios	65.04	324	eP	P	19 29 28.8	-1.0
	comp=Z,38nm,1.1s						
AGG	Agios Georgios	65.04	324	eP	P	19 29 28.8	-1.0
AGG				pmax	pmax		
	comp=Z,38nm,1.1s						
BVAR	Borovoye Array	65.17	3	P	P	19 29 29.3	-0.9
	comp=Z,0.9nm,0.7s,baz=159,slow=9.3,SNR=6.2						
BRVK	Borovoye	65.19	3	eP	P	19 29 29.3	-1.1
	comp=Z,16nm,1.9s						
BRVK	Borovoye	65.19	3	ceP	P	19 29 30.6	+0.2
BRVK				pmax	pmax		
	comp=Z,12nm,1.3s						
ASAR	Alice Springs	65.44	111	P	P	19 29 32.0	-0.8
	comp=Z,1.1nm,0.9s,baz=271,slow=5.8,SNR=7.4						
ASAR				LR	LR	19 55 16.4	
	comp=Z,110nm,18.8s,baz=272,slow=34						
ASAR	Alice Springs	65.44	111	P	P	19 29 32.0	-0.8
ASAR	Alice Springs	65.44	111	P	P	19 29 32.0	-0.8
AS31	Alice Springs	65.44	110	eP	P	19 29 31.5	-1.3
	comp=Z,1.0nm,0.9s						
AS01	Alice Springs	65.49	111	eP	P	19 29 32.7	-0.3
LIT	Litokhoron	65.68	325	eP	P	19 29 32.5	-1.4
	comp=Z,34nm,1.8s						
LIT	Litokhoron	65.68	325	eP	P	19 29 32.5	-1.4
LIT				pmax	pmax		
	comp=Z,34nm,1.8s						
TIRR	Tirgusor	65.78	332	⇓iP	P	19 29 34.2	-0.2
TIRR	Tirgusor	65.78	332	eP	P	19 29 33.6	-0.8
	comp=Z,8.9nm,0.9s						
TIRR	Tirgusor	65.78	332	⇓P	P	19 29 34.2	-0.2
TLB	Topalu	66.05	332	⇑iP	P	19 29 36.0	-0.1
TLB	Topalu	66.05	332	⇑P	P	19 29 36.0	-0.1
WRA	Warramunga Arr	66.11	106	P	P	19 29 37.5	+0.5
	comp=Z,2.0nm,1.0s,baz=265,slow=5.3,SNR=8.6						
WR1	Warramunga Arr	66.11	106	eP	P	19 29 37.5	+0.5
	comp=Z,34nm,1.8s						
WRAB	Tennant Creek	66.12	106	eP	P	19 29 37.0	-0.2
	comp=Z,43nm,1.8s						
WRAB	Tennant Creek	66.12	106	ceP	P	19 29 38.6	+1.4
WRAB				pmax	pmax		
	comp=Z,16nm,1.7s						
WB2	Warramunga Arr	66.12	106	eP	P	19 29 36.1	-1.1
	comp=Z,35nm,1.7s						
CFR	Carcaliu	66.46	332	⇑iP	P	19 29 38.5	-0.2
CFR	Carcaliu	66.46	332	⇑P	P	19 29 38.5	-0.2
VRH	Novokhopyorsk	66.54	344	eP	P	19 29 37.8	-1.3
VRH				pmax	pmax		
	comp=Z,9.0nm,0.9s						
FNA	Florina	66.77	325	eP	P	19 29 39.8	-1.1
	comp=Z,6.3nm,1.0s						
FNA	Florina	66.77	325	eP	P	19 29 39.8	-1.1
FNA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
VTS	Vitosha	67.00	327	⇓iP	P	19 29 42.1	-0.4
VTS	Vitosha	67.00	327	eP	P	19 29 41.6	-0.9
	comp=Z,9.3nm,1.3s						
VTS	Vitosha	67.00	327	⇓P	P	19 29 42.1	-0.4
VORD	Divnogorie	67.02	342	eP	P	19 29 41.4	-0.7
VORD				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BBOO	Buckleboo	67.09	121	eP	P	19 29 42.9	-0.3
	comp=Z,94nm,1.8s						
ISR	Istrita	67.16	331	⇑iP	P	19 29 45.0	+1.7
ISR	Istrita	67.16	331	⇑P	P	19 29 45.0	+1.7
VSR	Storozhevoye	67.28	342	eP	P	19 29 42.9	-0.9
VSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VRI	Vrincioaia	67.63	332	⇓iP	P	19 29 46.7	+0.5
VRI	Vrincioaia	67.63	332	⇓P	P	19 29 46.7	+0.5
PLOR	Plostina	67.65	332	⇓iP	P	19 29 47.0	+0.6
PLOR	Plostina	67.65	332	⇓P	P	19 29 47.0	+0.6
MLR	Muntele Rosu	67.72	331	P	P	19 29 47.3	+0.4
	comp=Z,0.7nm,0.9s,baz=153,slow=9.0,SNR=9.7						
MLR	Muntele Rosu	67.72	331	⇑iP	P	19 29 46.8	-0.1
MLR	Muntele Rosu	67.72	331	eP	P	19 29 46.8	-0.1
	comp=Z,32nm,1.6s						
MLR	Muntele Rosu	67.72	331	eP	P	19 29 46.8	-0.1
MLR				pmax	pmax		
	comp=Z,32nm,1.6s						
ZAA0	Zalesovo Array	67.97	12	eP	P	19 29 46.9	-1.2
	comp=Z,9.8nm,1.4s						
ZALV	Zalesovo Beam	67.97	12	P	P	19 29 47.0	-1.1
	comp=Z,1.9nm,0.8s,baz=188,slow=9.0,SNR=7.8						
ZAA1	Zalesovo Array	67.97	12	eP	P	19 29 47.0	-1.1
VOIR		68.10	330	⇑iP	P	19 29 48.0	-1.3
VOIR		68.10	330	⇑P	P	19 29 48.0	-1.3
TESR	Tescani	68.15	332	⇑iP	P	19 29 49.4	0.0
TORD	Torodi Ar. Bea	68.22	290	P	P	19 29 50.4	-0.1
	comp=Z,0.6nm,0.9s,baz=81,slow=4.8						
TORD				LR	LR	19 57 55.0	
	comp=Z,96nm,20.0s,baz=355,slow=34						
TOA1	Torodi Ar. Sit	68.22	290	eP	P	19 29 50.4	-0.2
DOPR	Dopca	68.33	331	⇑iP	P	19 29 56.6	+6.0
CEL	Celeste	68.45	320	eP	P	19 29 50.6	-0.9
	comp=Z,17nm,1.1s						
TIP	Timpagrande	68.46	321	eP	P	19 29 50.2	-1.5
	comp=Z,10nm,1.4s						
NVS	Novosibirsk	68.50	11	eP	P	19 29 52.7	+1.3
NVS				pmax	pmax		
	comp=N,8.0nm,1.7s						
NVS				pmax	pmax		
	comp=Z,11nm,1.7s						
SORM	Soroca	68.63	334	⇑iP	P	19 29 51.0	-1.3
SORM	Soroca	68.63	334	⇑P	P	19 29 51.1	-1.3
ARU	Arti	68.70	356	eP	P	19 29 52.0	-0.7
	comp=Z,8.2nm,1.1s						
ARU	Arti	68.70	356	c iP	P	19 29 52.3	-0.3
ARU						19 32 20.3	
ARU				S	S	19 38 56.9	+1.3
ARU				SS	SS	19 43 19.8	-0.9
ARU				pmax	pmax		
	comp=Z,18nm,1.7s						
BIZ	Bicaz	68.72	332	⇑iP	P	19 29 52.7	-0.3
SVE	Sverdlovsk	68.97	357	eP	P	19 29 53.2	-1.1
SVE				pmax	pmax		
	comp=Z,17nm,1.6s						
SHEL	Horse Pasture	68.99	257	eP	P	19 29 53.4	-2.0
	comp=Z,356nm,1.4s						
SHEL	Horse Pasture	68.99	257	eP	P	19 29 53.4	-2.0
SHEL				pmax	pmax		
	comp=Z,356nm,1.4s						
TTG	Podgorica	69.05	325	eP	P	19 29 54.9	-0.2
	comp=Z,36nm,1.9s						
TTG	Podgorica	69.05	325	eP	P	19 29 54.9	-0.2
TTG				pmax	pmax		
	comp=Z,36nm,1.9s						
MDVR	Moldovita	69.31	328	⇓iP	P	19 29 56.0	-0.7
CUC	Castrocucco	69.54	321	eP	P	19 29 56.4	-1.8
	comp=Z,3.2nm,1.0s						
BURAR	Bucovina Array	69.62	332	⇑iP	P	19 29 59.2	+0.5
BURAR	Bucovina Array	69.62	332	⇑P	P	19 29 59.2	+0.5
BUR04	Bucovina Ar. S	69.63	332	eP	P	19 29 58.5	-0.2
BUR08	Bucovina Ar. S	69.65	332	eP	P	19 29 59.3	+0.4
DIVS	Divibare	69.75	327	eP	P	19 29 59.5	0.0
	comp=Z,11nm,1.2s						
CLTB	Caltabellotta	69.77	318	eP	P	19 29 57.9	-1.9
	comp=Z,21nm,1.4s						
BZS	Buzias	69.93	329	⇓iP	P	19 30 00.4	-0.1
BZS	Buzias	69.93	329	⇓P	P	19 30 00.4	-0.1
SONA0	Songino Array	69.97	28	eP	P	19 30 01.2	+0.2
SONM	Songino Array	69.97	28	P	P	19 30 01.2	+0.2
	comp=Z,4.3nm,0.9s,baz=213,slow=6.3,SNR=22						
SONA1	Songino Array	69.99	28	eP	P	19 30 01.5	+0.5
BJT	Baijiatuau	70.03	39	eP	P	19 30 00.8	-0.4
	comp=Z,13nm,0.4s						
BJT	Baijiatuau	70.03	39	eP	P	19 30 00.9	-0.4
BJT				pmax	pmax		
	comp=Z,13nm,0.4s						
DRGR		70.21	330	⇓iP	P	19 30 02.1	-0.2
DRGR		70.21	330	⇓P	P	19 30 02.1	-0.2
AKASG	Malin Array Be	70.28	336	P	P	19 30 01.2	-1.3
	comp=Z,1.1nm,0.6s,baz=138,slow=5.0,SNR=10.0						
AKBB	Malin Array Si	70.28	336	eP	P	19 30 01.0	-1.5
	comp=Z,9.4nm,1.0s						
AKBB	Malin Array Si	70.28	336	eP	P	19 30 01.0	-1.5
AKBB				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KIEV	Kiev	70.28	336	eP	P	19 30 01.3	-1.2
	comp=Z,8.4nm,1.0s						
KIEV	Kiev	70.28	336	eP	P	19 30 01.3	-1.2
KIEV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
AK11	Malin Array Si	70.28	336	eP	P	19 30 00.2	-2.3
ULN	Ulaanbaatar	70.30	28	eP	P	19 30 02.3	-0.7
	comp=Z,24nm,2.0s						
ULN	Ulaanbaatar	70.30	28	eP	P	19 30 02.3	-0.7
ULN				pmax	pmax		
	comp=Z,24nm,2.0s						
OBN	Obninsk	71.45	343	eP	P	19 30 08.7	-0.9
	comp=Z,33nm,1.5s						
OBN	Obninsk	71.45	343	⇑eP	P	19 30 09.2	-0.3
OBN				e		19 30 25.2	
OBN				e		19 32 49.2	
OBN				pmax	pmax		
	comp=Z,25nm,1.7s						
BLY	Banja Luka	71.69	326	eP	P	19 30 10.9	-0.3
	comp=Z,15nm,1.3s						
SNAA	Sanae	71.70	198	P	P	19 30 12.0	+1.0
	comp=Z,1.9nm,1.1s,baz=72,slow=9.6,SNR=3.5						
SNAA				LR	LR	19 53 29.4	
	comp=Z,150nm,19.3s,baz=90,slow=29						
SNAA	Sanae	71.70	198	eP	P	19 30 11.4	+0.4
	comp=Z,30nm,1.9s						
SNAA	Sanae	71.70	198	i P	P	19 30 14.1	+3.1
MOS	Moscow	71.70	344	eP	P	19 30 11.0	0.0
MOS				e		19 30 18.1	
MOS				pmax	pmax		
	comp=Z,36nm,0.8s						
THTN	Thala	71.77	314	eP	P	19 30 10.8	-1.3
	comp=Z,33nm,1.7s						
CRVS	Cervenica-Dubn	72.29	331	eP	P	19 30 14.6	-0.2
CRVS				pmax	pmax		
	comp=Z,18nm,1.9s						
CRVS	Cervenica-Dubn	72.29	331	eP	P	19 30 14.6	-0.2
AQU	L'Aquila	72.40	322	eP	P	19 30 14.4	-1.3
	comp=Z,30nm,1.6s						
AQU	L'Aquila	72.40	322	eP	P	19 30 14.4	-1.3
AQU				pmax	pmax		
	comp=Z,30nm,1.6s						
DBIC	Dimbokro	72.52	281	LR	LR	19 59 54.5	
	comp=Z,120nm,21.8s,baz=70,slow=34						
VYHS	Vyhne	73.28	330	eP	P	19 30 20.4	-0.3
VYHS				pmax	pmax		
	comp=Z,6.0nm,1.4s						
VYHS	Vyhne	73.28	330	eP	P	19 30 20.4	-0.3
KOWA	Kowa	73.91	289	LR	LR	20 02 55.0	
	comp=Z,105nm,18.0s,baz=16,slow=36						
OJC	Ojcow	73.99	331	eP	P	19 30 23.3	-1.5
	comp=Z,9.7nm,1.1s						
OJC	Ojcow	73.99	331	eP	P	19 30 23.3	-1.5
OJC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
ARSA	Arzberg	74.17	327	eP	P	19 30 26.3	+0.3
	comp=Z,8.0nm,1.2s						
OBKA	Obir	74.24	326	eP	P	19 30 28.2	+1.8
	comp=Z,14nm,1.6s						
CONA	Conrad Observa	74.42	328	eP	P	19 30 27.6	+0.1
	comp=Z,12nm,1.3s						
MORC	Moravsky Berou	74.77	330	⇓iP	P	19 30 29.0	-0.4
MORC	Moravsky Berou	74.77	330	eP	P	19 30 29.0	-0.4
	comp=Z,7.2nm,1.0s						
MORC	Moravsky Berou	74.77	330	eP	P	19 30 29.0	-0.4
MORC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MORC	Moravsky Berou	74.77	330	eP	P	19 30 28.9	-0.4
MYKA	Terra Mystica	74.81	326	eP	P	19 30 30.8	+1.1
	comp=Z,6.4nm,1.4s						
KRUC	Moravsky	74.87	329	eP	P	19 30 29.5	-0.5
VRAC	Vranov	74.93	329	eP	P	19 30 30.1	-0.2
SUW	Suwalki	75.21	336	eP	P	19 30 31.3	-0.4
	comp=Z,27nm,1.0s						
SUW	Suwalki	75.21	336	eP	P	19 30 31.3	-0.4
SUW				pmax	pmax		
	comp=Z,27nm,1.0s						
MOA	Molln	75.21	327	i P	P	19 30 32.2	+0.2
	comp=Z,18nm,1.1s						
KBA	Koelnbreinsper	75.24	326	eP	P	19 30 32.6	+0.2
	comp=Z,13nm,1.7s						
ABTA	Abfaltersbach	75.50	325	eP	P	19 30 34.1	+0.4
	comp=Z,22nm,2.0s						
KLMR	Klimovskoe	75.78	347	eP	P	19 30 31.3	-3.6
KLMR				pmax	pmax		
	comp=Z,16nm,1.1s						
KLMR	Klimovskoe	75.78	347	eP	P	19 30 31.3	-3.6
KLMR				AMP		19 30 42.1	
	comp=Z,16nm,1.1s						
GEA0	GERESS Array S	76.12	328	eP	P	19 30 35.8	-1.4
GEC2	GERESS Array S	76.12	328	eP	P	19 30 35.9	-1.4
	comp=Z,5.4nm,1.2s						
GEC2	GERESS Array S	76.12	328	eP	P	19 30 35.9	-1.4
GEC2				pmax	pmax		
	comp=Z,5.0nm,1.2s						
GERES	GERESS Array B	76.12	328	P	P	19 30 36.4	-0.9
	comp=Z,1.0nm,0.8s,baz=133,slow=5.7,SNR=9.9						
GOPC	GO Pecny, Ondr	76.22	329	eP	P	19 30 38.5	+0.8
GOPC	GO Pecny, Ondr	76.22	329	eP	P	19 30 38.5	+0.8
KHC	Kasperske Hory	76.36	328	eP	P	19 30 38.5	0.0
KHC	Kasperske Hory	76.36	328	eP	P	19 30 37.4	-1.2
	comp=Z,4.0nm,1.2s						
KHC	Kasperske Hory	76.36	328	eP	P	19 30 37.4	-1.2
KHC				pmax	pmax		
	comp=Z,4.0nm,1.2s						

WATA	Walderalm	76.37	326	*i* P	P	19 30 39.4	+0.7
	comp=Z,7.7nm,1.0s						
MOTA	Moosalm	76.63	325	*e*P	P	19 30 40.7	+0.4
	comp=Z,17nm,1.2s						
FETA	Feichten	76.66	325	*e*P	P	19 30 40.3	-0.1
	comp=Z,8.6nm,1.1s						
PVCC	Panska Ves	76.72	329	*e*P	P	19 30 41.7	+1.2
PVCC	Panska Ves	76.72	329	*e*P	P	19 30 41.7	+1.2
RETA	Reutte	76.91	325	*i* P	P	19 30 41.2	-0.5
	comp=Z,3.9nm,1.2s						
TUE	Stuetta	77.14	324	*e*P	P	19 30 42.1	-1.1
	comp=Z,5.2nm,0.9s						
BRG	Berggiesshubel	77.25	329	*e*P	P	19 30 44.1	+0.7
	comp=Z,44nm,2.0s						
BRG				*e*		19 30 51.3	
	comp=Z,20nm,1.5s						
	comp=N,20µm,16.0s						
	comp=E,55nm,11.9s						
	comp=Z,195nm,16.7s						
BRG	Berggiesshubel	77.25	329	*e*P	P	19 30 44.1	+0.7
BRG				*e*		19 30 51.3	
BRG				pmax	pmax		
	comp=Z,45nm,2.0s						
BRG				pmax	pmax		
	comp=Z,20nm,1.5s						
BRG				MLR	MLR		
	comp=N,20µm,16.0s						
BRG				MLR	MLR		
	comp=E,55nm,11.9s						
BRG				MLR	MLR		
	comp=Z,195nm,16.7s						
VSU	Vasula	77.27	340	*i* P	P	19 30 43.9	+0.5
VSU				pmax	pmax		
	comp=Z,52nm,1.9s						
DAVA	Damuels	77.29	325	*e*P	P	19 30 43.2	-0.7
	comp=Z,7.9nm,1.0s						
QSPA	South Pole Qui	77.79	180	LR	LR	20 00 10.5	
	comp=Z,101nm,20.8s,baz=270,slow=32						
QSPA	South Pole Qui	77.79	180	*e*P	P	19 30 47.0	+0.5
	comp=Z,29nm,1.7s						
GRFO	Grafenberg	77.93	327	*e*P	P	19 30 46.8	-0.5
	comp=Z,24nm,1.1s						
GRFO	Grafenberg	77.93	327	*e*P	P	19 30 46.8	-0.5
GRFO				pmax	pmax		
	comp=Z,24nm,1.1s						
CLL	Collm	77.98	329	*e*P	P	19 30 47.0	-0.5
	comp=Z,17nm,1.5s						
CLL				*i*		19 30 55.7	
CLL	Collm	77.98	329	*e*P	P	19 30 47.4	-0.1
	comp=Z,6.9nm,1.0s						
CLL	Collm	77.98	329	*e*P	P	19 30 47.0	-0.5
CLL				*i*		19 30 55.7	
CLL				pmax	pmax		
	comp=Z,17nm,1.5s						
SENIN	Lac Senin/Sane	78.27	323	*e*P	P	19 30 47.7	-1.8
	comp=Z,12nm,1.4s						
STU	Stuttgart	78.50	326	*e*P	P	19 30 49.8	-0.7
	comp=Z,8.4nm,0.5s						
STU	Stuttgart	78.50	326	*e*P	P	19 30 49.8	-0.7
STU				pmax	pmax		
	comp=Z,8.0nm,0.5s						
BFO	Black Forest	78.73	325	*e*P	P	19 30 51.2	-0.6
	comp=Z,42nm,2.0s						
BFO	Black Forest	78.73	325	*ce*P	P	19 30 53.1	+1.3
BFO				pmax	pmax		
	comp=Z,1.0nm,1.3s						
VNDA	Vanda	79.45	167	LR	LR	20 02 29.8	
	comp=Z,61nm,21.4s,baz=262,slow=33						
FIA0	FINESS Array S	79.80	342	*e*P	P	19 30 57.6	+0.3
FIA0	FINESS Array S	79.80	342	*e*P	P	19 30 57.6	+0.3
FINES	FINESS Array B	79.80	342	P	P	19 30 57.6	+0.3
	comp=Z,1.6nm,0.8s,baz=149,slow=6.5,SNR=3.2						
ES19	SONSECA Array	82.55	313	*e*P	P	19 31 12.0	-0.5
ESDC	Sonseca Array	82.58	313	P	P	19 31 12.6	-0.1
	comp=Z,0.5nm,0.5s,baz=99,slow=5.1,SNR=7.0						
HFS	Hagfors	83.17	337	P	P	19 31 15.4	+0.2
	comp=Z,3.7nm,0.8s,baz=67,slow=4.8,SNR=5.9						
MAJO	Matsushiro	83.68	51	*e*P	P	19 31 18.1	-0.3
MAJO	Matsushiro	83.68	51	*e*P	P	19 31 18.1	-0.3
MJAR	Matsushiro Arr	83.68	51	P	P	19 31 18.1	-0.3
	comp=Z,1.0nm,0.9s,baz=249,slow=7.6,SNR=4.1						
KLR	Kul'dur	84.29	37	*ce*P	P	19 31 21.8	+0.6
NAO01	NORSAR Array S	84.70	336	*e*P	P	19 31 22.0	-1.0
NB204	NORSAR Array S	84.72	337	*e*P	P	19 31 22.2	-0.9
ARA0	ARCESS Array S	86.26	347	*e*P	P	19 31 32.4	+1.8
ARCES	ARCESS Array B	86.26	347	P	P	19 31 32.4	+1.8
	comp=Z,4.2nm,0.8s,baz=146,slow=5.5,SNR=5.0						
YAK	Yakutsk	89.14	25	LR	LR	20 13 49.3	
	comp=Z,159nm,18.1s,baz=260,slow=37						
YSS	Yuzh-Sakhalins	90.29	42	*e*P	P	19 31 46.3	-4.0
PMSA	Palmer Station	94.38	199	LR	LR	20 08 31.1	
	comp=Z,110nm,18.6s,baz=52,slow=32						
PD31	Pinedale Array	149.33	353	*e*PKPdf	PKPdf	19 38 33.6	-0.9
PD31				*e*PKPbc	PKPbc	19 38 39.1	+0.2
PDAR	Pinedale Array	149.33	353	PKPbc	PKPbc	19 38 37.4	-1.4
	comp=Z,1.2nm,0.7s,baz=51,slow=0.9,SNR=9.2						
NV01	Mina Array Sit	153.72	7	*e*PKPdf	PKPdf	19 38 43.0	+1.7
NV01				*e*PKPbc	PKiKP	19 38 49.7	+0.5
NVAR	Mina Array Bea	153.72	7	PKPbc	PKPbc	19 38 50.0	+0.9
	comp=Z,0.7nm,0.8s,baz=344,slow=1.4,SNR=6.3						
TXAR	Lajitas Array	160.31	331	PKPab	PKPab	19 39 29.9	-0.2
	comp=Z,1.0nm,1.0s,baz=64,slow=5.7,SNR=6.8						

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*GII **14** 19:27:31.6±0.1, 33°.29N×35°.36E, h4km, MD1.5/2*
*ISCJB **14** 19:27:32.1±0.6, 33°.30N±0°.04×35°.34E±0°.05, h13km±7km, Error ellipse: s-maj=8.8km s-min=3.3km az=38.5*
*CSEM **14** 19:27:32.7, 33°.26N×35°.35E, h10km, ML2.6*
*GRAL **14** 19:27:32.7±0.2, 33°.26N×35°.35E, h10km±6km, MD2.6*
ISC 14 19:27:32.3±1.1**, 33°.30N**±0°.03×**35°.36E**±0°.05**, h20**km±5km**, n22, σ0^{s}41**/33**, 1D, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNTI	Hanita	0.26	216	Pg	Pb	19 27 37.5	-0.9
HNTI				Sg	Sb	19 27 41.9	-0.5
KSDI	Kefar Szold	0.27	112	Pg	Pg	19 27 38.1	-0.4
KSDI				Sg	Sb	19 27 42.8	+0.2
MMA0B	Mount Meron ar	0.28	173	Pg	Pg	19 27 38.1	-0.6
MMA0B				Sg	Sb	19 27 42.9	-0.1
NATI	Neve Ativ	0.32	96	Pg	Pg	19 27 38.8	-0.4
NATI				Sg	Sg	19 27 44.1	+0.1
SHBL	Chebaa	0.33	81	*e*P	Pg	19 27 39.2	-0.3
SHBL				*e*S	Sg	19 27 44.0	-0.4
SHBL	Chebaa	0.33	81	*e*P	Pg	19 27 39.2	-0.3
SHBL				*e*S	Sg	19 27 44.0	-0.4
QRWL	Qaraoun	0.37	47	*e*P	Pg	19 27 40.0	-0.2
QRWL				*e*S	Sg	19 27 45.6	0.0
QRWL	Qaraoun	0.37	47	*e*P	Pg	19 27 40.0	-0.2
QRWL				*e*S	Sg	19 27 45.6	0.0
DQRL	Deir Qamar	0.45	23	*e*P	Pg	19 27 41.5	0.0
DQRL	Deir Qamar	0.45	23	*e*P	Pg	19 27 41.5	0.0
RCY	Rachaya	0.45	63	*e*P	Pg	19 27 41.3	-0.2
RCY				*e*S	Sg	19 27 47.7	-0.1
KSHT	Keshet	0.49	129	Pg	Pg	19 27 42.5	+0.2
BLGI	Bet Lehem HaGe	0.58	194	Pg	Pb	19 27 43.6	-0.1
BLGI				Sg	Sg	19 27 53.0	+1.3
BHL	Bhannes	0.65	22	*e*P	Pb	19 27 45.2	+0.1
BHL	Bhannes	0.65	22	*e*P	Pb	19 27 45.2	+0.1
OFRI	'Ofer	0.74	205	Pg	Pb	19 27 46.6	0.0
OFRI				Sg	Sn	19 27 58.2	-0.2
MMLI	Mount Malkishu	0.86	177	Pg	Pb	19 27 48.6	+0.1
HMDT	Nahal Hemdat	1.05	172	Pg	Pb	19 27 52.0	+0.2
SLTI	Sal'it	1.09	194	Pg	Pn	19 27 53.0	+0.6
SLTI				Sg	Sg	19 28 08.0	+0.3
HWQ	Hawqa	1.09	26	*e*P	Pb	19 27 52.4	-0.2
DSI	Dead Sea	1.72	179	Pn	Pb	19 28 03.0	-0.2
APE	Apeiranthos	8.88	298	⇓*i*P	Pn	19 29 53.4	+14

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*IDC **14** 19:41:15.1±1.0, 71°.19N×9°.80W, h0km, mb3.5/9, mb1 3.7/14, mb1mx3.5/68, mbtmp3.6/14, ML2.9/4, MS3.4/16, Ms1 3.4/16, ms1mx3.2/67, Error ellipse: s-maj=19.7km s-min=13.5km az=56.0*
*CSEM **14** 19:41:16.8±0.4, 71°.26N×9°.90W, h10km, ML3.8, Error ellipse: s-maj=14.4km s-min=6.4km az=136.0*
*NAO **14** 19:41:18.3±5.6, 71°.32N×9°.61W, h9km±29km, ML3.8*
*BER **14** 19:41:19.0±2.9, 71°.21N×9°.92W, h10km, ML3.1, ML3.8(NAO)*
*GCMT **14** 19:41:20.0±0.5, 71°.32N×10°.15W, h28km±2km, MW4.8/67, Moment Tensor Solution. s29,c39; s67,c94; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.15±.17; $M_{\theta\theta}$1.06±.16; $M_{\phi\phi}$-1.21±.12; $M_{r\theta}$-0.00±.25; $M_{\theta\phi}$1.69±.12; $M_{\phi r}$-0.25±.22; Best double couple: $M_0$2.05000×10^{16} NP1:ϕ_s17.00000°,δ89.00000°,λ-173.00000°. NP2: ϕ_s287.00000°,δ83.00000°,λ-1.00000°. Principal axes: T 1.9690, Plg4.0000°, Azm152.0000°; N 0.1610, Plg83.0000°, Azm27.0000°; P -2.1320, Plg5.0000°, Azm242.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*REY **14** 19:41:20.4, 70°.46N×8°.34W, h10km*
ISC 14 19:41:17.8±0.9**, 71°.31N**±0°.05×**9°.94W**±0°.05**, h18**km±5km**, n67, σ1^{s}44**/72**, mb3.4**/11**, MS3.3**/13**, 1C, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMI	Jan Mayen	0.55	133	*e*P	Pg	19 41 27.9	-0.8
JMI				*e*S	Sg	19 41 35.9	-0.1
JMI				IAML		19 41 41.0	
	comp=Z,1µm,0.4s						
JNW	Jan Mayen West	0.56	119	*e*P	Pg	19 41 27.8	-1.2
JNW				*e*S	Sg	19 41 35.0	-1.6
JNW				IAML		19 41 42.4	
	comp=Z,2µm,0.3s						
JMIC	Jan Mayen	0.57	124	Pg	Pg	19 41 27.8	-1.3
JMIC				Lg	Lg	19 41 34.7	
JMIC	Jan Mayen	0.57	124	Pn	Pg	19 41 27.7	-1.3
	comp=Z,227nm,0.3s,baz=92,slow=3.7,SNR=118						
JMIC				Sn	Sg	19 41 34.9	-1.8
	comp=Z,482nm,0.3s,baz=256,slow=17,SNR=48						
JMIC	Jan Mayen	0.57	124	Pg	Pg	19 41 27.8	-1.3
JMIC				Lg	Lg	19 41 34.7	
JMIC				*e*S	Sg	19 41 35.4	-1.3
JNE	Jan Mayen East	0.62	120	*e*P	Pg	19 41 28.6	-1.5
JNE				*e*S	Sg	19 41 36.6	-1.8
JNE				IAML		19 41 42.7	
	comp=Z,1µm,0.1s						
ILEI	Leirhofn	5.46	209	P	Pn	19 42 37.1	-1.0
	baz=220						
ILEI				S	Sn	19 43 38.6	-1.7
	baz=220						
IGRI	Grimsey	5.60	215	P	Pn	19 42 41.7	+1.7
	baz=227						
IGRI				S	Sn	19 43 43.0	-0.7
	baz=227						
IGIL	Gilhagi	5.75	207	P	Pn	19 42 40.6	-1.4
	baz=218						
IGIL				S	Sn	19 43 45.4	-2.0
	baz=218						
IGIL	Gilhagi	5.75	207	P	Pn	19 42 40.6	-1.4
IGIL				S	Sn	19 43 45.4	-2.0
IHED	Heoinshofoi	5.89	211	S	Sn	19 43 49.6	-1.3
	baz=222						
IHED	Heoinshofoi	5.89	211	S	Sn	19 43 49.6	-1.3
IDIM	Dimmadalsˆ¡s	5.94	209	P	Pn	19 42 44.1	-0.6
	baz=219						
IDIM				S	Sn	19 43 51.3	-0.9
	baz=219						
IBRE	Brettingsstaoi	5.95	213	P	Pn	19 42 45.5	+0.7
	baz=224						
IBRE				S	Sn	19 43 52.3	-0.2
	baz=224						
DAG	Danmarks Havn	5.99	340	⇑*i*P	Pn	19 42 44.4	-0.9
DAG				*i* S	Sn	19 43 45.4	-7.9
IGRA	Granastaoir	6.08	211	S	Sn	19 43 55.3	-0.4
	baz=222						
IGRS	Grimsstaoir	6.13	205	P	Pn	19 42 46.5	-0.8
	baz=215						
IGRS				S	Sn	19 43 54.4	-2.5
	baz=215						
IGRS	Grimsstaoir	6.13	205	P	Pn	19 42 46.5	-0.8
IGRS				S	Sn	19 43 54.3	-2.5
ISIG	Siglufjorour	6.13	216	P	Pn	19 42 49.6	+2.3
	baz=227						
ISIG	Siglufjorour	6.13	216	P	Pn	19 42 49.6	+2.3
IHLA	Hella	6.20	214	S	Sn	19 43 58.1	-0.5
	baz=224						
IHLA	Hella	6.20	214	S	Sn	19 43 58.1	-0.5
IMEL	Melhnausar	6.27	206	P	Pn	19 42 47.5	-1.7
	baz=216						
IMEL	Melhnausar	6.27	206	P	Pn	19 42 47.5	-1.7
IHRN	Hraun	6.39	220	P	Pn	19 42 52.5	+1.6
	baz=231						
IADA	Aoalbol	6.65	201	P	Pn	19 42 52.9	-1.6
	baz=210						
SUMG	Summit	8.90	292	*i* P	Pn	19 43 31.5	+5.9
SUMG				*i* S	Sn	19 45 01.4	-3.9
HSPB	Hornsund (broa	8.92	39	*e*P	Pn	19 43 25.3	-0.2
KBS	Kingsbay	9.40	26	Pn	Pn	19 43 31.2	-0.8
KBS	Kingsbay	9.40	26	Pn	Pn	19 43 31.2	-0.8
KBS				*e*P		19 43 31.8	
KBS				*e*S	Sn	19 45 09.3	-7.8
SPA0	Spitsbergen Ar	9.65	33	Pn	Pn	19 43 36.6	+1.1
	baz=252,slow=14						
SPA0	Spitsbergen Ar	9.65	33	Pn	Pn	19 43 36.6	+1.1
	baz=252,slow=14						
SPA0				*e*P		19 43 36.9	
SPITS	Spitsbergen Ar	9.65	33	Pn	Pn	19 43 36.2	+0.7
	baz=248,slow=13,SNR=112						
SPITS				Sn	Sn	19 45 20.8	-2.5
	baz=222,slow=21,SNR=3.0						
TRO	Tromso	9.76	86	*e*P	Pn	19 43 35.7	-1.3
AKN	Aaknes	11.29	136	Pn	Pn	19 43 58.3	+0.3
AKN	Aaknes	11.29	136	Pn	Pn	19 43 58.3	+0.3
ARA0	ARCESS Array S	11.90	81	Pn	Pn	19 44 06.7	+0.3
	baz=290,slow=12						
ARA0	ARCESS Array S	11.90	81	Pn	Pn	19 44 06.7	+0.3
	baz=290,slow=12						
ARCES	ARCESS Array B	11.90	81	Pn	Pn	19 44 05.9	-0.4
	comp=Z,0.1nm,0.3s,baz=289,slow=11,SNR=5.1						
NOA	NORSAR Array B	13.28	130	LR	LR	19 48 54.1	
	comp=Z,107nm,20.9s,baz=330,slow=35						
HFS	Hagfors	14.68	128	Pn	Pn	19 44 42.4	-1.9
	comp=Z,0.0nm,0.3s,baz=337,slow=14,SNR=2.5						
HFS				LR	LR	19 49 58.5	
	comp=Z,129nm,19.3s,baz=324,slow=36						
SFJD	Kangerlussuaq	14.87	273	LR	LR	19 49 54.0	
	comp=Z,104nm,21.2s,baz=58,slow=35						
EKA	Eskdalemuir Ar	16.30	166	Pn	Pn	19 45 03.5	-2.0
	baz=357,slow=11,SNR=2.5						
FIA0	FINESS Array S	17.16	107	P	Pn	19 45 17.4	+1.1
	baz=328,slow=14						
FIA0	FINESS Array S	17.16	107	Pn	Pn	19 45 17.4	+1.1
	baz=328,slow=14						
FINES	FINESS Array B	17.16	107	P	Pn	19 45 16.1	-0.2
	comp=Z,0.1nm,0.3s,baz=331,slow=11,SNR=2.6						
KLMR	Klimovskoe	21.87	93	*e*P	P	19 46 09.0	-0.1
KLMR				AMP		19 46 19.0	
	comp=Z,20nm,1.2s						
CLL	Collm	22.59	140	*e*P	P	19 46 20.0	+3.1
CLL				*e*pP	pP	19 46 22.0	0.0
	comp=Z,5.0nm,1.2s						
CLL				*e*(sP)	sP	19 46 26.0	+1.7
FRB	Frobisher Bay	22.70	280	LR	LR	19 54 19.7	
	comp=Z,82nm,18.2s,baz=40,slow=34						
RES	Resolute Bay	23.06	317	LR	LR	19 55 17.6	
	comp=Z,138nm,20.4s,baz=74,slow=36						
GERES	GERESS Array B	25.07	141	P	P	19 46 42.6	+1.7
	comp=Z,0.8nm,0.8s,baz=348,slow=9.0,SNR=4.0						
GERES				LR	LR	19 56 09.1	
	comp=Z,70nm,18.7s,baz=310,slow=36						
VRAC	Vranov	25.25	137	LR	LR	19 55 37.3	
	comp=Z,36nm,20.2s,baz=333,slow=34						
DAVOX	Davos/Dischmat	26.35	148	LR	LR	19 56 34.5	
	comp=Z,80nm,21.0s,baz=267,slow=35						
AKASG	Malin Array Be	27.19	118	P	P	19 46 58.7	-1.2
	comp=Z,0.2nm,0.3s,baz=337,slow=9.1,SNR=2.6						
SCHQ	Schefferville	29.08	266	LR	LR	19 57 39.0	
	comp=Z,150nm,19.6s,baz=58,slow=34						
MLR	Muntele Rosu	31.07	127	LR	LR	20 00 25.6	
	comp=Z,53nm,19.0s,baz=342,slow=37						
ESDC	Sonseca Array	31.85	171	LR	LR	20 00 19.0	
	comp=Z,60nm,18.1s,baz=15,slow=36						
YKA	Yellowknife Ar	36.83	311	P	P	19 48 23.4	-0.7
	comp=Z,0.9nm,0.7s,baz=30,slow=8.5,SNR=4.1						
YKA				LR	LR	20 03 07.7	
	comp=Z,13nm,19.2s,baz=32,slow=36						
KVAR	Kislovodsk Arr	37.24	108	LR	LR	20 04 25.9	
	comp=Z,56nm,19.8s,slow=37						
BVAR	Borovoye Array	38.09	75	P	P	19 48 35.9	+1.0
	comp=Z,0.2nm,0.3s,baz=326,slow=8.3,SNR=3.9						
BRTR	Keskin Array B	38.49	121	P	P	19 48 37.5	-1.1
	comp=Z,0.3nm,0.6s,baz=294,slow=7.5,SNR=2.0						
ILAR	Eielson Array	41.04	334	P	P	19 49 00.1	+0.8
	comp=Z,0.4nm,0.7s,baz=23,slow=7.7,SNR=4.5						
ILAR				LR	LR	20 07 43.5	
	comp=Z,45nm,20.7s,baz=102,slow=39						
ZALV	Zalesovo Beam	41.61	63	P	P	19 49 04.0	-0.1
	comp=Z,0.4nm,0.4s,baz=312,slow=12,SNR=2.3						
KURBB	Kurchatov Arra	42.68	70	P	P	19 49 13.7	+0.8
	comp=Z,0.5nm,0.7s,baz=325,slow=7.3,SNR=3.7						
MKAR	Makanchi Array	47.22	69	P	P	19 49 49.6	+0.4
	comp=Z,0.7nm,0.9s,baz=347,slow=5.0,SNR=4.2						
MKAR				LR	LR	20 10 01.4	
	comp=Z,244nm,21.4s,baz=148,slow=37						
TORD	Torodi Ar. Bea	58.56	167	P	P	19 51 14.2	+1.2
	comp=Z,0.3nm,0.6s,baz=350,slow=7.7						
NVAR	Mina Array Bea	59.59	300	LR	LR	20 16 58.1	
	comp=Z,74nm,18.4s,baz=342,slow=36						

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*NIED **14** 19:47:00, 45°.60N×151°.80E, h17km, Mw3.8 Best double couple: $M_0$4.86000×10^{14} NP1:ϕ_s154.00000°,δ44.00000°, λ53.00000°. NP2:ϕ_s21.00000°,δ56.00000°,λ121.00000°.*
JMA 14 19:47:30.5±0.7**, 45°.62N**×**151°.76E, h30**km**, M4.0, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	4.86	244	P	Pn	19 48 40.6	-0.9
NEM2				*e*S	Sn	19 49 32.5	-4.2
JRA	Rausu	5.02	253	P	Pn	19 48 45.9	+2.3
JNK	Nakash	5.42	250	P	Pn	19 48 50.1	+0.8
JNK				*e*S	Sn	19 49 49.7	-0.9
JAK	Akkeshi	5.71	245	P	Pn	19 48 52.4	-0.7
JAK				*e*S	Sn	19 49 54.0	-3.6
JTKR	Abashiri--Toko	5.83	256	P	Pn	19 48 57.5	+2.7
JAR	Ashorobuto	6.17	251	P	Pn	19 49 01.1	+1.6
JAR				*e*S	Sn	19 50 09.5	+0.4
JMP	Maruseppu	6.19	258	P	Pn	19 49 02.7	+2.9
JKK2	Kamakawa 2	6.65	258	P	Pn	19 49 09.1	+3.0
JCH	Churui	6.75	247	P	Pn	19 49 07.7	+0.2
JCH				*e*S	Sn	19 50 19.5	-3.8
JNB	Noboribetsu	8.34	252	P	Pn	19 49 30.9	+1.6
JKB	Kayabe	8.61	248	P	Pn	19 49 32.7	-0.3

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*ISCJB **14** 19:54:12.0±0.2, 71°.18N±0°.02×10°.20W±0°.06, h10km, mb4.4/76, MS3.4/14, Error ellipse: s-maj=3.4km s-min=2.5km az=150.2*
*MOS **14** 19:54:12.3±1.2, 71°.49N×9°.95W, h10km, mb4.6/34, Error ellipse: s-maj=16.6km s-min=5.4km az=101.0*
*IDC **14** 19:54:12.6±0.7, 71°.30N×9°.88W, h0km, mb3.9/13, mb1 4.1/17, mb1mx3.9/77, mbtmp4.0/17, ML3.8/4, MS3.4/12, Ms1 3.4/12, ms1mx3.2/76, Error ellipse: s-maj=15.1km s-min=11.1km az=54.0*
*CSEM **14** 19:54:13.4±0.1, 71°.27N×10°.20W, h10km, mb4.5/36, Error ellipse: s-maj=4.2km s-min=3.8km az=159.0*
*BER **14** 19:54:13.5±1.8, 71°.28N×10°.09W, h10km, ML3.8, ML4.8(NAO)*
*NAO **14** 19:54:14.7±4.5, 71°.34N×9°.79W, h16km±23km, ML4.8*
*NEIC **14** 19:54:14.2±1.9, 71°.38N×9°.73W, h8km±13km, mb4.5/55, Error ellipse: s-maj=5.2km s-min=3.5km az=47.0*
*REY **14** 19:54:15.5, 70°.83N×9°.78W, h10km*
ISC 14 19:54:13.8±0.4**, 71°.29N**±0°.04×**9°.91W**±0°.03**, h10**km**, n281, σ2^{s}16**/303**, mb4.4**/86**, MS3.5**/14**, 10C-3D, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMIC	Jan Mayen	0.55	123	Pg	Pb	19 54 25.3	-0.2
JMIC				Lg	Lg	19 54 33.4	
JMIC	Jan Mayen	0.55	123	Pn	Pb	19 54 25.5	0.0
	1µm,0.3s,baz=106,slow=1.6,SNR=433						
JMIC				Sn	Sg	19 54 30.6	-1.1
	1µm,0.3s,baz=225,slow=19,SNR=58						
JMIC	Jan Mayen	0.55	123	Pg	Pb	19 54 25.3	-0.2
JMIC				Lg	Lg	19 54 33.4	
JMIC	Jan Mayen	0.55	123	⇑*i*P	Pb	19 54 25.3	-0.2
JMIC				*e*S	Sb	19 54 32.9	-0.5
JMIC				IAML		19 54 41.8	
	comp=Z,6µm,0.4s						
SCO	Scoresbysund	4.04	264	*e*Pn	Pn	19 55 11.9	-3.7
SCO	Scoresbysund	4.04	264	*e*P	Pn	19 55 11.9	-3.7
SCO	Scoresbysund	4.04	264	*e*Pn	Pn	19 55 11.9	-3.7
ILEI	Leirhofn	5.45	209	P	Pn	19 55 32.1	-2.9
	baz=212						
ILEI				S	Sn	19 56 34.2	-3.5
	baz=212						
ILEI	Leirhofn	5.45	209	P	Pn	19 55 32.1	-2.9
ILEI				S	Sn	19 56 34.2	-3.5
IGIL	Gilhagi	5.74	207	P	Pn	19 55 36.1	-2.8
	baz=210						
IGIL				S	Sn	19 56 41.5	-3.2
	baz=210						
IGIL	Gilhagi	5.74	207	P	Pn	19 55 36.1	-2.8
IGIL				S	Sn	19 56 41.5	-3.2
IHED	Heoinshofoi	5.89	211	P	Pn	19 55 38.2	-2.7
	baz=214						
IHED				S	Sn	19 56 44.5	-3.8
	baz=214						
IHED	Heoinshofoi	5.89	211	P	Pn	19 55 38.2	-2.7
IHED				S	Sn	19 56 44.5	-3.8
IDIM	Dimmadalsˆ¡s	5.94	209	P	Pn	19 55 39.8	-1.8
	baz=212						
IDIM				S	Sn	19 56 46.4	-3.2
	baz=212						
IDIM	Dimmadalsˆ¡s	5.94	209	P	Pn	19 55 39.8	-1.8
IDIM				S	Sn	19 56 46.4	-3.2
IBRE	Brettingsstaoi	5.95	213	P	Pn	19 55 39.9	-1.9
	baz=216						
IBRE				S	Sn	19 56 46.8	-3.1
	baz=216						
IBRE	Brettingsstaoi	5.95	213	P	Pn	19 55 39.9	-1.9
IBRE				S	Sn	19 56 46.8	-3.1
DAG	Danmarks Havn	6.00	340	⇑*i*P	Pn	19 55 39.7	-2.8
DAG				*e*S	Sn	19 56 41.2	-10
DAG	Danmarks Havn	6.00	340	⇑*i*P	Pn	19 55 39.7	-2.8
DAG				*e*S	Sn	19 56 41.2	-10
IGHA	Grjothals	6.00	208	P	Pn	19 55 40.6	-2.0
	baz=210						
IGHA				S	Sn	19 56 48.5	-2.8
	baz=210						
IGRA	Granastaoir	6.08	211	P	Pn	19 55 42.1	-1.5
	baz=214						
IGRA				S	Sn	19 56 50.7	-2.4
	baz=214						
IGRS	Grimsstaoir	6.12	205	P	Pn	19 55 41.8	-2.4
	baz=207						
IGRS				S	Sn	19 56 51.9	-2.3
	baz=207						
ISIG	Siglufjorour	6.13	217	P	Pn	19 55 42.8	-1.4
	baz=220						
ISIG				S	Sn	19 56 51.4	-2.8
	baz=220						
IHLA	Hella	6.20	214	P	Pn	19 55 43.6	-1.5
	baz=217						
IHLA				S	Sn	19 56 53.8	-2.2
	baz=217						
IMEL	Melhnausar	6.26	207	P	Pn	19 55 43.9	-2.2
	baz=209						
IMEL				S	Sn	19 56 54.2	-3.4
	baz=209						
IMEL	Melhnausar	6.26	207	P	Pn	19 55 43.9	-2.2
IMEL				S	Sn	19 56 54.2	-3.4
IHRN	Hraun	6.39	220	P	Pn	19 55 48.3	+0.5
	baz=224						
IADA	Aoalbol	6.64	201	P	Pn	19 55 49.5	-1.9
	baz=203						
IADA	Aoalbol	6.64	201	P	Pn	19 55 49.5	-1.9
IASK	Askja	6.75	205	P	Pn	19 55 50.9	-2.0
	baz=207						
IASK	Askja	6.75	205	P	Pn	19 55 50.9	-2.0
IMKO	Mokollar	6.78	204	P	Pn	19 55 51.2	-2.1
	baz=206						
IMKO	Mokollar	6.78	204	P	Pn	19 55 51.2	-2.1
IVSH	V-Sauoahnukur	6.87	201	P	Pn	19 55 52.6	-1.9
	baz=203						
IKRE	Kreppuhraun	6.97	203	P	Pn	19 55 54.1	-1.8
	baz=206						
IDYN	Dyngjuhals	7.10	207	P	Pn	19 55 56.4	-1.3
	baz=209						
BORG	Borgarnes	7.83	219	*e*Pn	Pn	19 56 12.8	+5.3
BORG	Borgarnes	7.83	219	*e*P	Pn	19 56 12.9	+5.3
LOF	Lofoten	8.71	100	*e*Pn	Pn	19 56 19.9	+0.3
SUMG	Summit	8.91	292	*e*Pn	Pn	19 56 23.5	+0.7
SUMG				*e*Sn	Sn	19 57 54.3	-9.0
SUMG	Summit	8.91	292	*i* P	Pn	19 56 23.6	+0.8

SUMG	Summit	8.91	292	eP	Pn	19 56 23.5	+0.7
SUMG				e		19 57 54.3	
HSPB	Hornsund (broa	8.92	39	ePn	Pn	19 56 20.9	-1.6
BJO1	Bjornoya	9.03	56	Pn	Pn	19 56 24.5	+0.5
BJO	Bjornoya	9.08	56	Pn	Pn	19 56 24.5	-0.2
STEI	Steigen	9.35	99	ePn	Pn	19 56 28.6	+0.2
KBS	Kingsbay	9.41	26	Pn	Pn	19 56 27.2	-2.0
KBS	Kingsbay	9.41	26	ePn	Pn	19 56 27.5	-1.6
KBS				eSn	Sn	19 58 02.3	-12
KBS	Kingsbay	9.41	26	eP	Pn	19 56 27.5	-1.6
KBS	Kingsbay	9.41	26	ePn	Pn	19 56 28.1	-1.0
KBS				eSn	Sn	19 58 03.7	-11
KONS	Konsvik	9.54	109	ePn	Pn	19 56 30.2	-0.8
KONS				eSn	Sn	19 58 10.0	-8.1
SPA0	Spitsbergen Ar	9.66	33	Pn	Pn	19 56 32.5	-0.1
	baz=252,slow=12						
SPA0				Sn	Sn	19 58 17.6	-3.3
	baz=256,slow=28						
SPA0	Spitsbergen Ar	9.66	33	ePn	Pn	19 56 32.3	-0.3
SPA0				eSn	Sn	19 58 17.0	-3.9
SPA0	Spitsbergen Ar	9.66	33	ePn	Pn	19 56 32.1	-0.5
SPA0				eSn	Sn	19 58 12.7	-8.3
SPITS	Spitsbergen Ar	9.66	33	Pn	Pn	19 56 32.3	-0.3
	baz=240,slow=13,SNR=398						
SPITS				Sn	Sn	19 58 18.1	-2.8
	baz=239,slow=34,SNR=9.0						
SPITS				LR	LR	19 59 15.2	
	comp=Z,427nm,18.3s,baz=155,slow=31						
TRO	Tromso	9.74	86	ePn	Pn	19 56 32.4	-1.4
MOR8	Moi Rana	10.16	108	ePn	Pn	19 56 40.2	+0.6
NSS	Namsos	10.60	119	ePn	Pn	19 56 45.3	-0.3
NSS				eSn	Sn	19 58 34.1	-10
KIF	Kilpisjarvi	10.62	88	ePn	Pn	19 56 45.2	-0.4
HOPEN	Hopen	10.84	46	ePn	Pn	19 56 48.7	0.0
AKN	Aaknes	11.27	136	Pn	Pn	19 56 55.6	+0.9
AKN	Aaknes	11.27	136	ePn	Pn	19 56 53.8	-0.9
AKN				eSn	Sn	19 58 50.7	-10
KTK1	Kautokeino	11.40	86	ePn	Pn	19 56 55.5	-0.9
SUE	Sulen	11.81	143	ePn	Pn	19 57 01.2	-0.8
SUE				eSn	Sn	19 59 02.4	-11
HEF	Hetta	11.82	88	ePn	Pn	19 57 01.5	-0.6
DOMB	Dombas	11.87	132	ePn	Pn	19 57 02.2	-0.7
ARA0	ARCESS Array S	11.89	81	Pn	Pn	19 57 03.4	+0.2
	baz=285,slow=12						
ARA0	ARCESS Array S	11.89	81	ePn	Pn	19 57 03.4	+0.2
ARA0	ARCESS Array S	11.89	81	Pn	Pn	19 57 03.4	+0.2
	baz=285,slow=12						
ARCES	ARCESS Array B	11.89	81	Pn	Pn	19 57 03.4	+0.2
	comp=Z,0.7nm,0.3s,baz=289,slow=12,SNR=15						
ARCES	ARCESS Array B	11.89	81	ePn	Pn	19 57 03.9	+0.8
ARCES	ARCESS Array B	11.89	81	eP	Pn	19 57 03.5	+0.3
KEV	Kevo	12.28	79	ePn	Pn	19 57 08.7	+0.3
KEV	Kevo	12.28	79	eP	Pn	19 57 08.7	+0.3
ASK	Askoy	12.42	143	ePn	Pn	19 57 10.0	-0.4
NC204	NORSAR Array S	12.95	130	ePn	Pn	19 57 17.5	-0.1
NC203	NORSAR Array S	12.99	130	ePn	Pn	19 57 19.8	+1.6
NC301	NORSAR Array S	13.12	129	ePn	Pn	19 57 21.4	+1.3
NC303	NORSAR Array S	13.14	129	ePn	Pn	19 57 19.6	-0.6
NC303	NORSAR Array S	13.14	129	ePn	Pn	19 57 18.4	-1.8
NBO00	NORSAR Array S	13.16	131	ePn	Pn	19 57 21.3	+0.8
NBO00	NORSAR Array S	13.16	131	ePn	Pn	19 57 17.8	-2.8
NBO03	NORSAR Array S	13.19	131	ePn	Pn	19 57 21.9	+0.9
NB204	NORSAR Array S	13.24	130	ePn	Pn	19 57 22.6	+1.0
NOA	NORSAR Array B	13.26	130	LR	LR	20 01 51.3	
	comp=Z,106nm,20.9s,baz=335,slow=35						
NB201	NORSAR Array S	13.27	130	ePn	Pn	19 57 24.1	+2.0
NB201	NORSAR Array S	13.27	130	ePn	Pn	19 57 21.0	-1.0
NC405	NORSAR Array S	13.32	129	ePn	Pn	19 57 22.7	0.0
NAO01	NORSAR Array S	13.35	131	ePn	Pn	19 57 23.8	+0.7
NAO01	NORSAR Array S	13.35	131	ePn	Pn	19 57 22.3	-0.8
NC403	NORSAR Array S	13.36	129	ePn	Pn	19 57 22.1	-1.1
NAO03	NORSAR Array S	13.38	131	ePn	Pn	19 57 22.3	-1.2
NRA0	NORESS Array S	13.60	130	Pn	Pn	19 57 24.9	-1.6
	baz=330,slow=14						
NRA0	NORESS Array S	13.60	130	Pn	Pn	19 57 24.9	-1.6
	baz=330,slow=14						
NC602	NORSAR Array S	13.61	130	ePn	Pn	19 57 27.1	+0.6
NC602	NORSAR Array S	13.61	130	ePn	Pn	19 57 25.3	-1.2
BLS5	Blasjo	13.65	142	ePn	Pn	19 57 26.5	-0.7
ILULI	Ilulissat	13.88	281	ePn	Pn	19 57 28.2	-2.0
ILULI	Ilulissat	13.88	281	eP	Pn	19 57 28.2	-2.0
KONO	Kongsberg	14.11	136	ePn	Pn	19 57 30.9	-2.5
KONO	Kongsberg	14.11	136	eP	Pn	19 57 30.9	-2.5
HFS	Hagfors	14.67	128	Pn	Pn	19 57 40.1	-1.0
	baz=340,slow=9.3						
HFS	Hagfors	14.67	128	Pn	Pn	19 57 39.3	-1.7
	comp=Z,0.3nm,0.3s,baz=334,slow=9.9,SNR=11						
HFS				LR	LR	20 02 45.5	
	comp=Z,126nm,21.0s,baz=328,slow=35						
HFS	Hagfors	14.67	128	Pn	Pn	19 57 40.1	-1.0
	baz=340,slow=9.3						
SNART	Snartemo	14.81	143	ePn	Pn	19 57 42.5	-0.4
SFJD	Kangerlussuaq	14.88	273	LR	LR	20 02 54.6	
	comp=Z,137nm,20.1s,baz=60,slow=35						
LVZ	Lovozero	15.61	81	ePn	Pn	19 57 53.6	0.0
	comp=Z,104nm,1.8s						
LVZ	Lovozero	15.61	81	eP	Pn	19 57 53.6	0.0
LVZ				pmax	pmax		
	comp=Z,104nm,1.8s						
EKA	Eskdalemuir Ar	16.29	166	Pn	Pn	19 58 03.1	+0.9
	baz=356,slow=13,SNR=15						
ESK	Eskdalemuir	16.30	166	ePn	Pn	19 58 02.7	+0.2
	comp=Z,47nm,1.5s						
ESK	Eskdalemuir	16.30	166	eP	Pn	19 58 02.7	+0.2
ESK				pmax	pmax		
	comp=Z,47nm,1.5s						
TULEG	Thule	16.42	315	ePn	Pn	19 57 56.1	-7.8
	comp=Z,90nm,1.4s						
TULEG				eSn	Sn	20 00 52.4	-13
FIA0	FINESS Array S	17.15	107	P	P	19 58 14.3	-0.5
	baz=323,slow=14						
FIA0	FINESS Array S	17.15	107	ePn	P	19 58 14.3	-0.5
FIA0	FINESS Array S	17.15	107	eP	P	19 58 14.3	-0.5
FIA0	FINESS Array S	17.15	107	Pn	P	19 58 14.3	-0.5
	baz=323,slow=14						
FIA1	FINESS Array S	17.15	107	ePn	Pn	19 58 13.3	+0.2
	comp=Z,23nm,1.3s						
FINES	FINESS Array B	17.15	107	P	P	19 58 14.3	-0.5
	comp=Z,0.4nm,0.3s,baz=323,slow=10,SNR=13						
FINES				LR	LR	20 04 04.4	
	comp=Z,148nm,18.9s,baz=320,slow=34						
NRS	Narsarsuaq	17.22	252	ePn	P	19 58 16.0	+0.4
	comp=Z,21nm,0.8s						
NRS	Narsarsuaq	17.22	252	eP	P	19 58 16.0	+0.4
NRS				pmax	pmax		
	comp=Z,21nm,0.8s						
DSB	Dublin	18.18	173	eP	P	19 58 28.2	+1.9
	comp=Z,47nm,1.5s						
VSU	Vasula	19.73	112	⇑iP	Pn	19 58 44.9	+0.3
WTSB	Winterswijk	20.80	150	eP	Pn	19 58 56.6	-0.6
	comp=Z,68nm,0.8s						
UCC	Uccle	21.57	155	eP	P	19 59 04.0	+0.8
	comp=Z,16nm,0.9s						
UCC	Uccle	21.57	155	eP	P	19 59 04.0	+0.8
UCC				pmax	pmax		
	comp=Z,16nm,0.9s						
GKP	Gorka Klasztor	21.69	132	eP	P	19 59 07.3	+3.0
GKP	Gorka Klasztor	21.69	132	eP	P	19 59 07.3	+3.0
HGN	Heimansgroeve	21.83	152	eP	P	19 59 07.5	+1.6
	comp=Z,44nm,0.8s						
KLMR	Klimovskoe	21.86	93	eP	P	19 59 03.0	-3.1
KLMR				pmax	pmax		
	comp=Z,61nm,1.1s						
KLMR	Klimovskoe	21.86	93	eP	P	19 59 03.1	-3.1
KLMR				AMP		19 59 07.6	
	comp=Z,61nm,1.1s						
IZAR	Zarasai	21.87	116	eP	P	19 59 06.9	+0.5
IZAR				IAmb	IAmb	19 59 13.0	
	comp=Z,6.2nm,0.9s						
IIGN	Ignalina	22.21	117	eP	P	19 59 10.6	+0.6
IIGN				IAmb	IAmb	19 59 21.3	
	comp=Z,5.8nm,1.0s						
IDID	Didziasalis	22.39	116	eP	P	19 59 12.6	+0.7
IDID				IAmb	IAmb	19 59 18.5	
	comp=Z,9.9nm,1.1s						
SUW	Suwalki	22.54	123	eP	P	19 59 14.9	+1.4
	comp=Z,46nm,1.1s						
SUW	Suwalki	22.54	123	eP	P	19 59 14.9	+1.4
SUW				pmax	pmax		
	comp=Z,47nm,1.1s						
CLL	Collm	22.57	140	⇑iP	P	19 59 15.1	+1.2
	comp=Z,23nm,1.3s						
CLL				i sP	sP	19 59 19.3	+1.3
CLL				i		19 59 24.6	
CLL				e		19 59 37.0	
CLL				ePPP	PPP	19 59 47.0	
CLL				eS	S	20 03 25.0	+4.0
CLL	Collm	22.57	140	eP	P	19 59 15.0	+1.1
	comp=Z,12nm,0.9s						
CLL	Collm	22.57	140	⇑iP	P	19 59 15.1	+1.2
CLL				i		19 59 19.3	
CLL				eS	S	20 03 25.0	+4.0
CLL				pmax	pmax		
	comp=Z,23nm,1.3s						
WLF	Walferdange	22.93	153	eP	P	19 59 20.4	+2.7
	comp=Z,27nm,1.4s						
WLF	Walferdange	22.93	153	eP	P	19 59 20.4	+2.7
WLF				pmax	pmax		
	comp=Z,27nm,1.4s						
RES	Resolute Bay	23.08	318	P	P	19 59 22.8	+3.8
	comp=Z,16nm,0.8s,baz=52,slow=11,SNR=18						
RES	Resolute Bay	23.08	318	eP	P	19 59 23.0	+4.0
	comp=Z,17nm,0.8s						
RES	Resolute Bay	23.08	318	eP	P	19 59 23.0	+4.0
RES				pmax	pmax		
	comp=Z,17nm,0.8s						
BRG	Berggiesshubel	23.18	139	eP	P	19 59 22.6	+2.4
	comp=Z,7.9nm,1.1s						
BRG				S	S	20 03 25.0	-6.6
BRG	Berggiesshubel	23.18	139	eP	P	19 59 22.6	+2.4
BRG				S	S	20 03 25.0	-6.6
BRG				pmax	pmax		
	comp=Z,8.0nm,1.2s						
PRGR	Permogore	23.25	86	eP	P	19 59 21.8	+1.0
PRGR				pmax	pmax		
	comp=Z,21nm,1.4s						
NKC	Novy Kostel	23.48	142	eP	P	19 59 25.1	+1.8
NKC				epP	sP	19 59 28.1	+0.6
NKC	Novy Kostel	23.48	142	eP	P	19 59 25.1	+1.8
NKC				e		19 59 28.1	
NKC				MLR	MLR		
	comp=Z,400nm,22.3s						
KSP	Ksiaz	23.72	136	eP	P	19 59 28.7	+3.1
KSP	Ksiaz	23.72	136	eP	P	19 59 28.7	+3.1
GRFO	Grafenberg	23.76	144	eP	P	19 59 27.1	+1.1
	comp=Z,32nm,1.4s						
GRFO	Grafenberg	23.76	144	eP	P	19 59 27.1	+1.1
GRFO				pmax	pmax		
	comp=Z,32nm,1.4s						
PRU	Pruhonice	24.14	139	eP	P	19 59 32.0	+2.4
PRU				AMS	AMS	20 12 20.0	
	comp=Z,100nm,12.3s						
PRU	Pruhonice	24.14	139	eP	P	19 59 32.0	+2.4
PRU				MLR	MLR		
	comp=Z,100nm,12.3s						
DPC	Dobruska-Polom	24.19	136	eP	P	19 59 32.6	+2.5
DPC				AMS	AMS	20 11 30.0	
	comp=Z,100nm,10.1s						
DPC	Dobruska-Polom	24.19	136	eP	P	19 59 32.6	+2.5
DPC				MLR	MLR		
	comp=Z,100nm,10.1s						
GOPC	GO Pecny, Ondr	24.27	139	eP	P	19 59 32.7	+2.0
GOPC				ex	x	19 59 39.3	
GOPC	GO Pecny, Ondr	24.27	139	eP	P	19 59 32.7	+2.0
GOPC				e		19 59 39.3	
STU	Stuttgart	24.29	148	eP	P	19 59 32.6	+1.6
	comp=Z,18nm,1.3s						
STU	Stuttgart	24.29	148	eP	P	19 59 32.6	+1.6
STU				pmax	pmax		
	comp=Z,18nm,1.3s						
ECH	Echery	24.50	152	eP	P	19 59 34.4	+1.5
	comp=Z,10nm,0.8s						
ECH	Echery	24.50	152	eP	P	19 59 34.4	+1.5
ECH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KRLC	Kraliky	24.55	136	eP	P	19 59 35.2	+1.8
KRLC				ex	x	19 59 41.5	
KRLC	Kraliky	24.55	136	eP	P	19 59 35.2	+1.8
KRLC				e		19 59 41.5	
BFO	Black Forest	24.57	150	eP	P	19 59 35.2	+1.6
	comp=Z,18nm,1.2s						
BFO	Black Forest	24.57	150	ceP	P	19 59 36.0	+2.4
BFO				pmax	pmax		
	comp=Z,5.0nm,2.5s						
KHC	Kasperske Hory	24.76	141	eP	P	19 59 37.2	+2.0
KHC				ex	x	19 59 42.9	
KHC				AMS	AMS	20 12 20.0	
	comp=Z,200nm,12.3s						
KHC	Kasperske Hory	24.76	141	eP	P	19 59 36.8	+1.6
	comp=Z,2.3nm,0.9s						
KHC	Kasperske Hory	24.76	141	eP	P	19 59 37.2	+2.0
KHC				e		19 59 42.9	
KHC				MLR	MLR		
	comp=Z,200nm,12.3s						
MORC	Moravsky Berou	25.00	135	eP	P	19 59 38.7	+1.3
	comp=Z,16nm,1.9s						
MORC	Moravsky Berou	25.00	135	eP	P	19 59 38.7	+1.3
MORC				pmax	pmax		
	comp=Z,16nm,1.9s						
GEC2	GERESS Array S	25.05	141	eP	P	19 59 40.8	+2.8
	comp=Z,16nm,1.0s						
GERES	GERESS Array B	25.05	141	P	P	19 59 39.8	+1.8
	comp=Z,8.8nm,0.9s,baz=344,slow=8.3,SNR=50						
GERES				LR	LR	20 09 26.9	
	comp=Z,45nm,18.6s,baz=328,slow=36						
GEA0	GERESS Array S	25.06	141	eP	P	19 59 39.6	+1.6
OKC	Ostrava-Krasne	25.08	134	AMS	AMS	20 11 20.0	
	comp=Z,200nm,16.3s						
OJC	Ojcow	25.12	131	eP	P	19 59 39.4	+0.9
	comp=Z,6.8nm,0.8s						
OJC	Ojcow	25.12	131	eP	P	19 59 39.4	+0.9
OJC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
VRAC	Vranov	25.23	137	P	P	19 59 40.0	+0.6
	comp=Z,2.7nm,0.8s,baz=348,slow=11,SNR=5.2						
VRAC				LR	LR	20 09 28.4	
	comp=Z,54nm,18.3s,baz=329,slow=36						
OBN	Obninsk	25.53	105	eP	P	19 59 42.0	0.0
	comp=Z,26nm,0.4s						
OBN	Obninsk	25.53	105	⇑eP	P	19 59 42.4	+0.3
OBN				e		20 00 17.6	
OBN				pmax	pmax		
	comp=Z,25nm,1.7s						
OBN				MLR	MLR		
	comp=Z,58nm,15.0s						
DAVA	Damuels	25.84	148	i pP	P	19 59 48.1	+2.9
	comp=Z,10nm,0.9s						
MOTA	Moosalm	26.00	146	i P	P	19 59 49.9	+3.3
	comp=Z,7.9nm,1.3s						
WATA	Walderalm	26.09	146	eP	P	19 59 50.9	+3.4
	comp=Z,5.0nm,0.9s						
MOA	Molln	26.12	141	i pP	P	19 59 53.1	+5.5
	comp=Z,7.5nm,1.7s						
WTTA	Wattenberg	26.17	145	epP	P	19 59 50.8	+2.6
	comp=Z,8.1nm,1.2s						
FETA	Feichten	26.25	147	i P	P	19 59 53.6	+4.7
	comp=Z,8.9nm,1.6s						
MODS	Modra-Piesok	26.26	136	eP	P	19 59 50.6	+1.8
MODS				pmax	pmax		
	comp=Z,13nm,1.3s						
MODS	Modra-Piesok	26.26	136	eP	P	19 59 50.6	+1.8
SENIN	Lac Senin/Sane	26.33	152	eP	P	19 59 52.6	+2.9
	comp=Z,7.4nm,0.9s						
DAVOX	Davos/Dischmat	26.33	148	LR	LR	20 09 28.4	
	comp=Z,78nm,21.8s,baz=269,slow=35						
CONA	Conrad Observa	26.38	139	epP	P	19 59 52.2	+2.3
	comp=Z,4.9nm,1.0s						
KWP	Kalwaria Pacla	26.39	128	eP	P	19 59 53.6	+3.7
	comp=Z,86nm,1.0s						
KWP	Kalwaria Pacla	26.39	128	eP	P	19 59 53.6	+3.7
KWP				pmax	pmax		
	comp=Z,86nm,1.0s						
VYHS	Vyhne	26.50	134	eP	P	19 59 55.0	+4.0
VYHS				pmax	pmax		
	comp=Z,5.0nm,1.3s						
VYHS	Vyhne	26.50	134	eP	P	19 59 55.0	+4.0
TUE	Stuetta	26.54	149	eP	P	19 59 53.5	+1.8
	comp=Z,8.2nm,1.1s						
ABTA	Abfaltersbach	26.83	144	epP	P	19 59 56.4	+2.3
	comp=Z,8.4nm,1.6s						
ARSA	Arzberg	26.95	140	epP	P	19 59 57.8	+2.8
	comp=Z,2.6nm,0.7s						
AKASG	Malin Array Be	27.17	118	P	P	19 59 57.0	+0.1
	comp=Z,2.0nm,0.5s,baz=335,slow=9.1,SNR=4.0						
AKBB	Malin Array Si	27.17	118	eP	P	19 59 56.6	-0.3
	comp=Z,26nm,2.0s						
AKBB	Malin Array Si	27.17	118	eP	P	19 59 56.6	-0.3
AKBB				pmax	pmax		
	comp=Z,26nm,2.0s						
KIEV	Kiev	27.17	119	eP	P	19 59 57.1	+0.1
	comp=Z,6.4nm,1.2s						
KIEV	Kiev	27.17	119	⇓iP	P	19 59 57.2	+0.2
KIEV				pmax	pmax		
	comp=Z,9.0nm,2.5s						
AK11	Malin Array Si	27.18	119	eP	P	19 59 57.1	+0.1
PSZ	Piszkesteto	27.29	133	eP	P	20 00 00.3	+2.2
	comp=Z,4.4nm,0.8s						
PSZ	Piszkesteto	27.29	133	eP	P	20 00 00.3	+2.2
PSZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SOKA	Soboth	27.39	141	i pP	P	20 00 01.5	+2.4
	comp=Z,3.4nm,1.0s						
BNI	Bardonecchia	27.52	154	eP	P	20 00 02.1	+1.9
	comp=Z,35nm,1.8s						
BNI	Bardonecchia	27.52	154	eP	P	20 00 02.2	+1.9
BNI				pmax	pmax		
	comp=Z,35nm,1.8s						
BUR08	Bucovina Ar. S	28.86	126	eP	P	20 00 11.8	-0.4
BUR04	Bucovina Ar. S	28.89	126	eP	P	20 00 12.7	+0.3
VLC	Villacollemand	28.96	149	eP	P	20 00 13.5	+0.4
	comp=Z,31nm,1.3s						
SCHQ	Schefferville	29.09	266	LR	LR	20 10 41.6	
	comp=Z,139nm,20.2s,baz=52,slow=34						
VSR	Storozhevoye	29.68	106	eP	P	20 00 18.8	-0.5
VSR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
VORD	Divnogorie	29.94	106	eP	P	20 00 21.1	-0.4
VORD				pmax	pmax		
	comp=Z,4.0nm,0.4s						
VRH	Novokhopyorsk	30.49	104	eP	P	20 00 13.2	-13
VRH				pmax	pmax		
	comp=Z,8.0nm,0.8s						
DIVS	Divibare	30.92	136	eP	P	20 00 31.1	+0.7
	comp=Z,6.5nm,1.4s						
MTE	Manteigas	30.99	176	eP	P	20 00 32.6	+1.6
	comp=Z,10nm,1.0s						
MLR	Muntele Rosu	31.05	127	eP	P	20 00 32.4	+0.8
	comp=Z,6.6nm,1.5s						
MLR	Muntele Rosu	31.05	127	eP	P	20 00 32.4	+0.8
MLR				pmax	pmax		
	comp=Z,7.0nm,1.5s						
ARU	Arti	31.48	82	eP	P	20 00 35.3	+0.2
	comp=Z,30nm,1.9s						
ARU	Arti	31.48	82	diP	P	20 00 37.3	+2.1
ARU						20 01 37.9	
ARU				S	S	20 05 46.6	+3.9
ARU				SS	SnSn	20 07 30.7	+3.9
ARU				pmax	pmax		
	comp=Z,8.0nm,2.5s						
ES19	SONSECA Array	31.81	171	eP	P	20 00 38.0	-0.2
ESDC	Sonseca Array	31.84	171	P	P	20 00 39.5	+1.0
	comp=Z,0.1nm,0.3s,baz=356,slow=10,SNR=3.5						
TIRR	Tirgusor	32.65	125	eP	P	20 00 45.6	+0.1
	comp=Z,3.8nm,0.8s						
TIRR	Tirgusor	32.65	125	eP	P	20 00 45.6	+0.1
TIRR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
VTS	Vitosha	33.09	132	eP	P	20 00 48.6	-1.0
	comp=Z,6.6nm,1.5s						
VTS	Vitosha	33.09	132	eP	P	20 00 48.6	-1.0
VTS				pmax	pmax		
	comp=Z,7.0nm,1.5s						
FNA	Florina	34.38	136	eP	P	20 01 01.8	+1.1
	comp=Z,11nm,0.7s						
FNA	Florina	34.38	136	eP	P	20 01 01.8	+1.1
FNA				pmax	pmax		
	comp=Z,11nm,0.7s						
SFS	San Fernando	34.95	175	eP	P	20 01 08.0	+2.5
	comp=Z,90nm,1.0s						
SFS	San Fernando	34.95	175	eP	P	20 01 08.0	+2.5
SFS				pmax	pmax		
	comp=Z,90nm,1.0s						
ALN	Alexandroupoli	35.38	130	eP	P	20 01 09.9	+0.7
	comp=Z,2.6nm,0.9s						
ALN	Alexandroupoli	35.38	130	eP	P	20 01 09.9	+0.7
ALN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
INK	Inuvik	35.68	328	LR	LR	20 18 36.9	
	comp=Z,82nm,18.3s,baz=26,slow=41						
AGG	Agios Georgios	36.28	135	eP	P	20 01 18.4	+1.4
	comp=Z,19nm,0.8s						
AGG	Agios Georgios	36.28	135	eP	P	20 01 18.4	+1.4
AGG				pmax	pmax		
	comp=Z,19nm,0.8s						
AKTO	Aktyubinsk	36.37	88	P	P	20 01 18.1	+0.4
	comp=Z,2.0nm,0.8s,baz=275,slow=7.5,SNR=6.2						
YKW3	Yellowknife Ar	36.79	312	eP	P	20 01 23.2	+2.2
	comp=Z,3.7nm,0.8s						
YKA	Yellowknife Ar	36.84	311	P	P	20 01 21.2	-0.3
	comp=Z,1.7nm,0.7s,baz=30,slow=8.7,SNR=5.3						
YKA				LR	LR	20 16 01.0	
	comp=Z,11nm,18.9s,baz=23,slow=36						
THTN	Thala	37.12	154	eP	P	20 01 24.9	+0.6
	comp=Z,7.7nm,1.0s						
KIV	Kislovodsk	37.23	109	eP	P	20 01 25.4	+0.2
	comp=Z,7.5nm,1.0s						
KIV	Kislovodsk	37.23	109	⇑eP	P	20 01 25.9	+0.8
KIV				e		20 02 50.7	
KIV				eSS	SS	20 10 18.2	+24
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KIV				MLR	MLR		
	comp=Z,70nm,14.0s						
WDD	Wied Dalam	37.77	147	eP	P	20 01 31.1	+1.4
	comp=Z,99nm,1.2s						
ABKAR	Akbulak array	38.01	87	eP	P	20 01 31.8	+0.3
BRVK	Borovoye	38.02	75	eP	P	20 01 32.5	+0.9
	comp=Z,32nm,0.8s						
BRVK	Borovoye	38.02	75	ceP	P	20 01 32.2	+0.6
BRVK				pmax	pmax		
	comp=Z,13nm,0.8s						
BVAR	Borovoye Array	38.08	75	P	P	20 01 33.2	+1.1
	comp=Z,5.0nm,0.9s,baz=324,slow=7.1,SNR=30						
PKME	Peaks-Kenny Pk	38.17	260	eP	P	20 01 35.1	+2.2
	comp=Z,45nm,1.9s						
BR101	Keskin Array S	38.47	121	eP	P	20 01 37.5	+1.8
BR131	Keskin Array S	38.47	121	eP	P	20 01 37.9	+2.2
BRTR	Keskin Array B	38.47	121	P	P	20 01 37.5	+1.8
	comp=Z,1.2nm,0.8s,baz=332,slow=4.8,SNR=7.9						
APE	Apeiranthos	38.89	132	⇓eP	P	20 01 41.6	+2.5
APE				pmax	pmax		
	comp=Z,113nm,1.5s						
TRQ	Mont Tremblant	39.00	266	eP	P	20 01 40.5	+0.5
FYU	Fort Yukon	39.13	334	eP	P	20 01 40.9	+0.2
	comp=Z,28nm,1.1s						
COLD	Coldfoot	39.18	337	eP	P	20 01 40.6	-0.6
	comp=Z,5.3nm,1.5s						
RDOG	Red Dog Mine	39.73	345	eP	P	20 01 46.3	+0.5
	comp=Z,20nm,1.5s						
FFC	Flin Flon	40.16	296	eP	P	20 01 49.5	0.0
	comp=Z,5.2nm,1.0s						
FFC	Flin Flon	40.16	296	eP	P	20 01 49.5	0.0
FFC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
EGAK	Eagle	40.18	330	eP	P	20 01 49.5	0.0
	comp=Z,6.5nm,1.4s						
LONY	Lake Ozonia	40.44	264	eP	P	20 01 54.3	+2.4
	comp=Z,15nm,1.6s						
IDI	Anoyia	40.44	134	P	P	20 01 52.1	0.0
	comp=Z,4.5nm,1.0s,baz=15,slow=14,SNR=2.3						
NCB	Newcomb	40.90	264	eP	P	20 01 56.1	+0.3
	comp=Z,12nm,1.5s						
IL1	Eielson Array	41.06	334	eP	P	20 01 56.9	+0.2
ILAR	Eielson Array	41.06	334	P	P	20 01 57.1	+0.4
	comp=Z,0.9nm,0.9s,baz=23,slow=7.5,SNR=7.6						
ILB	Eielson Array	41.06	334	eP	P	20 01 57.4	+0.6
MDM	Murphy Dome	41.07	334	eP	P	20 01 57.3	+0.4
	comp=Z,5.4nm,1.5s						
ACCN	Adirondack Com	41.25	263	eP	P	20 01 59.5	+0.9
	comp=Z,6.4nm,1.0s						
MLY	Manley	41.34	336	eP	P	20 01 59.5	+0.3
	comp=Z,8.4nm,1.6s						
WES	Weston	41.40	260	eP	P	20 02 03.5	+3.7
	comp=Z,22nm,1.3s						
WES	Weston	41.40	260	eP	P	20 02 03.5	+3.7
WES				pmax	pmax		
	comp=Z,22nm,1.3s						
SADO	Sadowa	41.77	269	LR	LR	20 18 36.5	
	comp=Z,84nm,18.1s,baz=313,slow=35						
CAST	Castle Rocks	43.06	336	eP	P	20 02 13.3	+0.2
	comp=Z,3.7nm,0.8s						
PD31	Pinedale Array	53.09	295	eP	P	20 03 30.4	-0.8
PDAR	Pinedale Array	53.09	295	P	P	20 03 30.8	-0.4
	comp=Z,0.3nm,0.5s,baz=45,slow=9.0,SNR=3.2						
PLAL	Pickwick Lake	53.52	272	eP	P	20 03 37.8	+3.7
PLAL				ePcP	PcP	20 04 40.6	-0.2

TOA1	Torodi Ar. Sit	58.54	167	eP	P	20 04 10.3	+0.1
TOA0	Torodi Ar. Sit	58.55	167	eP	P	20 04 10.6	+0.4
TORD	Torodi Ar. Bea	58.55	167	P	P	20 04 10.3	+0.1
	comp=Z,2.6nm,0.8s,baz=348,slow=8.0						
YSS	Yuzh-Sakhalins	60.45	21	P	P	20 04 23.8	+0.8
YSS				pmax	pmax		
	comp=Z,74nm,1.3s						
TXAR	Lajitas Array	63.71	284	P	P	20 04 45.0	-0.3
	comp=Z,0.4nm,0.9s,baz=26,slow=3.2,SNR=3.5						

BJI **14** *19:55:10.6,25°.52N×94°.44E,h6^{km},mb5.3/71,mB5.2/45, ML5.1/2,Ms5.0/85,Ms7 4.7/74*

ISCJB **14** *19:55:16.6±0.3,25°.43N±0°.01×94°.41E±0°.01,h53^{km}±2^{km}, mb5.3/310,MS4.5/170,Error ellipse: s-maj=2.5km s-min=2.0km az=38.8*

MOS **14** *19:55:16.2±1.0,25°.42N×94°.44E,h49^{km},mb5.5/73, MS4.5/42,Error ellipse: s-maj=5.9km s-min=3.6km az=121.7*

IDC **14** *19:55:18.0±0.3,25°.40N×94°.50E,h50^{km}±2^{km},mb4.6/61, mb1 4.7/63,mb1mx4.6/74,mbtmp4.9/63,MS4.3/45, Ms1 4.3/45,ms1mx4.2/67,Error ellipse: s-maj=6.9km s-min=6.1km az=58.0*

NEIC **14** *19:55:17.9±0.1,25°.42N×94°.48E,mb5.5/156,MW5.2, Error ellipse: s-maj=3.4km s-min=2.3km az=222.0, Moment Tensor Solution. s15 Moment tensor: Scale 10^{16}Nm; M_{rr}0.02; $M_{\theta\theta}$-5.31; $M_{\phi\phi}$5.29; $M_{r\theta}$-0.55; $M_{\theta\phi}$3.02; $M_{\phi r}$-2.84; Best double couple: $M_0$6.80000×10^{16} NP1: ϕ_s148.00000°,δ76.00000°,λ163.00000°. NP2: ϕ_s242.00000°,δ73.00000°,λ14.00000°. Principal axes: T 7.2400, Plg22.0000°, Azm105.0000°; N -1.1200, Plg68.0000°, Azm290.0000°; P -6.1200, Plg2.0000°, Azm195.0000°;*

NEIC Felt [VI] at Phek, [IV] at Guwahati and [III] at Dibrugarh and Shillong, India. Also felt at Haflong, Jawai, Jorhat, Kohima, Manipur, and Margherita.

GCMT **14** *19:55:18.0±0.2,25°.40N×94°.45E,h41^{km}±1^{km},MW5.3/120, Moment Tensor Solution. s60,c90; s120,c197; Duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}0.11±.02; $M_{\theta\theta}$-0.70±.02; $M_{\phi\phi}$0.58±.02; $M_{r\theta}$-0.05±.02; $M_{\theta\phi}$0.82±.02; $M_{\phi r}$-0.46±.02; Best double couple: $M_0$1.14200×10^{17} NP1:ϕ_s159.00000°,δ80.00000°, λ158.00000°. NP2:ϕ_s253.00000°,δ69.00000°,λ11.00000°. Principal axes: T 1.1650, Plg23.0000°, Azm114.0000°; N -0.0460, Plg66.0000°, Azm315.0000°; P -1.1190, Plg7.0000°, Azm207.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NDI **14** *19:55:19.3±2.8,25°.55N×94°.33E,h54^{km}±14^{km},ML5.5, mb5.5(NEIC)*

ISC 14 19:55:18.2±0.2**,25°.44N**±0°.03×**94°.41E**±0°.02**,h53**^{km}±1^{km}**, h53**^{km}**:pP-P,n868,**σ1^{s}**89**/952**,mb5.3**/311**,MS4.6**/173**, 43C-46D,Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOHI	KOHIMA	0.39	316	eP	Pn	19 55 27.9	-0.8
KOHI				eS	Sn	19 55 34.7	-1.5
KOHI				IAML		19 55 36.9	
	comp=N,263µm,0.4s						
KOHI				IAML		19 55 39.1	
	comp=E,220µm,0.5s						
MOKO	MOKOCHONG	0.88	6	eP	Pn	19 55 35.2	+0.6
MOKO				eS	Sn	19 55 47.1	+0.4
MOKO				IAML		19 55 52.5	
	comp=N,317µm,0.6s						
MOKO				IAML		19 55 53.7	
	comp=E,343µm,1.0s						
ITAN	ITANAGAR	1.81	340	eP	Pn	19 55 47.0	0.0
TEZP	TEZPUR	1.86	309	eP	Pn	19 55 46.7	-1.0
TEZP				eS	Sn	19 56 08.6	-1.6
TEZP				IAML		19 56 16.5	
	comp=E,30µm,0.4s						
TEZP				IAML		19 56 17.6	
	comp=N,33µm,0.2s						
ZIRO	ZIRO	2.14	347	eP	Pn	19 55 51.1	-0.6
ZIRO				eS	Sn	19 56 14.3	-2.8
SHL	Shillong	2.28	274	ePn	Pn	19 55 52.4	-1.3
SHL				eSn	Sn	19 56 19.7	-1.1
SHL	Shillong	2.28	274	eP	Pn	19 55 53.2	-0.5
SHL				ex	Sn	19 56 24.9	+4.1
SHL				IAML		19 56 29.5	
	comp=N,46µm,0.4s						
SHL				IAML		19 56 32.1	
	comp=E,51µm,0.3s						
SHL	Shillong	2.28	274	eP	Pn	19 55 52.4	-1.3
SHL				e		19 56 19.7	
GUWA	GUWAHATI	2.56	288	eP	Pn	19 55 56.1	-1.1
GUWA				eS	Sn	19 56 23.5	-3.8
GUWA				IAML		19 56 25.3	
	comp=N,26µm,0.5s						
GUWA				IAML		19 56 25.5	
	comp=E,39µm,0.2s						
AGT	Agartala	3.26	242	eP	Pn	19 56 07.8	+0.9
AGT				eS	Sn	19 56 45.5	+1.0
BELO	BELONIA	3.47	232	eP	Pn	19 56 10.2	+0.4
BELO				eS	Sn	19 56 49.9	+0.2
BELO				IAML		19 57 50.4	
	comp=N,319µm,0.6s						
BELO				IAML		19 57 52.4	
	comp=E,301µm,2.6s						
TURI	Tura	3.68	273	eP	Pn	19 56 13.5	+0.8
TURI				eS	Sn	19 56 52.8	-2.1
TURI				IAML		19 57 18.8	
	comp=N,27µm,0.4s						
TURI				IAML		19 57 19.4	
	comp=E,25µm,0.4s						
BRDH	Bariadhala	3.73	223	P	Pn	19 56 13.0	-0.4
	comp=E,29nm,0.3s,baz=60,slow=13,SNR=16						
BRDH				S	Sn	19 56 56.6	+0.5
	comp=E,363nm,0.3s,baz=22,slow=23,SNR=11						
LSA	Lhasa	5.13	326	Pn	Pn	19 56 33.3	+0.3
LSA				Sn	Sn	19 57 25.5	-5.7
LSA				Sg		19 57 30.3	
LSA				smax	smax		
	comp=N,1µm,1.3s						
LSA				smax	smax		
	comp=E,3µm,1.3s						
LSA	Lhasa	5.13	326	ePn	Pn	19 56 34.0	+1.0
LSA	Lhasa	5.13	326	i P	Pn	19 56 34.0	+1.0
	SNR=153						
LSA	Lhasa	5.13	326	eP	Pn	19 56 34.0	+1.0
GTK	Tadong	5.53	291	eP	Pn	19 56 37.2	-1.0
GTK				ex	Sn	19 57 36.8	-3.8
TAPN	Taplejung	6.30	289	ePn	Pn	19 56 48.0	-0.9
ODAN	Odare	6.46	284	ePn	Pn	19 56 50.3	-0.7
CMAI	Chiengmai2	6.96	141	P	Pn	19 57 00.1	+2.4
	comp=E,64nm,0.5s,comp=E,1.3nm						
RAMN	Ramite	7.17	284	ePn	Pn	19 56 59.9	-0.9
KMI	Kunming	7.55	91	Pn	Pn	19 57 09.9	+4.0
KMI				Pg		19 57 31.8	
KMI				Sn	Sn	19 58 38.4	+8.1
KMI				Sg		19 59 22.6	
KMI				smax	smax		
	comp=N,400nm,1.3s						
KMI				smax	smax		
	comp=E,310nm,1.2s						
KMI				LR	LR		
	comp=N,5µm,6.1s						
KMI				LR	LR		
	comp=E,4µm,7.4s						
KMI				LR	LR		
	comp=Z,2µm,4.2s						
JIRN	Jiri	7.68	289	ePn	Pn	19 57 06.2	-1.7
CHTO	Chiang Mai	7.82	147	ePn	Pn	19 57 10.2	+0.7
CHTO	Chiang Mai	7.82	147	P	Pn	19 57 11.2	+1.8
	SNR=43						
CHTO	Chiang Mai	7.82	147	eP	Pn	19 57 10.2	+0.7
CHTO	Chiang Mai	7.82	147	P	Pn	19 57 10.8	+1.3
	comp=Z,1µm,0.9s,comp=Z,14µmcomp=Z,22nm						
CMMT	Chiang Mai	7.82	147	P	Pn	19 57 10.7	+1.2
	comp=Z,204nm,0.7s,comp=Z,3µmcomp=Z,5.0nm						
PAYA	Payao	7.88	139	P	Pn	19 57 12.6	+2.3
	comp=Z,153nm,0.7s,comp=Z,1µmcomp=Z,1.6nm						
BOK	Bokaro	7.92	260	eP	Pn	19 57 10.2	-0.6
GUN	Gumba	8.02	290	ePn	Pn	19 57 10.9	-1.5
GUN				eSn	Sn	19 58 35.0	-6.9
	comp=Z,972nm,0.4s						
CM31	Chiang Mai Arr	8.12	148	ePn	Pn	19 57 14.6	+1.0
CMAR	Chiang Mai Arr	8.12	148	P	Pn	19 57 13.9	+0.3
	comp=Z,6.2nm,0.3s,baz=324,slow=12,SNR=246						
CMAR				Lg	Lg	19 59 19.1	
	comp=Z,1.4nm,0.3s,baz=329,slow=26,SNR=2.8						
CMAR				LR	LR	20 00 11.7	
	comp=Z,2µm,21.1s,baz=330,slow=36						
CMAR				ScP	ScP	20 07 12.8	-0.1
	comp=Z,0.4nm,0.3s,baz=293,slow=2.0,SNR=15						
CM01	Chiang Mai Arr	8.16	148	ePn	Pn	19 57 14.6	+0.4
PKIN	Phulchoki	8.35	287	ePn	Pn	19 57 14.8	-2.1
PKIN				eSn	Sn	19 58 43.3	-6.6
	comp=Z,504nm,0.3s						
LAMP	Lampang	8.42	144	P	Pn	19 57 19.7	+2.0
	comp=Z,84nm,0.8s,comp=Z,757nmcomp=Z,1.2nm						
KKN	Kakani	8.50	288	ePn	Pn	19 57 17.0	-1.9
DMN	Daman	8.61	287	ePn	Pn	19 57 18.4	-2.0
DMN				eSn	Sn	19 58 49.0	-7.2
	comp=Z,624nm,0.3s						
GKN	Gorkha	9.10	288	ePn	Pn	19 57 25.2	-1.9
GKN				eSn	Sn	19 58 59.7	-8.5
	comp=Z,819nm,0.4s						
BWNR	Bhubaneshwar	9.44	239	eP	Pn	19 57 31.9	+0.4
CD2	Chengdu	9.88	54	P	Pn	19 57 37.9	+0.2
CD2				S	Sn	19 59 30.4	+3.1
CD2				pmax	pmax		
	comp=Z,90nm,0.5s						
CD2				pmax	pmax		
	comp=Z,990nm,5.4s						
CD2				LR	LR		
	comp=Z,16µm,12.2s						
CD2				LR	LR		
	comp=Z,8µm,7.6s						
CD2				LR	LR		
	comp=Z,9µm,8.6s						
DANN	Dangsing	9.94	289	ePn	Pn	19 57 35.3	-3.4
PHIT	Phitsanulok	9.94	145	P	Pn	19 57 40.7	+2.3
	comp=Z,178nm,0.8s,comp=Z,2µm						
KOLN	Koldanda	9.95	286	ePn	Pn	19 57 36.0	-2.7
KOLN				eSn	Sn	19 59 21.4	-7.6
	comp=Z,651nm,0.4s						
KOLN				eSn	Sn	19 59 21.4	-7.6
	comp=Z,550nm,0.4s						
UMPA	Umpang Tak	10.09	155	P	Pn	19 57 45.5	+5.0
	comp=Z,55nm,0.9s,comp=Z,414nm						
PYUN	Piuthan	10.54	287	ePn	Pn	19 57 43.2	-3.7
PYUN				eSn	Sn	19 59 35.6	-8.0
	comp=Z,449nm,0.5s						
PBKT	Sadao Pong	10.74	144	P	Pn	19 57 51.6	+2.2
	comp=Z,195nm,0.8s,comp=Z,2µm						
UTHA	Uthaitani	10.90	153	P	Pn	19 57 54.1	+2.4
	comp=Z,61nm,0.7s,comp=Z,420nm						
NONG	Nongkai	10.94	130	P	Pn	19 57 55.5	+3.3
	comp=Z,2.3nm,1.6s						
GYA	Guiyang	11.08	82	⇑iP	Pn	19 57 54.3	+0.2
GYA				PP	PnPn	19 58 01.0	-1.0
GYA				S	Sn	19 59 56.8	+0.2
GYA				SS	SnSn	20 00 10.3	+1.6
GYA				pmax	pmax		
	comp=Z,400nm,0.6s						
GYA				pmax	pmax		
	comp=Z,350nm,8.7s						
GYA				LR	LR		
	comp=Z,7µm,15.1s						
GYA				LR	LR		
	comp=Z,6µm,15.5s						
GYA				LR	LR		
	comp=Z,4µm,16.7s						
CHLP	Challavanipeta	11.82	236	eP	Pn	19 58 03.1	-1.0
SRDT	SRDT	11.89	157	P	Pn	19 58 08.2	+3.1
	comp=Z,117nm,1.0s						
KHON	Khomkaen	11.99	137	P	Pn	19 58 11.5	+5.0
SKNT	Sakolnakorn	12.27	131	P	Pn	19 58 12.8	+2.5
	comp=Z,67nm,1.6s,comp=Z,1µm						
VIS	Vishakhapatnam	12.85	235	i P	Pn	19 58 17.8	-0.4
VIS				i x	x	20 00 23.2	
VIS				ex	x	20 00 24.2	
	comp=E,234nm,0.9s						
VIS				ex	x	20 00 28.2	
	comp=N,366nm,0.8s						
LZH	Lanzhou	13.35	35	⇓P	Pn	19 58 23.6	-1.5
LZH				pP	P	19 58 25.1	-8.1
LZH				sP		19 58 26.5	
LZH				PP	PnPn	19 58 34.5	+1.2
LZH				eS	Sn	20 00 50.6	-1.4
LZH				sS	S	20 00 57.4	-16
LZH				SS	SnSn	20 01 08.3	+3.3
LZH				pmax	pmax		
	comp=N,270nm,1.0s						
LZH				pmax	pmax		
	comp=N,2µm,4.3s						
LZH				LR	LR		
	comp=N,8µm,12.3s						
LZH				LR	LR		
	comp=N,10µm,12.8s						
LZH				LR	LR		
	comp=N,11µm,14.3s						
PHET	Kaeng Krachan	13.40	157	P	Pn	19 58 29.5	+3.7
	comp=N,127nm,0.7s,comp=N,1µm						
SRAK	Srakaew	13.44	146	P	P	19 58 33.0	-1.1
	comp=N,384nm,0.7s,comp=N,3µm						
PBA	Port Blair	13.80	187	ePn	Pn	19 58 29.7	-1.5
PBA				eSn	Sn	20 00 56.2	-6.7
ENH	Enshi	14.18	67	ePn	Pn	19 58 31.6	-4.6
PVM	Polavaram	14.42	238	eP	Pn	19 58 36.4	-3.1
GTA	Gaotai	14.65	17	⇓P	Pn	19 58 38.8	-3.7
GTA				pP	P	19 58 43.3	-4.3
GTA				sP		19 58 46.0	
GTA				S	Sn	20 01 23.3	-0.4
GTA				sS	S	20 01 29.6	-11
GTA				SS	SnSn	20 01 41.3	+4.2
GTA				ScP	ScP	20 07 22.4	+0.6
GTA				PcS	PcS	20 07 24.8	-2.7
GTA				ScS	ScS	20 10 58.3	-1.3
GTA				pmax	pmax		
	comp=N,27nm,1.9s						
GTA				pmax	pmax		
	comp=N,270nm,4.6s						
GTA				LR	LR		
	comp=N,1µm,10.0s						
GTA				LR	LR		
	comp=N,5µm,14.3s						
GTA				LR	LR		
	comp=N,1µm,13.6s						
CHBT	CHBT	14.67	148	P	P	19 58 50.7	+3.0
NGP	Nagpur	14.74	256	eP	Pn	19 58 44.0	+0.3
NGP				ex	x	20 01 14.7	
XAN	Xi’an	15.23	52	P	P	19 58 52.8	-1.2
XAN				pP	pP	19 59 02.3	-3.5
XAN				PP	PnPn	19 59 04.9	+6.0
XAN				S	S	20 01 46.0	-6.0
XAN				SS	SnSn	20 02 10.3	+19
XAN				pmax	pmax		
	comp=Z,130nm,0.7s						
XAN				pmax	pmax		
	comp=Z,350nm,1.6s						
XAN				LR	LR		
	comp=N,5µm,21.1s						
XAN				LR	LR		
	comp=E,2µm,9.1s						
XAN				LR	LR		
	comp=Z,3µm,22.5s						
XAN	Xi’an	15.23	52	P	Pn	19 58 44.3	-5.7
XAN				pP	P	19 58 49.4	-4.6
DDI	Dehra Dun	15.25	292	ex	Pn	19 58 46.9	-3.4
RPR	Rampur	15.45	248	eP	Pn	19 58 52.5	-0.3
BHPL	Bhopal	15.63	266	ex	Pn	19 58 51.9	-3.3
BHPL				ex	x	20 01 30.0	
QIZ	Qiongzhong	15.64	111	P	Pn	19 58 52.6	-2.8
QIZ				S	Sn	20 01 52.3	+4.5
QIZ				LR	LR		
	comp=Z,2µm,11.3s						
QIZ				LR	LR		
	comp=Z,2µm,11.8s						
QIZ				LR	LR		
	comp=Z,2µm,12.8s						
QIZ	Qiongzhong	15.64	111	ePn	Pn	19 58 55.3	0.0
	comp=Z,167nm,1.1s						
SMLA	Simla	16.20	294	ex	Pn	19 58 58.1	-4.3
SRSP	Sriramsagar	16.22	250	eP	Pn	19 58 57.8	-5.0
ADKI	Addanki	16.53	238	eP	Pn	19 59 07.3	+0.7
NJS	Nagarjunasagar	16.63	241	eP	Pn	19 59 04.7	-3.1
HYB	Hyderabad	16.77	245	eP	Pn	19 59 10.0	+0.4
HYBB	Hyderabad (bro	16.77	245	eP	Pn	19 59 10.0	+0.4
SRLM	Srisailam	17.21	240	eP	Pn	19 59 15.3	+0.2
DHRM	DHARAMSHALA	17.24	297	ex	Pn	19 59 10.4	-5.2
GZH	Guangzhou	17.43	94	P	P	19 59 18.6	+0.3
GZH				LR	LR		
	comp=Z,2µm,6.2s						
GZH				LR	LR		
	comp=Z,2µm,5.9s						
MCO	Taipa Grande	17.84	97	P	P	19 59 24.0	+1.2
PKDT	Phuket	17.85	167	P	P	19 59 25.2	+2.2
	comp=Z,31nm,0.9s,comp=Z,4µm						
SKHT	Srikalahasti	18.07	233	eP	P	19 59 23.7	-1.7
KLRI	Killari	18.09	250	eP	P	19 59 24.1	-1.6
TRTT	Trang	18.22	163	P	Pn	19 59 28.6	+1.2
	comp=Z,34nm,0.8s,comp=Z,572nm						
WHN	Wuhan	18.32	69	⇓P	P	19 59 25.1	-3.0
WHN				LR	LR		
	comp=Z,9µm,11.1s						
WHN				LR	LR		
	comp=Z,3µm,13.0s						
WHN				LR	LR		
	comp=Z,5µm,11.5s						
SKLT	Songkhla	19.11	161	P	Pn	19 59 37.8	-0.4
	comp=Z,122nm,0.8s,comp=Z,2µm						
WMQ	Urumqi	19.14	345	P	P	19 59 37.5	+0.5
WMQ				pP	Pn	19 59 40.4	+2.0
WMQ				sP	pP	19 59 47.0	-2.0
WMQ				PP	PnPn	19 59 52.4	-0.1
WMQ				S	S	20 03 06.9	-4.3
WMQ				pmax	pmax		
	comp=Z,71nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,670nm,3.7s						
WMQ				LR	LR		
	comp=Z,5µm,16.9s						
WMQ				LR	LR		
	comp=Z,10µm,19.5s						
WMQ				LR	LR		
	comp=Z,2µm,16.1s						
URV	Uravakonda	19.16	240	eP	P	19 59 37.1	-0.4
TIY	Taiyuan	19.59	47	eP	P	19 59 41.9	-0.2
TIY				S	S	20 03 15.8	-4.7
TIY				SS	SnSn	20 03 43.5	+5.4
TIY				pmax	pmax		
	comp=Z,89nm,0.8s						
TIY				LR	LR		
	comp=Z,1µm,10.6s						
TIY				LR	LR		
	comp=Z,880nm,6.4s						
TIY				LR	LR		
	comp=Z,2µm,21.8s						
BSI	Banda Aceh	19.85	177	P	P	19 59 45.3	+0.4
	comp=Z,144nm,1.1s,comp=Z,2µm						
BTO	Baotou	19.95	37	eP	P	19 59 44.8	-1.2
BTO				pmax	pmax		
	comp=Z,29nm,0.6s						
NIL	Nilore	20.12	299	eP	P	19 59 47.1	-0.7
	comp=Z,362nm,0.9s						
NIL	Nilore	20.12	299	eP	P	19 59 47.1	-0.7
NIL				pmax	pmax		
	comp=Z,360nm,0.9s						
POO	Poona	20.25	254	eP	P	19 59 48.2	-1.2
KSH	Kashi	20.89	317	P	P	19 59 56.3	+0.1
KSH				PP	PnPn	20 00 19.9	+3.4
KSH				S	S	20 03 43.8	-2.5
KSH				SS	SnSn	20 04 13.3	+3.4
KSH				PcS	PcS	20 07 38.8	-1.9
KSH				ScS	ScS	20 11 21.3	+2.8
KSH				pmax	pmax		
	comp=Z,2µm,2.3s						
KSH				pmax	pmax		
	comp=Z,1µm,5.1s						
KSH				LR	LR		
	comp=Z,940nm,12.9s						
KSH				LR	LR		
	comp=Z,630nm,11.3s						
KSH				LR	LR		
	comp=Z,600nm,14.3s						
KULM	Kulim	20.91	162	eP	P	19 59 56.0	-0.4
HHC	Hu-ho-hao-te	20.98	39	eP	P	19 59 57.4	+0.3
HHC				PP	sP	20 00 14.9	-1.0
HHC				S	S	20 03 49.6	+1.7
HHC				SS	SnSn	20 04 15.3	+3.3
HHC				pmax	pmax		
	comp=Z,100nm,0.8s						
HHC				pmax	pmax		
	comp=Z,350nm,5.3s						
HHC				LR	LR		
	comp=Z,3µm,10.9s						
HHC				LR	LR		
	comp=Z,3µm,10.6s						
HHC				LR	LR		
	comp=Z,5µm,10.6s						
BOM	Bombay	21.02	256	eP	P	19 59 59.1	+1.6
MLSI	Meulaboh, Aceh	21.14	174	P	P	19 59 59.7	+0.8
	comp=Z,494nm,1.1s,comp=Z,5µm						
SHLS	Shalkode	21.50	329	⇑iP	P	20 00 01.1	-1.5
	comp=Z,45nm,1.2s						
SHLS				ePP	sP	20 00 21.3	-0.2
SHLS				LR	LR	20 10 02.9	
	comp=Z,228nm,10.3s						
PRZ	Przheval’sk	21.51	326	eP	P	20 00 03.5	+0.7
	comp=Z,2µm,1.8s						
PRZ	Przheval’sk	21.51	326	eP	P	20 00 03.5	+0.7
PRZ				pmax	pmax		
	comp=Z,2µm,1.8s						
UZB	Uzynbulak	21.70	328	i P	P	20 00 05.2	+0.3
	comp=Z,18nm,1.3s						
UZB				ePP	PnPn	20 00 26.4	-1.2
UZB				eS	S	20 04 07.5	+5.3
UZB				LR	LR	20 10 16.7	
	comp=Z,159nm,11.2s						
IPM	Ipoh	21.79	162	eP	P	20 00 04.4	-1.4
QZH	Quanzhou	21.89	86	⇑P	P	20 00 04.9	-1.9
QZH				PP	sP	20 00 27.1	+1.4
QZH				S	S	20 04 03.3	-2.5
QZH				SS	SnSn	20 04 36.0	+1.8
QZH				LR	LR		
	comp=Z,5µm,9.8s						
QZH				LR	LR		
	comp=Z,1µm,11.1s						
QZH				LR	LR		
	comp=Z,2µm,6.9s						
KDJ	Kajisay	21.89	324	eP	P	20 00 07.3	+0.4
	comp=Z,283nm,1.0s						
SATY	Saty	21.93	327	⇑iP	P	20 00 07.8	+0.6
	comp=Z,39nm,1.0s						
SATY				ePP	PnPn	20 00 29.7	-1.0
SATY				eS	S	20 04 12.1	+5.5
SATY				LR	LR	20 10 34.9	
	comp=Z,153nm,10.7s						
ZHN	Zhinishke	22.00	327	⇑iP	P	20 00 08.3	+0.3
	comp=Z,19nm,1.3s						
ZHN				ePP	PnPn	20 00 30.4	-1.2
ZHN				eS	S	20 04 13.2	+5.4
ZHN				LR	LR	20 10 19.8	
	comp=Z,68nm,8.7s						
KCSI	Kotacane, Aceh	22.03	171	P	P	20 00 09.6	+1.2
	comp=Z,150nm,0.8s,comp=Z,2µm						
KPKS	Kokpek	22.10	328	⇑iP	P	20 00 09.2	+0.1
	comp=Z,47nm,1.3s						
TSI	Tuntungan	22.18	169	P	P	20 00 11.1	+1.1
	comp=Z,503nm,0.9s,comp=Z,5µm						
TPTI		22.21	173	P	P	20 00 11.1	+0.7
	comp=Z,111nm,0.8s,comp=Z,2µm						
TIA	Tai’an	22.21	56	P	P	20 00 08.9	-1.4
TIA				S	S	20 04 08.4	-3.3
TIA				pmax	pmax		
	comp=Z,28nm,0.9s						
TIA				LR	LR		
	comp=Z,800nm,6.3s						
TIA				LR	LR		
	comp=Z,1µm,12.1s						
TIA				LR	LR		
	comp=Z,2µm,16.8s						
PALK	Pallekele	22.31	218	P	P	20 00 10.4	-1.0
	comp=Z,30nm,0.8s,baz=116,slow=2.5,SNR=12						
PALK				S	S	20 04 08.6	-5.0
	comp=Z,18nm,0.9s,baz=295,slow=3.2,SNR=5.0						
PALK				ScP	ScP	20 07 40.2	+1.4
	comp=Z,22nm,1.0s,baz=117,slow=2.5,SNR=3.8						
PALK				LR	LR	20 11 26.1	
	comp=Z,2µm,20.1s,baz=120,slow=43						
PALK	Pallekele	22.31	218	eP	P	20 00 12.3	+0.8
	comp=Z,159nm,1.1s						
PALK				S	S	20 04 08.6	-5.0
PALK				ScP	ScP	20 07 40.2	+1.4
PALK	Pallekele	22.31	218	i P	P	20 00 12.7	+1.2
	SNR=14						
PALK	Pallekele	22.31	218	ceP	P	20 00 13.0	+1.5

NJ2	**Nanjing**	22.40	67	*e*P	P	20 00 08.9	-3.4
NJ2				pP	pP	20 00 12.9	-11
NJ2				sP	sP	20 00 15.3	-16
NJ2				S	S	20 04 06.9	-8.0
NJ2				SS	SnSn	20 04 50.6	+4.0
NJ2				pmax	pmax		
	comp=Z,29nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,280nm,4.3s						
NJ2				LR	LR		
	comp=Z,6µm,15.2s						
NJ2				LR	LR		
	comp=Z,2µm,10.8s						
NJ2				LR	LR		
	comp=Z,2µm,11.4s						
ULHL	**Ulahol**	22.48	323	P	P	20 00 14.4	+1.1
	SNR=13						
MDOK	**Medeo**	22.69	326	*i* P	P	20 00 15.7	+0.3
	comp=Z,437nm,0.8s						
MDOK				*e*S	S	20 04 26.0	+6.0
MDOK				*e*SS	SnSn	20 04 58.1	+4.2
AAA	**Alma-Ata**	22.79	325	*e*P	P	20 00 17.4	+1.0
	comp=Z,41nm,1.0s						
AAA				LR	LR	20 11 52.1	
	comp=Z,253nm,9.5s						
AAA	**Alma-Ata**	22.79	325	*e*P	P	20 00 17.4	+1.0
AAA				*e*S	S	20 04 22.1	+0.6
AAA				pmax	pmax		
	comp=Z,200nm,3.0s						
AAA				smax	smax		
	comp=E,1µm,9.4s						
AAA				MLR	MLR		
	comp=Z,500nm,10.0s						
KZA	**Kyzart**	22.92	321	P	P	20 00 20.2	+2.1
	SNR=17						
PSI	**Prapat**	22.93	168	P	P	20 00 19.3	+1.2
	comp=Z,28nm,0.5s,baz=0.1,slow=7.7,SNR=29						
PSI				pP	pP	20 00 31.3	+1.0
	comp=Z,43nm,0.7s,baz=0.1,slow=3.2,SNR=8.8						
PSI				S	S	20 04 23.5	-0.8
	comp=Z,9.5nm,0.7s,baz=180,slow=19,SNR=7.3						
PSI				ScP	ScP	20 07 39.5	-0.9
	comp=Z,18nm,0.7s,baz=360,slow=6.6,SNR=9.1						
PSI	**Prapat**	22.93	168	*e*P	P	20 00 17.6	-0.4
	comp=Z,137nm,1.0s						
PSI				pP	pP	20 00 31.3	+1.0
PSI				*e*S	S	20 04 22.6	-1.7
PSI				*e*ScP	ScP	20 07 39.2	-1.3
SNSI	**Sinabang, Aceh**	22.97	175	P	P	20 00 21.5	+3.1
ZSN	**Zaisan**	23.23	343	*e*P	P	20 00 21.6	+0.8
	comp=Z,5.5nm,1.0s						
ZSN				*e*PP	PnPn	20 00 47.6	-0.7
TKM2	**Tokmak 2**	23.28	323	P	P	20 00 22.0	+0.5
	SNR=57						
BJT	**Baijiatuau**	23.29	46	*e*P	P	20 00 20.7	-0.7
	comp=Z,170nm,1.1s						
BJT				LR	LR		
	comp=Z,2µm,20.0s						
BJT	**Baijiatuau**	23.29	46	*e*P	P	20 00 20.7	-0.7
BJT				pmax	pmax		
	comp=Z,170nm,1.1s						
BJT				MLR	MLR		
	comp=Z,2µm,20.0s						
BJI	**Beijing**	23.31	46	P	P	20 00 21.3	-0.2
BJI				S	S	20 04 30.3	+0.3
BJI				pmax	pmax		
	comp=Z,96nm,1.0s						
BJI				LR	LR		
	comp=Z,4µm,17.7s						
BJI				LR	LR		
	comp=Z,3µm,22.5s						
BJI				LR	LR		
	comp=Z,1µm,32.7s						
MK01	**Makanchi Array**	23.37	339	*e*P	P	20 00 21.7	-0.4
MK31	**Makanchi Array**	23.40	339	*e*P	P	20 00 21.9	-0.4
MK31	**Makanchi Array**	23.40	339	*e*P	P	20 00 21.9	-0.4
MK32	**Makanchi Array**	23.40	339	*e*P	P	20 00 21.9	-0.4
MK32				*e*pP	pP	20 00 35.5	+0.5
MK32				*e*S	S	20 04 31.1	-0.4
MK32				*e*ScP	ScP	20 07 40.2	-0.9
MKAR	**Makanchi Array**	23.40	339	P	P	20 00 21.9	-0.4
	comp=Z,28nm,0.5s,baz=153,slow=9.3,SNR=94						
MKAR				pP	pP	20 00 35.5	+0.5
	comp=Z,124nm,0.8s,baz=146,slow=12,SNR=37						
MKAR				S	S	20 04 31.1	-0.4
	comp=Z,9.8nm,0.9s,baz=180,slow=1.4,SNR=3.5						
MKAR				ScP	ScP	20 07 40.2	-0.9
	comp=Z,7.8nm,0.9s,baz=177,slow=1.9,SNR=6.8						
MKAR	**Makanchi Array**	23.40	339	*e*P	P	20 00 22.0	-0.4
	comp=Z,1µm,0.9s						
MKAR				pP	pP	20 00 35.5	+0.5
MKAR				S	S	20 04 31.1	-0.4
MKAR				ScP	ScP	20 07 40.2	-0.9
TDK	**Taldyqorghan**	23.41	331	*e*P	P	20 00 22.4	-0.1
	comp=Z,20nm,1.2s						
TDK				*e*PP	PnPn	20 00 49.4	-1.4
TDK				*e*S	S	20 04 37.5	+5.8
TDK				LR	LR	20 11 15.7	
	comp=Z,368nm,9.8s						
UCH	**Uchtor**	23.43	321	P	P	20 00 24.8	+1.6
	SNR=6.9						
KBK	**Karagaybulak**	23.46	322	P	P	20 00 24.1	+0.9
	SNR=19						
MAKZ	**Makanchi**	23.51	338	*e*P	P	20 00 23.3	-0.1
	comp=Z,178nm,0.9s						
KUU	**Kurty**	23.57	326	⇑*i*P	P	20 00 23.8	-0.1
	comp=Z,20nm,1.1s						
KUU				*e*PP	PnPn	20 00 51.3	-1.7
KUU				*e*S	S	20 04 40.0	+5.7
KUU				LR	LR	20 10 57.5	
	comp=Z,303nm,9.7s						
AAK	**Ala-Archa**	23.71	321	P	P	20 00 26.4	+1.0
	comp=Z,18nm,0.5s,baz=125,slow=8.2,SNR=67						
AAK				pP	pP	20 00 38.4	-0.1
	comp=Z,48nm,0.7s,baz=132,slow=13,SNR=12						
AAK				S	S	20 04 36.5	-0.3
	comp=Z,5.8nm,0.9s,baz=232,slow=19,SNR=1.6						
AAK				LR	LR	20 09 32.6	
	comp=Z,293nm,19.1s,baz=120,slow=36						
AAK	**Ala-Archa**	23.71	321	P	P	20 00 27.9	+2.4
	SNR=21						
AAK	**Ala-Archa**	23.71	321	*e*P	P	20 00 26.0	+0.6
	comp=Z,153nm,1.0s						
AAK				*e*pP	pP	20 00 38.4	-0.1
AAK				*e*S	S	20 04 36.5	-0.3
KBL	**Kabul**	23.72	298	*e*P	P	20 00 25.5	-0.2
	comp=Z,267nm,0.9s						
KBL	**Kabul**	23.72	298	*e*P	P	20 00 25.5	-0.2
KBL				pmax	pmax		
	comp=Z,270nm,0.9s						
FRU1	**Bishkek**	23.74	322	*e*P	P	20 00 26.1	+0.5
	comp=Z,160nm,0.8s						
FRU	**Bishkek**	23.76	322	*e*P	P	20 00 27.0	+1.2
FRU				*e*		20 00 46.0	
FRU				pmax	pmax		
	comp=Z,165nm,1.9s						
FRU				MLR	MLR		
	comp=E,1µm,10.0s						
CHMS	**Chumysh**	23.80	322	P	P	20 00 26.5	+0.4
	SNR=14						
AML	**Almayashu**	23.85	319	P	P	20 00 27.9	+0.9
	SNR=16						
TPUB	**Ta-pu**	23.97	90	*e*P	P	20 00 26.5	-1.4
	comp=E,117nm,1.2s						
USP	**Ospenovka**	24.11	322	P	P	20 00 29.8	+0.8
	SNR=17						
EKS2	**Erkin-Say**	24.13	321	P	P	20 00 30.7	+1.4
	SNR=54						
SSLB	**Suanglung**	24.18	88	*e*P	P	20 00 28.6	-1.2
	comp=E,43nm,1.0s						
GSI	**Gunungsitoli**	24.19	172	P	P	20 00 30.8	+1.0
	comp=E,210nm,1.0s,comp=E,4µm						
GSI	**Gunungsitoli**	24.19	172	*e*P	P	20 00 30.4	+0.6
	comp=E,383nm,1.2s						
SSE	**Sheshan**	24.22	70	P	P	20 00 29.5	-0.5
SSE				S	S	20 04 49.4	+4.5
SSE				pmax	pmax		
	comp=E,17nm,0.8s						
SSE				pmax	pmax		
	comp=E,220nm,4.3s						
SSE				LR	LR		
	comp=E,1µm,16.0s						
SSE				LR	LR		
	comp=E,450nm,15.7s						
SONA0	**Songino Array**	24.28	20	*e*P	P	20 00 31.2	+0.7
SONA0				*e*ScP	ScP	20 07 43.3	-0.3
SONM	**Songino Array**	24.28	20	P	P	20 00 31.2	+0.7
	comp=E,40nm,0.9s,baz=200,slow=9.3,SNR=188						
SONM				ScP	ScP	20 07 43.3	-0.3
	comp=E,6.1nm,0.8s,baz=201,slow=3.7,SNR=9.3						
SONA1	**Songino Array**	24.29	20	*e*P	P	20 00 30.8	+0.1
YHNB	**Yeheng**	24.43	86	*e*P	P	20 00 33.0	+0.8
	comp=E,97nm,1.2s						
TWG	**Pinlang**	24.46	90	*e*P	P	20 00 32.1	-0.3
	comp=E,514nm,1.0s						
TATO	**Taipei**	24.49	85	*e*P	P	20 00 30.0	-2.6
	comp=E,478nm,2.0s						
TATO				LR	LR		
	comp=Z,2µm,20.0s						
ULN	**Ulaanbaatar**	24.51	21	*e*P	P	20 00 33.1	+0.3
	comp=Z,121nm,1.0s						
ULN				LR	LR		
	comp=Z,866nm,19.0s						
ULN	**Ulaanbaatar**	24.51	21	P	P	20 00 33.7	+1.0
	SNR=30						
ULN	**Ulaanbaatar**	24.51	21	*de*P	P	20 00 33.0	+0.3
ULN				pmax	pmax		
	comp=Z,48nm,1.0s						
YULB	**Yu-li**	24.56	89	*e*P	P	20 00 32.7	-0.5
	comp=Z,53nm,0.8s						
NACB	**Ninganchiao**	24.70	87	*e*P	P	20 00 33.9	-0.6
	comp=Z,101nm,0.9s						
DGZ	**Jazzator, Alta**	24.82	349	*i* P	P	20 00 36.4	+0.9
DGZ				pmax	pmax		
	comp=Z,26nm,0.9s						
MNSI	**Mandailing Nat**	25.00	168	P	P	20 00 36.1	-1.2
	comp=Z,114nm,0.9s,comp=Z,1µm						
BTLS	**Baital**	25.54	325	⇑*i*P	P	20 00 42.0	0.0
	comp=Z,12nm,0.9s						
PBSI	**Pulau Batu**	25.62	171	P	P	20 00 45.7	+2.9
HVS	**Khovu-Aksy**	25.66	359	*c* *i*P	P	20 00 46.9	+3.9
HVS				pmax	pmax		
	comp=Z,281nm,0.9s						
BKNI	**Bangkinang**	25.78	165	P	P	20 00 47.5	+3.2
BKNI	**Bangkinang**	25.78	165	*e*P	P	20 00 42.8	-1.5
	comp=Z,207nm,1.2s						
ZAK	**Zakamensk**	25.83	13	*e*P	P	20 00 46.0	+1.4
ZAK				pmax	pmax		
	comp=Z,35nm,1.6s						
YOJ	**Yonaguni jima**	25.93	86	*e*P	P	20 00 43.9	-1.8
	comp=Z,312nm,1.6s						
YOJ	**Yonaguni jima**	25.93	86	*e*P	P	20 00 43.9	-1.8
YOJ				pmax	pmax		
	comp=Z,310nm,1.6s						
IUG	**Iuzhnay**	26.10	316	⇑*i*P	P	20 00 48.1	+1.0
	comp=Z,28nm,0.9s						
TPRI	**Tanjung Pinang**	26.26	157	P	P	20 00 48.0	-0.7
	comp=Z,75nm,1.1s,comp=Z,1µm						
KK31	**Karatay Array**	26.32	318	*e*P	P	20 00 49.0	0.0
KK31	**Karatay Array**	26.32	318	*e*P	P	20 00 49.0	0.0
KKAR	**Karatay Array**	26.32	318	*e*P	P	20 00 49.3	+0.3
KKAR	**Karatay Array**	26.32	318	*e*P	P	20 00 49.3	+0.3
DL2	**Dalian**	26.55	53	⇓*i*P	P	20 00 50.9	-0.2
DL2				S	S	20 05 26.6	+4.8
DL2				pmax	pmax		
	comp=Z,110nm,0.6s						
DL2				pmax	pmax		
	comp=Z,74nm,6.0s						
DL2				LR	LR		
	comp=Z,1µm,23.1s						
DL2				LR	LR		
	comp=Z,1µm,22.4s						
DL2				LR	LR		
	comp=Z,1µm,19.5s						
MOY	**Mondy**	26.67	9	*e*P	P	20 00 53.7	+1.6
MOY				pmax	pmax		
	comp=Z,44nm,1.4s						
SISI	**Saibi**	26.99	170	P	P	20 00 58.0	+2.8
	comp=Z,80nm,1.4s						
TLY	**Talaya**	27.13	13	*e*P	P	20 00 54.9	-1.3
	comp=Z,108nm,1.5s						
TLY				LR	LR		
	comp=Z,377nm,19.0s						
TLY	**Talaya**	27.13	13	*e*P	P	20 00 58.2	+2.0
TLY				*e*S	S	20 05 25.0	-5.8
TLY				*e*SS	SnSn	20 05 49.4	-53
TLY				pmax	pmax		
	comp=Z,16nm,1.5s						
TLY				MLR	MLR		
	comp=Z,496nm,13.0s						
SEM	**Semipalatinsk**	27.22	340	*e*P	P	20 00 58.6	+1.4
	comp=Z,3.1nm,0.9s						
SEM				LR	LR	20 12 18.0	
	comp=Z,210nm,10.7s						
TGY	**Tagaytay City**	27.34	109	P	P	20 00 58.7	+0.2
	comp=Z,61nm,0.4s,baz=101,slow=4.9,SNR=5.0						
IRK	**Irkutsk**	27.79	13	*e*P	P	20 01 03.7	+1.6
IRK				pmax	pmax		
	comp=Z,162nm,2.8s						
KURBB	**Kurchatov Arra**	27.96	338	P	P	20 01 04.1	+0.5
	comp=Z,8.2nm,0.7s,baz=148,slow=8.9,SNR=25						
KURBB				pP	pP	20 01 16.4	-0.6
	comp=Z,50nm,0.8s,baz=152,slow=9.4,SNR=11						
KURBB				ScP	ScP	20 07 53.9	-0.2
	comp=Z,10nm,0.9s,baz=153,slow=2.8,SNR=12						
KURK	**Kurchatov**	28.01	338	*e*P	P	20 01 04.1	+0.1
KURK				*e*pP	pP	20 01 16.4	-1.1
KURK				*e*ScP	ScP	20 07 53.9	-0.3
KURK	**Kurchatov**	28.01	338	*ce*P	P	20 01 05.0	+1.0
KURK				pmax	pmax		
	comp=Z,18nm,1.0s						
KRJI	**Kerinci**	28.21	165	P	P	20 01 10.1	+3.9
KSM	**Kuching**	28.34	145	*e*P	P	20 01 07.3	+0.1
	comp=Z,112nm,1.3s						
KKM	**Kota Kinabalu**	28.41	129	*e*P	P	20 01 08.3	+0.2
PPSI	**Pulau Pagai**	28.56	168	P	P	20 01 10.7	+1.5
	comp=Z,299nm,0.7s,comp=Z,5µm						
ZAA0	**Zalesovo Array**	29.36	348	*e*P	P	20 01 16.7	+0.7
	comp=Z,115nm,1.3s						
ZALV	**Zalesovo Beam**	29.36	348	P	P	20 01 17.0	+1.1
	comp=Z,3.2nm,0.5s,baz=178,slow=7.4,SNR=22						
ZALV				pP	pP	20 01 29.1	-0.4
	comp=Z,24nm,0.6s,baz=169,slow=8.7,SNR=21						
ZALV				LR	LR	20 13 11.3	
	comp=Z,316nm,20.7s,baz=220,slow=36						
ZALV	**Zalesovo Beam**	29.36	348	*e*P	P	20 01 16.1	+0.2
ZALV				pP	pP	20 01 29.1	-0.4
ZAA1	**Zalesovo Array**	29.36	348	*e*P	P	20 01 17.0	+1.0
ZAA1				*e*pP	pP	20 01 29.1	-0.4
BRZS	**Berezniki**	29.72	331	⇑*i*P	P	20 01 20.0	+0.7
	comp=Z,15nm,1.3s						
BRZS				LR	LR	20 15 05.1	
	comp=Z,169nm,11.6s						
INCN	**Inchon**	29.85	58	PFAKE		20 01 30.0	+9.4
INCN				LR	LR		
	comp=Z,1µm,21.0s						
STKI	**Sintang**	30.14	144	P	P	20 01 24.3	+1.0
	comp=Z,87nm,1.2s						
TJN	**Taejon**	30.17	61	*i* P	P	20 01 22.1	-1.3
JOW	**Kunigami**	30.39	80	P	P	20 01 20.7	-4.7
	comp=Z,15nm,0.4s,baz=286,slow=8.6,SNR=9.8						
JOW				LR	LR	20 14 27.6	
	comp=Z,478nm,21.5s,baz=267,slow=38						
JOW	**Kunigami**	30.39	80	*e*P	P	20 01 22.8	-2.6
	comp=Z,27nm,0.7s						
NVS	**Novosibirsk**	30.51	347	*e*P	P	20 01 26.6	+0.5
NVS				*e*S	S	20 06 20.1	-3.5
NVS				*e*		20 11 54.4	
NVS				pmax	pmax		
	comp=N,97nm,1.4s						
NVS				pmax	pmax		
	comp=Z,126nm,1.4s						
NVS				pmax	pmax		
	comp=E,69nm,1.6s						
NVS				smax	smax		
	comp=N,21nm,1.5s						
NVS				smax	smax		
	comp=E,46nm,1.6s						
KRAR	**Krasnoyarsk**	30.56	358	*i* P	P	20 01 28.7	+2.1
MYLDM	**Lahad Datu**	30.64	127	*e*P	P	20 01 27.9	+0.2
KS15	**Wonju Array Si**	30.81	59	*e*P	P	20 01 26.2	-2.7
KSAR	**Wonju Array Be**	30.81	59	P	P	20 01 25.6	-3.4
KSAR				ScP	ScP	20 08 02.5	-1.0
KSAR	**Wonju Array Be**	30.81	59	P	P	20 01 25.6	-3.4
KSRS	**Korea Array**	30.84	59	P	P	20 01 25.6	-3.7
	comp=E,2.9nm,0.5s,baz=250,slow=8.7,SNR=16						
KSRS				ScP	ScP	20 08 02.5	-1.1
	comp=E,3.8nm,1.1s,baz=256,slow=3.6,SNR=4.5						
KSRS				LR	LR	20 15 10.8	
	comp=E,1µm,18.3s,baz=256,slow=39						
HIA	**Hailar**	30.90	33	*e*P	P	20 01 30.0	+0.3
	comp=E,31nm,0.6s						
HIA				LR	LR		
	comp=Z,2µm,19.0s						
HIA	**Hailar**	30.90	33	*e*P	P	20 01 30.0	+0.3
HIA				pmax	pmax		
	comp=Z,31nm,0.6s						
HIA				MLR	MLR		
	comp=Z,2µm,19.0s						
CN2	**Changchun**	31.18	46	*e*P	P	20 01 31.3	-0.9
CN2				*e*S	S	20 06 30.8	-3.6
CN2				pmax	pmax		
	comp=Z,50nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,6.0s						
CN2				LR	LR		
	comp=Z,1µm,18.0s						
CN2				LR	LR		
	comp=Z,770nm,18.0s						
CN2				LR	LR		
	comp=Z,730nm,18.0s						
MDSI	**Maura Dua**	31.22	161	P	P	20 01 31.0	-1.8
	comp=Z,42nm,0.9s						
LWLI	**Liwa**	31.69	161	P	P	20 01 35.6	-1.5
	comp=Z,109nm,0.8s,comp=Z,4µm						
JNU	**Nakatsue**	32.60	68	P	P	20 01 43.9	-0.9
	comp=Z,10nm,0.7s,baz=224,slow=3.1,SNR=4.1						
JNU				PcP	PcP	20 04 28.4	-1.8
	comp=Z,16nm,0.8s,baz=150,slow=1.9,SNR=4.1						
JNU				LR	LR	20 15 02.7	
	comp=Z,1µm,21.4s,baz=302,slow=36						
JNU	**Nakatsue**	32.60	68	*e*P	P	20 01 43.5	-1.3
	comp=Z,38nm,0.8s						
JNU				*e*PcP	PcP	20 04 29.5	-0.7
PBKI	**Pangkalan Bun**	32.60	147	P	P	20 01 47.0	+2.1
	comp=Z,131nm,1.2s,comp=Z,1µm						
WSAR	**Wadi Sarin**	32.61	274	P	P	20 01 46.1	+1.0
	comp=Z,5.5nm,0.9s,baz=18,slow=9.6,SNR=3.3						
MTKI	**Muara Teweh, K**	32.87	140	P	P	20 01 47.9	+0.6
	comp=Z,143nm,1.1s,comp=Z,1µm						
BVAR	**Borovoye Array**	32.93	333	P	P	20 01 47.5	0.0
	comp=Z,3.1nm,0.5s,baz=140,slow=12,SNR=26						
BVAR				pP	pP	20 02 01.2	+0.1
	comp=Z,9.5nm,0.7s,baz=132,slow=8.6,SNR=11						
BVAR				ScP	ScP	20 08 10.9	+0.5
	comp=Z,6.7nm,0.8s,baz=149,slow=5.9,SNR=8.4						
BRVK	**Borovoye**	33.00	333	*e*P	P	20 01 47.9	-0.1
	comp=Z,32nm,0.8s						
BRVK				LR	LR		
	comp=Z,339nm,22.0s						
BRVK	**Borovoye**	33.00	333	P	pP	20 02 00.4	-1.2
	SNR=6.1						
BRVK	**Borovoye**	33.00	333	*e*P	P	20 01 47.9	-0.1
BRVK				pmax	pmax		
	comp=Z,32nm,0.8s						
BIDO	**Bidbid**	33.01	274	P	pP	20 02 04.1	+2.0
	SNR=6.2						
GEYT	**Alibeck**	33.09	301	P	P	20 01 49.9	+0.8
	comp=Z,8.0nm,0.9s,baz=102,slow=12,SNR=22						
GEYT				pP	pP	20 02 03.0	+0.3
	comp=Z,16nm,1.0s,baz=111,slow=8.1,SNR=11						
GYA0B	**ALIBECK ARRAY**	33.09	301	*e*P	P	20 01 49.9	+0.8
	comp=Z,74nm,1.1s						
MDJ	**Mudanjiang**	34.23	47	P	P	20 01 55.3	-3.6
MDJ				pP	pP	20 02 00.4	-12
MDJ				sP	sP	20 02 03.8	-15
MDJ				PP	PnPn	20 03 11.8	-2.5
MDJ				S	S	20 07 26.1	+4.2
MDJ				sS	sS	20 07 32.4	-13
MDJ				pmax	pmax		
	comp=Z,66nm,1.4s						
MDJ				LR	LR		
	comp=Z,1µm,22.1s						
MDJ				LR	LR		
	comp=Z,310nm,11.1s						
MDJ				LR	LR		
	comp=Z,770nm,13.5s						
MDJ	**Mudanjiang**	34.23	47	*e*P	P	20 01 58.2	-0.6
	comp=Z,55nm,1.0s						
MDJ				LR	LR		
	comp=Z,151nm,20.0s						
BKB	**Balikpapan**	34.33	137	P	P	20 02 01.1	+1.2
	comp=Z,304nm,1.1s						
MSFE	**Esma-Masafi**	34.47	278	P	P	20 02 02.2	+0.9
UOSS	**Minazif**	34.49	278	*e*P	P	20 02 05.7	+4.3
	comp=Z,28nm,1.1s						
UOSS	**Minazif**	34.49	278	P	P	20 02 00.9	-0.6
LEM	**Lembang**	34.55	156	P	P	20 02 02.3	+0.3
	comp=Z,13nm,0.6s,baz=300,slow=20,SNR=2.1						
HATD	**Hatta, Dubai**	34.58	277	P	P	20 02 03.9	+1.8
MSHR	**Mys Shultsa**	34.60	51	*ce*P	P	20 02 00.5	-1.6
ASHO	**Ashiyiah**	34.67	277	P	pP	20 02 18.7	+2.1
	SNR=5.9						
ASHO	**Ashiyiah**	34.67	277	*i* P	P	20 02 04.3	+1.4
	SNR=7.8						
DAV	**Davao City (W)**	34.91	116	PFAKE		20 02 20.0	+15
DAV				LR	LR		
	comp=Z,2µm,19.0s						
MPSI	**Mapaga**	35.05	131	P	P	20 02 09.2	+3.0
BOD	**Bodaibo**	35.24	18	*e*P	P	20 02 08.6	+1.2
BOD				*e*		20 02 27.6	
ASUD	**Al Ashush, Dub**	35.33	277	*i* P	P	20 02 10.1	+1.5
	SNR=6.0						
KPJI	**Karang Pucung**	35.51	155	P	P	20 02 11.1	+1.0
	comp=Z,135nm,1.0s						
KBKI	**Kotabaru**	35.52	140	P	P	20 02 11.8	+1.6
	comp=Z,62nm,1.2s,comp=Z,530nm						
USA0B	**Ussuriysk Arra**	35.69	49	*e*P	P	20 02 10.7	-0.7
	comp=Z,108nm,0.9s						
USRK	**Ussuriysk Ar.**	35.69	49	P	P	20 02 11.1	-0.3
	comp=Z,79nm,0.8s,baz=247,slow=8.5						
USRK				LR	LR	20 17 47.0	
	comp=Z,466nm,19.8s,baz=242,slow=38						
ABKAR	**Akbulak array**	35.79	321	*e*P	P	20 02 12.6	+0.3
SMRI	**Semarang**	35.86	152	P	P	20 02 15.8	+2.6
	comp=Z,222nm,0.8s						
SMRI	**Semarang**	35.86	152	*e*P	P	20 02 14.5	+1.3
	comp=Z,180nm,0.9s						
PCI	**Palu**	35.93	133	P	P	20 02 16.8	+3.0
MRSI	**Marisa**	36.37	129	P	P	20 02 18.1	+0.6
	comp=Z,31nm,1.3s,comp=Z,364nm						
APSI	**Ampana**	37.15	131	P	P	20 02 25.4	+1.2
	comp=Z,86nm,1.2s,comp=Z,845nm						
ZEA	**Zeya**	37.35	32	*e*P	P	20 02 27.7	+2.2
ZEA				*e*		20 02 46.0	
ZEA				pmax	pmax		
	comp=N,18nm,1.0s						
ZEA				pmax	pmax		
	comp=E,18nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,20nm,1.0s						
ZEA				MLR	MLR		
	comp=E,800nm,15.0s						
ZEA				MLR	MLR		
	comp=Z,2µm,15.0s						
ZEA				MLR	MLR		
	comp=N,1µm,12.0s						
AKTO	**Aktyubinsk**	37.45	321	P	P	20 02 26.3	0.0
	comp=N,10nm,0.8s,baz=122,slow=10,SNR=17						
AKTO				pP	pP	20 02 40.2	+0.1
	comp=N,41nm,0.8s,baz=113,slow=9.1,SNR=22						
AKTO				LR	LR	20 21 07.0	
	comp=N,464nm,18.4s,baz=119,slow=41						
KLR	**Kul'dur**	37.45	41	P	P	20 02 26.6	+0.2
	comp=N,2.7nm,0.9s,baz=264,slow=9.2,SNR=86						
KLR				pP	pP	20 02 40.1	-0.1
	comp=N,1.4nm,0.7s,baz=276,slow=8.2,SNR=10						
KLR				ScP	ScP	20 08 24.3	-2.5
	comp=N,0.2nm,0.5s,baz=238,slow=4.0,SNR=5.5						
KLR	**Kul'dur**	37.45	41	*c* *i*P	P	20 02 26.3	-0.1
TTSI	**Tana Toraja**	37.53	135	P	P	20 02 28.2	+0.8
	comp=N,181nm,1.0s,comp=N,2µm						
KMSI	**Cibinong**	37.76	126	P	P	20 02 31.3	+2.0
	comp=N,413nm,1.1s,comp=N,4µm						
INU	**Inuyama**	37.81	65	*e*P	P	20 02 28.6	-1.0
	comp=N,27nm,0.8s						
LUWI	**Luwuk**	38.02	130	P	P	20 02 31.8	+0.2
	comp=N,213nm,1.5s,comp=N,3µm						
LUWI	**Luwuk**	38.02	130	*e*P	P	20 02 30.9	-0.6
	comp=N,300nm,1.2s						
SPSI	**Sidrap Palu**	38.21	136	P	P	20 02 33.6	+0.5
	comp=N,113nm,1.3s,comp=N,1µm						
JAGI	**Jajag, Banyuwa**	38.80	148	*e*P	P	20 02 37.2	-0.9
	comp=N,114nm,1.3s						
MJB9	**Matsu-Tunnel**	38.85	63	*e*P	P	20 02 36.5	-1.8
	comp=N,37nm,0.8s						
MJB9				*e*S	S	20 08 28.8	-3.7
MAJO	**Matsushiro**	38.85	63	*e*P	P	20 02 36.6	-1.7
	comp=N,37nm,0.8s						

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MAJO                                eS      S       20 08 29.0  -3.5
MAJO                                 LR     LR
      comp=Z,589nm,20.0s
MAJO  Matsushiro        38.85   63  i P     P       20 02 37.1  -1.2
MAJO                                 pmax   pmax
      comp=Z,27nm,1.2s
MAT   Matsushiro        38.85   63   P      P       20 02 35.6  -2.7
MAT                                  S      S       20 08 26.2  -6.4
MJAR  Matsushiro Arr    38.85   63   P      P       20 02 36.2  -2.1
      comp=Z,15nm,1.0s,baz=272,slow=11,SNR=33
MJAR                                 ScP    ScP     20 08 29.7  -2.7
      comp=Z,7.7nm,0.9s,baz=258,slow=5.2,SNR=11
KAPI  Kappang           39.02  137   PFAKE          20 02 50.0  +10
KAPI                                 LR     LR
      comp=Z,434nm,19.0s
TEY   Ternei            39.09   49⇑eP      P       20 02 40.4  +0.3
TEY                                  pmax   pmax
      comp=N,10.0nm,1.5s
TEY                                  pmax   pmax
      comp=Z,60nm,1.1s
TEY                                  pmax   pmax
      comp=E,20nm,1.2s
BKSI  Bulukumba         39.49  137   P      P       20 02 43.7  -0.1
      comp=E,48nm,1.2s,comp=E,472nm
SVE   Sverdlovsk        39.64  331ceP      P       20 02 46.1  +1.5
SVE                                  pmax   pmax
      comp=Z,146nm,0.9s
SVE                                  MLR    MLR
      comp=Z,568nm,11.0s
KDI   Kendari           40.04  133   P      P       20 02 49.5  +1.1
      comp=Z,44nm,0.9s
TNTI  Ternate           40.16  122   P      P       20 02 49.1  -0.3
      comp=Z,83nm,1.4s,comp=Z,938nm
TNTI  Ternate           40.16  122  eP      P       20 02 48.1  -1.3
      comp=Z,119nm,1.3s
ARU   Arti              40.33  330   P      P       20 02 45.3  -5.0
      comp=Z,0.6nm,0.3s,baz=114,slow=6.1,SNR=1.6
ARU                                  LR     LR      20 22 43.2
      comp=Z,210nm,20.4s,baz=116,slow=41
ARU   Arti              40.33  330c iP      P       20 02 50.7  +0.4
ARU                                                 20 04 20.8
ARU                                                 20 04 50.1
ARU                                  S      S       20 09 00.4  +6.3
ARU                                  SS     SS      20 11 56.8  +2.6
ARU                                  SSS    SSS     20 12 29.3
ARU                                  pmax   pmax
      comp=Z,35nm,1.7s
ARU                                  MLR    MLR
      comp=Z,357nm,18.0s
TWSI  Taliwang, Sumb    40.41  144   P      P       20 02 52.4  +1.0
      comp=Z,50nm,1.1s
GRNR  Gornyy            40.84   41⇑iP      P       20 02 57.3  +2.7
GRNR                                 pmax   pmax
      comp=E,120nm,0.9s
GRNR                                 pmax   pmax
      comp=Z,200nm,0.9s
PLAI  Plampang          40.96  143   P      P       20 02 57.0  +1.0
      comp=Z,125nm,0.9s
LBMI  Labuha            41.17  124   P      P       20 02 57.9  +0.1
      comp=Z,64nm,1.0s,comp=Z,880nm
AKT   Akhty             41.58  305  eP      P       20 03 01.6  +0.6
AKT                                 e               20 03 13.9
AKT                                 e               20 04 36.3
AKT                                 e               20 04 55.8
AKT                                 eS      S       20 09 18.2  +4.8
AKT                                  pmax   pmax
      comp=Z,66nm,0.9s
WBSI  Waikabubak, Su    42.52  142   P      P       20 03 07.2  -1.6
      comp=Z,384nm,1.1s,comp=Z,3µm
WSI   Waingapu          43.05  141   P      P       20 03 11.1  -1.9
      comp=Z,457nm,1.0s,comp=Z,4µm
ASAJ  Asahikawa         43.07   52   P      P       20 03 12.5  -0.4
      comp=Z,57nm,0.7s,baz=255,slow=5.7,SNR=71
ASAJ                                 LR     LR      20 22 44.4
      comp=Z,368nm,18.7s,baz=255,slow=38
ASAJ  Asahikawa         43.07   52  eP      P       20 03 11.8  -1.1
      comp=Z,70nm,0.8s
ASAJ                                eS      S       20 09 34.3  -0.8
EDFI  Ende, Flores      43.13  138   P      P       20 03 11.3  -2.5
      comp=Z,63nm,1.2s
ERM   Erimo             43.19   55  eP      P       20 03 12.3  -1.5
      comp=Z,209nm,1.7s
ERM                                  LR     LR
      comp=Z,330nm,20.0s
ERM   Erimo             43.19   55d iP      P       20 03 13.4  -0.5
ERM                                  pmax   pmax
      comp=Z,21nm,0.5s
MMRI  Maumere           43.37  138   P      P       20 03 14.7  -0.9
      comp=Z,168nm,1.4s,comp=Z,2µm
MMRI  Maumere           43.37  138  eP      P       20 03 13.1  -2.5
      comp=Z,120nm,0.8s
YAK   Yakutsk           43.55   23   P      P       20 03 17.1  +0.6
      comp=Z,16nm,0.6s,baz=301,slow=3.6,SNR=9.7
YAK   Yakutsk           43.55   23  eP      P       20 03 17.0  +0.5
      comp=Z,58nm,0.8s
YAK   Yakutsk           43.55   23  eP      P       20 03 17.6  +1.1
YAK                                 e*PP    sP      20 03 35.7  -1.0
YAK                                 e               20 04 56.3
YAK                                 ePPP    PPP     20 05 30.7
YAK                                 eS      S       20 09 43.2  +1.7
YAK                                 e               20 13 43.9
YAK                                  pmax   pmax
      comp=Z,14nm,0.9s
YAK                                  pmax   pmax
      comp=N,3.0nm,1.2s
YAK                                  pmax   pmax
      comp=E,12nm,1.5s
YAK                                  pmax   pmax
      comp=Z,66nm,2.0s
YAK                                  pmax   pmax
      comp=N,55nm,2.5s
YAK                                  pmax   pmax
      comp=E,91nm,2.3s
YAK                                  smax   smax
      comp=E,121nm,4.0s
YAK                                  smax   smax
      comp=N,106nm,4.3s
YAK                                  MLR    MLR
      comp=Z,351nm,10.0s
YAK                                  MLR    MLR
      comp=N,449nm,14.0s
YAK                                  MLR    MLR
      comp=E,352nm,12.0s
GNI   Garni             43.70  302   P      P       20 03 20.7  +2.4
      comp=E,4.3nm,0.5s,baz=146,slow=6.5,SNR=7.0
GNI                                  ScP    ScP     20 08 51.8   0.0
      comp=E,12nm,0.4s,baz=159,slow=14,SNR=10
GNI                                  LR     LR      20 24 33.1
      comp=E,310nm,21.0s,baz=85,slow=40
YSS   Yuzh-Sakhalins    43.71   48  eP      P       20 03 16.9  -1.1
      comp=E,191nm,1.1s
YSS   Yuzh-Sakhalins    43.71   48⇑eP      P       20 03 17.8  -0.2
YSS                                 e               20 04 55.8
YSS                                 ePPP    PPP     20 05 36.8
YSS                                 eS      S       20 09 48.9  +4.6
YSS                                  pmax   pmax
      comp=Z,140nm,1.2s
YSS                                  pmax   pmax
      comp=N,20nm,0.8s
YSS                                  pmax   pmax
      comp=E,50nm,0.9s
YSS                                  MLR    MLR
      comp=Z,700nm,13.0s
YSS                                  MLR    MLR
      comp=N,500nm,16.0s
YSS                                  MLR    MLR
      comp=E,300nm,12.0s
AAI   Ambon             43.73  127   P      P       20 03 19.6  +1.1
      comp=E,349nm,0.8s,comp=E,3µm
TBLG  Delisi            43.84  305  eP      P       20 03 19.3  +0.1
      comp=E,43nm,0.9s
TBLG  Delisi            43.84  305  eP      P       20 03 19.3  +0.1
TBLG                                 pmax   pmax
      comp=Z,43nm,0.9s
MSAI  Masohi            44.03  126   P      P       20 03 21.6  +0.6
      comp=Z,64nm,0.8s,comp=Z,519nm
NKL   Nikolayevsk       44.16   39  eP      P       20 03 21.0  -0.5
NKL                                 e               20 09 52.0
NKL                                  pmax   pmax
      comp=Z,34nm,0.9s
NKL                                  MLR    MLR
      comp=E,1µm,14.0s
NKL                                  MLR    MLR
      comp=Z,1µm,14.0s
RAYN  Ar Rayn           44.35  278  eP      P       20 03 23.9  +0.3
      comp=Z,250nm,1.4s
RAYN                                 LR     LR
      comp=Z,254nm,20.0s
RAYN  Ar Rayn           44.35  278  i P     P       20 03 24.2  +0.6
      SNR=16
RAYN  Ar Rayn           44.35  278  eP      P       20 03 23.9  +0.3
RAYN                                 pmax   pmax
      comp=Z,250nm,1.4s
RAYN                                 MLR    MLR
      comp=Z,254nm,20.0s
ZEI   Tsey              44.56  306  eP      P       20 03 25.0  -0.2
ZEI                                  pmax   pmax
      comp=Z,63nm,0.6s
TYV   Tymovskoe         44.60   42  eP      P       20 03 26.0  +0.9
TYV                                 eS      S       20 10 03.9  +6.8
TYV                                  pmax   pmax
      comp=Z,300nm,4.1s
TYV                                  pmax   pmax
      comp=Z,63nm,1.4s
TYV                                  smax   smax
      comp=E,600nm,12.7s
TYV                                  MLR    MLR
      comp=Z,800nm,15.0s
AKH   Akhalkalaki       44.74  304  eP      P       20 03 28.6  +2.0
      comp=Z,95nm,0.9s
AKH   Akhalkalaki       44.74  304  eP      P       20 03 28.6  +2.0
AKH                                  pmax   pmax
      comp=Z,95nm,0.9s
KBZ   Khabaz            45.40  307   P      P       20 03 31.7  +0.2
      comp=Z,1.2nm,0.5s,baz=67,slow=12,SNR=4.7
KBZ                                  LR     LR      20 25 27.1
      comp=Z,528nm,20.6s,baz=88,slow=40
BATI  Baumata           45.47  138   P      P       20 03 30.1  -2.3
      comp=Z,102nm,0.8s,baz=216,slow=2.5,SNR=23
BATI  Baumata           45.47  138   P      P       20 03 30.7  -1.7
      comp=Z,69nm,1.1s,comp=Z,627nm
SOEI  Soe               45.49  137   P      P       20 03 31.3  -1.4
      comp=Z,467nm,1.1s,comp=Z,4µm
SOEI  Soe               45.49  137  eP      P       20 03 30.2  -2.5
      comp=Z,444nm,1.0s
SOEI                                eS      S       20 10 12.4  +1.4
KVAR  Kislovodsk Arr    45.57  307   P      P       20 03 32.6  -0.4
      comp=Z,11nm,0.8s,baz=78,slow=2.7,SNR=13
KVAR                                 pP     pP      20 03 46.7  -0.4
      comp=Z,39nm,0.7s,baz=176,slow=4.1,SNR=13
KIV   Kislovodsk        45.57  307  eP      P       20 03 34.0  +0.9
      comp=Z,55nm,0.8s
KIV                                  LR     LR
      comp=Z,598nm,21.0s
KIV   Kislovodsk        45.57  307d iP      P       20 03 34.0  +0.9
KIV                                 e               20 05 10.7
KIV                                 e               20 05 21.8
KIV                                 i S     S       20 10 27.1  +15
KIV                                  pmax   pmax
      comp=Z,21nm,1.4s
KIV                                  MLR    MLR
      comp=Z,598nm,20.0s
FAKI  Fak Fak           46.25  122   P      P       20 03 37.8  -0.8
      comp=Z,206nm,1.3s,comp=Z,2µm
FAKI  Fak Fak           46.25  122  eP      P       20 03 36.4  -2.2
      comp=Z,133nm,0.9s
RKPI  Ransiki, Papua    46.88  119   P      P       20 03 43.2  -0.3
      comp=Z,116nm,1.1s,comp=Z,8µm
VRH   Novokhopyorsk     47.40  317  eP      P       20 03 46.5  -0.6
VRH                                 eS      S       20 10 33.5  -3.8
VRH                                  pmax   pmax
      comp=Z,20nm,0.9s
VRH                                  smax   smax
      comp=E,260nm,2.1s
VRH                                  MLR    MLR
      comp=Z,770nm,22.0s
SOC   Sochi             47.68  307  eP      P       20 03 54.4  +5.0
SOC                                 e               20 05 46.7
SOC                                 eS      S       20 10 49.4  +7.8
SOC                                 eSS     SS      20 14 04.7  -5.4
SOC                                  pmax   pmax
      comp=Z,43nm,0.9s
SOC                                  MLR    MLR
      comp=Z,354nm,17.0s
DAMY  Dhamar            47.98  267  eP      P       20 03 51.9  -0.6
      comp=Z,98nm,1.4s
MSEY  Mahe Island       48.20  237   PFAKE          20 04 10.0  +16
MSEY                                 LR     LR
      comp=Z,876nm,20.0s
PRGR  Permogore         48.71  331⇓iP      P       20 03 57.8  +0.8
PRGR                                 pmax   pmax
      comp=Z,88nm,0.7s
GUMO  Guam              48.74   94   LR     LR      20 25 45.7
      comp=Z,474nm,19.1s,baz=268,slow=38
VORD  Divnogorie        48.86  316  eP      P       20 03 58.0  -0.3
VORD                                 pmax   pmax
      comp=Z,10.0nm,0.8s
SAUI  Saumlaki          48.91  128  eP      P       20 03 58.5  -0.7
      comp=Z,342nm,1.2s
VSR   Storozhevoye      48.98  317  eP      P       20 03 58.3  -1.0
VSR                                 eS      S       20 10 55.9  -3.7
VSR                                  pmax   pmax
      comp=Z,7.0nm,0.8s
VSR                                  smax   smax
      comp=N,120nm,1.5s
VORR  Voronezh          49.03  317   P      P       20 04 00.0  +0.3
VORR                                 pmax   pmax
      comp=Z,250nm,1.2s
ANN   Anapa             49.40  308  eP      P       20 04 05.4  +2.8
ANN                                 e               20 05 58.2
ANN                                 eS      S       20 11 11.2  +5.6
ANN                                  pmax   pmax
      comp=Z,54nm,1.3s
ANN                                  MLR    MLR
      comp=Z,532nm,23.0s
ASF   Jabal al Asfar    50.34  292   P      P       20 04 11.0  +0.9
      comp=Z,2.7nm,0.7s,baz=34,slow=7.3,SNR=6.1
ASF                                  pP     pP      20 04 24.4  +0.1
      comp=Z,33nm,0.9s,baz=64,slow=3.2,SNR=21
ASF                                  LR     LR      20 29 12.5
      comp=Z,264nm,21.0s,baz=58,slow=40
ATD   Arta Tunnel       50.52  264   P      P       20 04 12.7  +1.0
      comp=Z,26nm,0.9s,baz=359,slow=4.1,SNR=8.7
ATD                                  LR     LR      20 24 03.0
      comp=Z,229nm,21.1s,baz=80,slow=34
ATD   Arta Tunnel       50.52  264  eP      P       20 04 11.5  -0.1
      comp=Z,73nm,1.0s
MOS   Moscow            50.77  322  eP      P       20 04 13.5  +0.7
MOS                                 eS      S       20 11 30.6  +6.2
MOS                                  pmax   pmax
      comp=Z,61nm,1.1s
KLMR  Klimovskoe        51.16  329  eP      P       20 04 14.7  -0.9
KLMR                                 pmax   pmax
      comp=Z,70nm,1.1s
KLMR  Klimovskoe        51.16  329  eP      P       20 04 14.8  -0.9
KLMR                                 AMP            20 04 31.6
      comp=Z,70nm,1.1s
KLMR                                 LQ     LQ      20 22 32.7
OBN   Obninsk           51.23  321   P      P       20 04 16.5  +0.3
      comp=Z,17nm,0.3s,baz=129,slow=13,SNR=6.5
OBN   Obninsk           51.23  321  eP      P       20 04 15.4  -0.8
      comp=Z,90nm,1.2s
OBN                                  LR     LR
      comp=Z,196nm,22.0s
OBN   Obninsk           51.23  321⇓eP      P       20 04 16.2  -0.1
OBN                                 e               20 06 21.4
OBN                                 i S     S       20 11 42.5  +12
OBN                                  pmax   pmax
      comp=Z,16nm,1.5s
OBN                                  MLR    MLR
      comp=Z,224nm,21.0s
MMAI  Mount Meron Ar    51.47  293   P      P       20 04 18.8  +0.2
      comp=Z,2.4nm,0.7s,baz=278,slow=39,SNR=5.0
MMAI                                 pP     pP      20 04 32.9   0.0
      comp=Z,22nm,0.9s,baz=82,slow=10,SNR=16
MMAI                                 LR     LR      20 29 04.3
      comp=Z,362nm,21.1s,baz=55,slow=39
MA2   Magadan           51.49   33   P      P       20 04 19.0  +0.8
      comp=Z,18nm,0.5s,baz=279,slow=5.7,SNR=17
MA2                                  pP     pP      20 04 32.0  -0.5
      comp=Z,18nm,0.8s,baz=254,slow=8.5,SNR=3.4
MA2                                  PcP    PcP     20 05 31.7   0.0
      comp=Z,27nm,0.8s,baz=242,slow=4.8,SNR=4.1
MA2   Magadan           51.49   33  eP      P       20 04 18.3  +0.1
MA2                                 epP     pP      20 04 32.0  -0.5
MA2                                 ePcP    PcP     20 05 31.7   0.0
MA2                                  LR     LR
      comp=Z,1µm,19.0s
MA2   Magadan           51.49   33   P      P       20 04 19.0  +0.8
MA2                                  *PP    pP      20 04 32.0  -0.5
MA2                                  pmax   pmax
      comp=Z,18nm,0.5s
SIM   Simferopol’       51.76  308  eP      P       20 04 20.9  +0.5
SIM                                 eS      S       20 11 51.0  +13
SIM                                  pmax   pmax
      comp=Z,26nm,1.5s
SIM                                  MLR    MLR
      comp=Z,200nm,21.0s
ILGA  Ilgaz             52.10  303  eP      P       20 04 23.3   0.0
      comp=Z,239nm,1.3s
BR101 Keskin Array S    52.23  302  eP      P       20 04 24.2   0.0
BR101                               epP     pP      20 04 38.5   0.0
BR131 Keskin Array S    52.23  302  eP      P       20 04 23.7  -0.5
BRTR  Keskin Array B    52.23  302   P      P       20 04 24.2   0.0
      comp=Z,2.4nm,0.6s,baz=113,slow=6.4,SNR=14
BRTR                                 pP     pP      20 04 38.5   0.0
      comp=Z,15nm,0.7s,baz=101,slow=5.2,SNR=20
BRTR                                 LR     LR      20 31 42.8
      comp=Z,86nm,18.8s,baz=108,slow=42
MTN   Manton Dam        52.23  132  eP      P       20 04 22.1  -2.1
      comp=Z,14nm,0.6s
GENI  Genyem            52.34  115   P      P       20 04 25.4  +0.3
      comp=Z,194nm,1.3s,comp=Z,3µm
MBWA  Marble Bar        52.45  150  eP      P       20 04 24.6  -1.1
      comp=Z,72nm,0.7s
MBWA                                 LR     LR
      comp=Z,581nm,21.0s
ANTO  Ankara            52.87  302⇓iP      P       20 04 29.0  +0.1
ANTO  Ankara            52.87  302  eP      P       20 04 28.2  -0.6
      comp=Z,41nm,0.8s
ANTO                                 LR     LR
      comp=Z,185nm,20.0s
ANTO  Ankara            52.87  302 ⇓P      P       20 04 29.0  +0.1
ANTO                                                20 04 46.5
FITZ  Fitzroy Crossi    52.88  142   P      P       20 04 28.5  -0.5
      comp=Z,17nm,0.6s,baz=343,slow=10.0,SNR=59
BR231 Keskin MP Arra    52.89  302  eP      P       20 04 28.4  -0.6
CSS   Mathiatis         52.92  296  eP      P       20 04 30.0  +0.7
      comp=Z,31nm,0.9s
CSS   Mathiatis         52.92  296   P      pP      20 04 43.2  -0.4
MAMC  Mammari           52.99  296   P      pP      20 04 41.1  -3.0
SEY   Seymchan          53.19   29   P      P       20 04 31.0  +0.3
      comp=Z,3.2nm,0.5s,baz=263,slow=10.0,SNR=24
SEY                                  ScP    ScP     20 09 30.3  -0.9
      comp=Z,2.6nm,0.7s,baz=242,slow=15,SNR=4.2
SEY   Seymchan          53.19   29ceP      P       20 04 31.4  +0.7
SZAC  Souni             53.32  296   P      pP      20 04 43.6  -2.9
ALFC  Alefka            53.49  296   P      pP      20 04 45.0  -2.8
AKMC  Akamas            53.73  296   P      P       20 04 44.3  +9.1
PEA0B Petropavlovsk-    54.14   42  eP      P       20 04 38.0  +0.2
      comp=Z,67nm,1.0s
PEA1  Petropavlovsk-    54.14   42  eP      P       20 04 36.4  -1.4
PEA1                                eScP    ScP     20 09 32.6  -3.0
PETK  Petropavlovsk-    54.14   42   P      P       20 04 36.4  -1.4
      comp=Z,14nm,0.5s,baz=205,slow=2.5
PETK                                 ScP    ScP     20 09 32.6  -3.0
      baz=236,slow=1.0
PETK                                 LR     LR      20 28 39.0
      comp=Z,378nm,21.7s,baz=261,slow=37
PETK  Petropavlovsk-    54.14   42  eP      P       20 04 37.5  -0.3
PETK                                 ScP    ScP     20 09 32.6  -3.0
PET   Petropavlovsk     54.71   42  eP      P       20 04 41.8  -0.1
      comp=Z,92nm,1.2s
PET                                  LR     LR
      comp=Z,307nm,20.0s
PET   Petropavlovsk     54.71   42⇓iP      P       20 04 42.0  +0.1
PET                                 eS      S       20 12 18.8  +0.6
PET                                 eSS     SS      20 16 01.2  -0.2
PET                                  pmax   pmax
      comp=Z,72nm,1.3s
PET                                  pmax   pmax
      comp=Z,100nm,13.4s
PET                                  MLR    MLR
      comp=Z,300nm,16.0s
PET                                  MLR    MLR
      comp=Z,300nm,13.0s
ISP   Isparta           54.83  300  eP      P       20 04 42.1  -1.1
      comp=Z,34nm,0.8s
ISP   Isparta           54.83  300  eP      P       20 04 42.1  -1.1
ISP                                  pmax   pmax
      comp=Z,34nm,0.8s
AKASG Malin Array Be    55.18  315   P      P       20 04 44.6  -0.8
      comp=Z,6.6nm,0.6s,baz=79,slow=7.0,SNR=12
AKASG                                pP     pP      20 04 58.6  -1.1
      comp=Z,29nm,0.6s,baz=79,slow=7.0,SNR=26
AKASG                                LR     LR      20 32 08.3
      comp=Z,322nm,21.6s,baz=55,slow=40
AKBB  Malin Array Si    55.18  315  eP      P       20 04 44.6  -0.8
      comp=Z,46nm,0.8s
AKBB  Malin Array Si    55.18  315  eP      P       20 04 45.0  -0.4
KIEV  Kiev              55.19  315  eP      P       20 04 44.3  -1.1
      comp=Z,42nm,0.8s
KIEV                                 LR     LR
      comp=Z,382nm,22.0s
KIEV  Kiev              55.19  315  i P     P       20 04 45.8  +0.4
      SNR=7.7
KIEV  Kiev              55.19  315  i P     P       20 04 45.2  -0.2
KIEV                                 pmax   pmax
      comp=Z,7.0nm,0.9s
AK11  Malin Array Si    55.21  315  eP      P       20 04 45.1  -0.5
LVZ   Lovozero          55.40  337  eP      P       20 04 46.2  -0.6
      comp=Z,47nm,0.9s
LVZ                                  LR     LR
      comp=Z,302nm,21.0s
LVZ   Lovozero          55.40  337  eP      P       20 04 46.2  -0.6
LVZ                                  pmax   pmax
      comp=Z,47nm,0.9s
KIS   Kishinev          55.44  311  eP      P       20 04 45.0  -2.3
KIS                                  LRM    MLR     20 31 52.0
      comp=Z,300nm,16.0s
KIS   Kishinev          55.44  311  eP      P       20 04 45.0  -2.3
KIS                                 e               20 12 50.0
KIS                                  MLR    MLR
      comp=Z,300nm,15.0s
KIS                                  MLR    MLR
      comp=Z,300nm,16.0s
TLCR                    55.51  309⇓iP      P       20 04 48.0  +0.2
TLCR                    55.51  309 ⇓P      P       20 04 48.0  +0.2
SORM  Soroca            55.74  312⇓iP      P       20 04 48.8  -0.6
SORM  Soroca            55.74  312 ⇓P      P       20 04 48.8  -0.6
APA   Apatity           55.76  336⇓iP      pP      20 05 01.3  -2.4
APA                                  pmax   pmax
      comp=Z,12nm,0.7s
APA                                  MLR    MLR
      comp=Z,400nm,16.0s
TIRR  Tirgusor          55.83  308⇑iP      P       20 04 50.1  -0.1
TIRR  Tirgusor          55.83  308  eP      P       20 04 50.3  +0.1
      comp=Z,29nm,1.0s
TIRR  Tirgusor          55.83  308  eP      P       20 04 50.3  +0.1
TIRR                                 pmax   pmax
      comp=Z,29nm,1.0s
CFR   Carcaliu          55.99  309⇓iP      P       20 04 51.2  -0.1
CFR   Carcaliu          55.99  309 ⇓P      P       20 04 51.2  -0.1
TLB   Topalu            56.09  308⇓iP      P       20 04 52.4  +0.4
TLB   Topalu            56.09  308 ⇓P      P       20 04 52.4  +0.4
FETY  Fethiye           56.12  298   P      P       20 04 52.4   0.0
MICGM Minsk             56.14  320  eP      P       20 05 02.0  +10
MNK   Minsk             56.14  320  eP      P       20 05 02.0  +10
HARR  Harsova           56.16  308⇓iP      P       20 04 52.6  +0.1
HARR  Harsova           56.16  308 ⇓P      P       20 04 52.6  +0.1
MANT  Manisa            56.28  301  eP      P       20 04 53.1  -0.7
      comp=Z,367nm,1.6s
ICOR  Ion Corvin        56.29  307⇓iP      P       20 04 54.1  +0.6
NACGM Naroch            56.80  320  eP      P       20 05 01.0  +4.1
VRI   Vrincioaia        56.94  310⇓iP      P       20 04 58.7  +0.6
VRI   Vrincioaia        56.94  310 ⇓P      P       20 04 58.7  +0.6
TESR  Tescani           56.95  310⇑iP      P       20 04 58.7  +0.6
PLOR  Plostina          56.99  310⇑iP      P       20 04 59.4  +0.9
PLOR  Plostina          56.99  310 ⇑P      P       20 04 59.4  +0.9
VSU   Vasula            57.05  325  i P     P       20 05 01.6  +3.1
VSU                                  pmax   pmax
      comp=Z,41nm,0.8s
ISR   Istrita           57.12  309⇑iP      P       20 05 00.2  +0.8
ISR   Istrita           57.12  309 ⇑P      P       20 05 00.2  +0.8
BIZ   Bicaz             57.30  311⇓iP      P       20 05 00.4  -0.2
JMB   Yambol            57.32  306  eP      pP      20 05 14.1  -1.2
MLR   Muntele Rosu      57.51  309   P      P       20 05 03.3  +1.0
      comp=Z,5.6nm,0.9s,baz=39,slow=3.5,SNR=27
MLR                                  LR     LR      20 34 05.8
      comp=Z,82nm,18.2s,baz=76,slow=40
MLR   Muntele Rosu      57.51  309⇓iP      P       20 05 02.0  -0.3
MLR   Muntele Rosu      57.51  309  eP      P       20 05 02.4  +0.1
      comp=Z,116nm,1.0s
FIA1  FINESS Array S    57.65  328  eP      P       20 05 03.3  +0.6
FIA0  FINESS Array S    57.65  328  eP      P       20 05 03.6  +0.8
FIA0                                epP     pP      20 05 17.6  +0.3
FIA0  FINESS Array S    57.65  328  eP      P       20 05 03.6  +0.8
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FIA0				e*PP	pP	20 05 17.6	+0.3
FINES	FINESS Array B	57.65	328	P	P	20 05 03.6	+0.8
	comp=Z,8.7nm,0.7s,baz=97,slow=8.1,SNR=19						
FINES				pP	pP	20 05 17.6	+0.3
	comp=Z,23nm,0.7s,baz=85,slow=8.0,SNR=17						
FINES				LR	LR	20 32 57.8	
	comp=Z,275nm,20.6s,baz=94,slow=39						
SZH	Strazhica	57.72	307	eP	pP	20 05 17.2	-0.9
KARP	Karpathos	57.83	297	eP	P	20 05 03.7	-0.8
	comp=Z,196nm,0.9s						
KARP	Karpathos	57.83	297	P	P	20 05 04.1	-0.4
BURAR	Bucovina Array	57.87	312	⇓iP	P	20 05 05.0	+0.3
BURAR	Bucovina Array	57.87	312	⇓P	P	20 05 05.0	+0.3
BUR04	Bucovina Ar. S	57.87	312	eP	P	20 05 04.2	-0.5
BUR08	Bucovina Ar. S	57.88	312	eP	P	20 05 04.8	+0.1
ALN	Alexandroupoli	57.90	304	eP	P	20 05 05.5	+0.6
	comp=Z,18nm,1.0s						
ALN	Alexandroupoli	57.90	304	P	P	20 05 04.5	-0.4
ALN	Alexandroupoli	57.90	304	eP	P	20 05 05.5	+0.6
ALN				pmax	pmax		
	comp=Z,18nm,1.0s						
PRK	Paraskevi	57.95	302	P	pP	20 05 20.0	+0.2
MANU	Manus Island	58.05	110	eP	P	20 05 05.7	-0.6
	comp=Z,176nm,1.4s						
ZIMR		58.09	307	⇑iP	P	20 05 06.3	+0.2
ZIMR		58.09	307	⇑P	P	20 05 06.3	+0.2
CHOS	Chios island	58.24	301	P	pP	20 05 22.7	+0.7
RDO	Rodhopi	58.25	304	P	pP	20 05 20.8	-1.1
GOLR		58.26	308	⇓iP	P	20 05 08.2	+0.9
ARCR	ARCALIA	58.49	311	⇑iP	P	20 05 10.3	+1.4
KEV	Kevo	58.57	338	PFAKE		20 05 20.0	+11
KEV				LR	LR		
	comp=Z,455nm,20.0s						
SUW	Suwalki	58.90	319	eP	P	20 05 12.2	+0.7
SUW	Suwalki	58.90	319	eP	P	20 05 11.7	+0.1
	comp=Z,144nm,1.0s						
SUW	Suwalki	58.90	319	eP	P	20 05 11.7	+0.1
SUW				pmax	pmax		
	comp=Z,144nm,1.0s						
THAS	Thassos island	58.94	304	P	pP	20 05 25.9	-0.8
BMR	Baia Mare	59.02	312	⇑iP	P	20 05 12.6	0.0
BMR	Baia Mare	59.02	312	⇑P	P	20 05 12.6	0.0
CJR	Cluj-Napoca	59.04	311	⇓iP	P	20 05 13.8	+1.0
CJR	Cluj-Napoca	59.04	311	⇓P	P	20 05 13.8	+1.0
LOT	Lotru	59.04	309	⇑iP	P	20 05 12.4	-0.5
ARA0	ARCESS Array S	59.04	338	eP	P	20 05 13.6	+1.2
ARA0				epP	pP	20 05 28.1	+1.1
ARCES	ARCESS Array B	59.04	338	P	P	20 05 13.6	+1.2
	comp=Z,5.9nm,0.8s,baz=96,slow=6.1,SNR=9.9						
ARCES				pP	pP	20 05 28.1	+1.1
	comp=Z,20nm,0.9s,baz=107,slow=5.2,SNR=8.8						
ARCES	ARCESS Array B	59.04	338	eP	P	20 05 12.8	+0.4
ARCES				pP	pP	20 05 28.1	+1.1
SANT	Santorini	59.05	299	⇓iP	P	20 05 11.8	-1.2
SANT	Santorini	59.05	299	eP	P	20 05 12.9	-0.1
	comp=Z,566nm,1.5s						
PGB	Panagyurishte	59.09	306	eP	P	20 05 21.9	+8.7
NPS	Neapolis	59.12	297	P	pP	20 05 24.9	-3.2
LAST	Lasithi	59.25	297	P	P	20 05 16.8	+2.3
MPEP	Malo Peshtene	59.30	307	eP	P	20 05 15.2	+0.6
KWP	Kalwaria Pacla	59.39	314	eP	P	20 05 15.4	+0.2
KWP	Kalwaria Pacla	59.39	314	eP	P	20 05 15.3	+0.2
	comp=Z,620nm,0.8s						
KWP	Kalwaria Pacla	59.39	314	eP	P	20 05 15.3	+0.2
NVR	Nevrokopi	59.48	305	P	pP	20 05 28.7	-1.8
WR1	Warramunga Arr	59.51	136	eP	P	20 05 15.8	-0.5
	comp=Z,196nm,1.3s						
WR1				e		20 35 05.7	
WRA	Warramunga Arr	59.51	136	P	P	20 05 15.8	-0.5
	comp=Z,50nm,0.7s,baz=323,slow=7.4,SNR=601						
WRA				PKP2ab		20 35 05.7	
	comp=Z,3.1nm,1.1s,baz=114,slow=3.0,SNR=6.1						
WRAB	Tennant Creek	59.51	135	eP	P	20 05 15.6	-0.7
	comp=Z,218nm,1.3s						
WRAB				LR	LR		
	comp=Z,567nm,20.0s						
WRAB	Tennant Creek	59.51	135	ceP	P	20 05 15.9	-0.4
WRAB				pmax	pmax		
	comp=Z,119nm,1.2s						
WB2	Warramunga Arr	59.52	136	eP	P	20 05 15.6	-0.7
	comp=Z,208nm,1.3s						
HEF	Hetta	59.52	336	eP	P	20 05 16.7	+1.0
OUR	Ouranopolis	59.54	303	P	P	20 05 20.5	+4.3
MMB	Musomiste	59.54	305	eP	P	20 05 20.2	+3.9
TRPA	Tarpa	59.62	312	⇑iP	P	20 05 16.9	+0.2
DRGR		59.63	311	⇓iP	P	20 05 16.9	0.0
DRGR		59.63	311	⇓P	P	20 05 16.9	0.0
IDI	Anoyia	59.70	297	P	P	20 05 18.4	+0.7
	comp=Z,8.2nm,0.6s,baz=58,slow=11,SNR=11						
IDI	Anoyia	59.70	297	⇑iP	P	20 05 17.1	-0.5
IDI	Anoyia	59.70	297	eP	P	20 05 18.3	+0.7
	comp=Z,59nm,1.1s						
UZH	Uzhgorod	59.74	313	eP	P	20 05 20.3	+2.8
KTK1	Kautokeino	59.76	337	eP	P	20 05 22.0	+4.7
VTS	Vitosha	59.78	306	⇑iP	P	20 05 17.4	-0.7
VTS	Vitosha	59.78	306	eP	P	20 05 18.0	-0.2
	comp=Z,54nm,1.4s						
VTS	Vitosha	59.78	306	eP	P	20 05 17.4	-0.7
VTS	Vitosha	59.78	306	P	P	20 05 17.3	-0.8
VTS	Vitosha	59.78	306	⇑P	P	20 05 17.4	-0.7
AOS	Alonnisos	59.80	302	P	P	20 05 14.4	-3.7
PAIG	Paliouri	59.83	303	P	pP	20 05 31.6	-1.3
HAMF	Hammerfest	59.85	339	eP	P	20 05 19.7	+1.8
PLG	Polygyros	59.94	303	P	pP	20 05 31.5	-2.2
KKB	Krupnik	59.98	305	eP	P	20 05 23.2	+3.9
PTL	Penteli	60.00	301	P	P	20 05 21.9	+2.3
HERR	Herculane	60.05	309	⇓iP	P	20 05 20.5	+0.7
KNT	Kendrikon	60.22	304	P	P	20 05 21.4	+0.4
VAM	Vamos	60.23	298	P	P	20 05 21.6	+0.5
CRVS	Cervenica-Dubn	60.27	313	eP	P	20 05 21.2	0.0
CRVS				e		20 05 35.0	
CRVS				pmax	pmax		
	comp=Z,15nm,0.9s						
CRVS	Cervenica-Dubn	60.27	313	eP	P	20 05 21.2	0.0
CRVS				epP	pP	20 05 35.0	-0.8
IMMV	Iera Moni Meta	60.40	298	P	P	20 05 22.4	+0.2
VAY	Valandovo	60.44	305	P	pP	20 05 36.7	-0.4
BZS	Buzias	60.52	310	⇓iP	P	20 05 23.9	+1.0
BZS	Buzias	60.52	310	⇓P	P	20 05 23.9	+1.0
MDVR	Moldovita	60.56	309	⇓iP	P	20 05 23.5	+0.2
DID	Didima	60.59	300	P	pP	20 05 34.7	-3.5
GRG	Griva	60.63	304	P	P	20 05 22.5	-1.3
KIF	Kilpisjarvi	60.63	337	eP	P	20 05 24.1	+0.9
STIP	Stip	60.67	305	i P	P	20 05 21.5	-2.5
KRND	KRANIDI	60.68	300	P	P	20 05 31.3	+7.2
LODK	Lodwar	60.69	259	i P	P	20 05 25.6	+0.9
LODK				e		20 05 29.6	
	baz=57,slow=9.3						
LODK				eS	pP	20 05 40.6	+1.3
LODK				eS	pP	20 05 41.1	+1.9
LODK	Lodwar	60.69	259	i P	P	20 05 25.5	+0.9
LODK				e		20 05 29.3	
	baz=58,slow=9.3						
LODK				eS	pP	20 05 39.5	+0.2
LODK				eS	pP	20 05 40.6	+1.3
LIT	Litokhoron	60.70	303	eP	P	20 05 23.9	-0.4
	comp=Z,68nm,1.3s						
LIT	Litokhoron	60.70	303	P	P	20 05 23.6	-0.7
LIT	Litokhoron	60.70	303	eP	P	20 05 23.9	-0.4
LIT				pmax	pmax		
	comp=Z,68nm,1.3s						
ANKY	Antikythira Is	60.86	298	P	P	20 05 25.0	-0.4
DSF	Desfina	60.97	301	P	pP	20 05 37.9	-2.9
NIE	Niedzica	60.97	314	eP	P	20 05 26.1	+0.1
NIE	Niedzica	60.97	314	eP	P	20 05 26.1	+0.1
VLI	Veliai	60.98	299	P	P	20 05 27.4	+1.2
AGG	Agios Georgios	61.01	302	eP	P	20 05 25.7	-0.7
	comp=Z,132nm,1.0s						
AGG	Agios Georgios	61.01	302	P	P	20 05 25.1	-1.3
AGG	Agios Georgios	61.01	302	eP	P	20 05 25.7	-0.7
AGG				pmax	pmax		
	comp=Z,132nm,1.0s						
THL	Klokotos Trika	61.16	303	P	P	20 05 27.0	-0.3
KMBO	Kilima Mbogo	61.19	253	pP	pP	20 05 43.7	+0.8
	comp=Z,16nm,0.9s,baz=51,slow=11,SNR=19						
KMBO	Kilima Mbogo	61.19	253	PFAKE		20 05 40.0	+12
KMBO				LR	LR		
	comp=Z,299nm,20.0s						
GUR	Goura	61.20	301	P	P	20 05 29.2	+1.4
KZN	Kozani	61.21	304	P	P	20 05 39.8	+12
OJC	Ojcow	61.21	315	eP	P	20 05 28.1	+0.6
	comp=Z,26nm,0.9s						
OJC	Ojcow	61.21	315	eP	P	20 05 28.1	+0.6
OJC				pmax	pmax		
	comp=Z,26nm,0.9s						
VLX	Vlachokerasia	61.28	300	P	P	20 05 27.4	-1.0
KLV	Kalavryta, Ach	61.33	301	P	P	20 05 26.2	-2.5
TRO	Tromso	61.34	337	eP	P	20 05 28.7	+0.6
ANX	Ano Chora	61.41	302	P	P	20 05 28.8	-0.4
PSZ	Piszkesteto	61.41	312	⇑iP	P	20 05 30.2	+1.2
PSZ	Piszkesteto	61.41	312	eP	P	20 05 28.9	-0.2
	comp=Z,24nm,1.1s						
PSZ	Piszkesteto	61.41	312	⇑P	P	20 05 30.2	+1.2
FNA	Florina	61.42	304	eP	P	20 05 28.2	-1.0
	comp=Z,21nm,1.0s						
FNA	Florina	61.42	304	P	P	20 05 29.9	+0.7
FNA	Florina	61.42	304	eP	P	20 05 28.2	-1.0
FNA				pmax	pmax		
	comp=Z,21nm,1.0s						
LAKA	Lakka	61.43	301	P	pP	20 05 41.6	-2.3
EVR	Evrytania	61.43	302	P	P	20 05 31.7	+2.3
DYR	Agios Nikonas	61.44	300	P	P	20 05 29.1	-0.3
EFP	Efpalio	61.45	301	P	pP	20 05 42.4	-1.6
LANS	Liptovska Anna	61.54	314	eP	pP	20 05 43.9	-0.6
LANS	Liptovska Anna	61.54	314	epP	pP	20 05 43.9	-0.6
COEN	Coen	61.56	124	eP	P	20 05 29.5	-0.8
	comp=Z,15nm,0.8s						
KPRO	Kipourio	61.58	303	P	pP	20 05 42.8	-2.1
ITM	Ithomi	61.68	300	eP	P	20 05 30.0	-1.0
	comp=Z,280nm,1.9s						
ITM	Ithomi	61.68	300	P	pP	20 05 43.9	-1.7
DRO	Drossia	61.69	301	P	pP	20 05 44.9	-0.8
PYL	PYLOS	61.88	300	P	P	20 05 30.7	-1.6
DIVS	Divibare	61.88	308	eP	P	20 05 31.6	-0.7
	comp=Z,27nm,0.9s						
PMG	Port Moresby	61.92	117	P	P	20 05 31.8	-1.0
	comp=Z,56nm,0.8s,baz=332,slow=5.5,SNR=20						
DSL	Palaion Diasel	61.93	302	P	P	20 05 32.4	-0.3
NWAO	Narrogin (SRO)	61.98	158	P	P	20 05 31.6	-1.3
	comp=Z,15nm,0.6s,baz=176,slow=5.1,SNR=17						
NWAO				LR	LR	20 35 18.5	
	comp=Z,202nm,18.8s,baz=194,slow=39						
NWAO	Narrogin (SRO)	61.98	158	eP	P	20 05 31.6	-1.3
NWAO				eP	P	20 05 31.8	-1.0
NWAO	Narrogin (SRO)	61.98	158	eP	P	20 05 32.0	-0.8
AS31	Alice Springs	62.02	139	eP	P	20 05 32.8	-0.5
	comp=Z,16nm,0.7s						
ASAR	Alice Springs	62.02	139	P	P	20 05 33.0	-0.3
	comp=Z,51nm,0.8s,baz=320,slow=6.9,SNR=524						
ASAR				PKP2bc		20 34 51.5	
	comp=Z,0.7nm,0.8s,baz=103,slow=2.9,SNR=4.3						
ASAR				LR	LR	20 36 09.2	
	comp=Z,252nm,19.0s,baz=319,slow=40						
VYHS	Vyhne	62.04	313	eP	P	20 05 33.1	-0.1
VYHS				e		20 05 46.5	
VYHS				pmax	pmax		
	comp=Z,12nm,1.0s						
VYHS	Vyhne	62.04	313	eP	P	20 05 33.1	-0.1
VYHS				epP	pP	20 05 46.5	-1.3
AS01	Alice Springs	62.05	139	eP	P	20 05 32.3	-1.2
OKC	Ostrava-Krasne	62.31	315	epP	pP	20 05 48.6	-1.0
OKC				AMS	AMS	20 35 10.0	
	comp=Z,300nm,18.2s						
PDG	Podgorica	62.70	306	⇓iP	P	20 05 36.8	-0.9
TTG	Podgorica	62.70	306	eP	P	20 05 36.7	-0.9
	comp=Z,51nm,1.0s						
TTG	Podgorica	62.70	306	eP	P	20 05 36.7	-0.9
TTG				pmax	pmax		
	comp=Z,51nm,1.0s						
MORC	Moravsky Berou	62.71	315	⇓iP	P	20 05 38.7	+1.0
MORC	Moravsky Berou	62.71	315	eP	P	20 05 37.8	+0.1
	comp=Z,25nm,0.9s						
MORC	Moravsky Berou	62.71	315	eP	P	20 05 37.8	+0.1
MORC				pmax	pmax		
	comp=Z,25nm,0.9s						
MORC	Moravsky Berou	62.71	315	eP	P	20 05 38.0	+0.3
JAVC	Velka Javorina	62.76	314	eP	P	20 05 39.2	+1.2
SPA0	Spitsbergen Ar	62.83	347	eP	P	20 05 36.6	-1.3
SPA0	Spitsbergen Ar	62.83	347	eP	P	20 05 30.0	-8.0
SPITS	Spitsbergen Ar	62.83	347	LR	LR	20 37 32.6	
	comp=Z,196nm,19.2s,baz=65,slow=40						
MODS	Modra-Piesok	63.09	313	eP	P	20 05 39.6	-0.6
MODS				e		20 05 52.6	
MODS				pmax	pmax		
	comp=Z,21nm,1.1s						
MODS	Modra-Piesok	63.09	313	eP	P	20 05 39.6	-0.6
MODS				epP	pP	20 05 52.6	-2.3
KRLC	Kraliky	63.16	315	eP	P	20 05 46.2	+5.6
KRLC	Kraliky	63.16	315	eP	P	20 05 46.2	+5.6
LOF	Lofoten	63.26	336	eP	P	20 05 40.6	-0.3
VRAC	Vranov	63.39	314	P	P	20 05 42.7	+0.6
	comp=Z,16nm,1.1s,baz=84,slow=6.7,SNR=9.9						
VRAC				pP	pP	20 05 56.0	-0.9
	comp=Z,38nm,0.9s,baz=103,slow=8.6,SNR=15						
VRAC	Vranov	63.39	314	⇓iP	P	20 05 43.0	+0.9
VRAC	Vranov	63.39	314	eP	P	20 05 42.7	+0.6
DPC	Dobruska-Polom	63.41	315	eP	P	20 05 52.1	+10
DPC				epP	pP	20 05 58.1	+1.1
DPC				eS	S	20 14 31.1	+20
DPC				AMS	AMS	20 35 50.0	
	comp=Z,300nm,15.2s						
OPO	Ambohidratompo	63.43	231	P	P	20 05 43.9	+1.0
	comp=Z,18nm,0.8s,baz=47,slow=8.8,SNR=19						
OPO				LR	LR	20 31 41.1	
	comp=Z,496nm,19.2s,baz=36,slow=34						
KRUC	Moravsky	63.56	314	eP	P	20 05 43.6	+0.4
UPC	Upice	63.58	316	eS	S	20 14 33.7	+21
UPC				AMS	AMS	20 36 30.0	
	comp=Z,400nm,24.0s						
ABPO	Ambohimpanom	63.70	231	eP	P	20 05 45.2	+0.4
	comp=Z,19nm,0.9s						
ABPO				LR	LR		
	comp=Z,252nm,22.0s						
ABPO	Ambohimpanom	63.70	231	eP	P	20 05 45.6	+0.9
HFS	Hagfors	63.71	327	P	P	20 05 44.4	+0.4
	comp=Z,12nm,0.7s,baz=102,slow=6.2,SNR=35						
HFS				pP	pP	20 05 58.7	-0.1
	comp=Z,58nm,0.8s,baz=104,slow=6.3,SNR=14						
HFS				LR	LR	20 36 58.0	
	comp=Z,284nm,21.1s,baz=80,slow=39						
BLY	Banja Luka	63.75	309	⇓iP	P	20 05 45.1	+0.5
BLY	Banja Luka	63.75	309	eP	P	20 05 43.3	-1.3
	comp=Z,45nm,1.2s						
KBS	Kingsbay	63.76	348	PFAKE		20 06 00.0	+16
KBS				LR	LR		
	comp=Z,353nm,21.0s						
SMY	Shemya	64.05	42	eP	P	20 05 46.4	0.0
	comp=Z,83nm,1.0s						
SMY	Shemya	64.05	42	eP	P	20 05 46.4	0.0
SMY				pmax	pmax		
	comp=Z,83nm,1.0s						
CONA	Conrad Observa	64.09	313	eP	P	20 05 46.9	0.0
	comp=Z,48nm,1.5s						
ARSA	Arzberg	64.44	312	eP	P	20 05 50.0	+0.9
	comp=Z,11nm,0.9s						
GOPC	GO Pecny, Ondr	64.45	315	eP	P	20 05 56.5	+7.4
GOPC				eS	S	20 14 44.2	+20
GOPC				AMS	AMS	20 36 30.0	
	comp=Z,300nm,16.4s						
PVCC	Panska Ves	64.49	316	AMS	AMS	20 37 00.0	
	comp=Z,400nm,22.7s						
FORT	Forrest	64.52	148	eP	P	20 05 49.5	-0.2
	comp=Z,78nm,1.1s						
NC405	NORSAR Array S	64.58	328	eP	P	20 05 50.4	+0.7
PRU	Pruhonice	64.60	315	eP	P	20 05 50.6	+0.6
PRU				ex	x	20 06 01.0	
PRU				eS	S	20 14 39.3	+14
PRU				AMS	AMS	20 36 30.0	
	comp=Z,300nm,17.6s						
PRU	Pruhonice	64.60	315	eP	P	20 05 50.6	+0.6
PRU				e		20 06 01.0	
PRU				eS	S	20 14 39.3	+14
PRU				MLR	MLR		
	comp=Z,300nm,17.6s						
NC602	NORSAR Array S	64.71	327	eP	P	20 05 52.2	+1.7
NC602	NORSAR Array S	64.71	327	eP	P	20 05 50.8	+0.3
NC303	NORSAR Array S	64.73	328	eP	P	20 05 51.6	+0.9
NB201	NORSAR Array S	64.79	328	eP	P	20 05 53.6	+2.5
BRG	Berggiesshubel	64.82	316	eP	P	20 05 52.5	+1.0
	comp=Z,4.4nm,0.9s						
BRG				i		20 05 55.9	
	comp=Z,17nm,1.3s						
BRG				PP	PP	20 08 18.8	+4.5
	comp=Z,10nm,1.1s						
BRG				S	S	20 14 51.0	+23
	comp=N,314nm,24.9s						
	comp=E,384nm,24.9s						
	comp=Z,449nm,13.9s						
BRG	Berggiesshubel	64.82	316	eP	P	20 05 52.5	+1.0
BRG						20 08 18.8	
BRG				S	S	20 14 51.0	+23
BRG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BRG				pmax	pmax		
	comp=Z,10.0nm,1.1s						
BRG				MLR	MLR		
	comp=N,314nm,24.9s						
BRG				MLR	MLR		
	comp=E,384nm,24.9s						
BRG				MLR	MLR		
	comp=Z,449nm,13.9s						
NB2	NORSAR Subarra	64.83	328	P	P	20 05 51.5	+0.1
	comp=Z,35nm,1.0s,baz=82,slow=6.5						
NB2	NORSAR Subarra	64.83	328	P	P	20 05 51.5	+0.1
	baz=82,slow=6.5						
NOA	NORSAR Array B	64.83	328	LR	LR	20 36 04.6	
	comp=Z,265nm,18.6s,baz=90,slow=38						
SOKA	Soboth	64.87	312	eP	P	20 05 52.1	+0.1
	comp=Z,13nm,0.7s						
NAO01	NORSAR Array S	65.01	328	eP	P	20 05 54.4	+1.8
NC204	NORSAR Array S	65.01	328	eP	P	20 05 52.9	+0.2
MOA	Molln	65.16	313	eP	P	20 05 53.4	-0.4
	comp=Z,38nm,1.1s						
TIP	Timpagrande	65.22	303	⇓iP	P	20 05 53.7	-0.7
TIP	Timpagrande	65.22	303	eP	P	20 05 54.2	-0.2
	comp=Z,38nm,1.3s						
OBKA	Obir	65.23	312	P	P	20 05 53.5	-0.8
	comp=Z,10nm,0.9s						
CLL	Collm	65.33	317	i P	P	20 05 55.3	+0.5
	comp=Z,18nm,1.5s						
CLL				i		20 06 07.7	
	comp=Z,23nm,1.4s						
CLL				i sP	sP	20 06 17.1	+1.6
CLL				i		20 06 32.9	
CLL				eS	S	20 14 52.0	+17
CLL				eSS	SS	20 18 54.0	+6.1
CLL				e		20 20 12.0	
CLL				eSSS	SSS	20 22 03.0	
CLL				LmV		20 37 00.0	
	comp=Z,300nm,20.3s						
CLL	Collm	65.33	317	eP	P	20 05 55.5	+0.8
	comp=Z,14nm,0.8s						
CLL				eP	P	20 05 58.8	+4.0
CLL	Collm	65.33	317	i P	P	20 05 55.3	+0.5
CLL				i		20 06 07.7	
CLL				eS	S	20 14 52.0	+17
GEC2	GERESS Array S	65.34	314	eP	P	20 05 55.2	+0.2
	comp=Z,30nm,1.0s						
GEC2	GERESS Array S	65.34	314	eP	P	20 05 55.2	+0.2
GEC2				pmax	pmax		
	comp=Z,30nm,1.0s						
GERES	GERESS Array B	65.34	314	P	P	20 05 55.2	+0.2
	comp=Z,5.2nm,0.8s,baz=79,slow=6.9,SNR=23						
GERES				pP	pP	20 06 10.3	+0.5
	comp=Z,12nm,0.7s,baz=68,slow=5.8,SNR=15						
GERES				LR	LR	20 38 40.9	
	comp=Z,231nm,20.2s,baz=83,slow=40						
GEA0	GERESS Array S	65.34	314	eP	P	20 05 55.1	+0.1
KHC	Kasperske Hory	65.37	314	eP	P	20 05 59.8	+4.7
KHC				epP	pP	20 06 10.7	+0.8
KHC				eS	S	20 14 48.8	+13
KHC				AMS	AMS	20 36 20.0	
	comp=Z,300nm,13.8s						
KHC	Kasperske Hory	65.37	314	eP	P	20 05 59.8	+4.7
KHC				e		20 06 10.7	
KHC				eS	S	20 14 48.8	+13
KHC				MLR	MLR		
	comp=Z,300nm,13.8s						
CUC	Castrocucco	65.74	304	eP	P	20 05 57.5	-0.1
	comp=Z,26nm,0.9s						
KONO	Kongsberg	65.82	326	eP	P	20 05 58.7	+0.9
	comp=Z,52nm,1.3s						
KONO	Kongsberg	65.82	326	eP	P	20 05 58.7	+0.9
KONO				pmax	pmax		
	comp=Z,52nm,1.3s						
KONO	Kongsberg	65.82	326	eP	P	20 06 07.7	+10
MYKA	Terra Mystica	65.82	312	eP	P	20 05 58.1	-0.1
	comp=Z,2.2nm,0.7s						
NKC	Novy Kostel	65.88	316	eS	S	20 15 04.6	+23
NKC				AMS	AMS	20 37 20.0	
	comp=Z,400nm,22.3s						
KBA	Koelnbreinsper	65.93	312	eP	P	20 06 00.3	+1.3
	comp=Z,8.6nm,0.9s						
CEL	Celeste	66.10	302	eP	P	20 06 00.7	+0.6
	comp=Z,63nm,1.0s						
MOL	Molde	66.32	330	eP	P	20 06 02.3	+1.4
WAKE	Wake Island	66.38	79	PFAKE		20 06 10.0	+8.0
WAKE				LR	LR		
	comp=Z,410nm,22.0s						
ABTA	Abfaltersbach	66.56	312	eP	P	20 06 02.3	-0.6
	comp=Z,10.0nm,0.8s						
MBAR	Mbarara	66.64	257	eP	P	20 06 04.4	+0.4
	comp=Z,24nm,1.0s						
MBAR				LR	LR		
	comp=Z,897nm,22.0s						
MBAR	Mbarara	66.64	257	eP	P	20 06 04.4	+0.4
MBAR				pmax	pmax		
	comp=Z,24nm,1.0s						
MBAR				MLR	MLR		
	comp=Z,897nm,22.0s						
AQU	L'Aquila	66.95	307	eP	P	20 06 06.2	+0.8
	comp=Z,81nm,1.2s						
AQU	L'Aquila	66.95	307	eP	P	20 06 06.2	+0.8
AQU				pmax	pmax		
	comp=Z,81nm,1.2s						
WTTA	Wattenberg	67.03	313	eP	P	20 06 05.0	-0.9
	comp=Z,6.3nm,0.8s						
WATA	Walderalm	67.05	313	eP	P	20 06 06.5	+0.4
	comp=Z,11nm,0.6s						
ODD1	Odda	67.25	327	eP	P	20 06 08.9	+2.0
SNART	Snartemo	67.28	325	eP	P	20 06 08.0	+0.9
MOTA	Moosalm	67.36	313	eP	P	20 06 08.5	+0.5
	comp=Z,9.2nm,0.7s						
VAE	Valguarnera	67.43	302	LR	LR	20 39 57.5	
	comp=Z,87nm,21.4s,baz=102,slow=40						
RETA	Reutte	67.55	313	eP	P	20 06 09.0	-0.1
	comp=Z,31nm,0.8s						
FETA	Feichten	67.69	313	eP	P	20 06 09.8	-0.3
	comp=Z,34nm,1.3s						
CTA	Charters Tower	67.72	127	P	P	20 06 10.4	-0.1
	comp=Z,76nm,1.1s,baz=321,slow=9.1,SNR=53						
CTAO	Charters Tower	67.72	127	eP	P	20 06 09.9	-0.5
	comp=Z,160nm,1.3s						
CTAO				LR	LR		
	comp=Z,264nm,22.0s						
CTAO	Charters Tower	67.72	127	eP	P	20 06 09.9	-0.5
CTAO				pmax	pmax		
	comp=Z,160nm,1.3s						
CTAO				MLR	MLR		
	comp=Z,264nm,22.0s						
DAVA	Damuels	68.18	313	eP	P	20 06 13.5	+0.3
	comp=Z,29nm,0.9s						
STU	Stuttgart	68.27	315	eP	P	20 06 14.4	+0.9
	comp=Z,52nm,1.1s						
STU				eP	P	20 06 17.6	+4.1
DAVOX	Davos/Dischmat	68.31	313	P	P	20 06 14.3	+0.2
	comp=Z,5.6nm,0.9s,baz=107,slow=3.5,SNR=5.2						
DAVOX				LR	LR	20 41 10.1	
	comp=Z,201nm,20.5s,baz=76,slow=40						
TUE	Stuetta	68.74	312	eP	P	20 06 18.7	+1.9
	comp=Z,25nm,0.9s						
BFO	Black Forest	68.93	314	PFAKE		20 06 30.0	+12
BFO				LR	LR		
	comp=Z,10.0nm,19.0s						
GAMB	Gambell	69.18	28	eP	P	20 06 18.5	-0.3
	comp=Z,23nm,1.0s						
MEM	Membach	69.80	317	⇑P	P	20 06 24.0	+1.0
WLF	Walferdange	69.96	316	⇑P	P	20 06 24.1	+0.1
WLF	Walferdange	69.96	316	eP	P	20 06 24.4	+0.4
	comp=Z,87nm,1.0s						
WLF	Walferdange	69.96	316	eP	P	20 06 24.4	+0.4
WLF				pmax	pmax		
	comp=Z,87nm,1.0s						
SENIN	Lac Senin/Sane	70.14	313	eP	P	20 06 25.3	-0.1
	comp=Z,22nm,0.9s						
SENIN				eP	P	20 06 29.6	+4.2
BBOO	Buckleboo	70.21	144	eP	P	20 06 24.3	-1.3
	comp=Z,63nm,0.6s						
BCLA	Clavier	70.28	317	⇑XP	P	20 06 30.6	+4.7
DOU	Dourbes	70.81	317	⇓XP	P	20 06 33.2	+4.1
BNI	Bardonecchia	70.93	311	eP	P	20 06 29.1	-1.0
	comp=Z,45nm,1.2s						
BNI	Bardonecchia	70.93	311	eP	P	20 06 29.1	-1.0
BNI				pmax	pmax		

	comp=Z,45nm,1.2s						
RDOG	**Red Dog Mine**	**71.26**	**23**	*e*P	**P**	**20 06 33.0**	**+1.4**
	comp=Z,33nm,1.1s						
KEST	**Kesra**	**71.84**	**301**	P	**P**	**20 06 36.4**	**+0.6**
	comp=Z,17nm,1.0s,baz=320,slow=4.0,SNR=13						
KEST				LR	LR	20 44 54.2	
	comp=Z,88nm,20.6s,baz=4.5,slow=41						
KEST	**Kesra**	**71.84**	**301**	*e*P	**P**	**20 06 36.9**	**+1.1**
	comp=Z,126nm,1.1s						
THTN	**Thala**	**72.40**	**301**	*e*P	**P**	**20 06 40.0**	**+0.8**
	comp=Z,85nm,1.5s						
HNR	**Honiara**	**72.55**	**110**	P	**P**	**20 06 38.7**	**-1.4**
	comp=Z,62nm,0.7s,baz=214,slow=3.6,SNR=3.0						
HNR				LR	LR	20 37 55.2	
	comp=Z,263nm,21.7s,baz=302,slow=35						
STKA	**Stephens Creek**	**72.65**	**139**	P	**P**	**20 06 39.8**	**-0.5**
	comp=Z,37nm,0.8s,baz=323,slow=5.5,SNR=70						
STKA				LR	LR	20 41 03.1	
	comp=Z,168nm,21.6s,baz=318,slow=38						
STKA	**Stephens Creek**	**72.65**	**139**	*e*P	**P**	**20 06 39.4**	**-1.0**
	comp=Z,12nm,1.0s						
STKA	**Stephens Creek**	**72.65**	**139**	*e*P	**P**	**20 06 39.7**	**-0.6**
EKA	**Eskdalemuir Ar**	**73.59**	**324**	P	**P**	**20 06 46.5**	**+0.9**
	comp=Z,7.1nm,0.8s,baz=73,slow=5.8,SNR=14						
EKA				pP	**pP**	**20 07 00.0**	**-0.6**
	comp=Z,9.8nm,0.6s,baz=67,slow=6.2,SNR=8.4						
EKA				LR	LR	20 41 36.0	
	comp=Z,158nm,19.2s,baz=70,slow=38						
ESK	**Eskdalemuir**	**73.62**	**324**	*e*P	**P**	**20 06 46.4**	**+0.6**
	comp=Z,42nm,1.0s						
ESK				LR	LR		
	comp=Z,228nm,19.0s						
ESK	**Eskdalemuir**	**73.62**	**324**	*e*P	**P**	**20 06 46.4**	**+0.6**
ESK				pmax	pmax		
	comp=Z,42nm,1.0s						
ESK				MLR	MLR		
	comp=Z,228nm,19.0s						
EIDS	**Eidsvold**	**74.49**	**128**	*e*P	**P**	**20 06 51.2**	**-0.2**
	comp=Z,117nm,1.3s						
SET	**Setif**	**74.70**	**303**	P	**P**	**20 06 57.0**	**+4.4**
COLD	**Coldfoot**	**75.96**	**21**	*e*P	**P**	**20 07 00.1**	**+0.9**
	comp=Z,18nm,0.9s						
LSZ	**Lusaka**	**76.11**	**245**	*e*P	**P**	**20 07 01.4**	**+0.4**
	comp=Z,35nm,0.6s						
LSZ				*e*P	**P**	**20 07 01.8**	**+0.9**
LSZ				LR	LR		
	comp=Z,593nm,20.0s						
LSZ	**Lusaka**	**76.11**	**245**	*e*P	**P**	**20 07 01.4**	**+0.4**
LSZ				pmax	pmax		
	comp=Z,35nm,0.6s						
LSZ				MLR	MLR		
	comp=Z,593nm,20.0s						
EMHD	**Djebel Mahouad**	**76.55**	**304**	P	**P**	**20 07 08.0**	**+4.8**
MLY	**Manley**	**76.97**	**23**	*e*P	**P**	**20 07 05.6**	**+0.7**
	comp=Z,39nm,0.8s						
SUMG	**Summit**	**77.17**	**347**	*e*P	**P**	**20 07 07.5**	**+1.1**
	comp=Z,33nm,0.9s						
SUMG	**Summit**	**77.17**	**347**	*e*P	**P**	**20 07 07.5**	**+1.1**
SUMG				pmax	pmax		
	comp=Z,33nm,0.9s						
CAST	**Castle Rocks**	**77.33**	**25**	*e*P	**P**	**20 07 07.5**	**+0.5**
	comp=Z,44nm,0.9s						
BPAW	**Bear Paw Mtn.**	**77.38**	**24**	*e*P	**P**	**20 07 07.7**	**+0.4**
	comp=Z,38nm,0.8s						
PPLA	**Purkeypile**	**77.57**	**25**	*e*P	**P**	**20 07 09.1**	**+0.7**
	comp=Z,184nm,1.6s						
MDM	**Murphy Dome**	**77.89**	**23**	*e*P	**P**	**20 07 10.7**	**+0.6**
	comp=Z,111nm,1.2s						
TRF	**Thorofare Moun**	**78.00**	**25**	*e*P	**P**	**20 07 11.8**	**+0.9**
	comp=Z,21nm,1.0s						
ARMA	**Armidale**	**78.02**	**132**	*e*P	**P**	**20 07 12.0**	**+0.7**
	comp=Z,90nm,1.1s						
EANR	**’Ain N’Sour**	**78.03**	**304**	P	P	20 07 18.0	+6.5
CCB	**Clear Creek Bu**	**78.22**	**23**	*e*P	**P**	**20 07 09.9**	**-1.9**
	comp=Z,12nm,0.9s						
WRH	**Wood River Hil**	**78.22**	**23**	*e*P	**P**	**20 07 12.4**	**+0.5**
	comp=Z,14nm,1.0s						
SKT	**Skwentna**	**78.32**	**26**	*e*P	**P**	**20 07 11.9**	**-0.6**
	comp=Z,37nm,0.8s						
MCK	**McKinley**	**78.34**	**24**	*e*P	**P**	**20 07 12.8**	**+0.2**
	comp=Z,23nm,0.8s						
MCK	**McKinley**	**78.34**	**24**	*e*P	**P**	**20 07 12.8**	**+0.2**
MCK				pmax	pmax		
	comp=Z,23nm,0.8s						
IL1	**Eielson Array**	**78.47**	**23**	*e*P	**P**	**20 07 12.4**	**-0.9**
ILAR	**Eielson Array**	**78.47**	**23**	P	**P**	**20 07 12.8**	**-0.4**
	comp=Z,5.2nm,0.8s,baz=300,slow=5.0,SNR=24						
ILAR				LR	LR	20 44 32.4	
	comp=Z,236nm,18.4s,baz=300,slow=38						
ILB	**Eielson Array**	**78.47**	**23**	*e*P	**P**	**20 07 12.7**	**-0.6**
RSO	**Redoubt South**	**78.63**	**28**	*e*P	**P**	**20 07 13.2**	**-1.2**
PMR	**Palmer**	**79.48**	**26**	*e*P	**P**	**20 07 18.6**	**-0.2**
	comp=Z,46nm,1.0s						
PMR	**Palmer**	**79.48**	**26**	*e*P	**P**	**20 07 18.6**	**-0.2**
PMR				pmax	pmax		
	comp=Z,46nm,1.0s						
CAN	**Canberra**	**79.48**	**137**	*e*P	**P**	**20 07 19.1**	**-0.2**
	comp=Z,216nm,1.7s						
RC01	**Rabbit Creek A**	**79.53**	**26**	*e*P	**P**	**20 07 18.4**	**-0.7**
	comp=Z,40nm,1.0s						
TAM	**Tamanrasset**	**79.58**	**290**	*e*P	**P**	**20 07 19.8**	**-0.5**
	comp=Z,21nm,1.3s						
SML	**Sawmill**	**79.67**	**25**	*e*P	**P**	**20 07 19.8**	**-0.1**
	comp=Z,101nm,1.0s						
SML	**Sawmill**	**79.67**	**25**	*e*P	**P**	**20 07 19.8**	**-0.1**
SML				pmax	pmax		
	comp=Z,101nm,1.0s						
CNPM	**China Poot**	**79.78**	**28**	*e*P	**P**	**20 07 20.6**	**+0.1**
	comp=Z,48nm,1.3s						
BRLK	**Bradley Lake**	**79.79**	**28**	*e*P	**P**	**20 07 19.8**	**-0.8**
	comp=Z,45nm,0.8s						
RES	**Resolute Bay**	**79.94**	**3**	P	**P**	**20 07 21.9**	**+0.8**
	comp=Z,6.7nm,1.0s,baz=31,slow=4.1,SNR=4.2						
RES	**Resolute Bay**	**79.94**	**3**	*e*P	**P**	**20 07 21.7**	**+0.7**
	comp=Z,27nm,1.1s						
RES	**Resolute Bay**	**79.94**	**3**	*e*P	**P**	**20 07 21.7**	**+0.7**
RES				pmax	pmax		
	comp=Z,27nm,1.1s						
SCM	**Sheep Creek Mo**	**80.04**	**25**	*e*P	**P**	**20 07 22.5**	**+0.5**
	comp=Z,48nm,1.0s						
PAX	**Paxson**	**80.06**	**24**	*e*P	**P**	**20 07 22.1**	**0.0**
	comp=Z,38nm,1.4s						
OHAK	**Old Harbor**	**80.11**	**31**	*e*P	**P**	**20 07 21.1**	**-1.2**
KDAK	**Kodiak Island**	**80.13**	**30**	*e*P	**P**	**20 07 21.7**	**-0.6**
	comp=Z,84nm,1.3s						
KDAK				LR	LR		
	comp=Z,184nm,20.0s						
KDAK	**Kodiak Island**	**80.13**	**30**	*i* P	**P**	**20 07 22.2**	**-0.2**
INK	**Inuvik**	**80.13**	**16**	P	**P**	**20 07 22.5**	**+0.3**
	comp=Z,14nm,0.6s,baz=330,slow=5.2,SNR=16						
INK	**Inuvik**	**80.13**	**16**	*e*P	**P**	**20 07 22.7**	**+0.5**
	comp=Z,30nm,0.8s						
INK	**Inuvik**	**80.13**	**16**	*e*P	**P**	**20 07 22.7**	**+0.5**
INK				pmax	pmax		
	comp=Z,30nm,0.8s						
ES19	**SONSECA Array**	**80.15**	**309**	*e*P	**P**	**20 07 23.6**	**+0.6**
ESDC	**Sonseca Array**	**80.21**	**309**	P	**P**	**20 07 24.4**	**+1.1**
	comp=Z,2.9nm,0.9s,baz=59,slow=5.5,SNR=9.6						
ESDC				LR	LR	20 48 41.3	
	comp=Z,98nm,18.9s,baz=345,slow=40						
EGAK	**Eagle**	**80.39**	**21**	*e*P	**P**	**20 07 24.0**	**+0.3**
	comp=Z,40nm,1.0s						
EGAK				*e*P	**PcP**	**20 07 24.4**	**-6.2**
EGAK				LR	LR		
	comp=Z,306nm,22.0s						
PAB	**San Pablo**	**80.53**	**309**	*e*P	**P**	**20 07 25.1**	**0.0**
	comp=Z,47nm,1.8s						
PAB				LR	LR		
	comp=Z,198nm,19.0s						
PAB	**San Pablo**	**80.53**	**309**	*e*P	**P**	**20 07 25.1**	**0.0**
PAB				pmax	pmax		
	comp=Z,47nm,1.8s						
PAB				MLR	MLR		
	comp=Z,198nm,19.0s						
DIV	**Divide**	**81.06**	**25**	*e*P	**P**	**20 07 27.1**	**-0.4**
	comp=Z,91nm,1.8s						
DAWY	**Dawson**	**81.44**	**21**	*e*P	**P**	**20 07 29.2**	**-0.1**
	comp=Z,39nm,1.2s						
BMRM	**Bremner River**	**81.61**	**25**	*e*P	**P**	**20 07 30.5**	**+0.2**
	comp=Z,72nm,1.0s						
MVO	**Moncorvo**	**81.67**	**312**	*e*P	P	20 07 39.0	+7.9
	comp=Z,40nm,1.3s						
MVO				*e*pP	pP	20 07 47.9	+1.6
RAGM	**Ragged Mountai**	**81.95**	**25**	*e*P	**P**	**20 07 31.2**	**-0.9**
	comp=Z,64nm,1.3s						
MTE	**Manteigas**	**82.37**	**311**	*e*P	**P**	**20 07 36.8**	**+2.1**
	comp=Z,56nm,1.5s						
MTE				*e*pP	**pP**	**20 07 49.9**	**-0.1**
TGL	**Tana Glacier**	**82.42**	**25**	*e*P	**P**	**20 07 35.2**	**+0.5**
	comp=Z,53nm,1.0s						
PCBR	**Castelo Branco**	**82.57**	**311**	*e*P	**P**	**20 07 36.5**	**+0.8**
	comp=Z,33nm,1.4s						
PCBR				*e*pP	**pP**	**20 07 50.8**	**-0.2**
PMRV	**Marv??o**	**82.70**	**310**	*e*P	P	20 07 44.5	+8.1
	comp=Z,35nm,1.6s						
PMRV				*e*pP	pP	20 07 51.2	-0.5
LBTB	**Lobatse**	**83.29**	**238**	*e*P	**P**	**20 07 40.4**	**+0.7**
	comp=Z,75nm,0.9s						
LBTB	**Lobatse**	**83.29**	**238**	*e*P	**P**	**20 07 40.4**	**+0.7**
LBTB				pmax	pmax		
	comp=Z,75nm,0.9s						
PTOM	**Tomar**	**83.32**	**311**	*e*P	P	20 07 48.0	+8.4
	comp=Z,46nm,1.3s						
PMTG	**Montargil**	**83.44**	**310**	*e*pP	pP	20 07 56.5	+1.0
MDT	**Midelt**	**83.62**	**303**	P	**P**	**20 07 44.3**	**+2.8**
	comp=Z,1.0nm,0.7s,baz=80,slow=6.1,SNR=2.4						
MDT				LR	LR	20 51 20.0	
	comp=Z,91nm,19.2s,baz=56,slow=40						
PBEJ	**Beja**	**83.67**	**309**	*e*P	P	20 07 51.2	+10
	comp=Z,22nm,1.7s						
PVAQ	**Vaqueiros**	**83.85**	**308**	*e*P	P	20 07 50.1	+7.8
	comp=Z,45nm,1.4s						
PVAQ				*e*pP	pP	20 07 57.1	-0.5
MESJ	**Messejana**	**84.00**	**309**	*e*P	P	20 07 51.1	+8.0
	comp=Z,39nm,1.6s						
MESJ				*e*pP	pP	20 07 57.9	-0.5
SFJD	**Kangerlussuaq**	**84.17**	**347**	LR	LR	20 51 10.9	
	comp=Z,186nm,19.8s,baz=30,slow=40						
DZM	**Mont Dzumac**	**84.31**	**118**	P	**P**	**20 07 44.2**	**-0.8**
	comp=Z,15nm,0.7s,baz=46,slow=5.4,SNR=17						
DZM	**Mont Dzumac**	**84.31**	**118**	*e*P	**P**	**20 07 45.0**	**0.0**
	comp=Z,77nm,1.3s						
BOSA	**Boshof**	**85.45**	**236**	P	**P**	**20 07 50.9**	**+0.3**
	comp=Z,12nm,1.0s,baz=51,slow=5.1,SNR=10						
BOSA				pP	**pP**	**20 08 06.2**	**+0.3**
	comp=Z,35nm,0.8s,baz=50,slow=4.2,SNR=14						
BOSA				LR	LR	20 42 00.0	
	comp=Z,364nm,21.5s,baz=44,slow=33						
SKAG	**Skagway**	**86.05**	**23**	*e*P	**P**	**20 07 53.6**	**+0.7**
	comp=Z,34nm,1.0s						
TOA0	**Torodi Ar. Sit**	**86.85**	**283**	*e*P	**P**	**20 07 58.4**	**+0.6**
TOA1	**Torodi Ar. Sit**	**86.85**	**283**	*e*P	**P**	**20 07 57.9**	**+0.2**
TOA1				*e*pP	**pP**	**20 08 13.6**	**+0.6**
TORD	**Torodi Ar. Bea**	**86.85**	**283**	P	**P**	**20 07 57.9**	**+0.2**
	comp=Z,3.3nm,1.0s,baz=80,slow=3.1						
TORD				pP	**pP**	**20 08 13.6**	**+0.6**
	baz=60,slow=3.0						
TORD				LR	LR	20 50 54.5	
	comp=Z,202nm,18.4s,baz=15,slow=38						
BESE	**Bessie Mountai**	**86.86**	**23**	*e*P	**P**	**20 07 57.6**	**+0.6**
	comp=Z,20nm,1.0s						
DLBC	**Dease Lake**	**88.64**	**22**	*e*P	**P**	**20 08 06.8**	**+1.3**
	comp=Z,30nm,1.3s						
YKA	**Yellowknife Ar**	**89.36**	**13**	P	**P**	**20 08 08.6**	**-0.1**
	comp=Z,2.7nm,0.9s,baz=334,slow=5.1,SNR=6.7						
YKA				pP	**pP**	**20 08 21.9**	**-2.2**
	comp=Z,3.1nm,0.9s,baz=334,slow=4.9,SNR=5.3						
YKA				LR	LR	20 52 25.0	
	comp=Z,7.9nm,19.8s,baz=294,slow=38						
WRAK	**Wrangell Islan**	**89.37**	**24**	PFAKE		20 08 20.0	+11
WRAK				LR	LR		
	comp=Z,186nm,21.0s						
FRB	**Frobisher Bay**	**90.10**	**353**	P	**P**	**20 08 13.6**	**+1.5**
	comp=Z,2.0nm,0.3s,baz=17,slow=11,SNR=2.3						
KOWA	**Kowa**	**91.26**	**287**	P	**P**	**20 08 20.6**	**+2.1**
	comp=Z,2.3nm,0.8s,baz=54,slow=12,SNR=3.9						
KOWA				pP	**pP**	**20 08 33.6**	**-0.3**
	comp=Z,12nm,0.8s,baz=93,slow=2.7,SNR=12						
KOWA				LR	LR	20 54 10.2	
	comp=Z,199nm,19.1s,baz=57,slow=39						
DBIC	**Dimbokro**	**95.47**	**280**	P	**P**	**20 08 39.5**	**+1.7**
	comp=Z,2.3nm,0.6s,baz=152,slow=15,SNR=3.0						
DBIC				pP	**pP**	**20 08 52.9**	**-0.4**
	comp=Z,9.2nm,1.0s,baz=16,slow=7.9,SNR=5.1						
DBIC				LR	LR	20 56 10.5	
	comp=Z,149nm,19.7s,baz=46,slow=38						
DBIC	**Dimbokro**	**95.47**	**280**	*e*P	**P**	**20 08 37.1**	**-0.8**
	comp=Z,16nm,1.0s						
DBIC				pP	**pP**	**20 08 52.9**	**-0.4**
DBIC	**Dimbokro**	**95.47**	**280**	*e*P	**P**	**20 08 37.1**	**-0.8**
DBIC				*PP	**pP**	**20 08 52.9**	**-0.4**
DBIC				pmax	pmax		
	comp=Z,16nm,1.0s						
MAW	**Mawson**	**95.70**	**192**	P	**P**	**20 08 38.6**	**+1.1**
	comp=Z,2.2nm,0.9s,baz=44,slow=16,SNR=2.8						
MAW				LR	LR	20 46 23.1	
	comp=Z,125nm,21.4s,baz=40,slow=32						
MAW	**Mawson**	**95.70**	**192**	*e*P	**P**	**20 08 37.8**	**+0.2**
	comp=Z,5.6nm,1.6s						
MAW	**Mawson**	**95.70**	**192**	*e*P	**P**	**20 08 37.8**	**+0.2**
MAW				pmax	pmax		
	comp=Z,6.0nm,1.6s						
SCHQ	**Schefferville**	**98.44**	**349**	LR	LR	20 57 54.1	
	comp=Z,60nm,21.8s,baz=13,slow=38						
FFC	**Flin Flon**	**98.93**	**10**	PFAKE		20 09 00.0	+7.3
FFC				LR	LR		
	comp=Z,219nm,22.0s						
NLWA	**Neilton Lookou**	**99.72**	**25**	PFAKE		20 09 10.0	+14
NLWA				LR	LR		
	comp=Z,218nm,21.0s						
HAWA	**Hanford**	**102.17**	**23**	PFAKE		20 09 20.0	+13
HAWA				LR	LR		
	comp=Z,175nm,21.0s						
EGMT	**Eagleton**	**103.72**	**16**	PFAKE		20 09 30.0	+16
EGMT				LR	LR		
	comp=Z,349nm,20.0s						
BMO	**Blue Mountains**	**104.29**	**23**	PFAKE		20 09 30.0	+13
BMO				LR	LR		
	comp=Z,196nm,22.0s						
DGMT	**Dagmar**	**104.56**	**13**	PFAKE		20 09 30.0	+12
DGMT				LR	LR		
	comp=Z,260nm,21.0s						
BOZ	**Bozeman (W)**	**105.44**	**19**	PFAKE		20 13 50.0	
BOZ				LR	LR		
	comp=Z,211nm,19.0s						
LAO	**LASA Array**	**105.82**	**15**	PFAKE		20 13 50.0	
LAO				LR	LR		
	comp=Z,308nm,22.0s						
WVOR	**Wild Horse Val**	**105.89**	**25**	PFAKE		20 13 50.0	
WVOR				LR	LR		
	comp=Z,197nm,19.0s						
AGMN	**Agassiz Nation**	**106.03**	**7**	PFAKE		20 13 50.0	
AGMN				LR	LR		
	comp=Z,191nm,21.0s						
HLID	**Hailey**	**106.41**	**21**	PFAKE		20 13 50.0	
HLID				LR	LR		
	comp=Z,228nm,21.0s						
RLMT	**Red Lodge**	**106.53**	**17**	PFAKE		20 13 50.0	
RLMT				LR	LR		
	comp=Z,292nm,20.0s						
LKWY	**Lake**	**106.73**	**18**	PFAKE		20 13 50.0	
LKWY				LR	LR		
	comp=Z,2µm,19.0s						
EYMN	**Ely**	**106.76**	**4**	PFAKE		20 13 50.0	
EYMN				LR	LR		
	comp=Z,233nm,20.0s						
SACV	**Santiago Islan**	**107.50**	**297**	PFAKE		20 13 50.0	
SACV				LR	LR		
	comp=Z,173nm,19.0s						
PKME	**Peaks-Kenny Pk**	**108.08**	**348**	PFAKE		20 13 50.0	
PKME				LR	LR		
	comp=Z,268nm,20.0s						
AHID	**Auburn Hatcher**	**108.17**	**19**	PFAKE		20 13 50.0	
AHID				LR	LR		
	comp=Z,108nm,22.0s						
BW06	**Boulder Array**	**108.62**	**18**	PFAKE		20 13 50.0	
BW06				LR	LR		
	comp=Z,212nm,22.0s						
PDAR	**Pinedale Array**	**108.62**	**18**	PP	PP	20 14 14.7	+8.0
	comp=Z,0.8nm,0.7s,baz=328,slow=1.9,SNR=4.1						
COWI	**Conover**	**108.73**	**3**	PFAKE		20 13 50.0	
COWI				LR	LR		
	comp=Z,192nm,20.0s						
HWUT	**Hardware Ranch**	**109.08**	**20**	PFAKE		20 13 50.0	
HWUT				LR	LR		
	comp=Z,221nm,20.0s						
NVAR	**Mina Array Bea**	**109.45**	**27**	PP	PP	20 14 22.2	+9.4
	comp=Z,0.7nm,0.6s,baz=307,slow=1.4,SNR=4.3						
LONY	**Lake Ozonia**	**109.56**	**352**	PFAKE		20 13 50.0	
LONY				LR	LR		
	comp=Z,217nm,22.0s						
DUG	**Dugway, Tooele**	**109.95**	**22**	PFAKE		20 14 00.0	
DUG				LR	LR		
	comp=Z,115nm,19.0s						
ECSD	**EROS Data Cent**	**110.43**	**9**	PFAKE		20 14 00.0	
ECSD				LR	LR		
	comp=Z,268nm,20.0s						
JFWS	**Jewell Farm**	**111.85**	**4**	PFAKE		20 14 00.0	
JFWS				LR	LR		
	comp=Z,207nm,21.0s						
BINY	**Binghamton**	**112.12**	**352**	PFAKE		20 14 00.0	
BINY				LR	LR		
	comp=Z,237nm,20.0s						
OGNE	**Ogallala**	**112.21**	**13**	PFAKE		20 14 00.0	
OGNE				LR	LR		
	comp=Z,457nm,21.0s						
ISCO	**Idaho Springs**	**112.46**	**17**	PFAKE		20 14 00.0	
ISCO				LR	LR		
	comp=Z,202nm,20.0s						
AAM	**Ann Arbor**	**112.58**	**358**	PFAKE		20 14 00.0	
AAM				LR	LR		
	comp=Z,182nm,20.0s						
SCIA	**State Center**	**112.62**	**6**	PFAKE		20 14 00.0	
SCIA				LR	LR		
	comp=Z,228nm,21.0s						
MVCO	**Mesa Verde**	**114.06**	**20**	PFAKE		20 14 00.0	+7.9
MVCO				LR	LR		
	comp=Z,233nm,20.0s						
HDIL	**Hopedale**	**114.25**	**3**	PFAKE		20 14 00.0	+8.0
HDIL				LR	LR		
	comp=Z,244nm,21.0s						
PFO	**Pinyon Flats O**	**114.35**	**28**	PFAKE		20 14 00.0	+7.4
PFO				LR	LR		
	comp=Z,163nm,19.0s						
SDCO	**Great Sand Dun**	**114.42**	**17**	PFAKE		20 14 00.0	+7.1
SDCO				LR	LR		
	comp=Z,182nm,21.0s						
ACSO	**Alum Creek Sta**	**114.62**	**358**	PFAKE		20 14 00.0	+7.2
ACSO				LR	LR		
	comp=Z,177nm,20.0s						
WUAZ	**Wupatki**	**114.65**	**23**	PFAKE		20 14 00.0	+6.8
WUAZ				LR	LR		
	comp=Z,132nm,20.0s						
CBKS	**Cedar Bluff**	**114.72**	**12**	PFAKE		20 14 00.0	+6.9
CBKS				LR	LR		
	comp=Z,247nm,22.0s						
KSU1	**Kansas State U**	**114.97**	**9**	PFAKE		20 14 00.0	+6.5
KSU1				LR	LR		
	comp=Z,225nm,21.0s						
QSPA	**South Pole Qui**	**115.25**	**180**	PKP	**PKPdf**	**20 13 52.3**	**-0.7**
	comp=Z,3.5nm,1.0s,baz=161,slow=2.8,SNR=3.7						
SNAA	**Sanae**	**116.19**	**200**	PKP	**PKPdf**	**20 13 53.8**	**-1.0**
	comp=Z,0.5nm,0.6s,baz=326,slow=15,SNR=2.7						
CBN	**Corbin Frederi**	**116.22**	**353**	PFAKE		20 14 10.0	+14
CBN				LR	LR		
	comp=Z,213nm,19.0s						
R40A	**Maddies Statio**	**116.30**	**6**	*e*PKPdf	**PKPdf**	**20 13 54.4**	**-1.7**
ANMO	**Albuquerque**	**116.77**	**19**	PKP	**PKPdf**	**20 13 58.1**	**+0.8**
	comp=Z,2.6nm,0.8s,baz=192,slow=2.4,SNR=8.8						
ANMO				SKP		20 17 28.4	
	comp=Z,1.0nm,0.8s,baz=312,slow=2.4,SNR=3.6						
ANMO	**Albuquerque**	**116.77**	**19**	*e*PKPdf	**PKPdf**	**20 13 57.4**	**+0.1**
ANMO				SKP		20 17 28.4	
ANMO				LR	LR		
	comp=Z,198nm,21.0s						
ANMO	**Albuquerque**	**116.77**	**19**	*e*PKIKP	**PKPdf**	**20 13 57.4**	**+0.1**
ANMO				MLR	MLR		
	comp=Z,198nm,21.0s						
LAZ	**Ladron**	**117.07**	**20**	*e*PKPdf	**PKPdf**	**20 13 57.3**	**-0.6**
BLA	**Blacksburg**	**117.49**	**355**	PFAKE		20 14 10.0	+12
BLA				LR	LR		
	comp=Z,312nm,22.0s						
T42A	**Van Buren**	**117.65**	**5**	*e*PKPdf	**PKPdf**	**20 13 58.3**	**-0.4**
TUC	**Tucson**	**117.75**	**24**	PFAKE		20 14 10.0	+11
TUC				LR	LR		
	comp=Z,305nm,21.0s						
HHAR	**Hobbs**	**118.11**	**8**	*e*PKPdf	**PKPdf**	**20 13 59.0**	**-0.6**
MSTX	**Muleshoe**	**118.70**	**16**	*e*PKPdf	**PKPdf**	**20 14 00.6**	**-0.4**
WMOK	**Wichita Mounta**	**118.86**	**12**	*e*PKPdf	**PKPdf**	**20 14 00.1**	**-1.0**
WMOK				LR	LR		
	comp=Z,173nm,22.0s						
WMOK	**Wichita Mounta**	**118.86**	**12**	*e*PKIKP	**PKPdf**	**20 14 00.1**	**-1.0**
WMOK				MLR	MLR		
	comp=Z,173nm,22.0s						
TKL	**Tuckaleechee C**	**119.21**	**358**	PKP	**PKPdf**	**20 14 01.7**	**0.0**
	comp=Z,2.4nm,0.6s,baz=230,slow=2.8,SNR=3.7						
TKL	**Tuckaleechee C**	**119.21**	**358**	*e*PKPdf	**PKPdf**	**20 14 00.9**	**-0.8**
TKL	**Tuckaleechee C**	**119.21**	**358**	*e*PKIKP	**PKPdf**	**20 14 00.9**	**-0.8**
CNNC	**Cliffs of the**	**119.21**	**353**	PFAKE		20 14 10.0	+8.3
CNNC				LR	LR		
	comp=Z,289nm,22.0s						
MIAR	**Mount Ida**	**119.86**	**8**	*e*PKPdf	**PKPdf**	**20 14 03.4**	**+0.4**
MIAR				LR	LR		
	comp=Z,223nm,21.0s						
MIAR	**Mount Ida**	**119.86**	**8**	*e*PKIKP	**PKPdf**	**20 14 03.4**	**+0.4**
MIAR				MLR	MLR		
	comp=Z,223nm,21.0s						
MNTX	**Cornudas Mount**	**120.12**	**19**	*e*PKPdf	**PKPdf**	**20 14 04.0**	**+0.3**
MNTX				LR	LR		
	comp=Z,157nm,20.0s						
X48A	**Hartselle**	**120.42**	**1**	*e*PKPdf	**PKPdf**	**20 14 03.1**	**-1.0**
GOGA	**Godfrey**	**121.44**	**358**	PFAKE		20 14 20.0	+14
GOGA				LR	LR		
	comp=Z,181nm,19.0s						
NHSC	**New Hope**	**121.55**	**355**	PFAKE		20 14 20.0	+14
NHSC				LR	LR		
	comp=Z,304nm,20.0s						
NATX	**Nacogdoches**	**122.47**	**9**	PFAKE		20 14 20.0	+12
NATX				LR	LR		
	comp=Z,298nm,22.0s						
JCT	**Junction City**	**122.75**	**15**	*e*PKPdf	**PKPdf**	**20 14 08.6**	**-0.1**
JCT				LR	LR		
	comp=Z,216nm,19.0s						
JCT	**Junction City**	**122.75**	**15**	*e*PKIKP	**PKPdf**	**20 14 08.6**	**-0.1**
JCT				MLR	MLR		
	comp=Z,216nm,19.0s						
TX31	**Lajitas Ar. Si**	**122.84**	**19**	*e*PKPpre	PKPpre	20 14 02.6	
TX31				*e*PKPdf	**PKPdf**	**20 14 08.5**	**-0.5**
TX31				*e*PKPdf	**PKiKP**	**20 14 08.8**	**-0.4**
TXAR	**Lajitas Array**	**122.84**	**19**	PKP	**PKPdf**	**20 14 09.3**	**+0.3**
	comp=Z,4.9nm,0.9s,baz=235,slow=0.5,SNR=26						
TXAR				pPKP	**pPKPdf**	**20 14 24.1**	**-0.8**
	comp=Z,2.5nm,0.7s,baz=58,slow=3.1,SNR=7.9						
TXAR				SKP		20 17 39.6	
	comp=Z,1.6nm,0.8s,baz=93,slow=1.0,SNR=4.2						
435B	**Jarrell**	**122.93**	**12**	*e*PKPdf	**PKPdf**	**20 14 08.7**	**-0.3**
BRAL	**Brewton**	**123.69**	**2**	PFAKE		20 14 20.0	+10
BRAL				LR	LR		
	comp=Z,345nm,21.0s						
HPIG		**124.45**	**22**	*e*PKPdf	**PKPdf**	**20 14 12.5**	**+0.2**
KVTX	**Kingsville**	**126.00**	**14**	PFAKE		20 14 30.0	+15
KVTX				LR	LR		
	comp=Z,269nm,19.0s						
LNIG	**Linares**	**128.19**	**16**	*e*PKPdf	**PKPdf**	**20 14 18.2**	**-1.0**
SJG	**San Juan**	**132.75**	**334**	PFAKE		20 14 40.0	+12
SJG				LR	LR		
	comp=Z,116nm,19.0s						
GTBY	**Guantanamo Bay**	**133.77**	**346**	PFAKE		20 14 40.0	+10
GTBY				LR	LR		
	comp=Z,161nm,19.0s						
PTCN	**Pitcairn Islan**	**139.89**	**99**	PFAKE		20 14 50.0	+9.0
PTCN				LR	LR		
	comp=Z,12nm,21.0s						
SDV	**Santo Domingo**	**142.90**	**335**	PKP	**PKPdf**	**20 14 46.6**	**-0.4**
	comp=Z,27nm,0.6s,baz=68,slow=5.4,SNR=8.0						
SDV	**Santo Domingo**	**142.90**	**335**	*e*PKPdf	**PKPdf**	**20 14 45.3**	**-1.7**
SDV				LR	LR		
	comp=Z,127nm,21.0s						
JTS	**JuntasAbangare**	**144.48**	**359**	PKP	**PKPdf**	**20 14 50.1**	**+0.6**
	comp=Z,1.7nm,0.4s,baz=68,slow=19,SNR=2.3						
JTS	**JuntasAbangare**	**144.48**	**359**	*e*PKPdf	**PKPdf**	**20 14 50.1**	**+0.6**
JTS				LR	LR		
	comp=Z,138nm,19.0s						
JTS	**JuntasAbangare**	**144.48**	**359**	*e*PKIKP	**PKPdf**	**20 14 50.1**	**+0.6**
JTS				MLR	MLR		
	comp=Z,138nm,19.0s						
PTGA	**Pitinga**	**145.14**	**311**	*e*PKPbc	**PKPdf**	**20 14 50.6**	**-0.1**
PTGA				LR	LR		
	comp=Z,9µm,20.0s						
RUSC	**La Rusia**	**146.56**	**337**	*e*PKPdf	**PKPdf**	**20 14 53.9**	**+0.2**
HELC	**Santa Helena**	**147.07**	**341**	*e*PKPdf	**PKPbc**	**20 14 57.0**	**+0.4**
ROSC	**El Rosal**	**147.97**	**338**	PKPbc	**PKPbc**	**20 14 59.9**	**+0.8**
	comp=Z,60nm,0.8s,baz=70,slow=1.3,SNR=33						
ROSC	**El Rosal**	**147.97**	**338**	*e*PKPdf	**PKPbc**	**20 14 58.1**	**-0.9**
ROSC				*e*PKPbc	**PKiKP**	**20 15 00.9**	**+0.1**
PRAC	**Prado**	**149.21**	**339**	*e*PKPdf	**PKPdf**	**20 14 53.8**	**-3.8**
PRAC				*e*PKPbc	**PKPbc**	**20 15 01.8**	**0.0**
SAML	**Samuel**	**153.11**	**304**	*e*PKPdf	**PKPdf**	**20 15 03.8**	**+0.4**

SAML				*e*PKPbc	PKiKP	20 15 10.9	0.0
SAML				LR	LR		
	comp=Z,243nm,22.0s						
SAML	Samuel	153.11	304	*e*PKIKP	PKPdf	20 15 03.8	+0.4
SAML				MLR	MLR		
	comp=Z,243nm,22.0s						
OTAV	Otavalo	153.56	344	*e*PKPdf	PKPdf	20 15 06.3	+1.6
OTAV				LR	LR		
	comp=Z,168nm,21.0s						
CPUP	Villa Florida	154.57	262	PKP	PKPdf	20 15 05.7	+0.5
	comp=Z,3.2nm,0.9s,baz=224,slow=7.7,SNR=3.7						
CPUP				PKPbc	PKiKP	20 15 15.1	+1.5
	comp=Z,5.2nm,0.8s,baz=80,slow=3.1,SNR=6.6						
CPUP				pPKPbc	PKPab	20 15 28.4	-0.1
	comp=Z,10nm,0.7s,baz=81,slow=2.1,SNR=7.4						
CPUP	Villa Florida	154.57	262	*e*PKPdf	PKPdf	20 15 05.5	+0.4
CPUP				*e*PKPbc	PKiKP	20 15 14.8	+1.1
CPUP				pPKPbc	PKPab	20 15 28.4	-0.1
SIV	San Ignacio	155.25	288	PKPab	PKPab	20 15 30.5	-1.0
	comp=Z,3.5nm,0.7s,baz=141,slow=1.7,SNR=8.5						
SIV				pPKPab	pPKPab	20 15 45.8	-1.2
	comp=Z,6.4nm,0.8s,baz=103,slow=4.9,SNR=6.5						
LPAZ	La Paz	161.33	296	PKP	PKPdf	20 15 14.7	+0.3
	comp=Z,2.1nm,0.9s,baz=50,slow=3.4,SNR=5.6						
LPAZ				pPKPab	pPKPab	20 16 12.5	-1.5
	comp=Z,8.7nm,1.0s,baz=65,slow=0.8,SNR=3.4						
LPAZ	La Paz	161.33	296	*e*PKPdf	PKPdf	20 15 11.4	-3.0
LPAZ				*e*PKPdif	PKPdf	20 15 13.7	-0.7
LPAZ				pPKPab	pPKPab	20 16 12.5	-1.5

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*CSEM **14** 20:03:08.2, 37°.87N×21°.09E, h28^{km}, ML1.4/6*

ATH 14 20:03:08.2, 37°.87N×21°.09E, h28^{km}±1^{km}, ML1.4/6, Error ellipse: s-maj=1.8km s-min=1.0km az=315.0, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VTN	Vitineika	0.09	59	P	Pb	20 03 13.0	-0.2
VTN				S	Sb	20 03 16.5	0.0
VTN	Vitineika	0.09	59	P	Pb	20 03 13.1	0.0
VTN				S	Sb	20 03 16.6	+0.1
ZKS	Zakynthos	0.30	234	P	Pn	20 03 16.2	-0.6
ZKS				S	Sn	20 03 21.8	-0.6
ZKS	Zakynthos	0.30	234	P	Pb	20 03 15.9	+0.4
ZKS				S	Sb	20 03 21.4	+1.0
KFL	Anninata	0.34	315	P	Pb	20 03 15.9	-0.2
KFL				S	Sb	20 03 21.5	+0.1
KFL				AML	AML	20 03 23.9	
	comp=E,215μm,0.3s						
KFL				AML	AML	20 03 24.0	
	comp=N,222μm,0.3s						
KFL	Anninata	0.34	315	P	Pb	20 03 16.0	-0.1
KFL				S	Sb	20 03 21.7	+0.3
RLS	Riolos of Patr	0.35	58	P	Pb	20 03 16.6	+0.4
RLS				S	Sb	20 03 22.2	+0.6
RLS				AML	AML	20 03 22.7	
	comp=E,200μm,0.3s						
RLS				AML	AML	20 03 22.9	
	comp=N,204μm,0.1s						
RLS	Riolos of Patr	0.35	58	P	Pb	20 03 16.4	+0.2
RLS				S	Sb	20 03 22.1	+0.5
VLS	Valsamata	0.50	308	P	Pb	20 03 18.3	-0.3
VLS				S	Sb	20 03 25.9	+0.3
VLS				AML	AML	20 03 26.6	
	comp=E,161μm,0.2s						
VLS				AML	AML	20 03 27.4	
	comp=N,121μm,0.1s						
VLS	Valsamata	0.50	308	P	Pb	20 03 18.5	-0.1
VLS				S	Sb	20 03 26.2	+0.6
PDO	Prodromos	0.73	6	P	Pb	20 03 22.4	0.0
PDO	Prodromos	0.73	6	P	Pb	20 03 22.5	+0.1
LAKA	Lakka	0.79	62	P	Pn	20 03 24.7	+1.1
LAKA				S	Sn	20 03 34.7	+0.2
LAKA	Lakka	0.79	62	P	Pn	20 03 24.2	+0.6
LAKA				S	Sn	20 03 34.9	+0.4
PVO	Paravola	0.82	24	P	Pn	20 03 25.7	+1.7
PVO	Paravola	0.82	24	P	Pn	20 03 25.0	+1.0
EFP	Efpalio	0.85	49	P	Pb	20 03 24.9	+0.5
EFP				S	Sn	20 03 37.1	+1.2
EFP	Efpalio	0.85	49	P	Pb	20 03 24.9	+0.5
EFP				S	Sn	20 03 37.0	+1.1
KLV	Kalavryta, Ach	0.85	78	P	Pn	20 03 24.3	-0.2
KLV				AML	AML	20 03 41.4	
	comp=N,20μm,0.3s						
KLV				AML	AML	20 03 43.2	
	comp=E,12μm,0.2s						
KLV	Kalavryta, Ach	0.85	78	P	Pb	20 03 24.6	+0.1
TRIZ	Trizonia	0.92	57	P	Pb	20 03 25.6	+0.1
TRIZ	Trizonia	0.92	57	P	Pb	20 03 25.9	+0.4
SERG	Sergoula	0.93	54	P	Pn	20 03 25.4	-0.2
SERG				S	Sn	20 03 40.0	+1.9
SERG				AML	AML	20 03 42.7	
	comp=N,44μm,0.3s						
SERG				AML	AML	20 03 45.6	
	comp=E,21μm,0.3s						
SERG	Sergoula	0.93	54	P	Pb	20 03 25.9	+0.1
SERG				S	Sn	20 03 39.8	+1.7
ANX	Ano Chora	0.97	42	P	Pb	20 03 26.8	+0.2
ANX				AML	AML	20 03 44.3	
	comp=N,88μm,0.4s						
ANX				AML	AML	20 03 44.6	
	comp=E,90μm,0.5s						
ANX	Ano Chora	0.97	42	P	Pb	20 03 26.9	+0.4
GUR	Goura	0.99	86	P	Pb	20 03 27.9	+1.0
GUR	Goura	0.99	86	P	Pb	20 03 27.6	+0.8
PYL	PYLOS	1.10	152	P	Pb	20 03 28.8	+0.1
PYL	PYLOS	1.10	152	P	Pb	20 03 29.1	+0.4
DSL	Palaion Diasel	1.26	0	P	Pb	20 03 32.4	+1.0
DSL	Palaion Diasel	1.26	0	P	Pb	20 03 32.2	+0.8

WBNET 14 20:03:15.4, 50°.24N×12°.45E, h10^{km}, 2C-5D, Germany

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NKC	Novy Kostel	0.00	216	⇓P	Pg	20 03 17.0	-0.1
NKC				S	Sg	20 03 18.1	-0.2
LBCW	Luby	0.04	322	⇓P	Pg	20 03 17.2	-0.1
LBCW				S	Sg	20 03 18.6	-0.1
VAC	Vackov	0.05	271	⇓P	Pg	20 03 17.2	-0.1
VAC				S	Sg	20 03 18.5	-0.3
KVC	Kvetna	0.05	125	P	Pg	20 03 17.1	-0.3
KVC				S	Sg	20 03 18.4	-0.5
STCW	Studenec	0.05	62	⇑P	Pg	20 03 17.2	-0.2
STCW				S	Sg	20 03 18.4	-0.4
POCW	Po˜ˆ¡tky	0.09	350	S	Sg	20 03 19.4	-0.2
SKC	Skalna	0.09	221	⇓P	Pg	20 03 17.6	-0.1
SKC				S	Sg	20 03 19.3	-0.2
KACW	Kace¯ov	0.10	155	S	Sg	20 03 19.6	-0.2
KRCW	Kraslice	0.11	28	⇑P	Pg	20 03 17.9	-0.2
KRCW				S	Sg	20 03 19.8	-0.3
KOCW	Kopaniny	0.14	282	⇓P	Pg	20 03 18.5	-0.1
KOCW				S	Sg	20 03 20.7	-0.1
ZHC	Zelena Hora	0.19	209	S	Sg	20 03 21.9	-0.2

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*MAN **14** 20:12:06.9, 14°.93N×119°.46E, h1^{km}, mb5.7, ML4.7, MS5.1*

*BJI **14** 20:12:10.8, 14°.67N×119°.73E, h37^{km}, mb4.5/42, mB4.9/39, Ms4.5/42, Ms7 4.4/40*

*MOS **14** 20:12:11.0±1.0, 14°.93N×119°.82E, h39^{km}, mb5.0/44, MS4.4/9, Error ellipse: s-maj=8.2km s-min=4.7km az=116.2*

*ISCJB **14** 20:12:13.1±0.3, 14°.97N±0°.02×119°.87E±0°.02, h55^{km}±3^{km}, mb4.8/166, MS4.2/49, Error ellipse: s-maj=3.9km s-min=2.7km az=172.8*

*IDC **14** 20:12:13.6±1.5, 14°.89N×119°.79E, h46^{km}±15^{km}, mb4.2/40, mb1 4.3/41, mb1mx4.2/72, mbtmp4.5/41, ML4.2/1, MS4.1/30, Ms1 4.1/30, ms1mx3.9/62, Error ellipse: s-maj=12.9km s-min=8.6km az=67.0*

*NEIC **14** 20:12:13.7±0.4, 14°.91N×119°.84E, h50^{km}±4^{km}, mb4.8/105, Error ellipse: s-maj=3.8km s-min=2.6km az=91.0*

NEIC Felt at Olongapo.

*GCMT **14** 20:12:13.7±0.3, 15°.12N×119°.56E, h28^{km}±1^{km}, MW5.0/75, Moment Tensor Solution. s26,c30; s75,c108; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.65±.24; $M_{\theta\theta}$0.37±.13; $M_{\phi\phi}$-3.01±.15; $M_{r\theta}$-0.07±.20; $M_{\theta\phi}$-0.13±.06; $M_{\phi r}$-2.96±.24; Best double couple: $M_0$4.09800×10^{16} NP1: ϕ_s182.00000°, δ68.00000°, λ89.00000°. NP2: ϕ_s3.00000°, δ22.00000°, λ91.00000°. Principal axes: T 3.9150, Plg67.0000°, Azm90.0000°; N 0.3710, Plg1.0000°, Azm182.0000°; P -4.2800, Plg23.0000°, Azm272.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*DJA **14** 20:12:18.1±0.5, 15°N±4°×12°0E±°, h72^{km}±5^{km}, M4.5/35, mb4.8/35, mB5.1/13, Mw(mB)4.4/13*

ISC 14 20:12:13.1±0.4, 14°.91N±0°.03×119°.73E±0°.04, h41^{km}±3^{km}, h42^{km}:pP-P, n452, σ1^{s}84/458, mb4.8/170, MS4.3/50, 24C-20D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCZP	Santa Cruz	0.88	11	*e*P	Pn	20 12 25.4	-3.6
SCZP				*e*S	Sn	20 12 35.9	-4.7
LUBP	Lubang	1.27	157	*e*P	Pn	20 12 34.7	+0.3
LUBP				*e*S	Sn	20 12 57.8	+7.6
QVPH	Quezon City--P	1.31	101	*e*P	Pn	20 12 35.4	+0.6
QVPH				*e*S	Sn	20 12 57.0	+5.9
TGY	Tagaytay City	1.42	124	P	Pn	20 12 36.4	-0.1
	1μm,0.3s,baz=274,slow=2.7,SNR=133						
TGY				S	Sn	20 12 53.3	-0.6
	1μm,0.3s,baz=262,slow=7.1,SNR=10.0						
TGY	Tagaytay City	1.42	124	⇓*i*P	Pn	20 12 38.9	+2.5
TGY				*i* S	Sn	20 12 57.6	+3.7
BOLP	Bolinao	1.47	7	*e*P	Pn	20 12 34.6	-2.6
BOLP				*e*S	Sn	20 12 53.5	-1.8
LQP	Lukban	1.92	114	*e*P	Pn	20 12 44.6	+1.1
BALP	Baler	1.96	65	*e*P	Pn	20 12 43.2	-0.6
BALP				*e*S	Sn	20 13 08.2	+1.0
BOAC	Boac	2.50	125	*e*P	Pn	20 12 52.9	+1.6
BOAC				*e*S	Sn	20 13 27.3	+6.7
SJMP	San Jose	2.78	151	*e*P	Pn	20 12 57.1	+1.9
SJMP				*e*S	Sn	20 13 35.3	+7.8
GQP	Guinayangan	2.81	110	⇓*e*P	Pn	20 13 08.0	+12
GQP				*e*S	Sn	20 13 52.4	+24
CAUP	Cauayan	2.85	45	*e*P	Pn	20 12 56.8	+0.7
CAUP				*e*S	Sn	20 13 34.0	+4.8
ABRA	Dolores	2.88	19	*e*P	Pn	20 12 57.2	+0.7
ABRA				*e*S	Sn	20 13 37.4	+7.4
BUSP	Coron	2.92	171	*e*P	Pn	20 12 58.3	+1.2
BUSP				*e*S	Sn	20 13 30.7	-0.3
APYP	Conner	3.27	26	*e*P	Pn	20 13 01.8	-0.1
APYP				*e*S	Sn	20 13 44.2	+4.6
OTRP	Odiongan	3.37	138	*e*P	Pn	20 13 03.4	+0.2
CVP	Callao Caves	3.43	36	*e*P	Pn	20 13 03.4	-0.6
ENPP	El Nido	3.69	185	*e*P	Pn	20 13 06.2	-1.5
ENPP				*e*S	Sn	20 13 46.9	-3.2
SGCP	Mt. Cagua	3.99	33	*e*P	Pn	20 13 11.4	-0.3
SGCP				*e*S	Sn	20 14 11.3	+14
CUYO	Cuyo Island	4.23	163	*e*P	Pn	20 13 15.5	+0.4
CUYO				*e*S	Sn	20 14 02.1	-1.1
RCP	Roxas	4.44	138	⇓*e*P	Pn	20 13 20.9	+2.9
PVCP	Virac	4.48	106	*e*P	Pn	20 13 19.0	+0.5
PPR	Puerto Princes	5.20	191	*e*P	Pn	20 13 27.7	-0.6
PPR				*e*S	Sn	20 14 23.2	-3.8
TWG	Pinlang	7.97	9	*e*Pn	Pn	20 14 08.5	+2.1
TPUB	Ta-pu	8.39	6	*e*Pn	Pn	20 14 12.3	+0.1
YULB	Yu-li	8.57	10	*e*Pn	Pn	20 14 15.8	+1.2
SSLB	Suanglung	8.91	7	*e*Pn	Pn	20 14 18.4	-0.9
MCO	Taipa Grande	9.26	322	P	Pn	20 14 22.0	-2.1
NACB	Ninganchiao	9.38	10	*e*Pn	Pn	20 14 25.9	+0.2
KKM	Kota Kinabalu	9.46	202	*e*Pn	Pn	20 14 27.8	+0.8
KKM				*e*Sn	Sn	20 16 05.3	-6.9
DAV	Davao City (W)	9.68	143	LR	LR	20 18 58.9	
	comp=Z,3μm,19.1s,baz=320,slow=42						
MYLDM	Lahad Datu	9.74	187	*e*Pn	Pn	20 14 30.9	+0.2
YHNB	Yeheng	9.83	9	*e*Pn	Pn	20 14 32.8	+0.8
YOJ	Yonaguni jima	9.99	17	*e*Pn	Pn	20 14 33.8	-0.3
YOJ	Yonaguni jima	9.99	17	*e*P	Pn	20 14 33.8	-0.3
QIZ	Qiongzhong	10.31	295	*e*Pn	Pn	20 14 35.9	-2.6
JOW	Kunigami	14.29	33	*e*Pn	Pn	20 15 31.0	-1.9
MPSI	Mapaga	14.48	179	P	P	20 15 44.1	+2.7
MRSI	Marisa	14.51	171	P	P	20 15 39.0	-2.7
	31nm,1.0s,376nm						
KMSI	Cibinong	14.85	163	P	P	20 15 43.3	-2.2
	197nm,1.3s						
SKNT	Sakolnakorn	15.29	280	P	P	20 15 49.7	-0.7
	4.1nm,1.3s						
PCI	Palu	15.71	180	P	P	20 16 02.1	+7.0
APSI	Ampana	15.83	173	P	P	20 15 56.3	-0.1
TNTI	Ternate	15.95	151	*e*Pn	Pn	20 15 53.7	-0.9
	21nm,0.8s						
LUWI	Luwuk	16.13	169	P	P	20 16 00.8	+1.1
LUWI	Luwuk	16.13	169	*e*Pn	P	20 15 58.3	-1.4
	133nm,0.8s						
NONG	Nongkai	16.21	283	P	P	20 16 01.3	+0.7
	0.5nm,1.2s						
KSM	Kuching	16.27	216	*e*Pn	Pn	20 15 57.3	-1.5
	30nm,0.9s						
WHN	Wuhan	16.33	343	P	P	20 16 04.8	+3.0
WHN				sP	sP	20 16 15.6	-1.6
WHN				LR	LR		
	comp=N,1μm,10.5s						
WHN				LR	LR		
	comp=E,1μm,11.9s						
WHN				LR	LR		
	comp=Z,2μm,17.4s						
KHON	Khomkaen	16.35	277	P	P	20 16 06.1	+3.9
	4.1nm,0.6s						
MTKI	Muara Teweh, K	16.46	197	P	P	20 16 05.5	+2.1
GYA	Guiyang	16.76	315	P	P	20 16 05.8	-1.0
GYA				pP	pP	20 16 15.5	-1.4
GYA				PP	sP	20 16 21.0	-1.2
GYA				S	Sn	20 19 12.0	+1.7
GYA				sS	S	20 19 24.4	+4.6
GYA				SS	SnSn	20 19 33.3	+9.3
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,4.8s						
GYA				LR	LR		
	comp=N,1μm,15.2s						
GYA				LR	LR		
	comp=E,890nm,15.8s						
GYA				LR	LR		
	comp=Z,1μm,16.0s						
STKI	Sintang	16.86	210	P	P	20 16 09.6	+1.8
	30nm,1.4s						
NJ2	Nanjing	17.08	357	*e*P	P	20 16 11.4	+1.2
NJ2				pP	pP	20 16 18.6	-1.7
NJ2				PP	sP	20 16 25.4	-0.1
NJ2				S	S	20 19 24.5	-1.5
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,410nm,7.6s						
NJ2				LR	LR		
	comp=N,870nm,13.0s						
NJ2				LR	LR		
	comp=E,500nm,14.9s						
NJ2				LR	LR		
	comp=Z,1μm,15.2s						
SRAK	Srakaew	17.16	269	P	Pn	20 16 07.4	-2.5
LBMI	Labuha	17.25	153	P	P	20 16 12.6	+0.4
	55nm,1.0s,783nm						
TTSI	Tana Toraja	17.84	180	P	P	20 16 21.8	+3.2
	64nm,1.1s						
SANI	Sanana	17.95	159	P	Pn	20 16 18.5	-1.2
	42nm,0.9s						
ENH	Enshi	17.96	330	*e*P	P	20 16 19.5	-0.4
	14nm,0.7s						
PBKT	Sadao Pong	18.14	278	P	P	20 16 27.7	+5.8
	15nm,1.2s,1μm						
PHIT	Phitsanulok	18.70	280	P	Pn	20 16 32.5	+3.7
	15nm,1.0s						
SPSI	Sidrap Palu	18.75	180	P	Pn	20 16 32.2	+2.8
	17nm,1.0s						
KMI	Kunming	18.91	305	P	Pn	20 16 34.4	+2.9
KMI				pP	sP	20 16 43.1	-2.9
KMI				sP	pP	20 16 47.4	+6.7
KMI				PP	PnPn	20 16 50.9	+6.4
KMI				S	Sn	20 19 57.3	-5.1
KMI				SS	SnSn	20 20 21.5	+4.8
KMI				pmax	pmax		
	comp=Z,15nm,1.3s						
KMI				pmax	pmax		
	comp=Z,230nm,3.3s						
KMI				LR	LR		
	comp=N,570nm,15.2s						
KMI				LR	LR		
	comp=E,1μm,15.2s						
KMI				LR	LR		
	comp=Z,1μm,15.2s						
PBKI	Pangkalan Bun	19.24	205	P	Pn	20 16 36.3	+1.0
	261nm,1.1s,2μm						
SIJI	Sorong	19.39	143	P	Pn	20 16 37.1	0.0
	0.8nm,0.3s,baz=254,slow=4.8,SNR=5.8						
PAYA	Payao	19.49	286	P	Pn	20 16 43.9	+5.6
	4.6nm,1.0s						
LAMP	Lampang	19.58	283	P	Pn	20 16 42.7	+3.3
	4.8nm,0.8s						
UTHA	Uthaitani	19.59	275	P	Pn	20 16 44.3	+4.8
	3.7nm,1.0s						
PHET	Kaeng Krachan	19.61	267	P	Pn	20 16 45.2	+5.4
	6.9nm,1.1s,115nm						
SRDT	SRDT	19.95	271	P	Pn	20 16 47.9	+4.1
	21nm,1.1s,2μm						
BKSI	Bulukumba	20.11	179	P	P	20 16 44.2	+0.7
	22nm,1.6s,281nm						
UMPA	Umpang Tak	20.15	276	P	Pn	20 16 49.7	+3.6
	11nm,1.3s,106nm						
CM01	Chiang Mai Arr	20.20	283	*e*P	Pn	20 16 46.0	-0.7
CM01				*e*PcP	PcP	20 20 59.4	+1.4
CM31	Chiang Mai Arr	20.22	283	*e*P	Pn	20 16 47.7	+0.8
CMAR	Chiang Mai Arr	20.22	283	P	Pn	20 16 46.5	-0.5
	13nm,0.9s,baz=95,slow=9.3,SNR=66						
CMAR				PcP	PcP	20 20 59.1	+1.1
	1.0nm,0.7s,baz=70,slow=0.9,SNR=6.4						
CMAR				LR	LR	20 24 50.1	
	comp=Z,609nm,18.8s,baz=101,slow=37						
SKLT	Songkhla	20.26	250	P	Pn	20 16 49.0	+1.6
	57nm,1.5s						
CMMT	Chiang Mai	20.26	284	P	Pn	20 16 48.4	+0.9
	12nm,1.4s						
CHTO	Chiang Mai	20.27	284	*e*P	Pn	20 16 47.1	-0.4
	12nm,1.0s						
CHTO	Chiang Mai	20.27	284	*e*P	Pn	20 16 47.1	-0.4
CHTO				pmax	pmax		
	comp=Z,12nm,1.0s						
CHTO	Chiang Mai	20.27	284	P	Pn	20 16 48.5	+1.0
	comp=Z,54nm,1.1s						
MSAI	Masohi	20.30	153	P	P	20 16 46.3	+0.7
	comp=Z,13nm,1.2s,comp=Z,392nm						
CMAI	Chiengmai2	20.36	287	P	Pn	20 16 49.7	+1.0
	comp=Z,5.3nm,1.1s,comp=Z,2μm						
MYKOM	Kota Tinggi	20.39	232	*e*P	Pn	20 16 49.2	+0.3
TPRI	Tanjung Pinang	20.47	229	P	Pn	20 16 49.6	-0.2
	comp=Z,43nm,1.6s						
JNU	Nakatsue	20.76	27	P	Pn	20 16 51.8	-1.4
	comp=Z,30nm,1.0s,baz=153,slow=9.0,SNR=3.4						
JNU				LR	LR	20 25 03.6	
	comp=Z,211nm,21.4s,baz=304,slow=37						
JNU	Nakatsue	20.76	27	*e*P	Pn	20 16 52.6	-0.6
	comp=Z,73nm,1.3s						
TRTT	Trang	20.86	253	P	Pn	20 16 55.6	+1.2
	comp=Z,11nm,1.1s						
KULM	Kulim	21.06	245	*e*P	P	20 16 56.7	+2.9
	comp=Z,70nm,1.4s						
IPM	Ipoh	21.13	243	*e*P	P	20 16 55.8	+1.2
	comp=Z,36nm,1.2s						
XAN	Xi'an	21.41	335	P	P	20 16 57.9	+0.4
XAN				pP	sP	20 17 10.8	-2.2
XAN				S	S	20 20 49.8	-3.1
XAN				LR	LR		
	comp=Z,870nm,14.4s						
XAN				LR	LR		
	comp=Z,410nm,19.2s						
XAN				LR	LR		
	comp=Z,1μm,15.8s						
CD2	Chengdu	21.64	320	P	P	20 17 01.1	+1.1
CD2				pP	pP	20 17 10.3	0.0
CD2				sP	sP	20 17 15.0	-0.5
CD2				S	S	20 21 00.3	+2.8
CD2				sS	sS	20 21 15.6	+1.6
CD2				pmax	pmax		
	comp=Z,70nm,0.5s						
CD2				pmax	pmax		
	comp=Z,290nm,4.4s						
CD2				LR	LR		
	comp=Z,1μm,16.5s						
CD2				LR	LR		
	comp=Z,1μm,16.5s						
CD2				LR	LR		
	comp=Z,2μm,16.9s						
RKPI	Ransiki, Papua	21.69	138	P	P	20 17 02.8	+2.2
	comp=Z,75nm,0.9s,comp=Z,641nm						
SRBI	Singaraja	23.28	191	P	P	20 17 17.2	-0.1
	comp=Z,69nm,1.2s						
SRPI	Serui, Papua	23.34	134	P	P	20 17 20.8	+2.9
	comp=Z,53nm,0.8s						
BKNI	Bangkinang	23.48	234	*e*P	P	20 17 20.8	+1.5
	comp=Z,52nm,0.8s						
MMRI	Maumere	23.52	174	P	P	20 17 23.3	+3.7
	comp=Z,113nm,0.9s						
MMRI	Maumere	23.52	174	*e*P	P	20 17 21.7	+2.1
	comp=Z,82nm,0.8s						
KS15	Wonju Array Si	23.58	16	*e*P	P	20 17 20.1	+0.1
KSAR	Wonju Array Be	23.58	16	P	P	20 17 18.8	-1.2
KSAR	Wonju Array Be	23.58	16	P	P	20 17 18.8	-1.2
EDFI	Ende, Flores	23.59	175	P	P	20 17 21.8	+1.5
	comp=Z,125nm,0.7s,comp=Z,1μm						
KSRS	Korea Array	23.60	16	P	P	20 17 18.8	-1.4
	comp=Z,4.2nm,0.8s,baz=201,slow=11,SNR=9.3						
KSRS				LR	LR	20 27 14.8	
	comp=Z,332nm,20.3s,baz=195,slow=38						
NGJI	Ngawi	23.60	201	P	P	20 17 40.0	+20
KS01	Wonju Array Si	23.62	16	*e*P	P	20 17 21.2	+0.8
PLAI	Plampang	23.66	185	P	P	20 17 23.7	+2.7
TWSI	Taliwang, Sumb	23.66	187	P	P	20 17 29.1	+8.1
SMRI	Semarang	23.68	204	*e*P	P	20 17 21.9	+0.8
	comp=Z,113nm,1.1s						
TSI	Tuntungan	23.74	244	P	P	20 17 24.6	+2.9
	comp=Z,65nm,1.0s						
PSI	Prapat	23.79	242	P	P	20 17 23.4	+1.1
	comp=Z,15nm,1.0s,baz=360,slow=4.0,SNR=8.8						
PSI				LR	LR	20 27 14.2	
	comp=Z,269nm,18.1s,baz=89,slow=38						
PSI	Prapat	23.79	242	*e*P	P	20 17 23.6	+1.3
	comp=Z,23nm,1.0s						
PSI	Prapat	23.79	242	*e*P	P	20 17 23.6	+1.3
PSI				pmax	pmax		
	comp=Z,23nm,1.0s						
GMJI	Gumukmas	23.86	196	P	P	20 17 38.7	+16
JAGI	Jajag, Banyuwa	23.88	194	P	P	20 17 39.2	+16
JAGI	Jajag, Banyuwa	23.88	194	*e*P	P	20 17 23.9	+0.9
	comp=Z,93nm,0.9s						
PWJI	Pagerwojo	24.10	200	P	P	20 17 40.2	+15
CBIJ	Chichi jima	24.17	56	*e*P	P	20 17 25.7	+0.1
	comp=Z,146nm,0.9s						
WOJI	Wonogiri, Jawa	24.23	202	P	P	20 17 44.5	+18
MNSI	Mandailing Nat	24.36	237	P	P	20 17 29.6	+2.2
	comp=Z,35nm,0.9s						
GUMO	Guam	24.39	90	*e*P	P	20 17 25.6	-2.2
	comp=Z,177nm,1.7s						
GUMO	Guam	24.39	90	*e*P	P	20 17 25.6	-2.2
GUMO				pmax	pmax		
	comp=Z,177nm,1.7s						
KCSI	Kotacane, Aceh	24.42	245	P	P	20 17 41.2	+13
UGM	Wanagama	24.45	203	*e*P	P	20 17 29.1	+0.9
	comp=Z,424nm,1.6s						
PCJI	Pacitan	24.47	201	P	P	20 17 47.2	+19
KPJI	Karang Pucung	24.56	207	P	P	20 17 43.7	+15
MDSI	Maura Dua	24.68	220	P	P	20 17 45.1	+15
SBJI	Serang	24.87	214	P	P	20 17 49.4	+17
DBJI	Dramaga	24.91	212	P	P	20 17 35.6	+3.2
	comp=Z,64nm,1.3s						
SOEI	Soe	24.91	169	P	P	20 17 35.9	+3.3
	comp=Z,124nm,1.0s						
SOEI	Soe	24.91	169	*e*P	P	20 17 32.5	-0.1
	comp=Z,98nm,0.9s						
LWLI	Liwa	25.17	219	P	P	20 17 47.9	+13
BJT	Baijiatuau	25.21	354	*e*P	P	20 17 34.5	-0.4
	comp=Z,43nm,1.3s						
BJT	Baijiatuau	25.21	354	*e*P	P	20 17 34.5	-0.4
BJT				pmax	pmax		
	comp=Z,43nm,1.3s						
CISI	Cisompet, Garu	25.25	209	P	P	20 17 50.6	+15
CISI	Cisompet, Garu	25.25	209	*e*P	P	20 17 36.6	+1.0
	comp=Z,130nm,1.3s						
BATI	Baumata	25.26	171	P	P	20 17 35.9	+0.3
	comp=Z,56nm,0.6s,baz=355,slow=0.8,SNR=14						
BATI	Baumata	25.26	171	P	P	20 17 36.1	+0.5
	comp=Z,73nm,1.0s,comp=Z,693nm						
LZH	Lanzhou	25.43	329	*e*P	P	20 17 38.4	+1.2
LZH				pP	pP	20 17 49.0	+0.6
LZH				sP	sP	20 17 53.5	+0.1
LZH				PP	PnPn	20 18 20.0	+6.3
LZH				*e*S	S	20 22 02.3	+0.9
LZH				sS	sS	20 22 18.5	-1.7

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LZH                                SS       SnSn     20 23 05.1 +8.7
LZH                                pmax     pmax
       comp=Z,42nm,1.1s
LZH                                pmax     pmax
       comp=Z,200nm,5.4s
LZH                                LR       LR
       comp=Z,2μm,13.6s
LZH                                LR       LR
       comp=Z,2μm,13.0s
LZH                                LR       LR
       comp=Z,2μm,15.2s
SAUI   Saumlaki          25.47 152 eP       P        20 17 38.5 +1.0
       comp=Z,363nm,1.2s
INU    Inuyama           25.59  34 eP       P        20 17 39.2 +0.7
       comp=Z,22nm,1.0s
GSI    Gunungsitoli      25.72 240 eP       P        20 17 39.7 -0.1
       comp=Z,22nm,0.9s
PBA    Port Blair        26.46 266 eP       P        20 17 47.3 +0.8
       comp=Z,221nm,1.6s
GENI   Genyem            26.68 129  P       P        20 17 48.0 -0.5
       comp=Z,38nm,1.1s
HHC    Hu-ho-hao-te      26.81 346 eP       P        20 17 51.4 +1.9
HHC                                pmax     pmax
       comp=Z,11nm,1.0s
HHC                                pmax     pmax
       comp=Z,190nm,5.9s
MAJO   Matsushiro        27.12  34 eP       P        20 17 50.3 -2.0
       comp=Z,32nm,1.8s
MAJO   Matsushiro        27.12  34 i P      P        20 17 51.5 -0.8
MAJO                               pmax     pmax
       comp=Z,18nm,1.8s
MJAR   Matsushiro Arr    27.12  34  P       P        20 17 52.2 -0.1
       comp=Z,0.9nm,0.6s,baz=247,slow=6.7,SNR=5.8
MJB9   Matsu-Tunnel      27.12  34 eP       P        20 17 50.8 -1.5
       comp=Z,36nm,1.8s
BRDH   Bariadhala        27.66 290  LR      LR       20 30 33.0
       comp=Z,532nm,19.2s,baz=163,slow=40
MTN    Manton Dam        29.80 157 eP       P        20 18 15.2 -1.0
       comp=Z,37nm,1.9s
GTA    Gaotai            30.02 328 eP       P        20 18 19.0 +0.8
GTA                                pP       pP       20 18 28.0 -1.5
GTA                                sP       sP       20 18 31.9 -2.6
GTA                                S        S        20 23 17.8 +4.1
GTA                                sS       sS       20 23 34.5 +2.0
GTA                                pmax     pmax
       comp=Z,4.0nm,1.0s
GTA                                pmax     pmax
       comp=Z,96nm,4.9s
GTA                                LR       LR
       comp=Z,640nm,15.9s
GTA                                LR       LR
       comp=Z,740nm,17.1s
GTA                                LR       LR
       comp=Z,1μm,16.8s
LSA    Lhasa             30.16 304 eP       P        20 18 19.8 -0.1
       comp=Z,4.6nm,1.0s
LSA    Lhasa             30.16 304 eP       P        20 18 19.8 -0.1
LSA                                pmax     pmax
       comp=Z,5.0nm,1.0s
MDJ    Mudanjiang        30.77  14 eP       P        20 18 22.3 -2.3
       comp=Z,7.7nm,1.0s
USA0B  Ussuriysk Arra    31.00  17 eP       P        20 18 26.1 -0.5
       comp=Z,29nm,1.9s
USRK   Ussuriysk Ar.     31.00  17  P       P        20 18 27.3 +0.7
       comp=Z,1.5nm,0.8s,baz=132,slow=20
USRK                                LR      LR       20 31 50.1
       comp=Z,125nm,19.2s,baz=180,slow=38
FITZ   Fitzroy Crossi    33.31 170  P       P        20 18 45.4 -1.7
       comp=Z,7.8nm,1.0s,baz=60,slow=8.2,SNR=5.4
ULN    Ulaanbaatar       34.50 345 eP       P        20 18 56.4 -0.9
       comp=Z,3.0nm,0.9s
ULN    Ulaanbaatar       34.50 345 i P      P        20 18 56.5 -0.9
ULN                                pmax     pmax
       comp=Z,3.0nm,1.1s
SONA0  Songino Array     34.64 344 eP       P        20 18 58.4 -0.2
SONM   Songino Array     34.64 344  P       P        20 18 58.4 -0.2
       comp=Z,2.4nm,0.8s,baz=162,slow=10,SNR=18
SONM                                LR      LR       20 34 05.4
       comp=Z,303nm,18.8s,baz=154,slow=38
SONA1  Songino Array     34.65 344 eP       P        20 18 58.1 -0.6
ASAJ   Asahikawa         35.02  29  P       P        20 19 01.1 -0.5
       comp=Z,15nm,0.8s,baz=223,slow=11,SNR=18
ASAJ                                LR      LR       20 34 48.9
       comp=Z,159nm,19.5s,baz=186,slow=39
ASAJ   Asahikawa         35.02  29 eP       P        20 19 00.7 -0.9
       comp=Z,17nm,0.8s
COCO   West Island       35.20 221 eP       P        20 19 02.2 -1.3
       comp=Z,338nm,1.3s
COCO   West Island       35.20 221 eP       P        20 19 02.2 -1.3
COCO                               pmax     pmax
       comp=Z,338nm,1.3s
KLR    Kul’dur           35.62  14 i P      P        20 19 04.7 -2.0
MBWA   Marble Bar        35.84 180 eP       P        20 19 08.7 -0.3
       comp=Z,28nm,0.9s
PMG    Port Moresby      36.37 130  P       P        20 19 12.9 -0.6
       comp=Z,22nm,1.0s,baz=234,slow=14,SNR=4.4
COEN   Coen              36.89 140 eP       P        20 19 16.7 -1.3
       comp=Z,31nm,1.4s
YSS    Yuzh-Sakhalins    37.27  26 eP       P        20 19 20.6 -0.2
       comp=Z,22nm,0.9s
YSS    Yuzh-Sakhalins    37.27  26⇓eP       P        20 19 20.0 -0.9
YSS                                pmax     pmax
       comp=Z,10.0nm,0.8s
YSS                                MLR      MLR
       comp=Z,200nm,14.0s
YSS                                MLR      MLR
       comp=N,200nm,11.0s
YSS                                MLR      MLR
       comp=E,300nm,16.0s
WRAB   Tennant Creek     37.49 157 eP       P        20 19 21.3 -1.8
WRAB   Tennant Creek     37.49 157deP       P        20 19 21.7 -1.3
WRAB                               pmax     pmax
       comp=Z,13nm,0.7s
WR1    Warramunga Arr    37.49 157 eP       P        20 19 21.5 -1.6
       comp=Z,23nm,0.6s
WRA    Warramunga Arr    37.49 157  P       P        20 19 21.5 -1.6
       comp=Z,13nm,0.6s,baz=336,slow=9.4,SNR=93
WRA                                 LR      LR       20 37 21.2
       comp=Z,177nm,21.0s,baz=245,slow=40
WB2    Warramunga Arr    37.50 157 eP       P        20 19 20.3 -2.8
GRNR   Gornyy            38.23  17 eP       P        20 19 25.9 -3.0
PATS   Pohnpei           38.68  98 eP       P        20 19 32.6 -0.6
       comp=Z,279nm,1.5s
TLY    Talaya            38.88 344 eP       P        20 19 33.0 -1.5
       comp=Z,5.1nm,0.7s
TLY    Talaya            38.88 344 eP       P        20 19 33.0 -1.5
TLY                                pmax     pmax
       comp=Z,5.0nm,0.7s
PALK   Pallekele         39.00 263  LR      LR       20 33 50.7
       comp=Z,198nm,19.9s,baz=135,slow=33
ZEA    Zeya              39.19   7 eP       P        20 19 37.9 +1.0
ZEA                                pmax     pmax
       comp=Z,36nm,1.6s
MOY    Mondy             39.63 342 eP       P        20 19 41.1 +0.3
WMQ    Urumqi            39.68 323  P       P        20 19 43.5 +2.2
WMQ                                pP       pP       20 19 53.0 +0.2
WMQ                                pmax     pmax
       comp=Z,14nm,0.7s
WMQ                                pmax     pmax
       comp=Z,240nm,4.1s
WMQ                                LR       LR
       comp=Z,2μm,17.7s
WMQ                                LR       LR
       comp=Z,2μm,16.1s
WMQ                                LR       LR
       comp=Z,1μm,19.3s
AS31   Alice Springs     40.77 160 eP       P        20 19 49.1 -1.3
       comp=Z,6.0nm,0.5s
AS31                               ePcP     PcP      20 21 50.1 -1.1
ASAR   Alice Springs     40.77 160  P       P        20 19 49.6 -0.8
       comp=Z,9.8nm,0.7s,baz=338,slow=7.0,SNR=73
ASAR                                PcP     PcP      20 21 50.1 -1.1
       comp=Z,2.4nm,1.0s,baz=336,slow=3.4,SNR=3.8
AS01   Alice Springs     40.78 160 eP       P        20 19 49.6 -0.9
CTA    Charters Tower    43.47 142  P       P        20 20 12.1 -0.4
       comp=Z,3.6nm,0.8s,baz=286,slow=7.8,SNR=5.0
CTAO   Charters Tower    43.47 142 eP       P        20 20 11.3 -1.2
       comp=Z,42nm,1.6s
CTAO   Charters Tower    43.47 142 eP       P        20 20 11.3 -1.2
CTAO                               pmax     pmax
       comp=Z,42nm,1.6s
DGZ    Jazzator, Alta    43.53 330 i P      P        20 20 12.3 -0.5
DGZ                                pmax     pmax
       comp=Z,3.0nm,0.8s
MK01   Makanchi Array    44.49 323 eP       P        20 20 20.6 +0.2
MK31   Makanchi Array    44.51 323 eP       P        20 20 20.9 +0.3
MK31   Makanchi Array    44.51 323 eP       P        20 20 20.9 +0.3
MK32   Makanchi Array    44.51 323 eP       P        20 20 21.4 +0.8
MK32                               ePcP     PcP      20 22 02.9 -0.4
MKAR   Makanchi Array    44.51 323  P       P        20 20 21.4 +0.8
       comp=Z,2.3nm,0.8s,baz=129,slow=8.8,SNR=22
MKAR                                PcP     PcP      20 22 02.9 -0.4
       comp=Z,1.5nm,0.7s,baz=113,slow=2.7,SNR=4.8
MKAR                                LR      LR       20 40 05.0
       comp=Z,276nm,18.6s,baz=104,slow=38
MKAR   Makanchi Array    44.51 323 eP       P        20 20 21.0 +0.4
       comp=Z,22nm,0.9s
MKAR                                PcP     PcP      20 22 02.9 -0.4
MKAR   Makanchi Array    44.51 323 eP       P        20 20 21.0 +0.4
MKAR                                                 20 22 02.9
MKAR                               pmax     pmax
       comp=Z,22nm,0.9s
MAKZ   Makanchi          44.70 323 eP       P        20 20 22.1  0.0
       comp=Z,11nm,1.5s
MAKZ   Makanchi          44.70 323 eP       P        20 20 22.1  0.0
MAKZ                               pmax     pmax
       comp=Z,11nm,1.5s
KSH    Kashi             45.40 311 eP       P        20 20 30.9 +3.0
KSH                                pP       sP       20 20 41.4 -3.1
KSH                                sP       pP       20 20 45.0 +5.4
KSH                                PP       PP       20 22 17.8 +3.2
KSH                                S        S        20 27 09.1 +2.7
KSH                                pmax     pmax
       comp=Z,16nm,1.1s
KSH                                pmax     pmax
       comp=Z,130nm,5.8s
KSH                                LR       LR
       comp=Z,420nm,16.0s
KSH                                LR       LR
       comp=Z,310nm,13.6s
KSH                                LR       LR
       comp=Z,390nm,15.8s
KDJ    Kajisay           45.52 315 eP       P        20 20 29.3 +0.4
       comp=Z,5.2nm,0.8s
KDJ    Kajisay           45.52 315 eP       P        20 20 29.3 +0.4
KDJ                                pmax     pmax
       comp=Z,5.0nm,0.8s
NIL    Nilore            45.87 303 eP       P        20 20 31.7 +0.1
       comp=Z,11nm,0.8s
NIL    Nilore            45.87 303 eP       P        20 20 31.7 +0.1
NIL                                pmax     pmax
       comp=Z,11nm,0.8s
FORT   Forrest           46.13 170 eP       P        20 20 33.9 +0.5
       comp=Z,31nm,0.9s
SKR    Severo-Kuril’s    46.18  32 eP       P        20 20 30.0 -3.6
SKR                                pmax     pmax
       comp=Z,44nm,0.9s
SKR                                pmax     pmax
       comp=Z,100nm,1.9s
SKR                                MLR      MLR
       comp=Z,100nm,19.0s
SKR                                MLR      MLR
       comp=Z,200nm,18.0s
AAK    Ala-Archa         47.55 315  P       P        20 20 44.7 -0.1
       comp=Z,1.3nm,0.3s,baz=192,slow=14,SNR=3.4
AAK    Ala-Archa         47.55 315 eP       P        20 20 44.5 -0.3
       comp=Z,4.2nm,0.8s
AAK    Ala-Archa         47.55 315 eP       P        20 20 44.5 -0.3
AAK                                pmax     pmax
       comp=Z,4.0nm,0.8s
ZAA0   Zalesovo Array    47.56 333 eP       P        20 20 43.8 -0.6
       comp=Z,4.0nm,0.8s
ZALV   Zalesovo Beam     47.56 333  P       P        20 20 44.1 -0.2
       comp=Z,1.6nm,0.4s,baz=128,slow=6.6,SNR=9.8
ZALV                                LR      LR       20 41 39.1
       comp=Z,357nm,18.5s,baz=72,slow=37
ZALV   Zalesovo Beam     47.56 333 eP       P        20 20 43.8 -0.6
ZALV   Zalesovo Beam     47.56 333 eP       P        20 20 43.8 -0.6
ZAA1   Zalesovo Array    47.56 333 eP       P        20 20 44.1 -0.3
YAK    Yakutsk           47.59   6 eP       P        20 20 43.5 -1.0
       comp=Z,12nm,0.7s
YAK    Yakutsk           47.59   6 eP       P        20 20 42.1 -2.4
YAK                                e*PP     sP       20 21 00.3 -0.8
YAK                                eS       S        20 27 33.1 -3.7
YAK                                e*SS     sS       20 27 52.2 -4.1
YAK                                e                 20 30 29.2
YAK                                pmax     pmax
       comp=Z,14nm,1.0s
YAK                                pmax     pmax
       comp=N,2.0nm,1.0s
YAK                                pmax     pmax
       comp=E,2.0nm,0.9s
YAK                                smax     smax
       comp=N,35nm,2.7s
YAK                                smax     smax
       comp=E,18nm,2.6s
YAK                                MLR      MLR
       comp=Z,244nm,18.0s
YAK                                MLR      MLR
       comp=N,328nm,18.0s
YAK                                MLR      MLR
       comp=E,65nm,18.0s
NWAO   Narrogin (SRO)    47.63 183 eP       P        20 20 44.3 -0.8
       comp=E,99nm,1.5s
NWAO   Narrogin (SRO)    47.63 183 eP       P        20 20 44.3 -0.8
NWAO                               pmax     pmax
       comp=Z,99nm,1.5s
PEA0B  Petropavlovsk-    48.43  30 eP       P        20 20 52.3 +1.1
       comp=Z,20nm,0.9s
PETK   Petropavlovsk-    48.43  30  P       P        20 20 50.7 -0.5
       comp=Z,15nm,0.8s,baz=240,slow=11
PETK   Petropavlovsk-    48.43  30 eP       P        20 20 50.5 -0.7
PETK   Petropavlovsk-    48.43  30 eP       P        20 20 50.5 -0.7
PEA1   Petropavlovsk-    48.44  30 eP       P        20 20 50.7 -0.5
KURBB  Kurchatov Arra    48.67 326  P       P        20 20 53.1 +0.1
       comp=Z,5.5nm,0.8s,baz=119,slow=7.6,SNR=40
KURK   Kurchatov         48.67 326ceP       P        20 20 53.2 +0.2
KURK                               pmax     pmax
       comp=Z,21nm,1.3s
PET    Petropavlovsk     48.84  30 eP       P        20 20 55.3 +1.0
       comp=Z,24nm,1.2s
PET    Petropavlovsk     48.84  30 eP       P        20 20 55.8 +1.5
PET                                pmax     pmax
       comp=Z,15nm,1.0s
NVS    Novosibirsk       48.84 333 eP       P        20 20 54.3  0.0
NVS                                pmax     pmax
       comp=Z,12nm,1.3s
NVS                                pmax     pmax
       comp=N,6.0nm,1.5s
KBL    Kabul             49.47 303 eP       P        20 21 00.1 +0.4
       comp=N,6.6nm,0.9s
KBL    Kabul             49.47 303 eP       P        20 21 00.1 +0.4
KBL                                pmax     pmax
       comp=Z,7.0nm,0.9s
BBOO   Buckleboo         49.95 162 eP       P        20 21 02.4 -0.6
       comp=Z,73nm,1.5s
MA2    Magadan           50.08  20 eP       P        20 21 02.9 -0.8
       comp=Z,46nm,1.4s
MA2    Magadan           50.08  20 eP       P        20 21 02.9 -0.8
MA2                                pmax     pmax
       comp=Z,46nm,1.4s
EIDS   Eidsvold          50.36 142 eP       P        20 21 06.2  0.0
       comp=Z,46nm,1.8s
KK31   Karatay Array     50.47 314 eP       P        20 21 07.4 +0.5
KK31   Karatay Array     50.47 314 eP       P        20 21 07.4 +0.5
KKAR   Karatay Array     50.47 314 eP       P        20 21 07.1 +0.2
KKAR   Karatay Array     50.47 314 eP       P        20 21 07.1 +0.2
STKA   Stephens Creek    51.03 156  P       P        20 21 10.6 -0.5
       comp=Z,4.5nm,1.0s,baz=315,slow=10,SNR=4.8
STKA   Stephens Creek    51.03 156 eP       P        20 21 11.0 -0.1
       comp=Z,3.7nm,1.4s
STKA   Stephens Creek    51.03 156 eP       P        20 21 11.0 -0.1
STKA                               pmax     pmax
       comp=Z,4.0nm,1.4s
SEY    Seymchan          53.15  18  P       P        20 21 26.6 +0.1
       comp=Z,5.7nm,0.7s,baz=266,slow=4.8,SNR=8.8
SEY    Seymchan          53.15  18ceP       P        20 21 26.0 -0.5
BVAR   Borovoye Array    54.25 326  P       P        20 21 35.3 +0.5
       comp=Z,2.8nm,0.7s,baz=108,slow=9.3,SNR=25
BVAR                                PcP     PcP      20 22 39.7 +1.1
       comp=Z,1.3nm,0.6s,baz=96,slow=5.1,SNR=2.7
BVAR                                LR      LR       20 46 04.0
       comp=Z,331nm,18.9s,baz=110,slow=37
BRVK   Borovoye          54.32 326 eP       P        20 21 35.8 +0.5
       comp=Z,12nm,1.0s
BRVK   Borovoye          54.32 326ceP       P        20 21 36.0 +0.7
BRVK                               pmax     pmax
       comp=Z,13nm,1.3s
ARMA   Armidale          54.53 146 eP       P        20 21 36.6 -0.6
       comp=Z,48nm,1.6s
WSAR   Wadi Sarin        57.99 288  LR      LR       20 50 33.6
       comp=Z,57nm,18.1s,baz=92,slow=40
GEYT   Alibeck           58.67 305  P       P        20 22 07.4 +0.8
       comp=Z,4.1nm,0.9s,baz=146,slow=3.2,SNR=12
GYA0B  ALIBECK ARRAY     58.67 305 eP       P        20 22 06.3 -0.3
       comp=Z,12nm,0.9s
DZM    Mont Dzumac       58.71 128 eP       P        20 22 06.5 -0.5
       comp=Z,58nm,1.6s
ABKAR  Akbulak array     59.21 319 eP       P        20 22 10.5 +0.5
AKTO   Aktyubinsk        60.69 320  P       P        20 22 20.0 -0.2
       comp=Z,4.6nm,0.9s,baz=124,slow=9.9,SNR=16
AKTO                                LR      LR       20 50 24.2
       comp=Z,342nm,18.5s,baz=107,slow=38
SVE    Sverdlovsk        60.89 327 eP       P        20 22 22.1 +0.7
SVE                                pmax     pmax
       comp=Z,29nm,1.3s
ARU    Arti              61.86 327 eP       P        20 22 27.4 -0.6
       comp=Z,8.4nm,1.0s
ARU    Arti              61.86 327c iP      P        20 22 27.7 -0.3
ARU                                S        S        20 30 52.6 +4.0
ARU                                pmax     pmax
       comp=Z,12nm,1.7s
ARU                                MLR      MLR
       comp=Z,275nm,19.0s
NIKH   Nikolski High     67.05  38 eP       P        20 22 59.0 -2.9
       comp=Z,690nm,1.9s
GAMB   Gambell           67.29  27 eP       P        20 23 02.1 -1.1
       comp=Z,13nm,1.4s
JOHN   Johnston Islan    67.74  78 eP       P        20 23 05.6 -1.4
       comp=Z,190nm,1.1s
GNI    Garni             69.14 308  LR      LR       20 57 06.6
       comp=Z,50nm,20.7s,baz=59,slow=39
PRGR   Permogore         69.45 331 eP       P        20 23 16.0 -0.8
PRGR                               pmax     pmax
       comp=Z,6.0nm,0.8s
ZEI    Tsey              69.68 310 eP       P        20 23 17.6 -1.3
RAYN   Ar Rayn           69.96 290 eP       P        20 23 21.4 +0.6
       comp=Z,14nm,1.4s
RAYN   Ar Rayn           69.96 290 eP       P        20 23 21.4 +0.6
RAYN                               pmax     pmax
       comp=Z,14nm,1.4s
KBZ    Khabaz            70.38 311  LR      LR       20 57 38.9
       comp=Z,134nm,18.6s,baz=54,slow=39
KIV    Kislovodsk        70.53 312 eP       P        20 23 25.0 +1.1
       comp=Z,11nm,0.8s
KIV    Kislovodsk        70.53 312deP       P        20 23 24.6 +0.7
KIV                                e                 20 23 44.6
KIV                                eS       S        20 32 30.0 -4.5
KIV                                pmax     pmax
       comp=Z,8.0nm,0.9s
KIV                                MLR      MLR
       comp=Z,159nm,16.0s
VRH    Novokhopyorsk     71.03 319 eP       P        20 23 26.9 +0.2
VRH                                pmax     pmax
       comp=Z,10.0nm,1.2s
KLMR   Klimovskoe        72.34 330 eP       P        20 23 33.0 -1.4
KLMR                               pmax     pmax
       comp=Z,15nm,1.0s
KLMR   Klimovskoe        72.34 330 eP       P        20 23 33.0 -1.4
KLMR                               AMP               20 23 48.6
       comp=Z,15nm,1.0s
VORD   Divnogorie        72.57 319 eP       P        20 23 34.7 -1.2
VORD                               pmax     pmax
       comp=Z,3.0nm,0.4s
VSR    Storozhevoye      72.64 319 eP       P        20 23 35.5 -0.8
VSR                                pmax     pmax
       comp=Z,4.0nm,0.8s
OBN    Obninsk           74.02 324⇓eP       P        20 23 43.9 -0.4
OBN                                e                 20 23 58.5
OBN                                e                 20 26 31.6
OBN                                eS       SKiKP    20 33 03.2 -6.2
OBN                                pmax     pmax
       comp=Z,5.0nm,1.2s
OBN                                MLR      MLR
       comp=Z,322nm,17.0s
RSO    Redoubt South     75.94  31 eP       P        20 23 56.2 +0.6
CAST   Castle Rocks      75.99  28 eP       P        20 23 55.3 -0.4
       comp=Z,16nm,0.8s
PPLA   Purkeypile        75.99  28 eP       P        20 23 56.1 +0.3
       comp=Z,37nm,1.8s
ASF    Jabal al Asfar    76.25 300  P       P        20 23 59.4 +1.5
       comp=Z,0.8nm,0.3s,baz=194,slow=11,SNR=4.0
KDAK   Kodiak Island     76.30  33  P       P        20 23 57.3 -0.2
       comp=Z,9.1nm,0.9s,baz=25,slow=14,SNR=3.4
KDAK   Kodiak Island     76.30  33 eP       P        20 23 55.6 -1.8
KDAK                               ePcP     P        20 23 56.1 -1.4
KDAK   Kodiak Island     76.30  33 i P      P        20 23 58.1 +0.6
SKT    Skwentna          76.38  29 eP       P        20 23 56.5 -1.4
       comp=Z,17nm,1.4s
BPAW   Bear Paw Mtn.     76.41  27 eP       P        20 23 57.8 -0.2
       comp=Z,10nm,0.9s
MLY    Manley            76.41  26 eP       P        20 23 58.4 +0.3
       comp=Z,7.9nm,0.8s
TRF    Thorofare Moun    76.79  27 eP       P        20 24 00.8 +0.4
       comp=Z,6.9nm,0.9s
CNPM   China Poot        76.80  32 eP       P        20 23 58.5 -1.9
       comp=Z,57nm,1.8s
SUA    Susitna One       76.81  30 eP       P        20 23 59.5 -0.9
       comp=Z,26nm,1.1s
RC01   Rabbit Creek A    77.34  30 eP       P        20 24 03.0 -0.3
       comp=Z,8.4nm,1.1s
MCK    McKinley          77.35  27 eP       P        20 24 03.0 -0.4
       comp=Z,16nm,0.9s
MCK    McKinley          77.35  27 eP       P        20 24 03.0 -0.4
MCK                                pmax     pmax
       comp=Z,16nm,0.9s
MMAI   Mount Meron Ar    77.36 301  LR      LR       21 02 36.0
       comp=Z,74nm,18.4s,baz=25,slow=39
MDM    Murphy Dome       77.48  26 eP       P        20 24 03.5 -0.6
       comp=Z,9.3nm,1.0s
PMR    Palmer            77.56  29 eP       P        20 24 03.5 -1.0
       comp=Z,12nm,0.9s
PMR    Palmer            77.56  29 eP       P        20 24 03.5 -1.0
PMR                                pmax     pmax
       comp=Z,12nm,0.9s
WRH    Wood River Hil    77.61  26 eP       P        20 24 05.1 +0.4
       comp=Z,7.0nm,0.9s
ARA0   ARCESS Array S    77.63 339 eP       P        20 24 05.0 +0.2
ARCES  ARCESS Array B    77.63 339  P       P        20 24 05.0 +0.2
       comp=Z,5.7nm,0.9s,baz=77,slow=6.5,SNR=8.9
ARCES  ARCESS Array B    77.63 339 eP       P        20 24 04.8  0.0
ARCES  ARCESS Array B    77.63 339 eP       P        20 24 04.8  0.0
GHO    Glory Hole Cre    77.63  29 eP       P        20 24 04.0 -1.1
       comp=Z,11nm,1.0s
COLA   College           77.65  26 eP       P        20 24 04.9  0.0
       comp=Z,8.0nm,0.6s
BR101  Keskin Array S    77.67 308 eP       P        20 24 06.0 +0.3
BR131  Keskin Array S    77.67 308 eP       P        20 24 05.8 +0.1
BRTR   Keskin Array B    77.67 308  P       P        20 24 06.0 +0.3
       comp=Z,1.1nm,0.9s,baz=113,slow=5.8,SNR=6.9
BRTR                                LR      LR       21 03 03.6
       comp=Z,44nm,20.2s,baz=68,slow=39
CCB    Clear Creek Bu    77.71  26 eP       P        20 24 06.0 +0.8
       comp=Z,4.9nm,1.0s
SML    Sawmill           77.91  29 eP       P        20 24 05.8 -0.7
       comp=Z,24nm,1.0s
SML    Sawmill           77.91  29 eP       P        20 24 05.8 -0.7
SML                                pmax     pmax
       comp=Z,24nm,1.0s
ILAR   Eielson Array     78.08  26  P       P        20 24 07.2 -0.2
       comp=Z,2.9nm,1.0s,baz=258,slow=4.4,SNR=12
ILB    Eielson Array     78.08  26 eP       P        20 24 07.1 -0.2
IL1    Eielson Array     78.08  26 eP       P        20 24 06.5 -0.9
HDA    Harding Lake      78.11  26 eP       P        20 24 04.1 -3.5
       comp=Z,8.8nm,1.0s
DHY    Denali Highway    78.14  28 eP       P        20 24 07.1 -0.9
       comp=Z,6.3nm,0.9s
SPA0   Spitsbergen Ar    78.22 348 eP       P        20 24 07.7 -0.3
SPITS  Spitsbergen Ar    78.22 348  P       P        20 24 08.2 +0.2
       comp=Z,5.3nm,0.6s,baz=78,slow=13,SNR=7.3
SPITS                               LR      LR       21 02 04.9
       comp=Z,186nm,21.2s,baz=65,slow=38
SCM    Sheep Creek Mo    78.37  29 eP       P        20 24 08.5 -0.6
       comp=Z,26nm,1.0s
SCM    Sheep Creek Mo    78.37  29 eP       P        20 24 08.5 -0.6
SCM                                pmax     pmax
       comp=Z,26nm,1.0s
CSS    Mathiatis         78.72 303 eP       P        20 24 11.6 +0.1
       comp=Z,11nm,0.9s
FIA1   FINESS Array S    78.78 331 eP       P        20 24 10.9 -0.3
FIA0   FINESS Array S    78.78 331 eP       P        20 24 10.7 -0.6
FIA0   FINESS Array S    78.78 331 eP       P        20 24 10.7 -0.6
FINES  FINESS Array B    78.78 331  P       P        20 24 10.7 -0.6
       comp=Z,2.7nm,0.6s,baz=37,slow=7.3,SNR=21
FINES                               LR      LR       21 02 03.6
       comp=Z,240nm,18.7s,baz=82,slow=38
AKASG  Malin Array Be    78.94 320  P       P        20 24 11.7 -0.6
       comp=Z,0.2nm,0.3s,baz=66,slow=6.0,SNR=5.4
AKASG                               LR      LR       21 00 00.9
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	comp=Z,83nm,21.7s,baz=60,slow=36						
AKBB	Malin Array Si	78.94	320	eP	P	20 24 11.2	-1.2
	comp=Z,6.8nm,1.2s						
KIEV	Kiev	78.95	320	eP	P	20 24 10.9	-1.5
	comp=Z,6.6nm,1.2s						
KIEV	Kiev	78.95	320	i P	P	20 24 11.7	-0.7
KIEV				pmax	pmax		
	comp=Z,3.0nm,1.1s						
AK11	Malin Array Si	78.98	320	eP	P	20 24 12.1	-0.5
VSU	Vasula	78.99	328	ceP	P	20 24 11.9	-0.6
VSU				pmax	pmax		
	comp=Z,36nm,1.3s						
KLU	Klutina	79.09	29	eP	P	20 24 12.4	-0.7
	comp=Z,9.3nm,0.9s						
DIV	Divide	79.23	30	eP	P	20 24 13.5	-0.4
	comp=Z,9.2nm,0.9s						
HARP	HAARP	79.27	28	eP	P	20 24 14.3	+0.3
	comp=Z,17nm,0.9s						
BMRM	Bremner River	79.82	30	eP	P	20 24 16.7	-0.3
	comp=Z,12nm,1.1s						
RAGM	Ragged Mountai	79.91	30	eP	P	20 24 17.8	+0.2
	comp=Z,13nm,1.0s						
SORM	Soroca	79.97	317	⇓iP	P	20 24 17.7	-0.3
SORM	Soroca	79.97	317	⇓P	P	20 24 17.7	-0.3
EGAK	Eagle	80.48	25	eP	P	20 24 20.3	-0.2
	comp=Z,7.5nm,0.8s						
CFR	Carcaliu	80.69	314	⇑iP	P	20 24 22.1	+0.1
CFR	Carcaliu	80.69	314	⇑P	P	20 24 22.1	+0.1
CASY	Casey	81.24	184	eP	P	20 24 24.7	+0.5
	comp=Z,14nm,1.0s						
DAWY	Dawson	81.41	26	eP	P	20 24 25.2	-0.2
	comp=Z,5.4nm,0.8s						
TESR	Tescani	81.43	316	⇑iP	P	20 24 26.6	+0.7
VRI	Vrincioaia	81.52	315	⇓iP	P	20 24 27.4	+1.0
VRI	Vrincioaia	81.52	315	⇓P	P	20 24 27.4	+1.0
PLOR	Plostina	81.57	315	⇑iP	P	20 24 27.8	+1.1
PLOR	Plostina	81.57	315	⇑P	P	20 24 27.8	+1.1
BIZ	Bicaz	81.70	316	⇑iP	P	20 24 27.5	+0.2
SUW	Suwalki	81.88	324	eP	P	20 24 28.8	+0.7
SUW	Suwalki	81.88	324	eP	P	20 24 28.8	+0.7
MLR	Muntele Rosu	82.14	315	P	P	20 24 30.8	+0.9
	comp=Z,0.7nm,0.7s,baz=240,slow=16,SNR=8.9						
MLR				LR	LR	21 05 20.6	
	comp=Z,38nm,20.2s,baz=64,slow=39						
MLR	Muntele Rosu	82.14	315	⇑iP	P	20 24 30.7	+0.9
MLR	Muntele Rosu	82.14	315	eP	P	20 24 29.0	-0.8
	comp=Z,5.2nm,0.8s						
BURAR	Bucovina Array	82.14	317	⇑iP	P	20 24 30.1	+0.4
BURAR	Bucovina Array	82.14	317	⇑P	P	20 24 30.1	+0.4
BUR04	Bucovina Ar. S	82.14	317	eP	P	20 24 29.6	-0.1
BUR08	Bucovina Ar. S	82.14	317	eP	P	20 24 29.9	+0.1
INK	Inuvik	82.31	21	P	P	20 24 31.6	+1.5
	comp=Z,4.6nm,0.9s,baz=297,slow=4.2,SNR=8.6						
INK	Inuvik	82.31	21	eP	P	20 24 30.3	+0.2
	comp=Z,8.3nm,1.0s						
INK	Inuvik	82.31	21	eP	P	20 24 30.3	+0.2
INK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
VOIR		82.76	315	⇓iP	P	20 24 33.5	+0.5
VOIR		82.76	315	⇓P	P	20 24 33.5	+0.5
ARCR	ARCALIA	82.83	317	⇓iP	P	20 24 34.2	+1.0
KWP	Kalwaria Pacla	83.26	319	eP	P	20 24 36.4	+1.0
KWP	Kalwaria Pacla	83.26	319	eP	P	20 24 35.3	-0.1
	comp=Z,160nm,1.2s						
KWP	Kalwaria Pacla	83.26	319	eP	P	20 24 35.3	-0.1
KWP				pmax	pmax		
	comp=Z,161nm,1.2s						
TRPA	Tarpa	83.76	318	⇓iP	P	20 24 38.7	+0.8
DRGR		84.00	317	⇑iP	P	20 24 40.0	+0.7
DRGR		84.00	317	⇑P	P	20 24 40.1	+0.7
CRVS	Cervenica-Dubn	84.24	319	eP	P	20 24 41.0	+0.6
CRVS				pmax	pmax		
	comp=Z,8.0nm,1.1s						
CRVS	Cervenica-Dubn	84.24	319	eP	P	20 24 41.0	+0.6
SKAG	Skagway	84.69	30	eP	P	20 24 42.2	-0.2
	comp=Z,12nm,0.9s						
VTS	Vitosha	84.76	313	⇑iP	P	20 24 43.4	0.0
VTS	Vitosha	84.76	313	eP	P	20 24 42.9	-0.5
	comp=Z,7.7nm,1.1s						
VTS	Vitosha	84.76	313	⇑P	P	20 24 43.4	0.0
NIE	Niedzica	84.83	320	eP	P	20 24 44.0	+0.6
NIE	Niedzica	84.83	320	eP	P	20 24 44.0	+0.6
OJC	Ojcow	84.90	321	eP	P	20 24 44.6	+0.8
OJC	Ojcow	84.90	321	eP	P	20 24 44.6	+0.8
	comp=Z,8.9nm,0.8s						
OJC	Ojcow	84.90	321	eP	P	20 24 44.6	+0.8
HFS	Hagfors	84.97	331	P	P	20 24 43.1	-0.7
	comp=Z,3.0nm,0.6s,baz=108,slow=17,SNR=11						
HFS				LR	LR	21 06 02.2	
	comp=Z,235nm,18.1s,baz=60,slow=38						
BZS	Buzias	85.05	316	⇓iP	P	20 24 45.1	+0.6
BZS	Buzias	85.05	316	⇓P	P	20 24 45.1	+0.6
MDVR	Moldovita	85.21	315	⇑iP	P	20 24 45.9	+0.4
BESE	Bessie Mountai	85.23	30	eP	P	20 24 45.8	+0.6
	comp=Z,9.5nm,1.0s						
LANS	Liptovska Anna	85.43	320	eP	P	20 24 47.3	+0.9
LANS	Liptovska Anna	85.43	320	eP	P	20 24 47.3	+0.9
NC405	NORSAR Array S	85.51	332	eP	P	20 24 46.2	-0.3
JIS	Juneau Island	85.57	31	eP	P	20 24 46.7	-0.1
	comp=Z,15nm,1.1s						
NC303	NORSAR Array S	85.62	333	eP	P	20 24 46.8	-0.3
NB2	NORSAR Subarra	85.76	332	P	P	20 24 47.0	-0.8
	comp=Z,13nm,1.1s,baz=67,slow=4.8						
NB2	NORSAR Subarra	85.76	332	P	P	20 24 47.0	-0.8
	baz=67,slow=4.8						
NOA	NORSAR Array B	85.76	332	LR	LR	21 05 29.3	
	comp=Z,150nm,18.8s,baz=60,slow=37						
NC204	NORSAR Array S	85.87	333	eP	P	20 24 48.1	-0.3
VYHS	Vyhne	86.02	319	eP	P	20 24 49.6	+0.2
VYHS				pmax	pmax		
	comp=Z,3.0nm,1.0s						
VYHS	Vyhne	86.02	319	eP	P	20 24 49.6	+0.2
OKC	Ostrava-Krasne	86.03	321	AMS	AMS	21 05 20.0	
	comp=Z,200nm,14.2s						
MORC	Moravsky Berou	86.43	321	⇑iP	P	20 24 51.5	+0.1
MORC	Moravsky Berou	86.43	321	⇑P	P	20 24 51.5	+0.1
MORC	Moravsky Berou	86.43	321	eP	P	20 24 52.1	+0.7
JAVC	Velka Javorina	86.64	320	eP	P	20 24 54.5	+2.0
KSP	Ksiaz	86.83	322	eP	P	20 24 54.1	+0.8
KSP	Ksiaz	86.83	322	eP	P	20 24 54.1	+0.8
DPC	Dobruska-Polom	86.98	321	eP	P	20 24 55.2	+1.1
DPC				AMS	AMS	21 05 40.0	
	comp=Z,200nm,20.7s						
DPC	Dobruska-Polom	86.98	321	eP	P	20 24 55.2	+1.1
DPC				MLR	MLR		
	comp=Z,200nm,20.7s						
KONO	Kongsberg	87.06	331	ceP	P	20 24 53.8	-0.4
KONO				pmax	pmax		
	comp=Z,15nm,2.5s						
UPC	Upice	87.11	322	AMS	AMS	21 05 40.0	
	comp=Z,300nm,23.1s						
VRAC	Vranov	87.16	320	⇑iP	P	20 24 56.0	+1.1
VRAC	Vranov	87.16	320	⇑P	P	20 24 56.0	+1.1
VRAC	Vranov	87.16	320	eP	P	20 24 56.0	+1.1
KRUC	Moravsky	87.37	320	eP	P	20 24 56.8	+0.9
DLBC	Dease Lake	87.62	30	P	P	20 24 57.6	+0.6
	comp=Z,4.1nm,0.9s,baz=258,slow=5.5,SNR=5.3						
DLBC	Dease Lake	87.62	30	eP	P	20 24 57.7	+0.6
	comp=Z,8.1nm,1.1s						
PVCC	Panska Ves	87.97	322	AMS	AMS	21 06 20.0	
	comp=Z,200nm,16.8s						
RES	Resolute Bay	87.99	9	P	P	20 24 58.6	+0.3
	comp=Z,4.2nm,1.0s,baz=277,slow=7.9,SNR=2.2						
RES	Resolute Bay	87.99	9	eP	P	20 24 60.0	+1.6
	comp=Z,5.6nm,0.9s						
RES	Resolute Bay	87.99	9	eP	P	20 25 00.0	+1.6
RES				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GOPC	GO Pecny, Ondr	88.06	321	AMS	AMS	21 06 10.0	
	comp=Z,200nm,15.9s						
PRU	Pruhonice	88.18	321	eP	P	20 25 00.5	+0.7
PRU				AMS	AMS	21 06 20.0	
	comp=Z,300nm,20.3s						
PRU	Pruhonice	88.18	321	eP	P	20 25 00.5	+0.7
PRU				MLR	MLR		
	comp=Z,300nm,20.3s						
BRG	Berggiesshubel	88.22	322	eP	P	20 25 00.6	+0.7
	comp=Z,5.3nm,1.1s						
BRG	Berggiesshubel	88.22	322	eP	P	20 25 00.6	+0.7
BRG				pmax	pmax		
	comp=Z,5.0nm,1.1s						
CLL	Collm	88.60	323	⇓iP	P	20 25 01.3	-0.4
	comp=Z,4.0nm,1.0s						
CLL				i pP	pP	20 25 14.5	+0.1
CLL				Lm	MLR	21 06 00.0	
	comp=Z,200nm,20.0s						
CLL	Collm	88.60	323	⇓iP	P	20 25 01.3	-0.4
CLL				i		20 25 14.5	
CLL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KHC	Kasperske Hory	89.08	321	eP	P	20 25 05.0	+0.9
KHC				ex	x	20 25 10.7	
KHC				AMS	AMS	21 06 50.0	
	comp=Z,200nm,14.4s						
KHC	Kasperske Hory	89.08	321	eP	P	20 25 05.0	+0.9
KHC				MLR	MLR		
	comp=Z,200nm,14.4s						
GEC2	GERESS Array S	89.11	321	eP	P	20 25 03.8	-0.5
	comp=Z,6.0nm,1.2s						
GEC2	GERESS Array S	89.11	321	eP	P	20 25 03.8	-0.5
GEC2				pmax	pmax		
	comp=Z,6.0nm,1.2s						
GERES	GERESS Array B	89.11	321	P	P	20 25 04.4	+0.1
	comp=Z,1.5nm,0.8s,baz=64,slow=6.1,SNR=13						
GERES				LR	LR	21 07 16.8	
	comp=Z,93nm,18.4s,baz=82,slow=37						
GEA0	GERESS Array S	89.11	321	eP	P	20 25 04.4	+0.1
MOA	Molln	89.12	320	ePcP	P	20 25 04.9	+0.6
	comp=Z,4.9nm,0.9s						
NKC	Novy Kostel	89.34	322	AMS	AMS	21 07 00.0	
	comp=Z,300nm,18.2s						
TIP	Timpagrande	90.45	311	⇓iP	P	20 25 09.4	-1.3
WATA	Walderalm	91.00	320	i PcP	P	20 25 13.9	+0.7
	comp=Z,1.5nm,0.3s						
MOTA	Moosalm	91.29	320	ePcP	P	20 25 15.2	+0.6
	comp=Z,5.5nm,0.8s						
RETA	Reutte	91.45	320	ePcP	P	20 25 15.0	-0.2
	comp=Z,4.6nm,1.4s						
FETA	Feichten	91.66	320	ePcP	P	20 25 17.2	+0.9
	comp=Z,6.4nm,0.9s						
MAW	Mawson	91.93	199	P	P	20 25 19.4	+2.8
	comp=Z,1.7nm,0.8s,baz=183,slow=9.5,SNR=4.4						
MAW	Mawson	91.93	199	eP	P	20 25 17.9	+1.2
	comp=Z,3.3nm,1.5s						
YKA	Yellowknife Ar	92.02	22	P	P	20 25 17.7	+0.3
	comp=Z,2.6nm,0.8s,baz=313,slow=4.7,SNR=7.4						
DAVOX	Davos/Dischmat	92.29	320	P	P	20 25 19.7	+0.4
	comp=Z,4.1nm,0.8s,baz=195,slow=16,SNR=6.5						
DAVOX				LR	LR	21 08 58.1	
	comp=Z,99nm,20.7s,baz=84,slow=37						
VAE	Valguarnera	92.77	310	LR	LR	21 12 16.6	
	comp=Z,51nm,19.4s,baz=66,slow=39						
KEST	Kesra	97.20	310	LR	LR	21 14 46.4	
	comp=Z,61nm,19.6s,baz=233,slow=39						
KEST	Kesra	97.20	310	eP	P	20 25 41.2	-0.6
	comp=Z,21nm,1.8s						
S39A	Bolivar	119.15	30	ePKPdf	PKPdf	20 30 58.2	+0.2
TX31	Lajitas Ar. Si	119.25	43	ePKPdf	PKPdf	20 30 58.5	-0.1
TXAR	Lajitas Array	119.26	43	PKP	PKPdf	20 30 58.8	+0.2
	comp=Z,0.8nm,0.7s,baz=181,slow=0.1,SNR=8.5						
V40A	Witts Springs	120.89	31	ePKPdf	PKPdf	20 30 59.3	-2.2
WVT	Waverly	122.94	27	ePKPdf	PKPdf	20 31 04.6	-0.7
WVT	Waverly	122.94	27	ePKIKP	PKPdf	20 31 04.6	-0.7
PLCA	Paso Flores	152.76	163	PKPbc	PKPbc	20 32 07.0	+1.1
	comp=Z,7.4nm,1.0s,baz=216,slow=5.8,SNR=7.8						
PLCA	Paso Flores	152.76	163	ePKPbc	PKPbc	20 32 03.4	-2.4
PLCA	Paso Flores	152.76	163	ePKIKP	PKPbc	20 32 03.4	-2.4
LPAZ	La Paz	172.30	101	ePKPdf	PKPdf	20 32 15.0	-4.2
LPAZ	La Paz	172.30	101	ePKIKP	PKPdf	20 32 15.0	-4.2

ISCJB ***14*** *20:23:41.7±1.3, 15.°03N±0.°04×119.°58E±0.°05, h30^{km}±11^{km}, mb3.4/6, Error ellipse: s-maj=8.5km s-min=5.7km az=161.6*

MAN ***14*** *20:23:41.1, 15.°03N×119.°66E, h15^{km}, mb5.1, ML4.0, MS4.1*

IDC ***14*** *20:23:47.1±1.5, 15.°01N×120.°05E, h78^{km}±19^{km}, mb3.1/7, mb1 3.3/7, mb1mx3.1/63, mbtmp3.4/7, Error ellipse: s-maj=47.2km s-min=16.1km az=59.0*

ISC 14 20:23:43.3±1.3**, 15.°03N**±0.°03×**119.°60E**±0.°06**, h35**^{km}±5^{km}**, n21,** σ**2**^{s}**58**/33**, mb3.5**/6**, 1D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCZP	Santa Cruz	0.80	22	eP	Pb	20 23 56.3	-2.6
SCZP				eS	Sb	20 24 08.0	-1.5
BOLP	Bolinao	1.38	13	eP	Pn	20 24 04.5	-1.6
BOLP				eS	Sb	20 24 33.3	+7.4
LUBP	Lubang	1.43	154	eP	Pn	20 24 04.7	-2.2
LUBP				eS	Sb	20 24 32.1	+4.6
QVPH	Quezon City--P	1.46	105	eP	Pn	20 24 05.5	-1.8
QVPH				eS	Sn	20 24 24.2	-1.0
TGY	Tagaytay City	1.59	125	P	Pn	20 24 08.6	-0.5
	196nm,0.3s,baz=338,slow=1.0,SNR=13						
TGY				S	Sn	20 24 25.9	-2.5
	185nm,0.3s,baz=119,slow=23,SNR=8.1						
TGY	Tagaytay City	1.59	125	⇓iP	Pn	20 24 09.5	+0.4
TGY				i S	Sn	20 24 27.9	-0.6
BALP	Baler	2.04	69	eP	Pn	20 24 14.4	-0.7
BALP				eS	Sn	20 24 39.9	+0.5
BOAC	Boac	2.68	125	eP	Pn	20 24 23.9	-0.1
BOAC				eS	Sn	20 24 58.1	+2.9
ABRA	Dolores	2.82	22	eP	Pn	20 24 26.1	+0.2
ABRA				eS	Sb	20 25 08.6	+1.5
CAUP	Cauayan	2.87	48	eP	Pn	20 24 27.6	+1.0
CAUP				eS	Sb	20 25 19.3	+11
SJMP	San Jose	2.95	150	eP	Pn	20 24 29.1	+1.4
SJMP				eS	Sn	20 25 05.8	+3.9
BUSP	Coron	3.06	169	eP	Pn	20 24 29.5	+0.2
BUSP				eS	Sn	20 25 06.7	+1.9
APYP	Conner	3.23	29	eP	Pn	20 24 33.8	+2.2
APYP				eS	Sb	20 25 15.4	-3.5
ENPP	El Nido	3.80	183	eP	Pn	20 24 38.0	-1.4
ENPP				eS	Sn	20 25 18.3	-4.7
CMAR	Chiang Mai Arr	20.07	283	P	Pn	20 28 18.9	+3.1
	0.9nm,0.8s,baz=91,slow=8.8,SNR=7.3						
SONM	Songino Array	34.49	344	P	P	20 30 28.5	+0.4
	0.2nm,0.6s,baz=162,slow=7.2,SNR=2.6						
WRA	Warramunga Arr	37.66	157	P	P	20 30 52.7	-2.6
	1.1nm,0.6s,baz=336,slow=9.4,SNR=5.5						
ASAR	Alice Springs	40.92	160	P	P	20 31 21.0	-1.6
	0.4nm,0.4s,baz=338,slow=7.0,SNR=6.9						
MKAR	Makanchi Array	44.33	323	P	P	20 31 52.0	+1.9
	0.3nm,0.8s,baz=130,slow=10.0,SNR=2.6						
KURBB	Kurchatov Arra	48.49	326	P	P	20 32 24.0	+1.4
	0.4nm,0.6s,baz=117,slow=9.2,SNR=4.0						
BVAR	Borovoye Array	54.08	326	P	P	20 33 05.5	+1.1
	0.3nm,0.6s,baz=126,slow=5.8,SNR=3.7						

ISCJB ***14*** *20:26:37.7±1.0, 7.°23S±0.°06×129.°81E±0.°08, h100^{km}, mb3.3/1, Error ellipse: s-maj=11.9km s-min=8.7km az=168.8*

IDC ***14*** *20:26:41.4±2.2, 7.°17S×129.°86E, h130^{km}±26^{km}, mb3.1/1, mb1 3.2/6, mb1mx2.9/51, mbtmp3.6/6, MS3.3/1, Ms1 3.3/1, ms1mx2.7/21, Error ellipse: s-maj=36.9km s-min=20.6km az=95.0*

ISC 14 20:26:38.1±0.9**, 7.°26S**±0.°06×**130.°0E**±0.°1**, h100**^{km}**, n7,** σ**3**^{s}**04**/11**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	6.48	11	P	Pn	20 28 12.8	+1.9
	0.6nm,0.3s,baz=192,slow=19,SNR=16						
SIJI				S	Sn	20 29 19.6	-3.9
	1.3nm,0.3s,baz=191,slow=22,SNR=7.9						
BATI	Baumata	6.90	244	P	Pn	20 28 20.1	+3.3
	3.5nm,0.3s,baz=98,slow=4.4,SNR=8.2						
BATI				S	Sn	20 29 31.6	-2.3
	0.9nm,0.3s,baz=119,slow=19,SNR=2.1						
FITZ	Fitzroy Crossi	11.57	201	P	Pn	20 29 22.9	+2.7
	0.1nm,0.3s,baz=25,slow=14,SNR=17						
FITZ				S	Sn	20 31 22.3	-5.2
	0.4nm,0.3s,baz=122,slow=19,SNR=4.6						
WRA	Warramunga Arr	13.29	162	P	P	20 29 48.5	-0.5
	0.6nm,0.3s,baz=338,slow=13,SNR=24						
WRA				S	Sn	20 32 10.3	+1.0
	0.5nm,0.3s,baz=340,slow=22,SNR=6.4						
ASAR	Alice Springs	16.74	167	P	P	20 30 27.8	+0.5
	0.0nm,0.3s,baz=345,slow=11,SNR=2.3						
ASAR				S	Sn	20 33 31.0	-1.6
	0.1nm,0.3s,baz=348,slow=25,SNR=3.5						
JOW	Kunigami	33.93	357	LR	LR	20 46 28.4	
	comp=Z,57nm,21.3s,baz=292,slow=35						
MKAR	Makanchi Array	68.44	327	P	P	20 37 28.6	-0.8
	0.2nm,0.4s,baz=124,slow=7.5,SNR=6.8						

IDC ***14*** *20:39:23.3±0.9, 18.°10S×172.°85W, h0^{km}, mb4.1/10, mb1 4.4/12, mb1mx4.0/53, mbtmp4.2/12, ML4.3/2, MS3.5/10, Ms1 3.5/10, ms1mx3.2/51, Error ellipse: s-maj=40.7km s-min=15.7km az=142.0*

ISCJB ***14*** *20:39:26.8±0.4, 17.°77S±0.°05×173.°18W±0.°08, h26^{km}, mb4.9/35, MS3.5/9, Error ellipse: s-maj=11.8km s-min=5.5km az=30.8*

NEIC ***14*** *20:39:30.5±1.3, 17.°79S×173.°13W, h44^{km}±13^{km}, mb5.2/28, Error ellipse: s-maj=11.5km s-min=6.3km az=126.0*

ISC 14 20:39:28.2±0.6**, 17.°84S**±0.°09×**173.°1W**±0.°1**, h26**^{km}**, n67,** σ**1**^{s}**48**/53**, mb5.0**/35**, MS3.4**/9**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	4.11	18	Pn	Pn	20 40 30.3	+0.9
	61nm,0.3s,baz=216,slow=2.6,SNR=46						
AFI				Sn	Sn	20 41 16.4	-0.3
	92nm,0.3s,baz=15,slow=21,SNR=10						
AFI	Afiamalu	4.11	18	ePn	Pn	20 40 30.2	+0.9
AFI				ePg	Pb	20 40 30.4	-9.5
AFI				eSn	Sn	20 41 15.2	-1.5
AFI				eSg	Sn	20 41 15.6	-1.0
RAR	Rarotonga	13.00	107	LR	LR	20 45 51.4	
	comp=Z,208nm,21.9s,baz=274,slow=31						
RAR	Rarotonga	13.00	107	eP	Pn	20 42 18.0	-13
KNTN	Kanton	15.03	5	ePn	Pn	20 43 00.7	+1.7
DZM	Mont Dzumac	19.69	254	P	Pn	20 43 56.8	-0.4
	0.2nm,0.3s,baz=18,slow=20,SNR=2.9						
DZM	Mont Dzumac	19.69	254	eP	P	20 43 56.0	+0.3
	75nm,1.8s						
OUZ	Omahuta	20.97	212	eP	P	20 44 08.6	-0.9
	181nm,2.0s						
MXZ	Matakaoa Point	21.05	199	eP	P	20 44 10.2	-0.1
	172nm,1.3s						
URZ	Urewera	22.08	201	P	P	20 44 18.9	-2.4
	12nm,0.3s,baz=253,slow=3.8,SNR=26						
PAE	Paea	22.39	93	eT	T	21 06 25.3	
	12nm,0.3s						
PPT2	Papeete2	22.40	93	eLQ	LQ	20 48 35.8	
	613nm,28.8s						
PPT2				eLR	LR	20 49 30.3	
	237nm,25.2s						
PPT2	Papeete2	22.40	93	eT	T	21 06 28.6	
	7.0nm,0.3s						
PPTF	Pamatai, Papee	22.41	93	eP	P	20 44 24.9	-0.3
	296nm,1.4s						
TVO	Taravao	22.70	94	eT	T	21 06 49.5	
	2.6nm,0.3s						
TBI	Tubuai	22.78	108	eLQ	LQ	20 48 44.6	
	334nm,28.8s						
TBI				eLR	LR	20 49 34.2	
	287nm,26.2s						
TBI	Tubuai	22.78	108	eT	T	21 06 39.8	
	4.8nm,0.2s						
BKZ	Black Stump Fm	23.10	201	eP	P	20 44 32.3	+0.1
	133nm,1.9s						
HIZ	Hauiti	23.13	205	eP	P	20 44 32.6	+0.2
	306nm,1.8s						
BFZ	Birch Farm	24.55	200	eP	P	20 44 46.6	+0.7
	35nm,1.1s						
SNZO	South Karori	25.63	202	eP	P	20 44 56.2	+0.6
	502nm,2.0s						
THZ	Tophouse	26.69	204	eP	P	20 45 06.9	+1.6
	320nm,1.9s						
KHZ	Kahutara	27.02	202	eP	P	20 45 10.0	+1.9
	194nm,1.8s						
HNR	Honiara	27.47	284	LR	LR	20 55 04.9	
	comp=Z,85nm,19.8s,baz=258,slow=34						
LTZ	Lake Taylor	27.80	204	eP	P	20 45 19.8	+4.5
	154nm,1.6s						
MQZ	McQueen's Vall	28.46	202	eP	P	20 45 27.7	+6.6
	130nm,1.5s						
RPZ	Rata Peaks	29.06	204	eP	P	20 45 29.8	+3.4
	93nm,1.5s						
FOZ	Fox Glacier	29.41	206	eP	P	20 45 32.2	+2.8
	191nm,1.4s						
LBZ	Lake Benmore	29.97	204	eP	P	20 45 37.1	+2.7
	117nm,1.9s						
WKZ	Wanaka	30.80	205	eP	P	20 45 46.0	+4.2
	259nm,1.9s						
EIDS	Eidsvold	34.06	251	eP	P	20 46 10.1	-0.6
	12nm,1.2s						
ARMA	Armidale	34.40	242	eP	P	20 46 13.8	+0.1
	30nm,1.4s						
CAN	Canberra	37.83	235	eP	P	20 46 42.3	-0.6
	33nm,1.4s						
CTA	Charters Tower	38.45	260	P	P	20 46 48.1	-0.1
	3.4nm,0.4s,baz=94,slow=14,SNR=13						
CTAO	Charters Tower	38.45	260	eP	P	20 46 48.2	+0.1
	25nm,1.5s						
KEKH	Kekaha	41.69	19	eP	P	20 47 14.5	-0.4
	147nm,1.1s						
COEN	Coen	42.17	269	eP	P	20 47 19.2	+0.2
	37nm,1.6s						
STKA	Stephens Creek	43.12	242	P	P	20 47 24.8	-1.8
	5.2nm,1.1s,baz=94,slow=14,SNR=4.4						
STKA	Stephens Creek	43.12	242	eP	P	20 47 24.6	-2.0
	8.2nm,1.9s						
BBOO	Buckleboo	47.88	242	eP	P	20 48 02.5	-1.8
	100nm,1.8s						
WB2	Warramunga Arr	49.60	259	eP	P	20 48 17.6	-0.1
	7.1nm,1.0s						
WR1	Warramunga Arr	49.62	259	eP	P	20 48 17.8	-0.1
	22nm,1.5s						
WRA	Warramunga Arr	49.62	259	P	P	20 48 17.8	-0.1
	3.5nm,0.3s,baz=98,slow=7.3,SNR=85						
AS01	Alice Springs	49.63	254	eP	P	20 48 18.0	0.0
AS01				ePcP	PcP	20 49 39.5	+0.2
AS31	Alice Springs	49.67	254	eP	P	20 48 18.4	+0.1
	2.7nm,0.4s						
ASAR	Alice Springs	49.68	254	P	P	20 48 18.3	0.0
	4.6nm,0.4s,baz=90,slow=9.2,SNR=131						
GUMO	Guam	51.92	304	LR	LR	21 09 23.5	
	comp=Z,32nm,19.0s,baz=104,slow=34						
MTN	Manton Dam	53.86	267	eP	P	20 48 50.0	+0.5
	26nm,1.6s						
FITZ	Fitzroy Crossi	58.02	259	P	P	20 49 20.6	+1.3
	1.1nm,0.5s,baz=54,slow=5.6,SNR=14						
MBWA	Marble Bar	62.99	255	eP	P	20 49 52.8	-0.5
	85nm,1.8s						
MJAR	Matsushiro Arr	70.98	320	LR	LR	21 18 13.3	
	comp=Z,20nm,19.8s,baz=120,slow=33						
JOW	Kunigami	72.16	307	LR	LR	21 17 50.1	
	comp=Z,43nm,19.2s,baz=57,slow=32						
JNU	Nakatsue	73.67	314	LR	LR	21 17 40.1	
	comp=Z,30nm,20.4s,baz=122,slow=31						
ASAJ	Asahikawa	73.75	328	LR	LR	21 18 14.3	
	comp=Z,22nm,20.4s,baz=18,slow=32						
BENR	Benton	75.35	42	eP	P	20 51 11.8	+2.0
NV01	Mina Array Sit	75.94	41	eP	P	20 51 12.3	-0.8
NVAR	Mina Array Bea	75.94	41	P	P	20 51 12.9	-0.3
	0.4nm,0.8s,baz=239,slow=10.0,SNR=2.2						
KSRS	Korea Array	78.10	316	LR	LR	21 24 39.6	
	comp=Z,17nm,18.4s,baz=139,slow=35						
USRK	Ussuriysk Ar.	79.50	323	LR	LR	21 19 27.3	
	comp=Z,57nm,21.8s,baz=174,slow=30						
TXAR	Lajitas Array	81.73	56	P	P	20 51 43.4	-1.6
	0.3nm,1.0s,baz=210,slow=4.3,SNR=3.4						
MA2	Magadan	82.56	342	LR	LR	21 21 22.6	
	comp=Z,22nm,21.4s,baz=178,slow=30						
PD31	Pinedale Array	83.88	42	eP	P	20 51 55.0	-1.0
PDAR	Pinedale Array	83.88	42	P	P	20 51 55.6	-0.5
	0.2nm,0.5s,baz=258,slow=6.4,SNR=2.6						
ILAR	Eielson Array	84.77	11	P	P	20 51 59.7	0.0
	0.5nm,0.8s,baz=218,slow=5.2,SNR=4.7						
CLL	Collm	146.25	353	ePKiKP	PKiKP	20 59 10.0	+0.5
CLL				epPKPdf	sPKPbc	20 59 18.0	+0.1
BR101	Keskin Array S	148.20	319	ePKPbc	PKPbc	20 59 12.6	+0.3
BRTR	Keskin Array B	148.20	319	PKPbc	PKPbc	20 59 12.6	+0.3
	0.7nm,0.7s,baz=56,slow=1.5,SNR=3.8						

IDC ***14*** *20:42:06.5±1.5, 2.°03N×92.°30E, h0^{km}, mb3.4/6, mb1 3.7/9, mb1mx3.5/68, mbtmp3.6/9, ML3.8/3, Error ellipse: s-maj=43.7km s-min=19.6km az=50.0*

DJA ***14*** *20:42:07.2±2.5, 2.°N±9.°×9.°2E±1.°6, h16^{km}±22^{km}, M5.0/8, mb4.9/6, mB5.6/6, MLv5.0/8, Mw(mB)5.1/6*

ISCJB ***14*** *20:42:09.3±0.9, 2.°1N±0.°1×92.°35E±0.°07, h33^{km}, mb3.5/6, Error ellipse: s-maj=16.6km s-min=8.2km az=24.7*

ISC 14 20:42:10.7±0.9**, 2.°12N**±0.°10×**92.°42E**±0.°06**, h35**^{km}**, n19,** σ**3**^{s}**34**/24**, mb3.5**/6**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNSI	Sinabang, Aceh	3.91	86	P	Pn	20 43 09.2	+0.9

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
MLSI	**Meulaboh, Aceh**	**4.51**	**62**	P	**Pn**	**20 43 17.7**	**+1.2**
MLSI				S	**Sn**	**20 44 03.2**	**-4.6**
TPTI		**4.88**	**77**	P	**Pn**	**20 43 22.7**	**+1.0**
TPTI				S	**Sn**	**20 44 12.5**	**-4.5**
GSI	**Gunungsitoli**	**5.21**	**99**	P	**Pn**	**20 43 27.9**	**+1.6**
GSI				S	**Sn**	**20 44 19.9**	**-5.3**
KCSI	**Kotacane, Aceh**	**5.52**	**75**	P	**Pn**	**20 43 33.0**	**+2.5**
KCSI				S	**Sn**	**20 44 28.5**	**-4.3**
PBSI	**Pulau Batu**	**6.24**	**110**	P	**Pn**	**20 43 42.3**	**+1.9**
PBSI				S	**Sn**	**20 44 44.4**	**-6.2**
TSI	**Tuntungan**	**6.29**	**77**	P	**Pn**	**20 43 43.6**	**+2.6**
	138nm,0.6s,3µm						
PSI	**Prapat**	**6.53**	**84**	Pn	**Pn**	**20 43 46.0**	**+1.6**
	5.1nm,0.3s,baz=360,slow=4.6,SNR=19						
MNSI	**Mandailing Nat**	**7.28**	**100**	P	**Pn**	**20 43 55.8**	**+1.2**
KRJI	**Kerinci**	**9.96**	**115**	P	Pn	20 44 36.9	+5.4
PALK	**Pallekele**	**12.75**	**294**	Pn	**Pn**	**20 45 09.8**	**+0.2**
	1.4nm,0.3s,baz=115,slow=14,SNR=13						
PALK				Sn	**Sn**	**20 47 22.6**	**-7.9**
	1.6nm,0.3s,baz=296,slow=2.9,SNR=6.0						
CMAR	**Chiang Mai Arr**	**17.45**	**21**	P	**P**	**20 46 14.3**	**+1.9**
	0.0nm,0.3s,baz=197,slow=12,SNR=3.7						
MKAR	**Makanchi Array**	**45.36**	**350**	P	**P**	**20 50 25.9**	**+0.3**
	0.5nm,1.0s,baz=173,slow=7.1,SNR=2.7						
WRA	**Warramunga Arr**	**46.60**	**120**	P	**P**	**20 50 36.7**	**+0.9**
	1.1nm,0.7s,baz=298,slow=8.6,SNR=5.9						
SONM	**Songino Array**	**47.11**	**13**	P	**P**	**20 50 41.7**	**+2.2**
	0.2nm,0.5s,baz=190,slow=7.2,SNR=2.3						
ASAR	**Alice Springs**	**47.80**	**125**	P	**P**	**20 50 46.6**	**+1.5**
	0.4nm,0.7s,baz=304,slow=7.4,SNR=3.1						
KURBB	**Kurchatov Arra**	**49.74**	**348**	P	**P**	**20 51 00.3**	**+0.8**
	0.2nm,0.7s,baz=162,slow=9.7,SNR=2.6						
ZALV	**Zalesovo Beam**	**52.03**	**354**	P	**P**	**20 51 18.7**	**+2.0**
	0.3nm,0.4s,baz=177,slow=8.2,SNR=2.5						
TXAR	**Lajitas Array**	**145.13**	**25**	PKPbc	**PKPdf**	**21 01 46.7**	**+1.3**
	0.3nm,0.6s,baz=16,slow=1.8,SNR=4.1						

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*ISCJB **14** 20:48:54.4±1.5, 15°.00N±0°.03×119°.49E±0°.07, h1^{km}±9^{km}, mb3.8/5, MS3.3/1, Error ellipse: s-maj=12.1km s-min=5.3km az=177.3*

*IDC **14** 20:48:54.2±1.0, 14°.56N×119°.21E, h0^{km}, mb3.8/5, mb1 3.9/5, mb1mx3.3/62, mbtmp3.8/5, MS3.3/1, Ms1 3.3/1, ms1mx2.5/64, Error ellipse: s-maj=51.6km s-min=20.3km az=54.0*

*MAN **14** 20:48:56.9, 15°.01N×119°.70E, h12^{km}, mb4.9, ML3.8, MS3.8*

ISC 14 20:48:56.7±1.6**, 15°.04N**±0°.03×**119°.62E**±0°.08**, h13**^{km}±10^{km}**, n16,** σ**1s.75**/25**, mb3.7**/5**, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCZP	**Santa Cruz**	**0.79**	**21**	*e*P	**Pg**	**20 49 11.6**	**-0.4**
SCZP				*e*S	**Sb**	**20 49 23.4**	**+0.5**
BOLP	**Bolinao**	**1.36**	**12**	*e*P	**Pn**	**20 49 20.5**	**-1.0**
BOLP				*e*S	**Sb**	**20 49 39.5**	**0.0**
LUBP	**Lubang**	**1.43**	**155**	*e*P	**Pn**	**20 49 20.5**	**-1.9**
LUBP				*e*S	**Sg**	**20 49 44.3**	**+1.4**
TGY	**Tagaytay City**	**1.58**	**126**	Pn	**Pb**	**20 49 25.4**	**-0.5**
	76nm,0.3s,baz=222,slow=8.6,SNR=4.3						
TGY				Sn	**Sn**	**20 49 45.5**	**+0.5**
	106nm,0.3s,baz=206,slow=18,SNR=3.4						
BALP	**Baler**	**2.02**	**69**	*e*P	**Pn**	**20 49 30.7**	**+0.2**
BALP				*e*S	**Sn**	**20 49 54.2**	**-1.3**
ABRA	**Dolores**	**2.80**	**22**	*e*P	**Pn**	**20 49 42.9**	**+1.6**
ABRA				*e*S	**Sg**	**20 50 27.0**	**+0.1**
CAUP	**Cauayan**	**2.85**	**48**	*e*P	**Pn**	**20 49 44.3**	**+2.4**
CAUP				*e*S	**Sb**	**20 50 23.4**	**+1.2**
SJMP	**San Jose**	**2.95**	**150**	*e*P	**Pn**	**20 49 45.0**	**+1.7**
SJMP				*e*S	**Sn**	**20 50 21.4**	**+2.8**
BUSP	**Coron**	**3.07**	**169**	*e*P	**Pn**	**20 49 45.5**	**+0.5**
BUSP				*e*S	**Sn**	**20 50 22.3**	**+0.7**
APYP	**Conner**	**3.21**	**29**	*e*P	**Pn**	**20 49 48.0**	**+1.1**
APYP				*e*S	**Sb**	**20 50 29.9**	**-2.8**
WRA	**Warramunga Arr**	**37.66**	**157**	P	**P**	**20 56 08.8**	**-3.1**
	0.7nm,0.5s,baz=331,slow=10,SNR=8.4						
ASAR	**Alice Springs**	**40.93**	**160**	P	**P**	**20 56 36.4**	**-2.7**
	0.4nm,0.4s,baz=337,slow=7.1,SNR=8.2						
PETK	**Petropavlovsk-**	**48.38**	**30**	LR	LR	21 19 46.5	
	comp=Z,32nm,18.9s,baz=184,slow=38						
KURBB	**Kurchatov Arra**	**48.50**	**326**	P	**P**	**20 57 41.8**	**+2.6**
	0.2nm,0.7s,baz=124,slow=7.9,SNR=3.1						
FINES	**FINESS Array B**	**78.61**	**331**	P	**P**	**21 00 58.7**	**+0.7**
	2.0nm,0.9s,baz=105,slow=6.7,SNR=3.5						
HFS	**Hagfors**	**84.80**	**331**	P	**P**	**21 01 30.3**	**-0.5**
	1.8nm,0.9s,baz=99,slow=8.9,SNR=3.8						

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*MAN **14** 20:56:49.0, 5°.58N×126°.77E, h71^{km}, mb4.9, ML3.8, MS3.8*

*IDC **14** 20:56:54.2±1.5, 6°.15N×126°.64E, h0^{km}, mb3.3/5, mb1 3.5/5, mb1mx3.3/56, mbtmp3.3/5, Error ellipse: s-maj=69.6km s-min=15.6km az=61.0*

ISC 14 20:56:55.3±2.2**, 5°.91N**±0°.07×**126°.36E**±0°.08**, h9**^{km}±13^{km}**, n11,** σ**2s.79**/16**, mb3.4**/5**, 1C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	**Mati**	**1.03**	**354**	*e*P	**Pn**	**20 57 13.7**	**-2.3**
MATI				*e*S	**Sn**	**20 57 33.1**	**+2.5**
DAV	**Davao City (W)**	**1.39**	**326**	Pn	**Pg**	**20 57 21.2**	**-0.8**
	15nm,0.3s,baz=229,slow=20,SNR=2.8						
DAV				LR	LR	20 57 39.1	
	comp=Z,38nm,21.4s,baz=124,slow=32						
DAV				Sn	**Sg**	**20 57 41.2**	**+1.2**
	72nm,0.3s,baz=59,slow=20,SNR=7.9						
GSPH	**General Santos**	**1.41**	**277**	⇑*i*P	**Pn**	**20 57 20.6**	**-0.7**
GSPH				*i* S	**Sn**	**20 57 36.7**	**-3.4**
DMPH	**Davao City--Mi**	**1.44**	**324**	⇓*e*P	Pg	20 57 28.1	+5.1
DMPH				*e*S	**Sg**	**20 57 47.0**	**+5.3**
SKMP	**Bagumbayan, Su**	**1.90**	**289**	*e*P	**Pn**	**20 57 26.9**	**-1.1**
SKMP				*e*S	**Sn**	**20 57 55.8**	**+3.7**
BUKP	**Musuan**	**2.34**	**327**	*e*P	**Pb**	**20 57 34.9**	**-2.9**
BUKP				*e*S	**Sb**	**20 58 06.5**	**-0.3**
FITZ	**Fitzroy Crossi**	**23.87**	**182**	P	**P**	**21 02 12.1**	**+2.8**
	1.6nm,0.9s,baz=1.9,slow=12,SNR=3.7						
WRA	**Warramunga Arr**	**26.87**	**163**	P	**P**	**21 02 39.4**	**+2.8**
	0.3nm,0.8s,baz=343,slow=10,SNR=2.8						
ASAR	**Alice Springs**	**30.31**	**166**	P	**P**	**21 03 07.4**	**+0.1**
	0.2nm,0.6s,baz=339,slow=6.8,SNR=4.7						
MKAR	**Makanchi Array**	**55.57**	**325**	P	**P**	**21 06 31.4**	**+0.1**
	0.2nm,0.5s,baz=126,slow=7.3,SNR=2.5						
KURBB	**Kurchatov Arra**	**59.72**	**327**	P	**P**	**21 06 60.0**	**-0.4**
	0.2nm,0.5s,baz=133,slow=6.0,SNR=3.3						

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*IDC **14** 21:02:20.4±1.9, 16°.82S×174°.65W, h222^{km}±13^{km}, mb3.5/11, mb1 3.8/12, mb1mx3.4/52, mbtmp4.1/12, Error ellipse: s-maj=58.1km s-min=10.4km az=147.0*

ISC 14 21:02:18.0±1.3**, 17°.0S**±0°.4×**174°.7W**±0°.3**, h200**^{km}**, n15,** σ**1s.50**/16**, mb3.7**/11**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.16**	**42**	P	**Pn**	**21 03 25.1**	**+3.1**
	23nm,0.3s,baz=168,slow=2.7,SNR=22						
AFI				S	**Sn**	**21 04 12.5**	**+0.3**
	58nm,0.3s,baz=63,slow=10,SNR=12						
CTA	**Charters Tower**	**37.13**	**259**	P	**P**	**21 09 10.2**	**+0.4**
	4.6nm,1.0s,baz=76,slow=19,SNR=2.4						
STKA	**Stephens Creek**	**42.19**	**241**	P	**P**	**21 09 52.7**	**+1.4**
	5.6nm,0.8s,baz=66,slow=7.9,SNR=15						
WRA	**Warramunga Arr**	**48.32**	**258**	P	**P**	**21 10 39.5**	**-0.3**
	0.8nm,0.5s,baz=93,slow=6.8,SNR=20						
ASAR	**Alice Springs**	**48.48**	**253**	P	**P**	**21 10 41.0**	**+0.1**
	7.6nm,0.6s,baz=88,slow=8.3,SNR=104						
FITZ	**Fitzroy Crossi**	**56.71**	**259**	P	**P**	**21 11 42.0**	**+0.7**
	1.4nm,0.8s,baz=93,slow=6.1,SNR=3.7						
YBH	**Yreka Blue Hor**	**75.62**	**37**	P	**P**	**21 13 40.9**	**-0.2**
	1.0nm,0.4s,baz=270,slow=1.0,SNR=5.3						
NVAR	**Mina Array Bea**	**76.34**	**42**	P	**P**	**21 13 44.6**	**-0.8**
	0.7nm,0.7s,baz=225,slow=10,SNR=6.1						
TXAR	**Lajitas Array**	**82.51**	**56**	P	**P**	**21 14 16.9**	**-1.9**
	0.4nm,0.9s,baz=216,slow=9.0,SNR=3.3						
SEY	**Seymchan**	**83.79**	**345**	P	**P**	**21 14 23.1**	**-1.3**
	1.1nm,0.6s,baz=91,slow=8.8,SNR=4.3						
ILAR	**Eielson Array**	**84.28**	**12**	P	**P**	**21 14 24.8**	**-2.1**
	0.7nm,0.6s,baz=224,slow=5.2,SNR=6.2						
PDAR	**Pinedale Array**	**84.28**	**42**	P	**P**	**21 14 26.4**	**-1.2**
	0.4nm,0.6s,baz=245,slow=3.1,SNR=5.4						
BRTR	**Keskin Array B**	**146.62**	**318**	PKPbc	**PKPdf**	**21 21 35.5**	**+0.9**
	0.6nm,0.9s,baz=92,slow=1.3,SNR=3.5						
GERES	**GERESS Array B**	**147.55**	**350**	PKPbc	**PKPdf**	**21 21 37.8**	**+1.9**
	0.5nm,0.7s,baz=13,slow=3.0,SNR=5.1						
DAVOX	**Davos/Dischmat**	**150.10**	**354**	PKPbc	**PKPbc**	**21 21 44.7**	**-0.6**
	3.4nm,0.6s,baz=350,slow=6.1,SNR=6.3						

NNC 14 21:05:25.0±1.8**, 36°.83N**×**70°.60E, h123**^{km}±40^{km}**, mb3.0, mpv3.7, 10C-4D, Error ellipse: s-maj=17.6km s-min=14.1km az=77.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**3.91**	**35**	⇑P	Pn	21 06 23.6	-0.1
	8.5nm,0.5s						
SFK				⇓S	Sn	21 07 09.2	+0.2
	17nm,0.4s						
MNAS	**Manas**	**5.84**	**14**	⇑P	Pn	21 06 50.3	+0.9
	3.0nm,0.4s						
MNAS				⇓S	Sn	21 07 55.8	+0.7
	3.7nm,0.5s						
KK31	**Karatay Array**	**6.27**	**359**	⇑P	Pn	21 06 56.0	+1.0
	2.6nm,0.3s,baz=182,slow=13,SNR=113						
KK31				⇑S	Sn	21 08 06.7	+1.4
	2.0nm,0.4s,baz=186,slow=24,SNR=9.3						
AAK	**Ala-Archa**	**6.53**	**26**	⇑P	Pn	21 06 58.8	+0.1
	1.8nm,0.5s						
AAK				⇓S	Sn	21 08 11.7	-0.3
	6.2nm,0.8s						
TKM2	**Tokmak 2**	**7.20**	**31**	⇑P	Pn	21 07 06.8	-0.9
	3.5nm,0.5s						
TKM2				⇑S	Sn	21 08 30.4	+2.3
	2.5nm,0.8s						
AB31	**Akbulak array**	**14.64**	**331**	⇑P	Pn	21 08 45.2	-0.8
	0.5nm,0.5s,baz=146,slow=12,SNR=12						
AB31				⇑S	Sn	21 11 26.1	-1.6
	0.4nm,0.6s,baz=145,slow=22,SNR=4.7						
AKTO	**Aktyubinsk**	**16.33**	**330**	⇓P	Pn	21 09 07.2	+0.2
	2.4nm,0.8s						
AKTO				⇑S	Sn	21 12 07.1	-1.3
	0.8nm,0.6s						

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*ISCJB **14** 21:07:31.8±1.0, 35°.44N±0°.05×141°.2E±0°.1, h35^{km}, mb3.5/5, Error ellipse: s-maj=13.6km s-min=6.2km az=162.6*

*JMA **14** 21:07:31.6±0.2, 35°.46N×141°.22E, h33^{km}±2^{km}, M3.0*

*IDC **14** 21:07:38.5±1.2, 34°.49N×138°.22E, h0^{km}, mb3.5/5, mb1 3.6/5, mb1mx3.4/68, mbtmp3.5/5, ML2.6/1, Error ellipse: s-maj=43.6km s-min=18.3km az=65.0*

ISC 14 21:07:33.3±1.4**, 35°.46N**±0°.06×**141°.2E**±0°.1**, h35**^{km}**, n22,** σ**1s.79**/20**, mb3.5**/5**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.40**	**309**	P	**Pn**	**21 07 40.2**	**-2.3**
CHOJ				S	**Sn**	**21 07 46.1**	**-2.7**
JIHU	**Itakohorinouch**	**0.77**	**311**	P	**Pn**	**21 07 46.4**	**-1.3**
KTR	**Katsuura**	**0.81**	**248**	P	**Pn**	**21 07 46.6**	**-1.7**
BSO1	**Boso 1**	**0.83**	**195**	P	**Pn**	**21 07 47.0**	**-1.0**
JCN	**Nagara**	**0.85**	**268**	P	**Pn**	**21 07 48.0**	**-0.7**
BSO4	**Boso 4**	**0.87**	**238**	P	**Pn**	**21 07 47.6**	**-1.4**
BSO3	**Boso 3**	**0.88**	**223**	P	**Pn**	**21 07 47.7**	**-1.3**
JYT	**Yasato**	**1.15**	**313**	P	**Pn**	**21 07 51.1**	**-1.8**
JHJ	**Hachijo jima 2**	**2.62**	**208**	Pn	**Pn**	**21 08 12.8**	**-0.3**
	9.5nm,0.3s,baz=128,slow=23,SNR=15						
JHJ				Sn	**Sn**	**21 08 41.6**	**-2.1**
	34nm,0.3s,baz=342,slow=22,SNR=9.1						
MJAR	**Matsushiro Arr**	**2.69**	**295**	Pn	**Pn**	**21 08 13.3**	**-0.7**
	2.1nm,0.3s,baz=178,slow=8.3,SNR=35						
MJAR				Sn	**Sn**	**21 08 46.1**	**+0.7**
	2.8nm,0.3s,baz=30,slow=32,SNR=6.0						
MAT	**Matsushiro**	**2.69**	**295**	P	**Pn**	**21 08 14.7**	**+0.6**
MAT				*e*S	**Sn**	**21 08 49.0**	**+3.6**
H11N2	**WAKE ISLAND Hy**	**27.50**	**118**	T	T	21 42 26.8	
	baz=310,slow=75,SNR=22						
H11N1	**WAKE ISLAND Hy**	**27.50**	**118**	T	T	21 42 27.4	
	baz=310,slow=75,SNR=20						
H11N3	**WAKE ISLAND Hy**	**27.52**	**118**	T	T	21 42 28.3	
	baz=310,slow=75,SNR=15						
H11S3	**WAKE ISLAND Hy**	**28.16**	**120**	T	T	21 43 07.0	
	baz=312,slow=75,SNR=32						
H11S1	**WAKE ISLAND Hy**	**28.16**	**120**	T	T	21 43 09.5	
	baz=312,slow=75,SNR=46						
H11S2	**WAKE ISLAND Hy**	**28.17**	**120**	T	T	21 43 11.9	
	baz=312,slow=75,SNR=25						
ZALV	**Zalesovo Beam**	**42.89**	**314**	P	**P**	**21 15 29.9**	**+1.8**
	0.4nm,0.4s,baz=110,slow=7.8,SNR=2.5						
MKAR	**Makanchi Array**	**44.85**	**303**	P	**P**	**21 15 43.4**	**-0.7**
	0.4nm,0.8s,baz=85,slow=8.1,SNR=3.2						
KURBB	**Kurchatov Arra**	**46.87**	**309**	P	**P**	**21 15 58.9**	**-1.0**
	0.4nm,0.6s,baz=80,slow=7.7,SNR=3.7						
WRA	**Warramunga Arr**	**55.48**	**188**	P	**P**	**21 17 05.4**	**+0.7**
	0.6nm,0.6s,baz=1.7,slow=7.6,SNR=7.7						
ASAR	**Alice Springs**	**59.21**	**188**	P	**P**	**21 17 33.1**	**+2.1**
	0.1nm,0.5s,baz=13,slow=13,SNR=4.4						

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*ISCJB **14** 21:07:38.1±0.7, 31°.51S±0°.03×69°.34W±0°.04, h119^{km}±6^{km}, Error ellipse: s-maj=5.8km s-min=4.3km az=19.4*

*GUC **14** 21:07:38.7±0.5, 31°.52S×69°.75W, h136^{km}±12^{km}, ML3.0*

*SJA **14** 21:07:38.0±1.2, 31°.51S×69°.37W, h111^{km}±5^{km}, ML2.8, MW3.2*

ISC 14 21:07:38.6±1.5**, 31°.51S**±0°.03×**69°.35W**±0°.04**, h115**^{km}±10^{km}**, n22,** σ**0s.69**/38**, 3D, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTLS	**Leoncito**	**0.29**	**171**	*e*P	**Pn**	**21 07 55.0**	**-0.3**
RTLS				*e*S	**Sn**	**21 08 07.7**	**-0.2**
ZON	**Zonda**	**0.57**	**94**	*e*P	**Pn**	**21 07 56.4**	**-0.1**
ZON				⇓*e*S	**Sn**	**21 08 09.8**	**-0.3**
AUSP	**Uspallata**	**0.71**	**183**	*e*P	**Pn**	**21 07 57.8**	**-0.2**
RTLL	**Cerro Villicun**	**0.77**	**77**	*e*P	**Pn**	**21 07 57.7**	**-0.4**
RTLL				*e*S	**Sn**	**21 08 12.4**	**-0.4**
RTLL				IAML		21 08 13.4	
	comp=Z,208nm,0.2s						
RTCV	**Cerro Valdivia**	**0.77**	**117**	*e*P	**Pn**	**21 07 58.2**	**0.0**
RTCV				⇓*e*S	**Sn**	**21 08 13.1**	**+0.2**
AMOG	**MOGNA**	**0.93**	**52**	*e*P	**Pn**	**21 07 59.6**	**0.0**
AMOG				*e*S	**Sn**	**21 08 15.1**	**-0.3**
ASAL	**Salagasta**	**1.16**	**158**	*e*P	**Pn**	**21 08 02.2**	**+0.2**
ASAL				*e*S	**Sn**	**21 08 20.9**	**+1.2**
AROD	**Rodeo**	**1.34**	**355**	*e*P	**Pn**	**21 08 05.0**	**+0.7**
AROD				*e*S	**Sn**	**21 08 24.5**	**+0.8**
ARCO	**CERRO ARCO**	**1.37**	**165**	*e*P	**Pn**	**21 08 05.0**	**+0.5**
ARCO				*e*S	**Sn**	**21 08 25.1**	**+1.0**
ARCO				IAML		21 08 26.6	
	comp=Z,100nm,0.3s						
AAGR	**Agrelo**	**1.63**	**164**	*e*P	**Pn**	**21 08 07.8**	**+0.4**
GO04	**Tololo Observa**	**1.83**	**316**	*e*P	**Pn**	**21 08 09.9**	**0.0**
GO04				*e*S	**Sn**	**21 08 33.3**	**-0.4**
GO04				IAML		21 08 36.2	
	comp=E,234nm,0.5s						
TLL	**Tololo Astrono**	**1.83**	**317**	*e*P	**Pn**	**21 08 10.0**	**0.0**
TLL				*e*S	**Sn**	**21 08 33.3**	**-0.6**
FCH	**Farellones**	**1.98**	**203**	*e*P	**Pn**	**21 08 12.4**	**+0.5**
FCH				*e*S	**Sn**	**21 08 38.8**	**+1.4**
PEL	**Peldehue**	**1.98**	**214**	*e*P	**Pn**	**21 08 11.4**	**-0.3**
PEL				*e*S	**Sn**	**21 08 36.2**	**-0.7**
ACAN	**Cantantal**	**1.99**	**113**	*e*P	**Pn**	**21 08 11.8**	**+0.1**
ACAN				*e*S	**Sn**	**21 08 35.9**	**-1.1**
ROCH	**El Roble**	**2.03**	**224**	*e*P	**Pn**	**21 08 11.7**	**-0.7**
ROCH				*e*S	**Sn**	**21 08 37.2**	**-1.0**
ROCH				IAML		21 08 38.8	
	comp=N,92nm,0.2s						
ROC1	**El Roble**	**2.03**	**224**	*e*S	**Sn**	**21 08 37.7**	**-0.7**
CLCH	**Cerro Calan**	**2.13**	**208**	*e*P	**Pn**	**21 08 13.7**	**+0.2**
CLCH				*e*S	**Sn**	**21 08 40.9**	**+0.6**
CLCH				IAML		21 08 42.8	
	comp=E,135nm,0.4s						
AGUA	**GUANDACOL**	**2.15**	**20**	*e*P	**Pn**	**21 08 14.7**	**+0.9**
AGUA				*e*S	**Sn**	**21 08 41.9**	**+1.2**
VCA	**Vinchina**	**2.94**	**20**	⇓*e*P	**Pn**	**21 08 24.6**	**+0.5**
VCA				IAML		21 09 03.0	
	comp=Z,28nm,0.3s						
MRA	**San Martin**	**3.22**	**107**	*e*P	**Pn**	**21 08 27.3**	**-0.4**
MRA				IAML		21 08 27.8	
	comp=Z,17nm,0.5s						
CYA	**Choya**	**4.34**	**46**	*e*P	**Pn**	**21 08 41.3**	**-1.3**

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*IDC **14** 21:16:53.1±2.3, 21°.93S×168°.77E, h0^{km}, mb3.9/6, mb1 4.1/7, mb1mx3.8/52, mbtmp3.9/7, ML3.7/1, MS3.0/2, Ms1 3.0/2, ms1mx2.6/41, Error ellipse: s-maj=78.2km s-min=32.4km az=160.0*

ISC 14 21:16:57.4±1.8**, 22°.0S**±0°.5×**168°.8E**±0°.2**, h31**^{km}**, n9,** σ**1s.05**/9**, mb3.9**/6**, New Caledonia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**2.19**	**269**	Pn	**Pn**	**21 17 31.0**	**-0.8**
	23nm,0.3s,baz=118,slow=14,SNR=218						
DZM				LR	LR	21 17 48.9	
	comp=Z,88nm,20.0s,baz=92,slow=26						
DZM				Sn	**Sn**	**21 17 58.3**	**+0.5**
	85nm,0.3s,baz=186,slow=23,SNR=9.7						
CTA	**Charters Tower**	**21.13**	**271**	P	**P**	**21 21 41.2**	**+1.3**
	2.7nm,0.7s,baz=115,slow=15,SNR=4.0						
STKA	**Stephens Creek**	**26.09**	**242**	P	**P**	**21 22 29.1**	**+0.6**
	2.6nm,0.8s,baz=82,slow=11,SNR=3.8						
ASAR	**Alice Springs**	**32.16**	**260**	P	**P**	**21 23 22.1**	**-0.4**
	1.1nm,0.7s,baz=84,slow=9.1,SNR=16						
WRA	**Warramunga Arr**	**32.21**	**267**	P	**P**	**21 23 21.4**	**-1.6**
	0.6nm,0.6s,baz=97,slow=8.3,SNR=7.8						
FITZ	**Fitzroy Crossi**	**40.63**	**268**	P	**P**	**21 24 34.8**	**-0.1**
	2.6nm,0.7s,baz=128,slow=8.9,SNR=5.9						
CMAR	**Chiang Mai Arr**	**79.29**	**295**	P	**P**	**21 29 01.3**	**+0.9**
	1.0nm,0.9s,baz=120,slow=4.2,SNR=4.6						
PDAR	**Pinedale Array**	**98.80**	**47**	LR	LR	22 09 00.9	
	comp=Z,22nm,20.1s,baz=120,slow=32						
GERES	**GERESS Array B**	**146.72**	**330**	PKPbc	**PKPbc**	**21 36 35.8**	**-0.4**
	0.7nm,0.7s,baz=37,slow=3.3,SNR=7.7						

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*IDC **14** 21:18:31.2±5.4, 25°.10N×93°.96E, h0^{km}, mb3.3/3, mb1 3.4/4, mb1mx3.1/76, mbtmp3.2/4, ML3.2/1, Error ellipse: s-maj=468.2km s-min=27.2km az=60.0*

ISC 14 21:18:33.8±1.3**, 25°.4N**±0°.2×**94°.63E**±0°.10**, h10**^{km}**, n5,** σ**1s.03**/6**, mb3.4**/3**, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHL	**Shillong**	**2.48**	**274**	*e*PN	**Pg**	**21 19 22.5**	**+1.0**
SHL				*e*SN	**Sg**	**21 19 52.5**	**-1.2**
CMAR	**Chiang Mai Arr**	**7.99**	**149**	Pn	**Pn**	**21 20 29.5**	**-0.5**
	0.1nm,0.3s,baz=334,slow=14,SNR=3.2						
MKAR	**Makanchi Array**	**23.51**	**338**	P	**P**	**21 23 43.4**	**-0.5**
	0.2nm,0.7s,baz=171,slow=8.6,SNR=3.8						
WRA	**Warramunga Arr**	**59.34**	**136**	P	**P**	**21 28 36.5**	**+0.1**
	0.3nm,0.7s,baz=323,slow=7.4,SNR=4.5						
ASAR	**Alice Springs**	**61.86**	**139**	P	**P**	**21 28 54.0**	**+0.5**
	0.2nm,0.7s,baz=321,slow=7.2,SNR=3.4						

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*ISCJB **14** 21:24:57.2±0.2, 63°.03N±0°.02×149°.80W±0°.05, h97^{km}±3^{km}, mb3.8/8, Error ellipse: s-maj=3.6km s-min=3.3km az=162.3*

*NEIC **14** 21:24:58.3±0.0, 63°.04N×149°.84W, h89^{km}, ML3.5(AEIC), After AEIC.*

*IDC **14** 21:25:00.5±4.1, 63°.26N×149°.66W, h99^{km}±32^{km}, mb3.5/8, mb1 3.5/10, mb1mx3.2/71, mbtmp3.8/10, Error ellipse: s-maj=39.3km s-min=20.1km az=37.0*

ISC 14 21:24:58.5±0.7**, 63°.01N**±0°.03×**149°.86W**±0°.03**, h93**^{km}±5^{km}**, n90,** σ**1s.10**/105**, mb3.9**/8**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUR	**Hurricane**	**0.10**	**105**	P	**Pn**	**21 25 10.7**	**-0.9**
HUR				S	**Sn**	**21 25 20.1**	**-1.3**
TRF	**Thorofare Moun**	**0.49**	**337**	P	**Pn**	**21 25 13.3**	**-0.3**
TRF				S	**Sn**	**21 25 24.4**	**-0.5**
TRAP	**Trapper Creek**	**0.70**	**195**	P	**Pn**	**21 25 14.8**	**-0.5**
KTH	**Kantishna Hill**	**0.73**	**319**	P	**Pn**	**21 25 15.3**	**-0.4**
KTH				S	**Sn**	**21 25 27.6**	**-0.8**
MCK	**McKinley**	**0.84**	**29**	P	**Pn**	**21 25 16.1**	**-0.6**
MCK				S	**Sn**	**21 25 29.5**	**-0.8**
PPLA	**Purkeypile**	**1.07**	**265**	P	**Pn**	**21 25 19.5**	**+0.2**
PPLA				S	**Sn**	**21 25 35.2**	**+0.2**
CAST	**Castle Rocks**	**1.09**	**293**	P	**Pn**	**21 25 18.8**	**-0.7**
CAST				S	**Sn**	**21 25 33.6**	**-1.6**
DHY	**Denali Highway**	**1.13**	**85**	P	**Pn**	**21 25 19.1**	**-1.0**
DHY				S	**Sn**	**21 25 35.5**	**-0.8**
BWN	**Browne**	**1.18**	**8**	P	**Pn**	**21 25 20.1**	**-0.5**
BPAW	**Bear Paw Mtn.**	**1.21**	**336**	P	**Pn**	**21 25 20.2**	**-0.7**
BPAW				S	**Sn**	**21 25 36.4**	**-1.3**
SKT	**Skwentna**	**1.29**	**218**	P	**Pn**	**21 25 21.3**	**-0.5**
GHO	**Glory Hole Cre**	**1.31**	**160**	P	**Pn**	**21 25 22.0**	**-0.2**
GHO				S	**Sn**	**21 25 41.1**	**+1.2**
SML	**Sawmill**	**1.40**	**149**	P	**Pn**	**21 25 23.1**	**-0.1**
CHUM	**Lake Minchumin**	**1.41**	**310**	P	**Pn**	**21 25 23.2**	**-0.1**
CHUM				S	**Sn**	**21 25 41.1**	**-0.9**
PMR	**Palmer**	**1.46**	**166**	P	**Pn**	**21 25 23.8**	**-0.1**
SUA	**Susitna One**	**1.60**	**195**	P	**Pn**	**21 25 25.8**	**0.0**
NEA	**Nenana**	**1.62**	**12**	P	**Pn**	**21 25 25.1**	**-0.8**
SCM	**Sheep Creek Mo**	**1.66**	**134**	P	**Pn**	**21 25 26.3**	**-0.2**
WRH	**Wood River Hil**	**1.67**	**27**	P	**Pn**	**21 25 25.6**	**-0.9**
KNK	**Knik Glacier**	**1.73**	**157**	P	**Pn**	**21 25 27.5**	**+0.2**
FIB	**Fire Island**	**1.85**	**185**	P	**Pn**	**21 25 29.8**	**+1.0**
CCB	**Clear Creek Bu**	**1.88**	**28**	P	**Pn**	**21 25 28.4**	**-0.9**
PS10	**TAPS Pump St10**	**1.90**	**75**	P	**Pn**	**21 25 29.9**	**+0.4**
HDA	**Harding Lake**	**1.91**	**41**	P	**Pn**	**21 25 28.9**	**-0.8**
RC01	**Rabbit Creek A**	**1.92**	**178**	P	**Pn**	**21 25 30.8**	**+1.0**
SPCG	**Spurr Capps Gl**	**2.00**	**212**	P	**Pn**	**21 25 31.1**	**+0.2**
PAX	**Paxson**	**2.00**	**89**	P	**Pn**	**21 25 30.9**	**0.0**
PS08	**TAPS Pump Stn8**	**2.05**	**40**	P	**Pn**	**21 25 30.7**	**-0.7**
SPCP	**Crater Peak Br**	**2.05**	**213**	P	**Pn**	**21 25 31.7**	**0.0**
MLY	**Manley**	**2.07**	**350**	P	**Pn**	**21 25 31.2**	**-0.6**
MDM	**Murphy Dome**	**2.09**	**19**	P	**Pn**	**21 25 31.3**	**-0.7**
SPU	**Mount Spurr**	**2.10**	**210**	P	**Pn**	**21 25 32.4**	**+0.2**
SPCR	**Spurr Chakacha**	**2.12**	**212**	P	**Pn**	**21 25 32.1**	**-0.3**
PTE	**Portage**	**2.18**	**169**	P	**Pn**	**21 25 34.2**	**+1.1**
ILAR	**Eielson Array**	**2.21**	**35**	P	**Pn**	**21 25 32.4**	**-1.1**
	38nm,0.3s,baz=218,slow=14,SNR=884						
ILAR				S	**Sn**	**21 25 56.8**	**-3.4**
	11nm,0.3s,baz=221,slow=18,SNR=9.2						
ILB	**Eielson Array**	**2.21**	**35**	P	**Pn**	**21 25 32.7**	**-0.8**
PS11	**TAPS Pump St11**	**2.23**	**113**	P	**Pn**	**21 25 34.5**	**+0.6**
HARP	**HAARP**	**2.25**	**103**	P	**Pn**	**21 25 34.5**	**+0.4**
GLM	**Gilmore Dome**	**2.27**	**28**	P	**Pn**	**21 25 33.7**	**-0.6**
KLU	**Klutina**	**2.39**	**128**	P	**Pn**	**21 25 35.0**	**-0.9**
SLKM	**Skilak Lake**	**2.51**	**184**	P	**Pn**	**21 25 38.5**	**+0.9**
DIV	**Divide**	**2.69**	**133**	P	**Pn**	**21 25 39.2**	**-0.8**
RDJH	**Redoubt Jeurge**	**2.80**	**211**	P	**Pn**	**21 25 41.2**	**-0.3**
TT01	**Tatalina**	**2.82**	**271**	P	**Pn**	**21 25 41.4**	**-0.3**
RDWB	**Redoubt West**	**2.90**	**211**	P	**Pn**	**21 25 43.0**	**+0.2**
HIN	**Hinchinbrook I**	**3.07**	**147**	P	**Pn**	**21 25 44.0**	**-1.0**
PRP	**Porcupine Dome**	**3.15**	**35**	P	**Pn**	**21 25 45.6**	**-0.6**
BMRM	**Bremner River**	**3.21**	**127**	P	**Pn**	**21 25 46.2**	**-0.8**
GLB	**Gilahina Butte**	**3.24**	**116**	P	**Pn**	**21 25 46.7**	**-0.6**
BRLK	**Bradley Lake**	**3.29**	**189**	P	**Pn**	**21 25 48.3**	**+0.3**
SVW2	**Sparrevohn**	**3.31**	**237**	P	**Pn**	**21 25 48.3**	**+0.1**
VRDI	**Verde Repeater**	**3.50**	**118**	P	**Pn**	**21 25 49.8**	**-1.1**
CNPM	**China Poot**	**3.56**	**191**	P	**Pn**	**21 25 51.7**	**+0.2**
MCARA	**McCarthy VSAT**	**3.59**	**114**	P	**Pn**	**21 25 51.8**	**-0.2**
RAGM	**Ragged Mountai**	**3.60**	**134**	P	**Pn**	**21 25 51.5**	**-0.7**
BCA3	**Beaver Creek A**	**3.68**	**85**	P	**Pn**	**21 25 52.4**	**-0.8**
PTPK	**Patty Peak**	**3.92**	**114**	P	**Pn**	**21 25 56.2**	**-0.4**
BERG	**Berg Lake**	**3.93**	**129**	P	**Pn**	**21 25 56.1**	**-0.5**
NICHA	**Nichawak Mount**	**3.95**	**132**	P	**Pn**	**21 25 55.8**	**-1.1**
TGL	**Tana Glacier**	**4.02**	**121**	P	**Pn**	**21 25 56.9**	**-1.0**
BALM	**Baldy**	**4.05**	**116**	P	**Pn**	**21 25 57.5**	**-0.9**
KHIT	**Khitrov Hills**	**4.06**	**126**	P	**Pn**	**21 25 58.0**	**-0.4**
KIAG	**Kiagna River**	**4.11**	**117**	P	**Pn**	**21 25 57.7**	**-1.4**
SUCK	**Suckling Hills**	**4.14**	**133**	P	**Pn**	**21 25 58.8**	**-0.6**
GRIN	**Grindle Hills**	**4.15**	**128**	P	**Pn**	**21 25 59.8**	**+0.3**
EGAK	**Eagle**	**4.24**	**61**	P	**Pn**	**21 26 00.2**	**-0.5**
COLD	**Coldfoot**	**4.24**	**358**	P	**Pn**	**21 26 00.8**	**0.0**
ISLE	**Juniper Island**	**4.30**	**121**	P	**Pn**	**21 26 00.3**	**-1.5**
BARN	**Barnard Glacie**	**4.33**	**113**	P	**Pn**	**21 26 01.9**	**-0.2**
BARK	**Barkley Ridge**	**4.37**	**123**	P	**Pn**	**21 26 01.7**	**-0.9**
KULT	**Kultieth River**	**4.39**	**126**	P	**Pn**	**21 26 02.1**	**-0.7**
CDD	**Cape Douglas**	**4.49**	**206**	P	**Pn**	**21 26 04.2**	**+0.1**
CTGM	**Chitina Glacie**	**4.51**	**113**	P	**Pn**	**21 26 04.5**	**-0.1**
MESA	**MESA**	**4.72**	**123**	P	**Pn**	**21 26 07.0**	**-0.5**
DAWY	**Dawson**	**4.80**	**73**	*e*Pn	**Pn**	**21 26 08.3**	**-0.2**
DAWY				*e*Sn	**Sn**	**21 27 02.5**	**-0.2**
BM3	**Burnt Mountain**	**4.95**	**24**	P	**Pn**	**21 26 10.0**	**-0.4**
KAKN	**Katmai Knife C**	**5.37**	**211**	P	**Pn**	**21 26 16.4**	**+0.2**
KDAK	**Kodiak Island**	**5.41**	**196**	P	**Pn**	**21 26 15.2**	**-1.4**
	1.2nm,0.3s,baz=43,slow=8.4,SNR=20						
KDAK				S	**Sn**	**21 27 12.2**	**-5.3**
	5.6nm,0.3s,baz=214,slow=20,SNR=9.2						
KDAK	**Kodiak Island**	**5.41**	**196**	Pn	**Pn**	**21 26 16.1**	**-0.5**
KDAK				S	**Sn**	**21 27 12.2**	**-5.3**
INK	**Inuvik**	**8.57**	**45**	P	**Pn**	**21 26 59.7**	**+0.2**
	0.5nm,0.3s,baz=235,slow=20,SNR=13						
YKA	**Yellowknife Ar**	**16.03**	**76**	P	**P**	**21 28 40.0**	**+0.1**
	0.1nm,0.3s,baz=286,slow=13,SNR=2.7						

TXAR	**Lajitas Array**	44.80	117	P	P	21 33 04.1	+1.2
	0.1nm,0.6s,baz=343,slow=4.8,SNR=2.8						
TXAR				pP	pP	21 33 26.4	+1.5
	0.2nm,0.5s,baz=324,slow=5.6,SNR=2.5						
SONM	**Songino Array**	54.23	306	P	P	21 34 15.5	+1.1
	0.6nm,0.6s,baz=15,slow=4.6,SNR=4.6						
ZALV	**Zalesovo Beam**	55.82	324	P	P	21 34 24.9	-0.6
	0.9nm,0.5s,baz=33,slow=4.5,SNR=3.7						
EKA	**Eskdalemuir Ar**	59.18	21	P	P	21 34 48.3	-0.7
	0.3nm,0.4s,baz=338,slow=5.5,SNR=3.5						
BVAR	**Borovoye Array**	60.08	333	P	P	21 34 56.0	+0.7
	0.5nm,0.5s,baz=37,slow=9.8,SNR=4.7						
KURK	**Kurchatov**	60.36	327	P	P	21 34 58.3	+1.0
KURBB	**Kurchatov Arra**	60.47	327	P	P	21 34 58.3	+0.3
	0.4nm,0.3s,baz=29,slow=6.9,SNR=4.5						
MKAR	**Makanchi Array**	62.99	322	P	P	21 35 14.8	-0.3
	0.8nm,0.4s,baz=39,slow=6.9,SNR=22						
AKTO	**Aktyubinsk**	64.78	341	P	P	21 35 27.1	+0.5
	1.7nm,0.5s,baz=45,slow=10.0,SNR=7.1						

*DDA **14** 21:45:51.6, 37°.05N×28°.53E, h7^{km}, Ml2.5, Suspected Mining explosion.*
*ISCJB **14** 21:45:52.7±0.6, 37°.08N±0°.03×28°.58E±0°.05, h0^{km}, Error ellipse: s-maj=6.0km s-min=4.3km az=149.6*
*CSEM **14** 21:45:52.9±0.3, 37°.10N×28°.59E, h1^{km}, ML1.8, Error ellipse: s-maj=8.8km s-min=6.0km az=63.0, Suspected Mining explosion.*
*ISK **14** 21:45:52.3, 37°.02N×28°.52E, h11^{km}, ML1.8/1*
ISC 14 21:45:51.9±0.9**, 37°.12N**±0°.03×**28°.65E**±0°.04**, h0^{km}, n19, σ0^{s}.55**/29**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TURN	**Turunc**	0.25	188	PG	Pb	21 45 59.1	-0.2
TURN				SG	Sb	21 46 04.7	+0.5
TURN	**Turunc**	0.25	188	*i* P	Pb	21 45 58.7	-0.6
TURN				*i* S	Sb	21 46 05.2	+1.0
TURN	**Turunc**	0.25	188	P	Pb	21 45 58.7	-0.6
TURN	**Turunc**	0.25	188	*e*Pg	Pb	21 45 59.1	-0.2
TURN				*e*Sg	Sb	21 46 04.7	+0.5
TURN				S		21 46 05.2	
YER	**Yerkesik**	0.29	272	PG	Pg	21 45 57.1	-0.3
YER				SG	Sg	21 46 01.3	+0.1
YER	**Yerkesik**	0.29	272	*e*Pg	Pg	21 45 57.1	-0.3
YER				*e*Sg	Sg	21 46 01.3	+0.1
DALY	**Dalyan (Mu˜la**	0.30	179	PG	Pg	21 45 57.6	-0.1
DALY				SG	Sg	21 46 01.5	-0.1
DALY	**Dalyan (Mu˜la**	0.30	179	*i* P	Pg	21 45 57.1	-0.5
DALY	**Dalyan (Mu˜la**	0.30	179	P	Pg	21 45 57.2	-0.5
DALY	**Dalyan (Mu˜la**	0.30	179	*e*Pg	Pg	21 45 57.6	-0.1
DALY				*e*Sg	Sg	21 46 01.5	-0.1
TAVA	**DENIZLI_Tavas**	0.40	32	*i* P	Pb	21 46 01.3	-0.6
TAVA				*i* S	Sb	21 46 09.3	+0.6
TAVA	**DENIZLI_Tavas**	0.40	32	P	Pb	21 46 01.3	-0.6
TAVA				S	Sb	21 46 09.3	+0.6
FETY	**Fethiye**	0.60	144	PG	Pb	21 46 04.5	-0.7
FETY	**Fethiye**	0.60	144	*e*Pg	Pb	21 46 04.5	-0.7
FETY	**Fethiye**	0.60	144	P	Pb	21 46 05.1	-0.1
FETY				S	Sg	21 46 12.5	+1.4
AYDB	**Zeytinkoy-Aydi**	1.02	324	PG	Pb	21 46 12.5	0.0
AYDB	**Zeytinkoy-Aydi**	1.02	324	*e*Pg	Pb	21 46 12.5	0.0
AKAS	**Kas**	1.18	139	PN	Pn	21 46 15.7	0.0
AKAS	**Kas**	1.18	139	*e*Pn	Pn	21 46 15.7	0.0

*IDC **14** 21:46:21.0±0.8, 5°.43N×126°.71E, h0^{km}, mb3.8/9, mb1 4.0/9, mb1mx3.6/57, mbtmp3.8/9, Error ellipse: s-maj=58.8km s-min=15.5km az=71.0*
*MAN **14** 21:46:22.9, 4°.71N×126°.71E, h9^{km}, mb5.2, ML4.2, MS4.3*
ISC 14 21:46:23.0±0.9**, 4°.72N**±0°.07×**126°.4E**±0°.1**, h10^{km}, n14, σ3^{s}.71**/17**, mb3.8**/9**, 1C-1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSPH	**General Santos**	1.97	314	⇑*i*P	Pn	21 46 58.6	+2.0
GSPH				*i* S	Sn	21 47 19.6	-1.9
MATI	**Mati**	2.21	357	*e*P	Pn	21 47 00.6	+0.8
MATI				*e*S	Sb	21 47 32.6	+1.9
DMPH	**Davao City--Mi**	2.50	340	⇓*e*P	Pn	21 47 07.2	+3.4
DMPH				*i* S	Sn	21 47 38.5	+4.0
SKMP	**Bagumbayan, Su**	2.56	314	*e*P	Pn	21 47 07.8	+3.2
SKMP				*e*S	Sn	21 47 34.3	-1.5
BUKP	**Musuan**	3.40	337	*e*P	Pn	21 47 17.9	+1.6
BUKP				*e*S	Sn	21 48 02.8	+6.1
FITZ	**Fitzroy Crossi**	22.69	182	P	P	21 51 31.2	+6.4
	1.1nm,0.4s,baz=338,slow=5.7,SNR=9.7						
WRA	**Warramunga Arr**	25.73	163	P	P	21 52 00.5	+6.7
	0.8nm,0.5s,baz=340,slow=10,SNR=7.1						
ASAR	**Alice Springs**	29.15	166	P	P	21 52 30.0	+5.4
	0.4nm,0.6s,baz=343,slow=6.4,SNR=8.4						
STKA	**Stephens Creek**	39.17	159	P	P	21 53 53.4	+2.2
	4.4nm,1.2s,baz=308,slow=12,SNR=2.7						
MKAR	**Makanchi Array**	56.55	325	P	P	21 56 02.8	-3.0
	0.8nm,0.5s,baz=119,slow=7.3,SNR=21						
KURBB	**Kurchatov Arra**	60.73	327	P	P	21 56 31.4	-3.3
	0.6nm,0.6s,baz=127,slow=6.4,SNR=8.4						
BVAR	**Borovoye Array**	66.31	327	P	P	21 57 08.5	-3.2
	0.2nm,0.4s,baz=127,slow=9.3,SNR=3.1						
ILAR	**Eielson Array**	84.36	25	P	P	21 58 51.0	-4.2
	0.3nm,0.4s,baz=254,slow=5.5,SNR=3.8						
FINES	**FINESS Array B**	90.80	332	P	P	21 59 23.7	-2.6
	0.9nm,0.7s,baz=46,slow=11,SNR=3.5						

*DDA **14** 21:48:37.0, 36°.63N×42°.77E, h7^{km}, Ml2.7*
*CSEM **14** 21:48:37.8±0.3, 36°.63N×42°.80E, h5^{km}, ML2.7, Error ellipse: s-maj=6.4km s-min=5.3km az=64.0*
*ISN **14** 21:48:38.8±0.3, 36°.72N×42°.83E, h26^{km}, ML2.7*
*ISK **14** 21:48:38.8, 36°.73N×42°.86E, h20^{km}, ML2.6/1*
ISC 14 21:48:38.7±1.3**, 36°.70N**±0°.05×**42°.82E**±0°.03**, h18**^{km}±7^{km}**, n24, σ0^{s}.56**/40**, Iraq**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CUKT	**Cukurca**	0.84	49	*e*PG	Pn	21 48 55.4	-0.4
CUKT	**Cukurca**	0.84	49	PG	Pn	21 48 55.2	-0.6
CUKT				SG	Sg	21 49 06.2	0.0
CUKT	**Cukurca**	0.84	49	*i* P	Pg	21 48 55.0	-0.1
CUKT				*i* S	Sn	21 49 07.1	-0.6
CUKT	**Cukurca**	0.84	49	P	Pg	21 48 55.0	-0.1
CUKT	**Cukurca**	0.84	49	*e*Pg	Pn	21 48 55.2	-0.6
CUKT				*e*Sg	Sg	21 49 06.2	0.0
CUKT				S	Sn	21 49 07.1	-0.6
SIRT	**Sirnak**	0.86	339	*e*PG	Pg	21 48 55.4	-0.1
SIRT	**Sirnak**	0.86	339	PG	Pg	21 48 55.4	-0.1
SIRT				SG	Sn	21 49 08.0	-0.2
SIRT	**Sirnak**	0.86	339	*e*Pg	Pg	21 48 55.4	-0.1
SIRT				*e*Sg	Sn	21 49 08.0	-0.2
SIRN	**S˜–rnak**	0.86	338	*i* P	Pn	21 48 55.5	-0.5
SIRN				*i* S	Sn	21 49 08.7	+0.5
SIRN	**S˜–rnak**	0.86	338	P	Pn	21 48 55.5	-0.5
SIRN				S	Sn	21 49 08.7	+0.5
YOVA	**Hakkari_Yˆ…kse**	1.47	53	*i* P	Pb	21 49 06.0	+0.3
YOVA				*i* S	Sg	21 49 27.3	+0.9
YOVA	**Hakkari_Yˆ…kse**	1.47	53	P	Pb	21 49 06.0	+0.3
YOVA				S	Sg	21 49 27.3	+0.9
SRTM	**Siirt_Merkez**	1.47	331	*i* P	Pb	21 49 06.1	+0.4
SRTM				*i* S	Sg	21 49 27.2	+0.8
SRTM	**Siirt_Merkez**	1.47	331	P	Pb	21 49 06.1	+0.4
SRTM				S	Sg	21 49 27.2	+0.8
GEVA	**Gevas**	1.62	7	*i* P	Pg	21 49 09.4	-0.6
GEVA	**Gevas**	1.62	7	P	Pg	21 49 09.4	-0.6
BTMN	**Batman**	1.71	314	*i* P	Pb	21 49 09.1	-0.7
BTMN				*i* S	Sg	21 49 33.7	-0.4
BTMN	**Batman**	1.71	314	P	Pb	21 49 09.1	-0.7
BTMN				S	Sg	21 49 33.7	-0.4
MARD	**Mardin**	1.74	291	*i* P	Pn	21 49 09.1	+0.9
MARD				*i* S	Sg	21 49 33.9	-1.1
SVAN	**Silvan-Diyarba**	1.94	319	PN	Pn	21 49 11.5	+0.6
SVAN	**Silvan-Diyarba**	1.94	319	*e*Pn	Pn	21 49 11.5	+0.6
GURO	**Guroymak-BITLI**	1.95	342	PN	Pn	21 49 11.6	+0.5
GURO	**Guroymak-BITLI**	1.95	342	*e*Pn	Pn	21 49 11.6	+0.5
RTB	**Rutbah**	4.20	210	*e*Pn	Pn	21 49 42.0	0.0
RTB				*e*Sn	Sn	21 50 31.0	+0.4

*NIED **14** 22:08:00, 45°.80N×151°.60E, h14^{km}, Mw3.6 Best double couple: $M_0$3.02000×10^{14} NP1:ϕ_s341.00000°, δ37.00000°, λ8.00000°. NP2:ϕ_s245.00000°, δ85.00000°, λ126.00000°.*

JMA 14 22:08:40.7±0.8**, 45°.84N**×**151°.61E, h30^{km}, M3.8, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	4.87	242	*e*S	Sn	22 10 43.3	-3.7
JRA	**Rausu**	4.99	250	P	Pn	22 09 55.6	+2.2
JRA				*e*S	Sn	22 10 52.4	+2.4
JNK	**Nakash**	5.40	248	P	Pn	22 10 00.1	+0.9
JAK	**Akkeshi**	5.71	243	P	Pn	22 10 02.2	-1.2
JAK				*e*S	Sn	22 11 03.7	-4.1
JTKR	**Abashiri--Toko**	5.78	254	P	Pn	22 10 07.2	+2.9
JMP	**Maruseppu**	6.14	256	P	Pn	22 10 12.4	+3.1
JAR	**Ashorobuto**	6.15	248	P	Pn	22 10 10.8	+1.4
JAR				*e*S	Sn	22 11 18.9	+0.2
JKK2	**Kamakawa 2**	6.60	256	P	Pn	22 10 17.8	+2.2
JCH	**Churui**	6.75	244	P	Pn	22 10 18.0	+0.4
JCH				*e*S	Sn	22 11 29.8	-3.6
JKB	**Kayabe**	8.60	246	P	Pn	22 10 42.2	-0.8
JKB				*e*S	Sn	22 12 13.7	-5.3

IDC 14 22:10:57.4±5.5**, 5°.86S**×**146°.39E, h101**^{km}±58^{km}**, mb3.5**/3**, mb1 3.6**/5**, mb1mx3.2**/46**, mbtmp3.8**/5**, MS3.7**/1**, Ms1 3.7**/1**, ms1mx2.5**/29**, Error ellipse: s-maj=45.2km s-min=36.3km az=146.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	3.60	168	P	Pn	22 11 50.6	-0.7
	3.0nm,0.3s,baz=281,slow=10,SNR=6.0						
PMG				S	Sn	22 12 33.8	+0.8
	16nm,0.3s,baz=244,slow=22,SNR=9.4						
WRA	**Warramunga Arr**	18.25	219	P	P	22 15 01.8	-1.3
	0.1nm,0.3s,baz=42,slow=11,SNR=5.5						
ASAR	**Alice Springs**	21.39	213	P	P	22 15 37.4	+0.3
	0.8nm,0.7s,baz=45,slow=9.2,SNR=4.5						
NWAO	**Narrogin (SRO)**	38.22	221	LR	LR	22 35 26.7	
	comp=Z,129nm,21.4s,baz=59,slow=38						
CMAR	**Chiang Mai Arr**	52.65	298	P	P	22 20 02.1	+0.4
	0.9nm,0.3s,baz=115,slow=6.5,SNR=5.4						
ILAR	**Eielson Array**	85.60	23	P	P	22 23 24.1	-0.2
	0.2nm,0.6s,baz=258,slow=5.0,SNR=4.1						
TORD	**Torodi Ar. Bea**	144.47	284	PKP	PKPbc	22 30 22.1	+0.3
	0.8nm,0.8s,baz=85,slow=2.4						

*ROM **14** 22:29:23.9±0.2, 44°.927N±0°.005×10°.931E±0°.008, h7^{km}, ML3.0/40*
*ISCJB **14** 22:29:26.4±0.2, 44°.97N±0°.01×10°.92E±0°.02, h13^{km}±1^{km}, Error ellipse: s-maj=2.2km s-min=1.8km az=38.1*
*PRU **14** 22:29:27.9, 44°.71N×11°.16E, h32^{km}*
*BGR **14** 22:29:27.7±0.5, 44°.87N×10°.88E, h10^{km}, ML3.2/6, Error ellipse: s-maj=8.9km s-min=6.7km az=26.0*
*CSEM **14** 22:29:27.1±0.1, 44°.96N×10°.95E, h10^{km}, ML3.1/24, Error ellipse: s-maj=3.1km s-min=2.2km az=166.0*
*LDG **14** 22:29:28.2±0.3, 44°.92N×11°.00E, h2^{km}, Ml3.2/25, Error ellipse: s-maj=7.7km s-min=4.1km az=95.0*
ISC 14 22:29:26.6±0.8**, 44°.94N**±0°.01×**10°.92E**±0°.01**, h7**^{km}±6^{km}**, n234, σ1^{s}.14**/323**, 3C-4D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NDIM	**Novi di Modena**	0.05	194	*i* P	Pg	22 29 27.3	-0.9
NDIM				S	Sg	22 29 28.8	-0.5
T0826	**Rio Saliceto (**	0.13	217	P	Pg	22 29 28.8	-0.5
T0826				S	Sg	22 29 31.8	+0.7
T0826				AML	AML		
	comp=E,77550μm,0.2s						
T0826				AML	AML		
	comp=N,68100μm,0.4s						
T0826				AML	AML		
	comp=E,77450μm,0.2s						
T0826				AML	AML		
	comp=N,68050μm,0.4s						
T0826				AML	AML		
	comp=E,77450μm,0.2s						
T0826				AML	AML		
	comp=N,68050μm,0.4s						
NOVE	**Novellara**	0.20	225	P	Pg	22 29 30.4	-0.3
NOVE				S	Sg	22 29 35.0	+1.6
NOVE				AML	AML		
	comp=E,20350μm,0.3s						
NOVE				AML	AML		
	comp=N,34650μm,0.4s						
NOVE				AML	AML		
	comp=E,20350μm,0.3s						
NOVE				AML	AML		
	comp=N,34600μm,0.4s						
NOVE				AML	AML		
	comp=E,20350μm,0.3s						
NOVE				AML	AML		
	comp=N,34650μm,0.4s						
NOVE				AML	AML		
	comp=E,20350μm,0.3s						
NOVE				AML	AML		
	comp=N,34650μm,0.4s						
GAZZ	**Gazzo Veronese**	0.21	36	⇓*e*Pg	Pg	22 29 32.4	+1.5
GAZZ	**Gazzo Veronese**	0.21	36	*e*Pg	Pg	22 29 32.4	+1.5
MNTV	**Mantova**	0.23	337	P	Pg	22 29 33.0	+1.8
MNTV				AML	AML		
	comp=E,25700μm,0.5s						
MNTV				AML	AML		
	comp=N,31700μm,0.6s						
MNTV				AML	AML		
	comp=E,25700μm,0.5s						
MNTV				AML	AML		
	comp=N,31700μm,0.6s						
MNTV				AML	AML		
	comp=N,31700μm,0.6s						
MNTV				AML	AML		
	comp=E,25700μm,0.5s						
RAVA	**Ravarino**	0.23	142	P	Pg	22 29 31.4	+0.1
RAVA				S	Sg	22 29 36.0	+1.7
RAVA				AML	AML		
	comp=E,14550μm,0.7s						
RAVA				AML	AML		
	comp=N,17150μm,0.3s						
RAVA				AML	AML		
	comp=E,14550μm,0.7s						
RAVA				AML	AML		
	comp=N,17150μm,0.3s						
RAVA				AML	AML		
	comp=E,14550μm,0.7s						
RAVA				AML	AML		
	comp=N,17150μm,0.3s						
RAVA				AML	AML		
	comp=E,14550μm,0.7s						
RAVA				AML	AML		
	comp=N,17150μm,0.3s						
T0800	**Massa Finalese**	0.25	111	P	Pg	22 29 31.8	+0.2
T0800				S	Sg	22 29 37.2	+2.3
T0800				AML	AML		
	comp=E,15200μm,0.7s						
T0800				AML	AML		
	comp=N,15550μm,0.4s						
T0800				AML	AML		
	comp=E,16400μm,0.7s						
T0800				AML	AML		
	comp=N,13850μm,1.1s						
T0800				AML	AML		
	comp=E,15200μm,0.7s						
T0800				AML	AML		
	comp=N,15550μm,0.4s						
T0800				AML	AML		
	comp=E,16400μm,0.7s						
T0800				AML	AML		
	comp=N,13850μm,1.1s						
T0800				AML	AML		
	comp=E,15200μm,0.7s						
T0800				AML	AML		
	comp=N,15500μm,0.4s						
T0800				AML	AML		
	comp=E,16400μm,0.7s						
T0800				AML	AML		
	comp=N,13850μm,1.1s						
T0800				AML	AML		
	comp=N,15500μm,0.4s						
T0800				AML	AML		
	comp=E,15200μm,0.7s						
T0800				AML	AML		
	comp=E,16400μm,0.7s						
T0800				AML	AML		
	comp=N,13850μm,1.1s						
SERM	**Sermide**	0.28	75	P	Pb	22 29 33.1	-0.8
SERM				AML	AML		
	comp=E,2910μm,0.7s						
SERM				AML	AML		
	comp=N,3135μm,0.4s						
SERM				AML	AML		
	comp=E,5090μm,0.5s						
SERM				AML	AML		
	comp=N,5095μm,0.8s						
SERM				AML	AML		
	comp=N,5095μm,0.8s						
SERM				AML	AML		
	comp=E,5090μm,0.5s						
SERM				AML	AML		
	comp=E,2910μm,0.7s						
SERM				AML	AML		
	comp=N,3135μm,0.4s						
MODE	**Modena**	0.31	176	P	Pg	22 29 32.9	+0.2
MODE				AML	AML		
	comp=E,49550μm,0.6s						
MODE				AML	AML		
	comp=N,20550μm,0.6s						
MODE				AML	AML		
	comp=E,49550μm,0.6s						
MODE				AML	AML		
	comp=N,20600μm,0.6s						
MODE				AML	AML		
	comp=E,49550μm,0.6s						
MODE				AML	AML		
	comp=N,20550μm,0.6s						
MODE				AML	AML		
	comp=N,20550μm,0.6s						
MODE				AML	AML		
	comp=E,49550μm,0.6s						
T0822	**Casumaru (Bond**	0.32	109	P	Pg	22 29 33.1	+0.2
T0822				S	Sb	22 29 39.6	-0.5
T0822				AML	AML		
	comp=E,6600μm,0.3s						
T0822				AML	AML		
	comp=N,6555μm,0.4s						
T0822				AML	AML		
	comp=E,6605μm,0.3s						
T0822				AML	AML		
	comp=N,6555μm,0.4s						
T0822				AML	AML		
	comp=E,6605μm,0.3s						
T0822				AML	AML		
	comp=N,6555μm,0.4s						
FIU	**Minerbio Fiu**	0.51	126	P	Pb	22 29 37.5	-0.3
FIU				AML	AML		
	comp=E,2080μm,1.5s						
FIU				AML	AML		
	comp=N,1570μm,0.3s						
FIU				AML	AML		
	comp=E,2080μm,1.5s						
FIU				AML	AML		
	comp=N,1570μm,0.3s						
FIU				AML	AML		
	comp=E,2080μm,1.5s						
FIU				AML	AML		
	comp=N,1575μm,0.3s						
FIU				AML	AML		
	comp=N,1575μm,0.3s						
FIU				AML	AML		
	comp=E,2080μm,1.5s						
ZCCA	**Zocca**	0.59	176	*e*P	Pb	22 29 39.2	-0.1
ZCCA				AML	AML		
	comp=E,1125μm,1.6s						
ZCCA				AML	AML		
	comp=N,1155μm,0.4s						
ZCCA				AML	AML		
	comp=E,1149μm,1.6s						
ZCCA				AML	AML		
	comp=N,1159μm,0.5s						
ZCCA				AML	AML		
	comp=E,1126μm,1.6s						
ZCCA				AML	AML		
	comp=N,1149μm,0.4s						
ZCCA				AML	AML		
	comp=E,1149μm,1.6s						
ZCCA				AML	AML		
	comp=N,1159μm,0.5s						
ZCCA				AML	AML		
	comp=N,1149μm,0.4s						
ZCCA				AML	AML		
	comp=N,1159μm,0.5s						
ZCCA				AML	AML		
	comp=E,1149μm,1.6s						
ZCCA				AML	AML		
	comp=E,1126μm,1.6s						
ERBM	**Eremo**	0.63	215	P	Pb	22 29 39.8	-0.2
ERBM				AML	AML		
	comp=E,455μm,1.6s						
ERBM				AML	AML		
	comp=N,714μm,0.8s						
ERBM				AML	AML		
	comp=E,456μm,1.4s						
ERBM				AML	AML		
	comp=N,714μm,0.8s						
ERBM				AML	AML		
	comp=E,458μm,1.4s						
ERBM				AML	AML		
	comp=N,713μm,0.8s						
ERBM				AML	AML		
	comp=N,713μm,0.8s						
ERBM				AML	AML		
	comp=E,458μm,1.4s						
TEOL	**Teolo**	0.68	51	P	Pb	22 29 40.4	-0.4
TEOL				AML	AML		
	comp=E,5225μm,0.3s						
TEOL				AML	AML		
	comp=N,5535μm,0.3s						
TEOL				AML	AML		
	comp=E,5220μm,0.3s						
TEOL				AML	AML		
	comp=N,5535μm,0.3s						
TEOL				AML	AML		
	comp=N,5535μm,0.3s						
TEOL				AML	AML		
	comp=E,5220μm,0.3s						
ROVR	**Roverˆ¤ Verone**	0.72	9	P	Pb	22 29 41.3	-0.2
ROVR				AML	AML		
	comp=E,1150μm,0.2s						
ROVR				AML	AML		
	comp=N,1760μm,1.3s						
ROVR				AML	AML		
	comp=E,1150μm,0.2s						
ROVR				AML	AML		
	comp=N,1760μm,1.3s						
ROVR				AML	AML		
	comp=E,1150μm,0.2s						
ROVR				AML	AML		
	comp=N,1760μm,1.3s						
ROVR				AML	AML		
	comp=N,1760μm,1.3s						
ROVR				AML	AML		
	comp=E,1150μm,0.2s						
MARN	**Marana (Italy)**	0.73	16	⇑*e*Pg	Pg	22 29 41.2	+0.5
MARN				*e*Sg	Sn	22 29 53.9	-0.9
MARN	**Marana (Italy)**	0.73	16	*e*Pg	Pg	22 29 41.2	+0.5
MARN				*e*Sg	Sn	22 29 53.9	-0.9
SALO	**Salr**	0.73	338	P	Pb	22 29 41.8	0.0
SALO				AML	AML		
	comp=E,1130μm,0.5s						
SALO				AML	AML		
	comp=N,1375μm,0.5s						
SALO				AML	AML		
	comp=E,1130μm,0.5s						
SALO				AML	AML		
	comp=N,1375μm,0.5s						
SALO				AML	AML		
	comp=N,1375μm,0.5s						
SALO				AML	AML		
	comp=E,1130μm,0.5s						
BALD	**Monte Baldo**	0.75	355	⇓*e*Pg	Pg	22 29 41.7	+0.7
BALD				*e*Sg	Sn	22 29 54.6	-0.9
BALD	**Monte Baldo**	0.75	355	*e*Pg	Pg	22 29 41.7	+0.7
BALD				*e*Sg	Sn	22 29 54.6	-0.9
ADRI	**Adria, Italy**	0.79	82	⇑*e*Pg	Pb	22 29 42.4	-0.3
ADRI				*e*Sg	Sn	22 29 55.5	-0.6
ADRI	**Adria, Italy**	0.79	82	*e*Pg	Pb	22 29 42.3	-0.3
ADRI				*e*Sg	Sn	22 29 55.5	-0.6
MAGA	**Magasa**	0.86	346	P	Pg	22 29 43.5	+0.3
MAGA				AML	AML		
	comp=E,5420μm,0.3s						
MAGA				AML	AML		
	comp=N,4605μm,0.3s						
MAGA				AML	AML		

	comp=E,5420µm,0.3s						
MAGA				AML	AML		
	comp=N,4605µm,0.3s						
MAGA				AML	AML		
	comp=N,4605µm,0.3s						
MAGA				AML	AML		
	comp=E,5420µm,0.3s						
VLC	**Villacollemand**	0.87	206	P	Pg	22 29 43.4	+0.1
VLC				AML	AML		
	comp=E,218µm,0.6s						
VLC				AML	AML		
	comp=N,244µm,1.0s						
VLC				AML	AML		
	comp=E,218µm,0.6s						
VLC				AML	AML		
	comp=N,244µm,1.0s						
VLC				AML	AML		
	comp=E,218µm,0.6s						
VLC				AML	AML		
	comp=N,244µm,1.0s						
CTL8	**Castelleone**	0.89	293	P	Pn	22 29 45.8	+0.3
DOSS	**Dosso del Somm**	0.96	11⇑	*e*Pg	Pg	22 29 45.3	+0.2
DOSS	**Dosso del Somm**	0.96	11	*e*Pg	Pg	22 29 45.3	+0.2
PTF	**Prato**	0.99	174	P	Pb	22 29 46.3	+0.2
RNI	**Roncone**	1.06	349⇓	*e*Pg	Pg	22 29 47.1	+0.2
RNI	**Roncone**	1.06	349	*e*Pg	Pg	22 29 47.2	+0.2
MAIM	**Mastiano**	1.07	197	P	Pg	22 29 47.3	+0.1
MAIM				AML	AML		
	comp=E,468µm,0.6s						
MAIM				AML	AML		
	comp=N,444µm,0.4s						
MAIM				AML	AML		
	comp=E,468µm,0.6s						
MAIM				AML	AML		
	comp=N,444µm,0.4s						
MAIM				AML	AML		
	comp=E,468µm,0.6s						
MAIM				AML	AML		
	comp=N,444µm,0.4s						
CGRP	**Cima Grappa**	1.13	33⇓	*e*Pg	Pg	22 29 48.0	-0.3
CGRP	**Cima Grappa**	1.13	33	*e*Pg	Pg	22 29 48.0	-0.3
CGRP	**Cima Grappa**	1.13	33	P	Pg	22 29 48.3	0.0
CGRP				AML	AML		
	comp=E,606µm,1.3s						
CGRP				AML	AML		
	comp=N,488µm,0.7s						
CGRP				AML	AML		
	comp=E,606µm,1.3s						
CGRP				AML	AML		
	comp=N,489µm,0.7s						
CGRP				AML	AML		
	comp=E,606µm,1.3s						
CGRP				AML	AML		
	comp=N,489µm,0.7s						
PANI	**Panarotta**	1.15	15	*e*Pg	Pg	22 29 48.9	+0.2
PANI				*e*Sg	Sn	22 30 06.1	+0.7
PANI	**Panarotta**	1.15	15	*e*Pg	Pg	22 29 48.9	+0.2
PANI				*e*Sg	Sn	22 30 06.1	+0.7
MABI	**Malga Bissina**	1.15	346	P	Pg	22 29 48.4	-0.3
MABI				AML	AML		
	comp=E,255µm,0.5s						
MABI				AML	AML		
	comp=N,233µm,1.0s						
MABI				AML	AML		
	comp=E,255µm,0.5s						
MABI				AML	AML		
	comp=N,233µm,1.0s						
MABI				AML	AML		
	comp=N,233µm,1.0s						
MABI				AML	AML		
	comp=E,255µm,0.5s						
PLMA	**Palmaria, Port**	1.17	221	P	Pg	22 29 48.8	-0.3
PLMA				AML	AML		
	comp=E,418µm,0.4s						
PLMA				AML	AML		
	comp=N,922µm,0.6s						
PLMA				AML	AML		
	comp=E,418µm,0.4s						
PLMA				AML	AML		
	comp=N,922µm,0.6s						
PLMA				AML	AML		
	comp=N,922µm,0.6s						
PLMA				AML	AML		
	comp=E,418µm,0.4s						
MSSA	**Maissana**	1.18	239	P	Pg	22 29 49.2	0.0
MSSA				AML	AML		
	comp=E,452µm,1.2s						
MSSA				AML	AML		
	comp=N,708µm,0.8s						
MSSA				AML	AML		
	comp=E,452µm,1.2s						
MSSA				AML	AML		
	comp=N,708µm,0.8s						
MSSA				AML	AML		
	comp=E,452µm,1.2s						
MSSA				AML	AML		
	comp=N,708µm,0.8s						
GORR	**Gorreto**	1.20	255	P	Pb	22 29 50.0	+0.2
GORR				AML	AML		
	comp=E,2030µm,0.5s						
GORR				AML	AML		
	comp=N,1170µm,0.4s						
GORR				AML	AML		
	comp=E,2030µm,0.5s						
GORR				AML	AML		
	comp=N,1170µm,0.4s						
GORR				AML	AML		
	comp=E,2030µm,0.5s						
GORR				AML	AML		
	comp=N,1170µm,0.4s						
MTLO	**Montello**	1.21	43	*e*Pg	Pg	22 29 49.5	-0.3
MTLO	**Montello**	1.21	43	*e*Pg	Pg	22 29 49.5	-0.3
CTI	**Castel Tesino**	1.22	25	P	Pg	22 29 49.6	-0.5
CTI				AML	AML		
	comp=E,1225µm,0.3s						
CTI				AML	AML		
	comp=N,1465µm,0.3s						
CTI				AML	AML		
	comp=E,1225µm,0.3s						
CTI				AML	AML		
	comp=N,1465µm,0.3s						
CTI				AML	AML		
	comp=E,1225µm,0.3s						
CTI				AML	AML		
	comp=N,1465µm,0.3s						
ASQU	**Asqua**	1.30	151	P	Pg	22 29 52.1	+0.5
ASQU				AML	AML		
	comp=E,275µm,0.4s						
ASQU				AML	AML		
	comp=N,281µm,1.4s						
ASQU				AML	AML		
	comp=E,275µm,0.4s						
ASQU				AML	AML		
	comp=N,281µm,1.4s						
ASQU				AML	AML		
	comp=E,275µm,0.4s						
ASQU				AML	AML		
	comp=N,281µm,1.4s						
VARN	**Col Varnada, M**	1.34	38	*e*Pg	Pn	22 29 51.1	-0.8
VARN	**Col Varnada, M**	1.34	38	*e*Pg	Pn	22 29 51.1	-0.8
OZOL	**Ozolo**	1.47	4	*e*Pg	Pn	22 29 54.0	+0.3
OZOL	**Ozolo**	1.47	4	*e*Pg	Pn	22 29 54.0	+0.3
CSNT	**Castellina Chi**	1.49	169	P	Pn	22 29 53.7	-0.2
CSNT				AML	AML		
	comp=E,186µm,0.9s						
CSNT				AML	AML		
	comp=N,289µm,0.7s						
CSNT				AML	AML		
	comp=E,186µm,0.9s						
CSNT				AML	AML		
	comp=N,289µm,0.7s						
CSNT				AML	AML		
	comp=N,289µm,0.7s						
CSNT				AML	AML		
	comp=E,186µm,0.9s						
FAU	**Forcella Aurin**	1.49	30	*e*Pg	Pn	22 29 53.8	-0.2
FAU	**Forcella Aurin**	1.49	30	*e*Pg	Pn	22 29 53.8	-0.2
CARE	**Lago del Cares**	1.49	354	*e*Pg	Pn	22 29 54.5	+0.3
CARE	**Lago del Cares**	1.49	354	*e*Pg	Pn	22 29 54.5	+0.3
CAE	**Caneva**	1.51	45	*e*Pg	Pn	22 29 54.5	+0.3
CAE	**Caneva**	1.51	45	*e*Pg	Pn	22 29 54.5	+0.3
CRE	**Caprese Michel**	1.51	150	P	Pb	22 29 54.9	-0.3
CRE				AML	AML		
	comp=E,218µm,1.0s						
CRE				AML	AML		
	comp=N,206µm,1.3s						
CRE				AML	AML		
	comp=N,206µm,1.3s						
CRE				AML	AML		
	comp=E,218µm,1.0s						
APPI	**Appiano**	1.56	8	P	Pn	22 29 55.2	+0.4
APPI				AML	AML		
	comp=E,635µm,0.4s						
APPI				AML	AML		
	comp=N,496µm,0.4s						
APPI				AML	AML		
	comp=E,635µm,0.4s						
APPI				AML	AML		
	comp=N,496µm,0.4s						
APPI				AML	AML		
	comp=E,635µm,0.4s						
APPI				AML	AML		
	comp=N,496µm,0.4s						
KOSI	**Kohlern**	1.56	12	P	Pn	22 29 55.3	+0.4
KOSI				AML	AML		
	comp=E,412µm,0.4s						
KOSI				AML	AML		
	comp=N,409µm,0.8s						
KOSI				AML	AML		
	comp=E,412µm,0.4s						
KOSI				AML	AML		
	comp=N,409µm,0.8s						
KOSI				AML	AML		
	comp=E,412µm,0.4s						
KOSI				AML	AML		
	comp=N,409µm,0.8s						
AGOR	**Agordo**	1.56	30	P	Pn	22 29 54.7	-0.2
AGOR				AML	AML		
	comp=E,363µm,0.4s						
AGOR				AML	AML		
	comp=N,371µm,0.4s						
AGOR				AML	AML		
	comp=E,363µm,0.4s						
AGOR				AML	AML		
	comp=N,371µm,0.4s						
BRMO	**Bormio**	1.58	346	P	Pn	22 29 55.8	+0.5
BRMO				AML	AML		
	comp=E,244µm,0.5s						
BRMO				AML	AML		
	comp=N,289µm,0.6s						
BRMO				AML	AML		
	comp=E,244µm,0.5s						
BRMO				AML	AML		
	comp=N,289µm,0.6s						
MLNI	**Malnisio**	1.70	44	*e*Pg	Pn	22 29 56.3	-0.5
MLNI	**Malnisio**	1.70	44	*e*Pg	Pn	22 29 56.3	-0.5
MOSI	**Grossmontoni**	1.70	351	P	Pb	22 29 58.2	-0.1
MOSI				AML	AML		
	comp=E,654µm,0.9s						
MOSI				AML	AML		
	comp=N,1250µm,0.8s						
MOSI				AML	AML		
	comp=E,654µm,0.9s						
MOSI				AML	AML		
	comp=N,1250µm,0.8s						
MOSI				AML	AML		
	comp=N,1250µm,0.8s						
MOSI				AML	AML		
	comp=E,654µm,0.9s						
PCP	**Piancastagn**	1.74	258	P	Pb	22 29 58.6	-0.2
PCP				AML	AML		
	comp=E,196µm,0.8s						
PCP				AML	AML		
	comp=N,196µm,1.5s						
PCP				AML	AML		
	comp=E,196µm,0.8s						
PCP				AML	AML		
	comp=N,196µm,1.5s						
ABSI	**Aberstueckl**	1.81	9	P	Pn	22 29 58.4	0.0
ABSI				AML	AML		
	comp=E,972µm,0.6s						
ABSI				AML	AML		
	comp=N,815µm,0.7s						
ABSI				AML	AML		
	comp=E,972µm,0.6s						
ABSI				AML	AML		
	comp=N,815µm,0.7s						
TUE	**Stuetta**	1.89	325	P	Pb	22 30 00.9	-0.6
TUE				AML	AML		
	comp=E,202µm,0.4s						
TUE				AML	AML		
	comp=N,206µm,0.7s						
TUE				AML	AML		
	comp=E,202µm,0.4s						
TUE				AML	AML		
	comp=N,206µm,0.7s						
DAVOX	**Davos/Dischmat**	1.98	339	P	Pn	22 30 02.2	+1.4
FINB	**Finale Ligure**	2.00	249	AML	AML		
	comp=E,660µm,0.3s						
FINB				AML	AML		
	comp=N,9µm,0.4s						
FINB				AML	AML		
	comp=E,660µm,0.3s						
FINB				AML	AML		
	comp=N,9µm,0.4s						
SSFR	**Montelago di S**	2.01	138	AML	AML		
	comp=E,268µm,0.2s						
SSFR				AML	AML		
	comp=N,237µm,1.5s						
SSFR				AML	AML		
	comp=E,268µm,0.2s						
SSFR				AML	AML		
	comp=N,237µm,1.5s						
ROSI	**Rosskopf**	2.02	10	P	Pn	22 30 01.4	+0.1
ROSI				AML	AML		
	comp=E,352µm,0.5s						
ROSI				AML	AML		
	comp=N,376µm,0.7s						
ROSI				AML	AML		
	comp=E,352µm,0.5s						
ROSI				AML	AML		
	comp=N,376µm,0.7s						
FETA	**Feichten**	2.09	356	*e*Pn	Pb	22 30 04.2	-0.7
	comp=N,8.0nm,0.2s,SNR=17						
FETA				Sg	Sg	22 30 34.3	+0.6
	comp=N,24nm,0.5s						
FETA	**Feichten**	2.09	356	Pn	Pb	22 30 04.2	-0.7
	comp=N,8.0nm,0.2s,SNR=17						
FETA				Sg	Sg	22 30 34.3	+0.6
	comp=N,24nm,0.5s						
ABTA	**Abfaltersbach**	2.12	31	*e*Pn	Pn	22 30 03.8	+1.2
	comp=N,6.0nm,0.3s						
ABTA				Sg	Sg	22 30 36.9	+2.0
	comp=N,29nm,0.5s						
ABTA	**Abfaltersbach**	2.12	31	Pn	Pn	22 30 03.8	+1.2
	comp=N,6.0nm,0.3s						
ABTA				Sg	Sg	22 30 36.9	+2.0
	comp=N,29nm,0.5s						
RISI	**Rein**	2.17	22	P	Pn	22 30 04.6	+1.3
RISI				AML	AML		
	comp=E,392µm,0.4s						
RISI				AML	AML		
	comp=N,474µm,0.5s						
RISI				AML	AML		
	comp=N,474µm,0.5s						
RISI				AML	AML		
	comp=E,392µm,0.4s						
SKDS	**Skadanscina**	2.27	73	*i* Pn	Pn	22 30 03.4	-1.2
SKDS				*i* Sn	Sn	22 30 31.1	-1.8
SKDS	**Skadanscina**	2.27	73	*i* Pn	Pn	22 30 03.4	-1.2
SKDS				*i* Sn	Sn	22 30 31.1	-1.8
WTTA	**Wattenberg**	2.38	12	*e*Pn	Pn	22 30 08.2	+2.0
WTTA				*e*Sg	Sg	22 30 42.9	-0.1
WTTA	**Wattenberg**	2.38	12	*e*Pn	Pn	22 30 08.1	+2.0
	comp=E,19nm,0.2s						
WTTA				*e*Sg	Sg	22 30 42.7	-0.3
	comp=E,41nm,0.4s						
WTTA	**Wattenberg**	2.38	12	Pn	Pn	22 30 08.2	+2.0
WTTA				Sg	Sg	22 30 42.9	-0.1
MOTA	**Moosalm**	2.41	3	*e*Pn	Pb	22 30 09.6	-0.8
	comp=E,11nm,0.2s,SNR=34						
MOTA	**Moosalm**	2.41	3	Pn	Pb	22 30 09.6	-0.8
	comp=E,11nm,0.2s,SNR=34						
WATA	**Walderalm**	2.44	11	*e*Pn	Pb	22 30 09.8	-1.2
	comp=E,25nm,0.2s,SNR=47						
WATA	**Walderalm**	2.44	11	Pn	Pb	22 30 09.8	-1.2
	comp=E,25nm,0.2s,SNR=47						
DAVA	**Damuels**	2.46	343	*e*Sg	Sg	22 30 44.3	-1.2
DAVA	**Damuels**	2.46	343	*e*Pn	Pn	22 30 09.3	+2.0
	comp=E,6.9nm,0.3s						
DAVA				*e*Sg	Sg	22 30 44.1	-1.4
	comp=E,33nm,0.5s						
DAVA	**Damuels**	2.46	343	Pn	Pn	22 30 09.3	+2.0
	comp=E,6.9nm,0.3s						
DAVA				Sg	Sg	22 30 44.3	-1.2
FDMO	**Fiordimonte**	2.46	140	AML	AML		
	comp=E,52µm,1.2s						
FDMO				AML	AML		
	comp=E,52µm,1.2s						
FDMO				AML	AML		
	comp=N,69µm,0.6s						
FDMO				AML	AML		
	comp=N,69µm,0.6s						
MYKA	**Terra Mystica**	2.55	47	*e*Pn	Pn	22 30 08.5	0.0
	comp=N,1.5nm,0.3s						
MYKA				*e*Pg	Pg	22 30 14.7	-0.7
	comp=N,12nm,0.3s						
MYKA				Sg	Sg	22 30 49.8	+1.3
	comp=N,20nm,0.4s						
MYKA	**Terra Mystica**	2.55	47	Pn	Pn	22 30 08.5	0.0
	comp=N,1.5nm,0.3s						
RETA	**Reutte**	2.55	358	*e*Pn	Pn	22 30 10.4	+1.9
	comp=N,7.9nm,0.2s,SNR=6.6						
RETA	**Reutte**	2.55	358	Pn	Pn	22 30 10.4	+1.9
	comp=N,7.9nm,0.2s,SNR=6.6						
SAOF	**Saorge**	2.59	250	P	Pn	22 30 10.6	+1.6
SAOF				AML	AML		
	comp=E,81µm,0.5s						
SAOF				AML	AML		
	comp=N,72µm,0.4s						
SAOF				AML	AML		
	comp=N,72µm,0.4s						
SAOF				AML	AML		
	comp=E,81µm,0.5s						
CEY	**Cerknica**	2.60	71	*e*Pn	Pn	22 30 08.0	-1.1
SBF	**Sospel**	2.72	248	*e*Pn	Pn	22 30 12.2	+1.4
SBF				*e*Sn	Sn	22 30 44.4	+0.5
	comp=E,72nm,0.5s						
SBF	**Sospel**	2.72	248	*e*Pn	Pn	22 30 12.2	+1.4
SBF				*e*Sn	Sn	22 30 44.4	+0.5
	comp=E,36nm,0.5s						
KBA	**Koelnbreinsper**	2.73	37	*e*Pn	Pn	22 30 12.3	+1.3
KBA				*e*Pg	Pg	22 30 17.9	-1.0
KBA				*e*Sg	Sg	22 30 58.3	+4.0
KBA	**Koelnbreinsper**	2.73	37	*e*Pn	Pn	22 30 12.2	+1.3
	comp=E,1.4nm,0.2s						
KBA				*e*Pg	Pg	22 30 18.5	-0.4
	comp=E,18nm,0.3s						
KBA				*e*Sg	Sg	22 30 57.4	+3.2
	comp=E,20nm,0.4s						
KBA	**Koelnbreinsper**	2.73	37	Pn	Pn	22 30 12.3	+1.3
KBA	**Koelnbreinsper**	2.73	37	Pg	Pg	22 30 17.9	-1.0
KBA				Sg	Sg	22 30 57.4	+3.2
	comp=E,20nm,0.4s						
LUCF	**Luceram**	2.77	249	P	Pn	22 30 12.9	+1.4
LUCF	**Luceram**	2.77	249	P	Pn	22 30 12.9	+1.4
PGF	**Pioggiola**	2.77	211	*e*Pn	Pn	22 30 11.6	+0.1
PGF				*e*Sn	Sn	22 30 45.3	+0.1
	comp=E,16nm,0.4s						
PGF	**Pioggiola**	2.77	211	*e*Pn	Pn	22 30 11.6	+0.1
PGF				*e*Sn	Sn	22 30 45.3	+0.1
	comp=E,8.1nm,0.4s						
LJU	**Ljubljana**	2.77	65	*e*Pn	Pn	22 30 10.6	-0.8
UBR	**Ueberruh**	2.80	349	*e*Pn	Pn	22 30 13.4	+1.5
UBR				*e*Pg	Pg	22 30 20.7	+0.4
UBR				*e*Sg	Sg	22 30 58.8	+2.3
UBR	**Ueberruh**	2.80	349	Pn	Pn	22 30 13.4	+1.5
NVLJ	**Novalja**	2.84	96	*e*Pn	Pn	22 30 11.5	-0.9
NVLJ				Sn	Sn	22 30 44.5	-2.3
MBDF	**Montbardon**	2.96	267	*e*Pn	Pn	22 30 13.4	-0.8
MBDF				*e*Sn	Sn	22 30 50.0	0.0
	comp=E,30nm,0.5s						
MBDF	**Montbardon**	2.96	267	*e*Pn	Pn	22 30 13.4	-0.8
MBDF				*e*Sn	Sn	22 30 50.0	0.0
	comp=E,15nm,0.5s						
OBKA	**Obir**	2.99	57	*e*Pn	Pn	22 30 14.9	+0.4
OBKA				*e*Pg	Pg	22 30 23.9	0.0
OBKA				*e*Sg	Sg	22 31 05.5	+2.9
OBKA	**Obir**	2.99	57	*e*Pn	Pn	22 30 14.8	+0.3
OBKA				*e*Pg	Pg	22 30 23.1	-0.8
	comp=E,11nm,0.3s						
OBKA				*e*Sg	Sg	22 31 06.9	+4.3
	comp=E,22nm,0.4s						
OBKA	**Obir**	2.99	57	Pn	Pn	22 30 14.9	+0.4
LPG	**La Plagne**	3.00	282	*e*Pn	Pn	22 30 15.8	+1.0
LPG				*e*Sn	Sn	22 30 51.2	+0.1
	comp=E,28nm,0.4s						
LPG	**La Plagne**	3.00	282	*e*Pn	Pn	22 30 15.8	+1.0
LPG				*e*Sn	Sn	22 30 51.2	+0.1
	comp=E,14nm,0.4s						
LPL	**La Plagne**	3.01	283	*e*Pn	Pn	22 30 15.9	+0.9
LPL				*e*Sn	Sn	22 30 50.8	-0.6
	comp=E,26nm,0.5s						
LPL	**La Plagne**	3.01	283	*e*Pn	Pn	22 30 15.9	+0.9
LPL				*e*Sn	Sn	22 30 50.8	-0.6
	comp=E,13nm,0.5s						
RJOB	**Jochberg**	3.09	24	*e*Pn	Pn	22 30 17.4	+1.6
RJOB	**Jochberg**	3.09	24	Pn	Pn	22 30 17.4	+1.6
CALF	**Calern**	3.10	249	P	Pn	22 30 18.0	+1.8
CALF	**Calern**	3.10	249	P	Pn	22 30 17.0	+0.9
RSL	**Roselend**	3.12	285	P	Pn	22 30 17.9	+1.5
RSL	**Roselend**	3.12	285	P	Pn	22 30 17.9	+1.5
AQU	**L'Aquila**	3.15	144	*e*Pn	Pn	22 30 19.1	+2.4
FUR	**Furstenfeldbru**	3.24	4	*e*Sg	Sg	22 31 13.1	+2.5
CRES	**Cresnjev**	3.32	73	*e*Pn	Pn	22 30 18.4	-0.6
SOKA	**Soboth**	3.36	57	*i* Pn	Pn	22 30 19.6	0.0
	comp=E,2.5nm,0.4s						
SOKA				*e*Pg	Pg	22 30 29.6	-1.4
	comp=E,3.4nm,0.3s						
SOKA				*e*Sn	Sn	22 30 59.1	-0.7
	comp=E,5.6nm,0.6s						
SOKA	**Soboth**	3.36	57	Pn	Pn	22 30 19.6	0.0
	comp=E,2.5nm,0.4s						
FRF	**La Foret Royal**	3.36	247	*e*Pn	Pn	22 30 20.8	+1.2
FRF				*e*Sn	Sn	22 31 01.7	+1.9
	comp=E,10nm,0.3s						
FRF	**La Foret Royal**	3.36	247	*e*Pn	Pn	22 30 20.8	+1.2
FRF				*e*Sn	Sn	22 31 01.7	+1.9
	comp=E,5.2nm,0.3s						
LMR	**La Mourre**	3.56	245	*e*Pn	Pn	22 30 22.6	+0.4
LMR				*e*Sn	Sn	22 31 03.2	-1.3
	comp=E,12nm,0.3s						
LMR	**La Mourre**	3.56	245	*e*Pn	Pn	22 30 22.6	+0.4
LMR				*e*Sn	Sn	22 31 03.2	-1.3
	comp=E,6.1nm,0.3s						
ORIF	**Oris-en-Rattie**	3.58	271	*e*Pn	Pn	22 30 23.5	+0.9
ORIF				*e*Sn	Sn	22 31 06.0	+0.8
	comp=E,27nm,0.6s						
ORIF	**Oris-en-Rattie**	3.58	271	P	Pn	22 30 23.8	+1.2
ORIF	**Oris-en-Rattie**	3.58	271	*e*Pn	Pn	22 30 23.5	+0.9
ORIF				*e*Sn	Sn	22 31 06.0	+0.8
	comp=E,14nm,0.6s						
KIZ	**Kirchzarten**	3.66	327	P	Pn	22 30 23.6	-0.1
KIZ	**Kirchzarten**	3.66	327	P	Pn	22 30 23.6	-0.1
MOA	**Molln**	3.72	37	*e*Pn	Pn	22 30 25.1	+0.6
MOA	**Molln**	3.72	37	*i* Pn	Pn	22 30 25.1	+0.6
	comp=E,3.0nm,0.2s,SNR=5.3						
MOA	**Molln**	3.72	37	Pn	Pn	22 30 25.1	+0.6
CHMF	**Charmoille**	3.76	309	P	Pn	22 30 25.3	+0.2
CHMF	**Charmoille**	3.76	309	P	Pn	22 30 25.3	+0.2
CABF	**La Chapelle**	3.77	298	*e*Pn	Pn	22 30 25.7	+0.4
CABF				*e*Sn	Sn	22 31 09.4	-0.5
	comp=E,3.4nm,0.3s						
CABF	**La Chapelle**	3.77	298	*e*Pn	Pn	22 30 25.7	+0.4
CABF				*e*Sn	Sn	22 31 09.4	-0.5
	comp=E,1.7nm,0.3s						
BFO	**Black Forest**	3.83	333	*e*Pn	Pn	22 30 26.1	+0.1
BFO				*e*Sn	Sn	22 31 10.2	-1.2
BFO	**Black Forest**	3.83	333	Pn	Pn	22 30 26.1	+0.1
BFO				Sn	Sn	22 31 10.2	-1.2
MOF	**Molkenrain**	3.92	319	P	Pn	22 30 27.9	+0.6
MOF	**Molkenrain**	3.92	319	P	Pn	22 30 27.9	+0.6
OG35	**Corcelles**	3.92	288	P	Pn	22 30 27.8	+0.5
OG35	**Corcelles**	3.92	288	P	Pn	22 30 27.8	+0.5
SMRF	**Simiane la Rot**	3.94	258	*e*Pn	Pn	22 30 28.5	+0.9
SMRF				*e*Sn	Sn	22 31 13.3	-0.9
	comp=E,6.6nm,0.4s						
SMRF	**Simiane la Rot**	3.94	258	*e*Pn	Pn	22 30 28.5	+0.9
SMRF				*e*Sn	Sn	22 31 13.3	-0.9
	comp=E,3.3nm,0.4s						
ARSA	**Arzberg**	3.95	53	*e*Pn	Pn	22 30 27.5	-0.2
ARSA	**Arzberg**	3.95	53	*e*Pn	Pn	22 30 27.4	-0.2
	comp=E,2.5nm,0.3s						
ARSA	**Arzberg**	3.95	53	Pn	Pn	22 30 27.5	-0.2
HINF	**Hinteralfeld**	4.02	317	*e*Pn	Pn	22 30 28.4	-0.3
HINF				*e*Sn	Sn	22 31 15.4	-0.7
	comp=E,6.8nm,0.3s						

HINF	Hinteralfeld	4.02	317	*e*Pn	Pn	22 30 28.4	-0.3
HINF				*e*Sn	Sn	22 31 15.4	-0.7
	comp=E,3.4nm,0.3s						
OPP	Oppenau	4.02	333	P	Pn	22 30 28.8	+0.1
OPP	Oppenau	4.02	333	P	Pn	22 30 28.8	+0.1
ECH	Echery	4.18	323	*e*Pn	Pn	22 30 30.7	-0.1
ECH				*e*Sn	Sn	22 31 16.7	-3.2
ECH	Echery	4.18	323	P	Pn	22 30 30.9	+0.1
ECH	Echery	4.18	323	P	Pn	22 30 30.9	+0.1
WLS	Welschbruch	4.25	326	P	Pn	22 30 32.3	+0.4
WLS	Welschbruch	4.25	326	P	Pn	22 30 32.3	+0.4
CDF	Champ du Feu	4.28	325	*e*Pn	Pn	22 30 32.2	-0.1
CDF				*e*Sn	Sn	22 31 22.7	+0.1
	comp=E,7.2nm,0.4s						
CDF	Champ du Feu	4.28	325	*e*Pn	Pn	22 30 32.2	-0.1
CDF				*e*Sn	Sn	22 31 22.7	+0.1
	comp=E,3.6nm,0.4s						
GEC2	GERESS Array S	4.35	25	*e*Pn	Pn	22 30 33.0	-0.2
GEC2	GERESS Array S	4.35	25	Pn	Pn	22 30 33.0	-0.2
HAU	Haudompre	4.40	316	*e*Pn	Pn	22 30 33.6	-0.3
HAU				*e*Sn	Sn	22 31 23.8	-1.6
	comp=E,21nm,0.3s						
HAU	Haudompre	4.40	316	*e*Pn	Pn	22 30 33.6	-0.3
HAU				*e*Sn	Sn	22 31 23.8	-1.6
	comp=E,11nm,0.3s						
WET	Wettzell	4.41	17	*e*Pn	Pn	22 30 33.6	-0.5
WET	Wettzell	4.41	17	Pn	Pn	22 30 33.6	-0.5
VIVF	Saint-Julien-l	4.44	271	*e*Pn	Pn	22 30 34.9	+0.5
VIVF				*e*Sn	Sn	22 31 25.8	-0.5
	comp=E,2.5nm,0.3s						
VIVF	Saint-Julien-l	4.44	271	*e*Pn	Pn	22 30 34.9	+0.5
VIVF				*e*Sn	Sn	22 31 25.8	-0.5
	comp=E,1.2nm,0.3s						
BLY	Banja Luka	4.46	90	*e*Pn	Pn	22 30 34.5	-0.2
CONA	Conrad Observa	4.54	47	*i* Pn	Pn	22 30 36.2	+0.4
	comp=E,0.6nm,0.2s						
CONA	Conrad Observa	4.54	47	Pn	Pn	22 30 36.2	+0.4
	comp=E,0.6nm,0.2s						
KHC	Kasperske Hory	4.57	22	*e*PN	Pn	22 30 35.9	-0.3
KHC				*e*PG	Pg	22 30 52.8	-1.4
KHC				*e*SN	Sn	22 31 30.0	+0.4
KHC				*e*SG	Sg	22 31 58.1	+4.8
	comp=E,6.2nm,0.5s						
KHC	Kasperske Hory	4.57	22	Pn	Pn	22 30 35.9	-0.3
GRFO	Grafenberg	4.76	2	*e*Pn	Pn	22 30 37.6	-1.1
GRFO				*e*Sg	Sg	22 32 04.0	+4.6
GRFO	Grafenberg	4.76	2	Pn	Pn	22 30 37.6	-1.1
ROTZ	Rotzenmuhle	4.91	10	*e*Pn	Pn	22 30 39.8	-1.0
ROTZ	Rotzenmuhle	4.91	10	Pn	Pn	22 30 39.8	-1.0
MANZ	Manzenberg	5.11	9	*e*Pn	Pn	22 30 42.5	-1.2
MANZ	Manzenberg	5.11	9	Pn	Pn	22 30 42.5	-1.2
LASF	Ste Croix	5.12	263	*e*Pn	Pn	22 30 44.6	+0.8
LASF				*e*Sn	Sn	22 31 41.7	-1.5
	comp=E,10nm,0.8s						
LASF	Ste Croix	5.12	263	*e*Pn	Pn	22 30 44.6	+0.8
LASF				*e*Sn	Sn	22 31 41.7	-1.5
	comp=E,5.2nm,0.8s						
SFTF	Sexfontaines	5.21	311	*e*Pn	Pn	22 30 45.0	+0.1
	baz=129						
SFTF	Sexfontaines	5.21	311	*e*Pn	Pn	22 30 45.0	+0.1
SMF	Signal de Mont	5.24	292	*e*Pn	Pn	22 30 45.4	+0.1
SMF				*e*Sn	Sn	22 31 43.7	-2.2
	comp=E,11nm,0.4s						
SMF	Signal de Mont	5.24	292	*e*Pn	Pn	22 30 45.4	+0.1
SMF				*e*Sn	Sn	22 31 43.7	-2.2
	comp=E,5.4nm,0.4s						
STON	Ston	5.32	110	*e*Pn	Pn	22 30 46.1	-0.3
MEZF	Maizieres J’vi	5.38	314	*e*Pn	Pn	22 30 48.0	+0.7
	baz=133						
MEZF				*e*Sn	Sn	22 31 45.1	-4.4
	comp=E,14nm,0.9s						
MEZF	Maizieres J’vi	5.38	314	*e*Pn	Pn	22 30 48.0	+0.7
MEZF				*e*Sn	Sn	22 31 45.1	-4.4
	comp=E,7.1nm,0.9s						
LOR	Lormes	5.43	298	*e*Pn	Pn	22 30 48.0	0.0
	baz=115						
LOR				*e*Sn	Sn	22 31 50.4	-0.4
	comp=E,6.4nm,0.3s						
LOR	Lormes	5.43	298	P	Pn	22 30 48.1	0.0
LOR	Lormes	5.43	298	*e*Pn	Pn	22 30 48.0	0.0
LOR				*e*Sn	Sn	22 31 50.4	-0.4
	comp=E,3.2nm,0.3s						
ABH	Alteburg	5.45	336	P	Pn	22 30 49.0	+0.7
ABH	Alteburg	5.45	336	P	Pn	22 30 48.0	-0.2
SSF	Saint Saulge	5.58	295	*e*Pn	Pn	22 30 50.0	-0.1
SSF				*e*Sn	Sn	22 31 52.4	-2.1
	comp=E,6.0nm,0.5s						
SSF	Saint Saulge	5.58	295	*e*Pn	Pn	22 30 50.0	-0.1
SSF				*e*Sn	Sn	22 31 52.4	-2.1
	comp=E,3.0nm,0.5s						
AVF	Avril sur Loir	5.60	292	*e*Pn	Pn	22 30 50.4	+0.1
AVF	Avril sur Loir	5.60	292	*e*Pn	Pn	22 30 50.4	+0.1
PRU	Pruhonice	5.62	25	*e*PN	Pn	22 30 50.6	+0.1
PRU	Pruhonice	5.62	25	Pn	Pn	22 30 50.6	+0.1
MOX	Moxa	5.73	4	*e*Pn	Pn	22 30 51.2	-0.9
MOX	Moxa	5.73	4	Pn	Pn	22 30 51.2	-0.9
TREB	Trebinje	5.82	110	*e*Pn	Pn	22 30 52.6	-0.7
BRY	Bratogost	5.87	108	*e*Pn	Pn	22 30 54.4	+0.2
BGF	Bois d’Agland	5.88	289	*e*Pn	Pn	22 30 54.5	+0.4
BGF				*e*Sn	Sn	22 32 01.5	-0.2
	comp=E,34nm,0.5s						
BGF	Bois d’Agland	5.88	289	*e*Pn	Pn	22 30 54.5	+0.4
BGF				*e*Sn	Sn	22 32 01.5	-0.2
	comp=E,17nm,0.5s						
UPM	Unac-Piva	6.01	104	*e*Pn	Pn	22 30 56.9	+0.8
HCY	Herceg Novi	6.03	112	*e*Pn	Pn	22 30 55.9	-0.3
PVCC	Panska Ves	6.11	22	*e*PN	Pn	22 30 57.5	+0.2
PVCC	Panska Ves	6.11	22	Pn	Pn	22 30 57.5	+0.2
TEKS	Tekeris	6.15	91	*e*Pn	Pn	22 30 56.3	-1.5
BBLS	Lazići	6.17	97	*e*Pn	Pn	22 30 57.7	-0.6
HYF	Humbligny	6.21	295	*e*Pn	Pn	22 30 59.0	+0.3
HYF	Humbligny	6.21	295	*e*Pg	Pg	22 31 24.5	-1.0
HYF	Humbligny	6.21	295	*e*Pn	Pn	22 30 59.0	+0.3
HYF	Humbligny	6.21	295	*e*Pg	Pg	22 31 24.5	-1.0
TCF	Toulx Ste Croi	6.25	286	*e*Pn	Pn	22 31 00.1	+0.8
TCF				*e*Sn	Sn	22 32 09.3	-1.8
	comp=E,3.2nm,0.4s						
TCF	Toulx Ste Croi	6.25	286	*e*Pn	Pn	22 31 00.1	+0.8
TCF				*e*Sn	Sn	22 32 09.3	-1.8
	comp=E,1.6nm,0.4s						
BRG	Berggiesshubel	6.28	18	PG	Pn	22 30 59.3	-0.3
BRG				SG	Sg	22 32 49.1	+1.1
	comp=E,12nm,1.6s						
CAF	Calviac	6.29	273	*e*Pn	Pn	22 31 00.4	+0.6
CAF	Calviac	6.29	273	*e*Pn	Pn	22 31 00.4	+0.6
CLL	Collm	6.52	12	*i* Pn	Pn	22 31 02.2	-0.8
	comp=Z,4.0nm,0.3s						
CLL				*e*Pg	Pg	22 31 38.0	+6.5
CLL				*i*		22 32 06.4	
CLL				*e*		22 32 27.0	
CLL				*e*		22 32 43.0	
CLL				*e*Sg	Sg	22 32 56.0	+0.1
	comp=Z,8.0nm,1.0s						
PDG	Podgorica	6.54	110	*e*Pn	Pn	22 31 02.7	-0.6
DRME	Dracevica, Mon	6.61	112	*e*Pn	Pn	22 31 03.5	-0.6
GIVF	Givet	6.61	324	*e*Pn	Pn	22 31 04.3	+0.1
GIVF	Givet	6.61	324	*e*Pn	Pn	22 31 04.3	+0.1
BAIF	Baives	6.85	321	*e*Pn	Pn	22 31 08.3	+0.9
BAIF	Baives	6.85	321	*e*Pn	Pn	22 31 08.3	+0.9

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*SJA **14** 22:34:35.7±0.6, 36°.57S×71°.13W, h33^{km}, ML4.6, MW4.5*

*IDC **14** 22:34:38.0±0.5, 36°.06S×70°.81W, h0^{km}, mb4.5/13, mb1 4.6/15, mb1mx4.4/33, mbtmp4.5/15, ML4.1/2, MS3.8/20, Ms1 3.8/20, ms1mx3.7/29, Error ellipse: s-maj=24.9km s-min=14.8km az=86.0*

*ISCJB **14** 22:34:38.4±0.2, 36°.13S±0°.03×70°.93W±0°.04, h10^{km}, mb4.7/64, MS3.9/17, Error ellipse: s-maj=4.7km s-min=3.6km az=9.0*

*BJI **14** 22:34:39.8, 36°.04S×71°.03W, h21^{km}, mB5.0/2, Ms5.0/3, Ms7 4.8/3*

*GUC **14** 22:34:40.3±0.6, 36°.08S×71°.05W, h10^{km}±5^{km}, ML5.0*

*NEIC **14** 22:34:40.0±0.0, 36°.08S×71°.05W, h10^{km}, mb4.8/56, ML5.0(GUC), After GUC.*

NEIC Felt [V] at Talca; [IV] at Constitucion; [III] at Linares, Longavi, Maule, Parral, Pelarco, San Clemente and Villa Alegre; [II] at Pencahue and Rio Claro. Also felt at Santiago.

ISC 14 22:34:39.1±1.2**, 36°.09S**±0°.02×**71°.01W**±0°.04**, h8**^{km}±7^{km}**, n154, σ1°.43**/169**, mb4.8**/64**, MS3.9**/17**, 2C-4D, Central**

Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCHI	Chillan	1.00	239	⇓*i*P	Pb	22 34 58.8	+0.2
CCHI				*e*S	Sn	22 35 12.7	-1.0
NICH	Los Niches	1.10	351	*e*P	Pg	22 34 60.0	-0.3
NICH				*e*S	Sb	22 35 15.4	+0.5
GO05	HualaæØ	1.32	325	*e*Pn	Pn	22 35 03.8	-0.1
GO05				*e*Sn	Sg	22 35 22.1	+0.6
GO05	HualaæØ	1.32	325	⇑*i*P	Pn	22 35 03.7	-0.1
GO05				*e*S	Sg	22 35 21.6	+0.1
CANA	Caviahue	1.79	181	*e*P	Pb	22 35 11.8	-0.5
CANA				*e*S	Sb	22 35 35.7	+0.8
CCSP	San Pedro de C	1.85	246	*e*P	Pn	22 35 11.7	+0.6
CCSP				*e*S	Sb	22 35 36.3	-0.2
CCSP				IAML		22 35 39.6	
	comp=N,10µm,0.6s						
LMEL	Las Melosas	2.34	17	*e*P	Pb	22 35 20.9	-0.7
LMEL				*e*S	Sg	22 35 52.9	-1.3
LMEL				IAML		22 35 59.1	
	comp=E,6µm,0.2s						
RFA	San Rafael	2.46	58	*e*P	Pn	22 35 20.8	+1.2
RFA				⇓*e*S	Sb	22 35 54.8	+0.8
RFA				IAML		22 35 57.6	
	comp=Z,3µm,0.9s						
CLCH	Cerro Calan	2.72	8	*e*P	Pb	22 35 26.0	-2.0
CLCH				*e*S	Sb	22 36 02.0	+0.4
CLCH				IAML		22 36 12.5	
	comp=N,10µm,1.0s						
PEL	Peldehue	2.96	5	*e*Pn	Pn	22 35 28.6	+2.3
PEL				*e*Sn	Sb	22 36 08.9	+0.6
ROC1	El Roble	3.11	360	*e*Pn	Pn	22 35 30.7	+2.0
ROC1				*e*Sg	Sb	22 36 13.5	+0.5
ROC1	El Roble	3.11	360	*e*P	Pn	22 35 31.1	+2.4
ROC1				⇓*e*S	Sb	22 36 13.9	+1.0
ROCH	El Roble	3.12	360	*e*P	Pn	22 35 31.4	+2.6
ROCH				*e*S	Sb	22 36 10.7	-2.4
ROCH				IAML		22 36 20.8	
	comp=E,6µm,0.7s						
AVIZ	Vizcacheras	3.32	39	*e*P	Pg	22 35 42.0	-0.8
AAGR	Agrelo	3.50	32	*e*P	Pb	22 35 39.9	-1.4
ARCO	CERRO ARCO	3.67	28	*e*P	Pb	22 35 46.2	+1.9
ARCO				IAML		22 35 54.0	
	comp=Z,485nm,0.6s						
ARCO				*e*S	Sg	22 36 40.2	+3.2
ASAL	Salagasta	3.93	28	*e*P	Pb	22 35 44.6	-4.1
AUSP	Uspallata	4.09	20	*e*P	Pb	22 35 47.2	-4.2
PLCA	Paso Flores	4.64	176	Pn	Pn	22 35 51.5	+1.9
	comp=Z,1.3nm,0.3s,baz=16,slow=14,SNR=35						
PLCA				Sn	Sb	22 36 56.9	-0.1
	comp=Z,12nm,0.3s,baz=170,slow=8.1,SNR=8.8						
PLCA				LR	LR	22 38 03.4	
	comp=Z,316nm,19.4s,baz=12,slow=44						
PLCA	Paso Flores	4.64	176	*e*Pn	Pn	22 35 51.5	+1.9
PLCA				*e*Sg	Sb	22 36 58.2	+1.2
RTCV	Cerro Valdivia	4.69	27	*e*P	Pn	22 35 54.8	+4.6
ACAN	Cantantal	4.95	41	*e*P	Pn	22 35 50.9	-2.9
RTLL	Cerro Villicun	5.20	25	*e*P	Pn	22 36 01.0	+3.7
RTLL				IAML		22 37 41.8	
	comp=N,312nm,0.5s						
AMOG	MOGNA	5.55	23	*e*P	Pn	22 36 05.8	+3.7
MRA	San Martin	5.71	52	*e*P	Pn	22 36 06.7	+2.3
MRA				IAML		22 38 08.6	
	comp=Z,81nm,0.6s						
GO04	Tololo Observa	5.91	2	*e*Pn	Pn	22 36 09.9	+2.8
GO04				*e*Sn	Sn	22 37 17.1	+2.0
ACDV	Cuesta del Vie	6.12	16	*e*P	Pn	22 36 12.3	+2.4
AGUA	GUANDACOL	6.92	19	*e*P	Pn	22 36 23.2	+2.3
LCO	Las Campanas	7.07	2	*e*Pn	Pn	22 36 23.5	+0.4
TRQA	Tornquist	7.48	108	*e*Pn	Pn	22 36 28.7	+0.3
VCA	Vinchina	7.71	19	*e*P	Pn	22 36 35.4	+3.6
VCA				IAML		22 38 55.0	
	comp=Z,107nm,0.6s						
GO03	Copiap	8.50	5	*e*Pn	Pn	22 36 44.1	+1.5
CYA	Choya	8.81	31	IAML		22 39 41.2	
	comp=Z,25nm,0.7s						
GO02	Mina Guanaco	10.96	7	*e*Pn	Pn	22 37 16.8	+0.2
PB04	IPOC Station P	13.73	3	*e*Pn	Pn	22 37 54.4	+0.1
PB01	IPOC Station P	15.06	5	*e*Pn	Pn	22 38 12.5	+0.2
	comp=Z,53nm,1.1s						
CPUP	Villa Florida	15.21	54	Pn	P	22 38 22.1	+2.9
	comp=Z,0.2nm,0.3s,baz=230,slow=7.6,SNR=5.1						
CPUP				Lg	Lg	22 42 44.5	
	comp=Z,0.1nm,0.3s,baz=318,slow=19,SNR=3.0						
CPUP				LR	LR	22 44 36.8	
	comp=Z,353nm,21.0s,baz=232,slow=40						
PB11	IPOC Station P	16.32	5	*e*Pn	Pn	22 38 27.7	-1.0
	comp=Z,53nm,0.9s						
MNMC	Minye Minye	16.95	5	*e*Pn	Pn	22 38 37.8	+1.0
	comp=Z,55nm,0.9s						
LPAZ	La Paz	19.89	8	P	Pn	22 39 12.5	-0.7
	comp=Z,0.4nm,0.3s,baz=159,slow=8.1,SNR=28						
LPAZ				LR	LR	22 48 45.2	
	comp=Z,256nm,20.0s,baz=164,slow=43						
LPAZ	La Paz	19.89	8	*e*P	Pn	22 39 12.5	-0.7
	comp=Z,16nm,0.9s						
SIV	San Ignacio	21.89	26	P	P	22 39 32.3	-0.4
	comp=Z,8.3nm,0.9s,baz=224,slow=11,SNR=16						
SPB	Sao Paulo	23.88	65	*e*P	P	22 39 53.0	-0.1
	comp=Z,58nm,1.5s						
NNA	Nana	24.57	346	LR	LR	22 47 42.0	
	comp=Z,224nm,20.6s,baz=154,slow=32						
SAML	Samuel	27.95	17	*e*P	P	22 40 29.2	-0.8
	comp=Z,6.6nm,0.9s						
BDFB	Brasilia	28.90	51	*e*P	P	22 40 39.0	+0.4
	comp=Z,10nm,0.7s						
PMSA	Palmer Station	29.02	174	LR	LR	22 52 04.5	
	comp=Z,332nm,18.1s,baz=28,slow=36						
ATAH	Atahualpa	29.61	345	LR	LR	22 51 14.4	
	comp=Z,154nm,19.0s,baz=183,slow=34						
OTAV	Otavalo	36.80	348	*e*P	P	22 41 47.5	-0.5
	comp=Z,11nm,1.1s						
PRAC	Prado	39.77	354	*e*P	P	22 42 14.0	+1.5
	comp=Z,17nm,1.0s						
ROSC	El Rosal	40.84	355	LR	LR	23 00 55.8	
	comp=Z,87nm,18.5s,baz=202,slow=39						
RUSC	La Rusia	41.81	357	*e*P	P	22 42 30.8	+0.9
	comp=Z,14nm,1.2s						
HELC	Santa Helena	42.27	353	*e*P	P	22 42 34.1	+0.6
	comp=Z,42nm,0.7s						
VNA3	Neumayer Olymp	47.10	157	P	P	22 43 11.3	+0.2
VNA1	Neumayer--Stat	47.42	156	P	P	22 43 14.6	+1.0
JTS	JuntasAbangare	47.97	341	LR	LR	22 59 29.6	
	comp=Z,52nm,19.6s,baz=202,slow=31						
SNAA	Sanae	49.33	157	P	P	22 43 28.2	-0.1
SNAA	Sanae	49.33	157	P	P	22 43 28.3	-0.1
	comp=Z,10nm,0.8s,baz=287,slow=7.0,SNR=56						
SNAA	Sanae	49.33	157	*e*P	P	22 43 28.3	-0.1
	comp=Z,20nm,1.0s						
QSPA	South Pole Qui	54.15	180	P	P	22 44 05.5	+1.0
	comp=Z,7.4nm,0.8s,baz=146,slow=3.5,SNR=15						
QSPA	South Pole Qui	54.15	180	*e*P	P	22 44 05.2	+0.7
	comp=Z,41nm,0.9s						
VNDA	Vanda	62.22	191	P	P	22 45 01.6	+1.0
	comp=Z,1.7nm,1.1s,baz=79,slow=14,SNR=5.7						
SYO	Syowa Base	63.61	158	⇓*e*P	P	22 45 05.8	-4.2
SYO	Syowa Base	63.61	158	⇑*e*pP	P	22 45 11.0	+1.0
833A	Chaparral WMA,	69.43	333	*e*P	P	22 45 49.2	+1.6
	comp=Z,11nm,0.8s						
Z50A	Ashland	70.39	347	*e*P	P	22 45 52.5	-0.9
	comp=Z,8.1nm,1.0s						
LPIG	La Paz	70.45	322	LR	LR	23 09 54.8	
	comp=Z,41nm,20.1s,baz=286,slow=30						
PPT2	Papeete2	70.78	262	*e*LR	LR	23 07 31.9	
	comp=Z,128nm,23.8s						
MAW	Mawson	70.94	163	P	P	22 45 56.3	-0.1
	comp=Z,2.0nm,0.6s,baz=269,slow=6.6,SNR=4.3						
MAW				LR	LR	23 16 45.7	
	comp=Z,129nm,18.7s,baz=240,slow=36						
143A	Socs Landing,	71.06	342	*e*P	P	22 45 58.6	+1.2
	comp=Z,36nm,1.1s						
JCT	Junction City	71.53	334	*e*P	P	22 46 01.4	+0.9
	comp=Z,17nm,1.3s						
X48A	Hartselle	71.76	346	*e*P	P	22 46 02.0	+0.3
	comp=Z,9.1nm,0.9s						
TXAR	Lajitas Array	71.97	330	P	P	22 46 03.8	+0.6
	comp=Z,2.5nm,0.8s,baz=145,slow=9.0,SNR=15						
TXAR				LR	LR	23 13 23.8	
	comp=Z,111nm,18.3s,baz=0.0,slow=32						
TX31	Lajitas Ar. Si	71.97	330	*e*P	P	22 46 03.8	+0.5
W50A	Signal Mountai	72.17	348	*e*P	P	22 46 04.3	+0.1
	comp=Z,9.5nm,0.9s						
SWET	Sewanee	72.30	347	*e*P	P	22 46 05.2	+0.2
	comp=Z,10nm,0.9s						
PLAL	Pickwick Lake	72.48	345	*e*P	P	22 46 05.7	-0.3
	comp=Z,6.4nm,0.9s						
V48A	Smith Brothers	72.97	347	*e*P	P	22 46 09.1	+0.1
	comp=Z,18nm,0.9s						
WVT	Waverly	73.54	346	*e*P	P	22 46 12.1	-0.1
	comp=Z,17nm,0.9s						
W39A	Magazine	74.03	341	*e*P	P	22 46 16.0	+0.8
	comp=Z,10nm,1.0s						
T47A	Sharon Grove	74.23	347	*e*P	P	22 46 15.9	-0.4
	comp=Z,8.0nm,1.0s						
S51A	Beattyville	74.29	350	*e*P	P	22 46 16.4	-0.1
	comp=Z,7.2nm,0.8s						
LIC	Lamto	74.66	70	*e*PKP1	P	22 46 21.4	+2.1
	comp=Z,44nm,1.4s						
MNTX	Cornudas Mount	74.75	330	*e*P	P	22 46 19.2	-0.2
	comp=Z,14nm,1.8s						
TIC	Toumodi	74.93	70	*e*PKP1	P	22 46 22.3	+1.3
KIC	Kosan Boka	74.96	70	*e*PKP1	P	22 46 22.5	+1.4
	comp=Z,51nm,1.1s						
DBIC	Dimbokro	75.07	70	P	P	22 46 21.0	-0.7
	comp=Z,13nm,0.9s,baz=211,slow=5.9,SNR=8.0						
DBIC				LR	LR	23 15 17.7	
	comp=Z,66nm,21.0s,baz=184,slow=33						
WMOK	Wichita Mounta	75.08	337	*e*P	P	22 46 21.8	+0.5
	comp=Z,5.7nm,1.3s						
MSTX	Muleshoe	75.75	333	*e*P	P	22 46 25.8	+0.5
	comp=Z,6.3nm,0.8s						
FVM	French Village	75.87	344	*e*P	P	22 46 26.8	+1.0
	comp=Z,20nm,1.4s						
CCM	Cathedral Cave	76.12	344	*e*P	P	22 46 28.1	+0.9
	comp=Z,12nm,0.9s						
AMTX	Amarillo	76.19	334	*e*P	P	22 46 28.5	+0.8
	comp=Z,16nm,1.2s						
S39A	Bolivar	76.27	342	*e*P	P	22 46 28.2	+0.2
	comp=Z,9.0nm,1.3s						
R40A	Maddies Statio	76.58	343	*e*P	P	22 46 29.8	0.0
	comp=Z,7.4nm,0.8s						
LAZ	Ladron	77.82	330	*e*P	P	22 46 37.6	+0.5
LAZ				*e*S	S	22 56 30.4	+0.3
ANMO	Albuquerque	78.02	331	LR	LR	23 17 01.4	
	comp=Z,84nm,18.1s,baz=161,slow=33						
ANMO	Albuquerque	78.02	331	*e*P	P	22 46 39.6	+1.4
	comp=Z,8.8nm,1.6s						
BOSA	Boshof	78.36	117	P	P	22 46 39.3	-1.1
	comp=Z,12nm,0.8s,baz=232,slow=4.5,SNR=14						
BOSA				LR	LR	23 16 13.8	
	comp=Z,67nm,20.2s,baz=209,slow=32						
T25A	Trinidad	79.18	333	*e*P	P	22 46 45.9	+1.3
	comp=Z,18nm,1.3s						
X16A	Lo Mia Camp, P	79.65	327	*e*P	P	22 46 49.0	+1.9
	comp=Z,3.2nm,0.9s						
SDCO	Great Sand Dun	80.12	333	*e*P	P	22 46 50.2	+0.5
	comp=Z,2.1nm,0.9s						
KOWA	Kowa	80.75	65	P	P	22 46 53.3	0.0
	comp=Z,3.4nm,0.6s,baz=236,slow=6.5,SNR=7.2						
KOWA				LR	LR	23 20 52.4	
	comp=Z,71nm,19.1s,baz=240,slow=34						
KOWA	Kowa	80.75	65	*e*P	P	22 46 52.4	-0.9
	comp=Z,18nm,1.4s						
W13A	Hualapai Mount	81.32	326	*e*P	P	22 46 57.4	+1.2
	comp=Z,5.1nm,1.1s						
SMCO	Snowmass	81.92	333	*e*P	P	22 47 00.0	+0.5
	comp=Z,5.5nm,1.0s						
ISCO	Idaho Springs	81.97	334	*e*P	P	22 47 00.8	+1.2
	comp=Z,13nm,1.8s						
KNB	Kanab	82.44	327	*e*P	P	22 47 02.5	+0.6
	comp=Z,6.9nm,1.1s						
ECSD	EROS Data Cent	82.80	342	*e*P	P	22 47 03.2	-0.3
	comp=Z,28nm,1.9s						
CCUT	Cedar City	83.12	327	*e*P	P	22 47 06.4	+0.8
	comp=Z,7.8nm,1.3s						
SRU	San Rafael Swe	83.25	330	*e*P	P	22 47 07.4	+1.3
	comp=Z,23nm,1.9s						
P18A	Preston Nutter	83.58	331	*e*P	P	22 47 09.3	+1.4
	comp=Z,26nm,1.9s						
TMUT	Trail Mountain	83.68	330	*e*P	P	22 47 09.8	+1.3
	comp=Z,3.0nm,0.8s						
RCWM	Renegade Canyo	83.78	324	*e*P	P	22 47 08.5	-0.3
F36A	Milaca	84.07	344	*e*P	P	22 47 09.7	-0.3
	comp=Z,4.4nm,0.9s						
TOA0	Torodi Ar. Sit	84.14	69	*e*P	P	22 47 10.8	-0.3
TORD	Torodi Ar. Bea	84.14	69	P	P	22 47 10.1	-0.9
	comp=Z,6.1nm,0.9s,baz=213,slow=5.0						
TORD				LR	LR	23 22 32.3	
	comp=Z,31nm,18.8s,baz=355,slow=34						
PSUT	Pine Spring	84.16	328	*e*P	P	22 47 12.4	+1.6
	comp=Z,4.9nm,1.0s						
R11A	Troy Canyon, C	84.77	326	*e*P	P	22 47 14.3	+0.4
	comp=Z,4.6nm,1.3s						
K22A	Casper	84.81	335	*e*P	P	22 47 15.5	+1.5
	comp=Z,7.8nm,1.0s						
DUG	Dugway, Tooele	85.10	329	*e*P	P	22 47 16.7	+1.2
	comp=Z,12nm,1.6s						
RSSD	Black Hills	85.29	337	*e*P	P	22 47 16.8	+0.4
	comp=Z,4.0nm,0.9s						
HWUT	Hardware Ranch	85.79	331	*e*P	P	22 47 19.7	+0.8
	comp=Z,5.3nm,0.9s						
PDAR	Pinedale Array	86.01	333	P	P	22 47 20.2	+0.2
	comp=Z,0.9nm,0.8s,baz=151,slow=3.4,SNR=7.0						
PDAR				LR	LR	23 22 39.6	
	comp=Z,61nm,18.0s,baz=136,slow=34						
PDAR	Pinedale Array	86.01	333	*e*P	P	22 47 19.6	-0.4
NV01	Mina Array Sit	86.08	325	*e*P	P	22 47 20.5	0.0
NVAR	Mina Array Bea	86.08	325	P	P	22 47 21.0	+0.5
	comp=Z,1.1nm,0.8s,baz=152,slow=6.4,SNR=7.2						
NVAR				LR	LR	23 20 19.0	
	comp=Z,38nm,18.6s,baz=272,slow=32						
HVU	Hansel Valley	86.42	330	*e*P	P	22 47 22.6	+0.6
	comp=Z,3.3nm,0.8s						
ULM	Lac du Bonnet	88.74	344	P	P	22 47 32.4	-0.3
	comp=Z,5.7nm,0.8s,baz=161,slow=5.3,SNR=5.7						
YBH	Yreka Blue Hor	90.76	324	LR	LR	23 24 44.9	
	comp=Z,30nm,18.4s,baz=159,slow=33						
MDT	Midelt	92.48	51	LR	LR	23 30 19.1	
	comp=Z,123nm,18.2s,baz=228,slow=36						
WRA	Warramunga Arr	119.32	208	PKP	PKPdf	22 53 28.5	-1.0
	comp=Z,0.6nm,0.8s,baz=156,slow=1.7,SNR=3.4						
BRTR	Keskin Array B	122.09	62	PKP	PKPdf	22 53 32.9	-1.4
	comp=Z,0.6nm,0.8s,baz=191,slow=3.7,SNR=3.6						
MYKOM	Kota Tinggi	145.53	171	*e*PKPdf	PKPdf	22 54 18.2	-0.3
PSI	Prapat	145.59	162	*e*PKPdf	PKPdf	22 54 18.2	-0.6
BVAR	Borovoye Array	148.19	46	PKPbc	PKPbc	22 54 25.4	+0.5
	comp=Z,4.8nm,0.8s,baz=298,slow=3.2,SNR=12						
KK31	Karatay Array	149.74	65	*e*PKPbc	PKPbc	22 54 29.1	-0.2
KKAR	Karatay Array	149.74	65	*e*PKPbc	PKPbc	22 54 29.1	-0.2
NIL	Nilore	150.68	84	*e*PKPbc	PKPbc	22 54 31.8	-0.1
AAK	Ala-Archa	152.67	66	*e*pPKPdf	PKPbc	22 54 36.8	+0.5
ASAJ	Asahikawa	153.22	298	PKP	PKPdf	22 54 30.3	+0.5
	comp=Z,2.8nm,1.0s,baz=55,slow=16,SNR=2.0						
ASAJ				PKPbc	PKiKP	22 54 37.8	+0.4
	comp=Z,3.6nm,0.9s,baz=198,slow=20,SNR=2.7						
KURBB	Kurchatov Arra	153.75	47	PKP	PKPdf	22 54 30.6	+0.3
	comp=Z,0.4nm,0.8s,baz=277,slow=1.7,SNR=3.2						
KURBB				PKPbc	PKPbc	22 54 37.7	-0.4
	comp=Z,2.7nm,0.8s,baz=301,slow=2.8,SNR=9.5						
KURK	Kurchatov	153.76	47	PKP	PKPdf	22 54 30.6	+0.3
KURK				*e*PKPbc	PKPbc	22 54 38.1	-0.1
KSH	Kashi	153.77	73	*e*PKPbc	PKPdf	22 54 28.0	-2.9
KSH				sPKP		22 54 41.8	
KSH				PP	PP	22 58 24.1	-2.5
ZAA0	Zalesovo Array	155.49	36	*e*PKPbc	PKPbc	22 54 45.6	
ZALV	Zalesovo Beam	155.49	36	PKP	PKPdf	22 54 30.1	-2.5
	comp=Z,0.3nm,0.2s,baz=298,slow=3.1,SNR=2.0						
ZALV	Zalesovo Beam	155.49	36	*e*PKPdf	PKPdf	22 54 35.0	+2.4
MKAR	Makanchi Array	157.41	53	PKP	PKPdf	22 54 36.2	+0.8
	comp=Z,1.2nm,0.9s,baz=285,slow=6.9,SNR=5.3						
MKAR				PKPab	PKPab	22 55 06.0	-0.9
	comp=Z,2.4nm,0.8s,baz=277,slow=3.1,SNR=8.2						
WMQ	Urumqi	161.97	58	PKP	PKPdf	22 54 40.4	-0.4
WMQ				LR	LR		
	comp=Z,86nm,21.5s						
WMQ				LR	LR		
	comp=Z,88nm,19.5s						
WMQ				LR	LR		
	comp=Z,66nm,25.9s						
ULN	Ulaanbaatar	168.15	6	*e*PKPab	PKPab	22 55 54.4	+0.5
GYA	Guiyang	170.19	168	*e*PKP	PKPdf	22 54 47.9	0.0
GYA				PKPab	PKPab	22 56 04.0	+0.5
GYA				PKS	PKSdf	22 58 18.3	-2.2
GYA				PP	PP	22 59 55.3	+2.7
GYA				AMB	AMB		
	comp=Z,110nm,8.2s						
NJ2	Nanjing	170.88	247	*e*PKP	PKPdf	22 54 46.9	-1.0
CD2	Chengdu	173.23	138	PKP	PKPdf	22 54 49.3	+0.2
HHC	Hu-ho-hao-te	174.84	338	*e*PKP	PKPdf	22 54 47.8	-1.6
LZH	Lanzhou	175.83	89	*e*PKP	PKPdf	22 54 48.3	-1.6
LZH				pPKP	sPKPdf	22 54 55.0	+1.3
LZH				sPKP		22 54 57.1	

LZH				PKPab	PKPab	22 56 28.5	-0.2
LZH				LR	LR		
	comp=Z,160nm,18.0s						
LZH				LR	LR		
	comp=Z,160nm,18.1s						
LZH				LR	LR		
	comp=Z,190nm,20.2s						

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*NIED **14** 22:54:00, 33°.10N×139°.50E, h145^{km}, Mw3.9 Best double couple: M$_0$7.03000×10^{14} NP1:φ$_s$258.00000°, δ35.00000°, λ55.00000°. NP2:φ$_s$118.00000°, δ62.00000°, λ111.00000°.*
*ISCJB **14** 22:54:49.8±0.5, 32°.99N±0°.05×139°.56E±0°.07, h186^{km}±3^{km}, mb3.5/7, Error ellipse: s-maj=9.7km s-min=7.6km az=151.0*
*IDC **14** 22:54:50.7±0.5, 32°.88N×139°.33E, h170^{km}±6^{km}, mb3.3/7, mb1 3.4/11, mb1mx3.2/66, mbtmp3.7/11, Error ellipse: s-maj=27.6km s-min=12.8km az=75.0*
*JMA **14** 22:54:51.0±0.2, 33°.07N×139°.55E, h184^{km}±2^{km}, M3.6*
ISC 14 22:54:50.6±0.8**, 32°.93N**±0°.05×**139°.55E**±0°.06**, h179**^{km}±6^{km}**, n34, σ1^s.18**/39**, mb3.5**/7**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHCJ	Hachijojimakas	0.25	54	P	Pn	22 55 15.8	+1.3
JHJ	Hachijo jima 2	0.27	45	P	Pn	22 55 14.9	+0.4
	91nm,0.3s,baz=84,slow=22,SNR=65						
JHJ				S	Sn	22 55 33.3	+0.3
	126nm,0.3s,baz=57,slow=22,SNR=10						
JHJ2	Mitsune	0.29	50	P	Pn	22 55 15.4	+0.8
JAOM	Aogashimamukai	0.49	159	P	Pn	22 55 16.9	+1.6
JMKN	Mikurajimanish	0.96	2	P	Pn	22 55 17.8	-0.1
JKO	Kozu shima	1.30	345	P	Pn	22 55 20.6	-0.1
JKO				*e*S	Sn	22 55 42.6	-1.5
JIM2	Oshima 3	1.79	357	P	Pn	22 55 25.2	-0.2
TK02	Tokai 2	1.81	305	P	Pn	22 55 25.5	+0.1
TK02				*e*S	Sn	22 55 52.4	0.0
JIZS	Izushimoda	1.87	343	P	Pn	22 55 26.0	-0.2
TK04	Tokai 4	2.02	317	P	Pn	22 55 27.8	+0.1
TK04				*e*S	Sn	22 55 56.6	+0.1
BSO3	Boso 3	2.03	23	P	Pn	22 55 27.8	+0.2
BSO1	Boso 1	2.09	34	P	Pn	22 55 28.1	+0.1
BSO1				*e*S	Sn	22 55 56.8	-0.4
TTO2	TONANKAI O.B.S	2.26	292	P	Pn	22 55 30.4	+0.2
SHZ3	Shizuoka 3	2.41	333	P	Pn	22 55 32.2	0.0
SHZ3				*e*S	Sn	22 56 03.4	-1.3
TTO1	TONANKAI O.B.S	2.42	287	P	Pn	22 55 32.1	+0.1
JYN	Shimob	2.70	342	P	Pn	22 55 35.8	+0.2
JRY	Ryogami san	3.13	350	P	Pn	22 55 40.6	-0.2
JWZ	Kozaga	3.27	282	P	Pn	22 55 42.2	-0.4
MJAR	Matsushiro Arr	3.77	343	P	Pn	22 55 48.1	-0.6
	6.2nm,0.3s,baz=157,slow=12,SNR=55						
MAT	Matsushiro	3.77	343	P	Pn	22 55 48.3	-0.5
MAT				*e*S	Sn	22 56 32.5	-1.9
JCJ	Chichijima	6.24	158	P	Pn	22 56 19.7	-1.1
	15nm,0.3s,baz=285,slow=20,SNR=18						
JCJ				S	Sn	22 57 28.4	-3.5
	18nm,0.3s,baz=282,slow=22,SNR=5.4						
ASAJ	Asahikawa	11.42	11	P	Pn	22 57 25.8	-2.7
	3.2nm,0.3s,baz=229,slow=11,SNR=30						
USRK	Ussuriysk Ar.	12.71	335	P	Pn	22 57 43.6	-1.4
	baz=132,slow=14						
KLR	Kul'dur	17.30	343	P	P	22 58 38.8	-1.2
	0.0nm,0.3s,baz=147,slow=10,SNR=15						
H11N2	WAKE ISLAND Hy	27.71	111	T	T	23 29 47.2	
	baz=306,slow=75,SNR=8.5						
H11N1	WAKE ISLAND Hy	27.72	112	T	T	23 29 49.7	
	baz=306,slow=75,SNR=4.5						
H11N3	WAKE ISLAND Hy	27.73	112	T	T	23 29 44.1	
	baz=306,slow=75,SNR=5.4						
MKAR	Makanchi Array	45.12	305	P	P	23 02 49.4	+0.3
	0.3nm,0.5s,baz=87,slow=9.1,SNR=2.8						
KURBB	Kurchatov Arra	47.42	311	P	P	23 03 06.9	+0.1
	0.2nm,0.4s,baz=91,slow=8.4,SNR=2.8						
WRA	Warramunga Arr	52.81	186	P	P	23 03 47.7	+0.1
	0.6nm,0.4s,baz=0.7,slow=7.7,SNR=11						
ILAR	Eielson Array	53.79	31	P	P	23 03 56.0	+1.8
	0.4nm,0.7s,baz=259,slow=6.6,SNR=4.6						
ASAR	Alice Springs	56.53	186	P	P	23 04 15.0	+0.6
	0.3nm,0.4s,baz=356,slow=6.1,SNR=10						
FINES	FINESS Array B	71.73	332	P	P	23 05 53.5	+0.7
	2.8nm,1.0s,baz=284,slow=7.7,SNR=5.2						
TXAR	Lajitas Array	93.85	51	P	P	23 07 50.5	+2.5
	0.4nm,0.5s,baz=303,slow=2.8,SNR=6.8						

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*ISCJB **14** 22:59:28.7±0.5, 33°.31N±0°.03×35°.34E±0°.05, h12^{km}±6^{km}, Error ellipse: s-maj=7.4km s-min=3.0km az=32.2*
*GII **14** 22:59:28.4±0.2, 33°.30N×35°.36E, h3^{km}, MD1.5/3*
*GRAL **14** 22:59:29.8±0.3, 33°.31N×35°.34E, h0^{km}±84^{km}, MD2.6*
*CSEM **14** 22:59:29.8, 33°.31N×35°.34E, h0^{km}, ML2.6*
ISC 14 22:59:28.7±1.0**, 33°.34N**±0°.03×**35°.33E**±0°.04**, h14**^{km}±8^{km}**, n24, σ0^s.40**/39**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNTI	Hanita	0.28	208	Pg	Pg	22 59 34.5	-0.1
HNTI				Sg	Sg	22 59 38.8	+0.2
KSDI	Kefar Szold	0.31	118	Pg	Pg	22 59 35.0	0.0
KSDI				Sg	Sg	22 59 39.3	0.0
MMA0B	Mount Meron ar	0.33	170	Pg	Pg	22 59 34.8	-0.6
MMA0B				Sg	Sg	22 59 40.1	+0.2
SHBL	Chebaa	0.34	88	*e*P	Pg	22 59 35.9	+0.2
SHBL				*e*S	Sg	22 59 40.5	0.0
SHBL	Chebaa	0.34	88	*e*P	Pg	22 59 35.9	+0.2
SHBL				*e*S	Sg	22 59 40.5	0.0
NATI	Neve Ativ	0.35	102	Pg	Pg	22 59 35.6	-0.1
NATI				Sg	Sg	22 59 40.5	+0.1
QRWL	Qaraoun	0.36	54	*e*P	Pb	22 59 36.6	-0.4
QRWL				*e*S	Sg	22 59 41.5	+0.5
QRWL	Qaraoun	0.36	54	*e*P	Pb	22 59 36.6	-0.4
QRWL				*e*S	Sg	22 59 41.5	+0.5
DQRL	Deir Qamar	0.42	28	*e*P	Pb	22 59 37.6	-0.3
DQRL				*e*S	Sb	22 59 43.5	-0.7
DQRL	Deir Qamar	0.42	28	*e*P	Pb	22 59 37.7	-0.3
DQRL				*e*S	Sb	22 59 43.5	-0.7
RCY	Rachaya	0.45	69	*e*P	Pb	22 59 38.0	-0.5
RCY				*e*S	Sg	22 59 44.1	+0.3
KSHT	Keshet	0.53	131	Pg	Pg	22 59 39.3	+0.1
BLGI	Bet Lehem HaGe	0.61	191	Pg	Pg	22 59 40.5	-0.1
BLGI				Sg	Sb	22 59 49.7	0.0
BHL	Bhannes	0.63	25	*e*P	Pb	22 59 41.4	-0.1
BHL	Bhannes	0.63	25	*e*P	Pb	22 59 41.4	-0.1
OFRI	‘Ofer	0.77	202	Pg	Pg	22 59 43.4	-0.2
OFRI				Sg	Sb	22 59 54.9	+0.6
MMLI	Mount Malkishu	0.90	175	Pg	Pb	22 59 45.3	-0.8
HWQ	Hawqa	1.07	28	*e*P	Pn	22 59 49.5	+0.1
HWQ	Hawqa	1.07	28	*e*P	Pn	22 59 49.5	+0.1
HMDT	Nahal Hemdat	1.09	171	Pg	Pb	22 59 48.8	-0.5
HMDT				Sg	Sn	23 00 04.5	0.0
SLTI	Sal’it	1.12	193	Pg	Pb	22 59 49.4	-0.4
SLTI				Sg	Sg	23 00 04.9	+0.1
DSI	Dead Sea	1.76	179	Pn	Pn	22 59 59.3	+0.5
AMAZ	Amatzia	1.83	191	Pn	Pn	23 00 00.6	+0.8
PRNI	Paran	2.99	185	Pn	Pn	23 00 16.3	+0.6

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*ISCJB **14** 23:14:40.0±0.3, 51°.48N±0°.02×16°.21E±0°.03, h0^{km}, Error ellipse: s-maj=2.7km s-min=2.2km az=157.9*
*CSEM **14** 23:14:42.0±0.1, 51°.46N×16°.17E, h2^{km}, ML3.4/9, Mw2.6, Error ellipse: s-maj=3.6km s-min=2.4km az=94.0*
*IDC **14** 23:14:43.3±0.8, 51°.42N×16°.21E, h0^{km}, mb1 3.3/6, mb1mx3.1/62, mbtmp3.2/6, ML2.9/6, Error ellipse: s-maj=14.9km s-min=6.8km az=101.0*
*PRU **14** 23:14:43.5, 51°.43N×16°.17E, h0^{km}*
*VIE **14** 23:14:45.2±1.0, 51°.25N×16°.30E, h0^{km}, mb2.4/6, ml2.8/7, Error ellipse: s-maj=10.4km s-min=7.6km az=44.0 52 km WNW of Wroclaw Suspected Mining induced.*
*UPP **14** 23:14:46.6±3.0, 51°.69N×15°.76E, h2^{km}, ML1.7*
*WAR **14** 23:14:47.9, 51°.02N×15°.80E, h1^{km}, Mw2.6*
ISC 14 23:14:41.1±0.6**, 51°.52N**±0°.03×**16°.20E**±0°.02**, h0**^{km}**, n79, σ1^s.44**/136**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.68	175	*i* Pg	Pg	23 14 54.7	+0.6
KSP				*e*Sg	Sg	23 15 02.6	-0.3
KSP	Ksiaz	0.68	175	*i* Pg	Pg	23 14 54.7	+0.6
KSP				*e*Sg	Sg	23 15 02.6	-0.3
UPC	Upice	1.02	187	*e*PG	Pg	23 15 00.8	+0.2
UPC				*e*SG	Sg	23 15 11.8	-2.0
	comp=Z,155nm,0.4s						
UPC	Upice	1.02	187	Pg	Pg	23 15 00.8	+0.2
UPC				Sg	Sg	23 15 11.8	-2.0
	155nm,0.4s						
DPC	Dobruska-Polom	1.17	176	*e*PG	Pg	23 15 03.7	+0.1
DPC				*e*SG	Sg	23 15 17.5	-1.2
	comp=Z,58nm,0.4s						
DPC	Dobruska-Polom	1.17	176	Pg	Pg	23 15 03.7	+0.1
DPC				Sg	Sg	23 15 17.5	-1.2
	58nm,0.4s						
PVCC	Panska Ves	1.43	227	*e*PG	Pb	23 15 09.1	+0.5
PVCC				*e*SG	Sn	23 15 27.9	+0.1
	comp=Z,207nm,0.3s						
PVCC	Panska Ves	1.43	227	Pg	Pb	23 15 09.1	+0.5
PVCC				Sg	Sn	23 15 27.9	+0.1
	207nm,0.3s						
KRLC	Kraliky	1.49	165	*e*PG	Pn	23 15 08.6	-0.6
KRLC				*e*SG	Sg	23 15 27.8	-1.2
	comp=Z,9.1nm,0.3s						
KRLC	Kraliky	1.49	165	Pg	Pn	23 15 08.6	-0.6
KRLC				Sg	Sg	23 15 27.8	-1.2
	9.1nm,0.3s						
BRG	Berggiesshubel	1.56	246	PN	Pn	23 15 10.2	+0.1
BRG				PG	Pg	23 15 12.1	+1.1
BRG				SG	Sg	23 15 32.0	+0.8
	64nm,0.3s						
PRA	Prague	1.83	218	*e*PN	Pn	23 15 14.2	+0.4
PRA				*e*PG	Pb	23 15 16.0	+0.5
PRA				*e*SG	Sb	23 15 38.8	-0.2
PRA	Prague	1.83	218	Pn	Pn	23 15 14.2	+0.4
GOPC	GO Pecny, Ondr	1.84	210	*e*PG	Pb	23 15 15.6	0.0
GOPC				*e*SG	Sb	23 15 39.3	+0.1
GOPC	GO Pecny, Ondr	1.84	210	Pg	Pb	23 15 15.6	0.0
GOPC				Sg	Sb	23 15 39.3	+0.1
PRU	Pruhonice	1.86	215	*e*PG	Pb	23 15 16.2	+0.3
PRU				*e*SG	Sb	23 15 39.5	-0.2
	comp=Z,45nm,0.5s						
PRU	Pruhonice	1.86	215	Pg	Pb	23 15 16.2	+0.3
PRU				Sg	Sb	23 15 39.5	-0.2
	45nm,0.5s						
MORC	Moravsky Berou	1.94	153	*e*PN	Pn	23 15 15.2	-0.2
MORC				*e*SN	Sn	23 15 39.3	-1.2
CLL	Collm	2.01	265	*e*Pn	Pn	23 15 17.0	+0.7
CLL				*e*Pg	Pg	23 15 20.0	+0.3
CLL				*e*Sg	Sg	23 15 46.0	+0.2
	comp=Z,22nm,0.6s						
OKC	Ostrava-Krasne	2.09	143	*e*PN	Pn	23 15 17.3	-0.1
OKC				*e*PG	Pg	23 15 20.9	-0.2
OKC				*e*SG	Sb	23 15 46.5	+0.2
	comp=Z,43nm,0.7s						
OKC	Ostrava-Krasne	2.09	143	Pn	Pn	23 15 17.3	-0.1
CHZP	Chorzow	2.15	124	*e*Pg	Pg	23 15 25.3	+3.0
CHZP				*e*Sg	Sg	23 15 52.3	+2.1
CHZP	Chorzow	2.15	124	*e*Pg	Pg	23 15 25.3	+3.0
CHZP				*e*Sg	Sg	23 15 52.3	+2.1
CHZP	Chorzow	2.15	124	*e*Pg	Pg	23 15 25.3	+3.0
CHZP				*e*Sg	Sg	23 15 52.3	+2.1
VRAC	Vranov	2.23	173	Pn	Pn	23 15 20.3	+1.0
	comp=Z,2.9nm,0.3s,baz=344,slow=13,SNR=21						
VRAC				Pg	Pg	23 15 23.3	-0.4
	comp=Z,2.9nm,0.3s,baz=344,slow=17,SNR=15						
VRAC				Lg	Lg	23 15 49.7	
	comp=Z,6.3nm,0.3s,baz=258,slow=22,SNR=10						
VRAC	Vranov	2.23	173	*e*PN	Pn	23 15 20.0	+0.7
VRAC				*e*SG	Sb	23 15 50.9	+0.6
KRUC	Moravsky	2.46	177	*e*PN	Pn	23 15 23.5	+1.0
KRUC				*e*SG	Sg	23 15 58.5	-1.7
OJC	Ojcow	2.62	118	*e*Pg	Pg	23 15 30.9	-0.5
OJC				*e*Sg	Sg	23 16 06.1	+0.7
OJC	Ojcow	2.62	118	*e*Pg	Pg	23 15 30.9	-0.5
OJC				*e*Sg	Sg	23 16 06.1	+0.7
OJC	Ojcow	2.62	118	*e*Pg	Pg	23 15 30.9	-0.5
OJC				*e*Sg	Sg	23 16 06.1	+0.7
NKC	Novy Kostel	2.70	243	*e*PN	Pn	23 15 27.0	+1.2
NKC				*e*PG	Pg	23 15 33.3	+0.4
NKC	Novy Kostel	2.70	243	Pn	Pn	23 15 27.0	+1.2
JAVC	Velka Javorina	2.83	160	*e*PN	Pn	23 15 29.0	+1.5
JAVC				*e*SG	Sg	23 16 12.4	+0.6
KHC	Kasperske Hory	2.92	216	*e*PN	Pn	23 15 29.4	+0.5
KHC				*e*PG	Pb	23 15 35.6	+1.5
KHC				*e*SN	Sn	23 16 03.7	-1.0
KHC				*e*SG	Sb	23 16 12.4	+2.1
	comp=Z,16nm,0.3s						
KHC	Kasperske Hory	2.92	216	Pn	Pn	23 15 29.4	+0.5
SMOL	Smolenice	3.11	165	*e*PG	Pg	23 15 40.7	0.0
SMOL				*e*SG	Sg	23 16 20.9	-0.1
GERES	GERESS Array B	3.12	212	Pn	Pn	23 15 32.6	+1.0
	comp=Z,0.6nm,0.3s,baz=34,slow=13,SNR=20						
GERES				Pg	Pb	23 15 39.0	+1.4
	comp=Z,6.5nm,0.3s,baz=31,slow=19,SNR=59						
GERES				Lg	Lg	23 16 18.3	
	comp=Z,5.3nm,0.3s,baz=33,slow=27,SNR=9.2						
LANS	Liptovska Anna	3.16	137	*e*PN	Pn	23 15 32.5	+0.3
LANS				*e*PG	Pg	23 15 42.1	+0.4
LANS				*e*SG	Sg	23 16 24.7	+2.0
MODS	Modra-Piesok	3.23	167	*e*PG	Pg	23 15 43.1	+0.2
MODS				*e*SG	Sg	23 16 23.7	-0.9
MODS				*e*LG	Lg	23 16 27.8	
NIE	Niedzica	3.36	127	*e*P	Pg	23 15 44.4	-1.1
NIE				*e*S	Sg	23 16 28.8	-0.1
NIE	Niedzica	3.36	127	*e*P	Pg	23 15 44.4	-1.1
NIE				*e*S	Sg	23 16 28.8	-0.1
NIE	Niedzica	3.36	127	*e*P	Pg	23 15 44.4	-1.1
NIE				*e*S	Sg	23 16 28.8	-0.1
VYHS	Vyhne	3.47	150	*e*PG	Pg	23 15 50.1	+2.5
VYHS				*e*SG	Sg	23 16 31.2	-1.4
CONA	Conrad Observa	3.60	184	*i* Pn	Pn	23 15 38.7	+0.5
	comp=Z,0.2nm,0.1s						
CONA	Conrad Observa	3.60	184	Pn	Pn	23 15 38.7	+0.5
	comp=Z,0.2nm,0.1s						
MOA	Molln	3.88	200	*i* Pn	Pn	23 15 42.8	+0.8
	comp=Z,3.3nm,0.4s						
MOA				Sg	Sg	23 16 44.4	-1.3
	comp=Z,16nm,0.5s						
MOA	Molln	3.88	200	Pn	Pn	23 15 42.8	+0.8
	comp=Z,3.3nm,0.4s						
MOA				Sg	Sg	23 16 44.4	-1.3
	comp=Z,16nm,0.5s						
ARSA	Arzberg	4.30	186	*e*Pn	Pn	23 15 48.8	+1.1
	comp=Z,1.2nm,0.3s						
ARSA				Sg	Sg	23 16 58.7	-0.3
	comp=Z,7.0nm,0.5s						
ARSA	Arzberg	4.30	186	Pn	Pn	23 15 48.8	+1.1
	comp=Z,1.2nm,0.3s						
ARSA				Sg	Sg	23 16 58.7	-0.3
	comp=Z,7.0nm,0.5s						
BLEU	Blekinge	4.80	357	P	Pn	23 15 56.0	+1.5
BLEU	Blekinge	4.80	357	P	Pn	23 15 56.0	+1.5
BJUU	Bjuv	4.94	339	P	Pn	23 15 56.8	+0.3
BJUU				S	Sn	23 16 52.0	-2.2
BJUU	Bjuv	4.94	339	P	Pn	23 15 56.8	+0.3
BJUU				S	Sn	23 16 52.0	-2.2
DEL	Delary	5.15	345	P	Pn	23 16 00.2	+0.8
DEL				S	Sn	23 16 57.1	-2.3
DEL	Delary	5.15	345	P	Pn	23 16 00.2	+0.8
DEL				S	Sn	23 16 57.1	-2.3
WATA	Walderalm	5.16	218	*i* Pn	Pn	23 16 02.8	+3.1
	comp=Z,1.8nm,0.3s						
WATA	Walderalm	5.16	218	Pn	Pn	23 16 02.8	+3.1
	comp=Z,1.8nm,0.3s						
RETA	Reutte	5.37	223	*i* Pn	Pn	23 16 03.1	+0.6
	comp=Z,0.5nm,0.2s						
RETA	Reutte	5.37	223	Pn	Pn	23 16 03.1	+0.6
	comp=Z,0.5nm,0.2s						
VXJU	Vaexsjoe	5.46	353	P	Pn	23 16 05.1	+1.4
VXJU	Vaexsjoe	5.46	353	P	Pn	23 16 05.1	+1.4
OSKU	Oskarshamn	5.69	359	P	Pn	23 16 08.5	+1.7
OSKU	Oskarshamn	5.69	359	P	Pn	23 16 08.5	+1.7
GNOU	Gnosjoe	5.96	347	P	Pn	23 16 11.7	+1.3
GNOU	Gnosjoe	5.96	347	P	Pn	23 16 11.7	+1.3
EKSU	Eksjoe	6.09	355	P	Pn	23 16 13.9	+1.6
EKSU	Eksjoe	6.09	355	P	Pn	23 16 13.9	+1.6
DAVOX	Davos/Dischmat	6.30	224	Pn	Pn	23 16 18.4	+3.0
	comp=Z,0.4nm,0.3s,baz=0.0,slow=14,SNR=3.8						
DAVOX				Lg	Lg	23 17 59.5	
	comp=Z,0.3nm,0.3s,baz=306,slow=21,SNR=3.0						
BORU	Boraas	6.44	343	P	Pn	23 16 18.9	+1.8
BORU	Boraas	6.44	343	P	Pn	23 16 18.9	+1.8
LNKU	Linkoeping	6.73	357	P	Pn	23 16 22.3	+1.2
LNKU				S	Sn	23 17 35.2	-3.2
LNKU	Linkoeping	6.73	357	P	Pn	23 16 22.3	+1.2
LNKU				S	Sn	23 17 35.2	-3.2
FKPU	Falk	6.81	349	P	Pn	23 16 23.5	+1.4
FKPU	Falk	6.81	349	P	Pn	23 16 23.5	+1.4
VIKU	Vikbolandet	7.00	2	P	Pn	23 16 26.4	+1.6
HFS	Hagfors	8.75	352	Pn	Pn	23 16 49.0	+0.3
	comp=Z,0.2nm,0.3s,baz=166,slow=15,SNR=8.1						
FINES	FINESS Array B	11.33	25	Pn	Pn	23 17 23.9	-0.1
	comp=Z,0.2nm,0.3s,baz=208,slow=11,SNR=6.8						
FINES				Sn	Sn	23 19 24.1	-7.1
	comp=Z,0.1nm,0.3s,baz=197,slow=23,SNR=1.6						
EKA	Eskdalemuir Ar	12.15	296	Pn	Pn	23 17 35.6	+0.2
	baz=101,slow=14,SNR=1.8						
ARCES	ARCESS Array B	18.60	10	Pn	P	23 18 57.8	-1.8
	comp=Z,0.2nm,0.3s,baz=196,slow=12,SNR=6.6						

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*CSEM **14** 23:19:55.5±0.2, 67°.83N×20°.26E, h2^{km}, ML1.7, Mining explosion.*
*UPP **14** 23:19:55.7±0.1, 67°.82N×20°.21E, h0^{km}, ML1.7*
HEL 14 23:19:56.4±0.1**, 67°.83N**×**20°.23E, h0**^{km}**, ML1.6, ML1.7**(UPP)**, Explosion, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.14	18	P	Pg	23 19 58.6	-0.4
KUA				S	Sg	23 20 00.8	+0.1
KUA	Kurravaara	0.14	18	*i* P	Pg	23 19 58.6	-0.4
KUA				*i* S	Sg	23 20 00.8	+0.1
KUA	Kurravaara	0.14	18	P	Pg	23 19 58.6	-0.4
KUA				S	Sg	23 20 00.8	+0.1
NIKU	Nikkaluokta	0.45	276	P	Pg	23 20 04.2	-0.8
NIKU				S	Sg	23 20 10.4	-0.5
NIKU	Nikkaluokta	0.45	276	*i* P	Pg	23 20 04.2	-0.8
NIKU				*i* S	Sg	23 20 10.4	-0.5
NIKU	Nikkaluokta	0.45	276	P	Pg	23 20 04.2	-0.9
NIKU				S	Sg	23 20 10.4	-0.5
SALU	Saltoluokta	0.80	237	P	Pg	23 20 10.6	-1.0
SALU				S	Sg	23 20 21.3	-0.6
SALU	Saltoluokta	0.80	237	*i* P	Pg	23 20 10.6	-1.0
SALU				*i* S	Sg	23 20 21.3	-0.6
SALU	Saltoluokta	0.80	237	P	Pg	23 20 10.6	-1.0
SALU				S	Sg	23 20 21.3	-0.6
KIF	Kilpisjarvi	1.20	10	*e*PB	Pg	23 20 18.9	-0.6
KIF				MSG		23 20 34.3	
	comp=Z,7.6nm,0.2s						
KIF				*e*S	Sg	23 20 34.9	-0.1
KIF	Kilpisjarvi	1.20	10	*e*Pb	Pg	23 20 18.9	-0.5
KIF				*e*S	Sg	23 20 34.8	-0.2
PAJU	Pajala	1.38	125	P	Pg	23 20 20.9	-1.8
PAJU	Pajala	1.38	125	*e*P	Pg	23 20 20.9	-1.8
PAJU	Pajala	1.38	125	P	Pg	23 20 20.9	-1.8
HEF	Hetta	1.41	64	*e*PG	Pn	23 20 21.8	-1.5
	baz=247						
HEF				MSG		23 20 39.5	
	comp=Z,3.1nm,0.2s						
HEF	Hetta	1.41	64	*e*Pg	Pn	23 20 21.8	-1.5
ERTU	Ertsjaerv	1.49	148	P	Pn	23 20 23.2	-1.2
ERTU	Ertsjaerv	1.49	148	*e*P	Pn	23 20 22.8	-1.6
ERTU	Ertsjaerv	1.49	148	*e*P	Pn	23 20 22.8	-1.6
HARU	Harads	1.70	170	P	Pn	23 20 26.4	-0.8
HARU	Harads	1.70	170	*e*P	Pn	23 20 26.4	-0.8
HARU	Harads	1.70	170	P	Pn	23 20 26.4	-0.8
KALU	Kalix	2.33	146	P	Pn	23 20 36.3	+0.4
KALU	Kalix	2.33	146	*e*P	Pn	23 20 36.2	+0.3
KALU	Kalix	2.33	146	*e*P	Pn	23 20 36.2	+0.3
TOF	Tornio	2.38	136	*e*PB	Pn	23 20 37.3	+0.7
	baz=323						
TOF				MSG		23 21 06.9	
	comp=Z,2.6nm,0.2s						
TOF				*e*SG	Sb	23 21 09.7	-0.3
TOF	Tornio	2.38	136	*e*Pb	Pn	23 20 37.3	+0.7
TOF	Tornio	2.38	136	*e*Sg	Sb	23 21 09.7	-0.3
	comp=Z,2.6nm,0.2s						
SGF	Sodankyl	2.44	96	*e*PB	Pn	23 20 38.8	+1.3
	baz=281						
SGF				*e*SG	Sb	23 21 13.1	+1.4
SGF	Sodankyl	2.44	96	*e*Pb	Pn	23 20 38.8	+1.4
SGF	Sodankyl	2.44	96	*e*Sg	Sb	23 21 13.1	+1.5
RNF	Rovaniemi	2.56	116	*e*PB	Pn	23 20 40.1	+1.0
RNF				*e*SB	Sb	23 21 13.8	-1.4
RNF	Rovaniemi	2.56	116	*e*Pb	Pn	23 20 40.1	+1.0
RNF	Rovaniemi	2.56	116	*e*Sb	Sb	23 21 13.8	-1.4

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*CSEM **14** 23:19:59.0±0.3, 67°.69N×20°.99E, h1^{km}, ML1.7, Error ellipse: s-maj=14.3km s-min=6.8km az=26.0, Mining explosion.*
UPP 14 23:20:03.7±0.1**, 67°.83N**×**20°.18E, h0**^{km}**, ML1.7, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	Kurravaara	0.14	26	P	Pg	23 20 06.6	+0.3
KUA				S	Sg	23 20 08.7	+0.6
KUA	Kurravaara	0.14	26	P	Pg	23 20 06.6	+0.2
KUA				S	Sg	23 20 08.7	+0.6
NIKU	Nikkaluokta	0.43	275	S	Sg	23 20 18.1	+0.5
NIKU	Nikkaluokta	0.43	275	S	Sg	23 20 18.1	+0.5
SALU	Saltoluokta	0.78	236	P	Pg	23 20 18.4	-0.2
SALU	Saltoluokta	0.78	236	P	Pg	23 20 18.4	-0.3

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*IDC **14** 23:34:12.5±8.1, 59°.32S×26°.01W, h65^{km}±73^{km}, mb3.6/5, mb1 3.8/6, mb1mx3.6/34, mbtmp4.0/6, ML4.6/1, Error ellipse: s-maj=42.0km s-min=24.4km az=75.0*
ISC 14 23:34:10.1±0.8**, 59°.4S**±0°.1×**25°.8W**±0°.2**, h40**^{km}**, n17, σ2^s.46**/14**, mb3.9**/5**, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	Neumayer--Stat	13.41	154	P	Pn	23 37 20.0	+2.5
VNA1				S	Sn	23 39 37.3	-7.6
VNA3	Neumayer Olymp	13.58	157	P	Pn	23 37 21.7	+1.9
VNA3				S	Sn	23 39 37.9	-11
SNAA	Sanae	15.39	152	P	Pn	23 37 46.4	+2.4
SNAA				S	Sn	23 40 27.3	-5.7
SNAA	Sanae	15.39	152	P	Pn	23 37 46.6	+2.6
	2.6nm,0.3s,baz=306,slow=15,SNR=181						
SNAA				S	Sn	23 40 20.2	-13
	0.2nm,0.3s,baz=260,slow=15,SNR=3.3						
QSPA	South Pole Qui	30.83	180	P	P	23 40 23.0	+1.1
	1.4nm,0.6s,baz=136,slow=2.6,SNR=7.8						
VNDA	Vanda	43.24	182	P	P	23 42 07.3	+0.7
	0.8nm,0.6s,baz=192,slow=8.3,SNR=9.5						
H10S2	ASCENSION HYDR	51.05	14	T	T	00 37 43.8	
	baz=188,slow=75,SNR=6.9						
H10S3	ASCENSION HYDR	51.05	14	T	T	00 37 43.9	
	baz=188,slow=75,SNR=7.1						
H10S1	ASCENSION HYDR	51.07	14	T	T	00 37 45.0	
	baz=188,slow=75,SNR=6.7						
H10N1	ASCENSION HYDR	52.17	14	T	T	00 39 09.7	
H10N3	ASCENSION HYDR	52.17	14	T	T	00 39 09.7	
	SNR=3.5						
H10N2	ASCENSION HYDR	52.18	14	T	T	00 39 09.7	
LPAZ	La Paz	52.94	306	P	P	23 43 21.4	-1.5
	0.4nm,0.4s,baz=97,slow=7.9,SNR=4.1						
TORD	Torodi Ar. Bea	75.66	28	P	P	23 45 50.2	-0.6
	0.5nm,0.4s,baz=199,slow=6.2						
TORD				pP	sP	23 46 09.7	+2.3
ASAR	Alice Springs	95.56	161	P	P	23 47 29.6	-1.3
	0.3nm,0.5s,baz=184,slow=4.5,SNR=6.7						
ARCES	ARCESS Array B	133.79	22	PKP	PKPdf	23 53 20.2	-0.5
	2.3nm,0.9s,baz=300,slow=2.4,SNR=4.9						
SONM	Songino Array	150.06	91	PKPbc	PKPbc	23 53 54.8	-0.6
	0.6nm,0.4s,baz=207,slow=2.7,SNR=4.1						
SONM				pPKPbc	pPKPab	23 54 13.5	-0.3
	0.9nm,0.6s,baz=251,slow=2.3,SNR=4.5						

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*ISCJB **14** 23:52:09.8±0.7, 6°.16S±0°.05×105°.38E±0°.04, h18^{km}±7^{km}, mb3.8/6, Error ellipse: s-maj=10.7km s-min=4.3km az=38.6*
*DJA **14** 23:52:09.6±0.3, 6°S±3°×10°5E±°, h10^{km}, M3.6/10, MLv3.6/10*
*IDC **14** 23:52:16.4±5.2, 5°.94S×105°.35E, h84^{km}±44^{km}, mb3.5/6, mb1 3.7/7, mb1mx3.3/61, mbtmp3.8/7, ML3.8/1, MS3.2/1, Ms1 3.2/1, ms1mx2.6/45, Error ellipse: s-maj=93.3km s-min=18.8km az=47.0*
ISC 14 23:52:08.9±1.1**, 6°.07S**±0°.05×**105°.41E**±0°.04**, h15**^{km}±8^{km}**, n21, σ1^s.18**/28**, mb3.8**/6**, Sunda Strait**

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

CGJI	Cibinong	0.61	152	P	Pg	23 52 19.9	-1.1
CGJI				S	Sg	23 52 28.9	-0.3
BLSI	Bandar Lampung	0.71	347	P	Pg	23 52 22.6	-0.3
BLSI				S	Sg	23 52 29.5	-2.8
SBJI	Serang	0.72	94	P	Pg	23 52 22.7	-0.4
SBJI				S	Sg	23 52 33.6	+1.0
KASI	Kota Agung	1.05	301	P	Pn	23 52 31.0	+1.9
KASI				S	Sb	23 52 42.2	-0.2
TNG	Tangerang	1.24	95	P	Pn	23 52 31.9	+0.2
TNG				S	Sg	23 52 50.0	+1.0
KLI	Kotabumi	1.31	335	P	Pg	23 52 35.0	+0.7
KLI				S	Sg	23 52 52.8	+1.4
DBJI	Dramaga	1.42	110	P	Pn	23 52 34.3	+0.1
SKJI	Sukabumi	1.48	129	P	Pn	23 52 35.4	+0.4
SKJI				S	Sn	23 52 55.1	+1.1
LWLI	Liwa	1.70	308	P	Pb	23 52 40.9	+1.0
LWLI				S	Sg	23 53 04.7	+1.0
MDSI	Maura Dua	1.99	322	P	Pb	23 52 44.1	-0.7
LEM	Lembang	2.33	109	P	Pg	23 52 54.2	+0.7
	20nm,0.3s,baz=210,slow=8.7,SNR=19						
LEM				S	Sg	23 53 23.8	0.0
	baz=303,slow=11,SNR=3.5						
LEM	Lembang	2.33	109	P	Pn	23 52 47.9	+1.1
CISI	Cisompet, Garu	2.81	122	P	Pn	23 52 54.1	+0.7
PSI	Prapat	10.93	324	LR	LR	23 59 28.9	
	comp=Z,108nm,18.4s,baz=272,slow=40						
SRAK	Srakaew	20.23	351	P	Pn	23 56 50.1	+4.5
CMAR	Chiang Mai Arr	25.19	345	P	P	23 57 33.1	-1.0
	0.3nm,0.3s,baz=165,slow=7.3,SNR=2.1						
WRA	Warramunga Arr	31.31	119	P	P	23 58 29.7	+0.8
	0.9nm,0.5s,baz=295,slow=9.9,SNR=3.2						
ASAR	Alice Springs	32.52	126	P	P	23 58 40.5	+1.0
	0.5nm,0.5s,baz=300,slow=8.1,SNR=10						
STKA	Stephens Creek	42.44	132	P	P	00 00 04.3	+1.0
	1.8nm,0.3s,baz=308,slow=8.7,SNR=5.1						
GEYT	Alibeck	62.02	319	P	P	00 02 27.5	-1.4
	1.0nm,0.8s,baz=193,slow=5.9,SNR=4.3						
BRTR	Keskin Array B	80.03	312	P	P	00 04 16.1	-2.2
	0.8nm,0.8s,baz=134,slow=7.1,SNR=5.0						

WEL 15 00:03:46.7, 44°S±1°×17°2E±°, h5^{km}±1^{km}, ML3.6/20, South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OXZ	Oxford	0.29	22	P	Pb	00 03 53.8	-0.6
OXZ				S	Sb	00 03 58.4	-1.1
EYCZ	Eyrewell	0.38	63	P	Pb	00 03 56.0	+0.1
EYCZ				P	Pg	00 03 56.0	+2.0
EYCZ				S	Sb	00 04 01.4	-0.7
MQZ	McQueen’s Vall	0.57	102	P	Pb	00 03 59.0	-0.1
RPZ	Rata Peaks	0.62	258	P	Pb	00 03 59.8	-0.1
AKCZ	Akaroa Harbour	0.79	111	P	Pb	00 04 03.3	+0.4
LTZ	Lake Taylor	0.86	19	P	Pn	00 04 04.8	-0.6
OKCZ	Okains Bay	0.86	99	P	Pb	00 04 04.7	+0.6
INZ	Inchbonnie	0.93	339	P	Pn	00 04 05.9	-0.5
WVZ	Waitaha Valley	0.99	301	P	Pn	00 04 06.9	-0.3
LBZ	Lake Benmore	1.46	237	P	Pn	00 04 13.5	-0.2
FOZ	Fox Glacier	1.51	272	P	Pg	00 04 15.5	0.0
KHZ	Kahutara	1.69	46	P	Pn	00 04 16.3	-0.5
ODZ	Otahua Downs	1.70	211	P	Pn	00 04 16.3	-0.8
DSZ	Denniston Nort	1.85	358	P	Pn	00 04 20.0	+0.9
THZ	Tophouse	1.98	23	P	Pn	00 04 20.8	-0.1
JCZ	Jackson Bay	2.30	257	P	Pn	00 04 26.2	+0.9
BSWZ	Blackbirch Sta	2.38	39	P	Pn	00 04 26.3	0.0
WKZ	Wanaka	2.41	238	P	Pn	00 04 27.5	+0.8
HHSZ	Highcliff Hill	2.47	201	P	Pg	00 04 33.5	-0.4
EAZ	Earnscleugh	2.47	228	P	Pn	00 04 27.3	-0.2
NNZ	Nelson	2.62	25	P	Pn	00 04 30.0	+0.4
TUWZ	Tuamarina	2.64	36	P	Pn	00 04 30.1	+0.2
TUZ	Tuapeka	2.85	213	P	Pn	00 04 32.1	-0.8
TCW	Tory Channel	2.97	37	P	Pn	00 04 33.7	-0.7
MLZ	Mavora Lakes	3.23	235	P	Pn	00 04 38.0	0.0
CAW	Cannon Point	3.42	45	P	Pn	00 04 39.4	-1.3
SYZ	Scrubby Hill	3.53	213	P	Pn	00 04 41.5	-0.6
MRZ	Mangatainoka R	4.01	44	P	Pn	00 04 47.3	-1.5
APZ	The Paps	4.25	219	P	Pn	00 04 51.5	-0.6

IDC 15 00:36:52.1±4.2, 6°.36S×128°.65E, h261^{km}±40^{km}, mb3.1/2, mb1 3.6/6, mb1mx3.1/52, mbtmp4.1/6, Error ellipse: s-maj=60.1km s-min=14.9km az=66.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	Baumata	6.24	232	P	Pn	00 38 21.6	-2.0
	15nm,0.3s,baz=65,slow=3.6,SNR=15						
BATI				S	S	00 39 28.3	-8.7
	4.4nm,0.3s,baz=250,slow=22,SNR=6.1						
FITZ	Fitzroy Crossi	12.04	194	P	Pn	00 39 36.5	+0.6
	0.5nm,0.3s,baz=7.0,slow=5.4,SNR=17						
FITZ				S	S	00 41 39.5	-11
	0.1nm,0.3s,baz=32,slow=19,SNR=1.4						
WRA	Warramunga Arr	14.59	158	P	Pn	00 40 07.8	+0.6
	0.7nm,0.3s,baz=342,slow=12,SNR=12						
ASAR	Alice Springs	17.94	164	P	P	00 40 44.4	+0.9
	1.7nm,0.3s,baz=345,slow=12,SNR=115						
ASAR				S	S	00 43 55.5	-0.2
	0.1nm,0.3s,baz=331,slow=16,SNR=2.7						
MKAR	Makanchi Array	66.96	327	P	P	00 47 17.1	+0.3
	0.3nm,0.4s,baz=122,slow=7.8,SNR=6.7						
KURBB	Kurchatov Arra	71.27	329	P	P	00 47 42.9	-0.2
	0.3nm,0.3s,baz=128,slow=4.7,SNR=1.9						

ISCJB ***15*** *00:38:05.8±0.7, 6°.81N±0°.04×73°.14W±0°.03, h145^{km}±6^{km}, Error ellipse: s-maj=6.4km s-min=4.9km az=143.1*

IDC ***15*** *00:38:05.5±2.7, 7°.02N×73°.22W, h156^{km}±27^{km}, mb1 3.5/3, mb1mx3.0/43, mbtmp4.0/3, Error ellipse: s-maj=143.6km s-min=15.2km az=135.0*

RSNC ***15*** *00:38:06.9±1.1, 6°.79N×73°.15W, h142^{km}±5^{km}, ML3.4, Mw3.4*

ISC 15 00:38:05.3±1.1, 6°.81N±0°.04×73°.13W±0°.04, h151^{km}±7^{km}, n24, σ0^{s}81/39, 1C-2D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	Barichara	0.22	193	*i* P	Pn	00 38 26.3	+0.2
BARC				*e*S	Sn	00 38 40.5	-1.4
BARC				*i*		00 38 42.3	
	comp=Z,1µm,0.2s						
BRRC	Barranca, Sant	0.65	297	⇓*i*P	Pn	00 38 28.2	+0.7
BRRC				*i*		00 38 28.6	
	comp=Z,925nm,0.1s						
BRRC				*e*S	Sn	00 38 44.8	+0.3
PAMC	Pamplona, Colo	0.68	39	*e*P	Pn	00 38 29.2	+0.8
PAMC				*e*S	Sn	00 38 46.2	+0.3
RUSC	La Rusia	0.91	177	⇑*i*P	Pn	00 38 30.1	+0.1
RUSC				*e*S	Sn	00 38 48.4	-0.4
RUSC				*i*		00 38 49.9	
	comp=Z,538nm,0.4s						
PTBC	PUERTO BERRIO,	1.34	259	*e*P	Pn	00 38 32.9	-0.4
PTBC				*e*S	Sn	00 38 53.4	-1.3
PTBC				*i*		00 38 57.5	
	comp=Z,177nm,0.2s						
TAMC	Tame, Arauca	1.38	105	⇓*i*P	Pn	00 38 34.6	+0.9
TAMC				*e*S	Sn	00 38 55.7	+0.1
OCAC	Ocana	1.43	353	*e*P	Pn	00 38 34.7	+0.3
OCAC				*e*S	Sn	00 38 56.2	-0.5
OCAC				*i*		00 39 00.5	
	comp=Z,1µm,0.2s						
YOPC	Yopal, Colombi	1.61	154	*e*P	Pn	00 38 37.0	+0.7
YOPC				*e*S	Sn	00 38 59.7	-0.3
YOPC				*i*		00 39 03.0	
	comp=Z,157nm,0.2s						
ZARC	Zaragoza, Cauc	1.84	292	*e*P	Pn	00 38 39.3	+0.6
ZARC				*e*S	Sn	00 39 04.9	+0.6
ZARC				*i*		00 39 10.9	
	comp=Z,316nm,0.5s						
NORC	Norcasia	2.12	234	*e*P	Pn	00 38 42.4	+0.4
NORC				*e*S	Sn	00 39 09.3	-0.9
CHIC	Chingaza	2.25	195	*e*P	Pn	00 38 44.2	+0.4
CHIC				*i*		00 38 47.1	
	comp=Z,105nm,0.5s						
CHIC				*e*S	Sn	00 39 13.8	+0.4
ROSC	El Rosal	2.29	211	P	Pn	00 38 46.3	+2.1
	comp=Z,40nm,0.3s,baz=74,slow=18,SNR=142						
ROSC				S	Sn	00 39 13.2	-1.0
	comp=Z,29nm,0.3s,baz=342,slow=23,SNR=10						
ROSC	El Rosal	2.29	211	*e*S	Sn	00 39 14.5	+0.3
ROSC				*i*		00 39 24.0	
	comp=Z,192nm,0.3s						
HELC	Santa Helena	2.46	256	*e*P	Pn	00 38 47.2	+0.9
HELC				*e*S	Sn	00 39 17.6	-0.3
HELC				*i*		00 39 26.7	
	comp=Z,113nm,0.5s						
VILC	Villavicencio,	2.74	192	*e*P	Pn	00 38 49.2	-0.4
VILC				*i*		00 38 57.0	
	comp=Z,62nm,0.5s						
GUYC	Guyana, Colomb	2.74	235	*e*P	Pn	00 38 51.2	+1.2
GUYC				*e*S	Sn	00 39 23.5	-0.8
GUYC				*i*		00 39 31.4	
	comp=Z,148nm,0.6s						
DBBC	Dabeiba	3.06	274	*e*P	Pn	00 38 54.3	+0.7
TOLC	Tolima	3.10	225	*e*P	Pn	00 38 55.8	+1.5
SDV	Santo Domingo	3.22	50	P	Pn	00 38 56.1	+0.4
	comp=Z,9.5nm,0.3s,baz=225,slow=4.3,SNR=6.2						
SDV				S	Sn	00 39 34.1	-0.7
	comp=Z,26nm,0.3s,baz=252,slow=19,SNR=9.1						
SDV	Santo Domingo	3.22	50	*e*P	Pn	00 38 56.2	+0.5
PRAC	Prado	3.54	210	*e*P	Pn	00 38 59.8	+0.1
PCRV	Puerto La Cruz	9.04	68	P	Pn	00 40 13.4	+0.7
	comp=Z,0.7nm,0.3s,baz=284,slow=4.2,SNR=1.2						
ASAR	Alice Springs	149.09	234	PKPbc	PKPbc	00 57 36.0	-0.6
	comp=Z,0.2nm,0.4s,baz=120,slow=3.6,SNR=6.4						
WRA	Warramunga Arr	150.32	241	PKPbc	PKPbc	00 57 38.6	-1.1
	comp=Z,0.7nm,0.4s,baz=110,slow=3.0,SNR=5.3						

IDC 15 00:49:27.1±1.3, 29°.44S×179°.00W, h368^{km}±19^{km}, mb2.9/2, mb1 3.2/3, mb1mx2.9/43, mbtmp3.9/3, Error ellipse: s-maj=55.2km s-min=36.7km az=127.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	0.96	79	P	Pn	00 50 14.7	+0.1
	335nm,0.3s,baz=261,slow=24,SNR=7.7						
RAO				S	S	00 50 42.0	-11
	98nm,0.3s,baz=81,slow=19,SNR=1.3						
URZ	Urewera	9.37	199	P	Pn	00 51 37.0	-0.5
	1.9nm,0.3s,baz=271,slow=5.7,SNR=15						
URZ				S	S	00 53 18.0	-6.4
	3.7nm,0.3s,baz=220,slow=21,SNR=11						
ASAR	Alice Springs	42.30	266	P	P	00 56 46.4	+0.1
	0.3nm,0.4s,baz=102,slow=6.3,SNR=4.5						
WRA	Warramunga Arr	43.20	272	P	P	00 56 53.1	-0.4
	0.7nm,0.5s,baz=108,slow=7.9,SNR=3.0						
FINES	FINESS Array B	143.94	340	PKP	PKPbc	01 08 17.7	+0.5
	1.0nm,0.5s,baz=43,slow=4.5,SNR=14						

CSEM ***15*** *01:01:30.9±0.2, 34°.04N×4°.98W, h5^{km}, ML2.8/14, Error ellipse: s-maj=6.4km s-min=4.2km az=88.0*

MDD ***15*** *01:01:31.6±0.4, 34°.02N×4°.97W, h0^{km}, mb3.7/6, Error ellipse: s-maj=7.1km s-min=3.2km az=90.0, PRXIMO*

SFS ***15*** *01:01:31.0, 34°.02N×4°.98W, h0^{km}, ML3.7*

ISCJB ***15*** *01:01:31.6±0.7, 34°.10N±0°.03×5°.12W±0°.04, h15^{km}, Error ellipse: s-maj=5.1km s-min=4.1km az=17.9*

CNRM ***15*** *01:01:32.7, 33°.94N×4°.69W, h7^{km}*

INMG ***15*** *01:01:32.1±1.5, 33°.91N×5°.08W, h23^{km}±10^{km}, ML2.2, Error ellipse: s-maj=6.1km s-min=3.1km az=77.0*

ISC 15 01:01:32.3±0.8, 34°.01N±0°.04×5°.01W±0°.04, h15^{km}, n70, σ1^{s}80/110, Morocco

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SICH	Sidi Chahed	0.28	291	Lg	Lg	01 01 52.4	
CZD	Col de Zad	0.97	182	Pg	Pb	01 01 50.1	-1.0
CZD				Lg	Lg	01 02 02.2	
CZD	Col de Zad	0.97	182	P	Pb	01 01 50.1	-1.0
CZD				S	Sb	01 02 02.2	-1.6
RSA	Sarsar	1.10	322	Pg	Pg	01 01 57.6	+4.0
RSA				Lg	Lg	01 02 16.0	
CHEFC	Chefchaouen	1.13	346	Lg	Lg	01 02 15.2	
MPAL	Palemas	1.50	36	Pn	Pn	01 01 58.5	-0.3
MPAL				Sn	Sb	01 02 18.3	-0.4
MPAL	Palemas	1.50	36	P	Pn	01 01 58.5	-0.3
MPAL				Sn	Sb	01 02 18.3	-0.4
EMEL	Melilla	2.13	52	Sn	Sn	01 02 33.3	-0.2
	80nm,0.4s,SNR=7.9						
AVE	Averroes	2.13	251	*e*P	Pg	01 02 15.8	+2.6
AVE				*e*S	Sg	01 02 45.0	+4.2
EMLI	Melilla	2.13	52	Sn	Sn	01 02 33.3	-0.3
	80nm,0.4s,SNR=7.9						
EMIJ	Mijas	2.56	4	Pn	Pn	01 02 12.3	-1.0
	0.6nm,0.2s,SNR=7.9						
EMIJ				Sn	Sn	01 02 43.1	-1.1
	2.4nm,0.2s,SNR=6.0						
EMIJ	Mijas	2.56	4	Pn	Pn	01 02 12.3	-1.0
	0.6nm,0.2s,SNR=7.9						
EMIJ				Sn	Sn	01 02 43.1	-1.1
	2.4nm,0.2s,SNR=6.0						
ELGU	Los Guajares,	3.07	21	Pn	Pn	01 02 18.5	-1.9
	0.9nm,0.1s,SNR=7.9						
ELGU				Sn	Sn	01 02 55.4	-1.5
	1.5nm,0.1s,SNR=7.9						
ELGU	Los Guajares,	3.07	21	Pn	Pn	01 02 18.5	-1.9
	0.9nm,0.1s,SNR=7.9						
ELGU				Sn	Sn	01 02 55.4	-1.5
	1.5nm,0.1s,SNR=7.9						
EGOR	Sierra Gorda,	3.18	13	Pn	Pn	01 02 21.0	-1.0
	0.3nm,0.2s,SNR=7.9						
EGOR				Sn	Sn	01 02 58.0	-1.7
	0.1nm,0.1s,SNR=7.9						
EGOR	Sierra Gorda,	3.18	13	Pn	Pn	01 02 21.0	-1.0
	0.3nm,0.2s,SNR=7.9						
EGOR				Sn	Sn	01 02 58.0	-1.7
	0.1nm,0.1s,SNR=7.9						
EBER	Berja	3.36	30	Sn	Sn	01 03 03.3	-1.0
	1.9nm,0.3s,SNR=7.9						
EBER	Berja	3.36	30	Sn	Sn	01 03 03.3	-1.0
	1.9nm,0.3s,SNR=7.9						
EQUE	Quentar	3.44	21	Pn	Pn	01 02 25.8	+0.3
	0.4nm,0.2s,SNR=7.9						
EQUE				Sn	Sn	01 03 05.4	-0.6
	2.3nm,0.5s,SNR=7.9						
EQUE	Quentar	3.44	21	Pn	Pn	01 02 25.8	+0.3
	0.4nm,0.2s,SNR=7.9						
EQUE				Sn	Sn	01 03 05.4	-0.6
	2.3nm,0.5s,SNR=7.9						
OUK	Oukaimeden	3.69	222	Pn	Pb	01 02 35.9	-1.5
OUK				Sn	Sb	01 03 18.6	-3.5
FIG	Monte Figo	3.85	324	P	Pn	01 02 26.1	-4.9
EMIN	Mina Concepcio	3.99	341	Pn	Pn	01 02 32.1	-0.8
	0.2nm,0.1s,SNR=7.6						
EMIN				Sn	Sn	01 03 17.2	-2.2
	0.8nm,0.1s,SNR=7.9						
EMIN	Mina Concepcio	3.99	341	Pn	Pn	01 02 32.1	-0.8
	0.2nm,0.1s,SNR=7.6						
EMIN				Sn	Sn	01 03 17.2	-2.2
	0.8nm,0.1s,SNR=7.9						
PBDV	Barranco-do-Ve	4.01	324	*e*Sn	Sn	01 03 19.5	-0.5
PBDV				A	A	01 03 19.8	
	3.2nm,0.7s						
PBDV	Barranco-do-Ve	4.01	324	Sn	Sn	01 03 19.5	-0.5
	3.2nm,0.7s						
PBDV	Barranco-do-Ve	4.01	324	Sn	Sn	01 03 19.5	-0.5
	3.2nm,0.7s						
PVAQ	Vaqueiros	4.04	328	*e*Pn	Pn	01 02 34.6	+0.9
PVAQ				*e*Sn	Sn	01 03 17.6	-3.2
PVAQ				A	A	01 03 30.5	
	3.7nm,0.2s						
PVAQ	Vaqueiros	4.04	328	Pn	Pn	01 02 34.6	+0.9
PVAQ				Sn	Sn	01 03 17.6	-3.2
	3.7nm,0.2s						
PVAQ	Vaqueiros	4.04	328	Pn	Pn	01 02 34.6	+0.9
PVAQ				Sn	Sn	01 03 17.6	-3.2
	3.7nm,0.2s						
EGRO	El Granado	4.05	331	Pn	Pn	01 02 34.2	+0.4
	1.1nm,0.1s,SNR=7.9						
EGRO				Sn	Sn	01 03 19.1	-1.9
	1.8nm,0.1s,SNR=7.9						
EGRO	El Granado	4.05	331	Pn	Pn	01 02 34.2	+0.4
	1.1nm,0.1s,SNR=7.9						
EGRO				Sn	Sn	01 03 19.1	-1.9
	1.8nm,0.1s,SNR=7.9						
ECAB	El Cabril	4.07	355	Pn	Pn	01 02 34.6	+0.4
	0.6nm,0.1s,SNR=14						
ECAB				Sn	Sn	01 03 20.4	-1.2
	0.8nm,0.1s,SNR=6.4						
ECAB	El Cabril	4.07	355	Pn	Pn	01 02 34.6	+0.4
	0.6nm,0.1s,SNR=14						
ECAB				Sn	Sn	01 03 20.4	-1.2
	0.8nm,0.1s,SNR=6.4						
EQES	Quesada	4.10	22	Pn	Pn	01 02 35.2	+0.6
	0.5nm,0.2s,SNR=7.9						
EQES				Sn	Sn	01 03 25.8	+3.4
	1.7nm,0.4s,SNR=7.9						
EQES	Quesada	4.10	22	Pn	Pn	01 02 35.2	+0.6
	0.5nm,0.2s,SNR=7.9						
EADA	Adamuz	4.17	5	Pn	Pn	01 02 34.8	-0.6
	0.6nm,0.1s,SNR=7.9						
EADA				Sn	Sn	01 03 22.2	-1.7
	0.7nm,0.1s,SNR=7.9						
EADA	Adamuz	4.17	5	Pn	Pn	01 02 34.8	-0.6
	0.6nm,0.1s,SNR=7.9						
EADA				Sn	Sn	01 03 22.2	-1.7
	0.7nm,0.1s,SNR=7.9						
PCVE	Castro Verde	4.38	327	*e*Sn	Sn	01 03 27.0	-2.0
PCVE	Castro Verde	4.38	327	Sn	Sn	01 03 27.0	-2.0
PCVE	Castro Verde	4.38	327	Sn	Sn	01 03 27.0	-2.0
PBAR	Barrancos	4.47	339	*e*Pn	Pn	01 02 39.0	-0.6
PBAR				*e*Sn	Sn	01 03 28.8	-2.6
PBAR				A	A	01 03 37.2	
	3.9nm,0.2s						
PBAR	Barrancos	4.47	339	Pn	Pn	01 02 39.0	-0.6
PBAR				Sn	Sn	01 03 28.8	-2.6
	3.9nm,0.2s						
PBAR	Barrancos	4.47	339	Pn	Pn	01 02 39.0	-0.6
PBAR				Sn	Sn	01 03 28.8	-2.6
	3.9nm,0.2s						
SESP	Santiago Espad	4.56	25	Sn	Sn	01 03 35.5	+1.7
	0.9nm,0.2s,SNR=7.9						
MESJ	Messejana	4.63	327	*e*Pn	Pn	01 02 41.7	0.0
MESJ				*e*Sn	Sn	01 03 33.5	-1.7
MESJ				A	A	01 03 43.0	
	3.1nm,0.6s						
MESJ	Messejana	4.63	327	Pn	Pn	01 02 41.7	0.0
MESJ				Sn	Sn	01 03 33.5	-1.7
	3.1nm,0.6s						
MESJ	Messejana	4.63	327	Pn	Pn	01 02 41.7	0.0
MESJ				Sn	Sn	01 03 33.5	-1.7
	3.1nm,0.6s						
PBEJ	Beja	4.63	331	*e*Sn	Sn	01 03 34.1	-1.2
PBEJ				A	A	01 03 39.4	
	2.3nm,0.4s						
PBEJ	Beja	4.63	331	Sn	Sn	01 03 34.1	-1.2
	1.2nm,0.4s						
PBEJ	Beja	4.63	331	Sn	Sn	01 03 34.1	-1.2
	1.2nm,0.4s						
PTEO	Sao Teotonio	4.65	321	*e*Pn	Pn	01 02 44.0	+2.0
PTEO				*e*Sn	Sn	01 03 34.3	-1.3
PTEO	Sao Teotonio	4.65	321	Pn	Pn	01 02 44.0	+2.0
PTEO				Sn	Sn	01 03 34.3	-1.3
PTEO	Sao Teotonio	4.65	321	*e*Pn	Pn	01 02 44.0	+2.0
PTEO				Sn	Sn	01 03 34.3	-1.3
EBAD	Badajoz	5.01	342	Pn	Pn	01 02 47.2	+0.3
	1.4nm,0.1s,SNR=18						
EBAD				Sn	Sn	01 03 42.0	-2.5
	0.7nm,0.1s,SNR=7.9						
EBAD	Badajoz	5.01	342	Pn	Pn	01 02 47.2	+0.3
	1.4nm,0.1s,SNR=18						
EBAD				Sn	Sn	01 03 42.0	-2.5
	0.7nm,0.1s,SNR=7.9						
EVO	Evora	5.13	333	*e*Sn	Sn	01 03 45.0	-2.5
EVO	Evora	5.13	333	Sn	Sn	01 03 45.0	-2.5
EVO	Evora	5.13	333	Sn	Sn	01 03 45.0	-2.5
PESTR	Estremoz	5.28	338	*e*Pn	Pn	01 02 51.1	+0.4
PESTR				*e*Sn	Sn	01 03 48.3	-2.9
PESTR				A	A	01 03 55.7	
	1.7nm,0.7s						
PESTR	Estremoz	5.28	338	*e*Pn	Pn	01 02 51.1	+0.4
PESTR				*e*Sn	Sn	01 03 48.3	-2.9
PAB	San Pablo	5.55	5	Pn	Pn	01 02 53.6	-0.9
	0.2nm,0.1s,SNR=7.9						
PAB				Sn	Sn	01 03 53.4	-4.7
	0.2nm,0.1s,SNR=7.9						
PAB	San Pablo	5.55	5	Pn	Pn	01 02 53.6	-0.9
	0.2nm,0.1s,SNR=7.9						
PMTG	Montargil	5.68	334	*e*Pn	Pn	01 02 56.8	+0.7
PMTG				*e*Sn	Sn	01 03 58.2	-2.8
PMTG				A	A	01 04 02.6	
	2.2nm,0.6s						
PMRV	Marv??o	5.74	341	*e*Pn	Pn	01 02 56.9	-0.1
PMRV				*e*Sn	Sn	01 04 00.0	-2.6
PMRV				A	A	01 04 07.5	
	1.3nm,1.0s						
PMRV	Marv??o	5.74	341	Pn	Pn	01 02 56.9	-0.1
PMRV				Sn	Sn	01 04 00.0	-2.6
	1.3nm,1.0s						
PCBR	Castelo Branco	6.15	342	*e*Pn	Pn	01 03 02.5	-0.1
PCBR	Castelo Branco	6.15	342	Pn	Pn	01 03 02.5	-0.1
MVO	Moncorvo	7.32	348	*e*Pn	Pn	01 03 18.4	-0.4
POLO	Lamas de Olo	7.68	344	*e*Pn	Pn	01 03 23.6	-0.1
POLO				*e*Sn	Sn	01 04 45.5	-4.9

IDC ***15*** *01:22:12.0±0.8, 53°.26N×165°.62W, h0^{km}, mb4.2/23, mb1 4.3/25, mb1mx4.1/87, mbtmp4.2/25, ML4.2/2, MS2.9/4, Ms1 2.9/4, ms1mx2.6/70, Error ellipse: s-maj=23.8km s-min=11.0km az=176.0*

ISCJB ***15*** *01:22:13.9±0.5, 52°.91N±0°.04×165°.49W±0°.04, h33^{km}±4^{km}, mb4.3/41, MS3.3/5, Error ellipse: s-maj=6.3km s-min=3.4km az=159.1*

NEIC ***15*** *01:22:15.0±0.0, 52°.96N×165°.52W, h39^{km}, mb4.3/22, ML3.7(AEIC), After AEIC.*

ISC 15 01:22:13.1±1.6, 52°.97N±0°.06×165°.43W±0°.04, h15^{km}±9^{km}, n129, σ1^{s}48/136, mb4.3/41, MS3.2/5, South of Aleutian Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UNV	Unalaska Valle	1.09	324	P	Pb	01 22 33.6	-0.1
UNV				S	Sg	01 22 48.1	-0.3
MREP	Makushin Rep’t	1.16	318	P	Pb	01 22 34.7	-0.2
AHB	Akutan Harbor	1.18	349	P	Pg	01 22 35.4	-0.4
AKMO	Akutan Morgan	1.18	343	P	Pg	01 22 35.5	-0.4
AKMO				S	Sn	01 22 51.4	+0.5
AKSA	Akutan Strait	1.18	352	P	Pb	01 22 35.1	-0.2
AKSA				S	Sg	01 22 50.8	-0.6
AKUT	Akutan	1.19	350	P	Pg	01 22 35.7	-0.4
AKUT				S	Sn	01 22 51.4	+0.3
AKRB	Akutan Reef Bi	1.23	342	P	Pb	01 22 36.2	+0.2
AKRB				S	Sn	01 22 52.9	+0.8
AKLV	Akutan Long Va	1.24	346	P	Pn	01 22 36.1	+0.2
MSW	Makushin Switc	1.25	320	P	Pn	01 22 36.1	0.0
MSW				S	Sb	01 22 51.9	-0.4
MTBL	Makushin Table	1.25	324	P	Pn	01 22 36.6	+0.4
AKGG	Akutan Green G	1.28	345	P	Pg	01 22 37.3	-0.5
MCIR	Makushin Cirqu	1.32	319	P	Pn	01 22 37.5	+0.4
OKID	Okmok Mt. Idak	1.52	291	P	Pn	01 22 39.9	0.0
WESP	Westdahl Peak	1.59	15	P	Pb	01 22 42.0	-0.2
WESP				S	Sb	01 23 02.2	+0.1
WESE	West Dahl East	1.59	18	P	Pn	01 22 41.5	+0.7
OKTU	Okmok Mt. Tuli	1.63	286	P	Pn	01 22 41.3	0.0
OKER	Okmok East Rim	1.65	288	P	Pn	01 22 41.8	+0.2
WEBT	Westdahl Beart	1.68	14	P	Pb	01 22 43.5	-0.2
OKAK	Okmok	1.86	290	P	Pn	01 22 43.5	-0.9
SSLW	Shishaldin Wes	1.97	23	P	Pn	01 22 46.8	+0.8
NIKH	Nikolski High	2.07	272	P	Pn	01 22 46.9	-0.5
NIKH				S	Sn	01 23 10.3	-2.5
FALS	False Pass	2.24	31	P	Pn	01 22 50.5	+0.9
FALS				S	Sn	01 23 18.2	+1.3
SDPT	Sand Point	3.77	49	P	Pn	01 23 12.0	+1.4
VNHG	Veniaminof 1	4.89	46	P	Pn	01 23 29.0	+2.9
SPIA	Saint Paul Isl	5.05	329	P	Pn	01 23 29.6	+1.4
CHGN	Chignik	5.27	48	P	Pn	01 23 32.7	+1.4
KOFP	Korovin Flat P	5.33	266	P	Pn	01 23 34.4	+2.3
ATKA	Atka Island	5.40	265	P	Pn	01 23 33.9	+0.8
GSTR	Great Sitkin T	6.55	267	P	Pn	01 23 49.0	+0.2
GSTD	Great Sitkin T	6.61	266	P	Pn	01 23 49.6	-0.1
GSCK	Great Sitkin C	6.63	266	P	Pn	01 23 49.7	-0.2
ETKA	Kagalaska Isla	6.81	265	P	Pn	01 23 51.9	-0.5
ADAG	Mount Adagdak	6.90	266	P	Pn	01 23 54.0	+0.4
KIWB	Kanaga Island	7.26	266	*e*Pn	Pn	01 23 58.0	-0.6
KIKV	Kanaga Island	7.26	266	P	Pn	01 23 58.3	-0.3
TAPA	Tanaga Point A	7.67	266	P	Pn	01 24 04.0	-0.2
KDAK	Kodiak Island	8.76	51	Pn	Pn	01 24 18.3	-0.8
	6.3nm,0.3s,baz=176,slow=3.7,SNR=73						
KDAK				Sn	Sn	01 25 51.3	-6.1
	0.6nm,0.3s,baz=291,slow=17,SNR=3.7						
KDAK	Kodiak Island	8.76	51	*e*Pn	Pn	01 24 18.7	-0.3
KDAK				Sn	Sn	01 25 51.3	-6.1
CDD	Cape Douglas	8.90	43	P	Pn	01 24 22.1	+1.0
CESW	Semis’ Southwe	9.23	269	P	Pn	01 24 26.6	+1.0
AMKA	Amchitka	9.52	266	P	Pn	01 24 29.6	+0.1
CNPM	China Poot	10.26	45	*e*Pn	Pn	01 24 39.1	-0.6
BRLK	Bradley Lake	10.54	44	*e*Pn	Pn	01 24 43.2	-0.4

SUA	Susitna One	11.63	37	ePn	Pn	01 24 58.8	+0.4
SKT	Skwentna	11.70	34	ePn	Pn	01 25 01.1	+1.7
RC01	Rabbit Creek A	11.78	40	ePn	Pn	01 24 59.4	-1.0
PPLA	Purkeypile	12.16	30	P	Pn	01 25 09.7	+3.9
CAST	Castle Rocks	12.59	28	ePn	Pn	01 25 12.9	+1.4
KTH	Kantishna Hill	13.03	30	ePn	Pn	01 25 19.3	+1.7
TRF	Thorofare Moun	13.15	31	ePn	Pn	01 25 19.2	-0.1
DIV	Divide	13.42	45	ePn	Pn	01 25 22.0	-0.9
BPAW	Bear Paw Mtn.	13.43	28	ePn	Pn	01 25 24.8	+1.8
RAGM	Ragged Mountai	13.57	49	ePn	Pn	01 25 24.8	-0.1
BMRM	Bremner River	13.85	46	ePn	Pn	01 25 27.6	-1.0
MLY	Manley	14.22	26	ePn	Pn	01 25 34.1	+0.4
HARP	HAARP	14.32	41	ePn	Pn	01 25 33.6	-1.5
WRH	Wood River Hil	14.56	31	ePn	Pn	01 25 39.2	+0.8
MDM	Murphy Dome	14.87	29	ePn	Pn	01 25 44.3	+1.7
BALM	Baldy	14.88	48	ePn	Pn	01 25 41.2	-1.7
ILAR	Eielson Array	15.15	31	Pn	Pn	01 25 43.1	-3.1
	0.4nm,0.3s,baz=218,slow=11,SNR=8.9						
ILAR				LR	LR	01 31 28.0	
	comp=Z,40nm,21.4s,baz=261,slow=37						
IL1	Eielson Array	15.15	31	ePn	Pn	01 25 47.1	+0.8
COLD	Coldfoot	16.11	22	ePn	Pn	01 25 57.6	-1.2
	11nm,0.8s						
EGAK	Eagle	17.10	37	ePn	P	01 26 12.4	-0.5
	5.6nm,0.6s						
DAWY	Dawson	17.41	40	ePn	Pn	01 26 15.4	+0.2
	5.7nm,0.7s						
SKAG	Skagway	17.84	57	ePn	P	01 26 21.6	+0.5
	20nm,1.0s						
DLBC	Dease Lake	20.51	60	P	P	01 26 51.3	+0.8
	6.2nm,0.8s,baz=279,slow=13,SNR=7.3						
DLBC	Dease Lake	20.51	60	eP	Pn	01 26 52.8	+0.1
	8.2nm,0.9s						
INK	Inuvik	21.54	32	P	P	01 26 59.8	-1.6
	5.2nm,0.4s,baz=269,slow=12,SNR=40						
INK	Inuvik	21.54	32	eP	P	01 27 00.1	-1.3
	7.6nm,0.6s						
PETK	Petropavlovsk-	22.02	285	P	P	01 27 06.7	0.0
	6.4nm,0.4s,baz=79,slow=14						
PETK				LR	LR	01 35 23.1	
	comp=Z,46nm,21.0s,baz=87,slow=36						
SEY	Seymchan	24.06	311	P	P	01 27 26.4	-1.0
	3.9nm,0.6s,baz=92,slow=9.4,SNR=17						
MA2	Magadan	24.82	303	P	P	01 27 32.1	-2.3
	7.2nm,0.4s,baz=74,slow=12,SNR=7.0						
MA2	Magadan	24.82	303	eP	P	01 27 34.3	0.0
	11nm,0.6s						
YKA	Yellowknife Ar	28.03	50	P	P	01 28 04.7	+1.5
	2.4nm,0.6s,baz=272,slow=7.9,SNR=11						
I07A	Izee	31.21	88	eP	P	01 28 34.0	+2.3
	3.9nm,0.8s						
J08A	Circle Bar Ran	32.23	88	eP	P	01 28 42.9	+2.2
	6.5nm,1.3s						
WVOR	Wild Horse Val	32.66	90	eP	P	01 28 48.0	+3.6
	4.7nm,0.9s						
PAHR	Pah Rah Range	33.84	94	eP	P	01 28 54.3	-0.6
	7.7nm,1.2s						
ASAJ	Asahikawa	34.84	277	P	P	01 29 02.8	-0.5
	7.0nm,0.7s,baz=56,slow=7.3,SNR=9.7						
NV01	Mina Array Sit	35.30	95	eP	P	01 29 09.6	+2.0
NVAR	Mina Array Bea	35.30	95	P	P	01 29 10.7	+3.2
	2.1nm,0.7s,baz=295,slow=9.0,SNR=15						
RCCR	Rock Creek Can	35.66	97	eP	P	01 29 12.4	+1.6
R11A	Troy Canyon, C	36.99	93	eP	P	01 29 24.8	+2.8
	3.0nm,1.0s						
TPNV	Topopah Spring	37.50	95	eP	P	01 29 29.1	+2.9
	4.4nm,0.8s						
PDAR	Pinedale Array	37.94	83	P	P	01 29 30.7	+0.7
	0.6nm,0.6s,baz=305,slow=5.2,SNR=7.0						
PDAR	Pinedale Array	37.94	83	eP	P	01 29 31.1	+1.1
KLR	Kul'dur	38.51	291	P	P	01 29 32.3	-2.2
	0.1nm,0.3s,baz=133,slow=1.1,SNR=5.4						
CCUT	Cedar City	38.85	92	eP	P	01 29 36.6	-1.1
	14nm,1.9s						
H11N2	WAKE ISLAND Hy	39.48	223	T	T	02 11 49.0	
	baz=25,slow=76,SNR=45						
H11N3	WAKE ISLAND Hy	39.48	223	T	T	02 11 51.5	
	baz=25,slow=76,SNR=49						
H11N1	WAKE ISLAND Hy	39.50	223	T	T	02 11 50.9	
	baz=25,slow=76,SNR=20						
U15A	North Rim	40.23	92	eP	P	01 29 51.0	+1.7
	3.3nm,1.0s						
O20A	White River Ci	40.31	85	eP	P	01 29 51.9	+2.0
	6.3nm,0.9s						
H11S1	WAKE ISLAND Hy	40.65	223	T	T	02 13 18.7	
	baz=25,slow=76,SNR=34						
H11S2	WAKE ISLAND Hy	40.67	223	T	T	02 13 18.5	
	baz=25,slow=76,SNR=34						
H11S3	WAKE ISLAND Hy	40.67	223	T	T	02 13 18.6	
	baz=25,slow=76,SNR=22						
MJAR	Matsushiro Arr	42.10	270	P	P	01 30 04.2	-0.2
	0.8nm,0.5s,baz=30,slow=5.4,SNR=4.5						
MJAR				LR	LR	01 45 44.9	
	comp=Z,38nm,21.8s,baz=205,slow=34						
MAJO	Matsushiro	42.11	270	eP	P	01 30 04.6	+0.2
	4.1nm,0.6s						
T25A	Trinidad	44.53	85	eP	P	01 30 26.6	+2.4
	3.8nm,0.9s						
KSRS	Korea Array	47.70	279	P	P	01 30 49.7	+0.8
	2.2nm,0.7s,baz=40,slow=9.0,SNR=6.0						
KSRS				LR	LR	01 51 15.1	
	comp=Z,5.6nm,19.0s,baz=35,slow=37						
KSAR	Wonju Array Be	47.73	279	P	P	01 30 49.7	+0.6
P40A	Paris	50.31	74	eP	P	01 31 08.9	0.0
	7.4nm,0.8s						
TX31	Lajitas Ar. Si	50.35	93	eP	P	01 31 11.2	+1.8
TXAR	Lajitas Array	50.35	93	P	P	01 31 11.2	+1.7
	2.2nm,0.5s,baz=300,slow=5.4,SNR=31						
ULN	Ulaanbaatar	52.67	302	eP	P	01 31 26.0	-0.7
	5.1nm,1.1s						
SONA1	Songino Array	53.02	303	eP	P	01 31 28.6	-0.6
SONM	Songino Array	53.03	303	P	P	01 31 28.7	-0.6
	1.4nm,0.7s,baz=51,slow=7.3,SNR=8.4						
HHC	Hu-ho-hao-te	54.92	293	eP	P	01 31 44.8	+1.6
HHC				sP	sP	01 31 56.4	+6.7
HHC				PP	PP	01 33 45.4	-0.4
HHC				S	S	01 39 23.1	-1.0
HHC				sS	sS	01 39 34.0	+2.1
HHC				pmax	pmax		
	comp=Z,24nm,1.0s						
HHC				pmax	pmax		
	comp=Z,69nm,5.0s						
HHC				LR	LR		
	comp=N,99nm,14.7s						
HHC				LR	LR		
	comp=E,93nm,15.9s						
HHC				LR	LR		
	comp=Z,47nm,16.5s						
ARCES	ARCESS Array B	57.55	355	P	P	01 31 59.8	-1.6
	comp=Z,4.2nm,0.9s,baz=6.7,slow=8.5,SNR=4.8						
ZALV	Zalesovo Beam	58.57	319	P	P	01 32 07.9	-0.8
	comp=Z,2.2nm,0.6s,baz=30,slow=6.2,SNR=7.5						
ZALV	Zalesovo Beam	58.57	319	eP	P	01 32 08.1	-0.6
LZH	Lanzhou	62.56	294	eP	P	01 32 36.1	-0.4
LZH				pP	sP	01 32 45.0	+1.9
LZH				sP	pP	01 32 48.8	+7.5
LZH				ePP	PP	01 34 55.0	+1.3
LZH				pmax	pmax		
	comp=Z,16nm,1.2s						
LZH				pmax	pmax		
	comp=Z,41nm,7.8s						
LZH				LR	LR		
	comp=N,67nm,15.2s						
LZH				LR	LR		
	comp=E,71nm,15.5s						
LZH				LR	LR		
	comp=Z,82nm,19.0s						
KURK	Kurchatov	63.49	320	eP	P	01 32 41.9	-0.2
	comp=Z,2.6nm,0.8s						
KURBB	Kurchatov Arra	63.59	320	P	P	01 32 42.0	-0.8
	comp=Z,2.5nm,0.9s,baz=51,slow=7.5,SNR=23						
BVAR	Borovoye Array	64.58	326	P	P	01 32 49.4	+0.1
	comp=Z,5.8nm,0.6s,baz=48,slow=6.9,SNR=44						
BRVK	Borovoye	64.58	326	eP	P	01 32 49.5	+0.2
WMQ	Urumqi	65.02	310	P	P	01 32 54.9	+2.5
MKAR	Makanchi Array	65.10	316	P	P	01 32 52.0	-0.8
	comp=Z,0.5nm,0.5s,baz=51,slow=6.7,SNR=8.9						
ARU	Arti	65.14	335	eP	P	01 32 52.1	-0.8
	comp=Z,1.8nm,0.6s						
FINES	FINESS Array B	65.57	354	P	P	01 32 54.7	-0.8
	comp=Z,0.9nm,0.5s,baz=23,slow=7.3,SNR=9.8						
HFS	Hagfors	67.25	0	P	P	01 33 06.0	-0.3
	comp=Z,0.8nm,0.3s,baz=9.1,slow=3.6,SNR=13						
GYA	Guiyang	68.12	285	eP	P	01 33 13.3	+0.8
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
AKTO	Aktyubinsk	70.65	332	P	P	01 33 27.6	0.0
	comp=Z,3.2nm,0.7s,baz=50,slow=4.3,SNR=9.1						
ABKAR	Akbulak array	71.15	330	eP	P	01 33 30.9	+0.2
KK31	Karatay Array	72.90	321	eP	P	01 33 41.8	+0.4
KKAR	Karatay Array	72.90	321	eP	P	01 33 41.8	+0.4
KSH	Kashi	73.70	315	eP	P	01 33 49.5	+3.3
CMAR	Chiang Mai Arr	78.80	286	P	P	01 34 15.5	+0.2
	comp=Z,1.0nm,0.3s,baz=71,slow=9.2,SNR=5.6						
BRTR	Keskin Array B	86.22	345	P	P	01 34 54.2	+0.3
	comp=Z,0.8nm,0.7s,baz=57,slow=2.3,SNR=6.0						

ISCJB ***15*** *01:25:12.9±1.6, 1°.7N±0°.2×90°.71E±0°.10, h10^{km}, mb3.8/7, Error ellipse: s-maj=35.6km s-min=13.8km az=1.2*

IDC ***15*** *01:25:13.3±3.1, 1°.65N×90°.68E, h0^{km}, mb3.8/6, mb1 4.0/9, mb1mx3.6/72, mbtmp3.9/9, ML4.2/3, Error ellipse: s-maj=71.9km s-min=30.5km az=177.0*

NEIC ***15*** *01:25:15.1±1.5, 1°.72N×90°.71E, h10^{km}, mb4.0/1, Error ellipse: s-maj=35.6km s-min=12.3km az=183.0*

ISC 15 01:25:14.7±2.1**, 1°.7N**±0°.3×**90°.7E**±0°.1**, h10**^{km}**, n15, σ1^{s}20**/12**, mb3.8**/7**, North Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSI	Prapat	8.30	82	Pn	Pn	01 27 15.0	-0.4
	0.4nm,0.3s,baz=0.2,slow=14,SNR=2.1						
PSI				Sn	Sn	01 28 34.1	-15
	0.7nm,0.3s,baz=180,slow=21,SNR=3.0						
PALK	Pallekele	11.41	300	Pn	Pn	01 27 56.7	-1.3
	1.5nm,0.3s,baz=116,slow=12,SNR=7.3						
PALK				Sn	Sn	01 29 56.0	-10
	0.4nm,0.3s,baz=295,slow=13,SNR=1.7						
PALK	Pallekele	11.41	300	ePn	Pn	01 27 57.6	-0.4
PALK				Sn	Sn	01 29 56.0	-10
CMAR	Chiang Mai Arr	18.55	25	P	P	01 29 30.3	-1.4
	1.0nm,0.3s,baz=210,slow=12,SNR=3.3						
H08S2	Diego Garcia H	20.38	243	T	T	01 50 54.1	
	baz=64,slow=74						
H08S3	Diego Garcia H	20.38	243	T	T	01 51 02.2	
	baz=64,slow=74						
H08S1	Diego Carcia H	20.39	243	T	T	01 51 14.2	
	baz=64						
SONM	Songino Array	47.96	14	P	P	01 33 54.8	+1.0
	0.8nm,0.6s,baz=196,slow=9.6,SNR=4.8						
RAYN	Ar Rayn	48.85	300	eP	P	01 34 00.7	-0.2
	1.3nm,0.8s						
KURBB	Kurchatov Arra	49.86	350	P	P	01 34 10.2	+2.1
	0.3nm,0.8s,baz=176,slow=7.4,SNR=2.9						
KURK	Kurchatov	49.93	350	P	P	01 34 10.2	+1.5
ZALV	Zalesovo Beam	52.34	356	P	P	01 34 25.9	-0.7
	0.5nm,0.4s,baz=192,slow=3.3,SNR=2.6						
BRTR	Keskin Array B	64.05	314	P	P	01 35 49.2	+0.1
	0.4nm,0.6s,baz=113,slow=6.0,SNR=2.7						
FINES	FINESS Array B	76.63	333	P	P	01 37 05.1	-0.4
	1.5nm,0.7s,baz=121,slow=5.4,SNR=3.4						
GERES	GERESS Array B	80.19	319	P	P	01 37 26.3	+0.7
	0.8nm,0.8s,baz=111,slow=5.9,SNR=4.7						

ISCJB ***15*** *01:34:24.8±0.3, 59°.98N±0°.02×152°.71W±0°.06, h110^{km}±3^{km}, mb4.1/1, Error ellipse: s-maj=5.1km s-min=3.7km az=24.2*

IDC ***15*** *01:34:25.3±2.1, 59°.96N×152°.81W, h83^{km}±37^{km}, mb3.7/1, mb1 3.4/5, mb1mx3.0/74, mbtmp3.6/5, Error ellipse: s-maj=44.6km s-min=15.7km az=109.0*

NEIC ***15*** *01:34:27.1±0.0, 59°.98N×152°.79W, h96^{km}, ML3.3(AEIC), After AEIC.*

ISC 15 01:34:26.0±1.0**, 59°.98N**±0°.03×**152°.75W**±0°.04**, h104**^{km}±6^{km}**, n80, σ0^{s}87**/94**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ILIM	Iliamna	0.14	313	P	Pn	01 34 40.3	-0.3
ILIM				S	Sn	01 34 50.8	-0.7
RDWB	Redoubt West	0.51	355	P	Pn	01 34 42.1	-0.4
RDWB				S	Sn	01 34 53.9	-0.9
RDN	Redoubt North	0.53	359	P	Pn	01 34 42.5	-0.1
RDJH	Redoubt Jeurge	0.61	358	P	Pn	01 34 43.0	-0.2
RDJH				S	Sn	01 34 55.2	-0.9
HOM	Homer	0.65	120	P	Pn	01 34 44.0	+0.7
AUE	Augustine Isla	0.70	207	P	Pn	01 34 43.7	-0.1
AUNW	Augustine NWes	0.71	212	P	Pn	01 34 43.9	+0.1
AUW	Augustine West	0.71	211	P	Pn	01 34 44.0	+0.1
AUI	Augustine Isla	0.73	208	P	Pn	01 34 43.5	-0.6
AUI				S	Sn	01 34 56.8	-0.8
CNPM	China Poot	0.89	120	P	Pn	01 34 45.8	+0.1
CNPM				S	Sn	01 35 00.6	+0.2
BRLK	Bradley Lake	0.97	102	P	Pn	01 34 46.6	+0.2
BRLK				S	Sn	01 35 01.9	+0.1
CDD	Cape Douglas	1.15	204	P	Pn	01 34 48.1	-0.3
SPCR	Spurr Chakacha	1.25	12	P	Pn	01 34 49.6	0.0
SPCR				S	Sn	01 35 06.9	-0.5
SPCP	Crater Peak Br	1.32	13	P	Pn	01 34 50.6	+0.2
SPCP				S	Sn	01 35 09.0	0.0
SPCG	Spurr Capps Gl	1.36	15	P	Pn	01 34 51.1	+0.2
FIB	Fire Island	1.74	46	P	Pn	01 34 56.7	+1.3
KAHC	Katmai Hardscr	1.77	222	P	Pn	01 34 55.8	-0.1
SUA	Susitna One	1.78	33	P	Pn	01 34 56.6	+0.6
SUA				S	Sn	01 35 19.5	+0.6
SVW2	Sparrevohn	1.79	310	P	Pn	01 34 55.5	-0.6
RC01	Rabbit Creek A	1.86	52	P	Pn	01 34 56.9	0.0
RC01				S	Sn	01 35 19.7	-0.7
PTE	Portage	2.05	63	P	Pn	01 34 59.3	0.0
KAKN	Katmai Knife C	2.07	216	P	Pn	01 34 59.8	+0.1
KAKN				S	Sn	01 35 24.2	-1.1
SKT	Skwentna	2.09	16	P	Pn	01 34 60.0	+0.1
KABU	Katmai Buttres	2.16	218	P	Pn	01 35 01.2	+0.4
KDAK	Kodiak Island	2.21	178	P	Pn	01 35 00.3	-1.1
	19nm,0.3s,baz=36,slow=6.2,SNR=316						
KDAK				S	Sn	01 35 26.6	-1.8
	22nm,0.3s,baz=131,slow=19,SNR=15						
PMR	Palmer	2.40	46	P	Pn	01 35 03.4	-0.4
PMR				S	Sn	01 35 30.9	-2.0
KNK	Knik Glacier	2.55	54	P	Pn	01 35 05.4	-0.5
GHO	Glory Hole Cre	2.59	45	P	Pn	01 35 06.3	-0.2
OHAK	Old Harbor	2.78	186	P	Pn	01 35 06.5	-2.4
SML	Sawmill	2.83	48	P	Pn	01 35 08.8	-0.8
PPLA	Purkeypile	2.94	5	P	Pn	01 35 11.9	+0.9
HIN	Hinchinbrook I	3.15	80	P	Pn	01 35 12.6	-1.2
SCM	Sheep Creek Mo	3.23	53	P	Pn	01 35 14.6	-0.4
TT01	Tatalina	3.33	333	P	Pn	01 35 15.8	-0.3
CAST	Castle Rocks	3.46	5	P	Pn	01 35 18.2	+0.2
DIV	Divide	3.63	69	P	Pn	01 35 19.3	-1.0
TRF	Thorofare Moun	3.67	18	P	Pn	01 35 21.1	+0.2
KLU	Klutina	3.68	63	P	Pn	01 35 20.1	-0.9
KTH	Kantishna Hill	3.69	13	P	Pn	01 35 21.0	-0.1
DHY	Denali Highway	4.03	37	P	Pn	01 35 25.8	0.0
RAGM	Ragged Mountai	4.05	81	P	Pn	01 35 24.3	-1.7
BMRM	Bremner River	4.15	73	P	Pn	01 35 25.9	-1.4
MCK	McKinley	4.17	24	P	Pn	01 35 28.1	+0.6
BPAW	Bear Paw Mtn.	4.21	11	P	Pn	01 35 26.9	-1.2
NICHA	Nichawak Mount	4.40	83	P	Pn	01 35 30.2	-0.4
HARP	HAARP	4.41	53	P	Pn	01 35 31.2	+0.5
SUCK	Suckling Hills	4.50	85	P	Pn	01 35 32.1	+0.1
BERG	Berg Lake	4.54	81	P	Pn	01 35 32.2	-0.3
PAX	Paxson	4.60	46	P	Pn	01 35 34.1	+0.7
GLB	Gilahina Butte	4.63	68	P	Pn	01 35 32.7	-1.0
VRDI	Verde Repeater	4.75	71	P	Pn	01 35 34.0	-1.4
KHIT	Khitrov Hills	4.76	80	P	Pn	01 35 35.3	-0.3
NEA	Nenana	4.92	19	P	Pn	01 35 37.3	-0.2
WRH	Wood River Hil	5.00	24	P	Pn	01 35 38.5	-0.2
KULT	Kultieth River	5.03	83	P	Pn	01 35 39.0	-0.1
BARK	Barkley Ridge	5.14	81	P	Pn	01 35 40.2	-0.5
MLY	Manley	5.15	10	P	Pn	01 35 41.3	+0.5
PTPK	Patty Peak	5.21	72	P	Pn	01 35 41.1	-0.7
CCB	Clear Creek Bu	5.22	24	P	Pn	01 35 41.1	-0.4
ISLE	Juniper Island	5.22	79	P	Pn	01 35 41.9	+0.2
KIAG	Kiagna River	5.23	75	P	Pn	01 35 41.8	-0.2
BALM	Baldy	5.25	74	P	Pn	01 35 41.6	-0.5
BAGL	Bagley Icefiel	5.34	80	P	Pn	01 35 43.8	+0.6
MESA	MESA	5.41	83	P	Pn	01 35 44.4	0.0
MDM	Murphy Dome	5.42	21	P	Pn	01 35 44.0	-0.3
ILAR	Eielson Array	5.52	27	P	Pn	01 35 45.1	-0.6
	1.5nm,0.3s,baz=214,slow=14,SNR=68						
ILAR				S	Sn	01 36 43.5	-4.3
	2.4nm,0.3s,baz=213,slow=23,SNR=8.2						
ILB	Eielson Array	5.52	27	P	Pn	01 35 45.3	-0.5
BARN	Barnard Glacie	5.58	74	P	Pn	01 35 47.2	+0.5
CTGM	Chitina Glacie	5.73	75	P	Pn	01 35 49.5	+0.8
SAMH	Samovar Hills	6.00	83	P	Pn	01 35 53.2	+0.9
IM01	Indian Mountai	6.05	356	P	Pn	01 35 52.8	-0.1
BCA3	Beaver Creek A	6.09	55	P	Pn	01 35 53.4	-0.1
YUK2	White River	6.09	68	P	Pn	01 35 53.2	-0.3
PRP	Porcupine Dome	6.47	28	P	Pn	01 35 58.3	-0.4
PNL	Peninsula	6.74	87	P	Pn	01 36 02.2	-0.1
EGAK	Eagle	7.22	43	ePn	Pn	01 36 08.5	-0.2
	3.9nm,0.6s						
BM3	Burnt Mountain	8.29	22	P	Pn	01 36 21.9	-1.4
INK	Inuvik	11.78	37	P	Pn	01 37 10.3	0.0
	0.1nm,0.3s,baz=216,slow=8.7,SNR=1.9						
YKA	Yellowknife Ar	18.34	66	P	P	01 38 33.1	+1.0
	0.1nm,0.3s,baz=277,slow=9.5,SNR=2.4						
SONM	Songino Array	54.90	306	P	P	01 43 47.0	+1.3
	1.4nm,0.7s,baz=42,slow=7.7,SNR=8.0						

IDC 15 01:36:13.9±2.7**, 5°.42S**×**146°.94E, h116**^{km}±25^{km}**, mb3.2**/3**, mb1 3.4**/6**, mb1mx3.1**/47**, mbtmp3.7**/6**, Error ellipse: s-maj=31.7km s-min=20.8km az=74.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.96	177	P	Pn	01 37 14.6	+1.7
	6.1nm,0.3s,baz=332,slow=9.8,SNR=15						
PMG				S	Sn	01 37 58.5	-0.1
	7.4nm,0.3s,baz=165,slow=22,SNR=9.7						
JAY	Jayapura	6.86	295	P	Pn	01 37 51.5	-0.4
	1.6nm,0.3s,baz=145,slow=12,SNR=10.0						
WRA	Warramunga Arr	18.93	219	P	P	01 40 26.0	+0.1
	0.2nm,0.3s,baz=38,slow=12,SNR=2.7						
ASAR	Alice Springs	22.06	213	P	P	01 40 60.0	+0.5
	0.4nm,0.5s,baz=50,slow=9.3,SNR=7.6						
FITZ	Fitzroy Crossi	24.32	237	P	P	01 41 20.7	-0.2
	2.7nm,0.7s,baz=58,slow=13,SNR=8.1						
ILAR	Eielson Array	84.98	23	P	P	01 48 35.7	-0.2
	0.3nm,0.6s,baz=261,slow=5.1,SNR=5.0						

IDC 15 01:50:12.7±1.3**, 2°.95S**×**129°.24E, h0**^{km}**, mb3.5**/3**, mb1 3.7**/6**, mb1mx3.4**/52**, mbtmp3.6**/6**, ML3.3**/2**, Error ellipse: s-maj=36.2km s-min=22.2km az=93.0, Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	2.89	44	Pn	Pn	01 51 01.3	+1.3
	baz=258,slow=14						
SIJI				Sn	Sn	01 51 34.7	-0.9
	14nm,0.3s,baz=17,slow=19,SNR=3.6						
FITZ	Fitzroy Crossi	15.46	193	Pn	Pn	01 53 54.5	+2.2
	0.1nm,0.3s,baz=9.4,slow=16,SNR=1.1						
FITZ				Sn	Sn	01 56 49.6	+5.2
	0.1nm,0.3s,baz=111,slow=17,SNR=1.4						
WRA	Warramunga Arr	17.61	164	P	Pn	01 54 19.2	-0.5
	0.2nm,0.3s,baz=347,slow=12,SNR=1.7						
ASAR	Alice Springs	21.08	168	P	P	01 54 58.4	-0.4
	1.5nm,0.5s,baz=348,slow=11,SNR=18						
MKAR	Makanchi Array	64.45	326	P	P	02 00 51.2	+0.1
	0.4nm,0.7s,baz=117,slow=8.7,SNR=3.0						
KURBB	Kurchatov Arra	68.69	328	P	P	02 01 17.7	-0.3
	0.3nm,0.7s,baz=124,slow=4.9,SNR=3.3						

SJA 15 02:03:27.4±1.1**, 34°.65S**×**69°.66W, h204**^{km}±24^{km}**, ML3.5, MW3.0, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RFA	San Rafael	0.99	97	eP	Pn	02 03 54.1	-3.5
RFA				eS	S	02 04 13.1	-7.6
ROC1	El Roble	2.01	326	eP	Pn	02 04 07.4	+0.8
ROC1				eS	S	02 04 36.0	-0.6
ASAL	Salagasta	2.16	19	eP	Pn	02 04 08.1	+0.1
ASAL				eS	S	02 04 39.1	0.0
AUSP	Uspallata	2.43	5	eP	Pn	02 04 12.6	+1.5
AUSP				eS	S	02 04 45.6	+1.1
RTCV	Cerro Valdivia	2.93	19	eP	Pn	02 04 16.8	+0.2
RTCV				eS	S	02 04 53.3	-1.0
RTLL	Cerro Villicun	3.46	17	eP	Pn	02 04 23.0	+0.2
RTLL				IAML		02 04 23.3	
	comp=Z,28nm,0.4s						
AMOG	MOGNA	3.83	15	eP	Pn	02 04 28.1	+0.8
AROD	Rodeo	4.47	2	eP	Pn	02 04 37.9	+2.3

CRAAG ***15*** *02:05:05.6, 35°.88N×1°.25E, Ml3.7*

IDC ***15*** *02:05:06.4±1.4, 35°.98N×1°.13E, h0^{km}, mb3.5/3, mb1 3.6/7, mb1mx3.3/62, mbtmp3.5/7, ML3.6/4, MS2.9/1, Ms1 2.9/1, ms1mx2.1/43, Error ellipse: s-maj=29.7km s-min=22.8km az=118.0*

INMG ***15*** *02:05:07.7±1.9, 35°.85N×1°.35E, h31^{km}, ML2.8, Error ellipse: s-maj=7.1km s-min=4.0km az=142.0*

LDG ***15*** *02:05:07.7±0.3, 35°.85N×1°.32E, h10^{km}, Ml3.3/5, Error ellipse: s-maj=7.2km s-min=3.2km az=158.0*

CSEM ***15*** *02:05:08.4±0.2, 36°.06N×1°.16E, h10^{km}, ML3.7/23, Error ellipse: s-maj=4.5km s-min=2.9km az=177.0*

MDD ***15*** *02:05:08.2±0.3, 36°.01N×1°.15E, h0^{km}, mb4.2/33, Error ellipse: s-maj=4.5km s-min=3.4km az=157.0, PRXIMO*

CNRM ***15*** *02:05:16.4, 36°.29N×0°.68E, h134^{km}*

ISC 15 02:05:07.5±1.0**, 36°.01N**±0°.04×**1°.20E**±0°.03**, h12**^{km}±6^{km}**, n207, σ1^{s}87**/285**, mb3.3**/3**, 3C-2D, Northern Algeria**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EANR	'Ain N'Sour	0.10	236	P	Pg	02 05 09.5	-1.0
EANR	'Ain N'Sour	0.10	236	Pg	Pg	02 05 09.5	-1.0
EANR	'Ain N'Sour	0.10	236	P	Pg	02 05 09.5	-1.0
ECHF	Ech Chlef	0.18	37	Pg	Pg	02 05 12.2	+0.5
ECHF	Ech Chlef	0.18	37	Pg	Pg	02 05 12.2	+0.5
ECHA	Ech Chlef	0.19	43	P	Pg	02 05 12.2	+0.4
ECHA	Ech Chlef	0.19	43	P	Pg	02 05 12.2	+0.4
EBNR	Beni Rached	0.39	43	P	Pb	02 05 16.5	+0.2
EBNR	Beni Rached	0.39	43	P	Pb	02 05 16.5	+0.2
ODJA	Bouhanifia	1.29	239	P	Pg	02 05 32.6	+0.2
ODJA	Bouhanifia	1.29	239	Pg	Pg	02 05 32.6	+0.2
ODJA	Bouhanifia	1.29	239	P	Pg	02 05 32.6	+0.2
EMHD	Djebel Mahouad	1.43	82	P	Pb	02 05 34.7	+0.6
EMHD	Djebel Mahouad	1.43	82	Pg	Pb	02 05 34.7	+0.6
EMHD	Djebel Mahouad	1.43	82	P	Pb	02 05 34.7	+0.6
ABA	Alger-Bouzarea	1.68	61	P	Pb	02 05 39.0	+0.7
ABA	Alger-Bouzarea	1.68	61	Pn	Pb	02 05 39.0	+0.7
ABA	Alger-Bouzarea	1.68	61	P	Pb	02 05 39.0	+0.7
ADJB	Djebel Djouab	1.81	85	P	Pb	02 05 40.2	-0.5
ADJB	Djebel Djouab	1.81	85	Pn	Pb	02 05 40.2	-0.5
ADJB	Djebel Djouab	1.81	85	P	Pb	02 05 40.2	-0.5
EMUR	La Murta	2.68	314	Pn	Pn	02 05 49.5	-1.0
	2.2nm,0.3s,SNR=28						
EMUR				Sn	Sn	02 06 23.6	+0.7
	43nm,0.4s,SNR=7.9						
EMUR	La Murta	2.68	314	Pn	Pn	02 05 49.5	-1.0
	2.2nm,0.3s,SNR=28						
EMUR				Sn	Sn	02 06 23.6	+0.7
	43nm,0.4s,SNR=7.9						
EBEN2	Beniarda presa	2.89	338	Pn	Pn	02 05 53.7	+0.4
	26nm,0.2s,SNR=7.9						
EBEN2				Sn	Sn	02 06 26.6	-1.3
	50nm,0.2s,SNR=7.9						
EBEN2	Beniarda presa	2.89	338	Pn	Pn	02 05 53.7	+0.4
	26nm,0.2s,SNR=7.9						
EBEN2				Sn	Sn	02 06 26.6	-1.3
	50nm,0.2s,SNR=7.9						
ENIJ	Nijar	2.91	290	Pn	Pn	02 05 52.7	-0.9
	8.7nm,0.2s,SNR=7.9						
ENIJ				Sn	Sn	02 06 25.0	-3.5
	32nm,0.4s,SNR=7.9						
ENIJ	Nijar	2.91	290	Pn	Pn	02 05 52.7	-0.9
	8.7nm,0.2s,SNR=7.9						
AFON	Font Roja	2.99	333	Pn	Pn	02 05 55.2	+0.3
	9.3nm,0.3s,SNR=24						
AFON				Sn	Sn	02 06 31.7	+1.0
	35nm,0.4s,SNR=7.9						
AFON	Font Roja	2.99	333	Pn	Pn	02 05 55.2	+0.3
	9.3nm,0.3s,SNR=24						
AFON				Sn	Sn	02 06 31.7	+1.0
	35nm,0.4s,SNR=7.9						
EIBI	Ibiza	3.02	2	Pn	Pn	02 05 55.4	+0.3
	5.3nm,0.2s,SNR=18						
EIBI				Sn	Sn	02 06 28.7	-2.4
	63nm,0.4s,SNR=7.9						
EIBI	Ibiza	3.02	2	Pn	Pn	02 05 55.4	+0.3
	5.3nm,0.2s,SNR=18						
EIBI				Sn	Sn	02 06 28.7	-2.4
	63nm,0.4s,SNR=7.9						
SET	Setif	3.40	86	P	Pn	02 06 02.0	+1.5
SET	Setif	3.40	86	Pn	Pn	02 06 02.0	+1.5

SET	**Setif**	**3.40**	**86**	P	**Pn**	**02 06 02.0**	**+1.5**
EBER	**Berja**	**3.42**	**286**	Pn	**Pn**	**02 06 00.1**	**-0.7**
	1.3nm,0.1s,SNR=69						
EBER				Sn	**Sn**	**02 06 40.0**	**-1.3**
	24nm,0.3s,SNR=7.9						
EBER	**Berja**	**3.42**	**286**	Pn	**Pn**	**02 06 00.1**	**-0.7**
	1.3nm,0.1s,SNR=69						
EBER				Sn	**Sn**	**02 06 40.0**	**-1.3**
	24nm,0.3s,SNR=7.9						
ETOB	**Tobarra**	**3.43**	**321**	⇓Pn	**Pn**	**02 06 01.3**	**+0.5**
	18nm,0.2s,SNR=18						
ETOB				Sn	**Sn**	**02 06 40.8**	**-0.5**
	38nm,0.4s,SNR=7.9						
ETOB	**Tobarra**	**3.43**	**321**	Pn	**Pn**	**02 06 01.3**	**+0.5**
	18nm,0.2s,SNR=18						
ETOB				Sn	**Sn**	**02 06 40.8**	**-0.5**
	38nm,0.4s,SNR=7.9						
EALB	**Alboran**	**3.44**	**270**	Pn	**Pn**	**02 06 00.3**	**-0.6**
	2.8nm,0.1s,SNR=7.9						
EALB				Sn	**Sn**	**02 06 38.1**	**-3.4**
	36nm,0.3s,SNR=7.9						
EALB	**Alboran**	**3.44**	**270**	Pn	**Pn**	**02 06 00.3**	**-0.6**
	2.8nm,0.1s,SNR=7.9						
CKHR	**Kef el Ahmar**	**3.49**	**89**	P	**Pg**	**02 06 13.7**	**-0.7**
CKHR	**Kef el Ahmar**	**3.49**	**89**	Pn	**Pg**	**02 06 13.7**	**-0.7**
SESP	**Santiago Espad**	**3.67**	**306**	Pn	**Pn**	**02 06 05.4**	**+1.3**
	8.3nm,0.2s,SNR=7.9						
SESP				Sn	**Sn**	**02 06 46.6**	**-0.7**
	83nm,0.3s,SNR=7.9						
SESP	**Santiago Espad**	**3.67**	**306**	Pn	**Pn**	**02 06 05.4**	**+1.3**
	8.3nm,0.2s,SNR=7.9						
SESP	**Santiago Espad**	**3.67**	**306**	P	**Pn**	**02 06 05.9**	**+1.8**
SESP				Sn	**Sn**	**02 06 46.6**	**-0.7**
	83nm,0.3s,SNR=7.9						
GORA	**Gorafe**	**3.71**	**295**	Pn	**Pn**	**02 06 05.8**	**+1.1**
	7.5nm,0.2s,SNR=7.9						
GORA				Sn	**Sn**	**02 06 48.8**	**+0.4**
	14nm,0.2s,SNR=7.9						
GORA	**Gorafe**	**3.71**	**295**	Pn	**Pn**	**02 06 05.8**	**+1.1**
	7.5nm,0.2s,SNR=7.9						
GORA				Sn	**Sn**	**02 06 48.8**	**+0.4**
	14nm,0.2s,SNR=7.9						
DFRA	**Djebel Bou Aff**	**3.81**	**81**	P	**Pn**	**02 06 08.8**	**+2.7**
DFRA	**Djebel Bou Aff**	**3.81**	**81**	Pn	**Pn**	**02 06 08.8**	**+2.7**
DFRA	**Djebel Bou Aff**	**3.81**	**81**	P	**Pn**	**02 06 08.8**	**+2.7**
EQES	**Quesada**	**3.87**	**299**	⇑Pn	**Pn**	**02 06 08.2**	**+1.3**
	4.6nm,0.2s,SNR=18						
EQES				Sn	**Sn**	**02 06 51.8**	**-0.4**
	62nm,0.4s,SNR=7.9						
EQES	**Quesada**	**3.87**	**299**	Pn	**Pn**	**02 06 08.2**	**+1.3**
	4.6nm,0.2s,SNR=18						
EQES				Sn	**Sn**	**02 06 51.8**	**-0.4**
	62nm,0.4s,SNR=7.9						
EQUE	**Quentar**	**3.92**	**289**	⇓Pn	**Pn**	**02 06 08.4**	**+0.8**
	12nm,0.2s,SNR=18						
EQUE				Sn	**Sn**	**02 06 52.3**	**-1.3**
	8.4nm,0.3s,SNR=7.9						
EQUE	**Quentar**	**3.92**	**289**	Pn	**Pn**	**02 06 08.4**	**+0.8**
	12nm,0.2s,SNR=18						
EQUE				Sn	**Sn**	**02 06 52.3**	**-1.3**
	8.4nm,0.3s,SNR=7.9						
ETOS	**Mallorca**	**3.96**	**18**	Pn	**Pn**	**02 06 08.0**	**-0.1**
	2.3nm,0.2s,SNR=8.1						
ETOS				Sn	**Sn**	**02 06 51.5**	**-3.0**
	9.6nm,0.3s,SNR=4.8						
ETOS	**Mallorca**	**3.96**	**18**	Pn	**Pn**	**02 06 08.0**	**-0.1**
	2.3nm,0.2s,SNR=8.1						
ECHE	**Chera**	**3.97**	**335**	Pn	**Pn**	**02 06 09.1**	**+0.9**
	8.6nm,0.3s,SNR=7.9						
ECHE				Sn	**Sn**	**02 06 55.7**	**+1.1**
	29nm,0.4s,SNR=7.9						
ECHE	**Chera**	**3.97**	**335**	Pn	**Pn**	**02 06 09.1**	**+0.9**
	8.6nm,0.3s,SNR=7.9						
ECHE				Sn	**Sn**	**02 06 55.7**	**+1.1**
	29nm,0.4s,SNR=7.9						
ELGU	**Los Guajares,**	**3.99**	**284**	Pn	**Pn**	**02 06 07.7**	**-0.8**
	1.8nm,0.2s,SNR=7.9						
ELGU				Sn	**Sn**	**02 06 54.1**	**-1.1**
	46nm,0.4s,SNR=7.9						
ELGU	**Los Guajares,**	**3.99**	**284**	Pn	**Pn**	**02 06 07.7**	**-0.8**
	1.8nm,0.2s,SNR=7.9						
ELGU				Sn	**Sn**	**02 06 54.1**	**-1.1**
	46nm,0.4s,SNR=7.9						
CTEI	**Djebel Teioual**	**4.22**	**88**	P	**Pn**	**02 06 13.7**	**+2.0**
CTEI	**Djebel Teioual**	**4.22**	**88**	Pn	**Pn**	**02 06 13.7**	**+2.0**
CTEI	**Djebel Teioual**	**4.22**	**88**	P	**Pn**	**02 06 13.7**	**+2.0**
CASM	**Ain Smara**	**4.29**	**85**	P	**Pn**	**02 06 14.1**	**+1.5**
CASM	**Ain Smara**	**4.29**	**85**	Pn	**Pn**	**02 06 14.1**	**+1.5**
CASM	**Ain Smara**	**4.29**	**85**	P	**Pn**	**02 06 14.1**	**+1.5**
EGOR	**Sierra Gorda,**	**4.42**	**286**	Pn	**Pn**	**02 06 16.5**	**+2.0**
	2.2nm,0.3s,SNR=7.9						
EGOR				Sn	**Sn**	**02 07 06.3**	**+0.4**
	5.8nm,0.3s,SNR=7.9						
EGOR	**Sierra Gorda,**	**4.42**	**286**	Pn	**Pn**	**02 06 16.5**	**+2.0**
	2.2nm,0.3s,SNR=7.9						
EGOR				Sn	**Sn**	**02 07 06.3**	**+0.4**
	5.8nm,0.3s,SNR=7.9						
CKFL	**Kef-Lekhel**	**4.48**	**83**	P	**Pn**	**02 06 16.0**	**+0.7**
CKFL	**Kef-Lekhel**	**4.48**	**83**	Pn	**Pn**	**02 06 16.0**	**+0.7**
CKFL	**Kef-Lekhel**	**4.48**	**83**	P	**Pn**	**02 06 16.0**	**+0.7**
EMOS	**Mosqueruela**	**4.54**	**344**	Pn	**Pn**	**02 06 17.5**	**+1.3**
	5.8nm,0.2s,SNR=42						
EMOS				Sn	**Sn**	**02 07 07.0**	**-2.1**
	52nm,0.7s,SNR=5.8						
EMOS	**Mosqueruela**	**4.54**	**344**	Pn	**Pn**	**02 06 17.5**	**+1.3**
	5.8nm,0.2s,SNR=42						
EMOS				Sn	**Sn**	**02 07 07.0**	**-2.1**
	52nm,0.7s,SNR=5.8						
EBR	**Ebro Roquetas**	**4.84**	**354**	Pn	**Pn**	**02 06 20.6**	**+0.5**
	19nm,0.2s,SNR=7.9						
EBR				Sn	**Sn**	**02 07 13.5**	**-2.4**
	91nm,0.4s,SNR=7.9						
EBR	**Ebro Roquetas**	**4.84**	**354**	Pn	**Pn**	**02 06 20.6**	**+0.5**
	19nm,0.2s,SNR=7.9						
EBR				Sn	**Sn**	**02 07 13.5**	**-2.4**
	91nm,0.4s,SNR=7.9						
EMIJ	**Mijas**	**4.86**	**278**	Pn	**Pn**	**02 06 16.1**	**-4.4**
	3.3nm,0.1s,SNR=28						
EMIJ				Sn	**Sn**	**02 07 10.4**	**-6.3**
	11nm,0.4s,SNR=7.9						
ERTA	**Horta de San J**	**4.99**	**352**	Pn	**Pn**	**02 06 22.9**	**+0.7**
	4.9nm,0.4s,SNR=12						
ERTA				Sn	**Sn**	**02 07 15.1**	**-4.6**
	7.1nm,0.3s,SNR=7.9						
ERTA	**Horta de San J**	**4.99**	**352**	Pn	**Pn**	**02 06 22.9**	**+0.7**
	4.9nm,0.4s,SNR=12						
CMAH	**Djebel Manchou**	**5.06**	**81**	P	**Pn**	**02 06 23.0**	**-0.2**
CMAH	**Djebel Manchou**	**5.06**	**81**	Pn	**Pn**	**02 06 23.0**	**-0.2**
CMAH	**Djebel Manchou**	**5.06**	**81**	P	**Pn**	**02 06 23.0**	**-0.2**
ABSA	**Djebel Ababsia**	**5.08**	**85**	P	**Pn**	**02 06 25.5**	**+1.9**
ABSA	**Djebel Ababsia**	**5.08**	**85**	P	**Pn**	**02 06 25.5**	**+1.9**
CABS	**Djebel Ababsia**	**5.08**	**85**	Pn	**Pn**	**02 06 25.5**	**+1.9**
CABS	**Djebel Ababsia**	**5.08**	**85**	Pn	**Pn**	**02 06 25.5**	**+1.9**
EADA	**Adamuz**	**5.10**	**297**	Pn	**Pn**	**02 06 23.8**	**+0.1**
	1.7nm,0.3s,SNR=11						
EADA				Sn	**Sn**	**02 07 21.6**	**-0.9**
	6.4nm,0.4s,SNR=7.9						
EADA	**Adamuz**	**5.10**	**297**	Pn	**Pn**	**02 06 23.8**	**+0.1**
	1.7nm,0.3s,SNR=11						
EADA				Sn	**Sn**	**02 07 21.6**	**-0.9**
	6.4nm,0.4s,SNR=7.9						
EPOB	**Poblet**	**5.34**	**359**	⇑Pn	**Pn**	**02 06 27.8**	**+0.8**
	4.5nm,0.2s,SNR=18						
EPOB				Sn	**Sn**	**02 07 24.9**	**-3.5**
	7.3nm,0.3s,SNR=7.9						
EPOB	**Poblet**	**5.34**	**359**	Pn	**Pn**	**02 06 27.8**	**+0.8**
	4.5nm,0.2s,SNR=18						
ETOR	**Torete**	**5.44**	**333**	Pn	**Pn**	**02 06 31.5**	**+3.0**
	1.2nm,0.2s,SNR=7.9						
ESDC	**Sonseca Array**	**5.49**	**313**	Pn	**Pn**	**02 06 28.9**	**-0.2**
	2.7nm,0.3s,baz=131,slow=13,SNR=34						
ESDC				Sn	**Sn**	**02 07 30.6**	**-1.5**
	3.6nm,0.3s,baz=131,slow=25,SNR=8.3						
ESDC	**Sonseca Array**	**5.49**	**313**	Pn	**Pn**	**02 06 28.9**	**-0.2**
	1.5nm,0.3s,baz=129,slow=14,SNR=28						
ESDC				Sn	**Sn**	**02 07 31.1**	**-1.0**
	baz=130,slow=24,SNR=7.9						
ESDC	**Sonseca Array**	**5.49**	**313**	Pn	**Pn**	**02 06 28.9**	**-0.2**
	1.5nm,0.3s,SNR=28						
ESDC				Sn	**Sn**	**02 07 31.1**	**-1.0**
	SNR=7.9						
HORN	**Hornachuelos**	**5.49**	**291**	P	**Pn**	**02 06 28.8**	**-0.3**
PAB	**San Pablo**	**5.64**	**310**	⇑Pn	**Pn**	**02 06 31.1**	**-0.1**
	1.1nm,0.2s,SNR=18						
PAB				Sn	**Sn**	**02 07 33.9**	**-2.0**
	3.2nm,0.3s,SNR=7.9						
PAB	**San Pablo**	**5.64**	**310**	Pn	**Pn**	**02 06 31.1**	**-0.1**
	1.1nm,0.2s,SNR=18						
PAB				Sn	**Sn**	**02 07 33.9**	**-2.0**
	3.2nm,0.3s,SNR=7.9						
ECAB	**El Cabril**	**5.69**	**293**	Pn	**Pn**	**02 06 31.1**	**-0.7**
	1.7nm,0.3s,SNR=31						
ECAB				Sn	**Sn**	**02 07 35.6**	**-1.4**
	2.3nm,0.3s,SNR=7.9						
ECAB	**El Cabril**	**5.69**	**293**	Pn	**Pn**	**02 06 31.1**	**-0.7**
	1.7nm,0.3s,SNR=31						
ECAB				Sn	**Sn**	**02 07 35.6**	**-1.4**
	2.3nm,0.3s,SNR=7.9						
MDT	**Midelt**	**5.77**	**238**	Pn	**Pn**	**02 06 33.2**	**+0.2**
	0.3nm,0.3s,baz=66,slow=19,SNR=13						
MDT				Sn	**Sn**	**02 07 34.6**	**-4.5**
	0.4nm,0.3s,baz=53,slow=20,SNR=4.0						
MDT				Lg	Lg	02 08 14.2	
	1.1nm,0.3s,baz=70,slow=24,SNR=4.1						
MDT				LR	LR	02 09 04.0	
	comp=Z,94nm,18.2s,baz=78,slow=42						
CFON	**Fontmartina**	**5.83**	**9**	Pn	**Pn**	**02 06 34.2**	**+0.5**
	2.3nm,0.2s,SNR=13						
CFON				Sn	**Sn**	**02 07 37.8**	**-2.7**
	3.5nm,0.2s,SNR=7.9						
CFON	**Fontmartina**	**5.83**	**9**	Pn	**Pn**	**02 06 34.2**	**+0.5**
	2.3nm,0.2s,SNR=13						
CFON				Sn	**Sn**	**02 07 37.8**	**-2.7**
	3.5nm,0.2s,SNR=7.9						
ESAC	**San Caprasio**	**5.85**	**348**	Pn	**Pn**	**02 06 38.4**	**+4.3**
	6.6nm,0.3s,SNR=14						
ESAC				Sn	**Sn**	**02 07 43.4**	**+2.3**
	28nm,0.4s,SNR=7.9						
EMIR	**Miracle**	**5.90**	**2**	Pn	**Pn**	**02 06 36.6**	**+1.8**
	2.7nm,0.2s,SNR=12						
EMIR				Sn	**Sn**	**02 07 39.9**	**-2.4**
	8.0nm,0.4s,SNR=7.9						
EMIR	**Miracle**	**5.90**	**2**	Pn	**Pn**	**02 06 36.6**	**+1.8**
	2.7nm,0.2s,SNR=12						
EMIR				Sn	**Sn**	**02 07 39.9**	**-2.4**
	8.0nm,0.4s,SNR=7.9						
CZD	**Col de Zad**	**5.95**	**242**	Pn	Pn	02 06 41.0	+5.4
CZD				Sn	**Sn**	**02 07 45.5**	**+1.7**
CSOR	**Sort**	**6.36**	**360**	Pn	**Pn**	**02 06 42.8**	**+1.7**
	3.1nm,0.2s,SNR=35						
CSOR				Sn	**Sn**	**02 07 49.7**	**-3.9**
	3.7nm,0.3s,SNR=7.9						
CSOR	**Sort**	**6.36**	**360**	Pn	**Pn**	**02 06 42.8**	**+1.7**
	3.1nm,0.2s,SNR=35						
CLLI	**Llivia**	**6.49**	**5**	Pn	**Pn**	**02 06 44.5**	**+1.6**
	0.6nm,0.2s,SNR=10						
CLLI				Sn	**Sn**	**02 07 54.3**	**-2.6**
	3.8nm,0.6s,SNR=7.9						
CLLI	**Llivia**	**6.49**	**5**	Pn	**Pn**	**02 06 44.5**	**+1.6**
	0.6nm,0.2s,SNR=10						
CLLI				Sn	**Sn**	**02 07 54.3**	**-2.6**
	3.8nm,0.6s,SNR=7.9						
EMIN	**Mina Concepcio**	**6.55**	**288**	Pn	**Pn**	**02 06 43.5**	**-0.1**
	0.1nm,0.1s,SNR=7.8						
EMIN				Sn	**Sn**	**02 07 55.8**	**-2.5**
	1.6nm,0.4s,SNR=7.9						
EMIN	**Mina Concepcio**	**6.55**	**288**	Pn	**Pn**	**02 06 43.5**	**-0.1**
	0.1nm,0.1s,SNR=7.8						
KEST	**Kesra**	**6.62**	**90**	Pn	**Pn**	**02 06 45.7**	**+1.1**
	0.9nm,0.3s,baz=54,slow=3.6,SNR=22						
KEST				Sn	**Sn**	**02 08 00.7**	**+0.7**
	baz=210,slow=16,SNR=1.0						
ETSF	**Etsaut**	**7.01**	**349**	*e*Pn	**Pn**	**02 06 51.9**	**+1.8**
ETSF				*e*Sn	**Sn**	**02 08 06.1**	**-3.6**
	4.1nm,0.5s						
ETSF	**Etsaut**	**7.01**	**349**	Pn	**Pn**	**02 06 51.9**	**+1.8**
ETSF				Sn	**Sn**	**02 08 06.1**	**-3.6**
	2.0nm,0.5s						
ETSF	**Etsaut**	**7.01**	**349**	Pn	**Pn**	**02 06 51.9**	**+1.8**
EPF	**Esparros**	**7.04**	**355**	*e*Pn	**Pn**	**02 06 51.4**	**+0.9**
EPF				*e*Sn	**Sn**	**02 08 07.5**	**-3.0**
	2.0nm,0.3s						
EPF	**Esparros**	**7.04**	**355**	Pn	**Pn**	**02 06 51.4**	**+0.9**
EPF				Sn	**Sn**	**02 08 07.5**	**-3.0**
	1.0nm,0.3s						
EPF	**Esparros**	**7.04**	**355**	Pn	**Pn**	**02 06 51.4**	**+0.9**
EPF				Sn	**Sn**	**02 08 07.5**	**-3.0**
	1.0nm,0.3s						
EBAD	**Badajoz**	**7.09**	**295**	Pn	**Pn**	**02 06 50.5**	**-0.6**
	1.0nm,0.3s,SNR=7.7						
EBAD				Sn	**Sn**	**02 08 07.6**	**-4.0**
	2.2nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**7.09**	**295**	Pn	**Pn**	**02 06 50.5**	**-0.6**
	1.0nm,0.3s,SNR=7.7						
PVAQ	**Vaqueiros**	**7.30**	**284**	*e*Pn	**Pn**	**02 06 53.1**	**-0.8**
PVAQ				*e*Sn	**Sn**	**02 08 12.2**	**-4.5**
PVAQ				A	A	02 08 15.3	
	3.4nm,0.5s						
PVAQ	**Vaqueiros**	**7.30**	**284**	Pn	**Pn**	**02 06 53.1**	**-0.8**
PVAQ				Sn	**Sn**	**02 08 12.2**	**-4.5**
	3.4nm,0.5s						
PVAQ	**Vaqueiros**	**7.30**	**284**	Pn	**Pn**	**02 06 53.1**	**-0.8**
SJPF	**Ste Jean**	**7.34**	**346**	*e*Pn	**Pn**	**02 06 55.9**	**+1.4**
SJPF	**Ste Jean**	**7.34**	**346**	Pn	**Pn**	**02 06 55.9**	**+1.4**
SJPF	**Ste Jean**	**7.34**	**346**	Pn	**Pn**	**02 06 55.9**	**+1.4**
MTLF	**Montolieu**	**7.37**	**6**	*e*Pn	**Pn**	**02 06 54.7**	**-0.1**
MTLF				*e*Sn	**Sn**	**02 08 14.0**	**-4.3**
	3.5nm,0.6s						
MTLF	**Montolieu**	**7.37**	**6**	Pn	**Pn**	**02 06 54.7**	**-0.1**
MTLF				Sn	**Sn**	**02 08 14.0**	**-4.3**
	1.8nm,0.6s						
MTLF	**Montolieu**	**7.37**	**6**	Pn	**Pn**	**02 06 54.7**	**-0.1**
EALK	**Alkurruntz**	**7.50**	**345**	Pn	**Pn**	**02 06 59.3**	**+2.6**
	4.3nm,0.4s,SNR=7.1						
EALK				Sn	**Sn**	**02 08 19.3**	**-2.4**
	14nm,0.7s,SNR=7.9						
EALK	**Alkurruntz**	**7.50**	**345**	Pn	**Pn**	**02 06 59.3**	**+2.6**
	4.3nm,0.4s,SNR=7.1						
EALK				Sn	**Sn**	**02 08 19.3**	**-2.4**
	14nm,0.7s,SNR=7.9						
PBEJ	**Beja**	**7.53**	**288**	*e*Pn	**Pn**	**02 06 57.8**	**+0.7**
PBEJ	**Beja**	**7.53**	**288**	Pn	**Pn**	**02 06 57.8**	**+0.7**
PBEJ	**Beja**	**7.53**	**288**	Pn	**Pn**	**02 06 57.8**	**+0.7**
PESTR	**Estremoz**	**7.55**	**295**	*e*Pn	**Pn**	**02 06 58.1**	**+0.7**
PESTR				*e*Sn	**Sn**	**02 08 21.3**	**-1.7**
PESTR				A	A	02 08 57.4	
	6.0nm,0.7s						
PESTR	**Estremoz**	**7.55**	**295**	*e*Pn	**Pn**	**02 06 58.1**	**+0.7**
PESTR				*e*Sn	**Sn**	**02 08 21.3**	**-1.7**
PMRV	**Marv??o**	**7.62**	**299**	*e*Pn	**Pn**	**02 07 00.8**	**+2.5**
PMRV	**Marv??o**	**7.62**	**299**	Pn	**Pn**	**02 07 00.8**	**+2.5**
PMRV	**Marv??o**	**7.62**	**299**	Pn	**Pn**	**02 07 00.8**	**+2.5**
MESJ	**Messejana**	**7.77**	**286**	*e*Pn	**Pn**	**02 07 01.1**	**+0.8**
MESJ	**Messejana**	**7.77**	**286**	Pn	**Pn**	**02 07 01.1**	**+0.8**
MESJ	**Messejana**	**7.77**	**286**	Pn	**Pn**	**02 07 01.1**	**+0.8**
PCBR	**Castelo Branco**	**7.85**	**302**	*e*Pn	**Pn**	**02 07 02.1**	**+0.6**
PCBR				*e*Sn	**Sn**	**02 08 28.9**	**-1.4**
PCBR	**Castelo Branco**	**7.85**	**302**	Pn	**Pn**	**02 07 02.1**	**+0.6**
PCBR				Sn	**Sn**	**02 08 28.9**	**-1.4**
PCBR	**Castelo Branco**	**7.85**	**302**	Pn	**Pn**	**02 07 02.1**	**+0.6**
PCBR				Sn	**Sn**	**02 08 28.9**	**-1.4**
ELAN	**Lanestosa**	**8.05**	**335**	Pn	**Pn**	**02 07 06.8**	**+2.6**
	4.1nm,0.2s,SNR=58						
ELAN				Sn	**Sn**	**02 08 31.4**	**-3.8**
	11nm,0.9s,SNR=7.9						
ELAN	**Lanestosa**	**8.05**	**335**	Pn	**Pn**	**02 07 06.8**	**+2.6**
	4.1nm,0.2s,SNR=58						
PMTG	**Montargil**	**8.09**	**295**	*e*Pn	**Pn**	**02 07 05.7**	**+1.0**
PMTG	**Montargil**	**8.09**	**295**	*e*Pn	**Pn**	**02 07 05.7**	**+1.0**
MVO	**Moncorvo**	**8.25**	**311**	*e*Pn	**Pn**	**02 07 07.5**	**+0.6**
MVO				*e*Sn	**Sn**	**02 08 37.7**	**-2.4**
MVO	**Moncorvo**	**8.25**	**311**	Pn	**Pn**	**02 07 07.6**	**+0.6**
	2.6nm,0.4s,SNR=5.8						
MVO				Sn	**Sn**	**02 08 36.1**	**-4.0**
	SNR=7.9						
MVO	**Moncorvo**	**8.25**	**311**	*e*Pn	**Pn**	**02 07 07.5**	**+0.6**
MVO				*e*Sn	**Sn**	**02 08 37.7**	**-2.4**
LMR	**La Mourre**	**8.38**	**28**	*e*Pn	**Pn**	**02 07 08.4**	**-0.3**
LMR				*e*Sn	**Sn**	**02 08 36.4**	**-6.8**
	2.5nm,0.4s						
LMR	**La Mourre**	**8.38**	**28**	Pn	**Pn**	**02 07 08.4**	**-0.3**
LMR				Sn	**Sn**	**02 08 36.4**	**-6.8**
	1.2nm,0.4s						
LMR	**La Mourre**	**8.38**	**28**	Pn	**Pn**	**02 07 08.4**	**-0.3**
PTOM	**Tomar**	**8.42**	**298**	*e*Pn	**Pn**	**02 07 09.4**	**+0.2**
PTOM	**Tomar**	**8.42**	**298**	Pn	**Pn**	**02 07 09.4**	**+0.2**
PTOM	**Tomar**	**8.42**	**298**	Pn	**Pn**	**02 07 09.4**	**+0.2**
PBRG	**Braganca**	**8.47**	**315**	*e*Pn	**Pn**	**02 07 10.7**	**+0.6**
PBRG	**Braganca**	**8.47**	**315**	Pn	**Pn**	**02 07 10.7**	**+0.6**
PBRG	**Braganca**	**8.47**	**315**	Pn	**Pn**	**02 07 10.7**	**+0.6**
PVIS	**Viseu**	**8.55**	**306**	*e*Pn	**Pn**	**02 07 12.0**	**+0.9**
PVIS	**Viseu**	**8.55**	**306**	Pn	**Pn**	**02 07 12.0**	**+0.9**
PVIS	**Viseu**	**8.55**	**306**	Pn	**Pn**	**02 07 12.0**	**+0.9**
FRF	**La Foret Royal**	**8.63**	**27**	*e*Pn	**Pn**	**02 07 11.6**	**-0.5**
FRF				*e*Sn	**Sn**	**02 08 43.5**	**-5.7**
	4.2nm,0.4s						
FRF	**La Foret Royal**	**8.63**	**27**	Pn	**Pn**	**02 07 11.6**	**-0.5**
FRF				Sn	**Sn**	**02 08 43.5**	**-5.7**
	2.1nm,0.4s						
FRF	**La Foret Royal**	**8.63**	**27**	Pn	**Pn**	**02 07 11.6**	**-0.5**
PCAS	**Casmilo, Conde**	**8.65**	**301**	*e*Pn	**Pn**	**02 07 13.8**	**+1.3**
PCAS	**Casmilo, Conde**	**8.65**	**301**	*e*Pn	**Pn**	**02 07 13.8**	**+1.3**
EARI	**Arriondas**	**8.80**	**328**	Pn	**Pn**	**02 07 17.2**	**+2.6**
	16nm,1.1s,SNR=11						
EARI	**Arriondas**	**8.80**	**328**	Pn	**Pn**	**02 07 17.2**	**+2.6**
	16nm,1.1s,SNR=11						
POLO	**Lamas de Olo**	**8.84**	**310**	*e*Pn	**Pn**	**02 07 16.4**	**+1.3**
POLO	**Lamas de Olo**	**8.84**	**310**	*e*Pn	**Pn**	**02 07 16.4**	**+1.3**
PGF	**Pioggiola**	**8.89**	**40**	*e*P	**Pn**	**02 07 20.0**	**+4.1**
PGF	**Pioggiola**	**8.89**	**40**	Pn	**Pn**	**02 07 20.0**	**+4.1**
LFF	**La Frestale**	**8.93**	**358**	*e*Pn	**Pn**	**02 07 16.6**	**+0.4**
LFF	**La Frestale**	**8.93**	**358**	*e*Pn	**Pn**	**02 07 16.6**	**+0.4**
CAF	**Calviac**	**8.93**	**4**	*e*Pn	**Pn**	**02 07 17.2**	**+0.9**
CAF	**Calviac**	**8.93**	**4**	*e*Pn	**Pn**	**02 07 17.2**	**+0.9**
ELOB	**Lobios**	**9.29**	**312**	Pn	**Pn**	**02 07 21.8**	**+0.5**
	5.3nm,0.9s,SNR=4.8						
ELOB				Sn	**Sn**	**02 09 00.8**	**-4.9**
	2.4nm,0.5s,SNR=7.9						
ELOB	**Lobios**	**9.29**	**312**	Pn	**Pn**	**02 07 21.8**	**+0.5**
	5.3nm,0.9s,SNR=4.8						
RJF	**Les Rejaudoux**	**9.29**	**1**	*e*Pn	**Pn**	**02 07 21.9**	**+0.7**
RJF	**Les Rejaudoux**	**9.29**	**1**	*e*Pn	**Pn**	**02 07 21.9**	**+0.7**
EPON	**Pontenova**	**9.74**	**321**	Pn	**Pn**	**02 07 27.9**	**+0.6**
	9.5nm,0.8s,SNR=8.1						
EPON	**Pontenova**	**9.74**	**321**	Pn	**Pn**	**02 07 27.9**	**+0.6**
	9.5nm,0.8s,SNR=8.1						
TCF	**Toulx Ste Croi**	**10.30**	**4**	*e*Pn	**Pn**	**02 07 34.9**	**-0.1**
TCF	**Toulx Ste Croi**	**10.30**	**4**	*e*Pn	**Pn**	**02 07 34.9**	**-0.1**
BGF	**Bois d’Agland**	**10.61**	**6**	*e*Pn	**Pn**	**02 07 38.7**	**-0.6**
BGF	**Bois d’Agland**	**10.61**	**6**	*e*Pn	**Pn**	**02 07 38.7**	**-0.6**
MFF	**Saint Martin d**	**10.63**	**355**	*e*Pn	**Pn**	**02 07 39.5**	**-0.1**
MFF	**Saint Martin d**	**10.63**	**355**	*e*Pn	**Pn**	**02 07 39.5**	**-0.1**
SMF	**Signal de Mont**	**10.81**	**10**	*e*Pn	**Pn**	**02 07 41.1**	**-0.9**
SMF	**Signal de Mont**	**10.81**	**10**	*e*P	Pn	02 07 47.3	+5.3
SMF	**Signal de Mont**	**10.81**	**10**	*e*Pn	**Pn**	**02 07 41.1**	**-0.9**
AVF	**Avril sur Loir**	**10.89**	**8**	*e*P	Pn	02 07 48.0	+4.9
QUIF	**Quistinic**	**12.33**	**346**	*e*P	Pn	02 08 08.7	+5.9
GRR	**Gorron**	**12.46**	**354**	*e*Pn	**Pn**	**02 08 04.2**	**-0.4**
GRR	**Gorron**	**12.46**	**354**	*e*Pn	**Pn**	**02 08 04.2**	**-0.4**
SGMF	**Saint Gilles**	**12.55**	**348**	*e*Pn	**Pn**	**02 08 05.6**	**-0.1**
SGMF	**Saint Gilles**	**12.55**	**348**	*e*Pn	**Pn**	**02 08 05.6**	**-0.1**
LDF	**La Druitiere**	**12.62**	**356**	*e*Pn	**Pn**	**02 08 06.7**	**0.0**
LDF	**La Druitiere**	**12.62**	**356**	*e*Pn	**Pn**	**02 08 06.7**	**0.0**
GERES	**GERESS Array B**	**15.77**	**32**	Pn	**Pn**	**02 08 51.1**	**+1.6**
	0.1nm,0.3s,baz=199,slow=15,SNR=2.4						
MLR	**Muntele Rosu**	**20.93**	**55**	P	Pn	02 09 54.9	+2.3
	0.3nm,0.7s,baz=331,slow=11,SNR=7.1						
TORD	**Torodi Ar. Bea**	**22.77**	**179**	P	**P**	**02 10 09.8**	**0.0**
	0.9nm,0.8s,baz=356,slow=10						
HFS	**Hagfors**	**25.45**	**15**	P	**P**	**02 10 35.3**	**+0.4**
	3.2nm,1.1s,baz=184,slow=16,SNR=1.4						
KURBB	**Kurchatov Arra**	**55.63**	**49**	P	**P**	**02 14 44.8**	**+1.8**
	0.1nm,0.3s,baz=292,slow=7.9,SNR=2.7						

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*ISCJB **15** 02:10:46.9±0.3, 23°.98N±0°.02×122°.48E±0°.01, h16^{km}±3^{km},*
Error ellipse: s-maj=3.3km s-min=2.2km az=162.3
*JMA **15** 02:10:46.9±0.2, 23°.98N×122°.46E, h19^{km}±4^{km}, M2.2*
*TAP **15** 02:10:47.6, 24°.05N×122°.46E, h28^{km}, ML2.9, C*
ISC 15 02:10:47.1±1.1**, 24°.00N**±0°.02×**122°.46E**±0°.02**, h23**^{km}±13^{km}**,**
n65, σ**0^{s}.59**/122**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.62**	**331**	*i* P	**Pb**	**02 10 59.5**	**+0.1**
	baz=321						
EOS1				S	**Sn**	**02 11 08.7**	**-1.2**
	baz=321						
JYNG	**Yonagunijimaku**	**0.63**	**44**	P	**Pb**	**02 10 59.3**	**-0.2**
JYNG				S	**Sb**	**02 11 07.3**	**-0.6**
YOJ	**Yonaguni jima**	**0.68**	**47**	P	**Pb**	**02 11 00.4**	**+0.1**
	baz=57						
YOJ				S	**Sb**	**02 11 09.4**	**0.0**
	baz=57						
YOJ	**Yonaguni jima**	**0.68**	**47**	P	**Pb**	**02 11 00.2**	**-0.1**
YOJ				*e*S	**Sb**	**02 11 08.7**	**-0.7**
NANB	**Nanao**	**0.78**	**303**	*i* P	**Pb**	**02 11 01.8**	**-0.1**
	baz=300						
NANB				S	**Sb**	**02 11 12.5**	**+0.4**
	baz=300						
ENA	**Nanau**	**0.78**	**303**	*i* P	**Pb**	**02 11 02.0**	**-0.1**
	baz=299						
ENA				*i* S	**Sn**	**02 11 13.1**	**-0.8**
	baz=299						
ENLB	**Shoufeng**	**0.79**	**263**	*e*P	**Pb**	**02 11 02.3**	**+0.1**
	baz=247						
ENLB				*e*S	**Sn**	**02 11 14.4**	**+0.4**
	baz=247						
TWD	**Chiawan**	**0.79**	**276**	*e*P	**Pb**	**02 11 02.1**	**-0.1**
	baz=272						
TWD				S	**Sb**	**02 11 13.1**	**+0.5**
	baz=272						
NACB	**Ninganchiao**	**0.81**	**283**	*i* P	**Pb**	**02 11 02.3**	**-0.2**
	baz=263						
NACB				S	**Sb**	**02 11 13.6**	**+0.6**
	baz=263						
TWC	**Suao**	**0.82**	**318**	*i* P	**Pb**	**02 11 02.2**	**-0.6**
	baz=315						
TWC				*i* S	**Sb**	**02 11 12.7**	**-0.8**
	baz=315						
ESL	**Shilin**	**0.96**	**259**	*e*P	**Pb**	**02 11 04.7**	**-0.4**
	baz=246						
ESL				*e*S	**Sb**	**02 11 17.5**	**+0.2**
	baz=246						
EGS		**0.97**	**330**	*e*P	**Pb**	**02 11 05.0**	**-0.3**
	baz=317						
EGS				S	**Sn**	**02 11 18.3**	**-0.1**
	baz=317						
EGFH	**Guangfu**	**1.00**	**251**	*e*P	**Pn**	**02 11 04.9**	**-0.8**
	baz=247						
EGFH				*e*S	**Sb**	**02 11 18.9**	**+0.4**
	baz=247						
ILA	**Ilan**	**1.00**	**320**	*e*P	**Pb**	**02 11 05.8**	**0.0**
	baz=310						
ILA				S	**Sn**	**02 11 18.8**	**-0.4**
	baz=310						
TWE	**Neicheng**	**1.02**	**315**	P	**Pb**	**02 11 06.3**	**+0.2**
	baz=313						
TWE				S	**Sn**	**02 11 19.6**	**0.0**
	baz=313						
NTC	**Toucheng**	**1.03**	**326**	*e*P	**Pb**	**02 11 06.6**	**+0.4**
	baz=324						
NTC				S	**Sn**	**02 11 19.9**	**+0.1**
	baz=324						
ENTT	**Nioudou**	**1.03**	**308**	*i* P	**Pn**	**02 11 06.3**	**0.0**
	baz=305						
ENTT				S	**Sn**	**02 11 21.0**	**+0.9**
	baz=305						
SLBB	**Yuanshan**	**1.06**	**315**	P	**Pb**	**02 11 06.8**	**-0.1**
	baz=312						
SLBB				S	**Sn**	**02 11 21.1**	**+0.3**
	baz=312						
NNSB	**Datong**	**1.07**	**294**	P	**Pn**	**02 11 06.7**	**-0.2**
	baz=290						
NNSB				S	**Sn**	**02 11 21.2**	**+0.1**
	baz=290						
NNSH	**Datong**	**1.07**	**294**	P	**Pn**	**02 11 06.7**	**-0.1**
	baz=290						
NNSH				*i* S	**Sn**	**02 11 21.1**	**-0.1**
	baz=290						
HGSD	**Ruisui**	**1.07**	**242**	*e*P	**Pn**	**02 11 06.8**	**0.0**
	baz=239						
HGSD				*e*S	**Sb**	**02 11 20.9**	**+0.2**
	baz=239						
NNS	**Nan Shan**	**1.08**	**294**	*e*P	**Pn**	**02 11 06.7**	**-0.3**
	baz=291						
NNS				S	**Sn**	**02 11 21.7**	**+0.2**
	baz=291						
TWB1	**Santiao Chiao**	**1.09**	**337**	*e*P	**Pn**	**02 11 06.9**	**-0.1**
	baz=351						
TWB1				S	**Sn**	**02 11 21.3**	**-0.1**
	baz=351						
WHF	**Hehuan Shan**	**1.10**	**278**	*i* P	**Pn**	**02 11 07.1**	**-0.5**
	baz=274						
WHF				*i* S	**Sn**	**02 11 22.2**	**-0.1**
	baz=274						
TIPB	**Shuangxi**	**1.13**	**329**	P	**Pn**	**02 11 07.5**	**-0.1**
	baz=327						

TIPB				S	Sn	02 11 22.2	-0.1
	baz=327						
NWLT	Wulai	1.17	312	P	Pb	02 11 08.6	0.0
	baz=309						
NWLT				S	Sb	02 11 24.1	+0.7
	baz=309						
CHGB	Renai	1.18	273	*e*P	Pn	02 11 08.2	-0.3
	baz=270						
CHGB				S	Sb	02 11 24.2	+0.4
	baz=270						
YHNB	Yeheng	1.19	304	P	Pb	02 11 08.8	-0.3
	baz=289						
YHNB				S	Sb	02 11 24.3	+0.2
	baz=289						
IRIF	Iriomote-Funau	1.21	74	P	Pb	02 11 09.3	0.0
IRIF				S	Sb	02 11 24.7	+0.2
NSK	Sanguang	1.21	304	P	Pn	02 11 08.9	+0.2
	baz=289						
NSK				*e*S	Sb	02 11 25.9	+1.3
	baz=289						
TDCB	Techi	1.22	282	*e*P	Pn	02 11 08.2	-0.7
	baz=266						
TDCB				S	Sb	02 11 25.5	+0.6
	baz=266						
YULB	Yu-li	1.23	241	P	Pn	02 11 08.5	-0.4
	baz=226						
YULB				S	Sn	02 11 23.9	-0.8
	baz=226						
HATJ	Hateruma jima	1.23	87	*e*S	Sb	02 11 25.8	+0.7
NWF	Wu-fen Shan	1.23	330	*e*P	Pn	02 11 08.7	-0.3
	baz=328						
NWF				S	Sb	02 11 26.3	+1.0
	baz=328						
WFSB	Wu-fen Shan	1.23	330	*e*P	Pn	02 11 08.6	-0.4
	baz=328						
WFSB				S	Sb	02 11 25.5	+0.2
	baz=328						
TWF1	Yuli	1.25	239	P	Pn	02 11 09.0	-0.1
	baz=236						
TWF1				*i* S	Sn	02 11 25.4	+0.2
	baz=236						
FULB	Fuli	1.33	234	*e*P	Pn	02 11 09.6	-0.8
	baz=219						
FULB				S	Sn	02 11 27.5	+0.1
	baz=219						
WLTB	Daxi	1.39	308	*e*S	Sb	02 11 30.0	+0.2
	baz=293						
SSLB	Suanglung	1.39	262	P	Pn	02 11 12.0	+0.8
	baz=259						
SSLB				*e*S	Sn	02 11 28.6	-0.4
	baz=259						
YM07	YM07	1.40	327	*e*P	Pb	02 11 12.2	-0.4
	baz=325						
YM07				*e*S	Sb	02 11 29.5	-0.5
	baz=325						
YM04	YM04	1.42	324	*e*S	Sb	02 11 30.1	-0.6
	baz=322						
SMLT	Sun Moon Lake	1.43	266	*e*P	Pb	02 11 13.1	-0.1
	baz=263						
SMLT				*e*S	Sb	02 11 31.2	+0.2
	baz=263						
JKRS	Kuro-shima	1.44	80	P	Pb	02 11 12.9	-0.3
JKRS				*e*S	Sb	02 11 31.8	+0.8
LIOB	Emei	1.47	296	*e*P	Pb	02 11 13.7	0.0
	baz=294						
LIOB				*e*S	Sb	02 11 32.3	+0.3
	baz=294						
TYC	Yuchr	1.47	267	*e*P	Pn	02 11 13.1	+0.8
	baz=264						
TYC				*e*S	Sn	02 11 31.3	+0.6
	baz=264						
YUS	Yu-Shan	1.47	250	*e*P	Pn	02 11 12.2	-0.5
	baz=247						
YUS				S	Sn	02 11 31.1	-0.4
	baz=247						
JIJ	Ishigaki jima	1.58	76	P	Pn	02 11 13.9	+0.2
JIJ				S	Sn	02 11 33.2	-0.3
ALS	Alishan	1.59	253	*e*P	Pb	02 11 15.6	-0.5
	baz=250						
ALS				S	Sb	02 11 35.4	-0.5
	baz=250						
WJS	Zhushan	1.59	264	*e*S	Sb	02 11 36.9	+1.3
	baz=261						
WNT	Mingjian	1.63	266	*e*S	Sb	02 11 37.5	+0.8
	baz=263						
PTSB	Yuanli	1.66	286	*e*S	Sb	02 11 38.4	+0.7
	baz=283						
CHN5	Tsauling	1.68	257	*e*P	Pb	02 11 17.2	-0.3
	baz=243						
CHN5				*e*S	Sb	02 11 37.8	-0.4
	baz=243						
TWGBT	Beinan	1.73	227	*e*P	Pn	02 11 15.9	+0.1
	baz=237						
TWGBT				*e*S	Sn	02 11 37.5	+0.3
	baz=237						
TWG	Pinlang	1.73	228	*e*S	Sn	02 11 35.8	-1.4
	baz=237						
JISG	Ishigakijimahi	1.79	71	P	Pn	02 11 16.6	0.0
JISG				S	Sn	02 11 38.6	0.0
WDLH	Douliu	1.79	260	*e*P	Pb	02 11 18.4	-0.7
	baz=258						
WDLH				*e*S	Sb	02 11 40.8	-0.3
	baz=258						
TPUB	Ta-pu	1.82	248	*e*P	Pn	02 11 18.6	+1.6
	baz=245						
TPUB				S	Sb	02 11 41.7	-0.4
	baz=245						
CHN4	Tsaushan	1.83	250	*e*P	Pb	02 11 19.6	-0.3
	baz=247						
CHN4				S	Sb	02 11 42.4	0.0
	baz=247						
WTP	Ta-pu	1.85	246	*e*P	Pn	02 11 19.1	+1.5
	baz=244						
WTP				S	Sb	02 11 42.7	-0.4
	baz=244						
RLNB	Erlin	1.93	267	*e*S	Sb	02 11 44.2	-0.9
	baz=278						
SLGT	Liugui	1.94	239	*e*P	Pb	02 11 20.8	-1.0
	baz=228						
SLGT				*e*S	Sb	02 11 45.1	-0.6
	baz=228						
CHN1	Nanshi	1.95	246	*e*P	Pn	02 11 20.3	+1.5
	baz=243						
CHN1				S	Sb	02 11 45.9	0.0
	baz=243						
TWK	Hsinying	1.95	248	*e*P	Pb	02 11 20.7	-1.3
	baz=245						
TWK				*e*S	Sb	02 11 45.4	-0.5
	baz=245						
MASBT	Mashibuluo	2.17	231	*e*P	Pn	02 11 23.1	+1.2
	baz=223						
MASBT				*e*S	Sn	02 11 50.0	+1.8
	baz=223						
EAST	Anshuo	2.19	223	*e*P	Pn	02 11 22.9	+0.8
	baz=221						
EAST				*e*S	Sn	02 11 48.5	0.0
	baz=221						

ISCJB ***15*** *02:13:36.3±0.6, 71.°13N±0.°02×10.°14W±0.°07, h6^{km}±4^{km}, mb4.3/79, MS3.6/47, Error ellipse: s-maj=3.8km s-min=2.9km az=26.1*

IDC ***15*** *02:13:36.3±0.7, 71.°18N×9.°65W, h0^{km}, mb3.8/13, mb1 4.1/16, mb1mx3.8/66, mbtmp3.9/16, ML3.4/3, MS3.5/36, Ms1 3.5/36, ms1mx3.4/62, Error ellipse: s-maj=18.5km s-min=10.4km az=31.0*

CSEM ***15*** *02:13:37.5±0.1, 71.°16N×9.°65W, h10^{km}, mb4.4/43, Error ellipse: s-maj=4.2km s-min=3.6km az=121.0*

MOS ***15*** *02:13:37.1±1.3, 71.°45N×9.°62W, h10^{km}, mb4.5/26, Error ellipse: s-maj=19.4km s-min=6.3km az=98.9*

BER ***15*** *02:13:38.5±2.4, 71.°26N×9.°83W, h15^{km}±15^{km}, ML3.6, ML4.6(NAO)*

GCMT ***15*** *02:13:38.8±0.3, 71.°33N×9.°78W, h30^{km}±1^{km}, MW4.8/66, Moment Tensor Solution. s14,c14; s66,c90; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.36±.18; $M_{\theta\theta}$0.91±.13; $M_{\phi\phi}$-1.28±.11; $M_{r\theta}$0.23±.18; $M_{\theta\phi}$1.87±.08; $M_{\phi r}$-0.02±.16; Best double couple: $M_0$2.18300×10^{16} NP1:ϕ_s105.00000°,δ87.00000°,λ7.00000°. NP2: ϕ_s15.00000°,δ83.00000°,λ177.00000°. Principal axes: T 2.0080, Plg7.0000°, Azm330.0000°; N 0.3470, Plg83.0000°, Azm128.0000°; P -2.3580, Plg3.0000°, Azm240.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NAO ***15*** *02:13:38.5±5.4, 71.°31N×9.°55W, h16^{km}±21^{km}, ML4.6*

NEIC ***15*** *02:13:38.8±0.2, 71.°34N×9.°56W, h10^{km}, mb4.5/43, Error ellipse: s-maj=5.3km s-min=3.3km az=220.0*

REY ***15*** *02:13:39.1, 70.°90N×9.°85W, h10^{km}*

ISC 15 02:13:39.3±1.0, **71.°17N**±0.°05×**9.°71W**±0.°03, **h16**^{km}±6^{km}, **n252**, σ1^{s}**93**/238, **mb4.4**/83, **MS3.5**/48, **10C-3D, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JMI	Jan Mayen	0.40	127	*e*P	Pb	02 13 48.1	+0.2
JMI				*e*S	Sb	02 13 55.1	+1.4
JMI				IAML		02 13 57.0	
	comp=Z,6µm,0.3s						
JMIC	Jan Mayen	0.43	114	Pg	Pg	02 13 48.0	0.0
JMIC				Lg	Lg	02 13 54.8	
JMIC	Jan Mayen	0.43	114	Pn	Pg	02 13 48.0	0.0
	comp=Z,1µm,0.3s,baz=52,slow=1.5,SNR=465						
JMIC				Sn	Sb	02 13 55.0	+0.3
	comp=Z,2µm,0.3s,baz=72,slow=19,SNR=110						
JMIC	Jan Mayen	0.43	114	*e*P	Pg	02 13 47.9	0.0
JMIC				*e*S	Sg	02 13 54.3	+0.5
JMIC				IAML		02 13 58.4	
	comp=Z,7µm,0.2s						
JNW	Jan Mayen West	0.44	108	*e*P	Pg	02 13 47.9	-0.2
JNW				*e*S	Sg	02 13 54.9	+0.8
JNW				IAML		02 13 55.2	
	comp=Z,6µm,0.2s						
JNE	Jan Mayen East	0.49	111	*e*P	Pg	02 13 48.6	-0.5
JNE				*e*S	Sg	02 13 55.6	-0.1
JNE				IAML		02 14 00.8	
	comp=Z,6µm,0.2s						
ILEI	Leirhofn	5.38	210	P	Pn	02 14 56.7	-1.9
	baz=212						
ILEI				S	Sn	02 15 58.4	-1.7
	baz=212						
ILEI	Leirhofn	5.38	210	P	Pn	02 14 56.7	-1.9
IGRI	Grimsey	5.53	217	P	Pn	02 15 00.2	-0.5
	baz=218						
IGRI				S	Sn	02 16 01.9	-1.9
	baz=218						
IGIL	Gilhagi	5.66	209	P	Pn	02 15 00.9	-1.6
	baz=209						
IGIL				S	Sn	02 16 06.5	-0.5
	baz=209						
IGIL	Gilhagi	5.66	209	P	Pn	02 15 00.9	-1.6
IGIL				S	Sn	02 16 06.5	-0.5
IHED	Heoinshofoi	5.81	212	P	Pn	02 15 02.6	-2.0
	baz=213						
IHED				S	Sn	02 16 09.1	-1.7
	baz=213						
IDIM	Dimmadalsˆ¡s	5.86	210	P	Pn	02 15 03.9	-1.4
	baz=211						
IDIM				S	Sn	02 16 11.7	-0.2
	baz=211						
IDIM	Dimmadalsˆ¡s	5.86	210	P	Pn	02 15 03.9	-1.4
IDIM				S	Sn	02 16 11.7	-0.2
IBRE	Brettingsstaoi	5.88	215	P	Pn	02 15 04.1	-1.5
	baz=216						
IBRE				S	Sn	02 16 11.3	-1.2
	baz=216						
IGHA	Grjothals	5.92	209	P	Pn	02 15 04.8	-1.3
	baz=210						
IGHA				S	Sn	02 16 12.1	-1.5
	baz=210						
IGRA	Granastaoir	6.01	212	P	Pn	02 15 05.6	-1.6
	baz=213						
IGRA				S	Sn	02 16 14.5	-1.1
	baz=213						
IGRA	Granastaoir	6.01	212	P	Pn	02 15 05.6	-1.6
IGRA				S	Sn	02 16 14.5	-1.1
IGRS	Grimsstaoir	6.04	206	P	Pn	02 15 06.2	-1.5
	baz=207						
IGRS				S	Sn	02 16 15.6	-0.7
	baz=207						
IGRS	Grimsstaoir	6.04	206	P	Pn	02 15 06.2	-1.5
IGRS				S	Sn	02 16 15.6	-0.7
ISIG	Siglufjorour	6.07	218	P	Pn	02 15 07.5	-0.6
	baz=219						
ISIG				S	Sn	02 16 16.5	-0.5
	baz=219						
IHLA	Hella	6.13	215	P	Pn	02 15 07.7	-1.2
	baz=216						
IHLA				S	Sn	02 16 18.5	-0.1
	baz=216						
DAG	Danmarks Havn	6.14	340	⇑*i*P	Pn	02 15 04.7	-4.4
DAG				*i* S	Sn	02 16 06.7	-12
DAG	Danmarks Havn	6.14	340	*i* P	Pn	02 15 05.3	-3.8
DAG	Danmarks Havn	6.14	340	⇑*i*P	Pn	02 15 04.7	-4.4
DAG				*i* S	Sn	02 16 06.7	-12
IREN	Reynihlio	6.14	209	P	Pn	02 15 08.6	-0.6
	baz=210						
IREN				S	Sn	02 16 19.0	0.0
	baz=210						
IREN	Reynihlio	6.14	209	P	Pn	02 15 08.6	-0.6
IREN				S	Sn	02 16 19.0	0.0
IMEL	Melhnausar	6.18	208	P	Pn	02 15 07.8	-1.9
	baz=209						
IMEL				S	Sn	02 16 19.2	-0.6
	baz=209						
IMEL	Melhnausar	6.18	208	P	Pn	02 15 07.8	-1.9
IMEL				S	Sn	02 16 19.2	-0.6
IHRN	Hraun	6.34	222	P	Pn	02 15 11.3	-0.5
	baz=223						
IHRN				S	Sn	02 16 25.1	+1.4
	baz=223						
ISVA	Svartarkot	6.49	209	P	Pn	02 15 13.4	-0.5
	baz=210						
ISVA				S	Sn	02 16 28.6	+1.1
	baz=210						
ISVA	Svartarkot	6.49	209	P	Pn	02 15 13.4	-0.5
ISVA				S	Sn	02 16 28.6	+1.1
IADA	Aoalbol	6.55	202	P	Pn	02 15 13.6	-1.2
	baz=203						
IADA				S	Sn	02 16 29.6	+0.6
	baz=203						
IASK	Askja	6.67	206	P	Pn	02 15 15.2	-1.2
	baz=207						
IMKO	Mokollar	6.69	205	P	Pn	02 15 15.5	-1.2
	baz=206						
IVSH	V-Sauoahnukur	6.77	202	P	Pn	02 15 16.7	-1.2
	baz=203						
IKRE	Kreppuhraun	6.88	205	P	Pn	02 15 18.2	-1.2
	baz=205						
IDYN	Dyngjuhals	7.02	208	P	Pn	02 15 20.1	-1.2
	baz=208						
BORG	Borgarnes	7.77	220	*e*Pn	Pn	02 15 34.7	+3.2
BORG	Borgarnes	7.77	220	*e*P	Pn	02 15 34.7	+3.2
HSPB	Hornsund (broa	8.98	38	*e*Pn	Pn	02 15 44.8	-3.2
HSP	Hornsund	8.99	38	Pn	Pn	02 15 44.7	-3.3
SUMG	Summit	9.02	292	*e*Pn	Pn	02 15 49.4	+0.5
SUMG	Summit	9.02	292	*i* P	Pn	02 15 49.6	+0.7
SUMG				*i* S	Sn	02 17 24.7	-5.4
SUMG	Summit	9.02	292	⇓*i*P	Pn	02 15 49.9	+1.0
SUMG	Summit	9.02	292	*e*P	Pn	02 15 49.4	+0.5
KONS	Konsvik	9.44	109	*e*Pn	Pn	02 15 53.0	-1.4
KONS				IAML		02 17 36.1	
	comp=Z,32nm,0.8s						
KBS	Kingsbay	9.49	26	Pn	Pn	02 15 51.4	-3.6
KBS	Kingsbay	9.49	26	*e*Pn	Pn	02 15 51.3	-3.6
KBS				*e*Sn	Sn	02 17 28.3	-13
KBS	Kingsbay	9.49	26	*e*P	Pn	02 15 51.3	-3.6
KBS				*e*		02 17 28.3	
KBS	Kingsbay	9.49	26	*e*Pn	Pn	02 15 51.4	-3.6
KBS				IAML		02 17 35.9	
	comp=Z,19nm,0.6s						
TRO	Tromso	9.69	85	*e*Pn	Pn	02 15 55.2	-2.5
SPA0	Spitsbergen Ar	9.73	32	Pn	Pn	02 15 56.5	-1.7
	baz=249,slow=16						
SPA0				Sn	Sn	02 17 39.5	-7.3
	baz=250,slow=28						
SPA0	Spitsbergen Ar	9.73	32	*e*Pn	Pn	02 15 56.2	-2.0
SPA0	Spitsbergen Ar	9.73	32	Pn	Pn	02 15 56.5	-1.7
	baz=249,slow=16						
SPA0				Sn	Sn	02 17 39.5	-7.3
	baz=250,slow=28						
SPITS	Spitsbergen Ar	9.73	32	Pn	Pn	02 15 56.1	-2.1
	baz=244,slow=15,SNR=417						
SPITS				Sn	Sn	02 17 39.1	-7.7
	baz=273,slow=30,SNR=4.3						
KIF	Kilpisjarvi	10.56	87	*e*Pn	Pn	02 16 08.7	-0.8
MOL	Molde	10.92	134	*e*Pn	Pn	02 16 14.5	-0.1
MOL				IAML		02 18 13.7	
	comp=Z,15nm,0.8s						
AKN	Aaknes	11.14	136	Pn	Pn	02 16 17.3	-0.3
AKN	Aaknes	11.14	136	Pn	Pn	02 16 17.3	-0.3
LRW	Lerwick	11.61	158	*e*Pn	Pn	02 16 25.5	+1.6
DOMB	Dombas	11.74	132	*e*Pn	Pn	02 16 25.2	-0.6
DOMB				IAML		02 18 35.7	
	comp=Z,7.6nm,0.5s						
HEF	Hetta	11.76	87	*e*Pn	Pn	02 16 24.6	-1.4
ARCES	ARCESS Array B	11.85	81	Pn	Pn	02 16 26.6	-0.6
	comp=Z,0.5nm,0.3s,baz=296,slow=12,SNR=23						
ARCES	ARCESS Array B	11.85	81	*e*Pn	Pn	02 16 27.9	+0.7
ARA0	ARCESS Array S	11.85	81	Pn	Pn	02 16 26.4	-0.8
	baz=293,slow=12						
ARA0	ARCESS Array S	11.85	81	Pn	Pn	02 16 26.4	-0.8
	baz=293,slow=12						
ASK	Askoy	12.29	143	*e*Pn	Pn	02 16 33.1	-0.1
BER	Bergen	12.40	143	*e*Pn	Pn	02 16 34.4	-0.5
BER				IAML		02 19 01.4	
	comp=Z,24nm,1.2s						
ODD1	Odda	13.10	141	*e*Pn	Pn	02 16 45.5	+1.2
NOA	NORSAR Array B	13.13	130	LR	LR	02 21 22.4	
	comp=Z,136nm,19.9s,baz=330,slow=36						
NRA0	NORESS Array S	13.47	130	Pn	Pn	02 16 49.5	+0.1
	baz=322,slow=18						
NRA0	NORESS Array S	13.47	130	Pn	Pn	02 16 49.5	+0.1
	baz=322,slow=18						
KONO	Kongsberg	13.97	136	*i* P	P	02 17 00.1	-4.1
KONO				pmax	pmax		
	comp=Z,9.0nm,1.1s						
HFS	Hagfors	14.54	128	Pn	Pn	02 17 02.6	-1.3
	baz=323,slow=10						
HFS	Hagfors	14.54	128	Pn	Pn	02 17 02.4	-1.5
	comp=Z,0.3nm,0.3s,baz=334,slow=9.9,SNR=9.3						
HFS				Sn	Sn	02 19 36.9	-7.6
	comp=Z,0.2nm,0.3s,baz=328,slow=16,SNR=3.9						
HFS				LR	LR	02 22 05.9	
	comp=Z,206nm,21.4s,baz=328,slow=35						
HFS	Hagfors	14.54	128	Pn	Pn	02 17 02.6	-1.3
	baz=323,slow=10						
SFJD	Kangerlussuaq	14.95	274	Sn	Sn	02 19 42.0	-12
	comp=Z,2.4nm,0.3s,baz=232,slow=9.5,SNR=5.2						
APA	Apatity	15.34	82	⇓*i*P	Pn	02 17 12.2	-2.5
APA				*i*		02 19 58.0	
APA				pmax	pmax		
	comp=Z,7.0nm,1.3s						
EKA	Eskdalemuir Ar	16.15	166	Pn	P	02 17 27.0	-1.3
	baz=352,slow=13,SNR=15						
ESK	Eskdalemuir	16.16	167	*e*Pn	P	02 17 27.6	-0.8
ESK	Eskdalemuir	16.16	167	*e*P	P	02 17 27.7	-0.8
TULEG	Thule	16.56	315	*e*Pn	Pn	02 17 22.9	-7.3
	comp=Z,73nm,1.1s						
FIA0	FINESS Array S	17.05	107	P	Pn	02 17 37.7	+1.1
	baz=318,slow=12						
FIA0	FINESS Array S	17.05	107	Pn	Pn	02 17 37.7	+1.1
	baz=318,slow=12						
FINES	FINESS Array B	17.05	107	P	Pn	02 17 37.2	+0.7
	comp=Z,0.4nm,0.3s,baz=314,slow=10,SNR=16						
FINES				S	Sn	02 20 36.8	-8.6
	comp=Z,0.2nm,0.3s,baz=339,slow=19,SNR=3.6						
VAL	Valentia	19.30	181	*i* S	S	02 21 50.2	+10
VSU	Vasula	19.62	112	*i* P	Pn	02 18 08.4	+0.5
VSU				pmax	pmax		
	comp=Z,65nm,1.5s						
WTSB	Winterswijk	20.66	150	*i* P	Pn	02 18 19.7	-0.5
	comp=Z,37nm,1.0s						
BEBN	Eben Emael	21.62	153	⇑P	P	02 18 30.4	+2.2
	comp=Z,3.0nm,0.5s						
HGN	Heimansgroeve	21.69	152	*i* P	P	02 18 30.9	+1.9
	comp=Z,140nm,1.8s						
HGN				*e*L	L	02 26 04.2	
	comp=Z,124nm,22.0s						
SNF	Seneffe	21.70	155	⇓P	P	02 18 32.9	+3.8
IZAR	Zarasai	21.76	116	*e*P	P	02 18 26.3	-3.3
IZAR				IAmb	IAmb	02 18 37.2	
	comp=Z,6.2nm,0.8s						
KLMR	Klimovskoe	21.79	93	*e*P	P	02 18 27.5	-2.4
KLMR				*e*S	S	02 22 29.0	-0.9
KLMR				pmax	pmax		
	comp=Z,45nm,1.1s						
KLMR	Klimovskoe	21.79	93	*e*P	P	02 18 27.6	-2.4
KLMR				AMP		02 18 39.6	
	comp=Z,45nm,1.1s						
KLMR				*e*S	S	02 22 29.1	-0.9
MEM	Membach	21.85	152	⇑P	P	02 18 32.4	+1.7
	comp=Z,20nm,1.4s						
ISAL	Salakas	21.88	117	*e*P	P	02 18 27.8	-3.1
ISAL				IAmb	IAmb	02 18 33.7	
	comp=Z,9.0nm,1.0s						
BCLA	Clavier	21.93	154	⇑P	P	02 18 32.9	+1.3
IIGN	Ignalina	22.10	117	*e*P	P	02 18 30.3	-3.0
IIGN				IAmb	IAmb	02 18 38.9	
	comp=Z,6.6nm,0.8s						
IDID	Didziasalis	22.28	116	*e*P	P	02 18 31.8	-3.4
IDID				IAmb	IAmb	02 18 40.2	
	comp=Z,6.8nm,1.2s						
CLL	Collm	22.44	141	*i* P	P	02 18 37.6	+0.7
	comp=Z,21nm,1.6s						
CLL				*i*		02 18 45.2	
CLL				*e*S	Sn	02 22 49.0	-6.2
CLL				*e*SS	SnSn	02 23 18.0	+7.5
CLL	Collm	22.44	141	*i* P	P	02 18 37.6	+0.7
CLL				*i*		02 18 45.2	
CLL				*e*S	Sn	02 22 49.0	-6.2
CLL				pmax	pmax		
	comp=Z,21nm,1.6s						
FRB	Frobisher Bay	22.80	281	LR	LR	02 26 38.8	
	comp=Z,112nm,19.0s,baz=44,slow=34						
BRG	Berggiesshubel	23.04	140	*e*P	P	02 18 51.0	+7.7
	comp=Z,17nm,1.6s						
	comp=N,132nm,12.8s						
	comp=E,75nm,14.0s						
	comp=Z,169nm,15.0s						
BRG	Berggiesshubel	23.04	140	*e*P	P	02 18 51.0	+7.7
BRG				pmax	pmax		
	comp=Z,17nm,1.6s						
BRG				MLR	MLR		
	comp=N,132nm,12.8s						
BRG				MLR	MLR		
	comp=E,75nm,14.0s						
BRG				MLR	MLR		
	comp=Z,169nm,15.0s						
PRGR	Permogore	23.19	86	*e*P	P	02 18 47.6	+2.9
PRGR				pmax	pmax		
	comp=Z,20nm,1.3s						
RES	Resolute Bay	23.22	318	P	P	02 18 49.1	+4.2
	comp=Z,27nm,0.9s,baz=54,slow=12,SNR=23						
RES				LR	LR	02 27 38.1	
	comp=Z,210nm,18.7s,baz=74,slow=36						
RES	Resolute Bay	23.22	318	*e*P	P	02 18 45.6	+0.7
	comp=Z,21nm,0.8s						
RES	Resolute Bay	23.22	318	*e*P	P	02 18 45.6	+0.7
RES				pmax	pmax		
	comp=Z,21nm,0.8s						
PVCC	Panska Ves	23.50	139	AMS	AMS	02 30 50.0	
	comp=Z,100nm,12.5s						
KSP	Ksiaz	23.59	136	*e*P	P	02 18 50.6	+1.8
KSP	Ksiaz	23.59	136	*e*P	P	02 18 50.6	+1.8
UPC	Upice	23.84	137	AMS	AMS	02 30 50.0	
	comp=Z,200nm,15.5s						
PRU	Pruhonice	24.01	139	*e*P	P	02 18 54.9	+2.1
PRU				*e*S		02 23 18.7	
PRU				AMS	AMS	02 31 10.0	
	comp=Z,100nm,10.3s						
PRU	Pruhonice	24.01	139	*e*P	P	02 18 54.9	+2.1
PRU				*e*S		02 23 18.7	
PRU				MLR	MLR		
	comp=Z,100nm,10.3s						
DPC	Dobruska-Polom	24.05	136	*e*P	P	02 18 55.2	+1.9
DPC				AMS	AMS	02 30 50.0	
	comp=Z,200nm,14.3s						
DPC	Dobruska-Polom	24.05	136	*e*P	P	02 18 55.2	+1.9
DPC				MLR	MLR		
	comp=Z,200nm,14.3s						
GOPC	GO Pecny, Ondr	24.13	139	AMS	AMS	02 30 10.0	
	comp=Z,100nm,11.5s						
ECH	Echery	24.36	152	*e*P	P	02 18 58.4	+2.4
	comp=Z,42nm,1.9s						
BFO	Black Forest	24.43	150	*e*P	P	02 18 58.1	+1.4
	comp=Z,42nm,1.8s						
BFO	Black Forest	24.43	150	*ce*P	P	02 19 01.1	+4.3
KHC	Kasperske Hory	24.62	141	*e*P	P	02 19 00.8	+2.3
KHC				*e*S	S	02 23 29.8	+11
KHC				AMS	AMS	02 31 40.0	
	comp=Z,200nm,16.0s						
KHC	Kasperske Hory	24.62	141	*e*P	P	02 19 00.8	+2.3
KHC				*e*S	S	02 23 29.8	+11
KHC				MLR	MLR		
	comp=Z,200nm,16.0s						

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MORC  Moravsky Berou    24.87 135  eP     P        02 18 57.2 -3.5
GEC2  GERESS Array S    24.92 141  eP     P        02 19 03.9 +2.7
      comp=Z,4.4nm,0.8s
GERES GERESS Array B    24.92 141  P      P        02 19 03.7 +2.5
      comp=Z,2.6nm,0.7s,baz=353,slow=9.4,SNR=18
GERES                              LR     LR       02 27 48.5
      comp=Z,54nm,21.7s,baz=308,slow=34
GEA0  GERESS Array S    24.93 141  eP     P        02 19 03.4 +2.1
OKC   Ostrava-Krasne    24.95 134  eS     S        02 23 35.0  +11
OKC                                AMS    AMS      02 31 00.0
      comp=Z,200nm,11.6s
OJC   Ojcow             24.99 131  eP     P        02 19 04.4 +2.7
      comp=Z,24nm,1.7s
VRAC  Vranov            25.09 137  P      P        02 19 03.1 +0.4
      comp=Z,1.3nm,0.6s,baz=339,slow=8.5,SNR=3.2
VRAC                               LR     LR       02 28 33.1
      comp=Z,41nm,18.8s,baz=334,slow=36
VRAC  Vranov            25.09 137  eP     P        02 19 03.6 +0.9
KRUC  Moravsky          25.28 137  eP     P        02 19 05.9 +1.5
OBN   Obninsk           25.43 105⇑eP     P        02 19 07.6 +1.9
OBN                                e               02 19 44.2
OBN                                pmax   pmax
      comp=Z,7.0nm,1.0s
OBN                                MLR    MLR
      comp=Z,72nm,14.0s
RETA  Reutte            25.66 147  P      P        02 19 11.5 +3.6
      comp=Z,6.7nm,1.2s
DAVA  Damuels           25.70 148  P      P        02 19 10.8 +2.4
      comp=Z,20nm,1.7s
NIE   Niedzica          25.85 132  eP     P        02 19 13.6 +4.0
NIE   Niedzica          25.85 132  eP     P        02 19 13.6 +4.0
MOTA  Moosalm           25.86 146  eP     P        02 19 13.6 +3.8
      comp=Z,12nm,1.4s
WATA  Walderalm         25.95 146  P      P        02 19 14.5 +3.8
      comp=Z,5.6nm,1.0s
MOA   Molln             25.98 141  P      P        02 19 13.1 +2.3
      comp=Z,5.7nm,1.6s
WTTA  Wattenberg        26.04 146  eP     P        02 19 13.7 +2.3
      comp=Z,19nm,1.2s
DAVOX Davos/Dischmat    26.19 149  LR     LR       02 28 52.2
      comp=Z,90nm,21.7s,baz=324,slow=35
CONA  Conrad Observa    26.24 139  eP     P        02 19 15.0 +1.8
      comp=Z,3.6nm,1.0s
VYHS  Vyhne             26.37 134  eP     P        02 19 17.0 +2.7
VYHS  Vyhne             26.37 134  eP     P        02 19 16.9 +2.7
KECS  Kecovo            26.77 132  eP     P        02 19 23.0 +5.2
KECS  Kecovo            26.77 132  eP     P        02 19 23.0 +5.2
AKASG Malin Array Be    27.05 119  P      P        02 19 20.3 -0.1
      comp=Z,0.8nm,0.4s,baz=328,slow=10.0,SNR=2.4
AKASG                              LR     LR       02 29 34.5
      comp=Z,101nm,20.3s,baz=300,slow=35
KIEV  Kiev              27.06 119 i P     P        02 19 22.8 +2.4
KIEV                               pmax   pmax
      comp=Z,12nm,3.1s
BUR04 Bucovina Ar. S    28.76 126  eP     P        02 19 37.5 +1.7
MLR   Muntele Rosu      30.92 127  LR     LR       02 33 12.7
      comp=Z,88nm,18.3s,baz=343,slow=38
ARU   Arti              31.44  82  eP     P        02 20 00.8 +1.6
ARU                                                02 21 04.4
ARU                                S      S        02 25 11.4 +5.6
ARU                                SS     SnSn     02 26 54.2 +4.3
ESDC  Sonseca Array     31.70 172  LR     LR       02 31 50.8
      comp=Z,62nm,19.5s,baz=10.0,slow=34
FNA   Florina           34.25 136  eP     P        02 20 25.4 +1.4
      comp=Z,7.7nm,0.8s
FNA   Florina           34.25 136  eP     P        02 20 25.4 +1.4
FNA                                pmax   pmax
      comp=Z,8.0nm,0.8s
ANN   Anapa             34.77 114  eP     P        02 20 25.0 -3.4
ANN                                MLR    MLR
      comp=N,285nm,21.0s
ANN                                MLR    MLR
      comp=Z,264nm,21.0s
INK   Inuvik            35.82 328  eP     P        02 20 34.3 -2.8
      comp=Z,9.0nm,1.3s
INK   Inuvik            35.82 328  eP     P        02 20 34.3 -2.9
INK                                pmax   pmax
      comp=Z,9.0nm,1.3s
AKTO  Aktyubinsk        36.31  88  P      P        02 20 41.0 -0.6
      comp=Z,1.7nm,0.9s,baz=343,slow=7.4,SNR=4.4
AKTO                               LR     LR       02 35 11.6
      comp=Z,79nm,18.3s,baz=337,slow=36
AKTO  Aktyubinsk        36.31  88  P      P        02 20 41.0 -0.6
KEST  Kesra             36.91 154  LR     LR       02 35 37.3
      comp=Z,87nm,21.6s,baz=309,slow=36
YKW3  Yellowknife Ar    36.92 312  eP     P        02 20 45.8 -0.8
      comp=Z,5.3nm,0.9s
YKA   Yellowknife Ar    36.97 312  P      P        02 20 46.1 -0.9
      comp=Z,3.4nm,0.7s,baz=31,slow=8.7,SNR=13
YKA                                LR     LR       02 35 28.1
      comp=Z,15nm,19.8s,baz=32,slow=36
KIV   Kislovodsk        37.13 109 i P     P        02 20 49.8 +1.1
KIV                               i                02 23 04.5
KIV                                pmax   pmax
      comp=Z,5.0nm,1.2s
KIV                                MLR    MLR
      comp=Z,44nm,14.0s
KBZ   Khabaz            37.40 109  LR     LR       02 36 51.6
      comp=Z,64nm,19.0s,baz=322,slow=37
BRVK  Borovoye          37.99  75  eP     P        02 20 56.1 +0.4
BRVK  Borovoye          37.99  75ceP      P        02 20 57.2 +1.4
BRVK                               pmax   pmax
      comp=Z,3.0nm,1.7s
BVAR  Borovoye Array    38.05  75  P      P        02 20 56.7 +0.5
      comp=Z,1.7nm,1.1s,baz=310,slow=8.9,SNR=6.7
BRTR  Keskin Array B    38.35 121  P      P        02 21 00.5 +1.4
      comp=Z,0.5nm,0.7s,baz=319,slow=6.2,SNR=3.8
BRTR                               LR     LR       02 37 59.5
      comp=Z,49nm,19.1s,baz=322,slow=38
MDT   Midelt            38.51 173  LR     LR       02 35 39.1
      comp=Z,103nm,21.2s,baz=0.5,slow=34
FYU   Fort Yukon        39.27 334  eP     P        02 21 06.9 +0.6
      comp=Z,15nm,1.1s
FFC   Flin Flon         40.27 296  eP     P        02 21 14.5 -0.4
      comp=Z,6.4nm,0.7s
FFC   Flin Flon         40.27 296  eP     P        02 21 14.5 -0.4
FFC                                pmax   pmax
      comp=Z,6.0nm,0.7s
IDI   Anoyia            40.30 134  LR     LR       02 39 42.8
      comp=Z,60nm,18.8s,baz=324,slow=39
EGAK  Eagle             40.32 330  eP     P        02 21 14.0 -1.1
      comp=Z,5.7nm,1.1s
IL1   Eielson Array     41.20 334  eP     P        02 21 20.9 -1.4
ILAR  Eielson Array     41.20 334  P      P        02 21 21.8 -0.6
      comp=Z,1.7nm,0.8s,baz=16,slow=7.0,SNR=23
ILAR                               LR     LR       02 41 23.9
      comp=Z,49nm,19.0s,baz=52,slow=40
ILB   Eielson Array     41.20 334  eP     P        02 21 22.1 -0.2
MDM   Murphy Dome       41.21 335  eP     P        02 21 22.7 +0.2
      comp=Z,15nm,1.6s
GNI   Garni             41.22 109  LR     LR       02 38 43.3
      comp=Z,70nm,18.4s,baz=334,slow=37
CCB   Clear Creek Bu    41.45 334  eP     P        02 21 24.0 -0.4
      comp=Z,3.4nm,1.0s
MLY   Manley            41.48 336  eP     P        02 21 24.5 -0.2
      comp=Z,8.4nm,1.4s
BPAW  Bear Paw Mtn.     42.40 336  eP     P        02 21 32.4 +0.2
      comp=Z,6.3nm,1.0s
MCK   McKinley          42.47 335  eP     P        02 21 33.1 +0.3
      comp=Z,10nm,1.1s
MCK   McKinley          42.47 335  eP     P        02 21 33.1 +0.3
MCK                                pmax   pmax
      comp=Z,10.0nm,1.1s
KURK  Kurchatov         42.60  70  eP     P        02 21 33.3 -0.6
KURK  Kurchatov         42.60  70ceP      P        02 21 34.4 +0.5
KURK                               pmax   pmax
      comp=Z,1.0nm,0.8s
KURBB Kurchatov Arra    42.65  70  P      P        02 21 34.1 -0.3
      comp=Z,0.9nm,0.7s,baz=329,slow=7.1,SNR=8.5
CAST  Castle Rocks      43.20 336  eP     P        02 21 37.8 -0.9
      comp=Z,6.9nm,0.9s
SKT   Skwentna          44.51 335  eP     P        02 21 48.3 -0.9
      comp=Z,8.7nm,1.2s
MMAI  Mount Meron Ar    45.13 123  LR     LR       02 43 08.9
      comp=Z,33nm,18.3s,baz=10.0,slow=39
MKAR  Makanchi Array    47.20  69  P      P        02 22 10.5 -0.2
      comp=Z,1.0nm,0.8s,baz=337,slow=5.8,SNR=6.4
GEYT  Alibeck           47.48  97  LR     LR       02 41 27.4
      comp=Z,67nm,18.6s,baz=15,slow=35
MA2   Magadan           48.82  13 i P     P        02 22 23.3 +0.3
MA2                                pmax   pmax
      comp=Z,7.0nm,1.0s
MSO   Missoula          50.74 301  eP     P        02 22 37.5 -0.4
      comp=Z,12nm,1.4s
WMQ   Urumqi            51.52  66  P      P        02 22 45.8 +2.1
WMQ                                sP     sP       02 22 52.3 +1.5
WMQ                                pmax   pmax
      comp=Z,22nm,0.7s
WMQ                                LR     LR
      comp=N,98nm,19.3s
WMQ                                LR     LR
      comp=E,170nm,24.9s
WMQ                                LR     LR
      comp=Z,130nm,27.3s
TKL   Tuckaleechee C    51.57 268  LR     LR       02 43 30.2
      comp=Z,76nm,18.5s,baz=12,slow=35
W50A  Signal Mountai    52.49 270  eP     P        02 22 52.5 +1.5
      comp=Z,8.9nm,1.0s
T42A  Van Buren         52.69 276  eP     P        02 22 52.2 -0.2
      comp=Z,4.6nm,1.0s
SONM  Songino Array     52.94  49  LR     LR       02 48 13.3
      comp=Z,60nm,18.1s,baz=172,slow=39
ULN   Ulaanbaatar       53.07  49  eP     P        02 22 54.8 -0.5
      comp=Z,2.2nm,0.8s
ULN   Ulaanbaatar       53.07  49 i P     P        02 22 54.0 -1.3
ULN                                pmax   pmax
      comp=Z,2.0nm,1.4s
PDAR  Pinedale Array    53.20 295  P      P        02 22 54.9 -1.5
      comp=Z,1.1nm,1.0s,baz=36,slow=5.5,SNR=6.6
PDAR                               LR     LR       02 46 11.9
      comp=Z,49nm,18.1s,baz=30,slow=37
PDAR  Pinedale Array    53.20 295  eP     P        02 22 55.3 -1.1
BMO   Blue Mountains    53.49 302  eP     P        02 22 56.7 -1.7
      comp=Z,3.7nm,0.9s
BMO   Blue Mountains    53.49 302  eP     P        02 22 56.7 -1.7
BMO                                pmax   pmax
      comp=Z,4.0nm,0.9s
G08A  Pilot Rock        53.53 304  eP     P        02 22 58.8 +0.1
      comp=Z,8.8nm,1.3s
N23A  Red Feather La    53.84 291  eP     P        02 23 02.0 +0.8
      comp=Z,9.2nm,1.3s
HLID  Hailey            53.87 299  eP     P        02 23 01.2 -0.1
      comp=Z,5.3nm,1.4s
O20A  White River Ci    55.23 293  eP     P        02 23 11.5 +0.3
      comp=Z,8.4nm,1.0s
PETK  Petropavlovsk-    55.70   9  LR     LR       02 46 01.3
      comp=Z,32nm,18.1s,baz=354,slow=35
SMCO  Snowmass          55.73 291  eP     P        02 23 15.1 +0.1
      comp=Z,4.0nm,1.1s
P18A  Preston Nutter    56.29 294  eP     P        02 23 19.6 +0.6
      comp=Z,13nm,1.6s
K05A  Summer Lake       56.43 304  eP     P        02 23 20.7 +0.9
      comp=Z,8.2nm,0.9s
DUG   Dugway, Tooele    56.52 297  eP     P        02 23 21.0 +0.6
      comp=Z,3.6nm,0.8s
DUG   Dugway, Tooele    56.52 297  eP     P        02 23 21.0 +0.6
DUG                                pmax   pmax
      comp=Z,4.0nm,0.8s
KOWA  Kowa              56.75 173  LR     LR       02 46 48.3
      comp=Z,39nm,19.5s,baz=44,slow=35
SRU   San Rafael Swe    56.85 294  eP     P        02 23 23.3 +0.5
      comp=Z,3.6nm,1.0s
SRU   San Rafael Swe    56.85 294  eP     P        02 23 23.3 +0.5
SRU                                pmax   pmax
      comp=Z,4.0nm,1.0s
S22A  4UR Ranch, Cre    57.00 290  eP     P        02 23 24.4 +0.4
      comp=Z,4.6nm,1.4s
YBH   Yreka Blue Hor    57.84 306  LR     LR       02 47 43.3
      comp=Z,86nm,18.2s,baz=5.0,slow=35
MVCO  Mesa Verde        58.00 292  eP     P        02 23 31.6 +0.6
      comp=Z,8.6nm,1.1s
MTPU  Mount Pierson     58.33 295  eP     P        02 23 34.6 +1.2
      comp=Z,3.0nm,1.0s
PSUT  Pine Spring       58.36 297  eP     P        02 23 34.7 +1.2
      comp=Z,4.7nm,1.0s
TOA0  Torodi Ar. Sit    58.41 167  eP     P        02 23 34.1 +0.4
TORD  Torodi Ar. Bea    58.41 167  P      P        02 23 33.6 -0.1
      comp=Z,1.6nm,0.6s,baz=352,slow=9.4
TORD                               LR     LR       02 49 44.9
      comp=Z,41nm,19.1s,baz=320,slow=37
PKCU  Pink Cliffs       58.92 295  eP     P        02 23 39.0 +1.5
      comp=Z,9.4nm,1.2s
KVN   Kaiserville       59.09 301  eP     P        02 23 38.6 +0.1
      comp=Z,3.4nm,1.0s
KVN   Kaiserville       59.09 301  eP     P        02 23 38.6 +0.1
KVN                                pmax   pmax
      comp=Z,3.0nm,1.0s
KNB   Kanab             59.47 295  eP     P        02 23 42.1 +1.0
      comp=Z,4.7nm,1.2s
KNB   Kanab             59.47 295  eP     P        02 23 42.1 +1.0
KNB                                pmax   pmax
      comp=Z,5.0nm,1.2s
ANMO  Albuquerque       59.47 289  LR     LR       02 49 36.3
      comp=Z,80nm,18.5s,baz=37,slow=36
ANMO  Albuquerque       59.47 289ceP      P        02 23 42.7 +1.5
ANMO                               pmax   pmax
      comp=Z,5.0nm,2.5s
LCMT  Little Creek M    59.60 296  eP     P        02 23 43.2 +1.3
      comp=Z,6.3nm,1.3s
NVAR  Mina Array Bea    59.73 300  P      P        02 23 43.0 +0.1
      comp=Z,0.1nm,0.4s,baz=45,slow=6.5,SNR=5.1
NVAR                               LR     LR       02 49 08.4
      comp=Z,85nm,18.4s,baz=360,slow=36
TPNV  Topopah Spring    60.53 298  eP     P        02 23 48.4  0.0
      comp=Z,17nm,2.0s
TPNV  Topopah Spring    60.53 298  eP     P        02 23 48.4  0.0
TPNV                               pmax   pmax
      comp=Z,17nm,2.0s
HHC   Hu-ho-hao-te      60.77  48  eP     P        02 23 49.5 -0.3
HHC                                sP     sP       02 24 02.8 +5.7
HHC                                S      S        02 32 03.4 -2.5
HHC                                sS     pS       02 32 13.8 +1.5
HHC   Hu-ho-hao-te      60.77  48  SS     SS       02 35 55.6 -8.3
HHC                                pmax   pmax
      comp=Z,11nm,1.0s
HHC                                pmax   pmax
      comp=Z,87nm,5.4s
HHC                                LR     LR
      comp=N,140nm,15.9s
HHC                                LR     LR
      comp=E,100nm,14.3s
HHC                                LR     LR
      comp=Z,140nm,16.2s
LZH   Lanzhou           63.29  56  eP     P        02 24 06.9  0.0
LZH                                pP     pP       02 24 10.3 -1.9
LZH                                sP     sP       02 24 11.8 -2.3
LZH                               ePP     PP       02 26 27.0 +1.4
LZH                                pmax   pmax
      comp=Z,19nm,1.3s
LZH                                pmax   pmax
      comp=Z,67nm,8.0s
LZH                                LR     LR
      comp=N,180nm,15.5s
LZH                                LR     LR
      comp=E,190nm,15.7s
LZH                                LR     LR
      comp=Z,240nm,19.2s
TXAR  Lajitas Array     63.81 284  P      P        02 24 09.7 -0.6
      comp=Z,0.6nm,0.8s,baz=96,slow=5.0,SNR=5.6
DBIC  Dimbokro          64.50 175  LR     LR       02 51 34.8
      comp=Z,22nm,20.5s,baz=360,slow=35
KSRS  Korea Array       67.56  35  LR     LR       02 54 35.9
      comp=Z,9.1nm,19.9s,baz=100,slow=36
LPIG  La Paz            70.76 288  LR     LR       02 54 39.3
      comp=Z,50nm,19.8s,baz=62,slow=35
NJ2   Nanjing           70.88  45  eP     P        02 24 52.9 -2.0
NJ2                                pmax   pmax
      comp=Z,8.0nm,0.5s
GYA   Guiyang           73.15  57  eP     P        02 25 09.0 +0.2
GYA                                pmax   pmax
      comp=Z,10.0nm,1.0s
JTS   JuntasAbangare    75.57 259  LR     LR       02 59 47.4
      comp=Z,22nm,19.3s,baz=51,slow=37
CMAR  Chiang Mai Arr    78.52  67  LR     LR       03 09 19.8
      comp=Z,16nm,18.1s,baz=185,slow=43
OTAV  Otavalo           83.01 250  eP     P        02 26 05.0 +1.0
      comp=Z,7.0nm,1.3s
OTAV  Otavalo           83.01 250  eP     P        02 26 05.0 +1.0
OTAV                               pmax   pmax
      comp=Z,7.0nm,1.3s
SHEL  Horse Pasture     86.95 176 i P     P        02 26 26.4 +3.4
PSI   Prapat            93.31  71  LR     LR       03 14 44.6
      comp=Z,194nm,18.2s,baz=92,slow=39
```

ISCJB ***15*** *02:57:19.1±0.3, 7°.23S±0°.05×123°.78E±0°.06, h550^{km}, mb3.5/14, Error ellipse: s-maj=8.3km s-min=6.6km az=163.2*

DJA ***15*** *02:57:19.8±0.4, 7°S±5°×12°4E±°, h579^{km}±7^{km}, M4.2/8, mB4.1/2, mb4.5/7, MLv4.1/8, Mw(mB)3.2/2*

IDC ***15*** *02:57:20.2±0.7, 7°.29S×123°.81E, h559^{km}±8^{km}, mb3.1/14, mb1 3.3/20, mb1mx3.2/54, mbtmp4.1/20, Error ellipse: s-maj=16.8km s-min=8.8km az=76.0*

ISC 15 02:57:19.4±0.5**, 7°.33S**±0°.06×**123°.71E**±0°.07**, h550^{km}, n42, σ1^s.82**/48**, mb3.5**/14**, Banda Sea**

```
Code  Station Name        Δ°   AZ°   Phase ID           Time      Res
                                    Op     ISC        h  m  s    ISC
MMRI  Maumere            1.95 228   P      P        02 58 31.3 +2.4
EDFI  Ende, Flores       2.45 235   P      P        02 58 33.3 +1.8
SOEI  Soe                2.47 167   P      S        02 59 34.4 +4.1
SOEI  Soe                2.47 167   P      P        02 58 34.2 +2.6
BATI  Baumata            2.86 181   P      P        02 58 36.8 +3.1
      106nm,0.3s,baz=20,slow=1.2,SNR=70
BATI                                S      S        02 59 36.2 +2.1
      22nm,0.3s,baz=300,slow=2.1,SNR=3.7
BATI  Baumata            2.86 181   P      P        02 58 36.7 +3.1
KDI   Kendari            3.52 342   P      P        02 58 41.8 +3.8
WSI   Waingapu           4.10 235   P      S        02 59 48.2 -1.2
BASI  Baing, Sumba       4.22 227   P      S        02 59 51.2 +0.1
WBSI  Waikabubak, Su     4.85 241   P      S        02 59 59.3 -1.1
SANI  Sanana             5.71  24   P      P        02 58 58.2 +2.6
PLAI  Plampang           6.06 255   P      S        03 00 21.0 +1.2
      0.4nm110nm,0.9s
TWSI  Taliwang, Sumb     6.91 258   P      S        03 00 30.8 -3.4
PCI   Palu               7.46 329   P      P        02 59 15.5 +3.5
FAKI  Fak Fak            9.56  63   P      P        02 59 32.1 -0.9
SIJI  Sorong             9.90  50   P      P        02 59 37.4 +0.9
      10nm,0.3s,baz=228,slow=9.6,SNR=18
SIJI                                S      S        03 01 27.5 -1.4
      0.5nm,0.3s,baz=114,slow=14,SNR=3.0
FITZ  Fitzroy Crossi    10.87 170   P      P        02 59 47.5 +1.2
      0.7nm,0.3s,baz=10,slow=6.4,SNR=36
KPJI  Karang Pucung     14.66 269   P      P        03 00 26.3 +0.8
CISI  Cisompet, Garu    15.76 268   P      P        03 00 35.8 -1.1
LEM   Lembang           15.98 271   P      P        03 00 39.9 +0.7
      9.5nm,0.3s,baz=352,slow=6.8,SNR=6.6
WRA   Warramunga Arr    16.23 142   P      P        03 00 40.7 -0.5
      1.2nm,0.3s,baz=312,slow=13,SNR=28
WRA                                 S      S        03 03 20.9 -5.0
      0.1nm,0.3s,baz=324,slow=17,SNR=3.3
JAY   Jayapura          17.59  75   P      P        03 00 53.3 -0.4
      1.4nm,0.3s,baz=221,slow=10,SNR=7.6
ASAR  Alice Springs     18.96 150   P      P        03 01 06.2  0.0
      0.6nm,0.3s,baz=325,slow=8.1,SNR=27
ASAR                                S      S        03 04 10.8 +0.3
      0.1nm,0.3s,baz=342,slow=23,SNR=4.5
ASAR                                PcP    PcP      03 05 03.4 -0.8
      0.2nm,0.3s,baz=351,slow=1.3,SNR=7.8
STKA  Stephens Creek    29.57 148   P      P        03 02 39.9 -0.3
      1.8nm,0.4s,baz=323,slow=9.3,SNR=5.0
KSRS  Korea Array       44.72   5   P      P        03 04 43.6 -0.4
      1.1nm,0.8s,baz=165,slow=11,SNR=3.4
MJAR  Matsushiro Arr    45.71  16   P      P        03 04 50.9 -0.7
      1.2nm,0.5s,baz=201,slow=9.4,SNR=5.8
USRK  Ussuriysk Ar.     51.83   8   P      P        03 05 36.8  0.0
      1.8nm,0.5s,baz=170,slow=7.2
SONM  Songino Array     57.02 346   P      P        03 06 13.5 +0.2
      0.7nm,0.5s,baz=167,slow=11,SNR=4.0
MKAR  Makanchi Array    65.23 330   P      P        03 07 07.1 +0.2
      1.5nm,0.5s,baz=128,slow=7.9,SNR=16
ZALV  Zalesovo Beam     69.26 337   P      P        03 07 30.5 -0.9
      0.7nm,0.5s,baz=134,slow=4.2,SNR=3.1
KURBB Kurchatov Arra    69.66 331   P      P        03 07 33.5 -0.3
      0.5nm,0.6s,baz=145,slow=5.2,SNR=6.3
VNDA  Vanda             72.94 172   P      P        03 07 52.8 +0.2
      0.7nm,0.5s,baz=306,slow=8.7,SNR=9.7
BVAR  Borovoye Array    75.11 330   P      P        03 08 05.7 +0.3
      0.6nm,0.5s,baz=119,slow=12,SNR=4.2
AKTO  Aktyubinsk        80.58 324   P      P        03 08 34.5 -0.4
      0.9nm,0.4s,baz=118,slow=9.5,SNR=4.0
QSPA  South Pole Qui    82.65 180   P      P        03 08 45.1 -0.2
      0.8nm,0.4s,baz=320,slow=7.9,SNR=4.7
SNAA  Sanae             93.82 195   P      P        03 09 38.0 +0.2
      0.4nm,0.5s,baz=170,slow=6.1,SNR=6.1
ILAR  Eielson Array     96.32  26   P      P        03 09 47.2 -1.8
      0.2nm,0.8s,baz=219,slow=5.6,SNR=2.7
PDAR  Pinedale Array   121.51  44   PKP    PKPdf    03 15 09.5 -1.8
      0.2nm,0.6s,baz=266,slow=2.7,SNR=2.8
TORD  Torodi Ar. Bea   122.75 281   PKP    PKPdf    03 15 13.8 -0.3
      0.4nm,0.6s,baz=84,slow=2.3
KOWA  Kowa             128.27 283   PKP    PKPdf    03 15 25.0 +0.3
      0.7nm,0.5s,baz=16,slow=3.5,SNR=3.7
CPUP  Villa Florida    146.53 178   PKPbc  PKPbc    03 16 00.2 +0.1
      4.8nm,1.1s,baz=68,slow=18,SNR=3.6
LPAZ  La Paz           153.77 154   PKPbc  PKPbc    03 16 18.3 +0.1
      0.3nm,0.4s,baz=112,slow=5.4,SNR=3.2
LPAZ                                PKPab  PKPab    03 16 34.6 +0.8
      1.1nm,0.6s,baz=194,slow=0.8,SNR=6.8
```

NIED ***15*** *03:04:00, 45°.70N×152°.10E, h32^{km}, Mw3.7 Best double couple: M$_0$4.32000×10^{14} NP1:ϕ_s145.00000°, δ64.00000°, λ-10.00000°. NP2:ϕ_s239.00000°, δ81.00000°, λ-154.00000°.*

JMA 15 03:04:05.2±0.9**, 45°.73N**×**152°.14E, h30^{km}, M4.1, East of Kuril Islands**

```
Code  Station Name        Δ°   AZ°   Phase ID           Time      Res
                                    Op     ISC        h  m  s    ISC
NEM2  Nemuro 2           5.15 245   P      Pn       03 05 19.2 -0.9
NEM2                               eS      Sn       03 06 14.2 -4.3
JRA   Rausu              5.30 253   P      Pn       03 05 24.2 +1.9
JNK   Nakash             5.71 251   P      Pn       03 05 28.7 +0.8
JAK   Akkeshi            6.00 246   P      Pn       03 05 30.8 -1.0
JAK                                eS      Sn       03 06 34.9 -4.5
JTKR  Abashiri--Toko     6.11 256   P      Pn       03 05 35.8 +2.4
JAR   Ashorobuto         6.46 251   P      Pn       03 05 39.5 +1.3
JAR                                eS      Sn       03 06 49.5 -1.4
JMP   Maruseppu          6.47 258   P      Pn       03 05 41.2 +2.8
JOB   Onbets             6.59 248   P      Pn       03 05 40.2 +0.2
JOB                                eS      Sn       03 06 50.8 -3.3
JKK2  Kamakawa 2         6.94 258   P      Pn       03 05 47.6 +2.9
JCH   Churui             7.04 247   P      Pn       03 05 45.9 -0.2
JCH                                eS      Sn       03 07 00.3 -4.8
JNBK  Urakawa-nobuka     7.59 246   P      Pn       03 05 53.1 -0.7
JNBK                               eS      Sn       03 07 13.8 -5.0
JKB   Kayabe             8.90 248   P      Pn       03 06 11.1 -0.6
JYM2  Yakumo 2           9.23 251   P      Pn       03 06 16.8 +0.6
JANG  Nango              9.44 239   P      Pn       03 06 15.9 -3.2
JANG                               eS      Sn       03 07 52.6  -11
JOSM  Okushiri--Mats     9.84 253   P      Pn       03 06 25.2 +0.7
```

ISCJB ***15*** *03:10:10.7±0.5, 9°.62S±0°.07×119°.00E±0°.04, h46^{km}, mb3.8/6, Error ellipse: s-maj=11.0km s-min=4.3km az=20.0*

DJA ***15*** *03:10:11.7±0.4, 9°S±4°×11°9E±°, h15^{km}±5^{km}, M4.3/14, mb4.3/1, MLv4.3/14*

IDC ***15*** *03:10:13.5±3.3, 9°.59S×119°.07E, h78^{km}±28^{km}, mb3.6/6, mb1 3.6/9, mb1mx3.4/56, mbtmp3.8/9, Error ellipse: s-maj=38.5km s-min=12.0km az=49.0*

ISC 15 03:10:10.6±0.7**, 9°.67S**±0°.08×**118°.99E**±0°.05**, h46^{km}, n24, σ2^s.28**/29**, mb3.9**/6**, Sumbawa region**

```
Code  Station Name        Δ°   AZ°   Phase ID           Time      Res
                                    Op     ISC        h  m  s    ISC
WBSI  Waikabubak, Su     0.40  86   P      Pn       03 10 21.0 +0.5
WBSI                                S      Sn       03 10 28.0 +0.5
WSI   Waingapu           1.29  90   P      Pn       03 10 33.3 +1.1
PLAI  Plampang           1.46 305   P      Pn       03 10 35.6 +1.1
PLAI                                S      Sn       03 10 53.0 +0.6
BASI  Baing, Sumba       1.66 109   P      Pn       03 10 41.1 +3.8
TWSI  Taliwang, Sumb     2.27 294   P      Pn       03 10 48.0 +2.3
EDFI  Ende, Flores       2.82  71   P      Pn       03 10 53.4 +0.1
MMRI  Maumere            3.37  73   P      Pn       03 11 03.8 +3.1
DNP   Denpasar           3.86 284   P      Pn       03 11 10.5 +3.1
IGBI  Denpasar           3.88 282   P      Pn       03 11 10.7 +2.9
SRBI  Singaraja          4.05 293   P      Pn       03 11 12.7 +2.7
BKSI  Bulukumba          4.46  15   P      Pn       03 11 16.7 +0.9
BATI  Baumata            4.64  97   P      Pn       03 11 21.3 +3.1
      41nm,0.3s,baz=310,slow=2.5,SNR=26
BATI                                S      Sn       03 12 12.2 +1.4
      14nm,0.3s,baz=105,slow=9.2,SNR=12
BATI  Baumata            4.64  97   P      Pn       03 11 21.4 +3.2
JAGI  Jajag, Banyuwa     4.92 284   P      Pn       03 11 23.7 +1.7
SOEI  Soe                5.21  91   P      Pn       03 11 29.2 +3.1
FITZ  Fitzroy Crossi    10.58 143   P      Pn       03 12 40.7 +1.1
      0.6nm,0.3s,baz=340,slow=8.8,SNR=15
FITZ                                S      Sn       03 14 31.0 -5.8
      0.9nm,0.3s,baz=172,slow=17,SNR=7.9
WRA   Warramunga Arr    18.00 126   P      P        03 14 18.3 +0.6
      0.2nm,0.3s,baz=305,slow=14,SNR=5.0
WRA                                 S      Sn       03 17 26.8  -11
      0.1nm,0.3s,baz=294,slow=23,SNR=1.8
ASAR  Alice Springs     19.92 136   P      Pn       03 14 40.9 +0.3
```

	0.1nm,0.3s,baz=319,slow=9.8,SNR=5.4						
ASAR				S	**S**	**03 18 19.7**	**-0.8**
	0.1nm,0.3s,baz=306,slow=22,SNR=3.4						
SONM	**Songino Array**	**58.33**	**350**	P	**P**	**03 20 00.4**	**-0.6**
	0.9nm,0.5s,baz=164,slow=8.1,SNR=6.4						
MKAR	**Makanchi Array**	**65.04**	**333**	P	**P**	**03 20 45.0**	**-1.2**
	0.4nm,0.4s,baz=141,slow=8.0,SNR=6.7						
KURBB	**Kurchatov Arra**	**69.56**	**334**	P	**P**	**03 21 13.6**	**-0.9**
	0.3nm,0.5s,baz=146,slow=5.7,SNR=3.0						
ZALV	**Zalesovo Beam**	**69.66**	**339**	P	**P**	**03 21 13.9**	**-1.2**
	0.8nm,0.3s,baz=160,slow=4.6,SNR=2.0						
BVAR	**Borovoye Array**	**74.88**	**332**	P	**P**	**03 21 45.7**	**-0.6**
	0.5nm,0.5s,baz=132,slow=6.4,SNR=2.5						
AKTO	**Aktyubinsk**	**79.76**	**325**	P	**P**	**03 22 12.7**	**-1.1**
	0.4nm,0.3s,baz=108,slow=9.6,SNR=3.9						

ISCJB ***15*** *03:18:33.1±0.4, 49°.86N±0°.03×18°.46E±0°.03, h0^{km}, Error ellipse: s-maj=3.9km s-min=2.3km az=19.3*

CSEM ***15*** *03:18:34.4±0.2, 49°.82N×18°.50E, h1^{km}, ML2.9/14, Error ellipse: s-maj=5.1km s-min=3.3km az=18.0*

IPEC ***15*** *03:18:34.9±0.2, 49°.83N×18°.59E, h0^{km}±3^{km}, ML2.2/3, Error ellipse: s-maj=1.8km s-min=1.1km az=164.0*

PRU ***15*** *03:18:35.4, 49°.82N×18°.49E, h0^{km}*

VIE ***15*** *03:18:36.2±0.8, 49°.65N×18°.47E, h0^{km}, mb2.4/3, ml2.4/5, Error ellipse: s-maj=7.3km s-min=6.0km az=32.0 25 km SE of Ostrava Suspected Mining induced.*

ISC 15 03:18:33.8±0.7, **49°.83N**±0°.03×**18°.55E**±0°.02, **h0**^{km}**, n54, σ0**^{s}**.72**/97, **4D, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.26**	**272**	⇓*i*PG	**Pb**	**03 18 40.7**	**-0.7**
OKC				*e*SG	**Sg**	**03 18 44.1**	**+1.8**
	comp=Z,125nm,0.4s						
OKC	**Ostrava-Krasne**	**0.26**	**272**	Pg	**Pb**	**03 18 40.7**	**-0.7**
OKC				Sg	**Sg**	**03 18 44.1**	**+1.8**
	125nm,0.4s						
RAC	**Raciborz**	**0.34**	**318**	*e*Pg	**Pb**	**03 18 42.9**	**+0.1**
RAC				*e*Sg	**Sb**	**03 18 48.6**	**-0.3**
MORC	**Moravsky Berou**	**0.66**	**266**	*e*Pg	**Pb**	**03 18 47.9**	**-0.3**
MORC				*e*Sg	**Sg**	**03 18 56.1**	**+1.2**
	40nm,0.2s						
MORC	**Moravsky Berou**	**0.66**	**266**	*e*PG	**Pb**	**03 18 48.0**	**-0.3**
MORC				*e*SG	**Sg**	**03 18 56.2**	**+1.3**
MORC	**Moravsky Berou**	**0.66**	**266**	*e*Pg	**Pb**	**03 18 47.9**	**-0.3**
	baz=85						
MORC				*e*Sg	**Sg**	**03 18 56.1**	**+1.2**
	40nm,0.2s,baz=85						
OJC	**Ojcow**	**0.89**	**64**	*e*Pg	**Pb**	**03 18 51.8**	**-0.4**
OJC				*e*Sg	**Sb**	**03 19 04.9**	**+0.2**
OJC	**Ojcow**	**0.89**	**64**	*e*Pg	**Pb**	**03 18 51.8**	**-0.4**
OJC				*e*Sg	**Sb**	**03 19 04.9**	**+0.2**
LANS	**Liptovska Anna**	**0.90**	**138**	*e*PG	**Pb**	**03 18 52.2**	**-0.2**
LANS				*e*SG	**Sb**	**03 19 05.0**	**0.0**
LANS	**Liptovska Anna**	**0.90**	**138**	*e*Pg	**Pb**	**03 18 52.2**	**-0.2**
LANS				*e*Sg	**Sb**	**03 19 05.0**	**0.0**
JAVC	**Velka Javorina**	**1.13**	**211**	*e*Pg	**Pn**	**03 18 57.1**	**+0.2**
JAVC	**Velka Javorina**	**1.13**	**211**	*e*PG	**Pn**	**03 18 57.1**	**+0.2**
JAVC	**Velka Javorina**	**1.13**	**211**	*e*Pg	**Pn**	**03 18 57.1**	**+0.2**
	baz=31						
KRLC	**Kraliky**	**1.17**	**283**	*i* PG	**Pg**	**03 18 56.1**	**-0.1**
KRLC				*e*SG	**Sb**	**03 19 12.0**	**-0.7**
KRLC	**Kraliky**	**1.17**	**283**	Pg	**Pg**	**03 18 56.1**	**-0.1**
KRLC				Sg	**Sb**	**03 19 12.0**	**-0.7**
NIE	**Niedzica**	**1.21**	**109**	*e*Pg	**Pn**	**03 18 58.0**	**0.0**
NIE				*e*Sg	**Sn**	**03 19 16.0**	**+1.0**
NIE	**Niedzica**	**1.21**	**109**	*e*Pg	**Pn**	**03 18 58.0**	**0.0**
NIE				*e*Sg	**Sn**	**03 19 16.0**	**+1.0**
VYHS	**Vyhne**	**1.35**	**172**	*e*PG	**Pb**	**03 18 59.9**	**0.0**
VYHS				*e*SG	**Sn**	**03 19 18.2**	**-0.3**
VYHS				*e*LG	Lg	03 19 20.6	
VYHS	**Vyhne**	**1.35**	**172**	*e*Pg	**Pb**	**03 18 59.9**	**0.0**
VYHS				*e*Sn	**Sn**	**03 19 18.2**	**-0.3**
VRAC	**Vranov**	**1.38**	**249**	*e*Pg	**Pb**	**03 19 00.7**	**+0.3**
VRAC				*e*Sg	**Sb**	**03 19 18.8**	**+0.2**
	28nm,0.3s						
VRAC	**Vranov**	**1.38**	**249**	*e*PG	**Pb**	**03 19 00.8**	**+0.3**
VRAC				*e*SG	**Sn**	**03 19 18.9**	**-0.4**
VRAC	**Vranov**	**1.38**	**249**	*e*Pg	**Pb**	**03 19 00.7**	**+0.3**
	baz=67						
VRAC				*e*Sg	**Sb**	**03 19 18.8**	**+0.2**
	28nm,0.3s,baz=67						
SMOL	**Smolenice**	**1.51**	**210**	*e*PN	**Pn**	**03 19 02.0**	**-0.1**
SMOL	**Smolenice**	**1.51**	**210**	*e*Pn	**Pn**	**03 19 02.0**	**-0.1**
DPC	**Dobruska-Polom**	**1.53**	**291**	*i* PG	**Pb**	**03 19 02.9**	**-0.2**
DPC				*e*SG	**Sn**	**03 19 23.6**	**+0.6**
	comp=Z,23nm,0.3s						
DPC	**Dobruska-Polom**	**1.53**	**291**	Pg	**Pb**	**03 19 02.9**	**-0.2**
DPC				Sg	**Sn**	**03 19 23.6**	**+0.6**
	23nm,0.3s						
KRUC	**Moravsky**	**1.60**	**242**	*e*Pg	**Pb**	**03 19 04.2**	**-0.1**
KRUC				*e*Sg	**Sg**	**03 19 25.8**	**+0.5**
	27nm,0.2s						
KRUC	**Moravsky**	**1.60**	**242**	*e*PG	**Pb**	**03 19 04.2**	**-0.1**
KRUC				*e*SG	**Sg**	**03 19 25.8**	**+0.5**
KRUC	**Moravsky**	**1.60**	**242**	*e*Pg	**Pb**	**03 19 04.2**	**-0.1**
	baz=61						
KRUC				*e*Sg	**Sg**	**03 19 25.8**	**+0.5**
	27nm,0.2s,baz=61						
MODS	**Modra-Piesok**	**1.68**	**210**	*e*SN	**Sn**	**03 19 26.6**	**-0.1**
MODS				*e*LG	Lg	03 19 31.8	
MODS	**Modra-Piesok**	**1.68**	**210**	*e*Sn	**Sn**	**03 19 26.6**	**-0.1**
KSP	**Ksiaz**	**1.77**	**306**	*e*Pg	**Pn**	**03 19 06.1**	**+0.5**
KSP				*e*Sg	**Sb**	**03 19 29.4**	**-0.5**
UPC	**Upice**	**1.77**	**294**	⇓*e*PG	**Pb**	**03 19 07.1**	**0.0**
UPC				*e*SG	**Sg**	**03 19 31.2**	**+0.6**
	comp=Z,15nm,0.5s						
UPC	**Upice**	**1.77**	**294**	Pg	**Pb**	**03 19 07.1**	**0.0**
UPC				Sg	**Sg**	**03 19 31.2**	**+0.6**
	15nm,0.5s						
KECS	**Kecovo**	**1.85**	**136**	*e*SN	**Sb**	**03 19 32.0**	**-0.1**
KECS				*e*LG	Lg	03 19 36.2	
KECS	**Kecovo**	**1.85**	**136**	*e*Sn	**Sb**	**03 19 32.0**	**-0.1**
CRVS	**Cervenica-Dubn**	**2.12**	**115**	*e*PN	**Pg**	**03 19 14.2**	**-0.1**
CRVS	**Cervenica-Dubn**	**2.12**	**115**	*e*Pn	**Pg**	**03 19 14.2**	**-0.1**
GOPC	**GO Pecny, Ondr**	**2.44**	**273**	*e*SG	**Sg**	**03 19 50.8**	**-1.3**
	comp=Z,6.6nm,0.3s						
GOPC	**GO Pecny, Ondr**	**2.44**	**273**	Sg	**Sg**	**03 19 50.8**	**-1.3**
	6.6nm,0.3s						
PRU	**Pruhonice**	**2.60**	**275**	⇓*e*PG	**Pb**	**03 19 21.2**	**0.0**
PRU				*e*SG	**Sb**	**03 19 55.2**	**+1.5**
	comp=Z,8.2nm,0.4s						
PRU	**Pruhonice**	**2.60**	**275**	Pg	**Pb**	**03 19 21.2**	**0.0**
PRU				Sg	**Sb**	**03 19 55.2**	**+1.5**
	8.2nm,0.4s						
CONA	**Conrad Observa**	**2.60**	**224**	Pn	**Pn**	**03 19 17.1**	**-0.1**
	1.1nm,0.4s						
CONA				Sn	**Sn**	**03 19 49.7**	**+0.1**
	2.9nm,0.3s						
CONA	**Conrad Observa**	**2.60**	**224**	Pn	**Pn**	**03 19 17.1**	**-0.1**
	1.1nm,0.4s						
CONA				Sn	**Sn**	**03 19 49.7**	**+0.1**
	2.9nm,0.3s						
PVCC	**Panska Ves**	**2.66**	**287**	⇓*e*PG	**Pb**	**03 19 23.0**	**+0.8**
PVCC				*e*SG	**Sg**	**03 19 59.0**	**-0.1**
	comp=Z,22nm,0.4s						
PVCC	**Panska Ves**	**2.66**	**287**	Pg	**Pb**	**03 19 23.0**	**+0.8**
PVCC				Sg	**Sg**	**03 19 59.0**	**-0.1**
	22nm,0.4s						
BRG	**Berggiesshubel**	**3.13**	**291**	PG	**Pg**	**03 19 32.2**	**-1.6**
BRG				SG	**Sg**	**03 20 12.9**	**-1.5**
	4.9nm,0.4s						
ARSA	**Arzberg**	**3.27**	**219**	*e*Pn	**Pn**	**03 19 26.0**	**-0.3**
	1.8nm,0.6s						
ARSA				*e*Sn	**Sn**	**03 20 07.4**	**+1.4**
	1.5nm,0.5s						
ARSA	**Arzberg**	**3.27**	**219**	Pn	**Pn**	**03 19 26.0**	**-0.3**
	1.8nm,0.6s						
ARSA				Sn	**Sn**	**03 20 07.4**	**+1.4**
	1.5nm,0.5s						
KHC	**Kasperske Hory**	**3.32**	**260**	*e*PN	**Pn**	**03 19 27.7**	**+0.7**
KHC				*i* PG	**Pb**	**03 19 34.2**	**+0.7**
KHC				*e*SG	**Sg**	**03 20 18.8**	**-1.6**
	comp=Z,6.9nm,0.4s						
KHC	**Kasperske Hory**	**3.32**	**260**	Pn	**Pn**	**03 19 27.7**	**+0.7**
KHC				Sg	**Sg**	**03 20 18.8**	**-1.6**
	6.9nm,0.4s						
MOA	**Molln**	**3.46**	**237**	*e*Pn	**Pn**	**03 19 28.6**	**-0.3**
	0.5nm,0.2s						
MOA				Pg	**Pg**	**03 19 39.4**	**-0.6**
	0.7nm,0.3s						
MOA				*e*Sn	**Sn**	**03 20 10.4**	**-0.1**
	0.7nm,0.2s						
MOA				Sg	**Sg**	**03 20 23.9**	**-0.9**
	3.3nm,0.3s						
MOA	**Molln**	**3.46**	**237**	Pn	**Pn**	**03 19 28.6**	**-0.3**
	0.5nm,0.2s						
CLL	**Collm**	**3.84**	**295**	*e*Pg	**Pg**	**03 19 47.0**	**-0.3**
CLL				*e*Sg	**Sg**	**03 20 35.0**	**-2.0**
	comp=Z,5.0nm,0.7s						

GII ***15*** *03:34:03.3±0.4, 36°.61N×27°.00E, h122^{km}*

ISCJB ***15*** *03:34:05.2±0.2, 36°.54N±0°.02×27°.06E±0°.02, h142^{km}±2^{km}, mb3.6/8, Error ellipse: s-maj=3.3km s-min=2.2km az=179.1*

IDC ***15*** *03:34:05.6±0.8, 36°.62N×26°.94E, h133^{km}±12^{km}, mb3.4/8, mb1 3.4/14, mb1mx3.2/62, mbtmp3.7/14, Error ellipse: s-maj=20.3km s-min=9.7km az=151.0*

ATH ***15*** *03:34:06.1, 36°.58N×26°.99E, h136^{km}±2^{km}, ML3.6/12, Error ellipse: s-maj=2.3km s-min=0.9km az=141.0*

CSEM ***15*** *03:34:06.5±0.1, 36°.56N×27°.04E, h131^{km}±2^{km}, ML3.7, Error ellipse: s-maj=3.3km s-min=1.8km az=173.0*

ISK ***15*** *03:34:07.6, 36°.64N×26°.97E, h111^{km}±3^{km}, ML3.7/7*

DDA ***15*** *03:34:08.0, 36°.58N×26°.84E, h45^{km}, Ml3.5*

NIC ***15*** *03:34:08.7±0.2, 36°.95N×27°.46E, h25^{km}, mb4.3, ML3.8*

HLW ***15*** *03:34:08.2, 36°.21N×27°.31E, h25^{km}±15^{km}, Md3.9, Ml4.3*

THE ***15*** *03:34:10.5, 36°.55N×26°.99E, h103^{km}±3^{km}, ML3.4/12, Error ellipse: s-maj=3.5km s-min=0.7km az=70.0*

ISC 15 03:34:05.9±0.6, **36°.60N**±0°.03×**27°.04E**±0°.03, **h137**^{km}±4^{km}**, n267, σ1**^{s}**.41**/337, **mb3.6**/8, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DAT	**Datca**	**0.45**	**73**	PG	**Pn**	**03 34 26.2**	**+0.6**
DAT	**Datca**	**0.45**	**73**	*i* P	**Pn**	**03 34 26.2**	**+0.6**
DAT				*i* S	**Sn**	**03 34 40.4**	**-0.2**
DAT	**Datca**	**0.45**	**73**	P	**Pn**	**03 34 26.2**	**+0.6**
DAT				S	**Sn**	**03 34 40.4**	**-0.2**
BODT	**Bodrum**	**0.51**	**25**	PG	**Pn**	**03 34 26.0**	**+0.2**
BODT	**Bodrum**	**0.51**	**25**	P	**Pn**	**03 34 26.3**	**+0.5**
BODT				S	**Sn**	**03 34 36.5**	**-4.5**
BODT	**Bodrum**	**0.51**	**25**	*e*Pg	**Pn**	**03 34 26.0**	**+0.2**
BODT	**Bodrum**	**0.51**	**25**	P	**Pn**	**03 34 26.3**	**+0.5**
BODT				S	**Sn**	**03 34 36.5**	**-4.5**
BDRM	**Kayabasi**	**0.56**	**35**	*i* S	**Sn**	**03 34 40.4**	**-1.1**
BDRM	**Kayabasi**	**0.56**	**35**	S	**Sn**	**03 34 40.4**	**-1.1**
MLSB	**Milas**	**0.91**	**40**	PG	**Pn**	**03 34 29.1**	**+0.4**
MLSB	**Milas**	**0.91**	**40**	*e*Pg	**Pn**	**03 34 29.1**	**+0.4**
MRSB	**Marmaris-Mugla**	**0.94**	**83**	PG	**Pn**	**03 34 29.3**	**+0.4**
MRSB	**Marmaris-Mugla**	**0.94**	**83**	*e*Pg	**Pn**	**03 34 29.3**	**+0.4**
AMGA	**Amorgos Island**	**0.95**	**284**	P	**Pn**	**03 34 29.6**	**+0.6**
AMGA				S	**Sn**	**03 34 45.9**	**-0.7**
AMGA				AML	AML	03 34 46.6	
	comp=N,1748μm,0.6s						
AMGA				AML	AML	03 34 46.7	
	comp=E,1576μm,1.0s						
AMGA	**Amorgos Island**	**0.95**	**284**	P	**Pn**	**03 34 29.5**	**+0.6**
AMGA				S	**Sn**	**03 34 43.0**	**-3.5**
AMGA	**Amorgos Island**	**0.95**	**284**	P	**Pn**	**03 34 29.5**	**+0.6**
AMGA				S	**Sn**	**03 34 43.0**	**-3.5**
ARG	**Arkhangelos**	**0.96**	**113**	PG	**Pn**	**03 34 30.3**	**+1.3**
ARG	**Arkhangelos**	**0.96**	**113**	P	Pn	03 34 30.9	+1.8
ARG				S	**Sn**	**03 34 46.6**	**0.0**
ARG				AML	AML	03 34 48.1	
	comp=N,2732μm,0.5s						
ARG				AML	AML	03 34 48.3	
	comp=E,5836μm,0.3s						
ARG	**Arkhangelos**	**0.96**	**113**	P	**Pn**	**03 34 30.4**	**+1.4**
ARG				S	**Sn**	**03 34 43.5**	**-3.1**
ARG	**Arkhangelos**	**0.96**	**113**	P	**Pn**	**03 34 30.4**	**+1.4**
ARG				S	**Sn**	**03 34 47.0**	**+0.4**
KARP	**Karpathos**	**1.06**	**175**	PN	**Pn**	**03 34 30.8**	**+0.7**
KARP	**Karpathos**	**1.06**	**175**	P	**Pn**	**03 34 30.9**	**+0.7**
KARP				S	**Sn**	**03 34 48.4**	**+0.1**
KARP				AML	AML	03 34 52.1	
	comp=N,4807μm,0.2s						
KARP				AML	AML	03 34 52.5	
	comp=E,4956μm,0.2s						
KARP	**Karpathos**	**1.06**	**175**	P	**Pn**	**03 34 30.7**	**+0.7**
KARP				S	**Sn**	**03 34 43.8**	**-4.5**
KARP	**Karpathos**	**1.06**	**175**	P	**Pn**	**03 34 30.7**	**+0.7**
KARP				S	**Sn**	**03 34 48.4**	**+0.1**
SMG	**Samos**	**1.12**	**352**	P	**Pn**	**03 34 30.3**	**-0.2**
SMG	**Samos**	**1.12**	**352**	P	**Pn**	**03 34 30.9**	**+0.4**
SMG	**Samos**	**1.12**	**352**	P	**Pn**	**03 34 30.9**	**+0.4**
YER	**Yerkesik**	**1.13**	**62**	PN	**Pn**	**03 34 31.4**	**+0.7**
YER	**Yerkesik**	**1.13**	**62**	P	**Pn**	**03 34 32.0**	**+1.3**
YER				S	**Sn**	**03 34 49.1**	**-0.5**
YER	**Yerkesik**	**1.13**	**62**	*e*Pn	**Pn**	**03 34 31.4**	**+0.7**
YER	**Yerkesik**	**1.13**	**62**	P	**Pn**	**03 34 32.0**	**+1.3**
YER				S	**Sn**	**03 34 49.1**	**-0.5**
AYDN	**Tasoluk**	**1.25**	**32**	*i* P	**Pn**	**03 34 32.9**	**+1.0**
AYDN	**Tasoluk**	**1.25**	**32**	P	**Pn**	**03 34 32.9**	**+1.0**
THR8	**Santorini-Mono**	**1.27**	**262**	P	**Pn**	**03 34 32.7**	**+0.6**
THR8	**Santorini-Mono**	**1.27**	**262**	P	**Pn**	**03 34 32.6**	**+0.6**
THR8	**Santorini-Mono**	**1.27**	**262**	P	**Pn**	**03 34 32.6**	**+0.6**
TURN	**Turunc**	**1.28**	**77**	PG	**Pn**	**03 34 29.8**	**-2.3**
TURN	**Turunc**	**1.28**	**77**	*i* P	**Pn**	**03 34 30.1**	**-2.0**
TURN				*i* S	**Sn**	**03 34 46.3**	**-5.8**
TURN	**Turunc**	**1.28**	**77**	P	**Pn**	**03 34 30.1**	**-2.0**
SANT	**Santorini**	**1.29**	**260**	PN	**Pn**	**03 34 32.6**	**+0.3**
SANT				SN	**Sn**	**03 34 50.5**	**-1.9**
SANT	**Santorini**	**1.29**	**260**	P	**Pn**	**03 34 33.1**	**+0.7**
SANT				S	**Sn**	**03 34 51.4**	**-1.0**
SANT	**Santorini**	**1.29**	**260**	P	**Pn**	**03 34 32.9**	**+0.6**
SANT				S	**Sn**	**03 34 49.2**	**-3.2**
SANT	**Santorini**	**1.29**	**260**	*e*Pn	**Pn**	**03 34 32.6**	**+0.3**
SANT	**Santorini**	**1.29**	**260**	P	**Pn**	**03 34 32.9**	**+0.6**
SANT				*e*Sn	**Sn**	**03 34 50.5**	**-1.9**
SANT				S		03 34 51.8	
APE	**Apeiranthos**	**1.30**	**291**	PN	**Pn**	**03 34 32.4**	**+0.1**
APE	**Apeiranthos**	**1.30**	**291**	P	**Pn**	**03 34 33.0**	**+0.7**
APE	**Apeiranthos**	**1.30**	**291**	P	**Pn**	**03 34 33.0**	**+0.7**
APE	**Apeiranthos**	**1.30**	**291**	*e*Pn	**Pn**	**03 34 32.4**	**+0.1**
APE	**Apeiranthos**	**1.30**	**291**	P	**Pn**	**03 34 33.0**	**+0.7**
SAP2K	**Karterados**	**1.30**	**262**	P	**Pn**	**03 34 33.5**	**+1.2**
THR2	**Thira island,**	**1.30**	**264**	P	**Pn**	**03 34 33.3**	**+0.9**
THR2	**Thira island,**	**1.30**	**264**	P	**Pn**	**03 34 33.0**	**+0.7**
THR2	**Thira island,**	**1.30**	**264**	P	**Pn**	**03 34 33.0**	**+0.7**
THR7	**Fira-Santorini**	**1.31**	**263**	P	**Pn**	**03 34 33.5**	**+1.0**
THR7	**Fira-Santorini**	**1.31**	**263**	P	**Pn**	**03 34 33.2**	**+0.8**
THR7	**Fira-Santorini**	**1.31**	**263**	P	**Pn**	**03 34 33.2**	**+0.8**
DALY	**Dalyan (Mu˜la**	**1.31**	**80**	PN	**Pn**	**03 34 33.9**	**+1.5**
DALY	**Dalyan (Mu˜la**	**1.31**	**80**	*i* P	**Pn**	**03 34 34.1**	**+1.7**
DALY				*i* S	**Sn**	**03 34 53.2**	**+0.5**
DALY	**Dalyan (Mu˜la**	**1.31**	**80**	*e*Pn	**Pn**	**03 34 33.9**	**+1.5**
DALY				S	**Sn**	**03 34 53.2**	**+0.5**
THT1	**Athinios (Pele**	**1.32**	**261**	P	**Pn**	**03 34 33.0**	**+0.5**
THT1	**Athinios (Pele**	**1.32**	**261**	P	**Pn**	**03 34 33.0**	**+0.5**
THT1	**Athinios (Pele**	**1.32**	**261**	P	**Pn**	**03 34 33.0**	**+0.5**
CMBO	**Columbo, Santo**	**1.32**	**265**	P	**Pn**	**03 34 33.4**	**+0.9**
CMBO	**Columbo, Santo**	**1.32**	**265**	P	**Pn**	**03 34 33.3**	**+0.7**
CMBO	**Columbo, Santo**	**1.32**	**265**	P	**Pn**	**03 34 33.2**	**+0.7**
THR3	**Thira Island,**	**1.33**	**262**	P	**Pn**	**03 34 33.3**	**+0.6**
THR3	**Thira Island,**	**1.33**	**262**	P	**Pn**	**03 34 33.3**	**+0.6**
THR3	**Thira Island,**	**1.33**	**262**	P	**Pn**	**03 34 33.2**	**+0.5**
THR6	**Thira Island,**	**1.35**	**260**	P	**Pn**	**03 34 34.0**	**+1.2**
THR6	**Thira Island,**	**1.35**	**260**	P	**Pn**	**03 34 33.6**	**+0.8**
THR6	**Thira Island,**	**1.35**	**260**	P	**Pn**	**03 34 33.6**	**+0.8**
SAP1	**Santorini-Akro**	**1.35**	**260**	P	**Pn**	**03 34 33.9**	**+1.1**
SAP1	**Santorini-Akro**	**1.35**	**260**	P	**Pn**	**03 34 33.6**	**+0.8**
SAP1	**Santorini-Akro**	**1.35**	**260**	P	**Pn**	**03 34 33.6**	**+0.8**
SAP3	**Santorini-Thir**	**1.38**	**264**	P	**Pn**	**03 34 34.0**	**+0.9**
THR5	**Thira Island,**	**1.38**	**263**	P	**Pn**	**03 34 34.6**	**+1.5**
THR5	**Thira Island,**	**1.38**	**263**	P	**Pn**	**03 34 34.1**	**+1.0**
THR5	**Thira Island,**	**1.38**	**263**	P	**Pn**	**03 34 34.1**	**+1.0**
THR9	**Santorini-Faro**	**1.38**	**260**	P	**Pn**	**03 34 34.2**	**+1.1**
THR9	**Santorini-Faro**	**1.38**	**260**	P	**Pn**	**03 34 33.9**	**+0.8**
THR9	**Santorini-Faro**	**1.38**	**260**	P	**Pn**	**03 34 33.9**	**+0.8**
AYDB	**Zeytinkoy-Aydi**	**1.50**	**27**	PN	**Pn**	**03 34 35.0**	**+0.4**
AYDB				SN	**Sn**	**03 34 55.9**	**-0.7**
AYDB	**Zeytinkoy-Aydi**	**1.50**	**27**	*e*Pn	**Pn**	**03 34 35.0**	**+0.4**
ZKR	**Zakros**	**1.63**	**205**	P	Pn	03 34 38.5	+2.6
ZKR				S	**Sn**	**03 35 00.8**	**+2.0**
ZKR				AML	AML	03 35 01.0	
	comp=E,5018μm,0.4s						
ZKR				AML	AML	03 35 02.8	
	comp=N,1144μm,0.5s						
ZKR	**Zakros**	**1.63**	**205**	P	**Pn**	**03 34 37.2**	**+1.3**
ZKR				S	**Sn**	**03 34 57.2**	**-1.6**
ZKR	**Zakros**	**1.63**	**205**	P	**Pn**	**03 34 37.2**	**+1.3**
ZKR				S	**Sn**	**03 34 59.7**	**+0.9**
FETY	**Fethiye**	**1.64**	**88**	PN	**Pn**	**03 34 37.4**	**+1.3**
FETY	**Fethiye**	**1.64**	**88**	P	**Pn**	**03 34 37.4**	**+1.3**
FETY	**Fethiye**	**1.64**	**88**	P	**Pn**	**03 34 37.4**	**+1.3**
FETY				S	**Sn**	**03 34 58.0**	**-1.2**
TAVA	**DENIZLI_Tavas**	**1.73**	**60**	*i* P	**Pn**	**03 34 38.1**	**+1.0**
TAVA				*i* S	**Sn**	**03 35 00.4**	**-0.6**
TAVA	**DENIZLI_Tavas**	**1.73**	**60**	P	**Pn**	**03 34 38.1**	**+1.0**
TAVA				S	**Sn**	**03 35 00.4**	**-0.6**
NPS	**Neapolis**	**1.77**	**221**	P	**Pn**	**03 34 37.9**	**+0.3**
NPS				S	**Sn**	**03 35 00.4**	**-1.3**
NPS				AML	AML	03 35 02.2	
	comp=N,3411μm,0.2s						
NPS				AML	AML	03 35 02.8	
	comp=E,3526μm,0.2s						
NPS	**Neapolis**	**1.77**	**221**	P	**Pn**	**03 34 37.9**	**+0.3**
NPS				S	**Sn**	**03 35 00.1**	**-1.6**
NPS	**Neapolis**	**1.77**	**221**	P	**Pn**	**03 34 37.9**	**+0.3**
NPS				S	**Sn**	**03 35 00.9**	**-0.8**
LAST	**Lasithi**	**1.92**	**222**	P	**Pn**	**03 34 39.5**	**+0.1**
LAST				S	**Sn**	**03 35 03.4**	**-1.5**
LAST				AML	AML	03 35 04.8	
	comp=N,1700μm,0.4s						
LAST				AML	AML	03 35 09.8	
	comp=E,832μm,0.6s						
LAST	**Lasithi**	**1.92**	**222**	P	**Pn**	**03 34 39.6**	**+0.3**
LAST				S	**Sn**	**03 35 03.1**	**-1.8**
LAST	**Lasithi**	**1.92**	**222**	P	**Pn**	**03 34 39.6**	**+0.3**
LAST				S	**Sn**	**03 35 03.9**	**-1.0**
CHOS	**Chios island**	**1.95**	**337**	P	**Pn**	**03 34 40.2**	**+0.6**
CHOS				S	**Sn**	**03 35 05.7**	**+0.1**
CHOS	**Chios island**	**1.95**	**337**	P	**Pn**	**03 34 40.2**	**+0.6**
CHOS				S	**Sn**	**03 35 05.7**	**+0.1**
DENT	**Denizli**	**1.96**	**54**	PN	**Pn**	**03 34 40.3**	**+0.5**
DENT	**Denizli**	**1.96**	**54**	*e*Pn	**Pn**	**03 34 40.3**	**+0.5**
IACM	**Heraklion**	**2.06**	**232**	P	**Pn**	**03 34 41.1**	**+0.3**
IACM				S	**Sn**	**03 35 06.8**	**-0.9**
IACM	**Heraklion**	**2.06**	**232**	P	**Pn**	**03 34 41.4**	**+0.5**
IACM				S	**Sn**	**03 35 06.3**	**-1.4**
IACM	**Heraklion**	**2.06**	**232**	P	**Pn**	**03 34 41.4**	**+0.5**
IACM				S	**Sn**	**03 35 07.1**	**-0.6**
KSTL	**Kastelli Herak**	**2.06**	**232**	P	**Pn**	**03 34 40.3**	**-0.6**
KSTL				S	**Sn**	**03 35 04.2**	**-3.5**
KSTL	**Kastelli Herak**	**2.06**	**232**	P	**Pn**	**03 34 40.3**	**-0.6**
KSTL				S	**Sn**	**03 35 04.2**	**-3.5**
AKAS	**Kas**	**2.10**	**99**	PN	**Pn**	**03 34 43.2**	**+1.6**
AKAS	**Kas**	**2.10**	**99**	*i* P	**Pn**	**03 34 43.0**	**+1.4**
AKAS	**Kas**	**2.10**	**99**	P	**Pn**	**03 34 43.0**	**+1.4**
KSL	**Kastellorizon**	**2.10**	**102**	P	**Pn**	**03 34 42.3**	**+0.9**
KSL				S	**Sn**	**03 35 06.9**	**-1.7**
KSL				AML	AML	03 35 09.3	
	comp=N,1534μm,0.4s						
KSL				AML	AML	03 35 09.5	
	comp=E,3632μm,0.3s						
KSL	**Kastellorizon**	**2.10**	**102**	P	**Pn**	**03 34 42.6**	**+1.2**
KSL	**Kastellorizon**	**2.10**	**102**	P	**Pn**	**03 34 42.7**	**+1.3**
KSL				S	**Sn**	**03 35 08.4**	**-0.3**
MHLA	**Plaka, Milos I**	**2.11**	**275**	P	**Pn**	**03 34 42.2**	**+0.7**
MHLA	**Plaka, Milos I**	**2.11**	**275**	P	**Pn**	**03 34 42.2**	**+0.7**
GOLH	**Golhisar**	**2.12**	**72**	*i* P	**Pn**	**03 34 43.4**	**+1.7**
GOLH	**Golhisar**	**2.12**	**72**	P	**Pn**	**03 34 43.4**	**+1.7**
SERI	**Serifos**	**2.12**	**286**	P	**Pn**	**03 34 42.3**	**+0.6**
SERI	**Serifos**	**2.12**	**286**	P	**Pn**	**03 34 42.3**	**+0.6**
IDI	**Anoyia**	**2.18**	**234**	P	**Pn**	**03 34 42.6**	**+0.1**
	comp=E,43nm,0.3s,baz=58,slow=5.2,SNR=1052						
IDI				S	**Sn**	**03 35 08.8**	**-1.8**
	comp=E,60nm,0.3s,baz=87,slow=21,SNR=28						
IDI	**Anoyia**	**2.18**	**234**	PN	**Pn**	**03 34 42.6**	**+0.1**
MANT	**Manisa**	**2.24**	**32**	*i* P	**Pn**	**03 34 44.1**	**+0.8**
MANT	**Manisa**	**2.24**	**32**	P	**Pn**	**03 34 44.2**	**+0.8**
ELL	**Elmali**	**2.31**	**86**	PN	**Pn**	**03 34 45.6**	**+1.5**
ELL	**Elmali**	**2.31**	**86**	*e*Pn	**Pn**	**03 34 45.6**	**+1.5**
PRNS	**Prines Rethymn**	**2.40**	**240**	P	**Pn**	**03 34 45.8**	**+0.7**
PRNS				S	**Sn**	**03 35 15.8**	**+0.5**
PRNS	**Prines Rethymn**	**2.40**	**240**	P	**Pn**	**03 34 45.8**	**+0.7**
PRNS				S	**Sn**	**03 35 15.8**	**+0.5**
SIVA	**Sivas**	**2.41**	**230**	P	**Pn**	**03 34 46.3**	**+1.2**
SIVA				S	**Sn**	**03 35 16.3**	**+0.9**
SIVA				AML	AML	03 35 21.0	
	comp=N,988μm,0.3s						
SIVA				AML	AML	03 35 22.1	
	comp=E,1959μm,0.6s						
SIVA	**Sivas**	**2.41**	**230**	P	**Pn**	**03 34 46.1**	**+0.9**
SIVA				S	**Sn**	**03 35 14.4**	**-1.0**
SIVA	**Sivas**	**2.41**	**230**	P	**Pn**	**03 34 46.1**	**+0.9**
SIVA				S	**Sn**	**03 35 15.6**	**+0.2**
KARY	**Karystos**	**2.52**	**305**	P	**Pn**	**03 34 47.6**	**+1.0**
KARY	**Karystos**	**2.52**	**305**	P	**Pn**	**03 34 47.6**	**+1.0**
VAM	**Vamos**	**2.59**	**243**	P	**Pn**	**03 34 46.7**	**-0.9**
VAM				S	**Sn**	**03 35 18.5**	**-1.1**
VAM	**Vamos**	**2.59**	**243**	P	**Pn**	**03 34 47.4**	**-0.1**
VAM				S	**Sn**	**03 35 18.9**	**-0.7**
VAM	**Vamos**	**2.59**	**243**	P	**Pn**	**03 34 47.5**	**-0.1**
VAM				S	**Sn**	**03 35 18.9**	**-0.7**
BRDR	**BURDUR-Merkez**	**2.65**	**65**	*i* P	**Pn**	**03 34 49.6**	**+1.3**
BRDR	**BURDUR-Merkez**	**2.65**	**65**	P	**Pn**	**03 34 49.6**	**+1.3**
CHAN	**Chania**	**2.66**	**247**	P	**Pn**	**03 34 49.0**	**+0.7**
CHAN				S	**Sn**	**03 35 20.5**	**-0.5**
CHAN	**Chania**	**2.66**	**247**	P	**Pn**	**03 34 49.0**	**+0.7**
CHAN				S	**Sn**	**03 35 20.5**	**-0.5**
KORT	**Korkueli**	**2.69**	**80**	PN	**Pn**	**03 34 50.4**	**+1.6**
KORT	**Korkueli**	**2.69**	**80**	*i* P	**Pn**	**03 34 50.7**	**+1.9**
KORT	**Korkueli**	**2.69**	**80**	*e*Pn	**Pn**	**03 34 50.4**	**+1.6**
KORT	**Korkueli**	**2.69**	**80**	P	**Pn**	**03 34 50.7**	**+1.9**
IMMV	**Iera Moni Meta**	**2.73**	**246**	P	**Pn**	**03 34 48.8**	**-0.5**
IMMV	**Iera Moni Meta**	**2.73**	**246**	P	**Pn**	**03 34 49.5**	**+0.2**
IMMV				S	**Sn**	**03 35 22.4**	**-0.3**
IMMV	**Iera Moni Meta**	**2.73**	**246**	P	**Pn**	**03 34 49.5**	**+0.2**
IMMV				S	**Sn**	**03 35 22.4**	**-0.3**
DEMI	**Demirci**	**2.77**	**28**	*i* P	**Pn**	**03 34 51.0**	**+1.1**
DEMI	**Demirci**	**2.77**	**28**	P	**Pn**	**03 34 51.0**	**+1.1**
VLY	**Voula,Athens**	**2.88**	**297**	P	**Pn**	**03 34 51.8**	**+0.7**
VLY	**Voula,Athens**	**2.88**	**297**	P	**Pn**	**03 34 52.0**	**+0.9**
VLY	**Voula,Athens**	**2.88**	**297**	P	**Pn**	**03 34 52.0**	**+0.9**
DION	**Dionisos Attik**	**2.88**	**302**	P	**Pn**	**03 34 52.0**	**+0.8**
DION	**Dionisos Attik**	**2.88**	**302**	P	**Pn**	**03 34 52.2**	**+1.0**
PTL	**Penteli**	**2.92**	**301**	P	**Pn**	**03 34 52.7**	**+1.1**
PTL	**Penteli**	**2.92**	**301**	P	**Pn**	**03 34 52.7**	**+1.1**
ANTB	**Antalya**	**2.92**	**83**	PN	**Pn**	**03 34 54.2**	**+2.6**
ANTB	**Antalya**	**2.92**	**83**	*e*Pn	**Pn**	**03 34 54.2**	**+2.6**
ATHU	**Athens Univers**	**2.93**	**299**	P	**Pn**	**03 34 52.8**	**+0.9**
ATHU	**Athens Univers**	**2.93**	**299**	P	**Pn**	**03 34 52.9**	**+1.1**
ATHU	**Athens Univers**	**2.93**	**299**	P	**Pn**	**03 34 52.9**	**+1.1**
GVD	**Gavdhos**	**2.98**	**235**	P	**Pn**	**03 34 53.2**	**+0.7**
GVD				S	**Sn**	**03 35 28.2**	**-0.2**
GVD				AML	AML	03 35 31.0	
	comp=N,619μm,0.4s						
GVD				AML	AML	03 35 32.1	
	comp=E,808μm,0.3s						
GVD	**Gavdhos**	**2.98**	**235**	P	**Pn**	**03 34 53.2**	**+0.7**
GVD				S	**Sn**	**03 35 28.0**	**-0.4**
ISP	**Isparta**	**3.03**	**65**	Pn	**Pn**	**03 34 53.7**	**+0.4**
ANKY	**Antikythira Is**	**3.11**	**257**	P	**Pn**	**03 34 53.5**	**-0.7**
ANKY				S	**Sn**	**03 35 29.1**	**-2.4**
ANKY				AML	AML	03 35 33.7	
	comp=N,174μm,0.5s						
ANKY				AML	AML	03 35 40.5	
	comp=E,177μm,0.3s						
ANKY	**Antikythira Is**	**3.11**	**257**	P	**Pn**	**03 34 54.2**	**+0.1**
ANKY	**Antikythira Is**	**3.11**	**257**	P	**Pn**	**03 34 54.3**	**+0.1**
ANKY				S	**Sn**	**03 35 30.0**	**-1.4**
DID	**Didima**	**3.17**	**288**	P	**Pn**	**03 34 55.3**	**+0.3**
DID	**Didima**	**3.17**	**288**	P	**Pn**	**03 34 55.7**	**+0.7**
DID	**Didima**	**3.17**	**288**	P	**Pn**	**03 34 55.7**	**+0.7**
KYTH	**Kithira**	**3.24**	**265**	P	**Pn**	**03 34 55.8**	**0.0**
KYTH	**Kithira**	**3.24**	**265**	P	**Pn**	**03 34 56.4**	**+0.6**
KYTH	**Kithira**	**3.24**	**265**	P	**Pn**	**03 34 56.4**	**+0.6**
KTHR	**Kythira**	**3.27**	**265**	P	**Pn**	**03 34 56.9**	**+0.6**
KTHR	**Kythira**	**3.27**	**265**	P	**Pn**	**03 34 56.9**	**+0.6**
SUTC	**Sutluce-Ispart**	**3.29**	**73**	PN	**Pn**	**03 34 57.7**	**+1.2**
SUTC	**Sutluce-Ispart**	**3.29**	**73**	*e*Pn	**Pn**	**03 34 57.7**	**+1.2**
VLI	**Veliai**	**3.30**	**273**	P	**Pn**	**03 34 56.0**	**-0.6**
VLI				S	**Sn**	**03 35 32.9**	**-3.0**
VLI				AML	AML	03 35 35.8	
	comp=N,422μm,0.2s						
VLI				AML	AML	03 35 37.2	
	comp=E,216μm,0.2s						
VLI	**Veliai**	**3.30**	**273**	P	**Pn**	**03 34 56.8**	**+0.2**
VLI	**Veliai**	**3.30**	**273**	P	**Pn**	**03 34 56.8**	**+0.2**
VLI				S	**Sn**	**03 35 34.0**	**-1.8**

LTK	Loutraki	3.54	295	P	Pn	03 35 01.2	+1.4
LTK	Loutraki	3.54	295	P	Pn	03 35 01.1	+1.4
DYR	Agios Nikonas	3.79	274	P	Pn	03 35 04.5	+1.5
DYR	Agios Nikonas	3.79	274	P	Pn	03 35 04.3	+1.3
VLX	Vlachokerasia	3.81	283	P	Pn	03 35 04.6	+1.2
VLX	Vlachokerasia	3.81	283	P	Pn	03 35 04.6	+1.2
GUR	Goura	3.98	291	P	Pn	03 35 07.1	+1.5
GUR	Goura	3.98	291	P	Pn	03 35 07.0	+1.5
DSF	Desfina	4.02	298	P	Pn	03 35 07.2	+1.2
DSF	Desfina	4.02	298	P	Pn	03 35 07.4	+1.4
ITM	Ithomi	4.14	280	P	Pn	03 35 09.0	+1.4
ITM				S	Sn	03 35 52.9	-2.7
ITM				AML	AML	03 35 59.6	
	comp=E,235μm,0.3s						
ITM				AML	AML	03 36 00.7	
	comp=N,188μm,0.3s						
ITM	Ithomi	4.14	280	P	Pn	03 35 09.0	+1.4
ITM				S	Sn	03 35 53.9	-1.7
KLV	Kalavryta, Ach	4.16	292	P	Pn	03 35 09.0	+1.2
KLV	Kalavryta, Ach	4.16	292	P	Pn	03 35 09.1	+1.2
PYL	PYLOS	4.26	276	P	Pn	03 35 07.5	-1.7
PYL	PYLOS	4.26	276	P	Pn	03 35 09.1	-0.2
MES2	Methoni	4.29	275	P	Pn	03 35 07.5	-2.0
MES2	Methoni	4.29	275	P	Pn	03 35 09.3	-0.3
TRIZ	Trizonia	4.33	296	P	Pn	03 35 11.7	+1.6
TRIZ	Trizonia	4.33	296	P	Pn	03 35 11.6	+1.6
MES3	Kyparissia	4.35	280	P	Pn	03 35 10.3	-0.1
MES3	Kyparissia	4.35	280	P	Pn	03 35 11.0	+0.6
SERG	Sergoula	4.36	296	P	Pn	03 35 12.3	+1.9
SERG	Sergoula	4.36	296	P	Pn	03 35 12.2	+1.7
AMT	Artemida-Makis	4.36	284	P	Pn	03 35 12.8	+2.1
AMT	Artemida-Makis	4.36	284	P	Pn	03 35 12.4	+1.8
AKMC	Akamas	4.58	109	P	Pn	03 35 12.7	-0.7
	baz=297						
AKMC	Akamas	4.58	109	P	Pn	03 35 12.7	-0.7
PPCY	Paphos	4.64	110	P	Pn	03 35 13.7	-0.6
	baz=298						
PPCY	Paphos	4.64	110	P	Pn	03 35 13.7	-0.6
ALFC	Alefka	4.74	106	P	Pn	03 35 15.1	-0.5
	baz=294						
ALFC				S	Sn	03 36 06.5	-3.3
ALFC	Alefka	4.74	106	P	Pn	03 35 15.1	-0.5
ALFC				S	Sn	03 36 06.5	-3.3
PDO	Prodromos	5.06	295	P	Pn	03 35 22.6	+2.8
PDO	Prodromos	5.06	295	P	Pn	03 35 22.1	+2.3
SZAC	Souni	5.10	109	P	Pn	03 35 20.3	-0.1
	baz=297						
SZAC				S	Sn	03 36 16.5	-2.0
SZAC	Souni	5.10	109	P	Pn	03 35 20.3	-0.1
SZAC				S	Sn	03 36 16.5	-2.0
MAMC	Mammari	5.21	104	P	Pn	03 35 21.3	-0.6
	baz=292						
MAMC	Mammari	5.21	104	P	Pn	03 35 21.3	-0.6
MATC	Matruh	5.25	178	AMP		03 36 00.0	
	baz=181						
SLUM	Salum	5.32	197	P	Pn	03 35 22.9	-0.5
	baz=201						
CSS	Mathiatis	5.37	106	P	Pn	03 35 23.2	-0.8
	baz=294						
CSS				S	Sn	03 36 22.3	-2.6
CSS	Mathiatis	5.37	106	Pn	Pn	03 35 23.4	-0.6
CSS	Mathiatis	5.37	106	P	Pn	03 35 23.2	-0.8
CSS				S	Sn	03 36 22.3	-2.6
VLS	Valsamata	5.37	289	P	Pn	03 35 21.9	-2.1
VLS	Valsamata	5.37	289	P	Pn	03 35 23.9	-0.1
EVGI	Lefkada island	5.46	294	P	Pn	03 35 25.3	+0.2
EVGI	Lefkada island	5.46	294	P	Pn	03 35 26.1	+1.0
FSK	Fiskardo	5.47	292	P	Pn	03 35 23.3	-2.0
BRTR	Keskin Array B	6.06	57	P	Pn	03 35 35.5	+2.1
	comp=N,0.6nm,0.3s,baz=234,slow=14,SNR=36						
BRTR				S	Sn	03 36 44.1	+2.5
	comp=N,0.2nm,0.3s,baz=221,slow=23,SNR=3.6						
KEK	Kerkira	6.50	301	P	Pn	03 35 38.2	-0.9
KEK	Kerkira	6.50	301	P	Pn	03 35 39.7	+0.7
SWA2		7.46	191	P	Pn	03 35 51.3	-0.7
	baz=194						
SWA2				AMP		03 37 00.0	
	baz=194						
SWA2				S	Sn	03 37 07.1	-8.1
	baz=194						
HNTI	Hanita	7.55	115	Pn	Pn	03 35 52.8	-0.5
MMAI	Mount Meron Ar	7.75	115	P	Pn	03 35 55.2	-0.9
	comp=N,3.5nm,0.3s,baz=303,slow=11,SNR=5.6						
MMAI				S	Sn	03 37 17.2	-5.1
	comp=N,14nm,0.3s,baz=315,slow=24,SNR=11						
KOT	Kottamia	7.77	148	P	Pn	03 35 54.1	-2.1
	baz=147						
KOT				S	Sn	03 37 12.4	-10
	baz=147						
SHBL	Chebaa	7.84	112	*e*P	Pn	03 35 56.8	-0.6
KSDI	Kefar Szold	7.85	113	Pn	Pn	03 35 56.9	-0.4
HHAG	Hagoal	7.87	146	P	Pn	03 35 56.2	-1.3
	baz=145						
RSH		7.91	133	P	Pn	03 35 57.0	-1.1
	baz=132						
HSAF	As Saff	7.92	150	P	Pn	03 35 57.1	-1.2
	baz=150						
GLL	Jalalah	8.02	149	P	Pn	03 35 58.0	-1.7
	baz=149						
KSHT	Keshet	8.07	114	Pn	Pn	03 36 00.3	+0.1
MMLI	Mount Malkishu	8.07	119	Pn	Pn	03 36 00.0	-0.2
HMDT	Nahal Hemdat	8.24	119	Pn	Pn	03 36 02.3	-0.2
KZIT	Kziot	8.35	131	Pn	Pn	03 36 03.4	-0.6
DSI	Dead Sea	8.54	124	Pn	Pn	03 36 06.6	0.0
MZDA	Masada	8.70	125	Pn	Pn	03 36 08.3	-0.3
PRNI	Paran	9.11	131	Pn	Pn	03 36 12.9	-1.4
ASF	Jabal al Asfar	9.27	116	S	Sn	03 37 58.6	-0.4
	comp=N,0.3nm,0.3s,baz=90,slow=19,SNR=3.4						
MBRI	Mt Berech	9.46	134	Pn	Pn	03 36 18.8	-0.2
HFRF	Wahat Farafira	9.49	173	P	Pn	03 36 18.6	-0.7
	baz=174						
STON	Ston	9.53	314	*e*Pn	Pn	03 36 20.1	+0.4
EIL	Elat	9.58	134	S	Sn	03 38 06.8	+0.4
	comp=N,2.4nm,0.3s,baz=1.8,slow=7.7,SNR=8.7						
EIL	Elat	9.58	134	Pn	Pn	03 36 19.5	-0.9
HBST	Basata	9.80	137	P	Pn	03 36 23.1	-0.2
	baz=136						
HKAT	Jabal Katrina	9.96	142	P	Pn	03 36 24.9	-0.9
	baz=141						
VAE	Valguarnera	10.13	279	P	Pn	03 36 28.4	+0.5
	comp=N,0.4nm,0.3s,baz=178,slow=18,SNR=2.0						
VAE				S	Sn	03 38 10.9	-9.0
	comp=N,1.4nm,0.3s,baz=34,slow=15,SNR=3.6						
HDK1	Dakhla	11.21	169	P	Pn	03 36 43.4	+1.2
	baz=169						
NVLJ	Novalja	12.19	314	*i* Pn	Pn	03 36 55.0	+0.2
AKASG	Malin Array Be	14.18	6	P	Pn	03 37 22.1	+1.7
	comp=N,0.8nm,0.3s,baz=193,slow=12,SNR=2.4						
GERES	GERESS Array B	15.65	326	P	Pn	03 37 36.6	-2.2
	comp=N,0.1nm,0.3s,baz=151,slow=15,SNR=5.1						
ESDC	Sonseca Array	24.52	287	P	P	03 39 13.0	+0.5
	comp=N,0.3nm,0.4s,baz=84,slow=9.4,SNR=6.1						
FINES	FINESS Array B	24.87	359	P	P	03 39 14.8	-0.6
	comp=N,1.2nm,0.6s,baz=169,slow=11,SNR=7.7						
HFS	Hagfors	25.06	344	P	P	03 39 16.7	-0.5
	comp=N,1.0nm,0.3s,baz=156,slow=11,SNR=17						
TORD	Torodi Ar. Bea	32.58	231	P	P	03 40 24.6	+0.3
	comp=N,0.3nm,0.3s,baz=33,slow=9.0						
ARCES	ARCESS Array B	33.00	359	P	P	03 40 26.7	-0.8
	comp=N,1.2nm,0.9s,baz=162,slow=6.6,SNR=3.5						
KURBB	Kurchatov Arra	39.03	52	P	P	03 41 18.8	-0.1
	comp=N,0.4nm,0.5s,baz=279,slow=8.8,SNR=3.5						
MKAR	Makanchi Array	41.71	58	P	P	03 41 42.3	+1.2
	comp=N,0.6nm,0.5s,baz=268,slow=8.4,SNR=5.4						
SPITS	Spitsbergen Ar	41.93	357	P	P	03 41 42.2	-0.2
	comp=N,9.5nm,1.1s,baz=171,slow=13,SNR=3.1						

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*CSEM **15** 03:34:26.4, 38°.10N×26°.18W, h7^{km}, ML3.4*

PDA 15 03:34:26.4±0.7**, 38°.10N×26°.18W, h7^{km}**±3^{km}**, MD3.8, ML3.4, 6C-2D, Error ellipse: s-maj=4.5km s-min=1.3km az=36.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSET	Sete Cidades	0.46	127	⇑*i*P	Pg	03 34 34.2	-1.1
PSET				*e*S	Sg	03 34 40.2	-1.1
PSET				A	A	03 34 44.9	
	656nm,0.2s						
PSET	Sete Cidades	0.46	127	⇑*i*P	Pg	03 34 34.2	-1.1
PSET				*e*S	Sg	03 34 40.2	-1.1
PDA	Ponta Delgada	0.54	131	*e*P	Pg	03 34 35.5	-1.4
PDA				*e*S	Sg	03 34 42.5	-1.4
PDA				A	A	03 34 44.7	
	492nm,0.2s						
PDA	Ponta Delgada	0.54	131	*e*P	Pg	03 34 35.5	-1.4
PDA				*e*S	Sg	03 34 42.5	-1.4
GRON	Grota Negra	0.61	123	*e*P	Pg	03 34 37.8	-0.4
GRON				*e*S	Sg	03 34 46.8	+0.6
GRON				A	A	03 34 49.5	
	117nm,0.2s						
CMLA	Cha da Macela	0.62	123	⇑*i*P	Pg	03 34 36.6	-1.7
CMLA				*e*S	Sg	03 34 44.5	-1.9
CMLA				A	A	03 34 52.0	
	868nm,0.4s						
CMLA	Cha da Macela	0.62	123	⇑*i*P	Pg	03 34 36.6	-1.7
CMLA				*e*S	Sg	03 34 44.5	-1.9
BART	Pico Bartolome	0.86	112	⇑*i*P	Pg	03 34 39.9	-3.1
BART				*e*S	Sg	03 34 50.5	-3.7
BART				A	A	03 34 55.5	
	397nm,0.4s						
BART	Pico Bartolome	0.86	112	⇑*i*P	Pg	03 34 39.9	-3.1
BART				*e*S	Sg	03 34 50.5	-3.7
ADH	Angra Heroismo	0.99	304	*e*P	Pg	03 34 41.9	-3.6
ADH				*e*S	Sg	03 34 53.7	-4.7
ADH				A	A	03 34 59.1	
	638nm,0.2s						
ADH	Angra Heroismo	0.99	304	*e*P	Pg	03 34 41.9	-3.6
ADH				*e*S	Sg	03 34 53.7	-4.7
PSMA	Santa Maria	1.39	143	*e*P	Pn	03 34 47.5	-4.7
PSMA				*e*S	Sb	03 35 03.1	-7.4
PSMA				A	A	03 35 05.5	
	142nm,0.2s						
PSMN	Pico do Norte,	1.41	141	⇓*i*P	Pn	03 34 47.7	-4.8
PSMN				*e*S	Sb	03 35 03.8	-7.5
PSMN				A	A	03 35 05.3	
	53nm,0.2s						
PSMN	Pico do Norte,	1.41	141	⇓*i*P	Pn	03 34 47.7	-4.8
PSMN				*e*S	Sb	03 35 03.8	-7.5
PMAN	Manadas	1.59	290	*e*P	Pn	03 34 50.1	-4.9
PMAN				*e*S	Sn	03 35 07.9	-7.9
PMAN				A	A	03 35 10.2	
	180nm,0.1s						
PMAN	Manadas	1.59	290	*e*P	Pn	03 34 50.1	-4.9
PMAN				*e*S	Sn	03 35 07.9	-7.9
PGRA	Graciosa	1.69	304	*e*P	Pn	03 34 51.5	-4.8
PGRA				*e*S	Sn	03 35 10.6	-7.6
PGRA				A	A	03 35 13.3	
	104nm,0.2s						
PGRA	Graciosa	1.69	304	*e*P	Pn	03 34 51.5	-4.8
PGRA				*e*S	Sn	03 35 10.6	-7.6
ROSA	Rosais	1.73	291	*e*P	Pn	03 34 52.5	-4.4
ROSA				*e*S	Sn	03 35 11.7	-7.6
ROSA				A	A	03 35 14.9	
	189nm,0.2s						
ROSA	Rosais	1.73	291	*e*P	Pn	03 34 52.5	-4.4
ROSA				*e*S	Sn	03 35 11.7	-7.6
PICO	Pico	1.81	283	*e*P	Pn	03 34 53.4	-4.7
PICO				*e*S	Sn	03 35 13.6	-7.7
PICO				A	A	03 35 14.1	
	274nm,0.3s						
PICO	Pico	1.81	283	*e*P	Pn	03 34 53.4	-4.7
PICO				*e*S	Sn	03 35 13.6	-7.7
PCAN	Candelaria	1.85	282	*e*P	Pn	03 34 54.0	-4.6
PCAN				*e*S	Sn	03 35 14.4	-7.8
PCAN				A	A	03 35 17.3	
	139nm,0.3s						
PCAN	Candelaria	1.85	282	*e*P	Pn	03 34 54.0	-4.6
PCAN				*e*S	Sn	03 35 14.4	-7.8
HOR	Horta	1.97	283	*e*S	Sn	03 35 17.2	-8.0
HOR				A	A	03 35 22.0	
	250nm,0.2s						
HOR	Horta	1.97	283	*e*S	Sn	03 35 17.2	-8.0
CALA	Caldeira	2.04	284	*e*P	Pn	03 34 56.5	-4.7
CALA				*e*S	Sn	03 35 18.9	-8.1
CALA	Caldeira	2.04	284	*e*P	Pn	03 34 56.5	-4.7
CALA				*e*S	Sn	03 35 18.9	-8.1
PCED	Cedros	2.05	286	*e*P	Pn	03 34 56.5	-4.8
PCED				*e*S	Sn	03 35 18.7	-8.4
PCED				A	A	03 35 21.3	
	78nm,0.2s						
PCED	Cedros	2.05	286	*e*P	Pn	03 34 56.5	-4.8
PCED				*e*S	Sn	03 35 18.7	-8.4

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*ISCJB **15** 03:42:19.8±0.4, 33°.67N±0°.04×88°.68E±0°.07, h10^{km}, mb4.0/23, MS3.3/12, Error ellipse: s-maj=8.9km s-min=6.1km az=172.0*

*IDC **15** 03:42:19.5±0.7, 33°.51N×88°.68E, h0^{km}, mb4.0/17, mb1 4.1/21, mb1mx3.9/66, mbtmp4.0/21, ML3.7/4, MS3.3/14, Ms1 3.3/14, ms1mx3.0/65, Error ellipse: s-maj=21.0km s-min=14.2km az=43.0*

*BJI **15** 03:42:20.8, 33°.52N×88°.46E, h7^{km}, mb4.2/5, mB4.2/1, ML4.6/1, Ms3.9/6, Ms7 3.6/6*

*NEIC **15** 03:42:21.3±0.3, 33°.55N×88°.59E, h10^{km}, mb4.2/6, Error ellipse: s-maj=9.3km s-min=6.3km az=48.0*

ISC 15 03:42:23.2±0.5**, 33°.71N**±0°.05×**88°.42E**±0°.06**, h10^{km}, n54,** σ**2^{s}.04**/40**, mb4.1**/23**, MS3.2**/12**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSA	Lhasa	4.63	149	Pg	Pn	03 43 36.8	+3.1
LSA				Sg	Sb	03 44 43.5	+2.7
LSA	Lhasa	4.63	149	*e*Pn	Pn	03 43 30.1	-3.5
JIRN	Jiri	6.33	198	*e*P	Pn	03 44 02.6	+5.6
TAPN	Taplejung	6.37	186	*e*P	Pn	03 43 59.3	+1.8
PKIN	Phulchoki	6.64	204	*e*P	Pn	03 44 05.6	+4.4
	18nm,0.7s						
DMN	Daman	6.72	206	*e*P	Pn	03 44 06.8	+4.6
	15nm,0.6s						
ODAN	Odare	6.89	188	*e*P	Pn	03 44 03.7	-0.8
	35nm,0.5s						
RAMN	Ramite	6.92	194	*e*P	Pn	03 44 04.3	-0.7
	30nm,0.7s						
KOLN	Koldanda	7.23	216	*e*P	Pn	03 44 10.7	+1.5
	7.6nm,0.7s						
PYUN	Piuthan	7.28	221	*e*P	Pn	03 44 10.6	+0.7
	13nm,0.5s						
WMQ	Urumqi	10.11	357	P	Pn	03 44 56.3	+7.8
WMQ				LR	LR		
	comp=N,520nm,7.1s						
WMQ				LR	LR		
	comp=E,400nm,11.7s						
WMQ				LR	LR		
	comp=Z,120nm,15.7s						
NIL	Nilore	12.63	274	*e*Pn	Pn	03 45 23.4	+0.4
	18nm,0.8s						
LZH	Lanzhou	12.89	75	*e*P	Pn	03 45 29.5	+2.9
LZH				pP		03 45 31.8	
LZH				sP		03 45 33.8	
LZH				*e*PP	PnPn	03 45 39.6	+5.2
LZH				LR	LR		
	comp=N,420nm,12.5s						
LZH				LR	LR		
	comp=E,380nm,11.0s						
LZH				LR	LR		
	comp=Z,460nm,14.2s						
MKAR	Makanchi Array	13.87	342	Pn	Pn	03 45 36.9	-3.0
	0.1nm,0.3s,baz=148,slow=16,SNR=5.6						
AAK	Ala-Archa	14.10	313	LR	LR	03 52 09.1	
	comp=Z,57nm,19.0s,baz=126,slow=41						
CMAR	Chiang Mai Arr	17.87	146	P	Pn	03 46 26.4	-5.6
	0.9nm,0.3s,baz=327,slow=9.7,SNR=3.3						
CMAR				LR	LR	03 53 55.6	
	comp=Z,52nm,20.8s,baz=335,slow=40						
KURBB	Kurchatov Arra	18.39	340	P	P	03 46 37.0	-1.2
	0.1nm,0.3s,baz=149,slow=12,SNR=27						
KURK	Kurchatov	18.45	340	P	P	03 46 37.0	-1.9
SONM	Songino Array	19.54	38	P	P	03 46 51.0	0.0
	0.2nm,0.3s,baz=232,slow=9.6,SNR=21						
HHC	Hu-ho-hao-te	19.72	62	*e*P	Pn	03 46 55.8	+1.4
HHC				sP	sP	03 47 08.3	+11
HHC				S	Sn	03 50 38.6	+2.7
HHC				pmax	pmax		
	comp=Z,30nm,1.0s						
HHC				LR	LR		
	comp=N,120nm,10.0s						
HHC				LR	LR		
	comp=E,140nm,9.2s						
HHC				LR	LR		
	comp=Z,110nm,11.2s						
ULN	Ulaanbaatar	19.90	39	*e*P	P	03 46 54.2	-0.8
	6.9nm,0.9s						
ZALV	Zalesovo Beam	20.39	354	P	P	03 47 00.5	+0.4
	4.5nm,0.9s,baz=169,slow=11,SNR=14						
BVAR	Borovoye Array	23.21	332	P	P	03 47 30.8	+0.6
	2.5nm,0.9s,baz=147,slow=12,SNR=12						
BVAR				LR	LR	03 56 44.1	
	comp=Z,25nm,20.1s,baz=134,slow=37						
BRVK	Borovoye	23.28	332	*e*P	P	03 47 31.2	+0.3
	3.1nm,0.6s						
GEYT	Alibeck	24.87	288	P	P	03 47 47.9	+1.8
	1.6nm,0.3s,baz=158,slow=4.5,SNR=4.9						
GEYT				LR	LR	03 59 39.7	
	comp=Z,112nm,18.2s,baz=210,slow=41						
AKTO	Aktyubinsk	27.81	316	LR	LR	04 01 15.7	
	comp=Z,45nm,20.4s,baz=123,slow=40						
ARU	Arti	30.57	327	*e*P	P	03 48 36.4	-0.5
	1.0nm,0.3s						
KSRS	Korea Array	32.18	72	LR	LR	04 03 25.7	
	comp=Z,36nm,20.1s,baz=280,slow=40						
USRK	Ussuriysk Ar.	35.10	60	LR	LR	04 04 47.2	
	comp=Z,96nm,21.9s,baz=200,slow=38						
JNU	Nakatsue	35.27	79	LR	LR	04 03 43.0	
	comp=Z,41nm,19.6s,baz=303,slow=37						
KLR	Kul’dur	35.45	51	P	P	03 49 17.1	-2.5
	0.2nm,0.9s,baz=278,slow=8.0,SNR=5.6						
KIV	Kislovodsk	36.65	300	*e*P	P	03 49 29.1	-0.9
	3.6nm,0.5s						
MJAR	Matsushiro Arr	40.46	71	LR	LR	04 08 06.0	
	comp=Z,24nm,18.3s,baz=260,slow=38						
BRTR	Keskin Array B	43.74	294	P	P	03 50 29.8	+0.8
	0.7nm,0.9s,baz=77,slow=6.4,SNR=4.5						
AKASG	Malin Array Be	45.75	310	P	P	03 50 44.4	-0.2
	0.8nm,0.6s,baz=81,slow=5.7,SNR=2.5						
KIEV	Kiev	45.76	310	*e*P	P	03 50 44.4	-0.2
	1.6nm,0.4s						
FINES	FINESS Array B	47.90	325	P	P	03 51 01.2	0.0
	1.1nm,0.7s,baz=127,slow=9.2,SNR=4.8						
MLR	Muntele Rosu	48.42	304	P	P	03 51 06.9	+1.2
	1.9nm,0.9s,baz=103,slow=7.0,SNR=14						
PETK	Petropavlovsk-	51.79	46	LR	LR	04 15 15.3	
	comp=Z,32nm,18.5s,baz=282,slow=38						
HFS	Hagfors	53.97	323	P	P	03 51 47.0	0.0
	1.6nm,0.6s,baz=119,slow=8.9,SNR=3.7						
NB2	NORSAR Subarra	55.08	325	P	P	03 51 54.5	-0.6
	comp=Z,0.8nm,0.6s,baz=82,slow=7.4						
NOA	NORSAR Array B	55.08	325	LR	LR	04 15 03.9	
	comp=Z,8.8nm,20.1s,baz=300,slow=36						
GERES	GERESS Array B	55.95	310	P	P	03 52 02.1	+0.5
	comp=Z,2.0nm,0.6s,baz=69,slow=6.2,SNR=18						
GERES				LR	LR	04 21 10.1	
	comp=Z,23nm,18.6s,baz=55,slow=41						
DAVOX	Davos/Dischmat	58.99	308	LR	LR	04 20 40.1	
	comp=Z,33nm,19.1s,baz=83,slow=39						
EKA	Eskdalemuir Ar	63.88	320	P	P	03 52 55.6	-0.2
	comp=Z,2.0nm,0.9s,baz=92,slow=5.0,SNR=3.6						
WRA	Warramunga Arr	69.01	134	P	P	03 53 25.4	-3.8
	comp=Z,2.8nm,0.8s,baz=327,slow=6.4,SNR=12						
WRAB	Tennant Creek	69.01	134	*e*P	P	03 53 26.1	-3.0
	comp=Z,3.3nm,0.6s						
ESDC	Sonseca Array	71.06	305	P	P	03 53 40.3	-1.4
	comp=Z,0.3nm,0.6s,baz=54,slow=7.7,SNR=5.8						
ASAR	Alice Springs	71.62	136	P	P	03 53 40.9	-4.2
	comp=Z,1.1nm,0.7s,baz=320,slow=6.6,SNR=8.9						
ILAR	Eielson Array	72.80	22	P	P	03 53 49.7	-1.9
	comp=Z,0.2nm,0.6s,baz=312,slow=4.2,SNR=4.0						
CTA	Charters Tower	76.80	125	LR	LR	04 31 35.9	
	comp=Z,158nm,20.9s,baz=40,slow=39						
TORD	Torodi Ar. Bea	80.14	279	P	P	03 54 32.7	-1.3
	comp=Z,1.2nm,0.8s,baz=67,slow=4.8						
KOWA	Kowa	84.08	283	P	P	03 54 53.6	-1.1
	comp=Z,1.5nm,0.6s,baz=24,slow=1.7,SNR=4.9						
BOSA	Boshof	86.12	232	P	P	03 55 03.0	-1.6
	comp=Z,2.5nm,0.8s,baz=82,slow=15,SNR=3.6						

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*IDC **15** 04:36:47.3±1.8, 40°.46N×122°.41E, h0^{km}, mb3.7/2, mb1 3.6/4, mb1mx3.3/73, mbtmp3.5/4, ML3.3/1, Error ellipse: s-maj=35.4km s-min=19.5km az=22.0*

*BJI **15** 04:36:49.0, 40°.48N×122°.38E, h6^{km}, ML3.4/8*

ISC 15 04:36:49.7±0.8**, 40°.51N**±0°.06×**122°.28E**±0°.08**, h10^{km}, n8,** σ**2^{s}.16**/10**, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DL2	Dalian	1.67	198	Pg	Pn	04 37 18.4	-0.6
DL2				Sg	Sn	04 37 41.0	+0.5
DL2				smax	smax		
	comp=N,680nm,0.7s						
DL2				smax	smax		
	comp=E,1μm,0.4s						
CN2	Changchun	4.05	35	*e*Pg	Pb	04 38 02.0	+0.9
CN2				*e*Sg	Sb	04 38 53.1	+3.0
CN2				smax	smax		
	comp=N,90nm,0.7s						
CN2				smax	smax		
	comp=E,50nm,0.7s						
KSRS	Korea Array	5.35	123	Pn	Pn	04 38 06.4	-3.2
	1.1nm,0.3s,baz=306,slow=14,SNR=9.4						
KSRS				Pg	Pb	04 38 26.0	+2.8
	1.7nm,0.3s,baz=305,slow=18,SNR=8.4						
KSRS				Lg	Lg	04 39 33.0	
	4.7nm,0.3s,baz=306,slow=29,SNR=4.9						
USRK	Ussuriysk Ar.	8.08	60	Pn	Pn	04 38 45.5	-1.6
	baz=235,slow=13						
USRK				Lg	Lg	04 41 00.1	
	baz=248,slow=29						
KLR	Kul’dur	11.00	34	Lg	Lg	04 42 31.8	
	0.0nm,0.3s,baz=138,slow=18,SNR=5.2						
WMQ	Urumqi	25.73	289	*e*P	P	04 42 20.4	+0.1
KURBB	Kurchatov Arra	31.83	303	P	P	04 43 13.4	-1.0
	0.3nm,0.6s,baz=88,slow=9.1,SNR=3.2						
FINES	FINESS Array B	58.14	326	P	P	04 46 43.9	+0.8
	1.1nm,0.7s,baz=52,slow=7.2,SNR=4.1						

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*ISCJB **15** 04:38:13.2±0.4, 27°.12S±0°.02×69°.60W±0°.06, h141^{km}±8^{km}, Error ellipse: s-maj=9.2km s-min=3.9km az=179.8*

*GUC **15** 04:38:14.3±0.7, 27°.19S×69°.57W, h127^{km}±5^{km}, ML4.1*

*SJA **15** 04:38:14.6±1.0, 27°.12S×69°.61W, h33^{km}, ML3.9, MW3.7*

*NEIC **15** 04:38:14.0±0.0, 27°.19S×69°.57W, h127^{km}, ML4.1(GUC), After GUC.*

NEIC Felt [III] at Copiapo and Tierra Amarilla.

ISC 15 04:38:12.7±1.1**, 27°.14S**±0°.04×**69°.54W**±0°.05**, h141^{km}**±12^{km}**, n42,** σ**2^{s}.04**/61**, 6C-21D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO03	Copiap	0.77	233	*e*Pn	Pn	04 38 35.1	+0.2
GO03				*e*Sn	Sn	04 38 50.4	-1.3
GO03	Copiap	0.77	233	⇓*i*P	Pn	04 38 35.6	+0.7
GO03				*i* S	Sn	04 38 50.7	-1.0
GO03				IAML		04 38 52.0	
	comp=N,4μm,0.1s						
VACH	Vallenar	1.79	217	⇓*i*P	Pn	04 38 46.5	+1.6
VACH				*i* S	Sn	04 39 10.4	+0.7
GO02	Mina Guanaco	1.97	359	*e*Pn	Pn	04 38 49.4	+2.0
GO02				*e*Sn	Sn	04 39 14.2	+0.4
GO02	Mina Guanaco	1.97	359	⇑*i*P	Pn	04 38 49.6	+2.3
GO02				IAML		04 39 18.0	
	comp=N,948nm,0.4s						
VCA	Vinchina	1.98	144	⇓*e*P	Pn	04 38 49.3	+2.0
VCA				IAML		04 38 49.6	
	comp=Z,1μm,0.3s						
VCA				*e*S	Sn	04 39 14.6	+0.7
VCA	Vinchina	1.98	144	⇑*i*P	Pn	04 38 49.0	+1.7
VCA				*i* S	Sn	04 39 14.4	+0.6
VCA				IAML		04 39 16.0	
	comp=E,1μm,0.3s						
LCO	Las Campanas	2.13	209	*e*Pn	Pn	04 38 50.2	+1.1
LCO				*e*Sn	Sn	04 39 16.8	-0.3
LCO	Las Campanas	2.13	209	⇓*e*P	Pn	04 38 50.8	+1.6
LCO				⇓*e*S	Sn	04 39 17.7	+0.5
LCO	Las Campanas	2.13	209	⇓*i*P	Pn	04 38 50.6	+1.4
LCO				*i* S	Sn	04 39 17.5	+0.3
LCO				IAML		04 39 18.9	
	comp=N,2μm,0.2s						
AGUA	GUANDACOL	2.52	159	⇓*e*P	Pn	04 38 55.9	+2.1
PB14	IPOC Station P	2.62	343	⇓*e*P	Pn	04 38 58.0	+2.8
PB14	IPOC Station P	2.62	343	⇑*i*P	Pn	04 38 58.1	+2.8
PB14				IAML		04 39 37.5	
	comp=E,470nm,0.7s						
AROD	Rodeo	3.02	179	⇓*e*P	Pn	04 39 03.6	+3.3
ACDV	Cuesta del Vie	3.04	173	⇓*e*P	Pn	04 39 03.2	+2.7
TLL	Tololo Astrono	3.22	200	⇑*i*P	Pn	04 39 04.2	+1.4
TLL				*i* S	Sn	04 39 42.4	+0.9
TLL				IAML		04 39 44.4	
	comp=N,594nm,0.5s						
GO04	Tololo Observa	3.22	200	*e*Pn	Pn	04 39 03.5	+0.6
GO04				*e*Sn	Sn	04 39 35.1	-6.4
GO04	Tololo Observa	3.22	200	⇓*i*P	Pn	04 39 03.9	+1.0

CYA	**Choya**	**3.56**	**112**	⇓eP	**Pn**	**04 39 07.5**	**+0.5**
CYA				⇓eS	**Sn**	**04 39 44.4**	**-4.7**
CYA				IAML		04 39 45.4	
	comp=Z,180nm,0.7s						
PB10	**IPOC Station P**	**3.72**	**346**	eP	**Pn**	**04 39 10.9**	**+1.7**
PB10	**IPOC Station P**	**3.72**	**346**	⇑iP	**Pn**	**04 39 10.7**	**+1.5**
AHML	**Horco Molle**	**3.77**	**86**	eP	**Pn**	**04 39 11.4**	**+1.6**
AHML				IAML		04 39 12.1	
	comp=Z,162nm,0.6s						
AHML	**Horco Molle**	**3.77**	**86**	⇓iP	**Pn**	**04 39 11.4**	**+1.6**
AMOG	**MOGNA**	**3.90**	**167**	eP	**Pn**	**04 39 13.0**	**+1.5**
AMOG				⇓eS	**Sn**	**04 39 55.2**	**-1.9**
RTLL	**Cerro Villicun**	**4.28**	**168**	eP	**Pn**	**04 39 18.2**	**+1.7**
RTLL				IAML		04 39 19.0	
	comp=Z,204nm,0.4s						
RTLL				⇓eS	**Sn**	**04 40 03.7**	**-2.4**
SLA	**San Lorenzo**	**4.36**	**57**	IAML		04 39 21.4	
	comp=Z,82nm,0.8s						
SLA	**San Lorenzo**	**4.36**	**57**	⇓iP	**Pn**	**04 39 20.5**	**+2.8**
PB06	**IPOC Station P**	**4.41**	**360**	⇑iP	**Pn**	**04 39 19.8**	**+1.4**
PB06				i S	**Sn**	**04 40 10.4**	**+0.9**
RTLS	**Leoncito**	**4.65**	**177**	⇓eP	**Pn**	**04 39 23.7**	**+2.1**
RTLS				⇓eS	**Sn**	**04 40 12.6**	**-2.6**
RTCV	**Cerro Valdivia**	**4.79**	**170**	eP	**Pn**	**04 39 24.9**	**+1.7**
PB04	**IPOC Station P**	**4.81**	**353**	ePn	**Pn**	**04 39 23.9**	**+0.1**
PB04				eSn	**Sn**	**04 40 18.0**	**-1.0**
AUSP	**Uspallata**	**5.07**	**179**	eP	**Pn**	**04 39 29.3**	**+2.1**
HJA	**Humahuaca**	**5.41**	**45**	eP	**Pn**	**04 39 34.8**	**+2.8**
ASAL	**Salagasta**	**5.47**	**174**	eP	**Pn**	**04 39 34.6**	**+2.2**
ACAN	**Cantantal**	**5.51**	**159**	⇓eP	**Pn**	**04 39 34.3**	**+1.5**
ARCO	**CERRO ARCO**	**5.71**	**175**	eP	**Pn**	**04 39 37.2**	**+1.6**
ARCO				IAML		04 40 42.8	
	comp=Z,35nm,0.3s						
ROC1	**El Roble**	**5.96**	**192**	ePn	**Pn**	**04 39 38.4**	**-0.6**
ROC1				eSn	**Sn**	**04 40 43.7**	**-2.7**
PB01	**IPOC Station P**	**6.07**	**0**	ePn	**Pn**	**04 39 40.3**	**-0.1**
PB01				eSn	**Sn**	**04 40 45.6**	**-3.3**
MRA	**San Martin**	**6.22**	**149**	⇓eP	**Pn**	**04 39 42.8**	**+0.4**
MRA				IAML		04 39 45.2	
	comp=Z,44nm,0.3s						
PB11	**IPOC Station P**	**7.34**	**359**	ePn	**Pn**	**04 39 56.1**	**-1.5**
MNMC	**Minye Minye**	**7.97**	**360**	ePn	**Pn**	**04 40 05.3**	**-0.8**
MNMC				eSn	**Sn**	**04 41 32.5**	**-2.4**
LPAZ	**La Paz**	**10.88**	**7**	ePn	**Pn**	**04 40 46.4**	**+1.3**

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*MOS **15** 04:43:29.2±1.4, 53.°21N×107.°14E, h10^{km}, mb4.1/1, Error ellipse: s-maj=99.9km s-min=29.0km az=58.7*

BYKL 15 04:43:27.1±0.2**, 53.°11N×107.°49E, h24**^{km}±3^{km}**, 4C-2D, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KELR	**Kotokel**	**0.50**	**134**	⇑iPg	Pb	04 43 36.4	-0.9
KELR				i Sg	Sb	04 43 43.2	-1.0
KELR				eSb	Sn	04 43 46.7	+0.1
OGRR	**Ongureny**	**0.54**	**7**	⇑iPg	Pb	04 43 38.5	+0.6
OGRR				i Sg	Sb	04 43 45.9	+0.6
OGRR				Pmax			
	63nm,0.1s						
OGRR				Smax			
	1µm,0.2s						
OGRR	**Ongureny**	**0.54**	**7**	ePG	Pb	04 43 38.6	+0.7
OGRR				e		04 43 45.9	
OGRR				pmax	pmax		
	comp=Z,123nm,0.2s						
OGRR				smax	smax		
	comp=E,1µm,0.2s						
ZRHB	**Zarechye**	**0.59**	**200**	⇓iPg	Pb	04 43 39.0	+0.1
ZRHB				eSg	Sb	04 43 47.6	+0.8
ZRHB				eSb	Sn	04 43 50.8	+1.9
ZRHB				Pmax			
	comp=E,137nm,0.1s						
ZRHB				max			
	comp=E,1µm,0.3s						
MXMB	**Maximikha**	**0.77**	**78**	⇑iPg	Pn	04 43 42.2	-0.3
MXMB				eSg	Sn	04 43 52.9	-0.4
TRG	**Tyrgan**	**0.78**	**244**	⇓iPg	Pb	04 43 41.3	-0.6
TRG				eSg	Sb	04 43 51.7	-0.4
TRG				Pmax			
	comp=E,153nm,0.1s						
TRG				Smax			
	comp=E,2µm,0.1s						
TRG	**Tyrgan**	**0.78**	**244**	ePG	Pb	04 43 41.3	-0.6
TRG				e		04 43 51.5	
TRG				pmax	pmax		
	comp=Z,153nm,0.1s						
TRG				smax	smax		
	comp=N,2µm,0.1s						
FFNB	**Fofonovo**	**1.15**	**203**	ePg	Pb	04 43 48.2	-0.2
FFNB				eSg	Sb	04 44 03.7	+0.8
STDB	**Stepnoy Dvoret**	**1.17**	**216**	ePg	Pb	04 43 49.1	+0.6
STDB				eSg	Sb	04 44 05.4	+2.2
STDB				Pmax			
	comp=N,88nm,0.1s						
STDB				Smax			
	comp=N,867nm,0.4s						
KAB	**Kabansk**	**1.18**	**206**	Pg	Pb	04 43 49.1	+0.3
KAB				eSg	Sb	04 44 04.8	+1.2
KAB				Pmax			
	comp=N,95nm,0.2s						
KAB				Smax			
	comp=N,862nm,0.4s						
UUDB	**Ulan-Yde**	**1.25**	**175**	⇑iPg	Pn	04 43 49.4	+0.3
UUDB				eSg	Sb	04 44 06.0	+0.3
UUDB				Pmax			
	comp=N,45nm,0.1s						
UUDB				Smax			
	comp=N,756nm,0.4s						
HRMR	**Khuramsha**	**1.52**	**193**	ePn	Pn	04 43 53.4	+0.6
HRMR				ePg	Pb	04 43 54.9	+0.3
HRMR				eSg	Sb	04 44 14.8	+1.4
HRMR				e		04 44 56.3	
HRMR				Pmax			
	comp=N,134nm,0.2s						
HRMR				Smax			
	comp=N,2µm,0.2s						
SYVR	**Suvo**	**1.60**	**69**	ePn	Pn	04 43 54.3	+0.4
SYVR				ePg	Pb	04 43 56.4	+0.4
SYVR				eSg	Sb	04 44 16.8	+1.1
SYVR				Pmax			
	comp=N,28nm,0.1s						
SYVR				Smax			
	comp=N,103nm,0.3s						
BGT	**Bolshoye Golou**	**1.66**	**231**	ePn	Pn	04 43 55.5	+0.8
BGT				ePg	Pb	04 43 57.6	+0.6
BGT				eSg	Sb	04 44 19.1	+1.7
BGT				Pmax			
	comp=N,22nm,0.1s						
BGT				Smax			
	comp=N,161nm,0.3s						
BGT	**Bolshoye Golou**	**1.66**	**231**	ePN	Pb	04 43 55.9	-1.1
BGT				e		04 44 17.3	
BGT				pmax	pmax		
	comp=Z,21nm,0.1s						
BGT				smax	smax		
	comp=E,217nm,0.7s						
LSTR	**Listvyanka**	**2.05**	**234**	ePn	Pn	04 44 00.5	+0.5
LSTR				ePg	Pb	04 44 03.1	-0.5
LSTR				eSn	Sn	04 44 25.0	+0.2
LSTR				eSg	Sb	04 44 29.8	+1.2
LSTR				Pmax			
	comp=E,9.0nm,0.2s						
LSTR				Smax			
	comp=E,107nm,0.3s						
IRK	**Irkutsk**	**2.14**	**247**	e	Pb	04 44 24.6	+19
IRK				eSg	Sb	04 44 32.4	+1.1
IRK				max			
	comp=E,89nm,0.1s						
IRK				Smax			
	comp=E,481nm,0.4s						
IVK	**Ivanovka**	**2.29**	**236**	ePn	Pn	04 44 04.4	+1.0
IVK				e		04 44 07.1	
IVK				eSn	Sn	04 44 32.6	+1.7
IVK				eSg	Sb	04 44 37.7	+2.0
IVK				max			
	comp=E,11nm,0.1s						
IVK				Smax			
	comp=E,221nm,0.2s						
IVK	**Ivanovka**	**2.29**	**236**	ePN	Pb	04 44 07.1	-0.7
IVK				eS	Sn	04 44 33.1	+2.2
IVK				e		04 44 37.0	
IVK				pmax	pmax		
	comp=Z,8.0nm,0.1s						
IVK				smax	smax		
	comp=N,221nm,0.2s						
TLY	**Talaya**	**2.76**	**240**	ePn	Pn	04 44 10.4	+0.6
TLY				ePg	Pb	04 44 16.6	+0.9
TLY				eSg	Sb	04 44 51.3	+2.3
TLY				Pmax			
	comp=N,14nm,0.2s						
TLY				Smax			
	comp=N,83nm,0.1s						
NIZ	**Nizh Angarsk**	**2.93**	**23**	ePn	Pn	04 44 13.4	+1.3
NIZ				ePg	Pb	04 44 19.0	+0.5
NIZ				eSn	Sn	04 44 44.7	-1.8
NIZ				eSg	Sb	04 44 56.9	+3.0
NIZ				e		04 44 59.2	
NIZ				Pmax			
	comp=N,13nm,0.3s						
NIZ				max			
	comp=N,60nm,0.5s						
ARS	**Arshan**	**3.32**	**251**	ePn	Pn	04 44 17.7	+0.2
ARS				ePg	Pb	04 44 26.5	+1.3
ARS				e		04 44 56.9	
ARS				Sg	Sb	04 45 08.5	+3.4
ARS				Pmax			
	comp=N,25nm,0.4s						
ARS				Smax			
	comp=N,278nm,0.3s						
ARS	**Arshan**	**3.32**	**251**	ePN	Pb	04 44 27.3	+2.1
ARS				e		04 45 05.8	
ARS				pmax	pmax		
	comp=Z,17nm,0.3s						
ARS				smax	smax		
	comp=E,283nm,0.3s						
KMO	**Kumora**	**3.52**	**36**	ePn	Pn	04 44 22.0	+1.7
KMO				ePg	Pb	04 44 30.3	+1.6
KMO				eSg	Sb	04 45 15.6	+4.6
KMO				Pmax			
	comp=E,12nm,0.3s						
KMO				Smax			
	comp=E,37nm,1.0s						
ZAK	**Zakamensk**	**3.78**	**225**	ePn	Pn	04 44 25.6	+1.6
ZAK				ePg	Pb	04 44 35.9	+2.7
ZAK				eSg	Sb	04 45 24.4	+5.8
ZAK				Pmax			
	comp=E,3.0nm,0.3s						
ZAK				Smax			
	comp=E,19nm,0.5s						
CIT	**Chita**	**3.86**	**104**	e	Sn	04 45 19.7	+10
CIT				eSg	Sb	04 45 25.3	+4.7
YOA	**Uoyan**	**3.90**	**37**	eSg	Sb	04 45 29.6	+7.7
YOA				Smax			
	comp=E,159nm,1.0s						
MOY	**Mondy**	**4.23**	**253**	ePn	Pn	04 44 32.8	+2.6
MOY				ePg	Pb	04 44 42.9	+2.0
MOY				e		04 45 21.4	
MOY				e		04 45 33.8	
MOY				eSg	Sb	04 45 36.5	+4.9
MOY				Pmax			
	comp=E,6.0nm,0.5s						
MOY				Smax			
	comp=E,57nm,1.0s						
UKT	**Uakit**	**4.31**	**54**	ePn	Pn	04 44 32.4	+1.2
UKT				ePg	Pb	04 44 44.7	+2.5
UKT				eSg	Sb	04 45 40.8	+7.0
SVKR	**Severomuysk**	**4.64**	**47**	Sg	Sb	04 45 49.7	+6.6
SVKR				Smax			
	comp=E,82nm,0.8s						
ORL	**Orlik**	**4.69**	**266**	ePn	Pn	04 44 39.3	+2.8
ORL				e		04 44 50.2	
ORL				e		04 45 32.8	
ORL				eSg	Sb	04 45 52.0	+7.2
ORL				max			
	comp=E,8.0nm,0.5s						
ORL				Smax			
	comp=E,26nm,0.9s						
NLYR	**Nelyaty**	**5.83**	**51**	ePn	Pn	04 44 53.8	+1.8
NLYR				e		04 45 01.8	
NLYR				e		04 45 10.4	
NLYR				e		04 45 29.3	
NLYR				eSg	Sb	04 46 27.9	+11
NLYR				Smax			
	comp=E,25nm,1.1s						
BOD	**Bodaibo**	**6.00**	**36**	Sg	Sb	04 46 31.2	+9.1
BOD				Smax			
	comp=E,7.0nm,0.4s						
KNGR	**Kungurtug, Tuv**	**6.67**	**252**	e		04 46 38.6	
KNGR				eSg	Sb	04 46 53.8	+12
TUP	**Tupik**	**7.50**	**75**	e		04 44 13.3	
TUP				e		04 44 30.1	
TUP				eSg	Sb	04 47 18.9	+13
TUP				e		04 47 22.9	
TUP				max			
	comp=E,30nm,1.0s						
ERNS	**Erzin**	**8.18**	**255**	e		04 47 33.8	
ERNS				Sg	Sb	04 47 40.7	+16

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*CSEM **15** 05:06:23.8±0.7, 51.°43N×16.°15E, h1^{km}, ML2.6/7, Error ellipse: s-maj=11.6km s-min=8.4km az=50.0, Suspected Mining induced.*

*VIE **15** 05:06:25.9±1.1, 51.°26N×15.°97E, h0^{km}, mb2.2/4, ml2.1/5, Error ellipse: s-maj=8.1km s-min=5.8km az=46.0 74 km WNW of Wroclaw Suspected Mining induced.*

ISC 15 05:06:23.2±1.7**, 51.°42N**±0.°07×**16.°18E**±0.°04**, h0**^{km}**, n24, σ1ˢ03**/51**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.58**	**173**	ePg	**Pb**	**05 06 35.6**	**-0.6**
KSP				eSg	**Sb**	**05 06 44.0**	**-0.9**
UPC	**Upice**	**0.92**	**187**	ePG	**Pb**	**05 06 41.7**	**-0.2**
UPC				eSG	**Sb**	**05 06 54.6**	**-0.1**
	comp=Z,30nm,0.4s						
UPC	**Upice**	**0.92**	**187**	Pg	**Pb**	**05 06 41.7**	**-0.2**
UPC				Sg	**Sb**	**05 06 54.6**	**-0.1**
	30nm,0.4s						
DPC	**Dobruska-Polom**	**1.07**	**175**	ePG	**Pb**	**05 06 44.5**	**-0.1**
DPC				eSG	**Sb**	**05 06 59.1**	**-0.1**
	comp=Z,8.6nm,0.6s						
DPC	**Dobruska-Polom**	**1.07**	**175**	Pg	**Pb**	**05 06 44.5**	**-0.1**
DPC				Sg	**Sb**	**05 06 59.1**	**-0.1**
	8.6nm,0.6s						
PVCC	**Panska Ves**	**1.35**	**229**	ePG	**Pn**	**05 06 49.2**	**-0.1**
PVCC				eSG	**Sb**	**05 07 07.0**	**-0.2**
	comp=Z,28nm,0.2s						
KRLC	**Kraliky**	**1.40**	**164**	ePG	**Pb**	**05 06 50.8**	**+0.6**
KRLC				eSG	**Sn**	**05 07 09.6**	**+0.5**
	comp=Z,2.7nm,0.4s						
KRLC	**Kraliky**	**1.40**	**164**	Pg	**Pb**	**05 06 50.8**	**+0.6**
KRLC				Sg	**Sn**	**05 07 09.6**	**+0.5**
	2.7nm,0.4s						
BRG	**Berggiesshubel**	**1.51**	**250**	PG	**Pn**	**05 06 51.4**	**-0.1**
BRG				SG	**Sg**	**05 07 11.2**	**-0.4**
	20nm,0.4s						
GOPC	**GO Pecny, Ondr**	**1.75**	**211**	ePG	**Pb**	**05 06 56.2**	**+0.1**
GOPC				eSG	**Sg**	**05 07 19.6**	**+0.4**
	comp=Z,4.5nm,0.6s						
PRU	**Pruhonice**	**1.77**	**217**	ePG	**Pb**	**05 06 56.5**	**0.0**
PRU				eSG	**Sb**	**05 07 19.1**	**-0.1**
	comp=Z,6.3nm,0.3s						
MORC	**Moravsky Berou**	**1.86**	**152**	ePn	**Pn**	**05 06 56.5**	**+0.2**
MORC				eSg	**Sg**	**05 07 22.3**	**-0.5**
MORC	**Moravsky Berou**	**1.86**	**152**	ePN	**Pn**	**05 06 56.5**	**+0.2**
MORC				eSG	**Sg**	**05 07 22.3**	**-0.5**
CLL	**Collm**	**1.99**	**268**	ePg	**Pn**	**05 06 59.0**	**+0.9**
CLL				eSg	**Sb**	**05 07 26.0**	**+0.3**
	comp=Z,11nm,0.3s						
NKC	**Novy Kostel**	**2.65**	**245**	ePN	**Pn**	**05 07 06.9**	**-0.2**
NKC				ePG	**Pg**	**05 07 13.6**	**-0.3**
NKC				eSG	**Sg**	**05 07 48.9**	**+0.8**
	comp=Z,8.3nm,0.3s						
NKC	**Novy Kostel**	**2.65**	**245**	Pn	**Pn**	**05 07 06.9**	**-0.2**
KHC	**Kasperske Hory**	**2.83**	**217**	ePN	**Pn**	**05 07 09.5**	**-0.2**
KHC				ePG	**Pb**	**05 07 15.4**	**+0.8**
KHC				eSN	**Sn**	**05 07 44.3**	**-0.2**
KHC				eSG	**Sg**	**05 07 54.1**	**0.0**
	comp=Z,3.4nm,0.3s						
KHC	**Kasperske Hory**	**2.83**	**217**	Pn	**Pn**	**05 07 09.5**	**-0.2**
KHC				Sn	**Sn**	**05 07 44.3**	**-0.2**
KHC				Sg	**Sg**	**05 07 54.1**	**0.0**
	comp=Z,3.4nm,0.3s						
CONA	**Conrad Observa**	**3.50**	**183**	ePn	**Pn**	**05 07 20.2**	**+1.3**
	comp=Z,0.7nm,0.4s						
CONA				Sn	**Sn**	**05 07 57.8**	**-3.2**
	comp=Z,0.5nm,0.3s						
CONA				Sg	**Sg**	**05 08 15.6**	**+0.1**
	comp=Z,3.7nm,0.5s						
CONA	**Conrad Observa**	**3.50**	**183**	Pn	**Pn**	**05 07 20.2**	**+1.3**
	comp=Z,0.7nm,0.4s						
CONA				Sn	**Sn**	**05 07 57.8**	**-3.2**
	comp=Z,0.5nm,0.3s						
CONA				Sg	**Sg**	**05 08 15.6**	**+0.1**
	comp=Z,3.7nm,0.5s						
MOA	**Molln**	**3.78**	**200**	ePn	**Pn**	**05 07 25.7**	**+3.0**
	comp=Z,1.0nm,0.4s						
MOA				Sg	**Sg**	**05 08 24.7**	**+0.1**
	comp=Z,1.4nm,0.3s						
MOA	**Molln**	**3.78**	**200**	Pn	**Pn**	**05 07 25.7**	**+3.0**
	comp=Z,1.0nm,0.4s						
MOA				Sg	**Sg**	**05 08 24.7**	**+0.1**
	comp=Z,1.4nm,0.3s						
ARSA	**Arzberg**	**4.19**	**186**	Sg	**Sg**	**05 08 39.0**	**+1.2**
	comp=Z,1.5nm,0.4s						
ARSA	**Arzberg**	**4.19**	**186**	Sg	**Sg**	**05 08 39.0**	**+1.2**
	comp=Z,1.5nm,0.4s						

MEX 15 05:07:48.3±0.8**, 16.°43N×94.°46W, h106**^{km}±11^{km}**, MD3.9, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**0.78**	**329**	i P	Pn	05 08 06.2	-0.8
CMIG				i S	Sn	05 08 19.5	-1.5
TGIG		**1.33**	**75**	eP	Pn	05 08 11.6	-1.3
TGIG				i S	Sn	05 08 29.2	-2.4
PCIG		**1.39**	**121**	eP	Pn	05 08 12.8	-0.8
PCIG				eS	Sn	05 08 31.4	-1.3
HUIG	**Huatulco**	**1.71**	**248**	i P	Pn	05 08 15.8	-1.6
HUIG				eS	Sn	05 08 37.9	-1.9
CCIG	**Comitan**	**2.24**	**93**	eP	Pn	05 08 23.7	-0.6
CCIG				i S	Sn	05 08 50.5	-1.4
VHO	**Vista Hermosa**	**2.27**	**287**	eP	Pn	05 08 22.8	-2.0
VHO				eS	Sn	05 08 51.5	-1.2

IDC 15 05:17:31.8±8.1**, 7.°52S×119.°57E, h266**^{km}±94^{km}**, mb3.0**/2**, mb1 3.1**/4**, mb1mx2.7**/55**, mbtmp3.7**/4**, Error ellipse: s-maj=142.8km s-min=32.5km az=51.0, Flores Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**12.06**	**151**	P	Pn	05 20 16.2	+0.3
	0.2nm,0.3s,baz=344,slow=11,SNR=14						
FITZ				S	S	05 22 30.1	-0.3
	0.1nm,0.3s,baz=135,slow=20,SNR=2.4						
WRA	**Warramunga Arr**	**18.91**	**132**	P	P	05 21 33.2	-0.1
	0.3nm,0.3s,baz=310,slow=9.7,SNR=9.6						
WRA				S	S	05 25 03.3	+9.3
	0.1nm,0.3s,baz=294,slow=21,SNR=3.7						
ASAR	**Alice Springs**	**21.14**	**141**	P	P	05 21 56.9	+0.1
	0.9nm,0.3s,baz=317,slow=8.7,SNR=20						
MKAR	**Makanchi Array**	**63.41**	**332**	P	P	05 27 33.3	0.0
	0.4nm,0.6s,baz=153,slow=8.0,SNR=4.4						

IDC 15 06:05:23.4±2.1**, 8.°64S×128.°78E, h0**^{km}**, mb3.3**/1**, mb1 3.9**/4**, mb1mx3.5**/48**, mbtmp3.7**/4**, ML3.9**/3**, Error ellipse: s-maj=89.9km s-min=26.3km az=73.0, Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	**Fitzroy Crossi**	**9.88**	**198**	Pn	Pn	06 07 47.4	+0.6
	0.9nm,0.3s,baz=37,slow=10,SNR=43						
FITZ				Sn	Sn	06 09 35.4	-3.2
	1.7nm,0.3s,baz=248,slow=19,SNR=4.6						
WRA	**Warramunga Arr**	**12.46**	**155**	Pn	Pn	06 08 22.4	+0.3
	0.8nm,0.3s,baz=331,slow=13,SNR=25						
WRA				Sn	Sn	06 10 38.5	-3.2
	2.2nm,0.3s,baz=336,slow=22,SNR=13						
ASAR	**Alice Springs**	**15.73**	**162**	Pn	Pn	06 09 06.2	-0.3
	0.3nm,0.3s,baz=335,slow=9.3,SNR=13						
ASAR				Sn	Sn	06 12 00.6	-1.0
	0.5nm,0.3s,baz=318,slow=16,SNR=8.1						
MKAR	**Makanchi Array**	**68.94**	**328**	P	P	06 16 30.4	0.0
	0.2nm,0.5s,baz=118,slow=7.5,SNR=5.5						

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*ISCJB **15** 06:37:21.3±0.6, 35.°49N±0.°08×135.°85E±0.°09, h355^{km}±5^{km}, mb2.9/4, Error ellipse: s-maj=13.0km s-min=11.8km az=140.9*

*JMA **15** 06:37:22.8±0.1, 35.°50N×135.°79E, h345^{km}±1^{km}, M3.0*

*IDC **15** 06:37:22.0±1.3, 35.°45N×135.°89E, h351^{km}±14^{km}, mb2.8/4, mb1 2.8/9, mb1mx2.7/69, mbtmp3.5/9, Error ellipse: s-maj=24.6km s-min=19.1km az=72.0*

ISC 15 06:37:22.1±0.8**, 35.°47N**±0.°09×**135.°82E**±0.°08**, h348**^{km}±7^{km}**, n22, σ0ˢ73**/25**, mb2.9**/4**, Western Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFM	**Mihama**	**0.14**	**68**	P	**Pn**	**06 38 06.3**	**+0.7**
JFM				S	**S**	**06 38 40.1**	**-0.4**
JWT	**Wachi**	**0.39**	**241**	P	**Pn**	**06 38 06.3**	**+0.3**
JWT				eS	**S**	**06 38 40.0**	**-1.1**
JKG	**Kaga**	**0.90**	**27**	P	**Pn**	**06 38 07.5**	**+0.3**
JIE	**Ise**	**1.30**	**146**	P	**Pn**	**06 38 09.7**	**+0.6**
JIE				S	**S**	**06 38 46.5**	**-0.2**
JWZ	**Kozaga**	**1.94**	**183**	P	**Pn**	**06 38 13.1**	**+0.2**
TTO1	**TONANKAI O.B.S**	**2.01**	**156**	P	**Pn**	**06 38 14.3**	**+1.3**
JAI	**Aioi**	**2.02**	**214**	eS	**S**	**06 38 54.5**	**-0.1**
TK02	**Tokai 2**	**2.21**	**133**	P	**Pn**	**06 38 15.7**	**+1.2**
MJAR	**Matsushiro Arr**	**2.21**	**60**	P	**Pn**	**06 38 15.5**	**+0.8**
	0.5nm,0.3s,baz=233,slow=10.0,SNR=4.8						
JYN	**Shimob**	**2.22**	**89**	P	**Pn**	**06 38 15.2**	**+0.3**
JOI	**OKI**	**2.24**	**292**	P	**Pn**	**06 38 15.5**	**+0.6**
JHS	**Saijyo**	**2.26**	**259**	P	**Pn**	**06 38 15.5**	**+0.3**
JHT	**Toyohira**	**2.90**	**255**	P	**Pn**	**06 38 20.9**	**+0.4**
JNU	**Nakatsue**	**4.71**	**242**	P	**Pn**	**06 38 38.5**	**-0.1**
	1.2nm,0.3s,baz=206,slow=6.0,SNR=4.2						
KSRS	**Korea Array**	**6.66**	**290**	P	**Pn**	**06 39 01.5**	**+1.1**
	0.2nm,0.3s,baz=106,slow=13,SNR=4.1						
USRK	**Ussuriysk Ar.**	**9.20**	**343**	P	**Pn**	**06 39 31.3**	**+1.0**
	baz=165,slow=13						
ASAJ	**Asahikawa**	**10.08**	**29**	P	**Pn**	**06 39 39.5**	**-1.3**
	0.7nm,0.3s,baz=244,slow=16,SNR=8.1						
KLR	**Kul'dur**	**14.07**	**349**	P	**P**	**06 40 26.4**	**0.0**
	0.0nm,0.3s,baz=174,slow=10,SNR=3.9						
SONM	**Songino Array**	**25.05**	**309**	P	**P**	**06 42 16.2**	**+0.3**
	0.3nm,0.3s,baz=134,slow=10,SNR=3.0						
MKAR	**Makanchi Array**	**41.14**	**303**	P	**P**	**06 44 33.5**	**+0.2**
	0.3nm,0.4s,baz=89,slow=9.7,SNR=6.5						
KURBB	**Kurchatov Arra**	**43.42**	**309**	P	**P**	**06 44 51.4**	**-0.1**
	0.5nm,0.6s,baz=88,slow=8.8,SNR=4.9						
WRA	**Warramunga Arr**	**55.13**	**182**	P	**P**	**06 46 18.9**	**-0.6**
	0.3nm,0.5s,baz=356,slow=7.7,SNR=4.7						

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*ISK **15** 06:41:09.1, 38.°74N×41.°41E, h10^{km}, ML2.9/4*

*ISCJB **15** 06:41:10.2±0.4, 38.°71N±0.°02×41.°38E±0.°03, h11^{km}±6^{km}, Error ellipse: s-maj=4.6km s-min=3.4km az=135.7*

*DDA **15** 06:41:10.8, 38.°69N×41.°34E, h7^{km}, Ml2.8*

*CSEM **15** 06:41:10.1±0.2, 38.°72N×41.°37E, h12^{km}, ML2.9, Error ellipse: s-maj=4.0km s-min=3.4km az=48.0*

ISC 15 06:41:09.6±1.1**, 38.°75N**±0.°02×**41.°40E**±0.°02**, h11**^{km}±10^{km}**, n35, σ0ˢ82**/57**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNGL	**BINGOL**	**0.28**	**316**	i P	**Pb**	**06 41 16.9**	**0.0**
BNGL				i S	**Sb**	**06 41 21.8**	**+0.2**
GURO	**Guroymak-BITLI**	**0.53**	**112**	PG	**Pg**	**06 41 20.1**	**+0.1**
GURO				SG	**Sg**	**06 41 27.2**	**+0.1**
GURO	**Guroymak-BITLI**	**0.53**	**112**	ePg	**Pg**	**06 41 20.1**	**+0.1**
GURO				eSg	**Sg**	**06 41 27.2**	**+0.1**
BNGB	**Bingˆ¶l**	**0.61**	**293**	PG	**Pg**	**06 41 22.2**	**+0.6**
BNGB				SG	**Sb**	**06 41 31.0**	**-0.1**
BGOL	**Bingol**	**0.62**	**293**	i P	**Pg**	**06 41 22.2**	**+0.6**
BGOL				i S	**Sb**	**06 41 31.6**	**+0.3**
BGOL	**Bingol**	**0.62**	**293**	P	**Pg**	**06 41 22.2**	**+0.6**
BGOL				S	**Sb**	**06 41 31.5**	**+0.3**
SVAN	**Silvan-Diyarba**	**0.62**	**195**	PG	**Pg**	**06 41 21.4**	**-0.3**
SVAN				SG	**Sb**	**06 41 30.1**	**-1.2**
SVAN	**Silvan-Diyarba**	**0.62**	**195**	i P	**Pg**	**06 41 21.9**	**+0.2**
SVAN				i S	**Sg**	**06 41 29.9**	**0.0**
SVAN	**Silvan-Diyarba**	**0.62**	**195**	i Pg	**Pg**	**06 41 21.4**	**-0.3**
SVAN	**Silvan-Diyarba**	**0.62**	**195**	P	**Pg**	**06 41 21.9**	**+0.2**
SVAN				S	**Sg**	**06 41 29.9**	**0.0**

SVAN				*i* Sg	Sb	06 41 30.1	-1.2
EKAR	**Karacoban**	0.72	46	*i* P	Pn	06 41 26.5	+0.5
EKAR				*i* S	Sn	06 41 37.7	+0.5
EKAR	**Karacoban**	0.72	46	P	Pn	06 41 26.5	+0.5
EKAR				S	Sn	06 41 37.7	+0.5
BINT	**Bingol**	0.72	280	*e*Pg	Pg	06 41 22.2	-1.4
HANI	**Diyarbakir_Han**	0.85	247	*i* P	Pb	06 41 26.4	-0.1
HANI				*i* S	Sb	06 41 37.5	-0.5
HANI	**Diyarbakir_Han**	0.85	247	P	Pb	06 41 26.4	-0.1
HANI				S	Sb	06 41 37.5	-0.5
SRTM	**Siirt_Merkez**	0.86	152	*i* P	Pg	06 41 26.6	+0.3
SRTM				*i* S	Sb	06 41 38.8	+0.5
SRTM	**Siirt_Merkez**	0.86	152	P	Pg	06 41 26.6	+0.3
SRTM				S	Sb	06 41 38.8	+0.5
BTMN	**Batman**	0.87	187	*i* P	Pg	06 41 26.1	-0.2
BTMN				*i* S	Sb	06 41 38.7	+0.4
BTMN	**Batman**	0.87	187	P	Pg	06 41 26.1	-0.2
BTMN				S	Sb	06 41 38.7	+0.4
YEDI	**Yedisu-Bingol**	0.96	316	PG	Pg	06 41 28.0	-0.1
YEDI				SG	Sb	06 41 41.7	+0.6
YEDI	**Yedisu-Bingol**	0.96	316	*e*Pg	Pg	06 41 28.0	-0.1
YEDI				*e*Sg	Sb	06 41 41.7	+0.6
ERZM	**Erzurum**	1.15	359	*i* P	Pn	06 41 33.0	+1.1
ERZM				*i* S	Sb	06 41 43.4	-3.4
ERZM	**Erzurum**	1.15	359	P	Pn	06 41 33.0	+1.1
ERZM				S	Sb	06 41 43.4	-3.4
DIY	**Diyarbakir**	1.26	228	*e*Pn	Pg	06 41 33.8	0.0
DYBB	**Diyarbakir**	1.27	232	PN	Pg	06 41 33.8	-0.3
SIRT	**Sirnak**	1.49	146	PN	Pn	06 41 36.2	-0.3
SIRT	**Sirnak**	1.49	146	*e*Pn	Pn	06 41 36.2	-0.3
MAZI	**Mazidag**	1.50	211	PN	Pn	06 41 36.7	+0.2
MAZI	**Mazidag**	1.50	211	*e*Pn	Pn	06 41 36.7	+0.2
PTK	**Pertek**	1.58	276	PN	Pn	06 41 37.7	0.0
PTK	**Pertek**	1.58	276	*e*Pn	Pn	06 41 37.7	0.0
SVRC	**Sivrice-ELAZID**	1.69	258	PN	Pn	06 41 39.4	+0.2
SVRC	**Sivrice-ELAZID**	1.69	258	*e*Pn	Pn	06 41 39.4	+0.2
CUKT	**Cukurca**	2.30	130	PN	Pn	06 41 47.3	-0.3
CUKT	**Cukurca**	2.30	130	*e*Pn	Pn	06 41 47.3	-0.3

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*IDC **15** 06:44:36.1±1.2, 35°.79N×141°.03E, h0^{km}, mb3.3/4, mb1 3.5/7, mb1mx3.3/69, mbtmp3.3/7, ML3.2/3, MS2.3/1, Ms1 2.3/1, ms1mx1.9/29, Error ellipse: s-maj=32.2km s-min=20.4km az=90.0*

*ISCJB **15** 06:44:37.2±1.0, 35°.85N±0°.04×141°.14E±0°.09, h23^{km}±6^{km}, mb3.4/4, Error ellipse: s-maj=12.0km s-min=6.7km az=171.5*

*JMA **15** 06:44:38.8±0.2, 35°.82N×140°.97E, h29^{km}±1^{km}, M3.2*

ISC 15 06:44:39.5±1.1**, 35°.84N**±0°.05×**140°.93E**±0°.08**, h24**^{km}±7^{km}**, n21,** σ**0.^{s}95**/21**, mb3.4**/4**, 1C-2D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	**Chosi**	0.15	202	⇑P	Pb	06 44 44.2	-0.3
CHOJ				S	Sb	06 44 47.8	0.0
JIHU	**Itakohorinouch**	0.35	291	P	Pb	06 44 48.0	+0.8
JIHU				S	Sn	06 44 54.6	-0.7
JHYU	**Hitachinakayam**	0.57	331	P	Pb	06 44 50.9	+0.1
JHYU				S	Sb	06 44 59.2	+0.7
JYT	**Yasato**	0.71	303	⇓P	Pb	06 44 52.5	-0.7
JYT				S	Sb	06 45 02.0	-0.5
JCN	**Nagara**	0.73	235	P	Pn	06 44 54.1	-0.2
JHO	**Hitachi**	0.82	339	⇓P	Pb	06 44 54.2	-0.9
JHO				*e*S	Sb	06 45 05.4	-0.3
BSO3	**Boso 3**	1.09	198	P	Pn	06 44 57.7	-1.4
MJAR	**Matsushiro Arr**	2.31	288	Pn	Pn	06 45 16.2	+0.2
	1.4nm,0.3s,baz=92,slow=8.6,SNR=12						
MAT	**Matsushiro**	2.31	288	P	Pn	06 45 16.1	0.0
MAT				*e*S	Sb	06 45 48.7	+0.1
JHJ	**Hachijo jima 2**	2.88	199	Pn	Pn	06 45 24.0	+0.1
	5.4nm,0.3s,baz=73,slow=20,SNR=3.1						
ASAJ	**Asahikawa**	8.36	8	Pn	Pn	06 46 37.7	-1.5
	0.7nm,0.3s,baz=227,slow=12,SNR=7.3						
ASAJ				LR	LR	06 50 25.6	
	comp=Z,19nm,19.0s,baz=171,slow=42						
H11N2	**WAKE ISLAND Hy**	27.90	118	T	T	07 19 27.6	
	baz=311,slow=75,SNR=99						
H11N1	**WAKE ISLAND Hy**	27.91	118	T	T	07 19 28.2	
	baz=311,slow=75,SNR=66						
H11N3	**WAKE ISLAND Hy**	27.92	118	T	T	07 19 29.0	
	baz=311,slow=75,SNR=88						
H11S1	**WAKE ISLAND Hy**	28.57	120	T	T	07 20 13.8	
	baz=312,slow=76,SNR=1.6						
H11S3	**WAKE ISLAND Hy**	28.57	120	T	T	07 20 20.7	
	baz=312,slow=76,SNR=4.5						
H11S2	**WAKE ISLAND Hy**	28.59	120	T	T	07 20 24.1	
	baz=312,slow=76,SNR=8.5						
MKAR	**Makanchi Array**	44.43	303	P	P	06 52 49.6	+1.1
	0.4nm,0.7s,baz=78,slow=11,SNR=3.9						
ILAR	**Eielson Array**	50.71	32	P	P	06 53 37.9	+1.0
	0.3nm,0.8s,baz=265,slow=6.2,SNR=4.3						
WRA	**Warramunga Arr**	55.83	187	P	P	06 54 12.9	-2.1
	0.3nm,0.5s,baz=1.7,slow=6.6,SNR=3.2						
ASAR	**Alice Springs**	59.56	187	P	P	06 54 42.3	+1.1
	0.2nm,0.7s,baz=17,slow=9.7,SNR=2.3						

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*ISCJB **15** 06:51:23.0±0.5, 1°.49S±0°.03×77°.72W±0°.05, h195^{km}±3^{km}, mb4.3/121, Error ellipse: s-maj=8.2km s-min=4.2km az=159.4*

*IDC **15** 06:51:23.9±0.7, 1°.52S×77°.61W, h183^{km}±6^{km}, mb3.8/20, mb1 4.0/28, mb1mx3.8/53, mbtmp4.4/28, MS3.4/2, Ms1 3.4/2, ms1mx2.6/39, Error ellipse: s-maj=13.9km s-min=8.6km az=66.0*

*NEIC **15** 06:51:23.8±0.2, 1°.53S×77°.71W, mb4.5/114, Error ellipse: s-maj=6.7km s-min=3.3km az=72.0*

ISC 15 06:51:23.6±0.5**, 1°.56S**±0°.05×**77°.75W**±0°.08**, h183**^{km}±4^{km}**, h184**^{km}**:pP-P, n484,** σ**1.^{s}03**/497**, mb4.5**/121**, 1C, Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OTAV	**Otavalo**	1.92	339	*e*Pn	Pn	06 51 59.8	-0.8
OTAV	**Otavalo**	1.92	339	*e*P	Pn	06 51 59.6	-1.0
CMBC	**Cumbal**	2.49	358	*e*P	Pn	06 52 06.7	-0.2
GCUF	**Volcan Galeras**	2.80	8	*e*P	Pn	06 52 11.0	+0.4
CRUC	**La Cruz**	3.21	14	*e*P	Pn	06 52 16.0	+0.6
TUMC	**Tumaco**	3.50	344	*e*Pn	Pn	06 52 17.6	-1.0
TUMC				*e*Sn	Sn	06 52 58.7	-3.0
TUMC	**Tumaco**	3.50	344	*e*P	Pn	06 52 17.9	-0.8
SOTA	**Rioblanco**	3.85	17	*e*P	Pn	06 52 23.8	+0.4
PCON	**Cinco Dias**	4.10	19	*e*P	Pn	06 52 27.3	+0.7
MARP	**Paez Belalcaza**	4.73	22	*e*P	Pn	06 52 34.3	-0.2
BETC	**Betania**	4.81	29	*e*P	Pn	06 52 35.5	+0.3
HORQ	**Saladito**	5.14	13	*e*P	Pn	06 52 37.0	-2.7
ATAH	**Atahualpa**	5.57	187	P	Pn	06 52 44.8	-0.7
	26nm,0.3s,baz=21,slow=8.2,SNR=185						
ATAH				S	Sn	06 53 46.0	-3.9
	18nm,0.3s,baz=129,slow=22,SNR=14						
YOTC	**Yotoco, Valle**	5.69	14	*e*P	Pn	06 52 43.8	-3.0
PRAC	**Prado**	5.97	29	*e*Pn	Pn	06 52 48.6	-1.8
ANIL	**Santa Ana**	6.46	21	*e*P	Pn	06 52 53.8	-3.2
TOLC	**Tolima**	6.57	22	*e*P	Pn	06 52 57.3	-1.3
PLMC	**San Jos˜' del**	6.59	13	*e*P	Pn	06 52 55.6	-2.9
VILC	**Villavicencio,**	6.95	36	*e*P	Pn	06 53 03.3	+0.1
ROSC	**El Rosal**	7.23	28	P	Pn	06 53 07.8	+0.6
	0.8nm,0.3s,baz=110,slow=12,SNR=6.5						
ROSC	**El Rosal**	7.23	28	*e*Pn	Pn	06 53 09.3	+2.1
HELC	**Santa Helena**	8.02	16	*e*Pn	Pn	06 53 16.9	-0.7
RUSC	**La Rusia**	8.75	32	*e*Pn	Pn	06 53 26.3	-1.0
ZARC	**Zaragoza, Cauc**	9.45	18	*e*P	Pn	06 53 33.6	-2.4
NNA	**Nana**	10.40	175	P	Pn	06 53 48.1	-0.2
	4.7nm,0.3s,baz=328,slow=10,SNR=12						
NNA				S	Sn	06 55 33.8	-10
	6.9nm,0.3s,baz=266,slow=19,SNR=7.5						
BCIP	**Isla Barro Col**	10.86	349	*e*Pn	Pn	06 53 54.8	+0.5
SDV	**Santo Domingo**	12.57	34	P	Pn	06 54 14.4	-2.1
	2.2nm,0.3s,baz=208,slow=12,SNR=5.0						
SDV	**Santo Domingo**	12.57	34	*e*Pn	Pn	06 54 15.7	-0.8
JTS	**JuntasAbangare**	13.79	329	P	P	06 54 34.1	-0.2
	0.4nm,0.3s,baz=204,slow=13,SNR=5.3						
JTS				LR	LR	06 59 09.8	
	comp=Z,80nm,18.9s,baz=210,slow=34						
ESPN	**Las Esperanzas**	15.14	335	*e*Pn	Pn	06 54 47.1	-1.2
	47nm,1.3s						
SAML	**Samuel**	16.25	117	*e*P	P	06 55 00.0	-1.5
	10nm,1.1s						
LPAZ	**La Paz**	17.43	148	P	Pn	06 55 16.3	-0.3
	1.8nm,0.3s,baz=354,slow=6.1,SNR=46						
LPAZ	**La Paz**	17.43	148	*e*P	P	06 55 15.5	+0.4
	26nm,1.3s						
PCRV	**Puerto La Cruz**	17.51	48	P	Pn	06 55 15.7	-1.3
	1.7nm,0.3s,baz=318,slow=5.2,SNR=8.6						
PTGA	**Pitinga**	17.80	88	P	P	06 55 18.5	-0.1
	0.5nm,0.3s,baz=268,slow=14,SNR=9.3						
PTGA	**Pitinga**	17.80	88	*e*P	P	06 55 18.5	-0.1
	12nm,0.8s						
MNMC	**Minye Minye**	19.20	156	*e*P	P	06 55 34.9	+0.9
	79nm,1.1s						
MTDJ	**Mount Denham**	19.67	1	*e*P	P	06 55 40.0	+1.2
	66nm,0.8s						
PB11	**IPOC Station P**	19.75	157	*e*P	P	06 55 39.0	-0.7
	29nm,0.8s						
PB01	**IPOC Station P**	20.97	158	*e*P	P	06 55 53.8	+1.1
	17nm,1.1s						
FSCY	**Frank Sound, G**	21.02	351	*e*P	P	06 55 55.5	+2.4
	112nm,0.9s						
GTBY	**Guantanamo Bay**	21.51	7	*e*P	P	06 55 59.9	+1.5
	86nm,1.0s						
SIV	**San Ignacio**	21.81	132	P	P	06 56 01.6	0.0
	3.0nm,0.5s,baz=314,slow=8.8,SNR=26						
AOPR	**Arecibo Observ**	22.55	28	*e*P	P	06 56 07.8	-0.8
	24nm,0.7s						
GO02	**Mina Guanaco**	24.75	162	*e*P	P	06 56 29.9	+1.2
	20nm,1.1s						
ROC1	**El Roble**	31.88	169	*e*P	P	06 57 32.3	+0.3
	21nm,0.6s						
PEL	**Peldehue**	32.11	169	*e*P	P	06 57 33.8	+0.1
	16nm,0.9s						
254A	**Abbeville**	33.74	352	P	P	06 57 47.8	+0.1
	baz=170						
349A	**Repton**	33.94	345	P	P	06 57 50.0	+0.5
	baz=163,SNR=5.1						
446A	**Poplarville**	34.02	342	P	P	06 57 50.3	+0.1
	baz=159						
252A	**Lumpkin**	34.03	349	P	P	06 57 50.6	+0.3
	baz=167						
156A	**Sylvania**	34.22	354	P	P	06 57 52.6	+0.8
	baz=173						
251A	**Midway**	34.25	348	P	P	06 57 52.1	-0.1
	baz=166,SNR=8.1						
155A	**Kite**	34.29	353	P	P	06 57 52.6	+0.1
	baz=172						
250A	**Grady**	34.32	347	P	P	06 57 52.7	-0.1
	baz=165						
250A	**Grady**	34.32	347	*e*P	P	06 57 52.5	-0.3
	15nm,0.8s						
347A	**Saraland**	34.35	344	P	P	06 57 53.7	+0.7
	baz=161						
154A	**Montrose**	34.37	352	P	P	06 57 53.5	+0.3
	baz=170						
154A	**Montrose**	34.37	352	*e*P	P	06 57 53.5	+0.3
	18nm,0.8s						
153A	**Fort Valley**	34.51	351	P	P	06 57 54.7	+0.3
	baz=169						
249A	**Camden**	34.52	346	P	P	06 57 54.7	+0.2
	baz=163,SNR=7.3						
542A	**Morse**	34.53	337	P	P	06 57 55.2	+0.6
	baz=153,SNR=5.4						
NHSC	**New Hope**	34.56	356	P	P	06 57 54.9	+0.1
	baz=176						
NHSC	**New Hope**	34.56	356	*e*P	P	06 57 56.2	+1.4
	106nm,1.3s						
151A	**Opelika**	34.66	349	P	P	06 57 55.6	-0.1
	baz=167						
152A	**Waverly Hall**	34.68	350	P	P	06 57 55.8	0.0
	baz=168,SNR=5.6						
152A	**Waverly Hall**	34.68	350	*e*P	P	06 57 55.4	-0.5
	8.8nm,0.8s						
345A	**Thompson Farm,**	34.71	341	P	P	06 57 56.6	+0.4
	baz=158						
248A	**Dixon Mills**	34.79	345	P	P	06 57 57.2	+0.4
	baz=162						
150A	**Eclectic**	34.87	348	P	P	06 57 57.7	+0.2
	baz=165,SNR=5.4						
Z54A	**Sparta**	34.95	353	P	P	06 57 58.3	+0.2
	baz=171						
149A	**Jones**	35.04	347	P	P	06 57 58.8	-0.1
	baz=164,SNR=6.1						
344A	**Westbrook Farm**	35.07	340	P	P	06 57 59.6	+0.3
	baz=157						
344A	**Westbrook Farm**	35.07	340	*e*P	P	06 57 59.9	+0.6
	16nm,0.8s						
Z53A	**Monticello**	35.09	352	P	P	06 57 59.5	+0.2
	baz=170						
Z52A	**Williamson**	35.13	350	P	P	06 57 59.8	+0.1
	baz=168,SNR=6.2						
GOGA	**Godfrey**	35.20	352	P	P	06 58 00.5	+0.2
	baz=170						
245A	**Little AP, Sta**	35.34	342	P	P	06 58 01.9	+0.4
	baz=159,SNR=5.2						
Z51A	**Franklin**	35.39	349	P	P	06 58 02.1	+0.1
	baz=167						
Z50A	**Ashland**	35.48	348	P	P	06 58 02.6	-0.1
	baz=166,SNR=9.0						
Z50A	**Ashland**	35.48	348	*e*P	P	06 58 02.0	-0.7
	11nm,0.7s						
LRAL	**Lakeview Retre**	35.50	347	P	P	06 58 02.8	-0.1
	baz=164,SNR=7.6						
LRAL	**Lakeview Retre**	35.50	347	*e*P	P	06 58 02.4	-0.4
	10nm,0.8s						
Y54A	**Tignall**	35.54	353	P	P	06 58 03.4	+0.2
	baz=172						
Z49A	**Columbiana**	35.55	347	P	P	06 58 03.3	0.0
	baz=165						
Y53A	**Monroe**	35.66	352	P	P	06 58 04.5	+0.3
	baz=170						
146A	**Union**	35.66	344	P	P	06 58 04.6	+0.3
	baz=160						
Y52A	**Lilburn**	35.74	351	P	P	06 58 04.9	0.0
	baz=169						
JSC	**Jenkinsville**	35.81	355	*e*P	P	06 58 05.7	+0.3
	10nm,0.9s						
341A	**Kurthwood**	35.85	337	P	P	06 58 06.0	+0.2
	baz=153						
Z47A	**Carrollton**	35.92	345	P	P	06 58 06.2	-0.2
	baz=162,SNR=6.4						
Y51A	**Rockmart**	35.94	350	P	P	06 58 06.4	-0.2
	baz=168						
Z48A	**Northport**	35.96	346	P	P	06 58 06.5	-0.3
	baz=163,SNR=6.4						
Y50A	**Piedmont**	36.06	349	P	P	06 58 07.6	0.0
	baz=166						
144A	**Alexander Plac**	36.06	342	P	P	06 58 07.7	+0.1
	baz=158						
Z46A	**Louisville**	36.15	344	P	P	06 58 08.2	-0.1
	baz=161						
Y49A	**Blount Mountai**	36.16	348	P	P	06 58 08.0	-0.6
	baz=165						
Y48A	**Jasper**	36.38	347	P	P	06 58 09.5	-0.8
	baz=164,SNR=6.8						
X52A	**Dahlonega**	36.44	351	P	P	06 58 10.6	-0.3
	baz=170						
Y47A	**UCPARC, Winfie**	36.54	346	P	P	06 58 11.4	-0.2
	baz=163,SNR=8.5						
X51A	**Calhoun**	36.55	350	P	P	06 58 11.6	-0.2
	baz=168						
X50B	**Fort Payne**	36.59	349	P	P	06 58 11.7	-0.5
	baz=167						
CNNC	**Cliffs of the**	36.61	360	P	P	06 58 12.6	+0.3
	baz=180						
Z44A	**Pea Ridge, Bel**	36.66	342	P	P	06 58 12.3	-0.4
	baz=158						
KMSC	**Kings Mountain**	36.67	355	P	P	06 58 13.0	+0.2
	baz=174,SNR=9.7						
KMSC	**Kings Mountain**	36.67	355	*e*P	P	06 58 13.2	+0.5
	22nm,1.0s						
BG3	**Lake Jocassee**	36.69	353	*e*P	P	06 58 12.9	0.0
	6.3nm,0.6s						
Y46A	**Houston**	36.77	344	P	P	06 58 13.2	-0.5
	baz=161,SNR=13						
X49A	**Woodville**	36.78	348	P	P	06 58 13.3	-0.4
	baz=166						
X48A	**Hartselle**	36.87	347	P	P	06 58 14.0	-0.5
	baz=164						
X48A	**Hartselle**	36.87	347	*e*P	P	06 58 13.8	-0.7
	6.0nm,0.8s						
W53A	**Cullowhee**	36.89	353	P	P	06 58 15.1	+0.3
	baz=171,SNR=6.7						
W52A	**Murphy**	36.92	352	P	P	06 58 15.3	+0.4
	baz=170						
W52A	**Murphy**	36.92	352	*e*P	P	06 58 14.7	-0.2
	16nm,1.5s						
Y45A	**Yeager Farm, C**	36.95	344	P	P	06 58 15.3	+0.2
	baz=160,SNR=8.7						
W51A	**Cleveland**	37.12	350	P	P	06 58 16.8	+0.3
	baz=168						
X47A	**Russelville**	37.12	346	P	P	06 58 16.0	-0.6
	baz=163,SNR=6.3						
Y44A	**Strider, Charl**	37.23	343	P	P	06 58 17.2	-0.3
	baz=159,SNR=5.6						
W50A	**Signal Mountai**	37.25	350	P	P	06 58 17.3	-0.4
	baz=167						
W50A	**Signal Mountai**	37.25	350	*e*P	P	06 58 16.7	-1.0
	7.4nm,0.8s						
435B	**Jarrell**	37.30	331	P	P	06 58 19.1	+0.9
	baz=146						
435B	**Jarrell**	37.30	331	*e*P	P	06 58 18.5	+0.3
	4.9nm,0.6s						
V53A	**Saluda**	37.34	353	P	P	06 58 18.2	-0.4
	baz=172,SNR=5.2						
V53A	**Saluda**	37.34	353	*e*P	P	06 58 18.1	-0.4
	18nm,1.5s						
X46A	**Booneville**	37.34	345	P	P	06 58 17.7	-0.7
	baz=162						
W49A	**Belvidere**	37.35	348	P	P	06 58 18.0	-0.5
	baz=166						
CPCT	**Cooper Cave**	37.36	351	*e*P	P	06 58 18.5	-0.2
	6.8nm,0.7s						
SWET	**Sewanee**	37.38	349	*e*P	P	06 58 18.4	-0.4
	6.6nm,0.7s						
TKL	**Tuckaleechee C**	37.45	352	P	P	06 58 19.2	-0.2
	2.6nm,0.6s,baz=158,slow=10,SNR=7.5						
W48A	**Pulaski**	37.51	348	P	P	06 58 19.2	-0.7
	baz=165,SNR=7.1						
OXF	**Oxford**	37.52	344	P	P	06 58 19.7	-0.3
	baz=161						
Y42A	**Garnett, Star**	37.61	341	P	P	06 58 20.7	0.0
	baz=157						
V52A	**Sevierville**	37.61	352	P	P	06 58 20.8	+0.1
	baz=170						
PLAL	**Pickwick Lake**	37.62	346	*e*P	P	06 58 19.9	-0.9
	7.6nm,1.0s						
V50A	**Pikevile**	37.67	350	P	P	06 58 20.6	-0.6
	baz=168						
V51A	**Loudon**	37.68	351	P	P	06 58 20.9	-0.4
	baz=169,SNR=5.7						
V51A	**Loudon**	37.68	351	*e*P	P	06 58 20.6	-0.7
	7.3nm,0.7s						
W47A	**Westpoint**	37.76	347	P	P	06 58 21.4	-0.6
	baz=164,SNR=10						
W46A	**Michie**	37.84	346	P	P	06 58 21.7	-0.9
	baz=162						
V49A	**McMinnville**	37.91	349	P	P	06 58 22.6	-0.6
	baz=167,SNR=6.6						
U53A	**Fall Branch**	38.00	354	P	P	06 58 23.9	-0.1
	baz=172,SNR=5.7						
V48A	**Smith Brothers**	38.07	348	P	P	06 58 23.9	-0.6
	baz=165,SNR=18						
V48A	**Smith Brothers**	38.07	348	*e*P	P	06 58 23.9	-0.6
	24nm,0.6s						
U52A	**Thorn Hill**	38.12	353	P	P	06 58 24.5	-0.6
	baz=171						
JCT	**Junction City**	38.17	328	P	P	06 58 25.8	+0.3
	baz=143						
JCT	**Junction City**	38.17	328	*e*P	P	06 58 26.1	+0.6
	3.7nm,0.7s						
U51A	**La Follette**	38.20	352	P	P	06 58 25.2	-0.5
	baz=170						
WHTX	**Lake Whitney,**	38.24	332	P	P	06 58 26.3	+0.2
	baz=147						
WHTX	**Lake Whitney,**	38.24	332	*e*P	P	06 58 26.5	+0.5
	7.5nm,0.6s						
Y40A	**Okolona**	38.28	339	P	P	06 58 26.4	0.0
	baz=154						
TZTN	**Tazewell**	38.30	352	P	P	06 58 26.2	-0.2
	baz=171,SNR=6.6						
TZTN	**Tazewell**	38.30	352	*e*P	P	06 58 26.2	-0.2
	6.9nm,0.6s						
V47A	**Nunnelly**	38.30	347	P	P	06 58 25.8	-0.7
	baz=164						
U50A	**Jamestown**	38.36	351	P	P	06 58 26.6	-0.4
	baz=168						
X41A	**Kaden, Bauxite**	38.45	340	P	P	06 58 27.3	-0.5
	baz=156,SNR=7.1						
X40A	**Basin Creek Fa**	38.56	340	P	P	06 58 28.2	-0.4
	baz=155						
U49A	**Red Boiling Sp**	38.61	350	P	P	06 58 28.3	-0.7
	baz=167						
UALR	**University of**	38.65	341	*e*P	P	06 58 28.9	-0.5
	13nm,0.8s						
BLA	**Blacksburg**	38.66	357	P	P	06 58 30.0	+0.5
	baz=176,SNR=7.3						
BLA	**Blacksburg**	38.66	357	*e*P	P	06 58 29.7	+0.2
	18nm,0.8s						
WVT	**Waverly**	38.66	347	P	P	06 58 29.7	+0.3
	baz=164						
WVT	**Waverly**	38.66	347	*e*P	P	06 58 28.2	-1.3
	6.1nm,0.6s						
VWCC	**Virginia Weste**	38.67	357	*e*P	P	06 58 30.4	+0.9
U48A	**Cassie Pea, Po**	38.75	349	P	P	06 58 29.4	-0.8
	baz=166						
T51A	**Gray**	38.76	352	P	P	06 58 30.1	-0.2
	baz=170						
T52A	**Hallie**	38.78	353	P	P	06 58 30.1	-0.4
	baz=172,SNR=7.4						
U47A	**Clarksville**	38.84	348	P	P	06 58 30.1	-0.9
	baz=165						
W42A	**Bald Knob**	38.84	342	P	P	06 58 30.2	-0.8
	baz=158						
MIAR	**Mount Ida**	38.87	339	P	P	06 58 30.6	-0.6
	baz=154						
MIAR	**Mount Ida**	38.87	339	*e*P	P	06 58 30.4	-0.9
	4.2nm,1.0s						
T50A	**Nancy**	38.95	351	P	P	06 58 31.2	-0.7
	baz=169						
U46A	**Springville**	38.96	347	P	P	06 58 30.9	-1.0
	baz=163						
W41B	**Gary Mavity, V**	38.98	341	P	P	06 58 31.4	-0.8
	baz=157,SNR=6.8						
W41B	**Gary Mavity, V**	38.98	341	*e*P	P	06 58 31.4	-0.8
	12nm,1.1s						
X39A	**Fountain Ranch**	39.03	338	P	P	06 58 32.3	-0.3
	baz=154						
U45A	**Rockin P Farm,**	39.09	346	P	P	06 58 32.7	-0.3
	baz=162						
T49A	**Edmonton**	39.15	350	P	P	06 58 32.8	-0.7
	baz=168						
W40A	**Ferguson Farm,**	39.28	340	P	P	06 58 34.2	-0.4
	baz=155						
W40A	**Ferguson Farm,**	39.28	340	*e*P	P	06 58 34.0	-0.6
	13nm,1.2s						
V42A	**Cord**	39.30	342	P	P	06 58 34.1	-0.6
	baz=158,SNR=6.9						
T48A	**Bowling Green**	39.30	349	P	P	06 58 34.1	-0.7
	baz=166						
T47A	**Sharon Grove**	39.33	348	P	P	06 58 34.1	-0.9
	baz=165,SNR=6.9						
T47A	**Sharon Grove**	39.33	348	*e*P	P	06 58 33.7	-1.3
	10nm,0.7s						
S52A	**Salyersville**	39.36	353	P	P	06 58 34.9	-0.3
	baz=172,SNR=5.1						
S51A	**Beattyville**	39.38	353	P	P	06 58 35.0	-0.4
	baz=171,SNR=6.0						
S51A	**Beattyville**	39.38	353	*e*P	P	06 58 35.3	-0.1
	15nm,1.2s						
TXAR	**Lajitas Array**	39.48	323	P	P	06 58 37.5	+1.1
	0.3nm,0.5s,baz=146,slow=9.7,SNR=9.6						
TXAR				ScP	ScP	07 04 13.7	+1.6
	0.5nm,0.8s,baz=141,slow=8.1,SNR=5.5						
V41A	**Mountainview**	39.52	341	P	P	06 58 35.7	-0.9
	baz=157,SNR=9.9						
S50A	**Richmond**	39.53	352	P	P	06 58 35.9	-0.7
	baz=170						
W39A	**Magazine**	39.53	339	P	P	06 58 36.4	-0.3
	baz=154,SNR=7.0						
W39A	**Magazine**	39.53	339	*e*P	P	06 58 36.4	-0.3
	9.7nm,0.9s						
PLCA	**Paso Flores**	39.53	171	P	P	06 58 37.6	+0.9
	7.6nm,0.9s,baz=5.9,slow=9.1,SNR=13						
PLCA	**Paso Flores**	39.53	171	*e*P	P	06 58 37.0	+0.2
	15nm,1.0s						
U43A	**Rector**	39.54	344	P	P	06 58 36.3	-0.4
	baz=160						
T46A	**Princeton**	39.55	347	P	P	06 58 35.9	-0.9
	baz=164,SNR=6.9						
PARMO	**Parma**	39.64	345	*e*P	P	06 58 36.7	-0.8
	61nm,0.8s						
V40A	**Witts Springs**	39.75	341	P	P	06 58 37.8	-0.8
	baz=156,SNR=13						
V40A	**Witts Springs**	39.75	341	*e*P	P	06 58 38.0	-0.5
	15nm,0.8s						
U42A	**Revenden**	39.76	343	P	P	06 58 37.8	-0.8
	baz=159,SNR=9.1						
S49A	**Springfield**	39.77	351	P	P	06 58 37.7	-1.0
	baz=168						
S48A	**Wiedeman Farm,**	39.77	350	P	P	06 58 37.6	-1.1

	baz=167						
ABTX	**Abilene, Hawle** baz=144,SNR=5.0	39.81	331	P	P	06 58 39.4	+0.3
ABTX	**Abilene, Hawle** 8.0nm,0.8s	39.81	331	*e*P	P	06 58 39.7	+0.6
S47A	**Hartford** baz=166	39.87	349	P	P	06 58 38.5	-1.0
PBMO	**Poplar Bluff** 14nm,0.8s	39.93	344	*e*P	P	06 58 38.7	-1.2
U41A	**Viola** baz=158,SNR=9.9	39.96	342	P	P	06 58 39.4	-0.8
R51A	**Hillsboro** baz=171,SNR=5.7	40.03	353	P	P	06 58 40.2	-0.6
V39A	**Pettigrew** baz=155,SNR=13	40.06	340	P	P	06 58 40.7	-0.4
R50A	**Paris** baz=170	40.11	352	P	P	06 58 40.7	-0.7
T43A	**Greenville** baz=160,SNR=14	40.17	344	P	P	06 58 41.0	-0.9
R49A	**Shelbyville** baz=168	40.24	351	P	P	06 58 41.5	-1.0
U40A	**Yellville** baz=156,SNR=14	40.26	341	P	P	06 58 42.1	-0.6
S45A	**Carrier Mills** baz=163	40.31	347	P	P	06 58 42.0	-1.1
T42A	**Van Buren** baz=159,SNR=15	40.35	343	P	P	06 58 42.0	-1.3
T42A	**Van Buren** 14nm,0.8s	40.35	343	*e*P	P	06 58 42.1	-1.3
USIN	**University of** 16nm,0.7s	40.39	348	*e*P	P	06 58 42.0	-1.7
R47A	**Wooly Knot Far** baz=166	40.48	349	P	P	06 58 43.3	-1.2
S44A	**Carbondale** baz=162,SNR=7.0	40.49	346	P	P	06 58 43.2	-1.3
U39A	**Green Forest** baz=155,SNR=8.7	40.49	340	P	P	06 58 43.7	-0.9
SIUC	**Southern Illin** 20nm,0.8s	40.50	346	*e*P	P	06 58 43.5	-1.1
T41A	**Mountain View** baz=158,SNR=10	40.56	343	P	P	06 58 44.0	-1.1
HHAR	**Hobbs** 15nm,1.1s	40.56	340	*e*P	P	06 58 44.4	-0.8
S43A	**Fulton Ridge,** baz=161	40.58	345	P	P	06 58 44.1	-1.2
R46A	**Gibon Southern** baz=165	40.59	348	P	P	06 58 44.2	-1.2
Q51A	**Peebles** baz=171	40.72	353	P	P	06 58 45.7	-0.7
R45A	**Skylar, Fairfi** baz=164,SNR=5.0	40.83	347	P	P	06 58 46.4	-1.0
T40A	**Mansfield** baz=157	40.88	342	P	P	06 58 47.0	-0.8
TUL1	**Leonard** baz=152	40.91	337	P	P	06 58 47.6	-0.4
TUL1	**Leonard** 7.6nm,0.9s	40.91	337	*e*P	P	06 58 47.6	-0.4
S42A	**Caledonia** baz=160,SNR=7.2	40.96	344	P	P	06 58 46.9	-1.5
Q48A	**North Vernon** baz=168	40.96	350	P	P	06 58 47.4	-1.0
R44A	**Waltonville** baz=163,SNR=6.8	40.97	346	P	P	06 58 47.2	-1.2
T39A	**Clever** baz=156	41.04	341	P	P	06 58 47.9	-1.2
S41A	**Jillco Farms,** baz=158,SNR=7.7	41.05	343	P	P	06 58 48.4	-0.8
FVM	**French Village** 20nm,0.8s	41.06	345	*e*P	P	06 58 48.8	-0.4
MCWV	**Mont Chateau** baz=177	41.07	358	P	P	06 58 49.8	+0.5
MCWV	**Mont Chateau** 57nm,1.9s	41.07	358	*e*P	P	06 58 49.0	-0.3
Q47A	**Bedord North L** baz=167,SNR=11	41.09	350	P	P	06 58 48.2	-1.2
WMOK	**Wichita Mounta** baz=147	41.15	333	P	P	06 58 49.4	-0.6
WMOK	**Wichita Mounta** 6.1nm,0.9s	41.15	333	*e*P	P	06 58 50.3	+0.3
R43A	**Red Bud** baz=161,SNR=5.1	41.21	345	P	P	06 58 49.3	-1.1
OLIL	**Olney** 11nm,0.7s	41.22	348	*e*P	P	06 58 49.2	-1.3
S40A	**Lebanon** baz=157,SNR=12	41.29	342	P	P	06 58 50.1	-1.1
BLO	**Bloomington** 13nm,0.6s	41.33	350	*e*P	P	06 58 50.2	-1.2
P50A	**Jamestown** baz=171,SNR=6.5	41.35	353	P	P	06 58 50.6	-0.9
CCM	**Cathedral Cave** baz=159	41.35	344	P	P	06 58 50.9	-0.6
CCM	**Cathedral Cave** 8.8nm,0.7s	41.35	344	*e*P	P	06 58 50.9	-0.6
T38A	**Diamond** baz=154,SNR=7.8	41.36	340	P	P	06 58 51.1	-0.6
MVL	**Millersville** 17nm,0.9s	41.38	2	*e*P	P	06 58 52.3	+0.5
Q45A	**Warren Harvey,** baz=164	41.38	348	P	P	06 58 50.9	-1.0
P48A	**Milroy** baz=168	41.43	351	P	P	06 58 51.0	-1.2
R42A	**Luebbering** baz=160,SNR=5.8	41.44	344	P	P	06 58 51.3	-0.9
Q44A	**Meyer Farm, Va** baz=163	41.58	347	P	P	06 58 52.0	-1.4
P47A	**Martinsville** baz=167,SNR=8.7	41.59	350	P	P	06 58 52.4	-1.1
PAGS	**Pennsylvania G** 13nm,1.0s	41.60	1	*e*P	P	06 58 53.1	-0.4
R41A	**Rosebud** baz=159,SNR=5.4	41.61	344	P	P	06 58 52.5	-1.2
S39A	**Bolivar** baz=156,SNR=6.4	41.63	341	P	P	06 58 52.9	-1.0
S39A	**Bolivar** 7.3nm,1.0s	41.63	341	*e*P	P	06 58 52.3	-1.6
O56A	**Blue Knob Stat** baz=179,SNR=12	41.64	359	P	P	06 58 54.2	+0.2
O56A	**Blue Knob Stat** 18nm,0.8s	41.64	359	*e*P	P	06 58 54.1	+0.2
S38A	**Stockton** baz=155	41.77	341	P	P	06 58 54.0	-1.0
Q43A	**New Douglas** baz=162	41.78	346	P	P	06 58 54.0	-1.1
O50A	**Cable** baz=171,SNR=6.2	41.86	353	P	P	06 58 54.9	-0.7
R40A	**Maddies Statio** baz=158	41.86	343	P	P	06 58 55.2	-0.5
R40A	**Maddies Statio** 4.1nm,0.7s	41.86	343	*e*P	P	06 58 54.2	-1.6
ACSO	**Alum Creek Sta** baz=172	41.87	354	P	P	06 58 55.1	-0.6
ACSO	**Alum Creek Sta** 16nm,0.9s	41.87	354	*e*P	P	06 58 55.2	-0.6
O49A	**Covington** baz=170	41.99	352	P	P	06 58 55.6	-1.1
SSPA	**Standing Stone** baz=180	42.00	360	P	P	06 58 57.2	+0.4
SSPA	**Standing Stone** 15nm,0.9s	42.00	360	*e*P	P	06 58 57.2	+0.4
LUPA	**Lehigh Univers**	42.02	3	*e*P	P	06 58 57.0	+0.1
R39A	**Chumby, Stover** baz=157,SNR=8.4	42.12	342	P	P	06 58 56.7	-1.1
O48A	**Farmland** baz=169,SNR=5.5	42.17	352	P	P	06 58 56.9	-1.3
Q41A	**Truxton** baz=160,SNR=5.1	42.19	344	P	P	06 58 57.2	-1.1
MNTX	**Cornudas Mount** baz=136	42.20	324	P	P	06 58 59.7	+1.1
R38A	**Fenwick Farm,** baz=156	42.27	341	P	P	06 58 58.5	-0.5
O47A	**Sheridan** baz=167,SNR=5.1	42.31	350	P	P	06 58 58.0	-1.3
N59A	**State Game Lan** baz=183,SNR=8.5	42.32	2	P	P	06 58 59.8	+0.4
N59A	**State Game Lan** 15nm,0.9s	42.32	2	*e*P	P	06 59 00.0	+0.6
N54A	**Moraine State** baz=177,SNR=12	42.37	357	P	P	06 59 00.0	+0.2
N54A	**Moraine State** 27nm,1.0s	42.37	357	*e*P	P	06 58 59.7	-0.2
N50A	**Nevada** baz=172	42.42	354	P	P	06 58 59.3	-0.9
Q40A	**Laux Farm, Aux** baz=158,SNR=5.1	42.46	343	P	P	06 58 59.2	-1.4
MSTX	**Muleshoe** baz=141	42.46	329	P	P	06 59 00.2	-0.6
MSTX	**Muleshoe** 12nm,1.4s	42.46	329	*e*P	P	06 59 00.9	+0.1
MSTX				*e*pP	**pP**	06 59 45.2	+4.8
PAL	**Palisades** baz=186	42.51	4	P	P	06 59 01.0	+0.1
P42A	**Winchester** baz=161	42.55	346	P	P	06 58 60.0	-1.3
P42A	**Winchester** 11nm,1.0s	42.55	346	*e*P	P	06 58 60.0	-1.3
O45A	**Potomac** baz=165	42.60	349	P	P	06 59 01.9	+0.2
Q39A	**Willow Grove F** baz=157,SNR=13	42.77	342	P	P	06 59 01.7	-1.3
P41A	**Barry, Barry** baz=160	42.82	345	P	P	06 59 02.1	-1.3
Q38A	**Cooks Store, C** baz=156,SNR=5.9	42.89	342	P	P	06 59 02.8	-1.1
M54A	**Oil Creek Stat** baz=177,SNR=14	42.91	358	P	P	06 59 04.1	0.0
M54A	**Oil Creek Stat** 25nm,0.8s	42.91	358	*e*P	P	06 59 04.0	-0.2
P40A	**Paris** baz=159	42.95	344	P	P	06 59 02.9	-1.6
KSPA	**Keystone Colle** 20nm,1.1s	42.96	2	*e*P	P	06 59 04.7	+0.2
ALLY	**Alegheny Colle** 62nm,1.5s	43.07	357	*e*P	P	06 59 04.8	-0.6
P39B	**Salisbury** baz=158,SNR=6.9	43.11	343	P	P	06 59 04.4	-1.3
N44A	**Piper City** baz=165,SNR=6.7	43.21	348	P	P	06 59 04.9	-1.7
HDIL	**Hopedale** baz=163,SNR=11	43.22	347	P	P	06 59 05.0	-1.6
HDIL	**Hopedale** 27nm,0.6s	43.22	347	*e*P	P	06 59 04.7	-2.0
O40A	**La Belle** baz=159	43.45	344	P	P	06 59 07.1	-1.4
P38A	**Dawn** baz=157	43.47	342	P	P	06 59 07.5	-1.1
P38A	**Dawn** 6.0nm,0.8s	43.47	342	*e*P	P	06 59 07.1	-1.5
ERPA	**Erie** baz=177	43.53	358	P	P	06 59 09.0	0.0
ERPA	**Erie** 18nm,0.8s	43.53	358	*e*P	P	06 59 08.7	-0.4
N43A	**Stutzman Famil** baz=163	43.56	347	P	P	06 59 07.7	-1.7
BINY	**Binghamton** baz=182,SNR=8.2	43.59	2	P	P	06 59 10.0	+0.4
BINY	**Binghamton** 21nm,0.9s	43.59	2	*e*P	P	06 59 09.9	+0.4
N42A	**Yates City** baz=162	43.65	346	P	P	06 59 08.5	-1.5
P37A	**Lathrop** baz=156	43.69	341	P	P	06 59 09.4	-1.0
O39A	**Kirksville** baz=158	43.76	344	P	P	06 59 09.9	-1.1
O38A	**Galt** baz=157,SNR=6.7	43.91	343	P	P	06 59 10.9	-1.3
M43A	**Waltham Townsh** baz=164	43.99	348	P	P	06 59 11.3	-1.5
KSU1	**Kansas State U** baz=152	44.02	339	P	P	06 59 12.4	-0.7
KSU1	**Kansas State U** 15nm,0.7s	44.02	339	*e*P	P	06 59 12.4	-0.7
MMNY	**Mt. Morris Dam** 34nm,1.3s	44.09	360	*e*P	P	06 59 13.2	-0.4
N39A	**Derby Farms, D** baz=159,SNR=5.9	44.33	344	P	P	06 59 14.1	-1.4
N39A	**Derby Farms, D** 18nm,0.9s	44.33	344	*e*P	P	06 59 13.9	-1.5
N38A	**Joes South For** baz=158	44.46	343	P	P	06 59 15.3	-1.2
TYNO	**Tyneside** baz=177	44.50	358	P	P	06 59 16.1	-0.6
MEDO	**Medina** baz=179	44.53	359	P	P	06 59 17.2	+0.1
M40A	**Post Highland** baz=160	44.56	345	P	P	06 59 16.0	-1.3
STCO	**Saint Catharin** baz=178	44.59	359	P	P	06 59 17.7	+0.3
L43A	**Garden Prairie** baz=164	44.67	348	P	P	06 59 16.6	-1.5
ELFO	**Elginfield** baz=175	44.67	356	P	P	06 59 17.1	-1.0
L42A	**Oliver, Polo** baz=163	44.69	347	P	P	06 59 16.7	-1.6
L42A	**Oliver, Polo** 8.8nm,0.7s	44.69	347	*e*P	P	06 59 16.5	-1.8
N37A	**Lee Faris, Mou** 8.6nm,0.8s	44.72	342	*e*P	P	06 59 17.6	-1.0
M39A	**Webster** baz=159	44.80	345	P	P	06 59 17.7	-1.5
L41A	**Preston** baz=162,SNR=7.3	44.94	347	P	P	06 59 18.7	-1.6
CBKS	**Cedar Bluff** baz=148	44.99	336	P	P	06 59 21.3	+0.5
ACTO	**Acton** baz=177	45.02	358	P	P	06 59 20.4	-0.5
M38A	**Pleasantville** baz=158	45.02	344	P	P	06 59 19.5	-1.5
L40A	**Anamosa** baz=161	45.10	346	P	P	06 59 20.6	-1.0
L40A	**Anamosa** 11nm,1.0s	45.10	346	*e*P	P	06 59 20.1	-1.5
TASL	**Snake Pit, Alb** baz=138,SNR=10	45.18	326	P	P	06 59 23.9	+1.3
ANMO	**Albuquerque** 4.5nm,0.6s,baz=136,slow=11,SNR=27	45.19	326	P	P	06 59 24.3	+1.7
ANMO	 1.6nm,0.8s,baz=151,slow=10,SNR=2.7			pP	**pP**	07 00 04.7	+2.0
ANMO	**Albuquerque** baz=138	45.19	326	P	P	06 59 23.6	+1.0
ANMO	**Albuquerque** 4.4nm,0.6s	45.19	326	*e*P	P	06 59 23.9	+1.3
ANMO				pP	**pP**	07 00 04.7	+2.0
TASM	**ASL Pad, Albuq** baz=138,SNR=10	45.19	326	P	P	06 59 23.9	+1.3
DRWO	**Darlington Wes** baz=179,SNR=6.0	45.24	359	P	P	06 59 22.4	-0.2
M37A	**Trindle Farm,** baz=157	45.26	343	P	P	06 59 21.8	-1.0
WLVO	**Wesleyville** baz=179,SNR=16	45.29	359	P	P	06 59 22.8	-0.2
PKRO	**Pickering** baz=178,SNR=6.7	45.34	359	P	P	06 59 23.4	+0.1
L39A	**Vinton** baz=160	45.36	345	P	P	06 59 22.1	-1.5
K42A	**Prairie Point,** baz=164	45.36	348	P	P	06 59 21.9	-1.7
K41A	**Shullsburg** baz=162,SNR=5.1	45.41	347	P	P	06 59 22.4	-1.5
NCB	**Newcomb** 9.3nm,0.7s	45.44	4	*e*P	P	06 59 23.8	-0.4
SCIA	**State Center** baz=158	45.48	344	P	P	06 59 23.5	-1.1
M36A	**Felix, Anita** baz=156	45.53	342	P	P	06 59 23.8	-1.1
BWLO	**Walkerton** baz=175,SNR=8.0	45.58	357	P	P	06 59 24.6	-0.7
L38A	**Oak Wood Farm,** baz=158,SNR=5.0	45.63	344	P	P	06 59 24.1	-1.5
JFWS	**Jewell Farm** baz=162,SNR=6.0	45.69	347	P	P	06 59 24.7	-1.5
JFWS	**Jewell Farm** 10nm,0.6s	45.69	347	*e*P	P	06 59 24.6	-1.5
K40A	**Colesburg** baz=161	45.69	346	P	P	06 59 24.7	-1.5
J43A	**Natural Harves** baz=165	45.76	349	P	P	06 59 25.5	-1.2
T25A	**Trinidad** baz=141	45.76	330	P	P	06 59 28.1	+1.0
J42A	**Columbus** baz=164	45.83	348	P	P	06 59 25.9	-1.3
CLWO	**Collingwood** baz=176,SNR=8.5	45.87	357	P	P	06 59 27.0	-0.5
K39A	**Oelwein** baz=160,SNR=5.4	45.88	345	P	P	06 59 26.0	-1.6
DELO	**Deloro Mine** baz=180,SNR=7.9	45.88	0	P	P	06 59 26.4	-1.2
LBNH	**Lisbon** baz=188,SNR=5.0	45.90	6	P	P	06 59 28.6	+0.9
LBNH	**Lisbon** 11nm,0.8s	45.90	6	*e*P	P	06 59 27.5	-0.3
BMRO	**Meriville Lake** baz=175	46.06	357	P	P	06 59 28.2	-0.8
J41A	**Loganville** baz=163	46.06	348	P	P	06 59 27.6	-1.5
LONY	**Lake Ozonia** baz=184,SNR=6.3	46.07	3	P	P	06 59 29.1	0.0
LONY	**Lake Ozonia** 5.8nm,0.7s	46.07	3	*e*P	P	06 59 28.9	-0.2
L36A	**Harm Buss Farm** baz=156	46.08	343	P	P	06 59 28.0	-1.2
SADO	**Sadowa** 17nm,0.9s	46.15	359	*e*P	P	06 59 28.9	-0.8
I43A	**Langenfeld Bro** baz=166	46.19	350	P	P	06 59 28.8	-1.3
J40A	**Soldiers Grove** baz=162	46.26	347	P	P	06 59 29.0	-1.5
FRNY	**Flat Rock** 19nm,0.8s	46.34	4	*e*P	P	06 59 31.7	+0.5
I42A	**Draeger Farm,** baz=164,SNR=6.8	46.34	349	P	P	06 59 30.1	-1.2
I42A	**Draeger Farm,** 32nm,1.4s	46.34	349	*e*P	P	06 59 29.9	-1.4
BANO	**Bancroft** baz=180	46.38	360	P	P	06 59 30.8	-0.7
K37A	**Belmond** baz=158	46.40	344	P	P	06 59 30.0	-1.7
PLVO	**Plevna** baz=181,SNR=14	46.40	1	P	P	06 59 31.6	-0.1
PLVO	**Plevna** 22nm,0.9s	46.40	1	*e*P	P	06 59 31.3	-0.4
J39A	**Decorah** baz=161,SNR=5.5	46.42	346	P	P	06 59 30.3	-1.6
K36A	**Gilmore City** baz=157	46.51	343	P	P	06 59 31.6	-0.9
H43A	**Windswept, Lux** baz=166	46.70	350	P	P	06 59 32.5	-1.5
TOBO	**Tobermory, Bru** baz=175	46.71	356	P	P	06 59 32.9	-1.1
KLBO	**Killbear Provi** baz=177,SNR=10.0	46.77	358	P	P	06 59 32.5	-2.0
SDCO	**Great Sand Dun** baz=140,SNR=9.4	46.78	330	P	P	06 59 36.1	+1.0
SDCO	**Great Sand Dun** 3.9nm,0.6s	46.78	330	*e*P	P	06 59 36.7	+1.5
BUKO	**Buck Lake** baz=178,SNR=14	46.83	358	P	P	06 59 34.2	-0.8
H42A	**Shiocton** baz=165	46.87	349	P	P	06 59 34.1	-1.2
I39A	**Houston** baz=161	46.87	346	P	P	06 59 33.8	-1.5
PEMO	**Pembroke** baz=181,SNR=8.2	47.04	0	P	P	06 59 36.0	-0.6
214A	**Organ Pipe Nat** baz=128	47.06	318	P	P	06 59 37.4	+0.3
ALFO	**Alfred** baz=184,SNR=8.1	47.06	3	P	P	06 59 37.0	+0.3
J36A	**Seneca 1, Swea** baz=157	47.11	343	P	P	06 59 35.9	-1.3
I38A	**Scanlan Farm,** baz=160	47.24	346	P	P	06 59 36.5	-1.7
H40A	**Chili** baz=163	47.34	348	P	P	06 59 37.6	-1.4
G43A	**Wallace** baz=166	47.45	350	P	P	06 59 38.5	-1.2
F45A	**CMU Biological** baz=169	47.55	353	P	P	06 59 39.3	-1.2
G42A	**Mountain** baz=165	47.56	350	P	P	06 59 39.5	-1.1
G42A	**Mountain** 11nm,0.8s	47.56	350	*e*P	P	06 59 39.5	-1.1
TRQ	**Mont Tremblant**	47.67	3	*e*P	P	06 59 41.2	-0.4
F43A	**Flat Rock, Esc** baz=167	47.92	351	P	P	06 59 41.7	-1.7
G40A	**Rib Lake** baz=163	47.92	348	P	P	06 59 42.0	-1.5
G39A	**Holcombe** baz=162	48.15	347	P	P	06 59 44.0	-1.2
F41A	**Three Lakes** baz=165	48.16	349	P	P	06 59 43.9	-1.4
F41A	**Three Lakes** 8.8nm,0.9s	48.16	349	*e*P	P	06 59 44.3	-1.0
ECSD	**EROS Data Cent** baz=154	48.16	342	P	P	06 59 43.7	-1.7
E45A	**Wooded Hills,** baz=170	48.16	353	P	P	06 59 44.3	-1.0
G38A	**Ridgeland** baz=161,SNR=5.9	48.19	347	P	P	06 59 43.9	-1.6
E43A	**Lone Tree Farm** baz=168	48.43	351	P	P	06 59 45.9	-1.4
E43A	**Lone Tree Farm** 9.9nm,0.8s	48.43	351	*e*P	P	06 59 45.5	-1.8
ISCO	**Idaho Springs** baz=141	48.43	331	P	P	06 59 47.4	-0.4
H35A	**Sunnyside Ranc** baz=157	48.51	344	P	P	06 59 45.9	-2.0
F40A	**Park Falls** baz=163	48.53	348	P	P	06 59 46.7	-1.4
E42A	**Champion** baz=166	48.62	351	P	P	06 59 47.4	-1.4
F39A	**Loretta** baz=162	48.69	348	P	P	06 59 47.6	-1.7
BELQ	**Belleterre** baz=179	48.77	359	P	P	06 59 49.3	-0.6
E41A	**Kenton** baz=165	48.84	350	P	P	06 59 49.1	-1.3
PV03	**Paradox Valley**	48.91	327	*e*P	P	06 59 51.0	-0.4
F38A	**Pierce - Schro** baz=161	48.94	347	P	P	06 59 50.1	-1.1
E40A	**Wakefield** baz=164,SNR=6.6	48.99	349	P	P	06 59 50.5	-1.1
E39A	**Mellen** baz=163,SNR=6.7	49.06	348	P	P	06 59 50.9	-1.2
H32A	**Carlson Farm,** baz=154	49.11	341	P	P	06 59 51.6	-1.0
F36A	**Milaca** baz=159	49.24	345	P	P	06 59 52.4	-1.1
E38A	**The Farm, Brul** baz=162	49.48	348	P	P	06 59 53.9	-1.4
E38A	**The Farm, Brul** 6.0nm,0.9s	49.48	348	*e*P	P	06 59 54.1	-1.2
E36A	**McGregor** baz=160	49.79	346	P	P	06 59 56.3	-1.4
G32A	**Webster** baz=154	49.81	342	P	P	06 59 56.3	-1.5
G32A	**Webster** 16nm,0.8s	49.81	342	*e*P	P	06 59 56.3	-1.5
D37A	**Cotton** baz=161	50.20	347	P	P	06 59 59.7	-1.0
F32A	**Veblen** baz=154	50.25	342	P	P	06 59 59.8	-1.3
D36A	**Goodland** baz=160	50.39	346	P	P	07 00 01.0	-1.1
C37A	**Embarrass** baz=161,SNR=5.2	50.69	347	P	P	07 00 03.1	-1.3
EYMN	**Ely** baz=162	50.75	348	P	P	07 00 03.6	-1.2
C36A	**Pine Crest Far** baz=160,SNR=8.9	50.86	347	P	P	07 00 04.8	-0.8
MATQ	**Matagami** baz=180	51.12	0	P	P	07 00 06.7	-0.9
RSSD	**Black Hills** baz=145	51.19	336	P	P	07 00 08.8	+0.3
CHGQ	**Chibougamau** baz=184	51.36	3	P	P	07 00 08.8	-0.5
B35A	**Bob, Littlefor** baz=160	51.63	346	P	P	07 00 10.1	-1.2
B34A	**Aery, Baudette** baz=158	51.97	346	P	P	07 00 13.0	-0.8
AGMN	**Agassiz Nation** baz=157,SNR=8.0	52.10	345	P	P	07 00 13.9	-1.0
AGMN	**Agassiz Nation** 6.4nm,0.7s	52.10	345	*e*P	P	07 00 13.2	-1.6
TCUT	**Toone Canyon** 8.2nm,0.6s	52.34	328	*e*P	P	07 00 17.2	+0.2
PDAR	**Pinedale Array** 0.8nm,0.8s,baz=113,slow=9.8,SNR=6.8	52.61	331	P	P	07 00 19.0	0.0
HWUT	**Hardware Ranch** 2.0nm,0.8s	52.78	328	*e*P	P	07 00 20.5	+0.4
SPUT	**South Promonto** 2.9nm,0.7s	53.03	328	*e*P	P	07 00 22.2	+0.1
SPUT				*e*pP	**pP**	07 01 05.4	+2.0
ULM	**Lac du Bonnet** 4.4nm,0.6s,baz=151,slow=8.8,SNR=5.0	53.91	346	P	P	07 00 26.6	-1.4
ULM	**Lac du Bonnet** 17nm,1.4s	53.91	346	*e*P	P	07 00 26.5	-1.4
NVAR	**Mina Array Bea** 0.4nm,0.7s,baz=132,slow=7.0,SNR=4.3	54.57	321	P	P	07 00 34.4	+1.1
NVAR	 0.4nm,0.7s,baz=129,slow=7.2,SNR=2.3			pP	**pP**	07 01 17.0	+2.1
YMR	**Madison River** 3.0nm,0.7s	54.71	331	*e*P	P	07 00 35.2	+1.0
YKA	**Yellowknife Ar** 1.6nm,0.6s,baz=140,slow=6.3,SNR=15	69.67	343	P	P	07 02 12.3	-0.7
DLBC	**Dease Lake**	72.62	334	P	P	07 02 31.6	+0.6

	2.1nm,0.8s,baz=146,slow=12,SNR=4.2						
ILULI	Ilulissat	72.92	10	eP	P	07 02 32.3	-0.1
	24nm,0.8s						
LIC	Lamto	73.01	83	eP	P	07 02 33.0	-1.0
	91nm,1.7s						
TIC	Toumodi	73.04	83	eP	P	07 02 33.0	-1.3
DBIC	Dimbokro	73.21	83	P	P	07 02 34.6	-0.6
	7.2nm,0.4s,baz=257,slow=3.6,SNR=35						
DBIC	Dimbokro	73.21	83	eP	P	07 02 34.4	-0.8
	27nm,1.0s						
KIC	Kosan Boka	73.30	83	eP	P	07 02 35.0	-0.8
	21nm,0.4s						
KOWA	Kowa	74.67	75	P	P	07 02 43.1	-0.5
	16nm,0.6s,baz=265,slow=8.2,SNR=26						
KOWA	Kowa	74.67	75	eP	P	07 02 42.4	-1.2
	16nm,0.8s						
SUMG	Summit	78.04	11	eP	P	07 03 01.6	-0.3
	19nm,0.7s						
ESDC	Sonseca Array	78.57	49	P	P	07 03 06.7	+1.6
	0.4nm,0.6s,baz=253,slow=3.9,SNR=3.7						
ESDC				pP	pP	07 03 47.5	-2.1
	1.4nm,0.9s,baz=260,slow=6.8,SNR=3.7						
ES19	SONSECA Array	78.62	49	eP	P	07 03 04.2	-1.2
ES19				epP	pP	07 03 49.1	-0.8
INK	Inuvik	79.40	342	P	P	07 03 09.5	+0.6
	4.0nm,0.7s,baz=83,slow=4.0,SNR=14						
INK	Inuvik	79.40	342	eP	P	07 03 09.1	+0.2
	11nm,1.1s						
TORD	Torodi Ar. Bea	80.08	76	P	P	07 03 11.7	-2.1
	1.8nm,0.3s,baz=283,slow=6.3						
EGAK	Eagle	80.37	337	eP	P	07 03 14.7	+0.4
	5.3nm,0.9s						
VNA3	Neumayer Olymp	81.58	162	P	P	07 03 21.2	+0.6
VNA1	Neumayer--Stat	81.82	162	P	P	07 03 22.9	+1.2
ILAR	Eielson Array	82.64	336	P	P	07 03 26.0	-0.1
	0.9nm,0.9s,baz=125,slow=3.8,SNR=9.0						
ILAR				pP	pP	07 04 10.8	-0.3
	0.4nm,0.8s,baz=112,slow=3.4,SNR=2.9						
ILAR				PP	PP	07 06 37.6	-0.8
	0.4nm,0.9s,baz=115,slow=7.9,SNR=5.0						
SNAA	Sanae	83.80	162	P	P	07 03 32.2	+0.2
SNAA	Sanae	83.80	162	P	P	07 03 32.4	+0.3
	2.8nm,0.8s,baz=278,slow=5.7,SNR=9.0						
SNAA				LR	LR	07 43 03.9	
	comp=Z,39nm,18.4s,baz=328,slow=37						
QSPA	South Pole Qui	88.50	180	P	P	07 03 56.4	+1.2
	10nm,1.0s,baz=158,slow=3.8,SNR=15						
QSPA	South Pole Qui	88.50	180	eP	P	07 03 56.2	+1.1
	22nm,1.2s						
DAVOX	Davos/Dischmat	89.50	43	P	P	07 04 00.2	-0.1
	3.6nm,0.7s,baz=304,slow=7.3,SNR=5.2						
VNDA	Vanda	94.79	191	P	P	07 04 25.2	+1.3
	0.9nm,0.8s,baz=114,slow=2.6,SNR=6.9						
KURK	Kurchatov	127.09	19	PKP	PKPdf	07 10 06.4	+0.4
KURBB	Kurchatov Arra	127.15	19	PKP	PKPdf	07 10 06.4	+0.2
	0.2nm,0.4s,baz=317,slow=2.5,SNR=4.5						
MKAR	Makanchi Array	131.70	18	PKP	PKPdf	07 10 14.3	-0.7
	0.2nm,0.4s,baz=258,slow=3.2,SNR=4.7						
SONM	Songino Array	133.77	356	SKPbc	SKPab	07 13 32.7	-0.7
	1.2nm,1.0s,baz=301,slow=2.2,SNR=4.4						
ASAR	Alice Springs	140.30	229	PKhKP	PKPpre	07 10 24.4	
	0.6nm,0.6s,baz=125,slow=4.2,SNR=9.3						
ASAR				PKP	PKPdf	07 10 31.4	-0.3
	1.2nm,0.7s,baz=125,slow=2.3,SNR=4.3						
WRA	Warramunga Arr	141.96	234	PKhKP	PKPpre	07 10 29.5	
	1.8nm,0.7s,baz=125,slow=3.1,SNR=14						
WRA				PKP	PKPdf	07 10 34.5	-0.2
	1.7nm,0.8s,baz=109,slow=2.2,SNR=7.9						
LZH	Lanzhou	145.62	358	⇑PKPbc	PKPab	07 10 42.1	+0.2
LZH				PKPbc	PKiKP	07 10 45.0	+0.1
LZH				pPKP	pPKPdf	07 11 30.3	+1.5
LZH				sPKP		07 11 50.0	
FITZ	Fitzroy Crossi	149.80	229	PKPbc	PKPbc	07 10 52.6	-0.3
	6.3nm,0.9s,baz=132,slow=7.2,SNR=6.8						
CMAR	Chiang Mai Arr	162.90	11	PKPab	PKPab	07 11 54.1	-0.6
	2.1nm,0.8s,baz=321,slow=5.0,SNR=5.5						

NIED ***15*** *08:20:00, 38°.40N×144°.60E, h5^{km}, Mw3.6 Best double couple: M$_0$2.57000×10^{14} NP1:φ$_s$30.00000°, δ27.00000°, λ-95.00000°. NP2:φ$_s$215.00000°, δ63.00000°, λ-88.00000°.*

JMA 15 08:20:48.2±0.2**, 38°.39N×144°.61E, h43^{km}, M3.7, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	2.40	288	P	Pn	08 21 26.5	+1.5
OFUJ				S	Sn	08 21 54.7	+1.5
MIYJ	Miyakonagasawa	2.48	299	P	Pn	08 21 27.3	+1.3
MIYJ				S	Sn	08 21 56.1	+1.1
JIO	Ouri	2.56	272	P	Pn	08 21 28.6	+1.4
JIO				eS	Sn	08 21 57.8	+0.7
JMK	Ichinoseki	2.71	283	P	Pn	08 21 31.1	+1.9
JMK				S	Sn	08 22 02.7	+1.9
JOM	Ohasama	2.80	294	P	Pn	08 21 32.3	+1.8
JOM				S	Sn	08 22 05.3	+2.2
JANG	Nango	3.11	311	P	Pn	08 21 35.5	+0.8
JYK	Kaneyama	3.37	280	P	Pn	08 21 40.6	+2.3
JYK				S	Sn	08 22 19.8	+2.8
JFT	Otama	3.49	257	P	Pn	08 21 42.3	+2.4
JFT				S	Sn	08 22 22.2	+2.2
JOT	Ohata	4.05	319	P	Pn	08 21 49.5	+1.8
JOT				S	Sn	08 22 33.3	-0.6
JCH	Churui	4.33	348	P	Pn	08 21 51.2	-0.2
JCH				eS	Sn	08 22 39.2	-1.3
JKB	Kayabe	4.44	323	P	Pn	08 21 56.1	+3.1
JKB				eS	Sn	08 22 43.1	-0.3
NEM2	Nemuro 2	5.04	9	P	Pn	08 21 58.9	-2.3
NEM2				eS	Sn	08 22 53.1	-5.1
JRY	Ryogami san	5.13	244	P	Pn	08 22 03.9	+1.3
JRY				S	Sn	08 23 00.0	-0.6
JOSM	Okushiri--Mats	5.39	315	P	Pn	08 22 09.0	+3.0
JTKR	Abashiri--Toko	5.60	355	P	Pn	08 22 08.6	-0.3
JTKR				eS	Sn	08 23 09.7	-2.2
JHR	Hokuryu	5.78	339	eS	Sn	08 23 17.2	+1.0

MOS ***15*** *08:23:23.0±1.0, 33°.47S×67°.47W, h192^{km}, mb4.5/22, Error ellipse: s-maj=15.8km s-min=7.1km az=105.9*
GUC ***15*** *08:23:23.7±0.6, 33°.14S×67°.78W, h232^{km}±9^{km}, ML5.0*
ISCJB ***15*** *08:23:23.9±0.3, 33°.44S±0°.03×67°.51W±0°.04, h203^{km}±1^{km}, mb4.5/110, Error ellipse: s-maj=5.8km s-min=4.6km az=6.8*
IDC ***15*** *08:23:24.9±0.5, 33°.40S×67°.49W, h199^{km}±3^{km}, mb4.1/15, mb1 4.1/17, mb1mx3.9/36, mbtmp4.5/17, Error ellipse: s-maj=15.3km s-min=9.8km az=84.0*
SJA ***15*** *08:23:24.0±0.6, 33°.49S×67°.61W, h210^{km}±4^{km}, ML4.4, MW4.8*
NEIC ***15*** *08:23:25.0±0.2, 33°.48S×67°.48W, mb4.6/99, MD4.8(SJA), Error ellipse: s-maj=6.0km s-min=3.8km az=77.0*
NEIC Felt at San Rafael.

ISC 15 08:23:24.7±0.4**, 33°.49S**±0°.04×**67°.62W**±0°.04**, h198^{km}**±3^{km}**, h198^{km}:pP-P, n682, σ0^{s}.83**/713**, mb4.6**/110**, 6C-11D, Mendoza Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AVIZ	Vizcacheras	0.75	271	i P	Pn	08 23 53.6	+0.7
AAGR	Agrelo	1.09	291	i P	Pn	08 23 56.1	+1.0
ACAN	Cantantal	1.26	17	i P	Pn	08 23 57.4	+0.9
ACAN				i S	Sn	08 24 21.3	+0.4
ARCO	CERRO ARCO	1.28	300	i P	Pn	08 23 57.5	+0.8
ARCO				IAML		08 23 58.0	
	comp=Z,2µm,0.4s						
ARCO				⇓iS	Sn	08 24 22.2	+0.9
ASAL	Salagasta	1.36	311	i P	Pn	08 23 58.2	+1.0
RFA	San Rafael	1.46	209	i P	Pn	08 23 58.3	+0.3
RFA				IAML		08 23 59.0	
	comp=Z,671nm,0.6s						
RTCV	Cerro Valdivia	1.80	334	i P	Pn	08 24 01.7	+0.4
MRA	San Martin	1.92	57	⇓iP	Pn	08 24 02.9	+0.5
MRA				IAML		08 24 03.4	
	comp=Z,2µm,0.3s						
AUSP	Uspallata	1.95	310	i P	Pn	08 24 03.9	+0.9
SJA	San Juan	2.11	338	i P	Pn	08 24 05.1	+0.7
SJA				IAML		08 24 06.0	
	comp=Z,4µm,0.2s						
SJA				i S	Sn	08 24 35.0	-0.3
ZON	Zonda	2.14	335	i P	Pn	08 24 05.3	+0.6
ZON				i S	Sn	08 24 35.7	0.0
ZON				IAML		08 24 37.0	
	comp=Z,2µm,0.5s						
LMEL	Las Melosas	2.19	260	⇓iP	Pn	08 24 06.1	+0.8
LMEL				eS	Sn	08 24 38.7	+1.9
LMEL				IAML		08 24 49.1	
	comp=N,2µm,0.2s						
RTLS	Leoncito	2.20	319	i P	Pn	08 24 06.7	+1.1
RTLS				⇓iS	Sn	08 24 37.9	+0.5
RTLS				IAML		08 24 40.0	
	comp=Z,3µm,0.2s						
FCH	Farellones	2.24	273	⇓iP	Pn	08 24 06.8	+0.8
FCH				eS	Sn	08 24 39.8	+1.6
FCH				IAML		08 24 47.2	
	comp=N,1µm,0.6s						
RTLL	Cerro Villicun	2.27	341	i P	Pn	08 24 06.5	+0.3
RTLL				IAML		08 24 07.5	
	comp=Z,3µm,0.2s						
SUCO	SUCO	2.29	87	IAML		08 24 06.8	
	comp=Z,4µm,0.3s						
CLCH	Cerro Calan	2.44	271	eP	Pn	08 24 08.4	+0.4
CLCH				eS	Sn	08 24 41.6	0.0
CLCH				IAML		08 24 46.5	
	comp=E,6µm,0.3s						
ANTU	Antumapu	2.52	267	eP	Pn	08 24 08.9	+0.1
ANTU				eS	Sn	08 24 43.8	+0.6
ANTU				IAML		08 24 45.0	
	comp=N,4µm,0.5s						
PEL	Peldehue	2.59	277	ePn	Pn	08 24 09.8	+0.1
PEL				eSn	Sn	08 24 44.2	-0.4
PEL	Peldehue	2.59	277	⇓iP	Pn	08 24 09.7	+0.1
PEL				i S	Sn	08 24 43.8	-0.8
PEL				IAML		08 24 46.7	
	comp=N,4µm,0.3s						
PEL	Peldehue	2.59	277	eP	Pn	08 24 09.8	+0.1
PEL				e		08 24 44.2	
ROCH	El Roble	2.89	279	⇓iP	Pn	08 24 12.9	-0.4
ROCH				i S	Sn	08 24 49.9	-1.2
ROCH				IAML		08 24 51.4	
	comp=N,9µm,0.4s						
ROC1	El Roble	2.90	279	ePn	Pn	08 24 13.1	-0.2
ROC1				eSn	Sn	08 24 49.0	-2.2
TCA	Tanti	3.34	51	IAML		08 24 18.6	
	comp=Z,149nm,0.4s						
TCA	Tanti	3.34	51	⇑iP	Pn	08 24 18.2	-0.2
GO05	HualaæØ	3.88	246	ePn	Pn	08 24 24.0	-1.0
GO05				eSn	Sn	08 25 07.5	-4.8
GO05	HualaæØ	3.88	246	eP	Pn	08 24 22.7	-2.2
GO05				i S	Sn	08 25 07.9	-4.3
GO04	Tololo Observa	4.28	320	ePn	Pn	08 24 30.2	+0.1
GO04				eSn	Sn	08 25 21.0	-0.5
GO04	Tololo Observa	4.28	320	eP	Pn	08 24 30.2	+0.1
GO04				eS	Sn	08 25 20.7	-0.8
VCA	Vinchina	4.76	354	⇓iP	Pn	08 24 36.9	+0.6
VCA				i S	Sn	08 25 31.1	-1.6
LCO	Las Campanas	5.19	329	ePn	Pn	08 24 41.7	-0.1
LCO	Las Campanas	5.19	329	eP	Pn	08 24 41.7	-0.1
GO03	Copiap	6.29	338	ePn	Pn	08 24 55.9	0.0
TRQA	Tornquist	6.46	136	ePn	Pn	08 24 56.2	-1.7
TRQA	Tornquist	6.46	136	eP	Pn	08 24 56.2	-1.7
AHML	Horco Molle	6.97	17	IAML		08 26 23.0	
	comp=Z,166nm,0.4s						
PLCA	Paso Flores	7.60	197	P	Pn	08 25 11.5	-1.3
	comp=Z,1.0nm,0.3s,baz=24,slow=9.6,SNR=22						
PLCA	Paso Flores	7.60	197	ePn	Pn	08 25 11.4	-1.4
GO02	Mina Guanaco	8.47	348	ePn	Pn	08 25 24.5	0.0
PB04	IPOC Station P	11.34	348	ePn	Pn	08 25 59.8	-1.6
CPUP	Villa Florida	11.42	54	P	Pn	08 25 58.8	-3.5
	comp=Z,0.2nm,0.3s,baz=224,slow=18,SNR=3.4						
YJA	Yavi	11.42	10	IAML		08 26 06.4	
	comp=Z,8.0nm,0.5s						
PB01	IPOC Station P	12.51	352	ePn	Pn	08 26 16.0	-0.3
PB11	IPOC Station P	13.79	352	ePn	Pn	08 26 32.1	-0.3
MNMC	Minye Minye	14.41	352	ePn	Pn	08 26 40.0	-0.1
LPAZ	La Paz	17.13	358	P	Pn	08 27 13.8	+0.5
	comp=Z,2.9nm,0.3s,baz=151,slow=4.6,SNR=96						
LPAZ	La Paz	17.13	358	eP	Pn	08 27 13.9	+0.5
	comp=Z,14nm,0.6s						
LPAZ	La Paz	17.13	358	eP	Pn	08 27 13.9	+0.5
LPAZ				pmax	pmax		
	comp=Z,14nm,0.6s						
SIV	San Ignacio	18.40	20	P	Pn	08 27 25.3	-2.3
	comp=Z,1.3nm,0.3s,baz=218,slow=12,SNR=21						
EFI	East Falkland	19.46	162	eP	P	08 27 34.7	-1.4
	comp=Z,166nm,0.6s						
EFI	East Falkland	19.46	162	c iP	P	08 27 34.8	-1.4
GO10	Punta Arenas	19.81	186	eP	P	08 27 40.2	+0.2
	comp=Z,576nm,1.8s						
NNA	Nana	23.01	336	eP	P	08 28 12.0	-0.4
	comp=Z,25nm,1.0s						
NNA	Nana	23.01	336	eP	P	08 28 12.0	-0.4
NNA				pmax	pmax		
	comp=Z,25nm,1.0s						
SAML	Samuel	24.76	11	eP	P	08 28 28.4	+0.1
	comp=Z,4.3nm,0.8s						
SAML	Samuel	24.76	11	eP	P	08 28 28.4	+0.1
SAML				pmax	pmax		
	comp=Z,4.0nm,0.8s						
PMSA	Palmer Station	31.39	177	P	P	08 29 27.1	+0.5
	comp=Z,19nm,1.0s,baz=351,slow=13,SNR=2.1						
PTGA	Pitinga	33.37	14	P	P	08 29 42.8	-1.5
	comp=Z,4.1nm,0.5s,baz=204,slow=9.1,SNR=9.7						
PTGA	Pitinga	33.37	14	eP	P	08 29 43.3	-1.1
	comp=Z,6.2nm,1.0s						
YOTC	Yotoco, Valle	38.17	346	eP	P	08 30 24.9	-0.4
RUSC	La Rusia	39.51	351	eP	P	08 30 36.8	0.0
	comp=Z,8.2nm,0.5s						
RUSC				epP	pP	08 31 18.8	0.0
RUSC	La Rusia	39.51	351	eP	P	08 30 37.0	+0.2
HELC	Santa Helena	40.17	348	eP	P	08 30 42.0	-0.1
	comp=Z,86nm,0.7s						
HELC				epP	pP	08 31 23.7	-0.5
HELC	Santa Helena	40.17	348	eP	P	08 30 41.2	-0.9
PTBC	PUERTO BERRIO,	40.34	349	eP	P	08 30 40.8	-2.3
ZARC	Zaragoza, Cauc	41.33	349	eP	P	08 30 49.8	-1.4
VNA3	Neumayer Olymp	48.46	159	P	P	08 31 46.7	-0.1
VNA1	Neumayer--Stat	48.72	158	P	P	08 31 48.7	+0.1
SNAA	Sanae	50.68	158	P	P	08 32 03.3	-0.3
SNAA	Sanae	50.68	158	P	P	08 32 03.2	-0.3
	comp=Z,5.4nm,0.4s,baz=253,slow=8.9,SNR=168						
SNAA	Sanae	50.68	158	eP	P	08 32 03.3	-0.3
	comp=Z,24nm,1.3s						
SNAA	Sanae	50.68	158	c iP	P	08 32 03.5	0.0
SNAA				pmax	pmax		
	comp=Z,620nm,1.2s						
NVL	N'lazarevskaya	55.33	157	i P	P	08 32 39.4	+2.1
NVL				e*PP	pP	08 33 21.9	-0.1
NVL				eS	S	08 40 10.3	+4.9
NVL				pmax	pmax		
	comp=Z,14nm,1.1s						
QSPA	South Pole Qui	56.75	180	P	P	08 32 49.5	+1.8
	comp=Z,14nm,0.9s,baz=329,slow=3.6,SNR=39						
QSPA	South Pole Qui	56.75	180	eP	P	08 32 48.2	+0.5
	comp=Z,36nm,0.6s						
VNDA	Vanda	65.30	190	P	P	08 33 45.1	+0.3
	comp=Z,0.4nm,0.5s,baz=214,slow=15,SNR=2.7						
LNIG	Linares	65.50	328	eP	P	08 33 46.5	-0.3
	comp=Z,2.9nm,0.7s						
351A	Pinckard	66.62	343	P	P	08 33 53.3	-0.4
	baz=164						
352A	Blakely	66.66	344	P	P	08 33 53.4	-0.5
	baz=164						
254A	Abbeville	66.74	346	P	P	08 33 54.3	-0.2
	baz=166						
NHSC	New Hope	67.29	349	P	P	08 33 58.6	+0.7
	baz=169						
154A	Montrose	67.35	346	P	P	08 33 57.9	-0.3
	baz=166,SNR=5.5						
154A	Montrose	67.35	346	eP	P	08 33 58.0	-0.3
	comp=Z,31nm,1.0s						
251A	Midway	67.36	344	P	P	08 33 57.7	-0.6
	baz=164,SNR=6.3						
249A	Camden	67.66	342	P	P	08 34 00.2	-0.1
	baz=162						
152A	Waverly Hall	67.75	344	P	P	08 34 00.4	-0.4
	baz=165						
151A	Opelika	67.75	344	P	P	08 34 00.4	-0.4
	baz=164						
Z54A	Sparta	67.90	346	P	P	08 34 00.9	-0.8
	baz=166						
248A	Dixon Mills	67.94	342	P	P	08 34 01.8	-0.2
	baz=162						
150A	Eclectic	67.99	343	P	P	08 34 01.9	-0.4
	baz=163						
Z53A	Monticello	68.09	346	P	P	08 34 02.1	-0.8
	baz=166						
247A	Quitman	68.13	341	P	P	08 34 02.0	-1.2
	baz=161						
149A	Jones	68.17	343	P	P	08 34 02.5	-0.9
	baz=163						
344A	Westbrook Farm	68.18	339	P	P	08 34 04.6	+1.1
	baz=159						
Z52A	Williamson	68.18	345	P	P	08 34 03.2	-0.3
	baz=165,SNR=7.0						
GOGA	Godfrey	68.20	346	P	P	08 34 03.2	-0.4
	baz=166						
833A	Chaparral WMA,	68.46	330	P	P	08 34 06.2	+0.9
	baz=152						
833A	Chaparral WMA,	68.46	330	eP	P	08 34 05.8	+0.5
	comp=Z,17nm,0.8s						
245A	Little AP, Sta	68.47	340	P	P	08 34 06.1	+0.7
	baz=160,SNR=13						
Y54A	Tignall	68.48	347	P	P	08 34 04.8	-0.5
	baz=166						
Z50A	Ashland	68.59	344	P	P	08 34 05.7	-0.4
	baz=164,SNR=9.5						
Z50A	Ashland	68.59	344	eP	P	08 34 05.5	-0.6
	comp=Z,11nm,0.8s						
342A	Flagon Creek P	68.60	337	P	P	08 34 07.3	+1.2
	baz=158						
LRAL	Lakeview Retre	68.64	343	P	P	08 34 05.8	-0.5
	baz=163						
LRAL	Lakeview Retre	68.64	343	eP	P	08 34 04.5	-1.8
Y53A	Monroe	68.65	346	P	P	08 34 06.0	-0.4
	baz=166,SNR=5.9						
Z49A	Columbiana	68.68	343	P	P	08 34 06.2	-0.4
	baz=163						
244A	Avery, Jackson	68.72	339	P	P	08 34 07.4	+0.6
	baz=159,SNR=7.3						
Y52A	Lilburn	68.76	345	P	P	08 34 06.8	-0.2
	baz=165,SNR=7.3						
Y52A	Lilburn	68.76	345	eP	P	08 34 06.1	-0.9
	comp=Z,9.2nm,0.7s						
VBMS	Vicksburg	68.83	339	P	P	08 34 08.2	+0.7
	baz=160						
341A	Kurthwood	68.84	337	P	P	08 34 08.0	+0.4
	baz=157						
Y51A	Rockmart	69.01	345	P	P	08 34 08.3	-0.4
	baz=164						
145A	Houston Renfro	69.02	340	P	P	08 34 09.7	+1.1
	baz=160						
CNNC	Cliffs of the	69.05	351	P	P	08 34 09.2	+0.4
	baz=171						
Z47A	Carrollton	69.07	342	P	P	08 34 08.9	-0.1
	baz=162,SNR=11						
Z48A	Northport	69.11	342	P	P	08 34 08.8	-0.4
	baz=162,SNR=5.8						
242A	Grayson	69.19	338	P	P	08 34 10.6	+0.9
	baz=158						
X53A	Estanollee	69.22	346	P	P	08 34 09.9	+0.1
	baz=166						
Y49A	Blount Mountai	69.28	343	P	P	08 34 09.7	-0.6
	baz=163						
Y49A	Blount Mountai	69.28	343	eP	P	08 34 09.4	-0.9
	comp=Z,4.7nm,0.8s						
Z46A	Louisville	69.30	341	P	P	08 34 11.1	+0.7
	baz=161						
X52A	Dahlonega	69.44	346	P	P	08 34 11.0	-0.3
	baz=165,SNR=7.3						
KMSC	Kings Mountain	69.47	348	P	P	08 34 11.1	-0.3
	baz=168						
KMSC	Kings Mountain	69.47	348	eP	P	08 34 10.9	-0.6
	comp=Z,6.9nm,0.8s						
Y48A	Jasper	69.52	343	P	P	08 34 11.2	-0.5
	baz=163						
143A	Socs Landing,	69.55	339	P	P	08 34 12.7	+0.9
	baz=159						
143A	Socs Landing,	69.55	339	eP	P	08 34 13.1	+1.2
	comp=Z,32nm,0.6s						
X51A	Calhoun	69.61	345	P	P	08 34 12.2	0.0
	baz=165						
X51A	Calhoun	69.61	345	eP	P	08 34 12.2	0.0
	comp=Z,24nm,0.8s						
BG3	Lake Jocassee	69.62	347	eP	P	08 34 12.5	+0.1
	comp=Z,7.8nm,0.7s						
Z45A	Winona	69.67	340	P	P	08 34 13.2	+0.6
	baz=160						
Y47A	UCPARC, Winfie	69.68	342	P	P	08 34 12.5	-0.2
	baz=162,SNR=11						
X50B	Fort Payne	69.68	344	P	P	08 34 12.3	-0.5
	baz=164						
NATX	Nacogdoches	69.74	336	P	P	08 34 13.8	+0.8
	baz=156						
W53A	Cullowhee	69.84	346	P	P	08 34 13.5	-0.3
	baz=166,SNR=6.4						
X49A	Woodville	69.89	344	P	P	08 34 13.8	-0.1
	baz=163						
W52A	Murphy	69.92	346	P	P	08 34 14.1	-0.1
	baz=166,SNR=5.1						
W52A	Murphy	69.92	346	eP	P	08 34 13.5	-0.7
	comp=Z,8.6nm,0.8s						
Y46A	Houston	69.93	341	P	P	08 34 14.0	-0.2
	baz=161,SNR=5.5						
X48A	Hartselle	70.00	343	P	P	08 34 14.7	0.0
	baz=163,SNR=9.0						
X48A	Hartselle	70.00	343	eP	P	08 34 14.9	+0.3
	comp=Z,9.0nm,0.7s						
Y45A	Yeager Farm, C	70.10	341	P	P	08 34 15.1	-0.1
	baz=161						
HPIG		70.12	324	eP	P	08 34 16.4	+0.6
	comp=Z,9.9nm,0.8s						
W51A	Cleveland	70.16	345	P	P	08 34 15.2	-0.4
	baz=165						
V53A	Saluda	70.25	347	P	P	08 34 15.9	-0.3
	baz=166,SNR=7.8						
V53A	Saluda	70.25	347	eP	P	08 34 16.1	-0.2
	comp=Z,20nm,1.2s						
X47A	Russelville	70.27	342	P	P	08 34 15.8	-0.4
	baz=162,SNR=6.6						
W50A	Signal Mountai	70.31	345	P	P	08 34 16.3	-0.3
	baz=164,SNR=6.8						
W50A	Signal Mountai	70.31	345	eP	P	08 34 16.8	+0.2
	comp=Z,14nm,0.7s						
Y44A	Strider, Charl	70.38	340	P	P	08 34 17.3	+0.4
	baz=160						
CPCT	Cooper Cave	70.39	345	eP	P	08 34 16.6	-0.3
	comp=Z,11nm,0.8s						
TKL	Tuckaleechee C	70.43	346	P	P	08 34 16.6	-0.7
	comp=Z,6.3nm,0.6s,baz=163,slow=8.2,SNR=19						
TKL	Tuckaleechee C	70.43	346	eP	P	08 34 16.2	-1.1
	comp=Z,7.2nm,0.8s						
TKL	Tuckaleechee C	70.43	346	eP	P	08 34 16.2	-1.1
TKL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
W49A	Belvidere	70.45	344	P	P	08 34 17.0	-0.3
	baz=164,SNR=8.3						
SWET	Sewanee	70.47	344	eP	P	08 34 17.3	-0.2
	comp=Z,17nm,0.9s						
X46A	Booneville	70.49	342	P	P	08 34 17.3	-0.3
	baz=162						
JCT	Junction City	70.53	331	P	P	08 34 17.9	0.0
	baz=152						
JCT	Junction City	70.53	331	eP	P	08 34 18.2	+0.3
	comp=Z,12nm,1.1s						
JCT	Junction City	70.53	331	eP	P	08 34 18.3	+0.3
JCT				pmax	pmax		
	comp=Z,12nm,1.1s						
Y43A	Makayla and Ka	70.53	340	P	P	08 34 18.8	+0.9
	baz=159						
V52A	Sevierville	70.57	346	P	P	08 34 17.5	-0.6
	baz=166,SNR=5.1						
V52A	Sevierville	70.57	346	eP	P	08 34 16.6	-1.5
	comp=Z,8.9nm,0.8s						
X45A	UM Field Stati	70.58	341	P	P	08 34 18.0	-0.2
	baz=161,SNR=6.7						
W48A	Pulaski	70.63	343	P	P	08 34 18.2	-0.3
	baz=163,SNR=15						
OXF	Oxford	70.67	341	P	P	08 34 18.3	-0.4
	baz=161,SNR=6.7						
OXF	Oxford	70.67	341	eP	P	08 34 18.3	-0.4
	comp=Z,29nm,1.1s						
OXF	Oxford	70.67	341	eP	P	08 34 18.3	-0.4
OXF				pmax	pmax		
	comp=Z,29nm,1.1s						
V51A	Loudon	70.69	346	P	P	08 34 18.2	-0.6
	baz=165						
V51A	Loudon	70.69	346	eP	P	08 34 17.6	-1.1
	comp=Z,6.0nm,0.6s						
PLAL	Pickwick Lake	70.76	342	eP	P	08 34 18.9	-0.4
	comp=Z,6.3nm,0.6s						
CCAR	Cane Creek	70.79	339	eP	P	08 34 20.4	+1.0
	comp=Z,12nm,0.9s						
U53A	Fall Branch	70.89	347	P	P	08 34 19.3	-0.7
	baz=167						
W47A	Westpoint	70.90	343	P	P	08 34 19.9	-0.2

	baz=162,SNR=15						
WHTX	Lake Whitney,	70.95	333	P	P	08 34 20.4	-0.1
	baz=154						
V49A	McMinnville	70.99	344	P	P	08 34 20.0	-0.6
	baz=164,SNR=5.9						
Y41A	Eaglette Beard	71.01	338	P	P	08 34 21.4	+0.6
	baz=158,SNR=6.9						
U52A	Thorn Hill	71.06	347	P	P	08 34 20.5	-0.6
	baz=166						
X43A	Marvell	71.09	340	P	P	08 34 21.6	+0.4
	baz=160						
X43A	Marvell	71.09	340	*e*P	P	08 34 21.4	+0.2
	comp=Z,19nm,0.9s						
U51A	La Follette	71.18	346	P	P	08 34 21.2	-0.6
	baz=166						
V48A	Smith Brothers	71.18	344	P	P	08 34 21.4	-0.3
	baz=163,SNR=8.1						
V48A	Smith Brothers	71.18	344	*e*P	P	08 34 21.2	-0.6
	comp=Z,11nm,0.8s						
TXAR	Lajitas Array	71.20	327	P	P	08 34 22.4	+0.3
	comp=Z,1.4nm,0.8s,baz=147,slow=6.9,SNR=28						
TXAR				pP	pP	08 35 10.7	+1.6
	comp=Z,0.6nm,0.8s,baz=130,slow=8.4,SNR=2.3						
TX31	Lajitas Ar. Si	71.20	327	*e*P	P	08 34 22.5	+0.4
W45A	Hickory Valley	71.22	341	P	P	08 34 21.7	-0.3
	baz=161						
TZTN	Tazewell	71.25	346	P	P	08 34 21.8	-0.3
	baz=166						
Y40A	Okolona	71.34	338	P	P	08 34 23.1	+0.4
	baz=158						
BLA	Blacksburg	71.34	349	P	P	08 34 23.2	+0.4
	baz=169						
U50A	Jamestown	71.38	345	P	P	08 34 22.5	-0.5
	baz=165						
V47A	Nunnelly	71.43	343	P	P	08 34 22.5	-0.7
	baz=162,SNR=16						
DBIC	Dimbokro	71.54	69	P	P	08 34 24.7	+0.3
	comp=Z,4.1nm,0.8s,baz=177,slow=8.2,SNR=3.0						
V46A	Holladay	71.55	343	P	P	08 34 23.4	-0.6
	baz=162,SNR=31						
U49A	Red Boiling Sp	71.68	345	P	P	08 34 24.1	-0.6
	baz=164,SNR=7.5						
T52A	Hallie	71.68	347	P	P	08 34 24.6	-0.2
	baz=166						
V45A	Humboldt	71.71	342	P	P	08 34 24.8	-0.1
	baz=161						
T51A	Gray	71.73	346	P	P	08 34 24.3	-0.7
	baz=166						
WVT	Waverly	71.79	343	P	P	08 34 24.8	-0.6
	baz=162						
WVT	Waverly	71.79	343	*e*P	P	08 34 24.8	-0.6
	comp=Z,15nm,0.6s						
WVT	Waverly	71.79	343	*e*P	P	08 34 24.8	-0.6
WVT				pmax	pmax		
	comp=Z,15nm,0.6s						
U48A	Cassie Pea, Po	71.85	344	P	P	08 34 25.9	+0.2
	baz=163						
MIAR	Mount Ida	71.93	338	P	P	08 34 26.0	-0.3
	baz=157						
MIAR	Mount Ida	71.93	338	*e*P	P	08 34 26.3	+0.1
	comp=Z,9.6nm,1.4s						
MIAR	Mount Ida	71.93	338	*e*P	P	08 34 26.3	+0.1
MIAR				pmax	pmax		
	comp=Z,10.0nm,1.4s						
U47A	Clarksville	71.96	343	P	P	08 34 25.8	-0.5
	baz=163,SNR=9.4						
T50A	Nancy	71.97	346	P	P	08 34 25.6	-0.8
	baz=165						
X39A	Fountain Ranch	72.07	337	P	P	08 34 27.3	+0.2
	baz=157,SNR=6.5						
U46A	Springville	72.10	343	P	P	08 34 26.7	-0.5
	baz=162,SNR=6.4						
W41B	Gary Mavity, V	72.10	339	P	P	08 34 27.1	-0.1
	baz=158						
W41B	Gary Mavity, V	72.10	339	*e*P	P	08 34 27.4	+0.2
	comp=Z,4.9nm,0.8s						
V43A	Jonesboro	72.18	341	P	P	08 34 27.8	+0.1
	baz=160						
T49A	Edmonton	72.19	345	P	P	08 34 27.0	-0.7
	baz=164,SNR=8.7						
T49A	Edmonton	72.19	345	*e*P	P	08 34 27.1	-0.7
	comp=Z,8.8nm,0.6s						
U45A	Rockin P Farm,	72.23	342	P	P	08 34 27.9	0.0
	baz=162						
S52A	Salyersville	72.25	347	P	P	08 34 27.7	-0.4
	baz=166,SNR=5.5						
S51A	Beattyville	72.31	347	P	P	08 34 28.1	-0.4
	baz=166,SNR=5.6						
S51A	Beattyville	72.31	347	*e*P	P	08 34 28.1	-0.4
	comp=Z,8.4nm,0.7s						
ABTX	Abilene, Hawle	72.35	332	P	P	08 34 28.8	0.0
	baz=152						
ABTX	Abilene, Hawle	72.35	332	*e*P	P	08 34 29.6	+0.8
	comp=Z,9.8nm,0.8s						
W40A	Ferguson Farm,	72.37	338	P	P	08 34 29.2	+0.4
	baz=158						
W40A	Ferguson Farm,	72.37	338	*e*P	P	08 34 29.5	+0.7
	comp=Z,8.6nm,1.1s						
U44B	Burton Farm, H	72.38	342	P	P	08 34 29.1	+0.3
	baz=161						
T48A	Bowling Green	72.39	344	P	P	08 34 28.3	-0.6
	baz=164						
T47A	Sharon Grove	72.44	344	P	P	08 34 28.4	-0.8
	baz=163						
T47A	Sharon Grove	72.44	344	*e*P	P	08 34 28.4	-0.8
	comp=Z,9.2nm,0.7s						
V42A	Cord	72.44	340	P	P	08 34 28.8	-0.4
	baz=159						
S50A	Richmond	72.51	346	P	P	08 34 29.5	-0.1
	baz=165						
PVMO	Portageville	72.54	341	*e*P	P	08 34 30.5	+0.7
	comp=Z,222nm,0.3s						
MAW	Mawson	72.58	162	P	P	08 34 31.9	+2.2
	comp=Z,9.1nm,0.7s,baz=221,slow=9.0,SNR=15						
MAW	Mawson	72.58	162	*e*P	P	08 34 32.1	+2.4
	comp=Z,2.1nm,0.8s						
MAW	Mawson	72.58	162	*e*P	P	08 34 32.1	+2.4
MAW				pmax	pmax		
	comp=Z,2.0nm,0.8s						
W39A	Magazine	72.59	338	P	P	08 34 30.6	+0.4
	baz=157,SNR=11						
W39A	Magazine	72.59	338	*e*P	P	08 34 30.6	+0.4
	comp=Z,14nm,0.8s						
V41A	Mountainview	72.64	339	P	P	08 34 30.2	-0.3
	baz=159,SNR=9.5						
T46A	Princeton	72.67	343	P	P	08 34 30.1	-0.5
	baz=162,SNR=6.1						
U43A	Rector	72.69	341	P	P	08 34 30.7	0.0
	baz=160						
PARMO	Parma	72.79	342	*e*P	P	08 34 31.7	+0.5
	comp=Z,43nm,0.7s						
S48A	Wiedeman Farm,	72.84	345	P	P	08 34 30.7	-0.8
	baz=164,SNR=6.1						
V40A	Witts Springs	72.86	339	P	P	08 34 31.6	-0.1
	baz=158						
V40A	Witts Springs	72.86	339	*e*P	P	08 34 31.8	0.0
	comp=Z,4.4nm,0.6s						
U42A	Revenden	72.90	340	P	P	08 34 32.0	+0.1
	baz=160,SNR=8.0						
R51A	Hillsboro	72.95	347	P	P	08 34 32.3	+0.1
	baz=166						
S47A	Hartford	72.96	344	P	P	08 34 31.1	-1.2
	baz=163						
R50A	Paris	73.08	346	P	P	08 34 32.4	-0.5
	baz=165						
PBMO	Poplar Bluff	73.08	341	*e*P	P	08 34 32.7	-0.3
	comp=Z,14nm,0.8s						
U41A	Viola	73.09	340	P	P	08 34 32.9	-0.2
	baz=159,SNR=7.7						
V39A	Pettigrew	73.14	338	P	P	08 34 33.4	0.0
	baz=157,SNR=10						
S46A	Don Dixon Farm	73.24	343	P	P	08 34 32.8	-1.1
	baz=162						
R49A	Shelbyville	73.26	346	P	P	08 34 33.4	-0.6
	baz=165						
T43A	Greenville	73.33	341	P	P	08 34 34.0	-0.4
	baz=160,SNR=13						
U40A	Yellville	73.38	339	P	P	08 34 34.5	-0.3
	baz=158,SNR=11						
WCI	Wyandotte Cave	73.44	345	P	P	08 34 34.0	-1.1
	baz=164						
WCI	Wyandotte Cave	73.44	345	*e*P	P	08 34 34.4	-0.7
	comp=Z,8.3nm,0.9s						
WCI	Wyandotte Cave	73.44	345	*e*P	P	08 34 34.4	-0.7
WCI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
S45A	Carrier Mills	73.45	343	P	P	08 34 34.2	-0.9
	baz=162						
T42A	Van Buren	73.50	341	P	P	08 34 34.6	-0.8
	baz=160						
R48A	Northridge Ran	73.51	345	P	P	08 34 34.6	-0.8
	baz=164						
R47A	Wooly Knot Far	73.55	345	P	P	08 34 34.8	-0.9
	baz=164						
U39A	Green Forest	73.59	338	P	P	08 34 35.7	-0.3
	baz=158,SNR=8.9						
Q51A	Peebles	73.61	347	P	P	08 34 36.1	+0.1
	baz=166						
S44A	Carbondale	73.63	342	P	P	08 34 35.5	-0.6
	baz=161						
HHAR	Hobbs	73.64	338	*e*P	P	08 34 36.1	-0.2
	comp=Z,8.9nm,1.0s						
T41A	Mountain View	73.70	340	P	P	08 34 36.3	-0.3
	baz=159,SNR=21						
R46A	Gibon Southern	73.70	344	P	P	08 34 35.6	-0.9
	baz=163						
S43A	Fulton Ridge,	73.73	342	P	P	08 34 36.0	-0.7
	baz=160,SNR=8.8						
Q49A	Aurora	73.89	346	P	P	08 34 37.1	-0.6
	baz=165,SNR=6.5						
WMOK	Wichita Mounta	73.90	334	P	P	08 34 37.3	-0.6
	baz=153,SNR=6.1						
WMOK	Wichita Mounta	73.90	334	*e*P	P	08 34 37.5	-0.3
	comp=Z,3.5nm,1.0s						
WMOK	Wichita Mounta	73.90	334	*e*P	P	08 34 37.5	-0.3
WMOK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
R45A	Skylar, Fairfi	73.96	343	P	P	08 34 37.1	-0.9
	baz=162						
MNTX	Cornudas Mount	73.98	327	P	P	08 34 37.2	-1.2
	baz=148,SNR=13						
MNTX	Cornudas Mount	73.98	327	*e*P	P	08 34 37.4	-1.0
	comp=Z,4.9nm,0.8s						
Q48A	North Vernon	73.99	345	P	P	08 34 37.6	-0.6
	baz=164,SNR=6.2						
T40A	Mansfield	74.02	340	P	P	08 34 38.1	-0.4
	baz=158						
O56A	Blue Knob Stat	74.09	351	P	P	08 34 38.8	0.0
	baz=170						
S42A	Caledonia	74.11	341	P	P	08 34 38.2	-0.8
	baz=160,SNR=7.5						
T39A	Clever	74.15	339	P	P	08 34 38.9	-0.3
	baz=158,SNR=9.4						
S41A	Jillco Farms,	74.20	340	P	P	08 34 39.3	-0.2
	baz=159,SNR=15						
FVM	French Village	74.21	341	*e*P	P	08 34 40.3	+0.8
	comp=Z,13nm,0.6s						
P50A	Jamestown	74.26	347	P	P	08 34 39.2	-0.6
	baz=166						
OLIL	Olney	74.33	343	*e*P	P	08 34 40.0	-0.2
	comp=Z,26nm,1.4s						
R43A	Red Bud	74.36	342	P	P	08 34 39.7	-0.7
	baz=161						
P49A	Miami Univ. Ec	74.36	346	P	P	08 34 39.9	-0.5
	baz=165						
SSPA	Standing Stone	74.37	352	P	P	08 34 40.6	+0.3
	baz=171						
BLO	Bloomington	74.39	345	*e*P	P	08 34 40.1	-0.5
	comp=Z,8.2nm,0.7s						
BLO	Bloomington	74.39	345	*e*P	P	08 34 40.1	-0.5
BLO				pmax	pmax		
	comp=Z,8.0nm,0.7s						
N59A	State Game Lan	74.42	354	P	P	08 34 41.5	+0.8
	baz=173						
N59A	State Game Lan	74.42	354	*e*P	P	08 34 41.9	+1.2
	comp=Z,8.4nm,0.8s						
S40A	Lebanon	74.43	340	P	P	08 34 40.8	0.0
	baz=159,SNR=16						
P48A	Milroy	74.44	346	P	P	08 34 39.9	-0.9
	baz=165,SNR=5.6						
T38A	Diamond	74.44	338	P	P	08 34 40.9	0.0
	baz=157,SNR=11						
CCM	Cathedral Cave	74.50	341	P	P	08 34 41.9	+0.6
	baz=160						
CCM	Cathedral Cave	74.50	341	*e*P	P	08 34 41.8	+0.6
	comp=Z,20nm,1.2s						
CCM	Cathedral Cave	74.50	341	*e*P	P	08 34 41.8	+0.6
CCM				pmax	pmax		
	comp=Z,20nm,1.2s						
Q45A	Warren Harvey,	74.50	343	P	P	08 34 40.3	-0.9
	baz=162,SNR=5.9						
R42A	Luebbering	74.59	341	P	P	08 34 41.4	-0.2
	baz=160						
P47A	Martinsville	74.64	345	P	P	08 34 41.2	-0.8
	baz=164						
ACSO	Alum Creek Sta	74.72	348	P	P	08 34 42.0	-0.4
	baz=167,SNR=6.0						
ACSO	Alum Creek Sta	74.72	348	*e*P	P	08 34 42.1	-0.4
	comp=Z,14nm,0.7s						
S39A	Bolivar	74.75	339	P	P	08 34 42.7	-0.1
	baz=158,SNR=15						
S39A	Bolivar	74.75	339	*e*P	P	08 34 42.6	-0.1
	comp=Z,30nm,1.3s						
R41A	Rosebud	74.76	341	P	P	08 34 42.2	-0.5
	baz=160,SNR=9.2						
MSTX	Muleshoe	74.79	330	P	P	08 34 43.0	-0.2
	baz=150,SNR=6.1						
MSTX	Muleshoe	74.79	330	*e*P	P	08 34 43.4	+0.2
	comp=Z,12nm,0.9s						
S38A	Stockton	74.87	339	P	P	08 34 43.1	-0.3
	baz=157,SNR=27						
O49A	Covington	74.92	347	P	P	08 34 42.9	-0.6
	baz=166						
Q43A	New Douglas	74.92	342	P	P	08 34 43.0	-0.6
	baz=161,SNR=8.3						
N54A	Moraine State	74.96	350	P	P	08 34 43.9	+0.1
	baz=169						
N54A	Moraine State	74.96	350	*e*P	P	08 34 44.1	+0.3
	comp=Z,11nm,1.0s						
R40A	Maddies Statio	75.00	340	P	P	08 34 43.7	-0.4
	baz=159,SNR=21						
R40A	Maddies Statio	75.00	340	*e*P	P	08 34 44.0	-0.1
	comp=Z,18nm,0.7s						
P45A	Graceland, Par	75.01	344	P	P	08 34 43.4	-0.7
	baz=163						
P45A	Graceland, Par	75.01	344	*e*P	P	08 34 43.2	-0.9
	comp=Z,11nm,0.9s						
Q42A	Golden Eagle	75.11	342	P	P	08 34 44.3	-0.4
	baz=160,SNR=5.5						
AMTX	Amarillo	75.14	332	P	P	08 34 45.1	0.0
	baz=151						
AMTX	Amarillo	75.14	332	*e*P	P	08 34 45.5	+0.4
	comp=Z,18nm,1.2s						
O48A	Farmland	75.15	346	P	P	08 34 44.1	-0.8
	baz=165						
R39A	Chumby, Stover	75.25	340	P	P	08 34 45.1	-0.4
	baz=158,SNR=8.9						
N50A	Nevada	75.27	348	P	P	08 34 44.9	-0.6
	baz=167						
Q41A	Truxton	75.34	341	P	P	08 34 45.6	-0.3
	baz=160,SNR=7.7						
O47A	Sheridan	75.34	345	P	P	08 34 45.1	-0.8
	baz=164,SNR=6.2						
R38A	Fenwick Farm,	75.39	339	P	P	08 34 45.7	-0.5
	baz=158,SNR=7.9						
M54A	Oil Creek Stat	75.45	351	P	P	08 34 46.6	0.0
	baz=170						
P43A	Skaggs, Pawnee	75.54	343	P	P	08 34 46.5	-0.6
	baz=161,SNR=6.8						
319A	Douglas	75.56	324	*e*P	P	08 34 48.7	+1.1
Q40A	Laux Farm, Aux	75.61	341	P	P	08 34 47.3	-0.2
	baz=159,SNR=9.3						
O45A	Potomac	75.69	344	P	P	08 34 46.9	-1.0
	baz=163,SNR=6.3						
P42A	Winchester	75.69	342	P	P	08 34 47.2	-0.7
	baz=160,SNR=6.7						
P42A	Winchester	75.69	342	*e*P	P	08 34 47.4	-0.6
	comp=Z,12nm,0.7s						
BINY	Binghamton	75.71	354	P	P	08 34 48.7	+0.6
	baz=173						
O44A	Mansfield	75.77	344	P	P	08 34 47.4	-1.0
	baz=162						
121A	Cookes Peak, D	75.79	326	P	P	08 34 50.0	+1.1
	baz=146,SNR=6.7						
Q39A	Willow Grove F	75.91	340	P	P	08 34 48.9	-0.3
	baz=158						
P41A	Barry, Barry	75.97	342	P	P	08 34 49.0	-0.5
	baz=160,SNR=7.6						
Q38A	Cooks Store, C	76.02	339	P	P	08 34 49.7	-0.1
	baz=158,SNR=12						
N46A	Monticello	76.09	345	P	P	08 34 49.7	-0.5
	baz=164						
O43A	Sugar Creek Fa	76.10	343	P	P	08 34 49.7	-0.5
	baz=161						
P40A	Paris	76.10	341	P	P	08 34 50.1	-0.1
	baz=159,SNR=8.0						
P40A	Paris	76.10	341	*e*P	P	08 34 50.2	0.0
	comp=Z,19nm,0.7s						
Q37A	Longview Farm,	76.19	339	P	P	08 34 50.7	-0.1
	baz=157						
O42A	Bath	76.20	342	P	P	08 34 50.6	-0.2
	baz=161						
N45A	Kentland	76.21	345	P	P	08 34 50.4	-0.5
	baz=163						
P39B	Salisbury	76.25	340	P	P	08 34 51.1	-0.1
	baz=158						
N44A	Piper City	76.30	344	P	P	08 34 51.0	-0.4
	baz=162						
O41A	Passleys Farm,	76.33	342	P	P	08 34 51.1	-0.5
	baz=160,SNR=7.5						
HDIL	Hopedale	76.35	343	P	P	08 34 51.2	-0.4
	baz=161						
M46A	Old House Fiel	76.50	346	P	P	08 34 51.8	-0.6
	baz=164						
O40A	La Belle	76.60	341	P	P	08 34 52.6	-0.5
	baz=159,SNR=5.8						
P38A	Dawn	76.61	340	P	P	08 34 52.7	-0.4
	baz=158						
BNM	Barren Site	76.61	328	*e*P	P	08 34 54.8	+1.2
N43A	Stutzman Famil	76.68	343	P	P	08 34 53.3	-0.2
	baz=162						
LENM	Lemitar	76.78	327	*e*P	P	08 34 55.6	+1.1
N42A	Yates City	76.79	343	P	P	08 34 53.8	-0.4
	baz=161						
P37A	Lathrop	76.81	339	P	P	08 34 53.6	-0.7
	baz=157,SNR=5.4						
N41A	Harden Midland	76.88	342	P	P	08 34 54.3	-0.4
	baz=160,SNR=7.2						
N41A	Harden Midland	76.88	342	*e*P	P	08 34 54.1	-0.5
	comp=Z,34nm,1.1s						
HNH	Hanover	76.94	357	*e*P	P	08 34 56.5	+1.6
	comp=Z,11nm,0.9s						
BOSA	Boshof	77.01	116	P	P	08 34 55.6	-0.4
	comp=Z,5.7nm,0.4s,baz=259,slow=3.6,SNR=23						
TYNO	Tyneside	77.04	351	P	P	08 34 55.8	+0.4
	baz=169						
LAZ	Ladron	77.05	327	*e*P	P	08 34 57.1	+1.1
O38A	Galt	77.05	340	P	P	08 34 55.4	-0.1
	baz=158						
TUC	Tucson	77.06	324	P	P	08 34 56.7	+0.7
	baz=144						
KSU1	Kansas State U	77.07	337	P	P	08 34 55.5	-0.2
	baz=155,SNR=5.2						
KSU1	Kansas State U	77.07	337	*e*P	P	08 34 55.5	-0.2
	comp=Z,10nm,0.6s						
KOWA	Kowa	77.10	63	P	P	08 34 56.1	-0.3
	comp=Z,3.1nm,0.6s,baz=224,slow=7.3,SNR=10.0						
KOWA				pP	pP	08 35 45.4	+1.4
	comp=Z,2.5nm,0.6s,baz=225,slow=11,SNR=2.8						
M43A	Waltham Townsh	77.11	344	P	P	08 34 55.6	-0.3
	baz=162						
ANMO	Albuquerque	77.20	328	P	P	08 34 57.8	+1.0
	baz=148						
ANMO	Albuquerque	77.20	328	*e*P	P	08 34 57.7	+0.8
	comp=Z,3.8nm,0.8s						
ANMO	Albuquerque	77.20	328*c*	*i*P	P	08 34 57.0	+0.2
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.1s						
TASL	Snake Pit, Alb	77.20	328	P	P	08 34 57.5	+0.7
	baz=148,SNR=12						
TASM	ASL Pad, Albuq	77.20	328	P	P	08 34 57.7	+0.9
	baz=148,SNR=11						
N40A	Mertquake, Sal	77.24	342	P	P	08 34 56.4	-0.2
	baz=160						
O37A	Wolven Farm, M	77.28	339	P	P	08 34 56.8	-0.1
	baz=158						
M41A	Milan	77.43	343	P	P	08 34 57.3	-0.4
	baz=160						
LBNH	Lisbon	77.46	357	P	P	08 34 58.9	+1.1
	baz=176,SNR=6.6						
LBNH	Lisbon	77.46	357	*e*P	P	08 34 59.2	+1.5
	comp=Z,9.9nm,0.7s						
LBNH	Lisbon	77.46	357	*e*P	P	08 34 59.3	+1.5
LBNH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
N39A	Derby Farms, D	77.48	341	P	P	08 34 57.6	-0.3
	baz=159,SNR=7.1						
N39A	Derby Farms, D	77.48	341	*e*P	P	08 34 57.6	-0.3
ACTO	Acton	77.57	351	P	P	08 34 58.7	+0.3
	baz=169						
N38A	Joes South For	77.60	340	P	P	08 34 58.3	-0.3
	baz=158						
M40A	Post Highland	77.71	342	P	P	08 34 59.0	-0.2
	baz=160						
PKRO	Pickering	77.79	352	P	P	08 34 60.0	+0.4
	baz=170,SNR=5.6						
214A	Organ Pipe Nat	77.80	322	P	P	08 35 01.0	+1.0
	baz=143,SNR=5.5						
L42A	Oliver, Polo	77.81	343	P	P	08 35 00.1	+0.3
	baz=161						
N37A	Lee Faris, Mou	77.85	340	P	P	08 34 59.7	-0.3
	baz=158						
N37A	Lee Faris, Mou	77.85	340	*e*P	P	08 34 59.7	-0.3
CBKS	Cedar Bluff	77.87	335	P	P	08 35 00.8	+0.5
	baz=153						
CBKS	Cedar Bluff	77.87	335	*e*P	P	08 35 01.2	+1.0
	comp=Z,18nm,0.8s						
CBKS	Cedar Bluff	77.87	335	*e*P	P	08 35 01.2	+1.0
CBKS				pmax	pmax		
	comp=Z,18nm,0.8s						
M39A	Webster	77.95	341	P	P	08 35 00.2	-0.4
	baz=159						
LONY	Lake Ozonia	78.00	355	P	P	08 35 01.2	+0.4
	baz=174						
L41A	Preston	78.08	343	P	P	08 35 00.3	-0.9
	baz=161						
FRNY	Flat Rock	78.14	356	*e*P	P	08 35 02.4	+0.9
	comp=Z,10nm,0.9s						
DELO	Deloro Mine	78.17	353	P	P	08 35 01.6	-0.1
	baz=171						
M38A	Pleasantville	78.17	341	P	P	08 35 01.5	-0.3
	baz=158						
BASO	Ashfield	78.19	350	P	P	08 35 02.1	+0.3
	baz=168						
T25A	Trinidad	78.19	331	P	P	08 35 03.2	+1.0
	baz=149,SNR=9.7						
T25A	Trinidad	78.19	331	*e*P	P	08 35 03.4	+1.1
	comp=Z,12nm,0.8s						
BWLO	Walkerton	78.22	350	P	P	08 35 02.2	+0.3
	baz=168						
L40A	Anamosa	78.25	342	P	P	08 35 01.9	-0.3
	baz=160,SNR=11						
L40A	Anamosa	78.25	342	*e*P	P	08 35 02.0	-0.1
BRCO	Bruce Peninsul	78.38	350	P	P	08 35 03.0	+0.1
	baz=168						
M37A	Trindle Farm,	78.40	340	P	P	08 35 03.1	+0.1
	baz=158,SNR=7.6						
CLWO	Collingwood	78.42	351	P	P	08 35 03.2	+0.1
	baz=169						
X18A	Snowflake	78.45	325	*e*P	P	08 35 05.2	+1.4
K42A	Prairie Point,	78.47	344	P	P	08 35 03.0	-0.4
	baz=162,SNR=5.4						
L39A	Vinton	78.51	342	P	P	08 35 03.0	-0.6
	baz=159						
K41A	Shullsburg	78.53	343	P	P	08 35 03.4	-0.3
	baz=161						
SADO	Sadowa	78.59	352	*e*P	P	08 35 04.2	+0.2
PLVO	Plevna	78.63	353	P	P	08 35 04.7	+0.5
	baz=172						
PLVO	Plevna	78.63	353	*e*P	P	08 35 04.9	+0.7
M36A	Felix, Anita	78.66	339	P	P	08 35 04.1	-0.4
	baz=157,SNR=5.1						
BMRO	Meriville Lake	78.69	350	P	P	08 35 04.7	+0.2
	baz=168						
BANO	Bancroft	78.70	353	P	P	08 35 05.3	+0.7
	baz=171						
L38A	Oak Wood Farm,	78.78	341	P	P	08 35 04.8	-0.3
	baz=159,SNR=5.3						
JFWS	Jewell Farm	78.81	343	P	P	08 35 05.0	-0.3
	baz=161						
JFWS	Jewell Farm	78.81	343	*e*P	P	08 35 05.3	+0.1
	comp=Z,10nm,0.8s						
JFWS	Jewell Farm	78.81	343	*e*P	P	08 35 05.3	+0.1
JFWS				pmax	pmax		
	comp=Z,11nm,0.8s						
K40A	Colesburg	78.83	343	P	P	08 35 04.8	-0.5
	baz=160						
J43A	Natural Harves	78.83	345	P	P	08 35 04.6	-0.7
	baz=162						
W18A	Petrified Fore	78.83	326	P	P	08 35 06.6	+0.8
	baz=145,SNR=5.3						
W18A	Petrified Fore	78.83	326	*e*P	P	08 35 07.0	+1.2
	comp=Z,9.2nm,1.0s						
ORIO	Orleans, Innes	78.90	354	P	P	08 35 05.9	+0.3

	baz=173						
J42A	Columbus	78.93	344	P	P	08 35 05.6	-0.3
	baz=162,SNR=5.4						
K39A	Oelwein	79.02	342	P	P	08 35 05.7	-0.7
	baz=160,SNR=5.5						
ALFO	Alfred	79.02	355	P	P	08 35 06.6	+0.3
	baz=174						
KSCO	Kaye Shedlock’	79.11	333	P	P	08 35 08.6	+1.4
	baz=151						
SDCO	Great Sand Dun	79.16	330	P	P	08 35 08.3	+0.6
	baz=148,SNR=11						
SDCO	Great Sand Dun	79.16	330	*e*P	P	08 35 08.4	+0.7
	comp=Z,3.8nm,0.8s						
J41A	Loganville	79.18	344	P	P	08 35 06.9	-0.3
	baz=161						
K38A	Parkersburg	79.20	341	*e*P	P	08 35 07.0	-0.3
I43A	Langenfeld Bro	79.25	345	P	P	08 35 07.0	-0.5
	baz=163						
PEMO	Pembroke	79.28	353	P	P	08 35 08.0	+0.3
	baz=172,SNR=5.4						
BUKO	Buck Lake	79.29	352	P	P	08 35 07.8	0.0
	baz=170						
KLBO	Killbear Provi	79.31	351	P	P	08 35 06.7	-1.1
	baz=169,SNR=6.0						
J40A	Soldiers Grove	79.39	343	P	P	08 35 07.9	-0.4
	baz=160,SNR=9.0						
I42A	Draeger Farm,	79.43	345	P	P	08 35 08.2	-0.4
	baz=162						
I42A	Draeger Farm,	79.43	345	*e*P	P	08 35 08.7	+0.1
Y14A	Wickenburg	79.47	323	*e*P	P	08 35 10.1	+0.9
K37A	Belmond	79.55	341	P	P	08 35 08.8	-0.4
	baz=158						
J39A	Decorah	79.57	342	P	P	08 35 08.9	-0.4
	baz=160,SNR=8.9						
TRQ	Mont Tremblant	79.59	355	*e*P	P	08 35 09.8	+0.4
K36A	Gilmore City	79.65	340	P	P	08 35 09.5	-0.3
	baz=157						
S22A	4UR Ranch, Cre	79.72	329	P	P	08 35 11.5	+0.8
	baz=148,SNR=5.9						
S22A	4UR Ranch, Cre	79.72	329	*e*P	P	08 35 11.5	+0.8
	comp=Z,4.2nm,0.9s						
J38A	Wedel Dairy, R	79.75	342	P	P	08 35 09.7	-0.6
	baz=159,SNR=5.2						
I41A	Arkdale	79.80	344	P	P	08 35 10.3	-0.2
	baz=161						
I41A	Arkdale	79.80	344	*e*P	P	08 35 10.5	-0.1
I40A	Norwalk	79.82	343	P	P	08 35 10.5	-0.2
	baz=161						
WUAZ	Wupatki	79.94	325	P	P	08 35 12.9	+1.2
	baz=144						
WUAZ	Wupatki	79.94	325	*e*P	P	08 35 13.2	+1.5
	comp=Z,7.8nm,1.1s						
MVCO	Mesa Verde	80.00	328	P	P	08 35 12.9	+0.8
	baz=146						
MVCO	Mesa Verde	80.00	328	*e*P	P	08 35 13.1	+1.0
	comp=Z,8.5nm,1.3s						
I39A	Houston	80.01	343	P	P	08 35 11.4	-0.3
	baz=160						
I39A	Houston	80.01	343	*e*P	P	08 35 11.6	-0.1
J37A	Redenius Farm,	80.03	341	P	P	08 35 11.4	-0.4
	baz=158,SNR=5.1						
Q24A	Divide	80.06	331	P	P	08 35 13.2	+0.8
	baz=149						
Y12C	Blythe	80.10	322	P	P	08 35 13.4	+1.0
	baz=142						
Y12C	Blythe	80.10	322	*e*P	P	08 35 13.6	+1.2
J36A	Seneca 1, Swea	80.26	341	P	P	08 35 13.1	0.0
	baz=158,SNR=6.4						
J36A	Seneca 1, Swea	80.26	341	*e*P	P	08 35 12.8	-0.2
H41A	Junction City	80.28	344	P	P	08 35 12.8	-0.3
	baz=161						
I38A	Scanlan Farm,	80.39	342	P	P	08 35 13.3	-0.4
	baz=159,SNR=5.4						
BAR	Barrett	80.40	320	*e*P	P	08 35 15.5	+1.4
	comp=Z,7.7nm,0.8s						
MONP2	Monument Peak	80.43	320	P	P	08 35 15.4	+0.9
	baz=140						
H40A	Chili	80.46	344	P	P	08 35 14.1	0.0
	baz=161						
BC3	Big Chuckawall	80.51	321	P	P	08 35 15.9	+1.1
	baz=141						
TORD	Torodi Ar. Bea	80.59	67	P	P	08 35 14.9	-0.6
	comp=Z,2.2nm,0.5s,baz=282,slow=4.2						
TORD				pP	pP	08 36 02.5	-1.0
	baz=240,slow=4.3						
G42A	Mountain	80.61	345	P	P	08 35 14.9	0.0
	baz=162						
I37A	Lemond, Waseca	80.64	341	P	P	08 35 14.8	-0.3
	baz=158,SNR=12						
I37A	Lemond, Waseca	80.64	341	*e*P	P	08 35 15.0	-0.1
IRM	Iron Mountain	80.74	322	P	P	08 35 16.7	+0.9
	baz=141,SNR=5.6						
I36A	Fitzsimmons Fa	80.81	341	P	P	08 35 15.6	-0.4
	baz=158						
ISCO	Idaho Springs	80.96	331	P	P	08 35 18.0	+0.9
	baz=149,SNR=8.2						
ISCO	Idaho Springs	80.96	331	*e*P	P	08 35 18.1	+0.9
	comp=Z,4.4nm,0.8s						
ISCO	Idaho Springs	80.96	331	*e*P	P	08 35 18.1	+0.9
ISCO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SMCO	Snowmass	80.99	330	*e*P	P	08 35 18.9	+1.4
	comp=Z,6.4nm,0.8s						
FRD	Ford Ranch, An	80.99	320	P	P	08 35 18.8	+1.6
	baz=140,SNR=8.1						
PFO	Pinyon Flats O	81.00	320	P	P	08 35 18.7	+1.3
	baz=140,SNR=5.8						
PFO	Pinyon Flats O	81.00	320	*e*P	P	08 35 18.7	+1.3
	comp=Z,7.1nm,0.9s						
PFO	Pinyon Flats O	81.00	320	*e*P	P	08 35 18.7	+1.3
PFO				pmax	pmax		
	comp=Z,7.0nm,0.9s						
G40A	Rib Lake	81.02	344	P	P	08 35 17.3	+0.3
	baz=161						
F42A	Maple Grove Fa	81.04	346	P	P	08 35 17.6	+0.5
	baz=163						
E45A	Wooded Hills,	81.05	348	P	P	08 35 17.9	+0.8
	baz=165						
BELC	Belle Mtn. Jos	81.06	321	P	P	08 35 18.4	+0.7
	baz=141						
U15A	North Rim	81.11	325	*e*P	P	08 35 19.3	+1.2
BELQ	Belleterre	81.13	352	P	P	08 35 17.6	0.0
	baz=171						
F41A	Three Lakes	81.23	345	P	P	08 35 18.4	+0.3
	baz=162,SNR=6.2						
F41A	Three Lakes	81.23	345	*e*P	P	08 35 18.5	+0.3
ECSD	EROS Data Cent	81.29	339	P	P	08 35 18.3	-0.2
	baz=156,SNR=18						
ECSD	EROS Data Cent	81.29	339	*e*P	P	08 35 18.4	-0.2
	comp=Z,15nm,0.8s						
H36A	Jessenland, He	81.30	341	P	P	08 35 18.5	0.0
	baz=158,SNR=5.3						
G38A	Ridgeland	81.32	343	P	P	08 35 18.4	-0.2
	baz=160						
MURC	Murrieta	81.39	320	P	P	08 35 20.3	+1.0
	baz=140						
E43A	Lone Tree Farm	81.40	347	P	P	08 35 19.4	+0.4
	baz=164,SNR=6.2						
E43A	Lone Tree Farm	81.40	347	*e*P	P	08 35 19.6	+0.6
	comp=Z,14nm,0.8s						
GMRC	Granite Mounta	81.49	322	P	P	08 35 21.4	+1.4
	baz=141,SNR=7.0						
COWI	Conover	81.58	345	*e*P	P	08 35 20.4	+0.4
	comp=Z,7.0nm,0.8s						
F40A	Park Falls	81.62	344	P	P	08 35 20.5	+0.3
	baz=161,SNR=6.7						
E42A	Champion	81.64	346	P	P	08 35 20.5	+0.2
	baz=163,SNR=7.0						
H35A	Sunnyside Ranc	81.66	341	P	P	08 35 20.2	-0.2
	baz=157,SNR=18						
F39A	Loretta	81.80	344	P	P	08 35 21.4	+0.3
	baz=160,SNR=6.0						
E41A	Kenton	81.89	345	P	P	08 35 21.8	+0.2
	baz=162						
N23A	Red Feather La	82.02	332	P	P	08 35 23.6	+0.9
	baz=148,SNR=6.5						
N23A	Red Feather La	82.02	332	*e*P	P	08 35 23.9	+1.2
LCMT	Little Creek M	82.03	325	*e*P	P	08 35 23.8	+1.1
	comp=Z,3.7nm,1.1s						
E40A	Wakefield	82.07	345	P	P	08 35 22.9	+0.4
	baz=161,SNR=10						
F38A	Pierce - Schro	82.07	343	P	P	08 35 22.8	+0.3
	baz=160,SNR=8.3						
BFSC	Mount Baldy Ra	82.12	320	P	P	08 35 24.2	+1.0
	baz=140						
TUQ	Turquoise Moun	82.13	322	P	P	08 35 24.4	+1.2
	baz=141,SNR=5.9						
E39A	Mellen	82.15	344	P	P	08 35 23.2	+0.2
	baz=161,SNR=10						
PHWY	Pilot Hill	82.18	332	*e*P	P	08 35 24.2	+0.7
H32A	Carlson Farm,	82.23	339	P	P	08 35 23.4	0.0
	baz=155						
O20A	White River Ci	82.32	330	P	P	08 35 25.0	+0.8
	baz=147						
O20A	White River Ci	82.32	330	*e*P	P	08 35 25.2	+1.0
MWC	Mount Wilson	82.33	320	*e*P	P	08 35 25.7	+1.3
	comp=Z,13nm,1.0s						
MTPU	Mount Pierson	82.36	326	*e*P	P	08 35 25.6	+1.0
	comp=Z,3.0nm,0.8s						
D41A	Chassel	82.37	346	P	P	08 35 24.5	+0.5
	baz=162,SNR=8.4						
D41A	Chassel	82.37	346	*e*P	P	08 35 24.6	+0.5
G34A	Benson	82.39	340	P	P	08 35 23.6	-0.5
	baz=157						
F36A	Milaca	82.39	342	P	P	08 35 23.8	-0.4
	baz=158,SNR=6.1						
F36A	Milaca	82.39	342	*e*P	P	08 35 23.8	-0.4
SNCC	San Nicolas Is	82.40	318	P	P	08 35 26.1	+1.6
	baz=138						
SZCU	Shurtz Canyon	82.42	325	*e*P	P	08 35 26.9	+2.0
	comp=Z,3.5nm,1.0s						
SRU	San Rafael Swe	82.46	328	*e*P	P	08 35 25.7	+0.7
	comp=Z,4.9nm,0.8s						
SRU	San Rafael Swe	82.46	328	*e*P	P	08 35 25.7	+0.7
SRU				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GSC	Goldstone, Bar	82.49	321	P	P	08 35 26.3	+1.2
	baz=140						
GSC	Goldstone, Bar	82.49	321	*e*P	P	08 35 26.3	+1.2
	comp=Z,3.0nm,0.9s						
GSC	Goldstone, Bar	82.49	321	*e*P	P	08 35 26.3	+1.2
GSC				pmax	pmax		
	comp=Z,3.0nm,0.9s						
DECC	Green Verdugo	82.50	320	P	P	08 35 25.8	+0.8
	baz=139						
CCUT	Cedar City	82.52	325	*e*P	P	08 35 27.2	+1.8
	comp=Z,6.0nm,0.9s						
G33A	Ortonville	82.57	340	P	P	08 35 24.7	-0.4
	baz=156						
SHPR	Sheep Range	82.58	323	*e*P	P	08 35 26.7	+1.1
	comp=Z,4.3nm,0.8s						
E38A	The Farm, Brul	82.60	344	P	P	08 35 25.2	0.0
	baz=160,SNR=5.5						
E38A	The Farm, Brul	82.60	344	*e*P	P	08 35 25.3	0.0
MSU	Marysvale	82.73	326	*e*P	P	08 35 27.7	+1.3
MSU	Marysvale	82.73	326	*e*P	P	08 35 27.7	+1.3
P18A	Preston Nutter	82.76	328	*e*P	P	08 35 27.8	+1.1
EDW2	Edwards Air Fo	82.79	320	P	P	08 35 27.5	+0.9
	baz=140,SNR=6.0						
TMUT	Trail Mountain	82.92	327	*e*P	P	08 35 28.4	+0.9
	comp=Z,2.8nm,0.8s						
E36A	McGregor	82.93	342	P	P	08 35 27.0	0.0
	baz=159,SNR=12						
CHGQ	Chibougamau	83.25	356	P	P	08 35 28.3	-0.2
	baz=174						
E35A	Pequot Lakes	83.26	342	P	P	08 35 28.5	-0.1
	baz=158						
D37A	Cotton	83.33	343	P	P	08 35 29.1	+0.2
	baz=159						
MATQ	Matagami	83.36	353	P	P	08 35 28.9	-0.1
	baz=172						
MPMC	Manual Prospec	83.42	321	P	P	08 35 30.8	+0.8
	baz=140						
TPNV	Topopah Spring	83.47	323	P	P	08 35 31.5	+1.3
	baz=141,SNR=6.3						
TPNV	Topopah Spring	83.47	323	*e*P	P	08 35 31.5	+1.3
	comp=Z,10.0nm,1.1s						
TPNV	Topopah Spring	83.47	323	*e*P	P	08 35 31.5	+1.3
TPNV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
PSUT	Pine Spring	83.54	325	*e*P	P	08 35 31.8	+1.2
	comp=Z,4.1nm,1.0s						
C38A	Sawbill Land.	83.58	344	P	P	08 35 30.1	-0.2
	baz=160,SNR=6.1						
ISA	Isabella, Lake	83.64	321	P	P	08 35 32.4	+1.4
	baz=139,SNR=7.2						
ISA	Isabella, Lake	83.64	321	*e*P	P	08 35 32.5	+1.6
	comp=Z,5.3nm,0.8s						
ISA	Isabella, Lake	83.64	321	*e*P	P	08 35 32.5	+1.6
ISA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
DAC	Darwin (Calif)	83.64	321	*e*P	P	08 35 32.1	+1.0
DAC	Darwin (Calif)	83.64	321	*e*P	P	08 35 32.1	+1.0
D35A	Remer	83.66	342	P	P	08 35 31.0	+0.3
	baz=158,SNR=10						
MPU	Maple Canyon	83.70	328	*e*P	P	08 35 31.2	-0.1
K22A	Casper	83.74	332	P	P	08 35 32.7	+1.3
	baz=148						
K22A	Casper	83.74	332	*e*P	P	08 35 32.5	+1.1
PKM	Mcpherson Peak	83.78	319	P	P	08 35 32.8	+1.0
	baz=138						
C37A	Embarrass	83.80	344	P	P	08 35 31.5	+0.1
	baz=160						
EYMN	Ely	83.85	344	P	P	08 35 31.7	+0.1
	baz=160						
EYMN	Ely	83.85	344	*e*P	P	08 35 31.6	0.0
	comp=Z,13nm,1.1s						
C36A	Pine Crest Far	83.99	343	P	P	08 35 32.1	-0.2
	baz=159						
CWC	Cottonwood Cre	84.02	321	P	P	08 35 33.9	+1.0
	baz=140						
RSSD	Black Hills	84.07	335	P	P	08 35 33.4	+0.3
	baz=150						
RSSD	Black Hills	84.07	335	*e*P	P	08 35 33.7	+0.6
RSSD	Black Hills	84.07	335	*e*P	P	08 35 33.7	+0.6
JLU	Jordanelle	84.09	328	*e*P	P	08 35 34.1	+0.8
VES	Vestal, Richgr	84.10	320	P	P	08 35 33.3	+0.2
	baz=139						
SMMC	Simmler	84.20	319	P	P	08 35 35.0	+1.2
	baz=138						
C35A	Jirik Farms, M	84.21	342	P	P	08 35 33.1	-0.3
	baz=158,SNR=7.3						
R11A	Troy Canyon, C	84.23	324	P	P	08 35 35.0	+1.0
	baz=141,SNR=10						
R11A	Troy Canyon, C	84.23	324	*e*P	P	08 35 35.1	+1.1
DUG	Dugway, Tooele	84.38	327	P	P	08 35 35.4	+0.8
	baz=143						
DUG	Dugway, Tooele	84.38	327	*e*P	P	08 35 35.6	+1.0
DUG	Dugway, Tooele	84.38	327	*e*P	P	08 35 35.6	+1.0
C34A	RKJ Ranch, Bem	84.41	342	P	P	08 35 34.2	-0.2
	baz=157						
TCUT	Toone Canyon	84.49	328	*e*P	P	08 35 36.8	+1.5
C33A	Trail	84.73	341	P	P	08 35 35.8	-0.2
	baz=157						
B35A	Bob, Littlefor	84.77	343	P	P	08 35 36.0	-0.2
	baz=158,SNR=7.1						
B35A	Bob, Littlefor	84.77	343	*e*P	P	08 35 36.0	-0.2
HWUT	Hardware Ranch	84.96	328	*e*P	P	08 35 37.9	+0.3
PD31	Pinedale Array	85.06	330	*e*P	P	08 35 38.0	-0.1
PDAR	Pinedale Array	85.06	330	P	P	08 35 37.8	-0.3
	comp=Z,3.1nm,0.8s,baz=134,slow=5.3,SNR=26						
PDAR				pP	pP	08 36 27.5	+0.9
	comp=Z,0.7nm,0.7s,baz=90,slow=3.3,SNR=3.4						
PDAR	Pinedale Array	85.06	330	*e*P	P	08 35 37.2	-0.9
PDAR				pP	pP	08 36 27.5	+0.9
BW06	Boulder Array	85.06	330	P	P	08 35 37.9	-0.1
	baz=146,SNR=7.4						
BW06	Boulder Array	85.06	330	*e*P	P	08 35 38.3	+0.2
SPUT	South Promonto	85.11	328	*e*P	P	08 35 39.0	+0.8
B34A	Aery, Baudette	85.11	342	P	P	08 35 38.2	+0.3
	baz=158						
AGMN	Agassiz Nation	85.25	342	P	P	08 35 38.6	-0.1
	baz=157,SNR=7.2						
AGMN	Agassiz Nation	85.25	342	*e*P	P	08 35 38.5	-0.1
MLAC	Mammoth, Mammo	85.32	322	P	P	08 35 40.7	+1.2
	baz=139,SNR=5.1						
OMMB	Old Mammoth Mi	85.39	322	*e*P	P	08 35 41.1	+1.1
MDPB	Devils Postpil	85.44	321	*e*P	P	08 35 41.6	+1.5
NV11	Mina Array Sit	85.58	323	*e*P	P	08 35 41.4	+0.7
HVU	Hansel Valley	85.63	328	*e*P	P	08 35 41.0	+0.1
HVU	Hansel Valley	85.63	328	*e*P	P	08 35 41.0	+0.1
NV01	Mina Array Sit	85.65	322	*e*P	P	08 35 41.8	+0.7
NVAR	Mina Array Bea	85.65	322	P	P	08 35 41.8	+0.7
	comp=Z,3.2nm,0.8s,baz=148,slow=5.3,SNR=28						
AHID	Auburn Hatcher	85.70	329	*e*P	P	08 35 41.8	+0.5
A33A	Warroad	85.72	342	P	P	08 35 41.0	+0.1
	baz=157,SNR=5.0						
RYN	Ryan	85.91	322	*e*P	P	08 35 43.4	+1.1
KVN	Kaiserville	86.02	323	*e*P	P	08 35 43.7	+0.8
KVN	Kaiserville	86.02	323	*e*P	P	08 35 43.7	+0.8
REDW	Red Top Meadow	86.08	330	*e*P	P	08 35 43.4	+0.3
SNOW	Snow King Moun	86.13	330	*e*P	P	08 35 43.7	+0.3
LOHW	Long Hollow	86.19	330	*e*P	P	08 35 43.9	+0.2
TPAW	Teton Pass	86.23	330	*e*P	P	08 35 44.6	+0.7
WAKR	Walker	86.29	322	*e*P	P	08 35 46.0	+1.8
MOOW	Moose Ponds	86.36	330	*e*P	P	08 35 44.5	+0.1
FXWY	Fox Creek	86.38	330	*e*P	P	08 35 44.8	+0.2
YERR	Yerington	86.55	322	*e*P	P	08 35 46.8	+1.4
IMW	Indian Meadow	86.56	330	*e*P	P	08 35 46.0	+0.4
FLWY	Flagg Ranch	86.61	330	*e*P	P	08 35 46.5	+0.8
PNTR	Pine Nut	86.81	322	*e*P	P	08 35 48.3	+1.5
H17A	Grant Village	86.82	331	P	P	08 35 47.9	+1.2
	baz=145						
H17A	Grant Village	86.82	331	*e*P	P	08 35 47.9	+1.2
RLMT	Red Lodge	86.89	332	P	P	08 35 47.4	+0.4
	baz=146,SNR=14						
RLMT	Red Lodge	86.89	332	*e*P	P	08 35 47.5	+0.5
YFT	Old Faithful	86.97	331	*e*P	P	08 35 49.5	+2.0
ULM	Lac du Bonnet	87.05	342	P	P	08 35 47.0	-0.3
	comp=Z,4.9nm,0.6s,baz=144,slow=2.4,SNR=7.7						
ULM	Lac du Bonnet	87.05	342	*e*P	P	08 35 47.3	0.0
ULM	Lac du Bonnet	87.05	342	*e*P	P	08 35 47.3	0.0
LAO	LASA Array	87.06	335	P	P	08 35 48.0	+0.4
	baz=148,SNR=8.9						
LAO	LASA Array	87.06	335	*e*P	P	08 35 47.9	+0.4
YMR	Madison River	87.20	331	*e*P	P	08 35 49.5	+1.0
YHB	Horse Butte	87.36	331	*e*P	P	08 35 50.3	+1.0
GCMT	Greycliff	87.61	332	*e*P	P	08 35 51.0	+0.8
BEKR	Beckworth	87.78	322	*e*P	P	08 35 52.3	+1.0
HLID	Hailey	87.78	328	P	P	08 35 52.0	+0.7
	baz=142,SNR=11						
HLID	Hailey	87.78	328	*e*P	P	08 35 52.5	+1.2
DGMT	Dagmar	87.90	337	P	P	08 35 52.2	+0.7
	baz=150,SNR=6.2						
DGMT	Dagmar	87.90	337	*e*P	P	08 35 52.5	+1.1
MCMT	McKenzie Canyo	88.11	330	*e*P	P	08 35 54.2	+1.3
BOZ	Bozeman (W)	88.23	331	P	P	08 35 53.4	+0.2
	baz=144,SNR=5.5						
BOZ	Bozeman (W)	88.23	331	*e*P	P	08 35 53.4	+0.2
BOZ	Bozeman (W)	88.23	331	*e*P	P	08 35 53.4	+0.2
MFID	Camas Ranch	88.30	327	*e*P	P	08 35 54.4	+0.8
DLMT	Dillon	88.44	330	*e*P	P	08 35 55.3	+1.1
LRM	Limekiln Ridge	88.75	330	*e*P	P	08 35 56.4	+0.6
HRY	Holter Researc	89.22	331	*e*P	P	08 35 58.7	+0.9
MOD	Modoc Plateau	89.27	324	*e*P	P	08 35 59.3	+1.1
J08A	Circle Bar Ran	89.48	326	*e*P	P	08 36 00.1	+1.0
EGMT	Eagleton	89.49	333	P	P	08 35 59.0	0.0
	baz=146						
MSO	Missoula	90.17	330	P	P	08 36 02.9	+0.7
	baz=143						
K05A	Summer Lake	90.18	324	*e*P	P	08 36 04.0	+1.5
I07A	Izee	90.52	325	*e*P	P	08 36 05.1	+1.2
PINE	Pine Mountain	90.99	324	*e*P	P	08 36 07.7	+1.5
JTMT	Jette	91.05	331	*e*P	P	08 36 07.0	+0.7
I05D	Terrebonne, OR	91.59	325	P	P	08 36 09.9	+1.1
	baz=138						
WALA	Waterton Lakes	91.94	332	*e*P	P	08 36 10.8	+0.4
TOLK	Toolik Lake Re	117.92	336	P	PKPdf	08 41 46.8	+0.2
	baz=110						
ASAR	Alice Springs	119.58	203	PKP	PKPdf	08 41 49.8	-1.6
	comp=Z,0.5nm,0.5s,baz=132,slow=1.5,SNR=6.1						
FINES	FINESS Array B	120.50	34	PKP	PKPdf	08 41 50.8	-1.0
	comp=Z,1.7nm,1.0s,baz=174,slow=3.8,SNR=4.7						
SPITS	Spitsbergen Ar	121.29	14	PKP	PKPdf	08 41 52.4	-0.5
	comp=Z,6.3nm,1.0s,baz=318,slow=1.9,SNR=2.6						
WRA	Warramunga Arr	122.89	205	PKP	PKPdf	08 41 56.6	-1.2
	comp=Z,1.7nm,0.4s,baz=163,slow=1.6,SNR=45						
WRA				pPKP	pPKPdf	08 42 48.2	-1.0
	comp=Z,0.7nm,0.6s,baz=178,slow=1.8,SNR=3.1						
FITZ	Fitzroy Crossi	127.16	196	PKP	PKPdf	08 42 05.6	-0.3
	comp=Z,2.4nm,0.8s,baz=238,slow=4.2,SNR=5.5						
ARU	Arti	136.94	41	*i* PKIKP	PKPdf	08 42 22.0	-1.1
ARU						08 45 09.7	
TIXI	Tiksi	140.78	352	⇑*i*PKIKP	PKPdf	08 42 31.0	+1.3
SEY	Seymchan	141.37	332	⇓*i*PKIKP	PKPdf	08 42 32.1	+1.1
PETK	Petropavlovsk-	142.42	315	PKhKP	PKPpre	08 42 29.2	
	baz=60,slow=5.8						
BRVK	Borovoye	144.30	44	⇓*e*PKIKP	PKPdf	08 42 35.6	-0.9
BVAR	Borovoye Array	144.38	44	PKP	PKPdf	08 42 35.6	-1.0
	comp=Z,1.5nm,0.5s,baz=343,slow=3.4,SNR=12						
BVAR				pPKP	pPKPdf	08 43 27.7	-0.4
	comp=Z,0.8nm,0.6s,baz=328,slow=5.1,SNR=3.6						
NIL	Nilore	147.53	79	*e*PKPbc	PKPbc	08 42 45.2	-0.3
NIL				*e*PKPab	PKPab	08 42 48.4	+0.2
NIL	Nilore	147.53	79	*e*PKP2	PKPbc	08 42 45.2	-0.3
YAK	Yakutsk	149.37	344	*e*PKHKP	PKPpre	08 42 48.0	
YAK				pmax	pmax		
	comp=Z,15nm,0.8s						
KURBB	Kurchatov Arra	149.93	45	PKPbc	PKPbc	08 42 51.1	+0.1
	comp=Z,6.6nm,0.7s,baz=301,slow=3.0,SNR=34						
KURBB				pPKPbc	pPKPbc	08 43 41.8	-0.4
	comp=Z,4.1nm,0.7s,baz=295,slow=3.2,SNR=8.7						
KURK	Kurchatov	149.95	45	PKPbc	PKPbc	08 42 51.1	0.0
KURK				pPKPbc	pPKPbc	08 43 41.8	-0.4
KURK	Kurchatov	149.95	45	⇑*i*PKP2	PKPbc	08 42 51.2	+0.2
NVS	Novosibirsk	150.48	35	*e*PKIKP	PKPbc	08 42 50.9	-1.2
NVS				pmax	pmax		
	comp=N,4.0nm,1.0s						
NVS				pmax	pmax		
	comp=E,4.0nm,1.0s						
NVS				pmax	pmax		
	comp=Z,14nm,1.0s						
ZALV	Zalesovo Beam	151.75	35	PKPbc	PKPbc	08 42 54.8	-0.3
	comp=Z,8.9nm,0.5s,baz=299,slow=2.8,SNR=28						
ZALV				pPKPbc	pPKPbc	08 43 45.7	-0.6
	comp=Z,9.0nm,0.6s,baz=302,slow=3.1,SNR=12						
YSS	Yuzh-Sakhalins	153.38	309	*e*PKIKP	PKPbc	08 42 59.7	+0.8
MKAR	Makanchi Array	153.62	51	PKP	PKPdf	08 42 51.5	-0.1
	comp=Z,0.3nm,0.7s,baz=208,slow=2.5,SNR=3.3						
MKAR				PKPbc	PKiKP	08 42 59.2	-0.4
	comp=Z,1.3nm,0.7s,baz=275,slow=3.2,SNR=9.4						
MKAR				PKPab	PKPab	08 43 11.6	-1.5
	comp=Z,0.8nm,0.6s,baz=271,slow=3.7,SNR=5.3						
MKAR				pPKPbc	pPKPbc	08 43 49.7	-1.1
	comp=Z,1.6nm,0.7s,baz=305,slow=2.0,SNR=7.5						
BOD	Bodaibo	155.64	358	*e*PKP2	PKPab	08 43 19.1	-2.1
BOD				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MJAR	Matsushiro Arr	158.65	286	PKPab	PKPab	08 43 35.5	+0.5
	comp=Z,3.0nm,1.0s,baz=129,slow=1.9,SNR=7.9						
SONM	Songino Array	164.97	16	PKPab	PKPab	08 44 03.2	+0.8
	comp=Z,0.9nm,0.7s,baz=315,slow=6.6,SNR=4.0						
CD2	Chengdu	172.25	107	PKP	PKPdf	08 43 10.0	+0.1
LZH	Lanzhou	172.51	67	⇓PKP	PKPdf	08 43 10.0	0.0
LZH				pPKP	pPKPdf	08 44 00.3	-1.6
LZH				sPKP		08 44 20.1	
LZH				PKP	PKPab	08 44 38.0	+1.6

SJA 15 08:28:11.8±1.0, 31°.70S×68°.30W, h105^{km}±3^{km}, ML3.0, MW3.5, 11D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTCV	Cerro Valdivia	0.26	231	⇓*e*P	Pn	08 28 27.8	+1.0
RTCV				*e*S	Sn	08 28 38.5	+0.3
SJA	San Juan	0.28	307	*e*P	Pn	08 28 28.0	+1.1
SJA				*e*S	Sn	08 28 39.4	+1.2
SJA				IAML		08 28 43.5	
	comp=Z,347nm,0.2s						
ZON	Zonda	0.35	295	*e*P	Pn	08 28 27.9	+0.6
ZON				*e*S	Sn	08 28 39.8	+0.9
ZON				IAML		08 28 40.2	
	comp=Z,458nm,0.2s						
RTLL	Cerro Villicun	0.40	338	*e*P	Pn	08 28 28.3	+0.8
RTLL				*e*S	Sn	08 28 40.4	+1.1
RTLL				IAML		08 28 40.9	
	comp=N,3µm,0.5s						
RTLL				IAML		08 28 41.0	
	comp=Z,573nm,0.3s						
RTLL				IAML		08 28 41.0	
	comp=E,2µm,0.3s						
AMOG	MOGNA	0.77	348	⇓*e*P	Pn	08 28 31.5	+1.1
AMOG				*e*S	Sn	08 28 45.0	+0.6
RTLS	Leoncito	0.85	263	*e*P	Pn	08 28 32.7	+1.3
RTLS				*e*S	Sn	08 28 48.0	+1.8
RTLS				IAML		08 28 49.4	
	comp=Z,186nm,0.2s						
ASAL	Salagasta	1.00	207	⇓*e*P	Pn	08 28 33.9	+1.2
ASAL				*e*S	Sn	08 28 50.3	+1.9
AUSP	Uspallata	1.06	240	⇓*e*P	Pn	08 28 35.0	+1.4
AUSP				*e*S	Sn	08 28 51.7	+1.7
ACAN	Cantantal	1.11	122	⇓*e*P	Pn	08 28 35.0	+1.2
ACAN				*e*S	Sn	08 28 51.0	+0.6
ARCO	CERRO ARCO	1.26	205	*e*P	Pn	08 28 36.9	+1.2
ARCO				*e*S	Sn	08 28 54.8	+1.1
ARCO				IAML		08 28 56.4	
	comp=Z,130nm,0.4s						

AAGR	**Agrelo**	**1.46**	**198**	⇓eP	Pn	08 28 39.2	+1.3
AAGR				eS	Sn	08 28 58.6	+0.9
ACDV	**Cuesta del Vie**	**1.68**	**335**	eP	Pn	08 28 41.9	+1.2
ACDV				IAML		08 28 42.2	
	comp=Z,103nm,0.4s						
ACDV				⇓eS	Sn	08 29 03.8	+1.3
AROD	**Rodeo**	**1.83**	**326**	⇓eP	Pn	08 28 44.3	+1.6
AROD				eS	Sn	08 29 08.1	+1.9
AGUA	**GUANDACOL**	**2.21**	**356**	⇓eP	Pn	08 28 48.9	+1.5
MRA	**San Martin**	**2.31**	**109**	⇓eP	Pn	08 28 49.3	+0.7
MRA				eS	Sn	08 29 15.1	-1.8
MRA				IAML		08 29 18.0	
	comp=Z,121nm,0.2s						
ROC1	**El Roble**	**2.63**	**240**	⇓eS	Sn	08 29 25.2	+0.7

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*ISCJB **15** 08:49:03.3±1.2, 71°.5N±0°.1×9°.4W±0°.7, h10^{km}, Error ellipse: s-maj=36.2km s-min=6.8km az=150.2*

*BER **15** 08:49:05.9±0.4, 71°.32N×9°.33W, h0^{km}±100^{km}, ML2.7*

ISC 15 08:49:03.4±1.3, 71°.5N±0°.1×9°.5W±0°.2, h10^{km}, n5, σ1^{s}.58/10, 3C-1D, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
JNW	**Jan Mayen West**	**0.57**	**143**	⇑eP	**Pg**	**08 49 15.1**	**+0.7**
JNW				eS	**Sg**	**08 49 21.4**	**-0.4**
JNW				IAML		08 49 22.0	
	comp=Z,731nm,0.2s						
JMIC	**Jan Mayen**	**0.59**	**148**	⇑eP	**Pg**	**08 49 15.0**	**+0.2**
JMIC				eS	**Sg**	**08 49 21.8**	**-0.7**
JMIC				IAML		08 49 25.9	
	comp=Z,270nm,0.2s						
JMI	**Jan Mayen**	**0.61**	**157**	⇑eP	**Pg**	**08 49 15.3**	**+0.2**
JMI				eS	**Sg**	**08 49 22.2**	**-0.9**
JMI				IAML		08 49 23.6	
	comp=Z,272nm,0.2s						
JNE	**Jan Mayen East**	**0.62**	**142**	eP	**Pg**	**08 49 15.8**	**+0.3**
JNE				eS	**Sg**	**08 49 22.7**	**-0.9**
JNE				IAML		08 49 23.4	
	comp=Z,797nm,0.2s						
DAG	**Danmarks Havn**	**5.87**	**339**	⇓iP	**Pn**	**08 50 32.3**	**+2.0**
DAG				eS	**Sn**	**08 51 34.3**	**-3.2**

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*BJI **15** 08:57:36.4, 41°.69N×88°.63E, h7^{km}, ML3.8/10, Ms3.1/1, Ms7 3.1/1*

*ISCJB **15** 08:57:39.2±1.2, 41°.89N±0°.07×88°.16E±0°.08, h10^{km}, Error ellipse: s-maj=9.8km s-min=9.0km az=160.9*

*IDC **15** 08:57:40.1±5.7, 41°.95N×88°.35E, h0^{km}, mb1 3.7/4, mb1mx3.3/71, mbtmp3.7/4, ML3.4/3, Error ellipse: s-maj=67.1km s-min=27.0km az=11.0*

*NNC **15** 08:57:40.5±2.2, 42°.03N×88°.26E, h0^{km}, mb4.1, mpv3.7, Error ellipse: s-maj=15.9km s-min=13.5km az=107.0*

ISC 15 08:57:41.4±1.9, 41°.8N±0°.1×88°.22E±0°.08, h10^{km}, n9, σ1^{s}.95/14, 6C-6D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
WMQ	**Urumqi**	**2.02**	**349**	Pn	**Pn**	**08 58 15.1**	**-0.5**
WMQ				Sg	**Sn**	**08 58 45.4**	**+4.5**
WMQ				smax	smax		
	comp=N,3μm,0.7s						
WMQ				smax	smax		
	comp=E,4μm,0.5s						
MK31	**Makanchi Array**	**6.53**	**321**	⇑Pn	**Pn**	**08 59 16.6**	**-0.9**
	1.1nm,0.2s,baz=136,slow=14,SNR=114						
MK31				⇓Sn	**Sn**	**09 00 30.9**	**-1.1**
	5.0nm,0.5s,baz=134,slow=26,SNR=4.4						
MK31				⇑Lg	Lg	09 01 04.7	
	15nm,0.7s,baz=145,slow=30,SNR=3.9						
MKAR	**Makanchi Array**	**6.53**	**321**	Pn	**Pn**	**08 59 16.2**	**-1.3**
	2.1nm,0.3s,baz=136,slow=14,SNR=75						
MKAR				Sn	**Sn**	**09 00 30.7**	**-1.3**
	2.0nm,0.3s,baz=137,slow=27,SNR=4.3						
MKAR				Lg	Lg	09 01 08.1	
	2.2nm,0.3s,baz=134,slow=30,SNR=3.6						
PDGK	**Podgornoye**	**6.61**	**286**	⇑Pn	**Pn**	**08 59 18.8**	**0.0**
	3.1nm,0.3s						
PDGK				⇑Sn	**Sn**	**09 00 37.4**	**+3.0**
	25nm,0.7s						
PDGK				⇓Lg	Lg	09 01 10.4	
	30nm,0.6s						
MAKZ	**Makanchi**	**6.68**	**320**	⇓Pn	**Pn**	**08 59 19.2**	**-0.5**
	2.2nm,0.3s						
MAKZ				⇓Sn	**Sn**	**09 00 34.3**	**-1.6**
	5.8nm,0.5s						
MAKZ				⇑Lg	Lg	09 01 10.4	
	10nm,0.7s						
TKM2	**Tokmak 2**	**9.41**	**281**	⇓Pn	**Pn**	**08 59 56.1**	**-1.1**
	2.3nm,0.5s						
TKM2				⇓Sn	**Sn**	**09 01 44.5**	**+1.4**
	6.2nm,0.7s						
TKM2				⇑Lg	Lg	09 02 40.0	
	10nm,0.8s						
KURBB	**Kurchatov Arra**	**11.04**	**326**	Pn	Pn	09 00 15.9	-3.4
	0.3nm,0.3s,baz=131,slow=13,SNR=11						
ZALV	**Zalesovo Beam**	**12.32**	**351**	Pn	**Pn**	**09 00 36.3**	**-0.6**
	0.4nm,0.3s,baz=158,slow=16,SNR=3.5						
SONM	**Songino Array**	**14.20**	**59**	Pn	**Pn**	**09 01 02.6**	**-0.1**
	baz=254,slow=10,SNR=3.1						
SONM				Lg	Lg	09 05 04.8	
	0.0nm,0.3s,baz=254,slow=24,SNR=6.0						

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*IDC **15** 09:07:14.7±0.8, 2°.84N×128°.18E, h0^{km}, mb4.0/9, mb1 4.1/9, mb1mx3.8/62, mbtmp4.0/9, MS3.2/3, Ms1 3.1/3, ms1mx2.7/52, Error ellipse: s-maj=64.0km s-min=14.4km az=73.0*

*ISCJB **15** 09:07:18.3±0.4, 2°.91N±0°.05×128°.41E±0°.09, h33^{km}, mb4.2/23, Error ellipse: s-maj=13.2km s-min=5.9km az=165.1*

*DJA **15** 09:07:19.6±1.5, 3°N±14°×12°8E±°, h10^{km}, M4.2/6, mB4.8/1, mb4.5/2, MLv4.1/6, Mw(mB)4.0/1*

*NEIC **15** 09:07:23.3±1.2, 2°.78N×128°.26E, h64^{km}±12^{km}, mb4.3/16, Error ellipse: s-maj=21.6km s-min=6.1km az=71.0*

ISC 15 09:07:20.6±0.6, 2°.85N±0°.08×128°.4E±0°.1, h35^{km}, n42, σ1^{s}.21/40, mb4.3/22, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	**2.30**	**207**	P	**Pn**	**09 07 56.9**	**+0.8**
TNTI	**Ternate**	**2.30**	**207**	ePn	**Pn**	**09 07 56.7**	**+0.6**
LBMI	**Labuha**	**3.58**	**194**	P	Pn	09 08 19.4	+5.8
MRSI	**Marisa**	**6.87**	**250**	P	**Pn**	**09 08 59.2**	**+0.3**
FAKI	**Fak Fak**	**6.90**	**146**	ePn	**Pn**	**09 09 02.2**	**+2.9**
MTN	**Manton Dam**	**15.82**	**170**	eP	**P**	**09 11 04.2**	**-0.1**
	19nm,1.4s						
FITZ	**Fitzroy Crossi**	**20.99**	**187**	P	**P**	**09 12 00.6**	**-0.4**
	2.0nm,0.9s,baz=10,slow=11,SNR=2.6						
TWG	**Pinlang**	**21.09**	**341**	eP	**P**	**09 12 02.0**	**-0.1**
	36nm,0.7s						
YULB	**Yu-li**	**21.55**	**342**	eP	**P**	**09 12 06.9**	**-0.1**
	7.4nm,0.9s						
TPUB	**Ta-pu**	**21.68**	**340**	eP	**P**	**09 12 08.3**	**-0.2**
	45nm,1.5s						
WRAB	**Tennant Creek**	**23.38**	**166**	eP	**P**	**09 12 26.1**	**-0.2**
	8.2nm,0.6s						
WR1	**Warramunga Arr**	**23.39**	**166**	eP	**P**	**09 12 26.1**	**-0.4**
	7.7nm,0.8s						
WRA	**Warramunga Arr**	**23.39**	**166**	P	**P**	**09 12 26.1**	**-0.4**
	6.0nm,0.4s,baz=345,slow=10,SNR=63						
WB2	**Warramunga Arr**	**23.39**	**166**	eP	**P**	**09 12 26.3**	**-0.2**
	8.0nm,0.8s						
WC3	**Warramunga Arr**	**23.41**	**166**	eP	**P**	**09 12 26.3**	**-0.4**
	11nm,0.7s						
JOW	**Kunigami**	**23.85**	**360**	LR	LR	09 19 57.1	
	comp=Z,33nm,21.2s,baz=321,slow=32						
RGRI	**Rengat**	**26.24**	**263**	P	**P**	**09 12 56.0**	**+3.3**
AS31	**Alice Springs**	**26.89**	**169**	eP	**P**	**09 12 57.9**	**-0.7**
	0.9nm,0.7s						
ASAR	**Alice Springs**	**26.89**	**169**	P	**P**	**09 12 57.9**	**-0.7**
	0.4nm,0.3s,baz=351,slow=8.0,SNR=13						
ASAR				PcP	**PcP**	**09 16 19.1**	**-1.3**
	0.4nm,0.7s,baz=359,slow=2.2,SNR=4.6						
AS01	**Alice Springs**	**26.90**	**169**	eP	**P**	**09 12 58.0**	**-0.6**
BBOO	**Buckleboo**	**36.20**	**169**	eP	**P**	**09 14 19.3**	**-0.8**
	42nm,1.5s						
STKA	**Stephens Creek**	**36.74**	**161**	P	**P**	**09 14 24.4**	**-0.4**
	2.5nm,0.4s,baz=341,slow=8.1,SNR=27						
ARMA	**Armidale**	**39.83**	**148**	eP	**P**	**09 14 50.8**	**-0.1**
	17nm,1.4s						
USRK	**Ussuriysk Ar.**	**41.30**	**4**	P	**P**	**09 15 02.7**	**0.0**
	1.8nm,0.6s,baz=165,slow=6.0						
ASAJ	**Asahikawa**	**42.98**	**15**	LR	LR	09 32 07.6	
	comp=Z,16nm,22.0s,baz=198,slow=35						
SONA0	**Songino Array**	**48.67**	**340**	eP	**P**	**09 16 03.5**	**+2.1**
SONM	**Songino Array**	**48.67**	**340**	P	**P**	**09 16 03.5**	**+2.1**
	0.3nm,0.4s,baz=182,slow=7.2,SNR=2.4						
MK01	**Makanchi Array**	**59.21**	**325**	eP	**P**	**09 17 17.6**	**-0.8**
MK31	**Makanchi Array**	**59.23**	**325**	eP	**P**	**09 17 18.7**	**+0.2**
MK32	**Makanchi Array**	**59.23**	**325**	eP	**P**	**09 17 17.9**	**-0.6**
MKAR	**Makanchi Array**	**59.23**	**325**	P	**P**	**09 17 17.9**	**-0.6**
	0.8nm,0.5s,baz=117,slow=7.9,SNR=15						
MKAR	**Makanchi Array**	**59.23**	**325**	eP	**P**	**09 17 19.0**	**+0.5**
	7.3nm,0.6s						
OXZ	**Oxford**	**60.42**	**145**	eP	**P**	**09 17 26.1**	**-0.6**
	37nm,1.4s						
KURBB	**Kurchatov Arra**	**63.38**	**327**	P	**P**	**09 17 44.6**	**-1.8**
	0.6nm,0.2s,baz=126,slow=6.4,SNR=6.1						
KURK	**Kurchatov**	**63.38**	**327**	eP	**P**	**09 17 44.6**	**-1.8**
BVAR	**Borovoye Array**	**68.96**	**327**	P	**P**	**09 18 20.6**	**-1.7**
	0.2nm,0.4s,baz=131,slow=7.9,SNR=3.1						
VNDA	**Vanda**	**82.35**	**173**	P	**P**	**09 19 37.3**	**-1.1**
	0.7nm,0.7s,baz=318,slow=5.8,SNR=8.6						
VNDA	**Vanda**	**82.35**	**173**	eP	**P**	**09 19 36.5**	**-1.8**
VNDA				ePcP	**P**	**09 19 37.3**	**-1.1**
SBA	**Scott Base**	**83.24**	**172**	eP	**P**	**09 19 43.9**	**+0.9**
	1.6nm,0.8s						
COLD	**Coldfoot**	**84.06**	**23**	eP	**P**	**09 19 47.0**	**-0.3**
	1.6nm,0.7s						
KBZ	**Khabaz**	**84.79**	**313**	LR	LR	10 03 35.1	
	comp=Z,30nm,18.1s,baz=126,slow=40						
241A	**Mo Tay, Goldon**	**127.68**	**45**	ePKPdf	**PKPdf**	**09 26 21.1**	**-1.8**

MEX 15 09:08:37.8±0.9, 16°.87N×95°.05W, h129^{km}±18^{km}, MD3.6, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
HUIG	**Huatulco**	**1.50**	**223**	eP	Pn	09 09 04.0	-1.8
HUIG				i S	Sn	09 09 25.6	-1.5
VHO	**Vista Hermosa**	**1.62**	**277**	eP	Pn	09 09 07.0	-0.5
VHO				i S	Sn	09 09 28.1	-1.9
TGIG		**1.85**	**93**	eP	Pn	09 09 09.3	-0.7
TGIG				eS	Sn	09 09 32.1	-2.4
PNIG	**Pinotepa**	**2.99**	**261**	eP	Pn	09 09 22.4	-1.9
PNIG				eS	Sn	09 09 57.8	-2.3

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*IDC **15** 09:09:27.2±1.2, 32°.05N×141°.10E, h0^{km}, mb3.3/3, mb1 3.6/5, mb1mx3.4/67, mbtmp3.4/5, ML3.5/2, MS3.0/1, Ms1 3.0/1, ms1mx2.1/33, Error ellipse: s-maj=39.1km s-min=18.5km az=79.0*

*ISCJB **15** 09:09:33.1±0.7, 32°.16N±0°.06×140°.8E±0°.1, h57^{km}, mb3.3/3, MS2.9/1, Error ellipse: s-maj=13.3km s-min=6.1km az=153.7*

*JMA **15** 09:09:35.9±0.2, 32°.37N×140°.83E, h42^{km}, M3.8*

ISC 15 09:09:33.4±0.9, 32°.12N±0°.06×140°.86E±0°.09, h57^{km}, n28, σ1^{s}.97/27, mb3.5/3, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
JAOM	**Aogashimamukai**	**0.98**	**291**	P	**Pn**	**09 09 52.3**	**+1.2**
JHCJ	**Hachijojimakas**	**1.30**	**317**	P	**Pn**	**09 09 55.7**	**+0.4**
JHCJ				eS	**Sn**	**09 10 09.2**	**-2.5**
JHJ2	**Mitsune**	**1.32**	**319**	P	**Pn**	**09 09 55.5**	**0.0**
JHJ2				S	**Sn**	**09 10 09.6**	**-2.5**
JHJ	**Hachijo jima 2**	**1.34**	**318**	Pn	**Pn**	**09 09 55.7**	**-0.2**
	70nm,0.3s,baz=264,slow=22,SNR=54						
JHJ				Sn	**Sn**	**09 10 08.7**	**-4.0**
	225nm,0.3s,baz=253,slow=19,SNR=33						
JMKN	**Mikurajimanish**	**2.06**	**329**	P	**Pn**	**09 10 05.9**	**+0.3**
JMKN				S	**Sn**	**09 10 28.0**	**-2.1**
JKO	**Kozu shima**	**2.51**	**325**	P	**Pn**	**09 10 12.6**	**+0.8**
BSO1	**Boso 1**	**2.53**	**2**	P	**Pn**	**09 10 11.7**	**+0.2**
BSO3	**Boso 3**	**2.69**	**354**	P	**Pn**	**09 10 14.3**	**+0.4**
JTHY	**Toshimahigashi**	**2.73**	**332**	P	**Pn**	**09 10 15.7**	**+1.0**
JIM2	**Oshima 3**	**2.85**	**336**	P	**Pn**	**09 10 16.8**	**+0.4**
BSO4	**Boso 4**	**2.89**	**352**	P	**Pn**	**09 10 17.4**	**+0.5**
JIZS	**Izushimoda**	**3.07**	**328**	P	**Pn**	**09 10 20.9**	**+1.5**
JOD2	**Odawara 2**	**3.46**	**335**	P	**Pn**	**09 10 25.5**	**+0.7**
JRY	**Ryogami san**	**4.21**	**338**	P	**Pn**	**09 10 36.6**	**+1.6**
JHO	**Hitachi**	**4.48**	**357**	P	**Pn**	**09 10 38.9**	**+0.1**
MJAR	**Matsushiro Arr**	**4.92**	**334**	Pn	**Pn**	**09 10 45.6**	**+0.8**
	1.5nm,0.3s,baz=157,slow=12,SNR=13						
MJAR				Sn	**Sn**	**09 11 43.1**	**+2.7**
	0.6nm,0.3s,baz=266,slow=32,SNR=3.1						
JCJ	**Chichijima**	**5.14**	**167**	Pn	**Pn**	**09 10 50.6**	**+2.8**
	baz=287,slow=20						
JCJ				Sn	**Sn**	**09 11 41.4**	**-4.5**
	3.6nm,0.3s,baz=282,slow=20,SNR=2.3						
ASAJ	**Asahikawa**	**12.05**	**6**	Pn	**Pn**	**09 12 19.0**	**-3.3**
	0.4nm,0.3s,baz=200,slow=11,SNR=5.6						
H11N2	**WAKE ISLAND Hy**	**26.40**	**112**	T	T	09 43 25.6	
	baz=304,slow=74,SNR=8.7						
H11N1	**WAKE ISLAND Hy**	**26.40**	**112**	T	T	09 43 26.2	
	baz=304,slow=74,SNR=6.3						
H11N3	**WAKE ISLAND Hy**	**26.41**	**112**	T	T	09 43 22.2	
	baz=304,slow=74,SNR=7.1						
H11S3	**WAKE ISLAND Hy**	**26.92**	**114**	T	T	09 44 00.4	
	baz=304,slow=75,SNR=9.0						
H11S1	**WAKE ISLAND Hy**	**26.93**	**114**	T	T	09 43 59.9	
	baz=304,slow=75,SNR=8.6						
H11S2	**WAKE ISLAND Hy**	**26.94**	**114**	T	T	09 43 60.0	
	baz=304,slow=75,SNR=5.8						
MA2	**Magadan**	**28.25**	**11**	LR	LR	09 27 01.6	
	comp=Z,28nm,18.2s,baz=258,slow=37						
WRA	**Warramunga Arr**	**52.14**	**188**	P	**P**	**09 18 39.0**	**+0.9**
	0.2nm,0.4s,baz=7.0,slow=7.7,SNR=8.1						
ILAR	**Eielson Array**	**53.92**	**30**	P	**P**	**09 18 52.1**	**+1.5**
	0.5nm,0.8s,baz=265,slow=5.3,SNR=5.0						
ASAR	**Alice Springs**	**55.87**	**188**	P	**P**	**09 19 06.3**	**+1.1**
	0.1nm,0.5s,baz=3.5,slow=7.8,SNR=3.1						

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*CNRM **15** 09:10:59.9, 35°.15N×9°.26W, h20^{km}, ML3.8*

*MDD **15** 09:11:02.3±0.7, 35°.23N×9°.35W, h30^{km}, mbLg3.4/47, Error ellipse: s-maj=7.3km s-min=4.0km az=71.0, PRXIMO*

*SFS **15** 09:11:02.0, 35°.42N×9°.16W, h0^{km}, ML3.4*

*LDG **15** 09:11:03.9±0.3, 35°.37N×9°.21W, h10^{km}, Ml3.4/3, Error ellipse: s-maj=5.9km s-min=4.0km az=34.0*

*IGIL **15** 09:11:03.9, 35°.28N×9°.32W, h31^{km}, ML3.4*

*INMG **15** 09:11:04.2±1.5, 35°.27N×9°.31W, h31^{km}, MD2.8, ML3.1, Error ellipse: s-maj=4.3km s-min=2.8km az=57.0*

*CSEM **15** 09:11:06.2±0.3, 35°.50N×9°.01W, h30^{km}, ML3.4, Error ellipse: s-maj=6.5km s-min=3.6km az=46.0*

ISC 15 09:10:59.0±1.9, 35°.34N±0°.06×9°.19W±0°.06, h10^{km}, n178, σ2^{s}.38/315, 8C-1D, West of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
PFVI	**Vila Bisbo**	**1.81**	**9**	ePn	**Pn**	**09 11 32.7**	**+2.5**
PFVI				eSn	**Sn**	**09 11 54.4**	**+1.1**
PFVI				A	A	09 12 00.6	
	66nm,0.2s						
PFVI	**Vila Bisbo**	**1.81**	**9**	⇓P	**Pn**	**09 11 32.8**	**+2.5**
	2.9nm,0.1s,SNR=18						
PFVI				S	**Sn**	**09 11 54.2**	**+0.9**
	170nm,0.2s,SNR=12						
PFVI	**Vila Bisbo**	**1.81**	**9**	P	**Pn**	**09 11 32.8**	**+2.5**
	2.9nm,0.1s,SNR=18						
PFVI				S	**Sn**	**09 11 54.2**	**+0.9**
	170nm,0.2s,SNR=12						
MORF	**Marmelete**	**2.01**	**12**	eP	**Pn**	**09 11 35.5**	**+2.5**
MORF				eS	**Sn**	**09 11 58.6**	**+0.4**
MORF				AML	AML	09 12 02.1	
	comp=N,261nm,0.3s						
MORF	**Marmelete**	**2.01**	**12**	ePn	**Pn**	**09 11 35.5**	**+2.5**
MORF				eSn	**Sn**	**09 11 59.1**	**+0.9**
MORF				A	A	09 12 03.8	
	comp=N,109nm,0.1s						
MORF	**Marmelete**	**2.01**	**12**	P	**Pn**	**09 11 35.5**	**+2.5**
MORF				S	**Sn**	**09 11 59.1**	**+0.9**
	comp=N,109nm,0.1s						
MORF	**Marmelete**	**2.01**	**12**	P	**Pn**	**09 11 35.5**	**+2.5**
MORF				S	**Sn**	**09 11 59.1**	**+0.9**
	comp=N,109nm,0.1s						
PBDV	**Barranco-do-Ve**	**2.15**	**28**	⇑ePn	**Pn**	**09 11 37.9**	**+2.9**
PBDV				eSn	**Sb**	**09 12 03.2**	**-1.7**
PBDV				A	A	09 12 08.2	
	comp=N,34nm,0.1s						
PBDV	**Barranco-do-Ve**	**2.15**	**28**	P	**Pn**	**09 11 37.9**	**+2.9**
PBDV				S	**Sb**	**09 12 03.2**	**-1.7**
	comp=N,34nm,0.1s						
PBDV	**Barranco-do-Ve**	**2.15**	**28**	P	**Pn**	**09 11 37.9**	**+2.9**
PBDV				S	**Sb**	**09 12 03.2**	**-1.7**
	comp=N,34nm,0.1s						
PTEO	**Sao Teotonio**	**2.23**	**10**	ePn	**Pn**	**09 11 38.5**	**+2.5**
PTEO				eSn	**Sn**	**09 12 04.6**	**+1.0**
PTEO				A	A	09 12 05.5	
	comp=N,76nm,0.2s						
PTEO	**Sao Teotonio**	**2.23**	**10**	P	**Pn**	**09 11 38.5**	**+2.5**
PTEO				S	**Sn**	**09 12 04.6**	**+1.0**
	comp=N,38nm,0.2s						
PTEO	**Sao Teotonio**	**2.23**	**10**	P	**Pn**	**09 11 38.5**	**+2.5**
PTEO				S	**Sn**	**09 12 04.6**	**+1.0**
	comp=N,38nm,0.2s						
PVAQ	**Vaqueiros**	**2.38**	**30**	ePn	**Pn**	**09 11 40.8**	**+2.8**
PVAQ				eSn	**Sn**	**09 12 08.6**	**+1.3**
PVAQ				A	A	09 12 12.6	
	comp=N,35nm,0.1s						
PVAQ	**Vaqueiros**	**2.38**	**30**	P	**Pn**	**09 11 40.8**	**+2.8**
PVAQ				S	**Sn**	**09 12 08.6**	**+1.3**
	comp=N,35nm,0.1s						
PVAQ	**Vaqueiros**	**2.38**	**30**	P	**Pn**	**09 11 40.8**	**+2.8**
PVAQ				S	**Sn**	**09 12 08.6**	**+1.3**
	comp=N,35nm,0.1s						
PCVE	**Castro Verde**	**2.47**	**22**	⇑ePn	**Pn**	**09 11 42.2**	**+2.9**
PCVE				eSn	**Sn**	**09 12 10.7**	**+1.2**
PCVE				A	A	09 12 14.1	
	comp=N,55nm,0.2s						
PCVE	**Castro Verde**	**2.47**	**22**	P	**Pn**	**09 11 42.2**	**+2.9**
PCVE				S	**Sn**	**09 12 10.7**	**+1.2**
	comp=N,55nm,0.2s						
PCVE	**Castro Verde**	**2.47**	**22**	P	**Pn**	**09 11 42.2**	**+2.9**
PCVE				S	**Sn**	**09 12 10.7**	**+1.2**
	comp=N,55nm,0.2s						
EGRO	**El Granado**	**2.59**	**32**	⇑P	**Pn**	**09 11 43.9**	**+3.0**
	comp=N,17nm,0.1s,SNR=18						
EGRO				S	**Sn**	**09 12 13.5**	**+1.1**
	comp=N,73nm,0.1s,SNR=8.2						
EGRO	**El Granado**	**2.59**	**32**	P	**Pn**	**09 11 43.9**	**+3.0**
	comp=N,17nm,0.1s,SNR=18						
EGRO				S	**Sn**	**09 12 13.5**	**+1.1**
	comp=N,73nm,0.1s,SNR=8.2						
MESJ	**Messejana**	**2.61**	**17**	eP	**Pn**	**09 11 43.9**	**+2.7**
MESJ				eS	**Sn**	**09 12 13.3**	**+0.3**
MESJ				AML	AML	09 12 15.0	
	comp=N,107nm,0.3s						
MESJ	**Messejana**	**2.61**	**17**	ePn	**Pn**	**09 11 44.0**	**+2.7**
MESJ				eSn	**Sn**	**09 12 14.0**	**+0.9**
MESJ				A	A	09 12 16.9	
	comp=N,59nm,0.2s						
MESJ	**Messejana**	**2.61**	**17**	P	**Pn**	**09 11 44.0**	**+2.7**
MESJ				S	**Sn**	**09 12 14.0**	**+0.9**
	comp=N,59nm,0.2s						
MESJ	**Messejana**	**2.61**	**17**	P	**Pn**	**09 11 44.0**	**+2.7**
MESJ				S	**Sn**	**09 12 14.0**	**+0.9**
	comp=N,59nm,0.2s						
RSA	**Sarsar**	**2.80**	**99**	P	**Pn**	**09 11 46.0**	**+2.1**
RSA				S	**Sn**	**09 12 17.1**	**-0.6**
RSA	**Sarsar**	**2.80**	**99**	P	**Pn**	**09 11 46.0**	**+2.1**
RSA				S	**Sn**	**09 12 17.1**	**-0.6**
PBEJ	**Beja**	**2.88**	**21**	ePn	**Pn**	**09 11 48.5**	**+3.5**
PBEJ				eSn	**Sn**	**09 12 20.8**	**+1.1**
PBEJ				A	A	09 12 23.4	
	comp=N,42nm,0.4s						
PBEJ	**Beja**	**2.88**	**21**	P	**Pn**	**09 11 48.5**	**+3.5**
PBEJ				S	**Sn**	**09 12 20.8**	**+1.1**
	comp=N,21nm,0.4s						
PBEJ	**Beja**	**2.88**	**21**	P	**Pn**	**09 11 48.5**	**+3.5**
PBEJ				S	**Sn**	**09 12 20.8**	**+1.1**
	comp=N,21nm,0.4s						
ECEU	**Ceuta**	**3.16**	**79**	P	**Pn**	**09 11 52.1**	**+3.3**
	comp=N,1.8nm,0.1s,SNR=4.0						
ECEU				S	**Sn**	**09 12 27.2**	**+0.7**
	comp=N,2.8nm,0.1s,SNR=7.9						
ECEU	**Ceuta**	**3.16**	**79**	P	**Pn**	**09 11 52.1**	**+3.3**
	comp=N,1.8nm,0.1s,SNR=4.0						
ECEU				S	**Sn**	**09 12 27.2**	**+0.7**
	comp=N,2.8nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**3.16**	**39**	⇑P	**Pn**	**09 11 51.3**	**+2.5**
	comp=N,2.0nm,0.1s,SNR=18						
EMIN				S	**Sn**	**09 12 26.2**	**-0.3**
	comp=N,7.2nm,0.1s						
CEU	**Ceuta**	**3.16**	**79**	P	**Pn**	**09 11 52.6**	**+3.8**
CEU				S	**Sn**	**09 12 29.2**	**+2.7**
CEU	**Ceuta**	**3.16**	**79**	P	**Pn**	**09 11 52.6**	**+3.8**
CEU				S	**Sn**	**09 12 29.2**	**+2.7**
CHEFC	**Chefchaouen**	**3.16**	**93**	S	**Sn**	**09 12 27.3**	**+0.5**
CEUT	**Ceuta**	**3.20**	**79**	P	**Pn**	**09 11 50.0**	**+0.8**
CEUT				S	**Sn**	**09 12 27.7**	**+0.2**
CEUT	**Ceuta**	**3.20**	**79**	P	**Pn**	**09 11 50.1**	**+0.8**
CEUT				S	**Sn**	**09 12 27.7**	**+0.2**
PBAR	**Barrancos**	**3.31**	**31**	ePn	**Pn**	**09 11 53.7**	**+2.8**
PBAR				eSn	**Sn**	**09 12 31.3**	**+0.9**
PBAR				A	A	09 12 35.2	
	comp=N,34nm,0.2s						
PBAR	**Barrancos**	**3.31**	**31**	P	**Pn**	**09 11 53.7**	**+2.8**
PBAR				S	**Sn**	**09 12 31.3**	**+0.9**
	comp=N,34nm,0.2s						
PBAR	**Barrancos**	**3.31**	**31**	ePn	**Pn**	**09 11 53.7**	**+2.8**
PBAR				S	**Sn**	**09 12 31.3**	**+0.9**
	comp=N,34nm,0.2s						
EVO	**Evora**	**3.32**	**16**	ePn	**Pn**	**09 11 53.5**	**+2.5**
EVO				eSn	**Sn**	**09 12 30.8**	**+0.3**
EVO				A	A	09 12 33.6	
	comp=N,57nm,0.2s						
EVO	**Evora**	**3.32**	**16**	P	**Pn**	**09 11 52.9**	**+1.9**
EVO				S	**Sn**	**09 12 30.5**	**0.0**
EVO	**Evora**	**3.32**	**16**	P	**Pn**	**09 11 52.9**	**+1.9**
EVO	**Evora**	**3.32**	**16**	ePn	**Pn**	**09 11 53.5**	**+2.5**
EVO				S	**Sn**	**09 12 30.5**	**0.0**
LIS	**Lisbon**	**3.37**	**1**	eS	**Sn**	**09 12 30.7**	**-0.9**
LIS				AML	AML	09 12 31.9	
	comp=N,168nm,0.3s						
LIS	**Lisbon**	**3.37**	**1**	S	**Sn**	**09 12 30.7**	**-0.9**
	comp=N,168nm,0.3s						
SICH	**Sidi Chahed**	**3.42**	**110**	P	**Pn**	**09 11 52.6**	**+0.2**
SICH				S	**Sn**	**09 12 31.6**	**-1.4**
PMAFR	**Mafra**	**3.61**	**359**	ePn	**Pn**	**09 11 56.9**	**+1.9**
PMAFR				eSn	**Sn**	**09 12 36.7**	**-0.9**
PMAFR				A	A	09 12 40.6	
	comp=N,171nm,0.2s						
PMAFR	**Mafra**	**3.61**	**359**	⇑P	**Pn**	**09 11 56.8**	**+1.9**
	comp=N,24nm,0.1s,SNR=18						
PMAFR				S	**Sn**	**09 12 36.7**	**-0.9**
	comp=N,155nm,0.1s,SNR=19						
PMAFR	**Mafra**	**3.61**	**359**	ePn	**Pn**	**09 11 56.9**	**+1.9**
PMAFR				S	**Sn**	**09 12 36.7**	**-0.9**
	comp=N,155nm,0.1s,SNR=19						
PESTR	**Estremoz**	**3.75**	**20**	ePn	**Pn**	**09 11 59.0**	**+2.1**
PESTR				eSn	**Sn**	**09 12 40.9**	**-0.1**
PESTR				A	A	09 12 42.9	
	comp=N,14nm,0.2s						
PESTR	**Estremoz**	**3.75**	**20**	ePn	**Pn**	**09 11 59.0**	**+2.1**
PESTR				eSn	**Sn**	**09 12 40.9**	**-0.1**
EMIJ	**Mijas**	**3.79**	**70**	P	**Pn**	**09 11 57.2**	**-0.3**
	comp=N,0.8nm,0.1s,SNR=12						
EMIJ				S	**Sn**	**09 12 39.8**	**-2.3**
	comp=N,7.1nm,0.1s,SNR=6.1						
EMIJ	**Mijas**	**3.79**	**70**	P	**Pn**	**09 11 57.2**	**-0.3**
	comp=N,0.8nm,0.1s,SNR=12						
EMIJ				S	**Sn**	**09 12 39.8**	**-2.3**
	comp=N,7.1nm,0.1s,SNR=6.1						
PMTG	**Montargil**	**3.80**	**11**	ePn	**Pn**	**09 11 59.9**	**+2.3**
PMTG				eSn	**Sn**	**09 12 41.7**	**-0.6**
PMTG				A	A	09 12 42.9	
	comp=N,47nm,0.4s						
PMTG	**Montargil**	**3.80**	**11**	ePn	**Pn**	**09 11 59.9**	**+2.3**
PMTG				eSn	**Sn**	**09 12 41.7**	**-0.6**
EBAD	**Badajoz**	**3.83**	**26**	P	**Pn**	**09 12 00.4**	**+2.4**
	comp=N,1.4nm,0.1s,SNR=89						
EBAD				S	**Sn**	**09 12 43.6**	**+0.6**
	comp=N,54nm,0.2s,SNR=7.6						
EBAD	**Badajoz**	**3.83**	**26**	P	**Pn**	**09 12 00.4**	**+2.4**
	comp=N,1.4nm,0.1s,SNR=89						
EBAD				S	**Sn**	**09 12 43.6**	**+0.6**
	comp=N,54nm,0.2s,SNR=7.6						
ALMR	**Almeirim**	**3.84**	**7**	eS	**Sn**	**09 12 41.9**	**-1.4**
ALMR				AML	AML	09 12 45.9	
	comp=E,73nm,0.4s						
ALMR	**Almeirim**	**3.84**	**7**	⇑iPn	**Pn**	**09 12 01.1**	**+3.0**
ALMR				eSn	**Sn**	**09 12 42.9**	**-0.4**
ALMR				A	A	09 12 44.7	
	comp=E,23nm,0.2s						
ALMR	**Almeirim**	**3.84**	**7**	P	**Pn**	**09 12 01.1**	**+3.0**
ALMR				S	**Sn**	**09 12 42.9**	**-0.4**
	comp=E,11nm,0.2s						
ALMR	**Almeirim**	**3.84**	**7**	⇑iPn	**Pn**	**09 12 01.1**	**+3.0**

ALMR				S	Sn	09 12 42.9	-0.4
	comp=E,11nm,0.2s						
HORN	Hornachuelos	4.03	51	P	Pn	09 12 01.9	+1.1
HORN				S	Sn	09 12 50.2	+2.1
ECAB	El Cabril	4.08	47	P	Pn	09 12 03.9	+2.4
	comp=E,2.1nm,0.1s,SNR=94						
ECAB				S	Sn	09 12 49.4	+0.1
	comp=E,7.9nm,0.2s						
ECAB	El Cabril	4.08	47	P	Pn	09 12 03.9	+2.4
	comp=E,2.1nm,0.1s,SNR=94						
ECAB				S	Sn	09 12 49.4	+0.1
	comp=E,7.9nm,0.2s						
EMAL	Malaga-Limoner	4.11	68	*i* P	Pn	09 12 05.7	+3.8
EMAL				*e*S	Sn	09 12 50.5	+0.5
CZD	Col de Zad	4.14	123	P	Pn	09 12 03.5	+1.0
CZD				S	Sn	09 12 46.9	-4.3
CZD	Col de Zad	4.14	123	P	Pn	09 12 03.5	+1.0
OUK	Oukaimeden	4.27	165	P	Pn	09 12 04.2	-0.1
OUK				S	Sn	09 12 47.5	-6.8
MPAL	Palemas	4.30	90	P	Pn	09 12 06.5	+2.0
MPAL				S	Sn	09 12 53.1	-1.5
MPAL	Palemas	4.30	90	P	Pn	09 12 06.5	+2.0
MPAL				S	Sn	09 12 53.2	-1.5
PTOM	Tomar	4.31	8	*e*Pn	Pn	09 12 07.2	+2.6
PTOM				*e*Sn	Sn	09 12 53.9	-1.1
PTOM				A	A	09 12 57.4	
	comp=E,40nm,0.2s						
PTOM	Tomar	4.31	8	P	Pn	09 12 07.2	+2.6
PTOM				S	Sn	09 12 53.9	-1.1
	comp=E,20nm,0.2s						
PTOM	Tomar	4.31	8	P	Pn	09 12 07.2	+2.6
PTOM				S	Sn	09 12 53.9	-1.1
	comp=E,20nm,0.2s						
PMRV	Marv??o	4.32	19⇑	*e*Pn	Pn	09 12 07.2	+2.4
PMRV				*e*Sn	Sn	09 12 54.6	-0.7
PMRV				A	A	09 12 56.0	
	comp=E,24nm,0.2s						
PMRV	Marv??o	4.32	19	P	Pn	09 12 07.2	+2.4
PMRV				S	Sn	09 12 54.6	-0.7
	comp=E,24nm,0.2s						
PMRV	Marv??o	4.32	19	P	Pn	09 12 07.2	+2.4
PMRV				S	Sn	09 12 54.6	-0.7
	comp=E,24nm,0.2s						
EGOR	Sierra Gorda,	4.47	65	P	Pn	09 12 09.6	+2.6
	comp=E,4.1nm,0.5s,SNR=7.9						
EGOR				S	Sn	09 12 59.8	+0.7
	comp=E,27nm,0.3s,SNR=7.9						
EGOR	Sierra Gorda,	4.47	65	P	Pn	09 12 09.6	+2.6
	comp=E,4.1nm,0.5s,SNR=7.9						
EGOR				S	Sn	09 12 59.8	+0.7
	comp=E,27nm,0.3s,SNR=7.9						
EADA	Adamuz	4.66	51	P	Pn	09 12 12.1	+2.7
	comp=E,15nm,0.1s,SNR=46						
EADA				S	Sn	09 13 02.4	-1.2
	comp=E,48nm,0.1s,SNR=8.0						
EADA	Adamuz	4.66	51	P	Pn	09 12 12.1	+2.7
	comp=E,15nm,0.1s,SNR=46						
EADA				S	Sn	09 13 02.4	-1.2
	comp=E,48nm,0.1s,SNR=8.0						
PCBR	Castelo Branco	4.69	16	*e*Pn	Pn	09 12 12.7	+2.9
PCBR				*e*Sn	Sn	09 13 03.7	-0.6
PCBR				A	A	09 13 07.8	
	comp=E,17nm,0.3s						
PCBR	Castelo Branco	4.69	16	P	Pn	09 12 12.7	+2.9
PCBR				S	Sn	09 13 03.7	-0.6
	comp=E,8.5nm,0.3s						
PCBR	Castelo Branco	4.69	16	P	Pn	09 12 12.7	+2.9
PCBR				S	Sn	09 13 03.7	-0.6
	comp=E,8.5nm,0.3s						
PCAS	Casmilo, Conde	4.74	6	*e*Pn	Pn	09 12 13.2	+2.8
PCAS				*e*Sn	Sn	09 13 04.3	-1.1
PCAS				A	A	09 13 07.6	
	comp=E,19nm,0.4s						
PCAS	Casmilo, Conde	4.74	6	*e*Pn	Pn	09 12 13.2	+2.8
PCAS				*e*Sn	Sn	09 13 04.3	-1.1
ELGU	Los Guajares,	4.76	70	P	Pn	09 12 14.9	+4.1
	comp=E,1.4nm,0.2s,SNR=7.9						
ELGU				S	Sn	09 13 06.5	+0.4
	comp=E,11nm,0.1s,SNR=7.9						
ELGU	Los Guajares,	4.76	70	P	Pn	09 12 14.9	+4.1
	comp=E,1.4nm,0.2s,SNR=7.9						
ELGU				S	Sn	09 13 06.5	+0.4
	comp=E,11nm,0.1s,SNR=7.9						
COI	Coimbra	4.90	7	*e*Sn	Sn	09 13 08.2	-1.2
COI	Coimbra	4.90	7	S	Sn	09 13 08.2	-1.2
COI	Coimbra	4.90	7	S	Sn	09 13 08.2	-1.2
EQUE	Quentar	5.01	67	P	Pn	09 12 17.9	+3.6
	comp=E,2.9nm,0.1s,SNR=20						
EQUE				S	Sn	09 13 11.2	-1.0
	comp=E,4.3nm,0.1s,SNR=7.5						
EQUE	Quentar	5.01	67	P	Pn	09 12 17.9	+3.6
	comp=E,2.9nm,0.1s,SNR=20						
EQUE				S	Sn	09 13 11.2	-1.0
	comp=E,4.3nm,0.1s,SNR=7.5						
EALB	Alboran	5.05	81	S	Sn	09 13 11.0	-2.2
	comp=E,11nm,0.2s,SNR=7.9						
EALB	Alboran	5.05	81	S	Sn	09 13 11.0	-2.2
	comp=E,11nm,0.2s,SNR=7.9						
EMEL	Melilla	5.10	89	S	Sn	09 13 11.6	-2.8
	comp=E,31nm,0.1s,SNR=7.9						
EMLI	Melilla	5.11	89	S	Sn	09 13 11.6	-2.9
	comp=E,31nm,0.1s,SNR=7.9						
MTE	Manteigas	5.21	14	*e*Pn	Pn	09 12 19.6	+2.5
MTE				*e*Sn	Sn	09 13 16.0	-1.3
MTE				A	A	09 13 18.1	
	comp=E,24nm,0.3s						
MTE	Manteigas	5.21	14	P	Pn	09 12 19.6	+2.5
MTE				S	Sn	09 13 16.0	-1.3
	comp=E,12nm,0.3s						
MTE	Manteigas	5.21	14	P	Pn	09 12 19.6	+2.5
MTE				S	Sn	09 13 16.0	-1.3
	comp=E,12nm,0.3s						
EBER	Berja	5.33	71	P	Pn	09 12 20.7	+1.8
	comp=E,2.8nm,0.4s,SNR=7.9						
EBER				S	Sn	09 13 19.8	-0.7
	comp=E,14nm,0.3s,SNR=7.9						
EBER	Berja	5.33	71	P	Pn	09 12 20.7	+1.8
	comp=E,2.8nm,0.4s,SNR=7.9						
EBER				S	Sn	09 13 19.8	-0.7
	comp=E,14nm,0.3s,SNR=7.9						
GORA	Gorafe	5.40	65	S	Sn	09 13 21.7	-0.2
	comp=E,19nm,0.2s,SNR=7.9						
GORA	Gorafe	5.40	65	S	Sn	09 13 21.7	-0.2
	comp=E,19nm,0.2s,SNR=7.9						
PVIS	Viseu	5.46	10	*e*Pn	Pn	09 12 22.9	+2.4
PVIS				*e*Sn	Sn	09 13 21.7	-1.7
PVIS				A	A	09 13 26.1	
	comp=E,19nm,0.1s						
PVIS	Viseu	5.46	10	P	Pn	09 12 22.9	+2.4
PVIS				S	Sn	09 13 21.7	-1.7
	comp=E,9.7nm,0.1s						
PVIS	Viseu	5.46	10	P	Pn	09 12 22.9	+2.4
PVIS				S	Sn	09 13 21.7	-1.7
	comp=E,9.7nm,0.1s						
EQES	Quesada	5.50	62	P	Pn	09 12 23.5	+2.4
	comp=E,0.3nm,0.2s,SNR=15						
EQES				S	Sn	09 13 23.5	-1.0
	comp=E,8.6nm,0.1s,SNR=7.9						
EQES	Quesada	5.50	62	P	Pn	09 12 23.5	+2.4
	comp=E,0.3nm,0.2s,SNR=15						
EQES				S	Sn	09 13 23.5	-1.0
	comp=E,8.6nm,0.1s,SNR=7.9						
PAB	San Pablo	5.70	41	P	Pn	09 12 26.3	+2.6
	comp=E,0.9nm,0.1s,SNR=7.9						
PAB				S	Sn	09 13 26.0	-3.2
	comp=E,1.9nm,0.1s,SNR=7.9						
PAB	San Pablo	5.70	41	P	Pn	09 12 26.3	+2.6
	comp=E,0.9nm,0.1s,SNR=7.9						
PAB				S	Sn	09 13 26.0	-3.2
	comp=E,1.9nm,0.1s,SNR=7.9						
PTO	Porto	5.81	4	*e*Sn	Sn	09 13 29.0	-2.7
PTO	Porto	5.81	4	S	Sn	09 13 29.0	-2.7
PTO	Porto	5.81	4	S	Sn	09 13 29.0	-2.7
ENIJ	Nijar	5.88	72	P	Pn	09 12 28.9	+2.7
	comp=E,1.3nm,0.3s,SNR=7.9						
ENIJ				S	Sn	09 13 32.7	-1.0
	comp=E,5.4nm,0.3s,SNR=7.9						
ENIJ	Nijar	5.88	72	P	Pn	09 12 28.9	+2.7
	comp=E,1.3nm,0.3s,SNR=7.9						
ENIJ				S	Sn	09 13 32.7	-1.0
	comp=E,5.4nm,0.3s,SNR=7.9						
ESDC	Sonseca Array	6.00	42	P	Pn	09 12 30.1	+2.3
	comp=E,1.5nm,0.2s,baz=230,slow=13,SNR=11						
ESDC				S	Sn	09 13 34.9	-1.7
	comp=E,2.6nm,0.2s,baz=227,slow=24,SNR=7.5						
ESDC	Sonseca Array	6.00	42	P	Pn	09 12 30.1	+2.3
	comp=E,1.5nm,0.2s,SNR=11						
ESDC				S	Sn	09 13 34.9	-1.7
	comp=E,2.6nm,0.2s,SNR=7.5						
SESP	Santiago Espad	6.02	61	P	Pn	09 12 30.2	+2.0
	comp=E,1.8nm,0.2s,SNR=7.9						
SESP				S	Sn	09 13 35.1	-2.1
	comp=E,13nm,0.1s,SNR=7.9						
SESP	Santiago Espad	6.02	61	P	Pn	09 12 30.2	+2.0
	comp=E,1.8nm,0.2s,SNR=7.9						
SESP				S	Sn	09 13 35.1	-2.1
	comp=E,13nm,0.1s,SNR=7.9						
PVRL	Vila Real	6.04	11	*e*Sn	Sn	09 13 34.7	-2.8
PVRL				A	A	09 13 38.6	
	comp=E,21nm,0.2s						
PVRL	Vila Real	6.04	11	S	Sn	09 13 34.7	-2.8
	comp=E,10nm,0.2s						
PVRL	Vila Real	6.04	11	S	Sn	09 13 34.7	-2.8
	comp=E,10nm,0.2s						
MVO	Moncorvo	6.06	16	*e*Pn	Pn	09 12 30.6	+1.9
MVO				*e*Sn	Sn	09 13 35.9	-2.2
MVO				A	A	09 13 39.3	
	comp=E,6.7nm,0.4s						
MVO	Moncorvo	6.06	16	P	Pn	09 12 30.7	+2.1
	comp=E,1.9nm,0.2s,SNR=13						
MVO				S	Sn	09 13 36.7	-1.4
	comp=E,11nm,0.2s,SNR=7.9						
MVO	Moncorvo	6.06	16	P	Pn	09 12 30.7	+2.1
	comp=E,1.9nm,0.2s,SNR=13						
MVO				*e*Sn	Sn	09 13 35.9	-2.2
MVO				S	Sn	09 13 36.7	-1.4
	comp=E,11nm,0.2s,SNR=7.9						
POLO	Lamas de Olo	6.12	10	*e*Pn	Pn	09 12 32.0	+2.4
POLO				*e*Sn	Sn	09 13 36.9	-2.8
POLO				A	A	09 13 41.0	
	comp=E,6.5nm,0.2s						
POLO	Lamas de Olo	6.12	10	*e*Pn	Pn	09 12 32.0	+2.4
POLO				*e*Sn	Sn	09 13 36.9	-2.8
PCAB	Cabril	6.42	8	*e*Pn	Pn	09 12 36.3	+2.6
PCAB				*e*Sn	Sn	09 13 43.8	-3.3
PCAB				A	A	09 13 49.6	
	comp=E,12nm,0.5s						
PCAB	Cabril	6.42	8	P	Pn	09 12 36.3	+2.6
PCAB				S	Sn	09 13 43.8	-3.3
	comp=E,5.8nm,0.5s						
PCAB	Cabril	6.42	8	P	Pn	09 12 36.3	+2.6
PCAB				S	Sn	09 13 43.8	-3.3
	comp=E,5.8nm,0.5s						
ELOB	Lobios	6.58	7	P	Pn	09 12 38.3	+2.5
	comp=E,3.9nm,0.2s,SNR=32						
ELOB				S	Sn	09 13 47.4	-3.4
	comp=E,12nm,0.2s,SNR=5.0						
ELOB	Lobios	6.58	7	P	Pn	09 12 38.3	+2.5
	comp=E,3.9nm,0.2s,SNR=32						
PGAV	Gavieira, Arco	6.65	6	*e*Pn	Pn	09 12 39.1	+2.2
PGAV				*e*Sn	Sn	09 13 49.5	-3.3
PGAV				A	A	09 13 54.0	
	comp=E,11nm,0.4s						
PGAV	Gavieira, Arco	6.65	6	*e*Pn	Pn	09 12 39.1	+2.2
PGAV				*e*Sn	Sn	09 13 49.5	-3.3
PBRG	Braganca	6.73	16	*e*Pn	Pn	09 12 40.7	+2.8
PBRG				*e*Sn	Sn	09 13 52.0	-2.7
PBRG				A	A	09 13 54.6	
	comp=E,7.7nm,0.2s						
PBRG	Braganca	6.73	16	P	Pn	09 12 40.7	+2.8
PBRG				S	Sn	09 13 52.0	-2.7
	comp=E,3.8nm,0.2s						
PBRG	Braganca	6.73	16	P	Pn	09 12 40.7	+2.8
PBRG				S	Sn	09 13 52.0	-2.7
	comp=E,3.8nm,0.2s						
EMUR	La Murta	6.87	66	S	Sn	09 13 55.2	-2.8
	comp=E,5.3nm,0.3s,SNR=7.9						
EMUR	La Murta	6.87	66	S	Sn	09 13 55.2	-2.8
	comp=E,5.3nm,0.3s,SNR=7.9						
PMAR	Madeira	6.92	250	P	Pn	09 12 35.7	-4.9
ETOB	Tobarra	6.95	59	P	Pn	09 12 42.2	+1.3
	comp=E,1.4nm,0.1s,SNR=37						
ETOB				S	Sn	09 13 56.7	-3.4
	comp=E,12nm,0.2s,SNR=6.2						
ETOB	Tobarra	6.95	59	P	Pn	09 12 42.2	+1.3
	comp=E,1.4nm,0.1s,SNR=37						
ETOB				S	Sn	09 13 56.7	-3.4
	comp=E,12nm,0.2s,SNR=6.2						
EAGO	Agolada(Pontev	7.50	6	P	Pn	09 12 49.6	+1.2
	comp=E,0.4nm,0.2s,SNR=7.9						
EAGO				S	Sn	09 14 09.5	-4.0
	comp=E,4.8nm,0.1s,SNR=7.9						
EAGO	Agolada(Pontev	7.50	6	P	Pn	09 12 49.6	+1.2
	comp=E,0.4nm,0.2s,SNR=7.9						
EMAZ	Mazaricos	7.60	1	P	Pn	09 12 50.9	+1.1
	comp=E,2.2nm,0.1s,SNR=7.9						
EMAZ				S	Sn	09 14 09.8	-6.1
	comp=E,14nm,0.2s,SNR=7.9						
EMAZ	Mazaricos	7.60	1	P	Pn	09 12 50.9	+1.1
	comp=E,2.2nm,0.1s,SNR=7.9						
AFON	Font Roja	7.67	62	S	Sn	09 14 15.2	-2.8
	comp=E,8.0nm,0.4s,SNR=7.9						
AFON	Font Roja	7.67	62	S	Sn	09 14 15.2	-2.8
	comp=E,8.0nm,0.4s,SNR=7.9						
ECHE	Chera	7.79	55	P	Pn	09 12 55.6	+3.1
	comp=E,0.2nm,0.1s,SNR=4.0						
ECHE				S	Sn	09 14 17.0	-3.8
	comp=E,1.5nm,0.3s,SNR=4.0						
ECHE	Chera	7.79	55	P	Pn	09 12 55.6	+3.1
	comp=E,0.2nm,0.1s,SNR=4.0						
ECHE				S	Sn	09 14 17.0	-3.8
	comp=E,1.5nm,0.3s,SNR=4.0						
ETOR	Torete	7.85	44	P	Pn	09 12 56.2	+3.0
	comp=E,3.0nm,0.2s,SNR=17						
ETOR				S	Sn	09 14 19.9	-2.3
	comp=E,3.6nm,0.2s,SNR=7.9						
ETOR	Torete	7.85	44	P	Pn	09 12 56.2	+3.0
	comp=E,3.0nm,0.2s,SNR=17						
ETOR				S	Sn	09 14 19.9	-2.3
	comp=E,3.6nm,0.2s,SNR=7.9						
EPON	Pontenova	8.13	11	P	Pn	09 13 00.3	+3.2
	comp=E,0.3nm,0.1s,SNR=4.0						
EPON				S	Sn	09 14 25.8	-3.2
	comp=E,4.3nm,0.5s,SNR=7.9						
EPON	Pontenova	8.13	11	P	Pn	09 13 00.3	+3.2
	comp=E,0.3nm,0.1s,SNR=4.0						
EPON				S	Sn	09 14 25.8	-3.2
	comp=E,4.3nm,0.5s,SNR=7.9						
EARI	Arriondas	8.53	20	S	Sn	09 14 36.2	-2.6
	comp=E,0.1nm,0.1s,SNR=7.9						
EARI	Arriondas	8.53	20	S	Sn	09 14 36.2	-2.6
	comp=E,0.1nm,0.1s,SNR=7.9						
EMOS	Mosqueruela	8.53	51	P	Pn	09 13 05.7	+3.1
	comp=E,0.1nm,0.1s,SNR=7.9						
EMOS				S	Sn	09 14 34.9	-4.1
	comp=E,0.3nm,0.1s,SNR=7.9						
EMOS	Mosqueruela	8.53	51	P	Pn	09 13 05.7	+3.1
	comp=E,0.1nm,0.1s,SNR=7.9						
EMOS				S	Sn	09 14 34.9	-4.1
	comp=E,0.3nm,0.1s,SNR=7.9						
IELO	Elcoad	9.71	37	P	Pn	09 13 22.4	+3.6
	comp=E,0.8nm,0.2s,SNR=7.9						
IELO				S	Sn	09 15 04.7	-3.2
	comp=E,0.9nm,0.2s,SNR=7.9						
IELO	Elcoad	9.71	37	P	Pn	09 13 22.4	+3.6
	comp=E,0.8nm,0.2s,SNR=7.9						
IELO				S	Sn	09 15 04.7	-3.2
	comp=E,0.9nm,0.2s,SNR=7.9						
EORO	Oroz-Betelu	9.71	37	P	Pn	09 13 22.2	+3.4
	comp=E,0.2nm,0.1s,SNR=7.9						
EORO	Oroz-Betelu	9.71	37	P	Pn	09 13 22.2	+3.4
	comp=E,0.2nm,0.1s,SNR=7.9						
EALK	Alkurruntz	9.86	35	P	Pn	09 13 23.8	+2.9
	comp=E,1.4nm,0.3s,SNR=7.9						
EALK				S	Sn	09 15 08.3	-3.4
	comp=E,1.3nm,0.3s,SNR=7.9						
EALK	Alkurruntz	9.86	35	P	Pn	09 13 23.8	+2.9
	comp=E,1.4nm,0.3s,SNR=7.9						
EALK				S	Sn	09 15 08.3	-3.4
	comp=E,1.3nm,0.3s,SNR=7.9						
SJPF	Ste Jean	9.92	36	*e*Pn	Pn	09 13 24.9	+3.3
SJPF				*e*Sn	Sn	09 15 08.8	-4.1
	comp=E,1.9nm,0.3s						
SJPF	Ste Jean	9.92	36	*e*Pn	Pn	09 13 24.9	+3.3
SJPF				*e*Sn	Sn	09 15 08.8	-4.1
	comp=E,0.9nm,0.3s						
ETSF	Etsaut	10.09	39	*e*Pn	Pn	09 13 27.1	+3.1
ETSF				*e*Sn	Sn	09 15 13.2	-4.1
	comp=E,0.7nm,0.3s						
ETSF	Etsaut	10.09	39	*e*Pn	Pn	09 13 27.1	+3.1
ETSF				*e*Sn	Sn	09 15 13.2	-4.1
	comp=E,0.3nm,0.3s						
ECHI	Chisagues Biel	10.33	42	P	Pn	09 13 30.6	+3.3
	comp=E,0.5nm,0.2s,SNR=7.9						
ECHI	Chisagues Biel	10.33	42	P	Pn	09 13 30.6	+3.3
	comp=E,0.5nm,0.2s,SNR=7.9						
EPF	Esparros	10.66	41	*e*Pn	Pn	09 13 34.8	+3.1
EPF				*e*Sn	Sn	09 15 26.7	-4.4
	comp=E,1.9nm,0.4s						
EPF	Esparros	10.66	41	*e*Pn	Pn	09 13 34.8	+3.1
EPF				*e*Sn	Sn	09 15 26.7	-4.4
	comp=E,0.9nm,0.4s						
MTLF	Montolieu	11.90	44	*e*Pn	Pn	09 13 50.7	+2.0
MTLF	Montolieu	11.90	44	*e*Pn	Pn	09 13 50.7	+2.0
CAF	Calviac	12.86	39	*e*Pn	Pn	09 14 03.8	+1.9
CAF	Calviac	12.86	39	*e*Pn	Pn	09 14 03.8	+1.9

ISCJB ***15*** *09:15:30.7±0.5, 37°.06N±0°.03×28°.56E±0°.04, h0^{km}, Error ellipse: s-maj=5.2km s-min=3.7km az=139.3*

DDA ***15*** *09:15:30.1, 37°.05N×28°.55E, h7^{km}, Ml2.5, Suspected Mining explosion.*

ISK ***15*** *09:15:31.0, 37°.00N×28°.50E, h10^{km}, ML2.1/2*

CSEM ***15*** *09:15:31.1±0.3, 37°.07N×28°.57E, h1^{km}, ML2.1, Error ellipse: s-maj=7.1km s-min=4.8km az=46.0, Suspected Mining explosion.*

ISC 15 09:15:30.1±0.8**, 37°.14N**±0°.02×**28°.63E**±0°.03**, h0^{km}, n33, σ0^{s}.89**/44**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TURN	Turunc	0.27	184	PG	Pb	09 15 37.6	-0.2
TURN				SG	Sb	09 15 42.4	-0.5
TURN	Turunc	0.27	184	*i* P	Pb	09 15 37.0	-0.7
TURN				*i* S	Sb	09 15 43.0	+0.1
TURN	Turunc	0.27	184	P	Pb	09 15 37.0	-0.7
TURN	Turunc	0.27	184	*e*Pg	Pb	09 15 37.6	-0.2
TURN				S	Sb	09 15 43.0	+0.1
YER	Yerkesik	0.28	269	PG	Pg	09 15 36.0	+0.7
YER				SG	Sg	09 15 39.9	+1.0
YER	Yerkesik	0.28	269	*e*Pg	Pg	09 15 36.0	+0.7
YER				*e*Sg	Sg	09 15 39.9	+1.0
DALY	Dalyan (Mu˜la	0.33	176	PG	Pg	09 15 35.9	-0.4
DALY	Dalyan (Mu˜la	0.33	176	*i* P	Pg	09 15 35.1	-1.2
DALY				*i* S	Sg	09 15 39.5	-1.0
DALY	Dalyan (Mu˜la	0.33	176	P	Pg	09 15 35.1	-1.2
DALY	Dalyan (Mu˜la	0.33	176	*e*Pg	Pg	09 15 35.9	-0.4
DALY				S	Sg	09 15 39.5	-1.0
TAVA	DENIZLI_Tavas	0.40	35	*i* P	Pb	09 15 39.8	-0.2
TAVA				*i* S	Sb	09 15 47.7	+1.0
TAVA	DENIZLI_Tavas	0.40	35	P	Pb	09 15 39.8	-0.2
TAVA				S	Sb	09 15 47.7	+1.0
FETY	Fethiye	0.62	144	PG	Pb	09 15 42.9	-0.9
FETY	Fethiye	0.62	144	*e*Pg	Pb	09 15 42.9	-0.9
MLSB	Milas	0.70	283	PG	Pb	09 15 44.5	-0.6
MLSB	Milas	0.70	283	*e*Pg	Pb	09 15 44.5	-0.6
AYDN	Tasoluk	0.79	311	*i* P	Pb	09 15 46.3	-0.4
AYDN				*i* S	Sb	09 15 57.1	-0.9
AYDN	Tasoluk	0.79	311	P	Pb	09 15 46.3	-0.4
AYDN				S	Sb	09 15 57.1	-0.9
DAT	Datca	0.94	244	PG	Pg	09 15 46.6	-1.4
DAT	Datca	0.94	244	*i* P	Pg	09 15 46.9	-1.2
DAT	Datca	0.94	244	P	Pg	09 15 46.8	-1.2
AYDB	Zeytinkoy-Aydi	0.99	324	PG	Pn	09 15 51.6	+0.2
AYDB	Zeytinkoy-Aydi	0.99	324	*e*Pg	Pn	09 15 51.6	+0.2
ARG	Arkhangelos	1.01	204	PG	Pg	09 15 47.4	-2.0
ARG	Arkhangelos	1.01	204	*e*Pg	Pg	09 15 47.4	-2.0
BODT	Bodrum	1.06	266	PG	Pg	09 15 49.9	-0.4
BODT	Bodrum	1.06	266	*e*Pg	Pg	09 15 49.9	-0.4
AKAS	Kas	1.20	139	PN	Pn	09 15 54.0	-0.2
AKAS	Kas	1.20	139	*i* P	Pb	09 15 53.5	-0.2
AKAS	Kas	1.20	139	P	Pb	09 15 53.5	-0.2
AKAS	Kas	1.20	139	*e*Pn	Pn	09 15 54.0	-0.2
KORT	Korkueli	1.39	95	PN	Pb	09 15 58.3	+1.4
KORT	Korkueli	1.39	95	*e*Pn	Pb	09 15 58.3	+1.4

NIED ***15*** *09:16:00, 45°.70N×152°.00E, h8^{km}, Mw3.8 Best double couple: M$_0$5.04000×10^{14} NP1:ϕ_s144.00000°, δ34.00000°, λ-13.00000°. NP2:ϕ_s245.00000°, δ83.00000°, λ-123.00000°.*

ISCJB ***15*** *09:16:45.5±0.8, 45°.2N±0°.1×152°.15E±0°.09, h30^{km}, mb3.8/7, MS3.3/3, Error ellipse: s-maj=18.7km s-min=6.2km az=156.7*

JMA ***15*** *09:16:46.3±0.9, 45°.67N×152°.04E, h30^{km}, M4.3*

SKHL ***15*** *09:16:46.3±0.7, 45°.02N×152°.30E, h35^{km}±4^{km}, mb4.4/2*

IDC ***15*** *09:16:51.2±3.1, 45°.59N×151°.93E, h46^{km}±29^{km}, mb3.6/7, mb1 3.7/9, mb1mx3.4/72, mbtmp3.8/9, ML3.8/1, MS2.9/5, Ms1 3.0/5, ms1mx2.6/60, Error ellipse: s-maj=26.4km s-min=21.5km az=147.0*

ISC 15 09:16:47.8±0.9**, 45°.2N**±0°.1×**152°.15E**±0°.08**, h30^{km}, n38, σ1^{s}.65**/42**, mb3.6**/7**, MS3.2**/3**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	Kuril'sk	3.03	273	*i* P	Pn	09 17 33.6	0.0
KUR				AMB	AMB	09 17 39.0	
	60nm,0.5s						
KUR				*i* S	Sn	09 18 09.0	+0.2
KUR				A	A	09 18 21.0	
	270nm,0.5s						
KUR				A	A	09 18 21.0	
	300nm,0.5s						
SHO	Shikotan	4.02	253	*i* P	Pn	09 17 47.3	0.0
SHO				AMB	AMB	09 17 52.0	
	32nm,0.5s						
SHO				*i* S	Sn	09 18 33.6	+0.3
SHO				A	A	09 19 04.0	
	114nm,0.5s						
SHO				A	A	09 19 04.0	
	138nm,0.5s						
YUK	Yuzh-Kuril'sk	4.63	258	*i* P	Pn	09 17 56.6	+0.9
YUK				*i* S	Sn	09 18 48.8	+0.4
YUK				A	A	09 19 04.7	
	294nm,0.7s						
YUK				A	A	09 19 04.7	
	214nm,0.7s						
GRPR	Tuman	4.71	258	*i* P	Pn	09 17 57.0	+0.3
GRPR				*i* S	Sn	09 18 54.0	+3.8
GRPR				A	A	09 19 07.0	
	61nm,0.4s						
GRPR				A	A	09 19 07.0	
	66nm,0.4s						
NEM2	Nemuro 2	4.94	251	P	Pn	09 17 59.1	-0.8
NEM2				*e*S	Sn	09 18 53.3	-2.8
GLVR	Golovnino	4.96	255	*i* P	Pn	09 17 59.0	-1.1
GLVR				*i* S	Sn	09 19 00.0	+3.6
GLVR				A	A	09 19 07.0	
	122nm,0.7s						
GLVR				A	A	09 19 07.0	
	64nm,0.7s						
JRA	Rausu	5.17	259	P	Pn	09 18 04.1	+1.0
JAK	Akkeshi	5.79	250	P	Pn	09 18 10.9	-0.7
JAK				*e*S	Sn	09 19 13.8	-3.2
JTKR	Abashiri--Toko	6.01	261	P	Pn	09 18 15.6	+1.0
JAR	Ashorobuto	6.30	256	P	Pn	09 18 19.7	+1.0
JAR				*e*S	Sn	09 19 29.0	-0.6
JMP	Maruseppu	6.38	263	P	Pn	09 18 21.1	+1.3
JOB	Onbets	6.41	252	P	Pn	09 18 20.4	+0.3
JCH	Churui	6.84	251	P	Pn	09 18 26.3	+0.3
JCH				*e*S	Sn	09 19 39.8	-3.1
JKK2	Kamakawa 2	6.84	262	P	Pn	09 18 27.6	+1.5
ASAJ	Asahikawa	6.89	264	P	Pn	09 18 28.6	+1.9
	1.9nm,0.3s,baz=70,slow=20,SNR=20						
MYR	Moyori	7.04	249	*e*P	Pn	09 18 29.0	+0.3
JNBK	Urakawa-nobuka	7.39	250	P	Pn	09 18 33.1	-0.5
JBT2	Biratori 2	7.45	255	P	Pn	09 18 34.2	-0.2
JNB	Noboribetsu	8.48	255	P	Pn	09 18 49.6	+1.2
JKB	Kayabe	8.72	252	P	Pn	09 18 51.0	-0.7
PETK	Petropavlovsk-	8.73	23	P	Pn	09 18 49.5	-2.3
	baz=191,slow=14						
JYM2	Yakumo 2	9.07	254	P	Pn	09 18 57.4	+0.8
JANG	Nango	9.17	242	P	Pn	09 18 55.7	-2.3
JTM	Tenmabayashi	9.23	245	P	Pn	09 18 58.2	-0.5
JOSM	Okushiri--Mats	9.70	256	P	Pn	09 19 05.3	+0.2
MJAR	Matsushiro Arr	13.61	236	P	P	09 20 06.8	-0.5
	0.1nm,0.3s,baz=31,slow=6.7,SNR=4.8						
USRK	Ussuriysk Ar.	14.37	273	LR	LR	09 25 17.1	
	comp=Z,65nm,22.0s,baz=67,slow=36						
KLR	Kul'dur	14.44	294	LR	LR	09 25 59.9	
	comp=Z,7.0nm,18.4s,baz=181,slow=39						
SONM	Songino Array	31.25	292	P	P	09 23 04.7	0.0
	0.5nm,0.7s,baz=39,slow=9.3,SNR=2.5						

ZALV	**Zalesovo Beam**	**43.00**	**307**	LR	LR	09 43 29.2	
	comp=Z,32nm,18.7s,baz=66,slow=38						
ARCES	**ARCESS Array B**	**59.11**	**341**	P	**P**	**09 26 43.3**	**-1.5**
	3.2nm,0.9s,baz=52,slow=7.9,SNR=4.3						
NVAR	**Mina Array Bea**	**63.77**	**61**	P	**P**	**09 27 18.7**	**+1.7**
	0.2nm,0.5s,baz=292,slow=7.3,SNR=2.6						
FINES	**FINESS Array B**	**65.17**	**335**	P	**P**	**09 27 23.8**	**-1.7**
	1.3nm,0.4s,baz=42,slow=5.7,SNR=18						
NOA	**NORSAR Array B**	**69.49**	**341**	LR	LR	10 03 12.0	
	comp=Z,8.6nm,18.5s,baz=65,slow=40						
HFS	**Hagfors**	**69.69**	**339**	P	**P**	**09 27 52.7**	**-1.4**
	0.9nm,0.4s,baz=46,slow=6.2,SNR=9.8						
ASAR	**Alice Springs**	**70.51**	**198**	P	**P**	**09 28 02.6**	**+3.1**
	0.3nm,0.7s,baz=4.2,slow=5.1,SNR=3.5						
TXAR	**Lajitas Array**	**78.86**	**60**	P	**P**	**09 28 49.5**	**+1.3**
	0.4nm,0.6s,baz=306,slow=4.1,SNR=6.6						
PPT	**Papeete**	**81.80**	**125**	LR	LR	09 59 11.0	
	comp=Z,24nm,20.2s,baz=330,slow=31						

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*IDC **15** 09:18:09.6±2.0, 1°.05S×99°.93E, h0^{km}, mb3.8/7, mb1 3.9/7, mb1mx3.6/67, mbtmp3.8/7, MS3.3/1, Ms1 3.3/1, ms1mx2.5/62, Error ellipse: s-maj=99.8km s-min=19.7km az=53.0*

*ISCJB **15** 09:18:13.8±0.4, 1°.17S±0°.05×99°.91E±0°.05, h35^{km}, mb4.1/13, MS3.1/1, Error ellipse: s-maj=7.6km s-min=5.8km az=140.0*

*NEIC **15** 09:18:14.8±0.4, 1°.17S×99°.88E, h35^{km}, mb4.5/7, Error ellipse: s-maj=13.2km s-min=7.4km az=63.0*

NEIC Felt [II] at Padang, Sumatra.

*DJA **15** 09:18:16.3±0.2, 1°S±2°×10°0E±°, h10^{km}, M4.2/15, mB5.6/1, mb4.3/3, MLv4.1/15, Mw(mB)5.1/1*

ISC 15 09:18:15.9±0.6, **1°.07S**±0°.04×**99°.74E**±0°.05, **h35**^{km}, **n52**, σ**2.^{s}62**/48, **mb4.2**/13, **Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SISI	**Saibi**	**0.70**	**249**	P	**Pn**	**09 18 29.8**	**+0.5**
SISI				S	**Sn**	**09 18 41.1**	**+2.2**
PPSI	**Pulau Pagai**	**1.70**	**171**	P	**Pn**	**09 18 46.5**	**+3.4**
PPSI				S	**Sn**	**09 19 11.9**	**+8.2**
PBSI	**Pulau Batu**	**1.78**	**305**	P	**Pn**	**09 18 47.1**	**+2.9**
PBSI				S	**Sn**	**09 19 11.5**	**+6.0**
MNSI	**Mandailing Nat**	**1.86**	**355**	P	**Pn**	**09 18 48.1**	**+2.7**
MNSI				S	**Sn**	**09 19 12.2**	**+4.5**
BKNI	**Bangkinang**	**1.90**	**43**	P	**Pn**	**09 18 48.1**	**+2.2**
BKNI	**Bangkinang**	**1.90**	**43**	*e*Pn	**Pn**	**09 18 47.5**	**+1.5**
KRJI	**Kerinci**	**2.00**	**120**	P	**Pn**	**09 18 49.0**	**+1.7**
GSI	**Gunungsitoli**	**3.20**	**317**	P	**Pn**	**09 19 05.0**	**+1.2**
GSI	**Gunungsitoli**	**3.20**	**317**	*e*Pn	**Pn**	**09 19 05.6**	**+1.8**
MASI	**Maura Aman, Be**	**3.23**	**129**	P	**Pn**	**09 19 06.9**	**+2.6**
PSI	**Prapat**	**3.93**	**348**	*e*Pn	**Pn**	**09 19 15.2**	**+1.2**
MNAI	**Manna**	**4.58**	**136**	*e*Pn	**Pn**	**09 19 24.2**	**+1.4**
TSI	**Tuntungan**	**4.69**	**346**	P	**Pn**	**09 19 28.1**	**+3.8**
SNSI	**Sinabang, Aceh**	**4.86**	**315**	P	**Pn**	**09 19 29.2**	**+2.6**
KCSI	**Kotacane, Aceh**	**4.97**	**337**	P	**Pn**	**09 19 31.3**	**+3.2**
TPTI		**5.01**	**329**	P	**Pn**	**09 19 32.4**	**+3.8**
TPRI	**Tanjung Pinang**	**5.18**	**68**	P	**Pn**	**09 19 34.5**	**+3.5**
MDSI	**Maura Dua**	**5.58**	**127**	P	**Pn**	**09 19 38.2**	**+1.7**
IPM	**Ipoh**	**5.66**	**13**	*e*Pn	**Pn**	**09 19 41.2**	**+3.5**
COCO	**West Island**	**11.41**	**194**	*e*Pn	**Pn**	**09 20 56.5**	**0.0**
PALK	**Pallekele**	**20.72**	**294**	LR	LR	09 30 20.5	
	comp=Z,76nm,18.7s,baz=113,slow=35						
TNTI	**Ternate**	**27.69**	**86**	*e*P	**P**	**09 23 58.2**	**-2.9**
	22nm,1.0s						
H08S2	**Diego Garcia H**	**27.93**	**256**	T	T	09 52 13.6	
	baz=76,slow=74,SNR=7.5						
H08S3	**Diego Garcia H**	**27.93**	**256**	T	T	09 52 05.3	
	baz=76,slow=74,SNR=21						
H08S1	**Diego Carcia H**	**27.94**	**256**	T	T	09 52 11.7	
	baz=76,slow=74,SNR=8.9						
POO	**Poona**	**32.05**	**309**	*e*x	x	09 24 26.0	
H01W3	**Cape Leeuwin H**	**36.22**	**160**	T	T	10 03 14.7	
	baz=335,slow=76,SNR=5.6						
H01W2	**Cape Leeuwin H**	**36.23**	**160**	T	T	10 03 17.6	
	baz=335,slow=76,SNR=7.4						
H01W1	**Cape Leeuwin H**	**36.23**	**160**	T	T	10 03 17.0	
	baz=335,slow=76,SNR=4.3						
WRA	**Warramunga Arr**	**38.69**	**121**	P	**P**	**09 25 33.9**	**-2.8**
	0.8nm,0.7s,baz=306,slow=9.0,SNR=10.0						
WR1	**Warramunga Arr**	**38.69**	**121**	*e*P	**P**	**09 25 33.9**	**-2.8**
	9.4nm,1.3s						
WB2	**Warramunga Arr**	**38.70**	**121**	*e*P	**P**	**09 25 34.1**	**-2.7**
	16nm,1.4s						
ASAR	**Alice Springs**	**40.01**	**127**	P	**P**	**09 25 45.8**	**-2.0**
	0.7nm,0.8s,baz=299,slow=7.5,SNR=6.1						
AS31	**Alice Springs**	**40.01**	**127**	*e*P	**P**	**09 25 45.8**	**-2.0**
	1.8nm,1.4s						
KDJ	**Kajisay**	**47.59**	**337**	*e*P	**P**	**09 26 49.1**	**+0.5**
	4.4nm,1.4s						
SONA0	**Songino Array**	**49.05**	**6**	*e*P	**P**	**09 26 58.0**	**-1.8**
SONM	**Songino Array**	**49.05**	**6**	P	**P**	**09 26 57.9**	**-1.8**
	0.3nm,0.4s,baz=182,slow=5.6,SNR=2.8						
MK01	**Makanchi Array**	**50.05**	**344**	*e*P	**P**	**09 27 07.0**	**-0.2**
MK31	**Makanchi Array**	**50.07**	**344**	*e*P	**P**	**09 27 07.2**	**-0.1**
MK32	**Makanchi Array**	**50.07**	**344**	*e*P	**P**	**09 27 07.2**	**-0.1**
MKAR	**Makanchi Array**	**50.07**	**344**	P	**P**	**09 27 07.2**	**-0.1**
	0.8nm,0.3s,baz=158,slow=8.8,SNR=15						
MKAR	**Makanchi Array**	**50.07**	**344**	*e*P	**P**	**09 27 07.2**	**-0.1**
	9.1nm,0.4s						
ZALV	**Zalesovo Beam**	**56.22**	**349**	P	**P**	**09 27 51.4**	**-1.0**
	1.4nm,0.5s,baz=183,slow=7.1,SNR=5.7						
ZALV	**Zalesovo Beam**	**56.22**	**349**	*e*P	**P**	**09 27 51.8**	**-0.6**
ZAA1	**Zalesovo Array**	**56.22**	**349**	*e*P	**P**	**09 27 51.4**	**-1.0**
BVAR	**Borovoye Array**	**59.23**	**340**	P	**P**	**09 28 12.2**	**-1.4**
	0.6nm,0.5s,baz=146,slow=8.0,SNR=5.0						
CASY	**Casey**	**65.52**	**175**	*e*P	**P**	**09 28 53.6**	**-1.8**
	1.9nm,0.8s						
BUR08	**Bucovina Ar. S**	**80.41**	**319**	*e*P	**P**	**09 30 24.5**	**+0.3**
FIA0	**FINESS Array S**	**83.18**	**332**	*e*P	**P**	**09 30 37.9**	**-0.4**
FINES	**FINESS Array B**	**83.18**	**332**	P	**P**	**09 30 37.9**	**-0.4**
	0.9nm,0.6s,baz=110,slow=4.5,SNR=6.1						
TX31	**Lajitas Ar. Si**	**144.12**	**36**	*e*PKPdf	**PKPab**	**09 37 46.7**	**+0.2**
TXAR	**Lajitas Array**	**144.12**	**36**	PKP	**PKPab**	**09 37 46.7**	**+0.2**
	0.2nm,0.6s,baz=270,slow=0.9,SNR=2.9						

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*NEIC **15** 09:31:06.3±0.0, 39°.70S×175°.68E, h4^{km}, ML4.1(WEL), After WEL.*

NEIC Felt in the Manawatu area.

WEL 15 09:31:05.6, 39°.7S±1°.0×**175°.7E**±0°.9, **h7**^{km}±1^{km}, **ML4.3**/69, **North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOVZ	**Moawhango**	**0.30**	**9**	Pg	Pb	09 31 12.6	-0.8
MOVZ				Sg	Sg	09 31 16.9	+1.4
MOVZ	**Moawhango**	**0.30**	**9**	P	Pb	09 31 12.6	-0.8
MOVZ				S	Sb	09 31 17.0	-1.5
BHHZ	**Black Hill Sta**	**0.36**	**54**	Pg	Pg	09 31 13.2	+0.7
BHHZ				Sg	Sg	09 31 18.4	+1.1
BHHZ	**Black Hill Sta**	**0.36**	**54**	P	Pg	09 31 13.3	+0.7
MTVZ	**Mangateitei**	**0.36**	**332**	Pg	Pb	09 31 14.1	-0.2
MTVZ	**Mangateitei**	**0.36**	**332**	P	Pb	09 31 14.2	-0.2
MTVZ				S	Sb	09 31 19.8	-0.5
WNVZ	**Wahianoa**	**0.38**	**349**	Pg	Pb	09 31 14.3	-0.5
TSZ	**Takapari Road**	**0.41**	**150**	Pg	Pb	09 31 15.0	-0.2
TSZ	**Takapari Road**	**0.41**	**150**	P	Pb	09 31 15.0	-0.2
TSZ				S	Sb	09 31 20.8	-0.9
TRVZ	**Turoa**	**0.42**	**345**	P	Pb	09 31 15.1	-0.3
TRVZ				S	Sg	09 31 20.6	+1.3
WHVZ	**Whangaehu Hut**	**0.43**	**349**	Pg	Pb	09 31 15.1	-0.5
WHVZ	**Whangaehu Hut**	**0.43**	**349**	P	Pb	09 31 15.1	-0.5
WHVZ				S	Sg	09 31 20.7	+1.2
TUVZ	**Tukino**	**0.44**	**356**	Pg	Pb	09 31 15.2	-0.5
TUVZ	**Tukino**	**0.44**	**356**	P	Pb	09 31 15.3	-0.4
DRZ	**Dome Shelter**	**0.44**	**347**	Pg	Pb	09 31 15.3	-0.6
DRZ	**Dome Shelter**	**0.44**	**347**	P	Pb	09 31 15.5	-0.3
PNHZ	**Pukenui**	**0.45**	**118**	Pg	Pb	09 31 15.3	-0.5
PNHZ	**Pukenui**	**0.45**	**118**	P	Pb	09 31 15.3	-0.5
FWVZ	**Far West T-bar**	**0.46**	**347**	Pg	Pb	09 31 15.6	-0.6
FWVZ	**Far West T-bar**	**0.46**	**347**	P	Pb	09 31 15.6	-0.6
PKVZ	**Pokaka**	**0.49**	**327**	Pg	Pb	09 31 16.2	-0.4
PKVZ	**Pokaka**	**0.49**	**327**	P	Pb	09 31 16.3	-0.3
PKVZ				S	Sb	09 31 23.0	-1.1
COVZ	**Chateau Observ**	**0.52**	**347**	P	Pb	09 31 16.6	-0.4
COVZ				S	Sb	09 31 23.6	-1.2
KRHZ	**Kereru**	**0.53**	**84**	P	Pb	09 31 16.5	-0.7
KRHZ				S	Sb	09 31 23.9	-1.2
NGZ	**Ngauruhoe**	**0.53**	**352**	Pg	Pb	09 31 16.8	-0.5
NGZ	**Ngauruhoe**	**0.53**	**352**	P	Pb	09 31 16.8	-0.5
WAZ	**Wanganui**	**0.55**	**264**	Pg	Pb	09 31 17.7	+0.2
WAZ	**Wanganui**	**0.55**	**264**	P	Pb	09 31 17.8	+0.3
OHWZ	**Ohakea**	**0.58**	**210**	P	Pb	09 31 18.0	0.0
WTVZ	**West Tongariro**	**0.59**	**352**	Pg	Pb	09 31 17.9	-0.5
WTVZ	**West Tongariro**	**0.59**	**352**	P	Pb	09 31 17.9	-0.5
KRVZ	**Karewarewa**	**0.61**	**356**	P*	Pb	09 31 18.0	-0.6
KRVZ	**Karewarewa**	**0.61**	**356**	P	Pb	09 31 18.1	-0.6
KWHZ	**Kaweka Forest**	**0.63**	**64**	P	Pg	09 31 18.2	+0.4
TWVZ	**Taurewa**	**0.66**	**343**	P	Pg	09 31 18.9	+0.6
WPHZ	**Waipukurau**	**0.68**	**122**	P*	Pb	09 31 20.1	+0.2
WPHZ	**Waipukurau**	**0.68**	**122**	P	Pb	09 31 20.1	+0.3
POWZ	**Post Office Ro**	**0.69**	**175**	P*	Pb	09 31 19.9	-0.1
POWZ	**Post Office Ro**	**0.69**	**175**	P	Pb	09 31 19.9	-0.1
DVHZ	**Dannevirke**	**0.70**	**149**	P*	Pb	09 31 20.1	-0.1
DVHZ	**Dannevirke**	**0.70**	**149**	P	Pb	09 31 20.2	0.0
KATZ	**Kakaramea**	**0.73**	**0**	P*	Pb	09 31 20.1	-0.5
KATZ	**Kakaramea**	**0.73**	**0**	P	Pb	09 31 20.1	-0.5
RITZ	**Rihia Road**	**0.74**	**10**	P*	Pg	09 31 20.2	+0.4
RITZ	**Rihia Road**	**0.74**	**10**	P	Pg	09 31 20.2	+0.5
MCHZ	**McNeill Hill**	**0.82**	**72**	P*	Pb	09 31 22.8	+0.6
MCHZ	**McNeill Hill**	**0.82**	**72**	P	Pb	09 31 22.7	+0.6
BKZ	**Black Stump Fm**	**0.82**	**49**	P	Pg	09 31 21.4	+0.1
RATZ	**Rangitukua**	**0.84**	**4**	P*	Pb	09 31 22.1	-0.4
RATZ	**Rangitukua**	**0.84**	**4**	P	Pb	09 31 22.2	-0.3
HATZ	**Hinemaiaia**	**0.87**	**21**	P*	Pg	09 31 22.0	-0.2
HATZ	**Hinemaiaia**	**0.87**	**21**	P	Pg	09 31 22.0	-0.2
PRWZ	**Pori Road**	**0.88**	**166**	P	Pb	09 31 23.6	+0.4
KAHZ	**Kahuranaki**	**0.92**	**96**	P	Pn	09 31 24.9	-0.1
PRHZ	**Porangahau**	**0.92**	**128**	P*	Pn	09 31 24.5	-0.4
PRHZ	**Porangahau**	**0.92**	**128**	P	Pn	09 31 24.6	-0.3
VRZ	**Vera Road**	**0.93**	**308**	P*	Pb	09 31 23.9	-0.1
VRZ	**Vera Road**	**0.93**	**308**	P	Pb	09 31 24.0	0.0
PXZ	**Pawanui**	**0.96**	**110**	P*	Pn	09 31 25.3	-0.2
PXZ	**Pawanui**	**0.96**	**110**	P	Pn	09 31 25.2	-0.3
MRZ	**Mangatainoka R**	**0.96**	**185**	P*	Pb	09 31 24.4	-0.2
MRZ	**Mangatainoka R**	**0.96**	**185**	P	Pb	09 31 24.5	-0.1
ANWZ	**Angora Road**	**0.97**	**142**	P	Pn	09 31 25.5	-0.1
WATZ	**Wairara**	**0.99**	**2**	P*	Pb	09 31 24.9	-0.3
WATZ	**Wairara**	**0.99**	**2**	P	Pb	09 31 25.1	-0.1
LREZ	**Lake Rotokare**	**1.02**	**283**	P	Pb	09 31 26.0	+0.3
MRHZ	**Matea Rd**	**1.03**	**33**	P	Pg	09 31 24.9	-0.5
NMHZ	**Naumai**	**1.05**	**55**	P*	Pb	09 31 26.5	+0.3
NMHZ	**Naumai**	**1.05**	**55**	P	Pb	09 31 26.5	+0.3
WHTZ	**Whakaora**	**1.06**	**11**	P	Pn	09 31 27.0	+0.1
BFZ	**Birch Farm**	**1.07**	**157**	P*	Pn	09 31 26.9	-0.1
BFZ	**Birch Farm**	**1.07**	**157**	P	Pn	09 31 26.9	-0.1
CKHZ	**Cape Kidnapper**	**1.07**	**88**	P*	Pn	09 31 27.4	+0.4
CKHZ	**Cape Kidnapper**	**1.07**	**88**	P	Pn	09 31 27.4	+0.4
TIWZ	**Tintock**	**1.08**	**172**	P	Pn	09 31 27.4	+0.1
ARHZ	**Aropaoanui**	**1.10**	**67**	P*	Pn	09 31 28.0	+0.6
ARHZ	**Aropaoanui**	**1.10**	**67**	P	Pn	09 31 28.0	+0.6
OGWZ	**Otaki Gorge**	**1.18**	**200**	P*	Pg	09 31 28.0	-0.3
OGWZ	**Otaki Gorge**	**1.18**	**200**	P	Pg	09 31 28.0	-0.3
HOWZ	**Holdsworth Sta**	**1.20**	**186**	P*	Pb	09 31 28.7	0.0
HOWZ	**Holdsworth Sta**	**1.20**	**186**	P	Pn	09 31 28.9	+0.1
KUTZ	**Kaahu Road**	**1.22**	**5**	P*	Pg	09 31 28.0	-0.9
KUTZ	**Kaahu Road**	**1.22**	**5**	P	Pg	09 31 28.1	-0.8
MHEZ	**Mangahewa**	**1.23**	**300**	P	Pn	09 31 30.1	+0.8
MTHZ	**Maungataniwha**	**1.23**	**47**	P	Pg	09 31 28.7	-0.5
WPRZ	**Whakapapatarin**	**1.24**	**17**	P*	Pg	09 31 28.9	-0.4
WPRZ	**Whakapapatarin**	**1.24**	**17**	P	Pg	09 31 29.1	-0.2
PREZ	**Palmer Road**	**1.24**	**286**	P*	Pn	09 31 29.5	+0.1
PREZ	**Palmer Road**	**1.24**	**286**	P	Pn	09 31 29.5	+0.2
ALRZ	**Allen Road**	**1.25**	**24**	P	Pb	09 31 28.2	-1.2
DREZ	**Durham Road**	**1.26**	**294**	P*	Pn	09 31 29.6	0.0
DREZ	**Durham Road**	**1.26**	**294**	P	Pn	09 31 29.6	0.0
CPWZ	**Castlepoint**	**1.27**	**162**	P*	Pg	09 31 30.8	+0.9
CPWZ	**Castlepoint**	**1.27**	**162**	P	Pg	09 31 31.0	+1.1
KIW	**Kapiti Island**	**1.30**	**207**	P*	Pn	09 31 29.4	-0.8
KIW	**Kapiti Island**	**1.30**	**207**	P	Pn	09 31 29.5	-0.7
NEZ	**North Egmont**	**1.31**	**289**	P*	Pg	09 31 30.6	0.0
PRRZ	**Plateau Road**	**1.32**	**25**	P*	Pn	09 31 29.9	-0.6
PRRZ	**Plateau Road**	**1.32**	**25**	P	Pn	09 31 29.2	-1.3
RAHZ	**Arahi**	**1.34**	**54**	P	Pg	09 31 31.4	+0.2
WHHZ	**Waihua**	**1.35**	**63**	P	Pg	09 31 32.0	+0.5
HIZ	**Hauiti**	**1.35**	**331**	P*	Pn	09 31 30.1	-0.8
HIZ	**Hauiti**	**1.35**	**331**	P	Pn	09 31 30.1	-0.8
KHEZ	**Kahui Hut**	**1.36**	**287**	P*	Pg	09 31 31.9	+0.2
KHEZ	**Kahui Hut**	**1.36**	**287**	P	Pg	09 31 32.1	+0.4
TLZ	**Tolley Road**	**1.38**	**355**	P	Pn	09 31 29.8	-1.5
GRRZ	**Galatos Road**	**1.39**	**14**	P	Pg	09 31 32.3	+0.1
HRRZ	**Handcock Road**	**1.39**	**20**	Pn	Pb	09 31 31.8	-0.1
HRRZ	**Handcock Road**	**1.39**	**20**	P	Pb	09 31 31.8	-0.1
TMWZ	**Te Maipa**	**1.41**	**174**	Pn	Pn	09 31 31.4	-0.4
TMWZ	**Te Maipa**	**1.41**	**174**	P	Pn	09 31 31.4	-0.4
PKE	**Pukeiti**	**1.41**	**291**	Pn	Pb	09 31 32.2	-0.1
PKE	**Pukeiti**	**1.41**	**291**	P	Pb	09 31 32.3	-0.1
NMEZ	**Namu Road**	**1.43**	**281**	Pn	Pn	09 31 32.2	+0.2
NMEZ	**Namu Road**	**1.43**	**281**	P	Pn	09 31 32.2	+0.2
HSRZ	**Hossack Road**	**1.46**	**17**	P	Pb	09 31 33.0	0.0
MTW	**Mount Morrison**	**1.46**	**186**	P	Pn	09 31 32.0	-0.4
NWEZ	**Newall Road**	**1.48**	**286**	Pn	Pb	09 31 33.4	0.0
CAW	**Cannon Point**	**1.48**	**199**	Pn	Pn	09 31 32.8	+0.1
CAW	**Cannon Point**	**1.48**	**199**	P	Pn	09 31 32.8	+0.1
MUGZ	**Murupara**	**1.48**	**35**	P	Pb	09 31 33.3	-0.2
RRRZ	**Republican Roa**	**1.51**	**25**	Pn	Pn	09 31 33.3	+0.2
RRRZ	**Republican Roa**	**1.51**	**25**	P	Pn	09 31 33.3	+0.2
HLRZ	**Highlands Stat**	**1.54**	**20**	P	Pg	09 31 34.8	-0.3
UTU	**Utuhina**	**1.57**	**15**	P	Pg	09 31 35.5	-0.2
SNGZ	**Shannon Statio**	**1.58**	**55**	Pn	Pb	09 31 34.6	-0.5
SNGZ	**Shannon Statio**	**1.58**	**55**	P	Pb	09 31 34.8	-0.3
TARZ	**Mount Tarawera**	**1.60**	**24**	Pn	Pb	09 31 35.3	-0.1
TARZ	**Mount Tarawera**	**1.60**	**24**	P	Pb	09 31 35.4	0.0
NGRZ	**Ngongotaha**	**1.65**	**14**	P	Pg	09 31 36.7	-0.4
KNZ	**Kokohu**	**1.68**	**67**	P	Pn	09 31 35.1	-0.3
OMRZ	**Omania**	**1.68**	**19**	P	Pb	09 31 37.1	+0.3
PAWZ	**Paruwai Farm**	**1.69**	**187**	P	Pn	09 31 34.9	-0.7
TRWZ	**Traveller**	**1.69**	**180**	Pn	Pn	09 31 34.9	-0.8
TRWZ	**Traveller**	**1.69**	**180**	P	Pn	09 31 34.8	-0.8
WEL	**Wellington**	**1.73**	**204**	Pn	Pn	09 31 35.9	-0.2
KARZ	**Kaharoa**	**1.73**	**15**	P	Pg	09 31 38.7	-0.1
DUWZ	**D'Urville Isla**	**1.74**	**230**	*e*Pn	Pn	09 31 35.8	-0.6
DUWZ	**D'Urville Isla**	**1.74**	**230**	P	Pn	09 31 35.8	-0.5
MSWZ	**Moikau Station**	**1.74**	**191**	Pn	Pn	09 31 35.5	-0.9
MSWZ	**Moikau Station**	**1.74**	**191**	P	Pn	09 31 35.6	-0.8
EDRZ	**Edgecumbe**	**1.79**	**27**	P	Pb	09 31 38.7	-0.1
MHGZ	**Mahia Peninsul**	**1.80**	**73**	Pn	Pn	09 31 36.9	-0.2
MHGZ	**Mahia Peninsul**	**1.80**	**73**	P	Pn	09 31 36.9	-0.1
RAGZ	**Rawiri**	**1.80**	**49**	P	Pn	09 31 37.9	+0.7
BHW	**Baring Head**	**1.81**	**200**	P	Pn	09 31 36.8	-0.5
URZ	**Urewera**	**1.82**	**38**	P	Pn	09 31 35.5	-1.7
TCW	**Tory Channel**	**1.85**	**215**	Pn	Pn	09 31 37.8	0.0
TCW	**Tory Channel**	**1.85**	**215**	P	Pn	09 31 37.8	0.0
KMRZ	**Kaimai**	**1.86**	**6**	P	Pb	09 31 40.0	0.0
PRGZ	**Paritu Road**	**1.87**	**66**	Pn	Pn	09 31 37.7	-0.4
PRGZ	**Paritu Road**	**1.87**	**66**	P	Pn	09 31 37.7	-0.4
RIGZ	**Rimuhau**	**1.89**	**59**	P	Pn	09 31 38.6	+0.2
PLWZ	**Palliser**	**1.89**	**190**	Pn	Pn	09 31 37.5	-0.9
PLWZ	**Palliser**	**1.89**	**190**	P	Pn	09 31 37.4	-1.0
OPRZ	**Ohinepanea**	**1.98**	**20**	P	Pb	09 31 40.7	-1.1
TOZ	**Tahuroa Road**	**1.98**	**356**	P	Pn	09 31 40.1	+0.7
MWZ	**Matawai**	**1.98**	**47**	Pn	Pn	09 31 39.9	+0.3
MWZ	**Matawai**	**1.98**	**47**	P	Pn	09 31 39.9	+0.3
TGRZ	**Tauranga**	**2.02**	**13**	P	Pb	09 31 42.7	+0.1
TKGZ	**Te Karaka**	**2.10**	**54**	P	Pn	09 31 41.4	+0.2
TUWZ	**Tuamarina**	**2.18**	**217**	P	Pn	09 31 42.1	-0.2
CNGZ	**Carnagh Statio**	**2.31**	**59**	Pn	Pn	09 31 43.8	-0.2
CNGZ	**Carnagh Statio**	**2.31**	**59**	P	Pn	09 31 44.2	+0.1
NNZ	**Nelson**	**2.32**	**229**	Pn	Pn	09 31 44.5	+0.3
NNZ	**Nelson**	**2.32**	**229**	P	Pn	09 31 44.5	+0.2
RUGZ	**Raukumara Rang**	**2.33**	**42**	P	Pn	09 31 45.1	+0.7
CMWZ	**Cape Campbell**	**2.33**	**208**	P	Pb	09 31 47.0	-0.9
TWGZ	**Tauwhareparae**	**2.35**	**50**	Pn	Pn	09 31 44.7	0.0
TWGZ	**Tauwhareparae**	**2.35**	**50**	P	Pn	09 31 45.1	+0.5
BSWZ	**Blackbirch Sta**	**2.44**	**214**	P	Pn	09 31 45.6	-0.2
HAZ	**Te Kaha**	**2.54**	**41**	P	Pn	09 31 46.7	-0.6
PUZ	**Puketiti**	**2.58**	**52**	P	Pn	09 31 47.4	-0.5
PKGZ	**Pakihiroa**	**2.60**	**47**	P	Pn	09 31 48.6	+0.5
MKAZ	**Moumakai**	**2.63**	**351**	Pn	Pn	09 31 47.9	-0.5
MKAZ	**Moumakai**	**2.63**	**351**	P	Pn	09 31 48.0	-0.5
QRZ	**Quartz Range**	**2.67**	**244**	Pn	Pn	09 31 48.9	-0.1
QRZ	**Quartz Range**	**2.67**	**244**	P	Pn	09 31 48.9	-0.1
AWAZ	**Awhitu Peninsu**	**2.76**	**342**	P	Pn	09 31 50.9	+0.6
ETAZ	**East Tamaki Re**	**2.81**	**347**	Pn	Pn	09 31 51.3	+0.4
ETAZ	**East Tamaki Re**	**2.81**	**347**	P	Pn	09 31 51.4	+0.5
ETAZ				P	Pb	09 31 56.9	+0.9
WMGZ	**Waiomatatini S**	**2.84**	**49**	P	Pn	09 31 50.9	-0.5
WTAZ	**Waiatarua**	**2.90**	**342**	P	Pn	09 31 52.2	-0.1
THZ	**Tophouse**	**2.95**	**225**	Pn	Pn	09 31 52.6	-0.4
THZ	**Tophouse**	**2.95**	**225**	P	Pn	09 31 52.6	-0.3
KUZ	**Kuaotunu**	**2.95**	**0**	P	Pb	09 31 59.3	+0.8
MXZ	**Matakaoa Point**	**2.96**	**45**	P	Pn	09 31 53.2	+0.2
RVAZ	**Riverhead Bore**	**3.06**	**343**	Pn	Pn	09 31 53.9	-0.4
RVAZ	**Riverhead Bore**	**3.06**	**343**	P	Pn	09 31 54.0	-0.3
KHZ	**Kahutara**	**3.16**	**210**	Pn	Pn	09 31 54.1	-1.6
KHZ	**Kahutara**	**3.16**	**210**	P	Pn	09 31 54.3	-1.5
DSZ	**Denniston Nort**	**3.59**	**234**	Pn	Pn	09 32 01.2	-0.6
DSZ	**Denniston Nort**	**3.59**	**234**	P	Pn	09 32 01.3	-0.5
WCZ	**Waipu Caves**	**3.91**	**344**	P	Pn	09 32 05.5	-0.5
LTZ	**Lake Taylor**	**4.01**	**219**	Pn	Pn	09 32 05.8	-1.7
LTZ	**Lake Taylor**	**4.01**	**219**	P	Pn	09 32 05.9	-1.6
INZ	**Inchbonnie**	**4.40**	**225**	P	Pn	09 32 10.9	-1.9
OXZ	**Oxford**	**4.54**	**216**	P	Pn	09 32 12.0	-2.8
AKCZ	**Akaroa Harbour**	**4.66**	**206**	P	Pn	09 32 13.8	-2.6
WVZ	**Waitaha Valley**	**5.02**	**226**	P	Pn	09 32 22.6	+1.3
RPZ	**Rata Peaks**	**5.30**	**219**	P	Pn	09 32 31.9	+6.7
FOZ	**Fox Glacier**	**5.83**	**227**	P	Pn	09 32 33.0	+0.5
JCZ	**Jackson Bay**	**6.75**	**227**	P	Pn	09 32 46.9	+1.6

IDC 15 09:33:35.2±6.8, **3°.32N**×**127°.65E**, **h0**^{km}, **mb3.7**/3, **mb1 3.9**/3, **mb1mx3.4**/52, **mbtmp3.7**/3, **Error ellipse: s-maj=147.3km s-min=108.0km az=78.0**, **Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.03**	**164**	P	P	09 38 52.0	-0.2
	1.7nm,0.4s,baz=345,slow=10,SNR=20						
ASAR	**Alice Springs**	**27.50**	**168**	P	P	09 39 23.1	-0.5
	0.2nm,0.3s,baz=353,slow=8.7,SNR=4.1						
STKA	**Stephens Creek**	**37.43**	**160**	P	P	09 40 50.9	+0.6
	1.0nm,0.5s,baz=337,slow=11,SNR=5.1						

IDC 15 09:36:04.0±7.7, **2°.45N**×**126°.17E**, **h0**^{km}, **mb3.5**/4, **mb1 3.7**/4, **mb1mx3.3**/52, **mbtmp3.6**/4, **Error ellipse: s-maj=128.6km s-min=102.2km az=123.0**, **Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	**20.43**	**181**	P	Pn	09 40 45.0	-0.1
	1.6nm,0.8s,baz=14,slow=12,SNR=5.2						
WRA	**Warramunga Arr**	**23.66**	**161**	P	P	09 41 17.8	+0.5
	0.5nm,0.4s,baz=336,slow=11,SNR=12						
ASAR	**Alice Springs**	**27.03**	**164**	P	P	09 41 47.7	-0.4
	0.2nm,0.5s,baz=343,slow=7.3,SNR=4.3						
STKA	**Stephens Creek**	**37.15**	**158**	P	P	09 43 15.5	-1.2
	3.0nm,0.9s,baz=356,slow=14,SNR=1.8						

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*ISCJB **15** 09:39:46.9±0.6, 19°.67S±0°.04×69°.39W±0°.09, h110^{km}±5^{km}, mb3.8/4, Error ellipse: s-maj=14.0km s-min=6.9km az=177.0*

*GUC **15** 09:39:47.6±0.5, 19°.68S×69°.35W, h99^{km}±3^{km}, ML3.8*

*IDC **15** 09:39:50.2±2.2, 19°.62S×68°.92W, h124^{km}±21^{km}, mb3.6/4, mb1 3.6/6, mb1mx3.3/39, mbtmp3.9/6, Error ellipse: s-maj=40.4km s-min=18.8km az=98.0*

ISC 15 09:39:47.4±0.8, **19°.66S**±0°.05×**69°.32W**±0°.09, **h101**^{km}±7^{km}, **n18**, σ**1.^{s}08**/23, **mb3.8**/4, **4C-2D**, **Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB11	**IPOC Station P**	**0.33**	**253**	⇑ *i*P	**Pn**	**09 40 02.5**	**0.0**
PB11				*i* S	**Sn**	**09 40 14.0**	**+0.2**
PB11				IAML		09 40 14.9	
	comp=E,9μm,0.3s						
PB08	**IPOC Station P**	**0.50**	**162**	⇑ *i*P	**Pn**	**09 40 04.2**	**+0.5**
PB08				*i* S	**Sn**	**09 40 16.6**	**+0.6**
PB08				IAML		09 40 17.6	
	comp=E,6μm,0.2s						
MNMC	**Minye Minye**	**0.59**	**334**	⇓ *i*P	**Pn**	**09 40 04.9**	**+0.5**
MNMC				*i* S	**Sn**	**09 40 17.7**	**+0.7**
MNMC				IAML		09 40 18.5	
	comp=N,17μm,0.2s						
PSGC	**Pisagua**	**0.76**	**275**	⇑ *i*P	**Pn**	**09 40 05.5**	**-0.1**
PSGC				*i* S	**Sn**	**09 40 19.4**	**+0.1**
PSGC				IAML		09 40 19.9	
	comp=E,4μm,0.2s						
PB16	**IPOC Station P**	**1.33**	**352**	IAML		09 40 33.1	
	comp=N,1μm,0.8s						
PB01	**IPOC Station P**	**1.38**	**187**	⇑ *i*P	**Pn**	**09 40 12.6**	**+0.2**
PB01				*i* S	**Sn**	**09 40 31.6**	**+0.3**
PB01				IAML		09 40 33.2	
	comp=N,3μm,0.3s						
PB12	**IPOC Station P**	**1.42**	**317**	⇓ *i*P	**Pn**	**09 40 12.5**	**-0.3**
PB12				*i* S	**Sn**	**09 40 31.5**	**-0.5**
PB12				IAML		09 40 32.8	
	comp=E,2μm,0.3s						
PB07	**IPOC Station P**	**2.12**	**194**	IAML		09 40 53.3	
	comp=E,635nm,0.2s						
PB03	**IPOC Station P**	**2.41**	**190**	*e*P	**Pn**	**09 40 25.3**	**-0.2**
PB03				IAML		09 40 53.6	
	comp=E,422nm,0.4s						
LPAZ	**La Paz**	**3.54**	**19**	P	**Pn**	**09 40 43.3**	**+2.2**
	comp=E,1.0nm,0.3s,baz=180,slow=3.9,SNR=49						
LPAZ				S	**Sn**	**09 41 22.9**	**+0.6**
	comp=E,1.4nm,0.3s,baz=190,slow=18,SNR=5.4						
SIV	**San Ignacio**	**8.66**	**66**	P	**Pn**	**09 41 47.2**	**-2.8**
	comp=E,1.6nm,0.3s,baz=270,slow=10,SNR=66						
PLCA	**Paso Flores**	**21.03**	**183**	P	**P**	**09 44 25.1**	**+2.0**
	comp=E,3.8nm,0.9s,baz=16,slow=10,SNR=5.7						
SNAA	**Sanae**	**64.13**	**161**	P	**P**	**09 50 10.7**	**+0.1**
	comp=E,1.9nm,1.2s,baz=297,slow=13,SNR=5.2						
QSPA	**South Pole Qui**	**70.52**	**180**	P	**P**	**09 50 51.3**	**+0.2**
	comp=E,0.8nm,0.6s,baz=121,slow=15,SNR=4.4						
TORD	**Torodi Ar. Bea**	**77.11**	**71**	P	**P**	**09 51 28.6**	**-1.7**
	comp=E,0.8nm,0.4s,baz=244,slow=4.8						
ASAR	**Alice Springs**	**131.34**	**209**	PKP	**PKPdf**	**09 58 48.1**	**-0.5**
	comp=E,0.2nm,0.5s,baz=126,slow=1.5,SNR=4.8						
WRA	**Warramunga Arr**	**134.32**	**212**	PKP	**PKPdf**	**09 58 53.9**	**-0.4**
	comp=E,0.6nm,0.8s,baz=142,slow=1.9,SNR=3.7						
SONM	**Songino Array**	**151.68**	**6**	PKPbc	**PKPbc**	**09 59 30.0**	**-0.1**
	comp=E,0.3nm,0.5s,baz=350,slow=3.5,SNR=3.3						

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*NIED **15** 09:50:00, 45°.50N×152°.20E, h26^{km}, Mw3.9 Best double couple: $M_0$8.70000×10^{14} NP1:ϕ_s146.00000°, δ78.00000°, λ0.00000°. NP2:ϕ_s236.00000°, δ90.00000°, λ-168.00000°.*

*SKHL **15** 09:50:20.7±0.7, 44°.78N×152°.63E, h43^{km}±6^{km}, mb4.2/2*

*MOS **15** 09:50:21.0±2.0, 44°.80N×152°.60E, h43^{km}, mb4.1/10, Error ellipse: s-maj=8.7km s-min=8.0km az=103.0*

*JMA **15** 09:50:23.0±0.7, 45°.55N×152°.21E, h30^{km}, M4.2*

*ISCJB **15** 09:50:26.0±0.5, 45°.48N±0°.08×151°.79E±0°.08, h32^{km}, mb4.2/33, MS3.5/7, Error ellipse: s-maj=12.8km s-min=3.4km az=146.7*

*IDC **15** 09:50:28.8±5.5, 45°.71N×151°.83E, h33^{km}±39^{km}, mb3.7/14, mb1 3.8/18, mb1mx3.6/73, mbtmp3.8/18, ML3.4/2, MS3.0/8, Ms1 3.1/8, ms1mx2.7/67, Error ellipse: s-maj=42.9km s-min=16.8km az=168.0*

*NEIC **15** 09:50:30.2±0.8, 46°.24N×151°.30E, h10^{km}, mb4.7/8, Error ellipse: s-maj=22.0km s-min=9.0km az=145.0*

*BJI **15** 09:50:32.3, 46°.33N×151°.35E, h47^{km}, mb4.7/26, mB4.8/15, Ms4.1/11, Ms7 3.8/11*

ISC 15 09:50:29.4±0.6, **45°.61N**±0°.09×**151°.67E**±0°.06, **h32**^{km}, **n129**, σ**1.^{s}85**/127, **mb4.4**/33, **MS3.6**/7, **7C**, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**2.71**	**263**	*i* P	**Pn**	**09 51 11.5**	**+0.8**
KUR				AMB	AMB	09 51 23.0	
	51nm,0.3s						
KUR				AMB	AMB	09 51 23.0	
	24nm,0.3s						
KUR				AMB	AMB	09 51 23.0	
	31nm,0.3s						
KUR				*i* S	**Sb**	**09 51 49.0**	**-0.9**
KUR				A	A	09 52 00.0	
	195nm,0.4s						
KUR	**Kuril'sk**	**2.71**	**263**	*c i*PN	**Pn**	**09 51 11.9**	**+1.2**
KUR				*i* S	**Sb**	**09 51 54.0**	**+4.1**
KUR				pmax	pmax		
	comp=N,31nm,0.3s						
KUR				pmax	pmax		
	comp=E,24nm,0.3s						
KUR				pmax	pmax		
	comp=Z,51nm,0.3s						
KUR				smax	smax		
	comp=N,289nm,0.5s						
KUR				smax	smax		
	comp=E,107nm,0.4s						
SHO	**Shikotan**	**3.87**	**245**	*i* P	**Pn**	**09 51 24.0**	**-2.6**

SHO				AMB	AMB	09 51 40.0	
	comp=E,35nm,0.3s						
SHO				AMB	AMB	09 51 40.0	
	comp=E,11nm,0.3s						
SHO				iS	Sn	09 52 11.2	+0.3
SHO				A	A	09 52 19.0	
	comp=E,110nm,0.3s						
SHO				A	A	09 52 19.0	
	comp=E,58nm,0.3s						
SHO	Shikotan	3.87	245	ePN	Pn	09 51 24.8	-1.8
YUK	Yuzh-Kuril'sk	4.43	251	iP	Pn	09 51 33.0	-1.3
YUK				iS	Sn	09 52 27.2	+2.5
YUK				A	A	09 52 38.0	
	comp=E,62nm,0.5s						
YUK				A	A	09 52 38.0	
	comp=E,135nm,0.5s						
YUK	Yuzh-Kuril'sk	4.43	251	ePN	Pn	09 51 33.6	-0.7
GRPR	Tuman	4.50	251	iP	Pn	09 51 34.0	-1.4
GRPR				iS	Sn	09 52 29.0	+2.4
GRPR	Tuman	4.50	251	iPN	Pn	09 51 34.4	-1.0
GLVR	Golovnino	4.77	249	iP	Pn	09 51 37.0	-2.1
GLVR				iS	Sn	09 52 35.0	+1.8
GLVR	Golovnino	4.77	249	iPN	Pn	09 51 37.8	-1.3
NEM2	Nemuro 2	4.80	244	P	Pn	09 51 36.7	-2.8
NEM2				eS	Sn	09 52 30.8	-3.2
JRA	Rausu	4.96	253	P	Pn	09 51 42.0	+0.4
JNK	Nakash	5.36	250	P	Pn	09 51 46.5	-0.7
JAK	Akkeshi	5.65	245	P	Pn	09 51 48.4	-2.7
JAK				eS	Sn	09 52 51.9	-2.9
JTKR	Abashiri--Toko	5.76	256	P	Pn	09 51 53.3	+0.6
SKR	Severo-Kuril's	5.88	29	ePN	Pn	09 51 52.4	-1.8
JAR	Ashorobuto	6.11	251	P	Pn	09 51 57.1	-0.4
JAR				eS	Sn	09 53 06.4	+0.1
JMP	Maruseppu	6.13	258	P	Pn	09 51 59.0	+1.3
YSS	Yuzh-Sakhalins	6.33	285	eP	Pn	09 52 05.7	+5.3
YSS	Yuzh-Sakhalins	6.33	285	ePn	Pn	09 51 58.9	-1.5
YSS	Yuzh-Sakhalins	6.33	285	ePN	Pn	09 51 58.6	-1.8
YSS				pmax	pmax		
	comp=Z,10.0nm,0.6s						
YSS				MLR	MLR		
	comp=Z,200nm,15.0s						
JKK2	Kamakawa 2	6.59	258	P	Pn	09 52 05.2	+1.1
ASAJ	Asahikawa	6.62	260	Pn	Pn	09 52 06.2	+1.7
	comp=Z,0.7nm,0.3s,baz=94,slow=17,SNR=9.6						
ASAJ				LR	LR	09 55 08.0	
	comp=Z,120nm,19.9s,baz=47,slow=41						
ASAJ	Asahikawa	6.62	260	P	Pn	09 52 06.5	+2.0
JCH	Churui	6.69	246	P	Pn	09 52 03.9	-1.5
JCH				eS	Sn	09 53 17.2	-3.3
MYR	Moyori	6.91	244	eP	Pn	09 52 06.5	-1.9
JFR	Furan	6.95	253	P	Pn	09 52 09.1	+0.1
ERM	Erimo	7.13	243	ePn	Pn	09 52 13.1	+1.6
ERM	Erimo	7.13	243	ePN	Pn	09 52 13.1	+1.6
JEM	Erimo	7.13	243	P	Pn	09 52 10.1	-1.4
JEM				eS	Sn	09 53 28.0	-3.3
JNBK	Urakawa-nobuka	7.25	246	P	Pn	09 52 10.4	-2.7
JNBK				eS	Sn	09 53 29.6	-4.6
JBT2	Biratori 2	7.27	250	P	Pn	09 52 12.0	-1.3
TYV	Tymovskoe	7.99	314	eP	Pn	09 52 30.6	+7.5
TYV	Tymovskoe	7.99	314	ePN	Pn	09 52 30.6	+7.5
JNB	Noboribetsu	8.28	251	P	Pn	09 52 26.6	-0.6
PEA0B	Petropavlovsk-	8.47	25	ePn	Pn	09 52 28.6	-1.2
PETK	Petropavlovsk-	8.47	25	Pn	Pn	09 52 27.7	-2.0
	baz=184,slow=11						
PETK	Petropavlovsk-	8.47	25	ePn	Pn	09 52 28.1	-1.6
PETK	Petropavlovsk-	8.47	25	ePN	Pn	09 52 28.1	-1.6
JKB	Kayabe	8.55	248	P	Pn	09 52 28.7	-2.3
JKB				eS	Sn	09 54 01.0	-5.3
JYM2	Yakumo 2	8.88	251	P	Pn	09 52 34.3	-1.2
JANG	Nango	9.10	238	P	Pn	09 52 33.3	-5.2
JANG				eS	Sn	09 54 09.8	-10
JTM	Tenmabayashi	9.12	242	P	Pn	09 52 35.1	-3.7
JOSM	Okushiri--Mats	9.49	252	P	Pn	09 52 43.1	-0.7
JIO	Ouri	10.49	231	P	Pn	09 52 52.0	-5.5
JIO				eS	Sn	09 54 41.2	-13
MAJO	Matsushiro	13.60	233	eP	Pn	09 53 33.2	-6.8
MAJO	Matsushiro	13.60	233	ePn	P	09 53 48.1	-0.5
MAJO	Matsushiro	13.60	233	⇑eP	P	09 53 47.9	-0.7
MAT	Matsushiro	13.60	233	P	P	09 53 47.4	-1.2
MAT				eS	Sn	09 56 18.8	+8.9
MJAR	Matsushiro Arr	13.60	233	Pn	P	09 53 45.4	-3.1
	comp=Z,0.2nm,0.3s,baz=27,slow=7.3,SNR=6.3						
MJAR				LR	LR	10 00 28.8	
	comp=Z,51nm,19.1s,baz=245,slow=44						
MJB9	Matsu-Tunnel	13.60	233	ePn	P	09 53 48.0	-0.5
KLR	Kul'dur	13.96	292	LR	LR	09 59 51.8	
	comp=Z,10nm,18.7s,baz=158,slow=40						
KLR	Kul'dur	13.96	292	⇑eP	Pn	09 53 41.9	-3.0
MA2	Magadan	14.00	358	LR	LR	09 59 46.2	
	comp=Z,78nm,18.4s,baz=196,slow=40						
MA2	Magadan	14.00	358	eP	Pn	09 53 38.6	-6.7
USRK	Ussuriysk Ar.	14.02	271	Pn	Pn	09 53 45.6	-0.1
	baz=85,slow=18						
USRK				LR	LR	09 59 30.4	
	comp=Z,66nm,20.7s,baz=11,slow=38						
MDJ	Mudanjiang	15.62	274	P	Pn	09 54 07.4	+0.3
MDJ				pmax	pmax		
	comp=Z,13nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,74nm,4.0s						
SEY	Seymchan	17.36	1	P	Pn	09 54 26.7	-2.3
	comp=Z,0.1nm,0.3s,baz=163,slow=11,SNR=4.6						
CN2	Changchun	18.70	274	eP	P	09 54 44.9	-0.1
CN2				eS	Sn	09 58 08.8	-4.9
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,90nm,12.0s						
CN2				LR	LR		
	comp=Z,100nm,12.0s						
CN2				LR	LR		
	comp=Z,1μm,15.0s						
SPIA	Saint Paul Isl	26.07	50	eP	P	09 56 02.5	+2.8
	comp=Z,147nm,1.4s						
GAMB	Gambell	27.33	35	eP	P	09 56 12.3	+1.4
	comp=Z,11nm,1.2s						
TIXI	Tiksi	28.29	345	LR	LR	10 07 43.6	
	comp=Z,54nm,18.4s,baz=236,slow=37						
TIXI	Tiksi	28.29	345	iP	P	09 56 14.1	-5.4
TIXI				pmax	pmax		
	comp=Z,11nm,1.0s						
NJ2	Nanjing	28.71	253	eP	P	09 56 27.1	+3.5
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
H11N2	WAKE ISLAND Hy	28.71	149	T	T	10 27 05.5	
	baz=338,slow=75,SNR=10						
H11N1	WAKE ISLAND Hy	28.73	149	T	T	10 27 09.5	
	baz=338,slow=75,SNR=6.3						
H11N3	WAKE ISLAND Hy	28.73	149	T	T	10 27 24.3	
	baz=338,slow=75,SNR=8.8						
HHC	Hu-ho-hao-te	29.39	275	eP	P	09 56 32.8	+3.1
HHC				sP	sP	09 56 48.4	+5.5
HHC				PP	PnPn	09 57 25.5	+1.5
HHC				S	S	10 01 20.8	-0.6
HHC				sS	sS	10 01 37.8	+1.1
HHC				pmax	pmax		
	comp=Z,35nm,1.0s						
HHC				pmax	pmax		
	comp=Z,120nm,5.9s						
HHC				LR	LR		
	comp=Z,110nm,11.0s						
HHC				LR	LR		
	comp=Z,140nm,9.8s						
HHC				LR	LR		
	comp=Z,95nm,13.5s						
H11S1	WAKE ISLAND Hy	29.77	150	T	T	10 28 27.2	
	baz=314,slow=76						
H11S3	WAKE ISLAND Hy	29.78	150	T	T	10 28 29.7	
	baz=314,slow=76						
H11S2	WAKE ISLAND Hy	29.79	150	T	T	10 28 27.6	
	baz=314,slow=76						
SONM	Songino Array	30.78	291	P	P	09 56 42.9	+0.9
	comp=Z,1.0nm,0.7s,baz=80,slow=6.8,SNR=5.9						
WHN	Wuhan	32.68	256	eP	P	09 57 04.0	+5.4
LZH	Lanzhou	36.93	272	eP	P	09 57 35.0	-0.5
LZH				pP	sP	09 57 48.3	-0.4
LZH				sP	pP	09 57 54.1	+9.2
LZH				ePP	PnPn	09 59 00.3	+0.2
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
LZH				pmax	pmax		
	comp=Z,72nm,5.2s						
LZH				LR	LR		
	comp=Z,370nm,13.0s						
LZH				LR	LR		
	comp=Z,370nm,13.4s						
LZH				LR	LR		
	comp=Z,430nm,16.5s						
GHO	Glory Hole Cre	37.20	43	eP	P	09 57 36.6	-0.8
	comp=Z,4.6nm,1.0s						
ILAR	Eielson Array	38.06	38	P	P	09 57 42.2	-2.4
	comp=Z,0.1nm,0.5s,baz=259,slow=7.9,SNR=3.8						
GTA	Gaotai	38.17	280	⇑P	P	09 57 46.8	+0.9
GTA				S	S	10 03 36.4	-0.7
GTA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,100nm,5.1s						
GTA				LR	LR		
	comp=Z,110nm,18.7s						
GTA				LR	LR		
	comp=Z,140nm,17.1s						
GTA				LR	LR		
	comp=Z,90nm,16.8s						
CD2	Chengdu	39.79	265	eP	P	09 58 00.0	+0.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
GYA	Guiyang	40.49	258	eP	P	09 58 08.9	+3.5
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
DGZ	Jazzator, Alta	42.29	300	eP	P	09 58 20.0	+0.1
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
INK	Inuvik	43.15	32	P	P	09 58 24.7	-1.7
	comp=Z,1.1nm,0.7s,baz=333,slow=4.5,SNR=3.9						
INK	Inuvik	43.15	32	eP	P	09 58 27.1	+0.7
	comp=Z,1.6nm,0.8s						
KMI	Kunming	44.05	259	P	P	09 58 37.5	+3.0
KMI				pmax	pmax		
	comp=Z,6.0nm,0.5s						
KMI				pmax	pmax		
	comp=Z,77nm,5.2s						
WMQ	Urumqi	44.41	292	P	P	09 58 38.9	+1.9
WMQ				sP	sP	09 58 55.4	+5.0
WMQ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
WMQ				LR	LR		
	comp=Z,150nm,20.5s						
WMQ				LR	LR		
	comp=Z,34nm,24.5s						
MK31	Makanchi Array	46.58	298	eP	P	09 58 53.7	-0.4
MK31	Makanchi Array	46.58	298	eP	P	09 58 53.7	-0.4
MKAR	Makanchi Array	46.58	298	P	P	09 58 52.4	-1.7
	comp=Z,0.5nm,0.5s,baz=72,slow=8.3,SNR=6.7						
MKAR				LR	LR	10 19 56.1	
	comp=Z,54nm,19.6s,baz=79,slow=38						
MKAR	Makanchi Array	46.58	298	eP	P	09 58 53.5	-0.5
MKAR	Makanchi Array	46.58	298	eP	P	09 58 53.6	-0.5
	comp=Z,4.9nm,0.6s						
MKAR	Makanchi Array	46.58	298	eP	P	09 58 53.6	-0.5
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MK01	Makanchi Array	46.58	298	eP	P	09 58 53.2	-1.0
KURK	Kurchatov	47.16	304	⇑eP	P	09 59 00.0	+1.4
KURK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KURBB	Kurchatov Arra	47.25	304	P	P	09 58 57.2	-2.0
	comp=Z,1.0nm,0.3s,baz=72,slow=8.7,SNR=4.2						
BVAR	Borovoye Array	50.81	310	P	P	09 59 25.1	-1.4
	comp=Z,0.5nm,0.5s,baz=46,slow=8.3,SNR=3.3						
BRVK	Borovoye	50.85	310	eP	P	09 59 26.9	+0.1
BRVK	Borovoye	50.85	310	⇑eP	P	09 59 26.9	+0.1
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
CMAR	Chiang Mai Arr	51.13	256	LR	LR	10 21 50.4	
	comp=Z,18nm,18.1s,baz=185,slow=37						
KDJ	Kajisay	52.00	295	eP	P	09 59 36.2	+0.4
	comp=Z,4.4nm,0.8s						
KSH	Kashi	54.16	292	eP	P	09 59 52.0	+0.4
KSH				sP	sP	10 00 10.3	+5.2
ARU	Arti	55.17	317	eP	P	09 59 58.4	-0.1
ARU	Arti	55.17	317	eP	P	09 59 58.4	-0.1
WPW	White Pass	57.05	55	eP	P	10 00 12.4	+0.1
KEV	Kevo	58.08	340	eP	P	10 00 18.2	-0.8
	comp=Z,35nm,1.5s						
KEV	Kevo	58.08	340	eP	P	10 00 18.2	-0.8
ABKAR	Akbulak array	58.38	310	eP	P	10 00 20.5	-0.9
ARCES	ARCESS Array B	58.59	341	P	P	10 00 22.2	-0.4
	comp=Z,3.3nm,0.8s,baz=46,slow=5.2,SNR=4.4						
ARCES	ARCESS Array B	58.59	341	eP	P	10 00 22.3	-0.3
ARCES	ARCESS Array B	58.59	341	eP	P	10 00 22.4	-0.3
ARCES	ARCESS Array B	58.59	341	eP	P	10 00 22.3	-0.3
HRY	Holter Researc	62.47	50	eP	P	10 00 54.0	+4.4
NVAR	Mina Array Bea	63.85	61	P	P	10 00 58.2	-0.8
	comp=Z,0.3nm,0.5s,baz=293,slow=7.8,SNR=3.9						
FIA1	FINESS Array S	64.64	334	eP	P	10 01 02.1	-1.3
	comp=Z,27nm,1.4s						
FINES	FINESS Array B	64.64	334	P	P	10 01 01.8	-1.7
	comp=Z,1.8nm,0.5s,baz=40,slow=6.4,SNR=16						
OAT	Oat Mountain	66.24	65	eP	P	10 01 19.8	+5.4
NB2	NORSAR Subarra	68.97	341	P	P	10 01 29.4	-1.7
	comp=Z,3.6nm,1.1s,baz=29,slow=6.5						
HFS	Hagfors	69.17	339	P	P	10 01 30.9	-1.4
	comp=Z,1.2nm,0.5s,baz=35,slow=5.3,SNR=8.3						
KBZ	Khabaz	70.92	313	P	P	10 01 44.3	+1.1
	comp=Z,4.4nm,0.8s,baz=209,slow=2.0,SNR=5.7						
BUR08	Bucovina Ar. S	75.96	326	eP	P	10 02 13.0	0.0
BUR04	Bucovina Ar. S	75.97	326	eP	P	10 02 12.7	-0.5
CLL	Collm	77.08	335	iP	P	10 02 19.7	+0.6
CLL	Collm	77.08	335	iP	P	10 02 19.7	+0.6
BRTR	Keskin Array B	78.52	316	P	P	10 02 27.7	+0.1
	comp=Z,0.7nm,0.8s,baz=69,slow=6.8,SNR=3.9						
KHC	Kasperske Hory	78.82	333	eP	P	10 02 28.5	-0.4
KHC	Kasperske Hory	78.82	333	eP	P	10 02 28.5	-0.4
TXAR	Lajitas Array	78.93	59	P	P	10 02 27.1	-2.8
	comp=Z,0.4nm,0.6s,baz=295,slow=4.4,SNR=7.6						
GERES	GERESS Array B	79.03	333	P	P	10 02 29.4	-0.8
	comp=Z,0.7nm,0.7s,baz=28,slow=6.0,SNR=5.8						
MEM	Membach	79.65	339	⇑P	P	10 02 34.1	+0.8
SNAA	Sanae	151.18	196	ePKPdf	PKPdf	10 10 14.5	+2.3
SNAA	Sanae	151.18	196	ePKIKP	PKPdf	10 10 14.5	+2.3

IDC 15 09:56:59.6±7.0**, 5°.06S**×**146°.48E, h92**^{km}±75^{km}**, mb3.7**/4**, mb1 3.8**/6**, mb1mx3.4**/43**, mbtmp4.0**/6**, ML1.2**/1**, Error ellipse: s-maj=59.6km s-min=26.6km az=140.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	4.38	171	P	Pn	09 58 05.3	+1.5
	1.0nm,0.3s,baz=274,slow=15,SNR=2.8						
PMG				S	Sn	09 58 53.3	-0.3
	9.3nm,0.3s,baz=167,slow=21,SNR=20						
WRA	Warramunga Arr	18.94	218	P	Pn	10 01 14.3	-0.8
	0.8nm,0.3s,baz=38,slow=12,SNR=42						
ASAR	Alice Springs	22.12	212	P	P	10 01 48.3	+0.5
	1.2nm,0.4s,baz=46,slow=7.9,SNR=40						
FITZ	Fitzroy Crossi	24.14	236	P	P	10 02 07.1	-0.1
	5.4nm,0.5s,baz=46,slow=10,SNR=19						
ZALV	Zalesovo Beam	77.94	328	P	P	10 08 46.5	-0.9
	0.4nm,0.3s,baz=119,slow=5.3,SNR=2.1						
ILAR	Eielson Array	84.82	23	P	P	10 09 24.2	+0.6
	0.8nm,0.6s,baz=249,slow=5.0,SNR=14						

IDC 15 10:05:49.3±6.1**, 5°.35S**×**145°.52E, h107**^{km}±58^{km}**, mb3.4**/4**, mb1 3.6**/6**, mb1mx3.3**/42**, mbtmp3.8**/6**, Error ellipse: s-maj=48.6km s-min=26.6km az=142.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	4.35	158	P	Pn	10 06 54.3	+1.1
	9.2nm,0.3s,baz=6.5,slow=6.4,SNR=23						
PMG				S	Sn	10 07 43.0	0.0
	15nm,0.3s,baz=150,slow=20,SNR=18						
CTA	Charters Tower	14.67	177	P	P	10 09 16.6	+1.6
	0.3nm,0.3s,baz=354,slow=11,SNR=3.4						
WRA	Warramunga Arr	18.13	216	P	P	10 09 53.5	+0.3
	0.5nm,0.3s,baz=30,slow=10,SNR=40						
ASAR	Alice Springs	21.37	210	P	P	10 10 28.4	+0.1
	0.5nm,0.4s,baz=38,slow=7.7,SNR=11						
FITZ	Fitzroy Crossi	23.19	235	P	P	10 10 46.5	-0.5
	2.6nm,0.4s,baz=53,slow=9.6,SNR=19						
STKA	Stephens Creek	26.64	187	P	P	10 11 18.5	+0.4
	2.2nm,0.9s,baz=8.7,slow=13,SNR=3.0						
ILAR	Eielson Array	85.47	23	P	P	10 18 14.8	-0.1
	0.5nm,0.7s,baz=250,slow=5.2,SNR=7.0						

*ISCJB **15** 10:19:26.7±0.3, 42°.80N±0°.04×141°.21E±0°.06, h148^{km}±3^{km}, mb3.6/12, Error ellipse: s-maj=9.0km s-min=5.5km az=41.7*

*JMA **15** 10:19:27.6±0.1, 42°.81N×141°.17E, h142^{km}±1^{km}, M3.2*

*IDC **15** 10:19:27.8±1.0, 42°.84N×141°.20E, h143^{km}±8^{km}, mb3.4/12, mb1 3.5/14, mb1mx3.3/61, mbtmp3.8/14, Error ellipse: s-maj=17.1km s-min=12.1km az=145.0*

ISC 15 10:19:27.7±0.7**, 42°.80N**±0°.05×**141°.21E**±0°.05**, h144**^{km}±5^{km}**, n32, σ0^{s}.56**/43**, mb3.6**/12**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JEW	Eniwo	0.18	75	P	Pn	10 19 47.2	+0.1
JEW				eS	Sn	10 20 01.9	0.0
JNB	Noboribetsu	0.35	202	P	Pn	10 19 47.4	-0.3
JNB				eS	Sn	10 20 02.4	-0.4
JSK	Shakotan	0.78	316	P	Pn	10 19 49.6	-0.4
JSK				eS	Sn	10 20 06.3	-0.7
JBT2	Biratori 2	0.85	91	P	Pn	10 19 50.5	-0.1
JSH	Shimam	0.87	260	P	Pn	10 19 50.6	-0.2
JKB	Kayabe	0.92	188	P	Pn	10 19 51.1	0.0
JKB				eS	Sn	10 20 08.9	0.0
JYM2	Yakumo 2	0.92	223	P	Pn	10 19 51.2	0.0
JYM2				eS	Sn	10 20 08.5	-0.5
JHR	Hokuryu	1.02	21	P	Pn	10 19 52.5	+0.5
JHR				eS	Sn	10 20 11.3	+0.7
JAB	Ashibetsu	1.02	46	P	Pn	10 19 52.7	+0.7
JAB				eS	Sn	10 20 11.6	+1.0
JHST	Hiyamasetana	1.05	250	P	Pn	10 19 52.2	-0.1
JFR	Furan	1.08	70	P	Pn	10 19 52.3	-0.2
JNBK	Urakawa-nobuka	1.25	114	P	Pn	10 19 54.2	0.0
JOT	Ohata	1.42	185	P	Pn	10 19 56.1	+0.2
JOT				eS	Sn	10 20 18.0	+0.6
JOSM	Okushiri--Mats	1.47	242	P	Pn	10 19 56.1	-0.3
JKK2	Kamakawa 2	1.55	46	P	Pn	10 19 57.5	+0.2
JKK2				eS	Sn	10 20 19.9	-0.2
JCH	Churui	1.59	96	P	Pn	10 19 57.2	-0.6
JCH				eS	Sn	10 20 19.8	-0.9
ASAJ	Asahikawa	1.66	37	P	Pn	10 19 58.8	+0.3
	15nm,0.3s,baz=246,slow=11,SNR=228						
ASAJ				S	Sn	10 20 21.7	-0.4
	7.1nm,0.3s,baz=7.9,slow=28,SNR=17						
JAR	Ashorobuto	1.94	74	P	Pn	10 20 01.5	-0.2
MJAR	Matsushiro Arr	6.66	201	P	Pn	10 21 03.9	+0.7
	0.2nm,0.3s,baz=29,slow=11,SNR=4.4						
KSRS	Korea Array	11.48	247	P	Pn	10 22 08.4	+1.1
	0.1nm,0.3s,baz=52,slow=14,SNR=3.0						
SONM	Songino Array	24.86	294	P	P	10 24 36.4	-0.4
	1.4nm,0.7s,baz=78,slow=9.6,SNR=7.9						
ZALV	Zalesovo Beam	38.11	307	P	P	10 26 32.8	+0.5
	2.6nm,0.4s,baz=84,slow=9.0,SNR=9.3						
MKAR	Makanchi Array	41.16	297	P	P	10 26 57.4	-0.3
	0.4nm,0.6s,baz=85,slow=11,SNR=6.5						
KURBB	Kurchatov Arra	42.52	303	P	P	10 27 08.5	-0.1
	5.7nm,0.5s,baz=75,slow=9.0,SNR=31						
ILAR	Eielson Array	44.80	35	P	P	10 27 25.2	-1.4
	0.3nm,0.9s,baz=279,slow=6.0,SNR=3.9						
BVAR	Borovoye Array	46.72	308	P	P	10 27 42.1	+0.2
	0.7nm,0.3s,baz=72,slow=8.9,SNR=7.1						
INK	Inuvik	49.38	29	P	P	10 28 01.8	-0.3
	0.7nm,0.5s,baz=246,slow=10.0,SNR=6.2						
WRA	Warramunga Arr	62.74	187	P	P	10 29 37.4	-0.1
	0.9nm,1.1s,baz=7.4,slow=6.8,SNR=3.3						
FINES	FINESS Array B	63.68	331	P	P	10 29 42.6	-0.6
	1.4nm,0.6s,baz=67,slow=7.7,SNR=8.6						
HFS	Hagfors	68.80	335	P	P	10 30 15.4	-0.4
	1.4nm,0.8s,baz=54,slow=7.4,SNR=3.3						
NVAR	Mina Array Bea	71.71	54	P	P	10 30 35.5	+1.3
	0.3nm,0.6s,baz=290,slow=5.6,SNR=3.1						
PDAR	Pinedale Array	73.77	46	P	P	10 30 46.8	+0.5
	0.2nm,0.5s,baz=270,slow=3.6,SNR=3.2						

MAN 15 10:50:16.6, 10°.36N×122°.17E, h44^{km}, mb4.2, ML3.0, MS2.7, 1C-1D, Panay

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAP	San Jose, Anti	0.45	331	⇑eP	Pn	10 50 28.7	+1.8
GUIM	Jordan	0.49	57	eP	Pn	10 50 24.3	-3.1
GUIM				eS	Sn	10 50 30.2	-4.9
CUYO	Cuyo Island	1.23	294	eP	Pn	10 50 38.3	+0.9
CUYO				eS	Sn	10 50 53.8	+0.8
RCP	Roxas	1.32	25	⇓eP	Pn	10 50 39.0	+0.3
RCP				eS	Sn	10 50 56.4	+1.3

*IDC **15** 10:52:26.8±1.7, 4°.49N×126°.29E, h0^{km}, mb3.5/5, mb1 3.7/5, mb1mx3.5/55, mbtmp3.5/5, MS3.8/1, Ms1 3.8/1, ms1mx2.5/40, Error ellipse: s-maj=116.4km s-min=19.4km az=70.0*

*ISCJB **15** 10:52:38.5±0.9, 4°.2N±0°.1×125°.9E±0°.3, h107^{km}, mb3.5/5, Error ellipse: s-maj=41.7km s-min=7.1km az=160.7*

ISC 15 10:52:39.6±1.2**, 4°.2N**±0°.1×**125°.8E**±0°.3**, h107**^{km}**, n9, σ0^{s}.93**/11**, mb3.5**/5**, 1C, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GSPH	General Santos	2.09	336	⇑iP	Pn	10 53 13.5	-0.3
GSPH				iS	Sn	10 53 39.3	-0.6
SKMP	Bagumbayan, Su	2.66	332	eP	Pn	10 53 21.5	+0.5
SKMP				eS	Sn	10 53 52.9	+0.1
BUKP	Musuan	3.76	349	eP	Pn	10 53 35.8	0.0
BUKP				eS	Sn	10 54 19.4	+0.2
FITZ	Fitzroy Crossi	22.13	180	P	P	10 57 27.6	+1.0
	1.7nm,0.6s,baz=2.4,slow=12,SNR=10						
WRA	Warramunga Arr	25.39	161	P	P	10 57 59.0	+1.9
	1.1nm,0.7s,baz=341,slow=10,SNR=12						
ASAR	Alice Springs	28.77	164	P	P	10 58 26.2	-1.2
	0.6nm,0.7s,baz=357,slow=7.3,SNR=9.0						
PALK	Pallekele	44.98	276	LR	LR	11 22 13.6	
	comp=Z,100nm,19.0s,baz=195,slow=39						
MKAR	Makanchi Array	56.68	326	P	P	11 02 12.1	+0.1
	0.2nm,0.4s,baz=121,slow=6.2,SNR=5.7						
KURBB	Kurchatov Arra	60.88	328	P	P	11 02 41.1	+0.2
	0.2nm,0.4s,baz=128,slow=5.8,SNR=3.7						

*IDC **15** 11:00:31.2±2.7, 22°.77N×94°.38E, h90^{km}±30^{km}, mb3.3/3, mb1 3.5/5, mb1mx3.0/68, mbtmp3.6/5, MS2.4/1, Ms1 2.4/1, ms1mx2.0/66, Error ellipse: s-maj=32.1km s-min=15.3km az=47.0*

*ISCJB **15** 11:00:34.5±0.8, 23°.12N±0°.04×94°.04E±0°.04, h129^{km}±6^{km}, mb3.7/4, Error ellipse: s-maj=7.7km s-min=5.9km az=148.0*

*NDI **15** 11:00:34.0±2.3, 23°.09N×94°.11E, h12^{km}, ML3.3*

ISC 15 11:00:35.8±1.8**, 23°.09N**±0°.08×**94°.04E**±0°.09**, h108**^{km}±12^{km}**, n31, σ1^{s}.35**/49**, mb3.7**/4**, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAIH	SAIHA	1.14	239	eP	Pn	11 00 55.5	-3.0
SAIH				eS	Sn	11 01 14.1	-1.6
SAIH				IAML		11 01 16.3	
	comp=E,406nm,0.2s						
SAIH				IAML		11 01 19.8	
	comp=N,221nm,0.4s						
AZL	Aizawl	1.40	298	eP	Pn	11 01 01.4	-0.1
AZL				eS	Sn	11 01 23.4	+2.5
AZL				IAML		11 01 25.9	
	comp=N,2μm,0.3s						
IMP	Imphal	1.74	357	eP	Pn	11 01 05.3	-0.2
IMP				eS	Sn	11 01 28.4	+0.4
IMP				IAML		11 01 30.2	
	comp=N,104nm,0.1s						
IMP				IAML		11 01 31.2	
	comp=E,53nm,0.2s						
BRDH	Bariadhala	2.25	260	P	Pn	11 01 11.6	-0.4
	comp=E,26nm,0.3s,baz=90,slow=20,SNR=2.7						
BRDH				S	Sn	11 01 40.8	+1.2
	comp=E,41nm,0.3s,baz=75,slow=22,SNR=10						
KOHI	KOHIMA	2.62	1	eP	Pn	11 01 15.6	-1.2
KOHI				eS	Sn	11 01 49.9	+1.5
KOHI				IAML		11 01 51.8	
	comp=E,119nm,0.3s						
KOHI				IAML		11 01 52.4	
	comp=N,118nm,0.6s						
AGT	Agartala	2.68	288	eS	Sn	11 01 52.3	+2.6
SHL	Shillong	3.16	322	eP	Pn	11 01 24.9	+0.9
SHL				eS	Sn	11 02 01.4	+0.2

SHL				IAML		11 02 05.7	
	comp=E,365nm,0.2s						
SHL				IAML		11 02 06.0	
	comp=N,340nm,0.1s						
MOKO	**MOKOCHONG**	3.25	8	*e*P	Pn	11 01 25.7	+0.6
MOKO				*e*S	Sn	11 02 02.8	-0.5
MOKO				IAML		11 02 05.2	
	comp=E,55nm,0.3s						
TEZP	**TEZPUR**	3.69	342	*e*P	Pn	11 01 30.4	-0.5
TEZP				*e*S	Sn	11 02 12.0	-1.6
TEZP				IAML		11 02 14.9	
	comp=E,232nm,0.2s						
GUWA	**GUWAHATI**	3.76	326	*e*P	Pn	11 01 31.4	-0.5
GUWA				*e*S	Sn	11 02 13.9	-1.3
GUWA				IAML		11 02 17.6	
	comp=N,88nm,0.1s						
GUWA				IAML		11 02 19.1	
	comp=E,147nm,0.1s						
ITAN	**ITANAGAR**	4.05	356	*e*P	Pn	11 01 35.4	-0.4
ITAN				*e*S	Sn	11 02 20.6	-1.6
ITAN				IAML		11 02 23.2	
	comp=E,121nm,0.1s						
TURI	**Tura**	4.18	307	*e*P	Pn	11 01 38.4	+0.9
TURI				*e*S	Sn	11 02 25.5	+0.2
ZIRO	**ZIRO**	4.42	358	*e*P	Pn	11 01 40.7	-0.2
ZIRO				*e*S	Sn	11 02 29.1	-2.3
CMAR	**Chiang Mai Arr**	6.50	134	P	Pn	11 01 58.5	-10
	baz=315,slow=14,SNR=5.4						
ODAN	**Odare**	7.11	303	*e*Pn	Pn	11 02 18.2	+0.8
ODAN				*e*Sn	Sn	11 03 35.5	-1.3
	comp=E,63nm,0.3s						
TAPN	**Taplejung**	7.13	308	*e*Pn	Pn	11 02 18.7	+0.9
TAPN				*e*Sn	Sn	11 03 37.0	-0.4
	comp=E,77nm,0.4s						
RAMN	**Ramite**	7.77	301	*e*Pn	Pn	11 02 27.2	+0.9
RAMN				*e*Sn	Sn	11 03 51.3	-1.5
	comp=E,48nm,0.4s						
JIRN	**Jiri**	8.43	304	*e*Pn	Pn	11 02 35.7	+0.2
JIRN				*e*Sn	Sn	11 04 08.4	-0.8
	comp=E,82nm,0.3s						
GUN	**Gumba**	8.80	305	*e*Pn	Pn	11 02 40.9	+0.5
GUN				*e*Sn	Sn	11 04 16.9	-1.1
	comp=E,41nm,0.3s						
PKIN	**Phulchoki**	9.01	302	*e*Pn	Pn	11 02 43.5	+0.3
PKIN				*e*Sn	Sn	11 04 21.1	-1.9
	comp=E,70nm,0.3s						
KKN	**Kakani**	9.20	302	*e*Pn	Pn	11 02 46.4	+0.7
KKN				*e*Sn	Sn	11 04 26.5	-1.0
DMN	**Daman**	9.25	301	*e*Pn	Pn	11 02 47.5	+1.0
DMN				*e*Sn	Sn	11 04 27.1	-1.8
	comp=E,32nm,0.4s						
GKN	**Gorkha**	9.80	302	*e*Pn	Pn	11 02 53.6	-0.2
GKN				*e*Sn	Sn	11 04 40.6	-1.5
	comp=E,53nm,0.3s						
KOLN	**Koldanda**	10.52	298	*e*Pn	Pn	11 03 03.8	+0.1
KOLN				*e*Sn	Sn	11 04 56.8	-3.0
	comp=E,44nm,0.5s						
DANN	**Dangsing**	10.65	302	*e*Sn	Sn	11 05 00.4	-2.4
	comp=E,27nm,0.4s						
PYUN	**Piuthan**	11.15	299	*e*Pn	Pn	11 03 12.0	-0.2
MKAR	**Makanchi Array**	25.48	341	P	P	11 05 54.9	+1.1
	comp=E,1.5nm,0.7s,baz=151,slow=11,SNR=14						
KURBB	**Kurchatov Arra**	30.03	340	P	P	11 06 35.3	+1.1
	comp=E,1.2nm,0.2s,baz=159,slow=7.9,SNR=3.2						
KLR	**Kul’dur**	39.46	39	LR	LR	11 27 22.2	
	comp=E,4.6nm,18.2s,baz=160,slow=41						
WRA	**Warramunga Arr**	58.09	134	P	P	11 10 11.9	-6.2
	comp=E,0.4nm,0.5s,baz=322,slow=7.4,SNR=14						
ASAR	**Alice Springs**	60.50	138	P	P	11 10 28.9	-5.8
	comp=E,0.3nm,0.5s,baz=320,slow=6.8,SNR=8.2						

IDC 15 11:05:40.7±43.0, 12.°53S×167.°99E, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.6/45, mbtmp4.0/3, Error ellipse: s-maj=732.6km s-min=110.3km az=64.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	30.97	227	P	P	11 11 59.9	+0.1
	0.5nm,0.3s,baz=55,slow=12,SNR=4.8						
WRA	**Warramunga Arr**	33.09	253	P	P	11 12 18.8	+0.2
	1.0nm,0.5s,baz=84,slow=8.7,SNR=20						
ASAR	**Alice Springs**	34.15	246	P	P	11 12 27.4	-0.5
	1.9nm,0.4s,baz=73,slow=9.5,SNR=35						

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*CSEM **15** 11:05:53.8±0.1, 40.°17N×3.°63W, h2km, ML2.8/25, Error ellipse: s-maj=2.0km s-min=1.5km az=145.0*
*INMG **15** 11:05:55.6±1.5, 40.°17N×3.°60W, h5km±2km, ML2.5, Error ellipse: s-maj=1.5km s-min=1.5km az=118.0*
*SFS **15** 11:05:55.0, 40.°16N×3.°61W, h0km, ML2.6*
*MDD **15** 11:05:55.5±0.3, 40.°17N×3.°61W, h0km, mbLg2.5/49, Error ellipse: s-maj=2.5km s-min=2.2km az=163.0, PRXIMO*
MDD EMS: III INTENSIDAD MAXIMA.
*LDG **15** 11:05:56.1±0.1, 40.°14N×3.°62W, h3km, Ml2.6/6, Error ellipse: s-maj=1.9km s-min=1.4km az=127.0*
*CNRM **15** 11:05:59.3, 35.°88N×2.°81W, h20km, ML3.5*

ISC 15 11:05:54.5±1.0, 40.°17N±0.°02×3.°61W±0.°01, h6km±9km, n159, σ1.§38/270, 3C, Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UCM	**Universidad Co**	0.31	63	*i* P	Pg	11 06 00.6	0.0
UCM				*i* S	Sg	11 06 05.0	+0.3
ESDC	**Sonseca Array**	0.56	209	⇑Pg	Pg	11 06 05.9	+0.5
	27nm,0.3s,baz=30,slow=18,SNR=18						
ESDC				Lg	Lg	11 06 13.5	
	33nm,0.5s,baz=31,slow=30,SNR=6.0						
ESDC	**Sonseca Array**	0.56	209	Pg	Pg	11 06 05.9	+0.5
	27nm,0.3s,SNR=18						
ESDC				Lg	Lg	11 06 13.5	
	33nm,0.5s,SNR=6.0						
PAB	**San Pablo**	0.84	223	⇑Pg	Pg	11 06 11.3	+0.6
	17nm,0.1s,SNR=18						
PAB				Lg	Lg	11 06 22.4	
	110nm,0.1s,SNR=7.9						
PAB	**San Pablo**	0.84	223	Pg	Pg	11 06 11.3	+0.6
	17nm,0.1s,SNR=18						
PAB				Lg	Lg	11 06 22.4	
	110nm,0.1s,SNR=7.9						
ETOR	**Torete**	1.35	61	Pg	Pb	11 06 20.6	+0.4
	2.9nm,0.2s,SNR=44						
ETOR				Lg	Lg	11 06 38.1	
	22nm,0.1s,SNR=11						
ETOR	**Torete**	1.35	61	Pg	Pb	11 06 20.6	+0.4
	2.9nm,0.2s,SNR=44						
ETOR				Lg	Lg	11 06 38.1	
	22nm,0.1s,SNR=11						
EPLA	**Plasencia**	1.90	268	Pn	Pn	11 06 27.7	+0.2
	0.3nm,0.1s,SNR=14						
EPLA				⇑Pg	Pb	11 06 30.2	+0.7
	3.3nm,0.2s,SNR=18						
EPLA				Sn	Sn	11 06 50.9	-0.7
	1.7nm,0.1s,SNR=4.0						
EPLA				Lg	Lg	11 06 55.3	
	15nm,0.1s,SNR=11						
EPLA	**Plasencia**	1.90	268	Pn	Pn	11 06 27.7	+0.2
	0.3nm,0.1s,SNR=14						
ECHE	**Chera**	2.11	105	Pg	Pg	11 06 34.9	-0.1
	0.3nm,0.1s,SNR=4.0						
ECHE				Lg	Lg	11 07 02.9	
	1.7nm,0.1s,SNR=7.9						
ECHE	**Chera**	2.11	105	Pg	Pg	11 06 34.9	-0.1
	0.3nm,0.1s,SNR=4.0						
ECHE				Lg	Lg	11 07 02.9	
	1.7nm,0.1s,SNR=7.9						
EADA	**Adamuz**	2.14	201	Pg	Pb	11 06 34.3	+0.7
	8.1nm,0.1s,SNR=30						
EADA				Lg	Lg	11 07 02.1	
	20nm,0.1s,SNR=17						
EADA	**Adamuz**	2.14	201	Pg	Pb	11 06 34.3	+0.7
	8.1nm,0.1s,SNR=30						
EADA				Lg	Lg	11 07 02.1	
	20nm,0.1s,SNR=17						
ETOB	**Tobarra**	2.21	133	Pn	Pn	11 06 32.2	+0.5
	1.2nm,0.3s,SNR=7.9						
ETOB				Pg	Pg	11 06 36.4	-0.4
	4.6nm,0.2s,SNR=54						
ETOB				Lg	Lg	11 07 05.2	
	14nm,0.3s,SNR=9.9						
ETOB	**Tobarra**	2.21	133	Pn	Pn	11 06 32.2	+0.5
	1.2nm,0.3s,SNR=7.9						
SESP	**Santiago Espad**	2.21	158	Pg	Pb	11 06 35.7	+0.8
	1.7nm,0.1s,SNR=7.9						
SESP				Lg	Lg	11 07 04.9	
	2.4nm,0.2s,SNR=7.9						
SESP	**Santiago Espad**	2.21	158	P	Pb	11 06 35.4	+0.5
SESP	**Santiago Espad**	2.21	158	Pg	Pb	11 06 35.7	+0.8
	1.7nm,0.1s,SNR=7.9						
SESP				S	Sb	11 07 04.0	+1.5
SESP				Lg	Lg	11 07 04.9	
	2.4nm,0.2s,SNR=7.9						
EQES	**Quesada**	2.40	170	Pn	Pn	11 06 35.0	+0.6
	0.2nm,0.2s,SNR=4.0						
EQES				Pg	Pb	11 06 39.4	+1.3
	2.0nm,0.1s,SNR=38						
EQES				Sn	Sn	11 07 03.3	-0.8
	4.4nm,0.2s,SNR=7.9						
EQES				Lg	Lg	11 07 11.1	
	11nm,0.2s,SNR=5.1						
EQES	**Quesada**	2.40	170	Pn	Pn	11 06 35.0	+0.6
	0.2nm,0.2s,SNR=4.0						
EMOS	**Mosqueruela**	2.41	84	Pn	Pn	11 06 35.5	+0.9
	0.6nm,0.3s,SNR=9.2						
EMOS				Sn	Sn	11 07 03.4	-1.0
	1.7nm,0.2s,SNR=7.9						
EMOS				Lg	Lg	11 07 11.3	
	2.8nm,0.2s,SNR=5.0						
EMOS	**Mosqueruela**	2.41	84	Pn	Pn	11 06 35.5	+0.9
	0.6nm,0.3s,SNR=9.2						
EMOS				Sn	Sn	11 07 03.4	-1.0
	1.7nm,0.2s,SNR=7.9						
EMOS				Lg	Lg	11 07 11.3	
	2.8nm,0.2s,SNR=5.0						
ECAB	**El Cabril**	2.52	215	Pn	Pn	11 06 36.3	+0.3
	0.8nm,0.2s,SNR=11						
ECAB				Pg	Pb	11 06 41.3	+1.1
	1.4nm,0.2s,SNR=19						
ECAB				Sn	Sn	11 07 06.0	-1.0
	1.4nm,0.1s,SNR=6.9						
ECAB				Lg	Lg	11 07 13.2	
	8.1nm,0.1s,SNR=20						
ECAB	**El Cabril**	2.52	215	Pn	Pn	11 06 36.3	+0.3
	0.8nm,0.2s,SNR=11						
ECAB	**El Cabril**	2.52	215	Pg	Pb	11 06 41.3	+1.1
	1.4nm,0.2s,SNR=19						
ECAB				Sn	Sn	11 07 06.0	-1.0
	1.4nm,0.1s,SNR=6.9						
ECAB				Lg	Lg	11 07 13.2	
	8.1nm,0.1s,SNR=20						
MVO	**Moncorvo**	2.79	292	*e*Pn	Pn	11 06 40.5	+0.8
MVO				*e*Sn	Sn	11 07 13.0	-0.6
MVO				*e*Sg	Sg	11 07 22.0	-2.0
MVO				A	A	11 07 29.4	
	20nm,0.4s						
MVO	**Moncorvo**	2.79	292	Pn	Pn	11 06 40.5	+0.8
	1.4nm,0.2s,SNR=7.7						
MVO				Sn	Sn	11 07 13.5	-0.1
	1.4nm,0.1s,SNR=7.9						
MVO				Lg	Lg	11 07 23.1	
	8.0nm,0.3s,SNR=5.0						
MVO	**Moncorvo**	2.79	292	Pn	Pn	11 06 40.5	+0.8
	1.4nm,0.2s,SNR=7.7						
MVO				Sn	Sn	11 07 13.5	-0.1
	1.4nm,0.1s,SNR=7.9						
MVO				*e*Sg	Sg	11 07 22.0	-2.0
MVO				Lg	Lg	11 07 23.1	
	8.0nm,0.3s,SNR=5.0						
AFON	**Font Roja**	2.81	121	Lg	Lg	11 07 24.6	
	16nm,0.4s,SNR=5.7						
AFON	**Font Roja**	2.81	121	Lg	Lg	11 07 24.6	
	16nm,0.4s,SNR=5.7						
ESAC	**San Caprasio**	2.84	56	Pg	Pb	11 06 46.5	+0.9
	2.4nm,0.2s,SNR=4.0						
ESAC				Sn	Sn	11 07 13.6	-1.3
	7.2nm,0.2s,SNR=7.9						
ESAC				Lg	Lg	11 07 26.8	
	44nm,0.4s,SNR=24						
ESAC	**San Caprasio**	2.84	56	Pg	Pb	11 06 46.5	+0.9
	2.4nm,0.2s,SNR=4.0						
ESAC				Sn	Sn	11 07 13.6	-1.3
	7.2nm,0.2s,SNR=7.9						
ESAC				Lg	Lg	11 07 26.8	
	44nm,0.4s,SNR=24						
PBRG	**Braganca**	2.88	306	*e*Pn	Pn	11 06 41.4	+0.5
PBRG				*e*Sg	Sg	11 07 25.6	-1.4
PBRG				A	A	11 07 29.8	
	16nm,0.4s						
PBRG	**Braganca**	2.88	306	Pn	Pn	11 06 41.4	+0.5
PBRG				Lg	Lg	11 07 25.6	
	7.8nm,0.4s						
PBRG	**Braganca**	2.88	306	Pn	Pn	11 06 41.4	+0.5
PBRG				*e*Sg	Sg	11 07 25.6	-1.4
EQUE	**Quentar**	2.96	177	Pg	Pg	11 06 50.1	-1.2
	0.2nm,0.2s,SNR=4.0						
EQUE				Lg	Lg	11 07 29.7	
	17nm,0.4s,SNR=4.5						
EQUE	**Quentar**	2.96	177	Pg	Pg	11 06 50.1	-1.2
	0.2nm,0.2s,SNR=4.0						
EQUE				Lg	Lg	11 07 29.7	
	17nm,0.4s,SNR=4.5						
EMUR	**La Murta**	2.97	141	Pg	Pg	11 06 50.3	-1.0
	5.3nm,0.2s,SNR=22						
EMUR				Lg	Lg	11 07 29.7	
	60nm,1.0s,SNR=5.0						
EMUR	**La Murta**	2.97	141	Pg	Pg	11 06 50.3	-1.0
	5.3nm,0.2s,SNR=22						
EMUR				Lg	Lg	11 07 29.7	
	60nm,1.0s,SNR=5.0						
EBAD	**Badajoz**	2.99	243	Pn	Pn	11 06 42.2	-0.2
	0.1nm,0.1s,SNR=17						
EBAD				Pg	Pb	11 06 49.9	+1.8
	0.8nm,0.1s,SNR=6.3						
EBAD				Sn	Sn	11 07 19.2	+0.7
	1.0nm,0.2s,SNR=6.1						
EBAD				Lg	Lg	11 07 28.0	
	19nm,0.2s,SNR=8.2						
EBAD	**Badajoz**	2.99	243	Pn	Pn	11 06 42.2	-0.2
	0.1nm,0.1s,SNR=17						
EBAD	**Badajoz**	2.99	243	Pg	Pb	11 06 49.9	+1.8
	0.8nm,0.1s,SNR=6.3						
EBAD				Sn	Sn	11 07 19.2	+0.7
	1.0nm,0.2s,SNR=6.1						
EBAD				Lg	Lg	11 07 28.0	
	19nm,0.2s,SNR=8.2						
PCBR	**Castelo Branco**	2.99	265	*e*Pn	Pn	11 06 42.5	+0.1
PCBR				*e*Sn	Sn	11 07 17.1	-1.4
PCBR				*e*Sg	Sg	11 07 30.7	+0.2
PCBR				A	A	11 07 34.7	
	9.2nm,0.5s						
PCBR	**Castelo Branco**	2.99	265	Pn	Pn	11 06 42.5	+0.1
PCBR				Sn	Sn	11 07 17.1	-1.4
PCBR				Lg	Lg	11 07 30.7	
	4.6nm,0.5s						
PCBR	**Castelo Branco**	2.99	265	Pn	Pn	11 06 42.5	+0.1
PCBR				Sn	Sn	11 07 17.1	-1.4
PCBR				*e*Sg	Sg	11 07 30.7	+0.2
PMRV	**Marv??o**	3.01	257	*e*Pn	Pn	11 06 42.6	-0.1
PMRV				*e*Sn	Sn	11 07 17.7	-1.3
PMRV				*e*Sg	Sg	11 07 30.5	-0.6
PMRV				A	A	11 07 34.9	
	15nm,0.6s						
PMRV	**Marv??o**	3.01	257	Pn	Pn	11 06 42.6	-0.1
PMRV				Sn	Sn	11 07 17.7	-1.3
PMRV				Lg	Lg	11 07 30.5	
	15nm,0.6s						
PMRV	**Marv??o**	3.01	257	Pn	Pn	11 06 42.6	-0.1
PMRV				Sn	Sn	11 07 17.7	-1.3
PMRV				*e*Sg	Sg	11 07 30.5	-0.6
MTE	**Manteigas**	3.02	276	*e*Sg	Sb	11 07 28.8	+3.0
MTE				A	A	11 07 34.2	
	11nm,0.4s						
MTE	**Manteigas**	3.02	276	Lg	Lg	11 07 28.8	
	5.7nm,0.4s						
MTE	**Manteigas**	3.02	276	*e*Sg	Sb	11 07 28.8	+3.0
EBEN2	**Beniarda presa**	3.04	118	Lg	Lg	11 07 33.1	
	5.5nm,0.1s,SNR=7.9						
EBEN2	**Beniarda presa**	3.04	118	Lg	Lg	11 07 33.1	
	5.5nm,0.1s,SNR=7.9						
ELAN	**Lanestosa**	3.06	2	Pg	Pb	11 06 51.3	+1.9
	0.2nm,0.2s,SNR=11						
ELAN				Lg	Lg	11 07 31.3	
	7.9nm,0.2s,SNR=7.9						
ELAN	**Lanestosa**	3.06	2	Pg	Pb	11 06 51.3	+1.9
	0.2nm,0.2s,SNR=11						
ELAN				Lg	Lg	11 07 31.3	
	7.9nm,0.2s,SNR=7.9						
EGOR	**Sierra Gorda,**	3.08	187	Pg	Pb	11 06 51.7	+2.0
	0.9nm,0.2s,SNR=7.9						
EGOR				Lg	Lg	11 07 34.3	
	5.1nm,0.3s,SNR=7.9						
EGOR	**Sierra Gorda,**	3.08	187	Pg	Pb	11 06 51.7	+2.0
	0.9nm,0.2s,SNR=7.9						
EGOR				Lg	Lg	11 07 34.3	
	5.1nm,0.3s,SNR=7.9						
ERTA	**Horta de San J**	3.10	74	Pn	Pn	11 06 43.7	-0.3
	0.4nm,0.1s,SNR=6.5						
ERTA				Sn	Sn	11 07 20.5	-0.9
	0.2nm,0.3s,SNR=7.9						
ERTA				Lg	Lg	11 07 33.7	
	4.1nm,0.2s,SNR=5.0						
ERTA	**Horta de San J**	3.10	74	Pn	Pn	11 06 43.7	-0.3
	0.4nm,0.1s,SNR=6.5						
ERTA				Sn	Sn	11 07 20.5	-0.9
	0.2nm,0.3s,SNR=7.9						
ERTA				Lg	Lg	11 07 33.7	
	4.1nm,0.2s,SNR=5.0						
IELO	**Elcoad**	3.21	33	Pn	Pn	11 06 46.8	+1.3
	0.3nm,0.1s,SNR=7.9						
IELO				Pg	Pg	11 06 56.0	0.0
	1.2nm,0.2s,SNR=7.9						
IELO				Sn	Sn	11 07 23.6	-0.5
	2.5nm,0.2s,SNR=7.9						
IELO				Lg	Lg	11 07 38.0	
	7.3nm,0.6s,SNR=7.9						
IELO	**Elcoad**	3.21	33	Pn	Pn	11 06 46.8	+1.3
	0.3nm,0.1s,SNR=7.9						
IELO	**Elcoad**	3.21	33	Pg	Pg	11 06 56.0	0.0
	1.2nm,0.2s,SNR=7.9						
IELO				Sn	Sn	11 07 23.6	-0.5
	2.5nm,0.2s,SNR=7.9						
IELO				Lg	Lg	11 07 38.0	
	7.3nm,0.6s,SNR=7.9						
EORO	**Oroz-Betelu**	3.22	32	Pn	Pn	11 06 47.5	+1.8
	0.4nm,0.1s,SNR=4.0						
EORO				Pg	Pg	11 06 55.0	-1.2
	1.1nm,0.3s,SNR=7.9						
EORO				Sn	Sn	11 07 24.2	-0.2
	3.9nm,0.4s,SNR=7.9						
EORO				Lg	Lg	11 07 38.0	
	7.7nm,0.3s,SNR=7.9						
EORO	**Oroz-Betelu**	3.22	32	Pn	Pn	11 06 47.5	+1.8
	0.4nm,0.1s,SNR=4.0						
ELGU	**Los Guajares,**	3.30	180	Pg	Pg	11 06 57.1	-0.6
	1.8nm,0.2s,SNR=7.9						
ELGU				Lg	Lg	11 07 41.7	
	8.1nm,0.3s,SNR=7.9						
ELGU	**Los Guajares,**	3.30	180	Pg	Pg	11 06 57.1	-0.6
	1.8nm,0.2s,SNR=7.9						
ELGU				Lg	Lg	11 07 41.7	
	8.1nm,0.3s,SNR=7.9						
PVRL	**Vila Real**	3.31	291	*e*Sg	Sg	11 07 38.9	-1.9
PVRL	**Vila Real**	3.31	291	Lg	Lg	11 07 38.9	
PVRL	**Vila Real**	3.31	291	*e*Sg	Sg	11 07 38.9	-1.9
EBER	**Berja**	3.31	170	Pg	Pg	11 06 57.2	-0.8
	1.0nm,0.4s,SNR=6.6						
EBER				Lg	Lg	11 07 42.4	
	16nm,0.4s,SNR=7.9						
EBER	**Berja**	3.31	170	Pg	Pg	11 06 57.2	-0.8
	1.0nm,0.4s,SNR=6.6						
EBER				Lg	Lg	11 07 42.4	
	16nm,0.4s,SNR=7.9						
PVIS	**Viseu**	3.32	281	*e*Sn	Sn	11 07 25.4	-1.3
PVIS				A	A	11 07 42.2	
	9.8nm,0.5s						
PVIS	**Viseu**	3.32	281	Sn	Sn	11 07 25.4	-1.3
	4.9nm,0.5s						
PVIS	**Viseu**	3.32	281	Sn	Sn	11 07 25.4	-1.3
	4.9nm,0.5s						
PBAR	**Barrancos**	3.33	234	*e*Pn	Pn	11 06 48.0	+1.0
PBAR				*e*Sn	Sn	11 07 26.0	-0.9
PBAR				A	A	11 07 42.9	
	23nm,0.4s						
PBAR	**Barrancos**	3.33	234	Pn	Pn	11 06 48.0	+1.0
PBAR				Sn	Sn	11 07 26.0	-0.9
	23nm,0.4s						
PBAR	**Barrancos**	3.33	234	Pn	Pn	11 06 48.0	+1.0
PBAR				Sn	Sn	11 07 26.0	-0.9
	23nm,0.4s						
PESTR	**Estremoz**	3.34	248	*e*Pn	Pn	11 06 48.1	+0.8
PESTR				*e*Sg	Sb	11 07 38.4	+3.3
PESTR				A	A	11 07 46.1	
	8.2nm,0.5s						
PESTR	**Estremoz**	3.34	248	*e*Pn	Pn	11 06 48.1	+0.8
PESTR				*e*Sg	Sb	11 07 38.4	+3.3
EARI	**Arriondas**	3.35	340	Pn	Pn	11 06 47.4	0.0
	0.1nm,0.1s,SNR=7.9						
EARI				Pg	Pg	11 06 57.3	-1.4
	6.1nm,0.4s,SNR=8.0						
EARI				Sn	Sn	11 07 26.2	-1.3
	1.1nm,0.2s,SNR=5.9						
EARI				Lg	Lg	11 07 40.5	
	9.4nm,0.4s,SNR=7.9						
EARI	**Arriondas**	3.35	340	Pn	Pn	11 06 47.4	0.0
	0.1nm,0.1s,SNR=7.9						
ENIJ	**Nijar**	3.38	161	Lg	Lg	11 07 41.9	
	6.2nm,0.3s,SNR=7.9						
ENIJ	**Nijar**	3.38	161	Lg	Lg	11 07 41.9	
	6.2nm,0.3s,SNR=7.9						
EMIN	**Mina Concepcio**	3.38	226	Pn	Pn	11 06 48.3	+0.5
	0.1nm,0.1s,SNR=7.9						
EMIN				Pg	Pb	11 06 56.5	+1.6
	0.1nm,0.0s,SNR=4.0						
EMIN				Sn	Sn	11 07 26.1	-2.2
	0.2nm,0.2s,SNR=7.9						
EMIN				Lg	Lg	11 07 40.0	
	3.7nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	3.38	226	Pn	Pn	11 06 48.3	+0.5
	0.1nm,0.1s,SNR=7.9						
POLO	**Lamas de Olo**	3.40	292	*e*Pn	Pn	11 06 48.1	0.0
POLO				*e*Sn	Sn	11 07 27.6	-1.2
POLO				*e*Sg	Sg	11 07 41.6	-2.1
POLO				A	A	11 07 52.4	
	3.4nm,0.6s						
POLO	**Lamas de Olo**	3.40	292	*e*Pn	Pn	11 06 48.1	0.0
POLO				*e*Sn	Sn	11 07 27.6	-1.2
POLO				*e*Sg	Sg	11 07 41.6	-2.1
EALK	**Alkurruntz**	3.43	27	Pn	Pn	11 06 49.4	+0.9
	1.9nm,0.2s,SNR=6.2						
EALK				Sn	Sn	11 07 28.4	-1.1
	5.4nm,0.2s,SNR=20						
EALK				Lg	Lg	11 07 45.8	
	17nm,0.4s,SNR=7.9						
EALK	**Alkurruntz**	3.43	27	Pn	Pn	11 06 49.4	+0.9
	1.9nm,0.2s,SNR=6.2						
EALK				Sn	Sn	11 07 28.4	-1.1
	5.4nm,0.2s,SNR=20						
EALK				Lg	Lg	11 07 45.8	
	17nm,0.4s,SNR=7.9						
SJPF	**Ste Jean**	3.44	30	*e*Pn	Pn	11 06 48.9	+0.3
SJPF				*e*Sn	Sn	11 07 28.0	-1.7
SJPF				*e*Sg	Sg	11 07 44.8	-0.2
	2.9nm,0.2s						
SJPF	**Ste Jean**	3.44	30	Pn	Pn	11 06 48.9	+0.3
SJPF				Sn	Sn	11 07 28.0	-1.7
SJPF				Lg	Lg	11 07 44.8	
	1.4nm,0.2s						
SJPF	**Ste Jean**	3.44	30	Pn	Pn	11 06 48.9	+0.3
SJPF				Sn	Sn	11 07 28.0	-1.7
SJPF				*e*Sg	Sg	11 07 44.8	-0.2
	1.5nm,0.2s						
ETSF	**Etsaut**	3.56	39	*e*Pn	Pn	11 06 50.4	+0.1
ETSF				*e*Sn	Sn	11 07 31.1	-1.6
ETSF				*e*Sg	Sg	11 07 48.1	-0.7
	3.2nm,0.4s						
ETSF	**Etsaut**	3.56	39	Pn	Pn	11 06 50.4	+0.1
ETSF				Sn	Sn	11 07 31.1	-1.6
ETSF				Lg	Lg	11 07 48.1	
	1.6nm,0.4s						
ETSF	**Etsaut**	3.56	39	Pn	Pn	11 06 50.4	+0.1
ETSF				Sn	Sn	11 07 31.1	-1.6
ETSF				*e*Sg	Sg	11 07 48.1	-0.7
	1.6nm,0.4s						
PCAB	**Cabril**	3.68	296	*e*Sn	Sn	11 07 34.8	-0.9
PCAB				*e*Sg	Sg	11 07 52.0	-0.8
PCAB				A	A	11 07 54.6	
	8.5nm,0.5s						
PCAB	**Cabril**	3.68	296	Sn	Sn	11 07 34.8	-0.9
PCAB				Lg	Lg	11 07 52.0	
	4.2nm,0.5s						
PCAB	**Cabril**	3.68	296	Sn	Sn	11 07 34.8	-0.9
PCAB				*e*Sg	Sg	11 07 52.0	-0.8
EMIJ	**Mijas**	3.71	195	Pn	Pn	11 06 53.0	+0.6
	0.5nm,0.2s,SNR=7.9						
EMIJ				Sn	Sn	11 07 36.0	-0.4
	2.1nm,0.4s,SNR=7.9						
EMIJ				Lg	Lg	11 07 50.3	

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      3.0nm,0.4s,SNR=7.9
EMIJ  Mijas                3.71 195   Pn    Pn     11 06 53.0 +0.6
      0.5nm,0.2s,SNR=7.9
EMIJ                                  Sn    Sn     11 07 36.0 -0.4
      2.1nm,0.4s,SNR=7.9
EMIJ                                  Lg    Lg     11 07 50.3
      3.0nm,0.4s,SNR=7.9
PMTG  Montargil            3.73 254  ePn    Pn     11 06 52.8 +0.2
PMTG                                 eSn    Sn     11 07 35.9 -0.9
PMTG                                 eSg    Sg     11 07 51.3 -3.0
PMTG                                  A     A      11 07 52.5
      7.1nm,0.5s
PMTG  Montargil            3.73 254  ePn    Pn     11 06 52.8 +0.2
PMTG                                 eSn    Sn     11 07 35.9 -0.9
PMTG                                 eSg    Sg     11 07 51.3 -3.0
PTOM  Tomar                3.73 263  ePn    Pn     11 06 53.4 +0.8
PTOM                                 eSg    Sg     11 07 52.9 -1.5
PTOM                                  A     A      11 07 55.5
      8.2nm,0.6s
PTOM  Tomar                3.73 263   Pn    Pn     11 06 53.4 +0.8
PTOM                                  Lg    Lg     11 07 52.9
      4.1nm,0.6s
PTOM  Tomar                3.73 263   Pn    Pn     11 06 53.4 +0.8
PTOM                                 eSg    Sg     11 07 52.9 -1.5
EPOB  Poblet               3.75  70   Sn    Sn     11 07 36.1 -1.3
      0.9nm,0.5s,SNR=7.9
EPOB                                  Lg    Lg     11 07 52.9
      6.5nm,0.5s,SNR=7.9
EPOB  Poblet               3.75  70   Sn    Sn     11 07 36.1 -1.3
      0.9nm,0.5s,SNR=7.9
EPOB                                  Lg    Lg     11 07 52.9
      6.5nm,0.5s,SNR=7.9
PCAS  Casmilo, Conde       3.75 270  ePn    Pn     11 06 53.9 +1.0
PCAS                                 eSn    Sn     11 07 36.5 -0.8
PCAS                                 eSg    Sg     11 07 53.8 -1.2
PCAS                                  A     A      11 07 59.8
      6.1nm,0.6s
PCAS  Casmilo, Conde       3.75 270  ePn    Pn     11 06 53.9 +1.0
PCAS                                 eSn    Sn     11 07 36.5 -0.8
PCAS                                 eSg    Sg     11 07 53.8 -1.2
ELOB  Lobios               3.77 298   Pn    Pn     11 06 53.3 +0.1
      1.1nm,0.1s,SNR=7.9
ELOB                                  Sn    Sn     11 07 37.0 -1.0
      2.9nm,0.2s,SNR=7.9
ELOB                                  Lg    Lg     11 07 53.6
      11nm,0.4s,SNR=7.9
ELOB  Lobios               3.77 298   Pn    Pn     11 06 53.3 +0.1
      1.1nm,0.1s,SNR=7.9
ELOB                                  Sn    Sn     11 07 37.0 -1.0
      2.9nm,0.2s,SNR=7.9
ELOB                                  Lg    Lg     11 07 53.6
      11nm,0.4s,SNR=7.9
EVO   Evora                3.79 246  ePn    Pn     11 06 53.9 +0.6
EVO                                  eSn    Sn     11 07 37.3 -0.9
EVO                                  eSg    Sg     11 07 53.0 -3.1
EVO                                   A     A      11 08 03.6
      9.0nm,0.4s
EVO   Evora                3.79 246   Pn    Pn     11 06 53.9 +0.6
EVO                                   Sn    Sn     11 07 37.3 -0.9
EVO                                   Lg    Lg     11 07 53.0
      9.0nm,0.4s
EVO   Evora                3.79 246   Pn    Pn     11 06 53.9 +0.6
EVO                                   Sn    Sn     11 07 37.3 -0.9
EVO                                  eSg    Sg     11 07 53.0 -3.1
ECHI  Chisagues Biel       3.79  48   Pn    Pn     11 06 54.4 +0.8
      0.3nm,0.1s,SNR=4.0
ECHI                                  Sn    Sn     11 07 36.5 -2.1
      2.0nm,0.1s,SNR=7.9
ECHI  Chisagues Biel       3.79  48   Pn    Pn     11 06 54.4 +0.8
      0.3nm,0.1s,SNR=4.0
ECHI                                  Sn    Sn     11 07 36.5 -2.1
      2.0nm,0.1s,SNR=7.9
PBEJ  Beja                 3.94 238  eSn    Sn     11 07 41.9 -0.2
PBEJ                                 eSg    Sg     11 07 57.5 -3.6
PBEJ                                  A     A      11 08 02.5
      5.9nm,0.4s
PBEJ  Beja                 3.94 238   Sn    Sn     11 07 41.9 -0.2
PBEJ                                  Lg    Lg     11 07 57.5
      3.0nm,0.4s
PBEJ  Beja                 3.94 238   Sn    Sn     11 07 41.9 -0.2
PBEJ                                 eSg    Sg     11 07 57.5 -3.6
PGAV  Gavieira, Arco       3.96 298  ePn    Pn     11 06 56.1 +0.3
PGAV                                 eSn    Sn     11 07 41.4 -1.1
PGAV                                 eSg    Sg     11 07 59.6 -1.9
PGAV                                  A     A      11 08 07.5
      6.4nm,0.8s
PGAV  Gavieira, Arco       3.96 298  ePn    Pn     11 06 56.1 +0.3
PGAV                                 eSn    Sn     11 07 41.4 -1.1
PGAV                                 eSg    Sg     11 07 59.6 -1.9
EGRO  El Granado           4.01 230   Pn    Pn     11 06 56.5 +0.1
      0.4nm,0.1s,SNR=7.9
EGRO                                  Sn    Sn     11 07 41.2 -2.4
      0.8nm,0.1s,SNR=7.9
EGRO                                  Lg    Lg     11 08 00.9
      5.4nm,0.2s,SNR=7.9
EGRO  El Granado           4.01 230   Pn    Pn     11 06 56.5 +0.1
      0.4nm,0.1s,SNR=7.9
EGRO                                  Sn    Sn     11 07 41.2 -2.4
      0.8nm,0.1s,SNR=7.9
EGRO                                  Lg    Lg     11 08 00.9
      5.4nm,0.2s,SNR=7.9
EPF   Esparros             4.12  45  ePn    Pn     11 06 58.1 +0.2
EPF                                  eSn    Sn     11 07 44.7 -1.7
EPF                                  eSg    Sg     11 08 05.7 -0.9
      3.8nm,0.4s
EPF   Esparros             4.12  45   Pn    Pn     11 06 58.1 +0.2
EPF                                   Sn    Sn     11 07 44.7 -1.7
EPF                                   Lg    Lg     11 08 05.7
      1.9nm,0.4s
EPF   Esparros             4.12  45   Pn    Pn     11 06 58.1 +0.2
EPF                                   Sn    Sn     11 07 44.7 -1.7
EPF                                  eSg    Sg     11 08 05.7 -0.9
      1.9nm,0.4s
EPON  Pontenova            4.12 321   Pn    Pn     11 06 57.9 -0.1
      0.4nm,0.1s,SNR=7.9
EPON                                  Sn    Sn     11 07 44.4 -2.0
      4.1nm,0.4s,SNR=7.9
EPON                                  Lg    Lg     11 08 04.1
      4.2nm,0.2s,SNR=7.9
EPON  Pontenova            4.12 321   Pn    Pn     11 06 57.9 -0.1
      0.4nm,0.1s,SNR=7.9
EPON                                  Sn    Sn     11 07 44.4 -2.0
      4.1nm,0.4s,SNR=7.9
EPON                                  Lg    Lg     11 08 04.1
      4.2nm,0.2s,SNR=7.9
CSOR  Sort                 4.20  57   Sn    Sn     11 07 46.9 -1.6
      12nm,0.6s,SNR=7.9
CSOR  Sort                 4.20  57   Sn    Sn     11 07 46.9 -1.6
      12nm,0.6s,SNR=7.9
PVAQ  Vaqueiros            4.24 231  ePn    Pn     11 06 59.8 +0.3
PVAQ                                 eSn    Sn     11 07 47.5 -1.7
PVAQ                                 eSg    Sg     11 08 08.0 -2.5
PVAQ                                  A     A      11 08 14.9
      11nm,0.5s
PVAQ  Vaqueiros            4.24 231   Pn    Pn     11 06 59.8 +0.3
PVAQ                                  Sn    Sn     11 07 47.5 -1.7
PVAQ                                  Lg    Lg     11 08 08.0
      11nm,0.5s
PVAQ  Vaqueiros            4.24 231   Pn    Pn     11 06 59.8 +0.3
PVAQ                                  Sn    Sn     11 07 47.5 -1.7
PVAQ                                 eSg    Sg     11 08 08.0 -2.5
EAGO  Agolada(Pontev       4.27 309   Pn    Pn     11 07 00.7 +0.6
      0.7nm,0.1s,SNR=7.9
EAGO                                  Sn    Sn     11 07 47.9 -2.3
      1.6nm,0.2s,SNR=7.9
EAGO                                  Lg    Lg     11 08 08.4
      3.7nm,0.2s,SNR=7.9
EAGO  Agolada(Pontev       4.27 309   Pn    Pn     11 07 00.7 +0.6
      0.7nm,0.1s,SNR=7.9
EAGO                                  Sn    Sn     11 07 47.9 -2.3
      1.6nm,0.2s,SNR=7.9
EAGO                                  Lg    Lg     11 08 08.4
      3.7nm,0.2s,SNR=7.9
MESJ  Messejana            4.28 239  eSg    Sg     11 08 10.0 -1.9
MESJ                                  A     A      11 08 16.0
      7.1nm,0.5s
MESJ  Messejana            4.28 239   Lg    Lg     11 08 10.0
      7.1nm,0.5s
MESJ  Messejana            4.28 239  eSg    Sg     11 08 10.0 -1.9
PCVE  Castro Verde         4.29 235  ePn    Pn     11 07 00.4 +0.2
PCVE                                 eSg    Sg     11 08 08.7 -3.4
PCVE                                  A     A      11 08 15.5
      8.2nm,0.8s
PCVE  Castro Verde         4.29 235   Pn    Pn     11 07 00.4 +0.2
PCVE                                  Lg    Lg     11 08 08.7
      8.2nm,0.8s
PCVE  Castro Verde         4.29 235   Pn    Pn     11 07 00.4 +0.2
PCVE                                 eSg    Sg     11 08 08.7 -3.4
PBDV  Barranco-do-Ve       4.47 231  eSn    Sn     11 07 54.1 -1.0
PBDV                                 eSg    Sg     11 08 18.4 +0.4
PBDV                                  A     A      11 08 22.8
      8.0nm,0.6s
PBDV  Barranco-do-Ve       4.47 231   Sn    Sn     11 07 54.1 -1.0
PBDV                                  Lg    Lg     11 08 18.4
      8.0nm,0.6s
PBDV  Barranco-do-Ve       4.47 231   Sn    Sn     11 07 54.1 -1.0
PBDV                                 eSg    Sg     11 08 18.4 +0.4
PMAFR Mafra                4.55 256  eSn    Sn     11 07 55.5 -1.5
PMAFR                                 A     A      11 08 20.8
      15nm,0.7s
PMAFR Mafra                4.55 256  eSn    Sn     11 07 55.5 -1.5
PTEO  Sao Teotonio         4.78 238  eSg    Sg     11 08 24.9 -2.9
PTEO  Sao Teotonio         4.78 238   Lg    Lg     11 08 24.9
PTEO  Sao Teotonio         4.78 238  eSg    Sg     11 08 24.9 -2.9
CLLI  Llivia               4.79  59   Sn    Sn     11 08 01.0 -2.2
      0.7nm,0.1s,SNR=7.9
MTLF  Montolieu            5.39  52  ePn    Pn     11 07 15.7 +0.4
MTLF                                 eSn    Sn     11 08 15.1 -2.5
      0.7nm,0.3s
MTLF  Montolieu            5.39  52   Pn    Pn     11 07 15.7 +0.4
MTLF                                  Sn    Sn     11 08 15.1 -2.5
      0.3nm,0.3s
MTLF  Montolieu            5.39  52   Pn    Pn     11 07 15.7 +0.4
LFF   La Frestale          5.75  33  ePn    Pn     11 07 20.6 +0.3
LFF                                  eSn    Sn     11 08 22.6 -3.9
      1.5nm,0.2s
LFF   La Frestale          5.75  33   Pn    Pn     11 07 20.6 +0.3
LFF                                   Sn    Sn     11 08 22.6 -3.9
      0.8nm,0.2s
LFF   La Frestale          5.75  33   Pn    Pn     11 07 20.6 +0.3
CAF   Calviac              6.33  40  ePn    Pn     11 07 28.4  0.0
CAF                                  eSn    Sn     11 08 37.4 -3.6
      0.5nm,0.2s
CAF   Calviac              6.33  40   Pn    Pn     11 07 28.4  0.0
CAF                                   Sn    Sn     11 08 37.4 -3.6
      0.2nm,0.2s
CAF   Calviac              6.33  40   Pn    Pn     11 07 28.4  0.0
```

IDC 15 11:15:23.2±8.4**,18°.85N**×**146°.57E,h0km,mb3.5**/5**,**
mb1 3.6/5**,mb1mx3.4**/54**,mbtmp3.5**/5**,Error ellipse:**
s-maj=332.9km s-min=22.4km az=81.0,Mariana Islands

```
Code  Station Name          Δ°   AZ°   Phase ID          Time      Res
                                       Op    ISC      h  m  s     ISC
WRA   Warramunga Arr      40.38 198    P     P        11 23 01.0 -2.0
      0.6nm,1.0s,baz=19,slow=8.1,SNR=3.0
SONM  Songino Array       43.54 321    P     P        11 23 29.7 +0.9
      0.3nm,0.3s,baz=124,slow=7.8,SNR=3.2
ASAR  Alice Springs       44.03 197    P     P        11 23 34.6 +1.8
      0.1nm,0.6s,baz=24,slow=9.2,SNR=3.9
KURBB Kurchatov Arra      61.76 318    P     P        11 25 42.8 -0.7
      0.5nm,0.7s,baz=95,slow=7.4,SNR=6.9
BVAR  Borovoye Array      66.88 320    P     P        11 26 16.9 -0.2
      1.3nm,0.6s,baz=72,slow=6.2,SNR=7.4
```

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*IDC **15** 11:38:09.3±2.0,22°.31N×89°.31E,h0km,mb3.4/4,*
mb1 3.7/6,mb1mx3.3/71,mbtmp3.5/6,ML3.9/2,MS3.2/3,
Ms1 3.2/3,ms1mx2.6/50,Error ellipse: s-maj=47.3km
s-min=26.5km az=62.0
*DMN **15** 11:38:16.6±0.2,22°.61N×89°.49E,h10km,Ml4.5/11,Error*
ellipse: s-maj=9.0km s-min=4.3km az=51.0
ISC 15 11:38:12.2±1.0**,22°.63N**±0°.08×**89°.52E**±0°.05**,h10km,n29,**
σ2ˢ23/40**,mb3.5**/4**,MS3.2**/3**,Bangladesh**

```
Code  Station Name          Δ°   AZ°   Phase ID          Time      Res
                                       Op    ISC      h  m  s     ISC
BELO  BELONIA              1.88  71   eP     Pn       11 38 47.0 +2.6
BELO                                  eS     Sn       11 39 09.9 +1.7
BRDH  Bariadhala           1.96  88    Pn    Pb       11 38 47.5 -0.5
      32nm,0.3s,baz=253,slow=19,SNR=10
BRDH                                   Lg    Lg       11 39 10.3
      342nm,0.3s,baz=45,slow=22,SNR=51
TURI  Tura                 3.00  14   eP     Pn       11 39 00.2 +0.4
TURI                                  eS     Sn       11 39 33.4 -2.5
TURI                                   IAML           11 39 34.9
      comp=E,345nm,0.2s
SAIH  SAIHA                3.21  92   eP     Pn       11 39 04.2 +1.3
SAIH                                  eS     Sn       11 39 40.3 -0.9
SAIH                                   IAML           11 39 43.3
      comp=N,100nm,0.3s
SHL   Shillong             3.63  36   eP     Pb       11 39 18.8 +2.2
SHL                                   eS     Sn       11 39 49.2 -2.6
SHL                                    IAML           11 39 53.9
      comp=E,41nm,0.1s
SHL                                    IAML           11 39 54.2
      comp=N,50nm,0.3s
GUWA  GUWAHATI             4.06  29   eP     Pn       11 39 14.6 +0.2
GUWA                                  eS     Sn       11 39 59.2 -2.8
GUWA                                   IAML           11 39 59.9
      comp=N,42nm,0.1s
ODAN  Odare                4.63 336   ePn    Pn       11 39 25.0 +2.5
ODAN                                  eSn    Sn       11 40 15.4 -1.1
      comp=N,353nm,0.3s
TAPN  Taplejung            4.97 341   ePn    Pn       11 39 29.7 +2.5
RAMN  Ramite               5.05 329   ePn    Pn       11 39 30.6 +2.4
RAMN                                  eSn    Sn       11 40 25.5 -1.3
      comp=N,88nm,0.3s
KOHI  KOHIMA               5.20  53   eP     Pn       11 39 27.0 -3.1
KOHI                                  eS     Sn       11 40 24.9 -5.5
KOHI                                   IAML           11 40 31.3
      comp=N,18nm,0.5s
KOHI                                   IAML           11 40 33.9
      comp=E,22nm,0.4s
JIRN  Jiri                 5.84 330   ePn    Pn       11 39 41.7 +2.5
JIRN                                  eSn    Sn       11 40 45.0 -1.5
      comp=E,128nm,0.3s
MOKO  MOKOCHONG            5.85  50   eS     Sn       11 40 44.4 -2.0
MOKO                                   IAML           11 40 48.0
      comp=E,49nm,0.7s
MOKO                                   IAML           11 40 48.9
      comp=N,36nm,0.2s
ITAN  ITANAGAR             5.89  40   eS     Sn       11 40 44.6 -2.7
PKIN  Phulchoki            6.18 324   ePn    Pn       11 39 45.9 +2.1
PKIN                                  eSn    Sn       11 40 51.9 -2.8
      comp=N,92nm,0.3s
GUN   Gumba                6.20 329   ePn    Pn       11 39 46.8 +2.7
GUN                                   eSn    Sn       11 40 52.9 -2.4
      comp=N,79nm,0.4s
DMN   Daman                6.37 322   ePn    Pn       11 39 48.5 +2.2
DMN                                   eSn    Sn       11 40 57.4 -1.9
      comp=N,41nm,0.4s
KKN   Kakani               6.41 324   ePn    Pn       11 39 49.2 +2.3
KKN                                   eSn    Sn       11 40 57.4 -2.9
      comp=N,25nm,0.2s
GKN   Gorkha               6.93 321   ePn    Pn       11 39 55.9 +1.9
GKN                                   eSn    Sn       11 41 10.6 -2.5
      comp=N,96nm,0.3s
KOLN  Koldanda             7.41 315   ePn    Pn       11 40 02.4 +1.8
KOLN                                  eSn    Sn       11 41 21.8 -3.0
      comp=N,86nm,0.4s
DANN  Dangsing             7.71 319   ePn    Pn       11 40 06.4 +1.6
DANN                                  eSn    Sn       11 41 28.1 -4.3
      comp=N,36nm,0.3s
PYUN  Piuthan              8.03 314   ePn    Pn       11 40 10.3 +1.2
PYUN                                  eSn    Sn       11 41 37.0 -3.1
      comp=N,59nm,0.4s
CMAR  Chiang Mai Arr       9.76 113    Pn    Pn       11 40 32.4 -0.3
      comp=N,0.4nm,0.3s,baz=293,slow=14,SNR=5.3
MKAR  Makanchi Array      24.80 348    P     P        11 43 36.5 +2.1
      comp=N,0.5nm,0.7s,baz=175,slow=9.7,SNR=2.8
SONM  Songino Array       28.55  24    P     P        11 44 09.0 +0.8
      comp=N,0.6nm,0.6s,baz=225,slow=10.0,SNR=2.9
KBZ   Khabaz              43.65 310    LR    LR       12 06 40.6
      comp=N,41nm,21.8s,baz=311,slow=39
MJAR  Matsushiro Arr      44.11  60    LR    LR       12 07 05.1
      comp=N,19nm,18.3s,baz=160,slow=39
GUMO  Guam                53.12  90    LR    LR       12 12 19.8
      comp=N,22nm,18.9s,baz=198,slow=38
WRA   Warramunga Arr      60.87 131    P     P        11 48 23.6 -1.7
      comp=N,0.5nm,1.0s,baz=320,slow=7.0,SNR=3.0
ASAR  Alice Springs       63.09 134    P     P        11 48 38.2 -1.9
      comp=N,0.1nm,0.4s,baz=308,slow=6.1,SNR=4.7
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*ISCJB **15** 11:40:55.1±0.7,11°.76S±0°.07×166°.6E±0°.2,h300km,*
mb3.6/13,Error ellipse: s-maj=20.6km s-min=9.0km
az=178.5
*IDC **15** 11:40:55.5±3.7,11°.69S×166°.67E,h291km±37km,*
mb3.4/13,mb1 3.5/14,mb1mx3.4/49,mbtmp4.0/14,Error
ellipse: s-maj=21.8km s-min=17.9km az=108.0
ISC 15 11:40:56.2±0.7**,11°.83S**±0°.08×**166°.7E**±0°.2**,h300km,n17,**
σ1ˢ36/18**,mb3.7**/13**,Santa Cruz Islands**

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Code  Station Name          Δ°   AZ°   Phase ID          Time      Res
                                       Op    ISC      h  m  s     ISC
DZM   Mont Dzumac         10.19 181    P     Pn       11 43 18.2 +1.5
      2.1nm,0.3s,baz=72,slow=7.2,SNR=26
DZM                                    S     S        11 45 08.4 -3.0
      0.2nm,0.3s,baz=94,slow=19,SNR=3.0
WRA   Warramunga Arr      32.09 251    P     P        11 46 55.8 -0.4
      0.2nm,0.3s,baz=83,slow=9.0,SNR=4.6
ASAR  Alice Springs       33.28 245    P     P        11 47 05.7 -0.7
      0.3nm,0.6s,baz=69,slow=10,SNR=5.8
FITZ  Fitzroy Crossi      40.08 256    P     P        11 48 04.2 +0.7
      4.3nm,1.1s,baz=43,slow=9.5,SNR=5.1
MJAR  Matsushiro Arr      55.09 332    P     P        11 49 56.0 -1.8
      1.6nm,0.7s,baz=170,slow=8.8,SNR=8.0
ASAJ  Asahikawa           59.84 340    P     P        11 50 30.7 +0.1
      4.4nm,0.6s,baz=233,slow=5.1,SNR=13
KSRS  Korea Array         61.04 325    P     P        11 50 38.2 -0.6
      1.1nm,0.7s,baz=132,slow=7.8,SNR=4.9
PETK  Petropavlovsk-      65.14 354    P     P        11 51 04.2 -1.1
      2.5nm,0.9s,baz=187,slow=10
VNDA  Vanda               65.73 181    P     P        11 51 10.2 +1.5
      0.6nm,0.8s,baz=340,slow=2.7,SNR=3.8
CMAR  Chiang Mai Arr      73.27 293    P     P        11 51 56.5 +0.8
      2.0nm,0.9s,baz=113,slow=4.9,SNR=6.2
SONM  Songino Array       79.84 324    P     P        11 52 32.5 +0.6
      1.0nm,0.7s,baz=131,slow=6.8,SNR=5.7
ILAR  Eielson Array       83.97  18    P     P        11 52 52.0 -0.6
      3.3nm,0.8s,baz=237,slow=5.2,SNR=35
NVAR  Mina Array Bea      85.83  50    P     P        11 53 03.1 +0.3
      0.1nm,0.4s,baz=233,slow=8.9,SNR=3.2
MKAR  Makanchi Array      94.72 317    P     P        11 53 44.1 +0.3
      2.1nm,0.7s,baz=92,slow=5.9,SNR=18
ARCES ARCESS Array B     117.32 346    PKP   PKPdf    11 59 06.5 +0.9
      2.3nm,1.1s,baz=62,slow=2.9,SNR=4.3
FINES FINESS Array B     122.84 339    PKP   PKPdf    11 59 16.8 +0.5
      1.8nm,0.9s,baz=270,slow=3.4,SNR=3.9
ESDC  Sonseca Array      151.06 345    PKPbc PKPbc    12 00 11.9 -2.3
      0.7nm,0.8s,baz=16,slow=2.2,SNR=3.3
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*ISCJB **15** 11:46:28.6±0.4,71°.31N±0°.03×10°.17W±0°.07,h10km,*
mb3.6/10,MS3.3/26,Error ellipse: s-maj=4.4km
s-min=2.8km az=148.6
*CSEM **15** 11:46:30.8±0.2,71°.29N×10°.04W,h10km,ML4.2,Error*
ellipse: s-maj=6.5km s-min=3.2km az=127.0
*IDC **15** 11:46:31.9±0.7,71°.38N×9°.64W,h0km,mb3.6/10,*
mb1 3.9/14,mb1mx3.6/70,mbtmp3.7/14,ML3.5/4,MS3.3/29,
Ms1 3.3/29,ms1mx3.1/65,Error ellipse: s-maj=16.4km
s-min=7.6km az=52.0
*BER **15** 11:46:31.9±3.0,71°.24N×10°.09W,h8km±17km,ML3.7,*
ML4.2(NAO)
*NAO **15** 11:46:33.2±5.1,71°.33N×9°.54W,h14km±23km,ML4.2*
*REY **15** 11:46:36.5,70°.46N×8°.71W,h10km*
ISC 15 11:46:31.9±0.5**,71°.30N**±0°.04×**9°.89W**±0°.05**,h10km,n90,**
σ1ˢ75/91**,mb3.6**/10**,MS3.3**/26**,4C,Jan Mayen Island**
region

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Code  Station Name          Δ°   AZ°   Phase ID          Time      Res
                                       Op    ISC      h  m  s     ISC
JMI   Jan Mayen            0.53 134⇑ iP     Pb        11 46 43.1 -0.1
JMI                                  eS     Sg        11 46 49.9 +0.8
JMI                                   IAML            11 46 56.6
      comp=Z,4µm,0.4s
JNW   Jan Mayen West       0.55 119⇑ iP     Pg        11 46 42.9 +0.4
JNW                                  eS     Sg        11 46 49.9 +0.3
JNW                                   IAML            11 46 50.1
      comp=Z,5µm,0.2s
JMIC  Jan Mayen            0.55 124   Pg    Pg        11 46 42.9 +0.4
JMIC                                  Lg    Lg        11 46 49.7
JMIC  Jan Mayen            0.55 124   Pg    Pg        11 46 42.8 +0.4
      comp=Z,479nm,0.3s,baz=284,slow=1.9,SNR=154
JMIC                                  Lg    Lg        11 46 49.0
      comp=Z,1000nm,0.3s,baz=114,slow=19,SNR=118
JMIC                                  LR    LR        11 47 05.6
      comp=Z,1µm,20.6s,baz=85,slow=63
JMIC  Jan Mayen            0.55 124   Pg    Pg        11 46 42.9 +0.4
JMIC                                  Lg    Lg        11 46 49.7
JMIC  Jan Mayen            0.55 124⇑ iP     Pg        11 46 42.8 +0.4
JMIC                                 eS     Sg        11 46 49.7  0.0
JMIC                                  IAML            11 46 55.3
      comp=Z,3µm,0.3s
JNE   Jan Mayen East       0.60 120⇑ iP     Pg        11 46 43.5  0.0
JNE                                  eS     Sg        11 46 50.8 -0.7
JNE                                   IAML            11 46 53.5
      comp=Z,4µm,0.2s
ILEI  Leirhofn             5.46 209   P     Pn        11 47 51.7 -1.4
      baz=219
ILEI                                  S     Sn        11 48 52.7 -3.1
      baz=219
IGRI  Grimsey              5.60 215   P     Pn        11 47 56.7 +1.6
      baz=225
IGIL  Gilhagi              5.75 207   P     Pn        11 47 56.0 -1.1
      baz=216
IGIL                                  S     Sn        11 48 59.1 -3.8
      baz=216
IGIL  Gilhagi              5.75 207   P     Pn        11 47 56.0 -1.1
IGIL                                  S     Sn        11 48 59.1 -3.8
IHED  Heoinshofoi          5.89 211   P     Pn        11 47 59.0 -0.1
      baz=220
IHED                                  S     Sn        11 49 03.6 -2.9
      baz=220
IDIM  Dimmadals^¡s         5.94 209   P     Pn        11 47 59.3 -0.5
      baz=218
IDIM                                  S     Sn        11 49 05.1 -2.7
      baz=218
IBRE  Brettingsstaoi       5.96 213   S     Sn        11 49 06.3 -1.8
      baz=222
IBRE  Brettingsstaoi       5.96 213   S     Sn        11 49 06.3 -1.8
DAG   Danmarks Havn        6.00 340  i P    Pn        11 47 59.4 -1.2
DAG                                  eS     Sn        11 49 02.3 -6.9
DAG   Danmarks Havn        6.00 340  i P    Pn        11 47 59.4 -1.2
IGHA  Grjothals            6.01 208   P     Pn        11 47 59.8 -0.9
      baz=216
IGHA                                  S     Sn        11 49 05.9 -3.6
      baz=216
IGRA  Granastaoir          6.09 211   P     Pn        11 48 01.6 -0.2
      baz=220
IGRA                                  S     Sn        11 49 09.6 -1.7
      baz=220
IGRA  Granastaoir          6.09 211   P     Pn        11 48 01.5 -0.2
IGRA                                  S     Sn        11 49 09.6 -1.7
IGRS  Grimsstaoir          6.13 205   P     Pn        11 48 00.7 -1.7
      baz=213
IGRS                                  S     Sn        11 49 08.4 -4.0
      baz=213
ISIG  Siglufjorour         6.13 217   P     Pn        11 48 03.7 +1.3
      baz=226
ISIG                                  S     Sn        11 49 11.4 -1.0
      baz=226
IHLA  Hella                6.20 214   P     Pn        11 48 04.4 +1.1
      baz=223
IHLA                                  S     Sn        11 49 13.2 -0.9
      baz=223
IMEL  Melhnausar           6.27 207   P     Pn        11 48 02.9 -1.3
      baz=215
IMEL                                  S     Sn        11 49 12.8 -3.0
      baz=215
IHRN  Hraun                6.40 221   P     Pn        11 48 08.3 +2.3
      baz=230
IHRN                                  S     Sn        11 49 19.8 +0.9
      baz=230
IADA  Aoalbol              6.65 201   P     Pn        11 48 08.1 -1.4
      baz=209
IADA  Aoalbol              6.65 201   P     Pn        11 48 08.1 -1.4
IASK  Askja                6.75 205   P     Pn        11 48 10.4 -0.6
      baz=213
IMKO  Mokollar             6.78 204   P     Pn        11 48 10.0 -1.4
      baz=211
IVSH  V-Sauoahnukur        6.87 201   P     Pn        11 48 11.3 -1.3
      baz=209
IKRE  Kreppuhraun          6.97 204   P     Pn        11 48 12.2 -1.8
      baz=211
HSPB  Hornsund (broa       8.92  39  ePn    Pn        11 48 39.9 -0.6
HSP   Hornsund             8.92  39   Pn    Pn        11 48 39.6 -0.9
KBS   Kingsbay             9.40  26   Pn    Pn        11 48 45.9 -1.2
KBS   Kingsbay             9.40  26  ePn    Pn        11 48 46.8 -0.3
KONS  Konsvik              9.54 109  ePn    Pn        11 48 48.7 -0.4
SPA0  Spitsbergen Ar       9.65  33   Pn    Pn        11 48 51.0 +0.4
      baz=247,slow=16
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SPA0                                Sn        Sn          11 50 35.7  -3.2
      baz=261,slow=28
SPA0  Spitsbergen Ar     9.65  33   Pn        Pn          11 48 51.0  +0.4
      baz=247,slow=16
SPA0                                Sn        Sn          11 50 35.7  -3.2
      baz=261,slow=28
SPITS Spitsbergen Ar     9.65  33   Pn        Pn          11 48 50.8  +0.3
      baz=245,slow=14,SNR=287
SPITS                               Sn        Sn          11 50 35.5  -3.3
      baz=252,slow=24,SNR=4.6
TRO   Tromso             9.74  86   ePn       Pn          11 48 50.9  -0.9
MOR8  Moi Rana          10.16 108   ePn       Pn          11 48 58.0  +0.5
NSS   Namsos            10.60 119   ePn       Pn          11 49 03.2  -0.3
KIF   Kilpisjarvi       10.61  88   ePn       Pn          11 49 03.2  -0.4
HOPEN Hopen             10.83  46   ePn       Pn          11 49 06.7  +0.1
AKN   Aaknes            11.27 136   Pn        Pn          11 49 13.1  +0.3
AKN   Aaknes            11.27 136   Pn        Pn          11 49 13.1  +0.3
HEF   Hetta             11.81  88   ePn       Pn          11 49 19.8  -0.4
ARA0  ARCESS Array S    11.89  81   Pn        Pn          11 49 21.0  -0.2
      baz=292,slow=12
ARA0  ARCESS Array S    11.89  81   Pn        Pn          11 49 21.0  -0.2
      baz=292,slow=12
ARCES ARCESS Array B    11.89  81   Pn        Pn          11 49 20.9  -0.3
      comp=Z,0.2nm,0.3s,baz=291,slow=12,SNR=9.7
NOA   NORSAR Array B    13.26 130   LR        LR          11 54 07.6
      comp=Z,64nm,21.4s,baz=330,slow=34
NRA0  NORESS Array S    13.60 130   Pn        Pn          11 49 44.8  +0.3
NRA0  NORESS Array S    13.60 130   Pn        Pn          11 49 43.8  -0.8
HFS   Hagfors           14.66 128   Pn        Pn          11 49 57.8  -1.3
      baz=323,slow=10
HFS   Hagfors           14.66 128   Pn        Pn          11 49 57.5  -1.5
      comp=Z,0.2nm,0.3s,baz=352,slow=9.0,SNR=8.0
HFS                                 LR        LR          11 55 01.2
      comp=Z,79nm,21.9s,baz=328,slow=35
HFS   Hagfors           14.66 128   Pn        Pn          11 49 57.8  -1.3
      baz=323,slow=10
SFJD  Kangerlussuaq     14.89 273   LR        LR          11 54 58.6
      comp=Z,122nm,18.1s,baz=54,slow=34
EKA   Eskdalemuir Ar    16.29 166   Pn        P           11 50 22.0  -1.4
      baz=353,slow=13,SNR=9.7
FIA0  FINESS Array S    17.14 107   P         P           11 50 32.0  -0.8
      baz=315,slow=14
FIA0  FINESS Array S    17.14 107   Pn        P           11 50 32.0  -0.8
      baz=315,slow=14
FINES FINESS Array B    17.14 107   Pn        Pn          11 50 29.9  -1.3
      comp=Z,0.2nm,0.3s,baz=318,slow=12,SNR=8.9
KLMR  Klimovskoe        21.86  93   eP        P           11 51 23.7  -0.5
KLMR                                AMP                   11 51 31.9
      comp=Z,40nm,1.2s
FRB   Frobisher Bay     22.72 280   LR        LR          11 59 57.6
      comp=Z,77nm,18.9s,baz=342,slow=35
RES   Resolute Bay      23.08 318   P         P           11 51 38.2  +1.2
      comp=Z,3.5nm,0.9s,baz=45,slow=8.6,SNR=2.5
RES                                 LR        LR          12 00 32.0
      comp=Z,98nm,19.1s,baz=114,slow=36
GERES GERESS Array B    25.05 141   P         P           11 51 58.1  +2.1
      comp=Z,1.3nm,0.8s,baz=350,slow=7.3,SNR=9.9
GERES                               LR        LR          12 00 41.9
      comp=Z,33nm,20.3s,baz=348,slow=34
VRAC  Vranov            25.23 137   P         P           11 52 00.9  +3.4
      comp=Z,0.6nm,0.4s,baz=324,slow=8.7,SNR=3.3
VRAC                                LR        LR          12 01 28.2
      comp=Z,27nm,19.0s,baz=343,slow=36
DAVOX Davos/Dischmat    26.33 148   LR        LR          12 02 31.4
      comp=Z,42nm,20.1s,baz=90,slow=36
MLR   Muntele Rosu      31.05 127   LR        LR          12 06 08.2
      comp=Z,30nm,18.3s,baz=344,slow=38
ESDC  Sonseca Array     31.84 171   LR        LR          12 04 45.1
      comp=Z,32nm,21.0s,baz=310,slow=34
AKTO  Aktyubinsk        36.36  88   LR        LR          12 08 05.9
      comp=Z,40nm,18.6s,baz=315,slow=36
YKA   Yellowknife Ar    36.84 312   P         P           11 53 40.9  +1.3
      comp=Z,0.5nm,0.5s,baz=34,slow=8.5,SNR=4.6
YKA                                 LR        LR          12 08 22.2
      comp=Z,7.7nm,18.3s,baz=30,slow=36
BRTR  Keskin Array B    38.47 121   P         P           11 53 56.0  +2.2
      comp=Z,0.4nm,0.3s,baz=334,slow=9.6,SNR=2.4
MDT   Midelt            38.64 173   LR        LR          12 08 54.1
      comp=Z,52nm,18.6s,baz=348,slow=35
ILAR  Eielson Array     41.06 334   P         P           11 54 16.8  +1.9
      comp=Z,0.7nm,0.8s,baz=18,slow=8.2,SNR=6.8
ILAR                                LR        LR          12 15 58.1
      comp=Z,18nm,18.2s,baz=73,slow=43
GNI   Garni             41.32 109   LR        LR          12 11 38.4
      comp=Z,32nm,18.7s,baz=328,slow=36
ULM   Lac du Bonnet     42.25 288   LR        LR          12 10 06.2
      comp=Z,31nm,19.6s,baz=130,slow=33
KURBB Kurchatov Arra    42.66  70   P         P           11 54 28.4  +0.3
      comp=Z,0.4nm,0.4s,baz=320,slow=8.6,SNR=3.0
MKAR  Makanchi Array    47.21  69   P         P           11 55 05.4  +1.1
      comp=Z,1.2nm,0.9s,baz=338,slow=5.9,SNR=5.0
MKAR                                LR        LR          12 18 06.5
      comp=Z,39nm,19.3s,baz=243,slow=40
TKL   Tuckaleechee C    51.52 268   LR        LR          12 16 17.5
      comp=Z,44nm,18.5s,baz=341,slow=35
SONM  Songino Array     52.90  49   LR        LR          12 21 08.0
      comp=Z,56nm,19.2s,baz=166,slow=39
PDAR  Pinedale Array    53.10 295   LR        LR          12 18 26.0
      comp=Z,65nm,19.1s,baz=26,slow=36
PETK  Petropavlovsk-    55.58   9   LR        LR          12 17 30.9
      comp=Z,29nm,20.7s,baz=292,slow=34
KOWA  Kowa              56.89 173   LR        LR          12 20 51.5
      comp=Z,56nm,18.1s,baz=210,slow=36
YBH   Yreka Blue Hor    57.72 305   LR        LR          12 20 18.6
      comp=Z,52nm,18.9s,baz=358,slow=35
TORD  Torodi Ar. Bea    58.55 167   P         P           11 56 29.2  +0.9
      comp=Z,1.1nm,0.6s,baz=350,slow=7.3
TORD                                LR        LR          12 22 11.8
      comp=Z,34nm,18.1s,baz=320,slow=36
NVAR  Mina Array Bea    59.61 300   LR        LR          12 22 13.1
      comp=Z,45nm,18.5s,baz=298,slow=36
TXAR  Lajitas Array     63.72 284   P         P           11 57 04.8  +1.4
      comp=Z,0.1nm,0.6s,baz=38,slow=4.6,SNR=2.6
TXAR                                LR        LR          12 23 31.6
      comp=Z,30nm,18.9s,baz=0.0,slow=35
DBIC  Dimbokro          64.63 174   LR        LR          12 24 45.6
      comp=Z,21nm,20.6s,baz=58,slow=35
LPIG  La Paz            70.67 288   LR        LR          12 28 52.1
      comp=Z,35nm,18.4s,baz=71,slow=36
CMAR  Chiang Mai Arr    78.52  66   LR        LR          12 40 08.8
      comp=Z,17nm,18.6s,baz=245,slow=41
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*DDA **15** 11:51:10.5, 39°.90N×34°.78E, h7^{km}, Ml2.8*
*ISCJB **15** 11:51:12.4±0.6, 39°.92N±0°.03×34°.73E±0°.05, h9^{km}±7^{km}, Error ellipse: s-maj=6.9km s-min=5.3km az=176.2*
*ISK **15** 11:51:12.1, 40°.06N×34°.89E, h29^{km}, ML2.5/1*
*CSEM **15** 11:51:13.0±0.2, 39°.89N×34°.67E, h10^{km}, ML2.5, Error ellipse: s-maj=5.3km s-min=4.4km az=68.0*
ISC 15 11:51:11.3±1.1, **39°.92N**±0°.03×**34°.78E**±0°.03, **h6**^{km}±12^{km}, **n20**, σ**0^{s}.81**/32, **Turkey**

```
Code  Station Name      Δ°   AZ°   Phase ID            Time        Res
                                   Op        ISC       h  m  s     ISC
CORM  Corum              0.28 336  PG        Pb        11 51 19.0  +0.1
CORM                               SG        Sb        11 51 24.1  +0.2
CORM  Corum              0.28 336  ePg       Pb        11 51 19.0  +0.1
CORM                               eSg       Sb        11 51 24.1  +0.2
COAL  Corum-Alaca        0.37  25  i P       Pg        11 51 18.0  -0.5
COAL                               i S       Sg        11 51 24.1  +0.8
COAL  Corum-Alaca        0.37  25  P         Pg        11 51 18.0  -0.5
COAL                               S         Sg        11 51 24.1  +0.8
CDAG  Cicekdag           0.43 227  i P       Pg        11 51 19.8  +0.1
CDAG                               i S       Sg        11 51 25.4   0.0
CDAG  Cicekdag           0.43 227  P         Pg        11 51 19.8  +0.1
CDAG                               S         Sg        11 51 25.4   0.0
YOZ   Yozgat             0.50 124  PG        Pn        11 51 23.8  -1.3
YOZ                                SG        Sb        11 51 32.3  +2.1
YOZ   Yozgat             0.50 124  ePg       Pn        11 51 23.8  -1.3
YOZ                                eSg       Sb        11 51 32.3  +2.1
ELDT  Eldivan            1.18 299  i P       Pg        11 51 33.9  -0.1
ELDT                               i S       Sg        11 51 49.4   0.0
ELDT  Eldivan            1.18 299  P         Pg        11 51 33.9  -0.1
ELDT                               S         Sg        11 51 49.4   0.0
SERE  Sereflikochisa     1.36 224  PN        Pg        11 51 37.9  +0.6
SERE  Sereflikochisa     1.36 224  ePn       Pg        11 51 37.9  +0.6
AKSY  AKSARAY - Alti     1.50 212  i P       Pn        11 51 38.2  -0.6
AKSY                               i S       Sb        11 51 58.7  -0.1
AKSY  AKSARAY - Alti     1.50 212  P         Pn        11 51 38.2  -0.6
AKSY                               S         Sb        11 51 58.7  -0.1
ANTO  Ankara             1.53 269  PN        Pb        11 51 39.6  -0.5
ANTO  Ankara             1.53 269  ePn       Pb        11 51 39.6  -0.5
GULA  Gulagac            1.63 195  PN        Pb        11 51 41.0  -0.8
GULA  Gulagac            1.63 195  ePn       Pb        11 51 41.0  -0.8
KIZT  Kizilcal           2.48 246  PN        Pn        11 51 52.9  +0.6
KIZT  Kizilcal           2.48 246  ePn       Pn        11 51 52.9  +0.6
```

ROM 15 11:51:31.7±0.2, **39°.633N**±0°.005×**16°.89E**±0°.01, **h20**^{km}±1^{km}, **Md1.8**/5, **Southern Italy**

```
Code  Station Name      Δ°   AZ°   Phase ID            Time        Res
                                   Op        ISC       h  m  s     ISC
PIPA  Pietrapaola        0.16 202  P         Pg        11 51 35.8  -0.5
PIPA                               S         Sg        11 51 39.3  -0.1
PIPA                               AML       AML
      comp=E,11005µm,1.6s
PIPA                               AML       AML
      comp=N,6530µm,0.4s
PIPA                               AML       AML
      comp=E,11070µm,1.6s
PIPA                               AML       AML
      comp=N,7030µm,1.2s
PIPA                               AML       AML
      comp=E,11005µm,1.6s
PIPA                               AML       AML
      comp=N,6530µm,0.4s
PIPA                               AML       AML
      comp=E,11065µm,1.6s
PIPA                               AML       AML
      comp=N,7030µm,1.2s
PIPA                               AML       AML
      comp=E,11000µm,1.6s
PIPA                               AML       AML
      comp=E,11065µm,1.6s
PIPA                               AML       AML
      comp=N,7030µm,1.2s
PIPA                               AML       AML
      comp=N,6530µm,0.4s
PIPA                               END
PIPA                               END
CELI  Celico             0.38 232  P         Pg        11 51 38.9  -0.8
CELI                               S         Sg        11 51 44.8  -0.4
CELI                               AML       AML
      comp=E,3920µm,0.6s
CELI                               AML       AML
      comp=N,1780µm,0.3s
CELI                               AML       AML
      comp=E,10000µm,0.5s
CELI                               AML       AML
      comp=N,4580µm,0.3s
CELI                               AML       AML
      comp=E,10000µm,0.5s
CELI                               AML       AML
      comp=N,4575µm,0.3s
CELI                               AML       AML
      comp=N,4575µm,0.3s
CELI                               AML       AML
      comp=E,10000µm,0.5s
CELI                               END
CELI                               END
TIP   Timpagrande        0.47 193  P         Pg        11 51 40.6  -0.7
TIP                                S         Sb        11 51 48.0  +0.2
TIP                                AML       AML
      comp=E,719µm,0.4s
TIP                                AML       AML
      comp=N,588µm,0.9s
TIP                                AML       AML
      comp=E,719µm,0.4s
TIP                                AML       AML
      comp=N,588µm,0.9s
TIP                                AML       AML
      comp=E,719µm,0.4s
TIP                                AML       AML
      comp=N,588µm,0.9s
TIP                                END
TIP                                END
SALB  San Lorenzo Be     0.49 300  P         Pg        11 51 40.8  -0.9
SALB                               S         Sb        11 51 48.7  +0.2
SALB                               AML       AML
      comp=E,1320µm,0.2s
SALB                               AML       AML
      comp=N,676µm,0.5s
SALB                               AML       AML
      comp=E,1410µm,0.2s
SALB                               AML       AML
      comp=N,729µm,0.5s
SALB                               AML       AML
      comp=E,1520µm,0.3s
SALB                               AML       AML
      comp=N,1008µm,1.2s
SALB                               AML       AML
      comp=E,1615µm,0.3s
SALB                               AML       AML
      comp=N,1085µm,1.0s
SALB                               AML       AML
      comp=N,1011µm,1.2s
SALB                               AML       AML
      comp=N,1085µm,1.0s
SALB                               AML       AML
      comp=E,1615µm,0.3s
SALB                               AML       AML
      comp=E,1520µm,0.3s
SALB                               END
SALB                               END
ORI   Oriolo Calabro     0.55 322  P         Pb        11 51 41.7  -0.9
ORI                                AML       AML
      comp=E,2085µm,0.3s
ORI                                AML       AML
      comp=N,1210µm,0.2s
ORI                                AML       AML
      comp=E,3335µm,0.3s
ORI                                AML       AML
      comp=N,2340µm,0.3s
ORI                                AML       AML
      comp=N,2335µm,0.3s
ORI                                AML       AML
      comp=E,3335µm,0.3s
SERS  Sersale            0.62 195  P         Pb        11 51 43.9  +0.1
SERS                               S         Sb        11 51 52.0  -0.1
SERS                               AML       AML
      comp=E,516µm,0.4s
SERS                               AML       AML
      comp=N,670µm,0.9s
SERS                               AML       AML
      comp=E,654µm,0.9s
SERS                               AML       AML
      comp=N,506µm,1.6s
SERS                               AML       AML
      comp=E,654µm,0.9s
SERS                               AML       AML
      comp=N,506µm,1.6s
SERS                               AML       AML
      comp=N,506µm,1.6s
SERS                               AML       AML
      comp=E,654µm,0.9s
SERS                               END
SERS                               END
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*IDC **15** 11:51:27.9±1.9, 34°.83N×142°.76E, h0^{km}, mb3.3/2, mb1 3.4/5, mb1mx3.2/64, mbtmp3.3/5, ML3.0/3, Error ellipse: s-maj=45.5km s-min=28.8km az=78.0*
*ISCJB **15** 11:51:32.9±1.1, 34°.64N±0°.07×142°.64E±0°.10, h42^{km}, mb3.3/2, Error ellipse: s-maj=11.9km s-min=10.0km az=143.4*
*JMA **15** 11:51:33.0±0.9, 34°.73N×142°.61E, h25^{km}, M3.2*
ISC 15 11:51:33.4±1.6, **34°.72N**±0°.09×**142°.7E**±0°.1, **h42**^{km}, **n14**, σ**1^{s}.49**/17, **Off east coast of Honshu**

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Code  Station Name      Δ°   AZ°   Phase ID            Time        Res
                                   Op        ISC       h  m  s     ISC
BSO1  Boso 1             1.43 268  P         Pn        11 51 56.4  +0.1
CHOJ  Chosi              1.80 303  P         Pn        11 52 02.7  +0.7
BSO3  Boso 3             1.81 273  P         Pn        11 52 02.7  +0.9
BSO4  Boso 4             1.96 279  P         Pn        11 52 05.2  +1.1
JHJ   Hachijo jima 2     2.91 237  Pn        Pn        11 52 16.8  -0.4
      7.6nm,0.3s,baz=246,slow=20,SNR=16
JHJ                                Sn        Sn        11 52 48.6  -2.3
      27nm,0.3s,baz=246,slow=20,SNR=8.3
JOD2  Odawara 2          3.02 281  P         Pn        11 52 18.6  -0.1
JOD2                               S         Sn        11 52 53.9  +0.3
JAG   Ashikaga           3.15 304  P         Pn        11 52 20.8  +0.3
JRY   Ryogami san        3.37 294  P         Pn        11 52 24.4  +0.9
JFT   Otama              3.39 326  P         Pn        11 52 23.9  +0.1
JYN   Shimob             3.50 284  P         Pn        11 52 25.9  +0.6
JYN                                S         Sn        11 53 05.6  +0.1
MJAR  Matsushiro Arr     4.09 298  Pn        Pn        11 52 30.8  -2.6
      0.6nm,0.3s,baz=93,slow=6.8,SNR=11
ASAJ  Asahikawa          9.38 360  Pn        Pn        11 53 43.0  -3.0
      0.2nm,0.3s,baz=193,slow=14,SNR=3.9
WRA   Warramunga Arr    54.94 190  P         P         12 00 60.0  -0.2
      0.2nm,0.6s,baz=7.2,slow=7.5,SNR=4.0
ASAR  Alice Springs     58.66 189  P         P         12 01 29.1  +2.5
      0.3nm,0.9s,baz=9.0,slow=6.1,SNR=3.4
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*ROM **15** 11:51:55.4±0.2, 39°.645N±0°.006×16°.90E±0°.01, h25^{km}±2^{km}, ML2.8/24*
ISC 15 11:51:56.5±1.1, **39°.67N**±0°.03×**16°.86E**±0°.04, **h13**^{km}±10^{km}, **n32**, σ**1^{s}.42**/33, **Southern Italy**

```
Code  Station Name      Δ°   AZ°   Phase ID            Time        Res
                                   Op        ISC       h  m  s     ISC
PIPA  Pietrapaola        0.19 191  i P       Pg        11 52 00.8   0.0
PIPA                               AML       AML
      comp=E,11005µm,1.6s
PIPA                               AML       AML
      comp=N,6530µm,0.4s
PIPA                               AML       AML
      comp=E,11065µm,1.6s
PIPA                               AML       AML
      comp=N,7030µm,1.2s
PIPA                               AML       AML
      comp=E,11000µm,1.6s
PIPA                               AML       AML
      comp=E,11065µm,1.6s
PIPA                               AML       AML
      comp=N,7030µm,1.2s
PIPA                               AML       AML
      comp=N,6530µm,0.4s
CELI  Celico             0.38 226  P         Pg        11 52 03.8  -0.4
CELI                               AML       AML
      comp=E,3920µm,0.6s
CELI                               AML       AML
      comp=N,1780µm,0.3s
CELI                               AML       AML
      comp=E,10000µm,0.5s
CELI                               AML       AML
      comp=N,4580µm,0.3s
CELI                               AML       AML
      comp=E,3915µm,0.6s
CELI                               AML       AML
      comp=N,1780µm,0.3s
CELI                               AML       AML
      comp=E,10000µm,0.5s
CELI                               AML       AML
      comp=N,4575µm,0.3s
CELI                               AML       AML
      comp=N,1780µm,0.3s
CELI                               AML       AML
      comp=E,3915µm,0.6s
CELI                               AML       AML
      comp=N,4575µm,0.3s
CELI                               AML       AML
      comp=E,10000µm,0.5s
SALB  San Lorenzo Be     0.45 298  i P       Pg        11 52 05.5  +0.1
SALB                               AML       AML
      comp=E,1520µm,0.3s
SALB                               AML       AML
      comp=N,1012µm,1.2s
SALB                               AML       AML
      comp=E,1620µm,0.3s
SALB                               AML       AML
      comp=N,1085µm,1.0s
SALB                               AML       AML
      comp=E,1520µm,0.3s
SALB                               AML       AML
      comp=N,1008µm,1.2s
SALB                               AML       AML
      comp=E,1615µm,0.3s
SALB                               AML       AML
      comp=N,1085µm,1.0s
SALB                               AML       AML
      comp=N,1085µm,1.0s
SALB                               AML       AML
      comp=N,1011µm,1.2s
SALB                               AML       AML
      comp=E,1615µm,0.3s
SALB                               AML       AML
      comp=E,1520µm,0.3s
TIP   Timpagrande        0.50 189  i P       Pg        11 52 05.6  -0.7
TIP                                AML       AML
      comp=E,719µm,0.4s
TIP                                AML       AML
      comp=N,588µm,0.9s
TIP                                AML       AML
      comp=E,719µm,0.4s
TIP                                AML       AML
      comp=N,588µm,0.9s
TIP                                AML       AML
      comp=E,719µm,0.4s
TIP                                AML       AML
      comp=N,588µm,0.9s
ORI   Oriolo Calabro     0.51 321  P         Pb        11 52 06.7  -0.5
ORI                                AML       AML
      comp=E,3335µm,0.3s
ORI                                AML       AML
      comp=N,2340µm,0.3s
ORI                                AML       AML
      comp=E,3335µm,0.3s
ORI                                AML       AML
      comp=N,2340µm,0.3s
ORI                                AML       AML
      comp=N,2335µm,0.3s
ORI                                AML       AML
      comp=E,3335µm,0.3s
SERS  Sersale            0.65 192  P         Pg        11 52 08.3  -0.9
SERS                               AML       AML
      comp=E,516µm,0.4s
SERS                               AML       AML
      comp=N,670µm,0.9s
SERS                               AML       AML
      comp=E,654µm,0.9s
SERS                               AML       AML
      comp=N,506µm,1.6s
SERS                               AML       AML
      comp=E,654µm,0.9s
SERS                               AML       AML
      comp=N,506µm,1.6s
SERS                               AML       AML
      comp=N,506µm,1.6s
SERS                               AML       AML
      comp=E,654µm,0.9s
CET2  Cetraro            0.71 259  P         Pg        11 52 09.2  -1.2
CET2                               S         Sg        11 52 19.8   0.0
CET2                               AML       AML
      comp=E,586µm,0.8s
CET2                               AML       AML
      comp=N,784µm,0.5s
CET2                               AML       AML
      comp=E,586µm,0.8s
CET2                               AML       AML
      comp=N,784µm,0.5s
CET2                               AML       AML
      comp=E,586µm,0.8s
CET2                               AML       AML
      comp=N,784µm,0.5s
CRAC  Craco              0.77 335  P         Pb        11 52 11.3  -0.4
CRAC                               AML       AML
      comp=E,1435µm,0.2s
CRAC                               AML       AML
      comp=N,984µm,0.4s
CRAC                               AML       AML
      comp=E,1435µm,0.2s
CRAC                               AML       AML
      comp=N,984µm,0.4s
SCHR  S. Chirico Rap     0.80 311  P         Pg        11 52 11.8  -0.3
SCHR                               AML       AML
      comp=E,263µm,0.6s
SCHR                               AML       AML
      comp=N,442µm,0.5s
SCHR                               AML       AML
      comp=E,263µm,0.6s
SCHR                               AML       AML
      comp=N,443µm,0.5s
SCHR                               AML       AML
      comp=N,443µm,0.5s
SCHR                               AML       AML
      comp=E,263µm,0.6s
TAR1  Taranto            0.92  21  ePg       Pg        11 52 12.7  -1.5
TAR1                               Sg        Sb        11 52 25.3  -1.0
SIRI  Monte Sirino -     0.92 304  P         Pg        11 52 13.0  -1.3
SIRI                               AML       AML
      comp=E,450µm,0.4s
SIRI                               AML       AML
      comp=N,304µm,0.4s
SIRI                               AML       AML
      comp=E,450µm,0.4s
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SIRI				AML	AML		
	comp=N,304µm,0.4s						
MATE	**Matera**	0.99	353	P	Pg	11 52 13.8	-1.8
MATE				AML	AML		
	comp=E,803µm,1.2s						
MATE				AML	AML		
	comp=N,812µm,0.3s						
MATE				AML	AML		
	comp=E,803µm,1.2s						
MATE				AML	AML		
	comp=N,812µm,0.3s						
MASS	**Massafra**	0.99	13	*e*Pg	Pn	11 52 15.4	-0.7
MASS				Sg	Sn	11 52 30.7	+0.8
MIGL	**Miglionico**	0.99	341	P	Pg	11 52 14.3	-1.3
MIGL				AML	AML		
	comp=E,1042µm,0.5s						
MIGL				AML	AML		
	comp=N,952µm,0.5s						
MIGL				AML	AML		
	comp=E,1042µm,0.5s						
MIGL				AML	AML		
	comp=N,952µm,0.5s						
MTSN	**Montesano sull**	1.04	305	P	Pg	11 52 15.0	-1.6
MTSN				AML	AML		
	comp=E,284µm,1.0s						
MTSN				AML	AML		
	comp=N,256µm,1.1s						
MTSN				AML	AML		
	comp=E,284µm,1.0s						
MTSN				AML	AML		
	comp=N,256µm,1.1s						
MCEL	**Monticello**	1.04	309	P	Pg	11 52 15.1	-1.6
MCEL				AML	AML		
	comp=E,307µm,0.8s						
MCEL				AML	AML		
	comp=N,304µm,0.8s						
MCEL				AML	AML		
	comp=E,307µm,0.8s						
MCEL				AML	AML		
	comp=N,304µm,0.8s						
CGL1	**Ceglie Messapi**	1.09	25	*e*Pg	Pn	11 52 17.7	+0.2
CGL1				Sg	Sn	11 52 32.7	+0.2
MGR	**Morigerati**	1.11	295	P	Pb	11 52 16.7	-0.9
MGR				AML	AML		
	comp=E,141µm,0.4s						
MGR				AML	AML		
	comp=N,182µm,1.0s						
MGR				AML	AML		
	comp=E,141µm,0.4s						
MGR				AML	AML		
	comp=N,182µm,1.0s						
NOCI	**Noci**	1.13	8	P	Pb	11 52 16.2	-1.7
NOCI				AML	AML		
	comp=E,958µm,0.3s						
NOCI				AML	AML		
	comp=N,836µm,1.3s						
NOCI				AML	AML		
	comp=E,958µm,0.3s						
NOCI				AML	AML		
	comp=N,836µm,1.3s						
SG1	**Sgolgore (BA)**	1.18	353	*e*Pg	Pn	11 52 19.4	+0.7
SG1				Sg	Sn	11 52 37.5	+2.8
SLCN	**Sala Consilina**	1.19	308	AML	AML		
	comp=N,390µm,0.6s						
SLCN				AML	AML		
	comp=E,433µm,0.9s						
SLCN				AML	AML		
	comp=N,358µm,1.1s						
SLCN				AML	AML		
	comp=E,454µm,0.9s						
SLCN				AML	AML		
	comp=N,390µm,0.6s						
SLCN				AML	AML		
	comp=E,433µm,0.9s						
SLCN				AML	AML		
	comp=E,454µm,0.9s						
SLCN				AML	AML		
	comp=N,358µm,1.1s						
FASA	**Fasano**	1.21	18	*e*Pg	Pg	11 52 20.2	+0.5
FASA				Sg	Sn	11 52 37.8	+2.5
AMUR	**Altamura**	1.25	351	AML	AML		
	comp=E,346µm,0.4s						
AMUR				AML	AML		
	comp=N,303µm,0.3s						
AMUR				AML	AML		
	comp=N,303µm,0.3s						
AMUR				AML	AML		
	comp=E,346µm,0.4s						
PLAC	**Placanica**	1.26	195	AML	AML		
	comp=N,264µm,1.1s						
PLAC				AML	AML		
	comp=E,268µm,0.6s						
PLAC				AML	AML		
	comp=N,264µm,1.1s						
PLAC				AML	AML		
	comp=E,268µm,0.6s						
SCTE	**Santa Cesarea**	1.30	71	AML	AML		
	comp=E,128µm,0.5s						
SCTE				AML	AML		
	comp=N,115µm,0.3s						
SCTE				AML	AML		
	comp=N,115µm,0.3s						
SCTE				AML	AML		
	comp=E,128µm,0.5s						
ACER	**Acerenza**	1.32	328	AML	AML		
	comp=E,367µm,0.4s						
ACER				AML	AML		
	comp=N,362µm,0.3s						
ACER				AML	AML		
	comp=N,362µm,0.3s						
ACER				AML	AML		
	comp=E,367µm,0.4s						
BAI	**Bari**	1.44	1	*e*Pg	Pg	11 52 23.1	-1.0
BAI				Sg	Sg	11 52 46.0	+3.2
MRVN	**Minervino Murg**	1.48	340	AML	AML		
	comp=N,148µm,0.2s						
MRVN				AML	AML		
	comp=E,174µm,0.2s						
MRVN				AML	AML		
	comp=N,148µm,0.2s						
MRVN				AML	AML		
	comp=E,174µm,0.2s						
MRLC	**Muro Lucano**	1.51	316	AML	AML		
	comp=N,148µm,0.6s						
MRLC				AML	AML		
	comp=E,124µm,0.4s						
MRLC				AML	AML		
	comp=E,124µm,0.4s						
MRLC				AML	AML		
	comp=N,148µm,0.6s						
MSAG	**Monte S. Angel**	2.17	341	AML	AML		
	comp=N,362µm,1.6s						
MSAG				AML	AML		
	comp=E,206µm,1.2s						
MSAG				AML	AML		
	comp=E,206µm,1.2s						
MSAG				AML	AML		
	comp=N,362µm,1.6s						
STON	**Ston**	3.26	11	*e*Pn	Pn	11 52 46.8	-0.5
STON				Sn	Sn	11 53 24.4	-1.5
UDBI	**Udbina**	4.92	351	*i* Pn	Pn	11 53 12.5	+2.2
UDBI				Sn	Sn	11 54 08.2	+1.1

IDC 15 12:04:50.4±3.0**,4°.16S**×**133°.29E,h0^{km},mb3.2**/1**, mb1 3.6**/4**,mb1mx3.3**/50**,mbtmp3.4**/4**,ML3.1**/3**,Error ellipse: s-maj=132.1km s-min=28.3km az=80.0,Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	15.72	176	Pn	Pn	12 08 31.4	-2.0
	0.1nm,0.3s,baz=356,slow=13,SNR=5.3						
WRA				Sn	Sn	12 11 21.9	-6.6
	0.1nm,0.3s,baz=358,slow=23,SNR=4.6						
FITZ	**Fitzroy Crossi**	15.75	208	Pn	Pn	12 08 33.5	-0.3
	0.1nm,0.3s,baz=32,slow=12,SNR=5.0						
FITZ				Sn	Sn	12 11 21.9	-7.1
	0.1nm,0.3s,baz=188,slow=19,SNR=5.1						
ASAR	**Alice Springs**	19.41	178	P	Pn	12 09 19.3	-0.1
	0.1nm,0.3s,baz=3.6,slow=11,SNR=11						
MKAR	**Makanchi Array**	67.73	325	P	P	12 15 49.8	0.0
	0.1nm,0.4s,baz=113,slow=7.9,SNR=1.8						

IDC 15 12:20:05.9±1.9**,2°.49S**×**127°.68E,h0^{km},mb3.4**/3**, mb1 3.5**/4**,mb1mx3.3**/56**,mbtmp3.4**/4**,ML3.2**/1**,Error ellipse: s-maj=184.0km s-min=23.1km az=67.0,Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	18.53	160	P	P	12 24 23.1	-1.1
	0.1nm,0.3s,baz=342,slow=13,SNR=6.5						
ASAR	**Alice Springs**	21.90	165	P	P	12 25 01.8	+0.9
	0.5nm,0.5s,baz=346,slow=11,SNR=9.6						
MKAR	**Makanchi Array**	63.21	327	P	P	12 30 35.6	-0.5
	0.2nm,0.4s,baz=125,slow=6.3,SNR=3.7						
KURBB	**Kurchatov Arra**	67.48	329	P	P	12 31 03.9	+0.3
	0.3nm,0.5s,baz=130,slow=4.6,SNR=7.2						

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*CSEM **15** 12:20:09.8±0.3,34°.28N×25°.21E,h10^{km},ML3.0,Error ellipse: s-maj=6.8km s-min=4.0km az=22.0*
*IDC **15** 12:20:10.5±3.7,34°.29N×25°.07E,h26^{km}±22^{km},mb3.8/6, mb1 3.8/10,mb1mx3.5/54,mbtmp3.9/10,ML3.8/4,MS3.0/2, Ms1 3.0/2,ms1mx2.2/58,Error ellipse: s-maj=28.4km s-min=18.4km az=152.0*
*THE **15** 12:20:10.4,34°.31N×25°.14E,h0^{km}±1^{km},ML3.0/10,Error ellipse: s-maj=1.9km s-min=0.7km az=173.0*
*ATH **15** 12:20:12.4,34°.48N×25°.14E,h25^{km}±1^{km},ML3.0/12,Error ellipse: s-maj=2.9km s-min=1.2km az=179.0*
*HLW **15** 12:20:12.0,34°.06N×25°.54E,h7^{km}±10^{km},Md3.5,Ml3.8*
*ISK **15** 12:20:12.4,34°.44N×25°.30E,h64^{km},ML3.8/3*
*DDA **15** 12:21:11.4,34°.68N×25°.33E,h12^{km},Md3.6*
ISC 15 12:20:09.9±1.2**,34°.26N**±0°.03×**25°.19E**±0°.02**,h23^{km}**±11^{km}**, n131,**σ**1^{s}.24**/178**,mb3.9**/7**,Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIVA	**Sivas**	0.82	338	P	Pb	12 20 25.5	0.0
SIVA				S	Sb	12 20 32.3	-3.8
SIVA				AML	AML	12 20 44.4	
	comp=E,8584µm,0.4s						
SIVA				AML	AML	12 20 44.7	
	comp=N,6999µm,0.4s						
SIVA	**Sivas**	0.82	338	P	Pb	12 20 25.0	-0.5
SIVA				S	Sn	12 20 37.5	0.0
SIVA	**Sivas**	0.82	338	P	Pb	12 20 25.0	-0.5
SIVA				S	Sb	12 20 32.8	-3.3
TMBK	**Timbaki Herakl**	0.88	337	P	Pb	12 20 25.7	-0.9
TMBK				S	Sn	12 20 39.4	+0.4
TMBK	**Timbaki Herakl**	0.88	337	P	Pb	12 20 25.7	-0.9
TMBK				S	Sn	12 20 39.4	+0.4
LAST	**Lasithi**	0.93	15	P	Pb	12 20 27.6	+0.2
LAST				AML	AML	12 20 51.3	
	comp=N,1863µm,0.8s						
LAST				AML	AML	12 20 52.9	
	comp=E,1569µm,0.9s						
LAST	**Lasithi**	0.93	15	P	Pb	12 20 27.3	-0.2
LAST				S	Sn	12 20 41.7	+1.3
LAST	**Lasithi**	0.93	15	P	Pb	12 20 27.3	-0.2
LAST				S	Sn	12 20 41.7	+1.3
KSTL	**Kastelli Herak**	1.05	355	P	Pb	12 20 27.8	-1.6
KSTL				S	Sb	12 20 42.4	-0.3
KSTL	**Kastelli Herak**	1.05	355	P	Pb	12 20 27.8	-1.6
KSTL				S	Sb	12 20 42.4	-0.3
IDI	**Anoyia**	1.05	347	Pg	Pb	12 20 29.1	-0.5
	comp=E,21nm,0.3s,baz=185,slow=8.5,SNR=60						
IDI				Lg	Lg	12 20 43.6	
	comp=E,91nm,0.3s,baz=260,slow=18,SNR=17						
IDI	**Anoyia**	1.05	347	PG	Pn	12 20 29.9	+0.5
IDI				SG	Sn	12 20 43.5	+0.1
IDI	**Anoyia**	1.05	347	*e*Pg	Pn	12 20 29.9	+0.5
IDI				*e*Sg	Sn	12 20 43.5	+0.1
NPS	**Neapolis**	1.06	19	P	Pn	12 20 30.0	+0.5
NPS				AML	AML	12 20 56.1	
	comp=N,1302µm,0.7s						
NPS				AML	AML	12 20 57.0	
	comp=E,1561µm,0.4s						
NPS	**Neapolis**	1.06	19	P	Pb	12 20 29.6	0.0
NPS				S	Sn	12 20 45.2	+1.7
NPS	**Neapolis**	1.06	19	P	Pb	12 20 29.6	0.0
NPS				S	Sn	12 20 45.2	+1.7
GVD	**Gavdhos**	1.07	303	P	Pb	12 20 31.8	+1.9
GVD				S	Sb	12 20 43.3	-0.2
GVD				AML	AML	12 20 49.2	
	comp=N,3482µm,0.5s						
GVD				AML	AML	12 20 54.2	
	comp=E,3381µm,0.4s						
GVD	**Gavdhos**	1.07	303	P	Pn	12 20 29.6	0.0
GVD				S	Sn	12 20 45.6	+1.8
GVD	**Gavdhos**	1.07	303	P	Pb	12 20 31.2	+1.3
GVD				S	Sb	12 20 43.6	+0.1
ZKR	**Zakros**	1.20	45	P	Pb	12 20 32.0	-0.1
ZKR				AML	AML	12 21 01.1	
	comp=E,1332µm,1.0s						
ZKR				AML	AML	12 21 06.0	
	comp=N,1153µm,0.6s						
ZKR	**Zakros**	1.20	45	P	Pb	12 20 32.8	+0.7
ZKR				S	Sn	12 20 50.1	+3.1
ZKR	**Zakros**	1.20	45	P	Pb	12 20 32.6	+0.5
ZKR				S	Sn	12 20 50.1	+3.1
PRNS	**Prines Rethymn**	1.24	333	P	Pb	12 20 32.6	-0.1
PRNS				S	Sb	12 20 50.4	+2.2
PRNS	**Prines Rethymn**	1.24	333	P	Pb	12 20 32.6	-0.1
PRNS				S	Sb	12 20 50.4	+2.2
VAM	**Vamos**	1.40	325	P	Pn	12 20 34.3	+0.2
VAM				AML	AML	12 21 05.5	
	comp=N,1320µm,0.6s						
VAM				AML	AML	12 21 14.9	
	comp=E,1573µm,0.6s						
VAM	**Vamos**	1.40	325	P	Pb	12 20 35.1	-0.4
VAM				S	Sb	12 20 54.5	+1.6
VAM	**Vamos**	1.40	325	P	Pb	12 20 35.1	-0.4
VAM				S	Sb	12 20 54.5	+1.6
IMMV	**Iera Moni Meta**	1.56	321	P	Pb	12 20 38.3	+0.3
IMMV				AML	AML	12 21 13.4	
	comp=N,1044µm,0.9s						
IMMV				AML	AML	12 21 20.0	
	comp=E,1266µm,0.5s						
IMMV	**Iera Moni Meta**	1.56	321	P	Pb	12 20 37.5	-0.6
IMMV				S	Sb	12 20 58.1	+0.8
IMMV	**Iera Moni Meta**	1.56	321	P	Pb	12 20 38.1	0.0
IMMV				S	Sb	12 20 58.1	+0.8
KARP	**Karpathos**	2.07	51	PN	Pn	12 20 43.7	+0.4
KARP				SN	Sn	12 21 06.1	-2.3
KARP	**Karpathos**	2.07	51	P	Pb	12 20 47.5	+0.6
KARP				AML	AML	12 21 33.4	
	comp=E,476µm,0.7s						
KARP				AML	AML	12 21 36.5	
	comp=N,468µm,0.5s						
KARP	**Karpathos**	2.07	51	P	Pb	12 20 46.4	-0.5
KARP				S	Sb	12 21 12.4	+0.2
KARP	**Karpathos**	2.07	51	*e*Pn	Pn	12 20 43.7	+0.4
KARP	**Karpathos**	2.07	51	P	Pb	12 20 46.9	0.0
KARP				*e*Sn	Sn	12 21 06.1	-2.3
KARP				S	Sb	12 21 12.4	+0.2
SANT	**Santorini**	2.12	6	PN	Pn	12 20 44.5	+0.5
SANT				SN	Sn	12 21 06.8	-2.8
SANT	**Santorini**	2.12	6	P	Pn	12 20 45.7	+1.7
SANT	**Santorini**	2.12	6	*e*Pn	Pn	12 20 44.5	+0.5
SANT	**Santorini**	2.12	6	P	Pn	12 20 45.6	+1.6
SANT				*e*Sn	Sn	12 21 06.8	-2.8
THR5	**Thira Island,**	2.16	3	P	Pn	12 20 46.3	+1.8
THR5	**Thira Island,**	2.16	3	P	Pn	12 20 46.3	+1.8
ANKY	**Antikythira Is**	2.23	317	P	Pb	12 20 49.3	-0.2
ANKY				AML	AML	12 21 30.5	
	comp=N,248µm,1.0s						
ANKY				AML	AML	12 21 38.4	
	comp=E,263µm,0.7s						
ANKY	**Antikythira Is**	2.23	317	P	Pn	12 20 47.0	+1.5
ANKY				S	Sb	12 21 15.0	-1.7
ANKY	**Antikythira Is**	2.23	317	P	Pn	12 20 47.0	+1.5
ANKY				S	Sb	12 21 15.0	-1.7
IOSP	**Ios island**	2.46	2	P	Pn	12 20 49.3	+0.6
IOSP				S	Sn	12 21 18.7	+0.7
IOSP				AML	AML	12 21 19.3	
	comp=E,372µm,0.2s						
IOSP				AML	AML	12 21 20.5	
	comp=N,394µm,0.3s						
IOSP	**Ios island**	2.46	2	P	Pn	12 20 49.7	+1.0
IOSP				S	Sn	12 21 18.2	+0.2
AMGA	**Amorgos Island**	2.63	12	P	Pn	12 20 51.9	+0.9
AMGA				S	Sn	12 21 22.7	+0.5
AMGA	**Amorgos Island**	2.63	12	P	Pn	12 20 52.3	+1.3
AMGA				S	Sn	12 21 22.5	+0.3
KYTH	**Kithira**	2.66	319	P	Pb	12 20 55.9	-1.0
SLUM	**Salum**	2.76	180	P	Pn	12 20 54.2	+1.4
	baz=187						
SLUM				AMP		12 21 00.0	
	baz=187						
SLUM				S	Sn	12 21 24.9	-0.5
	baz=187						
SLUM	**Salum**	2.76	180	P	Pn	12 20 54.2	+1.4
APE	**Apeiranthos**	2.82	6	PN	Pn	12 20 53.6	0.0
APE	**Apeiranthos**	2.82	6	P	Pn	12 20 53.8	+0.1
APE				S	Sn	12 21 26.9	-0.1
APE	**Apeiranthos**	2.82	6	*e*Pn	Pn	12 20 53.6	0.0
APE	**Apeiranthos**	2.82	6	P	Pn	12 20 54.5	+0.9
APE				S	Sn	12 21 26.8	-0.1
VLI	**Veliai**	3.06	324	P	Pn	12 20 56.6	-0.4
VLI				S	Sn	12 21 31.6	-1.3
VLI				AML	AML	12 21 42.0	
	comp=N,132µm,0.9s						
VLI				AML	AML	12 21 53.8	
	comp=E,102µm,0.7s						
VLI	**Veliai**	3.06	324	P	Pn	12 20 57.8	+0.8
VLI				S	Sn	12 21 34.3	+1.4
VLI	**Veliai**	3.06	324	P	Pn	12 20 57.8	+0.8
VLI				S	Sn	12 21 34.3	+1.4
ARG	**Arkhangelos**	3.10	50	PN	Pn	12 20 57.6	+0.2
ARG	**Arkhangelos**	3.10	50	P	Pn	12 20 59.8	+2.4
ARG				S	Sn	12 21 35.4	+1.6
ARG	**Arkhangelos**	3.10	50	*e*Pn	Pn	12 20 57.6	+0.2
ARG	**Arkhangelos**	3.10	50	P	Pn	12 21 00.3	+2.9
ARG				S	Sn	12 21 35.7	+1.9
DAT	**Datca**	3.14	38	PN	Pn	12 20 58.8	+0.7
DAT	**Datca**	3.14	38	*i* P	Pn	12 20 58.9	+0.7
DAT	**Datca**	3.14	38	P	Pn	12 20 58.9	+0.7
DATC	**Datca-Mugla**	3.21	38	PN	Pn	12 20 59.5	+0.6
DATC	**Datca-Mugla**	3.21	38	*e*Pn	Pn	12 20 59.5	+0.6
DYR	**Agios Nikonas**	3.41	318	P	Pn	12 21 03.7	+1.9
DYR	**Agios Nikonas**	3.41	318	P	Pn	12 21 03.9	+2.1
DID	**Didima**	3.61	335	P	Pn	12 21 04.0	-0.4
DID				S	Sn	12 21 47.7	+1.4
DID				AML	AML	12 21 53.7	
	comp=E,98µm,0.3s						
DID				AML	AML	12 21 56.8	
	comp=N,79µm,0.4s						
DID	**Didima**	3.61	335	P	Pn	12 21 05.2	+0.8
DID				S	Sn	12 21 46.7	+0.4
DALY	**Dalyan (Mu˜la**	3.81	47	PN	Pn	12 21 08.3	+1.1
DALY	**Dalyan (Mu˜la**	3.81	47	*i* P	Pn	12 21 05.4	-1.8
DALY	**Dalyan (Mu˜la**	3.81	47	P	Pn	12 21 05.4	-1.8
DALY	**Dalyan (Mu˜la**	3.81	47	*e*Pn	Pn	12 21 08.3	+1.1
TURN	**Turunc**	3.81	46	PN	Pn	12 21 04.6	-2.7
TURN	**Turunc**	3.81	46	*i* P	Pn	12 20 59.7	-7.6
TURN	**Turunc**	3.81	46	*e*Pn	Pn	12 21 04.6	-2.7
YER	**Yerkesik**	3.82	40	PN	Pn	12 21 08.4	+1.0
YER	**Yerkesik**	3.82	40	*e*Pn	Pn	12 21 08.4	+1.0
DION	**Dionisos Attik**	3.94	345	P	Pn	12 21 09.0	-0.1
DION				S	Sn	12 21 55.5	+0.9
DION	**Dionisos Attik**	3.94	345	P	Pn	12 21 10.0	+0.9
DION				S	Sn	12 21 54.7	+0.1
FETY	**Fethiye**	3.97	52	PN	Pn	12 21 10.8	+1.4
FETY	**Fethiye**	3.97	52	*e*Pn	Pn	12 21 10.8	+1.4
KSL	**Kastellorizon**	4.07	61	P	Pn	12 21 12.3	+1.6
AKAS	**Kas**	4.12	60	PN	Pn	12 21 13.0	+1.4
AKAS				SN	Sn	12 21 58.6	-0.5
AKAS	**Kas**	4.12	60	*i* P	Pn	12 21 13.2	+1.6
AKAS	**Kas**	4.12	60	*e*Pn	Pn	12 21 13.0	+1.4
AKAS				*e*Sn	Sn	12 21 58.6	-0.5
CHOS	**Chios island**	4.18	9	PN	Pn	12 21 13.1	+0.7
CHOS	**Chios island**	4.18	9	*e*Pn	Pn	12 21 13.1	+0.7
URLA	**Izmir**	4.25	15	PN	Pn	12 21 14.2	+0.9
URLA	**Izmir**	4.25	15	*e*Pn	Pn	12 21 14.2	+0.9
AYDB	**Zeytinkoy-Aydi**	4.28	30	PN	Pn	12 21 14.2	+0.4
AYDB	**Zeytinkoy-Aydi**	4.28	30	*e*Pn	Pn	12 21 14.2	+0.4
BLCB	**Balcova**	4.38	19	PN	Pn	12 21 16.1	+1.0
BLCB	**Balcova**	4.38	19	*e*Pn	Pn	12 21 16.1	+1.0
TAVA	**DENIZLI_Tavas**	4.40	42	*i* P	Pn	12 21 13.8	-1.7
TAVA	**DENIZLI_Tavas**	4.40	42	P	Pn	12 21 13.8	-1.7
ELL	**Elmali**	4.58	56	PN	Pn	12 21 18.9	+0.9
ELL	**Elmali**	4.58	56	*e*Pn	Pn	12 21 18.9	+0.9
SWA2		5.01	177	P	Pn	12 21 24.5	+0.9
	baz=181						
SWA2				AMP		12 22 00.0	
	baz=181						
SWA2				S	Sn	12 22 18.8	-2.0
	baz=181						
KORT	**Korkueli**	5.02	55	PN	Pn	12 21 24.9	+1.0
KORT	**Korkueli**	5.02	55	*i* P	Pn	12 21 23.5	-0.4
KORT	**Korkueli**	5.02	55	P	Pn	12 21 23.5	-0.4
KORT	**Korkueli**	5.02	55	*e*Pn	Pn	12 21 24.9	+1.0
KULA	**Kula-Manisa**	5.09	32	PN	Pn	12 21 25.8	+0.9
KULA	**Kula-Manisa**	5.09	32	*e*Pn	Pn	12 21 25.8	+0.9
SUTC	**Sutluce-Ispart**	5.71	54	PN	Pn	12 21 34.6	+1.2
SUTC	**Sutluce-Ispart**	5.71	54	*e*Pn	Pn	12 21 34.6	+1.2
CSS	**Mathiatis**	6.75	82	PN	Pn	12 21 48.4	+0.7
CSS	**Mathiatis**	6.75	82	*e*Pn	Pn	12 21 48.4	+0.7
TEKE	**Tekeli-Mersin**	6.76	72	PN	Pn	12 21 48.8	+1.1
TEKE	**Tekeli-Mersin**	6.76	72	*i* Pn	Pn	12 21 48.8	+1.1
GLL	**Jalalah**	7.25	128	P	Pn	12 21 53.9	-0.6
	baz=128						
EREN	**Erenkoy**	7.49	78	PN	Pn	12 21 56.7	-1.1
EREN	**Erenkoy**	7.49	78	*e*Pn	Pn	12 21 56.7	-1.1
RSH		7.92	112	P	Pn	12 22 04.5	+0.8
	baz=111						
BRTR	**Keskin Array B**	8.69	49	Pn	Pn	12 22 19.2	+4.9
	comp=N,0.2nm,0.3s,baz=216,slow=12,SNR=4.1						
HDK1	**Dakhla**	9.42	156	P	Pn	12 22 24.9	+0.5
	baz=157						
GNI	**Garni**	16.64	64	LR	LR	12 32 01.5	
	comp=N,38nm,18.4s,baz=147,slow=42						
KBZ	**Khabaz**	16.67	50	Pn	P	12 24 04.2	-0.1
	comp=N,0.1nm,0.3s,baz=255,slow=12,SNR=3.6						
AKASG	**Malin Array Be**	16.70	9	Pn	Pn	12 24 02.4	+0.1
	comp=N,1.0nm,0.3s,baz=199,slow=11,SNR=3.9						
GERES	**GERESS Array B**	16.89	333	Pn	Pn	12 24 04.4	-0.4
	comp=N,0.3nm,0.3s,baz=141,slow=11,SNR=10						
ESDC	**Sonseca Array**	23.85	292	P	P	12 25 21.5	-0.1
	comp=N,0.1nm,0.4s,baz=83,slow=9.9,SNR=3.6						
HFS	**Hagfors**	26.96	347	P	P	12 25 49.7	+0.3
	comp=N,2.6nm,0.9s,baz=170,slow=10,SNR=2.7						
TORD	**Torodi Ar. Bea**	29.93	231	P	P	12 26 15.8	-0.6
	comp=N,2.3nm,0.4s,baz=38,slow=9.1						
ARCES	**ARCESS Array B**	35.33	0	P	P	12 27 01.1	-2.0
	comp=N,2.2nm,1.0s,baz=167,slow=8.3,SNR=4.7						
KURBB	**Kurchatov Arra**	41.67	50	P	P	12 27 57.4	+0.8
	comp=N,1.0nm,0.7s,baz=279,slow=8.5,SNR=8.7						
SPITS	**Spitsbergen Ar**	44.19	357	LR	LR	12 45 58.4	
	comp=N,22nm,21.8s,baz=160,slow=35						
MKAR	**Makanchi Array**	44.26	56	P	P	12 28 18.3	+0.7
	comp=N,0.6nm,0.6s,baz=268,slow=8.9,SNR=5.1						
ZALV	**Zalesovo Beam**	45.61	46	P	P	12 28 28.2	0.0
	comp=N,1.3nm,0.4s,baz=268,slow=10,SNR=3.3						

IDC 15 12:20:41.8±1.9**,1°.98N**×**127°.06E,h0^{km},mb3.4**/4**, mb1 3.7**/4**,mb1mx3.4**/56**,mbtmp3.5**/4**,Error ellipse: s-maj=114.6km s-min=23.4km az=69.0,Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	**Fitzroy Crossi**	20.00	184	P	Pn	12 25 17.4	-0.5
	2.5nm,1.0s,baz=356,slow=13,SNR=4.1						
WRA	**Warramunga Arr**	22.93	162	P	P	12 25 47.8	0.0
	1.2nm,0.6s,baz=340,slow=11,SNR=19						
ASAR	**Alice Springs**	26.35	166	P	P	12 26 19.1	-0.7
	0.2nm,0.3s,baz=344,slow=11,SNR=6.4						
MKAR	**Makanchi Array**	59.17	326	P	P	12 30 44.6	-0.1
	0.1nm,0.4s,baz=119,slow=5.7,SNR=3.2						

IDC 15 12:27:29.4±2.1**,17°.94S**×**167°.68E,h0^{km},mb3.7**/4**, mb1 3.9**/5**,mb1mx3.6**/43**,mbtmp3.7**/5**,ML3.3**/1**,MS2.4**/2**, Ms1 2.4**/2**,ms1mx2.3**/46**,Error ellipse: s-maj=55.5km s-min=33.3km az=125.0,Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	4.28	196	Pn	Pn	12 28 36.5	+0.6
	1.7nm,0.3s,baz=70,slow=8.4,SNR=35						
DZM				Sn	Sn	12 29 23.6	-2.9
	2.3nm,0.3s,baz=133,slow=23,SNR=6.8						
DZM				LR	LR	12 29 56.3	
	comp=Z,20nm,18.0s,baz=236,slow=34						
HNR	**Honiara**	11.30	317	LR	LR	12 33 25.2	
	comp=Z,41nm,21.8s,baz=142,slow=32						
WRA	**Warramunga Arr**	31.57	261	P	P	12 33 53.4	-0.5
	0.6nm,0.6s,baz=85,slow=6.0,SNR=6.1						

ASAR	**Alice Springs**	**32.03**	**254**	P	P	12 33 57.3	-0.7
	0.9nm,0.8s,baz=81,slow=8.5,SNR=16						
CMAR	**Chiang Mai Arr**	**76.62**	**295**	P	P	12 39 23.9	+1.5
	0.6nm,0.5s,baz=138,slow=4.5,SNR=4.6						
ILAR	**Eielson Array**	**89.44**	**18**	P	P	12 40 27.1	-0.7
	0.3nm,0.7s,baz=238,slow=4.9,SNR=4.5						

IDC 15 12:30:23.6±3.5, 23°.86S×179°.93E, h506km±35km, mb3.0/6, mb1 3.3/6, mb1mx2.9/41, mbtmp3.9/6, Error ellipse: s-maj=50.2km s-min=24.8km az=176.0, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	**31.41**	**270**	P	P	12 36 03.8	+0.9
	5.1nm,0.4s,baz=94,slow=13,SNR=14						
ASAR	**Alice Springs**	**41.98**	**261**	P	P	12 37 30.2	+0.2
	1.0nm,0.7s,baz=96,slow=7.2,SNR=15						
ASAR				ScP	ScP	12 42 15.9	+0.2
	1.0nm,1.0s,baz=107,slow=4.4,SNR=5.1						
WRA	**Warramunga Arr**	**42.34**	**266**	P	P	12 37 32.6	-0.4
	1.5nm,0.5s,baz=92,slow=8.5,SNR=46						
FITZ	**Fitzroy Crossi**	**50.77**	**266**	P	P	12 38 35.7	-1.1
	1.2nm,0.8s,baz=122,slow=9.5,SNR=5.2						
SNAA	**Sanae**	**84.70**	**179**	P	P	12 42 02.8	-0.6
	0.4nm,0.8s,baz=192,slow=11,SNR=5.0						
TXAR	**Lajitas Array**	**90.47**	**58**	P	P	12 42 31.6	+0.4
	0.2nm,0.7s,baz=222,slow=6.1,SNR=3.2						

ISC 15 12:32:52.8±2.0, 46°.34N±0°.04×13°.19E±0°.03, h13km±13km, n13, σ0ˢ.49/25, 6C-4D, Austria

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VINO	**Villanova**	**0.10**	**141**	⇑*e*Pg	**Pg**	**12 32 55.5**	**-0.4**
VINO				*e*Sg	**Sg**	**12 32 58.1**	**0.0**
BAD	**Bernadia**	**0.11**	**159**	⇑*e*Pg	**Pg**	**12 32 55.8**	**-0.1**
BAD				*e*Sg	**Sg**	**12 32 58.3**	**+0.2**
FUSE	**Fusea**	**0.15**	**301**	⇑*e*Pg	**Pg**	**12 32 56.0**	**-0.5**
FUSE				*e*Sg	**Sg**	**12 32 58.9**	**-0.2**
MPRI	**Monte Prat**	**0.17**	**235**	⇑*e*Pg	**Pg**	**12 32 56.5**	**-0.3**
MPRI				*e*Sg	**Sg**	**12 32 59.9**	**+0.4**
CLUD	**Cludinico**	**0.24**	**299**	⇑*e*Pg	**Pg**	**12 32 57.7**	**-0.3**
CLUD				*e*Sg	**Sg**	**12 33 01.6**	**+0.1**
ROBS	**Robic**	**0.24**	**113**	*i* Pg	**Pg**	**12 32 57.5**	**-0.5**
ROBS				*i* Sg	**Sg**	**12 33 01.4**	**0.0**
COLI	**Coloredo**	**0.24**	**147**	⇓*e*Pg	**Pg**	**12 32 58.0**	**0.0**
COLI				*e*Sg	**Sg**	**12 33 02.5**	**+1.0**
ZOU	**Zoufplan**	**0.26**	**326**	⇑*e*Pg	**Pg**	**12 32 58.7**	**+0.2**
LSR	**Lussari**	**0.27**	**60**	⇓*e*Pg	**Pg**	**12 32 58.4**	**-0.3**
LSR				*e*Sg	**Sg**	**12 33 03.1**	**+0.5**
PRED	**Cave del Predi**	**0.28**	**68**	⇓*e*Pg	**Pg**	**12 32 58.4**	**-0.3**
PRED				*e*Sg	**Sg**	**12 33 03.1**	**+0.4**
ACOM	**Acomizza, Ital**	**0.31**	**47**	⇓*e*Pg	**Pg**	**12 32 58.9**	**-0.3**
ACOM				*e*Sg	**Sg**	**12 33 04.2**	**+0.6**
CADS	**Cadrg**	**0.40**	**106**	*i* Pg	**Pg**	**12 33 00.2**	**-0.6**
CADS				*i* Sg	**Sg**	**12 33 07.1**	**+1.0**
GORS	**Gorjuse**	**0.56**	**92**	*i* Pg	**Pg**	**12 33 03.0**	**-0.8**
GORS				*i* Sg	**Sg**	**12 33 11.6**	**+0.3**

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*NEIC **15** 12:34:35.9±0.0, 41°.49S×172°.41E, h5km, ML3.9(WEL), After WEL.*

NEIC Felt at Westport.

WEL 15 12:34:35.4, 41°S±9°×17°2E±°, h12km, ML4.0/22, South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DSZ	**Denniston Nort**	**0.50**	**236**	Pg	Pb	12 34 46.0	-0.2
DSZ				Sg	Sb	12 34 52.9	-0.7
DSZ	**Denniston Nort**	**0.50**	**236**	P	Pb	12 34 46.1	-0.1
DSZ				S	Sb	12 34 53.3	-0.3
THZ	**Tophouse**	**0.50**	**126**	Pg	Pg	12 34 44.5	-0.8
THZ				Sg	Sg	12 34 50.6	-1.5
THZ	**Tophouse**	**0.50**	**126**	P	Pg	12 34 44.6	-0.8
THZ				S	Sg	12 34 51.0	-1.1
QRZ	**Quartz Range**	**0.65**	**11**	P*	Pb	12 34 49.1	+0.4
QRZ				Sg	Sb	12 34 58.4	+0.6
QRZ	**Quartz Range**	**0.65**	**11**	P	Pb	12 34 49.1	+0.4
QRZ				S	Sb	12 34 58.2	+0.5
NNZ	**Nelson**	**0.81**	**72**	P*	Pg	12 34 50.6	-0.4
NNZ	**Nelson**	**0.81**	**72**	P	Pg	12 34 50.6	-0.4
NNZ				S	Sg	12 35 01.6	+0.1
BSWZ	**Blackbirch Sta**	**1.16**	**103**	P*	Pb	12 34 57.3	-0.2
BSWZ	**Blackbirch Sta**	**1.16**	**103**	P	Pb	12 34 57.3	-0.2
BSWZ				S	Sg	12 35 12.9	-0.1
TUWZ	**Tuamarina**	**1.19**	**89**	P*	Pn	12 34 56.9	-1.0
TUWZ	**Tuamarina**	**1.19**	**89**	P	Pn	12 34 57.0	-0.9
KHZ	**Kahutara**	**1.29**	**138**	P*	Pb	12 34 59.7	0.0
KHZ	**Kahutara**	**1.29**	**138**	P	Pg	12 34 60.0	-0.3
LTZ	**Lake Taylor**	**1.32**	**183**	P*	Pb	12 35 00.1	0.0
LTZ	**Lake Taylor**	**1.32**	**183**	P	Pb	12 35 00.2	+0.1
LTZ				S	Sn	12 35 17.3	+0.2
DUWZ	**D'Urville Isla**	**1.35**	**61**	P	Pg	12 35 01.4	0.0
DUWZ				S	Sg	12 35 19.5	+0.6
CMWZ	**Cape Campbell**	**1.42**	**102**	Pn	Pg	12 35 02.7	+0.1
CMWZ	**Cape Campbell**	**1.42**	**102**	P	Pg	12 35 02.8	+0.1
INZ	**Inchbonnie**	**1.43**	**208**	P	Pn	12 35 01.1	-0.1
TCW	**Tory Channel**	**1.46**	**81**	Pn	Pn	12 35 02.0	+0.4
TCW	**Tory Channel**	**1.46**	**81**	P	Pn	12 35 02.0	+0.4
WEL	**Wellington**	**1.82**	**85**	Pn	Pb	12 35 08.6	-0.1
OXZ	**Oxford**	**1.87**	**187**	Pn	Pn	12 35 07.4	+0.1
OXZ	**Oxford**	**1.87**	**187**	P	Pn	12 35 07.5	+0.2
BHW	**Baring Head**	**1.89**	**89**	Pn	Pb	12 35 08.8	-1.0
BHW	**Baring Head**	**1.89**	**89**	P	Pb	12 35 08.8	-1.0
EYCZ	**Eyrewell**	**1.95**	**180**	P	Pn	12 35 08.8	+0.5
WVZ	**Waitaha Valley**	**2.01**	**216**	Pn	Pn	12 35 09.5	+0.4
WVZ	**Waitaha Valley**	**2.01**	**216**	P	Pn	12 35 09.2	0.0
KIW	**Kapiti Island**	**2.02**	**73**	Pn	Pb	12 35 11.7	-0.3
KIW	**Kapiti Island**	**2.02**	**73**	P	Pb	12 35 11.8	-0.2
CAW	**Cannon Point**	**2.07**	**81**	Pn	Pb	12 35 11.8	-1.1
CAW	**Cannon Point**	**2.07**	**81**	P	Pb	12 35 11.9	-1.0
MSWZ	**Moikau Station**	**2.17**	**90**	Pn	Pn	12 35 12.0	+0.7
MSWZ	**Moikau Station**	**2.17**	**90**	P	Pn	12 35 12.1	+0.7
PLWZ	**Palliser**	**2.17**	**94**	Pn	Pn	12 35 12.2	+0.7
PLWZ	**Palliser**	**2.17**	**94**	P	Pn	12 35 12.2	+0.8
OGWZ	**Otaki Gorge**	**2.22**	**74**	Pn	Pb	12 35 14.3	-1.1
OGWZ	**Otaki Gorge**	**2.22**	**74**	P	Pb	12 35 14.3	-1.1
MQZ	**McQueen's Vall**	**2.25**	**175**	Pn	Pn	12 35 11.8	-0.6
MQZ	**McQueen's Vall**	**2.25**	**175**	P	Pn	12 35 11.9	-0.5
PAWZ	**Paruwai Farm**	**2.31**	**89**	P	Pn	12 35 14.0	+0.8
OKCZ	**Okains Bay**	**2.31**	**167**	P	Pn	12 35 13.4	+0.1
NMEZ	**Namu Road**	**2.35**	**30**	P	Pb	12 35 16.8	-1.0
MTW	**Mount Morrison**	**2.38**	**84**	Pn	Pn	12 35 15.1	+0.7
MTW	**Mount Morrison**	**2.38**	**84**	P	Pn	12 35 15.0	+0.7
AKCZ	**Akaroa Harbour**	**2.44**	**171**	P	Pn	12 35 15.0	-0.1
RPZ	**Rata Peaks**	**2.45**	**203**	Pn	Pn	12 35 15.5	+0.4
RPZ	**Rata Peaks**	**2.45**	**203**	P	Pn	12 35 15.5	+0.4
HOWZ	**Holdsworth Sta**	**2.45**	**78**	Pn	Pn	12 35 16.4	+1.2
HOWZ	**Holdsworth Sta**	**2.45**	**78**	P	Pn	12 35 16.4	+1.2
TRWZ	**Traveller**	**2.50**	**90**	P	Pn	12 35 16.6	+0.7
KHEZ	**Kahui Hut**	**2.51**	**31**	Pn	Pb	12 35 18.8	-1.7
KHEZ	**Kahui Hut**	**2.51**	**31**	P	Pb	12 35 18.8	-1.7
PREZ	**Palmer Road**	**2.53**	**33**	P	Pb	12 35 19.6	-1.2
LREZ	**Lake Rotokare**	**2.54**	**39**	P	Pb	12 35 21.2	+0.3
MRZ	**Mangatainoka R**	**2.56**	**73**	P	Pn	12 35 18.2	+1.5
PKE	**Pukeiti**	**2.59**	**29**	P	Pb	12 35 20.0	-1.7
WAZ	**Wanganui**	**2.63**	**50**	Pn	Pb	12 35 20.9	-1.6
WAZ	**Wanganui**	**2.63**	**50**	P	Pb	12 35 20.9	-1.6
DREZ	**Durham Road**	**2.67**	**32**	P	Pb	12 35 22.6	-0.6
TMWZ	**Te Maipa**	**2.68**	**83**	Pn	Pn	12 35 18.9	+0.4
TMWZ	**Te Maipa**	**2.68**	**83**	P	Pn	12 35 19.0	+0.5
FOZ	**Fox Glacier**	**2.79**	**222**	Pn	Pn	12 35 19.9	0.0
FOZ	**Fox Glacier**	**2.79**	**222**	P	Pn	12 35 20.0	+0.1
POWZ	**Post Office Ro**	**2.79**	**69**	P	Pb	12 35 25.3	0.0
MHEZ	**Mangahewa**	**2.82**	**33**	P	Pb	12 35 23.6	-2.0
PRWZ	**Pori Road**	**2.88**	**73**	P	Pn	12 35 22.2	+1.1
VRZ	**Vera Road**	**2.97**	**39**	P	Pn	12 35 25.1	+2.7
BFZ	**Birch Farm**	**3.04**	**76**	P	Pn	12 35 23.7	+0.4
TSZ	**Takapari Road**	**3.07**	**64**	P	Pb	12 35 28.3	-1.7
DVHZ	**Dannevirke**	**3.11**	**69**	P	Pb	12 35 28.7	-1.9
TRVZ	**Turoa**	**3.26**	**49**	P	Pb	12 35 31.4	-1.9
ANWZ	**Angora Road**	**3.27**	**73**	P	Pb	12 35 30.4	-3.0
FWVZ	**Far West T-bar**	**3.29**	**49**	P	Pb	12 35 32.9	-1.0
PNHZ	**Pukenui**	**3.31**	**63**	P	Pn	12 35 28.5	+1.5
MOVZ	**Moawhango**	**3.31**	**53**	P	Pn	12 35 29.5	+2.5
LBZ	**Lake Benmore**	**3.33**	**208**	Pn	Pn	12 35 27.6	+0.3
LBZ	**Lake Benmore**	**3.33**	**208**	P	Pn	12 35 27.6	+0.4
NGZ	**Ngauruhoe**	**3.37**	**48**	P	Pb	12 35 34.7	-0.5
WPHZ	**Waipukurau**	**3.40**	**67**	P	Pb	12 35 36.0	+0.4
BHHZ	**Black Hill Sta**	**3.44**	**56**	P	Pn	12 35 30.9	+1.9
KRVZ	**Karewarewa**	**3.45**	**48**	P	Pb	12 35 36.0	-0.5
HIZ	**Hauiti**	**3.52**	**34**	P	Pn	12 35 31.6	+1.7
KRHZ	**Kereru**	**3.56**	**60**	P	Pn	12 35 33.3	+2.9
RATZ	**Rangitukua**	**3.68**	**46**	P	Pb	12 35 38.0	-2.5
JCZ	**Jackson Bay**	**3.70**	**224**	P	Pn	12 35 32.3	-0.2
KWHZ	**Kaweka Forest**	**3.71**	**58**	P	Pb	12 35 40.0	-0.9
ODZ	**Otahua Downs**	**3.79**	**199**	Pn	Pn	12 35 33.3	-0.3
ODZ	**Otahua Downs**	**3.79**	**199**	P	Pn	12 35 33.1	-0.5
NMHZ	**Naumai**	**4.14**	**57**	P	Pn	12 35 39.3	+0.8
WKZ	**Wanaka**	**4.16**	**215**	P	Pn	12 35 37.9	-0.8
EAZ	**Earnscleugh**	**4.37**	**210**	Pn	Pn	12 35 41.4	-0.2
EAZ	**Earnscleugh**	**4.37**	**210**	P	Pn	12 35 41.2	-0.5
TOZ	**Tahuroa Road**	**4.45**	**34**	P	Pn	12 35 45.0	+2.4
MSZ	**Milford Sound**	**4.56**	**224**	P	Pn	12 35 44.6	+0.4
AWAZ	**Awhitu Peninsu**	**4.74**	**23**	P	Pn	12 35 48.8	+2.2
WTAZ	**Waiatarua**	**4.84**	**21**	Pn	Pn	12 35 50.6	+2.5
WTAZ	**Waiatarua**	**4.84**	**21**	P	Pn	12 35 50.8	+2.7
MKAZ	**Moumakai**	**4.87**	**27**	P	Pn	12 35 51.2	+2.8
TUZ	**Tuapeka**	**4.90**	**203**	P	Pn	12 35 48.1	-0.8
ETAZ	**East Tamaki Re**	**4.93**	**25**	Pn	Pn	12 35 51.6	+2.3
ETAZ	**East Tamaki Re**	**4.93**	**25**	P	Pn	12 35 51.7	+2.5
MLZ	**Mavora Lakes**	**4.97**	**217**	P	Pn	12 35 50.5	+0.6
RVAZ	**Riverhead Bore**	**5.00**	**21**	Pn	Pn	12 35 51.6	+1.4
RVAZ	**Riverhead Bore**	**5.00**	**21**	P	Pn	12 35 52.6	+2.4

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*IDC **15** 12:50:46.7±1.8, 34°.73N×142°.86E, h0km, mb3.3/3, mb1 3.4/6, mb1mx3.2/69, mbtmp3.3/6, ML3.2/3, MS2.5/2, Ms1 2.5/2, ms1mx2.2/30, Error ellipse: s-maj=45.5km s-min=23.9km az=76.0*

*ISCJB **15** 12:50:49.8±0.8, 34°.84N±0°.05×142°.75E±0°.07, h42km, mb3.4/3, Error ellipse: s-maj=8.5km s-min=6.8km az=160.1*

*JMA **15** 12:50:51.0±0.5, 34°.71N×142°.65E, h50km, M3.3*

ISC 15 12:50:51.3±1.3, 34°.79N±0°.06×142°.77E±0°.09, h42km, n18, σ2ˢ.02/27, mb3.5/3, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSO1	**Boso 1**	**1.48**	**265**	P	**Pn**	**12 51 14.2**	**-0.7**
BSO1				*e*X		12 51 32.1	
CHOJ	**Chosi**	**1.81**	**301**	P	**Pn**	**12 51 20.5**	**+0.6**
BSO3	**Boso 3**	**1.86**	**271**	P	**Pn**	**12 51 20.5**	**+0.1**
BSO4	**Boso 4**	**2.01**	**277**	P	**Pn**	**12 51 23.0**	**+0.4**
JHJ2	**Mitsune**	**2.97**	**237**	P	**Pn**	**12 51 34.7**	**-1.1**
JHJ2				*e*S	**Sn**	**12 52 06.0**	**-4.2**
JHJ	**Hachijo jima 2**	**2.98**	**237**	Pn	**Pn**	**12 51 34.6**	**-1.5**
	8.6nm,0.3s,baz=73,slow=19,SNR=16						
JHJ				Sn	**Sn**	**12 52 06.1**	**-4.6**
	33nm,0.3s,baz=72,slow=19,SNR=9.4						
JOD2	**Odawara 2**	**3.06**	**280**	P	**Pn**	**12 51 36.4**	**-0.7**
JOD2				*e*S	**Sn**	**12 52 10.0**	**-2.4**
JAG	**Ashikaga**	**3.16**	**302**	P	**Pn**	**12 51 38.4**	**-0.1**
JAG				*e*S	**Sn**	**12 52 14.5**	**-0.4**
JFT	**Otama**	**3.36**	**325**	P	**Pn**	**12 51 41.3**	**0.0**
JFT				S	**Sn**	**12 52 18.8**	**-1.2**
JRY	**Ryogami san**	**3.39**	**292**	P	**Pn**	**12 51 42.1**	**+0.4**
JRY				*e*S	**Sn**	**12 52 21.1**	**+0.5**
JYN	**Shimob**	**3.53**	**283**	P	**Pn**	**12 51 43.3**	**-0.4**
JYN				*e*S	**Sn**	**12 52 22.8**	**-1.5**
MJAR	**Matsushiro Arr**	**4.10**	**297**	Pn	**Pn**	**12 51 51.7**	**+0.2**
	0.9nm,0.3s,baz=117,slow=6.9,SNR=14						
MJAR				Sn	**Sn**	**12 52 38.6**	**+0.4**
	0.7nm,0.3s,baz=149,slow=28,SNR=5.1						
JMK	**Ichinoseki**	**4.34**	**344**	P	**Pn**	**12 51 54.1**	**-0.6**
JMK				*e*S	**Sn**	**12 52 42.0**	**-2.0**
ASAJ	**Asahikawa**	**9.32**	**359**	Pn	**Pn**	**12 53 01.6**	**-1.4**
	0.3nm,0.3s,baz=338,slow=19,SNR=4.2						
ASAJ				Sn	**Sn**	**12 54 41.0**	**-5.4**
	0.1nm,0.3s,baz=50,slow=18,SNR=1.8						
ASAJ				LR	LR	12 56 33.4	
	comp=Z,29nm,19.6s,baz=168,slow=37						
KSRS	**Korea Array**	**12.30**	**287**	LR	LR	12 58 34.2	
	comp=Z,20nm,18.1s,baz=215,slow=38						
KURBB	**Kurchatov Arra**	**48.27**	**310**	P	**P**	**12 59 30.5**	**+2.5**
	0.1nm,0.3s,baz=87,slow=7.7,SNR=2.6						
WRA	**Warramunga Arr**	**55.01**	**190**	P	**P**	**13 00 19.6**	**+1.1**
	0.3nm,0.7s,baz=7.2,slow=7.7,SNR=3.2						
ASAR	**Alice Springs**	**58.74**	**190**	P	**P**	**13 00 46.2**	**+1.3**
	0.3nm,0.7s,baz=7.6,slow=5.9,SNR=4.3						

IDC 15 12:51:36.0±8.0, 18°.37S×167°.73E, h182km±87km, mb3.3/4, mb1 3.5/5, mb1mx3.2/47, mbtmp3.7/5, Error ellipse: s-maj=108.2km s-min=29.6km az=166.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**3.88**	**198**	P	Pn	12 52 35.7	0.0
	1.3nm,0.3s,baz=122,slow=18,SNR=21						
DZM				S	Sn	12 53 22.7	+0.3
	0.3nm,0.3s,baz=38,slow=19,SNR=2.3						
WRA	**Warramunga Arr**	**31.55**	**262**	P	P	12 57 41.1	-0.4
	0.2nm,0.3s,baz=84,slow=6.9,SNR=8.6						
ASAR	**Alice Springs**	**31.96**	**255**	P	P	12 57 44.9	-0.2
	1.8nm,0.5s,baz=82,slow=8.6,SNR=31						
FITZ	**Fitzroy Crossi**	**39.91**	**264**	P	P	12 58 53.0	+0.4
	1.2nm,0.7s,baz=126,slow=8.7,SNR=6.2						
NVAR	**Mina Array Bea**	**89.31**	**49**	P	P	13 04 12.0	-0.1
	0.2nm,0.6s,baz=218,slow=5.7,SNR=3.5						

JMA 15 12:52:52.4±0.1, 36°.81N×138°.41E, h1km±1km, M0.0, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JJN	**Nakama**	**0.35**	**326**	*e*S	Sg	12 53 05.0	+1.2

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*BJI **15** 13:02:38.6, 71°.16N×10°.28W, h8km, mb4.8/13, mB4.9/9, Ms4.6/6, Ms7 4.3/6*

*ISCJB **15** 13:02:41.4±0.7, 71°.22N±0°.02×9°.98W±0°.07, h13km±3km, mb4.3/52, MS3.9/62, Error ellipse: s-maj=4.2km s-min=2.8km az=138.1*

*MOS **15** 13:02:41.9±1.2, 71°.41N×9°.61W, h10km, mb4.6/18, Error ellipse: s-maj=17.4km s-min=6.4km az=99.0*

*IDC **15** 13:02:42.3±0.7, 71°.26N×9°.54W, h0km, mb3.8/14, mb1 4.1/18, mb1mx3.8/75, mbtmp3.9/18, ML4.0/4, MS3.8/49, Ms1 3.9/49, ms1mx3.8/67, Error ellipse: s-maj=16.8km s-min=10.8km az=47.0*

*CSEM **15** 13:02:42.5±0.1, 71°.28N×9°.88W, h10km, mb4.6/25, Error ellipse: s-maj=3.8km s-min=3.1km az=140.0*

*BER **15** 13:02:42.3±3.8, 71°.27N×10°.08W, h8km±20km, ML3.9, ML4.7(NAO)*

*GCMT **15** 13:02:43.5±0.2, 71°.40N×9°.71W, h25km±1km, MW5.0/99, Moment Tensor Solution. s37,c43; s99,c145; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.08±.15; $M_{\theta\theta}$2.08±.14; $M_{\phi\phi}$-2.17±.12; $M_{r\theta}$0.45±.28; $M_{\theta\phi}$3.14±.10; $M_{\phi r}$1.40±.28; Best double couple: $M_0$4.06700×10^{16} NP1:ϕ_s17.00000°, δ89.00000°, λ159.00000°. NP2: ϕ_s107.00000°, δ69.00000°, λ1.00000°. Principal axes: T 4.0360, Plg15.0000°, Azm330.0000°; N 0.0540, Plg69.0000°, Azm195.0000°; P -4.0970, Plg14.0000°, Azm64.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **15** 13:02:43.5±0.2, 71°.31N×9°.71W, h10km, mb4.6/16 Error ellipse: s-maj=4.8km s-min=3.2km az=220.0*

*NAO **15** 13:02:44.4±5.8, 71°.26N×9°.56W, h23km±23km, ML4.7*

*REY **15** 13:02:45.1, 70°.67N×8°.83W, h10km*

ISC 15 13:02:43.3±0.7, 71°.34N±0°.03×9°.76W±0°.04, h11km±3km, n256, σ2ˢ.50/275, mb4.4/57, MS3.9/62, 11C-4D, Jan Mayen Island region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JMI	**Jan Mayen**	**0.53**	**141**	*e*P	**Pg**	**13 02 53.6**	**0.0**
JMI				*e*S	**Sg**	**13 03 00.9**	**+0.2**
JMI				IAML		13 03 02.9	
	comp=Z,15µm,0.5s						
JNW	**Jan Mayen West**	**0.53**	**125**	*e*P	**Pg**	**13 02 53.5**	**-0.2**
JNW				*e*S	**Sg**	**13 02 60.0**	**-0.7**
JNW				IAML		13 03 01.8	
	comp=Z,13µm,0.3s						
JMIC	**Jan Mayen**	**0.54**	**130**	Pg	**Pg**	**13 02 53.5**	**-0.3**
JMIC				Lg	Lg	13 03 00.5	
JMIC	**Jan Mayen**	**0.54**	**130**	Pn	**Pg**	**13 02 53.6**	**-0.2**
	comp=Z,2µm,0.3s,baz=285,slow=1.4,SNR=460						
JMIC				Sn	**Sg**	**13 03 00.1**	**-0.8**
	comp=Z,11µm,0.3s,baz=230,slow=0.6,SNR=31						
JMIC	**Jan Mayen**	**0.54**	**130**	Pg	**Pg**	**13 02 53.5**	**-0.3**
JMIC				Sn	**Sg**	**13 03 00.1**	**-0.8**
JMIC	**Jan Mayen**	**0.54**	**130**	*e*P	**Pg**	**13 02 53.5**	**-0.3**
JMIC				*e*S	**Sg**	**13 03 00.3**	**-0.7**
JMIC				IAML		13 03 03.5	
	comp=Z,29µm,0.3s						
JNE	**Jan Mayen East**	**0.59**	**126**	*e*P	**Pg**	**13 02 54.2**	**-0.6**
JNE				*e*S	**Sg**	**13 03 00.8**	**-1.7**
JNE				IAML		13 03 10.1	
	comp=Z,16µm,0.5s						
ILEI	**Leirhofn**	**5.52**	**209**	P	**Pn**	**13 04 01.9**	**-3.4**
	baz=217						
ILEI				S	**Sn**	**13 05 05.2**	**-3.4**
	baz=217						
IGRI	**Grimsey**	**5.66**	**216**	P	**Pn**	**13 04 06.0**	**-1.2**
	baz=223						
IGRI				S	**Sn**	**13 05 08.0**	**-4.0**
	baz=223						
IGIL	**Gilhagi**	**5.80**	**208**	P	**Pn**	**13 04 06.6**	**-2.6**
	baz=215						
IGIL				S	**Sn**	**13 05 11.9**	**-3.7**
	baz=215						
IGIL	**Gilhagi**	**5.80**	**208**	P	**Pn**	**13 04 06.6**	**-2.6**
IGIL				S	**Sn**	**13 05 11.9**	**-3.7**
IHED	**Heoinshofoi**	**5.95**	**211**	P	**Pn**	**13 04 09.7**	**-1.5**
	baz=218						
IHED				S	**Sn**	**13 05 15.9**	**-3.3**
	baz=218						
DAG	**Danmarks Havn**	**5.98**	**340**	*i* P	**Pn**	**13 04 10.3**	**-1.2**
DAG				*e*S	**Sn**	**13 05 12.4**	**-7.4**
DAG	**Danmarks Havn**	**5.98**	**340**	*i* P	**Pn**	**13 04 10.6**	**-0.9**
DAG	**Danmarks Havn**	**5.98**	**340**	*i* P	**Pn**	**13 04 10.3**	**-1.2**
DAG				*e*S	**Sn**	**13 05 12.4**	**-7.4**
DAG	**Danmarks Havn**	**5.98**	**340**	*i* P	**Pn**	**13 04 10.3**	**-1.2**
IDIM	**Dimmadalsˆ¡s**	**6.00**	**209**	P	**Pn**	**13 04 09.3**	**-2.5**
	baz=216						
IDIM				S	**Sn**	**13 05 17.6**	**-2.8**
	baz=216						
IBRE	**Brettingsstaoi**	**6.01**	**213**	P	**Pn**	**13 04 11.3**	**-0.8**
	baz=221						
IBRE	**Brettingsstaoi**	**6.01**	**213**	P	**Pn**	**13 04 11.3**	**-0.8**
IGHA	**Grjothals**	**6.07**	**208**	P	**Pn**	**13 04 10.1**	**-2.7**
	baz=215						
IGHA				S	**Sn**	**13 05 19.1**	**-3.0**
	baz=215						
IGRA	**Granastaoir**	**6.14**	**211**	P	**Pn**	**13 04 12.3**	**-1.5**
	baz=218						
IGRA				S	**Sn**	**13 05 21.3**	**-2.7**
	baz=218						
IGRA	**Granastaoir**	**6.14**	**211**	P	**Pn**	**13 04 12.3**	**-1.5**
IGRA				S	**Sn**	**13 05 21.3**	**-2.7**
IGRS	**Grimsstaoir**	**6.18**	**205**	P	**Pn**	**13 04 11.6**	**-2.8**
	baz=212						
IGRS				S	**Sn**	**13 05 21.7**	**-3.3**
	baz=212						
IGRS	**Grimsstaoir**	**6.18**	**205**	P	**Pn**	**13 04 11.6**	**-2.8**
IGRS				S	**Sn**	**13 05 21.7**	**-3.3**
ISIG	**Siglufjorour**	**6.19**	**217**	P	**Pn**	**13 04 13.8**	**-0.7**
	baz=224						
ISIG				S	**Sn**	**13 05 22.4**	**-2.8**
	baz=224						
ISIG	**Siglufjorour**	**6.19**	**217**	P	**Pn**	**13 04 13.8**	**-0.7**
ISIG				S	**Sn**	**13 05 22.4**	**-2.8**
IHLA	**Hella**	**6.26**	**214**	P	**Pn**	**13 04 14.7**	**-0.8**
	baz=221						
IHLA				S	**Sn**	**13 05 24.5**	**-2.4**
	baz=221						
IHLA	**Hella**	**6.26**	**214**	P	**Pn**	**13 04 14.7**	**-0.8**
IHLA				S	**Sn**	**13 05 24.5**	**-2.4**
IREN	**Reynihlio**	**6.29**	**208**	P	**Pn**	**13 04 13.7**	**-2.1**
	baz=215						
IREN				S	**Sn**	**13 05 25.1**	**-2.4**
	baz=215						
IMEL	**Melhnausar**	**6.32**	**207**	P	**Pn**	**13 04 14.0**	**-2.4**
	baz=214						
IMEL				S	**Sn**	**13 05 25.0**	**-3.4**
	baz=214						
IMEL	**Melhnausar**	**6.32**	**207**	P	**Pn**	**13 04 14.0**	**-2.4**
IMEL				S	**Sn**	**13 05 25.0**	**-3.4**
IHRN	**Hraun**	**6.46**	**221**	P	**Pn**	**13 04 18.5**	**+0.3**
	baz=228						
IADA	**Aoalbol**	**6.71**	**202**	P	**Pn**	**13 04 19.2**	**-2.4**
	baz=207						
IMKO	**Mokollar**	**6.84**	**204**	P	**Pn**	**13 04 20.4**	**-3.0**
	baz=210						
IVSH	**V-Sauoahnukur**	**6.93**	**202**	P	**Pn**	**13 04 21.8**	**-2.9**
	baz=207						
IKRE	**Kreppuhraun**	**7.03**	**204**	P	**Pn**	**13 04 23.4**	**-2.7**
	baz=210						
BORG	**Borgarnes**	**7.90**	**219**	*e*Pn	**Pn**	**13 04 38.0**	**+0.2**
BORG	**Borgarnes**	**7.90**	**219**	*e*P	**Pn**	**13 04 38.1**	**+0.2**
LOF	**Lofoten**	**8.67**	**100**	*e*Pn	**Pn**	**13 04 49.2**	**+0.8**
LOF				IAML		13 06 23.5	
	comp=Z,50nm,0.8s						
HSPB	**Hornsund (broa**	**8.86**	**39**	Pn	**Pn**	**13 04 50.3**	**-0.7**
HSP	**Hornsund**	**8.86**	**39**	Pn	**Pn**	**13 04 50.3**	**-0.8**
SUMG	**Summit**	**8.94**	**291**	*e*Pn	**Pn**	**13 04 53.9**	**+1.4**
SUMG	**Summit**	**8.94**	**291**	*e*P	**Pn**	**13 04 53.9**	**+1.4**
STEI	**Steigen**	**9.31**	**99**	*e*Pn	**Pn**	**13 04 57.4**	**+0.1**
STEI				IAML		13 06 39.6	
	comp=Z,73nm,0.5s						
KBS	**Kingsbay**	**9.34**	**26**	*e*Pn	**Pn**	**13 04 56.5**	**-1.1**
KBS	**Kingsbay**	**9.34**	**26**	*e*P	**Pn**	**13 04 56.5**	**-1.1**
KBS	**Kingsbay**	**9.34**	**26**	*e*Pn	**Pn**	**13 04 56.2**	**-1.5**
KBS				IAML		13 06 39.9	
	comp=Z,20nm,0.5s						
KONS	**Konsvik**	**9.51**	**109**	*e*Pn	**Pn**	**13 04 59.4**	**-0.6**
KONS				IAML		13 06 41.7	
	comp=Z,112nm,0.7s						
SPA0	**Spitsbergen Ar**	**9.59**	**33**	Pn	**Pn**	**13 05 01.8**	**+0.7**
	baz=248,slow=16						
SPA0				Sn	**Sn**	**13 06 46.0**	**-2.6**
	baz=263,slow=28						
SPA0	**Spitsbergen Ar**	**9.59**	**33**	*e*Pn	**Pn**	**13 05 01.1**	**0.0**
SPA0	**Spitsbergen Ar**	**9.59**	**33**	*e*Pn	**Pn**	**13 05 01.1**	**0.0**
SPA0				Sn	**Sn**	**13 06 46.0**	**-2.6**
	baz=263,slow=28						
SPITS	**Spitsbergen Ar**	**9.59**	**33**	Pn	**Pn**	**13 05 01.6**	**+0.5**
	baz=238,slow=16,SNR=532						
SPITS				Sn	**Sn**	**13 06 45.4**	**-3.2**
	baz=235,slow=33,SNR=5.0						
TRO	**Tromso**	**9.69**	**86**	*e*Pn	**Pn**	**13 05 00.7**	**-1.8**
TRO				IAML		13 06 53.6	
	comp=Z,18nm,0.6s						
MOR8	**Moi Rana**	**10.13**	**109**	*e*Pn	**Pn**	**13 05 07.7**	**-0.9**
MOR8				IAML		13 07 00.8	
	comp=Z,174nm,0.6s						
KIF	**Kilpisjarvi**	**10.56**	**88**	*e*Pn	**Pn**	**13 05 12.6**	**-1.8**
NSS	**Namsos**	**10.58**	**119**	*e*Pn	**Pn**	**13 05 12.6**	**-2.0**
NSS				IAML		13 07 07.8	
	comp=Z,115nm,0.4s						
HOPEN	**Hopen**	**10.77**	**46**	*e*Pn	**Pn**	**13 05 14.8**	**-2.3**
HAMF	**Hammerfest**	**10.84**	**78**	*e*Pn	**Pn**	**13 05 18.4**	**+0.3**
MOL	**Molde**	**11.05**	**134**	*e*Pn	**Pn**	**13 05 20.0**	**-1.1**
MOL				IAML		13 07 19.3	
	comp=Z,38nm,0.4s						
AKN	**Aaknes**	**11.27**	**136**	Pn	**Pn**	**13 05 23.9**	**-0.1**
AKN	**Aaknes**	**11.27**	**136**	Pn	**Pn**	**13 05 23.9**	**-0.1**
KTK1	**Kautokeino**	**11.34**	**86**	*e*Pn	**Pn**	**13 05 25.7**	**+0.7**
HEF	**Hetta**	**11.77**	**88**	*e*Pn	**Pn**	**13 05 29.9**	**-1.0**
SUE	**Sulen**	**11.82**	**143**	*e*Pn	**Pn**	**13 05 29.8**	**-1.7**
SUE				IAML		13 07 38.0	
	comp=Z,36nm,0.4s						
ARA0	**ARCESS Array S**	**11.84**	**82**	Pn	**Pn**	**13 05 31.6**	**-0.3**
	baz=289,slow=12						
ARA0	**ARCESS Array S**	**11.84**	**82**	Pn	**Pn**	**13 05 31.6**	**-0.3**
	baz=289,slow=12						
ARCES	**ARCESS Array B**	**11.84**	**82**	Pn	**Pn**	**13 05 31.8**	**0.0**
	comp=Z,1.7nm,0.3s,baz=291,slow=11,SNR=22						
ARCES				Sn	**Sn**	**13 07 41.8**	**-1.9**
	comp=Z,0.7nm,0.3s,baz=296,slow=23,SNR=3.5						
ARCES	**ARCESS Array B**	**11.84**	**82**	*e*P	**Pn**	**13 05 31.5**	**-0.3**
HYA	**Hoyanger**	**12.00**	**140**	*e*Pn	**Pn**	**13 05 33.5**	**-0.5**
HYA				IAML		13 07 43.8	
	comp=Z,47nm,0.6s						
KEV	**Kevo**	**12.22**	**80**	*e*Pn	**Pn**	**13 05 37.6**	**+0.6**
KEV	**Kevo**	**12.22**	**80**	*e*P	**Pn**	**13 05 37.6**	**+0.6**
ASK	**Askoy**	**12.43**	**144**	*e*Pn	**Pn**	**13 05 38.9**	**-1.1**
ASK				IAML		13 07 52.7	
	comp=Z,17nm,0.4s						

NC204	NORSAR Array S	12.94	131	*e*Pn	Pn	13 05 47.2	+0.3
NC303	NORSAR Array S	13.13	130	*e*Pn	Pn	13 05 47.8	-1.7
NBO00	NORSAR Array S	13.15	131	*e*Pn	Pn	13 05 49.0	-0.8
NOA	NORSAR Array B	13.25	131	LR	LR	13 10 27.6	
	comp=Z,343nm,19.9s,baz=335,slow=35						
NB201	NORSAR Array S	13.27	130	*e*Pn	Pn	13 05 51.4	+0.1
NC405	NORSAR Array S	13.31	129	*e*Pn	Pn	13 05 51.8	-0.1
NAO01	NORSAR Array S	13.34	132	*e*Pn	Pn	13 05 52.3	-0.1
NC602	NORSAR Array S	13.60	131	*e*Pn	Pn	13 05 54.0	-1.8
NRA0	NORESS Array S	13.60	131	Pn	Pn	13 05 51.6	-4.2
	baz=299,slow=18						
NRA0	NORESS Array S	13.60	131	Pn	Pn	13 05 51.6	-4.2
	baz=299,slow=18						
BLS5	Blasjo	13.66	143	*e*Pn	Pn	13 05 55.3	-1.4
BLS5				IAML		13 08 19.2	
	comp=Z,20nm,0.7s						
ILULI	Ilulissat	13.91	281	*e*Pn	Pn	13 05 58.4	-1.6
ILULI	Ilulissat	13.91	281	*e*P	Pn	13 05 58.4	-1.6
KONO	Kongsberg	14.11	136	*e*Pn	Pn	13 06 01.8	-1.0
KONO	Kongsberg	14.11	136	⇑*e*P	Pn	13 06 02.8	0.0
HFS	Hagfors	14.66	128	Pn	Pn	13 06 06.9	-3.4
	baz=323,slow=10						
HFS	Hagfors	14.66	128	Pn	Pn	13 06 09.4	-0.9
	comp=Z,0.4nm,0.3s,baz=325,slow=7.4,SNR=11						
HFS				Sn	Sn	13 08 40.6	-12
	comp=Z,1.7nm,0.3s,baz=331,slow=21,SNR=6.3						
HFS				LR	LR	13 11 11.3	
	comp=Z,523nm,21.4s,baz=328,slow=35						
HFS	Hagfors	14.66	128	Pn	Pn	13 06 06.9	-3.4
	baz=323,slow=10						
SFJD	Kangerlussuaq	14.93	273	LR	LR	13 11 20.0	
	comp=Z,398nm,21.2s,baz=53,slow=34						
APA	Apatity	15.34	83	⇓*i*P	Pn	13 06 18.6	-0.7
APA				*i*		13 09 07.0	
APA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
APA				MLR	MLR		
	comp=Z,400nm,12.0s						
EKA	Eskdalemuir Ar	16.32	166	Pn	Pn	13 06 32.0	-0.1
	baz=357,slow=12,SNR=7.6						
EKA				Sn	Sn	13 09 23.1	-10
	baz=355,slow=23,SNR=3.1						
FIA0	FINESS Array S	17.12	107	P	Pn	13 06 42.4	+0.3
	baz=320,slow=14						
FIA0	FINESS Array S	17.12	107	Pn	Pn	13 06 42.4	+0.3
	baz=320,slow=14						
FIA1	FINESS Array S	17.12	107	*e*Pn	Pn	13 06 42.1	0.0
FINES	FINESS Array B	17.12	107	Pn	Pn	13 06 42.1	0.0
	comp=Z,0.9nm,0.3s,baz=321,slow=12,SNR=23						
FINES				Sn	Sn	13 09 41.9	-10
	comp=Z,1.1nm,0.3s,baz=325,slow=24,SNR=6.2						
FINES				LR	LR	13 12 31.7	
	comp=Z,315nm,19.2s,baz=322,slow=35						
IVI	Ivigtut	18.10	256	*e*Pn	Pn	13 06 53.1	-1.2
	comp=Z,18nm,1.1s						
VSU	Vasula	19.70	112	*ce*P	Pn	13 07 15.0	+1.4
PUL	Pulkovo	19.74	105	⇑*e*P	Pn	13 07 13.5	-0.6
WTSB	Winterswijk	20.82	150	*i* P	P	13 07 25.1	+0.7
	comp=Z,259nm,1.8s						
BEBN	Eben Emael	21.78	153	⇑P	P	13 07 35.4	+0.7
KLMR	Klimovskoe	21.82	93	*e*P	P	13 07 33.1	-1.9
KLMR				*e*S	S	13 11 32.5	-3.2
KLMR				pmax	pmax		
	comp=Z,119nm,1.2s						
KLMR	Klimovskoe	21.82	93	*e*P	P	13 07 33.2	-1.8
KLMR				AMP		13 07 36.3	
	comp=Z,119nm,1.2s						
KLMR				*e*S	S	13 11 32.6	-3.2
KLMR				LQ	LQ	13 13 02.8	
KLMR				LQ	LQ	13 13 02.8	
KLMR				LR	LR	13 14 25.7	
HGN	Heimansgroeve	21.85	153	*i* P	P	13 07 36.4	+0.9
	comp=Z,212nm,1.6s						
HGN				*e*L	L	13 16 30.7	
	comp=Z,339nm,18.9s						
IZAR	Zarasai	21.85	117	*e*P	P	13 07 35.2	-0.3
IZAR				IAmb	IAmb	13 07 37.0	
	comp=Z,16nm,1.1s						
SNF	Seneffe	21.87	155	⇓P	P	13 07 35.2	-0.4
ISAL	Salakas	21.97	117	*e*P	P	13 07 36.6	-0.1
ISAL				IAmb	IAmb	13 07 38.3	
	comp=Z,11nm,0.8s						
MEM	Membach	22.01	152	⇑P	P	13 07 37.9	+0.7
	comp=Z,32nm,1.4s						
IIGN	Ignalina	22.19	117	*e*P	P	13 07 39.0	-0.1
IIGN				IAmb	IAmb	13 07 40.6	
	comp=Z,6.6nm,0.9s						
DOU	Dourbes	22.31	155	⇑P	P	13 07 40.6	+0.2
	comp=Z,15nm,2.0s						
IDID	Didziasalis	22.37	117	*e*P	P	13 07 41.0	0.0
IDID				IAmb	IAmb	13 07 42.6	
	comp=Z,8.9nm,0.6s						
CLL	Collm	22.58	141	*i* P	P	13 07 43.0	-0.3
	comp=Z,28nm,1.4s						
CLL				*i*		13 07 50.3	
CLL				*e*PPP	PPP	13 08 15.0	
CLL				*e*S	S	13 11 54.0	+3.7
CLL				Lmax		13 19 00.0	
CLL	Collm	22.58	141	*e*P	P	13 07 42.4	-0.9
	comp=Z,44nm,1.7s						
CLL	Collm	22.58	141	*i* P	P	13 07 43.0	-0.3
CLL				*e*S	S	13 11 54.0	+3.7
CLL				pmax	pmax		
	comp=Z,28nm,1.4s						
FRB	Frobisher Bay	22.75	280	LR	LR	13 15 45.5	
	comp=Z,245nm,20.3s,baz=44,slow=34						
WLF	Walferdange	22.95	153	⇑P	P	13 07 53.5	+6.2
RES	Resolute Bay	23.08	318	P	P	13 07 49.2	+0.9
	comp=Z,3.6nm,0.9s,baz=55,slow=7.9,SNR=3.5						
RES				LR	LR	13 16 44.2	
	comp=Z,513nm,18.1s,baz=65,slow=36						
BRG	Berggiesshubel	23.18	140	*e*P	P	13 07 50.1	+0.5
	comp=Z,8.9nm,1.1s						
BRG				*e*		13 07 55.5	
	comp=Z,8.3nm,1.1s						
BRG				S	S	13 12 05.0	+4.1
	comp=N,230nm,13.2s						
	comp=E,207nm,14.6s						
	comp=Z,345nm,14.3s						
BRG	Berggiesshubel	23.18	140	*e*P	P	13 07 50.1	+0.5
BRG				*e*		13 07 55.5	
BRG				S	S	13 12 05.0	+4.1
BRG				pmax	pmax		
	comp=Z,9.0nm,1.1s						
BRG				pmax	pmax		
	comp=Z,8.0nm,1.1s						
BRG				MLR	MLR		
	comp=N,230nm,13.2s						
BRG				MLR	MLR		
	comp=E,207nm,14.6s						
BRG				MLR	MLR		
	comp=Z,345nm,14.3s						
PRGR	Permogore	23.20	86	*e*P	P	13 07 48.5	-1.1
PRGR				pmax	pmax		
	comp=Z,33nm,1.1s						
NKC	Novy Kostel	23.49	142	*e*P	P	13 07 57.2	+4.5
NKC				*e*S	S	13 12 07.4	+1.5
NKC				AMS	AMS	13 20 00.0	
	comp=Z,400nm,13.2s						
NKC	Novy Kostel	23.49	142	*e*P	P	13 07 57.2	+4.5
NKC				*e*S	S	13 12 07.4	+1.5
NKC				MLR	MLR		
	comp=Z,400nm,13.2s						
PVCC	Panska Ves	23.64	139	AMS	AMS	13 20 00.0	
	comp=Z,300nm,11.6s						
KSP	Ksiaz	23.72	136	*e*P	P	13 07 56.1	+1.2
KSP	Ksiaz	23.72	136	*e*P	P	13 07 56.1	+1.2
UPC	Upice	23.97	137	*e*S	S	13 12 19.9	+6.3
UPC				AMS	AMS	13 19 50.0	
	comp=Z,500nm,12.9s						
PRU	Pruhonice	24.15	140	*e*P	P	13 08 00.0	+1.0
PRU				*e*pP	sP	13 08 06.7	+3.0
PRU				*e*S	S	13 12 18.8	+2.5
PRU				AMS	AMS	13 20 00.0	
	comp=Z,300nm,12.2s						
PRU	Pruhonice	24.15	140	*e*P	P	13 08 00.0	+1.0
PRU				*e*		13 08 06.7	
PRU				*e*S	S	13 12 18.8	+2.5
PRU				MLR	MLR		
	comp=Z,300nm,12.2s						
DPC	Dobruska-Polom	24.19	137	*e*P	P	13 08 00.5	+1.1
DPC				*e*pP	sP	13 08 06.8	+2.6
DPC				*e*S	S	13 12 15.9	-1.2
DPC				AMS	AMS	13 20 00.0	
	comp=Z,300nm,11.4s						
DPC	Dobruska-Polom	24.19	137	*e*P	P	13 08 00.5	+1.1
DPC				*e*		13 08 06.8	
DPC				*e*S	S	13 12 15.9	-1.2
DPC				MLR	MLR		
	comp=Z,300nm,11.4s						
GOPC	GO Pecny, Ondr	24.27	139	*e*P	P	13 08 02.3	+2.2
GOPC				*e*S	S	13 12 21.7	+3.3
GOPC				AMS	AMS	13 20 20.0	
	comp=Z,300nm,12.0s						
GOPC	GO Pecny, Ondr	24.27	139	*e*P	P	13 08 02.3	+2.2
GOPC				*e*S	S	13 12 21.7	+3.3
GOPC				MLR	MLR		
	comp=Z,300nm,12.0s						
ECH	Echery	24.52	152	*e*P	P	13 08 02.2	-0.2
	comp=Z,73nm,1.9s						
ECH	Echery	24.52	152	*e*P	P	13 08 02.2	-0.2
ECH				pmax	pmax		
	comp=Z,73nm,1.9s						
BFO	Black Forest	24.59	150	*e*P	P	13 08 03.8	+0.7
	comp=Z,25nm,1.4s						
BFO	Black Forest	24.59	150	*ce*P	P	13 08 04.9	+1.9
BFO				pmax	pmax		
	comp=Z,4.0nm,1.7s						
KHC	Kasperske Hory	24.77	142	*e*P	P	13 08 05.5	+0.9
KHC				*e*pP	sP	13 08 11.1	+1.7
KHC				*e*S	S	13 12 29.7	+3.3
KHC				AMS	AMS	13 20 40.0	
	comp=Z,400nm,14.4s						
KHC	Kasperske Hory	24.77	142	*e*P	P	13 08 05.5	+0.9
	comp=Z,14nm,2.0s						
KHC	Kasperske Hory	24.77	142	*e*P	P	13 08 05.5	+0.9
KHC				pmax	pmax		
	comp=Z,14nm,2.0s						
MORC	Moravsky Berou	25.00	135	*e*P	P	13 08 08.1	+1.3
	comp=Z,11nm,1.4s						
GEC2	GERESS Array S	25.06	142	*e*P	P	13 08 08.4	+1.1
	comp=Z,8.1nm,0.9s						
GERES	GERESS Array B	25.06	142	P	P	13 08 08.5	+1.1
	comp=Z,4.9nm,0.8s,baz=344,slow=8.3,SNR=19						
GERES				LR	LR	13 18 03.9	
	comp=Z,109nm,18.7s,baz=342,slow=37						
GEA0	GERESS Array S	25.07	142	*e*P	P	13 08 08.3	+0.9
OKC	Ostrava-Krasne	25.08	134	AMS	AMS	13 20 10.0	
	comp=Z,500nm,14.4s						
OJC	Ojcow	25.11	132	*e*P	P	13 08 08.8	+1.1
OJC	Ojcow	25.11	132	*e*P	P	13 08 07.5	-0.2
	comp=Z,10nm,0.8s						
OJC	Ojcow	25.11	132	*e*P	P	13 08 07.5	-0.2
OJC				pmax	pmax		
	comp=Z,11nm,0.8s						
VRAC	Vranov	25.23	137	P	P	13 08 08.7	-0.1
	comp=Z,2.7nm,0.8s,baz=349,slow=13,SNR=3.2						
VRAC				LR	LR	13 17 38.8	
	comp=Z,105nm,18.1s,baz=337,slow=36						
VRAC	Vranov	25.23	137	*e*P	P	13 08 09.1	+0.3
KRUC	Moravsky	25.42	138	*e*P	P	13 08 11.1	+0.6
OBN	Obninsk	25.49	105	⇑*e*P	P	13 08 10.3	-0.8
OBN				pmax	pmax		
	comp=Z,8.0nm,0.4s						
OBN				MLR	MLR		
	comp=Z,173nm,14.0s						
DAVA	Damuels	25.86	148	P	P	13 08 16.7	+2.0
	comp=Z,22nm,1.4s						
NIE	Niedzica	25.98	132	*e*P	P	13 08 14.9	-0.7
NIE	Niedzica	25.98	132	*e*P	P	13 08 14.9	-0.7
MOTA	Moosalm	26.01	146	*e*pP	P	13 08 19.1	+3.0
	comp=Z,3.7nm,0.9s						
LANS	Liptovska Anna	26.03	133	*e*P	P	13 08 18.8	+2.7
LANS	Liptovska Anna	26.03	133	*e*P	P	13 08 18.8	+2.7
WATA	Walderalm	26.11	146	P	P	13 08 19.2	+2.3
	comp=Z,1.5nm,0.6s						
MOA	Molln	26.12	141	P	P	13 08 21.3	+4.3
	comp=Z,14nm,1.6s						
WTTA	Wattenberg	26.18	146	*e*P	P	13 08 20.0	+2.3
	comp=Z,10nm,1.1s						
MODS	Modra-Piesok	26.26	137	*e*P	P	13 08 22.6	+4.4
MODS	Modra-Piesok	26.26	137	*e*P	P	13 08 22.6	+4.4
DAVOX	Davos/Dischmat	26.35	149	LR	LR	13 17 57.5	
	comp=Z,208nm,21.8s,baz=266,slow=35						
VYHS	Vyhne	26.50	134	*e*P	P	13 08 24.0	+3.7
VYHS	Vyhne	26.50	134	*e*P	P	13 08 24.0	+3.7
CRVS	Cervenica-Dubn	26.74	131	*e*P	P	13 08 28.6	+6.1
CRVS	Cervenica-Dubn	26.74	131	*e*P	P	13 08 28.6	+6.1
AKASG	Malin Array Be	27.15	119	P	P	13 08 25.8	-0.3
	comp=Z,1.0nm,0.5s,baz=332,slow=9.5,SNR=3.7						
AKASG				LR	LR	13 18 39.1	
	comp=Z,271nm,20.0s,baz=335,slow=35						
KIEV	Kiev	27.15	119	*ce*P	P	13 08 27.6	+1.5
KIEV				pmax	pmax		
	comp=Z,13nm,2.5s						
UZH	Uzhgorod	27.20	130	*e*P	P	13 08 26.4	-0.1
UZH				*e*		13 08 33.0	
UZH				*e*		13 09 16.2	
UZH				*e*S	S	13 13 00.0	-4.8
UZH				MLR	MLR		
	comp=Z,60nm,16.0s						
BUR04	Bucovina Ar. S	28.88	127	*e*P	P	13 08 40.2	-1.4
SCHQ	Schefferville	29.14	266	LR	LR	13 19 05.2	
	comp=Z,384nm,19.9s,baz=42,slow=34						
PGAV	Gavieira, Arco	29.46	178	*e*S	S	13 13 46.0	+5.3
PGAV				*e*LR	LR	13 17 01.8	
	comp=Z,404nm,20.0s						
VSR	Storozhevoye	29.65	107	*e*P	P	13 08 46.6	-1.7
VSR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
POLO	Lamas de Olo	30.05	177	*e*S	S	13 13 58.0	+7.9
MVO	Moncorvo	30.28	176	*e*S	S	13 14 00.7	+7.2
MVO				*e*LR	LR	13 16 47.0	
	comp=Z,255nm,18.0s						
MTE	Manteigas	31.03	177	*e*S	S	13 14 10.3	+5.0
MTE				*e*LR	LR	13 17 43.2	
	comp=Z,388nm,18.0s						
MLR	Muntele Rosu	31.04	127	LR	LR	13 22 18.0	
	comp=Z,226nm,18.3s,baz=340,slow=38						
PCAS	Casmilo, Conde	31.36	178	*e*S	S	13 14 27.7	+17
ARU	Arti	31.43	82	*c i*P	P	13 09 05.1	+1.1
ARU						13 10 05.6	
ARU						13 11 56.6	
ARU				S	S	13 14 14.9	+3.8
ARU				SS	SnSn	13 16 00.6	+5.8
ARU				pmax	pmax		
	comp=Z,11nm,1.7s						
ARU				MLR	MLR		
	comp=Z,240nm,16.0s						
ESDC	Sonseca Array	31.88	172	P	P	13 09 08.8	+0.6
	comp=Z,0.9nm,0.8s,baz=354,slow=12,SNR=5.7						
ESDC				LR	LR	13 21 45.0	
	comp=Z,152nm,18.1s,baz=330,slow=36						
PMRV	Marv??o	32.01	177	*e*S	S	13 14 26.3	+5.9
PMRV				*e*LR	LR	13 18 21.6	
	comp=Z,346nm,18.0s						
PMTG	Montargil	32.35	178	*e*S	S	13 14 31.9	+6.1
PMAFR	Mafra	32.45	179	*e*S	S	13 14 38.3	+11
PESTR	Estremoz	32.56	177	*e*S	S	13 14 35.9	+6.8
PVAQ	Vaqueiros	34.02	177	*e*S	S	13 14 54.8	+3.1
PVAQ				*e*LR	LR	13 19 15.0	
	comp=Z,255nm,20.0s						
PBDV	Barranco-do-Ve	34.18	177	*e*S	S	13 14 58.3	+4.1
FNA	Florina	34.38	136	*e*P	P	13 09 29.4	-0.6
	comp=Z,12nm,0.9s						
FNA	Florina	34.38	136	*e*P	P	13 09 29.4	-0.6
FNA				pmax	pmax		
	comp=Z,13nm,0.9s						
TIXI	Tiksi	34.76	22	⇓*e*P	P	13 09 32.6	-0.3
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ANN	Anapa	34.85	114	*e*P	P	13 09 34.7	+0.7
ANN				pmax	pmax		
	comp=Z,25nm,0.8s						
ANN				MLR	MLR		
	comp=N,230nm,13.0s						
ANN				MLR	MLR		
	comp=Z,380nm,13.0s						
VAE	Valguarnera	36.17	147	LR	LR	13 25 44.1	
	comp=Z,106nm,18.2s,baz=142,slow=38						
AGG	Agios Georgios	36.28	136	*e*P	P	13 09 46.7	+0.4
	comp=Z,13nm,0.7s						
AKTO	Aktyubinsk	36.32	88	P	P	13 09 46.6	+0.1
	comp=Z,1.8nm,0.7s,baz=326,slow=11,SNR=4.3						
AKTO				LR	LR	13 24 17.3	
	comp=Z,244nm,18.2s,baz=335,slow=36						
YKA	Yellowknife Ar	36.85	312	P	P	13 09 51.5	+0.7
	comp=Z,0.8nm,0.7s,baz=31,slow=9.1,SNR=3.1						
YKA				LR	LR	13 24 34.4	
	comp=Z,40nm,19.2s,baz=32,slow=36						
KEST	Kesra	37.07	154	LR	LR	13 24 31.8	
	comp=Z,183nm,21.6s,baz=334,slow=35						
KIV	Kislovodsk	37.20	109	*i* P	P	13 09 54.9	+0.7
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,156nm,18.0s						
KBZ	Khabaz	37.47	109	LR	LR	13 25 19.9	
	comp=Z,165nm,19.4s,baz=324,slow=36						
BRVK	Borovoye	37.96	75	*de*P	P	13 10 01.6	+1.2
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
ABKAR	Akbulak array	37.96	87	*e*P	P	13 10 00.5	+0.1
BVAR	Borovoye Array	38.02	75	P	P	13 10 01.7	+0.7
	comp=Z,1.9nm,1.0s,baz=333,slow=8.9,SNR=8.2						
BVAR				LR	LR	13 25 51.1	
	comp=Z,109nm,20.8s,baz=320,slow=37						
BRTR	Keskin Array B	38.46	122	LR	LR	13 27 14.0	
	comp=Z,129nm,18.8s,baz=328,slow=38						
MDT	Midelt	38.68	173	LR	LR	13 24 45.2	
	comp=Z,217nm,22.0s,baz=0.5,slow=34						
PMOZ	Porto Moniz, M	38.78	190	*e*LR	LR	13 21 17.8	
	comp=Z,103nm,18.0s						
NVS	Novosibirsk	40.31	63	*e*P	P	13 10 18.9	-1.1
NVS				*e*		13 11 53.3	
NVS				pmax	pmax		
	comp=Z,20nm,2.1s						
DAWY	Dawson	40.53	329	*e*P	P	13 10 22.1	+0.3
	comp=Z,11nm,1.6s						
IL1	Eielson Array	41.03	334	*e*P	P	13 10 26.3	+0.4
ILAR	Eielson Array	41.03	334	P	P	13 10 27.0	+1.1
	comp=Z,0.7nm,0.8s,baz=18,slow=7.3,SNR=10.0						
ILAR				LR	LR	13 29 08.9	
	comp=Z,77nm,19.9s,baz=46,slow=39						
GNI	Garni	41.29	109	LR	LR	13 27 57.4	
	comp=Z,206nm,18.2s,baz=334,slow=37						
ZALV	Zalesovo Beam	41.54	63	P	P	13 10 30.9	+0.7
	comp=Z,0.3nm,0.4s,baz=331,slow=15,SNR=2.8						
ZALV				LR	LR	13 29 26.1	
	comp=Z,171nm,21.8s,baz=254,slow=39						
BPAW	Bear Paw Mtn.	42.24	336	*e*P	P	13 10 37.2	+1.4
	comp=Z,12nm,1.4s						
ULM	Lac du Bonnet	42.28	288	LR	LR	13 27 19.3	
	comp=Z,168nm,19.9s,baz=335,slow=35						
KURK	Kurchatov	42.55	70	*e*P	P	13 10 39.1	+0.6
	comp=Z,13nm,1.6s						
KURK	Kurchatov	42.55	70	*e*P	P	13 10 39.1	+0.6
KURK				pmax	pmax		
	comp=Z,13nm,1.6s						
KURBB	Kurchatov Arra	42.61	70	P	P	13 10 39.2	+0.3
	comp=Z,1.6nm,0.9s,baz=331,slow=7.2,SNR=12						
MMAI	Mount Meron Ar	45.24	123	LR	LR	13 31 10.4	
	comp=Z,126nm,21.8s,baz=20,slow=38						
MK31	Makanchi Array	47.16	69	*e*P	P	13 11 15.3	+0.1
MK31	Makanchi Array	47.16	69	*e*P	P	13 11 15.3	+0.1
MKAR	Makanchi Array	47.16	69	P	P	13 11 16.1	+0.8
	comp=Z,2.2nm,1.0s,baz=342,slow=5.5,SNR=14						
MKAR				LR	LR	13 33 26.3	
	comp=Z,136nm,18.4s,baz=309,slow=39						
MKAR	Makanchi Array	47.16	69	*e*P	P	13 11 15.7	+0.5
	comp=Z,14nm,1.0s						
MKAR	Makanchi Array	47.16	69	*e*P	P	13 11 15.7	+0.5
MKAR				pmax	pmax		
	comp=Z,14nm,1.0s						
MK01	Makanchi Array	47.18	69	*e*P	P	13 11 15.4	0.0
GEYT	Alibeck	47.51	97	LR	LR	13 30 33.8	
	comp=Z,141nm,18.4s,baz=20,slow=35						
MSO	Missoula	50.64	301	*e*P	P	13 11 42.6	+0.6
	comp=Z,9.5nm,1.4s						
WMQ	Urumqi	51.46	67	P	P	13 11 50.9	+2.7
WMQ				pP	sP	13 11 55.3	+2.2
WMQ				sP	pP	13 11 59.1	+7.4
WMQ				pmax	pmax		
	comp=Z,15nm,0.7s						
WMQ				LR	LR		
	comp=Z,230nm,24.9s						
WMQ				LR	LR		
	comp=Z,360nm,22.1s						
WMQ				LR	LR		
	comp=Z,320nm,26.3s						
TKL	Tuckaleechee C	51.56	268	LR	LR	13 32 35.9	
	comp=Z,161nm,19.6s,baz=10.0,slow=35						
KSH	Kashi	51.79	79	*e*P	P	13 11 49.5	-1.3
KSH				*e*PcP	PcP	13 13 03.6	-0.1
KSH				*e*PP	PP	13 13 50.4	+2.3
KSH				pmax	pmax		
	comp=Z,99nm,5.5s						
SONM	Songino Array	52.84	49	LR	LR	13 37 18.1	
	comp=Z,103nm,18.8s,baz=333,slow=39						
PDAR	Pinedale Array	53.12	295	P	P	13 12 01.8	+1.1
	comp=Z,0.1nm,0.4s,baz=44,slow=9.2,SNR=3.4						
PDAR				LR	LR	13 32 20.5	
	comp=Z,130nm,21.4s,baz=28,slow=33						
PETK	Petropavlovsk-	55.53	9	LR	LR	13 33 20.7	
	comp=Z,52nm,21.3s,baz=355,slow=33						
KOWA	Kowa	56.92	173	LR	LR	13 37 02.2	
	comp=Z,147nm,18.1s,baz=36,slow=36						
YBH	Yreka Blue Hor	57.73	305	LR	LR	13 35 59.5	
	comp=Z,192nm,19.7s,baz=3.0,slow=34						
MVCO	Mesa Verde	57.92	291	*e*P	P	13 12 35.1	-0.2
	comp=Z,14nm,1.5s						
TORD	Torodi Ar. Bea	58.58	167	P	P	13 12 40.4	+0.7
	comp=Z,1.8nm,0.7s,baz=350,slow=9.0						
TORD				LR	LR	13 37 57.1	
	comp=Z,76nm,19.2s,baz=335,slow=36						
GTA	Gaotai	58.99	58	*e*P	P	13 12 44.3	+1.7
GTA				pP	sP	13 12 49.8	+2.3
GTA				sP	pP	13 12 52.8	+6.6
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
ANMO	Albuquerque	59.40	289	LR	LR	13 39 12.5	
	comp=Z,132nm,18.4s,baz=33,slow=37						
NVAR	Mina Array Bea	59.63	300	LR	LR	13 38 23.8	
	comp=Z,180nm,19.6s,baz=346,slow=36						
HHC	Hu-ho-hao-te	60.66	48	*e*P	P	13 12 54.1	0.0
HHC				sP	sP	13 13 03.6	+4.6
HHC				PP	PP	13 15 07.0	-0.2
HHC				S	S	13 21 10.8	+0.7
HHC				ScS	SKKSac	13 22 41.8	-2.6
HHC				pmax	pmax		
	comp=Z,35nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,5.7s						
HHC				LR	LR		
	comp=Z,140nm,16.1s						
HHC				LR	LR		
	comp=Z,230nm,15.5s						
HHC				LR	LR		
	comp=Z,160nm,15.2s						
PSNM	Stone Corral	62.65	301	*e*P	P	13 13 08.9	+1.5
ASAJ	Asahikawa	63.17	22	LR	LR	13 41 06.9	
	comp=Z,46nm,20.0s,baz=358,slow=36						
LZH	Lanzhou	63.20	56	*e*P	P	13 13 11.8	+0.5
LZH				pP	pP	13 13 15.0	+0.1
LZH				sP	sP	13 13 16.5	+0.3
LZH				*e*PP	PP	13 15 32.0	+2.2
LZH				pmax	pmax		
	comp=Z,20nm,1.2s						
LZH				pmax	pmax		
	comp=Z,69nm,7.9s						
LZH				LR	LR		
	comp=Z,220nm,15.0s						
LZH				LR	LR		
	comp=Z,220nm,15.4s						
LZH				LR	LR		
	comp=Z,280nm,18.9s						
TXAR	Lajitas Array	63.75	284	LR	LR	13 40 27.4	
	comp=Z,164nm,18.2s,baz=0.0,slow=36						
DBIC	Dimbokro	64.67	175	LR	LR	13 41 11.5	
	comp=Z,48nm,19.3s,baz=344,slow=36						
KSRS	Korea Array	67.42	35	LR	LR	13 44 38.5	
	comp=Z,39nm,18.3s,baz=295,slow=37						
PCRV	Puerto La Cruz	69.60	239	LR	LR	13 41 43.6	
	comp=Z,74nm,18.9s,baz=341,slow=34						
LPIG	La Paz	70.69	288	LR	LR	13 45 59.2	
	comp=Z,115nm,18.1s,baz=22,slow=37						
NJ2	Nanjing	70.77	45	*e*P	P	13 13 58.5	-0.7
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.6s						
BRDH	Bariadhala	72.29	72	LR	LR	13 49 31.0	
	comp=Z,118nm,19.8s,baz=120,slow=39						
GYA	Guiyang	73.07	57	*e*P	P	13 14 14.0	+0.8
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ROSC	El Rosal	77.46	247	LR	LR	13 44 28.0	
	comp=Z,31nm,21.9s,baz=269,slow=32						
CMAR	Chiang Mai Arr	78.46	67	LR	LR	13 56 09.8	

	comp=Z,30nm,18.7s,baz=320,slow=41						
TGY	**Tagaytay City**	**88.53**	**47**	LR	LR	13 59 02.8	
	comp=Z,84nm,19.6s,baz=151,slow=38						
LPAZ	**La Paz**	**95.84**	**235**	LR	LR	13 53 41.2	
	comp=Z,14nm,21.9s,baz=332,slow=32						
DAV	**Davao City (W)**	**96.40**	**45**	LR	LR	14 05 21.0	
	comp=Z,60nm,19.5s,baz=306,slow=39						
ASAR	**Alice Springs**	**128.00**	**44**	PKP	**PKPdf**	**13 21 50.2**	**+1.6**
	comp=Z,0.3nm,0.9s,baz=10,slow=1.7,SNR=3.9						

ISCJB ***15*** *13:11:15.2±0.5, 71°.33N±0°.03×10°.24W±0°.09, h10^{km}, Error ellipse: s-maj=5.3km s-min=3.1km az=144.5*
CSEM ***15*** *13:11:17.6±0.2, 71°.30N×10°.00W, h5^{km}, ML3.8, Error ellipse: s-maj=9.8km s-min=4.0km az=127.0*
NAO ***15*** *13:11:20.0±4.4, 71°.42N×9°.29W, ML3.8*
BER ***15*** *13:11:21.6±3.8, 71°.33N×9°.44W, h19^{km}±18^{km}, ML3.3, ML3.8(NAO)*
REY ***15*** *13:11:21.4, 70°.71N×9°.00W, h10^{km}*
ISC 15 13:11:17.5±0.9**, 71°.32N**±0°.06×**9°.56W**±0°.06**, h10**^{km}**, n37, σ2^s.10**/55**, 3C, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNW	**Jan Mayen West**	**0.47**	**128**	⇑*e*P	**Pn**	**13 11 29.9**	**-0.4**
JNW				*e*S	**Sb**	**13 11 36.6**	**+1.8**
JNW				IAML		13 11 38.0	
	comp=Z,5µm,0.2s						
JMI	**Jan Mayen**	**0.48**	**145**	⇑*e*P	**Pn**	**13 11 30.1**	**-0.3**
JMI				*e*S	**Sb**	**13 11 37.0**	**+2.0**
JMI				IAML		13 11 39.0	
	comp=Z,3µm,0.3s						
JMIC	**Jan Mayen**	**0.48**	**134**	Pg	**Pn**	**13 11 29.8**	**-0.6**
JMIC				Lg	Lg	13 11 36.7	
JMIC	**Jan Mayen**	**0.48**	**134**	Pg	**Pn**	**13 11 29.8**	**-0.6**
JMIC				Lg	Lg	13 11 36.7	
JMIC	**Jan Mayen**	**0.48**	**134**	*e*P	**Pn**	**13 11 29.8**	**-0.6**
JMIC				*e*S	**Sb**	**13 11 36.6**	**+1.5**
JMIC				IAML		13 11 38.8	
	comp=Z,3µm,0.2s						
JNE	**Jan Mayen East**	**0.53**	**128**	⇑*e*P	**Pn**	**13 11 30.5**	**-0.5**
JNE				*e*S	**Sb**	**13 11 37.3**	**+0.9**
JNE				IAML		13 11 40.3	
	comp=Z,6µm,0.2s						
ILEI	**Leirhofn**	**5.53**	**210**	P	**Pn**	**13 12 38.9**	**-0.9**
	baz=216						
ILEI				S	**Sn**	**13 13 40.5**	**-2.7**
	baz=216						
IGIL	**Gilhagi**	**5.81**	**208**	P	**Pn**	**13 12 42.6**	**-1.0**
	baz=214						
IGIL				S	**Sn**	**13 13 47.6**	**-2.7**
	baz=214						
IGIL	**Gilhagi**	**5.81**	**208**	P	**Pn**	**13 12 42.6**	**-1.0**
IGIL				S	**Sn**	**13 13 47.6**	**-2.7**
IHED	**Heoinshofoi**	**5.97**	**212**	P	**Pn**	**13 12 46.6**	**+0.9**
	baz=217						
IHED				S	**Sn**	**13 13 52.1**	**-1.9**
	baz=217						
IDIM	**Dimmadalsˆ¡s**	**6.01**	**210**	S	**Sn**	**13 13 53.3**	**-1.9**
	baz=215						
IGHA	**Grjothals**	**6.08**	**209**	P	**Pn**	**13 12 46.9**	**-0.4**
	baz=214						
IGHA				S	**Sn**	**13 13 55.0**	**-1.9**
	baz=214						
IGRS	**Grimsstaoir**	**6.19**	**206**	P	**Pn**	**13 12 48.0**	**-0.9**
	baz=211						
IGRS				S	**Sn**	**13 13 57.6**	**-2.0**
	baz=211						
IHLA	**Hella**	**6.28**	**215**	P	**Pn**	**13 12 51.4**	**+1.3**
	baz=220						
IHLA				S	**Sn**	**13 14 00.6**	**-1.1**
	baz=220						
IMEL	**Melhnausar**	**6.33**	**208**	P	**Pn**	**13 12 50.4**	**-0.4**
	baz=213						
IMEL				S	**Sn**	**13 14 01.9**	**-1.2**
	baz=213						
IHRN	**Hraun**	**6.48**	**221**	P	**Pn**	**13 12 54.7**	**+1.9**
	baz=227						
IADA	**Aoalbol**	**6.71**	**202**	P	**Pn**	**13 12 55.2**	**-0.8**
	baz=207						
IADA				S	**Sn**	**13 14 10.9**	**-1.5**
	baz=207						
IADA	**Aoalbol**	**6.71**	**202**	P	**Pn**	**13 12 55.2**	**-0.8**
IADA				S	**Sn**	**13 14 10.9**	**-1.5**
IVSH	**V-Sauoahnukur**	**6.93**	**202**	P	**Pn**	**13 12 58.3**	**-0.8**
	baz=206						
IVSH				S	**Sn**	**13 14 16.8**	**-1.1**
	baz=206						
IVSH	**V-Sauoahnukur**	**6.93**	**202**	P	**Pn**	**13 12 58.3**	**-0.8**
IVSH				S	**Sn**	**13 14 16.8**	**-1.1**
IKRE	**Kreppuhraun**	**7.04**	**205**	P	**Pn**	**13 13 00.6**	**+0.1**
	baz=209						
HSPB	**Hornsund (broa**	**8.83**	**39**	*e*Pn	**Pn**	**13 13 26.2**	**+1.3**
HSP	**Hornsund**	**8.84**	**39**	Pn	**Pn**	**13 13 27.1**	**+2.1**
KBS	**Kingsbay**	**9.33**	**26**	Pn	**Pn**	**13 13 32.8**	**+1.0**
KBS	**Kingsbay**	**9.33**	**26**	*e*Pn	**Pn**	**13 13 33.4**	**+1.6**
KBS				*e*Sn	**Sn**	**13 15 09.7**	**-7.0**
KONS	**Konsvik**	**9.45**	**110**	*e*Pn	**Pn**	**13 13 34.8**	**+1.4**
KONS				*e*Sn	Sn	13 15 09.7	-10
KONS				*e*S		13 15 12.7	
KONS				IAML		13 15 18.4	
	comp=Z,8.5nm,0.5s						
SPA0	**Spitsbergen Ar**	**9.57**	**33**	Pn	**Pn**	**13 13 37.8**	**+2.6**
	baz=244,slow=16						
SPA0	**Spitsbergen Ar**	**9.57**	**33**	Pn	**Pn**	**13 13 37.8**	**+2.6**
	baz=244,slow=16						
NSS	**Namsos**	**10.52**	**120**	*e*Pn	**Pn**	**13 13 47.9**	**-0.1**
NSS				*e*Sn	**Sn**	**13 15 39.2**	**-6.5**
NSS				IAML		13 15 43.5	
	comp=Z,8.1nm,0.7s						
HOPEN	**Hopen**	**10.74**	**46**	*e*Pn	**Pn**	**13 13 53.0**	**+2.0**
AKN	**Aaknes**	**11.21**	**137**	Pn	**Pn**	**13 14 00.5**	**+2.9**
AKN	**Aaknes**	**11.21**	**137**	*e*P	**Pn**	**13 14 00.3**	**+2.7**
AKN				*e*Sn	Sn	13 15 50.9	-12
AKN				IAML		13 16 01.4	
	comp=Z,7.0nm,0.4s						
ARA0	**ARCESS Array S**	**11.78**	**82**	Pn	**Pn**	**13 14 08.2**	**+2.8**
	baz=287,slow=12						
ARA0	**ARCESS Array S**	**11.78**	**82**	Pn	**Pn**	**13 14 08.2**	**+2.8**
	baz=287,slow=12						
FIA0	**FINESS Array S**	**17.05**	**107**	P	**P**	**13 15 18.6**	**+1.2**
	baz=316,slow=12						
FIA0	**FINESS Array S**	**17.05**	**107**	Pn	**P**	**13 15 18.6**	**+1.2**
	baz=316,slow=12						
KLMR	**Klimovskoe**	**21.75**	**93**	*e*P	**P**	**13 16 10.7**	**+2.0**
KLMR				AMP		13 16 18.6	
	comp=Z,22nm,1.5s						

IDC 15 13:17:18.9±2.9**, 17°.64N**×**123°.57E, h0**^{km}**, mb3.5**/3**, mb1 3.6**/3**, mb1mx3.2**/57**, mbtmp3.5**/3**, Error ellipse: s-maj=326.5km s-min=29.0km az=67.0, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**38.82**	**164**	P	P	13 24 45.7	0.0
	1.0nm,0.3s,baz=345,slow=8.9,SNR=41						
ASAR	**Alice Springs**	**42.28**	**166**	P	P	13 25 14.1	-0.3
	0.1nm,0.4s,baz=345,slow=7.3,SNR=7.1						
ZALV	**Zalesovo Beam**	**46.96**	**330**	P	P	13 25 51.3	-0.1
	0.6nm,0.4s,baz=128,slow=8.1,SNR=2.7						

DDA ***15*** *13:27:38.4, 36°.42N×28°.87E, h7^{km}, Ml2.9*
ATH ***15*** *13:27:38.4, 36°.42N×28°.93E, h41^{km}±4^{km}, ML2.3/3, Error ellipse: s-maj=6.2km s-min=1.2km az=178.0*
ISK ***15*** *13:27:38.5, 36°.49N×28°.91E, h23^{km}, ML3.0/4*
CSEM ***15*** *13:27:38.9±0.1, 36°.47N×28°.92E, h20^{km}, ML3.0, Error ellipse: s-maj=3.0km s-min=2.0km az=2.0*
ISCJB ***15*** *13:27:39.3±0.4, 36°.48N±0°.03×28°.91E±0°.03, h28^{km}±4^{km}, Error ellipse: s-maj=5.6km s-min=4.0km az=8.9*
THE ***15*** *13:27:39.4, 36°.43N×28°.90E, h17^{km}±3^{km}, ML2.0/2, Error ellipse: s-maj=4.3km s-min=0.8km az=37.0*
ISC 15 13:27:38.9±0.9**, 36°.45N**±0°.03×**28°.92E**±0°.02**, h23**^{km}±7^{km}**, n63, σ0^s.71**/90**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FETY	**Fethiye**	**0.23**	**35**	PG	**Pb**	**13 27 44.2**	**-0.6**
FETY				SG	**Sb**	**13 27 48.9**	**+0.2**
FETY	**Fethiye**	**0.23**	**35**	P	**Pb**	**13 27 44.8**	**0.0**
FETY				S	**Sb**	**13 27 50.1**	**+1.4**
FETY	**Fethiye**	**0.23**	**35**	*e*Pg	**Pb**	**13 27 44.2**	**-0.6**
FETY	**Fethiye**	**0.23**	**35**	P	**Pb**	**13 27 44.8**	**0.0**
FETY				*e*Sg	**Sb**	**13 27 48.9**	**+0.2**
FETY				S		13 27 49.6	
DALY	**Dalyan (Mu˜la**	**0.43**	**330**	PG	**Pb**	**13 27 47.2**	**-0.6**
DALY				SG	**Sb**	**13 27 53.3**	**-0.6**
DALY	**Dalyan (Mu˜la**	**0.43**	**330**	*e*Pg	**Pb**	**13 27 47.2**	**-0.6**
DALY				*e*Sg	**Sb**	**13 27 53.3**	**-0.6**
DALY				S	**Sn**	**13 27 54.3**	**-2.4**
TURN	**Turunc**	**0.49**	**329**	PG	**Pn**	**13 27 51.2**	**+0.6**
TURN				SG	**Sn**	**13 28 00.8**	**+2.4**
TURN	**Turunc**	**0.49**	**329**	*i* P	**Pn**	**13 27 51.4**	**+0.8**
TURN				*i* S	**Sn**	**13 28 00.4**	**+2.0**
TURN	**Turunc**	**0.49**	**329**	*e*Pg	**Pn**	**13 27 51.2**	**+0.6**
TURN				S	**Sn**	**13 28 00.4**	**+2.0**
AKAS	**Kas**	**0.59**	**111**	PG	**Pb**	**13 27 50.7**	**0.0**
AKAS				SG	**Sn**	**13 28 00.8**	**-0.2**
AKAS	**Kas**	**0.59**	**111**	*i* P	**Pb**	**13 27 50.6**	**0.0**
AKAS				*i* S	**Sn**	**13 28 00.3**	**-0.7**
AKAS	**Kas**	**0.59**	**111**	*e*Pg	**Pb**	**13 27 50.7**	**0.0**
AKAS				S	**Sn**	**13 28 00.3**	**-0.7**
KSL	**Kastellorizon**	**0.61**	**119**	P	**Pb**	**13 27 50.8**	**-0.1**
KSL				S	**Sn**	**13 28 00.9**	**-0.3**
KSL				AML	AML	13 28 01.7	
	comp=E,548µm,0.6s						
KSL				AML	AML	13 28 02.6	
	comp=N,358µm,0.4s						
KSL	**Kastellorizon**	**0.61**	**119**	P	**Pb**	**13 27 50.9**	**-0.1**
KSL				S	**Sn**	**13 28 01.4**	**+0.1**
MRSB	**Marmaris-Mugla**	**0.64**	**295**	PG	**Pb**	**13 27 51.8**	**+0.3**
MRSB	**Marmaris-Mugla**	**0.64**	**295**	*e*Pg	**Pb**	**13 27 51.8**	**+0.3**
ARG	**Arkhangelos**	**0.68**	**250**	PG	**Pn**	**13 27 52.6**	**-0.5**
ARG	**Arkhangelos**	**0.68**	**250**	P	**Pb**	**13 27 51.9**	**-0.3**
ARG				S	**Sn**	**13 28 03.3**	**+0.2**
ARG				AML	AML	13 28 05.3	
	comp=E,317µm,0.3s						
ARG				AML	AML	13 28 06.8	
	comp=N,171µm,0.3s						
ARG	**Arkhangelos**	**0.68**	**250**	P	**Pb**	**13 27 52.2**	**+0.1**
ARG				S	**Sn**	**13 28 02.4**	**-0.7**
ARG	**Arkhangelos**	**0.68**	**250**	P	**Pb**	**13 27 52.2**	**+0.1**
ARG	**Arkhangelos**	**0.68**	**250**	*e*Pg	**Pn**	**13 27 52.6**	**-0.5**
ARG				S	**Sn**	**13 28 02.4**	**-0.7**
ELL	**Elmali**	**0.85**	**69**	PG	**Pn**	**13 27 55.6**	**+0.1**
ELL	**Elmali**	**0.85**	**69**	*e*Pg	**Pn**	**13 27 55.6**	**+0.1**
YER	**Yerkesik**	**0.85**	**323**	PG	**Pn**	**13 27 55.7**	**+0.1**
YER	**Yerkesik**	**0.85**	**323**	P	**Pb**	**13 27 54.8**	**-0.3**
YER	**Yerkesik**	**0.85**	**323**	P	**Pb**	**13 27 54.8**	**-0.3**
YER	**Yerkesik**	**0.85**	**323**	*e*Pg	**Pn**	**13 27 55.7**	**+0.1**
GOLH	**Golhisar**	**0.94**	**33**	*i* P	**Pb**	**13 27 56.1**	**-0.5**
GOLH				*i* S	**Sn**	**13 28 09.8**	**+0.2**
GOLH	**Golhisar**	**0.94**	**33**	P	**Pb**	**13 27 56.1**	**-0.5**
GOLH				S	**Sn**	**13 28 09.8**	**+0.2**
TAVA	**DENIZLI_Tavas**	**1.01**	**360**	*i* P	**Pn**	**13 27 57.0**	**-0.8**
TAVA				*i* S	**Sb**	**13 28 10.0**	**-0.8**
TAVA	**DENIZLI_Tavas**	**1.01**	**360**	P	**Pn**	**13 27 57.0**	**-0.8**
TAVA				S	**Sb**	**13 28 10.0**	**-0.8**
DATC	**Datca-Mugla**	**1.06**	**287**	PG	**Pn**	**13 27 58.1**	**-0.2**
DATC	**Datca-Mugla**	**1.06**	**287**	*e*Pg	**Pn**	**13 27 58.1**	**-0.2**
DAT	**Datca**	**1.12**	**285**	PN	**Pn**	**13 27 59.1**	**-0.1**
DAT	**Datca**	**1.12**	**285**	*i* P	**Pb**	**13 27 59.4**	**-0.2**
DAT				*i* S	**Sb**	**13 28 13.6**	**-0.2**
DAT	**Datca**	**1.12**	**285**	*e*Pn	**Pn**	**13 27 59.1**	**-0.1**
DAT	**Datca**	**1.12**	**285**	P	**Pb**	**13 27 59.4**	**-0.2**
DAT				S	**Sb**	**13 28 13.6**	**-0.2**
MLSB	**Milas**	**1.25**	**313**	PN	**Pn**	**13 28 00.3**	**-0.7**
MLSB	**Milas**	**1.25**	**313**	*e*Pn	**Pn**	**13 28 00.3**	**-0.7**
KORT	**Korkueli**	**1.27**	**64**	PN	**Pn**	**13 28 01.7**	**+0.3**
KORT	**Korkueli**	**1.27**	**64**	*i* P	**Pn**	**13 28 00.7**	**-0.7**
KORT				*i* S	**Sb**	**13 28 19.7**	**+1.4**
KORT	**Korkueli**	**1.27**	**64**	P	**Pn**	**13 28 00.7**	**-0.7**
KORT	**Korkueli**	**1.27**	**64**	*e*Pn	**Pn**	**13 28 01.7**	**+0.3**
KORT				S	**Sb**	**13 28 19.7**	**+1.4**
DENT	**Denizli**	**1.31**	**4**	PN	**Pn**	**13 28 00.8**	**-1.0**
DENT	**Denizli**	**1.31**	**4**	*e*Pn	**Pn**	**13 28 00.8**	**-1.0**
BODT	**Bodrum**	**1.43**	**296**	PN	**Pn**	**13 28 03.5**	**0.0**
BODT	**Bodrum**	**1.43**	**296**	P	**Pn**	**13 28 03.0**	**-0.5**
BODT	**Bodrum**	**1.43**	**296**	P	**Pn**	**13 28 03.0**	**-0.5**
BODT	**Bodrum**	**1.43**	**296**	*e*Pn	**Pn**	**13 28 03.5**	**0.0**
KARP	**Karpathos**	**1.69**	**238**	PN	**Pn**	**13 28 07.7**	**+0.7**
KARP	**Karpathos**	**1.69**	**238**	P	**Pn**	**13 28 06.8**	**-0.2**
KARP	**Karpathos**	**1.69**	**238**	P	**Pn**	**13 28 06.8**	**-0.2**
KARP	**Karpathos**	**1.69**	**238**	*e*Pn	**Pn**	**13 28 07.7**	**+0.7**
AYDB	**Zeytinkoy-Aydi**	**1.71**	**331**	PN	**Pn**	**13 28 06.8**	**-0.6**
AYDB	**Zeytinkoy-Aydi**	**1.71**	**331**	*e*Pn	**Pn**	**13 28 06.8**	**-0.6**
SUTC	**Sutluce-Ispart**	**1.96**	**58**	PN	**Pn**	**13 28 10.6**	**-0.2**
SUTC	**Sutluce-Ispart**	**1.96**	**58**	*e*Pn	**Pn**	**13 28 10.6**	**-0.2**
KULA	**Kula-Manisa**	**2.07**	**354**	PN	**Pn**	**13 28 12.2**	**-0.1**
KULA	**Kula-Manisa**	**2.07**	**354**	*e*Pn	**Pn**	**13 28 12.2**	**-0.1**
SMG	**Samos**	**2.09**	**308**	P	**Pn**	**13 28 12.7**	**+0.3**
SMG				S	**Sn**	**13 28 38.9**	**+1.1**
SMG				AML	AML	13 28 40.6	
	comp=E,138µm,0.2s						
SMG				AML	AML	13 28 40.6	
	comp=N,142µm,0.5s						
SMG	**Samos**	**2.09**	**308**	P	**Pn**	**13 28 12.8**	**+0.3**
SMG				S	**Sn**	**13 28 38.5**	**+0.7**
CHOS	**Chios island**	**2.99**	**311**	P	**Pn**	**13 28 24.8**	**-0.2**
CHOS	**Chios island**	**2.99**	**311**	P	**Pn**	**13 28 25.2**	**+0.2**

IDC 15 13:43:57.7±3.4**, 6°.60S**×**154°.78E, h0**^{km}**, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.4**/41**, mbtmp3.4**/3**, Error ellipse: s-maj=123.8km s-min=39.0km az=118.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.87**	**234**	P	P	13 49 13.6	+0.5
	1.1nm,0.8s,baz=58,slow=9.7,SNR=7.5						
ASAR	**Alice Springs**	**26.27**	**228**	P	P	13 49 34.6	-0.4
	0.2nm,0.7s,baz=57,slow=10,SNR=1.6						
MKAR	**Makanchi Array**	**82.97**	**319**	P	P	13 56 25.6	+0.8
	0.4nm,0.7s,baz=98,slow=6.0,SNR=3.6						
TORD	**Torodi Ar. Bea**	**152.72**	**286**	PKPbc	PKPbc	14 03 56.8	-0.8
	baz=64,slow=3.4						

NIED ***15*** *14:08:00, 44°.90N×142°.30E, h5^{km}, Mw4.1 Best double couple: M$_0$1.66000×10^{15} NP1:φ$_s$204.00000°, δ24.00000°, λ95.00000°. NP2:φ$_s$18.00000°, δ66.00000°, λ88.00000°.*
IDC ***15*** *14:08:04.7±0.6, 44°.92N×142°.07E, h0^{km}, mb3.8/10, mb1 4.0/12, mb1mx3.7/64, mbtmp3.7/12, ML3.3/1, MS3.3/6, Ms1 3.3/6, ms1mx2.9/61, Error ellipse: s-maj=17.2km s-min=9.0km az=61.0*
BJI ***15*** *14:08:04.8, 44°.99N×142°.59E, h35^{km}, mb4.5/25, mB4.9/15, Ms4.3/13, Ms7 4.1/11*
ISCJB ***15*** *14:08:05.4±0.8, 44°.88N±0°.03×142°.10E±0°.03, h12^{km}±5^{km}, mb4.2/20, MS3.9/5, Error ellipse: s-maj=5.9km s-min=3.5km az=10.9*
JMA ***15*** *14:08:06.3, 44°.83N×142°.16E, h0^{km}, M4.2*
JMA Felt IV J1.
SKHL ***15*** *14:08:08.6±0.5, 44°.81N×142°.09E, h42^{km}±2^{km}, mb4.6/10*
NEIC ***15*** *14:08:08.5±2.5, 44°.83N×142°.10E, h29^{km}±19^{km}, mb4.5/4, Error ellipse: s-maj=10.0km s-min=8.9km az=96.0*
NEIC Recorded [1 JMA] in northern Hokkaido.
MOS ***15*** *14:08:08.1±0.9, 44°.86N×142°.13E, h42^{km}, mb4.4/3, Error ellipse: s-maj=9.4km s-min=7.5km az=119.5*
ISC 15 14:08:05.4±1.3**, 44°.96N**±0°.04×**142°.20E**±0°.03**, h2**^{km}±8^{km}**, n83, σ1^s.88**/101**, mb4.2**/20**, MS4.2**/5**, 4C-4D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSE	**Soyaes**	**0.27**	**90**	⇓P	**Pb**	**14 08 12.9**	**-0.1**
JRR	**Rishiri**	**0.66**	**286**	⇑P	**Pb**	**14 08 19.3**	**-0.2**
JYG	**Yagishiri**	**0.77**	**226**	⇑P	**Pg**	**14 08 18.7**	**-1.4**
ASAJ	**Asahikawa**	**0.89**	**161**	Pg	**Pg**	**14 08 21.5**	**-0.9**
	268nm,0.3s,baz=340,slow=12,SNR=2528						
ASAJ				Lg	Lg	14 08 33.4	
	274nm,0.3s,baz=152,slow=33,SNR=11						
ASAJ				LR	LR	14 08 55.0	
	comp=Z,547nm,21.7s,baz=334,slow=57						
ASAJ	**Asahikawa**	**0.89**	**161**	*e*Pg	**Pg**	**14 08 20.9**	**-1.5**
ASAJ				Lg	Lg	14 08 33.4	
ASAJ	**Asahikawa**	**0.89**	**161**	⇓P	**Pg**	**14 08 20.8**	**-1.6**
YSS	**Yuzh-Sakhalins**	**2.03**	**11**	*e*P	**Pb**	**14 08 42.1**	**-0.9**
YSS				AMB	AMB	14 08 42.9	
	20nm,1.0s						
YSS				*e*S	**Sb**	**14 09 07.5**	**-1.2**
YSS	**Yuzh-Sakhalins**	**2.03**	**11**	*e*Pn	**Pb**	**14 08 41.8**	**-1.2**
YSS	**Yuzh-Sakhalins**	**2.03**	**11**	⇑*e*PN	**Pb**	**14 08 42.1**	**-0.9**
YSS				*e*S	**Sb**	**14 09 07.5**	**-1.2**
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
YSS				smax	smax		
	comp=N,160nm,0.5s						
YSS				MLR	MLR		
	comp=Z,1µm,12.0s						
YSS				MLR	MLR		
	comp=N,1µm,13.0s						
YSS				MLR	MLR		
	comp=E,2.0nm,11.0s						
GLVR	**Golovnino**	**2.67**	**116**	*e*P	**Pn**	**14 08 50.6**	**+1.2**
GLVR				AMB	AMB	14 08 51.9	
	comp=E,50nm,0.4s						
GLVR				AMB	AMB	14 08 51.9	
	comp=E,260nm,0.4s						
GLVR				*i* S	**Sn**	**14 09 23.3**	**+1.0**
GLVR				A	A	14 09 37.8	
	comp=E,380nm,0.6s						
GLVR				A	A	14 09 37.8	
	comp=E,440nm,0.6s						
GLVR	**Golovnino**	**2.67**	**116**	PN	**Pn**	**14 08 50.6**	**+1.2**
GLVR				*i* S	**Sn**	**14 09 23.3**	**+1.0**
GLVR				pmax	pmax		
	comp=Z,256nm,0.3s						
GLVR				pmax	pmax		
	comp=N,48nm,0.4s						
GLVR				smax	smax		
	comp=N,375nm,0.6s						
GLVR				smax	smax		
	comp=E,444nm,0.6s						
LAGR	**Lagunnoye**	**2.72**	**108**	*e*P	**Pn**	**14 08 50.4**	**+0.4**
LAGR				AMB	AMB	14 08 58.3	
	comp=E,160nm,0.6s						
LAGR				AMB	AMB	14 08 58.3	
	comp=E,460nm,0.6s						
LAGR				AMB	AMB	14 08 58.3	
	comp=E,370nm,0.6s						
LAGR				*i* S	**Sn**	**14 09 24.9**	**+1.5**
LAGR				A	A	14 09 31.5	
	comp=E,1µm,0.5s						
LAGR				A	A	14 09 31.5	
	comp=E,1µm,0.5s						
LAGR	**Lagunnoye**	**2.72**	**108**	*e*PN	**Pn**	**14 08 50.4**	**+0.4**
LAGR				*i* S	**Sn**	**14 09 24.9**	**+1.5**
LAGR				pmax	pmax		
	comp=Z,367nm,0.6s						
LAGR				pmax	pmax		
	comp=N,161nm,0.4s						
LAGR				pmax	pmax		
	comp=E,456nm,0.4s						
LAGR				smax	smax		
	comp=N,1µm,0.5s						
LAGR				smax	smax		
	comp=E,1µm,0.5s						
GRPR	**Tuman**	**2.73**	**109**	*e*P	**Pn**	**14 08 50.5**	**+0.3**
GRPR				AMB	AMB	14 09 00.2	
	comp=E,220nm,0.4s						
GRPR				AMB	AMB	14 09 00.2	
	comp=E,160nm,0.4s						
GRPR				AMB	AMB	14 09 00.2	
	comp=E,340nm,0.4s						
GRPR				*i* S	**Sn**	**14 09 25.7**	**+1.9**
GRPR				A	A	14 09 28.7	
	comp=E,290nm,0.7s						
GRPR				A	A	14 09 28.7	
	comp=E,380nm,0.7s						
GRPR	**Tuman**	**2.73**	**109**	*e*PN	**Pn**	**14 08 50.5**	**+0.3**
GRPR				*i* S	**Sn**	**14 09 25.7**	**+1.9**
GRPR				pmax	pmax		
	comp=N,217nm,0.4s						
GRPR				pmax	pmax		
	comp=E,163nm,0.4s						
GRPR				pmax	pmax		
	comp=Z,340nm,0.4s						
GRPR				smax	smax		
	comp=E,377nm,0.8s						
GRPR				smax	smax		
	comp=N,285nm,0.6s						
YUK	**Yuzh-Kuril'sk**	**2.78**	**108**	*i* P	**Pn**	**14 08 51.0**	**+0.2**
YUK				AMB	AMB	14 08 56.6	
	comp=N,140nm,0.5s						
YUK				AMB	AMB	14 08 56.6	
	comp=N,170nm,0.5s						
YUK				AMB	AMB	14 08 56.6	
	comp=N,220nm,0.5s						
YUK				*i* S	**Sn**	**14 09 23.3**	**-1.5**
YUK				A	A	14 09 31.7	
	comp=N,463nm,0.7s						
YUK				A	A	14 09 31.7	
	comp=N,350nm,0.7s						
YUK	**Yuzh-Kuril'sk**	**2.78**	**108**	*d i*PN	**Pn**	**14 08 51.0**	**+0.2**
YUK				*i* S	**Sn**	**14 09 26.1**	**+1.3**
YUK				pmax	pmax		
	comp=Z,217nm,0.5s						
YUK				pmax	pmax		
	comp=N,140nm,0.6s						
YUK				pmax	pmax		
	comp=E,165nm,0.4s						
YUK				smax	smax		
	comp=N,463nm,0.7s						
YUK				smax	smax		
	comp=E,348nm,0.7s						
ERM	**Erimo**	**3.02**	**166**	*e*Pn	**Pn**	**14 08 56.4**	**+2.2**
ERM	**Erimo**	**3.02**	**166**	*e*PN	**Pn**	**14 08 56.4**	**+2.2**
SHO	**Shikotan**	**3.49**	**107**	*e*P	**Pn**	**14 09 01.7**	**+1.1**
SHO				AMB	AMB	14 09 07.6	
	comp=E,20nm,0.6s						
SHO				AMB	AMB	14 09 07.6	
	comp=E,40nm,0.6s						
SHO				AMB	AMB	14 09 07.6	
	comp=E,60nm,0.6s						
SHO				*e*S	**Sn**	**14 09 40.7**	**-1.7**
SHO				A	A	14 09 48.0	
	comp=E,89nm,0.5s						
SHO				A	A	14 09 48.0	
	comp=E,140nm,0.5s						
SHO	**Shikotan**	**3.49**	**107**	*e*PN	**Pn**	**14 09 00.9**	**+0.3**
SHO				*e*S	**Sn**	**14 09 43.6**	**+1.2**
SHO				pmax	pmax		
	comp=N,22nm,0.6s						
SHO				pmax	pmax		
	comp=Z,61nm,0.6s						
SHO				pmax	pmax		
	comp=E,38nm,0.7s						
SHO				smax	smax		
	comp=N,55nm,0.6s						
SHO				smax	smax		
	comp=E,71nm,0.7s						
TEY	**Ternei**	**3.97**	**273**	⇑*e*PN	**Pn**	**14 09 06.4**	**-0.8**
TEY				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KUR	**Kuril'sk**	**4.02**	**84**	*i* P	**Pn**	**14 09 09.5**	**+1.6**
KUR				AMB	AMB	14 09 13.1	
	comp=Z,8.0nm,0.4s						
KUR				AMB	AMB	14 09 13.1	
	comp=Z,4.0nm,0.4s						
KUR				AMB	AMB	14 09 13.1	
	comp=Z,20nm,0.4s						
KUR				*i* S	**Sn**	**14 09 56.5**	**+1.0**
KUR	**Kuril'sk**	**4.02**	**84**	⇓*i*PN	**Pn**	**14 09 09.5**	**+1.6**
KUR				*i* S	**Sn**	**14 09 58.1**	**+2.6**
KUR				pmax	pmax		
	comp=N,8.0nm,0.4s						
KUR				pmax	pmax		
	comp=E,4.0nm,0.4s						
KUR				pmax	pmax		
	comp=Z,16nm,0.4s						
KUR				smax	smax		
	comp=E,21nm,0.7s						
KUR				smax	smax		
	comp=N,16nm,0.9s						
GRNR	**Gornyy**	**6.99**	**328**	*e*PN	**Pn**	**14 09 52.5**	**+3.8**
GRNR				pmax	pmax		
	comp=Z,18nm,0.9s						
USRK	**Ussuriysk Ar.**	**7.33**	**268**	Pn	**Pn**	**14 09 53.7**	**+0.3**
	baz=84,slow=14						
USRK				LR	LR	14 12 44.5	
	comp=Z,266nm,19.5s,baz=133,slow=39						
I45RU	**USSURIYSK INFR**	**7.34**	**268**	*i*		14 50 30.0	
	baz=78,slow=313,SNR=2.0						
KLR	**Kul'dur**	**8.31**	**305**	Pn	**Pn**	**14 10 08.8**	**+1.9**
	comp=Z,0.0nm,0.3s,baz=121,slow=16,SNR=3.4						
KLR				Lg	Lg	14 12 26.5	

	comp=Z,0.0nm,0.3s,baz=323,slow=17,SNR=1.9						
KLR				LR	LR	14 13 33.0	
	comp=Z,14nm,21.2s,baz=122,slow=40						
MJB9	**Matsu-Tunnel**	**8.93**	**201**	*e*Pn	**Pn**	**14 10 14.9**	**-0.5**
MAJO	**Matsushiro**	**8.94**	**201**	*e*P	**Pn**	**14 10 14.8**	**-0.6**
MAJO	**Matsushiro**	**8.94**	**201**	*e*Pn	**Pn**	**14 10 14.8**	**-0.6**
MAJO	**Matsushiro**	**8.94**	**201**	*e*PN	**Pn**	**14 10 14.8**	**-0.6**
MJAR	**Matsushiro Arr**	**8.94**	**201**	Pn	**Pn**	**14 10 16.3**	**+0.8**
	comp=Z,0.3nm,0.3s,baz=22,slow=16,SNR=6.9						
MJAR				LR	LR	14 14 04.8	
	comp=Z,68nm,18.1s,baz=15,slow=41						
CN2	**Changchun**	**12.05**	**270**	*e*P	**Pn**	**14 10 59.9**	**+1.9**
CN2				*e*S	**Sn**	**14 13 18.8**	**+5.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,600nm,12.0s						
CN2				LR	LR		
	comp=Z,500nm,12.0s						
CN2				LR	LR		
	comp=Z,600nm,14.0s						
PETK	**Petropavlovsk-**	**13.01**	**46**	Pn	Pn	14 11 17.5	+6.4
	baz=242,slow=14						
KSRS	**Korea Array**	**13.10**	**240**	Pn	**Pn**	**14 11 13.7**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=50,slow=15,SNR=3.0						
KSRS				LR	LR	14 15 36.9	
	comp=Z,103nm,18.2s,baz=53,slow=35						
ZEA	**Zeya**	**13.10**	**317**	*e*PN	P	14 11 27.2	+4.4
ZEA				pmax	pmax		
	comp=N,21nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,26nm,0.8s						
ZEA				MLR	MLR		
	comp=Z,500nm,12.0s						
ZEA				MLR	MLR		
	comp=E,300nm,14.0s						
ZEA				MLR	MLR		
	comp=N,300nm,11.0s						
KSAR	**Wonju Array Be**	**13.13**	**240**	Pn	**Pn**	**14 11 13.7**	**+1.0**
KSAR	**Wonju Array Be**	**13.13**	**240**	PN	**Pn**	**14 11 13.7**	**+1.0**
YAK	**Yakutsk**	**18.59**	**341**	LR	LR	14 19 59.9	
	comp=N,77nm,18.8s,baz=122,slow=38						
SEY	**Seymchan**	**18.93**	**14**	P	**Pn**	**14 12 30.1**	**+2.3**
	comp=N,0.2nm,0.3s,baz=205,slow=11,SNR=12						
BJI	**Beijing**	**19.77**	**265**	P	**P**	**14 12 33.8**	**-2.8**
BJI				pmax	pmax		
	comp=N,21nm,0.4s						
BJI				LR	LR		
	comp=N,200nm,11.0s						
BJI				LR	LR		
	comp=N,370nm,14.1s						
NJ2	**Nanjing**	**22.27**	**243**	*e*P	**P**	**14 13 03.3**	**-0.3**
NJ2				pmax	pmax		
	comp=N,13nm,0.5s						
HHC	**Hu-ho-hao-te**	**22.74**	**270**	*e*P	**P**	**14 13 09.1**	**+0.3**
HHC				sP	sP	14 13 25.5	+16
HHC				PP	**PnPn**	**14 13 42.3**	**+10**
HHC				S	**S**	**14 17 13.1**	**-5.2**
HHC				sS	sS	14 17 24.3	+4.9
HHC				pmax	pmax		
	comp=N,21nm,1.1s						
HHC				pmax	pmax		
	comp=N,110nm,5.7s						
HHC				LR	LR		
	comp=N,340nm,11.8s						
HHC				LR	LR		
	comp=N,400nm,10.4s						
HHC				LR	LR		
	comp=N,390nm,12.0s						
SONA1	**Songino Array**	**24.72**	**290**	*e*P	**P**	**14 13 26.0**	**-2.0**
SONM	**Songino Array**	**24.73**	**290**	P	**P**	**14 13 26.5**	**-1.6**
	comp=N,1.5nm,0.7s,baz=80,slow=7.5,SNR=7.4						
SONM				LR	LR	14 24 20.5	
	comp=N,147nm,19.2s,baz=87,slow=40						
WHN	**Wuhan**	**26.15**	**246**	P	**P**	**14 13 42.0**	**+1.1**
LZH	**Lanzhou**	**30.24**	**266**	*e*P	**P**	**14 14 16.3**	**-1.3**
LZH				pP	sP	14 14 26.8	+8.2
LZH				sP	pP	14 14 31.3	+13
LZH				*e*PP	**PnPn**	**14 15 15.0**	**+0.2**
LZH				pmax	pmax		
	comp=N,18nm,1.0s						
LZH				pmax	pmax		
	comp=N,65nm,5.1s						
LZH				LR	LR		
	comp=N,360nm,13.0s						
LZH				LR	LR		
	comp=N,370nm,13.2s						
LZH				LR	LR		
	comp=N,440nm,16.7s						
GTA	**Gaotai**	**31.62**	**275**	*e*P	**P**	**14 14 29.8**	**+0.1**
GTA				pmax	pmax		
	comp=N,3.0nm,0.8s						
GYA	**Guiyang**	**33.90**	**249**	*e*P	**P**	**14 14 49.8**	**0.0**
GYA				pmax	pmax		
	comp=N,10.0nm,0.8s						
KMI	**Kunming**	**37.42**	**251**	P	**P**	**14 15 19.9**	**-0.2**
KMI				pmax	pmax		
	comp=N,8.0nm,0.8s						
KMI				pmax	pmax		
	comp=N,100nm,4.7s						
ZALV	**Zalesovo Beam**	**37.42**	**305**	LR	LR	14 31 37.6	
	comp=N,57nm,18.0s,baz=70,slow=38						
WMQ	**Urumqi**	**38.35**	**288**	P	**P**	**14 15 28.5**	**+0.9**
WMQ				pP	sP	14 15 38.3	+10
WMQ				pmax	pmax		
	comp=N,16nm,0.7s						
WMQ				LR	LR		
	comp=N,100nm,14.5s						
WMQ				LR	LR		
	comp=N,210nm,14.1s						
WMQ				LR	LR		
	comp=N,240nm,12.9s						
MK31	**Makanchi Array**	**40.87**	**295**	*e*P	**P**	**14 15 47.7**	**-0.8**
MK31	**Makanchi Array**	**40.87**	**295**	*e*P	**P**	**14 15 47.7**	**-0.8**
MKAR	**Makanchi Array**	**40.87**	**295**	P	**P**	**14 15 47.7**	**-0.8**
	comp=N,1.7nm,0.8s,baz=79,slow=7.5,SNR=12						
MKAR	**Makanchi Array**	**40.87**	**295**	*e*P	**P**	**14 15 47.8**	**-0.7**
MKAR	**Makanchi Array**	**40.87**	**295**	*e*P	**P**	**14 15 47.8**	**-0.7**
	comp=N,12nm,0.7s						
MK01	**Makanchi Array**	**40.87**	**295**	*e*P	**P**	**14 15 47.1**	**-1.4**
MAKZ	**Makanchi**	**41.06**	**295**	*e*P	**P**	**14 15 48.9**	**-1.2**
	comp=N,3.6nm,1.1s						
MAKZ	**Makanchi**	**41.06**	**295**	*e*P	**P**	**14 15 48.9**	**-1.2**
MAKZ				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KURK	**Kurchatov**	**41.89**	**301**	P	**P**	**14 15 55.7**	**-1.1**
KURK	**Kurchatov**	**41.89**	**301**	P	**P**	**14 15 55.7**	**-1.1**
KURBB	**Kurchatov Arra**	**41.97**	**301**	P	**P**	**14 15 55.7**	**-1.8**
	comp=Z,0.6nm,0.4s,baz=76,slow=8.9,SNR=3.8						
ILAR	**Eielson Array**	**42.63**	**37**	P	**P**	**14 16 03.4**	**+0.7**
	comp=Z,0.9nm,0.8s,baz=280,slow=8.3,SNR=12						
CHTO	**Chiang Mai**	**44.31**	**248**	*e*P	**P**	**14 16 15.6**	**-1.1**
CHTO	**Chiang Mai**	**44.31**	**248**	*e*P	**P**	**14 16 15.7**	**-1.1**
	comp=Z,3.7nm,0.6s						
CHTO	**Chiang Mai**	**44.31**	**248**	*e*P	**P**	**14 16 15.7**	**-1.1**
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**44.57**	**248**	P	**P**	**14 16 18.2**	**-0.6**
	comp=Z,0.5nm,0.4s,baz=33,slow=8.6,SNR=5.1						
BVAR	**Borovoye Array**	**45.97**	**307**	P	**P**	**14 16 28.1**	**-1.4**
	comp=Z,1.1nm,0.4s,baz=80,slow=8.9,SNR=11						
KDJ	**Kajisay**	**46.08**	**291**	*e*P	**P**	**14 16 29.9**	**-0.9**
	comp=Z,26nm,1.7s						
KSH	**Kashi**	**48.11**	**288**	*e*P	**P**	**14 16 48.8**	**+2.2**
KSH				*e*PcP	**PcP**	**14 18 14.4**	**+0.2**
KSH				PcS	**PcS**	**14 22 11.1**	**+1.0**
KSH				S	**S**	**14 23 49.1**	**+3.0**
KSH				sS	sS	14 24 05.1	+18
KSH				ScS	**ScS**	**14 26 37.1**	**-3.8**
KSH				SS	**SS**	**14 27 14.1**	**-0.6**
KK31	**Karatay Array**	**50.00**	**295**	*e*P	**P**	**14 16 59.5**	**-1.3**
KK31	**Karatay Array**	**50.00**	**295**	*e*P	**P**	**14 16 59.6**	**-1.3**
KKAR	**Karatay Array**	**50.00**	**295**	*e*P	**P**	**14 16 59.4**	**-1.5**
KKAR	**Karatay Array**	**50.00**	**295**	*e*P	**P**	**14 16 59.4**	**-1.5**
ABKAR	**Akbulak array**	**53.51**	**306**	*e*P	**P**	**14 17 25.2**	**-1.8**
FINES	**FINESS Array B**	**62.14**	**331**	P	**P**	**14 18 25.3**	**-2.1**
	comp=Z,0.6nm,0.5s,baz=60,slow=8.2,SNR=5.2						
NVAR	**Mina Array Bea**	**69.88**	**56**	P	**P**	**14 19 18.7**	**+0.8**
	comp=Z,0.8nm,0.8s,baz=289,slow=4.6,SNR=6.2						
PDAR	**Pinedale Array**	**71.77**	**47**	P	**P**	**14 19 29.6**	**+0.3**
	comp=Z,0.4nm,0.5s,baz=314,slow=1.4,SNR=6.0						
TXAR	**Lajitas Array**	**84.85**	**53**	P	**P**	**14 20 42.5**	**+0.7**
	comp=Z,0.9nm,1.0s,baz=306,slow=3.1,SNR=4.0						
SIV	**San Ignacio**	**145.09**	**42**	PKPbc	**PKPbc**	**14 27 43.3**	**-0.7**
	comp=Z,2.6nm,0.8s,baz=1.8,slow=1.7,SNR=14						
SNAA	**Sanae**	**148.44**	**200**	PKPbc	**PKPbc**	**14 27 51.1**	**-1.1**
	comp=Z,0.9nm,0.9s,baz=284,slow=4.2,SNR=4.2						

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*BJI **15** 14:10:51.1, 3°.41S×140°.07E, h68^{km}, mb4.8/18, mB5.1/12, Ms4.8/5, Ms7 4.5/5*

*ISCJB **15** 14:10:53.8±0.2, 3°.02S±0°.03×139°.70E±0°.03, h54^{km}, mb4.5/30, MS3.9/7, Error ellipse: s-maj=4.7km s-min=4.0km az=179.7*

*NEIC **15** 14:10:56.8±0.9, 3°.01S×139°.62E, h72^{km}±9^{km}, mb4.7/16, Error ellipse: s-maj=7.2km s-min=6.8km az=123.0*

*DJA **15** 14:10:57.0±0.6, 3°S±4°×14°0E±°, h43^{km}±12^{km}, M4.8/7, mb5.1/7, mB5.2/7, MLv5.0/6, Mw(mB)4.5/7*

*IDC **15** 14:10:59.3±3.4, 3°.01S×139°.72E, h95^{km}±34^{km}, mb3.9/13, mb1 4.0/16, mb1mx3.8/48, mbtmp4.3/16, MS3.3/6, Ms1 3.3/6, ms1mx3.0/42, Error ellipse: s-maj=19.4km s-min=15.8km az=74.0*

ISC 15 14:10:55.4±0.4, **2°.98S**±0°.04×**139°.72E**±0°.04, **h54**^{km}, **n74**, σ**2^{s}.24**/85, **mb4.5**/30, **MS3.6**/7, **1D**, **Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	**Genyem**	**0.59**	**50**	P	**Pn**	**14 11 08.1**	**+0.2**
GENI				S	**Sn**	**14 11 17.6**	**+0.6**
JAY	**Jayapura**	**1.09**	**65**	P	**Pn**	**14 11 13.7**	**-0.7**
JAY				S	**Sn**	**14 11 26.5**	**-2.0**
WAMI	**Wamena**	**1.35**	**228**	P	**Pn**	**14 11 21.4**	**+3.5**
WAMI				S	**Sn**	**14 11 41.8**	**+7.0**
SRPI	**Serui, Papua**	**3.65**	**287**	P	**Pn**	**14 11 50.8**	**+1.5**
SRPI				S	**Sn**	**14 12 31.3**	**+0.2**
BAKI	**Biak**	**4.02**	**296**	P	**Pn**	**14 11 55.5**	**+1.0**
RKPI	**Ransiki, Papua**	**5.72**	**285**	P	**Pn**	**14 12 20.1**	**+2.2**
FAKI	**Fak Fak**	**7.46**	**270**	P	**Pn**	**14 12 42.7**	**+1.0**
	83nm,0.9s,838nm						
FAKI				S	**Sn**	**14 14 03.8**	**-1.2**
	83nm,0.9s,838nm						
FAKI	**Fak Fak**	**7.46**	**270**	*e*Pn	**Pn**	**14 12 42.5**	**+0.8**
MANU	**Manus Island**	**7.70**	**83**	*e*Pn	**Pn**	**14 12 47.8**	**+2.9**
SWI	**Sorong**	**8.71**	**284**	P	**Pn**	**14 13 01.9**	**+3.1**
PMG	**Port Moresby**	**9.77**	**131**	P	**Pn**	**14 13 17.1**	**+3.8**
	2.3nm,0.3s,baz=15,slow=5.4,SNR=8.5						
PMG				S	**Sn**	**14 15 04.3**	**+2.6**
	0.3nm,0.3s,baz=221,slow=20,SNR=1.5						
COEN	**Coen**	**11.43**	**163**	*e*Pn	**Pn**	**14 13 36.4**	**+0.4**
LBMI	**Labuha**	**12.43**	**281**	P	**Pn**	**14 13 51.0**	**+1.3**
NLAI	**Namlea**	**12.60**	**268**	P	**Pn**	**14 13 54.9**	**+2.9**
	60nm,1.0s						
MTN	**Manton Dam**	**12.97**	**220**	*e*Pn	**Pn**	**14 13 55.5**	**-1.6**
SANI	**Sanana**	**13.75**	**274**	P	**Pn**	**14 14 08.2**	**+0.5**
SOEI	**Soe**	**16.76**	**246**	*e*Pn	**Pn**	**14 14 46.1**	**-0.6**
	103nm,0.9s						
GUMO	**Guam**	**17.23**	**17**	LR	LR	14 20 38.2	
	comp=Z,57nm,19.2s,baz=220,slow=34						
DAV	**Davao City (W)**	**17.28**	**305**	LR	LR	14 21 51.2	
	comp=Z,64nm,20.1s,baz=150,slow=38						
WRAB	**Tennant Creek**	**17.65**	**197**	*e*Pn	**Pn**	**14 14 54.5**	**-3.1**
	16nm,0.6s						
WB2	**Warramunga Arr**	**17.66**	**197**	*e*Pn	**Pn**	**14 14 56.2**	**-1.5**
WRA	**Warramunga Arr**	**17.66**	**197**	P	**P**	**14 14 58.5**	**+0.5**
	1.4nm,0.3s,baz=21,slow=12,SNR=45						
WRA				S	**Sn**	**14 18 06.3**	**-7.5**
	1.2nm,0.3s,baz=7.1,slow=22,SNR=7.2						
CTA	**Charters Tower**	**18.17**	**160**	P	**Pn**	**14 15 04.1**	**+0.2**
	0.5nm,0.3s,baz=335,slow=12,SNR=7.5						
CTAO	**Charters Tower**	**18.17**	**160**	*e*P	**Pn**	**14 15 03.8**	**-0.1**
	59nm,1.7s						
FITZ	**Fitzroy Crossi**	**20.40**	**222**	P	**P**	**14 15 28.3**	**+0.3**
	9.4nm,0.6s,baz=35,slow=8.4,SNR=38						
FITZ				S	**S**	**14 19 04.6**	**-9.1**
	19nm,0.8s,baz=167,slow=12,SNR=8.4						
HNR	**Honiara**	**21.10**	**109**	P	**P**	**14 15 35.9**	**+0.4**
	33nm,0.4s,baz=244,slow=15,SNR=4.4						
HNR				LR	LR	14 24 07.4	
	comp=Z,85nm,19.4s,baz=227,slow=37						
AS01	**Alice Springs**	**21.31**	**195**	*e*P	**P**	**14 15 37.0**	**-0.9**
AS31	**Alice Springs**	**21.32**	**195**	*e*P	**P**	**14 15 37.6**	**-0.4**
	4.7nm,0.6s						
ASAR	**Alice Springs**	**21.32**	**195**	P	**P**	**14 15 37.6**	**-0.4**
	4.6nm,0.6s,baz=25,slow=11,SNR=68						
ASAR				S	**S**	**14 19 30.4**	**-1.7**
	4.7nm,0.7s,baz=9.8,slow=30,SNR=4.2						
EIDS	**Eidsvold**	**24.81**	**155**	*e*P	**P**	**14 16 14.5**	**+2.0**
	71nm,0.8s						
MBWA	**Marble Bar**	**26.55**	**226**	*e*P	**P**	**14 16 28.9**	**+0.5**
	17nm,0.5s						
STKA	**Stephens Creek**	**28.80**	**177**	P	**P**	**14 16 49.2**	**+0.8**
	5.1nm,0.6s,baz=356,slow=8.3,SNR=9.8						
STKA				LR	LR	14 28 13.6	
	comp=Z,158nm,19.1s,baz=228,slow=36						
JOW	**Kunigami**	**31.63**	**340**	LR	LR	14 27 45.3	
	comp=Z,41nm,21.8s,baz=247,slow=32						
DZM	**Mont Dzumac**	**32.15**	**128**	LR	LR	14 29 31.1	
	comp=Z,101nm,19.2s,baz=279,slow=35						
NJ2	**Nanjing**	**40.08**	**332**	*e*P	**P**	**14 18 26.4**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KSAR	**Wonju Array Be**	**41.69**	**346**	P	**P**	**14 18 39.0**	**+0.1**
KSRS	**Korea Array**	**41.69**	**346**	P	**P**	**14 18 39.0**	**+0.1**
	1.1nm,0.7s,baz=160,slow=9.0,SNR=3.5						
GYA	**Guiyang**	**43.32**	**315**	*e*P	**P**	**14 18 53.0**	**+0.6**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**45.44**	**300**	P	**P**	**14 19 09.5**	**+0.1**
	0.5nm,0.3s,baz=107,slow=6.3,SNR=4.3						
KMI	**Kunming**	**45.46**	**310**	P	**P**	**14 19 10.3**	**+0.6**
KMI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KMI				pmax	pmax		
	comp=Z,120nm,4.3s						
ASAJ	**Asahikawa**	**46.95**	**3**	P	**P**	**14 19 20.5**	**-0.2**
	3.6nm,0.8s,baz=203,slow=18,SNR=5.5						
HHC	**Hu-ho-hao-te**	**50.63**	**332**	*e*P	**P**	**14 19 52.4**	**+3.2**
HHC				pP	pP	14 20 06.8	+3.1
HHC				sP	sP	14 20 17.9	+8.0
HHC				S	**S**	**14 27 02.3**	**+2.1**
HHC				SS	**SS**	**14 30 29.3**	**-6.0**
HHC				pmax	pmax		
	comp=Z,22nm,1.1s						
HHC				pmax	pmax		
	comp=Z,180nm,7.2s						
HHC				LR	LR		
	comp=N,280nm,14.7s						
HHC				LR	LR		
	comp=E,390nm,14.1s						
HHC				LR	LR		
	comp=Z,160nm,16.7s						
LZH	**Lanzhou**	**51.30**	**323**	*e*P	**P**	**14 19 55.3**	**+0.9**
LZH				pP	sP	14 20 12.5	-2.6
LZH				sP	pP	14 20 20.6	+12
LZH				*e*PP	**PP**	**14 21 54.0**	**+2.1**
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				pmax	pmax		
	comp=Z,78nm,7.5s						
LZH				LR	LR		
	comp=N,370nm,15.0s						
LZH				LR	LR		
	comp=E,380nm,14.9s						
LZH				LR	LR		
	comp=Z,460nm,18.5s						
KIWB	**Kanaga Island**	**65.69**	**28**	*e*P	**P**	**14 21 33.8**	**-0.4**
WMQ	**Urumqi**	**65.84**	**321**	P	**P**	**14 21 36.3**	**+0.9**
WMQ				sP	PcP	14 22 03.6	-2.5
WMQ				pmax	pmax		
	comp=Z,20nm,0.7s						
WMQ				LR	LR		
	comp=N,240nm,12.7s						
WMQ				LR	LR		
	comp=E,590nm,11.1s						
WMQ				LR	LR		
	comp=Z,250nm,14.5s						
MK01	**Makanchi Array**	**70.60**	**322**	*e*P	**P**	**14 22 04.5**	**-0.6**
MK31	**Makanchi Array**	**70.61**	**322**	*e*P	**P**	**14 22 04.6**	**-0.5**
MKAR	**Makanchi Array**	**70.61**	**322**	P	**P**	**14 22 05.3**	**+0.1**
	1.2nm,0.8s,baz=103,slow=7.8,SNR=10						
MKAR	**Makanchi Array**	**70.61**	**322**	*e*P	**P**	**14 22 04.9**	**-0.3**
	6.7nm,0.6s						
MAKZ	**Makanchi**	**70.81**	**322**	*e*P	**P**	**14 22 06.2**	**-0.1**
	1.8nm,0.7s						
KSH	**Kashi**	**72.00**	**313**	*e*P	**P**	**14 22 14.1**	**+0.3**
KSH				*e*sP	sP	14 22 42.0	+7.0
KSH				S	**S**	**14 31 30.1**	**-1.5**
KSH				sS	sS	14 32 04.1	+7.1
KSH				SKS	**SKSac**	**14 32 08.1**	**-5.6**
KSH				ScS	**SKKSac**	**14 32 11.1**	**-2.7**
KSH				SS	**SS**	**14 36 11.1**	**+1.6**
ZALV	**Zalesovo Beam**	**72.67**	**330**	P	**P**	**14 22 15.4**	**-1.9**
	0.6nm,0.5s,baz=132,slow=4.4,SNR=2.7						
KURK	**Kurchatov**	**74.51**	**325**	P	**P**	**14 22 27.5**	**-0.7**
KURBB	**Kurchatov Arra**	**74.52**	**325**	P	**P**	**14 22 27.5**	**-0.8**
	1.0nm,0.9s,baz=113,slow=5.1,SNR=6.2						
TIXI	**Tiksi**	**74.83**	**356**	P	**P**	**14 22 30.0**	**+0.4**
	1.8nm,0.6s,baz=172,slow=7.1,SNR=2.1						
BVAR	**Borovoye Array**	**80.11**	**325**	P	**P**	**14 22 59.4**	**-0.1**
	1.5nm,0.6s,baz=92,slow=7.2,SNR=9.1						
BRVK	**Borovoye**	**80.18**	**325**	P	**P**	**14 22 59.5**	**-0.4**
CAST	**Castle Rocks**	**83.06**	**25**	*e*P	**P**	**14 23 15.1**	**+0.2**
	4.9nm,1.0s						
SML	**Sawmill**	**84.17**	**27**	*e*P	**P**	**14 23 20.4**	**-0.2**
	11nm,0.8s						
COLD	**Coldfoot**	**85.13**	**22**	*e*P	**P**	**14 23 26.2**	**+0.9**
	3.2nm,0.8s						
DIV	**Divide**	**85.16**	**28**	*e*P	**P**	**14 23 25.7**	**+0.1**
	13nm,0.7s						
CCB	**Clear Creek Bu**	**85.24**	**24**	*e*P	**P**	**14 23 24.7**	**-1.2**
	7.1nm,0.9s						
IL1	**Eielson Array**	**85.66**	**24**	*e*P	**P**	**14 23 26.4**	**-1.6**
ILAR	**Eielson Array**	**85.66**	**24**	P	**P**	**14 23 27.0**	**-1.0**
	4.7nm,0.8s,baz=260,slow=4.8,SNR=46						
ILB	**Eielson Array**	**85.66**	**24**	*e*P	**P**	**14 23 26.5**	**-1.4**
TOLK	**Toolik Lake Re**	**85.82**	**20**	*e*P	**P**	**14 23 28.2**	**-0.6**
	6.5nm,1.0s						
EGAK	**Eagle**	**88.04**	**25**	*e*P	**P**	**14 23 39.0**	**-0.6**
	4.8nm,0.9s						
DAWY	**Dawson**	**88.67**	**26**	*e*P	**P**	**14 23 42.9**	**+0.2**
	4.7nm,0.9s						
SYO	**Syowa Base**	**90.87**	**201**	⇓*e*P	**P**	**14 23 52.2**	**-0.5**
MNMC	**Minye Minye**	**143.75**	**128**	*e*PKPdf	PKPbc	14 30 22.8	-0.7
DBIC	**Dimbokro**	**144.52**	**277**	PKP	**PKPab**	**14 30 24.5**	**-0.9**
	2.3nm,0.6s,baz=41,slow=2.5,SNR=2.5						
LPAZ	**La Paz**	**146.47**	**126**	PKPbc	**PKPdf**	**14 30 29.9**	**-1.0**
	1.8nm,0.8s,baz=250,slow=2.8,SNR=7.1						
RUSC	**La Rusia**	**147.17**	**84**	*e*PKPdf	**PKPdf**	**14 30 32.7**	**+0.7**
PTGA	**Pitinga**	**159.98**	**100**	PKPab	**PKPab**	**14 31 28.3**	**-1.1**
	1.0nm,0.3s,baz=231,slow=5.7,SNR=5.5						

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*ISCJB **15** 14:12:45.1±0.4, 16°.58N±0°.04×61°.75W±0°.06, h117^{km}±3^{km}, mb3.7/6, Error ellipse: s-maj=10.4km s-min=3.5km az=151.1*

*TRN **15** 14:12:45.6, 16°.56N×61°.75W, h103^{km}, MD3.6*

*IDC **15** 14:12:45.4±0.5, 16°.58N×61°.70W, h112^{km}±6^{km}, mb3.4/6, mb1 3.7/8, mb1mx3.3/55, mbtmp3.8/8, Error ellipse: s-maj=17.3km s-min=9.7km az=56.0*

ISC 15 14:12:45.6±0.7, **16°.58N**±0°.04×**61°.74W**±0°.06, **h112**^{km}±5^{km}, **n50**, σ**0^{s}.83**/69, **mb3.8**/6, **5C-2D**, **Leeward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SEG	**Port Louis**	**0.29**	**127**	⇑*i*P	**Pn**	**14 13 02.1**	**+0.6**
LZG	**Guadaloupe-1**	**0.43**	**184**	⇓*i*P	**Pn**	**14 13 02.5**	**+0.3**
MLYT	**Lee’s Yard**	**0.45**	**289**	*e*P	**Pn**	**14 13 02.7**	**+0.3**
MLYT				*e*S	**Sn**	**14 13 14.8**	**-0.2**
MBWH		**0.46**	**291**	⇑*i*P	**Pn**	**14 13 02.4**	**0.0**
MBWH				*e*S	**Sn**	**14 13 14.1**	**-1.0**
BPA	**Boggy Peak**	**0.48**	**347**	*e*P	**Pn**	**14 13 03.7**	**+1.1**
BPA				*e*S	**Sn**	**14 13 15.5**	**+0.1**
SCG	**Saint Claude**	**0.55**	**174**	⇓*i*P	**Pn**	**14 13 03.6**	**+0.6**
SFG	**Saint Francois**	**0.61**	**121**	⇑*i*P	**Pn**	**14 13 04.2**	**+0.7**
H05N1	**Guadeloupe/Mar**	**0.71**	**111**	P	**Pn**	**14 13 04.7**	**+0.5**
H05N1				S	**Sn**	**14 13 18.5**	**+0.3**
TBG	**Guadaloupe-3**	**0.72**	**172**	*e*P	**Pn**	**14 13 04.8**	**+0.4**
TBG				*e*S	**Sn**	**14 13 18.9**	**+0.5**
MGG	**Marie-Galante**	**0.77**	**148**	⇑*i*P	**Pn**	**14 13 05.5**	**+0.7**
MGG				*e*S	**Sn**	**14 13 18.7**	**-0.5**
NEV	**Hard Times**	**0.97**	**305**	*e*P	**Pn**	**14 13 07.7**	**+1.0**
NEV				*e*S	**Sn**	**14 13 23.3**	**+0.8**
MDVC	**Dominica, Viel**	**1.01**	**161**	*e*P	**Pn**	**14 13 07.3**	**+0.2**
MDVC				*e*S	**Sn**	**14 13 23.5**	**+0.2**
MDPO	**Dominica; Chan**	**1.03**	**164**	*e*P	**Pn**	**14 13 07.7**	**+0.4**
MDPO				*e*S	**Sn**	**14 13 23.3**	**-0.3**
BBL	**Barber’s Block**	**1.08**	**166**	*e*P	**Pn**	**14 13 08.0**	**+0.2**
BBL				*e*S	**Sn**	**14 13 24.3**	**-0.3**
ANWB	**Willy Bob**	**1.09**	**358**	⇑*i*P	**Pn**	**14 13 08.5**	**+0.6**
ANWB				*e*S	**Sn**	**14 13 25.1**	**+0.4**
DLPL	**La Plaine**	**1.32**	**159**	*e*P	**Pn**	**14 13 11.7**	**+1.2**
DLPL				*e*S	**Sn**	**14 13 30.6**	**+1.2**
PCM	**Pelee Case Pet**	**1.82**	**164**	*e*P	**Pn**	**14 13 16.8**	**+0.3**
PCM	**Pelee Case Pet**	**1.82**	**164**	*e*P	**Pn**	**14 13 17.4**	**+0.9**
CXM	**Morne La Croix**	**1.84**	**162**	*e*P	**Pn**	**14 13 17.6**	**+0.8**
CXM				*e*S	**Sn**	**14 13 40.8**	**+0.2**
BAMF	**Morne Balai**	**1.84**	**162**	*e*P	**Pn**	**14 13 17.0**	**+0.3**
PML	**Morne Lenard**	**1.86**	**163**	*e*P	**Pn**	**14 13 17.9**	**+0.9**
FDF	**Fort de France**	**1.92**	**163**	*e*P	**Pn**	**14 13 18.5**	**+0.8**
FDF				*e*S	**Sn**	**14 13 41.9**	**-0.3**
ZAM	**Aeronautique**	**2.11**	**161**	*e*P	**Pn**	**14 13 20.7**	**+0.6**
LPMF	**Morne Lapointe**	**2.12**	**159**	*e*P	**Pn**	**14 13 19.8**	**-0.5**
TRMF	**Trois Ilets**	**2.13**	**162**	*e*P	**Pn**	**14 13 20.9**	**+0.5**
BIM	**Bigot**	**2.15**	**162**	*e*P	**Pn**	**14 13 21.2**	**+0.6**
BIM				*e*S	**Sn**	**14 13 47.9**	**+0.6**
MVM	**Montagne Vaucl**	**2.17**	**158**	*e*P	**Pn**	**14 13 20.8**	**-0.1**
H05S1	**Guadeloupe/Mar**	**2.31**	**158**	P	**Pn**	**14 13 23.6**	**+1.0**
H05S1				S	**Sn**	**14 13 51.0**	**0.0**
SLB	**Belfond**	**2.81**	**166**	*e*P	**Pn**	**14 13 29.5**	**+0.2**
SLB				*e*S	**Sn**	**14 14 03.1**	**+0.2**
MCLT	**Moule a Chique**	**2.95**	**165**	*e*P	**Pn**	**14 13 31.5**	**+0.5**
MCLT				*e*S	**Sn**	**14 14 06.4**	**+0.3**
SVB	**Belmont**	**3.32**	**172**	*e*P	**Pn**	**14 13 37.5**	**+1.6**
SVCV	**St. Vincent, C**	**3.33**	**170**	*e*P	**Pn**	**14 13 37.6**	**+1.5**
FCV	**Fort Charlotte**	**3.43**	**172**	*e*P	**Pn**	**14 13 39.4**	**+2.0**
BBGH	**Gun Hill**	**4.01**	**148**	*e*P	**Pn**	**14 13 47.1**	**+1.9**
BBGH	**Gun Hill**	**4.01**	**148**	*e*S	**Sn**	**14 14 31.1**	**-0.3**
BBSP	**Saint Philip**	**4.10**	**147**	*e*P	**Pn**	**14 13 47.2**	**+0.9**
BBSP	**Saint Philip**	**4.10**	**147**	*e*S	**Sn**	**14 14 33.4**	**0.0**
SJG	**San Juan**	**4.48**	**291**	P	**Pn**	**14 13 51.6**	**+0.2**
	3.7nm,0.3s,baz=52,slow=12,SNR=9.7						
SJG				S	**Sn**	**14 14 43.9**	**+1.4**
	8.5nm,0.3s,baz=293,slow=20,SNR=9.8						
TOSP	**Speyside**	**5.38**	**167**	*e*P	**Pn**	**14 14 05.2**	**+1.6**
TOSP	**Speyside**	**5.38**	**167**	*e*S	**Sn**	**14 15 02.2**	**-2.0**
TRN	**Trinidad (W)**	**5.90**	**177**	*e*P	**Pn**	**14 14 12.0**	**+1.3**
TPP	**Pointe-a-Pierr**	**6.23**	**177**	*e*P	**Pn**	**14 14 16.4**	**+1.4**
PTGA	**Pitinga**	**17.29**	**174**	P	**P**	**14 16 39.1**	**-0.7**
	0.5nm,0.3s,baz=6.0,slow=19,SNR=4.5						
TXAR	**Lajitas Array**	**40.43**	**296**	P	**P**	**14 20 12.3**	**-0.9**
	0.2nm,0.5s,baz=116,slow=8.1,SNR=5.4						
ULM	**Lac du Bonnet**	**43.37**	**328**	P	**P**	**14 20 36.4**	**-0.3**
	1.1nm,0.4s,baz=131,slow=16,SNR=3.1						
PDAR	**Pinedale Array**	**48.24**	**313**	P	**P**	**14 21 15.8**	**+0.3**
	1.6nm,0.5s,baz=113,slow=9.1,SNR=22						
NVAR	**Mina Array Bea**	**53.80**	**306**	P	**P**	**14 21 57.5**	**+0.3**
	0.6nm,0.7s,baz=105,slow=6.9,SNR=6.5						
YKA	**Yellowknife Ar**	**58.67**	**334**	P	**P**	**14 22 30.6**	**-0.4**
	1.0nm,0.7s,baz=110,slow=6.8,SNR=3.4						
ILAR	**Eielson Array**	**73.08**	**333**	P	**P**	**14 24 03.7**	**+0.4**
	0.2nm,0.4s,baz=83,slow=4.7,SNR=5.2						
SONM	**Songino Array**	**115.01**	**9**	PKP	**PKPdf**	**14 31 12.9**	**-0.8**
	0.2nm,0.3s,baz=5.4,slow=3.0,SNR=2.4						

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*IDC **15** 14:32:01.1±0.8, 14°.87S×173°.41W, h0^{km}, mb3.9/6, mb1 4.2/6, mb1mx3.8/50, mbtmp3.9/6, MS3.5/6, Ms1 3.5/6, ms1mx3.1/43, Error ellipse: s-maj=36.9km s-min=19.6km az=144.0*

*ISCJB **15** 14:32:03.9±0.6, 15°.0S±0°.1×173°.3W±0°.1, h30^{km}, mb4.0/8, MS3.4/6, Error ellipse: s-maj=25.1km s-min=8.3km az=140.4*

*NEIC **15** 14:32:06.6±0.7, 14°.98S×173°.32W, h35^{km}, mb4.6/1, Error ellipse: s-maj=27.6km s-min=13.3km az=135.0*

ISC 15 14:32:05.8±0.8, **15°.0S**±0°.2×**173°.2W**±0°.2, **h30**^{km}, **n31**, σ**1^{s}.51**/15, **mb4.0**/8, **MS3.5**/6, **Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.75**	**53**	Pn	**Pn**	**14 32 34.5**	**+0.4**
	151nm,0.3s,baz=238,slow=19,SNR=129						
AFI				Sn	**Sn**	**14 32 53.5**	**-1.8**
	387nm,0.3s,baz=30,slow=21,SNR=10						
AFI				LR	LR	14 32 58.1	
	comp=Z,376nm,20.4s,baz=163,slow=31						
AFI	**Afiamalu**	**1.75**	**53**	*e*Pn	**Pn**	**14 32 34.1**	**0.0**
AFI				Sn	**Sn**	**14 32 53.5**	**-1.8**
RAO	**Raoul Island**	**14.87**	**196**	*e*Pn	**Pn**	**14 35 32.7**	**-1.3**
DZM	**Mont Dzumac**	**20.53**	**247**	LR	LR	14 43 29.5	

	comp=Z,191nm,18.4s,baz=34,slow=34						
DZM	**Mont Dzumac**	**20.53**	**247**	*e*LR	LR	14 42 09.6	
	189nm,24.1s						
PPT	**Papeete**	**22.84**	**100**	LR	LR	14 43 28.5	
	comp=Z,35nm,21.0s,baz=316,slow=30						
PAE	**Paea**	**22.84**	**100**	*e*T	T	14 59 52.3	
	1.4nm,0.2s						
PPT2	**Papeete2**	**22.84**	**100**	*e*LR	LR	14 42 23.0	
	90nm,24.0s						
PPT2	**Papeete2**	**22.84**	**100**	*e*T	T	14 59 53.4	
	2.7nm,0.4s						
TBI	**Tubuai**	**23.92**	**114**	*e*T	T	15 01 19.8	
	7.7nm,0.3s						
URZ	**Urewera**	**24.73**	**198**	LR	LR	14 45 37.3	
	comp=Z,122nm,18.9s,baz=322,slow=33						
RKT	**Rikitea**	**36.97**	**109**	*e*T	T	15 17 33.7	
	4.3nm,0.3s						
H11S2	**WAKE ISLAND Hy**	**38.68**	**329**	T	T	15 20 57.2	
	baz=148						
H11S3	**WAKE ISLAND Hy**	**38.69**	**329**	T	T	15 20 41.5	
	baz=148						
H11S1	**WAKE ISLAND Hy**	**38.69**	**329**	T	T	15 20 44.0	
	baz=148						
H11N3	**WAKE ISLAND Hy**	**39.62**	**330**	T	T	15 22 08.3	
	baz=150						
H11N1	**WAKE ISLAND Hy**	**39.62**	**330**	T	T	15 22 03.7	
	baz=150						
H11N2	**WAKE ISLAND Hy**	**39.63**	**330**	T	T	15 22 10.6	
	baz=150						
WRAB	**Tennant Creek**	**50.10**	**256**	P	**P**	**14 40 58.8**	**+0.2**
	9.0nm,1.3s						
WRA	**Warramunga Arr**	**50.11**	**256**	P	**P**	**14 40 57.1**	**-1.5**
	0.9nm,0.7s,baz=91,slow=6.9,SNR=10.0						
ASAR	**Alice Springs**	**50.41**	**252**	P	**P**	**14 40 59.3**	**-1.6**
	2.6nm,0.7s,baz=88,slow=8.1,SNR=46						
VNDA	**Vanda**	**63.83**	**186**	P	**P**	**14 42 36.0**	**+1.1**
	1.3nm,0.9s,baz=9.5,slow=7.0,SNR=7.1						
MJAR	**Matsushiro Arr**	**68.72**	**320**	LR	LR	15 06 45.1	
	comp=Z,27nm,21.4s,baz=250,slow=30						
YBH	**Yreka Blue Hor**	**73.14**	**37**	LR	LR	15 07 22.5	
	comp=Z,38nm,21.0s,baz=310,slow=29						
NVAR	**Mina Array Bea**	**73.89**	**42**	P	**P**	**14 43 41.6**	**+3.3**
	1.5nm,1.1s,baz=223,slow=7.4,SNR=4.2						
QSPA	**South Pole Qui**	**75.08**	**180**	P	**P**	**14 43 45.0**	**+0.3**
	3.6nm,0.8s,baz=16,slow=2.8,SNR=7.8						
QSPA	**South Pole Qui**	**75.08**	**180**	*e*P	**P**	**14 43 45.5**	**+0.8**
TXAR	**Lajitas Array**	**80.22**	**56**	P	**P**	**14 44 14.0**	**0.0**
	1.1nm,1.2s,baz=216,slow=5.6,SNR=4.9						
PDAR	**Pinedale Array**	**81.82**	**42**	P	**P**	**14 44 22.9**	**+0.5**
	0.5nm,0.8s,baz=201,slow=4.3,SNR=5.2						
ULM	**Lac du Bonnet**	**93.48**	**39**	LR	LR	15 19 42.9	
	comp=Z,40nm,21.6s,baz=324,slow=31						
BRTR	**Keskin Array B**	**145.92**	**322**	PKPbc	**PKPab**	**14 51 42.7**	**-0.7**
	0.9nm,0.7s,baz=81,slow=4.0,SNR=2.9						

*NIED **15** 14:34:00, 43°.20N×146°.30E, h62^{km}, Mw4.9 Best double couple: $M_0$2.60000×10^{16} NP1:ϕ_s178.00000°, δ36.00000°, λ30.00000°. NP2:ϕ_s63.00000°, δ72.00000°, λ123.00000°.*

*BJI **15** 14:34:43.7, 43°.24N×146°.52E, h61^{km}, mb4.9/71, mB4.9/46, Ms4.2/47, Ms7 3.8/42*

*IDC **15** 14:34:44.8±1.6, 43°.24N×146°.45E, h49^{km}±14^{km}, mb4.9/40, mb1 5.0/44, mb1mx4.9/64, mbtmp5.2/44, ML4.1/3, MS3.8/44, Ms1 3.8/44, ms1mx3.7/63, Error ellipse: s-maj=10.9km s-min=9.4km az=123.0*

*ISCJB **15** 14:34:45.1±0.3, 43°.15N±0°.02×146°.47E±0°.02, h67^{km}±2^{km}, mb5.1/432, Error ellipse: s-maj=3.3km s-min=2.0km az=162.5*

*JMA **15** 14:34:46.7±0.1, 43°.16N×146°.41E, h62^{km}±1^{km}, M5.0*

JMA Felt III J1.

*SKHL **15** 14:34:46.3±0.7, 43°.18N×146°.46E, h74^{km}±4^{km}, mb6.1/8*

SKHL Felt (IV) at Malokurilskoe; felt (III) at Yushno-Kurilsk.

*GCMT **15** 14:34:46.4±0.3, 43°.23N×146°.49E, h69^{km}±3^{km}, MW5.0/93, Moment Tensor Solution. s33,c37; s93,c131; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.21±.15; $M_{\theta\theta}$0.41±.12; $M_{\phi\phi}$-1.62±.11; $M_{r\theta}$2.29±.08; $M_{\theta\phi}$-1.82±.10; $M_{\phi r}$0.49±.07; Best double couple: $M_0$3.30500×10^{16} NP1:ϕ_s67.00000°, δ76.00000°, λ128.00000°. NP2: ϕ_s174.00000°, δ40.00000°, λ22.00000°. Principal axes: T 3.2830, Plg45.0000°, Azm15.0000°; N 0.0450, Plg37.0000°, Azm236.0000°; P -3.3270, Plg22.0000°, Azm129.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **15** 14:34:46.4±0.1, 43°.24N×146°.41E, mb5.2/296 Error ellipse: s-maj=3.1km s-min=1.7km az=160.0*

NEIC Recorded [3 JMA] in eastern Hokkaido. Recorded [1 JMA] in Aomori and Iwate, Honshu.

*MOS **15** 14:34:46.0±0.8, 43°.25N×146°.42E, h73^{km}, mb5.5/104, MS4.0/16, Error ellipse: s-maj=6.1km s-min=3.9km az=108.0*

MOS Felt (IV) at Malokuril'skoye; (III-IV) at Yuzhno-Kuril'sk.

ISC 15 14:34:46.1±0.3**, 43°.25N**±0°.03×**146°.47E**±0°.03**, h64**^{km}±1^{km}**, h63**^{km}**:pP-P, n1560,** σ1^{s}**05**/1799**, mb5.2**/458**, 102C-58D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NEM2	**Nemuro 2**	**0.54**	**283**	⇓P	**Pn**	**14 34 59.3**	**+0.5**
NEM2				*e*S	**Sn**	**14 35 08.4**	**+0.3**
SHO	**Shikotan**	**0.68**	**23**	*i* P	**Pn**	**14 35 01.4**	**+1.1**
SHO				AMB	AMB	14 35 05.0	
	445nm,0.3s						
SHO				AMB	AMB	14 35 05.0	
	4µm,0.3s						
SHO				*i* S	**Sn**	**14 35 12.0**	**+1.3**
SHO				A	A	14 35 14.0	
	70µm,0.3s						
SHO				A	A	14 35 14.0	
	93µm,0.3s						
SHO	**Shikotan**	**0.68**	**23**	*d* *i*PN	**Pn**	**14 35 02.2**	**+1.9**
SHO				*i* S	**Sn**	**14 35 12.6**	**+1.9**
SHO				pmax	pmax		
	comp=Z,4µm,0.3s						
SHO				pmax	pmax		
	comp=N,445nm,0.1s						
SHO				smax	smax		
	comp=N,70µm,0.3s						
SHO				smax	smax		
	comp=E,93µm,0.3s						
GLVR	**Golovnino**	**0.85**	**306**	*i* P	**Pn**	**14 35 03.0**	**+0.6**
GLVR				AMB	AMB	14 35 04.0	
	comp=E,12µm,0.4s						
GLVR				AMB	AMB	14 35 04.0	
	comp=E,30µm,0.4s						
GLVR				*i* S	**Sn**	**14 35 16.0**	**+1.6**
GLVR				A	A	14 35 21.0	
	comp=E,84µm,0.4s						
GLVR				A	A	14 35 21.0	
	comp=E,102µm,0.4s						
GLVR	**Golovnino**	**0.85**	**306**	*d* *i*PN	**Pn**	**14 35 03.4**	**+1.0**
GLVR				*i* S	**Sn**	**14 35 16.0**	**+1.6**
GLVR				pmax	pmax		
	comp=Z,30µm,0.4s						
GLVR				pmax	pmax		
	comp=E,12µm,0.2s						
GLVR				smax	smax		
	comp=N,84µm,0.3s						
GLVR				smax	smax		
	comp=E,101µm,0.4s						
GRPR	**Tuman**	**0.90**	**326**	*i* P	**Pn**	**14 35 03.0**	**-0.1**
GRPR				AMB	AMB	14 35 04.0	
	comp=E,22µm,0.3s						
GRPR				AMB	AMB	14 35 04.0	
	comp=E,12µm,0.3s						
GRPR				AMB	AMB	14 35 04.0	
	comp=E,32µm,0.3s						
GRPR				*i* S	**Sn**	**14 35 16.0**	**+0.4**
GRPR				A	A	14 35 20.0	
	comp=E,99µm,0.3s						
GRPR				A	A	14 35 20.0	
	comp=E,52nm,0.3s						
GRPR	**Tuman**	**0.90**	**326**	*d* *i*PN	**Pn**	**14 35 03.7**	**+0.6**
GRPR				*i* S	**Sn**	**14 35 16.2**	**+0.6**
GRPR				pmax	pmax		
	comp=N,22µm,0.3s						
GRPR				pmax	pmax		
	comp=Z,32µm,0.3s						
GRPR				pmax	pmax		
	comp=E,12µm,0.1s						
GRPR				smax	smax		
	comp=N,99µm,0.3s						
GRPR				smax	smax		
	comp=E,52nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**0.90**	**331**	*i* P	**Pn**	**14 35 03.0**	**-0.1**
YUK				AMB	AMB	14 35 04.0	
	comp=E,5µm,0.3s						
YUK				AMB	AMB	14 35 04.0	
	comp=E,6µm,0.3s						
YUK				AMB	AMB	14 35 04.0	
	comp=E,27µm,0.3s						
YUK				*e*S	**Sn**	**14 35 16.0**	**+0.4**
YUK				A	A	14 35 21.0	
	comp=E,80µm,0.4s						
YUK				A	A	14 35 21.0	
	comp=E,73µm,0.4s						
YUK	**Yuzh-Kuril'sk**	**0.90**	**331**	*d* *i*PN	**Pn**	**14 35 03.8**	**+0.7**
YUK				*e*S	**Sn**	**14 35 16.7**	**+1.1**
YUK				pmax	pmax		
	comp=Z,27µm,0.3s						
YUK				pmax	pmax		
	comp=E,6µm,0.2s						
YUK				pmax	pmax		
	comp=N,5µm,0.4s						
YUK				smax	smax		
	comp=N,80µm,0.4s						
YUK				smax	smax		
	comp=E,73µm,0.4s						
LAGR	**Lagunnoye**	**0.95**	**329**	*i* P	**Pn**	**14 35 04.0**	**+0.3**
LAGR				AMB	AMB	14 35 06.0	
	comp=E,8µm,0.3s						
LAGR				AMB	AMB	14 35 06.0	
	comp=E,34µm,0.3s						
LAGR				*i* S	**Sn**	**14 35 17.0**	**+0.4**
LAGR				A	A	14 35 20.0	
	comp=E,178µm,0.4s						
LAGR				A	A	14 35 20.0	
	comp=E,79µm,0.4s						
LAGR	**Lagunnoye**	**0.95**	**329**	*d* *i*PN	**Pn**	**14 35 04.4**	**+0.7**
LAGR				*i* S	**Sn**	**14 35 17.6**	**+1.0**
LAGR				pmax	pmax		
	comp=Z,34µm,0.3s						
LAGR				pmax	pmax		
	comp=N,8µm,0.4s						
LAGR				smax	smax		
	comp=N,178µm,0.4s						
LAGR				smax	smax		
	comp=E,79µm,0.3s						
JRA	**Rausu**	**1.20**	**306**	⇓P	**Pn**	**14 35 08.0**	**+1.1**
JRA				*e*S	**Sn**	**14 35 24.0**	**+1.6**
JNK	**Nakash**	**1.32**	**286**	⇓P	**Pn**	**14 35 08.8**	**+0.3**
JNK				*e*S	**Sn**	**14 35 25.5**	**+0.3**
JAK	**Akkeshi**	**1.32**	**260**	⇓P	**Pn**	**14 35 08.6**	**+0.1**
JAK				*e*S	**Sn**	**14 35 24.7**	**-0.5**
JOB	**Onbets**	**1.96**	**261**	⇓P	**Pn**	**14 35 17.4**	**+0.3**
JOB				*e*S	**Sn**	**14 35 39.8**	**-0.8**
JAR	**Ashorobuto**	**1.97**	**272**	⇓P	**Pn**	**14 35 17.9**	**+0.7**
JAR				*e*S	**Sn**	**14 35 41.5**	**+0.6**
JTKR	**Abashiri--Toko**	**2.00**	**292**	⇓P	**Pn**	**14 35 19.1**	**+1.5**
JTKR				*e*S	**Sn**	**14 35 43.4**	**+1.9**
KUR	**Kuril'sk**	**2.23**	**26**	*i* P	**Pn**	**14 35 22.4**	**+1.7**
KUR				AMB	AMB	14 35 28.1	
	comp=E,3µm,0.4s						
KUR				*i* S	**Sn**	**14 35 48.2**	**+1.1**
KUR				A	A	14 35 50.3	
	comp=E,120nm,0.4s						
KUR				A	A	14 35 50.3	
	comp=E,11µm,0.4s						
KUR	**Kuril'sk**	**2.23**	**26**	*c* *i*PN	**Pn**	**14 35 22.3**	**+1.6**
KUR				*i* S	**Sn**	**14 35 48.3**	**+1.1**
KUR				pmax	pmax		
	comp=Z,4µm,0.3s						
KUR				pmax	pmax		
	comp=N,809nm,0.2s						
KUR				pmax	pmax		
	comp=E,1µm,0.3s						
KUR				smax	smax		
	comp=E,14µm,0.6s						
KUR				smax	smax		
	comp=N,12µm,0.3s						
JCH	**Churui**	**2.37**	**256**	⇓P	**Pn**	**14 35 22.4**	**-0.2**
JCH				*e*S	**Sn**	**14 35 48.5**	**-2.0**
JMP	**Maruseppu**	**2.38**	**290**	⇓P	**Pn**	**14 35 24.5**	**+1.7**
JMP				*e*S	**Sn**	**14 35 53.2**	**+2.2**
HRK	**Horoka**	**2.45**	**276**	*e*P	**Pn**	**14 35 25.3**	**+1.6**
HRK				*e*S	**Sn**	**14 35 53.5**	**+1.0**
ERM	**Erimo**	**2.73**	**244**	*e*Pn	**Pn**	**14 35 29.1**	**+1.6**
ERM	**Erimo**	**2.73**	**244**	*e*PN	**Pn**	**14 35 29.2**	**+1.6**
JKK2	**Kamakawa 2**	**2.78**	**284**	⇓P	**Pn**	**14 35 30.0**	**+1.8**
ASAJ	**Asahikawa**	**2.94**	**289**	P	**Pn**	**14 35 32.8**	**+2.4**
	comp=N,326nm,0.3s,baz=112,slow=11,SNR=7388						
ASAJ				S	**Sn**	**14 36 03.6**	**-0.9**
	comp=N,271nm,0.3s,baz=88,slow=13,SNR=4.8						
ASAJ				LR	LR	14 36 56.4	
	comp=N,3µm,21.5s,baz=85,slow=45						
ASAJ	**Asahikawa**	**2.94**	**289**	⇓P	**Pn**	**14 35 32.6**	**+2.2**
ASAJ	**Asahikawa**	**2.94**	**289**	PN	**Pn**	**14 35 32.8**	**+2.4**
ASAJ				S	**Sn**	**14 36 03.6**	**-0.9**
ASAJ				pmax	pmax		
	comp=Z,326nm,0.3s						
ASAJ				smax	smax		
	comp=N,271nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,3µm,21.5s						
JBT2	**Biratori 2**	**3.05**	**263**	⇓P	**Pn**	**14 35 31.8**	**-0.1**
JSE	**Soyaes**	**3.28**	**303**	⇓P	**Pn**	**14 35 36.6**	**+1.6**
JSS	**Shosan**	**3.53**	**291**	⇓P	**Pn**	**14 35 41.5**	**+3.0**
JEW	**Eniwo**	**3.70**	**265**	⇓P	**Pn**	**14 35 42.4**	**+1.6**
JWK2	**Keihoku**	**3.88**	**304**	P	**Pn**	**14 35 46.3**	**+3.1**
YSS	**Yuzh-Sakhalins**	**4.55**	**326**	*i* P	**Pn**	**14 35 54.4**	**+2.0**
YSS				AMB	AMB	14 35 55.2	
	comp=Z,520nm,0.6s						
YSS				*e*S	**Sn**	**14 36 44.0**	**+0.2**
YSS				A	A	14 36 45.8	
	comp=Z,490nm,0.7s						
YSS				A	A	14 36 45.8	
	comp=Z,820nm,0.7s						
YSS	**Yuzh-Sakhalins**	**4.55**	**326**	*e*Pn	**Pn**	**14 35 54.3**	**+2.0**
YSS	**Yuzh-Sakhalins**	**4.55**	**326**	κ *i*PN	**Pn**	**14 35 54.4**	**+2.0**
YSS				*e*S	**Sn**	**14 36 44.0**	**+0.2**
YSS				pmax	pmax		
	comp=Z,520nm,0.6s						
YSS				smax	smax		
	comp=E,490nm,0.7s						
YSS				MLR	MLR		
	comp=N,2µm,14.0s						
JANG	**Nango**	**4.68**	**234**	P	**Pn**	**14 35 52.5**	**-1.8**
MIYJ	**Miyakonagasawa**	**5.06**	**225**	⇑P	**Pn**	**14 35 57.3**	**-2.2**
JAH	**Hinai**	**5.33**	**237**	⇑P	**Pn**	**14 36 02.1**	**-1.0**
JOM	**Ohasama**	**5.42**	**228**	⇑P	**Pn**	**14 36 02.6**	**-1.7**
OFUJ	**Ofunato**	**5.52**	**223**	P	**Pn**	**14 36 03.7**	**-2.0**
JIO	**Ouri**	**6.16**	**221**	⇑P	**Pn**	**14 36 11.9**	**-2.6**
UGL	**Uglegorsk**	**6.59**	**334**	*e*P	**Pn**	**14 36 23.5**	**+3.3**
UGL				AMB	AMB	14 36 25.0	
	comp=N,260nm,1.1s						
UGL				*e*S	**Sn**	**14 37 37.6**	**+3.8**
UGL				A	A	14 37 42.5	
	comp=N,523nm,0.8s						
UGL				A	A	14 37 44.5	
	comp=N,3µm,3.5s						
UGL				A	A	14 37 44.5	
	comp=N,3µm,3.5s						
TEY	**Ternei**	**7.32**	**288**	⇑*e*PN	**Pn**	**14 36 31.7**	**+1.4**
TEY				*e*		14 37 56.6	
TEY				pmax	pmax		
	comp=Z,30nm,0.8s						
TYV	**Tymovskoe**	**8.05**	**342**	*e*P	**Pn**	**14 36 42.9**	**+2.6**
TYV				AMB	AMB	14 36 43.5	
	comp=Z,400nm,4.9s						
TYV				*e*S	**Sn**	**14 38 11.0**	**+1.3**
TYV				A	A	14 38 14.7	
	comp=Z,400nm,3.2s						
TYV	**Tymovskoe**	**8.05**	**342**	*e*PN	**Pn**	**14 36 42.9**	**+2.6**
TYV				*e*S	**Sn**	**14 38 11.0**	**+1.3**
TYV				pmax	pmax		
	comp=Z,400nm,4.9s						
TYV				pmax	pmax		
	comp=Z,117nm,1.0s						
TYV				smax	smax		
	comp=E,400nm,3.2s						
TYV				smax	smax		
	comp=E,75nm,1.2s						
JIZZ	**Izumozaki**	**8.22**	**229**	P	**Pn**	**14 36 42.3**	**-0.3**
JAG	**Ashikaga**	**8.69**	**221**	P	**Pn**	**14 36 46.8**	**-2.2**
JJN	**Nakama**	**8.83**	**229**	P	**Pn**	**14 36 50.7**	**-0.3**
MAJO	**Matsushiro**	**9.22**	**226**	*e*P	**Pn**	**14 36 54.8**	**-1.6**
MAJO	**Matsushiro**	**9.22**	**226**	*e*Pn	**Pn**	**14 36 54.8**	**-1.6**
MAJO	**Matsushiro**	**9.22**	**226**	*c* *i*PN	**Pn**	**14 36 54.7**	**-1.6**
MJAR	**Matsushiro Arr**	**9.22**	**226**	P	**Pn**	**14 36 55.1**	**-1.3**
	comp=E,3.4nm,0.3s,baz=27,slow=14,SNR=110						
MJAR				S	**Sn**	**14 38 36.0**	**-2.5**
	comp=E,2.0nm,0.3s,baz=35,slow=28,SNR=2.9						
MJB9	**Matsu-Tunnel**	**9.22**	**226**	*e*Pn	**Pn**	**14 36 54.9**	**-1.5**
MAT	**Matsushiro**	**9.22**	**226**	P	**Pn**	**14 36 54.9**	**-1.4**
MAT	**Matsushiro**	**9.22**	**226**	P	**Pn**	**14 36 55.0**	**-1.4**
MAT				S	**Sn**	**14 38 36.5**	**-2.1**
JRY	**Ryogami san**	**9.28**	**221**	P	**Pn**	**14 36 55.3**	**-1.9**
SKR	**Severo-Kuril's**	**9.94**	**38**	*e*P	**Pn**	**14 37 04.9**	**-1.1**
SKR				AMB	AMB	14 37 07.5	
	comp=E,252nm,0.5s						
SKR				AMB	AMB	14 37 07.6	
	comp=E,400nm,1.9s						
SKR				*e*S	**Sn**	**14 38 53.6**	**-2.2**
SKR				A	A	14 38 58.3	
	comp=E,63nm,0.4s						
SKR				A	A	14 38 58.3	
	comp=E,174nm,0.4s						
SKR	**Severo-Kuril's**	**9.94**	**38**	*e*PN	**Pn**	**14 37 04.9**	**-1.1**
SKR				pmax	pmax		
	comp=Z,252nm,0.5s						
SKR				pmax	pmax		
	comp=Z,400nm,1.9s						
SKR				MLR	MLR		
	comp=Z,400nm,15.0s						
SKR				MLR	MLR		
	comp=N,500nm,16.0s						
SKR				MLR	MLR		
	comp=E,500nm,13.0s						
GRNR	**Gornyy**	**10.18**	**321**	*e*PN	Pn	14 37 14.2	+4.9
GRNR				pmax	pmax		
	comp=Z,26nm,1.0s						
USRK	**Ussuriysk Ar.**	**10.53**	**280**	P	**Pn**	**14 37 15.5**	**+1.4**
	baz=84,slow=14						
USRK				LR	LR	14 41 19.1	
	comp=Z,222nm,21.6s,baz=84,slow=38						
OKH	**Okha**	**10.57**	**348**	⇑*i*PN	**Pn**	**14 37 18.5**	**+3.8**
OKH				*i* S	Sn	14 39 23.5	+12
OKH				pmax	pmax		
	comp=Z,200nm,9.1s						
OKH				smax	smax		
	comp=N,300nm,7.0s						
NKL	**Nikolayevsk**	**10.63**	**341**	*e*PN	**Pn**	**14 37 17.0**	**+1.5**
NKL				*e*		14 39 15.0	
NKL				pmax	pmax		
	comp=Z,500nm,2.0s						
NKL				pmax	pmax		
	comp=N,86nm,1.0s						
NKL				pmax	pmax		
	comp=Z,160nm,1.0s						
NKL				MLR	MLR		
	comp=Z,500nm,14.0s						
INU	**Inuyama**	**10.76**	**226**	*e*Pn	**Pn**	**14 37 16.8**	**-0.5**
MSHR	**Mys Shultsa**	**11.25**	**272**	*d* *i*PN	**Pn**	**14 37 24.2**	**+0.2**
JHJ2	**Mitsune**	**11.38**	**210**	*e*Pn	**Pn**	**14 37 23.1**	**-2.8**
JHJ	**Hachijo jima 2**	**11.39**	**210**	P	**Pn**	**14 37 22.7**	**-3.3**
	comp=Z,11nm,0.3s,baz=264,slow=22,SNR=10						
JHJ				S	Sn	14 39 18.6	-13
	comp=Z,163nm,0.3s,baz=243,slow=23,SNR=17						
KLR	**Kul'dur**	**11.81**	**306**	P	**Pn**	**14 37 35.4**	**+3.8**
	comp=Z,0.1nm,0.3s,baz=112,slow=15,SNR=48						
KLR				LR	LR	14 42 27.3	
	comp=Z,52nm,19.9s,baz=118,slow=39						
KLR	**Kul'dur**	**11.81**	**306**	*d* *e*PN	**Pn**	**14 37 34.6**	**+3.0**
MDJ	**Mudanjiang**	**12.25**	**282**	P	**Pn**	**14 37 35.3**	**-2.3**
MDJ				sP	P	14 37 53.4	+5.6
MDJ				S	**Sn**	**14 39 50.1**	**-2.2**
MDJ				pmax	pmax		
	comp=Z,21nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,100nm,5.8s						
MDJ				LR	LR		
	comp=Z,260nm,10.4s						
MDJ				LR	LR		
	comp=Z,270nm,17.7s						
MDJ				LR	LR		
	comp=Z,660nm,22.0s						
MDJ	**Mudanjiang**	**12.25**	**282**	*e*P	**Pn**	**14 37 36.8**	**-0.8**
MDJ	**Mudanjiang**	**12.25**	**282**	*e*Pn	**Pn**	**14 37 36.9**	**-0.8**
PEA0B	**Petropavlovsk-**	**12.38**	**33**	*e*Pn	**Pn**	**14 37 38.0**	**-1.4**
PETK	**Petropavlovsk-**	**12.38**	**33**	P	**Pn**	**14 37 37.1**	**-2.2**
	baz=218,slow=13						
PETK				LR	LR	14 43 01.5	
	comp=Z,109nm,21.3s,baz=228,slow=40						
PETK	**Petropavlovsk-**	**12.38**	**33**	*e*Pn	**Pn**	**14 37 36.7**	**-2.6**
PETK	**Petropavlovsk-**	**12.38**	**33**	*e*PN	**Pn**	**14 37 36.7**	**-2.6**
PET	**Petropavlovsk**	**12.71**	**35**	*e*Pn	**Pn**	**14 37 40.5**	**-3.3**
PET	**Petropavlovsk**	**12.71**	**35**	*e*PN	**Pn**	**14 37 41.7**	**-2.1**
PET				pmax	pmax		
	comp=Z,100nm,8.5s						
PET				pmax	pmax		
	comp=Z,48nm,0.8s						
PET				pmax	pmax		
	comp=Z,200nm,9.4s						
PET				MLR	MLR		
	comp=Z,500nm,17.0s						
PET				MLR	MLR		
	comp=Z,500nm,15.0s						
CN2	**Changchun**	**15.26**	**279**	*e*P	**Pn**	**14 38 16.4**	**-1.2**
CN2				*e*S	**Sn**	**14 41 05.6**	**+0.1**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,6.0s						
CN2				LR	LR		
	comp=Z,700nm,20.0s						
CN2				LR	LR		
	comp=Z,200nm,20.0s						
CN2				LR	LR		
	comp=Z,300nm,20.0s						
KSRS	**Korea Array**	**15.27**	**254**	P	**Pn**	**14 38 18.9**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=58,slow=13,SNR=8.5						
KSRS				S	**Sn**	**14 41 09.3**	**+3.6**
	comp=Z,0.3nm,0.3s,baz=67,slow=24,SNR=5.7						
KSRS				LR	LR	14 44 19.9	
	comp=Z,228nm,18.3s,baz=64,slow=38						
KS01	**Wonju Array Si**	**15.28**	**254**	*e*Pn	**Pn**	**14 38 18.4**	**+0.6**
KS01				*e*PcP	**PcP**	**14 43 20.3**	**+0.9**
KS15	**Wonju Array Si**	**15.30**	**254**	*e*Pn	**Pn**	**14 38 18.3**	**+0.1**
KSAR	**Wonju Array Be**	**15.30**	**254**	P	**Pn**	**14 38 18.9**	**+0.7**
KSAR				S	**Sn**	**14 41 09.3**	**+2.8**
KSAR	**Wonju Array Be**	**15.30**	**254**	P	**Pn**	**14 38 18.9**	**+0.7**
KSAR				S	**Sn**	**14 41 09.4**	**+2.8**
JNU	**Nakatsue**	**15.86**	**236**	P	**P**	**14 38 31.0**	**+2.9**
	comp=Z,0.2nm,0.3s,baz=59,slow=19,SNR=2.5						
JNU				LR	LR	14 44 58.7	
	comp=Z,132nm,20.2s,baz=298,slow=39						
JNU	**Nakatsue**	**15.86**	**236**	*e*P	**Pn**	**14 38 25.7**	**+0.3**
JNU	**Nakatsue**	**15.86**	**236**	*e*Pn	**Pn**	**14 38 25.7**	**+0.3**
	comp=Z,35nm,1.0s						
ZEA	**Zeya**	**16.45**	**316**	*e*P	**Pn**	**14 38 32.8**	**+0.2**
ZEA				*e*S	**Sn**	**14 41 34.0**	**-0.3**
ZEA				pmax	pmax		
	comp=N,42nm,0.8s						
ZEA				pmax	pmax		
	comp=E,31nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,56nm,0.8s						
ZEA				smax	smax		
	comp=N,300nm,6.0s						
ZEA				MLR	MLR		
	comp=Z,500nm,16.0s						
ZEA				MLR	MLR		
	comp=N,500nm,15.0s						
CBIJ	**Chichi jima**	**16.48**	**194**	*e*Pn	**Pn**	**14 38 31.1**	**-2.1**
	comp=N,717nm,1.8s						
CBIJ				S	Sn	14 41 18.2	-17
JCJ	**Chichijima**	**16.48**	**194**	S	Sn	14 41 18.2	-17
	comp=N,24nm,0.3s,baz=257,slow=22,SNR=2.5						
MA2	**Magadan**	**16.57**	**8**	P	**Pn**	**14 38 32.8**	**-1.1**
	comp=N,5.1nm,0.3s,baz=187,slow=9.4,SNR=34						
MA2	**Magadan**	**16.57**	**8**	*e*P	**Pn**	**14 38 33.1**	**-0.9**
MA2	**Magadan**	**16.57**	**8**	*e*Pn	**Pn**	**14 38 32.9**	**-1.1**
	comp=N,43nm,0.6s						
MA2	**Magadan**	**16.57**	**8**	*e*P	**Pn**	**14 38 32.9**	**-1.1**
MA2				pmax	pmax		
	comp=Z,43nm,0.6s						
DL2	**Dalian**	**19.20**	**265**	P	**Pn**	**14 39 05.6**	**-0.6**
DL2				pmax	pmax		
	comp=Z,38nm,0.7s						
HIA	**Hailar**	**19.38**	**297**	*e*P	**P**	**14 39 05.2**	**-1.4**
	comp=Z,28nm,0.8s						
HIA	**Hailar**	**19.38**	**297**	*e*P	**P**	**14 39 05.2**	**-1.4**
HIA				pmax	pmax		

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       comp=Z,28nm,0.8s
SEY    Seymchan           20.02   8   P       P       14 39 11.7  -1.8
       comp=Z,58nm,0.8s,baz=184,slow=9.2,SNR=95
SEY    Seymchan           20.02   8deP    P       14 39 11.0  -2.5
SMY    Shemya             20.67  53  eP       Pn      14 39 22.4  -0.9
       comp=Z,142nm,0.9s
SMY    Shemya             20.67  53  eP       Pn      14 39 22.5  -0.9
SMY                                   pmax    pmax
       comp=Z,142nm,0.9s
YAK    Yakutsk            21.27 338   P       P       14 39 22.8  -4.1
       comp=Z,28nm,0.3s,baz=150,slow=0.3,SNR=12
YAK                                   S       S       14 43 09.4   -10
       comp=Z,9.8nm,0.5s,baz=23,slow=6.1,SNR=1.8
YAK    Yakutsk            21.27 338  eP       P       14 39 23.7  -3.2
YAK                                  eS       S       14 43 11.6  -7.9
YAK                                  e*SS     sS      14 43 46.2  +4.4
YAK                                   pmax    pmax
       comp=Z,56nm,0.9s
YAK                                   pmax    pmax
       comp=N,10.0nm,0.9s
YAK                                   pmax    pmax
       comp=E,7.0nm,0.8s
YAK                                   smax    smax
       comp=E,50nm,1.3s
YAK                                   smax    smax
       comp=N,36nm,1.0s
YAK                                   MLR     MLR
       comp=Z,218nm,15.0s
YAK                                   MLR     MLR
       comp=E,102nm,16.0s
YAK                                   MLR     MLR
       comp=N,179nm,15.0s
JOW    Kunigami           22.06 228   P       P       14 39 34.8  -0.8
       comp=N,5.9nm,0.5s,baz=29,slow=9.4,SNR=2.5
JOW                                   LR      LR      14 48 33.4
       comp=N,166nm,21.5s,baz=156,slow=38
JOW    Kunigami           22.06 228  eP       P       14 39 35.8  +0.1
       comp=N,81nm,0.9s
BJI    Beijing            22.80 272⇑iP       P       14 39 42.5  -1.0
BJI                                   sP      sP      14 40 02.5  -2.6
BJI                                   S       S       14 43 47.6  -0.1
BJI                                   pmax    pmax
       comp=N,72nm,0.7s
BJI                                   LR      LR
       comp=N,300nm,14.9s
BJT    Baijiatuau         22.82 272  eP       P       14 39 42.3  -1.3
       comp=N,43nm,0.8s
BJT    Baijiatuau         22.82 272  eP       P       14 39 42.3  -1.3
BJT                                   pmax    pmax
       comp=Z,43nm,0.8s
TIA    Tai'an             23.56 263   P       P       14 39 50.3  -0.5
TIA                                   pmax    pmax
       comp=Z,11nm,0.7s
NJ2    Nanjing            24.45 252  eP       P       14 39 59.4  +0.5
NJ2                                   sP      sP      14 40 21.3  -0.4
NJ2                                   S       S       14 44 14.8  +0.4
NJ2                                   pmax    pmax
       comp=Z,17nm,0.5s
NJ2                                   LR      LR
       comp=Z,350nm,17.9s
NJ2                                   LR      LR
       comp=Z,300nm,13.0s
NJ2                                   LR      LR
       comp=Z,280nm,17.9s
BOD    Bodaibo            24.96 317  eP       P       14 39 59.7  -3.6
BOD                                  eS       S       14 44 12.7  -9.4
BOD                                   pmax    pmax
       comp=Z,27nm,1.1s
KIWB   Kanaga Island      25.79  58  eP       P       14 40 09.9  -1.0
HHC    Hu-ho-hao-te       25.92 277  eP       P       14 40 13.4  +1.1
HHC                                   sP      sP      14 40 31.8  -3.4
HHC                                   S       S       14 44 38.0   0.0
HHC                                   sS      sS      14 45 06.3  +2.0
HHC                                   ScS     ScS     14 50 56.6  -6.5
HHC                                   pmax    pmax
       comp=Z,49nm,1.0s
HHC                                   pmax    pmax
       comp=Z,130nm,6.7s
HHC                                   LR      LR
       comp=Z,150nm,10.7s
HHC                                   LR      LR
       comp=Z,160nm,10.7s
HHC                                   LR      LR
       comp=Z,210nm,12.8s
TIY    Taiyuan            26.35 270  eP       P       14 40 19.3  +3.1
TIY                                   S       S       14 44 49.0  +4.2
TIY                                   SS      SnSn    14 45 59.3  +8.7
TIY                                   pmax    pmax
       comp=Z,44nm,0.5s
TIY                                   LR      LR
       comp=Z,81nm,6.6s
TIY                                   LR      LR
       comp=Z,87nm,16.2s
GSTR   Great Sitkin T     26.48  57  eP       P       14 40 16.2  -1.0
BTO    Baotou             27.11 277  eP       P       14 40 23.6  +0.5
SONA1  Songino Array      28.20 293  eP       P       14 40 33.4  +0.6
SONM   Songino Array      28.21 293   P       P       14 40 33.8  +1.0
       comp=Z,81nm,0.7s,baz=90,slow=8.5,SNR=411
SONM                                  ScP     ScP     14 47 19.7  -0.6
       comp=Z,0.9nm,0.7s,baz=100,slow=4.4,SNR=3.5
SONM                                  LR      LR      14 52 47.2
       comp=Z,418nm,19.7s,baz=83,slow=38
WHN    Wuhan              28.46 254 ⇓P       P       14 40 35.3  +0.3
WHN                                   pP      pP      14 40 51.0  +0.5
WHN                                   S       S       14 45 23.8  +5.9
WHN                                   LR      LR
       comp=Z,600nm,15.4s
WHN                                   LR      LR
       comp=Z,620nm,12.5s
WHN                                   LR      LR
       comp=Z,450nm,12.6s
H11N2  WAKE ISLAND Hy     29.05 137   T       T       15 11 35.7
       baz=329,slow=75,SNR=2127
H11N1  WAKE ISLAND Hy     29.07 137   T       T       15 11 40.7
       baz=329,slow=75,SNR=4117
H11N3  WAKE ISLAND Hy     29.07 137   T       T       15 11 39.2
       baz=329,slow=75,SNR=5224
QZH    Quanzhou           29.23 240   P       P       14 40 42.3  +0.4
QZH                                   S       S       14 45 32.9  +2.9
QZH                                   LR      LR
       comp=Z,200nm,15.6s
GUMO   Guam               29.58 183   LR      LR      14 50 34.3
       comp=Z,91nm,21.5s,baz=28,slow=32
TIXI   Tiksi              29.76 349   P       P       14 40 42.6  -3.5
       comp=Z,2.5nm,0.4s,baz=154,slow=6.3,SNR=4.3
TIXI                                  LR      LR      14 54 29.8
       comp=Z,200nm,18.1s,baz=114,slow=40
TIXI   Tiksi              29.76 349⇑eP       P       14 40 44.9  -1.2
TIXI                                 i *PP    pP      14 41 00.2  -1.4
TIXI                                  pmax    pmax
       comp=Z,4.0nm,0.9s
TIXI                                  MLR     MLR
       comp=Z,171nm,17.0s
TLY    Talaya             29.79 302  eP       P       14 40 47.4  +0.8
TLY    Talaya             29.79 302  eP       P       14 40 46.9  +0.3
       comp=Z,6.0nm,0.9s
TLY    Talaya             29.79 302  eP       P       14 40 47.3  +0.7
TLY                                  eS       S       14 45 41.1  +2.7
TLY                                   pmax    pmax
       comp=Z,8.0nm,1.2s
TLY                                   MLR     MLR
       comp=Z,245nm,19.0s
H11S1  WAKE ISLAND Hy     30.00 139   T       T       15 12 46.1
       baz=330,slow=76,SNR=8846
H11S3  WAKE ISLAND Hy     30.01 139   T       T       15 12 45.8
       baz=330,slow=76,SNR=7773
H11S2  WAKE ISLAND Hy     30.02 139   T       T       15 12 48.4
       baz=330,slow=76,SNR=6243
ZAK    Zakamensk          30.06 299  eP       P       14 40 49.7  +0.5
ZAK                                  e                14 43 47.5
ZAK                                   pmax    pmax
       comp=Z,27nm,1.1s
XAN    Xi'an              30.52 265   P       P       14 40 53.3   0.0
XAN                                   pP      pP      14 41 07.3  -1.5
XAN                                   sP      sP      14 41 16.0  -0.3
XAN                                   pmax    pmax
       comp=Z,12nm,1.0s
XAN                                   pmax    pmax
       comp=Z,100nm,5.9s
XAN                                   LR      LR
       comp=Z,130nm,12.3s
XAN                                   LR      LR
       comp=Z,96nm,23.0s
GAMB   Gambell            31.41  35  eP       P       14 41 01.2  +0.5
       comp=Z,25nm,0.8s
MOY    Mondy              31.43 302  eP       P       14 41 01.7  +0.4
MOY                                   pmax    pmax
       comp=Z,28nm,2.5s
ENH    Enshi              32.07 259  eP       P       14 41 06.3  -0.7
ENH                                  epP      pP      14 41 21.7  -0.8
LZH    Lanzhou            33.30 272 ⇑P       P       14 41 18.6  +0.8
LZH                                   pP      pP      14 41 34.8  +1.4
LZH                                   sP      sP      14 41 42.8  +2.0
LZH                                   PP      PnPn    14 42 30.3  +0.3
LZH                                  eS       S       14 46 33.5  -0.3
LZH                                   sS      sS      14 47 00.6  +0.3
LZH                                  eSS      SnSn    14 48 39.3  -0.2
LZH                                   pmax    pmax
       comp=Z,42nm,1.0s
LZH                                   pmax    pmax
       comp=Z,190nm,5.2s
LZH                                   LR      LR
       comp=Z,350nm,12.9s
LZH                                   LR      LR
       comp=Z,340nm,13.2s
LZH                                   LR      LR
       comp=Z,480nm,15.6s
GTA    Gaotai             34.89 280 ⇑P       P       14 41 32.0  +0.5
GTA                                   pP      pP      14 41 47.5  +0.3
GTA                                   sP      sP      14 41 54.8  +0.2
GTA                                   PcP     PcP     14 44 04.8  +1.7
GTA                                   S       S       14 46 58.3   0.0
GTA                                   ScP     ScP     14 47 43.9  +1.0
GTA                                   PcS     PcS     14 47 51.4  +1.5
GTA                                   ScS     ScS     14 51 46.8  +0.2
GTA                                   pmax    pmax
       comp=Z,14nm,1.0s
GTA                                   pmax    pmax
       comp=Z,95nm,5.7s
GTA                                   LR      LR
       comp=Z,140nm,18.1s
GTA                                   LR      LR
       comp=Z,93nm,18.7s
GTA                                   LR      LR
       comp=Z,110nm,16.8s
CD2    Chengdu            35.86 264   P       P       14 41 39.0  -0.9
CD2                                   pmax    pmax
       comp=Z,20nm,0.5s
CD2                                   pmax    pmax
       comp=Z,220nm,5.4s
RDOG   Red Dog Mine       36.21  29  eP       P       14 41 42.5  +0.2
       comp=Z,38nm,1.2s
GYA    Guiyang            36.32 256⇑iP       P       14 41 59.5   +16
GYA                                   pP      pP      14 42 00.5  +0.9
GYA                                   PP      PnPn    14 43 08.9  +1.4
GYA                                   PcP     PcP     14 44 08.3  +0.9
GYA                                   S       S       14 47 19.0  -1.3
GYA                                   sS      ScP     14 47 47.6  -0.6
GYA                                   SS      SnSn    14 49 16.5   -36
GYA                                   pmax    pmax
       comp=Z,30nm,0.8s
GYA                                   pmax    pmax
       comp=Z,130nm,4.9s
GYA                                   LR      LR
       comp=N,1μm,16.2s
GYA                                   LR      LR
       comp=E,790nm,16.8s
GYA                                   LR      LR
       comp=Z,1μm,17.0s
SVW2   Sparrevohn         38.27  42  eP       P       14 42 01.6  +1.7
       comp=Z,31nm,1.0s
OHAK   Old Harbor         39.64  48  eP       P       14 42 10.3  -0.9
RSO    Redoubt South      39.67  43  eP       P       14 42 12.6  +0.8
PPLA   Purkeypile         39.88  39  eP       P       14 42 15.2  +1.7
       comp=Z,166nm,1.5s
KMI    Kunming            39.92 258   P       P       14 42 14.9  +0.6
KMI                                   pP      pP      14 42 30.4  +0.2
KMI                                   sP      sP      14 42 37.6   0.0
KMI                                   PP      PnPn    14 43 50.8  -0.1
KMI                                   S       S       14 48 13.8  -1.2
KMI                                   sS      sS      14 48 41.8  -0.2
KMI                                   SS      SS      14 51 06.1  -7.5
KMI                                   pmax    pmax
       comp=Z,9.0nm,0.9s
KMI                                   pmax    pmax
       comp=Z,110nm,4.0s
KMI                                   LR      LR
       comp=Z,150nm,11.0s
KMI                                   LR      LR
       comp=Z,150nm,11.0s
KMI                                   LR      LR
       comp=Z,130nm,11.8s
CAST   Castle Rocks       39.93  38  eP       P       14 42 15.4  +1.6
       comp=Z,77nm,0.8s
KDAK   Kodiak Island      39.96  47  eP       P       14 42 14.0  +0.1
KDAK   Kodiak Island      39.96  47  eP       P       14 42 14.0  +0.1
       comp=Z,67nm,0.7s
KDAK   Kodiak Island      39.96  47  eP       P       14 42 14.0  +0.1
KDAK                                  pmax    pmax
       comp=Z,67nm,0.7s
SKT    Skwentna           40.20  40  eP       P       14 42 16.5  +0.5
       comp=Z,43nm,1.6s
DGZ    Jazzator, Alta     40.24 300  i P      P       14 42 17.7  +1.1
DGZ                                   pmax    pmax
       comp=Z,15nm,1.0s
BPAW   Bear Paw Mtn.      40.42  37  eP       P       14 42 19.0  +1.2
       comp=Z,32nm,0.8s
DAV    Davao City (W)     40.44 213   LR      LR      15 00 49.1
       comp=Z,37nm,18.8s,baz=23,slow=39
CNPM   China Poot         40.49  44  eP       P       14 42 18.7  +0.3
       comp=Z,47nm,0.8s
MLY    Manley             40.54  36  eP       P       14 42 20.0  +1.2
       comp=Z,148nm,1.7s
SUA    Susitna One        40.60  41  eP       P       14 42 19.1  -0.2
       comp=Z,34nm,0.8s
BRLK   Bradley Lake       40.65  44  eP       P       14 42 20.2  +0.5
       comp=Z,61nm,0.7s
TRF    Thorofare Moun     40.74  38  eP       P       14 42 20.9  +0.3
       comp=Z,30nm,0.8s
COLD   Coldfoot           40.84  32  eP       P       14 42 22.1  +0.9
       comp=Z,116nm,1.1s
ZAA0   Zalesovo Array     40.91 307  eP       P       14 42 20.9  -0.9
       comp=Z,41nm,1.2s
ZALV   Zalesovo Beam      40.91 307   P       P       14 42 21.4  -0.4
       comp=Z,13nm,0.4s,baz=76,slow=6.3,SNR=27
ZALV                                  PcP     PcP     14 44 21.6  +0.4
       comp=Z,18nm,0.6s,baz=91,slow=2.7,SNR=12
ZALV                                  LR      LR      15 00 39.0
       comp=Z,119nm,18.4s,baz=70,slow=38
ZALV   Zalesovo Beam      40.91 307  eP       P       14 42 20.6  -1.3
ZALV                                 ePcP     PcP     14 44 21.2   0.0
ZALV   Zalesovo Beam      40.91 307  eP       P       14 42 20.6  -1.3
ZALV                                 e                14 44 21.2
BWN    Browne             41.09  37  eP       P       14 42 24.1  +0.9
BWN                                  epP      pP      14 42 38.6  -0.6
RC01   Rabbit Creek A     41.11  42  eP       P       14 42 23.8  +0.4
       comp=Z,58nm,0.8s
TOLK   Toolik Lake Re     41.17  30   P       P       14 42 24.0  +0.1
       baz=266
TOLK   Toolik Lake Re     41.17  30  eP       P       14 42 24.4  +0.5
       comp=Z,86nm,1.3s
MCK    McKinley           41.34  37  eP       P       14 42 25.7  +0.4
       comp=Z,63nm,0.9s
PMR    Palmer             41.36  41  eP       P       14 42 25.6  +0.2
       comp=Z,33nm,1.0s
PMR    Palmer             41.36  41  eP       P       14 42 25.6  +0.2
PMR                                   pmax    pmax
       comp=Z,33nm,1.0s
MDM    Murphy Dome        41.61  36  eP       P       14 42 28.7  +1.2
       comp=Z,63nm,0.7s
NVS    Novosibirsk        41.65 309  eP       P       14 42 27.1  -0.8
NVS                                  e                14 44 23.3
NVS                                  eS       S       14 48 32.8  -6.8
NVS                                   pmax    pmax
       comp=N,5.0nm,1.2s
NVS                                   pmax    pmax
       comp=E,30nm,1.2s
NVS                                   pmax    pmax
       comp=Z,39nm,1.2s
NVS                                   smax    smax
       comp=N,6.0nm,1.3s
NVS                                   smax    smax
       comp=E,9.0nm,1.3s
SML    Sawmill            41.73  40  eP       P       14 42 29.1  +0.6
       comp=E,108nm,1.0s
SML    Sawmill            41.73  40  eP       P       14 42 29.1  +0.6
SML                                   pmax    pmax
       comp=Z,108nm,1.0s
COLA   College            41.77  36  eP       P       14 42 29.7  +1.0
       comp=Z,81nm,0.6s
COLA   College            41.77  36  eP       P       14 42 29.7  +1.0
COLA                                  pmax    pmax
       comp=Z,81nm,0.6s
CCB    Clear Creek Bu     41.80  36  eP       P       14 42 28.8  -0.2
       comp=Z,120nm,1.6s
WMQ    Urumqi             41.82 292   P       P       14 42 30.8  +1.2
WMQ                                   sP      sP      14 42 53.9  +1.0
WMQ                                   S       S       14 48 45.8  +3.2
WMQ                                   ScS     ScS     14 52 23.6  -2.6
WMQ                                   pmax    pmax
       comp=Z,110nm,1.3s
WMQ                                   pmax    pmax
       comp=Z,330nm,3.7s
WMQ                                   LR      LR
       comp=Z,500nm,13.5s
WMQ                                   LR      LR
       comp=Z,490nm,15.5s
WMQ                                   LR      LR
       comp=Z,370nm,18.3s
HDA    Harding Lake       42.18  36  eP       P       14 42 32.0  -0.1
       comp=Z,50nm,0.6s
IL1    Eielson Array      42.19  36  eP       P       14 42 32.4  +0.2
ILAR   Eielson Array      42.19  36   P       P       14 42 32.5  +0.4
       comp=Z,36nm,0.9s,baz=256,slow=6.5,SNR=297
ILAR                                  PcP     PcP     14 44 24.2  -1.0
       comp=Z,4.9nm,0.9s,baz=282,slow=3.9,SNR=4.0
ILAR                                  LR      LR      15 01 50.5
       comp=Z,54nm,18.1s,baz=288,slow=38
ILB    Eielson Array      42.19  36  eP       P       14 42 32.3  +0.1
SCM    Sheep Creek Mo     42.20  40  eP       P       14 42 32.4   0.0
       comp=Z,51nm,1.0s
SCM    Sheep Creek Mo     42.20  40  eP       P       14 42 32.4   0.0
SCM                                   pmax    pmax
       comp=Z,51nm,1.0s
FYU    Fort Yukon         42.80  33  eP       P       14 42 38.9  +1.9
       comp=Z,220nm,0.9s
KLU    Klutina            42.90  41  eP       P       14 42 39.1  +1.0
       comp=Z,62nm,0.9s
PAX    Paxson             42.95  38  eP       P       14 42 40.0  +1.5
       comp=Z,15nm,0.8s
PAX    Paxson             42.95  38  eP       P       14 42 40.0  +1.5
PAX                                   pmax    pmax
       comp=Z,15nm,0.8s
DIV    Divide             43.02  41  eP       P       14 42 39.9  +0.9
       comp=Z,67nm,0.9s
HARP   HAARP              43.15  39  eP       P       14 42 41.6  +1.5
       comp=Z,74nm,0.8s
BMRM   Bremner River      43.61  41  eP       P       14 42 44.9  +1.2
       comp=Z,70nm,0.9s
NONG   Nongkai            44.27 249   P       P       14 42 50.7  +1.2
       comp=Z,0.6nm,0.9s
MK31   Makanchi Array     44.38 298  eP       P       14 42 50.6  +0.4
MK31   Makanchi Array     44.38 298  eP       P       14 42 50.3  +0.2
MK31                                  pmax    pmax
       comp=Z,85nm,0.6s
MKAR   Makanchi Array     44.38 298   P       P       14 42 50.8  +0.6
       comp=Z,70nm,0.6s,baz=82,slow=9.0,SNR=770
MKAR                                  PcP     PcP     14 44 33.2  +0.2
       comp=Z,6.5nm,0.7s,baz=51,slow=4.6,SNR=3.5
MKAR                                  LR      LR      15 02 18.7
       comp=Z,196nm,19.4s,baz=65,slow=37
MKAR   Makanchi Array     44.38 298  eP       P       14 42 50.6  +0.4
       comp=Z,706nm,0.6s
MKAR                                  PcP     PcP     14 44 33.2  +0.2
MK01   Makanchi Array     44.38 298  eP       P       14 42 50.5  +0.3
SKNT   Sakolnakorn        44.46 247   P       P       14 42 52.3  +1.3
       comp=Z,9.7nm,0.7s
TGL    Tana Glacier       44.50  41  eP       P       14 42 52.1  +1.2
       comp=Z,102nm,1.2s
MAKZ   Makanchi           44.58 298  eP       P       14 42 52.1  +0.4
       comp=Z,82nm,0.8s
MAKZ   Makanchi           44.58 298  eP       P       14 42 52.1  +0.4
MAKZ                                  pmax    pmax
       comp=Z,82nm,0.8s
EGAK   Eagle              44.63  36  eP       P       14 42 52.3  +0.4
       comp=Z,46nm,0.6s
KURK   Kurchatov          45.40 304  eP       P       14 42 58.1   0.0
KURK   Kurchatov          45.40 304  eP       P       14 42 58.0   0.0
       comp=Z,80nm,0.6s
KURK                                  PcP     PcP     14 44 37.1  +0.7
KURK   Kurchatov          45.40 304c iP       P       14 42 58.1   0.0
KURK                                  pmax    pmax
       comp=Z,79nm,0.7s
KURK                                  MLR     MLR
       comp=Z,148nm,20.0s
KURBB  Kurchatov Arra     45.48 304   P       P       14 42 58.7   0.0
       comp=Z,71nm,0.7s,baz=70,slow=8.6,SNR=290
KURBB                                 PcP     PcP     14 44 37.1  +0.4
       comp=Z,8.9nm,0.7s,baz=72,slow=3.0,SNR=6.0
DAWY   Dawson             45.50  36  eP       P       14 42 59.5  +0.7
       comp=Z,19nm,0.6s
KHON   Khomkaen           45.69 248   P       P       14 43 02.0  +1.2
       comp=Z,15nm,1.1s
LSA    Lhasa              45.71 272   P       P       14 43 03.0  +1.6
LSA                                   pmax    pmax
       comp=Z,6.0nm,0.6s
LSA    Lhasa              45.71 272  eP       P       14 43 01.7  +0.3
LSA    Lhasa              45.71 272  eP       P       14 43 01.8  +0.3
       comp=Z,17nm,1.0s
LSA    Lhasa              45.71 272  eP       P       14 43 01.8  +0.3
LSA                                   pmax    pmax
       comp=Z,17nm,1.0s
UTTA   Uttaradit          46.27 251   P       P       14 43 06.5  +1.2
       comp=Z,5.0nm,0.7s,comp=Z,56nm
LAMP   Lampang            46.38 253   P       P       14 43 08.1  +1.9
       comp=Z,9.5nm,0.7s,comp=Z,76nm
CMMT   Chiang Mai         46.66 254   P       P       14 43 09.4  +0.9
       comp=Z,17nm,0.9s,comp=Z,344nm
CHTO   Chiang Mai         46.67 254  eP       P       14 43 08.5   0.0
       comp=Z,13nm,0.8s
CHTO   Chiang Mai         46.67 254  eP       P       14 43 08.5   0.0
CHTO                                  pmax    pmax
       comp=Z,13nm,0.8s
CMAR   Chiang Mai Arr     46.91 253   P       P       14 43 11.0  +0.7
       comp=Z,3.1nm,0.7s,baz=43,slow=7.4,SNR=23
CMAR                                  PcP     PcP     14 44 43.2  +1.0
       comp=Z,2.0nm,0.7s,baz=33,slow=1.5,SNR=4.3
CMAR                                  ScP     ScP     14 48 32.3  +2.1
       comp=Z,0.5nm,0.4s,baz=38,slow=4.7,SNR=3.2
CMAR                                  LR      LR      15 04 36.2
       comp=Z,102nm,19.3s,baz=151,slow=38
CM01   Chiang Mai Arr     46.92 253  eP       P       14 43 11.1  +0.6
CM01                                 epP      pP      14 43 27.7  +1.0
SUKH   Sukhothai          47.09 252   P       P       14 43 13.9  +2.2
       comp=Z,3.6nm,0.7s
INK    Inuvik             47.09  30  eP       P       14 43 12.2  +1.1
INK    Inuvik             47.09  30  eP       P       14 43 12.2  +1.1
       comp=Z,133nm,0.8s
INK    Inuvik             47.09  30  eP       P       14 43 12.2  +1.1
INK                                   pmax    pmax
       comp=Z,133nm,0.8s
PDGK   Podgornoye         47.52 294  i P      P       14 43 14.7  -0.3
PDGK                                  pmax    pmax
       comp=Z,33nm,1.0s
MRSI   Marisa             47.90 214   P       P       14 43 18.6  +0.6
       comp=Z,45nm,0.9s,comp=Z,476nm
SKAG   Skagway            48.45  42  eP       P       14 43 23.7  +1.9
       comp=Z,44nm,1.4s
PRZ    Przheval'sk        48.60 294  eP       P       14 43 24.4  +1.0
       comp=Z,81nm,1.5s
PRZ    Przheval'sk        48.60 294  eP       P       14 43 24.4  +1.0
PRZ                                   pmax    pmax
       comp=Z,81nm,1.5s
BESE   Bessie Mountai     48.95  43  eP       P       14 43 27.3  +1.6
       comp=Z,38nm,1.1s
JIS    Juneau Island      49.29  43  eP       P       14 43 30.0  +1.9
       comp=Z,65nm,1.1s
BVAR   Borovoye Array     49.44 309   P       P       14 43 29.8  +0.3
       comp=Z,19nm,0.6s,baz=82,slow=8.8,SNR=121
BVAR                                  PcP     PcP     14 44 50.3  -0.5
       comp=Z,5.5nm,0.5s,baz=87,slow=3.1,SNR=3.4
BVAR                                  LR      LR      15 06 08.3
       comp=Z,119nm,20.4s,baz=78,slow=38
BRVK   Borovoye           49.49 310  eP       P       14 43 30.0  +0.2
BRVK   Borovoye           49.49 310  eP       P       14 43 30.3  +0.5
       comp=Z,42nm,0.9s
BRVK   Borovoye           49.49 310   P       P       14 43 30.0  +0.2
BRVK                                  pmax    pmax
       comp=Z,34nm,0.8s
TAPN   Taplejung          49.53 271  eP       P       14 43 31.6  +0.8
KDJ    Kajisay            49.57 294  eP       P       14 43 31.1  +0.2
       comp=Z,23nm,1.0s
ODAN   Odare              50.04 271  eP       P       14 43 35.1  +0.5
ULHL   Ulahol             50.15 294   P       P       14 43 36.0  +0.8
       SNR=10
TKM2   Tokmak 2           50.27 296   P       P       14 43 37.1  +0.9
       SNR=53
TKM2   Tokmak 2           50.27 296  i P      P       14 43 37.0  +0.8
TKM2                                  pmax    pmax
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	comp=Z,49nm,0.9s						
JIRN	**Jiri**	50.46	273	*e*P	P	14 43 38.6	+0.6
GUN	**Gumba**	50.55	273	*e*P	P	14 43 39.1	+0.5
	comp=Z,148nm,0.8s						
RAMN	**Ramite**	50.57	272	*e*P	P	14 43 39.0	+0.4
	comp=Z,86nm,0.7s						
CHMS	**Chumysh**	50.80	296	P	P	14 43 40.5	+0.5
	SNR=5.6						
KBK	**Karagaybulak**	50.82	296	P	P	14 43 41.3	+1.1
	SNR=8.4						
USP	**Ospenovka**	50.84	296	P	P	14 43 41.1	+0.8
	SNR=24						
KZA	**Kyzart**	50.88	295	P	P	14 43 42.6	+1.5
	SNR=20						
FRU	**Bishkek**	50.96	296	*e*P	P	14 43 43.0	+1.9
FRU				*i*		14 44 05.5	
FRU				*e*		14 45 41.0	
FRU				pmax	pmax		
	comp=Z,58nm,2.1s						
KKN	**Kakani**	51.05	273	*e*P	P	14 43 42.6	+0.4
	comp=Z,80nm,0.9s						
PKIN	**Phulchoki**	51.09	273	*e*P	P	14 43 43.0	+0.4
	comp=Z,61nm,0.8s						
AAK	**Ala-Archa**	51.13	296	P	P	14 43 43.3	+0.7
	SNR=7.3						
AAK	**Ala-Archa**	51.13	296	*e*P	P	14 43 42.9	+0.3
	comp=Z,21nm,1.2s						
AAK	**Ala-Archa**	51.13	296	*e*P	P	14 43 42.9	+0.3
AAK				pmax	pmax		
	comp=Z,21nm,1.2s						
DMN	**Daman**	51.28	273	*e*P	P	14 43 44.6	+0.6
	comp=Z,80nm,0.9s						
DLBC	**Dease Lake**	51.38	42	*e*P	P	14 43 46.1	+2.0
	comp=Z,33nm,1.1s						
GKN	**Gorkha**	51.40	274	*e*P	P	14 43 45.0	+0.2
	comp=Z,46nm,0.8s						
KSH	**Kashi**	51.58	291	*e*P	P	14 43 50.1	+4.1
KSH				sP	sP	14 44 13.0	+3.4
KSH				*e*PcP	PcP	14 45 02.1	+3.0
KSH				pmax	pmax		
	comp=Z,28nm,1.3s						
KSH				pmax	pmax		
	comp=Z,69nm,5.3s						
EKS2	**Erkin-Say**	51.59	296	P	P	14 43 46.8	+0.8
	SNR=18						
DANN	**Dangsing**	51.84	275	*e*P	P	14 43 49.2	+1.0
	comp=Z,301nm,0.8s						
AML	**Almayashu**	51.89	295	P	P	14 43 49.4	+0.9
	SNR=12						
KOLN	**Koldanda**	52.29	275	*e*P	P	14 43 52.0	+0.6
	comp=Z,78nm,0.8s						
PMG	**Port Moresby**	52.40	179	LR	LR	15 02 58.6	
	comp=Z,39nm,21.0s,baz=358,slow=32						
MNAS	**Manas**	52.50	296	P	P	14 43 53.3	+0.5
MNAS				pmax	pmax		
	comp=Z,62nm,1.1s						
PYUN	**Piuthan**	52.55	275	*e*P	P	14 43 54.0	+0.7
	comp=Z,130nm,1.0s						
KSM	**Kuching**	52.61	228	*e*pP	pP	14 44 12.2	+2.0
SFK	**Sufi-Kurgan**	53.02	293	*i* P	P	14 43 56.8	+0.1
SFK				pmax	pmax		
	comp=Z,26nm,0.9s						
SVE	**Sverdlovsk**	53.17	317 *d*	*i*P	P	14 43 57.8	+0.5
SVE				pmax	pmax		
	comp=Z,164nm,1.1s						
SVE				MLR	MLR		
	comp=Z,157nm,16.0s						
KK31	**Karatay Array**	53.51	298	*e*P	P	14 44 00.2	+0.1
KK31	**Karatay Array**	53.51	298	*i* P	P	14 44 00.4	+0.4
KK31				pmax	pmax		
	comp=Z,14nm,0.6s						
KKAR	**Karatay Array**	53.51	298	*e*P	P	14 44 00.2	+0.2
KKAR	**Karatay Array**	53.51	298	*e*P	P	14 44 00.2	+0.2
HNR	**Honiara**	53.84	163	LR	LR	15 03 28.7	
	comp=Z,98nm,21.1s,baz=353,slow=32						
ARU	**Arti**	54.38	317	*e*P	P	14 44 06.0	0.0
ARU	**Arti**	54.38	317	*e*P	P	14 44 06.1	0.0
	comp=Z,132nm,0.7s						
ARU	**Arti**	54.38	317 *c*	*i*P	P	14 44 06.1	0.0
ARU				*PP	pP	14 44 22.2	-0.4
ARU						14 45 08.0	
ARU				S	S	14 51 41.4	+2.1
ARU				SS	SS	14 55 20.9	-0.6
ARU				pmax	pmax		
	comp=Z,222nm,1.2s						
SPA0	**Spitsbergen Ar**	55.18	349	*e*Pn	P	14 44 10.4	-1.3
SPITS	**Spitsbergen Ar**	55.18	349	P	P	14 44 10.3	-1.3
	comp=Z,8.9nm,0.8s,baz=34,slow=10,SNR=8.9						
SPITS				PcP	PcP	14 45 12.3	+0.3
	comp=Z,6.4nm,0.6s,baz=54,slow=7.3,SNR=4.7						
KBS	**Kingsbay**	55.20	350	*e*P	P	14 44 11.8	0.0
KBS	**Kingsbay**	55.20	350	*e*P	P	14 44 11.7	0.0
	comp=Z,25nm,0.9s						
KBS	**Kingsbay**	55.20	350	*e*P	P	14 44 11.7	0.0
KBS				pmax	pmax		
	comp=Z,25nm,0.9s						
KULM	**Kulim**	55.27	240	*e*P	P	14 44 14.3	+1.3
	comp=Z,17nm,0.8s						
RES	**Resolute Bay**	55.59	16	*e*P	P	14 44 14.7	+0.1
	comp=Z,181nm,0.6s						
RES	**Resolute Bay**	55.59	16	*e*P	P	14 44 14.7	+0.1
RES				pmax	pmax		
	comp=Z,181nm,0.6s						
HSPB	**Hornsund (broa**	56.18	348	*e*Pn	P	14 44 18.9	+0.2
YKW3	**Yellowknife Ar**	56.46	33	*e*P	P	14 44 21.4	+0.5
	comp=Z,38nm,1.0s						
NIL	**Nilore**	56.46	287	*e*P	P	14 44 21.9	+0.5
NIL				*e*pP	pP	14 44 37.5	-0.6
YKA	**Yellowknife Ar**	56.50	33	P	P	14 44 21.8	+0.6
	comp=Z,24nm,0.8s,baz=301,slow=6.9,SNR=66						
YKA				PcP	PcP	14 45 17.4	+0.2
	comp=Z,1.7nm,0.6s,baz=299,slow=3.7,SNR=2.6						
YKA				LR	LR	15 09 37.6	
	comp=Z,6.8nm,22.0s,baz=306,slow=37						
AB31	**Akbulak array**	56.99	309	P	P	14 44 25.2	+0.3
AB31				pmax	pmax		
	comp=Z,53nm,0.5s						
ABKAR	**Akbulak array**	56.99	309	*e*P	P	14 44 25.3	+0.4
COEN	**Coen**	57.00	184	*e*P	P	14 44 25.9	+0.7
	comp=Z,45nm,1.0s						
COEN				*e*pP	sP	14 44 46.9	-2.1
AKTO	**Aktyubinsk**	57.49	311	LR	LR	15 11 05.2	
	comp=Z,105nm,20.7s,baz=62,slow=38						
MTN	**Manton Dam**	57.55	198	*e*P	P	14 44 29.1	-0.1
	comp=Z,21nm,0.8s						
MTN				*e*pP	pP	14 44 46.6	+0.7
PRGR	**Permogore**	57.71	326 ⇑	*i*P	P	14 44 30.0	+0.2
PRGR				*e**PP	pP	14 44 48.6	+2.1
PRGR				pmax	pmax		
	comp=Z,141nm,0.8s						
PSI	**Prapat**	58.28	240	*e*P	P	14 44 35.4	+0.9
	comp=Z,20nm,1.1s						
PSI				*e*pP	pP	14 44 50.9	-0.3
PSI	**Prapat**	58.28	240	*e*P	P	14 44 35.4	+0.9
PSI				*e**PP	pP	14 44 50.9	-0.3
PSI				pmax	pmax		
	comp=Z,20nm,1.1s						
TULEG	**Thule**	58.40	9	*e*P	P	14 44 33.5	-0.9
	comp=Z,92nm,0.8s						
APA	**Apatity**	58.63	336 ⇓	*i*P	P	14 44 34.5	-1.6
APA				pmax	pmax		
	comp=Z,31nm,0.8s						
KBL	**Kabul**	58.89	290	*e*P	P	14 44 37.4	-1.3
	comp=Z,34nm,0.6s						
KBL	**Kabul**	58.89	290	*e*P	P	14 44 37.4	-1.3
KBL				pmax	pmax		
	comp=Z,34nm,0.6s						
KEV	**Kevo**	59.01	339	*e*P	P	14 44 38.3	-0.4
	comp=Z,56nm,0.8s						
KEV	**Kevo**	59.01	339	*e*P	P	14 44 38.3	-0.4
KEV				pmax	pmax		
	comp=Z,56nm,0.8s						
LLLB	**Lillooet**	59.15	48	*e*P	P	14 44 40.8	+0.8
	comp=Z,16nm,0.9s						
HAMF	**Hammerfest**	59.23	341	*e*Pn	P	14 44 37.8	-2.4
ARCES	**ARCESS Array B**	59.55	340	P	P	14 44 42.6	+0.2
	comp=Z,22nm,0.5s,baz=39,slow=7.4,SNR=132						
ARCES	**ARCESS Array B**	59.55	340	*e*P	P	14 44 42.0	-0.4
ARCES	**ARCESS Array B**	59.55	340	*e*P	P	14 44 42.0	-0.4
NLWA	**Neilton Lookou**	59.75	52	*e*P	P	14 44 45.7	+1.5
DAG	**Danmarks Havn**	59.89	356 ⇑	*i*P	P	14 44 44.3	-0.4
	comp=Z,39nm,0.8s						
DAG	**Danmarks Havn**	59.89	356 ⇑	*i*P	P	14 44 44.3	-0.4
DAG				pmax	pmax		
	comp=Z,39nm,0.8s						
GSI	**Gunungsitoli**	60.28	240	*e*P	P	14 44 49.0	+0.8
	comp=Z,34nm,1.1s						
GSI				*e*pP	pP	14 45 05.7	+0.7
B05A	**Bryant**	60.29	50	P	P	14 44 48.3	+0.5
	baz=303						
KTK1	**Kautokeino**	60.49	340	*e*Pn	P	14 44 48.7	-0.2
KLMR	**Klimovskoe**	60.59	327	*e*P	P	14 44 47.1	-2.6
KLMR				*e*		14 45 32.1	
KLMR				pmax	pmax		
	comp=Z,133nm,1.1s						
KLMR	**Klimovskoe**	60.59	327	*e*P	P	14 44 47.2	-2.5
KLMR				AMP		14 44 50.3	
	comp=Z,133nm,1.1s						
KLMR				*e*PcP	PcP	14 45 32.1	-1.4
HEF	**Hetta**	60.81	339	*e*Pn	P	14 44 51.2	+0.1
D05A	**Enumclaw**	60.93	51	*e*P	P	14 44 53.0	+0.8
	comp=Z,80nm,1.7s						
TRO	**Tromso**	61.08	342	*e*Pn	P	14 44 53.2	+0.4
KIF	**Kilpisjarvi**	61.10	340	*e*Pn	P	14 44 53.0	0.0
G03D	**McMinnville, O**	61.28	54	P	P	14 44 56.2	+1.6
	baz=304						
LTY	**Liberty**	61.64	51	*e*P	P	14 44 57.7	+0.5
	comp=Z,8.2nm,0.7s						
B08A	**Colville Reser**	61.77	49	*e*P	P	14 44 58.5	+0.6
	comp=Z,68nm,1.8s						
KEBM	**Edson Butte**	61.95	56	*e*P	P	14 45 00.0	+0.8
	comp=Z,145nm,1.3s						
I03D	**Drain, OR**	62.08	55	P	P	14 45 00.8	+0.8
	baz=304						
H04A	**Detroit Lake**	62.21	54	*e*P	P	14 45 01.9	+0.9
	comp=Z,42nm,1.2s						
HYB	**Hyderabad**	62.27	268	*i* P	P	14 45 01.5	-0.2
G05D	**Wamic, OR**	62.41	53	P	P	14 45 00.7	-1.5
	baz=305						
I04A	**Tendick Farm,**	62.58	55	P	P	14 45 04.5	+1.0
	baz=305,SNR=6.4						
C09A	**Chrisman Ranch**	62.67	49	*e*P	P	14 45 04.4	+0.4
	comp=Z,16nm,0.8s						
D08A	**Wollman Farm,**	62.74	50	*e*P	P	14 45 04.9	+0.5
	comp=Z,11nm,0.8s						
HAWA	**Hanford**	62.78	51	*e*P	P	14 45 05.2	+0.5
	comp=Z,69nm,1.7s						
L02D	**Cave Junction,**	62.80	57	P	P	14 45 06.4	+1.6
	baz=305						
I05D	**Terrebonne, OR**	62.91	54	P	P	14 45 05.2	-0.4
	baz=305						
E08A	**Dider Farm, El**	62.99	51	*e*P	P	14 45 06.9	+0.9
	comp=Z,14nm,0.8s						
CTA	**Charters Tower**	63.02	180	P	P	14 45 06.2	-0.2
	comp=Z,5.0nm,0.6s,baz=349,slow=7.6,SNR=11						
J04D	**Umpqua Nationa**	63.08	55	P	P	14 45 07.8	+0.9
	baz=305,SNR=8.3						
JCC	**Jacoby Creek,**	63.30	58	*e*P	P	14 45 10.5	+2.4
	comp=Z,76nm,1.1s						
KHMM	**Horse Mountain**	63.45	58	*e*P	P	14 45 10.5	+1.1
	comp=Z,41nm,1.0s						
PINE	**Pine Mountain**	63.46	54	*e*P	P	14 45 11.2	+1.7
	comp=Z,47nm,1.1s						
E09A	**Wood Farm, Sta**	63.49	50	*e*P	P	14 45 10.3	+0.9
	comp=Z,29nm,1.0s						
E09A				*e*pP	pP	14 45 27.3	+1.0
J05D	**Fort Rock, OR**	63.58	55	P	P	14 45 11.4	+1.2
	baz=306,SNR=9.9						
YBH	**Yreka Blue Hor**	63.58	57	P	P	14 45 11.9	+1.7
	comp=Z,14nm,0.9s,baz=328,slow=7.5,SNR=16						
YBH	**Yreka Blue Hor**	63.58	57	*e*P	P	14 45 11.7	+1.5
	comp=Z,24nm,1.1s						
K04D	**Chiloquin, OR**	63.65	55	P	P	14 45 11.9	+1.3
	baz=306						
M02C	**Callahan**	63.69	57	P	P	14 45 11.8	+0.9
	baz=306,SNR=8.3						
G08A	**Pilot Rock**	63.74	52	*e*P	P	14 45 12.0	+0.8
	comp=Z,7.7nm,1.1s						
WRAB	**Tennant Creek**	63.84	193	*e*P	P	14 45 11.4	-0.5
	comp=Z,5.8nm,0.7s						
WRAB	**Tennant Creek**	63.84	193 ⇑	*e*P	P	14 45 11.5	-0.4
WRAB				pmax	pmax		
	comp=Z,15nm,1.0s						
WB2	**Warramunga Arr**	63.85	193	*e*P	P	14 45 11.5	-0.5
	comp=Z,17nm,1.0s						
WB2				*e*pP	pP	14 45 31.9	+3.0
WRA	**Warramunga Arr**	63.86	193	P	P	14 45 11.3	-0.7
	comp=Z,7.7nm,0.7s,baz=9.8,slow=6.8,SNR=43						
WRA				PKP2bc		15 14 05.5	
	comp=Z,1.3nm,1.0s,baz=188,slow=8.3,SNR=2.5						
FITZ	**Fitzroy Crossi**	63.97	202	LR	LR	15 12 42.9	
	comp=Z,46nm,21.3s,baz=338,slow=36						
N02D	**Trinity Center**	64.03	57	P	P	14 45 14.1	+1.0
	baz=306,SNR=8.0						
M04C	**Macdoel**	64.09	56	P	P	14 45 14.8	+1.2
	baz=306,SNR=14						
K05A	**Summer Lake**	64.11	55	*e*P	P	14 45 15.4	+1.6
	comp=Z,50nm,1.0s						
I07A	**Izee**	64.13	53	*e*P	P	14 45 15.0	+1.2
	comp=Z,11nm,1.1s						
GEYT	**Alibeck**	64.25	299	P	P	14 45 13.7	-0.8
	comp=Z,4.4nm,0.4s,baz=346,slow=3.1,SNR=24						
GEYT				LR	LR	15 15 27.1	
	comp=Z,156nm,20.1s,baz=320,slow=38						
GYA0B	**ALIBECK ARRAY**	64.25	299	*e*P	P	14 45 14.8	+0.3
	comp=Z,17nm,0.6s						
WALA	**Waterton Lakes**	64.29	46	*e*P	P	14 45 15.5	+0.8
WALA				*e*pP	pP	14 45 32.5	+0.8
F10A	**Beach Ranch, E**	64.32	50	*e*P	P	14 45 15.8	+0.8
	comp=Z,8.4nm,0.9s						
WDC	**Whiskeytown Da**	64.36	58	*e*P	P	14 45 16.2	+1.1
	comp=Z,25nm,1.1s						
WDC	**Whiskeytown Da**	64.36	58	*e*P	P	14 45 16.2	+1.1
WDC				pmax	pmax		
	comp=Z,25nm,1.1s						
SUMG	**Summit**	64.43	2	*e*P	P	14 45 16.3	+0.7
	comp=Z,344nm,1.3s						
SUMG	**Summit**	64.43	2 ⇑	*i*P	P	14 45 16.6	+1.0
	comp=Z,110nm,0.6s						
SUMG	**Summit**	64.43	2 ⇑	*i*P	P	14 45 16.6	+1.0
SUMG				pmax	pmax		
	comp=Z,110nm,0.6s						
MOS	**Moscow**	64.56	324	*e*P	P	14 45 16.3	+0.1
MOS				pmax	pmax		
	comp=Z,148nm,1.5s						
PUL	**Pulkovo**	64.80	330	*e*P	P	14 45 17.8	+0.2
PUL	**Pulkovo**	64.80	330 *c*	*e*P	P	14 45 17.8	+0.2
PUL				pmax	pmax		
	comp=Z,93nm,0.6s						
MOR8	**Moi Rana**	64.85	341	*e*Pn	P	14 45 16.3	-1.6
JTMT	**Jette**	64.88	47	*e*P	P	14 45 19.6	+1.0
	comp=Z,15nm,0.8s						
MOD	**Modoc Plateau**	64.94	55	*e*P	P	14 45 20.0	+0.8
	comp=Z,20nm,0.9s						
BMO	**Blue Mountains**	64.94	51	*e*P	P	14 45 19.7	+0.6
	comp=Z,12nm,1.1s						
O03D	**Paynes Creek**	64.98	58	P	P	14 45 20.3	+1.0
	baz=306,SNR=12						
FIA1	**FINESS Array S**	65.10	333	*e*P	P	14 45 19.4	-0.2
FINES	**FINESS Array B**	65.10	333	P	P	14 45 18.9	-0.7
	comp=Z,98nm,0.7s,baz=53,slow=6.2,SNR=187						
FINES				LR	LR	15 16 37.2	
	comp=Z,83nm,20.8s,baz=45,slow=39						
J08A	**Circle Bar Ran**	65.16	53	*e*P	P	14 45 20.6	+0.1
	comp=Z,19nm,1.0s						
OBN	**Obninsk**	65.43	324	*e*P	P	14 45 21.8	0.0
OBN	**Obninsk**	65.43	324	*e*P	P	14 45 21.4	-0.4
	comp=Z,75nm,0.7s						
OBN	**Obninsk**	65.43	324 *c*	*i*P	P	14 45 21.6	-0.2
OBN				*i* *PP	pP	14 45 38.7	-0.1
OBN				*e*		14 47 43.7	
OBN				*e*S	S	14 54 07.7	+6.6
OBN				pmax	pmax		
	comp=Z,212nm,1.8s						
OBN				MLR	MLR		
	comp=Z,99nm,17.0s						
VRH	**Novokhopyorsk**	65.57	318	*e*P	P	14 45 22.6	-0.2
VRH				pmax	pmax		
	comp=Z,140nm,0.9s						
ORV	**Oroville**	65.61	58	*e*P	P	14 45 23.6	+0.3
	comp=Z,22nm,0.9s						
WVOR	**Wild Horse Val**	65.62	54	*e*P	P	14 45 23.0	-0.5
	comp=Z,20nm,1.0s						
WVOR	**Wild Horse Val**	65.62	54	*e*P	P	14 45 23.0	-0.5
WVOR				pmax	pmax		
	comp=Z,20nm,1.0s						
MSO	**Missoula**	65.62	48	P	P	14 45 24.0	+0.7
	baz=308,SNR=18						
MSO	**Missoula**	65.62	48	*e*P	P	14 45 24.1	+0.7
MSO				*e*pP	pP	14 45 41.1	+0.6
BEKR	**Beckworth**	66.12	57	*e*P	P	14 45 27.5	+0.7
	comp=Z,39nm,0.9s						
AFDM	**Forest Hills D**	66.30	58	*e*P	P	14 45 28.3	+0.5
	comp=Z,22nm,1.2s						
FFC	**Flin Flon**	66.40	36	*e*P	P	14 45 28.9	+0.8
FFC	**Flin Flon**	66.40	36	*e*P	P	14 45 28.6	+0.5
	comp=Z,50nm,1.2s						
FFC				*e*pP	pP	14 45 45.5	+0.4
FFC	**Flin Flon**	66.40	36	*e*P	P	14 45 28.6	+0.5
FFC				*e**PP	pP	14 45 45.5	+0.4
FFC				pmax	pmax		
	comp=Z,50nm,1.2s						
MFID	**Camas Ranch**	66.66	52	*e*P	P	14 45 31.3	+1.2
	comp=Z,7.7nm,0.8s						
RUBR	**Rubicon Trail**	66.74	58	*e*P	P	14 45 31.7	+0.9
	comp=Z,60nm,0.9s						
NSS	**Namsos**	66.79	340	*e*Pn	P	14 45 29.6	-0.8
VSR	**Storozhevoye**	66.79	319	*e*P	P	14 45 30.7	+0.1
VSR				pmax	pmax		
	comp=Z,130nm,1.0s						
PAHR	**Pah Rah Range**	66.82	57	*e*P	P	14 45 32.0	+0.8
	comp=Z,35nm,1.0s						
HRY	**Holter Researc**	66.83	47	*e*P	P	14 45 32.0	+0.8
HRY				*e*pP	pP	14 45 49.6	+1.3
VORD	**Divnogorie**	66.89	319	*e*P	P	14 45 31.5	+0.2
VORD				pmax	pmax		
	comp=Z,140nm,1.2s						
VCNR	**Virginia City**	66.91	57	*e*P	P	14 45 33.0	+1.2
	comp=Z,27nm,0.9s						
VSU	**Vasula**	67.03	330 *c*	*e*P	P	14 45 32.5	+0.5
LRM	**Limekiln Ridge**	67.06	48	*e*P	P	14 45 33.5	+0.7
LRM				*e*pP	pP	14 45 50.6	+0.8
PNTR	**Pine Nut**	67.06	57	*e*P	P	14 45 34.1	+1.3
	comp=Z,34nm,0.9s						
EGMT	**Eagleton**	67.10	45	P	P	14 45 33.2	+0.5
	baz=310,SNR=18						
EGMT	**Eagleton**	67.10	45	*e*P	P	14 45 33.3	+0.5
EGMT				*e*pP	pP	14 45 50.9	+1.0
ILULI	**Ilulissat**	67.11	7	*e*P	P	14 45 31.9	-0.4
	comp=Z,58nm,0.8s						
ILULI	**Ilulissat**	67.11	7 ⇑	*i*P	P	14 45 32.2	-0.1
	comp=Z,55nm,0.8s						
ILULI	**Ilulissat**	67.11	7 ⇑	*i*P	P	14 45 32.2	-0.1
ILULI				pmax	pmax		
	comp=Z,55nm,0.8s						
CMB	**Columbia Colle**	67.22	59	*e*P	P	14 45 34.5	+0.9
	comp=Z,20nm,0.8s						
CMB	**Columbia Colle**	67.22	59	*e*P	P	14 45 34.6	+0.9
CMB				pmax	pmax		
	comp=Z,20nm,0.8s						
DLMT	**Dillon**	67.27	49	*e*P	P	14 45 34.7	+0.7
	comp=Z,18nm,0.8s						
YERR	**Yerington**	67.35	57	*e*P	P	14 45 35.7	+1.1
	comp=Z,59nm,1.0s						
HLID	**Hailey**	67.38	51	P	P	14 45 35.9	+1.2
	baz=309,SNR=16						
HLID	**Hailey**	67.38	51	*e*P	P	14 45 35.7	+0.9
	comp=Z,11nm,1.0s						
MCMT	**McKenzie Canyo**	67.47	49	*e*P	P	14 45 35.6	+0.3
MCMT				*e*pP	pP	14 45 52.6	+0.2
WAKR	**Walker**	67.52	58	*e*P	P	14 45 37.2	+1.4
	comp=Z,28nm,1.1s						
DZM	**Mont Dzumac**	67.54	160	LR	LR	15 16 04.8	
	comp=Z,64nm,18.2s,baz=23,slow=37						
DZM	**Mont Dzumac**	67.54	160	*e*LR	LR	15 05 54.2	
	comp=Z,315nm,34.4s						
AS01	**Alice Springs**	67.57	192	*e*P	P	14 45 35.8	0.0
AS31	**Alice Springs**	67.58	192	*e*P	P	14 45 36.1	+0.3
	comp=Z,2.2nm,0.7s						
ASAR	**Alice Springs**	67.58	192	P	P	14 45 36.5	+0.6
	comp=Z,5.3nm,0.8s,baz=8.4,slow=5.5,SNR=52						
ASAR				PKP2bc		15 14 01.3	
	comp=Z,0.9nm,0.8s,baz=175,slow=3.3,SNR=8.8						
BOZ	**Bozeman (W)**	67.65	48	P	P	14 45 37.4	+1.0
	baz=310,SNR=21						
BOZ	**Bozeman (W)**	67.65	48	*e*P	P	14 45 37.3	+1.0
BOZ	**Bozeman (W)**	67.65	48	*e*P	P	14 45 37.3	+1.0
	comp=Z,23nm,0.6s						
BOZ				*e*pP	pP	14 45 54.5	+1.0
BMN	**Battle Mountai**	67.68	55	*e*P	P	14 45 37.1	+0.4
	comp=Z,34nm,1.2s						
BMN	**Battle Mountai**	67.68	55	*e*P	P	14 45 37.1	+0.4
BMN				pmax	pmax		
	comp=Z,34nm,1.2s						
KVN	**Kaiserville**	68.01	57	*e*P	P	14 45 39.8	+1.0
	comp=Z,48nm,0.9s						
KVN	**Kaiserville**	68.01	57	*e*P	P	14 45 39.8	+1.0
KVN				pmax	pmax		
	comp=Z,49nm,0.9s						
RYN	**Ryan**	68.01	57	*e*P	P	14 45 39.8	+1.0
	comp=Z,28nm,0.9s						
PMPB	**Monarch Peak**	68.07	61	*e*P	P	14 45 40.1	+1.0
	comp=Z,20nm,1.0s						
QLMT	**Earthquake Lak**	68.24	49	*e*P	P	14 45 40.9	+0.7
LHV	**Little Huntoon**	68.25	58	*e*P	P	14 45 42.1	+2.0
NV01	**Mina Array Sit**	68.27	57	*e*P	P	14 45 41.4	+0.9
NVAR	**Mina Array Bea**	68.27	57	P	P	14 45 41.8	+1.3
	comp=Z,23nm,0.7s,baz=292,slow=6.5,SNR=194						
MDPB	**Devils Postpil**	68.28	58	*e*P	P	14 45 41.8	+1.2
	comp=Z,18nm,1.0s						
OMMB	**Old Mammoth Mi**	68.34	58	*e*P	P	14 45 42.0	+0.9
	comp=Z,20nm,1.3s						
NV11	**Mina Array Sit**	68.36	57	*e*P	P	14 45 42.1	+1.1
	comp=Z,1.8nm,0.9s						
YHB	**Horse Butte**	68.42	48	*e*P	P	14 45 42.4	+1.0
	comp=Z,18nm,0.7s						
MLAC	**Mammoth, Mammo**	68.43	58	P	P	14 45 42.4	+0.8
	baz=309						
AKT	**Akhty**	68.47	307 ⇑	*i*P	P	14 45 42.3	+0.8
AKT				*e*		14 46 06.3	
AKT				*e*S	S	14 54 40.0	+1.5
AKT				pmax	pmax		
	comp=Z,73nm,1.2s						
GROC	**Groznyy**	68.49	309	*e*P	P	14 45 41.1	-0.4
GROC				*e*		14 46 05.4	
GROC				*e*		14 48 12.0	
GROC				pmax	pmax		
	comp=Z,25nm,0.6s						
GCMT	**Greycliff**	68.58	47	*e*P	P	14 45 43.4	+1.2
GCMT				*e*pP	pP	14 46 01.1	+1.8
PAGB	**Antelope Grade**	68.72	61	*e*P	P	14 45 44.4	+1.3
	comp=Z,30nm,0.9s						
YFT	**Old Faithful**	68.81	49	*e*P	P	14 45 46.2	+2.4
	comp=Z,17nm,0.9s						
YPP	**Pitchstone Pla**	68.95	49	*e*P	P	14 45 46.6	+1.9
	comp=Z,7.9nm,0.9s						
H17A	**Grant Village**	68.99	48	P	P	14 45 45.1	+0.2
	baz=310,SNR=5.4						
H17A	**Grant Village**	68.99	48	*e*P	P	14 45 47.3	+2.3
	comp=Z,34nm,1.1s						
IMW	**Indian Meadow**	69.11	49	*e*P	P	14 45 47.1	+1.4
	comp=Z,19nm,0.9s						
FLWY	**Flagg Ranch**	69.12	49	*e*P	P	14 45 47.4	+1.6
	comp=Z,18nm,1.0s						
SMMC	**Simmler**	69.14	61	P	P	14 45 47.1	+1.4
	baz=309,SNR=5.6						
TIN	**Tinemaha, Big**	69.17	58	P	P	14 45 47.3	+1.3
	baz=309						
IZAR	**Zarasai**	69.20	328	*e*P	P	14 45 46.2	+0.6
IZAR				IAmb	IAmb	14 45 47.4	
	comp=Z,18nm,0.8s						
RLMT	**Red Lodge**	69.23	47	P	P	14 45 46.4	+0.1
	baz=311,SNR=7.8						
RLMT	**Red Lodge**	69.23	47	*e*P	P	14 45 47.4	+1.0
	comp=Z,28nm,1.4s						
FXWY	**Fox Creek**	69.23	49	*e*P	P	14 45 47.9	+1.5
	comp=Z,33nm,1.4s						
SFJD	**Kangerlussuaq**	69.31	7	P	P	14 45 46.2	0.0
	comp=Z,44nm,0.8s,baz=359,slow=5.5,SNR=7.2						
SFJD				LR	LR	15 16 36.0	
	comp=Z,86nm,20.7s,baz=338,slow=36						
SFJD	**Kangerlussuaq**	69.31	7	*e*P	P	14 45 46.0	-0.1
	comp=Z,37nm,0.8s						
SFJD	**Kangerlussuaq**	69.31	7	*i* P	P	14 45 46.1	-0.1
MOOW	**Moose Ponds**	69.32	49	*e*P	P	14 45 48.3	+1.4
	comp=Z,32nm,1.3s						
IDID	**Didziasalis**	69.33	328	*e*P	P	14 45 47.1	+0.6
IDID				IAmb	IAmb	14 45 48.4	
	comp=Z,24nm,0.7s						
TPAW	**Teton Pass**	69.37	49	*e*P	P	14 45 48.6	+1.3
	comp=Z,34nm,1.0s						
ISAL	**Salakas**	69.38	328	*e*P	P	14 45 47.4	+0.7
ISAL				IAmb	IAmb	14 45 48.8	
	comp=Z,34nm,0.8s						
VES	**Vestal, Richgr**	69.39	60	P	P	14 45 47.2	0.0
	baz=309,SNR=14						
HVU	**Hansel Valley**	69.44	52	*e*P	P	14 45 48.7	+1.1
	comp=Z,18nm,1.1s						
HVU	**Hansel Valley**	69.44	52	*e*P	P	14 45 48.7	+1.1

HVU				pmax	pmax		
	comp=Z,18nm,1.1s						
LOHW	Long Hollow	69.48	49	*e*P	P	14 45 49.1	+1.1
	comp=Z,35nm,1.5s						
SNOW	Snow King Moun	69.50	49	*e*P	P	14 45 49.6	+1.5
	comp=Z,36nm,1.3s						
IIGN	Ignalina	69.50	328	*e*P	P	14 45 48.2	+0.6
IIGN				IAmb	IAmb	14 45 49.5	
	comp=Z,38nm,0.8s						
REDW	Red Top Meadow	69.51	49	*e*P	P	14 45 49.1	+1.0
	comp=Z,35nm,1.3s						
PKM	Mcpherson Peak	69.53	61	P	P	14 45 49.0	+0.7
	baz=309,SNR=7.1						
DOMB	Dombas	69.60	340	*e*Pn	P	14 45 48.2	+0.1
DGMT	Dagmar	69.60	42	P	P	14 45 48.8	+0.4
	baz=313,SNR=5.2						
DGMT	Dagmar	69.60	42	*e*P	P	14 45 48.6	+0.3
DGMT				*e*pP	pP	14 46 05.8	+0.3
NACGM	Naroch	69.62	328	*e*P	P	14 45 47.0	-1.2
NACGM				PM		14 45 49.0	
	comp=Z,0.3nm,0.9s						
CWC	Cottonwood Cre	69.65	59	P	P	14 45 49.7	+0.7
	baz=309						
NC303	NORSAR Array S	69.70	339	*e*P	P	14 45 48.6	-0.1
NC405	NORSAR Array S	69.70	338	*e*P	P	14 45 48.8	+0.1
KIV	Kislovodsk	69.73	312	*e*P	P	14 45 50.2	+0.9
KIV	Kislovodsk	69.73	312	*e*P	P	14 45 49.8	+0.5
	comp=Z,96nm,0.9s						
KIV	Kislovodsk	69.73	312	*i* P	P	14 45 51.0	+1.8
	SNR=26						
KIV	Kislovodsk	69.73	312	*c* *i*P	P	14 45 50.2	+0.9
KIV				*i* *PP	pP	14 46 07.8	+1.4
KIV				*i*		14 46 14.3	
KIV				pmax	pmax		
	comp=Z,128nm,1.0s						
KIV				MLR	MLR		
	comp=Z,140nm,18.0s						
GRAC	Grapevine Rang	69.74	58	P	P	14 45 51.0	+1.6
	baz=309,SNR=43						
AHID	Auburn Hatcher	69.76	50	*e*P	P	14 45 50.4	+0.8
	comp=Z,31nm,1.4s						
KBZ	Khabaz	69.76	311	P	P	14 45 50.5	+1.2
	comp=Z,52nm,0.9s,baz=63,slow=2.8,SNR=56						
KBZ				LR	LR	15 21 51.2	
	comp=Z,142nm,18.1s,baz=34,slow=40						
LAO	LASA Array	69.79	44	P	P	14 45 50.5	+0.9
	baz=312,SNR=6.1						
LAO	LASA Array	69.79	44	*e*P	P	14 45 50.2	+0.7
	comp=Z,34nm,0.9s						
LAO				*e*pP	pP	14 46 08.2	+1.5
NC204	NORSAR Array S	69.81	339	*e*P	P	14 45 49.4	0.0
ZEI	Tsey	69.82	310	*e*P	P	14 45 48.2	-1.8
ZEI				pmax	pmax		
	comp=Z,47nm,1.0s						
BGU	Big Grassy Mou	69.84	53	*e*P	P	14 45 50.4	+0.3
	comp=Z,33nm,1.9s						
NB201	NORSAR Array S	69.86	339	*e*P	P	14 45 49.8	+0.1
ISA	Isabella, Lake	69.89	60	P	P	14 45 50.7	+0.3
	baz=309,SNR=12						
ISA	Isabella, Lake	69.89	60	*e*P	P	14 45 50.3	-0.1
	comp=Z,12nm,0.8s						
NB2	NORSAR Subarra	69.89	339	P	P	14 45 49.8	-0.1
	comp=Z,52nm,0.7s,baz=32,slow=6.9						
NB2	NORSAR Subarra	69.89	339	P	P	14 45 49.8	-0.1
	baz=32,slow=6.9						
NOA	NORSAR Array B	69.89	339	LR	LR	15 21 23.2	
	comp=Z,121nm,19.4s,baz=40,slow=40						
SPUT	South Promonto	69.93	52	*e*P	P	14 45 51.7	+1.0
	comp=Z,22nm,1.2s						
HFS	Hagfors	69.96	337	P	P	14 45 50.1	-0.2
	comp=Z,61nm,0.7s,baz=64,slow=6.6,SNR=152						
HFS				LR	LR	15 22 23.5	
	comp=Z,91nm,18.1s,baz=42,slow=41						
R11A	Troy Canyon, C	69.98	56	P	P	14 45 51.7	+0.7
	baz=310,SNR=53						
R11A	Troy Canyon, C	69.98	56	*e*P	P	14 45 52.0	+1.0
	comp=Z,17nm,0.9s						
R11A				*e*pP	pP	14 46 08.8	+0.6
AKN	Aaknes	69.98	341	*e*Pn	P	14 45 50.2	-0.2
ARVC	Arvin	70.00	60	P	P	14 45 52.0	+1.1
	baz=309						
NBO00	NORSAR Array S	70.02	339	*e*P	P	14 45 50.5	-0.1
TBLG	Delisi	70.03	309	*e*P	P	14 45 52.1	+1.0
	comp=Z,68nm,0.9s						
TBLG				*e*pP	pP	14 46 08.4	+0.1
TBLG	Delisi	70.03	309	*e*P	P	14 45 52.1	+1.0
TBLG				*e**PP	pP	14 46 08.4	+0.1
TBLG				pmax	pmax		
	comp=Z,68nm,0.9s						
DAC	Darwin (Calif)	70.06	59	*e*P	P	14 45 52.1	+0.5
	comp=Z,30nm,1.3s						
DAC	Darwin (Calif)	70.06	59	*e*P	P	14 45 52.1	+0.5
DAC				pmax	pmax		
	comp=Z,30nm,1.3s						
NC602	NORSAR Array S	70.06	338	*e*P	P	14 45 50.3	-0.6
NC602	NORSAR Array S	70.06	338	*e*Pn	P	14 45 50.8	0.0
NAO01	NORSAR Array S	70.14	339	*e*P	P	14 45 51.2	-0.2
SCZ2	Santa Cruz Isl	70.20	62	P	P	14 45 53.3	+1.0
	baz=309						
HWUT	Hardware Ranch	70.25	51	*e*P	P	14 45 53.0	+0.4
	comp=Z,30nm,1.3s						
MPMC	Manual Prospec	70.26	59	P	P	14 45 53.8	+1.0
	baz=310,SNR=42						
FURC	Furnace Creek,	70.39	58	P	P	14 45 54.6	+1.3
	baz=310,SNR=23						
OSI	Osito Audit: C	70.40	61	P	P	14 45 54.8	+1.4
	baz=310,SNR=6.6						
OSI	Osito Audit: C	70.40	61	*e*P	P	14 45 54.5	+1.0
	comp=Z,40nm,0.7s						
DUG	Dugway, Tooele	70.44	53	P	P	14 45 54.9	+1.1
	baz=310,SNR=36						
DUG	Dugway, Tooele	70.44	53	*e*P	P	14 45 54.7	+0.9
	comp=Z,35nm,1.1s						
DUG	Dugway, Tooele	70.44	53	*e*P	P	14 45 54.7	+0.9
DUG				pmax	pmax		
	comp=Z,35nm,1.1s						
TPNV	Topopah Spring	70.46	57	P	P	14 45 55.1	+1.1
	baz=310,SNR=39						
TPNV	Topopah Spring	70.46	57	*e*P	P	14 45 55.0	+1.1
	comp=Z,38nm,0.9s						
TPNV	Topopah Spring	70.46	57	*e*P	P	14 45 55.0	+1.0
TPNV				pmax	pmax		
	comp=Z,38nm,0.9s						
BLG	Laguna Peak, P	70.50	61	P	P	14 45 55.0	+0.9
	baz=310						
BW06	Boulder Array	70.61	49	P	P	14 45 55.4	+0.5
	baz=311,SNR=30						
BW06	Boulder Array	70.61	49	*e*P	P	14 45 55.3	+0.4
	comp=Z,26nm,1.1s						
PD31	Pinedale Array	70.61	49	*e*P	P	14 45 55.3	+0.4
PD31				*e*pP	pP	14 46 12.8	+0.7
PDAR	Pinedale Array	70.61	49	P	P	14 45 55.4	+0.5
	comp=Z,13nm,0.9s,baz=256,slow=2.2,SNR=78						
PDAR	Pinedale Array	70.61	49	*e*P	P	14 45 55.4	+0.5
PDAR				*e*pP	pP	14 46 12.7	+0.7
TCUT	Toone Canyon	70.65	52	*e*P	P	14 45 56.2	+1.0
	comp=Z,79nm,1.6s						
EDW2	Edwards Air Fo	70.69	60	P	P	14 45 56.4	+1.2
	baz=310,SNR=20						
CTU	Camp Tracy	70.73	52	*e*P	P	14 45 56.5	+1.0
	comp=Z,17nm,1.1s						
DECC	Green Verdugo	70.87	61	P	P	14 45 57.4	+1.0
	baz=310,SNR=5.8						
PSUT	Pine Spring	70.90	55	*e*P	P	14 45 57.6	+0.9
	comp=Z,15nm,1.0s						
AKH	Akhalkalaki	70.95	309	⇑*i*P	P	14 45 58.2	+1.3
AKH	Akhalkalaki	70.95	309	*e*P	P	14 45 58.3	+1.5
	comp=Z,23nm,1.0s						
JLU	Jordanelle	70.97	52	*e*P	P	14 45 57.7	+0.6
	comp=Z,19nm,1.1s						
PASC	Pasadena Art C	71.02	61	*e*P	P	14 45 57.8	+0.6
	comp=Z,16nm,1.0s						
NLU	North Lily Min	71.03	53	*e*P	P	14 45 58.3	+0.9
	comp=Z,23nm,1.0s						
HYA	Hoyanger	71.06	341	*e*Pn	P	14 45 56.2	-0.7
GNI	Garni	71.06	307	P	P	14 45 57.6	+0.1
	comp=Z,19nm,1.0s,baz=17,slow=17,SNR=11						
GNI				LR	LR	15 20 15.7	
	comp=Z,68nm,20.7s,baz=36,slow=38						
MWC	Mount Wilson	71.07	61	*e*P	P	14 45 58.3	+0.6
	comp=Z,38nm,1.3s						
MWC	Mount Wilson	71.07	61	*e*P	P	14 45 58.3	+0.6
MWC				pmax	pmax		
	comp=Z,38nm,1.3s						
SHOC	Shoshone, Teco	71.12	58	P	P	14 45 59.0	+1.2
	baz=310,SNR=13						
GSC	Goldstone, Bar	71.17	59	P	P	14 45 59.3	+1.1
	baz=310,SNR=18						
GSC	Goldstone, Bar	71.17	59	*e*P	P	14 45 58.9	+0.7
	comp=Z,19nm,0.9s						
GSC	Goldstone, Bar	71.17	59	*e*P	P	14 45 58.9	+0.7
GSC				pmax	pmax		
	comp=Z,19nm,0.9s						
MPU	Maple Canyon	71.25	53	*e*P	P	14 45 59.5	+0.7
	comp=Z,27nm,1.1s						
MPU				*e*pP	PcP	14 46 17.8	-0.5
BFSC	Mount Baldy Ra	71.31	60	P	P	14 46 00.2	+1.1
	baz=310,SNR=22						
CIS	Catalina Islan	71.36	62	P	P	14 46 00.1	+0.8
	baz=310,SNR=5.2						
SHPR	Sheep Range	71.42	57	*e*P	P	14 46 00.8	+1.1
	comp=Z,26nm,0.9s						
ANGG	Ammassalik, Gr	71.43	2	*e*P	P	14 45 58.6	-0.5
	comp=Z,52nm,0.7s						
SUE	Sulen	71.49	341	*e*Pn	P	14 46 00.1	+0.7
KONO	Kongsberg	71.50	339	*e*P	P	14 45 59.3	-0.3
	comp=Z,26nm,1.0s						
KONO	Kongsberg	71.50	339	*d* *e*P	P	14 46 00.3	+0.7
KONO				pmax	pmax		
	comp=Z,47nm,1.7s						
TUQ	Turquoise Moun	71.64	59	P	P	14 46 02.3	+1.2
	baz=310,SNR=13						
SUW	Suwalki	71.68	329	*e*P	P	14 46 00.5	-0.3
SUW	Suwalki	71.68	329	*e*P	P	14 46 00.4	-0.3
	comp=Z,86nm,1.1s						
SUW	Suwalki	71.68	329	*e*P	P	14 46 00.4	-0.3
SUW				pmax	pmax		
	comp=Z,87nm,1.1s						
AKASG	Malin Array Be	71.69	323	P	P	14 46 00.8	-0.1
	comp=Z,26nm,0.6s,baz=40,slow=6.5,SNR=71						
AKASG				LR	LR	15 20 33.2	
	comp=Z,120nm,19.0s,baz=50,slow=38						
AKBB	Malin Array Si	71.69	323	*e*P	P	14 46 00.7	-0.2
	comp=Z,68nm,1.0s						
AKBB	Malin Array Si	71.69	323	*e*P	P	14 46 00.7	-0.2
AKBB				pmax	pmax		
	comp=Z,68nm,1.0s						
KIEV	Kiev	71.70	323	*e*P	P	14 46 00.8	-0.2
KIEV	Kiev	71.70	323	*e*P	P	14 46 00.7	-0.2
	comp=Z,66nm,1.0s						
KIEV	Kiev	71.70	323	*i* P	P	14 46 00.8	-0.2
	SNR=44						
KIEV	Kiev	71.70	323	*c* *i*P	P	14 46 00.8	-0.2
KIEV				pmax	pmax		
	comp=Z,61nm,1.0s						
AK11	Malin Array Si	71.73	323	*e*P	P	14 46 00.8	-0.4
BBRC	Big Bear Solar	71.77	60	P	P	14 46 02.6	+0.6
	baz=310						
HEC	Hector,Ludlow	71.77	59	P	P	14 46 03.0	+1.2
	baz=310,SNR=14						
CCUT	Cedar City	71.83	55	*e*P	P	14 46 03.1	+0.8
	comp=Z,29nm,1.2s						
ASK	Askoy	71.89	341	*e*Pn	P	14 46 00.1	-1.8
MSU	Marysvale	71.91	54	*e*P	P	14 46 04.2	+1.4
BORG	Borgarnes	71.92	355	*e*P	P	14 46 03.8	+1.7
	comp=Z,58nm,0.8s						
BER	Bergen	71.95	341	*e*Pn	P	14 46 02.1	-0.1
ANN	Anapa	71.96	315	*e*P	P	14 46 02.8	+0.2
ANN	Anapa	71.96	315	*c* *i*P	P	14 46 02.9	+0.3
ANN				*e**PP	pP	14 46 19.1	-0.7
ANN				*e*		14 48 38.7	
ANN				*e*S	S	14 55 19.5	+0.7
ANN				pmax	pmax		
	comp=Z,69nm,1.0s						
TMUT	Trail Mountain	71.97	53	*e*P	P	14 46 03.9	+0.7
	comp=Z,26nm,1.2s						
SZCU	Shurtz Canyon	71.97	55	*e*P	P	14 46 03.9	+0.7
	comp=Z,15nm,0.9s						
MURC	Murrieta	72.02	61	P	P	14 46 04.1	+0.9
	baz=310,SNR=11						
ODD1	Odda	72.04	340	*e*Pn	P	14 46 02.1	-0.8
ULM	Lac du Bonnet	72.20	37	P	P	14 46 03.8	-0.2
	comp=Z,7.2nm,0.7s,baz=310,slow=7.0,SNR=12						
ULM	Lac du Bonnet	72.20	37	*e*P	P	14 46 03.5	-0.5
ULM	Lac du Bonnet	72.20	37	*e*P	P	14 46 03.5	-0.5
ULM				*e*pP	pP	14 46 20.6	-0.6
ULM	Lac du Bonnet	72.20	37	*e*P	P	14 46 03.6	-0.5
ULM				*e**PP	pP	14 46 20.6	-0.6
MTPU	Mount Pierson	72.22	54	*e*P	P	14 46 06.0	+1.2
	comp=Z,18nm,0.8s						
GMRC	Granite Mounta	72.22	59	P	P	14 46 05.6	+1.0
	baz=311,SNR=31						
MDND	Maddock	72.25	40	P	P	14 46 04.8	+0.5
	baz=316						
LCMT	Little Creek M	72.26	56	*e*P	P	14 46 06.0	+1.2
	comp=Z,31nm,0.9s						
P18A	Preston Nutter	72.30	52	*e*P	P	14 46 06.0	+0.8
	comp=Z,17nm,1.1s						
K22A	Casper	72.35	48	P	P	14 46 06.0	+0.7
	baz=313,SNR=9.9						
K22A	Casper	72.35	48	*e*P	P	14 46 05.4	+0.2
	comp=Z,83nm,1.5s						
LDFC	Landfair	72.38	58	*e*P	P	14 46 06.1	+0.7
	comp=Z,51nm,1.0s						
FRD	Ford Ranch, An	72.46	60	P	P	14 46 06.9	+0.9
	baz=311,SNR=9.9						
PFO	Pinyon Flats O	72.48	60	P	P	14 46 06.8	+0.7
	baz=311,SNR=16						
PFO	Pinyon Flats O	72.48	60	*e*P	P	14 46 06.3	+0.2
	comp=Z,16nm,0.8s						
PFO	Pinyon Flats O	72.48	60	*e*P	P	14 46 06.3	+0.2
PFO				pmax	pmax		
	comp=Z,16nm,0.8s						
XPFO	Piæon Flat	72.48	60	*e*P	P	14 46 06.2	+0.1
	comp=Z,18nm,0.9s						
SRU	San Rafael Swe	72.49	53	*e*P	P	14 46 06.9	+0.7
	comp=Z,38nm,1.0s						
SRU	San Rafael Swe	72.49	53	*e*P	P	14 46 06.9	+0.7
SRU				pmax	pmax		
	comp=Z,38nm,1.0s						
BELC	Belle Mtn. Jos	72.52	60	P	P	14 46 06.9	+0.5
	baz=311,SNR=16						
109C	Camp Elliot, M	72.53	61	P	P	14 46 07.2	+0.9
	baz=311						
CPE	Camp Elliot	72.53	61	*e*P	P	14 46 06.8	+0.5
	comp=Z,25nm,0.9s						
PKCU	Pink Cliffs	72.53	55	*e*P	P	14 46 07.8	+1.1
	comp=Z,24nm,1.2s						
RWWY	Rawlins	72.63	49	*e*P	P	14 46 07.1	0.0
	comp=Z,32nm,1.0s						
RSSD	Black Hills	72.66	45	P	P	14 46 07.5	+0.3
	baz=314						
RSSD	Black Hills	72.66	45	*e*P	P	14 46 07.2	0.0
RSSD				*e*pP	PcP	14 46 24.5	+0.2
RSSD	Black Hills	72.66	45	*e*P	P	14 46 07.2	0.0
RSSD				*e**PP	PcP	14 46 24.5	+0.2
BANOM	Banah	72.85	290	P	P	14 46 08.5	+0.2
SHME	Shamm	72.88	290	*i* P	P	14 46 08.6	+0.1
	SNR=10						
NEE2	Needles Airpor	72.88	58	P	P	14 46 09.5	+1.2
	baz=311						
BAR	Barrett	72.95	61	*e*P	P	14 46 09.2	+0.4
	comp=Z,17nm,0.8s						
WSAR	Wadi Sarin	72.95	286	P	P	14 46 10.5	+1.6
	comp=Z,6.8nm,0.7s,baz=73,slow=11,SNR=6.3						
IRM	Iron Mountain	72.95	59	P	P	14 46 09.5	+0.7
	baz=311,SNR=23						
MONP2	Monument Peak	72.97	61	P	P	14 46 09.5	+0.3
	baz=311,SNR=7.4						
BC3	Big Chuckawall	73.09	60	P	P	14 46 09.4	-0.3
	baz=311,SNR=16						
O20A	White River Ci	73.11	51	P	P	14 46 09.9	+0.1
	baz=313,SNR=14						
O20A	White River Ci	73.11	51	*e*P	P	14 46 10.1	+0.3
	comp=Z,38nm,1.3s						
W13A	Hualapai Mount	73.12	58	*e*P	P	14 46 10.8	+0.8
	comp=Z,12nm,0.9s						
U15A	North Rim	73.22	56	*e*P	P	14 46 11.9	+1.3
	comp=Z,33nm,0.8s						
MDH	Madha	73.25	289	P	P	14 46 10.4	-0.3
SNART	Snartemo	73.26	339	*e*Pn	P	14 46 10.8	+0.6
MSFE	Esma-Masafi	73.31	289	P	P	14 46 11.3	+0.2
IKP	In-Ko-Pah, Jac	73.33	61	P	P	14 46 11.6	+0.5
	baz=311,SNR=11						
SWSC	Sam W. Stewart	73.33	60	P	P	14 46 11.0	0.0
	baz=311,SNR=10						
A33A	Warroad	73.38	37	P	P	14 46 10.6	-0.4
	baz=318,SNR=9.5						
PDMCI	Parker Dam,Lak	73.48	58	P	P	14 46 12.2	+0.3
	baz=311,SNR=7.9						
SIM	Simferopol’	73.54	317	*c* *i*P	P	14 46 12.5	+0.5
SIM				*e*		14 46 30.0	
SIM				*e**PP	sP	14 46 37.0	+0.6
SIM				pmax	pmax		
	comp=Z,35nm,0.8s						
UOSS	Minazif	73.54	289	*e*P	P	14 46 12.4	0.0
	comp=Z,43nm,0.7s						
UOSS	Minazif	73.54	289	*i* P	P	14 46 12.4	0.0
	SNR=7.7						
Y12C	Blythe	73.61	59	P	P	14 46 13.6	+1.0
	baz=311,SNR=15						
Y12C	Blythe	73.61	59	*e*P	P	14 46 13.6	+1.0
	comp=Z,27nm,1.0s						
AGMN	Agassiz Nation	73.64	38	P	P	14 46 12.4	-0.2
	baz=318,SNR=7.0						
AGMN	Agassiz Nation	73.64	38	*e*P	P	14 46 12.0	-0.6
AGMN				*e*pP	pP	14 46 29.4	-0.5
HATD	Hatta, Dubai	73.67	289	*i* P	P	14 46 13.6	+0.4
	SNR=5.9						
PV09	Paradox Valley	73.70	52	*e*P	P	14 46 13.8	+0.4
PV09				*e*pP	pP	14 46 32.4	+1.6
ASHO	Ashiyiah	73.81	289	P	P	14 46 14.2	+0.2
PHWY	Pilot Hill	73.86	48	*e*P	P	14 46 14.5	+0.1
	comp=Z,8.9nm,0.9s						
N23A	Red Feather La	73.87	49	P	P	14 46 14.8	+0.4
	baz=314,SNR=16						
N23A	Red Feather La	73.87	49	*e*P	P	14 46 14.9	+0.5
	comp=Z,29nm,1.0s						
GLA	Glamis	73.88	60	P	P	14 46 15.1	+0.9
	baz=311,SNR=10						
GLA	Glamis	73.88	60	*e*P	P	14 46 15.2	+1.0
	comp=Z,29nm,0.8s						
GLA	Glamis	73.88	60	*e*P	P	14 46 15.3	+1.0
GLA				pmax	pmax		
	comp=Z,29nm,0.8s						
NAZ	Nazwa, Dubai	73.89	289	P	P	14 46 14.6	+0.1
SORM	Soroca	73.97	322	⇓*i*P	P	14 46 15.1	+0.7
PV03	Paradox Valley	74.03	52	*e*P	P	14 46 15.9	+0.6
B34A	Aery, Baudette	74.05	37	P	P	14 46 14.5	-0.4
	baz=318,SNR=6.5						
C33A	Trail	74.08	38	P	P	14 46 15.1	-0.1
	baz=318						
PV02	Paradox Valley	74.13	52	*e*P	P	14 46 16.6	+0.7
	comp=Z,19nm,1.1s						
BEL	Belsk	74.28	328	*e*P	P	14 46 17.3	+1.1
BEL	Belsk	74.28	328	*e*P	P	14 46 17.3	+1.1
ASUD	Al Ashush, Dub	74.36	289	*i* P	P	14 46 17.7	+0.6
	SNR=9.1						
WUAZ	Wupatki	74.38	56	P	P	14 46 18.0	+0.6
	baz=312,SNR=21						
WUAZ	Wupatki	74.38	56	*e*P	P	14 46 18.3	+1.0
	comp=Z,24nm,0.9s						
Y14A	Wickenburg	74.43	58	*e*P	P	14 46 18.5	+1.0
	comp=Z,24nm,0.9s						
ALNE	Al Ain	74.43	288	*i* P	P	14 46 18.0	+0.4
	SNR=14						
GKP	Gorka Klasztor	74.44	331	*e*P	P	14 46 17.6	+0.5
GKP	Gorka Klasztor	74.44	331	*e*P	P	14 46 17.6	+0.5
SMCO	Snowmass	74.47	51	*e*P	P	14 46 18.4	+0.3
	comp=Z,22nm,1.1s						
SMCO				*e*pP	pP	14 46 35.0	-0.4
B35A	Bob, Littlefor	74.55	37	P	P	14 46 17.6	-0.3
	baz=319,SNR=20						
B35A	Bob, Littlefor	74.55	37	*e*P	P	14 46 17.4	-0.5
B35A				*e*pP	pP	14 46 34.9	-0.3
C34A	RKJ Ranch, Bem	74.56	38	P	P	14 46 17.6	-0.3
	baz=318						
LVV	L’vov	74.56	325	*e*P	P	14 46 18.2	+0.3
KIS	Kishinev	74.60	321	*i* P	P	14 46 18.0	-0.1
KIS				XM		14 46 19.0	
	comp=Z,100nm,1.5s						
KIS				*e*pP	sP	14 46 42.0	-0.5
KIS	Kishinev	74.60	321	⇑*i*P	P	14 46 18.0	-0.1
KIS				*e*		14 46 34.0	
KIS				*e*		14 46 42.0	
KIS				pmax	pmax		
	comp=Z,110nm,1.5s						
ISCO	Idaho Springs	74.81	49	P	P	14 46 20.1	+0.2
	baz=314,SNR=24						
ISCO	Idaho Springs	74.81	49	*e*P	P	14 46 20.5	+0.6
	comp=Z,19nm,1.1s						
F32A	Veblen	74.85	40	P	P	14 46 19.6	0.0
	baz=317,SNR=5.6						
STKA	Stephens Creek	74.89	184	P	P	14 46 19.8	0.0
	comp=Z,5.9nm,0.8s,baz=335,slow=9.4,SNR=7.8						
STKA				LR	LR	15 21 03.8	
	comp=Z,52nm,18.6s,baz=242,slow=37						
C35A	Jirik Farms, M	74.93	37	P	P	14 46 19.5	-0.6
	baz=319,SNR=11						
MVCO	Mesa Verde	74.94	53	P	P	14 46 21.3	+0.6
	baz=313,SNR=17						
MVCO	Mesa Verde	74.94	53	*e*P	P	14 46 21.3	+0.6
	comp=Z,25nm,1.0s						
IAS	Iasi	75.03	322	⇓*i*P	P	14 46 21.0	+0.4
X16A	Lo Mia Camp, P	75.07	57	*e*P	P	14 46 22.8	+1.4
	comp=Z,33nm,0.9s						
G32A	Webster	75.12	41	P	P	14 46 20.8	-0.4
	baz=317						
IVI	Ivigtut	75.22	7	*e*P	P	14 46 21.6	+0.1
	comp=Z,78nm,1.1s						
KWP	Kalwaria Pacla	75.25	326	*e*P	P	14 46 23.0	+1.1
KWP	Kalwaria Pacla	75.25	326	*e*P	P	14 46 22.5	+0.6
	comp=Z,1µm,1.1s						
KWP	Kalwaria Pacla	75.25	326	*e*P	P	14 46 22.5	+0.6
LEOM	Leova	75.25	321	⇑*i*P	P	14 46 23.1	+1.2
D35A	Remer	75.37	38	P	P	14 46 22.1	-0.5
	baz=319,SNR=6.5						
C36A	Pine Crest Far	75.39	37	P	P	14 46 22.5	-0.2
	baz=320,SNR=12						
PRAR	RASCA	75.50	323	⇓*i*P	P	14 46 23.9	+0.6
S22A	4UR Ranch, Cre	75.54	52	P	P	14 46 24.4	+0.3
	baz=314,SNR=28						
S22A	4UR Ranch, Cre	75.54	52	*e*P	P	14 46 25.1	+0.9
	comp=Z,18nm,1.0s						
E35A	Pequot Lakes	75.60	38	P	P	14 46 23.6	-0.4
	baz=319						
W18A	Petrified Fore	75.64	55	P	P	14 46 24.8	+0.2
	baz=313,SNR=7.4						
W18A	Petrified Fore	75.64	55	*e*P	P	14 46 25.6	+1.0
	comp=Z,13nm,0.8s						
Q24A	Divide	75.65	50	P	P	14 46 24.1	-0.6
	baz=314						
G33A	Ortonville	75.67	41	P	P	14 46 24.4	+0.1
	baz=318,SNR=8.4						
D36A	Goodland	75.69	37	P	P	14 46 24.1	-0.4
	baz=320						
D36A	Goodland	75.69	37	*e*P	P	14 46 23.9	-0.5
	comp=Z,19nm,0.9s						
D36A				*e*pP	pP	14 46 41.6	-0.2
C37A	Embarrass	75.70	37	P	P	14 46 24.3	-0.2
	baz=320,SNR=11						
H32A	Carlson Farm,	75.71	42	P	P	14 46 24.3	-0.3
	baz=318						
BUR08	Bucovina Ar. S	75.73	323	*e*P	P	14 46 25.3	+0.5
BUR04	Bucovina Ar. S	75.75	323	*e*P	P	14 46 25.2	+0.3
BURAR	Bucovina Array	75.75	323	⇑*i*P	P	14 46 25.7	+0.8
F34A	Alexandria	75.78	39	P	P	14 46 24.7	-0.3
	baz=318,SNR=5.6						
EYMN	Ely	75.83	36	P	P	14 46 25.0	-0.3
	baz=320,SNR=12						
EYMN	Ely	75.83	36	*e*P	P	14 46 24.9	-0.3
EYMN				*e*pP	pP	14 46 41.8	-0.8
BIZ	Bicaz	75.87	322	⇓*i*P	P	14 46 26.5	+1.0
214A	Organ Pipe Nat	75.88	59	P	P	14 46 26.1	+0.3
	baz=312,SNR=8.2						
X18A	Snowflake	75.91	56	*e*P	P	14 46 27.2	+1.1
	comp=Z,22nm,1.0s						
OJC	Ojcow	75.94	328	*e*P	P	14 46 26.6	+0.8
OJC	Ojcow	75.94	328	*e*P	P	14 46 26.3	+0.5
	comp=Z,77nm,1.1s						
OJC	Ojcow	75.94	328	*e*P	P	14 46 26.3	+0.5
OJC				pmax	pmax		
	comp=Z,77nm,1.1s						
TLCR		75.95	320	⇑*i*P	P	14 46 26.5	+0.6
OGNE	Ogallala	75.95	47	P	P	14 46 26.3	+0.2
	baz=316,SNR=8.4						
OGNE	Ogallala	75.95	47	*e*P	P	14 46 26.5	+0.3
OGNE				*e*pP	pP	14 46 44.2	+0.7
TESR	Tescani	75.95	322	⇑*i*P	P	14 46 26.7	+0.8
G34A	Benson	76.02	40	P	P	14 46 26.4	0.0
	baz=318,SNR=5.9						
D37A	Cotton	76.03	37	P	P	14 46 25.8	-0.6
	baz=320						
F35A	Swanville	76.05	39	P	P	14 46 26.2	-0.3
	baz=319						
C38A	Sawbill Land.	76.10	36	P	P	14 46 26.5	-0.4
	baz=321,SNR=23						
E36A	McGregor	76.15	38	P	P	14 46 27.0	-0.1

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      baz=320,SNR=13
UZH   Uzhgorod         76.20 326⇑iP    P       14 46 27.8 +0.5
UZH                              e             14 46 39.6
UZH                              e             14 46 52.2
CFR   Carcaliu         76.27 320⇑iP    P       14 46 28.3 +0.6
PETR  Petresti         76.28 321⇓iP    P       14 46 29.5 +1.7
SDCO  Great Sand Dun   76.30  51  P    P       14 46 28.5 +0.1
      baz=314,SNR=18
SDCO  Great Sand Dun   76.30  51 eP    P       14 46 29.1 +0.7
      comp=Z,10nm,1.1s
CRVS  Cervenica-Dubn   76.33 326 eP    P       14 46 28.9 +0.8
CRVS                              pmax pmax
      comp=Z,17nm,1.2s
CRVS  Cervenica-Dubn   76.33 326 eP    P       14 46 28.9 +0.8
NIE   Niedzica         76.39 327 eP    P       14 46 29.5 +1.1
NIE   Niedzica         76.39 327 eP    P       14 46 29.5 +1.1
MCD   Coleburn Disti   76.39 344⇑eP    P       14 46 28.5 +0.3
VRI   Vrincioaia       76.40 321⇑iP    P       14 46 29.6 +1.1
BMR   Baia Mare        76.44 324⇑iP    P       14 46 29.8 +1.1
PLOR  Plostina         76.45 321⇑iP    P       14 46 29.7 +0.9
TRPA  Tarpa            76.49 325⇑iP    P       14 46 30.3 +1.3
TRPA  Tarpa            76.49 325⇑eP    P       14 46 30.2 +1.3
ARCR  ARCALIA          76.53 323⇑iP    P       14 46 30.9 +1.7
F36A  Milaca           76.53  38  P    P       14 46 28.7 -0.5
      baz=320,SNR=5.4
F36A  Milaca           76.53  38 eP    P       14 46 28.9 -0.3
F36A                             epP   pP      14 46 45.7 -0.9
ILGA  Ilgaz            76.53 314 eP    P       14 46 31.0 +1.4
      comp=Z,77nm,1.3s
G35A  Watkins          76.57  39  P    P       14 46 29.8 +0.3
      baz=319
G35A  Watkins          76.57  39 eP    P       14 46 29.5  0.0
G35A                             epP   pP      14 46 46.9  0.0
ECSD  EROS Data Cent   76.67  42  P    P       14 46 30.1  0.0
      baz=318,SNR=20
ECSD  EROS Data Cent   76.67  42 eP    P       14 46 30.0 -0.1
ECSD                             epP   pP      14 46 47.4 -0.1
TIRR  Tirgusor         76.68 320⇑iP    P       14 46 30.7 +0.6
TIRR  Tirgusor         76.68 320 eP    P       14 46 30.3 +0.2
      comp=Z,22nm,1.1s
TIRR  Tirgusor         76.68 320 eP    P       14 46 30.3 +0.2
TIRR                              pmax pmax
      comp=Z,23nm,1.1s
MZR   Muzera           76.69 289 i P   P       14 46 30.6 +0.1
      SNR=5.4
HARR  Harsova          76.73 320⇓iP    P       14 46 31.0 +0.6
KSP   Ksiaz            76.76 330 eP    P       14 46 31.2 +0.8
KSP   Ksiaz            76.76 330 eP    P       14 46 31.2 +0.8
TLB   Topalu           76.76 320⇑iP    P       14 46 31.5 +1.0
H35A  Sunnyside Ranc   76.80  40  P    P       14 46 31.0 +0.2
      baz=319,SNR=18
E38A  The Farm, Brul   76.84  37  P    P       14 46 30.7 -0.3
      baz=321,SNR=12
E38A  The Farm, Brul   76.84  37 eP    P       14 46 30.3 -0.6
E38A                             epP   pP      14 46 48.0 -0.4
C40A  Isle Royale Na   76.85  35  P    P       14 46 30.6 -0.4
      baz=322
OKC   Ostrava-Krasne   76.89 329 eP    P       14 46 31.7 +0.5
OKC                               AMS  AMS     15 21 40.0
      comp=Z,200nm,19.7s
OKC   Ostrava-Krasne   76.89 329 eP    P       14 46 31.7 +0.5
OKC                               MLR  MLR
      comp=Z,200nm,19.7s
G36A  St. Michael      76.90  39  P    P       14 46 31.6 +0.3
      baz=320
TUC   Tucson           76.90  58  P    P       14 46 32.0 +0.4
      baz=313
TUC   Tucson           76.90  58 eP    P       14 46 32.5 +0.8
      comp=Z,13nm,0.9s
TUC   Tucson           76.90  58 eP    P       14 46 32.5 +0.8
TUC                               pmax pmax
      comp=Z,13nm,0.9s
LANS  Liptovska Anna   76.93 327 eP    P       14 46 33.0 +1.5
LANS  Liptovska Anna   76.93 327 eP    P       14 46 33.0 +1.5
KSCO  Kaye Shedlock’   77.01  48  P    P       14 46 32.3 +0.1
      baz=316
KSCO  Kaye Shedlock’   77.01  48 eP    P       14 46 32.3 +0.1
      comp=Z,24nm,1.0s
PGOR  Pogoanele        77.01 321⇑iP    P       14 46 33.4 +1.5
F37A  Hinrichs Farm,   77.04  38  P    P       14 46 31.9 -0.2
      baz=320
MLR   Muntele Rosu     77.05 322  P    P       14 46 32.9 +0.6
      comp=Z,3.3nm,0.7s,baz=63,slow=2.3,SNR=24
MLR                               LR   LR      15 23 12.8
      comp=Z,40nm,22.0s,baz=42,slow=38
MLR   Muntele Rosu     77.05 322⇑iP    P       14 46 33.2 +0.9
MLR   Muntele Rosu     77.05 322 eP    P       14 46 32.6 +0.3
      comp=Z,43nm,1.3s
MLR   Muntele Rosu     77.05 322 eP    P       14 46 32.6 +0.3
MLR                               pmax pmax
      comp=Z,43nm,1.3s
ISR   Istrita          77.06 321⇓iP    P       14 46 33.7 +1.4
UPC   Upice            77.14 330 eP    P       14 46 33.6 +1.0
UPC   Upice            77.14 330 eP    P       14 46 33.6 +1.0
CJR   Cluj-Napoca      77.15 324⇓iP    P       14 46 34.0 +1.2
DPC   Dobruska-Polom   77.15 330 eP    P       14 46 34.1 +1.4
DPC                              epP   pP      14 46 50.1  0.0
DPC   Dobruska-Polom   77.15 330 eP    P       14 46 34.1 +1.4
DPC                              e             14 46 50.1
MORC  Moravsky Berou   77.17 329⇑iP    P       14 46 33.7 +0.9
MORC  Moravsky Berou   77.17 329 eP    P       14 46 33.1 +0.3
      comp=Z,35nm,1.0s
MORC  Moravsky Berou   77.17 329 eP    P       14 46 33.1 +0.3
MORC                              pmax pmax
      comp=Z,35nm,1.0s
MORC  Moravsky Berou   77.17 329 eP    P       14 46 33.5 +0.7
F38A  Pierce - Schro   77.19  38  P    P       14 46 33.2 +0.2
      baz=320,SNR=19
KRLC  Kraliky          77.21 329 eP    P       14 46 33.8 +0.8
KRLC  Kraliky          77.21 329 eP    P       14 46 33.8 +0.8
ICOR  Ion Corvin       77.23 320⇑iP    P       14 46 34.4 +1.2
H36A  Jessenland, He   77.32  40  P    P       14 46 34.1 +0.4
      baz=320,SNR=9.5
SPMN  Marine on St.    77.34  39  P    P       14 46 34.0 +0.2
      baz=320,SNR=5.6
SPMN  Marine on St.    77.34  39 eP    P       14 46 33.5 -0.3
SPMN                             epP   pP      14 46 51.2 -0.1
T25A  Trinidad         77.34  51  P    P       14 46 33.9 -0.3
      baz=315,SNR=17
T25A  Trinidad         77.34  51 eP    P       14 46 34.8 +0.6
      comp=Z,27nm,1.1s
T25A                             epP   pP      14 46 52.5 +0.8
LTVH  Lˆ'tavˆ'rtes,    77.34 325⇑eP    P       14 46 36.4 +2.7
E39A  Mellen           77.45  37  P    P       14 46 34.1 -0.3
      baz=321,SNR=6.4
DRGR                   77.47 324⇓iP    P       14 46 35.3 +0.7
VOIR                   77.49 322⇓iP    P       14 46 36.0 +1.3
BR131 Keskin Array S   77.53 313 eP    P       14 46 35.4 +0.2
BRTR  Keskin Array B   77.53 313  P    P       14 46 35.9 +0.7
      comp=Z,8.1nm,0.7s,baz=78,slow=3.7,SNR=29
BRTR                              LR   LR      15 26 53.4
      comp=Z,46nm,19.2s,baz=54,slow=40
BRTR  Keskin Array B   77.53 313  P    P       14 46 35.9 +0.7
BRTR                              pmax pmax
      comp=Z,7.0nm,0.7s
CLL   Collm            77.53 332⇑iP    P       14 46 34.9 +0.2
      comp=Z,62nm,0.9s
CLL                              e             14 46 41.0
CLL                              epP   pP      14 46 50.0 -2.2
CLL                              esP   sP      14 46 57.0 -2.2
CLL                               Lm   MLR     15 23 00.0
      comp=Z,100nm,21.9s
CLL   Collm            77.53 332 eP    P       14 46 34.8  0.0
      comp=Z,61nm,0.9s
CLL   Collm            77.53 332⇑iP    P       14 46 34.9 +0.2
CLL                              e*PP  pP      14 46 50.0 -2.2
CLL                               pmax pmax
      comp=Z,62nm,0.9s
BRG   Berggiesshubel   77.57 331 i P   P       14 46 35.1 +0.1
      comp=Z,18nm,0.9s
BRG                              e             14 46 59.3
      comp=Z,19nm,1.4s
BRG   Berggiesshubel   77.57 331 i P   P       14 46 35.1 +0.1
BRG                              e             14 46 59.3
BRG                               pmax pmax
      comp=Z,19nm,0.9s
BGNE  Belgrade         77.63  44  P    P       14 46 35.4 -0.1
      baz=318
BGNE  Belgrade         77.63  44 eP    P       14 46 35.4 -0.1
      comp=Z,62nm,0.9s
BGNE                             epP   pP      14 46 53.7 +0.8
INVG  Invergeldie, C   77.63 344⇑eP    P       14 46 35.1 -0.1
INVG                              IAmb IAmb    14 46 36.2
      comp=Z,23nm,0.8s
PVCC  Panska Ves       77.64 331 eP    P       14 46 36.4 +1.0
PVCC                             ex    x       14 46 39.5
PVCC                              AMS  AMS     15 23 30.0
      comp=Z,200nm,19.6s
PVCC  Panska Ves       77.64 331 eP    P       14 46 36.4 +1.0
PVCC                             e             14 46 39.5
PVCC                              MLR  MLR
      comp=Z,200nm,19.6s
F39A  Loretta          77.65  37  P    P       14 46 35.4 -0.1
      baz=321,SNR=7.9
LAZ   Ladron           77.68  54 eP    P       14 46 37.5 +1.3
E40A  Wakefield        77.68  36  P    P       14 46 36.1 +0.4
      baz=322,SNR=24
TASM  ASL Pad, Albuq   77.70  53  P    P       14 46 37.5 +1.2
      baz=314,SNR=18
ANMO  Albuquerque      77.70  53  P    P       14 46 37.0 +0.7
      baz=314
ANMO  Albuquerque      77.70  53 eP    P       14 46 37.3 +1.0
      comp=Z,12nm,0.9s
ANMO  Albuquerque      77.70  53c iP   P       14 46 37.5 +1.3
ANMO                              pmax pmax
      comp=Z,21nm,1.7s
I36A  Fitzsimmons Fa   77.70  40  P    P       14 46 36.0 +0.2
      baz=320
TASL  Snake Pit, Alb   77.70  53  P    P       14 46 37.2 +1.0
      baz=314,SNR=18
VYHS  Vyhne            77.70 327 eP    P       14 46 36.5 +0.7
VYHS                              pmax pmax
      comp=Z,10.0nm,0.8s
VYHS  Vyhne            77.70 327 eP    P       14 46 36.5 +0.7
ARR   Arges            77.73 322⇓iP    P       14 46 37.7 +1.6
PSZ   Piszkesteto      77.75 326⇑iP    P       14 46 37.4 +1.3
PSZ   Piszkesteto      77.75 326⇑eP    P       14 46 37.4 +1.3
PSZ   Piszkesteto      77.75 326 eP    P       14 46 36.6 +0.5
      comp=Z,29nm,0.9s
PSZ   Piszkesteto      77.75 326 eP    P       14 46 36.6 +0.5
PSZ                               pmax pmax
      comp=Z,29nm,0.9s
D41A  Chassel          77.77  35  P    P       14 46 36.3 +0.2
      baz=322,SNR=5.8
D41A  Chassel          77.77  35 eP    P       14 46 36.0 -0.1
D41A                             epP   pP      14 46 53.4 -0.2
H37A  Dierke Farm, C   77.78  39  P    P       14 46 36.4 +0.1
      baz=320
ESY   Stoneypath       77.80 343⇑eP    P       14 46 36.6 +0.4
G38A  Ridgeland        77.81  38  P    P       14 46 36.0 -0.4
      baz=321
JAVC  Velka Javorina   77.86 328 eP    P       14 46 38.5 +1.8
ANTO  Ankara           77.87 314⇑iP    P       14 46 38.3 +1.3
ANTO  Ankara           77.87 314 eP    P       14 46 37.4 +0.5
      comp=Z,44nm,0.8s
ANTO                             epP   pP      14 46 54.5 +0.1
ANTO  Ankara           77.87 314 eP    P       14 46 37.4 +0.5
ANTO                             e*PP  pP      14 46 54.5 +0.1
ANTO                              pmax pmax
      comp=Z,44nm,0.8s
BR231 Keskin MP Arra   77.90 314 eP    P       14 46 38.0 +0.8
VRAC  Vranov           77.91 329⇑iP    P       14 46 38.1 +1.2
VRAC  Vranov           77.91 329 eP    P       14 46 37.7 +0.8
EAB   Aberfoyle        77.91 344⇑eP    P       14 46 36.9 +0.1
LENM  Lemitar          77.94  54 eP    P       14 46 38.6 +1.1
GOLR                   77.99 322⇓iP    P       14 46 39.2 +1.8
I37A  Lemond, Waseca   77.99  40  P    P       14 46 37.7 +0.2
      baz=320,SNR=11
I37A  Lemond, Waseca   77.99  40 eP    P       14 46 37.7 +0.2
I37A                             epP   pP      14 46 55.3 +0.4
F40A  Park Falls       78.00  37  P    P       14 46 37.0 -0.5
      baz=322,SNR=6.6
H38A  Maiden Rock      78.00  39  P    P       14 46 36.7 -0.8
      baz=320
G39A  Holcombe         78.03  38  P    P       14 46 37.0 -0.6
      baz=321
PRA   Prague           78.07 331 eP    P       14 46 39.0 +1.3
PRA   Prague           78.07 331 eP    P       14 46 39.0 +1.3
E41A  Kenton           78.07  36  P    P       14 46 37.5 -0.3
      baz=322,SNR=17
GOPC  GO Pecny, Ondr   78.07 330 eP    P       14 46 38.6 +0.8
GOPC                              AMS  AMS     15 22 00.0
      comp=Z,200nm,21.2s
GOPC  GO Pecny, Ondr   78.07 330 eP    P       14 46 38.6 +0.8
GOPC                              MLR  MLR
      comp=Z,200nm,21.2s
J36A  Seneca 1, Swea   78.07  41  P    P       14 46 37.8 -0.1
      baz=319
J36A  Seneca 1, Swea   78.07  41 eP    P       14 46 37.7 -0.1
J36A                             epP   pP      14 46 55.4  0.0
DEV   Deva             78.09 323⇓iP    P       14 46 39.3 +1.3
PRU   Pruhonice        78.10 331 eP    P       14 46 38.6 +0.7
PRU                               AMS  AMS     15 21 50.0
      comp=Z,200nm,23.0s
PRU   Pruhonice        78.10 331 eP    P       14 46 38.6 +0.7
PRU                               MLR  MLR
      comp=Z,200nm,23.0s
BNM   Barren Site      78.16  54 eP    P       14 46 39.5 +0.7
KRUC  Moravsky         78.18 329 eP    P       14 46 39.2 +0.8
SCHQ  Schefferville    78.26  19  P    P       14 46 39.2 +0.5
      comp=Z,21nm,0.7s,baz=9.8,slow=6.7,SNR=5.3
SCHQ                              LR   LR      15 22 52.3
      comp=Z,136nm,21.5s,baz=315,slow=37
COWI  Conover          78.28  36 eP    P       14 46 38.6 -0.5
COWI                             epP   pP      14 46 56.0 -0.5
PGBU  Glenifferbraes   78.29 344⇑eP    P       14 46 39.4 +0.5
PGBU                              IAmb IAmb    14 46 40.4
      comp=Z,74nm,1.0s
MODS  Modra-Piesok     78.41 328 eP    P       14 46 40.9 +1.2
MODS                              pmax pmax
      comp=Z,30nm,1.0s
MODS  Modra-Piesok     78.41 328 eP    P       14 46 40.9 +1.2
BUD   Budapest         78.44 327⇑eP    P       14 46 41.2 +1.3
H39A  Augusta          78.45  38  P    P       14 46 39.6 -0.4
      baz=321
J37A  Redenius Farm,   78.46  40  P    P       14 46 39.7 -0.3
      baz=320,SNR=11
EKA   Eskdalemuir Ar   78.46 343  P    P       14 46 40.1 +0.3
      comp=Z,19nm,0.5s,baz=27,slow=5.1,SNR=106
EKA                               LR   LR      15 26 26.5
      comp=Z,48nm,20.6s,baz=50,slow=40
I38A  Scanlan Farm,    78.47  39  P    P       14 46 39.7 -0.4
      baz=320
319A  Douglas          78.47  58 eP    P       14 46 41.4 +0.9
      comp=Z,59nm,0.8s
G40A  Rib Lake         78.47  37  P    P       14 46 39.8 -0.3
      baz=322,SNR=8.0
G40A  Rib Lake         78.47  37 eP    P       14 46 39.6 -0.5
G40A                             epP   pP      14 46 57.1 -0.4
ESK   Eskdalemuir      78.49 343 eP    P       14 46 40.2 +0.3
      comp=Z,36nm,0.7s
ESK   Eskdalemuir      78.49 343⇑eP    P       14 46 40.4 +0.5
ESK                               IAmb IAmb    14 46 41.2
      comp=Z,35nm,0.7s
ESK   Eskdalemuir      78.49 343 eP    P       14 46 40.2 +0.3
ESK                               pmax pmax
      comp=Z,36nm,0.7s
E42A  Champion         78.54  35  P    P       14 46 39.8 -0.7
      baz=323
K36A  Gilmore City     78.54  41  P    P       14 46 40.1 -0.5
      baz=320,SNR=8.0
F41A  Three Lakes      78.58  36  P    P       14 46 40.7  0.0
      baz=322,SNR=5.6
F41A  Three Lakes      78.58  36 eP    P       14 46 40.4 -0.3
F41A                             epP   pP      14 46 57.6 -0.5
121A  Cookes Peak, D   78.59  56  P    P       14 46 41.6 +0.5
      baz=314,SNR=25
ECK   Cauldkaine Hil   78.60 343⇑eP    P       14 46 41.0 +0.4
NKC   Novy Kostel      78.63 332 eP    P       14 46 41.2 +0.3
NKC   Novy Kostel      78.63 332 eP    P       14 46 41.2 +0.3
EDMD  Edmundbyers      78.66 342⇑eP    P       14 46 41.2 +0.3
EDMD                              IAmb IAmb    14 46 41.9
      comp=Z,16nm,0.7s
CBKS  Cedar Bluff      78.71  47  P    P       14 46 41.2 -0.3
      baz=317
SZH   Strazhica        78.75 320 i P   P       14 46 41.0 -0.7
K37A  Belmond          78.83  41  P    P       14 46 41.9 -0.2
      baz=320,SNR=29
L36A  Harm Buss Farm   78.84  42  P    P       14 46 41.9 -0.3
      baz=319
CSKK  Csˆ‡kako         78.85 327⇑eP    P       14 46 43.0 +0.9
BZS   Buzias           78.86 324⇑iP    P       14 46 42.5 +0.3
H40A  Chili            78.89  38  P    P       14 46 42.1 -0.3
      baz=322
WTSB  Winterswijk      78.95 336 i P   P       14 46 42.8 +0.3
      comp=Z,63nm,0.7s
J38A  Wedel Dairy, R   78.96  40  P    P       14 46 42.8  0.0
      baz=320
E43A  Lone Tree Farm   78.97  35  P    P       14 46 42.5 -0.2
      baz=323,SNR=7.7
E43A  Lone Tree Farm   78.97  35 eP    P       14 46 42.3 -0.5
E43A                             epP   pP      14 46 59.7 -0.6
F42A  Maple Grove Fa   78.98  36  P    P       14 46 42.4 -0.4
      baz=323
I39A  Houston          78.98  39  P    P       14 46 42.5 -0.4
      baz=321,SNR=5.9
I39A  Houston          78.98  39 eP    P       14 46 42.3 -0.7
I39A                             epP   pP      14 46 59.7 -0.7
BBO1  Bothel           79.03 343⇑eP    P       14 46 43.7 +0.8
HSIG                   79.04  61 eP    P       14 46 43.8 +0.3
      comp=Z,14nm,1.2s
JMB   Yambol           79.06 319 i P   P       14 46 44.0 +0.7
HERR  Herculane        79.09 323⇑iP    P       14 46 43.7 +0.2
KESW  Keswick, Cumbr   79.14 343 eP    P       14 46 43.4 -0.1
KESW                              IAmb IAmb    14 46 45.3
      comp=Z,61nm,0.9s
KHC   Kasperske Hory   79.16 331 eP    P       14 46 44.7 +0.9
KHC                              epP   pP      14 47 01.2 -0.1
KHC                               AMS  AMS     15 22 40.0
      comp=Z,200nm,21.0s
KHC   Kasperske Hory   79.16 331 eP    P       14 46 44.4 +0.6
      comp=Z,15nm,0.7s
KHC   Kasperske Hory   79.16 331 eP    P       14 46 44.4 +0.6
KHC                               pmax pmax
      comp=Z,15nm,0.7s
E44A  Grand Marais A   79.21  34  P    P       14 46 43.9 -0.2
      baz=324
E44A  Grand Marais A   79.21  34 eP    P       14 46 43.7 -0.4
E44A                             epP   pP      14 47 01.2 -0.3
GAL1  Galloway         79.22 344⇑eP    P       14 46 44.4 +0.4
GAL1                              IAmb IAmb    14 46 44.8
      comp=Z,16nm,0.6s
H41A  Junction City    79.23  37  P    P       14 46 43.9 -0.4
      baz=322
H41A  Junction City    79.23  37 eP    P       14 46 43.9 -0.4
H41A                             epP   pP      14 47 01.4 -0.3
G42A  Mountain         79.27  36  P    P       14 46 44.2 -0.2
      baz=323
L37A  Phoenix Point,   79.27  41  P    P       14 46 44.2 -0.3
      baz=320,SNR=9.1
M36A  Felix, Anita     79.27  42  P    P       14 46 44.3 -0.2
      baz=319,SNR=5.6
J39A  Decorah          79.30  39  P    P       14 46 43.9 -0.7
      baz=321,SNR=5.9
CLGH  Cloghs, Cushen   79.30 344 eP    P       14 46 44.8 +0.3
CLGH                              IAmb IAmb    14 46 45.8
      comp=Z,50nm,0.9s
CONA  Conrad Observa   79.32 329 eP    P       14 46 45.9 +1.1
      comp=Z,10nm,0.6s,SNR=7.8
F43A  Flat Rock, Esc   79.33  35  P    P       14 46 43.9 -0.8
      baz=323
GEC2  GERESS Array S   79.35 330 eP    P       14 46 44.9 -0.1
      comp=Z,9.5nm,0.7s
GEC2  GERESS Array S   79.35 330 eP    P       14 46 44.9 -0.1
GEC2                              pmax pmax
      comp=Z,10.0nm,0.7s
GERES GERESS Array B   79.35 330  P    P       14 46 45.0  0.0
      comp=Z,8.3nm,0.7s,baz=35,slow=5.5,SNR=68
GERES                             LR   LR      15 25 16.6
      comp=Z,129nm,20.2s,baz=62,slow=38
GEA0  GERESS Array S   79.36 330 eP    P       14 46 44.9 -0.1
I40A  Norwalk          79.36  38  P    P       14 46 44.5 -0.5
      baz=322
HPK   Haverah Park     79.39 341⇑eP    P       14 46 45.6 +0.7
HPK                               IAmb IAmb    14 46 46.5
      comp=Z,93nm,0.7s
MDVR  Moldovita        79.48 323⇑iP    P       14 46 45.5 -0.2
GRFO  Grafenberg       79.51 332 eP    P       14 46 46.3 +0.6
      comp=Z,47nm,0.9s
GRFO  Grafenberg       79.51 332 eP    P       14 46 46.3 +0.6
GRFO                              pmax pmax
      comp=Z,47nm,0.9s
F44A  Big Bay de Noc   79.53  34  P    P       14 46 45.4 -0.5
      baz=324
I41A  Arkdale          79.57  38  P    P       14 46 45.7 -0.4
      baz=322
I41A  Arkdale          79.57  38 eP    P       14 46 45.9 -0.2
I41A                             epP   pP      14 47 03.0 -0.6
G43A  Wallace          79.57  36  P    P       14 46 45.7 -0.4
      baz=323
MORH  Mˆ‡rˆ¡gy, Hung   79.62 326⇑eP    P       14 46 46.6 +0.3
L38A  Oak Wood Farm,   79.63  41  P    P       14 46 46.1 -0.4
      baz=320,SNR=5.0
MATQ  Matagami         79.67  27  P    P       14 46 45.3 -1.2
      baz=329
M37A  Trindle Farm,    79.67  42  P    P       14 46 46.5 -0.2
      baz=320
N36A  Muff Farm, Cla   79.67  43  P    P       14 46 46.2 -0.5
      baz=319
SCIA  State Center     79.69  41  P    P       14 46 46.5 -0.3
      baz=320
SCIA  State Center     79.69  41 eP    P       14 46 46.7 -0.1
SCIA                             epP   pP      14 47 04.7 +0.4
J40A  Soldiers Grove   79.69  39  P    P       14 46 46.1 -0.7
      baz=322
MPEP  Malo Peshtene    79.70 321 i P   P       14 46 47.7 +0.9
K39A  Oelwein          79.70  40  P    P       14 46 46.3 -0.6
      baz=321,SNR=7.2
E45A  Wooded Hills,    79.72  34  P    P       14 46 46.5 -0.4
      baz=324
H42A  Shiocton         79.80  37  P    P       14 46 46.8 -0.6
      baz=323
LBWR  Ladybower, Pea   79.93 341⇑eP    P       14 46 48.6 +0.8
LBWR                              IAmb IAmb    14 46 49.4
      comp=Z,151nm,0.9s
WACR  West Acre        79.97 340⇑eP    P       14 46 48.8 +0.7
WACR                              IAmb IAmb    14 46 50.0
      comp=Z,126nm,0.9s
MOA   Molln            79.98 330 eP    P       14 46 48.6 +0.3
      comp=Z,7.9nm,0.6s,SNR=6.0
ARSA  Arzberg          80.01 328 eP    P       14 46 49.2 +0.7
      comp=Z,4.4nm,0.6s
J41A  Loganville       80.05  38  P    P       14 46 48.2 -0.5
      baz=322
K40A  Colesburg        80.06  39  P    P       14 46 48.3 -0.5
      baz=321,SNR=6.2
GMM   Mts of Mourne    80.07 344⇑eP    P       14 46 48.7 +0.2
M38A  Pleasantville    80.08  41  P    P       14 46 48.6 -0.3
      baz=320,SNR=7.9
N37A  Lee Faris, Mou   80.09  42  P    P       14 46 48.5 -0.5
      baz=320
N37A  Lee Faris, Mou   80.09  42 eP    P       14 46 48.9  0.0
N37A                             epP   pP      14 47 06.7 +0.3
L39A  Vinton           80.10  40  P    P       14 46 48.6 -0.4
      baz=321,SNR=8.4
I42A  Draeger Farm,    80.12  37  P    P       14 46 48.6 -0.5
      baz=322
PGB   Panagyurishte    80.13 321 i P   P       14 46 50.0 +0.8
F45A  CMU Biological   80.13  34  P    P       14 46 48.6 -0.5
      baz=324
KSU1  Kansas State U   80.13  45  P    P       14 46 48.8 -0.5
      baz=319
KSU1  Kansas State U   80.13  45 eP    P       14 46 48.2 -1.1
      comp=Z,18nm,0.6s
KSU1                             epP   pP      14 47 06.1 -0.7
H43A  Windswept, Lux   80.16  36  P    P       14 46 48.9 -0.4
      baz=323
KDZ   Kurdzhali        80.24 319 i P   P       14 46 51.0 +1.2
HGN   Heimansgroeve    80.27 336 i P   P       14 46 49.9 +0.2
      comp=Z,44nm,0.8s
JFWS  Jewell Farm      80.30  39  P    P       14 46 49.5 -0.6
      baz=322
JFWS  Jewell Farm      80.30  39 eP    P       14 46 49.6 -0.4
JFWS                             epP   pP      14 47 07.0 -0.6
JFWS  Jewell Farm      80.30  39 eP    P       14 46 49.6 -0.4
JFWS                             e*PP  pP      14 47 07.0 -0.6
BEBN  Eben Emael       80.31 336 ⇑P    P       14 46 50.1 +0.2
      comp=Z,7.0nm,0.8s
F46A  Macinaw City C   80.37  34  P    P       14 46 49.9 -0.5
      baz=325
MEM   Membach          80.38 336 ⇑P    P       14 46 50.4 +0.1
      comp=Z,22nm,1.0s
CWF   Charnwood Fore   80.44 341⇑eP    P       14 46 50.9 +0.3
CWF                               IAmb IAmb    14 46 53.7
      comp=Z,22nm,1.0s
J42A  Columbus         80.48  38  P    P       14 46 50.7 -0.4
      baz=322
AMTX  Amarillo         80.50  51  P    P       14 46 51.2 -0.2
      baz=317
AMTX  Amarillo         80.50  51 eP    P       14 46 51.6 +0.2
      comp=Z,12nm,0.8s
K41A  Shullsburg       80.51  39  P    P       14 46 50.7 -0.5
      baz=322
L40A  Anamosa          80.51  40  P    P       14 46 50.8 -0.5
      baz=321
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L40A	Anamosa	80.51	40	eP	P	14 46 50.4	-0.8
L40A				epP	pP	14 47 08.0	-0.7
ALN	Alexandroupoli	80.52	318	eP	P	14 46 51.6	+0.3
	comp=Z,19nm,0.9s						
ALN	Alexandroupoli	80.52	318	P	P	14 46 51.3	+0.1
M39A	Webster	80.52	41	P	P	14 46 51.0	-0.2
	baz=321,SNR=18						
MSTX	Muleshoe	80.53	52	P	P	14 46 51.8	+0.1
	baz=316,SNR=7.5						
MSTX	Muleshoe	80.53	52	eP	P	14 46 51.6	0.0
	comp=Z,14nm,1.0s						
N38A	Joes South For	80.54	42	P	P	14 46 50.9	-0.5
	baz=320,SNR=5.6						
VTS	Vitosha	80.54	321	⇑iP	P	14 46 52.5	+0.9
VTS	Vitosha	80.54	321	eP	P	14 46 52.1	+0.6
	comp=Z,46nm,0.8s						
VTS	Vitosha	80.54	321	i P	P	14 46 52.4	+0.9
VTS	Vitosha	80.54	321	P	P	14 46 52.4	+0.9
WPM1	Penmaenmawr	80.55	342	⇑eP	P	14 46 51.8	+0.5
O37A	Wolven Farm, M	80.57	43	P	P	14 46 51.4	-0.2
	baz=320						
RDO	Rodhopi	80.57	319	P	P	14 46 52.5	+1.0
ISP	Isparta	80.58	314	⇓iP	P	14 46 52.0	+0.2
ISP	Isparta	80.58	314	eP	P	14 46 51.5	-0.3
	comp=Z,11nm,0.7s						
ISP	Isparta	80.58	314	ceP	P	14 46 51.6	-0.2
ISP				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CHGQ	Chibougamau	80.59	25	P	P	14 46 51.0	-0.5
	baz=331						
MNTX	Cornudas Mount	80.62	55	P	P	14 46 53.0	+1.0
	baz=315						
MNTX	Cornudas Mount	80.62	55	eP	P	14 46 53.0	+1.0
	comp=Z,33nm,0.8s						
GROS	Grobnik	80.67	328	i P	P	14 46 52.3	+0.3
SOKA	Soboth	80.67	328	eP	P	14 46 52.5	+0.4
	comp=Z,20nm,0.7s,SNR=5.2						
PERS	Pernice	80.67	328	i P	P	14 46 52.5	+0.4
YLL	Llanberis	80.72	343	⇑eP	P	14 46 52.6	+0.5
FOEL	Foel Wylfa	80.74	342	⇑eP	P	14 46 53.1	+0.9
FOEL				IAmb	IAmb	14 46 53.9	
	comp=Z,106nm,0.7s						
J43A	Natural Harves	80.75	37	P	P	14 46 52.0	-0.5
	baz=323						
DIVS	Divibare	80.77	324	eP	P	14 46 52.6	-0.1
	comp=Z,20nm,0.9s						
K42A	Prairie Point,	80.81	38	P	P	14 46 51.9	-0.9
	baz=322						
N39A	Derby Farms, D	80.83	41	P	P	14 46 52.8	-0.1
	baz=321,SNR=7.4						
N39A	Derby Farms, D	80.83	41	eP	P	14 46 52.8	-0.1
N39A				epP	pP	14 47 10.4	-0.1
L41A	Preston	80.84	39	P	P	14 46 52.2	-0.8
	baz=322						
LLW	Llanuwychllyn	80.88	342	⇑eP	P	14 46 53.7	+0.8
M40A	Post Highland	80.89	40	P	P	14 46 52.8	-0.5
	baz=321,SNR=10						
P37A	Lathrop	80.91	43	P	P	14 46 53.3	-0.1
	baz=320,SNR=9.4						
O38A	Galt	80.94	42	P	P	14 46 53.5	-0.1
	baz=320						
RAR	Rarotonga	80.94	130	LR	LR	15 13 28.6	
	comp=Z,78nm,21.8s,baz=288,slow=29						
KBA	Koelnbreinsper	80.97	330	eP	P	14 46 55.0	+1.2
	comp=Z,13nm,0.4s,SNR=12						
SNF	Seneffe	80.98	337	⇑P	P	14 46 53.5	0.0
STU	Stuttgart	80.98	333	eP	P	14 46 53.2	-0.4
	comp=Z,43nm,0.8s						
STU	Stuttgart	80.98	333	eP	P	14 46 53.2	-0.4
STU				pmax	pmax		
	comp=Z,43nm,0.8s						
OBKA	Obir	81.00	329	eP	P	14 46 54.2	+0.3
	comp=Z,11nm,0.6s						
HLM1	Long Mynd	81.01	342	⇑eP	P	14 46 54.3	+0.6
HLM1				IAmb	IAmb	14 46 55.0	
	comp=Z,32nm,1.2s						
MMB	Musomiste	81.08	320	i P	P	14 46 55.0	+0.7
DSB	Dublin	81.09	344	eP	P	14 46 54.5	+0.4
	comp=Z,39nm,0.9s						
MANT	Manisa	81.10	315	eP	P	14 46 54.6	-0.1
	comp=Z,86nm,0.9s						
GCIS	Gornji Cirnik	81.11	328	i P	P	14 46 54.5	+0.1
ASF	Jabal al Asfar	81.13	306	P	P	14 46 55.8	+1.0
	comp=Z,10nm,0.7s,baz=0.0,slow=3.0,SNR=16						
CSS	Mathiatis	81.17	310	eP	P	14 46 55.0	+0.1
	comp=Z,26nm,0.7s						
CSS	Mathiatis	81.17	310	P	P	14 46 55.2	+0.4
KKB	Krupnik	81.17	321	i P	P	14 46 55.5	+0.8
WLF	Walferdange	81.17	335	⇑P	P	14 46 56.0	+1.5
WLF	Walferdange	81.17	335	eP	P	14 46 54.6	0.0
	comp=Z,14nm,0.8s						
WLF	Walferdange	81.17	335	eP	P	14 46 54.6	0.0
WLF				pmax	pmax		
	comp=Z,14nm,0.8s						
NVR	Nevrokopi	81.21	320	P	P	14 46 55.7	+0.7
MYKA	Terra Mystica	81.24	329	i P	P	14 46 55.0	-0.1
	comp=Z,7.7nm,0.6s						
DOU	Dourbes	81.25	336	⇑P	P	14 46 54.9	-0.1
	comp=Z,9.7nm,1.1s						
N40A	Mertquake, Sal	81.26	41	P	P	14 46 55.3	+0.1
	baz=321,SNR=8.4						
ELSH	Elham, Standar	81.28	339	⇑eP	P	14 46 55.4	+0.3
ELSH				IAmb	IAmb	14 46 56.3	
	comp=Z,171nm,0.9s						
L42A	Oliver, Polo	81.28	39	P	P	14 46 54.7	-0.6
	baz=322						
L42A	Oliver, Polo	81.28	39	eP	P	14 46 54.4	-0.9
L42A				epP	pP	14 47 12.0	-0.8
O39A	Kirksville	81.29	42	P	P	14 46 55.0	-0.4
	baz=321						
P38A	Dawn	81.29	43	P	P	14 46 55.3	-0.1
	baz=320,SNR=8.2						
P38A	Dawn	81.29	43	eP	P	14 46 55.3	-0.1
P38A				epP	pP	14 47 13.1	+0.2
BELQ	Belleterre	81.32	29	P	P	14 46 54.8	-0.6
	baz=328						
K43A	Burlington	81.33	38	P	P	14 46 55.1	-0.5
	baz=323						
K43A	Burlington	81.33	38	eP	P	14 46 55.0	-0.5
K43A				epP	pP	14 47 12.7	-0.4
M41A	Milan	81.37	40	P	P	14 46 55.3	-0.5
	baz=322,SNR=7.1						
THAS	Thassos island	81.38	319	P	P	14 46 55.9	+0.1
WATA	Walderalm	81.39	331	i PcP	P	14 46 57.6	+1.6
	comp=Z,12nm,0.4s,SNR=20						
MMAI	Mount Meron Ar	81.40	308	P	P	14 46 57.3	+1.1
	comp=Z,47nm,0.7s,baz=44,slow=5.6,SNR=38						
MMAI				LR	LR	15 26 22.1	
	comp=Z,45nm,19.0s,baz=75,slow=38						
Q37A	Longview Farm,	81.40	44	P	P	14 46 55.5	-0.5
	baz=320						
BLY	Banja Luka	81.42	326	⇓iP	P	14 46 56.0	0.0
BLY	Banja Luka	81.42	326	eP	P	14 46 56.1	+0.2
	comp=Z,49nm,1.6s						
WTTA	Wattenberg	81.43	331	i P	P	14 46 56.8	+0.6
	comp=Z,18nm,0.5s						
SRS	Serrai	81.52	320	P	P	14 46 56.7	+0.1
MCH1	Michaelchurch	81.52	341	⇑eP	P	14 46 56.5	+0.2
MCH1				IAmb	IAmb	14 46 57.8	
	comp=Z,63nm,0.8s						
RETA	Reutte	81.55	331	eP	P	14 46 57.3	+0.6
	comp=Z,12nm,0.7s,SNR=7.2						
MOTA	Moosalm	81.55	331	ePcP	P	14 46 58.2	+1.4
	comp=Z,30nm,0.8s,SNR=26						
ABTA	Abfaltersbach	81.56	330	eP	P	14 46 56.9	+0.1
	comp=Z,5.0nm,0.8s						
L43A	Garden Prairie	81.56	38	P	P	14 46 56.2	-0.6
	baz=323						
MONM	Monmouth	81.62	341	⇑eP	P	14 46 57.4	+0.5
MONM				IAmb	IAmb	14 46 58.4	
	comp=Z,47nm,1.0s						
PLE	Pljevlja	81.65	324	⇓iP	P	14 46 58.3	+0.9
BFO	Black Forest	81.65	333	eP	P	14 46 57.1	-0.1
	comp=Z,20nm,0.8s						
BFO	Black Forest	81.65	333	i P	P	14 46 57.5	+0.3
M42A	Sheffield	81.67	39	P	P	14 46 56.9	-0.5
	baz=322						
LIA	Limnos Island	81.71	318	P	P	14 46 57.6	0.0
STIP	Stip	81.71	321	i P	P	14 46 56.8	-0.8
O40A	La Belle	81.72	41	P	P	14 46 57.5	-0.1
	baz=321,SNR=10						
HMNX	Herstmonceux	81.74	339	⇑eP	P	14 46 58.6	+1.0
HMNX				IAmb	IAmb	14 46 59.5	
	comp=Z,193nm,0.9s						
N41A	Harden Midland	81.74	40	P	P	14 46 57.4	-0.4
	baz=322						
N41A	Harden Midland	81.74	40	eP	P	14 46 57.5	-0.3
N41A				epP	pP	14 47 15.4	0.0
Q38A	Cooks Store, C	81.75	43	P	P	14 46 57.6	-0.2
	baz=320,SNR=15						
RAYN	Ar Rayn	81.76	294	eP	P	14 46 58.5	+0.3
	comp=Z,17nm,0.8s						
RAYN	Ar Rayn	81.76	294	i P	P	14 46 58.7	+0.5
	SNR=17						
RAYN	Ar Rayn	81.76	294	eP	P	14 46 58.5	+0.3
RAYN				pmax	pmax		
	comp=Z,17nm,0.8s						
P39B	Salisbury	81.78	42	P	P	14 46 57.9	-0.1
	baz=321,SNR=6.9						
IVA	Berane	81.80	323	eP	P	14 46 58.7	+0.6
HGH	Gray Hill	81.81	341	⇑eP	P	14 46 58.3	+0.4
SKO	Skopje	81.83	322	P	P	14 46 59.3	+1.1
SKO	Skopje	81.83	322	i P	P	14 46 59.4	+1.2
VAY	Valandovo	81.83	321	P	P	14 46 58.8	+0.6
VAY	Valandovo	81.83	321	i P	P	14 46 58.7	+0.6
L44A	Lake County Fo	81.93	38	P	P	14 46 58.4	-0.3
	baz=323						
OUR	Ouranopolis	81.94	319	P	P	14 46 59.2	+0.4
UPM	Unac-Piva	81.96	324	⇓iP	P	14 46 58.8	-0.3
FETA	Feichten	81.96	331	eP	P	14 46 59.7	+0.6
	comp=Z,11nm,0.7s,SNR=6.8						
KOME	Kolasin	81.98	324	⇓iP	P	14 46 58.8	-0.3
IWEX	Carrickbyrne,	81.99	344	eP	P	14 46 59.3	+0.5
IWEX				IAmb	IAmb	14 47 00.2	
	comp=Z,75nm,0.9s						
PVY	Plav	81.99	323	⇓iP	P	14 46 59.6	+0.4
Q39A	Willow Grove F	82.01	43	P	P	14 46 59.2	0.0
	baz=321,SNR=18						
DAVA	Damuels	82.03	332	eP	P	14 46 59.8	+0.4
	comp=Z,15nm,0.6s,SNR=7.4						
N42A	Yates City	82.03	40	P	P	14 46 59.2	-0.1
	baz=322,SNR=8.5						
M43A	Waltham Townsh	82.05	39	P	P	14 46 59.2	-0.2
	baz=323,SNR=5.3						
P40A	Paris	82.09	42	P	P	14 46 59.7	+0.1
	baz=321,SNR=15						
P40A	Paris	82.09	42	eP	P	14 46 59.4	-0.2
P40A				epP	pP	14 47 17.2	+0.1
ECH	Echery	82.13	334	eP	P	14 46 59.5	-0.2
	comp=Z,21nm,0.8s						
ECH	Echery	82.13	334	eP	P	14 46 59.5	-0.2
ECH				pmax	pmax		
	comp=Z,21nm,0.8s						
PLG	Polygyros	82.17	320	P	P	14 47 00.4	+0.3
O41A	Passleys Farm,	82.19	41	P	P	14 47 00.1	-0.1
	baz=322,SNR=9.4						
R38A	Fenwick Farm,	82.20	44	P	P	14 46 59.4	-0.8
	baz=320,SNR=10						
WMOK	Wichita Mounta	82.22	49	P	P	14 47 00.4	0.0
	baz=318,SNR=14						
WMOK	Wichita Mounta	82.22	49	eP	P	14 47 00.5	0.0
	comp=Z,19nm,1.3s						
WMOK	Wichita Mounta	82.22	49	eP	P	14 47 00.5	0.0
WMOK				pmax	pmax		
	comp=Z,19nm,1.3s						
NKY	Niksic	82.23	324	⇓iP	P	14 46 59.8	-0.7
NKME	Niksic	82.29	324	⇓iP	P	14 47 00.4	-0.3
N43A	Stutzman Famil	82.35	39	P	P	14 47 00.8	-0.1
	baz=323						
BRY	Bratogost	82.36	324	eP	P	14 47 00.4	-0.7
KRUS	Krusevo	82.40	322	i P	P	14 47 01.9	+0.6
PAIG	Paliouri	82.41	319	P	P	14 47 01.4	+0.1
PDG	Podgorica	82.43	324	⇑iP	P	14 47 01.6	+0.3
TTG	Podgorica	82.43	324	⇓iP	P	14 47 01.4	+0.1
TTG	Podgorica	82.43	324	eP	P	14 47 01.2	-0.1
	comp=Z,59nm,0.7s						
TTG	Podgorica	82.43	324	eP	P	14 47 01.2	-0.1
TTG				pmax	pmax		
	comp=Z,59nm,0.7s						
P41A	Barry, Barry	82.45	41	P	P	14 47 01.6	+0.1
	baz=322,SNR=8.6						
DAVOX	Davos/Dischmat	82.47	332	P	P	14 47 02.3	+0.6
	comp=Z,15nm,0.6s,baz=16,slow=1.7,SNR=25						
DAVOX				LR	LR	15 27 35.8	
	comp=Z,81nm,19.9s,baz=83,slow=38						
CEME	Cevo	82.48	324	⇓iP	P	14 47 01.3	-0.4
Q40A	Laux Farm, Aux	82.49	42	P	P	14 47 01.7	0.0
	baz=321,SNR=9.5						
KLBO	Killbear Provi	82.49	31	P	P	14 47 00.1	-1.5
	baz=328						
M44A	Midewin, Midew	82.50	38	P	P	14 47 01.6	-0.1
	baz=323,SNR=7.5						
M44A	Midewin, Midew	82.50	38	eP	P	14 47 01.5	-0.3
M44A				epP	pP	14 47 19.3	-0.1
PHP	Peshkopia	82.51	322	P	P	14 47 01.9	+0.1
R39A	Chumby, Stover	82.54	43	P	P	14 47 01.7	-0.3
	baz=321,SNR=16						
HDIL	Hopedale	82.59	39	P	P	14 47 01.9	-0.3
	baz=323,SNR=7.5						
HDIL	Hopedale	82.59	39	eP	P	14 47 01.9	-0.3
HDIL				epP	pP	14 47 19.7	-0.1
S38A	Stockton	82.63	44	P	P	14 47 02.0	-0.5
	baz=320,SNR=8.2						
BIA	Bitola	82.64	321	i P	P	14 47 03.4	+0.9
DRME	Dracevica, Mon	82.66	323	⇓iP	P	14 47 02.8	+0.3
BUM	Brajici-Budva	82.69	324	⇓iP	P	14 47 02.0	-0.8
BUKO	Buck Lake	82.73	31	P	P	14 47 02.6	-0.3
	baz=328						
STON	Ston	82.74	325	P	P	14 47 01.7	-1.2
HCY	Herceg Novi	82.75	324	⇓iP	P	14 47 01.5	-1.5
BMRO	Meriville Lake	82.75	32	P	P	14 47 01.8	-1.2
	baz=327						
O43A	Sugar Creek Fa	82.80	40	P	P	14 47 03.0	-0.3
	baz=323						
FNA	Florina	82.81	321	eP	P	14 47 03.1	-0.3
	comp=Z,32nm,0.8s						
FNA	Florina	82.81	321	P	P	14 47 03.2	-0.2
OHR	Ohrid	82.81	322	i P	P	14 47 03.5	+0.1
ULC	Ulcinj	82.81	323	⇓iP	P	14 47 02.6	-0.8
LIT	Litokhoron	82.83	320	eP	P	14 47 03.0	-0.5
	comp=Z,29nm,0.9s						
LIT	Litokhoron	82.83	320	P	P	14 47 03.2	-0.3
LIT	Litokhoron	82.83	320	eP	P	14 47 03.0	-0.5
LIT				pmax	pmax		
	comp=Z,29nm,0.9s						
P42A	Winchester	82.87	41	P	P	14 47 03.4	-0.2
	baz=322,SNR=6.6						
P42A	Winchester	82.87	41	eP	P	14 47 03.4	-0.2
P42A				epP	pP	14 47 21.1	-0.1
S39A	Bolivar	82.88	44	P	P	14 47 03.4	-0.4
	baz=321,SNR=11						
S39A	Bolivar	82.88	44	eP	P	14 47 03.0	-0.7
S39A				epP	pP	14 47 20.8	-0.6
T38A	Diamond	82.89	45	P	P	14 47 03.8	-0.1
	baz=320,SNR=33						
AOS	Alonnisos	82.91	319	P	P	14 47 04.0	+0.1
TUE	Stuetta	82.92	332	eP	P	14 47 04.2	+0.1
	comp=Z,19nm,0.7s						
Q41A	Truxton	82.94	42	P	P	14 47 04.1	+0.1
	baz=322,SNR=16						
N44A	Piper City	82.94	39	P	P	14 47 03.9	-0.1
	baz=323,SNR=6.7						
R40A	Maddies Statio	82.94	43	P	P	14 47 03.9	-0.2
	baz=321,SNR=10						
R40A	Maddies Statio	82.94	43	eP	P	14 47 03.8	-0.3
R40A				epP	pP	14 47 21.5	-0.2
TUL1	Leonard	82.96	46	P	P	14 47 04.4	+0.2
	baz=320,SNR=7.3						
TUL1	Leonard	82.96	46	eP	P	14 47 04.4	+0.2
	comp=Z,65nm,1.5s						
TUL1				epP	pP	14 47 22.8	+1.0
BASO	Ashfield	83.06	33	P	P	14 47 04.7	+0.2
	baz=327						
XOR	Xorichti	83.08	319	P	P	14 47 04.4	-0.4
FYTO	Fytoko, Volos	83.17	319	P	P	14 47 05.0	-0.2
N45A	Kentland	83.18	38	P	P	14 47 05.0	-0.3
	baz=324						
BWLO	Walkerton	83.18	32	P	P	14 47 05.8	+0.6
	baz=327						
DYA	Yadsworthy	83.19	341	⇑eP	P	14 47 05.5	+0.4
DYA				IAmb	IAmb	14 47 06.3	
	comp=Z,88nm,1.2s						
P43A	Skaggs, Pawnee	83.21	40	P	P	14 47 05.2	-0.3
	baz=323						
CLWO	Collingwood	83.23	32	P	P	14 47 05.8	+0.4
	baz=328,SNR=7.3						
M46A	Old House Fiel	83.24	37	P	P	14 47 05.3	-0.3
	baz=324						
M46A	Old House Fiel	83.24	37	eP	P	14 47 05.1	-0.4
	comp=Z,38nm,1.1s						
M46A				epP	pP	14 47 23.6	+0.5
NEST	Nestorio	83.25	321	P	P	14 47 05.9	+0.1
ABTX	Abilene, Hawle	83.31	51	P	P	14 47 05.9	-0.2
	baz=318						
ABTX	Abilene, Hawle	83.31	51	eP	P	14 47 05.7	-0.4
	comp=Z,54nm,1.6s						
Q42A	Golden Eagle	83.31	41	P	P	14 47 05.7	-0.2
	baz=322						
PEMO	Pembroke	83.31	29	P	P	14 47 05.5	-0.4
	baz=330,SNR=5.4						
TX31	Lajitas Ar. Si	83.34	56	eP	P	14 47 07.0	+0.6
TX31				epP	pP	14 47 24.2	+0.1
TX31				epP	pP	14 47 24.7	+0.7
TXAR	Lajitas Array	83.34	56	P	P	14 47 07.4	+0.9
	comp=Z,22nm,0.7s,baz=299,slow=4.0,SNR=322						
PMOR	Pomariorio Ree	83.36	118	eT	T	16 19 08.9	
	comp=Z,153nm,0.2s						
S40A	Lebanon	83.36	43	P	P	14 47 06.0	-0.3
	baz=321,SNR=10.0						
T39A	Clever	83.36	44	P	P	14 47 06.0	-0.3
	baz=321						
R41A	Rosebud	83.38	42	P	P	14 47 06.2	-0.1
	baz=322,SNR=13						
SLBS	Sierra La Lagu	83.38	64	eP	P	14 47 07.5	+0.8
	comp=Z,24nm,1.1s						
SADO	Sadowa	83.39	31	eP	P	14 47 05.5	-0.8
SADO				epP	pP	14 47 22.7	-1.1
SMIA	Simia	83.46	319	P	P	14 47 06.8	+0.1
N46A	Monticello	83.49	38	P	P	14 47 06.8	0.0
	baz=324						
O45A	Potomac	83.56	39	P	P	14 47 07.6	+0.4
	baz=324						
BANO	Bancroft	83.63	30	P	P	14 47 07.7	+0.2
	baz=329,SNR=6.5						
CCM	Cathedral Cave	83.63	42	P	P	14 47 07.9	+0.3
	baz=322						
CCM	Cathedral Cave	83.63	42	eP	P	14 47 08.4	+0.7
CCM				epP	pP	14 47 25.8	+0.6
HHAR	Hobbs	83.65	45	eP	P	14 47 07.3	-0.5
	comp=Z,12nm,0.7s						
AAM	Ann Arbor	83.67	35	P	P	14 47 08.0	+0.2
	baz=326						
AAM	Ann Arbor	83.67	35	eP	P	14 47 08.1	+0.4
	comp=Z,23nm,0.3s						
R42A	Luebbering	83.67	42	P	P	14 47 08.0	+0.2
	baz=322						
T40A	Mansfield	83.70	44	P	P	14 47 07.8	-0.2
	baz=321						
SENIN	Lac Senin/Sane	83.71	333	eP	P	14 47 08.1	-0.1
	comp=Z,21nm,0.8s						
CCA1	Carnmenellis	83.72	342	⇑eP	P	14 47 08.4	+0.6
CCA1				IAmb	IAmb	14 47 10.0	
	comp=Z,39nm,0.9s						
LKR	Lokris	83.74	319	P	P	14 47 07.6	-0.5
SFIN	Lafayette	83.74	38	P	P	14 47 08.3	+0.2
	baz=324						
SFIN	Lafayette	83.74	38	eP	P	14 47 07.8	-0.4
SFIN				epP	pP	14 47 25.6	-0.2
S41A	Jillco Farms,	83.75	43	P	P	14 47 08.0	-0.2
	baz=322,SNR=7.6						
AGG	Agios Georgios	83.76	320	eP	P	14 47 07.2	-1.1
	comp=Z,59nm,0.8s						
AGG	Agios Georgios	83.76	320	P	P	14 47 07.1	-1.2
AGG	Agios Georgios	83.76	320	eP	P	14 47 07.2	-1.1
AGG				pmax	pmax		
	comp=Z,59nm,0.8s						
TRQ	Mont Tremblant	83.77	27	eP	P	14 47 07.5	-0.8
TRQ				epP	pP	14 47 25.1	-0.7
P44A	Sand Creek, Wi	83.77	40	P	P	14 47 08.3	0.0
	baz=323,SNR=6.8						
PTL	Penteli	83.79	318	P	P	14 47 07.5	-1.0
U39A	Green Forest	83.81	45	P	P	14 47 08.5	-0.1
	baz=321,SNR=28						
HPIG		83.83	59	eP	P	14 47 09.5	+0.4
	comp=Z,32nm,1.0s						
HPIG				epP	pP	14 47 27.2	+0.5
ELFO	Elginfield	83.89	33	P	P	14 47 09.4	+0.6
	baz=327,SNR=6.5						
PLVO	Plevna	83.92	29	P	P	14 47 08.7	-0.3
	baz=330,SNR=6.7						
PLVO	Plevna	83.92	29	eP	P	14 47 08.2	-0.8
PLVO				epP	pP	14 47 25.6	-1.0
JSA	Saint Aubin	83.93	340	⇑eP	P	14 47 09.3	+0.5
JSA				IAmb	IAmb	14 47 10.2	
	comp=Z,69nm,1.0s						
ACTO	Acton	84.03	32	P	P	14 47 09.4	-0.2
	baz=328						
Q44A	Meyer Farm, Va	84.03	40	P	P	14 47 09.8	+0.1
	baz=323						
KARP	Karpathos	84.06	314	eP	P	14 47 09.7	-0.3
	comp=Z,76nm,0.7s						
KARP	Karpathos	84.06	314	P	P	14 47 09.2	-0.7
S42A	Caledonia	84.08	42	P	P	14 47 09.8	-0.1
	baz=322,SNR=16						
FVM	French Village	84.09	42	eP	P	14 47 10.5	+0.5
	comp=Z,39nm,1.4s						
FVM				epP	pP	14 47 29.1	+1.5
FVM	French Village	84.09	42	eP	P	14 47 10.5	+0.5
FVM				e*PP	pP	14 47 29.1	+1.5
FVM				pmax	pmax		
	comp=Z,39nm,1.4s						
EIL	Elat	84.09	306	P	P	14 47 12.8	+2.7
	comp=Z,31nm,0.8s,baz=33,slow=4.4,SNR=8.2						
R43A	Red Bud	84.10	41	P	P	14 47 10.0	0.0
	baz=322						
PKRO	Pickering	84.11	31	P	P	14 47 10.1	+0.2
	baz=328						
ORIO	Orleans, Innes	84.11	28	P	P	14 47 09.1	-0.8
	baz=331						
P45A	Graceland, Par	84.13	39	P	P	14 47 10.3	+0.1
	baz=324						
P45A	Graceland, Par	84.13	39	eP	P	14 47 10.1	0.0
P45A				epP	pP	14 47 27.5	-0.3
TAOE	Nuku Hiva Isla	84.14	108	eLR	LR	15 13 40.0	
	comp=Z,436nm,29.1s						
V39A	Pettigrew	84.14	45	P	P	14 47 10.1	-0.2
	baz=321,SNR=20						
U40A	Yellville	84.15	44	P	P	14 47 10.2	-0.1
	baz=321,SNR=25						
DSF	Desfina	84.15	319	P	P	14 47 09.0	-1.4
SRN	Sarande	84.16	322	P	P	14 47 10.2	-0.1
T41A	Mountain View	84.16	43	P	P	14 47 09.9	-0.5
	baz=322,SNR=10.0						
DELO	Deloro Mine	84.17	30	P	P	14 47 09.2	-1.1
	baz=329						
ALFO	Alfred	84.18	28	P	P	14 47 10.1	-0.1
	baz=331,SNR=11						
PPT	Papeete	84.19	121	LR	LR	15 20 51.2	
	comp=Z,55nm,20.1s,baz=342,slow=33						
PPT2	Papeete2	84.20	121	eLR	LR	15 13 32.4	
	comp=Z,524nm,31.2s						
PPT2	Papeete2	84.20	121	eT	T	16 20 13.4	
	comp=Z,8.2nm,0.2s						
DSL	Palaion Diasel	84.25	320	P	P	14 47 10.8	0.0
PAE	Paea	84.26	121	eT	T	16 20 16.3	
	comp=Z,1.9nm,0.3s						
SGD	Sagiada	84.27	321	P	P	14 47 10.8	0.0
O47A	Sheridan	84.27	38	P	P	14 47 10.7	-0.1
	baz=324						
IGT	Igoumenitsa	84.29	321	P	P	14 47 10.2	-0.7
ANX	Ano Chora	84.30	320	P	P	14 47 11.5	+0.4
DRWO	Darlington Wes	84.31	31	P	P	14 47 10.1	-0.9
	baz=329						
DRCO	St. Marys Ceme	84.32	31	P	P	14 47 11.5	+0.5
	baz=329						
THAL	Thalero	84.38	319	P	P	14 47 10.2	-1.2
KEK	Kerkira	84.39	322	P	P	14 47 10.4	-1.0
WLVO	Wesleyville	84.39	31	P	P	14 47 11.4	+0.1
	baz=329						
EFP	Efpalio	84.44	319	P	P	14 47 11.4	-0.3
Q45A	Warren Harvey,	84.45	40	P	P	14 47 11.5	-0.2
	baz=323,SNR=6.2						
PVO	Paravola	84.47	320	P	P	14 47 11.3	-0.5
T42A	Van Buren	84.51	43	P	P	14 47 12.0	-0.1
	baz=322						
T42A	Van Buren	84.51	43	eP	P	14 47 12.0	-0.1
T42A				epP	pP	14 47 29.6	-0.2
DID	Didima	84.53	318	P	P	14 47 09.9	-2.3
R44A	Waltonville	84.53	41	P	P	14 47 12.1	-0.1
	baz=323,SNR=5.1						
TYNO	Tyneside	84.54	32	P	P	14 47 12.5	+0.4
	baz=328						
LAKA	Lakka	84.55	319	P	P	14 47 12.1	-0.2
W39A	Magazine	84.56	46	P	P	14 47 12.4	0.0
	baz=321,SNR=11						
W39A	Magazine	84.56	46	eP	P	14 47 12.2	-0.2
	comp=Z,33nm,1.4s						

S43A	Fulton Ridge,	84.58	42	P	P	14 47 12.5	0.0
	baz=322,SNR=9.7						
V40A	Witts Springs	84.59	45	P	P	14 47 12.2	-0.4
	baz=321,SNR=7.7						
V40A	Witts Springs	84.59	45	eP	P	14 47 12.0	-0.6
	comp=Z,15nm,1.1s						
OLIL	Olney	84.60	40	eP	P	14 47 12.5	0.0
OLIL				epP	pP	14 47 30.4	+0.2
GUR	Goura	84.62	319	P	P	14 47 11.6	-1.2
KLV	Kalavryta, Ach	84.62	319	P	P	14 47 12.1	-0.7
U41A	Viola	84.63	44	P	P	14 47 12.4	-0.3
	baz=322,SNR=7.2						
PDO	Prodromos	84.64	320	P	P	14 47 12.7	0.0
O48A	Farmland	84.71	37	P	P	14 47 12.9	-0.2
	baz=325,SNR=6.4						
STCO	Saint Catharin	84.71	32	P	P	14 47 12.7	-0.2
	baz=328						
JCT	Junction City	84.80	53	P	P	14 47 14.2	+0.5
	baz=318,SNR=16						
JCT	Junction City	84.80	53	eP	P	14 47 14.0	+0.3
	comp=Z,32nm,0.8s						
JCT				epP	pP	14 47 32.5	+1.1
JCT	Junction City	84.80	53	eP	P	14 47 14.0	+0.3
JCT				e*PP	pP	14 47 32.5	+1.1
JCT				pmax	pmax		
	comp=Z,32nm,0.8s						
P47A	Martinsville	84.84	38	P	P	14 47 13.6	-0.1
	baz=324						
T43A	Greenville	84.86	42	P	P	14 47 14.0	+0.1
	baz=322,SNR=9.1						
R45A	Skylar, Fairfi	84.87	40	P	P	14 47 13.8	0.0
	baz=323						
S44A	Carbondale	84.88	41	P	P	14 47 14.0	+0.1
	baz=323						
SIUC	Southern Illin	84.88	41	eP	P	14 47 14.1	+0.1
	comp=Z,42nm,0.8s						
SIUC				epP	pP	14 47 32.4	+0.8
ZKR	Zakros	84.89	315	P	P	14 47 14.2	+0.1
DRO	Drossia	84.91	319	P	P	14 47 15.0	+0.9
X39A	Fountain Ranch	84.92	46	P	P	14 47 14.4	+0.2
	baz=320,SNR=18						
AQU	L'Aquila	84.93	327	eP	P	14 47 15.1	+0.9
	comp=Z,29nm,0.8s						
W40A	Ferguson Farm,	84.94	45	P	P	14 47 14.4	+0.2
	baz=321,SNR=9.4						
W40A	Ferguson Farm,	84.94	45	eP	P	14 47 14.3	0.0
	comp=Z,30nm,1.0s						
RLS	Riolos of Patr	84.94	320	P	P	14 47 14.6	+0.4
V41A	Mountainview	84.95	44	P	P	14 47 14.2	-0.2
	baz=321,SNR=15						
U42A	Revenden	84.97	43	P	P	14 47 14.5	+0.1
	baz=322						
BLO	Bloomington	84.98	39	eP	P	14 47 14.5	+0.1
	comp=Z,14nm,0.6s						
BLO				epP	pP	14 47 32.6	+0.5
BLO	Bloomington	84.98	39	eP	P	14 47 14.5	+0.1
BLO				e*PP	pP	14 47 32.6	+0.5
BLO				pmax	pmax		
	comp=Z,14nm,0.6s						
MATE	Matera	84.99	324	⇑iP	P	14 47 14.7	+0.3
WHTX	Lake Whitney,	85.01	50	P	P	14 47 15.2	+0.5
	baz=319,SNR=8.6						
WHTX	Lake Whitney,	85.01	50	eP	P	14 47 15.3	+0.6
	comp=Z,41nm,1.0s						
PBMO	Poplar Bluff	85.03	42	eP	P	14 47 14.8	+0.1
	comp=Z,31nm,1.0s						
PBMO				epP	pP	14 47 32.9	+0.5
BNI	Bardonecchia	85.07	333	eP	P	14 47 15.1	+0.2
	comp=Z,34nm,1.5s						
BNI	Bardonecchia	85.07	333	eP	P	14 47 15.1	+0.2
BNI				pmax	pmax		
	comp=Z,35nm,1.5s						
O49A	Covington	85.12	37	P	P	14 47 14.7	-0.4
	baz=326						
LONY	Lake Ozonia	85.16	28	eP	P	14 47 14.4	-0.9
LONY				epP	pP	14 47 31.8	-1.2
MIAR	Mount Ida	85.17	46	P	P	14 47 15.6	+0.1
	baz=321,SNR=26						
MIAR	Mount Ida	85.17	46	eP	P	14 47 15.6	+0.1
	comp=Z,29nm,0.9s						
MIAR	Mount Ida	85.17	46	eP	P	14 47 15.6	+0.1
MIAR				pmax	pmax		
	comp=Z,29nm,0.9s						
T44A	Benton	85.20	42	P	P	14 47 15.9	+0.3
	baz=323						
Q47A	Bedord North L	85.21	39	P	P	14 47 15.7	+0.1
	baz=324,SNR=9.2						
KFL	Anninata	85.22	320	P	P	14 47 15.4	-0.2
S45A	Carrier Mills	85.22	41	P	P	14 47 15.5	-0.1
	baz=323						
LAST	Lasithi	85.23	315	P	P	14 47 16.2	+0.3
P48A	Milroy	85.24	38	P	P	14 47 15.7	0.0
	baz=325						
VLS	Valsamata	85.26	320	P	P	14 47 15.1	-0.8
R46A	Gibon Southern	85.30	40	P	P	14 47 15.9	-0.1
	baz=324,SNR=5.0						
FRNY	Flat Rock	85.31	27	eP	P	14 47 14.9	-1.0
FRNY				epP	pP	14 47 32.4	-1.2
V42A	Cord	85.32	44	P	P	14 47 16.0	-0.1
	baz=322,SNR=12						
ERPA	Erie	85.32	33	eP	P	14 47 15.1	-0.9
	comp=Z,33nm,0.6s						
ERPA				epP	pP	14 47 34.3	+0.6
U43A	Rector	85.37	43	P	P	14 47 16.2	-0.2
	baz=322						
W41B	Gary Mavity, V	85.38	45	P	P	14 47 16.4	-0.1
	baz=321,SNR=14						
W41B	Gary Mavity, V	85.38	45	eP	P	14 47 15.9	-0.5
	comp=Z,30nm,1.1s						
ITM	Ithomi	85.42	319	eP	P	14 47 16.1	-0.6
	comp=Z,82nm,0.7s						
ITM	Ithomi	85.42	319	P	P	14 47 15.8	-0.9
IDI	Anoyia	85.44	316	P	P	14 47 15.9	-1.0
	comp=Z,23nm,0.6s,baz=32,slow=11,SNR=36						
IDI	Anoyia	85.44	316	⇓iP	P	14 47 16.6	-0.3
IDI	Anoyia	85.44	316	eP	P	14 47 15.7	-1.2
	comp=Z,43nm,1.1s						
PARMO	Parma	85.46	42	eP	P	14 47 16.2	-0.6
	comp=Z,58nm,0.8s						
PARMO				epP	pP	14 47 35.9	+1.4
O50A	Cable	85.47	36	P	P	14 47 16.9	0.0
	baz=326,SNR=7.2						
P49A	Miami Univ. Ec	85.49	37	P	P	14 47 16.7	-0.2
	baz=325,SNR=9.1						
Q48A	North Vernon	85.53	38	P	P	14 47 17.1	-0.1
	baz=325,SNR=5.7						
DYR	Agios Nikonas	85.55	318	P	P	14 47 18.3	+0.9
MMNY	Mt. Morris Dam	85.60	31	eP	P	14 47 16.8	-0.7
MMNY				epP	pP	14 47 34.5	-0.6
X40A	Basin Creek Fa	85.60	45	P	P	14 47 18.0	+0.3
	baz=321,SNR=8.6						
X40A	Basin Creek Fa	85.60	45	eP	P	14 47 17.7	+0.1
	comp=Z,23nm,1.2s						
X40A				epP	pP	14 47 36.6	+1.4
ALLY	Alegheny Colle	85.65	33	eP	P	14 47 17.6	-0.2
ALLY				epP	pP	14 47 35.1	-0.4
ACSO	Alum Creek Sta	85.67	36	P	P	14 47 17.6	-0.3
	baz=326,SNR=5.3						
ACSO	Alum Creek Sta	85.67	36	eP	P	14 47 17.8	0.0
ACSO				epP	pP	14 47 35.5	0.0
R47A	Wooly Knot Far	85.68	39	P	P	14 47 17.9	0.0
	baz=324,SNR=9.0						
SIVA	Sivas	85.69	316	P	P	14 47 18.5	+0.5
VAM	Vamos	85.69	316	P	P	14 47 07.8	-10
PYL	PYLOS	85.73	319	P	P	14 47 16.4	-1.8
Y40A	Okolona	85.74	46	P	P	14 47 18.1	-0.2
	baz=321						
V43A	Jonesboro	85.76	43	P	P	14 47 18.5	+0.1
	baz=322						
IMMV	Iera Moni Meta	85.76	316	P	P	14 47 18.1	-0.3
ANKY	Antikythira Is	85.78	317	P	P	14 47 17.6	-0.9
P50A	Jamestown	85.83	37	P	P	14 47 18.4	-0.3
	baz=326,SNR=6.7						
435B	Jarrell	85.84	51	P	P	14 47 19.2	+0.3
	baz=319						
WCI	Wyandotte Cave	85.84	39	P	P	14 47 18.5	-0.2
	baz=324						
WCI	Wyandotte Cave	85.84	39	eP	P	14 47 18.5	-0.2
WCI				epP	pP	14 47 36.6	+0.2
WCI	Wyandotte Cave	85.84	39	eP	P	14 47 18.5	-0.2
WCI				e*PP	pP	14 47 36.6	+0.2
Q49A	Aurora	85.85	38	P	P	14 47 18.7	-0.1
	baz=325						
NCB	Newcomb	85.86	28	eP	P	14 47 18.3	-0.4
NCB				epP	pP	14 47 35.9	-0.5
R48A	Northridge Ran	85.90	39	P	P	14 47 19.1	0.0
	baz=325						
U44B	Burton Farm, H	85.91	42	P	P	14 47 19.4	+0.3
	baz=323						
M54A	Oil Creek Stat	85.96	33	P	P	14 47 19.0	-0.3
	baz=328,SNR=6.5						
M54A	Oil Creek Stat	85.96	33	eP	P	14 47 19.0	-0.3
M54A				epP	pP	14 47 36.8	-0.2
GLAT	Glass	86.00	42	eP	P	14 47 20.3	+0.8
	comp=Z,143nm,1.2s						
VT1	Waterbury	86.03	27	eP	P	14 47 19.9	+0.3
	comp=Z,25nm,0.7s						
VT1				epP	pP	14 47 37.6	+0.3
T46A	Princeton	86.05	41	P	P	14 47 20.3	+0.5
	baz=324,SNR=18						
S47A	Hartford	86.09	40	P	P	14 47 20.0	0.0
	baz=324						
UTMT	University of	86.15	42	eP	P	14 47 20.8	+0.6
	comp=Z,82nm,1.1s						
X42A	Stuttgart	86.18	45	P	P	14 47 20.4	-0.1
	baz=322						
TIP	Timpagrande	86.18	323	⇓iP	P	14 47 21.3	+0.8
TIP	Timpagrande	86.18	323	eP	P	14 47 20.3	-0.2
	comp=Z,30nm,1.1s						
U45A	Rockin P Farm,	86.19	42	P	P	14 47 20.6	+0.1
	baz=323						
Y41A	Eaglette Beard	86.19	46	P	P	14 47 21.1	+0.6
	baz=321						
Z40A	Long Farm, Mag	86.26	47	P	P	14 47 21.5	+0.6
	baz=321						
N54A	Moraine State	86.30	33	P	P	14 47 20.8	-0.2
	baz=328,SNR=7.3						
N54A	Moraine State	86.30	33	eP	P	14 47 21.0	0.0
N54A				epP	pP	14 47 38.5	-0.2
PKME	Peaks-Kenny Pk	86.30	24	P	P	14 47 20.5	-0.3
	baz=335						
PKME	Peaks-Kenny Pk	86.30	24	epP	pP	14 47 38.5	0.0
LBNH	Lisbon	86.39	27	eP	P	14 47 22.2	+0.9
	comp=Z,14nm,0.8s						
LBNH				epP	pP	14 47 39.5	+0.4
LBNH	Lisbon	86.39	27	eP	P	14 47 22.2	+0.9
LBNH				e*PP	pP	14 47 39.5	+0.4
LBNH				pmax	pmax		
	comp=Z,14nm,0.8s						
S48A	Wiedeman Farm,	86.42	39	P	P	14 47 21.5	-0.1
	baz=325,SNR=7.9						
T47A	Sharon Grove	86.47	40	P	P	14 47 22.0	+0.1
	baz=324,SNR=13						
T47A	Sharon Grove	86.47	40	eP	P	14 47 22.1	+0.2
T47A				epP	pP	14 47 40.1	+0.5
Q51A	Peebles	86.51	37	P	P	14 47 22.3	+0.3
	baz=326,SNR=9.4						
ACCN	Adirondack Com	86.56	28	eP	P	14 47 21.8	-0.4
ACCN				epP	pP	14 47 39.2	-0.7
Z41A	Richland Creek	86.57	46	P	P	14 47 22.4	0.0
	baz=321						
Z41A	Richland Creek	86.57	46	eP	P	14 47 22.5	+0.1
	comp=Z,16nm,0.8s						
X43A	Marvell	86.59	44	P	P	14 47 22.2	-0.3
	baz=322						
X43A	Marvell	86.59	44	eP	P	14 47 22.5	+0.1
	comp=Z,62nm,1.2s						
CCAR	Cane Creek	86.60	45	eP	P	14 47 23.3	+0.8
	comp=Z,101nm,1.3s						
140A	Cam and Jess,	86.64	47	P	P	14 47 23.4	+0.6
	baz=321,SNR=6.0						
140A	Cam and Jess,	86.64	47	eP	P	14 47 23.5	+0.8
	comp=Z,52nm,0.8s						
Y42A	Garnett, Star	86.65	45	P	P	14 47 23.0	+0.2
	baz=322						
S49A	Springfield	86.67	39	P	P	14 47 22.9	+0.1
	baz=325						
R50A	Paris	86.69	38	P	P	14 47 23.1	+0.1
	baz=326						
T48A	Bowling Green	86.71	40	P	P	14 47 22.6	-0.4
	baz=324,SNR=5.7						
NATX	Nacogdoches	86.73	48	P	P	14 47 22.9	-0.3
	baz=320						
NATX	Nacogdoches	86.73	48	eP	P	14 47 24.2	+1.0
	comp=Z,56nm,0.9s						
BINY	Binghamton	86.78	30	P	P	14 47 22.7	-0.6
	baz=330						
BINY	Binghamton	86.78	30	eP	P	14 47 22.9	-0.4
	comp=Z,16nm,0.8s						
BINY				epP	pP	14 47 41.1	+0.1
WVT	Waverly	86.82	41	P	P	14 47 23.3	-0.2
	baz=324						
WVT	Waverly	86.82	41	eP	P	14 47 23.0	-0.6
	comp=Z,29nm,1.3s						
WVT				epP	pP	14 47 41.4	+0.1
WVT	Waverly	86.82	41	eP	P	14 47 23.0	-0.6
WVT				e*PP	pP	14 47 41.4	+0.1
WVT				pmax	pmax		
	comp=Z,29nm,1.3s						
U47A	Clarksville	86.83	41	P	P	14 47 23.6	0.0
	baz=324						
V46A	Holladay	86.94	42	P	P	14 47 24.3	+0.1
	baz=324,SNR=12						
X44A	Crenshaw	86.97	44	P	P	14 47 24.5	+0.1
	baz=322						
240A	Hunter Patters	87.00	48	P	P	14 47 24.8	+0.3
	baz=321						
R51A	Hillsboro	87.01	37	P	P	14 47 24.8	+0.3
	baz=326						
Z42A	Norrel Spur, H	87.01	46	P	P	14 47 25.0	+0.5
	baz=322						
141A	Papa Simpson,	87.03	47	P	P	14 47 24.8	+0.2
	baz=321						
Y43A	Makayla and Ka	87.04	45	P	P	14 47 25.1	+0.5
	baz=322						
T49A	Edmonton	87.11	39	P	P	14 47 25.1	+0.1
	baz=325,SNR=9.1						
T49A	Edmonton	87.11	39	eP	P	14 47 25.0	0.0
T49A				epP	pP	14 47 42.8	+0.1
U48A	Cassie Pea, Po	87.12	40	P	P	14 47 25.1	+0.1
	baz=324,SNR=5.8						
S50A	Richmond	87.16	38	P	P	14 47 25.2	0.0
	baz=326						
V47A	Nunnelly	87.21	41	P	P	14 47 25.6	+0.1
	baz=324,SNR=19						
OXF	Oxford	87.33	43	P	P	14 47 26.2	+0.1
	baz=323,SNR=10.0						
OXF	Oxford	87.33	43	eP	P	14 47 26.1	+0.1
	comp=Z,64nm,1.1s						
OXF				epP	pP	14 47 44.5	+0.7
OXF	Oxford	87.33	43	eP	P	14 47 26.1	0.0
OXF				e*PP	pP	14 47 44.5	+0.7
OXF				pmax	pmax		
	comp=Z,64nm,1.1s						
W46A	Michie	87.35	42	P	P	14 47 26.2	0.0
	baz=323						
Y44A	Strider, Charl	87.36	44	P	P	14 47 26.9	+0.6
	baz=322						
R52A	Catlettsburg	87.39	37	P	P	14 47 26.4	+0.1
	baz=327						
SSPA	Standing Stone	87.41	32	P	P	14 47 26.2	-0.1
	baz=329						
SSPA	Standing Stone	87.41	32	eP	P	14 47 26.5	+0.1
SSPA				epP	pP	14 47 44.0	-0.1
X45A	UM Field Stati	87.41	43	P	P	14 47 26.7	+0.2
	baz=323,SNR=7.0						
KSPA	Keystone Colle	87.41	30	eP	P	14 47 26.4	+0.1
KSPA				epP	pP	14 47 43.7	-0.4
O56A	Blue Knob Stat	87.45	33	P	P	14 47 26.9	+0.3
	baz=329,SNR=12						
O56A	Blue Knob Stat	87.45	33	eP	P	14 47 26.7	0.0
O56A				epP	pP	14 47 44.4	0.0
MCWV	Mont Chateau	87.46	34	P	P	14 47 27.0	+0.4
	baz=328,SNR=6.5						
MCWV	Mont Chateau	87.46	34	eP	P	14 47 27.0	+0.4
MCWV				epP	pP	14 47 44.7	+0.3
241A	Mo Tay, Goldon	87.47	47	P	P	14 47 27.2	+0.4
	baz=321						
241A	Mo Tay, Goldon	87.47	47	eP	P	14 47 27.4	+0.6
	comp=Z,43nm,1.0s						
U49A	Red Boiling Sp	87.48	40	P	P	14 47 27.1	+0.4
	baz=325,SNR=15						
T50A	Nancy	87.50	39	P	P	14 47 27.1	+0.2
	baz=325,SNR=23						
S51A	Beattyville	87.55	38	P	P	14 47 27.1	0.0
	baz=326,SNR=6.4						
S51A	Beattyville	87.55	38	eP	P	14 47 26.8	-0.3
S51A				epP	pP	14 47 44.8	0.0
V48A	Smith Brothers	87.61	41	P	P	14 47 27.6	+0.2
	baz=324,SNR=9.1						
V48A	Smith Brothers	87.61	41	eP	P	14 47 27.5	0.0
	comp=Z,35nm,1.4s						
V48A				epP	pP	14 47 45.1	-0.1
PLAL	Pickwick Lake	87.62	42	eP	P	14 47 27.1	-0.4
	comp=Z,10nm,0.7s						
W47A	Westpoint	87.64	42	P	P	14 47 27.7	+0.2
	baz=324,SNR=8.1						
X46A	Booneville	87.71	43	P	P	14 47 28.0	+0.1
	baz=323						
143A	Socs Landing,	87.74	46	P	P	14 47 28.6	+0.5
	baz=322						
S52A	Salyersville	87.75	37	P	P	14 47 28.3	+0.2
	baz=326,SNR=7.8						
Y45A	Yeager Farm, C	87.78	44	P	P	14 47 29.0	+0.8
	baz=323,SNR=9.1						
Z44A	Pea Ridge, Bel	87.79	45	P	P	14 47 29.2	+0.9
	baz=322,SNR=6.8						
242A	Grayson	87.85	47	P	P	14 47 29.1	+0.5
	baz=322						
341A	Kurthwood	87.87	48	eP	P	14 47 29.4	+0.7
	comp=Z,20nm,1.1s						
T51A	Gray	87.95	38	P	P	14 47 29.1	+0.1
	baz=326						
N59A	State Game Lan	87.97	31	P	P	14 47 29.2	+0.2
	baz=331,SNR=10						
N59A	State Game Lan	87.97	31	eP	P	14 47 29.0	0.0
N59A				epP	pP	14 47 46.6	-0.2
U50A	Jamestown	87.99	39	P	P	14 47 29.5	+0.2
	baz=325						
V49A	McMinnville	88.03	40	P	P	14 47 29.5	+0.1
	baz=325,SNR=6.3						
W48A	Pulaski	88.05	41	P	P	14 47 29.7	+0.2
	baz=324,SNR=19						
HRV	Adam Dziewonsk	88.06	27	eP	P	14 47 29.9	+0.5
	comp=Z,20nm,1.0s						
HRV				epP	pP	14 47 47.8	+0.7
HRV	Adam Dziewonsk	88.06	27	eP	P	14 47 29.9	+0.5
HRV				e*PP	pP	14 47 47.8	+0.7
HRV				pmax	pmax		
	comp=Z,20nm,1.0s						
Z45A	Winona	88.10	44	P	P	14 47 30.6	+0.9
	baz=323,SNR=5.4						
Z45A	Winona	88.10	44	eP	P	14 47 30.6	+0.9
	comp=Z,59nm,1.0s						
X47A	Russelville	88.10	42	P	P	14 47 29.6	-0.2
	baz=324,SNR=7.8						
Y46A	Houston	88.11	43	P	P	14 47 30.0	+0.2
	baz=323,SNR=15						
PAGS	Pennsylvania G	88.21	32	eP	P	14 47 30.0	-0.2
PAGS				epP	pP	14 47 47.8	-0.1
WES	Weston	88.24	27	eP	P	14 47 30.1	-0.2
WES				epP	pP	14 47 48.1	+0.1
WES	Weston	88.24	27	eP	P	14 47 30.1	-0.2
WES				e*PP	pP	14 47 48.1	+0.1
ODNJ	Ogdensburg	88.25	30	eP	P	14 47 30.2	-0.2
ODNJ				epP	pP	14 47 47.4	-0.7
T52A	Hallie	88.26	37	P	P	14 47 31.0	+0.5
	baz=326						
W49A	Belvidere	88.38	41	P	P	14 47 31.3	+0.2
	baz=325,SNR=6.9						
LUPA	Lehigh Univers	88.39	31	epP	pP	14 47 49.2	+0.4
U51A	La Follette	88.40	39	P	P	14 47 31.4	+0.2
	baz=326						
SWET	Sewanee	88.46	40	eP	P	14 47 31.3	-0.3
	comp=Z,22nm,0.8s						
SWET				epP	pP	14 47 48.9	-0.3
TZTN	Tazewell	88.47	38	P	P	14 47 31.9	+0.4
	baz=326,SNR=7.4						
TZTN	Tazewell	88.47	38	eP	P	14 47 31.7	+0.1
	comp=Z,11nm,0.6s						
TZTN				epP	pP	14 47 49.3	0.0
V50A	Pikevile	88.48	40	P	P	14 47 31.6	+0.1
	baz=325,SNR=6.6						
X48A	Hartselle	88.55	42	P	P	14 47 31.6	-0.3
	baz=324,SNR=7.6						
X48A	Hartselle	88.55	42	eP	P	14 47 31.2	-0.6
	comp=Z,11nm,0.8s						
X48A				epP	pP	14 47 49.2	-0.4
MVL	Millersville	88.55	31	eP	P	14 47 31.8	0.0
MVL				epP	pP	14 47 49.7	+0.2
PAL	Palisades	88.57	29	P	P	14 47 31.8	0.0
	baz=332						
145A	Houston Renfro	88.58	45	P	P	14 47 32.8	+0.7
	baz=323						
VBMS	Vicksburg	88.58	45	P	P	14 47 32.7	+0.6
	baz=322						
VBMS	Vicksburg	88.58	45	eP	P	14 47 32.5	+0.4
	comp=Z,113nm,1.4s						
TBI	Tubuai	88.59	124	eT	T	16 25 41.7	
	comp=Z,24nm,0.3s						
Y47A	UCPARC, Winfie	88.59	43	P	P	14 47 32.1	0.0
	baz=324,SNR=7.7						
VAE	Valguarnera	88.61	324	LR	LR	15 33 35.9	
	comp=Z,41nm,18.1s,baz=162,slow=40						
Z46A	Louisville	88.62	44	P	P	14 47 33.1	+0.9
	baz=323						
BRNJ	Basking Ridge	88.62	30	eP	P	14 47 32.5	+0.4
BRNJ				epP	pP	14 47 50.0	+0.2
244A	Avery, Jackson	88.63	46	P	P	14 47 33.2	+0.9
	baz=322,SNR=8.8						
U52A	Thorn Hill	88.68	38	P	P	14 47 33.0	+0.5
	baz=326						
V51A	Loudon	88.72	39	P	P	14 47 32.8	+0.1
	baz=326,SNR=7.6						
V51A	Loudon	88.72	39	eP	P	14 47 32.8	+0.1
V51A				epP	pP	14 47 50.5	+0.1
W50A	Signal Mountai	88.77	40	P	P	14 47 33.0	+0.1
	baz=325,SNR=7.1						
W50A	Signal Mountai	88.77	40	eP	P	14 47 32.8	-0.2
W50A				epP	pP	14 47 50.5	-0.2
X49A	Woodville	88.84	41	P	P	14 47 33.1	-0.2
	baz=325,SNR=17						
SDMD	Soldier's Deli	88.87	32	eP	P	14 47 32.8	-0.5
	comp=Z,9.8nm,1.0s						
SDMD				epP	pP	14 47 51.1	+0.1
Y48A	Jasper	88.92	42	P	P	14 47 33.3	-0.3
	baz=324,SNR=8.0						
CPCT	Cooper Cave	88.93	39	eP	P	14 47 33.3	-0.4
	comp=Z,22nm,1.1s						
CPCT				epP	pP	14 47 51.6	+0.2
PSUB	Penn St. - Bra	88.95	31	eP	P	14 47 33.2	-0.4
PSUB				epP	pP	14 47 51.0	-0.4
146A	Union	89.00	44	P	P	14 47 34.6	+0.5
	baz=323,SNR=8.9						
146A	Union	89.00	44	eP	P	14 47 34.6	+0.5
	comp=Z,75nm,0.9s						
146A				epP	pP	14 47 52.7	+0.9
V52A	Sevierville	89.03	39	P	P	14 47 34.4	+0.3
	baz=326,SNR=9.4						
V52A	Sevierville	89.03	39	eP	P	14 47 34.5	+0.3
V52A				epP	pP	14 47 52.3	+0.3
Z47A	Carrollton	89.05	43	P	P	14 47 34.5	+0.3
	baz=324						
245A	Little AP, Sta	89.05	45	P	P	14 47 34.4	+0.1
	baz=323,SNR=6.3						
W51A	Cleveland	89.06	40	P	P	14 47 34.3	0.0
	baz=325						
U53A	Fall Branch	89.06	38	P	P	14 47 34.4	+0.1
	baz=327,SNR=9.7						
344A	Westbrook Farm	89.07	46	eP	P	14 47 34.2	-0.2
	comp=Z,20nm,0.8s						
TKL	Tuckaleechee C	89.11	39	P	P	14 47 34.6	+0.1
	comp=Z,15nm,0.6s,baz=294,slow=10.0,SNR=37						
TKL	Tuckaleechee C	89.11	39	eP	P	14 47 34.6	+0.1
TKL				epP	pP	14 47 52.3	0.0
TKL	Tuckaleechee C	89.11	39	eP	P	14 47 34.6	+0.1
TKL				e*PP	pP	14 47 52.3	0.0
X50B	Fort Payne	89.21	41	P	P	14 47 34.9	-0.2
	baz=325,SNR=5.7						
BLA	Blacksburg	89.29	36	P	P	14 47 35.6	+0.1
	baz=328,SNR=7.1						
BLA	Blacksburg	89.29	36	eP	P	14 47 35.5	+0.1
	comp=Z,18nm,0.9s						
BLA				epP	pP	14 47 52.8	-0.4
BLA	Blacksburg	89.29	36	eP	P	14 47 35.5	+0.1
BLA				e*PP	pP	14 47 52.8	-0.4
BLA				pmax	pmax		
	comp=Z,18nm,0.9s						
Y49A	Blount Mountai	89.33	42	P	P	14 47 35.4	-0.3
	baz=324,SNR=5.6						
Y49A	Blount Mountai	89.33	42	eP	P	14 47 35.3	-0.3
	comp=Z,10nm,0.8s						
147A	Livingston	89.37	44	P	P	14 47 35.8	+0.1
	baz=324,SNR=6.7						
147A	Livingston	89.37	44	eP	P	14 47 36.0	+0.3
	comp=Z,77nm,1.3s						
147A				epP	pP	14 47 54.7	+1.2
X51A	Calhoun	89.50	40	P	P	14 47 36.0	-0.3
	baz=325						

V53A	Saluda	89.53	38	P	P	14 47 36.2	-0.4
	baz=326,SNR=5.3						
V53A	Saluda	89.53	38	*e*P	P	14 47 36.3	-0.2
V53A				*e*pP	pP	14 47 54.2	-0.1
Y50A	Piedmont	89.63	41	P	P	14 47 37.1	+0.2
	baz=325,SNR=10.0						
CVRD	Centerville Ro	89.64	33	*e*P	P	14 47 36.8	-0.1
	comp=Z,28nm,1.1s						
CVRD				*e*pP	pP	14 47 55.5	+0.8
247A	Quitman	89.69	44	P	P	14 47 37.1	-0.1
	baz=323						
LRAL	Lakeview Retre	89.71	42	P	P	14 47 37.0	-0.3
	baz=324						
LRAL	Lakeview Retre	89.71	42	*e*P	P	14 47 36.8	-0.6
	comp=Z,13nm,1.2s						
LRAL				*e*pP	pP	14 47 55.4	+0.3
148A	Greensboro	89.74	43	P	P	14 47 37.0	-0.5
	baz=324						
346A	Big Creek Wild	89.78	45	*e*P	P	14 47 40.7	+3.0
	comp=Z,113nm,0.3s						
W53A	Cullowhee	89.79	39	P	P	14 47 37.6	-0.3
	baz=326,SNR=7.9						
Z49A	Columbiana	89.81	42	P	P	14 47 37.7	-0.2
	baz=324,SNR=7.3						
X52A	Dahlonega	89.92	39	P	P	14 47 38.3	-0.1
	baz=326						
Y51A	Rockmart	89.95	41	P	P	14 47 38.4	-0.1
	baz=325,SNR=12						
BG3	Lake Jocassee	90.04	39	*e*P	P	14 47 39.1	+0.2
	comp=Z,34nm,1.2s						
Z50A	Ashland	90.06	42	P	P	14 47 39.0	0.0
	baz=325,SNR=23						
Z50A	Ashland	90.06	42	*e*P	P	14 47 38.9	0.0
	comp=Z,34nm,0.9s						
Z50A				*e*pP	pP	14 47 56.7	-0.1
149A	Jones	90.17	43	P	P	14 47 39.4	0.0
	baz=324,SNR=6.7						
URVA	University of	90.18	34	*e*P	P	14 47 39.2	-0.2
URVA				*e*pP	pP	14 47 58.2	+1.0
347A	Saraland	90.25	44	P	P	14 47 39.7	-0.1
	baz=323						
X53A	Estanollee	90.28	39	P	P	14 47 39.6	-0.3
	baz=326,SNR=12						
Z51A	Franklin	90.37	41	P	P	14 47 40.1	-0.4
	baz=325						
Y52A	Lilburn	90.45	40	P	P	14 47 40.1	-0.7
	baz=326						
Y52A	Lilburn	90.45	40	*e*P	P	14 47 40.9	+0.1
Y52A				*e*pP	pP	14 47 59.0	+0.4
249A	Camden	90.51	43	P	P	14 47 40.7	-0.3
	baz=324,SNR=6.0						
150A	Eclectic	90.54	42	P	P	14 47 40.9	-0.4
	baz=325,SNR=5.8						
KMSC	Kings Mountain	90.63	37	P	P	14 47 41.1	-0.5
	baz=327,SNR=5.8						
KMSC	Kings Mountain	90.63	37	*e*P	P	14 47 41.4	-0.2
	comp=Z,18nm,1.1s						
KMSC				*e*pP	pP	14 47 59.9	+0.4
Y53A	Monroe	90.68	40	P	P	14 47 41.6	-0.3
	baz=326,SNR=5.6						
PAULI	Pauline	90.69	38	*e*P	P	14 47 41.7	-0.2
	comp=Z,11nm,1.1s						
PAULI				*e*pP	pP	14 48 00.5	+0.8
Z52A	Williamson	90.84	41	P	P	14 47 42.2	-0.4
	baz=326						
250A	Grady	90.93	43	P	P	14 47 42.8	-0.2
	baz=325						
250A	Grady	90.93	43	*e*P	P	14 47 42.9	-0.1
	comp=Z,66nm,1.5s						
250A				*e*pP	pP	14 48 02.2	+1.3
HODGE	Hodges	90.98	39	*e*P	P	14 47 42.9	-0.4
	comp=Z,9.8nm,1.1s						
HODGE				*e*pP	pP	14 48 02.1	+1.1
Y54A	Tignall	91.09	39	P	P	14 47 43.5	-0.3
	baz=327,SNR=11						
GOGA	Godfrey	91.10	40	P	P	14 47 42.9	-0.9
	baz=326						
GOGA	Godfrey	91.10	40	*e*P	P	14 47 44.0	+0.2
	comp=Z,14nm,1.4s						
GOGA	Godfrey	91.10	40	*e*P	P	14 47 44.0	+0.2
GOGA				pmax	pmax		
	comp=Z,14nm,1.4s						
Z53A	Monticello	91.16	40	P	P	14 47 43.7	-0.4
	baz=326						
JSC	Jenkinsville	91.39	38	*e*P	P	14 47 44.6	-0.5
	comp=Z,15nm,1.4s						
JSC				*e*pP	pP	14 48 03.4	+0.5
JSC	Jenkinsville	91.39	38	*e*P	P	14 47 44.6	-0.5
JSC				*e**PP	pP	14 48 03.4	+0.5
JSC				pmax	pmax		
	comp=Z,15nm,1.4s						
Z54A	Sparta	91.54	39	P	P	14 47 45.4	-0.4
	baz=326						
351A	Pinckard	91.83	43	P	P	14 47 46.9	-0.3
	baz=325						
ATD	Arta Tunnel	91.90	288	LR	LR	15 34 35.4	
	comp=Z,56nm,18.6s,baz=357,slow=39						
PBRG	Braganca	91.97	340	*e*P	P	14 47 47.0	-0.7
	comp=Z,17nm,1.6s						
PGAV	Gavieira, Arco	92.18	341	*e*P	P	14 47 48.1	-0.7
	comp=Z,27nm,2.0s						
KEST	Kesra	92.22	326	P	P	14 47 48.9	-0.2
	comp=Z,8.2nm,0.7s,baz=306,slow=4.3,SNR=8.4						
KEST				LR	LR	15 33 00.2	
	comp=Z,84nm,21.4s,baz=270,slow=38						
254A	Abbeville	92.40	41	P	P	14 47 49.1	-0.7
	baz=326						
353A	Camilla	92.45	41	P	P	14 47 49.2	-0.9
	baz=326						
POLO	Lamas de Olo	92.63	341	*e*P	P	14 47 50.4	-0.5
	comp=Z,11nm,1.3s						
MVO	Moncorvo	92.64	340	*e*P	P	14 47 50.4	-0.5
	comp=Z,25nm,1.4s						
PVRL	Vila Real	92.70	341	*e*P	P	14 47 50.5	-0.6
	comp=Z,18nm,0.5s						
PTO	Porto	93.04	341	*e*P	P	14 47 51.9	-0.7
ES19	SONSECA Array	93.19	338	*e*P	P	14 47 53.0	-0.5
ESDC	Sonseca Array	93.23	338	P	P	14 47 53.2	-0.4
	comp=Z,8.4nm,0.7s,baz=16,slow=4.0,SNR=48						
ESDC				LR	LR	15 36 44.3	
	comp=Z,43nm,18.7s,baz=80,slow=40						
PVIS	Viseu	93.28	341	*e*P	P	14 47 53.5	-0.3
	comp=Z,22nm,1.3s						
PAB	San Pablo	93.46	338	*e*P	P	14 47 54.0	-0.7
	comp=Z,8.0nm,0.8s						
PAB	San Pablo	93.46	338	*e*P	P	14 47 54.0	-0.7
PAB				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MTE	Manteigas	93.49	340	*e*P	P	14 47 54.5	-0.3
	comp=Z,22nm,1.0s						
PCAS	Casmilo, Conde	94.05	341	*e*P	P	14 47 56.5	-0.8
PMRV	Marv??o	94.37	340	*e*P	P	14 47 59.9	+1.1
	comp=Z,17nm,1.7s						
PESTR	Estremoz	94.95	340	*e*P	P	14 48 01.1	-0.4
	comp=Z,22nm,1.9s						
PBAR	Barrancos	95.47	339	*e*P	P	14 48 03.3	-0.5
	comp=Z,42nm,1.5s						
PCVE	Castro Verde	96.23	340	*e*P	P	14 48 07.0	-0.3
	comp=Z,24nm,1.3s						
PVAQ	Vaqueiros	96.37	340	*e*P	P	14 48 07.6	-0.3
	comp=Z,21nm,1.6s						
MDT	Midelt	99.81	336	LR	LR	15 39 19.2	
	comp=Z,63nm,18.4s,baz=28,slow=39						
TORD	Torodi Ar. Bea	115.29	322	PKP	PKPdf	14 53 19.0	-1.8
	comp=Z,1.0nm,0.5s,baz=30,slow=1.1						
TORD				PP	PP	14 54 16.8	-4.4
	baz=31,slow=4.8						
KOWA	Kowa	116.49	328	PKP	PKPdf	14 53 22.8	-0.3
	comp=Z,2.2nm,0.5s,baz=33,slow=4.6,SNR=5.1						
KOWA				PP	PP	14 54 27.8	-1.7
	comp=Z,8.8nm,0.9s,baz=22,slow=8.3,SNR=6.5						
VNDA	Vanda	120.87	176	PKP	PKPdf	14 53 29.3	-0.3
	comp=Z,0.5nm,1.0s,baz=328,slow=3.2,SNR=4.2						
DBIC	Dimbokro	123.92	325	PKP	PKPdf	14 53 37.2	-0.2
	comp=Z,4.0nm,0.6s,baz=27,slow=5.0,SNR=7.4						
DBIC				PP	PP	14 55 17.7	-2.8
	comp=Z,6.4nm,1.0s,baz=16,slow=9.7,SNR=3.7						
QSPA	South Pole Qui	132.98	180	PKP	PKPdf	14 53 52.3	-0.7
	comp=Z,2.7nm,0.9s,baz=7.2,slow=1.3,SNR=5.2						
SAML	Samuel	137.13	46	*e*PKPdf	PKPdf	14 54 02.4	+0.1
LPAZ	La Paz	140.17	58	PKhKP	PKPpre	14 53 59.4	
	comp=Z,1.2nm,0.6s,baz=336,slow=5.5,SNR=6.1						
LPAZ				PKP	PKPdf	14 54 09.4	+0.8
	comp=Z,2.3nm,0.8s,baz=351,slow=6.6,SNR=7.8						
LPAZ	La Paz	140.17	58	*e*PKPpre	PKPpre	14 54 01.4	
LPAZ				PKP	PKPdf	14 54 09.4	+0.8
LPAZ	La Paz	140.17	58	*e*PKHKP	PKPpre	14 54 01.4	
LPAZ						14 54 09.4	
RCBR	Riachuelo	142.68	4	PKP	PKPdf	14 54 12.2	-0.3
	comp=Z,11nm,0.4s,baz=25,slow=0.4,SNR=3.0						
GO02	Mina Guanaco	145.49	70	*e*PKPdf	PKPab	14 54 18.3	+0.5
GO03	Copiap	146.56	74	*e*PKPdf	PKPdf	14 54 19.4	+0.5
LCO	Las Campanas	147.08	77	*e*PKPbc	PKPbc	14 54 22.6	+0.5
LCO	Las Campanas	147.08	77	*e*PKP2	PKPbc	14 54 22.6	+0.5
GO04	Tololo Observa	147.67	79	*e*PKPbc	PKPbc	14 54 23.7	0.0
SNAA	Sanae	147.82	198	PKP	PKPbc	14 54 23.1	+0.5
SNAA	Sanae	147.82	198	PKP	PKPdf	14 54 19.5	-0.1
	comp=Z,4.3nm,0.8s,baz=152,slow=3.3,SNR=12						
SNAA				PKPbc	PKPbc	14 54 22.8	+0.2
	comp=Z,4.3nm,0.8s,baz=98,slow=2.9,SNR=18						
SNAA	Sanae	147.82	198	PKIKP	PKPdf	14 54 19.5	-0.1
SNAA						14 54 22.8	
SNAA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SNAA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
VNA3	Neumayer Olymp	149.56	195	PKP	PKPbc	14 54 26.2	-0.7
VNA1	Neumayer--Stat	149.76	196	PKP	PKPbc	14 54 28.3	+0.9
BDFB	Brasilia	149.83	29	*e*PKPbc	PKPbc	14 54 29.6	+0.2
PLCA	Paso Flores	152.51	98	PKP	PKPdf	14 54 27.7	-0.2
	comp=Z,1.0nm,0.8s,baz=326,slow=3.6,SNR=2.0						
PLCA				PKPbc	PKPbc	14 54 34.7	-0.2
	comp=Z,2.4nm,0.8s,baz=319,slow=3.2,SNR=5.5						
CPUP	Villa Florida	154.31	57	PKPbc	PKPbc	14 54 39.2	+0.1
	comp=Z,6.5nm,1.1s,baz=296,slow=1.5,SNR=4.9						
CPUP				PKPab	PKPab	14 54 53.9	+0.5
	comp=Z,9.6nm,0.9s,baz=322,slow=4.2,SNR=11						

DDA ***15*** *14:40:01.3, 38.°17N×38.°48E, h7^{km}, Ml2.9*
ISK ***15*** *14:40:01.8, 38.°14N×38.°45E, h12^{km}, ML2.3/2*
ISCJB ***15*** *14:40:02.2±0.5, 38.°15N±0.°03×38.°44E±0.°04, h11^{km}±5^{km}, Error ellipse: s-maj=6.1km s-min=4.0km az=156.7*
CSEM ***15*** *14:40:02.0±0.2, 38.°18N×38.°45E, h15^{km}, ML2.3, Error ellipse: s-maj=4.0km s-min=3.0km az=67.0*
ISC 15 14:40:02.1±0.9**, 38.°17N**±0.°02×**38.°43E**±0.°03**, h16**^{km}±7^{km}**, n22,** σ**0.ˢ56**/38**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MALT	Malatya	0.14	360	PG	Pb	14 40 06.3	-0.3
MALT				SG	Sg	14 40 09.3	+0.4
MALT	Malatya	0.14	360	*e*Pg	Pb	14 40 06.3	-0.3
MALT				*e*Sg	Sg	14 40 09.3	+0.4
AKCD	Akcadag	0.42	288	*i* P	Pg	14 40 10.8	+0.2
AKCD				*i* S	Sb	14 40 17.3	-0.1
AKCD	Akcadag	0.42	288	P	Pg	14 40 10.8	+0.2
AKCD				S	Sb	14 40 17.3	-0.1
SVRC	Sivrice-ELAZID	0.72	73	PG	Pb	14 40 15.9	-0.5
SVRC				SG	Sb	14 40 27.2	+1.0
SVRC	Sivrice-ELAZID	0.72	73	*e*Pg	Pb	14 40 15.9	-0.5
SVRC				*e*Sg	Sb	14 40 27.2	+1.0
URFA	Urfa	0.79	157	PG	Pg	14 40 17.1	-0.4
URFA				SG	Sb	14 40 27.8	-0.2
URFA	Urfa	0.79	157	*e*Pg	Pg	14 40 17.1	-0.4
URFA				*e*Sg	Sb	14 40 27.8	-0.2
HEKM	Malatya_Hekimh	0.80	333	*i* P	Pg	14 40 17.0	-0.7
HEKM				*i* S	Sb	14 40 28.8	+0.3
HEKM	Malatya_Hekimh	0.80	333	P	Pg	14 40 17.0	-0.7
HEKM				S	Sb	14 40 28.8	+0.3
PTK	Pertek	1.05	46	PG	Pb	14 40 21.9	-0.1
PTK	Pertek	1.05	46	*e*Pg	Pb	14 40 21.9	-0.1
SANL	SANLIURFA_Merk	1.09	156	*i* P	Pb	14 40 22.4	-0.2
SANL				*i* S	Sg	14 40 36.9	-0.5
SANL	SANLIURFA_Merk	1.09	156	P	Pb	14 40 22.4	-0.2
SANL				S	Sg	14 40 36.9	-0.5
KEMA	Kemaliye	1.10	3	*i* P	Pb	14 40 21.5	-1.4
KEMA				*i* S	Sn	14 40 38.6	+0.7
KEMA	Kemaliye	1.10	3	P	Pb	14 40 21.5	-1.4
KEMA				S	Sn	14 40 38.6	+0.7
SURC	SANLIURFA_SURC	1.29	173	*i* P	Pn	14 40 25.8	+0.2
SURC				*i* S	Sb	14 40 42.8	+0.3
SURC	SANLIURFA_SURC	1.29	173	P	Pn	14 40 25.8	+0.2
SURC				S	Sb	14 40 42.8	+0.3
KMRS	Kahramanmaras	1.38	242	PN	Pb	14 40 27.6	0.0
KMRS	Kahramanmaras	1.38	242	*e*Pn	Pb	14 40 27.6	0.0
MAZI	Mazidag	1.75	113	PN	Pn	14 40 32.2	+0.3
MAZI	Mazidag	1.75	113	*e*Pn	Pn	14 40 32.2	+0.3

IDC 15 14:44:29.1±8.1**, 22.°88N×11.°83W, h0**^{km}**, mb3.5**/2**, mb1 3.7**/4**, mb1mx3.4**/58**, mbtmp3.6**/4**, ML3.7**/1**, Error ellipse: s-maj=194.8km s-min=36.2km az=71.0, Mauritania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOWA	Kowa	11.14	137	Pn	Pn	14 47 09.8	+0.1
	0.5nm,0.3s,baz=318,slow=12,SNR=5.1						
KOWA				Sn	Sn	14 49 11.5	-3.6
	0.3nm,0.3s,baz=103,slow=8.4,SNR=3.6						
I11CV	MAIO ISLAND IN	13.14	237	*i*		16 00 40.0	
	baz=50,slow=303,SNR=0.7						
TORD	Torodi Ar. Bea	16.08	125	Pn	Pn	14 48 15.8	-0.8
	baz=314,slow=13						
TORD				Sn	Sn	14 51 10.4	-5.3
	baz=304,slow=34						
I42PT	GRACIOSA ISLAN	21.21	323	*i*		16 48 20.0	
	baz=141,slow=316,SNR=2.0						
GERES	GERESS Array B	32.86	32	P	P	14 51 04.3	-0.4
	0.3nm,0.4s,baz=220,slow=9.0,SNR=3.2						
MKAR	Makanchi Array	76.39	45	P	P	14 56 20.9	+0.5
	0.3nm,0.5s,baz=289,slow=6.0,SNR=5.4						

IDC ***15*** *14:54:35.7±1.0, 7.°67S×128.°92E, h0^{km}, mb3.9/8, mb1 4.1/11, mb1mx3.9/47, mbtmp4.0/11, ML4.2/3, MS3.5/3, Ms1 3.5/3, ms1mx2.8/51, Error ellipse: s-maj=67.9km s-min=16.4km az=70.0*
ISCJB ***15*** *14:54:36.5±0.4, 7.°99S±0.°03×128.°53E±0.°06, h10^{km}, mb3.9/9, MS3.5/3, Error ellipse: s-maj=9.1km s-min=3.6km az=179.6*
NEIC ***15*** *14:54:46.0±0.9, 8.°03S×128.°83E, h98^{km}±11^{km}, mb4.2/5, Error ellipse: s-maj=11.4km s-min=9.0km az=70.0*
DJA ***15*** *14:54:47.4±0.2, 8°S±2°×12°9E±°, h73^{km}±27^{km}, M4.5/13, mb4.5/9, mB4.9/3, MLv4.5/13, Mw(mB)4.2/3*
ISC 15 14:54:39.2±0.6**, 8.°08S**±0.°04×**128.°39E**±0.°04**, h10**^{km}**, n44,** σ**2.ˢ21**/39**, mb4.0**/9**, MS3.7**/3**, Timor Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	Saumlaki	2.88	88	P	Pn	14 55 26.1	+0.9
SAUI				S	Sn	14 55 59.4	-0.6
SAUI				Sg	Sg	14 56 13.5	+1.6
BNDI	Bandanaira	3.84	23	P	Pn	14 55 39.7	+1.3
BNDI				S	Sn	14 56 20.0	-3.6
BNDI				Sg	Sb	14 56 38.8	+5.1
AAI	Ambon	4.37	357	P	Pn	14 55 47.5	+1.9
AAI				S	Sn	14 56 34.2	-2.4
AAI				Sg	Sg	14 57 00.0	+0.5
SOEI	Soe	4.40	247	P	Pb	14 55 56.7	0.0
SOEI				S	Sb	14 56 52.2	+2.2
SOEI				Sg	Sg	14 56 54.5	-6.2
SOEI	Soe	4.40	247	*e*Pn	Pb	14 55 56.8	0.0
MSAI	Masohi	4.73	7	Sg	Sg	14 57 08.6	-2.7
NLAI	Namlea	4.98	345	P	Pn	14 55 55.1	+1.1
BATI	Baumata	5.12	245	P	Pb	14 56 07.2	-1.8
BATI				S	Sb	14 57 08.3	-2.4
BATI				Sg	Sg	14 58 09.2	+45
MTN	Manton Dam	5.45	151	*e*Pn	Pn	14 56 05.1	+4.6
MMRI	Maumere	6.11	264	*e*Pn	Pn	14 56 17.2	+7.6
FAKI	Fak Fak	6.40	37	P	Pn	14 56 13.1	-0.6
FAKI	Fak Fak	6.40	37	*e*Pn	Pn	14 56 13.4	-0.3
EDFI	Ende, Flores	6.66	264	P	Pn	14 56 29.2	+12
LBMI	Labuha	7.45	353	P	Pn	14 56 31.6	+3.6
SWI	Sorong	7.72	22	P	Pn	14 56 33.7	+2.0
RKPI	Ransiki, Papua	8.71	42	P	Pn	14 56 44.8	-0.5
WBSI	Waikabubak, Su	9.03	259	P	Pn	14 57 00.2	+10
FITZ	Fitzroy Crossi	10.31	195	Pn	Pn	14 57 11.6	+4.3
	2.1nm,0.3s,baz=8.6,slow=9.7,SNR=67						
FITZ				Sn	Sn	14 59 02.1	-0.9
	3.9nm,0.3s,baz=69,slow=18,SNR=12						
PLAI	Plampang	10.53	265	P	Pn	14 57 19.3	+9.1
WRAB	Tennant Creek	13.12	155	*e*Pn	Pn	14 57 46.3	+0.6
WR1	Warramunga Arr	13.13	155	*e*Pn	Pn	14 57 45.5	-0.4
WRA	Warramunga Arr	13.13	155	Pn	Pn	14 57 45.5	-0.4
	1.1nm,0.3s,baz=341,slow=12,SNR=32						
WRA				Sn	Sn	15 00 01.9	-10
	1.9nm,0.3s,baz=328,slow=22,SNR=8.7						
WB2	Warramunga Arr	13.13	155	*e*Pn	Pn	14 57 45.4	-0.5
MBWA	Marble Bar	15.46	212	*e*Pn	Pn	14 58 20.6	+3.1
	22nm,1.2s						
COEN	Coen	15.64	113	*e*Pn	Pn	14 58 15.0	-4.8
	30nm,1.3s						
AS31	Alice Springs	16.38	162	*e*Pn	Pn	14 58 28.7	-0.7
	4.1nm,0.3s						
ASAR	Alice Springs	16.38	162	Pn	Pn	14 58 29.1	-0.2
	0.6nm,0.3s,baz=335,slow=9.2,SNR=41						
ASAR				Sn	Sn	15 01 19.9	-11
	1.2nm,0.3s,baz=319,slow=22,SNR=7.7						
AS01	Alice Springs	16.39	162	*e*Pn	Pn	14 58 28.6	-0.9
SBUM	Sibu	19.22	302	*e*P	P	14 59 04.8	+1.2
	19nm,1.9s						
TGY	Tagaytay City	23.25	341	LR	LR	15 09 35.2	
	comp=Z,48nm,19.6s,baz=154,slow=39						
STKA	Stephens Creek	26.68	154	P	P	15 00 18.6	+0.1
	2.3nm,1.0s,baz=316,slow=11,SNR=5.0						
CMAR	Chiang Mai Arr	39.24	312	P	P	15 02 07.7	-0.4
	0.6nm,0.6s,baz=137,slow=6.5,SNR=4.6						
SONA0	Songino Array	58.98	343	*e*P	P	15 04 35.2	-3.8
SONM	Songino Array	58.98	343	P	P	15 04 35.2	-3.8
	0.7nm,0.6s,baz=165,slow=7.4,SNR=4.3						
MK32	Makanchi Array	68.27	328	*e*P	P	15 05 38.5	-1.8
MKAR	Makanchi Array	68.27	328	P	P	15 05 38.5	-1.8
	0.5nm,0.4s,baz=122,slow=7.7,SNR=7.7						
VNDA	Vanda	71.58	173	P	P	15 06 00.4	+0.2
	0.4nm,0.6s,baz=304,slow=4.7,SNR=5.7						
VNDA				LR	LR	15 37 30.0	
	comp=Z,42nm,18.1s,baz=330,slow=36						
VNDA	Vanda	71.58	173	*e*P	P	15 06 01.1	+0.9
ZALV	Zalesovo Beam	71.85	335	P	P	15 05 59.1	-3.0
	0.8nm,0.4s,baz=141,slow=7.3,SNR=3.0						
ZAA1	Zalesovo Array	71.86	335	*e*P	P	15 05 59.1	-3.0
KURBB	Kurchatov Arra	72.60	329	P	P	15 06 04.4	-2.3
	1.9nm,0.7s,baz=128,slow=4.9,SNR=23						
KURK	Kurchatov	72.61	329	*e*P	P	15 06 04.3	-2.4
	4.0nm,0.9s						
BVAR	Borovoye Array	78.13	328	P	P	15 06 35.9	-2.6
	1.1nm,0.8s,baz=119,slow=5.6,SNR=6.2						
OPO	Ambohidratompo	79.17	253	LR	LR	15 36 15.3	
	comp=Z,45nm,20.3s,baz=9.0,slow=31						

ISK ***15*** *15:05:02.9, 37.°24N×28.°16E, h5^{km}, ML2.5/4*
ISCJB ***15*** *15:05:03.6±0.5, 37.°23N±0.°03×28.°22E±0.°03, h0^{km}, Error ellipse: s-maj=4.3km s-min=3.8km az=33.4*
CSEM ***15*** *15:05:03.7±0.2, 37.°24N×28.°22E, h1^{km}, ML2.5, Error ellipse: s-maj=4.3km s-min=3.5km az=53.0, Suspected Mining explosion.*
DDA ***15*** *15:05:03.1, 37.°20N×28.°21E, h7^{km}, Ml2.4, Suspected Mining explosion.*
ISC 15 15:05:04.1±1.0**, 37.°22N**±0.°02×**28.°19E**±0.°02**, h0**^{km}**, n31,** σ**0.ˢ78**/47**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	Yerkesik	0.11	142	PG	Pg	15 05 06.6	+0.4
YER	Yerkesik	0.11	142	*e*Pg	Pg	15 05 06.6	+0.4
MLSB	Milas	0.34	282	PG	Pg	15 05 10.5	-0.1
MLSB	Milas	0.34	282	*e*Pg	Pg	15 05 10.5	-0.1
TURN	Turunc	0.48	137	PG	Pg	15 05 12.7	-0.6
TURN	Turunc	0.48	137	*i* P	Pg	15 05 12.1	-1.2
TURN				*i* S	Sg	15 05 18.4	-1.0
TURN	Turunc	0.48	137	P	Pg	15 05 12.1	-1.2
TURN	Turunc	0.48	137	*e*Pg	Pg	15 05 12.7	-0.6
TURN				S	Sg	15 05 18.4	-1.0
AYDN	Tasoluk	0.50	330	*i* P	Pg	15 05 13.5	-0.2
AYDN				*i* S	Sg	15 05 21.1	+0.8
AYDN	Tasoluk	0.50	330	P	Pg	15 05 13.5	-0.2
AYDN				S	Sg	15 05 21.1	+0.8
DALY	Dalyan (Mu˜la	0.55	138	PG	Pg	15 05 14.9	+0.3
DALY				SG	Sb	15 05 24.9	0.0
DALY	Dalyan (Mu˜la	0.55	138	*i* P	Pg	15 05 12.8	-1.8
DALY				*i* S	Sb	15 05 25.6	+0.7
DALY	Dalyan (Mu˜la	0.55	138	P	Pg	15 05 12.8	-1.8
DALY	Dalyan (Mu˜la	0.55	138	*e*Pg	Pg	15 05 14.9	+0.3
DALY				*e*Sg	Sb	15 05 24.9	0.0
DALY				S	Sb	15 05 25.6	+0.7
TAVA	DENIZLI_Tavas	0.62	67	*i* P	Pg	15 05 16.1	+0.1
TAVA				*i* S	Sg	15 05 24.2	+0.1
TAVA	DENIZLI_Tavas	0.62	67	P	Pg	15 05 16.1	+0.1
TAVA				S	Sg	15 05 24.2	+0.1
DAT	Datca	0.70	225	PG	Pg	15 05 17.3	-0.2
DAT	Datca	0.70	225	*i* S	Pg	15 05 17.3	-0.2
DAT				*i* S	Sb	15 05 29.3	-0.1
DAT	Datca	0.70	225	*e*Pg	Pg	15 05 17.3	-0.2
DAT				S	Sb	15 05 29.3	-0.1
BODT	Bodrum	0.72	257	PG	Pg	15 05 17.6	-0.4
BODT				SG	Sb	15 05 29.1	-1.0
BODT	Bodrum	0.72	257	*e*Pg	Pg	15 05 17.6	-0.4
BODT				*e*Sg	Sb	15 05 29.1	-1.0
AYDB	Zeytinkoy-Aydi	0.76	342	PG	Pg	15 05 18.4	-0.3
AYDB	Zeytinkoy-Aydi	0.76	342	*e*Pg	Pg	15 05 18.4	-0.3
ARG	Arkhangelos	1.01	183	PG	Pg	15 05 23.6	+0.2
ARG	Arkhangelos	1.01	183	*e*Pg	Pg	15 05 23.6	+0.2
MANT	Manisa	1.30	13	*i* P	Pg	15 05 27.2	-1.8
MANT				*i* S	Sn	15 05 49.0	+1.1
MANT	Manisa	1.30	13	P	Pg	15 05 27.2	-1.8
MANT				S	Sn	15 05 49.0	+1.1
KULA	Kula-Manisa	1.34	16	PN	Pg	15 05 29.3	-0.5
KULA	Kula-Manisa	1.34	16	*e*Pn	Pg	15 05 29.3	-0.5
AKAS	Kas	1.50	131	PN	Pg	15 05 32.9	0.0
AKAS	Kas	1.50	131	*e*Pn	Pg	15 05 32.9	0.0

NSSP ***15*** *15:09:12.4, 38.°93N×44.°50E, h7^{km}, Ms3.1*
DDA ***15*** *15:09:12.1, 38.°99N×44.°51E, h7^{km}, Ml2.9*
TEH ***15*** *15:09:13.7, 38.°96N×44.°35E, h1^{km}, ML2.9*
ISK ***15*** *15:09:14.6, 39.°05N×44.°38E, h5^{km}, ML3.0/2*
CSEM ***15*** *15:09:14.4±0.3, 38.°92N×44.°36E, h2^{km}, ML3.0, Error ellipse: s-maj=6.9km s-min=6.6km az=170.0*
ATA ***15*** *15:09:14.3±1.4, 39.°03N×44.°40E, h4^{km}±23^{km}, ML3.7, MW3.7*
ISC 15 15:09:14.8±1.1**, 38.°98N**±0.°02×**44.°37E**±0.°02**, h9**^{km}±9^{km}**, n44,** σ**1.ˢ57**/69**, 1C-2D, Turkey-Iran border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLDR	Caldiran	0.39	295	PG	Pg	15 09 22.4	-0.2
CLDR				SG	Sb	15 09 29.4	-0.9
CLDR	Caldiran	0.39	295	*i* P	Pg	15 09 21.9	-0.6
CLDR				*i* S	Sb	15 09 29.8	-0.5
CLDR	Caldiran	0.39	295	P	Pg	15 09 22.0	-0.6
CLDR	Caldiran	0.39	295	*e*Pg	Pg	15 09 22.4	-0.2
CLDR				*e*Sg	Sb	15 09 29.4	-0.9
VMUR	Van-Muradiye	0.62	271	*i* P	Pg	15 09 26.4	-0.6
VMUR				*i* S	Sb	15 09 36.7	-0.3
VMUR	Van-Muradiye	0.62	271	P	Pg	15 09 26.4	-0.6
VMUR				S	Sb	15 09 36.7	-0.3
DYDN	Diyadin	0.77	317	*e*P	Pb	15 09 29.5	-1.1
DYDN				*e*S	Sn	15 09 41.9	-2.2
DYDN				IAML		15 09 50.7	
	comp=Z,152nm,0.4s						
VANB	Van	0.86	244	PG	Pn	15 09 33.5	+0.2
VANB				SG	Sn	15 09 47.6	+1.5
TVAN	Van	0.88	239	*i* P	Pg	15 09 29.8	-2.0
TVAN				*i* S	Sn	15 09 47.9	+1.2
TVAN	Van	0.88	239	P	Pg	15 09 29.8	-2.0
ARRZ	Ararat	0.91	16	*e*P	Pn	15 09 37.0	+3.1
ARRZ				*e*S	Sn	15 09 52.0	+4.8
IGDI	IGDIR	0.91	346	*e*P	Pn	15 09 32.1	-1.9
IGDI				*e*S	Sb	15 09 43.8	-1.5
IGDI				IAML		15 09 46.4	
	comp=Z,43nm,0.4s						
IGDI	IGDIR	0.91	346	*i* P	Pg	15 09 29.5	-2.9
IGDI				*i* S	Sb	15 09 43.8	-1.5
TASB	TASBURUN-IGDIR	1.01	354	PG	Pn	15 09 33.7	-1.6
TASB	TASBURUN-IGDIR	1.01	354	*e*Pg	Pn	15 09 33.7	-1.6
ISHB	Shabestar	1.20	125	*e*Pg	Pn	15 09 35.2	-2.9
ISHB				*e*Sg	Sb	15 09 52.5	-1.1
ISHB				*e*		15 09 56.2	
	comp=Z,4µm,0.2s						
AGRB	Hanur-Agry	1.22	299	PN	Pg	15 09 39.2	+0.8
AGRB				SN	Sn	15 09 55.9	+0.7
AGRB	Hanur-Agry	1.22	299	*e*Pn	Pg	15 09 39.2	+0.8
AGRB				*e*Sn	Sn	15 09 55.9	+0.7
GEVA	Gevas	1.23	237	*e*P	Pn	15 09 38.4	0.0
GEVA				IAML		15 10 05.2	
	comp=Z,95nm,0.8s						

GEVA	**Gevas**	**1.23**	**237**	*i* P	**Pn**	**15 09 37.5**	**-0.9**
GEVA				*i* S	**Sn**	**15 09 56.1**	**+0.9**
GEVA	**Gevas**	**1.23**	**237**	P	**Pn**	**15 09 37.5**	**-0.9**
GEVA				S	**Sn**	**15 09 56.1**	**+0.9**
ADCV	**BITLIS_Adilcev**	**1.30**	**263**	*i* P	**Pn**	**15 09 37.8**	**-1.6**
ADCV				*i* S	**Sg**	**15 10 00.9**	**+4.3**
ADCV	**BITLIS_Adilcev**	**1.30**	**263**	P	**Pn**	**15 09 37.8**	**-1.6**
YOVA	**Hakkari_Yˆ…kse**	**1.39**	**183**	*i* P	**Pn**	**15 09 39.6**	**-1.1**
YOVA				*i* S	**Sg**	**15 10 01.7**	**+2.0**
YOVA	**Hakkari_Yˆ…kse**	**1.39**	**183**	P	**Pn**	**15 09 39.6**	**-1.1**
ITBZ	**Tabriz**	**1.58**	**118**	*e*Pg	**Pn**	**15 09 42.8**	**-0.4**
ITBZ				*e*		15 09 48.0	
	comp=Z,1μm,0.2s						
GRS	**Goris**	**1.61**	**71**	⇓*i*P	**Pg**	**15 09 45.0**	**-0.7**
GRS				⇑*i*S	**Sg**	**15 10 07.0**	**+0.5**
GRS	**Goris**	**1.61**	**71**	⇓P	**Pg**	**15 09 45.0**	**-0.7**
GRS				S	**Sg**	**15 10 07.0**	**+0.5**
DIGO	**Kars**	**1.62**	**332**	*e*P	**Pg**	**15 09 45.5**	**-0.5**
DIGO				*i* Pg	**Pb**	**15 09 47.1**	**+1.9**
DIGO	**Kars**	**1.62**	**332**	*i* P	**Pg**	**15 09 45.6**	**-0.5**
DIGO	**Kars**	**1.62**	**332**	P	**Pg**	**15 09 45.6**	**-0.5**
EATA	**Eleskirt**	**1.70**	**302**	*e*P	**Pg**	**15 09 46.8**	**-0.7**
EATA	**Eleskirt**	**1.70**	**302**	*i* P	**Pg**	**15 09 46.5**	**-1.0**
EATA				*i* S	**Sg**	**15 10 08.6**	**-1.0**
EATA	**Eleskirt**	**1.70**	**302**	P	**Pg**	**15 09 46.5**	**-1.0**
EATA				S	**Sg**	**15 10 08.6**	**-1.0**
EAK	**Akyaka**	**1.80**	**341**	*i* P	**Pg**	**15 09 50.0**	**+0.7**
EAK				IAML		15 10 30.8	
	comp=Z,65nm,0.9s						
EKAR	**Karacoban**	**1.82**	**279**	*e*P	**Pg**	**15 09 50.0**	**+0.3**
EKAR				IAML		15 10 27.1	
	comp=Z,31nm,0.7s						
CUKT	**Cukurca**	**1.83**	**199**	PN	**Pb**	**15 09 49.5**	**+0.8**
GURO	**Guroymak-BITLI**	**1.88**	**257**	PN	**Pb**	**15 09 49.5**	**+0.1**
GURO	**Guroymak-BITLI**	**1.88**	**257**	*e*Pn	**Pb**	**15 09 49.5**	**+0.1**
HOMI	**Horasan**	**2.18**	**300**	*e*P	**Pg**	**15 09 56.1**	**-0.6**
IHRS	**Heris**	**2.19**	**107**	*e*Pn	**Pn**	**15 09 52.2**	**+0.5**
IHRS				*e*Sg	**Sb**	**15 10 22.0**	**-0.2**
IHRS				*e*		15 10 24.2	
	comp=Z,938nm,0.2s						
ERZM	**Erzurum**	**2.50**	**293**	*e*P	**Pb**	**15 10 00.2**	**+0.1**
DGRG	**David-gareji**	**2.58**	**17**	*e*P	**Pg**	**15 10 01.4**	**-2.9**
DGRG	**David-gareji**	**2.58**	**17**	P	**Pg**	**15 10 02.3**	**-2.0**
DGRG				S	**Sg**	**15 10 41.5**	**+3.7**

*NIED **15** 15:19:00,27°.10N×143°.40E,h8^{km},Mw4.0 Best double couple: M$_0$1.06000×10^{15} NP1:φ$_s$299.00000°,δ40.00000°, λ-114.00000°. NP2:φ$_s$149.00000°,δ54.00000°, λ-71.00000°.*

*IDC **15** 15:19:30.4±0.6,26°.94N×143°.70E,h0^{km},mb3.8/16, mb1 3.9/20,mb1mx3.8/64,mbtmp3.8/20,ML3.5/3,MS2.8/5, Ms1 2.9/5,ms1mx2.5/62,Error ellipse: s-maj=16.9km s-min=14.8km az=87.0*

*NEIC **15** 15:19:32.2±0.4,26°.91N×143°.61E,h10^{km},mb4.6/3,Error ellipse: s-maj=9.8km s-min=8.4km az=218.0*

*JMA **15** 15:19:34.9,27°.09N×143°.38E,h90^{km},M4.1*

*ISCJB **15** 15:19:35.2±0.5,27°.26N±0°.04×143°.49E±0°.05,h33^{km}, mb4.0/20,MS3.0/2,Error ellipse: s-maj=7.4km s-min=5.3km az=43.2*

ISC 15 15:19:36.7±0.7,27°.13N±0°.07×143°.50E±0°.07,h35^{km},n57, σ1^{s}.67/60,mb3.8/20,Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	**1.17**	**269**	Pn	**Pn**	**15 19 55.8**	**-0.7**
	168nm,0.3s,baz=90,slow=20,SNR=55						
JCJ				Sn	**Sn**	**15 20 10.4**	**-0.8**
	baz=90,slow=20						
CBIJ	**Chichi jima**	**1.17**	**269**	*e*Pg	**Pn**	**15 19 55.5**	**-1.0**
CBIJ				Sn	**Sn**	**15 20 10.4**	**-0.8**
CBIJ	**Chichi jima**	**1.17**	**269**	P	**Pn**	**15 19 55.6**	**-1.0**
JHHJ	**Haha-jima-NKT**	**1.28**	**248**	P	**Pn**	**15 19 56.7**	**-1.3**
JHHJ				*e*S	**Sn**	**15 20 13.1**	**-0.8**
JHJ	**Hachijo jima 2**	**6.78**	**333**	Pn	**Pn**	**15 21 10.0**	**-3.7**
	2.0nm,0.3s,baz=78,slow=20,SNR=2.0						
JHJ				Sn	**Sn**	**15 22 25.9**	**-3.7**
	8.2nm,0.3s,baz=73,slow=19,SNR=2.9						
BSO1	**Boso 1**	**7.81**	**345**	P	**Pn**	**15 21 25.9**	**-1.4**
JHU	**Hanno**	**9.41**	**339**	P	**Pn**	**15 21 49.0**	**-0.8**
JHU				*e*S	**Sn**	**15 23 33.6**	**-0.7**
JRY	**Ryogami san**	**9.69**	**337**	P	**Pn**	**15 21 53.9**	**+0.3**
JHO	**Hitachi**	**9.78**	**346**	P	**Pn**	**15 21 52.4**	**-2.4**
JAG	**Ashikaga**	**9.89**	**341**	P	**Pn**	**15 21 55.1**	**-1.2**
MJAR	**Matsushiro Arr**	**10.40**	**336**	Pn	**Pn**	**15 22 03.2**	**-0.2**
	1.1nm,0.3s,baz=162,slow=11,SNR=20						
MJAR				Sn	**Sn**	**15 23 54.5**	**-4.3**
	0.2nm,0.3s,baz=138,slow=9.8,SNR=2.5						
MAJO	**Matsushiro**	**10.41**	**336**	*e*Pn	**Pn**	**15 22 03.2**	**-0.2**
MAJO				*e*Sn	**Sn**	**15 23 54.5**	**-4.3**
MAT	**Matsushiro**	**10.41**	**336**	P	**Pn**	**15 22 03.1**	**-0.3**
MAT				*e*S	**Sn**	**15 23 57.8**	**-1.0**
MJB9	**Matsu-Tunnel**	**10.41**	**336**	*e*Pn	**Pn**	**15 22 03.4**	**-0.1**
JOW	**Kunigami**	**13.58**	**272**	LR	LR	15 27 50.9	
	comp=Z,33nm,19.4s,baz=304,slow=36						
KSRS	**Korea Array**	**16.69**	**312**	Pn	**P**	**15 23 30.6**	**+0.8**
	0.2nm,0.3s,baz=124,slow=10,SNR=5.1						
KSRS				LR	LR	15 30 09.4	
	comp=Z,20nm,19.7s,baz=215,slow=38						
KS15	**Wonju Array Si**	**16.71**	**312**	*e*Pn	**Pn**	**15 23 28.2**	**+0.1**
KSAR	**Wonju Array Be**	**16.71**	**312**	Pn	**P**	**15 23 30.6**	**+0.6**
KS01	**Wonju Array Si**	**16.73**	**312**	*e*Pn	**Pn**	**15 23 28.4**	**+0.2**
ASAJ	**Asahikawa**	**16.97**	**358**	P	**Pn**	**15 23 30.1**	**-1.2**
	0.2nm,0.3s,baz=221,slow=11,SNR=3.8						
ASAJ				LR	LR	15 30 40.4	
	comp=Z,22nm,20.4s,baz=165,slow=39						
ASAJ	**Asahikawa**	**16.97**	**358**	*e*Pn	**Pn**	**15 23 31.9**	**+0.7**
	17nm,1.5s						
USRK	**Ussuriysk Ar.**	**19.40**	**334**	P	**Pn**	**15 24 02.4**	**+1.5**
	baz=163,slow=10						
H11N2	**WAKE ISLAND Hy**	**22.68**	**104**	T	T	15 46 38.0	
	baz=297,slow=75,SNR=3.0						
H11N1	**WAKE ISLAND Hy**	**22.68**	**104**	T	T	15 46 41.4	
	baz=297,slow=75,SNR=3.4						
H11N3	**WAKE ISLAND Hy**	**22.69**	**104**	T	T	15 46 40.4	
	baz=297,slow=75,SNR=4.0						
KLR	**Kul'dur**	**23.87**	**341**	P	**P**	**15 24 48.4**	**+1.7**
	0.2nm,0.5s,baz=140,slow=6.6,SNR=8.3						
TGY	**Tagaytay City**	**24.72**	**243**	LR	LR	15 34 38.1	
	comp=Z,53nm,18.8s,baz=164,slow=37						
SONA0	**Songino Array**	**35.51**	**316**	*e*P	**P**	**15 26 30.7**	**+0.6**
SONM	**Songino Array**	**35.51**	**316**	P	**P**	**15 26 30.7**	**+0.6**
	0.7nm,0.5s,baz=114,slow=7.1,SNR=3.8						
CMAR	**Chiang Mai Arr**	**41.79**	**268**	P	**P**	**15 27 23.2**	**+0.2**
	0.7nm,0.6s,baz=58,slow=7.5,SNR=7.2						
CMAR				LR	LR	15 44 42.3	
	comp=Z,13nm,18.9s,baz=225,slow=36						
WR1	**Warramunga Arr**	**47.62**	**192**	*e*P	**P**	**15 28 07.1**	**-2.3**
	16nm,1.2s						
WRA	**Warramunga Arr**	**47.62**	**192**	P	**P**	**15 28 07.1**	**-2.3**
	2.1nm,0.5s,baz=12,slow=8.7,SNR=12						
FITZ	**Fitzroy Crossi**	**48.18**	**203**	P	**P**	**15 28 12.6**	**-1.1**
	3.8nm,0.9s,baz=29,slow=11,SNR=6.2						
ZALV	**Zalesovo Beam**	**50.23**	**319**	P	**P**	**15 28 30.3**	**+1.2**
	1.0nm,0.3s,baz=114,slow=7.0,SNR=3.0						
ZAA1	**Zalesovo Array**	**50.23**	**319**	*e*P	**P**	**15 28 30.3**	**+1.2**
ASAR	**Alice Springs**	**51.34**	**191**	P	**P**	**15 28 34.9**	**-2.8**
	0.4nm,0.8s,baz=360,slow=5.5,SNR=9.6						
MK32	**Makanchi Array**	**51.36**	**310**	*e*P	**P**	**15 28 38.6**	**+0.8**
MKAR	**Makanchi Array**	**51.36**	**310**	P	**P**	**15 28 38.6**	**+0.8**
	0.2nm,0.3s,baz=86,slow=11,SNR=6.0						
KDAK	**Kodiak Island**	**53.64**	**37**	P	**P**	**15 28 53.1**	**-1.2**
	baz=240,slow=20						
KDAK	**Kodiak Island**	**53.64**	**37**	*e*P	**P**	**15 28 54.1**	**-0.3**
	156nm,1.8s						
KURK	**Kurchatov**	**53.80**	**314**	*e*P	**P**	**15 28 57.0**	**+1.3**
	0.4nm,0.8s						
KURBB	**Kurchatov Arra**	**53.85**	**314**	P	**P**	**15 28 57.0**	**+0.9**
	2.6nm,0.7s,baz=91,slow=7.8,SNR=26						
ILAR	**Eielson Array**	**57.13**	**29**	P	**P**	**15 29 18.8**	**-0.7**
	0.6nm,0.9s,baz=258,slow=5.7,SNR=7.4						
BVAR	**Borovoye Array**	**58.81**	**317**	P	**P**	**15 29 31.6**	**+0.2**
	0.9nm,0.5s,baz=90,slow=8.6,SNR=5.6						
KK31	**Karatay Array**	**60.01**	**306**	*e*P	**P**	**15 29 41.3**	**+1.4**
KKAR	**Karatay Array**	**60.01**	**306**	*e*P	**P**	**15 29 41.0**	**+1.1**
ABKAR	**Akbulak array**	**65.91**	**315**	*e*P	**P**	**15 30 20.1**	**+1.2**
ARA0	**ARCESS Array S**	**73.89**	**341**	*e*P	**P**	**15 31 11.3**	**+3.6**
ARCES	**ARCESS Array B**	**73.89**	**341**	P	**P**	**15 31 11.3**	**+3.6**
	4.6nm,1.2s,baz=80,slow=10,SNR=2.3						
FIA0	**FINESS Array S**	**78.43**	**334**	*e*P	**P**	**15 31 33.7**	**+0.2**
FINES	**FINESS Array B**	**78.43**	**334**	P	**P**	**15 31 33.7**	**+0.2**
	0.7nm,0.8s,baz=56,slow=5.5,SNR=3.0						
NV01	**Mina Array Sit**	**79.58**	**52**	*e*P	**P**	**15 31 40.1**	**-0.5**
NVAR	**Mina Array Bea**	**79.58**	**52**	P	**P**	**15 31 40.4**	**-0.2**
	0.7nm,0.7s,baz=294,slow=5.6,SNR=6.1						
PDAR	**Pinedale Array**	**83.37**	**45**	P	**P**	**15 31 59.4**	**-1.2**
	0.2nm,0.4s,baz=264,slow=2.7,SNR=3.6						
HFS	**Hagfors**	**83.85**	**337**	P	**P**	**15 32 04.3**	**+1.9**
	3.2nm,1.0s,baz=93,slow=5.8,SNR=2.2						
TXAR	**Lajitas Array**	**94.65**	**54**	P	**P**	**15 32 52.7**	**-1.9**
	0.1nm,0.6s,baz=318,slow=1.2,SNR=3.2						
LPAZ	**La Paz**	**148.78**	**76**	PKPbc	**PKPbc**	**15 39 21.3**	**-0.6**
	1.3nm,0.5s,baz=276,slow=3.5,SNR=6.2						

*ISCJB **15** 15:30:06.8±0.6,48°.50N±0°.08×155°.1E±0°.2,h36^{km}, mb3.1/4,Error ellipse: s-maj=18.2km s-min=3.7km az=36.9*

*MOS **15** 15:30:06.4±0.9,48°.33N×155°.27E,h41^{km},mb4.1/1,Error ellipse: s-maj=24.3km s-min=5.5km az=71.2*

*KRSC **15** 15:30:08.7±1.0,48°.56N×155°.85E,h41^{km}±20^{km},ML3.9*

*IDC **15** 15:30:11.5±3.9,48°.53N×154°.94E,h70^{km}±39^{km},mb3.0/4, mb1 3.4/6,mb1mx3.0/65,mbtmp3.4/6,ML3.7/1,Error ellipse: s-maj=61.8km s-min=21.4km az=139.0*

ISC 15 15:30:08.4±1.0,48°.4N±0°.1×155°.4E±0°.1,h36^{km},n45, σ1^{s}.38/49,mb3.2/4,1D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**2.33**	**12**	*e*P	**Pn**	**15 30 43.7**	**-0.4**
SKR				*e*S	**Sn**	**15 31 09.4**	**-2.1**
SKR	**Severo-Kuril's**	**2.33**	**12**	*e*PN	**Pn**	**15 30 45.6**	**+1.5**
SKR				*e*S	**Sn**	**15 31 09.4**	**-2.1**
SKR				smax	smax		
	comp=N,132nm,0.4s						
SKR				smax	smax		
	comp=E,119nm,0.4s						
PAU	**Pauzhetka**	**3.20**	**16**	*e*P	**Pn**	**15 30 57.3**	**+1.2**
PAU				*e*S	**Sn**	**15 31 32.7**	**-0.3**
PAU	**Pauzhetka**	**3.20**	**16**	PN	**Pn**	**15 30 57.3**	**+1.2**
PAU				S	**Sn**	**15 31 32.7**	**-0.3**
KDTR	**Khodutka, Kamc**	**3.83**	**26**	*e*P	**Pn**	**15 31 05.3**	**+0.6**
KDTR				*e*S	**Sn**	**15 31 46.7**	**-1.6**
KDTR	**Khodutka, Kamc**	**3.83**	**26**	PN	**Pn**	**15 31 05.3**	**+0.6**
MIPR	**Malaya Ipel'ka**	**3.98**	**12**	*e*P	**Pn**	**15 31 07.4**	**+0.7**
MIPR	**Malaya Ipel'ka**	**3.98**	**12**	PN	**Pn**	**15 31 07.4**	**+0.7**
ASAK	**Asacha**	**4.30**	**21**	*e*P	**Pn**	**15 31 12.9**	**+1.7**
ASAK	**Asacha**	**4.30**	**21**	PN	**Pn**	**15 31 12.9**	**+1.7**
MTVR	**Mutnovka**	**4.46**	**23**	*e*P	**Pn**	**15 31 15.2**	**+1.7**
MTVR				*e*S	**Sn**	**15 32 03.7**	**-0.5**
MTVR	**Mutnovka**	**4.46**	**23**	PN	**Pn**	**15 31 15.2**	**+1.7**
RUS	**Russkaya**	**4.50**	**25**	*e*P	**Pn**	**15 31 14.4**	**+0.4**
RUS				*e*S	**Sn**	**15 32 03.2**	**-1.8**
RUS	**Russkaya**	**4.50**	**25**	PN	**Pn**	**15 31 14.4**	**+0.4**
KRMR	**Karymshinskiy**	**4.76**	**21**	*e*P	**Pn**	**15 31 18.7**	**+1.1**
KRMR				*e*S	**Sn**	**15 32 10.2**	**-1.2**
KRMR	**Karymshinskiy**	**4.76**	**21**	PN	**Pn**	**15 31 18.7**	**+1.1**
PETK	**Petropavlovsk-**	**4.93**	**17**	P	**Pn**	**15 31 22.2**	**+2.3**
	baz=178,slow=12						
DALK	**Dalny**	**5.10**	**24**	*e*P	**Pn**	**15 31 23.1**	**+0.9**
DALK				*e*S	**Sn**	**15 32 19.4**	**-0.4**
DALK	**Dalny**	**5.10**	**24**	PN	**Pn**	**15 31 23.1**	**+0.9**
UGLR	**Uglovaya**	**5.28**	**23**	*e*P	**Pn**	**15 31 26.1**	**+1.3**
UGLR	**Uglovaya**	**5.28**	**23**	PN	**Pn**	**15 31 26.1**	**+1.3**
AVH	**Avacha**	**5.31**	**22**	*e*P	**Pn**	**15 31 27.3**	**+2.1**
AVH				*e*S	**Sn**	**15 32 23.3**	**-1.8**
AVH	**Avacha**	**5.31**	**22**	PN	**Pn**	**15 31 27.3**	**+2.1**
SDLR	**Sedlovina**	**5.36**	**23**	*e*P	**Pn**	**15 31 26.8**	**+0.9**
SDLR	**Sedlovina**	**5.36**	**23**	PN	**Pn**	**15 31 26.8**	**+0.9**
GNL	**Ganaly**	**5.54**	**16**	*e*P	**Pn**	**15 31 30.7**	**+2.4**
GNL	**Ganaly**	**5.54**	**16**	PN	**Pn**	**15 31 30.7**	**+2.4**
SPN	**Mys Shipunski**	**5.55**	**30**	*e*P	**Pn**	**15 31 29.6**	**+1.3**
SPN				*e*S	**Sn**	**15 32 29.5**	**-1.2**
SPN	**Mys Shipunski**	**5.55**	**30**	PN	**Pn**	**15 31 29.6**	**+1.3**
KUR	**Kuril'sk**	**6.05**	**241**	*e*PN	**Pn**	**15 31 36.0**	**+0.8**
KUR				*i* S	**Sn**	**15 32 42.3**	**-0.8**
KUR				pmax	pmax		
	comp=Z,3.0nm,0.1s						
KUR				pmax	pmax		
	comp=E,8.0nm,0.5s						
KUR				pmax	pmax		
	comp=N,2.0nm,0.3s						
KUR				smax	smax		
	comp=N,9.0nm,0.4s						
KUR				smax	smax		
	comp=E,13nm,0.4s						
SHO	**Shikotan**	**7.47**	**236**	⇓*i*PN	Pn	15 31 52.5	-2.2
SHO				pmax	pmax		
	comp=Z,5.0nm,0.3s						
SHO				pmax	pmax		
	comp=N,1.0nm,0.1s						
YUK	**Yuzh-Kuril'sk**	**7.91**	**240**	*e*PN	**Pn**	**15 31 59.8**	**-1.0**
YUK				pmax	pmax		
	comp=E,10.0nm,0.4s						
YUK				pmax	pmax		
	comp=Z,9.0nm,0.4s						
KBTR	**Krutoberegovo**	**9.04**	**27**	*e*P	**Pn**	**15 32 17.7**	**+1.5**
KBTR	**Krutoberegovo**	**9.04**	**27**	PN	**Pn**	**15 32 17.7**	**+1.5**
ASAJ	**Asahikawa**	**9.83**	**249**	P	**Pn**	**15 32 27.4**	**+0.3**
	comp=Z,0.8nm,0.3s,baz=63,slow=9.0,SNR=17						
H11N2	**WAKE ISLAND Hy**	**30.09**	**158**	T	T	16 08 34.2	
	baz=336,slow=74,SNR=2.9						
H11N1	**WAKE ISLAND Hy**	**30.10**	**158**	T	T	16 08 36.4	
	baz=336,slow=74,SNR=6.8						
H11N3	**WAKE ISLAND Hy**	**30.10**	**158**	T	T	16 08 37.0	
	baz=336						
H11S1	**WAKE ISLAND Hy**	**31.21**	**159**	T	T	16 09 47.1	
	baz=345,slow=76,SNR=21						
H11S3	**WAKE ISLAND Hy**	**31.22**	**159**	T	T	16 09 50.9	
	baz=345,slow=76,SNR=22						
H11S2	**WAKE ISLAND Hy**	**31.23**	**159**	T	T	16 09 48.1	
	baz=345,slow=76,SNR=18						
CMAR	**Chiang Mai Arr**	**54.24**	**257**	P	P	15 39 28.2	-2.5
	comp=Z,0.2nm,0.6s,baz=35,slow=7.2,SNR=4.4						
WRA	**Warramunga Arr**	**70.59**	**201**	P	**P**	**15 41 18.6**	**-1.2**
	comp=Z,0.2nm,0.5s,baz=11,slow=5.4,SNR=2.9						
ASAR	**Alice Springs**	**74.28**	**200**	P	**P**	**15 41 41.4**	**-0.3**
	comp=Z,0.2nm,0.8s,baz=14,slow=5.0,SNR=5.0						
TXAR	**Lajitas Array**	**75.36**	**62**	P	**P**	**15 41 48.9**	**+0.7**
	comp=Z,0.1nm,0.5s,baz=304,slow=6.4,SNR=2.9						

*IDC **15** 15:32:13.6±2.8,8°.81S×114°.45E,h0^{km},mb3.2/3, mb1 3.5/4,mb1mx3.2/57,mbtmp3.3/4,ML3.1/1,Error ellipse: s-maj=162.2km s-min=26.5km az=48.0*

*ISCJB **15** 15:32:17.3±0.6,8°.28S±0°.05×115°.04E±0°.05,h10^{km}, mb3.1/3,Error ellipse: s-maj=7.3km s-min=6.5km az=159.4*

*DJA **15** 15:32:17.7±0.3,8°S±3°×11°5E±°,h10^{km},M3.2/10, MLv3.2/10*

ISC 15 15:32:16.5±0.8,8°.33S±0°.06×114°.99E±0°.04,h10^{km},n13, σ1^{s}.53/15,mb3.3/3,Bali region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRBI	**Singaraja**	**0.33**	**43**	P	**Pg**	**15 32 22.8**	**-0.2**
SRBI				S	**Sg**	**15 32 27.3**	**-0.1**
DNP	**Denpasar**	**0.41**	**148**	P	**Pb**	**15 32 27.2**	**+1.3**
IGBI	**Denpasar**	**0.51**	**162**	P	**Pb**	**15 32 29.6**	**+2.0**
JAGI	**Jajag, Banyuwa**	**0.84**	**260**	P	**Pn**	**15 32 34.7**	**+0.3**
ABJI	**Asem Bagus**	**0.91**	**305**	P	**Pn**	**15 32 35.5**	**+0.1**
BLJI	**Banyuglugur**	**1.50**	**293**	P	**Pg**	**15 32 45.3**	**+0.1**
GMJI	**Gumukmas**	**1.53**	**272**	P	**Pg**	**15 32 45.8**	**0.0**
TWSI	**Taliwang, Sumb**	**1.92**	**102**	P	**Pn**	**15 32 50.1**	**+0.9**
PLAI	**Plampang**	**2.80**	**100**	P	**Pn**	**15 33 03.1**	**+1.7**
FITZ	**Fitzroy Crossi**	**14.20**	**134**	Pn	**Pn**	**15 35 36.8**	**-1.0**
	0.1nm,0.3s,baz=313,slow=18,SNR=2.9						
FITZ				Sn	**Sn**	**15 38 11.4**	**-4.1**
	0.0nm,0.3s,baz=196,slow=20,SNR=2.2						
WRA	**Warramunga Arr**	**22.00**	**124**	P	**P**	**15 37 10.4**	**-0.7**
	0.2nm,0.4s,baz=297,slow=12,SNR=3.3						
ASAR	**Alice Springs**	**23.68**	**132**	P	**P**	**15 37 28.8**	**+0.2**
	0.6nm,0.7s,baz=305,slow=9.2,SNR=12						
MKAR	**Makanchi Array**	**62.12**	**335**	P	**P**	**15 42 37.9**	**+0.3**
	0.1nm,0.4s,baz=156,slow=7.6,SNR=3.3						

GUC 15 15:34:08.8±0.5,24°.05S×67°.69W,h234^{km}±9^{km},ML4.0,2C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB15	**IPOC Station P**	**1.83**	**297**	*e*P	Pn	15 34 50.1	+1.4
PB15				*e*S	S	15 35 21.6	+1.7
PB06	**IPOC Station P**	**2.18**	**307**	⇑*i*P	Pn	15 34 53.7	+1.7
PB06				*e*S	S	15 35 27.8	+2.1
PB06				IAML		15 35 28.7	
	comp=E,678nm,0.1s						
PB14	**IPOC Station P**	**2.54**	**256**	*e*P	Pn	15 34 57.0	+1.3
PB14				*e*S	S	15 35 33.4	+1.0
PB14				IAML		15 35 35.2	
	comp=E,238nm,0.2s						
PB05	**IPOC Station P**	**2.59**	**297**	*e*P	Pn	15 34 58.1	+2.0
PB05				*e*S	S	15 35 35.4	+2.2
PB05				IAML		15 35 39.7	
	comp=N,144nm,0.2s						
PB09	**IPOC Station P**	**2.66**	**327**	⇑*i*P	Pn	15 34 58.6	+1.8
PB09				*e*S	S	15 35 37.1	+2.6
PB03	**IPOC Station P**	**2.75**	**316**	*e*P	Pn	15 34 59.8	+1.9
PB03				*e*S	S	15 35 38.5	+2.3
PB03				IAML		15 35 40.5	
	comp=E,205nm,0.3s						
PB04	**IPOC Station P**	**2.83**	**306**	*e*P	Pn	15 35 01.2	+2.5
PB04				*e*S	S	15 35 40.3	+2.5
PB04				IAML		15 35 45.6	
	comp=N,260nm,0.3s						
PB07	**IPOC Station P**	**3.07**	**318**	*e*P	Pn	15 35 03.3	+2.0
PB07				*e*S	S	15 35 44.6	+2.0
PB07				IAML		15 35 48.4	
	comp=E,187nm,0.3s						
PB02	**IPOC Station P**	**3.39**	**323**	*e*P	Pn	15 35 06.6	+1.7

KRSC 15 15:37:32.3±0.8,51°.79N×159°.08E,h45^{km}±12^{km},ML3.7, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDTR	**Khodutka, Kamc**	**0.62**	**272**	*e*P	Pn	15 37 45.9	+1.1
KDTR				*e*S	Sn	15 37 54.5	+0.7
RUS	**Russkaya**	**0.74**	**332**	*e*P	Pn	15 37 47.2	+0.9
RUS				*e*S	Sn	15 37 57.3	+0.8
MTVR	**Mutnovka**	**0.89**	**322**	*e*P	Pn	15 37 49.9	+1.3
MTVR				*e*S	Sn	15 38 01.8	+1.4
ASAK	**Asacha**	**0.94**	**310**	*e*P	Pn	15 37 50.8	+1.6
ASAK				*e*S	Sn	15 38 03.0	+1.4
GRL	**Gorelyy**	**0.99**	**321**	*e*P	Pn	15 37 51.5	+1.6
KRMR	**Karymshinskiy**	**1.20**	**331**	*e*P	Pn	15 37 54.2	+1.6
KRMR				*e*S	Sn	15 38 08.6	+0.9
DALK	**Dalny**	**1.26**	**351**	*e*P	Pn	15 37 54.9	+1.4
DALK				*e*S	Sn	15 38 11.0	+1.7
NLC	**Nalytchevo**	**1.40**	**7**	*e*P	Pn	15 37 55.8	+0.5
UGLR	**Uglovaya**	**1.43**	**354**	*e*P	Pn	15 37 57.0	+1.1
SPN	**Mys Shipunski**	**1.44**	**23**	*e*P	Pn	15 37 58.0	+2.2
SPN				*e*S	Sn	15 38 15.9	+2.4
PAU	**Pauzhetka**	**1.45**	**258**	*e*P	Pn	15 37 57.8	+1.8
PAU				*e*S	Sn	15 38 15.7	+1.9
SMAR	**Somma**	**1.49**	**354**	*e*P	Pn	15 37 58.8	+2.0
AVH	**Avacha**	**1.50**	**352**	*e*P	Pn	15 37 58.6	+1.8
MIPR	**Malaya Ipel'ka**	**1.52**	**290**	*e*P	Pn	15 37 59.6	+2.6
KOK	**Koryaka**	**1.53**	**350**	*e*P	Pn	15 37 59.0	+1.7
KRX	**Arik**	**1.60**	**351**	*e*P	Pn	15 37 59.7	+1.5
APC	**Apacha**	**1.64**	**315**	*e*P	Pn	15 38 01.2	+2.6
APC				*e*S	Sn	15 38 21.0	+2.5
GNL	**Ganaly**	**2.03**	**341**	*e*P	Pn	15 38 06.8	+2.6
SKR	**Severo-Kuril's**	**2.17**	**240**	*e*P	Pn	15 38 07.6	+1.8
SKR				*e*S	Sn	15 38 33.1	+1.7
KII	**Karymskiy**	**2.27**	**6**	*e*P	Pn	15 38 10.8	+3.5
MKZ	**Mys Kozlova**	**3.20**	**29**	*e*P	Pn	15 38 22.7	+2.7
TUMR	**Tumrok**	**3.56**	**10**	*e*P	Pn	15 38 29.9	+4.8
KBTR	**Krutoberegovo**	**4.95**	**25**	*e*P	Pn	15 38 47.8	+3.8

MEX 15 15:37:35.0±0.4,15°.96N×98°.87W,h16^{km}±9^{km},MD3.6,Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.83**	**59**	*i* P	Pb	15 37 48.1	-2.9
PNIG				*e*S	Sb	15 37 58.1	-3.9
TLIG	**Tlapa**	**1.62**	**10**	*e*P	Pn	15 37 59.1	-3.9
TLIG				*i* S	Sn	15 38 19.0	-4.6
CAIG	**El Cayaco**	**1.72**	**309**	*e*P	Pn	15 38 01.1	-3.3
CAIG				*i* S	Sn	15 38 21.3	-4.8
MEIG	**Mezcala**	**2.08**	**340**	*e*P	Pn	15 38 06.0	-3.3
MEIG				*i* S	Sn	15 38 29.9	-5.2
VHO	**Vista Hermosa**	**2.33**	**61**	*i* P	Pn	15 38 10.6	-2.2
VHO				*i* S	Sn	15 38 36.6	-4.5
HUIG	**Huatulco**	**2.66**	**94**	*i* P	Pn	15 38 13.6	-3.6
HUIG				*i* S	Sn	15 38 45.2	-4.0

MEX 15 15:38:44.6±0.5,16°.41N×98°.63W,h17^{km}±40^{km},MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.48**	**92**	*e*P	Pg	15 38 52.8	-1.5
PNIG				*e*S	Sg	15 38 59.0	-1.8
TLIG	**Tlapa**	**1.15**	**3**	*i* P	Pn	15 39 02.1	-3.9
TLIG				*i* S	Sb	15 39 16.0	-4.8
MEIG	**Mezcala**	**1.78**	**328**	*i* P	Pn	15 39 10.9	-3.9
MEIG				*i* S	Sn	15 39 33.0	-4.1

*NIED **15** 15:44:00,45°.10N×147°.10E,h5^{km},Mw4.1 Best double couple: M$_0$1.56000×10^{15} NP1:φ$_s$202.00000°,δ20.00000°, λ68.00000°. NP2:φ$_s$45.00000°,δ72.00000°,λ98.00000°.*

*IDC **15** 15:44:17.1±1.6,44°.65N×146°.91E,h0^{km},mb3.7/7, mb1 4.1/8,mb1mx3.6/66,mbtmp3.7/8,ML2.8/2,MS2.2/2, Ms1 2.2/2,ms1mx2.1/63,Error ellipse: s-maj=45.8km s-min=19.6km az=174.0*

*ISCJB **15** 15:44:21.2±0.9,45°.22N±0°.04×147°.10E±0°.05,h23^{km}±8^{km}, mb3.7/7,Error ellipse: s-maj=7.5km s-min=4.4km az=43.0*

*JMA **15** 15:44:22.4±0.7,45°.12N×147°.14E,h30^{km},M3.5*

*SKHL **15** 15:44:22.1±0.6,45°.12N×147°.50E,h62^{km}±3^{km},mb4.7/6*

*MOS **15** 15:44:25.1±1.9,45°.08N×146°.56E,h59^{km},mb4.2/3,Error ellipse: s-maj=19.9km s-min=9.8km az=79.8*

ISC 15 15:44:21.1±1.9,45°.16N±0°.04×147°.12E±0°.05,h10^{km}±13^{km}, n43,σ1^{s}.53/47,mb3.9/7,1C-1D,Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**0.53**	**82**	*e*P	**Pb**	**15 44 31.9**	**-0.7**
KUR				AMB	AMB	15 44 33.0	
	863nm,0.3s						
KUR				AMB	AMB	15 44 33.0	
	723nm,0.3s						
KUR				AMB	AMB	15 44 33.0	
	2μm,0.3s						
KUR				*i* S	**Sb**	**15 44 39.0**	**-1.3**
KUR				A	A	15 44 41.0	
	8μm,0.2s						
KUR				A	A	15 44 41.0	
	7μm,0.2s						
KUR	**Kuril'sk**	**0.53**	**82**	*e*PN	**Pg**	**15 44 31.6**	**+0.1**
KUR				pmax	pmax		
	comp=Z,2μm,0.3s						
KUR				pmax	pmax		
	comp=N,863nm,0.2s						
KUR				pmax	pmax		
	comp=E,723nm,0.2s						
SHO	**Shikotan**	**1.31**	**189**	*i* P	**Pn**	**15 44 44.0**	**-1.4**
SHO				AMB	AMB	15 44 45.0	
	comp=E,268nm,0.4s						
SHO				AMB	AMB	15 44 45.0	
	comp=E,152nm,0.4s						
SHO				AMB	AMB	15 44 45.0	
	comp=E,540nm,0.4s						
SHO				*i* S	**Sb**	**15 45 00.0**	**-2.5**
SHO				A	A	15 45 03.0	
	comp=E,2μm,0.3s						
SHO				A	A	15 45 03.0	
	comp=E,4μm,0.3s						
SHO	**Shikotan**	**1.31**	**189**	*d* *i*PN	**Pn**	**15 44 44.2**	**-1.2**
SHO				*i* S	**Sb**	**15 45 00.8**	**-1.7**
SHO				pmax	pmax		
	comp=E,152nm,0.4s						
SHO				pmax	pmax		
	comp=Z,540nm,0.4s						
SHO				pmax	pmax		
	comp=N,268nm,0.5s						
SHO				smax	smax		
	comp=N,2μm,0.3s						
SHO				smax	smax		
	comp=E,4μm,0.2s						
YUK	**Yuzh-Kuril'sk**	**1.44**	**219**	*e*P	**Pn**	**15 44 47.0**	**-0.2**
YUK				AMB	AMB	15 44 50.0	

	comp=E,361nm,0.2s						
YUK				AMB	AMB	15 44 50.0	
	comp=E,54nm,0.2s						
YUK				AMB	AMB	15 44 50.0	
	comp=E,45nm,0.2s						
YUK				*i*S	**Sn**	**15 45 06.0**	**-0.2**
YUK				A	A	15 45 11.0	
	comp=E,824nm,0.4s						
YUK				A	A	15 45 11.0	
	comp=E,700nm,0.4s						
YUK	**Yuzh-Kuril’sk**	**1.44**	**219**	*e*PN	**Pn**	**15 44 47.7**	**+0.5**
YUK				pmax	pmax		
	comp=Z,45nm,0.1s						
YUK				pmax	pmax		
	comp=N,361nm,0.2s						
YUK				pmax	pmax		
	comp=E,54nm,0.2s						
LAGR	**Lagunnoye**	**1.46**	**221**	*i*P	**Pn**	**15 44 47.0**	**-0.4**
LAGR				AMB	AMB	15 44 51.0	
	comp=E,96nm,0.2s						
LAGR				AMB	AMB	15 44 51.0	
	comp=E,32nm,0.2s						
LAGR				AMB	AMB	15 44 51.0	
	comp=E,254nm,0.2s						
LAGR				*i*S	**Sn**	**15 45 07.0**	**+0.4**
LAGR				A	A	15 45 09.0	
	comp=E,2µm,0.3s						
LAGR				A	A	15 45 09.0	
	comp=E,968nm,0.3s						
LAGR	**Lagunnoye**	**1.46**	**221**	⇑*i*PN	**Pn**	**15 44 47.1**	**-0.4**
LAGR				pmax	pmax		
	comp=N,96nm,0.2s						
LAGR				pmax	pmax		
	comp=E,32nm,0.2s						
LAGR				pmax	pmax		
	comp=Z,254nm,0.2s						
GRPR	**Tuman**	**1.51**	**220**	*e*P	**Pn**	**15 44 48.0**	**-0.3**
GRPR				AMB	AMB	15 44 49.0	
	comp=Z,136nm,0.3s						
GRPR				AMB	AMB	15 44 49.0	
	comp=Z,33nm,0.3s						
GRPR				AMB	AMB	15 44 49.0	
	comp=Z,265nm,0.3s						
GRPR				*i*S	**Sn**	**15 45 08.0**	**0.0**
GRPR				A	A	15 45 10.0	
	comp=Z,1µm,0.3s						
GRPR				A	A	15 45 10.0	
	comp=Z,566nm,0.3s						
GRPR	**Tuman**	**1.51**	**220**	*e*PN	**Pn**	**15 44 48.0**	**-0.3**
GRPR				pmax	pmax		
	comp=Z,265nm,0.3s						
GRPR				pmax	pmax		
	comp=E,33nm,0.1s						
GRPR				pmax	pmax		
	comp=N,136nm,0.3s						
GLVR	**Golovnino**	**1.82**	**219**	*e*P	**Pn**	**15 44 53.0**	**+0.5**
GLVR				AMB	AMB	15 44 57.0	
	comp=N,37nm,0.3s						
GLVR				AMB	AMB	15 44 57.0	
	comp=N,64nm,0.3s						
GLVR				AMB	AMB	15 44 57.0	
	comp=N,114nm,0.3s						
GLVR				*i*S	**Sn**	**15 45 16.0**	**+0.3**
GLVR				A	A	15 45 18.5	
	comp=N,1µm,0.3s						
GLVR				A	A	15 45 18.5	
	comp=N,750nm,0.3s						
GLVR	**Golovnino**	**1.82**	**219**	*e*PN	**Pn**	**15 44 53.2**	**+0.7**
GLVR				pmax	pmax		
	comp=Z,114nm,0.3s						
GLVR				pmax	pmax		
	comp=N,37nm,0.1s						
GLVR				pmax	pmax		
	comp=E,64nm,0.3s						
JRA	**Rausu**	**1.88**	**230**	*e*S	**Sn**	**15 45 16.5**	**-0.5**
NEM2	**Nemuro 2**	**2.05**	**209**	P	**Pn**	**15 44 54.5**	**-1.1**
NEM2				*e*S	**Sn**	**15 45 19.3**	**-1.9**
JNK	**Nakash**	**2.33**	**228**	P	**Pn**	**15 45 00.5**	**+1.0**
JTKR	**Abashiri--Toko**	**2.58**	**244**	P	**Pn**	**15 45 03.3**	**+0.3**
JTKR				*e*S	**Sn**	**15 45 32.6**	**-1.8**
JAK	**Akkeshi**	**2.78**	**220**	*e*S	**Sn**	**15 45 38.5**	**-0.8**
JMP	**Maruseppu**	**2.92**	**248**	P	**Pn**	**15 45 08.5**	**+0.8**
JMP				*e*S	**Sn**	**15 45 42.2**	**-0.7**
JSE	**Soyaes**	**3.22**	**268**	P	**Pn**	**15 45 12.7**	**+1.0**
JKK2	**Kamakawa 2**	**3.38**	**249**	P	**Pn**	**15 45 15.1**	**+1.1**
ASAJ	**Asahikawa**	**3.39**	**254**	Pn	Pn	15 45 08.2	-5.9
	comp=E,0.6nm,0.3s,baz=67,slow=7.7,SNR=7.8						
ASAJ				Sn	**Sn**	**15 45 52.6**	**-1.8**
	comp=E,2.6nm,0.3s,baz=76,slow=12,SNR=3.8						
ASAJ				LR	LR	15 45 56.0	
	comp=E,76nm,20.1s,baz=192,slow=32						
YSS	**Yuzh-Sakhalins**	**3.53**	**302**	*e*PN	**Pn**	**15 45 13.0**	**-3.0**
YSS				*e*S	**Sn**	**15 45 54.7**	**-3.0**
YSS				smax	smax		
	comp=N,90nm,1.0s						
YSS				smax	smax		
	comp=E,90nm,1.0s						
YSS				smax	smax		
	comp=Z,300nm,12.0s						
JCH	**Churui**	**3.72**	**228**	P	**Pn**	**15 45 20.4**	**+1.8**
JNBK	**Urakawa-nobuka**	**4.28**	**229**	*e*S	**Sn**	**15 46 19.3**	**+3.1**
KLR	**Kul’dur**	**11.22**	**297**	LR	LR	15 51 30.2	
	comp=Z,4.7nm,18.1s,baz=114,slow=38						
ZEA	**Zeya**	**15.47**	**311**	*e*P	**P**	**15 48 03.8**	**+0.1**
ZEA				pmax	pmax		
	comp=N,24nm,1.0s						
ZEA				pmax	pmax		
	comp=E,24nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,29nm,1.0s						
SEY	**Seymchan**	**18.06**	**8**	P	**P**	**15 48 37.0**	**+4.7**
	comp=Z,0.1nm,0.3s,baz=174,slow=9.1,SNR=5.0						
YAK	**Yakutsk**	**19.70**	**335**	P	**Pn**	**15 48 52.8**	**+1.1**
YAK	**Yakutsk**	**19.70**	**335**	*e*P	**Pn**	**15 48 53.2**	**+1.5**
YAK				pmax	pmax		
	comp=Z,18nm,1.0s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.1s						
H11N2	**WAKE ISLAND Hy**	**30.19**	**141**	T	T	16 21 23.8	
	baz=332,slow=76,SNR=36						
H11N1	**WAKE ISLAND Hy**	**30.21**	**141**	T	T	16 21 24.9	
	baz=332,slow=76,SNR=29						
H11N3	**WAKE ISLAND Hy**	**30.21**	**141**	T	T	16 21 25.1	
	baz=332,slow=76,SNR=28						
H11S1	**WAKE ISLAND Hy**	**31.18**	**142**	T	T	16 22 37.8	
	baz=320,slow=77,SNR=19						
H11S3	**WAKE ISLAND Hy**	**31.19**	**142**	T	T	16 22 37.2	
	baz=320,slow=77,SNR=15						
H11S2	**WAKE ISLAND Hy**	**31.20**	**142**	T	T	16 22 38.3	
	baz=320,slow=77,SNR=19						
ILAR	**Eielson Array**	**40.37**	**37**	P	**P**	**15 51 59.2**	**+0.5**
	comp=E,2.0nm,1.0s,baz=270,slow=7.4,SNR=14						
MKAR	**Makanchi Array**	**43.92**	**296**	P	**P**	**15 52 25.5**	**-2.4**
	comp=E,0.3nm,0.8s,baz=59,slow=5.6,SNR=2.3						
KURK	**Kurchatov**	**44.73**	**303**	P	**P**	**15 52 33.4**	**-0.9**
KURBB	**Kurchatov Arra**	**44.82**	**303**	P	**P**	**15 52 33.4**	**-1.6**
	comp=E,0.4nm,0.7s,baz=66,slow=8.5,SNR=3.0						
YKA	**Yellowknife Ar**	**54.65**	**34**	P	**P**	**15 53 49.9**	**+0.3**
	comp=E,1.1nm,0.8s,baz=306,slow=6.2,SNR=5.4						
NVAR	**Mina Array Bea**	**66.85**	**58**	P	**P**	**15 55 13.9**	**+0.4**
	comp=E,1.0nm,0.8s,baz=293,slow=5.8,SNR=8.4						
PDAR	**Pinedale Array**	**69.02**	**50**	P	**P**	**15 55 26.6**	**-0.4**
	comp=E,0.8nm,0.9s,baz=281,slow=3.9,SNR=5.9						
TXAR	**Lajitas Array**	**81.89**	**56**	P	**P**	**15 56 41.8**	**+0.8**
	comp=E,1.3nm,0.9s,baz=296,slow=3.9,SNR=11						

IDC 15 15:49:02.4±4.9,**8°.10S**×**159°.38E,h121**^{km}±50^{km}**,mb3.7**/4, **mb1 3.8**/5**,mb1mx3.3**/52**,mbtmp4.1**/5**,Error ellipse: s-maj=116.4km s-min=54.8km az=72.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**1.44**	**157**	P	Pn	15 49 29.9	+0.7
	69nm,0.3s,baz=55,slow=19,SNR=59						
HNR				S	Sn	15 49 49.4	-0.3
	160nm,0.3s,baz=288,slow=20,SNR=6.5						
HNR	**Honiara**	**1.44**	**157**	*e*P	Pn	15 49 29.0	-0.2
CTA	**Charters Tower**	**17.42**	**225**	P	Pn	15 52 59.5	+1.5
	0.2nm,0.3s,baz=63,slow=11,SNR=3.5						
WRA	**Warramunga Arr**	**26.94**	**241**	P	P	15 54 32.9	+0.2
	1.0nm,0.4s,baz=65,slow=8.9,SNR=15						
STKA	**Stephens Creek**	**28.87**	**213**	P	P	15 54 49.4	-0.3
	2.9nm,1.1s,baz=48,slow=15,SNR=5.3						
ASAR	**Alice Springs**	**28.90**	**235**	P	P	15 54 49.6	-0.4
	1.0nm,0.4s,baz=62,slow=10.0,SNR=55						
FITZ	**Fitzroy Crossi**	**34.27**	**250**	P	P	15 55 36.9	-0.3
	1.0nm,0.4s,baz=72,slow=9.4,SNR=9.7						

NIED ***15*** *15:52:00, 45°.30N×151°.50E, h17^{km}, Mw4.3 Best double couple: $M_0$3.19000×10^{15} NP1:ϕ_s25.00000°, δ43.00000°, λ76.00000°. NP2:ϕ_s224.00000°, δ49.00000°, λ103.00000°.*

IDC ***15*** *15:52:45.2±0.6, 45°.19N×151°.40E, h0^{km}, mb4.1/22, mb1 4.2/28, mb1mx4.1/70, mbtmp4.1/28, ML3.4/3, MS3.6/24, Ms1 3.6/24, ms1mx3.4/69, Error ellipse: s-maj=16.7km s-min=13.3km az=137.0*

NEIC ***15*** *15:52:47.0±0.4, 45°.16N×151°.39E, h10^{km}, mb4.8/25, Error ellipse: s-maj=9.6km s-min=5.3km az=146.0*

ISCJB ***15*** *15:52:47.7±0.9, 44°.94N±0°.04×151°.43E±0°.04, h30^{km}±6^{km}, mb4.4/65, MS3.8/24, Error ellipse: s-maj=8.3km s-min=3.2km az=152.6*

JMA ***15*** *15:52:47.7±0.4, 45°.29N×151°.54E, h30^{km}, M4.7*

BJI ***15*** *15:52:48.4, 45°.19N×151°.36E, h30^{km}, mb4.6/43, mB4.8/27, Ms4.2/22, Ms7 4.0/22*

SKHL ***15*** *15:52:48.2±0.9, 44°.87N×151°.67E, h44^{km}±3^{km}, mb4.9/1, Ms4.1/5*

MOS ***15*** *15:52:49.4±1.5, 45°.08N×151°.40E, h41^{km}, mb4.7/21, Error ellipse: s-maj=6.7km s-min=6.0km az=101.1*

ISC 15 15:52:48.3±0.9,**45°.12N**±0°.05×**151°.40E**±0°.05,**h17**^{km}±5^{km}, **n290,**σ1ˢ.**43**/313,**mb4.6**/69,**MS3.8**/25,**17C-15D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril’sk**	**2.50**	**274**	*e*P	**Pn**	**15 53 29.0**	**+0.9**
KUR				AMB	AMB	15 53 30.0	
	109nm,0.2s						
KUR				AMB	AMB	15 53 30.0	
	31nm,0.2s						
KUR				AMB	AMB	15 53 30.0	
	229nm,0.2s						
KUR				*i*S	**Sn**	**15 54 00.0**	**+1.8**
KUR				A	A	15 54 08.0	
	646nm,0.4s						
KUR				A	A	15 54 08.0	
	214nm,0.4s						
KUR				AMS	AMS	15 55 07.0	
	2µm,10.0s						
KUR				AMS	AMS	15 55 07.0	
	3µm,10.0s						
KUR	**Kuril’sk**	**2.50**	**274**	*e*PN	**Pn**	**15 53 29.0**	**+0.9**
KUR				*i*S	**Sn**	**15 54 00.0**	**+1.8**
KUR				pmax	pmax		
	comp=N,109nm,0.2s						
KUR				pmax	pmax		
	comp=E,31nm,0.2s						
KUR				pmax	pmax		
	comp=Z,229nm,0.2s						
KUR				smax	smax		
	comp=N,646nm,0.4s						
KUR				smax	smax		
	comp=E,214nm,0.3s						
SHO	**Shikotan**	**3.50**	**251**	*e*P	**Pn**	**15 53 42.0**	**+0.1**
SHO				AMB	AMB	15 53 44.0	
	comp=E,60nm,0.4s						
SHO				AMB	AMB	15 53 44.0	
	comp=E,26nm,0.4s						
SHO				AMB	AMB	15 53 44.0	
	comp=E,22nm,0.4s						
SHO				*i*S	**Sn**	**15 54 22.3**	**-0.6**
SHO				A	A	15 54 26.0	
	comp=E,393nm,0.6s						
SHO				A	A	15 54 26.0	
	comp=E,431nm,0.6s						
SHO				AMS	AMS	15 55 30.0	
	comp=E,2µm,14.0s						
SHO				AMS	AMS	15 55 30.0	
	comp=E,1µm,14.0s						
SHO				AMS	AMS	15 55 30.0	
	comp=E,770nm,14.0s						
SHO	**Shikotan**	**3.50**	**251**	*e*PN	**Pn**	**15 53 42.3**	**+0.4**
SHO				*i*S	**Sn**	**15 54 21.9**	**-1.0**
SHO				pmax	pmax		
	comp=Z,22nm,0.3s						
SHO				pmax	pmax		
	comp=N,60nm,0.4s						
SHO				pmax	pmax		
	comp=E,26nm,0.2s						
SHO				smax	smax		
	comp=E,431nm,0.3s						
SHO				smax	smax		
	comp=N,393nm,0.6s						
YUK	**Yuzh-Kuril’sk**	**4.10**	**257**	*e*P	**Pn**	**15 53 50.0**	**-0.2**
YUK				AMB	AMB	15 54 01.0	
	comp=N,68nm,0.3s						
YUK				AMB	AMB	15 54 01.0	
	comp=N,27nm,0.3s						
YUK				AMB	AMB	15 54 01.0	
	comp=N,271nm,0.3s						
YUK				*i*S	**Sn**	**15 54 37.0**	**-0.7**
YUK				A	A	15 54 52.0	
	comp=N,262nm,0.4s						
YUK				A	A	15 54 52.0	
	comp=N,427nm,0.4s						
YUK				AMS	AMS	15 55 26.0	
	comp=N,1µm,15.0s						
YUK				AMS	AMS	15 55 26.0	
	comp=N,1µm,15.0s						
YUK				AMS	AMS	15 55 26.0	
	comp=N,710nm,15.0s						
YUK	**Yuzh-Kuril’sk**	**4.10**	**257**	*e*PN	**Pn**	**15 53 50.9**	**+0.7**
YUK				*i*S	**Sn**	**15 54 38.0**	**+0.3**
YUK				pmax	pmax		
	comp=Z,271nm,0.3s						
YUK				pmax	pmax		
	comp=N,68nm,0.2s						
YUK				pmax	pmax		
	comp=E,27nm,0.2s						
YUK				smax	smax		
	comp=N,262nm,0.3s						
YUK				smax	smax		
	comp=E,427nm,0.5s						
LAGR	**Lagunnoye**	**4.15**	**257**	*e*P	**Pn**	**15 53 51.0**	**+0.2**
LAGR				AMB	AMB	15 54 01.0	
	comp=E,129nm,0.3s						
LAGR				AMB	AMB	15 54 01.0	
	comp=E,82nm,0.3s						
LAGR				*i*S	**Sn**	**15 54 38.0**	**-0.8**
LAGR				A	A	15 54 48.0	
	comp=E,653nm,0.6s						
LAGR				A	A	15 54 48.0	
	comp=E,389nm,0.6s						
LAGR	**Lagunnoye**	**4.15**	**257**	*e*PN	**Pn**	**15 53 51.8**	**+1.0**
LAGR				*i*S	**Sn**	**15 54 38.8**	**0.0**
LAGR				pmax	pmax		
	comp=Z,82nm,0.2s						
LAGR				pmax	pmax		
	comp=N,129nm,0.3s						
LAGR				smax	smax		
	comp=N,653nm,0.6s						
LAGR				smax	smax		
	comp=E,389nm,0.6s						
GRPR	**Tuman**	**4.18**	**256**	*i*P	**Pn**	**15 53 52.0**	**+0.8**
GRPR				AMB	AMB	15 53 58.0	
	comp=E,65nm,0.3s						
GRPR				AMB	AMB	15 53 58.0	
	comp=E,180nm,0.3s						
GRPR				*i*S	**Sn**	**15 54 39.0**	**-0.6**
GRPR				A	A	15 54 45.0	
	comp=E,409nm,0.3s						
GRPR				A	A	15 54 45.0	
	comp=E,339nm,0.3s						
GRPR	**Tuman**	**4.18**	**256**	*i*PN	**Pn**	**15 53 52.4**	**+1.2**
GRPR				*i*S	**Sn**	**15 54 39.6**	**0.0**
GRPR				pmax	pmax		
	comp=Z,180nm,0.3s						
GRPR				pmax	pmax		
	comp=E,65nm,0.2s						
GRPR				smax	smax		
	comp=N,409nm,0.3s						
GRPR				smax	smax		
	comp=E,339nm,0.3s						
NEM2	**Nemuro 2**	**4.43**	**249**	P	**Pn**	**15 53 54.1**	**-0.5**
NEM2				*e*S	**Sn**	**15 54 43.4**	**-2.3**
GLVR	**Golovnino**	**4.43**	**254**	*i*P	**Pn**	**15 53 55.0**	**+0.3**
GLVR				AMB	AMB	15 53 57.0	
	comp=E,123nm,0.3s						
GLVR				AMB	AMB	15 53 57.0	
	comp=E,172nm,0.3s						
GLVR				*e*S	**Sn**	**15 54 47.0**	**+1.2**
GLVR				A	A	15 54 53.0	
	comp=E,640nm,0.3s						
GLVR				A	A	15 54 53.0	
	comp=E,692nm,0.3s						
GLVR	**Golovnino**	**4.43**	**254**	⇓*i*PN	**Pn**	**15 53 55.7**	**+1.0**
GLVR				*e*S	**Sn**	**15 54 47.1**	**+1.2**
GLVR				pmax	pmax		
	comp=Z,172nm,0.5s						
GLVR				pmax	pmax		
	comp=E,123nm,0.2s						
GLVR				smax	smax		
	comp=N,640nm,0.2s						
GLVR				smax	smax		
	comp=E,692nm,0.3s						
JRA	**Rausu**	**4.64**	**257**	P	**Pn**	**15 53 59.4**	**+1.8**
JRA				*e*S	**Sn**	**15 54 52.4**	**+1.4**
JNK	**Nakash**	**5.03**	**255**	P	**Pn**	**15 54 03.8**	**+0.9**
JNK				*e*S	**Sn**	**15 54 59.9**	**-0.7**
JAK	**Akkeshi**	**5.28**	**249**	P	**Pn**	**15 54 05.8**	**-0.5**
JAK				*e*S	**Sn**	**15 55 03.9**	**-2.7**
JTKR	**Abashiri--Toko**	**5.47**	**260**	P	**Pn**	**15 54 11.2**	**+2.2**
JAR	**Ashorobuto**	**5.78**	**254**	P	**Pn**	**15 54 14.4**	**+1.2**
JAR				*e*S	**Sn**	**15 55 19.6**	**+0.5**
JMP	**Maruseppu**	**5.85**	**262**	P	**Pn**	**15 54 16.4**	**+2.2**
JOB	**Onbets**	**5.89**	**251**	P	**Pn**	**15 54 15.0**	**+0.3**
JOB				*e*S	**Sn**	**15 55 20.3**	**-1.4**
YSS	**Yuzh-Sakhalins**	**6.29**	**290**	*e*P	**Pn**	**15 54 23.8**	**+3.6**
YSS				*e*S	**Sn**	**15 55 30.1**	**-1.5**
YSS				A	A	15 55 31.3	
	comp=E,20nm,0.6s						
YSS				AMS	AMS	15 56 43.0	
	comp=E,400nm,16.0s						
YSS				AMS	AMS	15 56 43.0	
	comp=E,500nm,16.0s						
YSS				AMS	AMS	15 56 43.0	
	comp=E,700nm,16.0s						
YSS	**Yuzh-Sakhalins**	**6.29**	**290**	*e*Pn	**Pn**	**15 54 21.1**	**+0.9**
YSS	**Yuzh-Sakhalins**	**6.29**	**290**	⇓*e*PN	**Pn**	**15 54 23.8**	**+3.6**
JKK2	**Kamakawa 2**	**6.31**	**262**	P	**Pn**	**15 54 22.9**	**+2.4**
JCH	**Churui**	**6.33**	**249**	P	**Pn**	**15 54 20.4**	**-0.3**
JCH				*e*S	**Sn**	**15 55 29.7**	**-2.8**
ASAJ	**Asahikawa**	**6.36**	**264**	Pn	**Pn**	**15 54 24.1**	**+2.8**
	comp=E,3.4nm,0.3s,baz=87,slow=12,SNR=72						
ASAJ				LR	LR	15 57 16.9	
	comp=E,700nm,18.5s,baz=87,slow=43						
ASAJ	**Asahikawa**	**6.36**	**264**	*e*Pn	**Pn**	**15 54 23.6**	**+2.4**
ASAJ	**Asahikawa**	**6.36**	**264**	P	**Pn**	**15 54 24.0**	**+2.8**
SKR	**Severo-Kuril’s**	**6.40**	**28**	*e*P	Pn	15 54 24.0	+2.3
SKR				AMB	AMB	15 54 27.0	
	comp=E,113nm,0.6s						
SKR				*e*S	**Sn**	**15 55 32.0**	**-2.4**
SKR				A	A	15 55 49.0	
	comp=E,115nm,0.9s						
SKR				A	A	15 55 49.0	
	comp=E,135nm,0.9s						
SKR				AMS	AMS	15 57 22.0	
	comp=E,800nm,13.0s						
SKR				AMS	AMS	15 57 22.0	
	comp=E,600nm,13.0s						
SKR				AMS	AMS	15 57 22.0	
	comp=E,500nm,13.0s						
SKR	**Severo-Kuril’s**	**6.40**	**28**	*e*PN	Pn	15 54 24.8	+3.1
SKR				pmax	pmax		
	comp=Z,113nm,0.6s						
SKR				MLR	MLR		
	comp=N,800nm,14.0s						
SKR				MLR	MLR		
	comp=Z,500nm,14.0s						
SKR				MLR	MLR		
	comp=E,600nm,12.0s						
JFR	**Furan**	**6.63**	**256**	P	**Pn**	**15 54 26.5**	**+1.6**
JFR				*e*S	**Sn**	**15 55 41.5**	**+1.4**
JWK2	**Keihoku**	**6.71**	**275**	P	**Pn**	**15 54 29.6**	**+3.6**
JEM	**Erimo**	**6.74**	**245**	*e*S	**Sn**	**15 55 40.9**	**-1.9**
ERM	**Erimo**	**6.74**	**245**	*e*P	**Pn**	**15 54 28.7**	**+2.3**
ERM	**Erimo**	**6.74**	**245**	*e*Pn	**Pn**	**15 54 28.4**	**+1.9**
ERM	**Erimo**	**6.74**	**245**	*de*PN	**Pn**	**15 54 28.7**	**+2.3**
JAB	**Ashibetsu**	**6.78**	**259**	P	**Pn**	**15 54 30.1**	**+3.2**
JNBK	**Urakawa-nobuka**	**6.88**	**249**	P	**Pn**	**15 54 27.9**	**-0.4**
JNBK				*e*S	Sn	15 55 41.4	-4.7
JBT2	**Biratori 2**	**6.93**	**253**	P	**Pn**	**15 54 29.4**	**+0.4**
JBT2				*e*S	**Sn**	**15 55 46.9**	**-0.5**
JNB	**Noboribetsu**	**7.95**	**254**	P	**Pn**	**15 54 43.8**	**+0.8**
JNB				*e*S	**Sn**	**15 56 10.2**	**-2.3**
JKB	**Kayabe**	**8.20**	**250**	P	**Pn**	**15 54 46.0**	**-0.4**
JKB				*e*S	Sn	15 56 12.6	-6.0
TYV	**Tymovskoe**	**8.20**	**318**	*e*P	**Pn**	**15 54 48.9**	**+2.5**
TYV				AMB	AMB	15 54 49.6	
	comp=E,100nm,2.9s						
TYV				*e*S	**Sn**	**15 56 18.6**	**-0.1**
TYV				A	A	15 56 21.9	
	comp=E,200nm,8.4s						
TYV				AMS	AMS	15 58 10.0	
	comp=E,800nm,13.0s						
TYV				AMS	AMS	15 58 10.0	
	comp=E,700nm,13.0s						
TYV	**Tymovskoe**	**8.20**	**318**	*e*PN	**Pn**	**15 54 48.9**	**+2.5**
TYV				pmax	pmax		
	comp=Z,100nm,2.9s						
TYV				pmax	pmax		
	comp=Z,14nm,0.8s						
TYV				MLR	MLR		
	comp=N,800nm,13.0s						
TYV				MLR	MLR		
	comp=Z,700nm,13.0s						
JYM2	**Yakumo 2**	**8.54**	**253**	P	**Pn**	**15 54 51.5**	**+0.3**
JSH	**Shimam**	**8.57**	**257**	P	**Pn**	**15 54 53.7**	**+2.3**
JANG	**Nango**	**8.68**	**240**	P	**Pn**	**15 54 50.9**	**-2.1**
JANG				*e*S	Sn	15 56 21.7	-8.8
JTM	**Tenmabayashi**	**8.72**	**244**	*e*S	Sn	15 56 24.8	-6.7
JTH	**Tanohata**	**8.74**	**237**	P	Pn	15 54 50.4	-3.4
JTH				*e*S	Sn	15 56 22.0	-10
JSR	**Shiriuchi**	**8.77**	**250**	P	**Pn**	**15 54 54.2**	**0.0**
PEA0B	**Petropavlovsk-**	**8.99**	**25**	*e*Pn	**Pn**	**15 54 57.3**	**0.0**
PETK	**Petropavlovsk-**	**8.99**	**25**	Pn	**Pn**	**15 54 56.9**	**-0.4**
	baz=191,slow=13						
PETK	**Petropavlovsk-**	**8.99**	**25**	*e*Pn	**Pn**	**15 54 57.1**	**-0.2**
JOSM	**Okushiri--Mats**	**9.17**	**255**	P	**Pn**	**15 55 00.3**	**+0.6**
PET	**Petropavlovsk**	**9.23**	**28**	*e*PN	Pn	15 55 14.6	+14
PET				*e*S	Sn	15 56 58.9	+15
PET				MLR	MLR		
	comp=Z,400nm,14.0s						
PET				MLR	MLR		
	comp=Z,400nm,16.0s						
OFUJ	**Ofunato**	**9.41**	**234**	P	Pn	15 55 01.1	-2.0
OFUJ				*e*S	Sn	15 56 39.2	-9.3
JRG	**Rokugo**	**9.81**	**238**	P	**Pn**	**15 55 07.5**	**-1.1**
JRG				*e*S	Sn	15 56 51.7	-6.6
JIO	**Ouri**	**10.03**	**232**	P	Pn	15 55 08.9	-2.6
JIO				*e*S	Sn	15 56 52.9	-11
TEY	**Ternei**	**10.47**	**275**	⇑*e*PN	Pn	15 55 22.4	+4.9
TEY				pmax	pmax		
	comp=Z,30nm,0.9s						
JYA	**Atsumi**	**10.88**	**237**	P	**Pn**	**15 55 21.9**	**-1.2**
JYA				*e*S	Sn	15 57 16.2	-8.2
GRNR	**Gornyy**	**11.52**	**305**	*e*PN	Pn	15 55 39.0	+7.2
JFY	**Yanaizu**	**11.69**	**233**	P	**Pn**	**15 55 33.0**	**-1.3**
MJA0	**Matsu Arr-Jizo**	**13.12**	**234**	*e*PN	**Pn**	**15 55 53.6**	**-0.3**
MAJO	**Matsushiro**	**13.15**	**234**	*e*Pn	**Pn**	**15 55 52.5**	**-1.7**
MAJO	**Matsushiro**	**13.15**	**234**	*de*PN	**Pn**	**15 55 53.4**	**-0.8**
MAT	**Matsushiro**	**13.15**	**234**	P	**Pn**	**15 55 53.5**	**-0.7**
MAT				*e*S	**Sn**	**15 58 26.2**	**+6.2**
MJAR	**Matsushiro Arr**	**13.15**	**234**	Pn	**Pn**	**15 55 53.1**	**-1.1**
	comp=Z,0.3nm,0.3s,baz=29,slow=12,SNR=15						
MJAR				LR	LR	16 03 36.9	
	comp=Z,69nm,18.7s,baz=80,slow=50						
MJB9	**Matsu-Tunnel**	**13.15**	**234**	*e*Pn	**Pn**	**15 55 52.3**	**-1.9**
USRK	**Ussuriysk Ar.**	**13.85**	**273**	Pn	**Pn**	**15 56 03.8**	**+0.1**
	baz=88,slow=13						
KLR	**Kul’dur**	**13.97**	**294**	Pn	**Pn**	**15 56 08.0**	**+2.6**
	comp=Z,0.0nm,0.3s,baz=103,slow=12,SNR=4.1						
KLR				LR	LR	16 01 56.7	
	comp=Z,33nm,18.9s,baz=99,slow=40						
KLR	**Kul’dur**	**13.97**	**294**	*e*P	**Pn**	**15 56 07.4**	**+2.0**
KLR	**Kul’dur**	**13.97**	**294**	⇑*e*P	**Pn**	**15 56 07.4**	**+2.0**
MA2	**Magadan**	**14.48**	**359**	Pn	**Pn**	**15 56 12.4**	**+0.1**
	comp=Z,1.2nm,0.3s,baz=180,slow=11,SNR=10						
MA2				LR	LR	16 02 15.5	
	comp=Z,160nm,18.2s,baz=180,slow=40						
INU	**Inuyama**	**14.67**	**233**	*e*Pn	**Pn**	**15 56 15.2**	**+0.1**
MSHR	**Mys Shultsa**	**14.82**	**267**	⇓*e*P	**Pn**	**15 56 16.1**	**-0.9**

MDJ	Mudanjiang	15.47	276	P	Pn	15 56 26.1	+0.6
MDJ				pP	sP	15 56 32.8	-4.1
MDJ				sP	pP	15 56 37.3	+2.6
MDJ				S	Sn	15 59 15.3	-1.1
MDJ				pmax	pmax		
	comp=Z,25nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,64nm,4.8s						
MDJ				LR	LR		
	comp=Z,220nm,10.9s						
MDJ				LR	LR		
	comp=Z,250nm,12.5s						
MDJ				LR	LR		
	comp=Z,360nm,12.7s						
MDJ	Mudanjiang	15.47	276	ePn	P	15 56 28.8	-1.1
	comp=Z,16nm,0.8s						
ZEA	Zeya	17.84	308	eP	P	15 56 55.2	-1.0
ZEA				pmax	pmax		
	comp=Z,28nm,1.2s						
SEY	Seymchan	17.86	1	P	P	15 56 54.1	-2.1
	comp=Z,0.1nm,0.3s,baz=161,slow=8.5,SNR=6.3						
SEY	Seymchan	17.86	1⇑	eP	P	15 56 55.1	-1.1
CN2	Changchun	18.55	275	eP	P	15 57 02.8	-1.2
CN2				eS	Sn	16 00 25.5	-5.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,300nm,16.0s						
CN2				LR	LR		
	comp=Z,300nm,16.0s						
CN2				LR	LR		
	comp=Z,400nm,16.0s						
KSRS	Korea Array	19.19	255	P	P	15 57 10.6	-0.5
	comp=Z,0.2nm,0.3s,baz=60,slow=11,SNR=7.3						
KSRS				LR	LR	16 05 09.2	
	comp=Z,128nm,18.1s,baz=68,slow=39						
KSRS	Korea Array	19.19	255	eP	P	15 57 11.8	+0.8
KSAR	Wonju Array Be	19.22	255	P	P	15 57 10.6	-0.8
KSAR	Wonju Array Be	19.22	255	P	P	15 57 10.6	-0.8
JNU	Nakatsue	19.86	240	LR	LR	16 06 51.7	
	comp=Z,179nm,18.6s,baz=306,slow=42						
YAK	Yakutsk	21.11	331	P	P	15 57 30.6	-1.1
	baz=232,slow=20						
YAK				LR	LR	16 05 47.1	
	comp=Z,109nm,20.0s,baz=86,slow=37						
YAK	Yakutsk	21.11	331	eP	P	15 57 30.4	-1.3
YAK				e		15 57 47.6	
YAK				eS	S	16 01 24.9	-0.8
YAK				e*SS	pS	16 01 37.2	+2.1
YAK				eSSS	SSS	16 02 07.6	
YAK				e		16 08 54.4	
YAK				pmax	pmax		
	comp=Z,25nm,0.9s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.0s						
YAK				pmax	pmax		
	comp=Z,18nm,1.1s						
YAK				pmax	pmax		
	comp=N,9.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.0s						
YAK				smax	smax		
	comp=N,26nm,2.1s						
YAK				smax	smax		
	comp=E,21nm,2.0s						
YAK				MLR	MLR		
	comp=Z,107nm,20.0s						
YAK				MLR	MLR		
	comp=N,257nm,19.0s						
YAK				MLR	MLR		
	comp=E,64nm,16.0s						
BJI	Beijing	26.29	271	P	P	15 58 21.5	-1.2
BJI				pmax	pmax		
	comp=E,5.0nm,0.9s						
BJI				LR	LR		
	comp=E,200nm,8.2s						
BJI				LR	LR		
	comp=E,300nm,15.3s						
BJI				LR	LR		
	comp=E,200nm,20.8s						
NJ2	Nanjing	28.39	254	eP	P	15 58 41.1	-0.5
NJ2				pmax	pmax		
	comp=E,11nm,0.5s						
H11N2	WAKE ISLAND Hy	28.40	148	T	T	16 29 27.4	
	baz=341,slow=74,SNR=52						
H11N1	WAKE ISLAND Hy	28.41	148	T	T	16 29 27.4	
	baz=341						
H11N3	WAKE ISLAND Hy	28.41	148	T	T	16 29 28.5	
	baz=341,slow=74,SNR=23						
TIXI	Tiksi	28.72	345	LR	LR	16 10 21.5	
	comp=E,70nm,20.8s,baz=93,slow=37						
TIXI	Tiksi	28.72	345⇓	eP	P	15 58 46.5	+2.4
TIXI				pmax	pmax		
	comp=Z,4.0nm,1.1s						
HHC	Hu-ho-hao-te	29.24	276	eP	P	15 58 49.8	+0.5
HHC				sP	sP	15 59 08.3	+12
HHC				PP	PnPn	15 59 45.1	+2.8
HHC				S	S	16 03 40.8	-0.5
HHC				sS	sS	16 03 55.8	+5.9
HHC				pmax	pmax		
	comp=Z,23nm,1.1s						
HHC				pmax	pmax		
	comp=Z,73nm,4.8s						
HHC				LR	LR		
	comp=Z,290nm,16.5s						
HHC				LR	LR		
	comp=Z,290nm,16.1s						
HHC				LR	LR		
	comp=Z,280nm,14.3s						
H11S1	WAKE ISLAND Hy	29.45	149	T	T	16 30 47.3	
	baz=333,slow=76,SNR=36						
H11S3	WAKE ISLAND Hy	29.45	149	T	T	16 30 46.8	
	baz=333						
H11S2	WAKE ISLAND Hy	29.46	149	T	T	16 30 47.3	
	baz=333,slow=76,SNR=28						
SONA1	Songino Array	30.77	291	eP	P	15 59 00.9	-1.9
SONM	Songino Array	30.78	291	P	P	15 59 02.5	-0.4
	comp=Z,3.4nm,1.0s,baz=89,slow=7.5,SNR=5.0						
SONM				LR	LR	16 12 31.5	
	comp=Z,172nm,18.2s,baz=88,slow=39						
SONM	Songino Array	30.78	291	eP	P	15 59 06.9	+4.0
SONM				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GUMO	Guam	31.92	192	LR	LR	16 13 14.8	
	comp=Z,51nm,19.0s,baz=20,slow=38						
WHN	Wuhan	32.37	256	P	P	15 59 16.9	+0.1
WHN				S	S	16 04 26.8	-3.4
WHN				LR	LR		
	comp=Z,340nm,16.5s						
LZH	Lanzhou	36.76	273	eP	P	15 59 54.9	0.0
LZH				pP	sP	16 00 04.0	+1.7
LZH				sP	pP	16 00 07.5	+7.3
LZH				ePP	PP	16 01 20.0	+1.4
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				pmax	pmax		
	comp=Z,85nm,4.9s						
LZH				LR	LR		
	comp=Z,430nm,13.0s						
LZH				LR	LR		
	comp=Z,430nm,13.3s						
LZH				LR	LR		
	comp=Z,620nm,16.8s						
BWN	Browne	37.44	38	eP	P	16 00 01.4	+1.2
	comp=Z,21nm,0.9s						
MDM	Murphy Dome	38.00	37	eP	P	16 00 05.3	+0.3
	comp=Z,3.2nm,0.9s						
GTA	Gaotai	38.06	280	⇑P	P	16 00 06.9	+1.0
GTA				pP	sP	16 00 15.9	+2.6
GTA				sP	pP	16 00 19.4	+8.2
GTA				PcP	PcP	16 02 22.3	+1.4
GTA				S	S	16 05 59.8	+2.0
GTA				pmax	pmax		
	comp=Z,18nm,1.0s						
GTA				pmax	pmax		
	comp=Z,67nm,4.8s						
GTA				LR	LR		
	comp=Z,87nm,15.6s						
GTA				LR	LR		
	comp=Z,100nm,15.6s						
GTA				LR	LR		
	comp=Z,110nm,15.6s						
IL1	Eielson Array	38.57	37	eP	P	16 00 08.8	-0.9
ILAR	Eielson Array	38.57	37	P	P	16 00 09.4	-0.3
	comp=Z,4.7nm,1.2s,baz=250,slow=6.6,SNR=18						
ILAR	Eielson Array	38.57	37	eP	P	16 00 09.6	-0.1
ILAR	Eielson Array	38.57	37	eP	P	16 00 09.6	-0.1
ILAR				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ILB	Eielson Array	38.57	37	eP	P	16 00 09.3	-0.4
CD2	Chengdu	39.56	266	eP	P	16 00 17.0	-1.5
GYA	Guiyang	40.20	258	eP	P	16 00 24.0	+0.1
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
EGAK	Eagle	41.02	37	eP	P	16 00 29.9	-0.2
	comp=Z,5.6nm,1.1s						
DGZ	Jazzator, Alta	42.36	300	eP	P	16 00 43.9	+2.4
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ZALV	Zalesovo Beam	42.61	307	PcP	PcP	16 02 32.6	-2.5
	comp=Z,1.4nm,0.7s,baz=54,slow=2.6,SNR=3.7						
ZALV				LR	LR	16 19 37.2	
	comp=Z,165nm,18.6s,baz=70,slow=38						
INK	Inuvik	43.67	31	P	P	16 00 49.4	-2.1
	comp=Z,4.4nm,1.1s,baz=272,slow=8.3,SNR=6.3						
INK	Inuvik	43.67	31	eP	P	16 00 52.1	+0.6
INK	Inuvik	43.67	31	eP	P	16 00 52.1	+0.6
	comp=Z,9.7nm,1.3s						
KMI	Kunming	43.77	260	P	P	16 00 52.8	-0.4
KMI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KMI				pmax	pmax		
	comp=Z,77nm,5.0s						
WMQ	Urumqi	44.41	292	P	P	16 00 59.3	+1.3
WMQ				pP	sP	16 01 08.0	+2.6
WMQ				sP	pP	16 01 12.4	+9.1
WMQ				pmax	pmax		
	comp=Z,29nm,0.8s						
WMQ				pmax	pmax		
	comp=Z,230nm,6.7s						
WMQ				LR	LR		
	comp=Z,140nm,23.1s						
WMQ				LR	LR		
	comp=Z,99nm,18.5s						
WMQ				LR	LR		
	comp=Z,150nm,18.5s						
MK31	Makanchi Array	46.64	298	eP	P	16 01 14.4	-1.1
MK31	Makanchi Array	46.64	298	eP	P	16 01 14.4	-1.1
MKAR	Makanchi Array	46.64	298	P	P	16 01 14.9	-0.6
	comp=Z,4.8nm,0.8s,baz=72,slow=7.5,SNR=38						
MKAR				PcP	PcP	16 02 49.1	-0.1
	comp=Z,0.9nm,0.6s,baz=70,slow=2.5,SNR=3.2						
MKAR				LR	LR	16 22 12.2	
	comp=Z,217nm,18.1s,baz=66,slow=38						
MKAR	Makanchi Array	46.64	298	eP	P	16 01 14.6	-1.0
	comp=Z,26nm,0.6s						
MKAR				PcP	PcP	16 02 49.1	-0.1
MKAR	Makanchi Array	46.64	298	eP	P	16 01 14.7	-0.8
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MK01	Makanchi Array	46.64	298	eP	P	16 01 14.4	-1.1
MAKZ	Makanchi	46.83	298	eP	P	16 01 15.7	-1.3
	comp=Z,6.1nm,1.3s						
MAKZ	Makanchi	46.83	298	eP	P	16 01 15.7	-1.3
MAKZ				pmax	pmax		
	comp=Z,6.0nm,1.3s						
KURK	Kurchatov	47.28	304	eP	P	16 01 18.3	-2.1
	comp=Z,5.3nm,1.2s						
KURK				PcP	PcP	16 02 51.2	0.0
KURK	Kurchatov	47.28	304⇓	eP	P	16 01 18.7	-1.7
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KURBB	Kurchatov Arra	47.37	304	P	P	16 01 19.7	-1.4
	comp=Z,2.8nm,0.8s,baz=72,slow=8.8,SNR=16						
KURBB				PcP	PcP	16 02 51.2	-0.4
	comp=Z,0.7nm,0.7s,baz=90,slow=2.6,SNR=3.9						
CMAR	Chiang Mai Arr	50.82	256	P	P	16 01 47.2	-0.7
	comp=Z,0.8nm,0.8s,baz=39,slow=12,SNR=5.0						
CMAR				LR	LR	16 25 47.0	
	comp=Z,106nm,18.2s,baz=208,slow=39						
CMAR	Chiang Mai Arr	50.82	256	eP	P	16 01 49.5	+1.6
CMAR	Chiang Mai Arr	50.82	256	eP	P	16 01 49.6	+1.6
BVAR	Borovoye Array	50.97	310	P	P	16 01 46.8	-1.8
	comp=Z,0.4nm,0.4s,baz=49,slow=15,SNR=3.6						
BVAR				PcP	PcP	16 03 04.8	+0.1
	comp=Z,1.1nm,0.6s,baz=93,slow=5.8,SNR=4.4						
BVAR				LR	LR	16 25 07.1	
	comp=Z,114nm,18.6s,baz=80,slow=38						
BRVK	Borovoye	51.02	310	eP	P	16 01 48.8	-0.2
BRVK	Borovoye	51.02	310⇑	eP	P	16 01 48.8	-0.2
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KDJ	Kajisay	52.03	295	eP	P	16 01 57.2	+0.2
	comp=Z,19nm,1.1s						
ULHL	Ulahol	52.57	295	P	P	16 02 01.9	+0.9
	SNR=10						
TKM2	Tokmak 2	52.64	296	P	P	16 02 02.2	+0.6
	SNR=5.2						
YKA	Yellowknife Ar	52.94	35	P	P	16 02 02.0	-1.2
	comp=Z,0.9nm,0.8s,baz=295,slow=8.7,SNR=2.6						
YKA	Yellowknife Ar	52.94	35	P	P	16 02 02.0	-1.2
USP	Ospenovka	53.16	297	P	P	16 02 05.9	+0.7
	SNR=5.6						
KBK	Karagaybulak	53.19	296	P	P	16 02 06.3	+0.8
	SNR=5.2						
KZA	Kyzart	53.29	296	P	P	16 02 08.1	+1.5
	SNR=12						
AAK	Ala-Archa	53.49	297	eP	P	16 02 07.7	0.0
AAK	Ala-Archa	53.49	297	eP	P	16 02 07.7	0.0
	comp=Z,5.5nm,0.8s						
AAK	Ala-Archa	53.49	297	eP	P	16 02 07.7	0.0
AAK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
JIRN	Jiri	53.88	275	eP	P	16 02 11.9	+0.9
EKS2	Erkin-Say	53.93	297	P	P	16 02 11.6	+0.7
	SNR=8.9						
GUN	Gumba	53.95	275	eP	P	16 02 12.5	+1.0
SPITS	Spitsbergen Ar	54.00	350	LR	LR	16 26 28.0	
	comp=Z,46nm,19.0s,baz=40,slow=38						
RAMN	Ramite	54.02	274	eP	P	16 02 11.5	-0.4
KSH	Kashi	54.17	293	P	P	16 02 17.3	+4.6
KSH				epP	sP	16 02 27.9	+7.7
KSH				ePcP	PcP	16 03 20.8	+3.7
KSH				pmax	pmax		
	comp=Z,21nm,1.3s						
KSH				pmax	pmax		
	comp=Z,120nm,5.2s						
AML	Almayashu	54.26	296	P	P	16 02 14.7	+1.0
	SNR=5.7						
KKN	Kakani	54.45	275	eP	P	16 02 16.1	+1.1
	comp=Z,18nm,0.8s						
PKIN	Phulchoki	54.49	275	eP	P	16 02 16.1	+0.7
	comp=Z,12nm,0.7s						
DMN	Daman	54.68	275	eP	P	16 02 17.2	+0.5
	comp=Z,23nm,0.8s						
GKN	Gorkha	54.77	276	eP	P	16 02 17.8	+0.6
	comp=Z,31nm,0.9s						
DANN	Dangsing	55.18	277	eP	P	16 02 21.5	+1.1
ARU	Arti	55.41	318	eP	P	16 02 19.3	-1.9
	comp=Z,3.7nm,0.6s						
ARU	Arti	55.41	318c	iP	P	16 02 19.6	-1.6
ARU						16 03 19.0	
ARU				S	S	16 10 02.4	-2.3
ARU				SS	SS	16 13 48.1	-0.6
ARU				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KOLN	Koldanda	55.64	276	eP	P	16 02 24.3	+0.7
	comp=Z,5.6nm,0.3s						
KK31	Karatay Array	55.74	299	eP	P	16 02 23.0	-0.9
KK31	Karatay Array	55.74	299	eP	P	16 02 23.0	-0.9
KKAR	Karatay Array	55.74	299	eP	P	16 02 23.2	-0.7
KKAR	Karatay Array	55.74	299	eP	P	16 02 23.2	-0.7
PYUN	Piuthan	55.87	277	eP	P	16 02 25.1	-0.1
	comp=Z,132nm,1.2s						
ABKAR	Akbulak array	58.55	310	eP	P	16 02 42.3	-1.3
AKTO	Aktyubinsk	58.92	312	LR	LR	16 30 40.6	
	comp=Z,181nm,18.4s,baz=52,slow=39						
ARCES	ARCESS Array B	58.99	341	P	P	16 02 45.5	-0.8
	comp=Z,3.2nm,1.0s,baz=24,slow=9.3,SNR=4.8						
NIL	Nilore	59.28	288	eP	P	16 02 49.4	+0.4
	comp=Z,17nm,0.8s						
NIL	Nilore	59.28	288	eP	P	16 02 49.4	+0.4
NIL				pmax	pmax		
	comp=Z,17nm,0.8s						
SUMG	Summit	62.40	3	eP	P	16 03 10.7	+0.6
	comp=Z,14nm,0.9s						
SUMG	Summit	62.40	3	eP	P	16 03 10.7	+0.6
SUMG				pmax	pmax		
	comp=Z,14nm,0.9s						
NVAR	Mina Array Bea	64.26	61	P	P	16 03 22.6	-0.1
	comp=Z,0.1nm,0.5s,baz=289,slow=6.5,SNR=2.9						
FINES	FINESS Array B	65.00	334	P	P	16 03 25.2	-1.6
	comp=Z,0.9nm,0.4s,baz=45,slow=6.6,SNR=14						
FINES				LR	LR	16 36 55.8	
	comp=Z,39nm,18.8s,baz=54,slow=41						
FINES	FINESS Array B	65.00	334	eP	P	16 03 24.2	-2.6
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
GEYT	Alibeck	66.41	301	P	P	16 03 36.2	-0.2
	comp=Z,3.3nm,0.8s,baz=42,slow=4.6,SNR=10						
GYA0B	ALIBECK ARRAY	66.41	301	eP	P	16 03 36.7	+0.3
	comp=Z,6.5nm,0.8s						
WRA	Warramunga Arr	66.59	198	P	P	16 03 36.2	-1.3
	comp=Z,0.3nm,0.5s,baz=14,slow=6.8,SNR=5.2						
WRA	Warramunga Arr	66.59	198	eP	P	16 03 36.8	-0.7
VSU	Vasula	67.10	332⇓	eP	P	16 03 41.2	+0.9
VSU				pmax	pmax		
	comp=Z,41nm,1.2s						
K22A	Casper	68.44	51	eP	P	16 03 50.0	+0.7
	comp=Z,11nm,1.0s						
NC405	NORSAR Array S	69.19	340	eP	P	16 03 52.9	-0.6
NB201	NORSAR Array S	69.34	341	eP	P	16 03 53.5	-0.9
NB2	NORSAR Subarra	69.37	341	P	P	16 03 53.7	-0.9
	comp=Z,5.0nm,0.6s,baz=30,slow=6.5						
NOA	NORSAR Array B	69.37	341	LR	LR	16 38 15.2	
	comp=Z,29nm,19.9s,baz=30,slow=39						
HFS	Hagfors	69.55	339	P	P	16 03 53.4	-2.3
	comp=Z,6.7nm,0.7s,baz=69,slow=7.9,SNR=12						
ASAR	Alice Springs	70.29	197	P	P	16 04 01.1	+0.5
	comp=Z,0.6nm,0.8s,baz=15,slow=6.1,SNR=7.4						
ASAR	Alice Springs	70.29	197	eP	P	16 04 02.2	+1.6
ASAR	Alice Springs	70.29	197	eP	P	16 04 02.2	+1.6
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KIV	Kislovodsk	71.07	314	eP	P	16 04 06.8	+1.4
KIV	Kislovodsk	71.07	314	eP	P	16 04 06.2	+0.9
	comp=Z,17nm,0.9s						
KIV	Kislovodsk	71.07	314	i P	P	16 04 06.9	+1.5
KIV				i		16 04 26.3	
KIV				pmax	pmax		
	comp=Z,18nm,1.0s						
KIV				MLR	MLR		
	comp=Z,77nm,18.0s						
KBZ	Khabaz	71.12	313	P	P	16 04 06.3	+0.8
	comp=Z,18nm,0.9s,baz=56,slow=2.1,SNR=20						
KBZ				LR	LR	16 39 40.0	
	comp=Z,140nm,19.4s,baz=47,slow=40						
ZEI	Tsey	71.26	312	eP	P	16 04 02.4	-4.3
ZEI				pmax	pmax		
	comp=Z,9.0nm,0.6s						
PALK	Pallekele	71.28	261	i P	P	16 04 09.5	+2.5
TBLG	Delisi	71.55	311	eP	P	16 04 08.9	+0.7
	comp=Z,19nm,0.8s						
TBLG	Delisi	71.55	311	eP	P	16 04 09.0	+0.7
TBLG				pmax	pmax		
	comp=Z,19nm,0.8s						
AKASG	Malin Array Be	72.22	326	P	P	16 04 10.9	-1.1
	comp=Z,1.2nm,0.4s,baz=32,slow=6.1,SNR=8.4						
AKASG	Malin Array Be	72.22	326	eP	P	16 04 11.2	-0.9
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKBB	Malin Array Si	72.22	326	eP	P	16 04 10.8	-1.2
	comp=Z,10.0nm,1.2s						
KIEV	Kiev	72.23	326	eP	P	16 04 11.6	-0.5
KIEV	Kiev	72.23	326	eP	P	16 04 10.8	-1.3
	comp=Z,9.7nm,1.2s						
KIEV	Kiev	72.23	326⇓	eP	P	16 04 11.6	-0.5
KIEV				pmax	pmax		
	comp=Z,7.0nm,1.2s						
GNI	Garni	72.66	310	LR	LR	16 39 32.6	
	comp=Z,43nm,18.9s,baz=58,slow=39						
BEL	Belsk	74.46	331	eP	P	16 04 26.7	+1.5
BEL	Belsk	74.46	331	eP	P	16 04 26.7	+1.5
KWP	Kalwaria Pacla	75.59	328	eP	P	16 04 31.9	0.0
KWP	Kalwaria Pacla	75.59	328	eP	P	16 04 31.5	-0.4
	comp=Z,271nm,1.1s						
KWP	Kalwaria Pacla	75.59	328	eP	P	16 04 31.5	-0.4
KWP				pmax	pmax		
	comp=Z,271nm,1.1s						
OJC	Ojcow	76.15	330	eP	P	16 04 35.5	+0.5
OJC	Ojcow	76.15	330	eP	P	16 04 34.8	-0.2
	comp=Z,12nm,1.0s						
OJC	Ojcow	76.15	330	eP	P	16 04 34.8	-0.2
OJC				pmax	pmax		
	comp=Z,12nm,1.0s						
BUR08	Bucovina Ar. S	76.26	326	eP	P	16 04 35.9	+0.1
BUR04	Bucovina Ar. S	76.27	326	eP	P	16 04 35.5	-0.4
BURAR	Bucovina Array	76.27	326⇓	iP	P	16 04 36.4	+0.5
TESR	Tescani	76.58	324⇓	iP	P	16 04 38.1	+0.6
NIE	Niedzica	76.65	330	eP	P	16 04 38.0	+0.1
NIE	Niedzica	76.65	330	eP	P	16 04 38.0	+0.1
CRVS	Cervenica-Dubn	76.66	329	eP	P	16 04 38.8	+0.9
CRVS				pmax	pmax		
	comp=Z,6.0nm,1.3s						
CRVS	Cervenica-Dubn	76.66	329	eP	P	16 04 38.8	+0.9
TLCR		76.72	322⇑	iP	P	16 04 38.1	-0.2
KSP	Ksiaz	76.81	333	eP	P	16 04 38.9	+0.2
KSP	Ksiaz	76.81	333	eP	P	16 04 38.9	+0.2
TRPA	Tarpa	76.89	328⇓	iP	P	16 04 40.3	+1.1
CFR	Carcaliu	77.02	323⇑	iP	P	16 04 40.4	+0.4
LANS	Liptovska Anna	77.17	330	eP	P	16 04 42.4	+1.5
LANS	Liptovska Anna	77.17	330	eP	P	16 04 42.4	+1.5
UPC	Upice	77.19	333	eP	P	16 04 42.4	+1.5
UPC	Upice	77.19	333	eP	P	16 04 42.4	+1.5
DPC	Dobruska-Polom	77.22	332	eP	P	16 04 42.3	+1.2
DPC	Dobruska-Polom	77.22	332	eP	P	16 04 42.3	+1.2
MORC	Moravsky Berou	77.31	331⇑	iP	P	16 04 42.5	+0.9
MORC	Moravsky Berou	77.31	331	eP	P	16 04 41.7	+0.1
	comp=Z,11nm,1.0s						
MORC	Moravsky Berou	77.31	331	eP	P	16 04 42.2	+0.6
CLL	Collm	77.44	335⇑	iP	P	16 04 41.6	-0.6
	comp=Z,13nm,1.0s						
CLL				e		16 04 50.0	
CLL	Collm	77.44	335	eP	P	16 04 41.3	-0.9
CLL	Collm	77.44	335	eP	P	16 04 41.4	-0.9
	comp=Z,12nm,1.0s						
CLL	Collm	77.44	335⇑	iP	P	16 04 41.6	-0.6
CLL				e*SP	PcP	16 04 54.0	+1.4
CLL				pmax	pmax		
	comp=Z,13nm,1.0s						
BRG	Berggiesshubel	77.53	334	eP	P	16 04 42.9	+0.1
	comp=Z,4.6nm,1.0s						
BRG	Berggiesshubel	77.53	334	eP	P	16 04 42.9	+0.1
BRG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TLB	Topalu	77.53	322⇑	iP	P	16 04 43.5	+0.6
EKA	Eskdalemuir Ar	77.62	345	P	P	16 04 43.1	-0.1
	comp=Z,1.0nm,0.4s,baz=15,slow=5.1,SNR=8.8						
MLR	Muntele Rosu	77.69	324	P	P	16 04 43.9	0.0
	comp=Z,1.0nm,0.7s,baz=316,slow=18,SNR=8.4						
MLR				LR	LR	16 42 13.7	
	comp=Z,13nm,18.0s,baz=36,slow=38						
MLR	Muntele Rosu	77.69	324⇓	iP	P	16 04 44.1	+0.1
MLR	Muntele Rosu	77.69	324	eP	P	16 04 44.3	+0.3
	comp=Z,23nm,1.6s						
DRGR		77.93	327⇑	iP	P	16 04 45.1	-0.1
VYHS	Vyhne	77.95	330	eP	P	16 04 45.3	+0.1
VYHS				pmax	pmax		
	comp=Z,4.0nm,1.1s						
VYHS	Vyhne	77.95	330	eP	P	16 04 45.3	+0.1
VRAC	Vranov	78.03	332⇑	iP	P	16 04 46.1	+0.5
VRAC	Vranov	78.03	332	eP	P	16 04 46.9	+1.3
JAVC	Velka Javorina	78.05	331	eP	P	16 04 47.7	+1.9
VOIR		78.11	325⇑	iP	P	16 04 47.3	+1.1
PRU	Pruhonice	78.11	333	eP	P	16 04 47.3	+1.3
PRU	Pruhonice	78.11	333	eP	P	16 04 47.3	+1.3
KRUC	Moravsky	78.31	332	eP	P	16 04 48.4	+1.3
ARR	Arges	78.33	325⇑	iP	P	16 04 48.9	+1.5
BR131	Keskin Array S	78.74	316	eP	P	16 04 49.8	-0.1
BRTR	Keskin Array B	78.74	316	P	P	16 04 50.3	+0.4
	comp=Z,2.8nm,0.9s,baz=64,slow=4.3,SNR=12						
BRTR				LR	LR	16 44 52.7	
	comp=Z,41nm,18.2s,baz=80,slow=40						
BRTR	Keskin Array B	78.74	316	eP	P	16 04 51.2	+1.3
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KHC	Kasperske Hory	79.17	333	eP	P	16 04 52.1	+0.1
KHC				epP	sP	16 04 57.0	-2.6
KHC				ex	x	16 05 06.2	
KHC	Kasperske Hory	79.17	333	eP	P	16 04 52.0	+0.1
KHC	Kasperske Hory	79.17	333	eP	P	16 04 52.0	+0.1
	comp=Z,4.7nm,1.2s						
KHC	Kasperske Hory	79.17	333	eP	P	16 04 52.0	+0.1

KHC				pmax	pmax		
	comp=Z,5.0nm,1.2s						
BZS	Buzias	79.33	327	⇓iP	P	16 04 53.1	+0.3
TXAR	Lajitas Array	79.34	59	P	P	16 04 52.9	-0.4
	comp=Z,0.4nm,0.9s,baz=297,slow=5.5,SNR=4.1						
TXAR	Lajitas Array	79.34	59	eP	P	16 04 53.0	-0.3
TXAR	Lajitas Array	79.34	59	eP	P	16 04 53.0	-0.3
GERES	GERESS Array B	79.38	333	P	P	16 04 52.7	-0.5
	comp=Z,1.3nm,0.6s,baz=32,slow=5.3,SNR=11						
GERES				LR	LR	16 44 05.6	
	comp=Z,38nm,18.7s,baz=334,slow=39						
GERES	GERESS Array B	79.38	333	eP	P	16 04 54.0	+0.8
GERES	GERESS Array B	79.38	333	eP	P	16 04 54.0	+0.8
GERES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GEA0	GERESS Array S	79.39	333	eP	P	16 04 52.5	-0.7
CONA	Conrad Observa	79.46	331	epP	P	16 04 54.9	+1.3
	comp=Z,5.8nm,0.8s						
MEM	Membach	80.03	338	⇑P	P	16 04 55.2	-1.3
KBA	Koelnbreinsper	81.04	332	epP	P	16 05 03.2	+0.9
	comp=Z,7.2nm,0.9s						
VTS	Vitosha	81.20	324	⇓iP	P	16 05 04.0	+0.9
VTS	Vitosha	81.20	324	eP	P	16 05 02.1	-1.0
	comp=Z,7.7nm,0.8s						
VTS	Vitosha	81.20	324	eP	P	16 05 02.1	-1.0
VTS				pmax	pmax		
	comp=Z,8.0nm,0.8s						
WATA	Walderalm	81.38	334	eP	P	16 05 06.4	+2.3
	comp=Z,2.5nm,0.5s						
WTTA	Wattenberg	81.43	334	epP	P	16 05 05.8	+1.5
	comp=Z,2.1nm,0.4s						
BFO	Black Forest	81.47	336	iP	P	16 05 07.0	+2.7
MOTA	Moosalm	81.52	334	epP	P	16 05 06.5	+1.7
	comp=Z,4.7nm,0.8s						
DAVOX	Davos/Dischmat	82.40	334	P	P	16 05 09.5	0.0
	comp=Z,4.8nm,0.8s,baz=13,slow=18,SNR=6.4						
MMAI	Mount Meron Ar	82.98	310	LR	LR	16 47 03.0	
	comp=Z,70nm,18.1s,baz=130,slow=39						
CPUP	Villa Florida	150.31	61	PKPbc	PKPbc	16 12 37.6	-0.9
	comp=Z,4.3nm,1.1s,baz=221,slow=8.4,SNR=3.2						
SNAA	Sanae	150.66	196	PKPbc	PKPbc	16 12 37.4	-0.6
	comp=Z,1.4nm,0.8s,baz=208,slow=6.7,SNR=12						

MEX 15 15:57:44.7±0.7, 15°.89N×98°.15W, $h15^{km}\pm32^{km}$, MD3.7, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.50	3	eP	Pg	15 57 53.2	-1.4
PNIG				eS	Sg	15 57 59.5	-1.9
TLIG	Tlapa	1.71	347	eP	Pn	15 58 11.2	-2.9
TLIG				iS	Sn	15 58 31.7	-4.0
VHO	Vista Hermosa	1.80	49	iP	Pn	15 58 12.6	-2.8
VHO				iS	Sn	15 58 33.1	-5.0
MEIG	Mezcala	2.46	325	eP	Pn	15 58 20.7	-3.7
MEIG				iS	Sn	15 58 50.2	-4.1

MOS ***15*** *16:03:41.7±2.6, 48°.70N×156°.50E, $h24^{km}$, mb4.4/1, Error ellipse: s-maj=21.9km s-min=4.9km az=77.4*

KRSC 15 16:03:41.8±1.9, 48°.70N×156°.50E, $h24^{km}\pm29^{km}$, ML4.3, 1C-1D, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.00	353	eP	Pn	16 04 13.8	-0.2
SKR				eS	Sn	16 04 38.7	+0.5
SKR	Severo-Kuril's	2.00	353	ePN	Pn	16 04 14.3	+0.3
SKR				eS	Sb	16 04 40.7	-1.2
SKR				pmax	pmax		
	comp=Z,74nm,0.6s						
SKR				smax	smax		
	comp=N,107nm,0.3s						
SKR				smax	smax		
	comp=E,162nm,0.3s						
PAU	Pauzhetka	2.78	4	eP	Pn	16 04 26.8	+2.1
PAU				eS	Sn	16 05 00.8	+3.4
PAU	Pauzhetka	2.78	4	PN	Pn	16 04 26.8	+2.1
PAU				S	Sn	16 05 00.8	+3.4
KDTR	Khodutka, Kamc	3.27	17	eP	Pn	16 04 35.0	+3.5
KDTR				eS	Sb	16 05 15.4	-3.1
MIPR	Malaya Ipel'ka	3.58	3	eP	Pn	16 04 37.7	+1.9
MIPR	Malaya Ipel'ka	3.58	3	PN	Pn	16 04 37.7	+1.9
ASAK	Asacha	3.79	13	eP	Pn	16 04 43.1	+4.4
ASAK	Asacha	3.79	13	PN	Pn	16 04 43.1	+4.4
MTVR	Mutnovka	3.94	15	eP	Pn	16 04 44.9	+4.1
MTVR				eS	Sn	16 05 31.5	+5.3
MTVR	Mutnovka	3.94	15	PN	Pn	16 04 44.9	+4.1
MTVR				S	Sn	16 05 31.5	+5.3
RUS	Russkaya	3.95	18	iP	Pn	16 04 44.9	+4.1
RUS	Russkaya	3.95	18	PN	Pn	16 04 44.9	+4.1
APC	Apacha	4.25	5	eP	Pn	16 04 49.0	+4.1
APC	Apacha	4.25	5	PN	Pn	16 04 49.0	+4.1
KRMR	Karymshinskiy	4.26	13	eP	Pn	16 04 49.9	+4.8
KRMR				eS	Sb	16 05 41.0	-5.9
KRMR	Karymshinskiy	4.26	13	PN	Pn	16 04 49.9	+4.8
KRMR				S	Sb	16 05 41.0	-5.9
PET	Petropavlovsk	4.54	17	eP	Pn	16 04 53.6	+4.7
PET				eS	Sn	16 05 46.5	+5.7
PET	Petropavlovsk	4.54	17	PN	Pn	16 04 53.6	+4.7
PET				S	Sn	16 05 46.5	+5.7
DALK	Dalny	4.57	17	eP	Pn	16 04 53.4	+4.2
DALK				eS	Sn	16 05 47.5	+6.0
DALK	Dalny	4.57	17	PN	Pn	16 04 53.4	+4.2
DALK				S	Sn	16 05 47.5	+6.0
UGLR	Uglovaya	4.75	17	eP	Pn	16 04 57.1	+5.2
UGLR	Uglovaya	4.75	17	PN	Pn	16 04 57.1	+5.2
AVH	Avacha	4.79	16	eP	Pn	16 04 58.1	+5.8
AVH	Avacha	4.79	16	PN	Pn	16 04 58.1	+5.8
SMAR	Somma	4.80	17	eP	Pn	16 04 58.8	+6.2
SMAR	Somma	4.80	17	PN	Pn	16 04 58.8	+6.2
NLC	Nalytchevo	4.83	21	eS	Sn	16 05 52.6	+4.8
SDLR	Sedlovina	4.83	17	iP	Pn	16 04 57.7	+4.8
SDLR	Sedlovina	4.83	17	PN	Pn	16 04 57.7	+4.8
KRX	Arik	4.86	15	eP	Pn	16 04 58.0	+4.6
KRX	Arik	4.86	15	PN	Pn	16 04 58.0	+4.6
SPN	Mys Shipunski	4.94	26	eP	Pn	16 04 59.0	+4.7
SPN				eS	Sn	16 05 56.9	+6.3
SPN	Mys Shipunski	4.94	26	PN	Pn	16 04 59.0	+4.7
SPN				S	Sn	16 05 56.9	+6.3
GNL	Ganaly	5.08	10	eP	Pn	16 05 00.9	+4.4
GNL	Ganaly	5.08	10	PN	Pn	16 05 00.9	+4.4
KII	Karymskiy	5.66	18	eP	Pn	16 05 09.2	+4.9
KII	Karymskiy	5.66	18	PN	Pn	16 05 09.2	+4.9
MKZ	Mys Kozlova	6.71	27	eP	Pn	16 05 22.5	+3.9
MKZ	Mys Kozlova	6.71	27	PN	Pn	16 05 22.5	+3.9
KUR	Kuril'sk	6.85	243	ePN	Pn	16 05 11.9	-8.6
KUR				pmax	pmax		
	comp=N,14nm,0.4s						
KUR				pmax	pmax		
	comp=Z,2.0nm,0.4s						
KUR				pmax	pmax		
	comp=E,5.0nm,0.1s						
TUMR	Tumrok	6.97	17	eP	Pn	16 05 27.5	+5.2
TUMR	Tumrok	6.97	17	PN	Pn	16 05 27.5	+5.2
SHO	Shikotan	8.25	238	d iPN	Pn	16 05 28.7	-11
SHO				pmax	pmax		
	comp=Z,4.0nm,0.7s						
SHO				pmax	pmax		
	comp=N,2.0nm,0.2s						
KBTR	Krutoberegovo	8.45	25	eP	Pn	16 05 47.3	+4.8
KBTR	Krutoberegovo	8.45	25	PN	Pn	16 05 47.3	+4.8
YUK	Yuzh-Kuril'sk	8.71	242	c iPN	Pn	16 05 36.0	-10
YUK				pmax	pmax		
	comp=Z,29nm,0.3s						
YUK				pmax	pmax		
	comp=N,13nm,0.2s						
BKI	Bering	8.75	38	eS	Sn	16 07 27.6	+3.3

ISCJB ***15*** *16:04:43.2±0.9, 10°.41S±0°.10×162°.41E±0°.10, $h35^{km}$, mb3.9/9, Error ellipse: s-maj=16.4km s-min=10.7km az=43.1*

IDC ***15*** *16:04:48.9±3.2, 10°.46S×162°.18E, $h65^{km}\pm23^{km}$, mb3.7/9, mb1 3.8/12, mb1mx3.6/48, mbtmp4.0/12, MS3.0/1, Ms1 3.0/1, ms1mx2.5/39, Error ellipse: s-maj=27.0km s-min=16.9km az=76.0*

ISC 15 16:04:45.6±1.1, 10°.4S±0°.1×162°.4E±0°.1, $h35^{km}$, n19, $\sigma1^{s}.42$/14, mb3.9/9, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	2.54	291	P	Pn	16 05 25.5	+1.2
	87nm,0.3s,baz=150,slow=5.7,SNR=34						
HNR				S	Sn	16 05 55.7	+1.6
	71nm,0.3s,baz=123,slow=15,SNR=6.1						
HNR				LR	LR	16 06 43.5	
	comp=Z,336nm,19.4s,baz=87,slow=47						
HNR	Honiara	2.54	291	eP	Pn	16 05 25.0	+0.7
DZM	Mont Dzumac	12.30	162	P	Pn	16 07 40.0	+1.7
	0.3nm,0.3s,baz=321,slow=18,SNR=9.2						
CTA	Charters Tower	18.29	236	P	Pn	16 08 57.2	+0.6
	0.5nm,0.3s,baz=67,slow=11,SNR=8.6						
WRA	Warramunga Arr	28.63	247	P	P	16 10 37.5	-1.5
	2.4nm,0.8s,baz=74,slow=9.6,SNR=8.7						
STKA	Stephens Creek	28.77	219	P	P	16 10 40.1	0.0
	1.1nm,0.6s,baz=61,slow=12,SNR=7.6						
H11S2	WAKE ISLAND Hy	28.98	9	T	T	16 41 14.9	
	baz=190						
H11S3	WAKE ISLAND Hy	28.98	9	T	T	16 41 13.8	
	baz=190						
H11S1	WAKE ISLAND Hy	29.00	9	T	T	16 41 13.2	
	baz=190						
ASAR	Alice Springs	30.18	240	P	P	16 10 51.0	-1.8
	0.5nm,0.6s,baz=64,slow=10,SNR=25						
H11N1	WAKE ISLAND Hy	30.21	9	T	T	16 42 44.2	
	baz=188,slow=76,SNR=9.7						
H11N3	WAKE ISLAND Hy	30.22	9	T	T	16 42 45.3	
	baz=188,slow=76,SNR=8.4						
H11N2	WAKE ISLAND Hy	30.23	9	T	T	16 42 44.7	
	baz=188,slow=76,SNR=11						
FITZ	Fitzroy Crossi	36.35	254	P	P	16 11 44.4	-2.2
	2.5nm,0.9s,baz=81,slow=9.3,SNR=8.6						
ASAJ	Asahikawa	57.10	343	P	P	16 14 29.3	+0.9
	3.4nm,0.8s,baz=202,slow=6.8,SNR=7.2						
CMAR	Chiang Mai Arr	68.78	294	P	P	16 15 45.6	-1.1
	0.2nm,0.4s,baz=102,slow=3.8,SNR=2.6						
SONM	Songino Array	76.16	325	P	P	16 16 30.7	+0.5
	1.4nm,0.7s,baz=148,slow=6.2,SNR=7.7						
MKAR	Makanchi Array	90.75	317	P	P	16 17 44.7	-0.4
	0.6nm,0.8s,baz=96,slow=5.0,SNR=4.4						
KURBB	Kurchatov Arra	94.02	321	P	P	16 17 58.7	-1.3
	0.1nm,0.3s,baz=101,slow=2.9,SNR=3.0						

MEX 15 16:21:48.6±0.4, 16°.47N×98°.58W, $h16^{km}\pm5^{km}$, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.44	100	iP	Pg	16 21 55.9	-1.6
PNIG				eS	Sg	16 22 02.0	-1.5
TLIG	Tlapa	1.09	1	iP	Pb	16 22 05.3	-3.8
TLIG				eS	Sb	16 22 18.4	-4.7
CAIG	El Cayaco	1.72	290	eP	Pn	16 22 14.5	-3.4
CAIG				iS	Sn	16 22 34.1	-5.4
MEIG	Mezcala	1.76	326	iP	Pn	16 22 15.5	-3.0
MEIG				iS	Sn	16 22 35.5	-5.1
VHO	Vista Hermosa	1.86	71	iP	Pn	16 22 16.4	-3.7
VHO				iS	Sn	16 22 37.9	-5.5

IDC 15 17:02:24.1±0.9, 24°.85N×45°.86W, $h0^{km}$, mb3.7/10, mb1 3.9/10, mb1mx3.6/62, mbtmp3.7/10, Error ellipse: s-maj=31.6km s-min=20.2km az=177.0, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N2	ASCENSION HYDR	44.60	133	T	T	17 57 57.7	
	baz=317						
H10N3	ASCENSION HYDR	44.60	133	T	T	17 57 58.8	
	baz=317						
H10N1	ASCENSION HYDR	44.62	133	T	T	17 57 57.1	
	baz=317						
H10S3	ASCENSION HYDR	45.32	134	T	T	17 58 53.2	
	baz=318						
H10S1	ASCENSION HYDR	45.32	134	T	T	17 58 53.5	
	baz=318						
H10S2	ASCENSION HYDR	45.33	134	T	T	17 58 53.8	
	baz=318						
TORD	Torodi Ar. Bea	46.23	96	P	P	17 10 50.7	-0.7
	0.8nm,0.9s,baz=302,slow=8.3						
LPAZ	La Paz	46.30	210	P	P	17 10 52.7	+0.2
	2.0nm,0.9s,baz=5.4,slow=6.3,SNR=5.6						
TXAR	Lajitas Array	51.22	289	P	P	17 11 29.4	-0.3
	0.4nm,0.7s,baz=97,slow=7.0,SNR=5.4						
GERES	GERESS Array B	51.84	46	P	P	17 11 34.8	+0.7
	0.5nm,0.7s,baz=209,slow=11,SNR=4.5						
PDAR	Pinedale Array	54.61	306	P	P	17 11 54.9	+0.1
	1.2nm,1.0s,baz=88,slow=7.6,SNR=7.0						
NVAR	Mina Array Bea	61.71	302	P	P	17 12 44.2	-0.4
	0.1nm,0.3s,baz=56,slow=8.8,SNR=2.5						
BRTR	Keskin Array B	66.81	56	P	P	17 13 17.0	-0.9
	0.3nm,0.4s,baz=259,slow=6.6,SNR=2.5						
ILAR	Eielson Array	72.36	334	P	P	17 13 50.9	-0.6
	0.6nm,0.9s,baz=79,slow=4.0,SNR=4.9						
KURBB	Kurchatov Arra	90.27	32	P	P	17 15 27.3	+0.6
	0.5nm,0.9s,baz=309,slow=4.9,SNR=3.7						
ZALV	Zalesovo Beam	90.74	27	P	P	17 15 30.1	+1.2
	0.3nm,0.3s,baz=328,slow=5.1,SNR=2.3						

IDC ***15*** *17:04:32.7±0.6, 24°.83N×45°.94W, $h0^{km}$, mb4.1/22, mb1 4.3/22, mb1mx4.0/61, mbtmp4.1/22, MS3.9/29, Ms1 3.9/29, ms1mx3.8/39, Error ellipse: s-maj=18.1km s-min=14.3km az=145.0*

ISCJB ***15*** *17:04:33.3±0.5, 24°.86N±0°.10×46°.00W±0°.08, $h15^{km}$, mb4.1/25, MS3.9/28, Error ellipse: s-maj=13.9km s-min=10.7km az=166.7*

NEIC ***15*** *17:04:34.1±0.3, 24°.84N×45°.98W, $h10^{km}$, mb4.0/3, Error ellipse: s-maj=9.9km s-min=8.0km az=168.0*

GCMT ***15*** *17:04:34.1±0.3, 24°.90N×45°.82W, $h12^{km}$, MW5.0/91, Moment Tensor Solution. s14,c14; s91,c120; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.08±.10; $M_{\theta\theta}$1.63±.12; $M_{\phi\phi}$1.45±.09; $M_{r\theta}$-0.81±.40; $M_{\theta\phi}$1.51±.08; $M_{\phi r}$-1.15±.43; Best double couple: $M_0$3.37300×10^{16} NP1:ϕ_s42.00000°, δ57.00000°, λ-95.00000°. NP2: ϕ_s231.00000°, δ33.00000°, λ-82.00000°. Principal axes: T 3.3480, Plg12.0000°, Azm136.0000°; N 0.0490, Plg4.0000°, Azm45.0000°; P -3.3970, Plg77.0000°, Azm295.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 15 17:04:34.9±0.7, 24°.9N±0°.1×46°.0W±0°.1, $h15^{km}$, n59, $\sigma1^{s}.01$/31, mb4.2/25, MS3.8/28, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SJG	San Juan	19.89	254	LR	LR	17 15 08.7	
	comp=Z,315nm,20.9s,baz=84,slow=32						
PCRV	Puerto La Cruz	22.94	234	LR	LR	17 17 22.1	
	comp=Z,138nm,21.0s,baz=6.0,slow=34						
PTGA	Pitinga	28.80	210	LR	LR	17 20 22.7	
	comp=Z,167nm,20.0s,baz=37,slow=33						
SCHQ	Schefferville	33.68	338	LR	LR	17 23 28.4	
	comp=Z,340nm,20.0s,baz=161,slow=34						
ROSC	El Rosal	33.69	238	LR	LR	17 24 24.4	
	comp=Z,141nm,21.3s,baz=56,slow=35						
TKL	Tuckaleechee C	34.16	297	LR	LR	17 22 47.0	
	comp=Z,679nm,20.4s,baz=85,slow=32						
MDT	Midelt	36.94	68	LR	LR	17 23 20.1	
	comp=Z,159nm,21.0s,baz=304,slow=31						
SAML	Samuel	37.53	209	eP	P	17 11 43.6	-5.0
	1.4nm,0.7s						
ESDC	Sonseca Array	38.15	57	LR	LR	17 23 40.4	
	comp=Z,64nm,21.4s,baz=175,slow=30						
JTS	JuntasAbangare	39.68	256	LR	LR	17 25 22.6	
	comp=Z,89nm,21.3s,baz=125,slow=31						
KOWA	Kowa	40.72	97	LR	LR	17 27 21.4	
	comp=Z,542nm,19.4s,baz=221,slow=34						
SFJD	Kangerlussuaq	42.25	357	LR	LR	17 26 22.0	
	comp=Z,220nm,21.1s,baz=164,slow=31						
SIV	San Ignacio	43.17	201	P	P	17 12 34.6	-0.6
	2.3nm,1.0s,baz=54,slow=7.4,SNR=7.3						
DBIC	Dimbokro	43.31	108	LR	LR	17 27 27.4	
	comp=Z,420nm,20.5s,baz=272,slow=32						
H10N2	ASCENSION HYDR	44.70	133	T	T	18 00 08.8	
	baz=317,slow=75,SNR=446						
H10N3	ASCENSION HYDR	44.70	133	T	T	18 00 08.2	
	baz=317,slow=75,SNR=368						
H10N1	ASCENSION HYDR	44.72	133	T	T	18 00 08.2	
	baz=317,slow=75,SNR=379						
AGMN	Agassiz Nation	45.39	314	P	P	17 12 53.7	+0.9
H10S3	ASCENSION HYDR	45.42	134	T	T	18 01 01.1	
	baz=318,slow=75,SNR=237						
H10S1	ASCENSION HYDR	45.42	134	T	T	18 00 60.0	
	baz=318,slow=75,SNR=203						
H10S2	ASCENSION HYDR	45.44	134	T	T	18 00 60.0	
	baz=318,slow=75,SNR=199						
ULM	Lac du Bonnet	45.86	317	P	P	17 12 57.8	+1.3
	5.0nm,0.9s,baz=84,slow=8.0,SNR=4.9						
ULM				LR	LR	17 29 58.5	
	comp=Z,479nm,20.1s,baz=106,slow=33						
LPAZ	La Paz	46.23	210	P	P	17 13 00.6	+0.2
	5.9nm,1.0s,baz=15,slow=6.9,SNR=12						
LPAZ				LR	LR	17 31 02.6	
	comp=Z,113nm,21.0s,baz=23,slow=34						
TORD	Torodi Ar. Bea	46.37	95	P	P	17 13 00.1	-0.8
	0.9nm,0.8s,baz=306,slow=10.0						
TORD				LR	LR	17 30 25.4	
	comp=Z,406nm,20.0s,baz=300,slow=34						
WMOK	Wichita Mounta	46.39	295	eP	P	17 13 00.8	-0.1
	2.5nm,1.0s						
NNA	Nana	47.38	223	LR	LR	17 34 13.0	
	comp=Z,38nm,18.7s,baz=354,slow=38						
KEST	Kesra	48.46	63	LR	LR	17 29 57.2	
	comp=Z,73nm,21.6s,baz=250,slow=32						
DAVOX	Davos/Dischmat	49.18	49	LR	LR	17 30 34.0	
	comp=Z,76nm,19.6s,baz=265,slow=32						
FFC	Flin Flon	50.55	322	eP	P	17 13 31.3	-1.3
TXAR	Lajitas Array	51.09	289	P	P	17 13 38.0	+0.7
	0.7nm,0.6s,baz=101,slow=7.9,SNR=12						
TXAR				PcP	PcP	17 14 53.7	+0.8
	1.0nm,0.9s,baz=87,slow=6.0,SNR=5.6						
TXAR				LR	LR	17 34 02.4	
	comp=Z,149nm,21.8s,baz=0.0,slow=35						
CLL	Collm	51.77	43	eP	P	17 13 43.0	+1.2
GERES	GERESS Array B	51.95	46	P	P	17 13 42.5	-0.9
	1.3nm,0.9s,baz=256,slow=5.4,SNR=8.0						
GERES				LR	LR	17 32 44.2	
	comp=Z,38nm,19.3s,baz=273,slow=33						
ANMO	Albuquerque	52.67	296	LR	LR	17 34 00.4	
	comp=Z,334nm,21.2s,baz=87,slow=34						
NOA	NORSAR Array B	52.81	31	LR	LR	17 32 15.5	
	comp=Z,88nm,20.2s,baz=255,slow=32						
HFS	Hagfors	53.76	32	P	P	17 13 56.6	+0.1
	6.3nm,0.9s,baz=205,slow=6.4,SNR=4.5						
HFS				LR	LR	17 33 50.4	
	comp=Z,76nm,18.6s,baz=248,slow=33						
RLMT	Red Lodge	54.23	309	eP	P	17 13 59.7	-0.7
PDAR	Pinedale Array	54.49	306	P	P	17 14 03.1	+0.8
	2.4nm,0.9s,baz=79,slow=7.7,SNR=14						
BW06	Boulder Array	54.50	306	eP	P	17 14 02.0	-0.3
	0.9nm,0.5s						
HWUT	Hardware Ranch	56.05	305	eP	P	17 14 09.9	-3.7
YKA	Yellowknife Ar	58.39	329	P	P	17 14 28.4	-1.1
	0.7nm,0.7s,baz=92,slow=6.6,SNR=4.3						
FINES	FINESS Array B	59.95	32	P	P	17 14 40.4	+0.1
	2.4nm,0.9s,baz=251,slow=8.7,SNR=3.8						
SPITS	Spitsbergen Ar	60.28	12	LR	LR	17 35 13.0	
	comp=Z,49nm,19.4s,baz=340,slow=30						
MLR	Muntele Rosu	60.33	50	LR	LR	17 39 32.4	
	comp=Z,14nm,18.5s,baz=272,slow=35						
ARCES	ARCESS Array B	60.50	23	P	P	17 14 43.9	-0.1
	2.3nm,0.8s,baz=259,slow=4.3,SNR=5.5						
NVAR	Mina Array Bea	61.59	302	P	P	17 14 53.2	+1.0
	0.5nm,0.7s,baz=91,slow=6.3,SNR=4.8						
NVAR				LR	LR	17 39 52.9	
	comp=Z,556nm,20.0s,baz=274,slow=34						
AKASG	Malin Array Be	61.98	44	P	P	17 14 54.1	-0.2
	0.2nm,0.3s,baz=272,slow=6.3,SNR=3.1						
INK	Inuvik	66.26	336	P	P	17 15 22.0	0.0
	1.1nm,0.7s,baz=145,slow=12,SNR=2.7						
BRTR	Keskin Array B	66.93	56	P	P	17 15 27.4	+0.3
	1.3nm,0.9s,baz=269,slow=4.9,SNR=8.5						
PLCA	Paso Flores	69.12	200	P	P	17 15 41.0	+0.5
	3.4nm,0.8s,baz=32,slow=6.4,SNR=6.6						
ILAR	Eielson Array	72.30	334	P	P	17 16 00.2	+0.7
	2.6nm,1.1s,baz=70,slow=4.9,SNR=14						
KBZ	Khabaz	72.52	49	P	P	17 16 01.8	+0.6
	2.6nm,0.7s,baz=343,slow=4.9,SNR=4.1						
GNI	Garni	74.97	53	LR	LR	17 47 32.1	
	comp=Z,25nm,20.3s,baz=324,slow=34						
AKTO	Aktyubinsk	79.60	39	P	P	17 16 42.2	+0.7
	2.9nm,0.9s,baz=345,slow=12,SNR=7.8						
ATD	Arta Tunnel	84.22	80	LR	LR	17 52 32.5	
	comp=Z,71nm,20.5s,baz=324,slow=34						
KMBO	Kilima Mbogo	84.36	94	LR	LR	17 54 49.3	
	comp=Z,126nm,19.2s,baz=59,slow=36						
BVAR	Borovoye Array	84.89	33	P	P	17 17 10.2	+1.1
	3.0nm,1.0s,baz=306,slow=3.4,SNR=12						
KURK	Kurchatov	90.32	32	P	P	17 17 35.2	-0.1
KURBB	Kurchatov Arra	90.34	32	P	P	17 17 35.3	-0.2
	2.9nm,0.9s,baz=312,slow=5.3,SNR=20						
ZALV	Zalesovo Beam	90.80	27	P	P	17 17 37.3	-0.2
	1.8nm,0.7s,baz=298,slow=3.2,SNR=8.4						

NIED ***15*** *18:02:00, 45°.60N×152°.10E, $h14^{km}$, Mw4.4 Best double couple: $M_0$3.87000×10^{15} NP1:ϕ_s359.00000°, δ34.00000°, λ40.00000°. NP2:ϕ_s234.00000°, δ68.00000°, λ118.00000°.*

IDC ***15*** *18:02:10.8±0.6, 45°.33N×151°.93E, $h0^{km}$, mb4.2/30, mb1 4.3/35, mb1mx4.2/68, mbtmp4.2/35, ML3.0/4, MS3.9/14, Ms1 3.9/14, ms1mx3.4/69, Error ellipse: s-maj=15.5km s-min=11.7km az=162.0*

SKHL ***15*** *18:02:12.3±0.5, 45°.14N×152°.34E, $h33^{km}\pm3^{km}$, mb4.4/5, Ms4.2/5*

JMA ***15*** *18:02:12.1±0.6, 45°.59N×152°.08E, $h30^{km}$, M4.4*

BJI ***15*** *18:02:12.8, 45°.33N×151°.86E, $h18^{km}$, mb4.4/28, mB4.7/22, Ms4.2/15, Ms7 3.9/15*

NEIC ***15*** *18:02:12.1±0.3, 45°.34N×151°.99E, $h10^{km}$, mb4.6/25, Error ellipse: s-maj=7.9km s-min=4.3km az=155.0*

ISCJB ***15*** *18:02:13.1±0.3, 45°.21N±0°.05×152°.00E±0°.04, $h30^{km}$, mb4.4/66, MS4.0/15, Error ellipse: s-maj=7.3km s-min=2.8km az=152.4*

MOS ***15*** *18:02:14.3±1.4, 45°.34N×152°.04E, $h34^{km}$, mb4.7/23, Error ellipse: s-maj=7.4km s-min=6.0km az=95.4*

ISC 15 18:02:15.1±0.5, 45°.27N±0°.06×152°.00E±0°.05, $h30^{km}$, n230, $\sigma1^{s}.82$/242, mb4.5/75, MS4.1/15, 14C-6D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.92	271	eP	Pn	18 03 00.0	+0.6
KUR				AMB	AMB	18 03 12.0	
	54nm,0.4s						
KUR				AMB	AMB	18 03 12.0	
	26nm,0.4s						
KUR				iS	Sn	18 03 35.8	+2.4
KUR				A	A	18 03 42.0	
	310nm,0.5s						
KUR				A	A	18 03 42.0	
	250nm,0.5s						
KUR				AMS	AMS	18 04 45.0	
	3µm,10.0s						
KUR				AMS	AMS	18 04 45.0	
	3µm,10.0s						
KUR				AMS	AMS	18 04 45.0	
	2µm,10.0s						
KUR	Kuril'sk	2.92	271	d iPN	Pn	18 03 00.3	+0.9
KUR				eS	Sn	18 03 36.1	+2.7
KUR				pmax	pmax		
	comp=Z,102nm,0.5s						
KUR				pmax	pmax		
	comp=E,348nm,0.4s						
KUR				smax	smax		
	comp=N,174nm,0.4s						
KUR				smax	smax		
	comp=E,148nm,0.5s						
SHO	Shikotan	3.95	251	iP	Pn	18 03 13.0	-0.6
SHO				AMB	AMB	18 03 16.0	
	comp=E,6.0nm,0.3s						
SHO				AMB	AMB	18 03 16.0	
	comp=E,24nm,0.3s						
SHO				iS	Sn	18 03 58.2	-0.7
SHO				A	A	18 04 02.4	
	comp=E,150nm,0.5s						
SHO				A	A	18 04 02.4	
	comp=E,170nm,0.5s						
SHO				AMS	AMS	18 05 32.0	
	comp=E,2µm,14.0s						
SHO				AMS	AMS	18 05 32.0	
	comp=E,2µm,14.0s						
SHO				AMS	AMS	18 05 32.0	
	comp=E,870nm,14.0s						
SHO	Shikotan	3.95	251	c iPN	Pn	18 03 13.3	-0.3
SHO				pmax	pmax		
	comp=Z,24nm,0.3s						
SHO				pmax	pmax		
	comp=E,6.0nm,0.2s						
YUK	Yuzh-Kuril'sk	4.55	256	eP	Pn	18 03 22.0	+0.2

YUK				AMB	AMB	18 03 27.0	
	comp=E,76nm,0.5s						
YUK				AMB	AMB	18 03 27.0	
	comp=E,75nm,0.5s						
YUK				AMB	AMB	18 03 27.0	
	comp=E,30nm,0.5s						
YUK				eS	Sn	18 04 14.7	+1.1
YUK				A	A	18 04 28.1	
	comp=E,132nm,0.6s						
YUK				A	A	18 04 28.1	
	comp=E,150nm,0.6s						
YUK				AMS	AMS	18 05 29.0	
	comp=E,1µm,11.0s						
YUK				AMS	AMS	18 05 29.0	
	comp=E,950nm,11.0s						
YUK				AMS	AMS	18 05 29.0	
	comp=E,300nm,11.0s						
YUK	Yuzh-Kuril'sk	4.55	256	ePN	Pn	18 03 22.5	+0.7
YUK				pmax	pmax		
	comp=Z,30nm,0.2s						
YUK				pmax	pmax		
	comp=N,76nm,0.5s						
YUK				pmax	pmax		
	comp=E,75nm,0.6s						
YUK				MLR	MLR		
	comp=Z,292nm,9.0s						
NEM2	Nemuro 2	4.87	249	P	Pn	18 03 24.8	-1.5
NEM2				eS	Sn	18 04 18.3	-3.4
JRA	Rausu	5.09	257	P	Pn	18 03 29.9	+0.7
JNK	Nakash	5.48	255	P	Pn	18 03 34.8	+0.2
JAK	Akkeshi	5.72	249	P	Pn	18 03 36.7	-1.3
JAK				eS	Sn	18 04 39.7	-2.9
JTKR	Abashiri--Toko	5.92	260	P	Pn	18 03 41.4	+0.8
SKR	Severo-Kuril's	6.08	26	eP	Pn	18 03 42.0	-0.9
SKR				AMB	AMB	18 03 43.0	
	comp=Z,115nm,0.8s						
SKR				eS	Sn	18 04 49.8	-1.6
SKR				A	A	18 05 27.0	
	comp=Z,244nm,0.9s						
SKR				A	A	18 05 27.0	
	comp=Z,132nm,0.9s						
SKR				AMS	AMS	18 06 37.0	
	comp=Z,700nm,13.0s						
SKR				AMS	AMS	18 06 37.0	
	comp=Z,1µm,13.0s						
SKR				A	A	18 06 37.0	
	comp=Z,900nm,15.0s						
SKR	Severo-Kuril's	6.08	26	ePN	Pn	18 03 42.3	-0.6
SKR				eS	Sn	18 04 52.7	+1.3
SKR				pmax	pmax		
	comp=Z,115nm,0.8s						
SKR				smax	smax		
	comp=E,132nm,0.9s						
SKR				smax	smax		
	comp=N,244nm,0.9s						
SKR				MLR	MLR		
	comp=Z,900nm,15.0s						
SKR				MLR	MLR		
	comp=N,700nm,14.0s						
SKR				MLR	MLR		
	comp=E,1µm,12.0s						
JAR	Ashorobuto	6.23	254	P	Pn	18 03 45.0	+0.1
JMP	Maruseppu	6.29	261	P	Pn	18 03 47.2	+1.4
JOB	Onbets	6.34	251	P	Pn	18 03 45.0	-1.4
YSS	Yuzh-Sakhalins	6.64	288	eP	Pn	18 03 55.3	+4.7
YSS				AMB	AMB	18 03 57.3	
	comp=E,10.0nm,0.5s						
YSS				eS	Sn	18 05 07.6	+2.4
YSS				AMS	AMS	18 06 54.0	
	comp=E,600nm,15.0s						
YSS				AMS	AMS	18 06 54.0	
	comp=E,500nm,15.0s						
YSS	Yuzh-Sakhalins	6.64	288	ePn	Pn	18 03 48.9	-1.7
YSS				eSn	Sn	18 05 02.5	-2.7
YSS	Yuzh-Sakhalins	6.64	288	⇑ePN	Pn	18 03 55.3	+4.7
YSS				pmax	pmax		
	comp=Z,10.0nm,0.5s						
YSS				MLR	MLR		
	comp=N,600nm,15.0s						
YSS				MLR	MLR		
	comp=Z,600nm,15.0s						
YSS				MLR	MLR		
	comp=E,500nm,16.0s						
JKK2	Kamakawa 2	6.75	261	P	Pn	18 03 53.4	+1.3
JCH	Churui	6.77	250	P	Pn	18 03 51.7	-0.7
JCH				eS	Sn	18 05 06.1	-2.4
ASAJ	Asahikawa	6.80	264	Pn	Pn	18 03 55.0	+2.2
	comp=E,0.8nm,0.3s,baz=92,slow=18,SNR=14						
ASAJ				LR	LR	18 07 03.6	
	comp=E,528nm,18.2s,baz=78,slow=43						
ASAJ	Asahikawa	6.80	264	ePn	Pn	18 03 54.6	+1.9
ASAJ	Asahikawa	6.80	264	P	Pn	18 03 54.4	+1.6
ASAJ	Asahikawa	6.80	264	PN	Pn	18 03 55.0	+2.2
ASAJ				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAJ				MLR	MLR		
	comp=Z,528nm,18.2s						
JFR	Furan	7.08	256	P	Pn	18 03 56.9	+0.3
ERM	Erimo	7.19	246	eP	Pn	18 04 01.5	+3.4
ERM	Erimo	7.19	246	ePn	Pn	18 04 00.2	+2.1
ERM				eSn	Sn	18 05 18.4	-0.3
ERM	Erimo	7.19	246	dePN	Pn	18 04 01.5	+3.4
ERM				pmax	pmax		
	comp=Z,46nm,2.5s						
JNBK	Urakawa-nobuka	7.33	249	P	Pn	18 03 58.5	-1.5
JBT2	Biratori 2	7.38	254	P	Pn	18 04 00.3	-0.4
TYV	Tymovskoe	8.39	315	eP	Pn	18 04 15.7	+1.2
TYV				AMB	AMB	18 04 17.4	
	comp=Z,8.0nm,1.8s						
JNB	Noboribetsu	8.40	254	P	Pn	18 04 14.9	+0.2
JKB	Kayabe	8.65	251	P	Pn	18 04 17.1	-1.0
JKB				eS	Sn	18 05 47.9	-6.6
PEA0B	Petropavlovsk-	8.69	23	ePn	Pn	18 04 16.2	-2.4
PETK	Petropavlovsk-	8.69	23	Pn	Pn	18 04 16.8	-1.8
	baz=187,slow=12						
PETK	Petropavlovsk-	8.69	23	ePn	Pn	18 04 16.7	-1.9
PETK	Petropavlovsk-	8.69	23	ePN	Pn	18 04 16.7	-1.9
PET	Petropavlovsk	8.90	27	ePN	Pn	18 04 19.1	-2.4
PET				pmax	pmax		
	comp=Z,25nm,0.9s						
PET				MLR	MLR		
	comp=Z,400nm,14.0s						
PET				MLR	MLR		
	comp=Z,400nm,14.0s						
JANG	Nango	9.12	241	P	Pn	18 04 21.7	-2.9
JANG				eS	Sn	18 05 57.8	-8.5
JOSM	Okushiri--Mats	9.62	255	P	Pn	18 04 31.0	-0.4
JIO	Ouri	10.46	233	P	Pn	18 04 39.8	-3.1
JIO				eS	Sn	18 06 28.8	-10
TEY	Ternei	10.88	274	⇑ePN	Pn	18 04 52.6	+4.0
GRNR	Gornyy	11.78	303	ePN	Pn	18 05 13.9	+13
MAJO	Matsushiro	13.58	235	ePn	Pn	18 05 23.1	-2.5
MAJO	Matsushiro	13.58	235	i P	Pn	18 05 25.6	0.0
MAT	Matsushiro	13.58	235	P	Pn	18 05 25.2	-0.4
MAT				eS	Sn	18 08 03.2	+7.8
MJAR	Matsushiro Arr	13.58	235	Pn	Pn	18 05 24.8	-0.8
	comp=Z,0.1nm,0.3s,baz=33,slow=12,SNR=12						
MJB9	Matsu-Tunnel	13.58	235	ePn	Pn	18 05 24.4	-1.2
USRK	Ussuriysk Ar.	14.26	273	Pn	Pn	18 05 33.5	-1.4
	baz=76,slow=12						
KLR	Kul'dur	14.30	293	Pn	Pn	18 05 32.7	-2.7
	comp=Z,0.0nm,0.3s,baz=82,slow=4.2,SNR=2.6						
KLR				LR	LR	18 11 57.6	
	comp=Z,39nm,18.1s,baz=87,slow=41						
KLR	Kul'dur	14.30	293	⇑eP	Pn	18 05 36.5	+1.1
MA2	Magadan	14.35	357	Pn	Pn	18 05 34.4	-1.6
	comp=Z,0.2nm,0.3s,baz=180,slow=14,SNR=3.6						
MA2				LR	LR	18 11 43.9	
	comp=Z,256nm,18.1s,baz=182,slow=40						
MSHR	Mys Shultsa	15.25	267	⇑eP	P	18 05 51.0	-1.8
MDJ	Mudanjiang	15.87	276	P	Pn	18 05 55.3	-0.9
MDJ				pmax	pmax		
	comp=Z,20nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,110nm,3.8s						
SEY	Seymchan	17.70	1	P	Pn	18 06 16.7	-2.4
	comp=Z,0.1nm,0.3s,baz=171,slow=10,SNR=13						
ZEA	Zeya	18.09	307	eP	Pn	18 06 21.8	-2.2
ZEA				pmax	pmax		
	comp=Z,12nm,1.0s						
ZEA				MLR	MLR		
	comp=E,300nm,16.0s						
ZEA				MLR	MLR		
	comp=Z,300nm,16.0s						
ZEA				MLR	MLR		
	comp=N,200nm,13.0s						
KSRS	Korea Array	19.64	255	P	Pn	18 06 42.3	-0.4
	comp=N,0.1nm,0.3s,baz=66,slow=12,SNR=5.2						
KSAR	Wonju Array Be	19.67	255	P	P	18 06 42.3	+0.8
KSAR	Wonju Array Be	19.67	255	P	P	18 06 42.3	+0.8
JNU	Nakatsue	20.30	241	LR	LR	18 16 28.1	
	comp=N,129nm,18.9s,baz=127,slow=42						
TJN	Taejon	20.59	253	⇑eP	Pn	18 06 56.4	+2.5
YAK	Yakutsk	21.18	330	P	P	18 06 57.5	-0.3
	comp=N,15nm,0.6s,baz=119,slow=1.2,SNR=9.2						
YAK				LR	LR	18 15 51.5	
	comp=N,159nm,18.2s,baz=108,slow=39						
YAK	Yakutsk	21.18	330	eP	P	18 06 58.7	+1.0
YAK				e*PP	sP	18 07 27.6	+18
YAK				eS	S	18 10 43.6	-7.9
YAK				e*SS	sS	18 11 26.4	+22
YAK				pmax	pmax		
	comp=Z,31nm,0.9s						
YAK				pmax	pmax		
	comp=N,11nm,1.0s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.1s						
YAK				smax	smax		
	comp=N,23nm,2.0s						
YAK				smax	smax		
	comp=E,28nm,2.0s						
H11N2	WAKE ISLAND Hy	28.30	149	T	T	18 38 47.3	
	baz=338,slow=76,SNR=12						
H11N1	WAKE ISLAND Hy	28.32	149	T	T	18 38 45.0	
	baz=338,slow=76,SNR=9.2						
H11N3	WAKE ISLAND Hy	28.32	149	T	T	18 38 46.2	
	baz=338,slow=76,SNR=12						
TIXI	Tiksi	28.68	345	P	P	18 08 06.4	-2.5
	comp=E,1.2nm,0.4s,baz=130,slow=5.7,SNR=5.5						
H11S1	WAKE ISLAND Hy	29.36	151	T	T	18 40 08.4	
	baz=339,slow=76,SNR=8.8						
H11S3	WAKE ISLAND Hy	29.37	151	T	T	18 40 09.5	
	baz=339,slow=76,SNR=6.9						
H11S2	WAKE ISLAND Hy	29.38	151	T	T	18 40 10.1	
	baz=339,slow=76,SNR=11						
SONA1	Songino Array	31.11	291	eP	P	18 08 29.4	-1.5
SONM	Songino Array	31.12	291	P	P	18 08 30.0	-0.9
	comp=E,2.1nm,0.8s,baz=70,slow=7.6,SNR=8.6						
SONM				LR	LR	18 22 32.7	
	comp=E,248nm,18.2s,baz=69,slow=39						
SONM	Songino Array	31.12	291	eP	P	18 08 32.9	+2.0
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
CAST	Castle Rocks	35.87	39	eP	P	18 09 11.2	-0.7
	comp=Z,4.6nm,0.8s						
BPAW	Bear Paw Mtn.	36.40	38	eP	P	18 09 16.3	-0.1
	comp=Z,15nm,1.4s						
LZH	Lanzhou	37.17	273	eP	P	18 09 25.1	+1.6
LZH				pP	pP	18 09 33.4	+1.1
LZH				sP	sP	18 09 36.1	+0.1
LZH				pmax	pmax		
	comp=Z,18nm,1.3s						
LZH				pmax	pmax		
	comp=Z,75nm,6.5s						
LZH				LR	LR		
	comp=Z,280nm,14.6s						
LZH				LR	LR		
	comp=Z,350nm,14.6s						
LZH				LR	LR		
	comp=Z,380nm,15.7s						
TOLK	Toolik Lake Re	37.41	31	eP	P	18 09 24.2	-0.8
	comp=Z,5.5nm,0.9s						
MDM	Murphy Dome	37.62	37	eP	P	18 09 26.8	0.0
	comp=Z,6.8nm,0.7s						
CCB	Clear Creek Bu	37.80	38	eP	P	18 09 28.3	0.0
	comp=Z,5.8nm,1.1s						
IL1	Eielson Array	38.19	37	eP	P	18 09 31.5	-0.1
ILAR	Eielson Array	38.19	37	P	P	18 09 31.8	+0.1
	comp=Z,2.0nm,0.7s,baz=258,slow=7.8,SNR=28						
ILB	Eielson Array	38.19	37	eP	P	18 09 31.5	-0.1
GTA	Gaotai	38.45	280	⇑P	P	18 09 35.4	+1.2
GTA				pP	pP	18 09 43.8	+0.7
GTA				sP	sP	18 09 48.0	+1.3
GTA				pmax	pmax		
	comp=Z,13nm,1.1s						
GTA				pmax	pmax		
	comp=Z,52nm,5.6s						
GTA				LR	LR		
	comp=Z,120nm,17.1s						
GTA				LR	LR		
	comp=Z,110nm,16.2s						
GTA				LR	LR		
	comp=Z,160nm,16.5s						
FYU	Fort Yukon	38.91	34	eP	P	18 09 39.1	+1.5
	comp=Z,24nm,1.2s						
CD2	Chengdu	39.99	266	eP	P	18 09 46.0	-1.1
EGAK	Eagle	40.65	37	eP	P	18 09 51.8	-0.2
	comp=Z,13nm,0.9s						
DAWY	Dawson	41.48	38	eP	P	18 09 58.7	-0.3
	comp=Z,9.8nm,1.6s						
ZALV	Zalesovo Beam	42.86	307	P	P	18 10 10.3	0.0
	comp=Z,0.6nm,0.5s,baz=94,slow=5.8,SNR=2.3						
ZALV				PcP	PcP	18 12 00.2	-0.6
	comp=Z,1.0nm,0.6s,baz=132,slow=4.1,SNR=3.2						
ZALV				LR	LR	18 29 35.4	
	comp=Z,204nm,18.1s,baz=70,slow=38						
INK	Inuvik	43.32	31	P	P	18 10 14.4	+0.6
	comp=Z,6.9nm,0.9s,baz=292,slow=7.9,SNR=11						
INK	Inuvik	43.32	31	eP	P	18 10 14.0	+0.2
	comp=Z,13nm,1.2s						
INK	Inuvik	43.32	31	eP	P	18 10 14.0	+0.2
INK				pmax	pmax		
	comp=Z,13nm,1.2s						
MK31	Makanchi Array	46.94	298	eP	P	18 10 42.4	-0.5
MK31	Makanchi Array	46.94	298	eP	P	18 10 42.4	-0.5
MKAR	Makanchi Array	46.94	298	P	P	18 10 42.7	-0.2
	comp=Z,1.9nm,0.8s,baz=75,slow=6.8,SNR=21						
MKAR				LR	LR	18 32 03.2	
	comp=Z,222nm,18.1s,baz=54,slow=38						
MKAR	Makanchi Array	46.94	298	eP	P	18 10 42.3	-0.6
	comp=Z,14nm,0.6s						
MKAR	Makanchi Array	46.94	298	eP	P	18 10 43.5	+0.6
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MK01	Makanchi Array	46.94	298	eP	P	18 10 42.2	-0.7
KURK	Kurchatov	47.55	304	eP	P	18 10 48.0	+0.5
KURK	Kurchatov	47.55	304	eP	P	18 10 45.8	-1.7
	comp=Z,2.7nm,0.8s						
KURK				PcP	PcP	18 12 17.6	+0.6
KURK	Kurchatov	47.55	304	⇓eP	P	18 10 48.0	+0.5
KURK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
KURBB	Kurchatov Arra	47.63	304	P	P	18 10 46.9	-1.2
	comp=Z,1.5nm,0.7s,baz=73,slow=8.6,SNR=12						
KURBB				PcP	PcP	18 12 17.6	+0.3
	comp=Z,0.3nm,0.2s,baz=67,slow=2.8,SNR=3.8						
BVAR	Borovoye Array	51.20	310	P	P	18 11 14.5	-0.9
	comp=Z,0.9nm,0.8s,baz=60,slow=8.5,SNR=5.5						
BVAR				LR	LR	18 35 06.3	
	comp=Z,156nm,18.4s,baz=67,slow=39						
BRVK	Borovoye	51.25	310	eP	P	18 11 15.5	-0.2
BRVK	Borovoye	51.25	310	⇑eP	P	18 11 15.5	-0.2
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
CMAR	Chiang Mai Arr	51.27	257	P	P	18 11 17.4	+1.1
	comp=Z,0.5nm,0.5s,baz=47,slow=6.6,SNR=5.3						
YKA	Yellowknife Ar	52.58	36	P	P	18 11 26.4	+0.9
	comp=Z,2.3nm,0.9s,baz=299,slow=7.6,SNR=7.3						
YKA	Yellowknife Ar	52.58	36	eP	P	18 11 26.2	+0.8
YKA	Yellowknife Ar	52.58	36	eP	P	18 11 26.2	+0.8
YKA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KBS	Kingsbay	53.84	351	eP	P	18 11 35.1	+0.6
SPITS	Spitsbergen Ar	53.93	350	LR	LR	18 36 16.3	
	comp=Z,63nm,19.0s,baz=15,slow=38						
JIRN	Jiri	54.29	275	eP	P	18 11 40.1	+1.1
RAMN	Ramite	54.44	274	eP	P	18 11 40.7	+0.8
	comp=Z,15nm,0.6s						
KSH	Kashi	54.50	293	P	P	18 11 44.9	+4.8
KSH				ePcP	PcP	18 12 50.8	+7.6
KSH				ePP	PP	18 13 49.3	+7.1
KSH				pmax	pmax		
	comp=Z,22nm,1.6s						
KSH				pmax	pmax		
	comp=Z,67nm,5.4s						
KKN	Kakani	54.85	276	eP	P	18 11 44.0	+1.1
	comp=Z,14nm,0.8s						
PKIN	Phulchoki	54.90	275	eP	P	18 11 44.2	+0.9
	comp=Z,7.2nm,0.6s						
DMN	Daman	55.08	276	eP	P	18 11 45.6	+1.0
	comp=Z,10nm,0.8s						
GKN	Gorkha	55.17	276	eP	P	18 11 46.2	+1.1
	comp=Z,16nm,0.9s						
ARU	Arti	55.58	318	eP	P	18 11 46.4	-1.1
	comp=Z,6.8nm,1.2s						
ARU	Arti	55.58	318	d iP	P	18 11 46.7	-0.7
ARU						18 13 49.1	
ARU				S	S	18 19 30.5	-0.3
ARU				SS	SS	18 23 18.2	+2.8
ARU				pmax	pmax		
	comp=Z,6.0nm,1.2s						
DANN	Dangsing	55.58	277	eP	P	18 11 49.7	+1.5
	comp=Z,29nm,0.7s						
KK31	Karatay Array	56.03	299	eP	P	18 11 49.6	-1.4
KK31	Karatay Array	56.03	299	eP	P	18 11 49.6	-1.4
KKAR	Karatay Array	56.03	299	eP	P	18 11 49.7	-1.2
KKAR	Karatay Array	56.03	299	eP	P	18 11 49.7	-1.2
KOLN	Koldanda	56.04	277	eP	P	18 11 52.6	+1.2
	comp=Z,13nm,0.8s						
PYUN	Piuthan	56.27	277	eP	P	18 11 54.4	+1.3
PRGR	Permogore	58.19	327	eP	P	18 12 04.7	-1.1
PRGR				e*SP	sP	18 12 18.1	-0.5
PRGR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ARCES	ARCESS Array B	58.99	341	P	P	18 12 09.9	-1.4
	comp=Z,6.6nm,0.9s,baz=38,slow=4.6,SNR=14						
ARCES	ARCESS Array B	58.99	341	eP	P	18 12 11.2	-0.1
ARCES	ARCESS Array B	58.99	341	eP	P	18 12 11.2	-0.1
ARCES				pmax	pmax		
	comp=Z,7.0nm,0.9s						
AKTO	Aktyubinsk	59.13	312	P	P	18 12 11.8	-0.8
	comp=Z,0.8nm,0.4s,baz=60,slow=9.6,SNR=3.6						
AKTO				LR	LR	18 40 29.6	
	comp=Z,288nm,18.3s,baz=57,slow=39						
NIL	Nilore	59.63	289	eP	P	18 12 16.1	-0.3
	comp=Z,13nm,0.8s						
NIL	Nilore	59.63	289	eP	P	18 12 16.1	-0.3
NIL				pmax	pmax		
	comp=Z,13nm,0.8s						
MSO	Missoula	61.29	51	eP	P	18 12 27.1	-0.4
	comp=Z,7.6nm,1.0s						
CTAM	Taylor	61.75	63	eP	P	18 12 30.3	-0.3
FFC	Flin Flon	62.38	39	eP	P	18 12 36.1	+1.5
GNO	Genoa	62.56	61	eP	P	18 12 36.2	-0.1
PNTR	Pine Nut	62.62	61	eP	P	18 12 34.8	-2.0
	comp=Z,5.1nm,0.8s						
HLID	Hailey	62.99	55	eP	P	18 12 37.5	-1.6
	comp=Z,3.0nm,1.0s						
BOZ	Bozeman (W)	63.31	51	eP	P	18 12 41.8	+0.6
	comp=Z,3.7nm,0.7s						
BOZ	Bozeman (W)	63.31	51	eP	P	18 12 41.8	+0.6
BOZ				pmax	pmax		
	comp=Z,4.0nm,0.7s						
NV01	Mina Array Sit	63.82	61	eP	P	18 12 43.0	-1.7
NVAR	Mina Array Bea	63.82	61	P	P	18 12 45.8	+1.0
	comp=Z,1.9nm,0.7s,baz=293,slow=6.7,SNR=20						
FIA1	FINESS Array S	65.04	335	eP	P	18 12 52.0	-0.1
FINES	FINESS Array B	65.04	335	P	P	18 12 52.0	-0.1
	comp=Z,6.4nm,0.7s,baz=46,slow=8.5,SNR=16						
FINES				LR	LR	18 44 39.8	
	comp=Z,74nm,19.1s,baz=32,slow=39						
LOHW	Long Hollow	65.13	53	eP	P	18 12 52.6	-0.6
	comp=Z,16nm,1.8s						
REDW	Red Top Meadow	65.14	53	eP	P	18 12 52.9	-0.4
	comp=Z,7.2nm,1.0s						
OBN	Obninsk	66.09	325	⇑eP	P	18 13 01.8	+3.0
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PD31	Pinedale Array	66.25	53	eP	P	18 13 00.9	+0.5
PDAR	Pinedale Array	66.25	53	P	P	18 13 01.1	+0.5
	comp=Z,1.8nm,0.8s,baz=276,slow=1.8,SNR=18						
PDAR	Pinedale Array	66.25	53	eP	P	18 13 00.8	+0.3
GEYT	Alibeck	66.69	301	P	P	18 13 04.1	+1.0
	comp=Z,2.9nm,0.8s,baz=46,slow=6.2,SNR=8.4						
GEYT				LR	LR	18 44 44.1	
	comp=Z,137nm,18.2s,baz=235,slow=38						
GYA0B	ALIBECK ARRAY	66.69	301	eP	P	18 13 02.9	-0.2
	comp=Z,8.5nm,0.8s						
WRA	Warramunga Arr	66.86	198	P	P	18 13 04.2	0.0
	comp=Z,1.4nm,0.9s,baz=24,slow=6.6,SNR=4.5						
MTPU	Mount Pierson	67.79	58	eP	P	18 13 08.1	-2.4
	comp=Z,3.9nm,1.2s						
ULM	Lac du Bonnet	68.15	40	P	P	18 13 11.8	-0.2
	comp=Z,2.1nm,0.7s,baz=294,slow=6.5,SNR=4.2						
ULM	Lac du Bonnet	68.15	40	eP	P	18 13 12.6	+0.5
ULM	Lac du Bonnet	68.15	40	eP	P	18 13 12.6	+0.5
ULM				pmax	pmax		
	comp=Z,2.0nm,0.7s						
NB2	NORSAR Subarra	69.37	341	P	P	18 13 19.6	0.0
	comp=Z,21nm,1.4s,baz=30,slow=6.5						
HFS	Hagfors	69.57	339	P	P	18 13 20.3	-0.4
	comp=Z,5.4nm,0.9s,baz=35,slow=3.5,SNR=8.7						
ASAR	Alice Springs	70.56	198	P	P	18 13 28.1	+1.0
	comp=Z,1.0nm,0.8s,baz=13,slow=5.8,SNR=7.6						
S22A	4UR Ranch, Cre	71.15	55	eP	P	18 13 32.2	+1.0
	comp=Z,3.3nm,1.0s						
KIV	Kislovodsk	71.27	314	deP	P	18 13 33.3	+1.8
KIV				i		18 13 44.9	
KIV				i		18 16 07.5	
KIV				pmax	pmax		
	comp=Z,15nm,1.3s						
KIV				MLR	MLR		
	comp=Z,128nm,17.0s						
KBZ	Khabaz	71.32	314	P	P	18 13 32.0	+0.3
	comp=Z,9.9nm,0.9s,baz=19,slow=2.3,SNR=12						
KBZ				LR	LR	18 49 46.7	
	comp=Z,182nm,18.4s,baz=43,slow=40						
ZEI	Tsey	71.47	312	eP	P	18 13 32.4	-0.5
AKASG	Malin Array Be	72.34	326	P	P	18 13 37.8	+0.2
	comp=Z,1.5nm,0.5s,baz=32,slow=6.0,SNR=7.9						
KIEV	Kiev	72.35	326	eP	P	18 13 38.2	+0.5
KIEV	Kiev	72.35	326	⇑eP	P	18 13 38.2	+0.5
KIEV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GNI	Garni	72.89	310	LR	LR	18 49 49.6	
	comp=Z,76nm,18.0s,baz=80,slow=39						
ANMO	Albuquerque	73.28	57	P	P	18 13 44.2	+0.4
	comp=Z,0.5nm,0.3s,baz=287,slow=9.1,SNR=4.8						
ANMO	Albuquerque	73.28	57	⇑eP	P	18 13 44.0	+0.2
ANMO				pmax	pmax		
	comp=Z,5.0nm,2.5s						
319A	Douglas	74.02	62	eP	P	18 13 45.7	-2.4
	comp=Z,10nm,0.8s						
BEL	Belsk	74.54	331	eP	P	18 13 52.0	+1.4
BEL	Belsk	74.54	331	eP	P	18 13 52.0	+1.4
KWP	Kalwaria Pacla	75.69	329	eP	P	18 13 57.7	+0.4
KWP	Kalwaria Pacla	75.69	329	eP	P	18 13 57.7	+0.4
OJC	Ojcow	76.23	331	eP	P	18 14 00.9	+0.5
OJC	Ojcow	76.23	331	eP	P	18 14 00.9	+0.5
BUR04	Bucovina Ar. S	76.39	326	eP	P	18 14 01.9	+0.5
UZH	Uzhgorod	76.67	328	⇑iP	P	18 13 56.0	-6.8
UZH				e		18 14 03.0	
NIE	Niedzica	76.73	330	eP	P	18 14 04.4	+1.1
NIE	Niedzica	76.73	330	eP	P	18 14 04.4	+1.1
KSP	Ksiaz	76.87	333	eP	P	18 14 05.8	+1.8
KSP	Ksiaz	76.87	333	eP	P	18 14 05.8	+1.8
LANS	Liptovska Anna	77.25	330	eP	P	18 14 07.7	+1.5
LANS	Liptovska Anna	77.25	330	eP	P	18 14 07.7	+1.5
MORC	Moravsky Berou	77.38	332	eP	P	18 14 07.4	+0.5
CLL	Collm	77.48	335	⇑iP	P	18 14 07.4	0.0
	comp=Z,6.0nm,0.9s						
CLL				e		18 14 17.0	
CLL				i		18 14 19.9	
CLL				ePS	PnS	18 24 37.0	-0.6
CLL				LmV		18 52 00.0	
	comp=Z,100nm,18.3s						
CLL	Collm	77.48	335	⇑iP	P	18 14 07.4	0.0
CLL				i		18 14 19.9	
CLL				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BRG	Berggiesshubel	77.58	334	eP	P	18 14 06.7	-1.3
	comp=Z,4.3nm,0.9s						
BRG	Berggiesshubel	77.58	334	eP	P	18 14 06.7	-1.3
BRG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
EKA	Eskdalemuir Ar	77.59	346	P	P	18 14 08.1	+0.2
	comp=Z,1.0nm,0.7s,baz=14,slow=6.1,SNR=3.0						
VYHS	Vyhne	78.03	330	eP	P	18 14 11.3	+0.8
VYHS				pmax	pmax		
	comp=Z,3.0nm,1.2s						
VYHS	Vyhne	78.03	330	eP	P	18 14 11.3	+0.8
VRAC	Vranov	78.10	332	eP	P	18 14 12.2	+1.3
JAVC	Velka Javorina	78.12	331	eP	P	18 14 13.0	+1.9
GOPC	GO Pecny, Ondr	78.16	333	eP	P	18 14 12.3	+1.1
GOPC	GO Pecny, Ondr	78.16	333	eP	P	18 14 12.3	+1.1
PRU	Pruhonice	78.17	334	eP	P	18 14 12.3	+1.1

PRU	Pruhonice	78.17	334	*e*P	P	18 14 12.3	+1.1
KRUC	Moravsky	78.38	332	*e*P	P	18 14 13.5	+1.1
MODS	Modra-Piesok	78.67	331	*e*P	P	18 14 15.5	+1.4
MODS				pmax	pmax		
	comp=Z,11nm,1.3s						
MODS	Modra-Piesok	78.67	331	*e*P	P	18 14 15.5	+1.4
TX31	Lajitas Ar. Si	78.91	60	*e*P	P	18 14 15.8	+0.1
TXAR	Lajitas Array	78.91	60	P	P	18 14 16.0	+0.2
	comp=Z,2.6nm,0.7s,baz=299,slow=4.0,SNR=42						
BRTR	Keskin Array B	78.93	316	P	P	18 14 16.4	+0.7
	comp=Z,1.9nm,0.8s,baz=81,slow=4.5,SNR=11						
BRTR	Keskin Array B	78.93	316	*e*P	P	18 14 16.9	+1.1
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KHC	Kasperske Hory	79.22	334	*e*P	P	18 14 18.3	+1.2
KHC				*e*x	x	18 14 30.5	
KHC				*e*x	x	18 14 35.6	
KHC	Kasperske Hory	79.22	334	*e*P	P	18 14 17.2	+0.1
	comp=Z,2.4nm,0.8s						
KHC	Kasperske Hory	79.22	334	*e*P	P	18 14 18.3	+1.2
KHC				*e*		18 14 30.5	
KHC				*e*		18 14 35.6	
GERES	GERESS Array B	79.44	333	P	P	18 14 18.9	+0.6
	comp=Z,1.7nm,0.8s,baz=23,slow=4.5,SNR=17						
GEA0	GERESS Array S	79.44	333	*e*P	P	18 14 17.1	-1.2
CONA	Conrad Observa	79.54	332	*e*pP	P	18 14 19.8	+0.9
	comp=Z,6.0nm,1.1s						
MEM	Membach	80.05	339	⇓P	P	18 14 22.5	+1.0
KBA	Koelnbreinsper	81.11	333	*e*pP	P	18 14 28.6	+1.2
	comp=Z,11nm,1.2s						
VTS	Vitosha	81.33	324	*e*P	P	18 14 28.3	-0.4
	comp=Z,8.9nm,0.9s						
VTS	Vitosha	81.33	324	*e*P	P	18 14 28.3	-0.4
VTS				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MYKA	Terra Mystica	81.41	332	*e*pP	P	18 14 29.7	+0.8
	comp=Z,5.2nm,0.7s						
WATA	Walderalm	81.44	334	*e*pP	P	18 14 30.6	+1.4
	comp=Z,3.6nm,0.8s						
WTTA	Wattenberg	81.48	334	*e*pP	P	18 14 30.6	+1.1
	comp=Z,5.8nm,0.9s						
BFO	Black Forest	81.50	336	*i* P	P	18 14 31.0	+1.6
RETA	Reutte	81.55	335	*e*pP	P	18 14 31.6	+1.9
	comp=Z,3.6nm,0.7s						
MOTA	Moosalm	81.58	334	*e*pP	P	18 14 31.6	+1.7
	comp=Z,9.8nm,1.1s						
ABTA	Abfaltersbach	81.67	333	*e*pP	P	18 14 32.3	+2.0
	comp=Z,9.1nm,1.8s						
FETA	Feichten	81.98	334	*e*pP	P	18 14 33.8	+1.7
	comp=Z,4.7nm,1.1s						
MMAI	Mount Meron Ar	83.20	311	P	P	18 14 38.8	+0.2
	comp=Z,4.2nm,0.8s,baz=46,slow=10,SNR=4.7						
IDI	Anoyia	86.64	319	P	P	18 14 55.6	-0.1
	comp=Z,11nm,1.1s,baz=12,slow=13,SNR=3.2						
PLCA	Paso Flores	148.82	97	*e*PKP2	PKPbc	18 21 57.5	-1.8
PLCA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SNAA	Sanae	150.91	196	PKPbc	PKPbc	18 22 01.6	-1.9
	comp=Z,1.8nm,0.8s,baz=125,slow=1.7,SNR=9.5						

JMA ***15*** *18:10:17.0±0.3,33°.39N×137°.71E,h372^{km}±3^{km},M3.2*

ISCJB ***15*** *18:10:19.5±0.6,33°.59N±0°.09×137°.68E±0°.08,h352^{km}, mb2.8/4,Error ellipse: s-maj=13.0km s-min=8.0km az=160.8*

IDC ***15*** *18:10:20.7±1.1,33°.55N×137°.57E,h347^{km}±23^{km},mb2.7/4, mb1 2.8/6,mb1mx2.6/62,mbtmp3.3/6,Error ellipse: s-maj=59.2km s-min=17.6km az=58.0*

ISC 15 18:10:20.4±1.0,**33°.7N**±0°.1×**137°.68E**±0°.09,**h352**^{km}**,n19,** σ**0^{s}.80**/20,**mb2.9**/4,**Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHMK	Hamakita	1.15	3	P	Pn	18 11 07.3	+0.5
JKN2	Miekihoku	1.30	296	P	Pn	18 11 07.3	-0.4
JAO	Obara	1.64	348	P	Pn	18 11 10.2	+0.7
JWY	Kouya	1.82	288	P	Pn	18 11 10.4	-0.4
JHJ	Hachijo jima 2	1.84	107	P	Pn	18 11 11.2	+0.4
	5.1nm,0.3s,baz=18,slow=20,SNR=3.8						
JWT	Wachi	2.48	311	P	Pn	18 11 15.4	0.0
BSO4	Boso 4	2.56	58	*e*S	S	18 12 01.1	+0.4
BSO3	Boso 3	2.60	63	*e*S	S	18 12 01.3	+0.3
MJAR	Matsushiro Arr	2.90	8	P	Pn	18 11 19.8	+0.8
	0.3nm,0.3s,baz=196,slow=11,SNR=8.8						
BSO1	Boso 1	2.90	69	P	Pn	18 11 18.3	-0.1
BSO1				*e*S	S	18 12 04.9	-0.2
JAG	Ashikaga	3.11	27	P	Pn	18 11 21.4	+0.5
JYT	Yasato	3.28	38	P	Pn	18 11 22.8	+0.4
JHO	Hitachi	3.77	38	P	Pn	18 11 27.2	+0.1
JFK	Kawauchi	4.52	34	*e*S	S	18 12 32.4	-2.6
KSRS	Korea Array	8.80	298	P	Pn	18 12 24.7	+0.6
	0.2nm,0.3s,baz=111,slow=12,SNR=6.9						
MKAR	Makanchi Array	43.42	305	P	P	18 17 49.7	+0.1
	0.1nm,0.4s,baz=89,slow=9.8,SNR=2.7						
KURBB	Kurchatov Arra	45.75	310	P	P	18 18 08.4	+0.7
	0.2nm,0.3s,baz=101,slow=6.7,SNR=3.7						
WRA	Warramunga Arr	53.40	184	P	P	18 19 04.4	-0.8
	1.4nm,1.2s,baz=2.8,slow=7.5,SNR=3.4						
ASAR	Alice Springs	57.13	184	P	P	18 19 31.6	+0.1
	0.2nm,0.4s,baz=13,slow=8.6,SNR=6.0						

GUC 15 18:33:25.5±0.6,**34°.81S**×**72°.66W,h20**^{km}±6^{km}**,ML3.5, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO05	HualaæØ	0.63	109	*e*P	Pb	18 33 36.8	-1.1
GO05				*e*S	Sb	18 33 45.1	-1.3
NICH	Los Niches	1.19	100	*e*P	Pn	18 33 45.8	-1.2
NICH				*e*S	Sb	18 34 01.3	-1.1
NICH				IAML		18 34 07.1	
	comp=E,2μm,0.6s						
CCHI	Chillan	1.85	165	*e*P	Pn	18 33 56.1	0.0
CCHI				*e*S	Sn	18 34 19.4	+0.4
LMEL	Las Melosas	2.25	66	*e*P	Pn	18 34 02.4	+0.7
LMEL				*e*S	Sb	18 34 32.3	-0.5
LMEL				IAML		18 34 37.0	
	comp=N,537nm,1.1s						
ROCH	El Roble	2.29	37	*e*P	Pn	18 34 02.8	+0.5
ROCH				IAML		18 34 44.6	
	comp=E,243nm,0.6s						
PEL	Peldehue	2.33	45	*e*P	Pn	18 34 03.7	+0.9
PEL				*e*S	Sn	18 34 32.1	+1.3
PEL				IAML		18 34 42.2	
	comp=N,211nm,0.3s						

NNC 15 18:47:22.0±3.0,**37°.06N**×**70°.79E,h0**^{km}**,mb3.8,mpv3.5, 4C-6D,Error ellipse: s-maj=25.1km s-min=20.5km az=146.0,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.64	35	⇑Pn	Pn	18 48 20.4	+0.5
	3.2nm,0.3s						
SFK				⇑Sn	Sn	18 49 05.5	+1.9
	6.3nm,0.4s						
MNAS	Manas	5.58	13	⇓Pn	Pn	18 48 47.3	+0.9
	3.8nm,0.8s						
MNAS				⇓Sn	Sn	18 49 51.7	+0.4
	18nm,0.9s						
KK31	Karatay Array	6.04	358	⇓Pn	Pn	18 48 54.2	+1.5
	3.0nm,0.4s,baz=178,slow=13,SNR=25						
KK31				⇓Sn	Sn	18 50 04.6	+2.1
	2.0nm,0.3s,baz=188,slow=24,SNR=7.4						
AAK	Ala-Archa	6.26	26	⇓Pn	Pn	18 48 54.8	-1.0
	3.3nm,0.4s						
AAK				⇓Sn	Sn	18 50 07.7	-0.4
	6.2nm,0.8s						
TKM2	Tokmak 2	6.92	31	⇑Pn	Pn	18 49 03.0	-1.9
	1.2nm,0.4s						
AB31	Akbulak array	14.52	331	⇑Pn	Pn	18 50 46.6	-2.0
	0.2nm,0.3s,baz=158,slow=11,SNR=12						

ISCJB ***15*** *18:49:32.7±0.7,54°.32N±0°.10×35°.0W±0°.1,h10^{km}, mb3.7/13,MS3.6/36,Error ellipse: s-maj=16.4km s-min=9.2km az=36.2*

IDC ***15*** *18:49:33.1±0.9,54°.31N×35°.06W,h0^{km},mb3.7/13, mb1 3.8/14,mb1mx3.6/72,mbtmp3.7/14,ML3.0/1,MS3.6/38, Ms1 3.6/38,ms1mx3.5/68,Error ellipse: s-maj=27.9km s-min=15.8km az=11.0*

GCMT ***15*** *18:49:36.0±0.5,54°.21N×35°.18W,h28^{km}±1^{km},MW4.8/65, Moment Tensor Solution. s14,c15; s65,c93; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.94±.22; $M_{\theta\theta}$0.09±.13; $M_{\phi\phi}$1.86±.14; $M_{r\theta}$-0.92±.20; $M_{\theta\phi}$-0.10±.08; $M_{\phi r}$0.15±.16; Best double couple: $M_0$2.08900×10^{16} NP1:ϕ_s156.00000°,δ52.00000°,λ-117.00000°. NP2: ϕ_s16.00000°,δ45.00000°,λ-60.00000°. Principal axes: T 1.8790, Plg4.0000°, Azm265.0000°; N 0.4270, Plg21.0000°, Azm174.0000°; P -2.2990, Plg69.0000°, Azm4.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 15 18:49:34.4±0.8,**54°.3N**±0°.1×**35°.0W**±0°.1,**h10**^{km}**,n44,** σ**0^{s}.83**/16,**mb3.8**/13,**MS3.5**/36,**Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFJD	Kangerlussuaq	14.80	336	Sn	Sn	18 55 47.8	+0.6
	2.4nm,0.3s,baz=173,slow=8.1,SNR=2.5						
SFJD				LR	LR	18 57 39.5	
	comp=Z,188nm,20.1s,baz=148,slow=33						
EKA	Eskdalemuir Ar	18.32	74	P	Pn	18 53 46.4	-1.9
	baz=280,slow=10.0,SNR=2.5						
SCHQ	Schefferville	18.38	285	LR	LR	18 59 28.3	
	comp=Z,193nm,21.4s,baz=84,slow=32						
FRB	Frobisher Bay	19.45	312	LR	LR	19 00 00.5	
	comp=Z,200nm,18.3s,baz=150,slow=32						
NOA	NORSAR Array B	25.17	56	LR	LR	19 03 11.0	
	comp=Z,128nm,21.5s,baz=275,slow=32						
ESDC	Sonseca Array	25.48	112	P	P	18 55 02.9	+0.4
	0.1nm,0.3s,baz=309,slow=8.1,SNR=2.8						
ESDC				LR	LR	19 02 56.6	
	comp=Z,112nm,19.9s,baz=300,slow=32						
HFS	Hagfors	26.50	57	LR	LR	19 04 21.1	
	comp=Z,159nm,19.6s,baz=298,slow=34						
DAVOX	Davos/Dischmat	29.09	86	LR	LR	19 06 46.4	
	comp=Z,320nm,18.0s,baz=266,slow=36						
SADO	Sadowa	29.73	270	LR	LR	19 06 39.5	
	comp=Z,365nm,18.3s,baz=71,slow=35						
SPITS	Spitsbergen Ar	29.76	19	LR	LR	19 05 34.7	
	comp=Z,50nm,18.6s,baz=190,slow=32						
GERES	GERESS Array B	30.27	80	LR	LR	19 07 15.2	
	comp=Z,140nm,18.5s,baz=292,slow=35						
RES	Resolute Bay	30.78	333	LR	LR	19 07 32.2	
	comp=Z,44nm,18.9s,baz=56,slow=35						
FINES	FINESS Array B	32.16	52	LR	LR	19 07 28.7	
	comp=Z,87nm,20.5s,baz=278,slow=33						
ULM	Lac du Bonnet	36.45	289	LR	LR	19 10 11.1	
	comp=Z,175nm,19.6s,baz=114,slow=34						
AKASG	Malin Array Be	38.08	68	P	P	18 56 52.9	0.0
	0.2nm,0.2s,baz=295,slow=8.7,SNR=4.5						
AKASG				LR	LR	19 13 22.0	
	comp=Z,54nm,18.1s,baz=255,slow=38						
TKL	Tuckaleechee C	38.28	261	LR	LR	19 11 39.6	
	comp=Z,151nm,21.4s,baz=23,slow=35						
MLR	Muntele Rosu	39.11	77	LR	LR	19 12 22.3	
	comp=Z,36nm,22.0s,baz=326,slow=35						
YKA	Yellowknife Ar	39.95	315	P	P	18 57 07.3	-1.1
	0.7nm,0.7s,baz=63,slow=9.2,SNR=3.1						
YKA				LR	LR	19 11 39.7	
	comp=Z,8.1nm,21.6s,baz=36,slow=33						
IDI	Anoyia	45.06	90	LR	LR	19 17 31.6	
	comp=Z,46nm,19.1s,baz=311,slow=37						
KOWA	Kowa	46.51	137	LR	LR	19 16 30.1	
	comp=Z,53nm,18.9s,baz=124,slow=35						
BRTR	Keskin Array B	47.14	79	P	P	18 58 07.5	+0.7
	1.5nm,0.9s,baz=303,slow=5.7,SNR=6.4						
BRTR				LR	LR	19 19 11.9	
	comp=Z,46nm,19.3s,baz=287,slow=38						
PDAR	Pinedale Array	48.46	289	P	P	18 58 16.1	-0.9
	0.5nm,0.7s,baz=65,slow=7.0,SNR=5.5						
PDAR				LR	LR	19 17 38.1	
	comp=Z,130nm,19.4s,baz=66,slow=35						
KBZ	Khabaz	49.69	68	LR	LR	19 19 45.4	
	comp=Z,64nm,19.7s,baz=271,slow=36						
TORD	Torodi Ar. Bea	50.14	131	P	P	18 58 29.9	0.0
	1.1nm,0.9s,baz=337,slow=6.3						
TORD				LR	LR	19 17 55.9	
	comp=Z,46nm,18.1s,baz=320,slow=34						
ILAR	Eielson Array	50.34	329	P	P	18 58 31.0	+0.2
	0.3nm,0.7s,baz=41,slow=5.9,SNR=3.3						
ILAR				LR	LR	19 19 42.3	
	comp=Z,70nm,18.6s,baz=66,slow=36						
ANMO	Albuquerque	52.03	279	LR	LR	19 20 09.4	
	comp=Z,217nm,19.4s,baz=48,slow=35						
MMAI	Mount Meron Ar	52.82	84	LR	LR	19 22 58.6	
	comp=Z,34nm,20.8s,baz=50,slow=38						
AKTO	Aktyubinsk	52.92	53	P	P	18 58 50.8	+0.4
	1.6nm,0.9s,baz=296,slow=10,SNR=4.0						
AKTO				LR	LR	19 20 11.2	
	comp=Z,77nm,21.7s,baz=299,slow=35						
GNI	Garni	53.12	71	LR	LR	19 22 37.6	
	comp=Z,36nm,18.9s,baz=326,slow=37						
DBIC	Dimbokro	53.34	142	LR	LR	19 19 08.3	
	comp=Z,85nm,19.5s,baz=6.5,slow=33						
TXAR	Lajitas Array	54.46	272	P	P	18 59 03.0	+1.0
	0.5nm,0.7s,baz=57,slow=9.1,SNR=7.6						
TXAR				LR	LR	19 21 44.0	
	comp=Z,182nm,18.1s,baz=0.0,slow=36						
NVAR	Mina Array Bea	56.27	290	LR	LR	19 22 29.8	
	comp=Z,123nm,18.5s,baz=293,slow=35						
YBH	Yreka Blue Hor	56.30	296	LR	LR	19 22 26.3	
	comp=Z,84nm,18.4s,baz=50,slow=35						
BVAR	Borovoye Array	56.53	44	P	P	18 59 17.3	+0.8
	1.0nm,0.7s,baz=309,slow=5.0,SNR=8.4						
BVAR				LR	LR	19 21 33.8	
	comp=Z,79nm,21.5s,baz=283,slow=34						
ROSC	El Rosal	58.66	228	LR	LR	19 24 55.2	
	comp=Z,17nm,19.2s,baz=156,slow=36						
JTS	JuntasAbangare	58.99	241	LR	LR	19 22 14.2	
	comp=Z,34nm,20.8s,baz=87,slow=33						
ZALV	Zalesovo Beam	61.26	36	LR	LR	19 25 57.6	
	comp=Z,47nm,18.7s,baz=35,slow=36						
KURBB	Kurchatov Arra	61.63	42	P	P	18 59 52.0	+0.3
	1.5nm,0.8s,baz=322,slow=7.4,SNR=19						
LPIG	La Paz	62.29	273	LR	LR	19 24 48.4	
	comp=Z,80nm,18.5s,baz=42,slow=34						
MKAR	Makanchi Array	66.19	42	P	P	19 00 22.4	+0.5
	0.9nm,0.7s,baz=328,slow=6.2,SNR=12						
SONM	Songino Array	73.16	26	P	P	19 01 04.7	-0.3
	1.1nm,0.7s,baz=329,slow=5.2,SNR=5.7						
NNA	Nana	74.91	223	LR	LR	19 33 04.7	
	comp=Z,22nm,21.4s,baz=326,slow=35						
CPUP	Villa Florida	82.56	200	LR	LR	19 36 47.6	
	comp=Z,19nm,18.7s,baz=29,slow=34						
ASAR	Alice Springs	148.32	20	PKPbc	PKPbc	19 09 20.4	-0.3
	1.7nm,0.6s,baz=351,slow=2.3,SNR=37						

NEIC 15 18:50:13.8±0.0,**53°.68N**×**164°.29W,h44**^{km}**,ML3.6**(AEIC)**, After AEIC.,Unimak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WESE	West Dahl East	0.82	348	P	Pn	18 50 29.2	+0.2
WESP	Westdahl Peak	0.86	343	P	Pn	18 50 30.2	+0.6
WESP				S	Sn	18 50 41.9	+0.8
AKSA	Akutan Strait	0.95	299	P	Pn	18 50 31.1	+0.3
AKSA				S	Sn	18 50 43.4	+0.3
WEBT	Westdahl Beart	0.96	344	P	Pn	18 50 32.0	+1.1
AKUT	Akutan	0.99	298	P	Pn	18 50 31.7	+0.5
AKUT				S	Sn	18 50 44.4	+0.4
AHB	Akutan Harbor	1.00	297	P	Pn	18 50 32.0	+0.5
SSLS	Shishaldin Sou	1.05	9	P	Pn	18 50 32.7	+0.5
AKLV	Akutan Long Va	1.10	297	P	Pn	18 50 33.1	+0.3
AKLV				S	Sn	18 50 47.0	+0.2
AKMO	Akutan Morgan	1.10	293	P	Pn	18 50 33.2	+0.4
SSBA	Shishaldin	1.10	5	P	Pn	18 50 33.2	+0.3
SSLW	Shishaldin Wes	1.10	5	P	Pn	18 50 33.3	+0.5
AKGG	Akutan Green G	1.13	298	P	Pn	18 50 33.8	+0.6
AKRB	Akutan Reef Bi	1.15	294	P	Pn	18 50 33.9	+0.5
FALS	False Pass	1.29	23	P	Pn	18 50 35.7	+0.4
UNV	Unalaska Valle	1.32	278	P	Pn	18 50 35.7	-0.1
UNV				S	Sn	18 50 53.2	+0.9
MTBL	Makushin Table	1.45	283	P	Pn	18 50 38.2	+0.6
MSW	Makushin Switc	1.50	280	P	Pn	18 50 38.6	+0.4
MCIR	Makushin Cirqu	1.57	281	P	Pn	18 50 40.2	+0.9
DRIA	Deer Island	1.75	42	P	Pn	18 50 42.0	+0.2
DT1	Dutton Round H	1.85	39	P	Pn	18 50 44.0	+0.9
DOL	Dolgoi Island	2.05	43	P	Pn	18 50 46.5	+0.7
OKER	Okmok East Rim	2.25	266	P	Pn	18 50 50.3	+1.7
SDPT	Sand Point	2.78	51	P	Pn	18 50 57.0	+1.2
NIKH	Nikolski High	2.83	257	P	Pn	18 50 57.3	+0.9

ISCJB ***15*** *18:50:54.4±0.5,0°.42N±0°.06×126°.85E±0°.05,h33^{km}, mb3.8/9,Error ellipse: s-maj=8.0km s-min=7.6km az=17.5*

DJA ***15*** *18:50:55.4±0.9,0°N±4°×12°7E±°,h21^{km}±11^{km},M4.4/6, mb4.6/2,MLv4.3/6*

IDC ***15*** *18:50:56.1±3.4,0°.54N×127°.10E,h35^{km}±28^{km},mb3.6/9, mb1 3.7/10,mb1mx3.5/54,mbtmp3.8/10,ML3.6/1,Error ellipse: s-maj=47.0km s-min=13.4km az=75.0*

ISC 15 18:50:56.1±0.7,**0°.41N**±0°.06×**126°.87E**±0°.05,**h35**^{km}**,n19,** σ**1^{s}.32**/22,**mb3.8**/9,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TNTI	Ternate	0.61	54	P	Pn	18 51 08.4	0.0
TNTI				S	Sn	18 51 19.3	+2.2
LBMI	Labuha	1.22	149	P	Pn	18 51 16.8	+0.1
SANI	Sanana	2.60	200	P	Pn	18 51 33.1	-2.6
KMSI	Cibinong	2.89	273	P	Pn	18 51 40.1	+0.4
KMSI				S	Sn	18 52 14.0	+0.7
NLAI	Namlea	3.63	176	P	Pn	18 51 50.3	+0.4
LUWI	Luwuk	4.34	251	P	Pn	18 52 00.9	+1.2
KDI	Kendari	6.07	224	P	Pn	18 52 33.3	+10
TTSI	Tana Toraja	7.84	244	P	Pn	18 52 47.0	-0.7
	28nm,0.8s						
EDFI	Ende, Flores	10.46	209	P	Pn	18 53 25.6	+1.8
FITZ	Fitzroy Crossi	18.43	184	P	P	18 55 08.3	-0.4
	0.1nm,0.3s,baz=8.4,slow=8.9,SNR=5.2						
WRA	Warramunga Arr	21.51	161	P	P	18 55 42.1	-0.1
	2.2nm,0.4s,baz=338,slow=10,SNR=35						
ASAR	Alice Springs	24.89	165	P	P	18 56 17.1	+1.2
	2.5nm,0.4s,baz=345,slow=11,SNR=76						
ASAR				PcP	PcP	18 59 51.8	+0.5
	0.3nm,0.7s,baz=344,slow=2.4,SNR=4.1						
ASAR				ScP	ScP	19 03 26.5	-1.4
	0.3nm,0.9s,baz=342,slow=2.7,SNR=3.5						
STKA	Stephens Creek	35.01	158	P	P	18 57 46.0	+0.6
	0.4nm,0.3s,baz=325,slow=19,SNR=4.2						
KSRS	Korea Array	36.87	1	P	P	18 57 58.5	-2.7
	0.4nm,0.6s,baz=180,slow=9.8,SNR=3.2						
MJAR	Matsushiro Arr	37.46	15	P	P	18 58 04.7	-1.6
	0.3nm,0.4s,baz=192,slow=9.9,SNR=3.1						
SONM	Songino Array	50.47	342	P	P	18 59 51.5	+0.8
	0.4nm,0.5s,baz=167,slow=6.8,SNR=2.1						
MKAR	Makanchi Array	60.36	326	P	P	19 01 01.7	-0.1
	1.2nm,0.5s,baz=118,slow=8.4,SNR=25						
KURBB	Kurchatov Arra	64.60	328	P	P	19 01 29.6	-0.3
	1.1nm,0.4s,baz=129,slow=6.3,SNR=14						
BVAR	Borovoye Array	70.17	328	P	P	19 02 05.7	+0.5
	0.3nm,0.3s,baz=132,slow=6.0,SNR=2.6						

ISK ***15*** *18:58:22.6,37°.01N×36°.76E,h6^{km},ML2.7/4*

ISCJB ***15*** *18:58:23.1±0.5,37°.03N±0°.02×36°.71E±0°.03,h1^{km}±5^{km}, Error ellipse: s-maj=4.2km s-min=3.7km az=162.6*

DDA ***15*** *18:58:23.1,37°.02N×36°.70E,h8^{km},Ml3.1*

CSEM ***15*** *18:58:23.4±0.2,37°.02N×36°.71E,h2^{km},ML3.1,Error ellipse: s-maj=4.0km s-min=3.3km az=156.0*

ISC 15 18:58:23.2±1.0,**37°.02N**±0°.02×**36°.72E**±0°.02,**h8**^{km}±10^{km}**, n41,**σ**0^{s}.54**/64,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUZU	Kuzuini	0.37	130	*i* P	Pg	18 58 30.8	+0.2
KUZU				*i* S	Sg	18 58 36.0	+0.5
KUZU	Kuzuini	0.37	130	P	Pg	18 58 30.8	+0.2
KUZU				S	Sg	18 58 36.0	+0.5
GAZ	Gaziantep	0.42	68	PG	Pg	18 58 31.0	-0.5
GAZ				SG	Sg	18 58 36.7	-0.4
GAZ	Gaziantep	0.42	68	*e*Pg	Pg	18 58 31.0	-0.5
GAZ				*e*Sg	Sg	18 58 36.7	-0.4
KMRS	Kahramanmaras	0.51	16	PG	Pg	18 58 33.3	+0.2
KMRS				SG	Sg	18 58 40.0	+0.1
KMRS	Kahramanmaras	0.51	16	*e*Pg	Pg	18 58 33.3	+0.2
KMRS				*e*Sg	Sg	18 58 40.0	+0.1
ANDN	Andirin	0.64	332	*i* P	Pg	18 58 35.8	+0.2
ANDN				*i* S	Sb	18 58 44.7	-1.2
ANDN	Andirin	0.64	332	P	Pg	18 58 35.8	+0.2
ANDN				S	Sb	18 58 44.7	-1.2
TAHT	Tahtakopru-Hat	0.77	214	PG	Pg	18 58 37.8	-0.2
TAHT				SG	Sb	18 58 49.2	-0.2
TAHT	Tahtakopru-Hat	0.77	214	*e*Pg	Pg	18 58 37.8	-0.2
TAHT				*e*Sg	Sb	18 58 49.2	-0.2
YURE	YUREGIR	0.89	258	PG	Pb	18 58 40.9	0.0
YURE				SG	Sb	18 58 53.9	+0.9
YURE	YUREGIR	0.89	258	*e*Pg	Pb	18 58 40.9	0.0
YURE				*e*Sg	Sb	18 58 53.9	+0.9
SAIM	ADANA	1.08	332	*i* P	Pg	18 58 43.8	-0.3
SAIM				*i* S	Sg	18 58 57.9	-0.3
SAIM	ADANA	1.08	332	P	Pg	18 58 43.8	-0.3
SAIM				S	Sg	18 58 57.9	-0.3
YAYL	Yayladag	1.09	207	PN	Pb	18 58 44.2	-0.2
YAYL	Yayladag	1.09	207	*i* P	Pb	18 58 44.3	-0.2
YAYL	Yayladag	1.09	207	P	Pb	18 58 44.3	-0.2
KRTS	Karatas	1.17	248	PN	Pn	18 58 46.4	+0.6
KRTS	Karatas	1.17	248	*e*Pn	Pn	18 58 46.4	+0.6
ATAB	Bozova	1.34	70	*i* P	Pg	18 58 49.0	+0.1
ATAB				*i* S	Sg	18 59 06.4	+0.2
ATAB	Bozova	1.34	70	P	Pg	18 58 49.0	+0.1
ATAB				S	Sg	18 59 06.4	+0.2
KARA	Karaisali	1.35	281	PN	Pn	18 58 47.7	-0.7
KARA	Karaisali	1.35	281	*e*Pn	Pn	18 58 47.7	-0.7
SARI	SarD1z-Kayseri	1.41	350	PN	Pb	18 58 49.7	-0.2
SURC	SANLIURFA_SURC	1.52	95	*i* P	Pb	18 58 51.6	-0.2
SURC				*i* S	Sg	18 59 12.1	-0.1
SURC	SANLIURFA_SURC	1.52	95	P	Pb	18 58 51.6	-0.2
SURC				S	Sg	18 59 12.1	-0.1
AKCD	Akcadag	1.60	36	*i* P	Pg	18 58 54.5	+0.6
AKCD				*i* S	Sn	18 59 12.6	-0.2
AKCD	Akcadag	1.60	36	P	Pg	18 58 54.5	+0.6
AKCD				S	Sn	18 59 12.6	-0.2
DARE	Darende-Malaty	1.67	21	PN	Pn	18 58 52.9	0.0
DARE	Darende-Malaty	1.67	21	*e*Pn	Pn	18 58 52.9	0.0
URFA	Urfa	1.73	75	PN	Pn	18 58 54.2	+0.5
URFA	Urfa	1.73	75	*e*Pn	Pn	18 58 54.2	+0.5
SANL	SANLIURFA_Merk	1.82	84	*i* P	Pg	18 58 57.8	-0.4
SANL				*i* S	Sg	18 59 21.6	-0.2
SANL	SANLIURFA_Merk	1.82	84	P	Pg	18 58 57.8	-0.4
SANL				S	Sg	18 59 21.6	-0.2
MALT	Malatya	1.88	46	PN	Pn	18 58 56.0	+0.3
MALT	Malatya	1.88	46	*e*Pn	Pn	18 58 56.0	+0.3
BNN	Bunyan	1.96	340	PN	Pn	18 58 57.9	+1.0
BNN	Bunyan	1.96	340	*e*Pn	Pn	18 58 57.9	+1.0
HEKM	Malatya_Hekimh	2.10	27	*i* P	Pg	18 59 05.8	+2.2
HEKM				*i* S	Sg	18 59 30.6	-0.2
SVRC	Sivrice-ELAZID	2.46	56	PN	Pn	18 59 03.9	0.0
SVRC	Sivrice-ELAZID	2.46	56	*e*Pn	Pn	18 59 03.9	0.0

ISCJB ***15*** *19:06:03.4±0.9,18°.3S±0°.3×178°.1W±0°.2,h557^{km}, mb3.8/13,Error ellipse: s-maj=38.0km s-min=12.4km az=152.0*

IDC ***15*** *19:06:03.0±1.7,18°.29S×178°.01W,h538^{km}±18^{km}, mb3.4/13,mb1 3.7/14,mb1mx3.3/44,mbtmp4.3/14,Error ellipse: s-maj=31.2km s-min=11.7km az=148.0*

ISC 15 19:06:04.2±1.0,**18°.3S**±0°.3×**178°.0W**±0°.2,**h557**^{km}**,n22,** σ**0^{s}.98**/23,**mb3.8**/13,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	7.36	55	P	P	19 07 54.3	-1.9
	11nm,0.3s,baz=188,slow=5.5,SNR=9.0						
CTA	Charters Tower	33.82	261	P	P	19 12 00.7	-0.3
	6.3nm,0.4s,baz=94,slow=11,SNR=12						
STKA	Stephens Creek	38.83	242	P	P	19 12 41.8	-0.2
	7.5nm,0.7s,baz=82,slow=9.6,SNR=18						
WRA	Warramunga Arr	44.99	260	P	P	19 13 29.8	-1.0
	9.2nm,0.7s,baz=97,slow=6.9,SNR=178						
WRA				PcP	PcP	19 14 59.6	-0.3
	0.7nm,0.4s,baz=93,slow=3.4,SNR=3.9						
ASAR	Alice Springs	45.11	255	P	P	19 13 30.7	-0.9
	28nm,0.6s,baz=88,slow=8.9,SNR=316						
ASAR				PcP	PcP	19 14 59.9	-0.5
	1.2nm,0.5s,baz=102,slow=3.8,SNR=6.4						
ASAR				ScP	ScP	19 18 01.6	+1.5
	0.3nm,0.7s,baz=79,slow=4.8,SNR=4.0						
FITZ	Fitzroy Crossi	53.40	261	P	P	19 14 32.2	-0.5
	1.6nm,0.3s,baz=65,slow=5.8,SNR=25						
MJAR	Matsushiro Arr	68.48	323	P	P	19 16 11.0	-0.3
	2.2nm,0.6s,baz=167,slow=5.9,SNR=7.7						
PETK	Petropavlovsk-	74.17	345	P	P	19 16 44.3	+0.2
	1.8nm,0.8s,baz=168,slow=3.7						
KSRS	Korea Array	75.28	318	P	P	19 16 51.7	+1.0
	0.6nm,0.6s,baz=127,slow=5.9,SNR=3.8						
NVAR	Mina Array Bea	79.40	44	P	P	19 17 13.8	+0.5

	0.6nm,0.7s,baz=225,slow=9.6,SNR=5.2						
TXAR	Lajitas Array	85.83	57	P	P	19 17 47.5	+1.8
	1.5nm,0.9s,baz=218,slow=6.4,SNR=15						
ILAR	Eielson Array	86.17	13	P	P	19 17 45.3	-1.0
	0.3nm,0.4s,baz=215,slow=5.1,SNR=8.9						
PDAR	Pinedale Array	87.33	43	P	P	19 17 53.5	+0.9
	0.3nm,0.7s,baz=248,slow=4.8,SNR=2.8						
CMAR	Chiang Mai Arr	89.43	290	P	P	19 18 03.9	+1.2
	1.1nm,0.8s,baz=118,slow=3.7,SNR=6.7						
MKAR	Makanchi Array	109.72	314	PKiKP	PKiKP	19 23 31.2	-1.0
	0.2nm,0.5s,baz=156,slow=0.6,SNR=4.1						
ARCES	ARCESS Array B	126.77	350	PKP	PKPdf	19 24 03.4	-0.9
	1.5nm,1.1s,baz=132,slow=1.8,SNR=3.7						
FINES	FINESS Array B	133.68	344	PKhKP	PKPpre	19 24 14.5	
	1.9nm,1.0s,baz=100,slow=4.2,SNR=2.5						
EKA	Eskdalemuir Ar	142.82	5	PKhKP	PKPpre	19 24 29.9	
	1.1nm,0.8s,baz=32,slow=4.2,SNR=3.3						
BRTR	Keskin Array B	145.37	315	PKPbc	PKPdf	19 24 40.5	+1.0
	0.9nm,0.5s,baz=116,slow=2.9,SNR=7.8						
MMAI	Mount Meron Ar	146.72	303	PKPbc	PKPbc	19 24 44.8	+0.2
	2.1nm,0.6s,baz=88,slow=10,SNR=4.7						
GERES	GERESS Array B	148.10	345	PKPbc	PKPbc	19 24 48.0	+0.3
	1.0nm,0.6s,baz=27,slow=3.3,SNR=9.4						
DAVOX	Davos/Dischmat	150.87	349	PKPbc	PKPbc	19 24 54.7	+0.3
	2.7nm,0.8s,baz=197,slow=11,SNR=3.9						

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*ATA **15** 19:10:33.7±1.2, 38.°27N×43.°43E, h23^{km}±10^{km}, ML3.5, MW3.2*

*ISK **15** 19:10:35.9, 38.°50N×43.°17E, h10^{km}, ML2.6/2*

*CSEM **15** 19:10:36.7±0.2, 38.°52N×43.°21E, h10^{km}, ML3.0, Error ellipse: s-maj=7.0km s-min=4.9km az=150.0*

*ISCJB **15** 19:10:37.3±0.5, 38.°49N±0.°04×43.°20E±0.°04, h9^{km}±4^{km}, Error ellipse: s-maj=6.6km s-min=4.2km az=147.2*

*DDA **15** 19:10:37.3, 38.°50N×43.°23E, h9^{km}, Ml3.0*

ISC 15 19:10:37.4±0.9**, 38.°51N**±0.°03×**43.°22E**±0.°02**, h6**^{km}±9^{km}**, n30,** σ1^{s}.**80**/48**, 1D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TVAN	Van	0.14	81	*i* P	Pg	19 10 40.5	+0.1
TVAN				*i* S	Sg	19 10 43.8	+1.3
TVAN	Van	0.14	81	P	Pg	19 10 40.5	+0.1
TVAN				S	Sg	19 10 43.8	+1.3
VANB	Van	0.16	56	PG	Pg	19 10 40.4	-0.2
VANB				SG	Sg	19 10 43.6	+0.8
VANB	Van	0.16	56	*e*Pg	Pg	19 10 40.4	-0.2
VANB				*e*Sg	Sg	19 10 43.6	+0.8
GEVA	Gevas	0.23	214	*i* P	Pg	19 10 41.4	-0.5
GEVA				⇓*e*S	Sg	19 10 46.3	+1.2
GEVA				IAML		19 10 46.8	
	comp=Z,530nm,0.5s						
GEVA	Gevas	0.23	214	*i* P	Pg	19 10 41.6	-0.4
GEVA				*i* S	Sg	19 10 46.6	+1.5
GEVA	Gevas	0.23	214	P	Pg	19 10 41.6	-0.4
GEVA				S	Sg	19 10 46.6	+1.5
ADCV	BITLIS_Adilcev	0.49	308	*i* P	Pg	19 10 46.9	0.0
ADCV				*i* S	Sb	19 10 55.7	-0.5
ADCV	BITLIS_Adilcev	0.49	308	P	Pg	19 10 46.9	0.0
VMUR	Van-Muradiye	0.55	29	*i* P	Pb	19 10 48.5	-1.1
VMUR				*i* S	Sn	19 10 59.3	-2.4
VMUR	Van-Muradiye	0.55	29	P	Pb	19 10 48.5	-1.1
CLDR	Caldiran	0.83	40	PG	Pg	19 10 53.1	-0.3
CLDR	Caldiran	0.83	40	*e*Pg	Pg	19 10 53.1	-0.3
GURO	Guroymak-BITLI	0.94	273	PG	Pg	19 10 53.5	-1.8
GURO				SG	Sg	19 11 06.3	-1.1
GURO	Guroymak-BITLI	0.94	273	*e*Pg	Pg	19 10 53.5	-1.8
GURO				*e*Sg	Sg	19 11 06.3	-1.1
AGRB	Hanur-Agry	1.08	351	PN	Pg	19 10 57.2	-0.9
AGRB				SN	Sb	19 11 12.4	-0.7
AGRB	Hanur-Agry	1.08	351	*e*Pn	Pg	19 10 57.2	-0.9
AGRB				*e*Sn	Sb	19 11 12.4	-0.7
DYDN	Diyadin	1.10	19	*e*P	Pn	19 10 58.8	-0.7
SRTM	Siirt_Merkez	1.15	244	*i* P	Pg	19 10 58.8	-0.5
SRTM				*i* S	Sn	19 11 18.2	+2.1
SRTM	Siirt_Merkez	1.15	244	P	Pg	19 10 58.8	-0.5
EKAR	Karacoban	1.17	310	*e*P	Pn	19 11 00.8	+0.3
EKAR				*e*S	Sn	19 11 23.4	+6.4
EKAR				IAML		19 11 30.1	
	comp=Z,19nm,0.5s						
EKAR	Karacoban	1.17	310	*i* P	Pb	19 10 58.8	-1.4
EKAR				*i* S	Sn	19 11 23.4	+6.4
EKAR	Karacoban	1.17	310	P	Pb	19 10 58.8	-1.4
CUKT	Cukurca	1.29	166	PN	Pn	19 11 00.7	-1.4
CUKT	Cukurca	1.29	166	*e*Pn	Pn	19 11 00.7	-1.4
EATA	Eleskirt	1.47	337	*e*P	Pg	19 11 05.2	-0.3
IGDI	IGDIR	1.51	26	*e*P	Pg	19 11 05.5	-0.9
IGDI				*e*S	Sg	19 11 28.2	+2.2
BTMN	Batman	1.66	249	*i* P	Pb	19 11 07.9	-0.5
BTMN				*i* S	Sg	19 11 32.5	+1.9
BTMN	Batman	1.66	249	P	Pb	19 11 07.9	-0.5
ECAT	Cat-ERZURUM	2.07	303	*e*P	Pb	19 11 13.1	-2.3

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*ISCJB **15** 19:12:58.5±1.2, 10.°4S±0.°1×161.°8E±0.°1, h61^{km}, mb3.7/6, Error ellipse: s-maj=23.2km s-min=13.8km az=38.7*

*IDC **15** 19:13:02.5±3.0, 10.°39S×161.°66E, h74^{km}±22^{km}, mb3.5/6, mb1 3.5/7, mb1mx3.3/50, mbtmp3.8/7, Error ellipse: s-maj=30.9km s-min=20.0km az=65.0*

ISC 15 19:13:01.3±1.1**, 10.°3S**±0.°1×**161.°7E**±0.°2**, h61**^{km}**, n8,** σ1^{s}.**28**/9**, mb3.8**/6**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.94	297	P	Pn	19 13 32.0	0.0
	72nm,0.3s,baz=163,slow=12,SNR=33						
HNR				S	Sn	19 13 57.4	+2.0
	41nm,0.3s,baz=154,slow=5.6,SNR=6.0						
HNR				LR	LR	19 14 37.5	
	comp=Z,140nm,19.4s,baz=168,slow=49						
DZM	Mont Dzumac	12.54	159	P	Pn	19 15 58.5	+1.3
	0.3nm,0.3s,baz=352,slow=14,SNR=15						
WRA	Warramunga Arr	28.06	247	P	P	19 18 46.3	-1.0
	0.9nm,0.6s,baz=76,slow=9.4,SNR=6.8						
ASAR	Alice Springs	29.65	240	P	P	19 19 00.5	-0.9
	0.2nm,0.5s,baz=70,slow=9.5,SNR=3.6						
FITZ	Fitzroy Crossi	35.76	253	P	P	19 19 54.2	-0.6
	0.7nm,0.5s,baz=86,slow=9.7,SNR=4.2						
ASAJ	Asahikawa	56.88	344	P	P	19 22 40.0	+0.1
	1.1nm,0.6s,baz=161,slow=7.4,SNR=4.5						
SONM	Songino Array	75.77	325	P	P	19 24 41.4	+0.6
	1.5nm,0.8s,baz=141,slow=5.7,SNR=5.0						
MKAR	Makanchi Array	90.29	318	P	P	19 25 54.4	-1.3
	0.2nm,0.6s,baz=96,slow=5.9,SNR=3.0						

MEX 15 19:14:54.9±0.4**, 16.°80N**×**94.°64W, h106**^{km}±8^{km}**, MD3.7, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TUIG	Tuzandepetl	1.25	9	*i* P	Pn	19 15 17.6	-0.9
TUIG				*e*S	Sn	19 15 35.0	-1.4
TGIG		1.45	90	*e*P	Pn	19 15 19.6	-1.4
TGIG				*e*S	Sn	19 15 39.1	-1.7
HUIG	Huatulco	1.74	234	*e*P	Pn	19 15 21.0	-3.5
HUIG				*e*S	Sn	19 15 43.9	-3.1
PCIG		1.74	128	*e*P	Pn	19 15 23.3	-1.1
PCIG				*e*S	Sn	19 15 45.5	-1.5
VHO	Vista Hermosa	2.02	278	*e*P	Pn	19 15 27.1	-1.1
VHO				*e*S	Sn	19 15 52.2	-1.5
CCIG	Comitan	2.45	102	*e*P	Pn	19 15 32.8	-1.0
CCIG				*i* S	Sn	19 16 02.5	-1.0

IDC 15 19:23:24.6±1.9**, 6.°15S**×**130.°12E, h0**^{km}**, mb3.5**/2**, mb1 3.7**/5**, mb1mx3.4**/54**, mbtmp3.6**/5**, ML3.8**/3**, Error ellipse: s-maj=90.7km s-min=25.8km az=77.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	12.66	200	Pn	Pn	19 26 25.5	-0.5
	0.4nm,0.3s,baz=30,slow=16,SNR=23						
FITZ				Sn	Sn	19 28 30.7	-17
	0.2nm,0.3s,baz=105,slow=20,SNR=3.6						
WRA	Warramunga Arr	14.31	164	Pn	Pn	19 26 49.0	+0.4
	0.4nm,0.3s,baz=347,slow=13,SNR=13						
WRA				Sn	Sn	19 29 11.9	-16
	0.2nm,0.3s,baz=334,slow=20,SNR=4.0						
ASAR	Alice Springs	17.80	169	P	Pn	19 27 34.0	+0.2
	0.3nm,0.3s,baz=343,slow=9.4,SNR=43						
ASAR				S	Sn	19 30 39.5	-14
	0.1nm,0.3s,baz=356,slow=29,SNR=4.3						
MKAR	Makanchi Array	67.58	327	P	P	19 34 23.8	+0.7
	0.2nm,0.4s,baz=112,slow=7.5,SNR=4.1						
KURBB	Kurchatov Arra	71.85	328	P	P	19 34 48.8	-0.5
	0.2nm,0.4s,baz=126,slow=4.9,SNR=3.3						

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*NIED **15** 19:31:00, 36.°20N×139.°80E, h62^{km}, Mw4.8 Best double couple: M$_0$1.66000×10^{16} NP1:φ$_s$264.00000°, δ39.00000°, λ148.00000°. NP2:φ$_s$20.00000°, δ71.00000°, λ56.00000°.*

*BJI **15** 19:31:24.6, 35.°94N×140.°27E, h62^{km}, mb4.9/68, mB4.8/45, Ms4.1/57, Ms7 3.8/52*

*MOS **15** 19:31:29.9±1.0, 36.°13N×139.°62E, h63^{km}, mb5.1/39, Error ellipse: s-maj=8.8km s-min=4.4km az=118.6*

*ISCJB **15** 19:31:30.2±0.3, 36.°10N±0.°02×139.°71E±0.°03, h65^{km}±2^{km}, mb4.6/152, Error ellipse: s-maj=3.6km s-min=3.3km az=25.7*

*IDC **15** 19:31:31.7±0.9, 36.°09N×139.°74E, h68^{km}±7^{km}, mb4.5/44, mb1 4.6/48, mb1mx4.5/68, mbtmp4.8/48, MS3.7/38, Ms1 3.7/38, ms1mx3.6/64, Error ellipse: s-maj=9.4km s-min=5.7km az=75.0*

*JMA **15** 19:31:31.2±0.1, 36.°15N×139.°82E, h52^{km}±1^{km}, M4.8 Broadband fault plane solution: P waves. NP1: φ$_s$26.00000°, δ62.00000°, λ62.00000°. NP2:φ$_s$255.00000°, δ38.00000°, λ131.00000°. Principal axes: T Plg62.0000°, Azm252.0000°; N Plg24.0000°, Azm40.0000°; P Plg13.0000°, Azm136.0000°;*

JMA Felt IV J1.

*NEIC **15** 19:31:33.0±0.5, 36.°08N×139.°58E, h78^{km}±4^{km}, mb4.6/45 Error ellipse: s-maj=4.2km s-min=3.8km az=107.0*

NEIC Felt [IV] at Maebashi and [III] at Kawaguchi, Tokyo and Tsukuba. Felt throughout east-central Honshu. Recorded [4 JMA] in Gumma, Saitama and Tochigi.

*GCMT **15** 19:31:33.0±0.3, 36.°04N×139.°84E, h68^{km}±2^{km}, MW4.9/67, Moment Tensor Solution. s23,c28; s67,c97; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.18±.15; M$_{\theta\theta}$-0.48±.14; M$_{\phi\phi}$-0.69±.13; M$_{r\theta}$-0.03±.09; M$_{\theta\phi}$-2.22±.11; M$_{\phi r}$1.15±.06; Best double couple: M$_0$2.64000×10^{16} NP1:φ$_s$7.00000°, δ72.00000°, λ38.00000°. NP2: φ$_s$263.00000°, δ54.00000°, λ158.00000°. Principal axes: T 2.3030, Plg39.0000°, Azm231.0000°; N 0.6710, Plg49.0000°, Azm28.0000°; P -2.9780, Plg11.0000°, Azm132.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 15 19:31:30.4±0.4**, 36.°09N**±0.°03×**139.°84E**±0.°03**, h60**^{km}±3^{km}**, h60**^{km}**:pP-P, n476,** σ1^{s}.**60**/524**, mb4.7**/160**, 38C-24D, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYT	Yasato	0.32	64	⇑P	Pn	19 31 40.7	+0.1
JYT				S	Sn	19 31 47.8	-0.3
JAG	Ashikaga	0.46	317	⇓P	Pn	19 31 41.6	-0.3
JAG				S	Sn	19 31 48.7	-1.6
JRY	Ryogami san	0.76	265	⇓P	Pn	19 31 45.7	+0.3
JRY				S	Sn	19 31 56.2	-0.2
JKT	Katashina	0.83	325	⇓P	Pn	19 31 45.6	-0.7
JKT				S	Sn	19 31 56.4	-1.6
I30JP	ISUMI INFRASON	0.87	153	P	Pn	19 31 50.0	+3.3
	baz=330,slow=11,SNR=1.1						
JOD2	Odawara 2	1.03	217	⇑P	Pn	19 31 50.1	+1.3
JOD2				S	Sn	19 32 04.4	+2.0
JYN	Shimob	1.21	241	⇑P	Pn	19 31 52.8	+1.6
JFY	Yanaizu	1.32	355	⇓P	Pn	19 31 52.5	-0.1
JFY				S	Sn	19 32 08.8	-0.5
MJAR	Matsushiro Arr	1.39	289	P	Pn	19 31 53.5	-0.1
	2μm,0.3s,baz=82,slow=10,SNR=6759						
MJAR				S	Sn	19 32 10.6	-0.5
	755nm,0.3s,baz=110,slow=25,SNR=10						
MJAR				LR	LR	19 32 39.7	
	comp=Z,3μm,21.1s,baz=120,slow=53						
MAJO	Matsushiro	1.39	289	*e*Pn	Pn	19 31 54.3	+0.7
MAJO				*e*Sn	Sn	19 32 11.6	+0.5
MAJO	Matsushiro	1.39	289	*d i*P	Pn	19 31 53.9	+0.3
MJB9	Matsu-Tunnel	1.40	290	*e*Pn	Pn	19 31 54.3	+0.7
INU	Inuyama	2.41	253	*e*Pn	Pn	19 32 09.4	+2.0
JHJ	Hachijo jima 2	2.96	181	P	Pn	19 32 16.2	+1.3
	460nm,0.3s,baz=318,slow=16,SNR=418						
JHJ				S	Sn	19 32 50.0	+0.7
	655nm,0.3s,baz=54,slow=21,SNR=13						
JHJ				LR	LR	19 33 09.4	
	comp=Z,583nm,18.1s,baz=327,slow=33						
JHJ2	Mitsune	2.97	180	*e*Pn	Pn	19 32 16.2	+1.1
ERM	Erimo	6.46	23	*e*Pn	Pn	19 33 01.8	-0.9
ERM				*e*Sn	Sn	19 34 12.3	-2.7
ERM	Erimo	6.46	23	*c i*P	Pn	19 33 02.2	-0.5
JNU	Nakatsue	7.96	251	P	Pn	19 33 24.8	+1.5
	3.8nm,0.3s,baz=72,slow=6.6,SNR=15						
JNU				LR	LR	19 36 42.2	
	comp=Z,731nm,21.1s,baz=124,slow=39						
JNU	Nakatsue	7.96	251	*e*Pn	Pn	19 33 25.4	+2.1
ASAJ	Asahikawa	8.29	14	P	Pn	19 33 26.8	-1.0
	2.4nm,0.3s,baz=227,slow=11,SNR=26						
ASAJ				S	Sn	19 34 57.9	-2.0
	0.5nm,0.3s,baz=292,slow=19,SNR=2.3						
ASAJ				LR	LR	19 38 00.7	
	comp=Z,70nm,18.4s,baz=204,slow=47						
ASAJ	Asahikawa	8.29	14	*e*Pn	Pn	19 33 27.5	-0.3
ASAJ				S	Sn	19 34 57.9	-2.0
YUK	Yuzh-Kuril'sk	9.18	28	P	Pn	19 33 37.7	-2.2
YUK				pmax	pmax		
	comp=Z,52nm,0.2s						
YUK				pmax	pmax		
	comp=E,107nm,0.5s						
YUK				pmax	pmax		
	comp=N,57nm,0.3s						
CBIJ	Chichi jima	9.19	167	*e*Pn	Pn	19 33 38.1	-2.1
CBIJ				S	Sn	19 35 15.1	-7.0
JCJ	Chichijima	9.19	167	P	Pn	19 33 39.1	-1.1
	comp=N,48nm,0.3s,baz=310,slow=17,SNR=12						
JCJ				S	Sn	19 35 15.1	-7.0
	comp=N,12nm,0.3s,baz=252,slow=20,SNR=3.4						
TEY	Ternei	9.27	346	⇑*e*P	Pn	19 33 44.5	+3.3
TEY				pmax	pmax		
	comp=Z,120nm,1.0s						
MSHR	Mys Shultsa	9.34	317	*ce*P	Pn	19 33 40.9	-1.2
SHO	Shikotan	9.44	32	*e*P	Pn	19 33 41.3	-2.2
SHO				pmax	pmax		
	comp=N,12nm,0.3s						
SHO				pmax	pmax		
	comp=Z,26nm,0.3s						
SHO				pmax	pmax		
	comp=E,16nm,0.4s						
KSRS	Korea Array	9.66	282	P	Pn	19 33 50.2	+3.7
	comp=E,8.7nm,0.3s,baz=94,slow=14,SNR=186						
KSRS				LR	LR	19 37 25.7	
	comp=E,717nm,19.9s,baz=81,slow=37						
KS01	Wonju Array Si	9.68	282	*e*Pn	Pn	19 33 47.6	+0.7
KS15	Wonju Array Si	9.69	282	*e*Pn	Pn	19 33 49.8	+2.9
KSAR	Wonju Array Be	9.69	282	P	Pn	19 33 50.2	+3.3
KSAR	Wonju Array Be	9.69	282	P	Pn	19 33 50.3	+3.3
USRK	Ussuriysk Ar.	10.08	326	P	Pn	19 33 51.8	-0.4
	baz=135,slow=43						
USRK				LR	LR	19 37 28.7	
	comp=E,568nm,19.9s,baz=137,slow=36						
USA0B	Ussuriysk Arra	10.08	326	*e*Pn	Pn	19 33 53.7	+1.4
TJN	Taejon	10.08	275	*ce*P	Pn	19 33 56.3	+4.0
KUR	Kuril'sk	10.97	31	*e*P	Pn	19 34 03.5	-1.0
KUR				*e*S	Sn	19 36 00.9	-4.7
KUR				pmax	pmax		
	comp=Z,36nm,0.7s						
KUR				pmax	pmax		
	comp=N,21nm,0.6s						
KUR				smax	smax		
	comp=N,93nm,0.6s						
KUR				smax	smax		
	comp=E,80nm,0.7s						
YSS	Yuzh-Sakhalins	11.07	10	⇓*e*P	Pn	19 34 04.9	-0.9
YSS				*e*S	Sn	19 36 04.0	-3.9
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
YSS				MLR	MLR		
	comp=Z,400nm,19.0s						
YSS				MLR	MLR		
	comp=N,400nm,14.0s						
MDJ	Mudanjiang	11.55	321	P	Pn	19 34 13.1	+0.7
MDJ				sP		19 34 31.5	
MDJ				S	Sn	19 36 21.3	+1.6
MDJ				pmax	pmax		
	comp=N,75nm,1.1s						
MDJ				pmax	pmax		
	comp=N,250nm,3.2s						
MDJ				LR	LR		
	comp=N,220nm,11.7s						
MDJ				LR	LR		
	comp=N,270nm,12.5s						
MDJ				LR	LR		
	comp=N,850nm,20.1s						
MDJ	Mudanjiang	11.55	321	*e*Pn	Pn	19 34 15.5	+3.2
CN2	Changchun	13.45	309	*e*P	P	19 34 43.3	-2.3
CN2				*e*S	Sn	19 37 07.0	+1.1
CN2				pmax	pmax		
	comp=N,10.0nm,0.9s						
CN2				pmax	pmax		
	comp=N,200nm,3.0s						
CN2				LR	LR		
	comp=N,300nm,16.0s						
CN2				LR	LR		
	comp=N,300nm,16.0s						
CN2				LR	LR		
	comp=N,300nm,21.0s						
JOW	Kunigami	13.50	230	P	Pn	19 34 41.4	+2.3
	comp=N,1.0nm,0.3s,baz=332,slow=13,SNR=3.8						
JOW				LR	LR	19 39 35.0	
	comp=N,166nm,21.0s,baz=54,slow=36						
JOW	Kunigami	13.50	230	*e*Pn	P	19 34 43.9	-2.4
KLR	Kul'dur	14.40	338	P	Pn	19 34 50.6	-0.3
	comp=N,0.0nm,0.3s,baz=140,slow=11,SNR=33						
KLR				LR	LR	19 40 23.1	
	comp=N,44nm,18.1s,baz=142,slow=37						
KLR	Kul'dur	14.40	338	*ce*P	Pn	19 34 50.0	-0.9
DL2	Dalian	14.73	286	P	P	19 35 00.6	+0.8
DL2				pP	Pn	19 35 11.1	+16
DL2				*e*S	S	19 37 47.6	-5.0
DL2				sS	Sn	19 38 01.8	+25
DL2				pmax	pmax		
	comp=N,63nm,0.6s						
DL2				pmax	pmax		
	comp=N,79nm,4.4s						
DL2				LR	LR		
	comp=N,300nm,13.0s						
DL2				LR	LR		
	comp=N,280nm,18.5s						
DL2				LR	LR		
	comp=N,510nm,16.4s						
GRNR	Gornyy	14.88	352	*e*P	Pn	19 34 57.2	+0.1
GRNR				pmax	pmax		
	comp=Z,20nm,0.9s						
TYV	Tymovskoe	14.91	7	*e*P	P	19 35 01.2	-0.5
TYV				*e*S	Sn	19 37 42.1	+0.9
TYV				pmax	pmax		
	comp=Z,100nm,5.4s						
TYV				pmax	pmax		
	comp=Z,44nm,0.8s						
TYV				smax	smax		
	comp=E,200nm,5.7s						
NJ2	Nanjing	17.84	263	*e*P	P	19 35 34.3	0.0
NJ2				pP	pP	19 35 45.3	-1.9
NJ2				sP	sP	19 35 53.8	-1.0
NJ2				pmax	pmax		
	comp=E,11nm,0.5s						
TIA	Tai'an	18.34	277	P	P	19 35 39.6	-0.3
TIA				S	S	19 39 10.5	+4.5
TIA				pmax	pmax		
	comp=E,11nm,0.8s						
TIA				LR	LR		
	comp=E,200nm,18.2s						
TIA				LR	LR		
	comp=E,230nm,15.6s						
TIA				LR	LR		
	comp=E,370nm,21.2s						
BJI	Beijing	19.03	289	⇓*i*P	P	19 35 47.1	-0.2
BJI				S	S	19 39 16.0	-4.1
BJI				pmax	pmax		
	comp=E,26nm,0.5s						
BJI				pmax	pmax		
	comp=E,150nm,3.7s						
BJI				LR	LR		
	comp=E,120nm,5.9s						
BJI				LR	LR		
	comp=E,280nm,13.5s						
BJT	Baijiatuau	19.03	289	*e*P	P	19 35 45.3	-2.1
BJT	Baijiatuau	19.03	289	*e*P	P	19 35 45.3	-2.1
ZEA	Zeya	19.72	337	*e*P	P	19 35 51.6	-3.1
ZEA				pmax	pmax		
	comp=N,31nm,0.8s						
ZEA				pmax	pmax		
	comp=E,21nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,41nm,0.8s						
ZEA				MLR	MLR		
	comp=Z,400nm,17.0s						
ZEA				MLR	MLR		
	comp=N,300nm,16.0s						
SSLB	Suanglung	20.41	238	*e*P	P	19 36 01.0	-1.5
YULB	Yu-li	20.43	237	*e*P	P	19 35 59.8	-2.9
PETK	Petropavlovsk-	21.14	31	P	P	19 36 08.5	-1.6
	comp=N,4.1nm,0.7s,baz=161,slow=9.2						
PETK				LR	LR	19 45 10.1	
	comp=N,77nm,18.2s,baz=235,slow=39						
PETK	Petropavlovsk-	21.14	31	*e*P	P	19 36 09.4	-0.8
PEA1	Petropavlovsk-	21.15	31	*e*P	P	19 36 08.5	-1.6
PET	Petropavlovsk	21.49	32	*e*P	P	19 36 15.6	+1.8
PET				*e*S	S	19 40 07.0	-1.6
PET				pmax	pmax		
	comp=Z,22nm,0.9s						
PET				MLR	MLR		
	comp=Z,200nm,19.0s						
PET				MLR	MLR		
	comp=Z,200nm,15.0s						
TIY	Taiyuan	21.95	282	*e*P	P	19 36 23.6	+4.6
TIY				S	S	19 40 13.9	-4.1
TIY				SS	SnSn	19 41 00.6	+13
TIY				pmax	pmax		
	comp=Z,140nm,4.1s						
TIY				LR	LR		
	comp=Z,180nm,13.5s						
TIY				LR	LR		
	comp=Z,210nm,15.5s						
TIY				LR	LR		
	comp=Z,340nm,16.1s						
WHN	Wuhan	21.98	263	P	P	19 36 17.9	-1.3
WHN				pP	pP	19 36 31.9	-0.6
WHN				sP	sP	19 36 39.1	-0.9
WHN				S	S	19 40 12.0	-6.4
WHN				LR	LR		
	comp=Z,380nm,13.9s						
WHN				LR	LR		
	comp=Z,480nm,10.9s						
WHN				LR	LR		
	comp=Z,680nm,12.5s						
HHC	Hu-ho-hao-te	22.59	291	*e*P	P	19 36 25.5	-0.4
HHC				S	S	19 40 28.9	-0.4
HHC				SS	SnSn	19 41 11.3	+8.1
HHC				pmax	pmax		
	comp=Z,27nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,6.6s						
HHC				LR	LR		
	comp=Z,170nm,12.6s						
HHC				LR	LR		
	comp=Z,250nm,10.2s						
HHC				LR	LR		
	comp=Z,240nm,14.9s						
GUMO	Guam	22.86	167	P	P	19 36 28.3	-0.4
	comp=Z,36nm,0.6s,baz=5.7,slow=10,SNR=3.0						
MA2	Magadan	24.55	13	P	P	19 36 44.2	0.0
	comp=Z,26nm,0.7s,baz=202,slow=9.5,SNR=15						
MA2				LR	LR	19 47 59.8	
	comp=Z,106nm,18.6s,baz=200,slow=40						
MA2	Magadan	24.55	13	*e*P	P	19 36 42.9	-1.2
MA2	Magadan	24.55	13	*e*P	P	19 36 42.9	-1.2
XAN	Xi'an	25.34	274	P	P	19 36 50.3	-1.3
XAN				pP	pP	19 37 04.9	-1.4
XAN				pmax	pmax		
	comp=Z,13nm,0.8s						
XAN				pmax	pmax		
	comp=Z,130nm,6.4s						
XAN				LR	LR		
	comp=Z,250nm,17.2s						
XAN				LR	LR		
	comp=Z,140nm,20.1s						
XAN				LR	LR		
	comp=Z,270nm,21.6s						
ENH	Enshi	25.99	266	*e*P	P	19 36 56.2	-1.4

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YAK    Yakutsk             26.74 349  P      P         19 37 03.3 -0.6
       comp=Z,16nm,0.5s,baz=180,slow=0.9,SNR=13
YAK                                   LR     LR        19 47 15.2
       comp=Z,251nm,20.2s,baz=126,slow=35
YAK    Yakutsk             26.74 349 eP      P         19 37 03.1 -0.7
YAK    Yakutsk             26.74 349 eP      P         19 37 02.6 -1.3
YAK                                  e*PP    pP        19 37 19.5 +0.9
YAK                                  eS      S         19 41 34.7 -0.3
YAK                                  e*SS    sS        19 41 59.2 -1.0
YAK                                  eSSS    SSS       19 42 53.1
YAK                                   pmax   pmax
       comp=Z,27nm,0.9s
YAK                                   pmax   pmax
       comp=N,8.0nm,0.9s
YAK                                   pmax   pmax
       comp=E,3.0nm,0.9s
YAK                                   pmax   pmax
       comp=Z,21nm,1.0s
YAK                                   pmax   pmax
       comp=N,19nm,1.3s
YAK                                   smax   smax
       comp=E,37nm,2.2s
YAK                                   smax   smax
       comp=N,34nm,2.3s
YAK                                   MLR    MLR
       comp=Z,265nm,19.0s
YAK                                   MLR    MLR
       comp=N,577nm,21.0s
SONA1  Songino Array       27.28 306 eP      P         19 37 08.4 -0.8
SONA0  Songino Array       27.29 306 eP      P         19 37 08.7 -0.5
SONM   Songino Array       27.29 306  P      P         19 37 08.7 -0.5
       comp=N,6.6nm,0.8s,baz=106,slow=8.4,SNR=30
SONM                                  PcP    PcP       19 40 28.2 +0.8
       comp=N,1.0nm,0.5s,baz=136,slow=3.3,SNR=4.6
SONM                                  LR     LR        19 48 30.0
       comp=N,160nm,20.0s,baz=92,slow=37
BOD    Bodaibo             27.68 330 eP      P         19 37 11.3 -1.1
BOD                                   pmax   pmax
       comp=Z,2.0nm,1.4s
SEY    Seymchan            27.97  12  P      P         19 37 15.2 +0.2
       comp=Z,4.9nm,0.8s,baz=211,slow=6.2,SNR=20
SEY    Seymchan            27.97  12⇓eP      P         19 37 16.0 +1.1
H11N2  WAKE ISLAND Hy      28.80 117  T      T         20 07 42.8
       baz=312,slow=74,SNR=185
H11N1  WAKE ISLAND Hy      28.81 117  T      T         20 07 40.5
       baz=312,slow=74,SNR=174
H11N3  WAKE ISLAND Hy      28.82 117  T      T         20 07 40.9
       baz=312,slow=74,SNR=193
LZH    Lanzhou             28.99 281 eP      P         19 37 23.9 -0.6
LZH                                   pP     pP        19 37 39.5 +0.2
LZH                                   sP     sP        19 37 47.6 +1.2
LZH                                   PP     PnPn      19 38 19.0 +0.1
LZH                                   pmax   pmax
       comp=Z,23nm,1.3s
LZH                                   pmax   pmax
       comp=Z,85nm,5.0s
LZH                                   LR     LR
       comp=Z,370nm,12.7s
LZH                                   LR     LR
       comp=Z,510nm,13.2s
LZH                                   LR     LR
       comp=Z,630nm,16.3s
H11S3  WAKE ISLAND Hy      29.46 119  T      T         20 08 31.8
       baz=314,slow=75,SNR=155
H11S1  WAKE ISLAND Hy      29.46 119  T      T         20 08 31.6
       baz=314,slow=75,SNR=232
H11S2  WAKE ISLAND Hy      29.47 119  T      T         20 08 25.4
       baz=314,slow=75,SNR=119
GYA    Guiyang             29.81 261⇑iP      P         19 37 30.3 -1.5
GYA                                   pP     pP        19 37 48.5 +1.8
GYA                                   PP     PnPn      19 38 31.6 +1.7
GYA                                   S      S         19 42 22.0 -2.4
GYA                                   sS     sS        19 42 49.8 +0.1
GYA                                   SS     SnSn      19 44 00.1 +0.5
GYA                                   pmax   pmax
       comp=Z,30nm,0.8s
GYA                                   pmax   pmax
       comp=Z,100nm,5.0s
GYA                                   LR     LR
       comp=Z,670nm,16.4s
GYA                                   LR     LR
       comp=Z,590nm,16.8s
GYA                                   LR     LR
       comp=Z,530nm,17.0s
ZAK    Zakamensk           29.88 310 eP      P         19 37 30.1 -2.1
ZAK                                   pmax   pmax
       comp=Z,3.0nm,1.0s
TLY    Talaya              30.01 313 eP      P         19 37 33.9 +0.7
TLY                                   pmax   pmax
       comp=Z,4.0nm,0.9s
TLY                                   MLR    MLR
       comp=Z,108nm,14.0s
CD2    Chengdu             30.41 271 eP      P         19 37 36.0 -1.0
CD2                                   pP     pP        19 37 51.3 -0.6
CD2                                   sP     sP        19 37 58.9 -0.1
CD2                                   S      S         19 42 31.9 -1.7
CD2                                   pmax   pmax
       comp=Z,10.0nm,0.5s
CD2                                   pmax   pmax
       comp=Z,160nm,5.0s
CD2                                   LR     LR
       comp=Z,410nm,17.9s
CD2                                   LR     LR
       comp=Z,530nm,20.9s
CD2                                   LR     LR
       comp=Z,280nm,18.9s
GTA    Gaotai              31.64 288 ⇑P      P         19 37 47.0 -0.8
GTA                                   PcP    PcP       19 40 40.3 +1.6
GTA                                   S      S         19 42 52.8  0.0
GTA                                   ScP    ScP       19 44 17.0 +0.3
GTA                                   pmax   pmax
       comp=Z,8.0nm,1.2s
GTA                                   LR     LR
       comp=Z,94nm,17.5s
GTA                                   LR     LR
       comp=Z,97nm,17.1s
GTA                                   LR     LR
       comp=Z,170nm,16.2s
KMI    Kunming             33.57 261  P      P         19 38 04.3 -0.6
KMI                                   pP     pP        19 38 14.1 -5.8
KMI                                   sP     sP        19 38 21.5 -5.4
KMI                                   pmax   pmax
       comp=Z,37nm,0.9s
KMI                                   pmax   pmax
       comp=Z,120nm,5.5s
KMI                                   LR     LR
       comp=Z,200nm,18.8s
KMI                                   LR     LR
       comp=Z,180nm,19.7s
KMI                                   LR     LR
       comp=Z,280nm,20.8s
HVS    Khovu-Aksy          36.00 309⇑eP      P         19 38 23.9 -1.5
HVS                                   pmax   pmax
       comp=Z,9.0nm,0.9s
TIXI   Tiksi               36.09 354  P      P         19 38 25.4 -0.4
       comp=Z,6.9nm,0.7s,baz=143,slow=7.0,SNR=10
NONG   Nongkai             37.00 251  P      P         19 38 34.4 +0.2
       comp=Z,0.6nm,0.9s
SKNT   Sakolnakorn         37.02 249  P      P         19 38 34.4  0.0
       comp=Z,7.2nm,1.1s
KMSI   Cibinong            38.28 206  P      P         19 38 47.1 +2.1
KHON   Khomkaen            38.29 249  P      P         19 38 45.3 +0.2
       comp=Z,6.5nm,0.8s
UTTA   Uttaradit           39.18 253  P      P         19 38 54.0 +1.4
       comp=Z,2.5nm,0.9s
FAKI   Fak Fak             39.45 192 eP      P         19 38 54.2 -0.5
PBKT   Sadao Pong          39.56 251  P      P         19 38 55.8 +0.1
       comp=Z,9.6nm,1.3s
CMMT   Chiang Mai          39.83 256  P      P         19 38 58.1 +0.1
       comp=Z,9.3nm,0.8s
CHTO   Chiang Mai          39.83 256 eP      P         19 38 55.7 -2.3
CHTO   Chiang Mai          39.83 256 eP      P         19 38 55.7 -2.3
CHTO   Chiang Mai          39.83 256  P      P         19 38 58.2 +0.2
DGZ    Jazzator, Alta      39.93 307 i P     P         19 38 59.7 +1.1
DGZ                                   pmax   pmax
       comp=Z,25nm,0.7s
CM31   Chiang Mai Arr      40.03 255 eP      P         19 38 59.6 -0.1
CMAR   Chiang Mai Arr      40.03 255  P      P         19 38 59.2 -0.4
       comp=Z,2.0nm,0.6s,baz=45,slow=8.2,SNR=15
CMAR                                  PcP    PcP       19 41 05.2 +1.5
       comp=Z,1.7nm,0.8s,baz=359,slow=2.2,SNR=6.8
CMAR                                  LR     LR        19 58 07.0
       comp=Z,115nm,18.1s,baz=128,slow=40
CM01   Chiang Mai Arr      40.04 255 eP      P         19 38 58.1 -1.6
MPSI   Mapaga              40.11 212  P      P         19 38 56.9 -3.3
WMQ    Urumqi              40.14 298  P      P         19 39 01.4 +1.0
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WMQ                                   pP     pP        19 39 16.0 +0.4
WMQ                                   sP     sP        19 39 24.0 +1.4
WMQ                                   pmax   pmax
       comp=Z,63nm,0.7s
WMQ                                   pmax   pmax
       comp=Z,200nm,4.3s
WMQ                                   LR     LR
       comp=Z,170nm,19.5s
WMQ                                   LR     LR
       comp=Z,150nm,25.7s
WMQ                                   LR     LR
       comp=Z,190nm,26.7s
LSA    Lhasa               41.03 275  P      P         19 39 09.0 +0.6
LSA                                   pmax   pmax
       comp=Z,33nm,0.9s
LSA    Lhasa               41.03 275 eP      P         19 39 08.9 +0.6
LSA    Lhasa               41.03 275 i P     P         19 39 09.4 +1.0
       SNR=23
LSA    Lhasa               41.03 275 eP      P         19 39 08.9 +0.6
PCI    Palu                41.25 211  P      P         19 39 00.9 -8.8
ZAA0   Zalesovo Array      41.62 313 eP      P         19 39 11.8 -0.6
ZAA1   Zalesovo Array      41.62 313 eP      P         19 39 12.2 -0.2
ZALV   Zalesovo Beam       41.62 313  P      P         19 39 12.2 -0.2
       comp=Z,32nm,0.6s,baz=93,slow=6.2,SNR=84
ZALV                                  PcP    PcP       19 41 08.3  0.0
       comp=Z,6.9nm,0.4s,baz=104,slow=3.2,SNR=7.1
ZALV                                  LR     LR        19 56 17.7
       comp=Z,74nm,22.0s,baz=70,slow=36
ZALV   Zalesovo Beam       41.62 313 eP      P         19 39 11.7 -0.6
ZALV                                  PcP    PcP       19 41 08.3  0.0
ZALV   Zalesovo Beam       41.62 313 eP      P         19 39 11.7 -0.6
ZALV                                                   19 41 08.3
SBUM   Sibu                42.10 224 eP      P         19 39 15.5 -1.2
       comp=Z,8.6nm,1.0s
NVS    Novosibirsk         42.58 314 eP      P         19 39 20.2 +0.1
NVS                                   pmax   pmax
       comp=N,6.0nm,0.8s
NVS                                   pmax   pmax
       comp=E,22nm,0.8s
NVS                                   pmax   pmax
       comp=Z,30nm,0.8s
PHET   Kaeng Krachan       42.83 248  P      P         19 39 23.4 +0.8
       comp=Z,9.9nm,0.8s
TTSI   Tana Toraja         43.20 210  P      P         19 39 24.1 -1.4
MK01   Makanchi Array      43.55 303 eP      P         19 39 27.9 -0.3
MK31   Makanchi Array      43.55 303 eP      P         19 39 28.1  0.0
MK31   Makanchi Array      43.55 303 i P     P         19 39 28.0 -0.1
MK31                                  pmax   pmax
       comp=Z,11nm,0.6s
MK32   Makanchi Array      43.55 303 eP      P         19 39 28.1  0.0
MKAR   Makanchi Array      43.55 303  P      P         19 39 28.1  0.0
       comp=Z,12nm,0.6s,baz=86,slow=9.3,SNR=73
MKAR                                  PcP    PcP       19 41 15.1 +0.2
       comp=Z,2.4nm,0.8s,baz=165,slow=1.0,SNR=4.6
MKAR                                  LR     LR        19 58 15.3
       comp=Z,111nm,20.0s,baz=86,slow=37
BRDH   Bariadhala          43.66 266  LR     LR        20 00 41.3
       comp=Z,109nm,19.2s,baz=108,slow=40
MAKZ   Makanchi            43.76 303 eP      P         19 39 29.4 -0.4
MAKZ   Makanchi            43.76 303 eP      P         19 39 29.4 -0.4
KSM    Kuching             43.99 225 eP      P         19 39 30.8 -1.0
TAPN   Taplejung           44.74 274 eP      P         19 39 38.4 +0.2
       comp=Z,39nm,0.4s
ODAN   Odare               45.21 274 eP      P         19 39 41.8  0.0
       comp=Z,54nm,0.6s
KURK   Kurchatov           45.52 309 eP      P         19 39 43.4 -0.3
KURK   Kurchatov           45.52 309c iP     P         19 39 43.3 -0.4
KURK                                  pmax   pmax
       comp=Z,45nm,0.6s
KURBB  Kurchatov Arra      45.59 309  P      P         19 39 43.9 -0.4
       comp=Z,43nm,0.6s,baz=84,slow=7.9,SNR=197
RAMN   Ramite              45.81 274 eP      P         19 39 46.6  0.0
       comp=Z,211nm,0.7s
JIRN   Jiri                45.84 275 eP      P         19 39 47.6 +0.6
       comp=Z,274nm,0.7s
GUN    Gumba               45.99 276 eP      P         19 39 48.4 +0.3
       comp=Z,44nm,0.4s
PDGK   Podgornoye          46.10 298  P      P         19 39 47.4 -1.2
PDGK                                  pmax   pmax
       comp=Z,28nm,0.6s
PKIN   Phulchoki           46.51 276 eP      P         19 39 52.5 +0.3
       comp=Z,92nm,0.7s
KKN    Kakani              46.52 276 eP      P         19 39 52.3 +0.2
       comp=Z,96nm,0.8s
DMN    Daman               46.73 276 eP      P         19 39 54.0 +0.1
       comp=Z,57nm,0.9s
GKN    Gorkha              46.95 276 eP      P         19 39 55.7 +0.3
       comp=Z,309nm,0.8s
PKDT   Phuket              47.08 244  P      P         19 39 59.5 +3.1
       comp=Z,9.0nm,0.8s
DANN   Dangsing            47.51 277 eP      P         19 40 00.6 +0.6
       comp=Z,440nm,0.7s
KOLN   Koldanda            47.88 277 eP      P         19 40 03.1 +0.4
       comp=Z,153nm,1.1s
KDJ    Kajisay             48.03 297 eP      P         19 40 04.0 +0.3
PYUN   Piuthan             48.23 277 eP      P         19 40 06.0 +0.5
       comp=Z,475nm,1.0s
RSO    Redoubt South       48.43  38 eP      P         19 40 11.8 +5.4
KDAK   Kodiak Island       48.65  41  P      P         19 40 08.9 +1.0
       comp=Z,12nm,0.5s,baz=280,slow=4.4,SNR=16
ULHL   Ulahol              48.68 298  P      P         19 40 09.1 +0.4
       SNR=11
TKM2   Tokmak 2            48.97 299  P      P         19 40 11.9 +1.0
       SNR=60
TKM2   Tokmak 2            48.97 299  P      P         19 40 10.6 -0.3
TKM2                                  pmax   pmax
       comp=Z,24nm,0.6s
HNR    Honiara             49.08 153  LR     LR        20 02 42.2
       comp=Z,31nm,18.9s,baz=353,slow=38
BPAW   Bear Paw Mtn.       49.21  33 eP      P         19 40 14.3 +2.2
MTN    Manton Dam          49.36 191 eP      P         19 40 14.2 +0.5
KZA    Kyzart              49.44 298  P      P         19 40 16.2 +1.5
       SNR=33
KBK    Karagaybulak        49.50 299  P      P         19 40 15.7 +0.7
       SNR=38
CHMS   Chumysh             49.55 299  P      P         19 40 15.5 +0.4
       SNR=16
KSH    Kashi               49.63 294 eP      P         19 40 19.9 +4.0
KSH                                  esP     sP        19 40 42.3 +3.8
KSH                                  ePcP    PcP       19 41 39.3 +2.7
KSH                                   S      S         19 47 22.8 +2.7
KSH                                   pmax   pmax
       comp=Z,15nm,0.8s
KSH                                   pmax   pmax
       comp=Z,98nm,4.0s
KSH                                   LR     LR
       comp=Z,340nm,11.1s
KSH                                   LR     LR
       comp=Z,220nm,14.0s
USP    Ospenovka           49.65 299  P      P         19 40 16.1 +0.2
       SNR=13
FRU    Bishkek             49.69 299 i P     P         19 40 17.0 +0.8
FRU                                   pmax   pmax
       comp=Z,59nm,1.7s
AAK    Ala-Archa           49.82 299  P      P         19 40 17.9 +0.5
       SNR=11
AAK    Ala-Archa           49.82 299 eP      P         19 40 16.7 -0.7
AAK    Ala-Archa           49.82 299 eP      P         19 40 16.7 -0.7
BVA0   Borovoye Array      50.27 313 i P     P         19 40 20.2 -0.2
BVA0                                  pmax   pmax
       comp=Z,16nm,0.9s
BVAR   Borovoye Array      50.27 313  P      P         19 40 20.0 -0.4
       comp=Z,11nm,0.5s,baz=86,slow=8.9,SNR=45
BVAR                                  PcP    PcP       19 41 39.0 +0.5
       comp=Z,2.4nm,0.6s,baz=72,slow=4.8,SNR=2.2
BVAR                                  LR     LR        20 02 58.3
       comp=Z,100nm,18.3s,baz=98,slow=38
EKS2   Erkin-Say           50.33 299  P      P         19 40 21.6 +0.4
       SNR=21
BRVK   Borovoye            50.33 313 eP      P         19 40 20.1 -0.8
BRVK   Borovoye            50.33 313c iP     P         19 40 20.5 -0.3
BRVK                                  pmax   pmax
       comp=Z,12nm,0.8s
MDM    Murphy Dome         50.39  32 eP      P         19 40 23.1 +2.0
AML    Almayashu           50.53 298  P      P         19 40 23.9 +0.9
       SNR=37
HDA    Harding Lake        50.96  32 eP      P         19 40 25.5 +0.1
IL1    Eielson Array       50.97  32 eP      P         19 40 24.5 -1.0
ILAR   Eielson Array       50.97  32  P      P         19 40 26.2 +0.8
       comp=Z,3.2nm,0.6s,baz=270,slow=5.5,SNR=51
ILAR                                  LR     LR        20 03 21.2
       comp=Z,27nm,19.2s,baz=270,slow=37
ILB    Eielson Array       50.97  32 eP      P         19 40 25.6 +0.2
MNAS   Manas               51.28 299  P      P         19 40 28.7 +0.4
MNAS                                  pmax   pmax
       comp=Z,38nm,0.9s
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GSI    Gunungsitoli        52.23 238 eP      P         19 40 34.3 -1.2
KK31   Karatay Array       52.50 300 eP      P         19 40 37.5 +0.2
KK31   Karatay Array       52.50 300  P      P         19 40 36.2 -1.1
KK31                                  pmax   pmax
       comp=Z,36nm,1.0s
KKAR   Karatay Array       52.50 300 eP      P         19 40 37.5 +0.2
KKAR   Karatay Array       52.50 300 eP      P         19 40 37.5 +0.2
EGAK   Eagle               53.41  32 eP      P         19 40 44.8 +1.3
       comp=Z,5.9nm,0.9s
SVE    Sverdlovsk          55.02 319⇓eP      P         19 40 55.7 +0.3
SVE                                   pmax   pmax
       comp=Z,28nm,1.3s
FITZ   Fitzroy Crossi      55.54 196  P      P         19 41 00.7 +1.2
       comp=Z,9.7nm,0.7s,baz=22,slow=8.3,SNR=33
INK    Inuvik              55.80  27  P      P         19 41 01.6 +0.9
       comp=Z,5.9nm,0.7s,baz=286,slow=9.7,SNR=17
INK    Inuvik              55.80  27 eP      P         19 41 02.1 +1.3
WRAB   Tennant Creek       55.96 186 eP      P         19 41 01.9 -0.5
WRAB   Tennant Creek       55.96 186d iP     P         19 41 03.1 +0.6
WRAB                                 i *PP   pP        19 41 20.4 +2.0
WRAB                                  pmax   pmax
       comp=Z,40nm,2.5s
WB2    Warramunga Arr      55.97 186 eP      P         19 41 02.4 -0.2
WR1    Warramunga Arr      55.97 186 eP      P         19 41 02.9 +0.4
WRA    Warramunga Arr      55.97 186  P      P         19 41 02.9 +0.4
       comp=Z,13nm,0.6s,baz=0.5,slow=7.5,SNR=284
WRA                                   S      S         19 48 45.1 -1.1
       comp=Z,1.2nm,0.9s,baz=5.4,slow=13,SNR=3.9
CTA    Charters Tower      56.20 173  P      P         19 41 05.2 +1.0
       comp=Z,5.3nm,0.8s,baz=309,slow=14,SNR=2.2
ARU    Arti                56.23 319 eP      P         19 41 03.2 -0.8
ARU    Arti                56.23 319c iP     P         19 41 03.8 -0.2
ARU                                   *PP    pP        19 41 19.9 -0.1
ARU                                                    19 42 00.5
ARU                                                    19 43 06.4
ARU                                   S      S         19 48 49.5 +0.5
ARU                                   SS     SS        19 52 31.3 -4.5
ARU                                   pmax   pmax
       comp=Z,37nm,1.7s
KBL    Kabul               56.57 291 eP      P         19 41 04.1 -3.0
KBL    Kabul               56.57 291 eP      P         19 41 04.1 -3.0
HYB    Hyderabad           56.91 268 i P     P         19 41 10.0 +0.5
AB31   Akbulak array       57.58 310  P      P         19 41 13.2 -0.5
AB31                                  pmax   pmax
       comp=Z,6.0nm,0.4s
ABKAR  Akbulak array       57.58 310 eP      P         19 41 13.5 -0.2
AKTO   Aktyubinsk          58.36 312  P      P         19 41 18.4 -0.8
       comp=Z,19nm,0.9s,baz=77,slow=9.9,SNR=23
AKTO                                  LR     LR        20 07 37.8
       comp=Z,63nm,19.7s,baz=77,slow=37
AKTO   Aktyubinsk          58.36 312  P      P         19 41 18.0 -1.2
AKTO                                  pmax   pmax
       comp=Z,16nm,0.7s
AS01   Alice Springs       59.69 186 eP      P         19 41 28.6  0.0
AS31   Alice Springs       59.70 186 eP      P         19 41 29.2 +0.6
ASAR   Alice Springs       59.70 186  P      P         19 41 29.3 +0.7
       comp=Z,8.5nm,0.7s,baz=12,slow=6.5,SNR=85
ASAR                                  S      S         19 49 34.6 -0.3
       comp=Z,0.9nm,0.8s,baz=19,slow=17,SNR=4.8
POO    Poona               60.13 272 eP      P         19 41 28.0 -3.9
PRGR   Permogore           60.87 327 eP      P         19 41 35.5 -0.7
PRGR                                  pmax   pmax
       comp=Z,9.0nm,0.6s
PALK   Pallekele           60.92 257  P      P         19 41 37.7 +0.4
       comp=Z,13nm,0.6s,baz=116,slow=3.8,SNR=16
PALK   Pallekele           60.92 257 eP      P         19 41 37.1 -0.2
PALK   Pallekele           60.92 257 eP      P         19 41 37.1 -0.2
SPITS  Spitsbergen Ar      61.20 349  P      P         19 41 38.6 +0.3
       comp=Z,4.8nm,0.6s,baz=38,slow=15,SNR=5.6
SPITS                                 LR     LR        20 08 54.0
       comp=Z,83nm,20.0s,baz=75,slow=37
DZM    Mont Dzumac         63.09 152  P      P         19 41 54.3 +2.7
       comp=Z,7.9nm,1.1s,baz=90,slow=20,SNR=3.8
DZM                                   LR     LR        20 12 14.7
       comp=Z,59nm,18.5s,baz=313,slow=39
DZM    Mont Dzumac         63.09 152 eLR     LR        20 00 48.6
       comp=Z,177nm,23.8s
GEYT   Alibeck             63.18 299  P      P         19 41 52.1 -0.1
       comp=Z,9.8nm,0.8s,baz=270,slow=4.4,SNR=40
GEYT                                  LR     LR        20 11 15.7
       comp=Z,75nm,18.2s,baz=240,slow=38
GYA0B  ALIBECK ARRAY       63.18 299 eP      P         19 41 51.1 -1.1
RES    Resolute Bay        63.83  14 eP      P         19 41 56.2 +0.4
RES    Resolute Bay        63.83  14 eP      P         19 41 56.2 +0.4
KLMR   Klimovskoe          63.87 328 eP      P         19 41 54.7 -1.5
KLMR                                  pmax   pmax
       comp=Z,13nm,0.7s
KLMR   Klimovskoe          63.87 328 eP      P         19 41 54.8 -1.5
KLMR                                  AMP              19 41 58.2
       comp=Z,13nm,0.7s
ARA0   ARCESS Array S      64.43 339 eP      P         19 41 59.8 -0.1
ARCES  ARCESS Array B      64.43 339  P      P         19 41 59.8 -0.1
       comp=Z,6.6nm,0.7s,baz=50,slow=8.2,SNR=26
YKA    Yellowknife Ar      65.26  30  P      P         19 42 06.2 +0.9
       comp=Z,3.0nm,0.9s,baz=300,slow=6.7,SNR=6.6
VRH    Novokhopyorsk       67.42 318 eP      P         19 42 18.5 -0.8
VRH                                   pmax   pmax
       comp=Z,40nm,0.7s
FORT   Forrest             67.43 191 eP      P         19 42 20.2 +0.8
AFI    Afiamalu            67.53 128  LR     LR        20 07 16.1
       comp=Z,63nm,21.6s,baz=174,slow=32
STKA   Stephens Creek      67.63 178  P      P         19 42 21.6 +0.9
       comp=Z,5.9nm,0.8s,baz=334,slow=7.3,SNR=11
STKA                                  LR     LR        20 11 31.5
       comp=Z,125nm,20.1s,baz=220,slow=36
OBN    Obninsk             68.09 323c iP     P         19 42 22.8 -0.6
OBN                                  e                 19 42 48.8
OBN                                  e                 19 44 50.7
OBN                                  eS      S         19 51 14.8 -3.4
OBN                                   pmax   pmax
       comp=Z,23nm,0.9s
OBN                                   MLR    MLR
       comp=Z,100nm,19.0s
VSR    Storozhevoye        68.80 318 eP      P         19 42 27.2 -0.8
VSR                                   pmax   pmax
       comp=Z,20nm,0.7s
FIA1   FINESS Array S      69.05 332 eP      P         19 42 29.5 +0.2
FIA0   FINESS Array S      69.05 332 eP      P         19 42 29.3  0.0
FIA0   FINESS Array S      69.05 332 eP      P         19 42 29.3  0.0
FINES  FINESS Array B      69.05 332  P      P         19 42 29.3  0.0
       comp=Z,16nm,0.8s,baz=76,slow=5.1,SNR=38
FINES                                 LR     LR        20 14 16.5
       comp=Z,72nm,20.1s,baz=56,slow=37
SHME   Shamm               70.36 288 i P     P         19 42 38.3 +0.3
       SNR=8.2
ZEI    Tsey                70.41 309 eP      P         19 42 35.2 -3.1
ZEI                                   pmax   pmax
       comp=Z,8.0nm,0.6s
KBZ    Khabaz              70.55 310  P      P         19 42 39.8 +0.9
       comp=Z,27nm,0.9s,baz=66,slow=3.3,SNR=35
KBZ                                   LR     LR        20 16 19.1
       comp=Z,64nm,20.6s,baz=68,slow=38
KIV    Kislovodsk          70.56 311 eP      P         19 42 39.2 +0.2
KIV    Kislovodsk          70.56 311 i P     P         19 42 39.7 +0.7
       SNR=28
KIV    Kislovodsk          70.56 311c iP     P         19 42 39.3 +0.2
KIV                                   pmax   pmax
       comp=Z,72nm,1.0s
KIV                                   MLR    MLR
       comp=Z,74nm,18.0s
VSU    Vasula              70.62 329⇑eP      P         19 42 39.0  0.0
VSU                                   pmax   pmax
       comp=Z,47nm,0.8s
MSFE   Esma-Masafi         70.70 288  P      P         19 42 40.7 +0.6
UOSS   Minazif             70.88 287  P      P         19 42 41.3  0.0
HATD   Hatta, Dubai        71.00 287  P      P         19 42 42.4 +0.5
GNI    Garni               71.25 306  P      P         19 42 44.2 +0.8
       comp=Z,6.6nm,0.8s,baz=11,slow=14,SNR=4.2
GNI                                   LR     LR        20 16 47.4
       comp=Z,62nm,19.2s,baz=66,slow=38
AKH    Akhalkalaki         71.39 308⇓iP      P         19 42 45.3 +1.0
SUMG   Summit              71.62 359 eP      P         19 42 46.5 +1.2
SUMG   Summit              71.62 359 eP      P         19 42 46.5 +1.2
ASUD   Al Ashush, Dub      71.73 287 i P     P         19 42 46.8 +0.5
       SNR=6.1
NWAO   Narrogin (SRO)      71.84 200  P      P         19 42 47.3 +0.7
       comp=Z,18nm,0.8s,baz=251,slow=6.6,SNR=6.7
IZAR   Zarasai             72.52 327 eP      P         19 42 50.8 +0.4
IZAR                                  IAmb   IAmb      19 42 52.1
       comp=Z,9.1nm,0.9s
IDID   Didziasalis         72.57 327 eP      P         19 42 51.0 +0.3
IDID                                  IAmb   IAmb      19 42 52.4
       comp=Z,10nm,0.9s
SOC    Sochi               72.58 311 eP      P         19 42 50.5 -0.6
SOC                                   pmax   pmax
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       comp=Z,14nm,0.6s
ISAL   Salakas           72.68 327  eP      P        19 42 51.8 +0.3
ISAL                                 IAmb   IAmb     19 42 53.2
       comp=Z,18nm,0.9s
IIGN   Ignalina          72.78 327  eP      P        19 42 52.2 +0.1
IIGN                                 IAmb   IAmb     19 42 53.7
       comp=Z,11nm,0.8s
NACGM  Naroch            72.81 326  e       P        19 42 51.0 -1.2
ANN    Anapa             73.26 313c iP      P        19 42 54.8 -0.3
ANN                                 e*PP    pP       19 43 11.7 +0.1
ANN                                 eS      SKiKP    19 52 20.3 -0.7
ANN                                  pmax   pmax
       comp=Z,31nm,1.1s
J08A   Circle Bar Ran    73.65  48  eP      P        19 42 60.0 +2.4
       comp=Z,16nm,1.5s
MZR    Muzera            74.02 287  i P     P        19 42 59.7 -0.2
       SNR=6.4
MZR                                  P      P        19 42 59.8 -0.2
MZR                                  P      P        19 42 59.8 -0.2
AKASG  Malin Array Be    74.26 322   P      P        19 43 00.5 -0.3
       comp=Z,15nm,0.7s,baz=48,slow=6.1,SNR=37
AKASG                                LR     LR       20 18 26.4
       comp=Z,164nm,19.3s,baz=45,slow=38
AKBB   Malin Array Si    74.26 322  eP      P        19 43 00.5 -0.3
KIEV   Kiev              74.27 322  eP      P        19 43 00.2 -0.7
KIEV   Kiev              74.27 322  i P     P        19 43 00.6 -0.3
       SNR=20
KIEV   Kiev              74.27 322deP       P        19 43 00.0 -0.9
KIEV                                 pmax   pmax
       comp=Z,21nm,0.9s
AK11   Malin Array Si    74.30 322  eP      P        19 43 00.2 -0.9
NC405  NORSAR Array S    74.34 337  eP      P        19 43 00.5 -0.7
NC303  NORSAR Array S    74.37 337  eP      P        19 43 00.7 -0.6
HFS    Hagfors           74.42 335   P      P        19 43 01.1 -0.5
       comp=Z,7.9nm,0.8s,baz=35,slow=5.3,SNR=13
HFS                                  LR     LR       20 17 57.8
       comp=Z,140nm,21.0s,baz=43,slow=38
NC204  NORSAR Array S    74.52 337  eP      P        19 43 01.9 -0.4
NB201  NORSAR Array S    74.53 337  eP      P        19 43 01.6 -0.6
NB2    NORSAR Subarra    74.56 337   P      P        19 43 02.1 -0.3
       comp=Z,4.1nm,0.5s,baz=42,slow=6.2
NBO00  NORSAR Array S    74.70 337  eP      P        19 43 02.6 -0.7
SUW    Suwalki           74.99 327  eP      P        19 43 04.9 -0.2
SUW    Suwalki           74.99 327  eP      P        19 43 04.8 -0.2
       comp=Z,22nm,0.9s
SUW    Suwalki           74.99 327  eP      P        19 43 04.8 -0.2
SUW                                  pmax   pmax
       comp=Z,22nm,0.9s
SIM    Simferopol'       75.10 315  eP      P        19 43 05.8  0.0
SIM                                 e                19 43 22.0
SIM                                  pmax   pmax
       comp=Z,29nm,0.8s
FFC    Flin Flon         75.18  32  eP      P        19 43 07.6 +1.5
       comp=Z,7.5nm,0.9s
FFC    Flin Flon         75.18  32  eP      P        19 43 07.6 +1.5
FFC                                  pmax   pmax
       comp=Z,8.0nm,0.9s
MFID   Camas Ranch       75.20  47  eP      P        19 43 08.8 +2.2
       comp=Z,10nm,1.4s
LRM    Limekiln Ridge    75.70  43  eP      P        19 43 09.1 -0.5
WAKR   Walker            75.80  53  eP      P        19 43 13.2 +3.0
       comp=Z,5.8nm,0.9s
HLID   Hailey            75.94  46  eP      P        19 43 13.1 +2.2
       comp=Z,3.9nm,1.0s
SORM   Soroca            76.31 320⇓iP       P        19 43 12.3 -0.3
KVN    Kaiserville       76.34  52  eP      P        19 43 15.5 +2.3
       comp=Z,7.2nm,0.9s
KVN    Kaiserville       76.34  52  eP      P        19 43 15.5 +2.3
KVN                                  pmax   pmax
       comp=Z,7.0nm,0.9s
NV01   Mina Array Sit    76.57  52  eP      P        19 43 16.4 +1.8
NVAR   Mina Array Bea    76.57  52   P      P        19 43 16.9 +2.3
       comp=Z,3.9nm,0.7s,baz=288,slow=5.6,SNR=25
LVV    L'vov             77.39 323  eP      P        19 43 19.1 +0.4
LEOM   Leova             77.42 319⇑iP       P        19 43 19.6 +0.7
BEL    Belsk             77.53 326  eP      P        19 43 20.1 +0.7
BEL    Belsk             77.53 326  eP      P        19 43 20.1 +0.7
ILGA   Ilgaz             77.67 312  eP      P        19 43 22.0 +1.3
IMW    Indian Meadow     77.73  44  eP      P        19 43 24.4 +3.3
       comp=Z,5.2nm,0.9s
FXWY   Fox Creek         77.85  45  eP      P        19 43 24.8 +3.1
FXWY                                epP     pP       19 43 40.3 +1.9
KWP    Kalwaria Pacla    78.15 324  eP      P        19 43 23.8 +0.9
KWP    Kalwaria Pacla    78.15 324  eP      P        19 43 23.6 +0.7
KWP    Kalwaria Pacla    78.15 324  eP      P        19 43 23.6 +0.7
TESR   Tescani           78.24 320⇑iP       P        19 43 23.9 +0.4
BIZ    Bicaz             78.24 320⇓iP       P        19 43 24.3 +0.8
BUR08  Bucovina Ar. S    78.25 321  eP      P        19 43 24.1 +0.5
BUR04  Bucovina Ar. S    78.26 321  eP      P        19 43 24.0 +0.3
BURAR  Bucovina Array    78.26 321⇓iP       P        19 43 24.3 +0.6
CFR    Carcaliu          78.30 318⇑iP       P        19 43 23.8  0.0
R11A   Troy Canyon, C    78.34  51  eP      P        19 43 26.6 +2.2
       comp=Z,3.4nm,0.9s
BR101  Keskin Array S    78.52 311  eP      P        19 43 25.6 +0.3
BR131  Keskin Array S    78.52 311  eP      P        19 43 25.9 +0.5
BRTR   Keskin Array B    78.52 311   P      P        19 43 25.6 +0.3
       comp=Z,10nm,1.1s,baz=106,slow=4.4,SNR=33
BRTR                                 PP     PP       19 46 23.7 +0.7
       comp=Z,1.0nm,0.9s,baz=72,slow=8.4,SNR=3.6
BRTR                                 LR     LR       20 22 52.1
       comp=Z,19nm,19.5s,baz=64,slow=39
ANGG   Ammassalik, Gr    78.60 359  eP      P        19 43 25.5 +0.4
       comp=Z,13nm,0.6s
VRI    Vrincioaia        78.61 319⇑iP       P        19 43 26.3 +0.7
PLOR   Plostina          78.67 319⇑iP       P        19 43 26.5 +0.6
HARR   Harsova           78.73 318⇓iP       P        19 43 26.6 +0.4
TLB    Topalu            78.73 317⇓iP       P        19 43 26.8 +0.6
TPNV   Topopah Spring    78.75  52  eP      P        19 43 28.8 +2.1
       comp=Z,7.4nm,0.9s
HWUT   Hardware Ranch    78.80  46  eP      P        19 43 29.7 +2.8
       comp=Z,7.7nm,1.3s
DUG    Dugway, Tooele    78.93  48  eP      P        19 43 29.9 +2.3
       comp=Z,9.8nm,1.3s
DUG    Dugway, Tooele    78.93  48  eP      P        19 43 29.9 +2.3
DUG                                  pmax   pmax
       comp=Z,10.0nm,1.3s
ANTO   Ankara            78.95 311⇑iP       P        19 43 28.4 +0.8
ANTO   Ankara            78.95 311  eP      P        19 43 28.6 +1.0
       comp=Z,15nm,0.9s
UZH    Uzhgorod          79.03 323  eP      P        19 43 28.6 +0.9
UZH                                 i                19 43 31.4
UZH                                 e                19 43 45.6
UZH                                 e                19 43 56.8
ARCR   ARCALIA           79.05 321⇑iP       P        19 43 29.4 +1.5
BMR    Baia Mare         79.08 322⇑iP       P        19 43 29.3 +1.2
PGOR   Pogoanele         79.10 318⇓iP       P        19 43 28.9 +0.7
OJC    Ojcow             79.11 326  eP      P        19 43 28.4 +0.3
OJC    Ojcow             79.11 326  eP      P        19 43 27.7 -0.5
OJC    Ojcow             79.11 326  eP      P        19 43 27.7 -0.5
ICOR   Ion Corvin        79.17 317⇓iP       P        19 43 29.2 +0.6
PDAR   Pinedale Array    79.23  45   P      P        19 43 30.6 +1.2
       comp=Z,2.0nm,0.9s,baz=263,slow=2.3,SNR=11
PDAR   Pinedale Array    79.23  45  eP      P        19 43 29.5 +0.2
CRVS   Cervenica-Dubn    79.24 324  eP      P        19 43 29.1 +0.1
CRVS                                 pmax   pmax
       comp=Z,8.0nm,1.0s
CRVS   Cervenica-Dubn    79.24 324  eP      P        19 43 29.1 +0.1
DOPR   Dopca             79.25 320⇓iP       P        19 43 30.6 +1.5
MLR    Muntele Rosu      79.28 319   LR     LR       20 21 46.9
       comp=Z,23nm,18.4s,baz=49,slow=38
MLR    Muntele Rosu      79.28 319⇓iP       P        19 43 30.3 +0.9
MLR    Muntele Rosu      79.28 319  eP      P        19 43 29.9 +0.5
       comp=Z,8.1nm,1.2s
MLR    Muntele Rosu      79.28 319  eP      P        19 43 29.9 +0.5
MLR                                  pmax   pmax
       comp=Z,8.0nm,1.2s
PSUT   Pine Spring       79.31  50  eP      P        19 43 31.4 +1.6
       comp=Z,3.6nm,1.0s
NIE    Niedzica          79.44 325  eP      P        19 43 30.9 +0.9
NIE    Niedzica          79.44 325  eP      P        19 43 30.9 +0.9
CJR    Cluj-Napoca       79.68 321⇓iP       P        19 43 33.0 +1.6
SHPR   Sheep Range       79.72  52  eP      P        19 43 34.9 +2.9
       comp=Z,5.0nm,1.0s
RAYN   Ar Rayn           79.83 292  eP      P        19 43 32.8 +0.1
RAYN   Ar Rayn           79.83 292  i P     P        19 43 32.9 +0.2
       SNR=19
RAYN   Ar Rayn           79.83 292  eP      P        19 43 32.8 +0.1
LANS   Liptovska Anna    80.01 325  eP      P        19 43 34.3 +1.1
LANS   Liptovska Anna    80.01 325  eP      P        19 43 34.3 +1.1
ARR    Arges             80.05 320⇑iP       P        19 43 34.6 +1.1
OKC    Ostrava-Krasne    80.13 326   AMS    AMS      20 23 00.0
CCUT   Cedar City        80.22  51  eP      P        19 43 37.7 +2.9
       comp=Z,3.9nm,1.2s
KSP    Ksiaz             80.23 328  eP      P        19 43 34.8 +0.6
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KSP    Ksiaz             80.23 328  eP      P        19 43 34.8 +0.6
LOT    Lotru             80.45 320⇑iP       P        19 43 36.8 +1.1
MORC   Moravsky Berou    80.45 326⇑iP       P        19 43 36.2 +0.7
MORC   Moravsky Berou    80.45 326  eP      P        19 43 34.5 -0.9
MORC   Moravsky Berou    80.45 326  eP      P        19 43 34.6 -0.9
MORC   Moravsky Berou    80.45 326  eP      P        19 43 36.0 +0.5
KRLC   Kraliky           80.57 327  eP      P        19 43 37.0 +0.8
KRLC   Kraliky           80.57 327  eP      P        19 43 37.0 +0.8
DPC    Dobruska-Polom    80.57 327  eP      P        19 43 37.3 +1.1
DPC                                 ex      x        19 43 48.7
DPC    Dobruska-Polom    80.57 327  eP      P        19 43 37.3 +1.1
UPC    Upice             80.59 327  eP      P        19 43 37.2 +1.0
UPC                                  AMS    AMS      20 23 50.0
       comp=Z,100nm,10.1s
UPC    Upice             80.59 327  eP      P        19 43 37.2 +1.0
UPC                                  MLR    MLR
       comp=Z,100nm,10.1s
PFO    Pinyon Flats O    80.62  55  eP      P        19 43 39.2 +2.4
       comp=Z,7.7nm,1.0s
LCMT   Little Creek M    80.63  51  eP      P        19 43 39.8 +2.9
       comp=Z,5.5nm,1.0s
MTPU   Mount Pierson     80.65  50  eP      P        19 43 39.9 +2.7
       comp=Z,5.8nm,1.0s
PSZ    Piszkesteto       80.68 324⇑iP       P        19 43 37.7 +0.9
PSZ    Piszkesteto       80.68 324⇓eP       P        19 43 37.9 +1.1
PSZ    Piszkesteto       80.68 324  eP      P        19 43 36.1 -0.7
PSZ    Piszkesteto       80.68 324  eP      P        19 43 36.1 -0.7
VYHS   Vyhne             80.77 325  eP      P        19 43 37.8 +0.6
VYHS                                 pmax   pmax
       comp=Z,5.0nm,1.0s
VYHS   Vyhne             80.77 325  eP      P        19 43 37.8 +0.6
ASF    Jabal al Asfar    80.97 303   P      P        19 43 39.1 +0.4
       comp=Z,7.1nm,0.9s,baz=16,slow=4.9,SNR=13
ULM    Lac du Bonnet     80.98  32   P      P        19 43 38.4 +0.1
       comp=Z,1.5nm,0.5s,baz=311,slow=20,SNR=3.2
BAR    Barrett           81.04  56  eP      P        19 43 40.5 +1.6
       comp=Z,6.3nm,0.8s
JAVC   Velka Javorina    81.05 326  eP      P        19 43 40.3 +1.5
PVCC   Panska Ves        81.20 328  eP      P        19 43 40.5 +1.1
PVCC   Panska Ves        81.20 328  eP      P        19 43 40.5 +1.1
BRG    Berggiesshubel    81.21 329  eP      P        19 43 39.7 +0.2
       comp=Z,7.3nm,0.9s
BRG    Berggiesshubel    81.21 329  eP      P        19 43 39.7 +0.2
BRG                                  pmax   pmax
       comp=Z,7.0nm,0.9s
VRAC   Vranov            81.21 326⇑iP       P        19 43 40.4 +0.8
VRAC   Vranov            81.21 326  eP      P        19 43 40.1 +0.5
RWWY   Rawlins           81.26  44  eP      P        19 43 41.8 +1.6
       comp=Z,8.8nm,1.1s
CLL    Collm             81.27 329⇑iP       P        19 43 39.8  0.0
       comp=Z,23nm,1.0s
CLL                                 e                19 43 57.0
CLL                                 epP     sP       19 44 01.0 -2.2
CLL                                 ePP     PP       19 46 44.0 -1.3
CLL                                  Lm     MLR      20 22 00.0
       comp=Z,100nm,18.8s
CLL    Collm             81.27 329  eP      P        19 43 39.4 -0.4
CLL    Collm             81.27 329⇑iP       P        19 43 39.8  0.0
CLL                                 e                19 44 01.0
CLL                                  pmax   pmax
       comp=Z,23nm,1.0s
SMOL   Smolenice         81.41 325  eP      P        19 43 41.6 +1.0
SMOL   Smolenice         81.41 325  eP      P        19 43 41.6 +1.0
BZS    Buzias            81.44 321⇑iP       P        19 43 40.9 +0.1
MMAI   Mount Meron Ar    81.47 305   P      P        19 43 42.1 +0.8
       comp=Z,11nm,0.9s,baz=90,slow=19,SNR=11
MMAI                                 LR     LR       20 23 37.1
       comp=Z,76nm,18.7s,baz=145,slow=38
KRUC   Moravsky          81.48 326  eP      P        19 43 41.4 +0.4
GOPC   GO Pecny, Ondr    81.56 328  eP      P        19 43 42.3 +0.9
GOPC                                 AMS    AMS      20 24 30.0
GOPC   GO Pecny, Ondr    81.56 328  eP      P        19 43 42.3 +0.9
MODS   Modra-Piesok      81.58 325  eP      P        19 43 42.3 +0.7
MODS                                 pmax   pmax
       comp=Z,11nm,1.1s
MODS   Modra-Piesok      81.58 325  eP      P        19 43 42.2 +0.7
U15A   North Rim         81.59  51  eP      P        19 43 44.6 +2.5
ISP    Isparta           81.61 311ceP       P        19 43 41.6 -0.4
ISP                                  pmax   pmax
       comp=Z,7.0nm,1.0s
PRU    Pruhonice         81.61 328  eP      P        19 43 41.9 +0.3
PRU    Pruhonice         81.61 328  eP      P        19 43 41.9 +0.3
CSS    Mathiatis         81.63 307  eP      P        19 43 42.2 +0.2
       comp=Z,7.6nm,0.7s
Y12C   Blythe            81.81  54  eP      P        19 43 45.3 +2.3
       comp=Z,6.5nm,0.8s
MDVR   Moldovita         81.96 321⇑iP       P        19 43 43.9 +0.2
NKC    Novy Kostel       82.32 329  eP      P        19 43 46.2 +0.8
NKC    Novy Kostel       82.32 329  eP      P        19 43 46.2 +0.8
N23A   Red Feather La    82.50  44  eP      P        19 43 49.6 +2.8
       comp=Z,6.3nm,0.9s
CONA   Conrad Observa    82.55 326  eP      P        19 43 47.6 +0.9
       comp=Z,4.0nm,0.7s
KHC    Kasperske Hory    82.67 328  eP      P        19 43 47.9 +0.6
KHC                                 ePCP    PcP      19 43 51.1 -1.0
KHC                                  AMS    AMS      20 25 40.0
KHC    Kasperske Hory    82.67 328  eP      P        19 43 47.5 +0.2
KHC    Kasperske Hory    82.67 328  eP      P        19 43 47.5 +0.2
VTS    Vitosha           82.68 318⇑iP       P        19 43 48.5 +0.9
VTS    Vitosha           82.68 318  eP      P        19 43 47.5 -0.1
VTS    Vitosha           82.68 318  eP      P        19 43 47.5 -0.1
Y14A   Wickenburg        82.69  53  eP      P        19 43 49.7 +2.1
WUAZ   Wupatki           82.74  51  eP      P        19 43 50.0 +2.0
       comp=Z,10.0nm,1.4s
GEC2   GERESS Array S    82.83 327  eP      P        19 43 48.5 +0.3
       comp=Z,5.8nm,1.0s
GEC2   GERESS Array S    82.83 327  eP      P        19 43 48.5 +0.3
GEC2                                 pmax   pmax
       comp=Z,6.0nm,1.0s
GERES  GERESS Array B    82.83 327   P      P        19 43 48.1  0.0
       comp=Z,4.1nm,0.8s,baz=35,slow=4.9,SNR=29
GERES                                LR     LR       20 23 00.3
       comp=Z,66nm,19.3s,baz=78,slow=37
GEA0   GERESS Array S    82.84 327  eP      P        19 43 48.1 -0.1
ARSA   Arzberg           83.21 325  eP      P        19 43 50.8 +0.7
       comp=Z,4.0nm,0.9s
DIVS   Divibare          83.32 321  eP      P        19 43 51.2 +0.5
       comp=Z,8.1nm,1.0s
B35A   Bob, Littlefor    83.33  33  eP      P        19 43 51.3 +0.7
       comp=Z,3.2nm,0.8s
MOA    Molln             83.33 327  i PcP   P        19 43 52.1 +1.4
       comp=Z,9.0nm,1.1s,SNR=4.4
X16A   Lo Mia Camp, P    83.39  52  eP      P        19 43 54.0 +2.5
       comp=Z,5.7nm,1.0s
EKA    Eskdalemuir Ar    83.59 340   P      P        19 43 52.2 +0.4
       comp=Z,1.8nm,0.6s,baz=39,slow=4.6,SNR=9.7
EKA                                  LR     LR       20 24 54.8
       comp=Z,41nm,19.2s,baz=75,slow=38
STIP   Stip              83.85 318  eP      P        19 43 52.5 -1.0
SOKA   Soboth            83.86 325  eP      P        19 43 53.7 +0.3
       comp=Z,23nm,1.0s,SNR=13
VAY    Valandovo         83.90 318  eP      P        19 43 54.0 +0.3
SKO    Skopje            84.06 319  eP      P        19 43 55.7 +1.2
KBA    Koelnbreinsper    84.33 326  ePcP    P        19 43 57.2 +1.2
       comp=Z,8.1nm,0.8s
MYKA   Terra Mystica     84.53 326  eP      P        19 43 56.4 -0.5
       comp=Z,6.1nm,0.8s
KRUS   Krusevo           84.58 318  eP      P        19 43 57.8 +0.5
EYMN   Ely               84.61  32  eP      P        19 43 57.9 +0.8
       comp=Z,4.9nm,0.8s
LIT    Litokhoron        84.79 317  eP      P        19 43 58.3 +0.1
LIT    Litokhoron        84.79 317  eP      P        19 43 58.3 +0.1
SDCO   Great Sand Dun    84.86  46  eP      P        19 44 01.1 +2.1
       comp=Z,2.9nm,0.9s
PDG    Podgorica         84.89 320⇑iP       P        19 43 59.1 +0.5
FNA    Florina           84.92 318  eP      P        19 43 59.4 +0.5
       comp=Z,7.6nm,1.0s
FNA    Florina           84.92 318  eP      P        19 43 59.4 +0.5
FNA                                  pmax   pmax
       comp=Z,8.0nm,1.0s
ABTA   Abfaltersbach     84.95 327  eP      P        19 43 58.5 -0.4
       comp=Z,9.3nm,1.0s
OHR    Ohrid             85.01 318  eP      P        19 43 59.7 +0.4
MOTA   Moosalm           85.11 328  ePcP    P        19 44 01.2 +1.3
       comp=Z,3.0nm,0.8s
RETA   Reutte            85.14 328  eP      P        19 43 59.6 -0.3
       comp=Z,11nm,0.9s,SNR=8.7
TUC    Tucson            85.16  53  eP      P        19 44 02.4 +2.1
       comp=Z,3.9nm,0.9s
TUC    Tucson            85.16  53  eP      P        19 44 02.4 +2.1
TUC                                  pmax   pmax
       comp=Z,4.0nm,0.9s
PPT    Papeete           85.36 115   LR     LR       20 12 30.4
       comp=Z,61nm,21.6s,baz=352,slow=29
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PPT2   Papeete2          85.37 116  eLR     LR       20 10 48.5
       comp=Z,148nm,24.8s
BFO    Black Forest      85.49 330  i P     P        19 44 01.9 +0.3
FETA   Feichten          85.52 328  ePcP    P        19 44 01.8 -0.1
       comp=Z,4.5nm,0.9s,SNR=5.2
DAVA   Damuels           85.67 328  ePcP    P        19 44 02.5 -0.2
       comp=Z,5.0nm,0.7s
T25A   Trinidad          85.91  46  eP      P        19 44 06.1 +1.9
       comp=Z,5.5nm,0.8s
ECH    Echery            86.06 330  eP      P        19 44 04.0 -0.4
       comp=Z,8.3nm,1.1s
ECH    Echery            86.06 330  eP      P        19 44 04.0 -0.4
ECH                                  pmax   pmax
       comp=Z,8.0nm,1.1s
DAVOX  Davos/Dischmat    86.07 328   P      P        19 44 04.8 +0.1
       comp=Z,4.1nm,0.7s,baz=217,slow=15,SNR=4.0
DAVOX                                LR     LR       20 26 23.8
       comp=Z,84nm,19.1s,baz=274,slow=38
ANMO   Albuquerque       86.16  49⇓eP       P        19 44 07.5 +2.1
ANMO                                 pmax   pmax
       comp=Z,5.0nm,1.7s
IDI    Anoyia            86.69 312   P      P        19 44 06.8 -1.0
       comp=Z,7.5nm,0.7s,baz=38,slow=7.7,SNR=7.6
TAOE   Nuku Hiva Isla    87.18 103  eLR     LR       20 11 36.8
       comp=Z,262nm,32.2s
G40A   Rib Lake          87.26  33  eP      P        19 44 11.4 +1.1
       comp=Z,4.7nm,0.8s
F41A   Three Lakes       87.36  32  eP      P        19 44 12.1 +1.3
       comp=Z,5.8nm,0.8s
I39A   Houston           87.76  34  eP      P        19 44 13.5 +0.8
       comp=Z,8.1nm,0.9s
N39A   Derby Farms, D    89.59  37  eP      P        19 44 22.8 +1.4
       comp=Z,6.8nm,0.7s
S39A   Bolivar           91.62  39  eP      P        19 44 31.8 +0.9
       comp=Z,3.0nm,0.8s
R40A   Maddies Statio    91.69  38  eP      P        19 44 32.2 +1.0
       comp=Z,4.3nm,1.0s
LTX    Lajitas           91.70  51  eP      P        19 44 33.2 +1.7
LTX    Lajitas           91.70  51  eP      P        19 44 33.2 +1.7
TX31   Lajitas Ar. Si    91.70  51  eP      P        19 44 32.8 +1.2
TXAR   Lajitas Array     91.70  51   P      P        19 44 33.2 +1.7
       comp=Z,1.5nm,0.8s,baz=300,slow=2.9,SNR=22
KEST   Kesra             94.99 322   LR     LR       20 31 32.0
       comp=Z,72nm,18.7s,baz=240,slow=38
ESDC   Sonseca Array     97.56 333   LR     LR       20 33 06.4
       comp=Z,28nm,19.0s,baz=280,slow=38
TKL    Tuckaleechee C    97.89  35   P      Pdif     19 45 00.5 +0.9
       comp=Z,1.6nm,0.6s,baz=143,slow=5.1,SNR=4.1
TORD   Torodi Ar. Bea   117.07 313   PKP    PKPdf    19 50 07.7 -1.4
       comp=Z,0.8nm,0.6s,baz=40,slow=1.9
KOWA   Kowa             119.19 319   PKP    PKPdf    19 50 13.3 +0.2
       comp=Z,2.7nm,0.5s,baz=129,slow=6.5,SNR=8.0
BOSA   Boshof           125.15 258   PKP    PKPdf    19 50 24.0 -0.3
       comp=Z,3.9nm,1.0s,baz=49,slow=3.8,SNR=5.3
QSPA   South Pole Qui   125.83 180   PKP    PKPdf    19 50 24.1 -0.2
       comp=Z,3.5nm,0.9s,baz=71,slow=1.4,SNR=7.1
DBIC   Dimbokro         126.08 315   PKP    PKPdf    19 50 25.6 -0.8
       comp=Z,6.3nm,1.0s,baz=35,slow=2.1,SNR=5.5
SAML   Samuel           145.81  43  ePKPdf  PKPab    19 51 04.3 +0.6
SAML   Samuel           145.81  43  ePKP2   PKPab    19 51 04.3 +0.6
LPAZ   La Paz           148.26  59   PKPbc  PKPbc    19 51 09.6 -1.3
       comp=Z,2.6nm,0.5s,baz=313,slow=2.4,SNR=13
SIV    San Ignacio      152.66  48   PKP    PKPdf    19 51 15.2 +1.6
       comp=Z,1.6nm,0.8s,baz=203,slow=2.1,SNR=1.5
SIV                                  PKPbc  PKiKP    19 51 21.9 +1.0
       comp=Z,3.4nm,0.4s,baz=301,slow=4.3,SNR=8.4
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*MOS **15** 20:05:02.9±1.4, 13.°49S×73.°75W, h63^{km}, mb5.2/24, Error ellipse: s-maj=13.7km s-min=6.8km az=111.7*

*ISCJB **15** 20:05:05.4±0.7, 13.°41S±0.°03×73.°72W±0.°03, h88^{km}±6^{km}, mb4.9/159, Error ellipse: s-maj=6.3km s-min=4.7km az=137.1*

*BJI **15** 20:05:05.1, 13.°70S×73.°80W, h70^{km}, mB5.0/9, Ms5.1/8, Ms7 4.8/8*

*NEIC **15** 20:05:06.0±0.6, 13.°58S×73.°80W, h79^{km}±5^{km}, mb5.0/142, ML4.7(ARE), Error ellipse: s-maj=7.6km s-min=4.0km az=60.0*

NEIC Felt [II] at Andahuaylas, Ayacucho and Huanco Sancos.

*GCMT **15** 20:05:06.0±0.4, 13.°73S×73.°60W, h89^{km}±3^{km}, MW4.8/65, Moment Tensor Solution. s34,c40; s65,c80; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.78±.12; $M_{\theta\theta}$1.94±.14; $M_{\phi\phi}$-0.15±.15; $M_{r\theta}$-1.13±.07; $M_{\theta\phi}$0.27±.15; $M_{\phi r}$0.49±.10; Best double couple: $M_0$2.25100×10^{16} NP1:ϕ_s99.00000°,δ62.00000°,λ-73.00000°. NP2: ϕ_s246.00000°,δ33.00000°,λ-119.00000°. Principal axes: T 2.2630, Plg15.0000°, Azm177.0000°; N -0.0150, Plg15.0000°, Azm271.0000°; P -2.2390, Plg68.0000°, Azm43.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*IDC **15** 20:05:07.2±0.5, 13.°61S×73.°83W, h91^{km}±4^{km}, mb4.4/25, mb1 4.5/31, mb1mx4.5/44, mbtmp4.7/31, MS3.4/21, Ms1 3.4/21, ms1mx3.3/44 Error ellipse: s-maj=15.5km s-min=9.3km az=57.0*

ISC 15 20:05:06.9±0.5**, 13.°55S**±0.°05×**73.°71W**±0.°05**, h86**^{km}±3^{km}**, h86**^{km}**:pP-P, n700, σ1^{s}27**/716**, mb5.0**/158**, 5C-2D, Central Peru**

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Code   Station Name       Δ°   AZ°   Phase ID           Time       Res
                                    Op      ISC       h  m  s     ISC
NNA    Nana               3.43 297   P      Pn       20 05 55.7 -2.5
       185nm,0.3s,baz=128,slow=11,SNR=145
NNA                                  S      Sn       20 06 36.3 -1.5
       190nm,0.3s,baz=135,slow=8.3,SNR=20
NNA    Nana               3.43 297  ePn     Pn       20 05 56.0 -2.2
NNA                                 eSn     Sn       20 06 35.4 -2.5
NNA                                  S      Sn       20 06 36.3 -1.5
NNA    Nana               3.43 297  i P     Pn       20 05 55.6 -2.6
LPAZ   La Paz             6.04 117   P      Pn       20 06 36.2 +2.0
       21nm,0.3s,baz=307,slow=12,SNR=326
LPAZ                                 LR     LR       20 08 33.4
       comp=Z,139nm,21.0s,baz=286,slow=34
LPAZ   La Paz             6.04 117  ePn     Pn       20 06 36.8 +2.5
LPAZ   La Paz             6.04 117  eP      Pn       20 06 36.8 +2.5
MNMC   Minye Minye        6.81 145  ePn     Pn       20 06 41.0 -3.5
PB11   IPOC Station P     7.30 148  ePn     Pn       20 06 45.9 -5.1
ATAH   Atahualpa          7.86 324   P      Pn       20 06 57.9 -1.1
       4.7nm,0.3s,baz=156,slow=8.2,SNR=37
ATAH                                 S      Sn       20 08 23.9 -2.7
       baz=349,slow=18,SNR=2.2
SAML   Samuel            11.29  67  ePn     Pn       20 07 42.0 -3.3
SAML                                eSn     Sn       20 09 47.1 -2.6
SAML   Samuel            11.29  67  eP      Pn       20 07 42.0 -3.3
SAML                                e                20 09 47.1
GO02   Mina Guanaco      12.19 162  ePn     Pn       20 07 59.6 +2.0
SIV    San Ignacio       12.46 103   P      Pn       20 08 01.7 +0.6
       2.1nm,0.3s,baz=294,slow=11,SNR=27
OTAV   Otavalo           14.48 341  ePn     P        20 08 30.4 -2.0
OTAV                                eSn     Sn       20 11 06.8 -1.1
OTAV   Otavalo           14.48 341  eP      Pn       20 08 30.1 +2.0
OTAV   Otavalo           14.48 341  eP      P        20 08 30.4 -2.0
OTAV                                e                20 11 06.8
GCUF   Volcan Galeras    15.12 346  eP      Pn       20 08 37.9 +1.6
CRUC   La Cruz           15.36 348  eP      Pn       20 08 39.4 +0.1
LCO    Las Campanas      15.64 170  ePn     Pn       20 08 42.5 -0.1
       200nm,0.8s
LCO    Las Campanas      15.64 170  eP      Pn       20 08 42.5 -0.1
LCO                                  pmax   pmax
       comp=Z,200nm,0.8s
SOTA   Rioblanco         15.84 349  eP      Pn       20 08 46.4 +0.9
PCON   Cinco Dias        16.00 350  eP      P        20 08 48.5 -0.9
BETC   Betania           16.21 354  eP      P        20 08 53.8 +2.5
GO04   Tololo Observa    16.76 171  ePn     Pn       20 08 56.7 +0.1
       comp=Z,191nm,0.9s
HORQ   Saladito          17.17 350  eP      Pn       20 09 00.6 -1.1
PRAC   Prado             17.19 356  ePn     P        20 09 05.0 +3.0
       comp=Z,31nm,1.0s
VILC   Villavicencio,    17.55   0  eP      Pn       20 09 10.6 +4.5
YOTC   Yotoco, Valle     17.61 351  eP      P        20 09 06.0 -0.8
ANIL   Santa Ana         18.00 355  eP      Pn       20 09 14.5 +2.7
CHIC   Chingaza          18.06 360  eP      Pn       20 09 15.9 +3.2
ROSC   El Rosal          18.28 358   P      Pn       20 09 19.6 +4.4
       comp=Z,6.0nm,0.3s,baz=158,slow=5.2,SNR=36
ROSC                                 LR     LR       20 16 45.0
       comp=Z,220nm,20.9s,baz=215,slow=38
ROSC   El Rosal          18.28 358  eP      Pn       20 09 18.5 +3.2
       comp=Z,48nm,0.6s
ROSC   El Rosal          18.28 358  eP      Pn       20 09 18.2 +3.0
PTGA   Pitinga           18.64  48   P      Pn       20 09 19.0 -0.2
       comp=Z,6.6nm,0.3s,baz=231,slow=13,SNR=43
PTGA                                 S      S        20 12 38.5 -7.1
       comp=Z,1.9nm,0.3s,baz=128,slow=13,SNR=4.5
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PTGA	Pitinga	18.64	48	eP	Pn	20 09 19.0	-0.2
	comp=Z,36nm,0.8s						
PTGA				S	S	20 12 38.5	-7.1
NORC	Norcasia	19.02	356	eP	Pn	20 09 24.4	+0.6
RUSC	La Rusia	19.32	2	eP	Pn	20 09 28.1	+0.3
	comp=Z,42nm,0.8s						
RUSC	La Rusia	19.32	2	eP	Pn	20 09 28.4	+0.6
ROC1	El Roble	19.50	173	eP	P	20 09 25.0	-2.5
	comp=Z,36nm,0.7s						
HELC	Santa Helena	19.69	355	eP	P	20 09 30.8	+1.0
	comp=Z,43nm,0.8s						
HELC	Santa Helena	19.69	355	eP	P	20 09 30.3	+0.5
PEL	Peldehue	19.70	172	eP	P	20 09 28.6	-0.8
	comp=Z,36nm,0.8s						
PEL	Peldehue	19.70	172	eP	P	20 09 28.6	-0.8
PEL				pmax	pmax		
	comp=Z,36nm,0.8s						
CPUP	Villa Florida	19.94	132	P	P	20 09 32.9	+0.9
	comp=Z,0.3nm,0.3s,baz=307,slow=11,SNR=11						
CPUP				LR	LR	20 18 58.2	
	comp=Z,162nm,20.8s,baz=328,slow=42						
TAMC	Tame, Arauca	19.94	6	eP	P	20 09 33.2	+1.0
PTBC	PUERTO BERRIO,	19.97	358	eP	P	20 09 33.5	+1.0
BARC	Barichara	20.02	2	eP	Pn	20 09 34.5	-1.1
BRRC	Barranca, Sant	20.52	360	eP	P	20 09 39.0	+0.6
PAMC	Pamplona, Colo	20.78	3	eP	P	20 09 42.5	+0.9
ZARC	Zaragoza, Cauc	20.93	357	eP	P	20 09 43.6	+0.7
OCAC	Ocana	21.65	1	eP	P	20 09 49.7	-0.9
CAPC	Capurgana	22.33	350	eP	P	20 10 02.3	+4.5
SDV	Santo Domingo	22.50	8	P	P	20 09 59.8	+0.1
	comp=Z,32nm,0.8s,baz=206,slow=7.1,SNR=8.7						
CODC	Agustˆ›n Codaz	23.33	1	eP	P	20 10 02.6	-5.2
PCRV	Puerto La Cruz	25.23	21	LR	LR	20 21 27.0	
	comp=Z,165nm,18.8s,baz=232,slow=39						
JTS	JuntasAbangare	26.18	334	P	P	20 10 35.0	+1.4
	comp=Z,9.8nm,0.8s,baz=202,slow=11,SNR=7.7						
JTS				LR	LR	20 20 41.4	
	comp=Z,122nm,21.6s,baz=208,slow=36						
JTS	JuntasAbangare	26.18	334	P	P	20 10 35.0	+1.4
PLCA	Paso Flores	27.22	175	P	P	20 10 40.6	-2.2
	comp=Z,3.0nm,0.8s,baz=0.7,slow=10.0,SNR=11						
PLCA				LR	LR	20 20 00.6	
	comp=Z,85nm,21.4s,baz=340,slow=33						
PLCA	Paso Flores	27.22	175	eP	P	20 10 42.3	-0.5
	comp=Z,18nm,1.1s						
PLCA	Paso Flores	27.22	175	eP	P	20 10 42.3	-0.5
PLCA				pmax	pmax		
	comp=Z,18nm,1.1s						
CMIG	Matias Romero	36.93	325	LR	LR	20 26 54.6	
	comp=Z,44nm,19.9s,baz=174,slow=35						
059A	Moore Haven	40.91	350	P	P	20 12 41.5	+0.7
	baz=169						
058A	Arcadia	41.12	349	P	P	20 12 43.1	+0.5
	baz=168						
959A	Okeechobee	41.42	350	P	P	20 12 45.6	+0.6
	baz=170						
957A	Wimauma	41.80	349	P	P	20 12 48.6	+0.5
	baz=168						
859A	Kempfer Cattle	41.94	350	P	P	20 12 49.9	+0.6
	baz=170						
556A	Lake Butler	44.10	349	P	P	20 13 06.7	0.0
	baz=168						
553A	Crawfordville	44.69	347	P	P	20 13 11.8	+0.5
	baz=165						
453A	Whigham	45.31	347	P	P	20 13 16.5	+0.2
	baz=166						
453A	Whigham	45.31	347	eP	P	20 13 16.5	+0.2
	comp=Z,41nm,0.9s						
452A	Marianna	45.50	346	P	P	20 13 17.7	0.0
	baz=164						
LNIG	Linares	45.73	327	eP	P	20 13 19.4	-0.4
	comp=Z,26nm,1.2s						
353A	Camilla	45.76	347	P	P	20 13 19.8	0.0
	baz=166						
450A	Crestview	45.80	344	P	P	20 13 20.3	+0.2
	baz=163						
255A	Hazlehurst	45.99	350	P	P	20 13 21.9	+0.2
	baz=168						
255A	Hazlehurst	45.99	350	eP	P	20 13 22.4	+0.7
	comp=Z,61nm,1.4s						
351A	Pinckard	46.01	346	P	P	20 13 21.7	-0.1
	baz=164,SNR=7.0						
352A	Blakely	46.05	347	P	P	20 13 22.0	0.0
	baz=165						
254A	Abbeville	46.16	349	P	P	20 13 23.4	+0.4
	baz=167						
BRAL	Brewton	46.27	344	P	P	20 13 24.0	+0.1
	baz=162						
350A	Dozier	46.33	345	P	P	20 13 23.9	-0.4
	baz=163						
253A	Americus	46.44	348	P	P	20 13 25.2	+0.1
	baz=166						
349A	Repton	46.48	344	P	P	20 13 25.3	-0.1
	baz=162,SNR=7.5						
252A	Lumpkin	46.50	347	P	P	20 13 25.3	-0.3
	baz=165						
446A	Poplarville	46.58	341	P	P	20 13 26.7	+0.4
	baz=159						
155A	Kite	46.67	350	P	P	20 13 27.1	+0.2
	baz=168,SNR=5.3						
251A	Midway	46.74	346	P	P	20 13 27.1	-0.4
	baz=164,SNR=12						
154A	Montrose	46.77	349	P	P	20 13 27.5	-0.3
	baz=168						
NHSC	New Hope	46.80	353	P	P	20 13 28.5	+0.6
	baz=172						
250A	Grady	46.84	345	P	P	20 13 27.7	-0.6
	baz=163						
250A	Grady	46.84	345	eP	P	20 13 28.0	-0.3
	comp=Z,32nm,0.8s						
347A	Saraland	46.91	343	P	P	20 13 28.3	-0.5
	baz=160,SNR=5.1						
249A	Camden	47.05	344	P	P	20 13 29.6	-0.3
	baz=162,SNR=8.6						
151A	Opelika	47.14	347	P	P	20 13 30.0	-0.7
	baz=165						
152A	Waverly Hall	47.15	347	P	P	20 13 30.1	-0.5
	baz=166,SNR=11						
346A	Big Creek Wild	47.17	342	P	P	20 13 30.4	-0.4
	baz=159						
Z54A	Sparta	47.33	350	P	P	20 13 31.4	-0.7
	baz=168,SNR=5.2						
248A	Dixon Mills	47.33	344	P	P	20 13 31.7	-0.4
	baz=162,SNR=8.8						
150A	Eclectic	47.38	346	P	P	20 13 32.1	-0.4
	baz=164,SNR=9.8						
Z53A	Monticello	47.51	349	P	P	20 13 32.8	-0.7
	baz=167						
247A	Quitman	47.54	343	P	P	20 13 32.8	-0.8
	baz=160						
149A	Jones	47.56	345	P	P	20 13 32.9	-1.0
	baz=163,SNR=10						
Z52A	Williamson	47.59	348	P	P	20 13 33.7	-0.3
	baz=166,SNR=12						
GOGA	Godfrey	47.62	349	P	P	20 13 33.7	-0.5
	baz=167,SNR=5.6						
GOGA	Godfrey	47.62	349	P	P	20 13 31.6	-2.7
	comp=Z,15nm,1.1s						
GOGA	Godfrey	47.62	349	P	P	20 13 31.6	-2.7
GOGA				pmax	pmax		
	comp=Z,15nm,1.1s						
148A	Greensboro	47.81	344	P	P	20 13 35.0	-0.8
	baz=162						
Z51A	Franklin	47.87	347	P	P	20 13 35.8	-0.5
	baz=165						
245A	Little AP, Sta	47.90	341	P	P	20 13 36.2	-0.4
	baz=159						
Y54A	Tignall	47.91	350	P	P	20 13 36.5	-0.1
	baz=168						
Z50A	Ashland	47.98	346	P	P	20 13 36.4	-0.8
	baz=164,SNR=21						
Z50A	Ashland	47.98	346	eP	P	20 13 36.3	-0.8
	comp=Z,28nm,0.8s						
147A	Livingston	48.02	343	P	P	20 13 36.7	-0.7
	baz=161						
LRAL	Lakeview Retre	48.03	345	P	P	20 13 36.5	-1.1
	baz=163,SNR=14						
LRAL	Lakeview Retre	48.03	345	eP	P	20 13 36.4	-1.1
Z49A	Columbiana	48.06	346	P	P	20 13 36.8	-0.9
	baz=163,SNR=12						
Y53A	Monroe	48.07	349	P	P	20 13 37.3	-0.4
	baz=167,SNR=5.7						
342A	Flagon Creek P	48.11	338	P	P	20 13 38.6	+0.5
	baz=156						
244A	Avery, Jackson	48.16	341	P	P	20 13 38.0	-0.5
	baz=158						
Y52A	Lilburn	48.17	348	P	P	20 13 38.0	-0.6
	baz=167						
Y52A	Lilburn	48.17	348	eP	P	20 13 38.0	-0.6
	comp=Z,13nm,1.0s						
146A	Union	48.21	343	P	P	20 13 39.1	+0.1
	baz=160						
146A	Union	48.21	343	eP	P	20 13 38.9	0.0
	comp=Z,38nm,0.9s						
HKT	Hockley	48.22	334	eP	P	20 13 37.7	-1.2
	comp=Z,12nm,1.2s						
HKT	Hockley	48.22	334	eP	P	20 13 37.7	-1.2
HKT				pmax	pmax		
	comp=Z,12nm,1.2s						
341A	Kurthwood	48.38	338	P	P	20 13 40.4	+0.2
	baz=155						
Y51A	Rockmart	48.41	347	P	P	20 13 39.7	-0.7
	baz=165,SNR=17						
145A	Houston Renfro	48.44	342	P	P	20 13 40.1	-0.6
	baz=159						
Z47A	Carrollton	48.47	344	P	P	20 13 40.2	-0.6
	baz=161,SNR=9.9						
833A	Chaparral WMA,	48.49	329	P	P	20 13 41.1	0.0
	baz=146						
Z48A	Northport	48.50	344	P	P	20 13 40.0	-1.0
	baz=162,SNR=14						
Y50A	Piedmont	48.55	347	P	P	20 13 40.7	-0.8
	baz=164,SNR=5.5						
X53A	Estanollee	48.65	349	P	P	20 13 41.5	-0.7
	baz=168						
Y49A	Blount Mountai	48.67	346	P	P	20 13 41.5	-0.9
	baz=164,SNR=6.5						
Y49A	Blount Mountai	48.67	346	eP	P	20 13 41.0	-1.4
	comp=Z,10nm,0.7s						
Z46A	Louisville	48.70	343	P	P	20 13 42.3	-0.4
	baz=160						
X52A	Dahlonega	48.85	349	P	P	20 13 42.8	-1.0
	baz=167						
Y48A	Jasper	48.91	345	P	P	20 13 43.0	-1.2
	baz=163,SNR=5.5						
KMSC	Kings Mountain	48.96	352	P	P	20 13 44.6	0.0
	baz=170,SNR=7.8						
X51A	Calhoun	49.01	348	P	P	20 13 44.3	-0.6
	baz=166						
Y47A	UCPARC, Winfie	49.07	344	P	P	20 13 44.5	-1.0
	baz=162,SNR=16						
X50B	Fort Payne	49.08	347	P	P	20 13 44.6	-0.9
	baz=165,SNR=10						
Z45A	Winona	49.09	342	P	P	20 13 45.3	-0.3
	baz=159						
Z44A	Pea Ridge, Bel	49.22	341	P	P	20 13 46.2	-0.4
	baz=158,SNR=5.7						
W53A	Cullowhee	49.27	350	P	P	20 13 46.9	-0.2
	baz=168,SNR=14						
X49A	Woodville	49.28	346	P	P	20 13 46.0	-1.0
	baz=164,SNR=7.1						
Y46A	Houston	49.33	343	P	P	20 13 46.2	-1.2
	baz=161,SNR=6.1						
W52A	Murphy	49.34	349	P	P	20 13 47.2	-0.3
	baz=167						
X48A	Hartselle	49.39	345	P	P	20 13 46.8	-1.1
	baz=163,SNR=9.6						
141A	Papa Simpson,	49.43	339	P	P	20 13 48.5	+0.3
	baz=155						
Y45A	Yeager Farm, C	49.50	343	P	P	20 13 48.3	-0.5
	baz=160						
W51A	Cleveland	49.56	348	P	P	20 13 48.7	-0.5
	baz=166						
X47A	Russelville	49.66	345	P	P	20 13 48.3	-1.6
	baz=162,SNR=8.8						
435B	Jarrell	49.70	333	P	P	20 13 50.5	+0.1
	baz=149						
V53A	Saluda	49.70	350	P	P	20 13 49.9	-0.4
	baz=168,SNR=5.5						
W50A	Signal Mountai	49.71	348	P	P	20 13 49.6	-0.8
	baz=165,SNR=11						
W50A	Signal Mountai	49.71	348	eP	P	20 13 49.7	-0.8
	comp=Z,22nm,1.0s						
CPCT	Cooper Cave	49.80	348	eP	P	20 13 50.1	-0.8
	comp=Z,6.9nm,0.7s						
W49A	Belvidere	49.84	347	P	P	20 13 50.1	-1.2
	baz=164,SNR=5.7						
TKL	Tuckaleechee C	49.86	349	P	P	20 13 50.6	-0.8
	comp=Z,9.2nm,1.0s,baz=171,slow=13,SNR=9.0						
TKL				LR	LR	20 38 35.2	
	comp=Z,39nm,18.0s,baz=176,slow=40						
X46A	Booneville	49.88	344	P	P	20 13 50.2	-1.4
	baz=161,SNR=5.4						
Y43A	Makayla and Ka	49.97	341	P	P	20 13 52.1	-0.1
	baz=158						
X45A	UM Field Stati	49.98	343	P	P	20 13 51.3	-1.1
	baz=160						
Z41A	Richland Creek	49.98	339	P	P	20 13 52.5	+0.1
	baz=156,SNR=5.9						
Z41A	Richland Creek	49.98	339	eP	P	20 13 51.9	-0.5
	comp=Z,40nm,1.0s						
V52A	Sevierville	50.00	350	P	P	20 13 51.5	-1.0
	baz=168,SNR=13						
V52A	Sevierville	50.00	350	eP	P	20 13 52.2	-0.4
	comp=Z,17nm,0.8s						
W48A	Pulaski	50.02	346	P	P	20 13 51.4	-1.3
	baz=163,SNR=14						
OXF	Oxford	50.07	343	P	P	20 13 51.8	-1.3
	baz=160,SNR=5.4						
OXF	Oxford	50.07	343	eP	P	20 13 51.2	-1.8
	comp=Z,32nm,1.0s						
OXF	Oxford	50.07	343	eP	P	20 13 51.2	-1.8
OXF				pmax	pmax		
	comp=Z,32nm,1.0s						
V51A	Loudon	50.10	349	P	P	20 13 52.5	-0.8
	baz=167,SNR=8.0						
V51A	Loudon	50.10	349	eP	P	20 13 52.3	-1.0
	comp=Z,14nm,0.9s						
V50A	Pikevile	50.12	348	P	P	20 13 52.6	-0.9
	baz=166,SNR=9.1						
PLAL	Pickwick Lake	50.15	345	eP	P	20 13 52.1	-1.6
	comp=Z,22nm,1.0s						
Y42A	Garnett, Star	50.17	340	P	P	20 13 54.4	+0.6
	baz=157						
Z40A	Long Farm, Mag	50.20	338	P	P	20 13 54.7	+0.6
	baz=155						
W47A	Westpoint	50.29	345	P	P	20 13 53.3	-1.4
	baz=162,SNR=9.5						
U53A	Fall Branch	50.34	351	P	P	20 13 54.7	-0.4
	baz=169,SNR=5.3						
W46A	Michie	50.37	344	P	P	20 13 53.8	-1.6
	baz=162						
V49A	McMinnville	50.38	347	P	P	20 13 54.3	-1.2
	baz=165,SNR=10						
JCT	Junction City	50.47	331	P	P	20 13 55.9	-0.3
	baz=147						
Y41A	Eaglette Beard	50.48	340	P	P	20 13 56.2	0.0
	baz=156						
U52A	Thorn Hill	50.50	350	P	P	20 13 55.5	-0.8
	baz=168						
V48A	Smith Brothers	50.57	346	P	P	20 13 55.7	-1.1
	baz=164,SNR=17						
V48A	Smith Brothers	50.57	346	eP	P	20 13 55.5	-1.3
	comp=Z,31nm,0.9s						
U51A	La Follette	50.60	349	P	P	20 13 56.2	-0.9
	baz=167						
W45A	Hickory Valley	50.61	344	P	P	20 13 55.7	-1.4
	baz=161						
WHTX	Lake Whitney,	50.68	334	P	P	20 13 56.5	-1.2
	baz=150						
TZTN	Tazewell	50.68	350	P	P	20 13 57.0	-0.7
	baz=168						
TZTN	Tazewell	50.68	350	eP	P	20 13 56.7	-1.0
	comp=Z,6.9nm,1.0s						
U50A	Jamestown	50.79	348	P	P	20 13 57.4	-1.1
	baz=166						
V47A	Nunnelly	50.82	346	P	P	20 13 57.1	-1.6
	baz=163						
Y40A	Okolona	50.84	339	P	P	20 13 58.8	0.0
	baz=155,SNR=10						
BLA	Blacksburg	50.88	353	P	P	20 13 59.4	+0.2
	baz=172						
BLA	Blacksburg	50.88	353	eP	P	20 13 55.9	-3.3
	comp=Z,13nm,1.1s						
BLA	Blacksburg	50.88	353	eP	P	20 13 55.9	-3.3
BLA				pmax	pmax		
	comp=Z,13nm,1.1s						
V46A	Holladay	50.94	345	P	P	20 13 57.5	-2.0
	baz=162,SNR=5.4						
X41A	Kaden, Bauxite	51.01	340	P	P	20 13 59.8	-0.3
	baz=156						
U49A	Red Boiling Sp	51.08	347	P	P	20 13 59.3	-1.3
	baz=165,SNR=7.2						
X40A	Basin Creek Fa	51.11	340	P	P	20 14 00.4	-0.5
	baz=156						
T52A	Hallie	51.13	350	P	P	20 14 00.5	-0.6
	baz=169,SNR=7.0						
T51A	Gray	51.16	349	P	P	20 14 00.6	-0.6
	baz=167						
WVT	Waverly	51.18	345	P	P	20 13 59.7	-1.6
	baz=162						
WVT	Waverly	51.18	345	eP	P	20 13 58.6	-2.8
	comp=Z,16nm,1.0s						
WVT	Waverly	51.18	345	eP	P	20 13 58.6	-2.8
WVT				pmax	pmax		
	comp=Z,16nm,1.0s						
UALR	University of	51.21	340	eP	P	20 13 59.1	-2.6
	comp=Z,26nm,0.9s						
U48A	Cassie Pea, Po	51.24	347	P	P	20 14 00.6	-1.3
	baz=164,SNR=8.1						
U47A	Clarksville	51.35	346	P	P	20 14 01.0	-1.6
	baz=163,SNR=8.0						
T50A	Nancy	51.38	349	P	P	20 14 01.8	-1.1
	baz=166,SNR=6.6						
MIAR	Mount Ida	51.42	339	P	P	20 14 02.8	-0.5
	baz=155,SNR=27						
MIAR	Mount Ida	51.42	339	eP	P	20 14 02.6	-0.5
	comp=Z,27nm,0.8s						
MIAR	Mount Ida	51.42	339	eP	P	20 14 02.7	-0.5
MIAR				pmax	pmax		
	comp=Z,27nm,0.8s						
TX31	Lajitas Ar. Si	51.52	326	eP	P	20 14 03.6	-0.5
TX31				eP	P	20 14 03.9	-0.3
TXAR	Lajitas Array	51.52	326	P	P	20 14 03.7	-0.5
	comp=Z,7.7nm,0.6s,baz=150,slow=8.8,SNR=71						
TXAR				pP	pP	20 14 26.5	+1.2
	comp=Z,3.2nm,0.9s,baz=160,slow=8.0,SNR=3.2						
W41B	Gary Mavity, V	51.55	341	P	P	20 14 03.4	-0.8
	baz=157,SNR=21						
W41B	Gary Mavity, V	51.55	341	eP	P	20 14 03.4	-0.8
	comp=Z,12nm,0.7s						
X39A	Fountain Ranch	51.58	338	P	P	20 14 04.0	-0.4
	baz=155,SNR=11						
T49A	Edmonton	51.60	348	P	P	20 14 03.5	-1.0
	baz=165,SNR=18						
T49A	Edmonton	51.60	348	eP	P	20 14 03.5	-1.0
	comp=Z,24nm,0.9s						
U45A	Rockin P Farm,	51.62	344	P	P	20 14 03.9	-0.8
	baz=161						
S52A	Salyersville	51.71	351	P	P	20 14 04.3	-1.0
	baz=168,SNR=7.6						
S51A	Beattyville	51.76	350	P	P	20 14 05.0	-0.7
	baz=168						
U44B	Burton Farm, H	51.77	344	P	P	20 14 04.7	-1.1
	baz=161						
T48A	Bowling Green	51.78	347	P	P	20 14 04.9	-1.0
	baz=164,SNR=6.2						
T47A	Sharon Grove	51.83	346	P	P	20 14 05.0	-1.2
	baz=164,SNR=7.9						
T47A	Sharon Grove	51.83	346	eP	P	20 14 05.1	-1.1
	comp=Z,14nm,0.8s						
W40A	Ferguson Farm,	51.83	340	P	P	20 14 06.3	+0.1
	baz=156,SNR=14						
W40A	Ferguson Farm,	51.83	340	eP	P	20 14 06.4	+0.1
	comp=Z,47nm,0.9s						
V42A	Cord	51.86	342	P	P	20 14 05.0	-1.4
	baz=158,SNR=5.0						
S50A	Richmond	51.94	349	P	P	20 14 06.2	-0.8
	baz=167						
T46A	Princeton	52.06	346	P	P	20 14 06.5	-1.5
	baz=163,SNR=5.5						
V41A	Mountainview	52.08	341	P	P	20 14 07.1	-1.0
	baz=157,SNR=14						
W39A	Magazine	52.08	339	P	P	20 14 08.2	+0.1
	baz=155,SNR=21						
W39A	Magazine	52.08	339	eP	P	20 14 07.8	-0.3
	comp=Z,25nm,0.8s						
U43A	Rector	52.09	343	P	P	20 14 07.1	-1.1
	baz=160						
ABTX	Abilene, Hawle	52.18	332	P	P	20 14 08.7	-0.3
	baz=148,SNR=18						
ABTX	Abilene, Hawle	52.18	332	eP	P	20 14 08.7	-0.3
	comp=Z,38nm,0.9s						
S49A	Springfield	52.20	348	P	P	20 14 07.9	-1.1
	baz=166						
S48A	Wiedeman Farm,	52.24	348	P	P	20 14 07.7	-1.6
	baz=165,SNR=12						
V40A	Witts Springs	52.31	340	P	P	20 14 09.0	-0.9
	baz=156,SNR=18						
V40A	Witts Springs	52.31	340	eP	P	20 14 09.0	-0.9
	comp=Z,26nm,0.8s						
U42A	Revenden	52.32	342	P	P	20 14 08.5	-1.3
	baz=158,SNR=14						
S47A	Hartford	52.35	347	P	P	20 14 08.8	-1.2
	baz=164						
R51A	Hillsboro	52.40	350	P	P	20 14 09.7	-0.7
	baz=168						
R50A	Paris	52.51	349	P	P	20 14 10.4	-0.8
	baz=167						
U41A	Viola	52.52	341	P	P	20 14 10.1	-1.2
	baz=158,SNR=22						
T44A	Benton	52.54	344	P	P	20 14 10.7	-0.7
	baz=161						
V39A	Pettigrew	52.62	340	P	P	20 14 11.7	-0.4
	baz=156,SNR=34						
S46A	Don Dixon Farm	52.63	346	P	P	20 14 10.8	-1.3
	baz=163,SNR=5.9						
R49A	Shelbyville	52.67	349	P	P	20 14 11.4	-1.0
	baz=166						
T43A	Greenville	52.73	343	P	P	20 14 11.6	-1.2
	baz=160,SNR=14						
U40A	Yellville	52.83	341	P	P	20 14 12.9	-0.8
	baz=157,SNR=23						
S45A	Carrier Mills	52.83	345	P	P	20 14 12.4	-1.2
	baz=162						
WCI	Wyandotte Cave	52.84	348	P	P	20 14 12.5	-1.1
	baz=165						
WCI	Wyandotte Cave	52.84	348	eP	P	20 14 12.6	-1.1
	comp=Z,86nm,1.4s						
WCI	Wyandotte Cave	52.84	348	eP	P	20 14 12.6	-1.1
WCI				pmax	pmax		
	comp=Z,86nm,1.4s						
T42A	Van Buren	52.91	343	P	P	20 14 12.5	-1.6
	baz=159,SNR=14						
T42A	Van Buren	52.91	343	eP	P	20 14 12.6	-1.6
	comp=Z,12nm,0.7s						
R48A	Northridge Ran	52.92	348	P	P	20 14 13.2	-1.0
	baz=165						
R47A	Wooly Knot Far	52.95	347	P	P	20 14 13.3	-1.2
	baz=164,SNR=11						
Q50A	Georgetown	52.99	350	P	P	20 14 14.1	-0.7
	baz=168						
S44A	Carbondale	53.02	345	P	P	20 14 14.0	-1.0
	baz=161,SNR=12						
SIUC	Southern Illin	53.03	345	eP	P	20 14 14.1	-1.0
	comp=Z,36nm,0.8s						
U39A	Green Forest	53.05	340	P	P	20 14 14.5	-0.8
	baz=156,SNR=17						
Q51A	Peebles	53.07	351	P	P	20 14 14.5	-0.9
	baz=168						
R46A	Gibon Southern	53.09	346	P	P	20 14 14.2	-1.2
	baz=163,SNR=6.9						
T41A	Mountain View	53.12	342	P	P	20 14 14.5	-1.2
	baz=158,SNR=12						
S43A	Fulton Ridge,	53.12	344	P	P	20 14 14.1	-1.7
	baz=160,SNR=5.4						
MCWV	Mont Chateau	53.24	354	P	P	20 14 16.8	+0.3
	baz=173						
Q49A	Aurora	53.31	349	P	P	20 14 16.2	-0.9
	baz=167						
R45A	Skylar, Fairfi	53.34	346	P	P	20 14 16.4	-1.0
	baz=162,SNR=18						
Q48A	North Vernon	53.40	348	P	P	20 14 16.7	-1.1
	baz=166,SNR=9.5						
TUL1	Leonard	53.44	338	P	P	20 14 17.7	-0.4
	baz=153,SNR=6.9						
T40A	Mansfield	53.45	341	P	P	20 14 17.1	-1.1
	baz=157						
R44A	Waltonville	53.50	345	P	P	20 14 17.4	-1.1
	baz=162,SNR=9.6						
S42A	Caledonia	53.51	343	P	P	20 14 17.0	-1.6
	baz=159						
Q47A	Bedord North L	53.55	348	P	P	20 14 17.8	-1.0
	baz=165,SNR=13						
WMOK	Wichita Mounta	53.60	334	P	P	20 14 18.2	-1.2
	baz=149,SNR=6.5						
T39A	Clever	53.60	340	P	P	20 14 18.4	-0.9
	baz=156						
S41A	Jillco Farms,	53.61	342	P	P	20 14 18.1	-1.3
	baz=158,SNR=15						
P50A	Jamestown	53.71	350	P	P	20 14 19.0	-1.1
	baz=168,SNR=7.9						
O56A	Blue Knob Stat	53.73	355	P	P	20 14 19.5	-0.7

	baz=174,SNR=6.7						
R43A	**Red Bud**	**53.75**	**344**	P	**P**	**20 14 19.4**	**-0.9**
	baz=160,SNR=6.4						
P49A	**Miami Univ. Ec**	**53.80**	**349**	P	**P**	**20 14 19.2**	**-1.5**
	baz=167,SNR=5.8						
S40A	**Lebanon**	**53.85**	**342**	P	**P**	**20 14 20.0**	**-1.1**
	baz=157,SNR=17						
P48A	**Milroy**	**53.85**	**349**	P	**P**	**20 14 19.5**	**-1.6**
	baz=166						
Q45A	**Warren Harvey,**	**53.89**	**346**	P	**P**	**20 14 19.8**	**-1.5**
	baz=163,SNR=14						
CCM	**Cathedral Cave**	**53.90**	**343**	P	**P**	**20 14 20.8**	**-0.6**
	baz=159						
CCM	**Cathedral Cave**	**53.90**	**343**	*e*P	**P**	**20 14 21.1**	**-0.4**
	comp=Z,32nm,0.7s						
CCM	**Cathedral Cave**	**53.90**	**343**	*e*P	**P**	**20 14 21.1**	**-0.4**
CCM				pmax	pmax		
	comp=Z,31nm,0.7s						
T38A	**Diamond**	**53.92**	**340**	P	**P**	**20 14 20.8**	**-0.9**
	baz=155,SNR=14						
R42A	**Luebbering**	**53.98**	**343**	P	**P**	**20 14 21.0**	**-1.1**
	baz=160,SNR=5.7						
P47A	**Martinsville**	**54.04**	**348**	P	**P**	**20 14 21.2**	**-1.3**
	baz=165,SNR=9.9						
SSPA	**Standing Stone**	**54.05**	**356**	P	**P**	**20 14 21.8**	**-0.6**
	baz=175						
SSPA	**Standing Stone**	**54.05**	**356**	P	**P**	**20 14 22.1**	**-0.4**
	comp=Z,154nm,1.5s						
Q44A	**Meyer Farm, Va**	**54.10**	**345**	P	**P**	**20 14 21.7**	**-1.2**
	baz=162,SNR=38						
R41A	**Rosebud**	**54.17**	**343**	P	**P**	**20 14 22.2**	**-1.2**
	baz=159,SNR=14						
ACSO	**Alum Creek Sta**	**54.19**	**351**	P	**P**	**20 14 22.5**	**-1.1**
	baz=169						
S39A	**Bolivar**	**54.20**	**341**	P	**P**	**20 14 22.5**	**-1.1**
	baz=156,SNR=26						
S39A	**Bolivar**	**54.20**	**341**	*e*P	**P**	**20 14 22.6**	**-1.1**
	comp=Z,27nm,0.8s						
N59A	**State Game Lan**	**54.22**	**358**	P	**P**	**20 14 24.1**	**+0.4**
	baz=178						
MNTX	**Cornudas Mount**	**54.28**	**327**	P	**P**	**20 14 22.9**	**-1.5**
	baz=141,SNR=9.1						
MNTX	**Cornudas Mount**	**54.28**	**327**	*e*P	**P**	**20 14 20.4**	**-3.9**
	comp=Z,8.4nm,1.2s						
Q43A	**New Douglas**	**54.31**	**345**	P	**P**	**20 14 23.3**	**-1.2**
	baz=161,SNR=9.5						
S38A	**Stockton**	**54.33**	**340**	P	**P**	**20 14 23.4**	**-1.1**
	baz=156,SNR=14						
O49A	**Covington**	**54.37**	**350**	P	**P**	**20 14 23.6**	**-1.2**
	baz=167						
P46A	**Rosedale**	**54.37**	**347**	P	**P**	**20 14 23.4**	**-1.4**
	baz=164						
P45A	**Graceland, Par**	**54.40**	**347**	P	**P**	**20 14 23.6**	**-1.4**
	baz=163,SNR=11						
P45A	**Graceland, Par**	**54.40**	**347**	*e*P	**P**	**20 14 23.6**	**-1.4**
	comp=Z,36nm,0.8s						
R40A	**Maddies Statio**	**54.42**	**342**	P	**P**	**20 14 24.0**	**-1.2**
	baz=158,SNR=11						
R40A	**Maddies Statio**	**54.42**	**342**	*e*P	**P**	**20 14 23.7**	**-1.5**
	comp=Z,44nm,1.4s						
Q42A	**Golden Eagle**	**54.50**	**344**	P	**P**	**20 14 25.0**	**-0.8**
	baz=160,SNR=19						
N54A	**Moraine State**	**54.54**	**354**	P	**P**	**20 14 26.2**	**+0.2**
	baz=173						
P44A	**Sand Creek, Wi**	**54.54**	**346**	P	**P**	**20 14 24.8**	**-1.3**
	baz=162,SNR=7.4						
O48A	**Farmland**	**54.58**	**349**	P	**P**	**20 14 24.8**	**-1.5**
	baz=166,SNR=11						
R39A	**Chumby, Stover**	**54.68**	**341**	P	**P**	**20 14 25.8**	**-1.3**
	baz=157,SNR=5.9						
Q41A	**Truxton**	**54.73**	**343**	P	**P**	**20 14 26.3**	**-1.2**
	baz=159,SNR=11						
N50A	**Nevada**	**54.75**	**351**	P	**P**	**20 14 26.5**	**-1.0**
	baz=169						
O47A	**Sheridan**	**54.75**	**348**	P	**P**	**20 14 26.0**	**-1.6**
	baz=165,SNR=6.8						
MSTX	**Muleshoe**	**54.76**	**330**	P	**P**	**20 14 26.9**	**-1.0**
	baz=145,SNR=15						
MSTX	**Muleshoe**	**54.76**	**330**	*e*P	**P**	**20 14 27.1**	**-0.9**
	comp=Z,24nm,1.1s						
R38A	**Fenwick Farm,**	**54.84**	**341**	P	**P**	**20 14 27.1**	**-1.1**
	baz=156,SNR=24						
P43A	**Skaggs, Pawnee**	**54.93**	**345**	P	**P**	**20 14 27.8**	**-1.1**
	baz=161,SNR=12						
Q40A	**Laux Farm, Aux**	**55.01**	**343**	P	**P**	**20 14 28.3**	**-1.2**
	baz=158,SNR=5.7						
M54A	**Oil Creek Stat**	**55.05**	**355**	P	**P**	**20 14 29.0**	**-0.8**
	baz=173,SNR=5.7						
SFIN	**Lafayette**	**55.07**	**348**	P	**P**	**20 14 28.1**	**-1.8**
	baz=164,SNR=8.1						
O45A	**Potomac**	**55.08**	**347**	P	**P**	**20 14 28.2**	**-1.7**
	baz=164,SNR=13						
P42A	**Winchester**	**55.09**	**344**	P	**P**	**20 14 28.7**	**-1.3**
	baz=160,SNR=16						
P42A	**Winchester**	**55.09**	**344**	*e*P	**P**	**20 14 28.6**	**-1.3**
	comp=Z,29nm,0.8s						
O44A	**Mansfield**	**55.16**	**346**	P	**P**	**20 14 28.9**	**-1.6**
	baz=163						
BRYW	**Bryant College**	**55.22**	**2**	*e*P	**P**	**20 14 32.0**	**+1.0**
	comp=Z,39nm,0.9s						
Q39A	**Willow Grove F**	**55.33**	**342**	P	**P**	**20 14 30.7**	**-1.0**
	baz=157,SNR=8.2						
P41A	**Barry, Barry**	**55.36**	**344**	P	**P**	**20 14 30.7**	**-1.3**
	baz=160,SNR=8.9						
Q38A	**Cooks Store, C**	**55.45**	**341**	P	**P**	**20 14 31.8**	**-0.8**
	baz=156,SNR=26						
O43A	**Sugar Creek Fa**	**55.49**	**346**	P	**P**	**20 14 31.3**	**-1.6**
	baz=162						
N46A	**Monticello**	**55.49**	**348**	P	**P**	**20 14 31.2**	**-1.7**
	baz=165,SNR=7.5						
P40A	**Paris**	**55.50**	**343**	P	**P**	**20 14 31.7**	**-1.3**
	baz=158,SNR=12						
P40A	**Paris**	**55.50**	**343**	*e*P	**P**	**20 14 31.8**	**-1.2**
	comp=Z,16nm,0.6s						
BINY	**Binghamton**	**55.51**	**358**	P	**P**	**20 14 33.8**	**+0.8**
	baz=177,SNR=17						
BINY	**Binghamton**	**55.51**	**358**	*e*P	**P**	**20 14 34.0**	**+0.9**
	comp=Z,41nm,0.8s						
N45A	**Kentland**	**55.61**	**347**	P	**P**	**20 14 32.1**	**-1.7**
	baz=164						
Q37A	**Longview Farm,**	**55.64**	**340**	P	**P**	**20 14 32.9**	**-1.1**
	baz=156						
P39B	**Salisbury**	**55.67**	**342**	P	**P**	**20 14 33.0**	**-1.2**
	baz=158,SNR=14						
ERPA	**Erie**	**55.69**	**354**	P	**P**	**20 14 33.4**	**-0.8**
	baz=173						
N44A	**Piper City**	**55.70**	**347**	P	**P**	**20 14 32.6**	**-1.7**
	baz=163,SNR=6.3						
O41A	**Passleys Farm,**	**55.73**	**344**	P	**P**	**20 14 33.0**	**-1.5**
	baz=160,SNR=18						
HDIL	**Hopedale**	**55.74**	**346**	P	**P**	**20 14 33.0**	**-1.7**
	baz=162,SNR=6.1						
HDIL	**Hopedale**	**55.74**	**346**	*e*P	**P**	**20 14 31.6**	**-3.0**
	comp=Z,46nm,1.0s						
M46A	**Old House Fiel**	**55.91**	**349**	P	**P**	**20 14 34.3**	**-1.6**
	baz=165						
O40A	**La Belle**	**56.00**	**343**	P	**P**	**20 14 35.1**	**-1.4**
	baz=159,SNR=8.1						
P38A	**Dawn**	**56.03**	**342**	P	**P**	**20 14 35.6**	**-1.2**
	baz=157,SNR=5.6						
P38A	**Dawn**	**56.03**	**342**	*e*P	**P**	**20 14 35.7**	**-1.1**
	comp=Z,13nm,0.9s						
N43A	**Stutzman Famil**	**56.07**	**346**	P	**P**	**20 14 35.6**	**-1.5**
	baz=162,SNR=15						
N42A	**Yates City**	**56.18**	**345**	P	**P**	**20 14 36.2**	**-1.6**
	baz=161,SNR=11						
319A	**Douglas**	**56.22**	**323**	*e*P	**P**	**20 14 38.9**	**+0.4**
	comp=Z,21nm,0.9s						
121A	**Cookes Peak, D**	**56.23**	**325**	P	**P**	**20 14 38.7**	**+0.1**
	baz=139,SNR=7.4						
P37A	**Lathrop**	**56.25**	**341**	P	**P**	**20 14 36.7**	**-1.7**
	baz=156,SNR=5.8						
N41A	**Harden Midland**	**56.27**	**344**	P	**P**	**20 14 36.9**	**-1.6**
	baz=160,SNR=12						
N41A	**Harden Midland**	**56.27**	**344**	*e*P	**P**	**20 14 37.0**	**-1.6**
	comp=Z,44nm,0.8s						
O39A	**Kirksville**	**56.32**	**343**	P	**P**	**20 14 37.3**	**-1.5**
	baz=158						
M43A	**Waltham Townsh**	**56.49**	**346**	P	**P**	**20 14 38.3**	**-1.7**
	baz=162,SNR=6.8						
KSU1	**Kansas State U**	**56.57**	**339**	P	**P**	**20 14 38.9**	**-1.8**
	baz=153						
N40A	**Mertquake, Sal**	**56.63**	**344**	P	**P**	**20 14 39.7**	**-1.3**
	baz=159,SNR=7.5						
O37A	**Wolven Farm, M**	**56.72**	**341**	P	**P**	**20 14 40.6**	**-1.0**
	baz=156						
M41A	**Milan**	**56.82**	**345**	P	**P**	**20 14 40.7**	**-1.7**
	baz=160,SNR=5.5						
N39A	**Derby Farms, D**	**56.88**	**343**	P	**P**	**20 14 41.3**	**-1.5**
	baz=158,SNR=9.1						
N38A	**Joes South For**	**57.02**	**342**	P	**P**	**20 14 42.9**	**-0.9**
	baz=157						
M40A	**Post Highland**	**57.10**	**344**	P	**P**	**20 14 42.6**	**-1.7**
	baz=159,SNR=5.7						
L43A	**Garden Prairie**	**57.16**	**347**	P	**P**	**20 14 43.3**	**-1.4**
	baz=163,SNR=8.1						
L42A	**Oliver, Polo**	**57.20**	**346**	P	**P**	**20 14 43.5**	**-1.5**
	baz=162						
N37A	**Lee Faris, Mou**	**57.28**	**342**	P	**P**	**20 14 44.5**	**-1.1**
	baz=156,SNR=6.1						
DRWO	**Darlington Wes**	**57.32**	**356**	P	**P**	**20 14 46.3**	**+0.5**
	baz=174						
DRCO	**St. Marys Ceme**	**57.33**	**356**	P	**P**	**20 14 46.0**	**+0.1**
	baz=174						
M39A	**Webster**	**57.35**	**344**	P	**P**	**20 14 44.7**	**-1.4**
	baz=159,SNR=5.1						
WLVO	**Wesleyville**	**57.35**	**356**	P	**P**	**20 14 46.1**	**+0.1**
	baz=175						
ANMO	**Albuquerque**	**57.37**	**328**	P	**P**	**20 14 46.2**	**-0.4**
	comp=Z,3.3nm,0.8s,baz=158,slow=9.8,SNR=9.6						
ANMO				LR	LR	20 41 14.4	
	comp=Z,21nm,18.3s,baz=112,slow=38						
ANMO	**Albuquerque**	**57.37**	**328**	P	**P**	**20 14 46.3**	**-0.4**
	baz=142						
ANMO	**Albuquerque**	**57.37**	**328⇑**	*e*P	**P**	**20 14 46.5**	**-0.1**
ANMO				*i* *PP	**pP**	**20 15 04.8**	**-3.3**
ANMO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TASL	**Snake Pit, Alb**	**57.37**	**328**	P	**P**	**20 14 46.2**	**-0.4**
	baz=142,SNR=8.4						
TASM	**ASL Pad, Albuq**	**57.37**	**328**	P	**P**	**20 14 46.2**	**-0.5**
	baz=142,SNR=7.7						
PKRO	**Pickering**	**57.44**	**355**	P	**P**	**20 14 46.6**	**-0.1**
	baz=174						
L41A	**Preston**	**57.47**	**345**	P	**P**	**20 14 45.4**	**-1.5**
	baz=161,SNR=10						
CBKS	**Cedar Bluff**	**57.49**	**336**	P	**P**	**20 14 46.7**	**-0.6**
	baz=150						
LBNH	**Lisbon**	**57.53**	**2**	P	**P**	**20 14 46.9**	**-0.4**
	baz=182						
N36A	**Muff Farm, Cla**	**57.56**	**341**	P	**P**	**20 14 46.6**	**-1.0**
	baz=156,SNR=6.2						
K43A	**Burlington**	**57.56**	**347**	P	**P**	**20 14 46.3**	**-1.3**
	baz=163						
M38A	**Pleasantville**	**57.58**	**343**	P	**P**	**20 14 46.4**	**-1.3**
	baz=158,SNR=5.7						
L40A	**Anamosa**	**57.64**	**345**	P	**P**	**20 14 46.7**	**-1.4**
	baz=160,SNR=8.5						
L40A	**Anamosa**	**57.64**	**345**	*e*P	**P**	**20 14 46.9**	**-1.3**
	comp=Z,24nm,0.9s						
BASO	**Ashfield**	**57.74**	**353**	P	**P**	**20 14 47.7**	**-1.0**
	baz=171						
TUC	**Tucson**	**57.78**	**323**	P	**P**	**20 14 48.8**	**-0.5**
	baz=136						
TUC	**Tucson**	**57.78**	**323**	P	**P**	**20 14 46.0**	**-3.4**
	comp=Z,2.1nm,0.8s						
TUC	**Tucson**	**57.78**	**323**	P	**P**	**20 14 46.0**	**-3.4**
TUC				pmax	pmax		
	comp=Z,2.0nm,0.8s						
BWLO	**Walkerton**	**57.78**	**354**	P	**P**	**20 14 48.8**	**-0.3**
	baz=172,SNR=5.1						
M37A	**Trindle Farm,**	**57.82**	**342**	P	**P**	**20 14 48.4**	**-1.0**
	baz=157,SNR=8.1						
K42A	**Prairie Point,**	**57.86**	**346**	P	**P**	**20 14 48.3**	**-1.3**
	baz=162,SNR=9.0						
LONY	**Lake Ozonia**	**57.89**	**359**	P	**P**	**20 14 50.5**	**+0.6**
	baz=179,SNR=6.2						
LONY	**Lake Ozonia**	**57.89**	**359**	*e*P	**P**	**20 14 50.4**	**+0.6**
	comp=Z,13nm,1.0s						
DELO	**Deloro Mine**	**57.90**	**357**	P	**P**	**20 14 49.1**	**-0.7**
	baz=176,SNR=14						
L39A	**Vinton**	**57.90**	**344**	P	**P**	**20 14 48.5**	**-1.4**
	baz=159						
K41A	**Shullsburg**	**57.92**	**346**	P	**P**	**20 14 48.7**	**-1.3**
	baz=161						
M36A	**Felix, Anita**	**58.09**	**341**	P	**P**	**20 14 50.0**	**-1.4**
	baz=156						
FRNY	**Flat Rock**	**58.10**	**0**	*e*P	**P**	**20 14 52.1**	**+0.8**
	comp=Z,26nm,1.0s						
T25A	**Trinidad**	**58.11**	**331**	P	**P**	**20 14 51.8**	**0.0**
	baz=144,SNR=8.5						
L38A	**Oak Wood Farm,**	**58.18**	**343**	P	**P**	**20 14 50.6**	**-1.3**
	baz=158,SNR=11						
JFWS	**Jewell Farm**	**58.20**	**346**	P	**P**	**20 14 50.6**	**-1.4**
	baz=161						
K40A	**Colesburg**	**58.22**	**345**	P	**P**	**20 14 50.8**	**-1.3**
	baz=160,SNR=9.5						
J43A	**Natural Harves**	**58.23**	**347**	P	**P**	**20 14 50.9**	**-1.3**
	baz=163,SNR=5.9						
SADO	**Sadowa**	**58.25**	**355**	*e*P	**P**	**20 14 52.1**	**-0.2**
	comp=Z,40nm,1.4s						
J42A	**Columbus**	**58.32**	**347**	P	**P**	**20 14 51.5**	**-1.3**
	baz=162						
PLVO	**Plevna**	**58.39**	**357**	P	**P**	**20 14 53.6**	**+0.4**
	baz=176,SNR=12						
PLVO	**Plevna**	**58.39**	**357**	*e*P	**P**	**20 14 53.7**	**+0.4**
	comp=Z,25nm,0.9s						
L37A	**Phoenix Point,**	**58.39**	**343**	P	**P**	**20 14 52.0**	**-1.3**
	baz=157						
K39A	**Oelwein**	**58.41**	**344**	P	**P**	**20 14 52.3**	**-1.2**
	baz=159						
J41A	**Loganville**	**58.57**	**346**	P	**P**	**20 14 53.3**	**-1.3**
	baz=162,SNR=6.9						
K38A	**Parkersburg**	**58.60**	**344**	P	**P**	**20 14 53.4**	**-1.4**
	baz=158						
L36A	**Harm Buss Farm**	**58.64**	**342**	P	**P**	**20 14 54.2**	**-0.9**
	baz=156						
I43A	**Langenfeld Bro**	**58.66**	**348**	P	**P**	**20 14 53.9**	**-1.2**
	baz=164,SNR=8.8						
PKME	**Peaks-Kenny Pk**	**58.67**	**4**	P	**P**	**20 14 56.2**	**+1.0**
	baz=185,SNR=5.8						
214A	**Organ Pipe Nat**	**58.74**	**321**	P	**P**	**20 14 55.0**	**-1.0**
	baz=134,SNR=5.6						
J40A	**Soldiers Grove**	**58.77**	**346**	P	**P**	**20 14 54.7**	**-1.3**
	baz=161,SNR=10						
I42A	**Draeger Farm,**	**58.82**	**347**	P	**P**	**20 14 55.2**	**-1.1**
	baz=163						
KSCO	**Kaye Shedlock’**	**58.85**	**334**	P	**P**	**20 14 56.9**	**+0.1**
	baz=147						
ALFO	**Alfred**	**58.91**	**359**	P	**P**	**20 14 58.1**	**+1.3**
	baz=179,SNR=8.1						
BUKO	**Buck Lake**	**58.94**	**355**	P	**P**	**20 14 56.8**	**-0.3**
	baz=174,SNR=6.3						
K37A	**Belmond**	**58.95**	**343**	P	**P**	**20 14 55.9**	**-1.3**
	baz=157						
J39A	**Decorah**	**58.96**	**345**	P	**P**	**20 14 55.8**	**-1.5**
	baz=160,SNR=10						
PEMO	**Pembroke**	**59.03**	**357**	P	**P**	**20 14 58.0**	**+0.3**
	baz=176,SNR=10						
K36A	**Gilmore City**	**59.07**	**342**	P	**P**	**20 14 57.1**	**-0.9**
	baz=156,SNR=6.7						
SDCO	**Great Sand Dun**	**59.11**	**331**	P	**P**	**20 14 58.6**	**-0.2**
	baz=144,SNR=22						
SDCO	**Great Sand Dun**	**59.11**	**331**	*e*P	**P**	**20 14 58.7**	**-0.2**
	comp=Z,18nm,1.0s						
H43A	**Windswept, Lux**	**59.14**	**348**	P	**P**	**20 14 57.2**	**-1.3**
	baz=164						
J38A	**Wedel Dairy, R**	**59.14**	**344**	P	**P**	**20 14 57.0**	**-1.5**
	baz=159						
BGNE	**Belgrade**	**59.16**	**339**	P	**P**	**20 14 58.3**	**-0.5**
	baz=152						
I41A	**Arkdale**	**59.19**	**346**	P	**P**	**20 14 57.8**	**-1.1**
	baz=162						
I40A	**Norwalk**	**59.21**	**346**	P	**P**	**20 14 57.7**	**-1.3**
	baz=161,SNR=6.6						
W18A	**Petrified Fore**	**59.24**	**326**	P	**P**	**20 14 59.8**	**+0.2**
	baz=138,SNR=5.8						
H42A	**Shiocton**	**59.33**	**348**	P	**P**	**20 14 58.8**	**-1.1**
	baz=163,SNR=5.9						
I39A	**Houston**	**59.40**	**345**	P	**P**	**20 14 59.0**	**-1.3**
	baz=160,SNR=7.2						
I39A	**Houston**	**59.40**	**345**	*e*P	**P**	**20 14 59.0**	**-1.3**
	comp=Z,20nm,0.7s						
J37A	**Redenius Farm,**	**59.43**	**343**	P	**P**	**20 14 59.0**	**-1.5**
	baz=158						
TRQ	**Mont Tremblant**	**59.49**	**359**	*e*P	**P**	**20 15 01.4**	**+0.4**
J36A	**Seneca 1, Swea**	**59.67**	**343**	P	**P**	**20 15 00.9**	**-1.2**
	baz=157						
H41A	**Junction City**	**59.67**	**347**	P	**P**	**20 15 01.1**	**-1.1**
	baz=162						
S22A	**4UR Ranch, Cre**	**59.75**	**330**	P	**P**	**20 15 03.0**	**-0.3**
	baz=142,SNR=6.9						
I38A	**Scanlan Farm,**	**59.77**	**345**	P	**P**	**20 15 01.6**	**-1.3**
	baz=159,SNR=7.1						
H40A	**Chili**	**59.85**	**346**	P	**P**	**20 15 02.2**	**-1.2**
	baz=161,SNR=5.9						
G43A	**Wallace**	**59.88**	**349**	P	**P**	**20 15 02.2**	**-1.3**
	baz=164						
G42A	**Mountain**	**60.01**	**348**	P	**P**	**20 15 03.3**	**-1.2**
	baz=164						
I37A	**Lemond, Waseca**	**60.04**	**344**	P	**P**	**20 15 03.4**	**-1.2**
	baz=158						
MVCO	**Mesa Verde**	**60.17**	**328**	P	**P**	**20 15 05.9**	**-0.1**
	baz=140						
Y14A	**Wickenburg**	**60.24**	**323**	*e*P	**P**	**20 15 06.7**	**+0.3**
	comp=Z,9.4nm,1.0s						
F43A	**Flat Rock, Esc**	**60.34**	**349**	P	**P**	**20 15 05.5**	**-1.2**
	baz=165						
H38A	**Maiden Rock**	**60.35**	**345**	P	**P**	**20 15 05.9**	**-0.9**
	baz=159						
H37A	**Dierke Farm, C**	**60.43**	**344**	P	**P**	**20 15 06.8**	**-0.6**
	baz=159						
WUAZ	**Wupatki**	**60.44**	**325**	P	**P**	**20 15 08.2**	**+0.4**
	baz=137,SNR=11						
WUAZ	**Wupatki**	**60.44**	**325**	*e*P	**P**	**20 15 08.5**	**+0.7**
	comp=Z,18nm,1.0s						
E45A	**Wooded Hills,**	**60.51**	**351**	P	**P**	**20 15 07.2**	**-0.7**
	baz=167						
F41A	**Three Lakes**	**60.63**	**348**	P	**P**	**20 15 07.8**	**-0.9**
	baz=163						
G39A	**Holcombe**	**60.66**	**346**	P	**P**	**20 15 07.8**	**-1.1**
	baz=161						
H36A	**Jessenland, He**	**60.70**	**344**	P	**P**	**20 15 08.6**	**-0.6**
	baz=158,SNR=11						
G38A	**Ridgeland**	**60.71**	**345**	P	**P**	**20 15 08.1**	**-1.1**
	baz=160						
ECSD	**EROS Data Cent**	**60.72**	**341**	P	**P**	**20 15 08.7**	**-0.7**
	baz=154,SNR=9.3						
ECSD	**EROS Data Cent**	**60.72**	**341**	*e*P	**P**	**20 15 08.8**	**-0.6**
	comp=Z,13nm,1.1s						
ISCO	**Idaho Springs**	**60.81**	**332**	P	**P**	**20 15 11.0**	**+0.5**
	baz=144						
ISCO	**Idaho Springs**	**60.81**	**332**	*e*P	**P**	**20 15 08.1**	**-2.4**
	comp=Z,3.4nm,0.8s						
ISCO	**Idaho Springs**	**60.81**	**332**	*e*P	**P**	**20 15 08.1**	**-2.4**
ISCO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
E43A	**Lone Tree Farm**	**60.83**	**350**	P	**P**	**20 15 09.0**	**-1.0**
	baz=165,SNR=5.2						
E43A	**Lone Tree Farm**	**60.83**	**350**	*e*P	**P**	**20 15 09.1**	**-1.0**
	comp=Z,9.9nm,0.8s						
E44A	**Grand Marais A**	**60.89**	**350**	P	**P**	**20 15 10.2**	**-0.2**
	baz=166						
SPMN	**Marine on St.**	**61.00**	**345**	P	**P**	**20 15 10.4**	**-0.8**
	baz=159						
F40A	**Park Falls**	**61.02**	**347**	P	**P**	**20 15 10.5**	**-0.9**
	baz=162,SNR=5.9						
Y12C	**Blythe**	**61.02**	**321**	P	**P**	**20 15 11.9**	**+0.3**
	baz=134,SNR=5.3						
H35A	**Sunnyside Ranc**	**61.06**	**343**	P	**P**	**20 15 10.6**	**-1.1**
	baz=157,SNR=12						
F39A	**Loretta**	**61.19**	**346**	P	**P**	**20 15 11.6**	**-0.9**
	baz=161						
G36A	**St. Michael**	**61.26**	**344**	P	**P**	**20 15 12.2**	**-0.8**
	baz=158						
E41A	**Kenton**	**61.29**	**348**	P	**P**	**20 15 12.4**	**-0.8**
	baz=163						
G35A	**Watkins**	**61.45**	**343**	P	**P**	**20 15 13.3**	**-0.9**
	baz=157,SNR=6.1						
F38A	**Pierce - Schro**	**61.46**	**346**	P	**P**	**20 15 13.3**	**-1.0**
	baz=160,SNR=5.6						
E40A	**Wakefield**	**61.47**	**347**	P	**P**	**20 15 13.7**	**-0.7**
	baz=162,SNR=11						
BC3	**Big Chuckawall**	**61.52**	**321**	P	**P**	**20 15 15.2**	**0.0**
	baz=133,SNR=5.5						
E39A	**Mellen**	**61.55**	**347**	P	**P**	**20 15 14.3**	**-0.6**
	baz=162,SNR=10						
U15A	**North Rim**	**61.61**	**325**	*e*P	**P**	**20 15 16.6**	**+0.7**
	comp=Z,11nm,1.1s						
IRM	**Iron Mountain**	**61.67**	**321**	P	**P**	**20 15 16.2**	**+0.1**
	baz=133,SNR=8.2						
F36A	**Milaca**	**61.78**	**344**	P	**P**	**20 15 15.6**	**-0.9**
	baz=158,SNR=14						
D41A	**Chassel**	**61.78**	**349**	P	**P**	**20 15 15.9**	**-0.5**
	baz=164						
E38A	**The Farm, Brul**	**61.99**	**346**	P	**P**	**20 15 17.1**	**-0.8**
	baz=160						
G33A	**Ortonville**	**61.99**	**342**	P	**P**	**20 15 17.1**	**-0.8**
	baz=155						
F35A	**Swanville**	**62.06**	**344**	P	**P**	**20 15 17.8**	**-0.6**
	baz=157						
FRD	**Ford Ranch, An**	**62.13**	**320**	P	**P**	**20 15 19.4**	**+0.2**
	baz=132						
F34A	**Alexandria**	**62.19**	**343**	P	**P**	**20 15 18.8**	**-0.4**
	baz=156						
O20A	**White River Ci**	**62.30**	**331**	P	**P**	**20 15 20.3**	**0.0**
	baz=142						
E36A	**McGregor**	**62.32**	**345**	P	**P**	**20 15 19.5**	**-0.6**
	baz=159,SNR=13						
E35A	**Pequot Lakes**	**62.66**	**344**	P	**P**	**20 15 21.9**	**-0.5**
	baz=157						
D37A	**Cotton**	**62.71**	**346**	P	**P**	**20 15 22.1**	**-0.6**
	baz=160,SNR=8.5						
E34A	**Wadena**	**62.82**	**343**	P	**P**	**20 15 23.0**	**-0.4**
	baz=157,SNR=7.6						
HEC	**Hector,Ludlow**	**62.85**	**321**	P	**P**	**20 15 24.7**	**+0.8**
	baz=132						
C38A	**Sawbill Land.**	**62.97**	**347**	P	**P**	**20 15 23.2**	**-1.2**
	baz=161						
D35A	**Remer**	**63.05**	**345**	P	**P**	**20 15 24.0**	**-0.9**
	baz=158						
C37A	**Embarrass**	**63.19**	**346**	P	**P**	**20 15 25.1**	**-0.7**
	baz=160,SNR=10.0						
EYMN	**Ely**	**63.24**	**347**	P	**P**	**20 15 25.3**	**-0.9**
	baz=161,SNR=7.5						
SHPR	**Sheep Range**	**63.29**	**323**	*e*P	**P**	**20 15 27.6**	**+0.6**
	comp=Z,14nm,1.3s						
C36A	**Pine Crest Far**	**63.37**	**346**	P	**P**	**20 15 26.5**	**-0.6**
	baz=159,SNR=12						
GSC	**Goldstone, Bar**	**63.45**	**321**	P	**P**	**20 15 28.2**	**+0.3**
	baz=132						
C35A	**Jirik Farms, M**	**63.60**	**345**	P	**P**	**20 15 27.9**	**-0.7**
	baz=158						
EDW2	**Edwards Air Fo**	**63.91**	**320**	P	**P**	**20 15 30.9**	**0.0**
	baz=131						
C33A	**Trail**	**64.13**	**344**	P	**P**	**20 15 31.2**	**-0.8**
	baz=156						
B35A	**Bob, Littlefor**	**64.15**	**345**	P	**P**	**20 15 31.3**	**-0.8**
	baz=158,SNR=12						
TPNV	**Topopah Spring**	**64.23**	**323**	P	**P**	**20 15 33.6**	**+0.4**
	baz=133,SNR=8.9						
FURC	**Furnace Creek,**	**64.27**	**322**	P	**P**	**20 15 33.7**	**+0.6**
	baz=133,SNR=6.7						
MPMC	**Manual Prospec**	**64.37**	**322**	P	**P**	**20 15 33.7**	**-0.4**
	baz=132,SNR=6.8						
B34A	**Aery, Baudette**	**64.50**	**345**	P	**P**	**20 15 33.9**	**-0.5**
	baz=158,SNR=6.0						
DAC	**Darwin (Calif)**	**64.58**	**322**	*e*P	**P**	**20 15 35.8**	**+0.4**
	comp=Z,8.7nm,1.2s						
DAC	**Darwin (Calif)**	**64.58**	**322**	*e*P	**P**	**20 15 35.8**	**+0.4**
DAC				pmax	pmax		
	comp=Z,9.0nm,1.2s						
DUG	**Dugway, Tooele**	**64.63**	**328**	P	**P**	**20 15 36.1**	**+0.5**
	baz=137,SNR=20						
DUG	**Dugway, Tooele**	**64.63**	**328**	*e*P	**P**	**20 15 36.0**	**+0.4**
	comp=Z,19nm,0.9s						
DUG	**Dugway, Tooele**	**64.63**	**328**	*e*P	**P**	**20 15 36.0**	**+0.4**
DUG				pmax	pmax		
	comp=Z,19nm,0.9s						
AGMN	**Agassiz Nation**	**64.65**	**344**	P	**P**	**20 15 35.0**	**-0.4**
	baz=156,SNR=13						
AGMN	**Agassiz Nation**	**64.65**	**344**	*e*P	**P**	**20 15 35.0**	**-0.4**
	comp=Z,19nm,0.8s						
ISA	**Isabella, Lake**	**64.71**	**321**	P	**P**	**20 15 36.6**	**+0.4**
	baz=131						
R11A	**Troy Canyon, C**	**64.82**	**325**	P	**P**	**20 15 37.4**	**+0.5**
	baz=134,SNR=16						
PDAR	**Pinedale Array**	**64.97**	**332**	P	**P**	**20 15 37.5**	**-0.4**
	comp=Z,1.5nm,0.7s,baz=121,slow=7.1,SNR=8.2						
PDAR				pP	**pP**	**20 16 00.8**	**+1.0**
	comp=Z,1.4nm,0.7s,baz=179,slow=5.9,SNR=3.3						
PDAR				LR	LR	20 45 04.0	
	comp=Z,27nm,18.5s,baz=138,slow=37						
PDAR	**Pinedale Array**	**64.97**	**332**	*e*P	**P**	**20 15 37.0**	**-0.9**
PDAR				pP	**pP**	**20 16 00.8**	**+1.0**
BW06	**Boulder Array**	**64.98**	**332**	P	**P**	**20 15 37.5**	**-0.4**
	baz=141						
BW06	**Boulder Array**	**64.98**	**332**	*e*P	**P**	**20 15 36.2**	**-1.8**
CWC	**Cottonwood Cre**	**64.98**	**322**	P	**P**	**20 15 38.3**	**+0.3**
	baz=132						
PKM	**Mcpherson Peak**	**65.05**	**319**	P	**P**	**20 15 39.0**	**+0.5**
	baz=130						
VES	**Vestal, Richgr**	**65.20**	**320**	P	**P**	**20 15 39.8**	**+0.5**
	baz=130,SNR=5.6						

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MDND  Maddock          65.34 341  P        P         20 15 39.9  0.0
      baz=152
HVU   Hansel Valley    65.78 329 eP        P         20 15 43.2 +0.2
      comp=Z,24nm,1.3s
HVU   Hansel Valley    65.78 329 eP        P         20 15 43.2 +0.2
HVU                               pmax     pmax
      comp=Z,24nm,1.3s
REDW  Red Top Meadow   66.04 331 eP        P         20 15 45.6 +0.8
      comp=Z,23nm,1.5s
LOHW  Long Hollow      66.11 332 eP        P         20 15 45.3  0.0
      comp=Z,4.5nm,0.9s
TPAW  Teton Pass       66.18 331 eP        P         20 15 45.9 +0.2
      comp=Z,4.8nm,0.8s
MOOW  Moose Ponds      66.28 332 eP        P         20 15 46.7 +0.3
      comp=Z,5.6nm,0.9s
OMMB  Old Mammoth Mi   66.31 322 eP        P         20 15 47.3 +0.6
      comp=Z,15nm,1.0s
FXWY  Fox Creek        66.33 331 eP        P         20 15 46.7 +0.1
      comp=Z,8.4nm,1.0s
NV11  Mina Array Sit   66.35 323 eP        P         20 15 47.3 +0.5
      comp=Z,0.6nm,1.2s
NV01  Mina Array Sit   66.43 323 eP        P         20 15 47.5 +0.1
NVAR  Mina Array Bea   66.43 323  P        P         20 15 47.6 +0.2
      comp=Z,2.9nm,0.9s,baz=143,slow=6.8,SNR=16
NVAR                              pP       pP        20 16 10.8 +1.4
      comp=Z,1.5nm,0.8s,baz=141,slow=6.6,SNR=3.6
ULM   Lac du Bonnet    66.44 345  P        P         20 15 45.9 -0.9
      comp=Z,12nm,0.7s,baz=147,slow=6.4,SNR=17
ULM                               pP       pP        20 16 09.1 +0.2
      comp=Z,12nm,1.0s,baz=150,slow=6.1,SNR=5.2
ULM   Lac du Bonnet    66.44 345 eP        P         20 15 46.0 -0.9
      comp=Z,14nm,0.7s
ULM                               pP       pP        20 16 09.1 +0.2
ULM   Lac du Bonnet    66.44 345 eP        P         20 15 46.0 -0.9
ULM                               *PP      pP        20 16 09.1 +0.2
ULM                               pmax     pmax
      comp=Z,14nm,0.7s
IMW   Indian Meadow    66.49 332 eP        P         20 15 47.7  0.0
      comp=Z,19nm,1.2s
FLWY  Flagg Ranch      66.52 332 eP        P         20 15 48.6 +0.8
      comp=Z,45nm,1.3s
RLMT  Red Lodge        66.69 333  P        P         20 15 49.0 +0.1
      baz=142,SNR=5.0
RLMT  Red Lodge        66.69 333 eP        P         20 15 49.2 +0.3
      comp=Z,19nm,1.1s
LAO   LASA Array       66.69 336  P        P         20 15 48.0 -0.7
      baz=146
LAO   LASA Array       66.69 336 eP        P         20 15 47.8 -0.8
      comp=Z,16nm,1.0s
RYN   Ryan             66.69 323 eP        P         20 15 49.7 +0.8
      comp=Z,6.6nm,1.1s
YPP   Pitchstone Pla   66.71 332 eP        P         20 15 50.8 +1.6
      comp=Z,11nm,1.4s
KVN   Kaiserville      66.73 324 eP        P         20 15 49.5 +0.3
      comp=Z,9.2nm,1.2s
KVN   Kaiserville      66.73 324 eP        P         20 15 49.5 +0.3
KVN                               pmax     pmax
      comp=Z,9.0nm,1.2s
WAKR  Walker           67.15 322 eP        P         20 15 53.1 +1.1
      comp=Z,9.2nm,1.0s
YERR  Yerington        67.35 323 eP        P         20 15 54.1 +0.9
      comp=Z,16nm,1.0s
GCMT  Greycliff        67.39 334 eP        P         20 15 53.6 +0.4
DGMT  Dagmar           67.42 339  P        P         20 15 53.9 +0.7
      baz=148,SNR=6.4
DGMT  Dagmar           67.42 339 eP        P         20 15 54.1 +1.0
      comp=Z,56nm,1.3s
PNTR  Pine Nut         67.63 323 eP        P         20 15 56.2 +1.2
      comp=Z,15nm,0.9s
VCNR  Virginia City    67.79 323 eP        P         20 15 57.0 +1.1
      comp=Z,15nm,1.0s
PAHR  Pah Rah Range    67.91 323 eP        P         20 15 57.3 +0.7
      comp=Z,26nm,1.0s
HLID  Hailey           67.91 329  P        P         20 15 56.7 +0.2
      baz=137,SNR=8.5
HLID  Hailey           67.91 329 eP        P         20 15 57.1 +0.5
      comp=Z,12nm,1.3s
MCMT  McKenzie Canyo   68.09 331 eP        P         20 15 58.6 +0.9
BOZ   Bozeman (W)      68.11 332  P        P         20 15 57.9 +0.2
      baz=140,SNR=10
BOZ   Bozeman (W)      68.11 332 eP        P         20 15 58.2 +0.5
      comp=Z,14nm,1.0s
BOZ   Bozeman (W)      68.11 332 eP        P         20 15 58.2 +0.5
BOZ                               pmax     pmax
      comp=Z,14nm,1.0s
AFDM  Forest Hills D   68.35 322 eP        P         20 15 59.5 +0.3
      comp=Z,5.0nm,1.0s
SCHQ  Schefferville    68.36   4  P        P         20 15 59.1 +0.2
      comp=Z,13nm,0.6s,baz=196,slow=5.1,SNR=6.9
SCHQ                              LR       LR        20 47 01.7
      comp=Z,22nm,21.8s,baz=202,slow=37
SCHQ  Schefferville    68.36   4 eP        P         20 15 59.2 +0.2
      comp=Z,17nm,0.8s
DLMT  Dillon           68.37 332 eP        P         20 16 00.0 +0.6
      comp=Z,16nm,1.3s
MFID  Camas Ranch      68.52 328 eP        P         20 16 00.8 +0.5
      comp=Z,35nm,1.0s
LRM   Limekiln Ridge   68.65 332 eP        P         20 16 01.7 +0.4
ORV   Oroville         69.05 322 eP        P         20 16 04.7 +1.1
      comp=Z,26nm,0.9s
ORV   Oroville         69.05 322 eP        P         20 16 04.7 +1.1
ORV                               pmax     pmax
      comp=Z,26nm,0.9s
EGMT  Eagleton         69.19 335  P        P         20 16 04.4 +0.1
      baz=142,SNR=10
EGMT  Eagleton         69.19 335 eP        P         20 16 04.6 +0.3
      comp=Z,25nm,0.9s
WVOR  Wild Horse Val   69.31 326 eP        P         20 16 05.6 +0.3
      comp=Z,8.6nm,1.1s
WVOR  Wild Horse Val   69.31 326 eP        P         20 16 05.6 +0.3
WVOR                              pmax     pmax
      comp=Z,9.0nm,1.1s
O03D  Paynes Creek     69.70 323  P        P         20 16 07.2 -0.4
      baz=130
J08A  Circle Bar Ran   69.86 327 eP        P         20 16 08.8 +0.3
      comp=Z,5.9nm,0.9s
MOD   Modoc Plateau    69.88 325 eP        P         20 16 09.1 +0.3
      comp=Z,24nm,0.9s
MSO   Missoula         70.09 332  P        P         20 16 10.2 +0.3
      baz=138,SNR=17
MSO   Missoula         70.09 332 eP        P         20 16 10.4 +0.5
      comp=Z,23nm,1.1s
BMO   Blue Mountains   70.28 329 eP        P         20 16 11.2 +0.1
      comp=Z,7.8nm,0.9s
BMO   Blue Mountains   70.28 329 eP        P         20 16 11.3 +0.1
BMO                               pmax     pmax
      comp=Z,8.0nm,0.9s
M04C  Macdoel          70.67 324  P        P         20 16 13.7 +0.1
      baz=130,SNR=6.0
K05A  Summer Lake      70.75 325 eP        P         20 16 15.2 +1.1
      comp=Z,39nm,1.5s
I07A  Izee             70.90 327 eP        P         20 16 15.6 +0.7
      comp=Z,26nm,1.1s
JTMT  Jette            70.93 332 eP        P         20 16 16.0 +1.0
      comp=Z,20nm,1.2s
M02C  Callahan         71.02 323  P        P         20 16 15.0 -0.7
      baz=129
F10A  Beach Ranch, E   71.03 329 eP        P         20 16 16.1 +0.5
      comp=Z,10nm,0.8s
YBH   Yreka Blue Hor   71.14 323  P        P         20 16 15.1 -1.3
      comp=Z,7.4nm,0.8s,baz=87,slow=6.5,SNR=14
YBH                               LR       LR        20 48 15.8
      comp=Z,32nm,18.6s,baz=146,slow=36
YBH   Yreka Blue Hor   71.14 323 eP        P         20 16 15.7 -0.7
      comp=Z,9.9nm,0.9s
DBIC  Dimbokro         71.24  78  P        P         20 16 16.7 -0.7
      comp=Z,7.6nm,0.8s,baz=219,slow=3.0,SNR=5.1
DBIC                              LR       LR        20 47 07.6
      comp=Z,34nm,18.4s,baz=342,slow=35
SNAA  Sanae            71.24 162  P        P         20 16 16.8 +0.3
      comp=Z,4.7nm,0.8s,baz=288,slow=6.6,SNR=13
SNAA                              pP       pP        20 16 39.1 +0.4
      comp=Z,2.9nm,0.8s,baz=321,slow=2.9,SNR=3.9
SNAA                              LR       LR        20 45 41.6
      comp=Z,36nm,20.4s,baz=221,slow=34
SNAA  Sanae            71.24 162 eP        P         20 16 15.5 -1.0
      comp=Z,5.4nm,0.8s
SNAA                              pP       pP        20 16 39.1 +0.4
SNAA  Sanae            71.24 162 eP        P         20 16 15.5 -1.0
SNAA                              *PP      pP        20 16 39.1 +0.4
SNAA                              pmax     pmax
      comp=Z,5.0nm,0.8s
J05D  Fort Rock, OR    71.31 325  P        P         20 16 17.7 +0.2
      baz=131,SNR=8.0
G08A  Pilot Rock       71.43 328 eP        P         20 16 18.9 +0.7
      comp=Z,12nm,0.9s
PINE  Pine Mountain    71.48 326 eP        P         20 16 19.4 +0.9
      comp=Z,25nm,0.9s
WALA  Waterton Lakes   71.74 333 eP        P         20 16 20.1 +0.2
J04D  Umpqua Nationa   71.76 325  P        P         20 16 20.9 +0.6
      baz=130
L02D  Cave Junction,   71.93 323  P        P         20 16 21.5 +0.5
      baz=129
I05D  Terrebonne, OR   72.05 326  P        P         20 16 22.6 +0.8
      baz=131,SNR=9.4
FFC   Flin Flon        72.11 343 eP        P         20 16 21.7  0.0
      comp=Z,7.2nm,0.8s
FFC   Flin Flon        72.11 343 eP        P         20 16 21.7  0.0
FFC                               pmax     pmax
      comp=Z,7.0nm,0.8s
I04A  Tendick Farm,    72.29 325  P        P         20 16 23.2  0.0
      baz=130
G05D  Wamic, OR        72.63 327  P        P         20 16 25.6 +0.4
      baz=131
H04A  Detroit Lake     72.74 326 eP        P         20 16 26.1 +0.3
      comp=Z,20nm,0.8s
I03D  Drain, OR        72.75 325  P        P         20 16 26.5 +0.7
      baz=129
LTY   Liberty          73.64 329 eP        P         20 16 31.9 +0.8
      comp=Z,14nm,1.1s
B08A  Colville Reser   73.73 330 eP        P         20 16 32.0 +0.5
      comp=Z,13nm,0.9s
D05A  Enumclaw         74.27 328 eP        P         20 16 35.4 +0.8
      comp=Z,42nm,0.8s
KOWA  Kowa             74.39  71  P        P         20 16 36.3 +0.2
      comp=Z,16nm,0.7s,baz=251,slow=8.2,SNR=24
KOWA  Kowa             74.39  71 eP        P         20 16 36.8 +0.7
      comp=Z,16nm,0.8s
B06A  Marblemount      74.89 329 eP        P         20 16 38.5 +0.3
      comp=Z,25nm,0.8s
B05A  Bryant           75.03 329  P        P         20 16 38.9 -0.1
      baz=131,SNR=7.0
QSPA  South Pole Qui   76.60 180  P        P         20 16 47.3 -0.7
      comp=Z,1.4nm,0.7s,baz=138,slow=5.4,SNR=5.1
FRB   Frobisher Bay    77.16   2  LR       LR        20 49 44.4
      comp=Z,28nm,21.3s,baz=186,slow=35
IVI   Ivigtut          77.22  12 eP        P         20 16 51.6 +0.4
      comp=Z,47nm,1.1s
MORF  Marmelete        79.25  47 eP        P         20 17 05.5 +2.5
      comp=Z,51nm,1.3s
TORD  Torodi Ar. Bea   79.27  74  P        P         20 17 02.7 -0.8
      comp=Z,24nm,0.9s,baz=278,slow=5.1
PCVE  Castro Verde     79.83  47 eP        P         20 17 08.4 +2.3
      comp=Z,27nm,1.4s
MDT   Midelt           80.41  53  P        P         20 17 10.7 +1.2
      comp=Z,6.3nm,1.0s,baz=276,slow=4.6,SNR=5.4
MDT                               LR       LR        20 52 25.3
      comp=Z,26nm,18.2s,baz=160,slow=35
PTOM  Tomar            80.44  45 eP        P         20 17 11.1 +1.8
      comp=Z,32nm,1.1s
MVO   Moncorvo         82.06  44 eP        P         20 17 19.6 +1.6
      comp=Z,24nm,1.1s
YKA   Yellowknife Ar   82.23 342  P        P         20 17 17.8 -0.4
      comp=Z,15nm,0.8s,baz=137,slow=5.5,SNR=66
YKA                               pP       pP        20 17 42.6 +1.5
      comp=Z,3.1nm,0.8s,baz=137,slow=6.0,SNR=3.0
PBRG  Braganca         82.54  44 eP        P         20 17 21.3 +0.9
      comp=Z,33nm,1.6s
PAB   San Pablo        83.25  47 eP        P         20 17 26.1 +1.9
      comp=Z,17nm,0.9s
ESDC  Sonseca Array    83.58  47  P        P         20 17 27.5 +1.6
      comp=Z,10nm,0.8s,baz=255,slow=5.1,SNR=46
ESLA  Sonseca Array    83.58  47 eP        P         20 17 27.9 +2.0
      comp=Z,16nm,1.0s
ES19  SONSECA Array    83.64  47 eP        P         20 17 27.4 +1.3
VNDA  Vanda            83.83 190  P        P         20 17 25.3 -1.1
      comp=Z,0.7nm,0.8s,baz=122,slow=6.5,SNR=4.3
VNDA                              LR       LR        20 48 32.6
      comp=Z,46nm,21.4s,baz=54,slow=31
DLBC  Dease Lake       85.08 334 eP        P         20 17 34.0 +1.0
      comp=Z,16nm,0.9s
TAM   Tamanrasset      85.53  65 eP        P         20 17 37.5 +1.4
      comp=Z,11nm,0.9s
TAM   Tamanrasset      85.53  65 eP        P         20 17 37.5 +1.4
TAM                               pmax     pmax
      comp=Z,11nm,0.9s
SUMG  Summit           89.01  10 eP        P         20 17 52.7 +0.5
      comp=Z,39nm,1.1s
SUMG  Summit           89.01  10 eP        P         20 17 52.7 +0.5
SUMG                              pmax     pmax
      comp=Z,39nm,1.1s
RES   Resolute Bay     89.05 354 eP        P         20 17 52.7 +0.9
      comp=Z,14nm,0.8s
RES   Resolute Bay     89.05 354 eP        P         20 17 52.7 +0.9
RES                               pmax     pmax
      comp=Z,14nm,0.8s
TULEG Thule            89.96   1 eP        P         20 17 57.1 +1.1
      comp=Z,23nm,1.0s
EKA   Eskdalemuir Ar   90.34  33  P        P         20 17 58.3 +0.1
      comp=Z,1.6nm,0.8s,baz=228,slow=3.7,SNR=5.1
DAWY  Dawson           91.89 336 eP        P         20 18 05.1 -0.2
      comp=Z,5.3nm,0.8s
INK   Inuvik           91.96 341 eP        P         20 18 05.6 +0.2
      comp=Z,17nm,1.1s
INK   Inuvik           91.96 341 eP        P         20 18 05.6 +0.2
INK                               pmax     pmax
      comp=Z,17nm,1.1s
KEST  Kesra            92.27  54  P        P         20 18 08.1 +0.3
      comp=Z,6.7nm,1.0s,baz=297,slow=9.0,SNR=4.5
EGAK  Eagle            92.90 337 eP        P         20 18 09.8 -0.1
      comp=Z,7.1nm,0.9s
MAW   Mawson           93.19 165  P        P         20 18 10.8 -0.5
      comp=Z,4.0nm,0.7s,baz=184,slow=17,SNR=4.9
JMIC  Jan Mayen        94.95  17  LR       LR        20 59 53.8
      comp=Z,19nm,20.2s,baz=61,slow=35
ILAR  Eielson Array    95.15 336  P        P         20 18 19.6 -0.6
      comp=Z,1.2nm,0.8s,baz=125,slow=2.1,SNR=15
ILB   Eielson Array    95.15 336 eP        P         20 18 20.0 -0.2
DAVOX Davos/Dischmat   95.42  43  LR       LR        20 57 04.7
      comp=Z,14nm,20.1s,baz=266,slow=33
CCB   Clear Creek Bu   95.47 335 eP        P         20 18 21.3 -0.3
      comp=Z,3.9nm,0.8s
COLA  College          95.57 336 eP        P         20 18 22.0 -0.1
      comp=Z,12nm,0.8s
COLA  College          95.57 336 eP        P         20 18 22.0 -0.1
COLA                              pmax     pmax
      comp=Z,12nm,0.8s
MDM   Murphy Dome      95.75 336 eP        P         20 18 22.4 -0.6
      comp=Z,11nm,0.8s
SKT   Skwentna         96.22 332 eP        P         20 18 24.8 -0.4
      comp=Z,8.2nm,0.9s
BPAW  Bear Paw Mtn.    96.61 334 eP        P         20 18 26.3 -0.6
      comp=Z,12nm,1.2s
CAST  Castle Rocks     96.88 334 eP        P         20 18 27.3 -0.8
      comp=Z,6.7nm,0.8s
TOLK  Toolik Lake Re   97.44 339  P        P         20 18 30.2 -0.4
      baz=108
GERES GERESS Array B   98.38  42  P        Pdif      20 18 36.0 +0.7
      comp=Z,1.3nm,0.8s,baz=255,slow=2.6,SNR=8.5
GERES                             LR       LR        20 59 41.8
      comp=Z,12nm,19.8s,baz=274,slow=33
CLL   Collm            98.41  39 ePdif     Pdif      20 18 36.0 +0.8
CLL   Collm            98.41  39 eP        Pdif      20 18 36.0 +0.8
BRG   Berggiesshubel   98.91  40 ePDIFF    Pdif      20 18 38.0 +0.5
      comp=Z,7.4nm,1.4s
BRG   Berggiesshubel   98.91  40 eP        Pdif      20 18 38.0 +0.5
BRG                               pmax     pmax
      comp=Z,7.0nm,1.4s
NOA   NORSAR Array B   99.29  29  LR       LR        21 02 59.5
      comp=Z,8.7nm,19.1s,baz=265,slow=35
KBZ   Khabaz          118.43  47  PKP      PKPdf     20 23 45.1 +0.5
      comp=Z,2.4nm,0.8s,baz=300,slow=3.2,SNR=4.1
SEY   Seymchan        121.03 337⇑iPKIKP    PKPdf     20 23 48.8 -0.3
ARU   Arti            123.85  30 i PKIKP   PKPdf     20 23 54.7  0.0
ARU                                                  20 25 39.6
ARU                                                  20 30 59.8
ARU                               SS       SS        20 42 18.2 -2.6
AKTO  Aktyubinsk      126.36  36  PKP      PKPdf     20 23 59.9 +0.2
      comp=Z,3.7nm,0.7s,baz=300,slow=2.5,SNR=11
BRVK  Borovoye        131.33  28⇑iPKIKP    PKPdf     20 24 10.1 +1.0
BVAR  Borovoye Array  131.40  28  PKP      PKPdf     20 24 10.3 +1.1
      comp=Z,2.3nm,0.8s,baz=255,slow=4.3,SNR=13
ASAR  Alice Springs   134.21 216  PKP      PKPdf     20 24 14.8 -0.8
      comp=Z,1.3nm,0.7s,baz=130,slow=2.2,SNR=20
NVS   Novosibirsk     135.03  19 ePKIKP    PKPdf     20 24 13.9 -2.1
ZALV  Zalesovo Beam   136.28  18  PKP      PKPdf     20 24 18.8 +0.5
      comp=Z,7.8nm,0.8s,baz=259,slow=0.8,SNR=12
KURK  Kurchatov       136.65  25  PKP      PKPdf     20 24 19.8 +0.7
KURK  Kurchatov       136.65  25c iPKIKP   PKPdf     20 24 20.2 +1.1
KURBB Kurchatov Arra  136.69  26  PKP      PKPdf     20 24 19.8 +0.6
      comp=Z,4.3nm,0.8s,baz=313,slow=2.6,SNR=17
WRA   Warramunga Arr  136.76 220  PKP      PKPdf     20 24 19.9 -0.5
      comp=Z,4.1nm,1.0s,baz=145,slow=1.9,SNR=15
KLR   Kul'dur         138.71 335⇑iPKIKP    PKPdf     20 24 23.3 +0.3
DGZ   Jazzator, Alta  140.77  19 ePKIKP    PKPdf     20 24 28.3 +1.4
MKAR  Makanchi Array  141.22  26  PKhKP    PKPpre    20 24 21.8
      comp=Z,0.8nm,0.7s,baz=324,slow=3.0,SNR=7.0
MKAR                              PKP      PKPdf     20 24 27.2 -0.5
      comp=Z,1.5nm,0.6s,baz=334,slow=1.9,SNR=13
KSH   Kashi           142.84  40 ePKP      PKPdf     20 24 28.9 -2.0
KSH                              ePP       PP        20 27 44.5 +4.3
MAJO  Matsushiro      143.40 314dePKIKP    PKPab     20 24 28.2 +0.1
MAT   Matsushiro      143.40 314  PKP      PKPab     20 24 28.1  0.0
MJAR  Matsushiro Arr  143.40 314  PKhKP    PKPpre    20 24 28.2
      comp=Z,6.7nm,0.9s,baz=54,slow=0.8,SNR=20
SONM  Songino Array   145.82 360  PKPbc    PKPab     20 24 37.1 +0.1
      comp=Z,5.7nm,0.7s,baz=329,slow=1.8,SNR=41
SONM                              pPKPbc   pPKPab    20 25 01.4 +1.0
      comp=Z,7.8nm,0.9s,baz=332,slow=2.6,SNR=8.5
WMQ   Urumqi          145.87  24 ePKPbc    PKPab     20 24 37.8 +0.6
WMQ                               sPKP               20 25 03.1
WMQ                               LR       LR
      comp=Z,99nm,22.5s
WMQ                               LR       LR
      comp=Z,75nm,26.9s
WMQ                               LR       LR
      comp=Z,63nm,24.7s
KSRS  Korea Array     149.36 325  PKP      PKPdf     20 24 41.2 -0.6
      comp=Z,3.3nm,1.0s,baz=12,slow=1.7,SNR=9.3
KSRS                              PKPbc    PKPbc     20 24 46.8 +0.5
      comp=Z,5.6nm,0.9s,baz=349,slow=3.1,SNR=8.9
KSAR  Wonju Array Be  149.39 325  PKP      PKPdf     20 24 41.2 -0.7
KSAR                              PKPbc    PKPbc     20 24 46.8 +0.4
HHC   Hu-ho-hao-te    152.41 351 ePKPbc    PKPdf     20 24 42.6 -4.0
HHC                               SKKS               20 35 14.9
HHC                               SS       SS        20 48 01.3 +4.0
HHC                               AMB      AMB
      comp=Z,43nm,8.3s
HHC                               LR       LR
      comp=Z,90nm,18.6s
HHC                               LR       LR
      comp=Z,120nm,16.3s
HHC                               LR       LR
      comp=Z,110nm,17.7s
GTA   Gaotai          153.61  11 ⇓PKPbc    PKPdf     20 24 48.6 +0.2
GTA                               pPKP     PKPab     20 25 08.9  0.0
GTA                               PKPab    pPKPdf    20 25 12.8 +0.3
GTA                               sPKP               20 25 15.4
GTA                               AMB      AMB
      comp=Z,64nm,10.8s
GTA                               LR       LR
      comp=Z,85nm,20.9s
GTA                               LR       LR
      comp=Z,90nm,18.1s
GTA                               LR       LR
      comp=Z,72nm,19.0s
LZH   Lanzhou         157.45   5 ePKP      PKPdf     20 24 53.1 -0.6
LZH                               pPKP     pPKPdf    20 25 13.5 -4.3
LZH                               sPKP               20 25 21.3
LZH                               PKPab    sPKPdf    20 25 28.3 +1.5
LZH                               PKS      PKSdf     20 28 30.6 +2.9
LZH                               LR       LR
      comp=Z,170nm,18.2s
LZH                               LR       LR
      comp=Z,170nm,18.0s
LZH                               LR       LR
      comp=Z,200nm,20.1s
NJ2   Nanjing         158.28 330 ePKP      PKPdf     20 24 55.8 +1.2
CD2   Chengdu         162.56   7  PKP      PKPdf     20 24 57.5 -1.9
GYA   Guiyang         167.15 358 ePKP      PKPdf     20 25 02.0 -1.6
GYA                               sPKP               20 25 30.3
GYA                               PKPab    PKPab     20 26 09.8 +1.8
GYA                               PKS      PKSdf     20 28 32.6 -3.9
GYA                               PP       PP        20 29 58.8 +3.9
GYA                               AMB      AMB
      comp=Z,120nm,8.1s
KMI   Kunming         168.01  16  PKP      PKPdf     20 25 03.1 -1.3
CMAR  Chiang Mai Arr  171.41  54  PKP      PKPdf     20 25 06.5 +0.3
      comp=Z,2.4nm,0.8s,baz=284,slow=1.7,SNR=24
CMAR                              PKPab    PKPab     20 26 26.9 -0.4
      comp=Z,1.2nm,0.9s,baz=293,slow=5.2,SNR=7.1
```

JMA 15 20:12:28.6±0.2, 28°.16N×127°.12E, h194km±4km, M3.8, Northwest of Ryukyu Islands

```
Code  Station Name        Δ°  AZ°    Phase ID          Time      Res
                                    Op       ISC      h  m  s    ISC
JIH   Iheya              1.35 146    P       Pn       20 13 00.8 +0.3
JIH                                 eS       Sn       20 13 25.6 +0.5
JOKE  Okinoerabujima     1.51 121    P       Pn       20 13 02.0 +0.1
JOKE                                eS       Sn       20 13 27.5 -0.2
JAGN  Aguni-jima         1.57 176    P       Pn       20 13 02.5 +0.1
JAGN                                eS       Sn       20 13 28.9 +0.2
JYRO  Yoronjima          1.64 133    P       Pn       20 13 03.1 +0.1
JYRO                                eS       Sn       20 13 28.9 -0.8
JTK   Tokunoshima        1.66 103    P       Pn       20 13 03.3  0.0
JTK                                 eS       Sn       20 13 30.2 +0.1
JOW   Kunigami           1.67 142    P       Pn       20 13 03.6 +0.2
JOW                                 eS       Sn       20 13 30.0 -0.4
JAMN  Amaminishikomi     1.82  87    P       Pn       20 13 04.7  0.0
JAMN                                 S       Sn       20 13 32.9 +0.1
JNTH  Nagotoyohara       1.82 154    P       Pn       20 13 05.0 +0.1
JNTH                                eS       Sn       20 13 32.2 -0.8
JKE   Kume jima 2        1.85 189    P       Pn       20 13 05.0 -0.2
JTAJ  Takarajima         2.08  61    P       Pn       20 13 07.9 +0.4
JJT3  Tamagusuku3        2.09 163    P       Pn       20 13 08.5 +0.8
JJT3                                eS       Sn       20 13 38.3 +0.2
JAM   Amami Oshima       2.21  83    P       Pn       20 13 09.0 +0.2
JAM                                 eS       Sn       20 13 40.8 +0.7
JZK   Kikaishima         2.52  86    P       Pn       20 13 13.5 +1.2
JZK                                 eS       Sn       20 13 46.6 +0.2
JYAK  Yakushimahirau     3.62  54    P       Pn       20 13 25.6 +0.3
JYAK                                eS       Sn       20 14 08.2 -1.7
JTN   Tanegashima 3      4.18  53    P       Pn       20 13 31.6 -0.9
JTN                                 eS       Sn       20 14 20.6 -2.1
JMZ   Minamidaito 2      4.34 122    P       Pn       20 13 34.3 -0.1
JMZ                                 eS       Sn       20 14 24.0 -2.1
JTZ   Takazaki           5.07  42    P       Pn       20 13 43.3 -0.4
```

MEX 15 20:13:13.9±1.4, 14°.57N×94°.10W, h17km±39km, MD4.1, Off coast of Chiapas

```
Code  Station Name        Δ°  AZ°    Phase ID          Time      Res
                                    Op       ISC      h  m  s    ISC
PCIG                     1.42  37   eP       Pn       20 13 34.7 -4.3
PCIG                                eS       Sn       20 13 51.7 -5.6
HUIG  Huatulco           2.28 302   eP       Pn       20 13 47.4 -3.4
HUIG                                i S      Sn       20 14 14.3 -4.2
TGIG                     2.39  23   eP       Pn       20 13 50.4 -2.1
TGIG                                i S      Sn       20 14 18.1 -3.4
CCIG  Comitan            2.55  48   eP       Pn       20 13 52.7 -2.0
CCIG                                i S      Sn       20 14 20.7 -4.8
```

MEX 15 20:29:38.0±0.3, 17°.95N×101°.53W, h39km±9km, MD3.5, Near coast of Guerrero

```
Code  Station Name        Δ°  AZ°    Phase ID          Time      Res
                                    Op       ISC      h  m  s    ISC
ZIIG  Zihuatanejo        0.34 169   eP       Pn       20 29 45.2 -1.5
ZIIG                                eS       Sn       20 29 51.0 -2.0
ARIG  Puente Sto Nin     1.18  73   eP       Pn       20 29 56.4 -1.6
ARIG                                eS       Sn       20 30 10.4 -2.4
CAIG  El Cayaco          1.50 126   eP       Pn       20 30 01.4 -1.0
CAIG                                i S      Sn       20 30 18.4 -2.4
MOIG  Morelia            1.75  11   i P      Pn       20 30 04.1 -2.1
MOIG                                eS       Sn       20 30 25.7 -1.7
MMIG  Aquila             1.76 281   i P      Pn       20 30 04.7 -1.2
MMIG                                i S      Sn       20 30 24.6 -2.5
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*DDA **15** 20:34:32.5, 37°.73N×29°.27E, h7km, Ml2.6*
*ISCJB **15** 20:34:42.9±0.7, 37°.66N±0°.05×29°.29E±0°.04, h12km, Error ellipse: s-maj=7.4km s-min=4.5km az=174.9*
*ISK **15** 20:34:42.6, 37°.69N×29°.30E, h8km, ML2.8/3*
*CSEM **15** 20:34:43.1±0.2, 37°.68N×29°.29E, h10km, ML2.6, Error ellipse: s-maj=5.4km s-min=3.5km az=161.0*

ISC 15 20:34:42.9±0.9, 37°.66N±0°.04×29°.33E±0°.03, h12km, n26, σ1s.56/28, Turkey

```
Code  Station Name        Δ°  AZ°    Phase ID          Time      Res
                                    Op       ISC      h  m  s    ISC
DNZL  Cakiroluk          0.23 278   i P      Pg       20 34 36.7  -11
DENT  Denizli            0.25 292    PG      Pg       20 34 47.1 -1.1
DENT                                 SG      Sg       20 34 51.4 -0.3
DENT  Denizli            0.25 292   ePg      Pg       20 34 47.1 -1.1
```

DENT				eSg	Sg	20 34 51.4	-0.3
TAVA	DENIZLI_Tavas	0.38	240	i P	Pg	20 34 40.3	-10
GOLH	Golhisar	0.46	156	i P	Pg	20 34 41.4	-11
KZIL	AFYON_Kizioren	0.88	47	i P	Pg	20 34 49.2	-11
KZIL				i S	Sb	20 35 12.5	+0.7
ISP	Isparta	0.96	80	PG	Pg	20 35 01.8	+0.4
ISP				SG	Sn	20 35 16.0	0.0
ISP	Isparta	0.96	80	ePg	Pg	20 35 01.8	+0.4
ISP				eSg	Sn	20 35 16.0	0.0
TURN	Turunc	0.98	217	PN	Pn	20 35 06.7	+4.3
TURN	Turunc	0.98	217	ePn	Pn	20 35 06.7	+4.3
YER	Yerkesik	0.98	238	PG	Pg	20 35 01.6	-0.2
YER	Yerkesik	0.98	238	ePg	Pg	20 35 01.6	-0.2
KULA	Kula-Manisa	1.00	329	PG	Pb	20 35 01.9	-0.3
KULA				SG	Sb	20 35 15.3	-0.1
KULA	Kula-Manisa	1.00	329	ePg	Pb	20 35 01.9	-0.3
KULA				eSg	Sb	20 35 15.3	-0.1
AYDN	Tasoluk	1.15	270	i P	Pb	20 34 53.1	-12
AYDB	Zeytinkoy-Aydi	1.17	285	PN	Pb	20 35 04.7	-0.5
AYDB	Zeytinkoy-Aydi	1.17	285	ePn	Pb	20 35 04.7	-0.5
MLSB	Milas	1.29	254	PN	Pg	20 35 07.5	-0.1
MLSB	Milas	1.29	254	ePn	Pg	20 35 07.5	-0.1
GEDZ	Gediz	1.38	3	PN	Pb	20 35 08.7	0.0
GEDZ	Gediz	1.38	3	ePn	Pb	20 35 08.7	0.0
AKAS	Kas	1.44	171	i P	Pn	20 35 04.8	-4.2
BODT	Bodrum	1.71	250	PN	Pb	20 35 13.4	-0.9
BODT	Bodrum	1.71	250	ePn	Pb	20 35 13.4	-0.9
TVSB	Tavsanli	1.79	3	PN	Pn	20 35 14.1	+0.4
TVSB	Tavsanli	1.79	3	ePn	Pn	20 35 14.1	+0.4

IDC 15 20:38:12.4±2.8, 22°.68S×170°.50E, h0^{km}, mb3.4/3, mb1 3.7/4, mb1mx3.5/42, mbtmp3.4/4, ML3.6/1, Error ellipse: s-maj=133.0km s-min=34.8km az=164.0, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.80	278	Pn	Pn	20 39 13.2	+0.9
	4.1nm,0.3s,baz=126,slow=15,SNR=108						
DZM				Sn	Sn	20 39 52.7	-5.1
	5.4nm,0.3s,baz=104,slow=19,SNR=9.3						
ASAR	Alice Springs	33.60	261	P	P	20 44 55.6	+0.9
	0.3nm,0.9s,baz=94,slow=9.9,SNR=4.2						
WRA	Warramunga Arr	33.75	268	P	P	20 44 55.2	-0.8
	0.3nm,0.3s,baz=100,slow=9.4,SNR=14						
CMAR	Chiang Mai Arr	80.98	294	P	P	20 50 28.7	-0.7
	0.3nm,0.6s,baz=148,slow=4.0,SNR=2.6						
EKA	Eskdalemuir Ar	147.05	353	PKPbc	PKPbc	20 57 55.9	-0.9
	0.6nm,0.5s,baz=3.9,slow=2.1,SNR=3.7						
GERES	GERESS Array B	148.06	331	PKPbc	PKPbc	20 58 00.3	+0.3
	0.7nm,0.7s,baz=54,slow=3.6,SNR=4.1						
DAVOX	Davos/Dischmat	151.31	332	PKPbc	PKPbc	20 58 07.9	-0.3
	1.0nm,0.5s,baz=63,slow=6.8,SNR=2.3						

JMA 15 21:04:53.5±0.1, 37°.12N×136°.30E, h11^{km}±2^{km}, M1.4, Near west coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JJH	Hakui	0.43	117	P	Pg	21 05 02.1	+0.1
JJH				S	Sg	21 05 08.4	+0.7

NIED ***15*** *21:21:00, 37°.70N×144°.10E, h5^{km}, Mw3.6 Best double couple: $M_0$2.98000×10^{14} NP1:ϕ_s11.00000°, δ24.00000°, λ-124.00000°. NP2:ϕ_s228.00000°, δ71.00000°, λ-76.00000°.*

IDC ***15*** *21:21:12.2±0.8, 37°.47N×144°.27E, h0^{km}, mb3.6/8, mb1 3.8/10, mb1mx3.6/61, mbtmp3.6/10, ML3.4/2, MS3.3/2, Ms1 3.3/2, ms1mx2.4/62, Error ellipse: s-maj=23.6km s-min=19.2km az=130.0*

ISCJB ***15*** *21:21:15.2±0.7, 37°.79N±0°.04×144°.20E±0°.05, h33^{km}, mb3.6/8, MS3.3/2, Error ellipse: s-maj=6.0km s-min=5.0km az=44.6*

JMA ***15*** *21:21:16.5±0.2, 37°.72N×144°.09E, h47^{km}, M3.8*

ISC 15 21:21:17.2±0.9, 37°.75N±0°.06×144°.18E±0°.07, h35^{km}, n32, σ1^{s}97/40, mb3.6/8, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIO	Ouri	2.34	288	P	Pn	21 21 53.1	-0.1
JIO				S	Sn	21 22 19.9	-0.8
OFUJ	Ofunato	2.38	305	P	Pn	21 21 53.6	-0.1
OFUJ				S	Sn	21 22 21.0	-0.6
JMK	Ichinoseki	2.62	298	P	Pn	21 21 57.3	+0.3
JMK				eS	Sn	21 22 27.4	-0.1
JOM	Ohasama	2.84	308	P	Pn	21 22 00.4	+0.3
JOM				eS	Sn	21 22 33.1	0.0
JFT	Otama	3.06	267	P	Pn	21 22 03.4	+0.3
JFT				eS	Sn	21 22 38.0	-0.5
JYK	Kaneyama	3.22	292	P	Pn	21 22 06.3	+1.0
JYK				S	Sn	21 22 42.8	+0.3
JANG	Nango	3.34	322	P	Pn	21 22 07.5	+0.5
JANG				S	Sn	21 22 44.4	-1.0
JOT	Ohata	4.36	327	eS	Sn	21 23 09.1	-1.4
JRY	Ryogami san	4.57	249	P	Pn	21 22 22.6	-1.3
JRY				S	Sn	21 23 11.8	-4.0
JKB	Kayabe	4.79	331	P	Pn	21 22 26.9	+0.1
JKB				S	Sn	21 23 19.0	-2.1
JCH	Churui	4.90	353	P	Pn	21 22 27.9	-0.5
JCH				S	Sn	21 23 21.4	-2.4
MJAR	Matsushiro Arr	4.92	258	Pn	Pn	21 22 28.9	+0.3
	1.4nm,0.3s,baz=89,slow=15,SNR=24						
MJAR				Sn	Sn	21 23 25.0	+0.7
	0.9nm,0.3s,baz=85,slow=13,SNR=6.1						
MAT	Matsushiro	4.92	258	P	Pn	21 22 29.8	+1.1
MAT				eS	Sn	21 23 23.7	-0.7
NEM2	Nemuro 2	5.74	11	P	Pn	21 22 37.5	-2.3
NEM2				S	Sn	21 23 39.6	-4.8
JHJ	Hachijo jima 2	5.85	219	Pn	Pn	21 22 36.5	-4.9
	3.9nm,0.3s,baz=255,slow=20,SNR=3.8						
JHJ				Sn	Sn	21 23 40.4	-6.9
	6.6nm,0.3s,baz=72,slow=20,SNR=3.3						
JTKR	Abashiri--Toko	6.22	358	P	Pn	21 22 46.2	-0.3
JTKR				S	Sn	21 23 53.2	-3.1
ASAJ	Asahikawa	6.47	350	Pn	Pn	21 22 49.6	-0.3
	1.4nm,0.3s,baz=203,slow=15,SNR=16						
ASAJ				Sn	Sn	21 24 02.4	-0.2
	0.8nm,0.3s,baz=37,slow=32,SNR=4.3						
H11N2	WAKE ISLAND Hy	26.70	126	T	T	21 54 30.5	
	baz=317,slow=74,SNR=5.8						
H11N1	WAKE ISLAND Hy	26.71	126	T	T	21 54 28.0	
	baz=317,slow=74,SNR=4.7						
H11N3	WAKE ISLAND Hy	26.72	126	T	T	21 54 36.4	
	baz=317,slow=74,SNR=3.6						
H11S1	WAKE ISLAND Hy	27.48	128	T	T	21 55 39.7	
	baz=320						
H11S3	WAKE ISLAND Hy	27.48	128	T	T	21 55 33.1	
	baz=320						
H11S2	WAKE ISLAND Hy	27.50	128	T	T	21 55 31.5	
	baz=320						
ZALV	Zalesovo Beam	43.07	312	P	P	21 29 15.5	+2.0
	0.3nm,0.4s,baz=114,slow=7.0,SNR=2.3						
MKAR	Makanchi Array	45.61	302	P	P	21 29 35.8	+1.9
	0.5nm,0.9s,baz=77,slow=11,SNR=4.4						
MKAR				LR	LR	21 50 06.0	
	comp=Z,32nm,18.0s,baz=180,slow=38						
KURBB	Kurchatov Arra	47.30	308	P	P	21 29 48.5	+1.4
	0.5nm,0.3s,baz=75,slow=8.7,SNR=2.5						
ILAR	Eielson Array	47.71	33	P	P	21 29 50.0	-0.1
	0.5nm,0.8s,baz=269,slow=6.8,SNR=5.9						
WRA	Warramunga Arr	58.12	191	P	P	21 31 05.6	-1.8
	1.9nm,0.8s,baz=12,slow=7.2,SNR=11						
AKTO	Aktyubinsk	59.83	312	LR	LR	21 56 54.4	
	comp=Z,22nm,18.3s,baz=154,slow=36						
ASAR	Alice Springs	61.85	191	P	P	21 31 31.3	-1.5
	0.6nm,0.9s,baz=9.8,slow=15,SNR=4.7						
NVAR	Mina Array Bea	72.79	55	P	P	21 32 44.3	+1.9
	0.4nm,0.6s,baz=301,slow=7.3,SNR=3.1						
PDAR	Pinedale Array	75.58	47	P	P	21 33 00.6	+1.9
	0.2nm,0.5s,baz=318,slow=5.3,SNR=3.0						

DJA 15 21:45:18.1±1.7, 4°S±7°×12°7E±1°1, h205^{km}±35^{km}, M4.3/7, mb4.7/4, mB4.8/3, MLv4.1/7, Mw(mB)4.1/3, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.58	65	P	Pn	21 45 53.4	+0.4
BNDI	Bandanaira	2.46	102	P	Pn	21 46 01.8	-0.1
LBMI	Labuha	3.35	0	P	Pn	21 46 12.2	0.0
KDI	Kendari	4.86	270	P	Pn	21 46 30.6	-0.3
SOEI	Soe	6.54	209	P	Pn	21 46 52.1	-0.5
	115nm,0.9s,2μm0.6nm						
MMRI	Maumere	6.95	228	P	Pn	21 46 47.5	-10
BATI	Baumata	7.23	211	P	Pn	21 47 01.4	-0.1
	60nm,0.6s,0.2nm						
EDFI	Ende, Flores	7.44	230	P	Pn	21 47 04.6	+0.3

IDC 15 21:47:18.1±2.4, 4°.54S×128°.91E, h0^{km}, mb3.8/1, mb1 3.5/3, mb1mx3.3/57, mbtmp3.4/3, ML3.1/2, Error ellipse: s-maj=190.3km s-min=29.4km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	16.20	161	Pn	Pn	21 51 08.9	+1.5
	0.1nm,0.3s,baz=344,slow=12,SNR=2.7						
ASAR	Alice Springs	19.62	166	P	P	21 51 47.6	-0.7
	0.1nm,0.3s,baz=348,slow=12,SNR=5.0						
MKAR	Makanchi Array	65.58	327	P	P	21 58 03.9	0.0
	0.5nm,0.4s,baz=123,slow=5.3,SNR=1.4						

NIED ***15*** *21:49:00, 44°.90N×142°.20E, h5^{km}, Mw4.1 Best double couple: $M_0$1.58000×10^{15} NP1:ϕ_s149.00000°, δ52.00000°, λ46.00000°. NP2:ϕ_s26.00000°, δ55.00000°, λ131.00000°.*

IDC ***15*** *21:49:44.5±0.5, 44°.92N×142°.02E, h0^{km}, mb3.9/17, mb1 4.1/18, mb1mx3.9/67, mbtmp4.0/18, ML3.6/1, MS3.3/11, Ms1 3.3/11, ms1mx3.0/58, Error ellipse: s-maj=16.3km s-min=8.4km az=62.0*

JMA ***15*** *21:49:46.6, 44°.84N×142°.15E, h0^{km}, M4.3 Broadband fault plane solution: P waves. NP1:ϕ_s359.00000°, δ75.00000°, λ90.00000°. NP2:ϕ_s179.00000°, δ15.00000°, λ90.00000°. Principal axes: T Plg60.0000°, Azm269.0000°; N Plg0.0000°, Azm179.0000°; P Plg30.0000°, Azm89.0000°;*

JMA Felt IV J1.

ISCJB ***15*** *21:49:47.1±0.5, 44°.89N±0°.03×142°.08E±0°.03, h25^{km}±3^{km}, mb4.1/23, MS3.4/6 Error ellipse: s-maj=4.5km s-min=3.5km az=14.2*

SKHL ***15*** *21:49:47.4±0.3, 44°.76N×141°.86E, h44^{km}±10^{km}, mb4.6/7*

MOS ***15*** *21:49:48.2±1.0, 44°.89N×142°.11E, h38^{km}, mb4.3/3, Error ellipse: s-maj=9.1km s-min=7.2km az=110.4*

NEIC ***15*** *21:49:50.6±0.7, 44°.92N×142°.09E, h42^{km}±7^{km}, mb4.5/5, Error ellipse: s-maj=7.5km s-min=6.3km az=116.0*

NEIC Recorded [4 JMA] in northern Hokkaido.

ISC 15 21:49:46.3±1.2, 44°.91N±0°.03×142°.11E±0°.03, h11^{km}±7^{km}, n93, σ1^{s}75/107, mb4.0/23, MS3.4/6, 5C-4D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSE	Soyaes	0.34	81	⇓P	Pg	21 49 53.4	+0.2
JSE				eS	Sg	21 49 58.6	+0.8
JWK2	Keihoku	0.43	340	⇑P	Pn	21 49 57.5	-1.0
JSS	Shosan	0.54	200	⇑P	Pg	21 49 57.3	+0.5
JSS				eS	Sb	21 50 06.4	+0.9
JRR	Rishiri	0.61	293	P	Pn	21 49 59.8	-1.1
JRR				S	Sn	21 50 10.9	+0.2
JYG	Yagishiri	0.68	225	⇑P	Pg	21 49 59.1	-0.4
ASAJ	Asahikawa	0.86	156	Pg	Pb	21 50 01.3	-2.0
	344nm,0.3s,baz=340,slow=12,SNR=1386						
ASAJ				Lg	Lg	21 50 14.3	
	456nm,0.3s,baz=300,slow=20,SNR=32						
ASAJ	Asahikawa	0.86	156	ePg	Pb	21 50 01.2	-2.2
ASAJ				eSn	Sb	21 50 13.2	-1.7
ASAJ	Asahikawa	0.86	156	⇓P	Pb	21 50 01.3	-2.0
YSS	Yuzh-Sakhalins	2.10	12	eP	Pn	21 50 22.5	+1.1
YSS				AMB	AMB	21 50 23.1	
	40nm,0.5s						
YSS				eS	Sb	21 50 49.0	-1.4
YSS				A	A	21 51 00.0	
	800nm,1.0s						
YSS				A	A	21 51 00.0	
	610nm,1.0s						
YSS	Yuzh-Sakhalins	2.10	12	ePn	Pn	21 50 23.2	+1.8
YSS				eSn	Sb	21 50 49.8	-0.6
YSS	Yuzh-Sakhalins	2.10	12	ePN	Pn	21 50 22.5	+1.1
YSS				eS	Sn	21 50 48.4	+1.0
YSS				pmax	pmax		
	comp=Z,40nm,0.5s						
YSS				smax	smax		
	comp=E,610nm,0.8s						
GLVR	Golovnino	2.71	114	eP	Pn	21 50 30.0	+0.2
GLVR				AMB	AMB	21 50 38.0	
	comp=E,8.0nm,0.2s						
GLVR				AMB	AMB	21 50 38.0	
	comp=E,85nm,0.2s						
GLVR				AMB	AMB	21 50 38.0	
	comp=E,27nm,0.2s						
GLVR				eS	Sn	21 51 03.0	+0.4
GLVR				A	A	21 51 08.0	
	comp=E,300nm,0.5s						
GLVR				A	A	21 51 08.0	
	comp=E,355nm,0.5s						
GLVR	Golovnino	2.71	114	ePN	Pn	21 50 30.9	+1.1
GLVR				eS	Sn	21 51 03.8	+1.2
GLVR				pmax	pmax		
	comp=N,8.0nm,0.2s						
GLVR				pmax	pmax		
	comp=E,85nm,0.2s						
GLVR				pmax	pmax		
	comp=Z,27nm,0.2s						
GLVR				smax	smax		
	comp=E,355nm,0.6s						
GLVR				smax	smax		
	comp=N,300nm,0.4s						
LAGR	Lagunnoye	2.77	107	eP	Pn	21 50 30.0	-0.6
LAGR				AMB	AMB	21 50 39.0	
	comp=N,284nm,0.5s						
LAGR				AMB	AMB	21 50 39.0	
	comp=N,651nm,0.5s						
LAGR				AMB	AMB	21 50 39.0	
	comp=N,252nm,0.5s						
LAGR				eS	Sn	21 51 04.5	+0.5
LAGR				A	A	21 51 14.0	
	comp=N,2μm,0.6s						
LAGR				A	A	21 51 14.0	
	comp=N,958nm,0.6s						
LAGR	Lagunnoye	2.77	107	ePN	Pn	21 50 30.9	+0.3
LAGR				eS	Sn	21 51 05.4	+1.4
LAGR				pmax	pmax		
	comp=N,284nm,0.5s						
LAGR				pmax	pmax		
	comp=E,651nm,0.5s						
LAGR				pmax	pmax		
	comp=Z,252nm,0.5s						
LAGR				smax	smax		
	comp=E,958nm,0.7s						
LAGR				smax	smax		
	comp=N,2μm,0.6s						
GRPR	Tuman	2.78	108	i P	Pn	21 50 31.0	+0.2
GRPR				AMB	AMB	21 50 33.0	
	comp=N,151nm,0.5s						
GRPR				AMB	AMB	21 50 33.0	
	comp=N,274nm,0.5s						
GRPR				i S	Sn	21 51 07.0	+2.7
GRPR				A	A	21 51 07.0	
	comp=N,417nm,0.6s						
GRPR				A	A	21 51 07.0	
	comp=N,477nm,0.6s						
GRPR	Tuman	2.78	108	⇑iPN	Pn	21 50 31.2	+0.4
GRPR				i S	Sn	21 51 07.4	+3.1
GRPR				pmax	pmax		
	comp=E,151nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,274nm,0.3s						
GRPR				smax	smax		
	comp=N,417nm,0.5s						
GRPR				smax	smax		
	comp=E,477nm,0.7s						
YUK	Yuzh-Kuril'sk	2.83	107	i P	Pn	21 50 32.2	+0.8
YUK				AMB	AMB	21 50 43.0	
	comp=E,191nm,0.5s						
YUK				AMB	AMB	21 50 43.0	
	comp=E,86nm,0.5s						
YUK				AMB	AMB	21 50 43.0	
	comp=E,253nm,0.5s						
YUK				eS	Sn	21 51 05.5	+0.1
YUK				A	A	21 51 09.0	
	comp=E,474nm,0.6s						
YUK				A	A	21 51 09.0	
	comp=E,389nm,0.6s						
YUK	Yuzh-Kuril'sk	2.83	107	c iPN	Pn	21 50 31.8	+0.4
YUK				eS	Sn	21 51 06.8	+1.4
YUK				pmax	pmax		
	comp=Z,253nm,0.5s						
YUK				pmax	pmax		
	comp=E,86nm,0.4s						
YUK				pmax	pmax		
	comp=N,191nm,0.3s						
YUK				smax	smax		
	comp=N,474nm,0.5s						
YUK				smax	smax		
	comp=E,389nm,0.7s						
ERM	Erimo	2.99	165	ePn	Pn	21 50 34.6	+1.0
ERM				eSn	Sn	21 51 10.3	+0.8
ERM	Erimo	2.99	165	ePN	Pn	21 50 34.6	+1.0
ERM				e		21 51 10.3	
SHO	Shikotan	3.54	105	i P	Pn	21 50 42.5	+1.3
SHO				AMB	AMB	21 50 53.0	
	comp=E,41nm,0.5s						
SHO				AMB	AMB	21 50 53.0	
	comp=E,82nm,0.5s						
SHO				eS	Sn	21 51 24.0	+0.9
SHO				A	A	21 51 28.0	
	comp=E,178nm,0.5s						
SHO				A	A	21 51 28.0	
	comp=E,116nm,0.5s						
SHO	Shikotan	3.54	105	d iPN	Pn	21 50 42.5	+1.3
SHO				eS	Sn	21 51 25.3	+2.2
SHO				pmax	pmax		
	comp=Z,82nm,0.8s						
SHO				pmax	pmax		
	comp=N,41nm,0.5s						
SHO				smax	smax		
	comp=N,70nm,0.5s						
SHO				smax	smax		
	comp=E,116nm,0.8s						
TEY	Ternei	3.91	274	ePN	Pn	21 50 48.0	+1.8
KUR	Kuril'sk	4.09	83	i P	Pn	21 50 51.0	+2.2
KUR				AMB	AMB	21 50 55.0	
	comp=E,25nm,0.5s						
KUR				AMB	AMB	21 50 55.0	
	comp=E,46nm,0.5s						
KUR				eS	Sn	21 51 38.8	+2.1
KUR	Kuril'sk	4.09	83	⇓iPN	Pn	21 50 51.7	+2.9
KUR				eS	Sn	21 51 38.8	+2.1
KUR				pmax	pmax		
	comp=Z,46nm,0.4s						
KUR				pmax	pmax		
	comp=N,25nm,0.5s						
GRNR	Gornyy	7.00	329	ePN	Pn	21 51 31.9	+3.2
GRNR				pmax	pmax		
	comp=Z,19nm,0.5s						
USRK	Ussuriysk Ar.	7.26	268	Pn	Pn	21 51 34.3	+1.9
	baz=79,slow=13						
USRK				LR	LR	21 54 25.0	
	comp=Z,425nm,20.2s,baz=23,slow=39						
I45RU	USSURIYSK INFR	7.27	268	i		22 31 40.0	
	baz=79,slow=319,SNR=2.0						
KLR	Kul'dur	8.29	305	Pn	Pn	21 51 48.4	+2.1
	comp=Z,0.0nm,0.3s,baz=106,slow=16,SNR=6.0						
KLR				LR	LR	21 55 14.8	
	comp=Z,16nm,20.3s,baz=122,slow=40						
MJB9	Matsu-Tunnel	8.86	201	ePn	Pn	21 51 54.2	-0.1
MAJO	Matsushiro	8.86	201	ePn	Pn	21 51 54.5	+0.2
MAJO	Matsushiro	8.86	201	ePN	Pn	21 51 54.5	+0.2
MAT	Matsushiro	8.86	201	P	Pn	21 51 58.5	+4.2
MAT				eS	Sn	21 53 41.8	+7.6
MJAR	Matsushiro Arr	8.86	201	Pn	Pn	21 51 56.6	+2.2
	comp=Z,0.4nm,0.3s,baz=17,slow=13,SNR=8.3						
MJAR				LR	LR	21 55 20.8	
	comp=Z,87nm,18.2s,baz=10.0,slow=38						
KSRS	Korea Array	13.01	240	Pn	Pn	21 52 55.0	+4.0
	comp=Z,0.1nm,0.3s,baz=52,slow=14,SNR=2.7						
KSRS				LR	LR	21 57 16.6	
	comp=Z,174nm,18.5s,baz=62,slow=35						
KS15	Wonju Array Si	13.04	240	ePn	Pn	21 52 55.0	+3.5
KSAR	Wonju Array Be	13.04	240	Pn	Pn	21 52 55.0	+3.5
KSAR	Wonju Array Be	13.04	240	PN	Pn	21 52 55.0	+3.5
ZEA	Zeya	13.09	318	ePN	P	21 53 07.6	+5.2
ZEA				pmax	pmax		
	comp=N,42nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,51nm,0.8s						
PETK	Petropavlovsk-	13.10	46	LR	LR	21 57 47.4	
	comp=Z,68nm,20.1s,baz=227,slow=37						
JNU	Nakatsue	14.63	220	LR	LR	21 58 15.0	
	comp=Z,85nm,18.4s,baz=125,slow=35						
CBIJ	Chichi jima	17.77	180	ePn	Pn	21 53 49.7	-4.0
	comp=Z,118nm,1.0s						
SEY	Seymchan	19.00	15	P	Pn	21 54 09.3	+0.9
	comp=Z,0.2nm,0.3s,baz=191,slow=4.9,SNR=7.1						
BOD	Bodaibo	21.59	317	eP	P	21 54 27.6	-8.3
BOD				pmax	pmax		
	comp=Z,6.0nm,1.3s						
SONA1	Songino Array	24.67	290	eP	P	21 55 06.9	-0.3
SONA0	Songino Array	24.68	290	eP	P	21 55 06.2	-1.0
SONM	Songino Array	24.68	290	P	P	21 55 06.2	-1.0
	comp=Z,2.6nm,0.8s,baz=94,slow=9.2,SNR=16						
SONM				LR	LR	22 06 08.4	
	comp=Z,117nm,20.2s,baz=85,slow=40						
YULB	Yu-li	27.37	225	eP	P	21 55 26.9	-4.6
	comp=Z,7.5nm,1.0s						
MK32	Makanchi Array	40.83	295	eP	P	21 57 28.8	+1.1
MKAR	Makanchi Array	40.83	295	P	P	21 57 28.8	+1.1
	comp=Z,1.8nm,0.8s,baz=72,slow=9.3,SNR=1.6						
MKAR				LR	LR	22 16 09.8	
	comp=Z,41nm,19.4s,baz=130,slow=39						
KURK	Kurchatov	41.86	302	eP	P	21 57 36.0	-0.2
KURK	Kurchatov	41.86	302	eP	P	21 57 36.0	-0.2
KURBB	Kurchatov Arra	41.94	301	P	P	21 57 36.0	-0.9
	comp=Z,1.5nm,0.5s,baz=70,slow=9.0,SNR=5.3						
ILAR	Eielson Array	42.71	37	P	P	21 57 42.7	-0.2
	comp=Z,0.9nm,0.7s,baz=278,slow=8.2,SNR=14						
ILB	Eielson Array	42.71	37	eP	P	21 57 42.7	-0.2
CHTO	Chiang Mai	44.23	248	eP	P	21 57 56.7	+1.0
	comp=Z,4.3nm,0.7s						
CHTO	Chiang Mai	44.23	248	eP	P	21 57 56.7	+1.0
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CM31	Chiang Mai Arr	44.49	248	eP	P	21 57 58.3	+0.6
CMAR	Chiang Mai Arr	44.49	248	P	P	21 57 58.3	+0.6
	comp=Z,1.1nm,0.3s,baz=38,slow=7.2,SNR=6.1						
CMAR				LR	LR	22 18 03.8	
	comp=Z,39nm,18.6s,baz=195,slow=38						
BVAR	Borovoye Array	45.94	307	P	P	21 58 08.6	-0.4
	comp=Z,1.4nm,0.4s,baz=81,slow=8.8,SNR=20						
KK31	Karatay Array	49.96	295	eP	P	21 58 40.4	+0.2
KK31	Karatay Array	49.96	295	eP	P	21 58 40.4	+0.2
KKAR	Karatay Array	49.96	295	eP	P	21 58 40.4	+0.2
KKAR	Karatay Array	49.96	295	eP	P	21 58 40.4	+0.2
ABKAR	Akbulak array	53.49	306	eP	P	21 59 06.3	-0.1
YKA	Yellowknife Ar	56.82	33	P	P	21 59 30.0	-0.2
	comp=Z,0.7nm,0.5s,baz=309,slow=7.2,SNR=5.2						
YKB5	Yellowknife Ar	56.82	33	eP	P	21 59 30.1	-0.2
GEYT	Alibeck	60.69	296	P	P	21 59 57.0	-0.6
	comp=Z,0.9nm,0.5s,baz=81,slow=8.9,SNR=3.3						
FIA0	FINESS Array S	62.15	331	eP	P	22 00 05.2	-1.8
FIA0	FINESS Array S	62.15	331	eP	P	22 00 05.2	-1.8
FINES	FINESS Array B	62.15	331	P	P	22 00 05.2	-1.8
	comp=Z,1.5nm,0.8s,baz=104,slow=8.0,SNR=7.1						
FINES				LR	LR	22 29 03.5	
	comp=Z,47nm,18.1s,baz=87,slow=38						
WR1	Warramunga Arr	64.92	188	eP	P	22 00 25.6	-0.2
	comp=Z,15nm,1.3s						
WRA	Warramunga Arr	64.92	188	P	P	22 00 25.6	-0.2
	comp=Z,0.8nm,0.8s,baz=9.0,slow=7.2,SNR=4.0						
HFS	Hagfors	67.16	335	P	P	22 00 38.0	-1.8
	comp=Z,2.3nm,0.8s,baz=33,slow=8.8,SNR=5.1						
HFS	Hagfors	67.16	335	P	P	22 00 38.0	-1.8
AS31	Alice Springs	68.65	188	eP	P	22 00 50.1	+0.6
	comp=Z,1.1nm,1.0s						
ASAR	Alice Springs	68.65	188	P	P	22 00 50.1	+0.6
	comp=Z,0.7nm,0.9s,baz=7.6,slow=6.9,SNR=4.6						
NV01	Mina Array Sit	69.97	56	eP	P	22 00 59.2	+1.3
NVAR	Mina Array Bea	69.97	56	P	P	22 00 59.2	+1.3
	comp=Z,0.8nm,0.7s,baz=294,slow=5.6,SNR=5.8						
PD31	Pinedale Array	71.86	47	eP	P	22 01 09.8	+0.4
PDAR	Pinedale Array	71.86	47	P	P	22 01 09.8	+0.4
	comp=Z,0.7nm,0.6s,baz=246,slow=0.3,SNR=8.8						
PDAR	Pinedale Array	71.86	47	eP	P	22 01 09.4	0.0
MLR	Muntele Rosu	73.76	319	LR	LR	22 38 16.1	
	comp=Z,6.5nm,21.1s,baz=52,slow=40						
BR101	Keskin Array S	74.08	310	eP	P	22 01 21.8	-0.7
BRTR	Keskin Array B	74.08	310	P	P	22 01 21.8	-0.7

	comp=Z,0.3nm,0.4s,baz=39,slow=9.4,SNR=2.9						
GERES	GERESS Array B	76.31	328	LR	LR	22 40 10.3	
	comp=Z,32nm,18.6s,baz=286,slow=40						
MMAI	Mount Meron Ar	77.88	305	P	P	22 01 43.1	-1.1
	comp=Z,1.3nm,0.7s,baz=68,slow=11,SNR=3.6						
TX31	Lajitas Ar. Si	84.93	53	eP	P	22 02 22.5	+0.8
LTX	Lajitas	84.93	53	eP	P	22 02 22.2	+0.5
LTX	Lajitas	84.93	53	eP	P	22 02 22.2	+0.5
TXAR	Lajitas Array	84.93	53	P	P	22 02 22.2	+0.5
	comp=Z,0.9nm,0.8s,baz=308,slow=4.1,SNR=6.3						
CPCT	Cooper Cave	89.55	36	eP	P	22 02 42.6	-1.2
	comp=Z,131nm,0.7s						

IDC 15 22:02:57.2±4.7, 5°.68S×147°.56E, h197km±51km, mb3.2/2, mb1 3.4/4, mb1mx2.9/41, mbtmp3.7/4, Error ellipse: s-maj=95.9km s-min=26.5km az=130.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.72	186	P	Pn	22 03 56.4	+0.9
	1.9nm,0.3s,baz=3.8,slow=15,SNR=12						
PMG				S	Sn	22 04 41.5	+0.2
	10.0nm,0.3s,baz=185,slow=23,SNR=14						
WRA	Warramunga Arr	19.14	221	P	P	22 07 05.2	-0.5
	1.1nm,0.3s,baz=47,slow=12,SNR=45						
ASAR	Alice Springs	22.20	215	P	P	22 07 38.1	+0.4
	2.2nm,0.6s,baz=49,slow=8.5,SNR=27						
ILAR	Eielson Array	84.97	23	P	P	22 15 09.8	-0.2
	0.3nm,0.8s,baz=243,slow=6.0,SNR=3.6						

ISCJB 15 22:03:30.0±0.5, 0°.19S±0°.05×123°.38E±0°.05, h150km, mb3.8/10, Error ellipse: s-maj=7.3km s-min=6.6km az=179.3

IDC 15 22:03:31.2±7.9, 0°.06S×123°.45E, h130km±79km, mb3.5/9, mb1 3.6/9, mb1mx3.3/52, mbtmp3.9/9, Error ellipse: s-maj=30.0km s-min=13.7km az=74.0

DJA 15 22:03:31.3±0.4, 0°S±3°×12°3E±°, h109km±6km, M4.3/11, mB4.3/1, mb4.3/1, MLv4.3/11, Mw(mB)3.5/1

ISC 15 22:03:32.1±0.7, 0°.15S±0°.05×123°.37E±0°.05, h150km, n22, σ2^{s}94/27, mb3.9/10, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	Cibinong	0.94	40	P	Pn	22 03 53.6	-2.7
KMSI				S	Sn	22 04 09.7	-5.1
LUWI	Luwuk	1.07	214	P	Pn	22 03 53.0	-4.5
LUWI				S	Sn	22 04 09.4	-7.5
MRSI	Marisa	1.56	293	P	Pn	22 03 57.9	-4.4
APSI	Ampana	1.89	246	P	Pn	22 04 02.6	-3.3
SANI	Sanana	3.23	126	P	Pn	22 04 18.6	-3.7
MPSI	Mapaga	3.51	278	P	Pn	22 04 24.8	-1.1
KDI	Kendari	3.86	191	P	Pn	22 04 28.2	-2.4
LBMI	Labuha	4.16	97	P	Pn	22 04 32.5	-1.9
TTSI	Tana Toraja	4.57	231	P	Pn	22 04 38.4	-1.5
NLAI	Namlea	4.83	130	P	Pn	22 04 42.3	-0.9
NLAI				S	Sn	22 05 35.7	-3.0
SPSI	Sidrap Palu	5.23	223	P	Pn	22 04 47.7	-0.9
SPSI				S	Sn	22 05 45.6	-2.7
BNSI	Bone	5.34	218	P	Pn	22 04 50.2	+0.2
WRA	Warramunga Arr	22.42	152	P	P	22 08 18.9	+0.4
	3.1nm,0.5s,baz=334,slow=10.0,SNR=17						
ASAR	Alice Springs	25.52	157	P	P	22 08 48.9	+2.1
	0.5nm,0.6s,baz=349,slow=14,SNR=4.8						
ASAR				PcP	PcP	22 12 16.3	+1.7
	0.4nm,0.5s,baz=343,slow=2.3,SNR=4.3						
CMAR	Chiang Mai Arr	30.30	309	P	P	22 09 31.8	+2.4
	0.9nm,0.4s,baz=117,slow=7.2,SNR=3.1						
NWAO	Narrogin (SRO)	33.12	189	P	P	22 09 54.8	+0.9
	26nm,1.1s,baz=37,slow=5.1,SNR=3.5						
STKA	Stephens Creek	35.96	153	P	P	22 10 20.5	+2.1
	1.5nm,0.4s,baz=331,slow=8.1,SNR=6.2						
MJAR	Matsushiro Arr	39.01	19	P	P	22 10 43.3	-0.8
	2.1nm,0.7s,baz=200,slow=10,SNR=7.6						
ASAJ	Asahikawa	47.28	19	P	P	22 11 51.4	+1.1
	2.6nm,0.7s,baz=162,slow=13,SNR=4.6						
SONM	Songino Array	50.02	345	P	P	22 12 12.9	+1.5
	0.7nm,0.6s,baz=160,slow=8.6,SNR=7.3						
MKAR	Makanchi Array	58.93	328	P	P	22 13 15.7	+0.1
	0.2nm,0.4s,baz=124,slow=8.3,SNR=6.1						
KURBB	Kurchatov Arra	63.28	330	P	P	22 13 44.6	0.0
	0.4nm,0.6s,baz=118,slow=6.3,SNR=6.1						

NSSP 15 22:07:08.6, 38°.92N×44°.40E, h8km, Ms3.0

DDA 15 22:07:11.0, 38°.99N×44°.60E, h7km, Ml3.0

ISK 15 22:07:11.9, 39°.00N×44°.36E, h5km, ML3.1/4

TEH 15 22:07:11.4, 38°.78N×44°.43E, h10km, ML2.6

CSEM 15 22:07:12.7±0.3, 39°.01N×44°.37E, h2km, ML3.1, Error ellipse: s-maj=6.3km s-min=5.5km az=80.0

ATA 15 22:07:12.8±1.4, 39°.01N×44°.35E, h9km±23km, ML3.5, MW3.7

ISC 15 22:07:11.9±1.1, 39°.01N±0°.02×44°.43E±0°.02, h4km±10km, n52, σ1^{s}29/77, 2C-1D, Iran-Armenia-Azerbaijan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLDR	Caldiran	0.42	289	PG	Pg	22 07 20.2	0.0
CLDR				SG	Sb	22 07 26.9	-2.0
CLDR	Caldiran	0.42	289	i P	Pg	22 07 19.9	-0.3
CLDR				i S	Sb	22 07 29.4	+0.4
CLDR	Caldiran	0.42	289	P	Pg	22 07 19.9	-0.3
CLDR	Caldiran	0.42	289	ePg	Pg	22 07 20.2	0.0
CLDR				S	Sb	22 07 29.4	+0.4
VMUR	Van-Muradiye	0.67	269	i P	Pg	22 07 23.9	-0.9
VMUR				i S	Sb	22 07 35.3	-0.8
VMUR	Van-Muradiye	0.67	269	P	Pg	22 07 24.0	-0.9
VMUR				S	Sb	22 07 35.3	-0.8
DYDN	Diyadin	0.79	313	eP	Pb	22 07 27.5	-0.8
DYDN				eS	Sn	22 07 40.1	-2.2
DYDN				IAML		22 07 47.7	
	comp=Z,105nm,0.4s						
DYDN	Diyadin	0.79	313	i P	Pb	22 07 28.6	+0.2
DYDN				i S	Sn	22 07 41.8	-0.5
DYDN	Diyadin	0.79	313	P	Pb	22 07 28.5	+0.2
DYDN				S	Sn	22 07 41.8	-0.5
ERCV	ERCIS-VAN	0.85	271	PG	Pg	22 07 28.1	-0.2
ERCV				SG	Sb	22 07 40.7	-0.6
ERCV	ERCIS-VAN	0.85	271	ePg	Pg	22 07 28.1	-0.2
ARRZ	Ararat	0.87	14	eP	Pg	22 07 22.0	-6.6
ARRZ				eS	Sg	22 07 35.0	-4.9
IGDI	IGDIR	0.90	342	eP	Pb	22 07 29.6	-0.6
IGDI				eS	Sn	22 07 43.5	-1.4
IGDI	IGDIR	0.90	342	i P	Pb	22 07 30.0	-0.2
TVAN	Van	0.94	239	i P	Pb	22 07 30.1	-0.7
TVAN				i S	Sn	22 07 46.4	+0.4
TVAN	Van	0.94	239	P	Pb	22 07 30.1	-0.7
TASB	TASBURUN-IGDIR	0.98	351	PG	Pn	22 07 32.0	-0.6
TASB	TASBURUN-IGDIR	0.98	351	ePg	Pn	22 07 32.0	-0.6
ISHB	Shabestar	1.18	128	ePg	Pg	22 07 32.4	-2.1
ISHB				e		22 07 36.4	
	comp=Z,2µm,0.1s						
ISHB				eSg	Sg	22 07 48.9	-0.9
AGRB	Hanur-Agry	1.25	297	PN	Pg	22 07 35.6	-0.4
AGRB				SN	Sn	22 07 53.6	-0.2
AGRB	Hanur-Agry	1.25	297	ePn	Pg	22 07 35.6	-0.4
AGRB				eSn	Sn	22 07 53.6	-0.2
GEVA	Gevas	1.28	238	eP	Pg	22 07 36.1	-0.4
GEVA				eS	Sn	22 07 55.6	+1.2
GEVA				IAML		22 08 03.2	
	comp=Z,50nm,0.7s						
GEVA	Gevas	1.28	238	i P	Pg	22 07 36.4	-0.1
GEVA				i S	Sn	22 07 57.5	+3.1
GEVA	Gevas	1.28	238	P	Pg	22 07 36.4	-0.1
TUTA	Tutak	1.32	288	eP	Pg	22 07 36.8	-0.4
TUTA				eS	Sn	22 07 55.5	+0.1
TUTA				IAML		22 08 04.9	
	comp=Z,48nm,0.5s						
YOVA	Hakkari_Yˆ…kse	1.43	185	i P	Pn	22 07 37.9	-0.9
YOVA				i S	Sg	22 08 00.1	+2.4
YOVA	Hakkari_Yˆ…kse	1.43	185	P	Pn	22 07 37.9	-0.9
YOVA				S	Sg	22 08 00.1	+2.4
ITBZ	Tabriz	1.55	119	ePn	Pn	22 07 40.1	-0.4
ITBZ				e		22 07 46.2	
	comp=Z,665nm,0.2s						
GRS	Goris	1.56	71	⇑iP	Pg	22 07 42.0	+0.2
GRS				⇓iS	Sg	22 08 04.0	+2.1
GRS	Goris	1.56	71	⇑P	Pg	22 07 42.0	+0.2
GRS				S	Sg	22 08 04.0	+2.1
DIGO	Kars	1.62	330	eP	Pg	22 07 44.8	+1.7
EATA	Eleskirt	1.73	300	eP	Pb	22 07 44.2	-0.2
EAK	Akyaka	1.79	339	eP	Pg	22 07 47.9	+1.7
EAK				eS	Sg	22 08 13.3	+3.8
EAK				IAML		22 08 27.5	
	comp=Z,17nm,0.6s						
EKAR	Karacoban	1.86	278	eP	Pg	22 07 47.1	-0.5
CUKT	Cukurca	1.88	201	PN	Pb	22 07 46.2	-0.6
CUKT	Cukurca	1.88	201	i P	Pb	22 07 46.9	+0.1
CUKT				i S	Sg	22 08 11.5	-0.7
CUKT	Cukurca	1.88	201	ePn	Pb	22 07 46.2	-0.6
CUKT	Cukurca	1.88	201	P	Pb	22 07 46.9	+0.1
CUKT				S	Sg	22 08 11.5	-0.7
KARS	Kars	1.92	328	PN	Pb	22 07 46.6	-1.0
KARS	Kars	1.92	328	ePn	Pb	22 07 46.6	-1.0
GURO	Guroymak-BITLI	1.93	257	PN	Pb	22 07 46.2	-1.6
GURO	Guroymak-BITLI	1.93	257	ePn	Pb	22 07 46.2	-1.6
IHRS	Heris	2.16	108	ePn	Pn	22 07 49.8	+1.0
IHRS				e		22 07 55.8	
	comp=Z,602nm,0.2s						
HOMI	Horasan	2.21	299	eP	Pb	22 07 52.9	+0.3
IBST	Bostanabad	2.33	123	e		22 06 25.7	
	comp=N,274nm,0.0s						
IBST				ePn	Pn	22 07 51.8	+0.5
IBST				e		22 07 55.7	
	comp=Z,204nm,0.2s						
IBST				eSg	Sb	22 08 25.6	+1.6
ERZM	Erzurum	2.54	292	eP	Pb	22 07 58.1	-0.1
DGRG	David-gareji	2.54	16	eP	Pg	22 07 59.8	-0.9
BNGB	Bingˆ¶l	2.92	271	PN	Pn	22 08 00.7	+1.4
YEDI	Yedisu-Bingol	3.05	279	PN	Pn	22 08 02.7	+1.6
YEDI	Yedisu-Bingol	3.05	279	ePn	Pn	22 08 02.7	+1.6
BINT	Bingol	3.08	269	ePn	Pn	22 08 00.7	-0.7
KOPT	Kop Dagi	3.21	290	eP	Pb	22 08 10.2	+0.6

NIED 15 22:18:00, 31°.00N×141°.20E, h56km, Mw4.2 Best double couple: M$_0$2.25000×10^{15} NP1:φ$_s$221.00000°, δ69.00000°, λ20.00000°. NP2:φ$_s$123.00000°, δ71.00000°, λ158.00000°.

ISCJB 15 22:18:07.5±0.5, 30°.92N±0°.03×140°.94E±0°.05, h62km±4km, mb4.3/46, Error ellipse: s-maj=7.7km s-min=3.9km az=163.1

JMA 15 22:18:07.6±0.2, 31°.00N×141°.19E, h60km, M4.5

NEIC 15 22:18:08.3±0.9, 30°.93N×141°.18E, h43km±9km, mb4.5/21, Error ellipse: s-maj=10.6km s-min=6.5km az=117.0

IDC 15 22:18:10.9±0.7, 31°.01N×140°.57E, h82km±5km, mb3.7/22, mb1 3.9/24, mb1mx3.8/61, mbtmp4.1/24, MS2.9/7, Ms1 2.9/7, ms1mx2.7/62, Error ellipse: s-maj=13.9km s-min=9.0km az=75.0

ISC 15 22:18:10.1±0.6, 30°.95N±0°.05×140°.87E±0°.07, h78km±5km, n100, σ1^{s}79/108, mb4.2/46, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	1.77	328	P	Pn	22 18 38.4	-0.6
JHCJ	Hachijojimakas	2.30	337	P	Pn	22 18 45.0	-1.0
JHCJ				eS	Sn	22 19 11.4	-2.0
JHJ2	Mitsune	2.33	338	ePn	Pn	22 18 45.6	-0.7
JHJ2				eSn	Sn	22 19 14.5	+0.4
JHJ2	Mitsune	2.33	338	P	Pn	22 18 45.5	-0.9
JHJ2				eS	Sn	22 19 12.7	-1.4
JHJ	Hachijo jima 2	2.35	337	P	Pn	22 18 45.6	-1.0
	337nm,0.3s,baz=67,slow=23,SNR=210						
JHJ				S	Sn	22 19 11.2	-3.3
	154nm,0.3s,baz=56,slow=22,SNR=6.0						
JMKN	Mikurajimanish	3.12	340	P	Pn	22 18 56.8	-0.3
JMKN				S	Sn	22 19 32.0	-1.3
BSO1	Boso 1	3.69	1	P	Pn	22 19 03.3	-1.0
CBIJ	Chichi jima	4.01	163	ePn	Pn	22 19 07.2	-2.0
CBIJ				eSn	Sn	22 19 49.7	-5.4
CBIJ	Chichi jima	4.01	163	P	Pn	22 19 07.1	-2.1
CBIJ				S	Sn	22 19 50.7	-4.4
JCJ	Chichijima	4.01	163	P	Pn	22 19 06.4	-2.9
	baz=300,slow=20						
JCJ				S	Sn	22 19 49.1	-6.0
	baz=287,slow=19						
TTO1	TONANKAI O.B.S	4.36	309	P	Pn	22 19 15.0	+1.3
JHHJ	Haha-jima-NKT	4.46	165	P	Pn	22 19 13.2	-2.1
JHHJ				S	Sn	22 20 03.8	-2.2
JOD2	Odawara 2	4.55	341	P	Pn	22 19 17.2	+0.7
JIE	Ise	4.90	315	P	Pn	22 19 22.6	+1.3
JWZ	Kozaga	5.06	302	P	Pn	22 19 24.1	+0.6
JRY	Ryogami san	5.31	343	P	Pn	22 19 27.3	+0.4
JRY				eS	Sn	22 20 26.8	+0.1
INU	Inuyama	5.44	325	ePn	Pn	22 19 30.0	+1.3
INU				eSn	Sn	22 20 31.2	+1.3
MJAR	Matsushiro Arr	6.00	339	P	Pn	22 19 35.7	-0.6
	7.2nm,0.3s,baz=18,slow=12,SNR=74						
MJAR				S	Sn	22 20 40.1	-3.4
	baz=145,slow=14,SNR=1.5						
MJAR				LR	LR	22 22 07.3	
	comp=Z,49nm,18.8s,baz=180,slow=41						
MAJO	Matsushiro	6.00	339	ePn	Pn	22 19 36.8	+0.5
MAJO				eSn	Sn	22 20 45.0	+1.5
MAT	Matsushiro	6.00	339	P	Pn	22 19 37.0	+0.7
MAT				eS	Sn	22 20 45.1	+1.5
MJB9	Matsu-Tunnel	6.00	339	ePn	Pn	22 19 37.1	+0.8
JNU	Nakatsue	8.75	287	P	Pn	22 20 16.8	+2.9
	1.6nm,0.3s,baz=129,slow=7.0,SNR=6.4						
JNU				LR	LR	22 23 33.3	
	comp=Z,58nm,18.2s,baz=124,slow=38						
JNU	Nakatsue	8.75	287	ePn	Pn	22 20 16.2	+2.3
ERM	Erimo	11.19	9	ePn	Pn	22 20 44.0	-3.1
ERM				eSn	Sn	22 22 41.0	-9.3
JOW	Kunigami	11.77	253	P	Pn	22 20 57.7	+2.6
	1.6nm,0.3s,baz=113,slow=24,SNR=7.6						
JOW				LR	LR	22 25 20.6	
	comp=Z,43nm,19.4s,baz=56,slow=37						
KSRS	Korea Array	12.52	305	P	P	22 21 09.2	-4.6
	0.2nm,0.3s,baz=117,slow=14,SNR=7.1						
KSRS				LR	LR	22 25 34.6	
	comp=Z,51nm,19.8s,baz=182,slow=36						
ASAJ	Asahikawa	13.21	5	P	Pn	22 21 10.3	-4.1
	5.7nm,0.3s,baz=226,slow=10,SNR=46						
ASAJ				S	Sn	22 23 23.2	-16
	0.3nm,0.3s,baz=42,slow=12,SNR=2.8						
ASAJ				LR	LR	22 27 39.7	
	comp=Z,47nm,19.2s,baz=184,slow=43						
ASAJ	Asahikawa	13.21	5	ePn	Pn	22 21 11.0	-3.4
GUMO	Guam	17.67	167	P	Pn	22 22 13.4	+2.3
	8.3nm,0.3s,baz=17,slow=8.9,SNR=4.1						
SSLB	Suanglung	19.06	253	eP	Pn	22 22 30.0	+2.2
	6.2nm,0.7s						
KLR	Kul’dur	19.52	342	P	P	22 22 30.4	-0.6
	0.0nm,0.3s,baz=139,slow=7.3,SNR=7.9						
HHC	Hu-ho-hao-te	25.61	301	eP	P	22 23 32.1	-0.1
HHC				pP	pP	22 23 45.0	-5.2
HHC				sP	sP	22 23 51.8	-7.6
HHC				S	S	22 27 55.9	+1.2
HHC				sS	sS	22 28 18.6	-7.2
HHC				pmax	pmax		
	comp=Z,19nm,1.1s						
HHC				pmax	pmax		
	comp=Z,98nm,4.6s						
HHC				LR	LR		
	comp=N,88nm,7.0s						
HHC				LR	LR		
	comp=E,92nm,6.1s						
HHC				LR	LR		
	comp=Z,85nm,7.7s						
H11N2	WAKE ISLAND Hy	25.98	109	T	T	22 51 13.7	
	baz=300,slow=75,SNR=33						
H11N1	WAKE ISLAND Hy	25.98	109	T	T	22 51 31.2	
	baz=300,slow=75,SNR=33						
H11N3	WAKE ISLAND Hy	26.00	109	T	T	22 51 30.4	
	baz=300,slow=75,SNR=35						
H11S3	WAKE ISLAND Hy	26.46	112	T	T	22 52 37.0	
	baz=304,slow=75,SNR=34						
H11S1	WAKE ISLAND Hy	26.46	112	T	T	22 52 44.7	
	baz=304,slow=75,SNR=47						
H11S2	WAKE ISLAND Hy	26.48	112	T	T	22 52 38.6	
	baz=304,slow=75,SNR=48						
ENH	Enshi	26.97	277	eP	P	22 23 48.5	+3.9
	comp=Z,7.0nm,0.8s						
DAV	Davao City (W)	27.74	214	LR	LR	22 33 19.8	
	comp=Z,41nm,21.2s,baz=153,slow=33						
DAV	Davao City (W)	27.74	214	eP	P	22 23 51.6	+0.1
	comp=Z,172nm,0.4s						
LZH	Lanzhou	31.16	290	eP	P	22 24 24.3	+2.5
LZH				pP	pP	22 24 37.0	-3.1
LZH				sP	sP	22 24 43.5	-5.7
LZH				ePP	PP	22 25 29.0	-4.4
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
LZH				pmax	pmax		
	comp=Z,43nm,4.7s						
LZH				LR	LR		
	comp=N,150nm,12.7s						
LZH				LR	LR		
	comp=E,160nm,13.0s						
LZH				LR	LR		
	comp=Z,190nm,16.5s						
SONM	Songino Array	31.20	313	P	P	22 24 19.9	-2.1
	comp=Z,0.1nm,0.3s,baz=108,slow=8.4,SNR=2.4						
SONM				LR	LR	22 36 36.8	
	comp=Z,40nm,19.0s,baz=226,slow=36						
SEY	Seymchan	32.84	10	P	P	22 24 36.0	+0.1
	comp=Z,0.8nm,0.4s,baz=189,slow=5.3,SNR=5.8						
KIWB	Kanaga Island	37.10	43	eP	P	22 25 13.5	+0.7
GSTR	Great Sitkin T	37.82	43	eP	P	22 25 18.0	-0.9
ATKA	Atka Island	38.95	44	eP	P	22 25 28.9	+0.6
	comp=Z,8.9nm,0.8s						
CHTO	Chiang Mai	39.69	262	eP	P	22 25 39.2	+4.3
	comp=Z,7.4nm,0.8s						
CMAR	Chiang Mai Arr	39.84	262	P	P	22 25 35.0	-1.2
	comp=Z,0.8nm,0.4s,baz=55,slow=6.6,SNR=2.9						
CMAR				pP	pP	22 25 55.5	+0.5
	comp=Z,2.4nm,0.7s,baz=56,slow=6.4,SNR=3.2						
TIXI	Tiksi	41.27	354	eP	P	22 25 49.0	+1.8
	comp=Z,3.3nm,0.9s						
NIKH	Nikolski High	42.30	44	eP	P	22 25 55.3	-0.6
	comp=Z,32nm,0.9s						
WMQ	Urumqi	43.46	303	P	P	22 26 08.5	+3.0
UNV	Unalaska Valle	43.84	43	eP	P	22 26 09.7	+1.3
	comp=Z,35nm,1.3s						
ZALV	Zalesovo Beam	45.86	317	P	P	22 26 21.8	-2.5
	comp=Z,0.8nm,0.5s,baz=110,slow=12,SNR=2.3						
ZALV				PcP	PcP	22 28 00.6	+0.3
	comp=Z,0.6nm,0.5s,baz=133,slow=3.5,SNR=2.7						
ZALV				pPcP		22 28 21.6	
	comp=Z,1.5nm,0.5s,baz=114,slow=3.1,SNR=5.7						
MK01	Makanchi Array	47.18	307	eP	P	22 26 32.9	-2.0
MKAR	Makanchi Array	47.19	307	P	P	22 26 32.2	-2.7
	comp=Z,0.5nm,0.7s,baz=95,slow=9.3,SNR=6.5						
MKAR				pPcP		22 28 26.9	
	comp=Z,1.1nm,0.9s,baz=93,slow=4.9,SNR=4.5						
MKAR				ScP	ScP	22 31 50.6	-1.6
	comp=Z,0.2nm,0.6s,baz=89,slow=5.4,SNR=4.1						
KURK	Kurchatov	49.50	312	eP	P	22 26 51.1	-1.5
	comp=Z,1.8nm,0.8s						
KURBB	Kurchatov Arra	49.56	312	P	P	22 26 50.6	-2.4
	comp=Z,1.0nm,0.6s,baz=89,slow=7.2,SNR=15						
WRAB	Tennant Creek	50.98	188	eP	P	22 27 03.7	-0.3
	comp=Z,14nm,0.7s						
WB2	Warramunga Arr	50.99	188	eP	P	22 27 06.5	+2.4
WRA	Warramunga Arr	50.99	188	P	P	22 27 02.6	-1.5
	comp=Z,1.6nm,0.4s,baz=5.5,slow=7.7,SNR=28						
WRA				PcP	PcP	22 28 20.2	+0.9
	comp=Z,1.5nm,0.5s,baz=0.3,slow=4.0,SNR=7.2						
KDAK	Kodiak Island	52.02	39	P	P	22 27 11.3	-0.1
	comp=Z,14nm,0.8s,baz=266,slow=3.4,SNR=12						
KDAK	Kodiak Island	52.02	39	eP	P	22 27 12.1	+0.7
	comp=Z,56nm,1.5s						
PPLA	Purkeypile	52.48	32	eP	P	22 27 15.1	+0.2
	comp=Z,19nm,1.4s						
KSH	Kashi	52.67	298	eP	P	22 27 22.0	+5.3
BPAW	Bear Paw Mtn.	53.11	31	eP	P	22 27 19.9	+0.4
	comp=Z,3.7nm,1.3s						
BWN	Browne	53.78	31	eP	P	22 27 26.9	+2.6
	comp=Z,31nm,0.8s						
BVAR	Borovoye Array	54.46	316	P	P	22 27 27.8	-1.6
	comp=Z,0.5nm,0.5s,baz=113,slow=8.5,SNR=5.1						
AS31	Alice Springs	54.72	188	eP	P	22 27 32.9	+1.3
	comp=Z,1.4nm,1.0s						
ASAR	Alice Springs	54.72	188	P	P	22 27 30.5	-1.0
	comp=Z,0.8nm,0.4s,baz=1.4,slow=6.1,SNR=18						
ASAR				PcP	PcP	22 28 34.2	+0.9
	comp=Z,1.3nm,1.1s,baz=29,slow=3.0,SNR=4.5						
IL1	Eielson Array	54.92	30	eP	P	22 27 32.2	-0.4
ILAR	Eielson Array	54.92	30	P	P	22 27 32.6	0.0
	comp=Z,1.1nm,0.7s,baz=270,slow=6.1,SNR=13						
ILB	Eielson Array	54.92	30	eP	P	22 27 33.9	+1.4
ABKAR	Akbulak array	61.61	313	eP	P	22 28 18.9	-0.5
AKTO	Aktyubinsk	62.49	314	P	P	22 28 24.3	-1.0
	comp=Z,0.9nm,0.6s,baz=98,slow=14,SNR=4.5						
ARCES	ARCESS Array B	69.53	340	P	P	22 29 10.6	+0.5
	comp=Z,1.2nm,0.7s,baz=70,slow=7.0,SNR=6.8						
FINES	FINESS Array B	73.99	333	P	P	22 29 37.5	+0.6
	comp=Z,1.2nm,0.5s,baz=60,slow=6.0,SNR=16						
FINES				pP	pP	22 29 57.7	+0.3
	comp=Z,1.4nm,0.4s,baz=61,slow=5.9,SNR=2.5						
YBH	Yreka Blue Hor	74.49	51	P	P	22 29 41.7	+1.4
	comp=Z,1.6nm,0.8s,baz=279,slow=5.2,SNR=4.1						
PINE	Pine Mountain	74.67	48	eP	P	22 29 41.2	-0.3
	comp=Z,26nm,1.5s						
CMB	Columbia Colle	77.83	53	eP	P	22 30 01.2	+1.9
	comp=Z,2.7nm,0.8s						
YERR	Yerington	78.13	52	eP	P	22 30 03.3	+2.1
	comp=Z,6.0nm,1.0s						
AKASG	Malin Array Be	78.84	323	P	P	22 30 04.0	-0.5
	comp=Z,1.2nm,0.4s,baz=51,slow=5.3,SNR=3.3						
AKASG				pP	pP	22 30 25.3	+0.1
	comp=Z,0.4nm,0.3s,baz=51,slow=5.3,SNR=1.8						
LRM	Limekiln Ridge	78.85	43	eP	P	22 30 06.9	+1.9
KVN	Kaiserville	78.87	51	eP	P	22 30 07.2	+2.0
	comp=Z,2.3nm,0.9s						
NV01	Mina Array Sit	79.05	52	eP	P	22 30 07.8	+1.6
NVAR	Mina Array Bea	79.05	52	P	P	22 30 07.5	+1.3
	comp=Z,1.6nm,0.6s,baz=289,slow=6.0,SNR=14						
NVAR				pP	pP	22 30 29.7	+2.7
	comp=Z,1.1nm,0.7s,baz=294,slow=5.5,SNR=3.6						
HFS	Hagfors	79.44	336	P	P	22 30 08.8	+1.2
	comp=Z,1.9nm,0.7s,baz=64,slow=3.4,SNR=8.2						
NB2	NORSAR Subarra	79.61	338	P	pP	22 30 29.0	-0.4
	comp=Z,1.1nm,0.6s,baz=42,slow=5.3						
HWUT	Hardware Ranch	81.72	46	eP	P	22 30 22.6	+2.2
	comp=Z,2.2nm,0.7s						
PDAR	Pinedale Array	82.28	44	P	P	22 30 24.2	+0.7
	comp=Z,0.5nm,0.4s,baz=273,slow=2.0,SNR=7.8						
BRTR	Keskin Array B	82.56	312	P	P	22 30 24.1	-0.7
	comp=Z,0.9nm,0.8s,baz=88,slow=4.7,SNR=5.0						
P18A	Preston Nutter	83.67	47	eP	P	22 30 32.9	+2.2
	comp=Z,2.3nm,0.8s						
SRU	San Rafael Swe	83.78	48	eP	P	22 30 33.0	+1.8
	comp=Z,3.2nm,0.7s						
ASF	Jabal al Asfar	84.53	304	P	P	22 30 33.3	-1.7
	comp=Z,1.2nm,0.5s,baz=332,slow=0.8,SNR=4.1						
MMAI	Mount Meron Ar	85.12	306	P	P	22 30 38.2	+0.3
	comp=Z,1.5nm,0.6s,baz=69,slow=7.9,SNR=3.9						
TX31	Lajitas Ar. Si	94.19	52	eP	P	22 31 22.3	+1.5
TXAR	Lajitas Array	94.19	52	P	P	22 31 22.7	+1.9
	comp=Z,2.5nm,0.7s,baz=296,slow=3.0,SNR=36						
TXAR				pP	pP	22 31 44.4	+2.4
	comp=Z,1.4nm,0.8s,baz=316,slow=2.5,SNR=6.1						
TORD	Torodi Ar. Bea	121.17	312	PKP	PKPdf	22 36 52.8	-1.9
	comp=Z,0.2nm,0.5s,baz=350,slow=3.5						
LPAZ	La Paz	149.80	68	PKPbc	PKPbc	22 37 53.2	+0.6
	comp=Z,2.8nm,0.8s,baz=0.6,slow=3.4,SNR=14						
PLCA	Paso Flores	152.85	120	PKPbc	PKPbc	22 37 59.5	+1.2
	comp=Z,1.4nm,0.7s,baz=58,slow=20,SNR=3.4						

ATA 15 22:22:20.3±1.0, 39°.80N×40°.97E, h21km±4km, ML3.5, MW3.4

ISCJB 15 22:22:21.5±0.4, 39°.83N±0°.02×40°.96E±0°.02, h6km±4km, Error ellipse: s-maj=3.9km s-min=3.1km az=7.8

CSEM 15 22:22:21.7±0.2, 39°.83N×40°.96E, h10km, ML2.8, Error ellipse: s-maj=5.3km s-min=4.3km az=51.0

ISK 15 22:22:21.1, 39°.82N×40°.95E, h10km, ML3.0/2

DDA 15 22:22:23.9, 39°.73N×40°.77E, h7km, Ml2.8

ISC 15 22:22:21.6±1.0, 39°.82N±0°.02×40°.97E±0°.02, h10km±9km, n51, σ1^{s}09/77, 4C-1D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ECAT	Cat-ERZURUM	0.21	179	⇓iP	Pg	22 22 26.4	+0.3
ECAT				eS	Sg	22 22 30.5	+1.4
ERZM	Erzurum	0.32	74	⇑iP	Pg	22 22 27.3	-0.8
KOPT	Kop Dagi	0.41	299	⇑iP	Pg	22 22 30.2	+0.3
KOPT				eS	Sb	22 22 36.9	-0.9
KOPT				IAML		22 22 41.4	
	comp=Z,435nm,0.5s						
KOPT	Kop Dagi	0.41	299	i P	Pb	22 22 31.3	0.0
KOPT	Kop Dagi	0.41	299	P	Pb	22 22 31.3	0.0
HOMI	Horasan	0.76	72	i P	Pg	22 22 35.1	-1.1
HOMI				eS	Sb	22 22 48.0	+0.5
VRTB	Varto-Mus	0.76	150	PG	Pg	22 22 36.3	+0.1
VRTB				SG	Sb	22 22 47.5	+0.1

VRTB	Varto-Mus	0.76	150	ePg	Pg	22 22 36.3	+0.1
VRTB				eSg	Sb	22 22 47.5	+0.1
BNGB	Bingˆ¶l	0.85	195	PG	Pg	22 22 37.6	-0.5
BNGB				SG	Sb	22 22 50.3	+0.1
BAYT	Ayd˜–ntepe-Bay	0.86	312	PG	Pg	22 22 38.0	-0.2
BAYT				SG	Sb	22 22 50.6	+0.2
BAYT	Ayd˜–ntepe-Bay	0.86	312	ePg	Pg	22 22 38.0	-0.2
BAYT				eSg	Sb	22 22 50.6	+0.2
BGOL	Bingol	0.86	196	i P	Pg	22 22 37.8	-0.4
BGOL				i S	Sg	22 22 49.5	+0.1
BGOL	Bingol	0.86	196	P	Pg	22 22 37.8	-0.4
BGOL				S	Sg	22 22 49.5	+0.1
EUZM	Uzumlu	0.99	264	⇑iP	Pg	22 22 39.7	-0.9
EUZM				eS	Sb	22 22 54.4	+0.4
EUZM	Uzumlu	0.99	264	i P	Pg	22 22 39.9	-0.7
EUZM				i S	Sn	22 22 59.1	+3.3
EUZM	Uzumlu	0.99	264	P	Pg	22 22 39.9	-0.7
ERZN	Erzincan	0.99	257	PG	Pg	22 22 39.3	-1.3
ERZN				SG	Sb	22 22 54.1	0.0
BINT	Bingol	1.01	202	ePg	Pg	22 22 37.6	-3.4
BINT				eSg	Sg	22 22 50.3	-3.9
EKAR	Karacoban	1.01	123	eP	Pg	22 22 40.6	-0.5
EKAR				IAML		22 23 03.8	
	comp=Z,66nm,0.4s						
EATA	Eleskirt	1.17	87	eP	Pb	22 22 42.7	-1.5
EATA				eS	Sn	22 23 01.1	+0.5
EATA				IAML		22 23 09.0	
	comp=Z,13nm,0.5s						
CHOM	Cayeli-Rize	1.29	353	PN	Pn	22 22 45.2	-0.6
CHOM	Cayeli-Rize	1.29	353	ePn	Pn	22 22 45.2	-0.6
TNCL	Tunceli-Merkez	1.31	238	i P	Pn	22 22 44.7	-1.4
TNCL				eS	Sg	22 23 04.3	+0.6
TNCL				IAML		22 23 09.6	
	comp=Z,76nm,0.6s						
TNCL	Tunceli-Merkez	1.31	238	i P	Pn	22 22 45.1	-1.0
TNCL				i S	Sg	22 23 04.6	+0.9
TNCL	Tunceli-Merkez	1.31	238	P	Pn	22 22 45.1	-1.0
TNCL				S	Sg	22 23 04.6	+0.9
KELT	Kelkit	1.36	285	⇑iP	Pn	22 22 46.6	-0.3
KELT				eS	Sg	22 23 06.8	+1.4
KELT				IAML		22 23 10.4	
	comp=Z,48nm,0.4s						
KELT	Kelkit	1.36	285	i P	Pn	22 22 45.6	-1.3
KELT				i S	Sb	22 23 02.4	-2.4
KELT	Kelkit	1.36	285	P	Pn	22 22 45.6	-1.3
KELT				S	Sb	22 23 02.4	-2.4
HANI	Diyarbakir_Han	1.47	198	i P	Pb	22 22 49.5	+0.4
HANI				i S	Sg	22 23 08.9	+0.1
HANI	Diyarbakir_Han	1.47	198	P	Pb	22 22 49.5	+0.4
HANI				S	Sg	22 23 08.9	+0.1
TUTA	Tutak	1.48	106	eP	Pn	22 22 48.5	-0.1
TUTA				eS	Sg	22 23 09.6	+0.2
GURO	Guroymak-BITLI	1.51	146	PN	Pn	22 22 49.1	+0.2
GURO	Guroymak-BITLI	1.51	146	ePn	Pn	22 22 49.1	+0.2
PTK	Pertek	1.53	233	PN	Pn	22 22 49.2	-0.1
PTK	Pertek	1.53	233	i Pn	Pn	22 22 49.2	-0.1
AGRB	Hanur-Agry	1.58	98	PN	Pn	22 22 50.2	+0.3
AGRB	Hanur-Agry	1.58	98	ePn	Pn	22 22 50.2	+0.3
SVAN	Silvan-Diyarba	1.67	174	PN	Pn	22 22 51.4	+0.4
SVAN	Silvan-Diyarba	1.67	174	ePn	Pn	22 22 51.4	+0.4
BCA	Borcka	1.70	17	PN	Pn	22 22 51.4	0.0
BCA	Borcka	1.70	17	ePn	Pn	22 22 51.4	0.0
REFA	Refahiye_ERZ˜	1.75	257	eP	Pn	22 22 52.6	+0.3
REFA	Refahiye_ERZ˜	1.75	257	i P	Pb	22 22 53.3	-0.7
REFA				i S	Sg	22 23 20.6	+2.6
REFA	Refahiye_ERZ˜	1.75	257	P	Pb	22 22 53.3	-0.7
KARS	Kars	1.81	63	PN	Pn	22 22 53.5	+0.5
KARS	Kars	1.81	63	i Pn	Pn	22 22 53.5	+0.5
KEMA	Kemaliye	1.99	255	eP	Pn	22 22 56.4	+0.9
KEMA	Kemaliye	1.99	255	i P	Pb	22 22 57.2	-0.8
KEMA				i S	Sg	22 23 27.1	+1.5
KEMA	Kemaliye	1.99	255	P	Pb	22 22 57.2	-0.8
MALT	Malatya	2.48	234	PN	Pn	22 23 02.6	+0.3
MALT	Malatya	2.48	234	i Pn	Pn	22 23 02.6	+0.3

ISCJB ***15*** *22:27:22.5±0.4, 2°.40N±0°.06×89°.73E±0°.06, h10^{km}, mb4.2/28, Error ellipse: s-maj=9.5km s-min=6.8km az=42.1*

IDC ***15*** *22:27:22.7±0.5, 2°.40N×89°.64E, h0^{km}, mb4.1/23, mb1 4.2/25, mb1mx4.0/68, mbtmp4.1/25, ML4.0/2, Error ellipse: s-maj=18.4km s-min=13.5km az=58.0*

NEIC ***15*** *22:27:24.2±0.2, 2°.43N×89°.69E, h10^{km}, mb4.5/10, Error ellipse: s-maj=6.9km s-min=4.9km az=33.0*

ISC 15 22:27:24.1±0.5**, 2°.39N**±0°.09×**89°.76E**±0°.07**, h10**^{km}**, n70, σ1^{s}.25**/69**, mb4.2**/28**, North Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSI	Gunungsitoli	7.89	98	ePn	Pn	22 29 19.1	+0.1
GSI				eSn	Sn	22 30 43.0	-5.3
PALK	Pallekele	10.24	299	Pn	Pn	22 29 49.5	-1.8
	1.6nm,0.3s,baz=116,slow=11,SNR=8.9						
PALK				Sn	Sn	22 31 31.8	-15
	7.5nm,0.3s,baz=112,slow=1.8,SNR=11						
PALK	Pallekele	10.24	299	ePn	Pn	22 29 49.5	-1.8
PALK				eSn	Sn	22 31 33.8	-13
KULM	Kulim	11.24	75	ePn	Pn	22 30 05.0	+0.1
CM31	Chiang Mai Arr	18.33	29	ePn	Pn	22 31 37.9	-0.8
CMAR	Chiang Mai Arr	18.33	29	P	P	22 31 39.5	+0.8
	0.2nm,0.3s,baz=225,slow=12,SNR=10						
H08S3	Diego Garcia H	19.90	240	T	T	22 52 12.3	
	baz=60,slow=74,SNR=110						
H08S2	Diego Garcia H	19.91	240	T	T	22 52 12.4	
	baz=60,slow=74,SNR=78						
H08S1	Diego Carcia H	19.92	240	T	T	22 52 14.8	
	baz=60,slow=74,SNR=121						
KSM	Kuching	20.56	92	eP	P	22 32 04.7	+1.5
	7.7nm,1.1s						
ODAN	Odare	24.43	355	eP	P	22 32 46.9	+3.5
RAMN	Ramite	24.61	353	eP	P	22 32 47.5	+2.5
PKIN	Phulchoki	25.39	351	eP	P	22 32 53.5	+1.4
DMN	Daman	25.47	350	eP	P	22 32 54.2	+1.4
KKN	Kakani	25.61	351	eP	P	22 32 56.0	+1.9
GKN	Gorkha	25.93	350	eP	P	22 32 58.4	+1.5
	28nm,1.0s						
LSA	Lhasa	27.19	3	eP	P	22 33 07.8	-0.8
	8.9nm,0.9s						
H01W3	Cape Leeuwin H	43.57	151	T	T	23 21 55.1	
	baz=324,slow=76,SNR=22						
H01W2	Cape Leeuwin H	43.58	151	T	T	23 21 56.1	
	baz=324,slow=76,SNR=25						
H01W1	Cape Leeuwin H	43.58	150	T	T	23 22 07.2	
	baz=324,slow=76,SNR=18						
MK01	Makanchi Array	44.68	353	eP	P	22 35 36.8	-0.3
MK32	Makanchi Array	44.70	353	eP	P	22 35 37.9	+0.5
MKAR	Makanchi Array	44.70	353	P	P	22 35 37.9	+0.5
	1.0nm,0.6s,baz=167,slow=8.2,SNR=6.5						
GEYT	Alibeck	45.73	325	P	P	22 35 45.7	0.0
	1.1nm,0.8s,baz=126,slow=8.7,SNR=2.8						
OPO	Ambohidratompo	46.78	242	P	P	22 35 54.9	+0.5
	4.2nm,1.1s,baz=67,slow=4.9,SNR=2.6						
SONA0	Songino Array	47.49	15	eP	P	22 36 00.5	+1.0
SONM	Songino Array	47.49	15	P	P	22 36 00.5	+1.0
	2.8nm,0.6s,baz=193,slow=9.5,SNR=21						
SONA1	Songino Array	47.51	15	eP	P	22 36 00.8	+1.2
KURBB	Kurchatov Arra	48.99	351	P	P	22 36 10.1	-0.7
	0.5nm,0.7s,baz=174,slow=7.2,SNR=5.6						
WRA	Warramunga Arr	49.05	119	P	P	22 36 12.9	+1.1
	4.0nm,0.7s,baz=297,slow=8.6,SNR=30						
WRA				PcP	PcP	22 37 35.9	+0.2
	1.1nm,0.7s,baz=312,slow=2.8,SNR=6.6						
WR1	Warramunga Arr	49.05	119	eP	P	22 36 12.9	+1.1
	6.6nm,0.8s						
WR1				ePcP	PcP	22 37 35.9	+0.2
WB2	Warramunga Arr	49.06	119	eP	P	22 36 12.6	+0.7
	4.1nm,0.7s						
KURK	Kurchatov	49.06	351	eP	P	22 36 10.1	-1.3
KS01	Wonju Array Si	49.43	40	eP	P	22 36 13.5	-0.9
AS31	Alice Springs	50.15	124	eP	P	22 36 21.4	+1.3
	1.4nm,1.2s						
AS31				ePcP	PcP	22 37 40.2	+0.6
ASAR	Alice Springs	50.15	124	P	P	22 36 21.4	+1.3
	0.8nm,0.4s,baz=295,slow=7.3,SNR=14						
ASAR				PcP	PcP	22 37 40.2	+0.6
	1.3nm,0.7s,baz=306,slow=3.6,SNR=7.9						
AS01	Alice Springs	50.19	124	eP	P	22 36 21.2	+0.7
ZALV	Zalesovo Beam	51.55	356	P	P	22 36 29.4	-0.8
	0.7nm,0.3s,baz=186,slow=7.2,SNR=3.6						
ZALV	Zalesovo Beam	51.55	356	eP	P	22 36 29.7	-0.4
ZAA1	Zalesovo Array	51.55	356	eP	P	22 36 29.4	-0.8
BVAR	Borovoye Array	52.96	345	P	P	22 36 40.6	0.0
	0.3nm,0.3s,baz=147,slow=8.1,SNR=2.0						
ABKAR	Akbulak array	53.18	336	eP	P	22 36 41.7	-0.6
CTAO	Charters Tower	59.72	115	eP	P	22 37 31.3	+1.8
	36nm,1.4s						
STKA	Stephens Creek	59.77	129	P	P	22 37 30.4	+0.7
	2.3nm,0.8s,baz=145,slow=22,SNR=3.8						
STKA	Stephens Creek	59.77	129	eP	P	22 37 30.4	+0.7
	1.4nm,1.4s						
BR101	Keskin Array S	62.87	314	eP	P	22 37 50.0	-0.8
BRTR	Keskin Array B	62.87	314	P	P	22 37 50.0	-0.8
	1.0nm,0.6s,baz=129,slow=7.3,SNR=10						
BOSA	Boshof	69.00	238	P	P	22 38 29.9	-0.5
	4.8nm,1.0s,baz=95,slow=11,SNR=3.2						
MLR	Muntele Rosu	70.15	318	P	P	22 38 37.6	+0.5
	0.8nm,0.7s,baz=333,slow=2.3,SNR=14						
MLR	Muntele Rosu	70.15	318	eP	P	22 38 37.9	+0.8
	3.7nm,0.6s						
TIXI	Tiksi	73.45	12	P	P	22 38 54.9	-1.4
	4.9nm,0.7s,baz=223,slow=3.7						
FIA0	FINESS Array S	75.57	334	eP	P	22 39 07.6	-1.2
FINES	FINESS Array B	75.57	334	P	P	22 39 07.6	-1.2
	2.6nm,1.0s,baz=196,slow=9.8,SNR=3.2						
ARA0	ARCESS Array S	78.96	341	eP	P	22 39 28.4	+0.6
ARCES	ARCESS Array B	78.96	341	P	P	22 39 28.4	+0.6
	1.6nm,0.7s,baz=97,slow=4.9,SNR=13						
GEC2	GERESS Array S	79.04	319	eP	P	22 39 29.1	+0.4
	3.4nm,1.2s						
GERES	GERESS Array B	79.04	319	P	P	22 39 29.1	+0.4
	0.8nm,0.6s,baz=112,slow=6.2,SNR=5.5						
HFS	Hagfors	81.01	331	P	P	22 39 39.3	+0.4
	0.8nm,0.5s,baz=183,slow=9.5,SNR=6.0						
DAVOX	Davos/Dischmat	81.33	317	P	P	22 39 40.9	-0.3
	1.1nm,0.5s,baz=239,slow=12,SNR=4.4						
SPA0	Spitsbergen Ar	84.29	349	eP	P	22 39 56.5	+0.7
SPITS	Spitsbergen Ar	84.29	349	P	P	22 39 56.5	+0.7
	2.3nm,0.8s,baz=157,slow=4.1,SNR=2.4						
TORD	Torodi Ar. Bea	87.58	283	P	P	22 40 12.5	-0.8
	0.6nm,0.9s,baz=81,slow=5.1						
TOA1	Torodi Ar. Sit	87.58	283	eP	P	22 40 12.5	-0.8
ESDC	Sonseca Array	91.36	310	P	P	22 40 30.2	-0.4
	0.5nm,0.8s,baz=55,slow=3.3,SNR=3.4						
SNAA	Sanae	93.08	198	P	P	22 40 36.7	-1.1
	0.5nm,0.9s,baz=180,slow=20,SNR=8.6						
SNAA	Sanae	93.08	198	eP	P	22 40 36.7	-1.1
	7.4nm,1.5s						
PD31	Pinedale Array	131.78	19	ePKPdf	PKPdf	22 46 38.2	0.0
PDAR	Pinedale Array	131.78	19	PKP	PKPdf	22 46 38.2	0.0
	0.3nm,0.6s,baz=124,slow=2.7,SNR=4.0						
TXAR	Lajitas Array	145.93	21	PKPbc	PKPab	22 47 05.1	-0.1
	3.1nm,0.7s,baz=351,slow=2.3,SNR=39						
LPAZ	La Paz	154.23	236	PKPbc	PKPbc	22 47 26.2	-0.2
	1.3nm,0.5s,baz=131,slow=2.0,SNR=6.5						

KRSC ***15*** *22:39:55.4±0.5, 55°.07N×162°.37E, h48^{km}±13^{km}, ML4.6*

ISCJB ***15*** *22:39:57.0±0.4, 55°.11N±0°.03×162°.34E±0°.06, h52^{km}±4^{km}, mb3.7/19, Error ellipse: s-maj=6.8km s-min=3.1km az=32.6*

MOS ***15*** *22:39:57.0±0.6, 55°.12N×162°.32E, h45^{km}, mb4.1/11, Error ellipse: s-maj=8.7km s-min=4.7km az=72.1*

IDC ***15*** *22:40:00.4±2.3, 55°.39N×161°.81E, h70^{km}±22^{km}, mb3.4/16, mb1 3.7/18, mb1mx3.4/69, mbtmp3.8/18, MS2.9/6, Ms1 2.9/6, ms1mx2.6/50, Error ellipse: s-maj=18.2km s-min=13.3km az=140.0*

ISC 15 22:39:57.3±1.0**, 55°.11N**±0°.03×**162°.34E**±0°.04**, h44**^{km}±10^{km}**, n116, σ1^{s}.53**/135**, mb3.8**/19**, 3C-2D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKZ	Mys Kozlova	0.66	212	i P	Pn	22 40 09.0	-1.2
MKZ				i S	Sn	22 40 18.2	-1.3
MKZ	Mys Kozlova	0.66	212	PN	Pn	22 40 09.0	-1.2
MKZ				S	Sn	22 40 18.2	-1.3
KBTR	Krutoberegovo	1.13	14	eP	Pn	22 40 16.6	-0.1
KBTR				eS	Sn	22 40 32.4	+1.4
KBTR	Krutoberegovo	1.13	14	PN	Pn	22 40 16.6	-0.1
KBTR				S	Sn	22 40 32.4	+1.4
KBG	Krutoberegovo	1.16	10	eP	Pn	22 40 17.0	-0.1
KBG				eS	Sn	22 40 32.4	+0.6
KBG	Krutoberegovo	1.16	10	PN	Pn	22 40 17.0	-0.1
KBG				S	Sn	22 40 32.4	+0.6
ZLN	Zelenaya	1.26	317	i P	Pn	22 40 18.9	+0.4
ZLN	Zelenaya	1.26	317	PN	Pn	22 40 18.9	+0.4
TUMR	Tumrok	1.27	279	eP	Pn	22 40 18.6	0.0
TUMR	Tumrok	1.27	279	PN	Pn	22 40 18.6	0.0
LGNR	Loginova	1.35	317	eP	Pn	22 40 20.5	+0.6
LGNR	Loginova	1.35	317	PN	Pn	22 40 20.5	+0.6
KMNR	Kamenistaya	1.36	299	eP	Pn	22 40 20.0	+0.1
KMNR	Kamenistaya	1.36	299	PN	Pn	22 40 20.0	+0.1
KIRR	Kirishev	1.41	307	eP	Pn	22 40 20.6	-0.1
KIRR	Kirishev	1.41	307	PN	Pn	22 40 20.6	-0.1
KPT	Kopyto	1.47	306	eP	Pn	22 40 21.4	-0.1
KPT	Kopyto	1.47	306	PN	Pn	22 40 21.4	-0.1
KLY	Klyuchi	1.53	322	eP	Pn	22 40 21.0	-1.2
KLY	Klyuchi	1.53	322	PN	Pn	22 40 21.0	-1.2
SMKR	Semkarok	1.55	342	eP	Pn	22 40 23.0	+0.5
SMKR	Semkarok	1.55	342	PN	Pn	22 40 23.0	+0.5
BDR	Baidarnaya	1.59	337	i P	Pn	22 40 23.8	+0.8
BDR	Baidarnaya	1.59	337	PN	Pn	22 40 23.8	+0.8
SRKR	Sorokina	1.68	337	i P	Pn	22 40 24.9	+0.7
SRKR	Sorokina	1.68	337	PN	Pn	22 40 24.9	+0.7
KOZ	Kozyrevsk	1.69	305	eP	Pn	22 40 24.5	+0.2
KOZ	Kozyrevsk	1.69	305	PN	Pn	22 40 24.5	+0.2
KII	Karymskiy	2.00	238	eP	Pn	22 40 29.0	+0.4
KII				eS	Sn	22 40 53.6	+1.2
KII	Karymskiy	2.00	238	PN	Pn	22 40 29.0	+0.4
KII				S	Sn	22 40 53.6	+1.2
BKI	Bering	2.09	86	eP	Pn	22 40 30.9	+1.1
BKI				eS	Sn	22 40 54.8	+0.3
BKI	Bering	2.09	86	PN	Pn	22 40 30.9	+1.1
BKI				S	Sn	22 40 54.8	+0.3
ESO	Esso	2.22	293	eP	Pn	22 40 31.4	-0.2
ESO	Esso	2.22	293	PN	Pn	22 40 31.4	-0.2
SPN	Mys Shipunski	2.44	215	eP	Pn	22 40 33.5	-1.0
SPN				eS	Sn	22 41 01.4	-1.7
SPN	Mys Shipunski	2.44	215	PN	Pn	22 40 33.5	-1.0
SPN				S	Sn	22 41 01.4	-1.7
NLC	Nalytchevo	2.62	223	eP	Pn	22 40 37.4	+0.3
NLC				eS	Sn	22 41 08.3	+0.7
NLC	Nalytchevo	2.62	223	PN	Pn	22 40 37.4	+0.3
NLC				S	Sn	22 41 08.3	+0.7
SDLR	Sedlovina	2.74	229	eP	Pn	22 40 39.7	+0.9
SDLR	Sedlovina	2.74	229	PN	Pn	22 40 39.7	+0.9
SMAR	Somma	2.78	230	i P	Pn	22 40 40.6	+1.1
SMAR	Somma	2.78	230	PN	Pn	22 40 40.6	+1.1
KRX	Arik	2.79	232	eP	Pn	22 40 41.1	+1.6
KRX				eS	Sn	22 41 14.6	+2.7
KRX	Arik	2.79	232	PN	Pn	22 40 41.1	+1.6
KRX				S	Sn	22 41 14.6	+2.7
AVH	Avacha	2.81	230	eP	Pn	22 40 41.1	+1.3
AVH	Avacha	2.81	230	PN	Pn	22 40 41.1	+1.3
UGLR	Uglovaya	2.81	229	eP	Pn	22 40 41.0	+1.2
UGLR	Uglovaya	2.81	229	PN	Pn	22 40 41.0	+1.2
KOK	Koryaka	2.84	231	eP	Pn	22 40 41.9	+1.7
KOK	Koryaka	2.84	231	PN	Pn	22 40 41.9	+1.7
GNL	Ganaly	2.94	243	eP	Pn	22 40 42.6	+1.1
GNL	Ganaly	2.94	243	PN	Pn	22 40 42.6	+1.1
DALK	Dalny	2.97	227	eP	Pn	22 40 42.9	+1.1
DALK				eS	Sn	22 41 17.8	+1.7
DALK	Dalny	2.97	227	PN	Pn	22 40 42.9	+1.1
DALK				S	Sn	22 41 17.8	+1.7
PET	Petropavlovsk	3.02	228	i P	Pn	22 40 44.2	+1.7
PET	Petropavlovsk	3.02	228	⇓ePN	Pn	22 40 43.8	+1.3
PET				eS	Sn	22 41 18.7	+1.4
PET				pmax	pmax		
	comp=Z,100nm,0.7s						
PET				pmax	pmax		
	comp=Z,131nm,0.4s						
PET				smax	smax		
	comp=E,700nm,1.0s						
PET				smax	smax		
	comp=E,594nm,0.5s						
PET				smax	smax		
	comp=N,494nm,0.4s						
PET				MLR	MLR		
	comp=Z,300nm,11.0s						
PET				MLR	MLR		
	comp=Z,100nm,17.0s						
KRMR	Karymshinskiy	3.38	229	eP	Pn	22 40 49.6	+2.2
KRMR				eS	Sn	22 41 28.0	+1.8
KRMR	Karymshinskiy	3.38	229	PN	Pn	22 40 49.6	+2.2
KRMR				S	Sn	22 41 28.0	+1.8
PETK	Petropavlovsk-	3.39	236	P	Pn	22 40 49.5	+1.8
PETK				S	Sn	22 41 28.8	+2.2
	baz=80,slow=22						
PETK				LR	LR	22 42 17.9	
	comp=Z,118nm,20.0s,baz=64,slow=41						
RUS	Russkaya	3.51	222	eP	Pn	22 40 49.6	+0.3
RUS				eS	Sn	22 41 30.6	+1.0
RUS	Russkaya	3.51	222	PN	Pn	22 40 49.6	+0.3
RUS				S	Sn	22 41 30.6	+1.0
MTVR	Mutnovka	3.61	225	eP	Pn	22 40 51.8	+1.0
MTVR				eS	Sn	22 41 32.9	+0.8
MTVR	Mutnovka	3.61	225	PN	Pn	22 40 51.8	+1.0
MTVR				S	Sn	22 41 32.9	+0.8
APC	Apacha	3.76	236	eP	Pn	22 40 55.0	+2.3
APC				eS	Sn	22 41 38.3	+2.7
APC	Apacha	3.76	236	PN	Pn	22 40 55.0	+2.3
APC				S	Sn	22 41 38.3	+2.7
ASAK	Asacha	3.80	226	eP	Pn	22 40 55.7	+2.4
ASAK	Asacha	3.80	226	PN	Pn	22 40 55.7	+2.4
KDTR	Khodutka, Kamc	4.17	219	eP	Pn	22 40 59.7	+1.3
KDTR				eS	Sn	22 41 47.7	+1.8
MIPR	Malaya Ipel'ka	4.37	232	eP	Pn	22 41 03.3	+2.2
MIPR	Malaya Ipel'ka	4.37	232	PN	Pn	22 41 03.3	+2.2
SKR	Severo-Kuril's	5.82	223	ePN	Pn	22 41 20.6	-0.3
MA2	Magadan	7.69	310	LR	LR	22 44 33.3	
	comp=Z,66nm,21.9s,baz=124,slow=38						
YSS	Yuzh-Sakhalins	14.74	244	eP	P	22 43 27.0	-1.0
ASAJ	Asahikawa	16.81	237	P	P	22 43 51.0	+0.1
	comp=Z,0.7nm,0.3s,baz=81,slow=4.6,SNR=8.4						
ERM	Erimo	18.16	232	⇑eP	Pn	22 44 06.7	+0.7
KLR	Kul'dur	19.56	265	P	P	22 44 20.6	-0.5
	comp=Z,0.0nm,0.3s,baz=86,slow=13,SNR=2.7						
KLR	Kul'dur	19.56	265	⇑eP	Pn	22 44 23.2	+0.5
TIXI	Tiksi	21.85	332	P	P	22 44 45.3	-0.3
	comp=Z,1.5nm,0.4s,baz=123,slow=13,SNR=2.9						
TIXI	Tiksi	21.85	332	⇓eP	P	22 44 48.3	+2.6
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KDAK	Kodiak Island	24.71	65	LR	LR	22 54 42.5	
	comp=Z,33nm,18.9s,baz=282,slow=36						
MJA0	Matsu Arr-Jizo	24.82	232	eP	P	22 45 15.8	+0.6
MJA0				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MAJO	Matsushiro	24.84	232	⇑eP	P	22 45 15.9	+0.5
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MJAR	Matsushiro Arr	24.84	232	P	P	22 45 15.8	+0.4
	comp=Z,1.8nm,0.6s,baz=22,slow=6.3,SNR=6.1						
MJAR				LR	LR	22 55 43.9	
	comp=Z,30nm,18.6s,baz=235,slow=38						
ILAR	Eielson Array	26.47	48	P	P	22 45 30.6	+0.7
	comp=Z,0.7nm,1.0s,baz=261,slow=7.3,SNR=5.8						
ILAR	Eielson Array	26.47	48	eP	P	22 45 32.1	+2.3
ILAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
KSRS	Korea Array	29.21	247	LR	LR	22 56 27.6	
	comp=Z,9.2nm,20.3s,baz=205,slow=34						
TLY	Talaya	34.27	289	LR	LR	23 03 18.2	
	comp=Z,44nm,18.4s,baz=111,slow=41						
H11N2	WAKE ISLAND Hy	35.49	173	T	T	23 24 14.6	
	baz=355,slow=76,SNR=182						
H11N3	WAKE ISLAND Hy	35.51	173	T	T	23 24 15.7	
	baz=355,slow=76,SNR=115						
H11N1	WAKE ISLAND Hy	35.51	173	T	T	23 24 16.0	
	baz=355,slow=76,SNR=234						
H11S1	WAKE ISLAND Hy	36.69	173	T	T	23 25 42.0	
	baz=352,slow=76,SNR=4.8						
H11S3	WAKE ISLAND Hy	36.70	173	T	T	23 25 42.3	
	baz=352,slow=76,SNR=4.1						
H11S2	WAKE ISLAND Hy	36.71	173	T	T	23 25 49.2	
	baz=352,slow=76,SNR=3.1						
YKA	Yellowknife Ar	40.79	45	P	P	22 47 34.9	+1.2
	comp=Z,1.0nm,0.5s,baz=299,slow=31,SNR=4.2						
KURK	Kurchatov	47.80	301	P	P	22 48 27.9	-2.0
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KURBB	Kurchatov Arra	47.90	301	P	P	22 48 27.9	-2.8
	comp=Z,0.7nm,0.5s,baz=57,slow=8.5,SNR=6.8						
MKAR	Makanchi Array	48.48	295	P	P	22 48 32.6	-2.6
	comp=Z,0.2nm,0.4s,baz=28,slow=6.5,SNR=4.6						
MKAR	Makanchi Array	48.48	295	eP	P	22 48 37.3	+2.1
BVAR	Borovoye Array	50.17	308	P	P	22 48 44.0	-4.1
	comp=Z,0.8nm,0.6s,baz=26,slow=10,SNR=5.3						
BVAR	Borovoye Array	50.17	308	P	P	22 48 44.0	-4.1
BVAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ARCES	ARCESS Array B	51.77	342	P	P	22 48 56.5	-3.3
	comp=Z,1.2nm,0.8s,baz=15,slow=11,SNR=3.4						
ARCES	ARCESS Array B	51.77	342	eP	P	22 49 03.9	+4.1
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
PDAR	Pinedale Array	55.41	63	P	P	22 49 27.6	+0.4
	comp=Z,0.2nm,0.5s,baz=255,slow=2.4,SNR=3.4						
FINES	FINESS Array B	58.78	337	P	P	22 49 49.2	-1.2
	comp=Z,1.3nm,0.8s,baz=20,slow=2.2,SNR=5.2						
FINES	FINESS Array B	58.78	337	eP	P	22 49 50.8	+0.5
FINES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CMAR	Chiang Mai Arr	59.88	259	P	P	22 49 57.6	-0.9
	comp=Z,0.4nm,0.5s,baz=29,slow=7.3,SNR=5.0						
HFS	Hagfors	62.42	343	P	P	22 50 13.4	-1.8
	comp=Z,1.5nm,0.8s,baz=42,slow=12,SNR=4.6						
HFS	Hagfors	62.42	343	P	P	22 50 13.4	-1.8
HFS				pmax	pmax		
	comp=Z,1.0nm,0.5s						
TXAR	Lajitas Array	68.66	69	P	P	22 50 58.1	+2.1
	comp=Z,0.3nm,0.5s,baz=294,slow=4.9,SNR=6.6						
BRTR	Keskin Array B	75.88	322	P	P	22 51 36.0	-3.0
	comp=Z,0.3nm,0.6s,baz=13,slow=8.9,SNR=2.7						
BRTR	Keskin Array B	75.88	322	P	P	22 51 36.0	-3.0
WRA	Warramunga Arr	78.48	207	P	P	22 51 53.2	-0.2
	comp=Z,0.4nm,0.6s,baz=24,slow=5.8,SNR=4.6						
WRA	Warramunga Arr	78.48	207	eP	P	22 51 55.6	+2.1
ASAR	Alice Springs	82.15	206	P	P	22 52 14.5	+1.3
	comp=Z,1.0nm,0.6s,baz=17,slow=5.3,SNR=11						
ESDC	Sonseca Array	84.86	349	P	P	22 52 27.2	+0.1
	comp=Z,0.2nm,0.4s,baz=349,slow=3.8,SNR=5.1						
QSPA	South Pole Qui	144.86	180	PKPbc	PKPab	22 59 26.7	-0.4
	comp=Z,1.7nm,0.6s,baz=211,slow=0.1,SNR=6.9						

ISCJB ***15*** *22:52:11.2±0.9, 43°.59N±0°.06×146°.62E±0°.07, h49^{km}±10^{km}, Error ellipse: s-maj=11.5km s-min=6.0km az=147.4*

SKHL ***15*** *22:52:12.2±0.6, 43°.61N×146°.62E, h47^{km}±1^{km}, mb4.0/6*

JMA ***15*** *22:52:12.2±0.2, 43°.54N×146°.57E, h50^{km}±2^{km}, M3.3*

ISC 15 22:52:11.6±1.7**, 43°.59N**±0°.07×**146°.63E**±0°.06**, h46**^{km}±15^{km}**, n14, σ0^{s}.60**/24**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	Shikotan	0.31	28	i P	Pn	22 52 21.0	+0.5
SHO				AMB	AMB	22 52 22.0	
	80nm,0.2s						
SHO				AMB	AMB	22 52 22.0	
	200nm,0.2s						
SHO				i S	Sn	22 52 27.0	+0.2
SHO				A	A	22 52 28.0	
	2µm,0.2s						
SHO				A	A	22 52 28.0	
	2µm,0.2s						
NEM2	Nemuro 2	0.68	251	P	Pn	22 52 25.1	+0.1
NEM2				eS	Sn	22 52 34.0	-0.6
YUK	Yuzh-Kuril'sk	0.71	309	i P	Pn	22 52 25.0	-0.3
YUK				AMB	AMB	22 52 27.0	
	331nm,0.3s						
YUK				AMB	AMB	22 52 27.0	
	44nm,0.3s						
YUK				i S	Sn	22 52 35.0	-0.2
YUK				A	A	22 52 35.0	
	1µm,0.4s						
YUK				A	A	22 52 35.0	
	2µm,0.4s						
GRPR	Tuman	0.74	303	i P	Pn	22 52 25.0	-0.7
GRPR				AMB	AMB	22 52 26.0	
	50nm,0.1s						
GRPR				i S	Sn	22 52 35.0	-0.9
GRPR				A	A	22 52 36.0	
	2µm,0.2s						
GRPR				A	A	22 52 36.0	
	2µm,0.2s						
LAGR	Lagunnoye	0.77	308	eP	Pn	22 52 26.0	-0.1
LAGR				AMB	AMB	22 52 26.0	
	80nm,0.2s						

LAGR				AMB	AMB	22 52 26.0	
	105nm,0.2s						
LAGR				AMB	AMB	22 52 26.0	
	63nm,0.2s						
LAGR				*i* S	**Sn**	**22 52 36.0**	**-0.6**
LAGR				A	A	22 52 39.0	
	956nm,0.3s						
LAGR				A	A	22 52 39.0	
	1µm,0.3s						
GLVR	**Golovnino**	**0.82**	**281**	*i* P	**Pn**	**22 52 27.0**	**+0.2**
GLVR				AMB	AMB	22 52 27.0	
	473nm,0.2s						
GLVR				AMB	AMB	22 52 27.0	
	37nm,0.2s						
GLVR				*i* S	**Sn**	**22 52 38.0**	**+0.2**
GLVR				A	A	22 52 42.0	
	1µm,0.2s						
GLVR				A	A	22 52 42.0	
	609nm,0.2s						
JRA	**Rausu**	**1.15**	**288**	P	**Pn**	**22 52 31.6**	**+0.4**
JRA				*e*S	**Sn**	**22 52 46.3**	**+0.6**
JNK	**Nakash**	**1.39**	**270**	P	**Pn**	**22 52 34.6**	**+0.1**
JAK	**Akkeshi**	**1.53**	**248**	P	**Pn**	**22 52 36.5**	**0.0**
JAK				*e*S	**Sn**	**22 52 54.5**	**-0.7**
KUR	**Kuril'sk**	**1.87**	**28**	*e*P	**Pn**	**22 52 41.0**	**-0.1**
KUR				AMB	AMB	22 52 47.0	
	15nm,0.4s						
KUR				AMB	AMB	22 52 47.0	
	19nm,0.4s						
KUR				AMB	AMB	22 52 47.0	
	28nm,0.4s						
KUR				*i* S	**Sn**	**22 53 03.0**	**-0.4**
KUR				A	A	22 53 07.0	
	127nm,0.2s						
KUR				A	A	22 53 07.0	
	175nm,0.2s						
JTKR	**Abashiri--Toko**	**2.01**	**282**	P	**Pn**	**22 52 44.1**	**+1.1**
JAR	**Ashorobuto**	**2.10**	**263**	P	**Pn**	**22 52 45.2**	**+0.9**
JMP	**Maruseppu**	**2.40**	**281**	P	**Pn**	**22 52 49.6**	**+1.1**
JCH	**Churui**	**2.58**	**249**	P	**Pn**	**22 52 50.7**	**-0.2**
JCH				*e*S	**Sn**	**22 53 20.6**	**-0.5**

IDC 15 23:09:54.8±1.9**,7°.13S×125°.30E,h0**^{km}**,mb3.5**/1**, mb1 3.8**/3**,mb1mx3.4**/48**,mbtmp3.6**/3**,ML3.2**/2**,Error ellipse: s-maj=217.1km s-min=31.6km az=61.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**15.46**	**146**	Pn	Pn	23 13 34.3	-0.1
	0.1nm,0.3s,baz=319,slow=13,SNR=6.1						
ASAR	**Alice Springs**	**18.40**	**154**	P	Pn	23 14 11.6	0.0
	0.1nm,0.3s,baz=335,slow=13,SNR=8.4						
MKAR	**Makanchi Array**	**65.86**	**329**	P	P	23 20 42.2	-0.1
	0.4nm,0.8s,baz=140,slow=4.7,SNR=3.8						

NNC 15 23:41:20.4±6.5**,38°.51N×72°.68E,h0**^{km}**,mb3.8,mpv3.5, 4C-1D,Error ellipse: s-maj=53.5km s-min=33.6km az=143.0,Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**1.63**	**23**	⇑P	Pn	23 41 50.1	-0.5
	24nm,0.2s						
SFK				⇓S	Sg	23 42 13.0	+0.3
	43nm,0.3s						
MNAS	**Manas**	**3.97**	**358**	⇑Pn	Pn	23 42 22.0	-0.6
	2.6nm,0.3s						
MNAS				⇑Sn	Sn	23 43 09.5	-0.5
	1.9nm,0.4s						
KK31	**Karatay Array**	**4.87**	**341**	⇑Pn	Pn	23 42 35.6	+0.7
	1.6nm,0.3s,baz=142,slow=12,SNR=28						
KK31				Sn	Sn	23 43 33.4	+1.4
	4.0nm,0.5s,baz=151,slow=21,SNR=12						

IDC 16 00:13:17.3±1.4**,9°.38N×137°.90E,h0**^{km}**,mb3.6**/6**, mb1 3.8**/6**,mb1mx3.6**/52**,mbtmp3.6**/6**,MS3.1**/7**,Ms1 3.1**/7**, ms1mx2.8**/39**,Error ellipse: s-maj=41.4km s-min=29.4km az=83.0,Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	**Davao City (W)**	**12.41**	**260**	LR	LR	00 20 10.6	
	comp=Z,56nm,21.6s,baz=170,slow=33						
JOW	**Kunigami**	**19.61**	**334**	LR	LR	00 23 48.0	
	comp=Z,58nm,20.3s,baz=146,slow=32						
PMG	**Port Moresby**	**20.81**	**153**	LR	LR	00 25 20.4	
	comp=Z,141nm,18.3s,baz=260,slow=35						
JNU	**Nakatsue**	**24.50**	**346**	LR	LR	00 28 15.9	
	comp=Z,39nm,18.9s,baz=140,slow=37						
H11S3	**WAKE ISLAND Hy**	**29.34**	**69**	T	T	00 49 38.5	
	baz=256,slow=75,SNR=100						
H11S1	**WAKE ISLAND Hy**	**29.35**	**69**	T	T	00 49 43.3	
	baz=256,slow=75,SNR=78						
H11S2	**WAKE ISLAND Hy**	**29.35**	**69**	T	T	00 49 39.7	
	baz=256,slow=75,SNR=90						
KSRS	**Korea Array**	**29.37**	**344**	LR	LR	00 30 32.1	
	comp=Z,21nm,19.0s,baz=205,slow=35						
H11N1	**WAKE ISLAND Hy**	**29.84**	**67**	T	T	00 50 18.3	
	baz=254,slow=75,SNR=31						
H11N2	**WAKE ISLAND Hy**	**29.85**	**67**	T	T	00 50 16.9	
	baz=254,slow=75,SNR=56						
H11N3	**WAKE ISLAND Hy**	**29.85**	**67**	T	T	00 50 21.4	
	baz=254,slow=75,SNR=46						
ASAR	**Alice Springs**	**33.07**	**187**	P	P	00 19 54.5	-0.5
	0.4nm,0.6s,baz=19,slow=12,SNR=4.6						
ASAJ	**Asahikawa**	**34.85**	**6**	LR	LR	00 34 40.5	
	comp=Z,26nm,18.9s,baz=172,slow=37						
CMAR	**Chiang Mai Arr**	**38.80**	**288**	P	P	00 20 45.8	+1.6
	2.1nm,0.7s,baz=103,slow=7.3,SNR=9.4						
SONM	**Songino Array**	**46.65**	**331**	P	P	00 21 47.2	-0.5
	0.4nm,0.7s,baz=134,slow=6.2,SNR=2.2						
MKAR	**Makanchi Array**	**59.96**	**319**	P	P	00 23 24.6	-1.0
	0.3nm,0.8s,baz=88,slow=7.4,SNR=2.7						
ZALV	**Zalesovo Beam**	**61.25**	**327**	LR	LR	00 50 30.9	
	comp=Z,25nm,19.6s,baz=73,slow=36						
BVAR	**Borovoye Array**	**69.08**	**323**	P	P	00 24 23.6	-1.5
	0.4nm,0.6s,baz=96,slow=8.1,SNR=5.0						
ILAR	**Eielson Array**	**75.28**	**25**	P	P	00 25 03.2	+1.2
	0.3nm,0.6s,baz=244,slow=6.1,SNR=5.9						

SJA 16 00:18:27.5±0.6**,31°.65S×68°.80W,h104**^{km}±3^{km}**,ML2.8, MW3.5,San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZON	**Zonda**	**0.15**	**47**	*i* P	Pn	00 18 42.5	+0.3
ZON				IAML		00 18 43.1	
	comp=Z,205nm,0.1s						
ZON				*i* S	Sn	00 18 54.1	+0.9
RTCV	**Cerro Valdivia**	**0.31**	**134**	*i* P	Pn	00 18 43.3	+0.6
RTLL	**Cerro Villicun**	**0.42**	**42**	*i* P	Pn	00 18 44.2	+0.9
RTLL				*i* S	Sn	00 18 56.2	+1.0
RTLL				AMSG		00 18 56.4	
	comp=E,13µm,0.6s						
RTLL				AMSG		00 18 57.5	
	comp=N,12µm,0.3s						
AMOG	**MOGNA**	**0.75**	**21**	*i* P	Pn	00 18 47.0	+1.1
AMOG				*i* S	Sn	00 19 00.9	+1.2
AUSP	**Uspallata**	**0.76**	**221**	*i* P	Pn	00 18 47.4	+1.2
ASAL	**Salagasta**	**0.94**	**182**	*i* P	Pn	00 18 48.4	+0.6
ARCO	**CERRO ARCO**	**1.20**	**185**	*i* P	Pn	00 18 51.4	+0.8
ARCO				*i* S	Sn	00 19 09.5	+1.4
ARCO				IAML		00 19 11.9	
	comp=Z,131nm,0.3s						
AAGR	**Agrelo**	**1.44**	**181**	*i* P	Pn	00 18 54.9	+1.6
ACAN	**Cantantal**	**1.51**	**115**	*i* P	Pn	00 18 54.9	+0.8
AROD	**Rodeo**	**1.58**	**338**	*i* P	Pn	00 18 56.7	+1.3

DJA 16 00:28:24.7±0.9**,9°S**±6°**×11°7E**±°**,h25**^{km}±7^{km}**,M4.1**/13**, mb4.6**/1**,MLv3.8**/13**,Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLAI	**Plampang**	**0.71**	**38**	P	Pb	00 28 38.7	+0.3
PLAI				S	Sn	00 28 48.6	-0.6
TWSI	**Taliwang, Sumb**	**0.79**	**325**	P	Pb	00 28 40.0	+0.2
WBSI	**Waikabubak, Su**	**2.04**	**97**	P	Pn	00 28 55.6	-1.9
IGBI	**Denpasar**	**2.24**	**285**	P	Pn	00 29 00.2	0.0
IGBI				S	Sn	00 29 25.3	-1.8
SRBI	**Singaraja**	**2.47**	**301**	P	Pn	00 29 04.3	+0.9
JAGI	**Jajag, Banyuwa**	**3.28**	**286**	P	Pn	00 29 14.5	0.0
GMJI	**Gumukmas**	**4.01**	**286**	P	Pn	00 29 24.6	+0.1
BLJI	**Banyuglugur**	**4.05**	**294**	P	Pn	00 29 25.8	+0.7
EDFI	**Ende, Flores**	**4.34**	**82**	P	Pn	00 29 29.5	+0.2
PWJI	**Pagerwojo**	**5.64**	**284**	P	Pn	00 29 46.8	-0.2

NIED ***16*** *00:36:00,25°.90N×128°.50E,h11^{km},Mw4.1 Best double couple: M$_0$1.74000×10^{15} NP1:φ$_s$236.00000°,δ42.00000°, λ-76.00000°. NP2:φ$_s$38.00000°,δ49.00000°, λ-102.00000°.*

IDC ***16*** *00:36:19.6±0.7,25°.79N×128°.63E,h0^{km},mb4.0/17, mb1 4.2/19,mb1mx4.0/57,mbtmp4.0/19,ML4.0/2,MS3.1/2, Ms1 3.1/2,ms1mx2.5/56,Error ellipse: s-maj=24.8km s-min=13.3km az=80.0*

ISCJB ***16*** *00:36:21.9±1.0,25°.84N±0°.04×128°.66E±0°.04,h27^{km}±6^{km}, mb3.9/20,MS2.8/1,Error ellipse: s-maj=6.8km s-min=5.9km az=7.1*

NEIC ***16*** *00:36:22.5±3.9,25°.78N×128°.62E,h18^{km}±24^{km},mb4.3/1, Error ellipse: s-maj=13.2km s-min=8.4km az=80.0*

JMA ***16*** *00:36:24.2±0.3,25°.91N×128°.54E,h53^{km},M4.0*

ISC 16 00:36:22.5±0.6**,25°.80N**±0°.06**×128°.69E**±0°.04**,h17**^{km}±3^{km}**, n47,**σ1^{s}.**69**/60**,mb4.1**/20**,Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JJT3	**Tamagusuku3**	**0.88**	**293**	P	**Pb**	**00 36 38.5**	**-0.8**
JJT3				S	**Sb**	**00 36 49.6**	**-1.2**
JNTH	**Nagotoyohara**	**0.93**	**320**	P	**Pb**	**00 36 38.8**	**-1.4**
JNTH				*e*S	**Sb**	**00 36 49.2**	**-3.0**
JOW	**Kunigami**	**1.09**	**340**	Pn	**Pb**	**00 36 41.8**	**-1.2**
	2µm,0.3s,baz=113,slow=24,SNR=9551						
JOW				Sn	**Sb**	**00 36 54.0**	**-2.8**
	946nm,0.3s,baz=157,slow=14,SNR=29						
JOW				LR	LR	00 37 17.0	
	comp=Z,809nm,19.2s,baz=354,slow=53						
JOW	**Kunigami**	**1.09**	**340**	P	**Pb**	**00 36 41.7**	**-1.2**
JOW				*e*S	**Sb**	**00 36 54.1**	**-2.8**
JYRO	**Yoronjima**	**1.23**	**350**	P	**Pn**	**00 36 43.7**	**-1.2**
JYRO				S	**Sb**	**00 36 58.1**	**-2.9**
JIH	**Iheya**	**1.39**	**332**	P	**Pn**	**00 36 46.1**	**-0.9**
JIH				S	**Sn**	**00 37 02.1**	**-2.9**
JAGN	**Aguni-jima**	**1.52**	**301**	P	**Pn**	**00 36 47.4**	**-1.4**
JAGN				S	**Sn**	**00 37 05.5**	**-2.7**
JOKE	**Okinoerabujima**	**1.55**	**356**	P	**Pn**	**00 36 48.6**	**-0.8**
JOKE				S	**Sn**	**00 37 06.3**	**-2.9**
JKE	**Kume jima 2**	**1.79**	**287**	P	**Pn**	**00 36 50.5**	**-2.1**
JKE				S	**Sn**	**00 37 10.5**	**-4.4**
JTK	**Tokunoshima**	**1.99**	**7**	P	**Pn**	**00 36 54.6**	**-0.7**
JTK				S	**Sn**	**00 37 17.6**	**-2.2**
JMZ	**Minamidaito 2**	**2.28**	**89**	P	**Pn**	**00 36 57.9**	**-1.5**
JMZ				S	**Sn**	**00 37 23.0**	**-4.1**
JNU	**Nakatsue**	**7.54**	**14**	Pn	**Pn**	**00 38 12.6**	**+0.9**
	3.6nm,0.3s,baz=202,slow=9.4,SNR=25						
JNU				Sn	**Sn**	**00 39 32.6**	**-4.1**
	1.7nm,0.3s,baz=272,slow=9.7,SNR=4.1						
KSAR	**Wonju Array Be**	**11.62**	**357**	Pn	**Pn**	**00 39 08.0**	**+0.4**
KSRS	**Korea Array**	**11.63**	**357**	Pn	**Pn**	**00 39 08.0**	**+0.3**
	0.4nm,0.3s,baz=177,slow=15,SNR=5.0						
KSRS				LR	LR	00 44 02.9	
	comp=Z,88nm,18.9s,baz=180,slow=40						
ASAJ	**Asahikawa**	**21.48**	**28**	LR	LR	00 49 22.4	
	comp=Z,42nm,20.5s,baz=190,slow=36						
KLR	**Kul'dur**	**23.51**	**5**	P	**P**	**00 41 32.0**	**+0.6**
	0.1nm,0.4s,baz=193,slow=8.1,SNR=2.9						
SONM	**Songino Array**	**28.13**	**327**	P	**P**	**00 42 15.0**	**+1.3**
	1.1nm,0.4s,baz=146,slow=12,SNR=7.8						
CMAR	**Chiang Mai Arr**	**28.46**	**261**	P	**P**	**00 42 16.4**	**-0.4**
	0.7nm,0.3s,baz=41,slow=7.2,SNR=4.4						
ODAN	**Odare**	**36.91**	**281**	*e*P	**P**	**00 43 30.0**	**-0.9**
	21nm,0.6s						
RAMN	**Ramite**	**37.60**	**281**	*e*P	**P**	**00 43 35.5**	**-1.2**
	7.1nm,0.5s						
JIRN	**Jiri**	**37.87**	**283**	*e*P	**P**	**00 43 38.3**	**-0.8**
	8.9nm,0.4s						
PKIN	**Phulchoki**	**38.58**	**283**	*e*P	**P**	**00 43 44.0**	**-1.0**
	14nm,0.7s						
KKN	**Kakani**	**38.65**	**283**	*e*P	**P**	**00 43 44.7**	**-0.8**
	11nm,0.5s						
DMN	**Daman**	**38.83**	**283**	*e*P	**P**	**00 43 46.4**	**-0.7**
	17nm,1.0s						
GKN	**Gorkha**	**39.19**	**283**	*e*P	**P**	**00 43 48.8**	**-1.2**
	9.3nm,0.5s						
DANN	**Dangsing**	**39.91**	**284**	*e*P	**P**	**00 43 55.0**	**-1.2**
	17nm,0.6s						
KOLN	**Koldanda**	**40.13**	**283**	*e*P	**P**	**00 43 57.5**	**-0.4**
	3.4nm,0.4s						
PYUN	**Piuthan**	**40.62**	**284**	*e*P	**P**	**00 44 01.7**	**-0.2**
	34nm,1.0s						
MKAR	**Makanchi Array**	**42.12**	**312**	P	**P**	**00 44 12.3**	**-1.5**
	1.1nm,0.7s,baz=98,slow=10,SNR=11						
MKAR				PcP	**PcP**	**00 46 07.9**	**-0.3**
	0.7nm,0.8s,baz=98,slow=2.5,SNR=4.1						
ZALV	**Zalesovo Beam**	**42.83**	**323**	P	**P**	**00 44 18.9**	**-0.5**
	1.1nm,0.3s,baz=115,slow=10,SNR=4.0						
FITZ	**Fitzroy Crossi**	**43.74**	**184**	P	**P**	**00 44 26.5**	**-0.5**
	2.5nm,0.7s,baz=17,slow=9.6,SNR=5.8						
KURK	**Kurchatov**	**45.41**	**317**	P	**P**	**00 44 39.4**	**-0.7**
KURBB	**Kurchatov Arra**	**45.44**	**317**	P	**P**	**00 44 39.4**	**-1.0**
	0.6nm,0.2s,baz=103,slow=9.0,SNR=3.0						
WRA	**Warramunga Arr**	**45.80**	**173**	P	**P**	**00 44 42.9**	**-0.6**
	1.6nm,0.5s,baz=354,slow=8.6,SNR=12						
ASAR	**Alice Springs**	**49.44**	**174**	P	**P**	**00 45 11.7**	**0.0**
	1.6nm,0.7s,baz=2.6,slow=8.3,SNR=12						
BVAR	**Borovoye Array**	**50.87**	**319**	P	**P**	**00 45 21.9**	**-0.4**
	0.7nm,0.6s,baz=101,slow=7.5,SNR=5.7						
BRVK	**Borovoye**	**50.93**	**319**	*e*P	**P**	**00 45 22.2**	**-0.5**
	1.9nm,0.5s						
ILAR	**Eielson Array**	**64.61**	**28**	P	**P**	**00 46 58.2**	**-0.6**
	0.3nm,0.6s,baz=280,slow=5.4,SNR=3.7						
KBZ	**Khabaz**	**69.75**	**310**	P	**P**	**00 47 32.1**	**+0.5**
	6.4nm,0.9s,baz=107,slow=3.8,SNR=11						
ARCES	**ARCESS Array B**	**70.55**	**339**	P	**P**	**00 47 35.4**	**-0.7**
	1.4nm,0.9s,baz=61,slow=7.5,SNR=3.5						
FINES	**FINESS Array B**	**73.44**	**331**	P	**P**	**00 47 52.8**	**-0.7**
	1.2nm,0.5s,baz=104,slow=8.0,SNR=7.9						
AKASG	**Malin Array Be**	**76.12**	**320**	P	**P**	**00 48 08.6**	**-0.7**
	1.1nm,0.6s,baz=54,slow=7.3,SNR=4.4						
BRTR	**Keskin Array B**	**77.62**	**308**	P	**P**	**00 48 17.9**	**-0.2**
	1.9nm,0.8s,baz=96,slow=5.6,SNR=14						
NB2	**NORSAR Subarra**	**79.88**	**334**	P	**P**	**00 48 28.7**	**-1.3**
	comp=Z,2.1nm,0.7s,baz=54,slow=5.6						
CLL	**Collm**	**84.73**	**325**	*i* P	**P**	**00 48 55.4**	**-0.2**
CLL				*e*(sP)	**sP**	**00 49 06.0**	**+2.7**
GERES	**GERESS Array B**	**85.79**	**323**	P	**P**	**00 49 01.2**	**+0.2**
	comp=Z,0.2nm,0.4s,baz=66,slow=4.8,SNR=2.1						
PDAR	**Pinedale Array**	**93.23**	**39**	P	**P**	**00 49 36.8**	**+0.3**
	comp=Z,0.3nm,0.8s,baz=2.3,slow=2.3,SNR=3.0						

ROM ***16*** *01:00:06.4±0.2,44°.913N±0°.007×10°.936E±0°.009, h8^{km},ML3.0/31*

VIE ***16*** *01:00:07.7±0.3,44°.97N×10°.82E,h5^{km}±4^{km},mb2.5/13, ml2.8/16,Error ellipse: s-maj=2.7km s-min=1.9km az=112.0 66 km NW of Bologna*

ISCJB ***16*** *01:00:08.5±0.2,44°.99N±0°.01×10°.90E±0°.02,h12^{km}±1^{km}, Error ellipse: s-maj=2.4km s-min=1.8km az=30.2*

BGR ***16*** *01:00:08.5±0.5,44°.72N×11°.15E,h10^{km},ML3.2/13,Error ellipse: s-maj=10.0km s-min=7.8km az=17.0*

CSEM ***16*** *01:00:09.8±0.2,45°.00N×10°.93E,h10^{km},ML2.9/29,Error ellipse: s-maj=4.9km s-min=2.4km az=144.0*

LDG ***16*** *01:00:10.9±0.3,44°.89N×11°.01E,h2^{km},Ml2.8/24,Error ellipse: s-maj=5.8km s-min=3.1km az=89.0*

PRU ***16*** *01:00:12.2,44°.97N×11°.02E,h24^{km}*

STR ***16*** *01:00:12.7±3.8,45°N±14°×1°1E±3°5,h5^{km},M4.0/6, MLv4.0/6*

ISC 16 01:00:09.3±0.8**,44°.93N**±0°.01**×10°.94E**±0°.02**,h7**^{km}±5^{km}**, n177,**σ1^{s}.**62**/273**,3C-3D,Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NDIM	**Novi di Modena**	**0.06**	**214**	*i* P	**Pg**	**01 00 09.5**	**-1.4**
NDIM				S	**Sg**	**01 00 10.9**	**-1.2**
T0825	**Gonzaga (MN)**	**0.08**	**300**	*i* P	**Pg**	**01 00 11.6**	**+0.4**
T0825				S	**Sg**	**01 00 15.3**	**+2.7**
T0825				AML	AML		
	comp=E,77150µm,0.3s						
T0825				AML	AML		
T0826	**Rio Saliceto (**	**0.13**	**225**	*i* P	**Pg**	**01 00 11.0**	**-1.1**
T0826				S	**Sg**	**01 00 14.1**	**+0.1**
T0826				AML	AML		
	comp=E,34800µm,0.9s						
T0826				AML	AML		
	comp=N,64100µm,0.5s						
T0826				AML	AML		
	comp=E,34800µm,0.9s						
T0826				AML	AML		
	comp=N,64100µm,0.5s						
GAZZ	**Gazzo Veronese**	**0.21**	**31**	⇑*e*Pg	**Pg**	**01 00 14.6**	**+1.1**
GAZZ	**Gazzo Veronese**	**0.21**	**31**	*e*Pg	**Pg**	**01 00 14.6**	**+1.1**
NOVE	**Novellara**	**0.21**	**230**	*i* P	**Pg**	**01 00 12.5**	**-1.0**
NOVE				AML	AML		
	comp=E,11615µm,0.4s						
NOVE				AML	AML		
	comp=N,17150µm,0.5s						
NOVE				AML	AML		
	comp=N,17150µm,0.5s						
NOVE				AML	AML		
	comp=E,11615µm,0.4s						
RAVA	**Ravarino**	**0.22**	**145**	*e*P	**Pg**	**01 00 13.5**	**-0.2**
RAVA				AML	AML		
	comp=E,14300µm,0.7s						
RAVA				AML	AML		
	comp=N,13850µm,0.7s						
RAVA				AML	AML		
	comp=E,14350µm,0.7s						
RAVA				AML	AML		
	comp=N,13850µm,0.7s						
RAVA				AML	AML		
	comp=N,13850µm,0.7s						
RAVA				AML	AML		
	comp=E,14350µm,0.7s						
T0800	**Massa Finalese**	**0.23**	**111**	P	**Pg**	**01 00 13.9**	**0.0**
T0800				S	**Sg**	**01 00 19.6**	**+2.5**
T0800				AML	AML		
	comp=E,13100µm,0.3s						
T0800				AML	AML		
	comp=N,13000µm,0.2s						
T0800				AML	AML		
	comp=E,13350µm,0.3s						
T0800				AML	AML		
	comp=N,12725µm,1.1s						
T0800				AML	AML		
	comp=E,13050µm,0.3s						
T0800				AML	AML		
	comp=N,13000µm,0.2s						
T0800				AML	AML		
	comp=E,13350µm,0.3s						
T0800				AML	AML		
	comp=N,12725µm,1.1s						
T0800				AML	AML		
	comp=E,13050µm,0.3s						
T0800				AML	AML		
	comp=E,13350µm,0.3s						
T0800				AML	AML		
	comp=N,13000µm,0.2s						
T0800				AML	AML		
	comp=N,12725µm,1.1s						
MNTV	**Mantova**	**0.24**	**333**	P	**Pg**	**01 00 15.1**	**+1.0**
SERM	**Sermide**	**0.26**	**73**	P	**Pg**	**01 00 15.2**	**+0.7**
SERM				AML	AML		
	comp=E,2225µm,0.6s						
SERM				AML	AML		
	comp=N,2560µm,0.5s						
SERM				AML	AML		
	comp=E,4045µm,0.6s						
SERM				AML	AML		
	comp=N,4435µm,0.6s						
SERM				AML	AML		
	comp=E,4040µm,0.6s						
SERM				AML	AML		
	comp=N,4435µm,0.6s						
SERM				AML	AML		
	comp=N,4435µm,0.6s						
SERM				AML	AML		
	comp=E,4040µm,0.6s						
T0822	**Casumaru (Bond**	**0.30**	**109**	P	**Pg**	**01 00 15.3**	**+0.1**
T0822				S	**Sb**	**01 00 21.9**	**-0.3**
T0822				AML	AML		
	comp=E,5530µm,0.3s						
T0822				AML	AML		
	comp=N,4765µm,0.7s						
T0822				AML	AML		
	comp=E,5530µm,0.3s						
T0822				AML	AML		
	comp=N,4760µm,0.7s						
T0822				AML	AML		
	comp=E,5530µm,0.3s						
T0822				AML	AML		
	comp=N,4760µm,0.7s						
MODE	**Modena**	**0.30**	**179**	P	**Pg**	**01 00 15.7**	**+0.5**
MODE				AML	AML		
	comp=E,33850µm,0.5s						
MODE				AML	AML		
	comp=N,22950µm,0.5s						
MODE				AML	AML		
	comp=E,33850µm,0.5s						
MODE				AML	AML		
	comp=N,22950µm,0.5s						
MODE				AML	AML		
	comp=N,22950µm,0.5s						
MODE				AML	AML		
	comp=E,33850µm,0.5s						
FIU	**Minerbio Fiu**	**0.49**	**127**	AML	AML		
	comp=E,1255µm,0.4s						
FIU				AML	AML		
	comp=E,1255µm,0.4s						
FIU				AML	AML		
	comp=N,1140µm,1.6s						
FIU				AML	AML		
	comp=E,1255µm,0.4s						
FIU				AML	AML		
	comp=N,1140µm,1.6s						
FIU				AML	AML		
	comp=N,1140µm,1.6s						
ZCCA	**Zocca**	**0.58**	**178**	P	**Pg**	**01 00 21.4**	**+0.9**
ZCCA				AML	AML		
	comp=E,920µm,1.6s						
ZCCA				AML	AML		
	comp=N,875µm,0.6s						
ZCCA				AML	AML		
	comp=E,822µm,0.4s						
ZCCA				AML	AML		
	comp=N,876µm,1.6s						
ZCCA				AML	AML		
	comp=E,920µm,1.6s						
ZCCA				AML	AML		
	comp=N,876µm,0.6s						
ZCCA				AML	AML		
	comp=E,822µm,0.4s						
ZCCA				AML	AML		
	comp=N,876µm,1.6s						
ZCCA				AML	AML		
	comp=E,822µm,0.4s						
ZCCA				AML	AML		
	comp=E,920µm,1.6s						
ZCCA				AML	AML		
	comp=N,876µm,1.6s						
ZCCA				AML	AML		
	comp=N,876µm,0.6s						
ERBM	**Eremo**	**0.64**	**216**	P	**Pg**	**01 00 21.8**	**+0.2**
ERBM				AML	AML		
	comp=E,368µm,0.8s						
ERBM				AML	AML		
	comp=N,613µm,1.0s						
ERBM				AML	AML		
	comp=E,368µm,0.8s						
ERBM				AML	AML		
	comp=N,614µm,1.0s						
ERBM				AML	AML		
	comp=N,614µm,1.0s						
ERBM				AML	AML		
	comp=E,368µm,0.8s						
TEOL	**Teolo**	**0.67**	**50**	*e*P	**Pg**	**01 00 22.4**	**+0.3**
TEOL				AML	AML		
	comp=E,5860µm,0.3s						
TEOL				AML	AML		
	comp=N,5045µm,0.3s						
TEOL				AML	AML		
	comp=E,5860µm,0.3s						
TEOL				AML	AML		
	comp=N,5050µm,0.3s						
TEOL				AML	AML		
	comp=N,5050µm,0.3s						
TEOL				AML	AML		
	comp=E,5860µm,0.3s						
ROVR	**Roverˆ¤ Verone**	**0.72**	**7**	P	**Pg**	**01 00 23.1**	**0.0**
ROVR				AML	AML		
	comp=E,918µm,0.3s						

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ROVR                                AML   AML
      comp=N,1600µm,0.3s
ROVR                                AML   AML
      comp=E,918µm,0.3s
ROVR                                AML   AML
      comp=N,1600µm,0.3s
ROVR                                AML   AML
      comp=E,918µm,0.3s
ROVR                                AML   AML
      comp=N,1600µm,0.3s
ROVR                                AML   AML
      comp=E,918µm,0.3s
ROVR                                AML   AML
      comp=N,1600µm,0.3s
MARN  Marana (Italy)   0.73  15⇓ePg   Pg    01 00 23.5 +0.2
MARN                             eSg   Sn    01 00 36.2 -1.2
MARN  Marana (Italy)   0.73  15  ePg   Pg    01 00 23.5 +0.2
MARN                             eSg   Sn    01 00 36.2 -1.2
SALO  Salr             0.74 337   P    Pg    01 00 23.8 +0.1
SALO                                AML   AML
      comp=E,672µm,0.3s
SALO                                AML   AML
      comp=N,1072µm,0.6s
SALO                                AML   AML
      comp=E,672µm,0.3s
SALO                                AML   AML
      comp=N,1072µm,0.6s
SALO                                AML   AML
      comp=E,672µm,0.3s
SALO                                AML   AML
      comp=N,1072µm,0.6s
SALO                                AML   AML
      comp=N,1072µm,0.6s
SALO                                AML   AML
      comp=E,672µm,0.3s
BALD  Monte Baldo      0.75 353⇓ePg   Pg    01 00 23.8  0.0
BALD                             eSg   Sn    01 00 36.7 -1.6
BALD  Monte Baldo      0.75 353  ePg   Pg    01 00 23.8  0.0
BALD                             eSg   Sn    01 00 36.7 -1.6
IMOL  Imola, Italy     0.81 135   P    Pn    01 00 27.4 +0.3
DOSS  Dosso del Somm   0.96  10  ePg   Pg    01 00 27.5 -0.3
DOSS                             eSg   Sn    01 00 43.4  0.0
DOSS  Dosso del Somm   0.96  10  ePg   Pg    01 00 27.5 -0.3
DOSS                             eSg   Sn    01 00 43.4  0.0
PTF   Prato            0.98 175   P    Pg    01 00 28.0 -0.1
RNI   Roncone          1.07 348⇓ePg   Pg    01 00 29.2 -0.6
RNI   Roncone          1.07 348  ePg   Pg    01 00 29.2 -0.6
BOB   Bobbio (Coli)    1.08 262   P    Pg    01 00 30.4 +0.5
BOB                                 AML   AML
      comp=E,1039µm,1.5s
BOB                                 AML   AML
      comp=N,1350µm,1.5s
BOB                                 AML   AML
      comp=E,1039µm,1.5s
BOB                                 AML   AML
      comp=N,1350µm,1.5s
BOB                                 AML   AML
      comp=E,1039µm,1.5s
BOB                                 AML   AML
      comp=N,1350µm,1.5s
CGRP  Cima Grappa      1.12  32⇑ePg   Pg    01 00 30.7 -0.1
CGRP                             eSg   Sn    01 00 48.5 +1.1
CGRP  Cima Grappa      1.12  32  ePg   Pg    01 00 30.7 -0.1
CGRP                             eSg   Sn    01 00 48.5 +1.1
CGRP  Cima Grappa      1.12  32   P    Pg    01 00 30.6 -0.2
CGRP                                AML   AML
      comp=E,496µm,0.6s
CGRP                                AML   AML
      comp=N,472µm,0.8s
CGRP                                AML   AML
      comp=E,496µm,0.6s
CGRP                                AML   AML
      comp=N,472µm,0.8s
CGRP                                AML   AML
      comp=E,496µm,0.6s
CGRP                                AML   AML
      comp=N,472µm,0.8s
PANI  Panarotta        1.15  14⇑ePg   Pg    01 00 31.0 -0.3
PANI                             eSg   Sn    01 00 48.0 -0.1
MABI  Malga Bissina    1.16 345   P    Pg    01 00 30.7 -0.9
MABI                                AML   AML
      comp=E,165µm,1.3s
MABI                                AML   AML
      comp=N,184µm,0.9s
MABI                                AML   AML
      comp=E,166µm,1.3s
MABI                                AML   AML
      comp=N,184µm,0.9s
MABI                                AML   AML
      comp=N,184µm,0.9s
MABI                                AML   AML
      comp=E,166µm,1.3s
PLMA  Palmaria, Port   1.18 222   P    Pb    01 00 31.8 -0.1
PLMA                                AML   AML
      comp=E,386µm,0.5s
PLMA                                AML   AML
      comp=N,808µm,0.5s
PLMA                                AML   AML
      comp=E,386µm,0.5s
PLMA                                AML   AML
      comp=N,808µm,0.5s
PLMA                                AML   AML
      comp=N,808µm,0.5s
PLMA                                AML   AML
      comp=E,386µm,0.5s
MSSA  Maissana         1.19 239   P    Pg    01 00 31.9 -0.3
MSSA                                AML   AML
      comp=E,392µm,0.5s
MSSA                                AML   AML
      comp=N,540µm,1.4s
MSSA                                AML   AML
      comp=E,392µm,0.5s
MSSA                                AML   AML
      comp=N,540µm,1.4s
MSSA                                AML   AML
      comp=N,540µm,1.4s
MSSA                                AML   AML
      comp=E,392µm,0.5s
MTLO  Montello         1.20  42  ePg   Pg    01 00 32.0 -0.3
MTLO  Montello         1.20  42  ePg   Pg    01 00 32.0 -0.3
ASQU  Asqua            1.29 152   P    Pb    01 00 34.8 +0.9
ASQU                                AML   AML
      comp=E,173µm,0.5s
ASQU                                AML   AML
      comp=N,232µm,0.9s
ASQU                                AML   AML
      comp=E,173µm,0.5s
ASQU                                AML   AML
      comp=N,232µm,0.9s
ASQU                                AML   AML
      comp=E,173µm,0.5s
ASQU                                AML   AML
      comp=N,232µm,0.9s
VARN  Col Varnada, M   1.34  37  ePg   Pn    01 00 34.0 -0.5
VARN  Col Varnada, M   1.34  37  ePg   Pn    01 00 34.0 -0.5
OZOL  Ozolo            1.47   3  ePg   Pn    01 00 36.1 -0.2
OZOL  Ozolo            1.47   3  ePg   Pn    01 00 36.1 -0.2
CSNT  Castellina Chi   1.48 170   P    Pn    01 00 36.0 -0.4
CSNT                                AML   AML
      comp=E,208µm,0.9s
CSNT                                AML   AML
      comp=N,240µm,0.7s
CSNT                                AML   AML
      comp=E,208µm,0.9s
CSNT                                AML   AML
      comp=N,240µm,0.7s
CSNT                                AML   AML
      comp=N,240µm,0.7s
CSNT                                AML   AML
      comp=E,208µm,0.9s
FAU   Forcella Aurin   1.49  29  ePg   Pn    01 00 36.5 -0.1
FAU   Forcella Aurin   1.49  29  ePg   Pn    01 00 36.5 -0.1
CRE   Caprese Michel   1.50 151   P    Pn    01 00 37.0 +0.3
CRE                                 AML   AML
      comp=E,156µm,0.6s
CRE                                 AML   AML
      comp=N,209µm,1.2s
CRE                                 AML   AML
      comp=E,157µm,0.6s
CRE                                 AML   AML
      comp=N,210µm,1.2s
CRE                                 AML   AML
      comp=E,157µm,0.6s
CRE                                 AML   AML
      comp=N,210µm,1.2s
CARE  Lago del Cares   1.50 353  ePg   Pn    01 00 36.0 -0.9
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CARE  Lago del Cares   1.50 353  ePg   Pn    01 00 36.0 -0.9
APPI  Appiano          1.56   7   P    Pn    01 00 37.4 -0.1
APPI                                AML   AML
      comp=E,636µm,0.4s
APPI                                AML   AML
      comp=N,625µm,0.4s
APPI                                AML   AML
      comp=E,636µm,0.4s
APPI                                AML   AML
      comp=N,625µm,0.4s
APPI                                AML   AML
      comp=N,625µm,0.4s
APPI                                AML   AML
      comp=E,636µm,0.4s
KOSI  Kohlern          1.56  11   P    Pn    01 00 37.4 -0.2
KOSI                                AML   AML
      comp=E,410µm,0.7s
KOSI                                AML   AML
      comp=N,326µm,1.2s
KOSI                                AML   AML
      comp=E,410µm,0.7s
KOSI                                AML   AML
      comp=N,326µm,1.2s
KOSI                                AML   AML
      comp=E,410µm,0.7s
KOSI                                AML   AML
      comp=N,326µm,1.2s
BRMO  Bormio           1.59 346   P    Pn    01 00 37.9 -0.1
BRMO                                AML   AML
      comp=E,212µm,0.6s
BRMO                                AML   AML
      comp=N,160µm,0.6s
BRMO                                AML   AML
      comp=E,212µm,0.6s
BRMO                                AML   AML
      comp=N,160µm,0.6s
BRMO                                AML   AML
      comp=E,212µm,0.6s
BRMO                                AML   AML
      comp=N,160µm,0.6s
MOSI  Grossmontoni     1.71 351   P    Pn    01 00 40.1 +0.5
MOSI                                AML   AML
      comp=E,420µm,0.9s
MOSI                                AML   AML
      comp=N,767µm,0.5s
MOSI                                AML   AML
      comp=E,420µm,0.9s
MOSI                                AML   AML
      comp=N,767µm,0.5s
MOSI                                AML   AML
      comp=N,767µm,0.5s
MOSI                                AML   AML
      comp=E,420µm,0.9s
CAFI  Castiglion Fio   1.77 155   P    Pn    01 00 40.9 +0.6
CAFI                                AML   AML
      comp=E,80µm,0.6s
CAFI                                AML   AML
      comp=N,63µm,1.0s
CAFI                                AML   AML
      comp=N,63µm,1.0s
CAFI                                AML   AML
      comp=E,80µm,0.6s
ABSI  Aberstueckl      1.81   8   P    Pn    01 00 40.4 -0.7
ABSI                                AML   AML
      comp=E,546µm,0.7s
ABSI                                AML   AML
      comp=N,581µm,0.8s
ABSI                                AML   AML
      comp=E,546µm,0.7s
ABSI                                AML   AML
      comp=N,581µm,0.8s
ABSI                                AML   AML
      comp=N,581µm,0.8s
ABSI                                AML   AML
      comp=E,546µm,0.7s
STAL  STALIGIAL        1.82  42   P    Pn    01 00 39.7 -1.3
STAL                                AML   AML
      comp=E,386µm,0.8s
STAL                                AML   AML
      comp=N,418µm,0.7s
STAL                                AML   AML
      comp=N,418µm,0.7s
STAL                                AML   AML
      comp=E,386µm,0.8s
FETA  Feichten         2.09 356  ePg   Pb    01 00 46.8 -0.9
      comp=E,1.3nm,0.3s,SNR=11
FETA                              Sg   Sg    01 01 15.8 -0.7
      comp=E,7.7nm,0.3s
FETA  Feichten         2.09 356   Pg   Pb    01 00 46.8 -0.9
      comp=E,1.3nm,0.3s,SNR=11
FETA                              Sg   Sg    01 01 15.8 -0.7
      comp=E,7.7nm,0.3s
VINO  Villanova        2.11  50  AML   AML
      comp=N,177µm,0.7s
VINO                                AML   AML
      comp=E,113µm,0.5s
VINO                                AML   AML
      comp=N,177µm,0.7s
VINO                                AML   AML
      comp=E,113µm,0.5s
ABTA  Abfaltersbach    2.12  31  ePn   Pn    01 00 45.6 +0.4
      comp=E,0.7nm,0.2s
ABTA                              Sg   Sg    01 01 18.1 +0.8
      comp=E,28nm,0.6s
ABTA  Abfaltersbach    2.12  31   Pn   Pn    01 00 45.6 +0.4
      comp=E,0.7nm,0.2s
ABTA                              Sg   Sg    01 01 18.1 +0.8
      comp=E,28nm,0.6s
RISI  Rein             2.16  21  AML   AML
      comp=E,310µm,0.4s
RISI                                AML   AML
      comp=N,373µm,0.4s
RISI                                AML   AML
      comp=N,373µm,0.4s
RISI                                AML   AML
      comp=E,310µm,0.4s
WTTA  Wattenberg       2.38  11  ePn   Pb    01 00 51.4 -1.1
WTTA                             eSg   Sg    01 01 33.6 +7.9
WTTA  Wattenberg       2.38  11  ePg   Pb    01 00 51.5 -1.1
      comp=E,9.7nm,0.3s
WTTA                              Sg   Sg    01 01 24.8 -0.9
      comp=E,12nm,0.3s
WTTA  Wattenberg       2.38  11   Pn   Pn    01 00 49.5 +0.6
WTTA                              Sg   Sg    01 01 24.8 -0.9
      comp=E,12nm,0.3s
WTTA  Wattenberg       2.38  11  AML   AML
      comp=E,124µm,0.8s
WTTA                                AML   AML
      comp=N,73µm,0.5s
WTTA                                AML   AML
      comp=E,124µm,0.8s
WTTA                                AML   AML
      comp=N,73µm,0.5s
MOTA  Moosalm          2.41   3  ePg   Pb    01 00 51.7 -1.4
      comp=N,4.7nm,0.2s,SNR=20
MOTA                              Sg   Sg    01 01 26.2 -0.6
      comp=N,6.8nm,0.4s
WATA  Walderalm        2.44  10  ePg   Pb    01 00 51.8 -1.8
      comp=N,1.1nm,0.2s,SNR=31
WATA                              Sg   Sg    01 01 27.1 -0.6
      comp=N,5.6nm,0.3s
DAVA  Damuels          2.47 343  ePn   Pn    01 00 51.5 +1.4
DAVA                             eSg   Sg    01 01 37.4 +8.9
DAVA  Damuels          2.47 343  ePg   Pn    01 00 51.4 +1.3
      comp=N,2.8nm,0.2s
DAVA                              Sg   Sb    01 01 24.4 -0.2
      comp=N,11nm,0.6s
DAVA  Damuels          2.47 343   Pn   Pn    01 00 51.5 +1.4
MYKA  Terra Mystica    2.54  47  ePg   Pg    01 00 56.9 -1.0
      comp=N,9.1nm,0.3s
MYKA                              Sg   Sg    01 01 32.5 +1.7
      comp=N,9.5nm,0.3s
MYKA  Terra Mystica    2.54  47   Pg   Pg    01 00 56.9 -1.0
      comp=N,9.1nm,0.3s
MYKA                              Sg   Sg    01 01 32.5 +1.7
      comp=N,9.5nm,0.3s
RETA  Reutte           2.56 357  ePn   Pn    01 00 52.6 +1.4
      comp=N,2.8nm,0.3s
RETA                              Sg   Sg    01 01 30.5 -0.9
      comp=N,6.1nm,0.4s
RETA  Reutte           2.56 357   Pn   Pn    01 00 52.6 +1.4
      comp=N,2.8nm,0.3s
RETA                              Sg   Sg    01 01 30.5 -0.9
      comp=N,6.1nm,0.4s
KBA   Koelnbreinsper   2.72  37  ePg   Pg    01 01 00.2 -1.3
KBA                              eSg   Sg    01 01 37.7 +1.0
KBA   Koelnbreinsper   2.72  37  ePg   Pg    01 01 00.6 -0.8
      comp=N,4.3nm,0.3s
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KBA                               Sg   Sg    01 01 37.3 +0.6
      comp=N,6.1nm,0.3s
KBA   Koelnbreinsper   2.72  37   Pg   Pg    01 01 00.6 -0.8
      comp=N,4.3nm,0.3s
KBA                               Sg   Sg    01 01 37.3 +0.6
      comp=N,6.1nm,0.3s
SBF   Sospel           2.73 248  ePn   Pn    01 00 55.2 +1.6
SBF                              eSn   Sn    01 01 26.3 -0.6
      comp=N,40nm,0.5s
SBF   Sospel           2.73 248  ePn   Pn    01 00 55.2 +1.6
SBF                              eSn   Sn    01 01 26.3 -0.6
      comp=N,20nm,0.5s
PGF   Pioggiola        2.77 211  ePn   Pn    01 00 54.7 +0.5
PGF                              eSn   Sn    01 01 26.6 -1.3
PGF   Pioggiola        2.77 211  ePn   Pn    01 00 54.7 +0.5
PGF                              eSn   Sn    01 01 26.6 -1.3
UBR   Ueberruh         2.81 348  ePn   Pn    01 00 55.5 +0.8
UBR                              ePg   Pg    01 01 02.9 -0.2
UBR                              eSg   Sg    01 01 46.5 +7.0
UBR   Ueberruh         2.81 348   Pn   Pn    01 00 55.5 +0.8
NVLJ  Novalja          2.82  96  ePn   Pn    01 00 53.9 -0.8
NVLJ                              Sn   Sn    01 01 26.9 -2.2
MBDF  Montbardon       2.98 267  ePn   Pn    01 00 57.9 +0.9
MBDF                             eSn   Sn    01 01 33.4 +0.4
      comp=N,26nm,0.7s
MBDF  Montbardon       2.98 267  ePn   Pn    01 00 57.9 +0.9
MBDF                             eSn   Sn    01 01 33.4 +0.4
      comp=N,13nm,0.7s
OBKA  Obir             2.98  57  ePg   Pb    01 01 04.5 +1.7
OBKA                             eSg   Sg    01 01 44.1 -0.8
OBKA  Obir             2.98  57  ePn   Pn    01 00 56.3 -0.7
      comp=N,1.0nm,0.2s
OBKA                              Sg   Sg    01 01 48.1 +3.2
      comp=N,25nm,0.5s
OBKA  Obir             2.98  57   Pn   Pn    01 00 56.3 -0.7
      comp=N,1.0nm,0.2s
OBKA  Obir             2.98  57   Pg   Pb    01 01 04.4 +1.7
OBKA                              Sg   Sg    01 01 44.1 -0.8
LPG   La Plagne        3.02 282  ePn   Pn    01 00 59.5 +1.8
LPG                              eSn   Sn    01 01 34.2  0.0
      comp=N,11nm,0.5s
LPG   La Plagne        3.02 282  ePn   Pn    01 00 59.5 +1.8
LPG                              eSn   Sn    01 01 34.2  0.0
      comp=N,5.7nm,0.5s
LPL   La Plagne        3.03 283  ePn   Pn    01 00 59.5 +1.6
LPL                              eSn   Sn    01 01 34.1 -0.4
      comp=N,8.6nm,0.5s
LPL   La Plagne        3.03 283  ePn   Pn    01 00 59.5 +1.6
LPL                              eSn   Sn    01 01 34.1 -0.4
      comp=N,4.3nm,0.5s
RJOB  Jochberg         3.08  24  ePn   Pn    01 01 00.6 +2.2
RJOB  Jochberg         3.08  24   Pn   Pn    01 01 00.6 +2.2
CALF  Calern           3.12 249   P    Pn    01 01 00.0 +1.1
CALF  Calern           3.12 249   P    Pn    01 01 00.0 +1.1
FUR   Furstenfeldbru   3.24   4  eSg   Sg    01 01 55.0 +1.7
FUR   Furstenfeldbru   3.24   4   Sg   Sg    01 01 55.0 +1.7
OZLJ  Ozalj            3.27  76  ePn   Pn    01 01 00.2 -0.6
OZLJ                              Sn   Sn    01 01 38.6 -1.3
SOKA  Soboth           3.35  57  ePn   Pn    01 01 01.8 -0.3
      comp=N,2.2nm,0.4s
SOKA                              Sg   Sg    01 02 02.0 +5.2
      comp=N,3.3nm,0.4s
SOKA  Soboth           3.35  57   Pn   Pn    01 01 01.8 -0.3
      comp=N,2.2nm,0.4s
FRF   La Foret Royal   3.38 248  ePn   Pn    01 01 03.4 +1.0
FRF                              eSn   Sn    01 01 42.0 -0.8
      comp=N,9.1nm,0.3s
FRF   La Foret Royal   3.38 248  ePn   Pn    01 01 03.4 +1.0
FRF                              eSn   Sn    01 01 42.0 -0.8
      comp=N,4.6nm,0.3s
UDBI  Udbina           3.46  95  ePn   Pn    01 01 03.9 +0.2
UDBI                              Sn   Sn    01 01 41.0 -3.9
LMR   La Mourre        3.57 245  ePn   Pn    01 01 05.5 +0.4
LMR                              eSn   Sn    01 01 45.8 -1.7
      comp=N,12nm,0.4s
LMR   La Mourre        3.57 245  ePn   Pn    01 01 05.5 +0.4
LMR                              eSn   Sn    01 01 45.8 -1.7
      comp=N,5.9nm,0.4s
ORIF  Oris-en-Rattie   3.60 272  ePn   Pn    01 01 05.4 -0.1
ORIF                             eSn   Sn    01 01 45.8 -2.5
      comp=N,12nm,0.5s
ORIF  Oris-en-Rattie   3.60 272   P    Pn    01 01 05.8 +0.3
ORIF  Oris-en-Rattie   3.60 272  ePn   Pn    01 01 05.4 -0.1
ORIF                             eSn   Sn    01 01 45.8 -2.5
      comp=N,6.0nm,0.5s
KIZ   Kirchzarten      3.67 326   P    Pn    01 01 06.0 -0.5
KIZ   Kirchzarten      3.67 326   P    Pn    01 01 05.0 -1.5
MOA   Molln            3.71  37  ePn   Pn    01 01 07.6 +0.5
MOA   Molln            3.71  37  i Pn  Pn    01 01 07.4 +0.3
      comp=N,3.5nm,0.4s
MOA                               Sg   Sg    01 02 10.7 +2.2
      comp=N,3.2nm,0.5s
MOA   Molln            3.71  37   Pn   Pn    01 01 07.4 +0.3
      comp=N,3.5nm,0.4s
CHMF  Charmoille       3.78 309   P    Pn    01 01 07.4 -0.6
CHMF  Charmoille       3.78 309   P    Pn    01 01 07.4 -0.6
CABF  La Chapelle      3.79 298  ePn   Pn    01 01 08.4 +0.2
CABF                             eSn   Sn    01 01 52.7 -0.3
      comp=N,3.3nm,0.4s
CABF  La Chapelle      3.79 298  ePn   Pn    01 01 08.4 +0.2
CABF                             eSn   Sn    01 01 52.7 -0.3
      comp=N,1.6nm,0.4s
BFO   Black Forest     3.84 333  ePn   Pn    01 01 08.5 -0.4
BFO                              eSn   Sn    01 01 54.7 +0.4
BFO                              eSg   Sg    01 02 19.7 +7.0
ARSA  Arzberg          3.94  52  i Pn  Pn    01 01 10.9 +0.8
      comp=N,1.8nm,0.3s
ARSA                              Sg   Sg    01 02 19.5 +3.7
      comp=N,1.8nm,0.5s
ARSA  Arzberg          3.94  52   Pn   Pn    01 01 10.9 +0.8
      comp=N,1.8nm,0.3s
SMRF  Simiane la Rot   3.96 258  ePn   Pn    01 01 11.6 +1.1
SMRF                             eSn   Sn    01 01 56.1 -1.1
      comp=N,3.5nm,0.4s
SMRF  Simiane la Rot   3.96 258  ePn   Pn    01 01 11.6 +1.1
SMRF                             eSn   Sn    01 01 56.1 -1.1
      comp=N,1.8nm,0.4s
OPP   Oppenau          4.04 333   P    Pn    01 01 11.1 -0.4
OPP   Oppenau          4.04 333   P    Pn    01 01 11.1 -0.4
HINF  Hinteralfeld     4.04 317  ePn   Pn    01 01 10.3 -1.3
HINF                             eSn   Sn    01 01 58.4 -0.7
      comp=N,4.4nm,0.4s
HINF  Hinteralfeld     4.04 317  ePn   Pn    01 01 10.3 -1.3
HINF                             eSn   Sn    01 01 58.4 -0.7
      comp=N,2.2nm,0.4s
ECH   Echery           4.19 323  ePn   Pn    01 01 12.8 -0.9
ECH                              eSn   Sn    01 02 00.9 -2.0
ECH                              eSg   Sg    01 02 31.2 +7.3
ECH   Echery           4.19 323   P    Pn    01 01 13.1 -0.6
ECH   Echery           4.19 323   P    Pn    01 01 13.1 -0.6
ECH                               Sn   Sn    01 02 00.9 -2.0
CDF   Champ du Feu     4.30 325  ePn   Pn    01 01 14.3 -0.8
CDF                              eSn   Sn    01 02 04.9 -0.7
      comp=N,1.8nm,0.3s
CDF   Champ du Feu     4.30 325  ePn   Pn    01 01 14.3 -0.8
CDF                              eSn   Sn    01 02 04.9 -0.7
      comp=N,0.9nm,0.3s
GEC2  GERESS Array S   4.34  25  ePn   Pn    01 01 15.2 -0.6
GEC2                             ePg   Pg    01 01 32.5  0.0
GEC2                             eSn   Sn    01 02 05.5 -1.2
GEC2  GERESS Array S   4.34  25   Pn   Pn    01 01 15.2 -0.6
WET   Wettzell         4.41  17  ePn   Pn    01 01 16.3 -0.4
WET                              eSn   Sn    01 02 07.4 -0.9
WET                              eSg   Sg    01 02 30.2 -0.8
WET   Wettzell         4.41  17   Pn   Pn    01 01 16.3 -0.4
WET                               Sg   Sg    01 02 30.2 -0.8
HAU   Haudompre        4.42 316  ePn   Pn    01 01 15.3 -1.4
HAU                              eSn   Sn    01 02 06.4 -2.0
      comp=N,11nm,0.3s
VIVF  Saint-Julien-l   4.46 271  ePn   Pn    01 01 16.0 -1.3
VIVF                             eSn   Sn    01 02 07.7 -1.7
      comp=N,1.1nm,0.3s
VIVF  Saint-Julien-l   4.46 271  ePn   Pn    01 01 16.0 -1.3
VIVF                             eSn   Sn    01 02 07.7 -1.7
      comp=N,0.6nm,0.3s
CONA  Conrad Observa   4.53  47  ePn   Pn    01 01 18.3  0.0
      comp=N,0.1nm,0.1s
CONA                              Sg   Sg    01 02 41.3 +6.5
      comp=N,2.7nm,0.5s
CONA  Conrad Observa   4.53  47   Pn   Pn    01 01 18.3  0.0
      comp=N,0.1nm,0.1s
KHC   Kasperske Hory   4.57  22  ePN   Pn    01 01 18.0 -0.8
KHC                              ePG   Pg    01 01 34.3 -2.5
KHC                              eSN   Sn    01 02 10.0 -2.1
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KHC				*e*SG	Sg	01 02 35.4	-0.5
	comp=N,12nm,0.9s						
KHC	Kasperske Hory	4.57	22	Pn	Pn	01 01 18.0	-0.8
GRFO	Grafenberg	4.76	2	*e*Sg	Sg	01 02 46.3	+4.2
GRF	Grafenberg Arr	4.76	2	*e*Sg	Sg	01 02 47.2	+5.0
ROTZ	Rotzenmuhle	4.91	10	*e*Pn	Pn	01 01 21.2	-2.3
ROTZ				*e*Sn	Sn	01 02 17.1	-3.4
ROTZ				*e*Sg	Sg	01 02 46.3	-0.6
ROTZ	Rotzenmuhle	4.91	10	Pn	Pn	01 01 21.2	-2.3
ROTZ				Sn	Sn	01 02 17.1	-3.4
ROTZ				Sg	Sg	01 02 46.3	-0.6
LASF	Ste Croix	5.14	263	*e*Pn	Pn	01 01 27.1	+0.4
LASF				*e*Sn	Sn	01 02 24.2	-2.0
	comp=N,1.4nm,0.3s						
LASF	Ste Croix	5.14	263	*e*Pn	Pn	01 01 27.1	+0.4
LASF				*e*Sn	Sn	01 02 24.2	-2.0
	comp=N,0.7nm,0.3s						
SFTF	Sexfontaines	5.22	311	*e*Pn	Pn	01 01 28.3	+0.5
SFTF	Sexfontaines	5.22	311	*e*Pn	Pn	01 01 28.3	+0.5
SMF	Signal de Mont	5.25	292	*e*Pn	Pn	01 01 27.6	-0.6
SMF				*e*Sn	Sn	01 02 27.9	-1.1
	comp=N,9.2nm,0.5s						
SMF	Signal de Mont	5.25	292	*e*Pn	Pn	01 01 27.6	-0.6
SMF				*e*Sn	Sn	01 02 27.9	-1.1
	comp=N,4.6nm,0.5s						
STON	Ston	5.30	111	*e*Pn	Pn	01 01 28.3	-0.5
STON				Sn	Sn	01 02 26.6	-3.4
WERN	Wernitzgruen	5.44	10	*e*Pn	Pn	01 01 29.3	-1.5
WERN	Wernitzgruen	5.44	10	Pn	Pn	01 01 29.3	-1.5
LOR	Lormes	5.45	298	*e*Pn	Pn	01 01 30.1	-0.8
LOR				*e*Sn	Sn	01 02 32.0	-1.9
	comp=N,2.6nm,0.3s						
LOR	Lormes	5.45	298	*e*Pn	Pn	01 01 30.1	-0.8
LOR				*e*Sn	Sn	01 02 32.0	-1.9
	comp=N,1.3nm,0.3s						
GUNZ	Gunzen	5.51	9	*e*Pn	Pn	01 01 30.3	-1.5
GUNZ	Gunzen	5.51	9	Pn	Pn	01 01 30.3	-1.5
TANN	Tannenbergstha	5.58	10	*e*Pn	Pn	01 01 32.2	-0.5
TANN				*e*Pg	Pg	01 01 57.2	+1.1
TANN	Tannenbergstha	5.58	10	Pn	Pn	01 01 32.2	-0.5
WERD	Werda	5.59	9	*e*Sg	Sg	01 03 11.6	+2.8
SSF	Saint Saulge	5.60	295	*e*Pn	Pn	01 01 32.1	-0.9
SSF				*e*Sn	Sn	01 02 36.0	-1.5
	comp=N,3.8nm,0.6s						
AVF	Avril sur Loir	5.62	292	*e*Pn	Pn	01 01 32.5	-0.7
AVF				*e*Sn	Sn	01 02 36.6	-1.3
	comp=N,1.2nm,0.5s						
BGF	Bois d'Agland	5.89	289	*e*Pn	Pn	01 01 36.7	-0.3
BGF				*e*Sn	Sn	01 02 42.8	-2.0
	comp=N,13nm,0.5s						
TCF	Toulx Ste Croi	6.27	286	*e*Pn	Pn	01 01 42.5	+0.3
TCF				*e*Sn	Sn	01 02 51.8	-2.4
	comp=N,0.3nm,0.2s						
TCF	Toulx Ste Croi	6.27	286	*e*Sn	Sn	01 02 51.8	-2.4
	comp=N,0.2nm,0.2s						
BRG	Berggiesshubel	6.28	18	SG	Sg	01 03 33.3	+2.7
	comp=N,15nm,1.5s						
CAF	Calviac	6.30	273	*e*Pn	Pn	01 01 43.0	+0.3
CAF	Calviac	6.30	273	*e*Pn	Pn	01 01 43.0	+0.3
CLL	Collm	6.53	11	*i* Pn	Pn	01 01 44.6	-1.0
CLL				*e*Sg	Sg	01 03 39.0	+0.4
EPF	Esparros	7.88	260	*e*Pn	Pn	01 02 05.4	+1.1
EPF	Esparros	7.88	260	*e*Pn	Pn	01 02 05.4	+1.1

KRSC 16 01:32:12.3±2.5**, 50°.06N×154°.36E, h232**^{km}±33^{km}**, ML3.9, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAU	Pauzhetka	2.10	47	*e*P	Pn	01 32 54.6	+0.5
MIPR	Malaya Ipel'ka	2.69	33	*e*P	Pn	01 33 01.5	+1.4
KDTR	Khodutka, Kamc	2.93	52	*e*P	Pn	01 33 03.3	+0.5
KDTR				*e*S	S	01 33 42.1	-0.4
ASAK	Asacha	3.22	42	*e*P	Pn	01 33 08.4	+2.3
APC	Apacha	3.36	30	*e*P	Pn	01 33 09.6	+2.0
RUS	Russkaya	3.53	46	*e*P	Pn	01 33 10.9	+1.3
RUS				*e*S	S	01 33 55.8	+1.0
AVH	Avacha	4.21	39	*e*P	Pn	01 33 21.7	+3.9
SMAR	Somma	4.24	39	*e*P	Pn	01 33 21.7	+3.5
GNL	Ganaly	4.26	30	*e*P	Pn	01 33 17.2	-1.3
SDLR	Sedlovina	4.28	39	*e*P	Pn	01 33 21.3	+2.6
SDLR				*e*S	S	01 34 12.1	+0.9
SPN	Mys Shipunski	4.66	47	*e*P	Pn	01 33 24.9	+1.7
SPN				*e*S	S	01 34 19.0	-0.4
MKZ	Mys Kozlova	6.38	42	*e*P	Pn	01 33 46.0	+1.3
MKZ				*e*S	S	01 34 55.8	-2.6

IDC 16 01:40:15.1±1.0**, 18°.58N×145°.93E, h0**^{km}**, mb3.9**/5**, mb1 4.1**/5**, mb1mx3.5**/56**, mbtmp3.9**/5**, Error ellipse: s-maj=43.9km s-min=23.7km az=106.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	39.94	197	P	P	01 47 51.1	-0.2
	1.9nm,0.8s,baz=17,slow=8.8,SNR=7.4						
FITZ	Fitzroy Crossi	41.55	210	P	P	01 48 04.3	-0.4
	2.8nm,0.9s,baz=32,slow=16,SNR=3.1						
ASAR	Alice Springs	43.60	196	P	P	01 48 21.4	+0.1
	0.3nm,0.4s,baz=22,slow=7.3,SNR=5.1						
ZALV	Zalesovo Beam	58.24	323	P	P	01 50 11.4	+0.2
	0.6nm,0.4s,baz=107,slow=9.3,SNR=2.8						
NVAR	Mina Array Bea	83.04	52	P	P	01 52 42.7	-0.4
	0.6nm,0.7s,baz=280,slow=5.4,SNR=3.0						
LPAZ	La Paz	147.45	91	PKPbc	PKPbc	02 00 02.3	-0.5
	0.7nm,0.7s,baz=281,slow=5.2,SNR=3.2						

MAN ***16*** *01:57:03.7, 8°.37N×125°.87E, h1*^{km}*, mb5.0, ML3.9, MS4.0*

IDC ***16*** *01:57:03.7±0.8, 8°.41N×126°.17E, h0*^{km}*, mb3.9/10, mb1 4.0/10, mb1mx3.7/54, mbtmp3.9/10, MS3.4/12, Ms1 3.4/12, ms1mx3.1/53, Error ellipse: s-maj=29.1km s-min=11.4km az=95.0*

ISCJB ***16*** *01:57:04.9±1.1, 8°.39N±0°.04×125°.96E±0°.05, h16*^{km}*±8*^{km}*, mb3.8/10, MS3.4/10, Error ellipse: s-maj=8.7km s-min=6.7km az=5.5*

ISC 16 01:57:04.6±1.6**, 8°.35N**±0°.03×**125°.91E**±0°.04**, h1**^{km}±10^{km}**, n36, σ2**^{s}**.13**/33**, mb3.8**/10**, MS3.5**/10**, 6C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	Bislig	0.48	110	⇑*e*P	Pn	01 57 17.8	-0.9
BIPH				*i* S	Sb	01 57 27.4	+3.9
BUTP	Butuan	0.68	336	*e*P	Pg	01 57 16.1	-1.5
BUTP				*e*S	Sn	01 57 37.6	+4.9
BUKP	Musuan	0.96	241	*e*P	Pg	01 57 22.0	-1.0
BUKP				*e*S	Sn	01 57 41.5	+2.0
CGP	Cagayan de Oro	1.20	275	⇑*e*P	Pg	01 57 25.6	-2.1
CGP				*i* S	Sg	01 57 43.4	+0.1
DAV	Davao City (W)	1.31	194	Pg	Pn	01 57 31.7	+1.5
	143nm,0.3s,baz=24,slow=4.0,SNR=11						
DAV				Lg	Lg	01 57 49.4	
	119nm,0.3s,baz=292,slow=0.2,SNR=12						
DMPH	Davao City--Mi	1.32	197	*e*P	Pn	01 57 30.3	+0.1
MATI	Mati	1.44	166	*e*P	Pn	01 57 30.6	-1.3
MATI				*e*S	Sn	01 57 54.6	+3.2
SCPH	Surigao	1.48	344	*e*P	Pn	01 57 29.9	-2.6
SCPH				*e*S	Sn	01 57 52.6	+0.1
CTBH	Cotabato--PC H	1.99	236	⇑*e*P	Pn	01 57 39.4	-0.1
CTBH				*i* S	Sb	01 58 07.6	+0.6
MSLP	Maasin	2.05	330	*e*P	Pn	01 57 40.7	+0.4
MSLP				*e*S	Sg	01 58 16.9	+6.3
DCPH	Dipolog City	2.54	275	⇑*e*P	Pn	01 57 48.3	+1.3
PAGZ	Pagadian	2.55	259	*e*P	Pn	01 57 47.3	+0.2
PAGZ				*e*S	Sn	01 58 18.5	-0.3
PLP	Palo	2.94	342	⇑*e*P	Pn	01 57 52.8	+0.1
RCP	Roxas	4.46	316	⇑*e*P	Pn	01 58 12.6	-0.9
TGY	Tagaytay City	7.51	320	LR	LR	02 02 28.5	
	comp=Z,223nm,18.9s,baz=234,slow=42						
JOW	Kunigami	18.52	7	LR	LR	02 08 37.2	
	comp=Z,54nm,18.7s,baz=200,slow=38						
FITZ	Fitzroy Crossi	26.28	181	P	P	02 02 42.0	+0.2
	2.8nm,0.7s,baz=9.5,slow=12,SNR=3.7						
JHJ	Hachijo jima 2	27.79	26	LR	LR	02 11 59.4	
	comp=Z,33nm,22.0s,baz=66,slow=32						
CMAR	Chiang Mai Arr	28.05	294	LR	LR	02 14 35.7	
	comp=Z,107nm,18.3s,baz=184,slow=37						
KSRS	Korea Array	29.03	3	LR	LR	02 16 30.9	
	comp=Z,21nm,18.8s,baz=200,slow=40						
WRA	Warramunga Arr	29.31	164	P	P	02 03 06.9	-2.1
	0.8nm,0.8s,baz=345,slow=9.0,SNR=3.2						
MJAR	Matsushiro Arr	30.22	20	LR	LR	02 14 22.5	
	comp=Z,36nm,20.2s,baz=240,slow=34						
ASAR	Alice Springs	32.77	166	P	P	02 03 38.2	-1.2
	0.4nm,0.5s,baz=343,slow=7.3,SNR=6.0						
USRK	Ussuriysk Ar.	36.11	7	P	P	02 04 06.5	-1.7
	4.0nm,0.8s,baz=190,slow=7.3						
ASAJ	Asahikawa	38.49	19	LR	LR	02 19 12.4	
	comp=Z,22nm,19.6s,baz=166,slow=35						
NWAO	Narrogin (SRO)	41.87	191	LR	LR	02 25 38.2	
	comp=Z,130nm,18.0s,baz=282,slow=41						
MKAR	Makanchi Array	53.34	324	P	P	02 06 24.1	-1.5
	0.9nm,0.8s,baz=120,slow=7.5,SNR=6.1						
ZALV	Zalesovo Beam	56.14	332	LR	LR	02 33 24.3	
	comp=Z,34nm,18.1s,baz=22,slow=39						
AAK	Ala-Archa	56.44	316	LR	LR	02 32 19.0	
	comp=Z,46nm,20.1s,baz=96,slow=37						
KURBB	Kurchatov Arra	57.45	326	P	P	02 06 53.7	-1.4
	0.4nm,0.7s,baz=125,slow=6.4,SNR=3.7						
BVAR	Borovoye Array	63.04	326	P	P	02 07 32.8	-0.7
	0.4nm,0.7s,baz=111,slow=7.9,SNR=2.6						
AKTO	Aktyubinsk	69.57	321	P	P	02 08 16.4	+1.1
	1.0nm,0.8s,baz=33,slow=6.3,SNR=4.0						
GNI	Garni	77.93	309	P	P	02 09 05.9	+1.0
	4.3nm,0.7s,baz=233,slow=22,SNR=4.3						
ILAR	Eielson Array	81.32	26	P	P	02 09 21.8	-0.8
	0.3nm,0.7s,baz=250,slow=4.7,SNR=4.8						
MMAI	Mount Meron Ar	85.93	303	LR	LR	02 54 32.3	
	comp=Z,35nm,18.1s,baz=155,slow=40						
MAW	Mawson	87.78	200	LR	LR	02 49 37.8	
	comp=Z,71nm,18.6s,baz=34,slow=36						

TAP ***16*** *02:00:04.9, 25°.58N×122°.85E, h275*^{km}*, ML3.9, C*

ISCJB ***16*** *02:00:07.8±0.8, 25°.37N±0°.09×122°.64E±0°.03, h261*^{km}*±5*^{km}*, Error ellipse: s-maj=14.1km s-min=4.5km az=172.0*

JMA ***16*** *02:00:07.6±0.3, 25°.46N×122°.59E, h258*^{km}*±4*^{km}*, M4.2*

ISC 16 02:00:05.5±2.2**, 25°.5N**±0°.1×**122°.62E**±0°.05**, h272**^{km}±13^{km}**, n41, σ1**^{s}**.29**/72**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NWF	Wu-fen Shan	0.87	241	*e*P	Pn	02 00 43.3	+1.0
	baz=249						
NWF				*e*S	S	02 01 11.7	+0.2
	baz=249						
WFSB	Wu-fen Shan	0.87	241	*e*P	Pn	02 00 43.3	+1.0
	baz=249						
WFSB				*e*S	S	02 01 11.7	+0.4
	baz=249						
TIPB	Shuangxi	0.89	234	P	Pn	02 00 43.1	+0.7
	baz=246						
TIPB				*e*S	S	02 01 11.0	-0.6
	baz=246						
TWY	Chenhua	0.95	257	*e*P	Pn	02 00 43.1	+0.5
	baz=262						
EOS1	EOS1	1.04	205	*e*P	Pn	02 00 43.8	+0.7
	baz=203						
EOS1				*e*S	S	02 01 12.2	-0.7
	baz=203						
JYNG	Yonagunijimaku	1.08	164	P	Pn	02 00 43.8	+0.5
JYNG				S	S	02 01 12.7	-0.6
YOJ	Yonaguni jima	1.09	161	*e*P	Pn	02 00 43.4	+0.1
	baz=171						
YOJ				*e*S	S	02 01 11.5	-1.8
	baz=171						
YOJ	Yonaguni jima	1.09	161	P	Pn	02 00 43.9	+0.5
TWC	Suao	1.13	219	*e*P	Pn	02 00 44.4	+0.8
	baz=229						
TWC				*e*S	S	02 01 10.9	-2.8
	baz=229						
TWE	Neicheng	1.16	228	*e*P	Pn	02 00 46.1	+2.4
	baz=224						
TWE				*e*S	S	02 01 14.7	+0.7
	baz=224						
ENTT	Nioudou	1.28	229	*e*P	Pn	02 00 46.1	+1.6
	baz=224						
ENTT				*e*S	S	02 01 15.4	0.0
	baz=224						
NANB	Nanao	1.33	217	P	Pn	02 00 45.5	+0.7
	baz=216						
NANB				*e*S	S	02 01 15.5	-0.4
	baz=216						
ENA	Nanau	1.33	217	*e*P	Pn	02 00 45.5	+0.7
	baz=216						
ENA				*e*S	S	02 01 15.6	-0.4
	baz=216						
YHNB	Yeheng	1.40	234	*e*P	Pn	02 00 45.5	+0.1
	baz=228						
YHNB				*e*S	S	02 01 16.0	-0.9
	baz=228						
NSK	Sanguang	1.41	235	*e*P	Pn	02 00 46.2	+0.8
	baz=228						
NSK				*e*S	S	02 01 15.5	-1.5
	baz=228						
IRIF	Iriomote-Funau	1.53	139	P	Pn	02 00 46.8	+0.6
NNSB	Datong	1.55	227	*e*P	Pn	02 00 47.3	+0.9
	baz=224						
NNSB				*e*S	S	02 01 15.7	-3.2
	baz=224						
NACB	Ninganchiao	1.61	216	*e*P	Pn	02 00 47.3	+0.5
	baz=225						
NACB				*e*S	S	02 01 17.6	-1.9
	baz=225						
TWD	Chiawan	1.69	214	P	Pn	02 00 48.0	+0.6
	baz=224						
TWD				*e*S	S	02 01 19.2	-1.3
	baz=224						
JKRS	Kuro-shima	1.78	135	P	Pn	02 00 49.3	+1.3
JKRS				S	S	02 01 21.4	-0.3
JISG	Ishigakijimahi	1.78	120	P	Pn	02 00 48.8	+0.8
JISG				S	S	02 01 20.8	-0.9
JIJ	Ishigaki jima	1.78	129	P	Pn	02 00 48.8	+0.7
JIJ				S	S	02 01 20.3	-1.5
HATJ	Hateruma jima	1.79	143	P	Pn	02 00 49.5	+1.4
HATJ				S	S	02 01 21.4	-0.5
TDCB	Techi	1.82	227	*e*P	Pn	02 00 50.3	+1.8
	baz=227						
TDCB				*e*S	S	02 01 21.4	-1.2
	baz=227						
WHF	Hehuan Shan	1.82	223	P	Pn	02 00 50.1	+1.2
	baz=220						
WHF				*e*S	S	02 01 22.8	-0.5
	baz=220						
CHGB	Renai	1.94	223	*e*P	Pn	02 00 51.1	+1.4
	baz=221						
CHGB				*e*S	S	02 01 24.7	+0.1
	baz=221						
JTJ	Tarama	2.07	114	P	Pn	02 00 51.9	+1.5
JTJ				S	S	02 01 25.9	-0.1
SMLT	Sun Moon Lake	2.24	225	*e*P	Pn	02 00 52.9	+0.8
	baz=225						
JIRB	Irabujima	2.41	105	P	Pn	02 00 54.6	+1.2
JIRB				S	S	02 01 30.5	-1.0
YULB	Yu-li	2.42	210	*e*P	Pn	02 00 53.7	+0.1
	baz=209						
YULB				*e*S	S	02 01 28.8	-3.1
	baz=209						
JIKM	Ikemajima	2.45	103	P	Pn	02 00 55.5	+1.7
JIKM				S	S	02 01 32.0	-0.2
TWF1	Yuli	2.45	210	*e*P	Pn	02 00 54.3	+0.3
	baz=214						
TWF1				*e*S	S	02 01 30.3	-2.1
	baz=214						
JMJ	Miyako jima 2	2.52	105	P	Pn	02 00 56.4	+1.9
JMJ				*e*S	S	02 01 33.5	+0.1
CHN5	Tsauling	2.59	224	*e*P	Pn	02 00 56.5	+1.1
	baz=224						
CHN5				*e*S	S	02 01 34.8	-0.2
	baz=224						
JOGS	Gusukube	2.63	106	P	Pn	02 00 57.5	+1.9
JOGS				*e*S	S	02 01 35.1	-0.3
STYT	Tauyuan	2.88	217	*e*P	Pn	02 00 59.7	+1.5
	baz=217						
TWK	Hsinying	2.95	222	*e*P	Pn	02 01 00.1	+1.2
	baz=217						
CHN1	Nanshi	2.99	220	*e*P	Pn	02 01 00.1	+0.7
	baz=221						
SGST	Jiashian	3.04	218	*e*P	Pn	02 01 01.3	+1.4
	baz=219						
JKE	Kume jima 2	3.84	77	P	Pn	02 01 08.2	-0.2
JAGN	Aguni-jima	4.30	74	*e*S	S	02 02 04.8	-3.3

CASC 16 02:19:29.4±2.6**, 8°.12N×83°.06W, h13**^{km}±8^{km}**, MD3.8, 2D, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACR	Cerro Adams	0.54	349	⇓*i*P	Pg	02 19 39.1	-0.9
ACR				*e*S	Sg	02 19 47.1	-0.2
EDPN	Palmar Norte	0.92	335	*e*P	Pg	02 19 46.1	-1.2
EDPN				*e*S	Sn	02 20 00.8	-0.5
EDBA	Buenos Aires	1.06	349	*e*P	Pb	02 19 48.7	-0.9
EDBA				*e*S	Sn	02 20 04.9	+0.3
DRK0	Durika	1.15	351	⇓*e*P	Pb	02 19 49.7	-1.6
DRK0				*e*S	Sb	02 20 05.1	-1.1
EDLM	Las Mercedes	1.26	336	*e*P	Pn	02 19 52.0	-0.9
EDLM				*e*S	Sb	02 20 08.6	-0.8
EDDO	Dominical	1.38	325	*e*P	Pn	02 19 52.4	-2.0
EDDO				*e*S	Sn	02 20 12.2	-0.2
BUS	Buena Vista	1.58	334	*e*P	Pn	02 19 56.8	-0.9
BUS				*e*S	Sn	02 20 18.4	+0.2
URSC	Urasca	1.84	338	*e*P	Pn	02 20 00.4	-0.6
URSC				*e*S	Sn	02 20 24.6	+0.3
LCR2	La Lucha 2	1.86	330	*e*P	Pn	02 20 00.5	-0.7
LCR2				*e*S	Sb	02 20 26.1	-0.7
CVTR	Volcan Turrial	2.01	340	*e*P	Pn	02 20 04.7	+1.2
CVTR				*e*S	Sb	02 20 30.9	-0.3
CGA2	Cerro Gallo 2	2.34	324	*e*P	Pn	02 20 07.8	+0.1
CGA2				*e*S	Sb	02 20 39.3	-1.1

NIED ***16*** *02:19:00, 22°.70N×122°.50E, h29*^{km}*, Mw4.1 Best double couple: M*$_0$*1.76000×*10^{15}* NP1:*ϕ_s*170.00000°, δ79.00000°, λ-6.00000°. NP2:*ϕ_s*262.00000°, δ84.00000°, λ-169.00000°.*

IDC ***16*** *02:19:58.1±0.9, 22°.62N×123°.08E, h0*^{km}*, mb3.8/11, mb1 4.0/14, mb1mx3.8/59, mbtmp3.9/14, ML3.5/3, MS2.9/6, Ms1 3.0/6, ms1mx2.7/59, Error ellipse: s-maj=22.2km s-min=17.4km az=86.0*

JMA ***16*** *02:19:59.5±0.1, 22°.74N×122°.46E, h37*^{km}*, M4.7*

BJI ***16*** *02:20:00.3, 22°.88N×122°.44E, h6*^{km}*, mb3.9/5, mB3.9/1, ML3.7/4, Ms3.6/2, Ms7 3.5/1*

TAP ***16*** *02:20:01.0, 22°.69N×122°.39E, h46*^{km}*±1*^{km}*, ML4.7, D*

ISC 16 02:19:56.0±1.3**, 22°.71N**±0°.02×**122°.47E**±0°.02**, h2**^{km}±9^{km}**, n140, σ1**^{s}**.31**/204**, mb3.7**/12**, 13C-30D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWH	Lutao	0.92	270	⇑*i*P	Pn	02 20 16.0	+0.1
	baz=278						
TWH				*i* S	Sb	02 20 26.5	-0.8
	baz=278						
LAY	Lan-yu	1.08	232	⇑*i*P	Pn	02 20 18.2	+0.1
	baz=238						
LAY				S	Sb	02 20 31.0	-1.0
	baz=238						
CHKT	Chengkung	1.09	291	⇓*i*P	Pn	02 20 18.6	+0.3
	baz=294						
CHKT				S	Sb	02 20 31.0	-1.2
	baz=294						
FULB	Fuli	1.19	294	⇓*i*P	Pg	02 20 19.9	+1.1
	baz=301						
FULB				*e*S	Sb	02 20 33.6	-1.5
	baz=301						
HGSD	Ruisui	1.24	309	⇓P	Pg	02 20 20.6	+0.8
	baz=312						
HGSD				*e*S	Sb	02 20 34.9	-1.7
	baz=312						
TWF1	Yuli	1.26	301	⇓*i*P	Pg	02 20 21.1	+1.0
	baz=308						
YULB	Yu-li	1.28	302	⇓*i*P	Pg	02 20 21.5	+1.0
	baz=312						
YULB				*e*S	Sb	02 20 36.5	-1.2
	baz=312						
TWGBT	Beinan	1.29	275	*e*P	Pg	02 20 21.9	+1.1
	baz=282						
TWGBT				S	Sg	02 20 37.4	-0.1
	baz=282						
TWG	Pinlang	1.30	275	P	Pg	02 20 22.0	+1.2
	baz=282						
TWG				S	Sn	02 20 37.2	-1.8
	baz=282						
EHY	Hungye	1.32	307	⇓*i*P	Pg	02 20 22.0	+0.6
	baz=316						
EHY				*e*S	Sb	02 20 37.3	-1.7
	baz=316						
EGFH	Guangfu	1.35	315	*e*P	Pg	02 20 22.8	+0.8
	baz=318						
ECL	Taimali	1.41	266	⇑*i*P	Pg	02 20 23.4	+0.4
	baz=278						
ECL				*e*S	Sn	02 20 39.4	-2.3
	baz=278						
ELDTW	Lidau	1.42	290	⇓*i*P	Pg	02 20 23.6	+0.3
	baz=291						
ENLB	Shoufeng	1.43	326	*e*P	Pb	02 20 23.5	+0.1
	baz=339						
ESL	Shilin	1.46	319	*e*P	Pb	02 20 23.5	-0.3
	baz=331						
ESL				*e*S	Sn	02 20 39.9	-3.0
	baz=331						
HWA	Hwalien	1.49	328	*e*P	Pb	02 20 23.8	-0.6
	baz=331						
TAW	Tawu	1.50	257	*e*P	Pb	02 20 24.4	-0.1
	baz=265						
EAST	Anshuo	1.54	258	*e*P	Pg	02 20 25.7	+0.2
	baz=265						
TWD	Chiawan	1.58	330	⇓P	Pb	02 20 25.6	-0.4
	baz=333						
TWD				*e*S	Sn	02 20 43.9	-2.1
	baz=333						
YUS	Yu-Shan	1.60	299	⇓*i*P	Pg	02 20 27.1	+0.4
	baz=309						
NACB	Ninganchiao	1.66	331	⇓P	Pb	02 20 26.7	-0.7
	baz=334						
NACB				S	Sn	02 20 45.0	-3.1
	baz=334						
TSEB	Hengchuen, Pin	1.67	241	*e*P	Pg	02 20 28.1	+0.2
	baz=248						
TSEB				*e*S	Sb	02 20 47.2	-1.5
	baz=248						
SSD	Sandimen	1.70	272	*e*P	Pb	02 20 28.0	0.0
	baz=271						
MASBT	Mashibuluo	1.70	267	⇑P	Pb	02 20 28.1	+0.1
	baz=272						
SLGT	Liugui	1.71	280	*e*P	Pg	02 20 28.5	-0.2
	baz=275						
TWKBT	Hengchun	1.72	244	⇑P	Pb	02 20 28.5	+0.2
	baz=243						
TWKBT				*e*S	Sn	02 20 47.0	-2.4
	baz=243						
TWK1	Hengchun	1.72	244	⇑*i*P	Pb	02 20 28.6	+0.2
	baz=243						
TWK1				*e*S	Sn	02 20 47.6	-1.9
	baz=243						
ALS	Alishan	1.73	298	⇓*i*P	Pg	02 20 29.4	+0.3
	baz=305						
HEN	Hengchun	1.75	247	⇑P	Pb	02 20 29.4	+0.5
	baz=239						
HEN				*e*S	Sn	02 20 48.7	-1.5
	baz=239						
SSLB	Suanglung	1.76	308	⇓P	Pb	02 20 29.1	+0.1
	baz=310						
SSLB				*e*S	Sn	02 20 48.4	-2.1
	baz=310						
SSPT	Xinbi	1.77	263	*e*P	Pg	02 20 31.0	+1.0
	baz=267						
SGST	Jiashian	1.78	282	⇓P	Pg	02 20 30.6	+0.4
	baz=284						
SGST				*e*S	Sb	02 20 51.2	-0.9
	baz=284						
JYNG	Yonagunijimaku	1.79	14	P	Pb	02 20 29.0	-0.4
JYNG				*e*S	Sn	02 20 49.4	-1.7
WTP	Ta-pu	1.79	288	⇓*i*P	Pg	02 20 30.7	+0.3
	baz=291						
WTP				*e*S	Sg	02 20 52.8	-0.8
	baz=291						
CHGB	Renai	1.80	319	⇓P	Pb	02 20 29.7	0.0
	baz=321						
CHGB				*e*S	Sn	02 20 49.7	-2.0
	baz=321						
TPUB	Ta-pu	1.80	289	⇓P	Pg	02 20 30.8	+0.3
	baz=293						
TPUB				*e*S	Sb	02 20 51.6	-1.0
	baz=293						
WHF	Hehuan Shan	1.81	322	⇓*i*P	Pb	02 20 29.5	-0.6
	baz=325						
WHF				*e*S	Sn	02 20 50.3	-2.0
	baz=325						
YOJ	Yonaguni jima	1.81	16	⇑*e*P	Pb	02 20 29.4	-0.4
	baz=8.0						

YOJ				*e*S	**Sn**	**02 20 51.3**	**-0.4**
	baz=8.0						
YOJ	**Yonaguni jima**	**1.81**	**16**	P	**Pb**	**02 20 29.5**	**-0.4**
YOJ				*e*S	**Sn**	**02 20 50.9**	**-0.8**
HATJ	**Hateruma jima**	**1.81**	**42**	P	**Pb**	**02 20 29.3**	**-0.6**
HATJ				S	**Sn**	**02 20 50.6**	**-1.2**
SGLT	**Jiouru**	**1.83**	**271**	*e*P	**Pg**	**02 20 30.9**	**-0.2**
	baz=271						
NANB	**Nanao**	**1.83**	**339**	⇓P	**Pb**	**02 20 29.8**	**-0.5**
	baz=342						
NANB				*e*S	**Sn**	**02 20 50.5**	**-1.8**
	baz=342						
ENA	**Nanau**	**1.84**	**339**	*e*P	**Pb**	**02 20 29.8**	**-0.5**
	baz=341						
CHN4	**Tsaushan**	**1.84**	**291**	⇓*i*P	**Pg**	**02 20 31.8**	**+0.4**
	baz=292						
CHN4				*e*S	**Sg**	**02 20 54.0**	**-1.3**
	baz=292						
CHN1	**Nanshi**	**1.85**	**285**	⇓*i*P	**Pg**	**02 20 32.1**	**+0.6**
	baz=292						
CHN1				*e*S	**Sg**	**02 20 54.5**	**-1.0**
	baz=292						
EOS1	**EOS1**	**1.86**	**350**	*e*P	**Pb**	**02 20 30.2**	**-0.4**
	baz=353						
EOS1				*e*S	**Sn**	**02 20 52.3**	**-0.5**
	baz=353						
SMLT	**Sun Moon Lake**	**1.86**	**309**	⇓P	**Pb**	**02 20 30.9**	**+0.2**
	baz=317						
SMLT				*e*S	**Sb**	**02 20 52.5**	**-1.9**
	baz=317						
CHN5	**Tsauling**	**1.87**	**298**	⇓P	**Pg**	**02 20 32.2**	**+0.3**
	baz=308						
CHN5				*e*S	**Sb**	**02 20 53.9**	**-1.0**
	baz=308						
TYC	**Yuchr**	**1.90**	**309**	⇓*i*P	**Pb**	**02 20 31.6**	**+0.2**
	baz=316						
TYC				*e*S	**Sb**	**02 20 54.0**	**-1.6**
	baz=316						
TWK	**Hsinying**	**1.91**	**287**	⇓*i*P	**Pg**	**02 20 32.8**	**+0.1**
	baz=289						
TWK				*e*S	**Sb**	**02 20 55.5**	**-0.4**
	baz=289						
TWT	**Tachien**	**1.94**	**322**	*e*P	**Pb**	**02 20 31.8**	**-0.4**
	baz=332						
WJS	**Zhushan**	**1.95**	**305**	*e*P	**Pg**	**02 20 33.1**	**-0.2**
	baz=313						
WJS				*e*S	**Sb**	**02 20 56.9**	**-0.1**
	baz=313						
TDCB	**Techi**	**1.95**	**322**	⇓P	**Pb**	**02 20 32.2**	**-0.2**
	baz=325						
TDCB				*e*S	**Sn**	**02 20 54.1**	**-1.4**
	baz=325						
WLCH	**Liuqiu**	**1.97**	**260**	*e*P	**Pg**	**02 20 35.0**	**+1.2**
	baz=259						
TWC	**Suao**	**1.97**	**343**	⇑P	**Pb**	**02 20 32.1**	**-0.5**
	baz=356						
TWC				*e*S	**Sn**	**02 20 54.5**	**-1.3**
	baz=356						
CHN3	**Shinhua**	**1.98**	**281**	*e*P	**Pg**	**02 20 33.5**	**-0.4**
	baz=282						
CHN3				*e*S	**Sg**	**02 21 01.5**	**+2.0**
	baz=282						
NNSB	**Datong**	**1.98**	**330**	⇓P	**Pb**	**02 20 32.0**	**-0.8**
	baz=333						
NNSB				*e*S	**Sn**	**02 20 54.6**	**-1.5**
	baz=333						
NNSH	**Datong**	**1.98**	**330**	*e*P	**Pb**	**02 20 32.0**	**-0.8**
	baz=332						
NNSH				*e*S	**Sn**	**02 20 54.7**	**-1.4**
	baz=332						
IRIF	**Iriomote-Funau**	**1.99**	**35**	P	**Pb**	**02 20 31.8**	**-1.0**
IRIF				*e*S	**Sn**	**02 20 55.2**	**-0.8**
NNS	**Nan Shan**	**2.00**	**330**	⇓*i*P	**Pb**	**02 20 32.4**	**-0.7**
	baz=333						
NNS				*e*S	**Sn**	**02 20 54.6**	**-1.8**
	baz=333						
WGK	**Gukeng**	**2.01**	**299**	*e*P	**Pg**	**02 20 34.5**	**0.0**
	baz=313						
WGK				*e*S	**Sb**	**02 20 58.6**	**0.0**
	baz=313						
CHN2	**Minshiung**	**2.01**	**294**	*e*P	**Pg**	**02 20 34.4**	**-0.1**
	baz=296						
CHN2				*e*S	**Sg**	**02 20 59.1**	**-1.6**
	baz=296						
WNT	**Mingjian**	**2.01**	**306**	*e*P	**Pg**	**02 20 34.2**	**-0.4**
	baz=308						
WNT				*e*S	**Sb**	**02 20 58.8**	**0.0**
	baz=308						
WDLH	**Douliu**	**2.03**	**299**	*e*P	**Pg**	**02 20 34.9**	**0.0**
	baz=311						
WDLH				*e*S	**Sb**	**02 20 59.4**	**+0.2**
	baz=311						
CHY	**Chiayi**	**2.04**	**293**	*e*P	**Pb**	**02 20 34.0**	**+0.2**
	baz=293						
JKRS	**Kuro-shima**	**2.07**	**43**	P	**Pn**	**02 20 33.1**	**+1.3**
JKRS				*e*S	**Sn**	**02 20 56.6**	**-1.6**
ENTT	**Nioudou**	**2.09**	**337**	*e*P	**Pb**	**02 20 33.8**	**-0.9**
	baz=339						
TWE	**Neicheng**	**2.13**	**340**	*e*P	**Pb**	**02 20 34.1**	**-1.2**
	baz=343						
WLGB	**Puzi**	**2.14**	**291**	*e*P	**Pb**	**02 20 35.4**	**-0.1**
	baz=291						
SCLT	**Jiali**	**2.15**	**283**	*e*P	**Pb**	**02 20 34.2**	**-1.4**
	baz=284						
SCLT				*e*S	**Sb**	**02 21 03.1**	**+0.4**
	baz=284						
SLBB	**Yuanshan**	**2.17**	**340**	*e*P	**Pb**	**02 20 35.3**	**-0.8**
	baz=342						
CHN8	**Yiju**	**2.18**	**287**	*e*P	**Pb**	**02 20 34.9**	**-1.2**
	baz=287						
EGS		**2.18**	**347**	*e*P	**Pb**	**02 20 35.4**	**-0.7**
	baz=349						
YHNB	**Yeheng**	**2.19**	**333**	⇓P	**Pb**	**02 20 35.4**	**-1.0**
	baz=335						
YHNB				*e*S	**Sn**	**02 20 59.7**	**-1.6**
	baz=335						
NSK	**Sanguang**	**2.21**	**333**	⇓*e*P	**Pb**	**02 20 35.5**	**-1.1**
	baz=335						
NSK				*e*S	**Sn**	**02 21 00.0**	**-1.6**
	baz=335						
NTC	**Toucheng**	**2.21**	**345**	*e*P	**Pb**	**02 20 35.8**	**-1.0**
	baz=347						
WCHH	**Zhanghua**	**2.22**	**308**	*e*P	**Pg**	**02 20 37.9**	**-0.8**
	baz=310						
NWLT	**Wulai**	**2.24**	**337**	*e*P	**Pb**	**02 20 36.7**	**-0.5**
	baz=339						
JIJ	**Ishigaki jima**	**2.25**	**43**	P	**Pn**	**02 20 35.0**	**+0.8**
JIJ				S	**Sn**	**02 21 00.2**	**-2.3**
RLNB	**Erlin**	**2.27**	**302**	*e*P	**Pb**	**02 20 37.5**	**-0.1**
	baz=303						
BBP	**Basco**	**2.31**	**192**	*e*P	**Pn**	**02 20 35.0**	**0.0**
BBP				*e*S	**Sn**	**02 20 59.3**	**-4.6**
NSY	**Sanyi**	**2.31**	**318**	*e*P	**Pb**	**02 20 38.7**	**+0.3**
	baz=328						
TIPB	**Shuangxi**	**2.33**	**345**	⇑*e*P	**Pb**	**02 20 37.3**	**-1.4**
	baz=356						
TIPB				*e*S	**Sn**	**02 21 03.6**	**-1.0**
	baz=356						
TWB1	**Santiao Chiao**	**2.33**	**349**	*e*P	**Pn**	**02 20 36.4**	**+1.1**
	baz=3.0						
NSTT	**Nanjuang**	**2.34**	**325**	*e*P	**Pb**	**02 20 38.5**	**-0.4**
	baz=335						
NSTT				*e*S	**Sn**	**02 21 05.0**	**+0.2**
	baz=335						
LIOB	**Emei**	**2.34**	**326**	*e*P	**Pb**	**02 20 39.0**	**+0.1**
	baz=336						
PTSB	**Yuanli**	**2.37**	**317**	*e*P	**Pb**	**02 20 39.0**	**-0.4**
	baz=330						
PTSB				*e*S	**Sb**	**02 21 07.4**	**-1.7**
	baz=330						
NMLH	**Miaoli**	**2.38**	**320**	*e*P	**Pb**	**02 20 39.1**	**-0.5**
	baz=322						
WLTB	**Daxi**	**2.41**	**333**	*e*P	**Pb**	**02 20 39.6**	**-0.4**
	baz=344						
WLTB				*e*S	**Sb**	**02 21 07.3**	**-2.9**
	baz=344						
TATO	**Taipei**	**2.43**	**338**	P	**Pb**	**02 20 39.4**	**-1.0**
	baz=332						
TATO				S	**Sn**	**02 21 06.5**	**-0.4**
	baz=332						
NWF	**Wu-fen Shan**	**2.43**	**345**	*e*P	**Pb**	**02 20 39.1**	**-1.4**
	baz=347						
NWF				*e*S	**Sn**	**02 21 07.0**	**-0.2**
	baz=347						
WFSB	**Wu-fen Shan**	**2.43**	**345**	*e*P	**Pb**	**02 20 38.8**	**-1.7**
	baz=347						
WFSB				*e*S	**Sn**	**02 21 07.1**	**0.0**
	baz=347						
SBCB	**Hsinchu**	**2.48**	**327**	*e*P	**Pb**	**02 20 41.1**	**-0.1**
	baz=345						
HSN	**Hsinchu**	**2.50**	**327**	*e*P	**Pb**	**02 20 41.0**	**-0.5**
	baz=345						
JISG	**Ishigakijimahi**	**2.52**	**42**	P	**Pn**	**02 20 38.5**	**+0.6**
JISG				*e*S	**Sn**	**02 21 07.4**	**-1.7**
NCUH	**Zhongli**	**2.54**	**333**	*e*P	**Pb**	**02 20 41.4**	**-0.9**
	baz=335						
NCU	**National Centr**	**2.54**	**333**	*e*P	**Pb**	**02 20 41.6**	**-0.6**
	baz=335						
TWS1	**Kuangyinshan**	**2.57**	**338**	*e*P	**Pb**	**02 20 41.9**	**-0.9**
	baz=340						
YM10	**YM10**	**2.57**	**341**	⇑*e*P	**Pb**	**02 20 41.1**	**-1.7**
	baz=343						
YM07	**YM07**	**2.57**	**343**	⇓*e*P	**Pb**	**02 20 41.0**	**-1.9**
	baz=345						
YM07				*e*S	**Sn**	**02 21 10.7**	**0.0**
	baz=345						
YM04	**YM04**	**2.58**	**341**	*e*P	**Pb**	**02 20 41.3**	**-1.7**
	baz=343						
YM11	**YM11**	**2.58**	**342**	*e*P	**Pb**	**02 20 41.6**	**-1.4**
	baz=344						
NTST	**Danshui**	**2.62**	**339**	*e*P	**Pb**	**02 20 42.9**	**-0.6**
	baz=341						
WDGT	**Dungji**	**2.65**	**282**	⇑*e*P	**Pb**	**02 20 42.4**	**-1.7**
	baz=283						
WDGT				*e*S	**Sn**	**02 21 11.7**	**-0.7**
	baz=283						
TWY	**Chenhua**	**2.67**	**343**	*e*P	**Pb**	**02 20 43.1**	**-1.5**
	baz=345						
PHUB	**P'eng-hu**	**2.79**	**287**	*e*P	**Pb**	**02 20 43.8**	**-2.7**
	baz=288						
PHUB				*e*S	**Sn**	**02 21 15.0**	**-0.8**
	baz=288						
JTJ	**Tarama**	**2.81**	**46**	P	**Pn**	**02 20 43.0**	**+1.2**
JTJ				S	**Sn**	**02 21 14.6**	**-1.7**
PNG	**Penghu**	**2.82**	**288**	*e*P	**Pb**	**02 20 44.5**	**-2.5**
	baz=287						
VCHM	**Qimei**	**2.85**	**281**	*e*P	**Pb**	**02 20 45.0**	**-2.5**
	baz=281						
VCHM				*e*S	**Sn**	**02 21 16.3**	**-1.0**
	baz=281						
JIRB	**Irabujima**	**3.25**	**49**	P	**Pn**	**02 20 48.6**	**+0.6**
JIRB				S	**Sn**	**02 21 25.7**	**-1.5**
JMJ	**Miyako jima 2**	**3.33**	**50**	P	**Pn**	**02 20 49.8**	**+0.8**
JMJ				S	**Sn**	**02 21 27.9**	**-1.2**
JIKM	**Ikemajima**	**3.36**	**49**	P	**Pn**	**02 20 50.4**	**+0.9**
JIKM				S	**Sn**	**02 21 29.1**	**-0.9**
JOGS	**Gusukube**	**3.38**	**52**	P	**Pn**	**02 20 51.3**	**+1.6**
JOGS				S	**Sn**	**02 21 29.5**	**-0.8**
VWUC	**VWUC**	**3.58**	**310**	*e*P	**Pn**	**02 20 54.8**	**+2.3**
	baz=312						
KNM	**Kinmen**	**4.08**	**295**	*e*P	Pb	02 21 03.9	-4.6
	baz=293						
MATB	**Ma-tsu**	**4.13**	**327**	*e*P	**Pn**	**02 21 01.5**	**+1.4**
	baz=328						
KNMB	**Chin-men Tao**	**4.13**	**296**	*e*P	**Pn**	**02 21 02.1**	**+2.0**
	baz=294						
QZH	**Quanzhou**	**4.19**	**303**	⇑*i*Pn	**Pn**	**02 21 03.4**	**+2.5**
QZH				Sn	**Sn**	**02 21 48.8**	**-1.6**
APYP	**Conner**	**4.96**	**194**	*e*P	**Pn**	**02 21 12.2**	**+0.7**
APYP				*e*S	**Sn**	**02 22 06.7**	**-2.8**
ABRA	**Dolores**	**5.30**	**198**	*e*P	**Pn**	**02 21 18.6**	**+2.4**
ABRA				*e*S	**Sn**	**02 22 17.9**	**0.0**
VDOS	**Pratas Island**	**5.70**	**251**	*e*P	**Pn**	**02 21 24.4**	**+2.7**
	baz=247						
JOW	**Kunigami**	**6.68**	**51**	Pn	**Pn**	**02 21 34.2**	**-0.9**
	1.7nm,0.3s,baz=210,slow=8.1,SNR=17						
JOW				Sn	**Sn**	**02 22 47.0**	**-4.9**
	0.7nm,0.3s,baz=316,slow=28,SNR=4.1						
JNU	**Nakatsue**	**12.75**	**34**	LR	LR	02 28 09.4	
	comp=Z,90nm,20.4s,baz=290,slow=39						
KSRS	**Korea Array**	**15.43**	**17**	Pn	**P**	**02 23 36.8**	**-2.5**
	1.3nm,0.3s,baz=199,slow=11,SNR=31						
KSRS				LR	LR	02 29 47.7	
	comp=Z,56nm,19.0s,baz=214,slow=38						
DAV	**Davao City (W)**	**15.84**	**169**	LR	LR	02 30 21.4	
	comp=Z,76nm,19.3s,baz=338,slow=40						
MJAR	**Matsushiro Arr**	**19.38**	**41**	P	**P**	**02 24 22.8**	**-0.4**
	0.1nm,0.3s,baz=229,slow=12,SNR=7.6						
CMAR	**Chiang Mai Arr**	**22.42**	**263**	LR	LR	02 35 09.6	
	comp=Z,24nm,18.1s,baz=205,slow=40						
USRK	**Ussuriysk Ar.**	**22.82**	**18**	P	**P**	**02 24 59.9**	**-0.3**
	1.7nm,0.6s,baz=210,slow=7.7						
ASAJ	**Asahikawa**	**27.03**	**33**	P	**P**	**02 25 40.8**	**+1.3**
	2.7nm,0.3s,baz=221,slow=8.7,SNR=4.8						
KLR	**Kul'dur**	**27.47**	**13**	P	**P**	**02 25 46.0**	**+2.6**
	0.2nm,1.0s,baz=234,slow=8.9,SNR=5.3						
KLR				LR	LR	02 36 30.2	
	comp=Z,4.6nm,19.9s,baz=205,slow=36						
SONM	**Songino Array**	**28.18**	**337**	P	P	02 25 55.6	+5.7
	0.2nm,0.4s,baz=153,slow=9.8,SNR=4.4						
WMQ	**Urumqi**	**35.53**	**315**	*e*P	P	02 26 58.9	+4.5
MKAR	**Makanchi Array**	**40.22**	**317**	P	P	02 27 40.7	+6.8
	1.2nm,0.7s,baz=106,slow=9.5,SNR=13						
ZALV	**Zalesovo Beam**	**42.12**	**327**	P	P	02 27 55.4	+6.0
	0.9nm,0.4s,baz=114,slow=6.9,SNR=4.5						
ZALV				LR	LR	02 48 05.8	
	comp=Z,28nm,18.1s,baz=256,slow=40						
WRA	**Warramunga Arr**	**43.95**	**164**	P	**P**	**02 28 04.8**	**+0.1**
	1.4nm,0.7s,baz=347,slow=9.0,SNR=6.3						
KURBB	**Kurchatov Arra**	**43.99**	**320**	P	P	02 28 09.9	+5.3
	1.5nm,1.1s,baz=116,slow=7.8,SNR=5.1						
ASAR	**Alice Springs**	**47.42**	**166**	P	**P**	**02 28 33.0**	**+1.0**
	0.5nm,0.5s,baz=351,slow=9.4,SNR=6.4						
BVAR	**Borovoye Array**	**49.56**	**321**	P	P	02 28 53.3	+5.0
	0.4nm,0.4s,baz=95,slow=6.1,SNR=3.2						
ILAR	**Eielson Array**	**69.98**	**27**	P	**P**	**02 31 09.5**	**+0.8**
	0.2nm,0.5s,baz=270,slow=6.3,SNR=3.9						
YKA	**Yellowknife Ar**	**83.86**	**23**	P	**P**	**02 32 28.5**	**+1.6**
	0.4nm,0.6s,baz=303,slow=5.0,SNR=3.0						

IDC ***16*** *02:30:58.0±1.2, 0°.59N×124°.27E, h0^{km}, mb4.1/5, mb1 4.1/6, mb1mx3.7/52, mbtmp4.0/6, ML3.8/1, MS3.7/2, Ms1 3.7/2, ms1mx2.9/47, Error ellipse: s-maj=135.3km s-min=18.5km az=67.0*

DJA ***16*** *02:31:07.2±1.1, 2°N±15°×12°0E±°, h134^{km}±23^{km}, M4.6/4, mb5.0/4, mB5.4/3, MLv4.4/4, Mw(mB)4.9/3*

ISC 16 02:31:15.6±0.9, **0°.2N**±0°.1×**123°.99E**±0°.09, **h157^{km}, n13,** σ1^{s}.**26**/10, **mb3.9**/5, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MRSI	**Marisa**	**2.07**	**278**	P	Pn	02 31 45.2	-6.7
APSI	**Ampana**	**2.59**	**245**	P	**Pn**	**02 31 57.7**	**-0.5**
TNTI	**Ternate**	**3.42**	**81**	P	**Sn**	**02 32 48.4**	**-1.4**
	86nm,0.5s						
LBMI	**Labuha**	**3.61**	**103**	P	**Sn**	**02 32 54.9**	**+0.8**
TTSI	**Tana Toraja**	**5.27**	**232**	P	Pn	02 32 24.3	-8.5
	34nm,0.6s,1µm						
FITZ	**Fitzroy Crossi**	**18.26**	**175**	P	**P**	**02 35 15.7**	**-1.6**
	0.2nm,0.3s,baz=357,slow=8.6,SNR=7.1						
WRA	**Warramunga Arr**	**22.44**	**154**	P	**P**	**02 36 01.0**	**-0.7**
	1.2nm,0.5s,baz=336,slow=8.2,SNR=13						
ASAR	**Alice Springs**	**25.61**	**159**	P	**P**	**02 36 32.6**	**+2.1**
	0.5nm,0.4s,baz=346,slow=12,SNR=11						
JOW	**Kunigami**	**26.79**	**9**	LR	LR	02 46 30.3	
	comp=Z,264nm,20.7s,baz=307,slow=35						
KSRS	**Korea Array**	**37.24**	**5**	LR	LR	02 54 39.8	
	comp=Z,64nm,18.6s,baz=178,slow=39						
MKAR	**Makanchi Array**	**58.97**	**328**	P	**P**	**02 40 58.3**	**-0.3**
	0.9nm,0.5s,baz=122,slow=8.7,SNR=9.8						
MKAR				PcP	**PcP**	**02 41 45.8**	**-0.2**
	0.2nm,0.4s,baz=134,slow=4.2,SNR=3.4						
KURBB	**Kurchatov Arra**	**63.29**	**329**	P	**P**	**02 41 28.0**	**+0.5**
	1.4nm,0.2s,baz=126,slow=5.8,SNR=5.4						
ARCES	**ARCESS Array B**	**92.78**	**340**	P	**P**	**02 44 10.6**	**+0.7**
	2.3nm,1.1s,baz=70,slow=5.9,SNR=4.0						

GEN ***16*** *02:34:15.9, 43°.89N×7°.76E, h6^{km}, ML2.2*

CSEM ***16*** *02:34:15.8±0.2, 43°.94N×7°.72E, h5^{km}, ML2.7/18, Error ellipse: s-maj=4.0km s-min=2.8km az=126.0*

ISCJB ***16*** *02:34:15.5±0.4, 43°.89N±0°.03×7°.78E±0°.03, h18^{km}±3^{km}, Error ellipse: s-maj=4.5km s-min=3.5km az=153.3*

ROM ***16*** *02:34:15.4±0.1, 43°.942N±0°.007×7°.742E±0°.009, h3^{km}±1^{km}, ML2.3/16*

LDG ***16*** *02:34:16.1±0.1, 43°.88N×7°.77E, h6^{km}, Md2.8/3, Ml2.7/28, Error ellipse: s-maj=2.0km s-min=1.6km az=150.0*

STR ***16*** *02:34:17.4±1.0, 44°N±3°×°±°, h5^{km}, M2.7/11, MLv2.7/11*

ISC 16 02:34:14.9±0.9, **43°.90N**±0°.02×**7°.79E**±0°.02, **h18^{km}**±3^{km}, **n110,** σ1^{s}.**15**/172, **Near south coast of France**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IMI	**Imperia**	**0.08**	**82**	P	**Pg**	**02 34 18.4**	**-0.1**
IMI	**Imperia**	**0.08**	**82**	*i* P	**Pg**	**02 34 18.3**	**-0.1**
IMI				S	**Sg**	**02 34 20.1**	**-0.8**
IMI				AML	AML		
	comp=E,6130µm,0.5s						
IMI				AML	AML		
	comp=N,6210µm,1.2s						
NEGI	**Seborga**	**0.08**	**229**	P	**Pg**	**02 34 17.8**	**-0.6**
NEGI	**Seborga**	**0.08**	**229**	*i* P	**Pg**	**02 34 17.9**	**-0.6**
NEGI				AML	AML		
	comp=E,17200µm,0.1s						
NEGI				AML	AML		
	comp=N,17750µm,0.3s						
NEGI				AML	AML		
	comp=E,17200µm,0.1s						
NEGI				AML	AML		
	comp=N,17750µm,0.3s						
NEGI				AML	AML		
	comp=E,17200µm,0.1s						
NEGI				AML	AML		
	comp=N,17750µm,0.3s						
SAOF	**Saorge**	**0.19**	**297**	P	**Pb**	**02 34 19.4**	**-0.1**
SAOF				AML	AML		
	comp=E,2350µm,0.5s						
SAOF				AML	AML		
	comp=N,1740µm,1.5s						
SAOF				AML	AML		
	comp=E,2350µm,0.5s						
SAOF				AML	AML		
	comp=N,1740µm,1.5s						
SAOF				AML	AML		
	comp=N,1740µm,1.5s						
SAOF				AML	AML		
	comp=E,2350µm,0.5s						
SAOF				AML	AML		
	comp=E,2350µm,0.5s						
SAOF				AML	AML		
	comp=N,1740µm,1.5s						
SBF	**Sospel**	**0.26**	**262**	*e*Pg	**Pg**	**02 34 20.9**	**+0.1**
SBF				*e*Sg	**Sg**	**02 34 24.7**	**-0.1**
	comp=N,867nm,0.3s						
SBF	**Sospel**	**0.26**	**262**	*e*Pg	**Pg**	**02 34 20.9**	**+0.1**
SBF				*e*Sg	**Sg**	**02 34 24.7**	**-0.1**
	comp=N,434nm,0.3s						
RORO	**Rocca Rossa**	**0.29**	**43**	P	**Pb**	**02 34 22.1**	**+0.5**
RORO	**Rocca Rossa**	**0.29**	**43**	P	**Pb**	**02 34 22.9**	**+1.3**
RORO				AML	AML		
	comp=E,988µm,0.1s						
RORO				AML	AML		
	comp=N,1080µm,0.2s						
RORO				AML	AML		
	comp=E,988µm,0.1s						
RORO				AML	AML		
	comp=N,1080µm,0.2s						
RORO				AML	AML		
	comp=E,988µm,0.1s						
RORO				AML	AML		
	comp=N,1080µm,0.2s						
MON	**Monaco**	**0.31**	**237**	Pg	**Pg**	**02 34 22.1**	**+0.5**
MON	**Monaco**	**0.31**	**237**	Pg	**Pg**	**02 34 22.1**	**+0.5**
LUCF	**Luceram**	**0.32**	**269**	Pg	**Pb**	**02 34 22.1**	**0.0**
LUCF	**Luceram**	**0.32**	**269**	Pg	**Pb**	**02 34 22.1**	**0.0**
REVF	**Revere**	**0.34**	**242**	Pg	**Pb**	**02 34 23.4**	**+0.8**
REVF	**Revere**	**0.34**	**242**	Pg	**Pb**	**02 34 23.4**	**+0.8**
GBOS	**Grotte di Boss**	**0.34**	**6**	P	**Pb**	**02 34 23.1**	**+0.5**
ENR	**Entracque**	**0.42**	**321**	P	**Pb**	**02 34 24.0**	**+0.1**
ENR	**Entracque**	**0.42**	**321**	*i* P	**Pb**	**02 34 24.0**	**+0.1**
ENR				S	**Sb**	**02 34 29.5**	**-0.5**
ENR				AML	AML		
	comp=E,1775µm,0.1s						
ENR				AML	AML		
	comp=N,1218µm,0.1s						
ENR				AML	AML		
	comp=E,1775µm,0.1s						
ENR				AML	AML		
	comp=N,1218µm,0.1s						
ENR				AML	AML		
	comp=E,1775µm,0.1s						
ENR				AML	AML		
	comp=N,1218µm,0.1s						
FINB	**Finale Ligure**	**0.48**	**54**	*i* P	**Pb**	**02 34 25.5**	**+0.7**
FINB				AML	AML		
	comp=E,642µm,0.2s						
FINB				AML	AML		
	comp=N,23µm,1.2s						
FINB				AML	AML		
	comp=E,642µm,0.2s						
FINB				AML	AML		
	comp=N,23µm,1.2s						
FINB				AML	AML		
	comp=N,23µm,1.2s						
FINB				AML	AML		
	comp=E,642µm,0.2s						
STV	**Sant Anna di V**	**0.48**	**316**	P	**Pb**	**02 34 25.0**	**+0.1**
STV	**Sant Anna di V**	**0.48**	**316**	P	**Pb**	**02 34 24.9**	**+0.1**
STV				AML	AML		
	comp=E,444µm,0.7s						
STV				AML	AML		
	comp=N,525µm,0.2s						
STV				AML	AML		
	comp=E,444µm,0.7s						
STV				AML	AML		
	comp=N,524µm,0.2s						
STV				AML	AML		
	comp=E,444µm,0.7s						
STV				AML	AML		
	comp=N,524µm,0.2s						
QLNO	**Quiliano**	**0.58**	**43**	P	**Pb**	**02 34 27.4**	**+0.8**
QLNO				AML	AML		
	comp=E,264µm,1.3s						
QLNO				AML	AML		
	comp=N,336µm,0.2s						
QLNO				AML	AML		
	comp=E,264µm,1.3s						
QLNO				AML	AML		
	comp=N,336µm,0.2s						
QLNO				AML	AML		
	comp=E,264µm,1.3s						
QLNO				AML	AML		
	comp=N,336µm,0.2s						
ISO	**Isola**	**0.60**	**298**	Pg	**Pb**	**02 34 27.4**	**+0.5**
ISO	**Isola**	**0.60**	**298**	Pg	**Pb**	**02 34 27.4**	**+0.5**
ISO				Sg	**Sb**	**02 34 34.8**	**-0.3**
CALF	**Calern**	**0.64**	**257**	Pg	**Pb**	**02 34 28.3**	**+0.7**
CALF	**Calern**	**0.64**	**257**	Pg	**Pb**	**02 34 28.3**	**+0.7**
PZZ	**Stroppo**	**0.78**	**322**	P	**Pn**	**02 34 30.5**	**-0.6**
PZZ	**Stroppo**	**0.78**	**322**	*i* P	**Pn**	**02 34 30.5**	**-0.6**
PZZ				AML	AML		
	comp=E,421µm,0.2s						
PZZ				AML	AML		
	comp=N,319µm,0.5s						
PZZ				AML	AML		
	comp=E,421µm,0.2s						
PZZ				AML	AML		
	comp=N,319µm,0.5s						
PCP	**Piancastagn**	**0.84**	**40**	P	**Pn**	**02 34 32.1**	**+0.2**
PCP	**Piancastagn**	**0.84**	**40**	P	**Pn**	**02 34 32.9**	**+1.0**
PCP				AML	AML		
	comp=E,296µm,1.4s						
PCP				AML	AML		
	comp=N,238µm,0.2s						
PCP				AML	AML		
	comp=N,238µm,0.2s						
PCP				AML	AML		
	comp=E,296µm,1.4s						
FRF	**La Foret Royal**	**0.89**	**248**	*e*Pg	**Pb**	**02 34 32.5**	**+0.7**
FRF				*e*Sg	**Sg**	**02 34 43.8**	**-0.3**
FRF				*e*Sn	**Sn**	**02 34 45.5**	**+0.5**
	comp=E,132nm,0.2s						
FRF	**La Foret Royal**	**0.89**	**248**	*e*Pg	**Pb**	**02 34 32.5**	**+0.7**
FRF				*e*Sg	**Sg**	**02 34 43.8**	**-0.3**
FRF				*e*Sn	**Sn**	**02 34 45.5**	**+0.5**
	comp=E,66nm,0.2s						
SURF	**Saint Ours**	**0.91**	**310**	Pg	**Pn**	**02 34 33.2**	**+0.2**
SURF	**Saint Ours**	**0.91**	**310**	Pg	**Pn**	**02 34 33.2**	**+0.2**
SURF				Sg	**Sn**	**02 34 45.0**	**-0.7**
BHB	**Bricherasio**	**1.01**	**338**	P	**Pn**	**02 34 33.9**	**-0.4**
BHB	**Bricherasio**	**1.01**	**338**	P	**Pn**	**02 34 33.9**	**-0.4**
ROTM	**Rocchetta Tana**	**1.03**	**23**	P	**Pn**	**02 34 35.7**	**+1.2**
ROTM	**Rocchetta Tana**	**1.03**	**23**	P	**Pn**	**02 34 35.9**	**+1.4**
ROTM				AML	AML		
	comp=E,590µm,1.2s						
ROTM				AML	AML		
	comp=N,972µm,0.5s						

ROTM				AML	AML		
	comp=N,972µm,0.5s						
ROTM				AML	AML		
	comp=E,590µm,1.2s						
OGAG	**Argentiere**	1.05	302	Pg	Pn	02 34 39.4	+4.5
LMR	**La Mourre**	1.09	239	*e*Pg	Pb	02 34 35.6	+0.5
LMR				*e*Sg	Sb	02 34 49.8	+0.8
	comp=E,70nm,0.2s						
LMR	**La Mourre**	1.09	239	*e*Pg	Pb	02 34 35.6	+0.5
LMR				*e*Sg	Sb	02 34 49.8	+0.8
	comp=E,35nm,0.2s						
OGDI	**Digne**	1.09	282	Pn	Pn	02 34 38.4	+3.0
MBDF	**Montbardon**	1.10	319	*e*Pg	Pn	02 34 36.2	+0.6
MBDF				*e*Sg	Sn	02 34 50.6	+0.2
	comp=E,20nm,0.2s						
MBDF	**Montbardon**	1.10	319	*e*Pg	Pn	02 34 36.2	+0.6
MBDF				*e*Sg	Sn	02 34 50.6	+0.2
	comp=E,10nm,0.2s						
MONC	**Moncucco Torin**	1.18	5	P	Pg	02 34 38.9	+1.2
MONC				AML	AML		
	comp=E,304µm,1.5s						
MONC				AML	AML		
	comp=N,316µm,0.3s						
MONC				AML	AML		
	comp=N,316µm,0.3s						
MONC				AML	AML		
	comp=E,304µm,1.5s						
RRL	**Rocca Remolon**	1.25	325	P	Pg	02 34 38.3	-0.7
RRL				AML	AML		
	comp=E,76µm,0.6s						
RRL				AML	AML		
	comp=N,91µm,0.8s						
RRL				AML	AML		
	comp=N,91µm,0.8s						
RRL				AML	AML		
	comp=E,76µm,0.6s						
GORR	**Gorreto**	1.29	56	P	Pg	02 34 39.8	-0.1
GORR				AML	AML		
	comp=E,87µm,1.0s						
GORR				AML	AML		
	comp=N,96µm,0.9s						
GORR				AML	AML		
	comp=N,96µm,0.9s						
GORR				AML	AML		
	comp=E,87µm,1.0s						
RSP	**Reno Superiore**	1.30	344	P	Pg	02 34 38.6	-1.5
RSP				AML	AML		
	comp=E,60µm,1.0s						
RSP				AML	AML		
	comp=N,54µm,0.3s						
RSP				AML	AML		
	comp=E,60µm,1.0s						
RSP				AML	AML		
	comp=N,54µm,0.3s						
BNI	**Bardonecchia**	1.40	326	P	Pg	02 34 41.7	-0.2
BNI				AML	AML		
	comp=E,53µm,0.9s						
BNI				AML	AML		
	comp=N,41µm,0.7s						
BNI				AML	AML		
	comp=E,53µm,0.9s						
BNI				AML	AML		
	comp=N,41µm,0.7s						
BSTF	**la Bastide-des**	1.55	270	Pn	Pb	02 34 43.3	+0.3
BSTF	**la Bastide-des**	1.55	270	Pn	Pb	02 34 43.3	+0.3
SMRF	**Simiane la Rot**	1.60	273	*e*Pg	Pg	02 34 44.7	-1.0
SMRF				*e*Sg	Sg	02 35 06.7	+0.2
	comp=N,98nm,0.4s						
SMRF	**Simiane la Rot**	1.60	273	*e*Pg	Pg	02 34 44.7	-1.0
SMRF				*e*Sg	Sg	02 35 06.7	+0.2
	comp=N,49nm,0.4s						
TRAV	**Traversella**	1.61	359	P	Pb	02 34 43.8	-0.4
TRAV				AML	AML		
	comp=E,43µm,0.3s						
TRAV				AML	AML		
	comp=N,56µm,0.5s						
TRAV				AML	AML		
	comp=N,56µm,0.5s						
TRAV				AML	AML		
	comp=E,43µm,0.3s						
PGF	**Pioggiola**	1.62	146	*e*Pn	Pn	02 34 42.2	-0.4
PGF				*e*Sn	Sn	02 35 01.5	-1.5
	comp=E,9.5nm,0.2s						
PGF	**Pioggiola**	1.62	146	*e*Pn	Pn	02 34 42.2	-0.4
PGF				*e*Sn	Sn	02 35 01.5	-1.5
	comp=E,4.8nm,0.2s						
ORIF	**Oris-en-Rattie**	1.70	307	*e*Pg	Pg	02 34 47.3	-0.4
ORIF				*e*Sg	Sg	02 35 10.4	+0.5
	comp=E,48nm,0.4s						
ORIF	**Oris-en-Rattie**	1.70	307	Pg	Pg	02 34 47.6	-0.1
ORIF	**Oris-en-Rattie**	1.70	307	*e*Pg	Pg	02 34 47.3	-0.4
ORIF				*e*Sg	Sg	02 35 10.4	+0.5
	comp=E,24nm,0.4s						
ORIF	**Oris-en-Rattie**	1.70	307	P	Pg	02 34 47.2	-0.4
LPG	**La Plagne**	1.76	336	*e*Pn	Pb	02 34 46.9	+0.1
LPG				*e*Sn	Sn	02 35 07.1	+0.3
LPG				*e*Sg	Sg	02 35 12.0	+0.3
	comp=E,36nm,0.6s						
LPG	**La Plagne**	1.76	336	*e*Pn	Pb	02 34 46.9	+0.1
LPG				*e*Sn	Sn	02 35 07.1	+0.3
LPG				*e*Sg	Sg	02 35 12.0	+0.3
	comp=E,18nm,0.6s						
LPL	**La Plagne**	1.78	335	*e*Pn	Pb	02 34 47.2	0.0
LPL				*e*Sg	Sg	02 35 13.5	+1.1
	comp=E,14nm,0.4s						
LPL	**La Plagne**	1.78	335	*e*Pn	Pb	02 34 47.2	0.0
LPL				*e*Sg	Sg	02 35 13.5	+1.1
	comp=E,7.2nm,0.4s						
ERBM	**Eremo**	1.96	74	P	Pb	02 34 50.4	+0.4
VIVF	**Saint-Julien-l**	2.43	294	*e*Pn	Pn	02 34 55.8	+2.1
VIVF	**Saint-Julien-l**	2.43	294	*e*Pg	Pg	02 35 01.5	0.0
VIVF				*e*Sn	Sn	02 35 22.9	-0.1
	comp=E,6.0nm,0.3s						
VIVF				*e*Sg	Sg	02 35 32.3	-0.7
	comp=E,14nm,0.4s						
VIVF	**Saint-Julien-l**	2.43	294	*e*Pn	Pn	02 34 55.8	+2.1
VIVF	**Saint-Julien-l**	2.43	294	*e*Pg	Pg	02 35 01.5	0.0
VIVF				*e*Sn	Sn	02 35 22.9	-0.1
	comp=E,3.0nm,0.3s						
VIVF				*e*Sg	Sg	02 35 32.3	-0.7
	comp=E,6.9nm,0.4s						
TRBF	**Trabuc cave**	2.77	276	Pn	Pn	02 34 59.8	+1.4
TRBF	**Trabuc cave**	2.77	276	Pn	Pn	02 34 59.8	+1.4
LASF	**Ste Croix**	2.84	275	*e*Pn	Pn	02 35 00.8	+1.4
LASF	**Ste Croix**	2.84	275	*e*Pg	Pg	02 35 08.1	-1.3
LASF				*e*Sn	Sn	02 35 33.2	+0.1
	comp=E,6.1nm,0.2s						
LASF	**Ste Croix**	2.84	275	*e*Pn	Pn	02 35 00.8	+1.4
LASF	**Ste Croix**	2.84	275	*e*Pg	Pg	02 35 08.1	-1.3
LASF				*e*Sn	Sn	02 35 33.2	+0.1
	comp=E,3.0nm,0.2s						
CABF	**La Chapelle**	2.96	337	*e*Pn	Pn	02 35 02.9	+1.8
CABF	**La Chapelle**	2.96	337	*e*Pg	Pg	02 35 11.8	+0.1
CABF				*e*Sn	Sn	02 35 36.8	+0.5
CABF				*e*Sg	Sg	02 35 49.5	-0.7
	comp=E,1.3nm,0.2s						
CABF	**La Chapelle**	2.96	337	*e*Pn	Pn	02 35 02.9	+1.8
CABF	**La Chapelle**	2.96	337	*e*Pg	Pg	02 35 11.8	+0.1
CABF				*e*Sn	Sn	02 35 36.8	+0.5
CABF				*e*Sg	Sg	02 35 49.5	-0.7
	comp=E,0.6nm,0.2s						
LBL	**Lubilhac**	3.51	294	Pn	Pn	02 35 10.7	+2.1
LBL	**Lubilhac**	3.51	294	Pn	Pn	02 35 10.7	+2.1
SMF	**Signal de Mont**	3.91	316	*e*Pn	Pn	02 35 15.0	+1.0
SMF	**Signal de Mont**	3.91	316	*e*Pg	Pg	02 35 28.2	-1.6
SMF				*e*Sn	Sn	02 35 58.8	-0.7
SMF				*e*Sg	Sg	02 36 18.4	-2.0
	comp=E,1.0nm,0.2s						
SMF	**Signal de Mont**	3.91	316	*e*Pn	Pn	02 35 15.0	+1.0
SMF	**Signal de Mont**	3.91	316	*e*Pg	Pg	02 35 28.2	-1.6
SMF				*e*Sn	Sn	02 35 58.8	-0.7
SMF				*e*Sg	Sg	02 36 18.4	-2.0
	comp=E,0.5nm,0.2s						
HINF	**Hinteralfeld**	3.97	351	*e*Pn	Pn	02 35 16.1	+1.2
HINF				*e*Sn	Sn	02 36 00.0	-1.0
	comp=E,1.1nm,0.3s						
HINF	**Hinteralfeld**	3.97	351	*e*Pn	Pn	02 35 16.1	+1.2
HINF				*e*Sn	Sn	02 36 00.0	-1.0
	comp=E,0.6nm,0.3s						
MTLF	**Montolieu**	4.08	264	*e*Pn	Pn	02 35 17.6	+1.2
MTLF				*e*Sn	Sn	02 36 02.1	-1.6
	comp=E,1.2nm,0.2s						
MTLF				*e*Sg	Sg	02 36 23.4	-2.5
	comp=E,1.5nm,0.4s						
MTLF	**Montolieu**	4.08	264	Pn	Pn	02 35 18.0	+1.6
MTLF	**Montolieu**	4.08	264	*e*Pn	Pn	02 35 17.6	+1.2
MTLF				*e*Sn	Sn	02 36 02.1	-1.6
	comp=E,0.6nm,0.2s						
MTLF				*e*Sg	Sg	02 36 23.4	-2.5
	comp=E,0.8nm,0.4s						
CAF	**Calviac**	4.23	286	*e*Pn	Pn	02 35 20.1	+1.7
CAF				*e*Sn	Sn	02 36 06.0	-1.3
	comp=E,1.3nm,0.2s						
CAF	**Calviac**	4.23	286	*e*Pn	Pn	02 35 20.1	+1.7
CAF				*e*Sn	Sn	02 36 06.0	-1.3
	comp=E,0.6nm,0.2s						
HAU	**Haudompre**	4.23	347	*e*Pn	Pn	02 35 20.7	+2.3
HAU				*e*Sn	Sn	02 36 06.1	-1.2
	comp=E,6.8nm,0.5s						
HAU	**Haudompre**	4.23	347	*e*Pn	Pn	02 35 20.7	+2.3
HAU				*e*Sn	Sn	02 36 06.1	-1.2
	comp=E,3.4nm,0.5s						
AVF	**Avril sur Loir**	4.26	314	*e*Pn	Pn	02 35 20.0	+1.2
AVF	**Avril sur Loir**	4.26	314	*e*Pg	Pg	02 35 35.3	-1.1
AVF				*e*Sn	Sn	02 36 07.9	-0.1
	comp=E,0.9nm,0.3s						
AVF	**Avril sur Loir**	4.26	314	*e*Pn	Pn	02 35 20.0	+1.2
AVF	**Avril sur Loir**	4.26	314	*e*Pg	Pg	02 35 35.3	-1.1
AVF				*e*Sn	Sn	02 36 07.9	-0.1
	comp=E,0.4nm,0.3s						
LOR	**Lormes**	4.35	322	*e*Pn	Pn	02 35 21.2	+1.1
	baz=140						
LOR				*e*Sn	Sn	02 36 09.5	-0.9
	comp=E,1.1nm,0.2s,baz=147						
LOR	**Lormes**	4.35	322	*e*Pn	Pn	02 35 21.2	+1.1
LOR				*e*Sn	Sn	02 36 09.5	-0.9
	comp=E,0.6nm,0.2s						
SSF	**Saint Saulge**	4.37	318	*e*Pn	Pn	02 35 21.2	+0.9
SSF				*e*Sn	Sn	02 36 09.8	-0.9
	comp=E,0.8nm,0.3s						
SSF	**Saint Saulge**	4.37	318	*e*Pn	Pn	02 35 21.2	+0.9
SSF				*e*Sn	Sn	02 36 09.8	-0.9
	comp=E,0.4nm,0.3s						
BGF	**Bois d'Agland**	4.39	309	*e*Pn	Pn	02 35 23.9	+3.3
BGF				*e*Sn	Sn	02 36 10.0	-1.2
	comp=E,3.1nm,0.4s						
BGF	**Bois d'Agland**	4.39	309	*e*Pn	Pn	02 35 23.9	+3.3
BGF				*e*Sn	Sn	02 36 10.0	-1.2
	comp=E,1.5nm,0.4s						
CDF	**Champ du Feu**	4.53	356	*e*Pn	Pn	02 35 24.0	+1.4
CDF				*e*Sn	Sn	02 36 14.3	-0.5
	comp=E,0.9nm,0.2s						
CDF	**Champ du Feu**	4.53	356	*e*Pn	Pn	02 35 24.0	+1.4
CDF				*e*Sn	Sn	02 36 14.3	-0.5
	comp=E,0.4nm,0.2s						
TCF	**Toulx Ste Croi**	4.61	303	*e*Pn	Pn	02 35 24.7	+1.0
TCF				*e*Sn	Sn	02 36 15.5	-1.3
	comp=E,0.5nm,0.2s						
TCF	**Toulx Ste Croi**	4.61	303	*e*Pn	Pn	02 35 24.7	+1.0
TCF				*e*Sn	Sn	02 36 15.5	-1.3
	comp=E,0.2nm,0.2s						
SFTF	**Sexfontaines**	4.71	337	*e*Sn	Sn	02 36 17.4	-1.8
	comp=E,3.1nm,0.3s,baz=155						
SFTF	**Sexfontaines**	4.71	337	*e*Sn	Sn	02 36 17.4	-1.8
	comp=E,1.5nm,0.3s						

BJI ***16*** *03:08:25.9, 55°.43N×161°.73E, h74^{km}, mb5.1/67, mB5.2/50, Ms5.0/73, Ms7 4.7/66*

KRSC ***16*** *03:08:29.2±0.4, 55°.67N×161°.59E, h80^{km}±8^{km}, ML5.9*

ISCJB ***16*** *03:08:30.3±0.2, 55°.75N±0°.01×161°.29E±0°.02, h89^{km}±1^{km}, mb5.4/684, Error ellipse: s-maj=2.5km s-min=1.5km az=159.6*

MOS ***16*** *03:08:30.1±0.8, 55°.77N×161°.31E, h87^{km}, mb5.4/154, MS4.7/48, Error ellipse: s-maj=6.0km s-min=3.1km az=81.0*

NEIC ***16*** *03:08:31.7±0.4, 55°.78N×161°.23E, h86^{km}±3^{km}, mb5.4/299, MW5.5, Error ellipse: s-maj=2.8km s-min=1.6km az=169.0, Moment Tensor Solution. s72 Moment tensor: Scale 10^{17}Nm; M_{rr}1.22; $M_{\theta\theta}$-1.37; $M_{\phi\phi}$0.15; $M_{r\theta}$1.75; $M_{\theta\phi}$0.81; $M_{\phi r}$0.33; Best double couple: $M_0$2.40000×10^{17} NP1: ϕ_s322.00000°, δ29.00000°, λ141.00000°. NP2: ϕ_s87.00000°, δ72.00000°, λ67.00000°. Principal axes: T 2.3100, Plg57.0000°, Azm327.0000°; N 0.0800, Plg22.0000°, Azm94.0000°; P -2.3900, Plg24.0000°, Azm195.0000°;*

GCMT ***16*** *03:08:31.7±0.1, 55°.69N×161°.43E, h87^{km}±1^{km}, MW5.6/128, Moment Tensor Solution. s118,c221; s128,c269; Duration: 1^{s}5 Moment tensor: Scale 10^{17} Nm; M_{rr}1.24±.04; $M_{\theta\theta}$-1.31±.04; $M_{\phi\phi}$0.07±.03; $M_{r\theta}$2.02±.03; $M_{\theta\phi}$1.20±.03; $M_{\phi r}$0.47±.02; Best double couple: $M_0$2.71500×10^{17} NP1:ϕ_s87.00000°, δ74.00000°, λ61.00000°. NP2:ϕ_s332.00000°, δ33.00000°, λ150.00000°. Principal axes: T 2.7440, Plg52.0000°, Azm324.0000°; N -0.0510, Plg28.0000°, Azm96.0000°; P -2.6870, Plg24.0000°, Azm199.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

IDC ***16*** *03:08:31.1±0.5, 55°.72N×161°.33E, h78^{km}±4^{km}, mb5.1/55, mb1 5.1/60, mb1mx5.1/73, mbtmp5.4/60, MS4.5/60, Ms1 4.5/60, ms1mx4.4/63 Error ellipse: s-maj=7.3km s-min=5.9km az=139.0*

ISC 16 03:08:31.2±0.2**, 55°.65N**±0°.02×**161°.45E**±0°.02**, h85**^{km}±1^{km}**, h85**^{km}**:pP-P, n2046,** σ**1**^{s}**36**/2294**, mb5.5**/736**, 102C-29D,**
Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZLN	**Zelenaya**	0.52	315	*i* P	Pn	03 08 45.0	-0.7
ZLN	**Zelenaya**	0.52	315	PN	Pn	03 08 45.0	-0.7
LGNR	**Loginova**	0.61	316	*e*P	Pn	03 08 46.2	-0.6
LGNR	**Loginova**	0.61	316	PN	Pn	03 08 46.2	-0.6
CIRR	**Tsirk**	0.61	320	*i* P	Pn	03 08 45.8	-0.8
CIRR	**Tsirk**	0.61	320	PN	Pn	03 08 45.8	-0.8
BZMR	**Bezymyannaya**	0.61	298	*i* P	Pn	03 08 45.6	-1.0
BZMR	**Bezymyannaya**	0.61	298	PN	Pn	03 08 45.6	-1.0
BZWR	**Bezymyannyi-We**	0.62	301	*i* P	Pn	03 08 45.9	-0.8
BZWR	**Bezymyannyi-We**	0.62	301	PN	Pn	03 08 45.9	-0.8
KIRR	**Kirishev**	0.69	296	*i* P	Pn	03 08 46.5	-0.9
KIRR	**Kirishev**	0.69	296	PN	Pn	03 08 46.5	-0.9
KMNR	**Kamenistaya**	0.69	279	*i* P	Pn	03 08 47.0	-0.4
KMNR	**Kamenistaya**	0.69	279	PN	Pn	03 08 47.0	-0.4
TUMD	**Tumrok D**	0.75	234	*e*P	Pn	03 08 47.4	-0.4
TUMD				*e*S	Sn	03 08 59.4	-0.8
KRSR	**Krestovskiy**	0.76	319	*i* P	Pn	03 08 47.0	-1.0
KRSR	**Krestovskiy**	0.76	319	PN	Pn	03 08 47.0	-1.0
KPT	**Kopyto**	0.76	295	*i* P	Pn	03 08 47.2	-0.8
KPT	**Kopyto**	0.76	295	PN	Pn	03 08 47.2	-0.8
KLY	**Klyuchi**	0.80	326	*i* P	Pn	03 08 46.6	-1.7
KLY	**Klyuchi**	0.80	326	PN	Pn	03 08 46.6	-1.7
TUMR	**Tumrok**	0.83	244	*i* P	Pn	03 08 48.9	+0.1
TUMR	**Tumrok**	0.83	244	PN	Pn	03 08 47.4	-1.4
TUMR				S	Sn	03 08 59.4	-2.5
BDR	**Baidarnaya**	0.93	352	*i* P	Pn	03 08 48.9	-0.9
BDR	**Baidarnaya**	0.93	352	PN	Pn	03 08 48.9	-0.9
KBG	**Krutoberegovo**	0.93	49	*i* P	Pn	03 08 48.1	-1.6
KBG				*i* S	Sn	03 09 01.6	-1.9
KBG	**Krutoberegovo**	0.93	49	PN	Pn	03 08 48.1	-1.6
KBG				S	Sn	03 09 01.6	-1.9
SMKR	**Semkarok**	0.93	1	*i* P	Pn	03 08 48.8	-1.1
SMKR	**Semkarok**	0.93	1	PN	Pn	03 08 48.8	-1.1
KBTR	**Krutoberegovo**	0.95	54	*i* P	Pn	03 08 48.3	-1.7
KBTR	**Krutoberegovo**	0.95	54	PN	Pn	03 08 48.3	-1.7
KOZ	**Kozyrevsk**	0.98	295	*i* P	Pn	03 08 50.1	-0.2
KOZ	**Kozyrevsk**	0.98	295	PN	Pn	03 08 50.1	-0.2
SRKR	**Sorokina**	1.02	351	*i* P	Pn	03 08 50.0	-0.9
SRKR	**Sorokina**	1.02	351	PN	Pn	03 08 50.0	-0.9
MKZ	**Mys Kozlova**	1.11	172	*i* P	Pn	03 08 50.7	-1.1
MKZ	**Mys Kozlova**	1.11	172	PN	Pn	03 08 50.7	-1.1
ESO	**Esso**	1.58	281	*e*P	Pn	03 08 57.2	-0.5
ESO	**Esso**	1.58	281	PN	Pn	03 08 57.2	-0.5
KII	**Karymskiy**	1.99	216	*e*P	Pn	03 09 03.9	+0.7
KII	**Karymskiy**	1.99	216	PN	Pn	03 09 03.9	+0.7
BKI	**Bering**	2.62	98	*i* P	Pn	03 09 11.1	-0.3
BKI				*e*S	Sn	03 09 40.8	-1.4
BKI	**Bering**	2.62	98	PN	Pn	03 09 11.1	-0.3
BKI				S	Sn	03 09 40.8	-1.4
SPN	**Mys Shipunski**	2.69	199	*i* P	Pn	03 09 11.7	-0.8
SPN				*e*S	Sn	03 09 42.9	-1.2
SPN	**Mys Shipunski**	2.69	199	PN	Pn	03 09 11.7	-0.8
SPN				S	Sn	03 09 42.9	-1.2
NLC	**Nalytchevo**	2.77	207	*e*P	Pn	03 09 13.6	+0.1
NLC				*e*S	Sn	03 09 46.7	+0.6
NLC	**Nalytchevo**	2.77	207	PN	Pn	03 09 13.6	+0.1
NLC				S	Sn	03 09 46.7	+0.6
SDLR	**Sedlovina**	2.81	213	*e*P	Pn	03 09 15.2	+1.0
SDLR				*i* P	Pn	03 09 15.2	+1.0
SDLR	**Sedlovina**	2.81	213	PN	Pn	03 09 15.2	+1.0
KRX	**Arik**	2.82	217	*e*P	Pn	03 09 15.8	+1.5
KRX	**Arik**	2.82	217	PN	Pn	03 09 15.8	+1.5
GNL	**Ganaly**	2.83	228	*e*P	Pn	03 09 15.3	+0.9
GNL	**Ganaly**	2.83	228	PN	Pn	03 09 15.3	+0.9
SMAR	**Somma**	2.85	214	*i* P	Pn	03 09 15.7	+0.9
SMAR	**Somma**	2.85	214	PN	Pn	03 09 15.7	+0.9
AVH	**Avacha**	2.87	215	*e*P	Pn	03 09 16.3	+1.4
AVH	**Avacha**	2.87	215	PN	Pn	03 09 16.3	+1.4
KOK	**Koryaka**	2.88	216	*e*P	Pn	03 09 17.5	+2.4
KOK	**Koryaka**	2.88	216	PN	Pn	03 09 17.5	+2.4
UGLR	**Uglovaya**	2.89	213	*e*P	Pn	03 09 16.3	+1.1
UGLR	**Uglovaya**	2.89	213	PN	Pn	03 09 16.3	+1.1
DALK	**Dalny**	3.06	212	*e*P	Pn	03 09 18.4	+0.9
DALK				*e*S	Sn	03 09 54.2	+1.1
DALK	**Dalny**	3.06	212	PN	Pn	03 09 18.4	+0.9
DALK				S	Sn	03 09 54.2	+1.1
PET	**Petropavlovsk**	3.10	213	*e*Pn	Pn	03 09 18.6	+0.7
PET				*e*Sn	Sn	03 09 57.3	+3.4
PET	**Petropavlovsk**	3.10	213	*i* P	Pn	03 09 19.4	+1.4
PET	**Petropavlovsk**	3.10	213κ	*i*PN	Pn	03 09 19.0	+1.0
PET				*i* S	Sn	03 09 58.5	+4.5
PET				pmax	pmax		
	comp=Z,22µm,3.3s						
PET				pmax	pmax		
	comp=Z,8µm,11.9s						
PET				pmax	pmax		
	comp=Z,8µm,0.6s						
PET				smax	smax		
	comp=E,47µm,4.7s						
PET				smax	smax		
	comp=N,40µm,6.5s						
PET				smax	smax		
	comp=N,16µm,0.8s						
PET				smax	smax		
	comp=E,14µm,0.7s						
PET				MLR	MLR		
	comp=Z,39µm,10.0s						
PET				MLR	MLR		
	comp=Z,28µm,19.0s						
I44RU	**PETROPAVLOVSK-**	3.36	222	P	Pn	03 09 20.0	-1.5
	baz=66,slow=18,SNR=0.5						
I44RU				*i*		03 30 40.0	
	baz=39,slow=314,SNR=1.1						
PEA1	**Petropavlovsk-**	3.36	222	*e*Pn	Pn	03 09 22.5	+1.0
PEA1				*e*Sn	Sn	03 10 06.5	+6.2
PETK	**Petropavlovsk-**	3.36	222	P	Pn	03 09 22.5	+1.0
PETK				S	Sn	03 10 06.5	+6.1
PETK				LR	LR	03 11 16.9	
	comp=Z,13µm,21.8s,baz=53,slow=49						
KRMR	**Karymshinskiy**	3.43	216	*e*P	Pn	03 09 23.9	+1.4
KRMR				*e*S	Sn	03 10 03.6	+1.6
KRMR	**Karymshinskiy**	3.43	216	PN	Pn	03 09 23.9	+1.4
KRMR				S	Sn	03 10 03.6	+1.6
PALN	**Palana**	3.54	347	*e*P	Pn	03 09 23.7	-0.1
PALN	**Palana**	3.54	347	PN	Pn	03 09 23.7	-0.1
RUS	**Russkaya**	3.66	209	*e*P	Pn	03 09 26.5	+1.0
RUS				*e*S	Sn	03 10 09.2	+1.7
RUS	**Russkaya**	3.66	209	PN	Pn	03 09 26.5	+1.0
RUS				S	Sn	03 10 09.2	+1.7
GRL	**Gorelyy**	3.69	214	*e*P	Pn	03 09 28.9	+2.9
GRL	**Gorelyy**	3.69	214	PN	Pn	03 09 28.9	+2.9
MTVR	**Mutnovka**	3.71	213	*e*P	Pn	03 09 28.4	+2.0
MTVR	**Mutnovka**	3.71	213	PN	Pn	03 09 28.4	+2.0
APC	**Apacha**	3.71	224	*e*P	Pn	03 09 27.9	+1.6
APC				*e*S	Sn	03 10 10.5	+1.7
APC	**Apacha**	3.71	224	PN	Pn	03 09 27.9	+1.6
APC				S	Sn	03 10 10.5	+1.7
ASAK	**Asacha**	3.89	214	*e*P	Pn	03 09 30.7	+2.0
ASAK	**Asacha**	3.89	214	PN	Pn	03 09 30.7	+2.0
KDTR	**Khodutka, Kamc**	4.34	209	*e*P	Pn	03 09 35.3	+0.6
KDTR				*e*S	Sn	03 10 26.2	+2.1
MIPR	**Malaya Ipel'ka**	4.37	221	*e*P	Pn	03 09 37.2	+2.0
MIPR	**Malaya Ipel'ka**	4.37	221	PN	Pn	03 09 37.2	+2.0
PAU	**Pauzhetka**	5.02	215	*e*P	Pn	03 09 46.3	+2.3
PAU	**Pauzhetka**	5.02	215	PN	Pn	03 09 46.3	+2.3
TILK	**Tilichiki**	5.41	25	*e*P	Pn	03 09 49.2	-0.1
TILK	**Tilichiki**	5.41	25	PN	Pn	03 09 49.2	-0.1
SKR	**Severo-Kuril's**	5.92	215⇓	*i*PN	Pn	03 09 57.5	+1.2
SKR				*e*S	Sn	03 11 03.5	+0.9
SKR				pmax	pmax		
	comp=Z,7µm,2.7s						
SKR				pmax	pmax		
	comp=Z,3µm,3.5s						
SKR				pmax	pmax		
	comp=Z,2µm,0.8s						
SKR				smax	smax		
	comp=N,6µm,0.9s						
SKR				smax	smax		
	comp=E,4µm,0.8s						
SKR				MLR	MLR		
	comp=Z,7µm,20.0s						
SKR				MLR	MLR		
	comp=N,9µm,13.0s						
SKR				MLR	MLR		
	comp=E,8µm,14.0s						
MA2	**Magadan**	6.95	309	P	Pn	03 10 10.4	+0.1
	comp=E,9.1nm,0.3s,baz=112,slow=11,SNR=52						
MA2				S	Sn	03 11 21.9	-5.9
	comp=E,1.3nm,0.3s,baz=119,slow=12,SNR=2.4						
KMSK	**Kamenskaya**	7.26	18	*i* P	Pn	03 10 15.6	+1.2
KMSK	**Kamenskaya**	7.26	18	PN	Pn	03 10 15.6	+1.2
SMY	**Shemya**	7.97	106	*e*Pn	Pn	03 10 24.0	-0.3
SMY				*e*Sn	Sn	03 11 45.5	-7.2
SMY	**Shemya**	7.97	106	*e*PN	Pn	03 10 24.0	-0.3
SEY	**Seymchan**	8.64	331	P	Pn	03 10 32.5	-0.7
	comp=E,1.5nm,0.3s,baz=133,slow=11,SNR=26						
SEY				LR	LR	03 14 04.8	
	comp=E,8µm,20.8s,baz=142,slow=39						
SEY	**Seymchan**	8.64	331⇑	*e*PN	Pn	03 10 35.1	+1.8
OKH	**Okha**	10.94	267⇑	*i*PN	Pn	03 11 08.3	+3.6
OKH				*i* S	Sn	03 13 10.1	+5.1
OKH				pmax	pmax		
	comp=Z,300nm,15.0s						
OKH				smax	smax		
	comp=N,2µm,13.0s						
TYV	**Tymovskoe**	12.22	255	*e*PN	Pn	03 11 25.6	+3.7
TYV				*e*S	Sn	03 13 39.0	+2.9
TYV				pmax	pmax		
	comp=Z,2µm,3.4s						
TYV				pmax	pmax		
	comp=Z,227nm,1.0s						
TYV				smax	smax		
	comp=E,42nm,1.8s						
TYV				smax	smax		
	comp=E,6µm,8.1s						
NKL	**Nikolayevsk**	12.35	267	*e*PN	Pn	03 11 27.0	+3.3
NKL				*e*S	Sn	03 13 46.0	+6.8
NKL				pmax	pmax		
	comp=E,600nm,5.0s						
NKL				pmax	pmax		
	comp=Z,550nm,6.0s						
NKL				pmax	pmax		
	comp=N,34nm,1.0s						
NKL				pmax	pmax		
	comp=E,52nm,1.0s						
NKL				pmax	pmax		
	comp=Z,52nm,1.0s						
NKL				smax	smax		
	comp=N,3µm,14.0s						
NKL				smax	smax		
	comp=E,2µm,14.0s						
NKL				MLR	MLR		
	comp=N,1µm,15.0s						
NKL				MLR	MLR		
	comp=E,2µm,15.0s						
NKL				MLR	MLR		
	comp=Z,2µm,15.0s						
KIWB	**Kanaga Island**	13.21	98	*e*Pn	Pn	03 11 32.9	-2.2
KIWB				*e*Sn	Sn	03 13 51.4	-8.6
KUR	**Kuril'sk**	13.53	225*c*	*i*P	Pn	03 11 40.0	+0.7
KUR				*e*S	Sn	03 14 13.0	+5.2
KUR				pmax	pmax		
	comp=Z,102nm,0.9s						
KUR				pmax	pmax		
	comp=E,28nm,0.3s						
KUR				pmax	pmax		
	comp=N,26nm,0.6s						
KUR				pmax	pmax		
	comp=Z,2µm,4.0s						
KUR				pmax	pmax		

	comp=N,990nm,2.6s						
KUR				pmax	pmax		
	comp=E,822nm,2.8s						
KUR				smax	smax		
	comp=E,2µm,13.9s						
KUR				MLR	MLR		
	comp=N,2µm,16.0s						
KUR				MLR	MLR		
	comp=E,987nm,15.0s						
GSTR	**Great Sitkin T**	13.72	96	*e*Pn	Pn	03 11 40.8	-1.1
GSTR				*e*Sn	Sn	03 14 05.9	-6.6
YSS	**Yuzh-Sakhalins**	14.54	241	*e*Pn	P	03 11 55.0	-1.7
YSS	**Yuzh-Sakhalins**	14.54	241	⇓*i*P	P	03 11 55.1	-1.6
YSS				*e*S	Sn	03 14 36.0	+3.6
YSS				pmax	pmax		
	comp=Z,1µm,8.2s						
YSS				pmax	pmax		
	comp=N,600nm,2.5s						
YSS				pmax	pmax		
	comp=E,400nm,2.7s						
YSS				pmax	pmax		
	comp=Z,160nm,0.7s						
YSS				smax	smax		
	comp=N,600nm,4.0s						
YSS				smax	smax		
	comp=E,600nm,8.7s						
YSS				MLR	MLR		
	comp=E,2µm,14.0s						
YSS				MLR	MLR		
	comp=Z,3µm,14.0s						
ATKA	**Atka Island**	14.73	93	*e*Pn	Pn	03 11 55.0	+0.1
ATKA				*e*Sn	Sn	03 14 33.6	-3.3
SHO	**Shikotan**	15.07	225	*e*P	Pn	03 11 55.4	-3.9
SHO				*e*S	Sn	03 14 39.0	-6.2
SHO				pmax	pmax		
	comp=Z,131nm,0.3s						
SHO				pmax	pmax		
	comp=N,50nm,0.2s						
SHO				pmax	pmax		
	comp=E,41nm,0.5s						
SHO				smax	smax		
	comp=E,1µm,12.0s						
YUK	**Yuzh-Kuril'sk**	15.33	227	*e*P	Pn	03 12 01.2	-1.4
YUK				S	Sn	03 14 48.6	-2.9
YUK				pmax	pmax		
	comp=N,66nm,0.3s						
YUK				pmax	pmax		
	comp=Z,758nm,0.3s						
YUK				MLR	MLR		
	comp=Z,1µm,13.0s						
YUK				MLR	MLR		
	comp=E,458nm,11.0s						
GAMB	**Gambell**	15.69	48	*e*Pn	Pn	03 12 07.6	+0.7
	comp=E,260nm,1.5s						
SPIA	**Saint Paul Isl**	15.69	73	*e*Pn	Pn	03 12 07.0	0.0
	comp=E,461nm,1.5s						
GRNR	**Gornyy**	15.73	262	*e*P	P	03 12 12.3	+2.4
GRNR				pmax	pmax		
	comp=N,100nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,180nm,1.0s						
ASAJ	**Asahikawa**	16.69	234	P	Pn	03 12 19.6	0.0
	comp=Z,5.2nm,0.3s,baz=37,slow=6.6,SNR=122						
ASAJ				S	Sn	03 15 25.3	+0.8
	comp=Z,0.2nm,0.3s,baz=47,slow=7.6,SNR=1.9						
ASAJ				LR	LR	03 18 42.8	
	comp=Z,3µm,19.8s,baz=48,slow=37						
ASAJ	**Asahikawa**	16.69	234	*e*Pn	Pn	03 12 19.3	-0.4
	comp=Z,185nm,0.8s						
ASAJ				*e*Sn	Sn	03 15 25.3	+0.8
NIKH	**Nikolski High**	17.47	86	*e*P	P	03 12 30.2	+1.1
	comp=Z,511nm,0.8s						
YAK	**Yakutsk**	17.50	304	P	P	03 12 28.6	-0.7
	comp=Z,0.1nm,0.3s,baz=78,slow=0.9,SNR=42						
YAK				S	S	03 15 46.5	+0.5
	comp=Z,0.0nm,0.3s,baz=331,slow=22,SNR=2.1						
YAK	**Yakutsk**	17.50	304	*e*Pn	Pn	03 12 29.4	0.0
	comp=Z,804nm,0.8s						
YAK				*e*S	S	03 15 46.5	+0.5
YAK	**Yakutsk**	17.50	304	⇑*i*P	P	03 12 29.1	-0.2
YAK				*e*S	Sn	03 15 44.0	+0.5
YAK				pmax	pmax		
	comp=Z,498nm,0.8s						
YAK				pmax	pmax		
	comp=N,82nm,1.1s						
YAK				pmax	pmax		
	comp=E,265nm,1.0s						
YAK				smax	smax		
	comp=N,331nm,2.5s						
YAK				smax	smax		
	comp=E,395nm,2.0s						
ERM	**Erimo**	18.12	229	*e*P	P	03 12 36.4	+0.2
	comp=E,180nm,0.6s						
ERM				*e*Sn	S	03 15 51.3	-7.3
ERM	**Erimo**	18.12	229	⇓*e*P	P	03 12 34.9	-1.4
UNV	**Unalaska Valle**	18.50	82	*e*P	Pn	03 12 42.5	+1.0
	comp=E,367nm,1.2s						
ANM	**Nome**	18.57	48	*e*P	Pn	03 12 42.6	+0.3
	comp=E,321nm,1.4s						
ANM	**Nome**	18.57	48	*e*P	Pn	03 12 42.6	+0.3
ANM				pmax	pmax		
	comp=Z,320nm,1.4s						
AKUT	**Akutan**	18.82	81	*e*P	Pn	03 12 46.0	+0.8
	comp=Z,316nm,1.0s						
TEY	**Ternei**	18.98	246	⇓*e*P	P	03 12 45.5	-0.2
TEY				*e*S	S	03 16 12.6	-3.9
TEY				pmax	pmax		
	comp=Z,100nm,0.8s						
TEY				smax	smax		
	comp=E,30nm,1.5s						
TEY				smax	smax		
	comp=N,20nm,1.1s						
TEY				MLR	MLR		
	comp=Z,3µm,15.0s						
KLR	**Kul'dur**	19.11	263	P	P	03 12 47.5	+0.4
	comp=Z,0.4nm,0.3s,baz=62,slow=10,SNR=138						
KLR				S	S	03 16 20.4	+1.3
	comp=Z,0.0nm,0.3s,baz=345,slow=20,SNR=2.0						
KLR				PcP	PcP	03 17 08.0	+0.4
	comp=Z,0.1nm,0.3s,baz=81,slow=4.2,SNR=4.6						
ZEA	**Zeya**	19.74	279	*e*P	P	03 12 53.4	-0.5
ZEA				*e*S	S	03 16 31.0	-0.7
ZEA				pmax	pmax		
	comp=E,62nm,0.8s						
ZEA				pmax	pmax		
	comp=N,72nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,150nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,900nm,12.0s						
ZEA				pmax	pmax		
	comp=E,500nm,9.0s						
ZEA				smax	smax		
	comp=N,3µm,11.0s						
ZEA				MLR	MLR		
	comp=E,2µm,14.0s						
ZEA				MLR	MLR		
	comp=Z,2µm,14.0s						
FALS	**False Pass**	19.92	78	*e*P	P	03 12 56.6	+0.9
	comp=Z,191nm,0.7s						
RDOG	**Red Dog Mine**	20.52	39	*e*P	P	03 13 03.0	+0.8
	comp=Z,159nm,1.2s						
TIXI	**Tiksi**	21.14	332	P	P	03 13 09.3	+0.5
	comp=Z,210nm,0.8s,baz=117,slow=11,SNR=123						
TIXI				S	S	03 17 02.1	+3.4
	comp=Z,7.4nm,0.8s,baz=163,slow=22,SNR=3.6						
TIXI				PcP	PcP	03 17 10.9	0.0
	comp=Z,8.0nm,0.4s,baz=118,slow=3.4,SNR=5.6						
TIXI	**Tiksi**	21.14	332	*e*P	P	03 13 09.1	+0.3
	comp=Z,214nm,0.7s						
TIXI				*e*S	S	03 17 02.1	+3.4
TIXI				*e*PcP	PcP	03 17 10.9	0.0
SDPT	**Sand Point**	21.39	75	*e*P	P	03 13 09.6	-2.0
	comp=Z,303nm,1.3s						
USA0B	**Ussuriysk Arra**	21.98	251	*e*P	P	03 13 15.9	-2.1
	comp=Z,65nm,1.2s						
USRK	**Ussuriysk Ar.**	21.98	251	P	P	03 13 15.9	-2.0
	comp=Z,13nm,0.8s,baz=46,slow=6.6						
USRK				PcP	PcP	03 17 13.4	+0.3
USRK				ScP	ScP	03 20 44.8	+2.5
CHGN	**Chignik**	22.25	72	*e*P	P	03 13 20.6	-0.1
	comp=Z,205nm,1.3s						
SVW2	**Sparrevohn**	22.84	59	*e*P	P	03 13 27.3	+0.3
	comp=Z,36nm,0.9s						
MDJ	**Mudanjiang**	23.00	255	P	P	03 13 23.5	-5.2
MDJ				pP	pP	03 13 37.8	-8.2
MDJ				S	S	03 17 29.9	-2.4
MDJ				sS	sS	03 18 00.3	-3.6
MDJ				PcS	PcS	03 20 51.9	-2.3
MDJ				pmax	pmax		
	comp=Z,15nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,230nm,4.8s						
MDJ				LR	LR		
	comp=Z,2µm,9.4s						
MDJ				LR	LR		
	comp=Z,1µm,9.4s						
MDJ				LR	LR		
	comp=Z,1µm,12.6s						
MDJ	**Mudanjiang**	23.00	255	*e*P	P	03 13 26.1	-2.5
	comp=Z,25nm,1.0s						
MSHR	**Mys Shultsa**	23.53	249	⇑*e*P	P	03 13 35.5	+2.0
PPLA	**Purkeypile**	24.29	54	*e*P	P	03 13 41.4	+1.0
	comp=Z,476nm,1.3s						
RSO	**Redoubt South**	24.30	60	*e*P	P	03 13 41.3	+0.8
CAST	**Castle Rocks**	24.30	52	*e*P	P	03 13 41.0	+0.7
	comp=Z,107nm,1.0s						
SPU	**Mount Spurr**	24.53	58	*e*P	P	03 13 43.1	+0.6
SKT	**Skwentna**	24.68	56	*e*P	P	03 13 44.2	+0.4
	comp=Z,152nm,1.2s						
OHAK	**Old Harbor**	24.73	67	*e*P	P	03 13 42.3	-1.8
	comp=Z,55nm,0.6s						
BPAW	**Bear Paw Mtn.**	24.75	51	*e*P	P	03 13 44.9	+0.4
	comp=Z,79nm,0.8s						
MJB9	**Matsu-Tunnel**	24.79	229	*e*P	P	03 13 45.1	0.0
	comp=Z,224nm,0.9s						
MAJO	**Matsushiro**	24.79	229	*e*P	P	03 13 45.0	0.0
	comp=Z,205nm,0.9s						
MAJO				*e*PcP	PcP	03 17 19.8	+0.6
MAJO				*e*S	S	03 18 00.7	-0.5
MAJO				*e*ScP	ScP	03 20 51.8	+1.7
MAJO	**Matsushiro**	24.79	229	*d i*P	P	03 13 45.2	+0.2
MAJO				pmax	pmax		
	comp=Z,244nm,1.0s						
MAT	**Matsushiro**	24.79	229	P	P	03 13 45.5	+0.5
MAT				S	S	03 18 00.4	-0.9
MJAR	**Matsushiro Arr**	24.79	229	P	P	03 13 45.6	+0.5
	comp=Z,110nm,0.8s,baz=18,slow=7.6,SNR=181						
MJAR				PcP	PcP	03 17 19.8	+0.6
	comp=Z,9.5nm,0.8s,baz=323,slow=0.3,SNR=5.5						
MJAR				S	S	03 18 00.7	-0.5
	comp=Z,1.2nm,0.7s,baz=112,slow=0.8,SNR=1.9						
MJAR				ScP	ScP	03 20 51.8	+1.7
	comp=Z,2.9nm,0.7s,baz=15,slow=1.3,SNR=5.5						
MJAR				LR	LR	03 23 41.2	
	comp=Z,2µm,20.8s,baz=45,slow=37						
KTH	**Kantishna Hill**	24.81	52	*e*P	P	03 13 45.6	+0.6
	comp=Z,80nm,1.0s						
MLY	**Manley**	24.83	48	*e*P	P	03 13 45.7	+0.5
	comp=Z,216nm,1.5s						
MLY				*e*PcP	PcP	03 17 19.7	+0.9
KDAK	**Kodiak Island**	24.94	66	P	P	03 13 45.6	-0.6
	comp=Z,48nm,0.7s,baz=204,slow=2.1,SNR=34						
KDAK				PcP	PcP	03 17 20.4	+1.4
	comp=Z,13nm,0.9s,baz=159,slow=16,SNR=3.4						
KDAK	**Kodiak Island**	24.94	66	*e*P	P	03 13 45.5	-0.6
	comp=Z,62nm,0.8s						
KDAK				*e*PcP	PcP	03 17 20.4	+1.4
KDAK	**Kodiak Island**	24.94	66	*i* P	P	03 13 45.4	-0.8
HOM	**Homer**	24.99	61	*e*P	P	03 13 45.2	-1.3
	comp=Z,148nm,0.8s						
HOM				*e*pP	pP	03 14 09.3	+3.5
TRF	**Thorofare Moun**	25.10	52	*e*P	P	03 13 48.2	+0.4
	comp=Z,114nm,1.0s						
COLD	**Coldfoot**	25.11	43	*e*P	P	03 13 47.5	-0.1
	comp=Z,37nm,0.9s						
SUA	**Susitna One**	25.11	57	*e*P	P	03 13 47.6	-0.2
	comp=Z,84nm,1.0s						
SUA				*e*PcP	PcP	03 17 20.7	+1.1
CNPM	**China Poot**	25.22	62	*e*P	P	03 13 48.3	-0.4
	comp=Z,179nm,1.4s						
BRLK	**Bradley Lake**	25.34	61	*e*P	P	03 13 48.3	-1.6
	comp=Z,94nm,1.4s						
BWN	**Browne**	25.41	50	*e*P	P	03 13 51.6	+1.1
	comp=Z,273nm,1.4s						
TOLK	**Toolik Lake Re**	25.46	40	P	P	03 13 50.9	0.0
	baz=264						
TOLK	**Toolik Lake Re**	25.46	40	*e*P	P	03 13 50.9	0.0
	comp=Z,138nm,0.8s						
RC01	**Rabbit Creek A**	25.66	58	*e*P	P	03 13 51.9	-0.7
	comp=Z,14nm,0.6s						
RC01				*e*PcP	PcP	03 17 21.8	+1.1
MCK	**McKinley**	25.68	51	*e*P	P	03 13 52.8	-0.1
	comp=Z,103nm,1.2s						
MCK	**McKinley**	25.68	51	*e*P	P	03 13 52.8	-0.1
BOD	**Bodaibo**	25.70	295	⇑*i*P	P	03 13 52.3	-0.7
BOD				pmax	pmax		
	comp=Z,230nm,0.8s						
CN2	**Changchun**	25.81	258	*e*P	P	03 13 51.8	-2.4
CN2				*e*S	S	03 18 15.9	-1.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				LR	LR		
	comp=Z,850nm,13.0s						
CN2				LR	LR		
	comp=Z,1µm,13.0s						
CN2				LR	LR		
	comp=Z,1µm,14.0s						
PMR	**Palmer**	25.86	56	*e*P	P	03 13 53.4	-1.0
	comp=Z,40nm,1.3s						
PMR	**Palmer**	25.86	56	*e*P	P	03 13 53.4	-1.0
PMR				pmax	pmax		
	comp=Z,40nm,1.3s						
HIA	**Hailar**	25.89	273	*e*P	P	03 13 55.2	+0.3
	comp=Z,83nm,0.9s						
HIA	**Hailar**	25.89	273	*e*P	P	03 13 55.2	+0.3
HIA				pmax	pmax		
	comp=Z,83nm,0.9s						
MDM	**Murphy Dome**	25.90	49	*e*P	P	03 13 54.7	-0.1
	comp=Z,36nm,0.9s						
GHO	**Glory Hole Cre**	25.93	56	*e*P	P	03 13 54.5	-0.7
	comp=Z,26nm,0.8s						
WRH	**Wood River Hil**	25.99	50	*e*P	P	03 13 56.1	+0.5
	comp=Z,102nm,0.8s						
COLA	**College**	26.07	49	*e*P	P	03 13 56.4	+0.2
	comp=Z,103nm,1.1s						
COLA	**College**	26.07	49	*e*P	P	03 13 56.4	+0.2
COLA				pmax	pmax		
	comp=Z,100nm,1.1s						
CCB	**Clear Creek Bu**	26.10	49	*e*P	P	03 13 56.7	+0.1
	comp=Z,81nm,1.0s						
SML	**Sawmill**	26.20	56	*e*P	P	03 13 56.8	-0.8
	comp=Z,105nm,0.9s						
SML	**Sawmill**	26.20	56	*e*P	P	03 13 56.2	-1.4
SML				pmax	pmax		
	comp=Z,100nm,0.9s						
INU	**Inuyama**	26.32	230	*e*P	P	03 13 58.5	-0.3
	comp=Z,50nm,0.8s						
DHY	**Denali Highway**	26.45	53	*e*P	P	03 13 59.5	-0.5
	comp=Z,63nm,1.0s						
IL1	**Eielson Array**	26.49	49	*e*P	P	03 13 59.3	-0.8
IL1				*e*PcP	PcP	03 17 21.7	-0.8
ILAR	**Eielson Array**	26.49	49	P	P	03 13 59.7	-0.4
	comp=Z,16nm,0.6s,baz=272,slow=9.3,SNR=316						
ILAR				pP	pP	03 14 19.2	-0.2
	comp=Z,69nm,0.9s,baz=266,slow=8.0,SNR=18						
ILAR				PcP	PcP	03 17 21.7	-0.8
	comp=Z,3.1nm,0.6s,baz=273,slow=3.4,SNR=5.9						
ILAR				ScP	ScP	03 20 53.8	-0.7
	comp=Z,2.6nm,1.0s,baz=284,slow=3.2,SNR=5.1						
ILAR				LR	LR	03 25 59.3	
	comp=Z,848nm,18.2s,baz=274,slow=40						
ILAR				P3KPbc		03 46 43.9	
	comp=Z,1.0nm,0.9s,baz=106,slow=3.5,SNR=7.4						
ILB	**Eielson Array**	26.49	49	*e*P	P	03 13 59.8	-0.4
ILB				*e*PcP	PcP	03 17 21.7	-0.8
HDA	**Harding Lake**	26.49	50	*e*P	P	03 13 59.5	-0.6
	comp=Z,56nm,0.9s						
SCM	**Sheep Creek Mo**	26.66	56	*e*P	P	03 14 01.9	+0.1
	comp=Z,81nm,0.7s						
SCM	**Sheep Creek Mo**	26.66	56	*e*P	P	03 14 01.9	+0.1
SCM				pmax	pmax		
	comp=Z,81nm,0.7s						
FYU	**Fort Yukon**	27.06	45	*e*P	P	03 14 05.7	+0.5
	comp=Z,101nm,1.0s						
JHJ2	**Mitsune**	27.11	223	*e*P	P	03 14 06.2	+0.3
	comp=Z,241nm,1.1s						
JHJ	**Hachijo jima 2**	27.12	223	P	P	03 14 05.6	-0.5
	comp=Z,239nm,1.1s,baz=219,slow=17,SNR=4.0						
JHJ				LR	LR	03 26 38.5	
	comp=Z,537nm,19.5s,baz=102,slow=40						
PAX	**Paxson**	27.33	53	*e*P	P	03 14 07.4	-0.4
	comp=Z,67nm,1.3s						
PAX	**Paxson**	27.33	53	*e*P	P	03 14 07.4	-0.4
PAX				pmax	pmax		
	comp=Z,67nm,1.3s						
KLU	**Klutina**	27.39	56	*e*P	P	03 14 08.4	+0.1
	comp=Z,121nm,1.4s						
DIV	**Divide**	27.54	57	*e*P	P	03 14 09.7	+0.1
	comp=Z,111nm,1.4s						
HARP	**HAARP**	27.57	54	*e*P	P	03 14 10.3	+0.5
	comp=Z,65nm,0.6s						
BMRM	**Bremner River**	28.13	57	*e*P	P	03 14 15.0	+0.2
	comp=Z,97nm,1.2s						
RAGM	**Ragged Mountai**	28.23	58	*e*P	P	03 14 16.0	+0.2
	comp=Z,67nm,0.6s						
EGAK	**Eagle**	28.92	48	*e*P	P	03 14 21.0	-0.8
	comp=Z,72nm,1.0s						
KS01	**Wonju Array Si**	28.96	245	*e*P	P	03 14 20.5	-1.9
KSRS	**Korea Array**	28.97	245	P	P	03 14 21.4	-1.0
	comp=Z,22nm,0.8s,baz=38,slow=8.8,SNR=64						
KSRS				PP	PnPn	03 15 18.4	+0.2
	comp=Z,8.1nm,0.9s,baz=44,slow=9.8,SNR=4.4						
KSRS				PcP	PcP	03 17 30.6	+1.6
	comp=Z,10nm,0.7s,baz=7.7,slow=2.6,SNR=22						
KSRS				ScP	ScP	03 21 04.5	+2.0
	comp=Z,7.1nm,0.9s,baz=50,slow=3.3,SNR=12						
KSRS				LR	LR	03 27 53.1	
	comp=Z,654nm,18.8s,baz=50,slow=40						
KS15	**Wonju Array Si**	29.00	245	*e*P	P	03 14 21.4	-1.3
TGL	**Tana Glacier**	29.02	57	*e*P	P	03 14 21.2	-1.6
	comp=Z,32nm,1.2s						
BALM	**Baldy**	29.18	56	*e*P	P	03 14 25.3	+1.1
	comp=Z,59nm,1.4s						
BALM	**Baldy**	29.18	56	*e*P	P	03 14 25.3	+1.1
BALM				pmax	pmax		
	comp=Z,59nm,1.4s						
DAWY	**Dawson**	29.81	49	*e*P	P	03 14 29.4	-0.3
	comp=Z,22nm,1.0s						
JNU	**Nakatsue**	30.95	236	P	P	03 14 40.4	+0.3
	comp=Z,6.3nm,0.7s,baz=299,slow=3.4,SNR=4.5						
JNU				LR	LR	03 28 21.6	
	comp=Z,414nm,21.7s,baz=62,slow=38						
JNU	**Nakatsue**	30.95	236	*e*P	P	03 14 40.4	+0.3
	comp=Z,17nm,0.9s						
DL2	**Dalian**	31.24	254	P	P	03 14 40.4	-2.1
DL2				*e*S	S	03 19 39.3	-3.3
DL2				sS	sS	03 20 17.6	+1.2
DL2				pmax	pmax		
	comp=Z,55nm,0.9s						
DL2				LR	LR		
	comp=Z,2µm,21.9s						
DL2				LR	LR		
	comp=Z,1µm,22.4s						
DL2				LR	LR		
	comp=Z,2µm,18.0s						
INK	**Inuvik**	31.38	40	P	P	03 14 44.0	+0.7
	comp=Z,19nm,0.6s,baz=288,slow=6.8,SNR=49						
INK				PcP	PcP	03 17 35.1	+0.4
	comp=Z,4.6nm,0.6s,baz=306,slow=5.5,SNR=5.0						
INK	**Inuvik**	31.38	40	*e*P	P	03 14 44.0	+0.7
	comp=Z,81nm,1.2s						
CBIJ	**Chichi jima**	31.76	214	*e*P	P	03 14 47.6	+0.5
	comp=Z,161nm,1.1s						
JCJ	**Chichijima**	31.76	214	P	P	03 14 48.2	+1.0
	comp=Z,46nm,0.5s,baz=317,slow=21,SNR=3.1						
SKAG	**Skagway**	32.99	57	*e*P	P	03 14 59.3	+1.7
	comp=Z,63nm,1.0s						
IRK	**Irkutsk**	33.01	288	*e*P	P	03 14 57.0	-0.9
IRK				pmax	pmax		
	comp=Z,84nm,2.4s						
BJI	**Beijing**	33.48	261	⇓*i*P	P	03 15 04.6	+2.6
BJI				PP	PnPn	03 16 14.4	-1.5
BJI				PcP	PcP	03 17 42.8	+1.8
BJI				S	S	03 20 15.4	-1.8
BJI				pmax	pmax		
	comp=Z,42nm,0.9s						
BJI				pmax	pmax		
	comp=Z,160nm,4.2s						
BJI				LR	LR		
	comp=Z,2µm,17.6s						
BJI				LR	LR		
	comp=Z,2µm,13.4s						
BJI				LR	LR		
	comp=Z,1µm,24.6s						
BJT	**Baijiatuau**	33.49	261	*e*P	P	03 15 00.5	-1.7
	comp=Z,26nm,0.9s						
BJT	**Baijiatuau**	33.49	261	*e*P	P	03 15 00.5	-1.7
BJT				pmax	pmax		
	comp=Z,26nm,0.9s						
BESE	**Bessie Mountai**	33.56	58	*e*P	P	03 15 03.5	+0.9
	comp=Z,107nm,1.2s						
TLY	**Talaya**	33.62	288	*e*P	P	03 15 02.9	-0.4
	comp=Z,29nm,1.0s						
TLY	**Talaya**	33.62	288	*c i*P	P	03 15 02.8	-0.4
TLY				*e*		03 16 20.8	
TLY				*e*PPP	PPP	03 16 30.5	
TLY				*e*S	S	03 20 18.2	-1.2
TLY				*e*		03 20 50.6	
TLY				pmax	pmax		
	comp=Z,23nm,0.9s						
TLY				MLR	MLR		
	comp=Z,1µm,20.0s						
JIS	**Juneau Island**	33.91	58	*e*P	P	03 15 07.5	+2.0
	comp=Z,128nm,1.2s						
SIT	**Sitka**	33.95	61	*e*P	P	03 15 08.2	+2.3
	comp=Z,212nm,1.4s						
SIT	**Sitka**	33.95	61	*e*P	P	03 15 08.2	+2.3
SIT				pmax	pmax		
	comp=Z,212nm,1.4s						
SONA1	**Songino Array**	34.14	280	*e*P	P	03 15 07.7	-0.2
SONA0	**Songino Array**	34.15	280	*e*P	P	03 15 08.0	0.0
SONA0				*e*PcP	PcP	03 17 43.6	+0.5
SONA0				*e*ScP	ScP	03 21 20.9	+0.8
SONM	**Songino Array**	34.15	280	P	P	03 15 08.0	0.0
	comp=Z,4.8nm,0.4s,baz=61,slow=8.4,SNR=50						
SONM				PcP	PcP	03 17 43.6	+0.5
	comp=Z,16nm,0.9s,baz=60,slow=1.3,SNR=9.0						
SONM				ScP	ScP	03 21 20.9	+0.8
	comp=Z,9.2nm,0.9s,baz=111,slow=1.8,SNR=11						
SONM				LR	LR	03 30 47.7	
	comp=Z,514nm,20.5s,baz=59,slow=39						
MOY	**Mondy**	35.05	289	*e*P	P	03 15 16.1	+0.4
MOY				pmax	pmax		
	comp=Z,70nm,2.0s						
HHC	**Hu-ho-hao-te**	35.53	267	*e*P	P	03 15 20.8	+0.9
HHC				PP	PP	03 16 42.1	+0.2
HHC				S	S	03 20 48.4	-0.7
HHC				sS	sS	03 21 22.3	-0.9
HHC				SS	SnSn	03 23 09.8	-7.6
HHC				pmax	pmax		
	comp=Z,33nm,1.1s						
HHC				pmax	pmax		
	comp=Z,220nm,5.2s						
HHC				LR	LR		
	comp=Z,860nm,12.6s						
HHC				LR	LR		
	comp=Z,1µm,11.2s						
HHC				LR	LR		
	comp=Z,1µm,11.0s						
TIA	**Tai'an**	35.66	256	P	P	03 15 15.5	-5.4
TIA				pmax	pmax		
	comp=Z,6.0nm,0.6s						
TIA				LR	LR		
	comp=Z,850nm,16.5s						
TIA				LR	LR		
	comp=Z,850nm,17.8s						
TIA				LR	LR		
	comp=Z,1µm,18.2s						
WRAK	**Wrangell Islan**	35.70	61	*e*P	P	03 15 23.4	+2.4
	comp=Z,46nm,0.8s						
CRAG	**Craig**	35.76	62	*e*P	P	03 15 24.1	+2.6
	comp=Z,28nm,0.8s						
DLBC	**Dease Lake**	35.92	57	*e*P	P	03 15 25.4	+2.4
	comp=Z,58nm,0.8s						
BTO	**Baotou**	36.56	268	*e*P	P	03 15 20.9	-7.8
TIY	**Taiyuan**	37.19	262	*e*P	P	03 15 37.5	+3.5
TIY				PP	PnPn	03 17 04.8	+3.3
TIY				S	S	03 21 10.8	-3.6
TIY				sS	sS	03 21 49.1	+0.5
TIY				SS	SnSn	03 23 54.4	-3.0
TIY				pmax	pmax		
	comp=Z,26nm,0.5s						
TIY				LR	LR		
	comp=Z,1µm,15.1s						
TIY				LR	LR		
	comp=Z,520nm,10.4s						
TIY				LR	LR		
	comp=Z,970nm,15.0s						
DIB	**Dawson Inlet,**	37.21	65	*e*P	P	03 15 35.2	+1.3

	comp=Z,68nm,1.3s						
SSE	**Sheshan**	**37.40**	**246**	P	**P**	**03 15 35.1**	**-0.6**
SSE				S	**S**	**03 21 12.1**	**-5.4**
SSE				pmax	pmax		
	comp=Z,17nm,0.6s						
SSE				pmax	pmax		
	comp=Z,84nm,3.9s						
SSE				LR	LR		
	comp=Z,460nm,15.1s						
SSE				LR	LR		
	comp=Z,730nm,14.7s						
JOW	**Kunigami**	**37.46**	**234**	P	**P**	**03 15 36.6**	**+0.3**
	comp=Z,62nm,0.9s,baz=20,slow=11,SNR=28						
JOW				PcP	**PcP**	**03 17 54.0**	**+1.0**
	comp=Z,16nm,0.8s,baz=184,slow=7.3,SNR=2.8						
JOW				LR	LR	03 32 59.9	
	comp=Z,345nm,20.3s,baz=60,slow=39						
JOW	**Kunigami**	**37.46**	**234**	*e*P	**P**	**03 15 35.9**	**-0.3**
	comp=Z,56nm,0.8s						
NJ2	**Nanjing**	**37.87**	**249**	*e*P	**P**	**03 15 39.1**	**-0.6**
NJ2				pP	**pP**	**03 15 53.8**	**-5.8**
NJ2				sP	**sP**	**03 16 08.3**	**-1.1**
NJ2				S	**S**	**03 21 20.8**	**-3.8**
NJ2				pmax	pmax		
	comp=Z,30nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,220nm,3.7s						
NJ2				LR	LR		
	comp=Z,880nm,17.9s						
NJ2				LR	LR		
	comp=Z,1µm,17.3s						
NJ2				LR	LR		
	comp=Z,1µm,18.4s						
HVS	**Khovu-Aksy**	**39.20**	**293**	⇑*e*P	**P**	**03 15 53.4**	**+2.7**
HVS				pmax	pmax		
	comp=Z,58nm,0.9s						
RES	**Resolute Bay**	**40.65**	**23**	*e*P	**P**	**03 16 02.6**	**+0.3**
	comp=Z,30nm,0.8s						
RES				*e*PcP	**PcP**	**03 18 02.7**	**+0.4**
RES	**Resolute Bay**	**40.65**	**23**	*e*P	**P**	**03 16 02.6**	**+0.3**
RES				pmax	pmax		
	comp=Z,30nm,0.9s						
YKW3	**Yellowknife Ar**	**40.72**	**45**	*e*P	**P**	**03 16 03.6**	**+0.5**
	comp=Z,39nm,1.0s						
YKA	**Yellowknife Ar**	**40.76**	**45**	P	**P**	**03 16 03.8**	**+0.4**
	comp=Z,12nm,0.6s,baz=300,slow=8.1,SNR=63						
YKA				pP	**pP**	**03 16 22.9**	**-0.6**
	comp=Z,15nm,0.7s,baz=299,slow=8.0,SNR=6.6						
YKA				PcP	**PcP**	**03 18 03.2**	**+0.4**
	comp=Z,6.9nm,0.7s,baz=310,slow=3.7,SNR=6.7						
YKA				ScP	**ScP**	**03 21 45.3**	**+0.9**
	comp=Z,3.1nm,0.8s,baz=305,slow=4.0,SNR=7.4						
WHN	**Wuhan**	**41.46**	**253**	P	**P**	**03 16 07.3**	**-2.1**
WHN				sP	**pP**	**03 16 33.8**	**+4.2**
WHN				PcP	**PcP**	**03 18 07.3**	**+1.7**
WHN				S	**S**	**03 22 09.4**	**-8.8**
WHN				LR	LR		
	comp=Z,2µm,15.3s						
WHN				LR	LR		
	comp=Z,2µm,14.6s						
WHN				LR	LR		
	comp=Z,4µm,18.1s						
ZAA1	**Zalesovo Array**	**42.10**	**301**	*e*P	**P**	**03 16 13.8**	**-0.5**
ZAA1				*e*PP	**PP**	**03 17 54.3**	**+1.3**
ZAA1				*e*PcP	**PcP**	**03 18 07.7**	**+0.3**
ZAA1				*e*ScP	**ScP**	**03 21 49.9**	**0.0**
ZAA0	**Zalesovo Array**	**42.10**	**301**	*e*P	**P**	**03 16 12.8**	**-1.7**
	comp=Z,16nm,0.9s						
ZALV	**Zalesovo Beam**	**42.10**	**301**	P	**P**	**03 16 13.8**	**-0.6**
	comp=Z,6.2nm,0.3s,baz=57,slow=6.8,SNR=10						
ZALV				PP	**PP**	**03 17 54.3**	**+1.2**
	comp=Z,3.7nm,0.4s,baz=59,slow=9.0,SNR=4.9						
ZALV				PcP	**PcP**	**03 18 07.7**	**+0.3**
	comp=Z,35nm,0.8s,baz=27,slow=4.0,SNR=9.7						
ZALV				ScP	**ScP**	**03 21 49.9**	**0.0**
	comp=Z,16nm,0.9s,baz=40,slow=3.6,SNR=13						
ZALV				LR	LR	03 35 00.0	
	comp=Z,761nm,19.6s,baz=66,slow=38						
ZALV	**Zalesovo Beam**	**42.10**	**301**	*e*P	**P**	**03 16 13.2**	**-1.2**
GTA	**Gaotai**	**43.15**	**275**	P	**P**	**03 16 25.0**	**+1.7**
GTA				pP	pP	03 16 42.9	-0.7
GTA				sP	sP	03 16 51.4	-1.9
GTA				ScP	**ScP**	**03 21 55.1**	**+0.5**
GTA				S	**S**	**03 22 44.5**	**+1.2**
GTA				sS	sS	03 23 17.3	-0.8
GTA				SS	**SS**	**03 25 52.0**	**-6.6**
GTA				ScS	**ScS**	**03 26 13.0**	**-1.8**
GTA				pmax	pmax		
	comp=Z,56nm,1.2s						
GTA				pmax	pmax		
	comp=Z,240nm,8.4s						
GTA				LR	LR		
	comp=Z,960nm,17.2s						
GTA				LR	LR		
	comp=Z,1µm,18.6s						
GTA				LR	LR		
	comp=Z,640nm,18.5s						
LZH	**Lanzhou**	**43.19**	**268**	⇑P	**P**	**03 16 24.4**	**+0.7**
LZH				pP	pP	03 16 43.0	-1.0
LZH				sP	sP	03 16 53.1	-0.6
LZH				PP	**PP**	**03 18 07.3**	**+2.0**
LZH				PcP	**PcP**	**03 18 12.8**	**+1.2**
LZH				ScP	**ScP**	**03 21 58.9**	**+4.1**
LZH				S	**S**	**03 22 43.3**	**-0.7**
LZH				sS	sS	03 23 17.4	-1.4
LZH				SS	**SS**	**03 25 51.9**	**-7.6**
LZH				ScS	**ScS**	**03 26 13.6**	**-1.6**
LZH				pmax	pmax		
	comp=Z,93nm,1.0s						
LZH				pmax	pmax		
	comp=Z,360nm,5.2s						
LZH				LR	LR		
	comp=Z,2µm,14.0s						
LZH				LR	LR		
	comp=Z,1µm,13.1s						
LZH				LR	LR		
	comp=Z,2µm,15.3s						
DGZ	**Jazzator, Alta**	**43.29**	**294**	*i* P	**P**	**03 16 26.2**	**+1.9**
DGZ				pmax	pmax		
	comp=Z,46nm,0.7s						
QZH	**Quanzhou**	**43.72**	**243**	*e*P	**P**	**03 16 28.4**	**+0.6**
QZH				S	**S**	**03 22 47.5**	**-4.1**
QZH				LR	LR		
	comp=Z,500nm,20.0s						
QZH				LR	LR		
	comp=Z,460nm,19.8s						
QZH				LR	LR		
	comp=Z,480nm,20.8s						
GUMO	**Guam**	**43.90**	**204**	LR	LR	03 31 10.8	
	comp=Z,158nm,21.1s,baz=36,slow=31						
LLLB	**Lillooet**	**44.09**	**63**	*e*P	**P**	**03 16 31.2**	**+0.7**
	comp=Z,30nm,0.9s						
TWG	**Pinlang**	**44.27**	**239**	*e*P	**P**	**03 16 31.5**	**-0.7**
	comp=Z,82nm,0.5s						
TULEG	**Thule**	**44.27**	**15**	*e*P	**P**	**03 16 30.9**	**-0.7**
	comp=Z,27nm,0.8s						
ENH	**Enshi**	**44.33**	**257**	*e*P	**P**	**03 16 30.1**	**-2.6**
	comp=Z,14nm,0.9s						
KBS	**Kingsbay**	**44.45**	**352**	*e*P	**P**	**03 16 33.3**	**+0.3**
	comp=Z,111nm,0.8s						
KBS	**Kingsbay**	**44.45**	**352**	*e*P	**P**	**03 16 33.3**	**+0.3**
KBS				pmax	pmax		
	comp=Z,111nm,0.8s						
SPA0	**Spitsbergen Ar**	**44.74**	**350**	*e*P	**P**	**03 16 35.6**	**+0.2**
SPA0	**Spitsbergen Ar**	**44.74**	**350**	*e*P	**P**	**03 16 34.8**	**-0.6**
SPA0				IAmb	IAmb	03 16 36.4	
	comp=Z,280nm,0.8s						
SPITS	**Spitsbergen Ar**	**44.74**	**350**	P	**P**	**03 16 35.4**	**+0.1**
	comp=Z,168nm,0.6s,baz=29,slow=10,SNR=145						
SPITS				LR	LR	03 35 02.3	
	comp=Z,638nm,20.8s,baz=20,slow=36						
A04D	**Lummi Island**	**44.84**	**66**	P	**P**	**03 16 38.1**	**+1.7**
	baz=309,SNR=6.3						
NLWA	**Neilton Lookou**	**45.07**	**68**	*e*P	**P**	**03 16 40.2**	**+1.8**
	comp=Z,24nm,0.7s						
B05A	**Bryant**	**45.44**	**66**	P	**P**	**03 16 42.7**	**+1.5**
	baz=310,SNR=30						
JCW	**Jim Creek**	**45.57**	**66**	*e*P	**P**	**03 16 43.7**	**+1.4**
B06A	**Marblemount**	**45.59**	**65**	*e*P	**P**	**03 16 43.6**	**+1.2**
	comp=Z,37nm,0.7s						
E03A	**Lebam**	**45.77**	**68**	*e*P	**P**	**03 16 45.3**	**+1.5**
	comp=Z,47nm,0.8s						
HSPB	**Hornsund (broa**	**45.88**	**350**	*e*P	**P**	**03 16 44.4**	**+0.1**
	comp=Z,122nm,1.2s						
HSPB				IAmb	IAmb	03 16 45.4	
	comp=Z,122nm,1.2s						
F03A	**Seaside**	**46.17**	**69**	*e*P	**P**	**03 16 49.1**	**+2.1**
	comp=Z,42nm,0.8s						
D05A	**Enumclaw**	**46.18**	**67**	*e*P	**P**	**03 16 49.0**	**+1.9**
	comp=Z,40nm,0.7s						
C06D	**Leavenworth**	**46.28**	**65**	P	**P**	**03 16 49.0**	**+1.1**
	baz=310						
F04D	**Rainier, OR**	**46.37**	**69**	P	**P**	**03 16 49.7**	**+1.2**
	baz=311						
LON	**Longmire**	**46.56**	**67**	*e*P	**P**	**03 16 51.5**	**+1.4**
	comp=Z,7.8nm,0.7s						
LON	**Longmire**	**46.56**	**67**	*e*P	**P**	**03 16 51.5**	**+1.4**
LON				pmax	pmax		
	comp=Z,8.0nm,0.7s						
B08A	**Colville Reser**	**46.80**	**64**	*e*P	**P**	**03 16 53.0**	**+1.0**
	comp=Z,36nm,0.8s						
LTY	**Liberty**	**46.82**	**66**	*e*P	**P**	**03 16 53.0**	**+0.8**
	comp=Z,18nm,0.8s						
WMQ	**Urumqi**	**46.91**	**288**	P	**P**	**03 16 53.8**	**+0.9**
WMQ				pP	pP	03 17 13.6	+0.2
WMQ				sP	sP	03 17 19.4	-3.7
WMQ				PP	**PP**	**03 18 45.5**	**+1.7**
WMQ				S	**S**	**03 23 38.3**	**+1.0**
WMQ				sS	sS	03 24 11.3	-1.1
WMQ				LR	LR		
	comp=Z,4µm,25.9s						
WMQ				LR	LR		
	comp=Z,2µm,20.1s						
WMQ				LR	LR		
	comp=Z,2µm,26.3s						
CD2	**Chengdu**	**47.04**	**263**	P	**P**	**03 16 53.0**	**-1.1**
CD2				pP	pP	03 17 11.9	-2.7
CD2				sP	sP	03 17 20.9	-3.3
CD2				PP	**PP**	**03 18 43.8**	**-1.5**
CD2				S	**S**	**03 23 38.6**	**-0.8**
CD2				sS	sS	03 24 11.4	-3.2
CD2				pmax	pmax		
	comp=Z,40nm,0.7s						
CD2				pmax	pmax		
	comp=Z,210nm,6.6s						
CD2				LR	LR		
	comp=Z,2µm,18.3s						
CD2				LR	LR		
	comp=Z,950nm,12.9s						
CD2				LR	LR		
	comp=Z,1µm,11.9s						
KURK	**Kurchatov**	**47.09**	**301**	*e*P	**P**	**03 16 52.7**	**-1.4**
	comp=Z,199nm,0.7s						
KURK				*e*PcP	**PcP**	**03 18 23.8**	**-0.8**
KURK				*e*PP	**PP**	**03 18 44.5**	**-0.7**
KURK				*e*ScP	**ScP**	**03 22 11.1**	**+0.7**
KURK	**Kurchatov**	**47.09**	**301**	*c i*P	**P**	**03 16 52.6**	**-1.5**
KURK				pmax	pmax		
	comp=Z,236nm,0.8s						
KURBB	**Kurchatov Arra**	**47.19**	**300**	P	**P**	**03 16 53.9**	**-1.0**
	comp=Z,153nm,0.7s,baz=55,slow=7.9,SNR=917						
KURBB				PcP	**PcP**	**03 18 24.6**	**-0.3**
	comp=Z,29nm,0.8s,baz=50,slow=3.4,SNR=9.2						
KURBB				PP	**PP**	**03 18 46.4**	**+0.2**
	comp=Z,46nm,1.0s,baz=56,slow=9.7,SNR=8.2						
KURBB				ScP	**ScP**	**03 22 11.1**	**+0.2**
	comp=Z,7.2nm,1.0s,baz=50,slow=3.8,SNR=7.7						
KULLO	**Kullorsuaq**	**47.51**	**13**	⇑*i*P	**P**	**03 16 57.0**	**-0.1**
	comp=Z,97nm,0.8s						
KULLO	**Kullorsuaq**	**47.51**	**13**	⇑*i*P	**P**	**03 16 57.0**	**-0.1**
KULLO				pmax	pmax		
	comp=Z,97nm,0.8s						
C09A	**Chrisman Ranch**	**47.70**	**64**	*e*P	**P**	**03 16 59.7**	**+0.8**
	comp=Z,28nm,0.8s						
H04A	**Detroit Lake**	**47.73**	**70**	*e*P	**P**	**03 16 59.8**	**+0.6**
	comp=Z,55nm,1.4s						
I03D	**Drain, OR**	**47.77**	**71**	P	**P**	**03 17 01.2**	**+1.7**
	baz=313,SNR=5.6						
MK31	**Makanchi Array**	**47.79**	**294**	*e*P	**P**	**03 16 58.3**	**-1.4**
MK31	**Makanchi Array**	**47.79**	**294**	*ce*P	**P**	**03 16 58.0**	**-1.7**
MK31				pmax	pmax		
	comp=Z,42nm,0.6s						
MK32	**Makanchi Array**	**47.79**	**294**	*e*P	**P**	**03 16 58.3**	**-1.4**
MK32				*e*pP	**pP**	**03 17 19.1**	**-1.2**
MK32				*e*PcP	**PcP**	**03 18 26.8**	**-0.4**
MK32				*e*PP	**PP**	**03 18 53.2**	**+1.4**
MK32				*e*ScP	**ScP**	**03 22 13.3**	**-0.2**
MKAR	**Makanchi Array**	**47.79**	**294**	P	**P**	**03 16 58.3**	**-1.4**
	comp=Z,42nm,0.6s,baz=60,slow=4.8,SNR=268						
MKAR				pP	**pP**	**03 17 19.1**	**-1.2**
	comp=Z,12nm,0.6s,baz=51,slow=9.6,SNR=2.8						
MKAR				PcP	**PcP**	**03 18 26.8**	**-0.4**
	comp=Z,14nm,0.8s,baz=79,slow=2.6,SNR=4.0						
MKAR				PP	**PP**	**03 18 53.2**	**+1.4**
	comp=Z,13nm,0.8s,baz=50,slow=7.2,SNR=3.8						
MKAR				ScP	**ScP**	**03 22 13.4**	**-0.2**
	comp=Z,1.1nm,0.8s,baz=120,slow=29,SNR=3.5						
MKAR				LR	LR	03 38 09.9	
	comp=Z,1µm,19.6s,baz=38,slow=37						
MKAR	**Makanchi Array**	**47.79**	**294**	*e*P	**P**	**03 16 58.3**	**-1.4**
	comp=Z,320nm,0.6s						
MK01	**Makanchi Array**	**47.80**	**294**	*e*P	**P**	**03 16 58.1**	**-1.7**
MK01				*e*PcP	**PcP**	**03 18 26.7**	**-0.6**
G05D	**Wamic, OR**	**47.81**	**68**	P	**P**	**03 17 01.2**	**+1.3**
	baz=312						
DAG	**Danmarks Havn**	**47.84**	**0**	⇑*i*P	**P**	**03 16 59.2**	**-0.4**
	comp=Z,44nm,0.9s						
DAG				*i*		03 17 18.9	
DAG	**Danmarks Havn**	**47.84**	**0**	⇑*i*P	**P**	**03 16 59.2**	**-0.4**
DAG				*i*		03 17 18.9	
DAG				pmax	pmax		
	comp=Z,44nm,0.9s						
D08A	**Wollman Farm,**	**47.86**	**65**	*e*P	**P**	**03 17 00.9**	**+0.8**
	comp=Z,45nm,1.4s						
MAKZ	**Makanchi**	**47.94**	**295**	*e*P	**P**	**03 16 59.4**	**-1.4**
	comp=Z,44nm,0.9s						
MAKZ	**Makanchi**	**47.94**	**295**	*e*P	**P**	**03 16 59.4**	**-1.4**
MAKZ				pmax	pmax		
	comp=Z,44nm,0.9s						
HAWA	**Hanford**	**47.98**	**66**	*e*P	**P**	**03 17 01.7**	**+0.6**
	comp=Z,17nm,0.8s						
F07A	**Phinny Hill Vi**	**48.11**	**67**	*e*P	**P**	**03 17 02.4**	**+0.3**
	comp=Z,85nm,0.6s						
E08A	**Dider Farm, El**	**48.16**	**66**	*e*P	**P**	**03 17 02.6**	**+0.2**
	comp=Z,20nm,0.8s						
G06A	**Carlson Farm,**	**48.18**	**68**	*e*P	**P**	**03 17 02.8**	**+0.1**
	comp=Z,19nm,1.4s						
I04A	**Tendick Farm,**	**48.20**	**71**	P	**P**	**03 17 03.8**	**+0.9**
	baz=313,SNR=9.5						
KBO	**Bosley Butte**	**48.30**	**73**	*e*P	**P**	**03 17 05.7**	**+2.0**
	comp=Z,233nm,1.5s						
I05D	**Terrebonne, OR**	**48.41**	**69**	P	**P**	**03 17 05.7**	**+1.2**
	baz=313,SNR=11						
E09A	**Wood Farm, Sta**	**48.62**	**65**	*e*P	**P**	**03 17 06.6**	**+0.7**
	comp=Z,49nm,0.8s						
L02D	**Cave Junction,**	**48.67**	**73**	P	**P**	**03 17 08.2**	**+1.7**
	baz=314						
HUMO	**Hull Mountain**	**48.72**	**72**	*e*P	**P**	**03 17 08.6**	**+1.8**
	comp=Z,17nm,0.9s						
J04D	**Umpqua Nationa**	**48.74**	**71**	P	**P**	**03 17 08.9**	**+1.7**
	baz=313,SNR=16						
GYA	**Guiyang**	**48.85**	**257**	P	**P**	**03 17 04.8**	**-3.3**
GYA				pP	pP	03 17 28.6	-0.2
GYA				sP	sP	03 17 37.5	-0.9
GYA				PcP	**PcP**	**03 18 32.3**	**+0.8**
GYA				PP	**PP**	**03 19 03.0**	**+1.1**
GYA				ScP	**ScP**	**03 22 20.0**	**+1.6**
GYA				S	**S**	**03 23 59.0**	**-6.1**
GYA				sS	sS	03 24 38.6	-1.9
GYA				ScS	**ScS**	**03 26 51.5**	**-0.6**
GYA				SS	**SS**	**03 27 31.3**	**-5.1**
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,5.3s						
GYA				LR	LR		
	comp=Z,750nm,19.6s						
GYA				LR	LR		
	comp=Z,880nm,22.7s						
GYA				LR	LR		
	comp=Z,610nm,18.0s						
PINE	**Pine Mountain**	**48.99**	**70**	*e*P	**P**	**03 17 10.7**	**+1.6**
	comp=Z,40nm,0.8s						
G08A	**Pilot Rock**	**49.02**	**67**	*e*P	**P**	**03 17 10.0**	**+0.8**
	comp=Z,14nm,0.7s						
WALA	**Waterton Lakes**	**49.05**	**60**	*e*P	**P**	**03 17 10.4**	**+1.0**
	comp=Z,57nm,0.8s						
J05D	**Fort Rock, OR**	**49.18**	**70**	P	**P**	**03 17 12.2**	**+1.7**
	baz=313,SNR=26						
K04D	**Chiloquin, OR**	**49.35**	**71**	P	**P**	**03 17 13.3**	**+1.5**
	baz=314						
BVA0	**Borovoye Array**	**49.44**	**307**	P	**P**	**03 17 10.7**	**-1.5**
BVA0				pmax	pmax		
	comp=Z,74nm,0.9s						
BVAR	**Borovoye Array**	**49.44**	**307**	P	**P**	**03 17 11.2**	**-1.0**
	comp=Z,50nm,0.7s,baz=56,slow=7.8,SNR=227						
BVAR				PcP	**PcP**	**03 18 33.1**	**0.0**
	comp=Z,32nm,0.8s,baz=64,slow=3.4,SNR=6.4						
BVAR				PP	**PP**	**03 19 10.2**	**+3.6**
	comp=Z,31nm,0.9s,baz=51,slow=11,SNR=6.7						
BVAR				ScP	**ScP**	**03 22 20.4**	**0.0**
	comp=Z,13nm,0.8s,baz=66,slow=3.7,SNR=15						
BVAR				LR	LR	03 40 36.9	
	comp=Z,754nm,19.8s,baz=44,slow=39						
YBH	**Yreka Blue Hor**	**49.45**	**73**	P	**P**	**03 17 14.1**	**+1.6**
	comp=Z,16nm,0.7s,baz=345,slow=12,SNR=45						
YBH	**Yreka Blue Hor**	**49.45**	**73**	*e*P	**P**	**03 17 13.6**	**+1.1**
	comp=Z,23nm,0.8s						
YBH	**Yreka Blue Hor**	**49.45**	**73**	*e*P	**P**	**03 17 14.5**	**+2.0**
YBH				pmax	pmax		
	comp=Z,23nm,0.8s						
F10A	**Beach Ranch, E**	**49.45**	**65**	*e*P	**P**	**03 17 13.2**	**+0.7**
	comp=Z,26nm,0.8s						
F10A				*e*PcP	**PcP**	**03 18 34.4**	**+1.1**
BRVK	**Borovoye**	**49.47**	**307**	*e*P	**P**	**03 17 11.3**	**-1.1**
	comp=Z,100nm,0.8s						
BRVK	**Borovoye**	**49.47**	**307**	*c i*P	**P**	**03 17 11.2**	**-1.2**
BRVK				pmax	pmax		
	comp=Z,128nm,1.0s						
KHMM	**Horse Mountain**	**49.49**	**74**	*e*P	**P**	**03 17 12.6**	**-0.3**
	comp=Z,77nm,1.3s						
I07A	**Izee**	**49.55**	**68**	*e*P	**P**	**03 17 14.5**	**+1.2**
	comp=Z,37nm,1.4s						
M02C	**Callahan**	**49.61**	**73**	P	**P**	**03 17 15.8**	**+2.1**
	baz=314,SNR=9.0						
K05A	**Summer Lake**	**49.74**	**71**	*e*P	**P**	**03 17 16.8**	**+1.9**
	comp=Z,28nm,0.8s						
JTMT	**Jette**	**49.75**	**62**	*e*P	**P**	**03 17 16.0**	**+1.3**
	comp=Z,70nm,0.7s						
M04C	**Macdoel**	**49.88**	**72**	P	**P**	**03 17 17.6**	**+1.7**
	baz=314,SNR=7.1						
N02D	**Trinity Center**	**49.98**	**73**	P	**P**	**03 17 18.5**	**+2.0**
	baz=314,SNR=9.0						
BMO	**Blue Mountains**	**50.17**	**66**	*e*P	**P**	**03 17 19.1**	**+1.1**
	comp=Z,29nm,0.8s						
BMO	**Blue Mountains**	**50.17**	**66**	*e*P	**P**	**03 17 19.1**	**+1.1**
BMO				pmax	pmax		
	comp=Z,29nm,0.8s						
WDC	**Whiskeytown Da**	**50.34**	**74**	*e*P	**P**	**03 17 20.8**	**+1.7**
	comp=Z,25nm,1.0s						
WDC	**Whiskeytown Da**	**50.34**	**74**	*e*P	**P**	**03 17 20.8**	**+1.7**
WDC				pmax	pmax		
	comp=Z,25nm,1.0s						
KCPM	**Cahto Peak**	**50.40**	**75**	*e*P	**P**	**03 17 20.8**	**+1.0**
	comp=Z,48nm,1.1s						
HAMF	**Hammerfest**	**50.45**	**343**	*e*P	**P**	**03 17 18.6**	**-0.9**
HAMF				IAmb	IAmb	03 17 20.0	
	comp=Z,71nm,1.0s						
MSO	**Missoula**	**50.54**	**62**	P	**P**	**03 17 21.5**	**+0.8**
	baz=313,SNR=18						
MSO	**Missoula**	**50.54**	**62**	*e*P	**P**	**03 17 21.6**	**+0.8**
	comp=Z,29nm,0.8s						
J08A	**Circle Bar Ran**	**50.59**	**68**	*e*P	**P**	**03 17 22.6**	**+1.5**
	comp=Z,22nm,0.8s						
MOD	**Modoc Plateau**	**50.63**	**71**	*e*P	**P**	**03 17 22.9**	**+1.4**
	comp=Z,38nm,0.8s						
KEV	**Kevo**	**50.64**	**341**	*e*P	**P**	**03 17 19.7**	**-1.3**
	comp=Z,40nm,1.0s						
KEV	**Kevo**	**50.64**	**341**	*e*P	**P**	**03 17 19.7**	**-1.3**
KEV				pmax	pmax		
	comp=Z,40nm,1.0s						
LVZ	**Lovozero**	**50.65**	**337**	*e*P	**P**	**03 17 20.2**	**-0.9**
	comp=Z,88nm,0.8s						
LVZ	**Lovozero**	**50.65**	**337**	*e*P	**P**	**03 17 20.2**	**-0.9**
LVZ				pmax	pmax		
	comp=Z,88nm,0.8s						
FFC	**Flin Flon**	**50.70**	**48**	*e*P	**P**	**03 17 22.1**	**+0.5**
	comp=Z,44nm,0.9s						
FFC	**Flin Flon**	**50.70**	**48**	*e*P	**P**	**03 17 22.1**	**+0.5**
FFC				pmax	pmax		
	comp=Z,44nm,0.9s						
O03D	**Paynes Creek**	**50.94**	**73**	P	**P**	**03 17 25.0**	**+1.2**
	baz=315,SNR=17						
SVE	**Sverdlovsk**	**50.97**	**316**	*d i*P	**P**	**03 17 23.2**	**-0.4**
SVE				pmax	pmax		
	comp=Z,120nm,0.8s						
SVE				MLR	MLR		
	comp=Z,2µm,20.0s						
ARA0	**ARCESS Array S**	**51.10**	**342**	*e*P	**P**	**03 17 23.5**	**-1.0**
ARA0				*e*PcP	**PcP**	**03 18 38.6**	**-0.3**
ARA0				*e*ScP	**ScP**	**03 22 27.8**	**+0.5**
ARCES	**ARCESS Array B**	**51.10**	**342**	P	**P**	**03 17 23.5**	**-1.0**
	comp=Z,38nm,0.8s,baz=31,slow=7.8,SNR=73						
ARCES				PcP	**PcP**	**03 18 38.6**	**-0.3**
	comp=Z,6.2nm,0.6s,baz=25,slow=3.4,SNR=4.1						
ARCES				ScP	**ScP**	**03 22 27.8**	**+0.5**
	comp=Z,13nm,0.8s,baz=35,slow=4.4,SNR=13						
ARCES				PKiKP	**PKiKP**	**03 25 21.6**	**+0.6**
	comp=Z,3.9nm,1.1s,baz=318,slow=1.6,SNR=4.8						
ARCES	**ARCESS Array B**	**51.10**	**342**	*e*P	**P**	**03 17 22.8**	**-1.7**
WVOR	**Wild Horse Val**	**51.15**	**69**	*e*P	**P**	**03 17 25.9**	**+0.5**
	comp=Z,26nm,0.8s						
WVOR	**Wild Horse Val**	**51.15**	**69**	*e*P	**P**	**03 17 25.9**	**+0.5**
WVOR				pmax	pmax		
	comp=Z,26nm,0.8s						
APA	**Apatity**	**51.19**	**337**	⇑*i*P	**P**	**03 17 23.0**	**-2.1**
APA				*i*		03 18 36.2	
APA				*i* S	**S**	**03 24 29.0**	**-7.5**
APA				*i*		03 27 09.0	
APA				pmax	pmax		
	comp=Z,28nm,0.8s						
SUMG	**Summit**	**51.32**	**8**	*e*P	**P**	**03 17 26.4**	**-0.1**
	comp=Z,122nm,0.9s						
SUMG	**Summit**	**51.32**	**8**	⇑*i*P	**P**	**03 17 26.9**	**+0.4**
SUMG	**Summit**	**51.32**	**8**	⇑*i*P	**P**	**03 17 26.9**	**+0.4**
PDGK	**Podgornoye**	**51.60**	**293**	*i* P	**P**	**03 17 28.0**	**-0.7**
PDGK				pmax	pmax		
	comp=Z,57nm,0.8s						
ORV	**Oroville**	**51.63**	**74**	*e*P	**P**	**03 17 29.8**	**+1.0**
	comp=Z,14nm,0.8s						
ORV	**Oroville**	**51.63**	**74**	*e*P	**P**	**03 17 29.8**	**+1.0**
ORV				pmax	pmax		
	comp=Z,14nm,0.8s						
HRY	**Holter Researc**	**51.67**	**61**	*e*P	**P**	**03 17 30.3**	**+1.1**
EGMT	**Eagleton**	**51.78**	**59**	P	**P**	**03 17 30.5**	**+0.6**
	baz=314,SNR=30						
EGMT	**Eagleton**	**51.78**	**59**	*e*P	**P**	**03 17 30.6**	**+0.6**
	comp=Z,42nm,0.8s						
TGY	**Tagaytay City**	**51.86**	**233**	P	**P**	**03 17 31.9**	**+1.1**
	comp=Z,185nm,0.5s,baz=175,slow=5.7,SNR=10						
MFID	**Camas Ranch**	**51.94**	**67**	*e*P	**P**	**03 17 32.3**	**+1.1**
	comp=Z,26nm,0.9s						
KTK1	**Kautokeino**	**51.96**	**342**	*e*P	**P**	**03 17 29.8**	**-1.0**
LRM	**Limekiln Ridge**	**51.98**	**62**	*e*P	**P**	**03 17 32.5**	**+0.8**
BEKR	**Beckworth**	**52.03**	**73**	*e*P	**P**	**03 17 33.4**	**+1.4**
	comp=Z,37nm,1.2s						
ARU	**Arti**	**52.06**	**317**	*e*P	**P**	**03 17 30.6**	**-1.1**
	comp=Z,197nm,0.9s						
ARU	**Arti**	**52.06**	**317**	*c i*P	**P**	**03 17 30.7**	**-1.1**
ARU				*PP	**pP**	**03 17 51.2**	**-1.5**
ARU						03 18 41.0	
ARU						03 19 28.2	
ARU				PPP	PPP	03 20 33.6	
ARU				S	**S**	**03 24 48.7**	**0.0**
ARU				*SS	**sS**	**03 25 28.0**	**+3.6**
ARU				SSS	SSS	03 30 08.6	
ARU				pmax	pmax		
	comp=Z,167nm,0.7s						
ARU				MLR	MLR		
	comp=Z,2µm,19.0s						
KMI	**Kunming**	**52.07**	**259**	P	**P**	**03 17 31.8**	**-0.7**
KMI				pP	pP	03 17 51.6	-1.8
KMI				sP	sP	03 18 03.4	+0.4
KMI				PP	**PP**	**03 19 31.4**	**+0.1**
KMI				S	**S**	**03 24 49.3**	**-0.7**
KMI				sS	sS	03 25 21.0	-4.7
KMI				SS	**SS**	**03 28 25.0**	**-2.9**
KMI				pmax	pmax		
	comp=Z,17nm,0.9s						
KMI				pmax	pmax		
	comp=Z,160nm,5.3s						
KMI				LR	LR		
	comp=Z,1µm,23.6s						
KMI				LR	LR		
	comp=Z,1µm,23.6s						
KMI				LR	LR		
	comp=Z,680nm,16.6s						
TRO	**Tromso**	**52.10**	**344**	*e*P	**P**	**03 17 30.7**	**-1.1**

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TRO                                   IAmb     IAmb     03 17 33.0
      comp=Z,70nm,0.9s
DLMT  Dillon               52.23  63  eP       P        03 17 34.3 +0.9
      comp=Z,79nm,1.5s
AFDM  Forest Hills D       52.35  74  eP       P        03 17 35.7 +1.5
      comp=Z,28nm,1.3s
KIF   Kilpisjarvi          52.37 343  eP       P        03 17 34.0 +0.1
HEF   Hetta                52.41 342  eP       P        03 17 33.9 -0.4
MCMT  McKenzie Canyo       52.48  63  eP       P        03 17 36.0 +0.7
BOZ   Bozeman (W)          52.55  62   P       P        03 17 36.8 +1.0
      baz=315,SNR=51
BOZ   Bozeman (W)          52.55  62  eP       P        03 17 36.8 +1.0
      comp=Z,30nm,0.8s
BOZ   Bozeman (W)          52.55  62  eP       P        03 17 36.8 +1.0
BOZ                                    pmax    pmax
      comp=Z,29nm,0.9s
HLID  Hailey               52.57  66   P       P        03 17 37.1 +1.1
      baz=315,SNR=31
HLID  Hailey               52.57  66  eP       P        03 17 37.0 +1.0
      comp=Z,14nm,0.8s
PAHR  Pah Rah Range        52.67  72  eP       P        03 17 38.3 +1.6
      comp=Z,33nm,1.1s
PRGR  Permogore            52.70 327  eP       P        03 17 36.1 -0.3
PRGR                                  e*PP     pP       03 17 58.2 +0.8
PRGR                                  e                 03 18 44.5
PRGR                                  e                 03 19 34.9
PRGR                                  e                 03 27 14.4
PRGR                                   pmax    pmax
      comp=Z,138nm,0.8s
PRZ   Przheval'sk          52.76 293  eP       P        03 17 38.4 +0.9
      comp=Z,42nm,0.8s
PRZ   Przheval'sk          52.76 293  eP       P        03 17 38.4 +0.9
PRZ                                    pmax    pmax
      comp=Z,42nm,0.8s
VCNR  Virginia City        52.82  73  eP       P        03 17 39.8 +1.9
      comp=Z,40nm,1.1s
PNTR  Pine Nut             52.99  73  eP       P        03 17 41.2 +2.0
      comp=Z,45nm,0.9s
QIZ   Qiongzhong           53.13 248   P       P        03 17 37.5 -2.6
QIZ                                    S       S        03 25 05.3 +1.2
QIZ                                    sS      sS       03 25 36.9 -3.0
QIZ                                    ScS     ScS      03 27 21.4  0.0
QIZ                                    LR      LR
      comp=Z,490nm,23.0s
QIZ                                    LR      LR
      comp=Z,470nm,16.7s
QIZ                                    LR      LR
      comp=Z,400nm,18.1s
QLMT  Earthquake Lak       53.19  63  eP       P        03 17 41.9 +1.3
ILULI Ilulissat            53.20  14  eP       P        03 17 39.3 -0.7
      comp=Z,46nm,0.8s
ILULI Ilulissat            53.20  14  i P      P        03 17 39.0 -1.0
      comp=Z,45nm,0.8s
ILULI Ilulissat            53.20  14  i P      P        03 17 39.0 -1.0
ILULI                                  pmax    pmax
      comp=Z,45nm,0.8s
YERR  Yerington            53.26  73  eP       P        03 17 43.2 +2.0
      comp=Z,90nm,1.3s
BMN   Battle Mountai       53.31  70  eP       P        03 17 43.2 +1.7
      comp=Z,24nm,0.9s
BMN   Battle Mountai       53.31  70  eP       P        03 17 43.2 +1.7
BMN                                    pmax    pmax
      comp=Z,24nm,0.9s
CMB   Columbia Colle       53.32  74  eP       P        03 17 43.1 +1.7
      comp=Z,35nm,1.4s
CMB   Columbia Colle       53.32  74  eP       P        03 17 43.1 +1.7
CMB                                    pmax    pmax
      comp=Z,35nm,1.3s
YHB   Horse Butte          53.37  62  eP       P        03 17 43.3 +1.5
      comp=Z,61nm,0.7s
GCMT  Greycliff            53.39  61  eP       P        03 17 43.5 +1.5
WAKR  Walker               53.50  73  eP       P        03 17 45.1 +2.2
      comp=Z,33nm,0.8s
YMR   Madison River        53.54  62  eP       P        03 17 44.5 +1.3
      comp=Z,45nm,0.9s
KDJ   Kajisay              53.65 293  eP       P        03 17 43.1 -0.8
      comp=Z,59nm,0.8s
SAO   San Andreas Ge       53.66  76  eP       P        03 17 45.8 +1.9
      comp=Z,16nm,1.0s
SAO   San Andreas Ge       53.66  76  eP       P        03 17 45.8 +1.9
SAO                                    pmax    pmax
      comp=Z,16nm,1.0s
YFT   Old Faithful         53.76  63  eP       P        03 17 47.5 +2.7
      comp=Z,70nm,0.7s
KVN   Kaiserville          53.83  72  eP       P        03 17 47.3 +2.0
      comp=Z,96nm,1.3s
KVN   Kaiserville          53.83  72  eP       P        03 17 47.3 +2.0
KVN                                    pmax    pmax
      comp=Z,96nm,1.3s
YPP   Pitchstone Pla       53.90  63  eP       P        03 17 48.1 +2.2
      comp=Z,32nm,0.9s
TKM2  Tokmak 2             53.91 295   P       P        03 17 45.0 -0.8
      SNR=35
TKM2  Tokmak 2             53.91 295  i P      P        03 17 44.9 -0.9
TKM2                                   pmax    pmax
      comp=Z,33nm,0.9s
RYN   Ryan                 53.91  73  eP       P        03 17 47.8 +1.9
      comp=Z,90nm,1.3s
H17A  Grant Village        53.93  62   P       P        03 17 48.8 +2.7
      baz=316,SNR=29
H17A  Grant Village        53.93  62  eP       P        03 17 48.9 +2.9
      comp=Z,49nm,0.8s
ULHL  Ulahol               54.06 294   P       P        03 17 46.3 -0.6
      SNR=29
RLMT  Red Lodge            54.06  61   P       P        03 17 48.6 +1.7
      baz=316,SNR=96
RLMT  Red Lodge            54.06  61  eP       P        03 17 48.7 +1.7
      comp=Z,83nm,0.7s
FLWY  Flagg Ranch          54.09  63  eP       P        03 17 49.4 +2.2
      comp=Z,65nm,0.7s
IMW   Indian Meadow        54.10  63  eP       P        03 17 49.2 +1.8
      comp=Z,39nm,0.8s
DGMT  Dagmar               54.11  55   P       P        03 17 47.7 +0.8
      baz=316,SNR=12
DGMT  Dagmar               54.11  55  eP       P        03 17 47.9 +0.9
      comp=Z,52nm,0.8s
NVAR  Mina Array Bea       54.17  73   LR      LR       03 38 06.7
      comp=Z,346nm,21.1s,baz=52,slow=33
STEI  Steigen              54.22 345  eP       P        03 17 46.1 -1.3
STEI                                   IAmb    IAmb     03 17 48.9
      comp=Z,94nm,1.2s
USP   Ospenovka            54.22 296   P       P        03 17 47.7 -0.1
      SNR=41
FXWY  Fox Creek            54.24  63  eP       P        03 17 50.1 +1.8
      comp=Z,36nm,0.8s
NV11  Mina Array Sit       54.25  73  eP       P        03 17 50.2 +1.9
      comp=Z,4.7nm,1.3s
LOF   Lofoten              54.27 346  eP       P        03 17 47.3 -0.5
LOF                                    IAmb    IAmb     03 17 48.9
      comp=Z,206nm,0.8s
CHMS  Chumysh              54.28 296   P       P        03 17 48.4  0.0
      SNR=16
MOOW  Moose Ponds          54.31  63  eP       P        03 17 50.4 +1.6
      comp=Z,22nm,0.9s
MDPB  Devils Postpil       54.33  74  eP       P        03 17 51.2 +2.2
      comp=Z,57nm,1.2s
OMMB  Old Mammoth Mi       54.38  74  eP       P        03 17 51.7 +2.2
      comp=Z,31nm,1.3s
TPAW  Teton Pass           54.39  63  eP       P        03 17 51.3 +1.9
      comp=Z,55nm,0.8s
PMPB  Monarch Peak         54.42  76  eP       P        03 17 50.9 +1.5
      comp=Z,27nm,1.0s
LAO   LASA Array           54.43  58   P       P        03 17 50.7 +1.3
      baz=316,SNR=40
LAO   LASA Array           54.43  58  eP       P        03 17 50.7 +1.3
      comp=Z,82nm,0.9s
KBK   Karagaybulak         54.43 295   P       P        03 17 49.3 -0.3
      SNR=17
MLAC  Mammoth, Mammo54.46  74   P       P        03 17 52.5 +2.5
      baz=317
FRU   Bishkek              54.47 296⇓eP       P        03 17 49.0 -0.7
FRU                                   e                 03 18 11.0
FRU                                   e                 03 18 52.0
FRU                                   e                 03 25 24.0
FRU                                   e                 03 26 00.0
FRU                                    pmax    pmax
      comp=Z,335nm,2.5s
LOHW  Long Hollow          54.48  63  eP       P        03 17 51.8 +1.8
      comp=Z,39nm,0.8s
FRU1  Bishkek              54.48 295  eP       P        03 17 50.5 +0.7
      comp=Z,83nm,1.0s
SNOW  Snow King Moun       54.51  63  eP       P        03 17 52.3 +2.0
      comp=Z,27nm,0.8s
REDW  Red Top Meadow       54.53  63  eP       P        03 17 52.0 +1.6
      comp=Z,46nm,1.0s
AAK   Ala-Archa            54.67 295   P       P        03 17 51.1 -0.3
      SNR=26
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AAK   Ala-Archa            54.67 295  eP       P        03 17 51.0 -0.3
      comp=Z,56nm,0.9s
AAK   Ala-Archa            54.67 295  i P      P        03 17 50.6 -0.7
AAK                                    pmax    pmax
      comp=Z,64nm,1.0s
HVU   Hansel Valley        54.68  66  eP       P        03 17 53.2 +1.8
      comp=Z,42nm,1.0s
HVU   Hansel Valley        54.68  66  eP       P        03 17 53.2 +1.8
HVU                                    pmax    pmax
      comp=Z,42nm,1.0s
KZA   Kyzart               54.69 294   P       P        03 17 51.1 -0.6
      SNR=38
AHID  Auburn Hatcher       54.83  64  eP       P        03 17 53.9 +1.3
      comp=Z,28nm,0.9s
EKS2  Erkin-Say            55.02 296   P       P        03 17 53.4 -0.4
      SNR=34
PAGB  Antelope Grade       55.08  76  eP       P        03 17 55.7 +1.5
      comp=Z,43nm,1.4s
LSA   Lhasa                55.09 273  eP       P        03 17 56.1 +1.3
      comp=Z,52nm,0.8s
LSA   Lhasa                55.09 273  i P      P        03 17 55.2 +0.4
      SNR=5.8
LSA   Lhasa                55.09 273  eP       P        03 17 56.1 +1.3
LSA                                    pmax    pmax
      comp=Z,52nm,0.8s
KLMR  Klimovskoe           55.14 330  eP       P        03 17 52.4 -1.7
KLMR                                  eS       S        03 25 29.4 -0.6
KLMR                                   pmax    pmax
      comp=Z,101nm,0.9s
KLMR  Klimovskoe           55.14 330  eP       P        03 17 52.4 -1.7
KLMR                                   AMP              03 17 55.1
      comp=Z,101nm,0.9s
KLMR                                  eS       S        03 25 29.5 -0.6
KLMR                                  eS       S        03 25 29.5 -0.6
KLMR                                   LQ      LQ       03 37 38.1
KLMR                                   LQ      LQ       03 37 38.1
KLMR                                   LR      LR       03 39 33.5
BGU   Big Grassy Mou       55.17  67  eP       P        03 17 56.2 +1.3
      comp=Z,32nm,1.1s
TIN   Tinemaha, Big        55.21  74   P       P        03 17 57.4 +2.2
      baz=317,SNR=5.7
SFJD  Kangerlussuaq        55.33  15   P       P        03 17 55.5  0.0
      comp=Z,15nm,0.4s,baz=341,slow=8.1,SNR=6.9
SFJD                                   PcP     PcP      03 18 55.2 +0.3
      comp=Z,26nm,0.7s,baz=2.4,slow=4.5,SNR=4.2
SFJD                                   LR      LR       03 42 47.9
      comp=Z,618nm,21.7s,baz=348,slow=37
SFJD  Kangerlussuaq        55.33  15  eP       P        03 17 54.6 -0.9
      comp=Z,32nm,0.9s
SFJD                                  ePcP     PcP      03 18 55.2 +0.3
SFJD  Kangerlussuaq        55.33  15⇑iP       P        03 17 54.7 -0.8
SFJD  Kangerlussuaq        55.33  15  eP       P        03 17 54.6 -0.9
SFJD                                  e                 03 18 55.2
SFJD                                   pmax    pmax
      comp=Z,32nm,0.9s
HWUT  Hardware Ranch       55.43  65  eP       P        03 17 58.7 +1.9
      comp=Z,57nm,0.8s
AML   Almayashu            55.45 296   P       P        03 17 56.9 -0.4
      SNR=36
SMMC  Simmler              55.52  76   P       P        03 17 59.5 +2.1
      baz=318,SNR=7.0
BW06  Boulder Array        55.62  63   P       P        03 17 59.6 +1.4
      baz=317,SNR=66
BW06  Boulder Array        55.62  63  eP       P        03 17 59.4 +1.2
      comp=Z,41nm,0.8s
PD31  Pinedale Array       55.62  63  eP       P        03 17 59.5 +1.3
PDAR  Pinedale Array       55.62  63   P       P        03 17 59.5 +1.3
      comp=Z,24nm,0.6s,baz=320,slow=2.5,SNR=372
PDAR                                   pP      pP       03 18 21.3 +1.9
      comp=Z,4.1nm,0.7s,baz=318,slow=4.2,SNR=3.1
PDAR                                   LR      LR       03 42 30.6
      comp=Z,332nm,20.1s,baz=342,slow=37
PDAR                                   PKP2ab           03 48 29.9
      comp=Z,0.9nm,0.9s,baz=132,slow=2.2,SNR=4.4
PDAR  Pinedale Array       55.62  63  eP       P        03 17 59.1 +0.9
VES   Vestal, Richgr       55.63  75   P       P        03 17 59.2 +1.1
      baz=318,SNR=16
R11A  Troy Canyon, C       55.69  71   P       P        03 18 00.1 +1.4
      baz=317,SNR=46
R11A  Troy Canyon, C       55.69  71  eP       P        03 18 00.1 +1.4
      comp=Z,42nm,1.3s
GRAC  Grapevine Rang       55.72  73   P       P        03 18 01.0 +2.2
      baz=318
CWC   Cottonwood Cre       55.74  74   P       P        03 18 00.9 +1.8
      baz=318
MOKO  MOKOCHONG            55.76 267  eP       P        03 17 56.4 -2.9
MOKO                                   IAmb    IAmb     03 18 03.7
      comp=Z,27nm,0.4s
MNAS  Manas                55.80 297  i P      P        03 17 58.6 -0.8
MNAS                                   pmax    pmax
      comp=Z,24nm,0.7s
DUG   Dugway, Tooele       55.81  67   P       P        03 18 01.3 +1.8
      baz=317,SNR=41
DUG   Dugway, Tooele       55.81  67  eP       P        03 18 01.5 +2.0
      comp=Z,62nm,0.8s
DUG   Dugway, Tooele       55.81  67  eP       P        03 18 01.5 +2.0
DUG                                    pmax    pmax
      comp=Z,61nm,0.9s
KONS  Konsvik              55.86 345  eP       P        03 17 58.6 -0.6
KONS                                   IAmb    IAmb     03 18 00.7
      comp=Z,88nm,1.0s
TCUT  Toone Canyon         55.87  66  eP       P        03 18 02.0 +1.9
      comp=Z,61nm,0.8s
PKM   Mcpherson Peak       55.94  77   P       P        03 18 02.4 +1.9
      baz=318,SNR=11
MOR8  Moi Rana             55.97 345  eP       P        03 17 58.4 -1.7
MOR8                                   IAmb    IAmb     03 17 59.8
      comp=Z,109nm,0.9s
CTU   Camp Tracy           56.00  66  eP       P        03 18 02.6 +1.7
      comp=Z,37nm,0.7s
ISA   Isabella, Lake       56.10  75   P       P        03 18 02.4 +0.8
      baz=318,SNR=11
ISA   Isabella, Lake       56.10  75  eP       P        03 18 02.4 +0.8
      comp=Z,20nm,1.2s
ISA   Isabella, Lake       56.10  75  eP       P        03 18 02.4 +0.8
ISA                                    pmax    pmax
      comp=Z,20nm,1.2s
DAC   Darwin (Calif)       56.13  74  eP       P        03 18 02.6 +0.7
      comp=Z,25nm,1.4s
DAC   Darwin (Calif)       56.13  74  eP       P        03 18 00.2 -1.7
DAC                                    pmax    pmax
      comp=Z,25nm,1.4s
KSH   Kashi                56.17 292   P       P        03 18 05.5 +3.4
KSH                                    sP      sP       03 18 32.8 +0.1
KSH                                   ePcP     PcP      03 19 01.4 +2.5
KSH                                   ePP      PP       03 20 12.6 +5.0
KSH                                    S       S        03 25 46.1 +1.3
KSH                                    ScS     ScS      03 27 43.8 +0.8
KSH                                    pmax    pmax
      comp=Z,57nm,1.1s
KSH                                    pmax    pmax
      comp=Z,280nm,2.9s
KSH                                    LR      LR
      comp=Z,190nm,11.8s
KSH                                    LR      LR
      comp=Z,440nm,13.5s
DAV   Davao City (W)       56.18 224   LR      LR       03 44 31.1
      comp=Z,168nm,18.1s,baz=348,slow=38
JLU   Jordanelle           56.23  66  eP       P        03 18 04.3 +1.7
      comp=Z,26nm,0.8s
ARVC  Arvin                56.30  76   P       P        03 18 03.8 +0.9
      baz=318
SBC   Santa Barbara        56.32  77   P       P        03 18 04.9 +1.9
      baz=318
MPMC  Manual Prospec       56.35  74   P       P        03 18 05.0 +1.6
      baz=318,SNR=21
KK31  Karatay Array        56.35 298  eP       P        03 18 02.1 -1.0
KK31  Karatay Array        56.35 298ceP       P        03 18 01.7 -1.4
KK31                                   pmax    pmax
      comp=Z,52nm,0.8s
KKAR  Karatay Array        56.35 298  eP       P        03 18 02.1 -1.0
KKAR  Karatay Array        56.35 298  eP       P        03 18 02.1 -1.0
TPNV  Topopah Spring       56.36  72   P       P        03 18 05.1 +1.7
      baz=318,SNR=36
TPNV  Topopah Spring       56.36  72  eP       P        03 18 05.2 +1.7
      comp=Z,28nm,1.0s
TPNV  Topopah Spring       56.36  72  eP       P        03 18 05.2 +1.7
TPNV                                   pmax    pmax
      comp=Z,28nm,1.0s
NLU   North Lily Min       56.37  67  eP       P        03 18 05.5 +1.9
      comp=Z,46nm,0.9s
FURC  Furnace Creek,       56.38  73   P       P        03 18 05.4 +2.0
      baz=318,SNR=27
KOHI  KOHIMA               56.46 267  eP       P        03 18 01.9 -2.4
PSUT  Pine Spring          56.48  70  eP       P        03 18 06.1 +1.7
      comp=Z,61nm,1.5s
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TEZP  TEZPUR               56.51 269  eP       P        03 18 03.2 -1.2
ULM   Lac du Bonnet        56.51  49   P       P        03 18 04.8 +0.8
      comp=Z,32nm,0.5s,baz=317,slow=7.3,SNR=63
ULM                                    pP      pP       03 18 28.0 +2.7
      comp=Z,16nm,0.6s,baz=326,slow=6.0,SNR=3.1
ULM                                    LR      LR       03 43 27.3
      comp=Z,447nm,18.9s,baz=328,slow=37
ULM   Lac du Bonnet        56.51  49  eP       P        03 18 05.0 +0.8
      comp=Z,62nm,0.8s
ULM   Lac du Bonnet        56.51  49   P       P        03 18 04.9 +0.8
ULM                                    *PP     pP       03 18 28.0 +2.7
ULM                                    pmax    pmax
      comp=Z,33nm,0.5s
ULM                                    MLR     MLR
      comp=Z,447nm,18.9s
MPU   Maple Canyon         56.56  67  eP       P        03 18 06.8 +1.9
      comp=Z,47nm,0.8s
MDND  Maddock              56.66  53   P       P        03 18 06.8 +1.6
      baz=318,SNR=7.8
MDND  Maddock              56.66  53  eP       P        03 18 06.7 +1.4
      comp=Z,183nm,0.6s
LRMC  Laurel Mtn Rad       56.67  75   P       P        03 18 06.9 +1.3
      baz=318
AKTO  Aktyubinsk           56.69 312   P       P        03 18 04.4 -1.0
      comp=Z,147nm,0.8s,baz=59,slow=8.5,SNR=222
AKTO                                   PcP     PcP      03 19 00.6  0.0
      comp=Z,43nm,0.7s,baz=64,slow=6.7,SNR=3.3
AKTO                                   ScP     ScP      03 22 51.6 -0.4
      comp=Z,14nm,0.9s,baz=34,slow=2.2,SNR=9.7
AKTO                                   LR      LR       03 45 04.0
      comp=Z,887nm,19.9s,baz=34,slow=39
SCZ2  Santa Cruz Isl       56.70  77   P       P        03 18 07.1 +1.4
      baz=319
OSI   Osito Audit: C       56.74  76   P       P        03 18 07.7 +1.6
      baz=318
OSI   Osito Audit: C       56.74  76  eP       P        03 18 07.4 +1.3
      comp=Z,31nm,1.2s
AB31  Akbulak array        56.75 310ceP       P        03 18 04.7 -1.1
AB31                                   pmax    pmax
      comp=Z,71nm,0.6s
ABKAR Akbulak array        56.75 310  eP       P        03 18 05.1 -0.7
ABKAR                                 ePcP     PcP      03 18 59.1 -1.6
BLG   Laguna Peak, P       56.93  77   P       P        03 18 08.6 +1.2
      baz=319
EDW2  Edwards Air Fo       56.94  75   P       P        03 18 08.9 +1.4
      baz=318,SNR=21
SHOC  Shoshone, Teco       57.12  73   P       P        03 18 10.4 +1.6
      baz=318
TCRU  Three Creeks R       57.17  68  eP       P        03 18 11.0 +1.7
      comp=Z,46nm,1.2s
DECC  Green Verdugo        57.22  76   P       P        03 18 10.9 +1.5
      baz=319
K22A  Casper               57.22  61   P       P        03 18 10.5 +1.0
      baz=318,SNR=22
K22A  Casper               57.22  61  eP       P        03 18 10.4 +1.0
      comp=Z,53nm,1.1s
IMP   Imphal               57.24 267  eP       P        03 18 07.2 -2.5
SHPR  Sheep Range          57.28  72  eP       P        03 18 11.7 +1.7
      comp=Z,25nm,1.4s
GSC   Goldstone, Bar       57.28  74   P       P        03 18 11.5 +1.6
      baz=318,SNR=18
GSC   Goldstone, Bar       57.28  74  eP       P        03 18 11.5 +1.6
      comp=Z,26nm,1.0s
GSC   Goldstone, Bar       57.28  74  eP       P        03 18 11.5 +1.6
GSC                                    pmax    pmax
      comp=Z,26nm,1.0s
TMUT  Trail Mountain       57.31  67  eP       P        03 18 12.2 +1.9
      comp=Z,34nm,0.8s
SNCC  San Nicolas Is       57.32  78   P       P        03 18 11.3 +1.2
      baz=319
RSSD  Black Hills          57.35  59  eP       P        03 18 11.7 +1.2
      comp=Z,70nm,0.8s
RSSD  Black Hills          57.35  59  eP       P        03 18 11.7 +1.2
RSSD                                   pmax    pmax
      comp=Z,70nm,0.8s
PASC  Pasadena Art C       57.37  76  eP       P        03 18 10.8 +0.3
      comp=Z,16nm,0.8s
MSU   Marysvale            57.38  68  eP       P        03 18 12.9 +2.1
MSU   Marysvale            57.38  68  eP       P        03 18 12.9 +2.1
MWC   Mount Wilson         57.40  76  eP       P        03 18 11.9 +1.0
      comp=Z,43nm,1.3s
MWC   Mount Wilson         57.40  76  eP       P        03 18 11.9 +1.0
MWC                                    pmax    pmax
      comp=Z,43nm,1.3s
GUWA  GUWAHATI             57.46 270  eP       P        03 18 10.6 -0.6
CCUT  Cedar City           57.47  70  eP       P        03 18 13.2 +1.8
      comp=Z,22nm,0.9s
RRX   Edison Barstow       57.49  75   P       P        03 18 12.8 +1.5
      baz=319
P18A  Preston Nutter       57.57  66  eP       P        03 18 14.0 +1.9
      comp=Z,28nm,0.8s
SZCU  Shurtz Canyon        57.58  70  eP       P        03 18 13.1 +1.0
      comp=Z,15nm,1.0s
RWWY  Rawlins              57.59  62  eP       P        03 18 13.4 +1.1
      comp=Z,34nm,0.8s
BFSC  Mount Baldy Ra       57.60  76   P       P        03 18 13.7 +1.4
      baz=319,SNR=6.2
TUQ   Turquoise Moun       57.66  73   P       P        03 18 14.2 +1.5
      baz=319,SNR=18
A33A  Warroad              57.70  49   P       P        03 18 13.2 +0.6
      baz=320,SNR=46
MTPU  Mount Pierson        57.73  69  eP       P        03 18 14.9 +1.6
      comp=Z,14nm,0.9s
SRU   San Rafael Swe       57.80  67  eP       P        03 18 15.4 +1.7
      comp=Z,45nm,0.8s
SRU   San Rafael Swe       57.80  67  eP       P        03 18 15.4 +1.7
SRU                                    pmax    pmax
      comp=Z,45nm,0.8s
NSS   Namsos               57.88 345  eP       P        03 18 12.8 -0.7
NSS                                    IAmb    IAmb     03 18 14.6
      comp=Z,73nm,0.9s
HEC   Hector,Ludlow        57.89  74   P       P        03 18 15.7 +1.5
      baz=319
LCMT  Little Creek M       57.93  70  eP       P        03 18 16.4 +1.9
      comp=Z,21nm,1.1s
SKNT  Sakolnakorn          57.95 252   P       P        03 18 14.9 +0.3
      comp=Z,11nm,1.1s,comp=Z,911nm
SKNT  Sakolnakorn          57.95 252   P       P        03 18 14.9 +0.3
AGMN  Agassiz Nation       57.98  50   P       P        03 18 15.0 +0.5
      baz=320,SNR=35
AGMN  Agassiz Nation       57.98  50  eP       P        03 18 15.2 +0.6
      comp=Z,50nm,0.8s
BBRC  Big Bear Solar       57.99  75   P       P        03 18 16.3 +1.2
      baz=319
SCI2  San Clemente I       58.06  77   P       P        03 18 16.5 +1.2
      baz=319
FIA1  FINESS Array S       58.08 337  eP       P        03 18 14.2 -0.7
FIA0  FINESS Array S       58.08 337  eP       P        03 18 14.0 -1.0
FIA0                                  epP      pP       03 18 37.9 +1.6
FIA0                                  eScP     ScP      03 22 57.9 -0.1
FIA0  FINESS Array S       58.08 337  eP       P        03 18 14.0 -1.0
FIA0                                  e*PP     pP       03 18 37.9 +1.6
FINES FINESS Array B       58.08 337   P       P        03 18 14.0 -1.0
      comp=Z,79nm,0.7s,baz=20,slow=13,SNR=134
FINES                                  pP      pP       03 18 37.9 +1.6
      comp=Z,26nm,0.8s,baz=26,slow=9.5,SNR=2.8
FINES                                  ScP     ScP      03 22 57.9 -0.1
      comp=Z,4.1nm,0.8s,baz=72,slow=6.2,SNR=3.8
FINES                                  LR      LR       03 46 33.6
      comp=Z,277nm,20.2s,baz=24,slow=39
PKCU  Pink Cliffs          58.10  69  eP       P        03 18 18.3 +2.3
      comp=Z,24nm,0.9s
KNB   Kanab                58.15  70  eP       P        03 18 17.9 +1.8
      comp=Z,22nm,0.9s
KNB   Kanab                58.15  70  eP       P        03 18 17.9 +1.8
KNB                                    pmax    pmax
      comp=Z,22nm,0.9s
ANGG  Ammassalik, Gr       58.19   9  eP       P        03 18 14.7 -1.0
      comp=Z,46nm,0.8s
O20A  White River Ci       58.22  64   P       P        03 18 18.1 +1.5
      baz=318,SNR=82
O20A  White River Ci       58.22  64  eP       P        03 18 18.1 +1.5
      comp=Z,70nm,0.6s
CMAI  Chiengmai2           58.25 259   P       P        03 18 17.6 +0.6
      comp=Z,1.7nm,1.4s,comp=Z,144nm
CMAI  Chiengmai2           58.25 259   P       P        03 19 08.2  +51
PAYA  Payao                58.25 258   P       P        03 18 17.4 +0.6
      comp=Z,8.2nm,0.8s,comp=Z,102nm
PAYA  Payao                58.25 258   P       P        03 19 08.4  +52
      comp=Z,11nm,0.7s
GMRC  Granite Mounta       58.29  74   P       P        03 18 18.5 +1.4
      baz=319,SNR=18
MURC  Murrieta             58.34  76   P       P        03 18 18.5 +1.2
      baz=319
GTK   Tadong               58.34 273  eP       P        03 18 16.9 -0.6
GTK                                    IAmb    IAmb     03 18 21.8
      comp=Z,112nm,0.2s
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B34A  Aery, Baudette    58.37  49   P      P      03 18 17.6 +0.4
      baz=320,SNR=42
LDFC  Landfair          58.37  73   eP     P      03 18 18.8 +1.2
      comp=Z,39nm,1.0s
C33A  Trail             58.43  51   P      P      03 18 18.1 +0.4
      baz=320,SNR=17
PUL   Pulkovo           58.54 333⇓eP     P      03 18 18.0 -0.2
PUL                                 pmax   pmax
      comp=Z,105nm,0.7s
MANU  Manus Island      58.65 197   eP     P      03 18 20.1 +0.6
      comp=Z,27nm,0.9s
BELC  Belle Mtn. Jos    58.69  75   P      P      03 18 20.7 +0.9
      baz=319,SNR=10
PFO   Pinyon Flats O    58.73  75   P      P      03 18 21.2 +1.1
      baz=319,SNR=7.2
PFO   Pinyon Flats O    58.73  75   eP     P      03 18 21.2 +1.1
      comp=Z,20nm,1.4s
PFO   Pinyon Flats O    58.73  75   eP     P      03 18 21.2 +1.1
PFO                                 pmax   pmax
      comp=Z,19nm,1.3s
XPFO  Piæon Flat        58.74  75   eP     P      03 18 21.1 +1.0
      comp=Z,20nm,1.4s
FRD   Ford Ranch, An    58.74  75   P      P      03 18 21.3 +1.1
      baz=319,SNR=6.3
PHWY  Pilot Hill        58.76  62   eP     P      03 18 21.3 +0.9
      comp=Z,12nm,0.8s
N23A  Red Feather La    58.82  62   P      P      03 18 22.3 +1.5
      baz=319,SNR=21
N23A  Red Feather La    58.82  62   eP     P      03 18 22.4 +1.5
      comp=Z,42nm,0.8s
TAPN  Taplejung         58.83 274   eP     P      03 18 20.8 -0.3
      comp=Z,13nm,0.3s
B35A  Bob, Littlefor    58.86  49   P      P      03 18 20.9 +0.3
      baz=320,SNR=56
B35A  Bob, Littlefor    58.86  49   eP     P      03 18 20.9 +0.3
      comp=Z,57nm,0.7s
NEE2  Needles Airpor    58.87  73   P      P      03 18 22.4 +1.5
      baz=319
U15A  North Rim         58.87  70   eP     P      03 18 23.1 +1.8
      comp=Z,24nm,1.1s
C34A  RKJ Ranch, Bem    58.89  50   P      P      03 18 21.2 +0.3
      baz=320,SNR=5.7
109C  Camp Elliot, M    58.92  76   P      P      03 18 22.9 +1.6
      baz=319
CPE   Camp Elliot       58.92  76   eP     P      03 18 22.7 +1.4
      comp=Z,17nm,1.0s
PV09  Paradox Valley    58.98  66   eP     P      03 18 23.6 +1.6
W13A  Hualapai Mount    59.02  72   eP     P      03 18 22.9 +0.7
      comp=Z,12nm,1.0s
PV21  Cone Mtn., Par    59.02  66   eP     P      03 18 23.6 +1.4
      comp=Z,26nm,0.8s
IRM   Iron Mountain     59.04  74   P      P      03 18 23.7 +1.6
      baz=319,SNR=15
PV23  Carpenter Ridg    59.08  66   eP     P      03 18 24.2 +1.6
      comp=Z,54nm,1.1s
KHON  Khomkaen          59.09 253   P      P      03 18 25.1 +2.5
PV10  Paradox Valley    59.12  66   eP     P      03 18 25.1 +2.2
PV14  Lion Creek, Pa    59.14  66   eP     P      03 18 24.4 +1.4
      comp=Z,45nm,1.1s
PV22  Blue Mesa, Par    59.14  66   eP     P      03 18 24.5 +1.5
      comp=Z,34nm,0.8s
PV20  West Nyswonger    59.19  66   eP     P      03 18 24.8 +1.5
      comp=Z,72nm,1.2s
PV19  Morning Glory     59.20  66   eP     P      03 18 24.9 +1.4
      comp=Z,42nm,0.9s
CMMT  Chiang Mai        59.20 258   P      P      03 18 23.6 +0.2
      comp=Z,13nm,0.9s,comp=Z,590nm
CMMT  Chiang Mai        59.20 258   P      PcP    03 19 12.7 +1.7
      comp=Z,19nm,0.9s
CHTO  Chiang Mai        59.21 258   eP     P      03 18 23.1 -0.3
      comp=Z,9.6nm,0.8s
CHTO  Chiang Mai        59.21 258   eP     P      03 18 23.1 -0.3
CHTO                                pmax   pmax
      comp=Z,10.0nm,0.8s
CHTO  Chiang Mai        59.21 258   P      P      03 18 23.7 +0.3
      comp=Z,59nm,0.9s
CHTO  Chiang Mai        59.21 258   P      PcP    03 19 12.7 +1.8
PV16  Nyswonger Mesa    59.24  66   eP     P      03 18 25.2 +1.5
      comp=Z,44nm,0.9s
PV17  East Wray Mesa    59.24  66   eP     P      03 18 25.0 +1.3
      comp=Z,88nm,1.1s
BC3   Big Chuckawall    59.25  74   P      P      03 18 24.8 +1.1
      baz=319,SNR=7.7
C35A  Jirik Farms, M    59.26  50   P      P      03 18 23.5 +0.1
      baz=321,SNR=35
PV11  David Mesa, Pa    59.27  66   eP     P      03 18 25.5 +1.6
      comp=Z,48nm,0.9s
F32A  Veblen            59.27  53   P      P      03 18 23.9 +0.4
      baz=320,SNR=9.1
PV18  Skein Mesa, Pa    59.29  66   eP     P      03 18 25.5 +1.5
      comp=Z,54nm,0.9s
PV12  Saucer Basin,     59.29  66   eP     P      03 18 25.7 +1.6
      comp=Z,47nm,1.1s
MONP2 Monument Peak     59.30  76   P      P      03 18 25.2 +1.1
      baz=320
PV03  Paradox Valley    59.32  66   eP     P      03 18 25.6 +1.3
PV05  Paradox Valley    59.32  67   eP     P      03 18 25.8 +1.6
BAR   Barrett           59.32  76   eP     P      03 18 25.2 +1.2
      comp=Z,15nm,1.1s
BAR                                 epP    pP     03 18 45.4  0.0
ODAN  Odare             59.38 274   eP     P      03 18 23.1 -1.7
      comp=Z,142nm,0.8s
PV13  Radium Mtn., P    59.40  66   eP     P      03 18 26.4 +1.6
      comp=Z,59nm,1.0s
PV02  Paradox Valley    59.41  66   eP     P      03 18 26.4 +1.6
      comp=Z,51nm,1.2s
GUN   Gumba             59.43 275   eP     P      03 18 24.7 -0.6
      comp=Z,422nm,1.0s
JIRN  Jiri              59.45 275   eP     P      03 18 25.1 -0.3
      comp=Z,138nm,0.9s
PDMCI Parker Dam,Lak    59.48  73   P      P      03 18 26.1 +1.1
      baz=319,SNR=7.0
CMAR  Chiang Mai Arr    59.49 258   P      P      03 18 25.4  0.0
      comp=Z,8.8nm,0.8s,baz=20,slow=6.6,SNR=19
CMAR                                PcP    PcP    03 19 13.1 +1.0
      comp=Z,18nm,0.7s,baz=16,slow=3.6,SNR=4.2
CMAR                                ScP    ScP    03 23 07.5 +2.7
      comp=Z,1.8nm,0.3s,baz=16,slow=4.4,SNR=7.7
CMAR                                LR     LR     03 47 41.0
      comp=Z,981nm,18.3s,baz=51,slow=40
CM01  Chiang Mai Arr    59.52 258   eP     P      03 18 25.3 -0.2
SUSD  Miller            59.52  55   P      P      03 18 25.7 +0.4
      baz=320
PV01  Paradox Valley    59.55  66   eP     P      03 18 26.9 +1.1
G32A  Webster           59.57  54   P      P      03 18 26.1 +0.5
      baz=320
SMCO  Snowmass          59.59  64   eP     P      03 18 27.0 +0.7
      comp=Z,25nm,0.8s
SWSC  Sam W. Stewart    59.60  75   P      P      03 18 27.2 +1.2
      baz=320
SAIH  SAIHA             59.62 266   eP     P      03 18 25.2 -1.2
IKP   In-Ko-Pah, Jac    59.65  76   P      P      03 18 27.7 +1.2
      baz=320
E34A  Wadena            59.65  51   P      P      03 18 26.5 +0.4
      baz=321,SNR=15
Y12C  Blythe            59.69  74   P      P      03 18 28.1 +1.5
      baz=320,SNR=12
Y12C  Blythe            59.69  74   eP     P      03 18 27.8 +1.3
      comp=Z,22nm,1.0s
C36A  Pine Crest Far    59.70  49   P      P      03 18 26.8 +0.3
      baz=321,SNR=25
D35A  Remer             59.70  50   P      P      03 18 26.7 +0.2
      baz=321,SNR=24
PHIT  Phitsanulok       59.71 256   P      PcP    03 19 14.8 +1.9
RAMN  Ramite            59.76 274   eP     P      03 18 25.5 -1.9
ISCO  Idaho Springs     59.81  63   P      P      03 18 29.6 +1.9
      baz=319,SNR=59
ISCO  Idaho Springs     59.81  63   eP     P      03 18 29.6 +1.9
ISCO                                pmax   pmax
      comp=Z,29nm,0.9s
KKN   Kakani            59.86 276   eP     P      03 18 27.5 -0.6
      comp=Z,153nm,0.8s
SUKH  Sukhothai         59.90 256   P      PcP    03 19 15.4 +1.7
PBKT  Sadao Pong        59.91 255   P      P      03 18 28.8 +0.6
      comp=Z,12nm,0.9s,comp=Z,995nm
MOS   Moscow            59.93 327   eP     P      03 18 26.5 -1.4
MOS                                 e             03 20 36.9
MOS                                 pmax   pmax
      comp=Z,71nm,0.7s
MOS                                 MLR    MLR
      comp=Z,1µm,19.0s
E35A  Pequot Lakes      59.95  51   P      P      03 18 28.5 +0.3
      baz=321,SNR=20
PKIN  Phulchoki         59.96 276   eP     P      03 18 27.3 -1.5
      comp=Z,169nm,0.8s
C37A  Embarrass         60.00  48   P      P      03 18 28.8 +0.3
      baz=321,SNR=27

D36A  Goodland          60.01  49   P      P      03 18 28.6  0.0
      baz=321,SNR=32
D36A  Goodland          60.01  49   eP     P      03 18 28.8 +0.2
      comp=Z,62nm,0.7s
WUAZ  Wupatki           60.05  70   P      P      03 18 31.1 +1.9
      baz=320,SNR=19
WUAZ  Wupatki           60.05  70   eP     P      03 18 31.1 +1.9
      comp=Z,49nm,1.4s
GLA   Glamis            60.05  74   P      P      03 18 30.7 +1.6
      baz=320,SNR=8.6
GLA   Glamis            60.05  74   eP     P      03 18 30.8 +1.6
      comp=Z,37nm,1.3s
GLA   Glamis            60.05  74   eP     P      03 18 30.8 +1.7
GLA                                 pmax   pmax
      comp=Z,37nm,1.2s
GKN   Gorkha            60.06 277   eP     P      03 18 29.2 -0.2
      comp=Z,253nm,0.9s
DMN   Daman             60.10 276   eP     P      03 18 28.4 -1.3
      comp=Z,172nm,0.9s
G33A  Ortonville        60.10  53   P      P      03 18 29.7 +0.5
      baz=321,SNR=32
EYMN  Ely               60.12  48   P      P      03 18 29.7 +0.4
      baz=322,SNR=121
EYMN  Ely               60.12  48   eP     P      03 18 29.6 +0.3
      comp=Z,103nm,0.6s
RABL  Rabaul            60.13 191   eP     P      03 18 31.4 +1.7
      comp=Z,83nm,0.8s
F34A  Alexandria        60.17  52   P      P      03 18 30.3 +0.6
      baz=321,SNR=12
H32A  Carlson Farm,     60.18  54   P      P      03 18 30.1 +0.3
      baz=320,SNR=18
BRDH  Bariadhala        60.23 267   LR     LR     03 49 07.8
      comp=Z,524nm,18.4s,baz=34,slow=40
MVCO  Mesa Verde        60.28  67   P      P      03 18 32.2 +1.3
      baz=320,SNR=16
MVCO  Mesa Verde        60.28  67   eP     P      03 18 32.2 +1.3
      comp=Z,22nm,1.0s
DANN  Dangsing          60.28 277   eP     P      03 18 30.5 -0.6
      comp=Z,226nm,0.8s
BAKI  Biak              60.32 210   P      P      03 18 32.2 +1.2
      comp=Z,77nm,1.0s,comp=Z,1µm
D37A  Cotton            60.34  49   P      P      03 18 30.9 +0.1
      baz=322,SNR=25
MOL   Molde             60.37 346   eP     P      03 18 29.6 -1.1
MOL                                 IAmb   IAmb   03 18 35.5
      comp=Z,38nm,0.7s
Y14A  Wickenburg        60.37  72   eP     P      03 18 32.9 +1.6
      comp=Z,18nm,1.1s
C38A  Sawbill Land.     60.40  48   P      P      03 18 31.4 +0.1
      baz=322,SNR=66
JAY   Jayapura          60.42 204   P      P      03 18 31.8 +0.1
      comp=Z,214nm,0.9s
F35A  Swanville         60.42  51   P      P      03 18 32.0 +0.6
      baz=321,SNR=30
G34A  Benson            60.42  52   P      P      03 18 32.1 +0.7
      baz=321,SNR=17
E36A  McGregor          60.49  50   P      P      03 18 32.3 +0.5
      baz=321,SNR=50
VSU   Vasula            60.58 335c iP     P      03 18 31.9 -0.3
VSU                                 pmax   pmax
      comp=Z,213nm,0.9s
GENI  Genyem            60.62 205   P      P      03 18 33.6 +0.6
      comp=Z,49nm,0.8s
DOMB  Dombas            60.66 345   eP     P      03 18 31.6 -1.3
DOMB                                IAmb   IAmb   03 18 33.9
      comp=Z,68nm,0.9s
Q24A  Divide            60.68  63   P      P      03 18 35.1 +1.4
      baz=320
Q24A  Divide            60.68  63   eP     P      03 18 34.9 +1.3
      comp=Z,16nm,0.9s
OGNE  Ogallala          60.72  60   P      P      03 18 34.9 +1.3
      baz=320
OGNE  Ogallala          60.72  60   eP     P      03 18 34.4 +0.8
      comp=Z,144nm,1.3s
S22A  4UR Ranch, Cre    60.74  65   P      P      03 18 36.0 +1.9
      baz=320,SNR=56
S22A  4UR Ranch, Cre    60.74  65   eP     P      03 18 36.0 +1.9
      comp=Z,48nm,1.2s
OBN   Obninsk           60.79 327   eP     P      03 18 32.5 -1.2
      comp=Z,51nm,0.8s
OBN   Obninsk           60.79 327c iP     P      03 18 32.5 -1.2
OBN                                 e*PP   pP     03 18 55.6 +0.5
OBN                                 e*SP   sP     03 19 06.4 +1.9
OBN                                 e             03 19 11.6
OBN                                 e             03 20 47.6
OBN                                 eS     S      03 26 42.3 -1.6
OBN                                 e*SS   sS     03 27 19.8 -0.6
OBN                                 eSS    SS     03 30 43.7 +0.7
OBN                                 pmax   pmax
      comp=Z,53nm,0.9s
OBN                                 MLR    MLR
      comp=Z,788nm,19.0s
AKN   Aaknes            60.82 347   eP     P      03 18 34.3 +0.5
AKN                                 IAmb   IAmb   03 18 36.3
      comp=Z,105nm,0.9s
E37A  Wrenshall         60.82  49   P      P      03 18 34.2 +0.2
      baz=322
KOLN  Koldanda          60.82 277   eP     P      03 18 33.4 -1.2
      comp=Z,158nm,0.9s
113A  Mohawk Valley,    60.84  74   eP     P      03 18 35.2 +0.8
      comp=Z,11nm,0.9s
X16A  Lo Mia Camp, P    60.84  71   eP     P      03 18 35.7 +1.0
      comp=Z,13nm,0.8s
MYLDM Lahad Datu        60.85 231   eP     P      03 18 36.8 +2.2
      comp=Z,48nm,1.0s
F36A  Milaca            60.88  51   P      P      03 18 34.6 +0.1
      baz=322,SNR=36
F36A  Milaca            60.88  51   eP     P      03 18 34.5 +0.1
      comp=Z,33nm,0.8s
PYUN  Piuthan           60.91 278   eP     P      03 18 34.1 -1.1
      comp=Z,478nm,1.0s
SRPI  Serui, Papua      60.93 209   P      P      03 18 36.6 +1.5
      comp=Z,178nm,0.4s
G35A  Watkins           60.96  52   P      P      03 18 35.8 +0.7
      baz=321,SNR=14
G35A  Watkins           60.96  52   eP     P      03 18 35.2 +0.2
      comp=Z,96nm,0.7s
C40A  Isle Royale Na    61.12  46   P      P      03 18 35.7 -0.4
      baz=323,SNR=19
C40A  Isle Royale Na    61.12  46   eP     P      03 18 35.8 -0.4
      comp=Z,30nm,0.8s
NC204 NORSAR Array S    61.15 344   eP     P      03 18 35.7 -0.4
ECSD  EROS Data Cent    61.15  54   P      P      03 18 36.7 +0.3
      baz=321,SNR=55
ECSD  EROS Data Cent    61.15  54   eP     P      03 18 36.8 +0.5
      comp=Z,40nm,0.7s
E38A  The Farm, Brul    61.15  49   P      P      03 18 36.3 -0.1
      baz=322,SNR=72
E38A  The Farm, Brul    61.15  49   eP     P      03 18 36.4 +0.1
      comp=Z,104nm,0.6s
NC405 NORSAR Array S    61.15 344   eP     P      03 18 35.6 -0.5
IVI   Ivigtut           61.16  16   eP     P      03 18 35.6 -0.5
      comp=Z,79nm,0.7s
NC203 NORSAR Array S    61.16 344   eP     P      03 18 35.7 -0.5
H35A  Sunnyside Ranc    61.21  52   P      P      03 18 37.7 +0.9
      baz=321,SNR=64
NC403 NORSAR Array S    61.22 344   eP     P      03 18 36.2 -0.3
W18A  Petrified Fore    61.22  69   P      P      03 18 39.0 +1.8
      baz=320
G36A  St. Michael       61.27  51   P      P      03 18 37.6 +0.5
      baz=322,SNR=11
NB201 NORSAR Array S    61.28 344   eP     P      03 18 36.6 -0.4
NB204 NORSAR Array S    61.30 344   eP     P      03 18 37.0 -0.2
NB2   NORSAR Subarra    61.30 344   P      P      03 18 36.6 -0.6
      comp=Z,150nm,0.9s,baz=19,slow=6.9
NB2   NORSAR Subarra    61.30 344   P      P      03 18 36.6 -0.6
      baz=19,slow=6.9
UMPA  Umpang Tak        61.37 256   P      P      03 18 42.4 +4.2
      comp=Z,13nm,0.8s
NBO00 NORSAR Array S    61.38 344   eP     P      03 18 37.3 -0.3
F37A  Hinrichs Farm,    61.38  50   P      P      03 18 38.2 +0.3
      baz=322,SNR=20
NBO03 NORSAR Array S    61.38 344   eP     P      03 18 36.8 -0.9
SDCO  Great Sand Dun    61.42  64   P      P      03 18 40.2 +1.5
      baz=320,SNR=43
SDCO  Great Sand Dun    61.42  64   eP     P      03 18 40.1 +1.5
      comp=Z,19nm,1.0s
SRAK  Srakaew           61.43 252   P      P      03 18 38.2 -0.4
      comp=Z,65nm,0.8s,comp=Z,1µm
DHRM  DHARAMSHALA       61.44 286   eP     P      03 18 38.6 -0.2
DHRM                                IAmb   IAmb   03 18 39.1
      comp=Z,104nm,1.3s
SWI   Sorong            61.48 215   P      P      03 18 39.9 +1.1
      comp=Z,44nm,0.9s,comp=Z,2µm
F38A  Pierce - Schro    61.52  49   P      P      03 18 39.5 +0.7
      baz=322,SNR=85
NAO01 NORSAR Array S    61.54 344   eP     P      03 18 37.8 -0.9

NC602 NORSAR Array S    61.54 344   eP     P      03 18 37.8 -0.9
NC602 NORSAR Array S    61.54 344   eP     P      03 18 38.0 -0.7
NC602                               IAmb   IAmb   03 18 39.6
      comp=Z,656nm,0.8s
X18A  Snowflake         61.56  70   eP     P      03 18 41.5 +2.0
      comp=Z,28nm,0.8s
NAO03 NORSAR Array S    61.60 344   eP     P      03 18 38.5 -0.6
NRS   Narsarsuaq        61.62  14   eP     P      03 18 38.3 -0.9
      comp=Z,46nm,0.8s
NRS   Narsarsuaq        61.62  14   i P    P      03 18 38.3 -0.9
NRS   Narsarsuaq        61.62  14   i P    P      03 18 38.3 -0.9
SPMN  Marine on St.     61.69  51   P      P      03 18 40.4 +0.4
      baz=322,SNR=40
SPMN  Marine on St.     61.69  51   eP     P      03 18 40.4 +0.4
      comp=Z,64nm,0.8s
H36A  Jessenland, He    61.70  52   P      P      03 18 41.2 +1.1
      baz=322,SNR=65
HFS   Hagfors           61.75 342   P      P      03 18 39.5 -0.6
      comp=Z,68nm,0.7s,baz=46,slow=6.4,SNR=95
HFS                                 PcP    PcP    03 19 21.3 +0.7
      comp=Z,9.6nm,0.6s,baz=18,slow=5.3,SNR=1.9
HFS                                 ScP    ScP    03 23 15.4 +1.1
      comp=Z,3.4nm,0.7s,baz=116,slow=6.8,SNR=4.0
HFS                                 LR     LR     03 46 33.8
      comp=Z,386nm,21.5s,baz=12,slow=37
E39A  Mellen            61.75  48   P      P      03 18 40.4  0.0
      baz=323,SNR=80
SMLA  Simla             61.82 285   eP     P      03 18 39.4 -1.6
SMLA                                IAmb   IAmb   03 18 41.5
      comp=Z,32nm,0.5s
HYA   Hoyanger          61.90 347   eP     P      03 18 40.6 -0.5
HYA                                 IAmb   IAmb   03 18 43.1
      comp=Z,124nm,1.3s
KSCO  Kaye Shedlock’    61.91  61   P      P      03 18 42.9 +1.2
      baz=321,SNR=5.8
KSCO  Kaye Shedlock’    61.91  61   eP     P      03 18 43.4 +1.7
      comp=Z,36nm,0.9s
DDI   Dehra Dun         61.95 283   eP     P      03 18 40.6 -1.4
F39A  Loretta           61.97  49   P      P      03 18 42.2 +0.4
      baz=323,SNR=65
E40A  Wakefield         61.98  48   P      P      03 18 42.4 +0.5
      baz=323,SNR=166
214A  Organ Pipe Nat    61.98  74   P      P      03 18 43.7 +1.5
      baz=320,SNR=13
NIL   Nilore            62.02 289   eP     P      03 18 41.8 -0.6
      comp=Z,70nm,0.9s
NIL   Nilore            62.02 289   eP     P      03 18 41.8 -0.6
NIL                                 pmax   pmax
      comp=Z,70nm,0.9s
D41A  Chassel           62.04  47   P      P      03 18 42.3  0.0
      baz=323,SNR=41
D41A  Chassel           62.04  47   eP     P      03 18 42.3  0.0
      comp=Z,73nm,0.8s
I36A  Fitzsimmons Fa    62.10  52   P      P      03 18 43.2 +0.5
      baz=322,SNR=24
H37A  Dierke Farm, C    62.15  51   P      P      03 18 43.8 +0.7
      baz=322,SNR=14
G38A  Ridgeland         62.15  50   P      P      03 18 43.0 -0.1
      baz=322,SNR=53
SUE   Sulen             62.19 347   eP     P      03 18 42.7 -0.3
SUE                                 IAmb   IAmb   03 18 44.5
      comp=Z,46nm,0.9s
BGNE  Belgrade          62.23  57   P      P      03 18 44.4 +0.7
      baz=321,SNR=7.7
BGNE  Belgrade          62.23  57   eP     P      03 18 44.6 +0.9
      comp=Z,113nm,0.9s
BGNE                                epP    pP     03 19 05.4 +0.2
BGNE                                ePcP   PcP    03 19 20.6 -2.3
F40A  Park Falls        62.30  48   P      P      03 18 44.2 +0.1
      baz=323,SNR=54
E41A  Kenton            62.35  47   P      P      03 18 44.4  0.0
      baz=323,SNR=55
G39A  Holcombe          62.35  50   P      P      03 18 44.2 -0.2
      baz=323,SNR=31
H38A  Maiden Rock       62.35  51   P      P      03 18 44.8 +0.4
      baz=322,SNR=5.3
I37A  Lemond, Waseca    62.38  52   P      P      03 18 45.6 +0.9
      baz=322,SNR=71
I37A  Lemond, Waseca    62.38  52   eP     P      03 18 45.5 +0.9
      comp=Z,147nm,0.8s
VRH   Novokhopyorsk     62.38 322   eP     P      03 18 42.9 -1.6
VRH                                 pmax   pmax
      comp=Z,180nm,0.6s
OSL   Oslo              62.43 344   eP     P      03 18 44.1 -0.5
OSL                                 IAmb   IAmb   03 18 46.1
      comp=Z,67nm,0.9s
T25A  Trinidad          62.45  64   P      P      03 18 46.6 +1.2
      baz=321,SNR=22
T25A  Trinidad          62.45  64   eP     P      03 18 46.7 +1.2
      comp=Z,23nm,1.0s
LBMI  Labuha            62.55 219   P      P      03 18 46.4 +0.4
      comp=Z,77nm,0.8s
COWI  Conover           62.57  48   eP     P      03 18 45.8 -0.1
      comp=Z,56nm,0.7s
BOK   Bokaro            62.62 273   eP     P      03 18 45.4 -1.0
BOK                                 IAmb   IAmb   03 18 51.0
      comp=Z,35nm,0.3s
ASK   Askoy             62.69 347   eP     P      03 18 45.5 -0.9
ASK                                 IAmb   IAmb   03 18 48.0
      comp=Z,63nm,0.9s
KMSI  Cibinong          62.74 223   P      P      03 18 48.6 +1.3
      comp=Z,97nm,0.5s
BER   Bergen            62.77 347   eP     P      03 18 45.5 -1.4
BER                                 IAmb   IAmb   03 18 48.1
      comp=Z,86nm,0.8s
G40A  Rib Lake          62.78  49   P      P      03 18 47.4  0.0
      baz=323,SNR=39
G40A  Rib Lake          62.78  49   eP     P      03 18 47.3  0.0
      comp=Z,43nm,0.8s
H39A  Augusta           62.79  50   P      P      03 18 47.1 -0.2
      baz=323,SNR=9.0
TUC   Tucson            62.81  72   P      P      03 18 49.1 +1.3
      baz=321
TUC   Tucson            62.81  72   eP     P      03 18 49.3 +1.5
      comp=Z,16nm,1.2s
TUC   Tucson            62.81  72   eP     P      03 18 49.3 +1.5
TUC                                 pmax   pmax
      comp=Z,16nm,1.2s
E42A  Champion          62.82  47   P      P      03 18 47.4 -0.1
      baz=324,SNR=38
J37A  Redenius Farm,    62.87  52   P      P      03 18 48.3 +0.4
      baz=322,SNR=40
F41A  Three Lakes       62.88  48   P      P      03 18 48.2 +0.2
      baz=323,SNR=86
F41A  Three Lakes       62.88  48   eP     P      03 18 48.1 +0.2
      comp=Z,98nm,0.6s
KONO  Kongsberg         62.88 344   eP     P      03 18 47.8 +0.2
      comp=Z,69nm,0.8s
KONO  Kongsberg         62.88 344c iP     P      03 18 47.1 -0.5
KONO                                pmax   pmax
      comp=Z,67nm,0.9s
K36A  Gilmore City      62.99  53   P      P      03 18 49.1 +0.4
      baz=322,SNR=16
SCHQ  Schefferville     63.02  29   P      P      03 18 48.3 -0.4
      comp=Z,59nm,0.7s,baz=347,slow=7.2,SNR=19
SCHQ                                LR     LR     03 47 48.8
      comp=Z,452nm,21.6s,baz=321,slow=37
SCHQ  Schefferville     63.02  29   eP     P      03 18 48.3 -0.4
      comp=Z,69nm,0.8s
TASM  ASL Pad, Albuq    63.08  67   P      P      03 18 51.1 +1.4
      baz=321,SNR=27
ANMO  Albuquerque       63.08  67   P      P      03 18 51.0 +1.4
      comp=Z,9.3nm,0.7s,baz=319,slow=7.4,SNR=58
ANMO                                LR     LR     03 46 18.9
      comp=Z,190nm,19.1s,baz=326,slow=36
ANMO  Albuquerque       63.08  67   P      P      03 18 51.0 +1.4
      baz=321
ANMO  Albuquerque       63.08  67   eP     P      03 18 51.1 +1.4
      comp=Z,16nm,0.8s
TASL  Snake Pit, Alb    63.08  67   P      P      03 18 51.1 +1.4
      baz=321,SNR=28
FAKI  Fak Fak           63.10 213   eP     P      03 18 50.1 +0.5
      comp=Z,60nm,1.0s
IZAR  Zarasai           63.12 333   eP     P      03 18 48.9 -0.4
IZAR                                IAmb   IAmb   03 18 51.5
      comp=Z,20nm,0.8s
LAZ   Ladron            63.14  68   eP     P      03 18 51.9 +1.9
STRU  Stroemstad        63.21 343   eP     P      03 18 49.5 -0.3
H40A  Chili             63.22  49   P      P      03 18 50.3 +0.1
      baz=323,SNR=38
E43A  Lone Tree Farm    63.24  46   P      P      03 18 49.9 -0.4
      baz=324,SNR=40
E43A  Lone Tree Farm    63.24  46   eP     P      03 18 49.7 -0.6
      comp=Z,41nm,0.8s
VSR   Storozhevoye      63.25 323   eP     P      03 18 49.1 -1.1
VSR                                 pmax   pmax
      comp=Z,110nm,0.8s
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K37A	Belmond	63.26	53	P	P	03 18 50.4	0.0
	baz=322,SNR=22						
G41A	Antigo	63.26	48	P	P	03 18 50.6	+0.1
	baz=324,SNR=18						
F42A	Maple Grove Fa	63.27	47	P	P	03 18 50.5	0.0
	baz=324						
ISAL	Salakas	63.31	333	eP	P	03 18 50.4	-0.2
ISAL				IAmb	IAmb	03 18 52.8	
	comp=Z,17nm,0.9s						
L36A	Harm Buss Farm	63.31	54	P	P	03 18 50.9	0.0
	baz=322,SNR=11						
I39A	Houston	63.34	51	P	P	03 18 50.8	-0.2
	baz=323,SNR=33						
I39A	Houston	63.34	51	eP	P	03 18 50.7	-0.2
	comp=Z,64nm,0.8s						
J38A	Wedel Dairy, R	63.34	52	P	P	03 18 51.0	0.0
	baz=323,SNR=27						
IDID	Didziasalis	63.38	333	eP	P	03 18 50.8	-0.3
IDID				IAmb	IAmb	03 18 53.3	
	comp=Z,27nm,0.9s						
LENM	Lemitar	63.41	68	eP	P	03 18 53.4	+1.6
VORD	Divnogorie	63.42	323	eP	P	03 18 50.2	-1.1
VORD				pmax	pmax		
	comp=Z,70nm,0.8s						
E44A	Grand Marais A	63.48	45	P	P	03 18 51.8	0.0
	baz=324,SNR=49						
E44A	Grand Marais A	63.48	45	eP	P	03 18 52.0	+0.1
	comp=Z,196nm,0.6s						
LPM	Los Pinos Moun	63.48	68	eP	P	03 18 53.9	+1.6
CBKS	Cedar Bluff	63.48	60	P	P	03 18 52.2	+0.1
	baz=322,SNR=6.4						
CBKS	Cedar Bluff	63.48	60	eP	P	03 18 52.1	+0.1
	comp=Z,42nm,0.8s						
CBKS	Cedar Bluff	63.48	60	eP	P	03 18 52.1	0.0
CBKS				pmax	pmax		
	comp=Z,42nm,0.8s						
IIGN	Ignalina	63.48	333	eP	P	03 18 51.4	-0.3
IIGN				IAmb	IAmb	03 18 53.9	
	comp=Z,59nm,1.1s						
Y22E	IRIS PASSCAL I	63.51	68	P	P	03 18 54.4	+2.0
	baz=321						
Y22D	IRIS PASSCAL I	63.51	68	P	P	03 18 54.4	+2.0
	baz=321						
Y22D	IRIS PASSCAL I	63.51	68	eP	P	03 18 53.8	+1.4
	comp=Z,53nm,0.8s						
H41A	Junction City	63.54	49	P	P	03 18 52.2	0.0
	baz=324,SNR=53						
H41A	Junction City	63.54	49	eP	P	03 18 52.3	0.0
	comp=Z,75nm,0.6s						
BLS5	Blasjo	63.55	346	eP	P	03 18 51.9	-0.3
BLS5				IAmb	IAmb	03 18 53.6	
	comp=Z,48nm,1.0s						
KBL	Kabul	63.55	293	eP	P	03 18 51.0	-1.8
	comp=Z,42nm,0.8s						
KBL	Kabul	63.55	293	eP	P	03 18 51.0	-1.8
KBL				pmax	pmax		
	comp=Z,42nm,0.8s						
G42A	Mountain	63.56	48	P	P	03 18 52.5	+0.1
	baz=324,SNR=56						
G42A	Mountain	63.56	48	eP	P	03 18 52.5	+0.1
	comp=Z,85nm,0.7s						
BNM	Barren Site	63.60	68	eP	P	03 18 54.8	+1.6
BNM				epP	pP	03 19 17.8	+3.1
F43A	Flat Rock, Esc	63.61	47	P	P	03 18 52.5	-0.2
	baz=324,SNR=40						
MRSI	Marisa	63.63	225	P	P	03 18 52.8	-0.4
	comp=Z,49nm,0.9s,comp=Z,629nm						
PHET	Kaeng Krachan	63.65	254	P	P	03 18 56.1	+2.8
	comp=Z,11nm,0.9s,comp=Z,131nm						
J39A	Decorah	63.67	51	P	P	03 18 52.6	-0.6
	baz=323,SNR=36						
I40A	Norwalk	63.70	50	P	P	03 18 53.4	0.0
	baz=323,SNR=26						
L37A	Phoenix Point,	63.71	53	P	P	03 18 53.6	+0.2
	baz=323,SNR=18						
LRW	Lerwick	63.73	350	eP	P	03 18 53.1	-0.2
LRW				IAmb	IAmb	03 18 54.5	
	comp=Z,41nm,0.8s						
NACGM	Naroch	63.74	333	eP	P	03 18 52.0	-1.4
K38A	Parkersburg	63.74	52	P	P	03 18 53.5	-0.2
	baz=323,SNR=6.4						
K38A	Parkersburg	63.74	52	eP	P	03 18 53.7	0.0
	comp=Z,52nm,0.8s						
M36A	Felix, Anita	63.76	54	P	P	03 18 54.0	+0.1
	baz=322,SNR=11						
F44A	Big Bay de Noc	63.80	46	P	P	03 18 53.7	-0.3
	baz=324,SNR=42						
MICGM	Minsk	63.81	332	eP	P	03 18 53.0	-0.9
MICGM				eLR	LR	03 46 30.0	
MNK	Minsk	63.81	332	eP	P	03 18 53.0	-0.9
G43A	Wallace	63.86	47	P	P	03 18 54.4	+0.1
	baz=324,SNR=35						
G43A	Wallace	63.86	47	eP	P	03 18 54.4	+0.1
	comp=Z,88nm,0.7s						
I41A	Arkdale	63.89	50	P	P	03 18 54.4	-0.2
	baz=324,SNR=11						
I41A	Arkdale	63.89	50	eP	P	03 18 54.8	+0.1
	comp=Z,40nm,0.8s						
E45A	Wooded Hills,	63.99	45	P	P	03 18 54.5	-0.7
	baz=325,SNR=12						
J40A	Soldiers Grove	64.05	51	P	P	03 18 55.1	-0.6
	baz=323,SNR=12						
L38A	Oak Wood Farm,	64.06	53	P	P	03 18 55.7	0.0
	baz=323,SNR=15						
K39A	Oelwein	64.09	52	P	P	03 18 55.3	-0.7
	baz=323,SNR=24						
H42A	Shiocton	64.10	48	P	P	03 18 55.9	0.0
	baz=324,SNR=21						
H42A	Shiocton	64.10	48	eP	P	03 18 56.0	0.0
	comp=Z,62nm,0.6s						
STAV	Stavanger	64.12	346	eP	P	03 18 55.9	+0.1
STAV				IAmb	IAmb	03 18 57.9	
	comp=Z,78nm,0.9s						
SCIA	State Center	64.13	53	P	P	03 18 56.8	+0.6
	baz=323,SNR=15						
SCIA	State Center	64.13	53	eP	P	03 18 56.8	+0.6
	comp=Z,145nm,0.8s						
M37A	Trindle Farm,	64.14	54	P	P	03 18 57.0	+0.7
	baz=323,SNR=23						
N36A	Muff Farm, Cla	64.19	55	P	P	03 18 57.3	+0.7
	baz=323,SNR=12						
121A	Cookes Peak, D	64.24	70	P	P	03 18 59.1	+1.8
	baz=321,SNR=13						
319A	Douglas	64.34	72	eP	P	03 18 59.0	+1.1
	comp=Z,30nm,0.9s						
J41A	Loganville	64.39	50	P	P	03 18 57.5	-0.3
	baz=324,SNR=23						
SANI	Sanana	64.40	220	P	P	03 18 57.4	-0.8
	comp=Z,54nm,0.9s,comp=Z,830nm						
F45A	CMU Biological	64.40	46	P	P	03 18 57.6	-0.3
	baz=325,SNR=71						
K40A	Colesburg	64.43	51	P	P	03 18 57.7	-0.4
	baz=323,SNR=25						
I42A	Draeger Farm,	64.44	49	P	P	03 18 58.1	-0.1
	baz=324,SNR=30						
I42A	Draeger Farm,	64.44	49	eP	P	03 18 58.1	-0.1
	comp=Z,45nm,0.7s						
H43A	Windswept, Lux	64.46	48	P	P	03 18 58.5	+0.2
	baz=324,SNR=79						
H43A	Windswept, Lux	64.46	48	eP	P	03 18 58.5	+0.2
	comp=Z,232nm,0.6s						
SNART	Snartemo	64.49	345	eP	P	03 18 58.4	+0.1
SNART				IAmb	IAmb	03 18 59.5	
	comp=Z,63nm,0.7s						
L39A	Vinton	64.50	52	P	P	03 18 58.5	-0.2
	baz=323,SNR=32						
N37A	Lee Faris, Mou	64.59	55	P	P	03 18 59.8	+0.6
	baz=323,SNR=100						
N37A	Lee Faris, Mou	64.59	55	eP	P	03 18 59.9	+0.6
	comp=Z,278nm,0.7s						
MPSI	Mapaga	64.60	227	P	P	03 19 00.0	+0.5
	comp=Z,27nm,0.7s						
F46A	Macinaw City C	64.63	45	P	P	03 18 59.1	-0.3
	baz=325,SNR=27						
JFWS	Jewell Farm	64.65	51	P	P	03 18 58.8	-0.8
	baz=324,SNR=17						
JFWS	Jewell Farm	64.65	51	eP	P	03 18 58.8	-0.8
	comp=Z,30nm,0.6s						
JFWS	Jewell Farm	64.65	51	eP	P	03 18 58.8	-0.8
JFWS				pmax	pmax		
	comp=Z,30nm,0.6s						
KSU1	Kansas State U	64.77	57	P	P	03 19 00.1	-0.3
	baz=322,SNR=11						
KSU1	Kansas State U	64.77	57	eP	P	03 19 00.1	-0.3
	comp=Z,50nm,0.8s						
I43A	Langenfeld Bro	64.77	49	P	P	03 19 00.2	-0.2
	baz=324,SNR=15						
J42A	Columbus	64.81	50	P	P	03 19 00.3	-0.3
	baz=324,SNR=33						
HNR	Honiara	64.85	182	LR	LR	03 42 47.5	
	comp=Z,778nm,21.8s,baz=349,slow=32						
K41A	Shullsburg	64.87	51	P	P	03 19 00.5	-0.5
	baz=324,SNR=16						
L40A	Anamosa	64.90	52	P	P	03 19 00.6	-0.6
	baz=324,SNR=21						
L40A	Anamosa	64.90	52	eP	P	03 19 00.3	-0.9
	comp=Z,63nm,0.8s						
M39A	Webster	64.94	53	P	P	03 19 01.6	+0.1
	baz=323,SNR=73						
N38A	Joes South For	65.01	54	P	P	03 19 02.0	+0.1
	baz=323,SNR=26						
APSI	Ampana	65.01	225	P	P	03 19 01.4	-0.8
	comp=Z,49nm,1.1s						
J43A	Natural Harves	65.06	49	P	P	03 19 01.7	-0.5
	baz=324,SNR=16						
O37A	Wolven Farm, M	65.08	55	P	P	03 19 02.7	+0.3
	baz=323,SNR=34						
NLAI	Namlea	65.10	218	P	P	03 19 01.4	-1.4
	comp=Z,26nm,0.7s						
K42A	Prairie Point,	65.15	50	P	P	03 19 02.4	-0.5
	baz=324,SNR=53						
L41A	Preston	65.21	51	P	P	03 19 02.7	-0.6
	baz=324,SNR=26						
HSIG		65.27	74	eP	P	03 19 04.4	+0.6
	comp=Z,31nm,1.3s						
N39A	Derby Farms, D	65.27	53	P	P	03 19 03.7	0.0
	baz=323,SNR=34						
N39A	Derby Farms, D	65.27	53	eP	P	03 19 03.6	0.0
	comp=Z,64nm,0.8s						
M40A	Post Highland	65.30	52	P	P	03 19 03.5	-0.2
	baz=324,SNR=27						
BWNR	Bhubaneshwar	65.42	270	eP	P	03 19 03.8	-1.0
O38A	Galt	65.43	54	P	P	03 19 04.8	+0.1
	baz=323						
P37A	Lathrop	65.45	55	P	P	03 19 05.0	+0.2
	baz=323,SNR=61						
SUW	Suwalki	65.45	334	eP	P	03 19 03.8	-0.8
SUW				eS	S	03 27 43.1	+1.0
SUW				esS	sS	03 28 15.9	-3.2
SUW				eScS	SKSac	03 28 47.1	-4.5
SUW				LMZ	LR	03 46 28.8	
	comp=Z,1µm,28.6s						
SUW	Suwalki	65.45	334	eP	P	03 19 03.8	-0.8
	comp=Z,70nm,0.8s						
SUW	Suwalki	65.45	334	eP	P	03 19 03.8	-0.8
SUW				eS	S	03 27 43.1	+1.0
SUW				e*SS	sS	03 28 15.9	-3.2
SUW				e		03 28 47.1	
AMTX	Amarillo	65.59	64	P	P	03 19 06.5	+0.6
	baz=322						
AMTX	Amarillo	65.59	64	eP	P	03 19 06.5	+0.6
	comp=Z,18nm,0.8s						
BIGH	Upper Bighouse	65.60	352⇑	eP	P	03 19 05.4	0.0
BIGH				IAmb	IAmb	03 19 06.3	
	comp=Z,128nm,0.7s						
L42A	Oliver, Polo	65.64	51	P	P	03 19 05.3	-0.6
	baz=324,SNR=24						
L42A	Oliver, Polo	65.64	51	eP	P	03 19 05.3	-0.6
	comp=Z,81nm,0.8s						
K43A	Burlington	65.65	49	P	P	03 19 05.5	-0.5
	baz=325,SNR=20						
K43A	Burlington	65.65	49	eP	P	03 19 05.5	-0.5
	comp=Z,78nm,0.9s						
N40A	Mertquake, Sal	65.68	53	P	P	03 19 06.3	+0.1
	baz=324,SNR=26						
MSTX	Muleshoe	65.75	65	P	P	03 19 07.6	+0.6
	baz=322,SNR=15						
MSTX	Muleshoe	65.75	65	eP	P	03 19 07.5	+0.6
	comp=Z,30nm,0.8s						
O39A	Kirksville	65.75	54	P	P	03 19 06.6	-0.1
	baz=324,SNR=13						
M41A	Milan	65.76	52	P	P	03 19 06.3	-0.4
	baz=324,SNR=41						
P38A	Dawn	65.80	55	P	P	03 19 07.3	+0.2
	baz=323,SNR=39						
P38A	Dawn	65.80	55	eP	P	03 19 07.3	+0.2
	comp=Z,82nm,0.8s						
L43A	Garden Prairie	65.89	50	P	P	03 19 06.9	-0.7
	baz=324,SNR=10						
PMG	Port Moresby	65.91	195	P	P	03 19 08.9	+1.1
	comp=Z,55nm,0.8s,baz=50,slow=5.8,SNR=9.0						
PMG				LR	LR	03 43 32.8	
	comp=Z,276nm,21.8s,baz=24,slow=32						
CPRX	Cap Rock	65.92	67	eP	P	03 19 09.6	+1.6
Q37A	Longview Farm,	65.97	56	P	P	03 19 07.8	-0.4
	baz=323,SNR=6.2						
MUD	Monsted U’grnd	66.00	344	i P	P	03 19 08.4	+0.4
	comp=Z,45nm,0.9s						
MUD	Monsted U’grnd	66.00	344	i P	P	03 19 08.4	+0.4
MUD				pmax	pmax		
	comp=Z,45nm,0.9s						
M42A	Sheffield	66.04	51	P	P	03 19 07.9	-0.7
	baz=324,SNR=10						
SBUM	Sibu	66.12	236	eP	P	03 19 10.6	+1.2
N41A	Harden Midland	66.15	52	P	P	03 19 09.1	-0.2
	baz=324,SNR=51						
N41A	Harden Midland	66.15	52	eP	P	03 19 09.2	-0.2
	comp=Z,156nm,0.7s						
MNTX	Cornudas Mount	66.17	69	P	P	03 19 11.0	+1.4
	baz=322,SNR=62						
MNTX	Cornudas Mount	66.17	69	eP	P	03 19 10.9	+1.4
	comp=Z,44nm,1.0s						
O40A	La Belle	66.17	53	P	P	03 19 09.6	+0.2
	baz=324,SNR=63						
BSD	Bornholm Skovb	66.26	340	i P	P	03 19 08.9	-0.8
	comp=Z,68nm,0.9s						
BSD	Bornholm Skovb	66.26	340	i P	P	03 19 08.9	-0.8
BSD				pmax	pmax		
	comp=Z,68nm,0.9s						
L44A	Lake County Fo	66.26	49	P	P	03 19 09.6	-0.3
	baz=325,SNR=14						
P39B	Salisbury	66.27	54	P	P	03 19 10.0	0.0
	baz=324,SNR=40						
Q38A	Cooks Store, C	66.29	55	P	P	03 19 10.2	0.0
	baz=324,SNR=93						
GDL2	Guadalupe Moun	66.31	67	eP	P	03 19 11.8	+1.2
GEYT	Alibeck	66.36	303	P	P	03 19 10.2	-0.6
	comp=Z,44nm,0.9s,baz=282,slow=7.4,SNR=25						
GEYT				LR	LR	03 50 40.7	
	comp=Z,241nm,19.9s,baz=325,slow=38						
GYA0B	ALIBECK ARRAY	66.36	303	eP	P	03 19 10.2	-0.5
	comp=Z,69nm,0.8s						
TOBO	Tobermory, Bru	66.37	43	P	P	03 19 09.7	-0.8
	baz=327						
M43A	Waltham Townsh	66.41	51	P	P	03 19 10.5	-0.4
	baz=325,SNR=36						
N42A	Yates City	66.42	52	P	P	03 19 10.6	-0.4
	baz=324,SNR=15						
MCD	Coleburn Disti	66.44	351⇑	eP	P	03 19 10.8	-0.1
Q39A	Willow Grove F	66.52	55	P	P	03 19 11.9	+0.2
	baz=324,SNR=146						
LLD	Lille Linde	66.56	341	i P	P	03 19 11.7	+0.1
LLD	Lille Linde	66.56	341	eP	P	03 19 11.7	+0.1
P40A	Paris	66.56	54	P	P	03 19 12.1	+0.2
	baz=324,SNR=83						
P40A	Paris	66.56	54	eP	P	03 19 12.0	0.0
	comp=Z,88nm,0.6s						
O41A	Passleys Farm,	66.62	53	P	P	03 19 12.3	0.0
	baz=324,SNR=84						
MME1	Meikle Cairn	66.68	351⇑	eP	P	03 19 11.7	-0.8
N43A	Stutzman Famil	66.72	51	P	P	03 19 12.5	-0.4
	baz=325						
KLBO	Killbear Provi	66.76	42	P	P	03 19 11.0	-2.1
	baz=327						
R38A	Fenwick Farm,	66.78	56	P	P	03 19 12.5	-0.8
	baz=324,SNR=44						
AKASG	Malin Array Be	66.82	329	P	P	03 19 12.0	-1.4
	comp=Z,5.3nm,0.4s,baz=30,slow=6.8,SNR=30						
AKASG				LR	LR	03 51 24.7	
	comp=Z,555nm,20.8s,baz=20,slow=39						
AKASG	Malin Array Be	66.82	329	P	P	03 19 12.0	-1.4
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.4s						
AKASG				MLR	MLR		
	comp=Z,555nm,20.8s						
AKBB	Malin Array Si	66.82	329	eP	P	03 19 12.3	-1.1
	comp=Z,23nm,0.8s						
AKBB	Malin Array Si	66.82	329	eP	P	03 19 12.3	-1.1
AKBB				pmax	pmax		
	comp=Z,23nm,0.8s						
KIEV	Kiev	66.83	329	eP	P	03 19 12.1	-1.4
	comp=Z,23nm,0.8s						
KIEV	Kiev	66.83	329	i P	P	03 19 12.2	-1.3
	SNR=23						
KIEV	Kiev	66.83	329	eP	P	03 19 12.1	-1.3
KIEV				pmax	pmax		
	comp=Z,23nm,0.8s						
M44A	Midewin, Midew	66.84	50	P	P	03 19 13.3	-0.4
	baz=325,SNR=25						
M44A	Midewin, Midew	66.84	50	eP	P	03 19 13.2	-0.4
	comp=Z,77nm,0.6s						
AK11	Malin Array Si	66.86	329	eP	P	03 19 12.3	-1.3
P41A	Barry, Barry	66.89	53	P	P	03 19 14.3	+0.2
	baz=324,SNR=106						
O42A	Bath	66.92	52	P	P	03 19 13.8	-0.3
	baz=324,SNR=13						
HDIL	Hopedale	66.97	51	P	P	03 19 14.5	0.0
	baz=325,SNR=86						
HDIL	Hopedale	66.97	51	eP	P	03 19 13.9	-0.6
	comp=Z,216nm,0.6s						
Q40A	Laux Farm, Aux	66.98	54	P	P	03 19 14.6	0.0
	baz=324,SNR=61						
BUKO	Buck Lake	67.00	42	P	P	03 19 13.6	-1.1
	baz=328						
MAK	Makhachkala	67.01	313	eP	P	03 19 13.9	-0.8
MAK				eS	S	03 28 04.9	+3.6
MAK				pmax	pmax		
	comp=Z,76nm,0.8s						
BMRO	Meriville Lake	67.01	44	P	P	03 19 14.0	-0.7
	baz=327						
DRUM	Mains of Drumt	67.04	351⇑	eP	P	03 19 14.6	-0.1
DRUM				IAmb	IAmb	03 19 16.6	
	comp=Z,108nm,0.9s						
R39A	Chumby, Stover	67.08	55	P	P	03 19 15.1	-0.1
	baz=324,SNR=140						
RGN	Rugen	67.10	340	eP	P	03 19 15.3	+0.3
	comp=Z,118nm,0.9s						
WMOK	Wichita Mounta	67.16	62	P	P	03 19 16.5	+0.7
	baz=323,SNR=28						
WMOK	Wichita Mounta	67.16	62	eP	P	03 19 16.4	+0.5
	comp=Z,44nm,0.8s						
WMOK	Wichita Mounta	67.16	62	eP	P	03 19 16.4	+0.5
WMOK				pmax	pmax		
	comp=Z,45nm,0.9s						
O43A	Sugar Creek Fa	67.18	52	P	P	03 19 15.8	-0.1
	baz=325,SNR=26						
M45A	Boilermakers S	67.19	50	P	P	03 19 15.3	-0.5
	baz=325,SNR=6.4						
BRCO	Bruce Peninsul	67.22	44	P	P	03 19 15.5	-0.5
	baz=327						
S38A	Stockton	67.22	56	P	P	03 19 15.5	-0.7
	baz=324,SNR=47						
N44A	Piper City	67.29	50	P	P	03 19 16.1	-0.4
	baz=325,SNR=23						
P42A	Winchester	67.29	53	P	P	03 19 16.4	-0.1
	baz=325,SNR=32						
P42A	Winchester	67.29	53	eP	P	03 19 16.5	-0.1
	comp=Z,67nm,0.8s						
BASO	Ashfield	67.32	44	P	P	03 19 16.6	-0.1
	baz=327						
Q41A	Truxton	67.40	54	P	P	03 19 17.5	+0.2
	baz=324,SNR=77						
BWLO	Walkerton	67.44	44	P	P	03 19 17.0	-0.5
	baz=327						
S39A	Bolivar	67.45	56	P	P	03 19 16.8	-0.8
	baz=324,SNR=44						
S39A				S	S	03 28 04.9	-1.8
	baz=324						
S39A	Bolivar	67.45	56	eP	P	03 19 16.8	-0.8
	comp=Z,40nm,0.8s						
R40A	Maddies Statio	67.46	55	P	P	03 19 17.6	0.0
	baz=324,SNR=147						
R40A	Maddies Statio	67.46	55	eP	P	03 19 17.6	0.0
	comp=Z,113nm,0.7s						
CLWO	Collingwood	67.49	43	P	P	03 19 17.0	-0.8
	baz=328						
GROC	Groznyy	67.51	314	eP	P	03 19 15.8	-2.1
GROC				e*PP	PcP	03 19 43.0	-1.6
GROC				e		03 21 46.5	
GROC				pmax	pmax		
	comp=Z,37nm,0.7s						
GKP	Gorka Klasztor	67.51	338	eP	P	03 19 17.8	+0.1
GKP				eS	S	03 28 09.0	+2.1
GKP				LMZ	LR	03 44 49.9	
	comp=Z,2µm,33.7s						
GKP	Gorka Klasztor	67.51	338	eP	P	03 19 17.8	+0.1
GKP				eS	S	03 28 09.0	+2.1
N45A	Kentland	67.52	50	P	P	03 19 17.7	-0.3
	baz=325,SNR=19						
T38A	Diamond	67.52	57	P	P	03 19 17.8	-0.2
	baz=324,SNR=29						
M46A	Old House Fiel	67.56	49	P	P	03 19 17.8	-0.3
	baz=326						
M46A	Old House Fiel	67.56	49	eP	P	03 19 17.6	-0.6
	comp=Z,67nm,0.6s						
PEMO	Pembroke	67.61	40	P	P	03 19 17.0	-1.4
	baz=329						
P43A	Skaggs, Pawnee	67.62	52	P	P	03 19 18.3	-0.3
	baz=325,SNR=26						
INVG	Invergeldie, C	67.66	351⇑	eP	P	03 19 18.0	-0.6
INVG				IAmb	IAmb	03 19 19.7	
	comp=Z,97nm,0.8s						
O44A	Mansfield	67.67	51	P	P	03 19 18.5	-0.4
	baz=325,SNR=9.9						
SADO	Sadowa	67.67	42	eP	P	03 19 17.6	-1.3
	comp=Z,17nm,0.8s						
TTSI	Tana Toraja	67.69	226	P	P	03 19 19.1	-0.2
	comp=Z,32nm,0.9s,comp=Z,771nm						
TUL1	Leonard	67.70	59	P	P	03 19 19.4	+0.2
	baz=324,SNR=22						
TUL1	Leonard	67.70	59	eP	P	03 19 19.4	+0.2
	comp=Z,41nm,0.8s						
Q42A	Golden Eagle	67.75	53	P	P	03 19 19.8	+0.3
	baz=325,SNR=51						
N46A	Monticello	67.81	49	P	P	03 19 19.2	-0.6
	baz=326,SNR=12						
BHPL	Bhopal	67.82	279	eP	P	03 19 19.2	-0.9
BHPL				IAmb	IAmb	03 19 23.5	
	comp=Z,42nm,0.6s						
TRTT	Trang	67.83	250	P	P	03 19 21.0	+0.8
	comp=Z,9.2nm,1.1s						
R41A	Rosebud	67.86	54	P	P	03 19 20.3	+0.1
	baz=324,SNR=117						
MTKI	Muara Teweh, K	67.90	232	P	P	03 19 21.7	+1.1
SKLT	Songkhla	67.90	249	P	P	03 19 21.9	+1.3
	comp=Z,45nm,1.0s,comp=Z,1µm						
S40A	Lebanon	67.91	55	P	P	03 19 20.2	-0.2
	baz=324,SNR=74						
BANO	Bancroft	67.91	41	P	P	03 19 19.5	-0.9
	baz=328						
O45A	Potomac	67.92	51	P	P	03 19 20.4	-0.1
	baz=325,SNR=28						
EAB	Aberfoyle	67.92	351⇑	eP	P	03 19 20.0	-0.2
AAM	Ann Arbor	67.95	47	P	P	03 19 20.7	+0.1
	baz=327,SNR=12						
AAM	Ann Arbor	67.95	47	eP	P	03 19 20.9	+0.3
	comp=Z,92nm,0.6s						
AAM	Ann Arbor	67.95	47	eP	P	03 19 20.9	+0.3
AAM				pmax	pmax		
	comp=Z,92nm,0.7s						
T39A	Clever	67.96	56	P	P	03 19 20.4	-0.4
	baz=324,SNR=29						
BEL	Belsk	68.03	335	eP	P	03 19 20.9	-0.1
BEL				ePcP	PcP	03 19 46.2	-0.4
BEL				LMZ	LR	03 46 59.9	
	comp=Z,1µm,31.4s						
BEL	Belsk	68.03	335	eP	P	03 19 20.9	-0.1
BEL				e		03 19 46.2	
ESY	Stoneypath	68.03	350	eP	P	03 19 20.7	-0.3
EDI	Edinburgh	68.08	351⇑	eP	P	03 19 20.3	-0.9
EDI				IAmb	IAmb	03 19 22.4	
	comp=Z,56nm,0.9s						
EDI	Edinburgh	68.08	351	eP	P	03 19 21.7	+0.5
SFIN	Lafayette	68.08	50	P	P	03 19 21.0	-0.5
	baz=326,SNR=30						
SFIN	Lafayette	68.08	50	eP	P	03 19 21.0	-0.5
	comp=Z,44nm,0.6s						
TRQ	Mont Tremblant	68.11	38	eP	P	03 19 20.9	-0.7
Q43A	New Douglas	68.11	53	P	P	03 19 21.6	0.0
	baz=325,SNR=26						
KIV	Kislovodsk	68.11	317	eP	P	03 19 21.6	-0.1
	comp=Z,24nm,0.7s						
KIV	Kislovodsk	68.11	317	i P	P	03 19 21.1	-0.6
	SNR=12						
KIV	Kislovodsk	68.11	317c	iP	P	03 19 21.4	-0.3
KIV				i *PP	pP	03 19 42.9	-0.7
KIV				e		03 19 46.2	
KIV				e*SP	sP	03 19 51.5	-1.4
KIV				ePPP	PPP	03 23 39.1	
KIV				i S	S	03 28 10.4	-4.2
KIV				i *SS	sS	03 28 51.2	-0.6

KIV				eSS	SS	03 32 39.4	+1.9
KIV				pmax	pmax		
	comp=Z,98nm,2.5s						
KIV				MLR	MLR		
	comp=Z,1µm,26.0s						
SLM	Saint Louis	68.11	53	eP	P	03 19 21.8	+0.1
	comp=Z,95nm,0.6s						
SLM	Saint Louis	68.11	53	eP	P	03 19 21.8	+0.1
SLM				pmax	pmax		
	comp=Z,95nm,0.6s						
CCM	Cathedral Cave	68.12	54	P	P	03 19 22.5	+0.7
	baz=325						
CCM	Cathedral Cave	68.12	54	eP	P	03 19 22.6	+0.8
CCM				pmax	pmax		
	comp=Z,52nm,0.9s						
R42A	Luebbering	68.15	54	P	P	03 19 22.1	+0.2
	baz=325,SNR=68						
ELFO	Elginfield	68.15	44	P	P	03 19 21.7	-0.2
	baz=327						
P44A	Sand Creek, Wi	68.16	52	P	P	03 19 22.0	0.0
	baz=325,SNR=44						
PLVO	Plevna	68.21	41	P	P	03 19 21.3	-1.0
	baz=329						
PLVO	Plevna	68.21	41	eP	P	03 19 21.2	-1.0
	comp=Z,30nm,0.8s						
KBZ	Khabaz	68.22	317	P	P	03 19 22.2	-0.1
	comp=Z,43nm,0.8s,baz=81,slow=3.0,SNR=40						
KBZ				LR	LR	03 52 34.2	
	comp=Z,951nm,21.4s,baz=21,slow=39						
T40A	Mansfield	68.26	56	P	P	03 19 22.4	-0.3
	baz=324,SNR=79						
S41A	Jillco Farms,	68.27	55	P	P	03 19 22.8	0.0
	baz=325,SNR=103						
HHAR	Hobbs	68.29	57	eP	P	03 19 22.7	-0.2
	comp=Z,83nm,0.7s						
ACTO	Acton	68.29	43	P	P	03 19 22.4	-0.4
	baz=328						
PGBU	Glenifferbraes	68.31	352⇑	eP	P	03 19 22.6	-0.1
PGBU				IAmb	IAmb	03 19 24.3	
	comp=Z,290nm,0.8s						
PKRO	Pickering	68.38	43	P	P	03 19 23.0	-0.3
	baz=328						
ABTX	Abilene, Hawle	68.41	64	P	P	03 19 24.1	+0.4
	baz=323,SNR=18						
ABTX	Abilene, Hawle	68.41	64	eP	P	03 19 24.1	+0.4
	comp=Z,35nm,0.8s						
U39A	Green Forest	68.43	57	P	P	03 19 23.7	-0.1
	baz=324,SNR=245						
Q44A	Meyer Farm, Va	68.44	52	P	P	03 19 23.5	-0.2
	baz=325,SNR=5.2						
DELO	Deloro Mine	68.45	41	P	P	03 19 21.9	-1.9
	baz=329						
P45A	Graceland, Par	68.50	51	P	P	03 19 23.8	-0.3
	baz=326,SNR=38						
P45A	Graceland, Par	68.50	51	eP	P	03 19 23.8	-0.3
	comp=Z,77nm,0.6s						
ALFO	Alfred	68.50	39	P	P	03 19 23.0	-1.0
	baz=330						
R43A	Red Bud	68.54	53	P	P	03 19 24.3	-0.1
	baz=325,SNR=43						
SPSI	Sidrap Palu	68.55	225	P	P	03 19 24.9	+0.3
	comp=Z,40nm,0.9s,comp=Z,451nm						
FVM	French Village	68.56	54	eP	P	03 19 25.5	+1.0
	comp=Z,126nm,0.6s						
FVM	French Village	68.56	54	eP	P	03 19 25.5	+1.0
FVM				pmax	pmax		
	comp=Z,130nm,0.7s						
S42A	Caledonia	68.56	54	P	P	03 19 24.5	0.0
	baz=325,SNR=102						
STKI	Sintang	68.56	235	P	P	03 19 25.4	+0.6
	comp=Z,47nm,0.6s,comp=Z,24µm						
TORO	Toronto--Lesli	68.57	43	P	P	03 19 24.1	-0.4
	baz=328						
DRWO	Darlington Wes	68.58	42	P	P	03 19 24.3	-0.3
	baz=328						
O47A	Sheridan	68.60	49	P	P	03 19 23.7	-1.1
	baz=326,SNR=14						
ZEI	Tsey	68.62	315	eP	P	03 19 23.0	-2.1
ZEI				pmax	pmax		
	comp=Z,46nm,0.9s						
P46A	Rosedale	68.66	51	P	P	03 19 24.9	-0.2
	baz=326,SNR=116						
EKA	Eskdalemuir Ar	68.66	351	P	P	03 19 24.8	0.0
	comp=Z,96nm,0.8s,baz=20,slow=5.5,SNR=229						
EKA				LR	LR	03 47 46.1	
	comp=Z,162nm,21.4s,baz=25,slow=34						
WLVO	Wesleyville	68.67	42	P	P	03 19 24.6	-0.5
	baz=328						
ESK	Eskdalemuir	68.68	351	eP	P	03 19 25.3	+0.3
	comp=Z,88nm,0.8s						
ESK	Eskdalemuir	68.68	351⇑	eP	P	03 19 24.1	-0.9
ESK				IAmb	IAmb	03 19 26.5	
	comp=Z,91nm,0.8s						
ESK	Eskdalemuir	68.68	351	eP	P	03 19 25.3	+0.3
ESK				pmax	pmax		
	comp=Z,88nm,0.8s						
ESK	Eskdalemuir	68.68	351	eP	P	03 19 25.8	+0.8
T41A	Mountain View	68.70	55	P	P	03 19 25.2	-0.2
	baz=325,SNR=128						
U40A	Yellville	68.75	56	P	P	03 19 25.4	-0.4
	baz=324,SNR=68						
V39A	Pettigrew	68.79	57	P	P	03 19 26.0	-0.1
	baz=324,SNR=178						
TYNO	Tyneside	68.80	44	P	P	03 19 25.4	-0.5
	baz=328						
Q45A	Warren Harvey,	68.83	52	P	P	03 19 26.2	-0.1
	baz=326,SNR=65						
BHH	Howats Hill	68.91	351⇑	eP	P	03 19 26.7	+0.3
TX31	Lajitas Ar. Si	68.93	69	eP	P	03 19 27.2	+0.1
LTX	Lajitas	68.94	69	eP	P	03 19 28.2	+1.1
LTX	Lajitas	68.94	69	eP	P	03 19 28.2	+1.1
TXAR	Lajitas Array	68.94	69	P	P	03 19 28.2	+1.1
	comp=Z,21nm,0.7s,baz=302,slow=4.2,SNR=289						
TXAR				PcP	PcP	03 19 51.8	+0.9
	comp=Z,22nm,0.8s,baz=304,slow=3.9,SNR=8.4						
TXAR				PKP2bc		03 47 37.5	
	comp=Z,0.7nm,0.9s,baz=132,slow=3.5,SNR=5.3						
R44A	Waltonville	68.95	53	P	P	03 19 26.9	-0.1
	baz=325,SNR=31						
STCO	Saint Catharin	68.98	43	P	P	03 19 26.6	-0.4
	baz=328						
OLIL	Olney	68.99	52	eP	P	03 19 27.1	-0.1
	comp=Z,51nm,0.8s						
O48A	Farmland	69.02	49	P	P	03 19 26.7	-0.7
	baz=326,SNR=49						
T42A	Van Buren	69.03	55	P	P	03 19 27.3	-0.1
	baz=325,SNR=73						
T42A	Van Buren	69.03	55	eP	P	03 19 27.1	-0.3
	comp=Z,54nm,0.8s						
EDMD	Edmundbyers	69.04	350⇑	eP	P	03 19 26.4	-0.8
EDMD				IAmb	IAmb	03 19 31.1	
	comp=Z,54nm,0.8s						
S43A	Fulton Ridge,	69.05	54	P	P	03 19 27.6	0.0
	baz=325,SNR=61						
LVV	L'vov	69.06	332	eP	P	03 19 26.7	-0.8
LVV				e*PP	sP	03 19 55.5	-3.1
LVV				eS	S	03 28 20.2	-5.3
LVV				MLR	MLR		
	comp=E,100nm,18.0s						
LVV				MLR	MLR		
	comp=N,300nm,17.0s						
LVV				MLR	MLR		
	comp=Z,400nm,18.0s						
Q46A	CEJHS Indians,	69.08	51	P	P	03 19 27.2	-0.5
	baz=326						
CLGH	Cloghs, Cushen	69.16	352⇑	eP	P	03 19 27.6	-0.3
CLGH				IAmb	IAmb	03 19 28.7	
	comp=Z,87nm,0.8s						
TBLG	Delisi	69.17	314	eP	P	03 19 28.6	+0.3
	comp=Z,108nm,0.8s						
TBLG	Delisi	69.17	314	eP	P	03 19 28.6	+0.3
TBLG				pmax	pmax		
	comp=Z,110nm,0.8s						
P47A	Martinsville	69.18	50	P	P	03 19 27.8	-0.5
	baz=326,SNR=121						
U41A	Viola	69.20	56	P	P	03 19 28.3	-0.3
	baz=325,SNR=65						
V40A	Witts Springs	69.21	57	P	P	03 19 28.5	-0.2
	baz=325,SNR=85						
V40A	Witts Springs	69.21	57	eP	P	03 19 28.4	-0.2
	comp=Z,82nm,0.7s						
W39A	Magazine	69.24	58	P	P	03 19 29.1	+0.3
	baz=324,SNR=42						
W39A	Magazine	69.24	58	eP	P	03 19 28.4	-0.4
	comp=Z,83nm,1.3s						
R45A	Skylar, Fairfi	69.27	52	P	P	03 19 28.7	-0.2
	baz=326,SNR=12						
MEDO	Medina	69.29	43	P	P	03 19 28.4	-0.5
	baz=329						
BLO	Bloomington	69.33	50	eP	P	03 19 28.8	-0.4
	comp=Z,71nm,0.7s						
BLO	Bloomington	69.33	50	eP	P	03 19 28.8	-0.4
BLO				pmax	pmax		
	comp=Z,71nm,0.7s						
S44A	Carbondale	69.33	53	P	P	03 19 29.4	+0.1
	baz=325,SNR=22						
SIUC	Southern Illin	69.33	53	eP	P	03 19 29.4	+0.2
	comp=Z,115nm,0.6s						
ANN	Anapa	69.34	321	eP	P	03 19 27.8	-1.4
ANN				e*PP	pP	03 19 48.3	-2.8
ANN				eS	S	03 28 29.6	+0.7
ANN				pmax	pmax		
	comp=Z,21nm,0.7s						
T43A	Greenville	69.35	54	P	P	03 19 29.4	-0.1
	baz=325,SNR=36						
SORM	Soroca	69.37	328⇓	iP	P	03 19 28.0	-1.4
KESW	Keswick, Cumbr	69.39	350⇑	eP	P	03 19 29.2	-0.2
KESW				IAmb	IAmb	03 19 31.1	
	comp=Z,229nm,0.8s						
O49A	Covington	69.42	48	P	P	03 19 29.5	-0.4
	baz=327,SNR=32						
N50A	Nevada	69.43	47	P	P	03 19 29.7	-0.2
	baz=327,SNR=13						
KULM	Kulim	69.46	248	eP	P	03 19 30.4	0.0
	comp=Z,34nm,0.8s						
LONY	Lake Ozonia	69.48	39	P	P	03 19 29.1	-1.0
	baz=330,SNR=16						
LONY	Lake Ozonia	69.48	39	eP	P	03 19 29.1	-1.0
	comp=Z,23nm,0.8s						
LPIG	La Paz	69.48	77	LR	LR	03 46 50.9	
	comp=Z,61nm,20.8s,baz=256,slow=33						
U42A	Revenden	69.51	55	P	P	03 19 30.1	-0.3
	baz=325,SNR=32						
PBMO	Poplar Bluff	69.54	55	eP	P	03 19 30.7	+0.1
	comp=Z,130nm,0.8s						
V41A	Mountainview	69.54	56	P	P	03 19 30.4	-0.2
	baz=325,SNR=88						
SOC	Sochi	69.55	319c	iP	P	03 19 29.5	-1.1
SOC				e*PP	pP	03 19 49.2	-3.3
SOC				e		03 22 01.5	
SOC				ePPP	PPP	03 23 43.2	
SOC				eS	S	03 28 31.1	-0.4
SOC				e*SS	pS	03 29 02.7	+5.1
SOC				pmax	pmax		
	comp=Z,11nm,0.6s						
SOC				MLR	MLR		
	comp=Z,385nm,17.0s						
P48A	Milroy	69.56	49	P	P	03 19 30.1	-0.6
	baz=326,SNR=85						
Q47A	Bedord North L	69.56	50	P	P	03 19 30.5	-0.2
	baz=326,SNR=105						
ERPA	Erie	69.58	44	P	P	03 19 30.5	-0.3
	baz=328,SNR=41						
ERPA	Erie	69.58	44	eP	P	03 19 30.5	-0.3
KWP	Kalwaria Pacla	69.58	333	eP	P	03 19 30.7	0.0
KWP				eS	S	03 28 35.7	+4.0
KWP				LMZ	LR	03 46 59.2	
	comp=Z,500nm,31.5s						
KWP	Kalwaria Pacla	69.58	333	eP	P	03 19 30.7	0.0
	comp=Z,1µm,1.0s						
KWP	Kalwaria Pacla	69.58	333	eP	P	03 19 30.7	0.0
KWP				eS	S	03 28 35.7	+4.0
W40A	Ferguson Farm,	69.59	57	P	P	03 19 31.3	+0.4
	baz=325,SNR=82						
W40A	Ferguson Farm,	69.59	57	eP	P	03 19 31.2	+0.4
	comp=Z,167nm,0.7s						
X39A	Fountain Ranch	69.64	59	P	P	03 19 31.9	+0.6
	baz=324,SNR=77						
S45A	Carrier Mills	69.64	53	P	P	03 19 31.2	0.0
	baz=326,SNR=23						
FRNY	Flat Rock	69.65	38	eP	P	03 19 30.0	-1.1
	comp=Z,15nm,0.8s						
T44A	Benton	69.67	54	P	P	03 19 31.5	+0.1
	baz=325,SNR=55						
R46A	Gibon Southern	69.68	52	P	P	03 19 31.3	-0.1
	baz=326,SNR=11						
O50A	Cable	69.76	48	P	P	03 19 31.7	-0.3
	baz=327,SNR=85						
OJC	Ojcow	69.77	335	eP	P	03 19 31.6	-0.2
OJC				eS	S	03 28 34.3	+0.5
OJC				esS	SKiKP	03 29 09.3	-0.9
OJC				LMZ	LR	03 47 50.9	
	comp=Z,1µm,29.3s						
OJC	Ojcow	69.77	335	eP	P	03 19 32.5	+0.7
	comp=Z,38nm,0.8s						
OJC	Ojcow	69.77	335	eP	P	03 19 31.6	-0.2
OJC				eS	S	03 28 34.3	+0.5
OJC				e*SS	SKiKP	03 29 09.3	-0.9
HPIG		69.77	72	eP	P	03 19 33.4	+0.9
	comp=Z,22nm,1.1s						
P49A	Miami Univ. Ec	69.81	49	P	P	03 19 31.6	-0.6
	baz=327,SNR=44						
USIN	University of	69.82	52	eP	P	03 19 32.3	+0.1
	comp=Z,119nm,0.9s						
IOMK	Kirk Michael	69.85	351⇑	eP	P	03 19 32.0	-0.2
IOMK				IAmb	IAmb	03 19 34.7	
	comp=Z,65nm,1.0s						
MIAR	Mount Ida	69.87	58	P	P	03 19 33.1	+0.4
	baz=325,SNR=46						
MIAR	Mount Ida	69.87	58	eP	P	03 19 33.0	+0.4
	comp=Z,51nm,0.8s						
MIAR	Mount Ida	69.87	58	eP	P	03 19 33.0	+0.4
MIAR				pmax	pmax		
	comp=Z,51nm,0.9s						
HPK	Haverah Park	69.87	349⇑	eP	P	03 19 32.1	-0.2
HPK				IAmb	IAmb	03 19 34.0	
	comp=Z,141nm,0.8s						
MMNY	Mt. Morris Dam	69.87	42	eP	P	03 19 31.8	-0.8
	comp=Z,93nm,0.8s						
Q48A	North Vernon	69.87	50	P	P	03 19 32.2	-0.4
	baz=326,SNR=33						
U43A	Rector	69.88	55	P	P	03 19 33.0	+0.3
	baz=325,SNR=23						
V42A	Cord	69.88	56	P	P	03 19 32.2	-0.5
	baz=325,SNR=26						
PQI	Presque Isle	69.89	34	eP	P	03 19 31.8	-0.8
	comp=Z,22nm,0.8s						
ALLY	Alegheny Colle	69.92	45	eP	P	03 19 32.6	-0.3
	comp=Z,92nm,0.8s						
AKH	Akhalkalaki	69.94	315⇑	iP	P	03 19 35.4	+2.2
AKH	Akhalkalaki	69.94	315	eP	P	03 19 33.8	+0.6
	comp=Z,40nm,0.9s						
AKH	Akhalkalaki	69.94	315	eP	P	03 19 33.8	+0.6
AKH				pmax	pmax		
	comp=Z,40nm,0.9s						
PARMO	Parma	69.94	54	eP	P	03 19 33.7	+0.6
	comp=Z,534nm,0.8s						
ACSO	Alum Creek Sta	69.95	47	P	P	03 19 32.9	-0.2
	baz=327,SNR=40						
WIM	Isle of Man	69.97	351⇑	eP	P	03 19 33.0	0.0
KSP	Ksiaz	69.99	337	eP	P	03 19 32.9	-0.2
KSP				eS	S	03 28 39.9	+3.5
KSP				eScS	SKSac	03 29 19.7	-6.4
KSP				LMZ	LR	03 45 39.0	
	comp=Z,2µm,35.0s						
KSP	Ksiaz	69.99	337	eP	P	03 19 32.9	-0.2
KSP				eS	S	03 28 39.9	+3.5
KSP				e		03 29 19.7	
W41B	Gary Mavity, V	69.99	57	P	P	03 19 33.5	+0.1
	baz=325,SNR=99						
W41B	Gary Mavity, V	69.99	57	eP	P	03 19 33.5	+0.1
	comp=Z,114nm,0.9s						
WHTX	Lake Whitney,	70.02	63	P	P	03 19 33.9	+0.3
	baz=324,SNR=8.6						
WHTX	Lake Whitney,	70.02	63	eP	P	03 19 34.0	+0.3
	comp=Z,18nm,0.8s						
S46A	Don Dixon Farm	70.03	52	P	P	03 19 33.4	-0.1
	baz=326,SNR=17						
JCT	Junction City	70.04	65	P	P	03 19 34.2	+0.4
	baz=324,SNR=45						
JCT	Junction City	70.04	65	eP	P	03 19 34.2	+0.4
	comp=Z,47nm,0.7s						
JCT	Junction City	70.04	65	eP	P	03 19 34.2	+0.4
JCT				pmax	pmax		
	comp=Z,47nm,0.7s						
R47A	Wooly Knot Far	70.05	51	P	P	03 19 33.4	-0.3
	baz=326,SNR=47						
U44A	Portageville	70.10	54	P	P	03 19 34.6	+0.6
	baz=326,SNR=18						
P50A	Jamestown	70.13	48	P	P	03 19 33.8	-0.4
	baz=327,SNR=45						
T45A	Paducah	70.16	53	P	P	03 19 34.5	+0.2
	baz=326						
T45A	Paducah	70.16	53	eP	P	03 19 35.1	+0.7
	comp=Z,171nm,0.6s						
NCB	Newcomb	70.17	39	eP	P	03 19 33.2	-1.2
	comp=Z,34nm,1.2s						
Q49A	Aurora	70.17	49	P	P	03 19 33.9	-0.5
	baz=327,SNR=17						
PVMO	Portageville	70.17	54	eP	P	03 19 35.6	+1.1
	comp=Z,261nm,0.8s						
WCI	Wyandotte Cave	70.21	51	P	P	03 19 34.7	0.0
	baz=326						
WCI	Wyandotte Cave	70.21	51	eP	P	03 19 34.7	0.0
	comp=Z,140nm,0.6s						
WCI	Wyandotte Cave	70.21	51	eP	P	03 19 34.7	0.0
WCI				pmax	pmax		
	comp=Z,140nm,0.7s						
M54A	Oil Creek Stat	70.23	44	P	P	03 19 34.2	-0.6
	baz=328,SNR=54						
M54A	Oil Creek Stat	70.23	44	eP	P	03 19 34.4	-0.4
	comp=Z,100nm,0.9s						
CLL	Collm	70.24	340⇑	iP	P	03 19 33.8	-0.8
	comp=Z,67nm,0.9s						
CLL				epP	pP	03 19 57.0	+0.5
CLL				esP	sP	03 20 04.0	-1.8
CLL				e		03 20 11.0	
CLL				ePP	PP	03 22 10.0	-0.3
CLL				ePPP	PPP	03 23 53.0	
CLL				eS	S	03 28 37.0	-2.2
CLL				ePS	PnS	03 29 21.0	+4.0
CLL				eSS	SS	03 33 12.0	+2.4
CLL				e		03 34 42.0	
CLL				esSSS		03 37 06.0	
CLL				e		03 37 42.0	
CLL	Collm	70.24	340	eP	P	03 19 34.1	-0.5
	comp=Z,78nm,1.0s						
CLL	Collm	70.24	340⇑	iP	P	03 19 33.8	-0.8
CLL				eS	S	03 28 37.0	-2.2
CLL				pmax	pmax		
	comp=Z,67nm,0.9s						
R48A	Northridge Ran	70.25	50	P	P	03 19 34.7	-0.3
	baz=326,SNR=24						
KIS	Kishinev	70.25	328⇑	iP	P	03 19 34.0	-0.8
	comp=Z,300nm,2.4s						
KIS				epP	pP	03 19 58.0	+1.3
KIS	Kishinev	70.25	328	ePP	PP	03 22 11.0	+0.4
KIS	Kishinev	70.25	328	ePPP	PPP	03 23 48.0	
KIS	Kishinev	70.25	328	eP	P	03 19 34.0	-0.8
KIS				e*PP	pP	03 19 58.0	+1.3
KIS				e		03 20 11.0	
KIS				e		03 22 11.0	
KIS				ePPP	PPP	03 23 48.0	
KIS				ePS	PnS	03 28 40.0	-37
KIS				e		03 29 10.0	
KIS				pmax	pmax		
	comp=Z,280nm,2.4s						
KIS				pmax	pmax		
	comp=Z,500nm,4.0s						
KIS				MLR	MLR		
	comp=Z,700nm,20.0s						
W42A	Bald Knob	70.26	56	P	P	03 19 35.3	+0.3
	baz=325,SNR=7.3						
UALR	University of	70.27	57	eP	P	03 19 35.4	+0.3
	comp=Z,22nm,0.8s						
X40A	Basin Creek Fa	70.27	58	P	P	03 19 35.2	+0.1
	baz=325,SNR=45						
X40A	Basin Creek Fa	70.27	58	eP	P	03 19 35.2	+0.1
	comp=Z,50nm,0.9s						
V43A	Jonesboro	70.30	55	P	P	03 19 35.8	+0.6
	baz=325,SNR=5.4						
UPC	Upice	70.37	337	eP	P	03 19 36.2	+0.7
UPC				ex	x	03 23 53.2	
UPC				eS	S	03 28 39.9	-0.9
UPC				AMS	AMS	03 51 10.0	
	comp=Z,500nm,20.5s						
UPC	Upice	70.37	337	eP	P	03 19 36.2	+0.7
UPC				e		03 23 53.2	
UPC				eS	S	03 28 39.9	-0.9
UPC				MLR	MLR		
	comp=Z,500nm,20.5s						
VT1	Waterbury	70.38	38	eP	P	03 19 35.5	-0.2
	comp=Z,35nm,0.9s						
NIE	Niedzica	70.39	334	eP	P	03 19 35.8	+0.2
NIE				epP	PcP	03 19 51.2	-5.5
NIE				eS	S	03 28 46.5	+5.3
NIE				eScS	SKSac	03 29 26.6	-2.7
NIE				LMZ	LR	03 48 43.0	
	comp=Z,400nm,30.5s						
NIE	Niedzica	70.39	334	eP	P	03 19 35.8	+0.2
NIE				e*PP	PcP	03 19 51.2	-5.5
NIE				eS	S	03 28 46.5	+5.3
NIE				e		03 29 26.6	
GNAR	Gosnell	70.39	55	eP	P	03 19 36.5	+0.7
	comp=Z,534nm,1.4s						
U44B	Burton Farm, H	70.39	54	P	P	03 19 36.5	+0.7
	baz=326,SNR=19						
X41A	Kaden, Bauxite	70.42	57	P	P	03 19 36.3	+0.3
	baz=325,SNR=27						
LBWR	Ladybower, Pea	70.43	349⇑	eP	P	03 19 35.3	-0.4
LBWR				IAmb	IAmb	03 19 37.2	
	comp=Z,201nm,0.8s						
HBAR	Harrisburg	70.43	55	eP	P	03 19 36.7	+0.7
	comp=Z,127nm,0.8s						
Y40A	Okolona	70.44	58	P	P	03 19 36.5	+0.3
	baz=325,SNR=13						
DPC	Dobruska-Polom	70.45	337	eP	P	03 19 36.9	+0.9
DPC				ePP	PP	03 23 58.6	
DPC				eS	S	03 28 41.6	-0.2
DPC				AMS	AMS	03 51 20.0	
	comp=Z,500nm,20.8s						
DPC	Dobruska-Polom	70.45	337	eP	P	03 19 36.9	+0.9
DPC				e		03 23 58.6	
DPC				eS	S	03 28 41.6	-0.2
DPC				MLR	MLR		
	comp=Z,500nm,20.8s						
BRG	Berggiesshubel	70.46	339	i P	P	03 19 35.7	-0.3
	comp=Z,55nm,0.9s						
BRG				i pP	sP	03 20 06.3	-0.9
	comp=Z,18nm,1.1s						
BRG				ePP	PP	03 22 16.5	+4.3
	comp=Z,9.8nm,1.1s						
BRG				S	S	03 28 43.0	+1.2
	comp=N,1µm,34.0s						
	comp=E,685nm,28.0s						
	comp=Z,1µm,30.7s						
BRG	Berggiesshubel	70.46	339	i P	P	03 19 35.7	-0.3
BRG				i *PP	sP	03 20 06.3	-0.9
BRG				e		03 22 16.5	
BRG				S	S	03 28 43.0	+1.2
BRG				pmax	pmax		
	comp=Z,55nm,0.9s						
BRG				pmax	pmax		
	comp=Z,10.0nm,1.1s						
T46A	Princeton	70.48	53	P	P	03 19 36.7	+0.4
	baz=326,SNR=44						
GLAT	Glass	70.48	54	eP	P	03 19 37.2	+0.8
	comp=Z,257nm,1.2s						
GNI	Garni	70.50	313	P	P	03 19 37.4	+0.7
	comp=Z,39nm,0.9s,baz=182,slow=3.0,SNR=19						
GNI				LR	LR	03 55 50.9	
	comp=Z,681nm,19.4s,baz=36,slow=40						
OKC	Ostrava-Krasne	70.51	336	eP	P	03 19 37.3	+1.0
OKC				eS	S	03 28 42.5	0.0
OKC				AMS	AMS	03 49 00.0	
	comp=Z,900nm,24.2s						
OKC	Ostrava-Krasne	70.51	336	eP	P	03 19 37.3	+1.0
OKC				eS	S	03 28 42.5	0.0
OKC				MLR	MLR		
	comp=Z,900nm,24.2s						
N54A	Moraine State	70.56	45	P	P	03 19 36.4	-0.4
	baz=328,SNR=33						
N54A	Moraine State	70.56	45	eP	P	03 19 36.4	-0.4
	comp=Z,64nm,0.7s						
V44A	Blytheville	70.56	55	P	P	03 19 37.9	+1.1
	baz=326,SNR=15						
CRVS	Cervenica-Dubn	70.58	333	eP	P	03 19 36.8	0.0
CRVS				pmax	pmax		
	comp=Z,16nm,1.1s						
CRVS	Cervenica-Dubn	70.58	333	eP	P	03 19 36.8	0.0
KRLC	Kraliky	70.60	337	eP	P	03 19 37.2	+0.2
KRLC	Kraliky	70.60	337	eP	P	03 19 37.2	+0.2
UZH	Uzhgorod	70.61	333	eP	P	03 19 36.9	0.0
UTMT	University of	70.61	54	eP	P	03 19 37.6	+0.5
	comp=Z,137nm,0.9s						
U45A	Rockin P Farm,	70.65	54	P	P	03 19 38.0	+0.6
	baz=326,SNR=9.9						
PVCC	Panska Ves	70.66	338	eP	P	03 19 37.8	+0.6

PVCC				AMS	AMS	03 49 30.0	
	comp=Z,600nm,23.8s						
PVCC	Panska Ves	70.66	338	*e*P	P	03 19 37.8	+0.6
PVCC				MLR	MLR		
	comp=Z,600nm,23.8s						
WME	Myndd Eilian	70.68	351	⇑*e*P	P	03 19 36.9	-0.4
Q50A	Georgetown	70.70	49	P	P	03 19 37.6	-0.1
	baz=327,SNR=28						
MORC	Moravsky Berou	70.71	336	⇑*i*P	P	03 19 37.7	+0.1
MORC	Moravsky Berou	70.71	336	*e*P	P	03 19 37.6	+0.1
	comp=Z,84nm,1.2s						
MORC	Moravsky Berou	70.71	336	*e*P	P	03 19 37.6	0.0
MORC				pmax	pmax		
	comp=Z,84nm,1.2s						
MORC	Moravsky Berou	70.71	336	⇑*i*P	P	03 19 37.7	0.0
WTSB	Winterswijk	70.71	344	*i* P	P	03 19 37.3	-0.2
	comp=Z,65nm,0.9s						
BUR08	Bucovina Ar. S	70.73	330	*e*P	P	03 19 37.5	-0.3
PKME	Peaks-Kenny Pk	70.73	35	P	P	03 19 37.7	0.0
	baz=333,SNR=13						
LBNH	Lisbon	70.75	38	P	P	03 19 37.9	+0.1
	baz=332,SNR=23						
LBNH	Lisbon	70.75	38	*e*P	P	03 19 38.0	+0.1
	comp=Z,48nm,0.8s						
LBNH	Lisbon	70.75	38	*e*P	P	03 19 38.0	+0.1
LBNH				pmax	pmax		
	comp=Z,48nm,0.8s						
BUR04	Bucovina Ar. S	70.75	330	*e*P	P	03 19 37.8	-0.1
BURAR	Bucovina Array	70.75	330	⇑*i*P	P	03 19 37.2	-0.8
HALT	Halls	70.75	54	*e*P	P	03 19 39.0	+1.0
	comp=Z,252nm,1.2s						
WPM1	Penmaenmawr	70.78	351	⇑*e*P	P	03 19 37.6	-0.3
S48A	Wiedeman Farm,	70.78	51	P	P	03 19 38.2	0.0
	baz=327,SNR=74						
W43A	Forest City	70.79	56	P	P	03 19 38.7	+0.4
	baz=326						
X42A	Stuttgart	70.79	57	P	P	03 19 38.7	+0.4
	baz=325,SNR=7.1						
Q51A	Peebles	70.81	48	P	P	03 19 38.1	-0.2
	baz=327,SNR=40						
WACR	West Acre	70.83	348	⇑*e*P	P	03 19 38.2	0.0
WACR				IAmb	IAmb	03 19 40.1	
	comp=Z,188nm,0.9s						
LANS	Liptovska Anna	70.84	335	*e*P	P	03 19 39.8	+1.4
LANS	Liptovska Anna	70.84	335	*e*P	P	03 19 39.8	+1.4
Y41A	Eaglette Beard	70.87	58	P	P	03 19 39.5	+0.7
	baz=325,SNR=9.4						
T47A	Sharon Grove	70.88	52	P	P	03 19 39.1	+0.4
	baz=326,SNR=83						
T47A	Sharon Grove	70.88	52	*e*P	P	03 19 39.0	+0.2
	comp=Z,128nm,0.7s						
ACCN	Adirondack Com	70.88	39	*e*P	P	03 19 38.2	-0.5
	comp=Z,46nm,0.8s						
U46A	Springville	70.91	53	P	P	03 19 39.4	+0.5
	baz=326,SNR=28						
PBKI	Pangkalan Bun	70.92	234	P	P	03 19 39.8	+0.6
	comp=Z,268nm,1.0s						
YLL	Llanberis	70.92	351	⇑*e*P	P	03 19 39.5	+0.8
435B	Jarrell	70.93	63	P	P	03 19 39.5	+0.3
	baz=324,SNR=7.2						
435B	Jarrell	70.93	63	*e*P	P	03 19 39.8	+0.6
	comp=Z,20nm,0.8s						
Z40A	Long Farm, Mag	71.00	59	P	P	03 19 40.4	+0.9
	baz=325,SNR=5.8						
DSB	Dublin	71.00	352	*e*P	P	03 19 39.6	+0.3
	comp=Z,73nm,0.8s						
COEN	Coen	71.03	199	*e*P	P	03 19 40.9	+1.1
	comp=Z,87nm,1.0s						
CWF	Charnwood Fore	71.04	349	⇑*e*P	P	03 19 38.8	-0.7
CWF				IAmb	IAmb	03 19 41.5	
	comp=Z,64nm,0.9s						
BINY	Binghamton	71.06	41	P	P	03 19 38.9	-0.8
	baz=330,SNR=13						
BINY	Binghamton	71.06	41	*e*P	P	03 19 39.0	-0.8
	comp=Z,34nm,0.8s						
V45A	Humboldt	71.06	54	P	P	03 19 40.3	+0.4
	baz=326,SNR=12						
FOEL	Foel Wylfa	71.08	350	⇑*e*P	P	03 19 39.4	-0.4
FOEL				IAmb	IAmb	03 19 41.3	
	comp=Z,123nm,0.8s						
HNH	Hanover	71.09	38	*e*P	P	03 19 39.6	-0.3
	comp=Z,42nm,0.8s						
T48A	Bowling Green	71.09	52	P	P	03 19 40.0	-0.1
	baz=327,SNR=30						
BIZ	Bicaz	71.11	329	⇑*i*P	P	03 19 40.1	+0.1
PRA	Prague	71.12	338	*e*P	P	03 19 40.9	+0.9
PRA	Prague	71.12	338	*e*P	P	03 19 40.9	+0.9
MET	Memphis--Engin	71.12	55	*e*P	P	03 19 41.7	+1.5
	comp=Z,328nm,0.6s						
W44A	Shelby Farms P	71.16	55	P	P	03 19 41.4	+0.9
	baz=326						
LLW	Llanuwychllyn	71.17	351	⇑*e*P	P	03 19 39.7	-0.5
PRU	Pruhonice	71.17	338	*e*P	P	03 19 41.0	+0.7
PRU				*e*x	x	03 24 01.2	
PRU				*e*S	S	03 28 50.5	+0.4
PRU				AMS	AMS	03 49 50.0	
	comp=Z,600nm,23.3s						
PRU	Pruhonice	71.17	338	*e*P	P	03 19 41.0	+0.7
PRU				*e*		03 24 01.2	
PRU				*e*S	S	03 28 50.5	+0.4
PRU				MLR	MLR		
	comp=Z,600nm,23.3s						
X43A	Marvell	71.17	56	P	P	03 19 41.1	+0.6
	baz=326,SNR=26						
X43A	Marvell	71.17	56	*e*P	P	03 19 41.0	+0.4
	comp=Z,139nm,0.8s						
GOPC	GO Pecny, Ondr	71.19	338	*e*P	P	03 19 40.6	+0.1
GOPC				*e*x	x	03 23 59.3	
GOPC				*e*S	S	03 28 49.3	-1.1
GOPC				AMS	AMS	03 50 20.0	
	comp=Z,600nm,22.1s						
GOPC	GO Pecny, Ondr	71.19	338	*e*P	P	03 19 40.6	+0.1
GOPC				*e*		03 23 59.3	
GOPC				*e*S	S	03 28 49.3	-1.1
GOPC				MLR	MLR		
	comp=Z,600nm,22.1s						
TPRI	Tanjung Pinang	71.19	242	P	P	03 19 39.3	-1.6
	comp=Z,599nm,0.4s						
KECS	Kecovo	71.21	334	*e*P	P	03 19 40.7	+0.1
KECS	Kecovo	71.21	334	*e*P	P	03 19 40.7	+0.1
WVL	Waterville	71.23	36	*e*P	P	03 19 40.7	-0.1
	comp=Z,22nm,0.8s						
CCAR	Cane Creek	71.25	57	*e*P	P	03 19 42.1	+1.1
	comp=Z,100nm,0.9s						
U47A	Clarksville	71.25	53	P	P	03 19 41.3	+0.4
	baz=326,SNR=50						
WVT	Waverly	71.26	53	*e*P	P	03 19 41.5	+0.4
	comp=Z,90nm,0.6s						
WVT	Waverly	71.26	53	*e*P	P	03 19 41.5	+0.4
WVT				pmax	pmax		
	comp=Z,90nm,0.6s						
Z41A	Richland Creek	71.29	58	P	P	03 19 41.9	+0.6
	baz=325						
Z41A	Richland Creek	71.29	58	*e*P	P	03 19 41.3	0.0
	comp=Z,72nm,1.3s						
Y42A	Garnett, Star	71.30	57	P	P	03 19 42.2	+0.8
	baz=325,SNR=22						
R51A	Hillsboro	71.32	49	P	P	03 19 41.6	+0.2
	baz=327,SNR=46						
VRAC	Vranov	71.37	337	⇑*i*P	P	03 19 41.8	+0.2
VRAC	Vranov	71.37	337	⇑*i*P	P	03 19 41.7	+0.2
NKC	Novy Kostel	71.37	340	*e*P	P	03 19 42.2	+0.7
NKC				*e*x	x	03 24 02.8	
NKC				*e*S	S	03 28 51.0	-1.4
NKC				AMS	AMS	03 48 50.0	
	comp=Z,600nm,24.5s						
NKC	Novy Kostel	71.37	340	*e*P	P	03 19 42.2	+0.7
NKC				*e*		03 24 02.8	
NKC				*e*S	S	03 28 51.0	-1.4
NKC				MLR	MLR		
	comp=Z,600nm,24.5s						
V46A	Holladay	71.40	53	P	P	03 19 42.2	+0.2
	baz=326,SNR=82						
140A	Cam and Jess,	71.42	59	P	P	03 19 43.0	+0.9
	baz=325						
140A	Cam and Jess,	71.42	59	*e*P	P	03 19 42.5	+0.4
	comp=Z,50nm,0.8s						
HLM1	Long Mynd	71.42	350	*e*P	P	03 19 41.7	-0.1
HLM1				IAmb	IAmb	03 19 43.3	
	comp=Z,55nm,0.8s						
W45A	Hickory Valley	71.44	55	P	P	03 19 42.8	+0.6
	baz=326,SNR=17						
T49A	Edmonton	71.47	51	P	P	03 19 42.5	+0.1
	baz=327,SNR=112						
T49A	Edmonton	71.47	51	*e*P	P	03 19 42.5	+0.1
	comp=Z,95nm,0.6s						
LHMI	Lhok Sumawe	71.48	251	*e*P	P	03 19 43.0	+0.3
	comp=Z,185nm,1.1s						
FFD	Franklin Falls	71.52	38	*e*P	P	03 19 42.8	+0.3
	comp=Z,32nm,0.7s						
U48A	Cassie Pea, Po	71.52	52	P	P	03 19 42.8	+0.1
	baz=327,SNR=73						
X44A	Crenshaw	71.53	56	P	P	03 19 43.7	+1.0
	baz=326,SNR=75						
JAVC	Velka Javorina	71.54	336	⇑*i*P	P	03 19 43.8	+1.1
NATX	Nacogdoches	71.60	61	P	P	03 19 44.0	+0.9
	baz=325,SNR=8.6						
NATX	Nacogdoches	71.60	61	*e*P	P	03 19 44.1	+0.9
	comp=Z,59nm,0.8s						
VYHS	Vyhne	71.61	335	*e*P	P	03 19 43.2	+0.2
VYHS				pmax	pmax		
	comp=Z,38nm,1.6s						
VYHS	Vyhne	71.61	335	*e*P	P	03 19 43.2	+0.2
KRUC	Moravsky	71.64	337	⇑*i*P	P	03 19 43.4	+0.2
V47A	Nunnelly	71.65	53	P	P	03 19 43.7	+0.2
	baz=326,SNR=43						
Y43A	Makayla and Ka	71.65	57	P	P	03 19 44.3	+0.8
	baz=326,SNR=8.9						
SSPA	Standing Stone	71.67	44	P	P	03 19 42.9	-0.6
	baz=329						
SSPA	Standing Stone	71.67	44	*e*P	P	03 19 43.0	-0.5
	comp=Z,52nm,0.9s						
Z42A	Norrel Spur, H	71.69	58	P	P	03 19 44.3	+0.7
	baz=325						
R52A	Catlettsburg	71.69	48	P	P	03 19 43.4	-0.2
	baz=328,SNR=41						
KSPA	Keystone Colle	71.69	42	*e*P	P	03 19 42.6	-1.0
	comp=Z,38nm,0.7s						
O56A	Blue Knob Stat	71.72	44	P	P	03 19 43.2	-0.6
	baz=329,SNR=34						
O56A	Blue Knob Stat	71.72	44	*e*P	P	03 19 43.3	-0.6
	comp=Z,52nm,0.8s						
MCWV	Mont Chateau	71.73	45	P	P	03 19 43.6	-0.3
	baz=329,SNR=6.7						
MCWV	Mont Chateau	71.73	45	*e*P	P	03 19 43.5	-0.3
	comp=Z,41nm,0.8s						
141A	Papa Simpson,	71.77	59	P	P	03 19 45.1	+0.9
	baz=325,SNR=7.4						
240A	Hunter Patters	71.81	60	P	P	03 19 45.2	+0.8
	baz=325						
240A	Hunter Patters	71.81	60	*e*P	P	03 19 45.3	+0.8
	comp=Z,39nm,0.8s						
EMMW	East Machias	71.82	34	*e*P	P	03 19 44.2	-0.1
	comp=Z,68nm,0.8s						
HYB	Hyderabad	71.82	274	*i* P	P	03 19 43.0	-1.7
HYB	Hyderabad	71.82	274	*e*P	P	03 19 43.2	-1.5
HYB				IAmb	IAmb	03 19 45.3	
	comp=Z,14nm,0.8s						
W46A	Michie	71.83	54	P	P	03 19 44.6	+0.1
	baz=326,SNR=33						
T50A	Nancy	71.85	50	P	P	03 19 44.6	0.0
	baz=327,SNR=88						
MMRI	Maumere	71.86	221	*e*P	P	03 19 44.8	-0.1
	comp=Z,83nm,0.7s						
U49A	Red Boiling Sp	71.86	51	P	P	03 19 44.8	+0.1
	baz=327,SNR=43						
LTVH	L˘'tav˘'rtes,	71.86	332	⇑*e*P	P	03 19 45.7	+1.2
OXF	Oxford	71.87	55	P	P	03 19 45.2	+0.5
	baz=326,SNR=43						
OXF	Oxford	71.87	55	*e*P	P	03 19 45.3	+0.5
	comp=Z,174nm,0.8s						
OXF	Oxford	71.87	55	*e*P	P	03 19 45.3	+0.5
OXF				pmax	pmax		
	comp=Z,170nm,0.8s						
S51A	Beattyville	71.87	49	P	P	03 19 44.6	-0.2
	baz=328,SNR=28						
S51A	Beattyville	71.87	49	*e*P	P	03 19 44.7	-0.1
	comp=Z,44nm,0.8s						
PSZ	Piszkesteto	71.88	334	⇑*e*P	P	03 19 44.9	+0.2
PSZ	Piszkesteto	71.88	334	*e*P	P	03 19 45.6	+0.9
	comp=Z,30nm,0.9s						
PSZ	Piszkesteto	71.88	334	*e*P	P	03 19 45.6	+0.9
PSZ				pmax	pmax		
	comp=Z,30nm,0.9s						
TLCR		71.88	327	⇑*i*P	P	03 19 44.6	0.0
VRI	Vrincioaia	71.90	329	⇓*i*P	P	03 19 44.4	-0.4
MCH1	Michaelchurch	71.95	350	⇑*e*P	P	03 19 44.8	-0.1
MCH1				IAmb	IAmb	03 19 46.2	
	comp=Z,129nm,0.8s						
Y44A	Strider, Charl	71.95	56	P	P	03 19 46.2	+1.0
	baz=326,SNR=14						
X45A	UM Field Stati	71.95	55	P	P	03 19 45.6	+0.3
	baz=326,SNR=14						
833A	Chaparral WMA,	71.98	66	P	P	03 19 46.4	+0.8
	baz=324,SNR=6.8						
833A	Chaparral WMA,	71.98	66	*e*P	P	03 19 46.5	+1.0
	comp=Z,14nm,0.8s						
HGN	Heimansgroeve	72.01	344	*i* P	P	03 19 45.0	-0.4
	comp=Z,89nm,1.1s						
BEBN	Eben Emael	72.02	344	⇑P	P	03 19 45.1	-0.2
CJR	Cluj-Napoca	72.02	331	⇑*i*P	P	03 19 45.4	-0.2
V48A	Smith Brothers	72.04	53	P	P	03 19 45.9	+0.1
	baz=327,SNR=74						
V48A	Smith Brothers	72.04	53	*e*P	P	03 19 45.8	0.0
	comp=Z,74nm,0.7s						
S52A	Salyersville	72.06	49	P	P	03 19 46.0	+0.1
	baz=328,SNR=42						
Z43A	Armstrong Fami	72.08	57	P	P	03 19 46.8	+0.8
	baz=326						
MONM	Monmouth	72.08	350	⇑*e*P	P	03 19 45.5	-0.2
MONM				IAmb	IAmb	03 19 47.2	
	comp=Z,191nm,0.8s						
MODS	Modra-Piesok	72.09	336	*e*P	P	03 19 46.6	+0.7
MODS				pmax	pmax		
	comp=Z,54nm,1.1s						
MODS	Modra-Piesok	72.09	336	*e*P	P	03 19 46.6	+0.7
W47A	Westpoint	72.09	53	P	P	03 19 46.3	+0.2
	baz=326,SNR=41						
PLAL	Pickwick Lake	72.10	54	*e*P	P	03 19 46.0	-0.1
	comp=Z,146nm,0.7s						
CFR	Carcaliu	72.10	327	⇓*i*P	P	03 19 45.5	-0.4
GRFO	Grafenberg	72.12	340	*e*P	P	03 19 45.8	-0.3
	comp=Z,77nm,0.8s						
GRFO	Grafenberg	72.12	340	*e*P	P	03 19 45.8	-0.3
GRFO				pmax	pmax		
	comp=Z,77nm,0.8s						
MEM	Membach	72.15	344	⇑P	P	03 19 45.6	-0.6
	comp=Z,114nm,0.9s						
SOEI	Soe	72.16	219	*e*P	P	03 19 48.1	+1.4
	comp=Z,83nm,1.0s						
KHC	Kasperske Hory	72.19	338	*e*P	P	03 19 47.2	+0.7
KHC				*e*x	x	03 24 15.2	
KHC				*e*S	S	03 29 01.2	-0.7
KHC				AMS	AMS	03 50 20.0	
	comp=Z,600nm,28.7s						
KHC	Kasperske Hory	72.19	338	*e*P	P	03 19 46.7	+0.2
	comp=Z,30nm,1.0s						
KHC	Kasperske Hory	72.19	338	*e*P	P	03 19 47.2	+0.7
KHC				*e*		03 24 15.2	
KHC				*e*S	S	03 29 01.2	-0.7
DRGR		72.19	332	⇓*i*P	P	03 19 46.7	+0.1
DOPR	Dopca	72.20	329	⇓*i*P	P	03 19 47.0	+0.4
X46A	Booneville	72.22	55	P	P	03 19 47.0	+0.1
	baz=326,SNR=61						
UCC	Uccle	72.22	345	⇑P	P	03 19 45.9	-0.7
UCC	Uccle	72.22	345	*e*P	P	03 19 46.6	0.0
	comp=Z,29nm,1.0s						
UCC	Uccle	72.22	345	*e*P	P	03 19 46.6	0.0
UCC				pmax	pmax		
	comp=Z,29nm,1.0s						
241A	Mo Tay, Goldon	72.24	59	P	P	03 19 47.9	+0.9
	baz=325,SNR=12						
241A	Mo Tay, Goldon	72.24	59	*e*P	P	03 19 48.1	+1.1
	comp=Z,188nm,1.4s						
N59A	State Game Lan	72.24	42	P	P	03 19 46.3	-0.7
	baz=330,SNR=29						
N59A	State Game Lan	72.24	42	*e*P	P	03 19 46.2	-0.7
	comp=Z,54nm,0.6s						
142A	Monroe	72.28	58	P	P	03 19 48.1	+0.9
	baz=326						
HGH	Gray Hill	72.28	350	*e*P	P	03 19 46.3	-0.6
QUA2	Belchertown	72.31	39	*e*P	P	03 19 46.7	-0.6
	comp=Z,26nm,0.9s						
Y45A	Yeager Farm, C	72.34	56	P	P	03 19 48.5	+0.9
	baz=326,SNR=47						
DSRI	Dabo	72.37	241	P	P	03 19 48.3	+0.4
HRV	Adam Dziewonsk	72.40	38	P	P	03 19 47.9	+0.1
	baz=332						
HRV	Adam Dziewonsk	72.40	38	*e*P	P	03 19 47.9	+0.1
	comp=Z,42nm,0.6s						
HRV	Adam Dziewonsk	72.40	38	*e*P	P	03 19 47.9	+0.1
HRV				pmax	pmax		
	comp=Z,42nm,0.7s						
Z44A	Pea Ridge, Bel	72.41	57	P	P	03 19 48.5	+0.5
	baz=326,SNR=8.0						
143A	Socs Landing,	72.42	58	P	P	03 19 49.0	+1.0
	baz=326,SNR=8.6						
143A	Socs Landing,	72.42	58	*e*P	P	03 19 49.0	+1.0
	comp=Z,72nm,0.8s						
V49A	McMinnville	72.43	52	P	P	03 19 48.0	-0.1
	baz=327,SNR=33						
GEC2	GERESS Array S	72.43	338	*e*P	P	03 19 48.1	0.0
	comp=Z,41nm,0.8s						
GEC2	GERESS Array S	72.43	338	*e*P	P	03 19 48.1	0.0
GEC2				pmax	pmax		
	comp=Z,41nm,0.8s						
GERES	GERESS Array B	72.43	338	P	P	03 19 48.0	0.0
	comp=Z,33nm,0.8s,baz=35,slow=4.9,SNR=133						
GERES				LR	LR	03 56 46.4	
	comp=Z,447nm,19.2s,baz=20,slow=40						
GERES	GERESS Array B	72.43	338	P	P	03 19 48.0	0.0
GERES				pmax	pmax		
	comp=Z,33nm,0.8s						
GERES				MLR	MLR		
	comp=Z,447nm,19.2s						
GEA0	GERESS Array S	72.44	338	*e*P	P	03 19 47.2	-0.9
MLR	Muntele Rosu	72.47	329	LR	LR	03 56 21.3	
	comp=Z,141nm,19.6s,baz=41,slow=40						
MLR	Muntele Rosu	72.47	329	⇓*i*P	P	03 19 49.2	+0.8
MLR	Muntele Rosu	72.47	329	*e*P	P	03 19 48.5	+0.1
	comp=Z,41nm,0.8s						
MLR	Muntele Rosu	72.47	329	*e*P	P	03 19 48.5	+0.1
MLR				pmax	pmax		
	comp=Z,41nm,0.8s						
PSI	Prapat	72.47	248	*e*P	P	03 19 47.8	-0.9
	comp=Z,52nm,1.0s						
PSI	Prapat	72.47	248	*e*P	P	03 19 47.8	-0.9
PSI				pmax	pmax		
	comp=Z,52nm,1.0s						
PAGS	Pennsylvania G	72.47	43	*e*P	P	03 19 47.5	-0.7
	comp=Z,28nm,0.8s						
HKT	Hockley	72.48	63	*e*P	P	03 19 49.1	+0.7
	comp=Z,26nm,1.1s						
HKT	Hockley	72.48	63	*e*P	P	03 19 49.1	+0.7
HKT				pmax	pmax		
	comp=Z,26nm,1.1s						
W48A	Pulaski	72.49	53	P	P	03 19 48.6	+0.1
	baz=327,SNR=89						
BUD	Budapest	72.50	334	⇑*e*P	P	03 19 48.4	+0.1
SNF	Seneffe	72.51	345	⇓P	P	03 19 48.4	+0.1
ODNJ	Ogdensburg	72.54	41	*e*P	P	03 19 47.6	-1.0
	comp=Z,24nm,0.8s						
VAL	Valentia	72.55	355	⇓*i*P	P	03 19 49.8	+1.3
T52A	Hallie	72.58	49	P	P	03 19 49.4	+0.4
	baz=328,SNR=72						
242A	Grayson	72.58	59	P	P	03 19 49.7	+0.7
	baz=326						
X47A	Russelville	72.58	54	P	P	03 19 48.9	-0.1
	baz=326,SNR=115						
WES	Weston	72.59	38	*e*P	P	03 19 48.9	0.0
	comp=Z,58nm,0.6s						
WES	Weston	72.59	38	*e*P	P	03 19 48.9	0.0
WES				pmax	pmax		
	comp=Z,58nm,0.7s						
HARR	Harsova	72.60	327	⇑*i*P	P	03 19 48.9	0.0
Y46A	Houston	72.64	55	P	P	03 19 49.9	+0.5
	baz=326,SNR=178						
TIRR	Tirgusor	72.66	327	⇓*i*P	P	03 19 48.5	-0.8
TIRR	Tirgusor	72.66	327	*e*P	P	03 19 49.2	-0.1
	comp=Z,26nm,0.9s						
TIRR	Tirgusor	72.66	327	*e*P	P	03 19 49.2	-0.1
TIRR				pmax	pmax		
	comp=Z,26nm,0.9s						
TLB	Topalu	72.66	327	⇑*i*P	P	03 19 49.0	-0.3
LUPA	Lehigh Univers	72.67	42	*e*P	P	03 19 48.8	-0.6
	comp=Z,5.8nm,1.2s						
Z45A	Winona	72.68	56	P	P	03 19 50.4	+0.8
	baz=326,SNR=27						
Z45A	Winona	72.68	56	*e*P	P	03 19 50.4	+0.8
	comp=Z,193nm,0.6s						
341A	Kurthwood	72.68	60	P	P	03 19 50.4	+0.8
	baz=325,SNR=12						
341A	Kurthwood	72.68	60	*e*P	P	03 19 50.4	+0.8
	comp=Z,99nm,1.4s						
VOIR		72.78	329	⇓*i*P	P	03 19 50.1	0.0
CSKK	Cs˘‡kako	72.80	335	⇓*e*P	P	03 19 51.0	+0.9
W49A	Belvidere	72.81	53	P	P	03 19 50.3	0.0
	baz=327,SNR=39						
TZTN	Tazewell	72.81	50	P	P	03 19 50.7	+0.3
	baz=328,SNR=93						
TZTN	Tazewell	72.81	50	*e*P	P	03 19 50.5	+0.1
	comp=Z,89nm,0.6s						
MTN	Manton Dam	72.83	211	*e*P	P	03 19 51.3	+0.8
	comp=Z,91nm,0.8s						
CONA	Conrad Observa	72.83	337	*e*P	P	03 19 51.5	+1.1
	comp=Z,36nm,0.9s,SNR=20						
PAL	Palisades	72.86	41	P	P	03 19 49.9	-0.6
	baz=331,SNR=17						
PAL	Palisades	72.86	41	*e*P	P	03 19 50.0	-0.6
	comp=Z,74nm,0.6s						
PAL	Palisades	72.86	41	*e*P	P	03 19 50.0	-0.6
PAL				pmax	pmax		
	comp=Z,74nm,0.7s						
V50A	Pikevile	72.86	51	P	P	03 19 50.7	0.0
	baz=327,SNR=60						
AFI	Afiamalu	72.87	153	LR	LR	03 44 37.9	
	comp=Z,542nm,21.0s,baz=2.0,slow=30						
AFI	Afiamalu	72.87	153	*e*P	P	03 19 50.1	-0.7
	comp=Z,63nm,1.0s						
AFI	Afiamalu	72.87	153	*e*P	P	03 19 50.1	-0.7
AFI				pmax	pmax		
	comp=Z,63nm,1.0s						
DOU	Dourbes	72.87	345	⇑P	P	03 19 50.2	-0.3
	comp=Z,25nm,1.0s						
SWET	Sewanee	72.87	52	*e*P	P	03 19 50.8	-0.1
	comp=Z,201nm,0.6s						
BRNJ	Basking Ridge	72.90	41	*e*P	P	03 19 50.5	-0.3
	comp=Z,41nm,0.8s						
BRYW	Bryant College	72.92	39	*e*P	P	03 19 50.7	-0.2
	comp=Z,44nm,0.7s						
144A	Alexander Plac	72.94	57	P	P	03 19 52.0	+0.9
	baz=326						
ARR	Arges	72.96	330	⇑*i*P	P	03 19 51.4	+0.2
X48A	Hartselle	73.01	54	P	P	03 19 51.3	-0.2
	baz=327,SNR=31						
X48A	Hartselle	73.01	54	*e*P	P	03 19 51.3	-0.2
	comp=Z,49nm,0.8s						
CPNY	Central Park	73.03	41	*e*P	P	03 19 51.1	-0.5
	comp=Z,66nm,0.6s						
WLF	Walferdange	73.05	344	⇑P	P	03 19 51.9	+0.4
WLF	Walferdange	73.05	344	*e*P	P	03 19 51.9	+0.4
	comp=Z,43nm,1.0s						
WLF	Walferdange	73.05	344	*e*P	P	03 19 51.9	+0.4
WLF				pmax	pmax		
	comp=Z,43nm,1.0s						
243A	Waterproof	73.05	58	P	P	03 19 53.0	+1.2
	baz=326,SNR=8.7						
342A	Flagon Creek P	73.06	59	P	P	03 19 52.9	+1.1
	baz=326,SNR=5.7						
342A	Flagon Creek P	73.06	59	*e*P	P	03 19 53.2	+1.3
	comp=Z,53nm,0.8s						
HTL	Hartland	73.08	351	⇑*e*P	P	03 19 51.1	-0.5
HTL				IAmb	IAmb	03 19 52.3	
	comp=Z,40nm,0.9s						
V51A	Loudon	73.08	51	P	P	03 19 52.0	0.0
	baz=328,SNR=54						
V51A	Loudon	73.08	51	*e*P	P	03 19 52.0	0.0
	comp=Z,98nm,0.7s						
Y47A	UCPARC, Winfie	73.10	54	P	P	03 19 52.0	-0.1
	baz=327,SNR=59						
SDMD	Soldier's Deli	73.13	44	*e*P	P	03 19 51.9	-0.3
	comp=Z,17nm,0.7s						
441A	DeRidder	73.15	60	P	P	03 19 53.9	+1.4
	baz=326,SNR=5.6						
W50A	Signal Mountai	73.16	52	P	P	03 19 52.6	+0.1
	baz=327,SNR=76						
W50A	Signal Mountai	73.16	52	*e*P	P	03 19 52.6	+0.1
	comp=Z,97nm,0.6s						
Z46A	Louisville	73.18	56	P	P	03 19 53.3	+0.7
	baz=326,SNR=20						
145A	Houston Renfro	73.20	57	P	P	03 19 53.6	+0.9
	baz=326,SNR=16						
PSUB	Penn St. - Bra	73.22	42	*e*P	P	03 19 52.0	-0.7
	comp=Z,19nm,1.0s						
VBMS	Vicksburg	73.24	57	P	P	03 19 53.7	+0.8
	baz=326,SNR=11						
VBMS	Vicksburg	73.24	57	*e*P	P	03 19 54.0	+1.1
	comp=Z,64nm,0.8s						
MOA	Molln	73.26	338	*i* P	P	03 19 53.6	+0.8
	comp=Z,19nm,0.9s,SNR=9.4						

X49A	Woodville	73.28	53	P	P	03 19 53.3	+0.1
	baz=327,SNR=106						
244A	Avery, Jackson	73.30	58	P	P	03 19 54.3	+1.0
	baz=326,SNR=34						
CPCT	Cooper Cave	73.31	51	eP	P	03 19 53.3	0.0
	comp=Z,70nm,0.7s						
U53A	Fall Branch	73.38	49	P	P	03 19 53.9	+0.1
	baz=328,SNR=56						
V52A	Sevierville	73.38	50	P	P	03 19 53.9	+0.2
	baz=328,SNR=70						
V52A	Sevierville	73.38	50	eP	P	03 19 53.9	+0.2
	comp=Z,89nm,0.6s						
STU	Stuttgart	73.39	341	eP	P	03 19 54.0	+0.4
	comp=Z,58nm,1.3s						
STU	Stuttgart	73.39	341	eP	P	03 19 54.0	+0.4
STU				pmax	pmax		
	comp=Z,58nm,1.3s						
Y48A	Jasper	73.40	54	P	P	03 19 53.5	-0.4
	baz=327,SNR=62						
TKL	Tuckaleechee C	73.46	50	P	P	03 19 54.4	+0.2
	comp=Z,36nm,0.7s,baz=152,slow=0.7,SNR=87						
TKL				LR	LR	03 52 54.2	
	comp=Z,803nm,21.1s,baz=338,slow=36						
TKL	Tuckaleechee C	73.46	50	eP	P	03 19 54.1	-0.1
	comp=Z,43nm,0.8s						
BKNI	Bangkinang	73.47	245	eP	P	03 19 55.5	+1.0
	comp=Z,302nm,1.3s						
343A	Vidalia	73.48	59	P	P	03 19 55.5	+1.2
	baz=326						
ARSA	Arzberg	73.55	337	i P	P	03 19 55.6	+1.1
	comp=Z,32nm,0.9s,SNR=14						
M65A	Busby, Falmout	73.55	38	P	P	03 19 54.4	-0.2
	baz=332						
442A	Mamou	73.55	60	P	P	03 19 56.3	+1.5
	baz=326						
BZS	Buzias	73.57	332⇑	iP	P	03 19 54.0	-0.7
BLA	Blacksburg	73.58	47	P	P	03 19 54.9	0.0
	baz=329,SNR=34						
BLA	Blacksburg	73.58	47	eP	P	03 19 54.9	0.0
	comp=Z,132nm,1.0s						
BLA	Blacksburg	73.58	47	eP	P	03 19 54.9	0.0
BLA				pmax	pmax		
	comp=Z,130nm,1.0s						
POO	Poona	73.58	279	eP	P	03 19 53.2	-2.0
POO				IAmb	IAmb	03 19 54.5	
	comp=Z,24nm,0.6s						
Z47A	Carrollton	73.58	55	P	P	03 19 55.1	+0.2
	baz=327,SNR=57						
146A	Union	73.58	56	P	P	03 19 56.1	+1.1
	baz=326,SNR=49						
146A	Union	73.58	56	eP	P	03 19 55.5	+0.6
	comp=Z,296nm,0.7s						
X50B	Fort Payne	73.63	52	P	P	03 19 55.2	-0.1
	baz=327,SNR=58						
Z48A	Northport	73.67	54	P	P	03 19 55.2	-0.2
	baz=327,SNR=78						
245A	Little AP, Sta	73.69	57	P	P	03 19 56.5	+1.0
	baz=326,SNR=12						
541A	Lake Charles	73.72	61	P	P	03 19 57.1	+1.3
	baz=326						
VWCC	Virginia Weste	73.73	47	eP	P	03 19 55.4	-0.4
344A	Westbrook Farm	73.77	58	P	P	03 19 57.4	+1.3
	baz=326,SNR=5.2						
344A	Westbrook Farm	73.77	58	eP	P	03 19 56.4	+0.4
	comp=Z,78nm,0.8s						
MORH	Mˆ‡rˆ¡gy, Hung	73.78	334⇑	eP	P	03 19 54.8	-1.1
Y49A	Blount Mountai	73.79	53	P	P	03 19 56.1	-0.1
	baz=327,SNR=82						
Y49A	Blount Mountai	73.79	53	eP	P	03 19 56.1	-0.1
	comp=Z,95nm,0.6s						
443A	Delano Plantat	73.83	59	P	P	03 19 58.1	+1.7
	baz=326						
W52A	Murphy	73.87	51	P	P	03 19 56.7	+0.1
	baz=328,SNR=37						
W52A	Murphy	73.87	51	eP	P	03 19 56.7	+0.1
	comp=Z,73nm,0.8s						
V53A	Saluda	73.87	50	P	P	03 19 56.8	+0.1
	baz=328,SNR=44						
V53A	Saluda	73.87	50	eP	P	03 19 56.8	+0.1
	comp=Z,58nm,0.8s						
X51A	Calhoun	73.90	52	P	P	03 19 56.7	0.0
	baz=328,SNR=25						
X51A	Calhoun	73.90	52	eP	P	03 19 56.9	+0.1
	comp=Z,69nm,0.8s						
CVRD	Centerville Ro	73.91	45	eP	P	03 19 56.8	+0.1
	comp=Z,68nm,0.9s						
147A	Livingston	73.92	55	P	P	03 19 57.4	+0.5
	baz=327,SNR=35						
147A	Livingston	73.92	55	eP	P	03 19 57.4	+0.5
PTRD	Partlow Road	73.94	45	eP	P	03 19 56.8	-0.1
	comp=Z,41nm,1.0s						
ILGA	Ilgaz	73.94	322	eP	P	03 19 58.0	+0.8
	comp=Z,40nm,1.0s						
CCA1	Carnmenellis	73.95	351⇑	eP	P	03 19 57.0	+0.2
CCA1				IAmb	IAmb	03 19 58.0	
	comp=Z,60nm,0.8s						
CBN	Corbin Frederi	73.96	45	P	P	03 19 56.7	-0.3
	baz=330						
CBN	Corbin Frederi	73.96	45	eP	P	03 19 56.7	-0.3
	comp=Z,46nm,0.8s						
BFO	Black Forest	73.97	342	eP	P	03 19 56.7	-0.3
	comp=Z,35nm,1.0s						
BFO	Black Forest	73.97	342	i P	P	03 19 57.1	+0.1
542A	Morse	73.97	60	P	P	03 19 59.6	+2.4
	baz=326						
BEHE	Becsehely	73.99	335⇑	eP	P	03 19 57.0	-0.1
HERR	Herculane	74.03	331⇑	iP	P	03 19 57.3	-0.1
246A	Jackson Lee, B	74.06	56	P	P	03 19 59.0	+1.2
	baz=326						
Y50A	Piedmont	74.07	53	P	P	03 19 57.8	0.0
	baz=327,SNR=30						
PRD	Provadia	74.11	327	eP	P	03 19 58.4	+0.6
W53A	Cullowhee	74.14	50	P	P	03 19 58.4	+0.1
	baz=328,SNR=41						
KBA	Koelnbreinsper	74.19	338	i P	P	03 19 60.0	+1.5
	comp=Z,78nm,0.8s,SNR=28						
SOKA	Soboth	74.20	337	i P	P	03 19 59.2	+0.7
	comp=Z,45nm,0.9s,SNR=10.0						
LRAL	Lakeview Retre	74.21	54	P	P	03 19 58.2	-0.4
	baz=327,SNR=106						
LRAL	Lakeview Retre	74.21	54	eP	P	03 19 57.8	-0.8
	comp=Z,109nm,0.6s						
PERS	Pernice	74.22	337	i P	P	03 19 58.7	+0.2
345A	Thompson Farm,	74.22	58	P	P	03 19 59.9	+1.2
	baz=326,SNR=7.9						
148A	Greensboro	74.27	55	P	P	03 19 58.7	-0.3
	baz=327,SNR=13						
247A	Quitman	74.28	56	P	P	03 20 00.1	+1.1
	baz=327,SNR=17						
ECH	Echery	74.28	342	eP	P	03 19 58.4	-0.4
	comp=Z,71nm,1.1s						
ECH	Echery	74.28	342	eP	P	03 19 58.4	-0.4
ECH				pmax	pmax		
	comp=Z,71nm,1.1s						
Z49A	Columbiana	74.29	54	P	P	03 19 58.9	-0.2
	baz=327,SNR=66						
X52A	Dahlonega	74.30	51	P	P	03 19 59.1	0.0
	baz=328,SNR=48						
WATA	Walderalm	74.31	339	i P	P	03 20 01.1	+1.9
	comp=Z,39nm,0.9s,SNR=6.8						
MDVR	Moldovita	74.32	331⇓	iP	P	03 19 56.2	-2.9
RETA	Reutte	74.32	340	i P	P	03 19 59.7	+0.5
	comp=Z,28nm,0.8s,SNR=15						
543A	St. Martinvill	74.35	60	P	P	03 20 01.4	+2.0
	baz=326						
WTTA	Wattenberg	74.36	339	i P	P	03 20 00.3	+0.8
	comp=Z,38nm,0.9s,SNR=8.6						
Y51A	Rockmart	74.37	52	P	P	03 19 59.3	-0.2
	baz=328,SNR=50						
444A	Pine Grove	74.37	58	P	P	03 20 01.0	+1.5
	baz=326						
BG3	Lake Jocassee	74.39	50	eP	P	03 19 59.9	+0.3
	comp=Z,104nm,0.7s						
MOTA	Moosalm	74.39	340	i P	P	03 20 01.3	+1.6
	comp=Z,52nm,0.8s,SNR=33						
346A	Big Creek Wild	74.42	57	P	P	03 20 00.9	+1.0
	baz=326,SNR=14						
346A	Big Creek Wild	74.42	57	eP	P	03 20 01.1	+1.2
	comp=Z,88nm,0.7s						
URVA	University of	74.44	45	eP	P	03 19 59.8	-0.1
GSI	Gunungsitoli	74.45	249	eP	P	03 19 59.7	-0.4
	comp=Z,64nm,0.9s						
OBKA	Obir	74.47	337	i P	P	03 20 01.0	+1.0
	comp=Z,89nm,0.9s,SNR=16						
SZH	Strazhica	74.50	328	eP	P	03 19 59.6	-0.5
Z50A	Ashland	74.52	53	P	P	03 20 00.4	-0.1
	baz=327,SNR=132						
Z50A	Ashland	74.52	53	eP	P	03 20 00.1	-0.3
	comp=Z,140nm,0.6s						
MYKA	Terra Mystica	74.55	338	i P	P	03 20 01.1	+0.6
	comp=Z,42nm,1.1s,SNR=5.2						
445A	Amite	74.55	58	P	P	03 20 02.1	+1.5
	baz=326,SNR=12						
JSA	Saint Aubin	74.64	349⇑	eP	P	03 20 00.4	-0.4
JSA				IAmb	IAmb	03 20 02.0	
	comp=Z,124nm,0.8s						
X53A	Estanollee	74.64	51	P	P	03 20 01.4	+0.4
	baz=328,SNR=49						
248A	Dixon Mills	74.65	55	P	P	03 20 01.9	+0.8
	baz=327,SNR=51						
544A	White Castle	74.67	59	P	P	03 20 03.3	+2.0
	baz=326						
149A	Jones	74.67	54	P	P	03 20 01.3	+0.1
	baz=327,SNR=76						
ABTA	Abfaltersbach	74.68	338	i P	P	03 20 01.9	+0.7
	comp=Z,66nm,0.9s,SNR=23						
DAVA	Damuels	74.69	340	i P	P	03 20 01.6	+0.2
	comp=Z,15nm,0.9s,SNR=7.1						
LNIG	Linares	74.71	68	eP	P	03 20 01.6	-0.1
	comp=Z,28nm,1.2s						
FETA	Feichten	74.78	340	i P	P	03 20 02.7	+0.8
	comp=Z,76nm,0.9s,SNR=34						
ZAIG	Zacatecas	74.78	72	eP	P	03 20 03.0	+0.6
	comp=Z,16nm,1.0s						
Z51A	Franklin	74.81	53	P	P	03 20 01.8	-0.3
	baz=328,SNR=32						
Y52A	Lilburn	74.84	52	P	P	03 20 02.4	+0.1
	baz=328,SNR=28						
Y52A	Lilburn	74.84	52	eP	P	03 20 02.4	+0.1
	comp=Z,42nm,0.8s						
347A	Saraland	74.85	56	P	P	03 20 03.6	+1.3
	baz=327,SNR=22						
LJU	Ljubljana	74.91	337	i P	P	03 20 01.7	-0.8
KMSC	Kings Mountain	74.95	49	P	P	03 20 02.7	-0.2
	baz=329,SNR=55						
KMSC	Kings Mountain	74.95	49	eP	P	03 20 02.6	-0.2
	comp=Z,79nm,0.6s						
446A	Poplarville	74.97	57	P	P	03 20 04.2	+1.3
	baz=327						
150A	Eclectic	75.02	54	P	P	03 20 03.1	-0.2
	baz=328,SNR=67						
PAULI	Pauline	75.02	50	eP	P	03 20 02.8	-0.5
	comp=Z,24nm,0.8s						
249A	Camden	75.04	55	P	P	03 20 04.0	+0.6
	baz=327,SNR=46						
Y53A	Monroe	75.06	51	P	P	03 20 03.7	+0.1
	baz=328,SNR=42						
OZLJ	Ozalj	75.10	336	i P	P	03 20 03.3	-0.2
BR101	Keskin Array S	75.14	321	eP	P	03 20 03.3	-0.7
BR131	Keskin Array S	75.14	321	eP	P	03 20 03.6	-0.5
BRTR	Keskin Array B	75.14	321	P	P	03 20 03.3	-0.7
	comp=Z,9.0nm,0.7s,baz=45,slow=3.2,SNR=48						
BRTR				LR	LR	03 59 06.3	
	comp=Z,235nm,18.4s,baz=14,slow=40						
348A	Jackson	75.14	56	P	P	03 20 05.1	+1.1
	baz=327,SNR=13						
348A	Jackson	75.14	56	eP	P	03 20 04.3	+0.3
	comp=Z,306nm,1.4s						
DAVOX	Davos/Dischmat	75.17	340	P	P	03 20 04.4	+0.3
	comp=Z,61nm,0.9s,baz=352,slow=4.4,SNR=73						
DAVOX				LR	LR	03 56 07.2	
	comp=Z,372nm,21.7s,baz=32,slow=38						
Z52A	Williamson	75.25	52	P	P	03 20 04.7	+0.1
	baz=328,SNR=34						
BOJS	Bojanci	75.26	336	i P	P	03 20 04.1	-0.4
447A	Lucedale	75.30	57	P	P	03 20 06.0	+1.1
	baz=327,SNR=5.4						
447A	Lucedale	75.30	57	eP	P	03 20 06.2	+1.3
	comp=Z,105nm,1.1s						
ANTO	Ankara	75.31	322⇑	iP	P	03 20 04.7	-0.3
ANTO	Ankara	75.31	322	eP	P	03 20 04.9	-0.1
	comp=Z,33nm,1.1s						
ANTO	Ankara	75.31	322	eP	P	03 20 04.9	-0.1
ANTO				pmax	pmax		
	comp=Z,33nm,1.1s						
HODGE	Hodges	75.33	50	eP	P	03 20 05.1	+0.1
	comp=Z,44nm,0.7s						
BR231	Keskin MP Arra	75.34	322	eP	P	03 20 05.8	+0.6
151A	Opelika	75.40	53	P	P	03 20 05.1	-0.4
	baz=328,SNR=39						
DIVS	Divibare	75.41	332	eP	P	03 20 05.3	-0.2
	comp=Z,45nm,1.0s						
250A	Grady	75.43	54	P	P	03 20 05.8	+0.1
	baz=328,SNR=42						
250A	Grady	75.43	54	eP	P	03 20 05.8	+0.1
	comp=Z,91nm,0.6s						
Y54A	Tignall	75.45	51	P	P	03 20 06.1	+0.3
	baz=328,SNR=116						
645A	Chauvin	75.48	59	P	P	03 20 08.5	+2.6
	baz=326						
GOGA	Godfrey	75.49	51	P	P	03 20 05.8	-0.1
	baz=328,SNR=12						
GOGA	Godfrey	75.49	51	eP	P	03 20 06.0	0.0
	comp=Z,18nm,0.8s						
GOGA	Godfrey	75.49	51	eP	P	03 20 06.0	0.0
GOGA				pmax	pmax		
	comp=Z,18nm,0.8s						
BLY	Banja Luka	75.51	335⇑	iP	P	03 20 05.2	-0.7
BLY	Banja Luka	75.51	335	eP	P	03 20 05.8	-0.1
	comp=Z,24nm,0.9s						
349A	Repton	75.53	55	P	P	03 20 07.2	+1.0
	baz=327,SNR=20						
Z53A	Monticello	75.55	52	P	P	03 20 06.3	-0.1
	baz=328,SNR=23						
152A	Waverly Hall	75.56	53	P	P	03 20 06.1	-0.3
	baz=328,SNR=32						
152A	Waverly Hall	75.56	53	eP	P	03 20 06.0	-0.3
	comp=Z,41nm,0.8s						
448A	Bay Minette	75.56	56	P	P	03 20 07.7	+1.3
	baz=327,SNR=7.1						
TUE	Stuetta	75.57	340	eP	P	03 20 06.3	-0.2
	comp=Z,35nm,0.8s						
JSC	Jenkinsville	75.72	49	eP	P	03 20 07.2	0.0
	comp=Z,38nm,0.7s						
JSC	Jenkinsville	75.72	49	eP	P	03 20 07.2	0.0
JSC				pmax	pmax		
	comp=Z,38nm,0.7s						
251A	Midway	75.73	54	P	P	03 20 07.3	-0.1
	baz=328,SNR=32						
BRAL	Brewton	75.75	55	P	P	03 20 08.4	+0.9
	baz=327,SNR=10						
BRAL	Brewton	75.75	55	eP	P	03 20 08.4	+0.9
	comp=Z,149nm,1.0s						
646A	Port Sulphur	75.75	58	P	P	03 20 09.6	+2.1
	baz=327						
350A	Dozier	75.87	55	P	P	03 20 08.8	+0.6
	baz=328,SNR=11						
Z54A	Sparta	75.92	51	P	P	03 20 08.6	+0.3
	baz=328,SNR=42						
VTS	Vitosha	75.92	330⇓	iP	P	03 20 07.4	-1.1
VTS	Vitosha	75.92	330	eP	P	03 20 08.2	-0.3
	comp=Z,24nm,0.7s						
VTS	Vitosha	75.92	330	eP	P	03 20 08.0	-0.5
VTS	Vitosha	75.92	330	P	P	03 20 07.2	-1.3
VTS	Vitosha	75.92	330	eP	P	03 20 08.2	-0.3
VTS				pmax	pmax		
	comp=Z,24nm,0.7s						
153A	Fort Valley	75.97	52	P	P	03 20 08.8	+0.1
	baz=328,SNR=22						
449A	Pace	76.01	56	P	P	03 20 10.3	+1.4
	baz=327,SNR=11						
SENIN	Lac Senin/Sane	76.05	342	eP	P	03 20 08.6	-0.6
	comp=Z,31nm,1.2s						
UDBI	Udbina	76.06	335	i P	P	03 20 08.9	-0.2
252A	Lumpkin	76.11	53	P	P	03 20 09.4	-0.1
	baz=328,SNR=19						
KDZ	Kurdzhali	76.13	328	eP	P	03 20 09.4	-0.1
NVLJ	Novalja	76.23	336	i P	P	03 20 09.5	-0.5
Z55A	Blythe	76.24	51	P	P	03 20 10.5	+0.3
	baz=329,SNR=7.7						
450A	Crestview	76.27	55	P	P	03 20 11.4	+1.0
	baz=328,SNR=11						
PLE	Pljevlja	76.28	332	eP	P	03 20 09.7	-0.8
RZN	Rozhen	76.31	328	eP	P	03 20 10.5	-0.2
CNNC	Cliffs of the	76.31	46	P	P	03 20 11.0	+0.4
	baz=330,SNR=12						
CNNC	Cliffs of the	76.31	46	eP	P	03 20 10.9	+0.4
	comp=Z,75nm,0.8s						
154A	Montrose	76.33	52	P	P	03 20 11.0	+0.2
	baz=328,SNR=14						
154A	Montrose	76.33	52	eP	P	03 20 11.1	+0.4
	comp=Z,124nm,0.9s						
351A	Pinckard	76.33	54	P	P	03 20 11.2	+0.5
	baz=328,SNR=31						
253A	Americus	76.33	53	P	P	03 20 10.7	0.0
	baz=328,SNR=23						
253A	Americus	76.33	53	eP	P	03 20 10.8	+0.1
	comp=Z,68nm,0.7s						
253A				ePP	PP	03 22 59.8	-2.9
352A	Blakely	76.46	54	P	P	03 20 11.8	+0.2
	baz=328,SNR=18						
352A	Blakely	76.46	54	eP	P	03 20 11.7	+0.2
	comp=Z,89nm,0.6s						
UPM	Unac-Piva	76.53	333	eP	P	03 20 11.3	-0.7
CTA	Charters Tower	76.54	195	P	P	03 20 12.3	+0.5
	comp=Z,36nm,0.9s,baz=2.5,slow=7.4,SNR=21						
CTA				LR	LR	03 52 02.1	
	comp=Z,151nm,18.6s,baz=18,slow=34						
CTAO	Charters Tower	76.54	195	eP	P	03 20 12.6	+0.8
	comp=Z,57nm,1.0s						
CTAO	Charters Tower	76.54	195	eP	P	03 20 12.6	+0.8
CTAO				pmax	pmax		
	comp=Z,57nm,1.0s						
RDO	Rodhopi	76.55	327	P	P	03 20 11.5	-0.4
RDO	Rodhopi	76.55	327	P	P	03 20 11.5	-0.4
IVA	Berane	76.58	332	eP	P	03 20 11.6	-0.5
155A	Kite	76.60	51	P	P	03 20 12.6	+0.3
	baz=329,SNR=23						
KKB	Krupnik	76.62	329	eP	P	03 20 12.6	+0.3
ALN	Alexandroupoli	76.62	327	eP	P	03 20 12.1	-0.2
	comp=Z,21nm,1.1s						
ALN	Alexandroupoli	76.62	327	P	P	03 20 10.4	-1.9
ALN	Alexandroupoli	76.62	327	eP	P	03 20 12.1	-0.2
ALN				pmax	pmax		
	comp=Z,21nm,1.0s						
KOME	Kolasin	76.70	332⇑	iP	P	03 20 12.3	-0.5
254A	Abbeville	76.81	52	P	P	03 20 13.8	+0.3
	baz=328,SNR=22						
451A	Vernon	76.81	55	P	P	03 20 14.4	+0.9
	baz=328,SNR=9.4						
451A	Vernon	76.81	55	eP	P	03 20 14.7	+1.2
	comp=Z,118nm,0.8s						
PVY	Plav	76.82	332⇑	iP	P	03 20 13.1	-0.4
NKY	Niksic	76.87	333⇑	iP	P	03 20 13.1	-0.7
NVR	Nevrokopi	76.87	329	P	P	03 20 11.7	-2.0
NVR	Nevrokopi	76.87	329	P	P	03 20 11.7	-2.0
452A	Marianna	76.88	54	P	P	03 20 14.2	+0.4
	baz=328						
353A	Camilla	76.90	53	P	P	03 20 14.2	+0.2
	baz=328,SNR=9.1						
BRY	Bratogost	76.91	333⇑	iP	P	03 20 13.1	-0.9
NKME	Niksic	76.92	333⇑	iP	P	03 20 13.4	-0.6
SHME	Shamm	76.98	297	P	P	03 20 12.8	-1.8
SKO	Skopje	76.99	331	i P	P	03 20 14.4	+0.1
156A	Sylvania	77.00	50	P	P	03 20 15.2	+0.7
	baz=329,SNR=10						
STIP	Stip	77.04	330	i P	P	03 20 13.1	-1.5
TIGA	Tifton	77.10	53	P	P	03 20 15.7	+0.5
	baz=328,SNR=41						
TIGA	Tifton	77.10	53	eP	P	03 20 15.7	+0.5
	comp=Z,147nm,0.6s						
CEME	Cevo	77.14	333⇑	iP	P	03 20 14.4	-0.8
STON	Ston	77.15	334	i P	P	03 20 13.8	-1.3
PDG	Podgorica	77.16	332⇑	iP	P	03 20 14.3	-0.9
PDG	Podgorica	77.16	332	P	P	03 20 14.4	-0.8
TTG	Podgorica	77.16	332⇑	iP	P	03 20 14.4	-0.8
TTG	Podgorica	77.16	332	eP	P	03 20 14.6	-0.6
	comp=Z,94nm,0.8s						
TTG	Podgorica	77.16	332	eP	P	03 20 14.6	-0.6
TTG				pmax	pmax		
	comp=Z,94nm,0.8s						
SRS	Serrai	77.16	329	P	P	03 20 14.4	-0.9
SRS	Serrai	77.16	329	P	P	03 20 14.4	-0.9
SRS	Serrai	77.16	329	P	P	03 20 14.4	-0.9
SMTH	Samothraki Isl	77.17	327	P	P	03 20 14.2	-1.2
SMTH	Samothraki Isl	77.17	327	P	P	03 20 14.2	-1.2
NHSC	New Hope	77.19	49	P	P	03 20 15.9	+0.4
	baz=330,SNR=9.5						
NHSC	New Hope	77.19	49	eP	P	03 20 15.9	+0.4
	comp=Z,72nm,0.8s						
255A	Hazlehurst	77.19	52	P	P	03 20 16.1	+0.5
	baz=329,SNR=40						
255A	Hazlehurst	77.19	52	eP	P	03 20 16.1	+0.5
	comp=Z,200nm,0.8s						
453A	Whigham	77.27	54	P	P	03 20 17.0	+0.9
	baz=328,SNR=10.0						
453A	Whigham	77.27	54	eP	P	03 20 16.9	+0.9
	comp=Z,92nm,0.8s						
VAY	Valandovo	77.27	329	P	P	03 20 15.9	0.0
VAY	Valandovo	77.27	329	P	P	03 20 15.9	0.0
VAY	Valandovo	77.27	329	i P	P	03 20 16.1	+0.2
THAS	Thassos island	77.30	328	P	P	03 20 15.1	-0.9
GADA	Gvkgeada	77.31	327	P	P	03 20 15.3	-0.9
GADA	Gvkgeada	77.31	327	P	P	03 20 15.3	-0.9
KNT	Kendrikon	77.33	329	P	P	03 20 15.6	-0.6
KNT	Kendrikon	77.33	329	P	P	03 20 15.6	-0.6
KNT	Kendrikon	77.33	329	P	P	03 20 15.6	-0.6
HCY	Herceg Novi	77.34	333⇑	iP	P	03 20 15.8	-0.5
BUM	Brajici-Budva	77.38	332⇑	iP	P	03 20 15.9	-0.7
256A	Glennville	77.40	51	P	P	03 20 17.4	+0.6
	baz=329,SNR=11						
DRME	Dracevica, Mon	77.41	332⇑	iP	P	03 20 16.2	-0.5
BNI	Bardonecchia	77.43	342	eP	P	03 20 18.1	+1.2
	comp=Z,34nm,0.8s						
BNI	Bardonecchia	77.43	342	eP	P	03 20 18.1	+1.2
BNI				pmax	pmax		
	comp=Z,34nm,0.8s						
552A	Lynn Haven	77.43	55	P	P	03 20 17.8	+0.9
	baz=328						
EZN	Ezine	77.51	326	P	P	03 20 16.4	-0.9
EZN	Ezine	77.51	326	P	P	03 20 16.4	-0.9
EZN	Ezine	77.51	326	P	P	03 20 16.4	-0.9
355A	Pearson	77.52	52	P	P	03 20 17.9	+0.5
	baz=329,SNR=9.9						
DZM	Mont Dzumac	77.53	175	P	P	03 20 20.3	+2.8
	comp=Z,18nm,0.9s,baz=80,slow=8.3,SNR=11						
DZM				LR	LR	03 50 03.2	
	comp=Z,355nm,19.3s,baz=15,slow=32						
DZM	Mont Dzumac	77.53	175	eP	P	03 20 20.0	+2.5
	comp=Z,41nm,1.1s						
DZM				epP	pP	03 20 39.2	-0.5
	comp=Z,168nm,1.4s						
DZM				eS	S	03 29 54.5	-7.2
	comp=Z,453nm,26.6s						
DZM	Mont Dzumac	77.53	175	eLR	LR	03 44 04.7	
	comp=Z,2µm,31.4s						
PHP	Peshkopia	77.53	331	P	P	03 20 16.3	-1.2
VLC	Villacollemand	77.59	339	eP	P	03 20 18.6	+0.9
	comp=Z,79nm,1.0s						
KRUS	Krusevo	77.61	330	i P	P	03 20 17.8	-0.1
GRG	Griva	77.66	329	P	P	03 20 17.7	-0.4
GRG	Griva	77.66	329	P	P	03 20 17.7	-0.4
GRG	Griva	77.66	329	P	P	03 20 17.7	-0.4
454A	Quitman	77.70	53	P	P	03 20 19.0	+0.6
	baz=329,SNR=6.3						
OUR	Ouranopolis	77.77	328	P	P	03 20 17.9	-0.8
553A	Crawfordville	77.78	54	P	P	03 20 19.6	+0.7
	baz=328,SNR=5.3						
257A	Skidaway Islan	77.79	50	P	P	03 20 19.2	+0.3
	baz=329						
LIA	Limnos Island	77.80	327	P	P	03 20 18.0	-0.9
356A	Blackshear	77.86	52	P	P	03 20 19.8	+0.5
	baz=329,SNR=8.3						
UOSS	Minazif	77.86	296	P	P	03 20 17.5	-2.0
PLG	Polygyros	77.89	328	P	P	03 20 18.5	-0.9
BIA	Bitola	77.91	330	i P	P	03 20 19.4	-0.2
ISP	Isparta	77.94	322	eP	P	03 20 18.8	-1.0
	comp=Z,16nm,1.0s						
ISP	Isparta	77.94	322	P	P	03 20 18.5	-1.3
ISP	Isparta	77.94	322c	iP	P	03 20 18.6	-1.3
ISP				pmax	pmax		
	comp=Z,9.0nm,0.9s						
455A	Stateville	77.95	53	P	P	03 20 20.5	+0.7
	baz=329,SNR=19						
OHR	Ohrid	77.97	331	i P	P	03 20 19.3	-0.6
HATD	Hatta, Dubai	78.00	296	i P	P	03 20 18.6	-1.6
	SNR=6.1						
MANT	Manisa	78.00	324	eP	P	03 20 20.1	-0.2
	comp=Z,136nm,1.1s						
WSAR	Wadi Sarin	78.02	294	P	P	03 20 20.8	+0.4
	comp=Z,15nm,0.9s,baz=89,slow=3.5,SNR=6.7						
WSAR				LR	LR	03 59 03.9	
	comp=Z,332nm,20.1s,baz=70,slow=39						
PRK	Paraskevi	78.06	326	P	P	03 20 19.1	-1.2
PRK	Paraskevi	78.06	326	P	P	03 20 19.1	-1.2
PRK	Paraskevi	78.06	326	P	P	03 20 19.1	-1.2
FNA	Florina	78.11	330	eP	P	03 20 20.3	-0.4
	comp=Z,47nm,0.9s						
FNA	Florina	78.11	330	P	P	03 20 19.7	-1.0

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FNA   Florina            78.11 330 eP       P       03 20 20.3  -0.4
FNA                                 pmax     pmax
      comp=Z,47nm,0.9s
554A  Perry              78.21  53  P       P       03 20 21.8 +0.5
      baz=329
SIGR  SIGRI              78.22 326  P       P       03 20 18.1  -3.1
SIGR  SIGRI              78.22 326  P       P       03 20 18.1  -3.1
PAIG  Paliouri           78.23 328  P       P       03 20 19.9  -1.4
456A  Hilliard           78.41  52  P       P       03 20 23.0 +0.6
      baz=329
456A  Hilliard           78.41  52 eP       P       03 20 22.7 +0.3
      comp=Z,78nm,0.8s
LIT   Litokhoron         78.42 329 eP       P       03 20 20.7  -1.7
      comp=Z,19nm,0.8s
LIT   Litokhoron         78.42 329  P       P       03 20 21.0  -1.4
LIT   Litokhoron         78.42 329 eP       P       03 20 20.7  -1.7
LIT                                 pmax     pmax
      comp=Z,19nm,0.8s
KBN   Korca              78.43 330  P       P       03 20 21.4  -1.0
555A  McAlpin            78.50  53  P       P       03 20 23.7 +0.7
      baz=329,SNR=9.9
555A  McAlpin            78.50  53 eP       P       03 20 23.6 +0.7
      comp=Z,94nm,0.9s
NEST  Nestorio           78.55 330  P       P       03 20 22.4  -0.7
DNZL  Cakiroluk          78.56 323 i P      P       03 20 22.9  -0.5
ASUD  Al Ashush, Dub     78.57 297 i P      P       03 20 22.3  -1.1
      SNR=5.6
AQU   L'Aquila           78.67 336 eP       P       03 20 23.9 +0.2
      comp=Z,98nm,0.9s
AQU   L'Aquila           78.67 336 eP       P       03 20 24.7 +1.0
AQU                                 pmax     pmax
      comp=Z,98nm,0.9s
457A  Yulee              78.71  52  P       P       03 20 24.9 +0.8
      baz=329
WRAB  Tennant Creek      78.73 206 eP       P       03 20 24.0   0.0
WRAB                               ePcP     P       03 20 24.5 +0.4
WRAB  Tennant Creek      78.73 206deP       P       03 20 24.5 +0.4
WRAB                                pmax     pmax
      comp=Z,42nm,0.8s
WR1   Warramunga Arr     78.74 206 eP       P       03 20 24.5 +0.4
      comp=Z,41nm,0.9s
WR1                                epP      pP      03 20 45.0  -1.5
WRA   Warramunga Arr     78.74 206  P       P       03 20 24.5 +0.4
      comp=Z,31nm,0.9s,baz=19,slow=6.0,SNR=59
WRA                                 pP      pP      03 20 45.0  -1.5
      comp=Z,15nm,0.9s,baz=16,slow=5.9,SNR=4.6
WRA                                 LR      LR      03 51 17.6
      comp=Z,142nm,22.0s,baz=20,slow=33
WC3   Warramunga Arr     78.75 206 eP       P       03 20 24.4 +0.3
      comp=Z,34nm,0.9s
AJN   Ajban              78.80 297  P       P       03 20 23.5  -1.1
TAVA  DENIZLI_Tavas      78.81 323 i P      P       03 20 24.3  -0.3
PALK  Pallekele          78.81 266  P       P       03 20 24.3  -0.6
      comp=Z,18nm,0.7s,baz=295,slow=2.0,SNR=10
PALK                                LR      LR      04 02 24.9
      comp=Z,155nm,18.8s,baz=197,slow=41
PALK  Pallekele          78.81 266 eP       P       03 20 23.0  -1.9
      comp=Z,19nm,0.8s
PALK  Pallekele          78.81 266 i P      P       03 20 25.4 +0.5
556A  Lake Butler        78.86  53  P       P       03 20 25.9 +1.1
      baz=329,SNR=14
AOS   Alonnisos          78.87 328  P       P       03 20 22.9  -1.9
KPRO  Kipourio           78.88 330  P       P       03 20 23.4  -1.6
655A  Horseshoe Beac     78.89  53  P       P       03 20 25.4 +0.4
      baz=329
XOR   Xorichti           78.90 328  P       P       03 20 23.1  -1.9
CHOS  Chios island       78.91 326  P       P       03 20 24.1  -1.0
CHOS  Chios island       78.91 326  P       P       03 20 24.1  -1.0
NEO   Neokhori           78.94 328  P       P       03 20 23.9  -1.3
SKIA  Skiathos           79.00 328  P       P       03 20 24.0  -1.5
THL   Klokotos Trika     79.06 329  P       P       03 20 24.5  -1.3
557A  Orange Park        79.15  52  P       P       03 20 27.4 +0.9
      baz=329,SNR=17
SMG   Samos              79.28 325  P       P       03 20 26.2  -0.9
JAN   Janina             79.31 330  P       P       03 20 27.4 +0.2
JAN   Janina             79.31 330  P       P       03 20 27.4 +0.2
YER   Yerkesik           79.32 324  P       P       03 20 26.6  -0.8
SRN   Sarande            79.34 331  P       P       03 20 26.8  -0.5
SMIA  Simia              79.34 328  P       P       03 20 26.1  -1.3
656A  Willston           79.34  53  P       P       03 20 28.6 +1.1
      baz=329,SNR=8.2
656A  Willston           79.34  53 eP       P       03 20 28.3 +0.8
      comp=Z,68nm,0.7s
657A  Interlachen        79.46  52  P       P       03 20 29.1 +1.0
      baz=329
FITZ  Fitzroy Crossi     79.47 214  P       P       03 20 28.7 +0.6
      comp=Z,51nm,1.1s,baz=22,slow=5.4,SNR=22
FITZ                                LR      LR      03 54 43.4
      comp=Z,68nm,21.8s,baz=9.5,slow=35
FITZ  Fitzroy Crossi     79.47 214 eP       P       03 20 28.8 +0.7
      comp=Z,58nm,1.2s
AGG   Agios Georgios     79.47 329 eP       P       03 20 26.9  -1.2
      comp=Z,47nm,0.7s
AGG   Agios Georgios     79.47 329 eP       P       03 20 26.9  -1.2
AGG                                 pmax     pmax
      comp=Z,47nm,0.7s
CSS   Mathiatis          79.48 319 eP       P       03 20 27.0  -1.3
      comp=Z,48nm,0.9s
CSS   Mathiatis          79.48 319  P       P       03 20 26.9  -1.3
CSS   Mathiatis          79.48 319  P       P       03 20 27.7  -0.5
MATE  Matera             79.49 333⇓iP       P       03 20 27.4  -0.7
FETY  Fethiye            79.50 323  P       P       03 20 27.1  -1.2
SGD   Sagiada            79.52 331  P       P       03 20 27.8  -0.5
KEK   Kerkira            79.55 331  P       P       03 20 27.2  -1.3
IGT   Igoumenitsa        79.57 330  P       P       03 20 27.9  -0.7
ALFC  Alefka             79.58 320  P       P       03 20 27.8  -1.0
BODT  Bodrum             79.71 324  P       P       03 20 27.9  -1.5
EVR   Evrytania          79.72 329  P       P       03 20 27.5  -2.0
EVR   Evrytania          79.72 329  P       P       03 20 27.5  -2.0
DSL   Palaion Diasel     79.72 330  P       P       03 20 28.5  -1.0
DSL   Palaion Diasel     79.72 330  P       P       03 20 28.5  -1.0
KARY  Karystos           79.74 327  P       P       03 20 27.9  -1.7
KSL   Kastellorizon      79.77 322  P       P       03 20 27.9  -1.8
AKMC  Akamas             79.79 320  P       P       03 20 28.0  -1.9
SZAC  Souni              79.83 319  P       P       03 20 30.2 +0.1
658A  Bunnell            79.87  52  P       P       03 20 31.4 +1.1
      baz=330
658A  Bunnell            79.87  52 eP       P       03 20 31.0 +0.7
      comp=Z,56nm,0.8s
PTL   Penteli            79.91 327  P       P       03 20 28.4  -2.1
PTL   Penteli            79.91 327  P       P       03 20 28.4  -2.1
PPCY  Paphos             79.91 320  P       P       03 20 28.8  -1.7
757A  Oxford             79.92  53  P       P       03 20 31.6 +1.0
      baz=329
ATHU  Athens Univers     80.01 327  P       P       03 20 29.0  -2.0
ATHU  Athens Univers     80.01 327  P       P       03 20 29.0  -2.0
PVO   Paravola           80.08 329  P       P       03 20 30.6  -0.8
LKD2  Lefkada island     80.17 330  P       P       03 20 31.0  -0.9
758A  Lake Helen         80.29  52  P       P       03 20 33.7 +1.1
      baz=330,SNR=7.0
CUC   Castrocucco        80.33 334 eP       P       03 20 31.7  -1.0
      comp=Z,41nm,1.0s
TAOE  Nuku Hiva Isla     80.36 121 eS       S       03 30 30.3  -1.9
      comp=Z,127nm,29.0s
TAOE  Nuku Hiva Isla     80.36 121 eLR      LR      03 45 23.4
      comp=Z,2µm,34.6s
MMAI  Mount Meron Ar     80.41 316  P       P       03 20 32.8  -0.6
      comp=Z,25nm,0.8s,baz=30,slow=6.8,SNR=18
MMAI                                LR      LR      04 02 33.5
      comp=Z,334nm,18.1s,baz=0.0,slow=40
KLV   Kalavryta, Ach     80.43 329  P       P       03 20 31.3  -2.0
KLV   Kalavryta, Ach     80.43 329  P       P       03 20 31.3  -2.0
ASF   Jabal al Asfar     80.56 315  P       P       03 20 34.8 +0.6
      comp=Z,36nm,0.9s,baz=341,slow=2.6,SNR=52
ASF                                 LR      LR      04 02 41.6
      comp=Z,362nm,18.8s,baz=336,slow=40
DID   Didima             80.60 328  P       P       03 20 31.1  -3.1
DID   Didima             80.60 328  P       P       03 20 31.1  -3.1
RLS   Riolos of Patr     80.61 329  P       P       03 20 33.7  -0.5
RLS   Riolos of Patr     80.61 329  P       P       03 20 33.7  -0.5
DRO   Drossia            80.64 329  P       P       03 20 33.8  -0.6
VLS   Valsamata          80.76 330  P       P       03 20 34.1  -0.9
VLS   Valsamata          80.76 330  P       P       03 20 34.1  -0.9
VLS   Valsamata          80.76 330  P       P       03 20 34.1  -0.9
KFL   Anninata           80.76 330  P       P       03 20 34.2  -0.8
858A  St. Cloud          80.86  53  P       P       03 20 36.7 +1.1
      baz=330
TIP   Timpagrande        80.86 333⇑iP       P       03 20 35.5  -0.1
TIP   Timpagrande        80.86 333 eP       P       03 20 35.7 +0.1
      comp=Z,55nm,0.9s
TIP   Timpagrande        80.86 333  P       P       03 20 35.5  -0.1
DWPF  Disney Wildern     80.91  53  P       P       03 20 37.1 +1.1
      baz=330
DWPF  Disney Wildern     80.91  53 eP       P       03 20 36.4 +0.4
      comp=Z,77nm,0.9s
957A  Wimauma            80.92  54  P       P       03 20 37.1 +1.1
      baz=329
AMT   Artemida-Makis     81.03 329  P       P       03 20 35.4  -1.1
KARP  Karpathos          81.14 324 eP       P       03 20 35.5  -1.7
      comp=Z,79nm,0.8s
KARP  Karpathos          81.14 324  P       P       03 20 35.4  -1.7
EIDS  Eidsvold           81.18 189 eP       P       03 20 38.8 +1.7
      comp=Z,19nm,0.8s
TLIG  Tlapa              81.18  72 eP       P       03 20 37.9 +0.2
      comp=Z,12nm,0.9s
859A  Kempfer Cattle     81.20  52  P       P       03 20 38.6 +1.1
      baz=330,SNR=6.4
958A  Wauchula           81.22  53  P       P       03 20 38.7 +1.1
      baz=330
ITM   Ithomi             81.29 328 eP       P       03 20 36.7  -1.2
      comp=Z,34nm,0.8s
DYR   Agios Nikonas      81.56 328  P       P       03 20 37.2  -2.1
058A  Arcadia            81.65  54  P       P       03 20 41.0 +1.2
      baz=330,SNR=5.2
959A  Okeechobee         81.67  53  P       P       03 20 41.3 +1.3
      baz=330,SNR=6.5
KTHR  Kythira            81.82 327  P       P       03 20 39.1  -1.6
ZKR   Zakros             81.84 324  P       P       03 20 38.8  -2.0
CEL   Celeste            81.95 333 eP       P       03 20 39.9  -1.5
      comp=Z,52nm,0.7s
059A  Moore Haven        82.02  53  P       P       03 20 43.0 +1.2
      baz=330
LAST  Lasithi            82.05 325  P       P       03 20 40.3  -1.7
ANKY  Antikythira Is     82.09 327  P       P       03 20 40.6  -1.5
ANKY  Antikythira Is     82.09 327  P       P       03 20 40.6  -1.5
IDI   Anoyia             82.12 325  P       P       03 20 39.8  -2.5
      comp=Z,19nm,0.7s,baz=25,slow=12,SNR=21
IDI                                 LR      LR      04 00 42.8
      comp=Z,201nm,21.4s,baz=27,slow=38
IDI   Anoyia             82.12 325⇑iP       P       03 20 39.4  -2.9
IDI   Anoyia             82.12 325 eP       P       03 20 39.5  -2.9
      comp=Z,33nm,1.1s
PMOR  Pomariorio Ree     82.22 131 eT       T       04 50 43.8
      comp=Z,15nm,0.2s
IMMV  Iera Moni Meta     82.25 326  P       P       03 20 41.4  -1.5
060A  Indiantown         82.32  52  P       P       03 20 44.6 +1.2
      baz=330
PGAV  Gavieira, Arco     82.36 352 eP       P       03 20 43.8 +0.3
      comp=Z,64nm,0.9s
PGAV  Gavieira, Arco     82.36 352 eS       S       03 31 08.7  +16
PGAV  Gavieira, Arco     82.36 352 eLQ      LQ      03 44 21.1
PGAV                               eLR      LR      03 48 09.4
      comp=Z,196nm,20.0s
SIVA  Sivas              82.39 325  P       P       03 20 42.3  -1.4
PBRG  Braganca           82.40 351 eP       P       03 20 43.5  -0.1
      comp=Z,38nm,3.1s
AS01  Alice Springs      82.41 205 eP       P       03 20 44.2 +0.5
AS31  Alice Springs      82.42 205 eP       P       03 20 44.2 +0.5
      comp=Z,9.3nm,1.0s
ASAR  Alice Springs      82.42 205  P       P       03 20 44.3 +0.6
      comp=Z,32nm,1.0s,baz=13,slow=5.1,SNR=81
ASAR                                pP      pP      03 21 07.3 +1.0
      comp=Z,14nm,0.8s,baz=17,slow=3.8,SNR=3.9
ASAR                                PKKPbc  PKKPbc  03 39 10.2 +1.5
      comp=Z,0.6nm,0.4s,baz=201,slow=2.2,SNR=6.6
059Z  Ave Maria          82.43  54  P       P       03 20 45.4 +1.4
      baz=330
PCAB  Cabril             82.60 352 eP       P       03 20 45.0 +0.3
      comp=Z,45nm,1.1s
060Z  West Palm Beac     82.77  53  P       P       03 20 47.0 +1.3
      baz=330
POLO  Lamas de Olo       82.91 352 eP       P       03 20 46.9 +0.5
      comp=Z,37nm,1.0s
POLO  Lamas de Olo       82.91 352 eS       S       03 31 08.6  +11
MYIG  MØrida             82.98  63 eP       P       03 20 48.2 +1.3
      comp=Z,112nm,0.7s
MVO   Moncorvo           83.06 351 eP       P       03 20 47.3 +0.2
      comp=Z,99nm,0.9s
MVO   Moncorvo           83.06 351 ePP      PP      03 24 04.2 +6.1
MVO   Moncorvo           83.06 351 eSS      SS      03 36 30.5 +7.3
MVO                                eLQ      LQ      03 44 32.8
MVO                                eLR      LR      03 48 26.4
      comp=Z,177nm,22.0s
VAE   Valguarnera        83.06 334  LR      LR      04 02 55.6
      comp=Z,404nm,18.5s,baz=26,slow=39
061Z  Ochoppi            83.08  54  P       P       03 20 48.5 +1.2
      baz=330
CLTB  Caltabellotta      83.26 335 eP       P       03 20 47.9  -0.3
      comp=Z,20nm,0.8s
RAR   Rarotonga          83.34 144  LR      LR      03 51 41.8
      comp=Z,217nm,21.5s,baz=294,slow=31
PVIS  Viseu              83.57 352 eP       P       03 20 50.0 +0.2
      comp=Z,86nm,2.0s
PPT   Papeete            83.81 134  LR      LR      03 55 01.2
      comp=Z,170nm,18.1s,baz=316,slow=33
PPT2  Papeete2           83.83 134 eS       S       03 31 03.8  -3.7
      comp=Z,113nm,24.0s
PPT2  Papeete2           83.83 134 eLR      LR      03 46 50.4
      comp=Z,3µm,34.2s,baz=339
PPT2  Papeete2           83.83 134 eT       T       04 52 52.4
      comp=Z,2.2nm,0.2s
MTE   Manteigas          83.86 352 eP       P       03 20 51.3 +0.1
      comp=Z,97nm,1.5s
MTE   Manteigas          83.86 352 ePP      PP      03 24 08.2 +3.6
MTE                                eS       S       03 31 09.1 +1.6
MTE   Manteigas          83.86 352 eLQ      LQ      03 44 51.6
MTE                                eLR      LR      03 48 58.6
      comp=Z,201nm,20.0s
MTE   Manteigas          83.86 352 eP       P       03 20 51.7 +0.4
      comp=Z,54nm,0.9s
BBSR  BB Station         83.88  38 eP       P       03 20 51.9 +0.6
      comp=Z,65nm,0.8s
PAE   Paea               83.90 134 eT       T       04 52 57.9
      comp=Z,0.8nm,0.3s
COI   Coimbra            84.12 352 eP       P       03 20 52.8 +0.4
      comp=Z,197nm,1.1s
ES19  SONSECA Array      84.20 349 eP       P       03 20 53.0 +0.1
ESDC  Sonseca Array      84.23 349  P       P       03 20 53.5 +0.4
      comp=Z,66nm,0.8s,baz=3.2,slow=4.4,SNR=214
ESDC                                LR      LR      04 01 29.3
      comp=Z,58nm,18.4s,baz=10.0,slow=38
ESLA  Sonseca Array      84.23 349 eP       P       03 20 53.6 +0.5
      comp=Z,76nm,0.9s
PCAS  Casmilo, Conde     84.28 352 eP       P       03 20 53.6 +0.3
      comp=Z,242nm,0.8s
PCAS  Casmilo, Conde     84.28 352 eS       S       03 31 14.3 +2.7
RAYN  Ar Rayn            84.30 304 i P      P       03 20 52.5  -1.2
      SNR=52
PAB   San Pablo          84.40 349 eP       P       03 20 54.1 +0.1
      comp=Z,59nm,0.9s
PAB   San Pablo          84.40 349 eP       P       03 20 54.1 +0.1
PAB                                 pmax     pmax
      comp=Z,59nm,0.9s
PCBR  Castelo Branco     84.41 351 eP       P       03 20 54.2 +0.3
      comp=Z,144nm,0.8s
WDD   Wied Dalam         84.59 334 eP       P       03 20 55.1 +0.2
      comp=Z,209nm,0.8s
PTOM  Tomar              84.70 352 eP       P       03 20 55.4   0.0
      comp=Z,141nm,1.1s
PMRV  Marv??o            84.81 351 eP       P       03 20 55.9  -0.1
      comp=Z,79nm,1.8s
PMRV  Marv??o            84.81 351 ePP      PP      03 24 14.9 +2.6
PMRV                               eS       S       03 31 15.6  -1.3
PMRV  Marv??o            84.81 351 eLQ      LQ      03 45 17.9
PMRV                               eLR      LR      03 49 19.2
      comp=Z,144nm,20.0s
ALMR  Almeirim           85.18 352 eP       P       03 20 57.6  -0.2
ALMR                                AMb     AMB     03 21 00.7
      comp=Z,246nm,1.3s
ALMR  Almeirim           85.18 352 eP       P       03 20 57.9 +0.1
      comp=Z,248nm,1.1s
ALMR  Almeirim           85.18 352 eP       P       03 20 57.5  -0.2
PMTG  Montargil          85.24 352 eP       P       03 20 57.8  -0.3
      comp=Z,75nm,1.2s
PMTG  Montargil          85.24 352 eS       S       03 31 21.5 +0.4
PESTR Estremoz           85.39 351 eP       P       03 20 58.8  -0.1
      comp=Z,96nm,1.9s
PESTR Estremoz           85.39 351 eS       S       03 31 18.4  -4.2
PESTR Estremoz           85.39 351 eP       P       03 20 59.2 +0.3
      comp=Z,42nm,0.9s
PMAFR Mafra              85.43 353 eP       P       03 20 59.2 +0.1
      comp=Z,177nm,1.1s
PMAFR Mafra              85.43 353 eS       S       03 31 20.4  -2.6
CMAH  Djebel Manchou     85.44 339  P       P       03 20 56.6  -2.7
PMST  Lisbon--Monsan     85.64 353 eP       P       03 21 00.7 +0.6
      comp=Z,169nm,1.4s
CCIG  Comitan            85.66  68 eP       P       03 21 02.4 +1.7
      comp=Z,34nm,1.0s
LIS   Lisbon             85.66 353 eP       P       03 21 00.0  -0.1
LIS                                 AMb     AMB     03 21 03.6
      comp=Z,112nm,1.3s
LIS   Lisbon             85.66 353 eP       P       03 21 00.0  -0.1
EVO   Evora              85.75 352 eP       P       03 21 00.6  -0.1
      comp=Z,78nm,1.3s
ABSA  Djebel Ababsia     85.77 339  P       P       03 20 59.0  -1.9
CKFL  Kef-Lekhel         85.80 340  P       P       03 21 00.0  -1.1
KEST  Kesra              85.91 338  P       P       03 21 01.4  -0.2
      comp=Z,29nm,0.8s,baz=351,slow=1.2,SNR=20
KEST                                LR      LR      04 05 28.2
      comp=Z,165nm,18.7s,baz=342,slow=40
KEST  Kesra              85.91 338 eP       P       03 21 01.6   0.0
      comp=Z,26nm,0.8s
PBAR  Barrancos          86.02 351 eP       P       03 21 02.1 +0.1
      comp=Z,191nm,1.3s
CTEI  Djebel Teioual     86.19 340  P       P       03 21 02.0  -1.0
THTN  Thala              86.21 338 eP       P       03 21 03.3 +0.2
      comp=Z,30nm,1.0s
PBEJ  Beja               86.24 352 eP       P       03 21 04.1 +1.0
      comp=Z,43nm,1.8s
CKHR  Kef el Ahmar       86.40 341  P       P       03 21 03.2  -0.9
MESJ  Messejana          86.46 352 eP       P       03 21 04.0  -0.1
MESJ                                AMb     AMB     03 21 07.5
      comp=Z,54nm,2.4s
MESJ                               eSKS     SKSac   03 31 23.2 +0.5
MESJ  Messejana          86.46 352 eP       P       03 21 04.0  -0.1
MESJ                               e                03 31 23.2
PCVE  Castro Verde       86.65 352 eP       P       03 21 05.8 +0.7
      comp=Z,57nm,1.9s
PCVE  Castro Verde       86.65 352 eS       S       03 31 34.4  -0.5
CMLA  Cha da Macela      86.76   6 eP       P       03 21 06.5 +0.9
      comp=Z,78nm,0.8s
CMLA  Cha da Macela      86.76   6 i P      P       03 21 07.2 +1.6
PVAQ  Vaqueiros          86.85 351 eP       P       03 21 05.7  -0.4
      comp=Z,31nm,1.0s
PVAQ  Vaqueiros          86.85 351 ePP      PP      03 24 34.8 +6.0
PVAQ                               eS       S       03 31 44.3 +7.4
PVAQ  Vaqueiros          86.85 351 eLQ      LQ      03 45 55.3
PVAQ                               eLR      LR      03 50 28.9
      comp=Z,173nm,20.0s
MORF  Marmelete          87.02 352 eP       P       03 21 06.8  -0.2
MORF  Marmelete          87.02 352 eS       S       03 31 35.3  -3.4
MORF  Marmelete          87.02 352 eP       P       03 21 06.7  -0.2
PBDV  Barranco-do-Ve     87.03 352 eS       S       03 31 37.7  -1.0
PFVI  Vila Bisbo         87.21 352 eP       P       03 21 08.3 +0.5
      comp=Z,103nm,1.5s
PFVI  Vila Bisbo         87.21 352 eS       S       03 31 42.3 +2.0
STKA  Stephens Creek     88.82 197  P       P       03 21 16.1 +1.0
      comp=Z,6.5nm,0.8s,baz=354,slow=6.2,SNR=10.0
STKA                                LR      LR      04 03 30.6
      comp=Z,141nm,18.6s,baz=11,slow=37
STKA  Stephens Creek     88.82 197 eP       P       03 21 16.2 +1.0
      comp=Z,3.9nm,1.3s
TBI   Tubuai             89.06 136 eLR      LR      03 49 19.6
      comp=Z,1µm,35.5s,baz=331
TGUH  Tegucigalpa,Un     90.04  65 eP       P       03 21 23.3 +1.8
      comp=Z,25nm,0.8s
FORT  Forrest            90.70 208 eP       P       03 21 24.2 +0.2
      comp=Z,40nm,0.8s
MDT   Midelt             91.08 348  P       P       03 21 25.8  -0.4
      comp=Z,15nm,0.7s,baz=37,slow=3.8,SNR=34
MDT                                 LR      LR      04 06 39.5
      comp=Z,72nm,19.8s,baz=26,slow=38
PMOZ  Porto Moniz, M     91.87 359 eS       S       03 32 41.6  +18
PMOZ  Porto Moniz, M     91.87 359 eLR      LR      03 52 14.5
      comp=Z,189nm,24.0s
JTS   JuntasAbangare     94.42  65  LR      LR      04 06 21.5
      comp=Z,112nm,21.7s,baz=32,slow=37
ATD   Arta Tunnel        95.87 300  LR      LR      04 10 27.8
      comp=Z,418nm,20.3s,baz=44,slow=39
NWAO  Narrogin (SRO)     95.97 216  P       P       03 21 49.6 +1.4
      comp=Z,14nm,0.9s,baz=251,slow=3.1,SNR=4.7
NWAO                                LR      LR      04 11 47.7
      comp=Z,71nm,18.1s,baz=290,slow=40
SDV   Santo Domingo     102.58  53  P       Pdif    03 22 20.9 +2.3
      comp=Z,2.1nm,0.7s,baz=25,slow=7.1,SNR=2.9
TOA1  Torodi Ar. Sit    109.38 339 ePdif    Pdif    03 22 52.2 +3.6
TOA1                               ePKiKP   PKiKP   03 26 51.8 +0.2
TOA1                               ePP      PP      03 27 19.3  -2.1
TORD  Torodi Ar. Bea    109.38 339  Pdiff   Pdif    03 22 52.2 +3.6
TORD                                PKiKP   PKiKP   03 26 51.8 +0.2
      baz=26,slow=1.6
TORD                                PP      PP      03 27 19.3  -2.1
      baz=2.6,slow=7.1
DBIC  Dimbokro          116.87 345  PKP     PKPdf   03 27 05.4  -0.5
      comp=Z,3.5nm,0.5s,baz=33,slow=2.5,SNR=11
DBIC  Dimbokro          116.87 345 ePKPdf   PKPdf   03 27 04.9  -1.0
NNA   Nana              117.48  70  PKP     PKPdf   03 27 07.3 +0.2
      comp=Z,6.7nm,0.6s,baz=248,slow=3.7,SNR=3.3
SAML  Samuel            121.72  55 ePKPdf   PKPdf   03 27 14.7  -0.5
SAML  Samuel            121.72  55 ePKIKP   PKPdf   03 27 14.7  -0.5
LPAZ  La Paz            125.63  64  PKP     PKPdf   03 27 23.6 +0.2
      comp=Z,4.9nm,0.7s,baz=14,slow=8.9,SNR=18
LPAZ  La Paz            125.63  64 ePKPdf   PKPdf   03 27 23.0  -0.4
LPAZ  La Paz            125.63  64 ePKIKP   PKPdf   03 27 23.0  -0.4
LSZ   Lusaka            126.20 299 ePKPdf   PKPdf   03 27 24.4 +0.5
LSZ   Lusaka            126.20 299 ePKIKP   PKPdf   03 27 24.4 +0.5
MNMC  Minye Minye       127.25  67 ePKPdf   PKPdf   03 27 26.3 +0.4
CASY  Casey             127.51 203 ePKPdf   PKPdf   03 27 26.6 +2.1
PB11  IPOC Station P    127.74  68 ePKPdf   PKPdf   03 27 27.3 +0.5
SIV   San Ignacio       128.85  57  SKPbc   SKPbc   03 30 42.3
      baz=326,slow=3.3
VNDA  Vanda             132.91 180  PKP     PKPdf   03 27 35.7 +1.1
      comp=Z,4.4nm,0.7s,baz=327,slow=3.8,SNR=18
VNDA                                SKPbc   SKPab   03 30 55.4  -0.7
      comp=Z,1.1nm,0.7s,baz=348,slow=4.6,SNR=4.2
VNDA  Vanda             132.91 180 ePKPpre  PKPpre  03 27 36.2
VNDA                               ePKPdf   PKiKP   03 27 36.4 +0.6
SBA   Scott Base        133.28 178 ePKPpre  PKPpre  03 27 29.3
SBA                                ePKPdf   PKiKP   03 27 37.9 +1.4
SBA   Scott Base        133.28 178 ePKIKP   PKPpre  03 27 29.3
LCO   Las Campanas      134.60  76 ePKPdf   PKPdf   03 27 40.6 +1.0
LCO   Las Campanas      134.60  76 ePKIKP   PKPdf   03 27 40.6 +1.0
LBTB  Lobatse           135.68 295 ePKPdf   PKPdf   03 27 41.8 +0.2
LBTB  Lobatse           135.68 295 ePKIKP   PKPdf   03 27 41.7 +0.2
ROC1  El Roble          137.44  80 ePKPdf   PKPdf   03 27 45.5 +0.8
BOSA  Boshof            138.78 293  PKhKP   PKPpre  03 27 41.2
      comp=Z,7.7nm,0.8s,baz=86,slow=2.6,SNR=5.3
BOSA                                PKP     PKPdf   03 27 47.9 +0.7
      comp=Z,8.7nm,0.9s,baz=144,slow=2.0,SNR=10
BOSA                                SKPbc   SKPbc   03 31 14.9 +0.8
      comp=Z,4.2nm,0.8s,baz=95,slow=5.6,SNR=3.7
CPUP  Villa Florida     139.46  60  PKhKP   PKPpre  03 27 41.7
      comp=Z,1.7nm,0.7s,baz=217,slow=2.7,SNR=4.1
CPUP                                PKP     PKPdf   03 27 49.0 +0.7
      comp=Z,2.9nm,0.7s,baz=346,slow=1.5,SNR=5.6
CPUP                                SKPbc   SKPbc   03 31 16.5 +0.6
      comp=Z,2.8nm,0.9s,baz=338,slow=5.4,SNR=3.6
CPUP  Villa Florida     139.46  60 ePKPpre  PKPpre  03 27 41.1
CPUP                               ePKPdf   PKPdf   03 27 47.8  -0.5
CPUP  Villa Florida     139.46  60 ePKHKP   PKPpre  03 27 41.1
CPUP                               e                03 27 47.8
MAW   Mawson            142.50 218  PKP     PKPdf   03 27 52.0  -0.4
      comp=Z,8.7nm,0.8s,baz=66,slow=6.3,SNR=7.1
MAW                                 SKPbc   SKiKP   03 31 24.9 +1.2
      comp=Z,5.2nm,0.8s,baz=264,slow=6.8,SNR=3.4
MAW   Mawson            142.50 218  PKIKP   PKPdf   03 27 52.0  -0.4
MAW                                 pmax     pmax
      comp=Z,9.0nm,0.8s
MAW                                 pmax     pmax
      comp=N,5.0nm,0.8s
PLCA  Paso Flores       143.20  88  PKhKP   PKPpre  03 27 52.1
      comp=N,19nm,0.8s,baz=292,slow=2.5,SNR=13
PLCA                                SKPbc   SKiKP   03 31 26.3 +0.1
      comp=N,9.8nm,1.1s,baz=334,slow=2.6,SNR=4.1
PLCA  Paso Flores       143.20  88 ePKPpre  PKPpre  03 27 52.0
PLCA                               ePKPdf   PKiKP   03 27 56.3  -1.7
QSPA  South Pole Qui    145.40 180  PKPbc   PKPdf   03 27 57.6  -0.1
      comp=N,48nm,0.8s,baz=347,slow=1.6,SNR=58
QSPA                                SKPbc   SKiKP   03 31 31.8 +2.0
      comp=N,4.6nm,0.8s,baz=106,slow=3.8,SNR=3.4
QSPA  South Pole Qui    145.40 180 ePKPdf   PKPdf   03 27 57.3  -0.4
QSPA                               eSKPbc   SKiKP   03 31 31.8 +2.0
TRQA  Tornquist         146.17  77 ePKPdf   PKPbc   03 28 00.7  -0.3
TRQA  Tornquist         146.17  77 ePKP2    PKPbc   03 28 00.7  -0.3
GO09  Cerro Castillo    148.36 105 ePKPbc   PKPbc   03 28 07.6 +1.0
GO10  Punta Arenas      149.94 107 ePKPbc   PKPbc   03 28 11.8 +1.3
SYO   Syowa Base        151.20 219⇓eP       PKPbc   03 28 12.0  -0.9
SYO   Syowa Base        151.20 219⇓iP       PKPab   03 28 17.2  -4.1
SYO   Syowa Base        151.20 219⇓iP       PKPab   03 28 21.2  -0.1
NVL   N'lazarevskaya    159.94 209 ePKP2    PKPab   03 28 42.4   -16
NVL                                 pmax     pmax
      comp=Z,5.0nm,0.7s
SNAA  Sanae             162.59 197  PKP     PKPdf   03 28 21.4  -0.1
SNAA                                x       x       03 29 10.1
SNAA  Sanae             162.59 197  PKP     PKPdf   03 28 21.4  -0.1
      comp=Z,2.3nm,0.8s,baz=241,slow=2.6,SNR=8.6
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SNAA				PKPab	PKPab	03 29 09.7	-0.6
	comp=Z,5.4nm,0.9s,baz=172,slow=5.0,SNR=6.1						
SNAA	Sanae	162.59	197	*e*PKPab	PKPab	03 29 09.5	-0.9
VNA3	Neumayer Olymp	163.89	190	PKP	PKPdf	03 28 22.4	-0.2
VNA3				x	x	03 29 16.5	
VNA1	Neumayer--Stat	164.29	193	PKP	PKPdf	03 28 23.6	+0.7

CSEM ***16*** *03:19:59.1, 38°.44N×21°.92E, h10^{km}, ML1.3/4*

ATH 16 03:19:59.1, 38°.44N×21°.92E, h10^{km}±2^{km}, ML1.3/4, Error ellipse: s-maj=2.0km s-min=1.1km az=202.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EFP	Efpalio	0.02	234	P	Pg	03 20 00.6	-0.2
EFP				S	Sg	03 20 01.6	-0.4
EFP				AML	AML	03 20 02.2	
	comp=E,1472μm,0.1s						
EFP				AML	AML	03 20 02.3	
	comp=N,1179μm,0.1s						
EFP	Efpalio	0.02	234	P	Pg	03 20 00.7	-0.1
EFP				S	Sg	03 20 01.9	-0.1
TRIZ	Trizonia	0.14	121	P	Pg	03 20 02.4	+0.2
TRIZ				S	Sg	03 20 05.6	+1.2
TRIZ	Trizonia	0.14	121	P	Pg	03 20 02.3	+0.1
TRIZ				S	Sg	03 20 05.1	+0.7
LAKA	Lakka	0.20	167	P	Pg	03 20 03.5	+0.3
LAKA	Lakka	0.20	167	P	Pg	03 20 03.4	+0.1
PVO	Paravola	0.36	300	P	Pg	03 20 05.2	-1.0
PVO	Paravola	0.36	300	P	Pg	03 20 05.7	-0.5
KLV	Kalavryta, Ach	0.43	155	P	Pg	03 20 06.8	-0.7
KLV	Kalavryta, Ach	0.43	155	P	Pg	03 20 07.2	-0.3
DSF	Desfina	0.48	93	P	Pg	03 20 07.8	-0.5
DSF				S	Sg	03 20 15.5	+0.8
DSF				AML	AML	03 20 15.6	
	comp=N,120μm,0.2s						
DSF				AML	AML	03 20 17.4	
	comp=E,61μm,0.1s						
DSF	Desfina	0.48	93	P	Pg	03 20 08.1	-0.3
DSF				S	Sg	03 20 15.3	+0.6
EVR	Evrytania	0.49	350	P	Pg	03 20 07.8	-0.8
EVR				S	Sb	03 20 16.5	-0.6
EVR				AML	AML	03 20 17.2	
	comp=N,145μm,0.1s						
EVR				AML	AML	03 20 18.0	
	comp=E,95μm,0.1s						
EVR	Evrytania	0.49	350	P	Pg	03 20 08.2	-0.4
EVR				S	Sg	03 20 15.9	+0.8
RLS	Riolos of Patr	0.52	224	P	Pg	03 20 09.0	-0.2
RLS				S	Sb	03 20 17.9	0.0
RLS				AML	AML	03 20 18.6	
	comp=E,46μm,0.2s						
RLS				AML	AML	03 20 18.9	
	comp=N,48μm,0.2s						
RLS	Riolos of Patr	0.52	224	P	Pg	03 20 09.1	-0.1
RLS				S	Sb	03 20 17.2	-0.7
GUR	Goura	0.60	146	P	Pg	03 20 09.9	-0.8
GUR	Goura	0.60	146	P	Pg	03 20 10.3	-0.4
PDO	Prodromos	0.60	286	P	Pb	03 20 11.4	-0.3
PDO	Prodromos	0.60	286	P	Pg	03 20 11.0	+0.3
AGG	Agios Georgios	0.67	29	P	Pg	03 20 10.6	-1.4
AGG	Agios Georgios	0.67	29	P	Pg	03 20 11.2	-0.8

MEX 16 03:30:29.6±0.7, 16°.30N×98°.43W, h19^{km}±85^{km}, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.31	72	*e*P	Pg	03 30 35.1	-1.3
PNIG				*e*S	Sg	03 30 40.2	-0.8
TLIG	Tlapa	1.26	354	*e*P	Pn	03 30 48.9	-3.5
TLIG				*e*S	Sb	03 31 04.3	-4.6
CAIG	El Cayaco	1.91	293	*e*P	Pn	03 30 59.1	-2.1
CAIG				*i* S	Sn	03 31 21.6	-3.2
MEIG	Mezcala	1.98	325	*e*P	Pn	03 31 00.2	-1.9
MEIG				*i* S	Sn	03 31 21.8	-4.7

ISCJB ***16*** *03:33:40.7±0.3, 13°.41S±0°.04×72°.55W±0°.04, h33^{km}, mb4.1/17, MS4.6/1, Error ellipse: s-maj=7.8km s-min=4.4km az=44.1*

BJI ***16*** *03:33:42.9, 14°.06S×72°.43W, h50^{km}, Ms4.9/1, Ms7 4.6/1*

NEIC ***16*** *03:33:43.8±0.7, 13°.41S×72°.59W, h45^{km}±7^{km}, mb4.4/8, ML4.6(ARE), Error ellipse: s-maj=11.1km s-min=6.0km az=59.0*

NEIC Felt [II] at Abancay.

IDC ***16*** *03:33:43.3±2.3, 13°.33S×72°.54W, h38^{km}±20^{km}, mb3.9/12, mb1 4.0/19, mb1mx3.9/45, mbtmp4.1/19, ML3.9/6, MS3.2/5, Ms1 3.3/5, ms1mx3.0/40, Error ellipse: s-maj=19.0km s-min=12.9km az=62.0*

ISC 16 03:33:43.3±0.5, 13°.30S±0°.06×72°.54W±0°.06, h35^{km}, n60, σ1.^{s}85/65, mb4.1/17, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	Nana	4.40	287	Pn	Pn	03 34 45.7	-2.0
	18nm,0.3s,baz=107,slow=10,SNR=30						
NNA				Sn	Sn	03 35 39.6	+1.8
	baz=219,slow=24,SNR=2.6						
NNA				LR	LR	03 36 27.1	
	comp=Z,330nm,18.1s,baz=120,slow=37						
NNA	Nana	4.40	287	*e*Pn	Pn	03 34 46.4	-1.3
NNA				*e*S	Sn	03 35 42.3	+4.5
LPAZ	La Paz	5.20	125	Pn	Pn	03 35 00.8	+1.6
	0.5nm,0.3s,baz=316,slow=10.0,SNR=19						
LPAZ				Sn	Sn	03 36 02.9	+4.6
	baz=196,slow=6.8,SNR=1.6						
LPAZ				LR	LR	03 37 26.1	
	comp=Z,436nm,20.2s,baz=285,slow=43						
LPAZ	La Paz	5.20	125	*e*Pn	Pn	03 35 02.1	+2.9
LPAZ				Sn	Sn	03 36 02.9	+4.6
MNMC	Minye Minye	6.45	154	*e*Pn	Pn	03 35 14.0	-2.1
PB11	IPOC Station P	7.00	157	*e*Pn	Pn	03 35 21.2	-2.3
PB01	IPOC Station P	8.24	160	*e*Pn	Pn	03 35 40.1	-0.4
ATAH	Atahualpa	8.41	316	Pn	Pn	03 35 45.2	+2.1
	2.1nm,0.3s,baz=138,slow=5.8,SNR=16						
ATAH				Sn	Sn	03 37 21.1	+4.0
	0.7nm,0.3s,baz=115,slow=22,SNR=1.7						
SAML	Samuel	10.14	66	*e*Pn	Pn	03 36 08.5	+1.9
SAML				*e*S	Sn	03 37 55.9	-3.3
SIV	San Ignacio	11.41	105	Pn	Pn	03 36 24.3	+0.3
	0.2nm,0.3s,baz=289,slow=12,SNR=14						
SIV				Sn	Sn	03 38 33.3	+2.9
	0.3nm,0.3s,baz=295,slow=12,SNR=2.0						
SIV				LR	LR	03 40 24.8	
	comp=Z,69nm,19.5s,baz=290,slow=35						
OTAV	Otavalo	14.67	336	*e*Pn	Pn	03 37 09.9	+1.1
OTAV	Otavalo	14.67	336	*e*P	Pn	03 37 07.3	-1.5
GCUF	Volcan Galeras	15.20	341	*e*P	Pn	03 37 14.7	-1.2
PCON	Cinco Dias	15.99	346	*e*P	Pn	03 37 23.3	-3.0
PRAC	Prado	17.06	352	*e*Pn	P	03 37 41.0	+0.1
	21nm,1.2s						
YOTC	Yotoco, Valle	17.58	347	*e*P	P	03 37 47.7	+1.1
PTGA	Pitinga	17.63	46	P	P	03 37 46.9	-0.2
	2.3nm,0.3s,baz=237,slow=15,SNR=12						
ROSC	El Rosal	18.11	354	P	P	03 37 52.8	0.0
	0.2nm,0.3s,baz=130,slow=12,SNR=2.4						
ROSC				LR	LR	03 45 46.3	
	comp=Z,102nm,21.8s,baz=279,slow=40						
RUSC	La Rusia	19.07	358	*e*P	Pn	03 38 05.4	+1.0
	4.6nm,1.0s						
RUSC	La Rusia	19.07	358	*e*P	Pn	03 38 06.5	+2.0
CPUP	Villa Florida	19.28	135	P	P	03 38 04.3	-0.9
	0.3nm,0.3s,baz=318,slow=9.2,SNR=6.3						
CPUP				LR	LR	03 47 37.8	
	comp=Z,68nm,18.7s,baz=242,slow=43						
HELC	Santa Helena	19.59	351	*e*P	Pn	03 38 12.6	+2.1
	18nm,0.7s						
HELC	Santa Helena	19.59	351	*e*P	Pn	03 38 11.8	+1.4
PTBC	PUERTO BERRIO,	19.80	354	*e*P	Pn	03 38 11.8	-0.9
ZARC	Zaragoza, Cauc	20.78	354	*e*P	Pn	03 38 22.9	-1.2
SDV	Santo Domingo	22.12	5	P	P	03 38 35.0	-1.1
	1.1nm,0.3s,baz=311,slow=18,SNR=2.1						
SJCC	San Jacinto, C	23.19	353	*e*P	P	03 38 51.0	+3.7
PCRV	Puerto La Cruz	24.60	19	P	P	03 38 59.3	-1.2
	3.7nm,0.6s,baz=214,slow=11,SNR=2.0						
PLCA	Paso Flores	27.39	177	P	P	03 39 24.7	-0.9
	6.1nm,1.2s,baz=27,slow=9.0,SNR=3.2						
T49A	Edmonton	51.60	347	*e*P	P	03 42 46.0	-0.3
	4.4nm,0.8s						
TXAR	Lajitas Array	51.95	325	P	P	03 42 48.5	-0.7
	0.6nm,0.7s,baz=153,slow=9.3,SNR=8.1						
TX31	Lajitas Ar. Si	51.95	325	*e*P	P	03 42 51.5	+2.3
WCI	Wyandotte Cave	52.85	346	*e*P	P	03 42 54.9	-0.7
	5.5nm,0.7s						
SDCO	Great Sand Dun	59.46	330	*e*P	P	03 43 42.5	-0.7
	1.4nm,0.8s						
PV05	Paradox Valley	61.53	328	*e*P	P	03 43 55.4	-1.8
AGMN	Agassiz Nation	64.73	343	*e*P	P	03 44 17.7	-0.3
	3.9nm,0.6s						
PDAR	Pinedale Array	65.31	331	P	P	03 44 22.2	+0.1
	0.3nm,0.8s,baz=145,slow=5.4,SNR=3.7						
ULM	Lac du Bonnet	66.51	344	P	P	03 44 29.1	-0.3
	2.4nm,0.7s,baz=152,slow=4.2,SNR=2.6						
WAKR	Walker	67.65	322	*e*P	P	03 44 38.8	+1.6
	8.4nm,1.4s						
SNAA	Sanae	71.12	162	P	P	03 44 57.1	-0.9
	2.3nm,0.7s,baz=272,slow=7.8,SNR=16						
KOWA	Kowa	73.24	70	P	P	03 45 11.3	-0.3
	5.7nm,1.0s,baz=254,slow=9.1,SNR=7.9						
QSPA	South Pole Qui	76.85	180	P	P	03 45 30.8	-0.8
	1.1nm,0.6s,baz=113,slow=7.2,SNR=4.8						
TOA0	Torodi Ar. Sit	78.11	73	*e*P	P	03 45 37.9	-1.5
TORD	Torodi Ar. Bea	78.11	73	P	P	03 45 37.9	-1.5
	4.9nm,0.9s,baz=275,slow=6.3						
YKA	Yellowknife Ar	82.35	342	P	P	03 46 01.1	-0.1
	0.4nm,0.7s,baz=144,slow=38,SNR=3.8						
ESDC	Sonseca Array	82.58	46	P	P	03 46 03.6	+0.5
	1.1nm,0.8s,baz=249,slow=4.2,SNR=5.2						
ES19	SONSECA Array	82.64	46	*e*P	P	03 46 03.8	+0.5
ASAR	Alice Springs	135.07	215	PKP	PKPdf	03 52 59.0	-0.9
	0.4nm,0.7s,baz=144,slow=1.7,SNR=3.5						
ZALV	Zalesovo Beam	135.68	19	PKP	PKPdf	03 52 59.1	-0.9
	0.9nm,0.3s,baz=306,slow=2.6,SNR=4.6						
KURK	Kurchatov	135.93	26	PKP	PKPdf	03 53 00.0	-0.5
KURBB	Kurchatov Arra	135.96	26	PKP	PKPdf	03 53 00.0	-0.6
	0.5nm,0.8s,baz=307,slow=2.6,SNR=3.5						
WRA	Warramunga Arr	137.69	219	PKP	PKPdf	03 53 03.6	-1.2
	0.7nm,0.7s,baz=136,slow=1.9,SNR=5.9						
MKAR	Makanchi Array	140.48	27	PKhKP	PKPpre	03 53 03.5	
	0.1nm,0.4s,baz=318,slow=1.9,SNR=2.9						
WMQ	Urumqi	145.17	25	*e*PKPbc	PKPab	03 53 17.0	-0.2
SONM	Songino Array	145.56	1	PKPbc	PKPab	03 53 18.8	+0.2
	1.3nm,0.7s,baz=343,slow=1.5,SNR=10						
KSRS	Korea Array	149.80	326	PKPbc	PKPbc	03 53 29.8	-0.2
	2.1nm,0.7s,baz=18,slow=2.6,SNR=7.5						
KSAR	Wonju Array Be	149.83	326	PKPbc	PKPbc	03 53 29.8	-0.3
HHC	Hu-ho-hao-te	152.32	353	*e*PKPbc	PKPdf	03 53 29.6	+0.4
LZH	Lanzhou	157.07	8	*e*PKP	PKPdf	03 53 35.0	-1.0
LZH				pPKP	pPKPdf	03 53 48.8	+1.3
LZH				sPKP		03 53 53.5	
LZH				LR	LR		
	comp=N,65nm,17.9s						
LZH				LR	LR		
	comp=E,71nm,18.0s						
LZH				LR	LR		
	comp=Z,90nm,20.2s						
NJ2	Nanjing	158.61	333	*e*PKP	PKPdf	03 53 35.6	-2.2

IDC ***16*** *03:58:47.4±1.8, 16°.05S×169°.59E, h0^{km}, mb4.4/7, mb1 4.5/8, mb1mx4.0/44, mbtmp4.5/8, ML5.4/1, MS3.5/5, Ms1 3.5/5, ms1mx3.1/44, Error ellipse: s-maj=51.0km s-min=21.9km az=4.0*

ISCJB ***16*** *03:58:50.7±1.3, 16°.3S±0°.2×169°.6E±0°.1, h33^{km}, mb4.3/7, MS3.5/5, Error ellipse: s-maj=28.8km s-min=17.8km az=178.9*

ISC 16 03:58:53.0±1.5, 16°.2S±0°.2×169°.6E±0°.1, h35^{km}, n13, σ1.^{s}77/8, mb4.1/7, MS3.4/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	6.50	206	Pn	Pn	04 00 25.1	-1.2
	82nm,0.3s,baz=25,slow=19,SNR=582						
DZM				Sn	Sn	04 01 23.1	-16
	30nm,0.3s,baz=311,slow=22,SNR=9.5						
CTA	Charters Tower	22.46	257	P	P	04 03 47.4	-2.0
	2.6nm,0.4s,baz=96,slow=14,SNR=5.4						
PMG	Port Moresby	22.85	285	LR	LR	04 10 16.7	
	comp=Z,124nm,19.5s,baz=199,slow=30						
RAR	Rarotonga	29.44	104	P	P	04 04 52.3	-1.3
	27nm,0.9s,baz=85,slow=12,SNR=2.4						
STKA	Stephens Creek	29.78	233	P	P	04 04 57.4	+0.8
	3.5nm,0.8s,baz=45,slow=11,SNR=4.6						
WRA	Warramunga Arr	33.64	258	P	P	04 05 30.2	-0.4
	1.4nm,0.6s,baz=90,slow=10,SNR=19						
ASAR	Alice Springs	34.24	252	P	P	04 05 35.9	0.0
	11nm,0.6s,baz=80,slow=8.6,SNR=112						
GUMO	Guam	38.39	319	LR	LR	04 21 17.0	
	comp=Z,27nm,19.4s,baz=114,slow=35						
PPT	Papeete	39.08	98	LR	LR	04 19 52.9	
	comp=Z,40nm,20.6s,baz=247,slow=32						
FITZ	Fitzroy Crossi	41.93	261	P	P	04 06 41.9	+1.3
	1.4nm,0.6s,baz=90,slow=7.1,SNR=4.4						
NWAO	Narrogin (SRO)	49.90	240	LR	LR	04 28 05.3	
	comp=Z,146nm,18.2s,baz=180,slow=35						
VNDA	Vanda	61.42	182	P	P	04 09 07.8	+2.5
	0.5nm,0.3s,baz=15,slow=2.5,SNR=3.4						
USRK	Ussuriysk Ar.	69.23	332	LR	LR	04 39 14.1	
	comp=Z,35nm,18.6s,baz=186,slow=35						

GUC 16 04:21:20.8±0.6, 21°.41S×68°.70W, h141^{km}±4^{km}, ML3.5, 4C-3D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	IPOC Station P	0.64	233	⇑*i*P	Pn	04 21 42.8	+0.6
PB09				*i* S	Sn	04 21 59.1	+0.7
PB09				IAML		04 21 59.7	
	comp=N,569nm,0.7s						
PB01	IPOC Station P	0.82	296	⇓*i*P	Pn	04 21 44.2	+0.8
PB01				*i* S	Sn	04 22 01.6	+1.1
PB01				IAML		04 22 03.2	
	comp=N,2μm,0.4s						
PB07	IPOC Station P	1.15	254	⇓*i*P	Pn	04 21 47.5	+1.2
PB07				*i* S	Sn	04 22 07.3	+1.5
PB07				IAML		04 22 08.3	
	comp=E,1μm,0.3s						
PB03	IPOC Station P	1.17	237	*e*P	Pn	04 21 47.4	+0.9
PB03				*i* S	Sn	04 22 07.3	+1.2
PB03				IAML		04 22 08.3	
	comp=N,1μm,0.2s						
PB08	IPOC Station P	1.33	341	⇑*i*P	Pn	04 21 49.4	+1.0
PB08				*i* S	Sn	04 22 10.8	+1.4
PB08				IAML		04 22 13.2	
	comp=E,383nm,0.4s						
PB06	IPOC Station P	1.52	212	⇑*i*P	Pn	04 21 50.8	+0.6
PB06				*i* S	Sn	04 22 13.5	+0.9
PB06				IAML		04 22 14.2	
	comp=E,456nm,0.1s						
PB04	IPOC Station P	1.63	235	*e*P	Pn	04 21 52.5	+1.2
PB04				*i* S	Sn	04 22 15.8	+1.1
PB04				IAML		04 22 21.2	
	comp=E,288nm,0.2s						
PB11	IPOC Station P	1.87	331	⇑*i*P	Pn	04 21 54.8	+0.7
PB11				*i* S	Sn	04 22 20.6	+1.1
PB11				IAML		04 22 21.8	
	comp=E,853nm,0.3s						
PB05	IPOC Station P	2.00	224	*i* P	Pn	04 21 56.2	+0.6
PB05				*i* S	Sn	04 22 23.0	+0.8
PB05				IAML		04 22 30.5	
	comp=E,112nm,0.3s						
PSGC	Pisagua	2.24	323	⇓*i*P	Pn	04 21 59.0	+0.5
PSGC				*i* S	Sn	04 22 28.0	+0.6
PSGC				IAML		04 22 29.6	
	comp=E,272nm,0.4s						
MNMC	Minye Minye	2.42	339	*e*P	Pn	04 22 01.8	+1.0
MNMC				*e*S	Sn	04 22 33.1	+1.6
MNMC				IAML		04 22 34.8	
	comp=N,644nm,0.2s						
PB10	IPOC Station P	2.71	219	IAML		04 22 41.0	
	comp=E,41nm,0.6s						
PB16	IPOC Station P	3.15	346	IAML		04 22 52.6	
	comp=E,47nm,0.3s						
PB12	IPOC Station P	3.17	331	IAML		04 22 54.4	
	comp=E,143nm,0.3s						
GO02	Mina Guanaco	3.83	192	IAML		04 23 06.2	
	comp=E,52nm,0.3s						

IDC ***16*** *04:37:53.2±1.1, 31°.22S×178°.93W, h0^{km}, mb4.1/8, mb1 4.3/9, mb1mx4.0/40, mbtmp4.2/9, ML3.7/1, MS3.5/2, Ms1 3.5/2, ms1mx2.8/44, Error ellipse: s-maj=29.3km s-min=22.5km az=43.0*

ISCJB ***16*** *04:37:57.5±0.9, 31°.37S±0°.09×179°.1W±0°.2, h33^{km}, mb4.1/8, MS3.4/1, Error ellipse: s-maj=21.4km s-min=11.9km az=12.2*

ISC 16 04:37:58.8±1.0, 31°.3S±0°.1×179°.0W±0°.2, h35^{km}, n13, σ0.^{s}91/12, mb4.1/8, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	7.66	204	Pn	Pn	04 39 47.6	-0.3
	1.2nm,0.3s,baz=58,slow=9.3,SNR=2.8						
URZ				Sn	Sn	04 41 13.5	+0.1
	0.5nm,0.3s,baz=162,slow=20,SNR=2.3						
DZM	Mont Dzumac	15.92	302	LR	LR	04 46 28.5	
	comp=Z,207nm,18.1s,baz=200,slow=32						
STKA	Stephens Creek	33.47	258	P	P	04 44 35.8	+1.1
	2.1nm,0.8s,baz=79,slow=5.2,SNR=2.8						
ASAR	Alice Springs	42.23	268	P	P	04 45 48.4	-0.4
	1.4nm,0.6s,baz=108,slow=7.5,SNR=17						
WRA	Warramunga Arr	43.30	274	P	P	04 45 56.7	-0.8
	2.5nm,0.5s,baz=111,slow=8.0,SNR=20						
VNDA	Vanda	47.13	186	P	P	04 46 27.9	+0.8
	0.8nm,1.1s,baz=5.7,slow=7.1,SNR=3.1						
FITZ	Fitzroy Crossi	51.52	271	P	P	04 47 01.2	-0.2
	6.0nm,0.9s,baz=144,slow=8.7,SNR=6.8						
QSPA	South Pole Qui	58.82	180	P	P	04 47 54.1	+0.5
	4.0nm,0.6s,baz=25,slow=2.0,SNR=19						
SNAA	Sanae	77.29	179	P	P	04 49 48.2	-1.1
	1.3nm,1.0s,baz=243,slow=14,SNR=6.7						
MJAR	Matsushiro Arr	78.50	326	LR	LR	05 22 42.3	
	comp=Z,16nm,18.7s,baz=205,slow=34						
NVAR	Mina Array Bea	89.46	43	P	P	04 50 53.3	+0.9
	0.9nm,0.8s,baz=215,slow=7.4,SNR=4.3						
FINES	FINESS Array B	145.68	339	PKPbc	PKPdf	04 57 31.3	-1.5
	1.4nm,0.5s,baz=41,slow=3.8,SNR=8.7						
TORD	Torodi Ar. Bea	161.94	182	PKPab	PKPab	04 58 42.1	-0.7
	baz=190,slow=3.5						

IDC ***16*** *04:49:32.4±1.0, 18°.82N×120°.97E, h0^{km}, mb3.6/6, mb1 3.8/7, mb1mx3.5/57, mbtmp3.7/7, ML3.8/2, MS3.5/5, Ms1 3.5/5, ms1mx2.9/62, Error ellipse: s-maj=47.1km s-min=16.4km az=72.0*

ISCJB ***16*** *04:49:37.7±0.9, 18°.99N±0°.05×120°.76E±0°.08, h53^{km}±12^{km}, mb3.5/6, MS3.7/4, Error ellipse: s-maj=13.7km s-min=6.8km az=19.3*

ISC 16 04:49:37.4±1.4, 19°.05N±0°.04×120°.91E±0°.10, h35^{km}±4^{km}, n25, σ1.^{s}98/22, mb3.5/6, MS3.6/4, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APYP	Conner	1.22	165	*e*P	Pb	04 49 58.7	-1.3
APYP				*e*S	Sn	04 50 14.7	+1.3
SGCP	Mt. Cagua	1.35	126	*e*P	Pb	04 50 01.4	-0.7
SGCP				*e*S	Sb	04 50 19.8	+0.7
ABRA	Dolores	1.41	188	*e*P	Pn	04 50 00.2	-0.3
ABRA				*e*S	Sn	04 50 16.6	-1.2
CVP	Callao Caves	1.60	147	*e*P	Pb	04 50 05.8	-0.5
CVP				*e*S	Sb	04 50 27.7	+1.5
BBP	Basco	1.71	36	*e*P	Pb	04 50 06.2	-2.0
BBP				*e*S	Sb	04 50 28.9	-0.4
CAUP	Cauayan	2.27	157	*e*P	Pb	04 50 15.6	-2.2
CAUP				*e*S	Sb	04 50 49.2	+3.9
BOLP	Bolinao	2.82	200	*e*P	Pn	04 50 20.6	+0.6
BOLP				*e*S	Sn	04 50 50.4	-2.3
TGY	Tagaytay City	4.92	180	Pn	Pn	04 50 46.6	-2.3
	28nm,0.3s,baz=348,slow=19,SNR=1.6						
TGY				LR	LR	04 53 03.2	
	comp=Z,132nm,20.4s,baz=168,slow=45						
JOW	Kunigami	10.30	40	Pn	Pn	04 52 04.0	+1.2
	0.8nm,0.3s,baz=230,slow=16,SNR=2.6						
SONM	Songino Array	31.05	341	P	P	04 55 53.2	+1.1
	0.5nm,0.8s,baz=167,slow=8.8,SNR=3.8						
FITZ	Fitzroy Crossi	37.21	173	P	P	04 56 44.1	-1.4
	1.6nm,0.8s,baz=5.2,slow=11,SNR=3.2						
WRA	Warramunga Arr	40.93	161	P	P	04 57 13.5	-3.2
	0.6nm,0.7s,baz=334,slow=10,SNR=9.5						
MKAR	Makanchi Array	41.97	320	P	P	04 57 26.9	+1.9
	0.5nm,0.7s,baz=134,slow=9.0,SNR=2.1						
H11S3	WAKE ISLAND Hy	43.26	83	T	T	05 43 15.9	
	baz=277,slow=74						
H11S1	WAKE ISLAND Hy	43.27	83	T	T	05 43 13.8	
	baz=277						
H11S2	WAKE ISLAND Hy	43.27	83	T	T	05 43 15.3	
	baz=277,slow=74						
H11N1	WAKE ISLAND Hy	43.28	81	T	T	05 43 27.4	
	baz=277,slow=75,SNR=9.5						
H11N2	WAKE ISLAND Hy	43.29	81	T	T	05 43 15.8	
	baz=277,slow=75,SNR=11						
H11N3	WAKE ISLAND Hy	43.30	81	T	T	05 43 30.2	
	baz=277,slow=75,SNR=10						
ASAR	Alice Springs	44.31	163	P	P	04 57 42.3	-1.8
	0.4nm,0.4s,baz=345,slow=6.6,SNR=5.6						
KURBB	Kurchatov Arra	45.96	323	P	P	04 57 59.3	+2.4
	0.5nm,0.5s,baz=119,slow=7.9,SNR=5.6						
KVAR	Kislovodsk Arr	68.66	311	LR	LR	05 36 05.0	
	comp=Z,20nm,18.2s,slow=41						
ASF	Jabal al Asfar	75.19	299	LR	LR	05 38 23.0	
	comp=Z,95nm,20.4s,baz=303,slow=39						
HFS	Hagfors	81.91	331	LR	LR	05 43 00.3	
	comp=Z,35nm,19.5s,baz=182,slow=39						
NOA	NORSAR Array B	82.63	332	LR	LR	05 41 39.4	
	comp=Z,20nm,19.2s,baz=210,slow=38						

NIED ***16*** *06:02:00, 39°.00N×142°.50E, h32^{km}, Mw3.6 Best double couple: M$_0$2.93000×10^{14} NP1:φ$_s$264.00000°, δ35.00000°, λ175.00000°. NP2:φ$_s$359.00000°, δ87.00000°, λ56.00000°.*

JMA ***16*** *06:02:04.7±0.1, 39°.02N×142°.41E, h32^{km}±2^{km}, M3.8*

JMA Felt II J1.

IDC ***16*** *06:02:07.4±2.4, 38°.91N×142°.39E, h44^{km}±23^{km}, mb3.5/7, mb1 3.7/11, mb1mx3.4/67, mbtmp3.7/11, ML3.5/4, MS2.6/3, Ms1 2.6/3, ms1mx2.3/51, Error ellipse: s-maj=25.0km s-min=17.3km az=96.0*

ISC 16 06:02:03.0±1.6, 38°.96N±0°.03×142°.42E±0°.06, h13^{km}±9^{km}, n29, σ1.^{s}50/35, mb3.9/7, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	0.60	282	P	Pn	06 02 16.3	-0.9
OFUJ				S	Sb	06 02 24.2	+0.6
MIYJ	Miyakonagasawa	0.77	323	P	Pg	06 02 18.1	+0.1
MIYJ				S	Sg	06 02 27.6	-0.5
JMK	Ichinoseki	0.94	270	P	Pn	06 02 21.6	-0.2
JMK				S	Sg	06 02 33.3	0.0
JIO	Ouri	0.98	239	P	Pg	06 02 22.0	+0.1
JIO				*e*S	Sg	06 02 33.9	-0.7
JOM	Ohasama	1.01	301	P	Pb	06 02 22.5	+0.1
JOM				S	Sb	06 02 35.5	-0.2
JTH	Tanohata	1.07	336	P	Pb	06 02 22.3	-1.0
JKZ	Kuzumaki	1.33	321	P	Pn	06 02 27.2	0.0
JKZ				S	Sb	06 02 43.3	-1.4
JRG	Rokugo	1.46	288	P	Pb	06 02 29.9	0.0
JRG				S	Sn	06 02 48.3	+0.4
JOU	Okura	1.50	247	P	Pb	06 02 30.1	-0.5
JOU				S	Sn	06 02 49.3	+0.3
JANG	Nango	1.57	334	P	Pn	06 02 30.3	-0.3
JANG				S	Sn	06 02 49.5	-1.4
MAT	Matsushiro	4.12	235	P	Pn	06 03 08.5	+2.9
MAT				*e*S	Sn	06 03 53.5	-0.2
MJAR	Matsushiro Arr	4.12	235	P	Pn	06 03 08.1	+2.5
	4.0nm,0.3s,baz=40,slow=10,SNR=34						
MJAR				S	Sb	06 04 01.4	-3.6
	0.9nm,0.3s,baz=9.6,slow=9.8,SNR=4.1						
MJAR				LR	LR	06 04 14.6	
	comp=Z,24nm,21.5s,baz=90,slow=31						
ASAJ	Asahikawa	5.15	1	P	Pn	06 03 21.9	+2.1
	1.1nm,0.3s,baz=151,slow=17,SNR=2.8						
ASAJ				S	Sn	06 04 17.2	-1.8
	1.0nm,0.3s,baz=302,slow=19,SNR=2.1						
JHJ	Hachijo jima 2	6.21	201	P	Pn	06 03 34.0	-0.3
	11nm,0.3s,baz=80,slow=24,SNR=4.7						
JHJ				S	Sn	06 04 41.5	-3.6
	7.0nm,0.3s,baz=73,slow=19,SNR=2.8						
KSRS	Korea Array	11.51	267	P	Pn	06 04 50.4	+3.5
	0.2nm,0.3s,baz=75,slow=14,SNR=3.1						
KSRS				LR	LR	06 08 50.0	
	comp=Z,39nm,18.0s,baz=120,slow=35						
PETK	Petropavlovsk-	17.63	32	LR	LR	06 13 41.8	
	comp=Z,34nm,19.8s,baz=272,slow=39						
H11N2	WAKE ISLAND Hy	28.53	125	T	T	06 38 28.9	
	baz=317,slow=75,SNR=166						
H11N1	WAKE ISLAND Hy	28.54	125	T	T	06 38 32.1	
	baz=317,slow=75,SNR=174						

H11N3	**WAKE ISLAND Hy**	**28.55**	**125**	T	T	06 38 26.7	
	baz=317,slow=75,SNR=120						
H11S1	**WAKE ISLAND Hy**	**29.31**	**127**	T	T	06 39 27.1	
	baz=318,slow=76,SNR=38						
H11S3	**WAKE ISLAND Hy**	**29.31**	**127**	T	T	06 39 20.9	
	baz=318,slow=76,SNR=60						
H11S2	**WAKE ISLAND Hy**	**29.33**	**127**	T	T	06 39 21.4	
	baz=318,slow=76,SNR=33						
MKAR	**Makanchi Array**	**43.80**	**301**	P	**P**	**06 10 08.5**	**+0.2**
	0.5nm,0.5s,baz=84,slow=9.1,SNR=7.8						
KURBB	**Kurchatov Arra**	**45.47**	**307**	P	**P**	**06 10 21.6**	**0.0**
	1.7nm,0.5s,baz=80,slow=8.3,SNR=11						
ILAR	**Eielson Array**	**47.45**	**33**	P	**P**	**06 10 37.8**	**+0.9**
	0.7nm,0.7s,baz=270,slow=6.2,SNR=11						
BVAR	**Borovoye Array**	**49.88**	**311**	P	**P**	**06 10 56.0**	**+0.2**
	0.8nm,0.5s,baz=70,slow=9.3,SNR=3.8						
WRA	**Warramunga Arr**	**59.08**	**189**	P	**P**	**06 12 02.8**	**-0.1**
	0.4nm,0.4s,baz=6.8,slow=7.0,SNR=14						
ASAR	**Alice Springs**	**62.81**	**189**	P	**P**	**06 12 28.0**	**-0.3**
	0.5nm,0.9s,baz=14,slow=8.9,SNR=4.0						
TXAR	**Lajitas Array**	**88.32**	**53**	P	**P**	**06 14 55.3**	**+0.6**
	0.1nm,0.6s,baz=270,slow=2.3,SNR=2.4						

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*ISCJB **16** 06:05:21.3±0.6, 24°.65N±0°.04×122°.54E±0°.02, h11^{km}±4^{km}, Error ellipse: s-maj=7.6km s-min=2.3km az=6.9*

*JMA **16** 06:05:21.9, 24°.58N×122°.52E, h25^{km}±1^{km}, M2.2*

*TAP **16** 06:05:21.3, 24°.65N×122°.51E, h13^{km}, ML2.7, C*

ISC 16 06:05:21.4±1.1**, 24°.62N**±0°.05×**122°.52E**±0°.02**, h19**^{km}±3^{km}**, n31, σ0^{s}.38**/52**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.36**	**259**	P	**Pg**	**06 05 29.1**	**+0.1**
	baz=253						
EOS1				S	**Sb**	**06 05 34.8**	**+0.2**
	baz=253						
JYNG	**Yonagunijimaku**	**0.43**	**113**	P	**Pg**	**06 05 30.3**	**+0.1**
JYNG				*e*S	**Sg**	**06 05 36.3**	**+0.1**
YOJ	**Yonaguni jima**	**0.48**	**109**	P	**Pg**	**06 05 31.2**	**0.0**
	baz=112						
YOJ				*e*S	**Sb**	**06 05 38.6**	**+0.6**
	baz=112						
YOJ	**Yonaguni jima**	**0.48**	**109**	P	**Pg**	**06 05 31.2**	**0.0**
YOJ				*e*S	**Sg**	**06 05 37.7**	**0.0**
EGS		**0.57**	**293**	P	**Pb**	**06 05 32.5**	**-0.4**
	baz=279						
TWC	**Suao**	**0.61**	**269**	P	**Pb**	**06 05 32.5**	**-0.9**
	baz=266						
TWC				*e*S	**Sb**	**06 05 41.7**	**+0.2**
	baz=266						
TWB1	**Santiao Chiao**	**0.61**	**309**	*e*P	**Pb**	**06 05 33.2**	**-0.3**
	baz=307						
TWB1				*e*S	**Sb**	**06 05 41.7**	**-0.1**
	baz=307						
NTC	**Toucheng**	**0.67**	**291**	*e*P	**Pb**	**06 05 34.0**	**-0.4**
	baz=276						
TIPB	**Shuangxi**	**0.72**	**299**	*e*P	**Pb**	**06 05 35.2**	**-0.2**
	baz=288						
NANB	**Nanao**	**0.72**	**255**	*e*P	**Pb**	**06 05 35.0**	**-0.4**
	baz=258						
ENA	**Nanau**	**0.73**	**255**	*e*P	**Pb**	**06 05 35.2**	**-0.4**
	baz=262						
ENA				*e*S	**Sg**	**06 05 45.6**	**+0.1**
	baz=262						
TWE	**Neicheng**	**0.78**	**278**	*e*P	**Pb**	**06 05 36.0**	**-0.4**
	baz=267						
TWE				S	**Sg**	**06 05 47.3**	**+0.2**
	baz=267						
ENTT	**Nioudou**	**0.86**	**272**	*e*P	**Pb**	**06 05 38.2**	**+0.3**
	baz=269						
NWLT	**Wulai**	**0.93**	**280**	*e*P	**Pb**	**06 05 38.9**	**-0.2**
	baz=277						
NACB	**Ninganchiao**	**0.95**	**242**	*e*P	**Pb**	**06 05 38.9**	**-0.4**
	baz=248						
NACB				*e*S	**Sg**	**06 05 52.4**	**-0.1**
	baz=248						
YM07	**YM07**	**0.98**	**304**	*e*P	**Pb**	**06 05 40.2**	**+0.3**
	baz=302						
TATO	**Taipei**	**1.00**	**291**	*e*P	**Pg**	**06 05 41.0**	**+0.1**
	baz=289						
TATO				*e*S	**Sn**	**06 05 54.3**	**+0.3**
	baz=289						
YM08	**YM08**	**1.01**	**304**	*e*P	**Pb**	**06 05 40.6**	**+0.2**
	baz=302						
YHNB	**Yeheng**	**1.04**	**273**	*e*P	**Pb**	**06 05 40.9**	**0.0**
	baz=271						
YHNB				*e*S	**Sg**	**06 05 55.5**	**+0.2**
	baz=271						
NNSB	**Datong**	**1.05**	**260**	*e*P	**Pb**	**06 05 41.0**	**-0.1**
	baz=258						
NNSB				*e*S	**Sn**	**06 05 55.6**	**+0.2**
	baz=258						
NNSH	**Datong**	**1.05**	**260**	*e*P	**Pb**	**06 05 41.1**	**0.0**
	baz=258						
NNSH				*e*S	**Sn**	**06 05 55.5**	**0.0**
	baz=258						
NSK	**Sanguang**	**1.05**	**273**	P	**Pb**	**06 05 41.2**	**0.0**
	baz=271						
NSK				*e*S	**Sn**	**06 05 55.3**	**-0.3**
	baz=271						
IRIF	**Iriomote-Funau**	**1.14**	**104**	P	**Pn**	**06 05 41.6**	**-0.9**
IRIF				*e*S	**Sb**	**06 05 56.9**	**-0.2**
WHF	**Hehuan Shan**	**1.23**	**248**	*e*P	**Pb**	**06 05 44.5**	**+0.1**
	baz=254						
WHF				*e*S	**Sg**	**06 06 01.8**	**+0.2**
	baz=254						
TDCB	**Techi**	**1.29**	**254**	*e*P	**Pg**	**06 05 46.1**	**-0.3**
	baz=234						
HATJ	**Hateruma jima**	**1.30**	**115**	P	**Pn**	**06 05 44.6**	**-0.1**
HATJ				*e*S	**Sn**	**06 06 01.7**	**+0.1**
CHGB	**Renai**	**1.34**	**246**	*e*P	**Pb**	**06 05 46.8**	**+0.6**
	baz=226						
JKRS	**Kuro-shima**	**1.41**	**105**	P	**Pn**	**06 05 46.7**	**+0.5**
JKRS				*e*S	**Sb**	**06 06 05.4**	**+0.5**
JIJ	**Ishigaki jima**	**1.50**	**99**	P	**Pn**	**06 05 47.2**	**-0.2**
JIJ				S	**Sb**	**06 06 07.4**	**-0.1**
JISG	**Ishigakijimahi**	**1.64**	**91**	P	**Pn**	**06 05 48.7**	**-0.5**
JISG				*e*S	**Sb**	**06 06 11.1**	**-0.2**
JTJ	**Tarama**	**1.99**	**89**	P	**Pn**	**06 05 55.2**	**+1.1**
JTJ				S	**Sb**	**06 06 20.6**	**-0.9**

GUC 16 06:06:19.5±0.6**, 19°.46S**×**67°.96W, h269**^{km}±7^{km}**, ML4.0, 2C, Southern Bolivia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**1.31**	**239**	⇑*i*P	Pn	06 07 00.3	+1.4
PB08				*e*S	S	06 07 31.8	+1.9
MNMC	**Minye Minye**	**1.58**	**282**	*e*P	Pn	06 07 02.5	+1.9
MNMC				*e*S	S	06 07 34.8	+1.8
MNMC				IAML		06 07 40.5	
	comp=N,841nm,0.3s						
PB11	**IPOC Station P**	**1.63**	**259**	*e*P	Pn	06 07 02.5	+1.7
PB11				*e*S	S	06 07 35.3	+1.9
PB11				IAML		06 07 37.3	
	comp=N,512nm,0.3s						
PB16	**IPOC Station P**	**1.85**	**307**	⇑*i*P	Pn	06 07 04.9	+1.9
PB16				*e*S	S	06 07 39.8	+2.4
PSGC	**Pisagua**	**2.05**	**266**	*e*P	Pn	06 07 06.4	+2.3
PSGC				*e*S	S	06 07 41.0	+1.6
PSGC				IAML		06 07 42.2	
	comp=N,326nm,0.5s						
PB01	**IPOC Station P**	**2.13**	**222**	*e*P	Pn	06 07 06.7	+1.9
PB01				*i* S	S	06 07 42.4	+1.7
PB01				IAML		06 07 47.0	
	comp=E,318nm,0.2s						
PB12	**IPOC Station P**	**2.40**	**290**	*e*P	Pn	06 07 09.5	+2.2
PB12				*e*S	S	06 07 47.0	+1.8
PB09	**IPOC Station P**	**2.62**	**207**	*e*P	Pn	06 07 12.0	+2.6
PB09				*e*S	S	06 07 51.4	+2.3
PB09				IAML		06 07 55.9	
	comp=E,113nm,0.5s						
PB07	**IPOC Station P**	**2.89**	**218**	*e*P	Pn	06 07 15.1	+2.9
PB07				*i* S	S	06 07 56.0	+1.9
PB03	**IPOC Station P**	**3.08**	**213**	*e*P	Pn	06 07 16.7	+2.6
PB03				*e*S	S	06 07 59.0	+1.4

IDC 16 06:32:26.9±2.4**, 4°.36N**×**127°.16E, h0**^{km}**, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.2**/58**, mbtmp3.4**/3**, MS3.1**/1**, Ms1 3.3**/1**, ms1mx2.4**/28**, Error ellipse: s-maj=192.7km s-min=25.5km az=66.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**25.16**	**164**	P	P	06 37 54.1	0.0
	0.6nm,0.4s,baz=343,slow=10.0,SNR=19						
ASAR	**Alice Springs**	**28.62**	**167**	P	P	06 38 25.2	-0.1
	0.3nm,0.6s,baz=357,slow=8.3,SNR=4.2						
CMAR	**Chiang Mai Arr**	**30.93**	**299**	LR	LR	06 52 21.6	
	comp=Z,31nm,18.1s,baz=220,slow=39						
MKAR	**Makanchi Array**	**57.29**	**325**	P	P	06 42 16.6	0.0
	0.2nm,0.6s,baz=117,slow=8.6,SNR=3.4						

IDC 16 06:34:39.7±9.2**, 22°.77S**×**179°.40E, h658**^{km}±118^{km}**, mb3.1**/6**, mb1 3.4**/6**, mb1mx2.8**/44**, mbtmp4.2**/6**, Error ellipse: s-maj=48.7km s-min=34.0km az=71.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**30.94**	**269**	P	P	06 40 07.6	+0.9
	5.8nm,0.3s,baz=94,slow=13,SNR=11						
ASAR	**Alice Springs**	**41.69**	**260**	P	P	06 41 33.6	-0.6
	1.8nm,0.6s,baz=101,slow=7.7,SNR=17						
WRA	**Warramunga Arr**	**41.95**	**265**	P	P	06 41 36.0	-0.3
	3.4nm,0.6s,baz=102,slow=8.2,SNR=85						
FITZ	**Fitzroy Crossi**	**50.38**	**265**	P	P	06 42 40.0	+0.6
	0.7nm,0.4s,baz=102,slow=12,SNR=4.8						
QSPA	**South Pole Qui**	**67.31**	**180**	P	P	06 44 31.6	+0.3
	0.7nm,0.3s,baz=90,slow=2.0,SNR=6.8						
TXAR	**Lajitas Array**	**90.30**	**58**	P	P	06 46 32.9	-0.2
	0.5nm,0.7s,baz=207,slow=5.3,SNR=6.8						
ARCES	**ARCESS Array B**	**130.67**	**348**	PKP	PKPdf	06 52 37.8	+0.7
	0.7nm,0.8s,baz=35,slow=3.3,SNR=4.0						
HFS	**Hagfors**	**141.33**	**349**	PKP	PKPdf	06 52 55.3	-1.7
	1.4nm,0.4s,baz=36,slow=3.4,SNR=11						

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*IDC **16** 07:12:11.7±1.1, 11°.04N×126°.82E, h0^{km}, mb3.9/9, mb1 4.0/9, mb1mx3.7/57, mbtmp3.9/9, MS3.0/2, Ms1 3.0/2, ms1mx2.6/56, Error ellipse: s-maj=100.0km s-min=15.6km az=70.0*

ISC 16 07:12:12.5±2.1**, 10°.88N**±0°.04×**126°.41E**±0°.08**, h5**^{km}±12^{km}**, n21, σ1^{s}.78**/28**, mb4.1**/9**, 1C-2D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	**Borongan**	**1.20**	**307**	*e*P	**Pn**	**07 12 37.3**	**+1.4**
BESP				*e*S	Sn	07 13 05.7	+13
SCPH	**Surigao**	**1.42**	**220**	⇓*i*P	**Pn**	**07 12 38.3**	**-0.7**
SCPH				*e*S	**Sb**	**07 12 54.8**	**-3.2**
PLP	**Palo**	**1.44**	**281**	⇑*e*P	**Pg**	**07 12 39.4**	**-0.7**
PLP				*i* S	**Sn**	**07 12 58.9**	**+0.4**
MSLP	**Maasin**	**1.70**	**244**	*e*P	**Pn**	**07 12 42.3**	**-0.6**
MSLP				*e*S	**Sn**	**07 13 05.0**	**0.0**
OCLP	**Ormoc**	**1.78**	**276**	*e*P	**Pg**	**07 12 45.7**	**-1.0**
OCLP				*e*S	**Sg**	**07 13 11.5**	**+1.8**
BUTP	**Butuan**	**2.05**	**202**	*e*P	**Pn**	**07 12 45.0**	**-2.8**
BUTP				*e*S	**Sg**	**07 13 23.4**	**+4.8**
CNP	**Catarman**	**2.36**	**314**	*e*P	**Pb**	**07 12 53.5**	**-2.0**
CNP				*e*S	**Sb**	**07 13 22.3**	**-2.7**
PVCP	**Virac**	**3.49**	**321**	*e*P	**Pn**	**07 13 07.6**	**+0.2**
PVCP				*e*S	**Sg**	**07 14 04.8**	**+0.2**
RCP	**Roxas**	**3.66**	**281**	⇓*e*P	**Pn**	**07 13 12.7**	**+2.8**
GUMO	**Guam**	**18.23**	**80**	LR	LR	07 22 23.5	
	comp=Z,30nm,21.9s,baz=240,slow=34						
JHJ	**Hachijo jima 2**	**25.32**	**27**	LR	LR	07 28 54.8	
	comp=Z,60nm,18.7s,baz=93,slow=40						
FITZ	**Fitzroy Crossi**	**28.80**	**182**	P	**P**	**07 18 14.1**	**+2.4**
	3.1nm,0.9s,baz=9.3,slow=7.5,SNR=2.9						
WRA	**Warramunga Arr**	**31.61**	**166**	P	**P**	**07 18 35.6**	**-0.9**
	0.2nm,0.5s,baz=347,slow=9.4,SNR=5.0						
WRA				PcP	**PcP**	**07 21 29.5**	**+0.4**
	0.3nm,0.8s,baz=342,slow=2.7,SNR=2.9						
ASAR	**Alice Springs**	**35.11**	**168**	P	**P**	**07 19 07.1**	**0.0**
	0.3nm,0.3s,baz=339,slow=6.7,SNR=6.2						
ASAR				PcP	**PcP**	**07 21 38.5**	**-0.4**
	0.2nm,0.4s,baz=348,slow=3.2,SNR=3.3						
MKAR	**Makanchi Array**	**51.63**	**322**	P	**P**	**07 21 21.0**	**+0.8**
	1.7nm,0.7s,baz=122,slow=8.3,SNR=19						
ZALV	**Zalesovo Beam**	**54.16**	**331**	P	**P**	**07 21 39.3**	**+0.6**
	0.8nm,0.3s,baz=109,slow=7.8,SNR=5.4						
KURBB	**Kurchatov Arra**	**55.66**	**325**	P	**P**	**07 21 49.6**	**0.0**
	0.6nm,0.5s,baz=125,slow=6.8,SNR=7.6						
BVAR	**Borovoye Array**	**61.25**	**325**	P	**P**	**07 22 29.5**	**+0.9**
	0.3nm,0.3s,baz=105,slow=11,SNR=4.2						
ARCES	**ARCESS Array B**	**83.67**	**340**	P	**P**	**07 24 42.1**	**+0.1**
	1.5nm,0.8s,baz=68,slow=7.9,SNR=14						
FINES	**FINESS Array B**	**85.42**	**332**	P	**P**	**07 24 50.6**	**-0.4**
	3.2nm,1.0s,baz=27,slow=9.4,SNR=3.1						
PLCA	**Paso Flores**	**146.71**	**156**	PKPbc	**PKPab**	**07 31 56.7**	**-0.4**
	2.3nm,0.9s,baz=164,slow=3.4,SNR=3.7						

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*BGR **16** 07:15:48.3±0.8, 44°.60N×10°.91E, h10^{km}, ML3.3/3, Error ellipse: s-maj=20.0km s-min=10.0km az=172.0*

*VIE **16** 07:15:48.7±0.3, 44°.92N×11°.07E, h5^{km}±2^{km}, mb2.7/12, ml3.0/16, Error ellipse: s-maj=3.1km s-min=1.8km az=120.0 51 km NNW of Bologna*

*ROM **16** 07:15:48.1±0.2, 44°.938N±0°.006×10°.961E±0°.009, h10^{km}, ML3.1/36*

*LDG **16** 07:15:49.8±0.1, 44°.90N×11°.05E, h2^{km}, Ml3.2/24, Error ellipse: s-maj=3.1km s-min=2.5km az=129.0*

*CSEM **16** 07:15:49.6±0.2, 44°.93N×10°.97E, h10^{km}, ML3.2/28, Error ellipse: s-maj=5.1km s-min=2.4km az=145.0*

*ISCJB **16** 07:15:50.2±0.2, 44°.89N±0°.02×10°.90E±0°.02, h24^{km}±2^{km}, Error ellipse: s-maj=3.0km s-min=2.2km az=148.0*

*PRU **16** 07:15:52.7, 44°.96N×10°.94E, h23^{km}*

ISC 16 07:15:49.8±0.8**, 44°.92N**±0°.02×**10°.91E**±0°.02**, h17**^{km}±4^{km}**, n191, σ1^{s}.13**/272**, 10C-2D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
T0825	**Gonzaga (MN)**	**0.07**	**318**	*i* P	**Pg**	**07 15 52.7**	**-0.3**
T0825				S	**Sg**	**07 15 56.4**	**+1.3**
T0826	**Rio Saliceto (**	**0.11**	**220**	*i* P	**Pg**	**07 15 52.8**	**-0.6**
T0826				S	**Sg**	**07 15 55.8**	**+0.1**
NOVE	**Novellara**	**0.19**	**228**	AML	AML		
	comp=E,18900μm,0.6s						
NOVE				AML	AML		
	comp=E,18850μm,0.6s						
NOVE				AML	AML		
	comp=N,41200μm,0.4s						
NOVE				AML	AML		
	comp=E,18850μm,0.6s						
NOVE				AML	AML		
	comp=N,41250μm,0.4s						
NOVE				AML	AML		
	comp=E,18900μm,0.6s						
NOVE				AML	AML		
	comp=N,41250μm,0.4s						
NOVE				AML	AML		
	comp=N,41250μm,0.4s						
RAVA	**Ravarino**	**0.23**	**138**	P	**Pg**	**07 15 54.7**	**-0.3**
RAVA				S	**Sb**	**07 15 59.8**	**+0.6**
RAVA				AML	AML		
	comp=E,14100μm,0.8s						
RAVA				AML	AML		
	comp=N,15200μm,0.3s						
RAVA				AML	AML		
	comp=E,14150μm,0.8s						
RAVA				AML	AML		
	comp=N,15200μm,0.3s						
RAVA				AML	AML		
	comp=E,14100μm,0.8s						
RAVA				AML	AML		
	comp=N,15200μm,0.3s						
RAVA				AML	AML		
	comp=N,15200μm,0.3s						
RAVA				AML	AML		
	comp=E,14100μm,0.8s						
T0800	**Massa Finalese**	**0.25**	**107**	AML	AML		
	comp=N,14950μm,0.3s						
T0800				AML	AML		
	comp=E,17350μm,0.5s						
T0800				AML	AML		
	comp=N,17600μm,0.3s						
T0800				AML	AML		
	comp=E,19250μm,0.5s						
T0800				AML	AML		
	comp=N,14950μm,0.3s						
T0800				AML	AML		
	comp=E,17350μm,0.5s						
T0800				AML	AML		
	comp=N,17550μm,0.3s						
T0800				AML	AML		
	comp=E,19250μm,0.5s						
T0800				AML	AML		
	comp=E,17350μm,0.5s						
T0800				AML	AML		
	comp=N,17550μm,0.3s						
T0800				AML	AML		
	comp=E,19250μm,0.5s						
T0800				AML	AML		
	comp=N,14950μm,0.3s						
T0800				AML	AML		
	comp=E,19250μm,0.5s						
T0800				AML	AML		
	comp=E,17350μm,0.5s						
T0800				AML	AML		
	comp=N,14950μm,0.3s						
T0800				AML	AML		
	comp=N,17550μm,0.3s						
MODE	**Modena**	**0.29**	**174**	P	**Pg**	**07 15 56.2**	**0.0**
MODE				AML	AML		
	comp=E,52050μm,0.6s						
MODE				AML	AML		
	comp=N,28100μm,0.5s						
MODE				AML	AML		
	comp=E,52050μm,0.6s						
MODE				AML	AML		
	comp=N,28150μm,0.5s						
MODE				AML	AML		
	comp=E,52050μm,0.6s						
MODE				AML	AML		
	comp=N,28150μm,0.5s						
MODE				AML	AML		
	comp=N,28150μm,0.5s						
MODE				AML	AML		
	comp=E,52050μm,0.6s						
T0822	**Casumaru (Bond**	**0.32**	**106**	P	**Pg**	**07 15 56.3**	**-0.3**
T0822				S	**Sg**	**07 16 01.6**	**+0.3**
T0821	**Loc. Casaglia**	**0.45**	**92**	P	**Pb**	**07 16 00.1**	**+0.8**
PRMA	**PARMA**	**0.45**	**250**	AML	AML		
	comp=N,4100μm,0.7s						
PRMA				AML	AML		
	comp=E,2540μm,0.6s						
PRMA				AML	AML		
	comp=N,4100μm,0.7s						
PRMA				AML	AML		
	comp=E,2540μm,0.6s						
PRMA				AML	AML		
	comp=N,4100μm,0.7s						
PRMA				AML	AML		
	comp=E,2540μm,0.6s						
PRMA				AML	AML		
	comp=E,2540μm,0.6s						
PRMA				AML	AML		
	comp=N,4100μm,0.7s						
ZCCA	**Zocca**	**0.57**	**175**	AML	AML		
	comp=E,1410μm,1.6s						
ZCCA				AML	AML		
	comp=E,1420μm,1.5s						
ZCCA				AML	AML		
	comp=N,1260μm,0.4s						
ZCCA				AML	AML		
	comp=E,1410μm,1.6s						
ZCCA				AML	AML		
	comp=N,1245μm,0.4s						
ZCCA				AML	AML		
	comp=E,1425μm,1.5s						
ZCCA				AML	AML		
	comp=N,1260μm,0.4s						
ZCCA				AML	AML		
	comp=E,1410μm,1.6s						
ZCCA				AML	AML		
	comp=N,1245μm,0.4s						
ZCCA				AML	AML		
	comp=E,1422μm,1.5s						
ZCCA				AML	AML		
	comp=N,1261μm,0.4s						
ZCCA				AML	AML		
	comp=N,1245μm,0.4s						
ZCCA				AML	AML		
	comp=N,1245μm,0.4s						
ZCCA				AML	AML		
	comp=N,1261μm,0.4s						
ZCCA				AML	AML		
	comp=E,1410μm,1.6s						
ZCCA				AML	AML		
	comp=E,1422μm,1.5s						
ERBM	**Eremo**	**0.62**	**215**	P	**Pn**	**07 16 03.4**	**-0.6**
ERBM				AML	AML		
	comp=E,546μm,1.1s						
ERBM				AML	AML		
	comp=N,872μm,0.8s						
ERBM				AML	AML		
	comp=E,545μm,1.1s						
ERBM				AML	AML		
	comp=N,871μm,0.8s						
ERBM				AML	AML		
	comp=E,546μm,1.1s						
ERBM				AML	AML		
	comp=N,872μm,0.8s						
ERBM				AML	AML		
	comp=N,872μm,0.8s						
ERBM				AML	AML		
	comp=E,546μm,1.1s						
TEOL	**Teolo**	**0.69**	**51**	⇑*e*Pg	**Pb**	**07 16 03.7**	**+0.2**
TEOL				*e*Sg	**Sn**	**07 16 15.7**	**+0.3**
TEOL	**Teolo**	**0.69**	**51**	*e*Pg	**Pb**	**07 16 03.7**	**+0.2**
TEOL				*e*Sg	**Sn**	**07 16 15.6**	**+0.3**
TEOL	**Teolo**	**0.69**	**51**	AML	AML		
	comp=E,4670μm,0.9s						
TEOL				AML	AML		
	comp=E,4675μm,0.9s						
TEOL				AML	AML		
	comp=N,4770μm,0.3s						
TEOL				AML	AML		
	comp=N,4770μm,0.3s						
TEOL				AML	AML		
	comp=N,4770μm,0.3s						
TEOL				AML	AML		
	comp=E,4670μm,0.9s						
ROVR	**Roverˆ¤ Verone**	**0.73**	**9**	AML	AML		
	comp=N,2350μm,0.2s						
ROVR				AML	AML		
	comp=E,1500μm,0.2s						
ROVR				AML	AML		
	comp=N,2350μm,0.2s						
ROVR				AML	AML		
	comp=E,1500μm,0.2s						
ROVR				AML	AML		
	comp=E,1500μm,0.2s						
ROVR				AML	AML		
	comp=N,2350μm,0.2s						
MARN	**Marana (Italy)**	**0.74**	**16**	⇑*e*Pg	**Pb**	**07 16 04.5**	**+0.1**
MARN				*e*Sg	**Sn**	**07 16 17.3**	**+0.7**
MARN	**Marana (Italy)**	**0.74**	**16**	*e*Pg	**Pb**	**07 16 04.5**	**+0.1**
MARN				*e*Sg	**Sn**	**07 16 17.3**	**+0.7**
SALO	**Salr**	**0.75**	**339**	AML	AML		
	comp=N,1745μm,0.5s						
SALO				AML	AML		
	comp=E,1210μm,1.2s						
SALO				AML	AML		
	comp=N,1745μm,0.5s						
SALO				AML	AML		
	comp=E,1210μm,1.2s						
SALO				AML	AML		
	comp=N,1745μm,0.5s						
SALO				AML	AML		
	comp=E,1210μm,1.2s						
SALO				AML	AML		
	comp=N,1745μm,0.5s						
SALO				AML	AML		
	comp=E,1210μm,1.2s						
BALD	**Monte Baldo**	**0.76**	**355**	⇑*e*Pg	**Pb**	**07 16 05.0**	**+0.2**
BALD				*e*Sg	**Sn**	**07 16 18.3**	**+1.0**
BALD	**Monte Baldo**	**0.76**	**355**	*e*Pg	**Pb**	**07 16 05.0**	**+0.2**
BALD				*e*Sg	**Sn**	**07 16 18.3**	**+1.0**
IMOL	**Imola, Italy**	**0.82**	**133**	AML	AML		
	comp=E,1650μm,0.3s						
IMOL				AML	AML		
	comp=N,1800μm,0.3s						
IMOL				AML	AML		
	comp=E,213μm,1.0s						
IMOL				AML	AML		
	comp=N,163μm,1.6s						
IMOL				AML	AML		
	comp=E,212μm,1.0s						
IMOL				AML	AML		
	comp=N,164μm,1.6s						

IMOL				AML	AML		
	comp=N,164µm,1.6s						
IMOL				AML	AML		
	comp=E,212µm,1.0s						
VLC	**Villacollemand**	0.85	206	P	Pg	07 16 06.7	+0.3
VLC				AML	AML		
	comp=E,256µm,0.6s						
VLC				AML	AML		
	comp=N,258µm,1.1s						
VLC				AML	AML		
	comp=E,256µm,0.6s						
VLC				AML	AML		
	comp=N,259µm,1.1s						
VLC				AML	AML		
	comp=N,259µm,1.1s						
VLC				AML	AML		
	comp=E,256µm,0.6s						
DOSS	**Dosso del Somm**	0.98	12⇑	*e*Pg	Pb	07 16 08.6	+0.1
DOSS				*e*Sg	Sn	07 16 23.9	+1.3
DOSS	**Dosso del Somm**	0.98	12	*e*Pg	Pb	07 16 08.6	+0.1
DOSS				*e*Sg	Sn	07 16 23.9	+1.3
BOB	**Bobbio (Coli)**	1.05	262	P	Pg	07 16 11.2	+1.0
BOB				AML	AML		
	comp=E,1610µm,1.6s						
BOB				AML	AML		
	comp=N,2110µm,1.5s						
BOB				AML	AML		
	comp=E,1605µm,1.6s						
BOB				AML	AML		
	comp=N,2110µm,1.5s						
BOB				AML	AML		
	comp=E,1605µm,1.6s						
BOB				AML	AML		
	comp=N,2110µm,1.5s						
MAIM	**Mastiano**	1.05	197	P	Pn	07 16 10.2	+0.3
MAIM				AML	AML		
	comp=E,473µm,0.7s						
MAIM				AML	AML		
	comp=N,457µm,0.8s						
MAIM				AML	AML		
	comp=E,473µm,0.7s						
MAIM				AML	AML		
	comp=N,457µm,0.8s						
MAIM				AML	AML		
	comp=N,457µm,0.8s						
MAIM				AML	AML		
	comp=E,473µm,0.7s						
RNI	**Roncone**	1.08	349⇓	*e*Pg	Pn	07 16 10.4	0.0
RNI	**Roncone**	1.08	349	*e*Pg	Pn	07 16 10.4	0.0
CGRP	**Cima Grappa**	1.14	33⇑	*e*Pg	Pn	07 16 11.5	+0.2
CGRP				*e*Sg	Sg	07 16 29.0	+2.0
CGRP	**Cima Grappa**	1.14	33	*e*Pg	Pn	07 16 11.5	+0.2
CGRP				*e*Sg	Sg	07 16 29.0	+2.0
CGRP	**Cima Grappa**	1.14	33	P	Pn	07 16 11.4	+0.1
CGRP				AML	AML		
	comp=E,612µm,1.3s						
CGRP				AML	AML		
	comp=N,573µm,0.8s						
CGRP				AML	AML		
	comp=E,611µm,1.3s						
CGRP				AML	AML		
	comp=N,573µm,0.8s						
CGRP				AML	AML		
	comp=E,611µm,1.3s						
CGRP				AML	AML		
	comp=N,573µm,0.8s						
PLMA	**Palmaria, Port**	1.16	221	P	Pg	07 16 12.5	+0.3
PLMA				AML	AML		
	comp=E,417µm,1.1s						
PLMA				AML	AML		
	comp=N,862µm,0.6s						
MABI	**Malga Bissina**	1.17	346	P	Pb	07 16 11.8	+0.1
MABI				AML	AML		
	comp=E,304µm,0.6s						
MABI				AML	AML		
	comp=N,288µm,1.5s						
MABI				AML	AML		
	comp=E,304µm,0.6s						
MABI				AML	AML		
	comp=N,288µm,1.5s						
MABI				AML	AML		
	comp=N,288µm,1.5s						
MABI				AML	AML		
	comp=E,304µm,0.6s						
MSSA	**Maissana**	1.17	239	P	Pg	07 16 12.6	+0.3
MSSA				AML	AML		
	comp=E,494µm,1.2s						
MSSA				AML	AML		
	comp=N,891µm,0.7s						
MSSA				AML	AML		
	comp=E,494µm,1.2s						
MSSA				AML	AML		
	comp=N,891µm,0.7s						
MSSA				AML	AML		
	comp=E,494µm,1.2s						
MSSA				AML	AML		
	comp=N,891µm,0.7s						
PANI	**Panarotta**	1.17	15⇑	*e*Pg	Pg	07 16 12.2	-0.2
PANI				*e*Sg	Sg	07 16 29.1	+1.4
GORR	**Gorreto**	1.19	255	P	Pg	07 16 13.0	+0.1
GORR				AML	AML		
	comp=E,2055µm,0.5s						
GORR				AML	AML		
	comp=N,1375µm,0.4s						
MTLO	**Montello**	1.22	43⇑	*e*Pg	Pb	07 16 12.8	+0.3
MTLO	**Montello**	1.22	43	*e*Pg	Pb	07 16 12.8	+0.3
VARN	**Col Varnada, M**	1.36	38⇑	*e*Pg	Pn	07 16 14.3	+0.1
VARN	**Col Varnada, M**	1.36	38	*e*Pg	Pn	07 16 14.3	+0.1
CSNT	**Castellina Chi**	1.48	169	P	Pg	07 16 17.8	-0.5
CSNT				AML	AML		
	comp=E,200µm,0.8s						
CSNT				AML	AML		
	comp=N,298µm,0.7s						
CSNT				AML	AML		
	comp=E,200µm,0.8s						
CSNT				AML	AML		
	comp=N,298µm,0.7s						
CSNT				AML	AML		
	comp=N,298µm,0.7s						
CSNT				AML	AML		
	comp=E,200µm,0.8s						
OZOL	**Ozolo**	1.48	4⇑	*e*Pg	Pb	07 16 17.3	+0.2
OZOL	**Ozolo**	1.48	4	*e*Pg	Pb	07 16 17.3	+0.2
FAU	**Forcella Aurin**	1.51	30	*e*Pg	Pb	07 16 17.2	-0.3
FAU	**Forcella Aurin**	1.51	30	*e*Pg	Pb	07 16 17.2	-0.3
CARE	**Lago del Cares**	1.51	354⇑	*e*Pg	Pb	07 16 17.9	+0.3
CARE	**Lago del Cares**	1.51	354	*e*Pg	Pb	07 16 17.9	+0.3
CAE	**Caneva**	1.53	44⇓	*e*Pg	Pn	07 16 16.7	+0.3
CAE	**Caneva**	1.53	44	*e*Pg	Pn	07 16 16.7	+0.3
APPI	**Appiano**	1.57	8	P	Pb	07 16 18.4	-0.1
APPI				AML	AML		
	comp=E,716µm,0.6s						
APPI				AML	AML		
	comp=N,562µm,1.2s						
APPI				AML	AML		
	comp=E,716µm,0.6s						
APPI				AML	AML		
	comp=N,562µm,1.2s						
APPI				AML	AML		
	comp=E,716µm,0.6s						
APPI				AML	AML		
	comp=N,562µm,1.2s						
POLC	**Polcenigo**	1.57	45	P	Pn	07 16 17.4	+0.5
POLC				AML	AML		
	comp=E,719µm,0.8s						
POLC				AML	AML		
	comp=N,777µm,0.5s						
POLC				AML	AML		
	comp=E,719µm,0.8s						
POLC				AML	AML		
	comp=N,777µm,0.5s						
POLC				AML	AML		
	comp=N,777µm,0.5s						
POLC				AML	AML		
	comp=E,719µm,0.8s						
KOSI	**Kohlern**	1.57	12	P	Pb	07 16 18.6	0.0
KOSI				AML	AML		
	comp=E,500µm,1.0s						
KOSI				AML	AML		
	comp=N,478µm,0.6s						
KOSI				AML	AML		
	comp=E,500µm,1.0s						
KOSI				AML	AML		
	comp=N,478µm,0.6s						
KOSI				AML	AML		
	comp=E,500µm,1.0s						
KOSI				AML	AML		
	comp=N,478µm,0.6s						
AGOR	**Agordo**	1.58	30	*e*Pg	Pn	07 16 17.9	+0.8
AGOR	**Agordo**	1.58	30	P	Pn	07 16 17.7	+0.6
AGOR				AML	AML		
	comp=E,381µm,0.4s						
AGOR				AML	AML		
	comp=N,366µm,0.4s						
AGOR				AML	AML		
	comp=E,381µm,0.4s						
AGOR				AML	AML		
	comp=N,366µm,0.4s						
BRMO	**Bormio**	1.60	347	P	Pb	07 16 19.4	+0.4
BRMO				AML	AML		
	comp=E,274µm,0.5s						
BRMO				AML	AML		
	comp=N,335µm,0.6s						
BRMO				AML	AML		
	comp=E,274µm,0.5s						
BRMO				AML	AML		
	comp=N,336µm,0.6s						
BRMO				AML	AML		
	comp=E,274µm,0.5s						
BRMO				AML	AML		
	comp=N,336µm,0.6s						
MUGIO	**Muggio**	1.65	308	P	Pn	07 16 18.4	+0.2
MOSI	**Grossmontoni**	1.71	352	P	Pb	07 16 21.3	+0.3
MOSI				AML	AML		
	comp=E,702µm,0.9s						
MOSI				AML	AML		
	comp=N,1385µm,0.7s						
MOSI				AML	AML		
	comp=E,702µm,0.9s						
MOSI				AML	AML		
	comp=N,1385µm,0.7s						
MOSI				AML	AML		
	comp=N,1385µm,0.7s						
MOSI				AML	AML		
	comp=E,702µm,0.9s						
MLNI	**Malnisio**	1.71	44	*e*Pg	Pn	07 16 19.7	+0.7
MLNI	**Malnisio**	1.71	44	*e*Pg	Pn	07 16 19.7	+0.7
PCP	**Piancastagn**	1.73	258	P	Pb	07 16 21.6	+0.4
PCP				AML	AML		
	comp=E,200µm,1.3s						
PCP				AML	AML		
	comp=N,219µm,0.3s						
PCP				AML	AML		
	comp=E,200µm,1.3s						
PCP				AML	AML		
	comp=N,219µm,0.3s						
PCP				AML	AML		
	comp=E,200µm,1.3s						
PCP				AML	AML		
	comp=N,219µm,0.3s						
CAFI	**Castiglion Fio**	1.77	154	P	Pb	07 16 21.3	-0.5
CAFI				AML	AML		
	comp=E,118µm,0.6s						
CAFI				AML	AML		
	comp=N,78µm,1.5s						
CAFI				AML	AML		
	comp=E,118µm,0.6s						
CAFI				AML	AML		
	comp=N,78µm,1.5s						
ABSI	**Aberstueckl**	1.83	9	P	Pn	07 16 21.8	+1.1
ABSI				AML	AML		
	comp=E,1290µm,0.6s						
ABSI				AML	AML		
	comp=N,929µm,0.5s						
ABSI				AML	AML		
	comp=E,1290µm,0.6s						
ABSI				AML	AML		
	comp=N,929µm,0.5s						
STAL	**STALIGIAL**	1.84	43	P	Pn	07 16 20.8	+0.1
STAL				AML	AML		
	comp=E,420µm,0.9s						
STAL				AML	AML		
	comp=N,548µm,0.7s						
STAL				AML	AML		
	comp=E,490µm,0.8s						
STAL				AML	AML		
	comp=N,421µm,0.2s						
STAL				AML	AML		
	comp=E,420µm,0.9s						
STAL				AML	AML		
	comp=N,548µm,0.7s						
STAL				AML	AML		
	comp=E,490µm,0.8s						
STAL				AML	AML		
	comp=N,421µm,0.2s						
STAL				AML	AML		
	comp=N,548µm,0.7s						
STAL				AML	AML		
	comp=N,421µm,0.2s						
STAL				AML	AML		
	comp=E,490µm,0.8s						
STAL				AML	AML		
	comp=E,420µm,0.9s						
TUE	**Stuetta**	1.90	325	P	Pb	07 16 23.2	-0.9
TUE				AML	AML		
	comp=E,243µm,0.4s						
TUE				AML	AML		
	comp=N,234µm,0.8s						
TUE				AML	AML		
	comp=E,243µm,0.4s						
TUE				AML	AML		
	comp=N,234µm,0.8s						
QLNO	**Quiliano**	1.93	253	AML	AML		
	comp=E,108µm,1.3s						
QLNO				AML	AML		
	comp=N,155µm,0.5s						
QLNO				AML	AML		
	comp=N,155µm,0.5s						
QLNO				AML	AML		
	comp=E,108µm,1.3s						
ROSI	**Rosskopf**	2.04	10	P	Pn	07 16 24.3	+0.7
ROSI				AML	AML		
	comp=E,400µm,0.5s						
ROSI				AML	AML		
	comp=N,447µm,0.7s						
ROSI				AML	AML		
	comp=E,400µm,0.5s						
ROSI				AML	AML		
	comp=N,447µm,0.7s						
FETA	**Feichten**	2.10	357	*e*Pn	Pn	07 16 24.7	+0.3
	comp=N,1.0nm,0.1s,SNR=23						
FETA				*e*Sn	Sb	07 16 53.1	-0.4
	comp=N,20nm,0.5s						
FETA	**Feichten**	2.10	357	Pn	Pn	07 16 24.7	+0.3
	comp=N,1.0nm,0.1s,SNR=23						
FETA				Sn	Sb	07 16 53.1	-0.4
	comp=N,20nm,0.5s						
VINO	**Villanova**	2.13	50	AML	AML		
	comp=N,213µm,0.8s						
VINO				AML	AML		
	comp=E,159µm,0.6s						
VINO				AML	AML		
	comp=E,159µm,0.6s						
VINO				AML	AML		
	comp=N,213µm,0.8s						
ABTA	**Abfaltersbach**	2.14	31	*e*Pn	Pn	07 16 24.0	-0.9
ABTA				Sg	Sg	07 16 57.6	-1.1
	comp=N,6.3nm,0.2s						
ABTA	**Abfaltersbach**	2.14	31	Pn	Pn	07 16 24.0	-0.9
ABTA				Sg	Sg	07 16 57.6	-1.1
	comp=N,6.3nm,0.2s						
SABO	**M.te Sabotino**	2.17	60	AML	AML		
	comp=E,264µm,0.6s						
SABO				AML	AML		
	comp=E,264µm,0.6s						
SABO				AML	AML		
	comp=N,355µm,0.8s						
SABO				AML	AML		
	comp=N,355µm,0.8s						
RISI	**Rein**	2.18	22	AML	AML		
	comp=N,475µm,0.6s						
RISI				AML	AML		
	comp=E,459µm,0.4s						
RISI				AML	AML		
	comp=N,475µm,0.6s						
RISI				AML	AML		
	comp=E,459µm,0.4s						
WTTA	**Wattenberg**	2.40	12	*e*Pn	Pb	07 16 32.4	-0.2
WTTA				*e*Sn	Sg	07 17 05.2	-1.7
WTTA	**Wattenberg**	2.40	12	*e*Pn	Pn	07 16 28.3	-0.2
	comp=E,0.9nm,0.1s,SNR=22						
WTTA				Sg	Sg	07 17 07.7	+0.8
	comp=E,27nm,0.3s						
WTTA	**Wattenberg**	2.40	12	Pn	Pn	07 16 28.3	-0.2
	comp=E,0.9nm,0.1s,SNR=22						
WTTA				Sg	Sg	07 17 07.7	+0.8
	comp=E,27nm,0.3s						
WTTA	**Wattenberg**	2.40	12	AML	AML		
	comp=E,189µm,0.6s						
WTTA				AML	AML		
	comp=N,104µm,0.5s						
WTTA				AML	AML		
	comp=E,189µm,0.6s						
WTTA				AML	AML		
	comp=N,104µm,0.5s						
MOTA	**Moosalm**	2.42	3	*e*Pn	Pn	07 16 29.3	+0.4
	comp=N,14nm,0.2s,SNR=20						
MOTA				*i* Sn	Sb	07 17 00.8	-2.0
	comp=N,7.1nm,0.2s						
MOTA	**Moosalm**	2.42	3	Pn	Pn	07 16 29.3	+0.4
	comp=N,14nm,0.2s,SNR=20						
MOTA				Sn	Sb	07 17 00.8	-2.0
	comp=N,7.1nm,0.2s						
FDMO	**Fiordimonte**	2.46	139	AML	AML		
	comp=N,72µm,0.3s						
FDMO				AML	AML		
	comp=E,58µm,1.1s						
FDMO				AML	AML		
	comp=N,72µm,0.3s						
FDMO				AML	AML		
	comp=E,58µm,1.1s						
WATA	**Walderalm**	2.46	11	*e*Pn	Pn	07 16 29.5	+0.2
	comp=E,3.5nm,0.2s,SNR=22						
WATA				Sg	Sg	07 17 09.8	+1.0
	comp=E,12nm,0.2s						
WATA	**Walderalm**	2.46	11	Pn	Pn	07 16 29.5	+0.2
	comp=E,3.5nm,0.2s,SNR=22						
WATA				Sg	Sg	07 17 09.8	+1.0
	comp=E,12nm,0.2s						
DAVA	**Damuels**	2.47	344	*e*Pn	Pb	07 16 32.6	-1.3
DAVA	**Damuels**	2.47	344	Pn	Pn	07 16 31.0	+1.5
	comp=E,2.3nm,0.2s,SNR=6.4						
DAVA				Sn	Sb	07 17 02.3	-1.8
	comp=E,10nm,0.3s						
DAVA	**Damuels**	2.47	344	Pn	Pn	07 16 31.0	+1.5
	comp=E,2.3nm,0.2s,SNR=6.4						
DAVA				Sn	Sb	07 17 02.3	-1.8
	comp=E,10nm,0.3s						
MYKA	**Terra Mystica**	2.56	47	*e*Pn	Pn	07 16 29.5	-1.2
	comp=E,16nm,0.4s						
MYKA				Sn	Sn	07 17 02.6	+1.1
	comp=E,6.0nm,0.2s						
MYKA	**Terra Mystica**	2.56	47	Pn	Pn	07 16 29.5	-1.2
	comp=E,16nm,0.4s						
MYKA				Sn	Sn	07 17 02.6	+1.1
	comp=E,6.0nm,0.2s						
RETA	**Reutte**	2.57	358	*e*Pn	Pn	07 16 30.9	+0.1
	comp=E,4.5nm,0.1s,SNR=19						
RETA				Sn	Sn	07 17 04.0	+2.4
	comp=E,7.6nm,0.4s						
RETA	**Reutte**	2.57	358	Pn	Pn	07 16 30.9	+0.1
	comp=E,4.5nm,0.1s,SNR=19						
RETA				Sn	Sn	07 17 04.0	+2.4
	comp=E,7.6nm,0.4s						
SBF	**Sospel**	2.71	248	*e*Pn	Pn	07 16 35.0	+2.3
SBF				*e*Sn	Sn	07 17 06.3	+1.2
	comp=E,83nm,0.5s						
SBF	**Sospel**	2.71	248	*e*Pn	Pn	07 16 35.0	+2.3
SBF				*e*Sn	Sn	07 17 06.3	+1.2
	comp=E,42nm,0.5s						
KBA	**Koelnbreinsper**	2.74	37	*e*Pg	Pg	07 16 41.2	-1.2
KBA				*e*Sg	Sg	07 17 21.7	+3.7
KBA	**Koelnbreinsper**	2.74	37	*e*Pn	Pn	07 16 33.4	+0.2
	comp=E,2.6nm,0.3s,SNR=8.1						
KBA				Sg	Sg	07 17 18.0	0.0
	comp=E,6.9nm,0.3s						
KBA	**Koelnbreinsper**	2.74	37	Pn	Pn	07 16 33.4	+0.2
	comp=E,2.6nm,0.3s,SNR=8.1						
KBA	**Koelnbreinsper**	2.74	37	Pg	Pg	07 16 41.2	-1.2
KBA				Sg	Sg	07 17 18.0	0.0
	comp=E,6.9nm,0.3s						
PGF	**Pioggiola**	2.75	211	*e*Pn	Pn	07 16 34.6	+1.3
PGF				*e*Sn	Sn	07 17 05.5	-0.6
	comp=E,16nm,0.3s						
PGF	**Pioggiola**	2.75	211	*e*Pn	Pn	07 16 34.6	+1.3
PGF				*e*Sn	Sn	07 17 05.5	-0.6
	comp=E,8.0nm,0.3s						
LUCF	**Luceram**	2.75	249	P	Pb	07 16 36.6	-2.1
LUCF	**Luceram**	2.75	249	P	Pb	07 16 36.6	-2.1
LUCF				S	Sb	07 17 11.8	-0.4
UBR	**Ueberruh**	2.81	349	*e*Pn	Pn	07 16 36.7	+2.6
UBR				*e*Pg	Pg	07 16 44.0	+0.2
UBR	**Ueberruh**	2.81	349	Pn	Pn	07 16 36.7	+2.6
UBR	**Ueberruh**	2.81	349	Pg	Pg	07 16 44.0	+0.2
NVLJ	**Novalja**	2.85	96	*e*Pn	Pn	07 16 35.4	+0.9
NVLJ				Sn	Sn	07 17 08.5	+0.2
ISO	**Isola**	2.86	256	P	Pb	07 16 38.1	-2.3
ISO	**Isola**	2.86	256	P	Pb	07 16 38.1	-2.3
MBDF	**Montbardon**	2.95	268	*e*Pn	Pn	07 16 36.6	+0.5
MBDF				*e*Sn	Sn	07 17 12.2	+1.0
	comp=E,17nm,0.3s						
MBDF	**Montbardon**	2.95	268	*e*Pn	Pn	07 16 36.6	+0.5
MBDF				*e*Sn	Sn	07 17 12.2	+1.0
	comp=E,8.6nm,0.3s						
LPG	**La Plagne**	2.99	283	*e*Pn	Pn	07 16 40.0	+3.2
LPG				*e*Sn	Sn	07 17 13.3	+0.8
	comp=E,30nm,0.4s						
LPG	**La Plagne**	2.99	283	*e*Pn	Pn	07 16 40.0	+3.2
LPG				*e*Sn	Sn	07 17 13.3	+0.8
	comp=E,15nm,0.4s						
OBKA	**Obir**	3.00	57	*e*Pn	Pn	07 16 38.1	+1.4
OBKA				*e*Pg	Pg	07 16 47.0	-0.4
OBKA				*e*Sg	Sg	07 17 30.0	+3.7
OBKA	**Obir**	3.00	57	*e*Pn	Pn	07 16 36.7	-0.1
	comp=E,1.1nm,0.2s,SNR=4.5						
OBKA				Sg	Sg	07 17 25.5	-0.8
	comp=E,25nm,0.4s						
OBKA	**Obir**	3.00	57	Pn	Pn	07 16 36.7	-0.1
	comp=E,1.1nm,0.2s,SNR=4.5						
OBKA	**Obir**	3.00	57	Pg	Pg	07 16 47.0	-0.4
OBKA				Sg	Sg	07 17 25.5	-0.8
	comp=E,25nm,0.4s						
LPL	**La Plagne**	3.01	283	*e*Pn	Pb	07 16 40.5	-2.6
LPL				*e*Sn	Sn	07 17 13.9	+1.1
LPL				*e*Sg	Sg	07 17 27.6	+1.0
	comp=E,23nm,0.4s						
LPL	**La Plagne**	3.01	283	*e*Pn	Pb	07 16 40.5	-2.6
LPL				*e*Sn	Sn	07 17 13.9	+1.1
LPL				*e*Sg	Sg	07 17 27.6	+1.0
	comp=E,11nm,0.4s						
RJOB	**Jochberg**	3.10	24	*e*Pn	Pn	07 16 40.7	+2.6
RJOB	**Jochberg**	3.10	24	Pn	Pn	07 16 40.7	+2.6
OZLJ	**Ozalj**	3.29	76	*e*Pn	Pn	07 16 41.1	+0.5
OZLJ				Sn	Sn	07 17 18.6	-0.7
FRF	**La Foret Royal**	3.35	248	*e*Pn	Pn	07 16 43.2	+1.7
FRF				*e*Sn	Sn	07 17 21.4	+0.5
	comp=E,15nm,0.3s						
FRF	**La Foret Royal**	3.35	248	*e*Pn	Pn	07 16 43.2	+1.7
FRF				*e*Sn	Sn	07 17 21.4	+0.5
	comp=E,7.7nm,0.3s						
SOKA	**Soboth**	3.38	57	*i* Pn	Pn	07 16 42.5	+0.6
	comp=E,1.7nm,0.2s						
SOKA				*e*Sg	Sg	07 17 37.4	-0.8
SOKA	**Soboth**	3.38	57	Pn	Pn	07 16 42.5	+0.6
	comp=E,1.7nm,0.2s						
SOKA				Sg	Sg	07 17 37.4	-0.8
UDBI	**Udbina**	3.48	95	*e*Pn	Pn	07 16 45.2	+1.9
UDBI				Sn	Sn	07 17 23.3	-0.9
LMR	**La Mourre**	3.54	245	*e*Pn	Pn	07 16 45.6	+1.5
LMR				*e*Sn	Sn	07 17 26.3	+0.7
	comp=E,22nm,0.4s						
LMR	**La Mourre**	3.54	245	*e*Pn	Pn	07 16 45.6	+1.5
LMR				*e*Sn	Sn	07 17 26.3	+0.7
	comp=E,11nm,0.4s						
FELD	**Feldberg im Sc**	3.57	327	P	Pn	07 16 45.3	+0.7
ORIF	**Oris-en-Rattie**	3.57	272	*e*Pn	Pn	07 16 46.7	+2.1
ORIF				*e*Sn	Sn	07 17 26.8	+0.4
	comp=E,28nm,0.5s						
ORIF	**Oris-en-Rattie**	3.57	272	P	Pn	07 16 46.6	+2.1
ORIF	**Oris-en-Rattie**	3.57	272	*e*Pn	Pn	07 16 46.7	+2.1
ORIF				*e*Sn	Sn	07 17 26.8	+0.4
	comp=E,14nm,0.5s						
KIZ	**Kirchzarten**	3.67	327	P	Pn	07 16 46.7	+0.8
KIZ	**Kirchzarten**	3.67	327	P	Pn	07 16 46.7	+0.8
MOA	**Molln**	3.74	37	*e*Pn	Pn	07 16 48.8	+2.1
MOA	**Molln**	3.74	37	*e*Pn	Pn	07 16 47.0	+0.3
	comp=E,3.6nm,0.2s						
MOA				Sg	Sg	07 17 51.0	+1.2
	comp=E,5.8nm,0.3s						

MOA	Molln	3.74	37	Pn	Pn	07 16 47.0	+0.3
	comp=E,3.6nm,0.2s						
MOA				Sg	Sg	07 17 51.0	+1.2
	comp=E,5.8nm,0.3s						
CHMF	Charmoille	3.77	310	P	Pn	07 16 48.4	+1.2
CHMF	Charmoille	3.77	310	P	Pn	07 16 48.4	+1.2
CABF	La Chapelle	3.77	298	ePn	Pn	07 16 48.5	+1.2
CABF				eSn	Sn	07 17 31.7	+0.3
	comp=E,6.1nm,0.4s						
CABF	La Chapelle	3.77	298	ePn	Pn	07 16 48.5	+1.2
CABF				eSn	Sn	07 17 31.7	+0.3
	comp=E,3.0nm,0.4s						
BFO	Black Forest	3.84	333	ePn	Pn	07 16 49.6	+1.4
BFO	Black Forest	3.84	333	Pn	Pn	07 16 49.6	+1.4
MOF	Molkenrain	3.92	320	P	Pn	07 16 50.6	+1.2
MOF	Molkenrain	3.92	320	P	Pn	07 16 50.6	+1.2
SMRF	Simiane la Rot	3.94	258	ePn	Pn	07 16 50.7	+1.2
SMRF				eSn	Sn	07 17 35.4	+0.1
	comp=E,8.2nm,0.3s						
SMRF	Simiane la Rot	3.94	258	ePn	Pn	07 16 50.7	+1.2
SMRF				eSn	Sn	07 17 35.4	+0.1
	comp=E,4.1nm,0.3s						
HINF	Hinteralfeld	4.03	317	ePn	Pn	07 16 51.4	+0.6
HINF				eSn	Sn	07 17 37.4	-0.3
	comp=E,7.6nm,0.3s						
HINF	Hinteralfeld	4.03	317	ePn	Pn	07 16 51.4	+0.6
HINF				eSn	Sn	07 17 37.4	-0.3
	comp=E,3.8nm,0.3s						
OPP	Oppenau	4.04	333	P	Pn	07 16 52.0	+1.2
OPP	Oppenau	4.04	333	P	Pn	07 16 52.0	+1.2
ECH	Echery	4.19	323	ePn	Pn	07 16 53.9	+0.9
ECH				eSn	Sn	07 17 42.4	+0.9
ECH	Echery	4.19	323	P	Pn	07 16 54.0	+1.1
ECH	Echery	4.19	323	Pn	Pn	07 16 53.9	+0.9
ECH				Sn	Sn	07 17 42.4	+0.9
ECH				S	Sn	07 17 43.6	+2.1
WLS	Welschbruch	4.26	326	P	Pn	07 16 55.0	+1.0
WLS	Welschbruch	4.26	326	P	Pn	07 16 55.0	+1.0
CDF	Champ du Feu	4.29	326	ePn	Pn	07 16 55.3	+0.8
CDF	Champ du Feu	4.29	326	ePn	Pn	07 16 55.3	+0.8
GEC2	GERESS Array S	4.37	25	ePn	Pn	07 16 56.3	+0.8
GEC2	GERESS Array S	4.37	25	Pn	Pn	07 16 56.3	+0.8
HAU	Haudompre	4.41	316	ePn	Pn	07 16 56.9	+0.9
HAU				eSn	Sn	07 17 47.0	+0.1
	comp=E,24nm,0.3s						
HAU	Haudompre	4.41	316	ePn	Pn	07 16 56.9	+0.9
HAU				eSn	Sn	07 17 47.0	+0.1
	comp=E,12nm,0.3s						
WET	Wettzell	4.43	17	ePn	Pn	07 16 57.3	+1.0
WET	Wettzell	4.43	17	Pn	Pn	07 16 57.3	+1.0
VIVF	Saint-Julien-l	4.43	271	ePn	Pn	07 16 57.1	+0.8
VIVF				eSn	Sn	07 17 48.0	+0.4
	comp=E,4.5nm,0.3s						
VIVF	Saint-Julien-l	4.43	271	ePn	Pn	07 16 57.1	+0.8
VIVF				eSn	Sn	07 17 48.0	+0.4
	comp=E,2.2nm,0.3s						
KHC	Kasperske Hory	4.59	22	ePN	Pn	07 16 59.2	+0.7
KHC				ePG	Pg	07 17 14.6	-3.0
KHC				eSN	Sn	07 17 51.2	-0.2
KHC				eSG	Sg	07 18 16.7	-0.3
	comp=E,11nm,0.9s						
KHC	Kasperske Hory	4.59	22	Pn	Pn	07 16 59.2	+0.7
ROTZ	Rotzenmuhle	4.92	10	ePn	Pn	07 17 03.1	0.0
ROTZ	Rotzenmuhle	4.92	10	Pn	Pn	07 17 03.1	0.0
PAGF	Fort de Pagny	5.09	317	ePn	Pn	07 17 06.4	+1.1
	baz=138						
PAGF				eSn	Sn	07 18 02.5	-1.2
	comp=E,7.6nm,0.3s						
PAGF	Fort de Pagny	5.09	317	ePn	Pn	07 17 06.4	+1.1
PAGF				eSn	Sn	07 18 02.5	-1.2
	comp=E,3.8nm,0.3s						
LASF	Ste Croix	5.12	263	ePn	Pn	07 17 06.3	+0.6
LASF				eSn	Sn	07 18 03.6	-0.8
	comp=E,3.5nm,0.3s						
LASF	Ste Croix	5.12	263	ePn	Pn	07 17 06.3	+0.6
LASF				eSn	Sn	07 18 03.6	-0.8
	comp=E,1.8nm,0.3s						
SMF	Signal de Mont	5.24	292	ePn	Pn	07 17 08.5	+1.2
SMF				eSn	Sn	07 18 06.6	-0.7
	comp=E,12nm,0.4s						
SMF	Signal de Mont	5.24	292	ePn	Pn	07 17 08.5	+1.2
SMF				eSn	Sn	07 18 06.6	-0.7
	comp=E,5.9nm,0.4s						
STON	Ston	5.32	110	ePn	Pn	07 17 09.9	+1.5
STON				Sn	Sn	07 18 09.6	+0.3
NKC	Novy Kostel	5.41	11	ePN	Pn	07 17 10.2	+0.4
NKC	Novy Kostel	5.41	11	Pn	Pn	07 17 10.2	+0.4
LOR	Lormes	5.43	298	ePn	Pn	07 17 10.8	+0.7
	baz=116						
LOR				eSn	Sn	07 18 11.3	-0.9
	comp=E,4.6nm,0.3s						
LOR	Lormes	5.43	298	P	Pn	07 17 11.1	+1.0
LOR	Lormes	5.43	298	ePn	Pn	07 17 10.8	+0.7
ABH	Alteburg	5.46	337	P	Pn	07 17 11.9	+1.5
ABH	Alteburg	5.46	337	P	Pn	07 17 11.9	+1.5
SSF	Saint Saulge	5.58	295	ePn	Pn	07 17 12.9	+0.8
SSF				eSn	Sn	07 18 14.8	-1.1
	comp=E,5.8nm,0.5s						
SSF	Saint Saulge	5.58	295	ePn	Pn	07 17 12.9	+0.8
AVF	Avril sur Loir	5.60	292	ePn	Pn	07 17 13.3	+1.0
AVF				eSn	Sn	07 18 15.2	-1.0
	comp=E,3.9nm,0.4s						
AVF	Avril sur Loir	5.60	292	ePn	Pn	07 17 13.3	+1.0
BGF	Bois d'Agland	5.88	289	ePn	Pn	07 17 17.2	+1.1
BGF				eSn	Sn	07 18 22.0	-1.1
	comp=E,37nm,0.5s						
BGF	Bois d'Agland	5.88	289	ePn	Pn	07 17 17.2	+1.1
BRG	Berggiesshubel	6.29	18	SG	Sg	07 19 11.0	-0.6
	comp=E,10nm,1.4s						
MTLF	Montolieu	6.45	259	ePn	Pn	07 17 24.5	+0.5
MTLF				eSn	Sn	07 18 35.4	-1.9
	comp=E,0.8nm,0.2s						
MTLF	Montolieu	6.45	259	ePn	Pn	07 17 24.5	+0.5
CLL	Collm	6.54	12	ePn	Pn	07 17 26.0	+0.8
CLL				eSg	Sg	07 19 20.0	+0.5
	comp=Z,8.0nm,0.9s						

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*IDC **16** 07:16:47.2±1.7, 3.°98S×101.°55E, h0km, mb4.0/10, mb1 4.1/10, mb1mx3.8/63, mbtmp4.0/10, Error ellipse: s-maj=71.0km s-min=16.9km az=56.0*

*NEIC **16** 07:16:55.5±1.0, 3.°93S×101.°67E, h62km±6km, mb4.5/6, Error ellipse: s-maj=22.3km s-min=4.8km az=50.0*

*DJA **16** 07:16:55.0±1.9, 4.°S±7.°×10.°2E±.°, h17km±20km, M3.9/6, MLv3.9/6*

ISC 16 07:16:53.7±0.7**, 3.°80S**±0.°10×**101.°82E**±0.°08**, h35km, n45, σ1.s55**/40**, mb4.2**/14**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MASI	Maura Aman, Be	0.78	33	P	Pn	07 17 10.7	+2.5
MNAI	Manna	1.26	116	P	Pn	07 17 17.1	+2.2
MNAI	Manna	1.26	116	ePn	Pn	07 17 17.3	+2.4
MNAI				eSn	Sn	07 17 33.3	+2.6
PPSI	Pulau Pagai	2.08	300	P	Pn	07 17 30.1	+4.0
MDSI	Maura Dua	2.45	106	P	Pn	07 17 34.4	+3.2
SISI	Saibi	3.67	312	P	Pn	07 17 50.5	+2.5
GSI	Gunungsitoli	6.61	320	ePn	Pn	07 18 30.9	+2.5
CMAR	Chiang Mai Arr	22.30	353	P	P	07 21 49.7	+1.5
	1.6nm,0.3s,baz=178,slow=11,SNR=2.1						
H08S2	Diego Garcia H	29.42	261	T	T	07 52 47.4	
	baz=84						
H08S3	Diego Garcia H	29.43	261	T	T	07 52 59.5	
	baz=84						
H08S1	Diego Carcia H	29.44	261	T	T	07 52 49.8	
	baz=84						
H01W3	Cape Leeuwin H	32.97	161	T	T	07 57 32.5	
	baz=338						
H01W2	Cape Leeuwin H	32.99	161	T	T	07 57 42.5	
	baz=338						
H01W1	Cape Leeuwin H	32.99	161	T	T	07 57 41.3	
	baz=338						
WR1	Warramunga Arr	35.53	120	eP	P	07 23 47.5	-0.2
	9.1nm,1.3s						
WRA	Warramunga Arr	35.53	120	P	P	07 23 47.5	-0.2
	0.3nm,0.4s,baz=302,slow=9.2,SNR=4.6						
WB2	Warramunga Arr	35.54	119	eP	P	07 23 48.4	+0.6
	15nm,1.4s						
ASAR	Alice Springs	36.73	125	P	P	07 23 57.8	-0.2
	0.7nm,0.4s,baz=297,slow=7.5,SNR=7.4						
STKA	Stephens Creek	46.60	131	P	P	07 25 17.7	-1.0
	3.0nm,0.7s,baz=287,slow=9.8,SNR=3.8						
STKA	Stephens Creek	46.60	131	eP	P	07 25 17.8	-0.8
	0.8nm,0.8s						
SONA0	Songino Array	51.57	4	eP	P	07 25 56.6	+0.1
SONM	Songino Array	51.57	4	P	P	07 25 56.6	+0.1
	1.4nm,0.7s,baz=183,slow=9.9,SNR=7.0						
SONA1	Songino Array	51.59	4	eP	P	07 25 56.9	+0.2
MK01	Makanchi Array	53.23	343	eP	P	07 26 08.0	-0.7
MK31	Makanchi Array	53.25	343	eP	P	07 26 08.2	-0.7
MK32	Makanchi Array	53.25	343	eP	P	07 26 08.4	-0.4
MKAR	Makanchi Array	53.25	343	P	P	07 26 08.4	-0.4
	1.4nm,0.5s,baz=151,slow=8.4,SNR=18						
MKAR	Makanchi Array	53.25	343	eP	P	07 26 08.2	-0.6
	14nm,0.4s						
ARMA	Armidale	53.89	125	eP	P	07 26 13.3	-0.7
	5.5nm,1.1s						
USRK	Ussuriysk Ar.	54.92	26	P	P	07 26 20.9	-0.1
	1.7nm,0.5s,baz=221,slow=3.7						
KURBB	Kurchatov Arra	57.79	343	P	P	07 26 40.9	-0.5
	0.6nm,0.5s,baz=163,slow=6.7,SNR=4.9						
KURK	Kurchatov	57.84	343	eP	P	07 26 40.9	-0.9
ZAA0	Zalesovo Array	59.27	348	eP	P	07 26 50.8	-0.8
	3.7nm,1.0s						
ZALV	Zalesovo Beam	59.27	348	P	P	07 26 50.8	-0.8
	3.8nm,0.4s,baz=174,slow=6.6,SNR=8.4						
ZALV	Zalesovo Beam	59.27	348	eP	P	07 26 50.5	-1.1
ZAA1	Zalesovo Array	59.27	348	eP	P	07 26 50.8	-0.9
BVAR	Borovoye Array	62.49	339	P	P	07 27 12.3	-1.2
	0.4nm,0.3s,baz=142,slow=5.7,SNR=4.6						
ABKAR	Akbulak array	64.08	331	eP	P	07 27 23.1	-1.1
T42A	Van Buren	144.86	18	ePKPbc	PKPab	07 36 26.1	-0.5
TX31	Lajitas Ar. Si	144.94	41	ePKPbc	PKPbc	07 36 26.8	-0.5
TXAR	Lajitas Array	144.94	41	PKPbc	PKPab	07 36 27.1	-0.2
	0.7nm,0.5s,baz=256,slow=0.7,SNR=21						
PBMO	Poplar Bluff	145.30	17	ePKPdf	PKPbc	07 36 25.8	-2.3
V40A	Witts Springs	145.40	21	ePKPdf	PKPdf	07 36 27.1	-1.5
V53A	Saluda	148.00	7	ePKPbc	PKPbc	07 36 34.7	-1.3
LRAL	Lakeview Retre	149.77	15	ePKPbc	PKPbc	07 36 39.0	-1.6

IDC 16 07:28:03.0±13.0**, 21.°77S×175.°55W, h0km, mb4.1**/5**, mb1 4.3**/5**, mb1mx3.8**/43**, mbtmp4.1**/5**, Error ellipse: s-maj=342.1km s-min=36.8km az=41.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	35.66	266	P	P	07 35 04.7	+1.6
	2.5nm,0.3s,baz=102,slow=8.0,SNR=8.6						
ASAR	Alice Springs	46.47	258	P	P	07 36 30.6	-1.6
	0.5nm,0.3s,baz=100,slow=7.1,SNR=8.5						
WRA	Warramunga Arr	46.70	263	P	P	07 36 33.1	-0.9
	1.5nm,0.4s,baz=96,slow=8.3,SNR=80						
FITZ	Fitzroy Crossi	55.13	263	P	P	07 37 38.1	+0.5
	1.9nm,0.9s,baz=111,slow=8.6,SNR=5.8						
VNDA	Vanda	56.87	186	P	P	07 37 49.1	0.0
	0.5nm,0.3s,baz=13,slow=2.1,SNR=10						

IDC 16 08:36:59.4±1.1**, 2.°16N×125.°91E, h0km, mb3.5**/6**, mb1 3.6**/6**, mb1mx3.4**/54**, mbtmp3.5**/6**, MS3.2**/1**, Ms1 3.2**/1**, ms1mx2.5**/34**, Error ellipse: s-maj=136.3km s-min=17.9km az=67.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	23.47	160	P	P	08 42 10.9	0.0
	0.4nm,0.5s,baz=338,slow=12,SNR=9.0						
ASAR	Alice Springs	26.83	164	P	P	08 42 43.0	+1.2
	0.2nm,0.5s,baz=348,slow=8.5,SNR=4.1						
KSRS	Korea Array	35.17	3	LR	LR	08 58 15.9	
	comp=Z,40nm,18.9s,baz=238,slow=36						
STKA	Stephens Creek	36.98	158	P	P	08 44 10.0	-0.8
	2.2nm,0.9s,baz=354,slow=9.8,SNR=3.4						
SONM	Songino Array	48.53	343	P	P	08 45 44.3	-0.1
	0.2nm,0.4s,baz=154,slow=6.0,SNR=3.2						
MKAR	Makanchi Array	58.38	326	P	P	08 46 55.9	-0.8
	0.3nm,0.4s,baz=126,slow=6.5,SNR=6.5						
KURBB	Kurchatov Arra	62.62	328	P	P	08 47 25.9	+0.3
	0.3nm,0.4s,baz=127,slow=6.0,SNR=3.0						

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*ISCJB **16** 08:38:41.3±0.7, 18.°0S±0.°2×178.°5W±0.°2, h579km, mb3.7/10, Error ellipse: s-maj=30.0km s-min=15.4km az=148.6*

*IDC **16** 08:38:45.0±4.7, 18.°01S×178.°51W, h610km±56km, mb3.2/10, mb1 3.5/10, mb1mx3.1/45, mbtmp4.1/10, Error ellipse: s-maj=28.6km s-min=19.0km az=134.0*

ISC 16 08:38:42.1±0.7**, 18.°0S**±0.°2×**178.°5W**±0.°2**, h579km, n13, σ0.s73**/15**, mb3.7**/10**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	Charters Tower	33.37	261	P	P	08 44 33.8	0.0
	3.1nm,0.6s,baz=114,slow=9.1,SNR=3.1						
WRA	Warramunga Arr	44.55	260	P	P	08 46 04.3	+0.6
	1.3nm,0.5s,baz=96,slow=7.1,SNR=29						
WRA				PcP	PcP	08 47 33.9	-0.2
	0.3nm,0.4s,baz=90,slow=3.5,SNR=4.0						
ASAR	Alice Springs	44.71	254	P	P	08 46 05.8	+0.9
	4.9nm,0.6s,baz=87,slow=8.8,SNR=89						
ASAR				PcP	PcP	08 47 34.7	+0.1
	0.4nm,0.6s,baz=105,slow=3.7,SNR=4.4						
QSPA	South Pole Qui	72.07	180	P	P	08 49 08.5	+0.3
	1.8nm,0.7s,baz=9.5,slow=6.1,SNR=7.1						
YBH	Yreka Blue Hor	78.62	39	P	P	08 49 44.7	-0.2
	1.4nm,0.7s,baz=188,slow=7.1,SNR=2.6						
NVAR	Mina Array Bea	79.52	44	P	P	08 49 50.5	+0.6
	1.0nm,0.7s,baz=222,slow=9.4,SNR=10						
ILAR	Eielson Array	85.97	13	P	P	08 50 20.8	-0.5
	0.3nm,0.4s,baz=220,slow=5.2,SNR=6.6						
TXAR	Lajitas Array	86.09	58	P	P	08 50 24.1	+1.3
	1.3nm,0.7s,baz=220,slow=6.1,SNR=20						
PDAR	Pinedale Array	87.45	43	P	P	08 50 29.5	+0.5
	0.6nm,0.6s,baz=211,slow=4.4,SNR=6.8						
SNAA	Sanae	90.53	179	P	P	08 50 41.8	-0.9
	0.8nm,0.7s,baz=173,slow=8.1,SNR=8.4						
ARCES	ARCESS Array B	126.38	350	PKP	PKPdf	08 56 38.7	-0.4
	1.0nm,0.8s,baz=0.0,slow=3.1,SNR=4.5						
BRTR	Keskin Array B	144.79	315	PKP	PKPdf	08 57 13.1	-0.9
	0.4nm,0.4s,baz=46,slow=4.2,SNR=3.1						
GERES	GERESS Array B	147.66	345	PKPbc	PKPbc	08 57 21.3	-0.9
	0.6nm,0.4s,baz=12,slow=5.0,SNR=4.1						

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*ISCJB **16** 08:46:25.0±0.5, 19.°93S±0.°03×69.°24W±0.°08, h106km±5km, mb3.8/3, Error ellipse: s-maj=12.8km s-min=5.5km az=175.8*

*GUC **16** 08:46:27.1±0.7, 19.°94S×69.°37W, h86km±3km, ML3.7*

*IDC **16** 08:46:29.5±3.4, 19.°91S×68.°80W, h125km±28km, mb3.6/3, mb1 3.6/6, mb1mx3.3/40, mbtmp3.9/6, Error ellipse: s-maj=42.6km s-min=23.8km az=69.0*

ISC 16 08:46:25.6±0.8**, 19.°93S**±0.°04×**69.°26W**±0.°08**, h95km**±6km**, n24, σ1.s29**/27**, mb3.7**/3**, 2C-4D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB08	IPOC Station P	0.23	155	⇓iP	Pn	08 46 40.8	+1.0
PB08				i S	Sn	08 46 51.6	+1.2
PB08				IAML		08 46 53.1	
	comp=N,4µm,0.4s						
PB11	IPOC Station P	0.41	294	⇓iP	Pn	08 46 41.0	+0.5
PB11				i S	Sn	08 46 50.8	-0.7
PB11				IAML		08 46 52.2	
	comp=E,10µm,0.4s						
MNMC	Minye Minye	0.86	338	⇓iP	Pn	08 46 45.5	+1.1
MNMC				eS	Sn	08 46 59.1	+0.6
PSGC	Pisagua	0.88	292	⇑iP	Pn	08 46 44.9	+0.4
PSGC				eS	Sn	08 46 57.8	-0.8
PSGC				IAML		08 47 00.4	
	comp=N,2µm,0.5s						
PB01	IPOC Station P	1.13	191	⇓iP	Pn	08 46 48.4	+1.2
PB01				eS	Sn	08 47 04.6	+1.1
PB16	IPOC Station P	1.60	351	⇑iP	Pn	08 46 55.4	+1.9
PB16				eS	Sn	08 47 16.2	+1.7
PB16				IAML		08 47 19.7	
	comp=E,750nm,0.7s						
PB12	IPOC Station P	1.65	322	eP	Pn	08 46 53.8	+0.1
PB12				eS	Sn	08 47 15.6	+0.6
PB12				IAML		08 47 19.3	
	comp=E,2µm,0.2s						
PB07	IPOC Station P	1.88	198	eP	Pn	08 46 58.0	+1.4
PB07				eS	Sn	08 47 21.6	+1.4
PB07				IAML		08 47 27.6	
	comp=E,1µm,0.4s						
PB03	IPOC Station P	2.16	192	i P	Pn	08 47 01.0	+0.8
PB03				eS	Sn	08 47 27.1	+0.5
PB03				IAML		08 47 37.6	
	comp=E,482nm,0.6s						
LPAZ	La Paz	3.78	17	P	Pn	08 47 25.2	+2.9
	comp=E,2.5nm,0.3s,baz=207,slow=6.1,SNR=106						
SIV	San Ignacio	8.72	65	P	Pn	08 48 27.7	-1.2
	comp=E,1.0nm,0.3s,baz=260,slow=11,SNR=25						
CPUP	Villa Florida	12.68	122	P	Pn	08 49 20.6	-1.9
	comp=E,0.1nm,0.3s,baz=314,slow=13,SNR=5.5						
SNAA	Sanae	63.86	161	P	P	08 56 47.7	0.0
	comp=E,1.2nm,1.1s,baz=270,slow=5.1,SNR=4.9						
TORD	Torodi Ar. Bea	77.14	71	P	P	08 58 07.3	-2.0
	comp=E,0.3nm,0.3s,baz=253,slow=5.6						
YKA	Yellowknife Ar	89.61	341	P	P	08 59 12.5	+0.4
	comp=E,1.1nm,0.6s,baz=128,slow=5.0,SNR=4.0						
H11S2	WAKE ISLAND Hy	127.34	278	T	T	11 25 05.4	
	baz=101,slow=74,SNR=13						
H11S1	WAKE ISLAND Hy	127.35	278	T	T	11 24 56.1	
	baz=101,slow=74,SNR=18						
H11S3	WAKE ISLAND Hy	127.36	278	T	T	11 25 06.8	
	baz=101,slow=74,SNR=15						
H11N3	WAKE ISLAND Hy	127.38	280	T	T	11 25 06.9	
	baz=100,slow=74,SNR=6.6						
H11N2	WAKE ISLAND Hy	127.40	280	T	T	11 25 06.4	
	baz=100,slow=74,SNR=9.0						
H11N1	WAKE ISLAND Hy	127.40	280	T	T	11 25 01.5	
	baz=100,slow=74,SNR=4.4						
ASAR	Alice Springs	131.14	209	PKP	PKPdf	09 05 27.4	+0.2
	comp=E,0.2nm,0.7s,baz=126,slow=1.8,SNR=4.1						
WRA	Warramunga Arr	134.12	212	PKP	PKPdf	09 05 33.0	+0.2
	comp=E,0.5nm,0.8s,baz=157,slow=1.7,SNR=4.8						
SONM	Songino Array	151.94	6	PKPbc	PKPbc	09 06 10.4	+0.7
	comp=E,0.3nm,0.4s,baz=343,slow=4.5,SNR=2.0						

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*ISCJB **16** 08:51:29.9±0.8, 23.°97N±0.°02×122.°27E±0.°02, h9km±5km, Error ellipse: s-maj=4.3km s-min=2.3km az=158.8*

*JMA **16** 08:51:30.7±0.1, 23.°98N×122.°26E, h19km±3km, M2.3*

*TAP **16** 08:51:30.5, 24.°01N×122.°28E, h17km, ML2.7, C*

ISC 16 08:51:30.6±1.2**, 23.°99N**±0.°03×**122.°26E**±0.°02**, h18km**±6km**, n52, σ0.s55**/75**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS1	EOS1	0.57	348	P	Pg	08 51 41.7	-0.2
	baz=345						
EOS1				eS	Sb	08 51 50.2	+0.5
	baz=345						
NACB	Ninganchiao	0.63	287	eP	Pg	08 51 43.3	+0.2
	baz=271						
NANB	Nanao	0.64	313	eP	Pb	08 51 42.9	-0.3
	baz=317						
ENA	Nanau	0.64	313	eP	Pb	08 51 42.8	-0.4
	baz=317						
TWC	Suao	0.72	329	eP	Pb	08 51 43.8	-0.8
	baz=337						
TWC				eS	Sb	08 51 53.4	-0.8
	baz=337						
JYNG	Yonagunijimaku	0.78	54	P	Pb	08 51 45.1	-0.4
JYNG				eS	Sb	08 51 55.4	-0.4
YOJ	Yonaguni jima	0.83	56	eP	Pb	08 51 46.4	-0.1
	baz=56						
YOJ				S	Sg	08 51 57.6	-0.2
	baz=56						
YOJ	Yonaguni jima	0.83	56	P	Pb	08 51 46.4	-0.1
YOJ				eS	Sg	08 51 58.2	+0.4
EGS		0.90	341	eP	Pg	08 51 48.0	-0.1
	baz=339						
ENTT	Nioudou	0.90	316	eP	Pb	08 51 48.0	+0.2
	baz=314						
TWE	Neicheng	0.91	324	eP	Pb	08 51 47.4	-0.4
	baz=322						
NNSB	Datong	0.91	299	eP	Pb	08 51 48.0	+0.1
	baz=284						
NNSB				eS	Sg	08 52 00.8	+0.4
	baz=284						
NNSH	Datong	0.91	299	eP	Pb	08 51 47.9	0.0
	baz=297						
HGSD	Ruisui	0.91	237	eP	Pb	08 51 47.6	-0.2
	baz=236						
HGSD				eS	Sb	08 52 00.1	+0.4
	baz=236						
WHF	Hehuan Shan	0.92	280	eP	Pb	08 51 48.2	-0.1
	baz=277						
WHF				eS	Sb	08 52 00.4	+0.1
	baz=277						
NNS	Nan Shan	0.92	299	eP	Pb	08 51 48.2	+0.1
	baz=297						
NTC	Toucheng	0.94	336	eP	Pb	08 51 48.5	0.0
	baz=353						
CHGB	Renai	0.99	274	eP	Pb	08 51 49.1	-0.3
	baz=272						
CHGB				eS	Sb	08 52 02.9	+0.6
	baz=272						
TDCB	Techi	1.04	285	eP	Pb	08 51 49.7	-0.4
	baz=283						
TWB1	Santiao Chiao	1.04	346	eP	Pb	08 51 49.6	-0.4
	baz=345						
NWLT	Wulai	1.04	319	eP	Pb	08 51 50.3	+0.2
	baz=317						
YHNB	Yeheng	1.05	310	eP	Pb	08 51 50.0	-0.3
	baz=308						
TIPB	Shuangxi	1.05	338	eP	Pb	08 51 50.1	-0.2
	baz=351						
TIPB				eS	Sn	08 52 04.6	-0.1
	baz=351						
YULB	Yu-li	1.06	236	eP	Pb	08 51 49.9	-0.6
	baz=235						
YULB				eS	Sb	08 52 03.5	-0.6
	baz=235						
NSK	Sanguang	1.07	310	eP	Pb	08 51 50.6	0.0
	baz=308						
TWF1	Yuli	1.09	234	eP	Pb	08 51 50.5	-0.3
	baz=233						
TWF1				eS	Sb	08 52 04.5	-0.3
	baz=233						
NWF	Wu-fen Shan	1.16	338	eP	Pn	08 51 51.5	-0.5
	baz=355						
WFSB	Wu-fen Shan	1.16	338	eP	Pn	08 51 51.4	-0.5
	baz=355						
FULB	Fuli	1.19	228	eP	Pn	08 51 51.2	-1.1
	baz=227						
SSLB	Suanglung	1.21	261	eP	Pn	08 51 52.2	-0.5
	baz=259						
SMLT	Sun Moon Lake	1.25	265	eP	Pn	08 51 53.2	0.0
	baz=263						
TYC	Yuchr	1.28	266	eP	Pn	08 51 54.0	+0.3
	baz=252						
TYC				eS	Sn	08 52 10.1	-0.3
	baz=252						
YUS	Yu-Shan	1.30	248	eP	Pb	08 51 54.9	+0.2
	baz=246						
YUS				eS	Sb	08 52 10.6	-0.6
	baz=246						
LIOB	Emei	1.31	300	eP	Pn	08 51 54.3	+0.3
	baz=298						
IRIF	Iriomote-Funau	1.39	75	P	Pb	08 51 55.4	-0.5
IRIF				S	Sb	08 52 13.7	+0.4
ELDTW	Lidau	1.39	235	eS	Sn	08 52 11.4	-1.8
	baz=233						
HATJ	Hateruma jima	1.42	87	P	Pn	08 51 55.5	+0.1
HATJ				eS	Sb	08 52 14.6	+0.4
TWH	Lutao	1.46	210	eP	Pn	08 51 55.0	-1.1
	baz=208						
CHN5	Tsauling	1.50	255	eP	Pb	08 51 57.8	-0.1
	baz=253						
CHN5				eS	Sb	08 52 17.4	+0.7
	baz=253						
JKRS	Kuro-shima	1.62	81	P	Pb	08 51 59.6	-0.3
JKRS				S	Sb	08 52 20.8	+0.8
TPUB	Ta-pu	1.64	246	eP	Pn	08 51 59.6	+1.0
	baz=244						
TPUB				eS	Sb	08 52 20.6	-0.2
	baz=244						
CHN4	Tsaushan	1.66	248	eP	Pb	08 52 00.0	-0.5
	baz=246						
CHN4				eS	Sb	08 52 21.7	+0.6
	baz=246						
WTP	Ta-pu	1.68	244	eP	Pn	08 52 00.2	+1.1
	baz=242						
WTP				eS	Sb	08 52 22.4	+0.5
	baz=242						
JIJ	Ishigaki jima	1.76	77	P	Pn	08 52 00.8	+0.6
JIJ				eS	Sn	08 52 22.2	+0.1
TWK	Hsinying	1.78	246	eS	Sb	08 52 24.9	+0.3
	baz=244						
CHN1	Nanshi	1.78	244	eS	Sb	08 52 25.2	+0.5
	baz=242						

SLGT	**Liugui**	1.78	236	*e*S	Sb	08 52 24.4	-0.3
	baz=223						
JISG	**Ishigakijimahi**	1.96	72	P	Pn	08 52 03.5	+0.5
JISG				S	Sn	08 52 26.6	-0.6
MASBT	**Mashibuluo**	2.03	228	*e*S	Sn	08 52 29.8	+1.0
	baz=226						
EAST	**Anshuo**	2.06	219	*e*P	Pn	08 52 04.2	-0.1
	baz=218						
SCZT	**Fangliau**	2.21	223	*e*S	Sn	08 52 34.6	+1.4
	baz=222						
PHUB	**P'eng-hu**	2.51	260	*e*S	Sn	08 52 40.9	+0.4
	baz=243						

ISCJB ***16*** *09:01:10.8±1.1, 31°.89S±0°.03×71°.50W±0°.08, h75^{km}±26^{km}, Error ellipse: s-maj=11.6km s-min=5.7km az=173.7*

SJA ***16*** *09:01:10.9±0.7, 31°.91S×71°.38W, h67^{km}±13^{km}, ML2.6, MW3.6*

GUC ***16*** *09:01:11.6±0.5, 31°.83S×71°.05W, h65^{km}±28^{km}, ML2.9*

ISC 16 09:01:11.7±2.1**, 31°.89S**±0°.04×**71°.49W**±0°.09**, h57**^{km}±56^{km}**, n20, σ0^{s}.46**/28**, 5C-1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROCH	**El Roble**	1.16	159	IAML		09 01 48.5	
	comp=N,476nm,0.3s						
ROC1	**El Roble**	1.16	160	*i* P	Pn	09 01 32.2	+0.2
ROC1				*i* S	Sn	09 01 47.5	+0.4
PEL	**Peldehue**	1.43	152⇑	*i*P	Pn	09 01 35.4	-0.1
PEL				*i* S	Sn	09 01 52.9	-0.3
PEL				IAML		09 01 54.2	
	comp=N,243nm,0.4s						
CLCH	**Cerro Calan**	1.71	152⇑	*i*P	Pn	09 01 39.2	-0.1
CLCH				*i* S	Sn	09 01 59.8	-0.3
CLCH				IAML		09 02 05.8	
	comp=E,182nm,0.2s						
FCH	**Farellones**	1.76	145⇑	*i*P	Pn	09 01 40.1	-0.1
FCH				IAML		09 02 05.2	
	comp=E,153nm,0.2s						
GO04	**Tololo Observa**	1.81	19	*e*P	Pn	09 01 40.4	-0.4
TLL	**Tololo Astrono**	1.81	19	*e*P	Pn	09 01 40.9	0.0
TLL				*i* S	Sn	09 02 03.0	+0.1
TLL				IAML		09 02 06.0	
	comp=E,236nm,0.4s						
AUSP	**Uspallata**	1.82	101	*i* P	Pn	09 01 40.7	-0.3
AUSP				*i* S	Sn	09 02 03.6	+0.5
ANTU	**Antumapu**	1.83	157⇑	*i*P	Pn	09 01 41.0	+0.1
ANTU				IAML		09 02 04.0	
	comp=E,170nm,0.2s						
RTLS	**Leoncito**	1.87	88	*i* P	Pn	09 01 41.8	+0.1
RTLS				*i* S	Sn	09 02 04.5	+0.1
RTLS				IAML		09 02 08.9	
	comp=Z,43nm,0.4s						
LMEL	**Las Melosas**	2.24	151⇓	*i*P	Pn	09 01 47.1	+0.5
LMEL				*i* S	Sn	09 02 13.5	+0.4
LMEL				IAML		09 02 15.3	
	comp=N,144nm,0.2s						
ASAL	**Salagasta**	2.36	108	*i* P	Pn	09 01 47.9	-0.3
ARCO	**CERRO ARCO**	2.37	114	*i* P	Pn	09 01 48.1	-0.3
ARCO				*i* S	Sn	09 02 15.2	-1.1
ARCO				IAML		09 02 20.7	
	comp=Z,38nm,0.5s						
AROD	**Rodeo**	2.44	46	*i* P	Pn	09 01 50.3	+0.8
RTCV	**Cerro Valdivia**	2.51	90	*i* P	Pn	09 01 50.4	+0.2
RTLL	**Cerro Villicun**	2.63	79	*i* P	Pn	09 01 51.7	-0.2
ACDV	**Cuesta del Vie**	2.66	51	*i* P	Pn	09 01 53.0	+0.7
AMOG	**MOGNA**	2.73	71	*i* P	Pn	09 01 53.1	-0.2
LCO	**Las Campanas**	2.95	14⇑	*i*P	Pn	09 01 56.0	-0.4
LCO				*i* S	Sn	09 02 30.1	-0.5
LCO				IAML		09 02 31.0	
	comp=E,100nm,0.3s						
AGUA	**GUANDACOL**	3.52	48	*i* P	Pn	09 02 04.9	+0.8

ISCJB ***16*** *09:03:46.0±0.6, 50°.16N±0°.04×19°.04E±0°.03, h0^{km}, Error ellipse: s-maj=5.9km s-min=2.7km az=8.7*

CSEM ***16*** *09:03:47.0±0.4, 50°.15N×19°.08E, h2^{km}, ML2.7/5, Error ellipse: s-maj=9.2km s-min=4.3km az=8.0*

PRU ***16*** *09:03:47.5, 50°.15N×19°.10E, h0^{km}*

WAR ***16*** *09:03:48.3, 50°.10N×19°.20E, h1^{km}, Mw2.3*

ISC 16 09:03:45.6±0.9**, 50°.20N**±0°.04×**19°.16E**±0°.02**, h0**^{km}**, n32, σ0^{s}.60**/50**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OJC	**Ojcow**	0.41	87	*e*Pg	Pb	09 03 56.0	+0.3
OJC				*e*Sg	Sb	09 04 01.9	-0.6
OJC	**Ojcow**	0.41	87	*e*Pg	Pb	09 03 56.0	+0.3
OJC				*e*Sg	Sb	09 04 01.9	-0.6
OJC	**Ojcow**	0.41	87	*e*Pg	Pb	09 03 56.0	+0.3
OJC				*e*Sg	Sb	09 04 01.9	-0.6
OKC	**Ostrava-Krasne**	0.75	241	*e*PG	Pb	09 04 01.4	-0.1
OKC				*e*SG	Sg	09 04 09.2	-0.4
	comp=Z,20nm,0.3s						
OKC	**Ostrava-Krasne**	0.75	241	Pg	Pb	09 04 01.4	-0.1
OKC				Sg	Sg	09 04 09.2	-0.4
	20nm,0.3s						
LANS	**Liptovska Anna**	1.07	169	*e*PG	Pb	09 04 06.8	-0.2
LANS				*e*SG	Sg	09 04 20.0	+0.1
LANS	**Liptovska Anna**	1.07	169	*e*Pg	Pb	09 04 06.8	-0.2
LANS				*e*Sg	Sg	09 04 20.0	+0.1
NIE	**Niedzica**	1.08	136	*e*Pg	Pb	09 04 07.2	+0.1
NIE				*e*Sg	Sb	09 04 22.3	+0.6
NIE	**Niedzica**	1.08	136	*e*Pg	Pb	09 04 07.2	+0.1
NIE				*e*Sg	Sb	09 04 22.3	+0.6
NIE	**Niedzica**	1.08	136	*e*Pg	Pb	09 04 07.2	+0.1
NIE				*e*Sg	Sb	09 04 22.3	+0.6
MORC	**Moravsky Berou**	1.13	248	*e*Pg	Pn	09 04 08.6	-0.1
MORC				*e*Sg	Sb	09 04 23.3	+0.1
MORC	**Moravsky Berou**	1.13	248	*e*PG	Pn	09 04 08.6	-0.1
MORC				*e*SG	Sb	09 04 23.3	+0.1
KRLC	**Kraliky**	1.54	266	*e*PG	Pn	09 04 14.3	0.0
KRLC				*e*SG	Sn	09 04 35.6	+0.6
	comp=Z,3.7nm,0.3s						
KRLC	**Kraliky**	1.54	266	Pg	Pn	09 04 14.3	0.0
KRLC				Sg	Sn	09 04 35.6	+0.6
	3.7nm,0.3s						
VYHS	**Vyhne**	1.72	187	*e*PN	Pn	09 04 16.9	+0.1
VYHS				*e*SN	Sn	09 04 38.6	-0.9
VYHS				*e*LG	Lg	09 04 40.9	
VYHS	**Vyhne**	1.72	187	*e*Pg	Pn	09 04 16.9	+0.1
VYHS				*e*Sn	Sn	09 04 38.6	-0.9
DPC	**Dobruska-Polom**	1.83	276	*e*PG	Pb	09 04 19.6	-0.3
DPC				*e*SG	Sg	09 04 44.7	+0.4
	comp=Z,17nm,0.4s						
DPC	**Dobruska-Polom**	1.83	276	Pg	Pb	09 04 19.6	-0.3
DPC				Sg	Sg	09 04 44.7	+0.4
	17nm,0.4s						
VRAC	**Vranov**	1.89	243	*e*Sg	Sg	09 04 46.1	-0.2
VRAC	**Vranov**	1.89	243	*e*SG	Sg	09 04 46.1	-0.2
CRVS	**Cervenica-Dubn**	1.98	130	*e*PN	Pg	09 04 23.7	+0.1
CRVS	**Cervenica-Dubn**	1.98	130	*e*Pn	Pg	09 04 23.7	+0.1
UPC	**Upice**	2.04	280	*e*SG	Sg	09 04 51.9	+0.8
UPC	**Upice**	2.04	280	Sg	Sg	09 04 51.9	+0.8
KRUC	**Moravsky**	2.13	239	*e*Sg	Sb	09 04 52.7	+0.7
KRUC	**Moravsky**	2.13	239	*e*SG	Sb	09 04 52.7	+0.7
GOPC	**GO Pecny, Ondr**	2.83	266	*e*SG	Sg	09 05 15.4	-1.2
	comp=Z,4.5nm,0.4s						
GOPC	**GO Pecny, Ondr**	2.83	266	Sg	Sg	09 05 15.4	-1.2
	4.5nm,0.4s						
PRU	**Pruhonice**	2.98	268	*e*SG	Sg	09 05 19.8	-1.5
	comp=Z,3.4nm,0.3s						
PRU	**Pruhonice**	2.98	268	Sg	Sg	09 05 19.8	-1.5
	3.4nm,0.3s						
KHC	**Kasperske Hory**	3.78	256	*e*SG	Sg	09 05 47.7	+0.7
KHC	**Kasperske Hory**	3.78	256	Sg	Sg	09 05 47.7	+0.7

ISCJB ***16*** *09:04:03.8±0.5, 39°.92N±0°.02×39°.06E±0°.03, h2^{km}±6^{km}, Error ellipse: s-maj=4.0km s-min=3.8km az=168.9*

CSEM ***16*** *09:04:03.9±0.1, 39°.92N×39°.07E, h5^{km}, ML2.4, Error ellipse: s-maj=2.8km s-min=2.6km az=145.0*

ISK ***16*** *09:04:03.5, 39°.93N×39°.07E, h5^{km}, ML2.4/9*

DDA ***16*** *09:04:03.9, 39°.89N×39°.06E, h7^{km}, Ml2.8*

ISC 16 09:04:03.9±1.1**, 39°.92N**±0°.02×**39°.06E**±0°.02**, h3**^{km}±11^{km}**, n36, σ0^{s}.71**/54**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KELT	**Kelkit**	0.28	33	*i* P	Pb	09 04 10.4	-1.3
KELT				*i* S	Sg	09 04 14.5	+1.6
KELT	**Kelkit**	0.28	33	P	Pb	09 04 10.4	-1.3
KELT				S	Sg	09 04 14.5	+1.6
EUZM	**Uzumlu**	0.54	113	*i* P	Pg	09 04 14.4	+0.3
EUZM				*i* S	Sg	09 04 22.1	+1.0
EUZM	**Uzumlu**	0.54	113	P	Pg	09 04 14.4	+0.3
EUZM				S	Sg	09 04 22.1	+1.0
REFA	**Refahiye_ERZ˜**	0.57	204	*i* P	Pg	09 04 09.1	-5.6
REFA				*i* S	Sg	09 04 12.4	-10
ERZN	**Erzincan**	0.61	123	PG	Pg	09 04 15.7	+0.1
ERZN				SG	Sb	09 04 24.9	-1.4
GUMT	**Gumushane**	0.63	31	PG	Pg	09 04 15.9	-0.1
GUMT				SG	Sg	09 04 24.9	+0.7
GUMT	**Gumushane**	0.63	31	*e*Pg	Pg	09 04 15.9	-0.1
GUMT				*e*Sg	Sg	09 04 24.9	+0.7
SUSE	**Susehri**	0.72	294	*i* P	Pb	09 04 18.5	-0.6
SUSE				*i* S	Sb	09 04 28.5	-1.0
SUSE	**Susehri**	0.72	294	P	Pb	09 04 18.5	-0.6
SUSE				S	Sb	09 04 28.5	-1.0
KEMA	**Kemaliye**	0.78	214	*i* P	Pg	09 04 18.5	-0.3
KEMA				*i* S	Sg	09 04 29.2	+0.3
KEMA	**Kemaliye**	0.78	214	P	Pg	09 04 18.5	-0.3
KEMA				S	Sg	09 04 29.2	+0.3
BAYT	**Ayd˜–ntepe-Bay**	0.96	60	PG	Pg	09 04 22.2	0.0
BAYT				SG	Sg	09 04 35.1	+0.4
BAYT	**Ayd˜–ntepe-Bay**	0.96	60	*e*Pg	Pg	09 04 22.2	0.0
BAYT				*e*Sg	Sg	09 04 35.1	+0.4
CUZAR	**Zara_SIVAS**	0.99	269	*i* P	Pg	09 04 22.7	-0.1
CUZAR				*i* S	Sb	09 04 38.0	+0.7
CUZAR	**Zara_SIVAS**	0.99	269	P	Pg	09 04 22.7	-0.1
CUZAR				S	Sb	09 04 38.0	+0.7
ESPY	**Espiye-Giresun**	1.03	346	PG	Pg	09 04 23.7	+0.1
ESPY	**Espiye-Giresun**	1.03	346	*e*Pg	Pg	09 04 23.7	+0.1
PTK	**Pertek**	1.05	166	PG	Pg	09 04 23.8	-0.3
PTK	**Pertek**	1.05	166	*e*Pg	Pg	09 04 23.8	-0.3
GRSN	**GIRESUNGRSN**	1.17	329	*i* P	Pg	09 04 26.4	0.0
GRSN				*i* S	Sg	09 04 41.2	-0.4
GRSN	**GIRESUNGRSN**	1.17	329	P	Pg	09 04 26.4	0.0
GRSN				S	Sg	09 04 41.2	-0.4
KTUT	**Trabzon**	1.20	27	PN	Pg	09 04 26.7	-0.1
KTUT	**Trabzon**	1.20	27	*e*Pn	Pg	09 04 26.7	-0.1
YEDI	**Yedisu-Bingol**	1.24	112	PN	Pg	09 04 27.5	-0.2
YEDI	**Yedisu-Bingol**	1.24	112	*e*Pn	Pg	09 04 27.5	-0.2
CUKAN	**kangal_SIVAS**	1.37	244	*i* P	Pn	09 04 29.9	-0.1
CUKAN				*i* S	Sn	09 04 50.4	+1.7
CUKAN	**kangal_SIVAS**	1.37	244	P	Pn	09 04 29.9	-0.1
CUKAN				S	Sn	09 04 50.4	+1.7
BINT	**Bingol**	1.52	133	*e*Pn	Pg	09 04 32.7	-0.3
SVRC	**Sivrice-ELAZID**	1.55	173	PN	Pn	09 04 32.2	-0.3
SVRC	**Sivrice-ELAZID**	1.55	173	*e*Pn	Pn	09 04 32.2	-0.3
BNGB	**Bingˆ¶l**	1.56	126	PN	Pb	09 04 32.7	-0.7
MALT	**Malatya**	1.67	197	PN	Pn	09 04 34.4	+0.2
MALT	**Malatya**	1.67	197	*e*Pn	Pn	09 04 34.4	+0.2
CHOM	**Cayeli-Rize**	1.75	47	PN	Pn	09 04 35.2	0.0
CHOM	**Cayeli-Rize**	1.75	47	*e*Pn	Pn	09 04 35.2	0.0

CSEM ***16*** *09:04:20.9±0.3, 38°.44N×43°.34E, h8^{km}, ML2.9, Error ellipse: s-maj=6.8km s-min=5.1km az=90.0*

ISK ***16*** *09:04:20.9, 38°.48N×43°.28E, h5^{km}, ML2.3/4*

ISCJB ***16*** *09:04:21.7±0.5, 38°.46N±0°.03×43°.33E±0°.04, h9^{km}±4^{km}, Error ellipse: s-maj=5.6km s-min=4.5km az=22.9*

DDA ***16*** *09:04:22.1, 38°.50N×43°.34E, h11^{km}, Ml2.9*

ISC 16 09:04:21.1±0.8**, 38°.47N**±0°.02×**43°.35E**±0°.04**, h12**^{km}±5^{km}**, n26, σ0^{s}.75**/43**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TVAN	**Van**	0.07	39	*i* P	Pg	09 04 24.2	+0.4
TVAN				*i* S	Sg	09 04 26.2	+0.4
TVAN	**Van**	0.07	39	P	Pg	09 04 24.2	+0.4
TVAN				S	Sg	09 04 26.2	+0.4
VANB	**Van**	0.13	15	PG	Pg	09 04 23.8	-0.6
VANB				SG	Sg	09 04 25.7	-1.1
VANB	**Van**	0.13	15	*i* Pg	Pg	09 04 23.8	-0.6
VANB				*i* Sg	Sg	09 04 25.7	-1.1
GEVA	**Gevas**	0.28	235	*i* P	Pg	09 04 27.2	+0.4
GEVA				*i* S	Sb	09 04 32.9	+0.1
GEVA	**Gevas**	0.28	235	P	Pg	09 04 27.2	+0.4
VMUR	**Van-Muradiye**	0.55	19	*i* P	Pb	09 04 33.2	+0.4
VMUR				*i* S	Sn	09 04 43.0	-1.2
VMUR	**Van-Muradiye**	0.55	19	P	Pb	09 04 33.2	+0.4
ADCV	**BITLIS_Adilcev**	0.59	305	*i* P	Pb	09 04 33.4	-0.1
ADCV				*i* S	Sb	09 04 42.9	+1.0
ADCV	**BITLIS_Adilcev**	0.59	305	P	Pb	09 04 33.4	-0.1
ADCV				S	Sb	09 04 42.9	+1.0
CLDR	**Caldiran**	0.81	33	PG	Pn	09 04 38.3	-0.2
CLDR	**Caldiran**	0.81	33	*e*Pg	Pn	09 04 38.3	-0.2
HAKT	**HAKKARI**	0.95	162	*i* P	Pg	09 04 38.1	-1.4
HAKT				*i* S	Sn	09 04 55.3	+1.1
HAKT	**HAKKARI**	0.95	162	P	Pg	09 04 38.1	-1.4
TUTA	**Tutak**	1.02	336	*i* P	Pg	09 04 40.5	-0.2
TUTA				*i* S	Sb	09 04 54.8	+0.5
TUTA	**Tutak**	1.02	336	P	Pg	09 04 40.5	-0.2
TUTA				S	Sb	09 04 54.8	+0.5
GURO	**Guroymak-BITLI**	1.03	275	PG	Pg	09 04 39.9	-1.1
GURO				SG	Sb	09 04 54.4	-0.2
GURO	**Guroymak-BITLI**	1.03	275	*e*Pg	Pg	09 04 39.9	-1.1
GURO				*e*Sg	Sb	09 04 54.4	-0.2
AGRB	**Hanur-Agry**	1.14	346	PN	Pg	09 04 42.4	-0.6
AGRB				SN	Sn	09 04 58.9	+0.2
AGRB	**Hanur-Agry**	1.14	346	*e*Pn	Pg	09 04 42.4	-0.6
AGRB				*e*Sn	Sn	09 04 58.9	+0.2
SIRT	**Sirnak**	1.20	217	PN	Pb	09 04 43.6	-0.3
SIRT	**Sirnak**	1.20	217	*e*Pn	Pb	09 04 43.6	-0.3
CUKT	**Cukurca**	1.24	170	PN	Pg	09 04 45.5	+0.6
CUKT	**Cukurca**	1.24	170	*e*Pn	Pg	09 04 45.5	+0.6
EATA	**Eleskirt**	1.54	335	*i* P	Pg	09 04 50.2	-0.5
EATA				*i* S	Sg	09 05 12.1	+1.4
EATA	**Eleskirt**	1.54	335	P	Pg	09 04 50.2	-0.5
EATA				S	Sg	09 05 12.1	+1.4

CSEM ***16*** *09:06:36.2±0.1, 38°.55N×22°.47E, h28^{km}±2^{km}, ML1.8, Error ellipse: s-maj=4.3km s-min=3.4km az=147.0*

ATH ***16*** *09:06:37.6, 38°.46N×22°.44E, h27^{km}±2^{km}, ML1.8/3, Error ellipse: s-maj=3.1km s-min=1.1km az=344.0*

THE 16 09:06:37.1, 38°.57N×22°.44E, h21^{km}±2^{km}**, ML1.7**/5**, Error ellipse: s-maj=2.3km s-min=0.6km az=146.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DSF	**Desfina**	0.17	156	P	Pb	09 06 42.3	-0.8
DSF				S	Sb	09 06 45.5	-1.7
DSF				AML	AML	09 06 46.9	
	comp=E,411µm,0.1s						
DSF				AML	AML	09 06 47.5	
	comp=N,683µm,0.1s						
DSF	**Desfina**	0.17	156	P	Pb	09 06 42.1	-0.9
DSF				S	Sb	09 06 45.3	-1.9
DSF	**Desfina**	0.17	156	P	Pb	09 06 42.1	-0.9
DSF				S	Sb	09 06 45.8	-1.4
SERG	**Sergoula**	0.34	243	P	Pb	09 06 44.0	-0.4
SERG				S	Sb	09 06 49.6	+0.3
SERG				AML	AML	09 06 51.2	
	comp=N,579µm,0.2s						
SERG				AML	AML	09 06 51.5	
	comp=E,637µm,0.3s						
SERG	**Sergoula**	0.34	243	P	Pb	09 06 44.3	-0.1
SERG				S	Sb	09 06 49.3	0.0
SERG	**Sergoula**	0.34	243	P	Pb	09 06 44.4	0.0
SERG				S	Sb	09 06 49.9	+0.6
TRIZ	**Trizonia**	0.35	235	P	Pb	09 06 44.7	+0.2
TRIZ				S	Sb	09 06 50.9	+1.3
TRIZ	**Trizonia**	0.35	235	P	Pb	09 06 44.5	0.0
TRIZ				S	Sb	09 06 50.6	+1.0
TRIZ	**Trizonia**	0.35	235	P	Pb	09 06 44.5	0.0
TRIZ				S	Sb	09 06 50.5	+0.9
EFP	**Efpalio**	0.44	252	P	Pb	09 06 46.1	0.0
EFP				S	Sb	09 06 53.5	+1.3
EFP				AML	AML	09 06 54.3	
	comp=E,246µm,0.2s						
EFP				AML	AML	09 06 55.4	
	comp=N,282µm,0.2s						
EFP	**Efpalio**	0.44	252	P	Pb	09 06 46.0	-0.1
EFP				S	Sb	09 06 53.2	+1.0
EFP	**Efpalio**	0.44	252	P	Pb	09 06 46.0	-0.1
EFP				S	Sb	09 06 53.2	+1.0
LKR	**Lokris**	0.45	79	P	Pn	09 06 47.4	-0.9
LKR				S	Sn	09 06 56.3	+0.6
LKR	**Lokris**	0.45	79	P	Pb	09 06 46.0	-0.2
LKR	**Lokris**	0.45	79	P	Pb	09 06 46.0	-0.2
AGG	**Agios Georgios**	0.46	349	P	Pb	09 06 46.6	+0.1
AGG				S	Sb	09 06 53.2	+0.3
AGG	**Agios Georgios**	0.46	349	P	Pb	09 06 46.6	+0.1
AGG				S	Sb	09 06 53.2	+0.3
LAKA	**Lakka**	0.49	228	P	Pb	09 06 47.9	+0.9
LAKA				S	Sb	09 06 54.6	+0.9
LAKA	**Lakka**	0.49	228	P	Pb	09 06 46.7	-0.3
LAKA	**Lakka**	0.49	228	P	Pb	09 06 46.7	-0.3
LAKA				S	Sb	09 06 54.0	+0.3
KLV	**Kalavryta, Ach**	0.57	204	P	Pb	09 06 47.8	-0.7
KLV	**Kalavryta, Ach**	0.57	204	P	Pb	09 06 47.8	-0.7
GUR	**Goura**	0.63	187	P	Pb	09 06 47.6	-2.1
GUR	**Goura**	0.63	187	P	Pb	09 06 48.0	-1.6
LTK	**Loutraki**	0.68	143	P	Pb	09 06 50.1	-0.2
LTK	**Loutraki**	0.68	143	P	Pb	09 06 50.0	-0.4

CSEM ***16*** *09:06:40.9±1.2, 38°.21N×25°.69E, h36^{km}±10^{km}, ML1.9, Error ellipse: s-maj=45.5km s-min=17.3km az=47.0*

ATH 16 09:06:39.4, 38°.17N×25°.73E, h44^{km}±2^{km}**, ML1.9**/1**, Error ellipse: s-maj=6.8km s-min=1.4km az=36.0, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOS	**Chios island**	0.34	50	P	Pn	09 06 49.8	+1.3
CHOS				S	Sn	09 06 55.5	+0.7
CHOS				AML	AML	09 06 56.7	
	comp=N,211µm,0.3s						
CHOS				AML	AML	09 06 57.3	
	comp=E,488µm,0.2s						
CHOS	**Chios island**	0.34	50	P	Pn	09 06 49.3	+0.9
CHOS				S	Sn	09 06 55.6	+0.8
PSRA	**Psara**	0.39	341	P	Pn	09 06 50.3	+1.3
PSRA				S	Sn	09 06 56.4	+0.7
PSRA	**Psara**	0.39	341	P	Pn	09 06 49.9	+1.0
PSRA				S	Sn	09 06 56.6	+0.9
SMG	**Samos**	0.99	117	P	Pn	09 06 57.5	+0.7
SMG				S	Sn	09 07 11.9	+2.2
SMG	**Samos**	0.99	117	P	Pn	09 06 57.8	+0.9
SMG				S	Sn	09 07 11.8	+2.1
SIGR	**SIGRI**	1.04	6	P	Pn	09 06 58.2	+0.6
SIGR	**SIGRI**	1.04	6	P	Pn	09 06 58.4	+0.9

NIED ***16*** *09:10:00, 25°.80N×124°.50E, h41^{km}, Mw4.1 Best double couple: M$_0$1.63000×10^{15} NP1:φ$_s$230.00000°, δ4.00000°, λ-57.00000°. NP2:φ$_s$17.00000°, δ87.00000°, λ-92.00000°.*

ISCJB ***16*** *09:10:24.2±0.3, 25°.80N±0°.06×124°.53E±0°.05, h162^{km}±5^{km}, mb3.6/13, Error ellipse: s-maj=12.2km s-min=4.3km az=148.6*

IDC ***16*** *09:10:24.0±2.6, 25°.83N×124°.54E, h145^{km}±27^{km}, mb3.6/12, mb1 3.6/14, mb1mx3.5/58, mbtmp4.0/14, Error ellipse: s-maj=26.0km s-min=13.4km az=65.0*

JMA ***16*** *09:10:26.3±0.2, 25°.77N×124°.48E, h151^{km}, M3.8*

ISC 16 09:10:25.1±0.7**, 25°.83N**±0°.08×**124°.51E**±0°.06**, h156**^{km}±9^{km}**, n34, σ1^{s}.02**/53**, mb3.8**/13**, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIKM	**Ikemajima**	1.12	143	P	Pn	09 10 52.6	+1.1
JIKM				*e*S	Sn	09 11 12.2	+0.5
JIRB	**Irabujima**	1.17	149	P	Pn	09 10 52.5	+0.6
JIRB				S	Sn	09 11 11.8	-0.6
JTJ	**Tarama**	1.20	172	P	Pn	09 10 52.8	+0.6
JTJ				S	Sn	09 11 12.2	-0.8
JMJ	**Miyako jima 2**	1.24	145	P	Pn	09 10 53.5	+0.9
JMJ				*e*S	Sn	09 11 13.5	-0.1
JISG	**Ishigakijimahi**	1.25	188	P	Pn	09 10 53.0	+0.3
JISG				S	Sn	09 11 12.8	-1.1
JOGS	**Gusukube**	1.34	143	P	Pn	09 10 54.8	+1.2
JOGS				*e*S	Sn	09 11 15.8	+0.4
JIJ	**Ishigaki jima**	1.50	193	P	Pn	09 10 54.9	-0.3
JIJ				S	Sn	09 11 15.8	-2.4
IRIF	**Iriomote-Funau**	1.65	206	P	Pn	09 10 56.6	-0.1
IRIF				S	Sn	09 11 20.0	-1.0
JKRS	**Kuro-shima**	1.65	196	P	Pn	09 10 56.8	0.0
JKRS				S	Sn	09 11 19.5	-1.6
HATJ	**Hateruma jima**	1.88	200	P	Pn	09 10 59.3	0.0
HATJ				S	Sn	09 11 24.2	-1.3
YOJ	**Yonaguni jima**	1.93	225	P	Pn	09 11 00.3	+0.5
YOJ				S	Sn	09 11 26.4	0.0
JYNG	**Yonagunijimaku**	1.98	226	P	Pn	09 11 00.8	+0.5
JYNG				S	Sn	09 11 27.8	+0.4
JKE	**Kume jima 2**	2.10	76	P	Pn	09 11 03.0	+1.2
JAGN	**Aguni-jima**	2.57	72	P	Pn	09 11 08.5	+1.2
JAGN				S	Sn	09 11 40.0	+0.1
JJT3	**Tamagusuku3**	2.96	83	P	Pn	09 11 13.5	+1.3
JJT3				S	Sn	09 11 49.0	+0.3
JNTH	**Nagotoyohara**	3.23	77	P	Pn	09 11 16.2	+0.6
JNTH				S	Sn	09 11 52.9	-1.8
JIH	**Iheya**	3.32	68	P	Pn	09 11 17.6	+0.8
JIH				*e*S	Sn	09 11 56.0	-0.9
JOW	**Kunigami**	3.52	73	P	Pn	09 11 19.2	-0.2
	34nm,0.3s,baz=122,slow=22,SNR=207						
JOW				S	Sn	09 11 58.9	-2.6
	27nm,0.3s,baz=318,slow=28,SNR=19						
JOW	**Kunigami**	3.52	73	P	Pn	09 11 19.6	+0.2
JOW				S	Sn	09 11 59.3	-2.2
JYRO	**Yoronjima**	3.73	71	P	Pn	09 11 22.1	+0.1
JYRO				*e*S	Sn	09 12 03.5	-2.7
KSRS	**Korea Array**	11.94	13	P	Pn	09 13 09.9	-0.5
	baz=186,slow=11,SNR=2.9						
KLR	**Kul'dur**	24.03	12	P	P	09 15 25.9	+0.3
	0.1nm,0.6s,baz=211,slow=12,SNR=3.8						
SONM	**Songino Array**	26.19	332	P	P	09 15 45.6	+0.4
	0.7nm,0.5s,baz=142,slow=8.2,SNR=5.1						
MKAR	**Makanchi Array**	39.34	313	P	P	09 17 39.2	+0.1
	4.1nm,0.5s,baz=104,slow=7.2,SNR=52						
ZALV	**Zalesovo Beam**	40.58	325	P	P	09 17 48.8	-0.3
	2.3nm,0.5s,baz=115,slow=7.5,SNR=6.6						
KURBB	**Kurchatov Arra**	42.86	318	P	P	09 18 07.8	+0.1
	0.9nm,0.4s,baz=110,slow=9.6,SNR=5.0						
WRA	**Warramunga Arr**	46.49	167	P	P	09 18 36.1	-0.7
	2.8nm,0.4s,baz=348,slow=8.0,SNR=18						
BVAR	**Borovoye Array**	48.36	319	P	P	09 18 49.8	-1.1
	0.6nm,0.5s,baz=98,slow=8.9,SNR=3.5						
ASAR	**Alice Springs**	50.04	169	P	P	09 19 04.3	+0.4
	0.3nm,0.5s,baz=356,slow=14,SNR=5.9						
ILAR	**Eielson Array**	66.36	28	P	P	09 20 57.1	+0.3
	0.1nm,0.4s,baz=281,slow=6.0,SNR=3.9						
KBZ	**Khabaz**	66.81	309	P	P	09 21 01.1	+1.2
	2.0nm,0.6s,baz=133,slow=4.6,SNR=4.4						
FINES	**FINESS Array B**	71.55	330	P	P	09 21 28.5	-0.3
	1.1nm,0.6s,baz=81,slow=6.0,SNR=5.9						
BRTR	**Keskin Array B**	74.61	307	P	P	09 21 47.9	+0.4
	1.4nm,0.8s,baz=100,slow=4.4,SNR=5.8						
HFS	**Hagfors**	77.59	331	P	P	09 22 03.9	+0.2
	1.4nm,0.7s,baz=69,slow=4.8,SNR=4.3						

ISN ***16*** *09:13:10.6±0.3, 37°.22N×42°.60E, h0^{km}, ML2.8*

CSEM ***16*** *09:13:12.8±0.2, 37°.25N×42°.61E, h2^{km}, ML2.6, Error ellipse: s-maj=6.8km s-min=3.8km az=36.0*

ISCJB ***16*** *09:13:13.6±1.4, 37°.27N±0°.08×42°.59E±0°.05, h6^{km}±10^{km}, Error ellipse: s-maj=13.8km s-min=5.1km az=21.0*

DDA ***16*** *09:13:13.8, 37°.30N×42°.60E, h6^{km}, Ml2.9*

ISK ***16*** *09:13:13.2, 37°.28N×42°.56E, h7^{km}, ML2.6/6*

ISC 16 09:13:13.2±1.4**, 37°.27N**±0°.06×**42°.63E**±0°.03**, h5**^{km}±10^{km}**, n26, σ0^{s}.76**/36**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIRT	**Sirnak**	0.27	327	PG	Pg	09 13 17.9	-0.7
SIRT				SG	Sg	09 13 22.7	+0.5
SIRT	**Sirnak**	0.27	327	*e*Pg	Pg	09 13 17.9	-0.7
SIRT				*e*Sg	Sg	09 13 22.7	+0.5
SIRN	**S˜–rnak**	0.28	323	*i* P	Pg	09 13 18.2	-0.5
SIRN				*i* S	Sg	09 13 23.0	+0.5
SIRN	**S˜–rnak**	0.28	323	P	Pg	09 13 18.2	-0.5
CUKT	**Cukurca**	0.78	91	PG	Pb	09 13 29.3	-0.1
CUKT				SG	Sn	09 13 42.3	-1.0
CUKT	**Cukurca**	0.78	91	*i* P	Pb	09 13 29.4	-0.1
CUKT				*i* S	Sn	09 13 43.3	+0.1
CUKT	**Cukurca**	0.78	91	*e*Pg	Pb	09 13 29.3	-0.1
HAKT	**HAKKARI**	0.91	71	*i* P	Pg	09 13 30.6	0.0
HAKT				*i* S	Sn	09 13 45.5	-1.0
HAKT	**HAKKARI**	0.91	71	P	Pg	09 13 30.6	0.0
SRTM	**Siirt_Merkez**	0.91	322	*i* P	Pg	09 13 30.5	-0.2
SRTM				*i* S	Sn	09 13 47.3	+0.9
SRTM	**Siirt_Merkez**	0.91	322	P	Pg	09 13 30.5	-0.2
BTMN	**Batman**	1.24	300	*i* P	Pn	09 13 36.8	-0.6

BTMN				*i* S	**Sn**	**09 13 55.4**	**+0.9**
BTMN	**Batman**	**1.24**	**300**	P	**Pn**	**09 13 36.8**	**-0.6**
BTMN				S	**Sn**	**09 13 55.4**	**+0.9**
GURO	**Guroymak-BITLI**	**1.36**	**340**	PN	**Pn**	**09 13 38.7**	**-0.3**
GURO	**Guroymak-BITLI**	**1.36**	**340**	*e*Pn	**Pn**	**09 13 38.7**	**-0.3**
SVAN	**Silvan-Diyarba**	**1.43**	**308**	PN	**Pn**	**09 13 39.4**	**-0.5**
SVAN	**Silvan-Diyarba**	**1.43**	**308**	*e*Pn	**Pn**	**09 13 39.4**	**-0.5**
MARD	**Mardin**	**1.47**	**272**	*i* P	**Pg**	**09 13 41.1**	**-0.3**
MARD				*i* S	**Sg**	**09 14 03.4**	**+2.8**
MAZI	**Mazidag**	**1.75**	**277**	PN	**Pb**	**09 13 44.8**	**-1.0**
MAZI	**Mazidag**	**1.75**	**277**	*e*Pn	**Pb**	**09 13 44.8**	**-1.0**
VRTB	**Varto-Mus**	**2.10**	**334**	PN	**Pn**	**09 13 49.3**	**+0.1**
VRTB	**Varto-Mus**	**2.10**	**334**	*e*Pn	**Pn**	**09 13 49.3**	**+0.1**
AGRB	**Hanur-Agry**	**2.32**	**7**	PN	**Pn**	**09 13 52.8**	**+0.5**
AGRB	**Hanur-Agry**	**2.32**	**7**	*e*Pn	**Pn**	**09 13 52.8**	**+0.5**
SVRC	**Sivrice-ELAZID**	**2.85**	**294**	PN	**Pn**	**09 13 59.6**	**0.0**
SVRC	**Sivrice-ELAZID**	**2.85**	**294**	*e*Pn	**Pn**	**09 13 59.6**	**0.0**

ISK ***16*** *09:29:41.9, 39°07N×29°14E, h5^{km}, ML2.4/14*
ISCJB ***16*** *09:29:42.4±0.3, 39°06N±0°03×29°16E±0°03, h7^{km}±4^{km}, Error ellipse: s-maj=5.7km s-min=3.3km az=178.8*
DDA ***16*** *09:29:42.8, 39°14N×29°16E, h8^{km}, Ml2.8*
CSEM ***16*** *09:29:42.2±0.1, 39°09N×29°15E, h2^{km}, ML2.4, Error ellipse: s-maj=2.1km s-min=1.7km az=167.0*
ISC 16 09:29:42.3±0.9**, 39°09N**±0°02×**29°14E**±0°02**, h8**^{km}±6^{km}**, n50, σ0^{s}40**/66**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHAP	**Saphane-Kutahy**	**0.09**	**137**	PG	**Pg**	**09 29 44.3**	**-0.3**
SHAP				SG	**Sg**	**09 29 46.2**	**-0.1**
SHAP	**Saphane-Kutahy**	**0.09**	**137**	*i* Pg	**Pg**	**09 29 44.3**	**-0.3**
SHAP				*e*Sg	**Sg**	**09 29 46.2**	**-0.1**
SIMA	**Simav-Kutahya**	**0.12**	**268**	PG	**Pg**	**09 29 44.9**	**-0.3**
SIMA				SG	**Sg**	**09 29 47.1**	**-0.1**
SIMA	**Simav-Kutahya**	**0.12**	**268**	*e*Pg	**Pg**	**09 29 44.9**	**-0.3**
SIMA				*e*Sg	**Sg**	**09 29 47.1**	**-0.1**
SMAA	**Simav-Kutahya**	**0.13**	**276**	PG	**Pg**	**09 29 45.3**	**+0.1**
SMAA				SG	**Sg**	**09 29 47.8**	**+0.6**
SMAA	**Simav-Kutahya**	**0.13**	**276**	*e*Pg	**Pg**	**09 29 45.3**	**+0.1**
SMAA				*e*Sg	**Sg**	**09 29 47.8**	**+0.6**
GEDZ	**Gediz**	**0.21**	**102**	PG	**Pg**	**09 29 46.7**	**+0.1**
GEDZ				SG	**Sg**	**09 29 50.1**	**+0.5**
GEDZ	**Gediz**	**0.21**	**102**	*e*Pg	**Pg**	**09 29 46.7**	**+0.1**
GEDZ				*e*Sg	**Sg**	**09 29 50.1**	**+0.5**
GDZ	**Gediz**	**0.26**	**90**	*i* P	**Pg**	**09 29 47.5**	**-0.1**
GDZ				*i* S	**Sg**	**09 29 50.9**	**-0.3**
GDZ	**Gediz**	**0.26**	**90**	P	**Pg**	**09 29 47.5**	**-0.1**
GDZ				S	**Sg**	**09 29 50.9**	**-0.3**
DEMI	**Demirci**	**0.34**	**262**	*i* P	**Pg**	**09 29 48.6**	**-0.3**
DEMI				*i* S	**Sg**	**09 29 53.6**	**+0.2**
DEMI	**Demirci**	**0.34**	**262**	P	**Pg**	**09 29 48.6**	**-0.3**
DEMI				S	**Sg**	**09 29 53.6**	**+0.2**
TVSB	**Tavsanli**	**0.44**	**34**	PG	**Pg**	**09 29 50.2**	**-0.7**
TVSB	**Tavsanli**	**0.44**	**34**	*e*Pg	**Pg**	**09 29 50.2**	**-0.7**
KULA	**Kula-Manisa**	**0.69**	**214**	PG	**Pg**	**09 29 55.3**	**-0.3**
KULA				SG	**Sg**	**09 30 04.9**	**+0.4**
KULA	**Kula-Manisa**	**0.69**	**214**	*e*Pg	**Pg**	**09 29 55.3**	**-0.3**
KULA				*e*Sg	**Sg**	**09 30 04.9**	**+0.4**
DURS	**Dursunbey**	**0.73**	**315**	*i* P	**Pg**	**09 29 55.5**	**-0.9**
DURS	**Dursunbey**	**0.73**	**315**	*i* P	**Pn**	**09 30 00.3**	**+1.3**
DURS				*i* S	**Sn**	**09 30 09.8**	**-0.6**
DURS	**Dursunbey**	**0.73**	**315**	P	**Pg**	**09 29 55.5**	**-0.9**
KUTH	**Kutahya**	**0.75**	**65**	PG	**Pg**	**09 29 56.8**	**+0.1**
KUTH	**Kutahya**	**0.75**	**65**	*e*Pg	**Pg**	**09 29 56.8**	**+0.1**
MANT	**Manisa**	**0.75**	**218**	*i* P	**Pg**	**09 29 56.3**	**-0.5**
MANT	**Manisa**	**0.75**	**218**	P	**Pg**	**09 29 56.3**	**-0.5**
KHL	**Karahalli**	**0.82**	**159**	PG	**Pg**	**09 29 58.0**	**-0.1**
KHL	**Karahalli**	**0.82**	**159**	*e*Pg	**Pg**	**09 29 58.0**	**-0.1**
BALB	**Balikesir**	**1.12**	**300**	PN	**Pn**	**09 30 04.4**	**0.0**
BALB	**Balikesir**	**1.12**	**300**	*e*Pn	**Pn**	**09 30 04.4**	**0.0**
STEP	**BALIKESIR_Sava**	**1.14**	**285**	*i* P	**Pn**	**09 30 04.9**	**+0.2**
STEP				*i* S	**Sn**	**09 30 21.0**	**+0.5**
CAVI	**Cavuskoy**	**1.24**	**26**	PN	**Pg**	**09 30 06.1**	**0.0**
CAVI	**Cavuskoy**	**1.24**	**26**	*e*Pn	**Pg**	**09 30 06.1**	**0.0**
BORA	**Eskisehir**	**1.29**	**52**	PN	**Pn**	**09 30 06.6**	**-0.1**
BORA	**Eskisehir**	**1.29**	**52**	*e*Pn	**Pn**	**09 30 06.6**	**-0.1**
MDNY	**Mudanya-Bursa**	**1.29**	**351**	PN	**Pg**	**09 30 07.3**	**+0.1**
MDNY	**Mudanya-Bursa**	**1.29**	**351**	*e*Pn	**Pg**	**09 30 07.3**	**+0.1**
KCTX	**Karacabey (Bur**	**1.32**	**333**	PN	**Pg**	**09 30 07.8**	**+0.1**
KCTX	**Karacabey (Bur**	**1.32**	**333**	*e*Pn	**Pg**	**09 30 07.8**	**+0.1**
ADVT	**Abdulvahap**	**1.42**	**19**	PN	**Pg**	**09 30 09.3**	**-0.3**
ADVT	**Abdulvahap**	**1.42**	**19**	*e*Pn	**Pg**	**09 30 09.3**	**-0.3**
GONE	**Gonen-Balikesi**	**1.48**	**311**	PN	**Pb**	**09 30 10.2**	**+0.1**
GONE	**Gonen-Balikesi**	**1.48**	**311**	*e*Pn	**Pb**	**09 30 10.2**	**+0.1**
YLV	**Yalova**	**1.49**	**7**	PN	**Pg**	**09 30 10.5**	**-0.4**
YLV	**Yalova**	**1.49**	**7**	*e*Pn	**Pg**	**09 30 10.5**	**-0.4**
AYDB	**Zeytinkoy-Aydi**	**1.50**	**221**	PN	**Pb**	**09 30 10.2**	**-0.4**
AYDB	**Zeytinkoy-Aydi**	**1.50**	**221**	*e*Pn	**Pb**	**09 30 10.2**	**-0.4**
SBT5	**Esenkoy-Cinarc**	**1.56**	**353**	PN	**Pb**	**09 30 11.1**	**-0.2**
SBT5	**Esenkoy-Cinarc**	**1.56**	**353**	*e*Pn	**Pb**	**09 30 11.1**	**-0.2**
EDC	**Edincik**	**1.60**	**322**	PN	**Pb**	**09 30 11.7**	**-0.4**
EDC	**Edincik**	**1.60**	**322**	*e*Pn	**Pb**	**09 30 11.7**	**-0.4**
GULT	**Gulveren**	**1.71**	**38**	PN	**Pn**	**09 30 13.0**	**+0.5**
GULT	**Gulveren**	**1.71**	**38**	*e*Pn	**Pn**	**09 30 13.0**	**+0.5**

KRSC 16 09:39:06.5±1.4**, 52°13N**×**159°90E, h50**^{km}±18^{km}**, ML3.7, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RUS	**Russkaya**	**0.90**	**290**	*e*P	Pn	09 39 23.1	+0.3
RUS				*e*S	Sn	09 39 34.5	-0.3
SPN	**Mys Shipunski**	**0.97**	**5**	*e*P	Pn	09 39 25.4	+1.6
SPN				*e*S	Sn	09 39 38.4	+1.9
NLC	**Nalytchevo**	**1.09**	**342**	*e*P	Pn	09 39 26.4	+1.0
NLC				*e*S	Sn	09 39 40.2	+0.8
MTVR	**Mutnovka**	**1.11**	**289**	*e*P	Pn	09 39 26.7	+0.9
MTVR				*e*S	Sn	09 39 41.4	+1.3
DALK	**Dalny**	**1.14**	**323**	*e*P	Pn	09 39 27.1	+1.1
DALK				*e*S	Sn	09 39 42.1	+1.6
PET	**Petropavlovsk**	**1.17**	**320**	*e*P	Pn	09 39 27.6	+1.1
PET				*e*S	Sn	09 39 42.2	+0.9
KDTR	**Khodutka, Kamc**	**1.17**	**255**	*e*P	Pn	09 39 27.0	+0.5
KDTR				*e*S	Sn	09 39 41.8	+0.5
ASAK	**Asacha**	**1.25**	**282**	*e*P	Pn	09 39 29.2	+1.5
ASAK				*e*S	Sn	09 39 45.8	+2.3
UGLR	**Uglovaya**	**1.26**	**329**	*e*P	Pn	09 39 29.4	+1.6
KRMR	**Karymshinskiy**	**1.29**	**304**	*e*P	Pn	09 39 29.2	+1.2
KRMR				*e*S	Sn	09 39 45.7	+1.6
SDLR	**Sedlovina**	**1.30**	**332**	*e*P	Pn	09 39 29.6	+1.2
SMAR	**Somma**	**1.31**	**330**	*e*P	Pn	09 39 31.7	+3.1
AVH	**Avacha**	**1.33**	**329**	*e*P	Pn	09 39 30.5	+1.7
AVH				*e*S	Sn	09 39 48.7	+3.2
KOK	**Koryaka**	**1.39**	**327**	*e*P	Pn	09 39 31.8	+2.2
KRX	**Arik**	**1.44**	**329**	*e*P	Pn	09 39 33.1	+2.8
APC	**Apacha**	**1.85**	**296**	*e*P	Pn	09 39 38.7	+3.0
APC				*e*S	Sn	09 40 01.4	+3.5
KII	**Karymskiy**	**1.93**	**352**	*e*P	Pn	09 39 40.3	+3.5
MIPR	**Malaya Ipel'ka**	**1.94**	**275**	*e*P	Pn	09 39 40.0	+3.1
GNL	**Ganaly**	**1.96**	**324**	*e*P	Pn	09 39 39.8	+2.4
GNL				*e*S	Sn	09 40 04.0	+3.2
PAU	**Pauzhetka**	**2.03**	**252**	*e*P	Pn	09 39 40.9	+2.7
MKZ	**Mys Kozlova**	**2.66**	**24**	*e*P	Pn	09 39 48.5	+1.7
MKZ				*e*S	Sn	09 40 20.1	+2.3
TUMR	**Tumrok**	**3.16**	**3**	*e*P	Pn	09 39 58.6	+4.8
KBTR	**Krutoberegovo**	**4.43**	**22**	*e*P	Pn	09 40 14.2	+3.2
KBTR				*e*S	Sn	09 41 03.7	+2.5

NIED ***16*** *09:43:00, 37°70N×141°90E, h32^{km}, Mw3.4 Best double couple: M$_0$1.57000×10^{14} NP1:φ$_s$298.00000°, δ66.00000°, λ164.00000°. NP2:φ$_s$35.00000°, δ75.00000°, λ25.00000°.*
JMA 16 09:43:19.0±0.1**, 37°67N**×**141°87E, h31**^{km}±2^{km}**, M3.5, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	**Kawauchi**	**0.85**	**249**	P	Pn	09 43 34.6	-0.2
JFK				*e*S	Sn	09 43 45.3	-0.9
JMM	**Marumori**	**0.88**	**283**	P	Pn	09 43 35.1	-0.1
JMM				S	Sn	09 43 46.1	-0.8
JIO	**Ouri**	**0.89**	**332**	P	Pn	09 43 35.1	-0.2
JIO				S	Sn	09 43 46.1	-1.0
ONAJ	**Iwakimizuishiy**	**1.02**	**237**	P	Pn	09 43 37.0	-0.3
ONAJ				*e*S	Sn	09 43 49.4	-1.2
JOU	**Okura**	**1.18**	**306**	P	Pb	09 43 40.2	-0.6
JOU				S	Sn	09 43 54.9	+0.5
JFT	**Otama**	**1.23**	**263**	P	Pb	09 43 41.1	-0.5
JFT				S	Sn	09 43 56.3	+0.7
JMK	**Ichinoseki**	**1.38**	**338**	P	Pn	09 43 42.4	+0.3
JYS	**Shirataka**	**1.53**	**292**	P	Pb	09 43 45.7	-1.0
JYS				*e*S	Sb	09 44 04.7	-1.0
JYK	**Kaneyama**	**1.72**	**317**	P	Pn	09 43 47.5	+0.7
JFY	**Yanaizu**	**1.74**	**262**	P	Pn	09 43 48.5	+1.4
JFY				S	Sn	09 44 09.8	+1.5
MAT	**Matsushiro**	**3.14**	**250**	P	Pn	09 44 08.4	+2.1
MAT				S	Sb	09 44 48.2	-3.7

IDC 16 09:58:00.2±48.0**, 18°55S**×**177°17W, h0**^{km}**, mb3.9**/3**, mb1 4.1**/3**, mb1mx3.5**/45**, mbtmp3.9**/3**, Error ellipse: s-maj=896.9km s-min=159.3km az=80.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.36**	**242**	P	P	10 05 31.8	+0.1
	1.5nm,0.7s,baz=95,slow=11,SNR=4.0						
WRA	**Warramunga Arr**	**45.68**	**260**	P	P	10 06 23.0	-0.2
	0.5nm,0.3s,baz=98,slow=7.5,SNR=28						
ASAR	**Alice Springs**	**45.75**	**255**	P	P	10 06 23.6	-0.2
	0.9nm,0.6s,baz=86,slow=8.3,SNR=29						

IDC ***16*** *10:07:51.2±0.9, 14°99S×173°63W, h0^{km}, mb3.6/7, mb1 4.0/8, mb1mx3.6/50, mbtmp3.6/8, ML4.0/1, Error ellipse: s-maj=45.3km s-min=18.6km az=146.0*
ISCJB ***16*** *10:07:54.0±0.8, 15°1S±0°2×173°6W±0°2, h30^{km}, mb3.6/7, Error ellipse: s-maj=40.7km s-min=14.4km az=145.5*
ISC 16 10:07:55.7±0.9**, 15°0S**±0°3×**173°4W**±0°2**, h30**^{km}**, n12, σ1^{s}90**/10**, mb3.5**/7**, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**1.93**	**56**	Pn	**Pn**	**10 08 26.8**	**+0.3**
	48nm,0.3s,baz=228,slow=12,SNR=74						
AFI				Sn	**Sn**	**10 08 46.8**	**-3.0**
	201nm,0.3s,baz=27,slow=18,SNR=33						
H11S2	**WAKE ISLAND Hy**	**38.60**	**329**	T	T	10 56 03.0	
	baz=146,slow=76,SNR=5.0						
H11S3	**WAKE ISLAND Hy**	**38.61**	**329**	T	T	10 56 06.7	
	baz=146,slow=76,SNR=6.1						
H11S1	**WAKE ISLAND Hy**	**38.62**	**329**	T	T	10 56 05.8	
	baz=146,slow=76,SNR=5.3						
WRA	**Warramunga Arr**	**49.91**	**256**	P	**P**	**10 16 45.6**	**-1.5**
	0.7nm,0.9s,baz=98,slow=5.9,SNR=13						
ASAR	**Alice Springs**	**50.21**	**252**	P	**P**	**10 16 47.9**	**-1.5**
	1.4nm,0.5s,baz=90,slow=7.6,SNR=42						
VNDA	**Vanda**	**63.78**	**186**	P	**P**	**10 18 24.4**	**0.0**
	0.6nm,0.7s,baz=356,slow=6.8,SNR=4.2						
NVAR	**Mina Array Bea**	**74.04**	**42**	P	**P**	**10 19 29.1**	**0.0**
	0.3nm,0.6s,baz=239,slow=6.2,SNR=2.6						
TXAR	**Lajitas Array**	**80.41**	**56**	P	**P**	**10 20 06.6**	**+1.7**
	0.4nm,0.9s,baz=256,slow=6.4,SNR=3.8						
PDAR	**Pinedale Array**	**81.98**	**42**	P	**P**	**10 20 15.4**	**+2.3**
	0.4nm,0.8s,baz=209,slow=4.6,SNR=4.6						
ILAR	**Eielson Array**	**82.05**	**11**	P	**P**	**10 20 13.8**	**+1.2**
	0.2nm,0.7s,baz=220,slow=6.7,SNR=3.3						
BRTR	**Keskin Array B**	**145.82**	**321**	PKPbc	**PKPdf**	**10 27 30.2**	**-1.7**
	0.7nm,0.7s,baz=62,slow=3.4,SNR=4.2						

MEX 16 10:57:06.4±0.7**, 16°05N**×**98°35W, h5**^{km}**, MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.41**	**32**	*e*P	Pg	10 57 13.5	-0.8
PNIG				*i* S	Sg	10 57 19.6	-0.1
TLIG	**Tlapa**	**1.52**	**352**	*e*P	Pn	10 57 30.7	-3.7
TLIG				*i* S	Sn	10 57 49.9	-4.8
VHO	**Vista Hermosa**	**1.86**	**56**	*e*P	Pn	10 57 35.8	-3.3
VHO				*i* S	Sn	10 57 58.8	-4.4
CAIG	**El Cayaco**	**2.09**	**299**	*i* P	Pn	10 57 37.9	-4.1
CAIG				*i* S	Sn	10 58 04.9	-3.5
HUIG	**Huatulco**	**2.18**	**97**	*e*P	Pn	10 57 40.1	-3.3
HUIG				*e*S	Sn	10 58 07.1	-3.6
MEIG	**Mezcala**	**2.23**	**327**	*i* P	Pn	10 57 40.4	-3.7
MEIG				*i* S	Sn	10 58 08.4	-3.7

CSEM ***16*** *11:06:24.6±0.7, 40°31N×44°71E, h2^{km}, ML2.0, Error ellipse: s-maj=13.3km s-min=6.0km az=151.0*
DDA ***16*** *11:06:25.9, 40°34N×44°63E, h7^{km}, Ml2.8*
ISCJB ***16*** *11:06:26.0±1.6, 40°29N±0°06×44°7E±0°1, h19^{km}±16^{km}, Error ellipse: s-maj=14.1km s-min=9.7km az=171.3*
TIF ***16*** *11:06:26.1, 40°43N×44°86E, h21^{km}±5^{km}*
ISC 16 11:06:24.9±1.9**, 40°31N**±0°05×**44°70E**±0°07**, h10**^{km}±12^{km}**, n15, σ0^{s}36**/30**, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IGDI	**IGDIR**	**0.65**	**228**	*i* P	**Pb**	**11 06 38.5**	**+0.1**
IGDI				*i* S	**Sb**	**11 06 47.7**	**+0.2**
EAK	**Akyaka**	**0.92**	**295**	*i* P	**Pg**	**11 06 42.1**	**-0.4**
EAK				*i* S	**Sb**	**11 06 55.2**	**-0.2**
EAK	**Akyaka**	**0.92**	**295**	P	**Pg**	**11 06 42.2**	**-0.4**
EAK				S	**Sb**	**11 06 55.2**	**-0.2**
DIGO	**Kars**	**1.02**	**276**	*i* P	**Pg**	**11 06 44.6**	**0.0**
DIGO				*i* S	**Sg**	**11 06 58.1**	**+0.2**
DIGO	**Kars**	**1.02**	**276**	P	**Pg**	**11 06 44.6**	**0.0**
DIGO				S	**Sg**	**11 06 58.1**	**+0.2**
BGD	**Bogdanovka**	**1.27**	**319**	P	**Pn**	**11 06 49.0**	**+0.1**
BGD				S	**Sn**	**11 07 06.5**	**+0.3**
BGD	**Bogdanovka**	**1.27**	**319**	P	**Pn**	**11 06 49.0**	**+0.1**
BGD				S	**Sn**	**11 07 06.5**	**+0.3**
TBLG	**Delisi**	**1.42**	**1**	P	**Pn**	**11 06 50.2**	**-0.6**
TBLG				S	**Sn**	**11 07 09.0**	**-0.6**
TBLG	**Delisi**	**1.42**	**1**	P	**Pn**	**11 06 50.2**	**-0.6**
TBLG				S	**Sn**	**11 07 09.0**	**-0.6**
AKH	**Akhalkalaki**	**1.43**	**321**	P	**Pn**	**11 06 51.0**	**-0.1**
AKH				S	**Sb**	**11 07 10.1**	**-0.1**
AKH	**Akhalkalaki**	**1.43**	**321**	P	**Pn**	**11 06 51.0**	**-0.1**
AKH				S	**Sb**	**11 07 10.1**	**-0.1**
SEAG	**Tbilisi Sea**	**1.46**	**3**	P	**Pn**	**11 06 51.6**	**+0.3**
SEAG				S	**Sb**	**11 07 11.3**	**+0.6**
SEAG	**Tbilisi Sea**	**1.46**	**3**	P	**Pn**	**11 06 51.6**	**+0.3**
SEAG				S	**Sb**	**11 07 11.3**	**+0.6**
DUS	**Dusheti**	**1.78**	**360**	P	**Pb**	**11 06 58.0**	**+0.3**
DUS				S	**Sb**	**11 07 20.0**	**-0.1**
DUS	**Dusheti**	**1.78**	**360**	P	**Pb**	**11 06 58.0**	**+0.3**
DUS				S	**Sb**	**11 07 20.0**	**-0.1**

ISCJB ***16*** *11:26:42.4±0.4, 9°83N±0°03×125°71E±0°05, h114^{km}±3^{km}, mb3.8/16, Error ellipse: s-maj=9.1km s-min=4.4km az=163.8*
MAN ***16*** *11:26:44.5, 9°80N×125°73E, h25^{km}, mb4.8, ML3.7, MS3.6*
IDC ***16*** *11:26:45.8±1.6, 9°73N×125°61E, h132^{km}±16^{km}, mb3.6/15, mb1 3.7/17, mb1mx3.5/55, mbtmp4.0/17, MS2.6/1, Ms1 2.6/1, ms1mx2.2/37, Error ellipse: s-maj=23.9km s-min=11.4km az=68.0*
ISC 16 11:26:42.4±0.6**, 9°85N**±0°03×**125°70E**±0°05**, h96**^{km}±5^{km}**, n39, σ2^{s}52**/55**, mb3.9**/16**, 7C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	**Surigao**	**0.21**	**251**	⇓*i*P	**Pn**	**11 26 56.5**	**+0.4**
SCPH				*i* S	**Sn**	**11 27 06.6**	**+0.3**
MSLP	**Maasin**	**0.87**	**289**	*e*P	**Pn**	**11 27 01.9**	**+0.9**
MSLP				*e*S	**Sn**	**11 27 18.1**	**+3.0**
BUTP	**Butuan**	**0.88**	**185**	*e*P	**Pn**	**11 27 02.4**	**+1.2**
BUTP				*e*S	**Sn**	**11 27 18.4**	**+3.2**
PLP	**Palo**	**1.48**	**332**	⇑*i*P	**Pn**	**11 27 09.6**	**+1.4**
PLP				*i* S	**Sn**	**11 27 31.9**	**+4.2**
OCLP	**Ormoc**	**1.60**	**318**	*e*P	**Pn**	**11 27 11.3**	**+1.6**
OCLP				*e*S	**Sn**	**11 27 33.3**	**+2.9**
CGP	**Cagayan de Oro**	**1.70**	**216**	⇑*e*P	**Pn**	**11 27 12.1**	**+1.1**
CGP				*i* S	**Sn**	**11 27 33.4**	**+0.7**
BESP	**Borongan**	**1.76**	**352**	*e*P	**Pn**	**11 27 12.4**	**+0.8**
BESP				*e*S	**Sn**	**11 27 41.0**	**+7.1**
LLP	**Lapu-Lapu**	**1.77**	**285**	⇑*i*P	**Pn**	**11 27 13.9**	**+2.2**
LLP				*i* S	**Sn**	**11 27 37.4**	**+3.2**
BIPH	**Bislig**	**1.78**	**158**	⇑*e*P	**Pn**	**11 27 12.6**	**+0.6**
BIPH				*i* S	**Sn**	**11 27 36.2**	**+1.7**
TBP	**Tagbilaran**	**1.81**	**265**	⇑*e*P	**Pn**	**11 27 16.2**	**+3.9**
TBP				*e*S	**Sn**	**11 27 40.0**	**+4.7**
BUKP	**Musuan**	**2.06**	**198**	*e*P	**Pn**	**11 27 17.2**	**+1.6**
BUKP				*e*S	**Sn**	**11 27 43.5**	**+2.6**
DCPH	**Dipolog City**	**2.63**	**242**	⇑*e*P	**Pn**	**11 27 25.4**	**+2.3**
DAV	**Davao City (W)**	**2.77**	**182**	P	**Pn**	**11 27 28.5**	**+3.6**
	44nm,0.3s,baz=63,slow=6.8,SNR=3.3						
DAV				S	**Sn**	**11 28 00.3**	**+2.6**
	117nm,0.3s,baz=318,slow=20,SNR=3.6						
CNP	**Catarman**	**2.83**	**339**	*e*P	**Pn**	**11 27 26.7**	**+1.0**
CNP				*e*S	**Sn**	**11 27 58.6**	**-0.6**
MATI	**Mati**	**2.94**	**169**	*e*P	**Pn**	**11 27 28.8**	**+1.6**
MATI				*e*S	**Sn**	**11 28 07.6**	**+5.8**
PAGZ	**Pagadian**	**3.03**	**229**	*e*P	**Pn**	**11 27 29.1**	**+0.6**
PAGZ				*e*S	**Sn**	**11 28 03.3**	**-0.7**
GUIM	**Jordan**	**3.15**	**284**	*e*P	**Pn**	**11 27 30.4**	**+0.3**
GUIM				*e*S	**Sn**	**11 28 03.4**	**-3.5**
RCP	**Roxas**	**3.36**	**301**	⇑*e*P	**Pn**	**11 27 36.0**	**+3.2**
JOW	**Kunigami**	**17.07**	**8**	P	**P**	**11 30 37.9**	**+2.6**
	1.0nm,0.3s,baz=170,slow=12,SNR=6.8						
JOW				LR	LR	11 36 58.1	
	comp=Z,22nm,20.0s,baz=288,slow=36						
CMAR	**Chiang Mai Arr**	**27.28**	**291**	P	**P**	**11 32 19.6**	**+1.4**
	1.0nm,0.4s,baz=97,slow=6.9,SNR=7.3						
WRA	**Warramunga Arr**	**30.80**	**164**	P	**P**	**11 32 48.2**	**-1.1**
	0.5nm,0.5s,baz=344,slow=8.5,SNR=3.1						
ASAR	**Alice Springs**	**34.27**	**167**	P	**P**	**11 33 17.7**	**-1.8**
	0.8nm,0.3s,baz=349,slow=7.4,SNR=4.7						
USRK	**Ussuriysk Ar.**	**34.65**	**8**	P	**P**	**11 33 23.8**	**+1.3**
	1.6nm,0.6s,baz=208,slow=8.1						
KLR	**Kul'dur**	**39.58**	**6**	P	**P**	**11 34 04.4**	**+0.3**
	0.1nm,0.4s,baz=194,slow=4.2,SNR=4.3						
H11N1	**WAKE ISLAND Hy**	**40.92**	**71**	T	T	12 17 56.8	
	baz=265,slow=74,SNR=26						
H11N2	**WAKE ISLAND Hy**	**40.93**	**71**	T	T	12 17 54.2	
	baz=265,slow=74,SNR=13						
H11N3	**WAKE ISLAND Hy**	**40.94**	**71**	T	T	12 17 58.1	
	baz=265,slow=74,SNR=20						
SONM	**Songino Array**	**41.22**	**340**	P	**P**	**11 34 20.1**	**+2.3**
	0.4nm,0.4s,baz=157,slow=7.8,SNR=2.9						
STKA	**Stephens Creek**	**44.19**	**160**	P	**P**	**11 34 41.9**	**-0.1**
	1.1nm,0.3s,baz=336,slow=10,SNR=22						
DZM	**Mont Dzumac**	**51.02**	**129**	P	**P**	**11 35 35.8**	**+0.7**
	3.5nm,0.6s,baz=258,slow=16,SNR=7.2						
MKAR	**Makanchi Array**	**52.02**	**323**	P	**P**	**11 35 42.0**	**-0.1**
	0.3nm,0.3s,baz=127,slow=8.6,SNR=6.3						
MKAR				pP	**pP**	**11 36 00.7**	**-4.7**
	0.4nm,0.7s,baz=121,slow=7.7,SNR=2.6						
KURBB	**Kurchatov Arra**	**56.10**	**326**	P	**P**	**11 36 09.9**	**-1.8**
	0.5nm,0.4s,baz=129,slow=6.5,SNR=7.2						
KURBB				pP	**pP**	**11 36 34.1**	**-1.0**
	0.8nm,0.6s,baz=127,slow=6.6,SNR=4.9						
AKTO	**Aktyubinsk**	**68.28**	**320**	P	**P**	**11 37 32.8**	**-0.3**
	0.7nm,0.5s,baz=97,slow=8.1,SNR=3.2						
ILAR	**Eielson Array**	**80.06**	**26**	P	**P**	**11 38 40.5**	**-0.7**
	0.2nm,0.5s,baz=249,slow=4.6,SNR=3.3						
ILAR				pP	**pP**	**11 39 02.6**	**-3.6**
	0.3nm,0.8s,baz=244,slow=5.3,SNR=3.6						
ARCES	**ARCESS Array B**	**84.39**	**340**	P	**P**	**11 39 03.2**	**-0.6**
	1.3nm,0.5s,baz=81,slow=6.5,SNR=22						
BRTR	**Keskin Array B**	**85.36**	**309**	P	**P**	**11 39 08.6**	**-0.8**
	0.4nm,0.5s,baz=104,slow=6.1,SNR=2.9						
FINES	**FINESS Array B**	**85.99**	**332**	P	**P**	**11 39 10.8**	**-1.0**
	1.5nm,0.4s,baz=59,slow=4.5,SNR=15						
HFS	**Hagfors**	**92.16**	**332**	P	**P**	**11 39 39.7**	**-1.4**
	1.2nm,0.7s,baz=106,slow=4.8,SNR=3.8						
TORD	**Torodi Ar. Bea**	**119.89**	**291**	PKP	**PKPdf**	**11 45 20.4**	**-2.2**
	0.3nm,0.4s,baz=51,slow=1.8						

JMA 16 11:31:46.3±0.8**, 45°49N**×**152°02E, h30**^{km}**, M3.8, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**4.97**	**247**	P	Pn	11 32 57.9	-0.9
NEM2				*e*S	Sn	11 33 51.6	-3.7
JRA	**Rausu**	**5.16**	**255**	P	Pn	11 33 03.4	+2.0
JNK	**Nakash**	**5.55**	**253**	P	Pn	11 33 07.4	+0.5
JNK				*e*S	Sn	11 34 08.8	-0.9
JAK	**Akkeshi**	**5.82**	**247**	P	Pn	11 33 09.7	-0.8
JAK				*e*S	Sn	11 34 11.4	-4.8
JTKR	**Abashiri--Toko**	**5.97**	**258**	P	Pn	11 33 14.9	+2.3
JAR	**Ashorobuto**	**6.30**	**253**	P	Pn	11 33 18.4	+1.2
JAR				*e*S	Sn	11 34 27.1	-1.0
JMP	**Maruseppu**	**6.34**	**260**	P	Pn	11 33 20.4	+2.7
JOB	**Onbets**	**6.43**	**249**	P	Pn	11 33 18.8	0.0
JOB				*e*S	Sn	11 34 28.6	-2.5
JKK2	**Kamakawa 2**	**6.80**	**260**	P	Pn	11 33 27.2	+3.2
JCH	**Churui**	**6.87**	**248**	P	Pn	11 33 25.0	+0.1
JCH				*e*S	Sn	11 34 37.8	-4.2
JNBK	**Urakawa-nobuka**	**7.42**	**248**	P	Pn	11 33 32.0	-0.5
JBT2	**Biratori 2**	**7.46**	**252**	P	Pn	11 33 33.3	+0.3
JNB	**Noboribetsu**	**8.47**	**253**	P	Pn	11 33 48.4	+1.5
JKB	**Kayabe**	**8.74**	**250**	P	Pn	11 33 50.2	-0.3

NIED ***16*** *12:22:00, 24°30N×125°20E, h47^{km}, Mw4.1 Best double couple: M$_0$1.42000×10^{15} NP1:φ$_s$276.00000°, δ36.00000°, λ150.00000°. NP2:φ$_s$31.00000°, δ73.00000°, λ58.00000°.*
IDC ***16*** *12:22:19.6±3.5, 24°36N×125°11E, h0^{km}, mb3.9/10, mb1 3.9/13, mb1mx3.7/64, mbtmp3.9/13, ML3.3/3, MS3.0/6, Ms1 3.1/6, ms1mx2.8/55, Error ellipse: s-maj=76.3km s-min=24.1km az=169.0*
JMA ***16*** *12:22:23.9±0.2, 24°31N×125°24E, h37^{km}, M3.6*
NEIC ***16*** *12:22:24.4±0.9, 24°29N×125°21E, h39^{km}±5^{km}, mb4.1/1, Error ellipse: s-maj=17.6km s-min=5.0km az=150.0*
ISC 16 12:22:21.3±1.5**, 24°28N**±0°07×**125°32E**±0°05**, h17**^{km}±8^{km}**, n46, σ1^{s}02**/56**, mb4.0**/11**, MS3.0**/4**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOGS	**Gusukube**	**0.48**	**9**	P	**Pn**	**12 22 34.0**	**+0.6**
JOGS				S	**Sn**	**12 22 41.9**	**+0.4**
JMJ	**Miyako jima 2**	**0.53**	**357**	P	**Pn**	**12 22 34.4**	**+0.3**
JMJ				S	**Sn**	**12 22 42.5**	**-0.2**
JIRB	**Irabujima**	**0.56**	**346**	P	**Pn**	**12 22 34.4**	**-0.1**
JIRB				*e*S	**Sn**	**12 22 42.0**	**-1.4**
JIKM	**Ikemajima**	**0.64**	**354**	P	**Pn**	**12 22 35.9**	**+0.3**
JIKM				S	**Sn**	**12 22 44.9**	**-0.5**
JTJ	**Tarama**	**0.67**	**302**	P	**Pn**	**12 22 35.6**	**-0.4**
JTJ				*e*S	**Sg**	**12 22 43.6**	**+0.2**
JISG	**Ishigakijimahi**	**0.97**	**288**	P	**Pg**	**12 22 39.8**	**-0.3**
JISG				*e*S	**Sn**	**12 22 53.3**	**-0.3**
JIJ	**Ishigaki jima**	**1.08**	**275**	P	**Pn**	**12 22 41.8**	**+0.1**
JIJ				*e*S	**Sn**	**12 22 55.7**	**-0.6**
JKRS	**Kuro-shima**	**1.20**	**268**	P	**Pg**	**12 22 44.6**	**+0.1**
JKRS				*e*S	**Sg**	**12 23 00.5**	**+0.3**
HATJ	**Hateruma jima**	**1.41**	**261**	P	**Pb**	**12 22 46.8**	**-0.3**
HATJ				*e*S	**Sb**	**12 23 04.4**	**-0.3**
IRIF	**Iriomote-Funau**	**1.46**	**272**	P	**Pg**	**12 22 49.7**	**+0.4**
IRIF				*e*S	**Sg**	**12 23 09.7**	**+1.4**
YOJ	**Yonaguni jima**	**2.12**	**275**	*e*Pn	**Pn**	**12 22 57.1**	**+1.2**
NACB	**Ninganchiao**	**3.41**	**269**	*e*Pn	**Pn**	**12 23 13.8**	**+0.1**
YHNB	**Yeheng**	**3.62**	**277**	*e*Pn	**Pn**	**12 23 18.1**	**+1.5**
JOW	**Kunigami**	**3.68**	**46**	Pn	**Pn**	**12 23 19.4**	**+1.9**
	3.8nm,0.3s,baz=120,slow=21,SNR=16						
JOW				Sn	**Sg**	**12 24 16.9**	**-2.6**
	5.1nm,0.3s,baz=158,slow=19,SNR=2.8						
JOW	**Kunigami**	**3.68**	**46**	*e*Pn	**Pn**	**12 23 20.0**	**+2.6**
JOW				Sn	**Sg**	**12 24 16.9**	**-2.6**
YULB	**Yu-li**	**3.79**	**257**	*e*Pn	**Pn**	**12 23 18.3**	**-0.7**
SSLB	**Suanglung**	**4.03**	**264**	*e*Pn	**Pn**	**12 23 22.5**	**+0.2**
TWG	**Pinlang**	**4.16**	**250**	*e*Pn	**Pn**	**12 23 22.5**	**-1.6**
TPUB	**Ta-pu**	**4.41**	**258**	*e*Pn	**Pn**	**12 23 27.3**	**-0.2**
KS15	**Wonju Array Si**	**13.30**	**9**	*e*Pn	**Pn**	**12 25 30.6**	**+1.4**
KSAR	**Wonju Array Be**	**13.30**	**9**	Pn	**Pn**	**12 25 30.6**	**+1.4**
KSRS	**Korea Array**	**13.32**	**9**	Pn	**Pn**	**12 25 30.6**	**+1.1**
	0.1nm,0.3s,baz=196,slow=12,SNR=2.8						
KSRS				LR	LR	12 29 57.5	
	comp=Z,67nm,21.7s,baz=170,slow=35						
MAJO	**Matsushiro**	**16.50**	**39**	*e*Pn	**P**	**12 26 13.7**	**-0.8**
MJAR	**Matsushiro Arr**	**16.50**	**39**	Pn	**P**	**12 26 13.7**	**-0.8**
	0.1nm,0.3s,baz=229,slow=12,SNR=4.1						
MJAR				LR	LR	12 32 32.4	
	comp=Z,21nm,20.3s,baz=260,slow=37						
USRK	**Ussuriysk Ar.**	**20.60**	**14**	LR	LR	12 35 18.4	
	comp=Z,60nm,19.5s,baz=212,slow=38						
ASAJ	**Asahikawa**	**24.31**	**31**	P	**P**	**12 27 38.0**	**+0.1**
	0.9nm,0.4s,baz=238,slow=9.5,SNR=4.3						
ASAJ				LR	LR	12 37 53.7	
	comp=Z,44nm,18.8s,baz=208,slow=38						
CMAR	**Chiang Mai Arr**	**25.22**	**262**	LR	LR	12 37 11.9	
	comp=Z,27nm,18.7s,baz=220,slow=36						
SONA0	**Songino Array**	**27.90**	**332**	*e*P	**P**	**12 28 09.4**	**-1.0**

SONM	Songino Array	27.90	332	P	P	12 28 09.4	-1.0
	0.3nm,0.3s,baz=166,slow=8.9,SNR=3.3						
SONM				LR	LR	12 40 44.6	
	comp=Z,75nm,20.0s,baz=123,slow=40						
MK01	Makanchi Array	40.92	314	eP	P	12 30 02.6	-0.2
MK31	Makanchi Array	40.94	314	eP	P	12 30 02.1	-0.8
MK32	Makanchi Array	40.94	314	eP	P	12 30 02.5	-0.4
MKAR	Makanchi Array	40.94	314	P	P	12 30 02.5	-0.4
	1.7nm,0.3s,baz=98,slow=9.6,SNR=36						
MKAR	Makanchi Array	40.94	314	eP	P	12 30 02.1	-0.8
	14nm,0.6s						
MAKZ	Makanchi	41.15	314	eP	P	12 30 04.7	+0.1
	4.4nm,1.1s						
ZALV	Zalesovo Beam	42.27	325	P	P	12 30 12.4	-1.3
	1.7nm,0.4s,baz=116,slow=9.2,SNR=6.9						
ZAA1	Zalesovo Array	42.27	325	eP	P	12 30 12.4	-1.3
KURK	Kurchatov	44.48	319	eP	P	12 30 31.2	-0.4
KURBB	Kurchatov Arra	44.50	319	P	P	12 30 31.2	-0.6
	0.6nm,0.4s,baz=105,slow=30,SNR=12						
BVAR	Borovoye Array	50.02	320	P	P	12 31 14.3	-0.4
	1.0nm,0.6s,baz=99,slow=10,SNR=3.3						
ILAR	Eielson Array	67.38	28	P	P	12 33 17.1	+1.7
	0.2nm,0.5s,baz=276,slow=5.2,SNR=5.9						
ARA0	ARCESS Array S	70.85	338	eP	P	12 33 37.1	+0.3
ARCES	ARCESS Array B	70.85	338	P	P	12 33 37.1	+0.3
	1.2nm,0.9s,baz=92,slow=9.4,SNR=3.5						
FIA0	FINESS Array S	73.25	330	eP	P	12 33 51.5	+0.2
FINES	FINESS Array B	73.25	330	P	P	12 33 51.5	+0.2
	2.3nm,0.6s,baz=71,slow=6.5,SNR=8.9						
AKASG	Malin Array Be	75.29	319	P	P	12 34 03.2	-0.2
	0.4nm,0.4s,baz=71,slow=6.2,SNR=4.1						

IDC ***16*** *12:25:32.2±1.0, 2°.02S×138°.82E, h0^{km}, mb3.7/5, mb1 4.0/6, mb1mx3.7/46, mbtmp3.8/6, ML4.1/1, MS3.3/6, Ms1 3.3/6, ms1mx3.0/47, Error ellipse: s-maj=48.8km s-min=14.0km az=93.0*

ISCJB ***16*** *12:25:34.6±1.0, 2°.1S±0°.1×139°.1E±0°.4, h29^{km}, mb3.6/6, MS3.3/5, Error ellipse: s-maj=52.0km s-min=14.9km az=179.4*

ISC 16 12:25:36.4±1.0**, 2°.0S**±0°.1×**139°.2E**±0°.3**, h29**^{km}**, n13,** σ**1^s.37**/9**, mb3.7**/6**, MS3.3**/5**, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	10.83	133	LR	LR	12 33 07.3	
	comp=Z,155nm,21.9s,baz=266,slow=41						
WRA	Warramunga Arr	18.43	194	P	P	12 29 48.7	-1.0
	0.6nm,0.3s,baz=18,slow=13,SNR=25						
WRA				S	Sn	12 33 03.0	-12
	0.1nm,0.3s,baz=9.9,slow=22,SNR=4.3						
ASAR	Alice Springs	22.12	193	P	P	12 30 29.4	-0.3
	4.3nm,0.6s,baz=25,slow=11,SNR=28						
ASAR				S	S	12 34 33.3	+1.1
	0.7nm,1.0s,baz=7.3,slow=15,SNR=3.9						
ASAR				LR	LR	12 39 43.6	
	comp=Z,209nm,18.2s,baz=5.5,slow=39						
STKA	Stephens Creek	29.79	176	P	P	12 31 40.7	-0.2
	2.8nm,0.8s,baz=356,slow=10,SNR=5.7						
JOW	Kunigami	30.54	341	LR	LR	12 41 44.5	
	comp=Z,38nm,19.8s,baz=225,slow=32						
DZM	Mont Dzumac	33.18	129	LR	LR	12 45 27.7	
	comp=Z,59nm,19.2s,baz=252,slow=36						
KSRS	Korea Array	40.63	346	LR	LR	12 50 22.5	
	comp=Z,17nm,18.1s,baz=225,slow=37						
SONM	Songino Array	57.29	334	LR	LR	13 00 48.0	
	comp=Z,29nm,19.0s,baz=248,slow=37						
MKAR	Makanchi Array	69.52	322	P	P	12 36 41.2	-1.3
	0.2nm,0.5s,baz=133,slow=7.1,SNR=2.7						
KURBB	Kurchatov Arra	73.42	325	P	P	12 37 05.9	0.0
	0.1nm,0.3s,baz=108,slow=5.7,SNR=2.4						
BVAR	Borovoye Array	79.00	325	P	P	12 37 40.3	+2.6
	0.6nm,0.6s,baz=92,slow=7.2,SNR=2.5						
ILAR	Eielson Array	85.02	24	P	P	12 38 08.8	-0.2
	0.5nm,1.0s,baz=258,slow=2.6,SNR=3.5						
LPAZ	La Paz	147.48	125	PKPbc	PKPab	12 45 21.9	+0.3
	1.4nm,1.0s,baz=235,slow=5.3,SNR=4.7						

IDC 16 12:32:01.9±4.9**, 16°.20S**×**176°.05W, h0**^{km}**, mb4.2**/3**, mb1 4.4**/3**, mb1mx3.6**/44**, mbtmp4.2**/3**, Error ellipse: s-maj=161.1km s-min=96.4km az=153.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	41.43	240	P	P	12 39 51.2	+0.7
	1.1nm,0.3s,baz=85,slow=6.8,SNR=10						
WRA	Warramunga Arr	47.18	258	P	P	12 40 36.1	-0.7
	0.4nm,0.4s,baz=96,slow=8.0,SNR=32						
ASAR	Alice Springs	47.44	253	P	P	12 40 38.4	-0.4
	4.5nm,0.4s,baz=89,slow=7.8,SNR=165						
ASAR				PcP	PcP	12 42 09.2	-0.2
	0.4nm,0.4s,baz=106,slow=3.9,SNR=5.5						

IDC 16 12:39:15.5±19.0**, 7°.37S**×**130°.47E, h170**^{km}±220^{km}**, mb3.3**/2**, mb1 3.4**/4**, mb1mx3.1**/50**, mbtmp3.8**/4**, ML3.9**/2**, Error ellipse: s-maj=130.8km s-min=106.4km az=81.0, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.06	164	P	Pn	12 42 12.9	-1.8
	0.9nm,0.3s,baz=347,slow=13,SNR=25						
WRA				S	Sn	12 44 33.7	-6.1
	1.3nm,0.3s,baz=337,slow=23,SNR=12						
ASAR	Alice Springs	16.54	169	P	Pn	12 42 59.2	+1.3
	0.3nm,0.3s,baz=337,slow=9.9,SNR=18						
ASAR				S	S	12 45 56.0	-4.9
	0.3nm,0.3s,baz=358,slow=23,SNR=6.0						
MKAR	Makanchi Array	68.78	327	P	P	12 50 01.4	+0.2
	0.5nm,0.5s,baz=120,slow=8.5,SNR=9.5						
KURBB	Kurchatov Arra	73.06	328	P	P	12 50 26.4	-0.4
	0.2nm,0.3s,baz=123,slow=5.1,SNR=3.2						

JMA ***16*** *12:41:12.0±0.2, 43°.86N×147°.76E, h1^{km}, M3.5*

SKHL ***16*** *12:41:13.4±0.9, 44°.24N×147°.96E, h42^{km}±8^{km}, mb4.0/6*

ISC 16 12:41:10.7±3.3**, 44°.20N**±0°.10×**148°.1E**±0°.1**, h25**^{km}±20^{km}**, n16,** σ**1^s.31**/29**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	Shikotan	0.95	250	iP	Pn	12 41 29.0	+0.6
SHO				AMB	AMB	12 41 29.0	
	29nm,0.3s						
SHO				AMB	AMB	12 41 29.0	
	33nm,0.3s						
SHO				AMB	AMB	12 41 29.0	
	64nm,0.3s						
SHO				iS	Sb	12 41 40.0	-0.6
SHO				A	A	12 41 40.0	
	310nm,0.2s						
SHO				A	A	12 41 40.0	
	326nm,0.2s						
KUR	Kuril'sk	1.05	352	iP	Pn	12 41 30.0	+0.2
KUR				AMB	AMB	12 41 31.0	
	23nm,0.2s						
KUR				AMB	AMB	12 41 31.0	
	17nm,0.2s						
KUR				AMB	AMB	12 41 31.0	
	32nm,0.2s						
KUR				eS	Sb	12 41 43.0	-0.5
KUR				A	A	12 41 48.0	
	331nm,0.2s						
KUR				A	A	12 41 48.0	
	213nm,0.2s						
YUK	Yuzh-Kuril'sk	1.60	265	iP	Pn	12 41 37.7	+0.4
YUK				AMB	AMB	12 41 40.0	
	20nm,0.2s						
YUK				AMB	AMB	12 41 40.0	
	23nm,0.2s						
YUK				AMB	AMB	12 41 40.0	
	74nm,0.2s						
YUK				iS	Sn	12 41 55.4	-1.7
YUK				A	A	12 42 02.0	
	49nm,0.2s						
YUK				A	A	12 42 02.0	
	291nm,0.2s						
LAGR	Lagunnoye	1.65	266	eP	Pn	12 41 38.0	0.0
LAGR				AMB	AMB	12 41 40.0	
	26nm,0.5s						
LAGR				AMB	AMB	12 41 40.0	
	25nm,0.5s						
LAGR				AMB	AMB	12 41 40.0	
	63nm,0.5s						
LAGR				eS	Sn	12 41 57.0	-1.4
LAGR				A	A	12 42 04.0	
	188nm,0.3s						
LAGR				A	A	12 42 04.0	
	325nm,0.3s						
GRPR	Tuman	1.67	264	eP	Pn	12 41 38.0	-0.3
GRPR				AMB	AMB	12 41 43.0	
	89nm,0.3s						
GRPR				iS	Sn	12 41 57.0	-1.9
GRPR				A	A	12 42 04.0	
	383nm,0.3s						
GRPR				A	A	12 42 04.0	
	154nm,0.3s						
NEM2	Nemuro 2	1.88	245	P	Pn	12 41 40.9	-0.3
NEM2				eS	Sn	12 42 01.7	-2.3
GLVR	Golovnino	1.90	257	eP	Pn	12 41 42.6	+1.2
GLVR				AMB	AMB	12 41 43.0	
	51nm,0.5s						
GLVR				AMB	AMB	12 41 43.0	
	27nm,0.5s						
GLVR				AMB	AMB	12 41 43.0	
	88nm,0.5s						
GLVR				eS	Sn	12 42 04.3	-0.2
GLVR				A	A	12 42 12.0	
	214nm,0.2s						
GLVR				A	A	12 42 12.0	
	353nm,0.2s						
JRA	Rausu	2.14	264	P	Pn	12 41 46.4	+1.6
JRA				eS	Sn	12 42 10.9	+0.4
JNK	Nakash	2.50	257	P	Pn	12 41 50.5	+0.8
JNK				eS	Sn	12 42 18.9	-0.5
JAK	Akkeshi	2.73	245	P	Pn	12 41 53.1	+0.3
JAK				eS	Sn	12 42 23.0	-2.0
JTKR	Abashiri--Toko	3.01	267	P	Pn	12 41 58.7	+2.0
JAR	Ashorobuto	3.24	255	P	Pn	12 42 01.9	+2.0
JAR				eS	Sn	12 42 38.7	+1.0
JOB	Onbets	3.34	249	P	Pn	12 42 02.3	+1.1
JOB				eS	Sn	12 42 39.3	-0.8
JMP	Maruseppu	3.40	268	P	Pn	12 42 04.0	+1.9
JCH	Churui	3.78	247	P	Pn	12 42 08.8	+1.5
JNBK	Urakawa-nobuka	4.33	246	P	Pn	12 42 16.3	+1.4
JNBK				eS	Sn	12 43 04.7	+0.2

IDC ***16*** *12:55:09.4±1.1, 6°.57S×105°.18E, h0^{km}, mb4.2/14, mb1 4.2/14, mb1mx4.0/57, mbtmp4.2/14, MS3.4/1, Ms1 3.4/1, ms1mx2.6/57, Error ellipse: s-maj=40.2km s-min=15.1km az=52.0*

ISCJB ***16*** *12:55:15.5±0.8, 6°.86S±0°.08×105°.07E±0°.05, h75^{km}±5^{km}, mb4.1/19, Error ellipse: s-maj=15.0km s-min=4.3km az=32.5*

DJA ***16*** *12:55:15.6±0.6, 7°S±3°×10°5E±°, h14^{km}±4^{km}, M4.6/15, mB5.5/1, mb4.7/4, MLv4.6/15, Mw(mB)5.0/1*

NEIC ***16*** *12:55:17.4±0.8, 6°.63S×105°.19E, h64^{km}±5^{km}, mb4.4/8, Error ellipse: s-maj=14.6km s-min=4.9km az=217.0*

ISC 16 12:55:15.6±1.3**, 6°.85S**±0°.09×**105°.08E**±0°.07**, h53**^{km}±10^{km}**, n76,** σ**1^s.34**/80**, mb4.2**/19**, Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CGJI	Cibinong	0.65	69	P	Pn	12 55 28.5	-0.4
CGJI				S	Sn	12 55 37.3	-1.2
SBJI	Serang	1.27	55	P	Pn	12 55 37.9	+0.9
KASI	Kota Agung	1.44	336	P	Pn	12 55 41.0	+1.6
SKJI	Sukabumi	1.47	96	P	Pn	12 55 40.4	+0.6
SKJI				S	Sn	12 56 00.4	+2.4
BLSI	Bandar Lampung	1.48	6	P	Pn	12 55 41.5	+1.6
DBJI	Dramaga	1.68	80	P	Pn	12 55 43.9	+1.2
TNG	Tangerang	1.69	67	P	Pn	12 55 44.5	+1.7
TNG				S	Sn	12 56 05.9	+2.5
KLI	Kotabumi	1.99	354	P	Pn	12 55 49.5	+2.7
KLI				S	Sn	12 56 14.3	+3.8
KLI				Sg		12 56 21.0	
LWLI	Liwa	2.09	331	P	Pn	12 55 50.9	+2.6
MDSI	Maura Dua	2.52	339	P	Pn	12 55 56.5	+2.5
LEM	Lembang	2.52	90	P	Pn	12 55 55.9	+1.7
CISI	Cisompet, Garu	2.80	105	P	Pn	12 55 58.4	+0.4
CISI	Cisompet, Garu	2.80	105	ePn	Pn	12 55 58.1	+0.1
CISI				eSn	Sn	12 56 29.1	-1.6
MNAI	Manna	3.25	319	P	Pn	12 56 06.1	+1.9
MNAI	Manna	3.25	319	ePn	Pn	12 56 06.1	+1.9
MNAI				eSn	Sn	12 56 42.1	+0.4
CMJI	Cimerak	3.47	106	P	Pn	12 56 08.3	+1.2
KPJI	Karang Pucung	3.85	97	P	Pn	12 56 13.8	+1.5
MASI	Maura Aman, Be	4.65	322	P	Pn	12 56 25.9	+2.6
UGM	Wanagama	5.50	101	P	Pn	12 56 36.3	+1.3
UGM	Wanagama	5.50	101	ePn	Pn	12 56 37.5	+2.5
PCJI	Pacitan	6.19	103	P	Pn	12 56 46.7	+2.3
PPSI	Pulau Pagai	6.48	309	P	Pn	12 56 49.1	+0.6
SISI	Saibi	8.11	312	P	Pn	12 57 10.3	-0.5
GMJI	Gumukmas	8.41	100	P	Pn	12 57 16.4	+1.5
JAGI	Jajag, Banyuwa	9.13	101	P	Pn	12 57 26.2	+1.4
JAGI	Jajag, Banyuwa	9.13	101	ePn	Pn	12 57 26.3	+1.4
JAGI				eSn	Sn	12 59 06.2	-0.1
GSI	Gunungsitoli	11.03	317	ePn	Pn	12 57 48.8	-2.1
PSI	Prapat	11.39	327	ePn	Pn	12 57 55.7	-0.1
SBUM	Sibu	11.67	38	ePn	Pn	12 57 57.8	-1.7
LHMI	Lhok Sumawe	14.49	326	ePn	Pn	12 58 37.2	-0.5
SOEI	Soe	19.20	100	eP	P	12 59 35.3	-0.1
	38nm,0.8s						
SOEI				eS	Sn	13 03 09.9	-1.6
TNTI	Ternate	23.49	72	eP	P	13 00 20.4	-0.6
	33nm,0.9s						
CMAR	Chiang Mai Arr	25.87	347	P	P	13 00 43.1	+0.6
	0.7nm,0.6s,baz=167,slow=12,SNR=4.1						
MTN	Manton Dam	26.34	105	eP	P	13 00 46.6	-0.3
	22nm,0.4s						
H01W3	Cape Leeuwin H	29.12	165	T	T	13 31 33.3	
	baz=344,slow=76,SNR=238						
H01W1	Cape Leeuwin H	29.13	165	T	T	13 31 38.3	
	baz=344,slow=76,SNR=191						
H01W2	Cape Leeuwin H	29.13	165	T	T	13 31 34.4	
	baz=344,slow=76,SNR=238						
WRA	Warramunga Arr	31.22	118	P	P	13 01 31.0	+0.6
	1.4nm,0.7s,baz=290,slow=9.9,SNR=44						
WR1	Warramunga Arr	31.23	118	eP	P	13 01 31.0	+0.6
	4.4nm,0.9s						
H08S2	Diego Garcia H	32.33	267	T	T	13 36 03.1	
	baz=91,slow=75,SNR=25						
ASAR	Alice Springs	32.34	124	P	P	13 01 41.0	+0.9
	0.3nm,0.3s,baz=298,slow=7.7,SNR=10						
ASAR				PcP	PcP	13 04 28.4	+1.3
	0.7nm,0.8s,baz=302,slow=2.4,SNR=4.1						
ASAR				LR	LR	13 15 01.8	
	comp=Z,59nm,20.1s,baz=310,slow=37						
H08S3	Diego Garcia H	32.34	267	T	T	13 36 05.8	
	baz=91,slow=75,SNR=77						
H08S1	Diego Carcia H	32.35	267	T	T	13 35 56.8	
	baz=91,slow=75,SNR=12						
PMG	Port Moresby	41.72	96	P	P	13 03 00.5	+0.7
	22nm,0.8s,baz=293,slow=7.7,SNR=4.7						
STKA	Stephens Creek	42.16	131	P	P	13 03 05.2	+2.0
	4.7nm,0.4s,baz=312,slow=7.8,SNR=29						
STKA	Stephens Creek	42.16	131	eP	P	13 03 05.2	+2.0
	2.6nm,1.1s						
KSAR	Wonju Array Be	48.94	24	P	P	13 03 56.8	+0.2
KSRS	Korea Array	48.97	24	P	P	13 03 56.7	0.0
	0.4nm,0.3s,baz=219,slow=7.3,SNR=4.2						
SONA0	Songino Array	54.46	1	eP	P	13 04 36.4	-1.4
SONA0				ePcP	PcP	13 05 41.4	+0.7
SONM	Songino Array	54.46	1	P	P	13 04 36.4	-1.4
	0.6nm,0.4s,baz=183,slow=12,SNR=3.9						
SONM				PcP	PcP	13 05 41.4	+0.7
	0.5nm,0.4s,baz=189,slow=4.6,SNR=4.0						
USRK	Ussuriysk Ar.	56.32	23	P	P	13 04 50.5	-0.5
	4.3nm,0.5s,baz=192,slow=7.5						
AAK	Ala-Archa	56.58	333	PcP	PcP	13 05 49.1	0.0
	6.5nm,0.3s,baz=169,slow=5.2,SNR=5.4						
MK32	Makanchi Array	57.12	342	eP	P	13 04 55.6	-1.1
MKAR	Makanchi Array	57.12	342	P	P	13 04 55.6	-1.1
	0.4nm,0.5s,baz=150,slow=9.6,SNR=6.1						
ASAJ	Asahikawa	60.98	30	P	P	13 05 21.8	-1.7
	1.7nm,0.5s,baz=253,slow=9.0,SNR=5.4						
ASAJ	Asahikawa	60.98	30	eP	P	13 05 21.8	-1.7
	3.4nm,0.9s						
KURBB	Kurchatov Arra	61.68	341	P	P	13 05 28.0	0.0
	0.5nm,0.8s,baz=151,slow=7.1,SNR=2.3						
KURK	Kurchatov	61.73	341	eP	P	13 05 28.0	-0.4
BVAR	Borovoye Array	66.50	338	P	P	13 05 59.9	+0.3
	0.4nm,0.3s,baz=143,slow=13,SNR=3.3						
ABKAR	Akbulak array	68.32	330	eP	P	13 06 11.4	+0.2
ARU	Arti	73.68	335	P	P	13 06 43.8	+0.3
	2.5nm,0.3s,baz=102,slow=14,SNR=4.1						
PETK	Petropavlovsk-	74.40	30	P	P	13 06 46.1	-1.7
	2.0nm,0.6s,baz=199,slow=3.1						
PEA1	Petropavlovsk-	74.40	30	eP	P	13 06 46.1	-1.7
TIXI	Tiksi	79.90	7	eP	P	13 07 16.9	-1.4
	2.2nm,0.7s						
ARA0	ARCESS Array S	92.74	340	eP	P	13 08 21.8	+0.1
ARCES	ARCESS Array B	92.74	340	P	P	13 08 21.8	+0.1
	3.5nm,1.1s,baz=93,slow=7.5,SNR=4.1						
TX31	Lajitas Ar. Si	144.88	47	ePKPdf	PKPab	13 14 47.1	+0.4
TX31				ePKPdf	PKPbc	13 14 47.4	+0.6
TXAR	Lajitas Array	144.88	47	PKP	PKPdf	13 14 47.8	+0.2
	3.0nm,0.7s,baz=278,slow=0.7,SNR=23						
R40A	Maddies Statio	144.98	24	ePKPdf	PKPab	13 14 46.6	-0.1
S39A	Bolivar	145.04	26	ePKPdf	PKPbc	13 14 46.8	-0.2
CCM	Cathedral Cave	145.59	23	ePKPbc	PKPbc	13 14 49.2	+0.6
HHAR	Hobbs	145.93	28	ePKPdf	PKPdf	13 14 48.9	-0.2
T42A	Van Buren	146.53	24	ePKPdf	PKPdf	13 14 51.1	+1.1
MIAR	Mount Ida	147.51	29	ePKPbc	PKPbc	13 14 55.0	+0.6
WVT	Waverly	148.55	20	ePKPbc	PKPbc	13 14 57.4	+0.3
TKL	Tuckaleechee C	150.20	15	PKPbc	PKPbc	13 15 01.9	+0.7
	2.5nm,0.5s,baz=284,slow=4.2,SNR=4.7						

ISCJB ***16*** *13:07:06.6±0.7, 42°.44N±0°.03×72°.21E±0°.03, h2^{km}±5^{km}, Error ellipse: s-maj=5.6km s-min=3.4km az=174.6*

KRNET ***16*** *13:07:06.8±0.1, 42°.45N×72°.22E, h20^{km}, mb2.6*

NNC ***16*** *13:07:06.2±1.1, 42°.44N×72°.15E, h0^{km}, mb2.3, mpv2.4, Error ellipse: s-maj=16.5km s-min=3.6km az=3.0*

SOME ***16*** *13:07:07.1, 42°.48N×72°.18E, h10^{km}*

ISC 16 13:07:06.3±1.1**, 42°.43N**±0°.03×**72°.17E**±0°.02**, h4**^{km}±10^{km}**, n22,** σ**1^s.10**/44**, 21C-7D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNAS	Manas	0.25	78	⇓P	Pg	13 07 11.7	+0.5
	7.8nm,0.2s						
MNAS				⇓S	Sg	13 07 15.1	+0.6
	46nm,0.2s						
MNAS	Manas	0.25	78	⇑iP	Pg	13 07 11.7	+0.5
	baz=79						
MNAS				⇑iS	Sg	13 07 15.3	+0.8
	baz=79						
ARK	Arkit	0.65	194	⇑iP	Pb	13 07 20.5	+0.1
	baz=95						
ARK				⇑iS	Sb	13 07 30.0	+0.1
	baz=95						
TOKL	Toktogul	0.71	133	⇑iP	Pg	13 07 20.2	+0.2
	baz=36						
TOKL				⇑iS	Sg	13 07 29.2	-0.1
	baz=36						
MRKS	Merke	0.84	68	eP	Pg	13 07 22.1	-0.3
	baz=68						
MRKS				eS	Sg	13 07 33.0	-0.3
	baz=68						
MRKS	Merke	0.84	68	eP	Pg	13 07 22.1	-0.3
	7.2nm,0.1s						
MRKS				eS	Sg	13 07 33.0	-0.3
	24nm,0.1s						
AML	Almayashu	1.17	104	⇓iP	Pg	13 07 28.0	-0.7
	baz=6.0						
AML				⇓iS	Sg	13 07 43.6	-0.3
	baz=6.0						
EKS2	Erkin-Say	1.21	79	⇑iP	Pb	13 07 28.4	-1.4
	baz=79						
EKS2				⇑iS	Sb	13 07 44.6	-1.3
	baz=79						
ARSB	Arslanbob	1.26	151	⇑iP	Pn	13 07 30.1	-0.8
	baz=53						
ARSB				⇑iS	Sb	13 07 47.0	-0.4
	baz=53						
KK31	Karatay Array	1.39	299	⇓P	Pn	13 07 32.0	-0.6
	0.7nm,0.3s,baz=118,slow=14,SNR=52						
KK31				⇓S	Sb	13 07 50.6	-0.5
	8.1nm,0.3s,baz=120,slow=27,SNR=6.1						
IUG	Iuzhnay	1.61	261	eP	Pb	13 07 36.3	-0.5
	baz=60						
IUG				eS	Sg	13 07 58.8	+0.6
	baz=60						
IUG	Iuzhnay	1.61	261	eP	Pb	13 07 36.3	-0.5
	62nm,0.1s						
IUG				eS	Sg	13 07 58.8	+0.6
	41nm,0.1s						
AAK	Ala-Archa	1.73	82	⇓P	Pb	13 07 38.3	-0.4
	1.4nm,0.3s						
AAK				⇑S	Sb	13 08 00.2	-0.7
	5.4nm,0.7s						
AAK	Ala-Archa	1.73	82	⇑iP	Pn	13 07 37.6	+0.3
	baz=83						
AAK				⇑iS	Sb	13 08 00.2	-0.7
	baz=83						
BRLS	Borolday	1.82	290	eP	Pb	13 07 40.3	+0.1
BRLS				eS	Sg	13 08 04.4	-0.4
USP	Ospenovka	1.90	63	⇑iP	Pb	13 07 40.7	-1.0
	baz=63						
USP				⇑iS	Sb	13 08 05.3	-0.5
	baz=63						
CHMS	Chumysh	1.98	73	⇑iP	Pb	13 07 41.7	-1.3
	baz=73						
CHMS				⇑iS	Sb	13 08 07.0	-1.1
	baz=73						
KZA	Kyzart	2.31	98	⇑eP	Pn	13 07 46.6	+1.0
	baz=98						
KZA				⇑iS	Sn	13 08 15.1	+0.4
	baz=98						
BOOM	Boomskoye usch	2.79	88	⇑iP	Pn	13 07 53.2	+1.3
	baz=88						
BOOM				⇑iS	Sn	13 08 26.6	+0.5
	baz=88						
KST	Kastek	2.86	76	eP	Pb	13 07 58.3	+0.3
	2.2nm,0.3s						
KST				eS	Sb	13 08 35.2	+1.9
	12nm,0.3s						
KUU	Kurty	3.38	63	eP	Pb	13 08 07.6	+0.8
	0.6nm,0.4s						
KUU				eS	Sb	13 08 51.0	+2.8
	4.9nm,0.5s						
MDOK	Medeo	3.66	77	eP	Pb	13 08 13.8	+2.2
	0.6nm,0.2s						
MDOK				eS	Sg	13 09 00.1	-3.8
	2.1nm,0.6s						

SOME ***16*** *13:13:22.8, 44°.65N×82°.32E, h10^{km}*

NNC ***16*** *13:13:26.3±0.7, 44°.69N×82°.06E, h0^{km}, mb3.2, mpv2.7, Error ellipse: s-maj=11.2km s-min=1.7km az=117.0*

ISC 16 13:13:24.6±2.5**, 44°.66N**±0°.06×**82°.18E**±0°.09**, h6**^{km}±18^{km}**, n11,** σ**1^s.26**/22**, 3C-3D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJR	Jarkent	1.74	260	eP	Pn	13 13 56.1	+0.7
	3.6nm,0.2s						
DJR				eS	Sg	13 14 20.6	+0.1
	7.2nm,0.2s						
KTMS	Ketmen	1.79	228	eP	Pb	13 13 57.3	-0.5
	8.3nm,0.2s						
KTMS				eS	Sg	13 14 22.8	+0.8
	30nm,0.3s						
KAPS	Kapalarasan	2.10	288	eP	Pb	13 14 02.1	-1.0
	3.2nm,0.3s						
KAPS				eS	Sb	13 14 30.3	+0.9
	17nm,0.3s						
MK31	Makanchi Array	2.14	2	⇑Pn	Pb	13 14 03.1	-0.6
	2.1nm,0.3s,baz=183,slow=13,SNR=146						
MK31				⇑Sn	Sb	13 14 30.9	+0.3
	12nm,0.5s,baz=185,slow=27,SNR=24						
MAKZ	Makanchi	2.16	356	⇓Pn	Pb	13 14 02.6	-1.4
	4.5nm,0.6s						
MAKZ				⇑Sn	Sb	13 14 30.9	-0.2
	4.4nm,0.4s						
PDGK	Podgornoye	2.35	237	⇓Pn	Pn	13 14 05.5	+1.7
	2.0nm,0.5s						
PDGK				⇓Sn	Sb	13 14 35.9	-0.9
	5.8nm,0.4s						
SHLS	Shalkode	2.47	234	eP	Pn	13 14 04.9	-0.6
	9.8nm,0.2s						
SHLS				eS	Sn	13 14 35.4	-0.6
	40nm,0.4s						
UZB	Uzynbulak	2.73	238	eP	Pn	13 14 11.1	+2.0
	3.9nm,0.2s						
UZB				eS	Sb	13 14 46.2	-1.6
	6.1nm,0.2s						
KPKS	Kokpek	2.79	246	eP	Pn	13 14 11.8	+1.9
	10nm,0.1s						
KPKS				eS	Sb	13 14 47.5	-1.7
	17nm,0.2s						

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	Saty	3.16	241	eP	Pb	13 14 20.2	-1.1
	8.2nm,0.2s						
SATY				eS	Sb	13 15 01.6	+1.5
	15nm,0.4s						
CHKK	Chushkaly	3.81	260	eP	Pb	13 14 31.0	-1.3
	2.1nm,0.2s						
CHKK				eS	Sb	13 15 19.4	+0.6
	4.0nm,0.2s						

IDC 16 13:31:54.9±1.9, 7°.43S×129°.33E, h0^{km}, mb3.8/3, mb1 3.7/5, mb1mx3.4/46, mbtmp3.6/5, ML3.3/2, MS2.9/1, Ms1 2.9/1, ms1mx2.5/48, Error ellipse: s-maj=184.9km s-min=29.9km az=68.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.36	159	Pn	Pn	13 35 04.8	-1.1
	0.2nm,0.3s,baz=332,slow=14,SNR=17						
WRA				Sn	Sn	13 37 22.4	-13
	0.5nm,0.3s,baz=332,slow=22,SNR=8.0						
ASAR	Alice Springs	16.73	165	Pn	Pn	13 35 52.1	+1.1
	0.1nm,0.3s,baz=342,slow=9.1,SNR=11						
ASAR				Sn	Sn	13 38 44.1	-14
	0.1nm,0.3s,baz=345,slow=24,SNR=2.3						
TGY	Tagaytay City	22.95	339	LR	LR	13 46 49.0	
	comp=Z,34nm,20.2s,baz=47,slow=39						
MKAR	Makanchi Array	68.22	327	P	P	13 42 57.6	+0.2
	0.3nm,0.5s,baz=145,slow=5.3,SNR=3.1						
ZALV	Zalesovo Beam	71.67	334	P	P	13 43 18.0	-0.5
	0.5nm,0.4s,baz=116,slow=3.4,SNR=1.6						
KURBB	Kurchatov Arra	72.53	329	P	P	13 43 24.0	+0.3
	0.3nm,0.3s,baz=129,slow=4.9,SNR=3.8						

IDC 16 14:02:09.7±1.9, 18°.22S×177°.60W, h0^{km}, mb4.2/4, mb1 4.5/4, mb1mx3.8/43, mbtmp4.2/4, Error ellipse: s-maj=151.2km s-min=32.2km az=156.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.16	242	P	P	14 09 40.2	+0.8
	1.4nm,0.5s,baz=74,slow=8.5,SNR=8.8						
WRA	Warramunga Arr	45.33	260	P	P	14 10 29.2	-0.7
	2.2nm,0.5s,baz=98,slow=6.7,SNR=85						
ASAR	Alice Springs	45.45	254	P	P	14 10 30.4	-0.5
	8.6nm,0.6s,baz=90,slow=8.7,SNR=197						
TXAR	Lajitas Array	85.52	57	P	P	14 14 50.2	+0.1
	0.3nm,0.6s,baz=216,slow=7.6,SNR=3.7						

IDC 16 14:17:41.4±2.1, 3°.64N×92°.65E, h0^{km}, mb3.7/3, mb1 3.9/5, mb1mx3.4/62, mbtmp3.8/5, ML3.9/2, Error ellipse: s-maj=56.2km s-min=31.3km az=48.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	Pallekele	12.42	287	Pn	Pn	14 20 39.5	-0.2
	0.4nm,0.3s,baz=119,slow=14,SNR=1.8						
PALK				Sn	Sn	14 22 47.3	-12
	1.0nm,0.3s,baz=110,slow=12,SNR=2.9						
CMAR	Chiang Mai Arr	15.96	22	Pn	Pn	14 21 26.9	-0.6
	0.2nm,0.3s,baz=216,slow=13,SNR=6.7						
H08S2	Diego Garcia H	23.02	241	T	T	14 48 41.0	
	baz=63						
H08S3	Diego Garcia H	23.02	241	T	T	14 48 24.6	
	baz=63						
H08S1	Diego Carcia H	23.04	241	T	T	14 48 17.5	
	baz=63						
H01W3	Cape Leeuwin H	43.32	154	T	T	15 12 34.8	
	baz=327						
H01W2	Cape Leeuwin H	43.33	154	T	T	15 12 29.9	
	baz=327						
H01W1	Cape Leeuwin H	43.34	154	T	T	15 12 35.2	
	baz=327						
MKAR	Makanchi Array	43.91	350	P	P	14 25 49.8	-0.1
	0.8nm,0.7s,baz=168,slow=8.1,SNR=8.0						
WRA	Warramunga Arr	47.18	121	P	P	14 26 16.1	-0.1
	0.5nm,1.1s,baz=296,slow=9.2,SNR=1.2						
ZALV	Zalesovo Beam	50.56	354	P	P	14 26 41.7	+0.1
	1.0nm,0.4s,baz=184,slow=4.3,SNR=2.2						

IDC 16 14:24:59.9±458.0, 47°.49N×46°.38E, h0^{km}, Error ellipse: s-maj=195.5km s-min=139.2km az=175.0, Ukraine-Moldova-Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I31KZ	AKTYUBINSK INF	8.21	65	i		15 19 10.0	
	baz=252,slow=301,SNR=4.0						
I43RU	DUBNA INFRASON	10.82	332	i		15 33 40.0	
	baz=142,slow=322,SNR=0.3						
I26DE	FREYUNG INFRAS	21.74	286	i		16 36 30.0	
	baz=80,slow=302,SNR=0.6						

IDC 16 14:35:29.4±3.8, 50°.78N×96°.27E, h0^{km}, mb1 3.2/1, mb1mx2.7/69, mbtmp3.2/1, ML2.5/1, Error ellipse: s-maj=67.7km s-min=30.9km az=5.0, Tuva-Buryatia-Mongolia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SONM	Songino Array	7.25	110	Pg	Pb	14 37 41.8	+5.6
	0.2nm,0.3s,baz=303,slow=19,SNR=5.8						
SONM				Lg	Lg	14 39 26.0	
	0.5nm,0.3s,baz=296,slow=30,SNR=10						
ZALV	Zalesovo Beam	7.69	299	Pn	Pn	14 37 22.4	-0.2
	0.4nm,0.3s,baz=105,slow=17,SNR=2.0						
ZALV				Sn	Sb	14 39 03.7	-12
	0.5nm,0.3s,baz=110,slow=26,SNR=7.0						
MKAR	Makanchi Array	10.05	252	Pg	Pn	14 38 33.4	+38
	0.1nm,0.3s,baz=61,slow=14,SNR=2.4						
MKAR				Lg	Lg	14 40 48.4	
	0.1nm,0.3s,baz=66,slow=29,SNR=4.7						

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*ISCJB **16** 14:35:52.7±0.6, 29°.49N±0°.08×107°.54E±0°.07, h10^{km}, mb3.9/7, Error ellipse: s-maj=11.8km s-min=7.9km az=156.5*

*IDC **16** 14:35:53.9±0.9, 29°.57N×107°.59E, h0^{km}, mb4.0/6, mb1 4.0/8, mb1mx3.6/66, mbtmp3.9/8, ML3.7/2, Error ellipse: s-maj=35.6km s-min=17.5km az=52.0*

*NEIC **16** 14:35:54.3±5.0, 29°.52N×107°.57E, h7^{km}±34^{km}, mb4.2/1, Error ellipse: s-maj=11.9km s-min=10.2km az=111.0*

ISC 16 14:35:54.6±0.7, 29°.5N±0°.1×107°.60E±0°.09, h10^{km}, n16, σ1^{s}.24/18, mb3.9/7, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENH	Enshi	1.83	63	ePn	Pn	14 36 26.5	+0.4
ENH				eSn	Sn	14 36 49.2	-0.2
BJT	Baijiatuau	12.66	31	ePn	Pn	14 38 53.6	-1.1
CHTO	Chiang Mai	13.21	219	ePn	Pn	14 38 59.4	-3.0
CMAR	Chiang Mai Arr	13.51	218	Pn	Pn	14 39 07.0	+0.5
	0.1nm,0.3s,baz=27,slow=10,SNR=2.7						
KSAR	Wonju Array Be	18.68	60	P	Pn	14 40 13.3	0.0
KSRS	Korea Array	18.71	59	P	Pn	14 40 13.3	-0.4
	0.3nm,0.3s,baz=243,slow=11,SNR=9.0						
MKAR	Makanchi Array	26.20	318	P	P	14 41 29.6	+0.2
	1.5nm,0.6s,baz=124,slow=8.9,SNR=10.0						
KURBB	Kurchatov Arra	30.37	322	P	P	14 42 05.9	-0.7
	0.7nm,0.3s,baz=127,slow=8.7,SNR=4.4						
KURK	Kurchatov	30.37	322	P	P	14 42 05.9	-0.7
YAK	Yakutsk	35.65	18	eP	P	14 42 52.7	+0.2
BVAR	Borovoye Array	35.95	322	P	P	14 42 54.6	-0.6
	0.5nm,0.5s,baz=122,slow=11,SNR=3.7						
BRVK	Borovoye	36.02	322	P	P	14 42 55.5	-0.3
	2.4nm,0.6s						
GEYT	Alibeck	41.62	295	P	P	14 43 44.7	+1.7
	0.6nm,0.5s,baz=76,slow=6.1,SNR=2.0						
WRAB	Tennant Creek	55.48	149	P	P	14 45 28.2	-1.6
WRA	Warramunga Arr	55.48	149	P	P	14 45 31.1	+1.2
	1.1nm,0.6s,baz=338,slow=8.1,SNR=11						
ASAR	Alice Springs	58.57	152	P	P	14 45 53.4	+1.6
	1.3nm,0.5s,baz=334,slow=6.9,SNR=46						
ASAR				PcP	PcP	14 46 42.9	+0.9
	0.2nm,0.5s,baz=342,slow=3.0,SNR=4.3						

SJA 16 14:45:01.3±0.6, 31°.41S×68°.58W, h109^{km}±2^{km}, ML3.0, MW3.6, 2D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTLL	Cerro Villicun	0.12	48	⇓iP	Pn	14 45 16.8	+0.3
RTLL				i S	Sn	14 45 28.9	+1.0
SJA	San Juan	0.12	174	AMPG		14 45 17.7	
	comp=Z,6μm,0.2s						
SJA				AMPG		14 45 17.8	
	comp=Z,33μm,0.1s						
ZON	Zonda	0.17	212	⇓iP	Pn	14 45 17.1	+0.5
RTCV	Cerro Valdivia	0.46	176	i P	Pn	14 45 18.5	+0.7
AMOG	MOGNA	0.47	9	i P	Pn	14 45 18.8	+0.8
RTLS	Leoncito	0.73	237	i P	Pn	14 45 21.6	+1.4
RTLS				i S	Sn	14 45 35.9	+1.5
RTLS				IAML		14 45 37.2	
	comp=Z,294nm,0.2s						
AUSP	Uspallata	1.07	220	i P	Pn	14 45 24.8	+1.4
AUSP				i S	Sn	14 45 41.6	+1.4
ASAL	Salagasta	1.20	191	i P	Pn	14 45 25.9	+1.2
ASAL				i S	Sn	14 45 43.8	+1.4
ACDV	Cuesta del Vie	1.32	339	i P	Pn	14 45 27.1	+0.9
ACDV				i S	Sn	14 45 46.3	+1.4
AROD	Rodeo	1.46	328	i P	Pn	14 45 29.3	+1.4
AROD				i S	Sn	14 45 50.1	+2.1
ACAN	Cantantal	1.46	127	i P	Pn	14 45 28.9	+1.2
ACAN				i S	Sn	14 45 48.6	+0.9
ARCO	CERRO ARCO	1.46	192	i P	Pn	14 45 28.8	+1.0
ARCO				i S	Sn	14 45 49.2	+1.3
ARCO				IAML		14 45 51.7	
	comp=Z,188nm,0.7s						
AAGR	Agrelo	1.69	187	i P	Pn	14 45 31.7	+1.2
AAGR				i S	Sn	14 45 53.9	+1.3
AGUA	GUANDACOL	1.91	2	i P	Pn	14 45 34.5	+1.2
AGUA				i S	Sn	14 45 58.8	+1.2
MRA	San Martin	2.63	113	i P	Pn	14 45 43.3	+0.8
VCA	Vinchina	2.68	7	i P	Pn	14 45 44.4	+1.2
VCA				IAML		14 46 21.8	
	comp=Z,56nm,0.3s						

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*ISCJB **16** 14:48:45.8±0.6, 12°.74N±0°.05×94°.10E±0°.06, h100^{km}, mb3.7/11, Error ellipse: s-maj=9.4km s-min=7.0km az=25.0*

*IDC **16** 14:48:48.4±5.2, 12°.87N×93°.83E, h116^{km}±45^{km}, mb3.4/11, mb1 3.5/12, mb1mx3.3/62, mbtmp3.8/12, Error ellipse: s-maj=36.9km s-min=14.3km az=61.0*

ISC 16 14:48:46.8±0.9, 12°.75N±0°.10×93°.9E±0°.1, h100^{km}, n22, σ1^{s}.57/22, mb3.7/11, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PBA	Port Blair	1.57	226	eP	Pn	14 49 15.3	+1.3
PBA				eS	Sn	14 49 36.5	+1.9
PBA				AML	AML	14 49 38.4	
	comp=N,10μm,0.3s						
PBA				AML	AML	14 49 38.7	
	comp=E,9μm,0.2s						
CMAR	Chiang Mai Arr	7.47	40	P	Pn	14 50 35.4	+2.2
	comp=E,0.6nm,0.3s,baz=235,slow=15,SNR=24						
CMAR				S	Sn	14 51 54.4	-1.9
	comp=E,0.2nm,0.3s,baz=233,slow=27,SNR=4.5						
ODAN	Odare	15.30	337	eP	Pn	14 52 19.0	+1.3
	comp=E,21nm,0.2s						
TAPN	Taplejung	15.64	339	eP	Pn	14 52 23.1	+1.2
	comp=E,25nm,0.3s						
RAMN	Ramite	15.70	335	eP	Pn	14 52 23.6	+1.0
	comp=E,26nm,0.3s						
JIRN	Jiri	16.49	335	eP	P	14 52 34.8	+1.3
	comp=E,26nm,0.3s						
PKIN	Phulchoki	16.76	333	eP	P	14 52 37.9	+1.5
	comp=E,35nm,0.4s						
DMN	Daman	16.91	332	eP	P	14 52 39.9	+1.8
	comp=E,12nm,0.3s						
KKN	Kakani	16.99	333	eP	P	14 52 40.6	+1.7
	comp=E,4.6nm,0.2s						
GKN	Gorkha	17.46	332	eP	Pn	14 52 47.0	+2.7
	comp=E,20nm,0.3s						
KOLN	Koldanda	17.77	329	eP	Pn	14 52 50.0	+1.9
	comp=E,11nm,0.3s						
MKAR	Makanchi Array	35.31	346	P	P	14 55 31.2	-1.1
	comp=E,0.3nm,0.5s,baz=165,slow=7.7,SNR=6.9						
SONM	Songino Array	36.50	14	P	P	14 55 42.2	-0.3
	comp=E,0.3nm,0.3s,baz=209,slow=8.3,SNR=3.6						
KSRS	Korea Array	39.07	45	P	P	14 56 04.3	+0.1
	comp=E,0.4nm,0.6s,baz=250,slow=7.1,SNR=2.5						
KURBB	Kurchatov Arra	39.80	345	P	P	14 56 09.1	-0.9
	comp=E,0.1nm,0.3s,baz=161,slow=7.8,SNR=4.5						
ZALV	Zalesovo Beam	41.72	352	P	P	14 56 24.9	-0.8
	comp=E,1.4nm,0.3s,baz=171,slow=7.7,SNR=7.4						
NWAO	Narrogin (SRO)	50.60	154	P	P	14 57 36.3	+0.7
	comp=E,8.2nm,0.7s,baz=337,slow=7.7,SNR=2.1						
WRA	Warramunga Arr	51.38	129	P	P	14 57 42.4	+0.7
	comp=E,0.3nm,0.5s,baz=296,slow=9.4,SNR=11						
ASAR	Alice Springs	53.30	133	P	P	14 57 56.4	+0.5
	comp=E,0.3nm,0.4s,baz=310,slow=6.9,SNR=20						
BRTR	Keskin Array B	59.14	309	P	P	14 58 35.5	-1.9
	comp=E,0.5nm,0.5s,baz=113,slow=9.3,SNR=2.7						
ARCES	ARCESS Array B	70.63	340	P	P	14 59 49.4	-1.8
	comp=E,1.8nm,1.0s,baz=102,slow=6.6,SNR=3.8						
ILAR	Eielson Array	90.34	22	P	P	15 01 34.8	-1.7
	comp=E,0.2nm,0.6s,baz=283,slow=4.4,SNR=2.9						

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*ISCJB **16** 15:31:33.0±1.5, 1°.8N±0°.2×126°.0E±0°.2, h10^{km}, mb3.3/3, Error ellipse: s-maj=30.1km s-min=19.6km az=36.7*

*IDC **16** 15:31:33.0±2.1, 1°.92N×126°.32E, h0^{km}, mb3.4/3, mb1 3.6/3, mb1mx3.3/58, mbtmp3.4/3, Error ellipse: s-maj=178.4km s-min=26.2km az=65.0*

*DJA **16** 15:32:13.6±1.2, 2°N±6°×12°2E±°, h10^{km}, M2.6/5, MLv2.6/5*

ISC 16 15:31:34.5±1.7, 1°.9N±0°.2×126°.1E±0°.1, h10^{km}, n7, σ1^{s}.67/6, mb3.5/3, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRSI	Marisa	4.37	251	P	Pn	15 32 38.9	-2.0
MRSI				S	Pg	15 32 58.2	0.0
LUWI	Luwuk	4.41	229	P	Pb	15 32 53.7	+1.7
APSI	Ampana	5.23	238	P	Pn	15 32 59.1	+6.3
MPSI	Mapaga	6.37	256	P	Pn	15 32 58.8	-10
WRA	Warramunga Arr	23.17	160	P	P	15 36 40.5	-0.9
	0.7nm,0.5s,baz=339,slow=11,SNR=12						
ASAR	Alice Springs	26.52	164	P	P	15 37 12.4	-0.1
	0.4nm,0.7s,baz=342,slow=7.6,SNR=6.3						
MKAR	Makanchi Array	58.70	326	P	P	15 41 33.2	+0.8
	0.3nm,0.5s,baz=121,slow=7.4,SNR=4.6						

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*IDC **16** 15:41:18.9±3.0, 36°.23N×70°.91E, h187^{km}±27^{km}, mb3.3/7, mb1 3.4/13, mb1mx3.1/67, mbtmp3.9/13, Error ellipse: s-maj=23.5km s-min=18.3km az=1.0*

*ISCJB **16** 15:41:19.3±0.3, 36°.38N±0°.03×70°.87E±0°.05, h188^{km}, mb3.4/7, Error ellipse: s-maj=5.8km s-min=3.1km az=154.6*

*NNC **16** 15:41:27.3±1.6, 36°.97N×70°.93E, h227^{km}±16^{km}, mb3.3, mpv4.5, Error ellipse: s-maj=15.5km s-min=9.9km az=14.0*

ISC 16 15:41:19.4±0.6, 36°.40N±0°.05×70°.92E±0°.06, h188^{km}, n57, σ2^{s}.35/72, mb3.3/7, 6C-8D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	2.70	162	P	Pn	15 42 09.5	+4.4
CEP				S	Sn	15 42 45.0	+4.4
CEP	Cherat	2.70	162	P	Sn	15 42 45.2	+4.6
CHCP	Chirah Chowk	3.35	144	P	Pn	15 42 17.0	+4.3
THW	Thamme Wali	3.66	169	P	Pn	15 42 20.6	+4.0
SFK	Sufi-Kurgan	4.14	29	⇑P	Pn	15 42 25.2	+2.5
	67nm,0.4s						
SFK				⇑S	Sn	15 43 13.6	+1.1
	43nm,0.4s						
SARP	Sargodha	4.70	161	P	Pn	15 42 32.7	+3.0
TAS	Tashkent	5.08	346	⇓P	Pn	15 42 36.4	+1.9
	190nm,0.3s						
TAS				⇑S	Sn	15 43 31.8	-1.9
	421nm,0.6s						
DHRM	DHARAMSHALA	6.08	131	eP	Pn	15 42 50.6	+2.8
DHRM				eS	Sn	15 43 56.4	-1.1
DHRM				IAML		15 44 00.9	
	comp=N,402nm,0.2s						
DHRM				IAML		15 44 01.2	
	comp=E,579nm,0.1s						
AML	Almayashu	6.11	20	P	Pn	15 42 49.9	+1.6
	SNR=121						
MNAS	Manas	6.20	11	⇑P	Pn	15 42 50.7	+1.6
	comp=E,4.7nm,0.4s						
MNAS				⇑S	Sn	15 43 57.6	-2.5
	comp=E,94nm,0.4s						
UCH	Uchtor	6.45	25	P	Pn	15 42 55.2	+2.5
	SNR=6.4						
KZA	Kyzart	6.59	29	P	Pn	15 42 55.5	+1.0
	SNR=13						
EKS2	Erkin-Say	6.63	19	P	Pn	15 42 56.8	+2.0
	SNR=33						
KK31	Karatay Array	6.70	357	⇓P	Pn	15 42 56.9	+1.3
	comp=E,5.8nm,0.3s,baz=180,slow=12,SNR=125						
KK31				S	Sn	15 44 07.2	-4.5
	comp=E,42nm,0.4s,baz=177,slow=14,SNR=20						
AAK	Ala-Archa	6.81	23	P	Pn	15 42 59.2	+2.0
	comp=E,5.9nm,0.3s,baz=185,slow=6.1,SNR=44						
AAK				S	Sn	15 44 13.6	-1.0
	comp=E,5.2nm,0.3s,baz=32,slow=22,SNR=22						
AAK	Ala-Archa	6.81	23	⇓P	Pn	15 42 59.3	+2.0
	comp=E,17nm,0.5s						
AAK				⇓S	Sn	15 44 13.0	-1.5
	comp=E,55nm,0.7s						
AAK	Ala-Archa	6.81	23	P	Pn	15 42 59.2	+2.0
	SNR=20						
ULHL	Ulahol	7.15	34	P	Pn	15 43 03.3	+1.7
	SNR=20						
CHMS	Chumysh	7.22	23	P	Pn	15 43 04.4	+2.0
	SNR=11						
USP	Ospenovka	7.39	21	P	Pn	15 43 05.8	+1.2
	SNR=6.3						
SMLA	Simla	7.40	134	eP	Pn	15 43 06.5	+1.8
SMLA				eS	Sn	15 44 24.5	-3.8
SMLA				IAML		15 44 28.8	
	comp=E,115nm,0.2s						
SMLA				IAML		15 44 30.6	
	comp=N,97nm,0.3s						
TKM2	Tokmak 2	7.44	28	⇑P	Pn	15 43 07.1	+1.6
	comp=N,15nm,0.5s						
TKM2				⇓S	Sn	15 44 25.2	-4.3
	comp=N,13nm,0.8s						
TKM2	Tokmak 2	7.44	28	P	Pn	15 43 06.9	+1.4
	SNR=37						
MDOK	Medeo	8.24	33	P	Pn	15 43 17.3	+1.4
	comp=N,16nm,0.6s						
DDI	Dehra Dun	8.51	133	eP	Pn	15 43 21.3	+1.9
DDI				eS	Sn	15 44 52.5	-2.3
JOSI	Joshimath	9.28	126	eP	Pn	15 43 31.8	+2.2
JOSI				eS	Sn	15 45 09.8	-3.6
KHET	Khetri	9.28	152	eP	Pn	15 43 27.7	-1.7
KHET				eS	Sn	15 45 04.5	-8.6
KHET				IAML		15 45 10.4	
	comp=E,22nm,0.6s						
KHET				IAML		15 45 10.6	
	comp=N,66nm,0.9s						
JASL	Jaisalmer	9.45	180	eP	Pn	15 43 31.0	-0.7
SONA	Sohna	9.65	146	eP	Pn	15 43 35.3	+0.9
SONA				eS	Sn	15 45 16.6	-5.5
SONA				IAML		15 45 28.4	
	comp=E,30nm,0.3s						
SONA				IAML		15 45 31.5	
	comp=N,189nm,0.0s						
GEYT	Alibeck	10.33	282	P	Pn	15 43 43.8	+0.7
	comp=N,0.2nm,0.3s,baz=83,slow=15,SNR=3.3						
GEYT				S	Sn	15 45 36.4	-1.7
	comp=N,0.5nm,0.3s,baz=130,slow=16,SNR=3.3						
PYUN	Piuthan	13.14	126	eP	Pn	15 44 19.3	0.0
	comp=N,48nm,0.4s						
MK31	Makanchi Array	13.41	36	⇓P	Pn	15 44 23.1	+0.8
	comp=N,0.6nm,0.4s,baz=211,slow=12,SNR=23						
MKAR	Makanchi Array	13.41	36	P	Pn	15 44 22.9	+0.6
	comp=N,0.4nm,0.3s,baz=207,slow=12,SNR=18						
DANN	Dangsing	13.49	123	eP	Pn	15 44 24.6	+0.8
	comp=N,21nm,0.2s						
KOLN	Koldanda	13.76	125	eP	Pn	15 44 27.6	+0.5
	comp=N,19nm,0.3s						
BHPL	Bhopal	14.27	155	eP	P	15 44 38.4	+3.3
BHPL				ex	x	15 47 07.1	
GKN	Gorkha	14.31	122	eP	P	15 44 34.5	-1.1
	comp=N,44nm,0.5s						
DMN	Daman	14.88	122	eP	P	15 44 42.3	+0.3
	comp=N,21nm,0.4s						
KKN	Kakani	14.88	121	eP	P	15 44 42.1	+0.1
	comp=N,40nm,0.5s						
PKIN	Phulchoki	15.10	122	eP	P	15 44 44.6	+0.2
	comp=N,36nm,0.4s						
AB31	Akbulak array	15.14	331	⇓P	Pn	15 44 43.8	+0.2
	comp=N,2.6nm,0.5s						
GUN	Gumba	15.23	120	eP	P	15 44 46.3	+0.3
	comp=N,30nm,0.5s						
KURBB	Kurchatov Arra	15.24	19	P	Pn	15 44 44.3	-0.5
	comp=N,0.1nm,0.3s,baz=205,slow=11,SNR=5.6						
JIRN	Jiri	15.60	120	eP	P	15 44 51.5	+1.4
	comp=N,61nm,0.4s						
RAMN	Ramite	16.32	121	eP	Pn	15 44 59.8	+1.3
	comp=N,35nm,0.4s						
BVAR	Borovoye Array	16.62	359	P	Pn	15 45 02.3	+0.7
	comp=N,1.1nm,0.3s,baz=165,slow=12,SNR=21						
BVAR				S	S	15 48 02.0	-2.5
	comp=N,0.1nm,0.3s,baz=156,slow=22,SNR=4.6						
AKTO	Aktyubinsk	16.83	330	P	Pn	15 45 04.9	+0.9
	comp=N,1.4nm,0.3s,baz=139,slow=11,SNR=30						
AKTO				S	S	15 48 07.0	-1.9
	comp=N,0.1nm,0.3s,baz=153,slow=6.7,SNR=2.8						
AKTO	Aktyubinsk	16.83	330	⇓P	Pn	15 45 05.0	+0.9
	comp=N,12nm,0.7s						
ODAN	Odare	16.93	120	eP	Pn	15 45 08.1	+2.4
	comp=N,15nm,0.4s						
ZALV	Zalesovo Beam	20.03	24	P	P	15 45 38.2	+0.6
	comp=N,2.8nm,0.5s,baz=222,slow=10,SNR=10						
ARCES	ARCESS Array B	41.21	338	P	P	15 48 46.5	+1.3
	comp=N,0.6nm,0.7s,baz=116,slow=8.1,SNR=4.8						
HFS	Hagfors	43.10	322	P	P	15 49 01.5	+0.8
	comp=N,1.0nm,0.5s,baz=81,slow=8.9,SNR=4.8						
NB2	NORSAR Subarra	44.42	323	P	P	15 49 11.7	+0.5
	comp=Z,0.4nm,0.5s,baz=97,slow=7.9						
TORD	Torodi Ar. Bea	65.65	269	P	P	15 51 42.3	-1.4
	comp=Z,0.4nm,0.4s,baz=58,slow=6.5						
YKA	Yellowknife Ar	81.34	3	P	P	15 53 15.2	+0.7
	comp=Z,1.3nm,0.8s,baz=347,slow=5.2,SNR=3.2						
WRA	Warramunga Arr	82.00	122	P	P	15 53 17.8	-0.7
	comp=Z,0.4nm,0.6s,baz=325,slow=5.0,SNR=6.6						
ASAR	Alice Springs	84.25	125	P	P	15 53 29.8	-0.3
	comp=Z,0.2nm,0.7s,baz=310,slow=4.9,SNR=5.5						

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*ISCJB **16** 15:59:37.5±1.6, 10°.4S±0°.2×161°.5E±0°.2, h67^{km}, mb3.3/4, Error ellipse: s-maj=31.9km s-min=16.3km az=137.5*

*IDC **16** 15:59:43.6±2.8, 10°.20S×161°.20E, h94^{km}±17^{km}, mb3.3/4, mb1 3.5/5, mb1mx3.3/47, mbtmp3.7/5, Error ellipse: s-maj=36.1km s-min=22.9km az=70.0*

ISC 16 15:59:38.9±1.4, 10°.4S±0°.2×161°.4E±0°.2, h67^{km}, n7, σ0^{s}.93/9, mb3.5/4, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	1.73	302	P	Pn	16 00 06.9	0.0
	48nm,0.3s,baz=169,slow=5.9,SNR=48						
HNR				S	Sn	16 00 28.4	+0.3
	86nm,0.3s,baz=78,slow=20,SNR=9.1						
HNR	Honiara	1.73	302	eP	Pn	16 00 07.0	+0.1
HNR				eS	Sn	16 00 27.0	-1.1
DZM	Mont Dzumac	12.60	158	P	P	16 02 44.3	-0.3
	0.3nm,0.3s,baz=319,slow=20,SNR=44						
WRA	Warramunga Arr	27.80	247	P	P	16 05 23.4	+1.3
	1.0nm,0.7s,baz=74,slow=9.4,SNR=12						
ASAR	Alice Springs	29.40	240	P	P	16 05 36.1	-0.1
	0.6nm,0.9s,baz=62,slow=10.0,SNR=7.5						
SONM	Songino Array	75.65	325	P	P	16 11 18.0	+1.0
	0.2nm,0.3s,baz=128,slow=5.5,SNR=2.9						
MKAR	Makanchi Array	90.14	318	P	P	16 12 30.9	-0.9
	0.2nm,0.7s,baz=98,slow=6.0,SNR=3.5						

MEX 16 16:15:50.1±0.8, 17°.30N×95°.38W, h157^{km}±13^{km}, MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VHO	Vista Hermosa	1.31	260	eP	Pn	16 16 17.4	-1.1
VHO				eS	Sn	16 16 38.3	-2.0
HUIG	Huatulco	1.67	205	eP	Pn	16 16 20.4	-1.7
HUIG				eS	Sn	16 16 44.8	-1.7
PCIG		2.61	127	i P	Pn	16 16 31.9	-1.0
PCIG				i S	Sn	16 17 03.4	-2.6
PNIG	Pinotepa	2.78	252	i P	Pn	16 16 33.2	-1.8
PNIG				i S	Sn	16 17 07.2	-2.5

BJI ***16*** *16:33:07.1, 1°.51S×137°.31E, h18^{km}, mb5.2/82, mB5.6/58, Ms5.4/94, Ms7 5.1/86*

IDC ***16*** *16:33:08.5±0.4, 1°.29S×137°.09E, h0^{km}, mb5.1/32, mb1 5.1/35, mb1mx5.0/49, mbtmp5.1/35, ML4.1/3, MS5.0/34, Ms1 5.0/34, ms1mx4.9/44, Error ellipse: s-maj=16.4km s-min=9.2km az=76.0*

ISCJB ***16*** *16:33:09.8±0.7, 1°.25S±0°.02×137°.09E±0°.02, h19^{km}±4^{km}, mb5.3/217, MS5.3/486, Error ellipse: s-maj=3.6km s-min=2.9km az=42.5*

NEIC ***16*** *16:33:09.0±0.0, 1°.31S×137°.05E, h25^{km}, Moment Tensor Solution. s25 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.32; M$_{\theta\theta}$0.78; M$_{\phi\phi}$0.54; M$_{r\theta}$-0.36; M$_{\theta\phi}$2.31; M$_{\phi r}$2.19; Best double couple: M$_0$3.40000×10^{17} NP1:ϕ_s189.00000°, δ74.00000°, λ-133.00000°. NP2:ϕ_s83.00000°, δ46.00000°, λ-23.00000°. Principal axes: T 3.3700, Plg17.0000°, Azm309.0000°; N 0.0800, Plg41.0000°, Azm204.0000°; P -3.4400, Plg43.0000°, Azm57.0000°;*

GCMT ***16*** *16:33:10.1±0.1, 1°.28S×137°.02E, h13^{km}, MW5.7/134, Moment Tensor Solution. s119,c229; s134,c382; Duration: 1s.8 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.53±.03; M$_{\theta\theta}$0.66±.03; M$_{\phi\phi}$-0.13±.03; M$_{r\theta}$0.52±.07; M$_{\theta\phi}$3.34±.03; M$_{\phi r}$3.44±.18; Best double couple: M$_0$4.84600×10^{17} NP1:ϕ_s187.00000°, δ86.00000°, λ-133.00000°. NP2:ϕ_s93.00000°, δ43.00000°, λ-5.00000°. Principal axes: T 5.0600, Plg28.0000°, Azm310.0000°; N -0.4290, Plg43.0000°, Azm190.0000°; P -4.6320, Plg34.0000°, Azm61.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

NEIC ***16*** *16:33:10.1±0.7, 1°.30S×137°.05E, h13^{km}±4^{km}, mb5.6/111, MS5.3/298, MW5.6, MW5.6 Error ellipse: s-maj=3.5km s-min=3.1km az=71.0, Moment Tensor Solution. s34 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.65; M$_{\theta\theta}$-0.10; M$_{\phi\phi}$-0.55; M$_{r\theta}$0.29; M$_{\theta\phi}$2.71; M$_{\phi r}$1.66; Best double couple: M$_0$3.30000×10^{17} NP1:ϕ_s95.00000°, δ57.00000°, λ12.00000°. NP2:ϕ_s359.00000°, δ81.00000°, λ147.00000°. Principal axes: T 3.1600, Plg30.0000°, Azm312.0000°; N 0.1700, Plg56.0000°, Azm165.0000°; P -3.3300, Plg16.0000°, Azm51.0000°;*

NEIC Felt [II] at Serui.

MOS ***16*** *16:33:11.2±0.8, 1°.34S×136°.92E, h31^{km}, mb5.7/56, MS5.1/29 Error ellipse: s-maj=9.5km s-min=4.8km az=103.5*

DJA ***16*** *16:33:11.6±0.6, 1°S±3°×13°7E±°, h16^{km}±4^{km}, M5.5/69, mB5.9/58, mb5.6/69, MLv6.0/10, Mw(mB)5.5/58, Mwp5.6/4*

ISC 16 16:33:11.5±0.4, **1°.27S**±0°.03×**137°.14E**±0°.03, **h20**^{km}±2^{km}, **h20**^{km}**:pP-P, n1049,** σ**1s.77**/808, **mb5.5**/222, **MS5.3**/488, **35C-9D, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BAKI	Biak	1.04	274	P	Pb	16 33 29.1	-1.7
SRPI	Serui, Papua	1.08	237	P	Pb	16 33 30.2	-1.3
RKPI	Ransiki, Papua	2.97	265	P	Pn	16 33 57.5	-0.1
RKPI				S	Sn	16 34 32.6	-0.1
RKPI				Sg	Sg	16 34 51.7	+4.5
GENI	Genyem	3.30	114	P	Pn	16 34 02.0	-0.1
GENI				S	Sn	16 34 36.4	-4.3
GENI				Sg	Sg	16 35 00.1	+2.6
JAY	Jayapura	3.77	109	P	Pn	16 34 07.8	-0.8
JAY				S	Sn	16 34 40.3	-12
KMPI	Kaimana, Papua	4.17	235	P	Pn	16 34 16.5	+2.4
FAKI	Fak Fak	5.16	251	P	Pn	16 34 27.5	-0.1
	1μm,1.2s,20μm37μm6.3nm						
FAKI	Fak Fak	5.16	251	*e*Pn	Pn	16 34 26.7	-1.0
SWI	Sorong	5.89	274	P	Pn	16 34 38.8	+1.0
	503nm,0.6s,5μm5.0nm						
BNDI	Bandanaira	7.92	246	P	Pn	16 35 06.9	+1.3
MSAI	Masohi	8.46	256	P	Pn	16 35 18.4	+5.3
	211nm,0.7s,2μm0.7nm						
PALU	Palau	8.96	343	P	Pn	16 35 21.0	+1.0
	baz=9.1,SNR=12						
I39PW	PALAU INFRASON	9.12	344	*i*		17 34 00.0	
	baz=166,slow=319,SNR=1.0						
AAI	Ambon	9.26	255	P	Pn	16 35 26.5	+2.5
LBMI	Labuha	9.66	274	P	Pn	16 35 32.1	+2.6
	251nm,0.9s,4μm						
TNTI	Ternate	9.98	282	P	Pn	16 35 37.1	+3.2
	249nm,0.7s,6μm						
TNTI	Ternate	9.98	282	*e*Pn	Pn	16 35 34.8	+0.9
NLAI	Namlea	10.22	259	P	Pn	16 35 38.3	+1.1
	182nm,0.9s,3μm						
MANU	Manus Island	10.25	94	*e*Pn	Pn	16 35 39.5	+1.9
SANI	Sanana	11.18	266	P	Pn	16 35 50.0	-0.3
	92nm,0.8s,2μm8μm						
KDU	Kakadu	12.25	202	P	Pn	16 36 02.2	-2.7
	baz=12,SNR=129						
PMG	Port Moresby	12.83	129	Pn	Pn	16 36 12.7	-0.3
	5.3nm,0.3s,baz=355,slow=6.0,SNR=16						
PMG				Sn	Sn	16 38 32.8	-2.5
	0.9nm,0.3s,baz=308,slow=17,SNR=2.2						
PMG				LR	LR	16 42 25.8	
	comp=Z,27μm,20.5s,baz=297,slow=43						
MTN	Manton Dam	12.95	207	P	Pn	16 36 12.0	-2.5
	baz=13,SNR=73						
MTN	Manton Dam	12.95	207	*e*Pn	Pn	16 36 12.3	-2.2
KMSI	Cibinong	13.29	278	P	Pn	16 36 23.2	+4.0
	936nm,1.0s,11μm						
COEN	Coen	13.95	155	P	Pn	16 36 25.0	-3.2
	baz=14,SNR=31						
COEN	Coen	13.95	155	*e*Pn	Pn	16 36 24.7	-3.4
DAV	Davao City (W)	14.21	306	Pn	Pn	16 36 33.7	+2.0
	baz=113,slow=2.9,SNR=15						
DAV				LR	LR	16 42 46.7	
	comp=Z,5μm,18.7s,baz=137,slow=41						
DAV	Davao City (W)	14.21	306	⇑*i*P	Pn	16 36 31.0	-0.7
DAV	Davao City (W)	14.21	306	*e*Pn	Pn	16 36 32.3	+0.6
DAV	Davao City (W)	14.21	306	P	P	16 36 36.5	-2.5
	SNR=14						
LUWI	Luwuk	14.37	271	P	P	16 36 38.1	-2.7
LUWI				S	Sn	16 39 14.4	+1.5
LUWI	Luwuk	14.37	271	*e*Pn	Pn	16 36 32.7	-1.3
KDI	Kendari	14.75	259	P	P	16 36 43.1	-2.0
	156nm,1.6s,2μm						
RABL	Rabaul	15.28	101	*e*Pn	Pn	16 36 48.2	+1.9
	1μm,1.5s						
MRSI	Marisa	15.30	276	P	P	16 36 49.3	-1.9
	93nm,1.0s,944nm						
SOEI	Soe	15.33	236	P	P	16 36 49.9	-1.8
	923nm,0.8s,9μm						
SOEI	Soe	15.33	236	*e*Pn	Pn	16 36 46.2	-0.8
	785nm,0.9s						
APSI	Ampana	15.49	271	P	Pn	16 36 50.6	+1.5
	444nm,1.1s,5μm						
BATI	Baumata	16.07	236	P	Pn	16 36 56.5	0.0
	558nm,0.8s,4μm						
KNRA	Kununurra	16.53	210	P	Pn	16 36 58.5	-3.8
	baz=16,SNR=56						
MMRI	Maumere	16.54	243	P	P	16 37 05.3	+0.3
MMRI	Maumere	16.54	243	*e*Pn	Pn	16 37 02.0	-0.6
	618nm,1.4s						
GUMO	Guam	16.63	27	Pn	P	16 37 05.5	-0.4
	1.4nm,0.3s,baz=212,slow=4.6,SNR=5.2						
GUMO				LR	LR	16 42 42.7	
	comp=Z,2μm,20.9s,baz=203,slow=34						
GUMO	Guam	16.63	27	*e*Pn	P	16 37 05.8	-0.1
	651nm,1.3s						
GUMO	Guam	16.63	27	*e*P	P	16 37 05.9	-0.1
GUMO				pmax	pmax		
	comp=Z,650nm,1.2s						
EDFI	Ende, Flores	17.08	244	P	P	16 37 14.4	+3.3
	comp=Z,313nm,1.6s,comp=Z,4μm						
PLP	Palo	17.29	316	⇑*i*P	Pn	16 37 11.5	-0.4
PCI	Palu	17.31	271	P	P	16 37 13.5	0.0
	comp=Z,456nm,0.9s,comp=Z,8μm						
MPSI	Mapaga	17.32	275	P	Pn	16 37 12.1	-0.2
	comp=Z,74nm,2.0s,comp=Z,4μm						
TTSI	Tana Toraja	17.40	264	P	P	16 37 17.1	+2.6
	comp=Z,316nm,1.0s,comp=Z,6μm						
BKSI	Bulukumba	17.46	256	P	P	16 37 17.5	+2.4
	comp=Z,80nm,1.0s,comp=Z,2μmcomp=Z,6μm						
SPSI	Sidrap Palu	17.56	261	P	P	16 37 17.0	+0.7
	comp=Z,148nm,1.1s,comp=Z,6μm						
MTSU	Mount Surprise	18.18	158	P	Pn	16 37 22.1	-0.8
	baz=18,SNR=53						
WB9	Warramunga Arr	18.60	188	P	Pn	16 37 28.3	+0.2
	baz=19						
WSI	Waingapu	18.71	243	P	Pn	16 37 34.3	+4.8
	comp=Z,747nm,0.9s,comp=Z,8μm						
WRAB	Tennant Creek	18.75	188	*e*P	P	16 37 27.3	-2.0
	comp=Z,247nm,0.9s						
WRAB	Tennant Creek	18.75	188	*ce*P	P	16 37 28.6	-0.7
WRAB				pmax	pmax		
	comp=Z,158nm,1.0s						
WB2	Warramunga Arr	18.76	188	*e*P	P	16 37 27.7	-1.7
	comp=Z,255nm,0.9s						
WRA	Warramunga Arr	18.76	188	P	P	16 37 28.5	-0.9
	comp=Z,1.6nm,0.3s,baz=10,slow=12,SNR=59						
WRA				S	Sn	16 40 45.3	-14
	comp=Z,3.6nm,0.3s,baz=13,slow=23,SNR=5.2						
WRA				LR	LR	16 45 46.2	
	comp=Z,13μm,18.3s,baz=0.0,slow=40						
RCP	Roxas	19.16	312	⇑*e*P	Pn	16 37 34.6	-0.3
QIS	Mount Isa	19.32	173	P	P	16 37 34.0	-1.6
	baz=19,SNR=58						
WBSI	Waikabubak, Su	19.52	244	P	P	16 37 36.8	-1.1
	comp=Z,353nm,0.9s,comp=Z,4μm						
SMKI	Samarinda	19.95	272	P	Pn	16 37 46.6	+2.3
	comp=Z,420nm,1.3s,comp=Z,6μm						
BKB	Balikpapan	20.24	270	P	Pn	16 37 47.7	0.0
PLAI	Plampang	20.69	248	P	P	16 37 50.0	-0.6
	comp=Z,635nm,0.9s,comp=Z,7μm						
CTA	Charters Tower	20.72	155	P	P	16 37 50.9	0.0
	comp=Z,18nm,0.7s,baz=340,slow=11,SNR=19						
CTA				S	S	16 41 40.0	-1.6
	comp=Z,13nm,0.8s,baz=227,slow=19,SNR=2.7						
CTA				LR	LR	16 47 27.8	
	comp=Z,21μm,18.3s,baz=338,slow=42						
CTAO	Charters Tower	20.72	155	*e*P	P	16 37 51.1	+0.2
	comp=Z,512nm,1.6s						
CTAO				LR	LR		
	comp=Z,33μm,18.0s						
CTAO	Charters Tower	20.72	155	*e*P	P	16 37 51.1	+0.2
CTAO				pmax	pmax		
	comp=Z,510nm,1.6s						
CTAO				MLR	MLR		
	comp=Z,33μm,18.0s						
KBKI	Kotabaru	21.05	264	P	P	16 37 56.1	+1.6
	comp=Z,99nm,0.8s,comp=Z,1μm						
PPR	Puerto Princes	21.37	301	⇓*e*P	P	16 37 59.4	+1.5
TWSI	Taliwang, Sumb	21.49	249	P	P	16 38 00.1	+0.9
	comp=Z,228nm,1.0s,comp=Z,3μm						
KKM	Kota Kinabalu	22.12	289	*e*P	P	16 38 05.9	-0.2
KKM	Kota Kinabalu	22.12	289	P	P	16 38 07.0	+0.8
TGY	Tagaytay City	22.16	314	P	P	16 38 09.2	+2.8
	comp=Z,2μm,0.9s,baz=206,slow=3.2,SNR=22						
TGY				LR	LR	16 47 19.5	
	comp=Z,4μm,20.8s,baz=133,slow=38						
MTKI	Muara Teweh, K	22.24	271	P	P	16 38 07.9	+0.5
	comp=Z,275nm,1.6s,comp=Z,4μm						
AS01	Alice Springs	22.48	188	*e*P	P	16 38 09.0	-0.8
AS31	Alice Springs	22.48	188	*e*P	P	16 38 09.1	-0.7
	comp=Z,102nm,0.8s						
AS31				LR	LR		
	comp=Z,200nm,18.0s						
ASAR	Alice Springs	22.48	188	P	P	16 38 09.8	-0.1
	comp=Z,241nm,0.8s,baz=15,slow=12,SNR=657						
ASAR				S	S	16 42 17.2	+1.4
	comp=Z,26nm,1.0s,baz=4.8,slow=12,SNR=5.2						
ASAR				LR	LR	16 47 44.3	
	comp=Z,9μm,19.4s,baz=15,slow=39						
PATS	Pohnpei	22.61	69	P	P	16 38 11.2	0.0
	baz=23,SNR=7.2						
PATS	Pohnpei	22.61	69	*e*P	P	16 38 10.6	-0.7
	comp=Z,808nm,1.3s						
PATS				LR	LR		
	comp=Z,9μm,20.0s						
SRBI	Singaraja	22.87	252	P	P	16 38 19.0	+5.0
	comp=Z,127nm,1.0s,comp=Z,2μm						
DNP	Denpasar	23.04	251	P	P	16 38 17.9	+2.1
IGBI	Denpasar	23.14	250	P	P	16 38 21.8	+5.0
	comp=Z,386nm,1.2s,comp=Z,6μm						
JAGI	Jajag, Banyuwa	23.98	252	P	P	16 38 28.1	+3.1
	comp=Z,256nm,1.2s,comp=Z,3μm						
JAGI	Jajag, Banyuwa	23.98	252	*e*P	P	16 38 24.5	-0.5
	comp=Z,243nm,1.1s						
JAGI				LR	LR		
	comp=Z,3μm,19.0s						
HNR	Honiara	24.09	110	P	P	16 38 25.2	-0.8
	comp=Z,151nm,0.9s,baz=229,slow=7.6,SNR=3.6						
HNR	Honiara	24.09	110	*e*P	P	16 38 24.0	-2.0
HNR	Honiara	24.09	110	*e*P	P	16 38 25.2	-0.8
	comp=Z,376nm,0.9s						
HNR				LR	LR		
	comp=Z,5μm,20.0s						
HNR	Honiara	24.09	110	*e*P	P	16 38 25.3	-0.8
HNR				pmax	pmax		
	comp=Z,380nm,1.0s						
HNR				MLR	MLR		
	comp=Z,5μm,20.0s						
BLJI	Banyuglugur	24.33	254	P	P	16 38 28.8	+0.6
	comp=Z,306nm,1.2s,comp=Z,4μm						
GMJI	Gumukmas	24.60	253	P	P	16 38 35.7	+5.0
	comp=Z,175nm,1.0s,comp=Z,3μm						
WRKA	Warakurna	25.12	199	P	P	16 38 34.7	-0.7
	baz=25,SNR=177						
SBUM	Sibu	25.19	278	P	P	16 38 37.0	+1.0
GRJI	Gresik	25.22	256	P	P	16 38 38.2	+1.9
PBKI	Pangkalan Bun	25.50	266	P	P	16 38 40.3	+1.5
	comp=Z,354nm,1.1s,comp=Z,3μm						
STKI	Sintang	25.70	273	P	P	16 38 41.2	+0.5
	comp=Z,156nm,1.2s						
TBJI	Tambak Boyo	25.82	257	P	P	16 38 50.4	+8.7
MBWA	Marble Bar	26.06	219	*e*P	P	16 38 43.3	-0.6
	comp=Z,154nm,1.0s						
MBWA	Marble Bar	26.06	219	P	P	16 38 50.1	+6.3
	SNR=10						
QLP	Quilpie	26.07	165	P	P	16 38 44.9	+1.0
	baz=26,SNR=50						
PWJI	Pagerwojo	26.11	254	P	P	16 38 48.4	+4.0
	comp=Z,216nm,1.2s						
NGJI	Ngawi	26.30	256	P	P	16 38 56.4	+10
PCJI	Pacitan	26.76	254	P	P	16 38 52.2	+1.9
WOJI	Wonogiri, Jawa	26.92	255	P	P	16 38 59.7	+8.0
KSM	Kuching	26.97	276	*e*P	P	16 38 51.0	-1.2
KSM				LR	LR		
	comp=Z,4μm,22.0s						
KSM	Kuching	26.97	276	P	P	16 38 53.0	+0.8
SMRI	Semarang	27.23	257	P	P	16 38 59.0	+4.5
	comp=Z,700nm,1.1s,comp=Z,9μm						
SMRI	Semarang	27.23	257	*e*P	P	16 38 53.5	-1.0
	comp=Z,1μm,1.2s						
UGM	Wanagama	27.33	255	PFAKE		16 39 10.0	+15
UGM				LR	LR		
	comp=Z,4μm,21.0s						
RMQ	Roma	27.45	157	P	P	16 38 58.5	+2.2
	baz=28,SNR=50						
EIDS	Eidsvold	27.48	152	P	P	16 38 58.5	+1.9
	baz=28,SNR=12						
EIDS	Eidsvold	27.48	152	*e*P	P	16 38 57.9	+1.3
	comp=Z,310nm,1.1s						
EIDS				LR	LR		
	comp=Z,8μm,21.0s						
TWG	Pinlang	28.61	328	PFAKE		16 39 20.0	+13
TWG				LR	LR		
	comp=Z,9μm,18.0s						
CBIJ	Chichi jima	28.62	9	P	P	16 39 06.3	-0.4
JCJ	Chichijima	28.62	9	P	P	16 39 06.3	-0.4
	comp=Z,93nm,0.6s,baz=246,slow=20,SNR=3.0						
YULB	Yu-li	28.96	329	*e*P	P	16 39 08.2	-1.6
	comp=Z,190nm,1.9s						
YULB				LR	LR		
	comp=Z,3μm,22.0s						
YOJ	Yonaguni jima	29.02	333	PFAKE		16 39 20.0	+10
YOJ				LR	LR		
	comp=Z,3μm,18.0s						
JOW	Kunigami	29.22	344	P	P	16 39 12.5	+0.4
	comp=Z,40nm,0.9s,baz=148,slow=11,SNR=9.8						
JOW	Kunigami	29.22	344	*e*P	P	16 39 12.4	+0.4
	comp=Z,211nm,1.5s						
JOW				LR	LR		
	comp=Z,3μm,20.0s						
TPUB	Ta-pu	29.24	328	*e*P	P	16 39 10.3	-2.0
	comp=Z,40nm,1.2s						
TPUB				LR	LR		
	comp=Z,2μm,22.0s						
NACB	Ninganchiao	29.46	330	*e*P	P	16 39 13.1	-1.2
	comp=Z,150nm,1.2s						
SSLB	Suanglung	29.46	329	*e*P	P	16 39 12.2	-2.2
	comp=Z,89nm,1.6s						
SSLB				LR	LR		
	comp=Z,3μm,18.0s						
CISI	Cisompet, Garu	29.88	257	PFAKE		16 39 30.0	+12
CISI				LR	LR		
	comp=Z,4μm,20.0s						
YHNB	Yeheng	29.98	330	*e*P	P	16 39 17.2	-1.8
	comp=Z,254nm,1.9s						
YHNB				LR	LR		
	comp=Z,4μm,20.0s						
TATO	Taipei	30.18	331	*e*P	P	16 39 19.4	-1.2
	comp=Z,155nm,1.3s						
TATO				LR	LR		
	comp=Z,4μm,20.0s						
FORT	Forrest	30.59	195	P	P	16 39 25.2	+1.1
	baz=31,SNR=39						
FORT	Forrest	30.59	195	*e*P	P	16 39 23.9	-0.3
	comp=Z,141nm,0.8s						
FORT				LR	LR		
	comp=Z,6μm,20.0s						
STKA	Stephens Creek	30.73	173	P	P	16 39 25.3	-0.1
	baz=31,SNR=48						
STKA	Stephens Creek	30.73	173	P	P	16 39 25.6	+0.2
	comp=Z,26nm,0.6s,baz=344,slow=9.0,SNR=37						
STKA				LR	LR	16 53 40.2	
	comp=Z,6μm,20.9s,baz=346,slow=40						
STKA	Stephens Creek	30.73	173	*e*P	P	16 39 24.9	-0.4
	comp=Z,14nm,0.7s						
STKA	Stephens Creek	30.73	173	*e*P	P	16 39 25.0	-0.4
STKA				pmax	pmax		
	comp=Z,15nm,0.7s						
GIRL	Giralia	30.77	225	P	P	16 39 24.4	-1.5
	baz=31,SNR=5.6						
MEEK	Meekatharra	30.88	214	P	P	16 39 26.6	-0.2
	baz=31,SNR=11						
CMSA	Cobar Meteorol	31.17	166	P	P	16 39 30.5	+1.2
	baz=31,SNR=50						
BBOO	Buckleboo	31.39	182	P	P	16 39 31.3	+0.1
	baz=32,SNR=11						
BBOO	Buckleboo	31.39	182	*e*P	P	16 39 31.2	-0.1
	comp=Z,221nm,1.3s						
BBOO				LR	LR		
	comp=Z,8μm,19.0s						
QZH	Quanzhou	31.66	327	⇑*i*P	P	16 39 33.5	-0.2
QZH				S	S	16 44 39.3	-2.8
QZH				pmax	pmax		
	comp=Z,480nm,2.5s						
QZH				LR	LR		
	comp=Z,3μm,18.5s						
QZH				LR	LR		
	comp=Z,2μm,14.7s						
QZH				LR	LR		
	comp=Z,5μm,31.3s						
HTT	Hallett	32.03	177	P	P	16 39 37.4	+0.5
	baz=32,SNR=20						
ARMA	Armidale	32.09	156	P	P	16 39 38.5	+1.0
	baz=32,SNR=18						
ARMA	Armidale	32.09	156	*e*P	P	16 39 38.7	+1.2
	comp=Z,239nm,1.8s						
ARMA				LR	LR		
	comp=Z,16μm,21.0s						
MDSI	Maura Dua	33.07	264	P	P	16 39 47.5	+1.3
KMBL	Kambalda	33.23	204	P	P	16 39 48.3	+0.9
	baz=33,SNR=5.9						
MYKOM	Kota Tinggi	33.43	275	*e*P	P	16 39 47.6	-1.7
MYKOM				LR	LR		
	comp=Z,3μm,20.0s						
MYKOM	Kota Tinggi	33.43	275	P	P	16 39 50.0	+0.7
GZH	Guangzhou	33.51	318	P	P	16 39 49.3	-0.6
GZH				S	S	16 45 09.3	-1.7
GZH				LR	LR		
	comp=Z,2μm,16.5s						
GZH				LR	LR		
	comp=Z,2μm,16.5s						
QIZ	Qiongzhong	33.56	308	P	P	16 39 49.9	-0.5
QIZ				PP	PP	16 41 06.8	+0.2
QIZ				S	S	16 45 09.8	-2.1
QIZ				ScS	ScS	16 50 17.0	+0.9
QIZ				pmax	pmax		
	comp=Z,310nm,6.9s						
QIZ				LR	LR		
	comp=Z,3μm,24.5s						
QIZ				LR	LR		
	comp=Z,2μm,19.1s						
QIZ				LR	LR		
	comp=Z,3μm,40.7s						
QIZ	Qiongzhong	33.56	308	*e*P	P	16 39 49.4	-1.0
	comp=Z,98nm,1.5s						
QIZ				LR	LR		
	comp=Z,3μm,20.0s						
MORW	Morawa	34.19	214	P	P	16 39 55.7	-0.1
	baz=34,SNR=6.3						
JHJ2	Mitsune	34.29	4	PFAKE		16 40 10.0	+13
JHJ2				LR	LR		
	comp=Z,4μm,18.0s						
MGCD	Mangrove Creek	34.37	159	P	P	16 39 58.4	+1.1
	baz=34,SNR=4.9						
YNG	Young	34.50	163	P	P	16 40 00.0	+1.6
	baz=35,SNR=72						
JNU	Nakatsue	34.72	351	P	P	16 40 00.7	+0.4
	comp=Z,52nm,0.9s,baz=163,slow=3.2,SNR=21						
JNU				LR	LR	16 54 29.0	
	comp=Z,2μm,18.2s,baz=135,slow=37						
JNU	Nakatsue	34.72	351	*e*P	P	16 40 00.3	0.0
	comp=Z,98nm,0.9s						
MASI	Maura Aman, Be	34.92	266	P	P	16 40 04.5	+2.1
	comp=Z,395nm,1.4s						
RIV	Riverview	34.95	159	P	P	16 40 03.3	+1.0
	baz=35,SNR=5.6						
BLDU	Ballidu	35.03	212	P	P	16 40 02.7	-0.4
	baz=35,SNR=9.0						
DZM	Mont Dzumac	35.22	128	P	P	16 40 04.2	-0.7
	comp=Z,7.6nm,1.0s,baz=305,slow=12,SNR=3.8						
DZM				LR	LR	16 54 26.8	
	comp=Z,5μm,21.8s,baz=304,slow=36						
DZM	Mont Dzumac	35.22	128	*e*P	P	16 40 10.7	+5.8
	comp=Z,67nm,1.0s						
DZM				*e*S	S	16 45 42.8	+5.1
	comp=Z,2μm,29.3s						
DZM				*e*LR	LR	16 49 42.5	
	comp=Z,10μm,25.2s						
DZM	Mont Dzumac	35.22	128	*e*P	P	16 40 05.7	+0.8
	comp=Z,36nm,1.1s						
KLBR	Kellerberrin	35.29	209	P	P	16 40 05.1	-0.2
	baz=35,SNR=21						
WAKE	Wake Island	35.45	53	PFAKE		16 40 20.0	+13
WAKE				LR	LR		
	comp=Z,2μm,18.0s						
SSE	Sheshan	35.58	336	P	P	16 40 07.3	-0.4
SSE				PP	PnPn	16 41 26.4	-0.9
SSE				S	S	16 45 41.8	-1.0
SSE				pmax	pmax		
	comp=Z,66nm,0.8s						
SSE				pmax	pmax		
	comp=Z,280nm,3.5s						
SSE				LR	LR		
	comp=Z,850nm,22.2s						
ARPS	Mount Arapiles	35.59	174	P	P	16 40 08.6	+0.9
	baz=36,SNR=25						
CAN	Canberra	35.63	163	*e*P	P	16 40 08.3	+0.1
	comp=Z,245nm,1.4s						
CAN				LR	LR		
	comp=Z,16μm,19.0s						
CAN	Canberra	35.63	163	*e*P	P	16 40 08.3	+0.1
CAN				pmax	pmax		
	comp=Z,240nm,1.4s						
KRJI	Kerinci	35.67	268	P	P	16 40 09.6	+0.7
	comp=Z,311nm,1.0s,comp=Z,4μm						
CNB	Canberra Magne	35.73	163	P	P	16 40 10.5	+1.4
	baz=36,SNR=15						
TARA	Tarawa	35.87	86	PFAKE		16 40 20.0	+9.5
TARA				LR	LR		
	comp=Z,4μm,18.0s						
BKNI	Bangkinang	36.13	272	PFAKE		16 40 20.0	+7.2
BKNI				LR	LR		
	comp=Z,3μm,21.0s						
MUN	Mundaring	36.37	211	P	P	16 40 14.1	-0.5
	baz=36,SNR=8.0						
INU	Inuyama	36.43	360	*e*P	P	16 40 14.4	-0.5
	comp=Z,33nm,1.1s						
INU				LR	LR		
	comp=Z,2μm,20.0s						
LHI	Lord Howe Isla	36.53	148	PFAKE		16 40 30.0	+14
LHI				LR	LR		
	comp=Z,5μm,19.0s						
IPM	Ipoh	36.54	279	*e*P	P	16 40 14.1	-2.1
	comp=Z,41nm,1.0s						
IPM				LR	LR		
	comp=Z,2μm,21.0s						
NWAO	Narrogin (SRO)	36.63	209	P	P	16 40 16.7	0.0
	baz=37,SNR=12						
NWAO	Narrogin (SRO)	36.63	209	P	P	16 40 16.6	-0.1
	comp=Z,25nm,0.6s,baz=16,slow=18,SNR=16						
NWAO				LR	LR	16 56 56.8	

	comp=Z,7µm,19.4s,baz=267,slow=39						
NWAO	**Narrogin (SRO)**	**36.63**	**209**	*e*P	**P**	**16 40 14.7**	**-2.0**
	comp=Z,293nm,1.4s						
NWAO	**Narrogin (SRO)**	**36.63**	**209**	P	P	16 40 24.5	+7.8
	SNR=6.6						
NWAO	**Narrogin (SRO)**	**36.63**	**209**	*e*P	**P**	**16 40 14.7**	**-2.0**
NWAO				pmax	pmax		
	comp=Z,290nm,1.3s						
TOO	**Toolangi**	**36.93**	**169**	P	**P**	**16 40 20.5**	**+1.2**
	baz=37,SNR=14						
KULM	**Kulim**	**37.03**	**280**	*e*P	**P**	**16 40 18.2**	**-2.2**
	comp=Z,29nm,0.9s						
KULM				LR	LR		
	comp=Z,2µm,20.0s						
KULM	**Kulim**	**37.03**	**280**	P	**P**	**16 40 20.0**	**-0.4**
MILA	**Mila**	**37.30**	**164**	P	**P**	**16 40 25.5**	**+3.1**
	baz=37,SNR=13						
SKNT	**Sakolnakorn**	**37.39**	**300**	P	**P**	**16 40 22.8**	**-0.6**
	comp=Z,36nm,0.9s						
SKLT	**Songkhla**	**37.39**	**283**	P	**P**	**16 40 24.6**	**+1.1**
	comp=Z,28nm,1.0s,comp=Z,1µm						
NJ2	**Nanjing**	**37.40**	**334**	*e*P	**P**	**16 40 24.3**	**+1.1**
NJ2				pP	**pP**	**16 40 26.3**	**-3.1**
NJ2				sP	**sP**	**16 40 30.8**	**-1.0**
NJ2				PP	**PP**	**16 41 47.8**	**-1.0**
NJ2				S	**S**	**16 46 11.4**	**+0.9**
NJ2				pmax	pmax		
	comp=Z,66nm,0.9s						
NJ2				pmax	pmax		
	comp=Z,530nm,3.5s						
NJ2				LR	LR		
	comp=Z,3µm,17.4s						
NJ2				LR	LR		
	comp=Z,5µm,17.3s						
NJ2				LR	LR		
	comp=Z,4µm,25.0s						
MNSI	**Mandailing Nat**	**37.62**	**273**	P	**P**	**16 40 25.4**	**0.0**
	comp=Z,89nm,0.8s						
MJAR	**Matsushiro Arr**	**37.63**	**1**	P	**P**	**16 40 24.7**	**-0.5**
	comp=Z,3.6nm,0.8s,baz=184,slow=9.5,SNR=8.3						
MAJO	**Matsushiro**	**37.63**	**1**	*e*P	**P**	**16 40 23.7**	**-1.5**
	comp=Z,25nm,1.0s						
MAJO	**Matsushiro**	**37.63**	**1**	*i* P	**P**	**16 40 25.8**	**+0.6**
MAJO				pmax	pmax		
	comp=Z,11nm,0.9s						
MAT	**Matsushiro**	**37.63**	**1**	P	**P**	**16 40 25.3**	**+0.1**
MAT				S	**S**	**16 46 13.4**	**-0.7**
MJB9	**Matsu-Tunnel**	**37.64**	**1**	*e*P	**P**	**16 40 23.9**	**-1.4**
	comp=Z,23nm,0.9s						
SRAK	**Srakaew**	**37.94**	**295**	P	P	16 40 22.5	-5.6
SISI	**Saibi**	**38.04**	**269**	P	**P**	**16 40 28.2**	**-0.8**
	comp=Z,237nm,0.9s						
KHON	**Khomkaen**	**38.13**	**299**	P	**P**	**16 40 29.4**	**-0.2**
	comp=Z,38nm,1.0s,comp=Z,1µm						
WHN	**Wuhan**	**38.37**	**327**	⇑*i*P	**P**	**16 40 32.8**	**+1.3**
WHN				PP	**PnPn**	**16 42 02.1**	**+0.8**
WHN				S	**S**	**16 46 27.1**	**+1.8**
WHN				pmax	pmax		
	comp=Z,250nm,1.5s						
WHN				pmax	pmax		
	comp=Z,1µm,8.9s						
WHN				LR	LR		
	comp=Z,5µm,13.6s						
WHN				LR	LR		
	comp=Z,2µm,12.4s						
WHN				LR	LR		
	comp=Z,5µm,17.8s						
PSI	**Prapat**	**38.42**	**276**	*e*P	**P**	**16 40 29.4**	**-2.9**
	comp=Z,164nm,1.0s						
PSI				LR	LR		
	comp=Z,2µm,21.0s						
PSI	**Prapat**	**38.42**	**276**	*e*P	**P**	**16 40 29.4**	**-2.9**
PSI				pmax	pmax		
	comp=Z,160nm,1.0s						
TRTT	**Trang**	**38.43**	**284**	P	**P**	**16 40 32.0**	**-0.2**
	comp=Z,20nm,1.1s,comp=Z,454nm						
TJN	**Taejon**	**38.55**	**347***c*	*i*P	**P**	**16 40 32.4**	**-0.5**
NONG	**Nongkai**	**38.58**	**301**	P	**P**	**16 40 32.4**	**-1.0**
	comp=Z,1.2nm,0.9s						
NAYO	**Nakonayok**	**38.70**	**295**	P	**P**	**16 40 34.1**	**-0.4**
	comp=Z,0.5nm,1.2s						
TSI	**Tuntungan**	**38.85**	**277**	P	**P**	**16 40 36.0**	**+0.2**
	comp=Z,220nm,1.2s,comp=Z,3µm						
KS15	**Wonju Array Si**	**39.46**	**348**	*e*P	**P**	**16 40 41.0**	**+0.5**
KSAR	**Wonju Array Be**	**39.46**	**348**	P	**P**	**16 40 40.9**	**+0.4**
KSAR				PcP	**PcP**	**16 42 49.1**	**+0.8**
KSAR	**Wonju Array Be**	**39.46**	**348**	P	**P**	**16 40 40.9**	**+0.4**
KSAR						16 42 49.1	
KSRS	**Korea Array**	**39.47**	**348**	P	**P**	**16 40 40.9**	**+0.3**
	comp=Z,9.9nm,1.0s,baz=167,slow=9.6,SNR=39						
KSRS				PcP	**PcP**	**16 42 49.1**	**+0.8**
	comp=Z,3.8nm,0.8s,baz=190,slow=3.5,SNR=4.5						
KS01	**Wonju Array Si**	**39.49**	**348**	*e*P	**P**	**16 40 40.3**	**-0.5**
KCSI	**Kotacane, Aceh**	**39.64**	**277**	P	**P**	**16 40 40.9**	**-1.5**
	comp=Z,100nm,0.9s,comp=Z,1µm						
GSI	**Gunungsitoli**	**39.65**	**274**	P	**P**	**16 40 41.1**	**-1.4**
	comp=Z,134nm,1.4s						
GSI	**Gunungsitoli**	**39.65**	**274**	*e*P	**P**	**16 40 40.2**	**-2.2**
	comp=Z,308nm,1.5s						
INCN	**Inchon**	**39.77**	**347**	*e*P	**P**	**16 40 42.8**	**-0.3**
	comp=Z,49nm,1.1s						
INCN				LR	LR		
	comp=Z,2µm,19.0s						
INCN	**Inchon**	**39.77**	**347**	*e*P	**P**	**16 40 42.8**	**-0.3**
INCN				pmax	pmax		
	comp=Z,49nm,1.1s						
INCN				MLR	MLR		
	comp=Z,2µm,19.0s						
PHET	**Kaeng Krachan**	**39.79**	**292**	P	**P**	**16 40 43.6**	**0.0**
	comp=Z,20nm,1.1s,comp=Z,152nm						
PBKT	**Sadao Pong**	**39.85**	**298**	P	**P**	**16 40 43.9**	**-0.2**
	comp=Z,24nm,0.9s						
TPTI		**40.20**	**277**	P	**P**	**16 40 47.5**	**+0.5**
	comp=Z,131nm,1.4s,comp=Z,2µm						
GYA	**Guiyang**	**40.30**	**315**	⇑*i*P	**P**	**16 40 48.3**	**+0.4**
GYA				pP	pP	16 40 53.6	-0.4
GYA				PP	**PnPn**	**16 42 26.0**	**+1.4**
GYA				PcP	**PcP**	**16 42 53.9**	**+2.5**
GYA				SS	SS	16 49 49.3	-4.5
GYA				ScS	**ScS**	**16 50 53.3**	**-0.6**
GYA				pmax	pmax		
	comp=Z,40nm,1.0s						
GYA				pmax	pmax		
	comp=Z,390nm,6.7s						
GYA				LR	LR		
	comp=Z,3µm,29.3s						
GYA				LR	LR		
	comp=Z,2µm,18.8s						
GYA				LR	LR		
	comp=Z,3µm,20.9s						
PHIT	**Phitsanulok**	**40.58**	**299**	P	**P**	**16 40 52.2**	**+2.1**
	comp=Z,24nm,0.9s						
LHMI	**Lhok Sumawe**	**40.66**	**279**	P	**P**	**16 40 51.5**	**+0.6**
	comp=Z,239nm,1.2s,comp=Z,3µm						
LHMI	**Lhok Sumawe**	**40.66**	**279**	*e*P	**P**	**16 40 49.2**	**-1.7**
	comp=Z,288nm,1.1s						
UTTA	**Uttaradit**	**40.68**	**299**	P	**P**	**16 40 50.5**	**-0.4**
	comp=Z,10nm,0.8s,comp=Z,96nm						
SRDT	**SRDT**	**40.72**	**294**	P	**P**	**16 40 51.5**	**+0.2**
	comp=Z,54nm,1.1s,comp=Z,2µm						
SNSI	**Sinabang, Aceh**	**40.97**	**275**	P	P	16 41 01.3	+7.9
ENH	**Enshi**	**40.97**	**322**	*e*P	**P**	**16 40 53.2**	**0.0**
	comp=Z,98nm,1.1s						
ENH				LR	LR		
	comp=Z,2µm,20.0s						
NANT	**Nan**	**40.99**	**301**	P	**P**	**16 40 53.2**	**-0.3**
	comp=Z,15nm,1.1s,comp=Z,188nm						
MLSI	**Meulaboh, Aceh**	**41.08**	**278**	P	**P**	**16 40 55.4**	**+1.1**
	comp=Z,311nm,1.3s,comp=Z,4µm						
UMPA	**Umpang Tak**	**41.59**	**296**	P	**P**	**16 40 58.3**	**-0.2**
	comp=Z,12nm,1.0s,comp=Z,111nm						
TIA	**Tai'an**	**41.69**	**335**	P	**P**	**16 40 59.3**	**+0.3**
TIA				S	**S**	**16 47 13.8**	**-1.2**
TIA				SS	**SS**	**16 50 15.3**	**-5.6**
TIA				pmax	pmax		
	comp=Z,44nm,1.3s						
TIA				LR	LR		
	comp=Z,2µm,17.5s						
TIA				LR	LR		
	comp=Z,3µm,18.2s						
TIA				LR	LR		
	comp=Z,3µm,28.4s						
LAMP	**Lampang**	**41.80**	**300**	P	**P**	**16 41 00.2**	**+0.1**
	comp=Z,16nm,0.8s,comp=Z,142nm						
PAYA	**Payao**	**41.94**	**301**	P	**P**	**16 41 00.8**	**-0.5**
	comp=Z,30nm,0.7s,comp=Z,218nm						
MOO	**Moorlands**	**41.97**	**169**	P	**P**	**16 41 02.6**	**+1.4**
	baz=42,SNR=6.0						
CM01	**Chiang Mai Arr**	**42.34**	**299**	*e*P	**P**	**16 41 04.2**	**-0.4**
CM31	**Chiang Mai Arr**	**42.37**	**299**	*e*P	**P**	**16 41 03.0**	**-1.8**
CMAR	**Chiang Mai Arr**	**42.37**	**299**	P	**P**	**16 41 04.8**	**0.0**
	comp=Z,13nm,0.7s,baz=114,slow=6.5,SNR=109						
CMAR				LR	LR	17 00 33.4	
	comp=Z,1µm,18.3s,baz=105,slow=39						
KMI	**Kunming**	**42.40**	**311**	P	**P**	**16 41 05.9**	**+0.7**
KMI				pP	pP	16 41 09.6	-1.8
KMI				sP	sP	16 41 11.6	-2.3
KMI				PP	**PP**	**16 42 46.3**	**+2.6**
KMI				S	**S**	**16 47 25.6**	**-0.6**
KMI				SS	**SS**	**16 50 34.1**	**-1.5**
KMI				pmax	pmax		
	comp=Z,42nm,1.5s						
KMI				pmax	pmax		
	comp=Z,570nm,5.7s						
KMI				LR	LR		
	comp=Z,1µm,18.2s						
KMI				LR	LR		
	comp=Z,2µm,21.9s						
KMI				LR	LR		
	comp=Z,3µm,22.4s						
TAU	**Tasmania Unive**	**42.45**	**169**	*e*P	**P**	**16 41 05.2**	**+0.2**
	comp=Z,129nm,1.1s						
TAU				LR	LR		
	comp=Z,19µm,18.0s						
TAU	**Tasmania Unive**	**42.45**	**169**	*e*P	**P**	**16 41 05.2**	**+0.2**
TAU				pmax	pmax		
	comp=Z,130nm,1.1s						
DL2	**Dalian**	**42.45**	**342**	P	**P**	**16 41 06.1**	**+1.0**
DL2				S	**S**	**16 47 26.6**	**+0.6**
DL2				pmax	pmax		
	comp=Z,53nm,1.1s						
DL2				pmax	pmax		
	comp=Z,480nm,5.9s						
DL2				LR	LR		
	comp=Z,2µm,16.9s						
DL2				LR	LR		
	comp=Z,2µm,17.3s						
DL2				LR	LR		
	comp=Z,2µm,22.2s						
CMMT	**Chiang Mai**	**42.51**	**300**	P	**P**	**16 41 05.5**	**-0.4**
	comp=Z,29nm,1.7s,comp=Z,830nm						
CHTO	**Chiang Mai**	**42.51**	**300**	*e*P	**P**	**16 41 05.2**	**-0.7**
	comp=Z,52nm,1.3s						
CHTO				LR	LR		
	comp=Z,2µm,20.0s						
CHTO	**Chiang Mai**	**42.51**	**300**	*e*P	**P**	**16 41 05.3**	**-0.7**
CHTO				pmax	pmax		
	comp=Z,52nm,1.2s						
CHTO	**Chiang Mai**	**42.51**	**300**	P	**P**	**16 41 05.6**	**-0.4**
	comp=Z,130nm,1.7s,comp=Z,4µm						
ERM	**Erimo**	**43.43**	**7**	*i* P	**P**	**16 41 14.3**	**+1.3**
ERM				pmax	pmax		
	comp=Z,16nm,1.3s						
CMBY	**CAMPBELL BAY**	**43.90**	**281**	*e*P	**P**	**16 41 14.5**	**-2.8**
MSHR	**Mys Shultsa**	**43.98**	**354***c*	*i*P	**P**	**16 41 18.4**	**+0.9**
XAN	**Xi'an**	**44.01**	**326**	P	**P**	**16 41 18.0**	**+0.1**
XAN				sP	pP	16 41 24.4	+0.3
XAN				PP	**PP**	**16 43 00.4**	**-0.3**
XAN				S	**S**	**16 47 44.3**	**-4.9**
XAN				SS	**SS**	**16 51 05.4**	**-1.2**
XAN				ScS	**ScS**	**16 51 15.8**	**-0.4**
XAN				pmax	pmax		
	comp=Z,49nm,1.3s						
XAN				pmax	pmax		
	comp=Z,580nm,3.1s						
XAN				LR	LR		
	comp=Z,2µm,17.2s						
XAN				LR	LR		
	comp=Z,2µm,14.7s						
XAN				LR	LR		
	comp=Z,3µm,23.1s						
SNY	**Shenyang**	**44.63**	**346**	⇑P	**P**	**16 41 23.0**	**+0.4**
SNY				S	**S**	**16 47 57.9**	**+0.2**
SNY				pmax	pmax		
	comp=Z,34nm,2.5s						
SNY				pmax	pmax		
	comp=Z,380nm,3.8s						
SNY				LR	LR		
	comp=Z,2µm,15.8s						
SNY				LR	LR		
	comp=Z,2µm,18.7s						
SNY				LR	LR		
	comp=Z,2µm,19.2s						
TIY	**Taiyuan**	**45.02**	**332**	*e*P	**P**	**16 41 26.0**	**0.0**
TIY				PP	**PP**	**16 43 16.3**	**+4.9**
TIY				S	**S**	**16 48 04.1**	**+0.3**
TIY				SS	**ScS**	**16 51 17.5**	**-5.0**
TIY				LR	LR		
	comp=Z,1µm,13.0s						
TIY				LR	LR		
	comp=Z,960nm,14.3s						
TIY				LR	LR		
	comp=Z,2µm,16.4s						
CD2	**Chengdu**	**45.07**	**318**	⇑*i*P	**P**	**16 41 27.0**	**+0.6**
CD2				pP	pP	16 41 30.9	-1.8
CD2				sP	sP	16 41 32.6	-2.5
CD2				PP	**PP**	**16 43 12.8**	**+0.8**
CD2				S	**S**	**16 48 04.0**	**-0.7**
CD2				sS	sS	16 48 13.8	-1.1
CD2				pmax	pmax		
	comp=Z,100nm,0.9s						
CD2				pmax	pmax		
	comp=Z,920nm,3.5s						
CD2				LR	LR		
	comp=Z,3µm,16.9s						
CD2				LR	LR		
	comp=Z,2µm,17.1s						
CD2				LR	LR		
	comp=Z,3µm,16.9s						
BJT	**Baijiatuau**	**45.35**	**337**	*e*P	**P**	**16 41 28.0**	**-0.4**
	comp=Z,260nm,1.6s						
BJT				LR	LR		
	comp=Z,3µm,20.0s						
BJT	**Baijiatuau**	**45.35**	**337**	*e*P	**P**	**16 41 28.0**	**-0.4**
BJT				pmax	pmax		
	comp=Z,260nm,1.6s						
BJT				MLR	MLR		
	comp=Z,3µm,20.0s						
BJI	**Beijing**	**45.37**	**337**	⇑*i*P	**P**	**16 41 28.8**	**+0.3**
BJI				PP	**PP**	**16 43 16.3**	**+1.4**
BJI				S	**S**	**16 48 07.8**	**-0.7**
BJI				SS	**ScS**	**16 51 28.1**	**+3.7**
BJI				pmax	pmax		
	comp=Z,93nm,1.2s						
BJI				LR	LR		
	comp=Z,3µm,21.9s						
BJI				LR	LR		
	comp=Z,6µm,23.0s						
BJI				LR	LR		
	comp=Z,6µm,34.3s						
ASAJ	**Asahikawa**	**45.45**	**6**	P	**P**	**16 41 30.3**	**+1.2**
	comp=Z,13nm,0.8s,baz=220,slow=10,SNR=19						
ASAJ	**Asahikawa**	**45.45**	**6**	*e*P	**P**	**16 41 29.9**	**+0.8**
	comp=Z,95nm,1.3s						
USRK	**Ussuriysk Ar.**	**45.50**	**355**	P	**P**	**16 41 29.9**	**+0.3**
	comp=Z,7.1nm,0.7s,baz=181,slow=7.4						
USRK				LR	LR	16 59 21.2	
	comp=Z,2µm,18.6s,baz=157,slow=35						
YUK	**Yuzh-Kuril'sk**	**45.77**	**9**	P	P	16 41 40.4	+8.7
YUK				*e*S	S	16 48 25.2	+11
YUK				*e*SSS	SSS	16 52 37.8	
YUK				pmax	pmax		
	comp=Z,109nm,1.1s						
YUK				pmax	pmax		
	comp=Z,121nm,1.2s						
PBA	**Port Blair**	**45.95**	**288**	PFAKE		16 41 40.0	+6.5
PBA				LR	LR		
	comp=Z,3µm,20.0s						
CN2	**Changchun**	**46.08**	**348**	*e*P	**P**	**16 41 34.1**	**0.0**
CN2				*e*sP	pP	16 41 41.1	+0.7
CN2				*e*S	**S**	**16 48 17.9**	**-0.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,2µm,17.0s						
CN2				LR	LR		
	comp=Z,4µm,17.0s						
CN2				LR	LR		
	comp=Z,2µm,20.0s						
TEY	**Ternei**	**46.11**	**359**	⇑*e*P	**P**	**16 41 35.6**	**+1.3**
TEY				pmax	pmax		
	comp=Z,70nm,0.9s						
MDJ	**Mudanjiang**	**46.18**	**353**	P	**P**	**16 41 33.3**	**-1.6**
MDJ				ScP	**ScP**	**16 47 00.5**	**-2.5**
MDJ				S	**S**	**16 48 17.6**	**-2.6**
MDJ				pmax	pmax		
	comp=Z,54nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,340nm,2.7s						
MDJ				LR	LR		
	comp=Z,1µm,15.9s						
MDJ				LR	LR		
	comp=Z,730nm,17.4s						
MDJ				LR	LR		
	comp=Z,2µm,17.5s						
MDJ	**Mudanjiang**	**46.18**	**353**	*e*P	**P**	**16 41 35.1**	**+0.2**
	comp=Z,42nm,0.8s						
KUR	**Kuril'sk**	**47.27**	**10***c*	*i*P	**P**	**16 41 45.5**	**+2.1**
KUR				*i* S	**S**	**16 48 37.1**	**+1.4**
KUR				pmax	pmax		
	comp=Z,725nm,4.1s						
KUR				pmax	pmax		
	comp=N,84nm,1.3s						
KUR				pmax	pmax		
	comp=E,89nm,1.3s						
KUR				pmax	pmax		
	comp=Z,325nm,1.3s						
KUR				MLR	MLR		
	comp=Z,525nm,14.0s						
KUR				MLR	MLR		
	comp=N,600nm,13.0s						
KUR				MLR	MLR		
	comp=E,323nm,18.0s						
OUZ	**Omahuta**	**47.85**	**139**	PFAKE		16 42 00.0	+12
OUZ				LR	LR		
	comp=Z,5µm,21.0s						
HHC	**Hu-ho-hao-te**	**47.95**	**334**	*e*P	**P**	**16 41 49.8**	**+0.8**
HHC				pP	pP	16 41 54.4	-0.8
HHC				PP	**PP**	**16 43 40.0**	**-1.2**
HHC				S	**S**	**16 48 47.0**	**+1.2**
HHC				sS	sS	16 48 55.4	-0.7
HHC				SS	**SS**	**16 52 15.6**	**+0.7**
HHC				pmax	pmax		
	comp=Z,62nm,1.0s						
HHC				pmax	pmax		
	comp=Z,370nm,5.2s						
HHC				LR	LR		
	comp=Z,2µm,17.8s						
HHC				LR	LR		
	comp=Z,2µm,17.1s						
HHC				LR	LR		
	comp=Z,2µm,18.0s						
YSS	**Yuzh-Sakhalins**	**48.28**	**5**	*e*P	**P**	**16 41 51.6**	**+0.4**
	comp=Z,58nm,0.9s						
YSS	**Yuzh-Sakhalins**	**48.28**	**5**κ	*e*P	**P**	**16 41 52.5**	**+1.3**
YSS				*e**SP	**pP**	**16 41 57.5**	**+0.1**
YSS				*e*		16 43 21.2	
YSS				*e*		16 43 48.0	
YSS				*i* S	**S**	**16 48 49.1**	**-0.8**
YSS				*e*		16 49 01.9	
YSS				*e*		16 51 45.0	
YSS				*e*		16 53 27.1	
YSS				pmax	pmax		
	comp=Z,30nm,1.1s						
YSS				pmax	pmax		
	comp=N,30nm,1.0s						
YSS				pmax	pmax		
	comp=E,20nm,1.5s						
YSS				pmax	pmax		
	comp=N,200nm,2.5s						
YSS				pmax	pmax		
	comp=Z,200nm,2.5s						
YSS				smax	smax		
	comp=N,300nm,10.6s						
YSS				smax	smax		
	comp=E,400nm,12.2s						
YSS				MLR	MLR		
	comp=N,900nm,17.0s						
YSS				MLR	MLR		
	comp=Z,700nm,17.0s						
LZH	**Lanzhou**	**48.40**	**324**	⇑P	**P**	**16 41 53.8**	**+1.2**
LZH				pP	pP	16 41 57.8	-1.0
LZH				sP	sP	16 42 00.6	-0.7
LZH				PP	**PP**	**16 43 47.8**	**+2.4**
LZH				S	**S**	**16 48 54.0**	**+1.6**
LZH				sS	sS	16 49 01.6	-1.1
LZH				SS	**SS**	**16 52 19.4**	**-3.0**
LZH				pmax	pmax		
	comp=Z,150nm,1.4s						
LZH				pmax	pmax		
	comp=Z,1µm,6.2s						
LZH				LR	LR		
	comp=Z,3µm,16.0s						
LZH				LR	LR		
	comp=Z,3µm,15.4s						
LZH				LR	LR		
	comp=Z,6µm,17.5s						
BTO	**Baotou**	**48.46**	**332**	*e*P	**P**	**16 41 52.3**	**-0.6**
SAIH	**SAIHA**	**49.08**	**302**	*e*P	**P**	**16 41 58.0**	**0.0**
MOKO	**MOKOCHONG**	**49.42**	**307**	*e*P	**P**	**16 41 59.7**	**-0.8**
MOKO				IAmb	IAmb	16 42 04.7	
	comp=Z,45nm,1.0s						
KOHI	**KOHIMA**	**49.48**	**306**	*e*P	**P**	**16 41 57.5**	**-3.5**
KOHI				IAmb	IAmb	16 42 03.6	
BRDH	**Bariadhala**	**50.30**	**301**	LR	LR	17 03 50.5	
	comp=Z,865nm,21.5s,baz=140,slow=37						
ZIRO	**ZIRO**	**50.50**	**308**	*e*P	**P**	**16 42 09.2**	**+0.4**
KLR	**Kul'dur**	**50.52**	**355***c*	*i*P	**P**	**16 42 09.3**	**+1.0**
QRZ	**Quartz Range**	**50.74**	**145**	P	**P**	**16 42 13.8**	**+3.6**
TEZP	**TEZPUR**	**50.93**	**306**	*e*P	**P**	**16 42 11.2**	**-0.6**
DSZ	**Denniston Nort**	**50.95**	**147**	P	**P**	**16 42 16.0**	**+4.2**
VRZ	**Vera Road**	**50.96**	**142**	P	P	16 42 18.2	+6.3
JCZ	**Jackson Bay**	**51.04**	**151**	P	**P**	**16 42 16.5**	**+4.0**
SHL	**Shillong**	**51.23**	**305**	*e*P	**P**	**16 42 13.0**	**-1.3**
	comp=Z,84nm,1.2s						
SHL	**Shillong**	**51.23**	**305**	*e*P	**P**	**16 42 13.1**	**-1.3**
SHL				IAmb	IAmb	16 42 14.4	
	comp=Z,22nm,0.8s						
SHL	**Shillong**	**51.23**	**305**	*e*P	**P**	**16 42 13.0**	**-1.3**
SHL				pmax	pmax		
	comp=Z,84nm,1.2s						
THZ	**Tophouse**	**51.57**	**146**	PFAKE		16 42 30.0	+14
THZ				LR	LR		
	comp=Z,7µm,19.0s						
THZ	**Tophouse**	**51.57**	**146**	P	**P**	**16 42 18.8**	**+2.4**
GUWA	**GUWAHATI**	**51.65**	**305**	*e*P	**P**	**16 42 17.1**	**-0.1**
GUWA				IAmb	IAmb	16 42 26.2	
	comp=Z,587nm,2.8s						
GRNR	**Gornyy**	**51.85**	**359**	*e*P	**P**	**16 42 22.2**	**+3.9**
GRNR				pmax	pmax		
	comp=Z,39nm,1.0s						
LTZ	**Lake Taylor**	**51.91**	**147**	PFAKE		16 42 30.0	+11
LTZ				LR	LR		
	comp=Z,5µm,21.0s						
RPZ	**Rata Peaks**	**51.92**	**149**	*e*P	**P**	**16 42 19.2**	**+0.3**
	comp=Z,105nm,1.0s						
URZ	**Urewera**	**51.92**	**140**	PFAKE		16 42 30.0	+11
URZ				LR	LR		
	comp=Z,4µm,19.0s						
LBZ	**Lake Benmore**	**51.96**	**150**	*e*P	**P**	**16 42 18.6**	**-0.6**
	comp=Z,423nm,2.0s						
BHHZ	**Black Hill Sta**	**51.99**	**142**	P	**P**	**16 42 22.4**	**+2.8**
AFI	**Afiamalu**	**52.04**	**107**	LR	LR	17 03 34.9	
	comp=Z,3µm,21.0s,baz=273,slow=35						
BKZ	**Black Stump Fm**	**52.06**	**141**	*e*P	**P**	**16 42 20.5**	**+0.4**
	comp=Z,59nm,0.9s						
BKZ				LR	LR		
	comp=Z,4µm,20.0s						
BKZ	**Black Stump Fm**	**52.06**	**141**	P	**P**	**16 42 22.5**	**+2.3**
MTHZ	**Maungataniwha**	**52.09**	**141**	P	**P**	**16 42 23.8**	**+3.4**
RUGZ	**Raukumara Rang**	**52.12**	**139**	P	**P**	**16 42 24.7**	**+4.0**
TYV	**Tymovskoe**	**52.15**	**4**	*e*P	**P**	**16 42 20.6**	**+0.1**
TYV				*e*		16 49 46.7	
TYV				pmax	pmax		
	comp=Z,500nm,3.7s						
TYV				pmax	pmax		
	comp=Z,43nm,1.0s						
TYV				MLR	MLR		
	comp=Z,10µm,19.0s						
TYV				MLR	MLR		
	comp=E,800nm,20.0s						
OXZ	**Oxford**	**52.16**	**148**	PFAKE		16 42 30.0	+9.2
OXZ				LR	LR		
	comp=Z,4µm,20.0s						
MWZ	**Matawai**	**52.23**	**140**	P	**P**	**16 42 21.8**	**+0.4**
KRHZ	**Kereru**	**52.27**	**142**	P	**P**	**16 42 22.8**	**+1.1**

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TSZ   Takapari Road    52.27 143   P       P        16 42 22.5 +0.8
RAHZ  Arahi            52.28 141   P       P        16 42 24.5 +2.7
SNZO  South Karori     52.30 145   PFAKE            16 42 30.0 +8.2
SNZO                               LR      LR
      comp=Z,6μm,21.0s
PNHZ  Pukenui          52.33 142   P       P        16 42 24.8 +2.7
KHZ   Kahutara         52.36 146   PFAKE            16 42 30.0 +7.8
KHZ                                LR      LR
      comp=Z,9μm,19.0s
SNGZ  Shannon Statio   52.37 140   P       P        16 42 23.9 +1.5
MRZ   Mangatainoka R   52.41 143   P       P        16 42 24.9 +2.3
HOWZ  Holdsworth Sta   52.52 144   P       P        16 42 26.1 +2.6
WMGZ  Waiomatatini S   52.52 139   P       P        16 42 28.2 +4.7
HIA   Hailar           52.53 346   PFAKE            16 42 40.0  +17
HIA                                LR      LR
      comp=Z,1μm,22.0s
MIDW  Midway           52.54  52   PFAKE            16 42 40.0  +16
MIDW                               LR      LR
      comp=Z,2μm,21.0s
KAHZ  Kahuranaki       52.67 142   P       P        16 42 27.9 +3.3
KNZ   Kokohu           52.72 140   P       P        16 42 29.7 +4.7
BFZ   Birch Farm       52.82 143   PFAKE            16 42 40.0  +14
BFZ                                LR      LR
      comp=Z,5μm,19.0s
BFZ   Birch Farm       52.82 143   P       P        16 42 28.9 +3.2
GTA   Gaotai           52.99 324 ⇑P      P        16 42 27.8 +0.7
GTA                                pP      pP       16 42 32.3  -1.1
GTA                                sP      sP       16 42 35.3  -0.6
GTA                                S       S        16 49 57.6 +1.6
GTA                                sS      sS       16 50 04.9  -1.5
GTA                                ScS     ScS      16 52 17.0 +0.8
GTA                                SS      SS       16 53 35.8 +0.3
GTA                                pmax    pmax
      comp=Z,18nm,1.7s
GTA                                pmax    pmax
      comp=Z,420nm,4.9s
GTA                                LR      LR
      comp=Z,1μm,15.8s
GTA                                LR      LR
      comp=Z,2μm,18.6s
GTA                                LR      LR
      comp=Z,2μm,20.6s
LSA   Lhasa            53.60 309   P       P        16 42 33.3 +1.1
LSA                                S       S        16 50 00.1  -5.1
LSA                                pmax    pmax
      comp=Z,32nm,0.7s
LSA                                LR      LR
      comp=Z,1μm,21.7s
LSA   Lhasa            53.60 309  eP       P        16 42 31.4  -0.8
      comp=Z,40nm,0.9s
LSA                                LR      LR
      comp=Z,1μm,19.0s
LSA   Lhasa            53.60 309  i P      P        16 42 33.1 +0.9
      SNR=19
LSA   Lhasa            53.60 309  eP       P        16 42 31.4  -0.8
LSA                                pmax    pmax
      comp=Z,40nm,0.9s
LSA                                MLR     MLR
      comp=Z,1μm,19.0s
SKR   Severo-Kuril's   54.24  15  eP       P        16 42 34.6  -1.2
SKR                               e                 16 42 51.6
SKR                               eS       S        16 50 04.3  -7.8
SKR                               eSS      ScS      16 52 26.4 +2.3
SKR                               eSSS     SSS      16 55 56.4
SKR                                pmax    pmax
      comp=Z,400nm,4.3s
SKR                                pmax    pmax
      comp=Z,88nm,1.1s
SKR                                MLR     MLR
      comp=Z,400nm,19.0s
SKR                                MLR     MLR
      comp=Z,600nm,18.0s
NKL   Nikolayevsk      54.31   3  eP       P        16 42 37.0 +0.7
NKL                               eS       S        16 50 16.0 +3.0
NKL                               e                 16 52 22.0
NKL                                pmax    pmax
      comp=Z,60nm,1.0s
NKL                                pmax    pmax
      comp=N,400nm,3.0s
NKL                                pmax    pmax
      comp=Z,500nm,3.0s
NKL                                smax    smax
      comp=N,500nm,11.0s
NKL                                smax    smax
      comp=E,1μm,11.0s
NKL                                MLR     MLR
      comp=N,900nm,18.0s
NKL                                MLR     MLR
      comp=E,450nm,18.0s
NKL                                MLR     MLR
      comp=Z,850nm,18.0s
GTK   Tadong           54.63 305  eP       P        16 42 39.5 +0.2
GTK                                IAmb    IAmb     16 42 42.2
      comp=Z,175nm,1.6s
BWNR  Bhubaneshwar     54.64 296  eP       P        16 42 39.0  -0.3
TAPN  Taplejung        55.37 305  eP       P        16 42 45.3 +0.4
      comp=Z,210nm,1.1s
ZEA   Zeya             55.43 353  eP       P        16 42 45.2 +0.7
ZEA                               e                 16 42 58.0
ZEA                               eS       S        16 50 27.0  -1.2
ZEA                               e                 16 52 34.0
ZEA                               eSSS     SSS      16 56 18.0
ZEA                                pmax    pmax
      comp=N,43nm,1.2s
ZEA                                pmax    pmax
      comp=Z,52nm,1.0s
ZEA                                pmax    pmax
      comp=Z,400nm,4.0s
ZEA                                smax    smax
      comp=E,900nm,10.0s
ZEA                                smax    smax
      comp=N,400nm,11.0s
ODAN  Odare            55.45 304  eP       P        16 42 45.6 +0.2
      comp=N,187nm,0.8s
ULN   Ulaanbaatar      55.52 336  eP       P        16 42 45.9 +0.5
      comp=N,114nm,1.8s
ULN                                LR      LR
      comp=Z,3μm,21.0s
ULN   Ulaanbaatar      55.52 336   P       P        16 42 46.7 +1.3
      SNR=25
ULN   Ulaanbaatar      55.52 336c iP       P        16 42 46.2 +0.8
ULN                                pmax    pmax
      comp=Z,67nm,2.5s
JOHN  Johnston Islan   55.54  69   PFAKE            16 43 00.0  +14
JOHN                               LR      LR
      comp=Z,3μm,22.0s
BOK   Bokaro           55.65 300  eP       P        16 42 47.7 +1.1
BOK                                IAmb    IAmb     16 42 56.1
      comp=Z,243nm,2.1s
CHLP  Challavanipeta   55.74 293  eP       P        16 42 46.5  -0.8
SONM  Songino Array    55.76 335   P       P        16 42 47.9 +0.7
      comp=Z,3.5nm,0.7s,baz=151,slow=8.2,SNR=25
SONM                               LR      LR       17 06 49.9
      comp=Z,1μm,20.8s,baz=146,slow=36
SONM                               PKP2bc           17 13 07.1
      comp=Z,1.6nm,0.9s,baz=190,slow=0.9,SNR=7.0
SONM                               PKP2ab           17 13 22.5
      comp=Z,1.6nm,0.9s,baz=346,slow=3.0,SNR=4.7
SONA1 Songino Array    55.77 335  eP       P        16 42 47.0  -0.2
RAMN  Ramite           56.14 304  eP       P        16 42 50.7 +0.3
      comp=Z,141nm,0.7s
JIRN  Jiri             56.74 305  eP       P        16 42 54.9 +0.1
      comp=Z,187nm,1.0s
PEA0B Petropavlovsk-   56.85  15  eP       P        16 42 55.8 +1.1
      comp=Z,84nm,1.1s
PEA0B                              LR      LR
      comp=Z,1μm,22.0s
PETK  Petropavlovsk-   56.85  15   P       P        16 42 56.7 +2.0
      comp=Z,22nm,0.9s,baz=184,slow=4.3
PETK                               LR      LR       17 03 50.0
      comp=Z,444nm,21.2s,baz=202,slow=32
PETK  Petropavlovsk-   56.85  15  eP       P        16 42 55.9 +1.2
PETK  Petropavlovsk-   56.85  15  eP       P        16 42 55.9 +1.2
PALK  Pallekele        56.94 279   P       P        16 42 55.8  -0.2
      comp=Z,20nm,0.8s,baz=116,slow=11,SNR=8.8
PALK                               LR      LR       17 08 00.6
      comp=Z,884nm,21.4s,baz=116,slow=37
PALK  Pallekele        56.94 279  eP       P        16 42 55.3  -0.7
      comp=Z,68nm,1.2s
PALK  Pallekele        56.94 279  i P      P        16 42 55.6  -0.5
      SNR=5.7
PALK  Pallekele        56.94 279  eP       P        16 42 55.3  -0.7
PALK                               pmax    pmax
      comp=Z,68nm,1.2s
PET   Petropavlovsk    57.02  15  eP       P        16 42 57.2 +1.3
      comp=Z,90nm,1.4s
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PET                                LR      LR
      comp=Z,1μm,19.0s
PET   Petropavlovsk    57.02  15  eP       P        16 42 58.1 +2.3
PET                               i                 16 43 52.1
PET                               i S      S        16 50 49.5 +0.2
PET                                pmax    pmax
      comp=Z,100nm,9.9s
PET                                pmax    pmax
      comp=Z,300nm,8.7s
PET                                pmax    pmax
      comp=Z,49nm,1.2s
PET                                pmax    pmax
      comp=Z,27nm,1.2s
PET                                MLR     MLR
      comp=Z,1μm,19.0s
PET                                MLR     MLR
      comp=Z,800nm,16.0s
GUN   Gumba            57.09 305  eP       P        16 42 57.6 +0.4
      comp=Z,130nm,0.8s
PKIN  Phulchoki        57.36 304  eP       P        16 42 59.1   0.0
      comp=Z,55nm,0.7s
KKN   Kakani           57.54 304  eP       P        16 43 00.4 +0.1
      comp=Z,186nm,1.1s
DMN   Daman            57.61 304  eP       P        16 43 01.1 +0.2
      comp=Z,244nm,1.2s
PVM   Polavaram        57.70 291  eP       P        16 43 00.5  -0.7
GKN   Gorkha           58.14 304  eP       P        16 43 04.6 +0.1
      comp=Z,100nm,0.7s
SKHT  Srikalahasti     58.82 287  eP       P        16 43 08.4  -0.8
KOLN  Koldanda         58.92 304  eP       P        16 43 10.3 +0.4
      comp=Z,98nm,0.9s
ADKI  Addanki          58.96 289  eP       P        16 43 08.9  -1.2
DANN  Dangsing         58.99 304  eP       P        16 43 10.8 +0.3
      comp=Z,103nm,0.8s
ZAK   Zakamensk        59.03 335  eP       P        16 43 10.0  -0.1
ZAK                                pmax    pmax
      comp=Z,73nm,1.4s
PYUN  Piuthan          59.54 304  eP       P        16 43 14.3 +0.1
      comp=Z,435nm,0.9s
NJS   Nagarjunasagar   59.72 290  eP       P        16 43 14.2  -1.2
TLY   Talaya           59.88 337  eP       P        16 43 14.6  -1.3
      comp=Z,104nm,1.8s
TLY                                LR      LR
      comp=Z,2μm,19.0s
TLY   Talaya           59.88 337c iP       P        16 43 16.7 +0.8
TLY                               eS       S        16 51 29.3 +2.6
TLY                               eSS      SS       16 55 22.5  -0.8
TLY                                pmax    pmax
      comp=Z,46nm,1.5s
TLY                                MLR     MLR
      comp=Z,1μm,20.0s
SRLM  Srisailam        60.02 289  eP       P        16 43 16.6  -0.9
IRK   Irkutsk          60.07 337  eP       P        16 43 17.6 +0.4
IRK                               e                 16 47 00.7
IRK                               eS       S        16 51 31.6 +2.5
IRK                                pmax    pmax
      comp=Z,134nm,2.6s
RPR   Rampur           60.21 293  eP       P        16 43 18.3  -0.5
HYB   Hyderabad        60.60 291  i P      P        16 43 21.0  -0.5
HYB                               eS       S        16 51 36.0  -1.1
HYB   Hyderabad        60.60 291  eP       P        16 43 20.5  -0.9
HYBB  Hyderabad (bro   60.60 291  eP       P        16 43 20.0  -1.5
MOY   Mondy            60.95 335  eP       P        16 43 24.6 +1.3
MOY                                pmax    pmax
      comp=Z,14nm,1.7s
NGP   Nagpur           60.96 295  eP       P        16 43 22.6  -1.2
NGP                               ex       x        16 43 23.6
SRSP  Sriramsagar      61.11 292  eP       P        16 43 23.7  -1.1
URV   Uravakonda       61.36 288  eP       P        16 43 25.3  -1.4
MA2   Magadan          61.61   8  eP       P        16 43 28.9 +1.4
      comp=Z,41nm,1.2s
MA2   Magadan          61.61   8  eP       P        16 43 28.9 +1.4
MA2                                pmax    pmax
      comp=Z,41nm,1.2s
BOD   Bodaibo          61.75 346  eP       P        16 43 27.4  -1.0
BOD                                pmax    pmax
      comp=Z,31nm,1.6s
SMY   Shemya           62.07  24  eP       P        16 43 31.1 +0.4
      comp=Z,90nm,1.1s
SMY   Shemya           62.07  24  eP       P        16 43 31.1 +0.4
SMY                                pmax    pmax
      comp=Z,90nm,1.1s
WMQ   Urumqi           62.92 322   P       P        16 43 37.4 +0.7
WMQ                                pP      sP       16 43 44.3  -1.2
WMQ                                sP      pP       16 43 50.4 +7.3
WMQ                                PP      PP       16 45 55.8 +0.6
WMQ                                S       S        16 52 06.1 +0.4
WMQ                                pmax    pmax
      comp=Z,150nm,1.3s
WMQ                                pmax    pmax
      comp=Z,970nm,4.3s
WMQ                                LR      LR
      comp=Z,3μm,17.3s
WMQ                                LR      LR
      comp=Z,2μm,18.7s
WMQ                                LR      LR
      comp=Z,3μm,20.7s
BHPL  Bhopal           62.93 297  eP       P        16 43 36.9  -0.1
BHPL                               IAmb    IAmb     16 43 39.4
      comp=Z,128nm,1.7s
YAK   Yakutsk          63.39 356  eP       P        16 43 39.8 +0.5
      comp=Z,130nm,0.8s
YAK                                LR      LR
      comp=Z,2μm,19.0s
YAK   Yakutsk          63.39 356c iP       P        16 43 39.9 +0.6
YAK                               e*PP     sP       16 43 52.0 +3.9
YAK                               e                 16 44 16.7
YAK                               e                 16 45 59.9
YAK                               ePPP     PPP      16 47 27.4
YAK                               eS       S        16 52 10.8 +0.1
YAK                               e*SS     sS       16 52 32.8  +12
YAK                               e                 16 53 32.6
YAK                               eSS      SS       16 56 16.7  -1.1
YAK                                pmax    pmax
      comp=Z,52nm,1.0s
YAK                                pmax    pmax
      comp=N,14nm,1.1s
YAK                                pmax    pmax
      comp=E,4.0nm,1.0s
YAK                                pmax    pmax
      comp=Z,76nm,2.5s
YAK                                pmax    pmax
      comp=N,45nm,2.5s
YAK                                pmax    pmax
      comp=E,31nm,2.3s
YAK                                smax    smax
      comp=N,143nm,4.4s
YAK                                smax    smax
      comp=E,149nm,4.1s
RAR   Rarotonga        64.52 113   LR      LR       17 09 53.6
      comp=E,831nm,21.3s,baz=273,slow=34
NDI   New Delhi        64.55 303  eP       P        16 43 46.0  -1.7
SEY   Seymchan         65.06   8d iP       P        16 43 52.4 +2.2
POO   Poona            65.21 291  eP       P        16 43 51.3  -0.9
SMLA  Simla            65.31 305  eP       P        16 43 52.5  -0.1
KIWB  Kanaga Island    65.43  29  eP       P        16 43 53.1 +0.3
KEKH  Kekaha           65.74  65   PFAKE            16 44 10.0  +15
KEKH                               LR      LR
      comp=Z,3μm,20.0s
DGZ   Jazzator, Alta   66.23 327  i P      P        16 43 57.5  -0.8
DGZ                                pmax    pmax
      comp=Z,5.0nm,0.8s
DHRM  DHARAMSHALA      66.36 306  eP       P        16 43 58.7  -0.8
ZSN   Zaisan           66.48 324  eP       P        16 44 00.2 +0.4
      comp=Z,3.1nm,1.8s
ZSN                               i S      S        16 52 50.8 +1.4
ATKA  Atka Island      67.11  30   PFAKE            16 44 20.0  +16
ATKA                               LR      LR
      comp=Z,1μm,20.0s
KIP   Kipapa           67.17  66  i P      P        16 44 06.2 +1.6
KIP                                pmax    pmax
      comp=Z,371nm,1.0s
KRAR  Krasnoyarsk      67.43 335  i P      P        16 44 04.2  -1.4
CASY  Casey            67.56 191  eP       P        16 44 06.0  -0.2
      comp=Z,39nm,0.8s
CASY                               LR      LR
      comp=Z,2μm,20.0s
MK01  Makanchi Array   67.68 323  eP       P        16 44 07.5 +0.1
MK31  Makanchi Array   67.70 323  eP       P        16 44 07.5   0.0
MK31  Makanchi Array   67.70 323  eP       P        16 44 07.6   0.0
MKAR  Makanchi Array   67.70 323   P       P        16 44 07.9 +0.3
      comp=Z,15nm,0.7s,baz=112,slow=7.6,SNR=208
MKAR                               PKP2ab           17 12 34.4
      comp=Z,0.8nm,0.9s,baz=298,slow=3.1,SNR=5.2
MKAR                               LR      LR       17 15 14.9
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      comp=Z,574nm,18.9s,baz=102,slow=37
MKAR  Makanchi Array   67.70 323  eP       P        16 44 07.5  -0.1
      comp=Z,477nm,1.5s
MKAR                               P'P'ab  P'P'ab   17 12 34.4 +1.1
MKAR  Makanchi Array   67.70 323  eP       P        16 44 07.5  -0.1
MKAR                               pmax    pmax
      comp=Z,480nm,1.5s
MAKZ  Makanchi         67.90 323  eP       P        16 44 08.9 +0.1
      comp=Z,120nm,1.5s
MAKZ                               LR      LR
      comp=Z,1μm,20.0s
MAKZ  Makanchi         67.90 323  eP       P        16 44 08.9 +0.1
MAKZ                               pmax    pmax
      comp=Z,120nm,1.5s
SHLS  Shalkode         67.91 318  eP       P        16 44 07.9  -1.2
      comp=Z,10nm,0.7s
SHLS                              i S      S        16 53 04.8  -2.1
UZB   Uzynbulak        68.20 318⇑iP      P        16 44 11.3 +0.3
      comp=Z,11nm,0.9s
UZB                               i S      S        16 53 11.8 +1.4
PRZ   Przheval'sk      68.35 317  eP       P        16 44 11.4  -0.6
      comp=Z,80nm,1.1s
PRZ                                LR      LR
      comp=Z,1μm,20.0s
PRZ   Przheval'sk      68.35 317  eP       P        16 44 11.4  -0.6
PRZ                                pmax    pmax
      comp=Z,80nm,1.1s
PRZ                                MLR     MLR
      comp=Z,1μm,20.0s
KPKS  Kokpek           68.55 318⇑iP      P        16 44 13.5 +0.5
      comp=Z,17nm,1.2s
KPKS                              ePP      PP       16 46 44.2  -0.3
KPKS                              i S      S        16 53 15.5 +1.0
KPKS                               LR      LR       17 16 55.4
      comp=Z,261nm,15.1s
SATY  Saty             68.57 318⇑iP      P        16 44 13.9 +0.6
      comp=Z,21nm,0.8s
SATY                              i S      S        16 53 16.1 +1.2
SATY                               LR      LR       17 18 27.0
      comp=Z,145nm,14.9s
ZHN   Zhinishke        68.60 318⇑iP      P        16 44 13.7 +0.3
      comp=Z,6.9nm,1.1s
ZHN                               ePP      PP       16 46 44.2  -0.8
ZHN                               i S      S        16 53 16.1 +0.9
HUH   Hualalai         68.88  68   PFAKE            16 44 30.0  +14
HUH                                LR      LR
      comp=Z,2μm,18.0s
KSH   Kashi            68.96 313   P       P        16 44 17.5 +1.8
KSH                                sP      sP       16 44 24.6   0.0
KSH                               ePcP     PcP      16 44 41.9 +1.9
KSH                                PP      PP       16 46 52.8 +4.5
KSH                                S       S        16 53 20.6 +0.9
KSH                                SS      SS       16 57 48.8 +3.2
KSH                                pmax    pmax
      comp=Z,140nm,1.8s
KSH                                pmax    pmax
      comp=Z,270nm,3.5s
KSH                                LR      LR
      comp=Z,730nm,13.8s
KSH                                LR      LR
      comp=Z,510nm,14.8s
KSH                                LR      LR
      comp=Z,980nm,21.3s
KDJ   Kajisay          69.05 316  eP       P        16 44 16.2  -0.1
      comp=Z,34nm,1.0s
HPAH  Hawaii Prepara   69.06  68   PFAKE            16 44 30.0  +13
HPAH                               LR      LR
      comp=Z,1μm,20.0s
MLOA  Mauna Loa Obse   69.09  69  eP       P        16 44 22.0 +4.7
      comp=Z,162nm,1.1s
POHA  Pohakuloa        69.17  68   PFAKE            16 44 30.0  +12
POHA                               LR      LR
      comp=Z,1μm,20.0s
AIN   Ainahou          69.18  69   PFAKE            16 44 30.0  +12
AIN                                LR      LR
      comp=Z,2μm,21.0s
HMH   Humu‘ula Sheep   69.19  69   PFAKE            16 44 30.0  +12
HMH                                LR      LR
      comp=Z,2μm,20.0s
NIL   Nilore           69.22 307  eP       P        16 44 16.7  -0.6
      comp=Z,45nm,0.8s
NIL   Nilore           69.22 307  eP       P        16 44 16.7  -0.6
NIL                                pmax    pmax
      comp=Z,45nm,0.8s
SDHHI Sand Hill        69.33  69   PFAKE            16 44 30.0  +12
SDHHI                              LR      LR
      comp=Z,2μm,21.0s
OBL   Observatory Le   69.35  69   PFAKE            16 44 30.0  +12
OBL                                LR      LR
      comp=Z,1μm,21.0s
NPH   North Pit        69.35  69   PFAKE            16 44 30.0  +11
NPH                                LR      LR
      comp=Z,1μm,20.0s
RIM   Rim              69.36  69   PFAKE            16 44 30.0  +11
RIM                                LR      LR
      comp=Z,2μm,20.0s
TDK   Taldyqorghan     69.36 320  eP       P        16 44 19.0 +1.0
      comp=Z,21nm,0.9s
TDK                               eS       S        16 53 25.9 +2.0
PUH   Pauahi           69.41  69   PFAKE            16 44 30.0  +11
PUH                                LR      LR
      comp=Z,2μm,20.0s
STCH  Steam Cracks     69.49  69   PFAKE            16 44 30.0  +11
STCH                               LR      LR
      comp=Z,2μm,19.0s
NPOC  North of Pu‘u    69.51  69   PFAKE            16 44 30.0  +11
NPOC                               LR      LR
      comp=Z,2μm,20.0s
MDOK  Medeo            69.53 317  i P      P        16 44 19.9 +0.7
      comp=Z,249nm,0.7s
MDOK                              ePP      PP       16 46 52.8  -0.3
MDOK                              eS       S        16 53 27.6 +1.3
MDOK                              eSS      SS       16 57 56.3 +2.0
AAA   Alma-Ata         69.64 317  eP       P        16 44 20.7 +0.9
      comp=Z,17nm,1.0s
AAA                               eS       S        16 53 29.0 +1.6
ZAA0  Zalesovo Array   69.91 330  eP       P        16 44 20.1  -1.0
      comp=Z,25nm,1.0s
ZAA0                               LR      LR
      comp=Z,900nm,21.0s
ZALV  Zalesovo Beam    69.91 330   P       P        16 44 20.5  -0.7
      comp=Z,11nm,0.6s,baz=115,slow=6.3,SNR=36
ZALV                               PKPPKP  P'P'df   17 12 27.2 +1.4
      comp=Z,1.2nm,0.6s,baz=300,slow=2.8,SNR=6.3
ZALV                               LR      LR       17 16 26.4
      comp=Z,575nm,19.7s,baz=125,slow=37
ZALV  Zalesovo Beam    69.91 330  eP       P        16 44 19.7  -1.4
ZALV                               P'P'             17 12 27.2
ZALV  Zalesovo Beam    69.91 330  eP       P        16 44 19.7  -1.4
NIKH  Nikolski High    70.26  31   PFAKE            16 44 40.0  +17
NIKH                               LR      LR
      comp=Z,700nm,20.0s
KUU   Kurty            70.28 318⇑eP      P        16 44 23.9 +0.3
      comp=Z,47nm,1.8s
KUU                               i S      S        16 53 35.8 +1.0
KUU                                LR      LR       17 19 00.6
      comp=Z,481nm,17.3s
KZA   Kyzart           70.37 316   P       P        16 44 25.9 +1.2
      SNR=29
TKM2  Tokmak 2         70.43 317   P       P        16 44 25.2 +0.3
      SNR=21
SEM   Semipalatinsk    70.58 325  eP       P        16 44 24.7  -0.9
      comp=Z,10nm,1.7s
SEM                               i S      S        16 53 38.3  -0.1
SEM                                LR      LR       17 20 53.9
      comp=Z,274nm,17.2s
KBK   Karagaybulak     70.78 316   P       P        16 44 27.5 +0.5
      SNR=5.5
CHMS  Chumysh          71.04 317   P       P        16 44 28.5 +0.2
      SNR=9.1
AAK   Ala-Archa        71.09 316  eP       P        16 44 28.7  -0.1
      comp=Z,28nm,1.1s
AAK                                LR      LR
      comp=Z,1μm,22.0s
AAK   Ala-Archa        71.09 316  eP       P        16 44 28.7  -0.1
AAK                                pmax    pmax
      comp=Z,28nm,1.1s
NVS   Novosibirsk      71.17 330⇓iP      P        16 44 28.8   0.0
NVS                               e                 16 47 11.9
NVS                               i S      S        16 53 44.5  -0.2
NVS                                pmax    pmax
      comp=N,67nm,1.8s
NVS                                pmax    pmax
      comp=E,68nm,1.8s
NVS                                pmax    pmax
      comp=Z,126nm,1.8s
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NVS                                pmax    pmax
      comp=Z,57nm,2.5s
NVS                                pmax    pmax
      comp=N,22nm,2.2s
NVS                                pmax    pmax
      comp=E,31nm,2.5s
NVS                                smax    smax
      comp=N,9.0nm,2.0s
NVS                                smax    smax
      comp=E,48nm,2.7s
USP   Ospenovka        71.30 317   P       P        16 44 30.2 +0.3
      SNR=14
AML   Almayashu        71.48 315   P       P        16 44 32.3 +0.9
      SNR=31
EKS2  Erkin-Say        71.59 316   P       P        16 44 32.3 +0.5
      SNR=12
KURK  Kurchatov        71.65 325   P       P        16 44 32.0 +0.3
KURK  Kurchatov        71.65 325c iP       P        16 44 31.5 -0.2
KURK                               pmax    pmax
      comp=Z,56nm,1.3s
KURBB Kurchatov Arra   71.66 325   P       P        16 44 32.0 +0.2
      comp=Z,16nm,0.8s,baz=119,slow=5.7,SNR=119
SPIA  Saint Paul Isl   71.81  27   PFAKE            16 44 40.0 +7.4
SPIA                               LR      LR
      comp=Z,2µm,22.0s
UNV   Unalaska Valle   71.91  31  eP       P        16 44 34.7 +1.5
      comp=Z,48nm,0.9s
UNV                                LR      LR
      comp=Z,1µm,19.0s
MIR   Mirnyy           72.10 197  i P      P        16 44 39.0 +4.9
MIR                               e                 16 44 56.0
MIR                               eS       SKiKP    16 54 16.0 +5.9
MIR                               ePS      PnS      16 54 46.0  +20
MIR                                pmax    pmax
      comp=Z,108nm,1.5s
MIR                                MLR     MLR
      comp=N,1µm,18.0s
MIR                                MLR     MLR
      comp=E,2µm,18.0s
MIR                                MLR     MLR
      comp=Z,4µm,18.0s
BTLS  Baital           72.23 318⇑iP        P        16 44 35.4  0.0
      comp=Z,8.2nm,1.5s
BTLS                              ePP      PP       16 47 15.4 -0.7
BTLS                              i S      S        16 53 57.1 -0.2
KBL   Kabul            72.82 307  eP       P        16 44 38.4 -1.0
      comp=Z,20nm,0.8s
KBL                                LR      LR
      comp=Z,700nm,22.0s
KBL   Kabul            72.82 307  eP       P        16 44 38.4 -1.0
KBL                                pmax    pmax
      comp=Z,20nm,0.9s
TIXI  Tiksi            72.99 357  eP       P        16 44 39.0 -0.4
      comp=Z,27nm,1.0s
TIXI                               LR      LR
      comp=Z,2µm,20.0s
TIXI  Tiksi            72.99 357c eP       P        16 44 39.6 +0.2
TIXI                               pmax    pmax
      comp=Z,9.0nm,0.8s
PPT   Papeete          73.68 108   LR      LR       17 14 06.3
      comp=Z,983nm,21.4s,baz=268,slow=33
PPT2  Papeete2         73.68 108  eS       S        16 54 16.0 +1.1
      comp=Z,1µm,27.2s
PPT2  Papeete2         73.68 108  eLQ      LQ       17 04 23.3
      comp=Z,3µm,31.0s
PPT2                              eLR      LR       17 07 32.7
      comp=Z,5µm,26.0s,baz=271
FALS  False Pass       73.98  31  eP       P        16 44 45.5  0.0
      comp=Z,100nm,0.9s
FALS                               LR      LR
      comp=Z,900nm,20.0s
KK31  Karatay Array    74.01 316  eP       P        16 44 45.6 -0.4
KK31  Karatay Array    74.01 316  eP       P        16 44 45.6 -0.4
KKAR  Karatay Array    74.01 316  eP       P        16 44 45.6 -0.4
KKAR  Karatay Array    74.01 316  eP       P        16 44 45.6 -0.4
IUG   Iuzhnay          74.07 315⇑iP        P        16 44 46.8 +0.3
      comp=Z,8.5nm,1.3s
IUG                               ePP      PP       16 47 31.4 -0.6
IUG                               i S      S        16 54 19.2 +0.7
TBI   Tubuai           74.26 114  eS       S        16 54 21.7 +0.6
      comp=Z,958nm,29.8s
TBI   Tubuai           74.26 114  eLQ      LQ       17 04 38.7
      comp=Z,3µm,41.2s
TBI                               eLR      LR       17 07 48.2
      comp=Z,5µm,34.2s,baz=278
BRZS  Berezniki        74.85 323⇑iP        P        16 44 50.6 -0.2
      comp=Z,11nm,1.1s
BRZS                              ePP      PP       16 47 37.0 -1.3
BRZS                              eS       S        16 54 27.6 +0.9
SDPT  Sand Point       75.72  31  eP       P        16 44 55.4 -0.2
SDPT                               LR      LR
      comp=Z,900nm,20.0s
BVAR  Borovoye Array   77.24 325   P       P        16 45 04.4 +0.1
      comp=Z,25nm,0.7s,baz=111,slow=8.1,SNR=165
BVAR                               LR      LR       17 19 11.3
      comp=Z,462nm,20.2s,baz=106,slow=36
BRVK  Borovoye         77.32 325  eP       P        16 45 04.4 -0.2
      comp=Z,94nm,1.2s
BRVK                               LR      LR
      comp=Z,1µm,21.0s
BRVK  Borovoye         77.32 325   P       P        16 45 05.2 +0.5
      SNR=40
BRVK  Borovoye         77.32 325c iP       P        16 45 04.7  0.0
BRVK                               pmax    pmax
      comp=Z,58nm,1.3s
VNDA  Vanda            77.34 175   P       P        16 45 04.8 +0.4
      comp=Z,11nm,0.6s,baz=322,slow=6.9,SNR=57
VNDA                               LR      LR       17 19 48.6
      comp=Z,3µm,18.9s,baz=350,slow=36
VNDA  Vanda            77.34 175  eP       P        16 45 04.7 +0.4
      comp=Z,18nm,0.9s
VNDA  Vanda            77.34 175  eP       P        16 45 04.7 +0.3
VNDA                               pmax    pmax
      comp=Z,18nm,0.9s
ANM   Nome             77.75  22   PFAKE            16 45 20.0  +13
ANM                                LR      LR
      comp=Z,800nm,20.0s
SBA   Scott Base       78.13 174  eP       P        16 45 09.8 +1.0
      comp=Z,150nm,1.8s
SBA                                LR      LR
      comp=Z,2µm,20.0s
SBA   Scott Base       78.13 174  eP       P        16 45 09.8 +1.0
SBA                                pmax    pmax
      comp=Z,150nm,1.8s
WSAR  Wadi Sarin       79.95 294   P       P        16 45 19.5 -0.4
      comp=Z,7.7nm,0.7s,baz=143,slow=5.8,SNR=4.9
WSAR                               LR      LR       17 22 27.9
      comp=Z,267nm,20.3s,baz=120,slow=37
OHAK  Old Harbor       80.14  31  eP       P        16 45 20.6 +0.6
SVW2  Sparrevohn       80.31  27  eP       P        16 45 22.1 +1.1
      comp=Z,30nm,1.0s
RDOG  Red Dog Mine     80.34  19  eP       P        16 45 20.6 -0.4
      comp=Z,108nm,1.8s
KDAK  Kodiak Island    80.67  31  eP       P        16 45 24.2 +1.3
      comp=Z,66nm,1.1s
KDAK                               LR      LR
      comp=Z,1µm,20.0s
KDAK  Kodiak Island    80.67  31  i P      P        16 45 24.5 +1.6
CNPM  China Poot       81.85  29   PFAKE            16 45 40.0  +11
CNPM                               LR      LR
      comp=Z,1µm,21.0s
BRLK  Bradley Lake     82.09  29  eP       P        16 45 35.2 +4.7
      comp=Z,50nm,1.2s
BRLK                               LR      LR
      comp=Z,1µm,20.0s
GEYT  Alibeck          82.12 308   P       P        16 45 29.9 -1.2
      comp=Z,14nm,1.1s,baz=90,slow=10,SNR=24
GEYT                               LR      LR       17 25 12.7
      comp=Z,585nm,20.6s,baz=85,slow=38
GYA0B ALIBECK ARRAY    82.12 308  eP       P        16 45 31.2 +0.1
      comp=Z,107nm,1.3s
BANOM Banah            82.32 296   P       P        16 45 32.7 +0.3
UOSS  Minazif          82.32 295   P       P        16 45 31.9 -0.5
HATD  Hatta, Dubai     82.37 295   P       P        16 45 31.7 -1.0
MSFE  Esma-Masafi      82.39 296   P       P        16 45 32.4 -0.4
PPLA  Purkeypile       82.42  26  eP       P        16 45 32.9 +0.6
      comp=Z,50nm,1.3s
PPLA                               LR      LR
      comp=Z,800nm,19.0s
ASHO  Ashiyiah         82.43 295   P       P        16 45 32.1 -0.9
SKT   Skwentna         82.43  27  eP       P        16 45 31.9 -0.3
      comp=Z,15nm,0.9s
SKT                                LR      LR
      comp=Z,1µm,21.0s
SHME  Shamm            82.47 296   P       P        16 45 32.7 -0.6
TAOE  Nuku Hiva Isla   82.60  99  eLR      LR       17 11 34.3
      comp=Z,2µm,24.0s,baz=260
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ABKAR Akbulak array    82.62 320  eP       P        16 45 32.4 -1.0
CAST  Castle Rocks     82.62  25  eP       P        16 45 33.7 +0.4
      comp=Z,16nm,0.8s
CAST                               LR      LR
      comp=Z,700nm,20.0s
SUA   Susitna One      82.64  27  eP       P        16 45 33.7 +0.3
      comp=Z,54nm,1.5s
SUA                                LR      LR
      comp=Z,900nm,20.0s
ALNE  Al Ain           82.65 294  i P      P        16 45 34.0 -0.2
      SNR=12
NAZ   Nazwa, Dubai     82.81 295   P       P        16 45 34.3 -0.7
MAW   Mawson           82.86 202   P       P        16 45 32.5 -1.8
      baz=83,SNR=20
MAW   Mawson           82.86 202   P       P        16 45 35.2 +0.9
      comp=Z,19nm,0.6s,baz=65,slow=12,SNR=50
MAW                                LR      LR       17 22 20.2
      comp=Z,2µm,18.2s,baz=68,slow=36
MAW   Mawson           82.86 202  eP       P        16 45 32.3 -2.0
      comp=Z,6.9nm,1.0s
MAW   Mawson           82.86 202  eP       P        16 45 32.3 -2.0
MAW                                pmax    pmax
      comp=Z,7.0nm,1.0s
RC01  Rabbit Creek A   83.00  28  eP       P        16 45 35.5 +0.3
      comp=Z,37nm,0.8s
RC01                               LR      LR
      comp=Z,1µm,22.0s
ASUD  Al Ashush, Dub   83.08 295   P       P        16 45 36.3 -0.1
KTH   Kantishna Hill   83.16  25   PFAKE            16 45 50.0  +14
KTH                                LR      LR
      comp=Z,900nm,20.0s
BPAW  Bear Paw Mtn.    83.29  25  eP       P        16 45 36.6 -0.1
      comp=Z,48nm,1.7s
TRF   Thorofare Moun   83.40  26  eP       P        16 45 37.0 -0.4
      comp=Z,20nm,1.0s
TRF                                LR      LR
      comp=Z,600nm,21.0s
PMR   Palmer           83.42  28  eP       P        16 45 37.5 +0.2
      comp=Z,23nm,0.9s
PMR   Palmer           83.42  28  eP       P        16 45 37.5 +0.2
PMR                                pmax    pmax
      comp=Z,23nm,0.9s
MLY   Manley           83.67  24  eP       P        16 45 39.4 +0.8
      comp=Z,23nm,1.0s
MLY                                LR      LR
      comp=Z,1µm,22.0s
SVE   Sverdlovsk       83.69 327d iP       P        16 45 38.9 +0.1
SVE                               eS       S        16 56 00.8 +0.4
SVE                               eSSS     SSS      17 04 49.3
SVE                                pmax    pmax
      comp=Z,90nm,1.5s
SVE                                MLR     MLR
      comp=Z,876nm,19.0s
SML   Sawmill          83.84  27  eP       P        16 45 40.3 +0.8
      comp=Z,52nm,1.0s
SML                                LR      LR
      comp=Z,1µm,22.0s
SML   Sawmill          83.84  27  eP       P        16 45 40.3 +0.8
SML                                pmax    pmax
      comp=Z,52nm,1.0s
BWN   Browne           83.95  25  eP       P        16 45 40.8 +0.7
      comp=Z,107nm,1.3s
BWN                                LR      LR
      comp=Z,1µm,20.0s
AKTO  Aktyubinsk       84.05 321   P       P        16 45 40.5 -0.4
      comp=Z,19nm,1.1s,baz=81,slow=5.3,SNR=25
MCK   McKinley         84.06  25  eP       P        16 45 40.9 +0.3
      comp=Z,36nm,1.1s
MCK                                LR      LR
      comp=Z,900nm,21.0s
MCK   McKinley         84.06  25  eP       P        16 45 40.9 +0.3
MCK                                pmax    pmax
      comp=Z,36nm,1.1s
SCM   Sheep Creek Mo   84.31  27  eP       P        16 45 43.0 +1.0
      comp=Z,48nm,1.0s
SCM                                LR      LR
      comp=Z,1µm,21.0s
SCM   Sheep Creek Mo   84.31  27  eP       P        16 45 43.0 +1.0
SCM                                pmax    pmax
      comp=Z,48nm,1.0s
COLD  Coldfoot         84.51  22  eP       P        16 45 44.2 +1.4
      comp=Z,24nm,0.9s
COLD                               LR      LR
      comp=Z,700nm,20.0s
DHY   Denali Highway   84.58  26   PFAKE            16 45 50.0 +6.6
DHY                                LR      LR
      comp=Z,1µm,21.0s
WRH   Wood River Hil   84.61  25   PFAKE            16 45 50.0 +6.7
WRH                                LR      LR
      comp=Z,900nm,20.0s
MDM   Murphy Dome      84.67  24   PFAKE            16 45 50.0 +6.3
MDM                                LR      LR
      comp=Z,800nm,21.0s
ARU   Arti             84.74 327   P       P        16 45 44.3 +0.2
      comp=Z,8.0nm,0.2s,baz=101,slow=2.8,SNR=28
ARU   Arti             84.74 327  eP       P        16 45 43.6 -0.6
      comp=Z,62nm,1.1s
ARU                                LR      LR
      comp=Z,1µm,20.0s
ARU   Arti             84.74 327c iP       P        16 45 43.6 -0.6
ARU                                                 16 48 58.0
ARU                                PPP     PPP      16 50 53.2
ARU                                S       S        16 56 07.2 -3.7
ARU                                SS      SS       17 01 42.9 +0.1
ARU                                pmax    pmax
      comp=Z,49nm,1.2s
ARU                                MLR     MLR
      comp=Z,937nm,21.0s
CCB   Clear Creek Bu   84.77  25  eP       P        16 45 44.0 -0.2
      comp=Z,29nm,0.8s
CCB                                LR      LR
      comp=Z,800nm,20.0s
COLA  College          84.81  24   PFAKE            16 46 00.0  +16
COLA                               LR      LR
      comp=Z,1µm,21.0s
DIV   Divide           84.89  28  eP       P        16 45 44.6 -0.3
      comp=Z,41nm,0.8s
DIV                                LR      LR
      comp=Z,1µm,20.0s
KLU   Klutina          84.89  28  eP       P        16 45 45.7 +0.7
      comp=Z,19nm,1.0s
KLU                                LR      LR
      comp=Z,900nm,20.0s
HDA   Harding Lake     85.08  25  eP       P        16 45 45.9 +0.2
      comp=Z,41nm,0.8s
TOLK  Toolik Lake Re   85.13  21  eP       P        16 45 47.4 +1.4
      comp=Z,186nm,1.8s
ILAR  Eielson Array    85.18  25   P       P        16 45 46.0 -0.2
      comp=Z,5.6nm,0.7s,baz=258,slow=4.7,SNR=35
ILAR                               LR      LR       17 21 00.4
      comp=Z,498nm,20.0s,baz=264,slow=34
ILB   Eielson Array    85.18  25  eP       P        16 45 45.2 -1.0
IL1   Eielson Array    85.19  25  eP       P        16 45 45.4 -0.9
RAGM  Ragged Mountai   85.27  29   PFAKE            16 46 00.0  +13
RAGM                               LR      LR
      comp=Z,1µm,22.0s
PAX   Paxson           85.41  27  eP       P        16 45 48.1 +0.6
      comp=Z,96nm,1.9s
PAX                                LR      LR
      comp=Z,1µm,20.0s
PAX   Paxson           85.41  27  eP       P        16 45 48.1 +0.6
PAX                                pmax    pmax
      comp=Z,96nm,1.9s
BMRM  Bremner River    85.41  29  eP       P        16 45 48.4 +0.9
      comp=Z,27nm,0.9s
BMRM                               LR      LR
      comp=Z,2µm,21.0s
HARP  HAARP            85.43  27   PFAKE            16 46 00.0  +12
HARP                               LR      LR
      comp=Z,900nm,20.0s
TGL   Tana Glacier     86.23  29  eP       P        16 45 52.2 +0.6
      comp=Z,29nm,0.8s
TGL                                LR      LR
      comp=Z,1µm,21.0s
FYU   Fort Yukon       86.25  23  eP       P        16 45 52.9 +1.4
      comp=Z,248nm,1.5s
FYU                                LR      LR
      comp=Z,1µm,20.0s
BALM  Baldy            86.50  29   PFAKE            16 46 00.0 +7.0
BALM                               LR      LR
      comp=Z,1µm,21.0s
RKT   Rikitea          87.56 113  eLQ      LQ       17 10 14.7
      comp=Z,2µm,41.0s
RKT                               eLR      LR       17 13 46.9
      comp=Z,1µm,24.2s
EGAK  Eagle            87.60  25  eP       P        16 45 59.1 +1.0
      comp=Z,42nm,1.2s
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EGAK                               LR      LR
      comp=Z,700nm,20.0s
DAWY  Dawson           88.27  26  eP       P        16 46 02.5 +1.2
      comp=Z,72nm,1.3s
DAWY                               LR      LR
      comp=Z,900nm,22.0s
QSPA  South Pole Qui   88.67 180   P       P        16 46 03.4 +0.1
      comp=Z,14nm,0.7s,baz=316,slow=1.2,SNR=36
QSPA                               LR      LR       17 26 54.3
      comp=Z,4µm,18.6s,baz=3.0,slow=36
OPO   Ambohidratompo   89.56 252   P       P        16 46 09.0 +0.4
      comp=Z,6.7nm,0.8s,baz=117,slow=4.5,SNR=3.6
OPO                                LR      LR       17 23 00.5
      comp=Z,421nm,18.9s,baz=74,slow=33
SIT   Sitka            89.71  33   PFAKE            16 46 20.0  +12
SIT                                LR      LR
      comp=Z,900nm,18.0s
SKAG  Skagway          89.83  31  eP       P        16 46 09.6 +0.9
      comp=Z,33nm,1.1s
BESE  Bessie Mountai   90.03  32   PFAKE            16 46 20.0  +10
BESE                               LR      LR
      comp=Z,1µm,19.0s
JIS   Juneau Island    90.27  32   PFAKE            16 46 20.0 +9.3
JIS                                LR      LR
      comp=Z,800nm,20.0s
INK   Inuvik           90.93  22   PFAKE            16 46 20.0 +6.4
INK                                LR      LR
      comp=Z,1µm,22.0s
WRAK  Wrangell Islan   91.33  34   PFAKE            16 46 30.0  +14
WRAK                               LR      LR
      comp=Z,900nm,18.0s
SYO   Syowa Base       91.53 201⇑eP        P        16 46 15.0 -1.4
SYO   Syowa Base       91.53 201⇓epZP      PcP      16 46 19.0 +1.7
SYO   Syowa Base       91.53 201⇑ePP       PP       16 49 45.0 -9.3
PRGR  Permogore        91.83 331  eP       P        16 46 16.2 -1.8
PRGR                               pmax    pmax
      comp=Z,24nm,0.5s
RAYN  Ar Rayn          92.00 293  eP       P        16 46 18.4 -1.3
      comp=Z,14nm,1.2s
RAYN  Ar Rayn          92.00 293  i P      P        16 46 18.7 -1.1
      SNR=6.2
RAYN  Ar Rayn          92.00 293  eP       P        16 46 18.4 -1.3
RAYN                               pmax    pmax
      comp=Z,14nm,1.2s
DLBC  Dease Lake       92.56  32  eP       P        16 46 22.5 +0.9
      comp=Z,26nm,1.4s
DLBC                               LR      LR
      comp=Z,800nm,19.0s
GNI   Garni            92.65 310   LR      LR       17 34 55.7
      comp=Z,165nm,18.2s,baz=85,slow=40
ZEI   Tsey             93.24 313  eP       P        16 46 21.9 -3.3
AKH   Akhalkalaki      93.58 311  eP       P        16 46 25.2 -1.5
      comp=Z,11nm,0.8s
AKH                                LR      LR
      comp=Z,500nm,21.0s
AKH   Akhalkalaki      93.58 311  eP       P        16 46 25.3 -1.5
AKH                                pmax    pmax
      comp=Z,11nm,0.8s
BBB   Bella Bella      93.92  38   PFAKE            16 46 40.0  +12
BBB                                LR      LR
      comp=Z,1µm,19.0s
KBZ   Khabaz           93.95 314   P       P        16 46 29.7 +1.6
      comp=Z,1.6nm,0.8s,baz=91,slow=5.9,SNR=3.5
KBZ                                LR      LR       17 36 17.7
      comp=Z,210nm,18.2s,baz=70,slow=40
KIV   Kislovodsk       94.09 314   PFAKE            16 46 40.0  +11
KIV                                LR      LR
      comp=Z,700nm,21.0s
KIV   Kislovodsk       94.09 314⇓eP        P        16 46 29.6 +0.6
KIV                               e                 16 50 20.5
KIV                               i SS     SS       17 04 03.8 +4.5
KIV                                SSS     SSS      17 07 34.0
KIV                                pmax    pmax
      comp=Z,3.0nm,0.9s
KIV                                MLR     MLR
      comp=Z,585nm,20.0s
VRH   Novokhopyorsk    94.39 321  eP       P        16 46 28.9 -1.1
VRH                                pmax    pmax
      comp=Z,9.0nm,0.8s
ATD   Arta Tunnel      94.46 281   PFAKE            16 46 40.0 +8.8
ATD                                LR      LR
      comp=Z,600nm,22.0s
KLMR  Klimovskoe       94.83 331  eP       P        16 46 30.1 -1.7
KLMR                              e                 16 50 21.2
KLMR                              eSS      SS       17 04 16.1 +7.5
KLMR                               pmax    pmax
      comp=Z,39nm,1.4s
KLMR  Klimovskoe       94.83 331  eP       P        16 46 30.2 -1.6
KLMR                               AMP              16 46 33.9
      comp=Z,39nm,1.4s
KLMR                              ePP      PP       16 50 21.2 +0.8
KLMR                              eSS      SS       17 04 16.1 +7.5
KLMR                              eSS      SS       17 04 16.1 +7.5
KLMR                               LQ      LQ       17 19 54.0
KLMR                               LQ      LQ       17 19 54.0
KLMR                               LR      LR       17 25 29.5
VSR   Storozhevoye     95.99 321  eP       P        16 46 34.7 -2.6
VSR                                pmax    pmax
      comp=Z,5.0nm,0.6s
SOC   Sochi            96.26 314  eP       P        16 46 36.3 -2.4
SOC                               e                 16 50 29.8
SOC                               ePPP     PPP      16 52 42.1
SOC                               eS       SKSac    16 57 13.2 -1.3
SOC                               eSS      SS       17 04 26.4 -3.5
SOC                                MLR     MLR
      comp=Z,486nm,17.0s
APA   Apatity          96.40 338⇑iP        P        16 46 37.6 -1.2
APA                               i                 16 50 37.9
APA                               i                 16 57 14.0
APA                               i S      S        16 57 52.0 -5.8
APA                                pmax    pmax
      comp=Z,9.0nm,1.1s
NLWA  Neilton Lookou   97.03  43   PFAKE            16 46 50.0 +7.7
NLWA                               LR      LR
      comp=Z,1µm,20.0s
OBN   Obninsk          97.09 325   PFAKE            16 46 50.0 +7.7
OBN                                LR      LR
      comp=Z,1µm,21.0s
OBN   Obninsk          97.09 325⇓eP        P        16 46 40.5 -1.7
OBN                               i *SP    pP       16 46 47.5 -1.3
OBN                                                 16 50 46.0
OBN                                PPP     PPP      16 52 41.0
OBN                               eS       SKSac    16 57 20.0 +1.7
OBN                               ePS      PS       16 59 25.7 -2.4
OBN                               i SS     SS       17 04 40.0 -0.9
OBN                                pmax    pmax
      comp=Z,15nm,0.8s
OBN                                MLR     MLR
      comp=Z,935nm,22.0s
SPITS Spitsbergen Ar   97.30 350   LR      LR       17 33 02.6
      comp=Z,384nm,20.8s,baz=175,slow=37
JCC   Jacoby Creek,    97.52  49   PFAKE            16 47 00.0  +15
JCC                                LR      LR
      comp=Z,1µm,19.0s
KBS   Kingsbay         97.64 351   PFAKE            16 47 00.0  +16
KBS                                LR      LR
      comp=Z,1µm,20.0s
ANN   Anapa            97.79 315  eP       Pdif     16 46 46.1 +0.5
ANN                               e                 16 57 23.8
ANN                                pmax    pmax
      comp=Z,26nm,1.2s
ANN                                MLR     MLR
      comp=Z,687nm,22.0s
KMRM  Mail Ridge       97.81  50   PFAKE            16 47 00.0  +14
KMRM                               LR      LR
      comp=Z,2µm,19.0s
LLLB  Lillooet         97.95  39   PFAKE            16 47 00.0  +14
LLLB                               LR      LR
      comp=Z,1µm,19.0s
KCPM  Cahto Peak       97.95  50   PFAKE            16 47 00.0  +13
KCPM                               LR      LR
      comp=Z,2µm,20.0s
KEV   Kevo             98.07 341  eP       P        16 46 43.8 -2.5
KEV   Kevo             98.07 341  eP       P        16 46 43.8 -2.5
HUMO  Hull Mountain    98.15  47   PFAKE            16 47 00.0  +13
HUMO                               LR      LR
      comp=Z,1µm,19.0s
D05A  Enumclaw         98.32  43   PFAKE            16 47 00.0  +12
D05A                               LR      LR
      comp=Z,1µm,22.0s
HOPS  Hopland Field    98.41  51   PFAKE            16 47 00.0  +11
HOPS                               LR      LR
      comp=Z,2µm,19.0s
YBH   Yreka Blue Hor   98.42  48   LR      LR       17 25 39.1
      comp=Z,994nm,20.1s,baz=282,slow=32
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H04A	**Detroit Lake**	**98.48**	**45**	PFAKE		16 47 00.0	+11
H04A				LR	LR		
	comp=Z,1µm,20.0s						
B06A	**Marblemount**	**98.48**	**41**	PFAKE		16 47 00.0	+11
B06A				LR	LR		
	comp=Z,1µm,21.0s						
LON	**Longmire**	**98.50**	**43**	PFAKE		16 47 00.0	+11
LON				LR	LR		
	comp=Z,1µm,20.0s						
MCCM	**Marconi Confer**	**98.64**	**52**	PFAKE		16 47 00.0	+10
MCCM				LR	LR		
	comp=Z,2µm,18.0s						
GDXM	**Geysers**	**98.64**	**51**	PFAKE		16 47 00.0	+10
GDXM				LR	LR		
	comp=Z,2µm,20.0s						
ARCES	**ARCESS Array B**	**98.64**	**341**	P	**P**	**16 46 47.9**	**-1.0**
	comp=Z,4.7nm,0.7s,baz=60,slow=4.8,SNR=10.0						
ARCES	**ARCESS Array B**	**98.64**	**341**	*e*P	**P**	**16 46 47.6**	**-1.3**
ARCES	**ARCESS Array B**	**98.64**	**341**	*e*P	**P**	**16 46 48.2**	**-0.7**
WDC	**Whiskeytown Da**	**98.67**	**49**	PFAKE		16 47 00.0	+10
WDC				LR	LR		
	comp=Z,2µm,21.0s						
LTY	**Liberty**	**99.20**	**42**	PFAKE		16 47 00.0	+8.0
LTY				LR	LR		
	comp=Z,2µm,20.0s						
EBG	**Ellensburg**	**99.32**	**43**	*e*P	**Pdif**	**16 46 54.4**	**+1.9**
YKW3	**Yellowknife Ar**	**99.47**	**26**	PFAKE		16 47 00.0	+7.3
YKW3				LR	LR		
	comp=Z,800nm,22.0s						
PINE	**Pine Mountain**	**99.48**	**46**	PFAKE		16 47 00.0	+6.5
PINE				LR	LR		
	comp=Z,1µm,20.0s						
YKA	**Yellowknife Ar**	**99.49**	**27**	LR	LR	17 30 22.7	
	comp=Z,55nm,20.1s,baz=296,slow=34						
G06A	**Carlson Farm,**	**99.51**	**44**	PFAKE		16 47 00.0	+6.6
G06A				LR	LR		
	comp=Z,1µm,19.0s						
ORV	**Oroville**	**99.57**	**50**	PFAKE		16 47 10.0	+16
ORV				LR	LR		
	comp=Z,700nm,19.0s						
K05A	**Summer Lake**	**99.65**	**47**	PFAKE		16 47 10.0	+16
K05A				LR	LR		
	comp=Z,2µm,20.0s						
E07A	**Sunnyside**	**99.86**	**43**	PFAKE		16 47 10.0	+15
E07A				LR	LR		
	comp=Z,1µm,19.0s						
SAO	**San Andreas Ge**	**99.90**	**53**	PFAKE		16 47 10.0	+15
SAO				LR	LR		
	comp=Z,1µm,19.0s						
F07A	**Phinny Hill Vi**	**99.91**	**44**	PFAKE		16 47 10.0	+15
F07A				LR	LR		
	comp=Z,1µm,22.0s						
B08A	**Colville Reser**	**99.92**	**41**	PFAKE		16 47 10.0	+15
B08A				LR	LR		
	comp=Z,1µm,21.0s						
AFDM	**Forest Hills D**	**100.04**	**51**	*e*Pdif	**Pdif**	**16 46 56.4**	**+0.5**
AFDM				LR	LR		
	comp=Z,1µm,20.0s						
HAWA	**Hanford**	**100.10**	**43**	PFAKE		16 47 10.0	+14
HAWA				LR	LR		
	comp=Z,1µm,19.0s						
MOD	**Modoc Plateau**	**100.19**	**48**	PFAKE		16 47 10.0	+13
MOD				LR	LR		
	comp=Z,1µm,20.0s						
BEKR	**Beckworth**	**100.41**	**50**	PFAKE		16 47 10.0	+12
BEKR				LR	LR		
	comp=Z,1µm,20.0s						
E08A	**Dider Farm, El**	**100.41**	**43**	PFAKE		16 47 10.0	+13
E08A				LR	LR		
	comp=Z,1µm,20.0s						
D08A	**Wollman Farm,**	**100.41**	**42**	PFAKE		16 47 10.0	+13
D08A				LR	LR		
	comp=Z,1µm,20.0s						
PMPB	**Monarch Peak**	**100.48**	**54**	PFAKE		16 47 10.0	+12
PMPB				LR	LR		
	comp=Z,2µm,18.0s						
CMB	**Columbia Colle**	**100.60**	**52**	PFAKE		16 47 10.0	+12
CMB				LR	LR		
	comp=Z,1µm,18.0s						
RES	**Resolute Bay**	**100.64**	**12**	*e*Pdif	**Pdif**	**16 46 57.7**	**0.0**
RES				LR	LR		
	comp=Z,400nm,20.0s						
RES	**Resolute Bay**	**100.64**	**12**	*e*P	**Pdif**	**16 46 57.7**	**0.0**
RES				MLR	MLR		
	comp=Z,400nm,20.0s						
RUBR	**Rubicon Trail**	**100.66**	**51**	PFAKE		16 47 10.0	+11
RUBR				LR	LR		
	comp=Z,1µm,20.0s						
G08A	**Pilot Rock**	**100.67**	**44**	PFAKE		16 47 10.0	+11
G08A				LR	LR		
	comp=Z,900nm,19.0s						
C09A	**Chrisman Ranch**	**100.72**	**42**	PFAKE		16 47 10.0	+11
C09A				LR	LR		
	comp=Z,1µm,19.0s						
PAGB	**Antelope Grade**	**100.97**	**54**	PFAKE		16 47 10.0	+10
PAGB				LR	LR		
	comp=Z,2µm,20.0s						
VCNR	**Virginia City**	**101.02**	**50**	PFAKE		16 47 10.0	+10
VCNR				LR	LR		
	comp=Z,2µm,18.0s						
E09A	**Wood Farm, Sta**	**101.03**	**43**	PFAKE		16 47 10.0	+10
E09A				LR	LR		
	comp=Z,1µm,20.0s						
FINES	**FINESS Array B**	**101.07**	**333**	P	**Pdif**	**16 47 00.9**	**+1.0**
	comp=Z,2.6nm,0.8s,baz=72,slow=4.5,SNR=5.1						
PNTR	**Pine Nut**	**101.09**	**51**	PFAKE		16 47 10.0	+9.2
PNTR				LR	LR		
	comp=Z,1µm,20.0s						
PAHR	**Pah Rah Range**	**101.17**	**50**	PFAKE		16 47 10.0	+8.9
PAHR				LR	LR		
	comp=Z,1µm,20.0s						
BRTR	**Keskin Array B**	**101.19**	**310**	P	**Pdif**	**16 46 59.4**	**-1.8**
	comp=Z,2.0nm,1.0s,baz=87,slow=4.6,SNR=7.3						
WAKR	**Walker**	**101.29**	**51**	PFAKE		16 47 10.0	+8.3
WAKR				LR	LR		
	comp=Z,1µm,19.0s						
J08A	**Circle Bar Ran**	**101.32**	**46**	PFAKE		16 47 10.0	+8.4
J08A				LR	LR		
	comp=Z,1µm,22.0s						
YERR	**Yerington**	**101.38**	**51**	PFAKE		16 47 10.0	+7.9
YERR				LR	LR		
	comp=Z,1µm,21.0s						
MDPB	**Devils Postpil**	**101.68**	**52**	PFAKE		16 47 10.0	+6.5
MDPB				LR	LR		
	comp=Z,2µm,18.0s						
OMMB	**Old Mammoth Mi**	**101.75**	**52**	PFAKE		16 47 20.0	+16
OMMB				LR	LR		
	comp=Z,2µm,18.0s						
F10A	**Beach Ranch, E**	**101.75**	**43**	PFAKE		16 47 10.0	+6.6
F10A				LR	LR		
	comp=Z,900nm,20.0s						
BMO	**Blue Mountains**	**101.90**	**44**	PFAKE		16 47 20.0	+16
BMO				LR	LR		
	comp=Z,1µm,20.0s						
RYN	**Ryan**	**101.98**	**51**	PFAKE		16 47 20.0	+15
RYN				LR	LR		
	comp=Z,1µm,20.0s						
NV01	**Mina Array Sit**	**102.18**	**51**	*e*Pdif	**Pdif**	**16 47 05.3**	**-0.3**
NVAR	**Mina Array Bea**	**102.18**	**51**	P	**Pdif**	**16 47 06.6**	**+0.9**
	comp=Z,1.4nm,0.7s,baz=270,slow=5.2,SNR=7.8						
KVN	**Kaiserville**	**102.25**	**50**	*e*Pdif	**Pdif**	**16 47 05.6**	**-0.3**
KVN				LR	LR		
	comp=Z,1µm,18.0s						
KVN	**Kaiserville**	**102.25**	**50**	*e*P	**Pdif**	**16 47 05.6**	**-0.3**
KVN				MLR	MLR		
	comp=Z,1µm,18.0s						
AKASG	**Malin Array Be**	**102.27**	**322**	P	**Pdif**	**16 47 03.9**	**-1.6**
	comp=Z,2.2nm,0.8s,baz=66,slow=5.3,SNR=6.9						
AKBB	**Malin Array Si**	**102.27**	**322**	*e*Pdif	**Pdif**	**16 47 03.8**	**-1.7**
AKBB				LR	LR		
	comp=Z,500nm,21.0s						
AKBB	**Malin Array Si**	**102.27**	**322**	*e*P	**Pdif**	**16 47 03.8**	**-1.7**
AKBB				MLR	MLR		
	comp=Z,500nm,21.0s						
KIEV	**Kiev**	**102.29**	**322**	PFAKE		16 47 20.0	+14
KIEV				LR	LR		
	comp=Z,600nm,22.0s						
NV11	**Mina Array Sit**	**102.29**	**51**	PFAKE		16 47 20.0	+14
NV11				LR	LR		
	comp=Z,100nm,20.0s						
OSI	**Osito Audit: C**	**102.35**	**55**	PFAKE		16 47 20.0	+14
OSI				LR	LR		
	comp=Z,2µm,22.0s						
ISA	**Isabella, Lake**	**102.42**	**54**	PFAKE		16 47 20.0	+13
ISA				LR	LR		
	comp=Z,1µm,20.0s						
SNAA	**Sanae**	**102.79**	**192**	PKiKP	**PKiKP**	**16 51 23.2**	**-4.6**
SNAA	**Sanae**	**102.79**	**192**	Pdiff	**Pdif**	**16 47 08.6**	**+1.1**
SNAA	**Sanae**	**102.79**	**192**	PFAKE		16 47 20.0	+13
SNAA				LR	LR		
	comp=Z,3µm,18.0s						
PASC	**Pasadena Art C**	**102.84**	**55**	PFAKE		16 47 20.0	+12
PASC				LR	LR		
	comp=Z,1µm,20.0s						
MWC	**Mount Wilson**	**102.94**	**55**	PFAKE		16 47 20.0	+11
MWC				LR	LR		
	comp=Z,1µm,21.0s						
DAC	**Darwin (Calif)**	**103.04**	**53**	PFAKE		16 47 20.0	+10
DAC				LR	LR		
	comp=Z,2µm,18.0s						
MFID	**Camas Ranch**	**103.21**	**46**	PFAKE		16 47 20.0	+10
MFID				LR	LR		
	comp=Z,900nm,21.0s						
WALA	**Waterton Lakes**	**103.30**	**40**	PFAKE		16 47 20.0	+10
WALA				LR	LR		
	comp=Z,2µm,19.0s						
JTMT	**Jette**	**103.37**	**41**	PFAKE		16 47 20.0	+9.4
JTMT				LR	LR		
	comp=Z,1µm,19.0s						
KIS	**Kishinev**	**103.37**	**318**	*e*PP	PP	16 51 24.0	-1.9
KIS	**Kishinev**	**103.37**	**318**	*e*PS	PS	17 01 24.0	+48
KIS				*e*SS	SS	17 06 32.0	+23
KIS				LRM	MLR	17 35 50.0	
	comp=Z,900nm,17.0s						
TULEG	**Thule**	**103.42**	**6**	PFAKE		16 47 20.0	+10
TULEG				LR	LR		
	comp=Z,400nm,20.0s						
MSO	**Missoula**	**103.80**	**42**	PFAKE		16 47 20.0	+7.4
MSO				LR	LR		
	comp=Z,1µm,20.0s						
GSC	**Goldstone, Bar**	**103.82**	**54**	PFAKE		16 47 20.0	+7.2
GSC				LR	LR		
	comp=Z,2µm,22.0s						
ISP	**Isparta**	**103.88**	**309**	PFAKE		16 47 20.0	+6.9
ISP				LR	LR		
	comp=Z,400nm,22.0s						
TPNV	**Topopah Spring**	**104.01**	**52**	PFAKE		16 47 30.0	+16
TPNV				LR	LR		
	comp=Z,1µm,18.0s						
HLID	**Hailey**	**104.19**	**45**	PFAKE		16 47 30.0	+16
HLID				LR	LR		
	comp=Z,1µm,22.0s						
TIRR	**Tirgusor**	**104.20**	**316**	PFAKE		16 47 20.0	+5.8
TIRR				LR	LR		
	comp=Z,500nm,22.0s						
BAR	**Barrett**	**104.29**	**57**	PFAKE		16 47 30.0	+15
BAR				LR	LR		
	comp=Z,2µm,22.0s						
PFO	**Pinyon Flats O**	**104.34**	**56**	PFAKE		16 47 30.0	+15
PFO				LR	LR		
	comp=Z,2µm,20.0s						
XPFO	**Piæon Flat**	**104.34**	**56**	PFAKE		16 47 30.0	+15
XPFO				LR	LR		
	comp=Z,2µm,21.0s						
VNA3	**Neumayer Olymp**	**104.47**	**191**	Pdiff	**Pdif**	**16 47 18.5**	**+3.6**
SHPR	**Sheep Range**	**104.95**	**53**	PFAKE		16 51 40.0	
SHPR				LR	LR		
	comp=Z,1µm,18.0s						
DLMT	**Dillon**	**105.05**	**43**	PFAKE		16 51 40.0	
DLMT				LR	LR		
	comp=Z,1µm,21.0s						
LDFC	**Landfair**	**105.22**	**54**	PFAKE		16 51 40.0	
LDFC				LR	LR		
	comp=Z,1µm,21.0s						
MANT	**Manisa**	**105.29**	**310**	PFAKE		16 51 40.0	
MANT				LR	LR		
	comp=Z,900nm,19.0s						
BUR04	**Bucovina Ar. S**	**105.59**	**319**	*e*Pdif	**Pdif**	**16 47 18.3**	**-2.2**
PSUT	**Pine Spring**	**105.60**	**50**	PFAKE		16 51 50.0	
PSUT				LR	LR		
	comp=Z,1µm,22.0s						
BOZ	**Bozeman (W)**	**105.66**	**43**	PFAKE		16 51 50.0	
BOZ				LR	LR		
	comp=Z,1µm,20.0s						
MLR	**Muntele Rosu**	**105.66**	**317**	PFAKE		16 51 50.0	
MLR				LR	LR		
	comp=Z,800nm,22.0s						
BGU	**Big Grassy Mou**	**105.74**	**48**	PFAKE		16 51 50.0	
BGU				LR	LR		
	comp=Z,1µm,20.0s						
HVU	**Hansel Valley**	**105.75**	**47**	PFAKE		16 51 50.0	
HVU				LR	LR		
	comp=Z,1µm,18.0s						
GLA	**Glamis**	**105.78**	**56**	PFAKE		16 51 50.0	
GLA				LR	LR		
	comp=Z,1µm,21.0s						
DUG	**Dugway, Tooele**	**106.06**	**48**	PFAKE		16 51 50.0	
DUG				LR	LR		
	comp=Z,900nm,20.0s						
SPUT	**South Promonto**	**106.09**	**47**	PFAKE		16 51 50.0	
SPUT				LR	LR		
	comp=Z,1µm,18.0s						
YHB	**Horse Butte**	**106.17**	**44**	PFAKE		16 51 50.0	
YHB				LR	LR		
	comp=Z,1µm,20.0s						
CCUT	**Cedar City**	**106.17**	**51**	PFAKE		16 51 50.0	
CCUT				LR	LR		
	comp=Z,1µm,18.0s						
W13A	**Hualapai Mount**	**106.21**	**54**	PFAKE		16 51 50.0	
W13A				LR	LR		
	comp=Z,1µm,22.0s						
EGMT	**Eagleton**	**106.24**	**40**	PFAKE		16 51 50.0	
EGMT				LR	LR		
	comp=Z,900nm,18.0s						
YMR	**Madison River**	**106.35**	**44**	PFAKE		16 51 50.0	
YMR				LR	LR		
	comp=Z,1µm,22.0s						
LCMT	**Little Creek M**	**106.37**	**52**	PFAKE		16 51 50.0	
LCMT				LR	LR		
	comp=Z,1µm,18.0s						
SZCU	**Shurtz Canyon**	**106.38**	**51**	PFAKE		16 51 50.0	
SZCU				LR	LR		
	comp=Z,1µm,18.0s						
MBAR	**Mbarara**	**106.39**	**269**	PFAKE		16 51 50.0	
MBAR				LR	LR		
	comp=Z,900nm,21.0s						
YFT	**Old Faithful**	**106.49**	**44**	PFAKE		16 51 50.0	
YFT				LR	LR		
	comp=Z,2µm,19.0s						
YPP	**Pitchstone Pla**	**106.56**	**44**	PFAKE		16 51 50.0	
YPP				LR	LR		
	comp=Z,1µm,21.0s						
IMW	**Indian Meadow**	**106.56**	**44**	PFAKE		16 51 50.0	
IMW				LR	LR		
	comp=Z,900nm,20.0s						
KWP	**Kalwaria Pacla**	**106.60**	**322**	PFAKE		16 51 50.0	
KWP				LR	LR		
	comp=Z,8µm,21.0s						
TPAW	**Teton Pass**	**106.65**	**45**	PFAKE		16 51 50.0	
TPAW				LR	LR		
	comp=Z,1µm,21.0s						
HWUT	**Hardware Ranch**	**106.67**	**47**	PFAKE		16 51 50.0	
HWUT				LR	LR		
	comp=Z,1µm,18.0s						
TCRU	**Three Creeks R**	**106.67**	**50**	PFAKE		16 51 50.0	
TCRU				LR	LR		
	comp=Z,1µm,18.0s						
FLWY	**Flagg Ranch**	**106.68**	**44**	PFAKE		16 51 50.0	
FLWY				LR	LR		
	comp=Z,1µm,21.0s						
ALN	**Alexandroupoli**	**106.69**	**312**	PFAKE		16 51 50.0	
ALN				LR	LR		
	comp=Z,200nm,22.0s						
113A	**Mohawk Valley,**	**106.70**	**56**	PFAKE		16 51 50.0	
113A				LR	LR		
	comp=Z,1µm,20.0s						
AHID	**Auburn Hatcher**	**106.73**	**46**	PFAKE		16 51 50.0	
AHID				LR	LR		
	comp=Z,1µm,20.0s						
MOOW	**Moose Ponds**	**106.73**	**45**	PFAKE		16 51 50.0	
MOOW				LR	LR		
	comp=Z,900nm,22.0s						
CTU	**Camp Tracy**	**106.74**	**48**	PFAKE		16 51 50.0	
CTU				LR	LR		
	comp=Z,800nm,20.0s						
REDW	**Red Top Meadow**	**106.76**	**45**	PFAKE		16 51 50.0	
REDW				LR	LR		
	comp=Z,1µm,22.0s						
LKWY	**Lake**	**106.76**	**44**	PFAKE		16 51 50.0	
LKWY				LR	LR		
	comp=Z,600nm,19.0s						
SNOW	**Snow King Moun**	**106.80**	**45**	PFAKE		16 51 50.0	
SNOW				LR	LR		
	comp=Z,1µm,21.0s						
LOHW	**Long Hollow**	**106.87**	**45**	PFAKE		16 51 50.0	
LOHW				LR	LR		
	comp=Z,700nm,20.0s						
TCUT	**Toone Canyon**	**106.90**	**47**	PFAKE		16 51 50.0	
TCUT				LR	LR		
	comp=Z,1µm,20.0s						
MPU	**Maple Canyon**	**106.98**	**48**	PFAKE		16 51 50.0	
MPU				LR	LR		
	comp=Z,1µm,18.0s						
JLU	**Jordanelle**	**106.99**	**48**	PFAKE		16 51 50.0	
JLU				LR	LR		
	comp=Z,1µm,20.0s						
MTPU	**Mount Pierson**	**106.99**	**51**	PFAKE		16 51 50.0	
MTPU				LR	LR		
	comp=Z,800nm,20.0s						
PKCU	**Pink Cliffs**	**107.02**	**51**	PFAKE		16 51 50.0	
PKCU				LR	LR		
	comp=Z,1µm,19.0s						
Y14A	**Wickenburg**	**107.13**	**55**	PFAKE		16 51 50.0	
Y14A				LR	LR		
	comp=Z,2µm,21.0s						
UZH	**Uzhgorod**	**107.17**	**321**	*e*P	**Pdif**	**16 47 27.5**	**+0.2**
U15A	**North Rim**	**107.23**	**52**	PFAKE		16 51 50.0	
U15A				LR	LR		
	comp=Z,1µm,18.0s						
RLMT	**Red Lodge**	**107.39**	**43**	PFAKE		16 51 50.0	
RLMT				LR	LR		
	comp=Z,1µm,19.0s						
TMUT	**Trail Mountain**	**107.46**	**49**	PFAKE		16 51 50.0	
TMUT				LR	LR		
	comp=Z,800nm,20.0s						
CRVS	**Cervenica-Dubn**	**107.60**	**321**	*e*P	**Pdif**	**16 47 32.2**	**+2.9**
CRVS	**Cervenica-Dubn**	**107.60**	**321**	*e*PDIFF	**Pdif**	**16 47 32.2**	**+2.9**
P17A	**Butcher Ranch,**	**107.78**	**49**	PFAKE		16 51 50.0	
P17A				LR	LR		
	comp=Z,1µm,21.0s						
BW06	**Boulder Array**	**107.83**	**45**	PFAKE		16 51 50.0	
BW06				LR	LR		
	comp=Z,1µm,20.0s						
PDAR	**Pinedale Array**	**107.83**	**45**	PKKPab	PKKPab	17 03 07.2	+1.3
	comp=Z,2.9nm,1.1s,baz=82,slow=6.5,SNR=6.3						
LSZ	**Lusaka**	**107.92**	**254**	PFAKE		16 51 50.0	
LSZ				LR	LR		
	comp=Z,900nm,20.0s						
SRU	**San Rafael Swe**	**108.03**	**49**	PFAKE		16 51 50.0	
SRU				LR	LR		
	comp=Z,1µm,21.0s						
P18A	**Preston Nutter**	**108.11**	**49**	PFAKE		16 51 50.0	
P18A				LR	LR		
	comp=Z,1µm,20.0s						
WUAZ	**Wupatki**	**108.15**	**53**	PFAKE		16 51 50.0	
WUAZ				LR	LR		
	comp=Z,1µm,19.0s						
X16A	**Lo Mia Camp, P**	**108.31**	**54**	PFAKE		16 51 50.0	
X16A				LR	LR		
	comp=Z,2µm,20.0s						
VTS	**Vitosha**	**108.32**	**315**	PFAKE		16 51 50.0	
VTS				LR	LR		
	comp=Z,500nm,20.0s						
FFC	**Flin Flon**	**108.40**	**32**	PFAKE		16 51 50.0	
FFC				LR	LR		
	comp=Z,1µm,22.0s						
SUMG	**Summit**	**108.74**	**359**	PFAKE		16 51 50.0	
SUMG				LR	LR		
	comp=Z,500nm,20.0s						
IDI	**Anoyia**	**108.81**	**307**	PFAKE		16 51 50.0	
IDI				LR	LR		
	comp=Z,300nm,20.0s						
SRIG	**Santa Rosalia**	**108.86**	**62**	PFAKE		16 51 50.0	
SRIG				LR	LR		
	comp=Z,1µm,18.0s						
PSZ	**Piszkesteto**	**108.92**	**321**	PFAKE		16 51 50.0	
PSZ				LR	LR		
	comp=Z,800nm,22.0s						
LAO	**LASA Array**	**108.94**	**41**	PFAKE		16 51 50.0	
LAO				LR	LR		
	comp=Z,900nm,22.0s						
KONO	**Kongsberg**	**109.17**	**335**	PFAKE		16 51 50.0	
KONO				LR	LR		
	comp=Z,1µm,21.0s						
TUC	**Tucson**	**109.26**	**56**	PFAKE		16 51 50.0	
TUC				LR	LR		
	comp=Z,1µm,20.0s						
OKC	**Ostrava-Krasne**	**109.30**	**323**	*e*SDIF	**Sdif**	**16 59 50.5**	**+3.7**
OKC				*e*SP	**SP**	**17 01 32.3**	**-1.5**
OKC				*e*SS	**SS**	**17 07 24.4**	**-4.9**
OKC				AMS	AMS	17 44 10.0	
	comp=Z,600nm,20.3s						
VYHS	**Vyhne**	**109.38**	**322**	*e*PP	PP	16 52 10.2	+0.1
X18A	**Snowflake**	**109.50**	**54**	PFAKE		16 51 50.0	
X18A				LR	LR		
	comp=Z,1µm,21.0s						
SCO	**Scoresbysund**	**109.55**	**353**	PFAKE		16 51 50.0	
SCO				LR	LR		
	comp=Z,108µm,21.0s						
DGMT	**Dagmar**	**109.61**	**38**	PFAKE		16 51 50.0	
DGMT				LR	LR		
	comp=Z,1µm,19.0s						
MORC	**Moravsky Berou**	**109.69**	**323**	PFAKE		16 51 50.0	
MORC				LR	LR		
	comp=Z,900nm,21.0s						
HSIG		**109.72**	**60**	PFAKE		16 51 50.0	
HSIG				LR	LR		
	comp=Z,900nm,18.0s						
RWWY	**Rawlins**	**109.80**	**46**	PFAKE		16 51 50.0	
RWWY				LR	LR		
	comp=Z,1µm,18.0s						
AGG	**Agios Georgios**	**109.91**	**311**	PFAKE		16 51 50.0	
AGG				LR	LR		
	comp=Z,900nm,22.0s						
MVCO	**Mesa Verde**	**110.03**	**51**	PFAKE		16 51 50.0	
MVCO				LR	LR		
	comp=Z,900nm,18.0s						
DIVS	**Divibare**	**110.12**	**317**	PFAKE		16 51 50.0	
DIVS				LR	LR		
	comp=Z,500nm,22.0s						
FNA	**Florina**	**110.14**	**313**	PFAKE		16 51 50.0	
FNA				LR	LR		
	comp=Z,500nm,22.0s						
DPC	**Dobruska-Polom**	**110.19**	**324**	*e*PP	PP	16 52 18.8	+2.9
DPC				*e*SDIF		16 59 55.9	
DPC				*e*x	x	17 01 31.6	
DPC				*e*SS	**SS**	**17 07 48.3**	**+7.1**
DPC				AMS	AMS	17 43 50.0	
	comp=Z,800nm,18.8s						
UPC	**Upice**	**110.30**	**324**	*e*PP	PP	16 52 18.4	+1.7
UPC				*e*SS	SS	17 07 52.9	+10
UPC				AMS	AMS	17 44 00.0	
	comp=Z,600nm,19.3s						
SMCO	**Snowmass**	**110.68**	**48**	PFAKE		16 52 00.0	
SMCO				LR	LR		
	comp=Z,900nm,21.0s						
ITM	**Ithomi**	**110.70**	**309**	PFAKE		16 51 50.0	
ITM				LR	LR		
	comp=Z,300nm,20.0s						
319A	**Douglas**	**110.70**	**57**	PFAKE		16 52 00.0	
319A				LR	LR		
	comp=Z,2µm,22.0s						
PVCC	**Panska Ves**	**111.13**	**325**	*e*PP	PP	16 52 27.6	+5.0
PVCC				AMS	AMS	17 41 40.0	
	comp=Z,700nm,20.3s						
TTG	**Podgorica**	**111.16**	**315**	PFAKE		16 52 00.0	
TTG				LR	LR		
	comp=Z,500nm,22.0s						
RSSD	**Black Hills**	**111.25**	**43**	PFAKE		16 52 00.0	
RSSD				LR	LR		
	comp=Z,900nm,20.0s						
GOPC	**GO Pecny, Ondr**	**111.27**	**324**	*e*PP	PP	16 52 24.2	+0.6
GOPC				*e*SDIF		17 00 08.9	
GOPC				*e*SS	**SS**	**17 08 02.2**	**+6.6**
GOPC				AMS	AMS	17 44 40.0	
	comp=Z,1µm,18.0s						
BRG	**Berggiesshubel**	**111.34**	**325**	*e*PKP	**PKiKP**	**16 51 48.7**	**+4.5**
	comp=Z,17nm,1.9s						
BRG				PP	**PP**	**16 52 20.0**	**-4.1**
BRG				SDIFF		17 00 07.0	
BRG				PS	**PS**	**17 01 51.0**	**-5.3**
BRG				SS	**SS**	**17 08 01.0**	**+4.6**
BRG				*e*		17 25 44.7	
	comp=Z,9.3nm,1.5s						
	comp=N,266nm,26.8s						

	comp=E,266nm,26.8s						
	comp=Z,250nm,17.6s						
BRG	**Berggiesshubel**	**111.34**	**325**	*e*PKIKP	**PKiKP**	**16 51 48.7**	**+4.5**
BRG						16 52 20.0	
BRG				PS	**PS**	**17 01 51.0**	**-5.3**
BRG				SS	SS	17 08 01.0	+4.6
BRG				pmax	pmax		
	comp=Z,17nm,1.9s						
BRG				pmax	pmax		
	comp=Z,9.0nm,1.5s						
BRG				MLR	MLR		
	comp=N,266nm,26.8s						
BRG				MLR	MLR		
	comp=E,266nm,26.8s						
BRG				MLR	MLR		
	comp=Z,250nm,17.6s						
PRU	**Pruhonice**	**111.38**	**324**	*e*PP	PP	16 52 24.6	+0.2
PRU				*e*SDIF		17 00 06.2	
PRU				*e*x	x	17 01 38.7	
PRU				*e*SS	**SS**	**17 07 59.3**	**+2.3**
PRU				AMS	AMS	17 44 50.0	
	comp=Z,700nm,19.3s						
CONA	**Conrad Observa**	**111.43**	**322**	pPKiKP	**PKiKP**	**16 51 46.4**	**+1.8**
	comp=Z,5.5nm,1.4s						
SLBS	**Sierra La Lagu**	**111.45**	**65**	PFAKE		16 52 00.0	
SLBS				LR	LR		
	comp=Z,1µm,20.0s						
ISCO	**Idaho Springs**	**111.51**	**47**	PFAKE		16 52 00.0	
ISCO				LR	LR		
	comp=Z,1µm,20.0s						
CLL	**Collm**	**111.67**	**326**	*e*(Pdif)	**Pdif**	**16 47 58.0**	**+11**
CLL				*e*sPKiKP	**sPKiKP**	**16 51 52.0**	**-2.0**
CLL				*e*PP	**PP**	**16 52 27.0**	**+0.6**
CLL				*e*PPP	PPP	16 54 42.0	
CLL				*e*PPPP		16 56 30.0	
CLL				*e*SKSac	**SKSac**	**16 58 24.0**	**-1.3**
CLL				*e*SKKSac	**SKKSac**	**16 59 27.0**	**-1.5**
CLL				*e*Sdif	**Sdif**	**17 00 07.0**	**+0.5**
CLL				*e*		17 00 26.0	
CLL				*e*PS	**PS**	**17 01 57.0**	**-2.3**
CLL				*e*PPS	PPS	17 03 00.0	
CLL				*e*SS	**SS**	**17 07 59.0**	**-1.8**
CLL				*e*SSS	SSS	17 12 12.0	
CLL				Lmax		17 41 00.0	
CLL				LmV		17 45 00.0	
	comp=Z,900nm,19.7s						
CLL	**Collm**	**111.67**	**326**	PFAKE		16 52 00.0	
CLL				LR	LR		
	comp=Z,900nm,19.0s						
CLL	**Collm**	**111.67**	**326**	*e*PKIKP	**sPKiKP**	**16 51 52.0**	**-2.0**
CLL				*e*		16 52 27.0	
BLY	**Banja Luka**	**111.79**	**318**	PFAKE		16 52 00.0	
BLY				LR	LR		
	comp=Z,700nm,22.0s						
ILULI	**Ilulissat**	**111.95**	**3**	PFAKE		16 52 00.0	
ILULI				LR	LR		
	comp=Z,500nm,22.0s						
SDCO	**Great Sand Dun**	**112.19**	**49**	PFAKE		16 52 00.0	
SDCO				LR	LR		
	comp=Z,1µm,18.0s						
ANMO	**Albuquerque**	**112.19**	**53**	PFAKE		16 52 00.0	
ANMO				LR	LR		
	comp=Z,900nm,21.0s						
KHC	**Kasperske Hory**	**112.31**	**324**	*e*PP	PP	16 52 34.5	+3.3
KHC				*e*SDIF		17 00 12.6	
KHC				*e*PS	**PS**	**17 02 02.3**	**-3.2**
KHC				*e*SS	**SS**	**17 08 15.2**	**+5.6**
KHC				AMS	AMS	17 44 40.0	
	comp=Z,800nm,18.0s						
KHC	**Kasperske Hory**	**112.31**	**324**	PFAKE		16 52 00.0	
KHC				LR	LR		
	comp=Z,300nm,20.0s						
MOA	**Molln**	**112.45**	**322**	*e*pPKiKP	**PKiKP**	**16 51 49.8**	**+3.3**
	comp=Z,5.4nm,1.4s						
SOKA	**Soboth**	**112.45**	**321**	pPKiKP	**PKiKP**	**16 51 49.4**	**+2.8**
	comp=Z,5.2nm,1.5s						
NKC	**Novy Kostel**	**112.48**	**325**	*e*PP	PP	16 52 35.4	+3.1
NKC				AMS	AMS	17 43 00.0	
	comp=Z,800nm,17.5s						
OBKA	**Obir**	**112.82**	**321**	PKiKP	**PKiKP**	**16 51 43.2**	**-4.1**
	comp=Z,16nm,1.7s						
KBA	**Koelnbreinsper**	**113.34**	**322**	PP	PP	16 52 37.4	-1.3
	comp=Z,1.5nm,0.5s						
GRFO	**Grafenberg**	**113.43**	**325**	PFAKE		16 52 00.0	
GRFO				LR	LR		
	comp=Z,800nm,19.0s						
TRI	**Trieste**	**113.65**	**320**	PFAKE		16 52 00.0	
TRI				LR	LR		
	comp=Z,600nm,19.0s						
OGNE	**Ogallala**	**113.73**	**45**	PFAKE		16 52 00.0	
OGNE				LR	LR		
	comp=Z,800nm,20.0s						
ULM	**Lac du Bonnet**	**113.77**	**34**	PFAKE		16 52 00.0	
ULM				LR	LR		
	comp=Z,1µm,20.0s						
MNTX	**Cornudas Mount**	**113.87**	**56**	*e*PKiKP	**PKiKP**	**16 51 49.7**	**0.0**
MNTX				LR	LR		
	comp=Z,1µm,20.0s						
ABTA	**Abfaltersbach**	**114.00**	**322**	PP	PP	16 52 39.8	-3.5
	comp=Z,4.0nm,1.0s						
TIP	**Timpagrande**	**114.01**	**313**	PFAKE		16 52 00.0	+10
TIP				LR	LR		
	comp=Z,800nm,22.0s						
SFJD	**Kangerlussuaq**	**114.18**	**3**	PFAKE		16 52 00.0	+11
SFJD				LR	LR		
	comp=Z,500nm,22.0s						
WTTA	**Wattenberg**	**114.31**	**323**	pPKPdf	PKPdf	16 51 53.0	+2.7
	comp=Z,4.9nm,0.9s						
MOTA	**Moosalm**	**114.59**	**323**	*e*PKiKP	**PKiKP**	**16 51 49.9**	**-0.9**
	comp=Z,1.6nm,0.5s						
HPIG		**114.70**	**61**	PFAKE		16 52 00.0	+8.4
HPIG				LR	LR		
	comp=Z,1µm,19.0s						
AGMN	**Agassiz Nation**	**114.72**	**36**	PFAKE		16 52 00.0	+9.2
AGMN				LR	LR		
	comp=Z,1µm,19.0s						
RETA	**Reutte**	**114.73**	**323**	*e*PP	**PP**	**16 52 49.1**	**+0.7**
	comp=Z,6.8nm,1.0s						
FETA	**Feichten**	**114.97**	**323**	PKiKP	PKPdf	16 51 52.1	+0.6
	comp=Z,4.6nm,1.5s						
STU	**Stuttgart**	**115.04**	**325**	PFAKE		16 52 00.0	+8.6
STU				LR	LR		
	comp=Z,900nm,20.0s						
AQU	**L’Aquila**	**115.24**	**317**	PFAKE		16 52 00.0	+8.0
AQU				LR	LR		
	comp=Z,500nm,22.0s						
DAVA	**Damuels**	**115.36**	**323**	PKPdf	**PKPdf**	**16 51 50.7**	**-1.5**
	comp=Z,4.6nm,1.1s						
ANGG	**Ammassalik, Gr**	**115.68**	**358**	PFAKE		16 52 00.0	+7.9
ANGG				LR	LR		
	comp=Z,500nm,20.0s						
BFO	**Black Forest**	**115.76**	**325**	PFAKE		16 52 00.0	+7.2
BFO				LR	LR		
	comp=Z,800nm,20.0s						
TX31	**Lajitas Ar. Si**	**115.88**	**58**	*e*PKPdf	**PKPdf**	**16 51 53.7**	**0.0**
TXAR	**Lajitas Array**	**115.88**	**58**	PKP	**PKPdf**	**16 51 54.2**	**+0.5**
	comp=Z,0.6nm,0.7s,baz=221,slow=1.0,SNR=6.7						
TXAR				PKKPab	**PKKPab**	**17 02 28.3**	**-1.9**
	comp=Z,0.7nm,0.7s,baz=114,slow=6.3,SNR=4.7						
AMTX	**Amarillo**	**115.98**	**51**	PFAKE		16 52 10.0	+16
AMTX				LR	LR		
	comp=Z,400nm,19.0s						
TUE	**Stuetta**	**116.06**	**323**	PFAKE		16 52 00.0	+6.3
TUE				LR	LR		
	comp=Z,700nm,20.0s						
CBKS	**Cedar Bluff**	**116.14**	**47**	PFAKE		16 52 10.0	+16
CBKS				LR	LR		
	comp=Z,1µm,20.0s						
WLF	**Walferdange**	**116.29**	**327**	PFAKE		16 52 00.0	+6.3
WLF				LR	LR		
	comp=Z,700nm,20.0s						
ECSD	**EROS Data Cent**	**116.34**	**41**	*e*PKPdf	**PKPdf**	**16 51 53.4**	**-0.7**
ECSD				LR	LR		
	comp=Z,900nm,20.0s						
VLC	**Villacollemand**	**116.48**	**320**	PFAKE		16 52 10.0	+16
VLC				LR	LR		
	comp=Z,900nm,22.0s						
ECH	**Echery**	**116.49**	**325**	PFAKE		16 52 10.0	+16
ECH				LR	LR		
	comp=Z,600nm,20.0s						
UCC	**Uccle**	**116.61**	**329**	PFAKE		16 52 10.0	+16
UCC				LR	LR		
	comp=Z,1µm,20.0s						
EKA	**Eskdalemuir Ar**	**117.23**	**336**	PKP	**PKPdf**	**16 51 55.0**	**-0.4**
	comp=Z,0.2nm,0.4s,baz=42,slow=3.3,SNR=2.4						
EKA	**Eskdalemuir Ar**	**117.23**	**336**	PKIKP	**PKPdf**	**16 51 55.0**	**-0.4**
ESK	**Eskdalemuir**	**117.26**	**336**	PFAKE		16 52 10.0	+15
ESK				LR	LR		
	comp=Z,1µm,22.0s						
F36A	**Milaca**	**117.30**	**37**	*e*PKPdf	**PKPdf**	**16 51 55.5**	**-0.4**
EYMN	**Ely**	**117.42**	**35**	PFAKE		16 52 10.0	+14
EYMN				LR	LR		
	comp=Z,1µm,20.0s						
KSU1	**Kansas State U**	**118.28**	**45**	PFAKE		16 52 10.0	+12
KSU1				LR	LR		
	comp=Z,700nm,20.0s						
WMOK	**Wichita Mounta**	**118.28**	**51**	PFAKE		16 52 10.0	+12
WMOK				LR	LR		
	comp=Z,700nm,19.0s						
ZAIG	**Zacatecas**	**118.29**	**65**	PFAKE		16 52 10.0	+11
ZAIG				LR	LR		
	comp=Z,1µm,20.0s						
BNI	**Bardonecchia**	**118.39**	**322**	PFAKE		16 52 10.0	+12
BNI				LR	LR		
	comp=Z,1µm,20.0s						
JCT	**Junction City**	**118.81**	**56**	*e*PKPdf	**PKPdf**	**16 51 58.0**	**-1.3**
JCT				LR	LR		
	comp=Z,900nm,21.0s						
JCT	**Junction City**	**118.81**	**56**	*e*PKIKP	**PKPdf**	**16 51 58.0**	**-1.3**
JCT				MLR	MLR		
	comp=Z,900nm,21.0s						
SCIA	**State Center**	**119.39**	**41**	PFAKE		16 52 10.0	+10
SCIA				LR	LR		
	comp=Z,800nm,21.0s						
I39A	**Houston**	**119.53**	**39**	*e*PKPdf	**PKPdf**	**16 51 58.8**	**-1.4**
G40A	**Rib Lake**	**119.60**	**37**	*e*PKPdf	**PKPdf**	**16 51 59.2**	**-1.0**
COWI	**Conover**	**119.78**	**35**	*e*PKPdf	**PKPdf**	**16 52 00.2**	**-0.4**
COWI				LR	LR		
	comp=Z,1µm,18.0s						
F41A	**Three Lakes**	**120.00**	**36**	*e*PKPdf	**PKPdf**	**16 52 00.4**	**-0.7**
DSB	**Dublin**	**120.05**	**336**	PFAKE		16 52 10.0	+9.1
DSB				LR	LR		
	comp=Z,700nm,20.0s						
MOIG	**Morelia**	**120.13**	**68**	PFAKE		16 52 10.0	+7.7
MOIG				LR	LR		
	comp=Z,3µm,21.0s						
P38A	**Dawn**	**120.22**	**44**	*e*PKPdf	**PKPdf**	**16 52 01.8**	**+0.2**
NRS	**Narsarsuaq**	**120.23**	**1**	PFAKE		16 52 10.0	+9.0
NRS				LR	LR		
	comp=Z,600nm,20.0s						
H41A	**Junction City**	**120.28**	**37**	*e*PKPdf	**PKPdf**	**16 52 01.7**	**+0.1**
LNIG	**Linares**	**120.59**	**62**	PFAKE		16 52 10.0	+7.2
LNIG				LR	LR		
	comp=Z,1µm,20.0s						
L40A	**Anamosa**	**120.62**	**40**	*e*PKPdf	**PKPdf**	**16 52 02.0**	**-0.3**
G42A	**Mountain**	**120.67**	**36**	*e*PKPdf	**PKPdf**	**16 52 02.2**	**-0.1**
JFWS	**Jewell Farm**	**120.81**	**39**	*e*PKPdf	**PKPdf**	**16 52 02.5**	**-0.2**
JFWS				LR	LR		
	comp=Z,1µm,22.0s						
JFWS	**Jewell Farm**	**120.81**	**39**	*e*PKIKP	**PKPdf**	**16 52 02.5**	**-0.2**
JFWS				MLR	MLR		
	comp=Z,1µm,22.0s						
E43A	**Lone Tree Farm**	**120.84**	**34**	*e*PKPdf	**PKPdf**	**16 52 01.7**	**-0.9**
G43A	**Wallace**	**121.09**	**36**	*e*PKPdf	**PKPdf**	**16 52 02.5**	**-0.7**
I42A	**Draeger Farm,**	**121.12**	**37**	*e*PKPdf	**PKPdf**	**16 52 02.2**	**-1.0**
S39A	**Bolivar**	**121.22**	**46**	*e*PKPdf	**PKPdf**	**16 52 03.0**	**-0.6**
KVTX	**Kingsville**	**121.26**	**58**	PFAKE		16 52 20.0	+16
KVTX				LR	LR		
	comp=Z,700nm,20.0s						
P40A	**Paris**	**121.28**	**43**	*e*PKPdf	**PKPdf**	**16 52 03.5**	**-0.2**
HHAR	**Hobbs**	**121.36**	**47**	*e*PKPdf	**PKPdf**	**16 52 04.0**	**0.0**
HHAR				LR	LR		
	comp=Z,1µm,22.0s						
L42A	**Oliver, Polo**	**121.65**	**40**	*e*PKPdf	**PKPdf**	**16 52 03.6**	**-0.7**
R40A	**Maddies Statio**	**121.70**	**45**	*e*PKPdf	**PKPdf**	**16 52 03.7**	**-0.8**
W39A	**Magazine**	**121.92**	**49**	*e*PKPdf	**PKPdf**	**16 52 04.4**	**-0.6**
HKT	**Hockley**	**122.24**	**55**	PFAKE		16 52 20.0	+14
HKT				LR	LR		
	comp=Z,1µm,19.0s						
MIAR	**Mount Ida**	**122.34**	**49**	*e*PKPdf	**PKPdf**	**16 52 08.5**	**+2.6**
MIAR				LR	LR		
	comp=Z,1µm,20.0s						
MIAR	**Mount Ida**	**122.34**	**49**	*e*PKIKP	**PKPdf**	**16 52 08.5**	**+2.6**
V40A	**Witts Springs**	**122.39**	**47**	*e*PKPdf	**PKPdf**	**16 52 05.3**	**-0.6**
P42A	**Winchester**	**122.42**	**42**	*e*PKPdf	**PKPdf**	**16 52 05.2**	**-0.6**
CCM	**Cathedral Cave**	**122.52**	**44**	*e*PKPdf	**PKPdf**	**16 52 04.8**	**-1.3**
CCM				LR	LR		
	comp=Z,899nm,19.0s						
CCM	**Cathedral Cave**	**122.52**	**44**	*e*PKIKP	**PKPdf**	**16 52 04.8**	**-1.3**
CCM				MLR	MLR		
	comp=Z,899nm,19.0s						
NATX	**Nacogdoches**	**122.56**	**53**	PFAKE		16 52 20.0	+14
NATX				LR	LR		
	comp=Z,1µm,22.0s						
HDIL	**Hopedale**	**122.63**	**41**	PFAKE		16 52 20.0	+14
HDIL				LR	LR		
	comp=Z,900nm,19.0s						
SLM	**Saint Louis**	**122.95**	**43**	PFAKE		16 52 20.0	+13
SLM				LR	LR		
	comp=Z,2µm,20.0s						
TLIG	**Tlapa**	**122.95**	**70**	PFAKE		16 52 20.0	+12
TLIG				LR	LR		
	comp=Z,1µm,19.0s						
WHAR	**Wooly Hollow**	**123.00**	**48**	PFAKE		16 52 20.0	+13
WHAR				LR	LR		
	comp=Z,1µm,21.0s						
M44A	**Midewin, Midew**	**123.01**	**40**	*e*PKPdf	**PKPdf**	**16 52 06.1**	**-0.8**
T42A	**Van Buren**	**123.10**	**45**	*e*PKPdf	**PKPdf**	**16 52 06.6**	**-0.6**
SCHQ	**Schefferville**	**123.13**	**16**	PFAKE		16 52 20.0	+13
SCHQ				LR	LR		
	comp=Z,600nm,22.0s						
FVM	**French Village**	**123.13**	**44**	*e*PKPdf	**PKPdf**	**16 52 05.4**	**-1.9**
FVM				*e*PKPdf	**PKiKP**	**16 52 09.7**	**+2.2**
FVM				LR	LR		
	comp=Z,1µm,19.0s						
FVM	**French Village**	**123.13**	**44**	*e*PKIKP	**PKPdf**	**16 52 05.4**	**-1.9**
FVM				*e*		16 52 09.7	
FVM				MLR	MLR		
	comp=Z,1µm,19.0s						
UALR	**University of**	**123.17**	**48**	PFAKE		16 52 20.0	+13
UALR				LR	LR		
	comp=Z,900nm,19.0s						
PBMO	**Poplar Bluff**	**123.69**	**45**	PFAKE		16 52 20.0	+12
PBMO				LR	LR		
	comp=Z,1µm,18.0s						
CCAR	**Cane Creek**	**123.96**	**49**	PFAKE		16 52 20.0	+11
CCAR				LR	LR		
	comp=Z,1µm,19.0s						
HBAR	**Harrisburg**	**124.08**	**47**	PFAKE		16 52 20.0	+11
HBAR				LR	LR		
	comp=Z,800nm,19.0s						
SIUC	**Southern Illin**	**124.10**	**44**	PFAKE		16 52 20.0	+11
SIUC				LR	LR		
	comp=Z,1µm,20.0s						
P45A	**Graceland, Par**	**124.18**	**41**	*e*PKPdf	**PKPdf**	**16 52 09.4**	**+0.2**
PARMO	**Parma**	**124.22**	**45**	PFAKE		16 52 20.0	+11
PARMO				LR	LR		
	comp=Z,1µm,18.0s						
OLIL	**Olney**	**124.35**	**42**	*e*PKPdf	**PKPdf**	**16 52 09.4**	**-0.1**
OLIL				LR	LR		
	comp=Z,900nm,19.0s						
GNAR	**Gosnell**	**124.36**	**46**	PFAKE		16 52 20.0	+10
GNAR				LR	LR		
	comp=Z,900nm,19.0s						
PVMO	**Portageville**	**124.38**	**45**	PFAKE		16 52 20.0	+10
PVMO				LR	LR		
	comp=Z,1µm,18.0s						
LVIG	**Laguna Verde**	**124.53**	**67**	PFAKE		16 52 20.0	+10
LVIG				LR	LR		
	comp=Z,2µm,21.0s						
GLAT	**Glass**	**124.74**	**45**	PFAKE		16 52 20.0	+10
GLAT				LR	LR		
	comp=Z,1µm,18.0s						
MET	**Memphis--Engin**	**124.80**	**47**	PFAKE		16 52 20.0	+9.5
MET				LR	LR		
	comp=Z,600nm,19.0s						
HALT	**Halls**	**124.87**	**46**	PFAKE		16 52 20.0	+9.4
HALT				LR	LR		
	comp=Z,1µm,19.0s						
USIN	**University of**	**125.04**	**43**	PFAKE		16 52 20.0	+9.1
USIN				LR	LR		
	comp=Z,1µm,20.0s						
BLO	**Bloomington**	**125.17**	**41**	*e*PKPdf	**PKPdf**	**16 52 09.1**	**-2.0**
BLO				*e*PKPdf	**PKiKP**	**16 52 12.5**	**+1.0**
BLO				LR	LR		
	comp=Z,800nm,20.0s						
BLO	**Bloomington**	**125.17**	**41**	*e*PKIKP	**PKPdf**	**16 52 09.1**	**-2.0**
BLO				MLR	MLR		
	comp=Z,800nm,20.0s						
AAM	**Ann Arbor**	**125.19**	**36**	PFAKE		16 52 20.0	+8.9
AAM				LR	LR		
	comp=Z,1µm,22.0s						
OXF	**Oxford**	**125.46**	**47**	PFAKE		16 52 20.0	+8.2
OXF				LR	LR		
	comp=Z,900nm,20.0s						
VBMS	**Vicksburg**	**125.62**	**50**	PFAKE		16 52 20.0	+7.8
VBMS				LR	LR		
	comp=Z,1µm,20.0s						
WCI	**Wyandotte Cave**	**125.83**	**42**	PFAKE		16 52 20.0	+7.6
WCI				LR	LR		
	comp=Z,1µm,19.0s						
WVT	**Waverly**	**125.84**	**45**	*e*PKPdf	**PKPdf**	**16 52 11.8**	**-0.7**
WVT				LR	LR		
	comp=Z,1µm,18.0s						
WVT	**Waverly**	**125.84**	**45**	*e*PKIKP	**PKPdf**	**16 52 11.8**	**-0.7**
WVT				MLR	MLR		
	comp=Z,1µm,18.0s						
SADO	**Sadowa**	**126.12**	**31**	*e*PKPdf	**PKPdf**	**16 52 12.4**	**-0.4**
SADO				LR	LR		
	comp=Z,1µm,19.0s						
PLAL	**Pickwick Lake**	**126.22**	**46**	*e*PKPdf	**PKPdf**	**16 52 12.8**	**-0.4**
PLAL				LR	LR		
	comp=Z,800nm,19.0s						
V48A	**Smith Brothers**	**126.74**	**45**	*e*PKPdf	**PKPdf**	**16 52 12.2**	**-2.1**
ACSO	**Alum Creek Sta**	**126.83**	**38**	*e*PKPdf	**PKPdf**	**16 52 14.0**	**-0.3**
ACSO				LR	LR		
	comp=Z,700nm,20.0s						
T49A	**Edmonton**	**126.93**	**43**	*e*PKPdf	**PKPdf**	**16 52 14.6**	**0.0**
X48A	**Hartselle**	**127.22**	**46**	*e*PKPdf	**PKPdf**	**16 52 15.2**	**0.0**
ERPA	**Erie**	**127.43**	**34**	PFAKE		16 52 30.0	+15
ERPA				LR	LR		
	comp=Z,1µm,19.0s						
SWET	**Sewanee**	**127.63**	**45**	PFAKE		16 52 30.0	+14
SWET				LR	LR		
	comp=Z,1µm,18.0s						
ALLY	**Alegheny Colle**	**127.64**	**35**	PFAKE		16 52 30.0	+14
ALLY				LR	LR		
	comp=Z,1µm,20.0s						
ESLA	**Sonseca Array**	**127.92**	**322**	PFAKE		16 52 30.0	+14
ESLA				LR	LR		
	comp=Z,800nm,19.0s						
LRAL	**Lakeview Retre**	**127.93**	**48**	*e*PKPdf	**PKPdf**	**16 52 16.8**	**+0.2**
LRAL				LR	LR		
	comp=Z,800nm,20.0s						
S51A	**Beattyville**	**127.94**	**41**	*e*PKPdf	**PKPdf**	**16 52 16.6**	**+0.1**
M54A	**Oil Creek Stat**	**128.01**	**35**	*e*PKPdf	**PKPdf**	**16 52 16.5**	**-0.1**
W50A	**Signal Mountai**	**128.08**	**45**	*e*PKPdf	**PKPdf**	**16 52 16.5**	**-0.4**
MMNY	**Mt. Morris Dam**	**128.17**	**33**	PFAKE		16 52 30.0	+13
MMNY				LR	LR		
	comp=Z,1µm,20.0s						
N54A	**Moraine State**	**128.17**	**36**	*e*PKPdf	**PKPdf**	**16 52 16.6**	**-0.3**
PAB	**San Pablo**	**128.23**	**322**	PFAKE		16 52 30.0	+13
PAB				LR	LR		
	comp=Z,600nm,19.0s						
CPCT	**Cooper Cave**	**128.50**	**44**	*e*PKPdf	**PKPdf**	**16 52 17.3**	**-0.3**
CPCT				LR	LR		
	comp=Z,1µm,20.0s						
LONY	**Lake Ozonia**	**128.51**	**29**	PFAKE		16 52 30.0	+13
LONY				LR	LR		
	comp=Z,800nm,22.0s						
TZTN	**Tazewell**	**128.57**	**42**	*e*PKPdf	**PKPdf**	**16 52 16.4**	**-1.4**
Z50A	**Ashland**	**128.61**	**47**	*e*PKPdf	**PKPdf**	**16 52 17.6**	**-0.3**
BRAL	**Brewton**	**128.74**	**50**	PFAKE		16 52 30.0	+12
BRAL				LR	LR		
	comp=Z,700nm,22.0s						
MVO	**Moncorvo**	**128.79**	**325**	*e*PP	PP	16 54 27.5	+3.6
MVO	**Moncorvo**	**128.79**	**325**	*e*SS	SS	17 11 44.1	+3.2
MVO	**Moncorvo**	**128.79**	**325**	*e*LR	LR	17 35 30.7	
	comp=Z,534nm,20.0s						
FRNY	**Flat Rock**	**128.82**	**28**	PFAKE		16 52 30.0	+12
FRNY				LR	LR		
	comp=Z,800nm,19.0s						
TKL	**Tuckaleechee C**	**128.91**	**43**	PKP	**PKPdf**	**16 52 19.2**	**+0.8**
	comp=Z,7.0nm,0.7s,baz=318,slow=12,SNR=7.0						
TKL	**Tuckaleechee C**	**128.91**	**43**	*e*PKPdf	**PKPdf**	**16 52 18.4**	**0.0**
TKL				LR	LR		
	comp=Z,1µm,22.0s						
TKL	**Tuckaleechee C**	**128.91**	**43**	*e*PKIKP	**PKPdf**	**16 52 18.4**	**0.0**
TKL				MLR	MLR		
	comp=Z,1µm,22.0s						
V52A	**Sevierville**	**128.93**	**43**	*e*PKPdf	**PKPdf**	**16 52 18.0**	**-0.4**
PGAV	**Gavieira, Arco**	**128.94**	**327**	*e*PP	PP	16 54 26.0	+1.1
PGAV	**Gavieira, Arco**	**128.94**	**327**	*e*LR	LR	17 39 11.4	
	comp=Z,596nm,20.0s						
250A	**Grady**	**128.97**	**49**	*e*PKPdf	**PKPdf**	**16 52 16.9**	**-1.7**
MCWV	**Mont Chateau**	**129.09**	**37**	PFAKE		16 52 30.0	+11
MCWV				LR	LR		
	comp=Z,1µm,20.0s						
W52A	**Murphy**	**129.10**	**44**	*e*PKPdf	**PKPdf**	**16 52 17.3**	**-1.5**
NCB	**Newcomb**	**129.17**	**29**	PFAKE		16 52 30.0	+11
NCB				LR	LR		
	comp=Z,500nm,21.0s						
CCIG	**Comitan**	**129.24**	**70**	PFAKE		16 52 30.0	+10
CCIG				LR	LR		
	comp=Z,900nm,21.0s						
V53A	**Saluda**	**129.55**	**43**	*e*PKPdf	**PKPdf**	**16 52 19.7**	**0.0**
BINY	**Binghamton**	**129.56**	**32**	PFAKE		16 52 30.0	+11
BINY				LR	LR		
	comp=Z,2µm,18.0s						
MTE	**Manteigas**	**129.59**	**325**	*e*PP	PP	16 54 33.6	+4.4
MTE	**Manteigas**	**129.59**	**325**	*e*SS	SS	17 12 23.4	+33
MTE	**Manteigas**	**129.59**	**325**	*e*LR	LR	17 35 45.7	
	comp=Z,579nm,20.0s						
MTE	**Manteigas**	**129.59**	**325**	PFAKE		16 52 30.0	+10
MTE				LR	LR		
	comp=Z,800nm,22.0s						
SSPA	**Standing Stone**	**129.59**	**35**	*e*PKPdf	**PKPdf**	**16 52 19.4**	**-0.2**
SSPA				LR	LR		
	comp=Z,1µm,19.0s						
152A	**Waverly Hall**	**129.78**	**47**	*e*PKPdf	**PKPdf**	**16 52 19.4**	**-0.8**
BG3	**Lake Jocassee**	**129.84**	**44**	PFAKE		16 52 30.0	+10
BG3				LR	LR		
	comp=Z,1µm,20.0s						
ACCN	**Adirondack Com**	**129.87**	**29**	PFAKE		16 52 30.0	+10
ACCN				LR	LR		
	comp=Z,600nm,19.0s						
LBNH	**Lisbon**	**130.05**	**27**	PFAKE		16 52 30.0	+10
LBNH				LR	LR		
	comp=Z,800nm,20.0s						
KSPA	**Keystone Colle**	**130.13**	**32**	PFAKE		16 52 30.0	+9.5
KSPA				LR	LR		
	comp=Z,2µm,19.0s						
PMRV	**Marv??o**	**130.13**	**324**	*e*PP	PP	16 54 37.7	+5.0
PMRV	**Marv??o**	**130.13**	**324**	*e*LR	LR	17 42 55.7	
	comp=Z,559nm,20.0s						
BLA	**Blacksburg**	**130.24**	**40**	PFAKE		16 52 30.0	+9.1
BLA				LR	LR		
	comp=Z,1µm,21.0s						
MYIG	**MØrida**	**130.28**	**63**	PFAKE		16 52 30.0	+8.6
MYIG				LR	LR		
	comp=Z,600nm,20.0s						
GOGA	**Godfrey**	**130.31**	**46**	PFAKE		16 52 30.0	+8.9
GOGA				LR	LR		
	comp=Z,1µm,19.0s						
PCAS	**Casmilo, Conde**	**130.36**	**325**	*e*SS	SS	17 12 22.7	+23
PKME	**Peaks-Kenny Pk**	**130.38**	**24**	PFAKE		16 52 30.0	+9.1
PKME				LR	LR		
	comp=Z,800nm,20.0s						
PAGS	**Pennsylvania G**	**130.52**	**34**	PFAKE		16 52 30.0	+8.7
PAGS				LR	LR		
	comp=Z,1µm,19.0s						
PESTR	**Estremoz**	**130.62**	**324**	*e*SS	SS	17 12 34.0	+31
PESTR	**Estremoz**	**130.62**	**324**	PFAKE		16 52 30.0	+8.4
PESTR				LR	LR		
	comp=Z,300nm,18.0s						
KMSC	**Kings Mountain**	**130.85**	**42**	*e*PKPdf	**PKPdf**	**16 52 21.0**	**-1.1**
PMTG	**Montargil**	**130.86**	**324**	*e*SS	SS	17 12 26.5	+20
ODNJ	**Ogdensburg**	**131.08**	**32**	PFAKE		16 52 30.0	+7.7
ODNJ				LR	LR		
	comp=Z,2µm,19.0s						
PLCA	**Paso Flores**	**131.18**	**152**	PKP	**PKPdf**	**16 52 23.9**	**+1.3**
	comp=Z,4.2nm,0.7s,baz=180,slow=0.8,SNR=12						
PLCA	**Paso Flores**	**131.18**	**152**	*e*PKPdf	**PKPdf**	**16 52 22.6**	**-0.1**
PLCA	**Paso Flores**	**131.18**	**152**	*e*PKIKP	**PKPdf**	**16 52 22.6**	**-0.1**
JSC	**Jenkinsville**	**131.38**	**43**	PFAKE		16 52 30.0	+6.9
JSC				LR	LR		
	comp=Z,1µm,19.0s						
BRNJ	**Basking Ridge**	**131.39**	**32**	PFAKE		16 52 30.0	+7.1
BRNJ				LR	LR		
	comp=Z,2µm,18.0s						
CBN	**Corbin Frederi**	**131.50**	**37**	PFAKE		16 52 30.0	+6.8
CBN				LR	LR		
	comp=Z,1µm,22.0s						

PAL	Palisades	131.50	31	PFAKE		16 52 30.0	+6.9
PAL				LR	LR		
	comp=Z,2µm,18.0s						
PMAFR	Mafra	131.55	325	eSS	SS	17 12 50.6	+36
HRV	Adam Dziewonsk	131.55	28	PFAKE		16 52 30.0	+6.8
HRV				LR	LR		
	comp=Z,600nm,19.0s						
PVAQ	Vaqueiros	131.63	322	ePP	PP	16 54 48.7	+6.2
PVAQ	Vaqueiros	131.63	322	eSS	SS	17 12 21.4	+5.5
PVAQ	Vaqueiros	131.63	322	eLR	LR	17 37 44.4	
	comp=Z,420nm,20.0s						
YLE	Yale	131.77	30	PFAKE		16 52 40.0	+16
YLE				LR	LR		
	comp=Z,1µm,19.0s						
NHSC	New Hope	132.79	44	PFAKE		16 52 40.0	+14
NHSC				LR	LR		
	comp=Z,1µm,18.0s						
CNNC	Cliffs of the	133.06	40	PFAKE		16 52 40.0	+14
CNNC				LR	LR		
	comp=Z,600nm,18.0s						
TGUH	Tegucigalpa,Un	134.29	72	PFAKE		16 52 40.0	+11
TGUH				LR	LR		
	comp=Z,700nm,20.0s						
TOC3	Torodi Ar. Sit	134.32	287	PFAKE		16 52 40.0	+11
TOC3				LR	LR		
	comp=Z,500nm,20.0s						
TOA2	Torodi Ar. Sit	134.34	287	PFAKE		16 52 40.0	+11
TOA2				LR	LR		
	comp=Z,2µm,21.0s						
TOA0	Torodi Ar. Sit	134.34	287	ePKPdf	PKPdf	16 52 28.3	-0.9
TORD	Torodi Ar. Bea	134.34	287	PKP	PKPdf	16 52 29.5	+0.3
	comp=Z,1.5nm,0.9s,baz=34,slow=3.5						
TOA3	Torodi Ar. Sit	134.35	287	PFAKE		16 52 40.0	+11
TOA3				LR	LR		
	comp=Z,400nm,20.0s						
DWPF	Disney Wildern	134.49	51	PFAKE		16 52 40.0	+11
DWPF				LR	LR		
	comp=Z,700nm,20.0s						
PEL	Peldehue	136.87	145	PFAKE		16 52 50.0	+16
PEL				LR	LR		
	comp=Z,700nm,18.0s						
TRQA	Tornquist	137.07	158	PFAKE		16 52 50.0	+16
TRQA				LR	LR		
	comp=Z,1µm,19.0s						
JTS	JuntasAbangare	137.22	76	PKP	PKPdf	16 52 34.2	-0.5
	comp=Z,2.0nm,0.3s,baz=333,slow=4.5,SNR=2.6						
JTS	JuntasAbangare	137.22	76	ePKPdf	PKPdf	16 52 34.6	+0.1
JTS	JuntasAbangare	137.22	76	ePKIKP	PKPdf	16 52 34.7	+0.1
ESPN	Las Esperanzas	137.51	73	PFAKE		16 52 50.0	+15
ESPN				LR	LR		
	comp=Z,200nm,18.0s						
HDC	Heredia	138.08	76	PFAKE		16 52 50.0	+14
HDC				LR	LR		
	comp=Z,1µm,22.0s						
KOWA	Kowa	139.44	291	PKP	PKPdf	16 52 38.2	-0.4
	comp=Z,2.9nm,0.7s,baz=56,slow=3.6,SNR=2.6						
LCO	Las Campanas	139.79	141	ePKPdf	PKPdf	16 52 40.0	+0.7
PMOZ	Porto Moniz, M	140.41	325	ePP	PP	16 55 41.2	+3.5
PMOZ	Porto Moniz, M	140.41	325	eLR	LR	17 41 45.0	
	comp=Z,296nm,22.0s						
DBIC	Dimbokro	141.73	279	PKhKP	PKPpre	16 52 36.4	
	comp=Z,5.1nm,0.6s,baz=73,slow=2.4,SNR=7.4						
BBSR	BB Station	142.85	31	PFAKE		16 53 00.0	+16
BBSR				LR	LR		
	comp=Z,700nm,20.0s						
GO02	Mina Guanaco	143.11	137	ePKPdf	PKPbc	16 52 43.1	+0.9
GTBY	Guantanamo Bay	143.41	57	PFAKE		16 53 00.0	+14
GTBY				LR	LR		
	comp=Z,700nm,19.0s						
NNA	Nana	143.76	112	PFAKE		16 53 00.0	+14
NNA				LR	LR		
	comp=Z,800nm,19.0s						
TUMC	Tumaco	144.14	89	PFAKE		16 53 00.0	+13
TUMC				LR	LR		
	comp=Z,700nm,20.0s						
OTAV	Otavalo	144.40	91	ePKPdf	PKPbc	16 52 46.5	-0.1
OTAV				LR	LR		
	comp=Z,500nm,19.0s						
OTAV	Otavalo	144.40	91	eP	PKPdf	16 52 48.1	0.0
OTAV	Otavalo	144.40	91	ePKIKP	PKPbc	16 52 46.5	-0.1
OTAV				MLR	MLR		
	comp=Z,500nm,19.0s						
PB04	IPOC Station P	144.52	133	ePKPdf	PKPbc	16 52 46.4	+0.1
CAPC	Capurgana	144.89	77	eP	PKPdf	16 52 54.8	+6.4
GCUF	Volcan Galeras	145.52	90	eP	PKPdf	16 52 48.8	-1.3
POPC	Popayan, Colom	146.18	87	eP	PKPdf	16 52 50.8	-0.1
HORQ	Saladito	146.19	86	eP	PKPab	16 52 52.8	0.0
SOTA	Rioblanco	146.25	88	eP	PKPbc	16 52 52.8	+0.3
YOTC	Yotoco, Valle	146.44	85	eP	PKPbc	16 52 52.8	+0.2
PCON	Cinco Dias	146.46	88	eP	PKPab	16 52 54.1	0.0
SJCC	San Jacinto, C	146.74	74	eP	PKPab	16 52 54.8	+0.3
MNMC	Minye Minye	146.82	129	PFAKE		16 53 00.0	+5.1
MNMC				LR	LR		
	comp=Z,700nm,22.0s						
HELC	Santa Helena	147.05	81	ePKPbc	PKPbc	16 52 54.3	-0.3
GUYC	Guyana, Colomb	147.29	82	eP	PKPab	16 52 56.8	-0.5
ANIL	Santa Ana	147.34	84	eP	PKPdf	16 52 53.5	+0.5
BETC	Betania	147.41	87	eP	PKPbc	16 52 56.1	+0.9
ZARC	Zaragoza, Cauc	147.52	78	eP	PKPbc	16 52 54.8	-0.7
PRAC	Prado	147.91	85	ePKPbc	PKPbc	16 52 55.9	-0.7
PRAC				LR	LR		
	comp=Z,300nm,19.0s						
ROSC	El Rosal	148.39	83	PKPbc	PKPbc	16 52 59.0	+0.7
	comp=Z,14nm,0.6s,baz=233,slow=5.1,SNR=7.9						
ROSC	El Rosal	148.39	83	ePKPdf	PKPdf	16 52 52.6	-2.2
ROSC				PKPbc	PKPbc	16 52 59.0	+0.7
ROSC				LR	LR		
	comp=Z,400nm,21.0s						
CODC	Agustˆ›n Codaz	148.40	73	eP	PKPbc	16 52 57.4	-0.3
BRRC	Barranca, Sant	148.70	78	eP	PKPdf	16 52 53.5	-1.4
CHIC	Chingaza	148.99	83	eP	PKPdf	16 52 56.1	+0.3
VILC	Villavicencio,	149.07	84	eP	PKPdf	16 52 57.4	+1.8
CPUP	Villa Florida	149.21	154	PKPbc	PKPbc	16 52 59.5	0.0
	comp=Z,22nm,0.8s,baz=213,slow=2.3,SNR=34						
CPUP	Villa Florida	149.21	154	ePKPbc	PKPbc	16 53 00.2	+0.7
CPUP	Villa Florida	149.21	154	ePKP2	PKPbc	16 53 00.2	+0.7
BARC	Barichara	149.30	79	eP	PKPbc	16 52 58.8	-1.6
RUSC	La Rusia	149.50	81	epPKPdf	PKPbc	16 52 59.0	-2.2
RUSC				LR	LR		
	comp=Z,300nm,21.0s						
RUSC	La Rusia	149.50	81	eP	PKPab	16 53 06.7	+0.6
LPAZ	La Paz	149.55	126	PKPbc	PKPbc	16 53 00.9	-0.4
	comp=Z,7.0nm,0.7s,baz=230,slow=2.4,SNR=16						
LPAZ	La Paz	149.55	126	PKP2	PKPbc	16 53 01.0	-0.4
YOPC	Yopal, Colombi	150.22	81	eP	PKPab	16 53 10.1	+1.5
TAMC	Tame, Arauca	150.69	79	eP	PKPbc	16 53 03.4	-0.1
CRPR	Cabo Rojo, PR	150.95	54	ePKPbc	PKPbc	16 53 03.1	-0.9
CRPR				LR	LR		
	comp=Z,900nm,21.0s						
AOPR	Arecibo Observ	151.05	53	ePKPbc	PKPbc	16 53 03.3	-0.9
OBIP	Obispado Ponce	151.34	53	ePKPbc	PKPbc	16 53 04.6	-0.3
SDV	Santo Domingo	151.34	74	PKPbc	PKPbc	16 53 04.3	-1.0
	comp=Z,29nm,0.8s,baz=284,slow=8.0,SNR=12						
SDV	Santo Domingo	151.34	74	PKPbc	PKPbc	16 53 04.3	-1.0
SDV				LR	LR		
	comp=Z,1µm,22.0s						
ICMP	Isla Caja de M	151.48	53	ePKPbc	PKPbc	16 53 04.7	-0.5
ICMP				LR	LR		
	comp=Z,600nm,21.0s						
SJG	San Juan	151.66	52	ePKPbc	PKPbc	16 53 06.1	+0.5
SJG				LR	LR		
	comp=Z,400nm,20.0s						
SJG	San Juan	151.66	52	ePKIKP	PKPbc	16 53 06.1	+0.5
SJG				MLR	MLR		
	comp=Z,400nm,20.0s						
CBYP	Canovanas	151.80	52	PFAKE		16 53 10.0	+4.0
CBYP				LR	LR		
	comp=Z,700nm,20.0s						
HUMP	Col San Antoni	151.88	52	ePKPbc	PKPbc	16 53 05.9	-0.2
MTP	Monte Pirata	152.14	52	ePKPbc	PKPbc	16 53 05.2	-1.4
STVI	Saint Thomas	152.46	51	ePKPbc	PKPbc	16 53 06.8	-0.5
CDVI	St. Croix	152.95	51	ePKPbc	PKPbc	16 53 08.0	-0.5
ANWB	Willy Bob	155.27	48	PFAKE		16 53 20.0	-9.4
ANWB				LR	LR		
	comp=Z,800nm,22.0s						
SAML	Samuel	157.34	117	ePKPdf	PKPdf	16 53 06.1	-1.2
SAML	Samuel	157.34	117	ePKIKP	PKPdf	16 53 06.1	-1.2
SVB	Belmont	158.23	56	PFAKE		16 53 20.0	+12
SVB				LR	LR		
	comp=Z,700nm,20.0s						
GRGR	Grenville	158.46	59	PFAKE		16 53 20.0	+11
GRGR				LR	LR		
	comp=Z,700nm,21.0s						

BEO 16 16:43:23.3±1.3**, 43°.38N×18°.76E, h0^{km}, ML1.4**/3**,**
Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBLS	Lazići	0.67	44	ePg	Pg	16 43 35.8	-0.4
BBLS				eSg	Sg	16 43 44.1	-0.8
SJES	Sjenica	0.89	97	ePg	Pg	16 43 38.9	-1.5
SJES				eSg	Sg	16 43 51.0	-1.0
IVAS	Ivanjica	1.03	79	ePg	Pg	16 43 42.5	-0.5
IVAS				eSg	Sg	16 43 57.0	+0.6
DIVS	Divibare	1.14	51	ePg	Pg	16 43 43.5	-1.7
DIVS				eSg	Sg	16 43 59.6	-0.4

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*MOS **16** 17:00:56.8±2.5, 51°.56N×101°.86E, h11^{km}, mb4.4/1, Error ellipse: s-maj=18.8km s-min=16.6km az=152.8*

*BYKL **16** 17:00:57.1±0.3, 51°.58N×101°.94E, h11^{km}±4^{km}, FELT I=III-IV MSK at Kyren*

*IDC **16** 17:00:59.6±2.8, 51°.10N×101°.58E, h0^{km}, mb1 2.9/4, mb1mx2.8/69, mbtmp2.9/4, ML2.0/3, Error ellipse: s-maj=55.6km s-min=15.2km az=26.0*

ISC 16 17:00:55.9±0.7**, 51°.54N**±0°.03×**101°.84E**±0°.02**, h10^{km}, n36,**
σ**2^{s}04**/72**, 6C-1D, Tuva-Buryatia-Mongolia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARS	Arshan	0.53	43	⇓iPg	Pg	17 01 05.9	-0.2
ARS				eSg	Sg	17 01 12.5	-0.5
ARS				Pmax			
	620nm,0.2s						
ARS				Smax			
	6µm,0.2s						
ARS	Arshan	0.53	43	ePG	Pg	17 01 05.7	-0.4
ARS				e		17 01 12.5	
ARS				pmax	pmax		
	comp=Z,662nm,0.2s						
ARS				smax	smax		
	comp=E,3µm,0.1s						
MOY	Mondy	0.55	284	⇑iPg	Pb	17 01 08.0	+0.4
MOY				eSg	Sb	17 01 16.4	+0.9
MOY				Pmax			
	comp=E,626nm,0.2s						
MOY				Smax			
	comp=E,8µm,1.1s						
MOY	Mondy	0.55	284	ePG	Pb	17 01 08.0	+0.4
MOY				e		17 01 16.3	
MOY				pmax	pmax		
	comp=Z,573nm,0.1s						
MOY				smax	smax		
	comp=N,6µm,0.3s						
TLY	Talaya	1.13	82	⇑iPg	Pb	17 01 15.9	-1.6
TLY				ePb	Pn	17 01 17.9	+0.1
TLY				eSg	Sg	17 01 30.6	-1.7
TLY				max			
	comp=N,123nm,0.1s						
TLY				Smax			
	comp=N,2µm,0.2s						
TLY	Talaya	1.13	82c	iPG	Pb	17 01 15.9	-1.6
TLY				e		17 01 30.2	
TLY				pmax	pmax		
	comp=Z,50nm,0.3s						
TLY				smax	smax		
	comp=N,1.0nm,0.5s						
ZAK	Zakamensk	1.47	141	⇑iPg	Pg	17 01 23.5	-0.6
ZAK				e		17 01 31.1	
ZAK				eSg	Sg	17 01 44.0	+0.8
ZAK				e		17 01 46.6	
ZAK				max			
	comp=N,679nm,0.9s						
ZAK				max			
	comp=N,2µm,0.4s						
ZAK	Zakamensk	1.47	141	ePG	Pg	17 01 23.5	-0.6
ZAK				e		17 01 43.7	
ZAK				pmax	pmax		
	comp=Z,679nm,0.6s						
ZAK				smax	smax		
	comp=E,2µm,0.4s						
ORL	Orlik	1.61	309	⇑iPg	Pg	17 01 26.1	-0.6
ORL				e		17 01 27.9	
ORL				eSg	Sg	17 01 47.5	0.0
ORL				e		17 01 49.8	
ORL				Pmax			
	comp=E,423nm,0.6s						
ORL				max			
	comp=E,770nm,0.7s						
ORL	Orlik	1.61	309	ePN	Pg	17 01 26.1	-0.6
ORL				e		17 01 47.8	
ORL				pmax	pmax		
	comp=Z,423nm,0.5s						
ORL				smax	smax		
	comp=E,768nm,0.8s						
IVK	Ivanovka	1.62	80	⇑iPg	Pn	17 01 24.4	-0.1
IVK				e		17 01 26.1	
IVK				eSg	Sn	17 01 44.9	-0.6
IVK				e		17 01 48.3	
IVK				max			
	comp=E,125nm,0.3s						
IVK				max			
	comp=E,547nm,0.4s						
IRK	Irkutsk	1.66	64	ePg	Pb	17 01 26.1	-0.4
IRK				i Sg	Sn	17 01 46.4	0.0
IRK				Pmax			
	comp=E,270nm,0.3s						
IRK				Smax			
	comp=E,3µm,0.5s						
IRK	Irkutsk	1.66	64	ePN	Pb	17 01 26.1	-0.4
IRK				e		17 01 46.5	
IRK				pmax	pmax		
	comp=Z,268nm,0.4s						
IRK				smax	smax		
	comp=N,3µm,0.9s						
LSTR	Listvyanka	1.89	79	ePg	Pb	17 01 29.5	-0.9
LSTR				e		17 01 30.2	
LSTR				e		17 01 35.7	
LSTR				eSg	Sb	17 01 52.8	-1.3
LSTR				eSgSg	SbSb	17 01 58.5	-0.7
LSTR				max			
	comp=N,71nm,0.5s						
LSTR				max			
	comp=N,597nm,1.3s						
LSTR	Listvyanka	1.89	79	ePN	Pb	17 01 29.7	-0.7
LSTR				e		17 01 52.7	
LSTR				pmax	pmax		
	comp=Z,70nm,0.6s						
LSTR				smax	smax		
	comp=N,573nm,0.5s						
BGT	Bolshoye Golou	2.27	76	ePn	Pb	17 01 35.1	-1.8
BGT				ePg	Pg	17 01 36.2	-3.1
BGT				e		17 01 41.2	
BGT				eSg	Sb	17 02 04.3	-0.7
BGT				max			
	comp=N,175nm,0.9s						
BGT				Smax			
	comp=N,1µm,1.2s						
STDB	Stepnoy Dvoret	2.87	76	ePn	Pn	17 01 43.1	+1.4
STDB				ePg	Pb	17 01 47.3	+0.1
STDB				eSg	Sb	17 02 23.7	+1.3
STDB				e		17 02 26.6	
KNGR	Kungurtug, Tuv	2.88	253	ePn	Pb	17 01 46.1	-1.4
KNGR				ePg	Pg	17 01 49.3	-1.8
KNGR				eSg	Sg	17 02 28.8	+0.3
KAB	Kabansk	3.03	78	eSg	Sb	17 02 29.0	+2.1
KAB				Smax			
	comp=N,2µm,0.7s						
TRG	Tyrgan	3.03	64	ePn	Pn	17 01 44.3	+0.4
TRG				ePg	Pb	17 01 49.5	-0.4
TRG				eSn	Sn	17 02 20.8	+0.5
TRG				eSg	Sb	17 02 27.1	+0.1
TRG				Pmax			
	comp=N,58nm,0.4s						
TRG				Smax			
	comp=N,624nm,0.7s						
TRG	Tyrgan	3.03	64	ePN	Pb	17 01 50.7	+0.8
TRG				e		17 02 27.1	
TRG				pmax	pmax		
	comp=Z,58nm,0.4s						
TRG				smax	smax		
	comp=E,627nm,0.5s						
FFNB	Fofonovo	3.10	79	ePg	Pb	17 01 51.5	+0.5
FFNB				eSg	Sb	17 02 30.0	+1.2
FFNB				Pmax			
	comp=E,60nm,0.5s						
FFNB				Smax			
	comp=E,382nm,0.7s						
HRMR	Khuramsha	3.19	86	ePn	Pn	17 01 46.9	+0.8
HRMR				ePg	Pb	17 01 51.9	-0.7
HRMR				eSg	Sb	17 02 33.1	+1.6
HRMR				Pmax			
	comp=E,94nm,0.5s						
HRMR				Smax			
	comp=E,2µm,0.5s						
TDJR	Todzha	3.66	286	ePg	Pb	17 02 02.7	+2.1
TDJR				eSg	Sg	17 02 51.6	-1.6
KELR	Kotokel	4.03	70	ePg	Pb	17 02 06.9	0.0
KELR				eSg	Sb	17 02 57.7	+2.0
KELR				eSgSg	SbSb	17 03 00.7	-0.1
OGRR	Ongureny	4.09	57	ePn	Pn	17 02 00.7	+2.3
OGRR				ePg	Pb	17 02 09.1	+1.2
OGRR				eSn	Sn	17 02 47.1	+0.8
OGRR				eSg	Sb	17 02 59.9	+2.5
OGRR				Pmax			
	comp=E,61nm,0.4s						
OGRR				Smax			
	comp=E,361nm,0.6s						
ERNS	Erzin	4.42	256	e	Pn	17 02 03.8	+0.7
ERNS				ePg	Pb	17 02 16.5	+2.9
ERNS				eSg	Sg	17 03 15.6	-2.2
KZLR	Kyzyl	4.61	275	e	Pb	17 02 12.2	-4.6
KZLR				ePg	Pg	17 02 20.1	-4.0
KZLR				eSg	Sg	17 03 21.7	-2.0
SONM	Songino Array	4.74	140	Pn	Pn	17 02 09.7	+2.2
	comp=E,0.2nm,0.3s,baz=319,slow=12,SNR=3.3						
SONM				Pg	Pb	17 02 21.5	+2.4
	comp=E,9.0nm,0.3s,baz=321,slow=18,SNR=99						
SONM				Lg	Lg	17 03 24.4	
	comp=E,28nm,0.3s,baz=317,slow=28,SNR=22						
ULN	Ulaanbaatar	4.99	135	e	Pb	17 02 24.0	+0.6
ULN				ePg	Pg	17 02 26.3	-5.2
ULN				i Sg	Sg	17 03 32.3	-3.8
NIZ	Nizh Angarsk	6.24	44	ePn	Pn	17 02 29.9	+2.0
NIZ				ePg	Pb	17 02 47.7	+3.2
NIZ				eSn	Sn	17 03 36.0	-3.2
NIZ				eSg	Sb	17 04 06.2	+7.1
NIZ				Pmax			
	comp=E,14nm,1.0s						
NIZ				Smax			
	comp=E,100nm,1.4s						
KMO	Kumora	7.05	48	ePn	Pn	17 02 41.9	+2.8
KMO				e		17 03 58.9	
KMO				eSg	Sg	17 04 35.6	-6.5
KMO				max			
	comp=E,13nm,0.5s						
KMO				Smax			
	comp=E,97nm,1.1s						
BOD	Bodaibo	9.43	43	e		17 04 56.7	
BOD				eSg	Sn	17 05 47.2	+50
BOD				Smax			
	comp=E,35nm,1.5s						
ZALV	Zalesovo Beam	10.60	290	Pn	Pn	17 03 34.1	+6.5
	comp=E,0.0nm,0.3s,baz=101,slow=15,SNR=2.1						
ZALV				Lg	Lg	17 06 24.2	
	comp=E,0.2nm,0.3s,baz=117,slow=21,SNR=5.8						
MKAR	Makanchi Array	13.63	257	Pn	Pn	17 04 11.2	+2.0
	comp=E,0.0nm,0.3s,baz=64,slow=6.7,SNR=2.7						
MKAR				Lg	Lg	17 08 05.0	
	comp=E,0.0nm,0.3s,baz=73,slow=26,SNR=4.6						
KURBB	Kurchatov Arra	14.67	276	Pn	Pn	17 04 25.3	+2.0
	baz=80,slow=12,SNR=2.8						
KURBB				Lg	Lg	17 08 34.2	
	comp=E,0.0nm,0.3s,baz=78,slow=32,SNR=4.3						

IDC 16 17:32:28.3±7.6**, 16°.16S×177°.99W, h434^{km}**±92^{km}**,**
mb3.2/4**, mb1 3.5**/4**, mb1mx2.9**/47**, mbtmp4.1**/4**, Error ellipse: s-maj=76.7km s-min=22.5km az=161.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	13.03	180	P	P	17 35 19.6	+1.1
	305nm,0.3s,baz=96,slow=24,SNR=7.9						
RAO				S	S	17 37 48.3	+9.2
	92nm,0.3s,baz=73,slow=19,SNR=3.0						
DZM	Mont Dzumac	15.84	246	P	P	17 35 54.7	+5.8
	0.2nm,0.3s,baz=90,slow=20,SNR=3.5						
DZM				S	S	17 38 47.4	+13
	0.1nm,0.3s,baz=148,slow=18,SNR=5.1						
STKA	Stephens Creek	39.84	239	P	P	17 39 21.4	-1.2
	1.3nm,0.5s,baz=103,slow=11,SNR=6.3						
WRA	Warramunga Arr	45.37	258	P	P	17 40 06.7	+0.1
	0.6nm,0.5s,baz=92,slow=6.9,SNR=27						
ASAR	Alice Springs	45.67	253	P	P	17 40 08.8	-0.1
	5.5nm,0.4s,baz=89,slow=7.7,SNR=253						
ASAR				PcP	PcP	17 41 39.1	+0.6
	0.2nm,0.5s,baz=107,slow=4.0,SNR=4.3						
NVAR	Mina Array Bea	77.89	44	P	P	17 43 40.2	-0.2
	0.3nm,0.5s,baz=231,slow=8.0,SNR=2.6						

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*ISCJB **16** 17:41:35.4±1.4, 6°.1S±0°.1×147°.1E±0°.1, h78^{km}, mb3.9/5, Error ellipse: s-maj=17.9km s-min=14.0km az=42.8*

*IDC **16** 17:41:39.1±5.6, 6°.22S×147°.20E, h95^{km}±39^{km}, mb3.8/5, mb1 3.9/7, mb1mx3.4/45, mbtmp4.1/7, Error ellipse: s-maj=44.0km s-min=30.6km az=11.0*

ISC 16 17:41:36.8±1.3**, 6°.1S**±0°.1×**146°.9E**±0°.2**, h78^{km}, n9,**
σ**1^{s}90**/13**, mb3.9**/5**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.27	175	P	Pn	17 42 27.8	+1.9
	16nm,0.3s,baz=13,slow=9.8,SNR=49						
PMG				S	Sn	17 43 04.1	+0.3
	21nm,0.3s,baz=217,slow=20,SNR=15						
CTA	Charters Tower	13.90	182	P	P	17 44 54.4	-1.6
	0.2nm,0.3s,baz=357,slow=13,SNR=2.9						
WRA	Warramunga Arr	18.36	220	P	P	17 45 47.8	+2.4
	0.8nm,0.3s,baz=46,slow=12,SNR=50						
WRA				S	S	17 49 07.0	-3.6
	0.1nm,0.3s,baz=38,slow=22,SNR=3.0						
WRA				PcP	PcP	17 50 13.9	0.0
	0.1nm,0.3s,baz=32,slow=14,SNR=3.8						
ASAR	Alice Springs	21.45	214	P	P	17 46 21.2	+2.3
	2.4nm,0.4s,baz=53,slow=8.5,SNR=119						
ASAR				S	S	17 50 11.7	-1.1
	0.5nm,0.9s,baz=31,slow=22,SNR=3.0						
DZM	Mont Dzumac	24.68	132	P	P	17 46 48.6	-2.1
	5.5nm,0.8s,baz=328,slow=9.5,SNR=6.9						
STKA	Stephens Creek	26.09	190	P	P	17 47 04.0	+0.6
	1.4nm,0.5s,baz=14,slow=9.1,SNR=6.0						
VNDA	Vanda	71.80	177	P	P	17 52 50.7	+0.2
	1.5nm,1.1s,baz=334,slow=6.9,SNR=7.3						
QSPA	South Pole Qui	83.85	180	P	P	17 53 57.3	-0.4
	2.6nm,0.6s,baz=271,slow=1.0,SNR=12						
TORD	Torodi Ar. Bea	145.00	284	PKPbc	PKPbc	18 01 05.5	-0.1
	baz=67,slow=3.5						

IDC 16 17:52:25.1±3.9**, 16°.07S×174°.30W, h74^{km}**±29^{km}**, mb3.3**/6**,**
mb1 3.7/7**, mb1mx3.5**/47**, mbtmp3.7**/7**, Error ellipse: s-maj=121.5km s-min=19.3km az=151.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	3.25	49	P	Pn	17 53 13.8	-0.2
	22nm,0.3s,baz=203,slow=3.4,SNR=48						
AFI				S	Sn	17 53 47.8	-3.8
	56nm,0.3s,baz=49,slow=22,SNR=14						
WRA	Warramunga Arr	48.84	257	P	P	18 01 03.4	-0.1
	0.2nm,0.3s,baz=94,slow=6.8,SNR=5.7						
ASAR	Alice Springs	49.08	252	P	P	18 01 05.3	0.0
	0.6nm,0.6s,baz=90,slow=7.7,SNR=19						
NVAR	Mina Array Bea	75.41	42	P	P	18 04 01.8	+0.5
	0.4nm,0.6s,baz=224,slow=9.8,SNR=2.7						
TXAR	Lajitas Array	81.71	56	P	P	18 04 36.1	+0.1
	0.5nm,0.9s,baz=202,slow=6.2,SNR=4.0						
ILAR	Eielson Array	83.27	11	P	P	18 04 43.5	+0.3
	0.2nm,0.5s,baz=210,slow=5.2,SNR=4.1						
PDAR	Pinedale Array	83.35	42	P	P	18 04 44.0	-0.4
	1.4nm,0.9s,baz=210,slow=4.0,SNR=8.6						
ARCES	ARCESS Array B	125.15	352	PKP	PKPdf	18 11 16.2	-0.3
	1.1nm,0.8s,baz=37,slow=0.5,SNR=3.2						
GERES	GERESS Array B	146.67	350	PKPbc	PKPdf	18 11 57.3	+0.4
	0.6nm,0.7s,baz=2.2,slow=5.2,SNR=4.3						

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*IDC **16** 17:59:11.8±1.0, 4°.34S×136°.99E, h0^{km}, mb3.9/7, mb1 4.1/9, mb1mx3.8/41, mbtmp3.9/9, ML4.0/2, Error*

ellipse: s-maj=47.4km s-min=18.5km az=73.0
*ISCJB **16** 17:59:14.9±0.5, 4°.55S±0°.04×136°.79E±0°.05, h33km, mb3.8/7, Error ellipse: s-maj=7.7km s-min=5.7km az=166.1*
*DJA **16** 17:59:15.8±1.1, 4°S±4°×13°7E±°, h10km±8km, M4.3/8, mb4.5/5, MLv4.3/8*
*NEIC **16** 17:59:17.3±0.6, 4°.40S×136°.83E, h35km, mb4.1/1, Error ellipse: s-maj=26.4km s-min=9.6km az=72.0*
ISC 16 17:59:16.6±0.7**, 4°.57S**±0°.06×**136°.80E**±0°.07**, h35km, n22, σ2.s43**/26**, mb3.9**/7**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRPI	Serui, Papua	2.74	348	P	Pn	17 59 57.1	-1.1
SRPI				S	Sn	18 00 29.2	-0.9
BAKI	Biak	3.43	348	P	Pn	18 00 06.7	-0.9
GENI	Genyem	3.89	60	P	Pn	18 00 14.8	+0.8
RKPI	Ransiki, Papua	4.01	319	P	Pn	18 00 15.3	-0.4
JAY	Jayapura	4.40	62	P	Pn	18 00 21.4	+0.4
FAKI	Fak Fak	4.83	290	P	Pn	18 00 27.6	+0.7
FAKI				S	Sn	18 01 22.5	+0.8
SWI	Sorong	6.65	303	P	Pn	18 00 51.6	-0.3
BNDI	Bandanaira	6.88	270	P	Pn	18 00 56.8	+1.8
WRAB	Tennant Creek	15.46	189	*e*P	Pn	18 02 54.1	+1.9
	11nm,0.8s						
WRA	Warramunga Arr	15.47	189	Pn	Pn	18 02 50.0	-2.3
	0.4nm,0.3s,baz=8.6,slow=13,SNR=18						
WRA				Sn	Sn	18 05 35.7	-6.9
	0.4nm,0.3s,baz=11,slow=22,SNR=7.6						
CTA	Charters Tower	17.96	150	P	Pn	18 03 25.0	+1.3
	0.2nm,0.3s,baz=342,slow=3.2,SNR=2.7						
CTAO	Charters Tower	17.96	150	P	P	18 03 28.3	+4.3
ASAR	Alice Springs	19.19	188	P	Pn	18 03 41.0	+2.3
	0.7nm,0.3s,baz=13,slow=10,SNR=68						
ASAR				S	Sn	18 07 06.4	-6.4
	0.1nm,0.3s,baz=5.2,slow=28,SNR=4.6						
STKA	Stephens Creek	27.53	171	P	P	18 05 01.4	+1.3
	2.7nm,1.0s,baz=342,slow=11,SNR=2.5						
KSAR	Wonju Array Be	42.62	349	P	P	18 07 08.5	-1.0
KSRS	Korea Array	42.62	350	P	P	18 07 08.5	-1.0
	0.8nm,0.8s,baz=168,slow=8.2,SNR=4.7						
CMAR	Chiang Mai Arr	43.77	303	P	P	18 07 19.8	+0.5
	0.6nm,0.7s,baz=114,slow=6.0,SNR=2.6						
MKAR	Makanchi Array	70.12	323	P	P	18 10 25.8	+0.3
	1.3nm,0.5s,baz=113,slow=8.0,SNR=19						
KURK	Kurchatov	74.16	326	P	P	18 10 49.5	0.0
KURBB	Kurchatov Arra	74.16	326	P	P	18 10 49.5	-0.1
	0.5nm,0.7s,baz=107,slow=5.5,SNR=4.4						
BVAR	Borovoye Array	79.76	326	P	P	18 11 21.1	+0.1
	1.2nm,0.6s,baz=129,slow=7.0,SNR=6.2						
ILAR	Eielson Array	88.31	25	P	P	18 12 03.6	-0.7
	0.6nm,0.6s,baz=264,slow=4.3,SNR=6.0						

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*ISCJB **16** 18:07:02.3±0.4, 36°.63S±0°.03×70°.93W±0°.07, h159km±4km, mb3.7/7, Error ellipse: s-maj=9.6km s-min=4.1km az=20.0*
*SJA **16** 18:07:02.4±0.6, 36°.68S×70°.95W, h164km±5km, ML3.8, MW3.6*
*IDC **16** 18:07:03.4±2.4, 36°.72S×70°.59W, h146km±22km, mb3.5/8, mb1 3.7/10, mb1mx3.5/39, mbtmp4.0/10, Error ellipse: s-maj=32.4km s-min=14.8km az=98.0*
*GUC **16** 18:07:03.3±0.5, 36°.63S×71°.05W, h168km±6km, ML3.9*
ISC 16 18:07:03.3±0.7**, 36°.61S**±0°.05×**70°.94W**±0°.06**, h154km**±7km**, n39, σ1.s29**/59**, mb3.8**/7**, 1C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCHI	Chillan	0.92	270	*i* P	Pn	18 07 28.4	+0.7
CCHI				*e*S	Sn	18 07 47.0	+0.6
CCHI	Chillan	0.92	270	⇑*i*P	Pn	18 07 28.3	+0.7
CCHI				*e*S	Sn	18 07 47.0	+0.6
CCHI				IAML		18 07 48.1	
	comp=N,3µm,0.3s						
CANA	Caviahue	1.28	184	*e*P	Pn	18 07 30.8	-0.3
CANA				IAML		18 07 35.1	
	comp=E,255nm,0.5s						
CANA				*e*S	Sn	18 07 52.5	0.0
CCSP	San Pedro de C	1.76	262	*e*P	Pn	18 07 35.5	-0.4
CCSP				*e*S	Sn	18 08 00.2	-0.7
CCSP				IAML		18 08 02.2	
	comp=N,2µm,0.3s						
GO05	HualaæØ	1.79	333	*e*P	Pn	18 07 37.1	+0.8
GO05				*e*S	Sn	18 08 02.3	+0.7
GO05				IAML		18 08 07.7	
	comp=N,499nm,0.4s						
TMU	Temuco	2.50	211	*e*P	Pn	18 07 42.7	-1.8
TMU				*e*S	Sn	18 08 11.6	-4.8
RFA	San Rafael	2.72	48	*i* P	Pn	18 07 48.2	+0.8
RFA				IAML		18 07 48.5	
	comp=Z,180nm,0.6s						
RFA				*i* S	Sn	18 08 22.2	+0.8
CLCH	Cerro Calan	3.22	6	*e*P	Pn	18 07 54.4	+0.7
CLCH				*e*S	Sn	18 08 33.9	+1.2
FCH	Farellones	3.32	9	*e*P	Pn	18 07 55.9	+0.7
FCH				*e*S	Sn	18 08 36.0	+0.8
ROC1	El Roble	3.62	359	*e*P	Pn	18 07 59.0	0.0
ROC1				*e*S	Sn	18 08 43.1	+0.9
AVIZ	Vizcacheras	3.71	33	*e*P	Pn	18 08 01.3	+1.4
AAGR	Agrelo	3.92	27	*e*P	Pn	18 08 04.0	+1.3
ARCO	CERRO ARCO	4.10	24	*e*P	Pn	18 08 05.9	+0.7
ARCO				IAML		18 08 13.2	
	comp=Z,25nm,0.4s						
PLCA	Paso Flores	4.13	176	P	Pn	18 08 03.5	-1.8
	comp=Z,6.4nm,0.3s,baz=21,slow=12,SNR=189						
PLCA				S	Sn	18 08 42.5	-11
	comp=Z,1.2nm,0.3s,baz=284,slow=7.8,SNR=3.1						
ASAL	Salagasta	4.37	24	*e*P	Pn	18 08 09.8	+1.3
ASAL				*e*S	Sn	18 09 01.1	+1.8
AUSP	Uspallata	4.56	17	*e*P	Pn	18 08 12.6	+1.3
RTLS	Leoncito	4.99	16	*i* P	Pn	18 08 18.1	+1.2
RTLS				IAML		18 08 19.7	
	comp=Z,101nm,0.3s						
RTLS				*e*S	Sn	18 09 14.7	+0.4
RTCV	Cerro Valdivia	5.13	23	*i* P	Pn	18 08 18.7	+0.1
RTCV				*i* S	Sn	18 09 16.9	-0.5
ACAN	Cantantal	5.32	37	*i* P	Pn	18 08 21.9	+0.9
ZON	Zonda	5.39	21	*i* P	Pn	18 08 22.0	0.0
ZON				IAML		18 08 23.4	
	comp=Z,45nm,0.2s						
ZON				*e*S	Sn	18 09 22.9	-0.5
RTLL	Cerro Villicun	5.65	22	*i* P	Pn	18 08 24.9	-0.5
RTLL				*e*S	Sn	18 09 27.8	-1.8
MRA	San Martin	6.00	47	*i* P	Pn	18 08 30.2	+0.1
MRA				IAML		18 08 32.0	
	comp=Z,24nm,0.4s						
AMOG	MOGNA	6.01	20	*e*P	Pn	18 08 29.8	-0.4
AMOG				*e*S	Sn	18 09 38.1	-0.1
AROD	Rodeo	6.54	11	*i* P	Pn	18 08 37.7	+0.1
AROD				*e*S	Sn	18 09 49.9	-1.4
ACDV	Cuesta del Vie	6.60	14	*e*P	Pn	18 08 37.9	-0.3
ACDV				*i* S	Sn	18 09 51.6	-0.9
AGUA	GUANDACOL	7.39	17	*e*P	Pn	18 08 47.6	-1.1
AGUA				*e*S	Sn	18 10 09.9	-1.6
TCA	Tanti	7.44	47	*i* P	Pn	18 08 48.8	-0.5
TCA				IAML		18 08 49.1	
	comp=Z,42nm,0.4s						
VCA	Vinchina	8.18	17	*e*P	Pn	18 08 58.8	-0.5
VCA				IAML		18 09 01.9	
	comp=Z,36nm,0.2s						
VCA				*e*S	Sn	18 10 26.3	-4.2
CPUP	Villa Florida	15.47	52	P	Pn	18 10 32.6	-0.7
	comp=Z,0.8nm,0.3s,baz=233,slow=10,SNR=8.0						
LPAZ	La Paz	20.39	8	P	Pn	18 11 31.2	-1.4
	comp=Z,6.9nm,0.8s,baz=180,slow=5.9,SNR=15						
LPAZ				S	S	18 15 07.9	-1.4
	comp=Z,0.7nm,0.5s,baz=135,slow=19,SNR=2.8						
SIV	San Ignacio	22.33	26	P	P	18 11 48.0	-0.6
	comp=Z,4.3nm,0.7s,baz=226,slow=8.7,SNR=23						
SNAA	Sanae	48.84	157	P	P	18 15 32.3	-0.3
	comp=Z,0.7nm,0.7s,baz=280,slow=11,SNR=5.6						
QSPA	South Pole Qui	53.63	180	P	P	18 16 08.2	-0.3
	comp=Z,0.6nm,0.3s,baz=148,slow=0.8,SNR=7.1						
TXAR	Lajitas Array	72.44	330	P	P	18 18 15.5	+2.6
	comp=Z,0.1nm,0.4s,baz=142,slow=6.6,SNR=4.4						
DBIC	Dimbokro	75.19	70	P	P	18 18 28.8	-0.4
	comp=Z,6.1nm,0.9s,baz=265,slow=11,SNR=3.8						
KOWA	Kowa	80.92	64	P	P	18 19 01.1	+0.4
	comp=Z,1.8nm,0.6s,baz=225,slow=5.3,SNR=3.5						
TORD	Torodi Ar. Bea	84.27	69	P	P	18 19 17.4	-0.6
	comp=Z,0.4nm,0.5s,baz=223,slow=6.7						
WRA	Warramunga Arr	118.89	207	PKP	PKPdf	18 25 34.4	+0.4
	comp=Z,0.3nm,0.4s,baz=155,slow=1.8,SNR=12						
MKAR	Makanchi Array	157.67	55	PKPab	PKPab	18 27 14.6	+0.6
	comp=Z,0.2nm,0.4s,baz=273,slow=3.9,SNR=4.6						

IDC 16 18:10:39.3±1.8**, 4°.13N**×**127°.16E, h0km, mb3.2**/3**, mb1 3.4**/3**, mb1mx3.2**/55**, mbtmp3.2**/3**, Error ellipse: s-maj=145.1km s-min=26.7km az=66.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.94	164	P	P	18 16 04.8	+0.4
	0.3nm,0.5s,baz=343,slow=10.0,SNR=7.1						
ASAR	Alice Springs	28.39	167	P	P	18 16 36.0	+0.3
	0.1nm,0.5s,baz=352,slow=7.1,SNR=5.3						
ASAR				PcP	PcP	18 19 47.0	-1.5
	0.5nm,1.0s,baz=321,slow=1.5,SNR=2.9						
MKAR	Makanchi Array	57.48	325	P	P	18 20 30.6	+0.3
	0.2nm,0.3s,baz=108,slow=7.8,SNR=6.2						

IDC 16 18:18:58.8±7.3**, 3°.54S**×**146°.90E, h0km, mb3.4**/3**, mb1 3.7**/3**, mb1mx3.4**/42**, mbtmp3.5**/3**, Error ellipse: s-maj=242.3km s-min=31.2km az=99.0, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.40	216	P	P	18 23 37.3	-0.2
	1.4nm,0.7s,baz=41,slow=11,SNR=18						
ASAR	Alice Springs	23.62	211	P	P	18 24 11.9	+0.1
	0.6nm,0.5s,baz=44,slow=7.5,SNR=14						
MKAR	Makanchi Array	75.55	320	P	P	18 30 45.4	0.0
	0.5nm,1.0s,baz=95,slow=7.7,SNR=2.7						

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*SJA **16** 18:24:12.4±0.8, 32°.41S×71°.70W, h35km±9km, ML2.4, MW3.3*
*GUC **16** 18:24:16.8±0.4, 32°.39S×71°.17W, h55km±4km, ML2.6*
ISC 16 18:24:14.5±4.4**, 32°.6S**±0°.1×**71°.7W**±0°.2**, h65km**±25km**, n11, σ0.s80**/18**, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROC1	El Roble	0.71	123	*i* P	Pn	18 24 29.5	0.0
ROC1				*i* S	Sn	18 24 40.8	+0.4
ROCH	El Roble	0.71	122	*e*P	Pn	18 24 30.2	+0.7
ROCH				*e*S	Sn	18 24 40.3	-0.1
ROCH				IAML		18 24 41.2	
	comp=N,452nm,0.1s						
PEL	Peldehue	1.04	122	*e*P	Pn	18 24 33.5	+0.2
PEL				*e*S	Sn	18 24 45.5	-1.7
PEL				IAML		18 24 47.2	
	comp=E,805nm,0.2s						
CLCH	Cerro Calan	1.28	129	*e*P	Pn	18 24 37.1	+0.6
CLCH				*e*S	Sn	18 24 52.8	-0.2
CLCH				IAML		18 24 54.1	
	comp=E,219nm,0.2s						
ANTU	Antumapu	1.34	137	IAML		18 24 55.7	
	comp=N,175nm,0.2s						
FCH	Farellones	1.42	122	*e*P	Pn	18 24 38.4	0.0
FCH				*e*S	Sn	18 24 55.1	-1.4
FCH				IAML		18 24 57.7	
	comp=N,174nm,0.1s						
AUSP	Uspallata	2.02	80	*i* P	Pn	18 24 45.9	-0.6
AUSP				*i* S	Sn	18 25 11.0	+0.1
ARCO	CERRO ARCO	2.37	97	*i* P	Pn	18 24 51.5	+0.3
ARCO				*i* S	Sn	18 25 20.6	+1.2
ARCO				IAML		18 25 21.1	
	comp=Z,22nm,0.4s						
ASAL	Salagasta	2.44	91	*i* P	Pn	18 24 51.9	-0.2
ASAL				*i* S	Sn	18 25 21.9	+0.9
AAGR	Agrelo	2.49	102	*i* P	Pn	18 24 53.1	+0.2
RTCV	Cerro Valdivia	2.80	76	*i* P	Pn	18 24 56.7	-0.3

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*IDC **16** 18:30:40.0±1.4, 14°.57S×76°.08W, h0km, mb3.7/3, mb1 3.8/6, mb1mx3.6/41, mbtmp3.7/6, ML3.3/3, MS3.8/1, Ms1 3.8/1, ms1mx2.9/41, Error ellipse: s-maj=39.9km s-min=14.4km az=69.0*
*NEIC **16** 18:30:41.4±0.5, 14°.56S×76°.06W, h10km, ML4.3(ARE), Error ellipse: s-maj=12.5km s-min=8.7km az=49.0*
NEIC Felt [II] at Chincha Alta and Ica.
*ISCJB **16** 18:30:42.7±1.1, 14°.52S±0°.10×75°.9W±0°.1, h29km, mb3.9/1, Error ellipse: s-maj=22.2km s-min=7.2km az=145.5*
ISC 16 18:30:44.3±1.1**, 14°.6S**±0°.1×**76°.0W**±0°.1**, h29km, n19, σ0.s81**/14**, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	2.68	342	Pn	Pn	18 31 23.9	-1.7
	11nm,0.3s,baz=168,slow=9.4,SNR=15						
NNA				Sn	Sn	18 31 58.0	+1.0
	83nm,0.3s,baz=113,slow=14,SNR=8.9						
NNA				Lg	Lg	18 32 05.3	
	138nm,0.3s,baz=236,slow=21,SNR=11						
ATAH	Atahualpa	7.74	342	Pn	Pn	18 32 35.2	-0.2
	0.2nm,0.3s,baz=110,slow=11,SNR=2.1						
ATAH				Sn	Sn	18 34 03.0	+0.6
	0.4nm,0.3s,baz=48,slow=15,SNR=1.8						
LPAZ	La Paz	7.79	104	Pn	Pn	18 32 41.9	+5.6
	2.8nm,0.3s,baz=290,slow=8.2,SNR=96						
LPAZ				Sn	Sb	18 34 23.3	-8.3
	baz=252,slow=20,SNR=2.1						
SAML	Samuel	13.73	67	*e*Pn	Pn	18 33 57.0	-0.1
	1.4nm,0.3s						
SIV	San Ignacio	14.48	98	Pn	Pn	18 34 06.5	-1.0
	0.2nm,0.3s,baz=282,slow=16,SNR=6.8						
SIV				LR	LR	18 40 15.9	
	comp=Z,334nm,18.5s,baz=310,slow=40						
PTGA	Pitinga	20.98	51	P	P	18 35 25.5	+0.1
	1.6nm,0.5s,baz=270,slow=20,SNR=3.3						
CPUP	Villa Florida	21.03	127	P	P	18 35 26.8	+0.9
	2.3nm,0.7s,baz=315,slow=10.0,SNR=4.4						
SNAA	Sanae	71.00	161	P	P	18 41 59.4	+0.3
	0.9nm,0.6s,baz=267,slow=7.9,SNR=12						
TOA0	Torodi Ar. Sit	81.69	74	*e*P	P	18 43 01.2	+0.5
H11N3	WAKE ISLAND Hy	119.94	285	T	T	21 00 29.4	
	baz=96,slow=74,SNR=152						
H11N2	WAKE ISLAND Hy	119.96	285	T	T	21 00 30.5	
	baz=96,slow=74,SNR=155						
H11N1	WAKE ISLAND Hy	119.96	285	T	T	21 00 30.7	
	baz=96,slow=74,SNR=53						
H11S2	WAKE ISLAND Hy	120.00	283	T	T	21 00 35.7	
	baz=97,slow=75,SNR=26						
H11S1	WAKE ISLAND Hy	120.01	283	T	T	21 00 36.4	
	baz=97,slow=75,SNR=42						
H11S3	WAKE ISLAND Hy	120.02	283	T	T	21 00 37.1	
	baz=97,slow=75,SNR=31						
WR1	Warramunga Arr	134.55	222	*e*PKPdf	PKPdf	18 50 00.3	-0.5
WRA	Warramunga Arr	134.55	222	PKP	PKPdf	18 50 00.3	-0.5
	0.3nm,0.7s,baz=119,slow=2.7,SNR=3.1						
MK32	Makanchi Array	143.09	25	*e*PKPdf	PKPdf	18 50 16.0	+0.4
MKAR	Makanchi Array	143.09	25	PKP	PKPdf	18 50 16.0	+0.4
	0.2nm,0.7s,baz=343,slow=1.5,SNR=2.4						

JMA 16 18:38:07.2±0.7**, 45°.52N**×**151°.27E, h30km, M3.9, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	Nemuro 2	4.51	243	P	Pn	18 39 12.5	-0.8
NEM2				*e*S	Sn	18 40 01.0	-3.7
JRA	Rausu	4.66	252	P	Pn	18 39 17.7	+2.3
JNK	Nakash	5.07	250	P	Pn	18 39 21.8	+0.8
JNK				*e*S	Sn	18 40 18.1	-0.4
JAK	Akkeshi	5.35	244	P	Pn	18 39 24.1	-0.9
JTKR	Abashiri--Toko	5.47	256	P	Pn	18 39 29.0	+2.4
JAR	Ashorobuto	5.81	250	P	Pn	18 39 32.7	+1.4
JMP	Maruseppu	5.83	258	P	Pn	18 39 34.6	+3.0
JOB	Onbets	5.95	247	P	Pn	18 39 33.5	+0.3
JOB				*e*S	Sn	18 40 37.6	-2.7
JKK2	Kamakawa 2	6.29	258	P	Pn	18 39 40.9	+3.0
JCH	Churui	6.39	246	P	Pn	18 39 39.1	-0.2
JCH				*e*S	Sn	18 40 46.7	-4.5
JFR	Furan	6.65	252	P	Pn	18 39 45.3	+2.4
JKB	Kayabe	8.26	248	P	Pn	18 40 04.3	-0.5
JANG	Nango	8.81	238	P	Pn	18 40 10.2	-2.2

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*IDC **16** 18:38:16.3±0.7, 0°.13S×125°.69E, h0km, mb4.0/13, mb1 4.0/13, mb1mx3.8/52, mbtmp4.0/13, MS3.2/1, Ms1 3.2/1, ms1mx2.6/54, Error ellipse: s-maj=34.0km s-min=14.0km az=65.0*
*ISCJB **16** 18:38:21.6±0.4, 0°.01N±0°.07×126°.15E±0°.05, h44km, mb4.0/15, Error ellipse: s-maj=9.6km s-min=6.5km az=13.0*
*NEIC **16** 18:38:21.4±0.4, 0°.13S×125°.71E, h35km, mb4.2/2, Error ellipse: s-maj=21.8km s-min=7.8km az=66.0*
*DJA **16** 18:38:23.8±0.8, 0°N±4°×12°6E±°, h21km±7km, M3.8/9, mb4.0/2, MLv3.7/9*
ISC 16 18:38:23.7±0.6**, 0°.10N**±0°.06×**126°.11E**±0°.04**, h44km, n26, σ1.s86**/29**, mb4.0**/15**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.42	62	P	Pn	18 38 47.5	+0.4
TNTI				S	Sn	18 39 07.6	+3.0
LBMI	Labuha	1.57	118	P	Pn	18 38 47.6	-1.5
LBMI				S	Sn	18 39 12.4	+4.1
LBMI				Sg		18 39 18.7	
SANI	Sanana	2.14	183	P	Pn	18 38 59.4	+2.5
KMSI	Cibinong	2.18	282	P	Pn	18 38 56.9	-0.6
KMSI				S	Sn	18 39 25.4	+2.1
LUWI	Luwuk	3.53	251	P	Pn	18 39 16.6	+0.6
MRSI	Marisa	4.19	275	P	Pn	18 39 26.9	+1.9
APSI	Ampana	4.57	257	P	Pn	18 39 31.5	+1.1
MPSI	Mapaga	6.22	272	P	Pn	18 39 53.4	+0.5
TGY	Tagaytay City	14.82	340	LR	LR	18 48 31.9	
	comp=Z,90nm,19.7s,baz=126,slow=41						
WRAB	Tennant Creek	21.48	158	*e*P	P	18 43 07.2	-1.6
	3.2nm,0.8s						
WRA	Warramunga Arr	21.49	158	P	P	18 43 06.5	-2.3
	1.8nm,0.6s,baz=337,slow=11,SNR=32						
PMG	Port Moresby	22.98	115	P	P	18 43 25.5	+0.7
	14nm,1.1s,baz=274,slow=16,SNR=2.2						
ASAR	Alice Springs	24.81	163	P	P	18 43 39.7	-2.1
	0.9nm,0.3s,baz=347,slow=13,SNR=45						
STKA	Stephens Creek	35.02	157	P	P	18 45 10.2	-2.0
	0.8nm,0.6s,baz=339,slow=8.6,SNR=3.8						
KSAR	Wonju Array Be	37.19	2	P	P	18 45 31.7	+1.1
KSRS	Korea Array	37.21	2	P	P	18 45 31.7	+1.0
	1.9nm,1.0s,baz=179,slow=9.5,SNR=6.4						
ASAJ	Asahikawa	46.22	16	P	P	18 46 46.5	+2.0
	0.8nm,0.4s,baz=215,slow=16,SNR=3.0						
SONM	Songino Array	50.54	343	P	P	18 47 17.3	-0.5
	1.3nm,0.9s,baz=156,slow=8.2,SNR=5.9						
PETK	Petropavlovsk-	59.01	22	P	P	18 48 19.9	+1.1
	1.4nm,0.8s,baz=175,slow=7.0						
MKAR	Makanchi Array	60.20	327	P	P	18 48 26.1	-1.2
	0.9nm,0.5s,baz=126,slow=7.6,SNR=13						
MKAR				PcP	PcP	18 49 11.9	-0.5
	0.6nm,0.7s,baz=122,slow=5.2,SNR=2.7						
ZALV	Zalesovo Beam	63.54	334	P	P	18 48 46.9	-2.6
	0.3nm,0.4s,baz=131,slow=8.4,SNR=2.5						
KURBB	Kurchatov Arra	64.47	329	P	P	18 48 55.0	-0.7
	0.7nm,0.3s,baz=133,slow=6.3,SNR=5.4						
KURK	Kurchatov	64.47	329	P	P	18 48 55.0	-0.7
BVAR	Borovoye Array	70.03	328	P	P	18 49 30.6	-0.3
	0.6nm,0.5s,baz=120,slow=8.5,SNR=4.2						
BRVK	Borovoye	70.10	328	*e*P	P	18 49 28.5	-2.8
	3.0nm,0.5s						
AKTO	Aktyubinsk	76.12	322	P	P	18 50 05.2	-1.7
	1.8nm,0.6s,baz=125,slow=8.8,SNR=3.9						

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*IDC **16** 18:41:12.1±0.7, 0°.04N×126°.07E, h0km, mb4.0/12, mb1 4.0/12, mb1mx3.8/52, mbtmp4.0/12, Error ellipse: s-maj=40.6km s-min=15.2km az=72.0*
*ISCJB **16** 18:41:16.2±0.6, 0°.0N±0°.1×126°.1E±0°.2, h44km, mb3.9/12, Error ellipse: s-maj=37.2km s-min=12.0km az=163.3*
ISC 16 18:41:18.2±0.8**, 0°.1N**±0°.2×**126°.2E**±0°.3**, h44km, n12, σ0.s73**/13**, mb4.0**/12**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.41	159	P	P	18 46 01.2	-1.4
	0.9nm,0.4s,baz=338,slow=11,SNR=20						
ASAR	Alice Springs	24.74	163	P	P	18 46 36.1	+0.3
	1.3nm,0.3s,baz=347,slow=13,SNR=31						
STKA	Stephens Creek	34.94	157	P	P	18 48 06.7	+0.6
	0.9nm,0.6s,baz=348,slow=12,SNR=4.3						
KSRS	Korea Array	37.26	2	P	P	18 48 25.2	-0.5
	1.7nm,0.7s,baz=179,slow=10,SNR=10						
MJAR	Matsushiro Arr	37.99	16	P	P	18 48 32.9	+0.9
	1.0nm,0.7s,baz=184,slow=11,SNR=3.7						
ASAJ	Asahikawa	46.25	16	P	P	18 49 39.1	-0.1
	2.1nm,0.9s,baz=175,slow=12,SNR=2.2						
SONM	Songino Array	50.61	343	P	P	18 50 12.2	-0.7
	1.3nm,0.8s,baz=157,slow=8.2,SNR=4.7						
MKAR	Makanchi Array	60.28	327	P	P	18 51 23.0	+0.6
	1.5nm,0.5s,baz=123,slow=8.2,SNR=19						
MKAR				PcP	PcP	18 52 07.2	-0.1
	0.6nm,0.7s,baz=128,slow=4.4,SNR=2.7						
ZALV	Zalesovo Beam	63.62	334	P	P	18 51 43.9	-0.7
	0.6nm,0.6s,baz=126,slow=7.3,SNR=2.5						
KURBB	Kurchatov Arra	64.55	329	P	P	18 51 50.2	-0.6
	0.9nm,0.2s,baz=140,slow=6.5,SNR=6.4						
BVAR	Borovoye Array	70.11	328	P	P	18 52 26.2	+0.3
	0.5nm,0.6s,baz=134,slow=6.2,SNR=3.7						
AKTO	Aktyubinsk	76.20	322	P	P	18 53 02.2	+0.3
	2.4nm,0.7s,baz=125,slow=7.2,SNR=8.7						

IDC 16 18:54:47.3±3.5**, 17°.38S**×**167°.70E, h0km, mb4.1**/3**, mb1 4.4**/4**, mb1mx3.8**/45**, mbtmp4.2**/4**, ML4.9**/1**, MS2.9**/1**, Ms1 2.9**/1**, ms1mx2.6**/41**, Error ellipse: s-maj=74.1km s-min=40.1km az=98.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.81	194	Pn	Pn	18 55 59.4	-1.7
	48nm,0.3s,baz=61,slow=10,SNR=740						
DZM				Sn	Sn	18 56 47.8	-10
	44nm,0.3s,baz=289,slow=23,SNR=18						
DZM				LR	LR	18 57 31.2	
	comp=Z,114nm,19.4s,baz=4.5,slow=34						
WRA	Warramunga Arr	31.68	260	P	P	19 01 12.8	0.0
	1.0nm,0.5s,baz=84,slow=8.5,SNR=31						
ASAR	Alice Springs	32.21	253	P	P	19 01 17.5	+0.1
	2.7nm,0.6s,baz=81,slow=8.6,SNR=64						
SONM	Songino Array	84.87	324	P	P	19 07 24.4	+0.4
	0.6nm,0.9s,baz=122,slow=7.0,SNR=3.8						

IDC 16 19:51:04.8±4.6**, 19°.65S**×**177°.82W, h279km**±46km**, mb3.1**/6**, mb1 3.5**/7**, mb1mx3.1**/43**, mbtmp3.8**/7**, Error ellipse: s-maj=21.7km s-min=14.1km az=111.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	19.06	192	P	P	19 55 06.7	-0.2
	1.2nm,0.3s,baz=201,slow=17,SNR=4.6						
URZ				S	S	19 58 28.8	+1.0
	0.4nm,0.3s,baz=27,slow=9.0,SNR=2.7						
ASAR	Alice Springs	44.88	256	P	P	19 58 52.4	0.0
	1.1nm,0.5s,baz=96,slow=7.5,SNR=23						
WRA	Warramunga Arr	44.89	261	P	P	19 58 52.4	0.0
	0.3nm,0.3s,baz=97,slow=7.5,SNR=24						
NVAR	Mina Array Bea	80.30	43	P	P	20 02 46.0	+0.8
	0.3nm,0.5s,baz=211,slow=8.3,SNR=2.6						
TXAR	Lajitas Array	86.46	57	P	P	20 03 16.5	-0.1
	0.3nm,0.7s,baz=232,slow=6.8,SNR=3.4						
PDAR	Pinedale Array	88.23	43	P	P	20 03 24.1	-0.8
	0.4nm,0.7s,baz=236,slow=6.4,SNR=3.6						
CMAR	Chiang Mai Arr	89.99	290	P	P	20 03 32.5	-0.8
	0.4nm,0.6s,baz=79,slow=4.3,SNR=4.2						

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*IDC **16** 19:53:45.9±0.9, 28°.49N×51°.98E, h0km, mb3.9/15, mb1 3.9/18, mb1mx3.7/56, mbtmp3.8/18, ML3.5/3, MS2.8/5, Ms1 2.8/5, ms1mx2.5/59, Error ellipse: s-maj=20.2km s-min=15.7km az=172.0*
*DSN **16** 19:53:46.3±1.1, 29°.02N×52°.32E, h15km, ML4.1/9, Error ellipse: s-maj=14.8km s-min=3.5km az=0.0*
*ISCJB **16** 19:53:46.9±0.3, 28°.81N±0°.03×52°.34E±0°.05, h12km, mb3.8/15, MS2.8/2, Error ellipse: s-maj=6.4km s-min=4.2km az=147.7*
*CSEM **16** 19:53:47.6±0.2, 28°.92N×52°.40E, h10km, ML3.6, Error ellipse: s-maj=6.4km s-min=4.6km az=72.0*
*THR **16** 19:53:47.4±0.3, 29°.01N×52°.48E, h16km±6km, ML3.6*
*TEH **16** 19:53:48.8, 28°.97N×52°.41E, h7km, ML3.6*
ISC 16 19:53:48.0±0.6**, 28°.88N**±0°.04×**52°.34E**±0°.05**, h12km, n74, σ1.s87**/65**, mb3.8**/15**, Southern Iran**

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

SHI	Shiraz	0.77	11	ePg	Pg	19 54 00.3	-2.8
SHI				e		19 54 21.8	
	comp=Z,24µm,0.3s						
SHI	Shiraz	0.77	11	ePg	Pg	19 54 00.3	-2.8
GHIR	Ghir-Karzin	0.82	136	ePg	Pg	19 54 03.5	-0.4
GHIR				IAML		19 54 28.9	
	comp=N,2µm,0.4s						
GHIR				IAML		19 54 29.2	
	comp=E,2µm,0.5s						
GHIR	Ghir-Karzin	0.82	136	ePg	Pg	19 54 03.5	-0.4
GHIR	Ghir-Karzin	0.82	136	ePg	Pg	19 54 03.5	-0.4
AHBU	AHRAM	0.92	269	ePg	Pn	19 54 07.0	+0.2
AHBU				eSg	Sn	19 54 21.2	+1.3
IPAR	Pars	1.14	33	e		19 54 34.4	
	comp=N,32µm,0.5s						
IPAR				ePg	Pb	19 54 07.7	-2.2
IPAR				e		19 54 34.8	
	comp=Z,14µm,0.4s						
IPAR				e		19 54 38.2	
	comp=E,20µm,0.4s						
JHRM	Jahrom	1.15	109	e		19 54 38.1	
	comp=Z,99nm,0.2s						
JHRM				ePg	Pg	19 54 09.8	-0.3
JHRM				e		19 54 39.1	
	comp=E,99nm,0.2s						
JHRM				e		19 54 40.5	
	comp=N,99nm,0.3s						
IRAM	Ramesheh	2.92	1	ePn	Pn	19 54 33.9	-0.6
IRAM				e		19 55 33.9	
	comp=E,1µm,0.2s						
IRAM				e		19 55 37.1	
	comp=N,2µm,0.3s						
IRAM				e		19 55 40.2	
	comp=Z,1µm,0.3s						
IRAM	Ramesheh	2.92	1	ePn	Pn	19 54 33.9	-0.6
IMEH	Mehriz	3.18	38	ePn	Pn	19 54 38.0	-0.2
IMEH				e		19 54 53.8	
	comp=Z,2µm,0.3s						
IMEH				e		19 55 44.0	
	comp=N,3µm,0.6s						
IMEH	Mehriz	3.18	38	ePn	Pn	19 54 38.0	-0.2
ISAD	Sadrabad	3.24	21	ePn	Pn	19 54 39.6	+0.6
ISAD				e		19 54 47.1	
	comp=Z,1µm,0.2s						
ISAD				e		19 55 26.1	
	comp=N,1µm,0.2s						
ISAD	Sadrabad	3.24	21	ePn	Pn	19 54 39.6	+0.6
ZNGN	Zangian	3.47	339	e		19 55 57.2	
	comp=E,99nm,0.3s						
ZNGN				e		19 55 59.6	
	comp=Z,99nm,0.4s						
ZNGN				e		19 56 03.1	
	comp=N,99nm,0.3s						
IGAR	Gharneh	3.52	356	e		19 55 06.0	
	comp=Z,648nm,0.2s						
IGAR				e		19 55 57.2	
	comp=N,2µm,0.3s						
BNDS	Bandar-Abbas	3.69	113	ePn	Pn	19 54 45.2	+0.1
BNDS	Bandar-Abbas	3.69	113	ePn	Pn	19 54 45.2	+0.1
BNDS	Bandar-Abbas	3.69	113	ePn	Pn	19 54 45.2	+0.1
ICHK	Chekchek	3.80	27	ePn	Pn	19 54 46.5	-0.1
ICHK				e		19 55 07.9	
	comp=E,1µm,0.3s						
ICHK				e		19 55 09.6	
	comp=Z,1µm,0.2s						
ICHK				e		19 55 38.1	
	comp=N,1µm,0.2s						
ICHK	Chekchek	3.80	27	ePn	Pn	19 54 46.5	-0.1
NASN	Na'in	3.93	6	ePn	Pn	19 54 47.5	-1.0
NASN	Na'in	3.93	6	ePn	Pn	19 54 47.5	-1.0
NASN	Na'in	3.93	6	ePn	Pn	19 54 47.5	-1.0
IPIR	Pirpir	3.99	342	e		19 55 45.9	
	comp=Z,652nm,0.2s						
IPIR				e		19 55 55.2	
	comp=E,749nm,0.1s						
IPIR				e		19 55 55.4	
	comp=N,906nm,0.2s						
IZEF	Zefreh	4.00	360	ePn	Pn	19 54 48.9	-0.6
IZEF				e		19 55 41.0	
	comp=N,380nm,0.1s						
IZEF				e		19 55 41.3	
	comp=E,456nm,0.1s						
IZEF				e		19 55 45.2	
	comp=Z,402nm,0.1s						
IZEF	Zefreh	4.00	360	ePn	Pn	19 54 48.9	-0.6
SHME	Shamm	4.40	129	P	Pn	19 54 54.3	-0.4
IKLH	Kolahrood	4.47	352	e		19 55 58.5	
	comp=E,499nm,0.1s						
IKLH				e		19 56 01.5	
	comp=N,774nm,0.2s						
IKLH				e		19 56 10.7	
	comp=Z,413nm,0.2s						
BANOM	Banah	4.59	129	P	Pn	19 54 56.9	-0.4
BANOM	Banah	4.59	129	P	Pn	19 54 56.9	-0.4
NAZ	Nazwa, Dubai	4.88	142	P	Pn	19 55 01.5	+0.2
NAZ	Nazwa, Dubai	4.88	142	P	Pn	19 55 01.5	+0.2
MSFE	Esma-Masafi	4.88	135	P	Pn	19 55 01.1	-0.3
ASUD	Al Ashush, Dub	5.01	147	P	Pn	19 55 03.2	+0.2
ASUD	Al Ashush, Dub	5.01	147	P	Pn	19 55 03.2	+0.2
MDH	Madha	5.01	134	P	Pn	19 55 02.5	-0.6
MDH	Madha	5.01	134	P	Pn	19 55 02.5	-0.6
UOSS	Minazif	5.22	138	P	Pn	19 55 05.1	-0.8
UOSS	Minazif	5.22	138	P	Pn	19 55 05.1	-0.8
HATD	Hatta, Dubai	5.27	139	P	Pn	19 55 06.2	-0.5
HATD	Hatta, Dubai	5.27	139	P	Pn	19 55 06.2	-0.5
ASHO	Ashiyiah	5.34	141	P	Pn	19 55 07.2	-0.4
ASHO	Ashiyiah	5.34	141	P	Pn	19 55 07.2	-0.4
ALNE	Al Ain	5.69	147	P	Pn	19 55 12.3	-0.1
MZR	Muzera	5.94	170	P	Pn	19 55 16.0	+0.2
TABS	Tabas	6.27	39	ePn	Pn	19 55 19.0	-1.5
TABS	Tabas	6.27	39	ePn	Pn	19 55 19.0	-1.5
TABS	Tabas	6.27	39	ePn	Pn	19 55 19.0	-1.5
WSAR	Wadi Sarin	7.97	133	Pn	Pn	19 55 42.1	-1.6
	comp=Z,1.1nm,0.3s,baz=318,slow=7.0,SNR=19						
WSAR				Sn	Sn	19 57 06.2	-7.7
	comp=Z,0.7nm,0.3s,baz=307,slow=18,SNR=2.1						
RAYN	Ar Rayn	8.13	231	P	Pn	19 55 45.1	-1.0
RAYN	Ar Rayn	8.13	231	P	Pn	19 55 45.1	-1.0
GEYT	Alibeck	10.23	27	Pn	Pn	19 56 20.1	+5.4
	comp=Z,0.3nm,0.3s,baz=224,slow=14,SNR=9.2						
GEYT				LR	LR	20 00 41.8	
	comp=Z,62nm,18.0s,baz=225,slow=39						
GNI	Garni	12.86	333	LR	LR	20 02 46.1	
	comp=Z,15nm,18.1s,baz=144,slow=41						
MMAI	Mount Meron Ar	15.11	290	LR	LR	20 04 08.1	
	comp=Z,46nm,18.7s,baz=140,slow=42						
BRTR	Keskin Array B	18.82	310	P	P	19 58 07.6	-0.2
	comp=Z,0.1nm,0.3s,baz=134,slow=12,SNR=2.8						
DHRM	DHARAMSHALA	20.89	75	eP	Pn	19 58 34.2	+1.2
SMLA	Simla	21.61	78	eP	P	19 58 28.6	-9.3
AKTO	Aktyubinsk	21.95	10	P	P	19 58 45.1	+3.6
	comp=Z,1.2nm,0.7s,baz=165,slow=15,SNR=5.0						
AKTO				LR	LR	20 08 44.4	
	comp=Z,21nm,18.3s,baz=131,slow=40						
IDI	Anoyia	24.08	292	P	P	19 59 00.8	-2.6
	comp=Z,1.7nm,0.7s,baz=56,slow=5.2,SNR=1.9						
BVAR	Borovoye Array	27.55	24	P	P	19 59 38.7	+4.0
	comp=Z,0.4nm,0.5s,baz=216,slow=9.0,SNR=6.3						
KURBB	Kurchatov Arra	29.35	35	P	P	19 59 55.0	+4.3
	comp=Z,1.3nm,0.7s,baz=233,slow=9.2,SNR=12						
MKAR	Makanchi Array	29.40	44	P	P	19 59 55.7	+4.5
	comp=Z,1.0nm,0.6s,baz=232,slow=7.0,SNR=2.5						
ZALV	Zalesovo Beam	34.42	34	P	P	20 00 38.8	+3.7
	comp=Z,2.9nm,0.4s,baz=241,slow=9.7,SNR=14						
FINES	FINESS Array B	36.94	339	P	P	20 00 59.2	+2.6
	comp=Z,2.8nm,0.7s,baz=136,slow=9.4,SNR=12						
HFS	Hagfors	40.64	331	P	P	20 01 28.5	+0.8
	comp=Z,2.2nm,0.8s,baz=134,slow=8.3,SNR=6.3						
ARCES	ARCESS Array B	43.53	347	P	P	20 01 53.8	+2.6
	comp=Z,0.9nm,0.7s,baz=136,slow=9.6,SNR=4.3						
ESDC	Sonseca Array	47.08	299	LR	LR	20 23 32.0	
	comp=Z,13nm,18.7s,baz=30,slow=38						
EKA	Eskdalemuir Ar	47.30	320	P	P	20 02 22.1	+0.9
	comp=Z,0.1nm,0.4s,baz=106,slow=9.8,SNR=2.4						
TORD	Torodi Ar. Bea	49.44	263	P	P	20 02 36.2	-2.0
	comp=Z,0.4nm,0.6s,baz=47,slow=8.5						
DBIC	Dimbokro	58.17	259	P	P	20 03 38.0	-4.3
	comp=Z,8.9nm,1.1s,baz=54,slow=7.9,SNR=2.8						
KSRS	Korea Array	62.31	61	P	P	20 04 12.2	+2.0
	comp=Z,1.0nm,0.6s,baz=279,slow=6.3,SNR=7.7						
WRA	Warramunga Arr	92.75	111	P	P	20 07 00.9	+0.2
	comp=Z,0.7nm,1.1s,baz=320,slow=4.0,SNR=3.4						
ASAR	Alice Springs	94.23	115	P	P	20 07 09.6	+2.2
	comp=Z,0.2nm,0.6s,baz=312,slow=4.8,SNR=4.0						

*SOME **16** 19:56:10.2, 44.°23N×84.°48E, h10^{km}*

*NNC **16** 19:56:10.6±2.3, 43.°46N×84.°45E, h0^{km}, mb3.4, mpv3.0, Error ellipse: s-maj=19.9km s-min=9.5km az=127.0*

ISC 16 19:56:11.7±2.8, 43.°4N±0.°1×84.°3E±0.°1, h10^{km}, n10, σ2.^{s}09/18, 2C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJR	Jarkent	3.38	287	eP	Pb	19 57 11.5	-0.3
	1.9nm,0.3s						
DJR				eS	Sb	19 57 55.0	+2.1
	8.5nm,0.5s						
PDGK	Podgornoye	3.50	270	⇓Pg	Pb	19 57 16.1	+2.4
	2.9nm,0.5s						
PDGK				⇑Lg	Lg	19 58 05.8	
	9.5nm,0.5s						
SHLS	Shalkode	3.53	268	eP	Pb	19 57 12.6	-1.7
	6.3nm,0.3s						
SHLS				eS	Sb	19 57 57.8	+0.6
	58nm,0.4s						
MK31	Makanchi Array	3.67	338	Pn	Pn	19 57 08.6	+0.1
	0.3nm,0.1s,baz=152,slow=15,SNR=44						
MK31				Pg	Pb	19 57 17.5	+0.9
	1.5nm,0.4s,baz=148,slow=19,SNR=27						
MK31				Lg	Lg	19 58 06.8	
	3.0nm,0.3s,baz=151,slow=29,SNR=5.2						
MAKZ	Makanchi	3.77	335	⇑Pg	Pb	19 57 19.9	+1.5
	1.7nm,0.4s						
MAKZ				⇓Lg	Lg	19 58 09.5	
	7.5nm,0.8s						
UZB	Uzynbulak	3.85	268	eP	Pg	19 57 24.2	-1.3
	2.0nm,0.3s						
UZB				eS	Sg	19 58 17.3	+2.0
	7.3nm,0.4s						
KAPS	Kapalarasan	4.00	300	eP	Pb	19 57 18.5	-3.8
	1.1nm,0.2s						
KAPS				eS	Sb	19 58 08.0	-2.8
	3.0nm,0.3s						
KPKS	Kokpek	4.08	273	eP	Pg	19 57 29.1	-0.7
	5.3nm,0.3s						
KPKS				eS	Sg	19 58 25.6	+3.0
	20nm,0.5s						
SATY	Saty	4.31	267	eP	Pg	19 57 33.0	-1.2
	4.6nm,0.3s						
SATY				eS	Sg	19 58 32.4	+2.4
	8.1nm,0.4s						
KURS	Kuram	4.45	273	eP	Pg	19 57 35.0	-2.0
	1.4nm,0.2s						
KURS				eS	Sg	19 58 35.0	+0.4
	5.0nm,0.6s						

*DJA **16** 20:20:35.2±5.2, 8°S±16°×12°6E±4°5, h10^{km}, M4.2/6, mb4.4/2, MLv4.0/6*

*ISCJB **16** 20:20:38.4±0.4, 7.°66S±0.°05×126.°08E±0.°07, h10^{km}, mb4.0/15, MS3.9/1, Error ellipse: s-maj=9.9km s-min=7.4km az=12.6*

*IDC **16** 20:20:39.0±0.6, 7.°77S×125.°73E, h0^{km}, mb4.1/14, mb1 4.1/15, mb1mx3.9/48, mbtmp4.0/15, ML4.2/1, MS3.9/1, Ms1 3.9/1, ms1mx2.7/44, Error ellipse: s-maj=34.9km s-min=14.4km az=78.0*

*NEIC **16** 20:20:43.8±0.5, 7.°81S×125.°98E, h35^{km}, mb4.4/1, Error ellipse: s-maj=26.8km s-min=8.7km az=67.0*

ISC 16 20:20:40.7±0.6, 7.°69S±0.°07×126.°00E±0.°09, h10^{km}, n24, σ1.^{s}02/22, mb4.1/15, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	2.67	220	P	Pn	20 21 24.7	+0.8
SOEI				S	Sb	20 22 02.7	+1.1
SOEI				Sg	Sg	20 22 22.0	+15
BATI	Baumata	3.40	223	P	Pn	20 21 34.2	+0.3
BATI				S	Sn	20 22 16.3	+2.0
BATI				Sg	Sb	20 22 21.6	-1.0
EDFI	Ende, Flores	4.39	256	P	Pn	20 21 46.4	-1.2
BKSI	Bulukumba	6.29	292	P	Pn	20 22 11.4	-2.2
WRAB	Tennant Creek	14.62	147	eP	Pn	20 24 06.5	-1.2
WRA	Warramunga Arr	14.62	147	Pn	Pn	20 24 04.5	-3.2
	0.5nm,0.3s,baz=320,slow=14,SNR=35						
WRA				Sn	Sn	20 26 37.0	-13
	0.2nm,0.3s,baz=323,slow=24,SNR=3.4						
ASAR	Alice Springs	17.60	155	P	Pn	20 24 44.9	-1.4
	0.7nm,0.3s,baz=318,slow=9.9,SNR=28						
ASAR				S	Sn	20 27 51.8	-11
	0.1nm,0.3s,baz=323,slow=20,SNR=3.6						
STKA	Stephens Creek	28.11	151	P	P	20 26 33.5	+0.6
	1.6nm,0.6s,baz=326,slow=12,SNR=4.6						
CMAR	Chiang Mai Arr	37.25	315	P	P	20 27 52.3	-0.6
	1.3nm,0.9s,baz=149,slow=6.8,SNR=6.5						
MJAR	Matsushiro Arr	45.47	14	P	P	20 29 01.0	+0.9
	0.4nm,0.5s,baz=199,slow=9.4,SNR=4.5						
PALK	Pallekele	47.55	287	LR	LR	20 50 15.6	
	comp=Z,121nm,18.0s,baz=111,slow=38						
SONM	Songino Array	57.94	345	P	P	20 30 34.2	+0.9
	0.6nm,0.9s,baz=168,slow=8.0,SNR=3.9						
PETK	Petropavlovsk-	66.28	20	P	P	20 31 29.9	+0.8
	2.2nm,0.7s,baz=183,slow=5.8						
MKAR	Makanchi Array	66.69	329	P	P	20 31 31.2	-0.7
	1.4nm,0.5s,baz=128,slow=7.8,SNR=31						
ZALV	Zalesovo Beam	70.51	336	P	P	20 31 54.0	-1.5
	0.7nm,0.5s,baz=96,slow=3.0,SNR=4.2						
KURBB	Kurchatov Arra	71.08	330	P	P	20 31 58.0	-1.0
	0.7nm,0.6s,baz=143,slow=5.3,SNR=12						
KURK	Kurchatov	71.09	330	P	P	20 31 58.0	-1.1
VNDA	Vanda	72.27	172	P	P	20 32 06.0	+0.2
	0.8nm,0.7s,baz=317,slow=6.8,SNR=6.3						
MAW	Mawson	72.87	201	P	P	20 32 08.5	-1.1
	2.0nm,0.8s,baz=27,slow=2.3,SNR=3.7						
SEY	Seymchan	73.27	12	P	P	20 32 13.1	+1.2
	1.9nm,0.6s,baz=191,slow=5.2,SNR=12						
BVAR	Borovoye Array	76.57	329	P	P	20 32 30.7	-0.6
	0.8nm,0.6s,baz=107,slow=7.7,SNR=7.8						
BRVK	Borovoye	76.65	329	eP	P	20 32 31.1	-0.5
	3.2nm,0.7s						
QSPA	South Pole Qui	82.29	180	P	P	20 33 01.7	-0.7
	2.0nm,0.7s,baz=148,slow=3.4,SNR=7.8						
SNAA	Sanae	94.04	194	P	P	20 33 58.7	-0.2
	0.8nm,0.5s,baz=198,slow=5.2,SNR=10						

*TIR **16** 20:30:59.0, 41.°35N×20.°93E, h10^{km}, Md2.8/7*

*ATH **16** 20:30:59.8, 41.°38N×20.°93E, h16^{km}±1^{km}, ML2.3/12, Error ellipse: s-maj=3.4km s-min=1.7km az=145.0*

*SKO **16** 20:30:60.0, 41.°31N×20.°94E, h16^{km}, M2.2, ML2.5*

*THE **16** 20:31:00.1, 41.°36N×20.°94E, h0^{km}±2^{km}, ML2.5/7, Error ellipse: s-maj=2.3km s-min=0.8km az=286.0*

*CSEM **16** 20:31:00.5±0.1, 41.°34N×20.°94E, h2^{km}, ML2.5, Error ellipse: s-maj=4.1km s-min=2.4km az=54.0*

*PDG **16** 20:31:00.3±0.3, 41.°32N×20.°89E, h2^{km}, ML2.9/12, Error ellipse: s-maj=0.4km s-min=0.6km az=0.0*

ISC 16 20:31:00.4±1.0, 41.°33N±0.°01×20.°92E±0.°02, h3^{km}±9^{km}, n93, σ0.^{s}98/167, 9C-16D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHR	Ohrid	0.23	202	⇑iPg	Pg	20 31 04.8	-0.1
OHR				i Sg	Sg	20 31 08.8	+0.8
OHR				eLg	Lg	20 31 08.9	
	comp=N,847nm,0.3s						
OHR				eLg	Lg	20 31 09.0	
	comp=E,1µm,0.4s						
KRUS	Krusevo	0.25	81	i Pg	Pg	20 31 05.7	+0.4
KRUS				i Sg	Sg	20 31 09.9	+1.2
BIA	Bitola	0.43	135	P	Pg	20 31 09.2	+0.4
BIA				S	Sb	20 31 16.4	-1.3
BIA	Bitola	0.43	135	i Pg	Pg	20 31 09.2	+0.4
BIA				i Sg	Sb	20 31 17.1	-0.5
BIA	Bitola	0.43	135	P	Pg	20 31 09.2	+0.4
PHP	Peshkopia	0.51	315	P	Pg	20 31 08.8	-1.3
PHP				S	Sg	20 31 17.1	+0.4
PHP	Peshkopia	0.51	315	i Pg	Pg	20 31 09.1	-1.0
PHP				i Sg	Sg	20 31 16.8	+0.1
PHP				S	Sg	20 31 17.1	+0.4
PHP	Peshkopia	0.51	315	i PG	Pg	20 31 09.1	-1.0
PHP				i SG	Sg	20 31 16.8	+0.1
FNA	Florina	0.65	147	P	Pg	20 31 11.6	-1.2
FNA				S	Sg	20 31 20.8	-0.3
FNA				AML	AML	20 31 24.6	
	comp=E,1762µm,0.2s						
FNA				AML	AML	20 31 24.6	
	comp=N,2132µm,0.3s						
FNA	Florina	0.65	147	P	Pg	20 31 12.3	-0.5
FNA				S	Sg	20 31 22.1	+1.0
FNA	Florina	0.65	147	P	Pg	20 31 12.3	-0.5
FNA				S	Sg	20 31 21.7	+0.6
KBN	Korca	0.71	188	i Pg	Pb	20 31 14.9	-0.5
KBN				i Sg	Sg	20 31 24.2	+1.0
KBN	Korca	0.71	188	i PG	Pb	20 31 14.9	-0.5
KBN				i SG	Sg	20 31 24.2	+1.0
SKO	Skopje	0.75	31	P	Pg	20 31 14.9	0.0
SKO				S	Sg	20 31 25.2	+0.6
SKO	Skopje	0.75	31	i Pg	Pb	20 31 15.3	-0.8
SKO				i Sg	Sg	20 31 25.4	+0.7
SKO	Skopje	0.75	31	P	Pg	20 31 14.9	0.0
SKO				S	Sg	20 31 25.2	+0.6
PRZK	Prizren	0.89	352	P	Pg	20 31 17.1	-0.4
NEST	Nestorio	0.92	174	P	Pg	20 31 16.5	-1.5
NEST				S	Sn	20 31 33.7	-0.3
NEST				AML	AML	20 31 37.4	
	comp=N,446µm,0.4s						
NEST				AML	AML	20 31 37.4	
	comp=E,549µm,0.3s						
NEST	Nestorio	0.92	174	P	Pg	20 31 17.1	-0.9
NEST				S	Sb	20 31 31.4	-0.2
NEST	Nestorio	0.92	174	P	Pg	20 31 17.3	-0.7
NEST				S	Sb	20 31 31.4	-0.2
STIP	Stip	1.02	69	i Pg	Pn	20 31 22.5	+0.9
STIP				i Sg	Sn	20 31 39.4	+2.9
PUK	Puka	1.05	313	i Pg	Pg	20 31 18.7	-1.8
PUK				i Sg	Sg	20 31 34.5	+0.4
PUK	Puka	1.05	313	i PG	Pg	20 31 18.7	-1.8
PUK				i SG	Sg	20 31 34.5	+0.4
PENT	Pentalofos	1.14	171	P	Pg	20 31 21.9	-0.4
PENT				AML	AML	20 31 43.0	
	comp=N,218µm,0.2s						
PENT				AML	AML	20 31 46.2	
	comp=E,266µm,0.5s						
PENT	Pentalofos	1.14	171	P	Pg	20 31 22.1	-0.2
GRG	Griva	1.18	108	P	Pg	20 31 22.5	-0.5
GRG				S	Sn	20 31 40.3	-0.1
GRG				AML	AML	20 31 42.0	
	comp=E,167µm,0.4s						
GRG				AML	AML	20 31 43.3	
	comp=N,200µm,0.5s						
GRG	Griva	1.18	108	P	Pg	20 31 22.3	-0.7
GRG	Griva	1.18	108	P	Pg	20 31 22.4	-0.6
GRG				S	Sb	20 31 39.4	+0.3
KZN	Kozani	1.21	147	P	Pg	20 31 22.0	-1.6
KZN				S	Sn	20 31 42.1	+0.9
KZN				AML	AML	20 31 45.1	
	comp=N,294µm,0.3s						
KZN				AML	AML	20 31 45.9	
	comp=E,267µm,0.3s						
KZN	Kozani	1.21	147	P	Pg	20 31 22.8	-0.8
KZN				S	Sn	20 31 41.6	+0.4
KZN	Kozani	1.21	147	P	Pg	20 31 22.8	-0.8
KZN				S	Sn	20 31 41.3	+0.1
BCI	Bajram Curri	1.22	329	i Pg	Pg	20 31 22.4	-1.3
BCI				i Sg	Sb	20 31 39.8	-0.4
BCI	Bajram Curri	1.22	329	i PG	Pg	20 31 22.4	-1.4
BCI				i SG	Sb	20 31 39.9	-0.3
VAY	Valandovo	1.25	90	P	Pg	20 31 23.5	-0.7
VAY				S	Sb	20 31 40.4	-0.5
VAY	Valandovo	1.25	90	i Pg	Pg	20 31 23.6	-0.7
VAY				i Sg	Sb	20 31 40.6	-0.3
VAY				eLg	Lg	20 31 42.6	
	comp=E,80nm,0.6s						
VAY				eLg	Lg	20 31 43.4	
	comp=N,99nm,0.7s						
VAY	Valandovo	1.25	90	P	Pg	20 31 23.5	-0.7
VAY				S	Sb	20 31 40.4	-0.5
ULC	Ulcinj	1.41	297	⇑iPg	Pn	20 31 25.2	-1.7
ULC				eSg	Sn	20 31 47.8	+1.8
ULC	Ulcinj	1.41	297	⇑iPg	Pn	20 31 25.2	-1.7
ULC				eSg	Sn	20 31 47.8	+1.8
KPRO	Kipourio	1.41	166	P	Pn	20 31 26.4	-0.7
KPRO				AML	AML	20 31 52.2	
	comp=N,199µm,0.3s						
KPRO				AML	AML	20 31 52.6	
	comp=E,357µm,0.8s						
KPRO	Kipourio	1.41	166	P	Pn	20 31 27.2	+0.1
KPRO				S	Sn	20 31 48.0	+1.8
KPRO	Kipourio	1.41	166	P	Pn	20 31 27.2	+0.1
PVY	Plav	1.45	331	⇑iPg	Pn	20 31 27.4	-0.3
PVY				eSg	Sn	20 31 49.6	+2.3
PVY	Plav	1.45	331	⇑iPg	Pn	20 31 27.4	-0.3
PVY				eSg	Sn	20 31 49.6	+2.3
KNT	Kendrikon	1.50	96	P	Pg	20 31 29.1	-0.2
KNT				S	Sg	20 31 48.4	-0.3
KNT				AML	AML	20 31 49.1	
	comp=N,98µm,0.3s						
KNT				AML	AML	20 31 52.5	
	comp=E,78µm,0.5s						
KNT	Kendrikon	1.50	96	P	Pn	20 31 28.3	+0.1
KNT				S	Sn	20 31 48.1	-0.2
KNT	Kendrikon	1.50	96	P	Pn	20 31 28.3	+0.1
KNT				S	Sn	20 31 48.1	-0.2
DRME	Dracevica, Mon	1.56	304	⇑iPg	Pn	20 31 28.5	-0.4
DRME				eSg	Sg	20 31 52.7	+2.3
DRME	Dracevica, Mon	1.56	304	⇑iPg	Pn	20 31 28.5	-0.4
DRME				eSg	Sg	20 31 52.7	+2.3
SRN	Sarande	1.61	206	i Pn	Pn	20 31 29.6	0.0
SRN				i Sn	Sg	20 31 53.4	+1.4
SRN	Sarande	1.61	206	i PN	Pn	20 31 29.6	0.0
SRN				i SN	Sg	20 31 53.4	+1.4
PDG	Podgorica	1.66	312	⇓iPn	Pn	20 31 30.9	+0.5
PDG				eSn	Sg	20 31 56.2	+2.5
TTG	Podgorica	1.66	312	⇓iPn	Pn	20 31 30.9	+0.5
TTG				eSn	Sg	20 31 56.2	+2.5
LIT	Litokhoron	1.71	135	P	Pn	20 31 31.5	+0.4
LIT				AML	AML	20 32 05.2	
	comp=E,93µm,0.3s						
LIT				AML	AML	20 32 06.6	
	comp=N,88µm,0.7s						
LIT	Litokhoron	1.71	135	P	Pn	20 31 31.2	+0.1
LIT	Litokhoron	1.71	135	P	Pn	20 31 31.2	+0.1
BEY	Berane	1.72	334	⇓iPn	Pb	20 31 32.1	-0.6
BEY				eSn	Sg	20 31 57.1	+1.4
IVA	Berane	1.72	334	⇓iPn	Pb	20 31 32.1	-0.6
IVA				eSn	Sg	20 31 57.1	+1.4
SGD	Sagiada	1.79	197	P	Pg	20 31 35.0	+0.2
SGD	Sagiada	1.79	197	P	Pb	20 31 33.9	+0.1
BUM	Brajici-Budva	1.80	303	⇓iPn	Pb	20 31 33.3	-0.7
BUM				eSn	Sg	20 31 59.7	+1.5
BUM	Brajici-Budva	1.80	303	⇓iPn	Pb	20 31 33.3	-0.7
BUM				eSn	Sg	20 31 59.7	+1.5
KEK	Kerkira	1.82	208	P	Pn	20 31 33.1	+0.4
KEK	Kerkira	1.82	208	P	Pn	20 31 33.2	+0.6
KOME	Kolasin	1.84	326	⇓iPn	Pb	20 31 33.9	-0.9
KOME				eSn	Sg	20 32 00.9	+1.2
KOME	Kolasin	1.84	326	⇓iPn	Pb	20 31 33.9	-0.9
KOME				eSn	Sg	20 32 00.9	+1.2
IGT	Igoumenitsa	1.85	194	P	Pb	20 31 35.0	+0.2
IGT				AML	AML	20 32 08.0	
	comp=N,64µm,0.7s						
IGT				AML	AML	20 32 08.4	
	comp=E,97µm,0.7s						
IGT	Igoumenitsa	1.85	194	P	Pb	20 31 34.3	-0.5
CEME	Cevo	1.93	310	⇓iPn	Pb	20 31 35.2	-1.0
CEME				eSn	Sg	20 32 03.5	+1.2
CEME	Cevo	1.93	310	⇓iPn	Pb	20 31 35.2	-1.0
CEME				eSn	Sg	20 32 03.5	+1.2
THL	Klokotos Trika	1.95	154	P	Pn	20 31 33.3	-1.1
THL				S	Sb	20 32 01.6	+0.4
THL				AML	AML	20 32 06.2	
	comp=N,78µm,0.7s						
THL				AML	AML	20 32 06.3	
	comp=E,96µm,1.0s						
THL	Klokotos Trika	1.95	154	P	Pn	20 31 34.2	-0.2
THL				S	Sb	20 32 01.1	-0.1
THL	Klokotos Trika	1.95	154	P	Pn	20 31 34.2	-0.2
THL				S	Sb	20 32 01.1	-0.1
NKME	Niksic	2.05	315	⇓iPn	Pb	20 31 37.1	-1.2
NKME				eSn	Sg	20 32 05.4	-0.9
NKME	Niksic	2.05	315	⇓iPn	Pb	20 31 37.1	-1.2
NKME				eSn	Sg	20 32 05.4	-0.9
VTS	Vitosha	2.12	53	P	Pn	20 31 37.3	+0.4
VTS				S	Sn	20 32 03.0	-0.9
VTS	Vitosha	2.12	53	P	Pn	20 31 37.3	+0.4
VTS				S	Sn	20 32 03.0	-0.9
HCY	Herceg Novi	2.13	303	⇑iPn	Pb	20 31 38.4	-1.2
HCY				eSn	Sg	20 32 07.7	-1.0
HCY	Herceg Novi	2.13	303	⇑iPn	Pb	20 31 38.4	-1.2

HCY				*e*Sn	Sg	20 32 07.7	-1.0
DSL	Palaion Diasel	2.20	176	P	Pb	20 31 40.5	-0.2
DSL	Palaion Diasel	2.20	176	P	Pb	20 31 39.5	-1.3
NVR	Nevrokopi	2.22	88	P	Pn	20 31 38.8	+0.7
NVR				S	Sn	20 32 04.7	-1.3
NVR				AML	AML	20 32 15.9	
	comp=N,46µm,0.5s						
NVR				AML	AML	20 32 18.8	
	comp=E,30µm,0.6s						
NVR	Nevrokopi	2.22	88	P	Pn	20 31 38.4	+0.3
NVR				S	Sn	20 32 05.3	-0.7
PLE	Pljevlja	2.30	331	*e*Pn	Pn	20 31 40.8	+1.5
PLE				*e*Sn	Sb	20 32 12.0	+0.6
PLE	Pljevlja	2.30	331	*e*Pn	Pn	20 31 40.8	+1.5
PLE				*e*Sn	Sb	20 32 12.0	+0.6
BRY	Bratogost	2.37	312	⇓*i*Pn	Pn	20 31 41.4	+1.2
BRY				*e*Sn	Sb	20 32 13.2	-0.2
BRY	Bratogost	2.37	312	⇓*i*Pn	Pn	20 31 41.4	+1.2
BRY				*e*Sn	Sb	20 32 13.2	-0.2
UPM	Unac-Piva	2.40	322	⇓*i*Pn	Pn	20 31 42.0	+1.3
UPM				*e*Sn	Sb	20 32 13.9	-0.4
UPM	Unac-Piva	2.40	322	⇓*i*Pn	Pn	20 31 42.0	+1.3
UPM				*e*Sn	Sb	20 32 13.9	-0.4
AGG	Agios Georgios	2.54	154	P	Pn	20 31 42.2	-0.4
AGG				S	Sn	20 32 12.8	-1.3
AGG	Agios Georgios	2.54	154	P	Pn	20 31 42.8	+0.2
AGG				S	Sn	20 32 15.1	+1.0
AGG	Agios Georgios	2.54	154	P	Pn	20 31 42.8	+0.2
AGG				S	Sn	20 32 14.0	-0.1
ANX	Ano Chora	2.84	164	P	Pn	20 31 47.0	+0.3
ANX				AML	AML	20 32 33.0	
	comp=E,56µm,0.5s						
ANX				AML	AML	20 32 33.7	
	comp=N,72µm,0.8s						
ANX	Ano Chora	2.84	164	P	Pn	20 31 47.3	+0.6

DJA 16 20:43:46.0±0.4, 9°S±2°×12°0E±°, h13^{km}±4^{km}, M3.8/10, MLv3.8/10, Flores region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WSI	Waingapu	1.03	187	P	Pb	20 44 05.4	-0.3
WSI				S	Sg	20 44 19.3	-0.1
EDFI	Ende, Flores	1.25	95	P	Pn	20 44 08.5	-0.8
WBSI	Waikabubak, Su	1.43	226	P	Pn	20 44 10.9	-0.8
WBSI				S	Sn	20 44 29.2	-1.2
BASI	Baing, Sumba	1.58	175	P	Pn	20 44 13.8	+0.1
BASI				S	Sn	20 44 33.8	-0.2
BASI				Sg	Sg	20 44 42.1	+5.3
MMRI	Maumere	1.79	90	P	Pn	20 44 17.5	+0.9
MMRI				S	Sn	20 44 37.9	-1.3
PLAI	Plampang	2.63	266	P	Pn	20 44 29.5	+1.3
PLAI				S	Sb	20 45 05.9	+0.6
PLAI				Sg	Sg	20 45 12.8	+2.2
BKSI	Bulukumba	3.31	355	P	Pn	20 44 38.0	+0.4
BKSI				S	Sn	20 45 15.6	-1.2
TWSI	Taliwang, Sumb	3.51	268	P	Pn	20 44 41.1	+0.8
BATI	Baumata	3.55	116	P	Pn	20 44 41.2	+0.3
SOEI	Soe	3.95	107	P	Pn	20 44 46.6	+0.2

IDC 16 20:51:37.5±5.5, 6°.16S×133°.95E, h0^{km}, mb3.4/1, mb1 4.0/3, mb1mx3.4/41, mbtmp3.8/3, ML3.9/2, MS3.5/2, Ms1 3.5/2, ms1mx2.8/27, Error ellipse: s-maj=301.6km s-min=33.2km az=78.0, Aru Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	13.70	178	Pn	Pn	20 54 53.0	-0.3
	0.6nm,0.3s,baz=356,slow=13,SNR=43						
WRA				Sn	Sn	20 57 15.8	-11
	0.2nm,0.3s,baz=358,slow=23,SNR=4.2						
DAV	Davao City (W)	15.57	327	LR	LR	21 01 35.6	
	comp=Z,49nm,18.8s,baz=81,slow=38						
ASAR	Alice Springs	17.41	180	P	Pn	20 55 42.2	+0.2
	0.4nm,0.3s,baz=5.3,slow=12,SNR=25						
URZ	Urewera	50.46	136	LR	LR	21 22 43.8	
	comp=Z,133nm,18.0s,baz=14,slow=37						
MKAR	Makanchi Array	69.74	325	P	P	21 02 49.5	0.0
	0.3nm,0.6s,baz=120,slow=8.0,SNR=4.1						

*IDC **16** 21:02:55.6±0.7, 14°.25N×90°.33W, h0^{km}, mb4.4/16, mb1 4.6/20, mb1mx4.3/46, mbtmp4.4/20, ML3.7/4, MS3.9/22, Ms1 3.9/22, ms1mx3.7/42, Error ellipse: s-maj=23.9km s-min=11.6km az=54.0*

*ISCJB **16** 21:02:58.4±0.3, 14°.03N±0°.03×90°.42W±0°.03, h33^{km}, mb4.7/99, MS3.9/23, Error ellipse: s-maj=5.1km s-min=2.0km az=40.9*

*CASC **16** 21:02:58.4±1.5, 14°.35N×90°.13W, h1^{km}±17^{km}, ML4.0, mb4.7(NEIC)*

*NEIC **16** 21:03:01.2±0.7, 14°.15N×90°.36W, h37^{km}±6^{km}, mb4.7/121, MD4.2(SNET), Error ellipse: s-maj=7.2km s-min=4.3km az=48.0*

NEIC Felt [III] at Guatemala, Mixco, Pueblo Nuevo Vinas and Santa Catarina Pinula. Also felt at Cahabon, Fraijanes, Lanquin, Pachalum, Petapa, San Bartolome Milpas Altas, Villa Canales and Villa Nueva. Felt [I] at Ahuachapan, El Salvador.

ISC 16 21:03:00.7±0.8, 14°.21N±0°.05×90°.19W±0°.05, h30^{km}±5^{km}, n488, σ1^{s}48/475, mb4.7/96, MS3.9/23, 1C, Guatemala

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTR	El Retiro	0.61	120	*e*P	Pb	21 03 11.4	-1.6
UNIC	Santa Ana	0.65	109	*e*P	Pb	21 03 11.7	-2.0
UNIC				IAML		21 03 12.3	
	comp=Z,7µm,0.2s						
UNIC				*e*S	Sn	21 03 22.7	-0.6
SNJE	San Jose	0.66	120	*e*P	Pb	21 03 12.1	-1.8
SBLS	San Blas	0.66	123	*e*P	Pb	21 03 12.1	-1.8
MTO3	Montecristo	0.83	77	*e*P	Pb	21 03 14.1	-2.7
MTO3				*e*S	Sb	21 03 26.0	-1.7
MTO3				IAML		21 03 27.9	
	comp=Z,4µm,0.3s						
CEDA	San Andres	0.87	117	*e*P	Pn	21 03 15.6	-1.4
CEDA				IAML		21 03 40.5	
	comp=Z,8µm,0.4s						
BOQS	Boqueron	1.00	118	*e*P	Pn	21 03 18.3	-0.6
COLS	Colinas	1.02	122	*e*P	Pn	21 03 18.5	-0.6
UEES	San Salvador	1.04	117	*e*P	Pb	21 03 19.0	-1.1
UEES				IAML		21 03 20.9	
	comp=Z,5µm,0.5s						
SNET	Serv Nac Est T	1.07	119	*e*P	Pb	21 03 19.3	-1.3
SNET				IAML		21 03 20.7	
	comp=Z,6µm,0.4s						
SNET				*e*S	Sn	21 03 34.6	+1.1
OPAM	San Salvador	1.08	117	*e*P	Pb	21 03 19.7	-1.1
OPAM				IAML		21 03 21.8	
	comp=Z,6µm,0.3s						
CUSC	San Salvador	1.08	116	*e*P	Pb	21 03 19.7	-1.2
UESS	San Salvador	1.08	117	*e*P	Pb	21 03 19.5	-1.4
UESS				IAML		21 03 21.1	
	comp=Z,6µm,0.3s						
UESS				*e*S	Sn	21 03 35.5	+1.5
UTEC	San Salvador	1.08	117	*e*P	Pb	21 03 19.9	-1.1
UDBS	Soyapango	1.11	115	*e*P	Pb	21 03 20.6	-0.8
LFU	La Fuente	1.14	113	*e*P	Pb	21 03 20.2	-1.7
LLGN	La Laguna	1.20	92	*e*P	Pn	21 03 21.0	-0.6
LLGN				*e*S	Sn	21 03 38.1	+1.1
LBRS	Las Brisas	1.21	112	*e*P	Pb	21 03 21.4	-1.7
LFRS	El Faro	1.24	118	*e*P	Pb	21 03 22.0	-1.6
SNVI	San Vicente	1.44	114	*e*P	Pb	21 03 25.7	-1.3
UESV	Ojushtada	1.59	121	*e*P	Pn	21 03 25.8	-1.1
UESV				*e*S	Sb	21 03 47.0	-2.2
TECA	Tecapa	1.79	113	*e*P	Pb	21 03 30.1	-2.8
LCY	Lacayo	2.00	113	*e*P	Pb	21 03 33.6	-2.9
VSM	San Miguel	2.02	112	*e*P	Pb	21 03 35.6	-1.2
CCIG	Comitan	2.79	318	*e*Pn	Pn	21 03 43.7	+0.2
CCIG				*e*Sn	Sn	21 04 07.9	-8.4
TGUH	Tegucigalpa,Un	2.83	93	*e*Pn	Pn	21 03 43.9	-0.1
TGUH				*e*Sn	Sn	21 04 15.4	-1.7
CNGN	Cerro Negro	3.80	116	*e*P	Pn	21 03 59.1	+1.8
CNGN				IAML		21 04 55.3	
	comp=N,162nm,0.9s						
ESTN	Estel	3.88	106	*e*Pn	Pn	21 03 58.8	+0.5
ESTN	Estel	3.88	106	*e*P	Pn	21 03 58.6	+0.2
MOMN	Momotombo	3.98	116	*e*P	Pn	21 04 01.1	+1.3
RCON	San Juan de Ri	3.98	100	*e*P	Pn	21 04 00.1	+0.1
COPN	Copaltepe	4.04	119	*e*P	Pn	21 04 02.1	+1.5
MATN	Matagalpa	4.34	106	*e*P	Pn	21 04 04.9	+0.2
BOAB	BOACO BROADBAN	4.74	111	*e*Pn	Pn	21 04 10.9	+0.8
BOAB				*e*Sn	Sn	21 04 58.8	-5.3
BOAB	BOACO BROADBAN	4.74	111	*e*P	Pn	21 04 09.9	-0.2
BOAB				*e*S	Sb	21 05 25.2	+5.5
CMIG	Matias Romero	5.35	303	Pn	Pn	21 04 16.3	-2.3
	comp=N,1.7nm,0.3s,baz=107,slow=9.2,SNR=21						
CMIG				Sn	Sn	21 05 20.5	+1.3
	comp=N,5.1nm,0.3s,baz=138,slow=16,SNR=3.3						
CMIG				Lg	Lg	21 05 39.9	
	comp=N,23nm,0.3s,baz=28,slow=19,SNR=11						
CMIG				LR	LR	21 06 25.5	
	comp=N,2µm,19.1s,baz=136,slow=40						
ESPN	Las Esperanzas	6.08	109	*e*Pn	Pn	21 04 32.4	+3.9
ESPN				*e*Sn	Sn	21 05 30.8	-6.3
JTS	JuntasAbangare	6.43	127	Pn	Pn	21 04 35.2	+1.7
	comp=N,2.5nm,0.3s,baz=5.0,slow=14,SNR=6.5						
MYIG	MØrida	6.73	4	*e*Pn	Pn	21 04 36.8	-0.7
MYIG				*e*Lg	Lg	21 06 39.3	
TLIG	Tlapa	8.72	294	*e*Pn	Pn	21 05 06.4	+1.5
LNIG	Linares	13.76	322	*e*Pn	Pn	21 06 16.5	+2.7
833A	Chaparral WMA,	16.45	330	P	P	21 06 53.1	+1.2
	baz=148						
833A	Chaparral WMA,	16.45	330	*e*Pn	Pn	21 06 48.0	-1.3
	comp=N,27nm,0.8s						
HKT	Hockley	16.51	343	*e*Pn	Pn	21 06 48.5	-1.6
	comp=N,13nm,1.2s						
446A	Poplarville	16.52	3	P	P	21 06 55.6	+2.9
	baz=183						
447A	Lucedale	16.57	5	*e*Pn	Pn	21 06 50.4	-0.5
	comp=N,69nm,1.0s						
553A	Crawfordville	16.77	18	P	P	21 06 59.2	+3.8
	baz=200						
451A	Vernon	16.84	13	P	P	21 06 58.8	+2.7
	baz=196						
554A	Perry	16.91	20	P	P	21 06 59.9	+3.0
	baz=203						
343A	Vidalia	17.05	356	P	P	21 07 01.0	+2.6
	baz=176						
BRAL	Brewton	17.13	9	P	P	21 07 01.0	+1.7
	baz=191						
344A	Westbrook Farm	17.17	358	P	P	21 07 01.8	+2.0
	baz=179						
344A	Westbrook Farm	17.17	358	*e*Pn	Pn	21 06 56.7	-1.7
	comp=N,120nm,1.2s						
347A	Saraland	17.18	5	P	P	21 07 02.6	+2.7
	baz=186						
555A	McAlpin	17.18	22	P	P	21 07 03.6	+3.7
	baz=205						
452A	Marianna	17.19	15	P	P	21 07 03.4	+3.3
	baz=197						
342A	Flagon Creek P	17.20	354	P	P	21 07 02.5	+2.3
	baz=174						
342A	Flagon Creek P	17.20	354	*e*Pn	Pn	21 06 57.6	-1.2
	comp=N,83nm,1.0s						
341A	Kurthwood	17.27	351	P	P	21 07 03.0	+2.1
	baz=171						
341A	Kurthwood	17.27	351	*e*Pn	Pn	21 06 57.4	-2.2
	comp=N,29nm,1.0s						
556A	Lake Butler	17.29	23	P	P	21 07 04.7	+3.6
	baz=207						
453A	Whigham	17.43	17	P	P	21 07 05.6	+2.9
	baz=200						
454A	Quitman	17.50	19	P	P	21 07 06.5	+3.0
	baz=202						
245A	Little AP, Sta	17.75	1	P	P	21 07 09.2	+3.0
	baz=182						
244A	Avery, Jackson	17.76	359	P	P	21 07 09.2	+2.9
	baz=179						
247A	Quitman	17.82	4	P	P	21 07 09.8	+2.8
	baz=186						
435B	Jarrell	17.85	339	P	P	21 07 08.9	+1.6
	baz=157						
435B	Jarrell	17.85	339	*e*Pn	Pn	21 07 04.9	-1.9
	comp=N,21nm,0.9s						
242A	Grayson	17.86	355	P	P	21 07 10.2	+2.7
	baz=174						
249A	Camden	17.91	9	P	P	21 07 10.9	+2.9
	baz=190						
241A	Mo Tay, Goldon	17.91	352	P	P	21 07 10.1	+2.2
	baz=172						
241A	Mo Tay, Goldon	17.91	352	*e*Pn	Pn	21 07 07.7	+0.2
	comp=N,125nm,1.6s						
353A	Camilla	17.92	17	P	P	21 07 11.3	+3.2
	baz=200						
VBMS	Vicksburg	17.93	359	*e*Pn	Pn	21 07 06.7	-1.1
	comp=N,79nm,0.8s						
NATX	Nacogdoches	17.95	348	P	P	21 07 10.3	+1.9
	baz=166						
NATX	Nacogdoches	17.95	348	*e*Pn	Pn	21 07 04.1	-4.0
	comp=N,29nm,0.7s						
248A	Dixon Mills	17.95	7	P	P	21 07 11.1	+2.8
	baz=188						
250A	Grady	18.05	11	P	P	21 07 11.8	+2.3
	baz=193						
250A	Grady	18.05	11	*e*P	P	21 07 10.7	+1.2
	comp=N,59nm,1.4s						
OTAV	Otavalo	18.10	139	*e*Pn	P	21 07 10.4	-0.3
	comp=N,11nm,1.1s						
ROSC	El Rosal	18.20	119	P	P	21 07 13.8	+2.1
	comp=N,1.6nm,0.3s,baz=28,slow=13,SNR=5.2						
ROSC				LR	LR	21 14 15.5	
	comp=N,157nm,19.9s,baz=56,slow=37						
ROSC	El Rosal	18.20	119	*e*Pn	P	21 07 13.8	+2.1
	comp=N,16nm,1.3s						
145A	Houston Renfro	18.32	1	P	Pn	21 07 15.6	+3.1
	baz=181						
142A	Monroe	18.33	355	P	Pn	21 07 14.8	+2.1
	baz=175						
251A	Midway	18.34	13	P	Pn	21 07 15.2	+2.5
	baz=195						
144A	Alexander Plac	18.34	359	P	Pn	21 07 15.8	+2.9
	baz=180						
146A	Union	18.38	3	P	Pn	21 07 15.8	+2.5
	baz=184						
146A	Union	18.38	3	*e*P	P	21 07 12.3	-0.8
	comp=N,73nm,1.3s						
252A	Lumpkin	18.40	15	P	Pn	21 07 15.5	+2.0
	baz=197						
143A	Socs Landing,	18.45	357	P	Pn	21 07 15.9	+1.8
	baz=177						
143A	Socs Landing,	18.45	357	*e*P	P	21 07 13.3	-0.5
	comp=N,31nm,0.9s						
JCT	Junction City	18.46	333	P	Pn	21 07 15.2	+0.9
	baz=150						
JCT	Junction City	18.46	333	*e*P	P	21 07 13.1	-1.0
	comp=N,30nm,1.3s						
147A	Livingston	18.47	5	P	P	21 07 15.0	+0.9
	baz=186						
147A	Livingston	18.47	5	*e*P	P	21 07 13.9	-0.2
	comp=N,94nm,1.5s						
141A	Papa Simpson,	18.48	353	P	Pn	21 07 16.4	+1.9
	baz=172						
148A	Greensboro	18.51	7	P	P	21 07 15.8	+1.2
	baz=188						
149A	Jones	18.57	9	P	Pn	21 07 16.7	+1.1
	baz=191						
140A	Cam and Jess,	18.61	351	P	P	21 07 16.7	+1.1
	baz=170						
150A	Eclectic	18.71	11	P	Pn	21 07 19.7	+2.4
	baz=193						
254A	Abbeville	18.75	19	P	Pn	21 07 20.5	+2.6
	baz=202						
151A	Opelika	18.77	13	P	Pn	21 07 20.0	+2.0
	baz=195,SNR=6.6						
Z46A	Louisville	18.94	3	P	Pn	21 07 22.0	+1.9
	baz=184						
Z43A	Armstrong Fami	18.94	357	P	Pn	21 07 21.6	+1.5
	baz=177						
LRAL	Lakeview Retre	18.97	8	P	Pn	21 07 22.5	+2.1
	baz=190						
LRAL	Lakeview Retre	18.97	8	*e*P	Pn	21 07 21.4	+0.9
	comp=N,9.6nm,0.9s						
LRAL				*e*Sn	Sn	21 10 49.7	-2.4
Z44A	Pea Ridge, Bel	18.99	359	P	Pn	21 07 22.5	+1.8
	baz=180						
Z47A	Carrollton	19.01	5	P	Pn	21 07 22.8	+1.9
	baz=187						
152A	Waverly Hall	19.05	14	P	Pn	21 07 23.2	+1.8
	baz=197,SNR=6.9						
152A	Waverly Hall	19.05	14	*e*P	Pn	21 07 22.4	+1.0
	comp=N,33nm,1.3s						
Z42A	Norrel Spur, H	19.05	355	P	Pn	21 07 23.0	+1.6
	baz=175						
Z45A	Winona	19.09	1	P	Pn	21 07 23.5	+1.6
	baz=182						
Z45A	Winona	19.09	1	*e*P	P	21 07 20.0	-0.9
	comp=N,35nm,0.8s						
Z41A	Richland Creek	19.11	353	P	Pn	21 07 23.1	+0.9
	baz=173						
Z41A	Richland Creek	19.11	353	*e*P	Pn	21 07 22.7	+0.5
	comp=N,38nm,1.0s						
Z40A	Long Farm, Mag	19.19	352	P	Pn	21 07 24.8	+1.7
	baz=171						
Z49A	Columbiana	19.20	9	P	Pn	21 07 25.1	+1.9
	baz=191,SNR=10						
Z48A	Northport	19.23	7	P	Pn	21 07 25.5	+1.9
	baz=188						
Z50A	Ashland	19.36	11	P	Pn	21 07 27.0	+1.9
	baz=193						
Z50A	Ashland	19.36	11	*e*P	P	21 07 24.4	+0.5
	comp=N,16nm,1.0s						
TXAR	Lajitas Array	19.55	323	P	P	21 07 25.9	-0.2
	comp=N,0.1nm,0.3s,baz=146,slow=12,SNR=39						
LTX	Lajitas	19.55	323	*e*P	P	21 07 25.9	-0.2
TX31	Lajitas Ar. Si	19.55	323	*e*P	Pn	21 07 27.1	-0.4
Y45A	Yeager Farm, C	19.58	2	P	Pn	21 07 29.8	+2.0
	baz=182						
Z52A	Williamson	19.61	15	P	Pn	21 07 30.4	+2.2
	baz=197,SNR=5.4						
Y46A	Houston	19.63	3	P	Pn	21 07 29.3	+0.9
	baz=184						
Y44A	Strider, Charl	19.67	360	P	Pn	21 07 29.8	+1.0
	baz=180						
CCAR	Cane Creek	19.68	356	*e*P	P	21 07 28.6	+1.2
	comp=N,154nm,1.7s						
Y41A	Eaglette Beard	19.71	354	P	Pn	21 07 29.6	+0.3
	baz=174						
Y47A	UCPARC, Winfie	19.73	6	P	Pn	21 07 30.5	+1.0
	baz=187,SNR=10.0						
Y48A	Jasper	19.81	7	P	Pn	21 07 31.2	+0.7
	baz=189,SNR=6.2						
Y49A	Blount Mountai	19.86	9	P	Pn	21 07 32.0	+0.8
	baz=191						
Y49A	Blount Mountai	19.86	9	*e*P	P	21 07 31.4	+2.0
	comp=N,17nm,1.0s						
SDV	Santo Domingo	19.87	103	P	Pn	21 07 32.0	+0.3
	comp=N,30nm,0.7s,baz=284,slow=6.3,SNR=15						
SDV	Santo Domingo	19.87	103	*e*P	Pn	21 07 32.3	+0.7
	comp=N,53nm,1.0s						
Y40A	Okolona	19.92	352	P	Pn	21 07 32.0	+0.2
	baz=172						
Z53A	Monticello	19.92	16	P	Pn	21 07 32.6	+0.8
	baz=200,SNR=6.2						
GOGA	Godfrey	20.07	17	P	P	21 07 33.8	+2.2
	baz=200						
GOGA	Godfrey	20.07	17	*e*P	P	21 07 33.1	+1.4
	comp=N,34nm,1.5s						
Z54A	Sparta	20.09	18	P	Pn	21 07 35.2	+1.3
	baz=202						
X45A	UM Field Stati	20.14	2	P	Pn	21 07 34.6	+0.1
	baz=183						
Y51A	Rockmart	20.15	12	P	P	21 07 34.6	+2.0
	baz=195,SNR=16						
X44A	Crenshaw	20.21	0	P	Pn	21 07 35.2	0.0
	baz=181						
OXF	Oxford	20.23	2	P	P	21 07 35.3	+1.9
	baz=183,SNR=5.2						
OXF	Oxford	20.23	2	*e*P	P	21 07 34.6	+1.3
	comp=N,46nm,1.1s						
ABTX	Abilene, Hawle	20.26	336	P	P	21 07 34.5	+0.7
	baz=153,SNR=6.6						
ABTX	Abilene, Hawle	20.26	336	*e*P	P	21 07 33.9	+0.1
	comp=N,32nm,1.1s						
Z55A	Blythe	20.30	20	P	Pn	21 07 37.3	+1.0
	baz=203						
X42A	Stuttgart	20.30	357	P	Pn	21 07 36.3	0.0
	baz=176						
X40A	Basin Creek Fa	20.33	354	P	P	21 07 36.2	+1.7
	baz=173						
X40A	Basin Creek Fa	20.33	354	*e*P	P	21 07 35.0	+0.5
	comp=N,36nm,1.5s						
X47A	Russelville	20.33	6	P	Pn	21 07 37.1	+0.4
	baz=187						
Y52A	Lilburn	20.35	15	P	Pn	21 07 37.0	+0.2
	baz=198,SNR=8.7						
Y52A	Lilburn	20.35	15	*e*P	P	21 07 36.5	+1.8
	comp=N,50nm,1.3s						
X48A	Hartselle	20.36	7	P	P	21 07 37.0	+2.2
	baz=189						
X48A	Hartselle	20.36	7	*e*P	P	21 07 35.9	+1.1
	comp=N,28nm,1.2s						
Y53A	Monroe	20.46	16	P	Pn	21 07 38.3	+0.1
	baz=199						
MIAR	Mount Ida	20.48	352	P	P	21 07 38.0	+1.8
	baz=171,SNR=20						
MIAR	Mount Ida	20.48	352	*e*P	Pn	21 07 38.5	+0.1
	comp=N,57nm,1.1s						
X49A	Woodville	20.52	9	P	P	21 07 38.6	+2.1
	baz=191,SNR=6.3						
X39A	Fountain Ranch	20.52	351	P	P	21 07 38.6	+1.9
	baz=170,SNR=19						
UALR	University of	20.57	355	*e*P	P	21 07 37.6	+0.5
	comp=N,62nm,1.3s						
X50B	Fort Payne	20.58	11	P	P	21 07 39.0	+1.8
	baz=193,SNR=5.9						
Y54A	Tignall	20.72	18	P	P	21 07 40.8	+2.1
	baz=201						
PLAL	Pickwick Lake	20.77	5	*e*P	P	21 07 41.4	+2.1
	comp=N,20nm,1.1s						
X51A	Calhoun	20.84	12	P	P	21 07 41.8	+1.8
	baz=195						
X51A	Calhoun	20.84	12	*e*P	P	21 07 43.1	+3.1
	comp=N,43nm,1.4s						
SLBS	Sierra La Lagu	20.91	300	*e*P	P	21 07 40.6	-0.3
	comp=N,34nm,1.2s						
NHSC	New Hope	20.91	24	P	P	21 07 42.8	+2.1
	baz=208						
NHSC	New Hope	20.91	24	*e*P	P	21 07 42.5	+1.8
	comp=N,82nm,1.3s						
W41B	Gary Mavity, V	20.96	355	P	P	21 07 43.1	+1.8
	baz=175,SNR=9.2						
W41B	Gary Mavity, V	20.96	355	*e*P	P	21 07 43.8	+2.5
	comp=N,22nm,1.1s						
W48A	Pulaski	21.05	7	P	P	21 07 43.8	+1.6
	baz=189						
W40A	Ferguson Farm,	21.06	353	P	P	21 07 43.0	+0.6
	baz=173,SNR=6.1						
W40A	Ferguson Farm,	21.06	353	*e*P	P	21 07 43.3	+0.9
	comp=N,24nm,1.0s						
WHAR	Wooly Hollow	21.08	355	*e*P	P	21 07 43.3	+0.7
	comp=N,34nm,1.2s						
W47A	Westpoint	21.09	6	P	P	21 07 44.0	+1.3
	baz=187						
X52A	Dahlonega	21.09	15	P	P	21 07 44.6	+1.9
	baz=198,SNR=8.1						
W49A	Belvidere	21.12	9	P	P	21 07 45.0	+2.0
	baz=191,SNR=7.0						
X53A	Estanollee	21.15	16	P	P	21 07 45.1	+1.7
	baz=199						
W39A	Magazine	21.15	352	P	P	21 07 44.5	+1.2
	baz=171,SNR=14						
W39A	Magazine	21.15	352	*e*P	P	21 07 45.9	+2.6
	comp=N,36nm,1.3s						
SWET	Sewanee	21.27	10	*e*P	P	21 07 45.4	+0.7
	comp=N,40nm,1.0s						
W50A	Signal Mountai	21.36	11	P	P	21 07 47.4	+1.8
	baz=193						
W50A	Signal Mountai	21.36	11	*e*P	P	21 07 47.0	+1.3
	comp=N,21nm,1.1s						
LPIG	La Paz	21.38	300	LR	LR	21 15 56.2	
	comp=N,377nm,18.6s,baz=116,slow=37						
V45A	Humboldt	21.47	3	P	P	21 07 48.5	+1.7
	baz=184						
V42A	Cord	21.54	357	P	P	21 07 49.0	+1.5
	baz=177						
W52A	Murphy	21.55	14	*e*P	P	21 07 49.1	+1.4
	comp=N,34nm,0.8s						
V41A	Mountainview	21.56	356	P	P	21 07 48.4	+0.6
	baz=175,SNR=15						
V46A	Holladay	21.58	5	P	P	21 07 49.0	+1.0
	baz=186						
V40A	Witts Springs	21.64	354	P	P	21 07 48.9	+0.2
	baz=174,SNR=8.9						
V40A	Witts Springs	21.64	354	*e*P	P	21 07 49.7	+1.1
	comp=N,17nm,0.9s						
V48A	Smith Brothers	21.66	7	P	P	21 07 50.1	+1.3
	baz=189,SNR=9.6						
V48A	Smith Brothers	21.66	7	*e*P	P	21 07 51.0	+2.2
	comp=N,60nm,1.3s						
V47A	Nunnelly	21.66	6	P	P	21 07 50.2	+1.4
	baz=187,SNR=7.1						
BG3	Lake Jocassee	21.71	16	*e*P	P	21 07 52.5	+3.2
	comp=N,36nm,1.2s						
CPCT	Cooper Cave	21.76	13	*e*P	P	21 07 52.6	+2.7
	comp=N,54nm,1.4s						

CPCT				*e*Sn	Sn	21 12 09.9	+11
V39A	Pettigrew	21.76	352	P	P	21 07 50.8	+0.8
	baz=171,SNR=22						
V49A	McMinnville	21.81	9	P	P	21 07 51.9	+1.5
	baz=192,SNR=7.3						
W53A	Cullowhee	21.81	16	P	P	21 07 52.7	+2.1
	baz=199						
V50A	Pikevile	21.86	11	P	P	21 07 52.4	+1.5
	baz=194						
WMOK	Wichita Mounta	21.86	341	P	P	21 07 51.3	+0.3
	baz=158						
WMOK	Wichita Mounta	21.86	341	*e*P	P	21 07 49.9	-1.2
	comp=N,14nm,1.1s						
WVT	Waverly	21.93	5	P	P	21 07 52.7	+1.0
	baz=186						
WVT	Waverly	21.93	5	*e*P	P	21 07 53.4	+1.6
	comp=N,61nm,1.9s						
GLAT	Glass	21.99	2	*e*P	P	21 07 54.8	+2.5
	comp=N,82nm,0.9s						
U44B	Burton Farm, H	22.05	2	P	P	21 07 54.7	+1.6
	baz=183						
U43A	Rector	22.07	360	P	P	21 07 54.8	+1.5
	baz=180						
U42A	Revenden	22.07	358	P	P	21 07 54.3	+1.0
	baz=178,SNR=8.8						
U41A	Viola	22.10	356	P	P	21 07 54.7	+1.1
	baz=176						
GDL2	Guadalupe Moun	22.10	327	*e*P	P	21 07 52.1	-1.7
TKL	Tuckaleechee C	22.13	14	P	P	21 07 54.3	+0.4
	comp=N,19nm,1.1s,baz=189,slow=7.8,SNR=12						
TKL				LR	LR	21 17 25.9	
	comp=N,415nm,18.7s,baz=192,slow=39						
TKL	Tuckaleechee C	22.13	14	*e*P	P	21 07 56.0	+2.2
	comp=N,43nm,1.3s						
U46A	Springville	22.13	4	P	P	21 07 55.6	+1.7
	baz=186						
V51A	Loudon	22.14	13	P	P	21 07 55.7	+1.8
	baz=196						
V51A	Loudon	22.14	13	*e*P	P	21 07 52.7	-1.3
	comp=N,23nm,1.0s						
U40A	Yellville	22.19	354	P	P	21 07 55.0	+0.5
	baz=174,SNR=13						
TUL1	Leonard	22.19	348	P	P	21 07 54.6	+0.1
	baz=166						
TUL1	Leonard	22.19	348	*e*P	P	21 07 54.7	+0.2
	comp=N,40nm,1.4s						
HHAR	Hobbs	22.24	352	*e*P	P	21 07 55.2	+0.2
	comp=N,28nm,1.0s						
U39A	Green Forest	22.28	353	P	P	21 07 55.7	+0.2
	baz=172,SNR=7.0						
MNTX	Cornudas Mount	22.29	324	P	P	21 07 54.6	-1.0
	baz=138,SNR=7.6						
MNTX	Cornudas Mount	22.29	324	*e*P	P	21 07 54.3	-1.3
	comp=N,12nm,1.1s						
U47A	Clarksville	22.30	6	P	P	21 07 57.1	+1.5
	baz=188						
V52A	Sevierville	22.34	14	P	P	21 07 57.4	+1.2
	baz=197						
V52A	Sevierville	22.34	14	*e*P	P	21 07 56.3	+0.1
	comp=N,71nm,1.6s						
V53A	Saluda	22.38	16	P	P	21 07 58.1	+1.6
	baz=199						
V53A	Saluda	22.38	16	*e*P	P	21 07 58.0	+1.4
	comp=N,18nm,1.0s						
U48A	Cassie Pea, Po	22.45	8	P	P	21 07 59.0	+1.6
	baz=190						
PBMO	Poplar Bluff	22.48	360	*e*P	P	21 07 57.4	-0.2
	comp=N,20nm,0.8s						
U49A	Red Boiling Sp	22.56	9	P	P	21 07 59.6	+1.1
	baz=192,SNR=11						
U50A	Jamestown	22.63	11	P	P	21 08 00.3	+1.1
	baz=194						
MSTX	Muleshoe	22.74	332	*e*P	P	21 08 01.1	+0.5
	comp=N,25nm,1.1s						
T42A	Van Buren	22.75	358	P	P	21 08 00.9	+0.5
	baz=178,SNR=5.4						
T42A	Van Buren	22.75	358	*e*P	P	21 07 58.8	-1.6
	comp=N,12nm,0.8s						
U51A	La Follette	22.76	13	P	P	21 08 02.4	+1.7
	baz=196						
T44A	Benton	22.79	1	P	P	21 08 02.3	+1.4
	baz=182						
T46A	Princeton	22.83	5	P	P	21 08 02.5	+1.1
	baz=186,SNR=9.9						
T47A	Sharon Grove	22.86	6	P	P	21 08 02.6	+1.1
	baz=188,SNR=20						
T47A	Sharon Grove	22.86	6	*e*P	P	21 08 02.9	+1.4
	comp=N,90nm,1.0s						
T39A	Clever	22.90	353	P	P	21 08 02.4	+0.3
	baz=172,SNR=14						
U52A	Thorn Hill	22.92	14	P	P	21 08 03.6	+1.3
	baz=198						
TZTN	Tazewell	23.03	14	P	P	21 08 04.9	+1.5
	baz=197						
TZTN	Tazewell	23.03	14	*e*P	P	21 08 05.4	+2.1
	comp=N,28nm,1.3s						
T38A	Diamond	23.03	352	P	P	21 08 03.6	+0.3
	baz=170,SNR=12						
AMTX	Amarillo	23.05	335	P	P	21 08 02.9	-0.8
	baz=151						
AMTX	Amarillo	23.05	335	*e*P	P	21 08 02.3	-1.4
	comp=N,16nm,0.9s						
T48A	Bowling Green	23.06	8	P	P	21 08 04.7	+1.0
	baz=190						
U53A	Fall Branch	23.10	16	P	P	21 08 05.4	+1.3
	baz=199,SNR=6.9						
T49A	Edmonton	23.18	9	P	P	21 08 05.8	+0.9
	baz=192,SNR=17						
T49A	Edmonton	23.18	9	*e*P	P	21 08 06.0	+1.0
	comp=N,99nm,1.3s						
T50A	Nancy	23.22	11	P	P	21 08 05.8	+0.5
	baz=194,SNR=6.6						
S43A	Fulton Ridge,	23.27	0	P	P	21 08 06.0	+0.2
	baz=181,SNR=5.4						
T51A	Gray	23.34	13	P	P	21 08 06.4	-0.1
	baz=196,SNR=5.1						
S40A	Lebanon	23.39	355	P	P	21 08 06.1	-0.9
	baz=175,SNR=9.2						
S44A	Carbondale	23.41	2	P	P	21 08 07.5	+0.3
	baz=183						
SJG	San Juan	23.41	77	LR	LR	21 18 05.3	
	comp=N,392nm,18.4s,baz=262,slow=39						
S45A	Carrier Mills	23.42	3	P	P	21 08 07.1	-0.1
	baz=184						
SIUC	Southern Illin	23.43	2	*e*P	P	21 08 07.7	+0.3
	comp=N,116nm,1.1s						
S42A	Caledonia	23.48	359	P	P	21 08 07.4	-0.4
	baz=179,SNR=5.6						
S46A	Don Dixon Farm	23.49	5	P	P	21 08 08.6	+0.7
	baz=186						
S39A	Bolivar	23.55	354	P	P	21 08 07.6	-1.0
	baz=173,SNR=35						
S39A	Bolivar	23.55	354	*e*P	P	21 08 08.1	-0.5
	comp=N,38nm,0.8s						
S38A	Stockton	23.56	353	P	P	21 08 07.5	-1.2
	baz=171,SNR=10						
S48A	Wiedeman Farm,	23.64	8	P	P	21 08 10.0	+0.6
	baz=190,SNR=9.6						
T52A	Hallie	23.70	14	P	P	21 08 10.5	+0.6
	baz=198						
USIN	University of	23.77	5	*e*P	P	21 08 12.0	+1.4
	comp=N,117nm,1.1s						
CCM	Cathedral Cave	23.77	358	P	P	21 08 10.4	-0.2
	baz=178						
CCM	Cathedral Cave	23.77	358	*e*P	P	21 08 11.8	+1.1
	comp=N,38nm,1.1s						
MTP	Monte Pirata	23.97	77	*e*P	P	21 08 14.5	+1.8
	comp=N,34nm,0.8s						
R43A	Red Bud	23.98	1	P	P	21 08 12.5	0.0
	baz=181						
R42A	Luebbering	23.98	359	P	P	21 08 12.2	-0.5
	baz=179						
R41A	Rosebud	24.02	358	P	P	21 08 12.2	-0.8
	baz=178,SNR=24						
R46A	Gibon Southern	24.03	5	P	P	21 08 13.2	+0.1
	baz=187						
R45A	Skylar, Fairfi	24.05	4	P	P	21 08 13.4	+0.2
	baz=185,SNR=12						
R40A	Maddies Statio	24.06	356	P	P	21 08 12.8	-0.5
	baz=176						
R40A	Maddies Statio	24.06	356	*e*P	P	21 08 13.4	+0.1
	comp=N,12nm,0.8s						
S51A	Beattyville	24.07	13	P	P	21 08 14.3	+0.9
	baz=196,SNR=15						
S51A	Beattyville	24.07	13	*e*P	P	21 08 14.2	+0.7
	comp=N,57nm,0.9s						
R38A	Fenwick Farm,	24.11	353	P	P	21 08 13.8	0.0
	baz=172,SNR=18						
R39A	Chumby, Stover	24.14	355	P	P	21 08 13.9	-0.2
	baz=174,SNR=15						
WCI	Wyandotte Cave	24.18	8	P	P	21 08 15.1	+0.7
	baz=190						
WCI	Wyandotte Cave	24.18	8	*e*P	P	21 08 15.2	+0.8
	comp=N,52nm,0.8s						
ATAH	Atahualpa	24.22	150	P	P	21 08 15.9	+0.4
	comp=N,4.5nm,0.8s,baz=3.2,slow=18,SNR=2.0						
121A	Cookes Peak, D	24.30	322	P	P	21 08 14.3	-1.5
	baz=135						
SLM	Saint Louis	24.33	360	*e*P	P	21 08 15.8	-0.1
	comp=N,26nm,0.9s						
R48A	Northridge Ran	24.40	8	P	P	21 08 17.1	+0.6
	baz=190						
OLIL	Olney	24.50	4	*e*P	P	21 08 17.1	-0.2
	comp=N,27nm,0.8s						
BLA	Blacksburg	24.51	19	P	P	21 08 18.4	+0.9
	baz=204						
BLA	Blacksburg	24.51	19	*e*P	P	21 08 19.0	+1.4
	comp=N,27nm,1.4s						
Q44A	Meyer Farm, Va	24.62	2	P	P	21 08 18.9	+0.4
	baz=183						
Q43A	New Douglas	24.64	1	P	P	21 08 19.4	+0.7
	baz=182						
Q45A	Warren Harvey,	24.66	4	P	P	21 08 18.9	+0.1
	baz=185,SNR=10						
Q41A	Truxton	24.67	358	P	P	21 08 19.9	+1.0
	baz=178,SNR=5.2						
BNM	Barren Site	24.81	326	*e*P	P	21 08 17.6	-3.0
Q38A	Cooks Store, C	24.84	354	P	P	21 08 21.2	+0.7
	baz=172,SNR=8.3						
Q47A	Bedord North L	24.86	7	P	P	21 08 21.3	+0.7
	baz=189,SNR=6.6						
Q37A	Longview Farm,	24.86	352	P	P	21 08 21.0	+0.4
	baz=171						
Q39A	Willow Grove F	24.86	355	P	P	21 08 21.3	+0.6
	baz=174						
Q48A	North Vernon	24.94	8	P	P	21 08 22.1	+0.7
	baz=191						
R52A	Catlettsburg	24.95	14	P	P	21 08 22.3	+0.8
	baz=198						
Q50A	Georgetown	25.15	11	P	P	21 08 23.6	+0.3
	baz=195						
P44A	Sand Creek, Wi	25.20	3	P	P	21 08 24.6	+0.9
	baz=184						
P40A	Paris	25.28	357	P	P	21 08 24.4	0.0
	baz=176,SNR=5.5						
P40A	Paris	25.28	357	*e*P	P	21 08 23.8	-0.7
	comp=N,41nm,1.2s						
P42A	Winchester	25.28	360	P	P	21 08 24.6	+0.2
	baz=180,SNR=5.7						
P42A	Winchester	25.28	360	*e*P	P	21 08 23.4	-1.0
	comp=N,33nm,1.3s						
P45A	Graceland, Par	25.32	4	P	P	21 08 25.1	+0.3
	baz=186,SNR=6.1						
P45A	Graceland, Par	25.32	4	*e*P	P	21 08 25.2	+0.5
	comp=N,45nm,1.1s						
ANMO	Albuquerque	25.33	327	LR	LR	21 21 12.4	
	comp=N,142nm,19.0s,baz=136,slow=44						
P43A	Skaggs, Pawnee	25.34	1	P	P	21 08 25.5	+0.6
	baz=182						
P41A	Barry, Barry	25.38	358	P	P	21 08 24.9	-0.4
	baz=178						
P47A	Martinsville	25.42	7	P	P	21 08 26.6	+0.9
	baz=189						
KSU1	Kansas State U	25.44	348	P	P	21 08 25.7	-0.2
	baz=166						
P46A	Rosedale	25.45	5	P	P	21 08 26.4	+0.5
	baz=187						
Q51A	Peebles	25.45	12	P	P	21 08 26.9	+0.9
	baz=196						
P38A	Dawn	25.49	354	P	P	21 08 26.1	-0.2
	baz=173						
P48A	Milroy	25.50	9	P	P	21 08 27.3	+0.9
	baz=191						
P37A	Lathrop	25.55	353	P	P	21 08 27.0	+0.2
	baz=171						
O41A	Passleys Farm,	25.82	359	P	P	21 08 29.9	+0.6
	baz=179						
O40A	La Belle	25.86	357	P	P	21 08 28.9	-0.8
	baz=177,SNR=7.8						
O44A	Mansfield	25.89	3	P	P	21 08 29.7	-0.2
	baz=184						
CBKS	Cedar Bluff	25.92	343	P	P	21 08 29.0	-1.3
	baz=159						
CBKS	Cedar Bluff	25.92	343	*e*P	P	21 08 28.8	-1.5
	comp=N,30nm,1.1s						
P50A	Jamestown	25.92	11	P	P	21 08 30.3	+0.1
	baz=195						
O38A	Galt	25.98	354	P	P	21 08 30.4	-0.3
	baz=173						
O45A	Potomac	26.03	4	P	P	21 08 31.2	0.0
	baz=186,SNR=9.7						
TUC	Tucson	26.04	317	P	P	21 08 30.1	-1.5
	baz=130						
TUC	Tucson	26.04	317	*e*P	P	21 08 30.4	-1.2
	comp=N,9.4nm,1.1s						
T25A	Trinidad	26.12	334	P	P	21 08 30.9	-1.5
	baz=148						
T25A	Trinidad	26.12	334	*e*P	P	21 08 32.0	-0.4
	comp=N,16nm,1.3s						
O47A	Sheridan	26.17	7	P	P	21 08 32.1	-0.4
	baz=189,SNR=6.3						
SFIN	Lafayette	26.21	5	P	P	21 08 32.8	-0.1
	baz=187,SNR=7.4						
SFIN	Lafayette	26.21	5	*e*P	P	21 08 34.8	+1.9
	comp=N,27nm,1.0s						
HDIL	Hopedale	26.26	2	P	P	21 08 33.7	+0.4
	baz=182						
HDIL	Hopedale	26.26	2	*e*P	P	21 08 32.6	-0.7
	comp=N,26nm,0.9s						
O48A	Farmland	26.32	9	P	P	21 08 34.3	+0.4
	baz=191						
O49A	Covington	26.39	10	P	P	21 08 35.1	+0.6
	baz=193						
O50A	Cable	26.48	11	P	P	21 08 35.8	+0.5
	baz=195						
N42A	Yates City	26.52	0	P	P	21 08 36.1	+0.4
	baz=181						
N44A	Piper City	26.55	3	P	P	21 08 36.5	+0.6
	baz=185,SNR=7.2						
N38A	Joes South For	26.62	355	P	P	21 08 36.3	-0.3
	baz=174						
N45A	Kentland	26.65	5	P	P	21 08 36.8	0.0
	baz=186,SNR=7.0						
N39A	Derby Farms, D	26.65	356	P	P	21 08 36.7	-0.1
	baz=175						
N39A	Derby Farms, D	26.65	356	*e*P	P	21 08 35.3	-1.5
	comp=N,16nm,1.1s						
N43A	Stutzman Famil	26.65	2	P	P	21 08 37.7	+0.9
	baz=183						
N46A	Monticello	26.76	6	P	P	21 08 38.5	+0.7
	baz=188						
M41A	Milan	27.07	359	P	P	21 08 40.3	-0.3
	baz=180,SNR=9.1						
M44A	Midewin, Midew	27.15	4	P	P	21 08 41.4	+0.2
	baz=185,SNR=5.6						
M44A	Midewin, Midew	27.15	4	*e*P	P	21 08 41.5	+0.2
	comp=N,43nm,1.1s						
M43A	Waltham Townsh	27.15	2	P	P	21 08 41.0	-0.3
	baz=183						
M45A	Boilermakers S	27.20	5	P	P	21 08 42.6	+0.8
	baz=187						
M39A	Webster	27.23	357	P	P	21 08 42.4	+0.4
	baz=176,SNR=5.6						
M38A	Pleasantville	27.24	355	P	P	21 08 42.0	-0.1
	baz=174						
L42A	Oliver, Polo	27.70	1	P	P	21 08 46.6	+0.3
	baz=181						
L42A	Oliver, Polo	27.70	1	*e*P	P	21 08 44.8	-1.5
L41A	Preston	27.77	360	P	P	21 08 47.1	+0.3
	baz=180						
L40A	Anamosa	27.77	358	P	P	21 08 47.1	+0.3
	baz=178						
L40A	Anamosa	27.77	358	*e*P	P	21 08 46.4	-0.5
	comp=N,47nm,1.0s						
L39A	Vinton	27.86	357	P	P	21 08 47.8	+0.1
	baz=177						
L43A	Garden Prairie	27.91	2	P	P	21 08 48.6	+0.6
	baz=183						
K41A	Shullsburg	28.30	360	P	P	21 08 51.9	+0.3
	baz=180						
K43A	Burlington	28.44	3	P	P	21 08 53.1	+0.3
	baz=184						
K43A	Burlington	28.44	3	*e*P	P	21 08 52.4	-0.5
	comp=N,60nm,1.1s						
WUAZ	Wupatki	28.51	322	P	P	21 08 52.3	-1.5
	baz=133						
JFWS	Jewell Farm	28.61	360	P	P	21 08 54.6	+0.2
	baz=180						
JFWS	Jewell Farm	28.61	360	*e*P	P	21 08 55.6	+1.2
	comp=N,15nm,0.9s						
J42A	Columbus	29.03	2	P	P	21 08 57.9	-0.1
	baz=182						
J39A	Decorah	29.06	358	P	P	21 08 58.0	-0.3
	baz=177						
J41A	Loganville	29.06	0	P	P	21 08 59.0	+0.7
	baz=181						
PV03	Paradox Valley	29.10	329	*e*P	P	21 08 58.7	-0.3
J43A	Natural Harves	29.11	3	P	P	21 08 59.3	+0.5
	baz=184						
PV18	Skein Mesa, Pa	29.13	329	*e*P	P	21 08 58.4	-0.8
	comp=N,5.1nm,1.1s						
PV12	Saucer Basin,	29.13	329	*e*P	P	21 08 56.7	-2.6
	comp=N,5.4nm,0.9s						
PDMCI	Parker Dam,Lak	29.48	317	P	P	21 09 00.8	-1.4
	baz=127						
I39A	Houston	29.57	358	P	P	21 09 02.9	+0.1
	baz=178						
I42A	Draeger Farm,	29.60	2	P	P	21 09 03.7	+0.5
	baz=183						
I42A	Draeger Farm,	29.60	2	*e*P	P	21 09 02.6	-0.5
	comp=N,28nm,1.3s						
I43A	Langenfeld Bro	29.63	3	P	P	21 09 03.5	+0.1
	baz=184						
I41A	Arkdale	29.75	0	*e*P	P	21 09 03.5	-1.0
	comp=N,27nm,1.0s						
I38A	Scanlan Farm,	29.79	357	P	P	21 09 04.8	0.0
	baz=176						
ECSD	EROS Data Cent	29.94	351	P	P	21 09 05.9	-0.2
	baz=168						
ECSD	EROS Data Cent	29.94	351	*e*P	P	21 09 06.6	+0.5
	comp=N,9.2nm,1.4s						
H42A	Shiocton	30.23	2	P	P	21 09 09.2	+0.5
	baz=184						
H42A	Shiocton	30.23	2	*e*P	P	21 09 08.9	+0.1
	comp=N,28nm,1.1s						
H41A	Junction City	30.31	1	*e*P	P	21 09 07.6	-1.8
	comp=N,14nm,1.1s						
H40A	Chili	30.32	360	P	P	21 09 10.1	+0.7
	baz=180						
H37A	Dierke Farm, C	30.36	356	P	P	21 09 10.1	+0.3
	baz=175						
H38A	Maiden Rock	30.42	357	P	P	21 09 10.3	0.0
	baz=176						
H36A	Jessenland, He	30.44	355	P	P	21 09 10.6	+0.1
	baz=173						
XPFO	Piæon Flat	30.67	314	*e*P	P	21 09 11.7	-1.2
	comp=N,5.8nm,1.3s						
PFO	Pinyon Flats O	30.67	314	*e*P	P	21 09 09.4	-3.4
	comp=N,3.0nm,0.8s						
G38A	Ridgeland	30.89	358	P	P	21 09 15.2	+0.7
	baz=177						
G40A	Rib Lake	30.96	360	*e*P	P	21 09 15.6	+0.4
	comp=N,19nm,1.4s						
G42A	Mountain	30.97	2	P	P	21 09 15.9	+0.6
	baz=184						
G42A	Mountain	30.97	2	*e*P	P	21 09 16.2	+1.0
	comp=N,15nm,0.9s						
G39A	Holcombe	30.99	359	P	P	21 09 15.9	+0.5
	baz=178						
SPMN	Marine on St.	31.00	356	*e*P	P	21 09 16.0	+0.5
	comp=N,39nm,1.6s						
G43A	Wallace	31.02	3	P	P	21 09 16.0	+0.3
	baz=185						
MSU	Marysvale	31.05	325	*e*P	P	21 09 15.3	-1.0
G34A	Benson	31.28	353	P	P	21 09 18.0	+0.1
	baz=170						
F43A	Flat Rock, Esc	31.63	4	P	P	21 09 21.3	+0.3
	baz=186						
F38A	Pierce - Schro	31.68	358	P	P	21 09 21.6	+0.2
	baz=177						
F44A	Big Bay de Noc	31.83	5	P	P	21 09 22.9	+0.2
	baz=187						
DELO	Deloro Mine	32.05	17	P	P	21 09 26.4	+1.6
	baz=204						
E39A	Mellen	32.07	360	P	P	21 09 25.2	+0.3
	baz=180						
E40A	Wakefield	32.14	0	P	P	21 09 25.8	+0.3
	baz=181						
E41A	Kenton	32.17	2	P	P	21 09 26.2	+0.4
	baz=182						
E42A	Champion	32.18	3	P	P	21 09 26.5	+0.6
	baz=184						
E43A	Lone Tree Farm	32.18	4	P	P	21 09 26.3	+0.4
	baz=186						
E43A	Lone Tree Farm	32.18	4	*e*P	P	21 09 26.3	+0.4
	comp=N,41nm,1.1s						
E36A	McGregor	32.31	356	P	P	21 09 27.4	+0.3
	baz=175						
BUKO	Buck Lake	32.45	14	P	P	21 09 31.0	+2.8
	baz=200						
PLVO	Plevna	32.69	17	P	P	21 09 33.8	+3.5
	baz=204						
D37A	Cotton	32.91	357	P	P	21 09 32.6	+0.4
	baz=176						
R11A	Troy Canyon, C	32.91	322	*e*P	P	21 09 32.2	-0.3
	comp=N,6.0nm,1.3s						
PDAR	Pinedale Array	32.99	333	LR	LR	21 26 31.0	
	comp=N,98nm,19.1s,baz=154,slow=43						
C36A	Pine Crest Far	33.52	357	P	P	21 09 37.7	+0.2
	baz=176						
C35A	Jirik Farms, M	33.54	355	P	P	21 09 37.9	+0.1
	baz=174						
REDW	Red Top Meadow	34.04	333	*e*P	P	21 09 41.8	-0.6
	comp=N,22nm,1.5s						
B35A	Bob, Littlefor	34.18	356	P	P	21 09 43.2	-0.1
	baz=174						
AGMN	Agassiz Nation	34.31	353	P	P	21 09 44.2	-0.2
	baz=171						
AGMN	Agassiz Nation	34.31	353	*e*P	P	21 09 45.1	+0.7
	comp=N,7.3nm,1.0s						
B34A	Aery, Baudette	34.38	355	P	P	21 09 44.9	-0.1
	baz=173						
NV11	Mina Array Sit	34.54	319	*e*P	P	21 09 47.5	+0.8
	comp=N,1.4nm,1.7s						
NV01	Mina Array Sit	34.64	319	*e*P	P	21 09 48.0	+0.3
NVAR	Mina Array Bea	34.64	319	P	P	21 09 47.5	-0.2
	comp=N,4.3nm,0.9s,baz=135,slow=9.0,SNR=15						
NVAR				LR	LR	21 24 18.5	
	comp=N,158nm,20.7s,baz=246,slow=37						
KVN	Kaiserville	34.88	320	*e*P	P	21 09 49.3	-0.4
A33A	Warroad	34.90	354	P	P	21 09 49.7	+0.3
	baz=172						
PKME	Peaks-Kenny Pk	35.66	26	P	P	21 09 57.4	+1.4
	baz=216						
DGMT	Dagmar	36.08	344	P	P	21 09 59.1	-0.5
	baz=157						
DGMT	Dagmar	36.08	344	*e*P	P	21 09 59.5	-0.2
	comp=N,20nm,0.9s						
MCMT	McKenzie Canyo	36.08	332	*e*P	P	21 10 00.4	+0.4
ULM	Lac du Bonnet	36.24	354	P	P	21 09 58.4	-2.6
	comp=N,12nm,0.9s,baz=176,slow=9.8,SNR=9.7						
ULM				LR	LR	21 27 44.3	
	comp=N,112nm,18.3s,baz=152,slow=41						
ULM	Lac du Bonnet	36.24	354	*e*P	P	21 10 00.6	-0.4
	comp=N,26nm,1.1s						
LPAZ	La Paz	37.33	143	P	P	21 10 11.5	+0.2
	comp=N,1.5nm,0.7s,baz=326,slow=6.8,SNR=7.4						
LPAZ	La Paz	37.33	143	*e*P	P	21 10 12.6	+1.3
	comp=N,6.5nm,1.4s						
EGMT	Eagleton	37.42	338	*e*P	P	21 10 11.2	+0.1
	comp=N,32nm,1.4s						
J08A	Circle Bar Ran	37.84	326	*e*P	P	21 10 13.7	-1.2
BMO	Blue Mountains	38.24	328	*e*P	P	21 10 16.6	-1.6
	comp=N,5.2nm,1.2s						
MNMC	Minye Minye	38.84	148	*e*P	P	21 10 22.4	-1.3
	comp=N,30nm,1.2s						
F10A	Beach Ranch, E	38.99	330	*e*P	P	21 10 23.2	-1.2
YBH	Yreka Blue Hor	39.30	321	LR	LR	21 29 28.4	
	comp=N,156nm,18.6s,baz=151,slow=41						
SCHQ	Schefferville	44.44	19	P	P	21 11 09.2	+0.4
	comp=N,24nm,0.9s,baz=201,slow=5.1,SNR=5.5						
SCHQ				LR	LR	21 30 24.9	
	comp=N,305nm,18.9s,baz=213,slow=37						
SCHQ	Schefferville	44.44	19	*e*P	P	21 11 09.5	+0.7
LLLB	Lillooet	44.46	331	*e*P	P	21 11 08.8	-0.3
	comp=N,25nm,1.4s						
YKA	Yellowknife Ar	51.24	346	P	P	21 12 00.4	-1.0
	comp=N,8.2nm,1.0s,baz=146,slow=7.6,SNR=4.1						
YKA				LR	LR	21 37 56.7	
	comp=N,8.6nm,18.0s,baz=164,slow=41						
CPUP	Villa Florida	51.43	141	P	P	21 12 02.7	-0.6
	comp=N,2.0nm,0.8s,baz=324,slow=5.0,SNR=3.7						
DLBC	Dease Lake	53.19	335	*e*P	P	21 12 15.9	-0.1
	comp=N,12nm,1.0s						

IVI	**Ivigtut**	55.79	23	*e*P	P	21 12 34.6	-0.1
	comp=N,21nm,0.8s						
PLCA	**Paso Flores**	57.62	162	P	P	21 12 47.9	-0.2
	comp=N,4.5nm,1.0s,baz=340,slow=9.9,SNR=6.5						
PLCA	**Paso Flores**	57.62	162	*e*P	P	21 12 49.3	+1.2
	comp=N,16nm,1.4s						
SFJD	**Kangerlussuaq**	58.80	17	LR	LR	21 38 55.0	
	comp=N,294nm,18.6s,baz=220,slow=37						
RES	**Resolute Bay**	60.53	359	*e*P	P	21 13 06.9	-0.7
	comp=N,6.6nm,0.9s						
INK	**Inuvik**	60.75	343	*e*P	P	21 13 08.7	-0.6
	comp=N,8.2nm,1.1s						
ANGG	**Ammassalik, Gr**	62.18	22	*e*P	P	21 13 18.2	-0.8
	comp=N,16nm,0.6s						
IL1	**Eielson Array**	63.35	336	*e*P	P	21 13 25.2	-1.6
ILAR	**Eielson Array**	63.35	336	P	P	21 13 25.7	-1.1
	comp=N,2.3nm,1.0s,baz=125,slow=4.7,SNR=10						
ILB	**Eielson Array**	63.35	336	*e*P	P	21 13 25.1	-1.7
BPAW	**Bear Paw Mtn.**	64.73	335	*e*P	P	21 13 34.7	-1.2
	comp=N,12nm,1.5s						
SUMG	**Summit**	65.58	15	*e*P	P	21 13 41.3	-0.4
	comp=N,30nm,1.4s						
COLD	**Coldfoot**	65.58	338	*e*P	P	21 13 40.3	-1.1
	comp=N,9.2nm,1.5s						
PPT	**Papeete**	66.55	243	LR	LR	21 34 25.1	
	comp=N,116nm,20.3s,baz=61,slow=28						
EKA	**Eskdalemuir Ar**	76.77	36	P	P	21 14 47.4	-1.9
	comp=N,10.0nm,1.0s,baz=266,slow=5.6,SNR=7.4						
EKA				LR	LR	21 50 27.6	
	comp=N,28nm,18.1s,baz=245,slow=37						
ESDC	**Sonseca Array**	78.21	52	P	P	21 14 57.3	-0.4
	comp=N,2.3nm,0.9s,baz=287,slow=5.9,SNR=8.9						
ES19	**SONSECA Array**	78.26	52	*e*P	P	21 14 57.8	-0.2
MDT	**Midelt**	78.78	59	LR	LR	21 46 15.9	
	comp=N,48nm,18.4s,baz=331,slow=33						
SPITS	**Spitsbergen Ar**	79.54	12	LR	LR	21 51 30.8	
	comp=N,119nm,19.9s,baz=335,slow=37						
KOWA	**Kowa**	82.92	77	LR	LR	21 51 38.1	
	comp=N,40nm,18.4s,baz=256,slow=35						
DBIC	**Dimbokro**	83.89	85	LR	LR	21 50 58.1	
	comp=N,35nm,19.5s,baz=230,slow=34						
HFS	**Hagfors**	84.57	29	P	P	21 15 30.1	-0.8
	comp=N,3.2nm,0.9s,baz=122,slow=5.2,SNR=2.5						
HFS				LR	LR	21 52 40.8	
	comp=N,55nm,20.0s,baz=289,slow=35						
ARA0	**ARCESS Array S**	85.39	19	*e*P	P	21 15 34.8	-0.1
ARCES	**ARCESS Array B**	85.39	19	P	P	21 15 34.8	-0.1
	comp=N,6.5nm,1.2s,baz=297,slow=4.0,SNR=5.1						
CLL	**Collm**	87.08	38	*e*P	P	21 15 43.0	-0.6
CLL				*i* Pmax		21 15 46.1	
	comp=Z,5.0nm,0.9s						
CLL				*i* pP	sP	21 15 56.7	0.0
BRG	**Berggiesshubel**	87.79	38	*e*(P)	P	21 15 49.3	+2.3
	comp=Z,8.3nm,1.3s						
GERES	**GERESS Array B**	88.32	40	P	P	21 15 51.1	+1.4
	comp=Z,0.6nm,0.7s,baz=297,slow=4.3,SNR=5.2						
GERES				LR	LR	21 51 18.1	
	comp=Z,48nm,19.3s,baz=288,slow=33						
TORD	**Torodi Ar. Bea**	88.62	77	LR	LR	21 52 16.8	
	comp=Z,67nm,20.8s,baz=290,slow=33						
FINES	**FINESS Array B**	89.56	26	LR	LR	21 57 03.4	
	comp=Z,36nm,18.3s,baz=288,slow=36						
HHC	**Hu-ho-hao-te**	121.63	341	*e*PKP	PKPdf	21 21 52.9	+0.9
WMQ	**Urumqi**	122.22	2	PKP	PKPdf	21 21 51.3	-1.7
WMQ				LR	LR		
	comp=Z,160nm,23.1s						
WMQ				LR	LR		
	comp=Z,120nm,20.1s						
WMQ				LR	LR		
	comp=Z,110nm,19.3s						
KSH	**Kashi**	125.02	13	*e*PKP	PKPdf	21 21 56.8	-1.8
KSH				*e*PP	PP	21 23 50.6	+4.6
NJ2	**Nanjing**	126.24	329	*e*PKP	PKPdf	21 21 58.0	-2.9
LZH	**Lanzhou**	128.25	346	⇑PKP	PKPdf	21 22 03.4	-1.5
LZH				sPKP		21 22 50.3	
LZH				LR	LR		
	comp=Z,72nm,18.1s						
LZH				LR	LR		
	comp=Z,75nm,18.0s						
LZH				LR	LR		
	comp=Z,86nm,20.2s						
WR1	**Warramunga Arr**	137.15	256	*e*PKPdf	PKPdf	21 22 20.9	-0.9
WRA	**Warramunga Arr**	137.15	256	PKP	PKPdf	21 22 20.9	-0.9
	comp=Z,2.5nm,0.8s,baz=84,slow=1.9,SNR=14						
ASAR	**Alice Springs**	137.39	250	PKhKP	PKPpre	21 22 10.6	
	comp=Z,0.3nm,0.6s,baz=111,slow=3.6,SNR=3.3						
ASAR				PKP	PKPdf	21 22 21.8	-0.4
	comp=Z,1.3nm,0.9s,baz=104,slow=1.9,SNR=8.1						
CMAR	**Chiang Mai Arr**	146.32	344	PKPbc	PKPdf	21 22 36.5	-1.7
	comp=Z,0.7nm,0.6s,baz=336,slow=2.3,SNR=5.2						

TRN 16 21:09:10.8,14°.96N×61°.41W,h198^{km},MD3.6,2C-1D, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCM	**Pelee Case Pet**	0.24	126	*e*P	Pn	21 09 38.1	+1.1
PCM	**Pelee Case Pet**	0.24	126	*e*P	Pn	21 09 38.3	+1.4
CXM	**Morne La Croix**	0.27	122	*e*P	Pn	21 09 38.5	+1.4
CXM				*e*S	Sn	21 09 58.0	+0.5
PML	**Morne Lenard**	0.28	129	*e*P	Pn	21 09 37.9	+0.8
GBMF	**Grand Be**	0.28	124	*e*P	Pn	21 09 38.2	+1.0
BAMF	**Morne Balai**	0.29	119	*e*P	Pn	21 09 38.3	+1.2
FDF	**Fort de France**	0.34	132	*e*P	Pn	21 09 38.1	+0.9
FDF				*e*S	Sn	21 09 58.0	+0.4
MDN	**Morne-Daniel**	0.36	3	*e*P	Pn	21 09 38.7	+1.5
DLPL	**La Plaine**	0.41	23	*e*P	Pn	21 09 38.1	+0.7
DLPL				*e*S	Sn	21 09 59.2	+1.1
ZAM	**Aeronautique**	0.53	136	*e*P	Pn	21 09 38.3	+0.6
TRMF	**Trois Ilets**	0.54	140	*e*P	Pn	21 09 38.3	+0.5
BIM	**Bigot**	0.55	143	*e*P	Pn	21 09 39.5	+1.6
BIM				*e*S	Sn	21 09 59.2	+0.3
BBL	**Barber's Block**	0.57	354	*e*P	Pn	21 09 38.5	+0.5
BBL				*e*S	Sn	21 09 58.8	-0.4
LPMF	**Morne Lapointe**	0.57	132	⇓*i*P	Pn	21 09 38.6	+0.6
DWS	**Wesley**	0.61	9	*e*P	Pn	21 09 33.0	-5.1
DWS				*e*S	Sn	21 09 56.9	-2.5
MDPO	**Dominica; Chan**	0.62	356	*e*P	Pn	21 09 38.9	+0.7
MDPO				*e*S	Sn	21 10 00.1	+0.7
MVM	**Montagne Vaucl**	0.64	129	⇑*e*P	Pn	21 09 39.1	+0.8
TBG	**Guadaloupe-3**	0.92	346	*e*P	Pn	21 09 40.4	+0.6
TBG				*e*S	Sn	21 10 03.2	+0.8
MGG	**Marie-Galante**	0.96	5	*e*P	Pn	21 09 40.7	+0.7
PHG	**Guadaloupe-2**	1.07	348	⇑*i*P	Pn	21 09 42.0	+1.0
SLB	**Belfond**	1.18	162	*e*P	Pn	21 09 42.5	+0.8
SLB				*e*S	Sn	21 10 05.0	-0.7
MCLT	**Moule a Chique**	1.32	160	*e*P	Pn	21 09 42.7	-0.1
MCLT				*e*S	Sn	21 10 07.3	-0.4
DEG	**La Desirade**	1.39	14	*e*P	Pn	21 09 44.5	+1.1
SSV	**Crater Summit**	1.63	173	*e*S	Sn	21 10 11.9	-0.9
SVV	**Soufriere Volc**	1.64	173	*e*P	Pn	21 09 47.0	+1.4
SVV				*e*S	Sn	21 10 13.5	+0.7
SVB	**Belmont**	1.68	175	*e*P	Pn	21 09 46.2	+0.2
SVB				*e*S	Sn	21 10 13.9	+0.4
SVCV	**St. Vincent, C**	1.69	171	*e*P	Pn	21 09 46.3	+0.1
SVCV				*e*S	Sn	21 10 14.6	+0.9
FCV	**Fort Charlotte**	1.80	175	*e*P	Pn	21 09 48.1	+1.0
FCV				*e*S	Sn	21 10 15.6	+0.2
MLYT	**Lee's Yard**	1.91	337	*e*P	Pn	21 09 49.5	+1.2
BPA	**Boggy Peak**	2.12	348	*e*P	Pn	21 09 52.1	+1.7
BPA				*e*S	Sn	21 10 21.2	-0.3
NEV	**Hard Times**	2.44	333	*e*P	Pn	21 09 54.4	+0.5
BBGH	**Gun Hill**	2.54	135	*e*P	Pn	21 09 56.3	+1.2
BBGH				*e*S	Sn	21 10 29.4	-0.2
BBSP	**Saint Philip**	2.64	134	*e*S	Sn	21 10 31.7	+0.1
GRSS	**Sisters**	2.65	184	*e*P	Pn	21 09 57.0	+0.7
GRSS				*e*S	Sn	21 10 31.0	-0.9
ANWB	**Willy Bob**	2.72	352	*e*P	Pn	21 09 57.3	+0.3
ANWB				*e*S	Sn	21 10 33.3	0.0
GRHS	**Sauteurs**	2.73	185	*e*P	Pn	21 09 58.6	+1.4
GRHS				*e*S	Sn	21 10 32.2	-1.2
GRGR	**Grenville**	2.82	185	*e*P	Pn	21 09 59.4	+1.1
GRGR				*e*S	Sn	21 10 34.6	-0.7
TOSP	**Speyside**	3.73	167	*e*P	Pn	21 10 09.8	+0.6
TOSP				*e*S	Sn	21 10 54.2	-0.9

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*ISCJB **16** 21:12:27.0±0.9,23°.32N±0°.06×122°.43E±0°.04,h22^{km}±7^{km}, Error ellipse: s-maj=11.0km s-min=3.5km az=152.5*

*TAP **16** 21:12:26.7,23°.34N×122°.40E,h17^{km}±2^{km},ML3.1,D*

*JMA **16** 21:12:27.3±0.1,23°.34N×122°.43E,h25^{km},M2.2*

ISC 16 21:12:26.7±3.2,**23°.34N**±0°.06×**122°.41E**±0°.04,**h17**^{km}±24^{km},**n17,σ0^{s}41**/31,**Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HGSD	**Ruisui**	0.92	280	P	Pb	21 12 44.3	+0.1
	baz=279						
HGSD				*e*S	Sb	21 12 56.2	+0.1
	baz=279						
TWF1	**Yuli**	1.02	271	*e*P	Pb	21 12 46.2	+0.2
	baz=270						
TWF1				*e*S	Sn	21 13 00.6	+0.3
	baz=270						
FULB	**Fuli**	1.03	262	P	Pb	21 12 46.1	-0.1
	baz=262						
FULB				*e*S	Sb	21 12 58.5	-1.0
	baz=262						
TWH	**Lutao**	1.06	234	*e*P	Pb	21 12 46.6	0.0
	baz=231						
JYNG	**Yonagunijimaku**	1.21	24	P	Pn	21 12 48.8	-0.1
JYNG				*e*S	Sb	21 13 04.3	-0.2
YOJ	**Yonaguni jima**	1.24	26	*i* P	Pb	21 12 49.6	-0.1
	baz=26						
YOJ	**Yonaguni jima**	1.24	26	P	Pn	21 12 49.4	+0.1
YOJ				*e*S	Sn	21 13 06.0	+0.3
ELDTW	**Lidau**	1.29	263	*e*P	Pn	21 12 50.1	0.0
	baz=263						
TWGBT	**Beinan**	1.33	247	*e*P	Pb	21 12 51.0	-0.3
	baz=246						
TWGBT				*e*S	Sb	21 13 08.2	+0.1
	baz=246						
TWG	**Pinlang**	1.34	247	P	Pn	21 12 50.8	+0.2
	baz=246						
TWG				*e*S	Sn	21 13 08.1	+0.1
	baz=246						
CHGB	**Renai**	1.34	303	P	Pb	21 12 51.5	0.0
	baz=302						
CHGB				S	Sn	21 13 08.4	0.0
	baz=302						
HATJ	**Hateruma jima**	1.46	61	P	Pn	21 12 52.4	0.0
HATJ				S	Sn	21 13 10.5	-0.7
IRIF	**Iriomote-Funau**	1.56	51	P	Pn	21 12 54.2	+0.5
IRIF				*e*S	Sn	21 13 12.9	-0.7
JKRS	**Kuro-shima**	1.72	58	P	Pn	21 12 56.2	+0.4
JKRS				*e*S	Sn	21 13 18.2	+0.8
JIJ	**Ishigaki jima**	1.89	57	P	Pn	21 12 58.5	+0.3
JIJ				*e*S	Sn	21 13 20.9	-0.7
JISG	**Ishigakijimahi**	2.14	54	P	Pn	21 13 01.8	+0.2
JISG				*e*S	Sn	21 13 27.9	+0.1
JTJ	**Tarama**	2.46	58	P	Pn	21 13 06.7	+0.6
JTJ				S	Sn	21 13 36.2	+0.3

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*IDC **16** 21:14:26.3±2.8,1°.24S×137°.54E,h0^{km},mb3.6/3, mb1 3.7/4,mb1mx3.4/46,mbtmp3.6/4,ML3.6/1,Error ellipse: s-maj=120.0km s-min=24.3km az=83.0*

*DJA **16** 21:14:29.9±0.8,1°S±7°×13°7E±°,h12^{km}±5^{km},M4.2/7, mb4.2/1,MLv4.3/7*

*ISCJB **16** 21:14:30.1±0.7,1°.25S±0°.09×137°.07E±0°.04,h26^{km}, mb3.5/3,Error ellipse: s-maj=12.4km s-min=5.1km az=5.2*

ISC 16 21:14:31.7±1.1,**1°.3S**±0°.1×**137°.03E**±0°.04,**h26**^{km}**,n10, σ0^{s}94**/14,**mb3.6**/3,**Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BAKI	**Biak**	0.93	277	P	Pn	21 14 47.8	-1.2
BAKI				S	Sb	21 15 00.8	-0.2
SRPI	**Serui, Papua**	0.96	235	P	Pb	21 14 48.9	-0.8
SRPI				S	Sn	21 15 03.5	+1.1
RKPI	**Ransiki, Papua**	2.85	266	P	Pn	21 15 15.9	+0.3
RKPI				S	Sn	21 15 51.2	+2.1
GENI	**Genyem**	3.39	112	P	Pn	21 15 23.7	+0.8
GENI				S	Sn	21 16 02.7	+0.3
JAY	**Jayapura**	3.87	108	P	Pn	21 15 29.2	-0.4
FAKI	**Fak Fak**	5.03	251	P	Pn	21 15 45.8	+0.2
WRA	**Warramunga Arr**	18.71	188	P	Pn	21 18 47.9	-0.9
	0.2nm,0.3s,baz=12,slow=12,SNR=9.8						
WRA				S	Sn	21 22 01.7	-16
	0.1nm,0.3s,baz=12,slow=23,SNR=3.4						
ASAR	**Alice Springs**	22.43	188	P	P	21 19 28.7	-0.1
	1.5nm,0.6s,baz=16,slow=11,SNR=20						
MKAR	**Makanchi Array**	67.66	323	P	P	21 25 26.7	+0.2
	0.3nm,0.5s,baz=110,slow=8.1,SNR=4.2						
KURBB	**Kurchatov Arra**	71.62	325	P	P	21 25 51.3	+0.4
	0.3nm,0.6s,baz=113,slow=7.1,SNR=6.6						

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*ISCJB **16** 21:14:49.2±0.8,31°.31S±0°.06×178°.1W±0°.2,h35^{km}, mb4.6/12,Error ellipse: s-maj=19.5km s-min=7.9km az=12.3*

*NEIC **16** 21:14:51.6±1.0,31°.30S×177°.96W,h47^{km}±8^{km},mb4.4/5, Error ellipse: s-maj=12.0km s-min=7.7km az=104.0*

*IDC **16** 21:14:52.3±2.2,31°.19S×178°.03W,h48^{km}±18^{km},mb4.2/5, mb1 4.3/6,mb1mx3.8/40,mbtmp4.4/6,ML3.7/1,MS3.4/1, Ms1 3.4/1,ms1mx2.6/42,Error ellipse: s-maj=28.6km s-min=14.6km az=112.0*

ISC 16 21:14:50.6±0.8,**31°.34S**±0°.07×**178°.1W**±0°.1,**h35**^{km}**,n28, σ1^{s}36**/30,**mb4.6**/12,**Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	2.08	3	P	Pn	21 15 24.7	+1.7
	90nm,0.3s,baz=27,slow=18,SNR=3.7						
RAO				LR	LR	21 15 40.2	
	comp=Z,119nm,18.5s,baz=332,slow=25						
RAO				S	Sn	21 15 45.9	-1.8
	152nm,0.3s,baz=273,slow=16,SNR=4.6						
RAO	**Raoul Island**	2.08	3	*e*Pn	Pn	21 15 23.5	+0.5
RAO				S	Sn	21 15 45.9	-1.8
URZ	**Urewera**	7.97	209	P	Pn	21 16 45.4	+1.5
	1.1nm,0.3s,baz=274,slow=4.0,SNR=6.2						
URZ				S	Sn	21 18 08.1	-4.6
	2.3nm,0.3s,baz=229,slow=23,SNR=7.0						
DZM	**Mont Dzumac**	16.63	300	LR	LR	21 23 34.4	
	comp=Z,137nm,21.7s,baz=234,slow=32						
FUNA	**Funafuti**	22.84	353	P	P	21 19 50.5	-0.2
	62nm,0.7s						
HNR	**Honiara**	29.88	312	P	P	21 20 54.9	-0.1
	4.2nm,0.3s						
CTA	**Charters Tower**	33.91	281	P	P	21 21 31.7	+1.3
	8.8nm,1.1s,baz=100,slow=12,SNR=5.1						
CTAO	**Charters Tower**	33.91	281	P	P	21 21 31.4	+1.0
	2.6nm,0.6s						
STKA	**Stephens Creek**	34.23	258	P	P	21 21 34.3	+1.2
	1.4nm,0.5s,baz=108,slow=14,SNR=8.0						
ASAR	**Alice Springs**	43.02	268	P	P	21 22 47.4	+0.4
	6.2nm,0.5s,baz=106,slow=7.6,SNR=84						
WRAB	**Tennant Creek**	44.09	273	*e*P	P	21 22 55.8	+0.2
	4.1nm,0.6s						
WRA	**Warramunga Arr**	44.09	273	P	P	21 22 55.9	+0.3
	8.1nm,0.6s,baz=111,slow=8.1,SNR=52						
NWAO	**Narrogin (SRO)**	54.03	250	P	P	21 24 12.0	+0.4
	12nm,0.8s						
CASY	**Casey**	54.30	208	*e*P	P	21 24 12.1	-0.8
	1.1nm,1.0s						
QSPA	**South Pole Qui**	58.78	180	P	P	21 24 46.9	+1.9
	1.0nm,0.5s,baz=332,slow=1.4,SNR=5.0						
QSPA	**South Pole Qui**	58.78	180	*e*P	P	21 24 46.3	+1.3
	28nm,0.9s						
JHJ	**Hachijo jima 2**	75.47	324	P	P	21 26 30.4	-0.7
	64nm,0.9s,baz=72,slow=20,SNR=3.5						
TRQA	**Tornquist**	88.81	135	P	P	21 27 41.2	+0.1
	1.4nm,0.7s						
MKAR	**Makanchi Array**	118.33	310	PKP	PKPdf	21 33 32.5	-1.5
	0.3nm,0.5s,baz=116,slow=0.9,SNR=3.8						
KURK	**Kurchatov**	121.66	313	PKP	PKPdf	21 33 39.8	-0.4
KURBB	**Kurchatov Arra**	121.69	313	PKP	PKPdf	21 33 39.8	-0.5
	0.8nm,0.5s,baz=115,slow=1.6,SNR=10						
BVAR	**Borovoye Array**	127.04	315	PKP	PKPdf	21 33 50.3	-0.1
	0.7nm,0.5s,baz=125,slow=2.4,SNR=3.9						
ARCES	**ARCESS Array B**	139.49	348	PKP	PKPdf	21 34 12.7	-0.7
	0.8nm,0.8s,baz=143,slow=0.5,SNR=3.0						
FINES	**FINESS Array B**	146.00	339	PKPbc	PKPbc	21 34 25.9	0.0
	5.3nm,0.6s,baz=35,slow=3.4,SNR=16						
NB2	**NORSAR Subarra**	149.66	351	PKP	PKPbc	21 34 36.0	+0.2
	comp=Z,0.7nm,0.7s,baz=17,slow=2.6						
HFS	**Hagfors**	150.15	348	PKPbc	PKPbc	21 34 36.6	-0.3
	comp=Z,2.1nm,0.9s,baz=48,slow=2.1,SNR=3.9						
AKASG	**Malin Array Be**	152.01	322	PKPbc	PKPbc	21 34 40.9	-0.7
	comp=Z,1.3nm,0.5s,baz=49,slow=2.8,SNR=3.5						
BRTR	**Keskin Array B**	152.99	297	PKPbc	PKPbc	21 34 43.0	-1.4
	comp=Z,0.9nm,0.8s,baz=137,slow=3.8,SNR=4.3						

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*MOS **16** 21:18:07.0±1.0,23°.19S×68°.78W,h78^{km},mb5.0/18,Error ellipse: s-maj=14.6km s-min=7.3km az=102.3*

*ISCJB **16** 21:18:08.1±0.3,23°.11S±0°.03×68°.66W±0°.05,h96^{km}±2^{km}, mb4.6/95,Error ellipse: s-maj=7.3km s-min=4.5km az=154.0*

*NEIC **16** 21:18:10.0±0.0,23°.23S×69°.07W,h103^{km},mb4.6/88, ML4.9(GUC),After GUC.*

NEIC Felt [III] at Calama and [II] at Antofagasta.

*IDC **16** 21:18:10.9±0.4,23°.17S×68°.68W,h104^{km}±3^{km},mb4.4/15, mb1 4.5/20,mb1mx4.3/39,mbtmp4.7/20,MS3.5/11, Ms1 3.5/11,ms1mx3.2/37,Error ellipse: s-maj=14.4km s-min=10.0km az=70.0*

*GCMT **16** 21:18:10.0±0.4,23°.15S×69°.01W,h120^{km}±5^{km},MW4.9/66, Moment Tensor Solution. s17,c18; s66,c87; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.00±.10; $M_{\theta\theta}$0.23±.11; $M_{\phi\phi}$1.77±.14; $M_{r\theta}$0.33±.08; $M_{\theta\phi}$-1.41±.09; $M_{\phi r}$-0.77±.12; Best double couple: $M_0$2.45200×10^{16} NP1:ϕ_s333.00000°,δ55.00000°,λ-85.00000°. NP2: ϕ_s145.00000°,δ35.00000°,λ-97.00000°. Principal axes: T 2.7520, Plg10.0000°, Azm60.0000°; N -0.5980, Plg4.0000°, Azm150.0000°; P -2.1530, Plg79.0000°, Azm262.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*GUC **16** 21:18:10.5±0.5,23°.23S×69°.07W,h103^{km}±3^{km},ML4.9*

*BJI **16** 21:18:14.0,23°.20S×69°.10W,h103^{km},mB5.1/7*

ISC 16 21:18:10.4±0.3,**23°.28S**±0°.04×**68°.89W**±0°.05,**h100**^{km}±2^{km}**, h100**^{km}**:pP-P,n398,σ1^{s}26**/436,**mb4.6**/98,**8C-2D,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB15	**IPOC Station P**	0.54	277	⇑*i*P	Pn	21 18 26.1	-0.6
PB15				*e*S	Sn	21 18 38.5	-0.5
PB15				IAML		21 18 41.5	
	comp=E,183μm,0.4s						
PB06	**IPOC Station P**	0.85	312	*e*P	Pn	21 18 28.7	-0.7
PB06				*e*S	Sn	21 18 42.6	-1.1
PB06				IAML		21 18 43.1	
	comp=N,64μm,0.4s						
PB05	**IPOC Station P**	1.28	289	⇑*i*P	Pn	21 18 33.0	-1.1
PB05				*e*S	Sn	21 18 50.2	-1.9
PB05				IAML		21 18 52.5	
	comp=E,14μm,0.6s						
PB03	**IPOC Station P**	1.46	327	*e*P	Pn	21 18 35.8	-0.6
PB03				*e*S	Sn	21 18 54.9	-1.1
PB03				IAML		21 18 56.1	
	comp=N,42μm,0.5s						
PB04	**IPOC Station P**	1.50	309	*e*Pn	Pn	21 18 35.8	-1.0
PB04	**IPOC Station P**	1.50	309	⇑*i*P	Pn	21 18 35.7	-1.0
PB04				*e*S	Sn	21 18 55.0	-1.7
PB04				IAML		21 18 57.8	
	comp=E,27μm,0.6s						
PB09	**IPOC Station P**	1.51	347	⇓*i*P	Pn	21 18 37.3	+0.3
PB09				*e*S	Sn	21 18 57.2	+0.1
PB09				IAML		21 19 01.5	
	comp=N,14μm,0.7s						
PB10	**IPOC Station P**	1.55	261	⇑*i*P	Pn	21 18 36.2	-1.0
PB10				*e*S	Sn	21 18 55.4	-2.2
PB10				IAML		21 18 57.8	
	comp=E,8μm,0.7s						
PB07	**IPOC Station P**	1.80	329	⇑*i*P	Pn	21 18 39.8	-0.8
PB07				*e*S	Sn	21 19 02.3	-1.3
PB07				IAML		21 19 03.8	
	comp=N,25μm,0.7s						
PB14	**IPOC Station P**	1.93	226	⇑*i*P	Pn	21 18 41.3	-1.0
PB14				IAML		21 19 08.9	
	comp=E,6μm,0.9s						
GO02	**Mina Guanaco**	1.98	199	*e*Pn	Pn	21 18 43.1	+0.1
PB01	**IPOC Station P**	2.29	346	*e*Pn	Pn	21 18 46.3	-0.6
SLA	**San Lorenzo**	3.41	116	*i* P	Pn	21 19 04.1	+2.3
SLA				IAML		21 19 09.2	
	comp=Z,128nm,0.6s						
PB11	**IPOC Station P**	3.57	348	*e*Pn	Pn	21 19 01.8	-2.2
MNMC	**Minye Minye**	4.18	351	*e*Pn	Pn	21 19 09.7	-2.6
GO03	**Copiap**	4.46	196	*e*Pn	Pn	21 19 13.8	-2.2
AHML	**Horco Molle**	4.75	138	*i* P	Pn	21 19 22.0	+2.2
VCA	**Vinchina**	5.47	174	*i* P	Pn	21 19 30.5	+0.9
CYA	**Choya**	5.84	152	*i* P	Pn	21 19 35.4	+0.8
LCO	**Las Campanas**	5.94	196	*e*Pn	Pn	21 19 32.5	-3.5
LCO	**Las Campanas**	5.94	196	*e*P	Pn	21 19 32.5	-3.5
LPAZ	**La Paz**	6.99	6	P	Pn	21 19 50.5	-0.3
	comp=Z,7.1nm,0.3s,baz=83,slow=1.2,SNR=333						
LPAZ				LR	LR	21 22 37.5	
	comp=Z,111nm,19.4s,baz=180,slow=39						
LPAZ	**La Paz**	6.99	6	*e*Pn	Pn	21 19 49.4	-1.4
LPAZ	**La Paz**	6.99	6	*e*P	Pn	21 19 49.3	-1.4
GO04	**Tololo Observa**	7.07	194	*e*Pn	Pn	21 19 47.9	-3.6
ROC1	**El Roble**	9.84	191	*e*Pn	Pn	21 20 24.6	-4.5
PEL	**Peldehue**	9.95	189	*e*Pn	Pn	21 20 29.7	-0.8
PEL	**Peldehue**	9.95	189	*e*P	Pn	21 20 29.7	-0.8
SIV	**San Ignacio**	10.33	47	P	Pn	21 20 31.5	-4.2
	comp=Z,7.7nm,0.3s,baz=256,slow=13,SNR=109						
SIV				S	Sn	21 22 18.3	-11
	comp=Z,1.9nm,0.3s,baz=319,slow=23,SNR=5.7						
CPUP	**Villa Florida**	10.93	108	P	Pn	21 20 41.4	-2.3
	comp=Z,0.8nm,0.3s,baz=291,slow=12,SNR=24						
CPUP				LR	LR	21 25 30.0	
	comp=Z,212nm,20.4s,baz=284,slow=41						
CPUP	**Villa Florida**	10.93	108	*e*Pn	Pn	21 20 41.7	-2.0
CPUP	**Villa Florida**	10.93	108	*e*P	Pn	21 20 41.7	-2.0
SAML	**Samuel**	15.26	22	*e*Pn	Pn	21 21 36.2	-4.3
	comp=Z,60nm,1.7s						
SAML	**Samuel**	15.26	22	*e*P	Pn	21 21 36.2	-4.3
SAML				pmax	pmax		
	comp=Z,60nm,1.7s						
TRQA	**Tornquist**	15.88	160	*e*Pn	Pn	21 21 47.6	-0.5
	comp=Z,27nm,0.8s						
TRQA	**Tornquist**	15.88	160	*e*P	Pn	21 21 47.6	-0.5
TRQA				pmax	pmax		
	comp=Z,27nm,0.8s						
PLCA	**Paso Flores**	17.46	184	P	P	21 22 07.0	-0.3
	comp=Z,0.3nm,0.3s,baz=31,slow=13,SNR=14						
PLCA	**Paso Flores**	17.46	184	*e*P	P	21 22 07.5	+0.1
	comp=Z,54nm,1.4s						
PLCA	**Paso Flores**	17.46	184	*e*P	P	21 22 07.4	+0.1
ATAH	**Atahualpa**	18.47	329	P	P	21 22 19.0	+0.1
	comp=Z,1.3nm,0.3s,baz=192,slow=8.3,SNR=3.0						
SPB	**Sao Paulo**	19.69	95	*e*P	P	21 22 30.9	-0.9
	comp=Z,49nm,0.8s						
BDFB	**Brasilia**	21.08	73	*e*P	P	21 22 45.9	-1.1
	comp=Z,100nm,0.9s						
BDFB	**Brasilia**	21.08	73	*e*P	P	21 22 45.9	-1.1
BDFB				pmax	pmax		
	comp=Z,100nm,0.9s						
PTGA	**Pitinga**	24.03	22	P	P	21 23 14.5	-1.7
	comp=Z,61nm,0.7s,baz=204,slow=10,SNR=101						
PTGA	**Pitinga**	24.03	22	*e*P	P	21 23 15.7	-0.5
	comp=Z,74nm,0.9s						
SOTA	**Rioblanco**	26.36	342	*e*P	P	21 23 39.3	+1.4
YOTC	**Yotoco, Valle**	28.06	344	*e*P	P	21 23 55.9	+3.2
ROSC	**El Rosal**	28.45	349	LR	LR	21 38 13.4	
	comp=Z,58nm,20.4s,baz=231,slow=42						
RUSC	**La Rusia**	29.28	351	*e*P	P	21 24 04.5	+0.6
	comp=Z,11nm,1.0s						
RUSC	**La Rusia**	29.28	351	*e*P	P	21 24 03.9	-0.1
BARC	**Barichara**	29.98	351	*e*P	P	21 24 13.4	+3.6
PMSA	**Palmer Station**	41.61	177	LR	LR	21 42 19.6	
	comp=Z,46nm,21.3s,baz=326,slow=35						
ZAIG	**Zacatecas**	56.28	322	*e*P	P	21 27 41.9	+0.8
	comp=Z,11nm,0.9s						
LNIG	**Linares**	56.33	326	*e*P	P	21 27 40.5	-0.5
	comp=Z,9.1nm,1.1s						
254A	**Abbeville**	56.62	345	P	P	21 27 43.2	+0.3
	baz=164						
252A	**Lumpkin**	57.02	344	P	P	21 27 45.5	-0.2
	baz=163						
152A	**Waverly Hall**	57.65	344	P	P	21 27 49.6	-0.6
	baz=163						
150A	**Eclectic**	57.93	343	P	P	21 27 51.0	-1.2
	baz=162						
Z52A	**Williamson**	58.07	345	P	P	21 27 51.5	-1.7
	baz=163						
VNA3	**Neumayer Olymp**	58.39	161	P	P	21 27 55.4	+0.4
Z50A	**Ashland**	58.52	343	P	P	21 27 54.9	-1.4
	baz=162						
LRAL	**Lakeview Retre**	58.60	342	P	P	21 27 55.5	-1.3
	baz=161						
Z49A	**Columbiana**	58.62	343	P	P	21 27 55.6	-1.4
	baz=161						
Y51A	**Rockmart**	58.91	344	P	P	21 27 57.7	-1.2
	baz=163						
HKT	**Hockley**	58.92	333	*e*P	P	21 28 00.1	+1.1
	comp=Z,4.9nm,0.4s						

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HKT   Hockley           58.92 333 eP    P      21 28 00.1 +1.1
HKT                                 pmax  pmax
      comp=Z,5.0nm,0.4s
Z48A  Northport         59.08 342  P    P      21 27 58.7 -1.4
      baz=160
833A  Chaparral WMA,    59.14 329  P    P      21 28 00.3 -0.3
      baz=147
833A  Chaparral WMA,    59.14 329 eP    P      21 28 00.4 -0.3
      comp=Z,17nm,0.8s
X51A  Calhoun           59.49 345  P    P      21 28 02.4 -0.6
      baz=163
X50B  Fort Payne        59.59 344  P    P      21 28 02.2 -1.5
      baz=162
Y47A  UCPARC, Winfie    59.66 342  P    P      21 28 02.9 -1.2
      baz=160
W53A  Cullowhee         59.69 346  P    P      21 28 03.4 -1.0
      baz=165
X48A  Hartselle         59.95 343  P    P      21 28 04.4 -1.7
      baz=161
W50A  Signal Mountai    60.21 345  P    P      21 28 06.7 -1.2
      baz=163
W50A  Signal Mountai    60.21 345 eP    P      21 28 07.0 -0.9
      comp=Z,12nm,1.1s
CPCT  Cooper Cave       60.26 345 eP    P      21 28 07.7 -0.5
      comp=Z,12nm,1.1s
W49A  Belvidere         60.37 344  P    P      21 28 07.5 -1.5
      baz=162
V52A  Sevierville       60.42 346 epP   pP     21 28 33.9 -0.2
V51A  Loudon            60.56 346  P    P      21 28 08.7 -1.5
      baz=164
W48A  Pulaski           60.57 343  P    P      21 28 09.1 -1.2
      baz=161
SNAA  Sanae             60.60 161  P    P      21 28 10.3 +0.1
SNAA  Sanae             60.60 161  P    P      21 28 10.2 -0.1
      comp=Z,18nm,1.0s,baz=279,slow=7.4,SNR=31
SNAA                               pP   pP     21 28 35.4 +0.4
      comp=Z,2.9nm,0.8s,baz=259,slow=10,SNR=1.7
SNAA  Sanae             60.60 161 eP    P      21 28 10.5 +0.2
      comp=Z,28nm,1.1s
SNAA                               pP   pP     21 28 35.4 +0.4
SNAA  Sanae             60.60 161 eP    P      21 28 10.4 +0.1
V50A  Pikevile          60.61 345  P    P      21 28 09.0 -1.6
      baz=163,SNR=6.6
OXF   Oxford            60.69 341  P    P      21 28 09.6 -1.5
      baz=159
U53A  Fall Branch       60.72 347  P    P      21 28 09.8 -1.5
      baz=166
W47A  Westpoint         60.85 343  P    P      21 28 10.5 -1.7
      baz=160
V49A  McMinnville       60.89 344  P    P      21 28 10.9 -1.6
      baz=162
V48A  Smith Brothers    61.10 343  P    P      21 28 12.9 -1.0
      baz=161
V48A  Smith Brothers    61.10 343 eP    P      21 28 13.1 -0.9
V48A                              epP   pP     21 28 38.6 -0.1
JCT   Junction City     61.14 330  P    P      21 28 12.7 -1.6
      baz=148
U50A  Jamestown         61.26 345  P    P      21 28 14.0 -1.0
      baz=164
V46A  Holladay          61.51 342  P    P      21 28 15.5 -1.2
      baz=160
U49A  Red Boiling Sp    61.57 345  P    P      21 28 15.8 -1.3
      baz=163
T51A  Gray              61.58 346  P    P      21 28 15.2 -1.9
      baz=164,SNR=6.4
WVT   Waverly           61.74 343  P    P      21 28 16.5 -1.7
      baz=160
U48A  Cassie Pea, Po    61.76 344  P    P      21 28 17.1 -1.3
      baz=162
X40A  Basin Creek Fa    61.79 338  P    P      21 28 17.3 -1.3
      baz=155
T50A  Nancy             61.83 346  P    P      21 28 17.6 -1.3
      baz=164
U47A  Clarksville       61.89 343  P    P      21 28 17.5 -1.7
      baz=161
U46A  Springville       62.05 342  P    P      21 28 18.7 -1.6
      baz=160
T49A  Edmonton          62.08 345  P    P      21 28 19.0 -1.4
      baz=163,SNR=7.7
T49A  Edmonton          62.08 345 eP    P      21 28 19.6 -0.8
T49A                              epP   pP     21 28 44.9 -0.4
TX31  Lajitas Ar. Si    62.10 326 eP    P      21 28 19.9 -0.9
TXAR  Lajitas Array     62.10 326  P    P      21 28 19.9 -1.0
      comp=Z,2.1nm,0.9s,baz=144,slow=7.8,SNR=18
TXAR                               pP   pP     21 28 46.2 +0.5
      comp=Z,0.8nm,0.7s,baz=156,slow=6.9,SNR=3.9
MIAR  Mount Ida         62.11 337  P    P      21 28 19.8 -0.9
      baz=154
MIAR  Mount Ida         62.11 337 eP    P      21 28 20.5 -0.2
      comp=Z,7.4nm,0.9s
MIAR  Mount Ida         62.11 337 eP    P      21 28 20.5 -0.2
MIAR                                pmax  pmax
      comp=Z,7.0nm,0.9s
W41B  Gary Mavity, V    62.21 338  P    P      21 28 20.3 -1.1
      baz=156
X39A  Fountain Ranch    62.27 337  P    P      21 28 21.1 -0.7
      baz=154
T48A  Bowling Green     62.29 344  P    P      21 28 21.2 -0.7
      baz=162
T47A  Sharon Grove      62.36 344 eP    P      21 28 21.4 -0.9
T47A                              epP   pP     21 28 46.8 -0.4
T47A                              esP   sP     21 28 57.5 -0.7
W40A  Ferguson Farm,    62.51 338  P    P      21 28 22.9 -0.5
      baz=155
W40A  Ferguson Farm,    62.51 338 eP    P      21 28 23.5 +0.2
      comp=Z,15nm,1.0s
T46A  Princeton         62.62 343  P    P      21 28 22.3 -1.8
      baz=160
S48A  Wiedeman Farm,    62.73 345  P    P      21 28 22.7 -2.1
      baz=162,SNR=5.4
V41A  Mountainview      62.74 339  P    P      21 28 23.3 -1.6
      baz=156
W39A  Magazine          62.77 337  P    P      21 28 24.7 -0.3
      baz=154
U42A  Revenden          62.96 340  P    P      21 28 25.5 -0.8
      baz=157
V40A  Witts Springs     62.98 338  P    P      21 28 24.8 -1.7
      baz=156
T44A  Benton            63.13 342  P    P      21 28 26.2 -1.3
      baz=159
U41A  Viola             63.17 339  P    P      21 28 26.3 -1.4
      baz=156
S46A  Don Dixon Farm    63.17 343  P    P      21 28 25.9 -1.9
      baz=161
V39A  Pettigrew         63.29 338  P    P      21 28 27.7 -1.0
      baz=155
WCI   Wyandotte Cave    63.33 345  P    P      21 28 27.4 -1.3
      baz=162
T43A  Greenville        63.34 341  P    P      21 28 27.3 -1.5
      baz=158
S45A  Carrier Mills     63.40 343  P    P      21 28 28.0 -1.2
      baz=160
U40A  Yellville         63.49 339  P    P      21 28 28.3 -1.5
      baz=156
T42A  Van Buren         63.53 340  P    P      21 28 28.3 -1.8
      baz=157
T42A  Van Buren         63.53 340 eP    P      21 28 28.9 -1.3
      comp=Z,4.9nm,1.0s
U39A  Green Forest      63.73 338  P    P      21 28 30.3 -1.1
      baz=155
S43A  Fulton Ridge,     63.73 341  P    P      21 28 30.1 -1.3
      baz=158
T41A  Mountain View     63.76 340  P    P      21 28 30.6 -1.0
      baz=157
O56A  Blue Knob Stat    63.86 352 eP    P      21 28 33.0 +0.8
      comp=Z,18nm,1.0s
R45A  Skylar, Fairfi    63.90 343  P    P      21 28 30.8 -1.6
      baz=160
P50A  Jamestown         64.09 347  P    P      21 28 32.2 -1.5
      baz=165
PAL   Palisades         64.12 356 eP    P      21 28 34.2 +0.3
      comp=Z,29nm,1.0s
PAL   Palisades         64.12 356 eP    P      21 28 34.2 +0.3
PAL                                 pmax  pmax
      comp=Z,29nm,1.0s
TUL1  Leonard           64.14 336  P    P      21 28 33.3 -0.8
      baz=153
FVM   French Village    64.21 341 eP    P      21 28 34.4 -0.2
FVM                               epP   pP     21 29 00.4 +0.9
FVM   French Village    64.21 341 eP    P      21 28 34.4 -0.2
FVM                               e*PP  pP     21 29 00.4 +0.9
P49A  Miami Univ. Ec    64.21 346  P    P      21 28 32.3 -2.2
      baz=164,SNR=5.0
S41A  Jillco Farms,     64.25 340  P    P      21 28 33.5 -1.3
      baz=157
T39A  Clever            64.27 338  P    P      21 28 33.4 -1.5
      baz=155
WMOK  Wichita Mounta    64.30 333  P    P      21 28 32.8 -2.4
      baz=150
S40A  Lebanon           64.50 339  P    P      21 28 35.5 -1.0
      baz=156
CCM   Cathedral Cave    64.53 341  P    P      21 28 36.2 -0.3
      baz=157
R42A  Luebbering        64.60 341  P    P      21 28 35.7 -1.4
      baz=158
T38A  Diamond           64.60 338  P    P      21 28 35.7 -1.4
      baz=154,SNR=5.3
R41A  Rosebud           64.79 341  P    P      21 28 37.0 -1.3
      baz=157
S39A  Bolivar           64.86 339  P    P      21 28 37.5 -1.3
      baz=155,SNR=10
S39A  Bolivar           64.86 339 eP    P      21 28 38.0 -0.8
      comp=Z,12nm,0.9s
S39A                              epP   pP     21 29 04.3 +0.6
P46A  Rosedale          64.87 344  P    P      21 28 37.1 -1.7
      baz=162
MNTX  Cornudas Mount    64.87 326  P    P      21 28 38.2 -0.8
      baz=143
MNTX  Cornudas Mount    64.87 326 eP    P      21 28 38.3 -0.7
      comp=Z,6.6nm,1.0s
S38A  Stockton          65.00 338  P    P      21 28 38.7 -0.9
      baz=155
R40A  Maddies Statio    65.06 340  P    P      21 28 38.8 -1.3
      baz=156
R40A  Maddies Statio    65.06 340 eP    P      21 28 39.1 -0.9
      comp=Z,7.1nm,0.8s
Q42A  Golden Eagle      65.10 342  P    P      21 28 38.9 -1.4
      baz=158
NVL   N'lazarevskaya    65.17 159 eP    P      21 28 41.5 +1.1
NVL                               eS    SKiKP  21 38 03.7  -36
O47A  Sheridan          65.21 345  P    P      21 28 40.1 -0.9
      baz=163
M54A  Oil Creek Stat    65.23 351  P    P      21 28 40.6 -0.5
      baz=169
R39A  Chumby, Stover    65.33 339  P    P      21 28 40.9 -0.9
      baz=156
Q41A  Truxton           65.35 341  P    P      21 28 40.4 -1.5
      baz=158
MSTX  Muleshoe          65.43 329  P    P      21 28 41.9 -0.7
      baz=146
MSTX  Muleshoe          65.43 329 eP    P      21 28 42.5 -0.2
      comp=Z,23nm,1.3s
BINY  Binghamton        65.48 354  P    P      21 28 42.7  0.0
      baz=173
R38A  Fenwick Farm,     65.50 339  P    P      21 28 41.8 -1.1
      baz=155,SNR=6.1
P42A  Winchester        65.67 342  P    P      21 28 43.1 -0.9
      baz=159
P41A  Barry, Barry      65.96 341  P    P      21 28 44.9 -1.0
      baz=158
Q39A  Willow Grove F    65.97 340  P    P      21 28 44.8 -1.2
      baz=156
Q38A  Cooks Store, C    66.10 339  P    P      21 28 45.7 -1.1
      baz=155,SNR=5.9
N45A  Kentland          66.11 345  P    P      21 28 46.3 -0.5
      baz=162
P40A  Paris             66.13 341  P    P      21 28 45.6 -1.2
      baz=157
N44A  Piper City        66.21 344  P    P      21 28 46.3 -1.1
      baz=161
P39B  Salisbury         66.31 340  P    P      21 28 46.8 -1.3
      baz=156
P38A  Dawn              66.68 339  P    P      21 28 49.1 -1.3
      baz=156
319A  Douglas           66.71 323 eP    P      21 28 52.3 +1.4
      comp=Z,16nm,1.0s
N42A  Yates City        66.74 343  P    P      21 28 49.1 -1.7
      baz=159
P37A  Lathrop           66.91 339  P    P      21 28 50.4 -1.5
      baz=155
QSPA  South Pole Qui    66.92 180  P    P      21 28 52.7 +0.9
      comp=Z,14nm,0.5s,baz=148,slow=2.6,SNR=39
QSPA                               pP   PcP    21 29 19.0 -0.7
      comp=Z,6.6nm,0.7s,baz=129,slow=3.6,SNR=4.0
QSPA                               LR   LR     21 57 54.7
      comp=Z,52nm,18.3s,baz=141,slow=36
QSPA  South Pole Qui    66.92 180 eP    P      21 28 52.4 +0.5
      comp=Z,111nm,0.9s
QSPA                               pP   PcP    21 29 19.0 -0.7
M43A  Waltham Townsh    67.03 344  P    P      21 28 50.8 -1.7
      baz=160
O38A  Galt              67.11 340  P    P      21 28 52.1 -1.1
      baz=156
N40A  Mertquake, Sal    67.23 342  P    P      21 28 53.3 -0.6
      baz=158
N39A  Derby Farms, D    67.50 341  P    P      21 28 54.2 -1.3
      baz=157
LENM  Lemitar           67.64 326 eP    P      21 28 57.9 +1.1
N38A  Joes South For    67.65 340  P    P      21 28 55.7 -0.8
      baz=156
L43A  Garden Prairie    67.67 344  P    P      21 28 55.3 -1.3
      baz=160,SNR=5.3
N37A  Lee Faris, Mou    67.92 339  P    P      21 28 57.3 -1.0
      baz=155
N37A  Lee Faris, Mou    67.92 339 eP    P      21 28 58.1 -0.1
      comp=Z,24nm,0.8s
TASL  Snake Pit, Alb    68.00 327  P    P      21 28 59.3 +0.2
      baz=143,SNR=10
ANMO  Albuquerque       68.00 327  P    P      21 28 59.7 +0.6
      comp=Z,6.2nm,0.8s,baz=142,slow=8.3,SNR=16
ANMO                               pP   PcP    21 29 25.4 +0.8
      comp=Z,1.3nm,0.6s,baz=125,slow=10.0,SNR=2.2
ANMO  Albuquerque       68.00 327  P    P      21 28 59.9 +0.7
      baz=143
ANMO  Albuquerque       68.00 327 eP    P      21 28 59.8 +0.7
      comp=Z,7.1nm,0.8s
ANMO                               pP   PcP    21 29 25.4 +0.8
ANMO  Albuquerque       68.00 327⇓iP    P      21 28 59.2 +0.1
ANMO                               pmax pmax
      comp=Z,8.0nm,0.9s
TASM  ASL Pad, Albuq    68.00 327  P    P      21 28 59.4 +0.3
      baz=143,SNR=10
L41A  Preston           68.03 343  P    P      21 28 58.1 -0.8
      baz=159
K43A  Burlington        68.06 345  P    P      21 28 58.2 -0.9
      baz=161
M38A  Pleasantville     68.20 341  P    P      21 28 58.4 -1.5
      baz=156
PKME  Peaks-Kenny Pk    68.21 360  P    P      21 28 59.7 -0.2
      baz=180
L40A  Anamosa           68.22 342  P    P      21 28 58.6 -1.4
      baz=158
N36A  Muff Farm, Cla    68.22 339  P    P      21 28 58.8 -1.3
      baz=154
TUC   Tucson            68.25 322 eP    P      21 29 01.8 +1.2
      comp=Z,12nm,1.1s
TUC   Tucson            68.25 322 eP    P      21 29 01.8 +1.2
TUC                                pmax pmax
      comp=Z,12nm,1.1s
K42A  Prairie Point,    68.38 344  P    P      21 28 59.6 -1.5
      baz=160,SNR=5.1
M37A  Trindle Farm,     68.46 340  P    P      21 29 00.9 -0.7
      baz=155
K41A  Shullsburg        68.47 343  P    P      21 29 00.4 -1.2
      baz=159
L39A  Vinton            68.50 342  P    P      21 29 00.5 -1.3
      baz=157
K40A  Colesburg         68.78 343  P    P      21 29 02.1 -1.5
      baz=158,SNR=5.8
LIC   Lamto             68.88  73 eP    P      21 29 02.5 -2.3
      comp=Z,71nm,1.5s
K39A  Oelwein           69.00 342  P    P      21 29 03.2 -1.7
      baz=158,SNR=5.3
TIC   Toumodi           69.08  73 eP    P      21 29 04.2 -1.9
KIC   Kosan Boka        69.19  73 eP    P      21 29 05.8 -0.9
      comp=Z,29nm,0.7s
DBIC  Dimbokro          69.23  73  P    P      21 29 06.5 -0.5
      comp=Z,10nm,0.8s,baz=214,slow=8.8,SNR=8.8
DBIC                               pP   PcP    21 29 30.9 +0.8
      comp=Z,2.9nm,0.6s,baz=78,slow=9.3,SNR=1.7
I42A  Draeger Farm,     69.32 345  P    P      21 29 06.1 -0.7
      baz=161
X18A  Snowflake         69.47 325 eP    P      21 29 09.8 +1.6
      comp=Z,9.3nm,1.2s
J39A  Decorah           69.53 342  P    P      21 29 07.1 -1.0
      baz=158,SNR=5.8
H43A  Windswept, Lux    69.60 346  P    P      21 29 07.3 -1.3
      baz=162
J38A  Wedel Dairy, R    69.73 342  P    P      21 29 08.6 -0.9
      baz=157
SDCO  Great Sand Dun    69.78 330  P    P      21 29 10.7 +0.5
      baz=144
SDCO  Great Sand Dun    69.78 330 eP    P      21 29 10.7 +0.5
      comp=Z,10nm,1.3s
W18A  Petrified Fore    69.81 325  P    P      21 29 10.1 -0.2
      baz=140,SNR=7.4
W18A  Petrified Fore    69.81 325 eP    P      21 29 10.8 +0.5
      comp=Z,15nm,1.0s
X16A  Lo Mia Camp, P    70.19 324 eP    P      21 29 14.2 +1.6
      comp=Z,11nm,1.1s
I38A  Scanlan Farm,     70.36 342  P    P      21 29 12.2 -1.0
      baz=157,SNR=5.1
H40A  Chili             70.38 344  P    P      21 29 12.2 -1.1
      baz=159
Y14A  Wickenburg        70.70 322 eP    P      21 29 17.0 +1.4
      comp=Z,7.1nm,1.1s
WUAZ  Wupatki           70.98 324  P    P      21 29 18.4 +0.9
      baz=139
WUAZ  Wupatki           70.98 324 eP    P      21 29 19.0 +1.6
      comp=Z,15nm,1.0s
G39A  Holcombe          71.19 344  P    P      21 29 17.8 -0.5
      baz=159
H36A  Jessenland, He    71.31 341  P    P      21 29 18.1 -0.8
      baz=156
ECSD  EROS Data Cent    71.38 339  P    P      21 29 18.8 -0.7
      baz=153
ECSD  EROS Data Cent    71.38 339 eP    P      21 29 19.1 -0.4
      comp=Z,6.4nm,1.1s
Y12C  Blythe            71.43 321  P    P      21 29 21.3 +1.3
      baz=136
Y12C  Blythe            71.43 321 eP    P      21 29 21.6 +1.6
      comp=Z,16nm,1.2s
ISCO  Idaho Springs     71.50 331  P    P      21 29 21.0 +0.4
      baz=145
ISCO  Idaho Springs     71.50 331 eP    P      21 29 21.5 +0.8
      comp=Z,11nm,1.5s
ISCO  Idaho Springs     71.50 331 eP    P      21 29 21.5 +0.8
ISCO                               pmax pmax
      comp=Z,11nm,1.5s
IKP   In-Ko-Pah, Jac    71.59 319  P    P      21 29 22.4 +1.4
      baz=135
H35A  Sunnyside Ranc    71.69 341  P    P      21 29 20.5 -0.7
      baz=155
BC3   Big Chuckawall    71.91 320  P    P      21 29 23.5 +0.6
      baz=136
MONP2 Monument Peak     71.94 319  P    P      21 29 24.4 +1.1
      baz=135
BAR   Barrett           71.95 319 eP    P      21 29 24.2 +1.1
      comp=Z,6.3nm,0.8s
W13A  Hualapai Mount    72.05 322 eP    P      21 29 25.2 +1.3
      comp=Z,4.3nm,0.9s
IRM   Iron Mountain     72.08 321  P    P      21 29 25.3 +1.3
      baz=136
U15A  North Rim         72.15 324 eP    P      21 29 26.1 +1.5
      comp=Z,10.0nm,1.1s
FRD   Ford Ranch, An    72.47 320  P    P      21 29 27.6 +1.3
      baz=135
N23A  Red Feather La    72.54 331  P    P      21 29 27.4 +0.6
      baz=145
GMRC  Granite Mounta    72.83 321  P    P      21 29 29.2 +0.8
      baz=136
KNB   Kanab             72.88 324 eP    P      21 29 30.2 +1.5
      comp=Z,20nm,1.1s
KNB   Kanab             72.88 324 eP    P      21 29 30.2 +1.5
KNB                                pmax pmax
      comp=Z,20nm,1.1s
O20A  White River Ci    72.97 329  P    P      21 29 29.7 +0.4
      baz=143
O20A  White River Ci    72.97 329 eP    P      21 29 30.2 +1.0
      comp=Z,10nm,0.8s
LCMT  Little Creek M    73.10 324 eP    P      21 29 31.5 +1.5
      comp=Z,6.1nm,1.1s
MTPU  Mount Pierson     73.31 326 eP    P      21 29 32.7 +1.2
      comp=Z,3.7nm,0.9s
P18A  Preston Nutter    73.54 328 eP    P      21 29 34.0 +1.3
      comp=Z,8.6nm,1.0s
BFSC  Mount Baldy Ra    73.62 320  P    P      21 29 34.3 +1.1
      baz=134
P17A  Butcher Ranch,    73.66 327 eP    P      21 29 34.6 +1.3
      comp=Z,15nm,1.0s
KOWA  Kowa              73.71  66  P    P      21 29 33.4 -0.5
      comp=Z,8.7nm,0.6s,baz=242,slow=8.5,SNR=19
KOWA                               pP   pP     21 29 58.7 -0.7
      comp=Z,7.7nm,0.7s,baz=242,slow=7.2,SNR=5.1
KOWA  Kowa              73.71  66 eP    P      21 29 33.6 -0.2
      comp=Z,11nm,0.9s
KOWA                               pP   pP     21 29 58.7 -0.7
SHPR  Sheep Range       73.78 323 eP    P      21 29 35.6 +1.6
      comp=Z,9.3nm,1.3s
GSC   Goldstone, Bar    73.86 321  P    P      21 29 35.6 +1.2
      baz=135
GSC   Goldstone, Bar    73.86 321 eP    P      21 29 35.6 +1.2
      comp=Z,5.9nm,0.8s
GSC   Goldstone, Bar    73.86 321 eP    P      21 29 35.6 +1.2
GSC                                pmax pmax
      comp=Z,6.0nm,0.8s
SBA   Scott Base        74.09 190 eP    P      21 29 37.0 +1.9
      comp=Z,12nm,1.3s
SBA   Scott Base        74.09 190 eP    P      21 29 37.0 +1.9
SBA                                pmax pmax
      comp=Z,12nm,1.3s
K22A  Casper            74.22 332  P    P      21 29 36.9 +0.4
      baz=144
EDW2  Edwards Air Fo    74.26 320  P    P      21 29 37.7 +0.9
      baz=134
RSSD  Black Hills       74.40 335  P    P      21 29 37.9 +0.3
      baz=147
RSSD  Black Hills       74.40 335 eP    P      21 29 38.2 +0.6
      comp=Z,6.0nm,0.7s
RSSD  Black Hills       74.40 335 eP    P      21 29 38.2 +0.6
RSSD                               pmax pmax
      comp=Z,6.0nm,0.7s
PSUT  Pine Spring       74.55 325 eP    P      21 29 40.0 +1.5
      comp=Z,4.7nm,0.9s
TPNV  Topopah Spring    74.70 322  P    P      21 29 40.6 +1.2
      baz=136
TPNV  Topopah Spring    74.70 322 eP    P      21 29 41.3 +1.9
      comp=Z,9.7nm,0.9s
TPNV  Topopah Spring    74.70 322 eP    P      21 29 41.3 +1.9
TPNV                               pmax pmax
      comp=Z,10.0nm,0.9s
FURC  Furnace Creek,    74.71 322  P    P      21 29 40.7 +1.6
      baz=135
MPMC  Manual Prospec    74.78 321  P    P      21 29 40.8 +0.9
      baz=135
SYO   Syowa Base        74.84 159⇑eP    P      21 29 39.6 +0.1
PPT   Papeete           74.94 257  LR   LR     21 53 25.3
      comp=Z,44nm,21.6s,baz=70,slow=28
DAC   Darwin (Calif)    75.00 321 eP    P      21 29 42.4 +1.3
      comp=Z,8.8nm,0.9s
DAC   Darwin (Calif)    75.00 321 eP    P      21 29 42.4 +1.3
DAC                                pmax pmax
      comp=Z,9.0nm,0.9s
SBC   Santa Barbara     75.00 318  P    P      21 29 42.0 +1.1
      baz=133
ISA   Isabella, Lake    75.09 320  P    P      21 29 42.8 +1.3
      baz=134
ISA   Isabella, Lake    75.09 320 eP    P      21 29 42.9 +1.3
      comp=Z,10nm,1.0s
VNDA  Vanda             75.11 190  P    P      21 29 42.3 +1.3
      comp=Z,3.7nm,0.9s,baz=125,slow=5.5,SNR=20
VNDA                               LR   LR     22 01 25.7
      comp=Z,82nm,18.2s,baz=124,slow=34
VNDA  Vanda             75.11 190 eP    P      21 29 42.7 +1.7
      comp=Z,5.8nm,1.0s
VNDA  Vanda             75.11 190 eP    P      21 29 42.7 +1.7
VNDA                               pmax pmax
      comp=Z,6.0nm,1.0s
AGMN  Agassiz Nation    75.24 342  P    P      21 29 40.9 -1.1
      baz=155
AGMN  Agassiz Nation    75.24 342 eP    P      21 29 41.4 -0.6
      comp=Z,3.7nm,0.8s
DUG   Dugway, Tooele    75.25 327  P    P      21 29 43.3 +0.9
      baz=139
DUG   Dugway, Tooele    75.25 327 eP    P      21 29 43.6 +1.2
      comp=Z,8.2nm,1.2s
TCUT  Toone Canyon      75.25 328 eP    P      21 29 44.0 +1.4
      comp=Z,11nm,1.2s
R11A  Troy Canyon, C    75.34 324  P    P      21 29 44.5 +1.4
      baz=136
R11A  Troy Canyon, C    75.34 324 eP    P      21 29 44.4 +1.3
      comp=Z,11nm,1.4s
PKM   Mcpherson Peak    75.36 319  P    P      21 29 44.2 +0.9
      baz=133
CWC   Cottonwood Cre    75.39 321  P    P      21 29 44.6 +1.3
      baz=134
BW06  Boulder Array     75.66 330  P    P      21 29 44.9 +0.1
      baz=142
PD31  Pinedale Array    75.66 330 eP    P      21 29 45.0 +0.2
PDAR  Pinedale Array    75.66 330  P    P      21 29 44.5 -0.4
      comp=Z,0.6nm,0.5s,baz=141,slow=5.8,SNR=7.6
PDAR  Pinedale Array    75.66 330 eP    P      21 29 44.6 -0.2
HWUT  Hardware Ranch    75.70 328 eP    P      21 29 45.4 +0.4
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	comp=Z,5.4nm,0.6s						
BGU	Big Grassy Mou	75.90	327	eP	P	21 29 46.9	+0.8
	comp=Z,3.3nm,0.8s						
SPUT	South Promonto	75.90	328	eP	P	21 29 47.1	+0.9
	comp=Z,6.0nm,0.7s						
HVU	Hansel Valley	76.42	328	eP	P	21 29 49.8	+0.7
	comp=Z,5.5nm,0.8s						
HVU	Hansel Valley	76.42	328	eP	P	21 29 49.8	+0.7
HVU				pmax	pmax		
	comp=Z,6.0nm,0.8s						
REDW	Red Top Meadow	76.71	330	eP	P	21 29 51.4	+0.6
	comp=Z,6.6nm,0.9s						
OMMB	Old Mammoth Mi	76.73	321	eP	P	21 29 52.4	+1.2
	comp=Z,10.0nm,1.0s						
LOHW	Long Hollow	76.79	330	eP	P	21 29 51.0	-0.3
	comp=Z,26nm,1.7s						
NV11	Mina Array Sit	76.82	322	eP	P	21 29 53.0	+1.6
	comp=Z,0.3nm,1.3s						
TPAW	Teton Pass	76.86	330	eP	P	21 29 52.6	+0.9
	comp=Z,6.5nm,0.8s						
NV01	Mina Array Sit	76.90	322	eP	P	21 29 52.7	+0.7
NVAR	Mina Array Bea	76.90	322	P	P	21 29 52.8	+0.8
	comp=Z,3.2nm,0.9s,baz=157,slow=6.4,SNR=13						
NVAR				pP	pP	21 30 19.3	+1.6
	comp=Z,0.6nm,0.7s,baz=156,slow=6.7,SNR=2.1						
FXWY	Fox Creek	77.01	330	eP	P	21 29 53.0	+0.5
	comp=Z,12nm,1.8s						
ULM	Lac du Bonnet	77.01	343	P	P	21 29 51.0	-0.9
	comp=Z,3.7nm,0.6s,baz=149,slow=8.5,SNR=3.6						
ULM				pP	pP	21 30 18.5	+0.8
	comp=Z,5.0nm,0.5s,baz=154,slow=8.9,SNR=4.5						
KVN	Kaiserville	77.22	323	eP	P	21 29 54.6	+0.9
	comp=Z,10nm,1.0s						
KVN	Kaiserville	77.22	323	eP	P	21 29 54.6	+0.9
KVN				pmax	pmax		
	comp=Z,11nm,1.0s						
RLMT	Red Lodge	77.39	332	P	P	21 29 54.9	+0.4
	baz=143						
RLMT	Red Lodge	77.39	332	eP	P	21 29 55.1	+0.6
	comp=Z,6.0nm,0.8s						
LAO	LASA Array	77.39	335	P	P	21 29 54.5	+0.2
	baz=145						
LAO	LASA Array	77.39	335	eP	P	21 29 54.9	+0.6
	comp=Z,16nm,1.1s						
SCHQ	Schefferville	77.81	1	LR	LR	22 07 36.9	
	comp=Z,26nm,19.5s,baz=8.5,slow=38						
YERR	Yerington	77.81	322	eP	P	21 29 58.5	+1.5
	comp=Z,10nm,1.2s						
TOA0	Torodi Ar. Sit	77.94	70	eP	P	21 29 57.5	-0.4
TORD	Torodi Ar. Bea	77.94	70	P	P	21 29 56.0	-1.9
	comp=Z,10nm,0.4s,baz=249,slow=5.2						
TORD				pP	pP	21 30 23.6	-0.2
	baz=267,slow=5.1						
YHB	Horse Butte	77.95	331	eP	P	21 29 58.3	+0.7
	comp=Z,7.4nm,0.9s						
GCMT	Greycliff	78.09	332	eP	P	21 29 59.0	+0.7
DGMT	Dagmar	78.11	337	P	P	21 29 58.8	+0.6
	baz=147						
PAHR	Pah Rah Range	78.39	323	eP	P	21 30 01.7	+1.5
	comp=Z,17nm,0.9s						
HLID	Hailey	78.55	328	P	P	21 30 01.7	+0.8
	baz=138						
HLID	Hailey	78.55	328	eP	P	21 30 01.9	+1.0
	comp=Z,11nm,1.1s						
MCMT	McKenzie Canyo	78.76	330	eP	P	21 30 03.6	+1.5
AFDM	Forest Hills D	78.78	321	eP	P	21 30 02.9	+0.8
	comp=Z,6.6nm,1.0s						
AFDM				eS	S	21 39 54.9	+3.1
BOZ	Bozeman (W)	78.80	331	P	P	21 30 02.8	+0.6
	baz=141						
MFID	Camas Ranch	79.14	327	eP	P	21 30 05.1	+1.0
	comp=Z,16nm,1.4s						
LRM	Limekiln Ridge	79.34	331	eP	P	21 30 06.3	+1.1
ORV	Oroville	79.49	321	eP	P	21 30 07.3	+1.4
	comp=Z,17nm,1.0s						
ORV	Oroville	79.49	321	eP	P	21 30 07.3	+1.4
ORV				pmax	pmax		
	comp=Z,17nm,1.0s						
TSUM	Tsumeb	79.52	106	eP	P	21 30 07.8	+1.0
	comp=Z,22nm,1.0s						
O03D	Paynes Creek	80.16	322	P	P	21 30 09.3	-0.3
	baz=132						
MOD	Modoc Plateau	80.41	324	eP	P	21 30 12.2	+1.2
	comp=Z,7.4nm,0.9s						
J08A	Circle Bar Ran	80.45	326	eP	P	21 30 12.1	+0.9
	comp=Z,6.3nm,0.9s						
MSO	Missoula	80.77	331	P	P	21 30 13.8	+1.0
	baz=139						
BMO	Blue Mountains	80.92	327	eP	P	21 30 14.0	+0.4
	comp=Z,9.8nm,1.2s						
BMO	Blue Mountains	80.92	327	eP	P	21 30 14.0	+0.4
BMO				pmax	pmax		
	comp=Z,10.0nm,1.2s						
M04C	Macdoel	81.17	323	P	P	21 30 15.9	+0.8
	baz=132						
K05A	Summer Lake	81.29	324	eP	P	21 30 17.1	+1.3
	comp=Z,18nm,1.0s						
I07A	Izee	81.49	326	eP	P	21 30 17.6	+0.9
	comp=Z,5.5nm,0.8s						
J05D	Fort Rock, OR	81.85	324	P	P	21 30 19.8	+1.1
	baz=133						
PINE	Pine Mountain	82.04	325	eP	P	21 30 20.8	+1.1
	comp=Z,11nm,0.9s						
WALA	Waterton Lakes	82.44	332	eP	P	21 30 21.8	+0.2
	comp=Z,8.3nm,0.9s						
BOSA	Boshof	82.60	118	P	P	21 30 22.1	-0.9
	comp=Z,5.8nm,0.8s,baz=287,slow=3.5,SNR=6.9						
I05D	Terrebonne, OR	82.62	325	P	P	21 30 23.8	+1.3
	baz=133						
MAW	Mawson	82.63	163	P	P	21 30 22.7	+0.5
	comp=Z,7.4nm,0.6s,baz=231,slow=8.0,SNR=11						
MAW				pP	pP	21 30 49.9	+1.7
	comp=Z,6.0nm,0.7s,baz=235,slow=7.2,SNR=4.4						
MAW	Mawson	82.63	163	eP	P	21 30 22.2	0.0
	comp=Z,2.6nm,0.9s						
MAW				pP	pP	21 30 49.9	+1.7
MDT	Midelt	82.87	50	pP	pP	21 30 49.8	-0.4
	comp=Z,2.8nm,0.8s,baz=288,slow=9.6,SNR=4.1						
MDT				LR	LR	22 06 58.6	
	comp=Z,26nm,20.1s,baz=186,slow=35						
C09A	Chrisman Ranch	83.49	329	eP	P	21 30 27.4	+0.5
	comp=Z,13nm,0.9s						
ESDC	Sonseca Array	87.08	44	pP	pP	21 31 11.5	+0.3
	comp=Z,3.0nm,0.9s,baz=227,slow=4.8,SNR=7.6						
YKA	Yellowknife Ar	92.86	341	P	P	21 31 11.1	-0.2
	comp=Z,3.2nm,0.8s,baz=134,slow=4.5,SNR=6.3						
YKA				pP	pP	21 31 37.6	-0.2
	comp=Z,1.9nm,0.6s,baz=137,slow=3.9,SNR=3.5						
KEST	Kesra	94.36	53	LR	LR	22 12 38.4	
	comp=Z,40nm,21.7s,baz=310,slow=35						
DAVOX	Davos/Dischmat	99.35	43	LR	LR	22 13 40.9	
	comp=Z,21nm,21.6s,baz=263,slow=34						
H11S2	WAKE ISLAND Hy	128.09	276	T	T	23 57 29.4	
	baz=121,slow=78,SNR=52						
H11S1	WAKE ISLAND Hy	128.10	276	T	T	23 57 21.7	
	baz=121,slow=78,SNR=43						
H11S3	WAKE ISLAND Hy	128.11	276	T	T	23 57 29.7	
	baz=121,slow=78,SNR=70						
H11N3	WAKE ISLAND Hy	128.22	277	T	T	23 57 32.6	
	baz=104,slow=75,SNR=50						
H11N2	WAKE ISLAND Hy	128.24	277	T	T	23 57 32.1	
	baz=104,slow=75,SNR=33						
H11N1	WAKE ISLAND Hy	128.24	277	T	T	23 57 41.1	
	baz=104,slow=75,SNR=41						
ASAR	Alice Springs	128.35	207	PKP	PKPdf	21 37 05.7	-0.4
	comp=Z,4.2nm,0.8s,baz=151,slow=2.1,SNR=25						
ASAR				pPKP	pPKPdf	21 37 34.0	+0.5
	comp=Z,3.3nm,0.8s,baz=158,slow=2.3,SNR=8.7						
ARU	Arti	129.60	35	i PKIKP	PKPdf	21 37 07.4	+0.2
ARU						21 39 17.4	
ARU						21 44 09.7	
WRA	Warramunga Arr	131.43	210	PKP	PKPdf	21 37 11.6	-0.3
	comp=Z,3.8nm,0.8s,baz=150,slow=1.8,SNR=31						
WRA				pPKP	pPKPdf	21 37 40.1	+0.7
	comp=Z,4.9nm,1.1s,baz=155,slow=1.6,SNR=7.0						
WRAB	Tennant Creek	131.43	210	i PKIKP	PKPdf	21 37 10.5	-1.4
BVAR	Borovoye Array	137.24	35	PKP	PKPdf	21 37 21.9	+0.2
	comp=Z,1.0nm,0.7s,baz=285,slow=2.8,SNR=5.8						
KURK	Kurchatov	142.79	34	PKP	PKPdf	21 37 29.2	-2.6
KURK				pPKP	pPKPdf	21 37 57.9	-1.4
KURK	Kurchatov	142.79	34	PKIKP	PKPdf	21 37 29.2	-2.6
KURK						21 37 57.9	
KURBB	Kurchatov Arra	142.80	35	PKP	PKPdf	21 37 29.2	-2.6
	comp=Z,0.7nm,0.8s,baz=291,slow=2.7,SNR=6.2						
KURBB				pPKP	pPKPdf	21 37 57.9	-1.4
	comp=Z,1.0nm,0.8s,baz=298,slow=2.8,SNR=3.8						
ZALV	Zalesovo Beam	143.54	26	PKP	PKPbc	21 37 31.6	+1.0
	comp=Z,4.0nm,0.8s,baz=309,slow=7.5,SNR=12						
ZALV				pPKP	pPKPdf	21 37 59.5	-1.1
	comp=Z,1.9nm,0.6s,baz=306,slow=3.4,SNR=3.6						
YSS	Yuzh-Sakhalins	145.34	321	⇑i PKIKP	PKPab	21 37 37.1	+0.4
YSS				e		21 38 05.6	
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
BOD	Bodaibo	145.43	357	ePKP2	PKPdf	21 37 34.9	-1.3
BOD				pmax	pmax		
	comp=Z,25nm,1.5s						
KSH	Kashi	146.18	53	ePKPbc	PKPab	21 37 40.3	0.0
KSH				pPKP	pPKPbc	21 38 06.4	-0.2
KSH				sPKP		21 38 17.0	
KSH				ePP	PP	21 41 06.0	+3.6
KSH				PKS	PKSdf	21 41 14.3	+0.6
KSH				SKS	SKSdf	21 44 37.3	-1.0
GRNR	Gornyy	146.25	331	ePKP2	PKPab	21 37 41.5	+1.5
GRNR				pmax	pmax		
	comp=Z,42nm,1.0s						
ASAJ	Asahikawa	146.87	317	PKPbc	PKPdf	21 37 39.3	+0.2
	comp=Z,11nm,0.9s,baz=358,slow=5.6,SNR=6.7						
MKAR	Makanchi Array	147.04	38	PKPbc	PKPdf	21 37 39.7	+0.4
	comp=Z,5.8nm,0.8s,baz=325,slow=1.5,SNR=32						
MKAR				pPKPbc	pPKPab	21 38 09.7	-0.4
	comp=Z,8.8nm,0.8s,baz=308,slow=2.7,SNR=10						
ZEA	Zeya	147.23	342	ePKP2	PKPbc	21 37 42.0	+0.2
ZEA				pmax	pmax		
	comp=Z,28nm,1.2s						
WMQ	Urumqi	151.88	38	PKPbc	PKPdf	21 37 47.1	-0.1
USRK	Ussuriysk Ar.	153.00	326	PKPbc	PKPbc	21 37 56.4	+0.4
	baz=272,slow=4.2						
USRK				pPKPbc	pPKPbc	21 38 24.9	+1.4
	baz=266,slow=4.3						
MJAR	Matsushiro Arr	153.15	306	PKPbc	PKPbc	21 37 56.7	0.0
	comp=Z,3.0nm,0.9s,baz=70,slow=0.5,SNR=6.6						
MJAR				PKPab	PKPab	21 38 09.0	+0.2
	comp=Z,3.9nm,0.9s,baz=189,slow=1.3,SNR=7.2						
MAT	Matsushiro	153.15	306	PKP	PKPbc	21 37 56.5	-0.2
SONM	Songino Array	155.21	8	PKP	PKPdf	21 37 52.0	+0.1
	comp=Z,0.9nm,0.7s,baz=184,slow=1.0,SNR=6.4						
SONM				PKPbc	PKPbc	21 38 00.7	
	comp=Z,0.6nm,0.6s,baz=3.7,slow=2.7,SNR=4.7						
SONM				PKPab	PKPab	21 38 17.4	+0.3
	comp=Z,0.8nm,0.8s,baz=336,slow=3.2,SNR=4.7						
SONM				pPKPbc	sPKPdf	21 38 31.1	+1.3
	comp=Z,1.0nm,0.8s,baz=320,slow=3.2,SNR=3.4						
KSRS	Korea Array	159.80	318	PKP	PKPdf	21 37 58.0	+0.3
	comp=Z,3.6nm,1.1s,baz=81,slow=1.2,SNR=13						
KSRS				pPKP	pPKPdf	21 38 26.7	+1.3
	comp=Z,0.4nm,0.2s,baz=202,slow=0.7,SNR=2.3						
KSRS				PKPab	PKPab	21 38 37.3	+0.2
	comp=Z,1.8nm,0.7s,baz=56,slow=4.6,SNR=7.4						
KSRS				pPKPab	pPKPab	21 39 04.5	+0.8
	comp=Z,0.7nm,0.5s,baz=54,slow=5.6,SNR=2.8						
KSAR	Wonju Array Be	159.83	318	PKP	PKPdf	21 37 58.0	+0.2
KSAR				pPKP	pPKPdf	21 38 26.7	+1.2
KSAR				PKPab	PKPab	21 38 37.3	0.0
KSAR				pPKPab	pPKPab	21 39 04.5	+0.7
KSAR	Wonju Array Be	159.83	318	PKIKP	PKPdf	21 37 58.0	+0.2
KSAR						21 38 26.7	
KSAR						21 38 37.3	
GTA	Gaotai	161.28	28	ePKP	PKPdf	21 38 00.8	+1.3
GTA				pPKP	pPKPdf	21 38 28.8	+1.6
GTA				sPKP		21 38 37.1	
HHC	Hu-ho-hao-te	162.48	359	ePKP	PKPdf	21 37 59.8	-0.9
LZH	Lanzhou	165.77	25	ePKP	PKPdf	21 38 02.0	-1.9
CMAR	Chiang Mai Arr	167.66	111	PKP	PKPdf	21 38 05.4	-0.1
	comp=Z,0.4nm,0.3s,baz=223,slow=2.2,SNR=4.4						
CMAR				pPKP	pPKPdf	21 38 34.3	+1.0
	comp=Z,0.3nm,0.3s,baz=212,slow=32,SNR=1.0						
CMAR				PKPab	PKPab	21 39 11.5	-0.8
	comp=Z,0.2nm,0.3s,baz=235,slow=3.2,SNR=3.0						
CMAR				pPKPab	pPKPab	21 39 39.8	+1.0
	comp=Z,0.2nm,0.3s,baz=167,slow=25,SNR=1.6						
NJ2	Nanjing	168.89	324	ePKP	PKPdf	21 38 06.5	+0.5

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*ISCJB **16** 21:46:14.0±0.3, 0°.05N±0°.04×123°.46E±0°.03, h157^{km}, mb4.0/20, Error ellipse: s-maj=5.7km s-min=4.7km az=1.0*

*DJA **16** 21:46:15.6±0.5, 0°N±4°×12°3E±°, h129^{km}±10^{km}, M4.4/15, mB5.2/1, mb4.4/4, MLv4.5/15, Mw(mB)4.6/1*

*IDC **16** 21:46:21.1±4.1, 0°.09N×123°.42E, h212^{km}±40^{km}, mb3.5/16, mb1 3.6/16, mb1mx3.5/50, mbtmp4.0/16, Error ellipse: s-maj=20.5km s-min=10.1km az=73.0*

ISC 16 21:46:15.3±0.5, **0°.06N**±0°.06×**123°.44E**±0°.05, **h157^{km}, n45, σ1^{s}16**/51, **mb4.0**/20, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	Cibinong	0.75	46	P	Pn	21 46 37.4	-1.5
LUWI	Luwuk	1.28	211	P	Pn	21 46 41.0	-2.2
MRSI	Marisa	1.56	286	P	Pn	21 46 44.4	-1.6
APSI	Ampana	2.03	242	P	Pn	21 46 50.0	-1.2
SANI	Sanana	3.30	129	P	Pn	21 47 05.4	-1.3
MPSI	Mapaga	3.55	275	P	Pn	21 47 09.9	-0.1
TNTI	Ternate	3.99	80	P	Pn	21 47 15.0	-0.7
TNTI				S	Sn	21 48 01.8	-0.8
KDI	Kendari	4.07	192	P	Pn	21 47 15.9	-0.8
LBMI	Labuha	4.12	100	P	Pn	21 47 17.0	-0.3
LBMI				S	Sn	21 48 04.5	-1.1
TTSI	Tana Toraja	4.75	230	P	Pn	21 47 25.4	-0.2
SPSI	Sidrap Palu	5.42	223	P	Pn	21 47 33.6	-0.9
SPSI				S	Sn	21 48 35.6	-0.8
AAI	Ambon	6.03	128	P	Pn	21 47 42.0	-0.6
BKSI	Bulukumba	6.29	212	P	Pn	21 47 45.6	-0.3
MSAI	Masohi	6.44	122	P	Pn	21 47 47.8	-0.2
WRA	Warramunga Arr	22.56	152	P	P	21 51 03.2	+0.7
	2.6nm,0.5s,baz=332,slow=10,SNR=94						
ASAR	Alice Springs	25.68	157	P	P	21 51 31.9	+1.0
	1.0nm,0.5s,baz=312,slow=5.5,SNR=14						
ASAR				PcP	PcP	21 54 58.2	+0.8
	0.9nm,0.5s,baz=349,slow=2.1,SNR=9.3						
CMAR	Chiang Mai Arr	30.23	309	P	P	21 52 12.8	+1.4
	2.1nm,0.7s,baz=133,slow=6.9,SNR=15						
CMMT	Chiang Mai	30.42	309	P	P	21 52 16.0	+2.8
	7.5nm,0.9s						
CHTO	Chiang Mai	30.43	309	P	P	21 52 16.0	+2.8
	32nm,0.9s						
JCJ	Chichijima	32.37	32	P	P	21 52 30.5	+0.4
	109nm,1.0s,baz=288,slow=20,SNR=4.0						
STKA	Stephens Creek	36.11	153	P	P	21 53 04.0	+1.8
	1.1nm,0.4s,baz=317,slow=8.0,SNR=4.5						
KSRS	Korea Array	37.44	6	P	P	21 53 14.4	+1.0
	0.9nm,0.6s,baz=188,slow=9.9,SNR=3.1						
MJAR	Matsushiro Arr	38.80	19	P	P	21 53 24.5	-0.4
	3.4nm,0.7s,baz=196,slow=9.8,SNR=14						
MAT	Matsushiro	38.80	19	P	P	21 53 24.5	-0.4
ODAN	Odare	43.72	310	eP	P	21 54 06.8	+1.3
RAMN	Ramite	44.37	310	eP	P	21 54 12.1	+1.4
	17nm,0.5s						
USRK	Ussuriysk Ar.	44.61	9	P	P	21 54 12.1	+0.2
	1.1nm,0.5s,baz=244,slow=4.6						
JIRN	Jiri	45.05	311	eP	P	21 54 17.2	+1.0
	15nm,0.6s						
GUN	Gumba	45.41	311	eP	P	21 54 19.7	+0.7
	20nm,0.6s						
PKIN	Phulchoki	45.61	310	eP	P	21 54 21.1	+0.6
	6.3nm,0.6s						
DMN	Daman	45.85	310	eP	P	21 54 23.4	+1.1
	12nm,0.8s						
GKN	Gorkha	46.41	310	eP	P	21 54 27.4	+0.8
	11nm,0.6s						
ASAJ	Asahikawa	47.08	19	P	P	21 54 32.7	+1.4
	6.2nm,0.7s,baz=309,slow=13,SNR=9.8						
KOLN	Koldanda	47.09	309	eP	P	21 54 33.0	+1.1
	23nm,0.7s						
DANN	Dangsing	47.25	310	eP	P	21 54 34.2	+0.9
	29nm,0.7s						
SONM	Songino Array	49.84	345	P	P	21 54 52.8	+0.3
	2.4nm,0.7s,baz=163,slow=8.7,SNR=18						
SONM				PcP	PcP	21 56 10.3	-0.5
	0.6nm,0.6s,baz=177,slow=5.8,SNR=3.4						
MKAR	Makanchi Array	58.80	328	P	P	21 55 57.1	-0.1
	0.8nm,0.5s,baz=118,slow=8.6,SNR=19						
MKAR				PcP	PcP	21 56 44.3	-0.7
	0.9nm,0.6s,baz=134,slow=4.5,SNR=8.1						
ZALV	Zalesovo Beam	62.45	335	P	P	21 56 21.0	-0.6
	0.9nm,0.4s,baz=138,slow=6.9,SNR=3.7						
KURBB	Kurchatov Arra	63.14	330	P	P	21 56 25.3	-1.0
	0.8nm,0.7s,baz=132,slow=6.7,SNR=12						
BVAR	Borovoye Array	68.66	329	P	P	21 57 00.9	-0.7
	0.3nm,0.5s,baz=148,slow=8.5,SNR=3.3						
AKTO	Aktyubinsk	74.53	323	P	P	21 57 35.3	-1.5
	0.6nm,0.5s,baz=154,slow=8.8,SNR=2.5						
ILAR	Eielson Array	89.81	25	P	P	21 58 54.2	-1.7
	0.2nm,0.4s,baz=251,slow=4.3,SNR=4.1						
ARCES	ARCESS Array B	92.73	340	P	P	21 59 08.6	-0.7
	1.4nm,0.9s,baz=67,slow=7.0,SNR=2.9						
SPITS	Spitsbergen Ar	93.42	349	P	P	21 59 11.5	-0.9
	6.7nm,0.8s,baz=330,slow=2.0,SNR=2.7						
TORD	Torodi Ar. Bea	120.82	285	PKP	PKPdf	22 04 48.7	-1.2
	0.3nm,0.5s,baz=98,slow=1.7						

SJA 16 22:21:41.0±0.4, **31°.84S×69°.20W, h108^{km}**±2^{km}, **ML3.2, MW3.9, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RTLS	Leoncito	0.09	296	i P	Pn	22 21 57.1	+0.8
RTLS				i S	Sn	22 22 09.2	+1.5
RTLS				IAML		22 22 10.4	
	comp=Z,421nm,0.1s						
AUSP	Uspallata	0.41	203	i P	Pn	22 21 58.3	+0.8
ZON	Zonda	0.53	57	i P	Pn	22 21 58.4	+0.5
RTCV	Cerro Valdivia	0.56	93	i P	Pn	22 21 58.8	+0.7
RTCV				i S	Sn	22 22 11.7	+0.8
RTLL	Cerro Villicun	0.80	51	i P	Pn	22 22 00.7	+0.6
ASAL	Salagasta	0.81	158	i P	Pn	22 22 01.0	+0.8
ASAL				i S	Sn	22 22 15.9	+1.2
ARCO	CERRO ARCO	1.02	167	i P	Pn	22 22 03.2	+0.7
ARCO				i S	Sn	22 22 20.1	+1.5
ARCO				IAML		22 22 22.5	
	comp=Z,590nm,0.4s						
AMOG	MOGNA	1.08	34	i P	Pn	22 22 03.8	+0.8
AAGR	Agrelo	1.28	166	i P	Pn	22 22 06.3	+1.0
ACDV	Cuesta del Vie	1.66	2	i P	Pn	22 22 11.1	+1.2
AROD	Rodeo	1.68	352	i P	Pn	22 22 11.8	+1.5
AVIZ	Vizcacheras	1.73	161	i P	Pn	22 22 11.3	+0.7
AGUA	GUANDACOL	2.42	15	i P	Pn	22 22 20.7	+1.2

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*CSEM **16** 22:31:49.7, 38°.67N×29°.05W, h9^{km}, ML1.9*

PDA 16 22:31:49.7±0.3, **38°.67N×29°.05W, h9^{km}**±3^{km}, **MD3.5, ML1.9, Error ellipse: s-maj=4.6km s-min=2.3km az=26.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCED	Cedros	0.28	98	eP	Pg	22 31 54.7	-0.6
PCED				eS	Sg	22 31 58.4	-0.6
PCED				A	A	22 31 59.0	
	77nm,0.3s						
PCED	Cedros	0.28	98	eP	Pg	22 31 54.7	-0.6
PCED				eS	Sg	22 31 58.4	-0.6
CALA	Caldeira	0.29	107	eP	Pg	22 31 54.9	-0.6
CALA				eS	Sg	22 31 58.9	-0.5
CALA	Caldeira	0.29	107	eP	Pg	22 31 54.9	-0.6
CALA				eS	Sg	22 31 58.9	-0.5
HOR	Horta	0.36	113	eS	Sg	22 32 00.5	-1.1
HOR				A	A	22 32 02.0	
	68nm,0.1s						
HOR	Horta	0.36	113	eS	Sg	22 32 00.5	-1.1
PCAN	Candelaria	0.49	114	eP	Pg	22 31 57.9	-1.3
PCAN				eS	Sg	22 32 04.2	-1.5
PCAN				A	A	22 32 06.8	
	38nm,0.2s						
PCAN	Candelaria	0.49	114	eP	Pg	22 31 57.9	-1.3
PCAN				eS	Sg	22 32 04.2	-1.5
ROSA	Rosais	0.64	85	eP	Pg	22 32 00.1	-1.9
ROSA				eS	Sg	22 32 07.7	-2.7
ROSA				A	A	22 32 08.7	
	87nm,0.1s						
ROSA	Rosais	0.64	85	eP	Pg	22 32 00.1	-1.9
ROSA				eS	Sg	22 32 07.7	-2.7
PMAN	Manadas	0.76	92	eS	Sg	22 32 10.8	-3.3
PMAN				A	A	22 32 14.2	
	15nm,0.2s						
PMAN	Manadas	0.76	92	eS	Sg	22 32 10.8	-3.3

IDC 16 22:40:33.1±1.6, **0°.19N×126°.59E, h0^{km}, mb3.2**/4, **mb1 3.4**/4, **mb1mx3.2**/50, **mbtmp3.3**/4, **Error ellipse: s-maj=163.2km s-min=21.9km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	21.40	160	P	P	22 45 22.1	-0.7
	0.3nm,0.4s,baz=338,slow=11,SNR=8.6						
ASAR	Alice Springs	24.76	164	P	P	22 45 57.2	+0.5
	0.3nm,0.3s,baz=347,slow=13,SNR=4.2						
MKAR	Makanchi Array	60.39	326	P	P	22 50 44.8	+0.5
	0.2nm,0.4s,baz=120,slow=7.7,SNR=6.4						
KURBB	Kurchatov Arra	64.64	328	P	P	22 51 12.2	-0.5
	0.1nm,0.5s,baz=136,slow=7.3,SNR=3.3						

IDC 16 22:43:35.8±2.3, **14°.69S×76°.69W, h0^{km}, mb3.7**/2, **mb1 3.9**/4, **mb1mx3.6**/46, **mbtmp3.8**/4, **ML3.9**/2, **MS2.4**/2, **Ms1 2.5**/2, **ms1mx2.4**/36, **Error ellipse: s-maj=57.8km s-min=25.6km az=63.0, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	Nana	2.69	357	Pn	Pn	22 44 21.5	+1.1
	14nm,0.3s,baz=172,slow=15,SNR=15						
NNA				Sn	Sn	22 44 54.5	+0.7
	37nm,0.3s,baz=258,slow=19,SNR=8.8						
NNA				LR	LR	22 45 00.3	
	comp=Z,44nm,20.6s,baz=98,slow=31						
LPAZ	La Paz	8.40	102	Pn	Pn	22 45 41.3	+1.9
	1.1nm,0.3s,baz=301,slow=8.2,SNR=29						
LPAZ				LR	LR	22 48 22.7	
	comp=Z,38nm,18.9s,baz=288,slow=34						
CPUP	Villa Florida	21.48	126	P	P	22 48 26.3	+0.2
	0.6nm,0.4s,baz=302,slow=13,SNR=2.4						
TORD	Torodi Ar. Bea	82.36	74	P	P	22 55 59.2	-1.1
	0.9nm,0.7s,baz=268,slow=5.7						
H11N3	WAKE ISLAND Hy	119.34	285	T	T	01 13 25.2	
	baz=100						
H11N2	WAKE ISLAND Hy	119.35	285	T	T	01 13 24.6	
	baz=100						
H11N1	WAKE ISLAND Hy	119.35	285	T	T	01 13 21.6	
	baz=100						
H11S2	WAKE ISLAND Hy	119.39	283	T	T	01 13 24.0	
	baz=98						
H11S1	WAKE ISLAND Hy	119.40	283	T	T	01 13 26.7	
	baz=98						
H11S3	WAKE ISLAND Hy	119.41	283	T	T	01 13 26.5	
	baz=98						
WRA	Warramunga Arr	134.00	222	PKP	PKPdf	23 02 56.5	+0.4
	0.3nm,0.8s,baz=123,slow=1.7,SNR=5.0						

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*IDC **16** 22:49:06.0±1.0, 16°.71N×85°.79W, h0^{km}, mb3.9/8, mb1 4.2/13, mb1mx3.9/54, mbtmp4.0/13, ML3.6/5, MS3.8/27, Ms1 3.8/27, ms1mx3.6/43, Error ellipse: s-maj=26.5km s-min=17.1km az=55.0*

*NEIC **16** 22:49:11.3±0.3, 16°.72N×85°.82W, h35^{km}, mb4.3/57, Error ellipse: s-maj=4.8km s-min=4.6km az=109.0*

*GCMT **16** 22:49:11.3±0.3, 16°.98N×85°.84W, h27^{km}±1^{km}, MW4.9/72, Moment Tensor Solution. s17,c20; s72,c89; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.28±.14; $M_{\theta\theta}$-1.46±.11; $M_{\phi\phi}$1.74±.13; $M_{r\theta}$-0.80±.20; $M_{\theta\phi}$1.54±.09; $M_{\phi r}$1.15±.22; Best double couple: $M_0$2.63500×10^{16} NP1:ϕ_s159.00000°, δ83.00000°, λ-148.00000°. NP2: ϕ_s65.00000°, δ58.00000°, λ-8.00000°. Principal axes: T 2.5900, Plg17.0000°, Azm288.0000°; N 0.0910, Plg58.0000°, Azm170.0000°; P -2.6810, Plg27.0000°, Azm26.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 16 22:49:11.0±0.6, **17°.03N**±0°.05×**85°.82W**±0°.05, **h29^{km}, n295, σ2^{s}56**/293, **mb4.4**/23, **MS3.9**/24, **3D, North of Honduras**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGUH	Tegucigalpa,Un	3.27	206	ePn	Pn	22 49 56.3	-3.9
ESTN	Estel	3.94	188	ePn	Pn	22 50 05.5	-4.1
WBCY	West Bay, Gran	4.81	60	ePn	Pn	22 50 22.9	+1.3
FSCY	Frank Sound, G	4.96	62	ePn	Pn	22 50 24.0	+0.5
ESPN	Las Esperanzas	5.03	163	ePn	Pn	22 50 20.3	-4.1
MYIG	MØrida	5.39	317	ePn	Pn	22 50 29.0	-0.4
LCCY	Blossom Villag	6.05	63	ePn	Pn	22 50 39.7	+1.2
LCCY				eSn	Sn	22 51 47.4	+0.5
CCIG	Comitan	6.10	264	ePn	Pn	22 50 37.0	-2.4
CBCY	The Bluff, Cay	6.36	64	ePn	Pn	22 50 43.8	+1.0
CBCY				eSn	Sn	22 51 53.9	-0.5

JTS	JuntasAbangare	6.75	173	Pn	Pn	22 50 43.3	-4.9
	2.0nm,0.3s,baz=56,slow=13,SNR=5.9						
JTS				Lg	Lg	22 52 28.7	
	2.0nm,0.3s,baz=138,slow=15,SNR=4.6						
MTDJ	Mount Denham	7.99	80	ePn	Pn	22 51 06.7	+1.4
BBJ	Bamboo Saint A	8.27	79	⇓iP	Sn	22 52 38.7	-2.8
STH	Stony Hill	8.66	82	⇓iP	Sn	22 52 48.0	-3.3
CMIG	Matias Romero	8.67	272	Pn	Pn	22 51 12.8	-1.7
	1.3nm,0.3s,baz=109,slow=9.6,SNR=8.9						
CMIG				Sn	Sn	22 52 38.6	-13
	0.6nm,0.3s,baz=24,slow=20,SNR=2.2						
GWJ	Greenwich	8.74	82	⇓iP	Sn	22 52 48.8	-4.5
062Z	Marathon	8.86	29	P	Pn	22 51 20.1	+3.0
	baz=210						
062Z				S	Sn	22 52 55.8	-0.2
	baz=210						
061Z	Ochoppi	9.91	27	P	Pn	22 51 33.6	+2.1
	baz=208						
061Z				S	Sn	22 53 20.3	-1.6
	baz=208						
061Z	Ochoppi	9.91	27	ePn	Pn	22 51 33.9	+2.4
059Z	Ave Maria	10.12	23	P	Pn	22 51 35.2	+0.8
	baz=204						
LVIG	Laguna Verde	10.41	287	ePn	Pn	22 51 34.0	-4.4
060Z	West Palm Beac	10.54	27	P	Pn	22 51 42.6	+2.6
	baz=208,SNR=5.5						
058A	Arcadia	10.65	20	P	Pn	22 51 43.4	+1.8
	baz=201,SNR=31						
059A	Moore Haven	10.80	23	P	Pn	22 51 44.2	+0.5
	baz=204,SNR=6.5						
059A				S	Sn	22 53 38.9	-4.7
	baz=204						
059A	Moore Haven	10.80	23	ePn	Pn	22 51 46.5	+2.8
957A	Wimauma	11.10	17	P	Pn	22 51 48.3	+0.5
	baz=198,SNR=5.2						
957A				S	Sn	22 53 46.4	-4.6
	baz=198						
957A	Wimauma	11.10	17	ePn	Pn	22 51 49.8	+2.0
958A	Wauchula	11.16	19	P	Pn	22 51 49.0	+0.4
	baz=200						
958A				S	Sn	22 53 47.7	-4.7
	baz=200						
060A	Indiantown	11.17	26	P	Pn	22 51 49.4	+0.7
	baz=207,SNR=5.1						
060A				S	Sn	22 53 49.3	-3.4
	baz=207						
060A	Indiantown	11.17	26	ePn	Pn	22 51 52.5	+3.7
959A	Okeechobee	11.40	23	P	Pn	22 51 55.4	+3.4
	baz=204						
857A	Zephyrhills	11.67	16	P	Pn	22 52 03.7	+8.2
	baz=197,SNR=7.5						
DWPF	Disney Wildern	11.75	19	P	Pn	22 51 58.7	+2.0
	baz=200						
DWPF				S	Sn	22 54 02.5	-4.4
	baz=200						
DWPF	Disney Wildern	11.75	19	ePn	Pn	22 51 59.2	+2.5
858A	St. Cloud	11.87	20	P	Pn	22 52 00.4	+2.1
	baz=201						
858A				S	Sn	22 54 03.9	-5.9
	baz=201						
859A	Kempfer Cattle	11.88	22	P	Pn	22 51 59.8	+1.3
	baz=203						
859A				S	Sn	22 54 05.5	-4.6
	baz=203						
TLIG	Tlapa	12.18	274	ePn	Pn	22 52 03.4	+0.6
757A	Oxford	12.35	16	P	Pn	22 52 05.5	+0.6
	baz=197,SNR=21						
757A				S	Sn	22 54 16.2	-5.4
	baz=197						
758A	Lake Helen	12.62	19	P	Pn	22 52 10.9	+2.4
	baz=200						
655A	Horseshoe Beac	12.65	10	P	Pn	22 52 08.9	0.0
	baz=191,SNR=5.1						
655A				S	Sn	22 54 22.6	-6.2
	baz=191						
656A	Willston	12.65	13	P	Pn	22 52 09.1	+0.2
	baz=194,SNR=14						
656A				S	Sn	22 54 22.1	-6.8
	baz=194						
656A	Willston	12.65	13	ePn	Pn	22 52 09.3	+0.3
657A	Interlachen	13.02	15	P	Pn	22 52 13.7	-0.3
	baz=197,SNR=19						
657A				S	Sn	22 54 31.3	-6.5
	baz=197						
658A	Bunnell	13.03	18	ePn	Pn	22 52 16.9	+2.8
552A	Lynn Haven	13.05	2	P	Pn	22 52 14.6	+0.1
	baz=182						
552A				S	Sn	22 54 31.2	-7.6
	baz=182						
554A	Perry	13.14	8	P	Pn	22 52 16.0	+0.3
	baz=189						
554A				S	Sn	22 54 33.7	-7.3
	baz=189						
553A	Crawfordville	13.16	5	P	Pn	22 52 16.2	+0.3
	baz=186						
553A				S	Sn	22 54 35.6	-5.8
	baz=186						
556A	Lake Butler	13.29	13	P	Pn	22 52 17.7	0.0
	baz=194						
555A	McAlpin	13.29	11	P	Pn	22 52 18.1	+0.4
	baz=192,SNR=14						
555A				S	Sn	22 54 39.3	-5.3
	baz=192						
555A	McAlpin	13.29	11	ePn	Pn	22 52 19.3	+1.5
555A				eSn	Sn	22 54 42.4	-2.3
557A	Orange Park	13.46	15	P	Pn	22 52 20.1	+0.1
	baz=197,SNR=13						
557A				S	Sn	22 54 42.3	-6.4
	baz=197						
450A	Crestview	13.73	357	P	Pn	22 52 24.6	+0.9
	baz=177						
452A	Marianna	13.77	2	P	Pn	22 52 25.3	+1.0
	baz=182						
454A	Quitman	13.77	8	P	Pn	22 52 25.2	+0.9
	baz=189						
453A	Whigham	13.83	5	P	Pn	22 52 25.9	+0.8
	baz=186						
455A	Stateville	13.89	10	P	Pn	22 52 26.9	+1.0
	baz=191,SNR=6.8						
456A	Hilliard	14.07	14	ePn	Pn	22 52 31.1	+2.8
457A	Yulee	14.08	15	P	Pn	22 52 29.2	+0.7
	baz=197,SNR=5.2						
543A	St. Martinvill	14.12	338	P	Pn	22 52 29.8	+0.7
	baz=156						
351A	Pinckard	14.19	1	P	Pn	22 52 30.4	+0.4
	baz=181						
353A	Camilla	14.33	6	P	Pn	22 52 31.5	-0.5
	baz=186						
TIGA	Tifton	14.49	8	P	Pn	22 52 34.2	+0.1
	baz=188						
355A	Pearson	14.51	10	P	Pn	22 52 33.9	-0.5
	baz=191						
541A	Lake Charles	14.62	334	P	Pn	22 52 36.5	+0.7
	baz=152						
356A	Blackshear	14.62	13	P	Pn	22 52 36.5	+0.5
	baz=194						
250A	Grady	14.89	359	P	Pn	22 52 39.6	0.0
	baz=178						
250A	Grady	14.89	359	ePn	Pn	22 52 40.5	+0.9
	51nm,0.4s						
249A	Camden	14.93	356	P	Pn	22 52 39.8	-0.2
	baz=175,SNR=5.1						
252A	Lumpkin	14.94	4	P	Pn	22 52 40.6	+0.5
	baz=184						
LNIG	Linares	14.95	304	ePn	Pn	22 52 37.1	-3.3
	20nm,1.1s						
251A	Midway	15.00	1	P	Pn	22 52 41.7	+0.7
	baz=182,SNR=9.1						
254A	Abbeville	15.03	8	P	Pn	22 52 41.7	+0.3
	baz=189						
344A	Westbrook Farm	15.04	344	P	Pn	22 52 41.4	0.0
	baz=162						
255A	Hazlehurst	15.14	11	P	Pn	22 52 43.1	+0.3
	baz=192,SNR=5.9						
255A	Hazlehurst	15.14	11	ePn	Pn	22 52 44.7	+1.9
	82nm,0.5s						
255A				eSn	S	22 55 42.7	-3.4
256A	Glennville	15.31	13	P	Pn	22 52 45.8	+0.7
	baz=194,SNR=5.6						
257A	Skidaway Islan	15.51	15	P	Pn	22 52 48.8	+1.2
	baz=197						
257A	Skidaway Islan	15.51	15	ePn	Pn	22 52 50.2	+2.6
	518nm,1.8s						
150A	Eclectic	15.51	359	P	Pn	22 52 48.8	+1.0
	baz=179,SNR=20						
149A	Jones	15.53	357	P	Pn	22 52 49.0	+1.1
	baz=177,SNR=6.6						
152A	Waverly Hall	15.61	3	P	Pn	22 52 49.4	+0.4
	baz=184,SNR=5.8						
148A	Greensboro	15.63	355	P	Pn	22 52 50.3	+1.0
	baz=174						
154A	Montrose	15.71	8	P	Pn	22 52 51.2	+0.9
	baz=189						
341A	Kurthwood	15.73	336	ePn	P	22 52 54.4	+0.1
	30nm,1.1s						
147A	Livingston	15.73	352	P	Pn	22 52 51.6	+1.0
	baz=172						
147A	Livingston	15.73	352	ePn	Pn	22 52 53.5	+2.9
	18nm,0.4s						
HKT	Hockley	15.79	326	ePn	P	22 52 54.4	-0.5
	7.5nm,0.8s						
HKT				eSn	Sn	22 55 44.3	-1.0
LRAL	Lakeview Retre	15.97	356	P	Pn	22 52 55.0	+1.4
	baz=176,SNR=15						
LRAL	Lakeview Retre	15.97	356	ePn	Pn	22 52 56.4	+2.8
	21nm,0.3s						
LRAL				eSn	Sn	22 55 40.2	-10
Z49A	Columbiana	16.11	358	P	Pn	22 52 56.7	+1.3
	baz=178,SNR=23						
Z52A	Williamson	16.14	4	P	Pn	22 52 57.5	+1.7
	baz=185,SNR=15						
Z50A	Ashland	16.16	360	P	Pn	22 52 57.5	+1.4
	baz=180,SNR=15						
Z47A	Carrollton	16.23	353	P	Pn	22 52 58.3	+1.3
	baz=172						
Z51A	Franklin	16.23	2	P	Pn	22 52 58.4	+1.4
	baz=182,SNR=20						
Z53A	Monticello	16.31	7	P	Pn	22 52 57.1	-0.8
	baz=188						
Z54A	Sparta	16.36	9	P	Pn	22 52 58.2	-0.4
	baz=190						
GOGA	Godfrey	16.45	7	P	Pn	22 52 59.7	-0.1
	baz=188,SNR=7.7						
GOGA	Godfrey	16.45	7	ePn	Pn	22 53 01.4	+1.7
	12nm,1.1s						
GOGA				eSn	Sn	22 55 54.8	-6.7
ROSC	El Rosal	16.55	136	Pn	Pn	22 52 58.1	-3.4
	1.0nm,0.3s,baz=253,slow=20,SNR=2.9						
ROSC				LR	LR	22 59 26.6	
	comp=Z,186nm,20.2s,baz=350,slow=38						
RGRS	Roger Stewart	16.61	17	ePn	P	22 53 06.1	+2.1
	850nm,0.4s						
Y49A	Blount Mountai	16.77	358	P	Pn	22 53 05.7	+2.0
	baz=178,SNR=7.9						
Y49A	Blount Mountai	16.77	358	ePn	P	22 53 08.4	+2.6
	14nm,0.7s						
NHSC	New Hope	16.80	17	ePn	P	22 53 08.8	+2.7
	208nm,1.5s						
833A	Chaparral WMA,	16.81	314	P	Pn	22 53 04.8	+0.4
	baz=130,SNR=14						
833A	Chaparral WMA,	16.81	314	ePn	Pn	22 53 05.2	+0.9
	98nm,0.8s						
833A				eSn	Sn	22 56 04.4	-5.9
Y51A	Rockmart	16.82	2	P	Pn	22 53 05.1	+0.7
	baz=182,SNR=6.4						
Y52A	Lilburn	16.84	5	ePn	P	22 53 08.1	+1.5
	11nm,0.8s						
SDV	Santo Domingo	16.86	117	Pn	Pn	22 53 01.8	-3.4
	1.9nm,0.3s,baz=322,slow=16,SNR=3.8						
Y47A	UCPARC, Winfie	16.90	354	P	Pn	22 53 05.3	-0.1
	baz=173,SNR=14						
Y54A	Tignall	17.00	9	P	Pn	22 53 06.9	+0.2
	baz=190						
Y46A	Houston	17.00	351	P	Pn	22 53 06.9	+0.2
	baz=170						
140A	Cam and Jess,	17.05	337	P	Pn	22 53 07.7	+0.4
	baz=154,SNR=5.6						
140A	Cam and Jess,	17.05	337	ePn	P	22 53 11.0	+2.1
	54nm,0.6s						
Z41A	Richland Creek	17.34	340	P	Pn	22 53 11.9	+1.0
	baz=158						
X50B	Fort Payne	17.36	0	P	Pn	22 53 12.1	+0.9
	baz=180						
X48A	Hartselle	17.39	357	P	Pn	22 53 11.9	+0.4
	baz=176						
X48A	Hartselle	17.39	357	ePn	P	22 53 15.5	+2.9
	9.4nm,0.6s						
435B	Jarrell	17.39	324	P	Pn	22 53 12.8	+1.2
	baz=140,SNR=7.8						
435B	Jarrell	17.39	324	ePn	P	22 53 14.6	+1.9
	47nm,0.8s						
435B				eSn	Sn	22 56 16.6	-7.7
X49A	Woodville	17.42	359	P	Pn	22 53 12.2	+0.3
	baz=178,SNR=6.6						
X51A	Calhoun	17.49	3	P	Pn	22 53 12.6	-0.1
	baz=183,SNR=5.5						
X51A	Calhoun	17.49	3	ePn	P	22 53 16.3	+2.6
	34nm,1.1s						
X47A	Russelville	17.51	354	P	Pn	22 53 12.7	-0.4
	baz=174,SNR=33						
Y42A	Garnett, Star	17.57	343	P	Pn	22 53 14.2	+0.4
	baz=161						
X52A	Dahlonega	17.59	5	P	Pn	22 53 14.1	+0.1
	baz=186,SNR=9.1						
JSC	Jenkinsville	17.66	13	ePn	P	22 53 17.5	+1.8
	48nm,1.6s						
OXF	Oxford	17.71	350	P	Pn	22 53 16.8	+1.3
	baz=169						
OXF	Oxford	17.71	350	ePn	P	22 53 19.8	+3.7
	42nm,1.1s						
PLAL	Pickwick Lake	17.99	354	ePn	P	22 53 23.2	+4.0
	14nm,0.6s						
PLAL				eSn	Sn	22 56 31.2	-7.7
W49A	Belvidere	18.02	359	P	Pn	22 53 20.4	+1.0
	baz=179						
W48A	Pulaski	18.07	357	P	Pn	22 53 21.1	+1.2
	baz=177						
W52A	Murphy	18.07	5	ePn	P	22 53 25.5	+5.3
	19nm,1.1s						
BG3	Lake Jocassee	18.08	8	ePn	P	22 53 23.4	+3.1
	78nm,1.9s						
BG3				eSn	Sn	22 56 37.6	-3.3
W50A	Signal Mountai	18.11	1	P	Pn	22 53 21.0	+0.7
	baz=182,SNR=9.4						
W50A	Signal Mountai	18.11	1	eP	P	22 53 23.8	+3.2
	12nm,0.7s						
SWET	Sewanee	18.11	360	eP	P	22 53 24.1	+3.4
	9.0nm,0.9s						
SWET				eSn	Sn	22 56 36.7	-5.1
Y40A	Okolona	18.19	340	P	P	22 53 22.7	+1.2
	baz=157						
W53A	Cullowhee	18.22	7	P	P	22 53 22.3	+0.3
	baz=188						
WHTX	Lake Whitney,	18.25	327	P	Pn	22 53 23.5	+1.4
	baz=143,SNR=8.2						
WHTX	Lake Whitney,	18.25	327	eP	Pn	22 53 24.8	+2.6
	43nm,0.6s						
CPCT	Cooper Cave	18.39	3	eP	Pn	22 53 27.0	+3.2
	15nm,1.1s						
CPCT				eSn	Sn	22 56 42.5	-5.9
KMSC	Kings Mountain	18.48	12	P	Pn	22 53 26.0	+1.0
	baz=193						
X40A	Basin Creek Fa	18.49	341	P	Pn	22 53 26.3	+1.3
	baz=159						
X40A	Basin Creek Fa	18.49	341	eP	Pn	22 53 27.6	+2.6
	5.6nm,0.8s						
JCT	Junction City	18.50	319	P	Pn	22 53 26.3	+1.1
	baz=134						
JCT	Junction City	18.50	319	eP	Pn	22 53 27.1	+1.9
	17nm,0.6s						
JCT				eSn	Sn	22 56 42.2	-8.9
V50A	Pikevile	18.58	2	P	Pn	22 53 27.1	+0.9
	baz=182						
TKL	Tuckaleechee C	18.64	5	P	Pn	22 53 29.8	+2.9
	1.2nm,0.3s,baz=192,slow=14,SNR=11						
TKL				S	Sn	22 56 44.6	-10
	1.5nm,0.3s,baz=272,slow=20,SNR=5.9						
TKL				LR	LR	23 01 17.7	
	comp=Z,224nm,18.3s,baz=188,slow=39						
TKL	Tuckaleechee C	18.64	5	eP	Pn	22 53 30.1	+3.2
	19nm,1.1s						
TKL				eSn	Sn	22 56 46.8	-7.8
V48A	Smith Brothers	18.66	357	P	P	22 53 27.6	+1.0
	baz=177						
V48A	Smith Brothers	18.66	357	eP	Pn	22 53 29.7	+2.6
	11nm,0.8s						
V49A	McMinnville	18.66	360	P	P	22 53 27.9	+1.2
	baz=180,SNR=11						
V51A	Loudon	18.75	4	P	Pn	22 53 29.0	+0.9
	baz=184						
V51A	Loudon	18.75	4	eP	Pn	22 53 31.2	+3.0
	53nm,2.0s						
V51A				eSn	Sn	22 56 55.7	-1.4
V53A	Saluda	18.76	8	P	Pn	22 53 29.4	+1.0
	baz=189,SNR=9.7						
V53A	Saluda	18.76	8	eP	Pn	22 53 31.0	+2.6
	15nm,0.9s						
V53A				eSn	Sn	22 56 50.4	-7.1
MIAR	Mount Ida	18.78	340	P	Pn	22 53 29.4	+0.9
	baz=157						
MIAR	Mount Ida	18.78	340	eP	Pn	22 53 31.7	+3.2
	5.3nm,0.8s						
V47A	Nunnelly	18.79	356	P	Pn	22 53 29.7	+1.1
	baz=175,SNR=13						
SJG	San Juan	18.79	84	LR	LR	23 00 15.7	
	comp=Z,350nm,21.6s,baz=268,slow=36						
V52A	Sevierville	18.84	6	P	Pn	22 53 30.3	+0.9
	baz=186						
V52A	Sevierville	18.84	6	eP	Pn	22 53 32.2	+2.9
	30nm,1.4s						
V52A				eSn	S	22 57 02.2	+0.9
W41B	Gary Mavity, V	18.96	344	P	Pn	22 53 32.4	+1.7
	baz=161						
WVT	Waverly	19.11	355	P	Pn	22 53 33.4	+0.9
	baz=174						
WVT	Waverly	19.11	355	eP	Pn	22 53 35.2	+2.7
	9.1nm,0.6s						
WVT				eSn	Sn	22 56 56.7	-9.1
W40A	Ferguson Farm,	19.21	342	P	Pn	22 53 34.6	+0.9
	baz=159						
U50A	Jamestown	19.33	2	P	Pn	22 53 36.6	+1.4
	baz=183,SNR=19						
U51A	La Follette	19.34	4	P	Pn	22 53 36.2	+0.8
	baz=185,SNR=6.9						
V42A	Cord	19.35	346	P	Pn	22 53 36.3	+0.9
	baz=164						
U47A	Clarksville	19.38	356	P	P	22 53 36.0	+1.5
	baz=176						
U49A	Red Boiling Sp	19.41	0	P	Pn	22 53 37.3	+1.2
	baz=180						
U52A	Thorn Hill	19.41	6	P	P	22 53 36.6	+1.7
	baz=187						
U48A	Cassie Pea, Po	19.42	358	P	P	22 53 36.1	+1.2
	baz=178						
W39A	Magazine	19.44	340	P	Pn	22 53 38.1	+1.6
	baz=157						
W39A	Magazine	19.44	340	eP	Pn	22 53 38.8	+2.3
	30nm,1.8s						
U53A	Fall Branch	19.48	8	P	Pn	22 53 38.2	+1.2
	baz=189						
V41A	Mountainview	19.51	344	P	Pn	22 53 38.5	+1.1
	baz=162						
TZTN	Tazewell	19.54	5	eP	Pn	22 53 40.0	+2.3
	9.1nm,1.0s						
V40A	Witts Springs	19.71	343	P	P	22 53 40.0	+1.8
	baz=160						
V40A	Witts Springs	19.71	343	eP	Pn	22 53 42.3	+2.6
	8.9nm,0.6s						
U42A	Revenden	19.84	347	P	Pn	22 53 41.9	+0.7
	baz=165						
T47A	Sharon Grove	19.91	357	P	P	22 53 41.5	+1.2
	baz=176,SNR=5.6						
ABTX	Abilene, Hawle	19.93	324	P	Pn	22 53 43.6	+1.2
	baz=138						
ABTX	Abilene, Hawle	19.93	324	eP	Pn	22 53 44.5	+2.2
	14nm,0.8s						
T51A	Gray	19.93	4	P	P	22 53 41.9	+1.4
	baz=185						
T50A	Nancy	19.93	2	P	Pn	22 53 42.6	+0.2
	baz=183,SNR=11						
U41A	Viola	19.99	345	P	Pn	22 53 43.6	+0.6
	baz=163						
V39A	Pettigrew	19.99	341	P	Pn	22 53 43.3	+0.3
	baz=158						
T49A	Edmonton	20.00	1	P	Pn	22 53 43.3	+0.2
	baz=181						
T49A	Edmonton	20.00	1	eP	Pn	22 53 45.3	+2.1
	10nm,0.9s						
T48A	Bowling Green	20.01	359	P	Pn	22 53 43.7	+0.5
	baz=178						
T46A	Princeton	20.02	355	P	Pn	22 53 43.9	+0.6
	baz=174						
T52A	Hallie	20.16	7	P	P	22 53 44.8	+1.8
	baz=188						
T43A	Greenville	20.36	350	P	P	22 53 47.1	+1.9
	baz=168						
TXAR	Lajitas Array	20.44	310	P	P	22 53 48.0	+1.8
	10nm,0.8s,baz=134,slow=9.0,SNR=75						
TXAR				S	S	22 57 22.7	-11
	0.6nm,0.6s,baz=124,slow=24,SNR=4.0						
TXAR				LR	LR	23 04 26.4	
	comp=Z,45nm,18.6s,baz=0.0,slow=44						
TX31	Lajitas Ar. Si	20.44	310	eP	P	22 53 47.7	+1.4
U39A	Green Forest	20.44	342	P	P	22 53 48.0	+2.0
	baz=159						
T42A	Van Buren	20.46	348	P	P	22 53 48.2	+1.9
	baz=166						
S48A	Wiedeman Farm,	20.55	359	P	P	22 53 48.6	+1.4
	baz=179,SNR=5.2						
T41A	Mountain View	20.62	346	P	P	22 53 49.9	+1.9
	baz=164						
S51A	Beattyville	20.63	5	P	Pn	22 53 50.6	+0.2
	baz=186						
S51A	Beattyville	20.63	5	eP	Pn	22 53 51.4	+0.9
	12nm,0.9s						
S46A	Don Dixon Farm	20.65	356	P	P	22 53 49.9	+1.7
	baz=175						
BLA	Blacksburg	20.66	12	P	P	22 53 50.0	+1.5
	baz=194						
BLA	Blacksburg	20.66	12	eP	Pn	22 53 51.9	+0.9
	20nm,1.1s						
S45A	Carrier Mills	20.71	354	P	P	22 53 50.4	+1.4
	baz=173						
TUL1	Leonard	20.79	337	P	Pn	22 53 52.7	+0.4
	baz=153						
S43A	Fulton Ridge,	20.81	350	P	P	22 53 52.0	+2.0
	baz=169						
S44A	Carbondale	20.81	352	P	Pn	22 53 52.4	-0.1
	baz=171						
HPIG		20.85	302	eP	Pn	22 53 53.2	-0.2
	7.7nm,0.9s						
WMOK	Wichita Mounta	21.10	329	P	P	22 53 54.5	+1.2
	baz=144						
WMOK	Wichita Mounta	21.10	329	eP	P	22 53 55.4	+2.1
	7.7nm,0.8s						
S42A	Caledonia	21.12	349	P	P	22 53 55.8	+2.4
	baz=167						
WCI	Wyandotte Cave	21.13	359	P	P	22 53 55.4	+2.0
	baz=179						
WCI	Wyandotte Cave	21.13	359	eP	P	22 53 56.4	+2.9
	20nm,0.8s						
R46A	Gibon Southern	21.16	356	P	P	22 53 55.4	+1.6
	baz=176						
R47A	Wooly Knot Far	21.20	358	P	P	22 53 55.0	+0.8
	baz=178						
R51A	Hillsboro	21.28	5	P	P	22 53 56.0	+0.9
	baz=186						
R48A	Northridge Ran	21.29	360	P	P	22 53 56.6	+1.3
	baz=180						
PCRV	Puerto La Cruz	21.68	106	LR	LR	23 04 00.8	
	comp=Z,415nm,18.5s,baz=285,slow=41						
URVA	University of	21.73	18	eP	P	22 54 03.1	+3.2
R41A	Rosebud	21.74	348	P	P	22 54 01.9	+1.8
	baz=166						
Q50A	Georgetown	21.80	4	P	P	22 54 01.5	+0.8
	baz=185						
Q45A	Warren Harvey,	21.88	355	P	P	22 54 04.0	+2.5
	baz=174						
IP07	Quail	21.91	17	eP	P	22 54 06.0	+4.2
	85nm,1.9s						
Q49A	Aurora	21.91	2	P	P	22 54 03.0	+1.1
	baz=182						
R40A	Maddies Statio	21.93	346	P	P	22 54 03.3	+1.3
	baz=164						
IP01	Cuckoo	21.98	17	eP	P	22 54 05.7	+3.1
	18nm,1.2s						
IP01				eS	Sn	22 58 13.3	-1.5
IP03	Louisa	22.01	17	eP	P	22 54 06.0	+3.1
	21nm,1.2s						
Q51A	Peebles	22.02	5	P	P	22 54 04.5	+1.4
	baz=186						
R38A	Fenwick Farm,	22.24	343	P	P	22 54 08.2	+2.7
	baz=160						
Q41A	Truxton	22.35	349	P	P	22 54 08.6	+2.0
	baz=166						
CBN	Corbin Frederi	22.36	18	P	P	22 54 08.4	+1.7
	baz=201						
P47A	Martinsville	22.38	359	P	P	22 54 08.6	+1.6
	baz=179						
P49A	Miami Univ. Ec	22.45	2	P	P	22 54 09.4	+1.8
	baz=183						
AMTX	Amarillo	22.74	324	eP	P	22 54 13.0	+2.1
	13nm,0.6s						

ANWB	Willy Bob	22.95	85	*e*P	P	22 54 14.4	+1.2
	59nm,0.8s						
MNTX	Cornudas Mount	22.98	313	P	P	22 54 14.1	+0.7
	baz=126,SNR=13						
MNTX	Cornudas Mount	22.98	313	*e*P	P	22 54 13.5	+0.1
	6.1nm,1.0s						
P40A	Paris	23.07	348	P	P	22 54 14.4	+0.3
	baz=165						
HDIL	Hopedale	23.64	353	P	P	22 54 20.4	+0.6
	baz=172						
LPIG	La Paz	23.96	291	LR	LR	23 04 31.8	
	comp=Z,331nm,18.7s,baz=75,slow=38						
O56A	Blue Knob Stat	24.00	14	P	P	22 54 26.4	+3.1
	baz=197						
SSPA	Standing Stone	24.51	15	P	P	22 54 30.4	+2.5
	baz=198						
SSPA	Standing Stone	24.51	15	*e*P	P	22 54 30.3	+2.5
	38nm,1.8s						
M54A	Oil Creek Stat	24.97	11	P	P	22 54 35.6	+3.6
	baz=194						
M54A	Oil Creek Stat	24.97	11	*e*P	P	22 54 34.8	+2.8
	65nm,1.9s						
121A	Cookes Peak, D	25.14	312	P	P	22 54 37.4	+3.5
	baz=123						
N59A	State Game Lan	25.34	18	P	P	22 54 38.4	+3.0
	baz=203						
N59A	State Game Lan	25.34	18	*e*P	P	22 54 39.2	+3.8
	70nm,1.9s						
Y22E	IRIS PASSCAL I	25.42	316	P	P	22 54 40.4	+4.0
	baz=127						
TASL	Snake Pit, Alb	25.65	318	P	P	22 54 40.4	+1.9
	baz=129						
ANMO	Albuquerque	25.65	318	P	P	22 54 39.5	+1.0
	1.1nm,0.6s,baz=150,slow=13,SNR=5.1						
ANMO	Albuquerque	25.65	318	P	P	22 54 40.1	+1.7
	baz=129						
ANMO	Albuquerque	25.65	318	*e*P	P	22 54 39.5	+1.0
	6.7nm,1.4s						
TASM	ASL Pad, Albuq	25.65	318	P	P	22 54 39.9	+1.4
	baz=129						
ODNJ	Ogdensburg	25.85	20	*e*P	P	22 54 42.9	+2.9
	54nm,1.8s						
T25A	Trinidad	25.89	324	P	P	22 54 42.8	+2.1
	baz=136						
KSPA	Keystone Colle	25.93	17	*e*P	P	22 54 44.0	+3.3
	69nm,1.9s						
PAL	Palisades	26.01	21	*e*P	P	22 54 44.2	+2.8
	15nm,0.8s						
JFWS	Jewell Farm	26.08	353	P	P	22 54 45.4	+3.4
	baz=170						
BINY	Binghamton	26.46	17	P	P	22 54 48.2	+2.6
	baz=201						
J41A	Loganville	26.49	353	P	P	22 54 48.3	+2.5
	baz=171						
K37A	Belmond	26.51	347	P	P	22 54 48.4	+2.5
	baz=163						
Q24A	Divide	27.61	326	P	P	22 54 58.3	+2.0
	baz=137						
S22A	4UR Ranch, Cre	27.70	322	P	P	22 54 59.9	+2.8
	baz=133						
SADO	Sadowa	28.22	10	LR	LR	23 06 47.3	
	comp=Z,297nm,18.2s,baz=196,slow=37						
X16A	Lo Mia Camp, P	28.73	312	*e*P	P	22 55 07.4	+1.3
	3.4nm,1.0s						
PKME	Peaks-Kenny Pk	31.38	23	P	P	22 55 32.7	+3.5
	baz=211						
HEC	Hector,Ludlow	32.49	309	P	P	22 55 42.9	+3.7
	baz=116						
PDAR	Pinedale Array	32.67	327	P	P	22 55 42.4	+1.5
	0.2nm,0.4s,baz=123,slow=9.8,SNR=2.5						
PDAR				LR	LR	23 11 15.8	
	comp=Z,118nm,20.9s,baz=132,slow=40						
ULM	Lac du Bonnet	34.12	348	LR	LR	23 10 32.2	
	comp=Z,82nm,18.5s,baz=174,slow=37						
ISA	Isabella, Lake	34.42	309	P	P	22 55 58.1	+2.0
	baz=115						
NV11	Mina Array Sit	35.41	314	*e*P	P	22 56 07.2	+2.5
	0.4nm,0.9s						
NV01	Mina Array Sit	35.51	313	*e*P	P	22 56 07.8	+2.2
NVAR	Mina Array Bea	35.51	313	P	P	22 56 08.1	+2.5
	2.9nm,0.9s,baz=127,slow=8.2,SNR=11						
NVAR				LR	LR	23 14 37.0	
	comp=Z,157nm,19.1s,baz=226,slow=43						
LPAZ	La Paz	37.42	151	LR	LR	23 13 01.9	
	comp=Z,114nm,19.3s,baz=310,slow=39						
YBH	Yreka Blue Hor	40.03	316	LR	LR	23 18 06.0	
	comp=Z,89nm,18.1s,baz=116,slow=43						
SCHQ	Schefferville	40.47	17	LR	LR	23 14 39.9	
	comp=Z,187nm,18.6s,baz=202,slow=38						
SIV	San Ignacio	40.89	142	LR	LR	23 14 52.1	
	comp=Z,117nm,18.1s,baz=328,slow=38						
JCW	Jim Creek	42.82	325	*e*P	P	22 57 07.6	+1.2
RPN	Rapa Nui	49.47	208	LR	LR	23 13 35.4	
	comp=Z,76nm,21.9s,baz=12,slow=30						
CPUP	Villa Florida	51.23	147	LR	LR	23 21 30.7	
	comp=Z,60nm,18.3s,baz=320,slow=38						
SFJD	Kangerlussuaq	54.91	16	LR	LR	23 21 19.5	
	comp=Z,96nm,21.9s,baz=210,slow=35						
ILAR	Eielson Array	62.53	335	P	P	22 59 33.1	+1.4
	0.5nm,0.6s,baz=106,slow=5.2,SNR=5.5						
ESDC	Sonseca Array	73.17	53	P	P	23 00 40.3	+1.0
	0.5nm,0.7s,baz=296,slow=5.6,SNR=4.2						
ESDC				LR	LR	23 27 40.5	
	comp=Z,72nm,20.6s,baz=325,slow=32						
MDT	Midelt	73.73	60	LR	LR	23 27 21.3	
	comp=Z,105nm,20.2s,baz=334,slow=31						
SPITS	Spitsbergen Ar	75.93	12	LR	LR	23 35 47.6	
	comp=Z,66nm,19.2s,baz=325,slow=37						
KOWA	Kowa	78.20	78	LR	LR	23 30 36.6	
	comp=Z,68nm,21.8s,baz=282,slow=32						
HFS	Hagfors	80.05	30	LR	LR	23 35 47.8	
	comp=Z,25nm,19.6s,baz=283,slow=35						
ARCES	ARCESS Array B	81.37	19	P	P	23 01 26.0	+1.4
	2.6nm,1.0s,baz=357,slow=3.2,SNR=3.1						
GERES	GERESS Array B	83.46	41	LR	LR	23 36 01.0	
	comp=Z,70nm,18.2s,baz=284,slow=34						
TORD	Torodi Ar. Bea	83.91	78	LR	LR	23 34 10.9	
	comp=Z,59nm,21.8s,baz=315,slow=32						
KEST	Kesra	84.31	55	LR	LR	23 30 55.2	
	comp=Z,59nm,21.2s,baz=291,slow=30						
FINES	FINESS Array B	85.19	27	P	P	23 01 43.6	-0.8
	1.5nm,0.8s,baz=251,slow=4.3,SNR=3.6						
FINES				LR	LR	23 40 34.8	
	comp=Z,59nm,18.0s,baz=295,slow=36						
VAE	Valguarnera	87.64	52	LR	LR	23 35 15.0	
	comp=Z,112nm,19.0s,baz=328,slow=32						

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*IDC **16** 22:58:36.6±1.1, 33°.31N×142°.02E, h0^{km}, mb3.8/6, mb1 3.9/8, mb1mx3.6/66, mbtmp3.8/8, ML3.8/2, MS2.6/2, Ms1 2.7/2, ms1mx2.2/61, Error ellipse: s-maj=24.9km s-min=18.3km az=68.0*

*ISCJB **16** 22:58:39.0±0.8, 33°.33N±0°.07×142°.03E±0°.09, h34^{km}, mb3.8/6, MS3.1/1, Error ellipse: s-maj=12.6km s-min=9.2km az=139.1*

ISC 16 22:58:41.4±0.9**, 33°.25N**±0°.09×**141°.86E**±0°.09**, h34**^{km}**, n11, σ1^{s}.27**/11**, mb3.8**/6**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	1.75	266	Pn	Pn	22 59 09.3	-0.1
	38nm,0.3s,baz=313,slow=23,SNR=32						
JHJ				Sn	Sb	22 59 32.9	-1.6
	44nm,0.3s,baz=70,slow=21,SNR=8.4						
MJAR	Matsushiro Arr	4.45	319	Pn	Pn	22 59 46.2	-0.3
	1.5nm,0.3s,baz=147,slow=11,SNR=6.8						
MJAR				Sn	Sn	23 00 36.4	-0.7
	0.8nm,0.3s,baz=278,slow=29,SNR=7.3						
JCJ	Chichijima	6.14	177	Pn	Pn	23 00 08.7	-1.0
	6.8nm,0.3s,baz=288,slow=20,SNR=4.4						
KSRS	Korea Array	12.13	294	LR	LR	23 05 20.2	
	comp=Z,13nm,20.8s,baz=235,slow=33						
SONM	Songino Array	30.34	309	P	P	23 04 51.9	+2.0
	1.4nm,0.7s,baz=115,slow=8.5,SNR=8.1						
MKAR	Makanchi Array	46.52	305	P	P	23 07 06.2	+0.7
	0.7nm,0.7s,baz=92,slow=8.5,SNR=8.2						
KURBB	Kurchatov Arra	48.68	311	P	P	23 07 22.0	-0.2
	0.5nm,0.3s,baz=84,slow=7.7,SNR=7.1						
ILAR	Eielson Array	52.52	31	P	P	23 07 49.6	-1.3
	0.6nm,0.6s,baz=269,slow=5.3,SNR=6.0						
WRA	Warramunga Arr	53.38	189	P	P	23 07 58.7	+1.0
	1.2nm,0.6s,baz=6.6,slow=7.7,SNR=22						
ASAR	Alice Springs	57.10	189	P	P	23 08 25.7	+1.1
	0.4nm,0.6s,baz=7.6,slow=7.7,SNR=3.9						
PDAR	Pinedale Array	80.06	45	LR	LR	23 43 07.0	
	comp=Z,8.9nm,20.0s,baz=140,slow=33						

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*IDC **16** 23:02:57.1±1.2, 14°.32N×90°.20W, h0^{km}, mb3.9/8, mb1 4.1/11, mb1mx3.8/49, mbtmp3.9/11, ML3.7/3, MS3.5/1, Ms1 3.5/1, ms1mx2.7/38, Error ellipse: s-maj=35.7km s-min=16.6km az=38.0*

*MEX **16** 23:02:59.5±0.5, 14°.09N×89°.86W, h85^{km}±58^{km}, MD4.2*

*ISCJB **16** 23:03:01.3±0.7, 14°.4N±0°.1×89°.99W±0°.07, h35^{km}, mb3.8/8, MS3.3/1, Error ellipse: s-maj=18.2km s-min=6.0km az=25.8*

*NEIC **16** 23:03:02.7±1.3, 14°.33N×90°.26W, h38^{km}±13^{km}, mb4.2/1, MD4.0(SNET), Error ellipse: s-maj=20.7km s-min=9.4km az=223.0*

NEIC Felt at Santa Catarina Pinula. Felt [I] at Ahuachapan, El Salvador.

ISC 16 23:03:01.7±1.1**, 14°.2N**±0°.2×**90°.01W**±0°.09**, h35**^{km}**, n20, σ1^{s}.68**/22**, mb3.8**/8**, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCIG	Comitan	2.91	315	*e*P	Pn	23 03 45.0	-0.7
CCIG				*i* S	Sn	23 04 22.1	+2.5
PCIG		3.44	296	*e*P	Pn	23 03 52.4	-0.4
PCIG				*e*S	Sn	23 04 34.2	+1.8
TGIG		3.94	311	*e*P	Pn	23 04 00.2	+0.4
TGIG				*i* S	Sn	23 04 46.0	+1.1
CMIG	Matias Romero	5.50	302	Pn	Pn	23 04 17.3	-4.0
	2.2nm,0.3s,baz=118,slow=11,SNR=16						
CMIG				Sn	Sn	23 05 26.5	+3.2
	4.3nm,0.3s,baz=357,slow=18,SNR=4.3						
CMIG				Lg	Lg	23 05 44.8	
	11nm,0.3s,baz=27,slow=19,SNR=9.3						
HUIG	Huatulco	6.09	286	*i* P	Pn	23 04 28.5	-0.9
JTS	JuntasAbangare	6.29	128	Pn	Pn	23 04 37.4	+5.3
	1.8nm,0.3s,baz=356,slow=7.7,SNR=6.2						
JTS				Lg	Lg	23 06 08.0	
	baz=18,slow=20,SNR=3.8						
VHO	Vista Hermosa	7.07	295	*i* P	Pn	23 04 43.0	-0.1
TXAR	Lajitas Array	19.65	322	P	P	23 07 27.4	-0.4
	0.1nm,0.3s,baz=145,slow=8.5,SNR=16						
SDV	Santo Domingo	19.70	103	P	Pn	23 07 31.7	+1.6
	1.2nm,0.3s,baz=298,slow=6.3,SNR=3.5						
MIAR	Mount Ida	20.50	352	*e*P	P	23 07 35.3	-1.5
	10nm,0.8s						
TKL	Tuckaleechee C	22.08	14	P	P	23 07 54.2	+0.4
	2.6nm,0.9s,baz=162,slow=13,SNR=2.8						
TKL				LR	LR	23 17 18.0	
	comp=Z,118nm,18.5s,baz=198,slow=39						
NVAR	Mina Array Bea	34.75	319	P	P	23 09 48.4	-0.6
	0.8nm,0.7s,baz=116,slow=10,SNR=4.5						
ULM	Lac du Bonnet	36.26	354	P	P	23 10 01.7	+0.1
	3.8nm,0.8s,baz=168,slow=11,SNR=3.4						
SIV	San Ignacio	41.45	135	P	P	23 10 47.9	+2.4
	0.3nm,0.4s,baz=337,slow=15,SNR=3.1						
ILAR	Eielson Array	63.42	336	P	P	23 13 25.2	-2.4
	0.5nm,1.0s,baz=120,slow=5.5,SNR=4.4						
EKA	Eskdalemuir Ar	76.67	36	P	P	23 14 48.1	-1.0
	2.7nm,0.9s,baz=258,slow=5.7,SNR=3.7						
HFS	Hagfors	84.48	29	P	P	23 15 31.7	+0.9
	1.4nm,0.7s,baz=235,slow=10,SNR=2.7						
GERES	GERESS Array B	88.21	40	P	P	23 15 50.9	+1.4
	0.4nm,0.8s,baz=248,slow=5.2,SNR=4.0						
WRA	Warramunga Arr	137.32	256	PKP	PKPdf	23 22 22.1	-0.3
	1.3nm,0.9s,baz=90,slow=1.9,SNR=6.9						
ASAR	Alice Springs	137.55	250	PKP	PKPdf	23 22 23.8	+0.9
	1.0nm,1.0s,baz=152,slow=4.2,SNR=3.6						

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*IDC **16** 23:16:06.8±0.7, 25°.47N×96°.65E, h0^{km}, mb4.1/17, mb1 4.1/18, mb1mx3.9/66, mbtmp4.0/18, ML3.8/1, MS3.4/13, Ms1 3.5/13, ms1mx3.2/62, Error ellipse: s-maj=22.3km s-min=12.4km az=55.0*

*ISCJB **16** 23:16:08.9±0.4, 25°.37N±0°.05×96°.51E±0°.03, h25^{km}, mb4.2/45, MS3.5/15, Error ellipse: s-maj=6.5km s-min=4.5km az=174.9*

*MOS **16** 23:16:09.8±1.0, 25°.44N×96°.65E, h33^{km}, mb4.4/30, Error ellipse: s-maj=11.1km s-min=6.1km az=111.4*

*NEIC **16** 23:16:13.0±1.0, 25°.44N×96°.55E, h41^{km}±11^{km}, mb4.4/8, Error ellipse: s-maj=12.3km s-min=10.2km az=222.0*

*BJI **16** 23:16:26.5, 26°.71N×95°.90E, h51^{km}, mb4.6/25, mB4.5/18, Ms4.1/23, Ms7 3.9/16*

ISC 16 23:16:10.9±0.4**, 25°.38N**±0°.05×**96°.48E**±0°.04**, h25**^{km}**, n113, σ1^{s}.88**/113**, mb4.3**/45**, MS3.5**/16**, 1C-1D, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MOKO	MOKOCHONG	2.01	298	*e*P	Pb	23 16 46.8	-0.1
MOKO				*e*S	Sb	23 17 15.0	+3.5
KOHI	KOHIMA	2.17	280	*e*P	Pn	23 16 48.1	+2.5
KOHI				*e*S	Sn	23 17 14.7	+2.9
KOHI				IAML		23 17 31.3	
	comp=N,676nm,0.7s						
KOHI				IAML		23 17 31.8	
	comp=E,1µm,0.5s						
JORH	JORHAT	2.43	305	*e*P	Pb	23 16 52.6	-1.3
JORH				*e*S	Sb	23 17 23.6	+0.3
JORH				IAML		23 17 30.1	
	comp=N,1µm,0.2s						
JORH				IAML		23 17 32.2	
	comp=E,2µm,0.6s						
ZIRO	ZIRO	3.19	313	*e*P	Pn	23 17 00.8	+1.2
TEZP	TEZPUR	3.54	291	*e*P	Pn	23 17 05.4	+1.2
TEZP				*e*S	Sn	23 17 47.4	+2.1
TEZP				IAML		23 17 50.4	
	comp=N,145nm,0.2s						
TEZP				IAML		23 17 50.4	
	comp=E,152nm,0.3s						
SHL	Shillong	4.16	274	*e*Pn	Pn	23 17 14.9	+1.9
SHL	Shillong	4.16	274	*e*P	Pn	23 17 13.4	+0.4
SHL				*e*S	Sn	23 18 01.1	+0.1
SHL				IAML		23 18 07.8	
	comp=E,52nm,0.3s						
SHL				IAML		23 18 08.3	
	comp=N,43nm,0.1s						
SHL	Shillong	4.16	274	*e*P	Pn	23 17 14.9	+1.9
GUWA	GUWAHATI	4.39	282	*e*P	Pn	23 17 16.2	+0.2
GUWA				*e*S	Sn	23 18 06.0	-0.5
GUWA				IAML		23 18 09.8	
	comp=N,91nm,0.4s						
GUWA				IAML		23 18 11.5	
	comp=E,115nm,0.7s						
AGT	Agartala	4.99	254	*e*S	Sn	23 18 16.9	-4.2
BELO	BELONIA	5.06	246	*e*x	Sn	23 18 11.3	-12
CMAI	Chiengmai2	5.91	156	P	Pb	23 17 51.2	-2.2
LSA	Lhasa	6.40	314	*e*Pn	Pn	23 17 44.6	+0.5
	comp=E,21nm,0.6s						
LSA	Lhasa	6.40	314	*e*P	Pn	23 17 44.6	+0.5
LSA				pmax	pmax		
	comp=Z,21nm,0.6s						
CHTO	Chiang Mai	6.92	160	*e*Pn	Pn	23 17 52.7	+1.9
CHTO				*e*Pg	Pb	23 18 14.8	+4.4
CHTO				*e*Sg	Sb	23 19 44.4	+12
CHTO	Chiang Mai	6.92	160	*e*P	Pn	23 17 52.7	+1.9
CHTO	Chiang Mai	6.92	160	P	Pn	23 18 00.0	+9.2
	comp=Z,71nm,0.9s,comp=Z,0.8nm						
CMMT	Chiang Mai	6.92	160	P	Pn	23 17 59.9	+9.1
	comp=Z,16nm,0.8s,comp=Z,0.2nm						
CMAR	Chiang Mai Arr	7.25	161	Pn	Pn	23 17 56.6	+1.2
	comp=Z,0.4nm,0.3s,baz=342,slow=14,SNR=14						
CMAR				Pg	Pb	23 18 21.7	+5.6
	comp=Z,0.3nm,0.3s,baz=330,slow=14,SNR=4.8						
CMAR				Lg	Lg	23 19 57.7	
	comp=Z,0.2nm,0.3s,baz=331,slow=27,SNR=4.3						
CMAR				LR	LR	23 20 59.1	
	comp=Z,400nm,18.3s,baz=332,slow=40						
CM01	Chiang Mai Arr	7.29	161	*e*Pn	Pb	23 18 20.9	+4.1
GTK	Tadong	7.33	287	*e*P	Pn	23 17 56.7	+0.2
GTK				*e*S	Sn	23 19 15.9	-3.1
GTK				IAML		23 19 22.9	
	comp=E,47nm,0.5s						
GTK				IAML		23 19 23.3	
	comp=N,39nm,0.5s						
TAPN	Taplejung	8.11	286	*e*P	Pn	23 18 09.3	+1.9
	comp=N,13nm,0.2s						
ODAN	Odare	8.30	282	*e*P	Pn	23 18 10.8	+0.8
	comp=N,243nm,1.0s						
CD2	Chengdu	8.46	48	*e*P	Pb	23 18 25.6	-11
CD2				S	Sb	23 20 01.9	-15
CD2				pmax	pmax		
	comp=N,20nm,0.5s						
CD2				LR	LR		
	comp=N,2µm,9.9s						
CD2				LR	LR		
	comp=N,1µm,10.3s						
CD2				LR	LR		
	comp=N,1µm,9.7s						
UTTA	Uttaradit	8.48	153	P	Pn	23 18 17.8	+5.5
	comp=N,1.8nm,0.7s,comp=N,0.0nm						
RAMN	Ramite	9.02	282	*e*P	Pn	23 18 20.2	+0.4
	comp=N,120nm,0.6s						
GYA	Guiyang	9.23	81	*e*P	Pn	23 18 45.3	+23
GYA				PP	PbPb	23 18 55.0	+1.9
GYA				sP		23 19 03.8	
GYA				S	Sn	23 20 36.6	+31
GYA				SS	SbSb	23 20 50.0	+5.5
GYA				pmax	pmax		
	comp=N,10.0nm,0.6s						
GYA				LR	LR		
	comp=N,850nm,10.5s						
GYA				LR	LR		
	comp=N,300nm,14.5s						
JIRN	Jiri	9.49	286	*e*P	Pn	23 18 27.6	+1.1
	comp=N,92nm,0.7s						
GUN	Gumba	9.82	287	*e*P	Pn	23 18 32.2	+1.4
	comp=N,109nm,0.8s						
PKIN	Phulchoki	10.17	285	*e*P	Pn	23 18 36.2	+0.6
	comp=N,65nm,0.8s						
KKN	Kakani	10.31	286	*e*P	Pn	23 18 38.0	+0.5
	comp=N,82nm,0.9s						
DMN	Daman	10.43	285	*e*P	Pn	23 18 39.0	-0.2
	comp=N,39nm,0.8s						
GKN	Gorkha	10.91	286	*e*P	Pn	23 18 46.1	+0.4
	comp=N,58nm,0.7s						
DANN	Dangsing	11.74	287	*e*P	Pn	23 18 56.2	-0.9
	comp=N,21nm,0.5s						
KOLN	Koldanda	11.78	285	*e*P	Pn	23 18 56.0	-1.5
	comp=N,24nm,0.7s						
PYUN	Piuthan	12.36	286	*e*P	Pn	23 19 03.4	-2.1
	comp=N,65nm,1.1s						
LZH	Lanzhou	12.41	29	*e*P	P	23 19 18.4	+0.5
LZH				pP	Pn	23 19 28.5	+22
LZH				PP	PnPn	23 19 29.3	+15
LZH				sP		23 19 35.6	
LZH				*e*S	Sn	23 21 32.3	+8.7
LZH				SS	SnSn	23 21 50.3	+14
LZH				pmax	pmax		
	comp=Z,26nm,1.0s						
LZH				pmax	pmax		
	comp=Z,120nm,4.3s						
LZH				LR	LR		
	comp=N,1µm,10.3s						
LZH				LR	LR		
	comp=E,2µm,11.0s						
LZH				LR	LR		
	comp=Z,2µm,12.1s						
GTA	Gaotai	14.27	11	P	P	23 19 38.8	+0.2
GTA				pP	Pn	23 19 47.3	+16
GTA				sP		23 19 53.8	
GTA				S	Sn	23 22 11.1	+2.0
GTA				sS	S	23 22 23.8	-5.4
GTA				SS	SnSn	23 22 27.9	+5.9
GTA				pmax	pmax		
	comp=Z,7.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,56nm,5.2s						
GTA				LR	LR		
	comp=N,320nm,11.5s						
GTA				LR	LR		
	comp=E,680nm,15.1s						
GTA				LR	LR		
	comp=Z,340nm,12.0s						
WHN	Wuhan	16.60	68	P	P	23 20 17.3	+13
WHN				S	S	23 23 21.3	+4.7
WHN				LR	LR		
	comp=Z,660nm,7.5s						
WHN				LR	LR		
	comp=Z,840nm,11.0s						
WHN				LR	LR		
	comp=Z,790nm,13.6s						
HYB	Hyderabad	18.46	248	*i* P	Pn	23 20 27.0	+1.8
WMQ	Urumqi	19.75	341	P	Pn	23 20 40.5	-0.1
WMQ				pP	sP	23 20 50.1	+1.1
WMQ				pmax	pmax		
	comp=Z,40nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,130nm,3.7s						
WMQ				LR	LR		
	comp=Z,270nm,14.9s						
WMQ				LR	LR		
	comp=Z,380nm,18.9s						
WMQ				LR	LR		
	comp=Z,300nm,16.9s						
HHC	Hu-ho-hao-te	19.90	35	*e*P	Pn	23 20 52.0	+10
HHC				pP	sP	23 21 01.8	+11
HHC				pmax	pmax		
	comp=Z,26nm,1.0s						
HHC				pmax	pmax		
	comp=Z,52nm,5.2s						
HHC				LR	LR		
	comp=Z,390nm,12.0s						
HHC				LR	LR		
	comp=Z,480nm,10.7s						
HHC				LR	LR		
	comp=Z,280nm,11.0s						
NJ2	Nanjing	20.70	66	*e*P	Pn	23 21 04.3	+13
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
NIL	Nilore	21.80	298	*e*P	P	23 21 01.2	0.0
	comp=Z,15nm,0.8s						
NIL	Nilore	21.80	298	*e*P	P	23 21 01.2	0.0
NIL				pmax	pmax		
	comp=Z,15nm,0.8s						
BJI	Beijing	22.03	44	*e*P	P	23 21 15.8	+12
BJI				LR	LR		
	comp=Z,310nm,14.7s						
BJI				LR	LR		
	comp=Z,280nm,13.9s						
KSH	Kashi	22.25	314	P	P	23 21 06.9	+0.8
KSH				pP	sP	23 21 21.3	+5.1
KSH				PP	PnPn	23 21 34.0	+5.1
KSH				S	S	23 24 52.3	-18
KSH				SS	Sn	23 25 29.8	+7.7
KSH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KSH				pmax	pmax		
	comp=Z,150nm,5.8s						
KSH				LR	LR		
	comp=Z,220nm,10.7s						
KSH				LR	LR		
	comp=Z,91nm,8.0s						
SONM	Songino Array	23.75	17	P	P	23 21 19.8	-1.5
	comp=Z,1.8nm,0.6s,baz=201,slow=10,SNR=12						
SONM				LR	LR	23 31 55.1	
	comp=Z,144nm,19.0s,baz=209,slow=40						
SONA1	Songino Array	23.76	17	*e*P	P	23 21 21.7	+0.3
ULN	Ulaanbaatar	23.95	18	*e*P	P	23 21 22.1	-1.1
	comp=Z,2.9nm,0.8s						
ULN	Ulaanbaatar	23.95	18	*i* P	P	23 21 21.5	-1.8
ULN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MK01	Makanchi Array	24.16	336	*e*P	P	23 21 25.0	-0.1
MK31	Makanchi Array	24.18	336	*e*P	P	23 21 25.8	+0.5
MK31	Makanchi Array	24.18	336	*e*P	P	23 21 25.8	+0.5
MKAR	Makanchi Array	24.18	336	P	P	23 21 25.7	+0.4
	comp=Z,6.2nm,0.6s,baz=146,slow=9.1,SNR=64						
MKAR				LR	LR	23 32 12.5	
	comp=Z,109nm,18.5s,baz=152,slow=40						
MKAR	Makanchi Array	24.18	336	*e*P	P	23 21 25.8	+0.4
	comp=Z,48nm,0.6s						
MAKZ	Makanchi	24.31	335	*e*P	P	23 21 26.8	+0.3
	comp=Z,6.6nm,0.9s						
MAKZ	Makanchi	24.31	335	*e*P	P	23 21 26.8	+0.3
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.9s						
AAK	Ala-Archa	24.96	319	P	P	23 21 33.2	+0.7
	comp=Z,2.5nm,0.5s,baz=132,slow=5.8,SNR=5.3						
DGZ	Jazzator, Alta	25.28	346	*i* P	P	23 21 33.3	-2.1
DGZ				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KBL	Kabul	25.40	298	*e*P	P	23 21 38.1	+1.4
	comp=Z,14nm,0.8s						
KBL	Kabul	25.40	298	*e*P	P	23 21 38.1	+1.4
KBL				pmax	pmax		
	comp=Z,14nm,0.8s						
ZAK	Zakamensk	25.51	10	*e*P	P	23 21 36.5	-0.9
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
HVS	Khovu-Aksy	25.81	356	*i* P	P	23 21 40.1	0.0
HVS				pmax	pmax		

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      comp=Z,15nm,0.9s
TLY   Talaya            26.83  10 eP    P     23 21 53.4 +4.2
TLY                               pmax  pmax
      comp=Z,4.0nm,1.0s
TLY                               MLR   MLR
      comp=Z,124nm,19.0s
JOW   Kunigami          28.55  80 LR    LR    23 34 20.0
      comp=Z,87nm,19.7s,baz=21,slow=38
KURBB Kurchatov Arra    28.75 336 P     P     23 22 06.7 +0.4
      comp=Z,2.1nm,0.6s,baz=147,slow=9.3,SNR=9.5
KURK  Kurchatov         28.79 336 P     P     23 22 06.7  0.0
KURK  Kurchatov         28.79 336 i P   P     23 22 05.8 -0.9
KURK                              pmax  pmax
      comp=Z,9.0nm,1.1s
KSRS  Korea Array       29.27  58 LR    LR    23 34 11.5
      comp=Z,62nm,19.0s,baz=252,slow=37
ZALV  Zalesovo Beam     29.84 346 P     P     23 22 15.9  0.0
      comp=Z,1.3nm,0.6s,baz=176,slow=10.0,SNR=3.2
JNU   Nakatsue          30.89  67 LR    LR    23 34 31.8
      comp=Z,46nm,18.4s,baz=303,slow=36
NVS   Novosibirsk       31.02 345 eP    P     23 22 27.4 +1.1
NVS                               pmax  pmax
      comp=Z,10.0nm,1.5s
NVS                               pmax  pmax
      comp=N,6.0nm,1.3s
NVS                               pmax  pmax
      comp=E,4.0nm,1.3s
MSHR  Mys Shultsa       33.20  50 i P   P     23 22 43.2 -2.4
BVAR  Borovoye Array    33.86 332 P     P     23 22 50.6 -0.7
      comp=E,1.8nm,0.5s,baz=129,slow=12,SNR=7.8
BVAR                              LR    LR    23 38 53.6
      comp=E,74nm,18.1s,baz=54,slow=40
BVAR  Borovoye Array    33.86 332 P     P     23 22 50.6 -0.7
BVAR                              pmax  pmax
      comp=Z,3.0nm,0.6s
BVAR                              MLR   MLR
      comp=Z,74nm,18.1s
BRVK  Borovoye          33.93 331 i P   P     23 22 50.2 -1.7
BRVK                              pmax  pmax
      comp=Z,3.0nm,0.8s
USRK  Ussuriysk Ar.     34.33  48 P     P     23 22 53.3 -2.2
      comp=Z,1.9nm,0.6s,baz=239,slow=7.8
GEYT  Alibeck           34.74 301 P     P     23 23 00.6 +1.4
      comp=Z,0.8nm,0.7s,baz=166,slow=3.1,SNR=3.9
GEYT                              LR    LR    23 40 20.9
      comp=Z,27nm,19.1s,baz=235,slow=42
KLR   Kul'dur           36.29  40 i P   P     23 23 10.0 -2.3
ABKAR Akbulak array     37.04 320 eP    P     23 23 19.1 +0.4
MJAR  Matsushiro Arr    37.21  62 P     P     23 23 18.1 -2.3
      comp=Z,1.4nm,0.8s,baz=275,slow=9.2,SNR=5.1
AKTO  Aktyubinsk        38.68 320 P     P     23 23 33.1 +0.5
      comp=Z,3.7nm,0.8s,baz=138,slow=7.8,SNR=9.9
SVE   Sverdlovsk        40.61 330⇑eP    P     23 23 49.2 +0.7
SVE                               pmax  pmax
      comp=Z,9.0nm,0.9s
ARU   Arti              41.34 329 eP    P     23 23 55.2 +0.7
      comp=Z,3.5nm,0.8s
ARU   Arti              41.34 329d iP   P     23 23 53.8 -0.7
ARU                                           23 25 26.5
ARU                                           23 25 50.9
ARU                               S     S     23 30 07.6 +0.3
ARU                               SS    SS    23 33 07.0 -4.3
ARU                               pmax  pmax
      comp=Z,6.0nm,1.7s
YSS   Yuzh-Sakhalins    42.37  47 eP    P     23 24 02.1 -0.9
YSS                               pmax  pmax
      comp=Z,10.0nm,0.7s
YSS                               MLR   MLR
      comp=Z,100nm,12.0s
YAK   Yakutsk           42.88  22 i P   P     23 24 06.8 -0.2
YAK                               pmax  pmax
      comp=Z,10.0nm,0.8s
RAYN  Ar Rayn           46.22 279 eP    P     23 24 33.9 -0.4
      comp=Z,17nm,2.0s
RAYN  Ar Rayn           46.22 279 eP    P     23 24 33.9 -0.4
RAYN                              pmax  pmax
      comp=Z,17nm,2.0s
PRGR  Permogore         49.67 331 eP    P     23 24 59.5 -0.8
PRGR                              pmax  pmax
      comp=Z,5.0nm,0.8s
TIXI  Tiksi             49.74  13 i P   P     23 24 59.0 -1.7
TIXI                              pmax  pmax
      comp=Z,2.0nm,1.0s
MA2   Magadan           50.53  32 i P   P     23 25 03.7 -3.2
MA2                               pmax  pmax
      comp=Z,4.0nm,1.0s
KLMR  Klimovskoe        52.19 329 P     P     23 25 17.8 -1.5
KLMR                              pmax  pmax
      comp=Z,10.0nm,1.5s
KLMR  Klimovskoe        52.19 329 P     P     23 25 17.8 -1.5
KLMR                              AMP         23 25 27.8
      comp=Z,10.0nm,1.5s
BRTR  Keskin Array B    53.86 302 P     P     23 25 31.5 -0.7
      comp=Z,0.6nm,0.6s,baz=110,slow=7.7,SNR=4.7
AKASG Malin Array Be    56.54 315 LR    LR    23 52 14.3
      comp=Z,35nm,19.3s,baz=300,slow=38
WRA   Warramunga Arr    58.17 137 P     P     23 26 02.5 -0.5
      comp=Z,2.6nm,0.9s,baz=326,slow=7.6,SNR=8.0
MLR   Muntele Rosu      59.01 309 LR    LR    23 54 22.5
      comp=Z,16nm,20.5s,baz=346,slow=39
PMG   Port Moresby      60.23 118 LR    LR    23 54 39.7
      comp=Z,78nm,18.9s,baz=234,slow=38
ASAR  Alice Springs     60.75 140 P     P     23 26 20.5 -0.3
      comp=Z,1.2nm,0.6s,baz=320,slow=6.7,SNR=15
VTS   Vitosha           61.34 306 eP    P     23 26 26.7 +1.9
      comp=Z,4.3nm,1.1s
VTS   Vitosha           61.34 306 eP    P     23 26 26.7 +1.9
VTS                               pmax  pmax
      comp=Z,4.0nm,1.1s
HFS   Hagfors           64.80 327 P     P     23 26 45.7 -1.5
      comp=Z,3.1nm,0.8s,baz=86,slow=4.5,SNR=3.0
HFS                               LR    LR    23 56 52.4
      comp=Z,35nm,18.6s,baz=16,slow=38
NB2   NORSAR Subarra    65.88 328 P     P     23 26 52.7 -1.6
      comp=Z,5.1nm,1.2s,baz=83,slow=6.9
GERES GERESS Array B    66.73 314 P     P     23 26 59.5 -0.5
      comp=Z,1.4nm,0.8s,baz=75,slow=6.2,SNR=10
ABTA  Abfaltersbach     67.99 312 eP    P     23 27 09.7 +1.7
      comp=Z,1.5nm,0.7s
WTTA  Wattenberg        68.44 313 eP    P     23 27 11.2 +0.2
      comp=Z,2.7nm,0.5s
MOTA  Moosalm           68.78 313 eP    P     23 27 12.5 -0.5
      comp=Z,3.0nm,0.8s
RETA  Reutte            68.96 314 eP    P     23 27 13.3 -0.8
      comp=Z,4.1nm,0.9s
FETA  Feichten          69.11 313 eP    P     23 27 17.2 +2.0
      comp=Z,4.3nm,1.1s
DAVOX Davos/Dischmat    69.73 313 P     P     23 27 17.8 -1.2
      comp=Z,2.4nm,0.6s,baz=116,slow=13,SNR=5.5
DAVOX                             LR    LR    00 02 20.0
      comp=Z,28nm,19.4s,baz=60,slow=40
ILAR  Eielson Array     77.80  23 P     P     23 28 05.0 -0.8
      comp=Z,0.5nm,0.8s,baz=292,slow=4.7,SNR=5.8
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*MOS **16** 23:19:48.9±0.7, 50°.25N×157°.72E, h27km, mb4.3/1, Error ellipse: s-maj=26.4km s-min=5.3km az=84.0*
*KRSC **16** 23:19:49.6±1.4, 50°.41N×157°.75E, h41km±22km, ML4.1*
*SKHL **16** 23:19:53.5±0.8, 50°.47N×157°.46E, h50km, mb4.4/1*
ISC 16 23:19:50.8±2.9**, 50°.4N**±0°.1×**157°.55E**±0°.06**, h25**km±22km**, n44, σ1s.02**/66**, 1D, Kuril Islands**

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Code  Station Name       Δ°   AZ°  Phase ID           Time      Res
                                   Op    ISC        h  m  s     ISC
SKR   Severo-Kuril's     0.96 289 i P   Pn    23 20 09.0 +0.2
SKR                               AMB   AMB   23 20 09.0
      214nm,0.3s
SKR                               i S   Sb    23 20 20.0 -1.1
SKR                               A     A     23 20 21.0
      1μm,0.3s
SKR                               A     A     23 20 21.0
      1μm,0.3s
SKR   Severo-Kuril's     0.96 289 eP    Pn    23 20 08.9 +0.2
SKR                               eS    Sb    23 20 21.3 +0.2
SKR   Severo-Kuril's     0.96 289⇓iPN   Pn    23 20 09.0 +0.2
SKR                               i S   Sb    23 20 20.9 -0.2
SKR                               pmax  pmax
      comp=Z,215nm,0.3s
SKR                               smax  smax
      comp=N,1μm,0.3s
SKR                               smax  smax
      comp=E,1μm,0.3s
PAU   Pauzhetka          1.19 337 eP    Pn    23 20 12.2 +0.4
PAU                               eS    Sn    23 20 26.7 -0.4
PAU                               A     A     23 20 28.3
      comp=E,2μm,0.2s
PAU   Pauzhetka          1.19 337 eP    Pn    23 20 12.2 +0.4
PAU                               eS    Sn    23 20 26.3 -0.8
PAU   Pauzhetka          1.19 337 PN    Pn    23 20 12.2 +0.4
PAU                               S     Sn    23 20 26.3 -0.8
KDTR  Khodutka, Kamc     1.47  13 eP    Pn    23 20 15.0 -0.7
KDTR                              eS    Sn    23 20 32.9 -1.2
ASAK  Asacha             2.02   6 eP    Pn    23 20 23.3  0.0
ASAK                              eS    Sn    23 20 47.5 -0.3
ASAK  Asacha             2.02   6 PN    Pn    23 20 23.3  0.0
ASAK                              S     Sn    23 20 47.5 -0.3
RUS   Russkaya           2.14  16 eP    Pn    23 20 24.2 -0.7
RUS                               eS    Sn    23 20 49.1 -1.6
RUS   Russkaya           2.14  16 PN    Pn    23 20 24.2 -0.7
RUS                               S     Sn    23 20 49.1 -1.6
MTVR  Mutnovka           2.14  10 eP    Pn    23 20 24.5 -0.6
MTVR                              eS    Sn    23 20 49.7 -1.3
MTVR  Mutnovka           2.14  10 PN    Pn    23 20 24.5 -0.6
MTVR                              S     Sn    23 20 49.7 -1.3
APC   Apacha             2.56 355 eP    Pn    23 20 31.3 +0.6
APC   Apacha             2.56 355 PN    Pn    23 20 31.3 +0.6
PET   Petropavlovsk      2.73  14 eP    Pn    23 20 33.4 +0.3
PET                               AMB   AMB   23 20 34.1
      comp=E,9.0nm,0.5s
PET                               eS    Sn    23 21 03.5 -1.8
PET                               A     A     23 21 09.3
      comp=E,80nm,0.3s
PET   Petropavlovsk      2.73  14 eP    Pn    23 20 33.1  0.0
PET                               eS    Sn    23 21 04.7 -0.6
PET   Petropavlovsk      2.73  14 ePN   Pn    23 20 33.6 +0.5
PET                               eS    Sn    23 21 05.7 +0.4
PET                               smax  smax
      comp=E,66nm,0.5s
PET                               smax  smax
      comp=N,79nm,0.4s
DALK  Dalny              2.76  15 eP    Pn    23 20 33.3 -0.1
DALK                              eS    Sn    23 21 05.5 -0.4
DALK  Dalny              2.76  15 PN    Pn    23 20 33.3 -0.1
DALK                              S     Sn    23 21 05.5 -0.4
UGLR  Uglovaya           2.94  15 eP    Pn    23 20 36.9 +0.9
UGLR  Uglovaya           2.94  15 PN    Pn    23 20 36.9 +0.9
AVH   Avacha             2.98  14 eP    Pn    23 20 37.9 +1.3
AVH   Avacha             2.98  14 PN    Pn    23 20 37.9 +1.3
SMAR  Somma              2.99  15 eP    Pn    23 20 37.7 +0.9
SMAR  Somma              2.99  15 PN    Pn    23 20 37.7 +0.9
KOK   Koryaka            2.99  13 eP    Pn    23 20 37.7 +1.0
KOK   Koryaka            2.99  13 PN    Pn    23 20 37.7 +1.0
NLC   Nalytchevo         3.01  21 eP    Pn    23 20 37.4 +0.6
NLC                               eS    Sn    23 21 10.9 -1.2
NLC   Nalytchevo         3.01  21 PN    Pn    23 20 37.4 +0.6
SDLR  Sedlovina          3.02  15 eP    Pn    23 20 37.3 +0.2
SDLR  Sedlovina          3.02  15 PN    Pn    23 20 37.3 +0.2
KRX   Arik               3.06  12 eP    Pn    23 20 38.8 +1.1
KRX                               eS    Sn    23 21 14.9 +1.3
KRX   Arik               3.06  12 PN    Pn    23 20 38.8 +1.1
KRX                               S     Sn    23 21 14.9 +1.3
SPN   Mys Shipunski      3.13  28 eP    Pn    23 20 39.0 +0.5
SPN                               eS    Sn    23 21 14.4 -0.6
SPN   Mys Shipunski      3.13  28 PN    Pn    23 20 39.0 +0.5
GNL   Ganaly             3.33   4 eP    Pn    23 20 43.0 +1.6
GNL   Ganaly             3.33   4 PN    Pn    23 20 43.0 +1.6
MKZ   Mys Kozlova        4.90  30 eP    Pn    23 21 02.9 +0.1
MKZ   Mys Kozlova        4.90  30 PN    Pn    23 21 02.9 +0.1
TUMR  Tumrok             5.16  17 eP    Pn    23 21 09.4 +2.9
TUMR  Tumrok             5.16  17 PN    Pn    23 21 09.4 +2.9
KBTR  Krutoberegovo      6.64  26 eP    Pn    23 21 28.0 +1.4
KBTR  Krutoberegovo      6.64  26 PN    Pn    23 21 28.0 +1.4
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*ISCJB **16** 23:41:58.3±2.1, 36°.16N±0°.08×70°.7E±0°.2, h110km, Error ellipse: s-maj=27.2km s-min=6.9km az=160.2*
*NNC **16** 23:42:01.1±9.7, 36°.64N×70°.05E, h0km, mb3.8, mpv3.4, Error ellipse: s-maj=84.6km s-min=71.0km az=123.0*
ISC 16 23:41:58.9±2.5**, 36°.1N**±0°.1×**70°.6E**±0°.2**, h110**km**, n5, σ1s.07**/9**, 4C-2D, Hindu Kush region**

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Code  Station Name       Δ°   AZ°  Phase ID           Time      Res
                                   Op    ISC        h  m  s     ISC
DHRM  DHARAMSHALA        6.12 127 eP    Pn    23 43 27.4 +0.3
DHRM                              eS    Sn    23 44 35.3 -0.6
DHRM                              IAML        23 45 20.3
      comp=N,28nm,0.5s
DHRM                              IAML        23 45 21.3
      comp=E,40nm,0.6s
MNAS  Manas              6.55  13 ⇑Pn   Pn    23 43 34.5 +1.8
      comp=E,1.2nm,0.4s
MNAS                              ⇓Sn   Sn    23 44 44.3 -1.6
      comp=E,5.7nm,0.4s
KK31  Karatay Array      6.99 360 ⇑Pn   Pn    23 43 38.5 -0.1
      comp=E,1.1nm,0.3s,baz=189,slow=14,SNR=42
KK31                              ⇑Sn   Sn    23 44 55.7 -0.7
      comp=E,3.5nm,0.7s,baz=187,slow=24,SNR=5.3
AAK   Ala-Archa          7.20  24 ⇓Pn   Pn    23 43 41.8 +0.2
      comp=E,1.4nm,0.3s
AAK                               ⇑Sn   Sn    23 45 02.2 +0.4
      comp=E,10nm,0.8s
SMLA  Simla              7.42 130 eS    Pn    23 43 44.3 -0.2
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*ISCJB **16** 23:45:24.5±1.0, 14°.62N±0°.09×145°.6E±0°.2, h109km, mb4.0/12, Error ellipse: s-maj=27.0km s-min=10.3km az=19.5*
*IDC **16** 23:45:26.2±1.5, 14°.53N×145°.61E, h111km±15km, mb3.8/12, mb1 3.9/12, mb1mx3.5/57, mbtmp4.2/12, Error ellipse: s-maj=25.9km s-min=21.9km az=77.0*
ISC 16 23:45:26.1±1.0**, 14°.6N**±0°.1×**145°.6E**±0°.2**, h109**km**, n19, σ1s.05**/14**, mb4.0**/12**, Mariana Islands**

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Code  Station Name       Δ°   AZ°  Phase ID           Time      Res
                                   Op    ISC        h  m  s     ISC
GUMO  Guam               1.20 216 P     Pn    23 45 50.1 +0.7
      baz=131,slow=11
GUMO                              S     Sn    23 46 06.7 -0.3
      392nm,0.3s,baz=300,slow=20,SNR=33
H11S3 WAKE ISLAND Hy    20.59  76 T     T     00 11 27.1
      baz=263,slow=75,SNR=36
H11S1 WAKE ISLAND Hy    20.61  76 T     T     00 11 29.4
      baz=263,slow=75,SNR=16
H11S2 WAKE ISLAND Hy    20.61  76 T     T     00 11 29.0
      baz=263,slow=75,SNR=19
H11N1 WAKE ISLAND Hy    20.98  73 T     T     00 11 55.6
      baz=260,slow=75,SNR=7.0
H11N2 WAKE ISLAND Hy    20.99  73 T     T     00 11 57.3
      baz=260,slow=75,SNR=2.6
H11N3 WAKE ISLAND Hy    21.00  73 T     T     00 11 59.5
      baz=260,slow=75,SNR=7.4
KSRS  Korea Array       27.69 329 P     P     23 51 02.7 -1.3
      0.6nm,0.4s,baz=147,slow=7.0,SNR=3.4
WRA   Warramunga Arr    36.03 198 P     P     23 52 16.3 -0.8
      0.5nm,0.9s,baz=21,slow=9.3,SNR=2.6
CMAR  Chiang Mai Arr    44.81 282 P     P     23 53 29.7 +0.2
      0.8nm,0.3s,baz=82,slow=7.2,SNR=4.4
SONM  Songino Array     46.35 324 P     P     23 53 42.6 +1.1
      1.4nm,0.7s,baz=138,slow=7.3,SNR=11
ZALV  Zalesovo Beam     61.25 324 P     P     23 55 29.9 +0.2
      2.5nm,0.3s,baz=113,slow=8.1,SNR=3.7
MKAR  Makanchi Array    61.29 316 P     P     23 55 30.7 +0.6
      2.2nm,0.5s,baz=91,slow=8.2,SNR=35
KURBB Kurchatov Arra    64.34 319 P     P     23 55 50.6 +0.4
      5.9nm,0.6s,baz=101,slow=6.9,SNR=39
ILAR  Eielson Array     67.39  25 P     P     23 56 08.7 -0.8
      0.7nm,0.4s,baz=248,slow=5.8,SNR=11
BVAR  Borovoye Array    69.61 321 P     P     23 56 23.8 +0.3
      2.4nm,0.4s,baz=109,slow=7.8,SNR=18
NVAR  Mina Array Bea    85.77  52 P     P     23 57 55.4 +1.5
      0.4nm,0.4s,baz=270,slow=5.4,SNR=3.5
ARCES ARCESS Array B    86.38 342 P     P     23 57 55.4 -0.5
      0.7nm,0.7s,baz=60,slow=7.3,SNR=7.8
FINES FINESS Array B    90.58 335 P     P     23 58 13.9 -2.0
      3.3nm,1.0s,baz=42,slow=5.9,SNR=8.2
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*ISCJB **17** 00:33:11.0±0.5, 38°.31N±0°.03×38°.80E±0°.03, h4km±6km, Error ellipse: s-maj=4.9km s-min=4.0km az=175.4*
*CSEM **17** 00:33:10.8±0.2, 38°.31N×38°.80E, h8km, ML2.8, Error ellipse: s-maj=3.5km s-min=3.2km az=30.0*
*DDA **17** 00:33:10.8, 38°.32N×38°.77E, h7km, Ml2.8*
*ISK **17** 00:33:10.4, 38°.31N×38°.79E, h13km, ML1.8/5*
ISC 17 00:33:11.2±0.9**, 38°.32N**±0°.03×**38°.79E**±0°.02**, h11**km±8km**, n20, σ0s.52**/37**, Turkey**

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Code  Station Name       Δ°   AZ°  Phase ID           Time      Res
                                   Op    ISC        h  m  s     ISC
ELZG  Elazig             0.23  40 i P   Pg    00 33 16.0 -0.2
ELZG                              i S   Sg    00 33 19.9 +0.3
ELZG  Elazig             0.23  40 P     Pg    00 33 16.0 -0.2
ELZG                              S     Sg    00 33 19.9 +0.3
MALT  Malatya            0.29 269 PG    Pg    00 33 16.7 -0.4
MALT                              SG    Sg    00 33 21.6 +0.5
MALT  Malatya            0.29 269 ePg   Pg    00 33 16.7 -0.4
MALT                              eSg   Sg    00 33 21.6 +0.5
SVRC  Sivrice-ELAZID     0.41  82 PG    Pg    00 33 18.5 -0.8
SVRC                              SG    Sg    00 33 25.4 +0.6
SVRC  Sivrice-ELAZID     0.41  82 ePg   Pg    00 33 18.5 -0.8
SVRC                              eSg   Sg    00 33 25.4 +0.6
AKCD  Akcadag            0.69 268 i P   Pg    00 33 23.7 -0.8
AKCD                              i S   Sg    00 33 33.8 +0.3
AKCD  Akcadag            0.69 268 P     Pg    00 33 23.7 -0.8
AKCD                              S     Sg    00 33 33.8 +0.3
PTK   Pertek             0.74  39 PG    Pg    00 33 25.2 -0.3
PTK                               SG    Sb    00 33 36.3 -0.1
HEKM  Malatya_Hekimh     0.86 311 i P   Pb    00 33 27.9 -0.4
HEKM                              i S   Sb    00 33 40.5 +0.7
HEKM  Malatya_Hekimh     0.86 311 P     Pb    00 33 27.9 -0.4
HEKM                              S     Sb    00 33 40.5 +0.7
URFA  Urfa               0.88 179 PG    Pg    00 33 27.7 -0.4
URFA  Urfa               0.88 179 ePg   Pg    00 33 27.7 -0.4
KEMA  Kemaliye           0.98 346 i P   Pg    00 33 29.3 -0.7
KEMA                              i S   Sb    00 33 43.5 +0.4
KEMA  Kemaliye           0.98 346 P     Pg    00 33 29.3 -0.7
KEMA                              S     Sb    00 33 43.5 +0.4
DYBB  Diyarbakir         1.12 109 PN    Pb    00 33 32.4 -0.2
SANL  SANLIURFA_Merk     1.16 172 i P   Pb    00 33 33.0 -0.2
SANL                              i S   Sn    00 33 49.5 +0.4
SANL  SANLIURFA_Merk     1.16 172 P     Pb    00 33 33.0 -0.2
SANL                              S     Sn    00 33 49.5 +0.4
CUKAN kangal_SIVAS       1.44 314 i P   Pn    00 33 37.1 -0.2
CUKAN                             i S   Sg    00 33 58.1 +0.6
CUKAN kangal_SIVAS       1.44 314 P     Pn    00 33 37.1 -0.2
CUKAN                             S     Sg    00 33 58.1 +0.6
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MAN 17 00:46:49.1, 13°.10N×120°.48E, h33km**, mb4.5, ML3.3, MS3.2, Mindoro**

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Code  Station Name       Δ°   AZ°  Phase ID           Time      Res
                                   Op    ISC        h  m  s     ISC
LUBP  Lubang             0.67 340 eP    Pb    00 47 02.4 -0.1
LUBP                              eS    Sn    00 47 13.1 +1.4
SJMP  San Jose           0.89 135 eP    Pn    00 47 04.7 -0.6
SJMP                              eS    Sn    00 47 17.2 +0.2
BUSP  Coron              1.12 194 eP    Pb    00 47 09.5 -0.5
BUSP                              eS    Sb    00 47 26.3 +2.0
BOAC  Boac               1.38  75 eP    Pn    00 47 11.3 -0.6
BOAC                              eS    Sn    00 47 30.1 +1.0
OTRP  Odiongan           1.67 116 eP    Pn    00 47 15.6 -0.5
OTRP                              eS    Sn    00 47 37.9 +1.5
ENPP  El Nido            2.15 209 eP    Pn    00 47 23.4 +0.8
ENPP                              eS    Sn    00 47 48.7 +0.6
CUYO  Cuyo Island        2.29 167 eP    Pn    00 47 24.9 +0.2
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*IDC **17** 01:00:35.2±0.7, 47°.55S×32°.37E, h0km, mb4.0/9, mb1 4.1/11, mb1mx3.9/47, mbtmp4.1/11, ML4.1/2, MS3.4/7, Ms1 3.4/7, ms1mx3.1/48, Error ellipse: s-maj=36.7km s-min=15.2km az=72.0*
*NEIC **17** 01:00:37.0±0.4, 47°.51S×32°.32E, h10km, mb4.4/11, Error ellipse: s-maj=23.2km s-min=8.5km az=67.0*
ISC 17 01:00:36.2±0.6**, 47°.41S**±0°.09×**32°.5E**±0°.2**, h10**km**, n33, σ1s.96**/30**, mb4.2**/14**, MS3.4**/5**, 2D, Prince Edward Islands region**

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Code  Station Name       Δ°   AZ°  Phase ID           Time      Res
                                   Op    ISC        h  m  s     ISC
SUR   Sutherland        17.46 325 P     Pn    01 04 39.2 -0.7
      1.2nm,0.3s,baz=146,slow=12,SNR=19
SUR                               S     Sn    01 07 42.5  -12
      0.2nm,0.3s,baz=209,slow=19,SNR=3.2
SUR                               LR    LR    01 10 18.4
      comp=Z,122nm,19.1s,baz=146,slow=33
SUR   Sutherland        17.46 325 ePn   Pn    01 04 39.2 -0.7
      68nm,1.5s
SUR                               eSn   Sn    01 07 42.5  -12
BOSA  Boshof            19.60 341 P     Pn    01 05 07.2 +1.2
      0.3nm,0.3s,baz=161,slow=12,SNR=5.7
BOSA                              S     S     01 08 29.4  -17
      0.0nm,0.3s,baz=175,slow=10,SNR=1.9
BOSA                              LR    LR    01 11 28.5
      comp=Z,81nm,18.9s,baz=160,slow=33
BOSA  Boshof            19.60 341 eP    Pn    01 05 07.2 +1.2
      52nm,1.4s
BOSA                              eS    S     01 08 29.4  -17
SYO   Syowa Base        21.95 173⇓eP    P     01 05 26.0 -3.6
SYO   Syowa Base        21.95 173⇓eP    P     01 05 34.6 +5.0
LBTB  Lobatse           23.02 344 P     P     01 05 41.0 -0.3
      2.7nm,0.8s,baz=170,slow=6.1,SNR=2.6
LBTB                              S     S     01 09 48.7 -3.4
      5.0nm,1.1s,baz=204,slow=20,SNR=2.2
LBTB                              LR    LR    01 13 07.3
      comp=Z,81nm,21.0s,baz=148,slow=32
LBTB  Lobatse           23.02 344 eP    P     01 05 41.0 -0.3
      43nm,1.8s
LBTB                              eS    S     01 09 48.7 -3.4
MAW   Mawson            25.51 153 P     P     01 06 03.9 -0.5
      6.6nm,0.9s,baz=296,slow=11,SNR=8.3
MAW                               LR    LR    01 14 03.7
      comp=Z,121nm,19.0s,baz=50,slow=32
MAW   Mawson            25.51 153 eP    P     01 06 05.5 +1.1
      2.6nm,1.0s
SNAA  Sanae             29.36 202 P     P     01 06 38.0 -1.0
      1.8nm,1.0s,baz=84,slow=11,SNR=7.3
SNAA  Sanae             29.36 202 eP    P     01 06 38.0 -1.0
      8.8nm,1.5s
TSUM  Tsumeb            30.66 331 eP    P     01 06 51.2 +0.2
      9.3nm,1.2s
QSPA  South Pole Qui    42.81 180 P     P     01 08 32.5 -1.4
      3.8nm,0.9s,baz=254,slow=5.1,SNR=9.5
QSPA                              PP    PP    01 10 03.9 -9.0
      2.6nm,0.8s,baz=272,slow=3.4,SNR=3.8
QSPA  South Pole Qui    42.81 180 eP    P     01 08 32.8 -1.1
      4.5nm,0.8s
QSPA                              ePP   PP    01 10 03.9 -9.0
KMBO  Kilima Mbogo      46.28   7 LR    LR    01 26 28.3
      comp=Z,42nm,19.7s,baz=152,slow=33
VNDA  Vanda             51.49 168 P     P     01 09 41.2 +0.1
      3.3nm,0.8s,baz=248,slow=7.9,SNR=23
VNDA                              LR    LR    01 29 18.5
      comp=Z,60nm,21.6s,baz=226,slow=34
VNDA  Vanda             51.49 168 eP    P     01 09 41.5 +0.3
      4.2nm,0.8s
SBA   Scott Base        51.91 169 eP    P     01 09 45.7 +1.4
      4.6nm,0.9s
H10S2 ASCENSION HYDR55.26 298 T     T     02 09 55.6
      baz=143,slow=75,SNR=244
H10S1 ASCENSION HYDR55.28 298 T     T     02 09 58.3
      baz=143,slow=75,SNR=236
H10S3 ASCENSION HYDR55.28 298 T     T     02 09 59.9
      baz=143,slow=75,SNR=218
TOA0  Torodi Ar. Sit    66.28 327 eP    P     01 11 26.6 +2.0
TORD  Torodi Ar. Bea    66.28 327 P     P     01 11 26.4 +1.9
      0.7nm,0.6s,baz=159,slow=6.5
TOA1  Torodi Ar. Sit    66.28 327 eP    P     01 11 26.4 +1.8
KOWA  Kowa              69.75 322 LR    LR    01 38 44.4
      comp=Z,30nm,21.4s,baz=207,slow=33
SMRI  Semarang          76.68  86 eP    P     01 12 24.7 -2.8
      96nm,1.3s
ASAR  Alice Springs     80.22 114 P     P     01 12 47.6 +0.5
      0.7nm,0.8s,baz=212,slow=5.0,SNR=3.8
AS31  Alice Springs     80.22 114 eP    P     01 12 47.6 +0.5
      4.1nm,1.6s
WRA   Warramunga Arr    83.23 112 P     P     01 13 03.8 +0.8
      1.0nm,1.0s,baz=215,slow=4.5,SNR=3.6
WR1   Warramunga Arr    83.23 112 eP    P     01 13 03.8 +0.8
      34nm,1.8s
BR101 Keskin Array S    86.76   1 eP    P     01 13 22.3 +2.1
BRTR  Keskin Array B    86.76   1 P     P     01 13 22.3 +2.1
      0.5nm,0.8s,baz=164,slow=6.8,SNR=2.2
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*ISCJB **17** 01:35:14.9±0.3, 37°.88S±0°.03×176°.10E±0°.05, h305km±2km, mb3.9/8, Error ellipse: s-maj=6.2km s-min=3.8km az=19.2*
*NEIC **17** 01:35:14.4±0.3, 37°.81S×176°.17E, h311km±3km, mb4.6/4, Error ellipse: s-maj=5.4km s-min=3.9km az=99.0*
NEIC Felt [III] at Palmerston North and Silverstream.
*IDC **17** 01:35:14.6±1.0, 37°.49S×176°.37E, h300km±8km, mb3.6/7, mb1 3.7/7, mb1mx3.5/38, mbtmp4.3/7, Error ellipse:*

s-maj=27.2km s-min=14.0km az=48.0

*WEL **17** 01:35:15.7, 38˚S±3˚×17˚6E±˚, h300^{km}±6^{km}*

ISC 17 01:35:15.7±0.6, **37.˚90S**±0.˚05×**176.˚05E**±0.˚05, **h303**^{km}±5^{km}, **n298**, σ**1**^{s}**39**/328, **mb4.0**/8, **North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMRZ	Kaimai	0.10	299	P	Pn	01 35 53.7	-0.5
KARZ	Kaharoa	0.20	129	*e*Pn	Pn	01 35 53.4	-0.8
KARZ	Kaharoa	0.20	129	P	Pn	01 35 53.4	-0.8
NGRZ	Ngongotaha	0.23	153	P	Pn	01 35 53.9	-0.4
TGRZ	Tauranga	0.23	45	Pn	Pn	01 35 53.1	-1.2
TGRZ				Sn	S	01 36 22.7	-2.3
TGRZ	Tauranga	0.23	45	P	Pn	01 35 53.2	-1.1
UTU	Utuhina	0.30	158	P	Pn	01 35 54.2	-0.1
OMRZ	Omania	0.33	130	Pn	Pn	01 35 53.5	-0.8
OMRZ	Omania	0.33	130	P	Pn	01 35 53.7	-0.7
OPRZ	Ohinepanea	0.40	83	Pn	Pn	01 35 52.7	-1.8
OPRZ	Ohinepanea	0.40	83	P	Pn	01 35 53.0	-1.5
OPRZ				S	S	01 36 22.1	-3.3
MKRZ	Makatiti	0.41	127	P	Pn	01 35 54.4	-0.1
HLRZ	Highlands Stat	0.43	146	P	Pn	01 35 54.3	-0.2
HSRZ	Hossack Road	0.44	160	P	Pn	01 35 54.4	-0.1
GRRZ	Galatos Road	0.46	174	P	Pn	01 35 54.5	-0.1
TOZ	Tahuroa Road	0.47	290	*e*Pn	Pn	01 35 54.2	-0.4
TOZ	Tahuroa Road	0.47	290	P	Pn	01 35 54.6	0.0
TARZ	Mount Tarawera	0.49	134	Pn	Pn	01 35 54.2	-0.6
TARZ	Mount Tarawera	0.49	134	P	Pn	01 35 54.2	-0.6
MARZ	Manawahe	0.50	101	P	Pn	01 35 53.7	-1.0
HRRZ	Handcock Road	0.53	160	Pn	Pn	01 35 54.0	-0.7
HRRZ	Handcock Road	0.53	160	P	Pn	01 35 54.4	-0.4
RRRZ	Republican Roa	0.57	141	Pn	Pn	01 35 54.0	-0.8
RRRZ	Republican Roa	0.57	141	P	Pn	01 35 54.1	-0.8
EDRZ	Edgecumbe	0.58	111	Pn	Pn	01 35 53.9	-1.1
EDRZ	Edgecumbe	0.58	111	P	Pn	01 35 54.0	-1.0
TLZ	Tolley Road	0.59	223	Pn	Pn	01 35 55.3	+0.4
TLZ	Tolley Road	0.59	223	P	Pn	01 35 55.4	+0.4
KUTZ	Kaahu Road	0.62	197	P	Pn	01 35 55.2	+0.2
WPRZ	Whakapapatarin	0.63	172	Pn	Pn	01 35 54.9	-0.1
WPRZ	Whakapapatarin	0.63	172	P	Pn	01 35 54.9	-0.1
PRRZ	Plateau Road	0.66	156	Pn	Pn	01 35 54.5	-0.6
PRRZ	Plateau Road	0.66	156	P	Pn	01 35 54.6	-0.6
PRRZ				S	S	01 36 24.1	-2.4
ALRZ	Allen Road	0.70	161	Pn	Pn	01 35 54.9	-0.3
ALRZ	Allen Road	0.70	161	P	Pn	01 35 54.9	-0.3
ALRZ				S	S	01 36 24.4	-2.4
WHRZ	Whale Island	0.73	87	P	Pn	01 35 55.1	-0.3
WHTZ	Whakaora	0.77	185	P	Pn	01 35 55.9	+0.3
MUGZ	Murupara	0.81	136	P	Pn	01 35 54.7	-1.0
MUGZ				S	S	01 36 23.3	-4.1
WATZ	Wairara	0.85	197	*e*Pn	Pn	01 35 56.1	+0.3
WATZ	Wairara	0.85	197	P	Pn	01 35 56.1	+0.3
URZ	Urewera	0.91	114	P	Pn	01 35 54.5	-1.5
	610nm,0.3s,baz=266,slow=2.7,SNR=1863						
URZ				S	S	01 36 23.1	-5.0
	1μm,0.3s,baz=194,slow=23,SNR=72						
URZ	Urewera	0.91	114	*e*Pn	Pn	01 35 54.7	-1.4
URZ				*e*S	S	01 36 21.9	-6.2
URZ	Urewera	0.91	114	P	Pn	01 35 54.6	-1.5
URZ				S	S	01 36 22.6	-5.5
WIZ	White Island	0.97	68	P	Pn	01 35 54.5	-1.9
MRHZ	Matea Rd	0.98	163	P	Pn	01 35 55.9	-0.4
RATZ	Rangitukua	0.99	193	Pn	Pn	01 35 56.5	+0.1
RATZ	Rangitukua	0.99	193	P	Pn	01 35 56.6	+0.1
RTZ	Ruatahuna	1.03	135	P	Pn	01 35 55.8	-0.8
RTZ				S	S	01 36 25.9	-3.2
MKAZ	Moumakai	1.06	318	*e*Pn	Pn	01 35 56.1	-0.7
MKAZ	Moumakai	1.06	318	P	Pn	01 35 56.7	-0.1
MKAZ				S	S	01 36 29.4	-0.1
RITZ	Rihia Road	1.09	188	P	Pn	01 35 57.4	+0.6
KATZ	Kakaramea	1.11	194	*e*Pn	Pn	01 35 57.3	+0.2
KATZ	Kakaramea	1.11	194	P	Pn	01 35 57.3	+0.2
HIZ	Hauiti	1.13	236	*e*Pn	Pn	01 35 57.7	+0.7
HIZ	Hauiti	1.13	236	P	Pn	01 35 57.9	+0.9
MTHZ	Maungataniwha	1.14	147	P	Pn	01 35 56.6	-0.5
KUZ	Kuaotunu	1.18	347	P	Pn	01 35 56.1	-1.3
KBAZ	Karaka Road Bo	1.22	310	Pn	Pn	01 35 57.8	+0.2
KBAZ	Karaka Road Bo	1.22	310	P	Pn	01 35 57.8	+0.2
RAGZ	Rawiri	1.23	120	Pn	Pn	01 35 56.9	-0.7
RAGZ	Rawiri	1.23	120	P	Pn	01 35 57.0	-0.7
KRVZ	Karewarewa	1.24	195	Pn	Pn	01 35 57.9	+0.1
KRVZ	Karewarewa	1.24	195	P	Pn	01 35 58.0	+0.3
MWZ	Matawai	1.24	111	*e*Pn	Pn	01 35 56.4	-1.3
MWZ	Matawai	1.24	111	P	Pn	01 35 56.4	-1.3
TWVZ	Taurewa	1.27	202	*e*Pn	Pn	01 35 58.2	+0.3
TWVZ	Taurewa	1.27	202	P	Pn	01 35 58.2	+0.3
WTVZ	West Tongariro	1.27	196	*e*Pn	Pn	01 35 58.1	+0.2
WTVZ	West Tongariro	1.27	196	P	Pn	01 35 58.2	+0.2
RUGZ	Raukumara Rang	1.29	94	P	Pn	01 35 55.5	-2.5
ETAZ	East Tamaki Re	1.30	316	Pn	Pn	01 35 58.0	-0.1
ETAZ	East Tamaki Re	1.30	316	P	Pn	01 35 58.0	-0.1
OTVZ	Oturere	1.30	193	*e*Pn	Pn	01 35 58.4	+0.2
RAHZ	Arahi	1.30	142	P	Pn	01 35 57.8	-0.2
BKZ	Black Stump Fm	1.31	165	*e*Pn	Pn	01 35 57.8	-0.3
BKZ				*e*S	S	01 36 28.9	-3.0
BKZ	Black Stump Fm	1.31	165	P	Pn	01 35 58.0	-0.1
WIAZ	Waiheke Island	1.32	326	P	Pn	01 35 57.8	-0.4
NGZ	Ngauruhoe	1.33	195	*e*Pn	Pn	01 35 58.3	0.0
NGZ	Ngauruhoe	1.33	195	P	Pn	01 35 58.5	+0.2
NMHZ	Naumai	1.34	154	Pn	Pn	01 35 58.6	+0.4
NMHZ	Naumai	1.34	154	P	Pn	01 35 58.7	+0.4
SNGZ	Shannon Statio	1.35	132	Pn	Pn	01 35 57.7	-0.5
SNGZ	Shannon Statio	1.35	132	P	Pn	01 35 57.8	-0.5
COVZ	Chateau Observ	1.36	197	P	Pn	01 35 58.5	+0.1
HAZ	Te Kaha	1.38	85	P	Pn	01 35 56.1	-2.3
AWAZ	Awhitu Peninsu	1.39	306	P	Pn	01 35 58.9	+0.3
TUVZ	Tukino	1.41	193	*e*Pn	Pn	01 35 59.1	+0.3
TUVZ	Tukino	1.41	193	P	Pn	01 35 59.2	+0.5
FWVZ	Far West T-bar	1.41	196	*e*Pn	Pn	01 35 59.0	+0.2
FWVZ	Far West T-bar	1.41	196	P	Pn	01 35 59.1	+0.2
DRZ	Dome Shelter	1.43	195	*e*Pn	Pn	01 35 59.8	+0.7
DRZ	Dome Shelter	1.43	195	P	Pn	01 35 59.8	+0.7
WHVZ	Whangaehu Hut	1.43	195	Pn	Pn	01 35 59.3	+0.3
WHVZ	Whangaehu Hut	1.43	195	P	Pn	01 35 59.3	+0.3
EPAZ	Eden Park BICE	1.46	314	P	Pn	01 35 59.1	+0.1
TRVZ	Turoa	1.46	196	P	Pn	01 35 59.7	+0.5
WNVZ	Wahianoa	1.47	194	*e*Pn	Pn	01 35 59.6	+0.4
HBAZ	Herne Bay Bore	1.48	314	P	Pn	01 35 59.1	-0.1
PKVZ	Pokaka	1.50	201	Pn	Pn	01 35 59.7	+0.5
PKVZ	Pokaka	1.50	201	P	Pn	01 35 59.7	+0.5
WHHZ	Waihua	1.50	142	P	Pn	01 35 59.0	-0.1
TKGZ	Te Karaka	1.52	112	Pn	Pn	01 35 58.2	-1.1
TKGZ	Te Karaka	1.52	112	P	Pn	01 35 58.1	-1.1
WTAZ	Waiatarua	1.52	309	Pn	Pn	01 35 59.9	+0.5
WTAZ	Waiatarua	1.52	309	P	Pn	01 35 59.9	+0.5
MOVZ	Moawhango	1.53	189	*e*Pn	Pn	01 35 59.5	+0.1
MOVZ	Moawhango	1.53	189	P	Pn	01 35 59.5	+0.1
TWGZ	Tauwhareparae	1.55	101	*e*Pn	Pn	01 35 58.4	-1.1
TWGZ	Tauwhareparae	1.55	101	P	Pn	01 35 58.5	-1.1
ARHZ	Aropaoanui	1.55	152	Pn	Pn	01 35 59.6	+0.2
ARHZ	Aropaoanui	1.55	152	P	Pn	01 35 59.7	+0.2
KWHZ	Kaweka Forest	1.56	169	P	Pn	01 35 59.8	+0.3
MTVZ	Mangateitei	1.56	197	*e*Pn	Pn	01 36 00.1	+0.5
MTVZ	Mangateitei	1.56	197	P	Pn	01 36 00.2	+0.6
RIGZ	Rimuhau	1.57	122	P	Pn	01 35 58.8	-0.8
BHHZ	Black Hill Sta	1.59	180	Pn	Pn	01 35 60.0	+0.2
BHHZ	Black Hill Sta	1.59	180	P	Pn	01 36 00.0	+0.2
VRZ	Vera Road	1.59	219	Pn	Pn	01 36 00.4	+0.7
VRZ	Vera Road	1.59	219	P	Pn	01 36 00.7	+1.0
PKGZ	Pakihiroa	1.60	90	P	Pn	01 35 58.5	-1.5
ABAZ	Army Bay	1.62	323	P	Pn	01 35 60.0	0.0
RVAZ	Riverhead Bore	1.62	313	P	Pn	01 36 00.1	0.0
MCHZ	McNeill Hill	1.63	162	Pn	Pn	01 36 00.5	+0.5
MCHZ	McNeill Hill	1.63	162	P	Pn	01 36 00.5	+0.5
KNZ	Kokohu	1.70	132	P	Pn	01 35 59.7	-0.7
GRZ	Great Barrier	1.71	344	P	Pn	01 35 59.6	-1.1
PUZ	Puketiti	1.75	96	Pn	Pn	01 35 59.1	-1.8
PUZ	Puketiti	1.75	96	P	Pn	01 35 59.2	-1.8
KRHZ	Kereru	1.76	172	P	Pn	01 36 01.1	+0.1
PRGZ	Paritu Road	1.77	126	Pn	Pn	01 36 00.3	-0.7
PRGZ	Paritu Road	1.77	126	P	Pn	01 36 00.3	-0.7
MHEZ	Mangahewa	1.80	228	P	Pn	01 36 03.1	+1.9
CNGZ	Carnagh Statio	1.80	110	Pn	Pn	01 36 00.4	-0.8
CNGZ	Carnagh Statio	1.80	110	P	Pn	01 36 00.4	-0.8
MXZ	Matakaoa Point	1.82	80	*e*Pn	Pn	01 35 59.5	-1.9
MXZ				*e*S	S	01 36 36.8	-1.0
MXZ	Matakaoa Point	1.82	80	P	Pn	01 35 59.6	-1.8
WMGZ	Waiomatatini S	1.87	88	*e*Pn	Pn	01 35 59.9	-1.9
WMGZ	Waiomatatini S	1.87	88	P	Pn	01 35 59.9	-1.9
MHGZ	Mahia Peninsul	1.92	131	Pn	Pn	01 36 01.7	-0.4
MHGZ	Mahia Peninsul	1.92	131	P	Pn	01 36 01.7	-0.4
CKHZ	Cape Kidnapper	1.94	156	Pn	Pn	01 36 02.5	+0.3
CKHZ	Cape Kidnapper	1.94	156	P	Pn	01 36 02.5	+0.3
DREZ	Durham Road	1.94	228	Pn	Pn	01 36 03.8	+1.5
DREZ	Durham Road	1.94	228	P	Pn	01 36 03.9	+1.6
KAHZ	Kahuranaki	2.00	161	Pn	Pn	01 36 03.2	+0.4
KAHZ	Kahuranaki	2.00	161	P	Pn	01 36 03.2	+0.4
PNHZ	Pukenui	2.02	177	P	Pn	01 36 03.0	+0.1
LREZ	Lake Rotokare	2.03	219	P	Pn	01 36 04.3	+1.4
WAZ	Wanganui	2.04	204	Pn	Pn	01 36 03.8	+0.8
WAZ	Wanganui	2.04	204	P	Pn	01 36 03.8	+0.8
NEZ	North Egmont	2.06	228	Pn	Pn	01 36 04.9	+1.6
PREZ	Palmer Road	2.07	225	Pn	Pn	01 36 04.8	+1.5
PREZ	Palmer Road	2.07	225	P	Pn	01 36 05.0	+1.7
PKE	Pukeiti	2.07	231	*e*Pn	Pn	01 36 05.1	+1.7
PKE	Pukeiti	2.07	231	P	Pn	01 36 05.1	+1.7
KHEZ	Kahui Hut	2.12	228	Pn	Pn	01 36 05.0	+1.2
KHEZ	Kahui Hut	2.12	228	P	Pn	01 36 05.3	+1.5
TSZ	Takapari Road	2.16	182	Pn	Pn	01 36 04.0	-0.1
TSZ	Takapari Road	2.16	182	P	Pn	01 36 04.3	+0.3
WPHZ	Waipukurau	2.19	172	Pn	Pn	01 36 04.5	+0.3
WPHZ	Waipukurau	2.19	172	P	Pn	01 36 04.5	+0.3
NWEZ	Newall Road	2.20	230	Pn	Pn	01 36 06.2	+1.9
PXZ	Pawanui	2.23	164	*e*Pn	Pn	01 36 04.5	0.0
PXZ				*e*S	S	01 36 44.6	+1.2
PXZ	Pawanui	2.23	164	P	Pn	01 36 04.8	+0.3
NMEZ	Namu Road	2.28	228	Pn	Pn	01 36 06.5	+1.5
NMEZ	Namu Road	2.28	228	P	Pn	01 36 06.5	+1.5
OHWZ	Ohakea	2.38	194	P	Pn	01 36 07.0	+1.2
WCZ	Waipu Caves	2.38	324	*e*Pn	Pn	01 36 05.0	-1.0
WCZ	Waipu Caves	2.38	324	P	Pn	01 36 05.6	-0.5
DVHZ	Dannevirke	2.40	178	Pn	Pn	01 36 06.1	+0.1
DVHZ	Dannevirke	2.40	178	P	Pn	01 36 06.2	+0.1
PRHZ	Porangahau	2.41	169	Pn	Pn	01 36 06.5	+0.4
PRHZ	Porangahau	2.41	169	P	Pn	01 36 06.5	+0.4
POWZ	Post Office Ro	2.50	185	Pn	Pn	01 36 07.1	+0.2
POWZ	Post Office Ro	2.50	185	P	Pn	01 36 07.2	+0.2
ANWZ	Angora Road	2.58	173	P	Pn	01 36 08.3	+0.6
PRWZ	Pori Road	2.66	181	Pn	Pn	01 36 08.8	+0.5
PRWZ	Pori Road	2.66	181	P	Pn	01 36 08.8	+0.5
MRZ	Mangatainoka R	2.79	187	*e*Pn	Pn	01 36 09.3	-0.3
MRZ	Mangatainoka R	2.79	187	P	Pn	01 36 09.7	+0.1
BFZ	Birch Farm	2.79	177	*e*Pn	Pn	01 36 09.5	0.0
BFZ				*e*S	S	01 36 54.0	+1.4
BFZ	Birch Farm	2.79	177	P	Pn	01 36 09.9	+0.3
TIWZ	Tintock	2.88	183	Pn	Pn	01 36 10.7	+0.2
TIWZ	Tintock	2.88	183	P	Pn	01 36 10.7	+0.2
OGWZ	Otaki Gorge	3.00	193	Pn	Pn	01 36 11.9	+0.4
OGWZ	Otaki Gorge	3.00	193	P	Pn	01 36 11.9	+0.4
CPWZ	Castlepoint	3.01	178	Pn	Pn	01 36 12.7	+1.0
CPWZ	Castlepoint	3.01	178	P	Pn	01 36 12.7	+1.0
HOWZ	Holdsworth Sta	3.03	188	Pn	Pn	01 36 11.8	-0.1
HOWZ	Holdsworth Sta	3.03	188	P	Pn	01 36 11.9	-0.1
KIW	Kapiti Island	3.09	196	*e*Pn	Pn	01 36 12.7	+0.2
KIW				*e*S	S	01 36 57.6	-0.4
KIW	Kapiti Island	3.09	196	P	Pn	01 36 12.7	+0.2
TMWZ	Te Maipa	3.21	182	Pn	Pn	01 36 13.9	+0.2
TMWZ	Te Maipa	3.21	182	P	Pn	01 36 13.9	+0.2
MTW	Mount Morrison	3.29	187	P	Pn	01 36 14.4	-0.1
CAW	Cannon Point	3.30	193	*e*S	S	01 37 03.4	+1.7
CAW				*e*		01 37 05.5	
CAW	Cannon Point	3.30	193	P	Pn	01 36 14.8	+0.2
OUZ	Omahuta	3.32	323	*e*Pn	Pn	01 36 13.9	-1.0
OUZ	Omahuta	3.32	323	P	Pn	01 36 14.6	-0.3
DUWZ	D’Urville Isla	3.34	209	*e*Pn	Pn	01 36 15.2	+0.1
DUWZ	D’Urville Isla	3.34	209	P	Pn	01 36 15.2	+0.1
TRWZ	Traveller	3.51	184	*e*Pn	Pn	01 36 17.1	+0.3
TRWZ				*e*S	S	01 37 08.4	+2.7
TRWZ	Traveller	3.51	184	P	Pn	01 36 17.1	+0.3
PAWZ	Paruwai Farm	3.52	188	P	Pn	01 36 16.9	0.0
WEL	Wellington	3.53	196	Pn	Pn	01 36 17.0	+0.1
SNZO	South Karori	3.57	197	*e*Pn	Pn	01 36 17.4	0.0
SNZO				*e*S	S	01 37 05.7	-1.0
MSWZ	Moikau Station	3.57	190	Pn	Pn	01 36 17.3	-0.1
MSWZ	Moikau Station	3.57	190	P	Pn	01 36 17.4	-0.1
TCW	Tory Channel	3.58	202	*e*Pn	Pn	01 36 17.8	+0.3
TCW				*e*S	S	01 37 08.4	+1.4
TCW	Tory Channel	3.58	202	P	Pn	01 36 17.8	+0.3
BHW	Baring Head	3.62	194	*e*S	S	01 37 08.2	+0.4
BHW				*e*		01 37 11.9	
BHW	Baring Head	3.62	194	P	Pn	01 36 18.1	+0.1
PLWZ	Palliser	3.72	189	Pn	Pn	01 36 19.0	-0.1
PLWZ	Palliser	3.72	189	P	Pn	01 36 19.0	-0.1
TUWZ	Tuamarina	3.89	204	*e*S	S	01 37 13.9	+1.0
TUWZ				*e*		01 37 16.2	
TUWZ	Tuamarina	3.89	204	P	Pn	01 36 21.1	+0.4
NNZ	Nelson	3.91	211	Pn	Pn	01 36 20.8	-0.2
NNZ	Nelson	3.91	211	P	Pn	01 36 21.0	0.0
QRZ	Quartz Range	4.00	222	*e*Pn	Pn	01 36 21.4	-0.6
QRZ	Quartz Range	4.00	222	P	Pn	01 36 21.5	-0.6
CMWZ	Cape Campbell	4.10	200	Pn	Pn	01 36 23.9	+0.8
CMWZ	Cape Campbell	4.10	200	P	Pn	01 36 24.0	+0.9
BSWZ	Blackbirch Sta	4.17	203	Pn	Pn	01 36 24.2	+0.3
BSWZ	Blackbirch Sta	4.17	203	P	Pn	01 36 24.2	+0.3
THZ	Tophouse	4.56	211	*e*Pn	Pn	01 36 28.3	0.0
THZ				*e*S	S	01 37 26.3	-0.2
THZ	Tophouse	4.56	211	P	Pn	01 36 28.0	-0.3
KHZ	Kahutara	4.91	202	*e*Pn	Pn	01 36 32.6	+0.5
KHZ				*e*S	S	01 37 26.8	-6.9
KHZ	Kahutara	4.91	202	P	Pn	01 36 32.6	+0.5
DSZ	Denniston Nort	5.05	219	*e*Pn	Pn	01 36 33.0	-0.8
DSZ	Denniston Nort	5.05	219	P	Pn	01 36 33.2	-0.7
LTZ	Lake Taylor	5.67	209	*e*Pn	Pn	01 36 41.2	0.0
LTZ				*e*S	S	01 37 48.3	-1.6
LTZ	Lake Taylor	5.67	209	P	Pn	01 36 41.0	-0.1
INZ	Inchbonnie	5.97	215	P	Pn	01 36 44.2	-0.4
EYCZ	Eyrewell	6.19	206	P	Pn	01 36 47.1	-0.2
EYCZ	Eyrewell	6.19	206	P	S	01 37 58.9	-2.3
OXZ	Oxford	6.22	208	*e*Pn	Pn	01 36 46.8	-0.8
OXZ				*e*S	S	01 37 59.0	-2.9
OXZ	Oxford	6.22	208	P	Pn	01 36 46.9	-0.8
OXZ	Oxford	6.22	208	P	S	01 38 00.2	-1.7
OKCZ	Okains Bay	6.25	200	P	Pn	01 36 48.2	+0.3
OKCZ	Okains Bay	6.25	200	P	S	01 38 03.1	+0.7
MQZ	McQueen’s Vall	6.35	203	*e*Pn	Pn	01 36 48.7	-0.5
MQZ				*e*S	S	01 38 01.6	-3.0
MQZ	McQueen’s Vall	6.35	203	P	Pn	01 36 48.5	-0.7
MQZ	McQueen’s Vall	6.35	203	P	S	01 38 01.6	-3.0
AKCZ	Akaroa Harbour	6.43	201	P	Pn	01 36 50.2	+0.1
AKCZ	Akaroa Harbour	6.43	201	P	S	01 38 06.1	-0.2
WVZ	Waitaha Valley	6.57	216	Pn	Pn	01 36 51.3	-0.5
WVZ	Waitaha Valley	6.57	216	P	Pn	01 36 50.5	-1.2
RPZ	Rata Peaks	6.94	212	P	Pn	01 36 55.6	-0.7
	77nm,0.3s,baz=25,slow=1.5,SNR=336						
RPZ				S	S	01 38 13.5	-4.2
	72nm,0.3s,baz=206,slow=7.4,SNR=16						
RPZ	Rata Peaks	6.94	212	*e*Pn	Pn	01 36 56.0	-0.3
RPZ	Rata Peaks	6.94	212	P	Pn	01 36 55.7	-0.5
RPZ	Rata Peaks	6.94	212	P	S	01 38 13.4	-4.2
FOZ	Fox Glacier	7.36	218	*e*Pn	Pn	01 37 00.8	-0.6
FOZ				*e*S	S	01 38 22.9	-3.9
FOZ	Fox Glacier	7.36	218	P	Pn	01 36 59.8	-1.5
FOZ	Fox Glacier	7.36	218	P	S	01 38 24.4	-2.4
LBZ	Lake Benmore	7.85	212	*e*Pn	Pn	01 37 07.0	-0.3
LBZ				*e*S	S	01 38 33.0	-4.9
LBZ	Lake Benmore	7.85	212	P	Pn	01 37 06.4	-0.9
ODZ	Otahua Downs	8.21	208	*e*Pn	Pn	01 37 12.7	+0.9
ODZ				*e*S	S	01 38 42.8	-3.3
ODZ	Otahua Downs	8.21	208	P	Pn	01 37 12.4	+0.6
JCZ	Jackson Bay	8.26	219	*e*Pn	Pn	01 37 10.8	-1.7
JCZ	Jackson Bay	8.26	219	P	Pn	01 37 10.9	-1.6
WKZ	Wanaka	8.71	215	*e*Pn	Pn	01 37 17.3	-0.6
WKZ				*e*S	S	01 38 53.0	-4.3
WKZ	Wanaka	8.71	215	P	Pn	01 37 16.3	-1.6
EAZ	Earnscleugh	8.90	212	*e*Pn	Pn	01 37 18.7	-1.5
EAZ	Earnscleugh	8.90	212	P	Pn	01 37 18.2	-2.0
HHSZ	Highcliff Hill	8.96	205	Pn	Pn	01 37 22.5	+1.6
HHSZ	Highcliff Hill	8.96	205	P	Pn	01 37 23.2	+2.3
MSZ	Milford Sound	9.12	220	*e*Pn	Pn	01 37 21.8	-1.0
MSZ	Milford Sound	9.12	220	P	Pn	01 37 23.0	+0.1
TUZ	Tuapeka	9.36	209	Pn	Pn	01 37 26.2	+0.4
TUZ	Tuapeka	9.36	209	P	Pn	01 37 26.2	+0.4
MLZ	Mavora Lakes	9.54	216	*e*Pn	Pn	01 37 27.4	-0.6
MLZ	Mavora Lakes	9.54	216	P	Pn	01 37 27.4	-0.6
WHZ	Wether Hill Ro	10.01	214	*e*Pn	Pn	01 37 34.0	+0.2
WHZ				*e*S	S	01 39 22.5	-4.2
WHZ	Wether Hill Ro	10.01	214	P	Pn	01 37 32.8	-1.0
SYZ	Scrubby Hill	10.04	208	Pn	Pn	01 37 35.6	+1.5
SYZ	Scrubby Hill	10.04	208	P	Pn	01 37 34.9	+0.8
APZ	The Paps	10.73	211	*e*Pn	Pn	01 37 43.1	+0.5
APZ	The Paps	10.73	211	P	Pn	01 37 43.1	+0.5
DZM	Mont Dzumac	17.81	330	P	P	01 39 03.9	+0.6
	2.0nm,0.3s,baz=183,slow=9.1,SNR=18						
DZM	Mont Dzumac	17.81	330	*e*P	P	01 38 59.8	-3.6
	140nm,2.0s						
AS01	Alice Springs	38.52	279	*e*P	P	01 42 09.1	-0.7
ASAR	Alice Springs	38.56	279	P	P	01 42 11.2	+1.1
	1.3nm,0.6s,baz=124,slow=8.0,SNR=17						
VNDA	Vanda	40.20	185	P	P	01 42 25.0	+2.3
	1.1nm,0.8s,baz=355,slow=8.0,SNR=6.8						
WB2	Warramunga Arr	40.26	284	*e*P	P	01 42 24.4	+0.4
	28nm,1.8s						
WRA	Warramunga Arr	40.27	284	P	P	01 42 24.9	+0.8
	1.8nm,0.6s,baz=125,slow=6.9,SNR=25						
QSPA	South Pole Qui	52.23	180	P	P	01 43 59.2	+3.2
	17nm,0.6s,baz=8.9,slow=0.6,SNR=63						
QSPA	South Pole Qui	52.23	180	*e*P	P	01 43 58.8	+2.8
	58nm,0.6s						
MAW	Mawson	63.54	203	P	P	01 45 15.3	+1.5
	1.5nm,0.7s,baz=127,slow=5.1,SNR=4.0						
SNAA	Sanae	70.73	180	P	P	01 45 59.7	+0.9
	6.2nm,1.1s,baz=197,slow=11,SNR=29						
SNAA	Sanae	70.73	180	*e*P	P	01 45 59.7	+0.9
	4.9nm,1.0s						
PLCA	Paso Flores	80.86	135	P	P	01 46 57.6	+1.3
	2.7nm,0.7s,baz=256,slow=5.5,SNR=16						
KURBB	Kurchatov Arra	122.51	312	PKP	PKPdf	01 53 32.8	-1.7
	0.2nm,0.3s,baz=116,slow=1.6,SNR=3.6						
ARCES	ARCESS Array B	144.57	343	PKP	PKPbc	01 54 13.2	-1.3
	2.4nm,0.9s,baz=46,slow=3.5,SNR=8.1						
DBIC	Dimbokro	148.91	178	PKPbc	PKPbc	01 54 28.2	0.0
	2.8nm,0.4s,baz=180,slow=3.0,SNR=3.8						
DBIC				PKPab	PKPab	01 54 33.0	-0.1
	2.8nm,0.4s,baz=158,slow=4.2,SNR=6.8						
FINES	FINESS Array B	149.94	331	PKPab	PKPab	01 54 34.7	-1.5
	2.7nm,0.8s,baz=83,slow=4.3,SNR=3.8						
BRTR	Keskin Array B	150.79	285	PKPbc	PKPbc	01 54 30.8	-1.4
	0.7nm,0.8s,baz=140,slow=6.0,SNR=5.3						
AKASG	Malin Array Be	153.27	309	PKPbc	PKPbc	01 54 34.6	-2.6
	0.9nm,0.3s,baz=136,slow=10,SNR=4.2						
TORD	Torodi Ar. Bea	154.85	193	PKPbc	PKPbc	01 54 41.3	-0.3
	baz=150,slow=3.2						
TORD				PKPab	PKPab	01 54 57.7	-0.3
	baz=165,slow=4.4						

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*IDC **17** 01:41:46.5±0.6, 21.˚30S×174.˚11W, h0^{km}, mb4.2/15, mb1 4.4/17, mb1mx4.2/44, mbtmp4.2/17, ML4.1/2, MS3.6/9, Ms1 3.6/9, ms1mx3.2/45, Error ellipse: s-maj=26.0km s-min=16.5km az=126.0*

*ISCJB **17** 01:41:48.9±0.4, 21.˚37S±0.˚07×174.˚21W±0.˚09, h25^{km}, mb4.5/34, MS3.6/7, Error ellipse: s-maj=14.0km s-min=7.8km az=38.7*

*NEIC **17** 01:41:51.8±0.2, 21.˚36S×174.˚16W, h35^{km}, mb4.8/22, Error ellipse: s-maj=10.5km s-min=5.8km az=132.0*

ISC 17 01:41:50.3±0.6, **21.˚30S**±0.˚10×**174.˚0W**±0.˚1, **h25**^{km}, **n80**, σ**1**^{s}**13**/74, **mb4.8**/33, **MS3.7**/7, **Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	7.66	17	Pn	Pn	01 43 38.5	-2.0
	2.5nm,0.3s,baz=216,slow=19,SNR=4.6						
AFI				Sn	Sn	01 44 56.3	-10
	13nm,0.3s,baz=120,slow=20,SNR=6.0						
RAR	Rarotonga	13.30	92	Pn	Pn	01 44 49.5	-8.1
	16nm,0.3s,baz=254,slow=9.8,SNR=34						
RAR				LR	LR	01 49 56.7	
	comp=Z,125nm,18.1s,baz=276,slow=37						
RAR	Rarotonga	13.30	92	*e*Pn	Pn	01 44 50.2	-7.4
RAR				*e*Sn	Sn	01 47 03.5	-21
DZM	Mont Dzumac	18.16	264	P	P	01 46 05.1	+4.0
	0.2nm,0.3s,baz=90,slow=17,SNR=4.2						
DZM				LR	LR	01 52 08.4	
	comp=Z,266nm,18.2s,baz=60,slow=34						
DZM	Mont Dzumac	18.16	264	*e*Pn	Pn	01 45 59.4	-1.5
	17nm,1.0s						
URZ	Urewera	18.55	202	P	Pn	01 46 05.7	+0.2
	0.6nm,0.3s,baz=20,slow=12,SNR=2.7						
BKZ	Black Stump Fm	19.57	202	*e*P	P	01 46 14.2	-2.2
	28nm,1.3s						
PPT	Papeete	23.36	85	LR	LR	01 53 22.1	
	comp=Z,90nm,21.4s,baz=277,slow=30						
RPZ	Rata Peaks	25.56	206	*e*P	P	01 47 16.6	-0.7
	22nm,1.2s						
STKA	Stephens Creek	40.80	246	P	P	01 49 28.9	-1.0
	3.4nm,0.8s,baz=117,slow=14,SNR=3.7						
STKA				LR	LR	02 04 39.3	
	comp=Z,158nm,18.2s,baz=25,slow=34						
STKA	Stephens Creek	40.80	246	*e*P	P	01 49 28.9	-1.0
	1.0nm,0.9s						
AS01	Alice Springs	47.90	257	*e*P	P	01 50 25.4	-1.4
AS31	Alice Springs	47.94	257	*e*P	P	01 50 26.5	-0.7
	2.3nm,0.9s						
AS31				*e*PcP	PcP	01 51 56.2	+0.9
ASAR	Alice Springs	47.94	257	P	P	01 50 26.0	-1.2
	8.1nm,0.8s,baz=90,slow=8.4,SNR=59						
ASAR				PcP	PcP	01 51 56.2	+0.9
	0.6nm,0.7s,baz=111,slow=5.1,SNR=2.8						
ASAR				LR	LR	02 11 02.9	
	comp=Z,81nm,18.3s,baz=118,slow=37						
WB2	Warramunga Arr	48.14	262	*e*P	P	01 50 27.1	-1.7
	10nm,1.0s						
WRAB	Tennant Creek	48.15	262	*e*P	P	01 50 27.7	-1.0
	10nm,1.0s						
WR1	Warramunga Arr	48.15	262	*e*P	P	01 50 27.0	-1.9
	12nm,1.0s						
WR1				*e*PcP	PcP	01 51 57.0	+0.8
WRA	Warramunga Arr	48.16	262	P	P	01 50 27.0	-1.9
	4.8nm,0.9s,baz=97,slow=8.1,SNR=74						
WRA				PcP	PcP	01 51 57.0	+0.8
	1.1nm,0.6s,baz=97,slow=3.2,SNR=3.8						
MTN	Manton Dam	52.87	270	*e*P	P	01 51 03.5	-1.0
	29nm,1.3s						
VNDA	Vanda	57.48	186	P	P	01 51 37.6	+0.8
	0.5nm,0.7s,baz=344,slow=8.0,SNR=3.8						
MBWA	Marble Bar	61.28	257	*e*P	P	01 52 03.3	-0.8
	15nm,1.3s						
CASY	Casey	64.84	206	*e*P	P	01 52 27.7	+0.9
	7.4nm,1.0s						
MJAR	Matsushiro Arr	73.09	321	P	P	01 53 18.7	+0.1
	0.9nm,0.5s,baz=170,slow=6.0,SNR=3.6						
MAJO	Matsushiro	73.09	321	*e*P	P	01 53 18.6	+0.1
ASAJ	Asahikawa	76.24	329	LR	LR	02 26 38.5	
	comp=Z,26nm,18.3s,baz=52,slow=35						
LPIG	La Paz	76.67	57	LR	LR	02 20 53.7	
	comp=Z,40nm,18.3s,baz=216,slow=31						
RCWM	Renegade Canyo	78.01	44	*e*P	P	01 53 44.5	-2.4
PETK	Petropavlovsk-	78.05	343	P	P	01 53 47.2	+0.7
	6.5nm,0.7s,baz=125,slow=6.0						
PEA1	Petropavlovsk-	78.05	343	*e*P	P	01 53 47.2	+0.6
MLKM	Mammoth Lakes	78.23	42	*e*P	P	01 53 48.9	+0.6
YBH	Yreka Blue Hor	78.66	37	P	P	01 53 51.4	+1.1
	1.7nm,0.8s,baz=198,slow=3.2,SNR=3.7						
NV01	Mina Array Sit	79.12	41	*e*P	P	01 53 53.4	+0.3
NVAR	Mina Array Bea	79.12	41	P	P	01 53 53.9	+0.8
	1.2nm,0.7s,baz=218,slow=8.7,SNR=5.2						
KSRS	Korea Array	79.97	317	P	P	01 53 57.4	-0.1
	0.7nm,0.7s,baz=155,slow=7.7,SNR=3.5						
KSRS				LR	LR	02 26 22.7	
	comp=Z,16nm,18.8s,baz=200,slow=34						
KS15	Wonju Array Si	79.99	317	*e*P	P	01 53 57.4	-0.2
KSAR	Wonju Array Be	79.99	317	P	P	01 53 57.4	-0.2
USRK	Ussuriysk Ar.	81.74	324	P	P	01 54 07.6	+0.9
	1.5nm,0.9s,baz=152,slow=9.5						
USRK				LR	LR	02 25 50.6	
	comp=Z,49nm,19.5s,baz=39,slow=32						
F10A	Beach Ranch, E	84.42	36	*e*P	P	01 54 20.8	0.0
	5.5nm,1.0s						
SUA	Susitna One	84.58	11	*e*P	P	01 54 21.4	+0.2
	7.2nm,0.7s						
DIV	Divide	85.25	13	*e*P	P	01 54 25.1	+0.7
	12nm,1.0s						
BMRM	Bremner River	85.36	14	*e*P	P	01 54 25.6	+0.6
	18nm,1.2s						
AHID	Auburn Hatcher	86.10	41	*e*P	P	01 54 33.2	+3.9
	15nm,0.8s						
CAST	Castle Rocks	86.18	10	*e*P	P	01 54 28.2	-0.8
	4.6nm,0.9s						
TRF	Thorofare Moun	86.51	10	*e*P	P	01 54 30.9	+0.1
	9.8nm,0.8s						
MCK	McKinley	87.00	11	*e*P	P	01 54 33.6	+0.5
	9.3nm,0.9s						
PD31	Pinedale Array	87.05	42	*e*P	P	01 54 33.5	-0.6
PDAR	Pinedale Array	87.05	42	P	P	01 54 33.5	-0.6
	0.3nm,0.6s,baz=225,slow=7.1,SNR=3.1						

SNAA	**Sanae**	**87.08**	**177**	P	**P**	**01 54 33.1**	**-0.5**
	1.7nm,0.9s,baz=180,slow=6.1,SNR=4.2						
SNAA	**Sanae**	**87.08**	**177**	*e*P	**P**	**01 54 33.1**	**-0.5**
	4.4nm,1.2s						
HDA	**Harding Lake**	**87.98**	**11**	*e*P	**P**	**01 54 38.2**	**+0.5**
	3.7nm,0.7s						
CCB	**Clear Creek Bu**	**88.04**	**11**	*e*P	**P**	**01 54 38.2**	**+0.2**
	9.4nm,1.3s						
IL1	**Eielson Array**	**88.32**	**11**	*e*P	**P**	**01 54 39.0**	**-0.2**
ILAR	**Eielson Array**	**88.32**	**11**	P	**P**	**01 54 39.4**	**+0.1**
	1.7nm,0.9s,baz=215,slow=5.3,SNR=13						
ILB	**Eielson Array**	**88.32**	**11**	*e*P	**P**	**01 54 39.8**	**+0.5**
DAWY	**Dawson**	**89.26**	**14**	*e*P	**P**	**01 54 44.9**	**+1.1**
	7.1nm,1.4s						
CM31	**Chiang Mai Arr**	**93.88**	**288**	*e*P	**P**	**01 55 07.4**	**+1.2**
CMAR	**Chiang Mai Arr**	**93.88**	**288**	P	**P**	**01 55 07.4**	**+1.2**
	1.4nm,0.3s,baz=115,slow=1.7,SNR=5.4						
SONA0	**Songino Array**	**98.80**	**318**	*e*P	Pdif	01 55 29.7	+1.6
SONM	**Songino Array**	**98.80**	**318**	P	Pdif	01 55 29.7	+1.6
	0.2nm,0.3s,baz=151,slow=3.3,SNR=3.2						
MK32	**Makanchi Array**	**114.44**	**313**	*e*PKiKP	PKPdf	02 00 26.3	-1.7
MKAR	**Makanchi Array**	**114.44**	**313**	PKP	PKPdf	02 00 26.3	-1.7
	0.3nm,0.5s,baz=85,slow=3.0,SNR=5.0						
KURK	**Kurchatov**	**117.09**	**317**	*e*PKPdf	**PKPdf**	**02 00 31.9**	**-1.1**
KURBB	**Kurchatov Arra**	**117.15**	**317**	PKP	**PKPdf**	**02 00 31.9**	**-1.2**
	1.0nm,0.7s,baz=97,slow=1.9,SNR=11						
BVAR	**Borovoye Array**	**122.07**	**320**	PKP	**PKPdf**	**02 00 42.4**	**-0.1**
	2.0nm,0.6s,baz=96,slow=2.4,SNR=13						
AKTO	**Aktyubinsk**	**130.11**	**319**	PKP	**PKPdf**	**02 00 57.7**	**-0.3**
	0.7nm,0.6s,baz=68,slow=5.4,SNR=4.0						
ARA0	**ARCESS Array S**	**130.32**	**351**	*e*PKPdf	**PKPdf**	**02 00 57.2**	**-0.6**
ARCES	**ARCESS Array B**	**130.32**	**351**	PKP	**PKPdf**	**02 00 57.2**	**-0.6**
	1.1nm,0.8s,baz=5.7,slow=3.7,SNR=5.1						
SUW	**Suwalki**	**144.81**	**342**	*e*PKPdf	PKPbc	02 01 23.6	-0.2
EKA	**Eskdalemuir Ar**	**145.33**	**9**	PKPbc	**PKPab**	**02 01 25.5**	**-0.1**
	0.3nm,0.5s,baz=342,slow=3.7,SNR=3.6						
AKASG	**Malin Array Be**	**145.44**	**334**	PKPbc	**PKPbc**	**02 01 25.4**	**-0.6**
	0.9nm,0.4s,baz=38,slow=3.3,SNR=8.1						
AKBB	**Malin Array Si**	**145.44**	**334**	*e*PKPbc	**PKPab**	**02 01 26.5**	**+0.3**
KIEV	**Kiev**	**145.45**	**334**	*e*PKPbc	**PKPab**	**02 01 26.0**	**-0.2**
AK11	**Malin Array Si**	**145.48**	**334**	*e*PKPdf	**PKPab**	**02 01 26.0**	**-0.3**
BUR04	**Bucovina Ar. S**	**149.49**	**334**	*e*PKPbc	**PKPbc**	**02 01 39.1**	**+1.7**
CLL	**Collm**	**149.55**	**351**	*i* PKPbc	**PKPbc**	**02 01 37.5**	**+0.2**
	comp=Z,6.0nm,1.0s						
BR131	**Keskin Array S**	**150.08**	**314**	*e*PKPbc	**PKPbc**	**02 01 39.7**	**+0.5**
ANTO	**Ankara**	**150.57**	**315**	*e*PKPbc	**PKPbc**	**02 01 41.3**	**+1.0**
GEC2	**GERESS Array S**	**151.83**	**349**	*e*PKPbc	**PKPbc**	**02 01 42.6**	**-0.4**
GERES	**GERESS Array B**	**151.83**	**349**	PKPbc	**PKPbc**	**02 01 42.6**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=336,slow=4.6,SNR=5.4						
GEA0	**GERESS Array S**	**151.83**	**349**	*e*PKPbc	**PKPbc**	**02 01 42.8**	**-0.2**

JMA ***17*** *01:58:14.8, 23°.86N×121°.52E, h7^{km}±3^{km}, M2.8*
ISCJB ***17*** *01:58:15.7±0.2, 23°.90N±0°.01×121°.52E±0°.02, h17^{km}±2^{km},*
Error ellipse: s-maj=2.6km s-min=1.7km az=35.2
TAP ***17*** *01:58:15.3, 23°.91N×121°.48E, h15^{km}, ML3.6, B*
ISC 17 01:58:15.5±0.7**, 23°.90N**±0°.02×**121°.49E**±0°.02**, h17**^{km}±3^{km}**,**
n92, σ0^{s}.68/138**, 5C-13D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENLB	**Shoufeng**	**0.10**	**90**	⇑P	**Pb**	**01 58 19.1**	**+0.2**
	baz=94						
ENLB				S	**Sb**	**01 58 21.9**	**+0.6**
	baz=94						
ESL	**Shilin**	**0.11**	**212**	⇑*i*P	**Pg**	**01 58 18.9**	**-0.2**
	baz=201						
ESL				S	**Sg**	**01 58 21.0**	**-0.4**
	baz=201						
HWA	**Hwalien**	**0.12**	**55**	*e*P	**Pb**	**01 58 19.9**	**+0.5**
	baz=61						
HWA				S	**Sb**	**01 58 23.1**	**+1.0**
	baz=61						
TWD	**Chiawan**	**0.20**	**28**	⇑P	**Pb**	**01 58 20.4**	**-0.3**
	baz=27						
TWD				S	**Sg**	**01 58 23.4**	**-0.2**
	baz=27						
EGFH	**Guangfu**	**0.24**	**195**	⇑P	**Pg**	**01 58 20.9**	**-0.1**
	baz=197						
EGFH				S	**Sg**	**01 58 24.1**	**-0.6**
	baz=197						
NACB	**Ninganchiao**	**0.28**	**19**	⇓P	**Pg**	**01 58 21.5**	**-0.2**
	baz=21						
NACB				S	**Sg**	**01 58 25.2**	**-0.7**
	baz=21						
WHF	**Hehuan Shan**	**0.32**	**319**	⇓*i*P	**Pg**	**01 58 22.2**	**-0.3**
	baz=312						
WHF				S	**Sg**	**01 58 26.6**	**-0.7**
	baz=312						
CHGB	**Renai**	**0.33**	**298**	⇓P	**Pg**	**01 58 22.5**	**-0.1**
	baz=302						
CHGB				S	**Sg**	**01 58 27.3**	**-0.2**
	baz=302						
HGSD	**Ruisui**	**0.41**	**189**	*e*P	**Pg**	**01 58 24.0**	**+0.1**
	baz=197						
EHY	**Hungye**	**0.43**	**202**	*e*P	**Pg**	**01 58 23.6**	**-0.6**
	baz=193						
EHY				*e*S	**Sg**	**01 58 29.8**	**-0.2**
	baz=193						
TWT	**Tachien**	**0.45**	**320**	⇓P	**Pb**	**01 58 24.9**	**-0.2**
	baz=313						
TWT				S	**Sg**	**01 58 30.9**	**-0.1**
	baz=313						
TDCB	**Techi**	**0.46**	**319**	⇓P	**Pb**	**01 58 25.0**	**-0.3**
	baz=313						
TDCB				*e*S	**Sg**	**01 58 30.8**	**-0.4**
	baz=313						
SSLB	**Suanglung**	**0.51**	**257**	⇓P	**Pg**	**01 58 25.4**	**-0.3**
	baz=264						
SSLB				S	**Sg**	**01 58 31.3**	**-1.2**
	baz=264						
NNSB	**Datong**	**0.53**	**349**	⇓P	**Pb**	**01 58 26.1**	**-0.4**
	baz=349						
NNSB				S	**Sg**	**01 58 32.9**	**-0.5**
	baz=349						
YULB	**Yu-li**	**0.54**	**200**	⇓*e*P	**Pg**	**01 58 24.8**	**-1.4**
	baz=190						
YULB				*e*S	**Sb**	**01 58 34.0**	**0.0**
	baz=190						
SMLT	**Sun Moon Lake**	**0.54**	**268**	⇓*i*P	**Pb**	**01 58 26.3**	**-0.4**
	baz=275						
SMLT				*i* S	**Sg**	**01 58 33.4**	**-0.3**
	baz=275						
NNS	**Nan Shan**	**0.55**	**348**	⇓P	**Pb**	**01 58 26.3**	**-0.4**
	baz=349						
NNS				S	**Sg**	**01 58 33.4**	**-0.4**
	baz=349						
ENA	**Nanau**	**0.57**	**23**	P	**Pg**	**01 58 26.4**	**-0.4**
	baz=25						
ENA				*e*S	**Sg**	**01 58 34.2**	**-0.2**
	baz=25						
NANB	**Nanao**	**0.57**	**24**	⇑P	**Pg**	**01 58 26.4**	**-0.5**
	baz=25						
NANB				S	**Sg**	**01 58 33.8**	**-0.7**
	baz=25						
TWF1	**Yuli**	**0.58**	**198**	*e*P	**Pg**	**01 58 25.5**	**-1.4**
	baz=196						
TYC	**Yuchr**	**0.58**	**270**	⇓*i*P	**Pg**	**01 58 26.7**	**-0.3**
	baz=277						
TYC				S	**Sg**	**01 58 34.1**	**-0.7**
	baz=277						
YUS	**Yu-Shan**	**0.65**	**230**	P	**Pg**	**01 58 28.3**	**-0.1**
	baz=217						
YUS				S	**Sg**	**01 58 36.5**	**-0.5**
	baz=217						
WJS	**Zhushan**	**0.71**	**263**	*e*P	**Pn**	**01 58 30.0**	**-0.7**
	baz=265						
WJS				*e*S	**Sn**	**01 58 40.7**	**-0.5**
	baz=265						
FULB	**Fuli**	**0.73**	**195**	*e*P	**Pg**	**01 58 28.7**	**-1.0**
	baz=204						
ENTT	**Nioudou**	**0.74**	**5**	P	**Pb**	**01 58 29.7**	**-0.1**
	baz=6.0						
ENTT				*e*S	**Sg**	**01 58 38.8**	**-0.9**
	baz=6.0						
WNT	**Mingjian**	**0.74**	**268**	*e*P	**Pn**	**01 58 30.5**	**-0.7**
	baz=268						
YHNB	**Yeheng**	**0.77**	**352**	⇓P	**Pb**	**01 58 30.6**	**+0.1**
	baz=344						
YHNB				S	**Sg**	**01 58 40.1**	**-0.6**
	baz=344						
TWC	**Suao**	**0.77**	**25**	*e*P	**Pg**	**01 58 29.8**	**-0.8**
	baz=20						
TWC				*e*S	**Sg**	**01 58 40.5**	**-0.3**
	baz=20						
NSK	**Sanguang**	**0.78**	**351**	P	**Pb**	**01 58 30.6**	**0.0**
	baz=344						
NSK				S	**Sg**	**01 58 40.0**	**-1.1**
	baz=344						
CHN5	**Tsauling**	**0.81**	**248**	⇓*i*P	**Pn**	**01 58 31.7**	**-0.5**
	baz=237						
CHN5				S	**Sn**	**01 58 44.1**	**+0.2**
	baz=237						
CHKT	**Chengkung**	**0.81**	**188**	*e*P	**Pb**	**01 58 30.2**	**-0.9**
	baz=186						
CHKT				*e*S	**Sb**	**01 58 42.4**	**+0.7**
	baz=186						
TWE	**Neicheng**	**0.83**	**11**	*e*P	**Pb**	**01 58 30.9**	**-0.5**
	baz=12						
TWE				*e*S	**Sb**	**01 58 42.4**	**0.0**
	baz=12						
ELDTW	**Lidau**	**0.84**	**212**	*e*P	**Pg**	**01 58 31.1**	**-0.7**
	baz=198						
NSY	**Sanyi**	**0.84**	**307**	P	**Pn**	**01 58 32.9**	**+0.3**
	baz=307						
NSY				S	**Sn**	**01 58 44.5**	**-0.1**
	baz=307						
NSTT	**Nanjuang**	**0.85**	**328**	*e*P	**Pg**	**01 58 31.7**	**-0.4**
	baz=329						
NSTT				*e*S	**Sb**	**01 58 42.4**	**-0.6**
	baz=329						
SLBB	**Yuanshan**	**0.86**	**9**	*e*P	**Pg**	**01 58 32.1**	**-0.1**
	baz=10.0						
LIOB	**Emei**	**0.86**	**330**	*e*P	**Pn**	**01 58 32.3**	**-0.5**
	baz=331						
EOS1	**EOS1**	**0.86**	**42**	*e*P	**Pn**	**01 58 32.6**	**-0.2**
	baz=32						
NWLT	**Wulai**	**0.87**	**1**	*e*P	**Pg**	**01 58 32.3**	**-0.1**
	baz=16						
WCHH	**Zhanghua**	**0.87**	**282**	*e*P	**Pn**	**01 58 32.7**	**-0.3**
	baz=281						
WGK	**Gukeng**	**0.88**	**256**	*e*P	**Pn**	**01 58 32.9**	**-0.2**
	baz=255						
NMLH	**Miaoli**	**0.90**	**315**	*e*P	**Pn**	**01 58 34.0**	**+0.7**
	baz=315						
PTSB	**Yuanli**	**0.90**	**307**	*e*P	**Pn**	**01 58 33.9**	**+0.5**
	baz=317						
PTSB				*e*S	**Sn**	**01 58 47.0**	**+0.9**
	baz=317						
CHN4	**Tsaushan**	**0.99**	**236**	P	**Pn**	**01 58 35.0**	**+0.4**
	baz=229						
CHN4				S	**Sn**	**01 58 49.5**	**+1.2**
	baz=229						
NTC	**Toucheng**	**0.99**	**18**	*e*P	**Pg**	**01 58 34.5**	**-0.3**
	baz=20						
TPUB	**Ta-pu**	**0.99**	**233**	*e*P	**Pn**	**01 58 34.8**	**+0.1**
	baz=225						
TPUB				*e*S	**Sn**	**01 58 48.6**	**+0.2**
	baz=225						
SBCB	**Hsinchu**	**1.00**	**332**	*e*P	**Pn**	**01 58 36.1**	**+1.4**
	baz=334						
STYT	**Tauyuan**	**1.00**	**223**	*e*P	**Pb**	**01 58 34.5**	**+0.1**
	baz=222						
EGS		**1.02**	**23**	*e*P	**Pg**	**01 58 35.0**	**-0.3**
	baz=25						
RLNB	**Erlin**	**1.04**	**270**	*e*P	**Pg**	**01 58 35.3**	**-0.3**
	baz=269						
RLNB				*e*S	**Sn**	**01 58 50.6**	**+1.2**
	baz=269						
WTP	**Ta-pu**	**1.04**	**231**	*e*P	**Pg**	**01 58 35.6**	**-0.1**
	baz=229						
WTP				*e*S	**Sn**	**01 58 50.1**	**+0.6**
	baz=229						
CHY	**Chiayi**	**1.06**	**248**	*e*P	**Pn**	**01 58 35.4**	**-0.1**
	baz=247						
TATO	**Taipei**	**1.07**	**360**	*e*P	**Pg**	**01 58 35.7**	**-0.4**
	baz=10.0						
NCUH	**Zhongli**	**1.10**	**345**	*e*P	**Pg**	**01 58 37.0**	**+0.3**
	baz=357						
NCU	**National Centr**	**1.10**	**345**	*e*P	**Pg**	**01 58 37.4**	**+0.7**
	baz=357						
TIPB	**Shuangxi**	**1.10**	**16**	*e*P	**Pb**	**01 58 36.0**	**-0.2**
	baz=17						
TIPB				*e*S	**Sb**	**01 58 50.0**	**-0.3**
	baz=17						
TWK	**Hsinying**	**1.12**	**236**	*e*P	**Pg**	**01 58 37.1**	**-0.1**
	baz=228						
TWK				*e*S	**Sn**	**01 58 52.9**	**+1.4**
	baz=228						
TAP1	**Taipei**	**1.13**	**1**	*e*P	**Pg**	**01 58 37.4**	**+0.1**
	baz=3.0						
CHN1	**Nanshi**	**1.14**	**231**	*e*P	**Pg**	**01 58 37.3**	**-0.3**
	baz=220						
CHN1				*e*S	**Sg**	**01 58 54.3**	**+1.9**
	baz=220						
TWG	**Pinlang**	**1.15**	**200**	*e*P	**Pn**	**01 58 36.6**	**-0.2**
	baz=185						
TWGBT	**Beinan**	**1.15**	**199**	*e*P	**Pn**	**01 58 36.5**	**-0.3**
	baz=185						
SGST	**Jiashian**	**1.17**	**226**	*e*P	**Pg**	**01 58 37.9**	**-0.2**
	baz=225						
TWH	**Lutao**	**1.19**	**181**	*e*P	**Pn**	**01 58 35.0**	**-2.3**
	baz=178						
NWF	**Wu-fen Shan**	**1.19**	**13**	*e*P	**Pg**	**01 58 38.5**	**-0.1**
	baz=15						
WFSB	**Wu-fen Shan**	**1.19**	**13**	*e*P	**Pg**	**01 58 38.2**	**-0.3**
	baz=15						
TWS1	**Kuangyinshan**	**1.19**	**357**	*e*P	**Pg**	**01 58 38.6**	**+0.1**
	baz=6.0						
SLGT	**Liugui**	**1.20**	**221**	*e*P	**Pn**	**01 58 37.6**	**+0.2**
	baz=220						
YM04	**YM04**	**1.25**	**2**	*e*P	**Pn**	**01 58 38.0**	**-0.1**
	baz=5.0						
YM10	**YM10**	**1.25**	**3**	*e*P	**Pn**	**01 58 38.0**	**-0.3**
	baz=6.0						
YM11	**YM11**	**1.26**	**3**	*e*P	**Pg**	**01 58 39.5**	**-0.3**
	baz=6.0						
YM03	**YM03**	**1.27**	**2**	*e*P	**Pn**	**01 58 38.6**	**+0.1**
	baz=5.0						
YM07	**YM07**	**1.27**	**5**	*e*P	**Pn**	**01 58 38.0**	**-0.5**
	baz=14						
CHN8	**Yiju**	**1.30**	**245**	*e*P	**Pg**	**01 58 41.0**	**+0.4**
	baz=244						
TWY	**Chenhua**	**1.37**	**4**	*e*P	**Pg**	**01 58 41.2**	**-0.7**
	baz=7.0						
SSD	**Sandimen**	**1.40**	**215**	*e*P	**Pb**	**01 58 41.6**	**+0.5**
	baz=226						
YOJ	**Yonaguni jima**	**1.49**	**68**	*e*P	**Pn**	**01 58 41.6**	**+0.1**
	baz=66						
YOJ	**Yonaguni jima**	**1.49**	**68**	P	**Pb**	**01 58 42.3**	**-0.5**
YOJ				*e*S	**Sn**	**01 59 00.4**	**-0.2**
MASBT	**Mashibuluo**	**1.51**	**212**	*e*P	**Pn**	**01 58 42.4**	**+0.6**
	baz=200						
WDGT	**Dungji**	**1.80**	**250**	*e*P	**Pn**	**01 58 46.0**	**+0.2**
	baz=233						
WDGT				*e*S	**Sb**	**01 59 09.9**	**-0.4**
	baz=233						
PHUB	**P'eng-hu**	**1.80**	**258**	*e*P	**Pn**	**01 58 46.1**	**+0.4**
	baz=257						
PHUB				*e*S	**Sb**	**01 59 10.0**	**-0.4**
	baz=257						
PNG	**Penghu**	**1.81**	**260**	*e*P	**Pn**	**01 58 46.1**	**+0.2**
	baz=258						
VCHM	**Qimei**	**2.02**	**250**	*e*P	**Pn**	**01 58 49.8**	**+1.1**
	baz=248						
TWKBT	**Hengchun**	**2.05**	**198**	*e*P	**Pn**	**01 58 50.0**	**+0.8**
	baz=187						
IRIF	**Iriomote-Funau**	**2.09**	**78**	P	**Pn**	**01 58 49.8**	**+0.1**
IRIF				*e*S	**Sn**	**01 59 15.9**	**+0.6**
HATJ	**Hateruma jima**	**2.12**	**85**	P	**Pn**	**01 58 51.7**	**+1.6**
HATJ				*e*S	**Sn**	**01 59 17.9**	**+1.8**
VWUC	**VWUC**	**2.15**	**301**	*e*P	**Pn**	**01 58 50.3**	**-0.3**
	baz=303						
JKRS	**Kuro-shima**	**2.32**	**81**	P	**Pn**	**01 58 54.6**	**+1.7**
JKRS				S	**Sn**	**01 59 22.9**	**+1.8**
JIJ	**Ishigaki jima**	**2.46**	**79**	P	**Pn**	**01 58 54.9**	**0.0**
JIJ				*e*S	**Sn**	**01 59 24.2**	**-0.4**
MATB	**Ma-tsu**	**2.64**	**328**	*e*P	**Pn**	**01 58 57.4**	**+0.1**
	baz=335						
JISG	**Ishigakijimahi**	**2.66**	**75**	P	**Pn**	**01 58 57.4**	**-0.2**
JISG				*e*S	**Sn**	**01 59 28.8**	**-0.6**
KNM	**Kinmen**	**2.84**	**281**	*e*P	**Pn**	**01 59 02.1**	**+2.0**
	baz=280						
KNMB	**Chin-men Tao**	**2.89**	**282**	*e*P	**Pn**	**01 59 01.0**	**+0.2**
	baz=282						

TRN 17 02:23:33.0, 10°.36N×62°.15W, h9^{km}, MD3.5, Near coast of Venezuela

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPP	**Pointe-a-Pierr**	**0.69**	**93**	*e*P	Pg	02 23 46.2	-0.1
TPP				*e*S	Sg	02 23 56.0	+0.6
TRN	**Trinidad (W)**	**0.79**	**69**	*e*P	Pb	02 23 48.9	0.0
TRN				*e*S	Sb	02 24 00.1	+0.4
GRGR	**Grenville**	**1.83**	**15**	*e*P	Pn	02 24 05.1	+0.4
GRGR				*e*S	Sn	02 24 28.3	+0.3
TOSP	**Speyside**	**1.84**	**59**	*e*P	Pn	02 24 04.9	+0.1
TOSP				*e*S	Sb	02 24 29.6	-0.5
SVB	**Belmont**	**3.03**	**17**	*e*S	Sn	02 24 57.3	-0.2
SVCV	**St. Vincent, C**	**3.06**	**19**	*e*P	Pn	02 24 22.0	+0.4
SVV	**Soufriere Volc**	**3.08**	**17**	*e*P	Pn	02 24 23.4	+1.5
MCLT	**Moule a Chique**	**3.54**	**19**	*e*S	Sn	02 25 08.8	-1.2

MEX 17 02:32:52.6±1.2**, 17°.26N×94°.78W, h153**^{km}±19^{km}**, MD4.0, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TUIG	**Tuzandepetl**	**0.84**	**24**	*i* P	Pn	02 33 10.9	-5.5
TUIG				*i* S	Sn	02 33 28.1	-6.6
TGIG		**1.66**	**107**	*e*P	Pn	02 33 23.3	-0.9
TGIG				*i* S	Sn	02 33 46.0	-2.3
VHO	**Vista Hermosa**	**1.88**	**265**	*e*P	Pn	02 33 25.3	-1.4
VHO				*e*S	Sn	02 33 51.3	-1.5
HUIG	**Huatulco**	**1.95**	**221**	*e*P	Pn	02 33 25.2	-2.2
HUIG				*e*S	Sn	02 33 53.0	-1.2
CCIG	**Comitan**	**2.71**	**111**	*e*P	Pn	02 33 36.3	-0.4
CCIG				*i* S	Sn	02 34 08.1	-2.7

ISCJB ***17*** *02:35:32.3±0.3, 20°.15S±0°.02×68°.96W±0°.04, h103^{km}±2^{km},*
mb4.5/101, Error ellipse: s-maj=6.0km s-min=3.7km
az=170.6
GUC ***17*** *02:35:34.8±0.6, 20°.24S×69°.17W, h96^{km}±3^{km}, ML4.7*
IDC ***17*** *02:35:34.9±0.5, 20°.16S×68°.99W, h105^{km}±3^{km}, mb4.0/22,*
mb1 4.1/24, mb1mx4.1/40, mbtmp4.4/24, MS3.0/3,
Ms1 3.1/3, ms1mx2.8/38, Error ellipse: s-maj=13.6km
s-min=10.6km az=69.0
NEIC ***17*** *02:35:35.0±0.0, 20°.24S×69°.14W, h94^{km}, mb4.6/89,*
ML4.7(GUC), After GUC.
NEIC Felt [V] at Alto Hospicio and Iquique; [IV] at Pica; [III] at
Cuya; [II] at La Tirana and Pisagua. Also felt at Arica.
ISC 17 02:35:34.4±0.3**, 20°.26S**±0°.03×**69°.09W**±0°.05**, h105**^{km}±2^{km}**,**
h105^{km}:pP-P, n497, σ1^{s}.27/555**, mb4.6**/101**, 9C-2D,**
Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**0.13**	**332**	⇓*i*P	**Pn**	**02 35 49.3**	**-0.2**
PB08				*i* S	**Sn**	**02 36 00.1**	**-0.6**
PB08				IAML		02 36 00.5	
	comp=N,65µm,0.2s						
PB11	**IPOC Station P**	**0.73**	**313**	*e*Pn	**Pn**	**02 35 51.2**	**-1.5**
PB11				*e*Sn	**Sn**	**02 36 04.0**	**-2.4**
PB11	**IPOC Station P**	**0.73**	**313**	⇑*i*P	**Pn**	**02 35 52.0**	**-0.7**
PB11				*e*S	**Sn**	**02 36 05.3**	**-1.1**
PB01	**IPOC Station P**	**0.87**	**205**	*e*Pn	**Pn**	**02 35 53.7**	**-0.3**
PB01				*e*Sn	**Sn**	**02 36 07.8**	**-0.8**
PB01	**IPOC Station P**	**0.87**	**205**	⇑*i*P	**Pn**	**02 35 53.8**	**-0.1**
PB01				*i* S	**Sn**	**02 36 08.2**	**-0.4**
PB01				IAML		02 36 09.2	
	comp=E,26µm,0.2s						
PSGC	**Pisagua**	**1.18**	**304**	⇑*i*P	**Pn**	**02 35 56.2**	**-1.0**
PSGC				*i* S	**Sn**	**02 36 13.0**	**-1.4**
PSGC				IAML		02 36 14.3	
	comp=E,27µm,0.4s						
MNMC	**Minye Minye**	**1.22**	**337**	*e*Pn	**Pn**	**02 35 57.5**	**-0.4**
MNMC				*e*Sn	**Sn**	**02 36 12.4**	**-3.2**
MNMC	**Minye Minye**	**1.22**	**337**	⇑*i*P	**Pn**	**02 35 58.0**	**+0.1**
MNMC				*e*S	**Sn**	**02 36 15.1**	**-0.5**
MNMC				IAML		02 36 17.6	
	comp=E,61µm,0.2s						
PB09	**IPOC Station P**	**1.54**	**185**	⇑*i*P	**Pn**	**02 36 02.2**	**+0.7**
PB09				*e*S	**Sn**	**02 36 23.1**	**+1.0**
PB09				IAML		02 36 24.6	
	comp=N,11µm,0.6s						
PB07	**IPOC Station P**	**1.64**	**207**	⇑*i*P	**Pn**	**02 36 02.5**	**-0.3**
PB07				*e*S	**Sn**	**02 36 23.7**	**-0.7**
PB07				IAML		02 36 27.0	
	comp=E,10µm,0.4s						
PB03	**IPOC Station P**	**1.89**	**199**	⇓*i*P	**Pn**	**02 36 05.9**	**0.0**
PB03				*i* S	**Sn**	**02 36 29.6**	**-0.2**
PB03				IAML		02 36 35.3	
	comp=E,6µm,0.5s						
PB16	**IPOC Station P**	**1.95**	**348**	⇑*i*P	**Pn**	**02 36 08.1**	**+1.0**
PB16				*i* S	**Sn**	**02 36 33.2**	**+1.2**
PB16				IAML		02 36 35.0	
	comp=E,4µm,0.5s						
PB12	**IPOC Station P**	**2.01**	**324**	⇑*i*P	**Pn**	**02 36 06.6**	**-0.8**
PB12				*i* S	**Sn**	**02 36 31.5**	**-1.1**
PB12				IAML		02 36 35.4	
	comp=N,11µm,0.8s						
PB04	**IPOC Station P**	**2.29**	**205**	*e*Pn	**Pn**	**02 36 11.3**	**+0.2**
PB04				*e*Sn	**Sn**	**02 36 36.5**	**-2.7**
PB06	**IPOC Station P**	**2.48**	**190**	*e*P	**Pn**	**02 36 13.1**	**-0.4**
PB06				*e*S	**Sn**	**02 36 42.0**	**-1.5**
PB10	**IPOC Station P**	**3.52**	**203**	*e*Pn	**Pn**	**02 36 25.8**	**-1.4**
PB10				*e*Sn	**Sn**	**02 37 04.5**	**-3.4**
LPAZ	**La Paz**	**4.05**	**13**	P	**Pn**	**02 36 37.2**	**+2.2**
	comp=N,27nm,0.3s,baz=199,slow=3.5,SNR=714						
LPAZ				S	**Sn**	**02 37 23.5**	**+1.7**
	baz=206,slow=18,SNR=1.5						
LPAZ				LR	LR	02 38 42.1	
	comp=N,284nm,21.4s,baz=246,slow=48						
LPAZ	**La Paz**	**4.05**	**13**	*e*Pn	**Pn**	**02 36 37.4**	**+2.4**
LPAZ				*e*Sn	**Sn**	**02 37 16.2**	**-5.5**
GO02	**Mina Guanaco**	**4.90**	**185**	*e*Pn	**Pn**	**02 36 45.1**	**-1.1**
GO02				*e*Sn	**Sn**	**02 37 40.2**	**-1.7**
GO03	**Copiap**	**7.38**	**188**	*e*Pn	**Pn**	**02 37 15.7**	**-3.8**
GO03				*e*Sn	**Sn**	**02 38 35.0**	**-6.6**
SIV	**San Ignacio**	**8.72**	**62**	P	**Pn**	**02 37 36.1**	**-1.7**
	comp=N,4.1nm,0.3s,baz=263,slow=12,SNR=69						
SIV				S	**Sn**	**02 39 11.2**	**-3.3**
	baz=254,slow=17,SNR=2.8						
LCO	**Las Campanas**	**8.84**	**189**	*e*Pn	Pn	02 37 46.6	+7.1
GO04	**Tololo Observa**	**9.99**	**189**	*e*Pn	Pn	02 38 01.4	+6.2
NNA	**Nana**	**11.09**	**317**	P	**Pn**	**02 38 06.5**	**-3.5**
	comp=N,2.7nm,0.3s,baz=239,slow=10,SNR=5.1						
NNA				S	Sn	02 40 02.6	-10
	comp=N,1.9nm,0.3s,baz=135,slow=8.6,SNR=2.3						
NNA				LR	LR	02 42 08.2	
	comp=N,35nm,19.9s,baz=171,slow=36						
NNA	**Nana**	**11.09**	**317**	*e*Pn	**Pn**	**02 38 06.0**	**-4.0**
NNA				*e*Sn	**Sn**	**02 40 09.7**	**-2.5**
CPUP	**Villa Florida**	**12.38**	**121**	P	**Pn**	**02 38 25.7**	**-1.3**
	comp=N,1.6nm,0.3s,baz=305,slow=12,SNR=51						
CPUP	**Villa Florida**	**12.38**	**121**	*e*Pn	**Pn**	**02 38 26.0**	**-1.0**
SAML	**Samuel**	**12.61**	**28**	*e*Pn	**Pn**	**02 38 28.2**	**-1.9**
ROC1	**El Roble**	**12.78**	**187**	*e*Pn	**Pn**	**02 38 32.5**	**0.0**
TRQA	**Tornquist**	**18.78**	**162**	*e*P	**P**	**02 39 46.1**	**+0.7**
	comp=N,33nm,0.9s						
SPB	**Sao Paulo**	**20.36**	**103**	*e*P	**P**	**02 40 01.8**	**-0.9**
	comp=N,12nm,0.8s						
PLCA	**Paso Flores**	**20.45**	**183**	P	**P**	**02 40 04.9**	**+1.3**
	comp=N,23nm,0.9s,baz=29,slow=12,SNR=20						
PLCA	**Paso Flores**	**20.45**	**183**	*e*P	**P**	**02 40 05.0**	**+1.3**
	comp=N,27nm,0.8s						
BDFB	**Brasilia**	**20.56**	**81**	*e*P	**P**	**02 40 05.2**	**+0.1**
	comp=N,32nm,1.0s						
PTGA	**Pitinga**	**21.36**	**26**	P	**P**	**02 40 11.3**	**-2.1**
	comp=N,4.6nm,0.4s,baz=209,slow=18,SNR=18						
PTGA	**Pitinga**	**21.36**	**26**	*e*P	**P**	**02 40 11.4**	**-2.1**
	comp=N,4.1nm,0.6s						
PTGA				*e*pP	**pP**	**02 40 32.6**	**-0.9**
OTAV	**Otavalo**	**22.34**	**335**	*e*P	**P**	**02 40 29.6**	**+5.4**
	comp=N,15nm,1.1s						
OTAV	**Otavalo**	**22.34**	**335**	*e*P	**P**	**02 40 28.2**	**+3.9**
SOTA	**Rioblanco**	**23.44**	**341**	*e*P	**P**	**02 40 37.5**	**+2.4**
YOTC	**Yotoco, Valle**	**25.12**	**343**	*e*P	**P**	**02 40 50.3**	**+0.4**
RUSC	**La Rusia**	**26.28**	**351**	*e*P	**P**	**02 41 00.8**	**0.0**
	comp=N,6.6nm,0.7s						
RUSC	**La Rusia**	**26.28**	**351**	*e*P	**P**	**02 41 01.2**	**+0.4**
RUSC				*e*S	**pP**	**02 41 24.4**	**+0.7**
BARC	**Barichara**	**26.98**	**351**	*e*P	**P**	**02 41 07.7**	**+0.9**
HELC	**Santa Helena**	**27.04**	**346**	*e*P	**P**	**02 41 06.6**	**-0.7**
	comp=N,15nm,0.5s						
HELC	**Santa Helena**	**27.04**	**346**	*e*P	**P**	**02 41 06.7**	**-0.7**
PTBC	**PUERTO BERRIO,**	**27.15**	**348**	*e*P	**P**	**02 41 05.7**	**-2.4**
PTBC				*e*S	**pP**	**02 41 28.4**	**-2.7**
ZARC	**Zaragoza, Cauc**	**28.15**	**348**	*e*P	**P**	**02 41 15.2**	**-1.8**
PCRV	**Puerto La Cruz**	**30.56**	**9**	P	**P**	**02 41 38.7**	**+0.4**
	comp=N,3.3nm,0.4s,baz=179,slow=14,SNR=4.4						
JTS	**JuntasAbangare**	**34.14**	**331**	P	**P**	**02 42 09.7**	**+0.1**
	comp=N,1.8nm,0.6s,baz=143,slow=20,SNR=1.9						

JTS				LR	LR	02 54 52.4	
	comp=N,44nm,18.8s,baz=176,slow=34						
SVB	Belmont	34.20	14	*e*P	P	02 42 07.8	-2.3
	comp=N,89nm,1.2s						
RCBR	Riachuelo	35.27	71	*e*P	P	02 42 18.4	-1.1
	comp=N,17nm,1.0s						
OBIP	Obispado Ponce	38.14	4	*e*P	P	02 42 42.2	-1.3
	comp=N,33nm,1.5s						
SJG	San Juan	38.24	5	P	P	02 42 43.1	-1.3
	comp=N,5.4nm,0.5s,baz=204,slow=20,SNR=3.7						
SJG	San Juan	38.24	5	*e*P	P	02 42 42.8	-1.6
	comp=N,9.5nm,0.9s						
MTP	Monte Pirata	38.27	5	*e*P	P	02 42 43.6	-1.1
	comp=N,32nm,1.3s						
CBYP	Canovanas	38.42	5	*e*P	P	02 42 44.3	-1.7
	comp=N,22nm,1.1s						
AOPR	Arecibo Observ	38.43	4	*e*P	P	02 42 44.0	-2.0
	comp=N,33nm,1.1s						
ABVI	Anegada Island	39.02	7	*e*P	P	02 42 48.9	-2.1
	comp=N,98nm,0.8s						
059Z	Ave Maria	47.84	345	P	P	02 44 02.9	+1.2
	baz=164						
060A	Indiantown	48.27	346	P	P	02 44 06.1	+1.2
	baz=166						
LNIG	Linares	53.74	325	*e*P	P	02 44 43.9	-2.1
	comp=N,4.7nm,1.0s						
ZAIG	Zacatecas	53.82	321	*e*P	P	02 44 49.1	+2.1
	comp=N,6.0nm,0.8s						
RGRS	Roger Stewart	53.92	348	*e*P	P	02 44 48.2	+1.1
	comp=N,232nm,0.5s						
NHSC	New Hope	54.11	349	P	P	02 44 48.9	+0.4
	baz=167						
NHSC	New Hope	54.11	349	*e*P	P	02 44 49.3	+0.8
	comp=N,19nm,0.7s						
349A	Repton	54.17	341	P	P	02 44 48.9	-0.1
	baz=159						
251A	Midway	54.35	343	P	P	02 44 49.7	-0.6
	baz=161						
347A	Saraland	54.65	340	P	P	02 44 52.4	0.0
	baz=158						
152A	Waverly Hall	54.71	344	P	P	02 44 52.7	-0.2
	baz=162						
Z54A	Sparta	54.79	346	P	P	02 44 53.1	-0.3
	baz=164						
346A	Big Creek Wild	54.95	339	P	P	02 44 54.6	0.0
	baz=157						
150A	Eclectic	55.01	343	P	P	02 44 54.7	-0.3
	baz=161						
248A	Dixon Mills	55.03	341	P	P	02 44 55.0	-0.3
	baz=159						
Z52A	Williamson	55.13	344	P	P	02 44 55.7	-0.2
	baz=162						
149A	Jones	55.22	342	P	P	02 44 55.9	-0.6
	baz=160						
Y54A	Tignall	55.36	346	P	P	02 44 57.2	-0.3
	baz=165						
Y53A	Monroe	55.56	345	P	P	02 44 58.4	-0.5
	baz=164						
Z50A	Ashland	55.59	343	P	P	02 44 58.7	-0.5
	baz=161,SNR=7.2						
Z50A	Ashland	55.59	343	*e*P	P	02 44 58.9	-0.3
	comp=N,7.2nm,0.8s						
Z50A				*e*pP	pP	02 45 25.2	+0.7
Y52A	Lilburn	55.68	345	P	P	02 44 59.1	-0.7
	baz=163						
245A	Little AP, Sta	55.68	339	P	P	02 44 59.6	-0.3
	baz=156						
LRAL	Lakeview Retre	55.69	342	P	P	02 44 59.3	-0.6
	baz=160						
Z49A	Columbiana	55.70	342	P	P	02 44 59.5	-0.5
	baz=160						
Y51A	Rockmart	55.97	344	P	P	02 45 01.5	-0.4
	baz=162						
342A	Flagon Creek P	55.97	336	P	P	02 45 02.5	+0.6
	baz=154						
342A	Flagon Creek P	55.97	336	*e*P	P	02 45 01.4	-0.5
	comp=N,18nm,0.8s						
X53A	Estanollee	56.11	346	P	P	02 45 02.4	-0.5
	baz=164						
Y50A	Piedmont	56.14	343	P	P	02 45 02.9	-0.2
	baz=161						
Z47A	Carrollton	56.16	341	P	P	02 45 02.2	-1.1
	baz=159						
Z48A	Northport	56.17	341	P	P	02 45 02.3	-1.0
	baz=159						
Y49A	Blount Mountai	56.29	343	P	P	02 45 04.1	-0.1
	baz=160						
X52A	Dahlonega	56.34	345	P	P	02 45 04.3	-0.3
	baz=163						
X51A	Calhoun	56.55	344	P	P	02 45 05.8	-0.1
	baz=162						
X50B	Fort Payne	56.65	344	P	P	02 45 06.5	-0.3
	baz=161						
W53A	Cullowhee	56.72	346	P	P	02 45 07.1	-0.2
	baz=164						
Y47A	UCPARC, Winfie	56.75	341	P	P	02 45 06.9	-0.5
	baz=159						
X49A	Woodville	56.88	343	P	P	02 45 07.8	-0.5
	baz=161						
X48A	Hartselle	57.03	342	P	P	02 45 08.8	-0.6
	baz=160						
X48A	Hartselle	57.03	342	*e*P	P	02 45 09.2	-0.2
	comp=N,6.3nm,0.8s						
Y46A	Houston	57.04	340	P	P	02 45 08.7	-0.8
	baz=158						
W51A	Cleveland	57.09	345	P	P	02 45 09.4	-0.4
	baz=162						
240A	Hunter Patters	57.12	335	P	P	02 45 09.4	-0.7
	baz=152						
V53A	Saluda	57.12	347	P	P	02 45 09.8	-0.3
	baz=165						
Z43A	Armstrong Fami	57.22	338	P	P	02 45 10.6	-0.1
	baz=155						
Y45A	Yeager Farm, C	57.24	340	P	P	02 45 10.7	-0.2
	baz=157						
W50A	Signal Mountai	57.26	344	P	P	02 45 10.7	-0.4
	baz=162						
W50A	Signal Mountai	57.26	344	*e*P	P	02 45 10.9	-0.2
	comp=N,5.5nm,0.8s						
X47A	Russelville	57.32	342	P	P	02 45 10.5	-1.0
	baz=159,SNR=5.0						
TKL	Tuckaleechee C	57.33	346	P	P	02 45 10.7	-0.8
	comp=N,4.3nm,0.9s,baz=146,slow=12,SNR=5.5						
TKL	Tuckaleechee C	57.33	346	*e*P	P	02 45 10.7	-0.8
	comp=N,4.9nm,0.9s						
W49A	Belvidere	57.44	343	P	P	02 45 11.6	-0.7
	baz=161						
SWET	Sewanee	57.44	344	*e*P	P	02 45 12.1	-0.2
	comp=N,6.1nm,0.7s						
SWET				*e*pP	pP	02 45 40.9	+3.1
V52A	Sevierville	57.46	346	P	P	02 45 11.8	-0.7
	baz=164						
V52A	Sevierville	57.46	346	*e*P	P	02 45 12.4	0.0
	comp=N,7.6nm,1.0s						
V52A				*e*pP	pP	02 45 39.0	+1.1
Y44A	Strider, Charl	57.55	339	P	P	02 45 12.5	-0.6
	baz=156						
X46A	Booneville	57.58	341	P	P	02 45 12.3	-1.0
	baz=158						
V51A	Loudon	57.60	345	P	P	02 45 12.8	-0.6
	baz=163						
W48A	Pulaski	57.64	343	P	P	02 45 13.1	-0.6
	baz=160,SNR=5.7						
V50A	Pikevile	57.66	345	P	P	02 45 13.5	-0.3
	baz=162,SNR=8.3						
X45A	UM Field Stati	57.71	340	P	P	02 45 13.3	-0.9
	baz=158						
OXF	Oxford	57.80	340	P	P	02 45 13.7	-1.1
	baz=158						
PLAL	Pickwick Lake	57.82	342	*e*P	P	02 45 14.2	-0.7
	comp=N,6.2nm,1.0s						
W47A	Westpoint	57.93	342	P	P	02 45 14.9	-0.8
	baz=160						
U52A	Thorn Hill	57.94	346	P	P	02 45 14.6	-1.2
	baz=164						
V49A	McMinnville	57.95	344	P	P	02 45 15.2	-0.7
	baz=161,SNR=6.7						
Z40A	Long Farm, Mag	58.06	336	P	P	02 45 17.5	+0.8
	baz=153						
U51A	La Follette	58.07	346	P	P	02 45 16.6	-0.1
	baz=164						
TZTN	Tazewell	58.12	346	P	P	02 45 16.8	-0.3
	baz=164						
BLA	Blacksburg	58.15	349	P	P	02 45 17.6	+0.4
	baz=168						
V48A	Smith Brothers	58.17	343	P	P	02 45 16.9	-0.5
	baz=160,SNR=5.7						
V48A	Smith Brothers	58.17	343	*e*P	P	02 45 17.0	-0.4
	comp=N,7.2nm,0.8s						
U50A	Jamestown	58.30	345	P	P	02 45 17.7	-0.6
	baz=163						
W45A	Hickory Valley	58.32	341	P	P	02 45 17.4	-1.0
	baz=158						
IP05	Hopewell Churc	58.35	352	*e*P	P	02 45 20.1	+1.5
	comp=N,35nm,0.1s						
V47A	Nunnelly	58.45	342	P	P	02 45 18.4	-1.0
	baz=160						
V46A	Holladay	58.59	342	P	P	02 45 19.1	-1.3
	baz=159						
T51A	Gray	58.62	346	P	P	02 45 20.0	-0.5
	baz=164						
U49A	Red Boiling Sp	58.63	344	P	P	02 45 19.7	-0.8
	baz=162						
Y40A	Okolona	58.68	337	P	P	02 45 20.1	-0.8
	baz=153						
WVT	Waverly	58.82	342	P	P	02 45 20.8	-1.0
	baz=160						
WVT	Waverly	58.82	342	*e*P	P	02 45 21.0	-0.9
	comp=N,8.6nm,0.7s						
WVT				*e*pP	pP	02 45 47.1	-0.3
U48A	Cassie Pea, Po	58.82	344	P	P	02 45 21.2	-0.6
	baz=161						
T50A	Nancy	58.88	345	P	P	02 45 21.6	-0.6
	baz=163						
U47A	Clarksville	58.96	343	P	P	02 45 22.0	-0.9
	baz=160						
T49A	Edmonton	59.12	345	P	P	02 45 23.5	-0.5
	baz=162,SNR=5.1						
T49A	Edmonton	59.12	345	*e*P	P	02 45 23.6	-0.5
	comp=N,6.6nm,0.8s						
U46A	Springville	59.13	342	P	P	02 45 23.5	-0.6
	baz=159						
S51A	Beattyville	59.18	347	P	P	02 45 23.8	-0.6
	baz=164						
W42A	Bald Knob	59.19	339	P	P	02 45 23.9	-0.5
	baz=156						
MIAR	Mount Ida	59.27	337	P	P	02 45 25.1	0.0
	baz=153,SNR=6.4						
MIAR	Mount Ida	59.27	337	*e*P	P	02 45 25.1	0.0
	comp=N,4.8nm,0.7s						
U45A	Rockin P Farm,	59.29	342	P	P	02 45 24.6	-0.6
	baz=159						
T48A	Bowling Green	59.35	344	P	P	02 45 24.8	-0.7
	baz=161						
W41B	Gary Mavity, V	59.35	338	P	P	02 45 24.9	-0.7
	baz=155						
S50A	Richmond	59.40	346	P	P	02 45 25.3	-0.6
	baz=163						
T47A	Sharon Grove	59.42	343	P	P	02 45 25.3	-0.7
	baz=160						
T47A	Sharon Grove	59.42	343	*e*P	P	02 45 25.8	-0.2
	comp=N,11nm,0.8s						
T47A				*e*pP	pP	02 45 56.2	+4.6
X39A	Fountain Ranch	59.44	336	P	P	02 45 26.7	+0.5
	baz=153,SNR=5.9						
U44B	Burton Farm, H	59.46	341	P	P	02 45 25.9	-0.4
	baz=158						
LTX	Lajitas	59.52	325	*e*P	P	02 45 26.7	-0.3
TXAR	Lajitas Array	59.52	325	P	P	02 45 26.7	-0.3
	comp=N,0.8nm,0.7s,baz=160,slow=11,SNR=7.3						
TXAR				pP	pP	02 45 52.7	+0.1
	comp=N,0.4nm,0.6s,baz=149,slow=9.9,SNR=3.0						
V42A	Cord	59.63	339	P	P	02 45 26.9	-0.5
	baz=156						
W40A	Ferguson Farm,	59.66	337	P	P	02 45 27.9	+0.2
	baz=154						
W40A	Ferguson Farm,	59.66	337	*e*P	P	02 45 28.3	+0.6
	comp=N,19nm,1.1s						
T46A	Princeton	59.69	343	P	P	02 45 27.0	-0.9
	baz=160						
S49A	Springfield	59.71	345	P	P	02 45 27.0	-1.0
	baz=162						
S48A	Wiedeman Farm,	59.78	344	P	P	02 45 27.6	-0.9
	baz=162						
R51A	Hillsboro	59.82	347	P	P	02 45 28.0	-0.7
	baz=164						
U43A	Rector	59.82	340	P	P	02 45 28.1	-0.6
	baz=157						
V41A	Mountainview	59.87	338	P	P	02 45 28.4	-0.7
	baz=155						
W39A	Magazine	59.92	337	P	P	02 45 29.7	+0.2
	baz=153						
W39A	Magazine	59.92	337	*e*P	P	02 45 30.3	+0.8
	comp=N,6.5nm,0.9s						
S47A	Hartford	59.93	344	P	P	02 45 29.1	-0.4
	baz=161						
R50A	Paris	59.96	346	P	P	02 45 29.4	-0.3
	baz=164						
U42A	Revenden	60.07	339	P	P	02 45 29.8	-0.6
	baz=156						
V40A	Witts Springs	60.12	338	P	P	02 45 30.5	-0.4
	baz=154						
V40A	Witts Springs	60.12	338	*e*P	P	02 45 30.7	-0.2
	comp=N,5.5nm,0.9s						
ABTX	Abilene, Hawle	60.16	330	P	P	02 45 31.6	+0.4
	baz=147						
R49A	Shelbyville	60.17	345	P	P	02 45 30.5	-0.6
	baz=163						
PBMO	Poplar Bluff	60.20	340	*e*P	P	02 45 30.9	-0.4
	comp=N,10nm,0.6s						
T44A	Benton	60.23	341	P	P	02 45 30.9	-0.6
	baz=158						
S46A	Don Dixon Farm	60.24	343	P	P	02 45 30.8	-0.8
	baz=160						
U41A	Viola	60.29	339	P	P	02 45 31.2	-0.8
	baz=155						
WCI	Wyandotte Cave	60.38	344	P	P	02 45 31.5	-1.1
	baz=162						
Q50A	Georgetown	60.42	347	P	P	02 45 32.2	-0.7
	baz=164						
T43A	Greenville	60.44	341	P	P	02 45 32.4	-0.5
	baz=157,SNR=7.5						
MCWV	Mont Chateau	60.44	350	P	P	02 45 33.6	+0.6
	baz=168						
MCWV	Mont Chateau	60.44	350	*e*P	P	02 45 34.1	+1.1
	comp=N,9.9nm,0.8s						
V39A	Pettigrew	60.45	337	P	P	02 45 33.1	0.0
	baz=154,SNR=13						
Q51A	Peebles	60.47	347	P	P	02 45 33.2	+0.1
	baz=165						
S45A	Carrier Mills	60.48	342	P	P	02 45 33.2	0.0
	baz=159						
U40A	Yellville	60.63	338	P	P	02 45 33.8	-0.5
	baz=154						
T42A	Van Buren	60.64	340	P	P	02 45 33.5	-0.9
	baz=156						
T42A	Van Buren	60.64	340	*e*P	P	02 45 33.7	-0.7
	comp=N,3.2nm,0.6s						
S44A	Carbondale	60.69	342	P	P	02 45 34.0	-0.6
	baz=158						
S43A	Fulton Ridge,	60.82	341	P	P	02 45 34.9	-0.7
	baz=158,SNR=6.4						
O56A	Blue Knob Stat	60.86	352	P	P	02 45 36.8	+1.0
	baz=170						
U39A	Green Forest	60.87	338	P	P	02 45 35.5	-0.5
	baz=154,SNR=5.8						
T41A	Mountain View	60.88	339	P	P	02 45 35.2	-0.8
	baz=156						
Q48A	North Vernon	60.91	345	P	P	02 45 35.2	-0.9
	baz=162						
HHAR	Hobbs	60.95	337	*e*P	P	02 45 36.5	0.0
	comp=N,10nm,1.2s						
R45A	Skylar, Fairfi	60.97	343	P	P	02 45 35.8	-0.7
	baz=160						
Q47A	Bedord North L	61.08	345	P	P	02 45 36.5	-0.7
	baz=162						
P50A	Jamestown	61.12	347	P	P	02 45 36.9	-0.7
	baz=164						
R44A	Waltonville	61.15	342	P	P	02 45 37.1	-0.7
	baz=159						
S42A	Caledonia	61.23	340	P	P	02 45 37.3	-1.0
	baz=157						
P49A	Miami Univ. Ec	61.25	346	P	P	02 45 37.3	-1.1
	baz=163						
FVM	French Village	61.31	341	*e*P	P	02 45 40.0	+1.1
	comp=N,15nm,0.9s						
P48A	Milroy	61.34	346	P	P	02 45 38.0	-1.0
	baz=163						
S41A	Jillco Farms,	61.37	340	P	P	02 45 38.5	-0.7
	baz=156						
R43A	Red Bud	61.43	341	P	P	02 45 38.8	-0.8
	baz=158						
Q45A	Warren Harvey,	61.49	343	P	P	02 45 39.6	-0.5
	baz=160						
ACSO	Alum Creek Sta	61.55	348	P	P	02 45 39.5	-1.0
	baz=165						
P47A	Martinsville	61.56	345	P	P	02 45 39.6	-0.9
	baz=162						
O50A	Cable	61.60	347	P	P	02 45 39.9	-0.9
	baz=165						
S40A	Lebanon	61.63	339	P	P	02 45 40.4	-0.6
	baz=155,SNR=6.0						
CCM	Cathedral Cave	61.63	340	P	P	02 45 41.2	+0.2
	baz=156						
CCM	Cathedral Cave	61.63	340	*e*P	P	02 45 41.4	+0.4
	comp=N,7.1nm,1.0s						
R42A	Luebbering	61.69	341	P	P	02 45 40.9	-0.5
	baz=157,SNR=5.2						
N54A	Moraine State	61.74	351	P	P	02 45 42.0	+0.2
	baz=168						
Q44A	Meyer Farm, Va	61.74	342	P	P	02 45 40.7	-1.0
	baz=159						
T38A	Diamond	61.75	337	P	P	02 45 41.8	-0.1
	baz=153,SNR=11						
O49A	Covington	61.79	347	P	P	02 45 41.1	-0.9
	baz=164						
R41A	Rosebud	61.89	340	P	P	02 45 42.4	-0.4
	baz=156,SNR=5.9						
P46A	Rosedale	61.92	344	P	P	02 45 41.8	-1.1
	baz=161						
Q43A	New Douglas	61.97	342	P	P	02 45 42.5	-0.8
	baz=158						
P45A	Graceland, Par	61.98	344	P	P	02 45 42.2	-1.1
	baz=160						
P45A	Graceland, Par	61.98	344	*e*P	P	02 45 42.5	-0.8
	comp=N,17nm,0.9s						
S39A	Bolivar	61.99	338	P	P	02 45 43.0	-0.4
	baz=154,SNR=16						
S39A	Bolivar	61.99	338	*e*P	P	02 45 43.3	-0.1
	comp=N,12nm,0.6s						
O48A	Farmland	62.04	346	P	P	02 45 42.9	-0.8
	baz=163						
N50A	Nevada	62.11	348	P	P	02 45 43.8	-0.3
	baz=165						
S38A	Stockton	62.14	338	P	P	02 45 44.0	-0.5
	baz=154						
P44A	Sand Creek, Wi	62.16	343	P	P	02 45 43.5	-1.0
	baz=159						
R40A	Maddies Statio	62.17	339	P	P	02 45 44.1	-0.5
	baz=155						
R40A	Maddies Statio	62.17	339	*e*P	P	02 45 44.5	-0.2
	comp=N,4.9nm,0.8s						
Q42A	Golden Eagle	62.20	341	P	P	02 45 44.3	-0.4
	baz=157						
M54A	Oil Creek Stat	62.23	351	P	P	02 45 45.4	+0.4
	baz=169						
M54A	Oil Creek Stat	62.23	351	*e*P	P	02 45 45.7	+0.7
	comp=N,12nm,0.8s						
O47A	Sheridan	62.25	345	P	P	02 45 44.1	-1.0
	baz=162						
MNTX	Cornudas Mount	62.28	325	P	P	02 45 44.5	-1.0
	baz=141						
MNTX	Cornudas Mount	62.28	325	*e*P	P	02 45 45.6	0.0
	comp=N,3.0nm,1.0s						
Q41A	Truxton	62.45	341	P	P	02 45 45.9	-0.5
	baz=157						
R39A	Chumby, Stover	62.45	339	P	P	02 45 46.5	0.0
	baz=155						
BINY	Binghamton	62.47	354	P	P	02 45 47.1	+0.5
	baz=173						
P43A	Skaggs, Pawnee	62.57	342	P	P	02 45 46.1	-1.1
	baz=158						
SFIN	Lafayette	62.61	345	P	P	02 45 46.2	-1.3
	baz=161,SNR=5.8						
SFIN	Lafayette	62.61	345	*e*P	P	02 45 46.6	-0.9
	comp=N,12nm,0.6s						
R38A	Fenwick Farm,	62.64	338	P	P	02 45 47.5	-0.2
	baz=154,SNR=13						
O45A	Potomac	62.65	344	P	P	02 45 46.5	-1.3
	baz=160,SNR=12						
Q40A	Laux Farm, Aux	62.75	340	P	P	02 45 47.6	-0.8
	baz=156						
MSTX	Muleshoe	62.75	329	P	P	02 45 47.7	-1.1
	baz=144						
P42A	Winchester	62.76	342	P	P	02 45 47.6	-0.9
	baz=158						
P42A	Winchester	62.76	342	*e*P	P	02 45 48.0	-0.5
	comp=N,10nm,0.8s						
ERPA	Erie	62.87	351	P	P	02 45 49.2	0.0
	baz=169						
N46A	Monticello	63.01	345	P	P	02 45 49.0	-1.2
	baz=162						
Q39A	Willow Grove F	63.09	339	P	P	02 45 50.5	-0.3
	baz=155,SNR=9.3						
O43A	Sugar Creek Fa	63.11	343	P	P	02 45 49.6	-1.3
	baz=159						
P40A	Paris	63.23	340	P	P	02 45 51.2	-0.5
	baz=156,SNR=6.0						
P40A	Paris	63.23	340	*e*P	P	02 45 51.5	-0.1
	comp=N,9.8nm,0.8s						
Q38A	Cooks Store, C	63.23	339	P	P	02 45 51.6	0.0
	baz=154,SNR=9.4						
O42A	Bath	63.25	342	P	P	02 45 50.5	-1.2
	baz=158						
N44A	Piper City	63.27	344	P	P	02 45 50.6	-1.3
	baz=160						
O41A	Passleys Farm,	63.41	341	P	P	02 45 51.7	-1.0
	baz=157						
P39B	Salisbury	63.42	340	P	P	02 45 52.4	-0.5
	baz=155,SNR=6.8						
Q37A	Longview Farm,	63.44	338	P	P	02 45 52.7	-0.4
	baz=153						
SNAA	Sanae	63.50	161	P	P	02 45 54.1	+0.9
	comp=N,3.9nm,0.9s,baz=275,slow=8.1,SNR=20						
SNAA	Sanae	63.50	161	*e*P	P	02 45 54.1	+0.9
	comp=N,4.6nm,0.9s						
N43A	Stutzman Famil	63.68	343	P	P	02 45 53.8	-0.7
	baz=159,SNR=7.5						
O40A	La Belle	63.72	341	P	P	02 45 54.1	-0.7
	baz=156,SNR=5.7						
P38A	Dawn	63.80	339	P	P	02 45 54.9	-0.4
	baz=154						
P38A	Dawn	63.80	339	*e*P	P	02 45 55.2	-0.2
	comp=N,14nm,1.0s						
N42A	Yates City	63.82	342	P	P	02 45 54.6	-0.9
	baz=158						
N41A	Harden Midland	63.94	342	P	P	02 45 55.6	-0.7
	baz=157						
P37A	Lathrop	64.04	338	P	P	02 45 56.5	-0.5
	baz=154						
M43A	Waltham Townsh	64.09	343	P	P	02 45 56.2	-1.0
	baz=159						
319A	Douglas	64.21	322	*e*P	P	02 46 00.1	+1.7
	comp=N,7.7nm,0.9s						
O38A	Galt	64.23	339	P	P	02 45 57.5	-0.7
	baz=155						
M42A	Sheffield	64.32	343	P	P	02 45 57.4	-1.3
	baz=159						
N40A	Mertquake, Sal	64.32	341	P	P	02 45 57.8	-1.0
	baz=157						
M41A	Milan	64.47	342	P	P	02 45 58.9	-0.8
	baz=158						
O37A	Wolven Farm, M	64.49	339	P	P	02 45 59.4	-0.5
	baz=154						
N39A	Derby Farms, D	64.60	341	P	P	02 46 00.0	-0.6
	baz=156						
N39A	Derby Farms, D	64.60	341	*e*P	P	02 46 00.3	-0.3
	comp=N,9.4nm,1.0s						
L43A	Garden Prairie	64.73	344	P	P	02 46 00.8	-0.6
	baz=160						
LONY	Lake Ozonia	64.75	356	P	P	02 46 01.7	+0.2
	baz=174						
M40A	Post Highland	64.78	342	P	P	02 46 00.9	-0.8
	baz=157						
L42A	Oliver, Polo	64.81	343	P	P	02 46 00.7	-1.2
	baz=159						
N37A	Lee Faris, Mou	65.05	339	P	P	02 46 03.1	-0.4
	baz=154,SNR=5.7						
N37A	Lee Faris, Mou	65.05	339	*e*P	P	02 46 03.7	+0.2
	comp=N,26nm,0.7s						
N37A				*e*pP	pP	02 46 29.6	+0.1
M39A	Webster	65.05	341	P	P	02 46 02.6	-0.9
	baz=156						
L41A	Preston	65.10	343	P	P	02 46 02.8	-1.0
	baz=158						
K43A	Burlington	65.11	344	P	P	02 46 02.8	-1.1
	baz=160						
L40A	Anamosa	65.30	342	P	P	02 46 04.7	-0.4
	baz=157						
M38A	Pleasantville	65.31	340	P	P	02 46 04.5	-0.7
	baz=155,SNR=5.1						
N36A	Muff Farm, Cla	65.35	339	P	P	02 46 05.3	-0.1
	baz=153						
ANMO	Albuquerque	65.37	327	P	P	02 46 05.3	-0.7

	comp=N,1.2nm,0.8s,baz=190,slow=6.1,SNR=5.6						
ANMO	Albuquerque	65.37	327	P	P	02 46 06.4	+0.4
	baz=141						
ANMO	Albuquerque	65.37	327	*e*P	P	02 46 06.8	+0.8
	comp=N,1.3nm,0.8s						
TASL	Snake Pit, Alb	65.37	327	P	P	02 46 06.0	0.0
	baz=141						
TASM	ASL Pad, Albuq	65.37	327	P	P	02 46 06.5	+0.5
	baz=141						
K42A	Prairie Point,	65.44	344	P	P	02 46 05.7	-0.3
	baz=159						
K41A	Shullsburg	65.54	343	P	P	02 46 06.3	-0.3
	baz=158						
M37A	Trindle Farm,	65.57	340	P	P	02 46 07.0	+0.1
	baz=154						
L39A	Vinton	65.58	341	P	P	02 46 06.4	-0.5
	baz=156						
TUC	Tucson	65.76	322	P	P	02 46 10.3	+1.9
	baz=137						
J43A	Natural Harves	65.77	345	P	P	02 46 07.6	-0.5
	baz=160						
JFWS	Jewell Farm	65.81	343	P	P	02 46 07.9	-0.5
	baz=158						
K40A	Colesburg	65.86	342	P	P	02 46 08.0	-0.7
	baz=157						
M36A	Felix, Anita	65.87	339	P	P	02 46 08.7	-0.1
	baz=154						
J42A	Columbus	65.89	344	P	P	02 46 08.1	-0.8
	baz=160						
L38A	Oak Wood Farm,	65.89	341	P	P	02 46 08.9	0.0
	baz=156						
K39A	Oelwein	66.08	342	P	P	02 46 09.3	-0.8
	baz=157						
T25A	Trinidad	66.09	330	P	P	02 46 09.7	-0.9
	baz=144						
L37A	Phoenix Point,	66.13	340	P	P	02 46 09.8	-0.7
	baz=155						
J41A	Loganville	66.17	343	P	P	02 46 09.7	-0.9
	baz=159						
I43A	Langenfeld Bro	66.18	345	P	P	02 46 10.1	-0.6
	baz=160						
K38A	Parkersburg	66.29	341	P	P	02 46 10.9	-0.6
	baz=156						
J40A	Soldiers Grove	66.39	343	P	P	02 46 11.6	-0.5
	baz=158						
L36A	Harm Buss Farm	66.40	339	P	P	02 46 11.7	-0.4
	baz=154						
J39A	Decorah	66.61	342	P	P	02 46 12.9	-0.5
	baz=157,SNR=7.9						
H43A	Windswept, Lux	66.64	346	P	P	02 46 12.7	-0.9
	baz=161						
K37A	Belmond	66.67	341	P	P	02 46 13.1	-0.7
	baz=155,SNR=5.1						
214A	Organ Pipe Nat	66.70	320	P	P	02 46 15.7	+1.3
	baz=135						
I41A	Arkdale	66.78	344	P	P	02 46 14.2	-0.3
	baz=159						
K36A	Gilmore City	66.81	340	P	P	02 46 14.6	-0.2
	baz=154						
J38A	Wedel Dairy, R	66.82	342	P	P	02 46 13.7	-1.1
	baz=156						
I40A	Norwalk	66.82	343	P	P	02 46 14.0	-0.8
	baz=158						
BGNE	Belgrade	67.01	337	P	P	02 46 15.4	-0.7
	baz=150						
I39A	Houston	67.03	343	P	P	02 46 15.6	-0.6
	baz=157						
I39A	Houston	67.03	343	*e*P	P	02 46 16.1	-0.1
	comp=N,8.8nm,0.8s						
SDCO	Great Sand Dun	67.10	329	P	P	02 46 18.0	+0.9
	baz=143,SNR=5.7						
SDCO	Great Sand Dun	67.10	329	*e*P	P	02 46 18.0	+0.9
	comp=N,7.0nm,1.4s						
SDCO				*e*pP	PcP	02 46 45.5	+0.9
J37A	Redenius Farm,	67.14	341	P	P	02 46 16.3	-0.5
	baz=155						
H41A	Junction City	67.24	344	P	P	02 46 16.6	-0.9
	baz=159						
F45A	CMU Biological	67.30	348	P	P	02 46 17.0	-0.8
	baz=163						
H40A	Chili	67.44	344	P	P	02 46 18.1	-0.5
	baz=158						
I38A	Scanlan Farm,	67.44	342	P	P	02 46 17.7	-0.9
	baz=156						
G42A	Mountain	67.52	345	P	P	02 46 18.5	-0.7
	baz=160						
X16A	Lo Mia Camp, P	67.67	323	*e*P	P	02 46 22.8	+2.1
	comp=N,3.9nm,1.1s						
I37A	Lemond, Waseca	67.73	341	P	P	02 46 20.4	-0.2
	baz=155						
H39A	Augusta	67.73	343	P	P	02 46 20.2	-0.3
	baz=158						
OGNE	Ogallala	68.15	334	P	P	02 46 24.6	+1.2
	baz=147						
F41A	Three Lakes	68.15	345	P	P	02 46 23.1	-0.1
	baz=160						
Y14A	Wickenburg	68.22	322	*e*P	P	02 46 25.8	+1.9
	comp=N,2.5nm,0.6s						
G39A	Holcombe	68.26	343	P	P	02 46 23.4	-0.4
	baz=158						
H36A	Jessenland, He	68.40	341	P	P	02 46 24.7	0.0
	baz=155						
WUAZ	Wupatki	68.43	324	P	P	02 46 26.6	+1.3
	baz=137						
WUAZ	Wupatki	68.43	324	*e*P	P	02 46 27.2	+1.8
	comp=N,5.2nm,0.8s						
ECSD	EROS Data Cent	68.50	339	P	P	02 46 25.0	-0.4
	baz=152						
DBIC	Dimbokro	68.55	74	P	P	02 46 27.3	+1.0
	comp=N,8.6nm,1.1s,baz=230,slow=7.6,SNR=5.8						
DBIC				pP	pP	02 46 52.0	-0.6
	comp=N,22nm,1.2s,baz=193,slow=7.1,SNR=3.7						
DBIC	Dimbokro	68.55	74	*e*P	P	02 46 27.3	+1.0
	comp=N,28nm,1.5s						
DBIC				*e*pP	pP	02 46 52.0	-0.6
F40A	Park Falls	68.57	344	P	P	02 46 25.5	-0.2
	baz=159						
SPMN	Marine on St.	68.66	342	P	P	02 46 26.1	-0.2
	baz=156						
F39A	Loretta	68.78	344	P	P	02 46 26.6	-0.5
	baz=158						
H35A	Sunnyside Ranc	68.78	341	P	P	02 46 27.0	-0.1
	baz=154						
ISCO	Idaho Springs	68.79	331	P	P	02 46 28.4	+0.8
	baz=143						
SMCO	Snowmass	68.94	329	*e*P	P	02 46 30.3	+1.6
	comp=N,5.7nm,1.4s						
E40A	Wakefield	69.01	345	P	P	02 46 28.6	+0.1
	baz=159						
E39A	Mellen	69.11	344	P	P	02 46 29.2	+0.1
	baz=158						
G35A	Watkins	69.15	341	P	P	02 46 29.3	0.0
	baz=155						
D41A	Chassel	69.27	346	P	P	02 46 29.8	-0.2
	baz=161						
F36A	Milaca	69.44	342	P	P	02 46 30.7	-0.5
	baz=156						
H32A	Carlson Farm,	69.46	339	P	P	02 46 31.2	-0.2
	baz=152						
BC3	Big Chuckawall	69.48	320	P	P	02 46 32.3	+0.5
	baz=134						
W13A	Hualapai Mount	69.56	322	*e*P	P	02 46 34.6	+2.3
	comp=N,2.5nm,0.7s						
E38A	The Farm, Brul	69.58	344	P	P	02 46 31.5	-0.5
	baz=158						
U15A	North Rim	69.61	324	*e*P	P	02 46 34.9	+2.1
	comp=N,4.3nm,0.7s						
G33A	Ortonville	69.74	340	P	P	02 46 33.0	+0.1
	baz=153						
F35A	Swanville	69.75	341	P	P	02 46 32.7	-0.3
	baz=155						
F34A	Alexandria	69.90	341	P	P	02 46 34.4	+0.4
	baz=154						
QSPA	South Pole Qui	69.93	180	P	P	02 46 35.9	+1.8
	comp=N,2.3nm,0.4s,baz=149,slow=5.5,SNR=8.4						
SUSD	Miller	69.94	338	P	P	02 46 34.6	+0.3
	baz=150						
E36A	McGregor	69.97	342	P	P	02 46 34.5	+0.1
	baz=156						
109C	Camp Elliot, M	69.98	318	P	P	02 46 35.0	+0.3
	baz=132						
BELC	Belle Mtn. Jos	70.05	320	P	P	02 46 36.2	+0.9
	baz=133						
PFO	Pinyon Flats O	70.06	319	P	P	02 46 36.1	+0.7
	baz=133						
FRD	Ford Ranch, An	70.07	319	P	P	02 46 36.8	+1.4
	baz=133						
O20A	White River Ci	70.29	329	P	P	02 46 38.1	+1.3
	baz=141						
KNB	Kanab	70.33	324	*e*P	P	02 46 39.3	+2.3
	comp=N,9.7nm,1.0s						
GMRC	Granite Mounta	70.38	321	P	P	02 46 39.3	+1.9
	baz=134,SNR=5.1						
LCMT	Little Creek M	70.56	324	*e*P	P	02 46 40.6	+2.3
	comp=N,2.5nm,0.8s						
SRU	San Rafael Swe	70.65	327	*e*P	P	02 46 40.5	+1.5
	comp=N,5.0nm,0.8s						
MTPU	Mount Pierson	70.72	325	*e*P	P	02 46 41.9	+2.2
	comp=N,2.0nm,0.7s						
HEC	Hector,Ludlow	70.81	320	P	P	02 46 41.9	+2.0
	baz=133						
P18A	Preston Nutter	70.90	327	*e*P	P	02 46 42.4	+1.8
	comp=N,4.3nm,0.8s						
CCUT	Cedar City	71.01	324	*e*P	P	02 46 43.7	+2.5
	comp=N,7.4nm,0.8s						
CCUT				*e*pP	pP	02 47 09.9	+2.3
MSU	Marysvale	71.07	325	*e*P	P	02 46 43.4	+1.9
BFSC	Mount Baldy Ra	71.22	319	P	P	02 46 44.5	+2.1
	baz=132						
FMP	Fort Macarthur	71.27	318	P	P	02 46 43.8	+1.3
	baz=132						
SHPR	Sheep Range	71.28	322	*e*P	P	02 46 44.8	+2.0
	comp=N,3.4nm,0.8s						
GSC	Goldstone, Bar	71.42	320	P	P	02 46 45.5	+2.0
	baz=133						
RSSD	Black Hills	71.61	334	P	P	02 46 45.5	+0.9
	baz=146						
B35A	Bob, Littlefor	71.78	343	P	P	02 46 44.9	-0.4
	baz=156						
C33A	Trail	71.82	341	P	P	02 46 45.1	-0.4
	baz=154						
PSUT	Pine Spring	71.99	324	*e*P	P	02 46 49.2	+2.2
	comp=N,3.9nm,0.7s						
PSUT				*e*pP	pP	02 47 17.1	+3.6
BLG	Laguna Peak, P	72.01	318	P	P	02 46 47.7	+0.7
	baz=131						
TPNV	Topopah Spring	72.22	322	P	P	02 46 50.6	+2.2
	baz=134						
TPNV	Topopah Spring	72.22	322	*e*P	P	02 46 50.9	+2.5
	comp=N,4.6nm,0.7s						
JLU	Jordanelle	72.24	327	*e*P	P	02 46 50.8	+2.3
	comp=N,4.7nm,1.0s						
JLU				*e*PcP	PcP	02 47 00.2	-5.9
FURC	Furnace Creek,	72.25	321	P	P	02 46 50.8	+2.5
	baz=133						
AGMN	Agassiz Nation	72.33	342	P	P	02 46 48.6	+0.1
	baz=154						
MPMC	Manual Prospec	72.34	321	P	P	02 46 50.8	+1.7
	baz=133						
DUG	Dugway, Tooele	72.64	326	P	P	02 46 52.3	+1.6
	baz=137						
ISA	Isabella, Lake	72.67	320	P	P	02 46 52.9	+1.9
	baz=132,SNR=5.2						
ISA	Isabella, Lake	72.67	320	*e*P	P	02 46 53.1	+2.1
	comp=N,4.8nm,0.8s						
KOWA	Kowa	72.68	67	P	P	02 46 51.4	0.0
	comp=N,1.8nm,0.7s,baz=260,slow=8.7,SNR=8.0						
KOWA				pP	pP	02 47 18.2	+0.3
	comp=N,11nm,0.9s,baz=253,slow=6.0,SNR=12						
KOWA	Kowa	72.68	67	*e*P	P	02 46 51.4	0.0
KOWA				*e*pP	pP	02 47 18.6	+0.7
A33A	Warroad	72.77	342	P	P	02 46 51.1	-0.1
	baz=154						
R11A	Troy Canyon, C	72.81	323	P	P	02 46 53.9	+2.1
	baz=135,SNR=6.5						
R11A	Troy Canyon, C	72.81	323	*e*P	P	02 46 54.0	+2.1
	comp=N,2.2nm,0.7s						
CWC	Cottonwood Cre	72.95	320	P	P	02 46 54.7	+1.9
	baz=132						
BW06	Boulder Array	72.96	330	P	P	02 46 53.5	+0.7
	baz=140						
PD31	Pinedale Array	72.96	330	*e*P	P	02 46 53.0	+0.3
PD31				*e*pP	pP	02 47 22.4	+3.2
PDAR	Pinedale Array	72.96	330	P	P	02 46 53.0	+0.3
	comp=N,0.2nm,0.3s,baz=144,slow=5.3,SNR=4.6						
PDAR				pP	pP	02 47 22.4	+3.2
	comp=N,0.4nm,0.5s,baz=131,slow=4.1,SNR=2.9						
PDAR	Pinedale Array	72.96	330	*e*P	P	02 46 52.3	-0.4
PDAR				pP	pP	02 47 22.4	+3.2
PKM	Mcpherson Peak	72.98	318	P	P	02 46 55.1	+2.1
	baz=131						
HWUT	Hardware Ranch	73.05	328	*e*P	P	02 46 54.3	+1.1
	comp=N,2.8nm,0.8s						
MDND	Maddock	73.12	339	P	P	02 46 53.9	+0.6
	baz=150						
MDND	Maddock	73.12	339	*e*P	P	02 46 54.1	+0.9
	comp=N,20nm,0.7s						
VES	Vestal, Richgr	73.16	319	P	P	02 46 55.5	+1.8
	baz=131						
SMMC	Simmler	73.38	319	P	P	02 46 57.0	+1.9
	baz=131						
ULM	Lac du Bonnet	74.09	342	P	P	02 46 58.8	-0.1
	comp=N,5.2nm,0.5s,baz=156,slow=6.1,SNR=7.8						
ULM				pP	pP	02 47 25.7	+0.2
	comp=N,2.0nm,0.5s,baz=161,slow=7.7,SNR=2.4						
OMMB	Old Mammoth Mi	74.28	321	*e*P	P	02 47 02.7	+2.0
	comp=N,3.6nm,0.7s						
NV01	Mina Array Sit	74.42	322	*e*P	P	02 47 02.8	+1.5
NV01				*e*pP	pP	02 47 28.3	+0.3
NV01				*e*sP	sP	02 47 40.0	+0.8
NVAR	Mina Array Bea	74.42	322	P	P	02 47 02.6	+1.3
	comp=N,2.0nm,0.8s,baz=154,slow=7.2,SNR=8.5						
NVAR				pP	pP	02 47 28.3	+0.3
	comp=N,1.2nm,0.7s,baz=130,slow=5.1,SNR=2.8						
NVAR				sP	sP	02 47 40.0	+0.8
	comp=N,1.5nm,0.7s,baz=151,slow=6.2,SNR=4.1						
IMW	Indian Meadow	74.47	330	*e*P	P	02 47 02.3	+0.7
	comp=N,6.0nm,1.3s						
LAO	LASA Array	74.60	334	P	P	02 47 03.4	+1.4
	baz=144						
RLMT	Red Lodge	74.65	332	P	P	02 47 03.5	+1.0
	baz=141						
KVN	Kaiserville	74.72	322	*e*P	P	02 47 04.8	+1.7
	comp=N,4.7nm,1.0s						
SCHQ	Schefferville	74.81	1	P	P	02 47 02.3	-0.6
	comp=N,3.8nm,0.5s,baz=200,slow=17,SNR=4.5						
SCHQ	Schefferville	74.81	1	*e*P	P	02 47 02.3	-0.6
	comp=N,14nm,1.3s						
EMT	Emmet	74.92	319	*e*P	P	02 47 07.8	+3.7
DGMT	Dagmar	75.27	337	P	P	02 47 07.2	+1.4
	baz=146						
PAHR	Pah Rah Range	75.90	322	*e*P	P	02 47 12.1	+2.3
	comp=N,8.3nm,0.8s						
HLID	Hailey	75.91	328	P	P	02 47 11.5	+1.8
	baz=137,SNR=6.7						
HLID	Hailey	75.91	328	*e*P	P	02 47 11.9	+2.2
	comp=N,3.8nm,0.9s						
HLID				*e*pP	pP	02 47 39.1	+2.6
MCMT	McKenzie Canyo	76.07	330	*e*P	P	02 47 12.8	+2.1
BOZ	Bozeman (W)	76.08	331	P	P	02 47 11.9	+1.3
	baz=139						
BOZ	Bozeman (W)	76.08	331	*e*P	P	02 47 11.8	+1.1
	comp=N,7.6nm,1.5s						
MFID	Camas Ranch	76.52	327	*e*P	P	02 47 15.2	+2.1
	comp=N,6.3nm,1.4s						
TOA0	Torodi Ar. Sit	77.10	71	*e*P	P	02 47 16.4	-0.4
TOA0				*e*pP	pP	02 47 43.9	+0.3
TOA1	Torodi Ar. Sit	77.10	71	*e*P	P	02 47 15.4	-1.5
TOA1				*e*pP	pP	02 47 43.1	-0.4
TORD	Torodi Ar. Bea	77.10	71	P	P	02 47 15.4	-1.5
	comp=N,1.8nm,0.4s,baz=250,slow=5.1						
TORD				pP	pP	02 47 43.1	-0.4
	baz=248,slow=5.2						
O03D	Paynes Creek	77.68	321	P	P	02 47 21.0	+1.3
	baz=130						
SYO	Syowa Base	77.72	160⇑	*e*P	P	02 47 21.0	+1.7
VNDA	Vanda	78.04	190	P	P	02 47 20.2	-0.8
	comp=N,1.1nm,0.8s,baz=124,slow=5.9,SNR=6.9						
MSO	Missoula	78.07	330	P	P	02 47 23.3	+1.6
	baz=138						
BMO	Blue Mountains	78.28	327	*e*P	P	02 47 24.6	+1.7
	comp=N,3.2nm,0.7s						
N02D	Trinity Center	78.65	322	P	P	02 47 26.0	+1.0
	baz=130						
M04C	Macdoel	78.67	323	P	P	02 47 26.4	+1.3
	baz=130						
YBH	Yreka Blue Hor	79.13	322	P	P	02 47 26.9	-0.7
	comp=N,1.9nm,0.9s,baz=129,slow=6.5,SNR=3.1						
J05D	Fort Rock, OR	79.31	324	P	P	02 47 30.0	+1.4
	baz=131						
WALA	Waterton Lakes	79.70	332	*e*P	P	02 47 31.7	+1.1
	comp=N,4.9nm,0.9s						
L02D	Cave Junction,	79.92	322	P	P	02 47 33.2	+1.5
	baz=129						
I05D	Terrebonne, OR	80.05	325	P	P	02 47 34.3	+1.8
	baz=131						
G05D	Wamic, OR	80.64	326	P	P	02 47 37.2	+1.6
	baz=131						
ESDC	Sonseca Array	85.07	45	P	P	02 47 59.6	+0.9
	comp=N,0.1nm,0.3s,baz=233,slow=13,SNR=3.0						
ESDC				pP	pP	02 48 26.2	+0.4
	comp=N,1.4nm,1.0s,baz=242,slow=5.9,SNR=3.3						
MAW	Mawson	85.56	163	P	P	02 48 01.1	+0.5
	comp=N,1.7nm,0.5s,baz=192,slow=4.4,SNR=9.6						
MAW	Mawson	85.56	163	*e*P	P	02 48 01.1	+0.5
	comp=N,1.1nm,1.4s						
YKA	Yellowknife Ar	89.97	341	P	P	02 48 21.9	+0.4
	comp=N,6.2nm,0.7s,baz=133,slow=4.7,SNR=18						
YKA				pP	pP	02 48 49.4	+0.5
	comp=N,2.2nm,0.7s,baz=133,slow=5.0,SNR=4.3						
YKA				sP	sP	02 48 59.7	-0.3
	comp=N,2.7nm,0.6s,baz=133,slow=4.8,SNR=4.8						
YKB5	Yellowknife Ar	89.97	341	*e*P	P	02 48 21.9	+0.4
YKB5				*e*pP	pP	02 48 49.4	+0.5
YKB5				*e*sP	sP	02 48 59.7	-0.3
YKW3	Yellowknife Ar	90.02	341	*e*P	P	02 48 22.3	+0.6
	comp=N,7.7nm,0.8s						
H11S2	WAKE ISLAND Hy	127.55	278	T	T	05 14 17.4	
	baz=101,slow=74,SNR=393						
H11S1	WAKE ISLAND Hy	127.56	278	T	T	05 14 18.0	
	baz=101,slow=74,SNR=338						
H11S3	WAKE ISLAND Hy	127.56	278	T	T	05 14 20.3	
	baz=101,slow=74,SNR=285						
H11N3	WAKE ISLAND Hy	127.59	280	T	T	05 14 24.8	
	baz=102,slow=74,SNR=75						
H11N2	WAKE ISLAND Hy	127.61	280	T	T	05 14 25.9	
	baz=102,slow=74,SNR=95						
H11N1	WAKE ISLAND Hy	127.61	280	T	T	05 14 24.7	
	baz=102,slow=74,SNR=52						
ASAR	Alice Springs	130.93	208	PKP	PKPdf	02 54 34.5	+0.1
	comp=N,1.3nm,0.8s,baz=146,slow=2.0,SNR=11						
AS31	Alice Springs	130.93	208	*e*PKPdf	PKPdf	02 54 34.5	+0.1
GEYT	Alibeck	131.27	57	PKP	PKPdf	02 54 35.0	+0.4
	comp=N,2.6nm,0.3s,baz=264,slow=7.0,SNR=3.7						
WR1	Warramunga Arr	133.93	211	*e*PKPdf	PKPdf	02 54 40.6	+0.4
WRA	Warramunga Arr	133.93	211	PKP	PKPdf	02 54 40.6	+0.4
	comp=N,2.1nm,0.7s,baz=158,slow=1.8,SNR=20						
BVAR	Borovoye Array	134.86	34	PKP	PKPdf	02 54 40.8	0.0
	comp=N,0.5nm,0.6s,baz=260,slow=4.4,SNR=4.3						
KURK	Kurchatov	140.38	32	*e*PKPdf	PKPdf	02 54 52.2	+1.2
KURBB	Kurchatov Arra	140.39	32	PKP	PKPdf	02 54 52.2	+1.2
	comp=N,0.7nm,0.7s,baz=299,slow=2.7,SNR=6.9						
ZAA1	Zalesovo Array	140.90	24	*e*PKPpre	PKPpre	02 54 48.9	
ZAA1				*e*PKPdf	PKPdf	02 54 52.8	+0.9
ZALV	Zalesovo Beam	140.90	24	PKhKP	PKPpre	02 54 48.9	
	comp=N,2.3nm,0.7s,baz=325,slow=7.4,SNR=3.8						
ZALV				PKP	PKPdf	02 54 52.8	+0.9
	comp=N,2.5nm,0.7s,baz=325,slow=9.2,SNR=3.9						
KSH	Kashi	144.44	50	*e*PKP	PKPdf	02 54 58.5	-0.3
KSH				*e*PP	PP	02 58 18.0	+2.4
KSH				PKS	PKSdf	02 58 33.3	-1.2
KSH				AMB	AMB		
	comp=N,70nm,5.4s						
ASAJ	Asahikawa	144.51	319	PKP	PKPdf	02 54 58.2	-0.3
	comp=N,6.1nm,0.6s,baz=202,slow=3.0,SNR=11						
ASAJ	Asahikawa	144.51	319	*e*PKPdf	PKPdf	02 54 58.9	+0.4
MK32	Makanchi Array	144.72	35	*e*PKPdf	PKPbc	02 54 58.4	+0.3
MKAR	Makanchi Array	144.72	35	PKP	PKPbc	02 54 58.4	+0.3
	comp=N,2.5nm,0.6s,baz=315,slow=4.1,SNR=20						
MKAR				pPKP	pPKPdf	02 55 26.3	-1.3
	comp=N,1.4nm,0.8s,baz=341,slow=2.6,SNR=3.6						
KLR	Kul’dur	146.63	335	PKPbc	PKPbc	02 55 03.8	0.0
	comp=N,0.2nm,0.5s,baz=26,slow=3.3,SNR=8.8						
WMQ	Urumqi	149.55	34	*e*PKPbc	PKPdf	02 55 07.3	+0.2
USRK	Ussuriysk Ar.	150.37	328	PKPbc	PKPbc	02 55 14.4	+0.7
	baz=0.0,slow=1.7						
MJAR	Matsushiro Arr	151.16	310	PKPbc	PKPbc	02 55 16.4	+0.6
	comp=N,2.1nm,0.6s,baz=133,slow=0.4,SNR=9.8						
MAJO	Matsushiro	151.16	310	*e*PKPbc	PKPbc	02 55 16.4	+0.6
SONA0	Songino Array	152.25	7	*e*PKPdf	PKPdf	02 55 12.5	+1.3
SONA0				*e*PKPbc	PKiKP	02 55 18.9	+0.6
SONA0				*e*		02 55 47.6	
SONA0				*e*pPKPab	pPKPab	02 55 53.9	-1.9
SONM	Songino Array	152.25	7	PKP	PKPdf	02 55 12.5	+1.3
	comp=N,1.0nm,0.8s,baz=350,slow=0.4,SNR=4.2						
SONM				PKPbc	PKiKP	02 55 18.9	+0.6
	comp=N,3.8nm,0.5s,baz=302,slow=1.2,SNR=18						
SONM				pPKPbc	pPKPbc	02 55 47.6	+1.0
	comp=N,1.4nm,0.5s,baz=286,slow=1.5,SNR=3.7						
SONM				pPKPab	pPKPab	02 55 53.9	-1.9
	comp=N,0.9nm,0.5s,baz=268,slow=0.5,SNR=2.2						
KSRS	Korea Array	157.36	323	PKP	PKPdf	02 55 17.4	-0.9
	comp=N,0.3nm,0.3s,baz=168,slow=32,SNR=4.2						
KSRS				PKPab	PKPab	02 55 51.2	+1.1
	comp=N,0.8nm,0.5s,baz=60,slow=4.6,SNR=4.6						
KSRS				pPKPab	pPKPab	02 56 17.4	-0.4
	comp=N,4.1nm,0.8s,baz=241,slow=30,SNR=7.9						
KS15	Wonju Array Si	157.39	323	*e*PKPdf	PKPdf	02 55 17.4	-1.0
KS15				*e*PKPab	PKPab	02 55 51.2	+1.0
KS15				*e*pPKPab	pPKPab	02 56 21.2	+3.4
KSAR	Wonju Array Be	157.39	323	PKP	PKPdf	02 55 17.4	-1.0
HHC	Hu-ho-hao-te	159.47	359	*e*PKP	PKPdf	02 55 20.8	-0.2
HHC				AMB	AMB		
	comp=N,300nm,8.6s						
LZH	Lanzhou	163.05	20	*e*PKP	PKPdf	02 55 23.9	-1.1
LZH				pPKP	pPKPdf	02 55 51.3	-2.5
LZH				sPKP		02 56 01.8	
LZH				LR	LR		
	comp=N,72nm,18.1s						
LZH				LR	LR		
	comp=N,75nm,18.0s						
LZH				LR	LR		
	comp=N,86nm,20.1s						
NJ2	Nanjing	166.27	330	*e*PKP	PKPdf	02 55 27.9	+0.2

IDC 17 02:50:49.0±1.3**, 31°.60N**×**109°.89E, h0^{km}, mb3.5**/3**,**
mb1 3.7/5**, mb1mx3.3**/64**, mbtmp3.5**/5**, ML3.4**/1**, Error**
ellipse: s-maj=54.2km s-min=25.0km az=59.0, Sichuan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSRS	Korea Array	15.96	64	Pn	Pn	02 54 35.8	+0.9
	baz=234,slow=10,SNR=5.0						
SONM	Songino Array	16.43	352	Pn	Pn	02 54 41.4	+0.4
	0.1nm,0.3s,baz=168,slow=14,SNR=3.9						
MKAR	Makanchi Array	26.04	314	P	P	02 56 23.7	-0.3
	0.4nm,0.4s,baz=110,slow=10,SNR=5.0						
WRA	Warramunga Arr	56.36	152	P	P	03 00 31.9	-0.3
	0.3nm,0.6s,baz=345,slow=8.2,SNR=4.0						
ASAR	Alice Springs	59.57	154	P	P	03 00 54.7	+0.1
	0.3nm,0.4s,baz=335,slow=6.9,SNR=7.6						

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*ISK **17** 02:55:07.7, 36°.99N×36°.75E, h8^{km}, ML3.1/14*
*DDA **17** 02:55:08.1, 37°.01N×36°.72E, h3^{km}, Ml3.5*
*CSEM **17** 02:55:08.2±0.1, 36°.99N×36°.72E, h2^{km}, ML3.1, Error*
ellipse: s-maj=4.1km s-min=2.6km az=148.0
ISC 17 02:55:08.2±1.1**, 36°.99N**±0°.02×**36°.72E**±0°.02**, h5^{km}**±10^{km}**,**
n76, σ0^{s}.61/108**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GAZ	Gaziantep	0.44	64	PG	Pg	02 55 16.3	-0.3
GAZ				SG	Sg	02 55 22.2	-0.1
GAZ	Gaziantep	0.44	64	*e*Pg	Pg	02 55 16.3	-0.3
GAZ				*e*Sg	Sg	02 55 22.2	-0.1
KMRS	Kahramanmaras	0.54	15	PG	Pg	02 55 18.8	+0.2
KMRS				SG	Sg	02 55 25.7	+0.1
KMRS	Kahramanmaras	0.54	15	*e*Pg	Pg	02 55 18.8	+0.2
KMRS				*e*Sg	Sg	02 55 25.7	+0.1
ANDN	Andirin	0.66	333	*i* P	Pg	02 55 21.0	0.0
ANDN				*i* S	Sg	02 55 30.0	+0.3
ANDN	Andirin	0.66	333	P	Pg	02 55 21.0	0.0
ANDN				S	Sg	02 55 30.0	+0.3
TAHT	Tahtakopru-Hat	0.74	215	PG	Pg	02 55 22.7	+0.2
TAHT				SG	Sb	02 55 33.7	-0.5
TAHT	Tahtakopru-Hat	0.74	215	*e*Pg	Pg	02 55 22.7	+0.2
TAHT				*e*Sg	Sb	02 55 33.7	-0.5
YURE	YUREGIR	0.89	260	PG	Pb	02 55 25.9	-0.2
YURE	YUREGIR	0.89	260	*e*Pg	Pb	02 55 25.9	-0.2
YAYL	Yayladag	1.07	208	PN	Pg	02 55 28.8	+0.1
YAYL	Yayladag	1.07	208	*i* P	Pb	02 55 29.3	0.0
YAYL				*i* S	Sb	02 55 44.1	+0.4
YAYL	Yayladag	1.07	208	*e*Pn	Pg	02 55 28.8	+0.1
YAYL	Yayladag	1.07	208	P	Pb	02 55 29.3	0.0
YAYL				S	Sb	02 55 44.1	+0.4
SAIM	ADANA	1.11	333	*i* P	Pg	02 55 28.8	-0.7
SAIM				*i* S	Sg	02 55 43.0	-1.0
SAIM	ADANA	1.11	333	P	Pg	02 55 28.8	-0.7

SAIM				S	Sg	02 55 43.0	-1.0
KRTD	**Karatas-Adana**	1.12	250	PN	Pb	02 55 30.1	+0.1
KRTD	**Karatas-Adana**	1.12	250	*e*Pn	Pb	02 55 30.1	+0.1
KRTS	**Karatas**	1.16	250	PN	Pn	02 55 31.3	+0.2
KRTS	**Karatas**	1.16	250	*e*Pn	Pn	02 55 31.3	+0.2
ATAB	**Bozova**	1.35	68	*i* P	Pb	02 55 34.1	+0.1
ATAB				*i* S	Sn	02 55 52.0	-0.1
ATAB	**Bozova**	1.35	68	P	Pb	02 55 34.1	+0.1
ATAB				S	Sn	02 55 52.0	-0.1
KARA	**Karaisali**	1.36	282	PN	Pn	02 55 33.3	-0.6
KARA	**Karaisali**	1.36	282	*e*Pn	Pn	02 55 33.3	-0.6
ELBS	**KAHRAMANMARAS**	1.38	14	*i* P	Pb	02 55 34.7	+0.1
ELBS				*i* S	Sn	02 55 53.8	+0.8
ELBS	**KAHRAMANMARAS**	1.38	14	P	Pb	02 55 34.7	+0.1
ELBS				S	Sn	02 55 53.8	+0.8
SARI	**SarD1z-Kayseri**	1.44	351	PN	Pn	02 55 35.2	0.0
SURC	**SANLIURFA_SURC**	1.52	93	*i* P	Pb	02 55 37.0	+0.1
SURC				*i* S	Sn	02 55 56.3	-0.1
SURC	**SANLIURFA_SURC**	1.52	93	P	Pb	02 55 37.0	+0.1
SURC				S	Sn	02 55 56.3	-0.1
GULE	**Gulek**	1.58	281	*i* P	Pb	02 55 37.7	-0.4
GULE				*i* S	Sg	02 56 00.2	+1.2
GULE	**Gulek**	1.58	281	P	Pb	02 55 37.7	-0.4
GULE				S	Sg	02 56 00.2	+1.2
AKCD	**Akcadag**	1.62	36	*i* P	Pb	02 55 38.8	+0.1
AKCD				*i* S	Sg	02 56 00.7	+0.4
AKCD	**Akcadag**	1.62	36	P	Pb	02 55 38.8	+0.1
AKCD				S	Sg	02 56 00.7	+0.4
DARE	**Darende-Malaty**	1.69	21	PN	Pn	02 55 38.5	-0.1
DARE	**Darende-Malaty**	1.69	21	*e*Pn	Pn	02 55 38.5	-0.1
URFA	**Urfa**	1.74	74	PN	Pn	02 55 39.6	+0.4
URFA	**Urfa**	1.74	74	*e*Pn	Pn	02 55 39.6	+0.4
MERS	**Mersin**	1.76	267	PN	Pn	02 55 39.0	-0.5
MERS	**Mersin**	1.76	267	*e*Pn	Pn	02 55 39.0	-0.5
CUGUR	**Gurin_S˜VAS**	1.79	14	*i* P	Pg	02 55 42.2	-0.3
CUGUR				*i* S	Sg	02 56 07.8	+2.1
CUGUR	**Gurin_S˜VAS**	1.79	14	P	Pg	02 55 42.2	-0.3
CUGUR				S	Sg	02 56 07.8	+2.1
SANL	**SANLIURFA_Merk**	1.82	83	*i* P	Pb	02 55 41.9	-0.3
SANL				*i* S	Sg	02 56 06.6	-0.2
SANL	**SANLIURFA_Merk**	1.82	83	P	Pb	02 55 41.9	-0.3
SANL				S	Sg	02 56 06.6	-0.2
MALT	**Malatya**	1.90	45	PN	Pn	02 55 40.9	-0.5
MALT	**Malatya**	1.90	45	*e*Pn	Pn	02 55 40.9	-0.5
BNN	**Bunyan**	1.99	340	PN	Pn	02 55 42.9	+0.2
BNN	**Bunyan**	1.99	340	*e*Pn	Pn	02 55 42.9	+0.2
KERG	**Konya-Eregli**	2.12	282	*i* P	Pb	02 55 45.8	-1.3
KERG				*i* S	Sb	02 56 13.1	-0.7
KERG	**Konya-Eregli**	2.12	282	P	Pb	02 55 45.8	-1.3
KERG				S	Sb	02 56 13.1	-0.7
KIZK	**Mersin**	2.13	257	PN	Pn	02 55 44.7	+0.2
HEKM	**Malatya_Hekimh**	2.13	27	*i* P	Pg	02 55 49.8	+0.8
HEKM				*i* S	Sg	02 56 16.8	+0.1
ELZG	**Elazig**	2.35	49	*i* P	Pg	02 55 52.9	-0.3
ELZG				*i* S	Sg	02 56 24.3	+0.7
GULA	**Gulagac**	2.39	305	PN	Pn	02 55 48.3	+0.1
GULA	**Gulagac**	2.39	305	*e*Pn	Pn	02 55 48.3	+0.1
CUSAR	**Sarkisla-SIVAS**	2.46	351	*i* P	Pb	02 55 53.6	+0.6
CUSAR				*i* S	Sg	02 56 26.0	-1.2
CUSAR	**Sarkisla-SIVAS**	2.46	351	P	Pb	02 55 53.6	+0.6
KEBE	**Keben-Mersin**	2.47	258	PN	Pn	02 55 50.1	+0.8
KEBE	**Keben-Mersin**	2.47	258	*e*Pn	Pn	02 55 50.1	+0.8
SVRC	**Sivrice-ELAZID**	2.48	55	PN	Pn	02 55 48.6	-0.9
SVRC	**Sivrice-ELAZID**	2.48	55	*e*Pn	Pn	02 55 48.6	-0.9
IKL	**Isikli**	2.55	254	PN	Pn	02 55 50.4	+0.1
IKL	**Isikli**	2.55	254	*e*Pn	Pn	02 55 50.4	+0.1
KEMA	**Kemaliye**	2.67	31	*i* P	Pn	02 55 51.0	-1.1
KEMA				*i* S	Sg	02 56 35.1	+1.0
KEMA	**Kemaliye**	2.67	31	P	Pn	02 55 51.0	-1.1
AKKU	**Akkuyu-Mersin**	2.68	253	PN	Pn	02 55 52.5	+0.4
AKKU	**Akkuyu-Mersin**	2.68	253	*e*Pn	Pn	02 55 52.5	+0.4
PTK	**Pertek**	2.84	47	PN	Pn	02 55 54.7	+0.2
PTK	**Pertek**	2.84	47	*e*Pn	Pn	02 55 54.7	+0.2
DYBB	**Diyarbakir**	2.89	69	PN	Pn	02 55 55.3	+0.3
SVSK	**Karacayir**	2.94	4	PN	Pn	02 55 56.5	+1.0
SVSK	**Karacayir**	2.94	4	*e*Pn	Pn	02 55 56.5	+1.0
DIY	**Diyarbakir**	2.94	71	*e*Pn	Pn	02 55 55.3	-0.4
MAZI	**Mazidag**	3.01	80	PN	Pn	02 55 55.8	-1.0
MAZI	**Mazidag**	3.01	80	*e*Pn	Pn	02 55 55.8	-1.0
TEKE	**Tekeli-Mersin**	3.02	255	PN	Pn	02 55 56.8	0.0
TEKE	**Tekeli-Mersin**	3.02	255	*e*Pn	Pn	02 55 56.8	0.0

JMA ***17*** *03:17:11.3±0.1, 43°.16N×146°.42E, h61^{km}±1^{km}, M3.6*
SKHL ***17*** *03:17:11.8±0.6, 43°.17N×146°.46E, h44^{km}±9^{km}, mb4.2/6*
ISC 17 03:17:10.0±2.5**, 43°.11N**±0°.09×**146°.52E**±0°.07**, h25**^{km}±16^{km}**, n16, σ1.^{s}17**/29**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	0.62	295	P	Pn	03 17 23.9	+0.6
NEM2				*e*S	Sn	03 17 32.8	+0.3
SHO	**Shikotan**	0.80	16	*i* P	Pn	03 17 26.0	+0.4
SHO				AMB	AMB	03 17 26.0	
	47nm,0.3s						
SHO				AMB	AMB	03 17 26.0	
	82nm,0.3s						
SHO				AMB	AMB	03 17 26.0	
	137nm,0.3s						
SHO				*i* S	Sn	03 17 37.0	+0.3
SHO				A	A	03 17 39.0	
	817nm,0.2s						
SHO				A	A	03 17 39.0	
	610nm,0.2s						
GLVR	**Golovnino**	0.96	311	*e*P	Pb	03 17 27.0	-1.0
GLVR				AMB	AMB	03 17 28.0	
	428nm,0.3s						
GLVR				AMB	AMB	03 17 28.0	
	305nm,0.3s						
GLVR				AMB	AMB	03 17 28.0	
	124nm,0.3s						
GLVR				*e*S	Sb	03 17 40.0	-0.4
GLVR				A	A	03 17 43.0	
	932nm,0.3s						
GLVR				A	A	03 17 43.0	
	2µm,0.3s						
GRPR	**Tuman**	1.04	329	*e*P	Pn	03 17 28.0	-1.0
GRPR				AMB	AMB	03 17 28.0	
	199nm,0.2s						
GRPR				AMB	AMB	03 17 28.0	
	223µm,0.2s						
GRPR				AMB	AMB	03 17 28.0	
	87nm,0.2s						
GRPR				*e*S	Sb	03 17 40.0	-2.5
GRPR				A	A	03 17 45.0	
	409nm,0.2s						
GRPR				A	A	03 17 45.0	
	914nm,0.2s						
YUK	**Yuzh-Kuril'sk**	1.04	333	*e*P	Pn	03 17 28.0	-1.1
YUK				AMB	AMB	03 17 30.0	
	58nm,0.1s						
YUK				*e*S	Sb	03 17 40.7	-1.9
YUK				A	A	03 17 44.0	
	587nm,0.2s						
YUK				A	A	03 17 44.0	
	712nm,0.2s						
LAGR	**Lagunnoye**	1.09	331	*e*P	Pn	03 17 28.0	-1.7
LAGR				AMB	AMB	03 17 29.0	
	118nm,0.3s						
LAGR				AMB	AMB	03 17 29.0	
	96nm,0.3s						
LAGR				*e*S	Sb	03 17 42.0	-1.9
LAGR				A	A	03 17 45.0	
	716nm,0.3s						
LAGR				A	A	03 17 45.0	
	1µm,0.3s						
JRA	**Rausu**	1.31	310	P	Pn	03 17 32.5	-0.3
JRA				*e*S	Sn	03 17 48.8	-0.7
JAK	**Akkeshi**	1.34	266	P	Pn	03 17 33.1	-0.1
JAK				*e*S	Sn	03 17 49.2	-1.0
JNK	**Nakash**	1.40	291	P	Pn	03 17 33.3	-0.7
JNK				*e*S	Sn	03 17 49.8	-1.8
JOB	**Onbets**	1.98	265	*e*S	Sn	03 18 04.7	-1.3
JAR	**Ashorobuto**	2.02	276	P	Pn	03 17 42.5	0.0
JAR				*e*S	Sn	03 18 06.1	-0.9
JTKR	**Abashiri--Toko**	2.09	295	P	Pn	03 17 43.7	+0.3
JTKR				*e*S	Sn	03 18 07.6	-1.0
KUR	**Kuril'sk**	2.33	24	*e*P	Pn	03 17 47.0	+0.2
KUR				AMB	AMB	03 17 47.0	
	15nm,0.3s						
KUR				AMB	AMB	03 17 47.0	
	13nm,0.3s						
KUR				AMB	AMB	03 17 47.0	
	32nm,0.3s						
KUR				*e*S	Sn	03 18 12.7	-2.0
KUR				A	A	03 18 15.0	
	139nm,0.3s						
KUR				A	A	03 18 15.0	
	98nm,0.3s						
JCH	**Churui**	2.37	259	P	Pn	03 17 47.1	-0.3
JMP	**Maruseppu**	2.47	292	P	Pn	03 17 49.0	+0.3
JMP				*e*S	Sn	03 18 17.7	-0.3
HRK	**Horoka**	2.50	279	*e*P	Pn	03 17 50.0	+0.8

MEX 17 03:22:19.0±0.9**, 16°.31N×98°.36W, h5**^{km}**, MD3.5, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	0.24	71	*i* P	Pg	03 22 23.1	-0.6
PNIG				*i* S	Sg	03 22 26.9	0.0
TLIG	**Tlapa**	1.26	351	*e*P	Pg	03 22 38.7	-4.4
TLIG				*i* S	Sg	03 22 55.5	-4.0
VHO	**Vista Hermosa**	1.74	64	*i* P	Pn	03 22 47.5	-2.5
VHO				*i* S	Sn	03 23 08.8	-3.9
MEIG	**Mezcala**	2.00	323	*i* P	Pn	03 22 50.7	-3.0
MEIG				*i* S	Sn	03 23 15.0	-4.1

TIR ***17*** *03:32:18.5, 41°.37N×21°.11E, h11^{km}, Md2.6/3*
SKO 17 03:32:18.4, 41°.27N×20°.81E, h23^{km}**, M1.1, ML1.2, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHR	**Ohrid**	0.16	183	*i* Pg	Pb	03 32 23.6	+0.1
OHR				*i* Sg	Sb	03 32 26.4	-0.5
OHR				*e*Lg	Lg	03 32 26.6	
	comp=N,140nm,0.3s						
OHR				*e*Lg	Lg	03 32 26.7	
	comp=E,101nm,0.3s						
KRUS	**Krusevo**	0.34	73	*i* Pg	Pb	03 32 26.1	-0.1
KRUS				*i* Sg	Sb	03 32 30.5	-0.8
BIA	**Bitola**	0.46	123	*i* Pg	Pb	03 32 28.6	+0.6
BIA				*i* Sg	Sb	03 32 35.1	+0.6
PHP	**Peshkopia**	0.50	326	*i* PG	Pn	03 32 31.2	+1.0
PHP				*i* SG	Sn	03 32 38.9	+0.8
KBN	**Korca**	0.65	182	*i* PG	Pn	03 32 33.3	+1.0
KBN				*i* SG	Sn	03 32 46.4	+4.6
FNA	**Florina**	0.65	138	*i* PG	Pb	03 32 31.1	0.0
SKO	**Skopje**	0.85	34	*e*Pg	Pn	03 32 35.3	+0.3
SKO				*i* Sg	Sn	03 32 47.6	+1.0
STIP	**Stip**	1.12	67	*i* Pg	Pb	03 32 43.1	+4.0
STIP				*i* Sg	Sn	03 33 01.0	+7.7

MOS ***17*** *03:42:16.1±1.1, 53°.65N×161°.06E, h42^{km}, mb4.4/1, Error ellipse: s-maj=9.7km s-min=5.5km az=76.0*
KRSC 17 03:42:14.5±0.9**, 53°.67N×161°.08E, h46**^{km}±15^{km}**, ML4.3, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPN	**Mys Shipunski**	0.85	228	*e*P	Pn	03 42 31.5	+1.4
SPN				*e*S	Sn	03 42 42.4	+0.9
SPN	**Mys Shipunski**	0.85	228	PN	Pn	03 42 31.5	+1.4
SPN				S	Sn	03 42 42.4	+0.9
MKZ	**Mys Kozlova**	0.97	23	*e*P	Pn	03 42 33.0	+1.4
MKZ				*e*S	Sn	03 42 45.1	+0.9
MKZ	**Mys Kozlova**	0.97	23	PN	Pn	03 42 33.0	+1.4
MKZ				S	Sn	03 42 45.1	+0.9
KII	**Karymskiy**	1.03	291	*e*P	Pn	03 42 33.7	+1.1
KII				*e*S	Sn	03 42 46.3	+0.4
KII	**Karymskiy**	1.03	291	PN	Pn	03 42 33.7	+1.1
KII				S	Sn	03 42 46.3	+0.4
NLC	**Nalytchevo**	1.15	245	*e*P	Pn	03 42 35.7	+1.6
NLC				*e*S	Sn	03 42 49.7	+1.0
NLC	**Nalytchevo**	1.15	245	PN	Pn	03 42 35.7	+1.6
NLC				S	Sn	03 42 49.7	+1.0
SDLR	**Sedlovina**	1.37	254	*e*P	Pn	03 42 39.0	+1.8
SDLR	**Sedlovina**	1.37	254	PN	Pn	03 42 39.0	+1.8
SMAR	**Somma**	1.42	254	*e*P	Pn	03 42 39.9	+1.9
SMAR	**Somma**	1.42	254	PN	Pn	03 42 39.9	+1.9
UGLR	**Uglovaya**	1.43	252	*e*P	Pn	03 42 40.1	+2.1
UGLR				*e*S	Sn	03 42 57.3	+1.7
UGLR	**Uglovaya**	1.43	252	PN	Pn	03 42 40.1	+2.1
UGLR				S	Sn	03 42 57.3	+1.7
AVH	**Avacha**	1.46	255	*e*P	Pn	03 42 40.6	+2.2
AVH				*e*S	Sn	03 42 58.4	+2.1
AVH	**Avacha**	1.46	255	PN	Pn	03 42 40.6	+2.2
AVH				S	Sn	03 42 58.4	+2.1
KRX	**Arik**	1.48	259	*e*P	Pn	03 42 40.8	+2.0
KRX				*e*S	Sn	03 42 58.3	+1.2
KRX	**Arik**	1.48	259	PN	Pn	03 42 40.8	+2.0
KRX				S	Sn	03 42 58.3	+1.2
KOK	**Koryaka**	1.51	256	*e*P	Pn	03 42 41.0	+1.9
KOK				*e*S	Sn	03 42 58.8	+1.2
KOK	**Koryaka**	1.51	256	PN	Pn	03 42 41.0	+1.9
KOK				S	Sn	03 42 58.8	+1.2
DALK	**Dalny**	1.53	246	*e*P	Pn	03 42 40.8	+1.5
DALK				*e*S	Sn	03 42 59.4	+1.4
DALK	**Dalny**	1.53	246	PN	Pn	03 42 40.8	+1.5
DALK				S	Sn	03 42 59.4	+1.4
TUMD	**Tumrok D**	1.59	346	*e*P	Pn	03 42 41.8	+1.7
TUMD				*e*S	Sn	03 43 00.4	+1.0
PET	**Petropavlovsk**	1.59	247	*e*P	Pn	03 42 41.8	+1.7
PET				*e*S	Sn	03 43 00.2	+0.7
PET	**Petropavlovsk**	1.59	247	*e*PN	Pn	03 42 42.4	+2.3
PET				*e*S	Sn	03 43 00.9	+1.4
PET				pmax	pmax		
	comp=Z,90nm,0.6s						
PET				smax	smax		
	comp=N,519nm,0.5s						
PET				smax	smax		
	comp=E,528nm,0.4s						
TUMR	**Tumrok**	1.71	342	*e*P	Pn	03 42 44.3	+2.5
TUMR				*e*S	Sn	03 43 04.5	+2.0
TUMR	**Tumrok**	1.71	342	PN	Pn	03 42 41.8	0.0
TUMR				S	Sn	03 43 00.4	-2.1
GNL	**Ganaly**	1.86	272	*e*P	Pn	03 42 46.6	+2.6
GNL	**Ganaly**	1.86	272	PN	Pn	03 42 46.6	+2.6
KRMR	**Karymshinskiy**	1.96	246	*e*P	Pn	03 42 48.1	+2.9
KRMR				*e*S	Sn	03 43 10.9	+2.4
KRMR	**Karymshinskiy**	1.96	246	PN	Pn	03 42 48.1	+2.9
KRMR				S	Sn	03 43 10.9	+2.4
RUS	**Russkaya**	1.98	232	*e*P	Pn	03 42 47.3	+1.8
RUS				*e*S	Sn	03 43 10.6	+1.5
RUS	**Russkaya**	1.98	232	PN	Pn	03 42 47.3	+1.8
RUS				S	Sn	03 43 10.6	+1.5
MTVR	**Mutnovka**	2.11	237	*e*P	Pn	03 42 50.6	+3.2
MTVR				*e*S	Sn	03 43 15.6	+3.1
MTVR	**Mutnovka**	2.11	237	PN	Pn	03 42 50.6	+3.2
MTVR				S	Sn	03 43 15.6	+3.1
KMNR	**Kamenistaya**	2.15	347	*e*P	Pn	03 42 51.3	+3.5
KMNR	**Kamenistaya**	2.15	347	PN	Pn	03 42 51.3	+3.5
ASAK	**Asacha**	2.31	237	*e*P	Pn	03 42 54.4	+4.3
ASAK				*e*S	Sn	03 43 21.1	+3.8
ASAK	**Asacha**	2.31	237	PN	Pn	03 42 54.4	+4.3
ASAK				S	Sn	03 43 21.1	+3.8
KIRR	**Kirishev**	2.33	350	*e*P	Pn	03 42 53.6	+3.2
KIRR	**Kirishev**	2.33	350	PN	Pn	03 42 53.6	+3.2
KPT	**Kopyto**	2.35	348	*e*P	Pn	03 42 53.6	+2.9
KPT	**Kopyto**	2.35	348	PN	Pn	03 42 53.6	+2.9
ZLN	**Zelenaya**	2.36	356	*e*P	Pn	03 42 54.5	+3.8
ZLN				*e*S	Sn	03 43 22.6	+4.1
ZLN	**Zelenaya**	2.36	356	PN	Pn	03 42 54.5	+3.8
ZLN				S	Sn	03 43 22.6	+4.1
LGNR	**Loginova**	2.43	355	*e*P	Pn	03 42 55.8	+3.9
LGNR	**Loginova**	2.43	355	PN	Pn	03 42 55.8	+3.9
APC	**Apacha**	2.47	254	*e*P	Pn	03 42 56.8	+4.7
APC				*e*S	Sn	03 43 25.8	+4.8
APC	**Apacha**	2.47	254	PN	Pn	03 42 56.8	+4.7
APC				S	Sn	03 43 25.8	+4.8
KOZ	**Kozyrevsk**	2.49	344	*e*P	Pn	03 42 54.9	+2.4
KOZ	**Kozyrevsk**	2.49	344	PN	Pn	03 42 54.9	+2.4
KRSR	**Krestovskiy**	2.57	354	*e*P	Pn	03 42 57.0	+3.4
KRSR	**Krestovskiy**	2.57	354	PN	Pn	03 42 57.0	+3.4
ESO	**Esso**	2.65	330	*e*P	Pn	03 42 57.0	+2.4
ESO	**Esso**	2.65	330	PN	Pn	03 42 57.0	+2.4
KLY	**Klyuchi**	2.66	355	*e*S	Sn	03 43 28.2	+2.5
KBTR	**Krutoberegovo**	2.73	21	*e*P	Pn	03 42 59.0	+3.2
KBTR				*e*S	Sn	03 43 30.5	+2.9
KBTR	**Krutoberegovo**	2.73	21	PN	Pn	03 42 59.0	+3.2
KBTR				S	Sn	03 43 30.5	+2.9
SMKR	**Semkarok**	2.93	4	*e*P	Pn	03 43 02.3	+3.8
SMKR	**Semkarok**	2.93	4	PN	Pn	03 43 02.3	+3.8
SRKR	**Sorokina**	2.99	1	*e*P	Pn	03 43 02.8	+3.4
SRKR	**Sorokina**	2.99	1	PN	Pn	03 43 02.8	+3.4
BKI	**Bering**	3.25	60	*e*P	Pn	03 43 06.7	+3.9
BKI				*e*S	Sn	03 43 41.0	+0.9
BKI	**Bering**	3.25	60	PN	Pn	03 43 06.7	+3.9
BKI				S	Sn	03 43 41.0	+0.9
PAU	**Pauzhetka**	3.41	231	*e*S	Sn	03 43 47.8	+3.5
SKR	**Severo-Kuril's**	4.27	228	*e*S	Sn	03 44 09.7	+4.3
SKR	**Severo-Kuril's**	4.27	228	*e*PN	Pn	03 43 17.8	+0.9

IDC 17 03:44:34.2±1.9**, 1°.85N×128°.23E, h0**^{km}**, mb3.4**/4**, mb1 3.6**/4**, mb1mx3.4**/56**, mbtmp3.5**/4**, Error ellipse: s-maj=151.9km s-min=21.4km az=68.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	22.47	165	P	P	03 49 35.0	-0.3
	0.4nm,0.5s,baz=345,slow=11,SNR=7.8						
ASAR	**Alice Springs**	25.95	168	P	P	03 50 08.6	0.0
	0.3nm,0.6s,baz=350,slow=8.2,SNR=3.9						
MKAR	**Makanchi Array**	59.95	325	P	P	03 54 42.5	+0.2
	0.5nm,0.5s,baz=123,slow=8.2,SNR=6.8						
KURBB	**Kurchatov Arra**	64.12	327	P	P	03 55 10.2	-0.1
	0.5nm,0.6s,baz=127,slow=5.9,SNR=5.4						

IDC 17 03:50:33.6±4.8**, 30°.21S×178°.59W, h0**^{km}**, mb3.5**/2**, mb1 3.8**/2**, mb1mx3.5**/39**, mbtmp3.5**/2**, Error ellipse: s-maj=266.8km s-min=45.0km az=162.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	**Alice Springs**	42.61	267	P	P	03 58 31.6	-0.1
	0.2nm,0.4s,baz=106,slow=6.8,SNR=2.9						
WRA	**Warramunga Arr**	43.58	272	P	P	03 58 39.5	-0.2
	0.5nm,0.4s,baz=110,slow=8.1,SNR=20						
FINES	**FINESS Array B**	144.79	340	PKP	PKPbc	04 10 11.0	+0.3
	3.3nm,0.6s,baz=67,slow=3.1,SNR=15						
HFS	**Hagfors**	148.95	348	PKPbc	PKPbc	04 10 22.3	-0.5
	0.6nm,0.5s,baz=48,slow=2.1,SNR=5.2						

IDC ***17*** *03:57:33.9±3.1, 53°.93N×165°.61W, h0^{km}, mb3.5/4, mb1 3.7/4, mb1mx3.3/70, mbtmp3.5/4, Error ellipse: s-maj=97.4km s-min=33.2km az=32.0*
NEIC ***17*** *03:57:36.8±0.0, 53°.31N×165°.52W, h26^{km}, ML3.5(AEIC), After AEIC.*
ISCJB ***17*** *03:57:37.2±1.0, 53°.36N±0°.09×165°.56W±0°.09, h62^{km}±9^{km}, mb3.6/4, Error ellipse: s-maj=16.7km s-min=4.9km az=150.8*
ISC 17 03:57:38.5±1.6**, 53°.38N**±0°.10×**165°.58W**±0°.06**, h50**^{km}±14^{km}**, n30, σ0.^{s}98**/35**, mb3.7**/4**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UNV	**Unalaska Valle**	0.72	310	P	Pn	03 57 51.8	-0.6
UNV				S	Sn	03 58 03.1	+0.6
ZRO	**Akutan Zero**	0.75	342	P	Pn	03 57 52.2	-0.7
AKSA	**Akutan Strait**	0.76	355	P	Pn	03 57 51.9	-1.0
AKSA				S	Sn	03 58 03.0	-0.4
AKUT	**Akutan**	0.76	351	P	Pn	03 57 52.2	-0.7
AKUT				S	Sn	03 58 03.7	+0.1
AKRB	**Akutan Reef Bi**	0.80	339	P	Pn	03 57 53.0	-0.6
AKRB				S	Sn	03 58 05.3	+0.8
MTBL	**Makushin Table**	0.88	312	P	Pn	03 57 54.6	0.0
MSW	**Makushin Switc**	0.89	307	P	Pn	03 57 54.6	-0.2
MSW				S	Sn	03 58 07.9	+1.2
MCIR	**Makushin Cirqu**	0.97	307	P	Pn	03 57 56.0	+0.2
WESP	**Westdahl Peak**	1.22	24	P	Pn	03 57 59.0	-0.2
WESP				S	Sn	03 58 15.7	+1.0
WESE	**West Dahl East**	1.24	28	P	Pn	03 57 58.6	-0.8
WEBT	**Westdahl Beart**	1.30	22	P	Pn	03 58 00.5	+0.1
OKFG	**Magazine Ridge**	1.40	272	P	Pn	03 58 01.4	-0.2
OKFG				S	Sn	03 58 20.1	+1.3
OKER	**Okmok East Rim**	1.48	274	P	Pn	03 58 02.1	-0.7
OKSO	**Okmok South**	1.55	270	P	Pn	03 58 03.4	-0.2
OKSO				S	Sn	03 58 23.1	+0.5
SSBA	**Shishaldin**	1.63	31	P	Pn	03 58 04.1	-0.7
SSBA				S	Sn	03 58 27.2	+2.5
SSLW	**Shishaldin Wes**	1.63	31	P	Pn	03 58 04.3	-0.5
OKAK	**Okmok**	1.67	278	P	Pn	03 58 04.3	-1.0
FALS	**False Pass**	1.95	40	P	Pn	03 58 08.0	-1.0
FALS				S	Sn	03 58 32.2	-0.1
NIKH	**Nikolski High**	2.01	260	P	Pn	03 58 09.6	-0.3
NIKH				S	Sn	03 58 33.5	-0.4
SPIA	**Saint Paul Isl**	4.64	327	P	Pn	03 58 46.9	+1.0
H11N2	**WAKE ISLAND Hy**	39.72	223	T	T	04 47 39.0	
	baz=25,slow=76,SNR=28						
H11N3	**WAKE ISLAND Hy**	39.73	223	T	T	04 47 34.4	
	baz=25,slow=76,SNR=26						
H11N1	**WAKE ISLAND Hy**	39.74	223	T	T	04 47 17.8	
	baz=25,slow=76,SNR=26						
H11S1	**WAKE ISLAND Hy**	40.90	222	T	T	04 49 00.4	
	baz=25,slow=76,SNR=29						
H11S2	**WAKE ISLAND Hy**	40.91	222	T	T	04 49 18.6	
	baz=25,slow=76,SNR=25						
H11S3	**WAKE ISLAND Hy**	40.92	222	T	T	04 49 12.7	
	baz=25,slow=76,SNR=14						
TXAR	**Lajitas Array**	50.47	93	P	P	04 06 33.7	+2.4
	0.1nm,0.7s,baz=312,slow=7.2,SNR=2.8						
ARCES	**ARCESS Array B**	57.12	355	P	P	04 07 17.5	-1.7
	1.2nm,0.9s,baz=26,slow=5.0,SNR=2.3						
MKAR	**Makanchi Array**	64.74	315	P	P	04 08 11.0	-0.2
	0.3nm,0.6s,baz=46,slow=6.2,SNR=3.8						
HFS	**Hagfors**	66.83	0	P	P	04 08 23.4	-1.0
	1.0nm,0.7s,baz=356,slow=10,SNR=3.4						

ISCJB ***17*** *04:10:59.5±0.4, 40°.13N±0°.03×31°.76E±0°.04, h0^{km}, Error ellipse: s-maj=4.5km s-min=3.9km az=139.2*
CSEM ***17*** *04:10:59.6±0.2, 40°.14N×31°.75E, h1^{km}, ML2.5, Error ellipse: s-maj=4.3km s-min=3.8km az=13.0, Suspected Mining explosion.*
ISK ***17*** *04:10:59.7, 40°.12N×31°.76E, h10^{km}, ML2.4/6*
DDA ***17*** *04:11:00.3, 40°.15N×31°.67E, h7^{km}, Ml2.5, Suspected Mining explosion.*
ISC 17 04:10:59.1±0.8**, 40°.18N**±0°.03×**31°.77E**±0°.03**, h0**^{km}**, n40, σ0.^{s}75**/50**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUMIH	**MIHALICIK**	0.38	216	PG	Pg	04 11 06.7	+0.2
AUMIH				SG	Sg	04 11 11.9	+0.4
AUMIH	**MIHALICIK**	0.38	216	*i* P	Pg	04 11 06.7	+0.2
AUMIH				*i* S	Sg	04 11 12.1	+0.6
AUMIH	**MIHALICIK**	0.38	216	P	Pg	04 11 06.7	+0.2
AUMIH				S	Sg	04 11 12.1	+0.6
MDUB	**Mudurnu**	0.53	304	PG	Pb	04 11 10.5	-0.8
MDUB				SG	Sb	04 11 19.7	+0.1
MDUB	**Mudurnu**	0.53	304	*e*Pg	Pb	04 11 10.5	-0.8
MDUB				*e*Sg	Sb	04 11 19.7	+0.1
CMDR	**Camlidere-ANKA**	0.62	60	*i* P	Pb	04 11 12.4	-0.6
CMDR				*i* S	Sn	04 11 24.6	-1.5
CMDR	**Camlidere-ANKA**	0.62	60	P	Pb	04 11 12.4	-0.6
BCAM	**Yenicaga**	0.67	19	*i* P	Pb	04 11 13.5	-0.3
BCAM				*i* S	Sb	04 11 24.8	+1.0
BCAM	**Yenicaga**	0.67	19	P	Pb	04 11 13.5	-0.3
BCAM				S	Sb	04 11 24.8	+1.0
BTAS	**Taskesti**	0.71	304	*i* P	Pb	04 11 13.9	-0.5
BTAS	**Taskesti**	0.71	304	P	Pb	04 11 13.9	-0.5
AUSIV	**SIVRIHISAR**	0.76	194	PG	Pg	04 11 14.0	+0.2
AUSIV	**SIVRIHISAR**	0.76	194	*i* P	Pg	04 11 13.9	+0.2
AUSIV	**SIVRIHISAR**	0.76	194	P	Pg	04 11 13.9	+0.2
LOD	**Lodumlu**	0.81	111	PG	Pb	04 11 15.6	-0.6
LOD	**Lodumlu**	0.81	111	*e*Pg	Pb	04 11 15.6	-0.6
ANTO	**Ankara**	0.84	111	PG	Pb	04 11 16.3	-0.4
ANTO	**Ankara**	0.84	111	*e*Pg	Pb	04 11 16.3	-0.4
ESKT	**Eskisehir**	0.97	227	*i* P	Pg	04 11 17.6	-0.1
SAHE	**Sakarya_HENDEK**	0.97	314	*i* P	Pb	04 11 18.4	-0.4
SAHE				*i* S	Sn	04 11 37.8	+3.3
SAHE	**Sakarya_HENDEK**	0.97	314	P	Pb	04 11 18.4	-0.4
SEYT	**Eskypehyr**	0.97	227	P	Pg	04 11 17.6	-0.1
GULT	**Gulveren**	0.99	285	PG	Pb	04 11 18.9	-0.4
GULT	**Gulveren**	0.99	285	*e*Pg	Pb	04 11 18.9	-0.4
BORA	**Eskisehir**	1.06	254	PG	Pb	04 11 19.7	-0.7

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BORA	**Eskisehir**	1.06	254	*i* P	Pg	04 11 18.4	-1.0
BORA				*i* S	Sn	04 11 36.4	-0.4
BORA	**Eskisehir**	1.06	254	P	Pg	04 11 18.4	-1.0
BORA	**Eskisehir**	1.06	254	*e*Pg	Pb	04 11 19.7	-0.7
GEYV	**SAKARYA_Geyve**	1.17	285	*i* P	Pg	04 11 21.3	-0.2
GEYV	**SAKARYA_Geyve**	1.17	285	P	Pg	04 11 21.3	-0.2
SAUV	**Serdivan-Sakar**	1.24	297	PN	Pb	04 11 22.7	-0.7
SAUV	**Serdivan-Sakar**	1.24	297	*e*Pn	Pb	04 11 22.7	-0.7
AFSR	**Af¯ar-Bala (A**	1.24	126	PN	Pb	04 11 23.4	-0.1
AFSR	**Af¯ar-Bala (A**	1.24	126	*e*Pn	Pb	04 11 23.4	-0.1
KIZT	**Kizilcal**	1.30	176	PN	Pg	04 11 23.4	-0.7
KIZT	**Kizilcal**	1.30	176	*e*Pn	Pg	04 11 23.4	-0.7
BOLV	**Bolvadin**	1.59	204	*i* P	Pg	04 11 29.7	0.0
BOLV	**Bolvadin**	1.59	204	P	Pg	04 11 29.7	0.0
TVSB	**Tavsanli**	1.92	248	PN	Pn	04 11 32.9	-0.3
TVSB	**Tavsanli**	1.92	248	*e*Pn	Pn	04 11 32.9	-0.3

MAN 17 04:16:31.6, 13°.13N×120°.54E, h22^{km}, mb4.2, ML3.0, MS2.7, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	0.66	335	*e*P	Pb	04 16 45.0	+0.4
LUBP				*e*S	Sn	04 16 55.7	+0.2
SJMP	**San Jose**	0.88	139	*e*P	Pb	04 16 47.8	-0.3
SJMP				*e*S	Sn	04 17 00.4	-0.3
BUSP	**Coron**	1.17	196	*e*P	Pn	04 16 52.6	0.0
BUSP				*e*S	Sn	04 17 08.8	+0.9
BOAC	**Boac**	1.32	75	*e*P	Pn	04 16 54.6	-0.1
BOAC				*e*S	Sb	04 17 12.6	+0.5
OTRP	**Odiongan**	1.64	118	*e*P	Pn	04 16 58.8	-0.3
ENPP	**El Nido**	2.20	210	*e*P	Pn	04 17 07.0	+0.1

IDC 17 04:34:43.1±2.2, 22°.52S×148°.02E, h0^{km}, mb3.6/1, mb1 3.8/5, mb1mx3.5/35, mbtmp3.6/5, ML3.4/4, Error ellipse: s-maj=30.6km s-min=21.7km az=71.0, Queensland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CTA	**Charters Tower**	2.92	326	Pn	Pn	04 35 31.1	+0.2
	7.3nm,0.3s,baz=137,slow=15,SNR=46						
CTA				Pg	Pb	04 35 36.5	+0.3
	12nm,0.3s,baz=137,slow=16,SNR=26						
CTA				Lg	Lg	04 36 15.0	
	15nm,0.3s,baz=58,slow=19,SNR=11						
STKA	**Stephens Creek**	10.93	210	Pn	Pn	04 37 19.4	-1.4
	0.1nm,0.3s,baz=45,slow=13,SNR=4.3						
WRA	**Warramunga Arr**	13.01	279	Pn	Pn	04 37 47.5	-1.8
	0.1nm,0.3s,baz=98,slow=12,SNR=6.5						
WRA				Lg	Lg	04 41 40.5	
	0.1nm,0.3s,baz=107,slow=26,SNR=7.0						
ASAR	**Alice Springs**	13.04	262	Pn	Pn	04 37 50.4	+0.7
	0.2nm,0.3s,baz=90,slow=14,SNR=6.8						
ASAR				Lg	Lg	04 41 38.2	
	baz=84,slow=27,SNR=3.3						
SONM	**Songino Array**	79.38	333	P	P	04 46 51.3	+0.4
	0.2nm,0.4s,baz=160,slow=4.6,SNR=2.5						

IDC 17 04:35:10.6±29.0, 2°.70N×90°.49E, h0^{km}, mb3.9/3, mb1 4.0/4, mb1mx3.5/60, mbtmp4.0/4, ML4.1/1, Error ellipse: s-maj=566.7km s-min=53.3km az=173.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PALK	**Pallekele**	10.76	295	Pn	Pn	04 37 46.5	+0.4
	1.5nm,0.3s,baz=115,slow=10,SNR=4.9						
PALK				Sn	Sn	04 39 38.5	-8.8
	1.9nm,0.3s,baz=115,slow=7.2,SNR=4.6						
H08S2	**Diego Garcia H**	20.69	240	T	T	05 00 39.3	
	baz=62,slow=75,SNR=5.3						
H08S3	**Diego Garcia H**	20.69	240	T	T	05 00 21.1	
	baz=62,slow=75,SNR=14						
H08S1	**Diego Carcia H**	20.71	240	T	T	05 00 25.8	
	baz=62,slow=75,SNR=6.7						
MKAR	**Makanchi Array**	44.49	352	P	P	04 43 23.9	+0.2
	0.7nm,0.6s,baz=168,slow=9.3,SNR=7.6						
SONM	**Songino Array**	47.01	15	P	P	04 43 44.3	+0.5
	1.1nm,0.4s,baz=194,slow=9.6,SNR=6.4						
ZALV	**Zalesovo Beam**	51.29	356	P	P	04 44 15.3	-1.0
	0.8nm,0.3s,baz=163,slow=5.9,SNR=3.0						

MEX 17 04:52:02.9±0.5, 16°.90N×95°.35W, h119^{km}±12^{km}, MD3.7, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VHO	**Vista Hermosa**	1.33	277	*i* P	Pn	04 52 27.5	-1.0
VHO				*e*S	Sn	04 52 46.2	-1.8
HUIG	**Huatulco**	1.34	213	*e*P	Pn	04 52 26.9	-1.6
HUIG				*i* S	Sn	04 52 46.8	-1.1
TGIG		2.14	93	*e*P	Pn	04 52 36.7	-1.4
TGIG				*i* S	Sn	04 53 03.2	-1.8
PCIG		2.37	120	*i* P	Pn	04 52 40.2	-0.7
PCIG				*i* S	Sn	04 53 09.0	-1.2

MEX 17 05:30:08.2±0.3, 16°.19N×98°.22W, h8^{km}±3^{km}, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	0.22	23	*i* P	Pg	05 30 12.5	-0.2
PNIG				*e*S	Sg	05 30 15.5	-0.2
TLIG	**Tlapa**	1.41	346	*e*P	Pn	05 30 30.5	-3.8
TLIG				*i* S	Sb	05 30 47.8	-5.3
VHO	**Vista Hermosa**	1.67	58	*e*P	Pn	05 30 34.4	-3.6
VHO				*i* S	Sn	05 30 55.4	-4.4
CAIG	**El Cayaco**	2.14	294	*i* P	Pn	05 30 40.7	-3.6
CAIG				*i* S	Sn	05 31 06.6	-4.5
MEIG	**Mezcala**	2.19	322	*i* P	Pn	05 30 42.4	-2.6
MEIG				*i* S	Sn	05 31 08.4	-4.0

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*ISK **17** 05:37:25.6, 38°.30N×43°.17E, h18^{km}, ML2.4/4*

*ISCJB **17** 05:37:28.5±0.6, 38°.60N±0°.05×43°.16E±0°.04, h15^{km}±7^{km}, Error ellipse: s-maj=9.1km s-min=5.2km az=1.5*

*DDA **17** 05:37:28.4, 38°.64N×43°.20E, h7^{km}, Ml2.7*

*CSEM **17** 05:37:28.1±0.2, 38°.61N×43°.14E, h10^{km}, ML2.7, Error ellipse: s-maj=6.8km s-min=5.5km az=13.0*

ISC 17 05:37:28.6±1.0, 38°.61N±0°.03×43°.14E±0°.04, h12^{km}±10^{km}, n20, σ0^{s}.65/27, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VANB	**Van**	0.19	93	PG	**Pg**	**05 37 32.5**	**-0.4**
VANB				SG	**Sg**	**05 37 36.6**	**+0.7**
VANB	**Van**	0.19	93	*i* Pg	**Pg**	**05 37 32.5**	**-0.4**
VANB				*e*Sg	**Sg**	**05 37 36.6**	**+0.7**
TVAN	**Van**	0.22	110	*i* P	**Pg**	**05 37 32.5**	**-0.9**
TVAN				*i* S	**Sg**	**05 37 36.6**	**-0.1**
TVAN	**Van**	0.22	110	P	**Pg**	**05 37 32.5**	**-0.9**
TVAN				S	**Sg**	**05 37 36.6**	**-0.1**
GEVA	**Gevas**	0.30	193	*i* P	**Pg**	**05 37 34.7**	**-0.1**
GEVA				*i* S	**Sb**	**05 37 41.2**	**+0.2**
GEVA	**Gevas**	0.30	193	P	**Pg**	**05 37 34.7**	**-0.1**
GEVA				S	**Sb**	**05 37 41.2**	**+0.2**
ADCV	**BITLIS_Adilcev**	0.38	302	*i* P	**Pg**	**05 37 36.5**	**+0.2**
ADCV				*i* S	**Sb**	**05 37 43.8**	**+0.3**
ADCV	**BITLIS_Adilcev**	0.38	302	P	**Pg**	**05 37 36.5**	**+0.2**
VMUR	**Van-Muradiye**	0.51	41	*i* P	**Pg**	**05 37 38.2**	**-0.4**
VMUR	**Van-Muradiye**	0.51	41	P	**Pg**	**05 37 38.2**	**-0.4**
TUTA	**Tutak**	0.83	342	*i* P	**Pg**	**05 37 43.9**	**-0.9**
TUTA	**Tutak**	0.83	342	P	**Pg**	**05 37 43.9**	**-0.9**
GURO	**Guroymak-BITLI**	0.87	267	PG	**Pg**	**05 37 44.4**	**-1.0**
GURO				SG	**Sb**	**05 37 57.4**	**0.0**
GURO	**Guroymak-BITLI**	0.87	267	*e*Pg	**Pg**	**05 37 44.4**	**-1.0**
GURO				*e*Sg	**Sb**	**05 37 57.4**	**0.0**
AGRB	**Hanur-Agry**	0.97	353	PN	**Pn**	**05 37 49.3**	**+1.0**
AGRB	**Hanur-Agry**	0.97	353	*e*Pn	**Pn**	**05 37 49.3**	**+1.0**
EATA	**Eleskirt**	1.35	338	*i* P	**Pn**	**05 37 53.1**	**-0.5**
EATA	**Eleskirt**	1.35	338	P	**Pn**	**05 37 53.1**	**-0.5**
CUKT	**Cukurca**	1.41	165	PN	Pn	05 37 46.5	-7.6
CUKT	**Cukurca**	1.41	165	*e*Pn	Pn	05 37 46.5	-7.6

JMA 17 05:38:22.0, 39°.15N×142°.44E, h45^{km}±1^{km}, M3.5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	0.60	264	P	Pn	05 38 34.4	+0.1
OFUJ				S	Sn	05 38 43.1	0.0
MIYJ	**Miyakonagasawa**	0.64	312	P	Pn	05 38 34.7	-0.1
MIYJ				S	Sn	05 38 43.9	-0.1
JTH	**Tanohata**	0.91	331	P	Pn	05 38 38.5	+0.2
JTH				*e*S	Sn	05 38 50.5	+0.2
JOM	**Ohasama**	0.95	290	P	Pn	05 38 39.2	+0.3
JOM				*e*S	Sn	05 38 51.1	-0.2
JMK	**Ichinoseki**	0.97	259	P	Pn	05 38 39.5	+0.3
JMK				*e*S	Sn	05 38 52.2	+0.4
JIO	**Ouri**	1.10	231	P	Pn	05 38 40.9	-0.1
JIO				*e*S	Sn	05 38 54.4	-0.6
JKZ	**Kuzumaki**	1.20	315	P	Pn	05 38 42.9	+0.6
JKZ				*e*S	Sn	05 38 58.1	+0.7
JANG	**Nango**	1.42	330	P	Pn	05 38 45.2	-0.1
JRG	**Rokugo**	1.42	281	P	Pn	05 38 45.8	+0.4
JOU	**Okura**	1.59	241	P	Pn	05 38 48.3	+0.5
JYK	**Kaneyama**	1.64	263	P	Pn	05 38 49.0	+0.7

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*IDC **17** 05:58:26.6±0.8, 11°.20N×126°.04E, h0^{km}, mb4.1/9, mb1 4.2/9, mb1mx3.9/57, mbtmp4.1/9, MS2.8/1, Ms1 2.8/1, ms1mx2.4/56, Error ellipse: s-maj=54.7km s-min=15.1km az=73.0*

*MAN **17** 05:58:28.5, 11°.35N×126°.26E, h16^{km}, mb4.7, ML3.6, MS3.6*

*ISCJB **17** 05:58:29.5±0.6, 11°.35N±0°.04×126°.27E±0°.07, h33^{km}, mb3.9/10, Error ellipse: s-maj=10.6km s-min=5.9km az=13.5*

ISC 17 05:58:31.5±0.7, 11°.29N±0°.04×126°.17E±0°.08, h33^{km}, n21, σ1^{s}.53/27, mb4.0/10, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BESP	**Borongan**	0.78	293	*e*P	**Pn**	**05 58 44.2**	**-2.0**
PLP	**Palo**	1.18	264	⇓*i*P	**Pn**	**05 58 49.9**	**-1.8**
SCPH	**Surigao**	1.65	204	*e*P	**Pn**	**05 58 57.4**	**-0.8**
SCPH				*e*S	**Sn**	**05 59 16.7**	**-1.6**
MSLP	**Maasin**	1.73	228	*e*P	**Pn**	**05 58 59.5**	**+0.1**
MSLP				*e*S	**Sb**	**05 59 23.6**	**-0.5**
BUTP	**Butuan**	2.37	193	*e*P	**Pb**	**05 59 13.1**	**-0.6**
BUTP				*e*S	**Sb**	**05 59 43.2**	**+0.7**
LLP	**Lapu-Lapu**	2.38	246	*e*P	**Pn**	**05 59 08.9**	**+0.7**
LLP				*e*S	**Sb**	**05 59 42.5**	**-0.1**
PVCP	**Virac**	3.02	319	*e*P	**Pn**	**05 59 15.3**	**-1.8**
PVCP				*e*S	**Sb**	**06 00 05.8**	**+4.7**
BUKP	**Musuan**	3.57	198	*e*P	**Pn**	**05 59 25.6**	**+0.9**
BUKP				*e*S	**Sn**	**06 00 08.9**	**+3.2**
GUIM	**Jordan**	3.58	260	*e*P	**Pn**	**05 59 25.4**	**+0.6**
PAGZ	**Pagadian**	4.39	219	*e*P	**Pn**	**05 59 36.6**	**+0.7**
GUMO	**Guam**	18.40	81	LR	LR	06 08 48.0	
	comp=Z,33nm,21.9s,baz=128,slow=34						
KSRS	**Korea Array**	26.09	3	P	**P**	**06 04 04.0**	**+1.7**
	0.5nm,0.3s,baz=177,slow=10.0,SNR=6.1						
WRA	**Warramunga Arr**	32.06	165	P	**P**	**06 04 56.1**	**+0.5**
	0.8nm,0.8s,baz=345,slow=9.3,SNR=6.4						
ASAR	**Alice Springs**	35.56	168	P	**P**	**06 05 24.6**	**-1.3**
	0.6nm,0.4s,baz=351,slow=7.0,SNR=9.3						
ASAR				PcP	**PcP**	**06 07 54.5**	**-0.2**
	0.5nm,0.7s,baz=346,slow=2.8,SNR=5.2						
KLR	**Kul'dur**	38.10	6	P	**P**	**06 05 47.4**	**+0.2**
	0.1nm,0.6s,baz=180,slow=10,SNR=3.2						
SONM	**Songino Array**	40.03	339	P	**P**	**06 06 03.6**	**0.0**
	0.5nm,0.4s,baz=157,slow=14,SNR=4.2						
STKA	**Stephens Creek**	45.40	161	P	**P**	**06 06 46.2**	**-0.9**
	2.4nm,0.6s,baz=351,slow=6.0,SNR=4.6						
MKAR	**Makanchi Array**	51.16	322	P	**P**	**06 07 31.8**	**+0.3**
	2.4nm,0.6s,baz=116,slow=8.3,SNR=8.8						
KURBB	**Kurchatov Arra**	55.18	325	P	**P**	**06 08 01.1**	**+0.1**
	3.6nm,0.6s,baz=126,slow=6.9,SNR=33						
BVAR	**Borovoye Array**	60.77	325	P	**P**	**06 08 40.6**	**+0.4**
	1.3nm,0.6s,baz=111,slow=7.9,SNR=5.8						
FINES	**FINESS Array B**	84.95	332	P	**P**	**06 11 02.1**	**-1.1**
	1.5nm,0.8s,baz=108,slow=6.2,SNR=3.9						

MAN 17 05:58:43.9, 13°.16N×120°.55E, h30^{km}, mb4.4, ML3.2, MS3.0, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	0.64	333	*e*P	Pn	05 58 57.3	+0.4
LUBP				*e*S	Sn	05 59 06.8	+0.8
SJMP	**San Jose**	0.89	141	*e*P	Pn	05 59 00.1	-0.3
SJMP				*e*S	Sb	05 59 12.5	+0.1
BUSP	**Coron**	1.20	196	*e*P	Pn	05 59 05.2	+0.5
BUSP				*e*S	Sb	05 59 21.1	-0.2
BOAC	**Boac**	1.29	77	*e*P	Pb	05 59 08.1	+0.5
BOAC				*e*S	Sb	05 59 25.0	+1.1
OTRP	**Odiongan**	1.64	119	*e*P	Pn	05 59 10.4	-0.3
OTRP				*e*S	Sn	05 59 31.8	+0.9
ENPP	**El Nido**	2.23	210	*e*P	Pn	05 59 19.3	+0.5
ENPP				*e*S	Sn	05 59 45.2	-0.3
RCP	**Roxas**	2.67	126	⇓*e*P	Pn	05 59 23.4	-1.5

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*IDC **17** 06:00:34.8±0.7, 23°.19N×93°.30E, h0^{km}, mb4.1/14, mb1 4.2/14, mb1mx3.9/61, mbtmp4.1/14, MS3.3/11, Ms1 3.3/11, ms1mx3.0/63, Error ellipse: s-maj=16.0km s-min=13.0km az=174.0*

*ISCJB **17** 06:00:37.9±0.5, 23°.02N±0°.03×92°.91E±0°.03, h35^{km}±5^{km}, mb4.1/22, MS3.3/9, Error ellipse: s-maj=6.4km s-min=3.3km az=33.5*

*NEIC **17** 06:00:41.1±0.5, 23°.05N×93°.07E, h48^{km}±5^{km}, mb4.4/10, Error ellipse: s-maj=8.8km s-min=4.1km az=53.0*

ISC 17 06:00:41.8±1.0, 23°.14N±0°.05×93°.04E±0°.05, h52^{km}±10^{km}, n84, σ1^{s}.63/99, mb4.1/23, MS3.4/9, Myanmar-India border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRDH	**Bariadhala**	1.37	251	Pg	**Pn**	**06 01 03.9**	**-0.6**
	178nm,0.3s,baz=72,slow=19,SNR=40						
BRDH				Lg	Lg	06 01 25.9	
	335nm,0.3s,baz=63,slow=23,SNR=20						
BELO	**BELONIA**	1.47	275	*e*P	**Pn**	**06 01 05.8**	**-0.2**
BELO				*e*S	**Sn**	**06 01 27.3**	**+3.2**
BELO				IAML		06 01 32.9	
	comp=N,4µm,0.6s						
BELO				IAML		06 01 34.5	
	comp=E,4µm,0.5s						
SILR	**SILCHAR**	1.65	352	*e*P	**Pn**	**06 01 07.6**	**-0.8**
SILR				*e*S	**Sn**	**06 01 30.3**	**+1.9**
SILR				IAML		06 01 36.4	
	comp=E,4µm,0.6s						
SILR				IAML		06 01 36.4	
	comp=N,3µm,0.3s						
AGT	**Agartala**	1.81	295	*e*P	**Pn**	**06 01 11.1**	**+0.6**
AGT				*e*S	**Sn**	**06 01 36.3**	**+4.0**
IMP	**Imphal**	1.88	26	*e*P	**Pn**	**06 01 09.7**	**-1.9**
IMP				*e*x	**Sn**	**06 01 36.1**	**+1.9**
SHL	**Shillong**	2.64	337	*e*Pn	**Pn**	**06 01 21.8**	**-0.3**
SHL	**Shillong**	2.64	337	*e*P	**Pn**	**06 01 21.9**	**-0.1**
SHL				*e*S	**Sn**	**06 01 55.1**	**+2.1**
KOHI	**KOHIMA**	2.75	20	*e*P	**Pn**	**06 01 21.0**	**-2.5**
KOHI				*e*S	**Sn**	**06 01 58.2**	**+2.6**
GUWA	**GUWAHATI**	3.28	338	*e*P	**Pn**	**06 01 29.1**	**-1.6**
GUWA				*e*x	**Sn**	**06 02 06.9**	**-1.6**
MOKO	**MOKOCHONG**	3.44	23	*e*P	**Pn**	**06 01 31.1**	**-2.0**
MOKO				*e*S	**Sn**	**06 02 12.1**	**-0.6**
TEZP	**TEZPUR**	3.47	356	*e*x	**Pn**	**06 01 29.7**	**-3.6**
ZIRO	**ZIRO**	4.43	9	*e*P	**Pn**	**06 01 44.9**	**-1.7**
ZIRO				*e*S	**Sn**	**06 02 32.9**	**-4.1**
ZIRO				IAML		06 02 37.3	
	comp=N,540nm,0.2s						
ZIRO				IAML		06 02 37.7	
	comp=E,575nm,0.4s						
GTK	**Tadong**	5.79	317	*e*P	**Pn**	**06 02 06.0**	**+0.7**
ODAN	**Odare**	6.33	307	*e*P	**Pn**	**06 02 11.5**	**-1.2**
	comp=E,79nm,0.3s						
ODAN				*e*S	**Sn**	**06 03 23.2**	**-0.6**
TAPN	**Taplejung**	6.39	312	*e*P	**Pn**	**06 02 12.8**	**-0.9**
	comp=E,84nm,0.3s						
TAPN				*e*S	**Sn**	**06 03 26.5**	**+1.0**
BOK	**Bokaro**	6.60	277	*e*P	**Pn**	**06 02 14.6**	**-1.7**
BOK				*e*S	**Sn**	**06 03 27.3**	**-3.0**
LSA	**Lhasa**	6.75	346	*e*Pn	**Pn**	**06 02 19.2**	**+0.5**
RAMN	**Ramite**	6.97	304	*e*P	**Pn**	**06 02 20.1**	**-1.4**
	comp=E,120nm,0.5s						
RAMN				*e*S	**Sn**	**06 03 37.8**	**-1.7**
CHTO	**Chiang Mai**	6.99	127	*e*Pn	**Pn**	**06 02 20.7**	**-1.0**
CHTO	**Chiang Mai**	6.99	127	P	**Pn**	**06 02 23.5**	**+1.8**
	comp=E,50nm,0.8s						
CMMT	**Chiang Mai**	7.00	127	P	**Pn**	**06 02 23.4**	**+1.6**
	comp=E,12nm,0.8s,comp=E,622nm						
CM31	**Chiang Mai Arr**	7.22	129	*e*Pn	**Pn**	**06 02 24.2**	**-0.7**
CMAR	**Chiang Mai Arr**	7.22	129	Pn	**Pn**	**06 02 22.7**	**-2.1**
	comp=E,1.2nm,0.3s,baz=309,slow=14,SNR=29						
CMAR				LR	LR	06 05 47.1	
	comp=E,178nm,18.8s,baz=285,slow=44						
CM01	**Chiang Mai Arr**	7.26	129	*e*Pn	**Pn**	**06 02 22.9**	**-2.4**
PAYA	**Payao**	7.39	119	P	**Pn**	**06 02 27.0**	**-0.2**
	comp=E,9.8nm,0.8s,comp=E,142nm						
JIRN	**Jiri**	7.66	307	*e*P	**Pn**	**06 02 29.3**	**-1.8**
	comp=E,123nm,0.4s						
JIRN				*e*S	**Sn**	**06 03 56.4**	**-0.3**
GUN	**Gumba**	8.03	308	*e*P	**Pn**	**06 02 34.8**	**-1.3**
	comp=E,98nm,0.5s						
GUN				*e*S	**Sn**	**06 04 05.5**	**-0.2**
PKIN	**Phulchoki**	8.21	304	*e*P	**Pn**	**06 02 36.6**	**-1.9**
	comp=E,133nm,0.4s						
PKIN				*e*S	**Sn**	**06 04 07.5**	**-2.5**
NANT	**Nan**	8.36	120	P	**Pn**	**06 02 39.7**	**-0.7**
KKN	**Kakani**	8.40	305	*e*P	**Pn**	**06 02 39.7**	**-1.5**
	comp=E,48nm,0.4s						
KKN				*e*S	**Sn**	**06 04 13.6**	**-1.2**
DMN	**Daman**	8.44	303	*e*P	**Pn**	**06 02 40.0**	**-1.8**
	comp=E,23nm,0.3s						
DMN				*e*S	**Sn**	**06 04 14.1**	**-1.7**
GKN	**Gorkha**	9.00	304	*e*P	**Pn**	**06 02 47.2**	**-2.1**
	comp=E,136nm,0.4s						
GKN				*e*S	**Sn**	**06 04 27.4**	**-2.0**
PHIT	**Phitsanulok**	9.11	129	P	**Pn**	**06 02 52.3**	**+1.6**
	comp=E,14nm,0.7s						
KOLN	**Koldanda**	9.70	300	*e*P	**Pn**	**06 02 55.9**	**-3.0**
	comp=E,68nm,0.5s						
KOLN				*e*S	**Sn**	**06 04 43.4**	**-3.1**
DANN	**Dangsing**	9.84	304	*e*P	**Pn**	**06 02 58.1**	**-2.9**
	comp=E,31nm,0.4s						
DANN				*e*S	**Sn**	**06 04 48.6**	**-1.6**
PBKT	**Sadao Pong**	9.91	130	P	**Pn**	**06 03 02.4**	**+0.7**
PYUN	**Piuthan**	10.33	301	*e*P	**Pn**	**06 03 04.5**	**-3.0**
	comp=E,36nm,0.4s						
PYUN				*e*S	**Sn**	**06 04 59.5**	**-2.4**
LHMI	**Lhok Sumawe**	18.20	167	*e*P	**P**	**06 04 48.3**	**-2.2**
	comp=E,56nm,0.7s						
PALK	**Pallekele**	19.74	219	LR	LR	06 12 41.1	
	comp=E,52nm,21.5s,baz=297,slow=36						
PSI	**Prapat**	21.00	163	*e*P	**P**	**06 05 20.9**	**-0.3**
	comp=E,7.1nm,0.8s						
PRZ	**Przheval'sk**	22.82	331	*e*P	**P**	**06 05 42.5**	**+2.0**
	comp=E,21nm,1.1s						
KDJ	**Kajisay**	23.10	329	*e*P	**P**	**06 05 44.8**	**+1.4**
	comp=E,8.0nm,0.9s						
KBL	**Kabul**	23.84	304	*e*P	**P**	**06 05 50.8**	**+0.3**
	comp=E,7.7nm,0.8s						
AAK	**Ala-Archa**	24.81	326	P	**P**	**06 06 00.7**	**+1.5**
	comp=E,3.1nm,0.5s,baz=153,slow=6.8,SNR=6.5						
AAK				LR	LR	06 17 45.9	
	comp=E,50nm,18.6s,baz=127,slow=41						
AAK	**Ala-Archa**	24.81	326	*e*P	**P**	**06 06 00.4**	**+1.1**
	comp=E,4.9nm,0.6s						
AAK				*e*P	**P**	**06 06 00.7**	**+1.5**
MK01	**Makanchi Array**	25.12	342	*e*P	**P**	**06 06 01.8**	**0.0**
MK31	**Makanchi Array**	25.14	342	*e*P	**P**	**06 06 02.0**	**0.0**
MK32	**Makanchi Array**	25.14	342	*e*P	**P**	**06 06 02.0**	**0.0**
MKAR	**Makanchi Array**	25.14	342	P	**P**	**06 06 02.0**	**0.0**
	comp=E,3.8nm,0.7s,baz=154,slow=8.9,SNR=31						
MKAR				LR	LR	06 17 50.6	
	comp=E,48nm,19.9s,baz=163,slow=41						
MKAR	**Makanchi Array**	25.14	342	*e*P	**P**	**06 06 02.0**	**0.0**
	comp=E,54nm,0.8s						
MAKZ	**Makanchi**	25.25	342	*e*P	**P**	**06 06 02.1**	**-0.9**
	comp=E,5.4nm,0.8s						
SONA0	**Songino Array**	26.86	20	*e*P	**P**	**06 06 18.5**	**+0.9**
SONM	**Songino Array**	26.86	20	P	**P**	**06 06 18.5**	**+0.9**
	comp=E,1.4nm,0.7s,baz=199,slow=9.0,SNR=6.1						
KK31	**Karatay Array**	27.28	322	*e*P	**P**	**06 06 22.4**	**+1.0**
KKAR	**Karatay Array**	27.28	322	*e*P	**P**	**06 06 22.5**	**+1.1**
KURBB	**Kurchatov Arra**	29.68	341	P	**P**	**06 06 42.6**	**+0.1**
	comp=E,1.4nm,0.7s,baz=155,slow=8.4,SNR=7.2						
KURK	**Kurchatov**	29.73	341	*e*P	**P**	**06 06 42.6**	**-0.4**
KSRS	**Korea Array**	33.12	56	LR	LR	06 22 08.3	
	comp=E,88nm,19.7s,baz=253,slow=39						
BVAR	**Borovoye Array**	34.46	336	P	**P**	**06 07 24.6**	**+0.1**
	comp=E,0.6nm,0.4s,baz=132,slow=8.4,SNR=5.6						
JNU	**Nakatsue**	34.66	65	LR	LR	06 23 08.3	
	comp=E,64nm,20.3s,baz=305,slow=39						
ABKAR	**Akbulak array**	36.83	323	*e*P	**P**	**06 07 45.6**	**+0.8**
AKTO	**Aktyubinsk**	38.52	324	P	**P**	**06 07 59.2**	**+0.1**
	comp=E,1.6nm,0.5s,baz=110,slow=10,SNR=7.1						
AKTO				LR	LR	06 25 52.3	
	comp=E,50nm,20.2s,baz=131,slow=39						
KLR	**Kul'dur**	40.01	40	P	**P**	**06 08 12.9**	**+1.4**
	comp=E,0.1nm,0.4s,baz=287,slow=14,SNR=3.0						
ARU	**Arti**	41.72	332	LR	LR	06 28 58.9	
	comp=E,46nm,18.0s,baz=86,slow=41						
KBZ	**Khabaz**	45.83	309	LR	LR	06 33 06.1	
	comp=E,30nm,19.4s,baz=94,slow=42						
MLR	**Muntele Rosu**	58.02	310	P	**P**	**06 10 29.6**	**+0.1**
	comp=E,0.5nm,0.6s,baz=197,slow=11,SNR=3.6						
MLR	**Muntele Rosu**	58.02	310	*e*P	**P**	**06 10 29.6**	**+0.1**
	comp=E,5.1nm,0.9s						
WR1	**Warramunga Arr**	58.79	133	*e*P	**P**	**06 10 34.1**	**-0.9**
	comp=E,6.5nm,1.0s						
WRA	**Warramunga Arr**	58.79	133	P	**P**	**06 10 34.1**	**-0.9**
	comp=E,3.3nm,0.6s,baz=322,slow=7.4,SNR=41						
FIA0	**FINESS Array S**	58.95	329	*e*P	**P**	**06 10 36.0**	**+0.4**
FINES	**FINESS Array B**	58.95	329	P	**P**	**06 10 36.0**	**+0.4**
	comp=E,1.3nm,0.6s,baz=128,slow=12,SNR=4.1						
ARA0	**ARCESS Array S**	60.70	338	*e*P	**P**	**06 10 47.4**	**-0.1**
ARCES	**ARCESS Array B**	60.70	338	P	**P**	**06 10 47.4**	**-0.1**
	comp=E,0.9nm,0.6s,baz=85,slow=10,SNR=6.9						
ASAR	**Alice Springs**	61.16	137	P	**P**	**06 10 50.9**	**-0.4**
	comp=E,4.5nm,0.6s,baz=319,slow=6.8,SNR=55						
HFS	**Hagfors**	64.95	327	P	**P**	**06 11 16.6**	**+0.7**
	comp=E,2.0nm,0.6s,baz=116,slow=3.4,SNR=7.9						
GERES	**GERESS Array B**	66.06	315	P	**P**	**06 11 23.8**	**+0.4**
	comp=E,0.7nm,0.4s,baz=90,slow=5.5,SNR=4.8						
NB2	**NORSAR Subarra**	66.11	328	P	**P**	**06 11 23.4**	**0.0**
	comp=Z,0.9nm,0.8s,baz=84,slow=6.9						
NOA	**NORSAR Array B**	66.11	328	LR	LR	06 42 05.2	
	comp=Z,29nm,19.2s,baz=285,slow=38						
DAVOX	**Davos/Dischmat**	68.95	313	LR	LR	06 47 31.1	
	comp=Z,27nm,19.9s,baz=276,slow=41						
EKA	**Eskdalemuir Ar**	74.70	324	P	**P**	**06 12 18.0**	**+2.1**
	comp=Z,1.0nm,0.7s,baz=77,slow=7.6,SNR=4.4						
ILAR	**Eielson Array**	81.06	22	P	**P**	**06 12 50.0**	**-1.0**
	comp=Z,0.4nm,0.6s,baz=298,slow=4.6,SNR=7.0						
ILB	**Eielson Array**	81.06	22	*e*P	**P**	**06 12 50.0**	**-1.0**
JCT	**Junction City**	125.28	14	*e*PKPpre	PKPpre	06 19 28.7	
TXAR	**Lajitas Array**	125.41	18	PKP	**PKPdf**	**06 19 37.8**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=146,slow=0.3,SNR=3.0						

IDC 17 06:15:00.3±3.3, 30°.18S×138°.56E, h0^{km}, mb1 3.2/3, mb1mx3.1/41, mbtmp3.0/3, ML3.0/3, Error ellipse: s-maj=95.7km s-min=15.8km az=44.0, South Australia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	3.10	124	Pn	Pn	06 15 51.0	+0.5
	0.7nm,0.3s,baz=305,slow=12,SNR=4.5						
STKA				Pg	Pg	06 15 58.2	-1.5
	2.7nm,0.3s,baz=302,slow=16,SNR=10						
STKA				Sn	Sn	06 16 27.8	-0.5
	4.5nm,0.3s,baz=310,slow=8.0,SNR=7.8						
STKA				Lg	Lg	06 16 37.3	
	3.8nm,0.3s,baz=8.7,slow=21,SNR=4.4						
ASAR	**Alice Springs**	7.71	326	Pn	Pn	06 16 53.9	0.0
	0.2nm,0.3s,baz=151,slow=12,SNR=8.7						
ASAR				Sn	Sn	06 18 21.2	-0.7
	0.2nm,0.3s,baz=151,slow=22,SNR=5.2						
WRA	**Warramunga Arr**	10.89	338	Pn	Pn	06 17 37.5	0.0
	0.2nm,0.3s,baz=156,slow=13,SNR=8.2						
WRA				Sn	Sn	06 19 38.2	-1.8
	0.1nm,0.3s,baz=166,slow=28,SNR=4.1						

IDC 17 06:40:20.7±1.3, 23°.21N×93°.38E, h0^{km}, mb3.4/3, mb1 3.7/3, mb1mx3.3/61, mbtmp3.4/3, MS3.7/1, Ms1 3.7/1, ms1mx2.5/52, Error ellipse: s-maj=26.7km s-min=14.2km az=172.0, Myanmar-India border region

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

BRDH	Bariadhala	1.68	252	Pg	Pn	06 40 50.5	-0.9
	24nm,0.3s,baz=72,slow=20,SNR=4.9						
BRDH				Lg	Lg	06 41 14.6	
	67nm,0.3s,baz=67,slow=23,SNR=9.7						
SHL	Shillong	2.71	330	*e*P	Pb	06 41 10.0	-0.3
MKAR	Makanchi Array	25.17	342	P	P	06 45 48.3	+0.6
	0.2nm,0.4s,baz=144,slow=9.0,SNR=4.1						
JHJ	Hachijo jima 2	41.80	66	LR	LR	07 06 07.2	
	comp=Z,88nm,20.3s,baz=88,slow=37						
WRA	Warramunga Arr	58.62	134	P	P	06 50 19.4	-0.5
	0.3nm,0.5s,baz=322,slow=7.4,SNR=5.5						
ASAR	Alice Springs	61.00	137	P	P	06 50 36.5	+0.2
	0.5nm,0.6s,baz=321,slow=6.9,SNR=7.8						

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*IDC **17** 06:40:28.1±7.8, 30°.35S×178°.33W, h0^{km}, mb3.3/2, mb1 3.6/2, mb1mx3.4/39, mbtmp3.3/2, Error ellipse: s-maj=326.1km s-min=59.2km az=155.0*

*WEL **17** 06:41:35.6±0.7, 33°S±8°×17°9W±2°1, h292^{km}±12^{km}*

ISC 17 06:41:14.4±2.2**, 31°.3S**±0°.2×**178°.6W**±0°.3**, h450^{km}, n98, σ1^{s}.27**/98**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	6.77	202	P	P	06 42 58.2	+1.8
MXZ	Matakaoa Point	6.77	202	P	P	06 42 58.2	+1.8
MXZ				S	S	06 43 58.3	-22
WMGZ	Waiomatatini S	6.97	200	P	P	06 42 57.9	-0.7
WMGZ	Waiomatatini S	6.97	200	P	P	06 42 57.9	-0.7
WMGZ				S	S	06 44 04.0	-20
HAZ	Te Kaha	7.12	204	P	P	06 42 58.8	-1.4
HAZ	Te Kaha	7.12	204	P	P	06 42 58.8	-1.4
HAZ				S	S	06 44 05.0	-22
PKGZ	Pakihiroa	7.14	202	P	P	06 43 00.1	-0.4
PKGZ	Pakihiroa	7.14	202	P	P	06 43 00.1	-0.4
PUZ	Puketiti	7.25	200	P	P	06 43 01.8	+0.2
PUZ	Puketiti	7.25	200	P	P	06 43 01.8	+0.2
PUZ				S	S	06 44 08.6	-21
RUGZ	Raukumara Rang	7.34	204	P	P	06 43 02.1	-0.6
RUGZ	Raukumara Rang	7.34	204	P	P	06 43 02.1	-0.6
TWGZ	Tauwhareparae	7.43	202	P	P	06 43 03.9	+0.3
TWGZ	Tauwhareparae	7.43	202	P	P	06 43 03.9	+0.3
TWGZ				S	S	06 44 13.4	-20
CNGZ	Carnagh Statio	7.65	199	P	P	06 43 05.6	-0.2
CNGZ	Carnagh Statio	7.65	199	P	P	06 43 05.6	-0.2
OPRZ	Ohinepanea	7.67	210	P	P	06 43 07.4	+1.3
OPRZ	Ohinepanea	7.67	210	P	P	06 43 07.4	+1.3
TKGZ	Te Karaka	7.71	202	P	P	06 43 04.7	-1.9
TKGZ	Te Karaka	7.71	202	P	P	06 43 04.7	-1.9
MWZ	Matawai	7.72	204	P	P	06 43 04.8	-1.9
MWZ	Matawai	7.72	204	P	P	06 43 04.8	-1.9
MKAZ	Moumakai	7.79	220	P	P	06 43 07.8	+0.4
URZ	Urewera	7.81	206	P	P	06 43 07.9	+0.4
URZ	Urewera	7.81	206	P	P	06 43 04.5	-3.0
RAGZ	Rawiri	7.91	204	P	P	06 43 10.4	+1.7
RAGZ	Rawiri	7.91	204	P	P	06 43 10.4	+1.7
KARZ	Kaharoa	7.96	211	P	P	06 43 11.3	+2.1
KARZ	Kaharoa	7.96	211	P	P	06 43 11.3	+2.1
RIGZ	Rimuhau	7.99	201	P	P	06 43 11.1	+1.6
RIGZ	Rimuhau	7.99	201	P	P	06 43 11.1	+1.6
TARZ	Mount Tarawera	8.03	209	P	P	06 43 11.5	+1.5
TOZ	Tahuroa Road	8.08	216	P	P	06 43 10.5	0.0
MUGZ	Murupara	8.13	207	P	P	06 43 09.9	-1.1
MUGZ	Murupara	8.13	207	P	P	06 43 09.9	-1.1
PRGZ	Paritu Road	8.15	200	P	P	06 43 11.8	+0.6
PRGZ	Paritu Road	8.15	200	P	P	06 43 13.5	+2.2
RTZ	Ruatahuna	8.17	205	P	P	06 43 11.9	+0.4
RTZ	Ruatahuna	8.17	205	P	P	06 43 11.9	+0.4
SNGZ	Shannon Statio	8.19	203	P	P	06 43 11.5	-0.2
SNGZ	Shannon Statio	8.19	203	P	P	06 43 11.5	-0.2
HRRZ	Handcock Road	8.25	210	P	P	06 43 14.1	+1.7
HRRZ	Handcock Road	8.25	210	P	P	06 43 14.1	+1.7
GRRZ	Galatos Road	8.29	210	P	P	06 43 14.8	+2.0
GRRZ	Galatos Road	8.29	210	P	P	06 43 14.8	+2.0
PRRZ	Plateau Road	8.30	209	P	P	06 43 13.8	+0.9
PRRZ	Plateau Road	8.30	209	P	P	06 43 13.8	+0.9
KNZ	Kokohu	8.30	201	P	P	06 43 12.4	-0.4
KNZ	Kokohu	8.30	201	P	P	06 43 14.1	+1.2
MHGZ	Mahia Peninsul	8.36	199	P	P	06 43 14.8	+1.4
MHGZ	Mahia Peninsul	8.36	199	P	P	06 43 14.8	+1.4
ALRZ	Allen Road	8.37	209	P	P	06 43 14.5	+0.9
ALRZ	Allen Road	8.37	209	P	P	06 43 14.5	+0.9
RAHZ	Arahi	8.40	204	P	P	06 43 13.9	-0.1
RAHZ	Arahi	8.40	204	P	P	06 43 13.9	-0.1
MTHZ	Maungataniwha	8.43	205	P	P	06 43 15.0	+0.7
MTHZ	Maungataniwha	8.43	205	P	P	06 43 15.0	+0.7
WHHZ	Waihua	8.49	203	P	P	06 43 16.6	+1.6
WHHZ	Waihua	8.49	203	P	P	06 43 16.6	+1.6
TLZ	Tolley Road	8.53	213	P	P	06 43 17.8	+2.4
TLZ	Tolley Road	8.53	213	P	P	06 43 17.8	+2.4
MRHZ	Matea Rd	8.57	207	P	P	06 43 15.0	-0.9
MRHZ	Matea Rd	8.57	207	P	P	06 43 15.0	-0.9
NMHZ	Naumai	8.66	205	P	P	06 43 16.9	+0.1
NMHZ	Naumai	8.66	205	P	P	06 43 16.9	+0.1
ARHZ	Aropaoanui	8.74	203	P	P	06 43 17.8	+0.2
ARHZ	Aropaoanui	8.74	203	P	P	06 43 17.8	+0.2
BKZ	Black Stump Fm	8.83	206	P	P	06 43 19.4	+0.7
BKZ	Black Stump Fm	8.83	206	P	P	06 43 19.4	+0.7
HIZ	Hauiti	9.00	215	P	P	06 43 23.2	+2.7
HIZ	Hauiti	9.00	215	P	P	06 43 23.2	+2.7
MCHZ	McNeill Hill	9.01	204	P	P	06 43 20.2	-0.3
MCHZ	McNeill Hill	9.01	204	P	P	06 43 21.4	+0.9
CKHZ	Cape Kidnapper	9.07	202	P	P	06 43 23.2	+2.0
CKHZ	Cape Kidnapper	9.07	202	P	P	06 43 23.2	+2.0
KWHZ	Kaweka Forest	9.09	205	P	P	06 43 22.0	+0.6
KWHZ	Kaweka Forest	9.09	205	P	P	06 43 22.0	+0.6
TWVZ	Taurewa	9.18	211	P	P	06 43 23.3	+0.8
TWVZ	Taurewa	9.18	211	P	P	06 43 23.3	+0.8
NGZ	Ngauruhoe	9.20	210	P	P	06 43 23.2	+0.4
NGZ	Ngauruhoe	9.20	210	P	P	06 43 23.7	+0.9
KAHZ	Kahuranaki	9.26	202	P	P	06 43 24.0	+0.7
KAHZ	Kahuranaki	9.26	202	P	P	06 43 24.0	+0.7
BHHZ	Black Hill Sta	9.28	207	P	P	06 43 23.2	-0.3
BHHZ	Black Hill Sta	9.28	207	P	P	06 43 23.2	-0.3
WHVZ	Whangaehu Hut	9.29	209	P	P	06 43 24.2	+0.3
WHVZ	Whangaehu Hut	9.29	209	P	P	06 43 24.2	+0.3
KRHZ	Kereru	9.30	205	P	P	06 43 22.9	-0.8
KRHZ	Kereru	9.30	205	P	P	06 43 22.9	-0.8
TRVZ	Turoa	9.32	209	P	P	06 43 24.6	+0.4
TRVZ	Turoa	9.32	209	P	P	06 43 24.6	+0.4
MOVZ	Moawhango	9.33	208	P	P	06 43 23.9	-0.3
MOVZ	Moawhango	9.33	208	P	P	06 43 23.9	-0.3
PKVZ	Pokaka	9.40	210	P	P	06 43 25.5	+0.6
PKVZ	Pokaka	9.40	210	P	P	06 43 25.5	+0.6
ASAR	Alice Springs	42.59	268	P	P	06 48 28.1	-1.5
	0.2nm,0.5s,baz=98,slow=6.8,SNR=2.8						
WRA	Warramunga Arr	43.66	273	P	P	06 48 35.7	-2.3
	0.3nm,0.4s,baz=110,slow=8.0,SNR=8.1						
FINES	FINESS Array B	145.82	339	PKPbc	PKPab	07 00 05.2	+2.3
	2.4nm,0.9s,baz=64,slow=4.4,SNR=4.9						

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*ISCJB **17** 06:44:52.6±0.9, 29°.04S±0°.03×70°.18W±0°.06, h126^{km}±7^{km}, Error ellipse: s-maj=8.9km s-min=5.7km az=179.6*

*GUC **17** 06:44:52.7±0.7, 29°.06S×70°.16W, h114^{km}±4^{km}, ML3.6*

*SJA **17** 06:44:52.7±0.6, 29°.08S×70°.18W, h120^{km}±4^{km}, ML3.3, MW3.7*

ISC 17 06:44:53.2±1.8**, 29°.04S**±0°.04×**70°.19W**±0°.06**, h122^{km}**±13^{km}**, n19, σ0^{s}.30**/31**, 3C-4D, Central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCO	Las Campanas	0.45	273	*i* P	Pn	06 45 11.5	0.0
LCO				*i* S	Sn	06 45 25.1	-0.1
LCO	Las Campanas	0.45	273	⇑*i*P	Pn	06 45 11.4	0.0
LCO				*i* S	Sn	06 45 25.1	-0.1
LCO				IAML		06 45 26.3	
	comp=E,768nm,0.2s						
VACH	Vallenar	0.68	313	⇑*i*P	Pn	06 45 13.0	+0.3
VACH				*i* S	Sn	06 45 27.5	+0.1
TLL	Tololo Astrono	1.25	205	⇓*i*P	Pn	06 45 18.3	0.0
TLL				*i* S	Sn	06 45 37.4	+0.1
TLL				IAML		06 45 38.2	
	comp=E,1μm,0.2s						
GO04	Tololo Observa	1.25	205	⇓*i*P	Pn	06 45 18.3	0.0
GO04				*i* S	Sn	06 45 37.2	-0.1
GO04				IAML		06 45 39.1	
	comp=E,3μm,0.3s						
AROD	Rodeo	1.29	151	*i* P	Pn	06 45 18.8	0.0
AROD				*i* S	Sn	06 45 38.1	-0.1
GO03	Copiap	1.44	358	⇓*i*P	Pn	06 45 20.1	-0.2
GO03				*i* S	Sn	06 45 40.3	-0.5
GO03				IAML		06 45 40.7	
	comp=N,2μm,0.2s						
ACDV	Cuesta del Vie	1.46	141	*i* P	Pn	06 45 20.9	+0.3
ACDV				*i* S	Sn	06 45 41.2	-0.1
AGUA	GUANDACOL	1.55	107	*i* P	Pn	06 45 21.5	+0.1
CPCH	Copiapo	1.68	355	⇓*i*P	Pn	06 45 23.1	+0.1
CPCH				*e*S	Sn	06 45 45.6	0.0
VCA	Vinchina	1.77	81	*i* P	Pn	06 45 24.3	+0.2
VCA				*i* S	Sn	06 45 47.8	+0.1
VCA				IAML		06 45 48.5	
	comp=Z,374nm,0.4s						
VCA	Vinchina	1.77	81	⇑*i*P	Pn	06 45 24.5	+0.4
VCA				*i* S	Sn	06 45 47.5	-0.1
VCA				IAML		06 45 48.7	
	comp=E,804nm,0.6s						
AMOG	MOGNA	2.40	143	*i* P	Pn	06 45 31.4	-0.4
RTLL	Cerro Villicun	2.72	147	*i* P	Pn	06 45 35.5	-0.5
RTLS	Leoncito	2.86	165	*i* P	Pn	06 45 38.6	+0.6
RTLS				IAML		06 45 39.0	
	comp=Z,135nm,0.4s						
RTCV	Cerro Valdivia	3.15	154	*i* P	Pn	06 45 41.6	0.0
AUSP	Uspallata	3.25	168	*i* P	Pn	06 45 43.8	+0.7
ARCO	CERRO ARCO	3.94	164	*i* P	Pn	06 45 52.2	0.0
ARCO				IAML		06 45 53.6	
	comp=Z,21nm,0.4s						
FCH	Farellones	4.28	181	*e*P	Pn	06 45 57.0	+0.2
FCH				*i* S	Sn	06 46 45.6	-0.5

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*SOME **17** 06:46:23.6, 43°.58N×83°.33E, h0^{km}*

*NNC **17** 06:46:30.5±4.8, 43°.80N×83°.09E, h0^{km}, mb2.9, mpv2.6, Error ellipse: s-maj=46.8km s-min=15.8km az=128.0*

ISC 17 06:46:25.7±1.9**, 43°.70N**±0°.08×**83°.23E**±0°.08**, h10^{km}, n11, σ2^{s}.04**/20**, 3C-3D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	2.10	264	*e*P	Pb	06 47 04.2	+0.1
	7.8nm,0.1s						
KTMS				*e*S	Sg	06 47 33.2	-0.1
	36nm,0.2s						
DJR	Jarkent	2.56	286	*e*P	Pb	06 47 12.3	+0.5
	2.5nm,0.3s						
DJR				*e*S	Sb	06 47 46.7	+3.4
	20nm,0.4s						
PDGK	Podgornoye	2.74	264	⇓Pg	Pg	06 47 20.5	+2.2
	1.9nm,0.3s						
PDGK				⇑Lg	Lg	06 47 52.3	
	9.1nm,0.4s						
SHLS	Shalkode	2.79	260	*e*P	Pn	06 47 10.6	0.0
	5.1nm,0.2s						
SHLS				*e*S	Sn	06 47 44.1	-0.3
	66nm,0.5s						
UZB	Uzynbulak	3.11	261	*e*P	Pg	06 47 22.6	-2.7
	1.9nm,0.3s						
UZB				*e*S	Sg	06 48 04.4	-1.3
	12nm,0.3s						
MK31	Makanchi Array	3.17	348	⇓Pn	Pb	06 47 18.9	-3.2
	0.1nm,0.2s,baz=154,slow=14,SNR=41						
MK31				⇑Pg	Pg	06 47 26.7	+0.3
	0.7nm,0.3s,baz=159,slow=17,SNR=26						
MK31				Lg	Lg	06 48 08.0	
	1.3nm,0.2s,baz=161,slow=30,SNR=4.2						
KAPS	Kapalarasan	3.19	301	*e*P	Pb	06 47 24.8	+2.2
	1.0nm,0.2s						
KAPS				*e*S	Sg	06 48 07.9	-0.4
	8.7nm,0.5s						
MAKZ	Makanchi	3.24	345	⇑Pg	Pg	06 47 27.7	0.0
	2.5nm,0.5s						
MAKZ				⇓Lg	Lg	06 48 09.5	
	1.7nm,0.3s						
KPKS	Kokpek	3.31	268	*e*P	Pg	06 47 26.6	-2.5
	3.6nm,0.2s						
KPKS				*e*S	Sg	06 48 11.2	-0.8
	31nm,0.5s						
ZSN	Zaisan	3.93	16	*e*P	Pb	06 47 37.4	+2.3
	2.8nm,0.3s						
ZSN				*e*S	Sg	06 48 29.9	-1.9
	6.8nm,0.3s						
ARXS	Arharly	3.93	279	*e*P	Pb	06 47 36.6	+1.4
	2.5nm,0.4s						
ARXS				*e*S	Sg	06 48 28.6	-3.4
	7.9nm,0.7s						

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*IDC **17** 07:43:30.2±0.9, 18°.08N×121°.02E, h0^{km}, mb3.7/9, mb1 3.9/10, mb1mx3.7/65, mbtmp3.8/10, ML3.3/1, MS3.1/6, Ms1 3.1/6, ms1mx2.8/61, Error ellipse: s-maj=28.5km s-min=18.2km az=72.0*

*MAN **17** 07:43:31.1, 18°.36N×120°.73E, h0^{km}, mb5.0, ML4.0, MS4.0*

*ISCJB **17** 07:43:33.1±1.1, 18°.33N±0°.04×120°.74E±0°.06, h15^{km}±10^{km}, mb4.1/14, MS3.1/5, Error ellipse: s-maj=9.7km s-min=5.5km az=16.2*

*NEIC **17** 07:43:35.4±3.5, 18°.21N×121°.16E, h26^{km}±25^{km}, mb4.5/9, Error ellipse: s-maj=18.5km s-min=11.7km az=81.0*

NEIC Felt [IV PIVS] at Bangui, Laoag, San Nicolas and Sarrat and [III PIVS] at Batac and Paoay.

ISC 17 07:43:32.6±1.7**, 18°.23N**±0°.04×**120°.81E**±0°.05**, h6^{km}**±12^{km}**, n40, σ1^{s}.64**/42**, mb4.3**/14**, MS3.2**/5**, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APYP	Conner	0.55	131	*e*P	Pb	07 43 45.1	+0.4
APYP				*e*S	Sn	07 43 54.8	-1.7
ABRA	Dolores	0.58	189	*e*P	Pg	07 43 44.2	+0.4
ABRA				*e*S	Sb	07 43 55.0	+1.2
CVP	Callao Caves	1.10	118	*i* P	Pn	07 43 54.5	0.0
CVP				*i* S	Sn	07 44 12.2	+2.2
SGCP	Mt. Cagua	1.18	89	*e*P	Pb	07 43 55.2	-0.2
SGCP				*e*S	Sn	07 44 13.5	+1.5
CAUP	Cauayan	1.60	143	*e*P	Pg	07 44 03.6	+0.2
BOLP	Bolinao	2.03	205	*e*P	Pn	07 44 06.3	-1.0
BOLP				*e*S	Sb	07 44 36.3	+1.0
SCZP	Santa Cruz	2.59	199	*e*P	Pn	07 44 16.1	+1.1
SCZP				*e*S	Sb	07 44 52.1	+0.7
TGY	Tagaytay City	4.11	178	Pn	Pn	07 44 36.5	+0.6
	62nm,0.3s,baz=297,slow=11,SNR=2.3						
TGY				Sn	Sb	07 45 34.8	-0.5
	54nm,0.3s,baz=183,slow=17,SNR=3.1						
TWG	Pinlang	4.57	3	*e*Pn	Pn	07 44 43.0	+0.7
YULB	Yu-li	5.16	5	*e*Pn	Pn	07 44 51.7	+1.3
SSLB	Suanglung	5.53	1	*e*Pn	Pn	07 44 56.1	+0.6
NACB	Ninganchiao	5.96	7	*e*Pn	Pn	07 45 02.0	+0.6
YHNB	Yeheng	6.43	5	*e*Pn	Pn	07 45 08.3	+0.4
QIZ	Qiongzhong	10.42	276	*e*Pn	Pn	07 45 59.8	-2.9
JNU	Nakatsue	17.37	29	P	Pn	07 47 34.1	-1.6
	0.1nm,0.3s,baz=196,slow=14,SNR=2.2						
JNU				LR	LR	07 54 21.5	
	comp=Z,48nm,18.2s,baz=301,slow=37						
KSRS	Korea Array	20.15	17	P	P	07 48 07.0	-0.5
	1.0nm,0.4s,baz=200,slow=11,SNR=4.9						
CMAR	Chiang Mai Arr	20.75	274	P	P	07 48 15.6	+1.3
	1.5nm,0.3s,baz=91,slow=9.0,SNR=5.0						
CMAR				LR	LR	07 56 11.9	
	comp=Z,23nm,19.0s,baz=170,slow=36						
GUMO	Guam	23.59	98	LR	LR	07 56 32.2	
	comp=Z,22nm,18.9s,baz=129,slow=34						
JAGI	Jajag, Banyuwa	27.33	194	*e*P	P	07 49 20.1	+1.6
	50nm,1.2s						
ULN	Ulaanbaatar	31.62	342	*e*P	P	07 50 03.2	+6.7
	6.1nm,1.2s						
ASAJ	Asahikawa	31.64	31	LR	LR	08 01 35.9	
	comp=Z,67nm,20.1s,baz=153,slow=34						
SONM	Songino Array	31.79	341	P	P	07 49 58.8	+0.9
	0.2nm,0.4s,baz=145,slow=6.3,SNR=2.4						
WRA	Warramunga Arr	40.19	160	P	P	07 51 06.2	-3.8
	0.4nm,0.7s,baz=324,slow=12,SNR=6.2						
WB2	Warramunga Arr	40.20	160	*e*P	P	07 51 07.7	-2.3
	9.5nm,1.4s						
MK01	Makanchi Array	42.52	321	*e*P	P	07 51 30.0	+1.1
MK31	Makanchi Array	42.53	321	*e*P	P	07 51 30.4	+1.4
MKAR	Makanchi Array	42.53	321	P	P	07 51 28.4	-0.6
	2.1nm,0.8s,baz=123,slow=8.5,SNR=10						
MKAR	Makanchi Array	42.53	321	*e*P	P	07 51 29.7	+0.7
	14nm,1.0s						
MAKZ	Makanchi	42.73	321	*e*P	P	07 51 32.0	+1.4
	3.8nm,1.3s						
PRZ	Przheval'sk	43.25	313	*e*P	P	07 51 38.6	+3.5
	21nm,0.4s						
AS31	Alice Springs	43.56	162	*e*P	P	07 51 41.4	+3.9
	2.4nm,1.5s						
ASAR	Alice Springs	43.56	162	P	P	07 51 34.7	-2.8
	0.7nm,0.7s,baz=337,slow=6.7,SNR=7.8						
KURBB	Kurchatov Arra	46.56	324	P	P	07 52 01.4	+0.4
	4.2nm,0.7s,baz=122,slow=8.2,SNR=27						
MA2	Magadan	46.63	20	LR	LR	08 13 52.9	
	comp=Z,29nm,19.6s,baz=162,slow=39						
KDAK	Kodiak Island	72.98	34	P	P	07 55 02.0	-0.9
	2.4nm,0.7s,baz=24,slow=5.7,SNR=4.2						
KDAK	Kodiak Island	72.98	34	*e*P	P	07 55 01.9	-1.0
	17nm,1.2s						
SKT	Skwentna	73.00	30	*e*P	P	07 55 01.9	-1.1
ILAR	Eielson Array	74.66	26	P	P	07 55 11.1	-1.6
	0.2nm,0.5s,baz=268,slow=5.1,SNR=4.8						
BRTR	Keskin Array B	76.46	308	LR	LR	08 33 25.9	
	comp=Z,26nm,18.4s,baz=110,slow=39						
EGAK	Eagle	77.06	26	*e*P	P	07 55 25.8	-0.5
	4.6nm,1.4s						

JMA 17 07:43:39.3±0.1**, 37°.33N×140°.27E, h97^{km}**±1^{km}**, M1.2, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFT	Otama	0.20	16	*e*S	Sn	07 44 03.5	0.0
JFFD	Fukushimafurud	0.33	136	P	Pn	07 43 53.8	+0.1
JFY	Yanaizu	0.46	280	P	Pn	07 43 54.4	-0.1
JFK	Kawauchi	0.48	85	P	Pn	07 43 54.6	-0.1
JFK				S	Sn	07 44 06.0	-0.2

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*ISCJB **17** 07:44:27.1±0.2, 48°.89N±0°.05×151°.56E±0°.07, h300^{km}, mb3.8/21, Error ellipse: s-maj=8.3km s-min=2.4km az=137.3*

*MOS **17** 07:44:27.9±1.0, 49°.07N×151°.42E, h302^{km}, mb3.9/15, Error ellipse: s-maj=13.0km s-min=4.9km az=58.9*

*SKHL **17** 07:44:27.8±0.5, 48°.74N×151°.71E, h304^{km}±31^{km}, mb5.2/1, msh4.7/1*

*KRSC **17** 07:44:29.5±2.2, 48°.69N×152°.71E, h332^{km}±30^{km}, ML4.7*

*IDC **17** 07:44:30.2±0.7, 49°.11N×151°.34E, h308^{km}±7^{km}, mb3.4/17, mb1 3.6/21, mb1mx3.4/73, mbtmp4.2/21, Error ellipse: s-maj=13.7km s-min=8.0km az=152.0*

ISC 17 07:44:27.6±0.5**, 48°.75N**±0°.07×**151°.69E**±0°.06**, h300^{km}, n126, σ2^{s}.81**/156**, mb3.8**/21**, 2C-4D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	3.46	54	*i* P	Pn	07 45 28.5	+0.6
SKR				AMB	AMB	07 45 29.0	
	900nm,3.0s						
SKR				AMB	AMB	07 45 29.0	
	681nm,0.6s						
SKR				*e*S	S	07 46 15.5	-0.7
SKR				A	A	07 46 19.0	
	280nm,2.0s						
SKR				A	A	07 46 19.0	
	340nm,2.0s						
SKR				A	A	07 46 25.0	
	137nm,0.5s						
SKR				A	A	07 46 25.0	
	99nm,0.5s						
SKR	Severo-Kuril's	3.46	54	*e*P	Pn	07 45 28.6	+0.6
SKR	Severo-Kuril's	3.46	54	⇓*i*PN	Pn	07 45 28.6	+0.6
SKR				*e*S	S	07 46 11.9	-4.3
SKR				pmax	pmax		
	comp=Z,900nm,3.0s						
SKR				pmax	pmax		
	comp=Z,681nm,0.6s						
SKR				smax	smax		
	comp=E,93nm,0.7s						
SKR				smax	smax		
	comp=N,137nm,0.8s						
PAU	Pauzhetka	4.27	49	*e*P	Pn	07 45 36.8	+0.1
PAU				AMB	AMB	07 45 37.7	
	comp=N,414nm,0.9s						
PAU				*e*S	S	07 46 31.0	-1.1
PAU				A	A	07 46 36.8	
	comp=N,355nm,1.0s						
PAU	Pauzhetka	4.27	49	*e*P	Pn	07 45 36.6	-0.1
PAU	Pauzhetka	4.27	49	PN	Pn	07 45 36.6	-0.1
MIPR	Malaya Ipel'ka	4.79	41	*e*P	Pn	07 45 43.1	+0.6
MIPR	Malaya Ipel'ka	4.79	41	PN	Pn	07 45 43.1	+0.6
ASAK	Asacha	5.37	45	*e*P	Pn	07 45 49.2	-0.2
ASAK	Asacha	5.37	45	PN	Pn	07 45 49.2	-0.2
MTVR	Mutnovka	5.57	45	*e*P	Pn	07 45 51.3	-0.5
MTVR	Mutnovka	5.57	45	PN	Pn	07 45 51.3	-0.5
RUS	Russkaya	5.70	47	*e*P	Pn	07 45 52.5	-0.6
RUS				*e*S	S	07 46 54.8	-7.2
RUS	Russkaya	5.70	47	PN	Pn	07 45 52.5	-0.6
RUS				S	S	07 46 54.8	-7.2
KRMR	Karymshinskiy	5.77	43	P	Pn	07 45 53.7	-0.4
KRMR	Karymshinskiy	5.77	43	PN	Pn	07 45 53.7	-0.4
PETK	Petropavlovsk-	5.78	39	P	Pn	07 45 54.1	-0.1
	baz=221,slow=9.8						
SHO	Shikotan	5.93	216	*e*P	Pn	07 45 56.5	+0.4
SHO				AMB	AMB	07 46 44.0	
	comp=N,10.0nm,0.3s						
SHO				AMB	AMB	07 46 44.0	
	comp=N,14nm,0.3s						
SHO				*e*S	S	07 47 05.7	-1.7
SHO				A	A	07 47 10.0	
	comp=N,50nm,0.4s						
SHO				A	A	07 47 10.0	
	comp=N,193nm,0.4s						
PET	Petropavlovsk	6.14	43	*e*P	Pn	07 45 57.7	-0.7
PET	Petropavlovsk	6.14	43	S	S	07 47 06.8	-4.8
PET	Petropavlovsk	6.14	43	*i* PN	Pn	07 45 59.5	+1.1
DALK	Dalny	6.19	44	*e*P	Pn	07 45 58.7	-0.3
DALK				*e*S	S	07 47 08.4	-4.3
DALK	Dalny	6.19	44	PN	Pn	07 45 58.7	-0.3
DALK				S	S	07 47 08.4	-4.3
YUK	Yuzh-Kuril'sk	6.20	223	*e*P	Pn	07 45 59.3	-0.1
TYV	Tymovskoe	6.22	293	*e*P	Pn	07 46 00.0	+0.6
TYV				AMB	AMB	07 46 00.7	
	comp=N,15nm,1.0s						
YSS	Yuzh-Sakhalins	6.28	257	*e*PN	Pn	07 46 07.6	+7.4
KOK	Koryaka	6.31	41	*e*P	Pn	07 46 01.2	+0.6
KOK	Koryaka	6.31	41	PN	Pn	07 46 01.2	+0.6
GNL	Ganaly	6.32	36	*e*P	Pn	07 46 00.2	-0.5
GNL	Ganaly	6.32	36	PN	Pn	07 46 00.2	-0.5
AVH	Avacha	6.34	42	*e*P	Pn	07 46 00.9	0.0
AVH				*e*S	S	07 47 10.8	-5.4
AVH	Avacha	6.34	42	PN	Pn	07 46 00.9	0.0
AVH				S	S	07 47 10.8	-5.4
UGLR	Uglovaya	6.34	43	*e*P	Pn	07 46 01.4	+0.4
UGLR				*e*S	S	07 47 10.5	-5.7
UGLR	Uglovaya	6.34	43	PN	Pn	07 46 01.4	+0.4
UGLR				S	S	07 47 10.5	-5.7
KRX	Arik	6.36	41	*e*P	Pn	07 46 01.5	+0.2
KRX	Arik	6.36	41	PN	Pn	07 46 01.5	+0.2
SMAR	Somma	6.37	42	*e*P	Pn	07 46 01.5	+0.1
SMAR				*e*S	S	07 47 12.5	-4.5
SMAR	Somma	6.37	42	PN	Pn	07 46 01.5	+0.1
SMAR				S	S	07 47 12.5	-4.5
SDLR	Sedlovina	6.41	42	*e*P	Pn	07 46 02.0	+0.2
SDLR				*e*S	S	07 47 11.2	-6.6
SDLR	Sedlovina	6.41	42	PN	Pn	07 46 02.0	+0.2
SDLR				S	S	07 47 11.2	-6.6
NEM2	Nemuro 2	6.79	220	P	Pn	07 46 06.0	-0.5
NEM2				*e*S	S	07 47 21.0	-5.3
SPN	Mys Shipunski	6.83	47	*e*P	Pn	07 46 05.0	-1.8
SPN				*e*S	S	07 47 16.0	-11
SPN	Mys Shipunski	6.83	47	PN	Pn	07 46 05.0	-1.8
JNK	Nakash	7.08	226	P	Pn	07 46 10.9	+1.0
KII	Karymskiy	7.18	40	*e*P	Pn	07 46 11.1	0.0
KII	Karymskiy	7.18	40	PN	Pn	07 46 11.1	0.0
JTKR	Abashiri--Toko	7.20	231	P	Pn	07 46 14.1	+2.7
JWK2	Keihoku	7.52	246	P	Pn	07 46 19.5	+4.2
JAK	Akkeshi	7.54	223	P	Pn	07 46 14.6	-1.0
JAK				*e*S	S	07 47 37.9	-5.2
JAR	Ashorobuto	7.75	228	P	Pn	07 46 19.2	+1.0
ASAJ	Asahikawa	7.80	237	P	Pn	07 46 22.1	+3.3
	comp=N,2.9nm,0.3s,baz=63,slow=12,SNR=60						
ASAJ	Asahikawa	7.80	237	P	Pn	07 46 21.7	+2.9
JKK2	Kamakawa 2	7.88	235	P	Pn	07 46 21.9	+2.2
HRK	Horoka	7.96	232	*e*P	Pn	07 46 22.9	+2.2
JOB	Onbets	8.02	226	P	Pn	07 46 21.2	-0.2
JSS	Shosan	8.05	241	P	Pn	07 46 26.1	+4.3
TUMR	Tumrok	8.36	35	*e*P	Pn	07 46 26.5	+1.0
TUMR				S	S	07 47 57.7	-3.6
TUMR	Tumrok	8.36	35	PN	Pn	07 46 26.5	+1.0
TUMR				S	S	07 47 57.7	-3.6
TUMD	Tumrok D	8.40	36	*e*P	Pn	07 46 27.2	+1.3
JCH	Churui	8.46	227	P	Pn	07 46 25.9	-0.9

JCH				*e*S	S	07 47 57.0	-6.7
MKZ	Mys Kozlova	8.52	43	*e*P	Pn	07 46 24.7	-2.7
MKZ				S	S	07 47 53.0	-12
MKZ	Mys Kozlova	8.52	43	PN	Pn	07 46 24.7	-2.7
MYR	Moyori	8.75	226	*e*P	Pn	07 46 28.4	-1.9
JBT2	Biratori 2	8.84	231	P	Pn	07 46 32.0	+0.5
JBT2				*e*S	S	07 48 08.8	-3.4
KPT	Kopyto	8.91	33	*e*P	Pn	07 46 32.3	+0.1
KPT	Kopyto	8.91	33	PN	Pn	07 46 32.3	+0.1
JNBK	Urakawa-nobuka	9.01	227	P	Pn	07 46 32.0	-1.6
JNBK				*e*S	S	07 48 08.5	-7.5
JEM	Erimo	9.02	225	*e*S	S	07 48 07.8	-8.5
ERM	Erimo	9.02	225	*e*P	Pn	07 46 34.1	+0.4
ERM	Erimo	9.02	225	⇓*i*PN	Pn	07 46 34.1	+0.4
KRSR	Krestovskiy	9.22	33	*e*P	Pn	07 46 37.1	+1.0
KRSR	Krestovskiy	9.22	33	PN	Pn	07 46 37.1	+1.0
JNB	Noboribetsu	9.75	234	P	Pn	07 46 43.1	+0.4
KBG	Krutoberegovo	10.07	38	*e*P	Pn	07 46 45.2	-1.1
KBG				*e*S	S	07 48 30.9	-8.7
KBG	Krutoberegovo	10.07	38	PN	Pn	07 46 45.2	-1.1
KBG				S	S	07 48 30.9	-8.7
KBTR	Krutoberegovo	10.08	38	*e*P	Pn	07 46 45.0	-1.5
KBTR				*e*S	S	07 48 29.5	-10
KBTR	Krutoberegovo	10.08	38	PN	Pn	07 46 45.0	-1.5
JKB	Kayabe	10.16	232	P	Pn	07 46 46.3	-1.4
JKB				*e*S	S	07 48 34.1	-8.1
JSH	Shimam	10.18	237	P	Pn	07 46 48.6	+0.7
JYM2	Yakumo 2	10.35	234	P	Pn	07 46 49.6	-0.4
JSR	Shiriuchi	10.74	232	P	Pn	07 46 54.3	-0.5
BKI	Bering	10.91	48	*e*P	Pn	07 46 56.8	+0.1
BKI				*e*S	S	07 48 48.0	-11
BKI	Bering	10.91	48	PN	Pn	07 46 56.8	+0.1
JTM	Tenmabayashi	10.96	227	*e*S	S	07 48 50.8	-10
TEY	Ternei	10.97	256	⇓*e*PN	P	07 47 00.0	0.0
TEY				pmax	pmax		
	comp=Z,40nm,0.7s						
JANG	Nango	11.07	225	*e*S	S	07 48 51.7	-11
KLR	Kul'dur	13.11	280	P	P	07 47 25.4	+1.8
	comp=Z,0.2nm,0.3s,baz=86,slow=10.0,SNR=46						
SEY	Seymchan	14.22	1	P	P	07 47 35.5	-0.2
	comp=Z,0.1nm,0.3s,baz=180,slow=20,SNR=2.5						
USRK	Ussuriysk Ar.	14.31	259	P	P	07 47 35.7	-1.3
	baz=71,slow=13						
MSHR	Mys Shultsa	15.61	254	⇓*i*P	Pn	07 47 54.1	+1.1
MJA0	Matsu Arr-Jizo	15.68	224	*e*P	Pn	07 47 55.6	+1.6
MJA0				pmax	pmax		
	comp=Z,3.0nm,0.3s						
MAJO	Matsushiro	15.69	224	*e*P	Pn	07 47 55.0	+0.8
MAJO	Matsushiro	15.69	224	⇑*i*P	Pn	07 47 55.0	+0.8
MAT	Matsushiro	15.69	224	P	Pn	07 47 54.8	+0.6
MJAR	Matsushiro Arr	15.69	224	P	Pn	07 47 55.6	+1.5
	comp=Z,2.9nm,0.3s,baz=18,slow=12,SNR=31						
ZEA	Zeya	16.06	297	*e*P	P	07 47 54.2	-1.9
YAK	Yakutsk	18.12	325	*e*P	P	07 48 20.3	+2.1
YAK	Yakutsk	18.12	325	*e*P	P	07 48 17.3	-0.9
YAK				pmax	pmax		
	comp=Z,13nm,0.7s						
KSRS	Korea Array	20.61	246	P	P	07 48 46.4	+1.7
	comp=Z,3.9nm,0.7s,baz=44,slow=10.0,SNR=17						
JNU	Nakatsue	22.05	233	P	P	07 48 59.7	+1.7
	comp=Z,13nm,0.9s,baz=31,slow=7.0,SNR=5.5						
BOD	Bodaibo	24.00	306	*e*P	P	07 49 13.7	-1.7
BOD				pmax	pmax		
	comp=Z,4.0nm,1.4s						
ULN	Ulaanbaatar	29.39	285	⇑*e*P	P	07 50 01.9	-1.7
ULN				pmax	pmax		
	comp=Z,5.0nm,1.2s						
SONM	Songino Array	29.82	286	P	P	07 50 06.8	-0.6
	comp=Z,2.1nm,0.9s,baz=64,slow=8.4,SNR=10.0						
KDAK	Kodiak Island	33.62	53	P	P	07 50 40.5	+0.4
	comp=Z,3.2nm,0.8s,baz=260,slow=6.1,SNR=4.3						
ILAR	Eielson Array	35.61	40	P	P	07 50 57.8	+0.9
	comp=Z,0.7nm,0.8s,baz=264,slow=9.0,SNR=12						
ILAR				pP	pP	07 51 57.5	+1.7
	comp=Z,0.6nm,0.8s,baz=270,slow=9.0,SNR=5.2						
ILAR	Eielson Array	35.61	40	*e*P	P	07 50 57.5	+0.6
ILAR	Eielson Array	35.61	40	*e*P	P	07 50 57.5	+0.6
GTA	Gaotai	37.76	276	*e*P	P	07 51 16.0	+0.5
GTA				pP	pP	07 51 19.3	-56
GTA				sP	sP	07 51 22.0	-87
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
INK	Inuvik	40.49	34	P	P	07 51 36.5	-0.8
	comp=Z,0.9nm,0.7s,baz=285,slow=1.3,SNR=3.8						
ZALV	Zalesovo Beam	40.69	304	P	P	07 51 36.4	-2.7
	comp=Z,2.8nm,0.4s,baz=43,slow=6.5,SNR=5.0						
MKAR	Makanchi Array	45.20	295	P	P	07 52 14.4	-0.8
	comp=Z,5.2nm,0.7s,baz=66,slow=7.8,SNR=26						
MKAR				PcP	PcP	07 53 49.8	+0.2
	comp=Z,1.1nm,0.6s,baz=57,slow=3.7,SNR=4.8						
KURK	Kurchatov	45.48	301	P	P	07 52 16.8	-0.4
KURK						07 53 51.0	
KURK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KURBB	Kurchatov Arra	45.57	301	P	P	07 52 16.8	-1.2
	comp=Z,7.9nm,0.8s,baz=67,slow=8.6,SNR=22						
KURBB				PcP	PcP	07 53 51.0	+0.3
	comp=Z,0.4nm,0.6s,baz=62,slow=3.9,SNR=5.4						
BVAR	Borovoye Array	48.86	308	P	P	07 52 42.0	-1.2
	comp=Z,2.2nm,0.5s,baz=59,slow=7.5,SNR=9.1						
BVAR				PcP	PcP	07 54 02.4	-0.2
	comp=Z,1.3nm,0.5s,baz=57,slow=5.5,SNR=4.5						
KSH	Kashi	53.03	290	*e*P	P	07 53 16.4	+2.0
KSH				*e*PcP	PcP	07 54 18.9	+0.4
FINES	FINESS Array B	61.82	334	P	P	07 54 13.4	-1.4
	comp=Z,1.8nm,0.8s,baz=28,slow=9.5,SNR=5.3						
FINES	FINESS Array B	61.82	334	*e*P	P	07 54 11.6	-3.1
NVAR	Mina Array Bea	62.35	62	P	P	07 54 21.4	+2.5
	comp=Z,0.5nm,0.4s,baz=292,slow=6.5,SNR=7.6						
OBN	Obninsk	63.12	324	*e*P	P	07 54 26.3	+2.9
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
PDAR	Pinedale Array	64.34	54	P	P	07 54 33.5	+1.6
	comp=Z,1.0nm,0.6s,baz=250,slow=1.6,SNR=17						
PDAR				pP	pP	07 55 41.2	+2.9
	comp=Z,0.5nm,0.8s,baz=36,slow=2.8,SNR=3.3						
WRA	Warramunga Arr	70.11	197	P	P	07 55 10.4	+2.7
	comp=Z,1.3nm,0.8s,baz=12,slow=6.8,SNR=8.9						
WRA	Warramunga Arr	70.11	197	*e*P	P	07 55 11.1	+3.4
WRA	Warramunga Arr	70.11	197	*e*P	P	07 55 11.1	+3.4
WRA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ANMO	Albuquerque	71.59	58	P	P	07 55 19.1	+2.3
	comp=Z,1.0nm,0.8s,baz=311,slow=9.3,SNR=5.5						
ASAR	Alice Springs	73.82	197	P	P	07 55 33.1	+3.6
	comp=Z,0.7nm,0.5s,baz=9.2,slow=5.5,SNR=15						
TXAR	Lajitas Array	77.33	60	P	P	07 55 51.6	+2.0
	comp=Z,1.5nm,0.6s,baz=297,slow=4.6,SNR=27						
TXAR				pP	pP	07 57 03.4	+4.7
	comp=Z,0.6nm,0.7s,baz=282,slow=3.7,SNR=6.7						

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*IDC **17** 07:47:07.1±3.9, 36°.29N×70°.95E, h164^{km}±33^{km}, mb3.6/11, mb1 3.6/16, mb1mx3.3/66, mbtmp4.1/16, Error ellipse: s-maj=26.4km s-min=16.4km az=25.0*

*ISCJB **17** 07:47:09.3±0.3, 36°.48N±0°.02×70°.90E±0°.05, h188^{km}, mb4.0/22, Error ellipse: s-maj=5.2km s-min=3.0km az=163.9*

*NEIC **17** 07:47:10.8±0.5, 36°.54N×70°.81E, h184^{km}±6^{km}, mb4.2/9, Error ellipse: s-maj=10.4km s-min=7.3km az=119.0*

*BJI **17** 07:47:10.2, 36°.68N×70°.74E, h185^{km}, mb4.5/10, mB4.6/6*

*NNC **17** 07:47:15.6±2.2, 36°.97N×70°.84E, h212^{km}±31^{km}, mb3.2, mpv4.2, Error ellipse: s-maj=24.9km s-min=19.2km az=68.0*

ISC 17 07:47:10.0±0.5, **36°.44N**±0°.04×**70°.90E**±0°.06, **h188**^{km}, **n88**, σ**2^{s}.43**/105, **mb4.0**/22, **4C-6D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	2.43	219	*e*Pn	Pn	07 47 53.7	+1.1
KBL				*e*Sn	Sn	07 48 25.9	+0.1
CEP	Cherat	2.74	162	P	Pn	07 47 58.3	+2.1
CEP				S	Sn	07 48 33.0	+0.9
CEP	Cherat	2.74	162	P	Sn	07 48 33.2	+1.1
CHCP	Chirah Chowk	3.39	144	P	Pn	07 48 06.1	+2.2
NIL	Nilore	3.39	145	*e*Pn	Pn	07 48 06.3	+2.4
NIL				*e*Sn	Sn	07 48 48.3	+2.4
THW	Thamme Wali	3.71	169	P	Pn	07 48 09.4	+1.6
SFK	Sufi-Kurgan	4.11	29	⇓P	Pn	07 48 13.5	+0.5
	20nm,0.4s						
SFK				⇓S	Sn	07 49 01.4	-1.0
	46nm,0.4s						
SARP	Sargodha	4.74	161	P	Pn	07 48 21.7	+0.8
KSH	Kashi	5.05	51	P	Pn	07 48 20.9	-4.0
KSH				S	Sn	07 49 12.3	-11
AML	Almayashu	6.08	20	P	Pn	07 48 38.4	-0.1
	SNR=48						
DHRM	DHARAMSHALA	6.12	132	*e*P	Pn	07 48 38.9	-0.1
DHRM				*e*S	Sn	07 49 47.3	-1.7
DHRM				IAML		07 49 50.0	
	comp=N,325nm,0.2s						
DHRM				IAML		07 49 50.6	
	comp=E,490nm,0.4s						
MNAS	Manas	6.16	11	⇑P	Pn	07 48 38.9	-0.4
	comp=E,18nm,0.5s						
MNAS				⇑S	Sn	07 49 45.4	-4.4
	comp=E,145nm,0.7s						
UCH	Uchtor	6.42	25	P	Sn	07 49 52.8	-3.5
	SNR=8.5						
KZA	Kyzart	6.56	30	P	Pn	07 48 44.5	-0.2
	SNR=5.3						
EKS2	Erkin-Say	6.60	19	P	Pn	07 48 45.0	+0.1
	SNR=30						
KK31	Karatay Array	6.66	358	P	Pn	07 48 45.0	-0.7
	comp=E,18nm,0.6s,baz=185,slow=12,SNR=213						
KK31				⇓S	Sn	07 49 55.1	-6.2
	comp=E,24nm,0.5s,baz=175,slow=17,SNR=16						
KK31	Karatay Array	6.66	358	*e*Pn	Pn	07 48 45.1	-0.6
KK31				*e*Sn	Sn	07 49 55.1	-6.2
KKAR	Karatay Array	6.66	358	*e*Pn	Pn	07 48 45.1	-0.5
KKAR				*e*Sn	Sn	07 49 56.1	-5.2
AAK	Ala-Archa	6.78	23	P	Pn	07 48 47.4	0.0
	comp=E,8.1nm,0.3s,baz=168,slow=6.7,SNR=22						
AAK				S	Sn	07 50 01.4	-3.0
	comp=E,3.5nm,0.3s,baz=150,slow=23,SNR=16						
AAK	Ala-Archa	6.78	23	⇓P	Pn	07 48 47.4	0.0
	comp=E,6.5nm,0.5s						
AAK				⇑S	Sn	07 50 01.7	-2.8
	comp=E,21nm,0.4s						
AAK	Ala-Archa	6.78	23	P	Pn	07 48 47.6	+0.2
	SNR=14						
AAK	Ala-Archa	6.78	23	*e*Pn	Pn	07 48 47.8	+0.4
AAK				*e*Sn	Sn	07 50 04.9	+0.5
KBK	Karagaybulak	6.95	26	P	Pn	07 48 50.2	+0.6
	SNR=9.9						
CHMS	Chumysh	7.19	23	P	Pn	07 48 52.4	-0.2
	SNR=5.6						
USP	Ospenovka	7.36	21	P	Pn	07 48 54.6	-0.2
	SNR=14						
TKM2	Tokmak 2	7.41	28	⇑P	Pn	07 48 55.6	-0.1
	comp=E,22nm,0.6s						
TKM2				⇓S	Sn	07 50 14.0	-5.5
	comp=E,8.4nm,0.8s						
TKM2	Tokmak 2	7.41	28	P	Pn	07 48 55.8	+0.1
	SNR=30						
SMLA	Simla	7.44	134	*e*P	Pn	07 48 56.4	+0.4
SMLA				*e*S	Sn	07 50 16.1	-3.7
SMLA				IAML		07 50 18.9	
	comp=N,151nm,0.2s						
SMLA				IAML		07 50 19.7	
	comp=E,160nm,0.1s						
KKR	Kurukshetra	8.15	141	*e*S	Sn	07 50 32.2	-4.6
BHGR	Bahadurgarh	9.26	145	*e*S	Sn	07 50 55.2	-8.1
JOSI	Joshimath	9.31	127	*e*P	Pn	07 49 21.5	+0.8
JOSI				*e*S	Sn	07 51 00.3	-4.6
JOSI				IAML		07 51 08.2	
	comp=N,127nm,0.6s						
JOSI				IAML		07 51 09.6	
	comp=E,122nm,0.6s						
KHET	Khetri	9.32	152	*e*P	Pn	07 49 19.9	-0.7
KHET				*e*S	Sn	07 50 57.0	-7.8
KHET				IAML		07 51 00.7	
	comp=E,35nm,0.4s						
KHET				IAML		07 51 01.2	
	comp=N,43nm,0.1s						
NDI	New Delhi	9.39	144	*e*S	Sn	07 51 01.0	-5.5
JASL	Jaisalmer	9.49	180	*e*S	Sn	07 50 50.0	-19
SONA	Sohna	9.70	146	*e*P	Pn	07 49 24.2	-1.3
SONA				*e*S	Sn	07 51 06.1	-7.6
MAKZ	Makanchi	13.25	35	*e*Pn	Pn	07 50 10.6	-0.3
MK01	Makanchi Array	13.37	36	*e*Pn	Pn	07 50 12.1	-0.4
MK31	Makanchi Array	13.38	36	*e*Pn	Pn	07 50 13.3	+0.6
MKAR	Makanchi Array	13.38	36	P	Pn	07 50 12.4	-0.2
	comp=N,0.1nm,0.3s,baz=218,slow=7.7,SNR=14						
MKAR	Makanchi Array	13.38	36	*e*Pn	Pn	07 50 13.3	+0.6
DANN	Dangsing	13.53	123	*e*P	Pn	07 50 13.8	-1.0
	comp=N,12nm,0.4s						
KOLN	Koldanda	13.80	125	*e*P	Pn	07 50 17.6	-0.5
	comp=N,13nm,0.3s						
BHPL	Bhopal	14.32	155	*e*P	Pn	07 50 24.6	+0.2
BHPL				*e*x	x	07 52 56.2	
GKN	Gorkha	14.34	122	*e*P	Pn	07 50 24.3	-0.6
	comp=N,60nm,0.4s						
GKN				*e*S	Sn	07 52 54.8	-10
WMQ	Urumqi	14.80	55	*e*P	P	07 50 32.8	+1.4
DMN	Daman	14.91	122	*e*P	Pn	07 50 32.0	0.0
	comp=N,27nm,0.4s						
KKN	Kakani	14.92	121	*e*P	Pn	07 50 32.3	+0.3
	comp=N,36nm,0.6s						
KKN				*e*S	Sn	07 53 08.3	-11
AB31	Akbulak array	15.09	331	P	Pn	07 50 32.1	-1.6
	comp=N,1.0nm,0.4s,baz=148,slow=12,SNR=34						
ABKAR	Akbulak array	15.09	331	*e*Pn	Pn	07 50 32.1	-1.6
PKIN	Phulchoki	15.13	122	*e*P	Pn	07 50 34.9	+0.2
	comp=N,72nm,0.6s						
KURBB	Kurchatov Arra	15.20	19	P	Pn	07 50 34.4	-0.6
	comp=N,0.1nm,0.3s,baz=209,slow=9.9,SNR=9.5						
GUN	Gumba	15.26	120	*e*P	Pn	07 50 36.9	+0.6
	comp=N,21nm,0.3s						
JIRN	Jiri	15.63	120	*e*P	P	07 50 41.9	+0.8
	comp=N,54nm,0.4s						
RAMN	Ramite	16.36	121	*e*P	Pn	07 50 49.7	+0.2
	comp=N,44nm,0.5s						
BVAR	Borovoye Array	16.58	359	P	Pn	07 50 51.6	-0.2
	comp=N,0.4nm,0.3s,baz=164,slow=13,SNR=7.4						
AKTO	Aktyubinsk	16.79	330	P	Pn	07 50 54.0	-0.1
	comp=N,0.8nm,0.3s,baz=139,slow=9.9,SNR=26						
AKTO	Aktyubinsk	16.79	330	⇓P	P	07 50 53.5	+0.3
	comp=N,16nm,0.8s						
ODAN	Odare	16.96	120	*e*P	Pn	07 50 58.6	+1.9
	comp=N,35nm,0.6s						
ZAA0	Zalesovo Array	20.00	25	*e*P	P	07 51 28.1	+0.1
	comp=N,4.7nm,0.7s						
ZALV	Zalesovo Beam	20.00	25	P	P	07 51 28.1	+0.1
	comp=N,5.5nm,0.6s,baz=228,slow=11,SNR=8.5						
ZALV	Zalesovo Beam	20.00	25	*e*P	P	07 51 28.4	+0.4
ARU	Arti	21.66	341	P	P	07 51 46.3	+0.8
	comp=N,8.2nm,0.2s,baz=165,slow=8.0,SNR=6.3						
GTA	Gaotai	22.96	74	*e*P	P	07 52 02.3	+4.2
GTA				pP	pP	07 52 37.3	+5.0
GTA				sP	sP	07 52 57.8	+2.0
GTA				pmax	pmax		
	comp=N,4.0nm,1.0s						
LZH	Lanzhou	26.50	81	*e*P	P	07 52 35.0	+4.8
LZH				pP	pP	07 53 08.5	+0.2
LZH				*e*PP	PnPn	07 53 26.3	+3.9
LZH				sP	sP	07 53 29.8	-0.3
LZH				pmax	pmax		
	comp=N,15nm,1.0s						
LZH				pmax	pmax		
	comp=N,120nm,4.8s						
HHC	Hu-ho-hao-te	31.86	69	*e*P	P	07 53 17.5	+0.1
HHC				pmax	pmax		
	comp=N,20nm,1.0s						
HHC				pmax	pmax		
	comp=N,130nm,5.4s						
GYA	Guiyang	31.94	98	*e*P	P	07 53 21.0	+2.7
GYA				pmax	pmax		
	comp=N,10.0nm,0.8s						
AKASG	Malin Array Be	32.92	309	P	P	07 53 26.9	+0.6
	comp=N,1.4nm,0.5s,baz=81,slow=7.0,SNR=3.8						
FIA1	FINESS Array S	37.48	326	*e*P	P	07 54 06.0	+0.9
	comp=N,19nm,1.4s						
FINES	FINESS Array B	37.48	326	P	P	07 54 06.0	+0.9
	comp=N,3.6nm,0.8s,baz=130,slow=18,SNR=6.1						
ARCES	ARCESS Array B	41.16	338	P	P	07 54 36.4	+0.9
	comp=N,3.2nm,0.7s,baz=107,slow=7.8,SNR=16						
ARE0	ARCESS Array S	41.16	338	*e*P	P	07 54 36.4	+0.9
	comp=N,15nm,1.4s						
HFS	Hagfors	43.06	322	P	P	07 54 51.3	+0.4
	comp=N,2.5nm,0.7s,baz=94,slow=13,SNR=4.9						
HFS	Hagfors	43.06	322	P	P	07 54 51.3	+0.4
HFS				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CLL	Collm	43.16	309	*e*P	P	07 54 53.0	+1.1
NC303	NORSAR Array S	44.32	323	*e*P	P	07 55 01.9	+1.0
NB201	NORSAR Array S	44.34	323	*e*P	P	07 55 01.7	+0.5
NB2	NORSAR Subarra	44.38	323	P	P	07 55 01.0	-0.5
	comp=Z,1.5nm,0.6s,baz=96,slow=7.9						
TOA0	Torodi Ar. Sit	65.63	269	*e*P	P	07 57 32.6	-1.7
	comp=Z,6.2nm,1.4s						
TORD	Torodi Ar. Bea	65.63	269	P	P	07 57 33.1	-1.2
	comp=Z,1.3nm,0.5s,baz=48,slow=5.9						
TOLK	Toolik Lake Re	71.00	15	*e*P	P	07 58 07.9	+1.1
	comp=Z,2.5nm,0.8s						
COLD	Coldfoot	72.05	16	*e*P	P	07 58 14.1	+1.1
	comp=Z,2.4nm,1.2s						
INK	Inuvik	73.97	9	P	P	07 58 25.1	+0.8
	comp=Z,1.4nm,0.7s,baz=330,slow=2.3,SNR=6.6						
INK	Inuvik	73.97	9	*e*P	P	07 58 25.1	+0.8
	comp=Z,4.1nm,1.3s						
ILAR	Eielson Array	74.86	16	P	P	07 58 28.9	-0.5
	comp=Z,0.2nm,0.6s,baz=307,slow=5.4,SNR=4.8						
PPLA	Purkeypile	75.17	19	*e*P	P	07 58 32.2	+0.8
	comp=Z,6.6nm,1.4s						
SML	Sawmill	77.06	18	*e*P	P	07 58 42.4	+0.3
	comp=Z,5.8nm,1.2s						
WRA	Warramunga Arr	82.03	122	P	P	07 59 08.6	-0.7
	comp=Z,0.4nm,0.6s,baz=325,slow=5.0,SNR=11						
ASAR	Alice Springs	84.29	125	P	P	07 59 20.2	-0.6
	comp=Z,0.4nm,0.6s,baz=302,slow=4.6,SNR=5.6						

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*CSEM **17** 07:58:27.0, 38°.58N×26°.88W, h12^{km}, ML2.6*

PDA 17 07:58:27.0±0.6, **38°.58N×26°.88W, h12**^{km}±3^{km}, **MD3.5, ML2.6, Error ellipse: s-maj=4.4km s-min=1.1km az=28.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSCM	Serra do Cume	0.22	303	*e*P	Pg	07 58 31.3	-0.5
PSCM				*e*S	Sg	07 58 34.6	-0.5
PSCM				A	A	07 58 37.8	
	632nm,0.1s						
PSCM	Serra do Cume	0.22	303	*e*P	Pg	07 58 31.3	-0.5
PSCM				*e*S	Sg	07 58 34.6	-0.5
ADH	Angra Heroismo	0.29	285	*e*P	Pg	07 58 31.8	-1.2
ADH				*e*S	Sg	07 58 36.3	-0.7
ADH				A	A	07 58 37.9	
	414nm,0.2s						
ADH	Angra Heroismo	0.29	285	*e*P	Pg	07 58 31.8	-1.2
ADH				*e*S	Sg	07 58 36.3	-0.7
PMAN	Manadas	0.95	274	*e*S	Sg	07 58 52.2	-5.5
PMAN				A	A	07 58 53.0	
	100nm,0.2s						
PMAN	Manadas	0.95	274	*e*S	Sg	07 58 52.2	-5.5
PGRA	Graciosa	0.97	298	*e*P	Pb	07 58 41.9	-3.8
PGRA				*e*S	Sg	07 58 53.0	-5.5
PGRA				A	A	07 58 55.8	
	140nm,0.5s						
PGRA	Graciosa	0.97	298	*e*P	Pb	07 58 41.9	-3.8
PGRA				*e*S	Sg	07 58 53.0	-5.5
ROSA	Rosais	1.08	278	*e*P	Pb	07 58 43.1	-4.4
ROSA				*e*S	Sb	07 58 55.8	-5.7
ROSA				A	A	07 58 58.8	
	37nm,0.1s						
ROSA	Rosais	1.08	278	*e*P	Pb	07 58 43.1	-4.4
ROSA				*e*S	Sb	07 58 55.8	-5.7
PSET	Sete Cidades	1.18	129	*e*S	Sb	07 58 58.2	-6.4
PSET				A	A	07 58 59.3	
	850nm,0.1s						
PSET	Sete Cidades	1.18	129	*e*S	Sb	07 58 58.2	-6.4
PCAN	Candelaria	1.27	265	*e*P	Pn	07 58 46.0	-4.5
PCAN				*e*S	Sb	07 59 00.2	-6.8
PCAN				A	A	07 59 04.0	
	20nm,0.3s						
PCAN	Candelaria	1.27	265	*e*P	Pn	07 58 46.0	-4.5
PCAN				*e*S	Sb	07 59 00.2	-6.8
PDA	Ponta Delgada	1.27	131	*e*S	Sb	07 59 00.2	-6.8
PDA				A	A	07 59 01.9	
	52nm,0.1s						
PDA	Ponta Delgada	1.27	131	*e*S	Sb	07 59 00.2	-6.8
CMLA	Cha da Macela	1.34	127	*e*P	Pn	07 58 47.1	-4.4
CMLA				*e*S	Sb	07 59 02.1	-7.1
CMLA				A	A	07 59 05.5	
	96nm,0.2s						
CMLA	Cha da Macela	1.34	127	*e*P	Pn	07 58 47.1	-4.4
CMLA				*e*S	Sb	07 59 02.1	-7.1
CALA	Caldeira	1.43	271	*e*P	Pn	07 58 48.4	-4.4
CALA				*e*S	Sn	07 59 04.4	-7.1
CALA	Caldeira	1.43	271	*e*P	Pn	07 58 48.4	-4.4
CALA				*e*S	Sn	07 59 04.4	-7.1
PCED	Cedros	1.43	273	*e*P	Pn	07 58 48.3	-4.4
PCED				*e*S	Sn	07 59 04.1	-7.3
PCED				A	A	07 59 05.4	
	21nm,0.1s						
PCED	Cedros	1.43	273	*e*P	Pn	07 58 48.3	-4.4
PCED				*e*S	Sn	07 59 04.1	-7.3
BART	Pico Bartolome	1.57	120	*e*P	Pn	07 58 50.1	-4.6
BART				*e*S	Sn	07 59 07.7	-7.2
BART				A	A	07 59 19.3	
	21nm,0.3s						
BART	Pico Bartolome	1.57	120	*e*P	Pn	07 58 50.1	-4.6
BART				*e*S	Sn	07 59 07.7	-7.2
PSMA	Santa Maria	2.10	138	*e*S	Sn	07 59 20.5	-7.5
PSMA				A	A	07 59 23.6	
	8.1nm,0.1s						
PSMN	Pico do Norte,	2.13	137	*e*S	Sn	07 59 21.1	-7.6
PSMN				A	A	07 59 25.4	
	4.7nm,0.2s						
PSMN	Pico do Norte,	2.13	137	*e*S	Sn	07 59 21.1	-7.6

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*NIED **17** 07:58:00, 41°.20N×135°.90E, h380^{km}, Mw4.6 Best double couple: M$_0$1.01000×10^{16} NP1:ϕ_s306.00000°, δ64.00000°, λ1.00000°. NP2:ϕ_s216.00000°, δ89.00000°, λ154.00000°.*

*BJI **17** 07:58:38.0, 40°.86N×136°.25E, h349^{km}, mb4.8/53, mB4.6/31*

*MOS **17** 07:58:44.5±1.0, 41°.21N×135°.52E, h364^{km}, mb4.4/67, Error ellipse: s-maj=6.7km s-min=4.9km az=93.0*

*ISCJB **17** 07:58:44.5±0.1, 41°.18N±0°.02×135°.52E±0°.02, h359^{km}±1^{km}, mb4.3/253, Error ellipse: s-maj=3.1km s-min=2.4km az=154.7*

*JMA **17** 07:58:45.0±0.2, 41°.15N×135°.90E, h391^{km}±3^{km}, M4.7*

*NEIC **17** 07:58:45.7±0.2, 41°.16N×135°.50E, h360^{km}±2^{km}, mb4.4/184, Error ellipse: s-maj=3.0km s-min=2.3km az=137.0*

*IDC **17** 07:58:45.6±0.5, 41°.16N×135°.49E, h363^{km}±5^{km}, mb3.9/41, mb1 4.0/47, mb1mx3.9/75, mbtmp4.6/47, Error ellipse: s-maj=7.2km s-min=6.2km az=75.0*

ISC 17 07:58:45.6±0.4, **41°.16N**±0°.03×**135°.60E**±0°.04, **h365**^{km}±3^{km}, **h365**^{km}**:pP-P, n725,** σ**1^{s}.21**/770, **mb4.4**/253, **19C-33D, Sea of Japan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOG3	Oga3	2.92	114	P	Pn	07 59 49.9	+4.5
JOSM	Okushiri--Mats	3.05	71	⇓P	Pn	07 59 45.8	-0.6
JOSM				S	S	08 00 33.8	-1.6
JIW	Iwasaki	3.38	98	⇓P	Pn	07 59 49.1	-0.4
JHST	Hiyamasetana	3.44	67	P	Pn	07 59 49.8	-0.1
JHST				S	S	08 00 40.6	-1.2
JHG	Hegura jima	3.46	162	⇑P	Pn	07 59 51.2	+0.9
JHG				S	S	08 00 42.7	+0.3
JNTW	Noshirotokiwa	3.58	103	P	Pn	07 59 51.1	-0.2
JTB	Tobi-shima	3.61	122	P	Pn	07 59 51.3	-0.3
MSHR	Mys Shultsa	3.61	295	*c i*P	Pn	07 59 52.4	+0.8
JSH	Shimam	3.63	64	⇓P	Pn	07 59 51.6	-0.2
JSI2	Shiura 2	3.63	90	⇓P	Pn	07 59 51.2	-0.6
JHHS	Hirosakihyakuz	3.64	96	P	Pn	07 59 52.1	+0.2
JSR	Shiriuchi	3.64	83	⇓P	Pn	07 59 51.8	-0.1
JYM2	Yakumo 2	3.70	73	⇓P	Pn	07 59 52.3	-0.1
JSD	Sado	3.73	146	S	S	08 00 46.3	-0.9
JYW	Yuwa	3.87	113	P	Pn	07 59 53.9	-0.3
JAW	Awa shima	3.89	133	⇓P	Pn	07 59 53.9	-0.5
TEY	Ternei	3.94	10	⇑*e*P	Pn	07 59 55.2	+0.5
TEY				*e*S	S	08 00 48.9	-1.8
TEY				pmax	pmax		
	comp=Z,540nm,0.5s						
TEY				smax	smax		
	comp=N,340nm,0.9s						
TEY				smax	smax		
	comp=E,220nm,1.0s						
JAH	Hinai	3.95	103	⇓P	Pn	07 59 54.2	-0.7
JSZ	Suzu	3.95	159	⇑P	Pn	07 59 55.7	+0.7
JSZ				S	S	08 00 51.7	+0.6
USRK	Ussuriysk Ar.	4.04	320	P	Pn	07 59 56.7	+1.0
	baz=134,slow=9.7						
USRK				S	S	08 00 51.8	-0.8

	baz=163,slow=10						
JYA	Atsumi	4.07	128	⇓P	Pn	07 59 55.5	-0.7
JOT	Ohata	4.11	85	⇓P	Pn	07 59 55.7	-0.8
JKB	Kayabe	4.14	78	⇓P	Pn	07 59 56.2	-0.6
JTM	Tenmabayashi	4.15	93	⇓P	Pn	07 59 56.0	-1.0
JTM				S	S	08 00 52.1	-2.6
JSK	Shakotan	4.23	57	⇓P	Pn	07 59 57.5	-0.1
JSK				*e*S	S	08 00 53.9	-2.1
JRG	Rokugo	4.23	113	⇓P	Pn	07 59 56.9	-0.9
JRG				*e*S	S	08 00 54.1	-2.1
JNB	Noboribetsu	4.27	70	⇓P	Pn	07 59 57.3	-0.8
JYK	Kaneyama	4.28	120	⇓P	Pn	07 59 57.5	-0.8
JSZI	Iwateshizukuis	4.32	107	P	Pn	07 59 58.1	-0.6
JJH	Hakui	4.33	167	⇑P	Pn	07 59 59.9	+1.1
JAHD	Aomorihigashid	4.33	87	P	Pn	07 59 57.7	-1.0
JARK	Aomorirokkasho	4.36	90	P	Pn	07 59 57.8	-1.2
JKZ	Kuzumaki	4.51	103	⇓P	Pn	07 59 59.4	-1.4
JYS	Shirataka	4.52	129	P	Pn	08 00 00.3	-0.6
JYS				S	S	08 01 00.2	-1.5
JANG	Nango	4.56	98	⇓P	Pn	07 59 59.5	-1.7
JANG				S	S	08 00 58.8	-3.5
JOM	Ohasama	4.66	109	⇓P	Pn	08 00 00.6	-1.7
JEW	Eniwo	4.67	67	⇓P	Pn	08 00 02.0	-0.3
JHK	Hiroka	4.72	145	P	Pn	08 00 02.4	-0.5
JOU	Okura	4.79	124	P	Pn	08 00 03.0	-0.7
JMK	Ichinoseki	4.84	115	⇓P	Pn	08 00 02.8	-1.3
MJB9	Matsu-Tunnel	5.03	155	*e*Pn	Pn	08 00 06.2	-0.1
MAJO	Matsushiro	5.04	155	*e*Pn	Pn	08 00 06.4	0.0
MAJO	Matsushiro	5.04	155	*c i*P	Pn	08 00 06.0	-0.4
MAT	Matsushiro	5.04	155	P	Pn	08 00 06.0	-0.4
MAT				S	S	08 01 16.4	+4.6
MJAR	Matsushiro Arr	5.04	155	P	Pn	08 00 06.4	0.0
	comp=E,6.5nm,0.3s,baz=336,slow=12,SNR=103						
MJAR				S	S	08 01 10.8	-1.0
	baz=34,slow=7.4,SNR=2.2						
JGN	Niukaw	5.11	164	⇑P	Pn	08 00 07.2	0.0
JNG	Nsakai	5.13	157	⇑P	Pn	08 00 07.1	-0.4
JOI	OKI	5.20	202	⇓P	Pn	08 00 09.1	+1.0
MDJ	Mudanjiang	5.61	310	P	Pn	08 00 10.4	-2.0
MDJ				S	S	08 01 18.0	-4.9
MDJ				pmax	pmax		
	comp=E,210nm,0.6s						
MDJ				pmax	pmax		
	comp=E,95nm,3.5s						
ERM	Erimo	5.73	79	*e*Pn	Pn	08 00 12.5	-1.3
ERM				*e*S	S	08 01 20.9	-4.5
ERM	Erimo	5.73	79	*c i*P	Pn	08 00 12.2	-1.6
ERM				pmax	pmax		
	comp=Z,324nm,0.4s						
INU	Inuyama	5.91	169	*e*Pn	Pn	08 00 15.8	-0.1
ASAJ	Asahikawa	5.94	58	P	Pn	08 00 15.3	-0.9
	comp=Z,192nm,0.3s,baz=250,slow=9.1,SNR=757						
ASAJ				S	S	08 01 25.1	-4.7
	comp=Z,7.9nm,0.3s,baz=102,slow=30,SNR=10						
KSRS	Korea Array	7.01	241	P	P	08 00 29.9	+0.4
	comp=Z,23nm,0.3s,baz=57,slow=11,SNR=821						
KSRS	Korea Array	7.01	241	P	P	08 00 30.0	+0.4
KSRS				pmax	pmax		
	comp=Z,23nm,0.3s						
KS01	Wonju Array Si	7.02	241	*e*Pn	P	08 00 29.0	-0.7
KS15	Wonju Array Si	7.04	241	*e*Pn	P	08 00 29.9	0.0
KSAR	Wonju Array Be	7.04	241	P	P	08 00 29.9	0.0
KSAR	Wonju Array Be	7.04	241	P	P	08 00 30.0	0.0
YSS	Yuzh-Sakhalins	7.75	39	*e*Pn	Pn	08 00 36.5	-0.3
YSS	Yuzh-Sakhalins	7.75	39	⇓*e*P	Pn	08 00 36.2	-0.6
YSS				*e*S	S	08 02 02.4	-5.3
YSS				pmax	pmax		
	comp=Z,300nm,1.0s						
YSS				pmax	pmax		
	comp=N,130nm,0.8s						
YSS				pmax	pmax		
	comp=Z,360nm,0.8s						
YSS				pmax	pmax		
	comp=E,160nm,0.9s						
YSS				smax	smax		
	comp=N,370nm,2.5s						
YSS				smax	smax		
	comp=N,240nm,1.1s						
INCN	Inchon	7.86	245	*e*Pn	P	08 00 39.5	+0.1
CN2	Changchun	7.96	293	*e*P	Pn	08 00 39.5	+0.2
CN2				*e*S	S	08 02 08.3	-4.0
CN2				pmax	pmax		
	comp=N,50nm,0.7s						
CN2				pmax	pmax		
	comp=N,200nm,4.0s						
TJN	Taejon	8.01	236	*d i*P	P	08 00 41.4	-0.8
YUK	Yuzh-Kuril’sk	8.09	66	*i* P	Pn	08 00 39.5	-1.4
YUK				*e*S	S	08 02 11.3	-3.9
YUK				pmax	pmax		
	comp=N,149nm,0.4s						
YUK				pmax	pmax		
	comp=Z,528nm,0.4s						
YUK				pmax	pmax		
	comp=E,54nm,0.1s						
KLR	Kul’dur	8.52	343	P	Pn	08 00 45.5	-0.3
	comp=E,3.3nm,0.3s,baz=152,slow=10,SNR=1103						
KLR	Kul’dur	8.52	343	*c i*P	Pn	08 00 45.4	-0.4
JHJ	Hachijo jima 2	8.69	156	P	Pn	08 00 45.4	-2.7
	comp=E,66nm,0.3s,baz=55,slow=22,SNR=18						
JHJ				S	S	08 02 20.2	-8.2
	comp=E,31nm,0.3s,baz=72,slow=20,SNR=4.8						
JHJ2	Mitsune	8.71	156	*e*Pn	Pn	08 00 45.2	-3.1
SHO	Shikotan	8.72	68	*d i*P	Pn	08 00 46.3	-2.0
SHO				*i* S	S	08 02 20.4	-8.4
SHO				pmax	pmax		
	comp=Z,274nm,0.3s						
SHO				pmax	pmax		
	comp=N,146nm,0.4s						
SHO				pmax	pmax		
	comp=E,176nm,0.3s						
JNU	Nakatsue	8.86	207	P	P	08 00 51.4	-0.4
	comp=E,3.8nm,0.3s,baz=26,slow=3.7,SNR=22						
JNU	Nakatsue	8.86	207	*e*Pn	P	08 00 51.0	-0.8
GRNR	Gornyy	9.63	3	⇑*i*P	P	08 01 01.1	+1.1
GRNR				*e*		08 02 47.4	
GRNR				pmax	pmax		
	comp=N,350nm,0.9s						
GRNR				pmax	pmax		
	comp=Z,490nm,0.9s						
KUR	Kuril’sk	9.84	61	⇑*i*P	Pn	08 00 59.7	-1.7
KUR				*i* S	S	08 02 49.2	-3.7
KUR				pmax	pmax		
	comp=Z,287nm,0.4s						
KUR				pmax	pmax		
	comp=E,48nm,0.3s						
KUR				pmax	pmax		
	comp=N,56nm,0.4s						
KUR				pmax	pmax		
	comp=Z,600nm,2.2s						
TYV	Tymovskoe	10.87	24	*e*P	P	08 01 14.9	+1.2
TYV				*e*S	S	08 03 13.6	-1.4
TYV				pmax	pmax		
	comp=Z,100nm,0.4s						
TYV				pmax	pmax		
	comp=Z,100nm,0.4s						
TYV				smax	smax		
	comp=E,14nm,1.4s						
TYV				smax	smax		
	comp=E,400nm,4.4s						
DL2	Dalian	10.95	263	⇓*i*P	P	08 01 16.0	+1.2
DL2				pmax	pmax		
	comp=E,290nm,3.8s						
NKL	Nikolayevsk	12.48	14	*e*P	P	08 01 31.5	0.0
NKL				*e*		08 03 44.5	
NKL				pmax	pmax		
	comp=N,26nm,0.6s						
NKL				pmax	pmax		
	comp=Z,56nm,0.6s						
OKH	Okha	13.35	19	*e*P	P	08 01 41.2	+0.2
OKH				*e*S	S	08 04 07.6	+1.1
OKH				smax	smax		
	comp=E,200nm,8.6s						
OKH				smax	smax		
	comp=Z,100nm,16.0s						
ZEA	Zeya	13.78	339	*e*P	P	08 01 45.8	-0.1
ZEA				pmax	pmax		
	comp=N,200nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,200nm,1.0s						
ZEA				pmax	pmax		
	comp=E,65nm,0.7s						
ZEA				pmax	pmax		
	comp=N,120nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,210nm,1.0s						
BJI	Beijing	14.81	272	⇓*e*P	P	08 01 57.5	+0.3
BJI				pmax	pmax		
	comp=Z,150nm,0.7s						
CBIJ	Chichi jima	15.04	157	*e*P	P	08 01 58.0	-2.0
	comp=Z,172nm,0.4s						
CBIJ				S	S	08 04 34.1	-7.0
JCJ	Chichijima	15.04	157	P	P	08 01 57.1	-2.9
	comp=Z,83nm,0.3s,baz=309,slow=6.5,SNR=39						
JCJ				S	S	08 04 34.1	-7.0
	comp=Z,16nm,0.3s,baz=198,slow=20,SNR=6.3						
TIA	Tai’an	15.25	257	P	P	08 02 02.8	+0.7
TIA				pmax	pmax		
	comp=Z,190nm,0.9s						
JOW	Kunigami	15.52	205	*e*P	P	08 02 05.9	+0.7
	comp=Z,78nm,1.3s						
HHC	Hu-ho-hao-te	18.14	277	*e*P	P	08 02 32.6	-0.7
HHC				pmax	pmax		
	comp=Z,17nm,1.0s						
HHC				pmax	pmax		
	comp=Z,140nm,6.4s						
PEA0B	Petropavlovsk-	19.11	44	*e*P	P	08 02 43.2	-0.1
	comp=Z,23nm,1.2s						
WHN	Wuhan	20.17	245	⇑P	P	08 02 52.6	-1.5
WHN				pmax	pmax		
	comp=Z,120nm,0.9s						
MA2	Magadan	20.73	22	P	P	08 02 59.5	+0.8
	comp=Z,8.9nm,0.6s,baz=204,slow=9.6,SNR=6.6						
YAK	Yakutsk	21.21	352	*e*P	P	08 02 58.9	-4.1
YAK				*e*S	S	08 06 33.5	+0.3
YAK				*e*		08 13 31.1	
YAK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,4.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,4.0nm,0.9s						
YAK				smax	smax		
	comp=N,73nm,2.3s						
YAK				smax	smax		
	comp=E,17nm,1.0s						
ULN	Ulaanbaatar	21.36	298	*e*P	P	08 03 05.2	+0.5
	comp=E,43nm,0.9s						
ULN	Ulaanbaatar	21.36	298	*d i*P	P	08 03 04.1	-0.7
ULN				pmax	pmax		
	comp=Z,49nm,0.9s						
YULB	Yu-li	21.40	218	*e*P	P	08 03 03.6	-1.6
	comp=Z,6.6nm,0.5s						
BOD	Bodaibo	21.64	328	*e*P	P	08 03 05.4	-1.6
BOD				pmax	pmax		
	comp=Z,15nm,1.2s						
SONA1	Songino Array	21.79	298	*e*P	P	08 03 08.6	-0.1
SONM	Songino Array	21.79	298	P	P	08 03 08.8	0.0
	comp=Z,21nm,0.6s,baz=111,slow=9.5,SNR=111						
SONM				ScP	ScP	08 09 55.8	-0.4
	comp=Z,0.3nm,0.3s,baz=72,slow=4.8,SNR=4.0						
TWG	Pinlang	21.99	218	*e*P	P	08 03 11.1	+0.4
XAN	Xi’an	22.25	260	P	P	08 03 11.6	-1.4
XAN				pmax	pmax		
	comp=Z,40nm,1.1s						
SEY	Seymchan	23.98	19	P	P	08 03 28.5	+0.4
	comp=Z,4.2nm,0.6s,baz=208,slow=7.7,SNR=12						
SEY				ScP	ScP	08 10 02.0	+0.5
	comp=Z,0.3nm,0.3s,baz=141,slow=16,SNR=3.7						
SEY	Seymchan	23.98	19	⇑*i*P	P	08 03 30.6	+2.5
LZH	Lanzhou	25.24	269	*e*P	P	08 03 39.6	-0.4
LZH				pP	pP	08 04 41.1	-1.3
LZH				sP	sP	08 05 27.0	-2.2
LZH				pmax	pmax		
	comp=Z,140nm,1.2s						
LZH				pmax	pmax		
	comp=Z,220nm,4.3s						
GTA	Gaotai	27.24	278	P	P	08 03 57.4	-0.3
GTA				pP	pP	08 05 05.8	+1.7
GTA				pmax	pmax		
	comp=Z,37nm,1.0s						
GYA	Guiyang	28.00	247	*e*P	P	08 04 06.4	+1.9
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
TIXI	Tiksi	30.75	356	P	P	08 04 26.9	-1.0
	comp=Z,4.9nm,0.3s,baz=202,slow=5.2,SNR=5.5						
KRAR	Krasnoyarsk	31.36	313	⇓*i*P	P	08 04 32.0	-1.3
KMI	Kunming	31.60	250	P	P	08 04 34.6	-1.5
KMI				pmax	pmax		
	comp=Z,29nm,0.7s						
DGZ	Jazzator, Alta	34.35	301	*i* P	P	08 04 59.6	+0.3
DGZ				pmax	pmax		
	comp=Z,27nm,0.7s						
WMQ	Urumqi	35.04	291	P	P	08 05 06.6	+1.4
WMQ				pmax	pmax		
	comp=Z,69nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,280nm,6.5s						
ZAA0	Zalesovo Array	35.81	308	*e*P	P	08 05 10.6	-0.8
	comp=Z,15nm,1.0s						
ZALV	Zalesovo Beam	35.81	308	P	P	08 05 09.6	-1.7
	comp=Z,10.0nm,0.3s,baz=94,slow=9.3,SNR=32						
ZALV				ScP	ScP	08 10 39.5	-0.6
	comp=Z,3.1nm,0.6s,baz=85,slow=2.3,SNR=5.3						
ZALV	Zalesovo Beam	35.81	308	*e*P	P	08 05 10.0	-1.3
ZALV				ScP	ScP	08 10 39.5	-0.6
NONG	Nongkai	36.08	240	P	P	08 05 14.2	+0.1
	comp=Z,1.9nm,0.9s						
SKNT	Sakolnakorn	36.34	238	P	P	08 05 16.7	+0.4
	comp=Z,11nm,1.2s,comp=Z,1µm						
NVS	Novosibirsk	36.73	310	*e*P	P	08 05 18.0	-1.0
PAYA	Payao	37.37	245	P	P	08 05 25.2	+0.3
	comp=Z,36nm,0.7s,comp=Z,274nm						
KHON	Khomkaen	37.55	239	P	P	08 05 26.9	+0.6
	comp=Z,32nm,0.9s						
SPIA	Saint Paul Isl	37.75	46	*e*P	P	08 05 28.6	+1.1
	comp=Z,48nm,1.4s						
UTTA	Uttaradit	38.03	243	P	P	08 05 30.4	+0.1
	comp=Z,4.5nm,0.8s						
LAMP	Lampang	38.11	245	P	P	08 05 31.5	+0.5
	comp=Z,10nm,0.8s,comp=Z,127nm						
MK01	Makanchi Array	38.16	297	*e*P	P	08 05 30.4	-0.7
MK31	Makanchi Array	38.16	297	*e*P	P	08 05 30.3	-0.8
MK31	Makanchi Array	38.16	297	*i* P	P	08 05 29.9	-1.2
MK31				pmax	pmax		
	comp=Z,11nm,0.4s						
MKAR	Makanchi Array	38.16	297	P	P	08 05 30.2	-0.8
	comp=Z,18nm,0.6s,baz=85,slow=10.0,SNR=213						
MKAR				ScP	ScP	08 10 48.1	-1.1
	comp=Z,1.2nm,0.7s,baz=65,slow=3.2,SNR=5.8						
MKAR	Makanchi Array	38.16	297	*e*P	P	08 05 30.4	-0.7
	comp=Z,153nm,0.6s						
MKAR				ScP	ScP	08 10 48.1	-1.1
MKAR	Makanchi Array	38.16	297	*e*P	P	08 05 30.4	-0.7
MKAR				pmax	pmax		
	comp=Z,153nm,0.6s						
MAKZ	Makanchi	38.37	297	*e*P	P	08 05 32.1	-0.7
	comp=Z,26nm,0.5s						
MAKZ	Makanchi	38.37	297	*e*P	P	08 05 32.1	-0.7
MAKZ				pmax	pmax		
	comp=Z,26nm,0.5s						
CMMT	Chiang Mai	38.38	246	P	P	08 05 33.3	+0.1
	comp=Z,27nm,0.6s						
CHTO	Chiang Mai	38.38	246	*e*P	P	08 05 34.3	+1.1
	comp=Z,20nm,0.7s						
CHTO	Chiang Mai	38.38	246	*e*P	P	08 05 34.3	+1.1
CHTO				pmax	pmax		
	comp=Z,20nm,0.7s						
CHTO	Chiang Mai	38.38	246	P	P	08 05 33.3	+0.1
	comp=Z,120nm,0.9s						
PHIT	Phitsanulok	38.51	242	P	P	08 05 35.6	+1.3
	comp=Z,23nm,0.7s,comp=Z,530nm						
PBKT	Sadao Pong	38.59	241	P	P	08 05 35.6	+0.7
	comp=Z,15nm,0.6s,comp=Z,1µm						
CMAR	Chiang Mai Arr	38.62	245	P	P	08 05 35.4	+0.1
	comp=Z,3.4nm,0.4s,baz=32,slow=6.9,SNR=20						
CMAR				ScP	ScP	08 10 52.1	+0.7
	comp=Z,1.2nm,0.4s,baz=67,slow=5.1,SNR=4.4						
CM01	Chiang Mai Arr	38.64	245	*e*P	P	08 05 35.2	-0.2
SHL	Shillong	39.26	261	*e*P	P	08 05 39.6	-1.0
	comp=Z,26nm,0.6s						
SHL	Shillong	39.26	261	*e*x	P	08 05 41.0	+0.4
SHL	Shillong	39.26	261	*e*P	P	08 05 39.6	-1.0
SHL				pmax	pmax		
	comp=Z,26nm,0.6s						
PATS	Pohnpei	39.72	143	*e*P	P	08 05 45.3	+1.2
	comp=Z,108nm,1.2s						
KURK	Kurchatov	39.86	304	P	P	08 05 44.9	0.0
KURK				ScP	ScP	08 10 55.8	+0.1
KURK				S	S	08 11 17.3	-4.2
KURK	Kurchatov	39.86	304	*d i*P	P	08 05 43.7	-1.2
KURK				pmax	pmax		
	comp=Z,52nm,0.5s						
KURBB	Kurchatov Arra	39.93	304	P	P	08 05 44.9	-0.6
	comp=Z,62nm,0.5s,baz=81,slow=8.4,SNR=294						
KURBB				ScP	ScP	08 10 55.8	-0.2
	comp=Z,0.2nm,0.3s,baz=87,slow=3.8,SNR=4.5						
KURBB				S	S	08 11 17.3	-5.2
	comp=Z,0.9nm,0.6s,baz=85,slow=11,SNR=5.7						
UMPA	Umpang Tak	40.26	243	P	P	08 05 51.6	+3.0
	comp=Z,4.3nm,0.6s,comp=Z,580nm						
PDGK	Podgornoye	40.93	292	*i* P	P	08 05 52.4	-1.5
PDGK				pmax	pmax		
	comp=Z,18nm,0.6s						
TAPN	Taplejung	41.41	266	*e*P	P	08 05 58.4	+0.2
	comp=Z,85nm,0.3s						
ODAN	Odare	41.92	266	*e*P	P	08 06 02.3	+0.2
	comp=Z,95nm,0.5s						
RDOG	Red Dog Mine	42.01	30	*e*P	P	08 06 02.7	+0.6
	comp=Z,15nm,1.3s						
MRSI	Marisa	42.34	201	P	P	08 06 05.4	+0.1
JIRN	Jiri	42.40	267	*e*P	P	08 06 06.0	-0.1
	comp=Z,164nm,0.3s						
RAMN	Ramite	42.46	266	*e*P	P	08 06 06.1	-0.4
	comp=Z,200nm,0.4s						
GUN	Gumba	42.50	268	*e*P	P	08 06 06.7	-0.2
	comp=Z,316nm,0.4s						
KKN	Kakani	43.02	268	*e*P	P	08 06 10.5	-0.3
	comp=Z,118nm,0.6s						
PKIN	Phulchoki	43.04	268	*e*P	P	08 06 10.4	-0.7
	comp=Z,51nm,0.4s						
MPSI	Mapaga	43.05	203	P	P	08 06 11.1	+0.2
DMN	Daman	43.24	268	*e*P	P	08 06 12.3	-0.4
	comp=Z,41nm,0.3s						
GKN	Gorkha	43.39	269	*e*P	P	08 06 13.1	-0.6
	comp=Z,49nm,0.3s						
JAY	Jayapura	43.71	173	P	P	08 06 14.5	-1.7
TKM2	Tokmak 2	43.77	293	*i* P	P	08 06 16.2	-0.4
TKM2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
DANN	Dangsing	43.87	270	*e*P	P	08 06 17.7	0.0
	comp=Z,370nm,0.5s						
SANI	Sanana	43.89	194	P	P	08 06 16.7	-0.8
SBUM	Sibu	43.92	215	*e*P	P	08 06 19.2	+1.4
	comp=Z,9.8nm,0.7s						
FAKI	Fak Fak	43.97	185	P	P	08 06 18.9	+0.7
FAKI	Fak Fak	43.97	185	*e*P	P	08 06 18.9	+0.7
	comp=Z,51nm,0.7s						
KOLN	Koldanda	44.30	269	*e*P	P	08 06 20.6	-0.3
	comp=Z,35nm,0.3s						
BVA0	Borovoye Array	44.46	308	*i* P	P	08 06 20.9	-0.7
BVA0				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BVAR	Borovoye Array	44.46	308	P	P	08 06 20.9	-0.7
	comp=Z,5.6nm,0.5s,baz=83,slow=7.4,SNR=35						
BVAR				ScP	ScP	08 11 13.4	-0.8
	comp=Z,0.9nm,0.4s,baz=82,slow=3.1,SNR=4.9						
BVAR				S	S	08 12 25.1	-3.2
	comp=Z,0.7nm,0.6s,baz=82,slow=10,SNR=3.0						
BRVK	Borovoye	44.52	309	*e*P	P	08 06 21.4	-0.6
	comp=Z,4.6nm,0.6s						
BRVK	Borovoye	44.52	309	*d i*P	P	08 06 21.3	-0.7
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
PYUN	Piuthan	44.58	270	*e*P	P	08 06 22.6	-0.6
SVW2	Sparrevohn	45.12	40	*e*P	P	08 06 28.3	+1.7
	comp=Z,4.6nm,1.1s						
MNAS	Manas	46.06	294	*i* P	P	08 06 33.6	-0.8
MNAS				pmax	pmax		
	comp=Z,7.0nm,0.6s						
SFK	Sufi-Kurgan	46.27	290	*i* P	P	08 06 34.1	-2.0
SFK				pmax	pmax		
	comp=Z,4.0nm,0.4s						
PPLA	Purkeypile	46.49	37	*e*P	P	08 06 39.2	+1.8
	comp=Z,4.7nm,0.6s						
SPU	Mount Spurr	46.80	39	*e*P	P	08 06 39.6	-0.1
COLD	Coldfoot	46.85	31	*e*P	P	08 06 40.8	+1.0
	comp=Z,3.7nm,1.0s						
BPAW	Bear Paw Mtn.	46.87	35	*e*P	P	08 06 41.3	+1.2
	comp=Z,3.6nm,0.9s						
BPAW				*e*PcP	PcP	08 08 07.3	+1.2
SKT	Skwentna	46.92	38	*e*P	P	08 06 41.0	+0.5
	comp=Z,3.9nm,1.2s						
TOLK	Toolik Lake Re	46.96	29	P	P	08 06 42.1	+1.4
	baz=274						
KTH	Kantishna Hill	46.97	36	*e*P	P	08 06 42.3	+1.4
	comp=Z,8.5nm,0.4s						
KDAK	Kodiak Island	47.17	44	P	P	08 06 42.6	+0.3
	comp=Z,4.0nm,0.5s,baz=116,slow=2.7,SNR=30						
KDAK	Kodiak Island	47.17	44	*e*P	P	08 06 42.5	+0.2
	comp=Z,8.2nm,0.9s						
KDAK	Kodiak Island	47.17	44	*i* P	P	08 06 42.3	-0.1
KK31	Karatay Array	47.21	295	*e*P	P	08 06 42.5	-0.6
KK31	Karatay Array	47.21	295	*i* P	P	08 06 41.7	-1.3
KK31				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KKAR	Karatay Array	47.21	295	*e*P	P	08 06 42.5	-0.5
KKAR	Karatay Array	47.21	295	*e*P	P	08 06 42.5	-0.5
TRF	Thorofare Moun	47.27	36	*e*P	P	08 06 44.7	+1.4
	comp=Z,8.4nm,1.4s						
SUA	Susitna One	47.38	39	*e*P	P	08 06 44.5	+0.4
	comp=Z,10nm,1.4s						
KULM	Kulim	47.44	231	*e*P	P	08 06 45.9	+0.9
	comp=Z,35nm,1.3s						
CNPM	China Poot	47.50	41	*e*P	P	08 06 44.6	-0.4
	comp=Z,30nm,1.4s						
BWN	Browne	47.52	35	*e*P	P	08 06 47.5	+2.5
	comp=Z,16nm,1.0s						
BRLK	Bradley Lake	47.63	41	*e*P	P	08 06 47.6	+1.7
	comp=Z,10nm,1.3s						
PBA	Port Blair	47.64	244	*e*P	P	08 06 47.1	+0.6
	comp=Z,76nm,0.9s						
MCK	McKinley	47.82	36	*e*P	P	08 06 48.4	+1.1
	comp=Z,4.0nm,0.6s						
MCK	McKinley	47.82	36	*e*P	P	08 06 48.4	+1.1
MCK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
RC01	Rabbit Creek A	47.93	39	*e*P	P	08 06 48.4	+0.2
	comp=Z,15nm,1.4s						
WRH	Wood River Hil	48.06	34	*e*P	P	08 06 50.0	+0.9
	comp=Z,3.5nm,1.1s						
PMR	Palmer	48.12	38	*e*P	P	08 06 50.1	+0.6
	comp=Z,11nm,1.4s						
PMR	Palmer	48.12	38	*e*P	P	08 06 50.1	+0.6
PMR				pmax	pmax		
	comp=Z,11nm,1.4s						
CCB	Clear Creek Bu	48.15	34	*e*P	P	08 06 50.5	+0.7
	comp=Z,2.7nm,0.6s						
SML	Sawmill	48.44	38	*e*P	P	08 06 53.0	+0.9
	comp=Z,6.9nm,0.8s						
IL1	Eielson Array	48.52	34	*e*P	P	08 06 52.9	+0.3
ILAR	Eielson Array	48.52	34	P	P	08 06 53.0	+0.4
	comp=Z,2.7nm,0.6s,baz=269,slow=5.7,SNR=51						
ILAR	Eielson Array	48.52	34	P	P	08 06 53.0	+0.4
ILAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ILB	Eielson Array	48.52	34	*e*P	P	08 06 53.0	+0.4
HDA	Harding Lake	48.56	34	*e*P	P	08 06 53.5	+0.6
	comp=Z,8.1nm,0.6s						
FYU	Fort Yukon	48.88	31	*e*P	P	08 06 54.6	-0.6
	comp=Z,11nm,0.6s						
SCM	Sheep Creek Mo	48.91	38	*e*P	P	08 06 56.6	+1.0
	comp=Z,10nm,0.8s						
SCM	Sheep Creek Mo	48.91	38	*e*P	P	08 06 56.6	+1.0
SCM				pmax	pmax		
	comp=Z,11nm,0.8s						
SVE	Sverdlovsk	49.06	315	*e*P	P	08 06 57.3	+0.6
SVE				pmax	pmax		
	comp=Z,40nm,0.9s						
NIL	Nilore	49.17	282	*e*P	P	08 06 58.6	+0.6
	comp=Z,31nm,0.8s						
NIL	Nilore	49.17	282	*e*P	P	08 06 58.6	+0.6
NIL				pmax	pmax		
	comp=Z,31nm,0.8s						
KLU	Klutina	49.64	38	*e*P	P	08 07 02.1	+1.0
	comp=Z,11nm,1.4s						
HARP	HAARP	49.77	37	*e*P	P	08 07 03.7	+1.7
	comp=Z,10nm,0.9s						
ARU	Arti	50.27	315	*e*P	P	08 07 06.0	+0.3
	comp=Z,33nm,0.7s						
ARU	Arti	50.27	315	*d i*P	P	08 07 05.5	-0.2
ARU				*PP	PcP	08 08 19.0	+0.4
ARU						08 08 58.8	
ARU				S	S	08 13 50.8	+1.5
ARU				SS	SS	08 17 25.3	-2.3
ARU				pmax	pmax		
	comp=Z,44nm,1.0s						
PSI	Prapat	50.45	231	*e*P	P	08 07 08.2	+0.4

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             comp=Z,11nm,0.6s
PSI   Prapat             50.45 231  eP    P       08 07 08.2 +0.4
PSI                                  pmax  pmax
             comp=Z,11nm,0.6s
RAGM  Ragged Mountai     50.51  39  eP    P       08 07 09.7 +2.2
             comp=Z,5.7nm,0.8s
EGAK  Eagle              50.91  33  eP    P       08 07 11.0 +0.6
             comp=Z,3.6nm,0.4s
BALM  Baldy              51.42  38  eP    P       08 07 15.5 +1.1
             comp=Z,4.4nm,0.9s
BALM  Baldy              51.42  38  eP    P       08 07 15.5 +1.1
BALM                                 pmax  pmax
             comp=Z,4.0nm,0.9s
SOEI  Soe                51.73 194  eP    P       08 07 17.5 +0.4
             comp=Z,28nm,0.9s
AB31  Akbulak array      51.84 306  i P   P       08 07 16.4 -1.0
AB31                                 pmax  pmax
             comp=Z,9.0nm,0.4s
ABKAR Akbulak array      51.84 306  eP    P       08 07 16.8 -0.6
DAWY  Dawson             51.85  34  eP    P       08 07 18.3 +0.9
             comp=Z,1.4nm,0.6s
GSI   Gunungsitoli       52.45 231   P    P       08 07 23.1 +0.8
AKTO  Aktyubinsk         52.57 308   P    P       08 07 22.1 -0.6
             comp=Z,7.9nm,0.6s,baz=62,slow=13,SNR=25
INK   Inuvik             52.82  28   P    P       08 07 24.9 +0.7
             comp=Z,5.4nm,0.3s,baz=299,slow=5.2,SNR=78
INK                                  PcP   PcP    08 08 29.1 +1.2
             comp=Z,3.1nm,0.5s,baz=322,slow=4.7,SNR=3.9
INK   Inuvik             52.82  28  eP    P       08 07 25.0 +0.8
             comp=Z,7.4nm,0.3s
INK                                  PcP   PcP    08 08 29.1 +1.2
INK   Inuvik             52.82  28  eP    P       08 07 25.0 +0.8
INK                                               08 08 29.2
INK                                  pmax  pmax
             comp=Z,7.0nm,0.3s
MASI  Maura Aman, Be     53.56 223   P    P       08 07 27.7 -2.6
MTN   Manton Dam         53.89 185  eP    P       08 07 32.4 -0.1
             comp=Z,48nm,0.6s
PRGR  Permogore          54.82 324  eP    P       08 07 38.0 -0.6
PRGR                                 pmax  pmax
             comp=Z,7.0nm,0.7s
COEN  Coen               55.28 171  eP    P       08 07 43.1 +0.7
             comp=Z,29nm,0.8s
SPITS Spitsbergen Ar     55.56 347   P    P       08 07 44.2 +0.5
             comp=Z,1.3nm,0.5s,baz=11,slow=16,SNR=4.6
SPITS                                PcP   PcP    08 08 38.6 +0.1
             comp=Z,2.0nm,0.6s,baz=76,slow=0.6,SNR=2.4
JIS   Juneau Island      56.18  39  eP    P       08 07 50.2 +1.9
             comp=Z,11nm,1.2s
KLMR  Klimovskoe         57.83 325  eP    P       08 07 57.8 -1.8
KLMR                                 pmax  pmax
             comp=Z,5.0nm,0.7s
KLMR  Klimovskoe         57.83 325  eP    P       08 07 57.8 -1.8
KLMR                                 AMP          08 08 02.6
             comp=Z,5.0nm,0.7s
GEYT  Alibeck            57.95 294   P    P       08 08 00.0 -0.9
             comp=Z,3.8nm,0.4s,baz=64,slow=13,SNR=3.5
DLBC  Dease Lake         58.17  38   P    P       08 08 04.4 +2.2
             comp=Z,1.7nm,0.5s,baz=329,slow=2.3,SNR=4.6
ARCES ARCESS Array B     58.50 337   P    P       08 08 04.5 +0.3
             comp=Z,0.9nm,0.5s,baz=64,slow=7.2,SNR=12
ARCES ARCESS Array B     58.50 337  eP    P       08 08 04.6 +0.4
ARCES ARCESS Array B     58.50 337  eP    P       08 08 04.6 +0.4
ARE0  ARCESS Array S     58.50 337  eP    P       08 08 04.3 +0.2
             comp=Z,5.2nm,1.4s
RES   Resolute Bay       59.71  14   P    P       08 08 12.3 +0.1
             comp=Z,3.5nm,0.4s,baz=327,slow=5.0,SNR=22
WRAB  Tennant Creek      60.79 181  eP    P       08 08 19.2 -1.0
             comp=Z,11nm,0.7s
WRAB  Tennant Creek      60.79 181⇑iP    P       08 08 19.6 -0.6
WRAB                                 pmax  pmax
             comp=Z,12nm,0.8s
WB2   Warramunga Arr     60.80 181  eP    P       08 08 20.0 -0.3
WB2                                 ePcP  PcP     08 09 00.6 +0.6
WRA   Warramunga Arr     60.80 181   P    P       08 08 19.7 -0.5
             comp=Z,8.4nm,0.6s,baz=359,slow=7.4,SNR=203
WRA                                  PcP   PcP    08 09 00.4 +0.4
             comp=Z,3.7nm,0.7s,baz=360,slow=5.0,SNR=6.6
VRH   Novokhopyorsk      61.48 314  eP    P       08 08 23.4 -1.0
VRH                                  pmax  pmax
             comp=Z,10.0nm,0.4s
TULEG Thule              61.56   6  eP    P       08 08 24.4 -0.1
             comp=Z,6.3nm,0.8s
HMH   Humu‘ula Sheep     61.66  88  eP    P       08 08 27.4 +0.9
             comp=Z,158nm,1.3s
CTA   Charters Tower     61.73 169   P    P       08 08 26.7 +0.3
             comp=Z,7.6nm,0.6s,baz=358,slow=6.4,SNR=8.0
CTA   Charters Tower     61.73 169   P    P       08 08 26.7 +0.3
CTA                                  pmax  pmax
             comp=Z,6.0nm,0.9s
CTAO  Charters Tower     61.73 169  eP    P       08 08 27.4 +1.0
             comp=Z,8.2nm,0.7s
CTAO  Charters Tower     61.73 169  eP    P       08 08 27.4 +1.0
CTAO                                 pmax  pmax
             comp=Z,8.0nm,0.7s
OBN   Obninsk            62.06 320⇑eP    P       08 08 30.2 +2.0
OBN                                 e             08 09 07.7
OBN                                 e*PP  pP      08 09 48.0 +1.4
OBN                                 e*SP  sP      08 10 27.1 +0.9
OBN                                 e             08 10 53.6
OBN                                  pmax  pmax
             comp=Z,8.0nm,0.8s
YKA   Yellowknife Ar     62.49  30   P    P       08 08 31.1 +0.2
             comp=Z,1.0nm,0.5s,baz=308,slow=6.1,SNR=8.3
YKA                                  PcP   PcP    08 09 07.1 +0.8
             comp=Z,1.3nm,0.7s,baz=309,slow=3.6,SNR=4.8
VSR   Storozhevoye       62.84 315  eP    P       08 08 32.6 -0.8
VSR                                  pmax  pmax
             comp=Z,10.0nm,0.5s
VORD  Divnogorie         62.91 315  eP    P       08 08 33.1 -0.7
VORD                                 pmax  pmax
             comp=Z,7.0nm,0.6s
FIA1  FINESS Array S     63.02 329  eP    P       08 08 34.1 -0.2
             comp=Z,8.0nm,0.8s
FINES FINESS Array B     63.02 329   P    P       08 08 34.5 +0.1
             comp=Z,2.6nm,0.5s,baz=75,slow=5.6,SNR=18
FINES                                pP    pP     08 09 51.7 -1.3
             comp=Z,4.5nm,0.9s,baz=64,slow=8.7,SNR=2.6
MBWA  Marble Bar         63.73 197  eP    P       08 08 39.4  0.0
             comp=Z,54nm,1.4s
AS01  Alice Springs      64.51 182  eP    P       08 08 44.5  0.0
AS31  Alice Springs      64.51 182  eP    P       08 08 44.5  0.0
             comp=Z,3.0nm,0.5s
ASAR  Alice Springs      64.51 182   P    P       08 08 44.5  0.0
             comp=Z,8.2nm,0.8s,baz=0.9,slow=8.0,SNR=98
VSU   Vasula             64.57 327⇑eP    P       08 08 43.8 -0.6
VSU                                  pmax  pmax
             comp=Z,37nm,1.0s
KBZ   Khabaz             64.80 307   P    P       08 08 46.3 +0.1
             comp=Z,5.0nm,0.7s,baz=42,slow=4.1,SNR=14
KIV   Kislovodsk         64.80 307  eP    P       08 08 46.8 +0.4
             comp=Z,32nm,1.0s
KIV   Kislovodsk         64.80 307c iP    P       08 08 46.9 +0.6
KIV                                 e             08 09 18.0
KIV                                 e*PP  pP      08 10 06.3 +0.8
KIV                                 e             08 11 12.6
KIV                                  pmax  pmax
             comp=Z,24nm,0.8s
WSAR  Wadi Sarin         65.56 280   P    P       08 08 51.6 +0.3
             comp=Z,6.2nm,0.7s,baz=109,slow=1.3,SNR=4.7
UOSS  Minazif            66.36 283  eP    P       08 08 56.8 +0.5
             comp=Z,65nm,1.4s
SUMG  Summit             66.49 358  eP    P       08 08 57.8 +0.9
             comp=Z,7.8nm,0.8s
SUMG  Summit             66.49 358⇑iP    P       08 08 57.8 +0.9
             comp=Z,7.9nm,0.5s
SUMG  Summit             66.49 358  eP    P       08 08 57.8 +0.9
SUMG                                 pmax  pmax
             comp=Z,8.0nm,0.8s
NLWA  Neilton Lookou     67.21  46  eP    P       08 09 02.9 +1.5
             comp=Z,11nm,1.1s
B05A  Bryant             67.65  45   P    P       08 09 05.0 +1.0
             baz=307
EIDS  Eidsvold           67.73 165  eP    P       08 09 05.5 +0.8
             comp=Z,16nm,1.3s
E03A  Lebam              67.89  47  eP    P       08 09 06.9 +1.4
             comp=Z,14nm,0.9s
AKASG Malin Array Be     68.25 319   P    P       08 09 07.1 -0.5
             comp=Z,5.5nm,0.4s,baz=50,slow=6.5,SNR=8.9
AKBB  Malin Array Si     68.25 319  eP    P       08 09 07.4 -0.3
             comp=Z,10nm,0.5s
AKBB  Malin Array Si     68.25 319  eP    P       08 09 07.4 -0.3
AKBB                                 pmax  pmax
             comp=Z,10.0nm,0.5s
D05A  Enumclaw           68.36  46  eP    P       08 09 10.1 +1.6
             comp=Z,16nm,1.3s
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HFS   Hagfors            68.42 333   P    P       08 09 08.5 -0.1
             comp=Z,1.5nm,0.4s,baz=343,slow=4.5,SNR=8.2
NC204 NORSAR Array S     68.55 335  eP    P       08 09 09.7 +0.3
NB2   NORSAR Subarra     68.58 334   P    P       08 09 08.6 -1.0
             comp=Z,7.6nm,1.7s,baz=42,slow=6.2
LTY   Liberty            69.02  45  eP    P       08 09 13.2 +0.6
             comp=Z,6.7nm,1.4s
DZM   Mont Dzumac        69.12 149   P    P       08 09 14.7 +1.3
             comp=Z,9.6nm,0.8s,baz=275,slow=7.0,SNR=7.0
DZM   Mont Dzumac        69.12 149  eP    P       08 09 14.7 +1.3
             comp=Z,32nm,1.4s
I03D  Drain, OR          69.73  49   P    P       08 09 18.3 +1.5
             baz=308
H04A  Detroit Lake       69.78  48  eP    P       08 09 18.1 +0.9
             comp=Z,5.0nm,0.8s
KBO   Bosley Butte       70.13  51  eP    P       08 09 20.5 +1.1
             comp=Z,50nm,1.4s
I04A  Tendick Farm,      70.21  49   P    P       08 09 20.6 +0.9
             baz=308
I05D  Terrebonne, OR     70.47  48   P    P       08 09 22.3 +0.9
             baz=309
L02D  Cave Junction,     70.53  51   P    P       08 09 22.8 +1.1
             baz=308
HUMO  Hull Mountain      70.63  50  eP    P       08 09 23.6 +1.3
             comp=Z,4.9nm,1.1s
J04D  Umpqua Nationa     70.72  49   P    P       08 09 24.1 +1.1
             baz=309
PINE  Pine Mountain      71.04  48  eP    P       08 09 26.5 +1.5
             comp=Z,11nm,0.7s
J05D  Fort Rock, OR      71.19  49   P    P       08 09 27.1 +1.3
             baz=309,SNR=7.8
KHMM  Horse Mountain     71.25  52  eP    P       08 09 27.8 +1.6
             comp=Z,23nm,1.4s
K04D  Chiloquin, OR      71.31  49   P    P       08 09 27.6 +1.1
             baz=309
YBH   Yreka Blue Hor     71.32  51   P    P       08 09 27.8 +1.3
             comp=Z,1.0nm,0.5s,baz=350,slow=6.9,SNR=7.2
WALA  Waterton Lakes     71.34  41  eP    P       08 09 27.4 +0.9
             comp=Z,3.6nm,0.8s
M02C  Callahan           71.45  51   P    P       08 09 28.5 +1.3
             baz=309
K05A  Summer Lake        71.74  49  eP    P       08 09 30.6 +1.5
             comp=Z,5.3nm,0.7s
M04C  Macdoel            71.79  50   P    P       08 09 30.5 +1.2
             baz=309,SNR=7.6
N02D  Trinity Center     71.80  51   P    P       08 09 30.8 +1.5
             baz=309
FORT  Forrest            71.92 187  eP    P       08 09 30.3 +0.5
             comp=Z,37nm,0.6s
JTMT  Jette              72.03  42  eP    P       08 09 31.8 +1.1
             comp=Z,6.6nm,0.9s
BUR08 Bucovina Ar. S     72.24 318  eP    P       08 09 32.2 +0.4
BUR04 Bucovina Ar. S     72.25 318  eP    P       08 09 32.0 +0.1
BMO   Blue Mountains     72.36  46  eP    P       08 09 33.4 +0.8
             comp=Z,5.0nm,0.6s
BMO   Blue Mountains     72.36  46  eP    P       08 09 33.4 +0.8
BMO                                  pmax  pmax
             comp=Z,5.0nm,0.6s
FFC   Flin Flon          72.59  31  eP    P       08 09 34.0 +0.4
             comp=Z,8.7nm,0.8s
FFC   Flin Flon          72.59  31  eP    P       08 09 34.0 +0.4
FFC                                  pmax  pmax
             comp=Z,9.0nm,0.8s
MOD   Modoc Plateau      72.60  49  eP    P       08 09 34.8 +0.7
             comp=Z,3.7nm,0.6s
J08A  Circle Bar Ran     72.70  47  eP    P       08 09 36.1 +1.5
             comp=Z,8.7nm,1.2s
ARMA  Armidale           72.74 166  eP    P       08 09 36.4 +1.6
             comp=Z,15nm,0.8s
BR131 Keskin Array S     72.75 308  eP    P       08 09 35.1 +0.1
BRTR  Keskin Array B     72.75 308   P    P       08 09 35.2 +0.2
             comp=Z,1.6nm,0.4s,baz=108,slow=3.0,SNR=9.1
O03D  Paynes Creek       72.76  51   P    P       08 09 35.5 +0.5
             baz=310
MSO   Missoula           72.81  42   P    P       08 09 35.7 +0.5
             baz=312
MSO   Missoula           72.81  42  eP    P       08 09 35.8 +0.5
             comp=Z,4.8nm,1.1s
HOPS  Hopland Field      72.82  53  eP    P       08 09 36.2 +1.0
             comp=Z,22nm,1.3s
STKA  Stephens Creek     72.88 175   P    P       08 09 36.5 +1.0
             comp=Z,12nm,0.6s,baz=341,slow=6.5,SNR=35
STKA  Stephens Creek     72.88 175  eP    P       08 09 36.6 +1.1
             comp=Z,2.6nm,0.7s
OJC   Ojcow              73.06 323  eP    P       08 09 36.9 +0.5
OJC   Ojcow              73.06 323  eP    P       08 09 36.9 +0.5
WVOR  Wild Horse Val     73.21  48  eP    P       08 09 38.9 +1.3
             comp=Z,3.2nm,0.8s
WVOR  Wild Horse Val     73.21  48  eP    P       08 09 38.9 +1.3
WVOR                                 pmax  pmax
             comp=Z,3.0nm,0.8s
MLR   Muntele Rosu       73.30 316   P    P       08 09 37.1 -0.9
             comp=Z,0.7nm,0.5s,baz=320,slow=7.9,SNR=3.4
NIE   Niedzica           73.40 322  eP    P       08 09 39.4 +1.0
NIE   Niedzica           73.40 322  eP    P       08 09 39.4 +1.0
BBOO  Buckleboo          73.60 180  eP    P       08 09 40.2 +0.6
             comp=Z,17nm,0.8s
FRB   Frobisher Bay      73.69  11   P    P       08 09 39.6 -0.1
             comp=Z,5.5nm,0.6s,baz=352,slow=5.1,SNR=8.1
FRB                                  pP    pP     08 11 02.7 +1.5
             comp=Z,8.9nm,0.9s,baz=325,slow=5.8,SNR=3.1
BEKR  Beckworth          73.88  51  eP    P       08 09 42.4 +0.8
             comp=Z,7.1nm,1.3s
HRY   Holter Researc     73.96  41  eP    P       08 09 42.9 +1.1
EGMT  Eagleton           74.06  39   P    P       08 09 43.1 +0.7
             baz=315,SNR=7.9
EGMT  Eagleton           74.06  39  eP    P       08 09 43.0 +0.7
             comp=Z,11nm,0.7s
MFID  Camas Ranch        74.11  46  eP    P       08 09 43.9 +1.1
             comp=Z,8.1nm,0.8s
LRM   Limekiln Ridge     74.26  42  eP    P       08 09 44.6 +0.9
DLMT  Dillon             74.50  43  eP    P       08 09 46.0 +1.1
             comp=Z,14nm,0.9s
PAHR  Pah Rah Range      74.56  51  eP    P       08 09 46.2 +0.8
             comp=Z,4.7nm,0.8s
MCMT  McKenzie Canyo     74.73  43  eP    P       08 09 47.1 +0.6
HLID  Hailey             74.77  45   P    P       08 09 47.8 +1.2
             baz=313,SNR=7.9
HLID  Hailey             74.77  45  eP    P       08 09 47.8 +1.2
             comp=Z,2.7nm,0.8s
BOZ   Bozeman (W)        74.83  42   P    P       08 09 47.8 +0.9
             baz=314,SNR=17
BOZ   Bozeman (W)        74.83  42  eP    P       08 09 47.9 +1.0
             comp=Z,7.4nm,0.8s
PNTR  Pine Nut           74.83  51  eP    P       08 09 49.0 +1.9
             comp=Z,4.5nm,0.8s
RAYN  Ar Rayn            74.99 288  eP    P       08 09 47.9 -0.1
             comp=Z,3.3nm,0.7s
RAYN  Ar Rayn            74.99 288  eP    P       08 09 47.9 -0.1
RAYN                                 pmax  pmax
             comp=Z,3.0nm,0.7s
CMB   Columbia Colle     75.05  52  eP    P       08 09 49.2 +1.1
             comp=Z,6.1nm,0.6s
CMB   Columbia Colle     75.05  52  eP    P       08 09 49.2 +1.1
CMB                                  pmax  pmax
             comp=Z,6.0nm,0.6s
CLL   Collm              75.23 327  i P   P       08 09 48.8  0.0
             comp=Z,5.0nm,0.5s
CLL   Collm              75.23 327  i P   P       08 09 48.8  0.0
CLL                                  pmax  pmax
             comp=Z,5.0nm,0.5s
WAKR  Walker             75.31  52  eP    P       08 09 51.6 +1.9
             comp=Z,3.3nm,0.9s
ASF   Jabal al Asfar     75.49 300   P    P       08 09 50.6 -0.2
             comp=Z,2.8nm,0.8s,baz=90,slow=1.0,SNR=4.7
YHB   Horse Butte        75.64  43  eP    P       08 09 52.8 +1.3
             comp=Z,11nm,0.7s
NWAO  Narrogin (SRO)     75.64 196   P    P       08 09 51.6 +0.4
             comp=Z,4.7nm,0.5s,baz=192,slow=7.4,SNR=4.5
NWAO  Narrogin (SRO)     75.64 196  eP    P       08 09 51.6 +0.4
             comp=Z,57nm,1.5s
GCMT  Greycliff          75.68  41  eP    P       08 09 52.9 +1.2
KVN   Kaiserville        75.73  50  eP    P       08 09 53.6 +1.5
             comp=Z,9.3nm,0.7s
KVN   Kaiserville        75.73  50  eP    P       08 09 53.6 +1.5
KVN                                  pmax  pmax
             comp=Z,9.0nm,0.7s
YMR   Madison River      75.81  42  eP    P       08 09 53.6 +1.1
             comp=Z,6.9nm,0.8s
NV01  Mina Array Sit     76.03  51  eP    P       08 09 55.1 +1.2
NVAR  Mina Array Bea     76.03  51   P    P       08 09 55.1 +1.3
             comp=Z,5.6nm,0.6s,baz=296,slow=5.3,SNR=64
NVAR                                 pP    pP     08 11 22.0 +6.1
             comp=Z,1.7nm,0.9s,baz=295,slow=5.5,SNR=5.4
MDPB  Devils Postpil     76.10  52  eP    P       08 09 55.3 +1.0
             comp=Z,2.7nm,0.6s
NV11  Mina Array Sit     76.11  51  eP    P       08 09 55.4 +1.2
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             comp=Z,0.3nm,0.8s
YPP   Pitchstone Pla     76.17  43  eP    P       08 09 56.6 +1.9
             comp=Z,3.3nm,0.7s
H17A  Grant Village      76.20  42   P    P       08 09 57.4 +2.7
             baz=315,SNR=11
H17A  Grant Village      76.20  42  eP    P       08 09 57.6 +2.9
             comp=Z,11nm,0.8s
DGMT  Dagmar             76.31  36   P    P       08 09 55.6 +0.6
             baz=318
DGMT  Dagmar             76.31  36  eP    P       08 09 55.9 +0.9
             comp=Z,10nm,0.6s
RLMT  Red Lodge          76.35  41   P    P       08 09 56.5 +1.0
             baz=315,SNR=8.6
RLMT  Red Lodge          76.35  41  eP    P       08 09 56.9 +1.4
             comp=Z,5.2nm,0.8s
IMW   Indian Meadow      76.37  43  eP    P       08 09 57.5 +1.8
             comp=Z,7.0nm,0.8s
FXWY  Fox Creek          76.50  43  eP    P       08 09 58.3 +1.9
             comp=Z,3.6nm,0.7s
MOOW  Moose Ponds        76.57  43  eP    P       08 09 58.3 +1.6
             comp=Z,5.2nm,0.9s
PAGB  Antelope Grade     76.64  54  eP    P       08 09 58.1 +1.1
             comp=Z,9.7nm,0.7s
TPAW  Teton Pass         76.65  43  eP    P       08 09 58.9 +1.6
             comp=Z,3.7nm,0.6s
LAO   LASA Array         76.69  39   P    P       08 09 57.9 +0.7
             baz=317
VTS   Vitosha            76.72 315  eP    P       08 09 58.2 +0.7
             comp=Z,7.7nm,0.7s
SNOW  Snow King Moun     76.77  43  eP    P       08 09 59.7 +1.8
             comp=Z,3.4nm,0.7s
GERES GERESS Array B     76.79 325   P    P       08 09 57.2 -0.5
             comp=Z,0.8nm,0.5s,baz=53,slow=6.7,SNR=3.4
REDW  Red Top Meadow     76.79  43  eP    P       08 09 59.6 +1.6
             comp=Z,5.5nm,1.1s
HVU   Hansel Valley      76.87  46  eP    P       08 09 59.8 +1.4
             comp=Z,17nm,1.4s
HVU   Hansel Valley      76.87  46  eP    P       08 09 59.8 +1.4
HVU                                  pmax  pmax
             comp=Z,17nm,1.4s
VES   Vestal, Richgr     77.28  53   P    P       08 10 00.8 +0.3
             baz=312
BGU   Big Grassy Mou     77.33  46  eP    P       08 10 02.3 +1.4
             comp=Z,2.4nm,0.7s
PKM   Mcpherson Peak     77.47  55   P    P       08 10 02.8 +1.0
             baz=312
CWC   Cottonwood Cre     77.49  52   P    P       08 10 02.6 +0.7
             baz=312
GRAC  Grapevine Rang     77.54  52   P    P       08 10 03.4 +1.4
             baz=312
HWUT  Hardware Ranch     77.64  45  eP    P       08 10 04.0 +1.3
             comp=Z,5.5nm,0.7s
R11A  Troy Canyon, C     77.66  50   P    P       08 10 03.5 +0.7
             baz=313,SNR=5.1
R11A  Troy Canyon, C     77.66  50  eP    P       08 10 03.6 +0.8
             comp=Z,1.8nm,0.9s
EKA   Eskdalemuir Ar     77.67 337   P    P       08 10 02.1 -0.2
             comp=Z,0.6nm,0.6s,baz=54,slow=7.2,SNR=3.9
BW06  Boulder Array      77.88  43   P    P       08 10 04.3 +0.3
             baz=316,SNR=13
BW06  Boulder Array      77.88  43  eP    P       08 10 04.0 +0.1
             comp=Z,7.1nm,0.8s
PD31  Pinedale Array     77.88  43  eP    P       08 10 04.1 +0.1
PDAR  Pinedale Array     77.88  43   P    P       08 10 04.4 +0.4
             comp=Z,7.1nm,0.7s,baz=334,slow=0.5,SNR=70
PDAR                                 pP    pP     08 11 26.4 -0.1
             comp=Z,0.3nm,0.5s,baz=318,slow=1.2,SNR=1.7
DUG   Dugway, Tooele     77.95  47   P    P       08 10 05.3 +1.0
             baz=314,SNR=5.1
DUG   Dugway, Tooele     77.95  47  eP    P       08 10 05.6 +1.3
             comp=Z,4.9nm,0.8s
DUG   Dugway, Tooele     77.95  47  eP    P       08 10 05.6 +1.3
DUG                                  pmax  pmax
             comp=Z,5.0nm,0.8s
TCUT  Toone Canyon       78.07  45  eP    P       08 10 06.6 +1.5
             comp=Z,17nm,0.6s
MPMC  Manual Prospec     78.10  52   P    P       08 10 05.9 +0.6
             baz=313,SNR=5.6
FURC  Furnace Creek,     78.19  52   P    P       08 10 06.7 +1.2
             baz=313
TPNV  Topopah Spring     78.23  51   P    P       08 10 06.8 +0.9
             baz=313,SNR=11
TPNV  Topopah Spring     78.23  51  eP    P       08 10 06.9 +1.0
             comp=Z,7.4nm,0.5s
JLU   Jordanelle         78.41  46  eP    P       08 10 07.9 +0.9
             comp=Z,3.3nm,0.8s
ULM   Lac du Bonnet      78.42  31   P    P       08 10 06.3 -0.1
             comp=Z,7.3nm,0.5s,baz=320,slow=5.9,SNR=16
ULM   Lac du Bonnet      78.42  31  eP    P       08 10 06.3 -0.1
             comp=Z,13nm,1.0s
PSUT  Pine Spring        78.52  49  eP    P       08 10 08.4 +0.9
             comp=Z,4.1nm,1.0s
NLU   North Lily Min     78.53  47  eP    P       08 10 09.2 +1.7
             comp=Z,3.7nm,0.7s
EDW2  Edwards Air Fo     78.58  54   P    P       08 10 08.3 +0.5
             baz=312
MPU   Maple Canyon       78.72  46  eP    P       08 10 09.6 +1.0
             comp=Z,4.0nm,0.8s
GSC   Goldstone, Bar     79.02  53   P    P       08 10 10.8 +0.7
             baz=313
SHPR  Sheep Range        79.17  51  eP    P       08 10 12.0 +1.0
             comp=Z,3.2nm,0.8s
FMP   Fort Macarthur     79.19  55   P    P       08 10 11.7 +0.8
             baz=313
BFSC  Mount Baldy Ra     79.22  54   P    P       08 10 11.9 +0.7
             baz=313
TCRU  Three Creeks R     79.26  48  eP    P       08 10 13.2 +1.6
             comp=Z,3.0nm,0.6s
TUQ   Turquoise Moun     79.45  52   P    P       08 10 13.5 +1.0
             baz=313
TMUT  Trail Mountain     79.46  47  eP    P       08 10 13.9 +1.2
             comp=Z,8.6nm,1.5s
MSU   Marysvale          79.48  48  eP    P       08 10 14.4 +1.7
CCUT  Cedar City         79.48  49  eP    P       08 10 14.1 +1.4
             comp=Z,2.2nm,1.2s
K22A  Casper             79.50  42   P    P       08 10 12.9 +0.2
             baz=317
P17A  Butcher Ranch,     79.59  46  eP    P       08 10 14.4 +1.1
             comp=Z,8.0nm,0.9s
HEC   Hector,Ludlow      79.62  53   P    P       08 10 14.1 +0.8
             baz=313
RSSD  Black Hills        79.63  39   P    P       08 10 13.7 +0.3
             baz=319
RSSD  Black Hills        79.63  39  eP    P       08 10 13.5 +0.1
             comp=Z,5.4nm,0.6s
RSSD  Black Hills        79.63  39  eP    P       08 10 13.5 +0.1
RSSD                                 pmax  pmax
             comp=Z,5.0nm,0.6s
BBRC  Big Bear Solar     79.65  53   P    P       08 10 14.2 +0.5
             baz=313
P18A  Preston Nutter     79.75  46  eP    P       08 10 15.6 +1.3
             comp=Z,13nm,0.6s
LCMT  Little Creek M     79.93  49  eP    P       08 10 16.4 +1.4
             comp=Z,1.6nm,0.8s
MURC  Murrieta           79.94  54   P    P       08 10 14.9 -0.1
             baz=313
SRU   San Rafael Swe     79.97  46  eP    P       08 10 16.4 +1.2
             comp=Z,9.7nm,1.1s
SRU   San Rafael Swe     79.97  46  eP    P       08 10 16.4 +1.2
SRU                                  pmax  pmax
             comp=Z,10.0nm,1.1s
AGMN  Agassiz Nation     79.98  32   P    P       08 10 14.7 -0.2
             baz=323
GMRC  Granite Mounta     80.06  52   P    P       08 10 16.5 +0.8
             baz=314
B34A  Aery, Baudette     80.31  31   P    P       08 10 16.3 -0.3
             baz=324
FRD   Ford Ranch, An     80.37  54   P    P       08 10 18.0 +0.7
             baz=313
PFO   Pinyon Flats O     80.38  54   P    P       08 10 17.8 +0.4
             baz=313
PFO   Pinyon Flats O     80.38  54  eP    P       08 10 17.8 +0.4
             comp=Z,6.9nm,1.1s
PFO   Pinyon Flats O     80.38  54  eP    P       08 10 17.8 +0.4
PFO                                  pmax  pmax
             comp=Z,7.0nm,1.1s
XPFO  Piæon Flat         80.38  54  eP    P       08 10 17.8 +0.4
             comp=Z,7.1nm,1.1s
BELC  Belle Mtn. Jos     80.39  53   P    P       08 10 17.5  0.0
             baz=314,SNR=5.1
C33A  Trail              80.45  32   P    P       08 10 17.3 -0.1
             baz=323
O20A  White River Ci     80.46  44   P    P       08 10 18.1 +0.3
             baz=317,SNR=6.4
O20A  White River Ci     80.46  44  eP    P       08 10 18.3 +0.5
             comp=Z,5.4nm,0.6s
109C  Camp Elliot, M     80.47  55   P    P       08 10 17.9 +0.1
             baz=313
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NEE2	Needles Airpor	80.69	52	P	P	08 10 19.2	+0.4
	baz=314						
B35A	Bob, Littlefor	80.77	31	P	P	08 10 19.0	0.0
	baz=325,SNR=6.3						
B35A	Bob, Littlefor	80.77	31	*e*P	P	08 10 19.1	0.0
	comp=Z,15nm,0.9s						
IRM	Iron Mountain	80.80	52	P	P	08 10 20.2	+0.8
	baz=314						
BAR	Barrett	80.88	54	*e*P	P	08 10 20.2	+0.3
	comp=Z,3.7nm,0.8s						
U15A	North Rim	80.88	49	*e*P	P	08 10 21.8	+1.5
	comp=Z,9.0nm,0.8s						
C34A	RKJ Ranch, Bem	80.89	32	P	P	08 10 19.6	0.0
	baz=324						
MONP2	Monument Peak	80.89	54	P	P	08 10 20.7	+0.5
	baz=314						
BC3	Big Chuckawall	80.95	53	P	P	08 10 20.7	+0.3
	baz=314						
N23A	Red Feather La	81.09	42	P	P	08 10 21.8	+0.5
	baz=318						
N23A	Red Feather La	81.09	42	*e*P	P	08 10 22.8	+1.6
	comp=Z,5.1nm,1.1s						
PV09	Paradox Valley	81.17	46	*e*P	P	08 10 23.0	+1.4
C35A	Jirik Farms, M	81.21	31	P	P	08 10 21.0	-0.3
	baz=325						
IKP	In-Ko-Pah, Jac	81.25	54	P	P	08 10 22.4	+0.5
	baz=314						
PDMCI	Parker Dam,Lak	81.29	52	P	P	08 10 22.7	+0.7
	baz=314						
PV10	Paradox Valley	81.30	46	*e*P	P	08 10 23.9	+1.5
Y12C	Blythe	81.45	52	P	P	08 10 23.7	+0.9
	baz=314						
PV05	Paradox Valley	81.49	46	*e*P	P	08 10 25.1	+1.9
PV03	Paradox Valley	81.50	46	*e*P	P	08 10 24.3	+1.0
PV02	Paradox Valley	81.59	46	*e*P	P	08 10 24.8	+0.9
	comp=Z,3.7nm,0.7s						
C36A	Pine Crest Far	81.61	31	P	P	08 10 23.4	-0.1
	baz=325						
SUSD	Miller	81.73	36	P	P	08 10 24.1	0.0
	baz=322						
PV01	Paradox Valley	81.73	46	*e*P	P	08 10 25.6	+1.0
GLA	Glamis	81.75	53	P	P	08 10 25.2	+0.7
	baz=314						
SMCO	Snowmass	81.82	44	*e*P	P	08 10 26.1	+0.9
	comp=Z,4.7nm,0.6s						
C37A	Embarrass	81.89	30	P	P	08 10 25.0	+0.2
	baz=326						
D36A	Goodland	81.96	31	P	P	08 10 26.1	+0.8
	baz=325						
EYMN	Ely	81.97	30	*e*P	P	08 10 25.2	-0.1
	comp=Z,25nm,1.3s						
WUAZ	Wupatki	82.05	49	P	P	08 10 27.4	+1.2
	baz=316						
WUAZ	Wupatki	82.05	49	*e*P	P	08 10 27.3	+1.2
	comp=Z,4.7nm,1.0s						
ISCO	Idaho Springs	82.07	43	P	P	08 10 27.2	+0.8
	baz=318						
ISCO	Idaho Springs	82.07	43	*e*P	P	08 10 27.3	+0.9
	comp=Z,4.4nm,1.2s						
ISCO	Idaho Springs	82.07	43	*e*P	P	08 10 27.3	+0.9
ISCO				pmax	pmax		
	comp=Z,4.0nm,1.2s						
Y14A	Wickenburg	82.22	51	*e*P	P	08 10 27.9	+1.0
	comp=Z,4.1nm,0.6s						
G33A	Ortonville	82.23	34	P	P	08 10 26.6	0.0
	baz=323						
C38A	Sawbill Land.	82.24	30	P	P	08 10 26.7	0.0
	baz=326						
F34A	Alexandria	82.24	33	P	P	08 10 26.7	0.0
	baz=324						
D37A	Cotton	82.26	31	P	P	08 10 26.5	-0.3
	baz=326						
H32A	Carlson Farm,	82.35	35	P	P	08 10 27.4	0.0
	baz=323						
MVCO	Mesa Verde	82.44	46	P	P	08 10 28.8	+0.5
	baz=317						
MVCO	Mesa Verde	82.44	46	*e*P	P	08 10 29.1	+0.8
	comp=Z,7.7nm,1.0s						
E36A	McGregor	82.46	32	P	P	08 10 27.6	-0.3
	baz=325						
F35A	Swanville	82.47	33	P	P	08 10 27.5	-0.4
	baz=324						
G34A	Benson	82.53	34	P	P	08 10 28.1	-0.1
	baz=324						
113A	Mohawk Valley,	82.59	53	*e*P	P	08 10 29.8	+1.1
	comp=Z,3.2nm,0.7s						
X16A	Lo Mia Camp, P	82.80	50	*e*P	P	08 10 31.7	+1.7
	comp=Z,4.9nm,0.8s						
F36A	Milaca	82.89	32	P	P	08 10 29.4	-0.6
	baz=325						
S22A	4UR Ranch, Cre	82.95	45	P	P	08 10 31.8	+0.9
	baz=318,SNR=5.1						
S22A	4UR Ranch, Cre	82.95	45	*e*P	P	08 10 32.5	+1.6
	comp=Z,3.0nm,0.9s						
OGNE	Ogallala	83.00	40	P	P	08 10 29.9	-0.9
	baz=320						
G35A	Watkins	83.03	33	P	P	08 10 30.9	+0.2
	baz=324						
G35A	Watkins	83.03	33	*e*P	P	08 10 31.2	+0.4
	comp=Z,4.7nm,0.6s						
E38A	The Farm, Brul	83.06	31	P	P	08 10 30.6	-0.3
	baz=326						
H35A	Sunnyside Ranc	83.31	34	P	P	08 10 32.3	+0.2
	baz=324,SNR=6.3						
ECSD	EROS Data Cent	83.32	35	P	P	08 10 32.3	0.0
	baz=323,SNR=6.6						
ECSD	EROS Data Cent	83.32	35	*e*P	P	08 10 32.4	+0.1
	comp=Z,6.4nm,0.8s						
F37A	Hinrichs Farm,	83.37	32	P	P	08 10 32.9	+0.5
	baz=326						
F38A	Pierce - Schro	83.47	31	P	P	08 10 33.4	+0.5
	baz=326						
X18A	Snowflake	83.57	49	*e*P	P	08 10 35.1	+1.2
	comp=Z,5.2nm,0.6s						
E39A	Mellen	83.63	30	P	P	08 10 33.8	+0.1
	baz=327						
SDCO	Great Sand Dun	83.66	44	P	P	08 10 35.1	+0.6
	baz=318,SNR=5.5						
SDCO	Great Sand Dun	83.66	44	*e*P	P	08 10 35.2	+0.8
	comp=Z,2.2nm,0.8s						
SPMN	Marine on St.	83.71	32	P	P	08 10 33.9	-0.2
	baz=326						
214A	Organ Pipe Nat	83.73	53	P	P	08 10 35.3	+0.7
	baz=315						
H36A	Jessenland, He	83.78	33	P	P	08 10 34.9	+0.3
	baz=325						
E40A	Wakefield	83.82	30	P	P	08 10 35.2	+0.5
	baz=327,SNR=5.8						
F39A	Loretta	83.88	31	P	P	08 10 34.8	-0.2
	baz=327						
G38A	Ridgeland	84.13	32	P	P	08 10 35.8	-0.4
	baz=326						
E41A	Kenton	84.15	29	P	P	08 10 36.3	-0.1
	baz=328						
F40A	Park Falls	84.18	30	P	P	08 10 36.4	-0.1
	baz=327						
I36A	Fitzsimmons Fa	84.20	34	P	P	08 10 36.4	-0.2
	baz=325						
G39A	Holcombe	84.30	31	P	P	08 10 37.5	+0.4
	baz=327						
I37A	Lemond, Waseca	84.46	33	P	P	08 10 38.7	+0.8
	baz=325						
I37A	Lemond, Waseca	84.46	33	*e*P	P	08 10 38.8	+0.9
	comp=Z,12nm,0.8s						
BGNE	Belgrade	84.48	38	P	P	08 10 38.3	+0.2
	baz=322						
BGNE	Belgrade	84.48	38	*e*P	P	08 10 38.5	+0.4
	comp=Z,24nm,0.6s						
J36A	Seneca 1, Swea	84.62	34	P	P	08 10 38.9	+0.1
	baz=325						
TUC	Tucson	84.68	51	P	P	08 10 40.0	+0.7
	baz=316						
TUC	Tucson	84.68	51	*e*P	P	08 10 40.7	+1.3
	comp=Z,4.6nm,1.4s						
TUC	Tucson	84.68	51	*e*P	P	08 10 40.7	+1.3
TUC				pmax	pmax		
	comp=Z,5.0nm,1.4s						
T25A	Trinidad	84.69	44	P	P	08 10 39.6	+0.1
	baz=319						
T25A	Trinidad	84.69	44	*e*P	P	08 10 40.0	+0.5
	comp=Z,5.9nm,0.9s						
G40A	Rib Lake	84.69	31	P	P	08 10 39.3	+0.2
	baz=327						
G40A	Rib Lake	84.69	31	*e*P	P	08 10 39.4	+0.3
	comp=Z,6.6nm,0.6s						
F41A	Three Lakes	84.71	30	P	P	08 10 39.1	0.0
	baz=328						
F41A	Three Lakes	84.71	30	*e*P	P	08 10 39.7	+0.6
	comp=Z,5.8nm,0.8s						
H39A	Augusta	84.76	32	P	P	08 10 39.9	+0.5
	baz=327						
I38A	Scanlan Farm,	84.87	33	P	P	08 10 40.2	+0.2
	baz=326						
E43A	Lone Tree Farm	84.94	28	P	P	08 10 40.3	+0.1
	baz=329						
G41A	Antigo	85.13	30	P	P	08 10 41.4	+0.2
	baz=328						
K36A	Gilmore City	85.14	35	P	P	08 10 41.5	+0.2
	baz=325						
H40A	Chili	85.16	31	P	P	08 10 41.5	+0.1
	baz=327						
TASM	ASL Pad, Albuq	85.22	47	P	P	08 10 43.1	+0.9
	baz=318,SNR=5.6						
ANMO	Albuquerque	85.23	47	P	P	08 10 43.2	+1.1
	comp=Z,1.3nm,0.6s,baz=318,slow=6.9,SNR=8.8						
ANMO	Albuquerque	85.23	47	P	P	08 10 43.2	+1.1
	baz=318						
ANMO	Albuquerque	85.23	47	*e*P	P	08 10 43.5	+1.4
	comp=Z,3.7nm,1.0s						
ANMO	Albuquerque	85.23	47	⇓*i*P	P	08 10 43.7	+1.5
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TASL	Snake Pit, Alb	85.23	47	P	P	08 10 43.0	+0.8
	baz=318,SNR=5.6						
F43A	Flat Rock, Esc	85.34	28	P	P	08 10 41.4	-0.8
	baz=329						
I39A	Houston	85.35	32	P	P	08 10 42.1	-0.3
	baz=326						
I39A	Houston	85.35	32	*e*P	P	08 10 42.2	-0.1
	comp=Z,9.4nm,0.6s						
K37A	Belmond	85.38	34	P	P	08 10 42.4	-0.1
	baz=325						
G42A	Mountain	85.39	30	P	P	08 10 42.5	+0.1
	baz=328						
G42A	Mountain	85.39	30	*e*P	P	08 10 42.7	+0.2
	comp=Z,12nm,1.3s						
L36A	Harm Buss Farm	85.48	35	P	P	08 10 43.0	0.0
	baz=324						
I40A	Norwalk	85.68	32	P	P	08 10 44.0	0.0
	baz=327						
J39A	Decorah	85.71	33	P	P	08 10 44.0	-0.2
	baz=326						
BNM	Barren Site	85.72	47	*e*P	P	08 10 46.1	+1.5
CBKS	Cedar Bluff	85.77	40	P	P	08 10 44.1	-0.4
	baz=322						
I41A	Arkdale	85.84	31	P	P	08 10 44.8	+0.1
	baz=328						
L37A	Phoenix Point,	85.86	34	P	P	08 10 44.9	0.0
	baz=325						
M36A	Felix, Anita	85.95	35	P	P	08 10 45.8	+0.5
	baz=324						
H42A	Shiocton	85.97	30	P	P	08 10 45.6	+0.3
	baz=328						
J40A	Soldiers Grove	86.05	32	P	P	08 10 44.9	-0.8
	baz=327						
K39A	Oelwein	86.16	33	P	P	08 10 46.1	-0.2
	baz=326						
L38A	Oak Wood Farm,	86.18	34	P	P	08 10 46.6	+0.2
	baz=326						
J41A	Loganville	86.36	31	P	P	08 10 47.1	-0.2
	baz=327						
N36A	Muff Farm, Cla	86.40	36	P	P	08 10 47.9	+0.4
	baz=324						
K40A	Colesburg	86.47	33	P	P	08 10 47.8	0.0
	baz=327						
L39A	Vinton	86.60	33	P	P	08 10 48.5	+0.1
	baz=326						
JFWS	Jewell Farm	86.65	32	P	P	08 10 48.2	-0.4
	baz=327						
M38A	Pleasantville	86.67	35	P	P	08 10 49.0	+0.3
	baz=326						
N37A	Lee Faris, Mou	86.78	36	P	P	08 10 49.7	+0.5
	baz=325						
N37A	Lee Faris, Mou	86.78	36	*e*P	P	08 10 50.0	+0.8
	comp=Z,16nm,0.6s						
K41A	Shullsburg	86.89	32	P	P	08 10 49.7	-0.1
	baz=327						
L40A	Anamosa	86.97	33	P	P	08 10 50.2	0.0
	baz=327						
J43A	Natural Harves	86.97	30	P	P	08 10 50.3	+0.2
	baz=328						
KSU1	Kansas State U	87.03	38	P	P	08 10 50.4	-0.1
	baz=324						
M39A	Webster	87.06	34	P	P	08 10 50.8	+0.2
	baz=326						
K42A	Prairie Point,	87.12	31	P	P	08 10 50.6	-0.2
	baz=328						
N38A	Joes South For	87.17	35	P	P	08 10 51.2	0.0
	baz=326						
L41A	Preston	87.25	32	P	P	08 10 51.0	-0.5
	baz=327						
O37A	Wolven Farm, M	87.28	36	P	P	08 10 51.9	+0.2
	baz=325						
M40A	Post Highland	87.39	33	P	P	08 10 52.3	+0.2
	baz=326						
N39A	Derby Farms, D	87.42	34	P	P	08 10 52.6	+0.3
	baz=326						
N39A	Derby Farms, D	87.42	34	*e*P	P	08 10 53.0	+0.7
	comp=Z,8.5nm,0.6s						
O38A	Galt	87.62	35	P	P	08 10 53.4	+0.2
	baz=325						
P37A	Lathrop	87.67	36	P	P	08 10 53.5	0.0
	baz=325						
N40A	Mertquake, Sal	87.80	34	P	P	08 10 54.3	+0.2
	baz=326						
M41A	Milan	87.82	33	P	P	08 10 54.2	0.0
	baz=327						
AMTX	Amarillo	87.84	44	P	P	08 10 54.6	+0.1
	baz=321						
L43A	Garden Prairie	87.86	31	P	P	08 10 54.3	0.0
	baz=328						
P38A	Dawn	88.00	36	P	P	08 10 55.2	+0.2
	baz=325						
P38A	Dawn	88.00	36	*e*P	P	08 10 55.7	+0.6
	comp=Z,8.2nm,0.4s						
Q37A	Longview Farm,	88.20	37	P	P	08 10 56.0	0.0
	baz=325						
BKZ	Black Stump Fm	88.20	149	*e*P	P	08 10 55.9	+0.1
	comp=Z,18nm,1.0s						
MNTX	Cornudas Mount	88.24	48	P	P	08 10 56.9	+0.5
	baz=319						
N41A	Harden Midland	88.25	33	P	P	08 10 56.2	0.0
	baz=327						
N41A	Harden Midland	88.25	33	*e*P	P	08 10 56.7	+0.5
	comp=Z,5.2nm,0.7s						
O40A	La Belle	88.31	34	P	P	08 10 57.0	+0.5
	baz=326						
M43A	Waltham Townsh	88.41	32	P	P	08 10 57.4	+0.4
	baz=328						
P39B	Salisbury	88.45	35	P	P	08 10 57.3	+0.2
	baz=326						
Q38A	Cooks Store, C	88.50	36	P	P	08 10 57.8	+0.3
	baz=325						
Q39A	Willow Grove F	88.72	36	P	P	08 10 58.7	+0.2
	baz=326						
P40A	Paris	88.73	35	P	P	08 10 58.8	+0.3
	baz=326						
P40A	Paris	88.73	35	*e*P	P	08 10 59.4	+1.0
	comp=Z,6.7nm,0.9s						
O41A	Passleys Farm,	88.73	34	P	P	08 10 58.8	+0.3
	baz=327						
N43A	Stutzman Famil	88.75	32	P	P	08 10 58.8	+0.3
	baz=328						
M44A	Midewin, Midew	88.81	31	P	P	08 10 59.3	+0.5
	baz=329						
TRQ	Mont Tremblant	88.94	20	*e*P	P	08 10 59.6	+0.2
O42A	Bath	89.00	33	P	P	08 11 00.2	+0.4
	baz=328						
R38A	Fenwick Farm,	89.01	37	P	P	08 10 59.5	-0.3
	baz=325						
HDIL	Hopedale	89.02	33	P	P	08 10 59.9	+0.1
	baz=328						
P41A	Barry, Barry	89.03	34	P	P	08 11 00.4	+0.5
	baz=327						
Q40A	Laux Farm, Aux	89.16	35	P	P	08 11 00.9	+0.4
	baz=326						
THZ	Tophouse	89.18	153	*e*P	P	08 11 01.4	+1.1
	comp=Z,54nm,1.5s						
O43A	Sugar Creek Fa	89.24	33	P	P	08 11 01.3	+0.4
	baz=328						
N44A	Piper City	89.28	32	P	P	08 11 00.8	-0.2
	baz=329						
R39A	Chumby, Stover	89.30	36	P	P	08 11 01.3	+0.2
	baz=326,SNR=5.6						
P42A	Winchester	89.41	34	P	P	08 11 01.9	+0.3
	baz=327						
P42A	Winchester	89.41	34	*e*P	P	08 11 02.3	+0.7
	comp=Z,6.3nm,0.6s						
WMOK	Wichita Mounta	89.44	42	P	P	08 11 02.3	+0.4
	baz=322						
WMOK	Wichita Mounta	89.44	42	*e*P	P	08 11 02.1	+0.2
	comp=Z,2.8nm,0.8s						
WMOK	Wichita Mounta	89.44	42	*e*P	P	08 11 02.1	+0.2
WMOK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
M46A	Old House Fiel	89.45	30	P	P	08 11 02.2	+0.4
	baz=330						
S38A	Stockton	89.46	37	P	P	08 11 02.1	+0.2
	baz=325						
N45A	Kentland	89.48	31	P	P	08 11 02.5	+0.6
	baz=329						
Q41A	Truxton	89.56	35	P	P	08 11 02.6	+0.3
	baz=327						
R40A	Maddies Statio	89.66	36	P	P	08 11 03.1	+0.3
	baz=326						
R40A	Maddies Statio	89.66	36	*e*P	P	08 11 03.4	+0.6
	comp=Z,4.2nm,0.6s						
S39A	Bolivar	89.68	37	P	P	08 11 02.9	0.0
	baz=326						
S39A	Bolivar	89.68	37	*e*P	P	08 11 03.5	+0.6
	comp=Z,4.7nm,1.0s						
O44A	Mansfield	89.70	32	P	P	08 11 03.3	+0.3
	baz=328						
P43A	Skaggs, Pawnee	89.70	33	P	P	08 11 03.3	+0.3
	baz=328						
N46A	Monticello	89.75	31	P	P	08 11 03.5	+0.3
	baz=330						
T38A	Diamond	89.77	38	P	P	08 11 03.8	+0.4
	baz=325						
Q42A	Golden Eagle	89.89	34	P	P	08 11 04.3	+0.4
	baz=327						
O45A	Potomac	89.91	32	P	P	08 11 04.6	+0.6
	baz=329						
TUL1	Leonard	89.98	39	P	P	08 11 04.7	+0.3
	baz=324						
R41A	Rosebud	90.04	35	P	P	08 11 04.7	+0.1
	baz=327						
SFIN	Lafayette	90.05	31	P	P	08 11 04.8	+0.2
	baz=329						
SFIN	Lafayette	90.05	31	*e*P	P	08 11 05.3	+0.7
	comp=Z,7.1nm,0.7s						
PQI	Presque Isle	90.06	16	*e*P	P	08 11 04.6	+0.1
	comp=Z,11nm,1.5s						
S40A	Lebanon	90.12	36	P	P	08 11 05.1	+0.1
	baz=326						
P44A	Sand Creek, Wi	90.22	33	P	P	08 11 05.6	+0.3
	baz=328						
CCM	Cathedral Cave	90.30	35	P	P	08 11 06.6	+0.8
	baz=327						
CCM	Cathedral Cave	90.30	35	*e*P	P	08 11 07.5	+1.7
	comp=Z,4.1nm,0.8s						
CCM	Cathedral Cave	90.30	35	*e*P	P	08 11 07.5	+1.7
CCM				pmax	pmax		
	comp=Z,4.0nm,0.8s						
R42A	Luebbering	90.31	35	P	P	08 11 06.6	+0.8
	baz=327						
S41A	Jillco Farms,	90.47	36	P	P	08 11 06.6	0.0
	baz=326						
P45A	Graceland, Par	90.52	32	P	P	08 11 07.4	+0.6
	baz=329						
R43A	Red Bud	90.68	34	P	P	08 11 08.1	+0.6
	baz=328						
U39A	Green Forest	90.68	38	P	P	08 11 07.5	-0.1
	baz=325						
S42A	Caledonia	90.73	35	P	P	08 11 08.2	+0.4
	baz=327						
Q45A	Warren Harvey,	90.89	33	P	P	08 11 08.8	+0.3
	baz=329						
O48A	Farmland	90.90	30	P	P	08 11 09.0	+0.4
	baz=331						
T41A	Mountain View	90.91	36	P	P	08 11 08.9	+0.2
	baz=326						
U40A	Yellville	90.99	37	P	P	08 11 09.4	+0.3
	baz=326						
TX31	Lajitas Ar. Si	90.99	49	*e*P	P	08 11 10.3	+1.0
TXAR	Lajitas Array	90.99	49	P	P	08 11 10.2	+0.9
	comp=Z,2.1nm,0.6s,baz=281,slow=2.4,SNR=42						
V39A	Pettigrew	91.05	38	P	P	08 11 09.5	+0.1
	baz=325						
P47A	Martinsville	91.14	31	P	P	08 11 10.2	+0.5
	baz=330						
N50A	Nevada	91.19	28	P	P	08 11 10.5	+0.6
	baz=332						
S43A	Fulton Ridge,	91.21	35	P	P	08 11 10.5	+0.5
	baz=328						
T42A	Van Buren	91.22	36	P	P	08 11 10.6	+0.6
	baz=327						
O49A	Covington	91.27	29	P	P	08 11 10.8	+0.6
	baz=331						
V40A	Witts Springs	91.46	37	P	P	08 11 11.4	+0.1
	baz=326						
Q47A	Bedord North L	91.55	31	P	P	08 11 12.0	+0.4
	baz=330						
O50A	Cable	91.57	29	P	P	08 11 12.2	+0.5
	baz=332						
P49A	Miami Univ. Ec	91.69	30	P	P	08 11 12.6	+0.3
	baz=331						
ACSO	Alum Creek Sta	91.72	29	P	P	08 11 13.0	+0.6
	baz=332						
M54A	Oil Creek Stat	91.73	26	P	P	08 11 13.1	+0.7
	baz=334						
V41A	Mountainview	91.78	37	P	P	08 11 12.7	0.0
	baz=326						
T44A	Benton	91.83	35	P	P	08 11 13.4	+0.6
	baz=328						
X39A	Fountain Ranch	91.91	39	P	P	08 11 13.6	+0.3
	baz=325						
R47A	Wooly Knot Far	92.06	32	P	P	08 11 14.4	+0.4
	baz=330						
N54A	Moraine State	92.11	26	*e*P	P	08 11 14.9	+0.7
	comp=Z,8.7nm,1.4s						
MIAR	Mount Ida	92.14	39	P	P	08 11 14.8	+0.4
	baz=325						
JCT	Junction City	92.25	45	P	P	08 11 15.3	+0.3
	baz=322						
T46A	Princeton	92.58	33	P	P	08 11 16.9	+0.6
	baz=329						
S48A	Wiedeman Farm,	92.80	32	P	P	08 11 17.9	+0.6
	baz=330						
R50A	Paris	92.93	30	P	P	08 11 18.4	+0.5
	baz=331						
T47A	Sharon Grove	92.95	33	P	P	08 11 18.5	+0.5
	baz=329						
WVT	Waverly	93.38	34	P	P	08 11 20.3	+0.3
	baz=329						
S50A	Richmond	93.43	31	P	P	08 11 20.5	+0.3
	baz=331						
T49A	Edmonton	93.49	32	P	P	08 11 21.1	+0.6
	baz=330						
V46A	Holladay	93.54	34	P	P	08 11 21.3	+0.5
	baz=329						
Y42A	Garnett, Star	93.56	38	P	P	08 11 20.8	0.0
	baz=326						
U48A	Cassie Pea, Po	93.59	33	P	P	08 11 21.1	+0.1
	baz=330						
V47A	Nunnelly	93.77	34	P	P	08 11 22.0	+0.2
	baz=329						
U49A	Red Boiling Sp	93.90	32	P	P	08 11 22.6	+0.2
	baz=330						
V48A	Smith Brothers	94.14	33	P	P	08 11 23.9	+0.4
	baz=330						
X45A	UM Field Stati	94.16	36	P	P	08 11 24.3	+0.7
	baz=328						
U50A	Jamestown	94.36	32	P	P	08 11 24.9	+0.4
	baz=331						
V49A	McMinnville	94.50	33	P	P	08 11 25.2	+0.1
	baz=330						
Y45A	Yeager Farm, C	94.56	36	P	P	08 11 26.0	+0.5
	baz=328						
TZTN	Tazewell	94.75	31	P	P	08 11 26.6	+0.3
	baz=332						
Y46A	Houston	94.85	36	P	P	08 11 27.0	+0.2
	baz=328						
U52A	Thorn Hill	94.95	31	P	P	08 11 27.6	+0.4
	baz=332						
U53A	Fall Branch	95.28	30	P	P	08 11 28.5	-0.3
	baz=332						
Z49A	Columbiana	96.45	34	P	P	08 11 33.6	-0.4
	baz=330						
Y51A	Rockmart	96.45	33	P	P	08 11 34.0	-0.1
	baz=330						
Z50A	Ashland	96.65	34	P	P	08 11 35.0	0.0
	baz=330						
Y53A	Monroe	97.09	32	P	Pdif	08 11 37.0	+0.1

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	baz=331						
150A	Eclectic	97.17	34	P	P	08 11 37.3	0.0
	baz=330						
249A	Camden	97.23	36	P	Pdif	08 11 37.7	+0.2
	baz=329						
Y54A	Tignall	97.44	31	P	Pdif	08 11 38.7	+0.2
	baz=332						
GOGA	Godfrey	97.53	32	Pdiff	Pdif	08 11 39.0	+0.1
	baz=332						
447A	Lucedale	97.55	37	Pdiff	Pdif	08 11 39.1	+0.1
	baz=328						
152A	Waverly Hall	97.66	33	Pdiff	Pdif	08 11 39.5	0.0
	baz=331						
349A	Repton	97.73	36	Pdiff	Pdif	08 11 39.9	+0.1
	baz=329						
VNDA	Vanda	119.51	174	PKP	PKPdf	08 16 50.4	-0.4
	comp=Z,1.0nm,0.5s,baz=321,slow=5.4,SNR=17						
VNDA	Vanda	119.51	174	*e*PKPdf	PKPdf	08 16 50.8	0.0
SBA	Scott Base	120.26	173	*e*PKPdf	PKPdf	08 16 53.3	+1.1
SBA	Scott Base	120.26	173	*e*PKIKP	PKPdf	08 16 53.3	+1.1
LBTB	Lobatse	120.67	262	*e*PKPdf	PKPdf	08 16 54.8	+0.1
MAW	Mawson	121.31	205	PKP	PKPdf	08 16 54.1	-0.3
	comp=Z,1.8nm,0.6s,baz=225,slow=2.9,SNR=3.7						
QSPA	South Pole Qui	130.90	180	PKP	PKPdf	08 17 12.1	-0.8
	comp=Z,2.9nm,0.6s,baz=227,slow=1.2,SNR=11						
SNAA	Sanae	143.20	201	PKP	PKPbc	08 17 33.2	-0.3
	comp=Z,11nm,0.9s,baz=158,slow=2.5,SNR=39						
SAML	Samuel	143.86	33	*e*PKPdf	PKPbc	08 17 37.0	0.0
SAML	Samuel	143.86	33	*e*PKIKP	PKPbc	08 17 37.0	+0.1
LPAZ	La Paz	147.84	47	PKPbc	PKPdf	08 17 46.9	+1.2
	comp=Z,4.2nm,0.7s,baz=2.9,slow=3.8,SNR=19						
LPAZ	La Paz	147.84	47	*e*PKPdf	PKPbc	08 17 47.5	-1.6
MNMC	Minye Minye	149.26	52	*e*PKPbc	PKPbc	08 17 51.6	-0.6
PB11	IPOC Station P	149.71	53	*e*PKPbc	PKPbc	08 17 53.7	+0.6
PLCA	Paso Flores	160.26	97	PKPab	PKPab	08 18 46.1	+1.7
	comp=Z,2.1nm,0.8s,baz=332,slow=3.7,SNR=5.7						

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*IDC **17** 08:03:18.2±2.5, 52°.03N×174°.89E, h0^{km}, mb3.8/7, mb1 3.9/8, mb1mx3.6/77, mbtmp3.8/8, ML4.2/1, MS2.4/1, Ms1 2.4/1, ms1mx2.1/70, Error ellipse: s-maj=65.4km s-min=24.1km az=2.0*

*ISCJB **17** 08:03:21.4±2.1, 52°.0N±0°.4×174°.9E±0°.2, h39^{km}, mb3.9/7, MS2.3/1, Error ellipse: s-maj=53.4km s-min=18.0km az=1.0*

ISC 17 08:03:24.0±2.4**, 52°.1N**±0°.4×**175°.0E**±0°.2**, h39^{km}, n15, σ0^{s}.71**/8**, mb3.8**/7**, Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDAK	Kodiak Island	19.38	60	P	P	08 07 45.6	-0.5
	0.7nm,0.3s,baz=143,slow=4.5,SNR=7.7						
ILAR	Eielson Array	23.24	42	P	P	08 08 27.8	+0.3
	0.5nm,0.5s,baz=275,slow=7.7,SNR=4.4						
H11N2	WAKE ISLAND Hy	32.88	194	T	T	08 44 40.1	
	baz=9.4,slow=76,SNR=9.2						
H11N3	WAKE ISLAND Hy	32.90	194	T	T	08 44 41.5	
	baz=9.4,slow=76,SNR=8.7						
H11N1	WAKE ISLAND Hy	32.90	194	T	T	08 44 41.3	
	baz=9.4,slow=76,SNR=7.5						
H11S1	WAKE ISLAND Hy	34.12	194	T	T	08 46 11.1	
	baz=8.8,SNR=4.8						
H11S3	WAKE ISLAND Hy	34.13	194	T	T	08 46 13.3	
	baz=8.8						
H11S2	WAKE ISLAND Hy	34.13	194	T	T	08 46 15.6	
	baz=8.8						
KSRS	Korea Array	35.78	265	LR	LR	08 24 43.2	
	comp=Z,5.9nm,21.6s,baz=225,slow=36						
SPITS	Spitsbergen Ar	49.36	354	P	P	08 12 09.1	+0.3
	2.0nm,0.5s,baz=29,slow=12,SNR=5.6						
KURBB	Kurchatov Arra	55.77	310	P	P	08 12 56.5	0.0
	1.0nm,0.5s,baz=43,slow=6.5,SNR=6.3						
MKAR	Makanchi Array	56.50	305	P	P	08 13 01.1	-0.8
	0.4nm,0.4s,baz=55,slow=7.3,SNR=5.0						
ARCES	ARCESS Array B	56.66	348	P	P	08 13 01.9	-0.8
	0.6nm,0.6s,baz=43,slow=9.3,SNR=2.8						
TXAR	Lajitas Array	62.34	77	P	P	08 13 42.7	+0.2
	0.5nm,0.7s,baz=293,slow=5.6,SNR=4.1						
AKTO	Aktyubinsk	64.78	321	P	P	08 13 59.1	+0.9
	0.9nm,0.5s,baz=38,slow=12,SNR=3.2						

TAP 17 08:11:43.0, 24°.76N×121°.30E, h8^{km}, ML1.6, B, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NSK	Sanguang	0.10	149	*e*P	Pg	08 11 46.2	+0.7
	baz=146						
NSK				*e*S	Sg	08 11 48.5	+1.3
	baz=146						
NSK	Sanguang	0.10	149	*i* P	Pg	08 11 47.4	+1.9
	baz=140						
NSK				*i* S	Sg	08 11 49.6	+2.4
	baz=140						
WLTB	Daxi	0.10	333	*e*P	Pg	08 11 45.9	+0.5
	baz=333						
WLTB				*e*S	Sg	08 11 48.3	+1.1
	baz=333						
WLTB	Daxi	0.10	333	P	Pg	08 11 47.2	+1.8
	baz=339						
WLTB				S	Sg	08 11 49.6	+2.4
	baz=339						
YHNB	Yeheng	0.11	144	P	Pg	08 11 46.5	+0.8
	baz=143						
YHNB				S	Sg	08 11 48.7	+1.1
	baz=143						
YHNB	Yeheng	0.11	144	P	Pg	08 11 47.7	+2.0
	baz=138						
YHNB				S	Sg	08 11 50.0	+2.4
	baz=138						
NWLT	Wulai	0.18	85	*e*P	Pg	08 11 47.9	+1.0
	baz=85						
NWLT				*e*S	Sg	08 11 51.1	+1.7
	baz=85						
NWLT	Wulai	0.18	85	*e*P	Pg	08 11 49.1	+2.3
	baz=83						
NWLT				*e*S	Sg	08 11 52.2	+2.8
	baz=83						
ENTT	Nioudou	0.27	117	*e*P	Pb	08 11 49.6	-0.5
	baz=116						
ENTT				*e*S	Sb	08 11 54.2	-0.6
	baz=116						
ENTT	Nioudou	0.27	117	*e*P	Pb	08 11 50.6	+0.5
	baz=114						
ENTT				*e*S	Sb	08 11 55.4	+0.6
	baz=114						
LIOB	Emei	0.28	246	*e*P	Pb	08 11 49.8	-0.6
	baz=246						
LIOB				*e*S	Sb	08 11 54.7	-0.6
	baz=246						
LIOB	Emei	0.28	246	*e*P	Pb	08 11 50.6	+0.3
	baz=246						
LIOB				*e*S	Sb	08 11 55.2	-0.1
	baz=246						
NSTT	Nanjuang	0.30	245	*e*P	Pb	08 11 50.0	-0.6
	baz=243						
NSTT				*e*S	Sb	08 11 55.0	-0.7
	baz=243						
NSTT	Nanjuang	0.30	245	P	Pb	08 11 50.8	+0.1
	baz=244						
NSTT				*e*S	Sb	08 11 55.4	-0.4
	baz=244						
NNS	Nan Shan	0.33	169	*e*P	Pb	08 11 50.6	-0.5
	baz=167						
NNS				*e*S	Sb	08 11 56.4	-0.2
	baz=167						
NNS	Nan Shan	0.33	169	*e*P	Pb	08 11 51.6	+0.5
	baz=165						
NNS				*e*S	Sb	08 11 56.4	-0.2
	baz=165						
TWE	Neicheng	0.33	97	*e*P	Pb	08 11 51.1	-0.1
	baz=97						
TWE				*e*S	Sb	08 11 56.9	+0.2
	baz=97						
NNSB	Datong	0.34	167	*e*P	Pb	08 11 50.6	-0.8
	baz=167						
NNSB				*e*S	Sb	08 11 56.4	-0.6
	baz=167						
NNSB	Datong	0.34	167	P	Pb	08 11 51.9	+0.5
	baz=165						
NNSB				*e*S	Sb	08 11 57.2	+0.3
	baz=165						
NNSH	Datong	0.34	167	P	Pb	08 11 50.6	-0.8
	baz=167						
NNSH				*e*S	Sb	08 11 56.0	-1.0
	baz=167						
NNSH	Datong	0.34	167	P	Pb	08 11 51.8	+0.5
	baz=165						
NNSH				*e*S	Sb	08 11 57.3	+0.3
	baz=165						
ENA	Nanau	0.52	130	*e*P	Pb	08 11 54.3	-0.1
	baz=129						
ENA				*e*S	Sb	08 12 02.5	+0.4
	baz=129						
ENA	Nanau	0.52	130	*e*P	Pn	08 11 55.6	-1.1
	baz=128						
ENA				*e*S	Sb	08 12 03.6	+1.6
	baz=128						
TIPB	Shuangxi	0.52	66	*e*P	Pb	08 11 54.0	-0.3
	baz=66						
TIPB				*e*S	Sb	08 12 02.5	+0.4
	baz=66						
TIPB	Shuangxi	0.52	66	*e*P	Pn	08 11 55.6	-1.2
	baz=66						
TIPB				*e*S	Sb	08 12 03.4	+1.4
	baz=66						
NANB	Nanao	0.53	129	*e*P	Pb	08 11 54.3	-0.2
	baz=129						
NANB				*e*S	Sb	08 12 02.2	0.0
	baz=129						
NANB	Nanao	0.53	129	*e*P	Pb	08 11 55.5	+1.1
	baz=128						
NANB				*e*S	Sb	08 12 03.4	+1.2
	baz=128						
WHF	Hehuan Shan	0.61	183	*e*P	Pb	08 11 56.0	-0.2
	baz=182						
WHF				*e*S	Sb	08 12 05.2	0.0
	baz=182						
WHF	Hehuan Shan	0.61	183	*e*P	Pb	08 11 57.3	+1.0
	baz=181						
WHF				*e*S	Sb	08 12 05.9	+0.7
	baz=181						
NACB	Ninganchiao	0.64	155	*e*P	Pn	08 11 57.7	-0.7
	baz=154						
CHGB	Renai	0.71	190	*e*P	Pb	08 11 58.4	+0.6
	baz=188						
CHGB				*e*S	Sb	08 12 08.9	+1.2
	baz=188						
EOS1	EOS1	0.78	106	*e*S	Sn	08 12 11.7	-0.4
	baz=105						

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*DDA **17** 08:25:45.9, 39°.69N×29°.36E, h7^{km}, Ml2.7, Suspected Mining explosion.*

*ISCJB **17** 08:25:46.0±0.7, 39°.68N±0°.04×29°.42E±0°.05, h0^{km}, Error ellipse: s-maj=5.7km s-min=5.1km az=160.6*

*CSEM **17** 08:25:46.1±0.2, 39°.65N×29°.39E, h2^{km}, ML2.7, Error ellipse: s-maj=4.2km s-min=3.6km az=102.0, Suspected Mining explosion.*

*ISK **17** 08:25:46.0, 39°.65N×29°.55E, h13^{km}±1^{km}, ML2.0/4*

ISC 17 08:25:46.2±0.9**, 39°.66N**±0°.03×**29°.37E**±0°.03**, h0^{km}, n20, σ0^{s}.68**/30**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TVSB	Tavsanli	0.22	161	PG	Pg	08 25 50.3	-0.1
TVSB				SG	Sg	08 25 55.0	+1.7
TVSB	Tavsanli	0.22	161	*e*Pg	Pg	08 25 50.3	-0.1
TVSB				*e*Sg	Sg	08 25 55.0	+1.7
GDZ	Gediz	0.57	171	*i* P	Pg	08 25 56.9	-0.3
GDZ				*i* S	Sg	08 26 04.2	-0.5
GDZ	Gediz	0.57	171	P	Pg	08 25 56.9	-0.3
GDZ				S	Sg	08 26 04.2	-0.5
CAVI	Cavuskoy	0.65	34	PG	Pg	08 25 58.4	-0.4
CAVI	Cavuskoy	0.65	34	*e*Pg	Pg	08 25 58.4	-0.4
DURS	Dursunbey	0.69	266	*i* P	Pg	08 25 59.5	0.0
DURS				*i* S	Sb	08 26 11.4	0.0
DURS	Dursunbey	0.69	266	P	Pg	08 25 59.5	0.0
DEMI	Demirci	0.80	220	*i* P	Pb	08 26 02.2	-0.8
DEMI				*i* S	Sn	08 26 16.5	-0.9
DEMI	Demirci	0.80	220	P	Pb	08 26 02.2	-0.8
KCTX	Karacabey (Bur	0.99	308	PN	Pn	08 26 07.9	+0.5
KCTX	Karacabey (Bur	0.99	308	*e*Pn	Pn	08 26 07.9	+0.5
ESKT	Eskisehir	1.15	96	*i* P	Pb	08 26 08.4	-0.7
ESKT				*i* S	Sn	08 26 26.9	+0.6
SEYT	Eskypehyr	1.15	96	P	Pb	08 26 08.4	-0.7
KULA	Kula-Manisa	1.27	206	PN	Pb	08 26 10.8	-0.2
KULA	Kula-Manisa	1.27	206	*e*Pn	Pb	08 26 10.8	-0.2
KHAL	Karahalli	1.29	176	*i* P	Pg	08 26 10.3	-0.6
KHAL				*i* S	Sn	08 26 30.3	+0.7
KHAL	Karahalli	1.29	176	P	Pg	08 26 10.3	-0.6
MANT	Manisa	1.33	209	*i* P	Pg	08 26 11.4	-0.2
MANT				*i* S	Sb	08 26 29.6	-0.1
MANT	Manisa	1.33	209	P	Pg	08 26 11.4	-0.2
MANT				S	Sb	08 26 29.6	-0.1

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*ISCJB **17** 08:26:14.3±0.9, 2°.90S±0°.09×135°.0E±0°.1, h10^{km}, mb3.5/1, Error ellipse: s-maj=16.0km s-min=11.7km az=27.4*

*IDC **17** 08:26:14.1±2.9, 2°.98S×136°.80E, h0^{km}, mb3.3/2, mb1 3.6/3, mb1mx3.2/53, mbtmp3.4/3, ML3.2/1, Error ellipse: s-maj=116.8km s-min=29.7km az=81.0*

*DJA **17** 08:26:17.1±0.9, 3°S±12°×13°5E±°, h10^{km}, M3.3/4, MLv3.3/4*

ISC 17 08:26:15.2±1.3**, 2°.8S**±0°.1×**134°.95E**±0°.08**, h10^{km}, n7, σ1^{s}.72**/6**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RKPI	Ransiki, Papua	1.47	328	P	Pn	08 26 41.2	-0.6
SRPI	Serui, Papua	1.57	55	P	Pn	08 26 43.6	+0.4
BAKI	Biak	1.95	36	P	Pn	08 26 49.7	+1.2
FAKI	Fak Fak	2.70	267	P	Pn	08 27 00.2	+1.5
WRA	Warramunga Arr	17.07	182	P	Pn	08 30 12.2	-2.1
	0.1nm,0.3s,baz=9.8,slow=13,SNR=4.3						
ASAR	Alice Springs	20.80	183	P	P	08 30 57.5	+0.6
	0.5nm,0.6s,baz=12,slow=10,SNR=9.1						
MKAR	Makanchi Array	67.58	324	P	P	08 37 20.5	+8.4
	0.3nm,0.6s,baz=112,slow=5.8,SNR=2.9						

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*NIED **17** 08:32:00, 38°.40N×142°.20E, h29^{km}, Mw3.5 Best double couple: M$_0$1.92000×10^{14} NP1:φ$_s$160.00000°, δ45.00000°, λ-95.00000°. NP2:φ$_s$347.00000°, δ46.00000°, λ-85.00000°.*

*IDC **17** 08:32:51.2±1.5, 38°.38N×142°.73E, h0^{km}, mb3.7/4, mb1 3.8/7, mb1mx3.5/74, mbtmp3.7/7, ML3.1/3, MS2.3/3, Ms1 2.3/3, ms1mx2.2/66, Error ellipse: s-maj=36.8km s-min=19.5km az=86.0*

*ISCJB **17** 08:32:53.8±0.8, 38°.34N±0°.04×142°.40E±0°.07, h24^{km}, mb3.7/4, MS4.1/1, Error ellipse: s-maj=7.6km s-min=5.3km az=10.4*

*JMA **17** 08:32:57.0±0.1, 38°.40N×142°.24E, h39^{km}±1^{km}, M3.8 JMA Felt I J1.*

ISC 17 08:32:56.2±1.2**, 38°.36N**±0°.04×**142°.24E**±0°.08**, h24^{km}, n24, σ1^{s}.49**/25**, mb3.6**/4**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIO	Ouri	0.71	278	P	Pb	08 33 10.5	+0.7
JIO				S	Sb	08 33 19.9	+0.7
OFUJ	Ofunato	0.85	328	P	Pb	08 33 12.1	-0.2
OFUJ				S	Sb	08 33 22.6	-0.7
JMK	Ichinoseki	1.00	307	P	Pn	08 33 14.5	-0.1
JOU	Okura	1.24	271	P	Pn	08 33 18.5	+0.5
JOU				S	Sn	08 33 34.4	+0.4
JMM	Marumori	1.24	247	P	Pn	08 33 17.9	-0.1
JMM				S	Sn	08 33 33.5	-0.5
JOM	Ohasama	1.34	327	P	Pn	08 33 19.5	+0.1
JOM				S	Sn	08 33 36.0	-0.4
JFK	Kawauchi	1.47	228	P	Pn	08 33 20.7	-0.5
JFK				S	Sn	08 33 37.8	-1.8
JYK	Kaneyama	1.58	291	P	Pn	08 33 23.2	+0.6
MJAR	Matsushiro Arr	3.69	242	Pn	Pn	08 33 54.7	+3.1
	2.1nm,0.3s,baz=63,slow=9.7,SNR=23						
MJAR				Sn	Sb	08 34 42.6	-2.2
	0.9nm,0.3s,baz=216,slow=34,SNR=2.6						
MJAR				LR	LR	08 35 38.3	
	comp=Z,66nm,20.7s,baz=95,slow=42						
MAT	Matsushiro	3.69	242	P	Pn	08 33 55.4	+3.7
MAT				S	Sb	08 34 42.4	-2.5
JHJ	Hachijo jima 2	5.60	202	Pn	Pn	08 34 17.9	0.0
	4.7nm,0.3s,baz=220,slow=16,SNR=2.3						
ASAJ	Asahikawa	5.76	3	Pn	Pn	08 34 18.1	-2.0
	0.2nm,0.3s,baz=111,slow=17,SNR=2.4						
ASAJ				Sn	Sn	08 35 26.0	+0.6
	0.4nm,0.3s,baz=84,slow=18,SNR=2.7						
ASAJ				LR	LR	08 36 48.6	
	comp=Z,15nm,21.5s,baz=47,slow=41						
KSRS	Korea Array	11.35	270	LR	LR	08 39 44.0	
	comp=Z,15nm,18.7s,baz=230,slow=35						
H11N2	WAKE ISLAND Hy	28.30	124	T	T	09 08 59.8	
	baz=316,slow=75,SNR=61						
H11N1	WAKE ISLAND Hy	28.31	124	T	T	09 09 05.1	
	baz=316,slow=75,SNR=34						
H11N3	WAKE ISLAND Hy	28.32	124	T	T	09 09 18.5	
	baz=316,slow=75,SNR=62						
H11S1	WAKE ISLAND Hy	29.07	126	T	T	09 10 05.0	
	baz=318,slow=76,SNR=23						
H11S3	WAKE ISLAND Hy	29.07	126	T	T	09 09 59.5	
	baz=318,slow=76,SNR=16						
H11S2	WAKE ISLAND Hy	29.08	126	T	T	09 10 04.4	
	baz=318,slow=76,SNR=12						
MKAR	Makanchi Array	43.98	301	P	P	08 41 03.3	+1.9
	0.3nm,0.6s,baz=81,slow=8.7,SNR=2.8						
KURBB	Kurchatov Arra	45.72	307	P	P	08 41 14.8	-0.3
	1.5nm,0.5s,baz=82,slow=8.1,SNR=8.4						
WRA	Warramunga Arr	58.46	189	P	P	08 42 49.3	-0.9
	0.9nm,0.7s,baz=7.8,slow=7.7,SNR=10						
ASAR	Alice Springs	62.19	189	P	P	08 43 15.3	-0.3
	0.2nm,0.7s,baz=17,slow=6.2,SNR=5.9						
ARCES	ARCESS Array B	62.99	339	LR	LR	09 14 02.6	
	comp=Z,137nm,20.3s,baz=36,slow=39						

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*ISCJB **17** 08:36:02.2±1.2, 37°.90N±0°.07×26°.89E±0°.07, h13^{km}±8^{km}, Error ellipse: s-maj=12.2km s-min=7.9km az=27.2*

*CSEM **17** 08:36:02.6±0.5, 37°.90N×26°.93E, h5^{km}, ML2.6, Error ellipse: s-maj=12.9km s-min=4.9km az=31.0*

*DDA **17** 08:36:02.7, 37°.97N×27°.00E, h8^{km}, Ml2.6*

*ISK **17** 08:36:02.9, 37°.94N×26°.92E, h4^{km}, ML2.6/3*

ISC 17 08:36:02.7±1.2**, 37°.95N**±0°.06×**26°.94E**±0°.04**, h14^{km}**±7^{km}**, n15, σ0^{s}.40**/25**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGB	˜zmir	0.11	335	*i* P	Pg	08 36 05.8	-0.1
DGB				*i* S	Sg	08 36 08.2	+0.1
BLCB	Balcova	0.44	10	PG	Pb	08 36 12.5	+0.2
BLCB				SG	Sb	08 36 19.4	+0.6
BLCB	Balcova	0.44	10	*e*Pg	Pb	08 36 12.5	+0.2
BLCB				*e*Sg	Sb	08 36 19.4	+0.6
URLA	Izmir	0.49	326	PG	Pg	08 36 12.6	+0.2
URLA				SG	Sb	08 36 20.5	+0.2
URLA	Izmir	0.49	326	*i* P	Pg	08 36 12.1	-0.3
URLA				*i* S	Sb	08 36 20.2	-0.1
URLA	Izmir	0.49	326	P	Pg	08 36 12.1	-0.3
URLA	Izmir	0.49	326	*e*Pg	Pg	08 36 12.6	+0.2
URLA				S	Sb	08 36 20.2	-0.1
AYDB	Zeytinkoy-Aydi	0.75	90	PG	Pb	08 36 18.4	+0.7
AYDB	Zeytinkoy-Aydi	0.75	90	*e*Pg	Pb	08 36 18.4	+0.7
AYDN	Tasoluk	0.80	111	*i* P	Pg	08 36 18.1	-0.1
AYDN				*i* S	Sg	08 36 28.4	-0.3
AYDN	Tasoluk	0.80	111	P	Pg	08 36 18.1	-0.1
AYDN				S	Sg	08 36 28.4	-0.3
CHOS	Chios island	0.82	302	PG	Pb	08 36 19.3	+0.4
CHOS	Chios island	0.82	302	*e*Pg	Pb	08 36 19.3	+0.4
MANT	Manisa	1.38	67	*i* P	Pn	08 36 27.4	-0.5
MANT				*i* S	Sg	08 36 47.0	-0.3
MANT	Manisa	1.38	67	P	Pn	08 36 27.4	-0.5
MANT				S	Sg	08 36 47.0	-0.3

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*IDC **17** 08:45:44.5±0.7, 31°.13S×178°.99W, h0^{km}, mb4.4/10, mb1 4.6/12, mb1mx4.2/43, mbtmp4.4/12, ML4.1/2, MS3.5/7, Ms1 3.5/7, ms1mx3.1/42, Error ellipse: s-maj=19.4km s-min=18.3km az=67.0*

*NEIC **17** 08:45:47.7±3.2, 31°.02S×179°.11W, h17^{km}±19^{km}, mb4.8/19, Error ellipse: s-maj=9.7km s-min=7.6km az=127.0*

*WEL **17** 08:45:47.0, 31°.02S×179°.11W, h17^{km}, ML5.0/12*

*ISCJB **17** 08:45:48.7±0.3, 31°.30S±0°.04×179°.16W±0°.07, h33^{km}, mb4.8/30, MS3.7/7, Error ellipse: s-maj=9.2km s-min=4.5km az=20.7*

*MOS **17** 08:45:49.5±1.2, 31°.19S×179°.22W, h33^{km}, mb4.9/6, Error ellipse: s-maj=20.6km s-min=16.2km az=20.3*

*BJI **17** 08:45:49.5, 30°.55S×178°.74W, h35^{km}, mb5.1/9, mB5.5/3, Ms4.7/3, Ms7 4.4/3*

ISC 17 08:45:50.4±0.4**, 31°.16S**±0°.06×**179°.00W**±0°.09**, h35^{km}, n114, σ1^{s}.77**/102**, mb4.9**/30**, MS3.7**/6**, 4C-8D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.11	27	P	Pn	08 46 20.8	-2.5
RAO	Raoul Island	2.12	27	Pn	Pn	08 46 20.4	-3.0
	64nm,0.3s,baz=94,slow=20,SNR=5.4						
RAO				Sn	Sn	08 46 53.1	+4.6
	152nm,0.3s,baz=331,slow=22,SNR=4.7						
RAO	Raoul Island	2.12	27	*e*Pn	Pn	08 46 21.0	-2.3
RAO				Sn	Sn	08 46 53.1	+4.6
RAO	Raoul Island	2.12	27	*e*P	Pn	08 46 21.0	-2.3
RAO						08 46 53.1	
RIZ	Raoul Island	2.12	26	P	Pn	08 46 22.4	-0.9
WMGZ	Waiomatatini S	6.98	197	P	Pn	08 47 29.0	-1.0
HAZ	Te Kaha	7.09	201	P	Pn	08 47 29.6	-2.1
PKGZ	Pakihiroa	7.13	199	P	Pn	08 47 29.7	-2.5
PUZ	Puketiti	7.25	197	P	Pn	08 47 33.2	-0.7
RUGZ	Raukumara Rang	7.32	201	P	Pn	08 47 33.2	-1.7
OUZ	Omahuta	7.41	235	*e*Pn	Pn	08 47 34.9	-1.0
TWGZ	Tauwhareparae	7.43	199	P	Pn	08 47 33.4	-2.9
TWGZ				S	Sn	08 49 04.3	+5.0
OPRZ	Ohinepanea	7.61	208	P	Pn	08 47 37.1	-1.7
MKAZ	Moumakai	7.65	218	P	Pn	08 47 43.7	+4.4
CNGZ	Carnagh Statio	7.66	197	P	Pn	08 47 35.7	-3.7
MWZ	Matawai	7.70	201	P	Pn	08 47 39.5	-0.6
TKGZ	Te Karaka	7.71	199	P	Pn	08 47 38.6	-1.5
URZ	Urewera	7.77	203	Pn	Pn	08 47 39.4	-1.6
	2.7nm,0.3s,baz=292,slow=5.6,SNR=9.9						
URZ				LR	LR	08 50 25.9	
	comp=Z,643nm,18.1s,baz=46,slow=36						
URZ	Urewera	7.77	203	*e*Pn	Pn	08 47 40.3	-0.6
URZ	Urewera	7.77	203	P	Pn	08 47 39.8	-1.1
RIGZ	Rimuhau	7.98	199	P	Pn	08 47 38.8	-5.1
RAHZ	Arahi	8.38	201	P	Pn	08 47 47.5	-1.8
BKZ	Black Stump Fm	8.80	204	*e*Pn	Pn	08 47 54.1	-1.0
HIZ	Hauiti	8.90	213	*e*Pn	Pn	08 47 58.7	+2.2
BFZ	Birch Farm	10.25	201	*e*Pn	Pn	08 48 11.1	-3.8
SNZO	South Karori	11.33	205	*e*Pn	Pn	08 48 23.7	-5.9
THZ	Tophouse	12.42	209	*e*Pn	Pn	08 48 38.5	-6.1
KHZ	Kahutara	12.72	206	*e*Pn	Pn	08 48 40.7	-7.9
DZM	Mont Dzumac	15.84	301	LR	LR	08 53 39.9	
	comp=Z,110nm,18.2s,baz=164,slow=30						
RAR	Rarotonga	19.87	65	LR	LR	08 58 11.5	
	comp=Z,45nm,18.4s,baz=265,slow=38						
FUNA	Funafuti	22.58	355	*e*P	P	08 50 44.1	-3.7
	234nm,1.4s						
TBI	Tubuai	27.33	81	*e*T	T	09 19 55.3	
	169nm,0.3s						
PAE	Paea	29.87	70	*e*T	T	09 23 04.8	
	44nm,0.3s						
PPT2	Papeete2	29.91	70	*e*LR	LR	08 59 25.0	
	154nm,28.2s						
PPT2	Papeete2	29.91	70	*e*T	T	09 23 08.7	
	20nm,0.3s						
TVO	Taravao	30.07	71	*e*T	T	09 23 19.8	
	4.5nm,0.3s						
PMOR	Pomariorio Ree	32.68	68	*e*T	T	09 26 35.4	
	5.3nm,0.3s						
VAH	Vaihoa	32.76	68	*e*T	T	09 26 41.0	
	139nm,0.2s						
CTA	Charters Tower	33.08	281	P	P	08 52 22.9	-0.1
	4.5nm,0.8s,baz=163,slow=14,SNR=3.6						
CTAO	Charters Tower	33.08	281	*e*P	P	08 52 21.4	-1.6
	21nm,1.4s						
CTAO	Charters Tower	33.08	281	*e*P	P	08 52 21.4	-1.6
CTAO				pmax	pmax		
	comp=Z,21nm,1.4s						
STKA	Stephens Creek	33.47	258	P	P	08 52 27.2	+0.9
	comp=Z,4.0nm,0.7s,baz=96,slow=9.9,SNR=8.7						
STKA				LR	LR	09 04 58.1	
	comp=Z,72nm,18.2s,baz=117,slow=34						
STKA	Stephens Creek	33.47	258	*e*P	P	08 52 27.3	+0.9
	comp=Z,5.0nm,1.5s						
BBOO	Buckleboo	37.94	255	*e*P	P	08 53 04.5	-0.1
	comp=Z,46nm,1.4s						
RKT	Rikitea	39.78	89	*e*T	T	09 35 28.6	
	comp=Z,7.3nm,0.4s						
AS01	Alice Springs	42.17	268	*e*P	P	08 53 38.8	-1.1
AS31	Alice Springs	42.21	268	*e*P	P	08 53 39.8	-0.4
	comp=Z,1.4nm,0.6s						

ASAR	Alice Springs	42.21	268	P	P	08 53 39.3	-0.9
	comp=Z,4.6nm,0.7s,baz=104,slow=7.5,SNR=72						
ASAR				LR	LR	09 08 59.5	
	comp=Z,92nm,18.2s,baz=138,slow=33						
WB2	Warramunga Arr	43.26	274	eP	P	08 53 47.9	-0.9
	comp=Z,11nm,0.6s						
WRAB	Tennant Creek	43.27	274	eP	P	08 53 47.8	-0.9
	comp=Z,8.9nm,0.7s						
WRAB	Tennant Creek	43.27	274⇓	eP	P	08 53 47.7	-1.1
WRA	Warramunga Arr	43.27	273	P	P	08 53 47.9	-1.0
	comp=Z,12nm,0.8s,baz=113,slow=7.8,SNR=48						
FORT	Forrest	45.02	256	eP	P	08 54 01.7	-1.0
	comp=Z,70nm,1.3s						
SBA	Scott Base	47.22	184	eP	P	08 54 21.3	+2.0
	comp=Z,12nm,0.9s						
VNDA	Vanda	47.26	186	P	P	08 54 18.7	-0.9
	comp=Z,0.8nm,0.8s,baz=55,slow=6.3,SNR=6.2						
VNDA				LR	LR	09 09 48.6	
	comp=Z,48nm,18.6s,baz=337,slow=30						
VNDA	Vanda	47.26	186	eP	P	08 54 21.3	+1.7
	comp=Z,6.3nm,1.5s						
VNDA	Vanda	47.26	186	eP	P	08 54 21.3	+1.7
VNDA				pmax	pmax		
	comp=Z,6.0nm,1.5s						
MTN	Manton Dam	49.26	280	eP	P	08 54 35.1	-0.7
	comp=Z,16nm,0.6s						
FITZ	Fitzroy Crossi	51.50	271	P	P	08 54 51.6	-1.2
	comp=Z,8.5nm,0.8s,baz=127,slow=9.0,SNR=19						
MBWA	Marble Bar	55.29	265	eP	P	08 55 19.5	-1.2
	comp=Z,17nm,1.3s						
QSPA	South Pole Qui	58.95	180	P	P	08 55 45.9	-0.2
	comp=Z,7.7nm,0.7s,baz=351,slow=1.0,SNR=29						
SYO	Syowa Base	76.18	193⇓	eP	P	08 57 33.6	-0.9
SNAA	Sanae	77.42	179	P	P	08 57 40.5	-1.1
	comp=Z,5.0nm,1.0s,baz=201,slow=7.9,SNR=18						
SNAA				LR	LR	09 29 30.6	
	comp=Z,33nm,21.1s,baz=81,slow=34						
SNAA	Sanae	77.42	179	eP	P	08 57 40.6	-0.9
	comp=Z,17nm,1.3s						
SNAA	Sanae	77.42	179⇓	iP	P	08 57 41.9	+0.3
NVL	N'lazarevskaya	78.07	184⇑	iP	P	08 57 44.8	-0.2
NVL				pmax	pmax		
	comp=Z,16nm,0.9s						
PLCA	Paso Flores	82.62	133	P	P	08 58 11.1	+0.9
	comp=Z,2.2nm,0.9s,baz=277,slow=11,SNR=5.0						
PLCA	Paso Flores	82.62	133	eP	P	08 58 11.3	+1.0
	comp=Z,4.9nm,1.2s						
PLCA	Paso Flores	82.62	133	eP	P	08 58 11.2	+1.0
YSS	Yuzh-Sakhalins	85.06	335	eP	P	08 58 21.8	-0.3
NJ2	Nanjing	86.09	311	eP	P	08 58 27.8	+0.2
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
MSHR	Mys Shultsa	86.49	326⇑	eP	P	08 58 30.7	+1.4
CYBM	Yerba Buena Is	86.62	42	eP	P	08 58 30.9	+0.9
ISA	Isabella, Lake	87.44	45	eP	P	08 58 35.1	+0.8
	comp=Z,4.6nm,1.0s						
ISA	Isabella, Lake	87.44	45	eP	P	08 58 35.1	+0.8
ISA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
LDFC	Landfair	89.15	47	eP	P	08 58 43.0	+0.6
	comp=Z,9.3nm,1.1s						
NV01	Mina Array Sit	89.38	43	eP	P	08 58 43.6	+0.1
NVAR	Mina Array Bea	89.38	43	P	P	08 58 44.0	+0.4
	comp=Z,1.0nm,0.9s,baz=218,slow=8.8,SNR=6.3						
CN2	Changchun	90.23	323	eP	P	08 58 45.5	-1.6
CN2				esP	pP	08 59 00.0	+1.8
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
X16A	Lo Mia Camp, P	91.10	50	eP	P	08 58 52.2	+0.6
	comp=Z,2.8nm,1.0s						
GYA	Guiyang	91.18	300	eP	P	08 58 52.0	-0.1
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KLR	Kul'dur	91.26	330	P	P	08 58 52.0	+0.3
	comp=Z,0.0nm,0.3s,baz=108,slow=7.1,SNR=4.7						
U15A	North Rim	91.78	48	eP	P	08 59 00.0	+5.2
	comp=Z,4.7nm,1.4s						
KMI	Kunming	93.39	297	P	P	08 59 02.8	+0.3
KMI				pP	pP	08 59 14.8	+1.1
KMI				sP	sP	08 59 19.1	+1.5
KMI				pmax	pmax		
	comp=Z,12nm,0.6s						
ANMO	Albuquerque	94.72	52⇑	eP	P	08 59 07.9	-0.5
ANMO				pmax	pmax		
	comp=Z,1.0nm,0.8s						
PB01	IPOC Station P	94.80	118	eP	P	08 59 11.1	+2.0
	comp=Z,6.3nm,0.8s						
CD2	Chengdu	95.76	303	eP	P	08 59 12.6	-0.4
HHC	Hu-ho-hao-te	96.14	314	eP	P	08 59 15.8	+1.2
HHC				sP	sP	08 59 32.0	+2.3
HHC				S	S	09 10 33.1	+1.9
HHC				pmax	pmax		
	comp=Z,29nm,1.2s						
HHC				pmax	pmax		
	comp=Z,110nm,8.3s						
HHC				LR	LR		
	comp=Z,89nm,16.9s						
HHC				LR	LR		
	comp=Z,130nm,16.3s						
HHC				LR	LR		
	comp=Z,100nm,16.9s						
YAK	Yakutsk	101.62	338	iP	Pdif	08 59 41.1	+2.7
YAK				pmax	pmax		
	comp=Z,14nm,0.6s						
WMQ	Urumqi	113.02	308	PKP	PKiKP	09 04 23.3	-0.4
WMQ				LR	LR		
	comp=Z,110nm,18.3s						
WMQ				LR	LR		
	comp=Z,65nm,17.5s						
DGZ	Jazzator, Alta	115.22	314	ePKIKP	PKPdf	09 04 25.4	-2.5
KURK	Kurchatov	120.95	314	PKPpre	PKPpre	09 04 33.5	
KURBB	Kurchatov Arra	120.98	313	PKhKP	PKPpre	09 04 33.5	
	comp=Z,0.7nm,0.7s,baz=118,slow=2.5,SNR=4.5						
BRVK	Borovoye	126.41	315⇓	iPKIKP	PKPdf	09 04 49.8	+0.8
VRH	Novokhopyorsk	143.99	316	ePKIKP	PKPdf	09 05 26.2	+4.5
VRH				pmax	pmax		
	comp=Z,20nm,0.9s						
KBZ	Khabaz	144.81	303	PKP	PKPab	09 05 20.9	-1.5
	comp=Z,1.9nm,0.8s,baz=33,slow=3.5,SNR=4.2						
KIV	Kislovodsk	144.93	303⇓	ePKIKP	PKPdf	09 05 25.7	+2.0
KIV				pmax	pmax		
	comp=Z,3.0nm,0.9s						
OBN	Obninsk	145.29	324	ePKPbc	PKPab	09 05 23.5	-0.2
OBN	Obninsk	145.29	324⇓	ePKIKP	PKPab	09 05 23.6	-0.2
OBN				pmax	pmax		
	comp=Z,21nm,0.9s						
PUL	Pulkovo	145.32	334⇓	ePKIKP	PKPab	09 05 25.0	+1.3
VSR	Storozhevoye	145.50	317	ePKP2	PKPdf	09 05 23.1	-1.2
VSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
VORD	Divnogorie	145.52	316	ePKIKP	PKPdf	09 05 23.7	-0.6
VORD				pmax	pmax		
	comp=Z,10.0nm,1.1s						
FIA1	FINESS Array S	145.55	339	ePKPbc	PKPdf	09 05 24.0	0.0
FINES	FINESS Array B	145.55	339	PKPbc	PKPdf	09 05 23.6	-0.5
	comp=Z,3.4nm,0.8s,baz=40,slow=7.3,SNR=7.3						
VSU	Vasula	147.56	335⇑	iPKP2	PKPbc	09 05 30.9	+0.7
NC204	NORSAR Array S	149.20	351	ePKPdf	PKPdf	09 05 29.9	-0.4
NC405	NORSAR Array S	149.22	350	ePKPdf	PKPdf	09 05 30.6	+0.3
NB2	NORSAR Subarra	149.36	350	PKP	PKPbc	09 05 33.0	-1.9
	comp=Z,13nm,1.7s,baz=17,slow=2.6						
HFS	Hagfors	149.80	347	PKPbc	PKPbc	09 05 34.7	-1.3
	comp=Z,2.6nm,0.8s,baz=108,slow=4.7,SNR=3.5						
KIEV	Kiev	151.38	321⇓	iPKIKP	PKPbc	09 05 42.5	+2.5
BRTR	Keskin Array B	152.19	297	PKPbc	PKPbc	09 05 40.6	-1.8
	comp=Z,0.9nm,0.5s,baz=130,slow=3.8,SNR=3.7						
BRTR				PKPab	sPKPdf	09 05 50.5	-0.6
	comp=Z,1.2nm,0.7s,baz=90,slow=5.3,SNR=4.4						
CLL	Collm	157.99	340	ePKPab	PKPab	09 06 16.0	-0.4
CLL	Collm	157.99	340	ePKP2	PKPab	09 06 16.0	-0.4
TORD	Torodi Ar. Bea	162.06	182	PKPab	PKPab	09 06 33.8	-1.1
	baz=184,slow=4.3						

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*ISK **17** 08:47:47.6, 38°.85N×38°.67E, h5^{km}, ML2.3/6*
*ISCJB **17** 08:47:48.5±0.5, 38°.89N±0°.03×38°.66E±0°.03, h1^{km}±9^{km}, Error ellipse: s-maj=5.1km s-min=4.2km az=161.5*
*CSEM **17** 08:47:48.4±0.2, 38°.89N×38°.66E, h2^{km}, ML3.0, Error ellipse: s-maj=3.7km s-min=3.3km az=138.0*
*DDA **17** 08:48:44.6, 38°.90N×38°.68E, h11^{km}, Ml3.0*
ISC 17 08:47:48.5±1.1**, 38°.89N**±0°.03×**38°.67E**±0°.02**, h8**^{km}±10^{km}**, n24, σ0ˢ.53**/39**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEMA	Kemaliye	0.40	340	iP	Pg	08 47 55.8	-0.7
KEMA				iS	Sg	08 48 02.2	+0.4
KEMA	Kemaliye	0.40	340	P	Pg	08 47 55.8	-0.7
KEMA				S	Sg	08 48 02.2	+0.4
ELZG	Elazig	0.46	148	iP	Pg	08 47 57.6	+0.1
ELZG				iS	Sb	08 48 05.1	-0.9
ELZG	Elazig	0.46	148	P	Pg	08 47 57.6	+0.1
ELZG				S	Sb	08 48 05.1	-0.9
HEKM	Malatya_Hekimh	0.56	269	iP	Pg	08 47 59.6	+0.2
HEKM				iS	Sb	08 48 09.2	+0.4
HEKM	Malatya_Hekimh	0.56	269	P	Pg	08 47 59.6	+0.2
PTK	Pertek	0.56	90	PG	Pg	08 47 59.3	-0.1
PTK				SG	Sb	08 48 08.7	-0.3
PTK	Pertek	0.56	90	ePg	Pg	08 47 59.3	-0.1
PTK				eSg	Sb	08 48 08.7	-0.3
MALT	Malatya	0.61	199	PG	Pg	08 47 59.9	-0.4
MALT				SG	Sg	08 48 08.8	+0.6
MALT	Malatya	0.61	199	ePg	Pg	08 47 59.9	-0.4
MALT				eSg	Sg	08 48 08.8	+0.6
SVRC	Sivrice-ELAZID	0.71	136	PG	Pg	08 48 02.2	-0.1
SVRC	Sivrice-ELAZID	0.71	136	ePg	Pg	08 48 02.2	-0.1
TNCL	Tunceli-Merkez	0.71	71	iP	Pg	08 48 01.9	-0.4
TNCL				iS	Sb	08 48 13.1	-0.1
TNCL	Tunceli-Merkez	0.71	71	P	Pg	08 48 01.9	-0.4
TNCL				S	Sb	08 48 13.1	-0.1
AKCD	Akcadag	0.83	225	iP	Pg	08 48 03.9	-0.7
AKCD				iS	Sb	08 48 16.4	-0.4
AKCD	Akcadag	0.83	225	P	Pg	08 48 03.9	-0.7
AKCD				S	Sb	08 48 16.4	-0.4
DARE	Darende-Malaty	0.98	251	PG	Pg	08 48 07.1	-0.3
DARE	Darende-Malaty	0.98	251	ePg	Pg	08 48 07.1	-0.3
EZC	Erzincan	1.01	31	ePn	Pn	08 48 10.0	+0.9
ERZN	Erzincan	1.07	49	PN	Pn	08 48 10.0	0.0
KELT	Kelkit	1.33	20	iP	Pn	08 48 12.7	-1.0
KELT				iS	Sn	08 48 32.4	+0.7
KELT	Kelkit	1.33	20	P	Pn	08 48 12.7	-1.0
KELT				S	Sn	08 48 32.4	+0.7
SVSK	Karacayir	1.65	309	PN	Pb	08 48 19.4	+0.2
SVSK	Karacayir	1.65	309	ePn	Pb	08 48 19.4	+0.2

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*IDC **17** 09:02:42.2±0.7, 31°.09S×178°.98W, h0^{km}, mb4.2/10, mb1 4.4/12, mb1mx4.1/45, mbtmp4.2/12, ML3.9/2, MS3.5/3, Ms1 3.5/3, ms1mx2.9/40, Error ellipse: s-maj=20.9km s-min=18.8km az=90.0*
*NEIC **17** 09:02:44.0±0.4, 31°.10S×179°.07W, h10^{km}, mb4.4/8, Error ellipse: s-maj=13.4km s-min=10.1km az=131.0*
*WEL **17** 09:02:43.0, 31°.10S×179°.07W, h10^{km}, ML4.9/9*
*ISCJB **17** 09:02:46.4±0.3, 31°.23S±0°.04×179°.15W±0°.09, h33^{km}, mb4.3/17, MS3.7/2, Error ellipse: s-maj=11.4km s-min=4.6km az=22.1*
ISC 17 09:02:47.8±0.5**, 31°.17S**±0°.07×**178°.9W**±0°.1**, h35**^{km}**, n68, σ1ˢ.77**/60**, mb4.3**/16**, 1C, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.09	24	P	Pn	09 03 19.0	-1.4
RAO	Raoul Island	2.10	24	Pn	Pn	09 03 17.7	-2.7
	30nm,0.3s,baz=73,slow=19,SNR=2.3						
RAO				Sn	Sn	09 03 49.6	+4.3
	87nm,0.3s,baz=146,slow=23,SNR=4.6						
RAO	Raoul Island	2.10	24	ePn	Pn	09 03 17.8	-2.7
RAO				ePn	Pn	09 03 23.1	+2.6
RAO				eSn	Sn	09 03 48.9	+3.6
RAO				eSn	Sn	09 03 49.6	+4.3
RIZ	Raoul Island	2.10	24	P	Pn	09 03 19.5	-1.0
WMGZ	Waiomatatini S	6.99	198	P	Pn	09 04 28.1	+0.5
HAZ	Te Kaha	7.11	202	P	Pn	09 04 29.7	+0.4
PKGZ	Pakihiroa	7.14	200	P	Pn	09 04 29.1	-0.8
PUZ	Puketiti	7.27	198	P	Pn	09 04 30.7	-0.8
RUGZ	Raukumara Rang	7.34	202	P	Pn	09 04 33.1	+0.5
TWGZ	Tauwhareparae	7.44	199	P	Pn	09 04 33.0	-0.9
CNGZ	Carnagh Statio	7.67	197	P	Pn	09 04 35.8	-1.2
MWZ	Matawai	7.72	201	P	Pn	09 04 36.0	-1.8
MWZ				S	Sn	09 06 07.8	+3.8
URZ	Urewera	7.79	204	Pn	Pn	09 04 36.5	-2.1
	2.0nm,0.3s,baz=219,slow=4.2,SNR=13						
URZ				LR	LR	09 06 53.2	
	comp=Z,85nm,20.6s,baz=32,slow=32						
URZ	Urewera	7.79	204	ePn	Pn	09 04 36.5	-2.1
URZ				ePn	Pn	09 04 37.6	-1.1
URZ	Urewera	7.79	204	P	Pn	09 04 38.0	-0.7
RIGZ	Rimuhau	8.00	199	P	Pn	09 04 39.3	-2.2
NGRZ	Ngongotaha	8.01	209	P	Pn	09 04 44.7	+3.1
SNGZ	Shannon Statio	8.19	201	P	Pn	09 04 43.3	-0.8
RAHZ	Arahi	8.39	202	P	Pn	09 04 45.2	-1.8
MTHZ	Maungataniwha	8.42	203	P	Pn	09 04 49.1	+1.8
NMHZ	Naumai	8.65	203	P	Pn	09 04 41.1	-9.4
BKZ	Black Stump Fm	8.82	204	P	Pn	09 04 52.5	-0.3
HIZ	Hauiti	8.94	213	P	Pn	09 04 57.6	+3.2
BHHZ	Black Hill Sta	9.26	205	P	Pn	09 04 59.8	+1.0
TBI	Tubuai	27.25	81	eT	T	09 36 53.8	
	78nm,0.3s						
PAE	Paea	29.79	70	eT	T	09 40 01.6	
	38nm,0.3s						
PPT2	Papeete2	29.83	70	eLR	LR	09 16 44.7	
	88nm,24.5s						
PPT2	Papeete2	29.83	70	eT	T	09 40 05.7	
	20nm,0.3s						
PPT	Papeete	29.84	70	LR	LR	09 17 35.8	
	comp=Z,40nm,22.0s,baz=54,slow=30						
TVO	Taravao	29.99	71	eT	T	09 40 17.2	
	5.2nm,0.3s						
PMOR	Pomariorio Ree	32.60	68	eT	T	09 43 32.0	
	5.8nm,0.4s						
VAH	Vaihoa	32.68	68	eT	T	09 43 37.7	
	162nm,0.2s						
STKA	Stephens Creek	33.55	258	P	P	09 09 24.8	+0.4
	3.5nm,0.9s,baz=110,slow=13,SNR=4.3						
RKT	Rikitea	39.70	89	eT	T	09 52 28.4	
	2.5nm,0.2s						
AS31	Alice Springs	42.30	268	eP	P	09 10 36.6	-1.7
	1.0nm,0.6s						
ASAR	Alice Springs	42.30	268	P	P	09 10 37.0	-1.4
	2.6nm,0.8s,baz=104,slow=7.5,SNR=27						
WB2	Warramunga Arr	43.35	273	eP	P	09 10 45.3	-1.5
WB2				eP	P	09 10 45.5	-1.4
WRAB	Tennant Creek	43.35	273	eP	P	09 10 45.3	-1.6
	6.0nm,0.8s						
WR1	Warramunga Arr	43.36	273	eP	P	09 10 45.4	-1.5
	6.5nm,0.7s						
WRA	Warramunga Arr	43.36	273	P	P	09 10 45.4	-1.5
	4.9nm,0.7s,baz=112,slow=8.0,SNR=48						
SBA	Scott Base	47.21	184	eP	P	09 11 18.6	+1.9
	9.6nm,1.1s						
VNDA	Vanda	47.25	186	P	P	09 11 18.4	+1.3
	0.5nm,0.8s,baz=26,slow=10,SNR=3.2						
FITZ	Fitzroy Crossi	51.59	271	P	P	09 11 50.3	-0.6
	8.2nm,1.0s,baz=181,slow=7.2,SNR=10.0						
QSPA	South Pole Qui	58.94	180	P	P	09 12 43.9	+0.5
	4.0nm,0.6s,baz=35,slow=0.2,SNR=17						
QSPA	South Pole Qui	58.94	180	eP	P	09 12 43.9	+0.5
QSPA				eP	P	09 12 44.1	+0.8
PMSA	Palmer Station	71.88	156	LR	LR	09 40 47.2	
	comp=Z,208nm,18.6s,baz=180,slow=32						
SYO	Syowa Base	76.19	193⇑	eP	P	09 14 29.0	-2.9
SNAA	Sanae	77.40	179	P	P	09 14 38.9	0.0
	3.7nm,0.9s,baz=184,slow=4.7,SNR=8.3						
SNAA	Sanae	77.40	179	eP	P	09 14 39.1	+0.2
	2.6nm,1.0s						
PLCA	Paso Flores	82.55	133	P	P	09 15 08.4	+1.2
	2.2nm,1.0s,baz=267,slow=5.5,SNR=4.7						
KSRS	Korea Array	84.44	320	P	P	09 15 17.3	+0.7
	0.8nm,0.6s,baz=139,slow=5.8,SNR=5.6						
KSAR	Wonju Array Be	84.45	320	P	P	09 15 17.3	+0.6
NV01	Mina Array Sit	89.33	43	eP	P	09 15 41.3	+0.6
NVAR	Mina Array Bea	89.33	43	P	P	09 15 41.8	+1.0
	1.1nm,0.9s,baz=220,slow=8.3,SNR=6.4						
TUC	Tucson	90.20	52	eP	P	09 15 46.8	+2.0
	2.5nm,0.9s						
U15A	North Rim	91.73	48	eP	P	09 15 53.2	+1.2
	1.6nm,0.8s						
YPP	Pitchstone Pla	97.39	42	eP	Pdif	09 16 19.0	+1.1
	2.3nm,0.6s						
RWWY	Rawlins	98.03	46	eP	Pdif	09 16 22.1	+1.4
RWWY				epP	sP	09 16 36.6	+0.8
KURK	Kurchatov	121.02	314	ePKPdf	PKPdf	09 21 34.0	-2.2
KURBB	Kurchatov Arra	121.06	313	PKP	PKPdf	09 21 34.0	-2.3
	0.1nm,0.3s,baz=118,slow=2.8,SNR=4.1						
KBZ	Khabaz	144.89	303	PKP	PKPab	09 22 20.0	-0.1
	2.6nm,0.9s,baz=144,slow=1.7,SNR=4.7						
FIA1	FINESS Array S	145.59	339	ePKPdf	PKPdf	09 22 21.2	-0.4
FIA0	FINESS Array S	145.59	339	ePKPdf	PKPdf	09 22 19.6	-2.0
FINES	FINESS Array B	145.59	339	PKPbc	PKPdf	09 22 19.6	-2.0
	6.4nm,0.9s,baz=338,slow=3.1,SNR=7.8						
BR101	Keskin Array S	152.27	297	ePKPbc	PKPbc	09 22 40.5	+0.5
BRTR	Keskin Array B	152.27	297	PKPbc	PKPbc	09 22 40.5	+0.5
	0.8nm,0.7s,baz=94,slow=4.3,SNR=3.8						
TORD	Torodi Ar. Bea	162.05	182	PKPab	PKPab	09 23 30.6	-1.7
	baz=202,slow=3.1						
TOA1	Torodi Ar. Sit	162.06	182	ePKPab	PKPab	09 23 30.6	-1.7

IDC 17 09:09:26.7±1.4**, 2°.90N**×**126°.66E, h0**^{km}**, mb3.6**/6**, mb1 3.8**/6**, mb1mx3.4**/58**, mbtmp3.6**/6**, Error ellipse: s-maj=105.3km s-min=18.8km az=68.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	20.89	183	P	P	09 14 11.0	+0.3
	2.8nm,0.9s,baz=29,slow=10,SNR=3.9						
WRA	Warramunga Arr	23.91	162	P	P	09 14 42.4	-0.2
	0.8nm,0.4s,baz=342,slow=11,SNR=17						
ASAR	Alice Springs	27.33	165	P	P	09 15 13.9	+0.4
	0.3nm,0.6s,baz=340,slow=7.1,SNR=5.0						
STKA	Stephens Creek	37.38	159	P	P	09 16 41.5	+0.1
	1.2nm,0.6s,baz=325,slow=13,SNR=3.0						
MKAR	Makanchi Array	58.20	326	P	P	09 19 22.5	-0.3
	0.2nm,0.4s,baz=131,slow=6.8,SNR=4.3						
KURBB	Kurchatov Arra	62.40	328	P	P	09 19 51.2	-0.2
	0.5nm,0.7s,baz=126,slow=6.4,SNR=6.2						

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*NIED **17** 09:10:00, 38°.30N×142°.40E, h23^{km}, Mw3.5 Best double couple: $M_0$2.11000×10^{14} NP1:ϕ_s306.00000°, δ27.00000°, λ-106.00000°. NP2:ϕ_s144.00000°, δ64.00000°, λ-82.00000°.*
JMA 17 09:10:16.6±0.2**, 38°.25N**×**142°.36E, h36**^{km}±2^{km}**, M3.5, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIO	Ouri	0.82	285	P	Pn	09 10 31.9	+0.3
JIO				S	Sn	09 10 42.5	0.0
OFUJ	Ofunato	0.99	327	P	Pn	09 10 34.3	+0.4
OFUJ				S	Sn	09 10 46.9	+0.2
JMK	Ichinoseki	1.14	308	P	Pn	09 10 36.7	+0.8
JMM	Marumori	1.29	253	P	Pn	09 10 38.3	+0.2
JMM				S	Sn	09 10 53.7	-0.5
JOU	Okura	1.34	275	P	Pn	09 10 39.8	+1.0
JOU				S	Sn	09 10 56.9	+1.6
JFK	Kawauchi	1.47	234	P	Pn	09 10 40.2	-0.4
JFK				S	Sn	09 10 57.1	-1.5
JOM	Ohasama	1.48	326	P	Pn	09 10 41.9	+1.2
JOM				S	Sn	09 11 00.6	+1.9
JYK	Kaneyama	1.70	294	P	Pn	09 10 45.2	+1.4
JFT	Otama	1.76	246	P	Pn	09 10 45.9	+1.4
JFT				S	Sn	09 11 07.2	+1.5
JRG	Rokugo	1.77	311	P	Pn	09 10 47.2	+2.6
JYS	Shirataka	1.81	270	P	Pn	09 10 47.0	+1.8
JYS				S	Sn	09 11 08.9	+2.0
MAT	Matsushiro	3.72	244	P	Pn	09 11 16.1	+4.6
MAT				eS	Sn	09 12 00.4	+6.3

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*TAP **17** 09:18:49.7, 24°.83N×122°.85E, h143^{km}, ML2.9, C*
*ISCJB **17** 09:18:50.1±0.9, 24°.76N±0°.07×122°.89E±0°.03, h131^{km}±6^{km}, Error ellipse: s-maj=12.4km s-min=3.8km az=177.1*
*JMA **17** 09:18:50.0±0.2, 24°.75N×122°.91E, h136^{km}±3^{km}, M1.7*
ISC 17 09:18:49.5±2.2**, 24°.8N**±0°.1×**122°.90E**±0°.03**, h139**^{km}±14^{km}**, n25, σ0ˢ.64**/45**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.33	172	P	Pn	09 19 09.1	+0.3
JYNG				S	Sn	09 19 23.3	0.0
YOJ	Yonaguni jima	0.34	162	P	Pn	09 19 09.1	+0.3
YOJ				eS	Sn	09 19 23.5	+0.1
EOS1	EOS1	0.73	252	P	Pn	09 19 11.2	+0.3
	baz=242						
EOS1				S	Sn	09 19 27.3	+0.1
	baz=242						
IRIF	Iriomote-Funau	0.88	120	P	Pn	09 19 12.2	+0.1
IRIF				S	Sn	09 19 29.1	-0.2
HATJ	Hateruma jima	1.10	131	eS	Sn	09 19 32.8	0.0
NANB	Nanao	1.10	252	eP	Pn	09 19 14.6	+0.6
	baz=249						
NANB				eS	Sn	09 19 32.5	-0.2
	baz=249						
JKRS	Kuro-shima	1.15	118	P	Pn	09 19 15.5	+1.0
JKRS				S	Sn	09 19 33.7	+0.1
JIJ	Ishigaki jima	1.21	110	P	Pn	09 19 15.4	+0.3
JIJ				S	Sn	09 19 33.4	-1.2
ENTT	Nioudou	1.22	264	eP	Pn	09 19 15.7	+0.5
	baz=262						
ENTT				eS	Sn	09 19 35.0	+0.2
	baz=262						
NWLT	Wulai	1.27	270	eS	Sn	09 19 35.4	-0.3
	baz=268						
JISG	Ishigakijimahi	1.30	98	P	Pn	09 19 16.1	+0.1
JISG				S	Sn	09 19 35.2	-1.1
NACB	Ninganchiao	1.33	243	eP	Pn	09 19 16.2	-0.1
	baz=242						
NACB				eS	Sn	09 19 35.8	-1.0
	baz=242						
YHNB	Yeheng	1.39	266	eP	Pn	09 19 17.7	+0.7
	baz=269						
YHNB				eS	Sn	09 19 37.1	-0.9
	baz=269						
NSK	Sanguang	1.40	266	eS	Sn	09 19 37.9	-0.4
	baz=269						
NNSB	Datong	1.42	256	eP	Pn	09 19 17.1	-0.3
	baz=255						
NNSB				eS	Sn	09 19 38.0	-0.8
	baz=255						
NNSH	Datong	1.42	256	eP	Pn	09 19 17.7	+0.3
	baz=254						
NNSH				eS	Sn	09 19 37.8	-0.9
	baz=254						
NNS	Nan Shan	1.43	256	eP	Pn	09 19 18.0	+0.5
	baz=251						
NNS				eS	Sn	09 19 38.6	-0.2
	baz=251						
WHF	Hehuan Shan	1.61	247	eP	Pn	09 19 20.3	+0.4
	baz=246						
WHF				eS	Sn	09 19 41.9	-1.2
	baz=246						
JTJ	Tarama	1.65	95	P	Pn	09 19 20.4	+0.6
JTJ				S	Sn	09 19 42.3	-0.7
CHGB	Renai	1.73	246	eS	Sn	09 19 44.8	-0.1
	baz=245						
HGSD	Ruisui	1.86	227	eP	Pn	09 19 22.9	+0.7
	baz=226						
HGSD				eS	Sn	09 19 47.6	+0.3
	baz=226						
YULB	Yu-li	2.01	227	eP	Pn	09 19 23.8	-0.2
	baz=235						
YULB				eS	Sn	09 19 49.0	-1.6
	baz=235						
SSLB	Suanglung	2.03	241	eS	Sn	09 19 50.8	-0.2
	baz=239						
TWF1	Yuli	2.04	226	eP	Pn	09 19 24.7	+0.3
	baz=235						
TWF1				eS	Sn	09 19 50.6	-0.5
	baz=235						
YUS	Yu-Shan	2.19	234	eP	Pn	09 19 28.0	+1.3
	baz=234						
YUS				eS	Sn	09 19 55.0	-0.2
	baz=234						

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*ISK **17** 09:21:21.9, 39°.60N×28°.88E, h4^{km}, ML2.6/7, Suspected Mining explosion.*
*ISCJB **17** 09:21:22.0±0.5, 39°.60N±0°.03×28°.88E±0°.04, h0^{km}, Error ellipse: s-maj=4.0km s-min=3.8km az=136.1*
*CSEM **17** 09:21:22.2±0.2, 39°.60N×28°.86E, h1^{km}, ML2.3, Error ellipse: s-maj=4.1km s-min=3.1km az=59.0, Suspected Mining explosion.*
*DDA **17** 09:21:22.1, 39°.61N×28°.86E, h7^{km}, Ml2.3, Suspected Mining explosion.*
ISC 17 09:21:21.4±0.8**, 39°.57N**±0°.03×**28°.94E**±0°.03**, h0**^{km}**, n23, σ0ˢ.47**/36**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DURS	**Dursunbey**	**0.36**	**275**	*i* P	**Pg**	**09 21 28.1**	**-0.2**
DURS				*i* S	**Sg**	**09 21 33.0**	**0.0**
DURS	**Dursunbey**	**0.36**	**275**	P	**Pg**	**09 21 28.1**	**-0.2**
DURS				S	**Sg**	**09 21 33.0**	**0.0**
TVSB	**Tavsanli**	**0.42**	**106**	PG	**Pb**	**09 21 31.7**	**-0.1**
TVSB				SG	**Sb**	**09 21 38.6**	**-0.1**
TVSB	**Tavsanli**	**0.42**	**106**	*e*Pg	**Pb**	**09 21 31.7**	**-0.1**
TVSB				*e*Sg	**Sb**	**09 21 38.6**	**-0.1**
DEMI	**Demirci**	**0.55**	**198**	*i* P	**Pb**	**09 21 33.7**	**-0.3**
DEMI				*i* S	**Sb**	**09 21 42.4**	**-0.1**
DEMI	**Demirci**	**0.55**	**198**	P	**Pb**	**09 21 33.7**	**-0.3**
DEMI				S	**Sb**	**09 21 42.4**	**-0.1**
GDZ	**Gediz**	**0.64**	**139**	*i* P	**Pb**	**09 21 35.9**	**+0.4**
GDZ				*i* S	**Sb**	**09 21 43.8**	**-1.2**
GDZ	**Gediz**	**0.64**	**139**	P	**Pb**	**09 21 35.9**	**+0.4**
GDZ				S	**Sb**	**09 21 43.8**	**-1.2**
KCTX	**Karacabey (Bur**	**0.83**	**327**	PG	**Pg**	**09 21 37.6**	**+0.4**
KCTX	**Karacabey (Bur**	**0.83**	**327**	*e*Pg	**Pg**	**09 21 37.6**	**+0.4**
CAVI	**Cavuskoy**	**0.94**	**47**	PG	**Pb**	**09 21 41.0**	**+0.4**
CAVI				SG	**Sn**	**09 21 54.9**	**-1.2**
YLV	**Yalova**	**1.05**	**18**	PG	**Pb**	**09 21 42.5**	**0.0**
YLV	**Yalova**	**1.05**	**18**	*e*Pg	**Pb**	**09 21 42.5**	**0.0**
KULA	**Kula-Manisa**	**1.07**	**192**	PN	**Pn**	**09 21 44.1**	**+0.3**
KULA	**Kula-Manisa**	**1.07**	**192**	*e*Pn	**Pn**	**09 21 44.1**	**+0.3**
GONE	**Gonen-Balikesi**	**1.08**	**297**	PG	**Pg**	**09 21 41.9**	**-0.1**
GONE	**Gonen-Balikesi**	**1.08**	**297**	*e*Pg	**Pg**	**09 21 41.9**	**-0.1**
MANT	**Manisa**	**1.12**	**196**	*i* P	**Pn**	**09 21 44.5**	**+0.1**
MANT				*i* S	**Sb**	**09 21 59.4**	**+0.5**
MANT	**Manisa**	**1.12**	**196**	P	**Pn**	**09 21 44.5**	**+0.1**
MANT				S	**Sb**	**09 21 59.3**	**+0.5**
EDC	**Edincik**	**1.13**	**314**	PN	**Pg**	**09 21 43.1**	**0.0**
EDC	**Edincik**	**1.13**	**314**	*e*Pn	**Pg**	**09 21 43.1**	**0.0**
KHAL	**Karahalli**	**1.27**	**160**	*i* P	**Pn**	**09 21 47.3**	**+0.8**
KHAL				*i* S	**Sb**	**09 22 03.5**	**+0.3**
KHAL	**Karahalli**	**1.27**	**160**	P	**Pn**	**09 21 47.3**	**+0.8**
KHAL				S	**Sb**	**09 22 03.5**	**+0.3**

ISCJB ***17*** *09:21:48.7±0.3, 2°.99N±0°.08×31°.24W±0°.05, h12^{km}, mb4.5/63, MS3.9/40, Error ellipse: s-maj=11.5km s-min=6.8km az=175.9*

IDC ***17*** *09:21:48.1±0.5, 2°.94N×31°.23W, h0^{km}, mb4.3/20, mb1 4.4/21, mb1mx4.2/62, mbtmp4.3/21, ML4.6/1, MS3.9/39, Ms1 3.9/39, ms1mx3.8/50, Error ellipse: s-maj=17.0km s-min=12.9km az=147.0*

NEIC ***17*** *09:21:49.7±0.2, 2°.90N×31°.20W, h10^{km}, mb4.6/44, Error ellipse: s-maj=7.2km s-min=5.6km az=176.0*

GCMT ***17*** *09:21:49.7±0.3, 3°.27N×31°.26W, h17^{km}±1^{km}, MW5.0/85, Moment Tensor Solution. s11,c12; s85,c110; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.37±.20; $M_{\theta\theta}$-0.26±.12; $M_{\phi\phi}$2.63±.14; $M_{r\theta}$2.16±.46; $M_{\theta\phi}$-0.55±.08; $M_{\phi r}$-0.32±.28; Best double couple: $M_0$3.28900×10^{16} NP1:ϕ_s319.00000°, δ62.00000°, λ-125.00000°. NP2: ϕ_s194.00000°, δ44.00000°, λ-44.00000°. Principal axes: T 2.8600, Plg10.0000°, Azm73.0000°; N 0.8600, Plg30.0000°, Azm337.0000°; P -3.7190, Plg58.0000°, Azm180.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 17 09:21:50.2±0.4, 2°.92N±0°.09×31°.26W±0°.08, h12^{km}, n123, σ1^{s}.00/97, mb4.5/63, MS3.9/40, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RCBR	**Riachuelo**	**9.85**	**208**	Pn	**Pn**	**09 24 10.2**	**-1.5**
	4.7nm,0.3s,baz=355,slow=1.5,SNR=8.9						
RCBR				Sn	Sn	09 25 52.9	-9.4
	5.8nm,0.3s,baz=260,slow=0.4,SNR=5.0						
H10N3	**ASCENSION HYDR**	**19.84**	**123**	T	T	09 46 39.1	
	baz=302,slow=75,SNR=1204						
H10N2	**ASCENSION HYDR**	**19.85**	**123**	T	T	09 46 39.5	
	baz=302,slow=75,SNR=1270						
H10N1	**ASCENSION HYDR**	**19.86**	**123**	T	T	09 46 40.6	
	baz=302,slow=75,SNR=1084						
H10S3	**ASCENSION HYDR**	**20.32**	**126**	T	T	09 47 14.2	
	baz=305,slow=75,SNR=1101						
H10S1	**ASCENSION HYDR**	**20.32**	**126**	T	T	09 47 14.7	
	baz=305,slow=75,SNR=962						
H10S2	**ASCENSION HYDR**	**20.34**	**126**	T	T	09 47 15.6	
	baz=305,slow=75,SNR=1259						
LIC	**Lamto**	**26.35**	**82**	*e*P	**P**	**09 27 29.0**	**+2.5**
	90nm,1.5s						
TIC	**Toumodi**	**26.41**	**81**	*e*P	**P**	**09 27 29.9**	**+2.9**
DBIC	**Dimbokro**	**26.57**	**81**	P	**P**	**09 27 26.9**	**-1.5**
	4.7nm,0.7s,baz=288,slow=13,SNR=1.8						
DBIC				LR	LR	09 35 48.3	
	comp=Z,702nm,20.4s,baz=248,slow=32						
KIC	**Kosan Boka**	**26.65**	**82**	*e*P	**P**	**09 27 31.2**	**+2.0**
	185nm,1.9s						
PTGA	**Pitinga**	**28.92**	**263**	LR	LR	09 38 01.9	
	comp=Z,382nm,19.3s,baz=74,slow=34						
PTGA	**Pitinga**	**28.92**	**263**	*e*P	**P**	**09 27 50.3**	**+0.8**
KOWA	**Kowa**	**29.24**	**65**	P	**P**	**09 27 51.9**	**-0.4**
	3.2nm,0.7s,baz=249,slow=8.7,SNR=5.6						
KOWA				LR	LR	09 38 01.3	
	comp=Z,602nm,21.9s,baz=222,slow=33						
H05S1	**Guadeloupe/Mar**	**31.34**	**293**	T	T	10 01 07.2	
	SNR=39						
H05N1	**Guadeloupe/Mar**	**32.18**	**296**	T	T	10 02 14.6	
	SNR=5.6						
PCRV	**Puerto La Cruz**	**33.91**	**284**	LR	LR	09 41 21.2	
	comp=Z,152nm,22.0s,baz=106,slow=35						
TOA1	**Torodi Ar. Sit**	**34.13**	**71**	*e*P	**P**	**09 28 34.2**	**-1.1**
TOA0	**Torodi Ar. Sit**	**34.13**	**71**	*e*P	**P**	**09 28 33.6**	**-1.7**
TOA0				*e*P	**P**	**09 28 34.6**	**-0.8**
TORD	**Torodi Ar. Bea**	**34.13**	**71**	P	**P**	**09 28 34.2**	**-1.1**
	3.2nm,0.6s,baz=252,slow=7.8						
TORD				LR	LR	09 41 12.6	
	comp=Z,310nm,18.3s,baz=295,slow=34						
SIV	**San Ignacio**	**34.95**	**237**	P	**P**	**09 28 42.9**	**+0.4**
	1.3nm,0.7s,baz=106,slow=9.2,SNR=9.2						
CPUP	**Villa Florida**	**38.48**	**219**	P	**P**	**09 29 13.3**	**+0.9**
	4.5nm,0.8s,baz=37,slow=5.5,SNR=9.1						
CPUP				LR	LR	09 44 29.8	
	comp=Z,289nm,19.2s,baz=47,slow=35						
CPUP	**Villa Florida**	**38.48**	**219**	*e*P	**P**	**09 29 12.9**	**+0.5**
	8.2nm,1.1s						
MDT	**Midelt**	**38.84**	**37**	LR	LR	09 43 17.2	
	comp=Z,447nm,21.5s,baz=246,slow=33						
LPAZ	**La Paz**	**41.13**	**241**	P	**P**	**09 29 35.5**	**+0.3**
	2.4nm,0.9s,baz=3.0,slow=1.9,SNR=6.8						
LPAZ				LR	LR	09 46 12.3	
	comp=Z,595nm,20.6s,baz=45,slow=36						
LPAZ	**La Paz**	**41.13**	**241**	*e*P	**P**	**09 29 35.3**	**0.0**
LPAZ				*e*pP	**P**	**09 29 35.7**	**+0.4**
ROSC	**El Rosal**	**43.00**	**274**	P	**P**	**09 29 51.5**	**+1.1**
	3.6nm,0.3s,baz=53,slow=20,SNR=2.8						
ROSC				LR	LR	09 47 08.9	
	comp=Z,301nm,20.8s,baz=67,slow=35						
ROSC	**El Rosal**	**43.00**	**274**	*e*P	**P**	**09 29 51.0**	**+0.6**
	9.1nm,1.1s						
ESDC	**Sonseca Array**	**44.19**	**31**	P	**P**	**09 30 00.3**	**+1.2**
	1.8nm,0.7s,baz=229,slow=9.0,SNR=8.2						
ESDC				LR	LR	09 46 00.7	
	comp=Z,58nm,20.4s,baz=110,slow=33						
GO02	**Mina Guanaco**	**46.48**	**231**	*e*P	**P**	**09 30 18.3**	**+0.4**
	22nm,0.9s						
KEST	**Kesra**	**49.74**	**44**	LR	LR	09 53 23.6	
	comp=Z,264nm,18.0s,baz=216,slow=38						
VAE	**Valguarnera**	**54.14**	**45**	LR	LR	09 54 36.6	
	comp=Z,188nm,18.2s,baz=158,slow=36						
PLCA	**Paso Flores**	**56.32**	**215**	LR	LR	09 56 10.5	
	comp=Z,213nm,18.2s,baz=68,slow=37						
DAVOX	**Davos/Dischmat**	**56.39**	**33**	LR	LR	09 52 44.1	
	comp=Z,56nm,21.5s,baz=264,slow=33						
TKL	**Tuckaleechee C**	**58.38**	**311**	LR	LR	09 51 21.1	
	comp=Z,148nm,21.9s,baz=113,slow=30						
V51A	**Loudon**	**58.87**	**311**	*e*P	**P**	**09 31 49.4**	**+0.3**
	8.1nm,1.1s						
CPCT	**Cooper Cave**	**58.87**	**310**	*e*P	**P**	**09 31 49.4**	**+0.2**
	7.3nm,1.1s						
Z50A	**Ashland**	**59.23**	**307**	*e*P	**P**	**09 31 52.3**	**+0.6**
	11nm,1.1s						
SCHQ	**Schefferville**	**59.25**	**337**	P	**P**	**09 31 50.8**	**-0.7**
	7.3nm,0.7s,baz=89,slow=4.7,SNR=4.4						
SCHQ				LR	LR	09 55 37.6	
	comp=Z,50nm,18.1s,baz=0.0,slow=34						
SCHQ	**Schefferville**	**59.25**	**337**	*e*P	**P**	**09 31 50.8**	**-0.7**
	11nm,0.9s						
GERES	**GERESS Array B**	**59.69**	**33**	LR	LR	09 54 51.3	
	comp=Z,72nm,21.3s,baz=288,slow=33						
Y49A	**Blount Mountai**	**59.80**	**308**	*e*P	**P**	**09 31 56.2**	**+0.6**
	5.8nm,0.8s						
SWET	**Sewanee**	**59.87**	**309**	*e*P	**P**	**09 31 56.6**	**+0.4**
	9.5nm,0.8s						
LRAL	**Lakeview Retre**	**60.02**	**307**	*e*P	**P**	**09 31 57.2**	**+0.2**
	6.1nm,1.0s						
V48A	**Smith Brothers**	**60.73**	**310**	*e*P	**P**	**09 32 02.3**	**+0.3**
	6.0nm,0.8s						
IDI	**Anoyia**	**61.04**	**51**	LR	LR	10 01 31.1	
	comp=Z,40nm,18.2s,baz=270,slow=39						
T47A	**Sharon Grove**	**61.36**	**311**	*e*P	**P**	**09 32 06.3**	**+0.1**
	10.0nm,0.8s						
PLAL	**Pickwick Lake**	**61.46**	**309**	*e*P	**P**	**09 32 06.2**	**-0.7**
	6.9nm,0.9s						
BOSA	**Boshof**	**62.59**	**124**	P	**P**	**09 32 14.6**	**-0.2**
	13nm,1.1s,baz=290,slow=5.3,SNR=5.7						
BOSA				LR	LR	09 54 05.1	
	comp=Z,94nm,21.6s,baz=230,slow=31						
OLIL	**Olney**	**62.69**	**313**	*e*P	**P**	**09 32 15.5**	**+0.4**
	14nm,0.9s						
143A	**Socs Landing,**	**63.49**	**305**	*e*P	**P**	**09 32 21.6**	**+1.2**
	26nm,1.0s						
PBMO	**Poplar Bluff**	**63.83**	**310**	*e*P	**P**	**09 32 22.4**	**-0.2**
	5.8nm,1.0s						
T42A	**Van Buren**	**64.41**	**310**	*e*P	**P**	**09 32 26.9**	**+0.5**
	5.0nm,0.9s						
W41B	**Gary Mavity, V**	**64.80**	**308**	*e*P	**P**	**09 32 28.5**	**-0.5**
	4.7nm,0.9s						
MLR	**Muntele Rosu**	**65.39**	**41**	LR	LR	10 00 25.2	
	comp=Z,17nm,19.3s,baz=231,slow=36						
V40A	**Witts Springs**	**65.41**	**308**	*e*P	**P**	**09 32 32.4**	**-0.7**
	5.9nm,0.9s						
P40A	**Paris**	**65.86**	**312**	*e*P	**P**	**09 32 35.7**	**-0.1**
	5.1nm,0.9s						
NB2	**NORSAR Subarra**	**66.25**	**21**	P	**P**	**09 32 37.7**	**-0.4**
	comp=Z,6.6nm,1.0s,baz=228,slow=6.5						
HFS	**Hagfors**	**66.58**	**23**	LR	LR	09 58 32.4	
	comp=Z,31nm,19.0s,baz=233,slow=33						
MMAI	**Mount Meron Ar**	**68.91**	**56**	LR	LR	10 05 01.3	
	comp=Z,50nm,18.2s,baz=40,slow=38						
BR101	**Keskin Array S**	**68.97**	**48**	*e*P	**P**	**09 32 56.6**	**+0.9**
BRTR	**Keskin Array B**	**68.97**	**48**	P	**P**	**09 32 56.6**	**+0.9**
	comp=Z,0.8nm,0.7s,baz=270,slow=4.3,SNR=2.8						
BRTR				LR	LR	10 05 18.4	
	comp=Z,51nm,18.3s,baz=260,slow=38						
D36A	**Goodland**	**69.03**	**320**	*e*P	**P**	**09 32 54.7**	**-1.1**
	comp=Z,11nm,0.6s						
833A	**Chaparral WMA,**	**69.40**	**299**	*e*P	**P**	**09 32 58.4**	**-0.1**
	comp=Z,14nm,1.1s						
SUMG	**Summit**	**69.71**	**358**	*e*P	**P**	**09 33 00.1**	**+0.1**
	comp=Z,5.2nm,1.0s						
JCT	**Junction City**	**70.06**	**301**	*e*P	**P**	**09 33 02.0**	**-0.6**
	comp=Z,9.8nm,0.9s						
AGMN	**Agassiz Nation**	**71.11**	**320**	*e*P	**P**	**09 33 07.5**	**-1.1**
ULM	**Lac du Bonnet**	**71.72**	**322**	LR	LR	09 59 02.9	
	comp=Z,65nm,21.3s,baz=156,slow=31						
FIA0	**FINESS Array S**	**72.34**	**25**	*e*P	**P**	**09 33 14.6**	**-1.1**
FINES	**FINESS Array B**	**72.34**	**25**	P	**P**	**09 33 14.6**	**-1.1**
	comp=Z,2.1nm,0.8s,baz=266,slow=12,SNR=4.0						
FINES				LR	LR	10 03 42.1	
	comp=Z,58nm,18.7s,baz=248,slow=35						
LTX	**Lajitas**	**73.25**	**300**	*e*P	**P**	**09 33 21.5**	**-0.4**
TXAR	**Lajitas Array**	**73.25**	**300**	P	**P**	**09 33 21.5**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=130,slow=6.9,SNR=16						
TX31	**Lajitas Ar. Si**	**73.25**	**300**	*e*P	**P**	**09 33 21.1**	**-0.7**
TX31				*e*P	**P**	**09 33 21.7**	**-0.2**
ATD	**Arta Tunnel**	**73.86**	**79**	LR	LR	10 05 21.7	
	comp=Z,88nm,18.0s,baz=294,slow=35						
MNTX	**Cornudas Mount**	**74.97**	**302**	*e*P	**P**	**09 33 31.7**	**-0.1**
	comp=Z,3.9nm,0.9s						
SDCO	**Great Sand Dun**	**75.77**	**308**	*e*P	**P**	**09 33 36.5**	**-0.1**
	comp=Z,2.3nm,1.1s						
ARA0	**ARCESS Array S**	**76.12**	**18**	*e*P	**P**	**09 33 37.2**	**-0.4**
ARCES	**ARCESS Array B**	**76.12**	**18**	P	**P**	**09 33 37.2**	**-0.4**
	comp=Z,2.7nm,0.8s,baz=237,slow=4.2,SNR=12						
ISCO	**Idaho Springs**	**76.13**	**310**	*e*P	**P**	**09 33 39.1**	**+0.5**
	comp=Z,3.0nm,1.0s						
ANMO	**Albuquerque**	**76.20**	**305**	LR	LR	10 02 07.9	
	comp=Z,97nm,22.0s,baz=98,slow=32						
ANMO	**Albuquerque**	**76.20**	**305**	*e*P	**P**	**09 33 39.8**	**+0.7**
	comp=Z,1.7nm,1.0s						
N23A	**Red Feather La**	**76.53**	**311**	*e*P	**P**	**09 33 40.7**	**-0.1**
	comp=Z,3.9nm,1.0s						
DGMT	**Dagmar**	**76.54**	**319**	*e*P	**P**	**09 33 40.6**	**+0.2**
	comp=Z,17nm,0.8s						
FFC	**Flin Flon**	**76.56**	**326**	*e*P	**P**	**09 33 41.2**	**+0.8**
	comp=Z,3.7nm,0.9s						
KBZ	**Khabaz**	**76.56**	**46**	P	**P**	**09 33 41.3**	**+0.7**
	comp=Z,0.7nm,0.5s,baz=309,slow=6.5,SNR=2.5						
KBZ				LR	LR	10 10 13.9	
	comp=Z,41nm,20.0s,baz=242,slow=38						
SNAA	**Sanae**	**76.71**	**171**	P	**P**	**09 33 41.8**	**+0.9**
	comp=Z,4.0nm,0.8s,baz=341,slow=6.7,SNR=20						
SNAA	**Sanae**	**76.71**	**171**	*e*P	**P**	**09 33 41.3**	**+0.4**
	comp=Z,8.8nm,1.0s						
GNI	**Garni**	**77.43**	**50**	LR	LR	10 10 36.9	
	comp=Z,54nm,18.9s,baz=260,slow=38						
O20A	**White River Ci**	**78.17**	**310**	*e*P	**P**	**09 33 51.4**	**+1.4**
	comp=Z,3.9nm,0.8s						
319A	**Douglas**	**78.26**	**301**	*e*P	**P**	**09 33 53.2**	**+2.6**
	comp=Z,4.8nm,0.9s						
LPIG	**La Paz**	**78.82**	**294**	LR	LR	10 06 23.6	
	comp=Z,28nm,21.8s,baz=36,slow=34						
SPITS	**Spitsbergen Ar**	**79.15**	**9**	LR	LR	10 03 54.2	
	comp=Z,36nm,18.4s,baz=265,slow=32						
PD31	**Pinedale Array**	**79.43**	**313**	*e*P	**P**	**09 33 56.3**	**-0.6**
PDAR	**Pinedale Array**	**79.43**	**313**	P	**P**	**09 33 56.3**	**-0.6**
	comp=Z,0.3nm,0.5s,baz=79,slow=7.7,SNR=3.6						
PDAR				LR	LR	10 04 19.6	
	comp=Z,78nm,21.7s,baz=120,slow=32						
TUC	**Tucson**	**79.59**	**302**	*e*P	**P**	**09 33 58.3**	**+0.5**
	comp=Z,5.3nm,1.1s						
P18A	**Preston Nutter**	**79.66**	**310**	*e*P	**P**	**09 33 58.4**	**+0.1**
	comp=Z,4.3nm,1.0s						
X16A	**Lo Mia Camp, P**	**80.25**	**304**	*e*P	**P**	**09 34 03.2**	**+1.7**
	comp=Z,3.2nm,1.0s						
WUAZ	**Wupatki**	**80.26**	**305**	*e*P	**P**	**09 34 01.8**	**+0.3**
	comp=Z,3.1nm,0.9s						
RPN	**Rapa Nui**	**80.73**	**242**	LR	LR	10 06 49.0	
	comp=Z,94nm,18.3s,baz=344,slow=33						
HWUT	**Hardware Ranch**	**80.82**	**312**	*e*P	**P**	**09 34 05.3**	**+0.9**
	comp=Z,4.1nm,0.9s						
MTPU	**Mount Pierson**	**81.06**	**308**	*e*P	**P**	**09 34 06.6**	**+0.6**
	comp=Z,5.0nm,1.0s						
CCUT	**Cedar City**	**81.97**	**307**	*e*P	**P**	**09 34 11.1**	**+0.5**
	comp=Z,2.6nm,1.0s						
W13A	**Hualapai Mount**	**82.29**	**305**	*e*P	**P**	**09 34 15.4**	**+3.0**
	comp=Z,4.0nm,1.1s						
YKA	**Yellowknife Ar**	**84.34**	**332**	P	**P**	**09 34 21.1**	**-0.9**
	comp=Z,2.1nm,0.8s,baz=96,slow=5.5,SNR=5.4						
YKA				LR	LR	10 07 08.1	
	comp=Z,6.4nm,21.5s,baz=82,slow=32						
BMO	**Blue Mountains**	**85.15**	**315**	*e*P	**P**	**09 34 26.8**	**+0.2**
	comp=Z,4.3nm,1.0s						
NV01	**Mina Array Sit**	**85.88**	**308**	*e*P	**P**	**09 34 30.2**	**-0.3**
NVAR	**Mina Array Bea**	**85.88**	**308**	P	**P**	**09 34 30.2**	**-0.3**
	comp=Z,0.7nm,0.8s,baz=94,slow=5.0,SNR=4.9						
NVAR				LR	LR	10 10 29.2	
	comp=Z,26nm,19.1s,baz=266,slow=34						
J08A	**Circle Bar Ran**	**85.98**	**313**	*e*P	**P**	**09 34 31.4**	**+0.6**
	comp=Z,3.6nm,0.9s						
AKTO	**Aktyubinsk**	**87.31**	**40**	LR	LR	10 12 55.7	
	comp=Z,31nm,21.4s,baz=267,slow=35						
GEYT	**Alibeck**	**87.74**	**52**	LR	LR	10 19 26.2	
	comp=Z,31nm,18.4s,baz=225,slow=39						
WSAR	**Wadi Sarin**	**88.77**	**67**	LR	LR	10 15 35.7	
	comp=Z,188nm,18.0s,baz=274,slow=36						
YBH	**Yreka Blue Hor**	**89.16**	**312**	LR	LR	10 10 35.3	
	comp=Z,67nm,21.7s,baz=92,slow=33						
BVAR	**Borovoye Array**	**94.68**	**36**	LR	LR	10 18 04.4	
	comp=Z,37nm,19.1s,baz=278,slow=36						
IL1	**Eielson Array**	**98.02**	**337**	*e*P	**P**	**09 35 25.0**	**-1.2**
ILAR	**Eielson Array**	**98.02**	**337**	P	**P**	**09 35 25.4**	**-0.9**
	comp=Z,0.8nm,0.9s,baz=47,slow=3.0,SNR=7.7						
ILB	**Eielson Array**	**98.02**	**337**	*e*P	**P**	**09 35 25.4**	**-0.9**
STKA	**Stephens Creek**	**150.42**	**168**	PKPbc	**PKPbc**	**09 41 41.7**	**-0.7**
	comp=Z,3.6nm,0.9s,baz=214,slow=4.7,SNR=3.6						
STKA	**Stephens Creek**	**150.42**	**168**	*e*PKPdf	**PKPdf**	**09 41 39.2**	**+2.1**
FITZ	**Fitzroy Crossi**	**152.80**	**125**	PKPbc	**PKPbc**	**09 41 48.2**	**+0.1**
	comp=Z,5.7nm,1.1s,baz=219,slow=6.5,SNR=5.1						
ASAR	**Alice Springs**	**154.87**	**146**	PKP	**PKPdf**	**09 41 44.1**	**+0.2**
	comp=Z,0.6nm,0.8s,baz=180,slow=1.6,SNR=3.6						
ASAR				PKPbc	**PKPbc**	**09 41 51.5**	**-1.0**
	comp=Z,0.5nm,0.8s,baz=187,slow=2.6,SNR=5.2						
ASAR				PKPab	**PKPab**	**09 42 06.3**	**-1.3**
	comp=Z,1.1nm,1.0s,baz=191,slow=4.3,SNR=4.8						
AS31	**Alice Springs**	**154.88**	**146**	*e*PKPdf	**PKPdf**	**09 41 44.1**	**+0.2**
AS31				*e*PKPbc	**PKPbc**	**09 41 51.5**	**-1.0**
AS31				*e*PKPab	**PKPab**	**09 42 06.3**	**-1.3**
WR1	**Warramunga Arr**	**158.00**	**141**	*e*PKPab	**PKPab**	**09 42 19.7**	**-1.4**
WRA	**Warramunga Arr**	**158.00**	**141**	PKPab	**PKPab**	**09 42 19.7**	**-1.4**
	comp=Z,1.3nm,1.0s,baz=218,slow=3.5,SNR=5.2						

IDC 17 09:23:54.3±2.2, 31°.42S×179°.52W, h0^{km}, mb4.0/4, mb1 4.1/5, mb1mx3.8/42, mbtmp3.9/5, ML3.2/1, Error ellipse: s-maj=56.0km s-min=30.9km az=52.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**7.36**	**201**	Pn	Pn	09 25 43.0	0.0
	0.4nm,0.3s,baz=14,slow=8.3,SNR=2.2						
ASAR	**Alice Springs**	**41.77**	**269**	P	P	09 31 46.1	+0.6
	1.5nm,0.8s,baz=106,slow=7.8,SNR=12						
WRA	**Warramunga Arr**	**42.85**	**274**	P	P	09 31 54.3	-0.1
	1.6nm,0.8s,baz=114,slow=7.5,SNR=12						
FITZ	**Fitzroy Crossi**	**51.07**	**271**	P	P	09 32 57.6	-1.1
	2.0nm,0.8s,baz=97,slow=8.1,SNR=3.7						
QSPA	**South Pole Qui**	**58.69**	**180**	P	P	09 33 53.3	-0.2
	2.0nm,0.8s,baz=355,slow=2.8,SNR=3.9						
H10S2	**ASCENSION HYDR**	**137.31**	**158**	T	T	12 16 46.2	
	baz=204,slow=75,SNR=9.4						
H10S3	**ASCENSION HYDR**	**137.31**	**158**	T	T	12 16 47.0	
	baz=204,slow=75,SNR=7.2						
H10S1	**ASCENSION HYDR**	**137.33**	**158**	T	T	12 16 54.3	
	baz=204,slow=75,SNR=7.9						
H10N3	**ASCENSION HYDR**	**138.41**	**157**	T	T	12 18 13.3	
	baz=203,slow=75,SNR=10						
H10N1	**ASCENSION HYDR**	**138.41**	**157**	T	T	12 18 19.3	
	baz=203,slow=75,SNR=15						
H10N2	**ASCENSION HYDR**	**138.43**	**157**	T	T	12 18 20.3	
	baz=203,slow=75,SNR=12						
BRTR	**Keskin Array B**	**151.91**	**296**	PKPbc	PKPbc	09 43 51.5	+0.1
	0.7nm,0.9s,baz=25,slow=3.8,SNR=2.6						

MAN 17 09:26:09.4, 19°.22N×122°.66E, h34^{km}, mb4.7, ML3.6, MS3.4, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SGCP	**Mt. Cagua**	**1.14**	**211**	*e*P	Pn	09 26 28.1	-0.7
SGCP				*e*S	Sb	09 26 47.4	+2.4
BBP	**Basco**	**1.38**	**332**	⇓*i*P	Pn	09 26 33.4	+1.1
BBP				*i* S	Sn	09 26 49.2	-0.2
APYP	**Conner**	**1.91**	**225**	*e*P	Pb	09 26 42.8	-0.8
APYP				*e*S	Sn	09 27 03.0	+0.7

INMG ***17*** *09:26:07.9±1.0, 32°.84N×3°.18W, h24^{km}±7^{km}, MD3.3, ML3.0, Error ellipse: s-maj=6.3km s-min=4.8km az=144.0*

CNRM ***17*** *09:26:08.1, 32°.79N×3°.28W, h10^{km}, ML3.9*

MDD ***17*** *09:26:08.4±1.2, 32°.83N×3°.50W, h0^{km}, mb3.9/7, Error ellipse: s-maj=12.5km s-min=8.3km az=140.0, PRXIMO*

SFS ***17*** *09:26:09.0, 32°.88N×3°.57W, h0^{km}, ML4.0*

ISCJB ***17*** *09:26:10.8±1.0, 33°.20N±0°.04×3°.69W±0°.06, h2^{km}±9^{km}, Error ellipse: s-maj=10.5km s-min=4.7km az=36.0*

CSEM ***17*** *09:26:11.9±0.4, 33°.08N×3°.59W, h10^{km}, mb3.9, Error ellipse: s-maj=8.7km s-min=4.7km az=122.0*

ISC 17 09:26:10.1±1.8, 33°.04N±0°.06×3°.53W±0°.06, h9^{km}±13^{km}, n85, σ1^{s}.41/146, 1C, Morocco

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MDT	**Midelt**	**0.94**	**257**	P	**Pn**	**09 26 30.5**	**+0.9**
MDT				S	**Sn**	**09 26 44.9**	**+1.7**
CZD	**Col de Zad**	**1.27**	**270**	P	**Pg**	**09 26 35.0**	**+0.4**
CZD				S	**Sn**	**09 26 55.1**	**+3.4**
CZD	**Col de Zad**	**1.27**	**270**	P	**Pg**	**09 26 35.0**	**+0.4**
CZD				S	**Sn**	**09 26 55.1**	**+3.4**
TFT	**Tounfite**	**1.76**	**237**	P	**Pg**	**09 26 43.5**	**-0.5**
SICH	**Sidi Chahed**	**1.84**	**306**	P	**Pb**	**09 26 44.9**	**+1.0**
MPAL	**Palemas**	**2.21**	**351**	P	**Pn**	**09 26 49.2**	**+2.2**
MPAL				S	**Sn**	**09 27 16.2**	**+1.7**
MPAL	**Palemas**	**2.21**	**351**	P	**Pn**	**09 26 49.2**	**+2.2**
MPAL				S	**Sn**	**09 27 16.2**	**+1.7**
PVLZ	**Peæn de**	**2.23**	**343**	*e*P	**Pb**	**09 26 50.6**	**+0.1**
CHEFC	**Chefchaouen**	**2.56**	**324**	P	**Pn**	**09 26 54.8**	**+3.0**
CHEFC				S	**Sn**	**09 27 27.3**	**+4.2**
RSA	**Sarsar**	**2.65**	**314**	P	**Pn**	**09 26 55.5**	**+2.4**
RSA				S	**Sn**	**09 27 28.8**	**+3.4**
RSA	**Sarsar**	**2.65**	**314**	P	**Pn**	**09 26 55.5**	**+2.4**
RSA				S	**Sn**	**09 27 28.8**	**+3.4**
AVE	**Averroes**	**3.27**	**276**	*e*P	**Pn**	**09 27 03.1**	**+1.6**
EMIJ	**Mijas**	**3.67**	**344**	P	**Pn**	**09 27 06.9**	**-0.1**
	0.1nm,0.0s,SNR=7.9						
EMIJ				S	**Sn**	**09 27 50.2**	**-0.2**
	2.5nm,0.3s,SNR=7.9						
EMIJ	**Mijas**	**3.67**	**344**	P	**Pn**	**09 27 06.9**	**-0.1**
	0.1nm,0.0s,SNR=7.9						
EMIJ				S	**Sn**	**09 27 50.2**	**-0.2**
	2.5nm,0.3s,SNR=7.9						
ELGU	**Los Guajares,**	**3.82**	**359**	P	**Pn**	**09 27 09.8**	**+0.5**
	0.8nm,0.1s,SNR=7.9						
ELGU				S	**Sn**	**09 27 53.7**	**-0.6**
	0.8nm,0.2s,SNR=7.9						
ELGU	**Los Guajares,**	**3.82**	**359**	P	**Pn**	**09 27 09.8**	**+0.5**
	0.8nm,0.1s,SNR=7.9						
ELGU				S	**Sn**	**09 27 53.7**	**-0.6**
	0.8nm,0.2s,SNR=7.9						
EBER	**Berja**	**3.89**	**8**	P	**Pn**	**09 27 11.2**	**+0.9**
	0.0nm,0.0s,SNR=7.9						
EBER				S	**Sn**	**09 27 56.0**	**-0.1**
	1.0nm,0.2s,SNR=7.9						
EBER	**Berja**	**3.89**	**8**	P	**Pn**	**09 27 11.2**	**+0.9**
	SNR=7.9						
EBER				S	**Sn**	**09 27 56.0**	**-0.1**
	1.0nm,0.2s,SNR=7.9						
EGOR	**Sierra Gorda,**	**4.09**	**353**	P	**Pn**	**09 27 14.5**	**+1.5**
	4.7nm,0.4s,SNR=7.9						
EGOR	**Sierra Gorda,**	**4.09**	**353**	P	**Pn**	**09 27 14.5**	**+1.5**
	4.7nm,0.4s,SNR=7.9						
OUK	**Oukaimeden**	**4.11**	**245**	P	**Pn**	**09 27 12.7**	**-0.7**
OUK				S	**Sb**	**09 28 05.5**	**-7.2**
OUK	**Oukaimeden**	**4.11**	**245**	P	**Pn**	**09 27 12.7**	**-0.7**
EQUE	**Quentar**	**4.16**	**1**	P	**Pn**	**09 27 15.4**	**+1.5**
	1.5nm,0.2s,SNR=6.6						
EQUE	**Quentar**	**4.16**	**1**	P	**Pn**	**09 27 15.4**	**+1.5**
	1.5nm,0.2s,SNR=6.6						
EQES	**Quesada**	**4.77**	**4**	P	**Pn**	**09 27 24.2**	**+1.9**
	0.1nm,0.1s,SNR=12						
EQES				S	**Sn**	**09 28 18.4**	**+0.6**
	0.7nm,0.2s,SNR=7.9						
EQES	**Quesada**	**4.77**	**4**	P	**Pn**	**09 27 24.2**	**+1.9**
	0.1nm,0.1s,SNR=12						
EQES				S	**Sn**	**09 28 18.4**	**+0.6**
	0.7nm,0.2s,SNR=7.9						
TTIG	**Tnine Tigouga,**	**4.86**	**241**	P	**Pn**	**09 27 23.3**	**-0.3**
TTIG				S	**Sn**	**09 28 22.0**	**+1.9**
HORN	**Hornachuelos**	**5.00**	**344**	P	**Pn**	**09 27 26.5**	**+1.1**
HORN				S	**Sn**	**09 28 28.3**	**+5.0**
SESP	**Santiago Espad**	**5.13**	**9**	P	**Pn**	**09 27 29.4**	**+2.1**
	1.4nm,0.2s,SNR=7.9						
SESP				S	**Sn**	**09 28 28.2**	**+1.4**
	14nm,0.4s,SNR=7.9						
SESP	**Santiago Espad**	**5.13**	**9**	P	**Pn**	**09 27 29.4**	**+2.1**
	1.4nm,0.2s,SNR=7.9						
SESP				S	**Sn**	**09 28 28.2**	**+1.4**
	14nm,0.4s,SNR=7.9						
EMUR	**La Murta**	**5.15**	**21**	P	**Pn**	**09 27 27.8**	**+0.4**
	0.3nm,0.1s,SNR=7.9						
EMUR	**La Murta**	**5.15**	**21**	P	**Pn**	**09 27 27.8**	**+0.4**
	0.3nm,0.1s,SNR=7.9						
ECAB	**El Cabril**	**5.26**	**343**	P	**Pn**	**09 27 31.4**	**+2.6**
	0.0nm,0.1s,SNR=7.9						
ECAB				S	**Sn**	**09 28 30.4**	**+0.8**
	1.2nm,0.4s,SNR=7.9						
ECAB	**El Cabril**	**5.26**	**343**	P	**Pn**	**09 27 31.5**	**+2.6**
	SNR=7.9						
ECAB				S	**Sn**	**09 28 30.5**	**+0.8**
	1.2nm,0.4s,SNR=7.9						
EMIN	**Mina Concepcio**	**5.37**	**332**	P	**Pn**	**09 27 29.5**	**-1.0**
	0.0nm,0.1s,SNR=31						
EMIN				S	**Sn**	**09 28 31.1**	**-1.4**
	0.3nm,0.4s,SNR=5.1						
EMIN	**Mina Concepcio**	**5.37**	**332**	P	**Pn**	**09 27 29.5**	**-1.0**
	SNR=31						
EMIN				S	**Sn**	**09 28 31.1**	**-1.4**
	0.3nm,0.4s,SNR=5.1						
EGRO	**El Granado**	**5.53**	**325**	⇑P	**Pn**	**09 27 32.5**	**-0.1**
	1.5nm,0.1s,SNR=18						

EGRO				S	Sn	09 28 34.8	-1.5
	3.7nm,0.2s,SNR=7.9						
EGRO	El Granado	5.53	325	P	Pn	09 27 32.5	-0.1
	1.5nm,0.1s,SNR=18						
EGRO				S	Sn	09 28 34.8	-1.5
	3.7nm,0.2s,SNR=7.9						
PBDV	Barranco-do-Ve	5.53	321	ePn	Pn	09 27 32.7	0.0
PBDV				eSn	Sn	09 28 36.7	+0.3
PBDV				A	A	09 28 47.2	
	7.2nm,0.3s						
PBDV	Barranco-do-Ve	5.53	321	P	Pn	09 27 32.7	0.0
PBDV				S	Sn	09 28 36.7	+0.3
	7.2nm,0.3s						
PBDV	Barranco-do-Ve	5.53	321	P	Pn	09 27 32.7	0.0
PBDV				S	Sn	09 28 36.7	+0.3
	7.2nm,0.3s						
PVAQ	Vaqueiros	5.54	323	ePn	Pn	09 27 32.9	+0.1
PVAQ				eSn	Sn	09 28 36.2	-0.4
PVAQ				A	A	09 28 38.9	
	16nm,0.4s						
PVAQ	Vaqueiros	5.54	323	P	Pn	09 27 32.4	-0.4
PVAQ				S	Sn	09 28 37.2	+0.5
PVAQ	Vaqueiros	5.54	323	P	Pn	09 27 32.4	-0.4
PVAQ	Vaqueiros	5.54	323	ePn	Pn	09 27 32.9	+0.1
PVAQ				eSn	Sn	09 28 36.2	-0.4
PVAQ				S	Sn	09 28 37.2	+0.5
ETOB	Tobarra	5.82	15	P	Pn	09 27 37.8	+1.1
	0.2nm,0.1s,SNR=7.9						
ETOB				S	Sn	09 28 41.6	-2.0
	0.9nm,0.4s,SNR=7.9						
ETOB	Tobarra	5.82	15	P	Pn	09 27 37.8	+1.1
	0.2nm,0.1s,SNR=7.9						
ETOB				S	Sn	09 28 41.6	-2.0
	0.9nm,0.4s,SNR=7.9						
PBAR	Barrancos	5.87	332	ePn	Pn	09 27 37.5	+0.2
PBAR				A	A	09 28 50.1	
	14nm,0.5s						
PBAR	Barrancos	5.87	332	P	Pn	09 27 37.5	+0.2
PBAR	Barrancos	5.87	332	P	Pn	09 27 37.5	+0.2
PCVE	Castro Verde	5.88	322	ePn	Pn	09 27 37.6	+0.1
PCVE				eSn	Sn	09 28 44.5	-0.5
PCVE				A	A	09 28 49.1	
	5.1nm,0.2s						
PCVE	Castro Verde	5.88	322	P	Pn	09 27 37.6	+0.1
PCVE				S	Sn	09 28 44.5	-0.5
	5.1nm,0.2s						
PCVE	Castro Verde	5.88	322	P	Pn	09 27 37.6	+0.1
PCVE				S	Sn	09 28 44.5	-0.5
	5.1nm,0.2s						
PFVI	Vila Bisbo	5.96	315	ePn	Pn	09 27 38.9	+0.3
PFVI				eSn	Sn	09 28 47.5	+0.5
PFVI				A	A	09 28 58.8	
	9.5nm,0.6s						
PFVI	Vila Bisbo	5.96	315	P	Pn	09 27 38.9	+0.3
	4.2nm,0.2s,SNR=11						
PFVI				S	Sn	09 28 44.9	-2.1
	45nm,0.6s,SNR=7.9						
PFVI	Vila Bisbo	5.96	315	P	Pn	09 27 38.9	+0.3
	4.2nm,0.2s,SNR=11						
PFVI				S	Sn	09 28 44.9	-2.1
	45nm,0.6s,SNR=7.9						
PFVI				eSn	Sn	09 28 47.5	+0.5
MESJ	Messejana	6.13	323	ePn	Pn	09 27 41.2	+0.3
MESJ				eSn	Sn	09 28 51.3	+0.1
MESJ				A	A	09 28 58.5	
	6.5nm,0.2s						
MESJ	Messejana	6.13	323	P	Pn	09 27 41.2	+0.3
MESJ				S	Sn	09 28 51.3	+0.1
	6.5nm,0.2s						
MESJ	Messejana	6.13	323	P	Pn	09 27 41.2	+0.3
MESJ				S	Sn	09 28 51.3	+0.1
	6.5nm,0.2s						
PTEO	Sao Teotonio	6.19	318	ePn	Pn	09 27 42.2	+0.6
PTEO				eSn	Sn	09 28 53.0	+0.5
PTEO				A	A	09 28 56.7	
	9.6nm,0.9s						
PTEO	Sao Teotonio	6.19	318	P	Pn	09 27 42.2	+0.6
PTEO				S	Sn	09 28 53.0	+0.5
	4.8nm,0.9s						
PTEO	Sao Teotonio	6.19	318	P	Pn	09 27 42.2	+0.6
PTEO				S	Sn	09 28 53.0	+0.5
	4.8nm,0.9s						
EBAD	Badajoz	6.37	335	P	Pn	09 27 44.2	+0.1
	0.2nm,0.1s,SNR=9.5						
EBAD				S	Sn	09 28 56.0	-0.9
	2.5nm,0.2s,SNR=7.9						
EBAD	Badajoz	6.37	335	P	Pn	09 27 44.2	+0.1
	0.2nm,0.1s,SNR=9.5						
EBAD				S	Sn	09 28 56.0	-0.9
	2.5nm,0.2s,SNR=7.9						
EVO	Evora	6.58	328	ePn	Pn	09 27 47.1	0.0
EVO				eSn	Sn	09 29 02.9	+0.6
EVO	Evora	6.58	328	P	Pn	09 27 47.1	0.0
EVO				S	Sn	09 29 02.9	+0.6
EVO	Evora	6.58	328	P	Pn	09 27 47.1	0.0
EVO				S	Sn	09 29 02.9	+0.6
PESTR	Estremoz	6.69	332	ePn	Pn	09 27 49.4	+0.9
PESTR				eSn	Sn	09 29 05.2	+0.4
PESTR	Estremoz	6.69	332	ePn	Pn	09 27 49.4	+0.9
PESTR				eSn	Sn	09 29 05.2	+0.4
PMRV	Marv??o	7.10	335	ePn	Pn	09 27 54.5	+0.3
PMRV				eSn	Sn	09 29 14.4	-0.6
PMRV	Marv??o	7.10	335	P	Pn	09 27 54.5	+0.3
PMRV				S	Sn	09 29 14.4	-0.6
PMRV	Marv??o	7.10	335	P	Pn	09 27 54.5	+0.3
PMRV				S	Sn	09 29 14.4	-0.6
PMTG	Montargil	7.12	329	ePn	Pn	09 27 54.6	+0.2
PMTG				eSn	Sn	09 29 15.0	-0.4
PMTG				A	A	09 29 37.5	
	4.0nm,0.5s						
PMTG	Montargil	7.12	329	ePn	Pn	09 27 54.6	+0.2
PMTG				eSn	Sn	09 29 15.0	-0.4
ALMR	Almeirim	7.35	328	ePn	Pn	09 27 58.3	+0.8
ALMR	Almeirim	7.35	328	P	Pn	09 27 58.3	+0.8
ALMR	Almeirim	7.35	328	P	Pn	09 27 58.3	+0.8
PMAFR	Mafra	7.52	323	ePn	Pn	09 28 00.8	+0.8
PMAFR	Mafra	7.52	323	ePn	Pn	09 28 00.8	+0.8
PTOM	Tomar	7.66	330	ePn	Pn	09 28 02.4	+0.6
PTOM	Tomar	7.66	330	P	Pn	09 28 02.4	+0.6
PTOM	Tomar	7.66	330	P	Pn	09 28 02.4	+0.6
PVIS	Viseu	8.42	337	ePn	Pn	09 28 12.2	-0.2
PVIS	Viseu	8.42	337	P	Pn	09 28 12.2	-0.2
PVIS	Viseu	8.42	337	P	Pn	09 28 12.2	-0.2

KRAR ***17*** *10:06:33.8±0.2, 53°.54N×87°.63E, M1.9, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

IDC 17 10:06:40.0±3.0**, 53°.40N×87°.66E, h0^{km}, mb1 2.8**/2**, mb1mx2.6**/72**, mbtmp2.8**/2**, ML2.4**/2**, Error ellipse: s-maj=27.3km s-min=17.0km az=62.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.77	289	i		10 18 28.6	
	baz=111,slow=354,SNR=2.4						
ZALV	Zalesovo Beam	1.77	289	Pn	Pn	10 07 10.6	-1.3
	1.1nm,0.3s,baz=104,slow=15,SNR=7.7						
ZALV				Lg	Lg	10 07 35.5	
	2.0nm,0.3s,baz=107,slow=30,SNR=7.1						
KURBB	Kurchatov Arra	6.28	247	Pn	Pn	10 08 14.9	+1.0
	0.1nm,0.3s,baz=62,slow=14,SNR=3.5						
KURBB				Lg	Lg	10 10 01.9	
	0.0nm,0.3s,baz=63,slow=35,SNR=5.1						
MKAR	Makanchi Array	7.46	210	Pn	Pn	10 08 31.2	+1.2
	0.1nm,0.3s,baz=25,slow=14,SNR=3.9						
MKAR				Lg	Lg	10 10 38.4	
	0.1nm,0.3s,baz=33,slow=35,SNR=5.8						

NNC 17 10:14:08.8±1.0**, 36°.85N×70°.93E, h145^{km}**±27^{km}**, mb2.8, mpv3.7, 3C-3D, Error ellipse: s-maj=13.8km s-min=8.3km az=78.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.75	32	⇑P	Pn	10 15 06.2	+0.4
	6.4nm,0.4s						
SFK				⇓S	Sn	10 15 50.6	+0.4
	30nm,0.4s						
MNAS	Manas	5.76	12	⇑P	Pn	10 15 32.3	0.0
	3.5nm,0.5s						
MNAS				⇓S	Sn	10 16 38.5	+0.9
	6.2nm,0.4s						
KK31	Karatay Array	6.25	357	P	Pn	10 15 38.8	0.0
	3.9nm,0.4s,baz=170,slow=14,SNR=48						
KK31				S	Sn	10 16 49.5	+0.3
	2.3nm,0.3s,baz=178,slow=18,SNR=11						
AAK	Ala-Archa	6.40	24	⇓P	Pn	10 15 40.4	-0.5
	2.3nm,0.5s						
AAK				⇑S	Sn	10 16 53.6	+0.6
	5.8nm,0.5s						

IDC 17 10:19:20.4±5.8**, 23°.83S×179°.99W, h541^{km}**±67^{km}**, mb3.0**/7**, mb1 3.2**/8**, mb1mx2.9**/47**, mbtmp3.9**/8**, Error ellipse: s-maj=39.5km s-min=25.8km az=9.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	14.60	189	P	P	10 22 25.6	-0.1
	0.8nm,0.3s,baz=18,slow=6.4,SNR=3.0						
CTA	Charters Tower	31.49	270	P	P	10 24 58.7	+0.3
	3.4nm,0.3s,baz=94,slow=11,SNR=9.7						
ASAR	Alice Springs	42.06	261	P	P	10 26 24.9	-0.2
	0.4nm,0.5s,baz=100,slow=6.9,SNR=9.0						
WRA	Warramunga Arr	42.42	266	P	P	10 26 27.2	-0.8
	0.9nm,0.5s,baz=102,slow=8.4,SNR=73						
FITZ	Fitzroy Crossi	50.85	266	P	P	10 27 32.0	+0.4
	1.8nm,0.9s,baz=124,slow=8.0,SNR=5.4						
SNAA	Sanae	84.74	179	P	P	10 30 57.2	-0.1
	0.8nm,0.9s,baz=112,slow=5.4,SNR=7.7						
TXAR	Lajitas Array	90.38	58	P	P	10 31 24.9	+0.4
	0.4nm,0.7s,baz=220,slow=5.4,SNR=5.7						
PDAR	Pinedale Array	92.63	44	P	P	10 31 34.1	-0.6
	0.1nm,0.3s,baz=235,slow=11,SNR=2.6						

ISCJB ***17*** *10:24:16.7±0.3, 44°.77N±0°.02×6°.70E±0°.03, h8^{km}±4^{km}, Error ellipse: s-maj=3.6km s-min=2.8km az=160.9*

GEN ***17*** *10:24:17.4, 44°.79N×6°.72E, h6^{km}, ML1.5*

CSEM ***17*** *10:24:17.3±0.1, 44°.79N×6°.74E, h2^{km}, ML2.2/9, Error ellipse: s-maj=2.7km s-min=2.3km az=86.0*

ROM ***17*** *10:24:17.1±0.2, 44°.803N±0°.007×6°.75E±0°.01, h11^{km}±1^{km}, ML1.6/12*

LDG ***17*** *10:24:17.4±0.0, 44°.80N×6°.75E, h2^{km}, Md2.6/1, Ml2.4/5, Error ellipse: s-maj=1.0km s-min=0.7km az=80.0*

ISC 17 10:24:17.6±0.9**, 44°.79N**±0°.02×**6°.74E**±0°.02**, h6^{km}**±6^{km}**, n40,** σ**0^{s}.49**/66**, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBDF	Montbardon	0.06	156	ePg	Pg	10 24 19.1	-0.2
MBDF				eSg	Sg	10 24 20.4	-0.1
	291nm,0.3s						
MBDF	Montbardon	0.06	156	ePg	Pg	10 24 19.1	-0.2
MBDF				eSg	Sg	10 24 20.4	-0.1
	145nm,0.3s						
RRL	Rocca Remolon	0.14	16	P	Pg	10 24 20.6	0.0
RRL	Rocca Remolon	0.14	16	P	Pg	10 24 20.6	0.0
RRL				S	Sg	10 24 22.6	0.0
RRL				AML	AML		
	comp=E,586µm,0.2s						
RRL				AML	AML		
	comp=N,594µm,0.3s						
RRL				AML	AML		
	comp=E,586µm,0.2s						
RRL				AML	AML		
	comp=N,594µm,0.3s						
RRL				AML	AML		
	comp=E,586µm,0.2s						
RRL				AML	AML		
	comp=N,594µm,0.3s						
BNI	Bardonecchia	0.27	352	P	Pg	10 24 22.9	-0.1
BNI				S	Sg	10 24 26.7	+0.2
BNI				AML	AML		
	comp=E,66µm,0.5s						
BNI				AML	AML		
	comp=N,52µm,0.6s						
BNI				AML	AML		
	comp=E,66µm,0.5s						
BNI				AML	AML		
	comp=N,52µm,0.6s						
BNI				AML	AML		
	comp=E,66µm,0.5s						
BNI				AML	AML		
	comp=N,52µm,0.6s						
BHB	Bricherasio	0.38	81	P	Pg	10 24 24.8	-0.1
BHB	Bricherasio	0.38	81	P	Pg	10 24 24.9	-0.1
BHB				S	Sg	10 24 30.4	+0.4
BHB				AML	AML		
	comp=E,146µm,0.3s						
BHB				AML	AML		
	comp=N,112µm,0.5s						
BHB				AML	AML		
	comp=E,145µm,0.3s						
BHB				AML	AML		
	comp=N,112µm,0.5s						
BHB				AML	AML		
	comp=E,145µm,0.3s						
BHB				AML	AML		
	comp=N,112µm,0.5s						
PZZ	Stroppo	0.39	135	P	Pg	10 24 24.8	-0.4
PZZ	Stroppo	0.39	135	P	Pg	10 24 24.8	-0.4
PZZ				S	Sg	10 24 30.8	+0.5
PZZ				AML	AML		
	comp=E,458µm,0.2s						
PZZ				AML	AML		
	comp=N,442µm,0.8s						
PZZ				AML	AML		
	comp=E,458µm,0.2s						
PZZ				AML	AML		
	comp=N,442µm,0.8s						
PZZ				AML	AML		
	comp=N,442µm,0.8s						
PZZ				AML	AML		
	comp=E,458µm,0.2s						
RSP	Reno Superiore	0.52	46	P	Pg	10 24 27.5	-0.2
RSP	Reno Superiore	0.52	46	P	Pg	10 24 27.6	-0.1
RSP				AML	AML		
	comp=E,82µm,0.1s						
RSP				AML	AML		
	comp=N,88µm,0.1s						
RSP				AML	AML		
	comp=E,82µm,0.1s						
RSP				AML	AML		
	comp=N,88µm,0.1s						
RSP				AML	AML		
	comp=N,88µm,0.1s						
RSP				AML	AML		
	comp=E,82µm,0.1s						
ORIF	Oris-en-Rattie	0.62	283	ePg	Pg	10 24 29.2	-0.3
ORIF				eSg	Sg	10 24 36.5	-1.2
	comp=E,36nm,0.2s						
ORIF	Oris-en-Rattie	0.62	283	ePg	Pg	10 24 29.2	-0.3
ORIF				eSg	Sg	10 24 36.5	-1.2
	comp=E,18nm,0.2s						
ORIF	Oris-en-Rattie	0.62	283	P	Pg	10 24 29.3	-0.3
ORIF				S	Sg	10 24 38.2	+0.6
ORIF				AML	AML		
	comp=E,45µm,1.0s						
ORIF				AML	AML		
	comp=N,43µm,0.3s						
ORIF				AML	AML		
	comp=E,45µm,1.0s						
ORIF				AML	AML		
	comp=N,43µm,0.3s						
STV	Sant Anna di V	0.69	142	P	Pg	10 24 30.9	+0.2
STV	Sant Anna di V	0.69	142	P	Pg	10 24 30.8	+0.1
STV				S	Sg	10 24 39.7	0.0
STV				AML	AML		
	comp=E,55µm,0.9s						
STV				AML	AML		
	comp=N,48µm,0.3s						
STV				AML	AML		
	comp=E,55µm,0.9s						
STV				AML	AML		
	comp=N,48µm,0.3s						
STV				AML	AML		
	comp=N,48µm,0.3s						
STV				AML	AML		
	comp=E,55µm,0.9s						
LPG	La Plagne	0.71	1	eP	Pb	10 24 32.5	-0.1
LPG				eSg	Sg	10 24 40.3	-0.3
	comp=E,22nm,0.4s						
LPG	La Plagne	0.71	1	eP	Pb	10 24 32.5	-0.1
LPG				eSg	Sg	10 24 40.3	-0.3
	comp=E,11nm,0.4s						
LPL	La Plagne	0.73	360	ePg	Pg	10 24 31.2	-0.5
LPL				eSg	Sg	10 24 41.6	+0.4
	comp=E,7.2nm,0.2s						
LPL	La Plagne	0.73	360	ePg	Pg	10 24 31.2	-0.5
LPL				eSg	Sg	10 24 41.6	+0.4
	comp=E,3.6nm,0.2s						
ENR	Entracque	0.74	138	P	Pg	10 24 31.9	+0.1
ENR	Entracque	0.74	138	P	Pg	10 24 31.9	+0.1
ENR				S	Sg	10 24 41.5	0.0
ENR				AML	AML		
	comp=E,112µm,0.3s						
ENR				AML	AML		
	comp=N,102µm,0.4s						
ENR				AML	AML		
	comp=E,112µm,0.3s						
ENR				AML	AML		
	comp=N,102µm,0.4s						
ENR				AML	AML		
	comp=E,112µm,0.3s						
ENR				AML	AML		
	comp=N,102µm,0.4s						
GBOS	Grotte di Boss	0.96	124	P	Pg	10 24 35.2	-0.8
SAOF	Saorge	0.99	143	P	Pg	10 24 35.9	-0.7
SAOF				S	Sg	10 24 49.4	0.0
SAOF				AML	AML		
	comp=E,26µm,0.7s						
SAOF				AML	AML		
	comp=N,30µm,1.6s						
SAOF				AML	AML		
	comp=E,26µm,0.7s						
SAOF				AML	AML		
	comp=N,30µm,1.6s						
TRAV	Traversella	1.02	44	P	Pg	10 24 36.3	-0.8
TRAV	Traversella	1.02	44	P	Pg	10 24 36.3	-0.8
TRAV				AML	AML		
	comp=E,26µm,0.5s						
TRAV				AML	AML		
	comp=N,30µm,0.3s						
TRAV				AML	AML		
	comp=E,26µm,0.5s						
TRAV				AML	AML		
	comp=N,30µm,0.3s						
SBF	Sospel	1.05	151	ePg	Pg	10 24 37.3	-0.4
SBF				eSg	Sg	10 24 51.0	-0.3
	comp=N,24nm,0.4s						
SBF	Sospel	1.05	151	ePg	Pg	10 24 37.3	-0.4
SBF				eSg	Sg	10 24 51.0	-0.3
	comp=N,12nm,0.4s						
SMRF	Simiane la Rot	1.16	226	ePg	Pg	10 24 39.4	-0.4
SMRF	Simiane la Rot	1.16	226	eP	Pn	10 24 41.5	+1.1
SMRF				eSg	Sg	10 24 55.0	+0.2
	comp=N,3.8nm,0.2s						
SMRF	Simiane la Rot	1.16	226	ePg	Pg	10 24 39.4	-0.4
SMRF	Simiane la Rot	1.16	226	eP	Pn	10 24 41.5	+1.1
SMRF				eSg	Sg	10 24 55.0	+0.2
	comp=N,1.9nm,0.2s						
NEGI	Seborga	1.17	143	AML	AML		
	comp=N,49µm,1.3s						
NEGI				AML	AML		
	comp=E,34µm,1.1s						
NEGI				AML	AML		
	comp=N,49µm,1.3s						
NEGI				AML	AML		
	comp=E,34µm,1.1s						
RORO	Rocca Rossa	1.17	125	P	Pg	10 24 38.7	-1.3
RORO				S	Sg	10 24 53.9	-1.2
RORO				AML	AML		
	comp=E,40µm,0.2s						
RORO				AML	AML		
	comp=N,28µm,1.6s						
RORO				AML	AML		
	comp=N,28µm,1.6s						
RORO				AML	AML		
	comp=E,40µm,0.2s						
FRF	La Foret Royal	1.23	183	ePg	Pg	10 24 40.9	-0.1
FRF				eSg	Sg	10 24 56.5	-0.4
	comp=E,16nm,0.4s						
FRF	La Foret Royal	1.23	183	ePg	Pg	10 24 40.9	-0.1
FRF				eSg	Sg	10 24 56.5	-0.4
	comp=E,8.1nm,0.4s						
LMR	La Mourre	1.46	186	ePg	Pg	10 24 45.4	-0.1
LMR				eSg	Sn	10 25 03.9	0.0
	comp=E,9.8nm,0.2s						
LMR	La Mourre	1.46	186	ePg	Pg	10 24 45.4	-0.1
LMR				eSg	Sn	10 25 03.9	0.0
	comp=E,4.9nm,0.2s						
VIVF	Saint-Julien-l	1.47	274	ePg	Pn	10 24 44.9	+0.3
VIVF				eSg	Sg	10 25 04.6	-0.2
	comp=E,4.9nm,0.3s						
VIVF	Saint-Julien-l	1.47	274	ePg	Pn	10 24 44.9	+0.3
VIVF				eSg	Sg	10 25 04.6	-0.2
	comp=E,2.5nm,0.3s						

ISCJB ***17*** *10:26:55.9±0.5, 31°.25N±0°.03×73°.49E±0°.04, h58^{km}±6^{km}, mb3.8/13, Error ellipse: s-maj=5.6km s-min=4.3km az=141.4*

NDI ***17*** *10:26:55.8±1.6, 31°.24N×73°.55E, h11^{km}±9^{km}, ML4.1, mb4.2(NEIC)*

IDC ***17*** *10:26:56.8±0.7, 31°.27N×73°.46E, h45^{km}±6^{km}, mb3.7/11, mb1 3.8/15, mb1mx3.5/69, mbtmp4.0/15, ML3.9/4, MS3.2/1, Ms1 3.2/1, ms1mx2.3/67, Error ellipse: s-maj=15.5km s-min=14.1km az=70.0*

NEIC ***17*** *10:26:57.1±0.9, 31°.30N×73°.48E, h49^{km}±8^{km}, mb4.2/3, Error ellipse: s-maj=8.6km s-min=6.5km az=142.0*

NNC ***17*** *10:27:05.4±5.5, 32°.21N×72°.71E, h0^{km}, mb4.7, mpv4.7, Error ellipse: s-maj=107.7km s-min=41.6km az=93.0*

ISC 17 10:26:56.6±0.5**, 31°.31N**±0°.04×**73°.48E**±0°.04**, h47^{km}**±5^{km}**, h47^{km}:pP-P, n57,** σ**2^{s}.23**/81**, mb3.9**/13**, 4C-4D, Pakistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SARP	Sargodha	0.92	312	P	Pn	10 27 14.7	+1.5
THW	Thamme Wali	2.09	316	P	Pn	10 27 31.2	+2.0
NIL	Nilore	2.35	355	ePn	Pn	10 27 34.2	+1.5
NIL	Nilore	2.35	355	eP	Pn	10 27 34.3	+1.5
CHCP	Chirah Chowk	2.35	356	P	Pn	10 27 34.2	+1.4
DHRM	DHARAMSHALA	2.58	68	eP	Pn	10 27 38.4	+2.3
DHRM				eS	Sn	10 28 08.6	+2.2
DHRM				IAML		10 28 10.2	
	comp=N,2µm,0.5s						
DHRM				IAML		10 28 10.4	
	comp=E,3µm,0.2s						
CEP	Cherat	2.84	333	P	Pn	10 27 41.4	+1.8
SMLA	Simla	3.16	92	eP	Pn	10 27 45.9	+2.1
SMLA				eS	Sn	10 28 21.6	+1.2
SMLA				IAML		10 28 23.6	
	comp=N,779nm,0.4s						
SMLA				IAML		10 28 24.1	
	comp=E,971nm,0.4s						
KHET	Khetri	3.80	147	eP	Pn	10 27 53.4	+0.7
KHET				eS	Sn	10 28 34.5	-1.7
DDI	Dehra Dun	4.06	103	eS	Sn	10 28 42.1	-0.3
NDI	New Delhi	4.16	128	eP	Pn	10 27 58.0	+0.4
NDI				eS	Sn	10 28 44.0	-1.0
JASL	Jaisalmer	4.91	208	eP	Pn	10 28 09.2	+1.3
JASL				eS	Sn	10 29 03.3	-0.2
KBL	Kabul	4.93	312	ePn	Pn	10 28 11.0	+2.7
KBL	Kabul	4.93	312	eP	Pn	10 28 11.3	+2.9
KBL				eS	Sn	10 29 06.1	+1.9
JOSI	Joshimath	5.28	97	eP	Pn	10 28 13.2	+0.1
SFK	Sufi-Kurgan	8.69	0	⇑P	Pn	10 29 01.3	+1.4
	comp=E,14nm,0.4s						
SFK				⇑S	Sn	10 30 34.1	-2.5
	comp=E,56nm,0.3s						
BHJ	Bhuj	8.71	204	eS	Sn	10 30 32.0	-4.8
BHPL	Bhopal	8.76	155	eP	Pn	10 29 01.3	+0.5
BHPL				eS	Sn	10 30 31.7	-6.6
BHPL				IAML		10 30 34.9	
	comp=E,106nm,0.3s						
BHPL				IAML		10 30 35.5	
	comp=N,66nm,0.3s						
MNAS	Manas	11.19	356	⇓P	Pn	10 29 33.0	-1.0
	comp=N,6.4nm,0.4s						
MNAS				⇑S	Sn	10 31 29.4	-8.3
	comp=N,15nm,0.6s						
KDJ	Kajisay	11.20	14	ePn	Pn	10 29 35.9	+1.6
AAK	Ala-Archa	11.34	4	P	Pn	10 29 37.0	+1.0
	comp=N,1.5nm,0.3s,baz=149,slow=3.1,SNR=6.5						
AAK				S	Sn	10 31 37.1	-4.3
	comp=N,1.3nm,0.3s,baz=216,slow=23,SNR=4.0						
AAK				LR	LR	10 34 19.8	
	comp=N,106nm,18.0s,baz=181,slow=39						

AAK	**Ala-Archa**	**11.34**	**4**	⇓P	**Pn**	**10 29 37.6**	**+1.5**
	comp=N,3.0nm,0.5s						
AAK				⇑S	**Sn**	**10 31 34.1**	**-7.3**
	comp=N,8.9nm,0.6s						
AAK	**Ala-Archa**	**11.34**	**4**	*e*Pn	**Pn**	**10 29 36.8**	**+0.7**
AAK				*e*Pn	Pn	10 29 37.0	+1.0
AAK				*e*Sn	**Sn**	**10 31 37.1**	**-4.3**
PRZ	**Przheval'sk**	**11.83**	**18**	*e*Pn	**Pn**	**10 29 43.0**	**+0.2**
KK31	**Karatay Array**	**12.01**	**350**	⇓P	**Pn**	**10 29 44.2**	**-0.9**
	comp=N,6.7nm,0.6s,baz=168,slow=13,SNR=44						
KK31				⇓S	**Sn**	**10 31 49.5**	**-8.1**
	comp=N,2.3nm,0.3s,baz=178,slow=24,SNR=12						
KK31	**Karatay Array**	**12.01**	**350**	*e*Pn	**Pn**	**10 29 44.4**	**-0.7**
KKAR	**Karatay Array**	**12.01**	**350**	*e*Pn	**Pn**	**10 29 44.4**	**-0.7**
BOK	**Bokaro**	**13.30**	**121**	*e*S	Sn	10 32 17.4	-12
WSAR	**Wadi Sarin**	**15.44**	**242**	P	**Pn**	**10 30 30.9**	**-0.5**
	comp=N,0.8nm,0.3s,baz=108,slow=7.0,SNR=16						
WSAR				S	Sn	10 33 06.5	-15
	comp=N,0.8nm,0.3s,baz=309,slow=18,SNR=7.9						
MAKZ	**Makanchi**	**16.81**	**21**	*e*Pn	**P**	**10 30 49.8**	**-0.4**
	comp=N,6.4nm,0.8s						
MK01	**Makanchi Array**	**16.88**	**21**	*e*Pn	**Pn**	**10 30 49.9**	**+0.5**
MK31	**Makanchi Array**	**16.89**	**21**	*e*Pn	**Pn**	**10 30 50.0**	**+0.3**
MK32	**Makanchi Array**	**16.89**	**21**	*e*Pn	**Pn**	**10 30 50.1**	**+0.4**
MK32				*e*Sn	Sn	10 33 43.2	-13
MKAR	**Makanchi Array**	**16.89**	**21**	P	**Pn**	**10 30 50.1**	**+0.4**
	comp=N,0.6nm,0.3s,baz=195,slow=12,SNR=11						
MKAR				S	Sn	10 33 43.2	-13
	comp=N,0.3nm,0.3s,baz=193,slow=19,SNR=4.3						
MKAR	**Makanchi Array**	**16.89**	**21**	*e*Pn	**Pn**	**10 30 50.0**	**+0.3**
	comp=N,14nm,0.6s						
MKAR				S	Sn	10 33 43.2	-13
KURBB	**Kurchatov Arra**	**19.66**	**10**	P	**P**	**10 31 21.4**	**0.0**
	comp=N,0.1nm,0.3s,baz=199,slow=10,SNR=4.5						
KURK	**Kurchatov**	**19.77**	**10**	*e*P	**P**	**10 31 21.4**	**-1.1**
ABKAR	**Akbulak array**	**20.63**	**334**	*e*P	**P**	**10 31 32.5**	**+0.5**
BVAR	**Borovoye Array**	**21.82**	**355**	P	**P**	**10 31 44.8**	**+0.1**
	comp=N,1.4nm,0.6s,baz=163,slow=10,SNR=4.9						
BVAR				pP	**pP**	**10 31 55.7**	**-0.1**
	comp=N,3.8nm,0.5s,baz=156,slow=9.9,SNR=11						
BRVK	**Borovoye**	**21.86**	**355**	*e*P	**P**	**10 31 45.6**	**+0.5**
BRVK				*e*pP	**pP**	**10 31 56.7**	**+0.4**
AKTO	**Aktyubinsk**	**22.32**	**333**	P	**P**	**10 31 50.8**	**+0.7**
	comp=N,3.3nm,0.6s,baz=145,slow=12,SNR=14						
ZAA0	**Zalesovo Array**	**24.06**	**17**	*e*P	**P**	**10 32 07.5**	**+0.3**
	comp=N,5.7nm,0.6s						
ZALV	**Zalesovo Beam**	**24.06**	**17**	P	**P**	**10 32 07.2**	**-0.1**
	comp=N,4.6nm,0.5s,baz=215,slow=9.4,SNR=8.0						
ZALV				pP	**pP**	**10 32 19.3**	**-0.1**
	comp=N,4.7nm,0.5s,baz=204,slow=10,SNR=5.2						
ZAA1	**Zalesovo Array**	**24.06**	**17**	*e*P	**P**	**10 32 07.2**	**-0.1**
ZAA1				*e*pP	**pP**	**10 32 19.3**	**-0.1**
CMAR	**Chiang Mai Arr**	**26.33**	**113**	P	**P**	**10 32 28.8**	**+0.5**
	comp=N,1.5nm,0.6s,baz=303,slow=8.8,SNR=8.4						
SONA0	**Songino Array**	**29.98**	**47**	*e*P	**P**	**10 33 02.1**	**+1.4**
SONA0				*e*pP	**pP**	**10 33 13.5**	**+0.6**
SONA0				*e*sP	**sP**	**10 33 19.8**	**+1.3**
SONM	**Songino Array**	**29.98**	**47**	P	**P**	**10 33 02.1**	**+1.4**
	comp=N,1.0nm,0.6s,baz=243,slow=9.3,SNR=7.1						
SONM				pP	**pP**	**10 33 13.5**	**+0.6**
	comp=N,1.1nm,0.7s,baz=248,slow=10,SNR=4.8						
SONM				sP	**sP**	**10 33 19.8**	**+1.3**
	comp=N,0.9nm,0.5s,baz=236,slow=9.6,SNR=3.6						
ARA0	**ARCESS Array S**	**46.72**	**339**	*e*P	**P**	**10 35 20.9**	**+0.4**
ARCES	**ARCESS Array B**	**46.72**	**339**	P	**P**	**10 35 20.9**	**+0.4**
	comp=N,0.8nm,0.5s,baz=106,slow=8.9,SNR=7.5						
KLR	**Kul'dur**	**46.72**	**50**	P	**P**	**10 35 21.3**	**+0.5**
	comp=N,0.1nm,0.6s,baz=288,slow=7.7,SNR=5.5						
HFS	**Hagfors**	**48.45**	**325**	P	**P**	**10 35 35.7**	**+1.5**
	comp=N,1.0nm,0.4s,baz=90,slow=7.2,SNR=5.5						
TOA1	**Torodi Ar. Sit**	**67.82**	**272**	*e*P	**P**	**10 37 50.8**	**+0.5**
TOA1				*e*pP	**pP**	**10 38 03.3**	**-0.3**
TORD	**Torodi Ar. Bea**	**67.82**	**272**	P	**P**	**10 37 50.8**	**+0.5**
	comp=N,0.6nm,0.7s,baz=82,slow=4.2						
TORD				pP	**pP**	**10 38 03.3**	**-0.3**
	baz=45,slow=6.3						
BOSA	**Boshof**	**75.22**	**223**	P	**P**	**10 38 34.6**	**0.0**
	comp=N,9.1nm,1.2s,baz=341,slow=3.8,SNR=4.1						
WRA	**Warramunga Arr**	**77.48**	**123**	P	**P**	**10 38 47.6**	**+0.2**
	comp=N,0.6nm,0.6s,baz=322,slow=5.1,SNR=10						
WRA				pP	**pP**	**10 39 01.2**	**+0.1**
	comp=N,0.3nm,0.3s,baz=324,slow=5.5,SNR=2.8						
WR1	**Warramunga Arr**	**77.48**	**123**	*e*P	**P**	**10 38 47.6**	**+0.2**
WR1				*e*pP	**pP**	**10 39 01.2**	**+0.1**
ASAR	**Alice Springs**	**79.57**	**126**	P	**P**	**10 38 59.0**	**+0.1**
	comp=N,0.4nm,0.7s,baz=317,slow=4.9,SNR=5.3						

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*WEL **17** 10:29:14.3±1.7, 31°S±30°×17°8W±8°3, h179^{km}±30^{km}*
*IDC **17** 10:29:14.3±0.8, 31.°13S×179.°06W, h0^{km}, mb4.3/8, mb1 4.5/10, mb1mx4.0/44, mbtmp4.3/10, ML4.2/2, MS3.4/1, Ms1 3.4/1, ms1mx2.7/42, Error ellipse: s-maj=22.7km s-min=21.1km az=152.0*
*ISCJB **17** 10:29:16.9±0.4, 31.°23S±0.°04×179.°04W±0.°10, h33^{km}, mb4.4/14, Error ellipse: s-maj=12.7km s-min=4.9km az=19.9*
*NEIC **17** 10:29:16.5±0.4, 31.°09S×179.°12W, h10^{km}, mb4.4/7, Error ellipse: s-maj=12.2km s-min=8.7km az=124.0*
ISC 17 10:29:19.3±0.6**, 31.°07S**±0.°08×**179.°1W**±0.°1**, h35**^{km}**, n45,** σ**1^{s}64**/47**, mb4.4**/14**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**2.06**	**30**	P	**Pn**	**10 29 49.7**	**-1.7**
RAO	**Raoul Island**	**2.07**	**30**	Pn	**Pn**	**10 29 51.0**	**-0.6**
	99nm,0.3s,baz=274,slow=22,SNR=5.1						
RAO	**Raoul Island**	**2.07**	**30**	*e*Pn	**Pn**	**10 29 51.0**	**-0.6**
RAO				*e*Sn	**Sn**	**10 30 16.1**	**0.0**
WMGZ	**Waiomatatini S**	**7.05**	**196**	P	**Pn**	**10 30 59.3**	**-0.6**
HAZ	**Te Kaha**	**7.16**	**200**	P	**Pn**	**10 30 56.7**	**-4.8**
PKGZ	**Pakihiroa**	**7.20**	**198**	P	**Pn**	**10 31 00.2**	**-1.9**
PKGZ				S	**Sn**	**10 32 24.4**	**+1.8**
PUZ	**Puketiti**	**7.32**	**197**	P	**Pn**	**10 31 02.6**	**-1.2**
RUGZ	**Raukumara Rang**	**7.38**	**200**	P	**Pn**	**10 31 02.4**	**-2.2**
TWGZ	**Tauwhareparae**	**7.49**	**198**	P	**Pn**	**10 31 03.1**	**-3.1**
CNGZ	**Carnagh Statio**	**7.73**	**196**	P	**Pn**	**10 31 07.4**	**-1.9**
MWZ	**Matawai**	**7.77**	**200**	P	**Pn**	**10 31 08.6**	**-1.3**
TKGZ	**Te Karaka**	**7.78**	**198**	P	**Pn**	**10 31 07.8**	**-2.1**
URZ	**Urewera**	**7.83**	**203**	Pn	**Pn**	**10 31 08.1**	**-2.6**
	2.2nm,0.3s,baz=212,slow=3.5,SNR=17						
URZ				LR	LR	10 33 46.1	
	comp=Z,269nm,21.8s,baz=40,slow=35						
URZ	**Urewera**	**7.83**	**203**	*e*Pn	**Pn**	**10 31 08.1**	**-2.6**
URZ				*e*Pn	Pn	10 31 09.4	-1.3
URZ	**Urewera**	**7.83**	**203**	P	**Pn**	**10 31 09.2**	**-1.4**
RIGZ	**Rimuhau**	**8.05**	**198**	P	**Pn**	**10 31 11.1**	**-2.7**
SNGZ	**Shannon Statio**	**8.24**	**200**	P	**Pn**	**10 31 13.8**	**-2.6**
RAHZ	**Arahi**	**8.44**	**201**	P	**Pn**	**10 31 16.7**	**-2.4**
MTHZ	**Maungataniwha**	**8.46**	**202**	P	**Pn**	**10 31 18.1**	**-1.2**
NMHZ	**Naumai**	**8.69**	**202**	P	**Pn**	**10 31 20.1**	**-2.4**
BKZ	**Black Stump Fm**	**8.85**	**203**	*e*Pn	**Pn**	**10 31 24.2**	**-0.6**
BKZ	**Black Stump Fm**	**8.85**	**203**	P	**Pn**	**10 31 22.2**	**-2.6**
BHHZ	**Black Hill Sta**	**9.29**	**204**	P	**Pn**	**10 31 30.8**	**0.0**
STKA	**Stephens Creek**	**33.42**	**258**	P	**P**	**10 35 55.5**	**+0.7**
	3.1nm,0.8s,baz=64,slow=7.6,SNR=4.7						
STKA	**Stephens Creek**	**33.42**	**258**	*e*P	**P**	**10 35 55.0**	**+0.3**
AS31	**Alice Springs**	**42.14**	**268**	*e*P	**P**	**10 37 08.5**	**-0.1**
	1.1nm,0.8s						
ASAR	**Alice Springs**	**42.15**	**268**	P	**P**	**10 37 08.8**	**+0.2**
	2.9nm,0.8s,baz=104,slow=7.5,SNR=31						
WB2	**Warramunga Arr**	**43.18**	**273**	*e*P	**P**	**10 37 17.3**	**+0.3**
	6.1nm,0.7s						
WRAB	**Tennant Creek**	**43.19**	**273**	*e*P	**P**	**10 37 17.1**	**+0.1**
	6.1nm,0.8s						
WR1	**Warramunga Arr**	**43.19**	**273**	*e*P	**P**	**10 37 17.2**	**+0.1**
	5.5nm,0.6s						
WRA	**Warramunga Arr**	**43.19**	**273**	P	**P**	**10 37 17.2**	**+0.1**
	5.1nm,0.7s,baz=112,slow=8.1,SNR=42						
SBA	**Scott Base**	**47.31**	**184**	*e*P	**P**	**10 37 50.1**	**+1.1**
	4.9nm,0.9s						
FITZ	**Fitzroy Crossi**	**51.43**	**271**	P	**P**	**10 38 21.4**	**+0.1**
	5.4nm,0.9s,baz=120,slow=14,SNR=11						
QSPA	**South Pole Qui**	**59.05**	**180**	P	**P**	**10 39 15.8**	**+0.2**
	4.8nm,0.6s,baz=355,slow=0.7,SNR=20						
SNAA	**Sanae**	**77.52**	**179**	P	**P**	**10 41 10.7**	**-0.3**
	1.2nm,0.7s,baz=178,slow=7.4,SNR=8.8						
SNAA	**Sanae**	**77.52**	**179**	*e*P	**P**	**10 41 10.7**	**-0.3**
	1.6nm,0.7s						
PLCA	**Paso Flores**	**82.73**	**133**	P	**P**	**10 41 40.2**	**+0.4**
	1.8nm,1.0s,baz=267,slow=4.0,SNR=4.3						
PLCA	**Paso Flores**	**82.73**	**133**	*e*P	**P**	**10 41 40.2**	**+0.4**
	2.6nm,1.0s						
RUBR	**Rubicon Trail**	**88.70**	**42**	*e*P	**P**	**10 42 11.7**	**+2.4**
	62nm,1.0s						
NV01	**Mina Array Sit**	**89.36**	**43**	*e*P	**P**	**10 42 12.9**	**+0.5**
NVAR	**Mina Array Bea**	**89.36**	**43**	P	**P**	**10 42 13.3**	**+0.9**
	0.9nm,0.9s,baz=221,slow=7.8,SNR=6.2						
FIA0	**FINESS Array S**	**145.44**	**339**	*e*PKPdf	**PKPab**	**10 48 52.9**	**-0.2**
FINES	**FINESS Array B**	**145.44**	**339**	PKPbc	**PKPab**	**10 48 52.9**	**-0.2**
	3.3nm,0.8s,baz=108,slow=6.2,SNR=5.8						
BR101	**Keskin Array S**	**152.08**	**297**	*e*PKPbc	**PKPbc**	**10 49 10.8**	**-0.4**
BRTR	**Keskin Array B**	**152.08**	**297**	PKPbc	**PKPbc**	**10 49 10.8**	**-0.4**
	1.6nm,1.0s,baz=318,slow=1.7,SNR=3.9						

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*IDC **17** 10:49:12.0±0.7, 14.°76N×147.°01E, h0^{km}, mb4.3/17, mb1 4.3/18, mb1mx4.1/60, mbtmp4.3/18, ML4.4/1, MS3.3/4, Ms1 3.3/4, ms1mx2.8/55, Error ellipse: s-maj=20.4km s-min=13.4km az=103.0*
*ISCJB **17** 10:49:15.3±0.4, 14.°82N±0.°05×147.°01E±0.°07, h32^{km}, mb4.4/45, Error ellipse: s-maj=10.5km s-min=6.3km az=31.0*
*NEIC **17** 10:49:16.9±0.4, 14.°78N×147.°03E, h35^{km}, mb4.4/8, Error ellipse: s-maj=10.6km s-min=7.3km az=102.0*
*MOS **17** 10:49:16.1±1.1, 14.°84N×146.°88E, h33^{km}, mb4.8/18, Error ellipse: s-maj=13.8km s-min=7.4km az=113.5*
ISC 17 10:49:17.1±0.6**, 14.°80N**±0.°08×**147.°01E**±0.°09**, h32**^{km}**, n113,** σ**1^{s}15**/109**, mb4.5**/45**, 7C-3D, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.40**	**240**	Pn	**Pn**	**10 49 53.4**	**-0.8**
	98nm,0.3s,baz=113,slow=5.8,SNR=53						
GUMO				Sn	**Sn**	**10 50 23.9**	**+1.4**
	61nm,0.3s,baz=224,slow=20,SNR=9.7						
GUMO	**Guam**	**2.40**	**240**	*e*Pn	**Pn**	**10 49 53.4**	**-0.8**
GUMO				*e*Pn	Pb	10 49 53.8	-5.9
GUMO				*e*Sn	**Sn**	**10 50 23.9**	**+1.4**
H11N1	**WAKE ISLAND Hy**	**19.60**	**73**	T	T	11 13 50.3	
	baz=257,slow=75,SNR=6.2						
H11N2	**WAKE ISLAND Hy**	**19.61**	**73**	T	T	11 13 48.8	
	baz=257,slow=75,SNR=4.0						
H11N3	**WAKE ISLAND Hy**	**19.62**	**73**	T	T	11 13 47.5	
	baz=257,slow=75,SNR=4.7						
DAV	**Davao City (W)**	**22.39**	**252**	LR	LR	11 04 05.8	
	comp=Z,32nm,18.3s,baz=144,slow=40						
FAKI	**Fak Fak**	**22.89**	**221**	*e*P	**P**	**10 54 18.5**	**+0.2**
	24nm,0.8s						
MJA0	**Matsu Arr-Jizo**	**23.03**	**342**	*e*P	**P**	**10 54 17.1**	**-2.5**
MJA0				pmax	pmax		
	comp=Z,1.0nm,0.4s						
MJAR	**Matsushiro Arr**	**23.04**	**342**	P	**P**	**10 54 16.6**	**-3.0**
	comp=Z,1.0nm,0.5s,baz=163,slow=6.3,SNR=5.2						
MAJO	**Matsushiro**	**23.04**	**342**	*e*P	**P**	**10 54 16.6**	**-3.1**
MAJO	**Matsushiro**	**23.04**	**342**	⇑*e*P	**P**	**10 54 21.2**	**+1.5**
MAJO				pmax	pmax		
	comp=Z,11nm,1.5s						
JNU	**Nakatsue**	**23.40**	**324**	P	**P**	**10 54 22.1**	**-1.2**
	comp=Z,11nm,0.7s,baz=56,slow=4.6,SNR=7.3						
TWG	**Pinlang**	**25.79**	**292**	*e*P	**P**	**10 54 45.7**	**+0.3**
	comp=Z,44nm,0.9s						
KSRS	**Korea Array**	**28.22**	**327**	P	**P**	**10 55 06.8**	**-0.2**
	comp=Z,5.6nm,0.5s,baz=148,slow=9.5,SNR=18						
KSRS				LR	LR	11 04 45.4	
	comp=Z,38nm,20.4s,baz=235,slow=33						
KS15	**Wonju Array Si**	**28.24**	**327**	*e*P	**P**	**10 55 06.8**	**-0.4**
KSAR	**Wonju Array Be**	**28.24**	**327**	P	**P**	**10 55 06.8**	**-0.3**
KSAR	**Wonju Array Be**	**28.24**	**327**	P	**P**	**10 55 06.9**	**-0.3**
ASAJ	**Asahikawa**	**29.46**	**354**	P	**P**	**10 55 18.6**	**+0.6**
	comp=Z,3.6nm,0.6s,baz=210,slow=9.3,SNR=7.5						
ASAJ	**Asahikawa**	**29.46**	**354**	*e*P	**P**	**10 55 18.6**	**+0.6**
	comp=Z,5.6nm,0.9s						
MSHR	**Mys Shultsa**	**30.87**	**337**	⇓*e*P	**P**	**10 55 31.4**	**+0.9**
YSS	**Yuzh-Sakhalins**	**32.26**	**355**	*e*P	**P**	**10 55 45.3**	**+2.7**
YSS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KLR	**Kul'dur**	**36.55**	**343**	P	**P**	**10 56 18.8**	**-0.9**
	comp=Z,0.3nm,0.8s,baz=138,slow=8.5,SNR=10						
KLR	**Kul'dur**	**36.55**	**343**	*de*P	**P**	**10 56 19.2**	**-0.6**
WR1	**Warramunga Arr**	**36.70**	**200**	*e*P	**P**	**10 56 20.1**	**-1.3**
	comp=Z,5.1nm,1.0s						
WRA	**Warramunga Arr**	**36.70**	**200**	P	**P**	**10 56 20.1**	**-1.3**
	comp=Z,1.3nm,0.8s,baz=21,slow=9.4,SNR=12						
WRA	**Warramunga Arr**	**36.70**	**200**	*e*P	**P**	**10 56 22.9**	**+1.5**
WRA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
FITZ	**Fitzroy Crossi**	**38.89**	**214**	P	**P**	**10 56 39.1**	**-0.7**
	comp=Z,4.4nm,0.8s,baz=9.6,slow=7.1,SNR=9.3						
PET	**Petropavlovsk**	**39.24**	**11**	*i* P	**P**	**10 56 43.3**	**+0.9**
PET				pmax	pmax		
	comp=Z,17nm,1.3s						
AS31	**Alice Springs**	**40.32**	**199**	*e*P	**P**	**10 56 50.9**	**-0.9**
	comp=Z,1.4nm,1.1s						
ASAR	**Alice Springs**	**40.32**	**199**	P	**P**	**10 56 50.9**	**-0.9**
	comp=Z,0.6nm,0.7s,baz=22,slow=8.8,SNR=9.2						
CM01	**Chiang Mai Arr**	**46.09**	**281**	*e*P	**P**	**10 57 39.0**	**+0.4**
CMAR	**Chiang Mai Arr**	**46.10**	**281**	P	**P**	**10 57 38.9**	**+0.2**
	comp=Z,3.3nm,0.9s,baz=80,slow=6.1,SNR=13						
CMAR	**Chiang Mai Arr**	**46.10**	**281**	*e*P	**P**	**10 57 39.7**	**+1.0**
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ULN	**Ulaanbaatar**	**46.62**	**323**	*e*P	**P**	**10 57 41.3**	**-1.2**
	comp=Z,4.9nm,0.8s						
ULN	**Ulaanbaatar**	**46.62**	**323**	⇑*e*P	**P**	**10 57 41.5**	**-1.0**
ULN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SONA0	**Songino Array**	**46.98**	**323**	*e*P	**P**	**10 57 45.7**	**+0.4**
SONM	**Songino Array**	**46.98**	**323**	P	**P**	**10 57 45.7**	**+0.4**
	comp=Z,3.1nm,0.6s,baz=139,slow=9.8,SNR=8.0						
SONA1	**Songino Array**	**46.98**	**323**	*e*P	**P**	**10 57 42.4**	**-2.9**
SEY	**Seymchan**	**48.22**	**3**	P	**P**	**10 57 55.2**	**+0.8**
	comp=Z,1.8nm,0.5s,baz=178,slow=6.4,SNR=7.6						
SEY	**Seymchan**	**48.22**	**3**	⇑*i*P	**P**	**10 57 55.5**	**+1.0**
YAK	**Yakutsk**	**48.77**	**349**	*e*P	**P**	**10 57 59.4**	**+0.7**
YAK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
AFI	**Afiamalu**	**49.76**	**123**	LR	LR	11 15 12.8	
	comp=Z,31nm,18.4s,baz=128,slow=31						
ZAK	**Zakamensk**	**50.03**	**325**	*e*P	**P**	**10 58 07.4**	**-1.3**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.3s						
LSA	**Lhasa**	**53.32**	**296**	*e*P	**P**	**10 58 33.7**	**-0.3**
	comp=Z,12nm,0.6s						
LSA	**Lhasa**	**53.32**	**296**	*e*P	**P**	**10 58 33.7**	**-0.3**
LSA				pmax	pmax		
	comp=Z,12nm,0.6s						
ODAN	**Odare**	**56.56**	**293**	*e*P	**P**	**10 58 57.6**	**+0.3**
	comp=Z,16nm,0.5s						
RAMN	**Ramite**	**57.27**	**293**	*e*P	**P**	**10 59 02.0**	**-0.3**
	comp=Z,29nm,1.0s						
JIRN	**Jiri**	**57.62**	**294**	*e*P	**P**	**10 59 05.4**	**+0.5**
	comp=Z,37nm,0.8s						
GUN	**Gumba**	**57.90**	**294**	*e*P	**P**	**10 59 07.5**	**+0.7**
	comp=Z,21nm,0.6s						
PKIN	**Phulchoki**	**58.33**	**293**	*e*P	**P**	**10 59 09.8**	**0.0**
	comp=Z,16nm,0.9s						
DMN	**Daman**	**58.59**	**293**	*e*P	**P**	**10 59 11.5**	**-0.1**
	comp=Z,19nm,0.8s						
GKN	**Gorkha**	**59.00**	**294**	*e*P	**P**	**10 59 14.6**	**+0.3**
	comp=Z,29nm,0.9s						
DGZ	**Jazzator, Alta**	**59.27**	**319**	*i* P	**P**	**10 59 16.6**	**+0.8**
DANN	**Dangsing**	**59.76**	**294**	*e*P	**P**	**10 59 20.1**	**+0.4**
	comp=Z,28nm,0.7s						
KOLN	**Koldanda**	**59.92**	**294**	*e*P	**P**	**10 59 20.1**	**-0.6**
	comp=Z,14nm,0.8s						
ZALV	**Zalesovo Beam**	**61.87**	**324**	P	**P**	**10 59 32.6**	**-0.6**
	comp=Z,2.3nm,0.6s,baz=104,slow=6.3,SNR=3.9						
ZAA1	**Zalesovo Array**	**61.88**	**324**	*e*P	**P**	**10 59 32.6**	**-0.6**
MK01	**Makanchi Array**	**62.07**	**315**	*e*P	**P**	**10 59 35.2**	**+0.4**
MK31	**Makanchi Array**	**62.08**	**315**	*e*P	**P**	**10 59 35.4**	**+0.6**
MK31	**Makanchi Array**	**62.08**	**315**	*ce*P	**P**	**10 59 35.0**	**+0.1**
MK31				pmax	pmax		
	comp=Z,2.0nm,0.4s						
MK32	**Makanchi Array**	**62.08**	**315**	*e*P	**P**	**10 59 35.4**	**+0.5**
MKAR	**Makanchi Array**	**62.08**	**315**	P	**P**	**10 59 35.4**	**+0.5**
	comp=Z,4.2nm,0.5s,baz=91,slow=8.3,SNR=64						
MKAR	**Makanchi Array**	**62.08**	**315**	*e*P	**P**	**10 59 35.4**	**+0.5**
	comp=Z,39nm,0.5s						
MKAR	**Makanchi Array**	**62.08**	**315**	*e*P	**P**	**10 59 35.4**	**+0.5**
MKAR				pmax	pmax		
	comp=Z,39nm,0.5s						
MAKZ	**Makanchi**	**62.30**	**315**	*e*P	**P**	**10 59 37.0**	**+0.7**
	comp=Z,8.8nm,0.6s						
MAKZ	**Makanchi**	**62.30**	**315**	*i* P	**P**	**10 59 36.0**	**-0.3**
MAKZ				pmax	pmax		
	comp=Z,6.0nm,0.5s						
NVS	**Novosibirsk**	**62.98**	**324**	*e*P	**P**	**10 59 36.7**	**-3.9**
NVS				*e*		11 00 25.6	
PDGK	**Podgornoye**	**63.68**	**311**	*i* P	**P**	**10 59 45.2**	**-0.5**
PDGK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CAST	**Castle Rocks**	**64.01**	**26**	*e*P	**P**	**10 59 47.4**	**0.0**
	comp=Z,4.1nm,1.0s						
KURK	**Kurchatov**	**65.02**	**319**	*e*P	**P**	**10 59 54.3**	**+0.2**
KURK	**Kurchatov**	**65.02**	**319**	*c i*P	**P**	**10 59 53.8**	**-0.3**
KURK				pmax	pmax		
	comp=Z,22nm,1.2s						
KURBB	**Kurchatov Arra**	**65.06**	**319**	P	**P**	**10 59 54.3**	**-0.1**
	comp=Z,10nm,0.7s,baz=98,slow=6.8,SNR=120						
KDJ	**Kajisay**	**65.31**	**310**	*e*P	**P**	**10 59 56.8**	**+0.4**
	comp=Z,4.9nm,0.9s						
KDJ	**Kajisay**	**65.31**	**310**	*e*P	**P**	**10 59 56.8**	**+0.4**
KDJ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
IL1	**Eielson Array**	**66.59**	**25**	*e*P	**P**	**11 00 03.7**	**-0.3**
ILAR	**Eielson Array**	**66.59**	**25**	P	**P**	**11 00 03.2**	**-0.8**
	comp=Z,1.2nm,1.0s,baz=259,slow=4.7,SNR=7.4						
ILAR	**Eielson Array**	**66.59**	**25**	*e*P	**P**	**11 00 03.8**	**-0.2**
ILAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ILB	**Eielson Array**	**66.59**	**25**	*e*P	**P**	**11 00 03.4**	**-0.6**
NIL	**Nilore**	**68.56**	**301**	*e*P	**P**	**11 00 17.6**	**+0.6**
	comp=Z,7.5nm,0.6s						
NIL	**Nilore**	**68.56**	**301**	*e*P	**P**	**11 00 17.6**	**+0.6**
NIL				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KK31	**Karatay Array**	**70.23**	**311**	*e*P	**P**	**11 00 27.9**	**+0.7**
KK31	**Karatay Array**	**70.23**	**311**	*ce*P	**P**	**11 00 26.3**	**-0.9**
KK31				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KKAR	**Karatay Array**	**70.23**	**311**	*e*P	**P**	**11 00 27.4**	**+0.2**
BVAR	**Borovoye Array**	**70.28**	**321**	P	**P**	**11 00 27.2**	**-0.1**
	comp=Z,2.3nm,0.4s,baz=112,slow=7.7,SNR=15						
BRVK	**Borovoye**	**70.34**	**321**	*e*P	**P**	**11 00 28.0**	**+0.3**
	comp=Z,3.3nm,0.8s						
BRVK	**Borovoye**	**70.34**	**321**	⇓*i*P	**P**	**11 00 27.7**	**0.0**
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
ARU	**Arti**	**76.97**	**325**	*c i*P	**P**	**11 01 06.3**	**-0.2**
ARU				S	**S**	**11 10 51.5**	**-0.9**
ARU				SS	**SS**	**11 15 46.5**	**-2.6**
ARU				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ABKAR	**Akbulak array**	**77.05**	**318**	*e*P	**P**	**11 01 06.8**	**-0.2**
AKTO	**Aktyubinsk**	**78.11**	**319**	LR	LR	11 34 51.9	
	comp=Z,38nm,20.5s,baz=97,slow=35						
YKA	**Yellowknife Ar**	**80.83**	**28**	P	**P**	**11 01 27.4**	**-0.1**
	comp=Z,0.9nm,0.7s,baz=279,slow=5.7,SNR=4.4						
YKA	**Yellowknife Ar**	**80.83**	**28**	*e*P	**P**	**11 01 28.9**	**+1.4**
YKA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
C09A	**Chrisman Ranch**	**82.31**	**43**	*e*P	**P**	**11 01 35.4**	**-0.3**
	comp=Z,13nm,0.2s						
NV01	**Mina Array Sit**	**84.55**	**52**	*e*P	**P**	**11 01 48.0**	**+0.3**
NVAR	**Mina Array Bea**	**84.55**	**52**	P	**P**	**11 01 48.9**	**+1.2**
	comp=Z,0.3nm,0.6s,baz=275,slow=5.3,SNR=3.5						
ARA0	**ARCESS Array S**	**86.57**	**343**	*e*P	**P**	**11 01 57.0**	**+0.2**
ARCES	**ARCESS Array B**	**86.57**	**343**	P	**P**	**11 01 57.0**	**+0.2**
	comp=Z,1.7nm,0.8s,baz=54,slow=6.2,SNR=4.6						
ARCES	**ARCESS Array B**	**86.57**	**343**	*e*P	**P**	**11 01 58.5**	**+1.7**
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.9s						
OBN	**Obninsk**	**89.22**	**327**	*e*P	**P**	**11 02 10.2**	**+0.5**
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KIV	**Kislovodsk**	**89.85**	**316**	*e*P	**P**	**11 02 12.4**	**-0.7**
KIV				pmax	pmax		
	comp=Z,5.0nm,0.8s						
FIA0	**FINESS Array S**	**90.94**	**336**	*e*P	**P**	**11 02 14.9**	**-2.7**
FIA0	**FINESS Array S**	**90.94**	**336**	*e*P	**P**	**11 02 14.9**	**-2.7**
FINES	**FINESS Array B**	**90.94**	**336**	P	**P**	**11 02 14.9**	**-2.7**
	comp=Z,1.3nm,0.7s,baz=83,slow=11,SNR=3.6						
FINES	**FINESS Array B**	**90.94**	**336**	*e*P	**P**	**11 02 19.2**	**+1.6**
FINES				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ANN	**Anapa**	**93.01**	**318**	*e*P	P	11 02 20.7	-6.9
ANN				pmax	pmax		
	comp=Z,36nm,1.1s						
SNAA	**Sanae**	**120.36**	**191**	PKP	**PKPdf**	**11 08 03.5**	**-1.1**
	comp=Z,1.0nm,1.0s,baz=270,slow=5.1,SNR=4.9						
PB11	**IPOC Station P**	**144.69**	**103**	*e*PKPdf	**PKPab**	**11 08 50.0**	**-0.4**
DBIC	**Dimbokro**	**144.89**	**305**	PKP	**PKPab**	**11 08 51.0**	**-0.1**
	comp=Z,6.2nm,0.7s,baz=37,slow=1.7,SNR=5.2						
KIC	**Kosan Boka**	**144.98**	**305**	*e*PKP1	PKPbc	11 08 51.5	0.0
	comp=Z,152nm,2.0s						
TIC	**Toumodi**	**145.03**	**306**	*e*PKP1	**PKPbc**	**11 08 51.4**	**-0.2**
LIC	**Lamto**	**145.29**	**305**	*e*PKP1	**PKPbc**	**11 08 52.4**	**0.0**
	comp=Z,41nm,0.9s						
LPAZ	**La Paz**	**146.13**	**97**	PKPbc	**PKPab**	**11 08 56.4**	**-0.1**
	comp=Z,0.9nm,0.5s,baz=180,slow=3.0,SNR=4.3						
LPAZ	**La Paz**	**146.13**	**97**	*e*PKPdf	**PKPdf**	**11 08 52.9**	**-1.9**
LPAZ	**La Paz**	**146.13**	**97**	*e*PKIKP	**PKPdf**	**11 08 52.9**	**-1.9**

MEX 17 11:27:26.9±0.7**, 16.°35N**×**99.°23W, h12**^{km}±23^{km}**, MD3.5, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ACX	**Acapulco**	**0.79**	**311**	*i* P	Pg	11 27 39.1	-3.2
ACX				*i* S	Sg	11 27 48.9	-3.7
CAIG	**El Cayaco**	**1.21**	**305**	*e*P	Pn	11 27 45.9	-3.8
CAIG				*e*S	Sb	11 28 01.1	-4.3
TLIG	**Tlapa**	**1.36**	**28**	*e*P	Pn	11 27 48.6	-3.3
TLIG				*i* S	Sb	11 28 04.6	-5.3
MEIG	**Mezcala**	**1.61**	**347**	*e*P	Pn	11 27 51.5	-3.8
MEIG				*e*S	Sn	11 28 11.0	-5.0
ARIG	**Puente Sto Nin**	**2.19**	**331**	*e*P	Pn	11 28 00.0	-3.3
ARIG				*i* S	Sn	11 28 26.0	-4.5

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*IDC **17** 11:28:33.4±0.5, 31.°11S×178.°95W, h0^{km}, mb4.7/15, mb1 4.8/17, mb1mx4.6/40, mbtmp4.7/17, ML4.2/2, MS3.8/32, Ms1 3.8/32, ms1mx3.8/43, Error ellipse: s-maj=16.8km s-min=14.4km az=107.0*
*BJI **17** 11:28:36.0, 30.°61S×178.°64W, h8^{km}, mb5.2/12, mB5.3/4, Ms4.8/3, Ms7 4.7/3*
*NEIC **17** 11:28:36.4±0.2, 31.°07S×179.°18W, h10^{km}, mb4.7/57, Error ellipse: s-maj=8.0km s-min=5.0km az=143.0*
*WEL **17** 11:28:36.0, 31.°07S×179.°18W, h10^{km}, ML5.2/16*
*MOS **17** 11:28:38.8±1.1, 31.°15S×179.°19W, h33^{km}, mb5.0/17, Error ellipse: s-maj=13.4km s-min=12.7km az=61.6*
*ISCJB **17** 11:28:38.6±0.2, 31.°28S±0.°03×179.°16W±0.°05, h33^{km}, mb4.7/79, MS3.9/30, Error ellipse: s-maj=6.4km s-min=3.7km az=36.5*
ISC 17 11:28:40.0±0.3**, 31.°17S**±0.°05×**178.°95W**±0.°07**, h35**^{km}**, n272,** σ**1^{s}74**/258**, mb4.8**/79**, MS3.9**/29**, 10C-8D, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	**Green Lake**	**2.10**	**25**	P	**Pn**	**11 29 09.4**	**-3.2**
RAO	**Raoul Island**	**2.11**	**25**	Pn	**Pn**	**11 29 09.0**	**-3.7**
	72nm,0.3s,baz=160,slow=7.1,SNR=7.0						
RAO				Sn	**Sn**	**11 29 37.4**	**-0.3**
	130nm,0.3s,baz=50,slow=22,SNR=4.2						
RIZ	**Raoul Island**	**2.11**	**25**	P	**Pn**	**11 29 10.0**	**-2.8**
MXZ	**Matakaoa Point**	**6.77**	**199**	*e*Pn	**Pn**	**11 30 15.7**	**-1.1**
MXZ	**Matakaoa Point**	**6.77**	**199**	P	**Pn**	**11 30 16.1**	**-0.7**
WMGZ	**Waiomatatini S**	**6.98**	**197**	P	**Pn**	**11 30 18.0**	**-1.8**
HAZ	**Te Kaha**	**7.10**	**201**	P	**Pn**	**11 30 19.0**	**-2.4**
HAZ				S	**Sn**	**11 31 46.2**	**+5.3**
KUZ	**Kuaotunu**	**7.11**	**217**	P	**Pn**	**11 30 25.1**	**+3.6**
PKGZ	**Pakihiroa**	**7.14**	**199**	P	**Pn**	**11 30 19.3**	**-2.6**
PKGZ				S	**Sn**	**11 31 45.0**	**+3.2**
PUZ	**Puketiti**	**7.26**	**198**	P	**Pn**	**11 30 23.0**	**-0.6**
RUGZ	**Raukumara Rang**	**7.33**	**201**	P	**Pn**	**11 30 23.6**	**-1.0**
WCZ	**Waipu Caves**	**7.35**	**228**	P	**Pn**	**11 30 24.4**	**-0.3**
TWGZ	**Tauwhareparae**	**7.43**	**199**	P	**Pn**	**11 30 22.6**	**-3.4**
OUZ	**Omahuta**	**7.44**	**235**	*e*Pn	**Pn**	**11 30 24.3**	**-1.8**
OUZ	**Omahuta**	**7.44**	**235**	P	**Pn**	**11 30 24.2**	**-1.8**
WIAZ	**Waiheke Island**	**7.46**	**220**	P	**Pn**	**11 30 30.6**	**+4.3**
OPRZ	**Ohinepanea**	**7.62**	**208**	P	**Pn**	**11 30 29.5**	**+1.0**
TGRZ	**Tauranga**	**7.65**	**210**	P	**Pn**	**11 30 31.2**	**+2.4**
CNGZ	**Carnagh Statio**	**7.66**	**197**	P	**Pn**	**11 30 26.3**	**-2.8**
MKAZ	**Moumakai**	**7.67**	**218**	P	**Pn**	**11 30 31.0**	**+1.8**
MWZ	**Matawai**	**7.71**	**201**	P	**Pn**	**11 30 26.4**	**-3.4**
TKGZ	**Te Karaka**	**7.72**	**199**	P	**Pn**	**11 30 28.3**	**-1.5**
URZ	**Urewera**	**7.78**	**204**	Pn	**Pn**	**11 30 27.3**	**-3.3**
	3.4nm,0.3s,baz=13,slow=4.0,SNR=26						
URZ				Sn	**Sn**	**11 31 51.3**	**-6.2**
	baz=94,slow=19,SNR=1.3						

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URZ                               LR        LR        11 33 07.4
      comp=Z,1µm,20.3s,baz=44,slow=35
URZ   Urewera           7.78 204 ePn       Pn        11 30 27.3  -3.3
URZ                              ePn       Pn        11 30 28.9  -1.8
URZ                              eSn       Sn        11 31 51.3  -6.2
URZ   Urewera           7.78 204  P        Pn        11 30 27.7  -3.0
RIGZ  Rimuhau           7.99 199  P        Pn        11 30 29.8  -3.8
BKZ   Black Stump Fm    8.81 204 ePn       Pn        11 30 44.9  +0.1
HIZ   Hauiti            8.92 213 ePn       Pn        11 30 47.1  +0.8
KHZ   Kahutara         12.73 206 ePn       Pn        11 31 31.4  -7.0
OXZ   Oxford           14.09 208 ePn       Pn        11 31 47.8  -9.1
RPZ   Rata Peaks       14.81 210  LR       LR        11 37 50.9
      comp=Z,1µm,19.5s,baz=38,slow=38
DZM   Mont Dzumac      15.88 301  Pn       Pn        11 32 15.5  -5.5
      0.1nm,0.3s,baz=109,slow=14,SNR=2.8
DZM                               LR       LR        11 37 17.0
      comp=Z,710nm,18.7s,baz=134,slow=33
DZM   Mont Dzumac      15.88 301 eP        Pn        11 32 15.8  -5.2
      173nm,1.4s
DZM                              eLR       LR        11 35 53.7
      992nm,24.1s
AFI   Afiamalu         18.40  23  LR       LR        11 39 17.7
      comp=Z,247nm,20.3s,baz=198,slow=35
RAR   Rarotonga        19.83  65  LR       LR        11 40 46.6
      comp=Z,63nm,18.1s,baz=261,slow=37
ARMA  Armidale         25.26 264  P        P         11 34 05.2  +2.2
      baz=25,SNR=3.5
ARMA  Armidale         25.26 264 eP        P         11 34 04.2  +1.1
      15nm,1.1s
MGCD  Mangrove Creek   25.39 257  P        P         11 34 06.8  +2.8
      baz=25,SNR=5.1
EIDS  Eidsvold         26.97 275 eP        P         11 34 17.6  -0.9
      19nm,1.1s
TBI   Tubuai           27.29  81 eLR       LR        11 41 09.5
      464nm,29.2s
TBI   Tubuai           27.29  81 eT        T         12 02 45.4
      346nm,0.4s
RMQ   Roma             28.62 271  P        P         11 34 35.0  +1.9
      baz=28,SNR=3.9
HNR   Honiara          29.21 313  LR       LR        11 45 01.0
      comp=Z,177nm,18.6s,baz=176,slow=34
PAE   Paea             29.82  70 eT        T         12 05 51.7
      57nm,0.2s
PPT2  Papeete2         29.86  70 eLR       LR        11 42 29.1
      517nm,26.5s
PPT2  Papeete2         29.86  70 eT        T         12 05 55.6
      50nm,0.4s
PPT   Papeete          29.88  70  LR       LR        11 46 07.6
      comp=Z,92nm,18.8s,baz=226,slow=35
TOO   Toolangi         29.92 248  P        P         11 34 46.7  +2.1
      baz=29,SNR=7.5
TVO   Taravao          30.02  71 eT        T         12 06 07.2
      9.4nm,0.4s
CMSA  Cobar Meteorol   30.12 260  P        P         11 34 47.7  +1.2
      baz=30,SNR=5.1
QLP   Quilpie          32.47 269  P        P         11 35 07.0  -0.1
      baz=32,SNR=3.4
PMOR  Pomariorio Ree   32.64  68 eT        T         12 09 21.7
      10.0nm,0.3s
VAH   Vaihoa           32.72  68 eT        T         12 09 27.5
      290nm,0.2s
CTA   Charters Tower   33.13 281  P        P         11 35 11.9  -1.1
      13nm,1.0s,baz=104,slow=12,SNR=8.4
CTAO  Charters Tower   33.13 281 eP        P         11 35 13.5  +0.5
      26nm,1.1s
CTAO  Charters Tower   33.13 281 eP        P         11 35 13.5  +0.5
CTAO                              pmax     pmax
      comp=Z,27nm,1.1s
STKA  Stephens Creek   33.52 258  P        P         11 35 17.0  +0.7
      baz=33,SNR=7.3
STKA  Stephens Creek   33.52 258  P        P         11 35 15.1  -1.2
      comp=Z,13nm,0.8s,baz=89,slow=11,SNR=16
STKA                              LR       LR        11 46 46.4
      comp=Z,366nm,19.9s,baz=62,slow=33
STKA  Stephens Creek   33.52 258 eP        P         11 35 16.1  -0.2
      comp=Z,5.5nm,1.0s
STKA  Stephens Creek   33.52 258 eP        P         11 35 17.2  +0.9
HTT   Hallett          35.51 255  P        P         11 35 34.4  +0.8
      baz=35,SNR=5.0
BBOO  Buckleboo        37.98 255  P        P         11 35 54.4  -0.2
      baz=37,SNR=8.4
BBOO  Buckleboo        37.98 255 eP        P         11 35 54.4  -0.2
      comp=Z,49nm,0.9s
PMG   Port Moresby     38.21 297  LR       LR        11 49 30.6
      comp=Z,103nm,21.9s,baz=178,slow=33
RKT   Rikitea          39.74  89 eT        T         12 18 20.1
      comp=Z,9.5nm,0.3s
AS01  Alice Springs    42.22 268 eP        P         11 36 28.6  -1.3
AS31  Alice Springs    42.26 268 eP        P         11 36 29.3  -0.9
      comp=Z,4.9nm,0.8s
ASAR  Alice Springs    42.26 268  P        P         11 36 29.1  -1.1
      comp=Z,15nm,0.8s,baz=102,slow=7.3,SNR=104
ASAR                              LR       LR        11 53 38.8
      comp=Z,234nm,18.8s,baz=113,slow=36
TAOE  Nuku Hiva Isla   42.36  67 eLR       LR        11 48 15.5
      comp=Z,368nm,27.1s
WB2   Warramunga Arr   43.31 273 eP        P         11 36 36.8  -1.9
WB2                              eP        P         11 36 37.4  -1.3
WRAB  Tennant Creek    43.31 273 eP        P         11 36 37.3  -1.5
      comp=Z,23nm,0.8s
WRAB  Tennant Creek    43.31 273 eP        P         11 36 37.3  -1.5
WRAB                              pmax     pmax
      comp=Z,23nm,0.8s
WR1   Warramunga Arr   43.32 273 eP        P         11 36 37.1  -1.7
      comp=Z,31nm,0.9s
WRA   Warramunga Arr   43.32 273  P        P         11 36 37.1  -1.7
      comp=Z,24nm,0.9s,baz=113,slow=7.8,SNR=69
FORT  Forrest          45.07 256  P        P         11 36 52.5  -0.1
      baz=44,SNR=6.2
FORT  Forrest          45.07 256 eP        P         11 36 51.9  -0.8
      comp=Z,89nm,1.0s
WRKA  Warakurna        46.58 264  P        P         11 37 02.9  -1.8
      baz=46,SNR=27
SBA   Scott Base       47.21 184 eP        P         11 37 10.5  +1.7
      comp=Z,26nm,1.1s
VNDA  Vanda            47.25 186  P        P         11 37 09.5  +0.3
      comp=Z,2.5nm,1.0s,baz=24,slow=7.2,SNR=7.6
VNDA                              LR       LR        11 53 02.9
      comp=Z,88nm,19.3s,baz=36,slow=31
VNDA  Vanda            47.25 186 eP        P         11 37 09.6  +0.4
VNDA                             epP       P         11 37 10.1  +0.9
VNDA  Vanda            47.25 186 eP        P         11 37 09.6  +0.4
KDU   Kakadu           48.26 281  P        P         11 37 17.6  -0.2
      baz=48,SNR=4.9
MTN   Manton Dam       49.31 280  P        P         11 37 25.6  -0.2
      baz=49,SNR=4.3
KNRA  Kununurra        49.96 275  P        P         11 37 30.3  -0.4
      baz=50,SNR=5.3
FITZ  Fitzroy Crossi   51.55 271  P        P         11 37 41.6  -1.1
      comp=Z,29nm,1.0s,baz=115,slow=11,SNR=31
FITZ                              LR       LR        11 58 14.6
      comp=Z,158nm,19.8s,baz=122,slow=35
NWAO  Narrogin (SRO)   53.37 250  LR       LR        11 58 15.5
      comp=Z,152nm,19.0s,baz=311,slow=33
MEEK  Meekatharra      54.22 258  P        P         11 38 01.6  -0.9
      baz=54,SNR=6.8
MBWA  Marble Bar       55.34 265 eP        P         11 38 09.5  -1.1
      comp=Z,37nm,1.1s
GUMO  Guam             56.46 316  LR       LR        12 01 51.0
      comp=Z,43nm,18.1s,baz=103,slow=35
SOEI  Soe              56.66 279 eP        P         11 38 19.5  -0.8
      comp=Z,51nm,1.0s
QSPA  South Pole Qui   58.94 180  P        P         11 38 35.3  -0.3
      comp=Z,20nm,0.8s,baz=354,slow=0.5,SNR=43
QSPA                              LR       LR        12 00 26.0
      comp=Z,120nm,20.2s,baz=42,slow=32
QSPA  South Pole Qui   58.94 180 eP        P         11 38 35.3  -0.3
QSPA                             eP        P         11 38 35.4  -0.1
MMRI  Maumere          58.95 279 eP        P         11 38 35.1  -1.1
      comp=Z,55nm,1.0s
RPN   Rapa Nui         60.02 105  LR       LR        12 00 47.0
      comp=Z,38nm,18.4s,baz=284,slow=32
DAV   Davao City (W)   65.22 296  LR       LR        12 08 03.5
      comp=Z,48nm,18.5s,baz=148,slow=36
MAW   Mawson           71.30 201  P        P         11 39 53.2  -2.2
      comp=Z,4.4nm,1.0s,baz=147,slow=7.8,SNR=4.0
MAW                               LR       LR        12 08 29.8
      comp=Z,147nm,21.3s,baz=64,slow=34
MAW   Mawson           71.30 201 eP        P         11 39 55.0  -0.5
      comp=Z,0.2nm,0.9s
MAW   Mawson           71.30 201 eP        P         11 39 55.0  -0.5
SYO   Syowa Base       76.18 193⇑eP        P         11 40 21.6  -2.5
SYO   Syowa Base       76.18 193⇓epP       P         11 40 27.5  +3.4
SYO   Syowa Base       76.18 193⇑esP       P         11 40 31.0  +6.9
SYO   Syowa Base       76.18 193⇑ePcP      PcP       11 40 36.6  +0.6
SNAA  Sanae            77.41 179  P        P         11 40 29.9  -1.2
      comp=Z,12nm,1.1s,baz=184,slow=6.7,SNR=18
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SNAA                              LR       LR        12 13 09.6
      comp=Z,60nm,19.0s,baz=143,slow=34
SNAA  Sanae            77.41 179 eP        P         11 40 30.7  -0.4
      comp=Z,12nm,1.1s
SNAA  Sanae            77.41 179c iP       P         11 40 31.0  -0.1
NVL   N'lazarevskaya   78.06 184 eP        P         11 40 35.3  +0.7
NVL                              eS        S         11 50 28.2  +2.5
NVL                              eSS       SS        11 55 26.2  -0.1
NVL                              eSSS      SSS       11 58 55.1
NVL                               pmax     pmax
      comp=Z,25nm,1.0s
MJAR  Matsushiro Arr   78.41 326  P        P         11 40 33.6  -3.3
      comp=Z,6.5nm,1.1s,baz=163,slow=4.7,SNR=8.8
MJAR                              LR       LR        12 09 37.2
      comp=Z,25nm,21.8s,baz=170,slow=32
MAJO  Matsushiro       78.42 326 eP        P         11 40 33.6  -3.3
MAJO  Matsushiro       78.42 326⇑iP        P         11 40 35.5  -1.5
MAJO                              pmax     pmax
      comp=Z,15nm,1.2s
MAT   Matsushiro       78.42 326  P        P         11 40 35.3  -1.7
MJB9  Matsu-Tunnel     78.42 326 eP        P         11 40 35.8  -1.2
      comp=Z,13nm,1.1s
JNU   Nakatsue         79.59 319  LR       LR        12 11 00.4
      comp=Z,44nm,19.5s,baz=125,slow=32
PLCA  Paso Flores      82.58 133  P        P         11 40 57.7  -1.9
      comp=Z,9.8nm,1.1s,baz=244,slow=5.9,SNR=13
PLCA  Paso Flores      82.58 133 eP        P         11 41 00.2  +0.5
      comp=Z,15nm,1.1s
PLCA  Paso Flores      82.58 133 eP        P         11 41 00.1  +0.5
EFI   East Falkland    82.59 147⇓eP        P         11 41 01.7  +2.4
EFI                               pmax     pmax
      comp=Z,68nm,1.4s
ASAJ  Asahikawa        82.75 333  LR       LR        12 14 17.4
      comp=Z,71nm,19.6s,baz=163,slow=33
ASAJ  Asahikawa        82.75 333 eP        P         11 41 01.1  +1.2
      comp=Z,0.8nm,0.8s
TJN   Taejon           83.94 319⇑eP        P         11 41 05.6  -0.7
KSRS  Korea Array      84.41 320  P        P         11 41 07.5  -1.1
      comp=Z,4.7nm,1.1s,baz=147,slow=5.8,SNR=15
KSRS                              LR       LR        12 18 22.1
      comp=Z,37nm,18.1s,baz=167,slow=35
KS15  Wonju Array Si   84.42 320 eP        P         11 41 07.5  -1.2
KSAR  Wonju Array Be   84.42 320  P        P         11 41 07.5  -1.1
KSAR  Wonju Array Be   84.42 320  P        P         11 41 07.6  -1.1
KS01  Wonju Array Si   84.44 320 eP        P         11 41 08.3  -0.5
GSI   Gunungsitoli     85.08 274 eP        P         11 41 13.1  +0.4
      comp=Z,42nm,1.1s
YSS   Yuzh-Sakhalins   85.09 335 eP        P         11 41 10.8  -1.0
YSS                               pmax     pmax
      comp=Z,120nm,5.5s
LPIG  La Paz           85.63  59  LR       LR        12 10 11.7
      comp=Z,72nm,22.0s,baz=218,slow=29
NJ2   Nanjing          86.13 311 eP        P         11 41 19.8  +2.4
NJ2                               pmax     pmax
      comp=Z,10.0nm,0.5s
PETK  Petropavlovsk-   86.36 346  P        P         11 41 19.2  +1.2
      comp=Z,4.2nm,0.9s,baz=116,slow=6.6
PETK                              LR       LR        12 17 05.6
      comp=Z,47nm,18.4s,baz=181,slow=34
PEA1  Petropavlovsk-   86.36 346 eP        P         11 41 19.2  +1.2
PAGB  Antelope Grade   86.39  44 eP        P         11 41 20.2  +1.5
MSHR  Mys Shultsa      86.52 326⇓eP        P         11 41 16.6  -2.5
BAR   Barrett          86.59  48 eP        P         11 41 19.5  -0.2
      comp=Z,0.4nm,0.6s
MWC   Mount Wilson     86.72  46 eP        P         11 41 21.5  +1.0
      comp=Z,5.6nm,1.0s
MWC   Mount Wilson     86.72  46 eP        P         11 41 21.5  +1.0
MWC                               pmax     pmax
      comp=Z,6.0nm,1.0s
PFO   Pinyon Flats O   87.33  48 eP        P         11 41 24.4  +1.1
      comp=Z,2.2nm,0.9s
PFO   Pinyon Flats O   87.33  48 eP        P         11 41 24.5  +1.1
PFO                               pmax     pmax
      comp=Z,2.0nm,0.9s
XPFO  Piæon Flat       87.33  48 eP        P         11 41 24.6  +1.2
      comp=Z,2.1nm,0.9s
ISA   Isabella, Lake   87.42  45 eP        P         11 41 25.0  +1.3
      comp=Z,5.8nm,1.1s
ISA   Isabella, Lake   87.42  45 eP        P         11 41 25.0  +1.3
ISA                               pmax     pmax
      comp=Z,6.0nm,1.1s
CMB   Columbia Colle   87.88  42 eP        P         11 41 26.6  +0.8
      comp=Z,2.7nm,0.9s
CMB   Columbia Colle   87.88  42 eP        P         11 41 26.6  +0.8
CMB                               pmax     pmax
      comp=Z,3.0nm,0.9s
GLA   Glamis           88.01  49 eP        P         11 41 27.3  +0.7
      comp=Z,16nm,1.1s
GLA   Glamis           88.01  49 eP        P         11 41 27.3  +0.7
GLA                               pmax     pmax
      comp=Z,16nm,1.1s
AFDM  Forest Hills D   88.17  41 eP        P         11 41 28.3  +1.1
      comp=Z,2.2nm,1.0s
GSC   Goldstone, Bar   88.20  46 eP        P         11 41 28.9  +1.4
      comp=Z,6.5nm,1.1s
GSC   Goldstone, Bar   88.20  46 eP        P         11 41 28.9  +1.4
GSC                               pmax     pmax
      comp=Z,7.0nm,1.1s
DAC   Darwin (Calif)   88.36  45 eP        P         11 41 29.9  +1.5
      comp=Z,3.7nm,1.1s
MDPB  Devils Postpil   88.37  43 eP        P         11 41 30.0  +1.6
      comp=Z,6.9nm,1.2s
OMMB  Old Mammoth Mi   88.40  43 eP        P         11 41 30.2  +1.5
      comp=Z,0.7nm,0.9s
WDC   Whiskeytown Da   88.42  39 eP        P         11 41 29.2  +0.9
      comp=Z,1.6nm,0.9s
WDC   Whiskeytown Da   88.42  39 eP        P         11 41 29.2  +0.9
WDC                               pmax     pmax
      comp=Z,2.0nm,0.9s
TYV   Tymovskoe        88.43 337 eP        P         11 41 27.5  -0.5
TYV                               pmax     pmax
      comp=Z,13nm,1.9s
TYV                               pmax     pmax
      comp=Z,100nm,6.9s
113A  Mohawk Valley,   88.53  50 eP        P         11 41 30.3  +1.4
      comp=Z,4.9nm,1.0s
Y12C  Blythe           88.65  49 eP        P         11 41 31.4  +1.9
      comp=Z,5.2nm,1.0s
WAKR  Walker           88.74  43 eP        P         11 41 31.2  +1.1
      comp=Z,2.1nm,1.0s
LDFC  Landfair         89.12  47 eP        P         11 41 33.9  +2.1
      comp=Z,8.9nm,0.9s
BEKR  Beckworth        89.14  41 eP        P         11 41 32.1  +0.2
      comp=Z,3.3nm,1.2s
YBH   Yreka Blue Hor   89.14  38  P        P         11 41 30.9  -0.9
      comp=Z,3.5nm,1.1s,baz=180,slow=9.1,SNR=3.0
YBH                               LR       LR        12 12 50.9
      comp=Z,37nm,21.2s,baz=211,slow=30
YBH   Yreka Blue Hor   89.14  38 eP        P         11 41 33.3  +1.6
YBH   Yreka Blue Hor   89.14  38 eP        P         11 41 33.3  +1.6
NV01  Mina Array Sit   89.36  43 eP        P         11 41 33.2  +0.2
NVAR  Mina Array Bea   89.36  43  P        P         11 41 32.4  -0.6
      comp=Z,3.3nm,1.0s,baz=224,slow=7.5,SNR=17
NVAR                              LR       LR        12 18 19.9
      comp=Z,93nm,18.2s,baz=102,slow=33
NV11  Mina Array Sit   89.44  43 eP        P         11 41 34.0  +0.7
      comp=Z,0.3nm,1.1s
PAHR  Pah Rah Range    89.58  42 eP        P         11 41 35.1  +1.2
      comp=Z,3.5nm,1.2s
PAHR                             epP       pP        11 41 44.3  -0.8
TPNV  Topopah Spring   89.61  45 eP        P         11 41 35.4  +1.2
      comp=Z,3.7nm,1.1s
TPNV  Topopah Spring   89.61  45 eP        P         11 41 35.4  +1.2
TPNV                              pmax     pmax
      comp=Z,4.0nm,1.1s
HUMO  Hull Mountain    89.62  38 eP        P         11 41 35.5  +1.6
KVN   Kaiserville      89.89  43 eP        P         11 41 35.9  +0.4
      comp=Z,4.2nm,1.2s
KVN   Kaiserville      89.89  43 eP        P         11 41 35.9  +0.4
KVN                               pmax     pmax
      comp=Z,4.0nm,1.2s
TIA   Tai'an           89.90 313  P        P         11 41 35.4  +0.1
TIA                               pmax     pmax
      comp=Z,7.0nm,1.1s
W13A  Hualapai Mount   89.91  48 eP        P         11 41 37.2  +1.6
      comp=Z,1.7nm,0.9s
SHPR  Sheep Range      90.00  46 eP        P         11 41 37.5  +1.5
      comp=Z,3.4nm,1.1s
TUC   Tucson           90.23  52 eP        P         11 41 39.2  +2.1
      comp=Z,6.8nm,1.1s
TUC   Tucson           90.23  52 eP        P         11 41 39.2  +2.1
TUC                               pmax     pmax
      comp=Z,7.0nm,1.1s
CN2   Changchun        90.26 323 eP        P         11 41 37.0  +0.2
CN2                              esP       pP        11 41 44.0  -4.0
CN2                               pmax     pmax
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      comp=Z,20nm,1.0s
MOD   Modoc Plateau    90.56  40 eP        P         11 41 39.0  +0.5
      comp=Z,1.9nm,1.0s
GRNR  Gornyy           90.60 334 eP        P         11 41 42.0  +3.8
GRNR                              pmax     pmax
      comp=Z,80nm,1.5s
319A  Douglas          90.69  53 eP        P         11 41 41.2  +1.9
      comp=Z,5.8nm,0.9s
K05A  Summer Lake      90.80  39 eP        P         11 41 40.5  +0.9
      comp=Z,3.4nm,1.0s
X16A  Lo Mia Camp, P   91.07  50 eP        P         11 41 43.0  +1.9
      comp=Z,2.5nm,0.9s
GYA   Guiyang          91.23 300 eP        P         11 41 43.3  +1.4
GYA                               pmax     pmax
      comp=Z,10.0nm,1.0s
KLR   Kul'dur          91.29 330d iP       P         11 41 42.3  +0.8
H04A  Detroit Lake     91.47  37 eP        P         11 41 43.4  +0.9
      comp=Z,8.1nm,1.1s
PINE  Pine Mountain    91.50  38 eP        P         11 41 44.0  +1.1
      comp=Z,13nm,1.1s
LCMT  Little Creek M   91.51  47 eP        P         11 41 44.3  +1.3
      comp=Z,2.9nm,1.1s
U15A  North Rim        91.75  48 eP        P         11 41 45.4  +1.1
      comp=Z,3.2nm,0.8s
CCUT  Cedar City       91.77  46 eP        P         11 41 45.9  +1.5
      comp=Z,2.3nm,1.1s
WUAZ  Wupatki          91.78  49 eP        P         11 41 45.8  +1.4
      comp=Z,5.5nm,1.1s
WVOR  Wild Horse Val   91.83  40 eP        P         11 41 45.5  +1.2
WVOR  Wild Horse Val   91.83  40 eP        P         11 41 45.5  +1.2
J08A  Circle Bar Ran   92.53  39 eP        P         11 41 48.7  +1.1
      comp=Z,4.1nm,1.0s
MTPU  Mount Pierson    92.81  47 eP        P         11 41 51.2  +1.9
      comp=Z,4.6nm,0.9s
TX31  Lajitas Ar. Si   93.49  58 eP        P         11 41 53.3  +1.1
TX31                             eP        P         11 41 53.8  +1.5
LTX   Lajitas          93.49  58 eP        P         11 41 52.0  -0.3
LTX   Lajitas          93.49  58 eP        P         11 41 52.0  -0.3
TXAR  Lajitas Array    93.49  58  P        P         11 41 52.0  -0.3
      comp=Z,1.0nm,1.1s,baz=228,slow=4.7,SNR=7.5
TXAR                              LR       LR        12 20 03.0
      comp=Z,25nm,18.1s,baz=0.0,slow=33
TXAR  Lajitas Array    93.49  58  P        P         11 41 52.0  -0.3
CMAI  Chiengmai2       93.58 291  P        P         11 41 56.3  +3.3
MNTX  Cornudas Mount   93.59  55 eP        P         11 41 53.3  +0.8
      comp=Z,0.7nm,0.8s
LAZ   Ladron           93.92  52 eP        P         11 41 55.7  +1.4
NNA   Nana             93.99 106  LR       LR        12 14 17.1
      comp=Z,20nm,20.6s,baz=224,slow=29
MFID  Camas Ranch      94.03  41 eP        P         11 41 54.9  +0.4
      comp=Z,2.0nm,1.0s
LNIG  Linares          94.22  64 eP        P         11 41 56.5  +0.9
      comp=Z,3.5nm,1.1s
ANMO  Albuquerque      94.69  52  LR       LR        12 18 14.8
      comp=Z,50nm,18.8s,baz=220,slow=32
ANMO  Albuquerque      94.69  52⇑eP        P         11 41 58.9  +1.1
ANMO                              pmax     pmax
      comp=Z,5.0nm,2.3s
HHC   Hu-ho-hao-te     96.18 314 eP        P         11 42 07.6  +3.3
HHC                               S        S         11 53 24.4  +3.2
HHC                               sS       pS        11 53 33.8  -1.7
HHC                               LR       LR
      comp=Z,99nm,16.7s
HHC                               LR       LR
      comp=Z,120nm,15.3s
HHC                               LR       LR
      comp=Z,78nm,16.4s
SEY   Seymchan         96.54 347⇓eP        P         11 42 07.2  +2.0
PDAR  Pinedale Array   97.25  44  LR       LR        12 18 15.9
      comp=Z,65nm,21.5s,baz=248,slow=31
LZH   Lanzhou          98.53 307 eP        Pdif      11 42 17.4  +2.3
LZH                               pP       pP        11 42 23.6  -2.7
LZH                               sP       sP        11 42 27.9  -2.4
LZH                              ePP       PP        11 46 19.8  +3.4
LZH                               LR       LR
      comp=Z,180nm,17.5s
LZH                               LR       LR
      comp=Z,190nm,17.7s
LZH                               LR       LR
      comp=Z,240nm,19.2s
JTS   JuntasAbangare   98.64  83  LR       LR        12 16 57.4
      comp=Z,34nm,18.9s,baz=358,slow=29
WMQ   Urumqi          113.06 308 ePKP      PKiKP     11 47 14.3  +0.9
DGZ   Jazzator, Alta  115.27 314 ePKIKP    PKPdf     11 47 19.5  +2.0
MK01  Makanchi Array  117.63 310 ePKPdf    PKPdf     11 47 21.3  -0.7
MK32  Makanchi Array  117.64 310 ePKPdf    PKPdf     11 47 20.2  -1.8
MKAR  Makanchi Array  117.64 310  PKP      PKPdf     11 47 20.2  -1.8
      comp=Z,0.9nm,0.9s,baz=48,slow=3.8,SNR=5.7
KSH   Kashi           119.93 300 ePKP      PKPdf     11 47 24.5  -2.3
KSH                              ePP       PP        11 48 53.8  +2.1
KURK  Kurchatov       120.99 314 ePKPdf    PKPdf     11 47 27.1  -1.2
KURK  Kurchatov       120.99 314⇑iPKIKP    PKPdf     11 47 29.3  +1.0
KURBB Kurchatov Arra  121.02 313  PKP      PKPdf     11 47 27.1  -1.2
      comp=Z,1.5nm,0.9s,baz=96,slow=2.3,SNR=6.9
KK31  Karatay Array   124.82 303 ePKPdf    PKPdf     11 47 37.0  +1.1
KK31  Karatay Array   124.82 303 ePKIKP    PKPdf     11 47 37.0  +1.1
KK31  Karatay Array   124.82 303 ⇑P        PKPdf     11 47 36.7  +0.8
      comp=Z,2.1nm,0.3s,baz=177,slow=12,SNR=36
KKAR  Karatay Array   124.82 303 ePKPdf    PKPdf     11 47 37.0  +1.1
KKAR  Karatay Array   124.82 303 ePKIKP    PKPdf     11 47 37.0  +1.1
BVAR  Borovoye Array  126.38 315  PKP      PKPdf     11 47 37.7  -0.9
      comp=Z,2.5nm,1.0s,baz=147,slow=3.4,SNR=6.5
BRVK  Borovoye        126.45 315 ePKPdf    PKPdf     11 47 38.1  -0.6
BRVK  Borovoye        126.45 315d iPKIKP   PKPdf     11 47 37.8  -0.9
ARU   Arti            133.16 320 i PKIKP   PKPdf     11 47 52.4  +1.1
ARU                                                  11 50 16.0
ARU                               SS       SS        12 07 55.2  -4.2
VRH   Novokhopyorsk   144.03 316 ePKIKP    PKPdf     11 48 12.9  +1.5
VRH                               pmax     pmax
      comp=Z,8.0nm,0.4s
ZEI   Tsey            144.21 301 i PKIKP   PKPab     11 48 09.6  -0.5
MOS   Moscow          144.50 325 ePKIKP    PKPbc     11 48 10.7   0.0
MOS                               pmax     pmax
      comp=Z,84nm,1.7s
AKH   Akhalkalaki     144.61 299 ePKPdf    PKPbc     11 48 11.9  +0.1
KBZ   Khabaz          144.85 303  PKP      PKPab     11 48 11.2  -1.0
      comp=Z,9.3nm,1.1s,baz=144,slow=2.1,SNR=9.8
KIV   Kislovodsk      144.98 303⇓ePKIKP    PKPbc     11 48 12.8   0.0
KIV                               pmax     pmax
      comp=Z,7.0nm,1.1s
OBN   Obninsk         145.32 324 ePKIKP    PKPbc     11 48 12.5  -0.8
OBN                               pmax     pmax
      comp=Z,158nm,1.7s
VSR   Storozhevoye    145.54 317 ePKP2     PKPdf     11 48 12.0  -2.0
VSR                               pmax     pmax
      comp=Z,60nm,1.2s
VORD  Divnogorie      145.56 316 ePKP2     PKPdf     11 48 12.6  -1.4
VORD                              pmax     pmax
      comp=Z,40nm,1.3s
FIA1  FINESS Array S  145.57 339 ePKPdf    PKPdf     11 48 12.2  -1.5
FIA0  FINESS Array S  145.58 339 ePKPdf    PKPdf     11 48 11.2  -2.5
FIA0  FINESS Array S  145.58 339 ePKP2     PKPdf     11 48 11.2  -2.5
FINES FINESS Array B  145.58 339  PKPbc    PKPdf     11 48 11.2  -2.5
      comp=Z,16nm,0.9s,baz=46,slow=5.5,SNR=17
VSU   Vasula          147.58 335⇑ePKP2     PKPbc     11 48 20.0  +0.1
NB2   NORSAR Subarra  149.38 350  PKP      PKPbc     11 48 24.4  -0.1
      comp=Z,0.9nm,0.7s,baz=18,slow=2.9
ASF   Jabal al Asfar  149.56 281  PKPbc    PKPbc     11 48 24.9  -1.1
      comp=Z,2.6nm,0.7s,baz=83,slow=3.9,SNR=7.8
HFS   Hagfors         149.82 347  PKPbc    PKPbc     11 48 24.4  -1.2
      comp=Z,1.7nm,0.8s,baz=79,slow=7.8,SNR=3.6
MMAI  Mount Meron Ar  150.91 283  PKPbc    PKPbc     11 48 29.6  +0.4
      comp=Z,1.0nm,0.3s,baz=90,slow=6.5,SNR=6.8
AKASG Malin Array Be  151.40 321  PKPbc    PKPbc     11 48 28.1  -1.5
      comp=Z,3.7nm,0.7s,baz=55,slow=3.0,SNR=8.1
AKBB  Malin Array Si  151.40 321 ePKPbc    PKPbc     11 48 28.2  -1.4
AKBB  Malin Array Si  151.40 321 ePKIKP    PKPbc     11 48 28.2  -1.4
KIEV  Kiev            151.41 321 ePKPbc    PKPbc     11 48 28.8  -0.8
KIEV  Kiev            151.41 321⇓iPKIKP    PKPbc     11 48 28.9  -0.8
AK11  Malin Array Si  151.44 321 ePKPdf    PKPdf     11 48 23.2  -0.4
AK11                             ePKPbc    PKPbc     11 48 29.0  -0.7
BR101 Keskin Array S  152.23 297 ePKPbc    PKPbc     11 48 31.2  -0.9
BR131 Keskin Array S  152.23 297 ePKPdf    PKPdf     11 48 24.6  -0.8
BR131                            ePKPbc    PKPbc     11 48 31.4  -0.7
BRTR  Keskin Array B  152.23 297  PKPbc    PKPbc     11 48 31.2  -0.9
      comp=Z,2.7nm,0.9s,baz=159,slow=3.8,SNR=8.2
BUR08 Bucovina Ar. S  155.28 319 ePKPdf    PKPdf     11 48 29.2  -0.2
BUR08                            ePKPbc    pPKPdf    11 48 38.4  -2.5
BUR04 Bucovina Ar. S  155.28 319 ePKPdf    PKPdf     11 48 29.6  +0.2
BUR04                            ePKPab    PKPab     11 48 54.7  +0.1
CRVS  Cervenica-Dubn  156.50 325 ePKP2     PKPab     11 48 59.1  -0.6
CRVS  Cervenica-Dubn  156.50 325 ePKP      PKPab     11 48 59.1  -0.6
CLL   Collm           158.02 340 ePKPab    PKPab     11 49 06.0  -0.1
      comp=Z,11nm,1.1s
CLL   Collm           158.02 340 ePKP2     PKPab     11 49 06.0  -0.1
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CLL				pmax	pmax		
	comp=Z,11nm,1.1s						
VYHS	Vyhne	158.05	327	*e*PKP2	PKPab	11 49 06.8	+0.5
VYHS	Vyhne	158.05	327	*e*PKP	PKPab	11 49 06.8	+0.5
BRG	Berggiesshubel	158.10	338	*e*PKP2	PKPab	11 49 05.7	-0.8
BRG				pmax	pmax		
	comp=Z,17nm,1.5s						
JAVC	Velka Javorina	158.31	329	*e*PKP	PKPab	11 49 07.6	+0.1
VRAC	Vranov	158.42	332	*e*PKP	PKPab	11 49 08.0	+0.1
KRUC	Moravsky	158.69	331	*e*PKP	PKPab	11 49 09.2	+0.1
GERES	GERESS Array B	159.91	335	PKPab	PKPab	11 49 13.1	-1.4
	comp=Z,0.3nm,0.2s,baz=32,slow=9.3,SNR=4.1						
TORD	Torodi Ar. Bea	162.06	182	PKPab	PKPab	11 49 22.0	-2.5
	baz=184,slow=2.6						
TOA1	Torodi Ar. Sit	162.06	182	*e*PKPab	PKPab	11 49 22.0	-2.5
KOWA	Kowa	162.77	163	PKPab	PKPab	11 49 27.8	+0.2
	comp=Z,2.5nm,0.8s,baz=288,slow=3.2,SNR=3.3						

NNC 17 11:46:05.1±3.5,**36°.99N×70°.77E,h0^{km},mb3.9,mpv3.5, 2C-3D,Error ellipse: s-maj=33.1km s-min=23.4km az=139.0,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	3.70	35	⇑P	Pn	11 47 03.9	+0.2
	5.5nm,0.3s						
SFK				⇑S	Sn	11 47 50.1	+1.9
	3.5nm,0.2s						
MNAS	Manas	5.65	13	⇓P	Pn	11 47 30.1	-0.4
	1.4nm,0.5s						
MNAS				⇓S	Sn	11 48 37.7	+1.5
	4.0nm,0.6s						
KK31	Karatay Array	6.11	358	⇓S	Sn	11 48 49.7	+2.5
	1.2nm,0.5s,baz=143,slow=24,SNR=4.2						
AAK	Ala-Archa	6.33	26	S	Sn	11 48 52.1	-0.7
	2.0nm,0.6s						

IDC **17** *12:00:26.8±2.9,36°.09N×71°.28E,h85^{km}±26^{km},mb3.8/16, mb1 3.9/20,mb1mx3.6/64,mbtmp4.2/20,MS2.8/1, Ms1 2.8/1,ms1mx2.2/62,Error ellipse: s-maj=17.6km s-min=16.1km az=177.0*

ISCJB **17** *12:00:27.2±0.2,36°.29N±0°.02×71°.21E±0°.04,h100^{km}, mb4.2/31,Error ellipse: s-maj=4.3km s-min=3.2km az=158.5*

BJI **17** *12:00:29.0,36°.40N×71°.20E,h96^{km},mb4.5/11,mB4.7/6*

MOS **17** *12:00:29.6±1.2,36°.44N×71°.27E,h110^{km},mb4.3/16,Error ellipse: s-maj=9.6km s-min=4.9km az=86.0*

NEIC **17** *12:00:29.7±0.7,36°.38N×71°.20E,h105^{km}±7^{km},mb4.1/6, Error ellipse: s-maj=9.0km s-min=7.3km az=131.0*

NNC **17** *12:00:34.6±1.9,36°.77N×70°.98E,h151^{km}±34^{km},mb3.7, mpv4.5,Error ellipse: s-maj=22.0km s-min=16.5km az=81.0*

ISC 17 12:00:29.1±0.4,**36°.30N**±0°.04×**71°.16E**±0°.04,**h100^{km},n131,** σ**2^{s}08**/148,**mb4.2**/31,**13C-8D,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	Kabul	2.46	225	*e*Pn	Pn	12 01 11.0	+3.1
KBL	Kabul	2.46	225	*e*PN	Pn	12 01 11.0	+3.1
CEP	Cherat	2.54	166	P	Pn	12 01 12.2	+3.3
CHCP	Chirah Chowk	3.15	146	P	Pn	12 01 20.2	+3.3
NIL	Nilore	3.15	146	*e*Pn	Pn	12 01 20.3	+3.4
NIL	Nilore	3.15	146	*e*PN	Pn	12 01 20.3	+3.4
THW	Thamme Wali	3.53	172	P	Pn	12 01 24.7	+2.8
SFK	Sufi-Kurgan	4.14	26	⇑P	Pn	12 01 32.3	+1.9
	65nm,0.3s						
SFK				⇑S	Sn	12 02 18.5	+0.5
	66nm,0.3s						
SFK	Sufi-Kurgan	4.14	26	PN	Pn	12 01 32.3	+1.9
SFK				S	Sn	12 02 18.4	+0.5
SFK				pmax	pmax		
	comp=Z,65nm,0.3s						
SFK				smax	smax		
	comp=N,97nm,0.5s						
SARP	Sargodha	4.54	164	P	Pn	12 01 37.4	+1.8
KSH	Kashi	4.98	48	*e*P	Pn	12 01 39.1	-2.5
KSH				*e*sP		12 02 03.6	
KSH				S	Sn	12 02 28.5	-10
KSH				pmax	pmax		
	comp=N,120nm,0.4s						
KSH				smax	smax		
	comp=N,1µm,0.9s						
KSH				smax	smax		
	comp=N,680nm,0.7s						
KSH				LR	LR		
	comp=N,310nm,5.2s						
DHRM	DHARAMSHALA	5.86	132	*e*P	Pn	12 01 51.3	-2.4
DHRM				*e*S	Sn	12 02 58.0	-1.7
AML	Almayashu	6.15	18	P	Pn	12 01 58.0	+0.2
	SNR=103						
MNAS	Manas	6.27	9	⇑P	Pn	12 01 58.7	-0.4
	comp=N,14nm,0.4s						
MNAS				⇓S	Sn	12 03 05.3	-4.0
	comp=N,80nm,0.4s						
MNAS	Manas	6.27	9	*i* PN	Pn	12 01 58.7	-0.4
MNAS				pmax	pmax		
	comp=Z,14nm,0.4s						
UCH	Uchtor	6.47	23	P	Pn	12 02 05.0	+2.9
	SNR=5.8						
KZA	Kyzart	6.59	28	P	Pn	12 02 03.7	0.0
	SNR=28						
EKS2	Erkin-Say	6.67	17	P	Pn	12 02 04.9	+0.3
	SNR=22						
KK31	Karatay Array	6.82	356	⇓P	Pn	12 02 05.8	-0.7
	comp=Z,13nm,0.3s,baz=175,slow=12,SNR=515						
KK31				⇑S	Sn	12 03 17.3	-5.2
	comp=Z,26nm,0.3s,baz=191,slow=25,SNR=11						
KK31	Karatay Array	6.82	356	*e*Pn	Pn	12 02 05.7	-0.7
KK31	Karatay Array	6.82	356	*e*PN	Pn	12 02 05.7	-0.7
KKAR	Karatay Array	6.82	356	*e*Pn	Pn	12 02 05.7	-0.7
KKAR	Karatay Array	6.82	356	*e*PN	Pn	12 02 05.7	-0.7
AAK	Ala-Archa	6.84	21	P	Pn	12 02 07.5	+0.7
	comp=Z,18nm,0.3s,baz=178,slow=5.7,SNR=42						
AAK				S	Sn	12 03 21.3	-1.9
	comp=Z,10nm,0.3s,baz=320,slow=19,SNR=16						
AAK	Ala-Archa	6.84	21	P	Pn	12 02 07.5	+0.7
	SNR=35						
AAK	Ala-Archa	6.84	21	*e*Pn	Pn	12 02 07.0	+0.1
AAK				*e*Pn	Pn	12 02 07.5	+0.7
AAK				*e*Sn	Sn	12 03 21.3	-1.9
KBK	Karagaybulak	6.99	24	P	Pn	12 02 10.5	+1.5
	SNR=10.0						
FRU	Bishkek	7.05	21	*e*PN	Pn	12 02 10.0	+0.3
FRU				*i* S	Sn	12 03 28.0	-0.3
FRU				smax	smax		
	comp=N,150nm,1.8s						
ULHL	Ulahol	7.13	32	P	Pn	12 02 10.9	+0.1
	SNR=9.6						
SMLA	Simla	7.18	134	*e*P	Pn	12 02 11.9	+0.5
SMLA				*e*S	Sn	12 03 28.3	-3.1
CHMS	Chumysh	7.24	21	P	Pn	12 02 12.5	+0.2
	SNR=22						
USP	Ospenovka	7.42	19	P	Pn	12 02 15.1	+0.5
	SNR=8.3						
TKM2	Tokmak 2	7.45	26	⇓P	Pn	12 02 15.0	-0.2
	comp=N,13nm,0.5s						
TKM2				⇑S	Sn	12 03 35.9	-2.3
	comp=N,42nm,0.9s						
TKM2	Tokmak 2	7.45	26	P	Pn	12 02 15.4	+0.2
	SNR=23						
TKM2	Tokmak 2	7.45	26	*i* PN	Pn	12 02 14.5	-0.7
TKM2				pmax	pmax		
	comp=Z,13nm,0.5s						
KKR	Kurukshetra	7.90	141	*e*S	Sn	12 03 44.3	-4.6
PRZ	Przheval'sk	8.34	40	*e*Pn	Pn	12 02 26.4	-0.9
PRZ	Przheval'sk	8.34	40	*e*PN	Pn	12 02 26.4	-0.9
BHGR	Bahadurgarh	9.02	146	*e*S	Sn	12 04 11.4	-4.7
KHET	Khetri	9.09	153	*e*P	Pn	12 02 34.9	-2.5
KHET				*e*S	Sn	12 04 10.5	-7.5
KHET				IAML		12 04 15.3	
	comp=E,72nm,0.0s						
KHET				IAML		12 04 16.6	
	comp=N,96nm,0.4s						
NDI	New Delhi	9.15	144	*e*S	Sn	12 04 15.0	-4.4
JASL	Jaisalmer	9.35	181	*e*S	Sn	12 04 14.3	-10
PDGK	Podgornoye	9.50	40	P	Pn	12 02 41.9	-1.2
GEYT	Alibeck	10.55	283	P	Pn	12 02 56.7	-0.5
	comp=N,1.0nm,0.3s,baz=107,slow=9.7,SNR=3.4						
GEYT				S	Sn	12 04 45.2	-8.2
	comp=N,6.6nm,0.3s,baz=188,slow=27,SNR=12						
GYA0B	ALIBECK ARRAY	10.55	283	*e*Pn	Pn	12 02 56.5	-0.7
PYUN	Piuthan	12.92	126	*e*P	Pn	12 03 27.4	-1.7
	comp=N,18nm,0.3s						
MAKZ	Makanchi	13.25	34	*e*Pn	Pn	12 03 31.7	-1.4
MAKZ	Makanchi	13.25	34	*e*P	Pn	12 03 31.7	-1.4
DANN	Dangsing	13.27	123	*e*P	Pn	12 03 31.9	-1.9
	comp=N,22nm,0.3s						
DANN				*e*S	Sn	12 05 47.4	-12
MK01	Makanchi Array	13.37	35	*e*Pn	Pn	12 03 33.8	-0.9
MK31	Makanchi Array	13.38	35	*e*Pn	Pn	12 03 33.5	-1.4
MK31	Makanchi Array	13.38	35	*e*P	Pn	12 03 33.5	-1.4
MK32	Makanchi Array	13.38	35	*e*Pn	Pn	12 03 33.5	-1.3
MKAR	Makanchi Array	13.38	35	P	Pn	12 03 33.6	-1.3
	comp=N,0.2nm,0.3s,baz=221,slow=15,SNR=5.8						
KOLN	Koldanda	13.54	125	*e*P	Pn	12 03 35.1	-2.1
	comp=N,16nm,0.5s						
GKN	Gorkha	14.08	122	*e*P	Pn	12 03 42.7	-1.6
	comp=N,14nm,0.3s						
BHPL	Bhopal	14.10	156	*e*P	Pn	12 03 46.6	+2.3
DMN	Daman	14.65	122	*e*S	Sn	12 06 20.1	-13
KKN	Kakani	14.66	121	*e*P	Pn	12 03 49.7	-2.0
	comp=N,8.4nm,0.2s						
WMQ	Urumqi	14.71	54	*e*P	Pn	12 03 52.8	+0.7
PKIN	Phulchoki	14.87	122	*e*P	Pn	12 03 52.9	-1.6
	comp=N,12nm,0.4s						
KURBB	Kurchatov Arra	15.28	18	P	Pn	12 03 55.6	-3.4
	comp=N,0.0nm,0.3s,baz=212,slow=11,SNR=3.9						
AB31	Akbulak array	15.33	331	⇑P	Pn	12 03 57.3	-2.5
	comp=N,4.0nm,0.4s,baz=141,slow=13,SNR=126						
AB31	Akbulak array	15.33	331	*ce*P	Pn	12 03 57.2	-2.5
AB31				pmax	pmax		
	comp=Z,4.0nm,0.4s						
ABKAR	Akbulak array	15.33	331	*e*Pn	Pn	12 03 57.4	-2.3
JIRN	Jiri	15.37	120	*e*P	Pn	12 03 59.1	-1.8
	comp=Z,44nm,0.5s						
KURK	Kurchatov	15.38	18	*e*Pn	Pn	12 03 55.6	-4.8
KURK	Kurchatov	15.38	18	*ce*P	P	12 04 02.0	-0.9
KURK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
RAMN	Ramite	16.10	121	*e*P	Pn	12 04 08.7	-1.1
	comp=Z,26nm,0.4s						
ODAN	Odare	16.70	120	*e*P	Pn	12 04 15.9	-1.4
	comp=Z,16nm,0.4s						
BVA0	Borovoye Array	16.74	358	*i* P	Pn	12 04 15.6	-1.6
BVA0				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BVAR	Borovoye Array	16.74	358	P	Pn	12 04 15.6	-1.6
	comp=Z,1.2nm,0.3s,baz=165,slow=12,SNR=14						
BRVK	Borovoye	16.77	358	*e*Pn	Pn	12 04 17.2	-0.5
	comp=Z,6.2nm,0.6s						
BRVK	Borovoye	16.77	358	⇓*i*P	Pn	12 04 17.5	-0.2
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.6s						
AKTO	Aktyubinsk	17.02	330	P	Pn	12 04 20.4	-0.4
	comp=Z,1.9nm,0.3s,baz=140,slow=12,SNR=26						
AKTO				S	Sn	12 07 16.2	-14
	comp=Z,1.0nm,0.3s,baz=18,slow=20,SNR=5.9						
AKTO				LR	LR	12 11 57.2	
	comp=Z,27nm,18.6s,baz=117,slow=40						
AKTO	Aktyubinsk	17.02	330	⇑P	Pn	12 04 19.3	-1.5
	comp=Z,15nm,0.9s						
AKTO	Aktyubinsk	17.02	330	*i* P	Pn	12 04 19.2	-1.5
AKTO				pmax	pmax		
	comp=Z,14nm,0.9s						
DGZ	Jazzator, Alta	17.87	36	*e*P	P	12 04 29.5	-1.0
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.5s						
HYB	Hyderabad	19.91	159	*e*P	P	12 04 54.4	+1.5
ZAA0	Zalesovo Array	20.05	24	*e*P	P	12 04 52.5	-1.6
	comp=Z,8.8nm,0.8s						
ZALV	Zalesovo Beam	20.05	24	P	P	12 04 53.1	-0.9
	comp=Z,5.8nm,0.3s,baz=213,slow=11,SNR=11						
ZAA1	Zalesovo Array	20.05	24	*e*P	P	12 04 53.1	-0.9
TEZP	TEZPUR	20.79	112	*e*P	P	12 05 03.5	+1.3
ARU	Arti	21.87	341	P	P	12 05 16.0	+2.6
	comp=Z,6.2nm,0.6s,baz=150,slow=3.6,SNR=11						
ARU	Arti	21.87	341	*e*P	P	12 05 14.1	+0.6
	comp=Z,12nm,0.9s						
ARU	Arti	21.87	341	*c i*P	P	12 05 16.1	+2.6
ARU						12 05 47.5	
ARU				S	S	12 09 13.6	+4.6
ARU				SS	SnSn	12 09 48.6	+5.0
ARU				pmax	pmax		
	comp=Z,21nm,1.2s						
ZEI	Tsey	21.94	296	*e*P	P	12 05 17.8	+3.1
AKH	Akhalkalaki	22.10	292	*e*P	P	12 05 16.5	+0.2
	comp=Z,7.6nm,0.7s						
AKH	Akhalkalaki	22.10	292	*e*P	P	12 05 16.5	+0.2
AKH				pmax	pmax		
	comp=Z,8.0nm,0.7s						
GTA	Gaotai	22.80	73	*e*P	P	12 05 25.3	+1.8
GTA				pP	pP	12 05 44.8	+1.6
GTA				sP	sP	12 05 56.8	+1.2
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
KIV	Kislovodsk	23.00	298	⇓*e*P	P	12 05 27.8	+2.4
KIV				pmax	pmax		
	comp=Z,6.0nm,0.6s						
LZH	Lanzhou	26.31	81	*e*P	P	12 05 56.5	+0.9
LZH				pP	pP	12 06 18.3	+0.6
LZH				sP	sP	12 06 30.8	+1.4
LZH				*e*PP	PnPn	12 06 44.0	+3.1
LZH				pmax	pmax		
	comp=Z,12nm,1.0s						
LZH				pmax	pmax		
	comp=Z,180nm,4.3s						
ANN	Anapa	26.85	299	*e*P	P	12 05 57.7	-2.4
ANN				e*PP	pP	12 06 17.5	-4.7
ANN				*e*S	S	12 10 26.3	-2.8
ANN				*e*SS	SnSn	12 11 46.7	+2.0
ANN				pmax	pmax		
	comp=Z,31nm,1.0s						
ULN	Ulaanbaatar	28.79	55	⇓*e*P	P	12 06 17.6	+0.1
ULN				pmax	pmax		
	comp=Z,1.0nm,0.4s						
OBN	Obninsk	30.18	320	⇓*e*P	P	12 06 30.7	+1.2
OBN				e*PP	pP	12 06 50.7	-1.2
OBN				*e*		12 07 31.7	
OBN				pmax	pmax		
	comp=Z,7.0nm,0.4s						
HHC	Hu-ho-hao-te	31.71	69	*e*P	P	12 06 43.0	-0.4
HHC				pmax	pmax		
	comp=Z,13nm,1.0s						
HHC				pmax	pmax		
	comp=Z,91nm,7.3s						
AKASG	Malin Array Be	33.17	309	P	P	12 06 57.0	+1.1
	comp=Z,2.0nm,0.5s,baz=81,slow=7.1,SNR=4.5						
AKASG	Malin Array Be	33.17	309	P	P	12 06 57.0	+1.1
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.5s						
AKBB	Malin Array Si	33.17	309	*e*P	P	12 06 55.0	-0.9
	comp=Z,4.7nm,0.6s						
AKBB	Malin Array Si	33.17	309	*e*P	P	12 06 55.0	-0.9
AKBB				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KIEV	Kiev	33.18	309	⇑*e*P	P	12 06 57.1	+1.1
KIEV				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MLR	Muntele Rosu	34.99	299	P	P	12 07 14.5	+2.6
	comp=Z,1.3nm,0.8s,baz=119,slow=9.5,SNR=6.6						
ATD	Arta Tunnel	35.50	233	P	P	12 07 14.8	-1.6
	comp=Z,12nm,0.8s,baz=54,slow=19,SNR=3.2						
FIA0	FINESS Array S	37.73	326	*e*P	P	12 07 35.1	+0.4
FIA0	FINESS Array S	37.73	326	*e*P	P	12 07 35.1	+0.4
FINES	FINESS Array B	37.73	326	P	P	12 07 35.1	+0.4
	comp=Z,1.4nm,0.4s,baz=120,slow=11,SNR=9.4						
ARA0	ARCESS Array S	41.38	338	*e*P	P	12 08 05.9	+1.0
ARCES	ARCESS Array B	41.38	338	P	P	12 08 05.9	+1.0
	comp=Z,2.7nm,0.5s,baz=112,slow=8.3,SNR=30						
ARCES	ARCESS Array B	41.38	338	*e*P	P	12 08 05.2	+0.2
ARCES	ARCESS Array B	41.38	338	*e*P	P	12 08 05.2	+0.2
CN2	Changchun	41.59	62	*e*P	P	12 08 05.4	-1.5
CN2				*e*sP	sP	12 08 39.8	-1.7
BRG	Berggiesshubel	42.85	308	*e*P	P	12 08 19.1	+2.0
	comp=Z,4.6nm,0.9s						
BRG	Berggiesshubel	42.85	308	*e*P	P	12 08 19.1	+2.0
BRG				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HFS	Hagfors	43.31	322	P	P	12 08 21.9	+1.3
	comp=Z,5.8nm,0.6s,baz=98,slow=10,SNR=29						
NB2	NORSAR Subarra	44.62	323	P	P	12 08 31.0	-0.2
	comp=Z,2.0nm,0.5s,baz=97,slow=7.9						
KONO	Kongsberg	45.33	321	⇓*i*P	P	12 08 38.5	+1.8
KONO				pmax	pmax		
	comp=Z,37nm,2.5s						
TIXI	Tiksi	45.91	22	⇑*i*P	P	12 08 41.1	-0.1
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SPITS	Spitsbergen Ar	47.72	347	P	P	12 08 57.2	+2.0
	comp=Z,1.3nm,0.4s,baz=65,slow=8.1,SNR=8.2						
EKA	Eskdalemuir Ar	52.52	316	P	P	12 09 32.6	+0.8
	comp=Z,0.5nm,0.4s,baz=81,slow=8.7,SNR=3.3						
MAJO	Matsushiro	52.91	68	*e*P	P	12 09 37.2	+2.3
MAJO	Matsushiro	52.91	68	*e*P	P	12 09 37.2	+2.3
TOA1	Torodi Ar. Sit	65.84	269	*e*P	P	12 11 02.8	-1.4
TOA0	Torodi Ar. Sit	65.84	269	*e*P	P	12 11 02.8	-1.4
TORD	Torodi Ar. Bea	65.84	269	P	P	12 11 02.8	-1.4
	comp=Z,1.9nm,0.5s,baz=48,slow=6.3						
KOWA	Kowa	69.71	273	P	P	12 11 28.6	+0.1
	comp=Z,2.4nm,0.7s,baz=65,slow=4.4,SNR=5.0						
ILAR	Eielson Array	74.94	16	P	P	12 11 58.0	-0.7
	comp=Z,0.3nm,0.8s,baz=316,slow=5.0,SNR=4.5						
YKA	Yellowknife Ar	81.44	3	P	P	12 12 34.5	-0.1
	comp=Z,1.3nm,0.8s,baz=350,slow=5.4,SNR=4.2						
WR1	Warramunga Arr	81.77	122	*e*P	P	12 12 36.0	-1.0
	comp=Z,2.7nm,1.0s						
WRA	Warramunga Arr	81.77	122	P	P	12 12 36.0	-1.0
	comp=Z,0.7nm,0.6s,baz=324,slow=4.9,SNR=21						
WRAB	Tennant Creek	81.77	122	⇑*e*P	P	12 12 37.3	+0.3
WRAB				e*SP	sP	12 13 12.8	-0.8
WRAB				pmax	pmax		
	comp=Z,28nm,2.4s						
ASAR	Alice Springs	84.03	125	P	P	12 12 47.8	-0.8
	comp=Z,0.5nm,0.5s,baz=310,slow=4.7,SNR=9.4						

NNC **17** *12:17:57.9±4.5,54°.15N×86°.99E,h0^{km},mb3.5,mpv3.2, Error ellipse: s-maj=59.2km s-min=28.8km az=161.0, Suspected Mining explosion.*

IDC 17 12:17:56.9±2.7,**54°.07N×87°.24E,h0^{km},mb1 3.1**/2, **mb1mx2.9**/69,**mbtmp3.1**/2,**ML2.6**/2,**5C-2D,Error ellipse: s-maj=24.4km s-min=15.6km az=63.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.43	266	*i*		12 27 00.0	
	baz=85,slow=317,SNR=1.1						
ZALV	Zalesovo Beam	1.43	266	Pg	Pn	12 18 22.3	-1.8
	4.1nm,0.3s,baz=80,slow=16,SNR=15						
ZALV				Lg	Lg	12 18 42.9	
	4.9nm,0.3s,baz=84,slow=27,SNR=7.6						
ZALV				Rg	Rg	12 18 57.4	
	10nm,0.6s,baz=107,slow=29,SNR=5.3						
KURK	Kurchatov	6.25	241	⇑Pn	Pn	12 19 29.9	-0.5
	1.4nm,0.8s						
KURK				⇑Sn	Sn	12 20 43.3	+0.9
	0.8nm,0.5s						
KURK				⇑Lg	Lg	12 21 16.9	
	2.9nm,0.7s						
KURBB	Kurchatov Arra	6.35	241	Pn	Pn	12 19 32.2	+0.5
	0.1nm,0.3s,baz=56,slow=14,SNR=9.6						
KURBB				Lg	Lg	12 21 19.5	
	0.0nm,0.3s,baz=59,slow=38,SNR=4.7						
KURBB	Kurchatov Arra	6.35	241	⇓Pn	Pn	12 19 32.0	+0.3
	2.4nm,0.7s						
KURBB				⇑Sn	Sn	12 20 42.7	-2.2
	5.5nm,0.7s						
KURBB				⇑Lg	Lg	12 21 19.7	
	6.2nm,0.8s						
MK31	Makanchi Array	7.94	205	Pn	Pn	12 19 55.0	+1.5
	0.5nm,0.6s,baz=28,slow=14,SNR=16						
MK31				⇓Lg	Lg	12 22 10.3	
	1.7nm,0.7s,baz=28,slow=30,SNR=5.0						
MKAR	Makanchi Array	7.94	205	Pn	Pn	12 19 55.2	+1.8
	0.1nm,0.3s,baz=28,slow=14,SNR=14						
MKAR				Sn	Sn	12 21 22.4	-1.5
	0.1nm,0.3s,baz=21,slow=25,SNR=3.9						
MKAR				Lg	Lg	12 22 08.9	
	0.1nm,0.3s,baz=28,slow=30,SNR=5.1						
BVAR	Borovoye Array	10.09	271	Sn	Sn	12 22 08.4	-8.3
	0.4nm,0.3s,baz=67,slow=22,SNR=2.0						

IDC **17** *12:20:44.5±0.7,31°.19S×178°.94W,h0^{km},mb4.1/9, mb1 4.3/11,mb1mx4.0/42,mbtmp4.1/11,ML3.8/2,MS3.0/2, Ms1 3.0/2,ms1mx2.6/41,Error ellipse: s-maj=22.5km s-min=18.8km az=107.0*

NEIC **17** *12:20:45.9±0.4,31°.11S×178°.91W,h10^{km},mb4.4/4,Error ellipse: s-maj=11.4km s-min=9.0km az=124.0*

ISCJB **17** *12:20:48.4±0.5,31°.25S±0°.07×179°.06W±0°.10,h33^{km}, mb4.0/12,Error ellipse: s-maj=13.8km s-min=8.0km az=33.8*

ISC 17 12:20:49.9±0.6,**31°.17S**±0°.08×**179°.0W**±0°.1,**h35^{km},n30,** σ**1^{s}29**/31,**mb4.1**/12,**Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	2.12	26	Pn	Pn	12 21 19.8	-3.1
	35nm,0.3s,baz=255,slow=20,SNR=2.9						
RAO				Sn	Sn	12 21 50.6	+2.6
	64nm,0.3s,baz=69,slow=21,SNR=4.6						
RAO	Raoul Island	2.12	26	*e*Pn	Pn	12 21 19.8	-3.1
RAO				*e*Pn	Pn	12 21 20.6	-2.3
RAO				*e*Sn	Sn	12 21 50.6	+2.6
URZ	Urewera	7.77	203	Pn	Pn	12 22 40.1	-0.3
	1.3nm,0.3s,baz=165,slow=1.9,SNR=10						
URZ	Urewera	7.77	203	*e*Pn	Pn	12 22 40.1	-0.3
URZ				*e*Pn	Pn	12 22 41.0	+0.6
DZM	Mont Dzumac	15.85	301	LR	LR	12 29 28.0	
	comp=Z,64nm,19.3s,baz=158,slow=33						
AFI	Afiamalu	18.41	23	LR	LR	12 30 36.5	
	comp=Z,40nm,21.9s,baz=148,slow=32						
LHI	Lord Howe Isla	18.75	263	*e*P	Pn	12 25 06.2	-0.2
	95nm,1.1s						
AS31	Alice Springs	42.22	268	*e*P	P	12 28 40.0	+0.2
	1.8nm,1.1s						
ASAR	Alice Springs	42.22	268	P	P	12 28 40.0	+0.2
	1.9nm,0.7s,baz=105,slow=7.7,SNR=31						
WB2	Warramunga Arr	43.27	274	*e*P	P	12 28 48.5	+0.2
WR1	Warramunga Arr	43.28	273	*e*P	P	12 28 48.0	-0.4
	4.1nm,0.8s						
WRA	Warramunga Arr	43.28	273	P	P	12 28 48.0	-0.4
	2.7nm,0.7s,baz=113,slow=7.7,SNR=15						
SBA	Scott Base	47.21	184	*e*P	P	12 29 20.6	+1.8
	4.9nm,1.1s						
FITZ	Fitzroy Crossi	51.51	271	P	P	12 29 52.9	+0.6
	4.6nm,0.8s,baz=176,slow=6.4,SNR=7.8						
QSPA	South Pole Qui	58.95	180	P	P	12 30 45.4	-0.1
	3.1nm,0.8s,baz=65,slow=1.5,SNR=8.8						
QSPA	South Pole Qui	58.95	180	*e*P	P	12 30 45.4	-0.1
QSPA				*e*P	P	12 30 46.4	+1.0
SNAA	Sanae	77.41	179	P	P	12 32 39.7	-1.3
	1.5nm,0.9s,baz=209,slow=6.7,SNR=5.2						
PLCA	Paso Flores	82.61	133	P	P	12 33 10.3	+0.7
	1.6nm,0.9s,baz=241,slow=7.3,SNR=6.0						
KSRS	Korea Array	84.38	320	P	P	12 33 19.0	+0.6
	0.6nm,0.6s,baz=132,slow=6.7,SNR=4.1						
KS15	Wonju Array Si	84.39	320	*e*P	P	12 33 19.0	+0.5
KSAR	Wonju Array Be	84.39	320	P	P	12 33 19.0	+0.5
BONR	Boundary Peak	89.07	44	*e*P	P	12 33 40.0	-1.7
NV01	Mina Array Sit	89.38	43	*e*P	P	12 33 43.5	+0.5
NVAR	Mina Array Bea	89.38	43	P	P	12 33 44.0	+1.0
	0.9nm,0.9s,baz=226,slow=6.1,SNR=5.1						
KLR	Kul'dur	91.27	330	P	P	12 33 52.4	+1.1
	0.1nm,0.6s,baz=63,slow=4.5,SNR=3.0						
KBZ	Khabaz	144.82	303	PKP	PKPab	12 40 21.4	-0.6
	1.4nm,0.7s,baz=155,slow=3.2,SNR=4.1						
FIA0	FINESS Array S	145.56	339	*e*PKPdf	PKPdf	12 40 23.2	-0.4
FINES	FINESS Array B	145.56	339	PKPbc	PKPdf	12 40 23.2	-0.4
	3.5nm,0.8s,baz=21,slow=4.6,SNR=7.3						
TORD	Torodi Ar. Bea	162.06	182	PKPab	PKPab	12 41 33.9	-0.4
	baz=174,slow=4.3						
TOA1	Torodi Ar. Sit	162.06	182	*e*PKPab	PKPab	12 41 33.9	-0.5

IDC 17 12:24:39.1±1.4,**3°.13N×128°.85E,h0^{km},mb3.7**/7, **mb1 3.9**/7,**mb1mx3.6**/62,**mbtmp3.8**/7,**Error ellipse: s-maj=71.5km s-min=17.7km az=66.0,North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	21.33	188	P	P	12 29 29.5	+1.6
	0.7nm,0.4s,baz=12,slow=9.3,SNR=1.3						
WRA	Warramunga Arr	23.56	167	P	P	12 29 51.2	-0.2
	1.8nm,0.4s,baz=346,slow=10,SNR=12						
ASAR	Alice Springs	27.09	170	P	P	12 30 22.3	-1.5
	0.2nm,0.4s,baz=350,slow=7.8,SNR=2.5						
ASAR				PcP	PcP	12 33 44.7	-0.4

	0.4nm,0.8s,baz=349,slow=1.5,SNR=4.3						
CMAR	Chiang Mai Arr	33.00	300	P	P	12 31 16.0	-0.2
	0.3nm,0.3s,baz=105,slow=6.8,SNR=1.6						
STKA	Stephens Creek	36.87	162	P	P	12 31 49.5	+0.1
	1.2nm,0.4s,baz=339,slow=10,SNR=7.6						
H11S3	WAKE ISLAND Hy	40.05	65	T	T	13 15 49.1	
	baz=252,slow=75,SNR=8.7						
H11S2	WAKE ISLAND Hy	40.07	65	T	T	13 15 44.4	
	baz=252,slow=75,SNR=7.9						
H11S1	WAKE ISLAND Hy	40.07	65	T	T	13 15 43.2	
	baz=252,slow=75,SNR=7.5						
H11N1	WAKE ISLAND Hy	40.62	63	T	T	13 16 17.8	
	baz=250,slow=74,SNR=11						
H11N2	WAKE ISLAND Hy	40.63	63	T	T	13 16 18.6	
	baz=250,slow=74,SNR=7.3						
H11N3	WAKE ISLAND Hy	40.64	63	T	T	13 16 19.1	
	baz=250,slow=74,SNR=9.1						
MKAR	Makanchi Array	59.26	325	P	P	12 34 42.5	0.0
	0.6nm,0.4s,baz=111,slow=8.5,SNR=8.7						
KURBB	Kurchatov Arra	63.38	327	P	P	12 35 10.6	+0.3
	0.5nm,0.4s,baz=130,slow=5.8,SNR=4.2						

DJA 17 12:24:42.2±0.7,**5°S**±4°×**13°2E**±°,**h126**^{km}±19^{km},**M4.1**/6, **mb4.5**/1,**MLv3.9**/6,**Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMPI	Kaimana, Papua	2.02	42	P	Pn	12 25 17.8	+1.6
KMPI				S	Sn	12 25 42.0	-0.2
FAKI	Fak Fak	2.23	358	P	Pn	12 25 19.3	+0.5
BNDI	Bandanaira	2.51	285	P	Pn	12 25 22.3	0.0
RKPI	Ransiki, Papua	4.06	27	P	Pn	12 25 47.0	+4.3
RKPI				S	Sn	12 26 29.2	-0.5
SWI	Sorong	4.40	346	P	Pn	12 25 48.0	+0.7

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*BJI **17** 12:38:32.0, 31°.70S×176°.10W, h35^{km}, mb5.4/11, mB5.6/4, Ms4.8/3, Ms7 4.5/2*

*IDC **17** 12:38:44.6±0.5, 31°.16S×179°.02W, h0^{km}, mb4.5/20, mb1 4.7/22, mb1mx4.6/42, mbtmp4.5/22, ML4.3/2, MS4.0/4, Ms1 4.0/4, ms1mx3.3/26, Error ellipse: s-maj=16.3km s-min=13.4km az=110.0*

*NEIC **17** 12:38:45.5±0.4, 31°.43S×178°.99W, h10^{km}, mb5.2/12, Error ellipse: s-maj=11.9km s-min=8.8km az=115.0*

*WEL **17** 12:38:45.0, 31°.43S×178°.99W, h10^{km}, ML5.2/13*

*ISCJB **17** 12:38:49.0±0.2, 31°.30S±0°.03×179°.18W±0°.05, h33^{km}, mb4.8/44, MS4.2/4, Error ellipse: s-maj=6.4km s-min=3.6km az=28.1*

*MOS **17** 12:38:49.0±1.1, 31°.15S×179°.13W, h33^{km}, mb5.2/6, Error ellipse: s-maj=14.9km s-min=13.5km az=90.0*

ISC 17 12:38:50.0±0.4,**31°.14S**±0°.05×**179°.01W**±0°.08,**h35**^{km},**n187**,σ**1^{s}.77**/170,**mb4.9**/43,**MS4.4**/5,**5C-4D**,**Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	2.10	27	P	Pn	12 39 21.3	-1.3
RAO	Raoul Island	2.11	27	Pn	Pn	12 39 21.1	-1.7
	92nm,0.3s,baz=194,slow=11,SNR=9.2						
RAO				Sn	Sn	12 39 51.2	+3.4
	169nm,0.3s,baz=316,slow=22,SNR=5.7						
RIZ	Raoul Island	2.11	27	P	Pn	12 39 24.8	+1.9
MXZ	Matakaoa Point	6.78	198	*e*Pn	Pn	12 40 17.5	-9.5
WMGZ	Waiomatatini S	6.99	197	P	Pn	12 40 28.0	-1.9
HAZ	Te Kaha	7.11	201	P	Pn	12 40 30.2	-1.3
PKGZ	Pakihiroa	7.14	199	P	Pn	12 40 30.3	-1.8
PUZ	Puketiti	7.27	197	P	Pn	12 40 33.0	-0.7
RUGZ	Raukumara Rang	7.33	201	P	Pn	12 40 35.1	+0.4
TWGZ	Tauwhareparae	7.44	199	P	Pn	12 40 34.4	-1.7
OPRZ	Ohinepanea	7.62	207	P	Pn	12 40 42.3	+3.7
CNGZ	Carnagh Statio	7.67	197	P	Pn	12 40 37.5	-1.8
MWZ	Matawai	7.72	201	P	Pn	12 40 39.0	-1.0
TKGZ	Te Karaka	7.72	199	P	Pn	12 40 39.2	-0.7
URZ	Urewera	7.78	203	Pn	Pn	12 40 38.3	-2.4
	4.3nm,0.3s,baz=35,slow=0.9,SNR=13						
URZ				Sn	Sn	12 42 09.7	+2.1
	0.6nm,0.3s,baz=150,slow=20,SNR=1.8						
URZ				LR	LR	12 43 26.5	
	comp=Z,1µm,19.2s,baz=38,slow=36						
URZ	Urewera	7.78	203	*e*Pn	Pn	12 40 34.0	-6.8
URZ				Sn	Sn	12 42 09.7	+2.1
URZ	Urewera	7.78	203	P	Pn	12 40 40.2	-0.6
RIGZ	Rimuhau	8.00	198	P	Pn	12 40 42.0	-1.7
SNGZ	Shannon Statio	8.19	200	P	Pn	12 40 44.9	-1.5
SNGZ				S	Sn	12 42 24.9	+7.2
RAHZ	Arahi	8.39	201	P	Pn	12 40 47.9	-1.2
MTHZ	Maungataniwha	8.41	203	P	Pn	12 40 52.4	+3.0
NMHZ	Naumai	8.64	202	P	Pn	12 40 51.4	-1.3
BKZ	Black Stump Fm	8.81	203	*e*Pn	Pn	12 40 48.7	-6.2
BKZ	Black Stump Fm	8.81	203	P	Pn	12 40 53.7	-1.2
HIZ	Hauiti	8.91	213	*e*Pn	Pn	12 40 56.7	+0.5
HIZ	Hauiti	8.91	213	P	Pn	12 40 59.9	+3.7
MCHZ	McNeill Hill	8.99	202	P	Pn	12 40 56.9	-0.5
KAHZ	Kahuranaki	9.26	200	P	Pn	12 40 59.2	-1.8
KHZ	Kahutara	12.73	206	*e*Pn	Pn	12 41 41.1	-7.3
OXZ	Oxford	14.08	208	*e*Pn	Pn	12 41 59.4	-7.5
RPZ	Rata Peaks	14.81	209	LR	LR	12 47 40.8	
	comp=Z,967nm,19.5s,baz=42,slow=36						
RPZ	Rata Peaks	14.81	209	*e*Pn	Pn	12 42 09.6	-7.2
	20nm,1.1s						
DZM	Mont Dzumac	15.82	301	Pn	Pn	12 42 31.5	+1.1
	0.2nm,0.3s,baz=95,slow=15,SNR=2.7						
DZM	Mont Dzumac	15.82	301	*e*P	Pn	12 42 31.4	+1.1
	137nm,1.4s						
DZM				*e*LR	LR	12 46 01.8	
	210nm,22.2s						
TBI	Tubuai	27.34	81	*e*T	T	13 12 55.2	
	144nm,0.3s						
RMQ	Roma	28.56	271	P	P	12 44 45.4	+2.7
	baz=28,SNR=4.9						
PAE	Paea	29.87	70	*e*T	T	13 15 59.4	
	59nm,0.3s						
TOO	Toolangi	29.87	248	P	P	12 44 54.9	+0.6
	baz=30,SNR=6.4						
PPT2	Papeete2	29.91	70	*e*LQ	LQ	12 51 13.5	
	216nm,22.2s						
PPT2				*e*LR	LR	12 52 44.3	
	244nm,26.0s						
PPT2	Papeete2	29.91	70	*e*T	T	13 16 03.2	
	38nm,0.3s						
PPT	Papeete	29.92	70	LR	LR	12 56 37.6	
	comp=Z,166nm,18.6s,baz=260,slow=36						
TVO	Taravao	30.07	71	*e*T	T	13 16 14.0	
	11nm,0.4s						
CMSA	Cobar Meteorol	30.07	260	P	P	12 44 57.0	+0.9
	baz=30,SNR=7.0						
TIAR	Tiarei	30.11	70	*e*T	T	13 16 12.4	
	6.3nm,0.3s						
QLP	Quilpie	32.41	269	P	P	12 45 17.4	+0.7
	baz=32,SNR=5.5						
PMOR	Pomariorio Ree	32.68	68	*e*T	T	13 19 27.6	
	9.0nm,0.3s						
VAH	Vaihoa	32.76	68	*e*T	T	13 19 33.6	
	237nm,0.3s						
CTA	Charters Tower	33.07	281	P	P	12 45 22.7	+0.1
	8.5nm,0.9s,baz=108,slow=14,SNR=6.3						
CTAO	Charters Tower	33.07	281	*e*P	P	12 45 21.1	-1.5
	436nm,1.4s						
CTAO	Charters Tower	33.07	281	*e*P	P	12 45 21.1	-1.5
CTAO				pmax	pmax		
	comp=Z,436nm,1.4s						
STKA	Stephens Creek	33.47	258	P	P	12 45 27.5	+1.6
	baz=33,SNR=6.9						
STKA	Stephens Creek	33.47	258	P	P	12 45 27.1	+1.2
	comp=Z,10nm,0.8s,baz=86,slow=9.8,SNR=11						
STKA	Stephens Creek	33.47	258	*e*P	P	12 45 27.3	+1.4
	comp=Z,4.4nm,1.0s						
STKA	Stephens Creek	33.47	258	*e*P	P	12 45 28.2	+2.3
STKA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HTT	Hallett	35.46	255	P	P	12 45 44.5	+1.2
	baz=35,SNR=6.1						
MTSU	Mount Surprise	35.59	283	P	P	12 45 47.6	+3.2
	baz=35,SNR=3.8						
BBOO	Buckleboo	37.93	255	P	P	12 46 04.6	+0.4
	baz=38,SNR=10						
BBOO	Buckleboo	37.93	255	*e*P	P	12 46 04.9	+0.6
	comp=Z,47nm,1.0s						
RABL	Rabaul	38.13	309	*e*P	P	12 46 07.3	+1.3
	comp=Z,32nm,0.7s						
COEN	Coen	38.65	288	*e*P	P	12 46 12.1	+1.7
	comp=Z,16nm,0.9s						
RKT	Rikitea	39.79	89	*e*T	T	13 28 32.1	
	comp=Z,8.7nm,0.3s						
AS01	Alice Springs	42.17	268	*e*P	P	12 46 39.2	-0.3
AS31	Alice Springs	42.21	268	*e*P	P	12 46 39.6	-0.2
	comp=Z,2.5nm,0.7s						
ASAR	Alice Springs	42.21	268	P	P	12 46 39.5	-0.3
	comp=Z,8.3nm,0.7s,baz=103,slow=7.6,SNR=59						
WB2	Warramunga Arr	43.25	273	*e*P	P	12 46 47.5	-0.8
WB2				*e*P	P	12 46 48.1	-0.2
WRAB	Tennant Creek	43.26	274	*e*P	P	12 46 47.9	-0.5
	comp=Z,23nm,0.9s						
WRAB	Tennant Creek	43.26	274	*de*P	P	12 46 48.3	0.0
WRAB				pmax	pmax		
	comp=Z,46nm,1.9s						
WRA	Warramunga Arr	43.26	273	P	P	12 46 47.8	-0.6
	comp=Z,20nm,0.8s,baz=115,slow=7.2,SNR=37						
FORT	Forrest	45.02	256	P	P	12 47 03.7	+1.4
	baz=45,SNR=9.2						
FORT	Forrest	45.02	256	*e*P	P	12 47 01.5	-0.8
	comp=Z,38nm,0.9s						
WRKA	Warakurna	46.53	264	P	P	12 47 13.8	-0.5
	baz=46,SNR=21						
SBA	Scott Base	47.23	184	*e*P	P	12 47 21.0	+2.0
	comp=Z,36nm,1.1s						
VNDA	Vanda	47.27	186	P	P	12 47 18.5	-0.9
	comp=Z,2.8nm,0.9s,baz=34,slow=4.8,SNR=11						
KDU	Kakadu	48.20	281	P	P	12 47 27.7	+0.4
	baz=48,SNR=7.8						
MTN	Manton Dam	49.25	280	P	P	12 47 35.6	+0.2
	baz=49,SNR=3.7						
MTN	Manton Dam	49.25	280	*e*P	P	12 47 35.6	+0.2
	comp=Z,20nm,0.8s						
KNRA	Kununurra	49.90	276	P	P	12 47 40.6	+0.3
	baz=50,SNR=9.6						
FITZ	Fitzroy Crossi	51.49	271	P	P	12 47 52.6	+0.2
	comp=Z,20nm,0.8s,baz=114,slow=9.0,SNR=30						
NWAO	Narrogin (SRO)	53.32	250	LR	LR	13 10 01.4	
	comp=Z,87nm,18.2s,baz=253,slow=35						
FAKI	Fak Fak	53.79	291	*e*P	P	12 48 07.5	-2.0
	comp=Z,37nm,1.1s						
MEEK	Meekatharra	54.17	258	P	P	12 48 11.2	-1.0
	baz=54,SNR=4.1						
MBWA	Marble Bar	55.28	265	*e*P	P	12 48 18.4	-1.8
	comp=Z,21nm,1.1s						
SOEI	Soe	56.61	279	P	P	12 48 31.1	+1.2
	comp=Z,44nm,1.0s						
SOEI	Soe	56.61	279	*e*P	P	12 48 29.0	-0.9
	comp=Z,37nm,0.9s						
QSPA	South Pole Qui	58.97	180	P	P	12 48 46.5	+0.7
	comp=Z,13nm,0.8s,baz=40,slow=2.8,SNR=22						
EDFI	Ende, Flores	59.30	279	P	P	12 48 47.3	-1.5
	comp=Z,25nm,0.8s						
SANI	Sanana	59.35	288	P	P	12 48 47.1	-1.9
	comp=Z,31nm,1.5s						
MTKI	Muara Teweh, K	69.16	282	P	P	12 50 05.3	+12
SYO	Syowa Base	76.19	193⇑	*e*sP	P	12 50 32.0	-2.2
MDSI	Maura Dua	76.41	273	P	P	12 50 34.4	-1.9
	comp=Z,12nm,0.8s						
SNAA	Sanae	77.44	179	P	P	12 50 40.5	-0.8
	comp=Z,11nm,0.9s,baz=178,slow=5.3,SNR=24						
SNAA	Sanae	77.44	179	*d i*P	P	12 50 41.2	-0.1
NVL	N'lazarevskaya	78.08	184	*e*P	P	12 50 44.7	-0.1
NVL				*e*S	S	13 00 31.1	-4.9
NVL				pmax	pmax		
	comp=Z,18nm,0.9s						
MJA0	Matsu Arr-Jizo	78.34	326	*e*P	P	12 50 48.9	+2.2
MJA0				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MJAR	Matsushiro Arr	78.36	326	P	P	12 50 45.4	-1.4
	comp=Z,2.4nm,0.9s,baz=165,slow=6.3,SNR=5.4						
PLCA	Paso Flores	82.64	133	P	P	12 51 11.1	+1.2
	comp=Z,4.9nm,0.8s,baz=238,slow=5.8,SNR=24						
PLCA	Paso Flores	82.64	133	*e*P	P	12 51 11.8	+1.8
ASAJ	Asahikawa	82.70	333	P	P	12 51 11.2	+1.5
	comp=Z,5.2nm,0.9s,baz=159,slow=8.6,SNR=8.1						
KSRS	Korea Array	84.35	320	P	P	12 51 19.1	+0.7
	comp=Z,4.3nm,0.9s,baz=143,slow=5.4,SNR=11						
KSAR	Wonju Array Be	84.37	320	P	P	12 51 19.1	+0.7
KSAR	Wonju Array Be	84.37	320	P	P	12 51 19.2	+0.7
YSS	Yuzh-Sakhalins	85.04	335⇑	*e*P	P	12 51 23.6	+2.0
YSS				*e*		12 51 32.3	
YSS				pmax	pmax		
	comp=Z,20nm,0.5s						
NJ2	Nanjing	86.07	311	*e*P	P	12 51 22.8	-4.3
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
PETK	Petropavlovsk-	86.32	346	P	P	12 51 26.4	-1.5
	comp=Z,3.3nm,0.8s,baz=146,slow=8.0						
MURC	Murrieta	86.87	47	P	P	12 51 33.2	+2.1
	baz=229						
MONP2	Monument Peak	86.91	48	P	P	12 51 33.5	+2.0
	baz=229						
IKP	In-Ko-Pah, Jac	86.95	49	P	P	12 51 33.6	+2.0
	baz=230						
BFSC	Mount Baldy Ra	87.00	47	P	P	12 51 33.5	+1.6
	baz=228						
FRD	Ford Ranch, An	87.18	48	P	P	12 51 34.5	+1.8
	baz=229						
EDW2	Edwards Air Fo	87.22	46	P	P	12 51 34.6	+1.8
	baz=228						
PFO	Pinyon Flats O	87.35	48	P	P	12 51 35.1	+1.5
	baz=229						
TPFO	Pinon Flats	87.35	48	P	P	12 51 35.1	+1.5
	baz=229						
ISA	Isabella, Lake	87.44	45	P	P	12 51 35.7	+1.8
	baz=228						
BELC	Belle Mtn. Jos	87.89	48	P	P	12 51 37.9	+1.8
	baz=230						
BC3	Big Chuckawall	88.02	48	P	P	12 51 38.9	+2.1
	baz=230						
GLA	Glamis	88.04	49	P	P	12 51 38.3	+1.5
	baz=230						
CWC	Cottonwood Cre	88.19	45	P	P	12 51 39.4	+1.8
	baz=228						
HEC	Hector,Ludlow	88.21	47	P	P	12 51 39.1	+1.5
	baz=229						
GSC	Goldstone, Bar	88.23	46	P	P	12 51 39.1	+1.4
	baz=229						
MPMC	Manual Prospec	88.30	45	P	P	12 51 39.3	+1.2
	baz=229						
TYV	Tymovskoe	88.39	337	*e*P	P	12 51 38.9	+1.0
TYV				*e*		13 02 25.1	
TYV				pmax	pmax		
	comp=Z,11nm,1.7s						
IRM	Iron Mountain	88.54	48	P	P	12 51 41.3	+2.3
	baz=230						
GMRC	Granite Mounta	88.61	47	P	P	12 51 41.5	+2.0
	baz=230						
N02D	Trinity Center	88.62	39	P	P	12 51 41.3	+1.9
	baz=225						
MDJ	Mudanjiang	88.75	326	P	P	12 51 38.9	-0.9
MDJ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,82nm,3.2s						
M02C	Callahan	88.84	39	P	P	12 51 42.2	+1.9
	baz=225						
TUQ	Turquoise Moun	88.86	47	P	P	12 51 42.5	+1.8
	baz=230						
SHOC	Shoshone, Teco	88.94	46	P	P	12 51 42.7	+1.7
	baz=229						
YBH	Yreka Blue Hor	89.15	39	P	P	12 51 43.1	+1.3
	comp=Z,1.8nm,0.9s,baz=211,slow=5.9,SNR=4.6						
NONG	Nongkai	89.25	292	P	P	12 51 46.0	+3.3
PDMCI	Parker Dam,Lak	89.27	49	P	P	12 51 44.5	+2.0
	baz=231						
NVAR	Mina Array Bea	89.37	43	P	P	12 51 43.2	0.0
	comp=Z,2.6nm,0.8s,baz=223,slow=8.2,SNR=21						
TPNV	Topopah Spring	89.64	45	P	P	12 51 45.9	+1.6
	baz=229						
M04C	Macdoel	89.66	39	P	P	12 51 47.1	+2.8
	baz=226						
CN2	Changchun	90.21	323	*e*P	P	12 51 33.1	-14
CN2				*e*sP	PcP	12 51 47.6	-0.2
CN2	Changchun	90.21	323	*e*S	S	13 02 31.6	-6.2
CN2	Changchun	90.21	323	*e*sS	sS	13 02 48.4	-7.9
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
TUC	Tucson	90.25	52	P	P	12 51 49.5	+2.2
	baz=232						
J04D	Umpqua Nationa	90.52	38	P	P	12 51 50.1	+1.7
	baz=226						
I04A	Tendick Farm,	90.75	37	P	P	12 51 50.5	+1.3
	baz=225						
R11A	Troy Canyon, C	90.94	45	P	P	12 51 51.6	+1.2
	baz=230						
GYA	Guiyang	91.17	300	*e*P	P	12 51 45.6	-6.1
GYA				pP	PcP	12 51 56.5	+3.9
GYA				PP	PP	12 55 32.0	+2.8
GYA				SKS	SKSac	13 02 16.8	-4.6
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KLR	Kul'dur	91.24	330	P	P	12 51 53.0	+1.7
	comp=Z,0.3nm,0.8s,baz=92,slow=2.9,SNR=16						
KLR	Kul'dur	91.24	330	*c i*P	P	12 51 52.7	+1.4
I05D	Terrebonne, OR	91.69	37	P	P	12 51 55.4	+1.8
	baz=226						
WUAZ	Wupatki	91.81	49	P	P	12 51 55.6	+1.2
	baz=232						
KMI	Kunming	93.38	297	P	P	12 51 55.1	-7.0
KMI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
TXAR	Lajitas Array	93.52	58	P	P	12 52 03.8	+1.3
	comp=Z,0.9nm,1.0s,baz=210,slow=7.2,SNR=7.8						
ANMO	Albuquerque	94.72	52	P	P	12 52 09.6	+1.6
	comp=Z,0.3nm,0.3s,baz=153,slow=6.4,SNR=2.8						
HLID	Hailey	94.94	41	P	P	12 52 10.0	+1.3
	baz=231						
CD2	Chengdu	95.75	303	*e*P	P	12 52 05.6	-7.0
CD2				pmax	pmax		
	comp=Z,120nm,5.0s						
HHC	Hu-ho-hao-te	96.13	314	*e*P	P	12 52 08.6	-5.5
HHC				S	S	13 03 28.0	-2.7
HHC				sS	sS	13 03 53.3	+4.0
HHC				pmax	pmax		
	comp=Z,17nm,1.0s						
HHC				LR	LR		
	comp=Z,98nm,17.7s						
HHC				LR	LR		
	comp=Z,110nm,17.1s						
HHC				LR	LR		
	comp=Z,78nm,17.5s						
SEY	Seymchan	96.50	347⇓	*e*P	P	12 52 15.8	+0.7
PDAR	Pinedale Array	97.27	44	P	P	12 52 18.9	-0.6
	comp=Z,0.2nm,0.5s,baz=181,slow=3.6,SNR=3.0						
LZH	Lanzhou	98.47	307	*e*P	P	12 52 17.4	-7.5
LZH				pP	Pdif	12 52 26.4	+1.5
LZH				sP	PcP	12 52 30.1	+5.2
LZH				PP	PP	12 56 27.5	+1.6
LZH				pmax	pmax		
	comp=Z,18nm,0.9s						
LZH				LR	LR		
	comp=Z,180nm,17.5s						
LZH				LR	LR		
	comp=Z,190nm,18.0s						
LZH				LR	LR		
	comp=Z,240nm,19.2s						
ILAR	Eielson Array	98.84	13	P	Pdif	12 52 26.4	+0.8
	comp=Z,0.2nm,0.5s,baz=206,slow=6.0,SNR=3.1						
WMQ	Urumqi	113.00	308	*e*PKP		12 57 09.0	
WMQ				LR	LR		
	comp=Z,75nm,21.1s						
MKAR	Makanchi Array	117.58	310	PKP	PKPdf	12 57 31.0	-1.0
	comp=Z,0.8nm,0.9s,baz=81,slow=4.5,SNR=4.0						
MKAR	Makanchi Array	117.58	310	PKIKP	PKPdf	12 57 31.0	-1.0
KURK	Kurchatov	120.93	314	PKP	PKPdf	12 57 36.2	-2.0
KURK	Kurchatov	120.93	314⇑	*i*PKIKP	PKPdf	12 57 37.6	-0.6
KURBB	Kurchatov Arra	120.97	314	PKP	PKPdf	12 57 36.2	-2.1
	comp=Z,0.6nm,0.3s,baz=104,slow=3.0,SNR=5.4						
BRVK	Borovoye	126.39	315⇑	*i*PKIKP	PKPdf	12 57 49.2	+0.6
AKTO	Aktyubinsk	133.95	312	PKP	PKPdf	12 58 03.5	+0.4
	comp=Z,1.0nm,0.6s,baz=0.0,slow=2.0,SNR=3.6						
VRH	Novokhopyorsk	143.98	316	*e*PKIKP	PKPdf	12 58 22.5	+1.2
VRH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
ZEI	Tsey	144.15	301	*i* PKIKP	PKPab	12 58 19.3	-0.6
KBZ	Khabaz	144.79	303	PKP	PKPab	12 58 21.3	-0.6
	comp=Z,6.3nm,0.9s,baz=69,slow=1.8,SNR=8.5						
KIV	Kislovodsk	144.92	303	*e*PKIKP	PKPab	12 58 22.7	+0.1
KIV				*e*		13 01 41.6	
KIV				*e*PPP	PPP	13 04 53.7	
KIV				pmax	pmax		
	comp=Z,5.0nm,0.9s						
OBN	Obninsk	145.27	324	*e*PKIKP	PKPbc	12 58 23.5	+0.3
OBN				*e*		13 01 43.1	
OBN				pmax	pmax		
	comp=Z,22nm,0.9s						
VSR	Storozhevoye	145.49	317	*e*PKIKP	PKPdf	12 58 23.2	-0.7
VSR				pmax	pmax		
	comp=Z,40nm,1.0s						
VORD	Divnogorie	145.50	316	*e*PKIKP	PKPdf	12 58 23.8	-0.2
VORD				pmax	pmax		
	comp=Z,30nm,0.7s						
FINES	FINESS Array B	145.53	339	PKPbc	PKPdf	12 58 22.8	-0.9
	comp=Z,7.8nm,0.7s,baz=42,slow=5.9,SNR=22						
ANN	Anapa	148.48	306	*i* PKP2	PKPbc	12 58 33.2	+0.5
ANN				*e*SS	SS	13 21 08.6	-0.3
ANN				pmax	pmax		
	comp=Z,42nm,1.1s						
NB2	NORSAR Subarra	149.34	350	PKP	PKPbc	12 58 33.9	-0.6
	comp=Z,1.7nm,0.8s,baz=19,slow=2.9						
ASF	Jabal al Asfar	149.50	281	PKPbc	PKPbc	12 58 36.1	+0.2
	comp=Z,3.4nm,0.8s,baz=88,slow=2.5,SNR=7.6						
HFS	Hagfors	149.79	347	PKPbc	PKPbc	12 58 35.0	-0.5
	comp=Z,4.7nm,0.8s,baz=84,slow=5.9,SNR=5.2						
MMAI	Mount Meron Ar	150.85	283	PKPbc	PKPbc	12 58 39.0	-0.1
	comp=Z,3.1nm,0.6s,baz=66,slow=3.5,SNR=3.6						
AKASG	Malin Array Be	151.34	321	PKPbc	PKPbc	12 58 38.9	-0.6
	comp=Z,1.0nm,0.4s,baz=51,slow=2.6,SNR=6.4						
AKASG	Malin Array Be	151.34	321	*e*PKIKP	PKPbc	12 58 40.1	+0.6
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KIEV	Kiev	151.36	321⇓	*e*PKIKP	PKPdf	12 58 32.7	-0.8
BRTR	Keskin Array B	152.17	297	PKPbc	PKPbc	12 58 41.5	-0.6
	comp=Z,2.1nm,0.6s,baz=132,slow=3.6,SNR=9.0						
CLL	Collm	157.97	340	*e*PKPab	PKPab	12 59 16.0	+0.1
	comp=Z,6.0nm,0.9s						
CLL	Collm	157.97	340	*e*PKP2	PKPab	12 59 16.0	+0.1
CLL				pmax	pmax		
	comp=Z,6.0nm,0.9s						
VYHS	Vyhne	158.00	327	*e*PKP2	PKPab	12 59 17.2	+1.0
VYHS	Vyhne	158.00	327	*e*PKP	PKPab	12 59 17.2	+1.0
TORD	Torodi Ar. Bea	162.08	182	PKPab	PKPab	12 59 32.7	-1.9
	baz=223,slow=1.9						
KOWA	Kowa	162.81	163	PKPab	PKPab	12 59 38.2	+0.4
	comp=Z,2.8nm,0.7s,baz=215,slow=5.5,SNR=4.5						

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*IDC **17** 12:45:18.6±1.0, 18°.64S×173°.75W, h0^{km}, mb4.1/8, mb1 4.4/9, mb1mx3.9/48, mbtmp4.1/9, ML3.3/1, MS3.7/7, Ms1 3.7/7, ms1mx3.3/37, Error ellipse: s-maj=41.7km s-min=17.5km az=138.0*

*NEIC **17** 12:45:19.9±0.6, 18°.67S×173°.73W, h10^{km}, mb4.3/3, Error ellipse: s-maj=24.9km s-min=9.0km az=142.0*

*ISCJB **17** 12:45:21.3±0.6, 18°.6S±0°.1×173°.8W±0°.1, h31^{km}, mb4.1/12, MS3.8/7, Error ellipse: s-maj=21.9km s-min=7.6km az=41.2*

ISC 17 12:45:23.0±0.9,**18°.7S**±0°.1×**173°.6W**±0°.2,**h31**^{km},**n31**, σ**1^{s}.74**/26,**mb4.2**/12,**MS3.8**/7,**Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	5.07	20	Pn	Pn	12 46 35.1	-1.9
	1.1nm,0.3s,baz=177,slow=18,SNR=4.9						
AFI				Sn	Sn	12 47 34.9	+0.3
	4.1nm,0.3s,baz=0.0,slow=20,SNR=3.2						
RPZ	Rata Peaks	28.09	204	P	P	12 51 12.4	+0.5
	9.6nm,0.6s,baz=54,slow=8.7,SNR=6.9						
CTA	Charters Tower	37.85	261	P	P	12 52 36.5	-0.8
	5.3nm,0.6s,baz=85,slow=12,SNR=7.2						
AS01	Alice Springs	48.95	255	*e*P	P	12 54 04.9	-1.9
WB2	Warramunga Arr	48.99	260	*e*P	P	12 54 04.9	-2.2
AS31	Alice Springs	49.00	255	*e*P	P	12 54 06.1	-1.1
	1.2nm,0.8s						
ASAR	Alice Springs	49.00	255	P	P	12 54 05.9	-1.3
	3.9nm,0.8s,baz=96,slow=7.1,SNR=34						
WR1	Warramunga Arr	49.00	260	*e*P	P	12 54 05.7	-1.5
	3.3nm,0.7s						
WRA	Warramunga Arr	49.00	260	P	P	12 54 05.7	-1.5
	1.1nm,0.5s,baz=97,slow=7.6,SNR=42						
FITZ	Fitzroy Crossi	57.42	260	P	P	12 55 08.2	-1.0
	2.0nm,0.9s,baz=78,slow=6.8,SNR=8.8						
RPN	Rapa Nui	59.23	111	LR	LR	13 16 14.0	
	comp=Z,77nm,20.1s,baz=352,slow=31						
MJAR	Matsushiro Arr	71.35	321	LR	LR	13 24 18.9	
	comp=Z,25nm,20.0s,baz=170,slow=33						
LRC	Lone Oak Road	73.83	42	*e*P	P	12 56 51.4	-3.4
JLAB	Laurel Hill	73.97	41	*e*P	P	12 56 56.0	+0.4
KBNM	Bluenose Ridge	74.85	38	*e*P	P	12 56 59.9	-0.9
NV01	Mina Array Sit	76.89	42	*e*P	P	12 57 13.3	+0.7
NVAR	Mina Array Bea	76.89	42	P	P	12 57 13.9	+1.3
	0.6nm,0.9s,baz=224,slow=5.0,SNR=3.6						
KSRS	Korea Array	78.39	316	P	P	12 57 24.1	+3.4

	0.3nm,0.4s,baz=125,slow=7.6,SNR=3.9						
KSRS				LR	LR	13 30 35.3	
	comp=Z,31nm,18.5s,baz=171,slow=35						
KS15	Wonju Array Si	78.41	316	eP	P	12 57 21.5	+0.7
KSAR	Wonju Array Be	78.41	316	P	P	12 57 24.1	+3.3
LTX	Lajitas	82.59	56	eP	P	12 57 43.1	-0.5
TXAR	Lajitas Array	82.59	56	P	P	12 57 43.1	-0.5
	0.7nm,0.9s,baz=213,slow=4.1,SNR=5.5						
CCB	Clear Creek Bu	85.42	11	eP	P	12 57 58.7	+1.7
	2.3nm,1.0s						
ILAR	Eielson Array	85.70	11	P	P	12 58 00.3	+1.9
	1.2nm,1.1s,baz=221,slow=6.5,SNR=5.7						
ILB	Eielson Array	85.70	11	eP	P	12 57 59.6	+1.2
JTS	JuntasAbangare	91.96	80	LR	LR	13 33 01.9	
	comp=Z,30nm,18.3s,baz=326,slow=31						
ATAH	Atahualpa	92.62	98	LR	LR	13 32 52.0	
	comp=Z,50nm,18.1s,baz=221,slow=31						
ULM	Lac du Bonnet	96.59	39	LR	LR	13 38 30.1	
	comp=Z,61nm,18.0s,baz=314,slow=33						
LPAZ	La Paz	98.84	110	LR	LR	13 33 25.5	
	comp=Z,29nm,20.7s,baz=165,slow=29						
BR101	Keskin Array S	148.53	317	ePKPbc	PKPbc	13 05 08.2	+1.0
BRTR	Keskin Array B	148.53	317	PKPbc	PKPbc	13 05 08.2	+1.0
	0.8nm,0.7s,baz=79,slow=2.6,SNR=4.0						

CSEM ***17*** *12:47:10.7±0.3, 39°.21N×43°.66E, h10km, ML3.5, Error ellipse: s-maj=6.2km s-min=5.0km az=111.0*
ISK ***17*** *12:47:10.6, 39°.20N×43°.64E, h10km, ML3.0/4*
ISCJB ***17*** *12:47:11.3±0.5, 39°.22N±0°.03×43°.64E±0°.05, h8km±7km, Error ellipse: s-maj=6.7km s-min=4.6km az=178.6*
DDA ***17*** *12:47:11.1, 39°.20N×43°.65E, h7km, Ml3.5*
ISC 17 12:47:10.7±0.8**, 39°.20N**±0°.03×**43°.69E**±0°.03**, h16**km±7km**, n26, σ0ˢ.62**/39**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CLDR	Caldiran	0.18	106	PG	Pb	12 47 15.5	-0.3
CLDR				SG	Sg	12 47 19.5	+1.1
CLDR	Caldiran	0.18	106	iP	Pb	12 47 15.5	-0.3
CLDR				iS	Sg	12 47 19.6	+1.1
CLDR	Caldiran	0.18	106	P	Pb	12 47 15.5	-0.3
CLDR				S	Sg	12 47 19.6	+1.1
VMUR	Van-Muradiye	0.23	204	iP	Pg	12 47 15.1	-0.8
VMUR				iS	Sg	12 47 19.0	-0.5
VMUR	Van-Muradiye	0.23	204	P	Pg	12 47 15.1	-0.8
VMUR				S	Sg	12 47 19.0	-0.5
DYDN	Diyadin	0.35	360	iP	Pg	12 47 17.8	-0.2
DYDN				iS	Sb	12 47 23.8	-0.2
DYDN	Diyadin	0.35	360	P	Pg	12 47 17.8	-0.2
DYDN				S	Sb	12 47 23.8	-0.2
VANB	Van	0.64	202	PG	Pn	12 47 24.9	-0.3
VANB	Van	0.64	202	ePg	Pn	12 47 24.9	-0.3
AGRB	Hanur-Agry	0.66	305	PG	Pg	12 47 23.2	-0.5
AGRB				SG	Sg	12 47 32.2	-0.3
AGRB	Hanur-Agry	0.66	305	ePg	Pg	12 47 23.2	-0.5
AGRB				eSg	Sg	12 47 32.2	-0.3
TVAN	Van	0.70	199	iP	Pb	12 47 25.2	+0.6
TVAN				iS	Sn	12 47 36.9	+0.1
TVAN	Van	0.70	199	P	Pb	12 47 25.2	+0.6
TUTA	Tutak	0.71	287	iP	Pg	12 47 23.8	-0.9
TUTA	Tutak	0.71	287	P	Pg	12 47 23.8	-0.9
ADCV	BITLIS_Adilcev	0.85	243	iP	Pb	12 47 27.4	+0.3
ADCV				iS	Sg	12 47 38.7	+0.4
ADCV	BITLIS_Adilcev	0.85	243	P	Pb	12 47 27.4	+0.3
ADCV				S	Sg	12 47 38.7	+0.4
TASB	TASBURUN-IGDIR	0.89	28	PG	Pn	12 47 28.6	-0.1
TASB	TASBURUN-IGDIR	0.89	28	ePg	Pn	12 47 28.6	-0.1
EKAR	Karacoban	1.27	273	iP	Pg	12 47 35.5	+0.4
EKAR	Karacoban	1.27	273	P	Pg	12 47 35.5	+0.4
GURO	Guroymak-BITLI	1.45	244	PN	Pn	12 47 36.9	+0.6
GURO	Guroymak-BITLI	1.45	244	ePn	Pn	12 47 36.9	+0.6
BNGL	BINGOL	1.99	264	iP	Pg	12 47 48.6	-0.3
BNGL				iS	Sg	12 48 14.5	-0.3
BNGB	Bingˆ¶l	2.35	266	PN	Pn	12 47 50.3	+1.6
BINT	Bingol	2.51	264	ePn	Pn	12 47 50.3	-0.7

ISCJB ***17*** *13:01:19.7±0.4, 7°.60S±0°.10×112°.12E±0°.05, h200km, mb4.0/5, Error ellipse: s-maj=14.6km s-min=4.9km az=18.1*
DJA ***17*** *13:01:21.0±0.3, 8°S±11°×11°2E±°, h183km±4km, M3.9/17, mb4.2/6, MLv3.8/17*
IDC ***17*** *13:01:30.1±8.8, 7°.23S×112°.54E, h282km±95km, mb3.5/5, mb1 3.6/6, mb1mx3.1/53, mbtmp4.1/6, Error ellipse: s-maj=136.1km s-min=14.9km az=52.0*
ISC 17 13:01:21.0±0.8**, 7°.7S**±0°.1×**112°.09E**±0°.07**, h200**km**, n28, σ1ˢ.73**/30**, mb4.0**/5**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PWJI	Pagerwojo	0.47	217	P	Pn	13 01 46.5	-1.5
PWJI				S	Sn	13 02 07.1	-1.9
NGJI	Ngawi	0.68	294	P	Pn	13 01 48.2	-0.7
GRJI	Gresik	0.82	28	P	Pn	13 01 47.5	-2.2
PCJI	Pacitan	1.06	239	P	Pn	13 01 50.1	-1.1
WOJI	Wonogiri, Jawa	1.17	261	P	Pn	13 01 50.4	-1.6
BLJI	Banyuglugur	1.49	94	P	Pn	13 01 53.5	-1.1
UGM	Wanagama	1.58	260	P	Pn	13 01 55.8	+0.3
SMRI	Semarang	1.74	290	P	Pn	13 01 55.9	-1.1
JAGI	Jajag, Banyuwa	2.20	112	P	Pn	13 02 00.5	-1.1
SRBI	Singaraja	3.12	98	P	Pn	13 02 11.9	-0.2
KPJI	Karang Pucung	3.15	275	P	Pn	13 02 12.9	+0.4
IGBI	Denpasar	3.24	111	P	Pn	13 02 13.6	+0.1
DNP	Denpasar	3.25	109	P	Sn	13 02 58.1	+3.3
CMJI	Cimerak	3.61	268	P	Pn	13 02 16.2	-1.9
TWSI	Taliwang, Sumb	4.86	103	P	Pn	13 02 32.1	-1.6
PLAI	Plampang	5.75	102	P	Pn	13 02 44.3	-0.8
CGJI	Cibinong	6.43	279	P	Pn	13 02 53.7	-0.2
WBSI	Waikabubak, Su	7.48	106	P	Pn	13 03 06.2	-1.4
KASI	Kota Agung	7.83	285	P	Pn	13 03 12.6	+0.4
	31nm,0.8s						
MDSI	Maura Dua	8.47	291	P	Pn	13 03 22.2	+1.7
	6.5nm,1.8s						
EDFI	Ende, Flores	9.56	97	P	Pn	13 03 33.2	-1.6
MNAI	Manna	9.65	289	P	Pn	13 03 35.3	-0.6
	314nm,1.2s						
FITZ	Fitzroy Crossi	16.79	130	P	Pn	13 05 05.6	+0.7
	0.5nm,0.3s,baz=281,slow=6.1,SNR=18						
FITZ				S	S	13 08 03.6	-5.3
	0.2nm,0.3s,baz=173,slow=16,SNR=4.8						
WRA	Warramunga Arr	24.78	122	P	P	13 06 25.7	+1.0
	2.1nm,0.6s,baz=301,slow=11,SNR=36						
ASAR	Alice Springs	26.29	130	P	P	13 06 39.5	+1.1
	2.8nm,0.5s,baz=306,slow=8.9,SNR=30						
CMAR	Chiang Mai Arr	29.00	334	P	P	13 07 03.5	+1.1
	2.6nm,0.9s,baz=168,slow=8.5,SNR=9.9						
STKA	Stephens Creek	36.54	135	P	P	13 08 09.5	+1.8
	2.0nm,0.4s,baz=316,slow=8.2,SNR=18						
MKAR	Makanchi Array	60.34	337	P	P	13 11 07.7	-1.1
	0.8nm,0.4s,baz=149,slow=7.3,SNR=16						

IDC ***17*** *13:20:57.4±1.0, 7°.19S×132°.07E, h0km, mb4.0/7, mb1 4.4/10, mb1mx4.1/42, mbtmp4.2/10, ML4.7/3, MS3.2/4, Ms1 3.2/4, ms1mx2.8/50, Error ellipse: s-maj=48.9km s-min=19.4km az=74.0*
ISCJB ***17*** *13:21:00.1±0.3, 7°.19S±0°.03×131°.99E±0°.04, h33km, mb4.2/13, MS3.2/4, Error ellipse: s-maj=6.2km s-min=4.0km az=169.1*
DJA ***17*** *13:21:03.5±0.4, 7°S±4°×13°2E±°, h63km±29km, M5.0/13, mb5.0/9, mB5.3/9, MLv5.2/13, Mw(mB)4.8/9*
NEIC ***17*** *13:21:06.5±1.3, 7°.51S×131°.94E, h81km±13km, mb4.1/4, Error ellipse: s-maj=16.4km s-min=11.6km az=48.0*
ISC 17 13:21:02.0±0.5**, 7°.17S**±0°.05×**131°.98E**±0°.06**, h35**km**, n64, σ2ˢ.38**/62**, mb4.1**/13**, MS3.2**/4**, 1D, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	Saumlaki	1.05	220	P	Pn	13 21 24.1	+3.8
SAUI	Saumlaki	1.05	220	ePn	Pn	13 21 24.0	+3.7
BNDI	Bandanaira	3.34	322	P	Pn	13 21 52.4	+0.6
BNDI				S	Sn	13 22 29.5	-0.8
KMPI	Kaimana, Papua	3.88	26	P	Pn	13 21 59.1	-0.2
FAKI	Fak Fak	4.23	4	P	Pn	13 22 03.5	-0.5
FAKI				S	Sn	13 22 48.3	-3.9
FAKI	Fak Fak	4.23	4	ePn	Pn	13 22 03.1	-0.9
MSAI	Masohi	4.86	321	P	Pn	13 22 13.8	+1.1
AAI	Ambon	5.11	312	P	Pn	13 22 17.4	+1.2
KDU	Kakadu	5.51	175	P	Pn	13 22 23.0	+1.4
	baz=5.6,SNR=119						
MTN	Manton Dam	5.70	188	P	Pn	13 22 25.7	+1.5
	baz=5.8,SNR=60						
MTN	Manton Dam	5.70	188	ePn	Pn	13 22 25.6	+1.4
RKPI	Ransiki, Papua	6.03	21	P	Pn	13 22 29.6	+0.8
	331nm,0.5s,6µm						
SWI	Sorong	6.30	353	P	Pn	13 22 31.5	-1.0
	64nm,0.6s,2µm						
SRPI	Serui, Papua	6.76	39	P	Pn	13 22 39.6	+0.7
BAKI	Biak	7.22	35	P	Pn	13 22 44.2	-1.0
WAMI	Wamena	7.45	64	P	Pn	13 22 50.7	+2.4
SANI	Sanana	7.84	310	P	Pn	13 22 55.2	+1.5
	44nm,0.5s,1µm						
LBMI	Labuha	7.87	325	P	Pn	13 22 55.0	+0.9
	87nm,0.8s,1µm						
SOEI	Soe	8.05	251	P	Pn	13 23 07.3	+11
SOEI	Soe	8.05	251	ePn	Pn	13 22 57.9	+1.3
KNRA	Kununurra	9.03	200	P	Pn	13 23 10.0	+0.1
	baz=9.2,SNR=25						
GENI	Genyem	9.34	61	P	Pn	13 23 15.3	+1.1
FITZ	Fitzroy Crossi	12.50	209	Pn	Pn	13 23 55.6	-1.8
	3.7nm,0.3s,baz=27,slow=10,SNR=163						
FITZ				Sn	Sn	13 26 06.4	-9.2
	6.3nm,0.3s,baz=178,slow=19,SNR=5.8						
WRAB	Tennant Creek	12.90	170	ePn	Pn	13 23 59.9	-3.1
WRA	Warramunga Arr	12.90	170	Pn	Pn	13 24 00.1	-3.0
	4.0nm,0.3s,baz=352,slow=14,SNR=114						
WRA				Sn	Sn	13 26 18.1	-7.4
	7.8nm,0.3s,baz=358,slow=22,SNR=7.8						
WRA				Lg	Lg	13 27 57.2	
	0.6nm,0.3s,baz=348,slow=28,SNR=3.9						
COEN	Coen	12.91	122	P	Pn	13 24 02.7	-0.3
	baz=13,SNR=22						
COEN	Coen	12.91	122	ePn	Pn	13 24 02.2	-0.9
WB2	Warramunga Arr	12.91	170	ePn	Pn	13 24 00.1	-3.0
PALU	Palau	14.63	10	P	Pn	13 24 26.7	+0.1
	baz=15						
PMG	Port Moresby	15.19	99	Pn	Pn	13 24 35.7	+1.7
	1.1nm,0.3s,baz=330,slow=16,SNR=4.2						
QIS	Mount Isa	15.22	152	P	Pn	13 24 33.1	-1.4
	baz=15,SNR=12						
MTSU	Mount Surprise	16.23	133	P	Pn	13 24 45.7	-1.8
	baz=16,SNR=21						
AS31	Alice Springs	16.51	174	ePn	Pn	13 24 47.7	-3.4
	10nm,0.8s						
ASAR	Alice Springs	16.51	174	Pn	Pn	13 24 48.5	-2.6
	3.9nm,0.3s,baz=350,slow=7.0,SNR=233						
ASAR				Sn	Sn	13 27 40.3	-13
	0.7nm,0.3s,baz=353,slow=26,SNR=4.1						
ASAR				Lg	Lg	13 29 39.0	
	baz=5.5,slow=30,SNR=2.8						
ASAR				LR	LR	13 31 07.2	
	comp=Z,116nm,19.7s,baz=351,slow=37						
AS01	Alice Springs	16.51	174	ePn	Pn	13 24 48.6	-2.5
JAGI	Jajag, Banyuwa	17.71	265	eP	Pn	13 25 00.5	-5.6
	88nm,1.6s						
MBWA	Marble Bar	18.27	219	eP	P	13 25 09.9	-2.9
	15nm,1.2s						
CTA	Charters Tower	18.88	134	P	Pn	13 25 22.5	+2.1
	0.2nm,0.3s,baz=281,slow=18,SNR=2.3						
CTA				Lg	Lg	13 31 03.2	
	0.5nm,0.3s,baz=34,slow=1.7,SNR=4.3						
MEEK	Meekatharra	23.16	212	P	P	13 26 06.0	+0.4
	baz=23,SNR=7.2						
FORT	Forrest	23.78	188	P	P	13 26 13.3	+1.9
	baz=24,SNR=12						
GUMO	Guam	24.27	32	LR	LR	13 35 58.5	
	comp=Z,16nm,18.8s,baz=180,slow=37						
RMQ	Roma	24.98	142	P	P	13 26 23.7	+1.1
	baz=25,SNR=11						
KMBL	Kambalda	25.86	200	P	P	13 26 31.7	+1.2
	baz=26,SNR=5.2						
STKA	Stephens Creek	26.17	161	P	P	13 26 33.9	+0.7
	baz=26,SNR=4.4						
STKA	Stephens Creek	26.17	161	P	P	13 26 36.5	+3.3
	1.8nm,0.5s,baz=335,slow=12,SNR=6.6						
STKA				LR	LR	13 38 39.8	
	comp=Z,152nm,21.4s,baz=360,slow=41						
STKA	Stephens Creek	26.17	161	P	P	13 26 36.5	+3.3
	7.6nm,1.5s						
CMAR	Chiang Mai Arr	41.36	308	P	P	13 28 46.1	+1.1
	1.2nm,0.5s,baz=139,slow=8.1,SNR=7.8						
KMI	Kunming	42.90	319	P	P	13 28 48.8	-8.9
KMI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KSRS	Korea Array	44.55	355	LR	LR	13 49 16.0	
	comp=Z,16nm,18.9s,baz=217,slow=38						
LZH	Lanzhou	50.50	330	eP	P	13 29 53.3	-3.7
LZH				pP	sP	13 30 18.5	+6.9
LZH				sP	pP	13 30 30.0	+23
LZH				ePP	PP	13 31 50.3	-2.8
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
LZH				pmax	pmax		
	comp=Z,170nm,4.9s						
CN2	Changchun	51.07	354	eP	P	13 29 51.3	-10
CN2				epP	sP	13 30 17.4	+1.8
HHC	Hu-ho-hao-te	51.34	340	eP	P	13 29 56.3	-6.8
HHC				pmax	pmax		
	comp=Z,27nm,1.0s						
HHC				pmax	pmax		
	comp=Z,97nm,5.8s						
GTA	Gaotai	55.08	330	eP	P	13 30 31.9	+1.1
GTA				pP	sP	13 30 57.6	+12
GTA				sP	PcP	13 31 12.4	-20
GTA				S	S	13 38 16.4	+5.2
GTA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,69nm,7.2s						
GTA				LR	LR		
	comp=N,120nm,20.6s						
GTA				LR	LR		
	comp=E,140nm,19.9s						
GTA				LR	LR		
	comp=Z,81nm,17.2s						
SONM	Songino Array	59.24	340	P	P	13 31 01.4	+1.4
	comp=Z,0.6nm,0.5s,baz=147,slow=5.6,SNR=3.3						
WMQ	Urumqi	64.62	326	P	P	13 31 29.8	-6.4
MKAR	Makanchi Array	69.45	326	P	P	13 32 08.2	+1.4
	comp=Z,2.2nm,0.4s,baz=113,slow=8.0,SNR=34						
VNDA	Vanda	72.05	173	P	P	13 32 23.8	+1.7
	comp=Z,0.8nm,1.0s,baz=333,slow=6.8,SNR=5.7						
ZALV	Zalesovo Beam	72.61	333	P	P	13 32 26.6	+0.8
	comp=Z,1.1nm,0.5s,baz=138,slow=8.9,SNR=2.2						
KURBB	Kurchatov Arra	73.69	328	P	P	13 32 33.3	+1.1
	comp=Z,0.7nm,0.6s,baz=127,slow=5.0,SNR=5.6						
KURK	Kurchatov	73.69	328	P	P	13 32 33.2	+1.1
MAW	Mawson	75.52	202	P	P	13 32 45.8	+3.3
	comp=Z,1.8nm,0.7s,baz=68,slow=6.2,SNR=5.2						
SYO	Syowa Base	84.22	201	⇓eP	P	13 33 34.8	+5.3
ILAR	Eielson Array	92.66	25	P	P	13 34 09.4	-0.5
	comp=Z,0.2nm,0.5s,baz=249,slow=4.5,SNR=4.5						
LPAZ	La Paz	149.35	140	PKPbc	PKPbc	13 40 50.2	+1.1
	comp=Z,1.7nm,1.1s,baz=187,slow=8.1,SNR=1.9						

IDC ***17*** *13:26:57.8±1.7, 13°.86N×87°.96W, h0km, mb3.5/4, mb1 3.9/6, mb1mx3.6/45, mbtmp3.5/6, ML3.5/2, MS3.5/1, Ms1 3.5/1, ms1mx2.5/29, Error ellipse: s-maj=78.1km s-min=28.2km az=47.0*
ISCJB ***17*** *13:26:58.8±0.7, 12°.68N±0°.05×88°.87W±0°.04, h10km, mb3.6/5, MS3.4/1, Error ellipse: s-maj=7.6km s-min=3.6km az=36.2*
CASC ***17*** *13:27:02.6±1.1, 12°.87N×88°.80W, h47km±33km, ML4.2*
ISC 17 13:26:59.3±1.0**, 12°.76N**±0°.06×**88°.85W**±0°.04**, h10**km**, n37, σ1ˢ.19**/41**, mb3.7**/5**, 1C-9D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
UESV	Ojushtada	0.62	6	eP	Pn	13 27 17.1	+2.8
UESV				IAML		13 27 29.6	
	comp=Z,12µm,0.1s						
TECA	Tecapa	0.81	25	⇓iP	Pb	13 27 16.4	+0.8
SNVI	San Vicente	0.85	1	⇓eP	Pg	13 27 17.0	+1.2
LCY	Lacayo	0.86	39	⇓iP	Pg	13 27 17.0	+1.2
VSM	San Miguel	0.87	40	eP	Pg	13 27 17.4	+1.2
PACA	Pacayal	0.88	36	⇓iP	Pg	13 27 17.2	+1.0
PACA				eS	Sb	13 27 28.1	-0.4
PACA				IAML		13 27 29.9	
	comp=E,54µm,0.2s						
LFRS	El Faro	0.89	347	⇓iP	Pg	13 27 17.5	+1.1
LBRS	Las Brisas	0.99	349	⇑eP	Pg	13 27 19.1	+0.7
SNET	Serv Nac Est T	0.99	338	eP	Pg	13 27 19.1	+0.6
SNET				IAML		13 27 32.8	
	comp=Z,6µm,0.2s						
COLS	Colinas	1.00	334	eP	Pg	13 27 19.5	+0.9
UDBS	Soyapango	1.01	343	eP	Pg	13 27 19.1	+0.4
UDBS				IAML		13 27 33.1	
	comp=Z,8µm,0.3s						
OPAM	San Salvador	1.01	341	eP	Pg	13 27 19.3	+0.5
OPAM				IAML		13 27 34.9	
	comp=Z,5µm,0.4s						
LFU	La Fuente	1.02	346	⇓iP	Pg	13 27 19.5	+0.6
UEES	San Salvador	1.04	339	eP	Pg	13 27 19.6	+0.3
UEES				IAML		13 27 38.4	
	comp=Z,4µm,0.5s						
BOQS	Boqueron	1.06	337	eP	Pg	13 27 20.4	+0.7
BOQS				eS	Sg	13 27 33.6	+0.1
BOQS				IAML		13 27 37.0	
	comp=Z,3µm,0.4s						
LCND	La Caˆ–ada	1.09	60	eP	Pg	13 27 20.3	0.0
LCND				IAML		13 27 35.1	
	comp=Z,9µm,0.3s						
CNCH	Conchagua	1.12	62	⇓eP	Pg	13 27 21.8	+0.9
CNCH				eS	Sb	13 27 35.9	+0.4
CNCH				IAML		13 27 39.6	
	comp=E,15µm,0.4s						
SNJE	San Jose	1.33	327	eP	Pn	13 27 24.5	+0.4
RTR	El Retiro	1.37	326	eP	Pn	13 27 25.5	+0.8
LLGN	La Laguna	1.41	356	⇓iP	Pn	13 27 24.3	-0.8
LLGN				IAML		13 27 44.4	
	comp=Z,1µm,0.4s						
MTO3	Montecristo	1.71	343	⇓iP	Pn	13 27 28.9	-0.4
TEL3	Telica 3	1.97	95	eP	Pn	13 27 33.3	+0.5
CNGN	Cerro Negro	2.12	97	eP	Pn	13 27 35.4	+0.5
CNGN				eS	Sn	13 27 59.6	-1.7
CNGN				IAML		13 28 03.6	
	comp=N,428nm,0.2s						
COPN	Copaltepe	2.28	104	eP	Pn	13 27 37.5	+0.4
MOMN	Momotombo	2.29	98	eP	Pn	13 27 37.3	+0.2
ESTN	Estel	2.45	82	eP	Pn	13 27 39.6	+0.2
RCON	San Juan de Ri	2.73	74	eP	Pn	13 27 43.2	-0.1
MATN	Matagalpa	2.86	86	eP	Pn	13 27 45.0	-0.1
BOAB	BOACO BROADBAN	3.13	95	eP	Pn	13 27 48.7	0.0
BOAB				eS	Sn	13 28 23.7	-2.4
JTS	JuntasAbangare	4.54	122	Pn	Pn	13 28 10.9	+2.7
	comp=N,2.5nm,0.3s,baz=18,slow=16,SNR=5.4						
JTS				Pg	Pb	13 28 19.4	+0.2
	comp=N,11nm,0.3s,baz=18,slow=8.1,SNR=20						
JTS				Sn	Sn	13 29 02.2	+1.1
	comp=N,3.7nm,0.3s,baz=74,slow=20,SNR=3.9						
JTS				Lg	Lg	13 29 20.5	
	comp=N,7.3nm,0.3s,baz=151,slow=22,SNR=10						
CMIG	Matias Romero	7.25	307	Pn	Pn	13 28 47.6	+2.3
	comp=N,0.6nm,0.3s,baz=155,slow=10.0,SNR=4.7						
CMIG				Sn	Sn	13 30 07.7	-0.1
	comp=N,0.9nm,0.3s,baz=163,slow=18,SNR=3.6						
TXAR	Lajitas Array	21.48	322	P	P	13 31 47.0	-1.3
	comp=N,0.8nm,0.6s,baz=148,slow=11,SNR=14						
TKL	Tuckaleechee C	23.26	11	P	P	13 32 00.4	-6.6
	comp=N,2.5nm,0.6s,baz=191,slow=13,SNR=4.2						
NVAR	Mina Array Bea	36.58	320	P	P	13 34 03.8	-2.0
	comp=N,0.2nm,0.5s,baz=127,slow=7.1,SNR=3.7						
NVAR				PcP	PcP	13 36 26.4	-2.8
	comp=N,0.4nm,0.5s,baz=134,slow=3.9,SNR=5.7						
NVAR				LR	LR	13 51 32.6	
	comp=N,61nm,18.1s,baz=104,slow=41						
YKA	Yellowknife Ar	52.96	345	P	P	13 36 10.5	-5.2
	comp=N,0.8nm,0.4s,baz=131,slow=8.5,SNR=8.0						
ILAR	Eielson Array	65.19	336	P	P	13 37 35.0	-5.5
	comp=N,0.4nm,0.8s,baz=101,slow=4.7,SNR=5.0						
WRA	Warramunga Arr	138.03	254	PKhKP	PKPpre	13 46 18.4	
	comp=N,0.3nm,0.6s,baz=89,slow=2.6,SNR=1.3						

IDC ***17*** *13:45:28.0±1.6, 31°.21S×178°.92W, h0km, mb4.0/5, mb1 4.3/7, mb1mx3.9/41, mbtmp4.0/7, ML3.4/2, MS3.0/2, Ms1 3.0/2, ms1mx2.6/44, Error ellipse: s-maj=50.3km s-min=24.4km az=140.0*
NEIC ***17*** *13:45:30.4±0.7, 31°.12S×179°.08W, h10km, mb4.3/1, Error ellipse: s-maj=20.4km s-min=12.6km az=116.0*
ISCJB ***17*** *13:45:32.5±0.8, 31°.0S±0°.1×179°.1W±0°.2, h33km, mb4.0/6, Error ellipse: s-maj=21.5km s-min=14.5km az=39.6*
ISC 17 13:45:34.3±0.8**, 31°.0S**±0°.1×**179°.0W**±0°.2**, h35**km**, n15, σ0ˢ.60**/13**, mb4.0**/6**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.97	30	Pn	Pn	13 46 04.5	-0.6
	10nm,0.3s,baz=73,slow=19,SNR=1.8						
RAO				LR	LR	13 46 28.4	
	comp=Z,194nm,18.1s,baz=209,slow=28						
RAO	Raoul Island	1.97	30	ePn	Pn	13 46 05.5	+0.4
URZ	Urewera	7.94	202	Pn	Pn	13 47 21.6	-5.5
	0.6nm,0.3s,baz=351,slow=14,SNR=2.7						
DZM	Mont Dzumac	15.71	301	LR	LR	13 54 25.5	
	comp=Z,74nm,19.2s,baz=24,slow=34						
ASAR	Alice Springs	42.19	268	P	P	13 53 24.2	+0.4
	1.6nm,0.8s,baz=107,slow=7.9,SNR=10						
WRAB	Tennant Creek	43.22	273	eP	P	13 53 32.3	0.0
	7.5nm,1.1s						
WRA	Warramunga Arr	43.23	273	P	P	13 53 31.5	-0.8
	2.3nm,0.8s,baz=112,slow=8.0,SNR=18						
SBA	Scott Base	47.41	184	eP	P	13 54 05.3	+0.6
FITZ	Fitzroy Crossi	51.46	271	P	P	13 54 35.6	-0.8
	4.3nm,1.0s,baz=129,slow=11,SNR=4.1						
QSPA	South Pole Qui	59.14	180	eP	P	13 55 30.7	-0.6
KSRS	Korea Array	84.20	320	P	P	13 58 02.5	+0.7
	0.8nm,0.8s,baz=142,slow=4.2,SNR=3.3						
KSAR	Wonju Array Be	84.21	320	P	P	13 58 02.5	+0.6
NVAR	Mina Array Bea	89.27	43	P	P	13 58 26.9	0.0
	0.9nm,0.9s,baz=238,slow=6.2,SNR=4.6						
KURK	Kurchatov	120.79	314	PKP	PKPdf	14 04 21.9	-0.3
KURBB	Kurchatov Arra	120.83	314	PKP	PKPdf	14 04 21.9	-0.3
	0.3nm,0.7s,baz=100,slow=2.8,SNR=4.0						

ISCJB ***17*** *13:54:00.4±0.4, 48°.97N±0°.02×2°.05W±0°.04, h3km±7km, Error ellipse: s-maj=4.6km s-min=3.9km az=154.6*
CSEM ***17*** *13:54:00.7±0.1, 49°.01N×2°.06W, h8km, ML2.4/7, Error ellipse: s-maj=1.8km s-min=1.4km az=161.0*
LDG ***17*** *13:54:01.6±0.1, 49°.00N×2°.05W, h2km, Md2.1/1, Ml2.5/7, Error ellipse: s-maj=2.4km s-min=0.9km az=167.0*
BGS ***17*** *13:54:01.8±0.1, 49°.35N×2°.11W, h6km±137km, ML1.4*
ISC 17 13:54:01.1±1.0**, 48°.99N**±0°.03×**2°.06W**±0°.02**, h6**km±13km**, n29, σ0ˢ.48**/46**, France**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JRS	Jersey	0.20	353	eP	Pg	13 54 05.1	0.0
JRS				eS	Sg	13 54 07.6	-0.2
JQE	Queens East	0.21	3	eP	Pg	13 54 05.2	0.0
JQE				eS	Sg	13 54 07.7	-0.3
JQE	Queens East	0.21	3	eP	Pg	13 54 05.2	0.0
JQE				eS	Sg	13 54 07.7	-0.3
JSA	Saint Aubin	0.21	339	eP	Pg	13 54 05.4	+0.2
JSA				eS	Sg	13 54 08.0	0.0
JSA				IAML		13 54 08.2	
	comp=N,88nm,0.1s						
JSA				IAML		13 54 08.2	
	comp=E,105nm,0.2s						
JSA	Saint Aubin	0.21	339	eP	Pg	13 54 05.4	+0.2
JSA				eS	Sg	13 54 08.0	0.0
SGMF	Saint Gilles	0.81	204	ePg	Pg	13 54 16.9	+0.3
SGMF	Saint Gilles	0.81	204	ePn	Pn	13 54 18.8	-0.3
SGMF				eSg	Sg	13 54 27.4	+0.3
	comp=E,12nm,0.4s						
SGMF	Saint Gilles	0.81	204	ePg	Pg	13 54 16.9	+0.3
SGMF	Saint Gilles	0.81	204	ePn	Pn	13 54 18.8	-0.3
SGMF				eSg	Sg	13 54 27.4	+0.3
	comp=E,6.1nm,0.4s						
GRR	Gorron	1.00	127	ePg	Pg	13 54 20.4	+0.2
GRR	Gorron	1.00	127	eP	Pn	13 54 22.7	+1.1
GRR				eSg	Sg	13 54 33.4	+0.3
	comp=E,13nm,0.2s						
GRR	Gorron	1.00	127	ePg	Pg	13 54 20.4	+0.2
GRR	Gorron	1.00	127	eP	Pn	13 54 22.7	+1.1
GRR				eSg	Sg	13 54 33.4	+0.3
	comp=E,6.3nm,0.2s						
ROSF	Rostrenen	1.04	231	ePg	Pg	13 54 20.6	-0.4
ROSF	Rostrenen	1.04	231	ePn	Pb	13 54 21.8	+0.3
ROSF				eSn	Sb	13 54 35.7	+0.3
	comp=E,19nm,0.3s						
ROSF	Rostrenen	1.04	231	ePg	Pg	13 54 20.6	-0.4
ROSF	Rostrenen	1.04	231	ePn	Pb	13 54 21.8	+0.3
ROSF				eSn	Sb	13 54 35.7	+0.3

	comp=E,9.7nm,0.3s						
FLN	La Foliniere	1.06	102	ePg	Pg	13 54 21.3	-0.2
	baz=285						
FLN				eSg	Sg	13 54 35.4	+0.1
	comp=E,7.5nm,0.2s,baz=286						
FLN	La Foliniere	1.06	102	ePg	Pg	13 54 21.3	-0.2
	baz=285						
FLN				eSg	Sg	13 54 35.4	+0.1
	comp=E,3.8nm,0.2s,baz=286						
QUIF	Quistinic	1.30	215	ePn	Pn	13 54 25.4	-0.5
QUIF	Quistinic	1.30	215	ePg	Pb	13 54 26.3	+0.3
QUIF				eSg	Sg	13 54 42.7	-0.3
	comp=E,7.0nm,0.4s						
QUIF	Quistinic	1.30	215	ePn	Pn	13 54 25.4	-0.5
QUIF	Quistinic	1.30	215	ePg	Pb	13 54 26.3	+0.3
QUIF				eSg	Sg	13 54 42.7	-0.3
	comp=E,3.5nm,0.4s						
LDF	La Druitiere	1.34	107	ePn	Pn	13 54 25.6	-0.8
LDF	La Druitiere	1.34	107	ePg	Pb	13 54 26.7	+0.1
LDF				eSg	Sg	13 54 43.8	-0.3
	comp=E,3.9nm,0.2s						
LDF	La Druitiere	1.34	107	ePn	Pn	13 54 25.6	-0.8
LDF	La Druitiere	1.34	107	ePg	Pb	13 54 26.7	+0.1
LDF				eSg	Sg	13 54 43.8	-0.3
	comp=E,2.0nm,0.2s						
MFF	Saint Martin d	2.72	151	eSg	Sg	13 55 26.9	-1.4
	comp=E,2.7nm,0.2s						
MFF	Saint Martin d	2.72	151	eSg	Sg	13 55 26.9	-1.4
	comp=E,1.4nm,0.2s						

PGC 17 14:02:56.1±0.8, 50°.60N×130°.30W, h10^{km}, MLSn2.9/20, Mw3.5/20, Mw3.5/20, 204km west of Pt. Hardy, Bc Vancouver Island, Canada Region, Vancouver Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOLB	Holberg	1.38	87	Pn	Pn	14 03 19.3	-2.2
HOLB				Sn	Sb	14 03 35.3	-4.5
BPBC	Brooks Peninsu	1.68	104	Pn	Pn	14 03 22.6	-3.0
PHC	Port Hardy	1.83	85	Pn	Pn	14 03 25.9	-1.7
PHC				Sn	Sn	14 03 46.8	-4.0
MAYB	Maynard	2.01	94	Pn	Pn	14 03 28.1	-2.2
BBB	Bella Bella	2.10	40	Pn	Pn	14 03 30.2	-1.1
BBB				Sn	Sn	14 03 53.3	-4.1
EDB	Eliza Dome	2.17	108	Pn	Pn	14 03 29.8	-2.4
BNB	Barry Inlet	2.18	336	Pn	Pn	14 03 30.6	-1.9
TLCB	Telegraph Cove	2.21	90	Pn	Pn	14 03 31.4	-1.4
TLCB				Sn	Sn	14 03 56.8	-3.5
WOSB	Woss	2.43	99	Pn	Pn	14 03 34.4	-1.5
NCRB	Newcastle Ridg	2.72	92	Pn	Pn	14 03 38.2	-1.7
GDR	Gold River	2.87	105	Pn	Pn	14 03 39.8	-2.0
DIB	Dawson Inlet,	2.94	334	Pn	Pn	14 03 41.3	-1.5
VIB	Van Inlet	3.00	333	Pn	Pn	14 03 42.4	-1.4
SPLB	Strathcona Par	3.07	102	Pn	Pn	14 03 38.7	-5.9
SPLB				Sn	Sn	14 04 06.9	-14
TOFB	Tofino	3.19	115	Pn	Pn	14 03 40.9	-5.3
CBB	Campbell River	3.22	98	Pn	Pn	14 03 45.4	-1.3
BTB	Buttle Lake	3.28	108	Pn	Pn	14 03 45.9	-1.9
B012	Ucluelet	3.51	117	Pn	Pn	14 03 48.8	-1.9
OZB	Mount Ozzard	3.52	116	Pn	Pn	14 03 48.6	-2.3
B928	Bamfield	3.79	116	Pn	Pn	14 03 54.1	-0.4
TXB	Texada	3.88	101	Pn	Pn	14 03 54.4	-1.4
MGB	Mount Grey	3.97	112	Pn	Pn	14 03 55.3	-1.8
SHB	Sechelt	4.26	101	Pn	Pn	14 04 00.3	-0.7
YOUB	Youbou, Lake C	4.27	111	Pn	Pn	14 04 00.8	-0.4
UBRB	Upper Baezaeko	4.50	57	Pn	Pn	14 04 05.3	+0.9
UBRB				Sn	Sn	14 04 56.0	-0.8
GOBB	Galiano Island	4.70	108	Pn	Pn	14 04 07.5	+0.5
OBC	Olympics--Boni	4.81	120	Pn	Pn	14 04 08.7	+0.1
SNB	Saturna Island	4.98	109	Pn	Pn	14 04 11.5	+0.6
LLLB	Lillooet	5.36	87	Pn	Pn	14 04 16.1	-0.1
VDB	Vedder Mountai	5.54	103	Pn	Pn	14 04 19.2	+0.7
MBW	Mount Baker	5.75	105	Pn	Pn	14 04 22.2	+0.6
JCW	Jim Creek	5.97	111	Pn	Pn	14 04 25.1	+0.5
B06A	Marblemount	6.10	107	Pn	Pn	14 04 26.4	+0.1
FMW	Mount Fremont	6.78	119	Pn	Pn	14 04 37.5	+1.6

IDC ***17*** *14:06:52.0±2.1, 24°.12S×175°.01W, h0^{km}, mb4.3/5, mb1 4.4/7, mb1mx3.9/43, mbtmp4.4/7, ML3.8/2, Error ellipse: s-maj=68.6km s-min=30.2km az=150.0*

ISCJB ***17*** *14:06:53.0±1.0, 24°.1S±0°.2×174°.9W±0°.1, h24^{km}, mb4.3/5, Error ellipse: s-maj=29.9km s-min=13.6km az=154.2*

ISC 17 14:06:55.1±1.1, 24°.2S±0°.2×174°.9W±0°.1, h24^{km}, n7, σ0^{s}88/7, mb4.2/5, South of Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	10.66	17	Pn	Pn	14 09 26.4	-0.1
	1.1nm,0.3s,baz=148,slow=19,SNR=1.8						
RAR	Rarotonga	14.28	81	Pn	Pn	14 10 16.0	0.0
	3.4nm,0.3s,baz=354,slow=2.6,SNR=7.0						
CTA	Charters Tower	36.13	269	P	P	14 13 56.2	+0.6
	5.8nm,0.3s,baz=98,slow=9.2,SNR=7.0						
STKA	Stephens Creek	38.94	249	P	P	14 14 18.9	-0.4
	0.8nm,0.4s,baz=101,slow=10,SNR=7.2						
ASAR	Alice Springs	46.57	260	P	P	14 15 20.3	-1.1
	1.5nm,0.5s,baz=90,slow=8.3,SNR=18						
WRA	Warramunga Arr	47.02	265	P	P	14 15 24.2	-0.7
	3.1nm,0.7s,baz=99,slow=6.5,SNR=11						
FITZ	Fitzroy Crossi	55.44	264	P	P	14 16 29.0	+1.0
	1.1nm,0.5s,baz=90,slow=4.0,SNR=5.3						

ISCJB ***17*** *14:08:20.2±0.9, 1°.59N±0°.08×126°.54E±0°.07, h47^{km}, mb3.9/5, Error ellipse: s-maj=13.6km s-min=6.8km az=33.3*

IDC ***17*** *14:08:23.7±3.1, 1°.54N×126°.59E, h68^{km}±27^{km}, mb3.6/5, mb1 3.7/6, mb1mx3.3/57, mbtmp3.8/6, Error ellipse: s-maj=84.6km s-min=13.0km az=68.0*

DJA ***17*** *14:08:23.0±0.5, 1°N±5°×12°7E±°, h45^{km}±60^{km}, M3.9/8, mB4.5/1, mb4.2/2, MLv3.8/8, Mw(mB)3.7/1*

ISC 17 14:08:22.2±1.2, 1°.5N±0°.1×126°.55E±0°.07, h47^{km}, n14, σ1^{s}11/18, mb3.9/5, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.09	131	P	Pn	14 08 41.2	+0.2
TNTI				S	Sn	14 08 56.6	+1.7
LBMI	Labuha	2.32	156	P	Pn	14 08 59.2	+1.3
LBMI				S	Sn	14 09 24.8	-0.5
KMSI	Cibinong	2.73	250	P	Pn	14 09 03.2	-0.3
SANI	Sanana	3.56	189	P	Pn	14 09 14.5	-0.5
LUWI	Luwuk	4.54	236	P	Pn	14 09 29.7	+1.3
MRSI	Marisa	4.72	258	P	Pn	14 09 32.4	+1.5
APSI	Ampana	5.45	244	P	Pn	14 09 42.7	+1.8
SPSI	Sidrap Palu	8.68	231	P	Pn	14 10 24.9	-0.3
FITZ	Fitzroy Crossi	19.49	183	P	P	14 12 44.6	-0.8
	0.1nm,0.3s,baz=12,slow=14,SNR=5.5						
WRA	Warramunga Arr	22.63	161	P	P	14 13 18.6	-0.7
	3.2nm,0.7s,baz=343,slow=11,SNR=43						
WRA				S	S	14 17 23.1	-1.0
	0.7nm,0.7s,baz=336,slow=18,SNR=4.3						
ASAR	Alice Springs	26.01	164	P	P	14 13 51.0	0.0
	1.0nm,0.5s,baz=342,slow=7.3,SNR=45						
ASAR				S	S	14 18 18.1	-0.6
	0.3nm,0.7s,baz=346,slow=21,SNR=3.0						
STKA	Stephens Creek	36.12	158	P	P	14 15 21.1	+1.2
	0.7nm,0.3s,baz=320,slow=7.8,SNR=11						
MKAR	Makanchi Array	59.29	326	P	P	14 18 18.1	-1.1
	0.5nm,0.4s,baz=120,slow=8.1,SNR=9.9						
KURBB	Kurchatov Arra	63.52	328	P	P	14 18 46.7	-0.9
	0.4nm,0.4s,baz=132,slow=6.7,SNR=4.6						

ISCJB ***17*** *14:12:02.7±0.5, 33°.30N±0°.03×35°.35E±0°.04, h11^{km}±6^{km}, Error ellipse: s-maj=6.6km s-min=3.1km az=32.3*

GII ***17*** *14:12:02.6±0.1, 33°.27N×35°.37E, h5^{km}, MD1.9/5*

CSEM ***17*** *14:12:04.3, 33°.30N×35°.40E, h4^{km}, ML2.7*

GRAL ***17*** *14:12:04.3±0.3, 33°.30N×35°.40E, h5^{km}±3^{km}, MD2.7*

ISC 17 14:12:03.0±0.9, 33°.30N±0°.03×35°.38E±0°.04, h15^{km}±8^{km}, n24, σ0^{s}57/39, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSDI	Kefar Szold	0.26	115	Pg	Pg	14 12 08.9	+0.3
KSDI				Sg	Sg	14 12 13.3	+0.9
HNTI	Hanita	0.28	218	Pg	Pg	14 12 08.4	-0.6
HNTI				Sg	Sg	14 12 12.9	-0.1
MMA0B	Mount Meron ar	0.29	176	Pg	Pg	14 12 08.9	-0.2
MMA0B				Sg	Sb	14 12 13.9	-0.7
MMC6	Mount Meron ar	0.29	178	Pg	Pg	14 12 08.8	-0.4
NATI	Neve Ativ	0.30	98	Pg	Pb	14 12 09.6	-0.5
NATI				Sg	Sb	14 12 14.2	-0.7
SHBL	Chebaa	0.31	81	eP	Pb	14 12 09.7	-0.7
SHBL				eS	Sg	14 12 13.7	-0.3
SHBL	Chebaa	0.31	81	eP	Pb	14 12 09.7	-0.7
SHBL				eS	Sg	14 12 13.7	-0.3
QRWL	Qaraoun	0.35	46	eP	Pb	14 12 10.5	-0.6
QRWL	Qaraoun	0.35	46	eP	Pb	14 12 10.5	-0.6
RCY	Rachaya	0.43	63	eP	Pb	14 12 11.9	-0.5
RCY				eS	Sg	14 12 17.5	0.0
DQRL	Deir Qamar	0.43	22	eP	Pb	14 12 12.2	-0.3
DQRL				eS	Sg	14 12 18.0	+0.3
DQRL	Deir Qamar	0.43	22	eP	Pb	14 12 12.2	-0.3
DQRL				eS	Sg	14 12 18.0	+0.3
KSHT	Keshet	0.48	131	Pg	Pb	14 12 13.2	-0.1
KSHT				Sg	Sb	14 12 20.4	+0.2
BLGI	Bet Lehem HaGe	0.59	196	Pg	Pg	14 12 14.5	-0.1
BLGI				Sg	Sb	14 12 23.3	+0.1
BHL	Bhannes	0.64	21	eP	Pb	14 12 15.9	-0.1
BHL	Bhannes	0.64	21	eP	Pb	14 12 15.9	-0.1
OFRI	‘Ofer	0.76	206	Pg	Pg	14 12 17.4	-0.4
OFRI				Sg	Sg	14 12 28.1	+0.4
MMLI	Mount Malkishu	0.86	178	Pg	Pg	14 12 19.0	-0.8
MMLI				Sg	Sb	14 12 31.7	+0.5
HMDT	Nahal Hemdat	1.05	173	Pg	Pg	14 12 22.7	-0.7
HMDT				Sg	Sb	14 12 37.9	+1.3
HWQ	Hawqa	1.08	26	eP	Pg	14 12 23.6	-0.3
HWQ	Hawqa	1.08	26	eP	Pg	14 12 23.6	-0.3
SLTI	Sal’it	1.10	195	Pg	Pg	14 12 23.1	-1.1
SLTI				Sg	Sg	14 12 38.3	-0.2
DSI	Dead Sea	1.73	180	Pn	Pn	14 12 33.7	+1.1
YTIR	Yattir	1.95	187	Pn	Pn	14 12 36.1	+0.4

RSNC 17 14:19:02.6±0.9, 2°.86N×74°.82W, h4^{km}±4^{km}, ML3.3, Mw3.5, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BETC	Betania	0.64	254	eP	Pg	14 19 14.8	-0.2
BETC				eS	Sg	14 19 23.0	-0.4
PRAC	Prado	0.85	356	eP	Pg	14 19 17.7	-1.3
PRAC				eS	Sg	14 19 29.1	-0.9
PRAC				i		14 19 32.6	
	comp=Z,470nm,0.3s						
SJAC	San Juan de Ar	0.96	65	eP	Pg	14 19 19.4	-1.7
SJAC				eS	Sg	14 19 32.0	-1.6
MARP	Paez Belalcaza	1.13	269	eP	Pg	14 19 22.6	-1.8
MARP				i		14 19 23.4	
	comp=Z,2μm,0.1s						
MARP				eS	Sg	14 19 38.2	-0.9
PCON	Cinco Dias	1.66	252	eP	Pn	14 19 30.8	-2.2
PCON				eS	Sn	14 19 54.1	-1.0
VILC	Villavicencio,	1.68	42	eP	Pn	14 19 31.8	-1.1
VILC				eS	Sn	14 19 54.1	-0.9
ANIL	Santa Ana	1.72	340	eP	Pn	14 19 31.9	-1.7
ANIL				eS	Sn	14 19 54.9	-1.4
ANIL				i		14 19 57.1	
	comp=Z,1μm,0.2s						
TOLC	Tolima	1.79	344	eP	Pn	14 19 32.8	-1.8
POPC	Popayan, Colom	1.88	260	eP	Pn	14 19 34.4	-1.4
POPC				i		14 20 01.9	
	comp=Z,124nm,0.1s						
YOTC	Yotoco, Valle	1.89	306	eP	Pn	14 19 33.5	-2.3
YOTC				i		14 19 60.0	
	comp=Z,103nm,0.1s						
HORQ	Saladito	1.90	289	eP	Pn	14 19 34.3	-1.8
HORQ				eS	Sn	14 19 59.6	-1.1
ROSC	El Rosal	2.03	14	eP	Pn	14 19 37.1	-0.9
ROSC				i		14 20 11.3	
	comp=Z,145nm,0.3s						
CHIC	Chingaza	2.07	32	eP	Pn	14 19 37.9	-0.6
CHIC				eS	Sn	14 20 04.8	-0.2
CHIC				i		14 20 09.1	
	comp=Z,214nm,0.5s						

IDC ***17*** *14:42:49.0±1.9, 79°.28N×1°.97E, h0^{km}, mb3.7/7, mb1 3.7/11, mb1mx3.5/65, mbtmp3.7/11, ML3.0/3, MS3.0/12, Ms1 3.0/12, ms1mx2.8/62, Error ellipse: s-maj=36.2km s-min=22.9km az=136.0*

BER ***17*** *14:42:52.0±2.3, 79°.74N×3°.89E, h31^{km}±189^{km}, ML2.8, ML3.3(NAO)*

NAO ***17*** *14:42:53.1±4.1, 79°.71N×5°.79E, h1^{km}±17^{km}, ML3.3*

ISC 17 14:42:52.5±1.5, 79°.2N±0°.2×3°.9E±0°.1, h10^{km}, n26, σ1^{s}53/22, mb3.8/7, MS2.9/8, Greenland Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	Kingsbay	1.55	96	Pg	Pn	14 43 18.7	-1.4
KBS				Lg	Lg	14 43 38.1	
KBS	Kingsbay	1.55	96	i P	Pn	14 43 18.5	-1.6
KBS				eS	Sn	14 43 38.1	-2.1
KBS				IAML		14 43 39.4	
	comp=Z,137nm,0.4s						
SPA0	Spitsbergen Ar	2.65	106	Pn	Pn	14 43 34.7	-0.6
	baz=321,slow=16						
SPA0				Sn	Sn	14 44 05.8	-1.6
	baz=308,slow=18						
SPA0	Spitsbergen Ar	2.65	106	Pn	Pn	14 43 34.7	-0.6
	baz=321,slow=16						
SPA0				Sn	Sn	14 44 05.8	-1.6
	baz=308,slow=18						
SPITS	Spitsbergen Ar	2.65	106	Pn	Pn	14 43 34.4	-0.8
	baz=321,slow=13,SNR=1203						
SPITS				Sn	Sn	14 44 08.8	+1.4
	baz=292,slow=23,SNR=3.4						
SPITS				LR	LR	14 44 47.4	
	comp=Z,297nm,18.3s,baz=325,slow=39						
HOPEN	Hopen	5.17	111	eP	Pn	14 44 08.6	-1.2
HOPEN				eS	Sn	14 45 05.4	-4.0
HOPEN				IAML		14 45 07.3	
	comp=Z,26nm,0.4s						
DAG	Danmarks Havn	5.28	254	i P	Pn	14 44 03.8	-7.4
DAG				i S	Sn	14 44 56.8	-15
ARA0	ARCESS Array S	11.18	138	Pn	Pn	14 45 33.6	+1.5
	baz=337,slow=10						
ARA0	ARCESS Array S	11.18	138	Pn	Pn	14 45 33.6	+1.5
	baz=337,slow=10						
ARCES	ARCESS Array B	11.18	138	Pn	Pn	14 45 34.0	+1.9
	comp=Z,0.2nm,0.3s,baz=358,slow=12,SNR=12						
SFJD	Kangerlussuaq	18.91	261	LR	LR	14 54 48.9	
	comp=Z,74nm,18.1s,baz=22,slow=39						
FINES	FINESS Array B	19.05	146	P	P	14 47 15.5	+1.1
	comp=Z,0.2nm,0.3s,baz=339,slow=9.5,SNR=2.6						
FINES				LR	LR	14 54 42.4	
	comp=Z,30nm,19.0s,baz=342,slow=37						
HFS	Hagfors	19.39	165	P	P	14 47 17.8	-0.3
	comp=Z,0.1nm,0.3s,baz=24,slow=13,SNR=3.2						
HFS				LR	LR	14 53 27.6	
	comp=Z,29nm,20.2s,baz=212,slow=33						
RES	Resolute Bay	20.11	310	LR	LR	14 55 06.8	
	comp=Z,44nm,18.2s,baz=172,slow=37						
EKA	Eskdalemuir Ar	24.09	190	P	P	14 48 05.7	-1.9
	comp=Z,1.1nm,0.5s,baz=359,slow=11,SNR=3.9						
FRB	Frobisher Bay	25.20	275	LR	LR	14 57 09.2	
	comp=Z,44nm,19.6s,baz=3.0,slow=35						
AKASG	Malin Array Be	29.96	147	LR	LR	15 02 15.2	
	comp=Z,22nm,19.8s,baz=160,slow=39						
BVAR	Borovoye Array	34.09	99	P	P	14 49 38.1	+1.5
	comp=Z,0.8nm,0.5s,baz=327,slow=7.7,SNR=5.4						
BVAR				LR	LR	15 06 11.2	
	comp=Z,46nm,19.3s,baz=317,slow=41						
AKTO	Aktyubinsk	34.33	113	P	P	14 49 40.2	+1.5
	comp=Z,1.2nm,0.9s,baz=7.1,slow=8.1,SNR=3.0						
AKTO				LR	LR	15 05 31.9	
	comp=Z,18nm,18.1s,baz=23,slow=39						
MLR	Muntele Rosu	34.81	152	LR	LR	15 04 04.7	
	comp=Z,5.3nm,18.1s,baz=90,slow=36						
ZALV	Zalesovo Beam	35.93	84	LR	LR	15 07 00.9	
	comp=Z,25nm,18.2s,baz=96,slow=40						
KURBB	Kurchatov Arra	37.91	92	P	P	14 50 11.0	+1.7
	comp=Z,1.5nm,0.8s,baz=342,slow=7.7,SNR=13						
MKAR	Makanchi Array	42.29	90	P	P	14 50 47.2	+1.5
	comp=Z,0.9nm,0.7s,baz=352,slow=8.0,SNR=12						
PDAR	Pinedale Array	52.48	302	LR	LR	15 15 06.6	
	comp=Z,33nm,18.3s,baz=246,slow=37						
TORD	Torodi Ar. Bea	66.07	182	P	P	14 53 37.6	-1.6
	comp=Z,0.7nm,1.0s,baz=29,slow=3.3						
CMAR	Chiang Mai Arr	72.94	82	P	P	14 54 21.6	0.0
	comp=Z,0.4nm,0.4s,baz=348,slow=8.4,SNR=5.0						

IDC ***17*** *14:57:35.6±1.7, 31°.04S×178°.90W, h0^{km}, mb4.1/5, mb1 4.2/6, mb1mx3.8/40, mbtmp4.1/6, ML3.8/1, MS3.1/2, Ms1 3.1/2, ms1mx2.7/43, Error ellipse: s-maj=41.1km s-min=25.8km az=55.0*

NEIC ***17*** *14:57:37.2±0.6, 31°.02S×178°.93W, h10^{km}, mb4.3/2, Error ellipse: s-maj=17.2km s-min=11.0km az=109.0*

ISCJB ***17*** *14:57:38.8±0.8, 31°.06S±0°.08×178°.9W±0°.2, h33^{km}, mb4.0/7, MS3.1/1, Error ellipse: s-maj=20.9km s-min=9.7km az=18.0*

ISC 17 14:57:40.6±0.9, 31°.0S±0°.1×178°.9W±0°.2, h35^{km}, n13, σ1^{s}00/12, mb4.1/7, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.93	27	Pn	Pn	14 58 10.5	-0.5
URZ	Urewera	7.96	203	Pn	Pn	14 59 31.8	-2.0
	1.3nm,0.3s,baz=30,slow=20,SNR=7.9						
URZ				Sn	Sn	15 01 03.1	+0.6
	0.3nm,0.3s,baz=238,slow=19,SNR=1.8						
RAR	Rarotonga	19.73	65	LR	LR	15 10 49.0	
	comp=Z,36nm,18.2s,baz=244,slow=40						
STKA	Stephens Creek	33.58	258	LR	LR	15 15 01.9	
	comp=Z,41nm,19.6s,baz=207,slow=31						
ASAR	Alice Springs	42.29	268	P	P	15 05 31.1	0.0
	1.1nm,0.7s,baz=103,slow=7.3,SNR=13						
WRAB	Tennant Creek	43.33	273	eP	P	15 05 39.6	+0.2
	1.7nm,0.5s						
WRA	Warramunga Arr	43.33	273	P	P	15 05 39.5	0.0
	1.3nm,0.5s,baz=112,slow=8.0,SNR=26						
SBA	Scott Base	47.40	184	eP	P	15 06 12.3	+1.4
	4.9nm,1.1s						
FITZ	Fitzroy Crossi	51.57	271	P	P	15 06 44.4	+0.9
	3.1nm,0.9s,baz=135,slow=5.7,SNR=4.1						
QSPA	South Pole Qui	59.13	180	P	P	15 07 38.3	+0.8
	1.7nm,0.6s,baz=147,slow=4.2,SNR=7.1						
QSPA	South Pole Qui	59.13	180	eP	P	15 07 38.0	+0.5
SNAA	Sanae	77.59	179	P	P	15 09 31.9	-0.8
	2.0nm,1.0s,baz=195,slow=5.0,SNR=4.3						
FINES	FINESS Array B	145.41	339	PKPbc	PKPab	15 17 14.7	+0.4
	1.1nm,0.7s,baz=38,slow=4.7,SNR=4.2						

DJA 17 15:08:41.4±1.1, 8°S±5°×10°7E±°, h23^{km}±9^{km}, M3.8/8, MLv3.8/8, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKJI	Sukabumi	0.71	1	P	Pb	15 08 55.3	+0.2
SKJI				S	Sn	15 09 06.2	-0.1
DBJI	Dramaga	1.18	10	P	Pn	15 09 02.6	+0.1
DBJI				S	Sn	15 09 17.4	-0.4
CGJI	Cibinong	1.38	323	P	Pn	15 09 04.8	-0.5
LEM	Lembang	1.39	50	P	Pb	15 09 06.2	-0.6
SBJI	Serang	1.64	346	P	Pn	15 09 09.5	+0.6
CMJI	Cimerak	1.89	92	P	Pn	15 09 11.8	-0.5
KPJI	Karang Pucung	2.40	81	P	Pn	15 09 19.6	+0.3
LWLI	Liwa	3.65	317	P	Pn	15 09 27.8	-8.8
UGM	Wanagama	3.95	93	P	Pn	15 09 40.2	-0.5
MDSI	Maura Dua	3.98	324	P	Pn	15 09 41.1	+0.1
PCJI	Pacitan	4.62	96	P	Pn	15 09 49.7	-0.1

DDA ***17*** *15:16:23.6, 38°.06N×38°.23E, h7^{km}, Ml2.8*

ISK ***17*** *15:16:23.7, 38°.16N×38°.11E, h10^{km}, ML2.3/4*

ISCJB ***17*** *15:16:24.9±0.6, 38°.11N±0°.02×38°.21E±0°.04, h10^{km}±4^{km}, Error ellipse: s-maj=5.3km s-min=4.0km az=179.6*

CSEM ***17*** *15:16:24.5±0.2, 38°.12N×38°.21E, h10^{km}, ML2.3, Error ellipse: s-maj=5.1km s-min=3.8km az=110.0*

ISC 17 15:16:24.4±0.9, 38°.13N±0°.02×38°.19E±0°.02, h16^{km}±7^{km}, n25, σ1^{s}14/45, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MALT	Malatya	0.26	45	PG	Pg	15 16 29.9	-0.3
MALT				SG	Sg	15 16 34.7	+0.5
MALT	Malatya	0.26	45	ePg	Pg	15 16 29.9	-0.3
MALT				eSg	Sg	15 16 34.7	+0.5
AKCD	Akcadag	0.27	309	i P	Pb	15 16 30.6	-0.3
AKCD				i S	Sg	15 16 35.4	+1.0
AKCD	Akcadag	0.27	309	P	Pb	15 16 30.6	-0.3
AKCD				S	Sg	15 16 35.4	+1.0
ELZG	Elazig	0.73	59	i P	Pg	15 16 37.8	-0.8
ELZG				i S	Sg	15 16 45.5	-2.8
ELZG	Elazig	0.73	59	P	Pg	15 16 37.8	-0.8
ELZG				S	Sg	15 16 45.5	-2.8
HEKM	Malatya_Hekimh	0.77	347	i P	Pn	15 16 39.7	-1.1
HEKM				i S	Sn	15 16 52.8	+0.6
HEKM	Malatya_Hekimh	0.77	347	P	Pn	15 16 39.7	-1.1
HEKM				S	Sn	15 16 52.8	+0.6
URFA	Urfa	0.85	144	PG	Pg	15 16 41.2	+0.3
URFA				SG	Sn	15 16 54.9	+1.0
URFA	Urfa	0.85	144	ePg	Pg	15 16 41.2	+0.3
SVRC	Sivrice-ELAZID	0.92	74	PG	Pb	15 16 42.7	+0.8
SVRC	Sivrice-ELAZID	0.92	74	ePg	Pb	15 16 42.7	+0.8
SANL	SANLIURFA_Merk	1.15	146	i P	Pn	15 16 43.5	-2.3
SANL				i S	Sb	15 16 59.6	-0.9
KEMA	Kemaliye	1.16	12	i P	Pn	15 16 47.5	+1.4
KEMA				i S	Sn	15 17 02.3	+0.6
KEMA	Kemaliye	1.16	12	P	Pn	15 16 47.5	+1.4
KEMA				S	Sn	15 17 02.3	+0.6
KMRS	Kahramanmaras	1.20	239	PN	Pg	15 16 46.3	-1.1
KMRS	Kahramanmaras	1.20	239	ePn	Pg	15 16 46.3	-1.1
PTK	Pertek	1.21	51	PN	Pg	15 16 47.6	-0.2
PTK				SN	Sn	15 17 05.2	+2.1
PTK	Pertek	1.21	51	ePn	Pg	15 16 47.6	-0.2
PTK				eSn	Sn	15 17 05.2	+2.1
GAZ	Gaziantep	1.23	219	PN	Pg	15 16 47.6	-0.5
GAZ				SN	Sn	15 17 04.1	+0.8
GAZ	Gaziantep	1.23	219	ePn	Pg	15 16 47.6	-0.5
GAZ				eSn	Sn	15 17 04.1	+0.8
SURC	SANLIURFA_SURC	1.29	165	i P	Pg	15 16 49.3	0.0
SURC				i S	Sg	15 17 06.6	+0.5
SURC	SANLIURFA_SURC	1.29	165	P	Pg	15 16 49.3	0.0
SURC				S	Sg	15 17 06.6	+0.5
KUZU	Kuzuini	1.62	214	i P	Pb	15 16 53.8	0.0
KUZU				i S	Sg	15 17 17.6	+1.1
KUZU	Kuzuini	1.62	214	P	Pb	15 16 53.8	0.0
KUZU				S	Sg	15 17 17.6	+1.1

DJA 17 15:23:05.7±1.1, 3°S±9°×12°9E±°, h13^{km}±14^{km}, M3.7/7, mb3.9/1, MLv3.5/7, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	0.62	157	P	Pg	15 23 18.1	+0.2
MSAI				S	Sb	15 23 27.5	+0.3
AAI	Ambon	1.03	208	P	Pg	15 23 25.6	0.0
LBMI	Labuha	2.42	331	P	Pn	15 23 45.9	+0.8
SANI	Sanana	2.78	285	P	Pn	15 23 48.5	-1.5
SWI	Sorong	3.20	54	P	Pn	15 23 55.6	-0.1
FAKI	Fak Fak	3.57	92	P	Pn	15 24 00.3	-0.5

GUC 17 15:30:34.1±0.8, 21°.22S×70°.01W, h66^{km}±6^{km}, ML3.8, 2C-6D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB07	IPOC Station P	0.51	167	⇑ iP	Pn	15 30 47.6	+0.7
PB07				i S	Sn	15 30 56.9	+0.7
PB07				IAML		15 30 57.4	
	comp=E,4μm,0.5s						
PB01	IPOC Station P	0.52	70	⇓ iP	Pn	15 30 47.4	+0.6
PB01				i S	Sn	15 30 56.6	+0.5
PB01				IAML		15 30 57.6	
	comp=E,13μm,0.3s						
PB03	IPOC Station P	0.85	164	⇓ iP	Pn	15 30 51.8	+1.1
PB03				i S	Sn	15 31 04.5	+1.5
PB03				IAML		15 31 05.1	
	comp=E,4μm,0.1s						
PB09	IPOC Station P	0.91	129	⇓ iP	Pn	15 30 53.3	+1.8
PB09				i S	Sn	15 31 07.2	+2.9
PB09				IAML		15 31 07.9	
	comp=E,4μm,0.2s						
PB04	IPOC Station P	1.11	187	⇓ iP	Pn	15 30 54.4	+0.4
PB04				i S	Sn	15 31 09.7	+0.9
PB04				IAML		15 31 12.1	
	comp=E,5μm,0.2s						
PB08	IPOC Station P	1.34	37	⇑ iP	Pn	15 30 58.1	+0.8
PB08				i S	Sn	15 31 16.0	+1.5

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PB06	**IPOC Station P**	**1.53**	**165**⇓	*i*P	Pn	15 31 00.4	+0.9
PB06				*i* S	Sn	15 31 19.9	+1.3
PSGC	**Pisagua**	**1.62**	**356**	*i* P	Pn	15 30 59.9	-0.8
PSGC				*i* S	Sn	15 31 18.3	-2.5
PB05	**IPOC Station P**	**1.63**	**186**⇓	*i*P	Pn	15 31 00.9	+0.1
PB05				*i* S	Sn	15 31 20.5	-0.5

NIED ***17*** *15:34:00, 45°.60N×151°.60E, h29^{km}, Mw3.7 Best double couple: M$_0$4.09000×10^{14} NP1:φ$_s$139.00000°, δ70.00000°, λ5.00000°. NP2:φ$_s$47.00000°, δ86.00000°, λ160.00000°.*
JMA ***17*** *15:34:45.1±0.5, 45°.64N×151°.59E, h30^{km}, M3.9*
SKHL ***17*** *15:34:45.1±1.4, 45°.22N×151°.83E, h35^{km}, mb4.3/3*
ISC 17 15:34:47.3±4.3**, 44°.8N**±0°.1×**151°.8E**±0°.2**, h35**^{km}**, n21,** σ**1.**^{s}**71**/31**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**2.80**	**281**	*e*P	**Pn**	**15 35 28.0**	**-1.5**
KUR				AMB	AMB	15 35 32.0	
	19nm,0.2s						
KUR				AMB	AMB	15 35 32.0	
	34nm,0.2s						
KUR				*i* S	**Sn**	**15 35 59.0**	**-3.0**
KUR				A	A	15 36 04.0	
	300nm,0.4s						
KUR				A	A	15 36 04.0	
	60nm,0.4s						
SHO	**Shikotan**	**3.65**	**258**	*i* P	**Pn**	**15 35 42.0**	**+0.9**
SHO				AMB	AMB	15 35 49.0	
	4.0nm,0.3s						
SHO				AMB	AMB	15 35 49.0	
	5.0nm,0.3s						
SHO				AMB	AMB	15 35 49.0	
	14nm,0.3s						
SHO				*i* S	**Sn**	**15 36 25.0**	**+2.1**
SHO				A	A	15 36 39.0	
	78nm,0.3s						
SHO				A	A	15 36 39.0	
	58nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**4.29**	**262**	*e*P	**Pn**	**15 35 51.0**	**+1.1**
YUK				AMB	AMB	15 35 59.0	
	10.0nm,0.5s						
YUK				AMB	AMB	15 35 59.0	
	26nm,0.5s						
YUK				AMB	AMB	15 35 59.0	
	52nm,0.5s						
YUK				*e*S	**Sn**	**15 36 40.0**	**+1.3**
YUK				A	A	15 36 51.0	
	69nm,0.5s						
YUK				A	A	15 36 51.0	
	132nm,0.5s						
GRPR	**Tuman**	**4.36**	**262**	*e*P	**Pn**	**15 35 52.0**	**+1.1**
GRPR				*e*S	**Sn**	**15 36 42.0**	**+1.5**
GRPR				A	A	15 36 50.0	
	56nm,0.4s						
GRPR				A	A	15 36 50.0	
	107nm,0.4s						
NEM2	**Nemuro 2**	**4.55**	**254**	P	**Pn**	**15 35 53.9**	**+0.3**
NEM2				*e*S	**Sn**	**15 36 44.9**	**-0.3**
GLVR	**Golovnino**	**4.60**	**259**	*e*P	**Pn**	**15 35 55.0**	**+0.8**
GLVR				*e*S	**Sn**	**15 36 49.0**	**+2.7**
GLVR				A	A	15 37 02.0	
	109nm,0.3s						
JRA	**Rausu**	**4.83**	**263**	P	**Pn**	**15 35 58.6**	**+1.2**
JNK	**Nakash**	**5.20**	**259**	P	**Pn**	**15 36 03.3**	**+0.8**
JNK				*e*S	**Sn**	**15 37 02.5**	**+1.4**
JAK	**Akkeshi**	**5.40**	**253**	P	**Pn**	**15 36 05.5**	**+0.3**
JAK				*e*S	**Sn**	**15 37 05.2**	**-0.9**
JTKR	**Abashiri--Toko**	**5.68**	**265**	P	**Pn**	**15 36 10.2**	**+1.1**
JAR	**Ashorobuto**	**5.94**	**259**	P	**Pn**	**15 36 14.4**	**+1.7**
JAR				*e*S	**Sn**	**15 37 19.4**	**-0.1**
JOB	**Onbets**	**6.02**	**255**	*e*S	**Sn**	**15 37 20.3**	**-1.2**
JMP	**Maruseppu**	**6.07**	**266**	P	**Pn**	**15 36 16.0**	**+1.6**
JCH	**Churui**	**6.45**	**254**	P	**Pn**	**15 36 20.9**	**+1.2**
JCH				*e*S	**Sn**	**15 37 31.0**	**-1.1**
JKK2	**Kamakawa 2**	**6.52**	**265**	P	**Pn**	**15 36 22.1**	**+1.4**
JEM	**Erimo**	**6.84**	**249**	*e*S	**Sn**	**15 37 41.5**	**0.0**
JNBK	**Urakawa-nobuka**	**7.00**	**252**	P	**Pn**	**15 36 27.6**	**+0.4**
JNBK				*e*S	**Sn**	**15 37 43.4**	**-2.1**
JBT2	**Biratori 2**	**7.08**	**257**	P	**Pn**	**15 36 28.9**	**+0.5**
JKB	**Kayabe**	**8.33**	**254**	*e*S	**Sn**	**15 38 13.9**	**-4.3**
JTH	**Tanohata**	**8.76**	**240**	*e*S	Sn	15 38 23.3	-5.6
JIO	**Ouri**	**10.02**	**235**	*e*S	**Sn**	**15 38 56.4**	**-3.2**

IDC 17 15:34:48.2±2.0**, 31°.55S**×**179°.50W, h0**^{km}**, mb3.9**/4**, mb1 4.1**/4**, mb1mx3.7**/40**, mbtmp3.9**/4**, MS3.1**/3**, Ms1 3.1**/3**, ms1mx2.8**/42**, Error ellipse: s-maj=58.0km s-min=33.4km az=61.0, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.67**	**31**	LR	LR	15 36 02.8	
	comp=Z,227nm,18.5s,baz=126,slow=28						
DZM	**Mont Dzumac**	**15.69**	**304**	LR	LR	15 43 27.7	
	comp=Z,167nm,19.4s,baz=158,slow=33						
RAR	**Rarotonga**	**20.43**	**64**	LR	LR	15 45 20.7	
	comp=Z,44nm,21.1s,baz=264,slow=31						
ASAR	**Alice Springs**	**41.78**	**269**	P	P	15 42 39.8	+0.2
	0.9nm,0.9s,baz=107,slow=7.6,SNR=6.3						
WRA	**Warramunga Arr**	**42.87**	**274**	P	P	15 42 47.9	-0.6
	1.5nm,0.8s,baz=112,slow=7.6,SNR=4.8						
QSPA	**South Pole Qui**	**58.56**	**180**	P	P	15 44 46.3	-0.1
	1.5nm,0.7s,baz=124,slow=6.0,SNR=5.5						
RPN	**Rapa Nui**	**60.38**	**105**	LR	LR	16 04 03.5	
	comp=Z,550nm,20.4s,baz=360,slow=29						
MJAR	**Matsushiro Arr**	**78.47**	**326**	P	P	15 46 51.0	0.0
	0.7nm,0.5s,baz=150,slow=6.1,SNR=3.1						

NIED ***17*** *15:52:00, 44°.90N×152°.20E, h5^{km}, Mw3.9 Best double couple: M$_0$8.48000×10^{14} NP1:φ$_s$59.00000°, δ40.00000°, λ-98.00000°. NP2:φ$_s$249.00000°, δ50.00000°, λ-83.00000°.*
IDC ***17*** *15:52:11.4±0.7, 44°.45N×152°.61E, h0^{km}, mb4.1/17, mb1 4.2/23, mb1mx4.0/77, mbtmp4.1/23, ML3.7/4, MS2.9/12, Ms1 3.0/12, ms1mx2.7/69, Error ellipse: s-maj=17.7km s-min=14.2km az=144.0*
SKHL ***17*** *15:52:13.6±0.1, 44°.41N×152°.54E, h38^{km}±8^{km}, mb5.1/5*
ISCJB ***17*** *15:52:13.8±0.4, 44°.44N±0°.06×152°.31E±0°.05, h25^{km}, mb4.2/32, MS3.3/8, Error ellipse: s-maj=8.9km s-min=4.0km az=160.4*
MOS ***17*** *15:52:15.6±1.2, 44°.50N×152°.40E, h40^{km}, mb4.6/22, Error ellipse: s-maj=8.4km s-min=7.2km az=38.7*
NEIC ***17*** *15:52:16.6±0.5, 44°.47N×152°.57E, h35^{km}, mb4.3/2, Error ellipse: s-maj=11.7km s-min=7.7km az=150.0*
JMA ***17*** *15:52:16.1±0.6, 44°.90N×152°.19E, h30^{km}, M4.7*
ISC 17 15:52:14.8±0.6**, 44°.36N**±0°.07×**152°.45E**±0°.06**, h25**^{km}**, n114,** σ**1.**^{s}**99**/120**, mb4.3**/32**, MS3.3**/8**, 8C-4D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**3.38**	**287**	*e*P	**Pn**	**15 53 05.0**	**-0.9**
KUR				AMB	AMB	15 53 08.0	
	33nm,0.2s						
KUR				AMB	AMB	15 53 08.0	
	20nm,0.2s						
KUR				AMB	AMB	15 53 08.0	
	46nm,0.2s						
KUR				*e*S	**Sn**	**15 53 43.5**	**-1.6**
KUR				A	A	15 55 15.0	
	324nm,0.3s						
KUR				A	A	15 55 15.0	
	174nm,0.3s						
KUR	**Kuril'sk**	**3.38**	**287**	*e*PN	**Pn**	**15 53 05.8**	**-0.1**
KUR				*i* S	**Sn**	**15 53 43.8**	**-1.3**
KUR				pmax	pmax		
	comp=Z,54nm,0.2s						
KUR				pmax	pmax		
	comp=N,35nm,0.1s						
KUR				pmax	pmax		
	comp=E,23nm,0.2s						
KUR				smax	smax		
	comp=N,295nm,0.3s						
KUR				smax	smax		
	comp=E,237nm,0.2s						
SHO	**Shikotan**	**4.08**	**265**	*e*P	**Pn**	**15 53 15.0**	**-0.5**
SHO				AMB	AMB	15 53 19.0	
	comp=E,8.0nm,0.3s						
SHO				AMB	AMB	15 53 19.0	
	comp=E,23nm,0.3s						
SHO				AMB	AMB	15 53 19.0	
	comp=E,40nm,0.3s						
SHO				*e*S	**Sn**	**15 54 01.1**	**-1.3**
SHO				A	A	15 55 14.0	
	comp=E,241nm,0.2s						
SHO				A	A	15 55 14.0	
	comp=E,154nm,0.2s						
SHO	**Shikotan**	**4.08**	**265**	*e*PN	**Pn**	**15 53 15.9**	**+0.4**
SHO				pmax	pmax		
	comp=Z,40nm,0.3s						
SHO				pmax	pmax		
	comp=N,8.0nm,0.2s						
SHO				pmax	pmax		
	comp=E,23nm,0.2s						
SHO				MLR	MLR		
	comp=N,58nm,9.0s						
SHO				MLR	MLR		
	comp=E,97nm,9.0s						
SHO				MLR	MLR		
	comp=Z,95nm,9.0s						
YUK	**Yuzh-Kuril'sk**	**4.75**	**268**	*i* P	**Pn**	**15 53 24.0**	**-0.7**
YUK				AMB	AMB	15 53 27.0	
	comp=Z,16nm,0.2s						
YUK				AMB	AMB	15 53 27.0	
	comp=Z,54nm,0.2s						
YUK				AMB	AMB	15 53 27.0	
	comp=Z,191nm,0.2s						
YUK				*i* S	**Sn**	**15 54 17.0**	**-1.9**
YUK				A	A	15 54 23.0	
	comp=Z,280nm,0.4s						
YUK				A	A	15 54 23.0	
	comp=Z,246nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**4.75**	**268***c*	*i*PN	**Pn**	**15 53 24.6**	**-0.1**
YUK				pmax	pmax		
	comp=E,54nm,0.2s						
YUK				pmax	pmax		
	comp=Z,191nm,0.2s						
YUK				pmax	pmax		
	comp=N,16nm,0.1s						
YUK				MLR	MLR		
	comp=Z,68nm,11.0s						
YUK				MLR	MLR		
	comp=N,122nm,9.0s						
GRPR	**Tuman**	**4.82**	**268**	*e*P	**Pn**	**15 53 25.0**	**-0.7**
GRPR				AMB	AMB	15 53 32.0	
	comp=N,6.0nm,0.1s						
GRPR				AMB	AMB	15 53 32.0	
	comp=N,68nm,0.1s						
GRPR				*e*S	**Sn**	**15 54 18.0**	**-2.6**
GRPR				A	A	15 54 24.0	
	comp=N,140nm,0.3s						
GRPR				A	A	15 54 24.0	
	comp=N,427nm,0.3s						
GRPR	**Tuman**	**4.82**	**268**	*e*PN	**Pn**	**15 53 25.5**	**-0.2**
GRPR				pmax	pmax		
	comp=Z,68nm,0.1s						
GRPR				pmax	pmax		
	comp=N,6.0nm,0.0s						
NEM2	**Nemuro 2**	**4.95**	**261**	P	**Pn**	**15 53 26.6**	**-0.9**
NEM2				*e*S	**Sn**	**15 54 18.7**	**-5.2**
GLVR	**Golovnino**	**5.03**	**265**	*i* P	**Pn**	**15 53 29.0**	**+0.4**
GLVR				AMB	AMB	15 53 31.0	
	comp=N,24nm,0.3s						
GLVR				AMB	AMB	15 53 31.0	
	comp=N,16nm,0.3s						
GLVR				AMB	AMB	15 53 31.0	
	comp=N,84nm,0.3s						
GLVR				*e*S	**Sn**	**15 54 24.0**	**-2.0**
GLVR				A	A	15 54 29.0	
	comp=N,427nm,0.3s						
GLVR				A	A	15 54 29.0	
	comp=N,452nm,0.3s						
GLVR	**Golovnino**	**5.03**	**265***d*	*i*PN	**Pn**	**15 53 29.1**	**+0.4**
GLVR				pmax	pmax		
	comp=Z,84nm,0.3s						
GLVR				pmax	pmax		
	comp=E,16nm,0.2s						
GLVR				pmax	pmax		
	comp=N,24nm,0.1s						
JRA	**Rausu**	**5.29**	**268**	P	**Pn**	**15 53 32.8**	**+0.6**
JRA				*e*S	**Sn**	**15 54 30.4**	**-1.9**
JNK	**Nakash**	**5.63**	**265**	P	**Pn**	**15 53 36.8**	**-0.1**
JAK	**Akkeshi**	**5.79**	**259**	P	**Pn**	**15 53 38.4**	**-0.6**
JTKR	**Abashiri--Toko**	**6.16**	**269**	P	**Pn**	**15 53 45.0**	**+0.9**
JAR	**Ashorobuto**	**6.37**	**263**	P	**Pn**	**15 53 44.6**	**-2.4**
JAR				*e*S	**Sn**	**15 54 54.9**	**-4.0**
JOB	**Onbets**	**6.42**	**260**	P	**Pn**	**15 53 47.8**	**+0.1**
JOB				*e*S	**Sn**	**15 54 56.9**	**-3.2**
JMP	**Maruseppu**	**6.54**	**270**	P	**Pn**	**15 53 50.7**	**+1.2**
SKR	**Severo-Kuril's**	**6.80**	**20**	*e*PN	**Pn**	**15 53 49.6**	**-3.2**
JCH	**Churui**	**6.83**	**258**	P	**Pn**	**15 53 53.7**	**+0.3**
JCH				*e*S	**Sn**	**15 55 05.8**	**-4.6**
JKK2	**Kamakawa 2**	**7.00**	**269**	P	**Pn**	**15 53 57.0**	**+1.3**
ASAJ	**Asahikawa**	**7.08**	**271**	Pn	**Pn**	**15 53 58.6**	**+1.8**
	comp=N,2.5nm,0.3s,baz=74,slow=21,SNR=22						
ASAJ				LR	LR	15 57 47.8	
	comp=N,83nm,19.0s,baz=124,slow=47						
ERM	**Erimo**	**7.18**	**254**	*e*P	**Pn**	**15 54 00.1**	**+1.9**
ERM	**Erimo**	**7.18**	**254**⇑	*e*PN	**Pn**	**15 54 00.1**	**+1.9**
YSS	**Yuzh-Sakhalins**	**7.27**	**294**	*e*P	**Pn**	**15 54 00.9**	**+1.6**
YSS	**Yuzh-Sakhalins**	**7.27**	**294**	*e*Pn	**Pn**	**15 53 59.2**	**-0.1**
YSS	**Yuzh-Sakhalins**	**7.27**	**294**	*e*PN	**Pn**	**15 54 01.0**	**+1.6**
YSS				MLR	MLR		
	comp=Z,290nm,17.0s						
YSS				MLR	MLR		
	comp=N,140nm,14.0s						
YSS				MLR	MLR		
	comp=E,240nm,13.0s						
JNBK	**Urakawa-nobuka**	**7.37**	**257**	P	**Pn**	**15 54 01.1**	**+0.4**
JNBK				*e*S	**Sn**	**15 55 18.6**	**-4.9**
JBT2	**Biratori 2**	**7.49**	**261**	P	**Pn**	**15 54 02.3**	**-0.1**
JNB	**Noboribetsu**	**8.52**	**261**	*e*S	**Sn**	**15 55 48.1**	**-3.7**
JKB	**Kayabe**	**8.71**	**257**	*e*S	**Sn**	**15 55 50.0**	**-6.4**
JTH	**Tanohata**	**9.02**	**244**	*e*S	Sn	15 55 54.5	-10
JANG	**Nango**	**9.02**	**248**	*e*S	Sn	15 55 55.3	-8.8
JTM	**Tenmabayashi**	**9.12**	**251**	*e*S	Sn	15 55 59.6	-7.0
JSR	**Shiriuchi**	**9.27**	**256**	*e*S	**Sn**	**15 56 03.9**	**-6.2**
TYV	**Tymovskoe**	**9.27**	**318**	*e*PN	**Pn**	**15 54 25.8**	**-1.0**
TYV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
PETK	**Petropavlovsk-**	**9.41**	**20**	Pn	**Pn**	**15 54 25.7**	**-3.1**
	baz=174,slow=12						
PETK				LR	LR	15 57 54.8	
	comp=Z,11nm,20.0s,baz=154,slow=37						
OFUJ	**Ofunato**	**9.63**	**240**	*e*S	Sn	15 56 10.6	-8.4
JRG	**Rokugo**	**10.11**	**245**	*e*S	**Sn**	**15 56 25.0**	**-5.8**
JIO	**Ouri**	**10.21**	**239**	*e*S	Sn	15 56 23.3	-10
MJAR	**Matsushiro Arr**	**13.35**	**239**	Pn	**Pn**	**15 55 22.6**	**0.0**
	comp=Z,0.2nm,0.3s,baz=32,slow=11,SNR=4.4						
MAJO	**Matsushiro**	**13.35**	**239**	*e*P	**Pn**	**15 55 22.5**	**-0.2**
MAJO	**Matsushiro**	**13.35**	**239**⇑	*e*PN	**Pn**	**15 55 25.4**	**+2.7**
MAJO				pmax	pmax		
	comp=Z,3.0nm,0.6s						
USRK	**Ussuriysk Ar.**	**14.66**	**277**	Pn	**Pn**	**15 55 39.6**	**-0.8**
	baz=88,slow=13						
KLR	**Kul'dur**	**14.98**	**296**	Pn	**Pn**	**15 55 47.1**	**+2.5**
	comp=Z,0.0nm,0.3s,baz=104,slow=14,SNR=7.1						
KLR				LR	LR	16 03 55.3	
	comp=Z,6.4nm,18.2s,baz=108,slow=47						
KLR	**Kul'dur**	**14.98**	**296**⇓	*e*P	**Pn**	**15 55 46.9**	**+2.2**
MA2	**Magadan**	**15.27**	**357**	LR	LR	16 02 09.0	
	comp=Z,30nm,19.4s,baz=221,slow=39						
MDJ	**Mudanjiang**	**16.31**	**279**	*e*Pn	**Pn**	**15 56 03.6**	**+1.6**
SEY	**Seymchan**	**18.61**	**360**	P	**P**	**15 56 28.0**	**-2.0**
	comp=Z,0.3nm,0.3s,baz=174,slow=13,SNR=11						
SEY	**Seymchan**	**18.61**	**360**	*e*P	**Pn**	**15 56 29.6**	**-0.8**
SEY	**Seymchan**	**18.61**	**360**⇑	*i*P	**Pn**	**15 56 29.6**	**-0.8**
ZEA	**Zeya**	**18.91**	**309**	*e*P	**P**	**15 56 33.1**	**-0.2**
ZEA				pmax	pmax		
	comp=Z,13nm,0.8s						
KSRS	**Korea Array**	**19.74**	**258**	P	**Pn**	**15 56 44.9**	**+0.8**
	comp=Z,0.2nm,0.3s,baz=61,slow=9.9,SNR=3.9						
KSRS				LR	LR	16 05 32.4	
	comp=Z,20nm,18.6s,baz=95,slow=40						
KSAR	**Wonju Array Be**	**19.77**	**258**	P	**Pn**	**15 56 44.9**	**+0.4**
KSAR	**Wonju Array Be**	**19.77**	**258**	P	**Pn**	**15 56 44.9**	**+0.4**
YAK	**Yakutsk**	**22.14**	**331**	P	**P**	**15 57 08.5**	**+0.3**
	comp=Z,9.7nm,0.4s,baz=52,slow=0.6,SNR=4.6						
YAK	**Yakutsk**	**22.14**	**331**	*e*P	**P**	**15 57 08.7**	**+0.5**
YAK	**Yakutsk**	**22.14**	**331**	*e*P	**P**	**15 57 08.7**	**+0.5**
YAK				pmax	pmax		
	comp=Z,17nm,0.9s						
ULN	**Ulaanbaatar**	**31.32**	**293**	*e*P	**P**	**15 58 34.9**	**+1.8**
ULN	**Ulaanbaatar**	**31.32**	**293**⇑	*e*P	**P**	**15 58 34.9**	**+1.8**
ULN				pmax	pmax		
	comp=Z,5.0nm,1.8s						
SONM	**Songino Array**	**31.76**	**293**	P	**P**	**15 58 38.6**	**+1.7**
	comp=Z,0.7nm,0.6s,baz=80,slow=7.8,SNR=4.5						
SONM				LR	LR	16 12 42.2	
	comp=Z,26nm,18.6s,baz=116,slow=39						
SONM	**Songino Array**	**31.76**	**293**	*e*P	**P**	**15 58 38.4**	**+1.5**
SONM				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TLY	**Talaya**	**32.92**	**300**	*e*P	**P**	**15 58 48.8**	**+1.8**
TLY	**Talaya**	**32.92**	**300**	*e*P	**P**	**15 58 48.1**	**+1.1**
TLY				*e*S	**S**	**16 04 09.3**	**+6.1**
TLY				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TLY				MLR	MLR		
	comp=Z,53nm,17.0s						
ILAR	**Eielson Array**	**38.73**	**37**	P	**P**	**15 59 35.9**	**-0.6**
	comp=Z,0.7nm,0.5s,baz=240,slow=7.1,SNR=9.0						
ILAR	**Eielson Array**	**38.73**	**37**	*e*P	**P**	**15 59 35.3**	**-1.2**
ILAR	**Eielson Array**	**38.73**	**37**	*e*P	**P**	**15 59 35.3**	**-1.2**
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
EGAK	**Eagle**	**41.18**	**37**	*e*P	**P**	**15 59 56.0**	**-0.8**
	comp=Z,4.4nm,1.0s						
DGZ	**Jazzator, Alta**	**43.40**	**301**	*e*P	**P**	**16 00 17.3**	**+2.0**
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ZALV	**Zalesovo Beam**	**43.67**	**308**	LR	LR	16 19 13.5	
	comp=Z,44nm,18.6s,baz=50,slow=37						
INK	**Inuvik**	**43.93**	**31**	P	**P**	**16 00 19.5**	**+0.4**
	comp=Z,5.1nm,0.6s,baz=287,slow=6.1,SNR=24						
MKAR	**Makanchi Array**	**47.66**	**299**	P	**P**	**16 00 50.0**	**+1.1**
	comp=Z,2.3nm,0.8s,baz=72,slow=7.7,SNR=15						
MKAR				PcP	**PcP**	**16 02 18.0**	**0.0**
	comp=Z,0.4nm,0.5s,baz=75,slow=1.4,SNR=3.4						
MKAR				LR	LR	16 22 23.2	
	comp=Z,27nm,19.1s,baz=111,slow=38						
KURK	**Kurchatov**	**48.33**	**305**	*e*P	**P**	**16 00 54.3**	**+0.4**
KURK	**Kurchatov**	**48.33**	**305**	P	**P**	**16 00 55.0**	**+1.1**
KURK	**Kurchatov**	**48.33**	**305***c*	*e*P	**P**	**16 00 54.3**	**+0.4**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KURBB	**Kurchatov Arra**	**48.42**	**305**	P	**P**	**16 00 55.0**	**+0.4**
	comp=Z,3.2nm,0.8s,baz=70,slow=8.5,SNR=16						
CMAR	**Chiang Mai Arr**	**51.38**	**258**	P	**P**	**16 01 19.8**	**+2.3**
	comp=Z,1.0nm,0.9s,baz=33,slow=8.6,SNR=6.2						
CMAR				LR	LR	16 27 11.3	
	comp=Z,17nm,18.4s,baz=170,slow=41						
BVAR	**Borovoye Array**	**52.04**	**311**	P	**P**	**16 01 23.1**	**+1.1**
	comp=Z,2.0nm,1.0s,baz=59,slow=6.9,SNR=11						
BRVK	**Borovoye**	**52.08**	**311**	*e*P	**P**	**16 01 23.0**	**+0.7**
BRVK	**Borovoye**	**52.08**	**311**	*e*P	**P**	**16 01 22.7**	**+0.4**
	comp=Z,4.9nm,0.8s						
BRVK	**Borovoye**	**52.08**	**311***d*	*e*P	**P**	**16 01 23.0**	**+0.7**
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ARU	**Arti**	**56.47**	**318***c*	*i*P	**P**	**16 01 54.0**	**-0.2**
ARU						16 03 56.7	
ARU				S	**S**	**16 09 46.9**	**+3.3**
ARU				SS	**SS**	**16 13 26.0**	**-4.2**
ARU				pmax	pmax		
	comp=Z,7.0nm,1.2s						
PRGR	**Permogore**	**59.13**	**328**	*e*P	**P**	**16 02 11.5**	**-1.3**
PRGR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
ARCES	**ARCESS Array B**	**59.96**	**341**	P	**P**	**16 02 18.4**	**0.0**
	comp=Z,1.7nm,0.8s,baz=52,slow=7.9,SNR=5.4						
AKTO	**Aktyubinsk**	**59.99**	**313**	LR	LR	16 31 05.5	
	comp=Z,34nm,19.1s,baz=75,slow=39						
KLMR	**Klimovskoe**	**61.92**	**329**	*e*P	**P**	**16 02 30.3**	**-1.5**
KLMR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KLMR	**Klimovskoe**	**61.92**	**329**	*e*P	**P**	**16 02 30.4**	**-1.4**
KLMR				AMP		16 02 32.1	
	comp=Z,6.0nm,0.9s						
FFC	**Flin Flon**	**62.88**	**39**	*e*P	**P**	**16 02 38.9**	**+0.5**
NVAR	**Mina Array Bea**	**63.98**	**61**	P	**P**	**16 02 46.3**	**+0.1**
	comp=Z,1.0nm,0.8s,baz=285,slow=5.3,SNR=5.3						
FINES	**FINESS Array B**	**66.00**	**335**	P	**P**	**16 02 57.3**	**-1.4**
	comp=Z,2.0nm,0.7s,baz=33,slow=11,SNR=7.0						
FINES	**FINESS Array B**	**66.00**	**335**	*e*P	**P**	**16 02 58.3**	**-0.3**
FINES	**FINESS Array B**	**66.00**	**335**	*e*P	**P**	**16 02 58.3**	**-0.3**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
WRAB	**Tennant Creek**	**66.09**	**199**⇑	*e*P	**P**	**16 03 02.2**	**+2.6**
WRAB				pmax	pmax		
	comp=Z,6.0nm,2.5s						
WRA	**Warramunga Arr**	**66.10**	**199**	P	**P**	**16 02 59.8**	**+0.1**
	comp=Z,0.4nm,0.7s,baz=16,slow=6.6,SNR=5.1						
WRA	**Warramunga Arr**	**66.10**	**199**	*e*P	**P**	**16 03 00.5**	**+0.8**
OBN	**Obninsk**	**67.02**	**326**	*e*P	**P**	**16 03 05.5**	**+0.3**
OBN	**Obninsk**	**67.02**	**326**	*e*P	**P**	**16 03 05.5**	**+0.3**
OBN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
DZM	**Mont Dzumac**	**67.34**	**166**	LR	LR	16 26 04.2	
	comp=Z,85nm,19.8s,baz=44,slow=30						
ASAR	**Alice Springs**	**69.79**	**198**	P	**P**	**16 03 24.8**	**+1.9**
	comp=Z,0.4nm,0.8s,baz=16,slow=6.2,SNR=7.4						
ASAR	**Alice Springs**	**69.79**	**198**	*e*P	**P**	**16 03 25.0**	**+2.1**
ASAR	**Alice Springs**	**69.79**	**198**	*e*P	**P**	**16 03 25.0**	**+2.1**
NB2	**NORSAR Subarra**	**70.34**	**341**	P	**P**	**16 03 24.9**	**-1.0**
	comp=Z,0.5nm,0.5s,baz=27,slow=6.2						
HFS	**Hagfors**	**70.53**	**340**	P	**P**	**16 03 26.7**	**-0.3**
	comp=Z,2.6nm,0.7s,baz=38,slow=7.3,SNR=4.8						
KIV	**Kislovodsk**	**72.14**	**314**	*e*P	**P**	**16 03 37.8**	**+0.7**
KIV				*e*		16 04 01.2	
KIV				*e*		16 06 20.3	
KIV				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KBZ	**Khabaz**	**72.19**	**314**	P	**P**	**16 03 38.8**	**+1.5**
	comp=Z,1.5nm,0.3s,baz=35,slow=5.3,SNR=4.2						
AKASG	**Malin Array Be**	**73.27**	**326**	P	**P**	**16 03 43.3**	**-0.3**
	comp=Z,1.7nm,0.4s,baz=37,slow=6.1,SNR=4.1						
KIEV	**Kiev**	**73.28**	**326**	*e*P	**P**	**16 03 43.3**	**-0.4**
KIEV	**Kiev**	**73.28**	**326**⇓	*e*P	**P**	**16 03 43.3**	**-0.4**
KIEV				pmax	pmax		
	comp=Z,6.0nm,1.4s						
CLL	**Collm**	**78.45**	**335**	*i* P	**P**	**16 04 13.0**	**-0.2**
	comp=Z,6.0nm,1.2s						
CLL	**Collm**	**78.45**	**335**	*i* P	**P**	**16 04 13.0**	**-0.2**
CLL				pmax	pmax		
	comp=Z,6.0nm,1.2s						
MLR	**Muntele Rosu**	**78.75**	**325**	LR	LR	16 41 39.4	
	comp=Z,5.1nm,19.4s,baz=194,slow=38						
TXAR	**Lajitas Array**	**79.09**	**60**	P	**P**	**16 04 17.1**	**-0.1**
	comp=Z,1.9nm,0.6s,baz=304,slow=4.2,SNR=11						
PLCA	**Paso Flores**	**148.38**	**99**	*e*PKP2	**PKPbc**	**16 11 59.7**	**+1.0**
PLCA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
SNAA	**Sanae**	**150.13**	**195**	PKPbc	**PKPbc**	**16 12 02.4**	**+0.3**
	comp=Z,2.3nm,0.8s,baz=153,slow=3.8,SNR=15						

ISCJB ***17*** *15:57:27.1±0.2, 18°.63N±0°.03×99°.92W±0°.02, h84^{km}±2^{km}, mb3.9/19, Error ellipse: s-maj=4.5km s-min=3.8km az=24.9*
NEIC ***17*** *15:57:28.6±0.4, 18°.62N×99°.93W, h76^{km}±5^{km}, mb4.1/40, MD4.3(MEX), Error ellipse: s-maj=6.9km s-min=5.6km az=219.0*
MEX ***17*** *15:57:29.5±0.7, 18°.62N×100°.01W, h67^{km}±5^{km}, MD4.0*
IDC ***17*** *15:57:30.5±1.4, 18°.88N×99°.81W, h80^{km}±10^{km}, mb3.5/7, mb1 3.9/10, mb1mx3.6/51, mbtmp4.0/10, MS3.0/5, Ms1 3.0/5, ms1mx2.8/30, Error ellipse: s-maj=35.6km s-min=14.6km az=46.0*
ISC 17 15:57:28.5±0.6**, 18°.62N**±0°.03×**100°.00W**±0°.03**, h71**^{km}±5^{km}**, n201,** σ**1.**^{s}**41**/225**, mb4.0**/20**, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARIG	**Puente Sto Nin**	**0.47**	**224**	*e*P	**Pn**	**15 57 40.2**	**-1.0**
ARIG				*i* S	**Sn**	**15 57 49.5**	**-1.0**
PLIG	**Platanillo**	**0.53**	**116**	*i* P	**Pn**	**15 57 41.0**	**-0.9**
PLIG				*e*S	**Sn**	**15 57 50.3**	**-1.3**
PLIG	**Platanillo**	**0.53**	**116**	*i* P	**Pn**	**15 57 40.9**	**-0.9**
PLIG				*e*S	**Sn**	**15 57 49.3**	**-2.3**
MAVM	**Malinalco, Edo**	**0.58**	**55**	*e*P	**Pn**	**15 57 43.5**	**+0.9**
MAVM				*i* S	**Sn**	**15 57 53.2**	**+0.3**
MAVM	**Malinalco, Edo**	**0.58**	**55**	*e*P	**Pn**	**15 57 43.4**	**+0.9**
MAVM				*e*S	**Sn**	**15 57 51.0**	**-1.8**
MEIG	**Mezcala**	**0.78**	**152**	*i* P	**Pn**	**15 57 44.1**	**-0.5**
MEIG				*e*S	**Sn**	**15 57 54.9**	**-1.5**
MEIG	**Mezcala**	**0.78**	**152**	*i* P	**Pn**	**15 57 44.1**	**-0.5**
MEIG				*e*S	**Sn**	**15 57 54.9**	**-1.5**
YAIG	**Yautepec**	**0.92**	**75**	*e*P	**Pn**	**15 57 45.4**	**-0.8**

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YAIG                            eS      Sn       15 57 57.8 -1.6
YAIG   Yautepec          0.92  75 eP    Pn       15 57 45.4 -0.8
YAIG                            eS      Sn       15 57 56.9 -2.4
UNM    Universidad Na    1.05  48 eP    Pn       15 57 47.0 -1.0
UNM                             eS      Sn       15 58 02.0 -0.4
UNM    Universidad Na    1.05  48 eP    Pn       15 57 47.0 -1.0
UNM                             eS      Sn       15 57 58.3 -4.2
VCVM   Valle de Chalc    1.20  56 i S   Sn       15 58 04.9 -0.9
AMVM   AMECAMECA         1.26  66 eP    Pn       15 57 50.4 -0.2
PPM    Popocatepetl      1.38  71 eP    Pn       15 57 52.3  0.0
PPM    Popocatepetl      1.38  71 eP    Pn       15 57 52.3  0.0
MOIG   Morelia           1.54 313 i P   Pn       15 57 53.9 -0.3
MOIG                            i S     Sn       15 58 12.8 -0.8
MOIG   Morelia           1.54 313 ePn   Pn       15 57 53.9 -0.3
CAIG   El Cayaco         1.59 189 i P   Pn       15 57 54.0 -0.7
CAIG                            eS      Sn       15 58 12.6 -1.9
CAIG   El Cayaco         1.59 189 i P   Pn       15 57 54.0 -0.7
CAIG                            eS      Sn       15 58 12.6 -1.9
ZIIG   Zihuatanejo       1.72 234 eP    Pn       15 57 55.2 -1.2
ZIIG                            i S     Sn       15 58 16.9 -0.7
ZIIG   Zihuatanejo       1.72 234 eP    Pn       15 57 55.2 -1.2
ZIIG                            eS      Sn       15 58 15.0 -2.6
TLIG   Tlapa             1.73 127 eP    Pn       15 57 56.9 +0.2
TLIG                            i S     Sn       15 58 17.6 -0.4
TLIG   Tlapa             1.73 127 ePn   Pn       15 57 57.2 +0.5
TLIG                            eS      Sn       15 58 16.0 -2.0
ACX    Acapulco          1.75 175 eP    Pn       15 57 56.3 -0.6
ACX    Acapulco          1.75 175 eP    Pn       15 57 56.3 -0.6
TPIG   Tehuac#an         2.51  94 i S   Sn       15 58 36.8 -0.2
PNIG   Pinotepa          2.85 141 eP    Pn       15 58 11.8 +0.1
PNIG                            eS      Sn       15 58 45.2 +0.2
PNIG   Pinotepa          2.85 141 eP    Pn       15 58 11.8 +0.1
PNIG                            eS      Sn       15 58 45.2 +0.2
SFJM   Santa Fe          3.41 303 eP    Pn       15 58 19.6 +0.1
LVIG   Laguna Verde      3.56  72 ePn   Pn       15 58 21.1 -0.3
ZAIG   Zacatecas         4.77 330 ePn   Pn       15 58 37.7 -0.5
CMIG   Matias Romero     5.11 107  P    Pn       15 58 43.4 +0.9
       42nm,0.3s,baz=286,slow=14,SNR=368
CMIG                             S      Sn       15 59 36.3 -3.9
       29nm,0.3s,baz=81,slow=17,SNR=10
LNIG   Linares           6.26   4 ePn   Pn       15 58 56.1 -2.3
CCIG   Comitan           7.86 106 ePn   Pn       15 59 20.5 +0.2
CCIG                            eSn     Sn       16 00 48.2 +0.3
HPIG                     9.78 329 ePn   Pn       15 59 48.6 +2.1
SLBS   Sierra La Lagu   10.55 300 ePn   Pn       16 00 00.2 +3.2
LPIG   La Paz           11.04 301  LR   LR       16 04 13.7
       comp=Z,97nm,21.0s,baz=136,slow=36
TXAR   Lajitas Array    11.18 343  P    Pn       16 00 06.6 +1.2
       0.2nm,0.3s,baz=162,slow=15,SNR=28
TXAR                               LR   LR       16 05 10.0
       comp=Z,24nm,21.2s,baz=0.0,slow=42
TX31   Lajitas Ar. Si   11.18 343 ePn   Pn       16 00 06.4 +0.9
JCT    Junction City    11.81   1  P    Pn       16 00 14.3 +0.2
       baz=181
JCT    Junction City    11.81   1 ePn   Pn       16 00 14.5 +0.4
MNTX   Cornudas Mount   13.90 341  P    Pn       16 00 42.9 +0.7
       baz=158,SNR=6.5
MNTX   Cornudas Mount   13.90 341 ePn   Pn       16 00 44.6 +2.5
ABTX   Abilene, Hawle   13.95   1  P    Pn       16 00 44.2 +1.4
       baz=181
GDL2   Guadalupe Moun   14.08 345 ePn   Pn       16 00 44.1 -0.5
342A   Flagon Creek P   14.47  27 ePn   Pn       16 00 49.6  0.0
MSTX   Muleshoe         15.48 351  P    Pn       16 01 02.2 -0.6
       baz=170,SNR=5.5
MSTX   Muleshoe         15.48 351 ePn   Pn       16 01 01.9 -0.9
       16nm,0.9s
121A   Cookes Peak, D   15.52 335  P    P        16 01 04.8 -1.5
       baz=151
Z40A   Long Farm, Mag   15.73  21  P    Pn       16 01 04.8 -1.0
       baz=203,SNR=5.6
WMOK   Wichita Mounta   16.09   4 ePn   Pn       16 01 10.5 +0.2
       6.4nm,1.0s
AMTX   Amarillo         16.27 355  P    Pn       16 01 12.5 -0.1
       baz=174
BNM    Barren Site      16.56 340 ePn   Pn       16 01 17.0 +0.6
X39A   Fountain Ranch   16.67  17  P    Pn       16 01 17.4 -0.2
       baz=200
TUC    Tucson           16.73 327  P    P        16 01 19.8 +0.2
       baz=142
JTS    JuntasAbangare   16.75 118  P    P        16 01 21.0 +1.1
       1.4nm,0.3s,baz=300,slow=9.7,SNR=4.1
JTS    JuntasAbangare   16.75 118  Pn   P        16 01 20.6 +0.7
       14nm,0.8s
MIAR   Mount Ida        16.86  19  P    Pn       16 01 20.0 +0.1
       baz=201
MIAR   Mount Ida        16.86  19 ePn   Pn       16 01 19.5 -0.4
       14nm,1.0s
X40A   Basin Creek Fa   17.04  21  P    Pn       16 01 20.7 -1.5
       baz=204
146A   Union            17.07  33  P    Pn       16 01 20.9 -1.7
       baz=218
ANMO   Albuquerque      17.24 342  P    P        16 01 26.6 +1.3
       0.2nm,0.3s,baz=142,slow=15,SNR=4.6
ANMO                               LR   LR       16 08 59.6
       comp=Z,60nm,20.4s,baz=170,slow=40
ANMO   Albuquerque      17.24 342  P    P        16 01 25.0 -0.3
       baz=159
ANMO   Albuquerque      17.24 342 ePn   P        16 01 26.4 +1.1
       2.8nm,0.8s
TASL   Snake Pit, Alb   17.24 342  P    P        16 01 25.0 -0.3
       baz=159
TASM   ASL Pad, Albuq   17.24 342  P    Pn       16 01 24.9 +0.1
       baz=159
W39A   Magazine         17.41  17  P    Pn       16 01 25.5 -1.1
       baz=200
W39A   Magazine         17.41  17 ePn   P        16 01 26.8 -0.2
       14nm,0.9s
TUL1   Leonard          17.62  11  P    Pn       16 01 28.3 -1.0
       baz=193
TUL1   Leonard          17.62  11 ePn   Pn       16 01 28.2 -1.0
       14nm,0.8s
W41B   Gary Mavity, V   17.86  21  P    P        16 01 30.7 -1.3
       baz=204
WHAR   Wooly Hollow     17.96  21 eP    P        16 01 32.2 -0.7
       8.6nm,1.1s
V39A   Pettigrew        18.05  17  P    P        16 01 33.2 -0.8
       baz=200,SNR=11
Y46A   Houston          18.17  31  P    P        16 01 34.5 -0.8
       baz=216
V40A   Witts Springs    18.25  19  P    P        16 01 34.8 -1.6
       baz=202,SNR=11
V40A   Witts Springs    18.25  19 eP    P        16 01 35.0 -1.3
       17nm,0.8s
149A   Jones            18.29  38  P    P        16 01 34.8 -1.9
       baz=223
HHAR   Hobbs            18.39  16 eP    P        16 01 36.4 -1.3
       19nm,1.2s
OXF    Oxford           18.42  29 eP    P        16 01 37.1 -1.0
       12nm,0.8s
V41A   Mountainview     18.45  21  P    P        16 01 37.6 -0.8
       baz=204,SNR=11
LRAL   Lakeview Retre   18.49  37  P    P        16 01 37.2 -1.8
       baz=222
U39A   Green Forest     18.60  17  P    P        16 01 39.0 -1.1
       baz=199
V42A   Cord             18.73  22  P    P        16 01 40.0 -1.6
       baz=206
X16A   Lo Mia Camp, P   18.74 329 eP    Pn       16 01 44.2 +1.2
       9.5nm,1.4s
U40A   Yellville        18.76  18  P    P        16 01 41.0 -0.8
       baz=201,SNR=11
T38A   Diamond          19.02  14  P    P        16 01 43.3 -1.4
       baz=196,SNR=7.2
U41A   Viola            19.04  20  P    P        16 01 44.4 -0.4
       baz=204,SNR=5.3
T39A   Clever           19.23  16  P    P        16 01 46.1 -0.9
       baz=199
Z50A   Ashland          19.27  38  P    P        16 01 45.4 -2.1
       baz=224
Z50A   Ashland          19.27  38 eP    P        16 01 45.4 -2.1
       7.7nm,0.8s
U42A   Revenden         19.28  22  P    P        16 01 46.2 -1.2
       baz=206,SNR=7.1
Y49A   Blount Mountai   19.43  36  P    P        16 01 48.0 -1.2
       baz=222
Y49A   Blount Mountai   19.43  36 eP    P        16 01 50.0 +0.8
       7.3nm,0.9s
PLAL   Pickwick Lake    19.43  31 eP    P        16 01 46.7 -2.5
       7.7nm,0.8s
X48A   Hartselle        19.54  34 eP    P        16 01 48.3 -2.0
       5.4nm,0.7s
T40A   Mansfield        19.59  18  P    P        16 01 50.0 -1.0
       baz=201
152A   Waverly Hall     19.60  42  P    P        16 01 49.1 -1.9
       baz=228
WUAZ   Wupatki          19.61 331  P    P        16 01 51.3  0.0
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       baz=146
WUAZ   Wupatki          19.61 331 eP    Pn       16 01 53.0 -0.3
       8.6nm,0.9s
SDCO   Great Sand Dun   19.65 347  P    P        16 01 51.4 -0.5
       baz=164
SDCO   Great Sand Dun   19.65 347 eP    P        16 01 51.2 -0.6
       5.9nm,1.3s
S38A   Stockton         19.68  14  P    P        16 01 50.6 -1.2
       baz=197,SNR=9.3
T41A   Mountain View    19.73  20  P    P        16 01 51.6 -0.8
       baz=203
Y50A   Piedmont         19.84  37  P    P        16 01 52.7 -0.9
       baz=223
S39A   Bolivar          19.88  16  P    P        16 01 52.4 -1.6
       baz=199
S39A   Bolivar          19.88  16 eP    P        16 01 52.5 -1.5
       7.7nm,0.8s
W47A   Westpoint        19.89  31  P    P        16 01 51.9 -2.2
       baz=216
T42A   Van Buren        19.94  21  P    P        16 01 54.4 -0.2
       baz=205,SNR=8.0
T42A   Van Buren        19.94  21 eP    P        16 01 54.6 -0.1
       14nm,0.8s
MVCO   Mesa Verde       19.96 340  P    P        16 01 55.6 +0.4
       baz=156
MVCO   Mesa Verde       19.96 340 ePn   Pn       16 01 58.3 +0.8
       6.1nm,0.6s
S22A   4UR Ranch, Cre   19.97 344  P    P        16 01 55.3  0.0
       baz=161
S22A   4UR Ranch, Cre   19.97 344 eP    P        16 01 55.8 +0.4
       12nm,1.1s
S40A   Lebanon          20.02  18  P    P        16 01 54.3 -1.2
       baz=201
254A   Abbeville        20.07  45  P    P        16 01 54.8 -1.3
       baz=232
W48A   Pulaski          20.13  33  P    P        16 01 55.0 -1.8
       baz=218
Z52A   Williamson       20.14  41  P    P        16 01 55.3 -1.6
       baz=227
R38A   Fenwick Farm,    20.21  14  P    P        16 01 56.1 -1.4
       baz=197
S41A   Jillco Farms,    20.23  19  P    P        16 01 56.9 -0.9
       baz=203
Y51A   Rockmart         20.23  38  P    P        16 01 57.3 -0.6
       baz=225
T43A   Greenville       20.27  23  P    P        16 01 57.3 -1.0
       baz=207,SNR=5.3
V47A   Nunnelly         20.38  30  P    P        16 01 57.8 -1.7
       baz=216
W49A   Belvidere        20.46  34  P    P        16 01 59.3 -1.1
       baz=220
WVT    Waverly          20.48  29  P    P        16 01 58.8 -1.8
       baz=214
W13A   Hualapai Mount   20.52 326 eP    P        16 02 02.5 +1.2
       5.0nm,1.2s
IRM    Iron Mountain    20.54 322  P    P        16 02 00.8 -0.4
       baz=135
R39A   Chumby, Stover   20.54  16  P    P        16 01 59.3 -1.9
       baz=199
S42A   Caledonia        20.71  21  P    P        16 02 00.8 -2.2
       baz=205
R40A   Maddies Statio   20.73  17  P    P        16 02 02.7 -0.5
       baz=201
R40A   Maddies Statio   20.73  17 eP    P        16 02 03.5 +0.4
       16nm,1.0s
Z53A   Monticello       20.73  42  P    P        16 02 01.6 -1.7
       baz=229
U15A   North Rim        20.78 331 eP    P        16 02 05.0 +0.9
       39nm,2.0s
S43A   Fulton Ridge,    20.78  23  P    P        16 02 03.1 -0.7
       baz=207
CCM    Cathedral Cave   20.82  20  P    P        16 02 03.9 -0.2
       baz=204
CCM    Cathedral Cave   20.82  20 eP    P        16 02 04.0 -0.2
       14nm,0.9s
GOGA   Godfrey          20.88  42  P    P        16 02 03.7 -1.1
       baz=229
PFO    Pinyon Flats O   20.96 319  LR   LR       16 11 20.9
       comp=Z,69nm,18.1s,baz=284,slow=40
FRD    Ford Ranch, An   20.97 318  P    P        16 02 06.8 +0.8
       baz=131
U47A   Clarksville      20.99  30  P    P        16 02 05.4 -0.6
       baz=215
R41A   Rosebud          21.00  19  P    P        16 02 05.2 -0.8
       baz=203
FVM    French Village   21.03  21 eP    P        16 02 04.8 -1.6
       11nm,0.9s
W50A   Signal Mountai   21.03  35  P    P        16 02 05.6 -0.9
       baz=222
155A   Kite             21.04  45  P    P        16 02 05.0 -1.5
       baz=232
S44A   Carbondale       21.20  24  P    P        16 02 08.1 -0.1
       baz=209
Q39A   Willow Grove F   21.25  15  P    P        16 02 07.8 -0.9
       baz=198
W51A   Cleveland        21.31  36  P    P        16 02 08.5 -1.0
       baz=223
SMCO   Snowmass         21.36 345 eP    P        16 02 11.8 +1.4
       7.8nm,1.0s
X52A   Dahlonega        21.42  39  P    P        16 02 09.6 -1.1
       baz=226
Q40A   Laux Farm, Aux   21.44  17  P    P        16 02 10.1 -0.7
       baz=201
V50A   Pikevile         21.50  35  P    P        16 02 10.3 -1.2
       baz=221
T47A   Sharon Grove     21.52  29  P    P        16 02 10.3 -1.4
       baz=215
ISCO   Idaho Springs    21.65 348  P    P        16 02 12.6 -0.8
       baz=165
P39B   Salisbury        21.72  15  P    P        16 02 12.5 -1.3
       baz=199
R44A   Waltonville      21.75  24  P    P        16 02 13.0 -1.1
       baz=209
TUQ    Turquoise Moun   21.89 323  P    P        16 02 15.7 -0.2
       baz=136
MTPU   Mount Pierson    22.08 334 eP    P        16 02 18.6 +0.5
       5.8nm,0.9s
TKL    Tuckaleechee C   22.23  37  P    P        16 02 16.4 -2.9
       2.4nm,0.6s,baz=182,slow=10,SNR=4.5
TKL                                pP   pP       16 02 35.0 +0.8
       4.0nm,0.8s,baz=199,slow=12,SNR=3.2
TKL    Tuckaleechee C   22.23  37 eP    P        16 02 17.0 -2.3
       6.8nm,0.9s
W53A   Cullowhee        22.24  39  P    P        16 02 17.4 -2.2
       baz=226
BG3    Lake Jocassee    22.26  40 eP    P        16 02 18.1 -1.5
       8.3nm,0.9s
SRU    San Rafael Swe   22.36 338 eP    P        16 02 20.7 -0.3
       4.3nm,1.0s
O20A   White River Ci   22.59 343  P    P        16 02 21.8 -1.5
       baz=159
T50A   Nancy            22.66  33  P    P        16 02 20.3 -3.6
       baz=220
P18A   Preston Nutter   22.73 339 eP    P        16 02 24.3 -0.7
       20nm,1.9s
N23A   Red Feather La   22.78 348  P    P        16 02 24.0 -1.4
       baz=165
N23A   Red Feather La   22.78 348 eP    P        16 02 25.2 -0.2
       5.0nm,1.0s
TMUT   Trail Mountain   22.78 337 eP    P        16 02 24.8 -0.6
       3.1nm,0.7s
V53A   Saluda           22.79  38  P    P        16 02 22.5 -2.9
       baz=226
O41A   Passleys Farm,   22.82  18  P    P        16 02 23.5 -2.0
       baz=202
R47A   Wooly Knot Far   22.85  28  P    P        16 02 23.1 -2.8
       baz=214
N39A   Derby Farms, D   23.10  15  P    P        16 02 26.2 -2.1
       baz=198
M37A   Trindle Farm,    23.27  11  P    P        16 02 28.1 -1.8
       baz=194
N40A   Mertquake, Sal   23.33  16  P    P        16 02 28.6 -1.9
       baz=200
KMSC   Kings Mountain   23.34  41  P    P        16 02 27.8 -2.9
       baz=230
M38A   Pleasantville    23.45  13  P    P        16 02 29.2 -2.5
       baz=196
R11A   Troy Canyon, C   23.89 329  P    P        16 02 34.5 -1.3
       baz=141
L37A   Phoenix Point,   24.02  11  P    P        16 02 34.6 -2.1
       baz=194
N43A   Stutzman Famil   24.11  20  P    P        16 02 34.4 -3.1
       baz=206
L38A   Oak Wood Farm,   24.20  13  P    P        16 02 36.2 -2.1
       baz=196
L39A   Vinton           24.40  15  P    P        16 02 38.1 -2.0
       baz=198
N45A   Kentland         24.61  23  P    P        16 02 39.6 -2.5
       baz=209
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K37A   Belmond          24.67  11  P    P        16 02 40.6 -1.9
       baz=194
L41A   Preston          24.74  17  P    P        16 02 40.9 -2.3
       baz=202
HWUT   Hardware Ranch   24.95 339 eP    P        16 02 45.9 +0.5
       4.9nm,0.8s
O48A   Farmland         25.07  28  P    P        16 02 43.9 -2.3
       baz=215
K40A   Colesburg        25.15  16  P    P        16 02 44.6 -2.4
       baz=200
ECSD   EROS Data Cent   25.20   6  P    P        16 02 45.6 -1.8
       baz=187
ECSD   EROS Data Cent   25.20   6 eP    P        16 02 45.1 -2.4
       7.0nm,0.8s
NVAR   Mina Array Bea   25.37 325  P    P        16 02 50.0 +0.8
       1.0nm,0.6s,baz=145,slow=9.7,SNR=9.8
NVAR                               pP   pP       16 03 07.2 +1.2
       1.3nm,0.7s,baz=148,slow=11,SNR=5.3
NVAR                               PcP  PcP      16 06 22.7 +2.5
       0.3nm,0.5s,baz=176,slow=2.5,SNR=3.1
BW06   Boulder Array    25.39 343  P    P        16 02 47.5 -2.0
       baz=158
BW06   Boulder Array    25.39 343 eP    P        16 02 48.2 -1.3
       4.3nm,0.9s
PD31   Pinedale Array   25.39 343 eP    P        16 02 48.1 -1.4
PDAR   Pinedale Array   25.39 343  P    P        16 02 48.2 -1.3
       2.4nm,0.7s,baz=134,slow=11,SNR=19
PDAR                               pP   pP       16 03 07.1 +0.9
       3.5nm,0.9s,baz=160,slow=8.4,SNR=7.3
PDAR                               LR   LR       16 13 45.4
       comp=Z,66nm,21.3s,baz=174,slow=39
PDAR   Pinedale Array   25.39 343 eP    P        16 02 48.0 -1.5
RLMT   Red Lodge        27.53 346  P    P        16 03 06.8 -1.9
       baz=161
LUPA   Lehigh Univers   30.44  39 eP    P        16 03 34.6 +0.3
       2.1nm,1.0s
LPAZ   La Paz           46.77 136  P    P        16 05 53.2 +1.5
       1.4nm,0.8s,baz=289,slow=9.2,SNR=4.7
SIV    San Ignacio      51.49 129  P    P        16 06 27.7 +0.4
       0.7nm,0.6s,baz=326,slow=9.1,SNR=5.0
ILAR   Eielson Array    55.63 338  P    P        16 06 56.2 -0.6
       0.2nm,0.5s,baz=106,slow=6.7,SNR=3.3
TRF    Thorofare Moun   56.23 335 eP    P        16 07 00.4 -0.9
       4.1nm,0.8s
PETK   Petropavlovsk-   82.45 324  P    P        16 09 43.3 +0.2
       2.0nm,0.6s,baz=67,slow=11
```

ISCJB ***17*** *16:01:40.1±0.5, 13°.42N±0°.05×90°.11W±0°.03, h58km, mb4.2/16, MS3.2/4, Error ellipse: s-maj=7.5km s-min=3.2km az=25.2*

CASC ***17*** *16:01:41.5±1.1, 13°.48N×90°.07W, h57km±10km, MD3.9, ML4.2, mb4.5(NEIC)*

IDC ***17*** *16:01:42.0±2.0, 13°.48N×89°.99W, h59km±19km, mb3.7/5, mb1 4.0/7, mb1mx3.5/50, mbtmp4.0/7, ML3.9/2, MS3.2/5, Ms1 3.2/5, ms1mx2.8/39, Error ellipse: s-maj=60.2km s-min=10.7km az=39.0*

NEIC ***17*** *16:01:43.4±0.6, 13°.53N×89°.88W, h78km±6km, mb4.5/17, MD4.3(SNET), Error ellipse: s-maj=10.5km s-min=5.8km az=216.0*

NEIC Felt [II] at San Salvador.

ISC 17 16:01:41.5±0.6**, 13°.49N**±0°.07×**90°.04W**±0°.05**, h58km, n85, σ1°.16**/88**, mb4.2**/16**, MS3.2**/4**, 1C-5D, Near coast of Guatemala**

```
Code   Station Name       Δ°   AZ°   Phase ID           Time     Res
                                    Op     ISC       h  m  s    ISC
SONS   Sonsonate         0.40  52  eP     Pn       16 01 52.4 +0.2
SONS                               eS     Sn       16 02 00.8 +0.7
SONS                                IAML           16 02 01.7
       comp=Z,22µm,0.2s
SBLS   San Blas          0.53  49⇓iP     Pn       16 01 54.3 +0.4
SNJE   San Jose          0.56  48⇓iP     Pn       16 01 54.7 +0.5
UNIC   Santa Ana         0.68  43  eP     Pn       16 01 55.9 +0.4
UNIC                                IAML           16 02 08.3
       comp=Z,8µm,0.2s
CEDA   San Andres        0.70  63⇓iP     Pn       16 01 56.3 +0.7
CEDA                                IAML           16 02 13.8
       comp=Z,14µm,0.4s
COLS   Colinas           0.74  76  eP     Pn       16 01 56.8 +0.6
COLS                               eS     Sn       16 02 08.2 +1.2
BOQS   Boqueron          0.78  72  eP     Pn       16 01 57.4 +0.7
IXG    Ixpaco            0.79 329⇓iP     Pn       16 01 56.5 -0.4
SNET   Serv Nac Est T    0.81  76  eP     Pn       16 01 57.5 +0.5
SNET                               eS     Sn       16 02 09.4 +1.0
SNET                                IAML           16 02 11.7
       comp=Z,6µm,0.3s
UEES   San Salvador      0.81  73  eP     Pn       16 01 57.7 +0.7
UEES                                IAML           16 02 13.6
       comp=Z,19µm,0.2s
OPAM   San Salvador      0.84  74  eP     Pn       16 01 58.5 +1.0
OPAM                                IAML           16 02 13.3
       comp=Z,15µm,0.3s
CUSC   San Salvador      0.86  74⇑eP     Pn       16 01 58.8 +1.1
CUSC                                IAML           16 02 18.6
       comp=Z,9µm,0.3s
UDBS   Soyapango         0.89  75  eP     Pn       16 01 59.1 +1.1
UDBS                                IAML           16 02 14.4
       comp=Z,11µm,0.3s
LFU    La Fuente         0.94  74  eP     Pn       16 01 59.4 +0.8
LFRS   El Faro           0.96  82  eP     Pn       16 01 59.5 +0.5
LBRS   Las Brisas        1.00  76  eP     Pn       16 02 00.2 +0.8
MTO3   Montecristo       1.12  36⇓iP     Pn       16 02 01.7 +0.5
MTO3                                IAML           16 02 20.6
       comp=Z,1µm,0.5s
SNVI   San Vicente       1.17  84  eP     Pn       16 02 02.8 +0.9
TECA   Tecapa            1.49  90  eP     Pn       16 02 06.8 +0.6
PACA   Pacayal           1.67  91  eP     Pn       16 02 09.7 +1.2
LCY    Lacayo            1.70  92  eP     Pn       16 02 10.1 +1.2
LCND   La Caˆ–ada        2.10  95  eP     Pn       16 02 15.0 +0.7
LCND                                IAML           16 02 46.9
       comp=Z,1µm,0.3s
CNCH   Conchagua         2.16  95  eP     Pn       16 02 16.8 +1.7
CNCH                                IAML           16 02 50.4
       comp=E,5µm,0.4s
TGUH   Tegucigalpa,Un    2.75  78  ePn    Pn       16 02 23.6 +0.5
TGUH   Tegucigalpa,Un    2.75  78  eP     Pn       16 02 23.5 +0.4
TEL3   Telica 3          3.24 106  eP     Pn       16 02 30.0 +0.1
CNGN   Cerro Negro       3.40 106  eP     Pn       16 02 32.5 +0.4
CCIG   Comitan           3.44 324  ePn    Pn       16 02 35.3 +2.6
MOMN   Momotombo         3.58 107  eP     Pn       16 02 35.1 +0.6
ESTN   Estel             3.59  96  ePn    Pn       16 02 35.2 +0.4
ESTN   Estel             3.59  96  eP     Pn       16 02 35.7 +0.9
ESTN                               eS     Sn       16 03 17.8 +1.7
ESTN                                IAML           16 03 33.4
       comp=N,107nm,0.6s
COPN   Copaltepe         3.60 111  eP     Pn       16 02 35.3 +0.5
RCON   San Juan de Ri    3.78  90  eP     Pn       16 02 37.7 +0.4
APYN   Apoyeque          3.81 109  eP     Pn       16 02 39.0 +1.3
MATN   Matagalpa         4.04  97  eP     Pn       16 02 41.5 +0.5
MATN                               eS     Sn       16 03 28.3 +1.2
BOAB   BOACO BROADBAN4.38 103  ePn    Pn       16 02 45.2 -0.4
BOAB   BOACO BROADBAN4.38 103  eP     Pn       16 02 45.7 +0.1
ESPN   Las Esperanzas    5.74 102  ePn    Pn       16 03 03.0 -1.2
CMIG   Matias Romero     5.89 308   P     Pn       16 03 06.8 +0.6
       comp=N,2.2nm,0.3s,baz=108,slow=13,SNR=16
CMIG                                S     Sn       16 04 12.7 +0.3
       comp=N,5.6nm,0.3s,baz=111,slow=17,SNR=2.2
JTS    JuntasAbangare    5.91 122   P     Pn       16 03 07.4 +1.0
       comp=N,5.0nm,0.3s,baz=6.8,slow=22,SNR=12
JTS                                 S     Sn       16 04 12.7 -0.1
       comp=N,2.8nm,0.3s,baz=22,slow=20,SNR=1.5
JTS    JuntasAbangare    5.91 122  eP     Pn       16 03 07.6 +1.1
MYIG   MØrida            7.43   2  ePn    Pn       16 03 28.7 +1.4
TLIG   Tlapa             9.16 297  ePn    Pn       16 03 53.8 +2.6
WBCY   West Bay, Gran   10.15  54  ePn    Pn       16 04 05.5 +1.1
LNIG   Linares          14.42 323  ePn    P        16 05 06.1 -1.7
059A   Moore Haven      15.78  30  ePn    Pn       16 05 19.7 -0.3
       comp=N,74nm,1.3s
LGNH   LØogne           17.48  71  ePn    Pn       16 05 40.6 -0.8
       comp=N,102nm,1.3s
ROSC   El Rosal         17.73 118   LR    LR       16 13 18.7
       comp=N,48nm,20.9s,baz=215,slow=39
658A   Bunnell          17.82  26  eP     Pn       16 05 43.5 -2.0
       comp=N,44nm,1.0s
VBMS   Vicksburg        18.65 359  eP     Pn       16 05 57.1 +1.7
       comp=N,52nm,0.4s
147A   Livingston       19.16   5  eP     P        16 06 01.0 +0.8
       comp=N,15nm,0.8s
LTX    Lajitas          20.21 323  eP     Pn       16 06 14.2 +0.1
LTX                                ePcP   PcP      16 10 24.3 +0.1
TXAR   Lajitas Array    20.21 323   P     Pn       16 06 14.2 +0.1
       comp=N,0.6nm,0.4s,baz=142,slow=10,SNR=11
```

TXAR				PcP	**PcP**	**16 10 24.3**	**+0.1**
	comp=N,0.8nm,0.8s,baz=152,slow=5.7,SNR=4.5						
MIAR	**Mount Ida**	**21.21**	**352**	*e*P	**P**	**16 06 22.2**	**-0.1**
	comp=N,7.6nm,1.3s						
PLAL	**Pickwick Lake**	**21.47**	**4**	*e*P	**P**	**16 06 26.1**	**+0.9**
	comp=N,3.6nm,0.7s						
W50A	**Signal Mountai**	**22.03**	**10**	*e*P	**P**	**16 06 31.6**	**+0.3**
	comp=N,13nm,0.8s						
WMOK	**Wichita Mounta**	**22.59**	**341**	*e*P	**P**	**16 06 35.3**	**-1.9**
	comp=N,6.6nm,0.8s						
WVT	**Waverly**	**22.63**	**5**	*e*P	**P**	**16 06 35.7**	**-1.9**
	comp=N,5.1nm,0.8s						
TKL	**Tuckaleechee C**	**22.78**	**13**	LR	LR	16 15 46.3	
	comp=N,71nm,20.7s,baz=216,slow=37						
ATAH	**Atahualpa**	**23.53**	**150**	LR	LR	16 14 59.1	
	comp=N,54nm,21.2s,baz=357,slow=34						
T47A	**Sharon Grove**	**23.55**	**6**	*e*P	**P**	**16 06 45.7**	**-0.9**
	comp=N,11nm,0.6s						
SFIN	**Lafayette**	**26.91**	**5**	*e*P	**P**	**16 07 16.5**	**-0.6**
SFIN				*e*sP	**sP**	**16 07 42.6**	**+4.3**
PV12	**Saucer Basin,**	**29.82**	**329**	*e*P	**P**	**16 07 43.7**	**+0.4**
	comp=N,4.1nm,0.7s						
BINY	**Binghamton**	**31.09**	**20**	*e*P	**P**	**16 07 54.4**	**+0.1**
	comp=N,37nm,1.7s						
PTGA	**Pitinga**	**32.98**	**113**	P	**P**	**16 08 10.7**	**-0.5**
	comp=N,2.8nm,0.7s,baz=310,slow=9.8,SNR=6.1						
PTGA	**Pitinga**	**32.98**	**113**	*e*P	**P**	**16 08 08.8**	**-2.3**
	comp=N,3.7nm,0.8s						
AGMN	**Agassiz Nation**	**35.04**	**353**	*e*P	**P**	**16 08 26.6**	**-2.0**
	comp=N,5.1nm,0.5s						
MDND	**Maddock**	**35.17**	**349**	*e*P	**P**	**16 08 28.0**	**-1.7**
	comp=N,15nm,0.6s						
NV11	**Mina Array Sit**	**35.18**	**320**	*e*P	**P**	**16 08 31.9**	**+1.7**
	comp=N,0.2nm,0.7s						
NV01	**Mina Array Sit**	**35.27**	**320**	*e*P	**P**	**16 08 32.1**	**+1.1**
NVAR	**Mina Array Bea**	**35.27**	**320**	P	**P**	**16 08 32.9**	**+1.8**
	comp=N,3.0nm,0.6s,baz=133,slow=8.3,SNR=23						
NVAR				PcP	**PcP**	**16 11 01.0**	**+0.3**
	comp=N,1.0nm,0.7s,baz=133,slow=4.3,SNR=5.8						
LPAZ	**La Paz**	**36.66**	**143**	P	**P**	**16 08 44.2**	**+0.7**
	comp=N,0.8nm,0.7s,baz=338,slow=14,SNR=2.9						
HRY	**Holter Researc**	**37.84**	**335**	*e*P	**P**	**16 08 52.5**	**-0.2**
LTIM	**Timbered Crate**	**38.88**	**321**	*e*P	**P**	**16 09 02.6**	**+1.2**
YBH	**Yreka Blue Hor**	**39.95**	**321**	LR	LR	16 27 53.8	
	comp=N,41nm,20.2s,baz=162,slow=39						
SIV	**San Ignacio**	**40.97**	**135**	P	**P**	**16 09 18.5**	**-0.4**
	comp=N,1.6nm,0.6s,baz=317,slow=8.5,SNR=9.7						
SFJD	**Kangerlussuaq**	**59.44**	**17**	LR	LR	16 36 46.1	
	comp=N,38nm,21.6s,baz=256,slow=35						
TULEG	**Thule**	**64.04**	**5**	*e*P	**P**	**16 12 07.3**	**-1.3**
	comp=N,5.8nm,0.8s						
RSO	**Redoubt South**	**65.02**	**331**	*e*pP	pP	16 12 36.4	+5.0
WR1	**Warramunga Arr**	**137.11**	**255**	*e*PKPdf	**PKPdf**	**16 20 59.9**	**+0.9**
WRA	**Warramunga Arr**	**137.11**	**255**	PKP	**PKPdf**	**16 20 59.9**	**+0.9**
	comp=N,0.5nm,0.7s,baz=90,slow=2.3,SNR=5.7						
ASAR	**Alice Springs**	**137.28**	**250**	PKhKP	PKPpre	16 20 51.9	
	comp=N,0.1nm,0.6s,baz=97,slow=3.0,SNR=3.4						
ASAR				PKP	**PKPdf**	**16 20 59.2**	**0.0**
	comp=N,0.4nm,0.8s,baz=128,slow=2.5,SNR=4.8						
FITZ	**Fitzroy Crossi**	**145.40**	**258**	PKPbc	**PKPdf**	**16 21 13.6**	**-0.2**
	comp=N,2.0nm,0.6s,baz=101,slow=5.2,SNR=13						
CM31	**Chiang Mai Arr**	**147.04**	**344**	*e*PKPdf	**PKPdf**	**16 21 15.6**	**-1.1**
CMAR	**Chiang Mai Arr**	**147.04**	**344**	PKPbc	**PKPdf**	**16 21 16.5**	**-0.1**
	comp=N,1.1nm,0.7s,baz=356,slow=3.8,SNR=5.0						

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*IDC **17** 16:11:07.4±2.4, 10°.38S×113°.05E, h0^{km}, mb3.5/3, mb1 3.7/3, mb1mx3.2/61, mbtmp3.5/3, Error ellipse: s-maj=119.1km s-min=24.7km az=46.0*

*ISCJB **17** 16:11:09.1±0.9, 10°.73S±0°.06×112°.71E±0°.06, h33^{km}, mb3.5/3, Error ellipse: s-maj=9.6km s-min=7.9km az=31.1*

*DJA **17** 16:11:09.4±0.6, 11˚S±4˚×11˚3E±˚, h10^{km}, M4.2/11, mb4.8/1, MLv4.0/11*

ISC 17 16:11:09.9±1.1**, 10°.80S**±0°.09×**112°.74E**±0°.06**, h35^{km}, n13, σ1^s.20**/16**, mb3.6**/3**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAGI	**Jajag, Banyuwa**	**2.70**	**31**	P	**Pn**	**16 11 50.6**	**-0.3**
JAGI				S	**Sn**	**16 12 21.5**	**-0.9**
PCJI	**Pacitan**	**3.01**	**329**	P	**Pn**	**16 11 54.0**	**-1.1**
PCJI				S	**Sn**	**16 12 28.9**	**-1.1**
BLJI	**Banyuglugur**	**3.15**	**16**	P	**Pn**	**16 11 57.8**	**+0.8**
BLJI				S	**Sn**	**16 12 33.6**	**+0.2**
WOJI	**Wonogiri, Jawa**	**3.45**	**329**	P	**Pn**	**16 12 00.9**	**-0.2**
UGM	**Wanagama**	**3.61**	**322**	P	**Pn**	**16 12 03.0**	**-0.4**
SRBI	**Singaraja**	**3.64**	**42**	P	**Pn**	**16 12 03.7**	**0.0**
GRJI	**Gresik**	**3.87**	**356**	P	**Pn**	**16 12 07.1**	**+0.2**
TWSI	**Taliwang, Sumb**	**4.57**	**64**	P	**Pn**	**16 12 16.6**	**+0.1**
CMJI	**Cimerak**	**5.19**	**305**	P	**Pn**	**16 12 25.5**	**+0.4**
FITZ	**Fitzroy Crossi**	**14.44**	**122**	Pn	**Pn**	**16 14 29.5**	**-2.4**
	0.1nm,0.3s,baz=318,slow=12,SNR=3.6						
FITZ				Sn	Sn	16 16 57.8	-13
	0.1nm,0.3s,baz=143,slow=14,SNR=1.8						
WRA	**Warramunga Arr**	**22.70**	**116**	P	**P**	**16 16 09.9**	**+1.2**
	1.5nm,0.6s,baz=291,slow=11,SNR=8.3						
ASAR	**Alice Springs**	**23.88**	**125**	P	**P**	**16 16 22.9**	**+2.4**
	0.5nm,0.6s,baz=302,slow=9.3,SNR=12						
MKAR	**Makanchi Array**	**63.47**	**337**	P	**P**	**16 21 37.5**	**+1.2**
	0.4nm,0.4s,baz=150,slow=7.0,SNR=8.0						

ISC 17 16:16:19.3±1.9**, 51°.45N**±0°.09×**16°.14E**±0°.05**, h0^{km}, n12, σ1^s.00**/25**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	**Ksiaz**	**0.62**	**171**	*e*Pg	**Pb**	**16 16 32.8**	**-0.2**
KSP				*e*Sg	**Sb**	**16 16 42.1**	**-0.2**
UPC	**Upice**	**0.95**	**185**	*e*PG	**Pb**	**16 16 38.7**	**0.0**
UPC				*e*SG	**Sn**	**16 16 51.9**	**-2.3**
	comp=Z,16nm,0.3s						
DPC	**Dobruska-Polom**	**1.11**	**174**	*e*PG	**Pb**	**16 16 41.5**	**+0.1**
DPC				*e*SG	**Sn**	**16 16 56.4**	**-1.8**
	comp=Z,8.5nm,0.4s						
PVCC	**Panska Ves**	**1.36**	**228**	*e*PG	**Pg**	**16 16 45.1**	**-0.2**
PVCC				*e*SG	**Sn**	**16 17 03.7**	**-0.5**
	comp=Z,32nm,0.3s						
KRLC	**Kraliky**	**1.44**	**163**	*e*PG	**Pn**	**16 16 47.7**	**+1.0**
KRLC				*e*SG	**Sn**	**16 17 07.1**	**+0.8**
BRG	**Berggiesshubel**	**1.50**	**248**	PG	**Pn**	**16 16 47.3**	**-0.2**
BRG				SG	**Sg**	**16 17 07.2**	**-0.2**
	14nm,0.4s						
GOPC	**GO Pecny, Ondr**	**1.76**	**210**	*e*SG	**Sg**	**16 17 16.0**	**+0.1**
	comp=Z,4.6nm,0.2s						
PRU	**Pruhonice**	**1.78**	**215**	*e*PG	**Pn**	**16 16 52.8**	**+1.4**
PRU				*e*SG	**Sg**	**16 17 16.3**	**-0.2**
	comp=Z,9.2nm,0.3s						
MORC	**Moravsky Berou**	**1.90**	**151**	*e*PN	**Pn**	**16 16 53.3**	**+0.2**
MORC				*e*SG	**Sg**	**16 17 20.5**	**+0.1**
CLL	**Collm**	**1.97**	**267**	*e*Pn	Pn	16 16 52.0	-1.9
CLL				*e*Pg	**Pb**	**16 16 55.0**	**-1.0**
CLL				*e*Sg	**Sn**	**16 17 20.0**	**+0.7**
	comp=Z,6.0nm,0.7s						
NKC	**Novy Kostel**	**2.64**	**244**	*e*PN	**Pn**	**16 17 02.6**	**-0.6**
NKC				*e*PG	**Pb**	**16 17 07.8**	**+0.4**
NKC				*e*SG	**Sb**	**16 17 42.5**	**+2.1**
	comp=Z,12nm,0.4s						
KHC	**Kasperske Hory**	**2.84**	**216**	*e*PN	**Pn**	**16 17 05.8**	**-0.2**
KHC				*e*PG	**Pb**	**16 17 12.0**	**+1.0**
KHC				*e*SG	**Sg**	**16 17 49.4**	**-1.3**
	comp=Z,3.0nm,0.6s						

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*IDC **17** 16:18:00.3±0.7, 31°.20S×179°.08W, h0^{km}, mb4.2/10, mb1 4.4/12, mb1mx4.1/42, mbtmp4.2/12, ML4.1/2, MS3.3/5, Ms1 3.3/5, ms1mx3.0/38, Error ellipse: s-maj=19.9km s-min=16.7km az=97.0*

*NEIC **17** 16:18:03.0±5.8, 31°.11S×179°.04W, h19^{km}±37^{km}, mb4.7/2, Error ellipse: s-maj=17.0km s-min=13.0km az=102.0*

*ISCJB **17** 16:18:04.4±0.5, 31°.20S±0°.06×179°.2W±0°.1, h33^{km}, mb4.4/13, MS3.6/5, Error ellipse: s-maj=14.1km s-min=6.5km az=24.5*

ISC 17 16:18:05.8±0.6**, 31°.17S**±0°.08×**179°.1W**±0°.1**, h35^{km}, n31, σ1^s.60**/23**, mb4.4**/13**, MS3.7**/4**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	**Raoul Island**	**2.17**	**29**	Pn	**Pn**	**16 18 39.8**	**+0.3**
	85nm,0.3s,baz=252,slow=20,SNR=3.6						
RAO				LR	LR	16 18 53.3	
	comp=Z,219nm,21.0s,baz=178,slow=24						
RAO				Sn	**Sn**	**16 19 07.4**	**+2.2**
	156nm,0.3s,baz=117,slow=21,SNR=2.8						
RAO	**Raoul Island**	**2.17**	**29**	Pn	**Pn**	**16 18 36.9**	**-2.6**
RAO				Sn	**Sn**	**16 19 07.4**	**+2.2**
URZ	**Urewera**	**7.72**	**203**	Pn	**Pn**	**16 19 54.9**	**-0.8**
	2.0nm,0.3s,baz=17,slow=11,SNR=12						
URZ				Sn	**Sn**	**16 21 24.5**	**+2.5**
	0.4nm,0.3s,baz=316,slow=19,SNR=1.0						
RAR	**Rarotonga**	**19.96**	**65**	LR	LR	16 30 10.1	
	comp=Z,28nm,19.0s,baz=248,slow=37						
TBI	**Tubuai**	**27.42**	**81**	*e*T	T	16 52 09.0	
	88nm,0.3s						
HNR	**Honiara**	**29.11**	**314**	P	**P**	**16 24 02.1**	**-1.2**
	70nm,0.6s,baz=80,slow=3.6,SNR=4.2						
PAE	**Paea**	**29.96**	**70**	*e*T	T	16 55 17.7	
	28nm,0.2s						
PPT2	**Papeete2**	**30.00**	**70**	*e*LR	LR	16 31 44.8	
	137nm,27.8s						
PPT2	**Papeete2**	**30.00**	**70**	*e*T	T	16 55 21.2	
	19nm,0.3s						
TVO	**Taravao**	**30.16**	**71**	*e*T	T	16 55 30.8	
	4.1nm,0.3s						
PMOR	**Pomariorio Ree**	**32.77**	**68**	*e*T	T	16 58 49.2	
	3.1nm,0.2s						
VAH	**Vaihoa**	**32.85**	**68**	*e*T	T	16 58 53.5	
	130nm,0.2s						
STKA	**Stephens Creek**	**33.38**	**258**	P	**P**	**16 24 42.3**	**+1.4**
	5.4nm,1.0s,baz=90,slow=9.8,SNR=4.4						
RKT	**Rikitea**	**39.88**	**89**	*e*T	T	17 07 43.3	
	3.7nm,0.3s						
ASAR	**Alice Springs**	**42.12**	**268**	P	**P**	**16 25 54.1**	**-0.8**
	2.7nm,0.8s,baz=104,slow=7.6,SNR=32						
ASAR				LR	LR	16 41 57.1	
	comp=Z,137nm,18.1s,baz=107,slow=34						
WRAB	**Tennant Creek**	**43.17**	**274**	*e*P	**P**	**16 26 03.2**	**-0.3**
	5.2nm,0.7s						
WRA	**Warramunga Arr**	**43.18**	**274**	P	**P**	**16 26 02.6**	**-0.9**
	3.4nm,0.8s,baz=114,slow=7.5,SNR=24						
SBA	**Scott Base**	**47.20**	**184**	*e*P	**P**	**16 26 36.3**	**+1.7**
	24nm,1.6s						
VNDA	**Vanda**	**47.24**	**186**	P	**P**	**16 26 35.9**	**+1.0**
	0.7nm,0.8s,baz=66,slow=5.1,SNR=3.6						
FITZ	**Fitzroy Crossi**	**51.41**	**271**	P	**P**	**16 27 08.1**	**+0.5**
	5.4nm,0.8s,baz=104,slow=9.2,SNR=11						
QSPA	**South Pole Qui**	**58.94**	**180**	P	**P**	**16 28 01.6**	**+0.2**
	3.5nm,0.7s,baz=76,slow=4.2,SNR=13						
QSPA	**South Pole Qui**	**58.94**	**180**	*e*P	**P**	**16 28 01.3**	**-0.1**
	65nm,1.3s						
SNAA	**Sanae**	**77.41**	**179**	P	**P**	**16 29 55.9**	**-1.1**
	4.3nm,1.1s,baz=190,slow=4.3,SNR=6.0						
PLCA	**Paso Flores**	**82.68**	**133**	P	**P**	**16 30 25.4**	**-0.6**
	2.2nm,1.0s,baz=229,slow=7.4,SNR=6.3						
KSRS	**Korea Array**	**84.32**	**320**	P	**P**	**16 30 35.5**	**+1.4**
	1.2nm,0.9s,baz=135,slow=5.1,SNR=5.1						
KSAR	**Wonju Array Be**	**84.33**	**320**	P	**P**	**16 30 35.5**	**+1.3**
NVAR	**Mina Array Bea**	**89.45**	**43**	P	**P**	**16 31 00.1**	**+0.8**
	0.5nm,0.8s,baz=236,slow=11,SNR=3.6						
NVAR				LR	LR	17 02 26.4	
	comp=Z,24nm,21.6s,baz=120,slow=30						
TXAR	**Lajitas Array**	**93.61**	**58**	LR	LR	17 10 06.8	
	comp=Z,15nm,18.0s,baz=0.0,slow=33						
SEY	**Seymchan**	**96.51**	**347**	LR	LR	17 11 29.1	
	comp=Z,225nm,21.5s,baz=330,slow=33						
FINES	**FINESS Array B**	**145.53**	**339**	PKPbc	**PKPdf**	**16 37 37.2**	**-2.2**
	2.7nm,0.9s,baz=50,slow=13,SNR=4.7						
TORD	**Torodi Ar. Bea**	**162.05**	**183**	PKPab	**PKPab**	**16 38 47.6**	**-2.7**
	baz=180,slow=1.4						

IDC 17 16:21:17.4±13.0**, 19°.45N**×**145°.96E, h230^{km}**±133^{km}**, mb3.0**/8**, mb1 3.2**/8**, mb1mx3.0**/64**, mbtmp3.6**/8**, Error ellipse: s-maj=29.3km s-min=17.2km az=92.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KLR	**Kul'dur**	**31.83**	**342**	P	P	16 27 21.0	+0.4
	0.1nm,0.5s,baz=170,slow=8.7,SNR=5.5						
WRA	**Warramunga Arr**	**40.77**	**197**	P	P	16 28 36.7	+0.2
	0.7nm,0.6s,baz=23,slow=9.0,SNR=11						
FITZ	**Fitzroy Crossi**	**42.31**	**209**	P	P	16 28 48.8	-0.2
	1.2nm,0.6s,baz=42,slow=9.4,SNR=7.0						
CMAR	**Chiang Mai Arr**	**44.37**	**277**	P	P	16 29 04.5	-1.0
	0.9nm,0.8s,baz=72,slow=5.5,SNR=5.3						
MKAR	**Makanchi Array**	**58.12**	**314**	P	P	16 30 47.6	+0.5
	0.2nm,0.5s,baz=98,slow=7.8,SNR=3.1						
KURBB	**Kurchatov Arra**	**60.93**	**318**	P	P	16 31 06.0	-0.2
	0.6nm,0.4s,baz=92,slow=7.5,SNR=15						
ILAR	**Eielson Array**	**62.87**	**26**	P	P	16 31 18.6	-0.2
	0.3nm,0.6s,baz=246,slow=6.8,SNR=3.7						
BVAR	**Borovoye Array**	**66.06**	**320**	P	P	16 31 39.7	+0.1
	0.6nm,0.3s,baz=92,slow=7.1,SNR=5.4						

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*IDC **17** 16:22:13.4±0.9, 17°.51S×167°.96E, h0^{km}, mb4.1/9, mb1 4.1/10, mb1mx3.8/46, mbtmp4.0/10, ML3.6/1, MS3.1/1, Ms1 3.1/1, ms1mx2.6/46, Error ellipse: s-maj=31.8km s-min=21.2km az=105.0*

*NEIC **17** 16:22:15.1±0.5, 17°.48S×167°.92E, h10^{km}, mb4.3/2, Error ellipse: s-maj=17.6km s-min=9.7km az=96.0*

*ISCJB **17** 16:22:16.5±0.8, 17°.63S±0°.07×167°.8E±0°.2, h27^{km}, mb4.0/11, MS3.1/1, Error ellipse: s-maj=25.8km s-min=9.8km az=7.2*

ISC 17 16:22:17.9±0.9**, 17°.58S**±0°.09×**167°.9E**±0°.2**, h27^{km}, n17, σ0^s.95**/17**, mb4.0**/10**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**4.66**	**196**	Pn	**Pn**	**16 23 27.1**	**+0.5**
	2.6nm,0.3s,baz=356,slow=17,SNR=16						
DZM				Sn	**Sn**	**16 24 17.6**	**-2.3**
	9.2nm,0.3s,baz=85,slow=22,SNR=4.7						
STKA	**Stephens Creek**	**27.68**	**234**	P	**P**	**16 28 05.5**	**+1.7**
	1.8nm,0.8s,baz=66,slow=12,SNR=3.8						
WRAB	**Tennant Creek**	**31.78**	**260**	*e*P	P	16 28 36.2	-4.1
	1.2nm,0.6s						
WRA	**Warramunga Arr**	**31.79**	**260**	PcP	**PcP**	**16 31 31.3**	**0.0**
	0.4nm,0.8s,baz=87,slow=2.9,SNR=3.8						
ASAR	**Alice Springs**	**32.29**	**253**	P	**P**	**16 28 44.5**	**-0.3**
	1.3nm,0.7s,baz=77,slow=8.6,SNR=28						
ASAR				PcP	**PcP**	**16 31 32.4**	**-0.3**
	0.5nm,0.7s,baz=95,slow=2.9,SNR=4.8						
GUMO	**Guam**	**38.39**	**322**	LR	LR	16 43 22.6	
	comp=Z,30nm,20.9s,baz=154,slow=33						
FITZ	**Fitzroy Crossi**	**40.12**	**263**	P	**P**	**16 29 52.3**	**+0.6**
	1.4nm,0.7s,baz=114,slow=12,SNR=3.5						
SBA	**Scott Base**	**60.30**	**180**	*e*P	**P**	**16 32 25.1**	**+1.3**
MJAR	**Matsushiro Arr**	**60.68**	**333**	P	**P**	**16 32 25.7**	**-1.1**
	0.9nm,0.7s,baz=171,slow=7.2,SNR=4.7						
QSPA	**South Pole Qui**	**72.46**	**180**	P	**P**	**16 33 42.1**	**+0.2**
	3.4nm,0.8s,baz=9.2,slow=1.6,SNR=9.2						
ULN	**Ulaanbaatar**	**84.75**	**324**	*e*P	**P**	**16 34 49.8**	**0.0**
	4.1nm,0.8s						
SONM	**Songino Array**	**85.11**	**324**	P	**P**	**16 34 51.6**	**+0.1**
	3.0nm,0.9s,baz=143,slow=6.1,SNR=13						
ILAR	**Eielson Array**	**89.05**	**18**	P	**P**	**16 35 09.9**	**-0.2**
	0.2nm,0.4s,baz=260,slow=5.4,SNR=3.8						
SNAA	**Sanae**	**90.75**	**183**	P	**P**	**16 35 17.9**	**-0.3**
	1.3nm,0.9s,baz=193,slow=6.4,SNR=4.1						
MKAR	**Makanchi Array**	**99.63**	**316**	P	**Pdif**	**16 35 59.1**	**0.0**
	0.2nm,0.6s,baz=90,slow=6.1,SNR=2.8						
ARCES	**ARCESS Array B**	**123.13**	**345**	PKP	**PKPdf**	**16 41 10.8**	**-0.7**
	1.9nm,1.0s,baz=69,slow=3.1,SNR=3.0						
DAVOX	**Davos/Dischmat**	**145.66**	**333**	PKPbc	**PKPbc**	**16 41 54.4**	**0.0**
	3.7nm,0.6s,baz=167,slow=3.0,SNR=5.3						

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*ISN **17** 16:51:57.1±1.8, 36°.28N×42°.68E, h0^{km}±17^{km}, ML3.0*

*CSEM **17** 16:51:58.7±0.2, 36°.40N×42°.52E, h2^{km}, ML3.2, Error ellipse: s-maj=5.0km s-min=4.5km az=47.0*

*DDA **17** 16:51:58.4, 36°.48N×42°.39E, h7^{km}, Ml3.2*

*ISK **17** 16:51:59.0, 36°.46N×42°.47E, h4^{km}, ML2.8/6*

ISC 17 16:51:58.5±1.3**, 36°.41N**±0°.03×**42°.48E**±0°.03**, h5^{km}**±11^{km}**, n31, σ0^s.79**/55**, Iraq**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIRN	**S˜–rnak**	**1.08**	**357**	*i* P	**Pg**	**16 52 19.3**	**0.0**
SIRN				*i* S	**Sg**	**16 52 32.7**	**-0.7**
SIRN	**S˜–rnak**	**1.08**	**357**	P	**Pg**	**16 52 19.3**	**0.0**
SIRN				S	**Sg**	**16 52 32.7**	**-0.7**
SIRT	**Sirnak**	**1.09**	**358**	PG	**Pb**	**16 52 19.6**	**-0.3**
SIRT				SG	**Sb**	**16 52 34.9**	**+0.4**
SIRT	**Sirnak**	**1.09**	**358**	*e*Pg	**Pb**	**16 52 19.6**	**-0.3**
SIRT				*e*Sg	**Sb**	**16 52 34.9**	**+0.4**
CUKT	**Cukurca**	**1.23**	**47**	PN	**Pn**	**16 52 22.7**	**+0.2**
CUKT				SN	**Sn**	**16 52 40.1**	**+0.5**
CUKT	**Cukurca**	**1.23**	**47**	*i* P	**Pn**	**16 52 22.4**	**-0.1**
CUKT				*i* S	**Sn**	**16 52 39.0**	**-0.5**
CUKT	**Cukurca**	**1.23**	**47**	P	**Pn**	**16 52 22.4**	**-0.1**
CUKT	**Cukurca**	**1.23**	**47**	*e*Pn	**Pn**	**16 52 22.7**	**+0.2**
CUKT				S	**Sn**	**16 52 39.0**	**-0.5**
CUKT				*e*Sn	**Sn**	**16 52 40.1**	**+0.5**
HAKT	**HAKKARI**	**1.51**	**40**	*i* P	**Pg**	**16 52 27.2**	**-0.2**
HAKT				*i* S	**Sg**	**16 52 47.5**	**+0.5**
HAKT	**HAKKARI**	**1.51**	**40**	P	**Pg**	**16 52 27.2**	**-0.2**
HAKT				S	**Sg**	**16 52 47.5**	**+0.5**
MARD	**Mardin**	**1.64**	**304**	*i* P	**Pn**	**16 52 27.2**	**-1.0**
MARD				*i* S	**Sn**	**16 52 48.7**	**-0.9**
SRTM	**Siirt_Merkez**	**1.64**	**344**	*i* P	**Pn**	**16 52 28.3**	**+0.1**
SRTM				*i* S	**Sb**	**16 52 50.0**	**-0.4**
SRTM	**Siirt_Merkez**	**1.64**	**344**	P	**Pn**	**16 52 28.3**	**+0.1**
SRTM				S	**Sb**	**16 52 50.0**	**-0.4**
BTMN	**Batman**	**1.77**	**327**	*i* P	**Pn**	**16 52 29.7**	**-0.2**
BTMN				*i* S	**Sn**	**16 52 53.4**	**+0.6**
BTMN	**Batman**	**1.77**	**327**	P	**Pn**	**16 52 29.7**	**-0.2**
BTMN				S	**Sn**	**16 52 53.4**	**+0.6**
IKRK	**Kirkuk**	**1.81**	**123**	*e*Pg	**Pb**	**16 52 32.0**	**-0.2**
	SNR=9.0						
IKRK				*e*Sg	**Sg**	**16 52 57.0**	**+0.2**
	SNR=9.0						
YOVA	**Hakkari_Yˆ…kse**	**1.86**	**50**	*i* S	**Sb**	**16 52 56.5**	**-0.4**
YOVA	**Hakkari_Yˆ…kse**	**1.86**	**50**	S	**Sb**	**16 52 56.5**	**-0.4**
MAZI	**Mazidag**	**1.94**	**303**	PN	**Pn**	**16 52 33.3**	**+1.0**
MAZI				SN	**Sb**	**16 52 58.2**	**-0.8**
MAZI	**Mazidag**	**1.94**	**303**	*e*Pn	**Pn**	**16 52 33.3**	**+1.0**
MAZI				*e*Sn	**Sb**	**16 52 58.2**	**-0.8**
GEVA	**Gevas**	**1.95**	**13**	*i* P	**Pg**	**16 52 37.0**	**+1.0**
SVAN	**Silvan-Diyarba**	**2.02**	**330**	PN	**Pb**	**16 52 34.6**	**-1.1**
SVAN				SN	**Sb**	**16 53 00.1**	**-1.0**
SVAN	**Silvan-Diyarba**	**2.02**	**330**	*e*Pn	**Pb**	**16 52 34.6**	**-1.1**
SVAN				*e*Sn	**Sb**	**16 53 00.1**	**-1.0**
DIYA	**Diyarbakir**	**2.42**	**309**	*i* P	**Pb**	**16 52 42.0**	**-0.6**
DIYA				*i* S	**Sn**	**16 53 08.9**	**+0.1**
DIYA	**Diyarbakir**	**2.42**	**309**	P	**Pb**	**16 52 42.0**	**-0.6**
DIYA				S	**Sn**	**16 53 08.9**	**+0.1**
HANI	**Diyarbakir_Han**	**2.60**	**321**	*i* P	**Pb**	**16 52 46.1**	**+0.4**
HANI				*i* S	**Sb**	**16 53 19.0**	**+1.1**
SVRC	**Sivrice-ELAZID**	**3.20**	**309**	PN	**Pn**	**16 52 51.5**	**+1.8**
SVRC	**Sivrice-ELAZID**	**3.20**	**309**	*e*Pn	**Pn**	**16 52 51.5**	**+1.8**
PTK	**Pertek**	**3.49**	**316**	PN	**Pn**	**16 52 55.2**	**+1.6**
PTK	**Pertek**	**3.49**	**316**	*e*Pn	**Pn**	**16 52 55.2**	**+1.6**
RTB	**Rutbah**	**3.82**	**209**	*e*Pn	**Pn**	**16 52 59.0**	**+0.9**
	SNR=3.0						
RTB				*e*Sn	**Sn**	**16 53 42.0**	**-1.4**
	SNR=3.0						

KRSC 17 16:56:20.2±1.7**, 50°.78N**×**160°.18E, h68^{km}**±33^{km}**, ML3.7, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDTR	**Khodutka, Kamc**	**1.68**	**309**	*e*P	Pn	16 56 49.0	+1.6
KDTR				*e*S	Sn	16 57 09.0	+1.0
RUS	**Russkaya**	**1.96**	**329**	*e*P	Pn	16 56 53.0	+1.8
RUS				*e*S	Sn	16 57 16.6	+1.8
MTVR	**Mutnovka**	**2.12**	**325**	*e*P	Pn	16 56 55.6	+2.1
MTVR				*e*S	Sn	16 57 21.1	+2.3
ASAK	**Asacha**	**2.15**	**319**	*e*P	Pn	16 56 56.2	+2.3
ASAK				*e*S	Sn	16 57 22.6	+3.1
GRL	**Gorelyy**	**2.21**	**324**	*e*P	Pn	16 56 58.0	+3.3
PAU	**Pauzhetka**	**2.23**	**289**	*e*P	Pn	16 56 57.6	+2.7
PAU				*e*S	Sn	16 57 23.4	+2.0
SPN	**Mys Shipunski**	**2.33**	**358**	*e*P	Pn	16 56 58.0	+1.8
SPN				*e*S	Sn	16 57 25.0	+1.2
DALK	**Dalny**	**2.43**	**339**	*e*P	Pn	16 57 00.1	+2.6
PET	**Petropavlovsk**	**2.44**	**338**	*e*P	Pn	16 56 59.9	+2.2
PET				*e*S	Sn	16 57 28.9	+2.4
NLC	**Nalytchevo**	**2.46**	**348**	*e*S	Sn	16 57 29.8	+3.0
UGLR	**Uglovaya**	**2.58**	**342**	*e*P	Pn	16 57 02.6	+2.9
SKR	**Severo-Kuril's**	**2.58**	**270**	*e*P	Pn	16 57 01.4	+1.8
SKR				*e*S	Sn	16 57 30.2	+0.3
SDLR	**Sedlovina**	**2.63**	**343**	*e*P	Pn	16 57 02.8	+2.4
AVH	**Avacha**	**2.65**	**341**	P	Pn	16 57 03.2	+2.6
AVH				S	Sn	16 57 35.0	+3.3
KOK	**Koryaka**	**2.70**	**340**	*e*P	Pn	16 57 05.2	+3.9
KRX	**Arik**	**2.75**	**341**	*e*P	Pn	16 57 05.7	+3.6
APC	**Apacha**	**2.85**	**320**	*e*P	Pn	16 57 06.7	+3.4
APC				*e*S	Sn	16 57 41.2	+4.7
GNL	**Ganaly**	**3.23**	**336**	*e*P	Pn	16 57 11.9	+3.3
KII	**Karymskiy**	**3.30**	**352**	*e*P	Pn	16 57 13.8	+4.3
MKZ	**Mys Kozlova**	**3.90**	**13**	*e*P	Pn	16 57 19.4	+1.8
TUMD	**Tumrok D**	**4.44**	**2**	*e*P	Pn	16 57 27.9	+2.9
TUMD				*e*S	Sn	16 58 17.1	+1.8
TUMR	**Tumrok**	**4.52**	**360**	*e*P	Pn	16 57 29.8	+3.7
KBTR	**Krutoberegovo**	**5.67**	**15**	*e*P	Pn	16 57 44.5	+2.8

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*BJI **17** 16:56:41.0, 7°.72S×129°.12E, h190^{km}, mb4.8/54, mB4.7/35*

*MOS **17** 16:56:45.2±0.9, 7°.21S×128°.63E, h183^{km}, mb4.8/40, Error ellipse: s-maj=12.0km s-min=6.2km az=111.0*

*ISCJB **17** 16:56:46.4±0.3, 7°.38S±0°.02×128°.70E±0°.02, h201^{km}±3^{km}, mb4.5/96, Error ellipse: s-maj=4.0km s-min=3.3km az=151.4*

*DJA **17** 16:56:46.9±0.2, 7˚S±2˚×12˚9E±˚, h183^{km}±3^{km}, M4.8/43, mB5.3/31, mb5.0/43, MLv5.5/15, Mw(mB)4.7/31, Mwp5.0/1*

*IDC **17** 16:56:47.9±0.5, 7°.27S×128°.66E, h193^{km}±4^{km}, mb4.4/28, mb1 4.4/29, mb1mx4.2/52, mbtmp4.9/29, MS3.5/8, Ms1 3.5/8, ms1mx3.2/48, Error ellipse: s-maj=11.8km s-min=6.4km az=75.0*

*GCMT **17** 16:56:47.7±0.2, 7°.42S×128°.73E, h186^{km}±2^{km}, MW5.1/98, Moment Tensor Solution. s51,c58; s98,c150; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.70±.14; $M_{\theta\theta}$-1.42±.16; $M_{\phi\phi}$-0.28±.16; $M_{r\theta}$4.43±.12; $M_{\theta\phi}$-3.22±.14; $M_{\phi r}$-0.33±.13; Best double couple: $M_0$5.70900×10^{16} NP1:ϕ_s87.00000°, δ79.00000°, λ124.00000°. NP2: ϕ_s192.00000°, δ35.00000°, λ18.00000°. Principal axes: T 5.6800, Plg45.0000°, Azm31.0000°; N 0.0510, Plg33.0000°, Azm260.0000°; P -5.7380, Plg27.0000°, Azm151.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **17** 16:56:47.6±0.1, 7°.32S×128°.67E, mb4.8/46 Error ellipse: s-maj=4.9km s-min=3.8km az=61.0*

ISC 17 16:56:47.3±0.3**, 7°.37S**±0°.04×**128°.72E**±0°.04**, h193^{km}**±3^{km}**, h194^{km}:pP-P, n295, σ1^s.57**/342**, mb4.7**/96**, 15C-4D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SAUI	**Saumlaki**	**2.63**	**103**	P	**Pn**	**16 57 32.7**	**+0.4**
SAUI				S	**Sn**	**16 58 09.1**	**+1.7**
SAUI	**Saumlaki**	**2.63**	**103**	*e*Pn	**Pn**	**16 57 32.6**	**+0.4**
BNDI	**Bandanaira**	**3.07**	**23**	P	**Pn**	**16 57 37.9**	**+0.5**
AAI	**Ambon**	**3.70**	**352**	P	**Pn**	**16 57 45.6**	**+0.5**
MSAI	**Masohi**	**4.00**	**3**	P	**Pn**	**16 57 49.6**	**+0.6**
SOEI	**Soe**	**5.00**	**241**	P	**Pn**	**16 58 00.3**	**-1.4**
SOEI	**Soe**	**5.00**	**241**	*e*Pn	**Pn**	**16 58 00.2**	**-1.4**
FAKI	**Fak Fak**	**5.65**	**39**	P	**Pn**	**16 58 07.0**	**-3.0**
	250nm,0.5s,12μm3μm4.0nm						
FAKI	**Fak Fak**	**5.65**	**39**	*e*Pn	**Pn**	**16 58 07.1**	**-3.0**
BATI	**Baumata**	**5.73**	**240**	P	**Pn**	**16 58 09.7**	**-1.3**
	1μm,0.7s,14μm9.1nm						
MTN	**Manton Dam**	**5.94**	**157**	P	**Pn**	**16 58 12.2**	**-1.4**
	baz=6.0,SNR=1000						
MTN	**Manton Dam**	**5.94**	**157**	*e*Pn	**Pn**	**16 58 12.2**	**-1.4**
SANI	**Sanana**	**5.95**	**333**	P	**Pn**	**16 58 14.6**	**+0.8**
	98nm,0.9s,2μm0.7nm						
KMPI	**Kaimana, Papua**	**6.18**	**54**	P	**Pn**	**16 58 15.9**	**-1.0**
	1μm,0.8s,28μm12nm						
KDU	**Kakadu**	**6.45**	**145**	P	**Pn**	**16 58 18.9**	**-1.4**
	baz=6.5,SNR=1000						
MMRI	**Maumere**	**6.54**	**258**	P	**Pn**	**16 58 20.6**	**-0.9**
	322nm,0.7s,4μm2.7nm						
MMRI	**Maumere**	**6.54**	**258**	*e*Pn	**Pn**	**16 58 20.4**	**-1.1**
LBMI	**Labuha**	**6.80**	**350**	P	**Pn**	**16 58 25.9**	**+1.0**
	199nm,0.7s,2μm1.2nm						
SWI	**Sorong**	**6.95**	**22**	P	**Pn**	**16 58 24.8**	**-2.0**
KDI	**Kendari**	**6.95**	**299**	P	**Pn**	**16 58 27.0**	**+0.1**
	65nm,0.8s,1μm0.3nm						
EDFI	**Ende, Flores**	**7.09**	**258**	P	**Pn**	**16 58 28.3**	**-0.5**
	132nm,0.6s,2μm1.1nm						
RKPI	**Ransiki, Papua**	**7.97**	**43**	P	**Pn**	**16 58 38.5**	**-1.8**
	968nm,0.5s,21μm						
TNTI	**Ternate**	**8.20**	**351**	P	**Pn**	**16 58 44.0**	**+0.7**
	58nm,0.9s						

TNTI	Ternate	8.20	351	ePn	Pn	16 58 43.2	-0.1
KNRA	Kununurra	8.25	180	P	Pn	16 58 41.7	-2.2
	baz=8.3,SNR=442						
BASI	Baing, Sumba	8.53	250	P	Pn	16 58 45.1	-2.4
	811nm,0.6s,8µm						
WSI	Waingapu	8.63	254	P	Pn	16 58 46.8	-2.1
	1µm,0.5s,21µm						
LUWI	Luwuk	8.64	316	P	Pn	16 58 50.4	+1.4
	94nm,1.1s,2µm						
BKSI	Bulukumba	8.78	283	P	Pn	16 58 52.6	+1.8
	26nm,0.7s,542nm						
KMSI	Cibinong	9.20	329	P	Pn	16 58 57.7	+1.4
	261nm,1.2s,3µm						
SRPI	Serui, Papua	9.28	54	P	Pn	16 58 55.5	-1.8
	207nm,0.9s,2µm						
WBSI	Waikabubak, Su	9.49	256	P	Pn	16 58 57.1	-3.1
	280nm,0.6s,3µm						
SPSI	Sidrap Palu	9.52	290	P	Pn	16 58 59.7	-0.8
	35nm,0.9s,428nm						
APSI	Ampana	9.53	312	P	Pn	16 59 02.3	+1.7
	67nm,1.1s,1µm						
BAKI	Biak	9.59	51	P	Pn	16 59 00.3	-1.1
	477nm,0.8s,4µm						
TTSI	Tana Toraja	9.85	295	P	Pn	16 59 05.6	+0.9
	38nm,1.4s,718nm						
MRSI	Marisa	10.32	319	P	Pn	16 59 12.7	+1.9
	114nm,1.1s,1µm						
WAMI	Wamena	10.53	71	P	Pn	16 59 15.2	+1.6
	305nm,0.9s,3µm						
PLAI	Plampang	10.93	262	P	Pn	16 59 15.5	-3.2
	166nm,0.7s,2µm						
PCI	Palu	10.94	306	P	Pn	16 59 21.0	+2.2
	79nm,0.9s,877nm						
FITZ	Fitzroy Crossi	11.07	195	P	Pn	16 59 17.1	-3.5
	23nm,0.3s,baz=23,slow=9.0,SNR=357						
FITZ				S	Sn	17 01 12.5	-12
	110nm,0.3s,baz=63,slow=9.5,SNR=12						
FITZ				LR	LR	17 03 59.4	
	comp=Z,269nm,21.4s,baz=18,slow=39						
MPSI	Mapaga	11.66	311	P	Pn	16 59 29.6	+1.5
	17nm,1.2s,485nm						
GENI	Genyem	12.36	68	P	Pn	16 59 38.3	+1.3
	103nm,0.6s,2µm						
JAY	Jayapura	12.88	69	P	Pn	16 59 44.8	+1.1
	378nm,1.2s,9µm						
WRAB	Tennant Creek	13.63	157	ePn	Pn	16 59 49.5	-3.5
WRAB	Tennant Creek	13.63	157	d iP	Pn	16 59 48.6	-4.4
WRA	Warramunga Arr	13.63	157	P	Pn	16 59 49.0	-4.0
	22nm,0.3s,baz=334,slow=12,SNR=503						
WRA				S	Sn	17 02 11.9	-13
	11nm,0.3s,baz=348,slow=18,SNR=7.1						
WRA	Warramunga Arr	13.63	157	P	Pn	16 59 49.0	-4.0
WB2	Warramunga Arr	13.64	157	ePn	Pn	16 59 49.7	-3.3
JAGI	Jajag, Banyuwa	14.47	265	ePn	Pn	17 00 03.3	-0.1
COEN	Coen	15.64	116	P	Pn	17 00 16.0	-1.7
	baz=16,SNR=126						
COEN	Coen	15.64	116	ePn	Pn	17 00 16.6	-1.1
	107nm,0.9s						
PALU	Palau	15.71	22	P	P	17 00 19.9	+1.3
	baz=16,SNR=12						
MBWA	Marble Bar	16.23	211	eP	P	17 00 22.8	-1.4
	55nm,0.6s						
QIS	Mount Isa	16.82	142	P	Pn	17 00 31.6	-0.3
	baz=17,SNR=162						
AS31	Alice Springs	16.95	163	eP	Pn	17 00 32.8	-0.6
	189nm,0.8s						
ASAR	Alice Springs	16.95	163	P	P	17 00 31.6	-0.6
	54nm,0.3s,baz=338,slow=9.4,SNR=3912						
ASAR				pP	pP	17 01 02.0	-1.8
	11nm,0.3s,baz=340,slow=11,SNR=3.8						
ASAR				S	S	17 03 32.2	-7.0
	8.2nm,0.3s,baz=329,slow=16,SNR=4.5						
AS01	Alice Springs	16.96	163	eP	Pn	17 00 33.1	-0.5
WRKA	Warakurna	17.57	181	P	P	17 00 39.8	+0.8
	baz=18,SNR=1000						
PBKI	Pangkalan Bun	17.60	284	P	Pn	17 00 41.9	+0.8
	136nm,1.0s						
UGM	Wanagama	18.04	267	eP	P	17 00 44.9	+0.7
	739nm,2.0s						
KKM	Kota Kinabalu	18.25	317	eP	P	17 00 47.4	+0.8
PMG	Port Moresby	18.36	98	P	Pn	17 00 50.1	+0.1
	3.3nm,0.3s,baz=225,slow=5.7,SNR=13						
PMG				S	S	17 04 02.3	-5.1
	0.3nm,0.3s,baz=252,slow=20,SNR=1.8						
MTSU	Mount Surprise	18.58	127	P	Pn	17 00 51.6	-1.0
	baz=19,SNR=183						
STKI	Sintang	18.71	293	P	Pn	17 00 58.9	+4.7
SBUM	Sibu	19.13	300	eP	P	17 00 57.4	+1.4
	34nm,0.9s						
MANU	Manus Island	19.32	75	eP	Pn	17 01 00.2	-1.2
	68nm,0.9s						
KSM	Kuching	20.36	295	eP	P	17 01 08.9	-0.3
	62nm,0.8s						
GIRL	Giralia	20.61	221	P	P	17 01 13.4	+1.7
	baz=21,SNR=3.8						
CTA	Charters Tower	21.18	128	P	P	17 01 19.2	+1.3
	38nm,0.5s,baz=301,slow=11,SNR=98						
CTA				S	S	17 05 04.8	+2.9
	14nm,0.9s,baz=70,slow=22,SNR=5.9						
CTAO	Charters Tower	21.18	128	eP	P	17 01 19.1	+1.2
	50nm,0.8s						
CTAO	Charters Tower	21.18	128	eP	P	17 01 19.1	+1.2
CTAO				pmax	pmax		
	comp=Z,50nm,0.8s						
MEEK	Meekatharra	21.43	205	P	P	17 01 19.7	-0.7
	baz=22,SNR=44						
FORT	Forrest	23.30	181	P	P	17 01 38.4	+0.6
	baz=23,SNR=73						
FORT	Forrest	23.30	181	eP	P	17 01 38.1	+0.2
	comp=Z,137nm,0.8s						
RABL	Rabaul	23.54	84	eP	P	17 01 42.1	+1.8
	comp=Z,28nm,1.1s						
QLP	Quilpie	24.14	144	P	P	17 01 46.6	+0.9
	baz=24,SNR=96						
MORW	Morawa	24.67	207	P	P	17 01 52.4	+1.9
	baz=25,SNR=31						
KMBL	Kambalda	24.71	194	P	P	17 01 51.0	+0.2
	baz=25,SNR=32						
BLDU	Ballidu	25.71	204	P	P	17 01 59.8	-0.1
	baz=26,SNR=19						
KLBR	Kellerberrin	26.18	202	P	P	17 02 04.3	+0.3
	baz=26,SNR=35						
BBOO	Buckleboo	26.21	166	P	P	17 02 04.7	+0.3
	baz=26,SNR=49						
BBOO	Buckleboo	26.21	166	eP	P	17 02 04.6	+0.3
	comp=Z,56nm,0.8s						
GUMO	Guam	26.29	38	P	P	17 02 04.4	-0.7
	comp=Z,35nm,0.5s,baz=186,slow=10,SNR=5.7						
GUMO				LR	LR	17 12 25.3	
	comp=Z,66nm,20.5s,baz=220,slow=36						
GUMO	Guam	26.29	38	eP	P	17 02 04.8	-0.3
GUMO	Guam	26.29	38	eP	P	17 02 04.8	-0.3
RMQ	Roma	26.92	137	P	P	17 02 12.0	+1.3
	baz=27,SNR=17						
MUN	Mundaring	27.12	204	P	P	17 02 12.3	-0.1
	baz=27,SNR=8.3						
STKA	Stephens Creek	27.18	155	P	P	17 02 13.6	+0.6
	baz=27,SNR=108						
STKA	Stephens Creek	27.18	155	P	P	17 02 13.6	+0.6
	comp=Z,28nm,0.5s,baz=328,slow=9.2,SNR=123						
STKA	Stephens Creek	27.18	155	eP	P	17 02 13.4	+0.5
	comp=Z,19nm,1.1s						
STKA	Stephens Creek	27.18	155	eP	P	17 02 13.4	+0.5
STKA				pmax	pmax		
	comp=Z,19nm,1.1s						
NWAO	Narrogin (SRO)	27.57	201	P	P	17 02 16.7	+0.3
	baz=28,SNR=28						
NWAO	Narrogin (SRO)	27.57	201	P	P	17 02 16.7	+0.3
	comp=Z,31nm,0.6s,baz=146,slow=2.4,SNR=33						
NWAO				pP	pP	17 02 57.4	+1.7
	comp=Z,18nm,0.5s,baz=262,slow=8.3,SNR=3.7						
NWAO				LR	LR	17 13 24.0	
	comp=Z,312nm,18.5s,baz=297,slow=36						
HTT	Hallett	27.60	161	P	P	17 02 17.4	+0.7
	baz=28,SNR=17						
CMSA	Cobar Meteorol	28.80	149	P	P	17 02 28.3	+1.0
	baz=29,SNR=109						
RKGY	Rocky Gully	29.18	200	P	P	17 02 32.5	+1.8
	baz=29,SNR=6.5						
MNSI	Mandailing Nat	30.17	284	P	P	17 02 39.8	+0.1
	comp=Z,11nm,0.8s						
PSI	Prapat	31.40	288	eP	P	17 02 50.1	-0.5
	comp=Z,20nm,1.0s						
PSI	Prapat	31.40	288	eP	P	17 02 50.1	-0.5
PSI				pmax	pmax		
	comp=Z,20nm,1.0s						
ARMA	Armidale	31.42	140	P	P	17 02 52.2	+1.7
	baz=32,SNR=18						
ARPS	Mount Arapiles	31.61	160	P	P	17 02 53.5	+1.5
	baz=32,SNR=50						
YNG	Young	32.37	149	P	P	17 03 00.3	+1.6
	baz=32,SNR=24						
CAN	Canberra	33.47	149	eP	P	17 03 10.2	+1.9
	comp=Z,74nm,1.5s						
CAN	Canberra	33.47	149	eP	P	17 03 10.2	+1.9
CAN				pmax	pmax		
	comp=Z,74nm,1.5s						
CNB	Canberra Magne	33.66	149	P	P	17 03 11.7	+1.8
	baz=34,SNR=7.0						
TOO	Toolangi	33.70	156	P	P	17 03 12.6	+2.4
	baz=34,SNR=28						
CHAI	Chaiyaphum	35.15	311	P	P	17 03 23.8	+1.0
	comp=Z,3.9nm,0.9s						
UTTA	Uttaradit	37.37	312	P	P	17 03 42.5	+0.9
	comp=Z,3.2nm,0.7s						
SUKH	Sukhothai	37.89	311	P	P	17 03 50.2	+4.2
	comp=Z,3.5nm,0.9s						
CM01	Chiang Mai Arr	38.97	311	eP	P	17 03 54.0	-1.1
CMAR	Chiang Mai Arr	39.01	312	P	P	17 03 55.0	-0.4
	comp=Z,3.1nm,0.8s,baz=138,slow=7.0,SNR=18						
CMAR				pP	pP	17 04 35.3	-1.0
	comp=Z,1.6nm,0.8s,baz=141,slow=7.1,SNR=1.7						
CMAR				PcP	PcP	17 06 03.1	+1.4
	comp=Z,2.4nm,0.8s,baz=180,slow=2.2,SNR=6.9						
CMAR				ScP	ScP	17 09 33.0	+1.1
	comp=Z,0.5nm,0.5s,baz=174,slow=2.7,SNR=4.1						
CMMT	Chiang Mai	39.22	312	P	P	17 04 00.7	+3.6
	comp=Z,7.8nm,0.9s						
CHTO	Chiang Mai	39.23	312	eP	P	17 03 56.0	-1.1
	comp=Z,6.2nm,0.8s						
CHTO	Chiang Mai	39.23	312	eP	P	17 03 56.1	-1.1
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CHTO	Chiang Mai	39.23	312	P	P	17 04 01.0	+3.8
	comp=Z,35nm,0.9s						
GYA	Guiyang	39.86	328	⇑iP	P	17 04 01.6	-0.8
GYA				pP	pP	17 04 44.8	+1.3
GYA				PP	PnPn	17 05 43.0	-0.6
GYA				S	S	17 09 55.4	+2.7
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,5.0s						
NJ2	Nanjing	40.32	347	eP	P	17 04 06.8	+0.9
NJ2				pmax	pmax		
	comp=Z,21nm,0.7s						
KMI	Kunming	41.02	323	P	P	17 04 12.8	+0.7
KMI				pP	pP	17 04 53.3	-0.1
KMI				sP	sP	17 05 15.8	+0.5
KMI				pmax	pmax		
	comp=Z,16nm,1.4s						
KMI				pmax	pmax		
	comp=Z,130nm,4.7s						
KMI				LR	LR		
	comp=Z,150nm,15.2s						
KMI				LR	LR		
	comp=Z,83nm,17.5s						
KMI				LR	LR		
	comp=Z,130nm,11.8s						
ENH	Enshi	41.73	335	eP	P	17 04 16.3	-1.3
	comp=Z,17nm,0.6s						
TJN	Taejon	43.53	358	⇑eP	P	17 04 31.5	-0.4
MJAR	Matsushiro Arr	44.58	11	P	P	17 04 38.1	-2.1
	comp=Z,9.7nm,0.8s,baz=194,slow=10,SNR=27						
MAJO	Matsushiro	44.58	11	eP	P	17 04 37.9	-2.3
	comp=Z,13nm,0.8s						
MAJO	Matsushiro	44.58	11	⇑iP	P	17 04 38.5	-1.7
MAJO				pmax	pmax		
	comp=Z,14nm,0.9s						
MAT	Matsushiro	44.58	11	P	P	17 04 38.4	-1.8
MJB9	Matsu-Tunnel	44.58	11	eP	P	17 04 37.9	-2.4
	comp=Z,14nm,0.9s						
KS15	Wonju Array Si	44.59	359	eP	P	17 04 40.0	-0.2
KSAR	Wonju Array Be	44.59	359	P	P	17 04 40.1	0.0
KSAR				pP	pP	17 05 20.4	-1.7
KSAR				PcP	PcP	17 06 20.6	+0.8
KSAR	Wonju Array Be	44.59	359	P	P	17 04 40.2	0.0
KSAR				*PP	pP	17 05 20.4	-1.7
KSAR						17 06 20.6	
KSRS	Korea Array	44.60	359	P	P	17 04 40.1	-0.1
	comp=Z,4.0nm,0.6s,baz=177,slow=10,SNR=24						
KSRS				pP	pP	17 05 20.4	-1.8
	comp=Z,1.7nm,0.8s,baz=183,slow=9.3,SNR=2.3						
KSRS				PcP	PcP	17 06 20.6	+0.8
	comp=Z,1.6nm,0.8s,baz=185,slow=1.9,SNR=5.4						
KSRS				LR	LR	17 23 22.7	
	comp=Z,46nm,18.9s,baz=178,slow=36						
KS01	Wonju Array Si	44.62	359	eP	P	17 04 39.5	-0.9
TIA	Tai’an	44.70	347	P	P	17 04 40.1	-1.1
TIA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
CD2	Chengdu	44.95	329	eP	P	17 04 44.0	+0.7
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
XAN	Xi’an	45.26	337	P	P	17 04 44.4	-1.2
XAN				sP	sP	17 05 48.4	-1.0
XAN				pmax	pmax		
	comp=Z,32nm,0.8s						
XAN				pmax	pmax		
	comp=Z,120nm,6.8s						
BJI	Beijing	48.58	347	eP	P	17 05 10.6	-0.5
BJI				pmax	pmax		
	comp=Z,21nm,0.8s						
LZH	Lanzhou	49.15	333	⇑P	P	17 05 15.8	0.0
LZH				pP	pP	17 06 00.0	+1.5
LZH				sP	sP	17 06 23.6	+3.6
LZH				ePP	PP	17 07 13.5	+1.9
LZH				pmax	pmax		
	comp=Z,59nm,1.4s						
LZH				pmax	pmax		
	comp=Z,240nm,5.4s						
LZH				LR	LR		
	comp=Z,370nm,14.7s						
LZH				LR	LR		
	comp=Z,510nm,15.2s						
LZH				LR	LR		
	comp=Z,630nm,16.3s						
MSHR	Mys Shultsa	49.76	2	⇓iP	P	17 05 19.5	-0.6
PALK	Pallekele	50.04	286	LR	LR	17 27 06.4	
	comp=Z,62nm,18.3s,baz=117,slow=36						
HHC	Hu-ho-hao-te	50.51	343	eP	P	17 05 27.1	+1.2
HHC				PP	PP	17 07 26.8	+3.0
HHC				S	S	17 12 32.6	+7.6
HHC				sS	sS	17 13 40.3	+0.2
HHC				pmax	pmax		
	comp=Z,30nm,1.1s						
HHC				pmax	pmax		
	comp=Z,130nm,5.0s						
CN2	Changchun	51.02	357	eP	P	17 05 32.1	+2.6
CN2				epP	pP	17 06 11.4	-1.1
USRK	Ussuriysk Ar.	51.42	3	P	P	17 05 32.0	-0.5
	comp=Z,8.6nm,0.6s,baz=184,slow=7.7						
LSA	Lhasa	51.60	317	eP	P	17 05 34.3	-0.3
	comp=Z,11nm,0.7s						
LSA	Lhasa	51.60	317	eP	P	17 05 34.3	-0.3
LSA				pmax	pmax		
	comp=Z,11nm,0.7s						
RPZ	Rata Peaks	51.73	142	P	P	17 05 36.8	+2.0
	comp=Z,29nm,0.9s,baz=253,slow=2.5,SNR=11						
RPZ	Rata Peaks	51.73	142	eP	P	17 05 34.0	-0.9
	comp=Z,51nm,1.2s						
MDJ	Mudanjiang	51.75	1	P	P	17 05 32.1	-2.8
MDJ				pmax	pmax		
	comp=Z,13nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,220nm,4.5s						
MDJ	Mudanjiang	51.75	1	eP	P	17 05 34.6	-0.3
	comp=Z,12nm,1.1s						
ODAN	Odare	52.55	312	eP	P	17 05 40.7	-0.7
	comp=Z,30nm,0.5s						
ASAJ	Asahikawa	52.76	13	P	P	17 05 42.2	-0.1
	comp=Z,9.1nm,0.6s,baz=228,slow=9.7,SNR=26						
ASAJ				LR	LR	17 29 48.3	
	comp=Z,45nm,19.4s,baz=176,slow=38						
ASAJ	Asahikawa	52.76	13	eP	P	17 05 41.9	-0.5
	comp=Z,10.0nm,0.6s						
RAMN	Ramite	53.18	312	eP	P	17 05 45.7	-0.4
	comp=Z,48nm,0.6s						
GTA	Gaotai	53.70	332	⇑P	P	17 05 49.5	+0.1
GTA				pP	pP	17 06 30.0	-2.9
GTA				sP	PcP	17 06 50.4	-2.7
GTA				PcP	sP	17 06 55.3	+1.1
GTA				ScP	ScP	17 10 34.3	+1.7
GTA				pmax	pmax		
	comp=Z,14nm,0.8s						
JIRN	Jiri	53.88	312	eP	P	17 05 50.5	-0.8
	comp=Z,36nm,0.7s						
GUN	Gumba	54.25	312	eP	P	17 05 53.2	-0.7
	comp=Z,35nm,0.5s						
PKIN	Phulchoki	54.42	312	eP	P	17 05 54.0	-1.1
	comp=Z,17nm,0.5s						
KKN	Kakani	54.62	312	eP	P	17 05 55.7	-0.8
	comp=Z,23nm,0.5s						
DMN	Daman	54.65	311	eP	P	17 05 56.1	-0.7
	comp=Z,22nm,0.7s						
GKN	Gorkha	55.22	312	eP	P	17 05 59.8	-0.9
	comp=Z,40nm,0.5s						
YSS	Yuzh-Sakhalins	55.51	12	eP	P	17 06 01.7	-0.4
	comp=Z,16nm,0.6s						
YSS	Yuzh-Sakhalins	55.51	12	⇑iP	P	17 06 01.8	-0.3
YSS				pmax	pmax		
	comp=Z,20nm,0.7s						
KOLN	Koldanda	55.87	311	eP	P	17 06 04.8	-0.6
	comp=Z,29nm,0.6s						
KLR	Kul’dur	56.43	2	P	P	17 06 08.2	-0.4
	comp=Z,0.5nm,0.8s,baz=239,slow=4.4,SNR=22						
PYUN	Piuthan	56.50	311	eP	P	17 06 09.3	-0.5
	comp=Z,42nm,0.7s						
ULN	Ulaanbaatar	58.23	343	eP	P	17 06 21.3	-0.2
	comp=Z,9.7nm,1.0s						
ULN	Ulaanbaatar	58.23	343	c iP	P	17 06 21.6	+0.1
ULN				pmax	pmax		
	comp=Z,31nm,2.8s						
GRNR	Gornyy	58.29	6	eP	P	17 06 23.8	+2.2
GRNR				pmax	pmax		
	comp=Z,39nm,1.0s						
SONM	Songino Array	58.40	343	P	P	17 06 22.8	+0.2
	comp=Z,6.7nm,0.7s,baz=156,slow=6.7,SNR=33						
SONM				pP	PcP	17 07 09.4	-1.9
	comp=Z,3.4nm,1.0s,baz=172,slow=3.7,SNR=2.8						
SONA1	Songino Array	58.41	343	eP	P	17 06 22.4	-0.3
TYV	Tymovskoe	59.24	10	eP	P	17 06 27.3	-0.8
TYV				eS	S	17 14 19.7	-0.9
TYV				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TYV				pmax	pmax		
	comp=Z,100nm,3.8s						
TYV				smax	smax		
	comp=E,4.0nm,1.8s						
TYV				smax	smax		
	comp=N,200nm,5.8s						
CASY	Casey	60.15	188	eP	P	17 06 34.9	+0.8
	comp=N,14nm,0.9s						
ZEA	Zeya	60.89	359	eP	P	17 06 39.2	-0.1
ZEA				pmax	pmax		
	comp=Z,19nm,0.9s						
ZAK	Zakamensk	61.61	342	eP	P	17 06 31.2	-13
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
TLY	Talaya	62.64	343	P	P	17 06 51.6	+0.6
	comp=Z,3.6nm,0.5s,baz=205,slow=2.8,SNR=14						
TLY	Talaya	62.64	343	eP	P	17 06 51.0	0.0
	comp=Z,5.0nm,0.7s						
TLY	Talaya	62.64	343	eP	P	17 06 51.3	+0.2
TLY				pmax	pmax		
	comp=Z,5.0nm,0.8s						
WMQ	Urumqi	63.02	328	P	P	17 06 54.8	+1.0
WMQ				sP	sP	17 07 58.1	-1.5
WMQ				pmax	pmax		
	comp=Z,45nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,330nm,5.9s						
WMQ				LR	LR		
	comp=Z,250nm,22.7s						
WMQ				LR	LR		
	comp=Z,150nm,24.1s						
WMQ				LR	LR		
	comp=Z,100nm,24.1s						
MOY	Mondy	63.44	341	eP	P	17 06 56.9	+0.4
MOY				pmax	pmax		
	comp=Z,27nm,2.8s						
PEA0B	Petropavlovsk-	65.08	19	eP	P	17 07 07.2	+0.2
	comp=Z,21nm,0.6s						
PETK	Petropavlovsk-	65.08	19	P	P	17 07 07.6	+0.6
	comp=Z,18nm,0.6s,baz=184,slow=4.4						
PETK				PcP	PcP	17 07 38.1	+0.1
	baz=137,slow=0.8						
PETK				LR	LR	17 33 07.5	
	comp=Z,15nm,21.4s,baz=201,slow=34						
PET	Petropavlovsk	65.32	19	eP	P	17 07 09.2	+0.8
PET				pmax	pmax		
	comp=Z,33nm,1.4s						
HVS	Khovu-Aksy	65.62	337	⇑eP	P	17 07 10.7	+0.1
HVS				pmax	pmax		
	comp=Z,35nm,0.9s						
BOD	Bodaibo	66.06	351	eP	P	17 07 12.9	-0.2
BOD				e		17 07 54.8	
BOD				pmax	pmax		
	comp=Z,9.0nm,1.5s						
NIL	Nilore	66.50	311	eP	P	17 07 15.6	-0.9
	comp=Z,6.9nm,0.5s						
NIL	Nilore	66.50	311	eP	P	17 07 15.6	-0.9
NIL				pmax	pmax		
	comp=Z,7.0nm,0.5s						
DGZ	Jazzator, Alta	67.23	332	i P	P	17 07 21.2	+0.3
DGZ				pmax	pmax		
	comp=Z,7.0nm,0.6s						
PDGK	Podgornoye	67.32	323	i P	P	17 07 21.8	+0.2
PDGK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KSH	Kashi	67.44	318	eP	P	17 07 22.8	+0.4
KSH				ePcP	PcP	17 07 49.1	+0.7
KSH				epP	pP	17 08 07.9	+0.1
KSH				S	S	17 15 56.4	-6.5
KSH				pmax	pmax		
	comp=Z,93nm,4.3s						
KSH				LR	LR		
	comp=Z,270nm,7.9s						
MK01	Makanchi Array	67.82	327	eP	P	17 07 24.2	-0.3
MK31	Makanchi Array	67.84	327	eP	P	17 07 24.6	-0.1
MK31	Makanchi Array	67.84	327	ceP	P	17 07 24.4	-0.3
MK31				pmax	pmax		
	comp=Z,17nm,1.0s						
MKAR	Makanchi Array	67.84	327	P	P	17 07 24.8	+0.2
	comp=Z,13nm,0.8s,baz=126,slow=7.4,SNR=120						
MKAR				pP	pP	17 08 11.3	+1.2
	comp=Z,4.8nm,1.0s,baz=125,slow=8.3,SNR=1.6						
MKAR	Makanchi Array	67.84	327	eP	P	17 07 24.6	-0.1
	comp=Z,64nm,0.6s						
MKAR				pP	pP	17 08 11.3	+1.2
MKAR	Makanchi Array	67.84	327	eP	P	17 07 24.6	-0.1
MKAR				*PP	pP	17 08 11.3	+1.2
MKAR				pmax	pmax		
	comp=Z,64nm,0.6s						
MAKZ	Makanchi	68.02	327	eP	P	17 07 25.5	-0.2
	comp=Z,30nm,1.4s						
MAKZ	Makanchi	68.02	327	i P	P	17 07 24.9	-0.9
MAKZ				pmax	pmax		
	comp=Z,13nm,0.9s						
KDJ	Kajisay	68.05	321	eP	P	17 07 26.0	-0.3
	comp=Z,8.8nm,0.8s						
KDJ	Kajisay	68.05	321	eP	P	17 07 26.0	-0.3
KDJ				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MA2	Magadan	69.02	12	P	P	17 07 32.1	+0.6
	comp=Z,12nm,0.8s,baz=201,slow=2.2,SNR=4.7						
YAK	Yakutsk	69.20	0	P	P	17 07 32.3	-0.3
	comp=Z,16nm,0.4s,baz=147,slow=1.3,SNR=18						
YAK	Yakutsk	69.20	0	eP	P	17 07 32.0	-0.7
	comp=Z,39nm,0.7s						
YAK	Yakutsk	69.20	0	eP	P	17 07 31.4	-1.2
YAK				pmax	pmax		
	comp=Z,33nm,0.9s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.9s						
KZA	Kyzart	69.24	320	P	P	17 07 34.9	+1.0
	SNR=7.9						
SFK	Sufi-Kurgan	69.33	318	i P	P	17 07 34.3	0.0
SFK				pmax	pmax		
	comp=Z,12nm,1.2s						
TKM2	Tokmak 2	69.47	321	P	P	17 07 35.5	+0.5
	SNR=20						
TKM2	Tokmak 2	69.47	321	i P	P	17 07 34.9	-0.1
TKM2				pmax	pmax		
	comp=Z,18nm,0.9s						
AAK	Ala-Archa	70.01	320	P	P	17 07 39.2	+0.9
	SNR=8.4						
AAK	Ala-Archa	70.01	320	eP	P	17 07 38.6	+0.3
	comp=Z,18nm,0.9s						

AAK	Ala-Archa	70.01	320	eP	P	17 07 38.6	+0.3
AAK				pmax	pmax		
	comp=Z,18nm,0.9s						
FRU	Bishkek	70.03	321	eP	P	17 07 39.0	+0.7
CHMS	Chumysh	70.03	321	P	P	17 07 38.4	+0.2
	SNR=6.6						
AML	Almayashu	70.26	320	P	P	17 07 40.9	+0.8
	SNR=25						
USP	Ospenovka	70.33	321	P	P	17 07 40.5	+0.5
	SNR=20						
EKS2	Erkin-Say	70.47	320	P	P	17 07 42.0	+0.9
	SNR=25						
MNAS	Manas	71.20	320	i P	P	17 07 46.1	+0.6
MNAS				pmax	pmax		
	comp=Z,25nm,0.9s						
ZAA0	Zalesovo Array	71.36	334	eP	P	17 07 44.8	-1.1
	comp=Z,17nm,0.8s						
ZALV	Zalesovo Beam	71.36	334	P	P	17 07 45.1	-0.8
	comp=Z,14nm,0.7s,baz=127,slow=5.0,SNR=23						
ZALV	Zalesovo Beam	71.36	334	eP	P	17 07 44.6	-1.3
ZALV	Zalesovo Beam	71.36	334	eP	P	17 07 44.6	-1.3
KURBB	Kurchatov Arra	72.17	329	P	P	17 07 50.6	-0.2
	comp=Z,11nm,0.5s,baz=126,slow=5.0,SNR=145						
KURK	Kurchatov	72.17	329	P	P	17 07 50.6	-0.3
KURK	Kurchatov	72.17	329c	iP	P	17 07 50.7	-0.2
KURK				pmax	pmax		
	comp=Z,19nm,0.8s						
VNDA	Vanda	72.24	173	P	P	17 07 51.1	+0.3
	comp=Z,1.5nm,0.7s,baz=322,slow=6.8,SNR=21						
VNDA				pP	pP	17 08 37.8	+1.0
	comp=Z,3.9nm,1.2s,baz=324,slow=8.5,SNR=2.8						
VNDA				LR	LR	17 38 28.6	
	comp=Z,46nm,18.9s,baz=324,slow=35						
VNDA	Vanda	72.24	173	eP	P	17 07 51.4	+0.6
	comp=Z,25nm,1.7s						
VNDA				pP	pP	17 08 37.8	+1.0
VNDA	Vanda	72.24	173	eP	P	17 07 51.4	+0.6
VNDA				*PP	pP	17 08 37.8	+1.0
VNDA				pmax	pmax		
	comp=Z,25nm,1.7s						
SEY	Seymchan	72.41	11	P	P	17 07 52.5	+0.6
	comp=Z,18nm,0.6s,baz=202,slow=4.5,SNR=89						
NVS	Novosibirsk	72.64	334	eP	P	17 07 52.8	-0.7
NVS				e*PP	pP	17 08 37.8	-1.8
NVS				eS	S	17 16 59.2	-3.3
NVS				pmax	pmax		
	comp=Z,16nm,1.0s						
NVS				pmax	pmax		
	comp=N,8.0nm,0.9s						
NVS				pmax	pmax		
	comp=E,8.0nm,0.9s						
NVS				smax	smax		
	comp=E,21nm,2.1s						
KK31	Karatay Array	72.78	319	eP	P	17 07 54.9	+0.2
KK31	Karatay Array	72.78	319c	eP	P	17 07 54.8	+0.1
KK31				pmax	pmax		
	comp=Z,19nm,1.1s						
KKAR	Karatay Array	72.78	319	eP	P	17 07 54.9	+0.2
KKAR	Karatay Array	72.78	319	eP	P	17 07 54.9	+0.2
MAW	Mawson	74.14	201	P	P	17 08 03.5	+1.3
	baz=74,SNR=8.6						
MAW	Mawson	74.14	201	P	P	17 08 03.4	+1.3
	comp=Z,5.0nm,0.6s,baz=92,slow=5.5,SNR=22						
MAW	Mawson	74.14	201	eP	P	17 08 03.0	+1.0
	comp=Z,8.2nm,1.8s						
MAW	Mawson	74.14	201	eP	P	17 08 03.1	+1.0
MAW				pmax	pmax		
	comp=Z,8.0nm,1.8s						
BVAR	Borovoye Array	77.70	328	P	P	17 08 21.9	-0.6
	comp=Z,12nm,0.9s,baz=118,slow=7.8,SNR=50						
BVAR				PKiKP	PKiKP	17 13 58.0	-2.1
	comp=Z,0.5nm,0.8s,baz=116,slow=3.4,SNR=3.8						
BRVK	Borovoye	77.77	328	eP	P	17 08 22.8	-0.1
	comp=Z,9.8nm,0.8s						
BRVK	Borovoye	77.77	328c	iP	P	17 08 22.7	-0.2
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TIXI	Tiksi	78.86	0c	eP	P	17 08 27.7	-0.7
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
GEYT	Alibeck	79.48	311	P	P	17 08 32.3	-0.3
	comp=Z,1.5nm,0.9s,baz=169,slow=1.5,SNR=5.1						
OPO	Ambohidratompo	79.69	252	P	P	17 08 35.9	+1.5
	comp=Z,2.7nm,0.6s,baz=45,slow=4.3,SNR=4.6						
AB31	Akbulak array	82.01	322c	eP	P	17 08 44.5	-1.2
AB31				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ABKAR	Akbulak array	82.01	322	eP	P	17 08 44.7	-1.0
QSPA	South Pole Qui	82.61	180	P	P	17 08 48.9	+0.2
	comp=Z,3.6nm,0.5s,baz=246,slow=0.6,SNR=19						
QSPA				pP	pP	17 09 33.8	-2.1
	comp=Z,4.2nm,0.8s,baz=323,slow=3.5,SNR=4.2						
SYO	Syowa Base	82.86	201⇓	eP	P	17 08 50.4	+0.7
AKTO	Aktyubinsk	83.59	323	P	P	17 08 53.5	-0.3
	comp=Z,5.5nm,0.9s,baz=107,slow=6.3,SNR=16						
ARU	Arti	85.35	328	eP	P	17 09 01.5	-1.0
	comp=Z,7.5nm,0.9s						
ARU	Arti	85.35	328c	iP	P	17 09 01.8	-0.7
ARU				*PP	pP	17 09 46.3	-3.7
ARU						17 12 18.9	
ARU				S	S	17 19 09.1	-7.6
ARU				SS	SS	17 24 54.7	-1.5
ARU				pmax	pmax		
	comp=Z,9.0nm,1.0s						
RAYN	Ar Rayn	86.73	294	eP	P	17 09 09.7	-0.4
	comp=Z,6.6nm,0.8s						
RAYN	Ar Rayn	86.73	294	eP	P	17 09 09.7	-0.4
RAYN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KDAK	Kodiak Island	90.20	32	P	P	17 09 25.7	+0.2
	comp=Z,6.8nm,0.8s,baz=205,slow=4.0,SNR=6.3						
SKT	Skwentna	91.67	28	eP	P	17 09 31.0	-1.3
	comp=Z,3.3nm,0.8s						
CAST	Castle Rocks	91.73	26	eP	P	17 09 32.3	-0.3
	comp=Z,2.5nm,0.8s						
KIV	Kislovodsk	92.21	314	eP	P	17 09 34.8	-0.5
KIV				e		17 13 13.3	
KIV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MLY	Manley	92.65	25	eP	P	17 09 36.5	-0.3
	comp=Z,5.5nm,0.8s						
SML	Sawmill	93.12	28	eP	P	17 09 38.7	-0.4
	comp=Z,11nm,0.9s						
SML	Sawmill	93.12	28	eP	P	17 09 38.7	-0.4
SML				pmax	pmax		
	comp=Z,11nm,0.9s						
COLD	Coldfoot	93.30	23	eP	P	17 09 39.6	-0.1
	comp=Z,4.1nm,1.0s						
CCB	Clear Creek Bu	93.82	25	eP	P	17 09 40.9	-1.2
	comp=Z,6.6nm,0.8s						
IL1	Eielson Array	94.22	25	eP	P	17 09 42.5	-1.6
ILAR	Eielson Array	94.22	25	P	P	17 09 42.0	-2.0
	comp=Z,1.3nm,0.8s,baz=277,slow=4.4,SNR=11						
ILAR	Eielson Array	94.22	25	P	P	17 09 42.0	-2.0
SNAA	Sanae	95.00	194	P	P	17 09 48.7	+1.0
	comp=Z,0.7nm,0.6s,baz=201,slow=8.2,SNR=12						
SNAA				pP	pP	17 10 36.2	+0.6
	comp=Z,4.7nm,1.0s,baz=81,slow=5.2,SNR=5.0						
SNAA	Sanae	95.00	194	eP	P	17 09 48.5	+0.9
	comp=Z,6.0nm,1.1s						
SNAA				pP	pP	17 10 36.2	+0.6
SNAA	Sanae	95.00	194	eP	P	17 09 48.5	+0.9
SNAA				*PP	pP	17 10 36.2	+0.6
SNAA				pmax	pmax		
	comp=Z,6.0nm,1.1s						
OBN	Obninsk	97.22	325	eP	P	17 09 55.4	-2.4
OBN				e		17 13 56.7	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ARCES	ARCESS Array B	101.48	340	P	Pdif	17 10 16.2	-0.3
	comp=Z,0.6nm,0.5s,baz=86,slow=7.4,SNR=7.1						
FINES	FINESS Array B	102.48	331	PKiKP	PKiKP	17 14 41.9	+0.5
	comp=Z,1.1nm,0.6s,baz=130,slow=5.8,SNR=5.6						
GERES	GERESS Array B	111.89	320	PKiKP	PKiKP	17 14 59.2	-0.3
	comp=Z,0.9nm,0.5s,baz=92,slow=2.0,SNR=5.6						
SENIN	Lac Senin/Sane	116.74	319	ePKPdf	PKPdf	17 15 09.3	+0.3
PDAR	Pinedale Array	118.06	45	PKP	PKPdf	17 15 12.3	+0.6
	comp=Z,0.8nm,0.7s,baz=90,slow=0.9,SNR=8.4						
EKA	Eskdalemuir Ar	118.88	331	PKP	PKPdf	17 15 11.7	-0.8
	comp=Z,0.6nm,0.4s,baz=49,slow=3.7,SNR=9.5						
LAO	LASA Array	118.99	40	ePKPdf	PKPdf	17 15 14.1	+0.9
RSSD	Black Hills	121.39	42	ePKPdf	PKPdf	17 15 17.9	-0.2
RSSD	Black Hills	121.39	42	ePKIKP	PKPdf	17 15 17.9	-0.2
SDCO	Great Sand Dun	122.51	50	ePKPdf	PKPdf	17 15 21.2	+0.7
ANMO	Albuquerque	122.55	53⇓	iPKIKP	PKPdf	17 15 22.9	+2.4
ULM	Lac du Bonnet	123.45	33	PKP	PKPdf	17 15 21.4	-0.1
	comp=Z,1.9nm,0.4s,baz=207,slow=2.3,SNR=3.3						
MNTX	Cornudas Mount	124.22	57	ePKPdf	PKPdf	17 15 24.8	+1.2
TXAR	Lajitas Array	126.21	59	PKP	PKPdf	17 15 28.4	+0.8
	comp=Z,0.4nm,0.4s,baz=199,slow=1.9,SNR=4.4						
TOA0	Torodi Ar. Sit	127.63	281	ePKPdf	PKPdf	17 15 30.4	-0.1
TORD	Torodi Ar. Bea	127.63	281	PKP	PKPdf	17 15 30.8	+0.3
	comp=Z,2.1nm,0.8s,baz=32,slow=2.6						
PLCA	Paso Flores	128.95	161	PKP	PKPdf	17 15 34.1	+1.6
	comp=Z,1.7nm,0.7s,baz=271,slow=0.9,SNR=6.9						
PLCA				SKPbc	SKiKP	17 18 35.3	-16
	comp=Z,1.3nm,0.8s,baz=249,slow=5.1,SNR=3.9						
S39A	Bolivar	131.45	45	ePKPdf	PKPdf	17 15 37.5	+0.3
R40A	Maddies Statio	131.90	44	ePKPdf	PKPdf	17 15 38.4	+0.4
P42A	Winchester	132.54	41	ePKPdf	PKPdf	17 15 39.8	+0.6
KOWA	Kowa	133.12	283	PKP	PKPdf	17 15 42.1	+1.2
	comp=Z,1.0nm,0.4s,baz=70,slow=5.2,SNR=3.1						
T42A	Van Buren	133.33	45	ePKPdf	PKPdf	17 15 40.1	-0.6
DBIC	Dimbokro	133.93	272	SKPbc	SKPbc	17 18 53.5	-0.2
	comp=Z,11nm,1.0s,baz=135,slow=1.6,SNR=4.4						
TKL	Tuckaleechee C	139.05	42	PKP	PKPdf	17 15 51.3	-0.1
	comp=Z,1.7nm,0.4s,baz=207,slow=9.0,SNR=2.9						
CPUP	Villa Florida	145.99	170	PKPbc	PKPab	17 16 06.0	+0.2
	comp=Z,3.6nm,0.6s,baz=183,slow=3.1,SNR=9.7						
CPUP				pPKPbc	pPKPab	17 16 54.6	-0.1
	comp=Z,9.6nm,1.0s,baz=184,slow=2.8,SNR=5.6						
CPUP				SKPbc	SKiKP	17 19 26.9	+0.6
	comp=Z,3.6nm,0.8s,baz=170,slow=1.5,SNR=5.0						
PB11	IPOC Station P	147.53	146	ePKPbc	PKPbc	17 16 09.0	-0.7
MNMC	Minye Minye	148.07	146	ePKPbc	PKPbc	17 16 10.8	-0.6
LPAZ	La Paz	151.18	145	PKPbc	PKPbc	17 16 21.3	+1.9
	comp=Z,2.8nm,0.4s,baz=146,slow=2.4,SNR=20						
LPAZ				PKPab	PKPab	17 16 29.5	+1.7
	comp=Z,5.4nm,0.6s,baz=211,slow=0.8,SNR=14						
LPAZ				pPKPbc	pPKPbc	17 17 11.7	+2.2
	comp=Z,11nm,1.2s,baz=271,slow=0.8,SNR=3.9						
LPAZ	La Paz	151.18	145	ePKPbc	PKPbc	17 16 20.4	+1.0
LPAZ				PKPab	PKPab	17 16 29.5	+1.7
LPAZ				pPKPbc	pPKPbc	17 17 11.7	+2.2
LPAZ	La Paz	151.18	145	ePKIKP	PKPbc	17 16 20.5	+1.0
LPAZ						17 17 11.7	

WEL **17** *17:04:40.8±1.2, 31˚S±26˚×17˚8W±6˚1, h184^{km}±32^{km}*
NEIC **17** *17:04:42.1±1.1, 31°.47S×179°.07W, h16^{km}±7^{km}, mb4.9/15, Error ellipse: s-maj=16.3km s-min=8.0km az=113.0*
ISCJB **17** *17:04:44.2±0.3, 31°.27S±0°.04×179°.16W±0°.08, h33^{km}, mb4.7/19, MS3.5/7, Error ellipse: s-maj=10.5km s-min=3.5km az=23.3*
IDC **17** *17:04:47.5±1.4, 31°.23S×179°.08W, h50^{km}±14^{km}, mb4.2/9, mb1 4.4/11, mb1mx4.0/42, mbtmp4.4/11, ML4.3/2, MS3.5/9, Ms1 3.5/9, ms1mx3.2/43, Error ellipse: s-maj=21.7km s-min=10.8km az=112.0*
ISC 17 17:04:44.6±0.4**, 31°.12S**±0°.06×**179°.0W**±0°.1**, h35**^{km}**, n93,** σ**2^{s}36**/79**, mb4.8**/19**, MS3.6**/6**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.08	27	P	Pn	17 05 16.7	-0.3
GLKZ				S	Sn	17 05 46.5	+4.7
RAO	Raoul Island	2.09	27	P	Pn	17 05 21.6	+4.4
	109nm,0.3s,baz=110,slow=24,SNR=5.4						
RAO				S	Sn	17 05 48.6	+6.6
	181nm,0.3s,baz=60,slow=20,SNR=6.7						
RAO				LR	LR	17 06 01.0	
	comp=Z,779nm,19.2s,baz=164,slow=33						
RAO	Raoul Island	2.09	27	ePn	Pn	17 05 18.5	+1.2
RAO				eSn	Sn	17 05 48.6	+6.6
MXZ	Matakaoa Point	6.79	198	ePn	Pn	17 06 21.9	+0.1
WMGZ	Waiomatatini S	7.01	197	P	Pn	17 06 25.7	+1.0
HAZ	Te Kaha	7.12	201	P	Pn	17 06 25.6	-0.7
PKGZ	Pakihiroa	7.16	199	P	Pn	17 06 25.4	-1.5
PUZ	Puketiti	7.29	197	P	Pn	17 06 29.1	+0.5
RUGZ	Raukumara Rang	7.35	201	P	Pn	17 06 30.2	+0.6
OUZ	Omahuta	7.42	235	ePn	Pn	17 06 31.1	+0.8
TWGZ	Tauwhareparae	7.46	199	P	Pn	17 06 29.9	-1.1
TWGZ				S	Sn	17 07 58.3	+4.0
OPRZ	Ohinepanea	7.63	207	P	Pn	17 06 35.6	+2.3
CNGZ	Carnagh Statio	7.69	196	P	Pn	17 06 33.6	-0.5
MWZ	Matawai	7.74	201	P	Pn	17 06 35.4	+0.6
MWZ				S	Sn	17 08 05.5	+4.3
TKGZ	Te Karaka	7.74	199	P	Pn	17 06 34.7	-0.1
URZ	Urewera	7.80	203	P	Pn	17 06 34.8	-0.7
	3.7nm,0.3s,baz=75,slow=0.8,SNR=19						
URZ				S	Sn	17 08 03.3	+0.7
	baz=163,slow=20,SNR=1.6						
URZ	Urewera	7.80	203	P	Pn	17 06 36.1	+0.6
URZ				S	Sn	17 08 07.9	+5.3
RAGZ	Rawiri	7.92	201	P	Pn	17 06 37.2	-0.1
RIGZ	Rimuhau	8.01	198	P	Pn	17 06 37.6	-1.0
RTZ	Ruatahuna	8.16	203	P	Pn	17 06 40.3	-0.3
SNGZ	Shannon Statio	8.20	200	P	Pn	17 06 40.5	-0.7
BKZ	Black Stump Fm	8.82	203	ePn	Pn	17 06 48.1	-1.6
HIZ	Hauiti	8.93	213	ePn	Pn	17 06 50.0	-1.1
BFZ	Birch Farm	10.28	201	ePn	Pn	17 07 05.5	-4.1
SNZO	South Karori	11.36	205	ePn	Pn	17 07 19.8	-4.5
THZ	Tophouse	12.44	209	ePn	Pn	17 07 34.1	-5.2
KHZ	Kahutara	12.74	206	ePn	Pn	17 07 36.4	-6.9
LTZ	Lake Taylor	13.55	208	ePn	Pn	17 07 49.0	-5.3
OXZ	Oxford	14.10	208	ePn	Pn	17 07 53.9	-7.9
MQZ	McQueen’s Vall	14.19	205	ePn	Pn	17 07 54.1	-8.8
RPZ	Rata Peaks	14.82	209	ePn	Pn	17 08 04.0	-7.6
FOZ	Fox Glacier	15.22	212	ePn	Pn	17 08 10.5	-6.4
	406nm,2.0s						
ODZ	Otahua Downs	16.09	207	ePn	Pn	17 08 19.6	-8.4
	176nm,2.0s						
WKZ	Wanaka	16.59	211	ePn	Pn	17 08 26.4	-8.1
	232nm,1.9s						
MLZ	Mavora Lakes	17.41	212	ePn	Pn	17 08 38.3	-6.4
	106nm,1.6s						
AFI	Afiamalu	18.38	23	LR	LR	17 15 36.6	
	comp=Z,94nm,20.0s,baz=180,slow=35						
AFI	Afiamalu	18.38	23	eP	P	17 08 53.2	-3.4
AFI				ePn	Pn	17 08 53.4	-3.5
RAR	Rarotonga	19.87	65	LR	LR	17 14 54.7	
	comp=Z,87nm,21.4s,baz=270,slow=30						
EIDS	Eidsvold	26.91	275	eP	P	17 10 20.1	-2.4
	48nm,1.3s						
CAN	Canberra	27.02	252	eP	P	17 10 22.4	-1.1
	23nm,1.1s						
TBI	Tubuai	27.34	81	eT	T	17 38 49.6	
	165nm,0.3s						
PAE	Paea	29.87	70	eT	T	17 41 57.7	
	26nm,0.2s						
PPT2	Papeete2	29.91	70	eLR	LR	17 18 28.2	
	182nm,28.2s						
PPT2	Papeete2	29.91	70	eT	T	17 42 01.7	
	27nm,0.3s						
PPT	Papeete	29.92	70	LR	LR	17 19 46.0	
	comp=Z,65nm,20.9s,baz=188,slow=30						
TVO	Taravao	30.07	71	eT	T	17 42 12.9	
	5.6nm,0.4s						
TIAR	Tiarei	30.11	70	eT	T	17 42 12.1	
	3.8nm,0.2s						
PMOR	Pomariorio Ree	32.68	68	eT	T	17 45 27.9	
	5.3nm,0.3s						
VAH	Vaihoa	32.76	68	eT	T	17 45 33.7	
	199nm,0.2s						
STKA	Stephens Creek	33.47	258	LR	LR	17 23 16.7	
	comp=Z,72nm,20.1s,baz=25,slow=33						
RKT	Rikitea	39.80	90	eT	T	17 54 24.3	
	6.1nm,0.3s						
AS01	Alice Springs	42.16	268	eP	P	17 12 34.7	+0.7
ASAR	Alice Springs	42.20	268	P	P	17 12 35.6	+1.2
	5.3nm,0.9s,baz=100,slow=8.6,SNR=4.6						
WB2	Warramunga Arr	43.24	273	eP	P	17 12 43.0	+0.2
	26nm,1.0s						
WR1	Warramunga Arr	43.26	273	eP	P	17 12 43.6	+0.7
	48nm,1.5s						
WRA	Warramunga Arr	43.26	273	P	P	17 12 43.6	+0.7
	11nm,0.8s,baz=112,slow=7.9,SNR=6.4						
SBA	Scott Base	47.26	184	eP	P	17 13 16.6	+2.7
	16nm,1.1s						
VNDA	Vanda	47.29	186	eP	P	17 13 17.1	+2.9
	8.6nm,1.6s						
MTN	Manton Dam	49.24	280	eP	P	17 13 31.9	+1.9
	21nm,1.1s						
FITZ	Fitzroy Crossi	51.49	271	P	P	17 13 48.2	+1.3
	16nm,1.0s,baz=144,slow=9.0,SNR=3.5						
CASY	Casey	54.09	208	eP	P	17 14 04.7	-0.8
	25nm,1.8s						
MWH	Moku‘aweowe	55.12	27	eP	P	17 14 15.5	+1.4
	174nm,1.3s						
QSPA	South Pole Qui	58.99	180	P	P	17 14 41.9	+1.4
	4.7nm,0.6s,baz=311,slow=1.8,SNR=13						
QSPA				LR	LR	17 37 34.0	
	comp=Z,55nm,18.5s,baz=338,slow=33						
QSPA	South Pole Qui	58.99	180	eP	P	17 14 42.2	+1.7
	24nm,1.3s						
SNAA	Sanae	77.46	179	P	P	17 16 36.3	+0.3
	3.6nm,0.9s,baz=184,slow=14,SNR=8.4						
SNAA	Sanae	77.46	179	eP	P	17 16 36.2	+0.3
	14nm,1.3s						
MJAR	Matsushiro Arr	78.34	326	P	P	17 16 43.6	+2.4
	1.6nm,1.0s,baz=166,slow=6.1,SNR=4.2						
MAJO	Matsushiro	78.34	326	eP	P	17 16 43.6	+2.4
PLCA	Paso Flores	82.65	133	P	P	17 17 06.8	+2.1
	3.1nm,1.0s,baz=232,slow=8.8,SNR=4.7						
PLCA	Paso Flores	82.65	133	eP	P	17 17 06.6	+2.0
	5.2nm,1.0s						
KSRS	Korea Array	84.33	320	P	P	17 17 14.6	+1.6
	1.8nm,0.9s,baz=141,slow=6.9,SNR=7.1						
KSAR	Wonju Array Be	84.35	320	P	P	17 17 14.6	+1.6
KS01	Wonju Array Si	84.36	320	eP	P	17 17 14.8	+1.7
ISA	Isabella, Lake	87.43	45	eP	P	17 17 29.8	+1.4
	6.9nm,1.3s						
YBH	Yreka Blue Hor	89.14	39	LR	LR	17 51 14.3	
	comp=Z,23nm,20.8s,baz=270,slow=31						
NV01	Mina Array Sit	89.36	43	eP	P	17 17 38.7	+0.9
NVAR	Mina Array Bea	89.36	43	P	P	17 17 38.0	+0.3
	1.3nm,0.8s,baz=219,slow=6.9,SNR=5.4						
NVAR				LR	LR	17 53 52.2	
	comp=Z,37nm,19.0s,baz=108,slow=33						
PDAR	Pinedale Array	97.26	44	LR	LR	17 54 22.8	
	comp=Z,29nm,21.2s,baz=255,slow=31						
KURBB	Kurchatov Arra	120.95	314	PKP	PKPdf	17 23 32.5	-0.3
	0.4nm,0.7s,baz=117,slow=2.1,SNR=3.6						
BVAR	Borovoye Array	126.30	315	PKP	PKPdf	17 23 43.8	+0.7
	1.0nm,0.9s,baz=66,slow=1.7,SNR=6.2						
KBZ	Khabaz	144.77	303	PKP	PKPdf	17 24 18.9	+1.4
	2.5nm,0.7s,baz=179,slow=1.6,SNR=3.9						
FIA1	FINESS Array S	145.51	339	ePKPdf	PKPab	17 24 20.0	+1.3
FIA1				ePKPdf	PKiKP	17 24 20.8	-1.5
FIA0	FINESS Array S	145.51	339	ePKPdf	PKPab	17 24 18.5	-0.1
FINES	FINESS Array B	145.51	339	PKPbc	PKPab	17 24 18.5	-0.1
	7.9nm,1.0s,baz=44,slow=4.4,SNR=8.4						
NB2	NORSAR Subarra	149.32	350	PKP	PKPbc	17 24 28.8	-0.3
	comp=Z,9.2nm,1.4s,baz=19,slow=4.3						
AKASG	Malin Array Be	151.32	321	PKPbc	PKPbc	17 24 34.7	+0.6
	comp=Z,1.1nm,0.4s,baz=57,slow=3.0,SNR=4.6						
AKBB	Malin Array Si	151.32	321	ePKPdf	PKPdf	17 24 29.8	+1.7
AKBB				ePKPbc	PKiKP	17 24 36.3	+1.7
KIEV	Kiev	151.34	321	ePKPdf	PKPdf	17 24 30.1	+2.1
BR101	Keskin Array S	152.16	297	epPKPdf	PKPbc	17 24 37.1	+0.5
BRTR	Keskin Array B	152.16	297	PKPbc	PKPbc	17 24 37.1	+0.5
	comp=Z,0.5nm,0.5s,baz=109,slow=3.8,SNR=2.6						
TOA0	Torodi Ar. Sit	162.10	182	ePKPab	PKPab	17 25 27.8	-1.5
TORD	Torodi Ar. Bea	162.10	182	PKPab	PKPab	17 25 28.8	-0.5
	baz=175,slow=4.6						
TOA1	Torodi Ar. Sit	162.10	182	ePKPab	PKPab	17 25 28.8	-0.5

ISCJB **17** *17:13:18.4±0.3, 67°.04N±0°.02×20°.96E±0°.05, h0^{km}, Error ellipse: s-maj=3.1km s-min=2.4km az=179.9*
CSEM **17** *17:13:19.4±0.2, 67°.09N×20°.92E, h2^{km}, ML2.3, Error ellipse: s-maj=4.4km s-min=3.4km az=93.0, Mining explosion.*
HEL **17** *17:13:19.8±0.0, 67°.09N×20°.93E, h0^{km}, ML2.3, ML2.3(UPP), Explosion*
UPP **17** *17:13:19.1±0.1, 67°.10N×20°.95E, h0^{km}, ML2.3*
IDC **17** *17:13:20.4±0.9, 67°.07N×21°.22E, h0^{km}, mb1 2.9/4, mb1mx2.8/63, mbtmp2.9/4, ML2.3/4, Error ellipse: s-maj=15.1km s-min=7.6km az=115.0*
NAO **17** *17:13:20.0±0.9, 67°.11N×21°.07E, ML2.6*
BER **17** *17:13:22.7±3.0, 67°.12N×20°.86E, h0^{km}, ML1.7, ML2.6(NAO), Suspected explosion*
ISC 17 17:13:19.4±0.7**, 67°.08N**±0°.02×**20°.93E**±0°.02**, h0**^{km}**, n99,** σ**0^{s}84**/140**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	Dundret	0.14	286	P	Pg	17 13 22.3	+0.2
DUNU				S	Sg	17 13 25.0	+1.0
DUNU	Dundret	0.14	286	i P	Pg	17 13 22.3	+0.2
DUNU				i S	Sg	17 13 25.0	+1.0
DUNU	Dundret	0.14	286	P	Pg	17 13 22.3	+0.2
DUNU				S	Sg	17 13 25.0	+1.0
ERTU	Ertsjaerv	0.73	136	P	Pg	17 13 33.0	-0.3
ERTU	Ertsjaerv	0.73	136	eP	Pg	17 13 32.7	-0.6
ERTU	Ertsjaerv	0.73	136	P	Pg	17 13 33.0	-0.3
PAJU	Pajala	0.86	93	P	Pg	17 13 35.0	-0.8
PAJU	Pajala	0.86	93	i P	Pg	17 13 35.0	-0.8
PAJU	Pajala	0.86	93	P	Pg	17 13 35.0	-0.8
RATU	Laukkuluspa	0.90	326	P	Pg	17 13 35.9	-0.8
RATU	Laukkuluspa	0.90	326	eP	Pg	17 13 35.9	-0.8
RATU	Laukkuluspa	0.90	326	P	Pg	17 13 35.9	-0.8
HARU	Harads	0.92	179	P	Pg	17 13 36.2	-0.8
HARU	Harads	0.92	179	eP	Pg	17 13 36.2	-0.8
HARU	Harads	0.92	179	P	Pg	17 13 36.2	-0.8
SALU	Saltoluokta	0.99	289	P	Pg	17 13 37.7	-0.5
SALU	Saltoluokta	0.99	289	eP	Pg	17 13 37.7	-0.5
SALU	Saltoluokta	0.99	289	P	Pg	17 13 37.7	-0.5
LANU	Lannavaara	1.05	22	P	Pg	17 13 38.6	-0.9
LANU	Lannavaara	1.05	22	eP	Pg	17 13 38.5	-1.1
LANU	Lannavaara	1.05	22	P	Pg	17 13 38.6	-0.9
NIKU	Nikkaluokta	1.07	318	P	Pg	17 13 39.1	-0.8
NIKU	Nikkaluokta	1.07	318	eP	Pg	17 13 39.1	-0.8
NIKU	Nikkaluokta	1.07	318	P	Pg	17 13 39.1	-0.8
KALU	Kalix	1.57	140	P	Pn	17 13 47.9	-0.5
KALU	Kalix	1.57	140	eP	Pn	17 13 47.6	-0.9
KALU	Kalix	1.57	140	P	Pn	17 13 47.9	-0.5
SJUU	Sjulsmark	1.61	170	P	Pn	17 13 48.6	-0.3
SJUU	Sjulsmark	1.61	170	eP	Pn	17 13 48.6	-0.3
SJUU	Sjulsmark	1.61	170	P	Pn	17 13 48.6	-0.3
HEF	Hetta	1.69	37	eP	Pn	17 13 49.5	-0.6
HEF				eSN	Sb	17 14 13.3	+0.3
HEF				MSG		17 14 18.7	
	comp=Z,17nm,0.2s						
HEF	Hetta	1.69	37	eP	Pn	17 13 49.5	-0.6
HEF				eSn	Sb	17 14 13.4	+0.3
HEF	Hetta	1.69	37	eP	Pn	17 13 50.7	+0.6
HEF				eS	Sn	17 14 12.1	-0.3
TOF	Tornio	1.69	125	ePG	Pn	17 13 50.0	-0.1
TOF				MSG		17 14 09.8	
	comp=Z,23nm,0.2s						
TOF				eSN	Sn	17 14 13.2	+0.8
TOF	Tornio	1.69	125	ePg	Pn	17 13 50.0	-0.1
TOF				eSn	Sn	17 14 13.2	+0.8
KIF	Kilpisjarvi	1.93	359	Pn	Pb	17 13 54.8	-0.6
KIF				Sn	Sg	17 14 21.7	+0.4
KIF	Kilpisjarvi	1.93	359	ePB	Pn	17 13 54.3	+0.9
KIF				MSG		17 14 24.8	
	comp=Z,39nm,0.2s						
KIF	Kilpisjarvi	1.93	359	ePb	Pn	17 13 54.3	+0.9
KIF	Kilpisjarvi	1.93	359	Pn	Pb	17 13 54.8	-0.6
KIF				Sn	Sg	17 14 21.7	+0.4
KIF	Kilpisjarvi	1.93	359	eP	Pn	17 13 54.4	+1.1
KIF				eSg	Sg	17 14 21.8	+0.5
RNF	Rovaniemi	2.07	101	ePB	Pn	17 13 55.9	+0.6
RNF				eSG	Sb	17 14 24.4	+0.5
RNF	Rovaniemi	2.07	101	ePb	Pn	17 13 55.9	+0.6
RNF				eSg	Sb	17 14 24.4	+0.5
KTK1	Kautokeino	2.12	23	eP	Pb	17 13 57.8	-0.8
KTK1				eSg	Sb	17 14 26.4	+0.9
KTK1				IAML		17 14 33.8	
	comp=Z,12nm,0.2s						
SGF	Sodankyl	2.21	78	eP	Pn	17 13 57.8	+0.6
SGF				eSG	Sb	17 14 27.8	-0.1
SGF	Sodankyl	2.21	78	eP	Pn	17 13 57.8	+0.6
SGF				eSg	Sb	17 14 27.8	-0.1
STEI	Steigen	2.34	294	eP	Pb	17 14 01.2	-1.3
STEI				eSg	Sg	17 14 34.4	-0.2
STEI				IAML		17 14 36.6	
	comp=Z,6.3nm,0.3s						
BURU	Burvik	2.52	176	P	Pn	17 14 02.1	+0.7
BURU	Burvik	2.52	176	eP	Pn	17 14 02.2	+0.7
BURU				eSG	Sb	17 14 39.0	+2.2
BURU	Burvik	2.52	176	P	Pn	17 14 02.2	+0.7
BURU				eSg	Sb	17 14 39.0	+2.2
SVAU	Svanoeiden	2.66	193	P	Pn	17 14 03.9	+0.5
SVAU	Svanoeiden	2.66	193	eP	Pn	17 14 03.9	+0.5
SVAU	Svanoeiden	2.66	193	P	Pn	17 14 03.9	+0.5
TRO	Tromso	2.67	345	eP	Pn	17 14 04.8	+1.3
TRO				IAML		17 14 44.5	
	comp=Z,6.6nm,0.4s						
ODEU	Stanfors	2.69	182	P	Pn	17 14 04.5	+0.7

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ODEU  Stanfors            2.69 182  eP      Pn     17 14 04.5 +0.7
ODEU  Stanfors            2.69 182   P      Pn     17 14 04.5 +0.7
MOR8  Moi Rana            2.74 253  eP      Pn     17 14 05.8 +1.2
MOR8                                eSg     Sb     17 14 41.9 -1.5
MOR8                                 IAML          17 14 44.1
      comp=Z,12nm,0.6s
OUL   Oulu                2.85 132  ePB     Pn     17 14 08.1 +2.1
OUL   Oulu                2.85 132  ePb     Pn     17 14 08.1 +2.1
ARA0  ARCESS Array S      2.99  33   Pn     Pn     17 14 08.0 -0.1
      baz=207,slow=16
ARA0                                 Sn     Sn     17 14 45.1 +0.6
      baz=217,slow=22
ARA0  ARCESS Array S      2.99  33   Pn     Pn     17 14 07.9 -0.1
      SNR=211
ARA0                                 Sn     Sn     17 14 45.1 +0.6
      SNR=5.2
ARA0  ARCESS Array S      2.99  33   Pn     Pn     17 14 08.0 -0.1
      baz=207,slow=16
ARA0                                 Sn     Sn     17 14 45.1 +0.6
      baz=217,slow=22
ARCES ARCESS Array B      2.99  33   Pn     Pn     17 14 08.1 +0.1
      comp=Z,1.2nm,0.3s,baz=210,slow=13,SNR=58
ARCES                                Sn     Sn     17 14 45.5 +1.0
      comp=Z,2.1nm,0.3s,baz=213,slow=22,SNR=13
LOF   Lofoten             3.02 294  eP      Pn     17 14 08.8 +0.5
KONS  Konsvik             3.15 263  eP      Pn     17 14 11.0 +1.0
OUF   Merijarvi           3.15 148  eP      Pn     17 14 11.3 +1.2
OUF   Merijarvi           3.15 148  eP      Pn     17 14 11.3 +1.2
UMAU  Umeaa               3.22 182   P      Pn     17 14 11.5 +0.5
UMAU  Umeaa               3.22 182  eP      Pn     17 14 11.4 +0.4
UMAU  Umeaa               3.22 182   P      Pn     17 14 11.5 +0.5
VRF   Varrio              3.42  75  eP      Pn     17 14 14.5 +0.7
VRF                                 eSG     Sb     17 15 04.5 +1.8
VRF   Varrio              3.42  75  eP      Pn     17 14 14.5 +0.7
MSF   Maaselka            3.46 106  eP      Pn     17 14 16.0 +1.6
MSF   Maaselka            3.46 106  eP      Pn     17 14 16.0 +1.6
KEV   Kevo                3.50  37  eP      Pn     17 14 15.3 +0.3
KEV                                 eS      Sn     17 14 57.2 +0.3
KEV   Kevo                3.50  37  eP      Pn     17 14 15.3 +0.3
KEV                                 eS      Sn     17 14 57.2 +0.3
KEV   Kevo                3.50  37  eP      Pn     17 14 15.2 +0.3
KEV                                 eS      Sn     17 14 57.4 +0.4
HAMF  Hammerfest          3.71  14  eP      Pn     17 14 19.9 +2.1
KU6   Riekki              3.74 102  eP      Pn     17 14 18.7 +0.5
KU6   Riekki              3.74 102  eP      Pn     17 14 18.7 +0.5
HUSU  Husum               3.83 192   P      Pn     17 14 19.8 +0.4
HUSU                                 S      Sn     17 15 03.9 -1.1
HUSU  Husum               3.83 192  eP      Pn     17 14 19.8 +0.4
HUSU                                eS      Sn     17 15 03.9 -1.1
HUSU  Husum               3.83 192   P      Pn     17 14 19.8 +0.4
HUSU                                 S      Sn     17 15 03.9 -1.1
VAF   Ylistaro            4.12 169  eP      Pn     17 14 24.2 +0.7
VAF   Ylistaro            4.12 169  eP      Pn     17 14 24.2 +0.7
HEMU  Hemsoen             4.59 197  eP      Pn     17 14 30.4 +0.5
HEMU  Hemsoen             4.59 197  eP      Pn     17 14 30.4 +0.5
FIA0  FINESS Array S      6.09 156   Pn     Pn     17 14 51.2 +0.8
      baz=344,slow=12
FIA0                                 Sn     Sn     17 16 00.9 +0.2
      baz=346,slow=28
FIA0  FINESS Array S      6.09 156   Pn     Pn     17 14 51.2 +0.8
      SNR=5.9
FIA0                                 Sn     Sn     17 16 00.9 +0.2
      SNR=5.8
FIA0  FINESS Array S      6.09 156   Pn     Pn     17 14 51.2 +0.8
      baz=344,slow=12
FIA0                                 Sn     Sn     17 16 00.9 +0.2
      baz=346,slow=28
FINES FINESS Array B      6.09 156   Pn     Pn     17 14 51.2 +0.8
      comp=Z,0.1nm,0.3s,baz=346,slow=11,SNR=8.6
FINES                                Sn     Sn     17 16 00.4 -0.3
      comp=Z,0.3nm,0.3s,baz=349,slow=26,SNR=6.0
FINES                                Lg     Lg     17 16 29.5
      comp=Z,0.3nm,0.3s,baz=341,slow=28,SNR=3.7
RAF   Rauma               6.10 176  eP      Pn     17 14 51.5 +0.9
      SNR=50
RAF                                 eS      Sn     17 15 59.8 -1.1
      comp=Z,4.8nm,0.3s,SNR=50
NB2   NORSAR Subarra      7.40 220   Pn     Pn     17 15 08.3 -0.2
      baz=27,slow=14
NB2   NORSAR Subarra      7.40 220   Pn     Pn     17 15 08.3 -0.2
      baz=27,slow=14
NRA0  NORESS Array S      7.59 217   Pn     Pn     17 15 11.2 +0.2
      baz=22,slow=16
NRA0                                 Sn     Sn     17 16 37.0 -0.6
      baz=29,slow=28
NRA0  NORESS Array S      7.59 217   Pn     Pn     17 15 11.2 +0.2
      baz=22,slow=16
NRA0                                 Sn     Sn     17 16 37.0 -0.6
      baz=29,slow=28
HFS   Hagfors             7.68 208   Pn     Pn     17 15 12.1 -0.2
      baz=27,slow=14
HFS                                  Sn     Sn     17 16 37.9 -1.9
      baz=23,slow=28
HFS   Hagfors             7.68 208   Pn     Pn     17 15 12.0 -0.2
      comp=Z,0.1nm,0.3s,baz=25,slow=12,SNR=10
HFS                                  Sn     Sn     17 16 38.2 -1.6
      comp=Z,0.1nm,0.3s,baz=28,slow=26,SNR=3.3
HFS   Hagfors             7.68 208   Pn     Pn     17 15 12.1 -0.2
      baz=27,slow=14
HFS                                  Sn     Sn     17 16 37.9 -1.9
      baz=23,slow=28
```

IDC 17 17:25:24.9±2.1**,1°.06N**×**91°.99E,h0**^{km}**,mb3.3**/4**,mb1 3.6**/6**, mb1mx3.3**/71**,mbtmp3.4**/6**,ML3.5**/2**,Error ellipse: s-maj=59.2km s-min=27.7km az=52.0,North Indian Ocean**

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Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op     ISC       h  m  s    ISC
PALK  Pallekele          12.83 299   Pn     Pn     17 28 29.6 +0.8
      0.1nm,0.3s,baz=116,slow=13,SNR=2.1
PALK                                 Sn     Sn     17 30 38.3  -14
      0.3nm,0.3s,baz=116,slow=15,SNR=2.8
CMAR  Chiang Mai Arr     18.59  21   P      P      17 29 43.7 -0.1
      0.1nm,0.3s,baz=215,slow=12,SNR=3.7
H08S2 Diego Garcia H     21.28 246   T      T      17 52 01.3
      baz=65,slow=74,SNR=4.6
H08S3 Diego Garcia H     21.28 246   T      T      17 51 56.3
      baz=65,slow=74,SNR=8.0
H08S1 Diego Carcia H     21.30 246   T      T      17 52 08.0
      baz=65,slow=74,SNR=6.8
MKAR  Makanchi Array     46.33 351   P      P      17 33 52.6 -0.1
      0.2nm,0.6s,baz=156,slow=7.3,SNR=3.0
WRA   Warramunga Arr     46.45 119   P      P      17 33 53.9 -0.2
      0.4nm,0.7s,baz=294,slow=8.5,SNR=4.9
SONM  Songino Array      48.24  13   P      P      17 34 08.2 +0.6
      0.3nm,0.6s,baz=193,slow=8.9,SNR=3.0
KURBB Kurchatov Arra     50.69 349   P      P      17 34 25.0 -1.1
      0.2nm,0.5s,baz=170,slow=6.2,SNR=2.6
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*ISCJB **17** 17:30:28.2±0.8, 38°.24N±0°.04×141°.96E±0°.08, h51^{km}±8^{km}, mb3.3/4, Error ellipse: s-maj=10.9km s-min=5.2km az=17.4*

*JMA **17** 17:30:29.8±0.1, 38°.26N×141°.85E, h47^{km}±1^{km}, M3.4*

*IDC **17** 17:30:29.3±2.2, 38°.27N×142°.10E, h49^{km}±21^{km}, mb3.0/4, mb1 3.2/7, mb1mx3.1/69, mbtmp3.3/7, ML2.9/3, Error ellipse: s-maj=37.6km s-min=15.8km az=93.0*

ISC 17 17:30:28.4±1.6**,38°.22N**±0°.04×**141°.95E**±0°.08**,h32**^{km}±7^{km}**, n26,**σ**1ˢ25**/36**,mb3.4**/4**,Near east coast of eastern Honshu**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op     ISC       h  m  s    ISC
JIO   Ouri                0.52 297   P      Pn     17 30 40.2 +0.6
JIO                                 eS      Sb     17 30 47.2 +0.4
OFUJ  Ofunato             0.89 346   P      Pb     17 30 45.2 -0.1
OFUJ                                 S      Sb     17 30 55.9 -0.9
JMK   Ichinoseki          0.93 322   P      Pb     17 30 45.7 -0.2
JMK                                  S      Sn     17 30 56.8 -0.5
JMM   Marumori            0.98 249   P      Pn     17 30 46.0 +0.2
JMM                                  S      Sn     17 30 57.7 -0.8
JOU   Okura               1.02 279   P      Pn     17 30 47.0 +0.6
JOU                                  S      Sn     17 30 59.4 -0.2
JFK   Kawauchi            1.20 225   P      Pn     17 30 49.5 +0.5
JFK                                 eS      Sn     17 31 04.7 +0.5
JOM   Ohasama             1.35 338   P      Pn     17 30 51.8 +0.8
JOM                                 eS      Sn     17 31 08.0 +0.2
JYK   Kaneyama            1.43 300   P      Pn     17 30 52.5 +0.5
JYK                                  S      Sn     17 31 10.2 +0.6
JFT   Otama               1.45 242   P      Pn     17 30 53.5 +1.1
JFT                                  S      Sn     17 31 10.8 +0.4
JYS   Shirataka           1.48 271   P      Pn     17 30 53.4 +0.6
JYS                                  S      Sn     17 31 11.1 +0.1
JRG   Rokugo              1.56 319   P      Pn     17 30 55.3 +1.5
JRG                                 eS      Sn     17 31 14.2 +1.3
JYA   Atsumi              1.79 283   P      Pn     17 30 57.9 +0.9
JYA                                 eS      Sn     17 31 19.6 +0.9
MJAR  Matsushiro Arr      3.42 242   P      Pn     17 31 21.6 +2.2
      1.0nm,0.3s,baz=63,slow=11,SNR=11
MJAR                                 S      Sb     17 32 11.5 +2.2
      0.9nm,0.3s,baz=54,slow=40,SNR=4.9
MAT   Matsushiro          3.42 242   P      Pn     17 31 22.3 +2.9
MAT                                  S      Sb     17 32 06.0 -3.3
JHJ   Hachijo jima 2      5.39 200   P      Pn     17 31 48.0 +1.5
      2.8nm,0.3s,baz=39,slow=19,SNR=3.7
JHJ                                  S      Sn     17 32 45.5 -1.9
      4.5nm,0.3s,baz=230,slow=18,SNR=3.6
ASAJ  Asahikawa           5.91   5   P      Pn     17 31 54.4 +0.8
      0.2nm,0.3s,baz=185,slow=13,SNR=4.2
ASAJ                                 S      Sn     17 32 59.5 -0.6
      0.2nm,0.3s,baz=319,slow=20,SNR=2.3
H11N2 WAKE ISLAND Hy     28.42 123   T      T      18 06 36.8
      baz=316,slow=75,SNR=7.3
H11N1 WAKE ISLAND Hy     28.43 123   T      T      18 06 35.0
      baz=316,slow=75,SNR=12
H11N3 WAKE ISLAND Hy     28.44 123   T      T      18 06 38.0
      baz=316,slow=75,SNR=9.1
H11S1 WAKE ISLAND Hy     29.18 125   T      T      18 07 32.5
      baz=317
H11S3 WAKE ISLAND Hy     29.18 125   T      T      18 07 38.1
      baz=317
H11S2 WAKE ISLAND Hy     29.19 125   T      T      18 07 40.2
      baz=317
MKAR  Makanchi Array     43.86 301   P      P      17 38 31.3 -0.2
      0.1nm,0.5s,baz=73,slow=9.7,SNR=2.4
KURBB Kurchatov Arra     45.61 307   P      P      17 38 44.8 -0.5
      0.2nm,0.4s,baz=79,slow=8.1,SNR=4.1
WRA   Warramunga Arr     58.29 188   P      P      17 40 18.6 -1.4
      0.2nm,0.5s,baz=6.5,slow=6.9,SNR=5.5
ASAR  Alice Springs      62.02 188   P      P      17 40 45.7 +0.2
      0.3nm,0.7s,baz=15,slow=3.8,SNR=3.5
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*IDC **17** 17:42:22.1±0.8, 9°.96S×151°.93E, h0^{km}, mb4.1/11, mb1 4.2/14, mb1mx4.0/44, mbtmp4.1/14, ML3.8/2, MS3.5/11, Ms1 3.4/11, ms1mx3.2/43, Error ellipse: s-maj=22.6km s-min=16.0km az=125.0*

*ISCJB **17** 17:42:25.4±0.4, 9°.95S±0°.05×151°.80E±0°.07, h33^{km}, mb4.5/22, MS3.4/9, Error ellipse: s-maj=10.3km s-min=5.8km az=19.8*

*NEIC **17** 17:42:26.5±0.4, 9°.94S×151°.98E, h35^{km}, mb4.7/13, Error ellipse: s-maj=10.5km s-min=7.3km az=118.0*

ISC 17 17:42:26.4±0.5**,9°.98S**±0°.06×**151°.95E**±0°.07**,h35**^{km}**,n51,** σ**1ˢ44**/48**,mb4.3**/22**,MS3.3**/9**,D'Entrecasteaux Islands region**

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Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op     ISC       h  m  s    ISC
PMG   Port Moresby        4.76 276   Pn     Pn     17 43 34.6 -1.0
      1.2nm,0.3s,baz=243,slow=20,SNR=6.6
PMG                                  Lg     Lg     17 44 51.8
      1.0nm,0.3s,baz=239,slow=19,SNR=1.9
RABL  Rabaul              5.75   2  ePn     Pn     17 43 46.5 -2.8
RABL                                eSn     Sn     17 44 55.7 +1.5
HNR   Honiara             7.90  87   LR     LR     17 46 54.0
      comp=Z,140nm,18.1s,baz=327,slow=34
HNR   Honiara             7.90  87  ePn     Pn     17 44 15.0 -3.8
COEN  Coen                9.45 244  ePn     Pn     17 44 38.5 -1.6
COEN                                eSn     Sn     17 46 22.8 -2.5
CTA   Charters Tower     11.46 208   Pn     Pn     17 45 07.4 -0.2
      0.5nm,0.3s,baz=41,slow=14,SNR=5.4
CTAO  Charters Tower     11.46 208  ePn     Pn     17 45 06.3 -1.2
EIDS  Eidsvold           15.33 183  ePn     Pn     17 46 00.9 +0.7
      16nm,1.1s
DZM   Mont Dzumac        18.38 133   LR     LR     17 52 55.3
      comp=Z,410nm,18.0s,baz=312,slow=34
WRAB  Tennant Creek      19.66 238  eP      Pn     17 46 53.7 -0.3
WRAB                                esP     pP     17 46 59.6 -2.0
WB2   Warramunga Arr     19.66 238  eP      P      17 46 52.9 +0.5
      7.6nm,0.9s
WR1   Warramunga Arr     19.67 238  eP      P      17 46 53.1 +0.6
      6.0nm,0.8s
WRA   Warramunga Arr     19.67 238   P      P      17 46 53.1 +0.6
      0.3nm,0.3s,baz=64,slow=10.0,SNR=30
FAKI  Fak Fak            20.79 288  eP      P      17 47 02.5 -2.2
      47nm,1.2s
AS01  Alice Springs      21.92 229  eP      P      17 47 18.0 +1.1
AS31  Alice Springs      21.95 229  eP      P      17 47 17.9 +0.7
      3.0nm,0.7s
ASAR  Alice Springs      21.96 229   P      P      17 47 17.9 +0.6
      5.1nm,0.7s,baz=58,slow=9.7,SNR=79
ASAR                                 LR     LR     17 55 35.8
      comp=Z,78nm,20.8s,baz=78,slow=36
STKA  Stephens Creek     23.81 202   P      P      17 47 36.8 +0.7
      4.1nm,0.8s,baz=34,slow=13,SNR=7.1
STKA                                 LR     LR     17 57 10.0
      comp=Z,92nm,19.5s,baz=15,slow=37
STKA  Stephens Creek     23.81 202  eP      P      17 47 37.4 +1.3
      1.6nm,0.9s
GUMO  Guam               24.45 343   LR     LR     17 55 19.4
      comp=Z,41nm,20.6s,baz=162,slow=32
CAN   Canberra           25.37 186  eP      P      17 47 52.2 +1.8
      49nm,1.8s
FITZ  Fitzroy Crossi     26.75 250   P      P      17 48 03.4 +0.4
      2.2nm,0.8s,baz=102,slow=9.5,SNR=3.6
BBOO  Buckleboo          27.04 210  eP      P      17 48 06.3 +0.8
      136nm,2.0s
SOEI  Soe                27.27 268  eP      P      17 48 08.7 +0.8
      26nm,1.1s
LUWI  Luwuk              30.34 285  eP      P      17 48 34.7 -0.3
      32nm,1.1s
FORT  Forrest            30.37 224  eP      P      17 48 36.2 +1.1
      23nm,0.8s
OUZ   Omahuta            31.95 145  eP      P      17 48 49.2 +0.3
      97nm,1.6s
JAGI  Jajag, Banyuwa     37.33 269  eP      P      17 49 34.9 -0.9
      37nm,1.1s
MJAR  Matsushiro Arr     48.04 345   P      P      17 51 01.7 -0.6
      2.8nm,0.9s,baz=171,slow=8.9,SNR=7.1
MJAR                                 LR     LR     18 10 30.3
      comp=Z,23nm,18.6s,baz=265,slow=35
MAJO  Matsushiro         48.05 345  eP      P      17 51 01.7 -0.6
MNAI  Manna              48.89 273  eP      P      17 51 09.2 -0.1
      468nm,1.4s
KSRS  Korea Array        52.28 336   LR     LR     18 11 59.2
      comp=Z,19nm,18.4s,baz=198,slow=34
CMAR  Chiang Mai Arr     59.44 298   P      P      17 52 27.9 +1.8
      0.3nm,0.6s,baz=123,slow=6.6,SNR=2.7
PETK  Petropavlovsk-     63.03   4   P      P      17 52 51.0 +1.3
      6.6nm,0.9s,baz=163,slow=5.6
PETK                                 LR     LR     18 19 13.0
      comp=Z,24nm,18.1s,baz=143,slow=35
PETK  Petropavlovsk-     63.03   4  eP      P      17 52 50.4 +0.7
PEA1  Petropavlovsk-     63.03   4  eP      P      17 52 51.0 +1.3
SONA0 Songino Array      70.27 329  eP      P      17 53 37.9 +1.6
SONM  Songino Array      70.27 329   P      P      17 53 37.9 +1.6
      3.5nm,1.0s,baz=142,slow=6.0,SNR=14
SONM                                 LR     LR     18 26 23.5
      comp=Z,26nm,18.1s,baz=170,slow=38
SONA1 Songino Array      70.28 329  eP      P      17 53 38.0 +1.7
QSPA  South Pole Qui     80.02 180   P      P      17 54 33.0 +0.9
      3.5nm,1.0s,baz=207,slow=0.1,SNR=4.6
MAW   Mawson             80.50 203   LR     LR     18 28 04.5
      comp=Z,90nm,18.7s,baz=63,slow=34
MK32  Makanchi Array     83.67 320  eP      P      17 54 52.6 +1.1
MKAR  Makanchi Array     83.67 320   P      P      17 54 52.6 +1.1
      0.8nm,0.9s,baz=97,slow=6.0,SNR=6.6
MAKZ  Makanchi           83.88 320  eP      P      17 54 53.9 +1.3
      2.6nm,1.1s
COLA  College            86.94  22  eP      P      17 55 04.4 -2.9
      31nm,0.3s
IL1   Eielson Array      87.24  22  eP      P      17 55 08.2 -0.7
ILAR  Eielson Array      87.24  22   P      P      17 55 09.0 +0.1
      0.9nm,0.9s,baz=264,slow=5.0,SNR=6.0
NVAR  Mina Array Bea     95.92  52   P      P      17 55 52.2 +2.1
      0.6nm,0.8s,baz=260,slow=5.4,SNR=3.0
SNAA  Sanae              96.82 188   LR     LR     18 38 16.6
      comp=Z,47nm,18.6s,baz=310,slow=35
TORD  Torodi Ar. Bea    150.70 279   PKPbc  PKPbc  18 02 16.9 +1.0
      baz=130,slow=2.3
TOA1  Torodi Ar. Sit    150.70 279  ePKPbc  PKPbc  18 02 16.9 +1.0
```

DJA 17 17:47:37.2±2.7**,2°S**±6°×**13°9E**±°**,h21**^{km}±27^{km}**,M3.9**/6**, mb4.2**/2**,MLv3.7**/6**,Irian Jaya**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op     ISC       h  m  s    ISC
GENI  Genyem              1.24  98   P      Pn     17 47 59.1 -0.2
GENI                                 S      Sb     17 48 16.3 +0.9
JAY   Jayapura            1.77  93   P      Pn     17 48 05.4 -1.2
BAKI  Biak                3.08 293   P      Pn     17 48 25.0 +0.3
FAKI  Fak Fak             6.70 266   P      Pn     17 49 13.1 -1.4
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*ISCJB **17** 17:51:15.0±0.5, 31°.20S±0°.05×179°.21W±0°.09, h10^{km}, mb4.5/16, MS3.5/3, Error ellipse: s-maj=12.5km s-min=6.1km az=23.5*

*NEIC **17** 17:51:15.8±0.6, 31°.39S×179°.20W, h10^{km}, mb4.7/10, Error ellipse: s-maj=18.3km s-min=8.8km az=105.0*

*IDC **17** 17:51:15.3±0.8, 31°.15S×179°.24W, h0^{km}, mb4.2/8, mb1 4.4/10, mb1mx4.1/45, mbtmp4.2/10, ML3.6/2, MS3.5/5, Ms1 3.5/5, ms1mx3.0/49, Error ellipse: s-maj=23.7km s-min=20.3km az=119.0*

ISC 17 17:51:16.4±0.6**,31°.13S**±0°.07×**179°.2W**±0°.1**,h10**^{km}**,n44,** σ**1ˢ94**/39**,mb4.5**/16**,MS3.5**/3**,Kermadec Islands region**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op     ISC       h  m  s    ISC
RAO   Raoul Island        2.17  31   Pn     Pn     17 51 52.0 -0.6
      48nm,0.3s,baz=135,slow=19,SNR=3.2
RAO                                  Sn     Sn     17 52 18.6 -0.8
      129nm,0.3s,baz=256,slow=20,SNR=4.3
RAO                                  LR     LR     17 52 34.0
      comp=Z,578nm,18.9s,baz=170,slow=36
MXZ   Matakaoa Point      6.75 197  ePn     Pn     17 52 52.6 -2.8
OUZ   Omahuta             7.30 234  ePn     Pn     17 53 04.7 +1.7
URZ   Urewera             7.74 202   Pn     Pn     17 53 07.5 -1.6
      0.3nm,0.3s,baz=324,slow=5.7,SNR=3.9
URZ                                  Sn     Sn     17 54 38.8 +1.9
      0.1nm,0.3s,baz=102,slow=19,SNR=1.7
URZ   Urewera             7.74 202  ePn     Pn     17 53 10.1 +1.0
URZ                                 eSn     Sn     17 54 38.8 +1.9
BKZ   Black Stump Fm      8.77 203  ePn     Pn     17 53 21.5 -1.8
BFZ   Birch Farm         10.23 200  ePn     Pn     17 53 39.7 -3.5
SNZO  South Karori       11.29 204  ePn     Pn     17 53 53.6 -4.2
THZ   Tophouse           12.37 209  ePn     Pn     17 54 07.6 -4.9
KHZ   Kahutara           12.68 205  ePn     Pn     17 54 10.4 -6.3
MQZ   McQueen's Vall     14.12 205  ePn     Pn     17 54 29.8 -6.6
RPZ   Rata Peaks         14.75 209   LR     LR     17 59 59.8
      comp=Z,258nm,21.8s,baz=28,slow=36
LBZ   Lake Benmore       15.66 209  ePn     Pn     17 54 52.2 -4.9
      225nm,2.0s
ODZ   Otahua Downs       16.02 207  ePn     Pn     17 54 56.6 -5.1
      120nm,1.7s
RAR   Rarotonga          20.00  65   LR     LR     18 01 50.9
      comp=Z,66nm,21.2s,baz=264,slow=32
STKA  Stephens Creek     33.32 258   LR     LR     18 10 40.8
      comp=Z,79nm,18.1s,baz=199,slow=35
AS01  Alice Springs      42.01 268  eP      P      17 59 08.8 +0.6
AS31  Alice Springs      42.05 268  eP      P      17 59 07.5 -1.0
      1.5nm,1.0s
ASAR  Alice Springs      42.05 268   P      P      17 59 08.5  0.0
      3.4nm,1.0s,baz=103,slow=7.3,SNR=18
MANU  Manus Island       42.83 306  eP      P      17 59 13.3 -1.6
      96nm,2.0s
WB2   Warramunga Arr     43.10 274  eP      P      17 59 16.4 -0.6
      7.4nm,0.9s
WRAB  Tennant Creek      43.10 274  eP      P      17 59 16.4 -0.7
      8.2nm,1.0s
WR1   Warramunga Arr     43.11 274  eP      P      17 59 16.9 -0.2
      9.9nm,1.0s
WRA   Warramunga Arr     43.11 274   P      P      17 59 16.9 -0.2
      6.1nm,1.0s,baz=113,slow=8.0,SNR=21
SBA   Scott Base         47.24 184  eP      P      17 59 50.5 +1.4
      8.2nm,1.2s
VNDA  Vanda              47.27 186  eP      P      17 59 50.9 +1.5
      7.4nm,1.7s
FITZ  Fitzroy Crossi     51.34 271   P      P      18 00 21.6 +0.4
      5.1nm,0.9s,baz=124,slow=7.5,SNR=5.5
QSPA  South Pole Qui     58.99 180   P      P      18 01 15.8 -0.2
      3.4nm,0.7s,baz=68,slow=0.8,SNR=9.6
QSPA  South Pole Qui     58.99 180  eP      P      18 01 15.8 -0.2
      8.6nm,1.1s
LUWI  Luwuk              62.41 287  eP      P      18 01 42.7 +2.8
      107nm,0.5s
MJAR  Matsushiro Arr     78.26 326   P      P      18 03 17.6 +1.2
      2.5nm,1.1s,baz=141,slow=4.1,SNR=4.3
MAJO  Matsushiro         78.26 326  eP      P      18 03 17.6 +1.2
PLCA  Paso Flores        82.76 133   P      P      18 03 42.5 +1.6
      1.9nm,0.9s,baz=249,slow=8.5,SNR=6.6
PLCA  Paso Flores        82.76 133  eP      P      18 03 42.3 +1.5
      16nm,1.8s
KSRS  Korea Array        84.24 320   P      P      18 03 49.1 +1.1
      1.1nm,0.9s,baz=147,slow=5.5,SNR=4.0
KS15  Wonju Array Si     84.25 320  eP      P      18 03 48.9 +0.8
KSAR  Wonju Array Be     84.25 320   P      P      18 03 49.1 +1.0
KS01  Wonju Array Si     84.27 320  eP      P      18 03 49.3 +1.0
NVAR  Mina Array Bea     89.47  43   P      P      18 04 14.7 +0.9
      1.0nm,0.8s,baz=224,slow=7.6,SNR=4.7
NV01  Mina Array Sit     89.47  43  eP      P      18 04 13.7 -0.2
NNA   Nana               94.20 107   LR     LR     18 38 21.8
      comp=Z,55nm,20.6s,baz=74,slow=30
FIA1  FINESS Array S    145.46 339  ePKPbc  PKPdf  18 10 52.9 -1.0
FIA0  FINESS Array S    145.46 339  ePKPbc  PKPdf  18 10 53.2 -0.7
FINES FINESS Array B    145.46 339   PKPbc  PKPdf  18 10 53.2 -0.7
      5.8nm,1.0s,baz=45,slow=3.0,SNR=8.2
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*ISCJB **17** 17:57:41.9±0.8, 46°.0N±0°.1×153°.9E±0°.1, h10^{km}, mb3.8/9, Error ellipse: s-maj=18.2km s-min=9.2km az=153.9*

*IDC **17** 17:57:42.2±0.9, 46°.03N×154°.01E, h0^{km}, mb3.8/9, mb1 3.8/11, mb1mx3.6/72, mbtmp3.7/11, ML3.0/1, Error ellipse: s-maj=25.9km s-min=20.9km az=85.0*

*SKHL **17** 17:58:10.0±0.3, 45°.24N×152°.70E, h45^{km}±1^{km}, mb4.3/3*

ISC 17 17:57:42.9±0.9**,45°.9N**±0°.1×**153°.94E**±0°.09**,h10**^{km}**,n16,** σ**1ˢ97**/19**,mb3.7**/9**,East of Kuril Islands**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op     ISC       h  m  s    ISC
KUR   Kuril'sk            4.31 264  eP      Pb     17 59 01.0 +2.3
KUR                                  AMB    AMB    17 59 02.0
      12nm,0.3s
KUR                                  AMB    AMB    17 59 02.0
      23nm,0.3s
KUR                                 eS      Sn     17 59 39.0 +0.2
KUR                                  A      A      17 59 42.0
      78nm,0.3s
KUR                                  A      A      17 59 42.0
      63nm,0.3s
SHO   Shikotan            5.43 251  eP      Pb     17 59 15.0 -2.8
SHO                                  AMB    AMB    17 59 27.0
      8.0nm,0.3s
SHO                                  AMB    AMB    17 59 27.0
      6.0nm,0.3s
SHO                                  AMB    AMB    17 59 27.0
      16nm,0.3s
SHO                                 i S     Sn     18 00 04.0 -2.3
SHO                                  A      A      18 00 12.0
      34nm,0.2s
SHO                                  A      A      18 00 12.0
      26nm,0.2s
YUK   Yuzh-Kuril'sk       6.02 255  eP      Pb     17 59 24.0 -3.7
YUK                                  AMB    AMB    17 59 26.0
      2.0nm,0.4s
YUK                                  AMB    AMB    17 59 26.0
      13nm,0.4s
YUK                                  AMB    AMB    17 59 26.0
      14nm,0.4s
YUK                                 eS      Sn     18 00 19.0 -1.8
YUK                                  A      A      18 00 26.0
      62nm,0.4s
YUK                                  A      A      18 00 26.0
      47nm,0.4s
GLVR  Golovnino           6.36 254  eP      Pb     17 59 28.0 -5.5
GLVR                                eS      Sn     18 00 28.0 -1.1
PETK  Petropavlovsk-      7.66  17   Pn     Pn     17 59 32.5 -1.9
      baz=180,slow=13
ASAJ  Asahikawa           8.23 262   Pn     Pn     17 59 45.4 +3.2
      0.2nm,0.3s,baz=60,slow=14,SNR=3.5
MKAR  Makanchi Array     47.87 298   P      P      18 06 21.2 +0.5
      0.3nm,0.7s,baz=59,slow=6.3,SNR=3.4
KURBB Kurchatov Arra     48.43 305   P      P      18 06 23.9 -1.1
      0.8nm,0.7s,baz=70,slow=8.4,SNR=4.9
BVAR  Borovoye Array     51.87 310   P      P      18 06 51.4 +0.3
      0.2nm,0.4s,baz=43,slow=6.5,SNR=4.2
FINES FINESS Array B     65.09 335   P      P      18 08 23.1  0.0
      1.7nm,0.7s,baz=52,slow=5.4,SNR=6.1
WRA   Warramunga Arr     67.86 200   P      P      18 08 42.6 +1.4
      0.3nm,0.7s,baz=338,slow=7.4,SNR=3.2
HFS   Hagfors            69.49 340   P      P      18 08 52.1 +1.1
      3.9nm,1.0s,baz=54,slow=7.3,SNR=3.3
```

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
ASAR	**Alice Springs**	**71.55**	**199**	P	**P**	**18 09 06.5**	**+2.5**
	0.4nm,0.7s,baz=15,slow=5.2,SNR=8.0						
TXAR	**Lajitas Array**	**77.43**	**61**	P	**P**	**18 09 38.1**	**-0.3**
	0.4nm,0.6s,baz=311,slow=2.9,SNR=4.7						
MMAI	**Mount Meron Ar**	**83.83**	**312**	P	**P**	**18 10 12.9**	**+0.2**
	1.5nm,0.5s,baz=49,slow=4.4,SNR=3.3						
PLCA	**Paso Flores**	**147.54**	**97**	PKPbc	**PKPab**	**18 17 28.0**	**-1.0**
	0.9nm,0.8s,baz=273,slow=8.4,SNR=4.0						

TRN 17 18:35:23.2, 10°.83N×61°.05W, h60^{km}, MD3.7, 1C-4D, Trinidad

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TBH	**Brigand Hill**	**0.34**	**183**	*i* P	Pn	18 35 34.4	+0.8
TBH				*e*S	Sn	18 35 42.4	+1.2
TRN	**Trinidad (W)**	**0.39**	**243**	⇓*i*P	Pn	18 35 34.4	+0.3
TRN				*e*S	Sn	18 35 41.5	-0.5
TPP	**Pointe-a-Pierr**	**0.64**	**218**	*e*P	Pn	18 35 37.4	+0.7
TPP				*e*S	Sn	18 35 46.6	-0.1
TOSP	**Speyside**	**0.69**	**47**	⇓*i*P	Pn	18 35 37.0	-0.3
TOSP				*e*S	Sn	18 35 47.4	-0.2
GRGR	**Grenville**	**1.43**	**335**	*e*P	Pn	18 35 46.3	-0.7
GRGR				*e*S	Sn	18 36 04.8	0.0
GRHS	**Sauteurs**	**1.51**	**337**	*e*P	Pn	18 35 47.8	-0.2
GRHS				*e*S	Sn	18 36 06.2	-0.5
GRSS	**Sisters**	**1.56**	**339**	*e*P	Pn	18 35 48.5	-0.2
GRSS				*e*S	Sn	18 36 08.6	+0.6
FCV	**Fort Charlotte**	**2.33**	**355**	*e*P	Pn	18 36 00.2	+1.1
FCV				*e*S	Sn	18 36 26.4	-0.2
SVCV	**St. Vincent, C**	**2.43**	**358**	*e*P	Pn	18 36 00.3	-0.3
SVCV				*e*S	Sn	18 36 28.6	-0.7
SVB	**Belmont**	**2.44**	**355**	*e*P	Pn	18 36 00.7	0.0
SVB				*e*S	Sn	18 36 28.9	-0.4
SVV	**Soufriere Volc**	**2.48**	**356**	*e*P	Pn	18 36 02.4	+1.1
SSV	**Crater Summit**	**2.49**	**357**	*e*P	Pn	18 36 01.7	+0.3
BBGH	**Gun Hill**	**2.73**	**32**	*e*P	Pn	18 36 04.9	+0.3
BBGH				*e*S	Sn	18 36 35.9	-0.5
MCLT	**Moule a Chique**	**2.87**	**2**	*e*	Pn	18 36 05.3	-1.2
MCLT	**Moule a Chique**	**2.87**	**2**	*e*P	Pn	18 36 06.5	0.0
MCLT				*e*S	Sn	18 36 38.2	-1.6
SLB	**Belfond**	**2.98**	**0**	*e*P	Pn	18 36 08.5	+0.4
SLB				*e*S	Sn	18 36 41.9	-0.8
BIM	**Bigot**	**3.67**	**360**	*e*P	Pn	18 36 17.7	+0.2
BIM				*e*S	Sn	18 36 59.2	-0.4
TRMF	**Trois Ilets**	**3.69**	**360**	*e*P	Pn	18 36 18.2	+0.5
MVM	**Montagne Vaucl**	**3.71**	**2**	*e*P	Pn	18 36 18.2	+0.1
ZAM	**Aeronautique**	**3.72**	**0**	*e*P	Pn	18 36 18.7	+0.5
LPMF	**Morne Lapointe**	**3.73**	**1**	⇑*e*P	Pn	18 36 18.8	+0.5
FDF	**Fort de France**	**3.88**	**359**	*e*P	Pn	18 36 20.7	+0.2
FDF				*e*S	Sn	18 37 03.8	-1.1
PML	**Morne Lenard**	**3.93**	**358**	*e*P	Pn	18 36 21.2	+0.1
CXM	**Morne La Croix**	**3.96**	**358**	*e*P	Pn	18 36 21.8	+0.2
CXM	**Morne La Croix**	**3.96**	**358**	*e*S	Sn	18 37 08.9	+1.9
BAMF	**Morne Balai**	**3.97**	**359**	⇓*i*P	Pn	18 36 21.9	+0.2
PCM	**Pelee Case Pet**	**3.97**	**358**	*e*P	Pn	18 36 21.4	-0.2
PCM	**Pelee Case Pet**	**3.97**	**358**	⇓*e*P	Pn	18 36 21.7	+0.1
DSHT	**Scott's Head**	**4.37**	**356**	*e*P	Pn	18 36 27.8	+0.7
DSTT	**Stowe**	**4.40**	**357**	*e*P	Pn	18 36 28.7	+1.2
DBCT	**Belle View Cho**	**4.43**	**356**	*e*P	Pn	18 36 29.1	+1.1
MDN	**Morne-Daniel**	**4.48**	**356**	*e*P	Pn	18 36 30.0	+1.5
BBL	**Barber's Block**	**4.69**	**355**	*e*P	Pn	18 36 32.7	+1.2
BBL	**Barber's Block**	**4.69**	**355**	*e*S	Sn	18 37 22.4	-2.3
MDPO	**Dominica; Chan**	**4.74**	**355**	*e*S	Sn	18 37 23.5	-2.2
TBG	**Guadaloupe-3**	**5.03**	**353**	*e*P	Pn	18 36 36.8	+0.7
MGG	**Marie-Galante**	**5.07**	**357**	*e*P	Pn	18 36 38.0	+1.3

ISCJB ***17*** *18:37:06.9±0.3, 49°.81N±0°.02×18°.44E±0°.02, h0^{km}, Error ellipse: s-maj=3.2km s-min=2.0km az=16.7*

CSEM ***17*** *18:37:08.1±0.2, 49°.81N×18°.48E, h1^{km}, ML2.8/10, Error ellipse: s-maj=6.2km s-min=2.9km az=14.0*

IPEC ***17*** *18:37:08.2±0.2, 49°.82N×18°.59E, h0^{km}, Error ellipse: s-maj=1.7km s-min=1.1km az=163.0*

PRU ***17*** *18:37:09.0, 49°.82N×18°.49E, h0^{km}*

VIE ***17*** *18:37:10.3±1.0, 49°.58N×18°.39E, h0^{km}, mb2.2/4, ml2.7/4, Error ellipse: s-maj=7.1km s-min=5.9km az=88.0 30 km SSE of Ostrava Suspected Mining induced.*

ISC 17 18:37:08.0±0.7**, 49°.80N**±0°.02×**18°.51E**±0°.02**, h0^{km}, n61,** σ**0^s.86**/111**, 9C-6D, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.23**	**279**	⇓*i*PG	**Pg**	**18 37 14.3**	**+1.8**
OKC				*e*SG	**Sg**	**18 37 17.4**	**+1.8**
	comp=Z,182nm,0.4s						
OKC	**Ostrava-Krasne**	**0.23**	**279**	Pg	**Pg**	**18 37 14.3**	**+1.8**
OKC				Sg	**Sg**	**18 37 17.4**	**+1.8**
	182nm,0.4s						
CHZP	**Chorzow**	**0.58**	**32**	*e*Pg	**Pg**	**18 37 19.5**	**+0.3**
CHZP				*e*Sg	**Sg**	**18 37 28.0**	**+1.3**
MORC	**Moravsky Berou**	**0.62**	**268**	⇑*i*P	**Pb**	**18 37 21.6**	**-0.3**
MORC				S	**Sb**	**18 37 30.5**	**-0.7**
MORC	**Moravsky Berou**	**0.62**	**268**	*e*Pg	**Pb**	**18 37 21.2**	**-0.6**
MORC	**Moravsky Berou**	**0.62**	**268**	⇑*i*P	**Pb**	**18 37 21.6**	**-0.3**
MORC				*e*Sg	**Sg**	**18 37 29.3**	**+1.2**
MORC				S	**Sb**	**18 37 30.5**	**-0.7**
MORC	**Moravsky Berou**	**0.62**	**268**	*e*PG	**Pb**	**18 37 21.3**	**-0.6**
MORC				*e*SG	**Sg**	**18 37 29.3**	**+1.2**
MORC	**Moravsky Berou**	**0.62**	**268**	*e*Pg	**Pb**	**18 37 21.2**	**-0.6**
	baz=86						
MORC				*e*Sg	**Sg**	**18 37 29.3**	**+1.2**
	98nm,0.3s,baz=86						
LANS	**Liptovska Anna**	**0.90**	**136**	*e*PG	**Pg**	**18 37 25.8**	**+0.5**
LANS				*e*SG	**Sb**	**18 37 38.4**	**-0.8**
LANS	**Liptovska Anna**	**0.90**	**136**	*e*Pg	**Pg**	**18 37 25.8**	**+0.5**
LANS				*e*Sg	**Sb**	**18 37 38.4**	**-0.8**
OJC	**Ojcow**	**0.93**	**63**	*e*Pg	**Pg**	**18 37 25.4**	**-0.5**
OJC				*e*Sg	**Sb**	**18 37 39.4**	**-0.7**
OJC	**Ojcow**	**0.93**	**63**	*e*Pg	**Pg**	**18 37 25.4**	**-0.5**
OJC				*e*Sg	**Sb**	**18 37 39.4**	**-0.7**
JAVC	**Velka Javorina**	**1.09**	**210**	*e*Pg	**Pb**	**18 37 30.1**	**+0.3**
JAVC	**Velka Javorina**	**1.09**	**210**	*e*PG	**Pb**	**18 37 30.2**	**+0.4**
JAVC	**Velka Javorina**	**1.09**	**210**	*e*Pg	**Pb**	**18 37 30.1**	**+0.3**
	baz=31						
KRLC	**Kraliky**	**1.15**	**285**	*e*PG	**Pg**	**18 37 29.9**	**-0.1**
KRLC				*e*SG	**Sb**	**18 37 45.7**	**-0.5**
	comp=Z,17nm,0.2s						
KRLC	**Kraliky**	**1.15**	**285**	Pg	**Pg**	**18 37 29.9**	**-0.1**
KRLC				Sg	**Sb**	**18 37 45.7**	**-0.5**
	17nm,0.2s						
NIE	**Niedzica**	**1.23**	**107**	*e*Pg	**Pg**	**18 37 31.6**	**0.0**
NIE				*e*Sg	**Sn**	**18 37 49.7**	**-0.1**
NIE	**Niedzica**	**1.23**	**107**	*e*Pg	**Pg**	**18 37 31.6**	**0.0**
NIE				*e*Sg	**Sn**	**18 37 49.7**	**-0.1**
VYHS	**Vyhne**	**1.33**	**170**	*e*PG	**Pg**	**18 37 33.7**	**+0.3**
VYHS				*e*SG	**Sn**	**18 37 52.0**	**-0.2**
VYHS				*e*LG	Lg	18 37 56.0	
VYHS	**Vyhne**	**1.33**	**170**	*e*Pg	**Pg**	**18 37 33.7**	**+0.3**
VYHS				*e*Sn	**Sn**	**18 37 52.0**	**-0.2**
VRAC	**Vranov**	**1.34**	**249**	⇑*i*P	**Pn**	**18 37 33.9**	**-0.1**
VRAC	**Vranov**	**1.34**	**249**	*e*Pg	**Pg**	**18 37 33.8**	**+0.1**
VRAC				*e*Sg	**Sb**	**18 37 52.0**	**+0.3**
VRAC				S	**Sn**	**18 37 53.9**	**+1.4**
VRAC	**Vranov**	**1.34**	**249**	*e*PG	**Pn**	**18 37 33.9**	**-0.1**
VRAC				*e*SG	**Sb**	**18 37 52.0**	**+0.3**
VRAC	**Vranov**	**1.34**	**249**	*e*Pg	**Pg**	**18 37 33.8**	**+0.1**
	baz=68						
VRAC				*e*Sg	**Sb**	**18 37 52.0**	**+0.3**
	46nm,0.4s,baz=68						
DPC	**Dobruska-Polom**	**1.51**	**292**	*e*PG	**Pn**	**18 37 36.6**	**+0.2**
DPC				*e*SG	**Sn**	**18 37 57.0**	**+0.2**
	comp=Z,24nm,0.3s						
DPC	**Dobruska-Polom**	**1.51**	**292**	Pg	**Pn**	**18 37 36.6**	**+0.2**
DPC				Sg	**Sn**	**18 37 57.0**	**+0.2**
	24nm,0.3s						
KRUC	**Moravsky**	**1.56**	**243**	*e*Pg	**Pb**	**18 37 37.7**	**-0.1**
KRUC				*e*Sg	**Sg**	**18 37 59.0**	**+0.8**
KRUC	**Moravsky**	**1.56**	**243**	*e*PG	**Pb**	**18 37 37.8**	**-0.1**
KRUC				*e*SG	**Sg**	**18 37 59.1**	**+0.8**
KRUC	**Moravsky**	**1.56**	**243**	*e*Pg	**Pb**	**18 37 37.7**	**-0.1**
	baz=61						
KRUC				*e*Sg	**Sg**	**18 37 59.0**	**+0.8**
	29nm,0.2s,baz=61						
MODS	**Modra-Piesok**	**1.64**	**210**	*e*PN	**Pn**	**18 37 38.6**	**+0.5**
MODS				*e*SN	**Sb**	**18 38 00.6**	**+0.2**
MODS				*e*LG	Lg	18 38 05.4	
MODS	**Modra-Piesok**	**1.64**	**210**	*e*Pn	**Pn**	**18 37 38.6**	**+0.5**
MODS				*e*Sn	**Sb**	**18 38 00.6**	**+0.2**
UPC	**Upice**	**1.75**	**295**	⇓*e*PG	**Pb**	**18 37 41.1**	**0.0**
UPC				*e*SG	**Sg**	**18 38 04.2**	**-0.1**
	comp=Z,18nm,0.6s						
UPC	**Upice**	**1.75**	**295**	Pg	**Pb**	**18 37 41.1**	**0.0**
UPC				Sg	**Sg**	**18 38 04.2**	**-0.1**
	18nm,0.6s						
KSP	**Ksiaz**	**1.76**	**307**	*e*Pb	**Pn**	**18 37 39.8**	**0.0**
KSP				*e*Pg	**Pg**	**18 37 41.8**	**+0.1**
KSP				*e*Sg	**Sg**	**18 38 04.6**	**0.0**
KECS	**Kecovo**	**1.85**	**135**	*e*PN	**Pn**	**18 37 40.7**	**-0.3**
KECS				*e*SN	**Sn**	**18 38 05.5**	**+0.4**
KECS				*e*LG	Lg	18 38 09.5	
KECS	**Kecovo**	**1.85**	**135**	*e*Pn	**Pn**	**18 37 40.7**	**-0.3**
KECS				*e*Sn	**Sn**	**18 38 05.5**	**+0.4**
PSZ	**Piszkesteto**	**2.10**	**154**	⇓*i*P	**Pn**	**18 37 44.7**	**+0.3**
PSZ	**Piszkesteto**	**2.10**	**154**	⇓*i*P	**Pn**	**18 37 44.7**	**+0.3**
PSZ				S	**Sb**	**18 38 14.4**	**+0.9**
CRVS	**Cervenica-Dubn**	**2.13**	**114**	*e*PN	**Pb**	**18 37 47.7**	**+0.2**
CRVS	**Cervenica-Dubn**	**2.13**	**114**	*e*Pn	**Pb**	**18 37 47.7**	**+0.2**
GOPC	**GO Pecny, Ondr**	**2.41**	**274**	*e*PG	**Pb**	**18 37 52.8**	**+0.6**
GOPC				*e*SG	**Sg**	**18 38 24.3**	**-1.1**
GOPC	**GO Pecny, Ondr**	**2.41**	**274**	Pg	**Pb**	**18 37 52.8**	**+0.6**
GOPC				Sg	**Sg**	**18 38 24.3**	**-1.1**
CONA	**Conrad Observa**	**2.56**	**224**	Pn	**Pn**	**18 37 50.0**	**-0.9**
	1.2nm,0.3s						
CONA				Sn	**Sn**	**18 38 20.3**	**-2.4**
	2.6nm,0.3s						
CONA	**Conrad Observa**	**2.56**	**224**	Pn	**Pn**	**18 37 50.0**	**-0.9**
	1.2nm,0.3s						
CONA				Sn	**Sn**	**18 38 20.3**	**-2.4**
	2.6nm,0.3s						
PRU	**Pruhonice**	**2.57**	**276**	⇓*e*PG	**Pb**	**18 37 55.6**	**+0.6**
PRU				*e*SG	**Sg**	**18 38 29.1**	**-1.4**
	comp=Z,8.7nm,0.4s						
PRU	**Pruhonice**	**2.57**	**276**	Pg	**Pb**	**18 37 55.6**	**+0.6**
PRU				Sg	**Sg**	**18 38 29.1**	**-1.4**
	8.7nm,0.4s						
PVCC	**Panska Ves**	**2.63**	**288**	⇓*e*SG	**Sg**	**18 38 32.5**	**-0.1**
	comp=Z,28nm,0.6s						
PVCC	**Panska Ves**	**2.63**	**288**	Sg	**Sg**	**18 38 32.5**	**-0.1**
	28nm,0.6s						
BRG	**Berggiesshubel**	**3.11**	**292**	PG	**Pb**	**18 38 05.5**	**+1.2**
BRG				SG	**Sg**	**18 38 46.1**	**-1.9**
	8.3nm,0.7s						
KHC	**Kasperske Hory**	**3.28**	**260**	*e*PG	**Pb**	**18 38 08.5**	**+1.3**
KHC				*e*SG	**Sg**	**18 38 51.7**	**-1.8**
	comp=Z,10nm,0.4s						
KHC	**Kasperske Hory**	**3.28**	**260**	Pg	**Pb**	**18 38 08.5**	**+1.3**
KHC				Sg	**Sg**	**18 38 51.7**	**-1.8**
	10nm,0.4s						
MOA	**Molln**	**3.41**	**237**	*e*Pn	**Pn**	**18 38 01.7**	**-0.8**
	0.9nm,0.3s						
MOA				Pg	**Pg**	**18 38 11.9**	**-1.6**
	1.0nm,0.2s						
MOA				*e*Sn	**Sn**	**18 38 43.1**	**-0.6**
	0.5nm,0.2s						
MOA				Sg	**Sg**	**18 38 56.9**	**-0.8**
	3.7nm,0.4s						
MOA	**Molln**	**3.41**	**237**	Pn	**Pn**	**18 38 01.7**	**-0.8**
	0.9nm,0.3s						
CLL	**Collm**	**3.82**	**295**	*e*Sg	**Sg**	**18 39 11.0**	**+0.3**
	comp=Z,7.0nm,0.7s						
DRGR		**4.12**	**135**	⇑*i*P	**Pn**	**18 38 12.3**	**+0.1**
DRGR		**4.12**	**135**	⇑*i*P	**Pn**	**18 38 12.3**	**+0.1**
DRGR				S	**Sn**	**18 39 01.3**	**+0.2**
BURAR	**Bucovina Array**	**4.95**	**114**	⇑*i*P	**Pn**	**18 38 22.7**	**-1.0**
BURAR	**Bucovina Array**	**4.95**	**114**	⇑*i*P	**Pn**	**18 38 22.7**	**-1.0**
VOIR		**6.21**	**132**	⇑*i*P	**Pn**	**18 38 42.1**	**+1.1**
VOIR		**6.21**	**132**	⇑*i*P	**Pn**	**18 38 42.1**	**+1.1**
VOIR				S	**Sn**	**18 39 54.1**	**+1.3**

DJA 17 18:43:58.2±0.4**, 9°S**±9°×**11°6E**±°**, h93^{km}**±7^{km}**, M4.0**/16**, mb4.2**/3**, MLv3.9**/16**, South of Bali**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DNP	**Denpasar**	**0.70**	**299**	P	Pn	18 44 15.7	+0.7
IGBI	**Denpasar**	**0.70**	**286**	P	Pn	18 44 16.6	+1.6
TWSI	**Taliwang, Sumb**	**1.08**	**75**	P	Pn	18 44 20.3	+1.3
SRBI	**Singaraja**	**1.11**	**327**	P	Pn	18 44 19.6	+0.2
JAGI	**Jajag, Banyuwa**	**1.75**	**288**	P	Pn	18 44 26.6	-0.6
PLAI	**Plampang**	**1.93**	**84**	P	Pn	18 44 31.1	+1.5
BLJI	**Banyuglugur**	**2.55**	**300**	P	Pn	18 44 37.4	-0.4
WBSI	**Waikabubak, Su**	**3.57**	**100**	P	Pn	18 44 49.0	-2.5
PWJI	**Pagerwojo**	**4.10**	**284**	P	Pn	18 44 58.7	0.0
WSI	**Waingapu**	**4.46**	**99**	P	Pn	18 45 05.4	+1.9
PCJI	**Pacitan**	**4.67**	**280**	P	Pn	18 45 05.4	-1.0
UGM	**Wanagama**	**5.36**	**281**	P	Pn	18 45 17.1	+1.2
	138nm,1.5s,0.9nm						
BKSI	**Bulukumba**	**5.62**	**50**	P	Pn	18 45 19.5	+0.1
	22nm,0.8s,0.1nm						
EDFI	**Ende, Flores**	**5.80**	**88**	P	Pn	18 45 20.0	-1.8

ISCJB ***17*** *18:48:07.4±0.5, 2°.26N±0°.06×93°.22E±0°.05, h10^{km}, mb4.3/13, Error ellipse: s-maj=9.5km s-min=5.8km az=41.1*

IDC ***17*** *18:48:08.8±1.7, 2°.40N×93°.55E, h0^{km}, mb3.8/6, mb1 4.0/8, mb1mx3.6/67, mbtmp3.9/8, ML4.0/2, Error ellipse: s-maj=56.5km s-min=20.6km az=56.0*

NEIC ***17*** *18:48:09.2±0.5, 2°.26N×93°.22E, h10^{km}, mb4.7/9, Error ellipse: s-maj=10.3km s-min=7.0km az=221.0*

DJA ***17*** *18:48:17.3±0.8, 2°N±5°×9°4E±°, h10^{km}, M4.3/7, mB5.7/1, mb4.5/6, MLv4.3/7, Mw(mB)5.2/1*

ISC 17 18:48:08.6±0.7**, 2°.29N**±0°.07×**93°.26E**±0°.05**, h10^{km}, n50,** σ**2^s.83**/52**, mb4.3**/13**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNSI	**Sinabang, Aceh**	**3.07**	**88**	P	**Pn**	**18 48 58.3**	**+1.1**
SNSI				S	**Sn**	**18 49 29.0**	**-5.0**
MLSI	**Meulaboh, Aceh**	**3.71**	**58**	P	Pg	18 49 35.4	+16
MLSI				S	**Sn**	**18 49 45.5**	**-4.3**
BSI	**Banda Aceh**	**3.78**	**33**	P	**Pn**	**18 49 08.8**	**+1.8**
GSI	**Gunungsitoli**	**4.43**	**103**	P	**Pn**	**18 49 17.4**	**+1.5**
GSI	**Gunungsitoli**	**4.43**	**103**	*e*Pn	**Pn**	**18 49 17.4**	**+1.5**
GSI				*e*Sn	**Sn**	**18 50 03.5**	**-4.1**
KCSI	**Kotacane, Aceh**	**4.67**	**75**	P	**Pn**	**18 49 21.9**	**+2.6**
KCSI				S	**Sn**	**18 50 09.0**	**-4.6**
LHMI	**Lhok Sumawe**	**4.70**	**51**	*e*Pn	**Pn**	**18 49 22.8**	**+3.1**
TSI	**Tuntungan**	**5.44**	**77**	P	**Pb**	**18 49 44.4**	**+0.7**
PBSI	**Pulau Batu**	**5.54**	**115**	P	**Pn**	**18 49 33.1**	**+2.0**
	253nm,0.6s						
PSI	**Prapat**	**5.69**	**85**	*e*Pn	**Pn**	**18 49 34.8**	**+1.5**
PSI				*e*Sn	**Sn**	**18 50 32.6**	**-6.1**
MNSI	**Mandailing Nat**	**6.49**	**103**	P	**Pn**	**18 49 46.1**	**+1.8**
	68nm,0.4s,5μm						
SISI	**Saibi**	**6.85**	**122**	P	**Pn**	**18 49 50.3**	**+1.1**
	22nm,1.1s						
KULM	**Kulim**	**7.96**	**68**	*e*Pn	**Pn**	**18 50 05.9**	**+1.4**
KULM				*e*Sn	Sn	18 51 26.3	-8.3
IPM	**Ipoh**	**8.06**	**74**	*e*Pn	**Pn**	**18 50 07.7**	**+1.9**
IPM				*e*Sn	**Sn**	**18 51 30.4**	**-6.7**
PBA	**Port Blair**	**9.32**	**357**	*e*Pn	Pn	18 50 22.5	-0.7
MNAI	**Manna**	**11.73**	**124**	*e*Pn	**Pn**	**18 50 57.2**	**+1.0**
PALK	**Pallekele**	**13.45**	**292**	Pn	**Pn**	**18 51 22.5**	**+2.8**
	0.3nm,0.3s,baz=117,slow=12,SNR=3.2						
PALK				Sn	**Sn**	**18 53 42.0**	**-7.4**
	1.4nm,0.3s,baz=116,slow=5.2,SNR=7.3						
PALK	**Pallekele**	**13.45**	**292**	*e*Pn	**Pn**	**18 51 19.6**	**-0.1**
PALK				*e*Sn	**Sn**	**18 53 41.4**	**-8.1**
PBKT	**Sadao Pong**	**16.09**	**28**	*e*Pn	**Pn**	**18 51 55.8**	**+0.6**
CM01	**Chiang Mai Arr**	**16.98**	**19**	*e*Pn	**Pn**	**18 52 06.7**	**+0.3**
CM31	**Chiang Mai Arr**	**17.01**	**19**	*e*Pn	**Pn**	**18 52 07.2**	**+0.4**
CMAR	**Chiang Mai Arr**	**17.01**	**19**	Pn	**Pn**	**18 52 04.5**	**-2.3**
	0.3nm,0.3s,baz=215,slow=13,SNR=20						
CHTO	**Chiang Mai**	**17.34**	**18**	*e*Pn	**Pn**	**18 52 11.8**	**+0.8**
	7.0nm,1.0s						
CHTO	**Chiang Mai**	**17.34**	**18**	P	**P**	**18 52 15.2**	**+2.9**
CMMT	**Chiang Mai**	**17.34**	**18**	P	**P**	**18 52 15.1**	**+2.7**
H08S2	**Diego Garcia H**	**22.94**	**244**	T	T	19 18 57.3	
	baz=63,slow=75,SNR=14						
H08S3	**Diego Garcia H**	**22.95**	**244**	T	T	19 18 45.6	
	baz=63,slow=75,SNR=32						
H08S1	**Diego Carcia H**	**22.96**	**244**	T	T	19 18 50.4	
	baz=63,slow=75,SNR=25						
LSA	**Lhasa**	**27.34**	**356**	*e*P	**P**	**18 53 53.5**	**-0.9**
	3.7nm,0.6s						
ENH	**Enshi**	**31.80**	**27**	*e*P	**P**	**18 54 34.9**	**+1.3**
	7.6nm,1.0s						
MSEY	**Mahe Island**	**38.37**	**260**	*e*P	**P**	**18 55 32.0**	**+1.5**
	29nm,1.0s						
MK01	**Makanchi Array**	**45.32**	**349**	*e*P	**P**	**18 56 28.6**	**+1.7**
MK31	**Makanchi Array**	**45.35**	**349**	*e*P	**P**	**18 56 28.6**	**+1.6**
MK32	**Makanchi Array**	**45.35**	**349**	*e*P	**P**	**18 56 28.6**	**+1.6**
MKAR	**Makanchi Array**	**45.35**	**349**	P	**P**	**18 56 28.6**	**+1.6**
	1.1nm,0.6s,baz=168,slow=8.8,SNR=14						
MKAR	**Makanchi Array**	**45.35**	**349**	*e*P	**P**	**18 56 29.2**	**+2.2**
	8.4nm,0.8s						
MAKZ	**Makanchi**	**45.42**	**349**	*e*P	**P**	**18 56 27.1**	**-0.4**
	5.1nm,1.5s						
WR1	**Warramunga Arr**	**45.97**	**121**	*e*P	**P**	**18 56 32.4**	**+0.1**
	25nm,1.8s						
WRA	**Warramunga Arr**	**45.97**	**121**	P	**P**	**18 56 32.4**	**+0.1**
	1.5nm,0.7s,baz=301,slow=8.6,SNR=11						
WRAB	**Tennant Creek**	**45.97**	**121**	*e*P	**P**	**18 56 32.6**	**+0.2**
	22nm,1.7s						
WB2	**Warramunga Arr**	**45.98**	**121**	*e*P	**P**	**18 56 30.6**	**-1.7**
	27nm,1.8s						
SONA0	**Songino Array**	**46.77**	**12**	*e*P	**P**	**18 56 38.1**	**-0.3**
SONM	**Songino Array**	**46.77**	**12**	P	**P**	**18 56 38.1**	**-0.3**
	1.2nm,0.6s,baz=190,slow=9.0,SNR=6.1						
SONA1	**Songino Array**	**46.79**	**12**	*e*P	**P**	**18 56 40.2**	**+1.7**
ASAR	**Alice Springs**	**47.21**	**126**	P	**P**	**18 56 42.3**	**+0.2**
	0.5nm,0.9s,baz=295,slow=7.6,SNR=4.7						
KURBB	**Kurchatov Arra**	**49.75**	**348**	P	**P**	**18 57 02.9**	**+1.8**
	1.1nm,1.0s,baz=174,slow=7.2,SNR=5.4						
KURK	**Kurchatov**	**49.82**	**348**	*e*P	**P**	**18 57 02.9**	**+1.3**
ZALV	**Zalesovo Beam**	**51.96**	**354**	P	**P**	**18 57 18.7**	**+1.0**
	0.6nm,0.4s,baz=172,slow=6.2,SNR=3.6						
ZAA1	**Zalesovo Array**	**51.96**	**354**	*e*P	**P**	**18 57 18.7**	**+1.0**
SVW2	**Sparrevohn**	**98.08**	**27**	*e*P	Pdif	19 01 48.9	+3.5

JMA ***17*** *18:48:23.8±0.2, 23°.97N×121°.65E, h0^{km}, M2.6*

ISCJB ***17*** *18:48:24.9±0.3, 23°.97N±0°.01×121°.66E±0°.02, h9^{km}±2^{km}, Error ellipse: s-maj=2.7km s-min=1.9km az=32.0*

TAP ***17*** *18:48:24.9, 23°.98N×121°.61E, h9^{km}, ML3.2, B*

ISC 17 18:48:24.8±0.8**, 23°.97N**±0°.02×**121°.65E**±0°.02**, h13^{km}**±4^{km}**, n96,** σ**0^s.71**/129**, 2C-19D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	**Hwalien**	**0.04**	**283**	P	**Pg**	**18 48 27.0**	**-0.2**
	baz=152						
HWA				S	**Sg**	**18 48 28.6**	**-0.3**
	baz=152						
ENLB	**Shoufeng**	**0.08**	**213**	⇑P	**Pg**	**18 48 27.5**	**-0.1**
	baz=187						
ENLB				S	**Sg**	**18 48 29.9**	**+0.4**
	baz=187						
TWD	**Chiawan**	**0.12**	**337**	⇓*i*P	**Pg**	**18 48 27.8**	**-0.3**
	baz=357						
TWD				*i* S	**Sg**	**18 48 29.7**	**-0.7**
	baz=357						
NACB	**Ninganchiao**	**0.21**	**347**	⇓P	**Pg**	**18 48 29.2**	**-0.3**
	baz=2.0						
NACB				S	**Sg**	**18 48 32.1**	**-0.6**
	baz=2.0						
ESL	**Shilin**	**0.25**	**232**	⇑P	**Pg**	**18 48 29.8**	**-0.3**
	baz=230						
ESL				*e*S	**Sg**	**18 48 33.3**	**-0.4**
	baz=230						
EGFH	**Guangfu**	**0.36**	**214**	*e*P	**Pb**	**18 48 32.3**	**-0.8**
	baz=219						
WHF	**Hehuan Shan**	**0.39**	**297**	⇓*i*P	**Pg**	**18 48 32.4**	**-0.5**
	baz=298						
WHF				S	**Sg**	**18 48 37.7**	**-0.6**
	baz=298						
CHGB	**Renai**	**0.44**	**282**	⇓P	**Pb**	**18 48 33.7**	**-1.0**
	baz=282						
CHGB				S	**Sg**	**18 48 39.7**	**0.0**
	baz=282						
ENA	**Nanau**	**0.47**	**11**	⇓*i*P	**Pb**	**18 48 34.2**	**-0.7**
	baz=15						
ENA				*e*S	**Sg**	**18 48 40.5**	**+0.1**
	baz=15						
NANB	**Nanao**	**0.47**	**12**	⇓*i*P	**Pg**	**18 48 34.2**	**+0.1**
	baz=15						
NANB				*e*S	**Sg**	**18 48 40.6**	**+0.2**
	baz=15						
TWT	**Tachien**	**0.52**	**304**	*e*P	**Pb**	**18 48 35.2**	**-0.6**
	baz=312						
TWT				*e*S	**Sb**	**18 48 42.5**	**-0.9**
	baz=312						
HGSD	**Ruisui**	**0.52**	**203**	⇓*e*P	**Pb**	**18 48 35.9**	**+0.2**
	baz=209						
NNSB	**Datong**	**0.52**	**332**	⇓P	**Pb**	**18 48 35.1**	**-0.8**
	baz=335						
NNSB				S	**Sg**	**18 48 41.6**	**-0.5**
	baz=335						
TDCB	**Techi**	**0.53**	**303**	P	**Pb**	**18 48 35.3**	**-0.8**
	baz=312						
TDCB				S	**Sb**	**18 48 42.7**	**-0.9**
	baz=312						
NNS	**Nan Shan**	**0.53**	**332**	⇓*i*P	**Pb**	**18 48 35.3**	**-0.8**
	baz=335						
NNS				S	**Sg**	**18 48 42.0**	**-0.5**
	baz=335						
EHY	**Hungye**	**0.55**	**213**	*e*P	**Pg**	**18 48 35.4**	**-0.2**
	baz=213						
YULB	**Yu-li**	**0.66**	**209**	*e*P	**Pg**	**18 48 37.3**	**-0.3**
	baz=209						
SSLB	**Suanglung**	**0.66**	**254**	⇓P	**Pb**	**18 48 37.6**	**-0.6**
	baz=255						
TWC	**Suao**	**0.66**	**16**	*e*P	**Pb**	**18 48 38.0**	**-0.3**
	baz=10.0						
TWC				*e*S	**Sb**	**18 48 47.0**	**-0.5**
	baz=10.0						
ENTT	**Nioudou**	**0.67**	**354**	⇓*i*P	**Pb**	**18 48 38.2**	**-0.3**
	baz=357						
ENTT				*e*S	**Sb**	**18 48 47.3**	**-0.5**
	baz=357						
SMLT	**Sun Moon Lake**	**0.69**	**263**	⇓*i*P	**Pb**	**18 48 38.4**	**-0.3**
	baz=263						
SMLT				S	**Sb**	**18 48 47.4**	**-0.9**
	baz=263						
TWF1	**Yuli**	**0.69**	**208**	*e*P	**Pg**	**18 48 37.9**	**-0.4**
	baz=220						
TYC	**Yuchr**	**0.72**	**265**	P	**Pb**	**18 48 38.8**	**-0.5**
	baz=265						
TYC				S	**Sg**	**18 48 47.9**	**-0.6**
	baz=265						
EOS1	**EOS1**	**0.73**	**37**	*e*P	**Pn**	**18 48 40.6**	**-0.2**
	baz=27						
YHNB	**Yeheng**	**0.74**	**341**	⇓P	**Pb**	**18 48 39.5**	**-0.2**
	baz=343						
YHNB				*e*S	**Sg**	**18 48 48.6**	**-0.4**
	baz=343						
TWE	**Neicheng**	**0.75**	**1**	⇓*i*P	**Pb**	**18 48 39.7**	**0.0**
	baz=5.0						
TWE				S	**Sb**	**18 48 49.6**	**-0.3**
	baz=5.0						
NSK	**Sanguang**	**0.75**	**340**	P	**Pb**	**18 48 39.6**	**-0.2**
	baz=342						
NSK				*e*S	**Sg**	**18 48 49.0**	**-0.4**
	baz=342						
YUS	**Yu-Shan**	**0.80**	**233**	*e*P	**Pb**	**18 48 40.6**	**-0.2**
	baz=233						
YUS				*e*S	**Sg**	**18 48 50.8**	**-0.1**
	baz=233						
FULB	**Fuli**	**0.83**	**203**	*e*P	**Pb**	**18 48 40.9**	**-0.3**
	baz=219						
WJS	**Zhushan**	**0.85**	**260**	*e*P	**Pb**	**18 48 41.7**	**+0.2**
	baz=256						
NSTT	**Nanjuang**	**0.89**	**318**	⇓*e*P	**Pb**	**18 48 42.4**	**+0.3**
	baz=320						
NSTT				*e*S	**Sb**	**18 48 53.9**	**+0.1**
	baz=320						
WNT	**Mingjian**	**0.89**	**264**	*e*P	**Pn**	**18 48 43.1**	**+0.1**
	baz=258						
LIOB	**Emei**	**0.89**	**320**	⇓*e*P	**Pb**	**18 48 42.6**	**+0.5**
	baz=321						
LIOB				*e*S	**Sb**	**18 48 54.0**	**+0.2**
	baz=321						
NTC	**Toucheng**	**0.90**	**11**	*e*P	**Pb**	**18 48 42.1**	**-0.1**
CHKT	**Chengkung**	**0.90**	**197**	*e*P	**Pg**	**18 48 41.9**	**-0.4**
	baz=198						
TCU	**Taichung**	**0.91**	**282**	*e*P	**Pn**	**18 48 43.1**	**-0.1**
	baz=277						
EGS		**0.91**	**17**	*e*P	**Pb**	**18 48 43.2**	**+0.8**
	baz=17						
NSY	**Sanyi**	**0.92**	**299**	*e*P	**Pn**	**18 48 43.5**	**-0.1**
	baz=300						
WLTB	**Daxi**	**0.95**	**338**	*e*P	**Pb**	**18 48 43.3**	**+0.1**
	baz=338						
CHN5	**Tsauling**	**0.96**	**248**	*e*P	**Pn**	**18 48 44.2**	**+0.1**
	baz=236						
NMLH	**Miaoli**	**0.96**	**306**	*e*P	**Pn**	**18 48 44.2**	**+0.1**

	baz=306						
ELDTW	Lidau	0.97	217	*e*P	Pg	18 48 42.3	-1.3
	baz=204						
PTSB	Yuanli	0.98	299	*e*P	Pb	18 48 43.9	+0.2
	baz=300						
WCHH	Zhanghua	1.00	277	*e*P	Pb	18 48 44.5	+0.4
	baz=277						
TATO	Taipei	1.01	352	*e*P	Pb	18 48 44.5	+0.3
	baz=353						
TATO				*e*S	Sg	18 48 57.2	-0.4
	baz=353						
TIPB	Shuangxi	1.01	9	⇓P	Pb	18 48 44.4	+0.1
	baz=2.0						
TIPB				*e*S	Sb	18 48 57.9	+0.3
	baz=2.0						
SBCB	Hsinchu	1.02	324	*e*P	Pn	18 48 44.9	0.0
	baz=324						
WGK	Gukeng	1.03	254	*e*P	Pn	18 48 45.8	+0.8
	baz=256						
HSN	Hsinchu	1.03	324	*e*P	Pn	18 48 45.5	+0.5
	baz=326						
WDLH	Douliu	1.05	255	*e*P	Pn	18 48 45.6	+0.3
	baz=257						
NCUH	Zhongli	1.08	337	*e*P	Pn	18 48 46.4	+0.7
	baz=337						
TWB1	Santiao Chiao	1.08	17	*e*P	Pn	18 48 46.1	+0.4
	baz=9.0						
NCU	National Centr	1.08	337	*e*P	Pb	18 48 45.8	+0.4
	baz=342						
NWF	Wu-fen Shan	1.10	6	*e*P	Pg	18 48 45.7	-0.4
	baz=5.0						
WFSB	Wu-fen Shan	1.10	6	*e*P	Pg	18 48 45.7	-0.5
	baz=5.0						
STYT	Tauyuan	1.14	226	*e*P	Pb	18 48 46.8	+0.3
	baz=215						
CHN4	Tsaushan	1.15	238	*e*P	Pn	18 48 47.2	+0.6
	baz=240						
TPUB	Ta-pu	1.15	235	⇓P	Pn	18 48 47.3	+0.8
	baz=236						
TPUB				*e*S	Sn	18 49 02.7	+0.6
	baz=236						
TWS1	Kuangyinshan	1.15	350	*e*P	Pn	18 48 47.7	+1.1
	baz=349						
CHN2	Minshiung	1.16	248	*e*P	Pn	18 48 48.0	+1.2
	baz=250						
RLNB	Erlin	1.18	267	*e*P	Pn	18 48 47.3	+0.3
	baz=268						
YM04	YM04	1.19	355	*e*P	Pb	18 48 47.3	+0.1
	baz=354						
YM10	YM10	1.19	356	*e*P	Pn	18 48 47.6	+0.4
	baz=355						
WTP	Ta-pu	1.19	233	*e*P	Pn	18 48 48.1	+0.9
	baz=235						
YM11	YM11	1.19	357	*e*P	Pn	18 48 48.4	+1.1
	baz=346						
YM07	YM07	1.20	359	*e*P	Pn	18 48 47.9	+0.5
	baz=9.0						
NTST	Danshui	1.21	351	*e*P	Pg	18 48 47.5	-0.6
	baz=350						
YM03	YM03	1.21	355	*e*P	Pn	18 48 48.7	+1.2
	baz=354						
CHY	Chiayi	1.21	248	*e*P	Pb	18 48 47.7	0.0
	baz=249						
YM08	YM08	1.22	358	*e*P	Pb	18 48 47.7	0.0
	baz=356						
WTCT	Ta-ch'eng	1.25	266	*e*P	Pn	18 48 48.9	+0.9
	baz=267						
TWG	Pinlang	1.26	205	*e*P	Pg	18 48 47.5	-1.6
	baz=207						
TWGBT	Beinan	1.26	205	*e*P	Pg	18 48 47.5	-1.6
	baz=207						
TWK	Hsinying	1.27	237	*e*P	Pn	18 48 49.1	+0.8
	baz=239						
JYNG	Yonagunijimaku	1.28	68	P	Pg	18 48 48.6	-0.9
JYNG				S	Sg	18 49 05.0	-1.1
CHN1	Nanshi	1.29	233	*e*P	Pb	18 48 49.7	+0.7
	baz=236						
SGST	Jiashian	1.32	228	*e*P	Pb	18 48 50.1	+0.7
	baz=219						
SLGT	Liugui	1.34	224	*e*P	Pg	18 48 50.1	-0.4
	baz=211						
YOJ	Yonaguni jima	1.34	68	⇓P	Pn	18 48 49.7	+0.5
	baz=69						
YOJ	Yonaguni jima	1.34	68	P	Pn	18 48 49.3	+0.1
YOJ				S	Sg	18 49 05.7	-2.3
WSF	Szhu	1.34	256	*e*P	Pg	18 48 50.7	0.0
	baz=258						
ECL	Taimali	1.51	205	*e*P	Pn	18 48 52.2	+0.7
	baz=188						
SSD	Sandimen	1.53	218	*e*P	Pb	18 48 52.9	-0.2
	baz=210						
MASBT	Mashibuluo	1.64	215	*e*P	Pn	18 48 54.0	+0.6
	baz=207						
IRIF	Iriomote-Funau	1.94	79	P	Pn	18 48 58.2	+0.7
IRIF				*e*S	Sn	18 49 23.1	+1.4
PHUB	P'eng-hu	1.95	257	*e*P	Pn	18 48 58.6	+0.9
	baz=258						
WDGT	Dungji	1.95	249	*e*P	Pn	18 48 57.9	+0.2
	baz=250						
PNG	Penghu	1.96	259	*e*P	Pn	18 48 58.4	+0.6
	baz=260						
TWKBT	Hengchun	2.16	201	*e*P	Pn	18 49 01.8	+1.3
	baz=185						
VCHM	Qimei	2.17	250	*e*P	Pn	18 49 01.5	+0.9
	baz=251						
JKRS	Kuro-shima	2.18	82	P	Pn	18 49 01.8	+1.1
JKRS				*e*S	Sn	18 49 29.7	+2.2
VWUC	VWUC	2.25	297	*e*P	Pn	18 49 02.1	+0.4
	baz=297						
JIJ	Ishigaki jima	2.31	80	P	Pn	18 49 02.3	-0.3
JIJ				*e*S	Sn	18 49 30.0	-1.0
JISG	Ishigakijimahi	2.51	75	P	Pn	18 49 05.4	+0.1
JISG				S	Sn	18 49 35.5	-0.2
MATB	Ma-tsu	2.67	325	*e*P	Pn	18 49 08.4	+0.9
	baz=309						
JTJ	Tarama	2.87	76	P	Pn	18 49 12.1	+1.9
JTJ				*e*S	Sn	18 49 46.3	+1.7

IDC ***17*** *18:49:59.5±5.3, 19°.52N×146°.55E, h96^{km}±36^{km}, mb3.5/11, mb1 3.6/13, mb1mx3.4/58, mbtmp3.9/13, Error ellipse: s-maj=88.5km s-min=14.5km az=83.0*

ISC 17 18:49:50.5±1.9, 19°.61N±0°.09×147°.3E±0°.4, h35^{km}, n14, σ1^s.00/14, mb3.8/11, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	6.42	201	P	Pn	18 51 28.5	+5.9
	11nm,0.3s,baz=102,slow=0.8,SNR=11						
GUMO				S	Sn	18 52 35.2	+0.5
	4.3nm,0.3s,baz=163,slow=19,SNR=3.2						
MJAR	Matsushiro Arr	18.65	337	P	Pn	18 54 07.0	+1.1
	0.3nm,0.3s,baz=158,slow=8.9,SNR=4.1						
KSRS	Korea Array	24.51	321	P	P	18 55 05.2	-1.4
	1.0nm,0.7s,baz=150,slow=10.0,SNR=4.3						
WRA	Warramunga Arr	41.30	199	P	P	18 57 34.0	+1.1
	0.4nm,0.4s,baz=12,slow=8.4,SNR=12						
FITZ	Fitzroy Crossi	43.08	211	P	P	18 57 46.5	-0.9
	1.4nm,0.7s,baz=34,slow=15,SNR=11						
SONM	Songino Array	43.38	320	P	P	18 57 50.1	+0.4
	0.5nm,0.7s,baz=178,slow=4.3,SNR=3.4						
ASAR	Alice Springs	44.95	197	P	P	18 58 01.7	-0.7
	0.2nm,0.6s,baz=7.8,slow=7.5,SNR=4.8						
ZALV	Zalesovo Beam	58.21	322	P	P	18 59 40.9	-0.2
	1.3nm,0.5s,baz=107,slow=6.5,SNR=5.2						
MKAR	Makanchi Array	58.91	313	P	P	18 59 46.0	-0.2
	0.5nm,0.6s,baz=94,slow=9.2,SNR=7.9						
KURBB	Kurchatov Arra	61.64	318	P	P	19 00 04.5	-0.2
	1.5nm,0.6s,baz=92,slow=7.4,SNR=22						
BVAR	Borovoye Array	66.72	320	P	P	19 00 38.4	+0.3
	3.2nm,0.4s,baz=92,slow=8.0,SNR=36						
AKTO	Aktyubinsk	74.67	318	P	P	19 01 25.8	-0.7
	0.9nm,0.5s,baz=83,slow=13,SNR=5.0						
FINES	FINESS Array B	86.67	336	P	P	19 02 31.8	+1.4
	1.4nm,0.8s,baz=57,slow=5.1,SNR=4.6						
TORD	Torodi Ar. Bea	133.00	311	PKP	PKPdf	19 09 01.7	-1.6
	0.8nm,1.1s,baz=114,slow=3.5						

ISCJB ***17*** *19:06:46.9±1.0, 1°.71S±0°.08×99°.11E±0°.09, h35^{km}, mb3.4/3, Error ellipse: s-maj=16.0km s-min=6.2km az=139.0*

DJA ***17*** *19:06:47.4±0.6, 2°S±5°×9°9E±°, h15^{km}±4^{km}, M3.7/9, mb3.6/1, MLv3.7/9*

IDC ***17*** *19:06:48.9±6.2, 0°.59S×100°.73E, h0^{km}, mb3.5/3, mb1 3.7/3, mb1mx3.3/65, mbtmp3.5/3, Error ellipse: s-maj=345.3km s-min=26.8km az=53.0*

ISC 17 19:06:49.0±1.1, 1°.61S±0°.08×99°.17E±0°.09, h35^{km}, n14, σ1^s.21/16, mb3.5/3, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SISI	Saibi	0.29	345	P	Pn	19 06 54.7	-2.2
SISI				S	Sn	19 07 01.3	-1.0
PPSI	Pulau Pagai	1.42	144	P	Pn	19 07 13.6	+1.2
PBSI	Pulau Batu	1.78	330	P	Pn	19 07 17.7	+0.4
KRJI	Kerinci	2.34	102	P	Pn	19 07 24.7	-0.5
KRJI				S	Sn	19 07 53.5	+0.7
MNSI	Mandailing Nat	2.43	10	P	Pn	19 07 26.3	+0.1
BKNI	Bangkinang	2.69	44	P	Pn	19 07 30.9	+1.1
GSI	Gunungsitoli	3.30	331	P	Pn	19 07 38.9	+0.6
MASI	Maura Aman, Be	3.43	116	P	Pn	19 07 38.5	-1.5
MNAI	Manna	4.67	126	P	Pn	19 07 56.2	-0.8
KCSI	Kotacane, Aceh	5.29	345	P	Pn	19 08 07.0	+1.4
WRA	Warramunga Arr	38.91	120	P	P	19 14 10.2	-1.5
	0.5nm,0.6s,baz=302,slow=9.2,SNR=6.9						
ASAR	Alice Springs	40.15	126	P	P	19 14 21.4	-0.7
	0.2nm,0.4s,baz=303,slow=7.5,SNR=6.5						
MKAR	Makanchi Array	50.44	345	P	P	19 15 44.3	+1.1
	0.7nm,0.6s,baz=155,slow=9.0,SNR=9.4						
TXAR	Lajitas Array	144.89	36	PKP	PKPab	19 26 23.2	+0.8
	0.4nm,0.5s,baz=254,slow=3.3,SNR=3.5						

IDC 17 19:06:58.0±2.1, 31°.16S×179°.02W, h0^{km}, mb4.0/5, mb1 4.2/5, mb1mx3.8/39, mbtmp4.0/5, Error ellipse: s-maj=63.4km s-min=28.1km az=41.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	Alice Springs	42.20	268	P	P	19 14 52.8	0.0
	1.2nm,0.7s,baz=105,slow=7.5,SNR=11						
WRA	Warramunga Arr	43.26	274	P	P	19 15 00.8	-0.7
	2.3nm,0.9s,baz=114,slow=7.9,SNR=12						
FITZ	Fitzroy Crossi	51.49	271	P	P	19 16 06.0	+0.5
	2.6nm,0.8s,baz=117,slow=4.5,SNR=3.6						
QSPA	South Pole Qui	58.95	180	P	P	19 16 59.5	+0.6
	2.1nm,0.8s,baz=130,slow=1.5,SNR=7.5						
SNAA	Sanae	77.42	179	P	P	19 18 53.9	-0.7
	0.8nm,0.8s,baz=170,slow=6.1,SNR=3.9						
FINES	FINESS Array B	145.54	339	PKPbc	PKPdf	19 26 36.9	-0.4
	1.3nm,0.7s,baz=350,slow=4.2,SNR=3.8						

IDC ***17*** *19:19:35.1±0.7, 31°.09S×178°.93W, h0^{km}, mb4.2/9, mb1 4.4/11, mb1mx4.1/41, mbtmp4.2/11, ML3.8/2, MS3.4/2, Ms1 3.4/2, ms1mx2.8/44, Error ellipse: s-maj=20.0km s-min=19.0km az=114.0*

ISCJB ***17*** *19:19:38.8±0.6, 31°.14S±0°.06×179°.0W±0°.1, h33^{km}, mb4.5/17, Error ellipse: s-maj=13.0km s-min=8.2km az=21.3*

NEIC ***17*** *19:19:38.9±0.9, 31°.29S×178°.86W, h29^{km}±6^{km}, mb4.7/10, Error ellipse: s-maj=13.4km s-min=8.9km az=113.0*

ISC 17 19:19:40.4±0.6, 31°.13S±0°.08×178°.9W±0°.1, h35^{km}, n38, σ1^s.38/37, mb4.5/17, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	2.06	25	Pn	Pn	19 20 11.4	-1.1
	28nm,0.3s,baz=107,slow=19,SNR=2.6						
URZ	Urewera	7.83	204	Pn	Pn	19 21 30.8	-0.9
	1.9nm,0.3s,baz=58,slow=3.4,SNR=13						
URZ				Sn	Sn	19 22 60.0	+1.0
	baz=151,slow=19,SNR=1.4						
URZ				LR	LR	19 24 16.4	
	comp=Z,270nm,19.2s,baz=359,slow=36						
URZ	Urewera	7.83	204	*e*Pn	Pn	19 21 30.3	-1.4
URZ				*e*Sn	Sn	19 22 60.0	+1.0
BKZ	Black Stump Fm	8.85	204	*e*Pn	Pn	19 21 40.7	-5.2
BFZ	Birch Farm	10.30	201	*e*Pn	Pn	19 22 01.8	-3.9
SNZO	South Karori	11.38	205	*e*Pn	Pn	19 22 16.6	-3.8
AFI	Afiamalu	18.36	23	LR	LR	19 29 44.0	
	comp=Z,104nm,21.8s,baz=180,slow=33						
ARMA	Armidale	25.29	264	*e*P	P	19 25 04.6	+0.9
	52nm,1.8s						
CTA	Charters Tower	33.15	281	P	P	19 26 14.3	+0.7
	4.2nm,1.0s,baz=108,slow=13,SNR=2.6						
CTAO	Charters Tower	33.15	281	*e*P	P	19 26 15.5	+1.9
	38nm,1.8s						
STKA	Stephens Creek	33.55	258	P	P	19 26 17.4	+0.4
	2.6nm,0.9s,baz=141,slow=14,SNR=3.2						
STKA	Stephens Creek	33.55	258	*e*P	P	19 26 18.3	+1.3
	5.0nm,1.7s						
AS01	Alice Springs	42.25	268	*e*P	P	19 27 28.1	-2.5
AS31	Alice Springs	42.29	268	*e*P	P	19 27 30.2	-0.7
	1.2nm,1.0s						
ASAR	Alice Springs	42.29	268	P	P	19 27 30.6	-0.3
	2.5nm,0.9s,baz=106,slow=7.1,SNR=19						
WC3	Warramunga Arr	43.31	273	*e*P	P	19 27 39.2	+0.1
	8.9nm,1.0s						
WB2	Warramunga Arr	43.34	273	*e*P	P	19 27 39.3	0.0
	19nm,1.5s						
WR1	Warramunga Arr	43.35	273	*e*P	P	19 27 38.9	-0.5
	27nm,1.6s						
WRA	Warramunga Arr	43.35	273	P	P	19 27 38.9	-0.6
	3.8nm,0.9s,baz=113,slow=7.6,SNR=20						
SBA	Scott Base	47.25	184	*e*P	P	19 28 11.4	+1.9
	6.0nm,1.3s						
JOHN	Johnston Islan	48.44	12	*e*P	P	19 28 20.0	+0.6
	233nm,1.2s						
MTN	Manton Dam	49.33	280	*e*P	P	19 28 25.5	-0.9
	39nm,1.5s						
FITZ	Fitzroy Crossi	51.58	271	P	P	19 28 42.8	-0.6
	4.4nm,0.8s,baz=151,slow=7.9,SNR=8.1						
QSPA	South Pole Qui	58.98	180	P	P	19 29 37.1	+0.8
	2.6nm,0.7s,baz=41,slow=0.5,SNR=12						
SNAA	Sanae	77.44	179	P	P	19 31 32.0	+0.3
	0.9nm,0.9s,baz=190,slow=6.1,SNR=6.7						
SNAA	Sanae	77.44	179	*e*P	P	19 31 31.7	0.0
	9.1nm,1.4s						
PLCA	Paso Flores	82.58	133	P	P	19 32 01.7	+1.6
	2.7nm,1.0s,baz=247,slow=7.1,SNR=4.9						
PLCA	Paso Flores	82.58	133	*e*P	P	19 32 01.3	+1.3
	26nm,1.9s						
NVAR	Mina Array Bea	89.31	43	P	P	19 32 33.1	-0.2
	0.6nm,0.5s,baz=221,slow=6.7,SNR=2.3						
KLR	Kul'dur	91.27	330	P	P	19 32 41.8	0.0
	0.0nm,0.4s,baz=148,slow=9.5,SNR=3.1						
MDM	Murphy Dome	98.72	13	*e*pP	pP	19 33 25.8	-0.9
KBZ	Khabaz	144.86	303	PKP	PKPab	19 39 12.4	-0.2
	1.8nm,0.7s,baz=116,slow=2.3,SNR=3.4						
FIA0	FINESS Array S	145.55	339	*e*PKPdf	PKPdf	19 39 13.3	-0.8
FINES	FINESS Array B	145.55	339	PKPbc	PKPdf	19 39 13.3	-0.8
	5.1nm,1.0s,baz=165,slow=7.9,SNR=5.8						
BR101	Keskin Array S	152.24	297	*e*PKPbc	PKPbc	19 39 32.1	-0.5
BRTR	Keskin Array B	152.24	297	PKPbc	PKPbc	19 39 32.1	-0.5
	0.5nm,0.7s,baz=66,slow=3.8,SNR=2.6						
TORD	Torodi Ar. Bea	162.09	182	PKPab	PKPab	19 40 23.8	-1.3
	baz=172,slow=3.7						
TOA1	Torodi Ar. Sit	162.10	182	*e*PKPab	PKPab	19 40 23.8	-1.3

ISCJB ***17*** *19:26:29.8±0.3, 31°.21S±0°.04×179°.19W±0°.07, h10^{km}, mb4.6/30, MS3.4/3, Error ellipse: s-maj=8.7km s-min=4.5km az=18.7*

IDC ***17*** *19:26:29.5±0.6, 31°.17S×179°.06W, h0^{km}, mb4.3/13, mb1 4.5/15, mb1mx4.3/43, mbtmp4.3/15, ML4.1/2, MS3.4/6, Ms1 3.4/6, ms1mx3.0/46, Error ellipse: s-maj=18.9km s-min=16.9km az=101.0*

WEL ***17*** *19:26:30.0, 31°.28S×179°.09W, h13^{km}, ML5.0/12*

NEIC ***17*** *19:26:31.0±1.0, 31°.28S×179°.09W, h12^{km}±6^{km}, mb5.0/17, Error ellipse: s-maj=11.0km s-min=6.8km az=121.0*

ISC 17 19:26:30.9±0.4, 31°.11S±0°.06×179°.12W±0°.07, h10^{km}, n91, σ1^s.15/77, mb4.7/30, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	2.11	30	P	Pn	19 27 06.5	+0.1
RAO	Raoul Island	2.12	30	Pn	Pn	19 27 05.0	-1.5
	47nm,0.3s,baz=264,slow=18,SNR=3.6						
RAO				LR	LR	19 27 49.3	
	comp=Z,427nm,18.1s,baz=166,slow=37						
RAO	Raoul Island	2.12	30	*e*Pn	Pn	19 27 04.3	-2.2
MXZ	Matakaoa Point	6.78	198	*e*Pn	Pn	19 28 08.6	-1.9
MXZ	Matakaoa Point	6.78	198	P	Pn	19 28 10.4	-0.1
WMGZ	Waiomatatini S	7.00	196	P	Pn	19 28 15.3	+1.8
KUZ	Kuaotunu	7.07	216	P	Pn	19 28 20.1	+5.7
HAZ	Te Kaha	7.11	200	P	Pn	19 28 14.3	-0.7
PUZ	Puketiti	7.27	197	P	Pn	19 28 17.9	+0.6
RUGZ	Raukumara Rang	7.33	200	P	Pn	19 28 19.0	+0.9
OUZ	Omahuta	7.35	234	*e*Pn	Pn	19 28 16.5	-1.9
OUZ	Omahuta	7.35	234	P	Pn	19 28 18.4	0.0
TWGZ	Tauwhareparae	7.44	198	P	Pn	19 28 20.5	+0.9
OPRZ	Ohinepanea	7.61	207	P	Pn	19 28 25.4	+3.6
MKAZ	Moumakai	7.63	217	P	Pn	19 28 27.6	+5.5
CNGZ	Carnagh Statio	7.68	196	P	Pn	19 28 23.5	+0.7
MWZ	Matawai	7.72	200	P	Pn	19 28 24.0	+0.7
URZ	Urewera	7.78	202	Pn	Pn	19 28 23.3	-0.9
	3.1nm,0.3s,baz=202,slow=1.3,SNR=16						
URZ				Sn	Sn	19 29 51.8	-0.5
	baz=165,slow=19,SNR=1.4						
URZ	Urewera	7.78	202	P	Pn	19 28 25.3	+1.1
RAGZ	Rawiri	7.90	200	P	Pn	19 28 24.4	-1.5
RIGZ	Rimuhau	8.00	198	P	Pn	19 28 26.8	-0.5
RAHZ	Arahi	8.39	201	P	Pn	19 28 32.5	0.0
MTHZ	Maungataniwha	8.40	202	P	Pn	19 28 33.7	+0.8
BKZ	Black Stump Fm	8.80	203	*e*Pn	Pn	19 28 35.8	-2.5
HIZ	Hauiti	8.89	212	*e*Pn	Pn	19 28 37.2	-2.2
FWVZ	Far West T-bar	9.22	207	P	Pn	19 28 43.7	-0.5
BHHZ	Black Hill Sta	9.24	204	P	Pn	19 28 44.2	-0.1
BFZ	Birch Farm	10.26	200	*e*Pn	Pn	19 28 53.5	-4.8
SNZO	South Karori	11.33	204	*e*Pn	Pn	19 29 08.1	-4.8
THZ	Tophouse	12.41	209	*e*Pn	Pn	19 29 23.0	-4.7
KHZ	Kahutara	12.72	205	*e*Pn	Pn	19 29 25.4	-6.4
LTZ	Lake Taylor	13.52	208	*e*Pn	Pn	19 29 37.2	-5.7
OXZ	Oxford	14.07	207	*e*Pn	Pn	19 29 43.4	-6.9
MQZ	McQueen's Vall	14.16	205	*e*Pn	Pn	19 29 43.2	-8.3
RPZ	Rata Peaks	14.79	209	LR	LR	19 35 53.5	
	comp=Z,271nm,19.7s,baz=38,slow=38						
RPZ	Rata Peaks	14.79	209	*e*Pn	Pn	19 29 52.7	-7.4
FOZ	Fox Glacier	15.19	212	*e*Pn	Pn	19 30 05.0	-0.5
	187nm,1.6s						
RAR	Rarotonga	19.94	65	LR	LR	19 36 55.9	
	comp=Z,61nm,21.9s,baz=244,slow=31						
ARMA	Armidale	25.11	264	*e*P	P	19 31 55.3	-0.9
	39nm,1.5s						
HNR	Honiara	29.06	313	LR	LR	19 41 20.4	
	comp=Z,67nm,19.2s,baz=137,slow=31						
PPT	Papeete	30.00	70	LR	LR	19 44 08.6	
	comp=Z,24nm,18.7s,baz=188,slow=35						
CTA	Charters Tower	32.97	281	P	P	19 33 05.8	-0.3
	3.9nm,0.9s,baz=66,slow=8.6,SNR=4.0						
CTA				LR	LR	19 44 09.0	
	comp=Z,13µm,21.7s,baz=130,slow=32						
CTAO	Charters Tower	32.97	281	*e*P	P	19 33 08.1	+1.9
	36nm,1.8s						
STKA	Stephens Creek	33.38	258	P	P	19 33 10.8	+1.2
	5.5nm,0.8s,baz=130,slow=19,SNR=6.8						
STKA	Stephens Creek	33.38	258	*e*P	P	19 33 09.9	+0.3
	2.1nm,0.9s						
BBOO	Buckleboo	37.85	255	*e*P	P	19 33 49.5	+1.5
	55nm,1.4s						
XMAS	Kiritimati	38.89	36	*e*P	P	19 33 58.9	+2.1
	88nm,1.0s						
AS01	Alice Springs	42.07	268	*e*P	P	19 34 23.2	-0.1
AS31	Alice Springs	42.11	268	*e*P	P	19 34 23.4	-0.2
	1.6nm,0.8s						
ASAR	Alice Springs	42.11	268	P	P	19 34 24.1	+0.6
	5.2nm,0.8s,baz=104,slow=7.2,SNR=44						
WB2	Warramunga Arr	43.16	274	*e*P	P	19 34 32.4	+0.3
	10nm,0.7s						
WRAB	Tennant Creek	43.16	274	*e*P	P	19 34 32.5	+0.4
	11nm,0.8s						
WR1	Warramunga Arr	43.17	274	*e*P	P	19 34 32.5	+0.4
	12nm,0.9s						
WRA	Warramunga Arr	43.17	274	P	P	19 34 32.5	+0.4
	8.0nm,0.9s,baz=113,slow=7.6,SNR=28						
PTCN	Pitcairn Islan	43.39	95	*e*P	P	19 34 35.0	+1.2
	2.7nm,1.2s						
FORT	Forrest	44.94	256	*e*P	P	19 34 45.1	-1.1
	31nm,1.0s						
SBA	Scott Base	47.26	184	*e*P	P	19 35 05.6	+1.8
	14nm,1.1s						
VNDA	Vanda	47.30	186	P	P	19 35 03.3	-0.8
	0.9nm,0.9s,baz=14,slow=8.1,SNR=4.7						
VNDA	Vanda	47.30	186	*e*P	P	19 35 03.2	-0.9
VNDA				*e*sP	P	19 35 03.5	-0.6
JOHN	Johnston Islan	48.45	12	*e*P	P	19 35 12.9	-0.7
	194nm,1.0s						
MTN	Manton Dam	49.15	280	*e*P	P	19 35 19.7	+0.5
	47nm,1.5s						
FITZ	Fitzroy Crossi	51.40	271	P	P	19 35 37.2	+1.0
	10nm,0.9s,baz=159,slow=6.7,SNR=13						
CASY	Casey	54.06	208	*e*P	P	19 35 54.1	-1.2
	21nm,1.6s						
MBWA	Marble Bar	55.19	265	*e*P	P	19 36 03.4	-0.8
	39nm,1.6s						
PUH	Pauahi	55.20	28	*e*P	P	19 36 02.6	-1.6
	354nm,1.8s						
QSPA	South Pole Qui	59.00	180	P	P	19 36 31.3	+0.6
	6.0nm,0.7s,baz=342,slow=1.2,SNR=31						
QSPA	South Pole Qui	59.00	180	*e*P	P	19 36 31.1	+0.4
	15nm,1.1s						
JOW	Kunigami	76.43	313	LR	LR	20 05 25.9	
	comp=Z,74nm,21.8s,baz=250,slow=30						
SNAA	Sanae	77.47	179	P	P	19 38 24.8	-1.5
	2.3nm,0.8s,baz=202,slow=5.4,SNR=11						
SNAA	Sanae	77.47	179	*e*P	P	19 38 25.1	-1.2
	35nm,2.0s						
MJAR	Matsushiro Arr	78.28	326	P	P	19 38 31.5	+0.4
	1.6nm,1.0s,baz=168,slow=5.3,SNR=4.7						
MAJO	Matsushiro	78.28	326	*e*P	P	19 38 31.4	+0.4
PLCA	Paso Flores	82.73	133	P	P	19 38 55.6	+0.4
	3.1nm,0.9s,baz=261,slow=8.5,SNR=5.6						
PLCA	Paso Flores	82.73	133	*e*P	P	19 38 55.2	0.0
	17nm,1.5s						
KSRS	Korea Array	84.27	320	P	P	19 39 04.2	+1.4
	1.4nm,0.9s,baz=152,slow=6.2,SNR=4.3						
KSAR	Wonju Array Be	84.28	320	P	P	19 39 04.2	+1.3
ISA	Isabella, Lake	87.48	45	*e*P	P	19 39 19.3	+0.4
	4.1nm,1.1s						
NV01	Mina Array Sit	89.41	43	*e*P	P	19 39 28.7	+0.6
NVAR	Mina Array Bea	89.41	43	P	P	19 39 29.2	+1.1
	1.8nm,0.9s,baz=228,slow=6.9,SNR=5.9						
KLR	Kul'dur	91.16	330	P	P	19 39 37.4	+1.6
	0.1nm,0.8s,baz=126,slow=6.2,SNR=3.3						
LTX	Lajitas	93.58	58	*e*P	P	19 39 48.8	+1.2
TXAR	Lajitas Array	93.58	58	P	P	19 39 48.8	+1.2
	0.4nm,0.8s,baz=202,slow=6.3,SNR=3.6						
KBZ	Khabaz	144.69	303	PKP	PKPab	19 46 06.9	+0.4
	1.5nm,0.6s,baz=153,slow=2.3,SNR=2.6						
FIA1	FINESS Array S	145.47	339	*e*PKPdf	PKPdf	19 46 07.5	-1.0
FIA1				*e*PKPdf	PKPbc	19 46 07.7	-0.9
FIA0	FINESS Array S	145.47	339	*e*PKPdf	PKPdf	19 46 07.1	-1.4
FINES	FINESS Array B	145.47	339	PKPbc	PKPdf	19 46 07.1	-1.4
	6.8nm,1.0s,baz=50,slow=2.2,SNR=5.5						
HFS	Hagfors	149.73	347	PKPbc	PKPbc	19 46 19.9	-0.4
	2.9nm,0.9s,baz=321,slow=1.8,SNR=2.6						
MMAI	Mount Meron Ar	150.75	283	PKPbc	PKPbc	19 46 24.7	+0.9
	0.5nm,0.3s,baz=93,slow=5.8,SNR=4.8						
BR101	Keskin Array S	152.07	297	*e*pPKPdf	pPKPdf	19 46 25.2	+1.7
BRTR	Keskin Array B	152.07	297	PKPbc	PKPbc	19 46 25.2	-1.5
	0.9nm,0.6s,baz=118,slow=4.1,SNR=3.9						
TOA0	Torodi Ar. Sit	162.11	183	*e*PKPab	PKPab	19 47 17.0	-2.6

NIED ***17*** *19:39:00, 44°.80N×142°.10E, h5^{km}, Mw4.0 Best double couple: M$_0$9.94000×10^{14} NP1:φ$_s$348.00000°, δ19.00000°, λ72.00000°. NP2:φ$_s$187.00000°, δ72.00000°, λ96.00000°.*

IDC ***17*** *19:39:33.2±0.7, 44°.89N×142°.01E, h0^{km}, mb3.7/11, mb1 3.8/13, mb1mx3.6/67, mbtmp3.6/13, ML2.7/3, MS3.3/4, Ms1 3.3/4, ms1mx2.7/67, Error ellipse: s-maj=19.6km s-min=8.6km az=63.0*

ISCJB ***17*** *19:39:35.4±0.5, 44°.83N±0°.05×142°.18E±0°.06, h33^{km}, mb3.6/11, MS3.5/2, Error ellipse: s-maj=7.4km s-min=6.6km az=175.5*

JMA ***17*** *19:39:35.2, 44°.83N×142°.15E, h0^{km}, M4.1 Broadband fault plane solution: P waves. NP1:φ$_s$172.00000°, δ60.00000°, λ82.00000°. NP2:φ$_s$8.00000°, δ31.00000°, λ103.00000°. Principal axes: T Plg74.0000°, Azm61.0000°; N Plg7.0000°, Azm176.0000°; P Plg14.0000°, Azm268.0000°;*

JMA Felt IV J1.

ISC 17 19:39:37.4±0.7, 44°.85N±0°.07×142°.21E±0°.06, h35^{km}, n25, σ2^s.02/23, mb3.6/11, 4D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSE	Soyaes	0.29	67	⇓P	Pn	19 39 41.9	-3.3
JSE				*e*S	Sn	19 39 47.7	-2.8
JSS	Shosan	0.52	210	⇓P	Pn	19 39 45.8	-2.5
JWK2	Keihoku	0.52	335	P	Pn	19 39 46.2	-2.1

JYG	Yagishiri	0.70	233	⇓P	Pn	19 39 47.5	-3.3
JRR	Rishiri	0.70	295	⇓P	Pn	19 39 48.0	-2.9
JRR				S	Sn	19 39 59.3	-1.2
ASAJ	Asahikawa	0.78	159	Pg	Pn	19 39 50.6	-1.4
	174nm,0.3s,baz=1.5,slow=11,SNR=1237						
ASAJ				Lg	Lg	19 40 02.1	
	185nm,0.3s,baz=319,slow=20,SNR=26						
ASAJ	Asahikawa	0.78	159	P	Pn	19 39 49.8	-2.2
I45RU	USSURIYSK INFR	7.35	269	i		20 23 30.0	
	baz=80,slow=305,SNR=0.9						
KLR	Kul'dur	8.38	305	Pn	Pn	19 41 35.9	-0.4
	0.0nm,0.3s,baz=110,slow=16,SNR=3.2						
KLR				LR	LR	19 45 02.1	
	comp=Z,7.5nm,18.3s,baz=110,slow=40						
MJAR	Matsushiro Arr	8.84	201	Pn	Pn	19 41 42.1	-0.5
	0.1nm,0.3s,baz=22,slow=13,SNR=2.7						
KSRS	Korea Array	13.05	240	LR	LR	19 46 55.4	
	comp=Z,69nm,21.0s,baz=28,slow=34						
JNU	Nakatsue	14.64	221	LR	LR	19 47 51.0	
	comp=Z,59nm,18.7s,baz=122,slow=34						
SEY	Seymchan	19.04	14	P	Pn	19 43 57.8	+0.6
	0.2nm,0.3s,baz=194,slow=6.6,SNR=7.6						
SONM	Songino Array	24.77	290	P	P	19 44 53.9	-1.9
	1.5nm,0.9s,baz=81,slow=8.9,SNR=6.3						
TIXI	Tiksi	27.64	351	P	P	19 45 19.4	-1.9
	2.9nm,0.7s,baz=117,slow=11,SNR=3.2						
MKAR	Makanchi Array	40.92	295	P	P	19 47 16.7	+0.5
	1.1nm,0.8s,baz=76,slow=9.5,SNR=9.4						
MKAR				LR	LR	20 04 39.0	
	comp=Z,28nm,20.0s,baz=84,slow=37						
KURBB	Kurchatov Arra	42.04	302	P	P	19 47 25.0	-0.2
	0.6nm,0.5s,baz=71,slow=8.9,SNR=4.7						
ILAR	Eielson Array	42.71	37	P	P	19 47 30.7	+0.1
	0.5nm,0.7s,baz=280,slow=6.7,SNR=5.6						
BRDH	Bariadhala	46.63	259	LR	LR	20 10 53.5	
	comp=Z,135nm,18.6s,baz=140,slow=40						
WRA	Warramunga Arr	64.88	188	P	P	19 50 14.0	+1.0
	0.5nm,0.9s,baz=6.8,slow=6.8,SNR=5.6						
HFS	Hagfors	67.25	335	P	P	19 50 28.7	+0.8
	0.9nm,0.7s,baz=68,slow=8.0,SNR=2.4						
ASAR	Alice Springs	68.60	188	P	P	19 50 37.5	+0.8
	0.7nm,1.0s,baz=10.0,slow=7.1,SNR=4.3						
NVAR	Mina Array Bea	69.94	56	P	P	19 50 47.5	+2.2
	0.8nm,0.7s,baz=297,slow=6.0,SNR=3.3						
PDAR	Pinedale Array	71.84	47	P	P	19 50 58.3	+1.6
	0.7nm,0.8s,baz=270,slow=2.7,SNR=4.3						
TXAR	Lajitas Array	84.91	53	P	P	19 52 11.7	+2.8
	0.3nm,0.7s,baz=281,slow=5.4,SNR=3.0						

MAN 17 19:49:33.8, 9°.94N×123°.19E, h3^{km}, mb4.2, ML3.0, MS2.7, 1C, Negros

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNPH	Sibulan	0.60	175	⇑iP	Pg	19 49 44.4	-0.9
SNPH				iS	Sg	19 49 52.0	-1.0
TBP	Tagbilaran	0.71	110	eP	Pb	19 49 48.7	-0.2
LLP	Lapu-Lapu	0.85	64	eP	Pg	19 49 50.1	-0.1
LLP				eS	Sg	19 50 02.2	+0.9
GUIM	Jordan	0.90	319	eP	Pb	19 49 52.0	0.0
GUIM				eS	Sn	19 50 06.4	-0.5
MSLP	Maasin	1.66	83	eP	Pn	19 50 03.1	-0.7
MSLP				eS	Sb	19 50 26.0	-0.3
OCLP	Ormoc	1.78	52	eP	Pn	19 49 59.4	-6.2
PAGZ	Pagadian	2.09	175	eP	Pn	19 50 10.6	+0.9
PAGZ				eS	Sn	19 50 37.0	+0.7

NIED **17** *19:50:00, 44°.90N×142°.30E, h5^{km}, Mw3.9 Best double couple: M$_0$8.73000×10^{14} NP1:φ$_s$13.00000°, δ23.00000°, λ100.00000°. NP2:φ$_s$182.00000°, δ67.00000°, λ86.00000°.*

IDC **17** *19:50:17.0±0.6, 44°.95N×142°.11E, h0^{km}, mb3.8/13, mb1 4.0/15, mb1mx3.8/70, mbtmp3.8/15, ML3.3/2, MS3.1/3, Ms1 3.1/3, ms1mx2.5/68, Error ellipse: s-maj=16.0km s-min=8.7km az=65.0*

ISCJB **17** *19:50:20.0±0.3, 44°.81N±0°.03×142°.05E±0°.06, h33^{km}, mb3.9/19, MS3.1/1, Error ellipse: s-maj=5.6km s-min=4.5km az=176.8*

JMA **17** *19:50:19.0, 44°.84N×142°.15E, h0^{km}, M4.1 Broadband fault plane solution: P waves. NP1:φ$_s$172.00000°, δ61.00000°, λ78.00000°. NP2:φ$_s$17.00000°, δ31.00000°, λ111.00000°. Principal axes: T Plg71.0000°, Azm54.0000°; N Plg11.0000°, Azm178.0000°; P Plg15.0000°, Azm271.0000°;*

JMA Felt III J1.

NEIC **17** *19:50:22.0±0.3, 44°.85N×142°.03E, h35^{km}, mb4.3/7 Error ellipse: s-maj=8.3km s-min=6.6km az=124.0*

NEIC Recorded [3 JMA] in northern Hokkaido.

ISC 17 19:50:21.9±0.5**, 44°.82N**±0°.04×**142°.04E**±0°.06**, h35^{km}, n54, σ1^{s}.41**/55**, mb4.0**/19**, 1C-5D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSE	Soyaes	0.41	71	⇓P	Pn	19 50 25.7	-5.5
JSS	Shosan	0.45	197	⇓P	Pn	19 50 29.7	-2.0
JSS				eS	Sn	19 50 38.9	+0.4
JWK2	Keihoku	0.50	349	⇑P	Pn	19 50 29.8	-2.8
JWK2				eS	Sn	19 50 39.4	-0.6
JYG	Yagishiri	0.59	228	⇓P	Pn	19 50 31.4	-2.4
JRR	Rishiri	0.60	302	⇓P	Pn	19 50 31.9	-2.1
JRR				S	Sn	19 50 42.9	+0.4
ASAJ	Asahikawa	0.81	150	Pg	Pn	19 50 34.4	-2.4
	158nm,0.3s,baz=333,slow=17,SNR=1079						
ASAJ				Lg	Lg	19 50 46.4	
	170nm,0.3s,baz=299,slow=19,SNR=23						
ASAJ	Asahikawa	0.81	150	ePg	Pn	19 50 33.8	-3.0
ASAJ				eSn	Sn	19 50 45.9	-1.7
ASAJ	Asahikawa	0.81	150	⇓P	Pn	19 50 33.7	-3.1
YSS	Yuzh-Sakhalins	2.19	13	ePn	Pn	19 50 54.3	-1.4
ERM	Erimo	2.92	163	ePn	Pn	19 51 09.1	+3.3
USRK	Ussuriysk Ar.	7.21	269	LR	LR	19 54 56.4	
	comp=Z,121nm,20.1s,baz=113,slow=38						
KLR	Kul'dur	8.29	306	Pn	Pn	19 52 18.8	-0.8
	0.0nm,0.3s,baz=196,slow=11,SNR=2.1						
MJB9	Matsu-Tunnel	8.77	201	ePn	Pn	19 52 26.3	+0.2
MAJO	Matsushiro	8.77	201	ePn	Pn	19 52 25.9	-0.2
MJAR	Matsushiro Arr	8.77	201	Pn	Pn	19 52 26.9	+0.8
	0.2nm,0.3s,baz=3.9,slow=17,SNR=3.3						
KSRS	Korea Array	12.93	240	LR	LR	19 57 38.9	
	comp=Z,51nm,19.8s,baz=50,slow=34						
KS01	Wonju Array Si	12.93	240	ePn	Pn	19 53 23.1	0.0
PEA0B	Petropavlovsk-	13.19	45	ePn	Pn	19 53 29.9	+3.4
PETK	Petropavlovsk-	13.19	45	ePn	Pn	19 53 29.4	+2.9
SEY	Seymchan	19.09	15	P	P	19 54 40.4	-0.8
	0.2nm,0.3s,baz=211,slow=7.0,SNR=11						
SONA1	Songino Array	24.65	290	eP	P	19 55 38.4	-0.9
SONA0	Songino Array	24.66	290	eP	P	19 55 39.7	+0.4
SONM	Songino Array	24.66	290	P	P	19 55 39.7	+0.4
	1.4nm,0.8s,baz=86,slow=8.2,SNR=7.3						
SONM				LR	LR	20 06 24.7	
	comp=Z,62nm,19.0s,baz=90,slow=39						
TIXI	Tiksi	27.64	351	P	P	19 56 03.9	-1.8
	2.1nm,0.5s,baz=90,slow=11,SNR=2.5						
MK31	Makanchi Array	40.82	295	eP	P	19 58 00.6	+0.8
MK32	Makanchi Array	40.82	295	eP	P	19 58 00.6	+0.8
MKAR	Makanchi Array	40.82	295	P	P	19 58 00.6	+0.8
	1.0nm,0.8s,baz=81,slow=9.5,SNR=9.6						
MKAR	Makanchi Array	40.82	295	eP	P	19 58 00.7	+0.9
	8.2nm,0.7s						
MAKZ	Makanchi	41.02	295	eP	P	19 58 01.7	+0.2
	5.6nm,1.6s						
KTH	Kantishna Hill	41.19	39	eP	P	19 58 03.2	+0.5
	3.6nm,0.7s						
KURBB	Kurchatov Arra	41.95	301	P	P	19 58 09.0	0.0
	0.6nm,0.4s,baz=71,slow=8.8,SNR=6.7						
ILAR	Eielson Array	42.80	37	P	P	19 58 14.7	-1.0
	1.0nm,0.7s,baz=280,slow=8.3,SNR=9.5						
CMAR	Chiang Mai Arr	44.41	248	P	P	19 58 30.0	+0.8
	0.8nm,0.8s,baz=34,slow=6.1,SNR=4.1						
BVAR	Borovoye Array	45.95	307	P	P	19 58 41.2	+0.1
	0.9nm,0.4s,baz=84,slow=6.6,SNR=6.6						
KK31	Karatay Array	49.95	295	eP	P	19 59 12.1	-0.1
KKAR	Karatay Array	49.95	295	eP	P	19 59 12.3	+0.2
ABKAR	Akbulak array	53.50	306	eP	P	19 59 38.3	-0.2
YKA	Yellowknife Ar	56.91	33	P	P	20 00 02.1	-0.8
	0.6nm,0.6s,baz=303,slow=7.3,SNR=3.6						
GEYT	Alibeck	60.68	296	P	P	20 00 29.8	+0.2
	0.8nm,0.7s,baz=57,slow=8.8,SNR=2.9						
FIA0	FINESS Array S	62.20	331	eP	P	20 00 37.7	-1.6
FINES	FINESS Array B	62.20	331	P	P	20 00 37.7	-1.6
	1.1nm,0.8s,baz=64,slow=8.9,SNR=4.2						
WTV	Waterville	63.19	49	eP	P	20 00 46.6	+0.4
NAO01	NORSAR Array S	67.47	336	eP	P	20 01 15.2	+1.5
DLMT	Dillon	68.57	47	eP	P	20 01 21.1	+0.1
	11nm,1.7s						
PAHR	Pah Rah Range	68.58	55	eP	P	20 01 21.4	+0.2
	18nm,2.0s						
KVN	Kaiserville	69.76	55	eP	P	20 01 29.8	+1.2
	1.8nm,0.7s						
NV01	Mina Array Sit	70.06	55	eP	P	20 01 30.2	-0.2
NVAR	Mina Array Bea	70.06	55	P	P	20 01 30.7	+0.2
	0.7nm,0.6s,baz=299,slow=6.1,SNR=5.1						
R11A	Troy Canyon, C	71.69	54	eP	P	20 01 40.8	+0.5
	2.9nm,1.2s						
PD31	Pinedale Array	71.95	47	eP	P	20 01 41.8	0.0
PDAR	Pinedale Array	71.95	47	P	P	20 01 42.2	+0.3
	0.8nm,0.7s,baz=280,slow=0.9,SNR=9.1						
PDAR	Pinedale Array	71.95	47	eP	P	20 01 41.8	0.0
LTX	Lajitas	85.02	53	eP	P	20 02 54.1	+0.2
TXAR	Lajitas Array	85.02	53	P	P	20 02 54.1	+0.1
	0.8nm,0.9s,baz=305,slow=5.3,SNR=5.2						

IDC 17 19:56:26.5±3.0**, 3°.05S**×**135°.90E, h0^{km}, mb3.4**/2**, mb1 3.6**/3**, mb1mx3.2**/50**, mbtmp3.5**/3**, ML3.5**/1**, Error ellipse: s-maj=125.8km s-min=29.5km az=80.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	16.86	185	Pn	Pn	20 00 22.9	-1.3
	0.2nm,0.3s,baz=6.6,slow=13,SNR=5.4						
WRA				Sn	Sn	20 03 18.4	-14
	0.1nm,0.3s,baz=2.6,slow=23,SNR=3.1						
ASAR	Alice Springs	20.59	185	P	P	20 01 07.9	+0.6
	0.9nm,0.5s,baz=14,slow=11,SNR=14						
ASAR				S	S	20 04 51.0	-7.6
	0.3nm,0.8s,baz=3.8,slow=28,SNR=2.9						
MKAR	Makanchi Array	68.36	323	P	P	20 07 30.0	0.0
	0.4nm,0.6s,baz=116,slow=6.6,SNR=2.3						

ISK **17** *19:57:11.9, 36°.97N×29°.34E, h6^{km}, ML2.7/3*

ISCJB **17** *19:57:13.0±0.5, 36°.92N±0°.03×29°.32E±0°.03, h0^{km}, Error ellipse: s-maj=4.2km s-min=4.0km az=10.4*

DDA **17** *19:57:12.0, 36°.90N×29°.37E, h7^{km}, Ml2.4, Suspected Mining explosion.*

CSEM **17** *19:57:12.6±0.2, 36°.92N×29°.33E, h1^{km}, ML2.4, Error ellipse: s-maj=5.0km s-min=4.5km az=18.0, Suspected Mining explosion.*

ISC 17 19:57:10.5±1.0**, 36°.90N**±0°.03×**29°.36E**±0°.03**, h0^{km}, n20, σ0^{s}.64**/36**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FETY	Fethiye	0.34	220	PG	Pb	19 57 19.3	-0.3
FETY				SG	Sb	19 57 25.6	0.0
FETY	Fethiye	0.34	220	P	Pb	19 57 19.3	-0.3
FETY				S	Sb	19 57 24.5	-1.1
FETY				eSg	Sb	19 57 25.6	0.0
GOLH	Golhisar	0.37	26	iP	Pb	19 57 19.4	-0.7
GOLH				iS	Sb	19 57 26.9	+0.4
GOLH	Golhisar	0.37	26	P	Pb	19 57 19.4	-0.7
GOLH				S	Sb	19 57 26.9	+0.4
ELL	Elmali	0.47	109	PG	Pb	19 57 22.1	+0.3
ELL				SG	Sb	19 57 30.2	+0.9
ELL	Elmali	0.47	109	ePg	Pb	19 57 22.1	+0.3
ELL				eSg	Sb	19 57 30.2	+0.9
DALY	Dalyan (Mu˜la	0.57	262	PG	Pb	19 57 23.5	+0.1
DALY				SG	Sb	19 57 32.4	+0.3
DALY	Dalyan (Mu˜la	0.57	262	iP	Pb	19 57 23.0	-0.4
DALY	Dalyan (Mu˜la	0.57	262	P	Pb	19 57 23.0	-0.4
DALY	Dalyan (Mu˜la	0.57	262	ePg	Pb	19 57 23.5	+0.1
DALY				eSg	Sb	19 57 32.4	+0.3
TAVA	DENIZLI_Tavas	0.67	328	iP	Pb	19 57 24.7	-0.4
TAVA				iS	Sb	19 57 35.5	+0.5
TAVA	DENIZLI_Tavas	0.67	328	P	Pb	19 57 24.7	-0.4
TAVA				S	Sb	19 57 35.5	+0.5
AKAS	Kas	0.70	163	PG	Pn	19 57 27.1	-0.7
AKAS				SG	Sn	19 57 38.9	-0.4
AKAS	Kas	0.70	163	iP	Pb	19 57 25.9	+0.3
AKAS				iS	Sn	19 57 38.9	-0.4
AKAS	Kas	0.70	163	P	Pb	19 57 25.9	+0.3
AKAS	Kas	0.70	163	ePg	Pn	19 57 27.1	-0.7
AKAS				eSg	Sn	19 57 38.9	-0.4
YER	Yerkesik	0.89	285	PG	Pb	19 57 28.9	0.0
YER	Yerkesik	0.89	285	ePg	Pb	19 57 28.9	0.0
DAT	Datca	1.44	264	PN	Pb	19 57 38.4	+0.1
DAT				SN	Sn	19 57 59.3	+1.7
DAT	Datca	1.44	264	ePn	Pb	19 57 38.4	+0.1
DAT				eSn	Sn	19 57 59.3	+1.7

ISCJB **17** *19:57:12.3±1.0, 23°.7S±0°.2×115°.5W±0°.2, h10^{km}, mb4.0/7, Error ellipse: s-maj=29.3km s-min=25.0km az=5.3*

IDC **17** *19:57:12.3±0.7, 23°.76S×115°.56W, h0^{km}, mb4.1/7, mb1 4.3/7, mb1mx4.0/40, mbtmp4.0/7, MS3.8/1, Ms1 3.8/1, ms1mx3.2/37, Error ellipse: s-maj=31.0km s-min=22.8km az=48.0*

ISC 17 19:57:14.1±0.8**, 23°.7S**±0°.2×**115°.5W**±0°.2**, h10^{km}, n21, σ0^{s}.69**/14**, mb4.0**/6**, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	Rapa Nui	6.51	122	LR	LR	20 00 38.9	
	comp=Z,730nm,18.2s,baz=296,slow=32						
PLCA	Paso Flores	41.14	125	P	P	20 04 59.4	+0.8
	2.8nm,1.1s,baz=354,slow=18,SNR=2.4						
LPAZ	La Paz	44.95	90	P	P	20 05 30.2	-0.2
	6.1nm,1.0s,baz=266,slow=4.2,SNR=5.8						
CPUP	Villa Florida	52.38	106	P	P	20 06 26.2	-0.5
	0.9nm,0.6s,baz=270,slow=7.1,SNR=2.5						
QSPA	South Pole Qui	66.41	180	P	P	20 08 02.9	-0.4
	1.3nm,0.9s,baz=114,slow=15,SNR=2.4						
SNAA	Sanae	74.45	162	P	P	20 08 51.8	-0.4
	1.0nm,0.8s,baz=269,slow=17,SNR=3.5						
YKA	Yellowknife Ar	85.94	0	P	P	20 09 53.1	-0.7
	1.0nm,0.8s,baz=176,slow=6.0,SNR=4.4						
H11S2	WAKE ISLAND Hy	86.70	292	T	T	21 45 57.0	
	baz=116,slow=75,SNR=98						
H11S1	WAKE ISLAND Hy	86.71	292	T	T	21 45 58.1	
	baz=116,slow=75,SNR=70						
H11S3	WAKE ISLAND Hy	86.72	292	T	T	21 45 58.3	
	baz=116,slow=75,SNR=74						
H11N3	WAKE ISLAND Hy	87.07	293	T	T	21 46 20.6	
	baz=117,slow=76,SNR=25						
H11N1	WAKE ISLAND Hy	87.08	293	T	T	21 46 22.5	
	baz=117,slow=76,SNR=14						
H11N2	WAKE ISLAND Hy	87.08	293	T	T	21 46 25.0	
	baz=117,slow=76,SNR=72						
WRA	Warramunga Arr	99.29	243	P	Pdif	20 10 57.0	0.0
	0.5nm,1.0s,baz=111,slow=4.6,SNR=2.9						
AKASG	Malin Array Be	141.69	36	PKP	PKPdf	20 16 46.7	+1.1
	0.5nm,0.4s,baz=304,slow=1.7,SNR=1.9						
ZALV	Zalesovo Beam	146.19	338	PKPbc	PKPdf	20 16 53.7	+0.3
	0.4nm,0.5s,baz=8.8,slow=3.1,SNR=2.5						
CMAR	Chiang Mai Arr	147.50	267	PKPbc	PKPdf	20 16 57.5	+0.9
	0.3nm,0.3s,baz=116,slow=2.1,SNR=3.4						
BRTR	Keskin Array B	149.48	51	PKPbc	PKPbc	20 17 04.4	+0.5
	2.3nm,0.8s,baz=277,slow=3.6,SNR=5.1						
BVAR	Borovoye Array	150.42	353	PKPbc	PKPbc	20 17 05.9	+0.3
	0.5nm,0.5s,baz=45,slow=0.8,SNR=4.7						
KURBB	Kurchatov Arra	151.03	341	PKPbc	PKPbc	20 17 07.2	+0.1
	0.5nm,0.2s,baz=22,slow=2.5,SNR=5.3						
MKAR	Makanchi Array	152.92	333	PKPbc	PKPbc	20 17 10.6	-1.0
	0.6nm,0.9s,baz=56,slow=3.6,SNR=3.8						

IDC **17** *19:58:47.4±0.8, 21°.99N×120°.41E, h0^{km}, mb3.9/11, mb1 4.0/11, mb1mx3.7/66, mbtmp3.9/11, MS2.9/7, Ms1 2.9/7, ms1mx2.7/63, Error ellipse: s-maj=36.0km s-min=17.3km az=64.0*

NEIC **17** *19:58:49.0±3.3, 22°.00N×120°.41E, h12^{km}±21^{km}, mb4.5/10, Error ellipse: s-maj=8.8km s-min=5.5km az=64.0*

ISCJB **17** *19:58:50.9±0.3, 22°.07N±0°.02×120°.38E±0°.02, h43^{km}±2^{km}, mb4.1/21, MS2.8/2, Error ellipse: s-maj=3.4km s-min=2.6km az=176.8*

TAP **17** *19:58:50.9, 22°.07N×120°.39E, h45^{km}, ML4.1, C*

JMA **17** *19:58:51.2±0.2, 22°.05N×120°.44E, h63^{km}±3^{km}, M3.8*

ISC 17 19:58:52.4±0.6**, 22°.06N**±0°.02×**120°.35E**±0°.03**, h36^{km}**±1^{km}**, n150, σ1^{s}.29**/212**, mb4.1**/21**, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWP	Hsiaoliuchiu	0.28	2	eP	Pn	19 58 59.6	-0.8
	baz=348						
TWP				S	Sn	19 59 06.8	+0.1
	baz=348						
WLCH	Liuqiu	0.29	4	eP	Pn	19 58 59.5	-0.8
	baz=350						
WLCH				eS	Sn	19 59 07.3	+0.6
	baz=350						
HEN	Hengchun	0.36	99	eP	Pn	19 58 60.0	-1.0
	baz=101						
HEN				eS	Sn	19 59 06.8	-0.5
	baz=101						
SCZT	Fangliau	0.40	38	eP	Pn	19 58 59.8	-1.6
	baz=30						
SCZT				eS	Sn	19 59 06.8	-1.2
	baz=30						
TWK1	Hengchun	0.43	105	eP	Pn	19 59 00.9	-1.0
	baz=108						
TWK1				eS	Sn	19 59 08.8	0.0
	baz=108						
TWKBT	Hengchun	0.44	105	eP	Pn	19 59 00.7	-1.4
	baz=108						
TWKBT				eS	Sn	19 59 07.9	-1.0
	baz=108						
SSPT	Xinbi	0.47	25	eP	Pn	19 59 01.6	-0.8
	baz=30						
SSPT				eS	Sn	19 59 09.8	+0.3
	baz=30						
KAU	Kaohsiung	0.51	355	P	Pn	19 59 02.4	-0.8
	baz=345						
TSEB	Hengchuen, Pin	0.53	107	P	Pn	19 59 01.9	-1.6
	baz=111						
EAST	Anshuo	0.56	55	eP	Pn	19 59 02.7	-1.3
	baz=54						
EAST				eS	Sn	19 59 11.0	-1.0
	baz=54						
TAW	Tawu	0.58	59	eP	Pn	19 59 03.5	-0.7
	baz=59						
MASBT	Mashibuluo	0.61	25	eP	Pn	19 59 03.3	-1.2
	baz=32						
SGLT	Jiouru	0.67	11	eP	Pn	19 59 05.6	+0.1
	baz=9.0						
SSD	Sandimen	0.73	21	eP	Pn	19 59 04.8	-1.4
	baz=28						
SSD				S	Sn	19 59 14.7	-1.4
	baz=28						
TWM1	Shoushan	0.76	5	eP	Pn	19 59 06.7	+0.1
	baz=3.0						
ECL	Taimali	0.77	46	eP	Pn	19 59 05.2	-1.5
	baz=45						
SLGT	Liugui	0.97	16	eP	Pn	19 59 08.5	-1.0
	baz=26						
TAI1	Yung-k'ang	0.98	353	eP	Pn	19 59 08.8	-0.8
	baz=352						
TWG	Pinlang	1.01	41	eP	Pn	19 59 09.6	-0.4
	baz=34						
TWG				eS	Sn	19 59 22.3	-0.7
	baz=34						
TWG	Pinlang	1.01	41	ePn	Pn	19 59 09.2	-0.7
TWGBT	Beinan	1.01	42	eP	Pn	19 59 09.2	-0.8
	baz=34						
TWGBT				eS	Sn	19 59 22.6	-0.4
	baz=34						
CHN3	Shinhua	1.01	1	eP	Pn	19 59 09.9	-0.1
	baz=359						
SGST	Jiashian	1.04	12	eP	Pn	19 59 09.7	-0.7
	baz=11						
LAY	Lan-yu	1.11	91	eP	Pn	19 59 09.3	-2.1
	baz=91						
CHN1	Nanshi	1.13	8	eP	Pn	19 59 10.9	-0.8
	baz=7.0						
STYT	Tauyuan	1.16	19	eP	Pn	19 59 11.5	-0.6
	baz=18						
WTP	Ta-pu	1.21	11	eP	Pn	19 59 11.7	-1.1
	baz=11						
TWK	Hsinying	1.21	6	eP	Pn	19 59 11.9	-0.9
	baz=5.0						
TWH	Lutao	1.23	58	eP	Pn	19 59 11.5	-1.4
	baz=58						
TWH				eS	Sn	19 59 26.2	-2.1
	baz=58						
TPUB	Ta-pu	1.26	12	eP	Pn	19 59 12.3	-1.2
	baz=11						
TPUB	Ta-pu	1.26	12	ePn	Pn	19 59 11.7	-1.8
ELDTW	Lidau	1.28	28	eP	Pn	19 59 13.0	-0.9
	baz=28						
CHN8	Yiju	1.29	354	eP	Pn	19 59 12.7	-1.1
	baz=354						
CHN4	Tsaushan	1.30	10	eP	Pn	19 59 12.7	-1.4
	baz=9.0						
WDGT	Dungji	1.36	332	eP	Pn	19 59 12.6	-2.1
	baz=331						
CHKT	Chengkung	1.39	42	eP	Pn	19 59 14.0	-1.3
	baz=41						
FULB	Fuli	1.43	37	eP	Pn	19 59 14.9	-0.9
	baz=27						
VCHM	Qimei	1.43	323	eP	Pn	19 59 13.6	-2.1
	baz=322						
VCHM				eS	Sn	19 59 30.8	-2.5
	baz=322						
CHY	Chiayi	1.43	3	eP	Pn	19 59 14.7	-1.1
	baz=2.0						
CHN2	Minshiung	1.47	4	eP	Pn	19 59 15.6	-0.8
	baz=4.0						
ALS	Alishan	1.50	16	eP	Pn	19 59 15.8	-1.3
	baz=4.0						
YUS	Yu-Shan	1.53	21	eP	Pn	19 59 16.6	-0.9
	baz=21						
TWF1	Yuli	1.55	34	eP	Pn	19 59 16.6	-0.9
	baz=33						
TWF1				eS	Sn	19 59 35.1	-1.3
	baz=33						
CHN5	Tsauling	1.56	11	eP	Pn	19 59 16.2	-1.4
	baz=10.0						
CHN5				eS	Sn	19 59 35.1	-1.6
	baz=10.0						
WSF	Szhu	1.58	356	eP	Pn	19 59 16.1	-1.7
	baz=355						
WSF				eS	Sn	19 59 35.5	-1.4
	baz=355						
YULB	Yu-li	1.59	33	eP	Pn	19 59 16.5	-1.5
	baz=32						
YULB				eS	Sn	19 59 35.6	-1.6
	baz=32						
YULB	Yu-li	1.59	33	ePn	Pn	19 59 17.4	-0.6
PHUB	P'eng-hu	1.62	334	eP	Pn	19 59 16.2	-2.2
	baz=333						
PHUB				eS	Sn	19 59 35.2	-2.7
	baz=333						
WDLH	Douliu	1.63	6	eP	Pn	19 59 16.9	-1.6
	baz=5.0						
WDLH				eS	Sn	19 59 37.3	-1.0
	baz=5.0						
WGK	Gukeng	1.63	7	eP	Pn	19 59 17.6	-0.9
	baz=6.0						
WGK				eS	Sn	19 59 37.5	-0.8
	baz=6.0						
PNG	Penghu	1.67	334	eP	Pn	19 59 16.9	-2.2
	baz=333						
PNG				eS	Sn	19 59 37.7	-1.6
	baz=333						
EHY	Hungye	1.69	32	eP	Pn	19 59 19.3	-0.1
	baz=31						
HGSD	Ruisui	1.73	34	eP	Pn	19 59 19.5	-0.5
	baz=23						
HGSD				eS	Sn	19 59 40.0	-0.9
	baz=23						
WJS	Zhushan	1.79	11	eP	Pn	19 59 19.1	-1.6
	baz=11						
WTCT	Ta-ch'eng	1.80	358	eS	Sn	19 59 41.8	-0.6
	baz=357						
SSLB	Suanglung	1.81	18	eP	Pn	19 59 19.9	-1.1
	baz=6.0						
SSLB	Suanglung	1.81	18	ePn	Pn	19 59 19.7	-1.3
RLNB	Erlin	1.82	0	eP	Pn	19 59 19.4	-1.8
	baz=360						
RLNB				eS	Sn	19 59 41.8	-1.2
	baz=360						
WNT	Mingjian	1.83	9	eP	Pn	19 59 20.3	-1.1
	baz=9.0						
WNT				eS	Sn	19 59 42.0	-1.3
	baz=9.0						
EGFH	Guangfu	1.88	32	eP	Pn	19 59 21.3	-0.8
	baz=30						
EGFH				eS	Sn	19 59 44.0	-0.5
	baz=30						
SMLT	Sun Moon Lake	1.88	15	eP	Pn	19 59 21.0	-1.1
	baz=15						

TYC	Yuchr	1.89	14	eP	Pn	19 59 21.1	-1.1
	baz=14						
ESL	Shilin	2.01	29	eP	Pn	19 59 23.5	-0.3
	baz=28						
ESL				eS	Sn	19 59 46.3	-1.4
	baz=28						
WCHH	Zhanghua	2.02	5	eP	Pn	19 59 22.9	-0.9
	baz=15						
WCHH				eS	Sn	19 59 47.5	-0.4
	baz=15						
TCU	Taichung	2.10	8	eP	Pn	19 59 23.9	-1.1
	baz=8.0						
TCU				eS	Sn	19 59 48.6	-1.3
	baz=8.0						
CHGB	Renai	2.13	21	eP	Pn	19 59 25.4	-0.2
	baz=10.0						
ENLB	Shoufeng	2.17	32	eP	Pn	19 59 25.6	-0.3
	baz=40						
ENLB				eS	Sn	19 59 51.8	+0.3
	baz=40						
BBP	Basco	2.20	137	eP	Pn	19 59 24.7	-1.7
BBP				eS	Sn	19 59 50.8	-1.6
HWA	Hwalien	2.23	31	eP	Pn	19 59 26.9	+0.1
	baz=20						
HWA				eS	Sn	19 59 52.3	-0.7
	baz=20						
WHF	Hehuan Shan	2.24	22	eP	Pn	19 59 26.6	-0.7
	baz=22						
WHF				eS	Sn	19 59 51.4	-2.5
	baz=22						
TDCB	Techi	2.31	19	eP	Pn	19 59 27.0	-0.9
	baz=18						
TDCB				eS	Sn	19 59 52.6	-2.6
	baz=18						
TWD	Chiawan	2.31	29	eP	Pn	19 59 27.3	-0.6
	baz=20						
TWD				eS	Sn	19 59 52.9	-2.2
	baz=20						
NSY	Sanyi	2.38	9	eP	Pn	19 59 28.5	-0.3
	baz=9.0						
NSY				eS	Sn	19 59 56.7	0.0
	baz=9.0						
NACB	Ninganchiao	2.39	28	eP	Pn	19 59 27.5	-1.6
	baz=38						
NACB	Ninganchiao	2.39	28	ePn	Pn	19 59 28.4	-0.7
NNSB	Datong	2.54	22	eP	Pn	19 59 31.0	-0.2
	baz=22						
NNSB				eS	Sn	19 59 59.1	-1.9
	baz=22						
NNSH	Datong	2.54	22	eP	Pn	19 59 30.8	-0.4
	baz=22						
NNSH				eS	Sn	19 59 58.8	-2.2
	baz=22						
NNS	Nan Shan	2.55	21	eP	Pn	19 59 31.4	+0.1
	baz=21						
NNS				eS	Sn	19 59 60.0	-1.1
	baz=21						
NSTT	Nanjuang	2.63	13	eP	Pn	19 59 31.4	-0.9
	baz=13						
NSTT				eS	Sn	20 00 01.7	-1.2
	baz=13						
LIOB	Emei	2.65	13	eP	Pn	19 59 31.6	-1.0
	baz=13						
LIOB				eS	Sn	20 00 01.7	-1.7
	baz=13						
ENA	Nanau	2.68	28	eP	Pn	19 59 32.6	-0.4
	baz=27						
NANB	Nanao	2.68	28	eP	Pn	19 59 32.2	-0.9
	baz=27						
NANB				eS	Sn	20 00 01.9	-2.5
	baz=27						
YHNB	Yeheng	2.76	20	eP	Pn	19 59 33.5	-0.7
	baz=20						
YHNB				eS	Sn	20 00 03.9	-2.5
	baz=20						
YHNB	Yeheng	2.76	20	ePn	Pn	19 59 34.1	-0.1
NSK	Sanguang	2.76	19	eP	Pn	19 59 34.4	+0.2
	baz=20						
NSK				eS	Sn	20 00 04.2	-2.1
	baz=20						
ENTT	Nioudou	2.80	23	eP	Pn	19 59 34.9	+0.2
	baz=24						
ENTT				eS	Sn	20 00 06.5	-0.7
	baz=24						
TWC	Suao	2.89	28	eP	Pn	19 59 35.5	-0.4
	baz=27						
TWC				eS	Sn	20 00 08.1	-1.2
	baz=27						
NWLT	Wulai	2.90	21	eP	Pn	19 59 36.4	+0.3
	baz=13						
TWE	Neicheng	2.91	24	eP	Pn	19 59 37.2	+1.1
	baz=35						
TWE				eS	Sn	20 00 09.8	-0.1
	baz=35						
KNM	Kinmen	2.94	323	eP	Pn	19 59 36.1	-0.4
	baz=320						
KNM				eS	Sn	20 00 10.5	-0.1
	baz=320						
EOS1	EOS1	2.97	33	eP	Pn	19 59 36.7	-0.2
	baz=42						
EOS1				eS	Sn	20 00 09.8	-1.4
	baz=42						
KNMB	Chin-men Tao	3.00	323	eP	Pn	19 59 36.0	-1.4
	baz=322						
KNMB				eS	Sn	20 00 09.9	-2.1
	baz=322						
VWUC	VWUC	3.03	344	eP	Pn	19 59 35.8	-2.1
	baz=344						
VWUC				eS	Sn	20 00 09.3	-3.7
	baz=344						
TATO	Taipei	3.08	20	ePn	Pn	19 59 38.5	0.0
EGS		3.13	27	eP	Pn	19 59 39.2	+0.1
	baz=37						
TIPB	Shuangxi	3.20	25	eP	Pn	19 59 39.9	-0.2
	baz=33						
TIPB				eS	Sn	20 00 15.5	-1.5
	baz=33						
JYNG	Yonagunijimaku	3.37	45	P	Pn	19 59 42.8	+0.4
JYNG				eS	Sn	20 00 20.3	-0.9
YOJ	Yonaguni jima	3.42	45	eP	Pn	19 59 42.2	-0.9
	baz=42						
YOJ				eS	Sn	20 00 19.9	-2.5
	baz=42						
YOJ	Yonaguni jima	3.42	45	ePn	Pn	19 59 43.7	+0.6
YOJ	Yonaguni jima	3.42	45	P	Pn	19 59 43.7	+0.6
YOJ				S	Sn	20 00 21.8	-0.6
VDOS	Pratas Island	3.64	249	eP	Pn	19 59 46.0	-0.2
	baz=249						
VDOS				eS	Sn	20 00 26.2	-1.7
	baz=249						
HATJ	Hateruma jima	3.75	57	P	Pn	19 59 47.8	+0.1
HATJ				eS	Sn	20 00 27.4	-3.2
IRIF	Iriomote-Funau	3.84	53	P	Pn	19 59 48.6	-0.4
IRIF				eS	Sn	20 00 31.6	-1.3
JKRS	Kuro-shima	4.00	56	P	Pn	19 59 50.6	-0.5
MATB	Ma-tsu	4.09	355	eP	Pn	19 59 51.3	-1.1
	baz=355						
MATB				eS	Sn	20 00 35.7	-3.3
	baz=355						
JIJ	Ishigaki jima	4.17	56	P	Pn	19 59 52.5	-1.0
JIJ				eS	Sn	20 00 37.5	-3.5
APYP	Conner	4.26	169	eP	Pn	19 59 53.7	-1.0
APYP				eS	Sn	20 00 41.9	-1.3
ABRA	Dolores	4.40	176	eP	Pn	19 59 55.2	-1.5
ABRA				eS	Sn	20 00 45.8	-0.9
JISG	Ishigakijimahi	4.42	55	P	Pn	19 59 55.9	-1.0
JISG				eS	Sn	20 00 43.7	-3.5
JTJ	Tarama	4.75	56	P	Pn	20 00 01.4	0.0
JTJ				eS	Sn	20 00 53.2	-2.1
JIRB	Irabujima	5.21	57	P	Pn	20 00 07.1	-0.7
JIRB				eS	Sn	20 01 03.2	-3.5
JOW	Kunigami	8.64	55	ePn	Pn	20 00 53.5	-1.4
DAV	Davao City (W)	15.73	161	LR	LR	20 09 27.4	
	comp=Z,49nm,20.4s,baz=343,slow=41						
KSRS	Korea Array	16.68	21	LR	LR	20 08 50.3	
	comp=Z,44nm,19.6s,baz=214,slow=36						
CMAR	Chiang Mai Arr	20.40	264	LR	LR	20 10 59.7	
	comp=Z,17nm,21.9s,baz=25,slow=36						
MAJO	Matsushiro	21.18	43	eP	P	20 03 35.4	+0.7
MJAR	Matsushiro Arr	21.18	43	P	P	20 03 35.4	+0.7
	0.7nm,0.6s,baz=216,slow=6.0,SNR=4.1						
GUMO	Guam	24.78	106	LR	LR	20 14 21.1	
	comp=Z,24nm,18.5s,baz=330,slow=38						
ULN	Ulaanbaatar	27.88	341	eP	P	20 04 38.4	-0.5
	9.1nm,1.9s						
SONA0	Songino Array	28.06	340	eP	P	20 04 41.1	+0.7
SONM	Songino Array	28.06	340	P	P	20 04 41.1	+0.7
	1.2nm,0.6s,baz=158,slow=9.7,SNR=8.2						
SONM				LR	LR	20 17 15.5	
	comp=Z,49nm,18.0s,baz=150,slow=39						
SONA1	Songino Array	28.06	340	eP	P	20 04 40.8	+0.2
LHMI	Lhok Sumawe	28.16	237	eP	P	20 04 42.1	+0.6
	71nm,1.1s						
KLR	Kul'dur	28.58	16	LR	LR	20 17 43.9	
	comp=Z,9.0nm,18.7s,baz=206,slow=40						
TLY	Talaya	32.29	340	eP	P	20 05 16.9	-0.8
	2.1nm,0.7s						
MK01	Makanchi Array	39.35	318	eP	P	20 06 19.4	+1.1
MK31	Makanchi Array	39.36	318	eP	P	20 06 19.5	+1.1
MK32	Makanchi Array	39.36	318	eP	P	20 06 19.9	+1.5
MKAR	Makanchi Array	39.36	318	P	P	20 06 19.9	+1.5
	2.5nm,0.6s,baz=113,slow=9.7,SNR=37						
MKAR				PcP	PcP	20 08 27.0	+0.7
	0.3nm,0.7s,baz=107,slow=5.0,SNR=3.2						
MKAR	Makanchi Array	39.36	318	eP	P	20 06 19.2	+0.8
	17nm,0.6s						
MKAR				PcP	PcP	20 08 27.0	+0.7
MAKZ	Makanchi	39.56	318	eP	P	20 06 21.4	+1.4
	2.1nm,0.6s						
YAK	Yakutsk	40.46	7	LR	LR	20 24 15.8	
	comp=Z,33nm,18.8s,baz=97,slow=38						
YAK	Yakutsk	40.46	7	eP	P	20 06 27.0	-0.2
	9.8nm,0.6s						
ZAA0	Zalesovo Array	41.63	329	eP	P	20 06 37.4	+0.5
	4.4nm,1.2s						
ZALV	Zalesovo Beam	41.63	329	P	P	20 06 37.5	+0.5
	1.8nm,0.6s,baz=111,slow=6.4,SNR=7.5						
ZALV				PcP	PcP	20 08 33.9	+0.4
	0.5nm,0.5s,baz=110,slow=4.7,SNR=2.2						
ZAA1	Zalesovo Array	41.64	329	eP	P	20 06 37.5	+0.5
KURK	Kurchatov	43.25	322	eP	P	20 06 51.1	+1.0
KURBB	Kurchatov Arra	43.27	322	P	P	20 06 51.2	+0.9
	1.0nm,0.7s,baz=135,slow=6.8,SNR=10						
WRA	Warramunga Arr	43.92	161	P	P	20 06 55.1	-0.8
	1.2nm,0.7s,baz=346,slow=8.9,SNR=4.2						
WR1	Warramunga Arr	43.93	161	eP	P	20 06 55.1	-0.8
	40nm,1.9s						
AS31	Alice Springs	47.32	163	eP	P	20 07 22.0	-0.8
	3.2nm,1.5s						
ASAR	Alice Springs	47.33	163	P	P	20 07 22.6	-0.1
	0.8nm,0.5s,baz=341,slow=6.9,SNR=10.0						
AS01	Alice Springs	47.34	163	eP	P	20 07 21.1	-1.7
BVAR	Borovoye Array	48.85	322	P	P	20 07 35.2	+0.9
	0.5nm,0.5s,baz=102,slow=8.4,SNR=5.6						
BVAR				PcP	PcP	20 08 59.3	+0.9
	0.5nm,0.6s,baz=102,slow=4.7,SNR=2.9						
PPLA	Purkeypile	69.47	29	eP	P	20 09 57.0	+0.1
	28nm,2.0s						
KDAK	Kodiak Island	70.08	35	eP	P	20 10 00.5	-0.1
	44nm,1.8s						
FIA0	FINESS Array S	72.89	330	eP	P	20 10 18.4	+0.9
FINES	FINESS Array B	72.89	330	P	P	20 10 18.4	+0.9
	1.9nm,1.0s,baz=60,slow=8.5,SNR=4.3						
GERES	GERESS Array B	83.99	320	P	P	20 11 19.8	+0.7
	0.9nm,0.8s,baz=76,slow=5.9,SNR=4.2						
YKA	Yellowknife Ar	85.22	22	P	P	20 11 25.4	+0.5
	0.2nm,0.3s,baz=337,slow=4.6,SNR=3.1						

MAN 17 19:59:19.1, 9°.92N×123°.18E, h1^{km}, mb4.0, ML2.8, MS2.4, 1C, Negros

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNPH	Sibulan	0.58	174	⇑iP	Pg	19 59 29.7	-0.5
SNPH				i S	Sg	19 59 36.9	-0.8
TBP	Tagbilaran	0.71	109	eP	Pb	19 59 34.5	+0.2
LLP	Lapu-Lapu	0.87	63	eP	Pg	19 59 35.5	-0.3
LLP				eS	Sg	19 59 47.9	+0.8
GUIM	Jordan	0.91	321	eP	Pb	19 59 37.4	-0.3
GUIM				eS	Sn	19 59 51.7	-1.1
MSLP	Maasin	1.67	83	eP	Pn	19 59 48.9	-0.7
MSLP				eS	Sn	20 00 11.4	-0.2
OCLP	Ormoc	1.80	51	eP	Pn	19 59 52.1	+0.7
PAGZ	Pagadian	2.07	174	eP	Pn	19 59 55.4	+0.4
CUYO	Cuyo Island	2.31	294	eP	Pn	19 59 59.7	+1.3

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*BJI **17** 20:01:30.0, 16°.50N×98°.70W, h21^{km}, Ms4.8/1, Ms7 4.4/1*

*ISCJB **17** 20:01:31.4±0.3, 16°.57N±0°.03×98°.64W±0°.02, h33^{km}, mb4.5/120, MS3.8/3, Error ellipse: s-maj=4.8km s-min=2.9km az=15.8*

*MEX **17** 20:01:32.2±0.6, 16°.42N×98°.90W, h13^{km}±5^{km}, MD4.5*

*NEIC **17** 20:01:34.5±0.5, 16°.65N×98°.63W, h36^{km}±3^{km}, mb4.5/148, MD4.5(MEX), Error ellipse: s-maj=5.5km s-min=3.0km az=200.0*

*IDC **17** 20:01:34.5±6.5, 16°.66N×98°.66W, h35^{km}±45^{km}, mb4.1/8, mb1 4.4/11, mb1mx4.0/47, mbtmp4.2/11, ML3.9/3, MS3.7/5, Ms1 3.7/5, ms1mx3.2/44, Error ellipse: s-maj=47.9km s-min=16.7km az=36.0*

ISC 17 20:01:30.3±1.2, 16°.45N±0°.05×98°.89W±0°.03, h17^{km}±8^{km}, n493, σ1^{s}.41/504, mb4.5/120, MS3.7/3, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.73	95	i P	Pg	20 01 44.1	-0.6
PNIG				eS	Sg	20 01 54.1	-0.3
PNIG	Pinotepa	0.73	95	ePg	Pg	20 01 44.1	-0.6
PNIG				eSn	Sg	20 01 54.1	-0.3
ACX	Acapulco	1.02	294	eP	Pb	20 01 48.5	-1.0
ACX				i S	Sb	20 02 01.8	-0.8
ACP2	Acapulco	1.04	294	eP	Pb	20 01 49.1	-0.9
ACP2				eS	Sb	20 02 02.5	-0.9
TLIG	Tlapa	1.15	16	eP	Pn	20 01 50.6	-1.1
TLIG				eS	Sb	20 02 05.3	-1.2
TLIG	Tlapa	1.15	16	ePn	Pn	20 01 50.4	-1.3
TLIG				eSn	Sb	20 02 03.9	-2.5
HMTT	Tlapaneco	1.37	13	eP	Pn	20 01 54.0	-0.9
HMTT				eS	Sn	20 02 10.8	-1.9
CAIG	El Cayaco	1.45	294	eP	Pn	20 01 55.2	-0.5
CAIG				eS	Sn	20 02 12.1	-2.3
MEIG	Mezcala	1.62	335	eP	Pn	20 01 57.6	-0.7
MEIG				eS	Sn	20 02 16.9	-2.0
MEIG	Mezcala	1.62	335	ePn	Pn	20 01 57.6	-0.7
PLIG	Platanillo	2.02	343	eP	Pn	20 02 03.8	+0.1
PLIG				eS	Sn	20 02 27.1	-1.5
PLIG	Platanillo	2.02	343	eSn	Sn	20 02 27.1	-1.5
VHO	Vista Hermosa	2.15	73	eP	Pn	20 02 05.2	-0.5
VHO				eS	Sn	20 02 31.7	-0.5
YAIG	Yautepec	2.40	356	eP	Pn	20 02 08.7	-0.4
YAIG				i S	Sn	20 02 38.2	0.0
TPIG	Tehuac#an	2.44	36	i S	Sn	20 02 37.7	-1.4
PPM	Popocatepetl	2.61	5	eP	Pn	20 02 12.2	0.0
PHPU	Puebla	2.67	15	eP	Pn	20 02 12.6	-0.2
ZIIG	Zihuatanejo	2.72	295	eP	Pn	20 02 13.1	-0.1
ZIIG				eS	Sn	20 02 45.0	-0.8
HUIG	Huatulco	2.76	104	eP	Pn	20 02 13.0	-0.9
HUIG				i S	Sn	20 02 45.3	-1.5
UNM	Universidad Na	2.87	355	i P	Pn	20 02 15.4	-0.2
UNM				i S	Sn	20 02 49.1	-0.9
MOIG	Morelia	3.88	326	i P	Pn	20 02 30.1	+0.6
MOIG				i S	Sn	20 03 13.9	-0.9
MOIG	Morelia	3.88	326	ePn	Pn	20 02 35.9	+6.4
MOIG				eSg	Sb	20 03 29.6	+4.2
CMIG	Matias Romero	3.89	80	Pn	Pn	20 02 28.2	-1.1
	18nm,0.3s,baz=258,slow=11,SNR=178						
CMIG				Lg	Lg	20 03 31.0	
	188nm,0.3s,baz=342,slow=17,SNR=6.8						
LVIG	Laguna Verde	4.01	35	ePn	Pn	20 02 28.0	-3.0
LVIG				ePg	Pb	20 02 43.5	+2.9
CCIG	Comitan	6.48	91	ePn	Pn	20 03 06.0	+0.8
ZAIG	Zacatecas	7.17	332	ePn	Pn	20 03 18.4	+3.6
ZAIG				ePg	Pg	20 03 44.4	-3.3
LNIG	Linares	8.42	356	ePn	Pn	20 03 31.0	-0.7
TGUH	Tegucigalpa,Un	11.46	100	ePn	Pn	20 04 09.7	-3.7
833A	Chaparral WMA,	11.82	358	P	Pn	20 04 20.1	+1.9
	baz=176						
833A	Chaparral WMA,	11.82	358	ePn	Pn	20 04 18.3	+0.1
HPIG		12.18	330	ePn	Pn	20 04 26.5	+3.2
SLBS	Sierra La Lagu	12.63	306	ePn	Pn	20 04 31.8	+2.4
LPIG	La Paz	13.13	307	LR	LR	20 09 20.5	
	comp=Z,222nm,18.1s,baz=43,slow=35						
BOAB	BOACO BROADBAN	13.41	106	ePn	Pn	20 04 40.2	+0.2
TXAR	Lajitas Array	13.55	342	Pn	Pn	20 04 43.9	+1.9
	0.1nm,0.3s,baz=161,slow=16,SNR=11						
TXAR				Lg	Lg	20 08 40.6	
	0.1nm,0.3s,baz=161,slow=22,SNR=4.1						
TXAR				LR	LR	20 09 48.7	
	comp=Z,153nm,19.3s,baz=0.0,slow=37						
LTX	Lajitas	13.55	342	ePn	Pn	20 04 43.9	+1.9
TX31	Lajitas Ar. Si	13.55	342	ePn	Pn	20 04 43.8	+1.8
HKT	Hockley	13.72	11	ePn	Pn	20 04 42.2	-1.9
JCT	Junction City	13.99	357	P	Pn	20 04 48.7	+0.8
	baz=175						
JCT	Junction City	13.99	357	ePn	Pn	20 04 46.8	-1.0
435B	Jarrell	14.31	5	ePn	Pn	20 04 51.1	-1.2
ESPN	Las Esperanzas	14.76	105	ePn	Pn	20 04 58.2	-0.2
JTS	JuntasAbangare	14.87	113	Pn	Pn	20 05 03.8	+3.8
	2.2nm,0.3s,baz=1.7,slow=13,SNR=8.6						
WHTX	Lake Whitney,	15.52	5	P	Pn	20 05 07.2	-1.4
	baz=184,SNR=7.1						
WHTX	Lake Whitney,	15.52	5	ePn	Pn	20 05 10.1	+1.5
	61nm,1.1s						
341A	Kurthwood	15.70	18	ePn	Pn	20 05 12.4	+1.5
	27nm,0.8s						
NATX	Nacogdoches	15.72	13	ePn	Pn	20 05 10.6	-0.4
	40nm,0.9s						
342A	Flagon Creek P	16.01	21	P	Pn	20 05 10.4	-4.4
	baz=203						
342A	Flagon Creek P	16.01	21	ePn	Pn	20 05 15.3	+0.5
	68nm,0.8s						
ABTX	Abilene, Hawle	16.11	358	P	Pn	20 05 15.0	-1.2
	baz=176,SNR=7.1						
ABTX	Abilene, Hawle	16.11	358	ePn	Pn	20 05 15.6	-0.6
	22nm,0.8s						
240A	Hunter Patters	16.20	16	ePn	Pn	20 05 17.9	+0.6
	23nm,0.7s						
MNTX	Cornudas Mount	16.29	340	P	Pn	20 05 19.0	+0.6
	baz=156,SNR=14						
MNTX	Cornudas Mount	16.29	340	ePn	Pn	20 05 18.7	+0.4
	7.1nm,0.8s						
CLNB	Carlsbad	16.38	345	ePn	Pn	20 05 21.1	+1.5
241A	Mo Tay, Goldon	16.42	18	ePn	Pn	20 05 18.9	-1.1
	50nm,1.0s						
GDL2	Guadalupe Moun	16.45	343	ePn	Pn	20 05 21.2	+0.7
HSIG		16.72	321	ePn	Pn	20 05 26.3	+2.4
	12nm,1.2s						
140A	Cam and Jess,	16.82	16	P	Pn	20 05 24.8	-0.3
	baz=197						
140A	Cam and Jess,	16.82	16	ePn	Pn	20 05 25.5	+0.4
	90nm,1.0s						
141A	Papa Simpson,	16.97	18	P	Pn	20 05 27.2	+0.2
	baz=199						
142A	Monroe	17.21	20	P	Pn	20 05 26.7	-3.4
	baz=202						
244A	Avery, Jackson	17.21	24	P	Pn	20 05 27.9	-2.1
	baz=207						
Z40A	Long Farm, Mag	17.45	16	P	Pn	20 05 31.5	-1.5
	baz=197,SNR=6.1						
143A	Socs Landing,	17.54	21	ePn	Pn	20 05 33.9	-0.3
	76nm,1.0s						
Z41A	Richland Creek	17.61	17	P	Pn	20 05 35.0	0.0
	baz=199						
Z41A	Richland Creek	17.61	17	ePn	Pn	20 05 34.7	-0.3
	116nm,1.4s						
319A	Douglas	17.61	329	ePn	Pn	20 05 37.2	+2.0
	15nm,0.9s						
MSTX	Muleshoe	17.79	349	P	Pn	20 05 36.7	-0.6
	baz=167,SNR=11						
MSTX	Muleshoe	17.79	349	ePn	Pn	20 05 36.3	-1.0
	24nm,0.8s						
121A	Cookes Peak, D	17.92	335	P	Pn	20 05 40.4	+1.3
	baz=150						
WMOK	Wichita Mounta	18.21	0	P	Pn	20 05 42.9	+0.5
	baz=180						
WMOK	Wichita Mounta	18.21	0	ePn	Pn	20 05 42.0	-0.4
	6.3nm,0.8s						
X39A	Fountain Ranch	18.48	13	P	P	20 05 44.0	-1.6
	baz=194						
AMTX	Amarillo	18.52	353	P	P	20 05 45.3	-0.8
	baz=171						
AMTX	Amarillo	18.52	353	eP	P	20 05 45.0	-1.1
	24nm,0.9s						
248A	Dixon Mills	18.57	31	P	P	20 05 44.2	-2.4
	baz=215						
MIAR	Mount Ida	18.64	14	P	P	20 05 45.5	-1.7
	baz=195,SNR=6.3						
MIAR	Mount Ida	18.64	14	eP	P	20 05 45.6	-1.6
	20nm,0.9s						
X40A	Basin Creek Fa	18.76	16	P	P	20 05 47.0	-1.6
	baz=198						
147A	Livingston	18.79	29	P	P	20 05 46.3	-2.7
	baz=213						
147A	Livingston	18.79	29	eP	P	20 05 46.8	-2.2
	61nm,1.2s						
BNM	Barren Site	18.95	340	eP	P	20 05 52.2	+1.3
LENM	Lemitar	19.08	339	eP	P	20 05 54.1	+1.8
TUC	Tucson	19.12	328	P	P	20 05 54.3	+1.6
	baz=142						
TUC	Tucson	19.12	328	eP	P	20 05 55.4	+2.7
	5.6nm,0.8s						
UALR	University of	19.16	17	eP	P	20 05 51.2	-1.8
	30nm,1.2s						
W39A	Magazine	19.21	13	P	P	20 05 52.7	-0.8
	baz=194,SNR=9.3						
W39A	Magazine	19.21	13	eP	P	20 05 53.0	-0.6
	61nm,1.6s						
Z47A	Carrollton	19.32	28	P	P	20 05 53.6	-1.2
	baz=212						
W40A	Ferguson Farm,	19.37	14	P	P	20 05 54.4	-0.9
	baz=196						
W40A	Ferguson Farm,	19.37	14	eP	P	20 05 55.1	-0.3
149A	Jones	19.45	32	P	P	20 05 54.7	-1.5
	baz=217						
Y46A	Houston	19.56	26	P	P	20 05 55.6	-1.8
	baz=209,SNR=11						
W41B	Gary Mavity, V	19.57	16	P	P	20 05 56.6	-0.8
	baz=199						
W41B	Gary Mavity, V	19.57	16	eP	P	20 05 56.7	-0.8
	11nm,0.8s						
TUL1	Leonard	19.57	8	P	P	20 05 56.5	-1.0
	baz=188						
TUL1	Leonard	19.57	8	eP	P	20 05 56.3	-1.2
	28nm,0.8s						
TASL	Snake Pit, Alb	19.62	341	P	P	20 05 59.7	+1.4
	baz=157						
ANMO	Albuquerque	19.62	341	P	P	20 05 59.2	+0.9
	0.5nm,0.3s,baz=146,slow=12,SNR=14						
ANMO				LR	LR	20 14 16.2	
	comp=Z,798nm,18.1s,baz=156,slow=39						
ANMO	Albuquerque	19.62	341	P	P	20 05 59.5	+1.2
	baz=157						
ANMO	Albuquerque	19.62	341	eP	P	20 05 52.2	-6.0
	9.9nm,0.8s						
TASM	ASL Pad, Albuq	19.62	341	P	P	20 05 59.4	+1.1
	baz=157						
352A	Blakely	19.63	38	eP	P	20 05 57.4	-0.7
	62nm,0.6s						
WHAR	Wooly Hollow	19.66	16	eP	P	20 05 57.1	-1.4
	16nm,0.8s						
LRAL	Lakeview Retre	19.70	31	P	P	20 05 57.0	-1.9
	baz=215						
LRAL	Lakeview Retre	19.70	31	eP	P	20 05 58.2	-0.6
	7.3nm,0.8s						
Z48A	Northport	19.71	29	P	P	20 05 57.1	-1.9
	baz=214						
251A	Midway	19.80	36	P	P	20 05 58.7	-1.4
	baz=221						
150A	Eclectic	19.86	34	P	P	20 05 60.0	-0.7
	baz=218						
V39A	Pettigrew	19.86	13	P	P	20 05 59.6	-1.1
	baz=194,SNR=17						
214A	Organ Pipe Nat	19.95	323	P	P	20 06 03.8	+2.1
	baz=137						
353A	Camilla	19.96	39	P	P	20 06 00.4	-1.4
	baz=225						
Y47A	UCPARC, Winfie	20.02	28	P	P	20 06 01.1	-1.3
	baz=212						
V40A	Witts Springs	20.02	15	P	P	20 06 01.1	-1.3
	baz=197,SNR=6.4						
V40A	Witts Springs	20.02	15	eP	P	20 06 00.7	-1.7
	20nm,0.7s						
Z49A	Columbiana	20.06	32	P	P	20 06 01.9	-0.9
	baz=216,SNR=7.9						
252A	Lumpkin	20.11	37	P	P	20 06 01.6	-1.8
	baz=223,SNR=6.3						
V41A	Mountainview	20.17	16	P	P	20 06 02.8	-1.2
	baz=198,SNR=11						
151A	Opelika	20.18	35	P	P	20 06 01.6	-2.5
	baz=220,SNR=8.2						
HHAR	Hobbs	20.23	12	eP	P	20 06 02.3	-2.5
	8.8nm,0.6s						
X46A	Booneville	20.26	25	P	P	20 06 03.9	-1.1
	baz=209						
Y48A	Jasper	20.33	29	P	P	20 06 04.5	-1.3
	baz=214						

657A	**Interlachen** baz=234	20.37	47	P	P	20 06 04.0	-2.2
V42A	**Cord** baz=200,SNR=9.9	20.40	18	P	P	20 06 04.8	-1.7
TIGA	**Tifton** baz=226	20.41	40	P	P	20 06 04.3	-2.3
Z50A	**Ashland** baz=218,SNR=7.1	20.42	33	P	P	20 06 06.0	-0.7
Z50A	**Ashland** 23nm,0.8s	20.42	33	*e*P	P	20 06 04.0	-2.8
U39A	**Green Forest** baz=194,SNR=17	20.42	13	P	P	20 06 05.3	-1.4
X47A	**Russelville** baz=211	20.53	27	P	P	20 06 06.6	-1.4
U40A	**Yellville** baz=196,SNR=21	20.54	14	P	P	20 06 06.6	-1.4
X18A	**Snowflake** 14nm,1.0s	20.55	333	*e*P	P	20 06 10.2	+1.7
152A	**Waverly Hall** baz=221,SNR=5.4	20.62	36	P	P	20 06 07.1	-1.8
152A	**Waverly Hall** 18nm,0.8s	20.62	36	*e*P	P	20 06 07.3	-1.6
Y49A	**Blount Mountai** baz=216	20.65	31	P	P	20 06 07.9	-1.4
Y49A	**Blount Mountai** 16nm,0.8s	20.65	31	*e*P	P	20 06 07.7	-1.6
U41A	**Viola** baz=199,SNR=7.3	20.76	16	P	P	20 06 09.1	-1.3
PLAL	**Pickwick Lake** 28nm,0.9s	20.84	26	*e*P	P	20 06 09.5	-1.8
X48A	**Hartselle** baz=213,SNR=7.4	20.84	28	P	P	20 06 09.2	-2.1
X48A	**Hartselle** 29nm,0.9s	20.84	28	*e*P	P	20 06 09.5	-1.8
Z51A	**Franklin** baz=219	20.86	34	P	P	20 06 10.2	-1.3
T38A	**Diamond** baz=192	20.90	10	P	P	20 06 10.7	-1.3
254A	**Abbeville** baz=226,SNR=6.9	20.94	40	P	P	20 06 10.3	-2.1
U42A	**Revenden** baz=200,SNR=16	20.95	17	P	P	20 06 11.0	-1.5
Y50A	**Piedmont** baz=217	21.02	32	P	P	20 06 11.4	-1.8
T39A	**Clever** baz=194	21.06	12	P	P	20 06 11.9	-1.8
113A	**Mohawk Valley,** 6.5nm,0.9s	21.10	323	*e*P	P	20 06 16.1	+2.1
X16A	**Lo Mia Camp, P** 19nm,0.8s	21.14	330	*e*P	P	20 06 17.1	+2.3
T25A	**Trinidad** baz=164,SNR=26	21.18	348	P	P	20 06 15.8	+0.7
T25A	**Trinidad** 32nm,0.9s	21.18	348	*e*P	P	20 06 16.4	+1.2
Z52A	**Williamson** baz=221	21.18	35	P	P	20 06 12.0	-3.0
X49A	**Woodville** baz=215,SNR=10	21.22	30	P	P	20 06 13.4	-2.0
W47A	**Westpoint** baz=211	21.27	26	P	P	20 06 15.2	-0.7
Y51A	**Rockmart** baz=219,SNR=8.2	21.37	33	P	P	20 06 15.7	-1.3
T40A	**Mansfield** baz=196	21.37	14	P	P	20 06 15.4	-1.6
T41A	**Mountain View** baz=198,SNR=14	21.46	16	P	P	20 06 16.5	-1.5
W48A	**Pulaski** baz=212	21.46	28	P	P	20 06 16.2	-1.8
X50B	**Fort Payne** baz=216,SNR=9.3	21.51	31	P	P	20 06 16.6	-2.0
154A	**Montrose** baz=225	21.52	39	P	P	20 06 16.5	-2.1
154A	**Montrose** 56nm,0.8s	21.52	39	*e*P	P	20 06 17.5	-1.1
S38A	**Stockton** baz=192	21.55	11	P	P	20 06 17.3	-1.6
Y14A	**Wickenburg** 15nm,1.0s	21.55	326	*e*P	P	20 06 21.0	+1.9
PBMO	**Poplar Bluff** 25nm,0.6s	21.59	19	*e*P	P	20 06 17.3	-2.0
T42A	**Van Buren** baz=200,SNR=12	21.63	17	P	P	20 06 18.0	-1.7
T42A	**Van Buren** 15nm,0.8s	21.63	17	*e*P	P	20 06 17.8	-2.0
S39A	**Bolivar** baz=194,SNR=8.3	21.72	12	P	P	20 06 19.0	-1.7
S39A	**Bolivar** 12nm,0.7s	21.72	12	*e*P	P	20 06 19.0	-1.7
Z53A	**Monticello** baz=223,SNR=8.9	21.72	37	P	P	20 06 18.1	-2.7
W49A	**Belvidere** baz=214	21.75	29	P	P	20 06 19.6	-1.4
U45A	**Rockin P Farm,** baz=206	21.76	23	P	P	20 06 20.1	-1.1
S40A	**Lebanon** baz=196,SNR=17	21.80	14	P	P	20 06 19.8	-1.8
GOGA	**Godfrey** baz=223,SNR=19	21.88	37	P	P	20 06 20.2	-2.3
GOGA	**Godfrey** 33nm,0.8s	21.88	37	*e*P	P	20 06 21.0	-1.5
Y52A	**Lilburn** baz=221	21.88	35	P	P	20 06 19.5	-2.9
Y52A	**Lilburn** 25nm,0.8s	21.88	35	*e*P	P	20 06 21.0	-1.4
155A	**Kite** baz=226,SNR=19	21.91	40	P	P	20 06 21.2	-1.6
T43A	**Greenville** baz=202,SNR=19	21.91	19	P	P	20 06 20.8	-2.0
GLA	**Glamis** baz=134	21.92	322	P	P	20 06 25.1	+2.1
WVT	**Waverly** baz=209	21.93	25	P	P	20 06 21.2	-1.8
S41A	**Jillco Farms,** baz=198	21.98	15	P	P	20 06 22.3	-1.2
X51A	**Calhoun** baz=218	21.99	32	P	P	20 06 22.1	-1.6
X51A	**Calhoun** 26nm,0.7s	21.99	32	*e*P	P	20 06 21.8	-1.9
SDCO	**Great Sand Dun** baz=162,SNR=12	22.00	346	P	P	20 06 25.0	+1.0
SDCO	**Great Sand Dun** 9.1nm,1.1s	22.00	346	*e*P	P	20 06 24.6	+0.6
WUAZ	**Wupatki** baz=146,SNR=11	22.01	332	P	P	20 06 26.1	+2.0
WUAZ	**Wupatki** 15nm,0.9s	22.01	332	*e*P	P	20 06 25.0	+0.8
R38A	**Fenwick Farm,** baz=192	22.09	10	P	P	20 06 22.9	-1.8
Z54A	**Sparta** baz=224,SNR=12	22.11	38	P	P	20 06 23.4	-1.6
Y53A	**Monroe** baz=222	22.14	36	P	P	20 06 23.6	-1.6
W50A	**Signal Mountai** baz=216,SNR=5.7	22.27	30	P	P	20 06 24.0	-2.7
W50A	**Signal Mountai** 22nm,0.8s	22.27	30	*e*P	P	20 06 24.8	-1.9
S22A	**4UR Ranch, Cre** baz=159,SNR=14	22.34	343	P	P	20 06 28.2	+0.5
S22A	**4UR Ranch, Cre** 14nm,1.2s	22.34	343	*e*P	P	20 06 28.0	+0.3
MVCO	**Mesa Verde** baz=154	22.36	339	P	P	20 06 28.9	+1.1
MVCO	**Mesa Verde** 17nm,0.9s	22.36	339	*e*P	P	20 06 28.8	+0.9
R39A	**Chumby, Stover** baz=194,SNR=8.7	22.38	12	P	P	20 06 25.4	-2.4
S42A	**Caledonia** baz=200,SNR=5.3	22.40	17	P	P	20 06 26.5	-1.6
U47A	**Clarksville** baz=210	22.42	25	P	P	20 06 26.4	-1.9
SWSC	**Sam W. Stewart** baz=132	22.43	320	P	P	20 06 28.0	-0.4
PDMCI	**Parker Dam,Lak** baz=138	22.44	325	P	P	20 06 29.6	+1.1
W51A	**Cleveland** baz=217	22.51	31	P	P	20 06 26.3	-3.0
R40A	**Maddies Statio** baz=196,SNR=18	22.52	14	P	P	20 06 28.5	-0.8
R40A	**Maddies Statio** 37nm,0.8s	22.52	14	*e*P	P	20 06 27.6	-1.7
X52A	**Dahlonega** baz=220	22.53	34	P	P	20 06 27.3	-2.2
156A	**Sylvania** baz=228	22.54	41	P	P	20 06 28.1	-1.5
CCM	**Cathedral Cave** baz=199	22.55	16	P	P	20 06 29.3	-0.3
CCM	**Cathedral Cave** 13nm,0.8s	22.55	16	*e*P	P	20 06 28.6	-1.0
Y54A	**Tignall** baz=224,SNR=24	22.65	37	P	P	20 06 28.6	-2.1
T46A	**Princeton** baz=208	22.70	23	P	P	20 06 28.9	-2.4
FVM	**French Village** 11nm,0.8s	22.71	18	*e*P	P	20 06 31.2	-0.1
R41A	**Rosebud** baz=198,SNR=7.6	22.74	15	P	P	20 06 30.2	-1.5
V50A	**Pikevile** baz=216	22.75	30	P	P	20 06 28.9	-2.9
MONP2	**Monument Peak** baz=131,SNR=5.7	22.78	319	P	P	20 06 34.2	+1.7
U48A	**Cassie Pea, Po** baz=212,SNR=8.5	22.79	26	P	P	20 06 30.9	-1.3
S44A	**Carbondale** baz=204	22.80	20	P	P	20 06 30.1	-2.2
SIUC	**Southern Illin** 24nm,0.8s	22.83	20	*e*P	P	20 06 31.2	-1.4
CPCT	**Cooper Cave** 38nm,0.8s	22.86	31	*e*P	P	20 06 32.3	-0.6
R42A	**Luebbering** baz=200,SNR=5.2	22.88	17	P	P	20 06 32.1	-1.0
W52A	**Murphy** 38nm,1.0s	22.88	33	*e*P	P	20 06 31.7	-1.5
IRM	**Iron Mountain** baz=136,SNR=8.8	22.89	323	P	P	20 06 35.0	+1.6
Q38A	**Cooks Store, C** baz=192	22.89	11	P	P	20 06 31.7	-1.5
W13A	**Hualapai Mount** 6.0nm,1.0s	22.91	327	*e*P	P	20 06 35.2	+1.6
T47A	**Sharon Grove** baz=210,SNR=7.7	22.96	25	P	P	20 06 33.0	-1.0
T47A	**Sharon Grove** 27nm,0.8s	22.96	25	*e*P	P	20 06 33.6	-0.4
Q24A	**Divide** baz=164	23.09	347	P	P	20 06 34.1	-1.5
Q39A	**Willow Grove F** baz=194	23.09	12	P	P	20 06 33.8	-1.6
R43A	**Red Bud** baz=202	23.12	18	P	P	20 06 34.1	-1.6
U15A	**North Rim** 14nm,1.1s	23.18	332	*e*P	P	20 06 38.4	+1.7
V51A	**Loudon** baz=217,SNR=6.1	23.22	31	P	P	20 06 36.2	-0.5
V51A	**Loudon** 33nm,0.9s	23.22	31	*e*P	P	20 06 36.1	-0.5
Q40A	**Laux Farm, Aux** baz=196,SNR=5.6	23.24	14	P	P	20 06 35.8	-0.9
BELC	**Belle Mtn. Jos** baz=134	23.28	322	P	P	20 06 38.3	+0.8
FRD	**Ford Ranch, An** baz=132	23.30	320	P	P	20 06 38.5	+0.9
PV13	**Radium Mtn., P** 13nm,0.9s	23.32	340	*e*P	P	20 06 38.5	+0.6
S46A	**Don Dixon Farm** baz=208	23.33	23	P	P	20 06 36.2	-1.5
PV02	**Paradox Valley** 13nm,0.9s	23.34	340	*e*P	P	20 06 39.1	+1.0
BG3	**Lake Jocassee** 27nm,0.8s	23.34	35	*e*P	P	20 06 37.0	-0.9
PV05	**Paradox Valley**	23.34	339	*e*P	P	20 06 39.5	+1.4
W53A	**Cullowhee** baz=221,SNR=8.0	23.35	34	P	P	20 06 36.4	-1.7
R44A	**Waltonville** baz=204	23.36	20	P	P	20 06 35.9	-2.1
P37A	**Lathrop** baz=190	23.39	9	P	P	20 06 37.3	-1.0
Q41A	**Truxton** baz=198,SNR=9.8	23.40	15	P	P	20 06 36.1	-2.3
TKL	**Tuckaleechee C** 20nm,1.0s,baz=219,slow=4.1,SNR=8.7	23.40	32	P	P	20 06 37.7	-0.8
TKL	 comp=Z,76nm,20.4s,baz=224,slow=43			LR	LR	20 18 13.8	
TKL	**Tuckaleechee C** 52nm,1.4s	23.40	32	*e*P	P	20 06 37.3	-1.1
PV03	**Paradox Valley**	23.42	340	*e*P	P	20 06 39.7	+0.8
PV18	**Skein Mesa, Pa** 11nm,1.0s	23.43	340	*e*P	P	20 06 39.6	+0.6
PV12	**Saucer Basin,** 13nm,0.9s	23.46	340	*e*P	P	20 06 39.9	+0.6
PV17	**East Wray Mesa** 7.4nm,0.8s	23.48	340	*e*P	P	20 06 40.2	+0.8
PV16	**Nyswonger Mesa** 14nm,1.3s	23.49	340	*e*P	P	20 06 39.1	-0.5
PV19	**Morning Glory** 7.6nm,0.9s	23.51	340	*e*P	P	20 06 40.1	+0.4
PV20	**West Nyswonger** 12nm,1.1s	23.54	340	*e*P	P	20 06 40.1	+0.1
Q42A	**Golden Eagle** baz=200,SNR=5.9	23.54	16	P	P	20 06 38.9	-0.9
P38A	**Dawn** baz=192	23.55	10	P	P	20 06 38.6	-1.3
P38A	**Dawn** 11nm,0.8s	23.55	10	*e*P	P	20 06 39.1	-0.8
P39B	**Salisbury** baz=194,SNR=5.2	23.57	12	P	P	20 06 38.2	-1.8
S47A	**Hartford** baz=210	23.58	24	P	P	20 06 38.5	-1.6
PV14	**Lion Creek, Pa** 7.7nm,1.0s	23.58	340	*e*P	P	20 06 40.8	+0.3
V52A	**Sevierville** baz=219,SNR=7.4	23.63	32	P	P	20 06 39.2	-1.5
V52A	**Sevierville** 21nm,0.9s	23.63	32	*e*P	P	20 06 39.6	-1.1
GMRC	**Granite Mounta** baz=136	23.64	324	P	P	20 06 42.1	+1.1
PV23	**Carpenter Ridg** 13nm,0.8s	23.65	340	*e*P	P	20 06 42.0	+0.7
PV22	**Blue Mesa, Par** 46nm,1.6s	23.65	340	*e*P	P	20 06 42.0	+0.8
R45A	**Skylar, Fairfi** baz=206	23.67	21	P	P	20 06 38.5	-2.6
SMCO	**Snowmass** 19nm,1.2s	23.72	344	*e*P	P	20 06 43.5	+1.5
T49A	**Edmonton** baz=213	23.72	27	P	P	20 06 40.1	-1.6
T49A	**Edmonton** 12nm,0.9s	23.72	27	*e*P	P	20 06 40.5	-1.2
PV09	**Paradox Valley**	23.73	340	*e*P	P	20 06 43.0	+1.0
PV21	**Cone Mtn., Par** 57nm,1.9s	23.74	340	*e*P	P	20 06 42.7	+0.7
MURC	**Murrieta** baz=131	23.74	319	P	P	20 06 41.6	-0.3
P40A	**Paris** baz=196,SNR=8.8	23.75	13	P	P	20 06 40.1	-1.7
P40A	**Paris** 35nm,1.0s	23.75	13	*e*P	P	20 06 40.1	-1.7
Q43A	**New Douglas** baz=202	23.81	18	P	P	20 06 41.1	-1.3
U51A	**La Follette** baz=217	23.84	31	P	P	20 06 40.7	-2.1
V53A	**Saluda** baz=221,SNR=7.0	23.91	34	P	P	20 06 41.2	-2.3
V53A	**Saluda** 22nm,0.8s	23.91	34	*e*P	P	20 06 42.4	-1.1
S48A	**Wiedeman Farm,** baz=211	23.96	26	P	P	20 06 42.8	-1.1
T50A	**Nancy** baz=215	23.97	29	P	P	20 06 42.8	-1.1
Q44A	**Meyer Farm, Va** baz=203	23.98	19	P	P	20 06 42.4	-1.6
ISCO	**Idaho Springs** baz=163,SNR=7.8	23.99	347	P	P	20 06 44.0	-0.4
ISCO	**Idaho Springs** 17nm,1.2s	23.99	347	*e*P	P	20 06 45.2	+0.8
PKCU	**Pink Cliffs**	24.04	333	*e*P	P	20 06 48.1	+3.1
P41A	**Barry, Barry** baz=198,SNR=6.3	24.12	15	P	P	20 06 43.2	-2.2
U52A	**Thorn Hill** baz=218	24.18	32	P	P	20 06 43.5	-2.4
TZTN	**Tazewell** baz=218	24.20	31	P	P	20 06 44.6	-1.6
TZTN	**Tazewell** 12nm,0.9s	24.20	31	*e*P	P	20 06 45.8	-0.4
P42A	**Winchester** baz=200,SNR=9.0	24.22	16	P	P	20 06 44.6	-1.6
P42A	**Winchester** 34nm,0.8s	24.22	16	*e*P	P	20 06 44.9	-1.3
Q45A	**Warren Harvey,** baz=205	24.25	21	P	P	20 06 44.9	-1.7
R47A	**Wooly Knot Far** baz=209,SNR=9.1	24.32	24	P	P	20 06 45.6	-1.6
KMSC	**Kings Mountain** baz=224	24.34	37	P	P	20 06 45.8	-1.7
KMSC	**Kings Mountain** 10nm,0.8s	24.34	37	*e*P	P	20 06 46.7	-0.7
WCI	**Wyandotte Cave** baz=210	24.36	25	P	P	20 06 46.4	-1.1
WCI	**Wyandotte Cave** 27nm,0.8s	24.36	25	*e*P	P	20 06 46.6	-0.9
O40A	**La Belle** baz=196	24.36	13	P	P	20 06 46.3	-1.2
S49A	**Springfield** baz=213	24.40	27	P	P	20 06 46.8	-1.1
MTPU	**Mount Pierson**	24.48	334	*e*P	P	20 06 50.4	+1.3
O41A	**Passleys Farm,** baz=198,SNR=6.8	24.58	15	P	P	20 06 48.1	-1.4
SHPR	**Sheep Range** 11nm,1.4s	24.65	327	*e*P	P	20 06 52.7	+2.3
N38A	**Joes South For** baz=192	24.74	10	P	P	20 06 49.5	-1.5
SRU	**San Rafael Swe** 29nm,0.9s	24.76	338	*e*P	P	20 06 52.7	+1.3
MSU	**Marysvale**	24.88	335	*e*P	P	20 06 55.0	+2.5
T52A	**Hallie** baz=218	24.92	31	P	P	20 06 51.0	-1.7
N39A	**Derby Farms, D** baz=194,SNR=7.5	24.96	12	P	P	20 06 51.9	-1.0
N39A	**Derby Farms, D** 34nm,0.9s	24.96	12	*e*P	P	20 06 52.0	-0.9
O20A	**White River Ci** 14nm,0.8s	24.96	343	*e*P	P	20 06 54.8	+1.7
P45A	**Graceland, Par** baz=206	24.96	21	P	P	20 06 52.2	-0.7
P45A	**Graceland, Par** 18nm,0.9s	24.96	21	*e*P	P	20 06 51.8	-1.2
S51A	**Beattyville** baz=216,SNR=9.7	25.05	30	P	P	20 06 52.3	-1.5
S51A	**Beattyville** 48nm,1.1s	25.05	30	*e*P	P	20 06 52.9	-0.9
EDW2	**Edwards Air Fo** baz=132	25.08	321	P	P	20 06 55.8	+1.5
N23A	**Red Feather La** baz=163,SNR=11	25.11	347	P	P	20 06 55.1	+0.5
N23A	**Red Feather La** 12nm,0.8s	25.11	347	*e*P	P	20 06 55.7	+1.1
N41A	**Harden Midland** baz=198,SNR=6.3	25.15	14	P	P	20 06 53.2	-1.5
N41A	**Harden Midland** 26nm,0.9s	25.15	14	*e*P	P	20 06 53.4	-1.3
N40A	**Mertquake, Sal** baz=196,SNR=5.4	25.15	13	P	P	20 06 52.9	-1.7
TMUT	**Trail Mountain** 34nm,1.6s	25.18	337	*e*P	P	20 06 56.7	+1.4
Q48A	**North Vernon** baz=210,SNR=8.7	25.18	25	P	P	20 06 53.4	-1.6
R50A	**Paris** baz=214	25.23	28	P	P	20 06 54.7	-0.7
O44A	**Mansfield** baz=204	25.29	19	P	P	20 06 55.5	-0.5
S52A	**Salyersville** baz=217	25.33	30	P	P	20 06 55.1	-1.2
M38A	**Pleasantville** baz=192	25.36	10	P	P	20 06 55.7	-0.8
PHWY	**Pilot Hill** 6.5nm,1.0s	25.40	348	*e*P	P	20 06 57.7	+0.4
HDIL	**Hopedale** baz=201	25.42	17	P	P	20 06 56.7	-0.4
HDIL	**Hopedale**	25.42	17	*e*P	P	20 06 56.5	-0.6
N42A	**Yates City** baz=200	25.47	16	P	P	20 06 56.8	-0.8
FURC	**Furnace Creek,** baz=136	25.53	325	P	P	20 07 00.0	+1.9
TPNV	**Topopah Spring** baz=138,SNR=5.1	25.55	326	P	P	20 06 59.6	+1.0
TPNV	**Topopah Spring** 11nm,1.0s	25.55	326	*e*P	P	20 07 00.4	+1.9
R51A	**Hillsboro** baz=216,SNR=5.2	25.59	29	P	P	20 06 57.2	-1.4
Q49A	**Aurora** baz=212,SNR=5.5	25.59	26	P	P	20 06 57.9	-0.8
M39A	**Webster** baz=194	25.60	12	P	P	20 06 57.2	-1.5
O45A	**Potomac** baz=205,SNR=9.2	25.62	20	P	P	20 06 58.5	-0.4
M40A	**Post Highland** baz=196	25.67	13	P	P	20 06 58.8	-0.5
P48A	**Milroy** baz=210	25.76	25	P	P	20 06 59.2	-1.0
N43A	**Stutzman Famil** baz=201	25.81	17	P	P	20 06 59.8	-0.8
DAC	**Darwin (Calif)** 4.9nm,1.0s	25.81	323	*e*P	P	20 06 59.7	-1.2
Q50A	**Georgetown** baz=214,SNR=7.5	25.85	27	P	P	20 06 59.9	-1.1
M41A	**Milan** baz=198,SNR=5.5	25.86	15	P	P	20 07 00.0	-1.1
ISA	**Isabella, Lake** baz=132	25.90	321	P	P	20 07 03.1	+1.5
ISA	**Isabella, Lake** 5.5nm,1.0s	25.90	321	*e*P	P	20 07 03.4	+1.7
SFIN	**Lafayette** baz=206	25.95	21	P	P	20 07 00.3	-1.6
SFIN	**Lafayette** 17nm,0.8s	25.95	21	*e*P	P	20 07 02.0	+0.1
L37A	**Phoenix Point,** baz=191	25.96	9	P	P	20 07 02.4	+0.4
MPU	**Maple Canyon** 7.8nm,0.9s	25.96	337	*e*P	P	20 07 03.0	+0.7
N44A	**Piper City** baz=204,SNR=6.1	25.98	19	P	P	20 07 01.3	-0.9
WASM	**Alta Sierra Ca**	26.00	321	*e*P	P	20 07 03.8	+1.1
WASM				*e*PcP	PcP	20 10 30.1	-0.7
R52A	**Catlettsburg** baz=217	26.06	30	P	P	20 07 01.5	-1.5
L38A	**Oak Wood Farm,** baz=192	26.10	10	P	P	20 07 02.6	-0.7
P49A	**Miami Univ. Ec** baz=212,SNR=15	26.11	25	P	P	20 07 01.9	-1.5
M42A	**Sheffield** baz=200	26.13	16	P	P	20 07 02.8	-0.8
O47A	**Sheridan** baz=208	26.15	22	P	P	20 07 02.5	-1.3
RWWY	**Rawlins** 23nm,1.3s	26.15	346	*e*P	P	20 07 01.7	-2.3
RWWY				*e*PcP	PcP	20 10 32.1	+0.9
L39A	**Vinton** baz=195	26.26	12	P	P	20 07 03.2	-1.5
Q51A	**Peebles** baz=215,SNR=7.4	26.28	28	P	P	20 07 03.7	-1.3
R11A	**Troy Canyon, C** baz=141,SNR=6.9	26.29	329	P	P	20 07 06.7	+1.4
R11A	**Troy Canyon, C** 5.2nm,1.1s	26.29	329	*e*P	P	20 07 07.1	+1.8
M43A	**Waltham Townsh** baz=201,SNR=6.8	26.33	17	P	P	20 07 04.0	-1.3
BLA	**Blacksburg** baz=223,SNR=5.4	26.34	35	P	P	20 07 04.2	-1.4
BLA	**Blacksburg** 23nm,0.8s	26.34	35	*e*P	P	20 07 04.7	-1.0
L40A	**Anamosa** baz=196	26.36	13	P	P	20 07 04.3	-1.3
L40A	**Anamosa** 28nm,1.0s	26.36	13	*e*P	P	20 07 04.8	-0.8
L41A	**Preston** baz=198,SNR=7.4	26.53	14	P	P	20 07 05.8	-1.4
O48A	**Farmland** baz=210,SNR=15	26.55	24	P	P	20 07 05.7	-1.6
M44A	**Midewin, Midew** 22nm,0.8s	26.55	18	*e*P	P	20 07 02.1	-5.2
P50A	**Jamestown** baz=214	26.56	27	P	P	20 07 06.2	-1.3
DUG	**Dugway, Tooele** baz=148	26.57	336	P	P	20 07 08.4	+0.7
DUG	**Dugway, Tooele** 5.5nm,0.8s	26.57	336	*e*P	P	20 07 08.8	+1.1
K37A	**Belmond** baz=191	26.61	9	P	P	20 07 05.7	-2.1
L42A	**Oliver, Polo** baz=200,SNR=6.1	26.67	15	P	P	20 07 07.3	-1.1
L42A	**Oliver, Polo** 38nm,0.8s	26.67	15	*e*P	P	20 07 07.4	-1.1
K39A	**Oelwein** baz=194	26.84	11	P	P	20 07 08.2	-1.8
TCUT	**Toone Canyon**	26.85	339	*e*P	P	20 07 11.6	+1.2
K22A	**Casper** baz=163	26.91	347	P	P	20 07 10.8	-0.1
K22A	**Casper** 9.5nm,0.9s	26.91	347	*e*P	P	20 07 11.2	+0.4
K40A	**Colesburg** baz=196	26.99	13	P	P	20 07 09.4	-1.8
J36A	**Seneca 1, Swea** baz=189	27.07	7	P	P	20 07 10.7	-1.3
J36A	**Seneca 1, Swea** 11nm,0.6s	27.07	7	*e*P	P	20 07 10.7	-1.3
L43A	**Garden Prairie**	27.08	17	P	P	20 07 11.2	-1.0

	baz=201						
K41A	Shullsburg	27.08	14	P	P	20 07 11.3	-0.9
	baz=198						
O50A	Cable	27.08	26	P	P	20 07 10.5	-1.7
	baz=213						
M46A	Old House Fiel	27.12	21	P	P	20 07 10.5	-1.9
	baz=207						
M46A	Old House Fiel	27.12	21	eP	P	20 07 12.1	-0.4
	19nm,0.8s						
J37A	Redenius Farm,	27.15	9	P	P	20 07 11.8	-0.9
	baz=191						
ECSD	EROS Data Cent	27.26	4	P	P	20 07 12.8	-0.9
	baz=184,SNR=5.8						
ECSD	EROS Data Cent	27.26	4	eP	P	20 07 12.8	-0.9
	5.6nm,0.8s						
L44A	Lake County Fo	27.31	18	P	P	20 07 13.8	-0.4
	baz=203						
J38A	Wedel Dairy, R	27.33	10	P	P	20 07 13.2	-1.1
	baz=193						
HWUT	Hardware Ranch	27.34	339	eP	P	20 07 15.7	+1.0
	4.4nm,0.8s						
JFWS	Jewell Farm	27.39	14	P	P	20 07 13.9	-1.0
	baz=198						
ACSO	Alum Creek Sta	27.43	27	P	P	20 07 14.0	-1.3
	baz=214						
ACSO	Alum Creek Sta	27.43	27	eP	P	20 07 14.4	-0.8
	73nm,1.5s						
K42A	Prairie Point,	27.48	15	P	P	20 07 15.1	-0.6
	baz=200						
J39A	Decorah	27.48	11	P	P	20 07 15.4	-0.3
	baz=195						
NV11	Mina Array Sit	27.67	326	eP	P	20 07 19.9	+2.2
	0.4nm,1.0s						
J40A	Soldiers Grove	27.74	13	P	P	20 07 17.3	-0.7
	baz=196						
NV01	Mina Array Sit	27.75	326	eP	P	20 07 19.7	+1.3
NVAR	Mina Array Bea	27.75	326	P	P	20 07 20.7	+2.3
	3.5nm,0.8s,baz=153,slow=10,SNR=13						
BW06	Boulder Array	27.77	343	P	P	20 07 18.6	0.0
	baz=157,SNR=7.4						
BW06	Boulder Array	27.77	343	eP	P	20 07 19.0	+0.5
	9.9nm,1.1s						
PD31	Pinedale Array	27.77	343	eP	P	20 07 18.8	+0.2
PDAR	Pinedale Array	27.77	343	P	P	20 07 19.2	+0.7
	3.7nm,0.9s,baz=139,slow=9.2,SNR=25						
PDAR				PcP	PcP	20 10 34.9	-0.1
	0.4nm,0.5s,baz=102,slow=2.1,SNR=3.9						
PDAR				LR	LR	20 19 41.8	
	comp=Z,207nm,20.8s,baz=170,slow=39						
PDAR	Pinedale Array	27.77	343	eP	P	20 07 18.4	-0.2
PDAR				PcP	PcP	20 10 34.9	-0.1
J41A	Loganville	27.87	14	P	P	20 07 18.2	-1.0
	baz=198						
HVU	Hansel Valley	27.93	337	eP	P	20 07 20.7	+0.8
I39A	Houston	28.02	11	P	P	20 07 19.6	-0.9
	baz=195						
J42A	Columbus	28.04	15	P	P	20 07 19.8	-0.9
	baz=200						
I38A	Scanlan Farm,	28.05	10	P	P	20 07 19.6	-1.3
	baz=193						
KVN	Kaiserville	28.09	327	eP	P	20 07 23.2	+1.7
	3.3nm,0.9s						
I42A	Draeger Farm,	28.63	15	P	P	20 07 25.4	-0.6
	baz=200						
TPAW	Teton Pass	28.84	342	eP	P	20 07 29.3	+1.2
	6.4nm,0.9s						
LOHW	Long Hollow	28.84	342	eP	P	20 07 28.7	+0.5
	6.0nm,0.8s						
H40A	Chili	28.98	13	P	P	20 07 27.9	-1.2
	baz=196						
FXWY	Fox Creek	28.99	342	eP	P	20 07 30.2	+0.7
	4.1nm,1.0s						
MOOW	Moose Ponds	29.01	342	eP	P	20 07 30.8	+1.2
	2.6nm,0.8s						
SPMN	Marine on St.	29.14	9	P	P	20 07 30.6	+0.1
	baz=192						
H41A	Junction City	29.14	14	P	P	20 07 29.6	-0.8
	baz=198						
G39A	Holcombe	29.47	11	P	P	20 07 32.4	-1.0
	baz=195						
O56A	Blue Knob Stat	29.57	33	P	P	20 07 32.4	-2.1
	baz=222						
G40A	Rib Lake	29.64	12	P	P	20 07 34.3	-0.6
	baz=197						
F36A	Milaca	29.66	8	P	P	20 07 34.5	-0.6
	baz=190						
RLMT	Red Lodge	29.88	345	P	P	20 07 38.6	+1.3
	baz=159						
RLMT	Red Lodge	29.88	345	eP	P	20 07 38.9	+1.5
	16nm,1.2s						
M54A	Oil Creek Stat	29.96	30	P	P	20 07 36.8	-1.0
	baz=219						
YHB	Horse Butte	30.06	342	eP	P	20 07 36.3	-2.6
	20nm,0.6s						
HLID	Hailey	30.07	337	eP	P	20 07 39.9	+0.9
	5.5nm,1.2s						
SSPA	Standing Stone	30.19	33	P	P	20 07 36.9	-2.9
	baz=223						
F40A	Park Falls	30.28	12	P	P	20 07 39.1	-1.5
	baz=196						
F41A	Three Lakes	30.32	14	P	P	20 07 39.0	-2.0
	baz=198						
MCMT	McKenzie Canyo	30.64	340	eP	P	20 07 46.3	+2.2
D35A	Remer	30.80	6	P	P	20 07 43.4	-1.7
	baz=189						
E40A	Wakefield	30.83	12	P	P	20 07 43.7	-1.7
	baz=197						
F43A	Flat Rock, Esc	30.89	16	P	P	20 07 44.6	-1.4
	baz=202						
WVOR	Wild Horse Val	30.93	331	eP	P	20 07 48.1	+1.6
	7.3nm,0.5s						
BOZ	Bozeman (W)	30.96	342	P	P	20 07 47.8	+1.1
	baz=155						
BOZ	Bozeman (W)	30.96	342	eP	P	20 07 48.2	+1.4
	2.6nm,0.8s						
DLMT	Dillon	31.03	341	eP	P	20 07 49.2	+1.8
	9.4nm,1.0s						
F44A	Big Bay de Noc	31.22	17	P	P	20 07 47.8	-1.1
	baz=203						
MDND	Maddock	31.31	359	P	P	20 07 48.8	-0.9
	baz=178,SNR=7.4						
MDND	Maddock	31.31	359	eP	P	20 07 49.8	+0.2
	46nm,0.8s						
E43A	Lone Tree Farm	31.44	16	P	P	20 07 49.3	-1.5
	baz=202						
F46A	Macinaw City C	31.53	19	P	P	20 07 50.7	-0.9
	baz=206						
J08A	Circle Bar Ran	31.57	332	eP	P	20 07 53.3	+1.1
	6.6nm,0.9s						
D41A	Chassel	31.70	13	P	P	20 07 52.4	-0.7
	baz=199						
AGMN	Agassiz Nation	31.85	4	eP	P	20 07 53.6	-0.8
	7.4nm,0.8s						
N02D	Trinity Center	31.94	325	P	P	20 07 54.7	-0.7
	baz=132						
EYMN	Ely	31.99	9	P	P	20 07 54.4	-1.3
	baz=193						
HRY	Holter Researc	32.03	343	eP	P	20 07 57.3	+1.2
B35A	Bob, Littlefor	32.10	6	P	P	20 07 55.0	-1.6
	baz=189						
DGMT	Dagmar	32.23	353	P	P	20 07 57.3	-0.4
	baz=170						
BMO	Blue Mountains	32.28	335	eP	P	20 07 58.6	+0.3
	19nm,2.0s						
BINY	Binghamton	32.31	33	P	P	20 07 57.4	-1.2
	baz=224						
BINY	Binghamton	32.31	33	eP	P	20 07 57.1	-1.4
	11nm,0.8s						
C40A	Isle Royale Na	32.38	12	P	P	20 07 57.1	-2.0
	baz=197						
A33A	Warroad	32.52	4	P	P	20 07 59.8	-0.4
	baz=186						
J05D	Fort Rock, OR	32.82	329	P	P	20 08 03.7	+0.6
	baz=137						
F10A	Beach Ranch, E	33.18	336	eP	P	20 08 06.9	+0.7
	16nm,1.0s						
G08A	Pilot Rock	33.32	334	eP	P	20 08 08.5	+1.0
	4.4nm,0.8s						
JTMT	Jette	33.69	341	eP	P	20 08 10.9	+0.3
	4.1nm,0.8s						
I04A	Tendick Farm,	33.77	329	P	P	20 08 11.3	-0.1
	baz=136						
ULM	Lac du Bonnet	33.80	3	P	P	20 08 10.9	-0.5
	1.1nm,0.3s,baz=181,slow=12,SNR=3.4						
ULM	Lac du Bonnet	33.80	3	eP	P	20 08 11.6	+0.2
	4.1nm,0.8s						
I03D	Drain, OR	34.18	328	P	P	20 08 15.5	+0.8
	baz=134						
LONY	Lake Ozonia	34.76	31	P	P	20 08 18.9	-1.0
	baz=224						
HRV	Adam Dziewonsk	34.93	36	P	P	20 08 19.5	-1.8
	baz=230						
C09A	Chrisman Ranch	35.10	337	eP	P	20 08 23.8	+1.0
	8.0nm,0.8s						
LON	Longmire	35.70	333	eP	P	20 08 28.0	+0.1
	4.1nm,0.7s						
PKME	Peaks-Kenny Pk	37.95	35	P	P	20 08 46.5	-0.5
	baz=230						
FFC	Flin Flon	38.27	357	eP	P	20 08 49.0	-0.6
	14nm,0.8s						
PTGA	Pitinga	42.02	110	P	P	20 09 21.7	+0.4
	2.0nm,0.7s,baz=288,slow=12,SNR=4.1						
YKA	Yellowknife Ar	47.30	350	P	P	20 10 02.4	-0.3
	4.6nm,0.8s,baz=157,slow=7.1,SNR=12						
YKB5	Yellowknife Ar	47.30	350	eP	P	20 10 02.4	-0.3
EGAK	Eagle	56.04	340	eP	P	20 11 08.6	+0.6
	5.0nm,0.9s						
INK	Inuvik	56.30	345	eP	P	20 11 10.2	+0.5
	5.3nm,0.8s						
RIDG	Independ'e Rid	56.71	338	eP	P	20 11 13.7	+0.8
	12nm,1.2s						
IL1	Eielson Array	58.03	338	eP	P	20 11 22.9	+0.8
ILAR	Eielson Array	58.03	338	P	P	20 11 22.9	+0.8
	2.7nm,0.9s,baz=137,slow=5.4,SNR=20						
ILB	Eielson Array	58.03	338	eP	P	20 11 23.1	+1.0
RSO	Redoubt South	58.34	332	eP	P	20 11 25.8	+1.2
SKT	Skwentna	58.46	334	eP	P	20 11 25.3	+0.1
	3.6nm,0.8s						
TRF	Thorofare Moun	58.63	336	eP	P	20 11 27.5	+0.9
	7.4nm,0.9s						
BPAW	Bear Paw Mtn.	59.22	336	eP	P	20 11 31.0	+0.5
	3.1nm,1.0s						
CAST	Castle Rocks	59.33	335	eP	P	20 11 31.8	+0.5
	6.3nm,1.0s						
MLY	Manley	59.57	337	eP	P	20 11 33.8	+0.9
	3.9nm,0.7s						
ILULI	Ilulissat	60.45	18	eP	P	20 11 39.8	+1.0
	9.1nm,0.7s						
COLD	Coldfoot	60.48	340	eP	P	20 11 39.6	+0.6
	2.9nm,0.9s						
ESDC	Sonseca Array	83.37	51	P	P	20 13 57.2	+0.3
	1.0nm,0.7s,baz=299,slow=5.0,SNR=8.1						
ES19	SONSECA Array	83.41	51	eP	P	20 13 56.8	-0.3
HHC	Hu-ho-hao-te	116.36	335	ePKP	PKPdf	20 20 10.1	-3.5
NJ2	Nanjing	119.71	323	ePKP	PKPdf	20 20 21.9	+1.8
WMQ	Urumqi	119.72	355	PKP	PKPdf	20 20 20.8	+0.9
LZH	Lanzhou	123.49	338	ePKP	PKPdf	20 20 25.1	-2.4
LZH				sPKP		20 20 38.8	
LZH				LR	LR		
	comp=N,65nm,17.9s						
LZH				LR	LR		
	comp=E,71nm,18.0s						
LZH				LR	LR		
	comp=Z,90nm,20.0s						
WR1	Warramunga Arr	129.48	258	ePKPdf	PKPdf	20 20 40.6	+1.5
WRA	Warramunga Arr	129.48	258	PKP	PKPdf	20 20 40.7	+1.5
	0.7nm,0.8s,baz=104,slow=2.8,SNR=5.0						

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*GCMT **17** 20:06:08.0±0.3, 65°.04S×177°.47E, h26km±1km, MW5.2/84, Moment Tensor Solution. s28,c29; s84,c113; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.80±.27; $M_{\theta\theta}$5.91±.23; $M_{\phi\phi}$-5.12±.20; $M_{r\theta}$-5.42±.55; $M_{\theta\phi}$-0.64±.17; $M_{\phi r}$0.27±.41; Best double couple: $M_0$7.06100×10^{16} NP1:ϕ_s225.00000°,δ71.00000°,λ158.00000°. NP2: ϕ_s323.00000°,δ69.00000°,λ20.00000°. Principal axes: T 8.9640, Plg29.0000°, Azm183.0000°; N -3.8110, Plg61.0000°, Azm7.0000°; P -5.1580, Plg1.0000°, Azm274.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*IDC **17** 20:06:09.0±4.1, 64°.96S×177°.90E, h0km, mb3.9/3, mb1 4.2/4, mb1mx3.9/33, mbtmp4.0/4, ML4.0/1, MS4.2/11, Ms1 4.2/11, ms1mx4.0/29 Error ellipse: s-maj=147.8km s-min=26.9km az=69.0*

ISC 17 20:06:11.1±3.7**, 65°.1S**±0°.2×**177°.3E**±0°.8**, h10**km**, n27,** σ**2s.31**/5**, mb3.9**/3**, MS4.2**/10**, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	Vanda	13.34	195	Pn	Pn	20 09 19.9	-0.2
	0.8nm,0.3s,baz=35,slow=16,SNR=39						
VNDA				LR	LR	20 13 23.7	
	comp=Z,1μm,18.9s,baz=19,slow=32						
QSPA	South Pole Qui	24.99	180	P	P	20 11 36.0	+1.3
	4.8nm,1.0s,baz=39,slow=9.6,SNR=6.4						
QSPA				LR	LR	20 20 14.5	
	comp=Z,491nm,19.2s,baz=44,slow=34						
URZ	Urewera	26.88	360	LR	LR	20 20 43.2	
	comp=Z,678nm,20.1s,baz=160,slow=33						
MAW	Mawson	39.67	213	LR	LR	20 30 07.6	
	comp=Z,1μm,18.4s,baz=139,slow=36						
STKA	Stephens Creek	39.76	309	LR	LR	20 28 49.8	
	comp=Z,224nm,19.6s,baz=220,slow=34						
SNAA	Sanae	43.49	180	LR	LR	20 31 52.2	
	comp=Z,377nm,19.7s,baz=220,slow=35						
DZM	Mont Dzumac	43.60	345	LR	LR	20 29 19.9	
	comp=Z,299nm,21.5s,baz=170,slow=32						
DZM	Mont Dzumac	43.60	345	eLR	LR	20 25 20.3	
	901nm,28.9s						
TBI	Tubuai	46.97	44	eLQ	LQ	20 25 05.6	
	729nm,29.0s						
TBI				eLR	LR	20 27 01.9	
	341nm,26.2s						
TBI	Tubuai	46.97	44	eT	T	21 04 04.3	
	25nm,0.3s						
H01W1	Cape Leeuwin H	47.68	277	T	T	21 06 34.3	
	baz=148,slow=76,SNR=34						
H01W2	Cape Leeuwin H	47.69	277	T	T	21 06 33.4	
	baz=148,slow=76,SNR=35						
H01W3	Cape Leeuwin H	47.70	277	T	T	21 06 43.6	
	baz=148,slow=76,SNR=34						
NWAO	Narrogin (SRO)	48.09	282	LR	LR	20 30 55.1	
	comp=Z,280nm,18.5s,baz=292,slow=31						
ASAR	Alice Springs	49.92	305	P	P	20 15 06.6	+1.8
	1.4nm,1.0s,baz=161,slow=7.4,SNR=5.4						
ASAR				LR	LR	20 34 31.3	
	comp=Z,139nm,19.0s,baz=137,slow=34						
RKT	Rikitea	51.99	60	eT	T	21 10 18.3	
	9.0nm,0.2s						
TVO	Taravao	52.30	42	eT	T	21 10 45.6	
	5.5nm,0.3s						
PPT2	Papeete2	52.39	41	eLR	LR	20 29 32.0	
	476nm,24.8s						
WRA	Warramunga Arr	53.22	307	P	P	20 15 28.6	-0.8
	1.2nm,1.1s,baz=154,slow=6.6,SNR=3.3						
VAH	Vaihoa	55.18	43	eT	T	21 14 19.5	
	70nm,0.2s						
RPN	Rapa Nui	58.75	87	LR	LR	20 35 23.2	
	comp=Z,149nm,18.6s,baz=278,slow=30						
TAOE	Nuku Hiva Isla	63.47	48	eLR	LR	20 34 41.6	
	300nm,27.8s						
LPAZ	La Paz	85.22	119	LR	LR	20 50 05.1	
	comp=Z,63nm,18.3s,baz=164,slow=31						
H08S2	Diego Garcia H	89.28	253	T	T	21 58 55.1	
	baz=154,slow=76,SNR=30						
H08S1	Diego Carcia H	89.28	253	T	T	21 58 56.6	
	baz=154,slow=76,SNR=65						
H08S3	Diego Garcia H	89.30	253	T	T	21 58 57.4	
	baz=154,slow=76,SNR=64						
BRTR	Keskin Array B	147.10	237	PKPbc	PKPab	20 25 52.8	-2.3
	1.0nm,0.9s,baz=132,slow=2.1,SNR=4.6						

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*IDC **17** 20:06:43.8±1.5, 30°.92S×178°.87W, h0km, mb4.2/5, mb1 4.4/6, mb1mx4.0/40, mbtmp4.2/6, ML3.7/1, Error ellipse: s-maj=42.6km s-min=26.2km az=37.0*

*NEIC **17** 20:06:43.7±0.7, 31°.06S×178°.76W, h10km, mb4.9/9, Error ellipse: s-maj=17.0km s-min=11.7km az=148.0*

*ISCJB **17** 20:06:44.2±1.0, 31°.2S±0°.1×179°.0W±0°.1, h10km, mb4.5/11, Error ellipse: s-maj=17.3km s-min=14.5km az=157.9*

ISC 17 20:06:47.8±0.8**, 30°.9S**±0°.1×**178°.9W**±0°.1**, h35**km**, n30,** σ**1s.90**/22**, mb4.6**/11**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OUZ	Omahuta	7.62	234	ePn	Pn	20 08 34.1	-2.3
URZ	Urewera	8.04	203	Pn	Pn	20 08 40.0	-1.9
	1.0nm,0.3s,baz=18,slow=16,SNR=6.1						
URZ	Urewera	8.04	203	ePn	Pn	20 08 39.3	-2.7
BKZ	Black Stump Fm	9.06	203	ePn	Pn	20 08 52.7	-3.4
THZ	Tophouse	12.68	209	ePn	Pn	20 09 38.0	-7.6
KHZ	Kahutara	12.98	206	ePn	Pn	20 09 40.7	-8.9
LHI	Lord Howe Isla	18.86	262	eP	P	20 11 02.5	-2.4
	157nm,1.1s						
RAR	Rarotonga	19.68	65	eP	P	20 11 10.8	-3.2
	199nm,1.9s						
AS01	Alice Springs	42.27	268	eP	P	20 14 39.3	+1.2
ASAR	Alice Springs	42.31	268	P	P	20 14 39.4	+1.0
	1.7nm,0.7s,baz=104,slow=7.3,SNR=16						
WC3	Warramunga Arr	43.31	273	eP	P	20 14 47.2	+0.7
	19nm,1.7s						
WB2	Warramunga Arr	43.34	273	eP	P	20 14 46.9	+0.1
WRAB	Tennant Creek	43.34	273	eP	P	20 14 47.5	+0.7
	12nm,1.4s						
WR1	Warramunga Arr	43.35	273	eP	P	20 14 48.0	+1.1
	21nm,1.5s						
WRA	Warramunga Arr	43.35	273	P	P	20 14 48.0	+1.1
	4.7nm,0.9s,baz=113,slow=7.9,SNR=19						
FORT	Forrest	45.17	256	eP	P	20 15 01.8	+0.6
	20nm,1.0s						
SBA	Scott Base	47.48	184	eP	P	20 15 21.1	+2.4
	17nm,1.7s						
FITZ	Fitzroy Crossi	51.59	271	P	P	20 15 53.1	+2.2
	4.0nm,0.8s,baz=94,slow=8.6,SNR=7.6						
QSPA	South Pole Qui	59.20	180	P	P	20 16 46.7	+1.5
	2.5nm,0.6s,baz=33,slow=0.1,SNR=14						
QSPA	South Pole Qui	59.20	180	eP	P	20 16 46.6	+1.5
	34nm,1.5s						
PLCA	Paso Flores	82.72	133	P	P	20 19 09.6	+1.4
	0.8nm,0.7s,baz=269,slow=6.3,SNR=3.0						
BOZ	Bozeman (W)	97.52	41	eP	P	20 20 17.3	-0.8
	3.2nm,0.8s						
H10S2	ASCENSION HYDR	137.58	157	T	T	22 59 43.1	
	baz=204,slow=75,SNR=17						
H10S3	ASCENSION HYDR	137.58	157	T	T	22 59 43.0	
	baz=204,slow=75,SNR=14						
H10S1	ASCENSION HYDR	137.59	157	T	T	22 59 44.3	
	baz=204,slow=75,SNR=15						
H10N3	ASCENSION HYDR	138.67	156	T	T	23 01 04.2	
	baz=203,slow=75,SNR=21						
H10N1	ASCENSION HYDR	138.67	156	T	T	23 01 10.1	
	baz=203,slow=75,SNR=21						
H10N2	ASCENSION HYDR	138.69	156	T	T	23 01 05.3	
	baz=203,slow=75,SNR=20						
FIA0	FINESS Array S	145.35	339	ePKPdf	PKPab	20 26 21.5	+0.2
FINES	FINESS Array B	145.35	339	PKPbc	PKPab	20 26 21.5	+0.2
	1.1nm,0.7s,baz=64,slow=3.2,SNR=4.4						

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*IDC **17** 20:06:50.5±0.6, 23°.53S×115°.44W, h0km, mb4.4/12, mb1 4.7/12, mb1mx4.4/37, mbtmp4.4/12, MS4.6/24, Ms1 4.6/24, ms1mx4.6/29, Error ellipse: s-maj=26.7km s-min=16.6km az=76.0*

*ISCJB **17** 20:06:51.6±0.3, 23°.43S±0°.04×115°.11W±0°.04, h10km, mb5.1/228, MS4.8/36, Error ellipse: s-maj=6.3km s-min=5.4km az=29.8*

*MOS **17** 20:06:52.3±1.1, 23°.32S×115°.10W, h10km, mb5.1/30, Error ellipse: s-maj=12.4km s-min=7.4km az=91.1*

*GCMT **17** 20:06:53.6±0.1, 23°.52S×115°.28W, h16km, MW5.3/119, Moment Tensor Solution. s84,c138; s119,c222; Duration: 1s.1 Moment tensor: Scale 10^{17}Nm; M_{rr}0.10±.02; $M_{\theta\theta}$-0.62±.02; $M_{\phi\phi}$0.52±.02; $M_{r\theta}$-0.22±.04; $M_{\theta\phi}$0.92±.01; $M_{\phi r}$0.29±.05; Best double couple: $M_0$1.13400×10^{17} NP1:ϕ_s164.00000°,δ86.00000°, λ-163.00000°. NP2:ϕ_s73.00000°,δ73.00000°,λ-4.00000°. Principal axes: T 1.0540, Plg9.0000°, Azm298.0000°; N 0.1580, Plg73.0000°, Azm176.0000°; P -1.2130, Plg14.0000°, Azm30.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **17** 20:06:53.6±0.5, 23°.50S×115°.18W, h11km±3km, mb5.1/213 Error ellipse: s-maj=4.8km s-min=4.5km az=64.0*

*BJI **17** 20:06:56.0, 23°.40S×115°.20W, h20km, mB5.2/13, Ms5.4/18, Ms7 5.2/18*

ISC 17 20:06:53.5±0.3**, 23°.42S**±0°.07×**115°.15W**±0°.06**, h10**km**, n599,** σ**1s.13**/576**, mb5.1**/228**, MS4.8**/36**, 7C-6D, Southern East Pacific Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RPN	Rapa Nui	6.43	126	LR	LR	20 10 17.4	
	comp=Z,10μm,18.9s,baz=297,slow=31						
RKT	Rikitea	18.21	267	eT	T	20 29 19.7	
	4.3nm,0.3s						
TAOE	Nuku Hiva Isla	27.97	297	eLR	LR	20 19 21.7	
	7μm,25.4s						
TBI	Tubuai	31.45	263	eS	S	20 18 06.3	-17
	433nm,28.8s						
TBI				eLQ	LQ	20 19 37.0	
	1μm,29.5s						
TBI				eLR	LR	20 20 57.3	
	2μm,24.2s						
PPT2	Papeete2	32.71	274	eS	S	20 18 26.4	-17
	608nm,25.0s						
PPT2				eLQ	LQ	20 20 12.3	
	2μm,25.0s						
PPT2				eLR	LR	20 21 31.2	
	2μm,25.5s						
NNA	Nana	38.11	79	LR	LR	20 25 51.0	
	comp=Z,697nm,18.4s,baz=247,slow=30						
PLCA	Paso Flores	41.07	126	P	P	20 14 37.7	+0.3
	8.4nm,1.2s,baz=318,slow=8.0,SNR=5.9						
PLCA				LR	LR	20 27 18.5	
	comp=Z,2μm,21.7s,baz=282,slow=30						
PLCA	Paso Flores	41.07	126	eP	P	20 14 38.1	+0.7
	74nm,1.9s						
PLCA	Paso Flores	41.07	126	eP	P	20 14 38.1	+0.7
PLCA				pmax	pmax		
	comp=Z,74nm,1.9s						
RAR	Rarotonga	41.22	264	LR	LR	20 27 21.0	
	comp=Z,1μm,18.6s,baz=112,slow=30						
RAR	Rarotonga	41.22	264	eP	P	20 14 39.4	+0.7
	comp=Z,316nm,2.0s						
RAR	Rarotonga	41.22	264	eP	P	20 14 39.4	+0.7
RAR				pmax	pmax		
	comp=Z,315nm,2.0s						
PB04	IPOC Station P	41.35	98	eP	P	20 14 41.4	+1.3
	comp=Z,51nm,1.5s						
GO02	Mina Guanaco	41.42	102	eP	P	20 14 41.0	+0.3
	comp=Z,26nm,1.2s						
PB01	IPOC Station P	42.21	96	eP	P	20 14 47.0	0.0
	comp=Z,77nm,1.9s						
PB11	IPOC Station P	42.33	94	eP	P	20 14 47.2	-0.9
	comp=Z,20nm,1.1s						
MNMC	Minye Minye	42.54	93	eP	P	20 14 50.3	+0.4
	comp=Z,51nm,1.8s						
OTAV	Otavalo	42.71	62	eP	P	20 14 51.0	-0.5
	comp=Z,30nm,1.8s						
OTAV	Otavalo	42.71	62	eP	P	20 14 51.0	-0.5
OTAV				pmax	pmax		
	comp=Z,30nm,1.8s						
TUMC	Tumaco	43.43	60	eP	P	20 14 57.2	+0.3
	comp=Z,251nm,1.0s						
TLIG	Tlapa	43.84	23	eP	P	20 14 60.0	-0.2
	comp=Z,27nm,1.1s						
GO10	Punta Arenas	44.54	143	eP	P	20 15 06.0	+0.7
	comp=Z,280nm,1.7s						
LPAZ	La Paz	44.64	90	P	P	20 15 07.7	+0.5
	comp=Z,14nm,1.2s,baz=246,slow=6.5,SNR=16						
LPAZ				LR	LR	20 29 13.0	
	comp=Z,940nm,21.8s,baz=252,slow=30						
LPAZ	La Paz	44.64	90	eP	P	20 15 07.5	+0.2
LPAZ	La Paz	44.64	90	eP	P	20 15 07.5	+0.2
JTS	JuntasAbangare	44.67	45	LR	LR	20 28 55.4	
	comp=Z,1μm,21.2s,baz=280,slow=30						
MOIG	Morelia	44.95	19	eP	P	20 15 09.5	+0.4
	comp=Z,110nm,0.2s						
HDC	Heredia	45.01	46	eP	P	20 15 09.9	+0.4
	comp=Z,88nm,0.4s						
CCIG	Comitan	45.43	32	eP	P	20 15 12.8	-0.1
	comp=Z,12nm,1.1s						
BOAB	BOACO BROADBAN	45.86	42	eP	P	20 15 16.5	+0.3
	comp=Z,10.0nm,0.6s						
ESTN	Estel	45.95	41	eP	P	20 15 18.9	+2.0
	comp=Z,80nm,1.5s						
TGUH	Tegucigalpa,Un	46.17	39	eP	P	20 15 21.2	+2.7
	comp=Z,15nm,0.6s						
ESPN	Las Esperanzas	46.52	44	eP	P	20 15 22.8	+1.4
	comp=Z,58nm,0.8s						
LVIG	Laguna Verde	46.62	25	eP	P	20 15 21.8	-0.2
	comp=Z,16nm,1.1s						
TRQA	Tornquist	47.37	121	eP	P	20 15 28.6	+0.7
	comp=Z,14nm,1.2s						
TRQA	Tornquist	47.37	121	eP	P	20 15 28.6	+0.7
TRQA				pmax	pmax		
	comp=Z,14nm,1.2s						
LPIG	La Paz	47.48	6	LR	LR	20 29 41.2	

	comp=Z,197nm,18.4s,baz=214,slow=29						
ZAIG	Zacatecas	47.52	16	*e*P	P	20 15 31.2	+1.8
	comp=Z,6.9nm,1.0s						
PRAC	Prado	47.62	61	*e*P	P	20 15 29.6	-0.6
	comp=Z,11nm,1.2s						
XMAS	Kiritimati	48.31	296	*e*P	P	20 15 36.0	+0.6
	comp=Z,122nm,1.1s						
HELC	Santa Helena	48.62	58	*e*P	P	20 15 38.5	+0.3
	comp=Z,59nm,1.6s						
ROSC	El Rosal	48.74	60	LR	LR	20 31 29.5	
	comp=Z,431nm,20.4s,baz=226,slow=30						
ROSC	El Rosal	48.74	60	*e*P	P	20 15 38.3	-0.8
	comp=Z,7.2nm,0.9s						
RUSC	La Rusia	50.36	60	*e*P	P	20 15 53.2	+1.6
	comp=Z,11nm,1.4s						
LNIG	Linares	50.39	19	*e*P	P	20 15 51.5	+0.5
	comp=Z,20nm,1.8s						
HPIG		50.90	11	*e*P	P	20 15 55.7	+0.7
	comp=Z,18nm,1.2s						
SAML	Samuel	51.67	83	*e*P	P	20 16 00.6	-0.4
	comp=Z,16nm,1.5s						
SAML	Samuel	51.67	83	*e*P	P	20 16 00.6	-0.4
SAML				pmax	pmax		
	comp=Z,16nm,1.5s						
EFI	East Falkland	51.68	138	*e*P	P	20 16 00.0	-0.5
	comp=Z,99nm,1.5s						
EFI	East Falkland	51.68	138	*e*P	P	20 16 00.0	-0.5
EFI				pmax	pmax		
	comp=Z,99nm,1.5s						
CPUP	Villa Florida	52.17	106	P	P	20 16 04.6	+0.1
	comp=Z,3.0nm,0.9s,baz=247,slow=8.9,SNR=4.7						
CPUP	Villa Florida	52.17	106	*e*P	P	20 16 03.8	-0.7
	comp=Z,18nm,1.5s						
CPUP	Villa Florida	52.17	106	*e*P	P	20 16 03.8	-0.7
CPUP				pmax	pmax		
	comp=Z,18nm,1.5s						
HSIG		52.30	5	*e*P	P	20 16 05.5	+0.3
	comp=Z,13nm,1.0s						
PMSA	Palmer Station	52.82	155	LR	LR	20 33 11.1	
	comp=Z,641nm,18.9s,baz=292,slow=30						
KVTX	Kingsville	53.34	19	*e*P	P	20 16 13.2	+0.2
	comp=Z,69nm,0.9s						
LTX	Lajitas	53.60	12	*e*P	P	20 16 14.5	-0.5
LTX	Lajitas	53.60	12	*e*P	P	20 16 14.5	-0.5
TX31	Lajitas Ar. Si	53.60	12	*e*P	P	20 16 15.1	0.0
TXAR	Lajitas Array	53.60	12	P	P	20 16 14.5	-0.5
	comp=Z,1.8nm,1.0s,baz=186,slow=10,SNR=10						
TXAR				LR	LR	20 34 26.6	
	comp=Z,209nm,18.0s,baz=0.0,slow=31						
833A	Chaparral WMA,	53.64	17	P	P	20 16 16.6	+1.3
	baz=198						
833A	Chaparral WMA,	53.64	17	*e*P	P	20 16 16.7	+1.5
	comp=Z,12nm,0.6s						
AFI	Afiamalu	54.19	269	*e*P	P	20 16 18.8	-0.9
	comp=Z,188nm,1.6s						
AFI	Afiamalu	54.19	269	*e*P	P	20 16 18.8	-0.9
AFI				pmax	pmax		
	comp=Z,188nm,1.6s						
319A	Douglas	54.78	6	*e*P	P	20 16 22.6	-1.0
	comp=Z,61nm,1.5s						
214A	Organ Pipe Nat	55.11	2	P	P	20 16 27.8	+1.9
	baz=183						
TUC	Tucson	55.58	4	P	P	20 16 31.1	+1.8
	baz=185						
TUC	Tucson	55.58	4	*e*P	P	20 16 29.3	0.0
	comp=Z,17nm,1.3s						
JCT	Junction City	55.58	16	P	P	20 16 30.2	+0.8
	baz=197						
JCT	Junction City	55.58	16	*e*P	P	20 16 29.1	-0.2
	comp=Z,29nm,1.0s						
JCT	Junction City	55.58	16	*e*P	P	20 16 29.1	-0.2
JCT				pmax	pmax		
	comp=Z,29nm,1.0s						
MNTX	Cornudas Mount	55.60	10	P	P	20 16 30.4	+1.0
	baz=191						
MNTX	Cornudas Mount	55.60	10	*e*P	P	20 16 29.1	-0.3
	comp=Z,21nm,1.3s						
IKP	In-Ko-Pah, Jac	55.77	359	P	P	20 16 32.1	+1.4
	baz=179						
BAR	Barrett	55.81	358	*e*P	P	20 16 31.0	+0.1
	comp=Z,33nm,1.4s						
113A	Mohawk Valley,	55.89	1	*e*P	P	20 16 31.6	+0.2
	comp=Z,35nm,1.8s						
RAO	Raoul Island	55.98	250	*e*P	P	20 16 33.6	+1.2
	comp=Z,1μm,1.5s						
RAO	Raoul Island	55.98	250	*e*P	P	20 16 33.6	+1.2
RAO				pmax	pmax		
	comp=Z,1μm,1.5s						
MONP2	Monument Peak	56.01	359	P	P	20 16 34.4	+1.8
	baz=179						
109C	Camp Elliot, M	56.03	358	P	P	20 16 34.1	+1.7
	baz=178						
SWSC	Sam W. Stewart	56.05	359	P	P	20 16 34.4	+1.8
	baz=179						
121A	Cookes Peak, D	56.08	8	P	P	20 16 33.6	+0.5
	baz=188						
GLA	Glamis	56.16	0	P	P	20 16 33.5	0.0
	baz=180						
GLA	Glamis	56.16	0	*e*P	P	20 16 34.0	+0.7
	comp=Z,7.4nm,0.8s						
GLA	Glamis	56.16	0	*e*P	P	20 16 34.1	+0.7
GLA				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HKT	Hockley	56.22	20	*e*P	P	20 16 34.4	+0.6
	comp=Z,66nm,2.0s						
HKT	Hockley	56.22	20	*e*P	P	20 16 34.4	+0.6
HKT				pmax	pmax		
	comp=Z,66nm,2.0s						
GDL2	Guadalupe Moun	56.26	11	*e*P	P	20 16 33.9	-0.3
435B	Jarrell	56.47	18	P	P	20 16 36.5	+0.9
	baz=199						
435B	Jarrell	56.47	18	*e*P	P	20 16 35.8	+0.2
	comp=Z,65nm,1.6s						
SNCC	San Nicolas Is	56.51	356	P	P	20 16 36.9	+1.0
	baz=175						
CIS	Catalina Islan	56.59	357	P	P	20 16 37.6	+1.1
	baz=176						
FRD	Ford Ranch, An	56.62	359	P	P	20 16 37.3	+0.6
	baz=178						
XPFO	Piæon Flat	56.73	359	*e*P	P	20 16 38.7	+1.1
	comp=Z,15nm,1.4s						
PFO	Pinyon Flats O	56.73	359	P	P	20 16 38.9	+1.3
	baz=179						
PFO	Pinyon Flats O	56.73	359	*e*P	P	20 16 38.7	+1.1
	comp=Z,14nm,1.4s						
PFO	Pinyon Flats O	56.73	359	*e*P	P	20 16 38.7	+1.1
PFO				pmax	pmax		
	comp=Z,14nm,1.4s						
BC3	Big Chuckawall	56.76	360	P	P	20 16 38.9	+1.1
	baz=180						
Y12C	Blythe	56.86	1	P	P	20 16 39.7	+1.4
	baz=181						
Y12C	Blythe	56.86	1	*e*P	P	20 16 39.4	+1.1
	comp=Z,35nm,1.8s						
Y14A	Wickenburg	57.08	2	*e*P	P	20 16 41.2	+1.2
	comp=Z,18nm,1.3s						
BELC	Belle Mtn. Jos	57.11	359	P	P	20 16 42.4	+2.1
	baz=179,SNR=11						
IRM	Iron Mountain	57.26	0	P	P	20 16 42.4	+1.2
	baz=180						
PASC	Pasadena Art C	57.35	357	*e*P	P	20 16 42.4	+0.6
	comp=Z,19nm,1.1s						
BFSC	Mount Baldy Ra	57.39	358	P	P	20 16 43.6	+1.3
	baz=177						
MWC	Mount Wilson	57.39	357	*e*P	P	20 16 42.1	-0.2
	comp=Z,25nm,1.3s						
MWC	Mount Wilson	57.39	357	*e*P	P	20 16 42.1	-0.2
MWC				pmax	pmax		
	comp=Z,25nm,1.3s						
X16A	Lo Mia Camp, P	57.63	4	*e*P	P	20 16 44.8	+0.8
	comp=Z,18nm,1.5s						
WHTX	Lake Whitney,	57.64	18	P	P	20 16 44.3	+0.4
	baz=199						
WHTX	Lake Whitney,	57.64	18	*e*P	P	20 16 44.4	+0.4
	comp=Z,39nm,1.5s						
ABTX	Abilene, Hawle	57.67	15	P	P	20 16 44.7	+0.6
	baz=197						
ABTX	Abilene, Hawle	57.67	15	*e*P	P	20 16 44.2	+0.1
	comp=Z,18nm,1.2s						
LENM	Lemitar	57.80	8	*e*P	P	20 16 45.9	+0.8
KKO	Keanakakoʻi	57.82	314	*e*P	P	20 16 44.1	-1.5
	comp=Z,275nm,1.6s						
RIM	Rim	57.82	314	*e*P	P	20 16 45.7	+0.1
	comp=Z,88nm,1.1s						
BNM	Barren Site	57.83	8	*e*P	P	20 16 45.6	+0.1
X18A	Snowflake	57.84	5	*e*P	P	20 16 46.1	+0.6
	comp=Z,21nm,1.2s						
X18A				*e*PcP	PcP	20 17 39.4	+1.4
UWB	Uwekahuna B	57.84	314	*e*P	P	20 16 45.8	+0.1
	comp=Z,183nm,1.5s						
UWE	Uwekahuna	57.85	314	*e*P	P	20 16 47.5	+1.7
	comp=Z,93nm,0.9s						
GMRC	Granite Mounta	57.89	360	P	P	20 16 47.4	+1.6
	baz=180						
HEC	Hector,Ludlow	57.94	359	P	P	20 16 47.2	+1.1
	baz=179						
MLH	Mauna Loa	57.97	314	*e*P	P	20 16 45.2	-1.5
	comp=Z,126nm,1.1s						
MLH	Mauna Loa	57.97	314	*e*P	P	20 16 45.2	-1.5
MLH				pmax	pmax		
	comp=Z,126nm,1.1s						
LPM	Los Pinos Moun	57.98	8	*e*P	P	20 16 46.1	-0.4
LAZ	Ladron	58.01	8	*e*P	P	20 16 47.8	+1.1
PTGA	Pitinga	58.04	75	*e*P	P	20 16 46.5	-0.6
	comp=Z,4.7nm,1.0s						
EDW2	Edwards Air Fo	58.05	357	P	P	20 16 47.7	+1.0
	baz=177						
HMH	Humuʻula Sheep	58.11	314	*e*P	P	20 16 48.1	+0.3
	comp=Z,288nm,1.6s						
LDFC	Landfair	58.18	0	*e*P	P	20 16 49.6	+1.9
	comp=Z,52nm,0.4s						
W13A	Hualapai Mount	58.21	1	*e*P	P	20 16 48.8	+0.7
	comp=Z,13nm,1.2s						
NATX	Nacogdoches	58.27	21	*e*P	P	20 16 49.2	+0.9
	comp=Z,93nm,0.3s						
MSTX	Muleshoe	58.28	12	P	P	20 16 49.1	+0.6
	baz=193						
MSTX	Muleshoe	58.28	12	*e*P	P	20 16 48.3	-0.1
	comp=Z,44nm,1.5s						
KNTN	Kanton	58.36	282	*e*P	P	20 16 48.7	-0.7
	comp=Z,551nm,1.6s						
341A	Kurthwood	58.38	22	*e*P	P	20 16 48.9	-0.2
	comp=Z,63nm,1.5s						
HUH	Hualalai	58.40	314	*e*P	P	20 16 49.7	-0.1
	comp=Z,247nm,1.5s						
GSC	Goldstone, Bar	58.42	358	P	P	20 16 50.1	+0.6
	baz=178						
GSC	Goldstone, Bar	58.42	358	*e*P	P	20 16 50.2	+0.7
	comp=Z,29nm,1.4s						
GSC	Goldstone, Bar	58.42	358	*e*P	P	20 16 50.2	+0.7
GSC				pmax	pmax		
	comp=Z,29nm,1.4s						
W18A	Petrified Fore	58.45	5	P	P	20 16 50.9	+1.2
	baz=186						
W18A	Petrified Fore	58.45	5	*e*P	P	20 16 51.0	+1.2
	comp=Z,53nm,1.8s						
TASL	Snake Pit, Alb	58.63	8	P	P	20 16 51.1	+0.1
	baz=189						
TASM	ASL Pad, Albuq	58.63	8	P	P	20 16 51.6	+0.6
	baz=189						
ANMO	Albuquerque	58.63	8	P	P	20 16 51.4	+0.3
	comp=Z,1.3nm,0.6s,baz=169,slow=10,SNR=4.6						
ANMO				LR	LR	20 37 19.8	
	comp=Z,311nm,20.9s,baz=188,slow=31						
ANMO	Albuquerque	58.63	8	P	P	20 16 51.6	+0.6
	baz=189						
ANMO	Albuquerque	58.63	8	*e*P	P	20 16 51.3	+0.3
	comp=Z,5.2nm,1.2s						
ANMO	Albuquerque	58.63	8	⇑*e*P	P	20 16 52.2	+1.2
ANMO				pmax	pmax		
	comp=Z,6.0nm,1.3s						
342A	Flagon Creek P	58.71	23	*e*P	P	20 16 52.4	+1.1
	comp=Z,20nm,0.7s						
WUAZ	Wupatki	58.73	4	P	P	20 16 53.0	+1.3
	baz=184						
WUAZ	Wupatki	58.73	4	*e*P	P	20 16 53.0	+1.3
	comp=Z,27nm,1.4s						
MHA	Mahukona	58.80	314	*e*P	P	20 16 52.1	-0.1
MHA	Mahukona	58.80	314	*e*P	P	20 16 52.1	-0.1
240A	Hunter Patters	58.82	21	P	P	20 16 53.4	+1.3
	baz=203						
240A	Hunter Patters	58.82	21	*e*P	P	20 16 53.1	+0.9
	comp=Z,36nm,1.1s						
URZ	Urewera	58.82	238	LR	LR	20 36 53.5	
	comp=Z,616nm,19.6s,baz=122,slow=31						
ISA	Isabella, Lake	58.85	357	P	P	20 16 54.1	+1.7
	baz=176,SNR=7.1						
ISA	Isabella, Lake	58.85	357	*e*P	P	20 16 53.4	+1.0
	comp=Z,30nm,1.6s						
ISA	Isabella, Lake	58.85	357	*e*P	P	20 16 53.4	+1.0
ISA				pmax	pmax		
	comp=Z,30nm,1.6s						
SHOC	Shoshone, Teco	59.01	359	P	P	20 16 55.0	+1.6
	baz=179						
PAGB	Antelope Grade	59.03	355	*e*P	P	20 16 54.9	+1.4
	comp=Z,39nm,1.7s						
VES	Vestal, Richgr	59.06	356	P	P	20 16 54.9	+1.2
	baz=176						
241A	Mo Tay, Goldon	59.09	22	*e*P	P	20 16 55.2	+1.2
	comp=Z,23nm,0.8s						
MPMC	Manual Prospec	59.20	358	P	P	20 16 56.5	+1.5
	baz=178,SNR=11						
BKZ	Black Stump Fm	59.20	237	*e*P	P	20 16 55.2	+0.2
	comp=Z,55nm,1.5s						
AMTX	Amarillo	59.38	13	P	P	20 16 56.6	+0.5
	baz=194						
AMTX	Amarillo	59.38	13	*e*P	P	20 16 56.1	0.0
	comp=Z,16nm,1.0s						
DAC	Darwin (Calif)	59.42	358	*e*P	P	20 16 57.2	+0.7
	comp=Z,22nm,1.4s						
DAC	Darwin (Calif)	59.42	358	*e*P	P	20 16 57.2	+0.7
DAC				pmax	pmax		
	comp=Z,22nm,1.4s						
PMPB	Monarch Peak	59.55	355	*e*P	P	20 16 57.9	+0.6
	comp=Z,21nm,1.3s						
FURC	Furnace Creek,	59.59	358	P	P	20 16 59.6	+2.2
	baz=178						
U15A	North Rim	59.59	3	*e*P	P	20 16 59.3	+1.6
	comp=Z,25nm,1.2s						
CWC	Cottonwood Cre	59.60	357	P	P	20 16 59.4	+1.7
	baz=177						
SHPR	Sheep Range	59.60	360	*e*P	P	20 16 59.3	+1.6
	comp=Z,44nm,1.4s						
PCRV	Puerto La Cruz	59.63	62	LR	LR	20 38 38.9	
	comp=Z,356nm,20.0s,baz=231,slow=32						
WMOK	Wichita Mounta	59.89	16	*e*P	P	20 16 59.4	-0.2
	comp=Z,5.8nm,1.1s						
WMOK	Wichita Mounta	59.89	16	*e*P	P	20 16 59.4	-0.2
WMOK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
059A	Moore Haven	59.91	35	P	P	20 17 00.6	+0.7
	baz=216						
TPNV	Topopah Spring	60.05	359	P	P	20 17 01.4	+0.6
	baz=179						
TPNV	Topopah Spring	60.05	359	*e*P	P	20 17 02.7	+1.9
	comp=Z,24nm,1.4s						
VBMS	Vicksburg	60.13	24	*e*P	P	20 17 04.1	+3.0
	comp=Z,54nm,0.3s						
LCMT	Little Creek M	60.14	2	*e*P	P	20 17 01.6	+0.3
	comp=Z,8.9nm,1.2s						
KNB	Kanab	60.15	2	*e*P	P	20 17 02.3	+0.8
	comp=Z,28nm,1.4s						
KNB	Kanab	60.15	2	*e*P	P	20 17 02.3	+0.8
KNB				pmax	pmax		
	comp=Z,28nm,1.4s						
SAO	San Andreas Ge	60.16	354	*e*P	P	20 17 02.1	+0.8
	comp=Z,13nm,1.2s						
SAO	San Andreas Ge	60.16	354	*e*P	P	20 17 02.1	+0.8
SAO				pmax	pmax		
	comp=Z,13nm,1.2s						
143A	Socs Landing,	60.24	23	*e*P	P	20 17 02.0	+0.1
	comp=Z,33nm,0.4s						
Z41A	Richland Creek	60.26	22	*e*P	P	20 17 02.4	+0.4
	comp=Z,26nm,0.6s						
BANI	BANI	60.33	50	*e*P	P	20 17 01.3	-1.6
060A	Indiantown	60.39	36	*e*P	P	20 17 01.6	-1.4
	comp=Z,214nm,1.2s						
PKCU	Pink Cliffs	60.60	3	*e*P	P	20 17 06.4	+1.7
	comp=Z,51nm,1.3s						
MVCO	Mesa Verde	60.63	6	P	P	20 17 05.7	+0.8
	baz=187						
MVCO	Mesa Verde	60.63	6	*e*P	P	20 17 05.5	+0.7
	comp=Z,30nm,1.4s						
CCUT	Cedar City	60.67	2	*e*P	P	20 17 06.3	+1.3
	comp=Z,25nm,1.3s						
SDD	Santo Domingo	60.69	51	*e*P	P	20 17 05.8	+0.6
SZCU	Shurtz Canyon	60.72	2	*e*P	P	20 17 07.1	+1.7
	comp=Z,12nm,1.0s						
OMMB	Old Mammoth Mi	60.82	357	*e*P	P	20 17 05.8	-0.4
	comp=Z,16nm,1.7s						
MDPB	Devils Postpil	60.84	356	*e*P	P	20 17 04.5	-1.8
	comp=Z,21nm,1.1s						
X39A	Fountain Ranch	60.98	20	P	P	20 17 07.4	+0.4
	baz=202						
HON	Honolulu	60.99	314	*e*P	P	20 17 07.2	0.0
	comp=Z,172nm,0.7s						
146A	Union	61.06	25	*e*P	P	20 17 07.3	-0.2
	comp=Z,25nm,0.8s						
KIP	Kipapa	61.06	314	*e*P	P	20 17 06.2	-1.5
	comp=Z,270nm,0.6s						
KIP	Kipapa	61.06	314	*c* *i*P	P	20 17 09.3	+1.5
KIP				pmax	pmax		
	comp=Z,1μm,0.6s						
T25A	Trinidad	61.08	10	P	P	20 17 08.3	+0.5
	baz=191						
T25A	Trinidad	61.08	10	*e*P	P	20 17 08.1	+0.2
	comp=Z,9.1nm,1.0s						
656A	Willston	61.15	32	*e*P	P	20 17 08.1	-0.1
	comp=Z,87nm,1.4s						
MIAR	Mount Ida	61.19	20	P	P	20 17 09.4	+1.0
	baz=203						
MIAR	Mount Ida	61.19	20	*e*P	P	20 17 08.2	-0.2
	comp=Z,6.2nm,0.8s						
MIAR	Mount Ida	61.19	20	*e*P	P	20 17 08.2	-0.2
MIAR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MTPU	Mount Pierson	61.20	3	*e*P	P	20 17 08.7	-0.1
	comp=Z,17nm,1.5s						
CCAR	Cane Creek	61.21	22	*e*P	P	20 17 10.3	+1.8
	comp=Z,105nm,1.4s						
OPA	Opana	61.25	314	*e*P	P	20 17 10.2	+1.2
	comp=Z,219nm,1.4s						
CMB	Columbia Colle	61.33	355	*e*P	P	20 17 09.8	+0.5
	comp=Z,29nm,1.6s						
CMB	Columbia Colle	61.33	355	*e*P	P	20 17 09.8	+0.5
CMB				pmax	pmax		
	comp=Z,29nm,1.6s						
S22A	4UR Ranch, Cre	61.34	8	P	P	20 17 10.3	+0.5
	baz=189						
S22A	4UR Ranch, Cre	61.34	8	*e*P	P	20 17 11.2	+1.4
	comp=Z,16nm,1.5s						
147A	Livingston	61.40	26	P	P	20 17 10.7	+0.9
	baz=208						
147A	Livingston	61.40	26	*e*P	P	20 17 09.7	-0.2
	comp=Z,28nm,1.0s						
PV05	Paradox Valley	61.44	5	*e*P	P	20 17 11.4	+1.1
R11A	Troy Canyon, C	61.45	360	P	P	20 17 11.8	+1.5
	baz=180,SNR=16						
R11A	Troy Canyon, C	61.45	360	*e*P	P	20 17 10.9	+0.6
	comp=Z,22nm,1.4s						
SDCO	Great Sand Dun	61.52	9	P	P	20 17 11.3	+0.4
	baz=190						
SDCO	Great Sand Dun	61.52	9	*e*P	P	20 17 10.7	-0.2
	comp=Z,16nm,1.3s						
PV13	Radium Mtn., P	61.54	6	*e*P	P	20 17 10.9	-0.1
	comp=Z,15nm,1.4s						
NV11	Mina Array Sit	61.59	357	*e*P	P	20 17 11.5	+0.3
	comp=Z,1.9nm,1.3s						
NV01	Mina Array Sit	61.60	357	*e*P	P	20 17 11.5	+0.2
NVAR	Mina Array Bea	61.60	357	P	P	20 17 11.6	+0.3
	comp=Z,9.7nm,1.1s,baz=184,slow=8.6,SNR=24						
PV18	Skein Mesa, Pa	61.62	6	*e*P	P	20 17 10.4	-1.1
	comp=Z,37nm,1.9s						
PV03	Paradox Valley	61.63	6	*e*P	P	20 17 11.1	-0.5
PSUT	Pine Spring	61.64	1	*e*P	P	20 17 12.9	+1.3
	comp=Z,18nm,1.2s						
PV17	East Wray Mesa	61.65	6	*e*P	P	20 17 12.3	+0.6
	comp=Z,52nm,1.8s						
MSU	Marysvale	61.67	3	*e*P	P	20 17 13.1	+1.3
MSU	Marysvale	61.67	3	*e*P	P	20 17 13.1	+1.3
PV16	Nyswonger Mesa	61.69	6	*e*P	P	20 17 12.0	0.0
	comp=Z,26nm,1.6s						
PV20	West Nyswonger	61.71	6	*e*P	P	20 17 12.7	+0.6
	comp=Z,38nm,1.7s						
W39A	Magazine	61.72	20	P	P	20 17 12.3	+0.3
	baz=202						
W39A	Magazine	61.72	20	*e*P	P	20 17 12.1	+0.2
	comp=Z,6.3nm,1.0s						
WAKR	Walker	61.73	356	*e*P	P	20 17 13.9	+1.7
	comp=Z,29nm,1.8s						
556A	Lake Butler	61.74	32	P	P	20 17 11.8	-0.4
	baz=214						
PV14	Lion Creek, Pa	61.74	5	*e*P	P	20 17 12.9	+0.5
	comp=Z,28nm,1.5s						
RYN	Ryan	61.80	357	*e*P	P	20 17 14.0	+1.4
	comp=Z,28nm,1.5s						
PV23	Carpenter Ridg	61.82	5	*e*P	P	20 17 13.9	+1.1
	comp=Z,28nm,1.4s						
PV09	Paradox Valley	61.85	5	*e*P	P	20 17 12.6	-0.6
PV22	Blue Mesa, Par	61.92	6	*e*P	P	20 17 13.4	-0.1
	comp=Z,6.8nm,1.1s						
PV21	Cone Mtn., Par	61.93	5	*e*P	P	20 17 14.2	+0.5
	comp=Z,13nm,1.1s						
149A	Jones	61.94	27	P	P	20 17 14.2	+0.7
	baz=210						
W40A	Ferguson Farm,	61.94	20	P	P	20 17 14.3	+0.8
	baz=203						
Z47A	Carrollton	61.95	26	P	P	20 17 14.1	+0.6
	baz=208						
251A	Midway	62.10	28	P	P	20 17 15.2	+0.6
	baz=211						
W41B	Gary Mavity, V	62.19	21	P	P	20 17 15.6	+0.5
	baz=204						
W41B	Gary Mavity, V	62.19	21	*e*P	P	20 17 14.2	-0.9
	comp=Z,13nm,1.2s						
YERR	Yerington	62.20	356	*e*P	P	20 17 15.4	+0.1
	comp=Z,33nm,1.3s						
KVN	Kaiserville	62.21	357	*e*P	P	20 17 16.7	+1.3
	comp=Z,16nm,1.4s						
KVN	Kaiserville	62.21	357	*e*P	P	20 17 16.7	+1.3
KVN				pmax	pmax		
	comp=Z,16nm,1.4s						
150A	Eclectic	62.27	28	P	P	20 17 16.4	+0.7
	baz=210						
AFDM	Forest Hills D	62.28	355	*e*P	P	20 17 16.3	+0.6
	comp=Z,40nm,1.8s						
WHAR	Wooly Hollow	62.28	21	*e*P	P	20 17 16.5	+0.7
	comp=Z,15nm,1.2s						
Z48A	Northport	62.31	26	P	P	20 17 16.0	+0.1
	baz=209						
PNTR	Pine Nut	62.32	356	*e*P	P	20 17 16.8	+0.6
	comp=Z,16nm,0.8s						
SRU	San Rafael Swe	62.36	4	*e*P	P	20 17 17.0	+0.6
	comp=Z,22nm,1.4s						
SRU	San Rafael Swe	62.36	4	*e*P	P	20 17 17.0	+0.6
SRU				pmax	pmax		
	comp=Z,22nm,1.4s						
V39A	Pettigrew	62.36	20	P	P	20 17 16.3	0.0
	baz=202						
151A	Opelika	62.51	28	P	P	20 17 17.1	-0.2
	baz=211						
Z49A	Columbiana	62.57	27	P	P	20 17 17.2	-0.4
	baz=210						
V40A	Witts Springs	62.58	20	P	P	20 17 17.2	-0.5
	baz=203						
V40A	Witts Springs	62.58	20	*e*P	P	20 17 17.6	-0.1
	comp=Z,16nm,1.5s						
Y47A	UCPARC, Winfie	62.65	25	P	P	20 17 17.5	-0.8
	baz=208						
P17A	Butcher Ranch,	62.70	4	*e*P	P	20 17 19.5	+0.8
	comp=Z,30nm,1.4s						
RPZ	Rata Peaks	62.74	232	LR	LR	20 38 47.8	
	comp=Z,984nm,19.6s,baz=92,slow=31						
SMCO	Snowmass	62.74	7	*e*P	P	20 17 19.6	+0.4
	comp=Z,10.0nm,1.3s						
V41A	Mountainview	62.78	21	P	P	20 17 18.2	-0.9
	baz=204						
Z50A	Ashland	62.87	27	P	P	20 17 19.1	-0.7
	baz=210						
Z50A	Ashland	62.87	27	*e*P	P	20 17 20.1	+0.3
	comp=Z,13nm,1.1s						
P18A	Preston Nutter	62.89	4	*e*P	P	20 17 20.9	+0.8
	comp=Z,25nm,1.5s						
U39A	Green Forest	62.91	20	P	P	20 17 19.6	-0.3
	baz=202						
PAHR	Pah Rah Range	62.92	356	*e*P	P	20 17 21.2	+1.1
	comp=Z,7.7nm,1.0s						
Y48A	Jasper	62.93	26	P	P	20 17 19.6	-0.5
	baz=209						
X46A	Booneville	62.94	24	P	P	20 17 19.2	-0.9
	baz=207						
V42A	Cord	63.05	22	P	P	20 17 19.9	-0.9
	baz=204						
U40A	Yellville	63.08	20	P	P	20 17 20.5	-0.5
	baz=203						
BEKR	Beckworth	63.15	356	*e*P	P	20 17 22.6	+1.0
	comp=Z,30nm,1.0s						
X47A	Russelville	63.19	25	P	P	20 17 20.9	-0.9
	baz=208						
Y49A	Blount Mountai	63.19	27	P	P	20 17 20.9	-1.0
	baz=210						
Y49A	Blount Mountai	63.19	27	*e*P	P	20 17 21.6	-0.2
	comp=Z,8.5nm,0.6s						
MPU	Maple Canyon	63.19	3	*e*P	P	20 17 23.1	+1.2

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      comp=Z,12nm,1.1s
T38A  Diamond           63.27  19  P     P      20 17 22.5 +0.2
      baz=201
BDFB  Brasilia          63.27  96  eP    P      20 17 22.8 -0.2
      comp=Z,119nm,1.9s
BDFB  Brasilia          63.27  96  eP    P      20 17 22.8 -0.2
BDFB                               pmax  pmax
      comp=Z,119nm,1.9s
DUG   Dugway, Tooele    63.33   2  P     P      20 17 23.3 +0.6
      baz=182,SNR=6.3
DUG   Dugway, Tooele    63.33   2  eP    P      20 17 24.1 +1.4
      comp=Z,22nm,1.4s
DUG   Dugway, Tooele    63.33   2  eP    P      20 17 24.2 +1.4
DUG                                pmax  pmax
      comp=Z,22nm,1.4s
X48A  Hartselle         63.45  26  P     P      20 17 23.0 -0.5
      baz=209
Y50A  Piedmont          63.50  27  P     P      20 17 23.5 -0.4
      baz=210
PLAL  Pickwick Lake     63.51  25  eP    P      20 17 23.8 -0.1
      comp=Z,7.2nm,0.6s
ISCO  Idaho Springs     63.52   8  P     P      20 17 24.1 -0.2
      baz=190
ISCO  Idaho Springs     63.52   8  eP    P      20 17 24.5 +0.2
      comp=Z,10nm,1.3s
ISCO  Idaho Springs     63.52   8  eP    P      20 17 24.5 +0.2
ISCO                               pmax  pmax
      comp=Z,10.0nm,1.3s
T39A  Clever            63.53  19  P     P      20 17 23.8 -0.3
      baz=202
BMN   Battle Mountai    63.55 358  eP    P      20 17 25.5 +1.2
      comp=Z,24nm,1.4s
BMN   Battle Mountai    63.55 358  eP    P      20 17 25.5 +1.2
BMN                                pmax  pmax
      comp=Z,24nm,1.4s
U42A  Revenden          63.60  21  P     P      20 17 24.4  0.0
      baz=204
O03D  Paynes Creek      63.69 354  P     P      20 17 25.1  0.0
      baz=173
JLU   Jordanelle        63.79   3  eP    P      20 17 26.1 +0.2
      comp=Z,52nm,1.9s
X49A  Woodville         63.79  26  P     P      20 17 26.0 +0.2
      baz=209
KMRM  Mail Ridge        63.82 353  eP    P      20 17 27.1 +1.2
      comp=Z,81nm,1.6s
T40A  Mansfield         63.91  20  P     P      20 17 25.8 -0.7
      baz=203
S38A  Stockton          63.93  19  P     P      20 17 26.4 -0.3
      baz=202
W47A  Westpoint         63.94  25  P     P      20 17 26.6 -0.2
      baz=208
X50B  Fort Payne        64.03  27  P     P      20 17 26.5 -0.9
      baz=210
WDC   Whiskeytown Da    64.04 354  eP    P      20 17 28.2 +0.9
      comp=Z,34nm,1.4s
WDC   Whiskeytown Da    64.04 354  eP    P      20 17 28.2 +0.9
WDC                                pmax  pmax
      comp=Z,34nm,1.4s
BGU   Big Grassy Mou    64.05   2  eP    P      20 17 28.5 +0.9
      comp=Z,24nm,1.3s
W48A  Pulaski           64.09  26  P     P      20 17 27.0 -0.8
      baz=209
S39A  Bolivar           64.16  19  P     P      20 17 27.4 -0.8
      baz=202
S39A  Bolivar           64.16  19  eP    P      20 17 28.1 -0.1
      comp=Z,20nm,1.4s
Y52A  Lilburn           64.19  29  P     P      20 17 27.6 -0.8
      baz=212
V46A  Holladay          64.22  24  P     P      20 17 27.5 -1.1
      baz=208
TCUT  Toone Canyon      64.30   3  eP    P      20 17 29.9 +0.6
      comp=Z,25nm,1.2s
W49A  Belvidere         64.35  26  P     P      20 17 29.1 -0.4
      baz=209
N02D  Trinity Center    64.45 354  P     P      20 17 30.8 +0.8
      baz=172,SNR=8.4
R38A  Fenwick Farm,     64.45  18  P     P      20 17 29.3 -0.8
      baz=202
U45A  Rockin P Farm,    64.47  23  P     P      20 17 29.7 -0.5
      baz=207
V47A  Nunnelly          64.47  25  P     P      20 17 29.0 -1.2
      baz=208
N23A  Red Feather La    64.56   8  P     P      20 17 31.2 +0.2
      baz=189
N23A  Red Feather La    64.56   8  eP    P      20 17 31.6 +0.5
S41A  Jillco Farms,     64.56  20  P     P      20 17 30.6 -0.2
      baz=204
SWET  Sewanee           64.56  26  eP    P      20 17 27.0 -3.9
      comp=Z,13nm,0.6s
T43A  Greenville        64.58  22  P     P      20 17 30.4 -0.6
      baz=205
WVT   Waverly           64.62  24  P     P      20 17 30.5 -0.7
      baz=208
WVT   Waverly           64.62  24  eP    P      20 17 30.1 -1.1
      comp=Z,13nm,1.1s
WVT   Waverly           64.62  24  eP    P      20 17 30.1 -1.1
WVT                                pmax  pmax
      comp=Z,13nm,1.1s
V48A  Smith Brothers    64.67  25  P     P      20 17 30.8 -0.7
      baz=209
V48A  Smith Brothers    64.67  25  eP    P      20 17 30.8 -0.7
      comp=Z,29nm,1.5s
HWUT  Hardware Ranch    64.78   3  eP    P      20 17 32.5 +0.1
      comp=Z,12nm,1.4s
W50A  Signal Mountai    64.81  27  P     P      20 17 32.0 -0.4
      baz=210
M02C  Callahan          64.88 354  P     P      20 17 33.4 +0.5
      baz=172,SNR=9.3
W51A  Cleveland         65.00  27  P     P      20 17 33.9 +0.2
      baz=211
V49A  McMinnville       65.05  26  P     P      20 17 34.2 +0.2
      baz=210
U47A  Clarksville       65.10  25  P     P      20 17 33.9 -0.4
      baz=208
M04C  Macdoel           65.17 354  P     P      20 17 35.5 +0.7
      baz=173,SNR=6.7
MOD   Modoc Plateau     65.17 356  eP    P      20 17 35.3 +0.4
      comp=Z,16nm,1.0s
YBH   Yreka Blue Hor    65.20 354  LR    LR     20 39 59.5
      comp=Z,204nm,20.4s,baz=188,slow=30
YBH   Yreka Blue Hor    65.20 354  eP    P      20 17 35.8 +0.8
      comp=Z,10nm,1.3s
YBH   Yreka Blue Hor    65.20 354  eP    P      20 17 35.8 +0.8
YBH                                pmax  pmax
      comp=Z,11nm,1.3s
Q38A  Cooks Store, C    65.25  18  P     P      20 17 35.4 +0.2
      baz=202
V50A  Pikevile          65.30  27  P     P      20 17 35.0 -0.6
      baz=210
T46A  Princeton         65.40  24  P     P      20 17 35.8 -0.5
      baz=207
S44A  Carbondale        65.49  22  P     P      20 17 36.4 -0.4
      baz=206
Q39A  Willow Grove F    65.52  19  P     P      20 17 36.7 -0.3
      baz=202
WVOR  Wild Horse Val    65.60 357  eP    P      20 17 39.8 +2.1
      comp=Z,31nm,1.3s
P37A  Lathrop           65.63  18  P     P      20 17 37.0 -0.7
      baz=201
T47A  Sharon Grove      65.65  24  P     P      20 17 37.6 -0.3
      baz=208
T47A  Sharon Grove      65.65  24  eP    P      20 17 37.6 -0.3
      comp=Z,16nm,0.4s
L02D  Cave Junction,    65.72 353  P     P      20 17 38.2  0.0
      baz=172
Q40A  Laux Farm, Aux    65.74  20  P     P      20 17 37.6 -0.8
      baz=203
U49A  Red Boiling Sp    65.75  26  P     P      20 17 37.6 -0.9
      baz=210
R43A  Red Bud           65.78  22  P     P      20 17 38.2 -0.5
      baz=205
VNDA  Vanda             65.78 194  LR    LR     20 39 57.0
      comp=Z,783nm,18.7s,baz=92,slow=30
VNDA  Vanda             65.78 194  eP    P      20 17 39.6 +1.3
VNDA  Vanda             65.78 194  eP    P      20 17 39.6 +1.3
Q41A  Truxton           65.97  20  P     P      20 17 39.3 -0.6
      baz=204
P39B  Salisbury         65.99  19  P     P      20 17 40.1 +0.1
      baz=202
K05A  Summer Lake       66.03 355  eP    P      20 17 41.5 +1.1
      comp=Z,50nm,1.4s
U50A  Jamestown         66.04  26  P     P      20 17 40.3 -0.2
      baz=210
BW06  Boulder Array     66.06   5  P     P      20 17 40.1 -0.6
      baz=186
BW06  Boulder Array     66.06   5  eP    P      20 17 40.5 -0.2
      comp=Z,7.1nm,0.6s
PD31  Pinedale Array    66.06   5  eP    P      20 17 40.8 +0.1
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PDAR  Pinedale Array    66.06   5  P     P      20 17 40.0 -0.7
      comp=Z,1.6nm,0.9s,baz=186,slow=6.0,SNR=13
PDAR  Pinedale Array    66.06   5  eP    P      20 17 39.9 -0.8
HUMO  Hull Mountain     66.09 354  eP    P      20 17 41.3 +0.6
      comp=Z,21nm,1.2s
K22A  Casper            66.22   7  eP    P      20 17 41.8 +0.1
      comp=Z,48nm,0.6s
S47A  Hartford          66.27  24  P     P      20 17 40.6 -1.3
      baz=208
O38A  Galt              66.37  18  P     P      20 17 42.9 +0.5
      baz=202
KMSC  Kings Mountain    66.49  30  P     P      20 17 42.3 -1.0
      baz=214
KMSC  Kings Mountain    66.49  30  eP    P      20 17 43.2 -0.1
      comp=Z,9.4nm,0.9s
MFID  Camas Ranch       66.51 359  eP    P      20 17 43.6 +0.2
      comp=Z,20nm,1.3s
J08A  Circle Bar Ran    66.52 357  eP    P      20 17 44.8 +1.3
      comp=Z,37nm,1.4s
J05D  Fort Rock, OR     66.61 355  P     P      20 17 44.8 +0.7
      baz=174
HLID  Hailey            66.66   1  P     P      20 17 44.5 +0.1
      baz=181,SNR=23
HLID  Hailey            66.66   1  eP    P      20 17 45.0 +0.6
      comp=Z,22nm,1.2s
Q44A  Meyer Farm, Va    66.66  22  P     P      20 17 44.2 -0.1
      baz=206
TPAW  Teton Pass        66.69   3  eP    P      20 17 44.8  0.0
      comp=Z,9.9nm,1.0s
QSPA  South Pole Qui    66.73 180  P     P      20 17 43.9 -0.8
      comp=Z,9.7nm,1.0s,baz=141,slow=3.1,SNR=7.3
QSPA                               LR    LR     20 42 20.1
      comp=Z,606nm,19.1s,baz=95,slow=32
P42A  Winchester        66.83  21  eP    P      20 17 45.2 -0.2
      comp=Z,15nm,0.9s
LOHW  Long Hollow       66.83   4  eP    P      20 17 45.3 -0.3
      comp=Z,19nm,1.5s
FXWY  Fox Creek         66.84   3  eP    P      20 17 45.7 +0.1
      comp=Z,15nm,1.5s
MOOW  Moose Ponds       66.96   3  eP    P      20 17 46.6 +0.2
      comp=Z,9.5nm,1.2s
R47A  Wooly Knot Far    67.02  24  P     P      20 17 46.6  0.0
      baz=208
PINE  Pine Mountain     67.09 355  eP    P      20 17 47.9 +0.7
      comp=Z,24nm,1.3s
IMW   Indian Meadow     67.10   3  eP    P      20 17 47.9 +0.6
      comp=Z,14nm,1.2s
O41A  Passleys Farm,    67.14  20  P     P      20 17 47.0 -0.3
      baz=204
I03D  Drain, OR         67.21 354  P     P      20 17 47.6 -0.1
      baz=172
I04A  Tendick Farm,     67.22 354  P     P      20 17 47.8  0.0
      baz=173
FLWY  Flagg Ranch       67.30   3  eP    P      20 17 48.9 +0.4
      comp=Z,22nm,1.2s
N39A  Derby Farms, D    67.35  18  P     P      20 17 47.8 -0.9
      baz=202
N39A  Derby Farms, D    67.35  18  eP    P      20 17 48.1 -0.6
      comp=Z,23nm,0.9s
M38A  Pleasantville     67.65  18  P     P      20 17 49.0 -1.6
      baz=202
N41A  Harden Midland    67.69  20  P     P      20 17 49.3 -1.5
      baz=204
MCMT  McKenzie Canyo    67.95   2  eP    P      20 17 52.4 -0.3
BMO   Blue Mountains    67.97 358  eP    P      20 17 53.2 +0.5
      comp=Z,19nm,1.4s
RSSD  Black Hills       67.98   9  eP    P      20 17 52.9 +0.1
      comp=Z,172nm,1.8s
RSSD  Black Hills       67.98   9  eP    P      20 17 52.9 +0.1
RSSD                               pmax  pmax
      comp=Z,172nm,1.8s
M39A  Webster           68.00  18  P     P      20 17 52.2 -0.5
      baz=203
QLMT  Earthquake Lak    68.01   3  eP    P      20 17 53.4 +0.4
N42A  Yates City        68.06  20  P     P      20 17 52.6 -0.5
      baz=205
COR   Corvallis         68.09 354  eP    P      20 17 53.2  0.0
      comp=Z,202nm,1.8s
COR   Corvallis         68.09 354  eP    P      20 17 53.2  0.0
COR                                pmax  pmax
      comp=Z,202nm,1.8s
SCIA  State Center      68.10  17  P     P      20 17 53.4  0.0
      baz=202
M40A  Post Highland     68.13  19  P     P      20 17 53.5 -0.1
      baz=203
L37A  Phoenix Point,    68.16  17  P     P      20 17 53.9 +0.2
      baz=201
L38A  Oak Wood Farm,    68.39  18  P     P      20 17 55.1  0.0
      baz=202
M41A  Milan             68.39  20  P     P      20 17 55.3 +0.1
      baz=204
RLMT  Red Lodge         68.42   4  P     P      20 17 56.0 +0.4
      baz=186
RLMT  Red Lodge         68.42   4  eP    P      20 17 56.0 +0.4
      comp=Z,8.2nm,1.0s
K36A  Gilmore City      68.45  16  P     P      20 17 56.2 +0.6
      baz=200
G08A  Pilot Rock        68.47 357  eP    P      20 17 56.9 +1.1
      comp=Z,39nm,1.4s
DLMT  Dillon            68.49   2  eP    P      20 17 56.2 +0.2
      comp=Z,14nm,1.3s
G06A  Carlson Farm,     68.51 356  eP    P      20 17 56.4 +0.5
      comp=Z,40nm,1.8s
G05D  Wamic, OR         68.56 355  P     P      20 17 56.8 +0.5
      baz=174
L39A  Vinton            68.64  18  P     P      20 17 56.6 -0.1
      baz=203
BOZ   Bozeman (W)       68.76   3  P     P      20 17 58.6 +1.0
      baz=184
BOZ   Bozeman (W)       68.76   3  eP    P      20 17 57.8 +0.1
      comp=Z,21nm,1.9s
BOZ   Bozeman (W)       68.76   3  eP    P      20 17 57.8 +0.1
BOZ                                pmax  pmax
      comp=Z,21nm,1.9s
L40A  Anamosa           68.81  19  P     P      20 17 57.6 -0.2
      baz=204
Q51A  Peebles           68.89  26  P     P      20 17 58.0 -0.4
      baz=211
N45A  Kentland          68.91  22  P     P      20 17 58.6 +0.1
      baz=207
ECSD  EROS Data Cent    68.96  14  P     P      20 17 58.6 -0.2
      baz=198
ECSD  EROS Data Cent    68.96  14  eP    P      20 17 58.5 -0.2
      comp=Z,9.1nm,1.1s
GCMT  Greycliff         69.06   4  eP    P      20 17 59.4 -0.1
F10A  Beach Ranch, E    69.09 358  eP    P      20 17 59.9 +0.3
      comp=Z,13nm,1.3s
J36A  Seneca 1, Swea    69.13  16  eP    P      20 17 59.1 -0.7
      comp=Z,15nm,1.0s
K39A  Oelwein           69.21  18  P     P      20 17 59.9 -0.4
      baz=203
K40A  Colesburg         69.42  19  P     P      20 18 01.5 -0.1
      baz=204
K41A  Shullsburg        69.59  19  P     P      20 18 02.4 -0.2
      baz=204
J38A  Wedel Dairy, R    69.61  17  P     P      20 18 02.8 +0.1
      baz=202
E09A  Wood Farm, Sta    69.66 358  eP    P      20 18 03.1 +0.2
      comp=Z,15nm,1.2s
L43A  Garden Prairie    69.69  21  P     P      20 18 02.9 -0.4
      baz=206
J39A  Decorah           69.84  18  P     P      20 18 04.8 +0.6
      baz=203
HRY   Holter Researc    69.87   2  eP    P      20 18 05.2 +0.8
MSO   Missoula          69.93   1  P     P      20 18 05.4 +0.6
      baz=181
MSO   Missoula          69.93   1  eP    P      20 18 05.3 +0.6
      comp=Z,10.0nm,1.0s
J40A  Soldiers Grove    70.18  19  P     P      20 18 06.0 -0.3
      baz=204
LAO   LASA Array        70.25   7  P     P      20 18 07.0 +0.3
      baz=189
LAO   LASA Array        70.25   7  eP    P      20 18 06.1 -0.6
      comp=Z,19nm,1.3s
I39A  Houston           70.37  18  P     P      20 18 07.4  0.0
      baz=203
H36A  Jessenland, He    70.40  16  P     P      20 18 08.1 +0.5
      baz=201
LTY   Liberty           70.53 356  eP    P      20 18 09.2 +0.9
      comp=Z,11nm,1.3s
JTMT  Jette             70.84   1  eP    P      20 18 11.2 +0.8
      comp=Z,20nm,1.3s
C09A  Chrisman Ranch    70.95 358  eP    P      20 18 11.6 +0.7
      comp=Z,52nm,1.6s
H39A  Augusta           71.20  18  P     P      20 18 12.3 -0.1
      baz=203
F34A  Alexandria        71.22  15  P     P      20 18 13.0 +0.4
      baz=199
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EGMT  Eagleton          71.28   4  P     P      20 18 13.4 +0.5
      baz=185
EGMT  Eagleton          71.28   4  eP    P      20 18 14.1 +1.1
      comp=Z,38nm,1.4s
DZM   Mont Dzumac       71.40 253  LR    LR     20 41 51.7
      comp=Z,224nm,18.9s,baz=50,slow=30
DZM   Mont Dzumac       71.40 253  eLR   LR     20 39 24.9
      comp=Z,523nm,26.6s
H40A  Chili             71.40  18  P     P      20 18 13.8 +0.1
      baz=204
F35A  Swanville         71.44  15  P     P      20 18 14.2 +0.3
      baz=200
G38A  Ridgeland         71.49  17  P     P      20 18 14.2  0.0
      baz=202
B08A  Colville Reser    71.55 357  eP    P      20 18 14.5  0.0
      comp=Z,15nm,1.5s
F36A  Milaca            71.70  16  P     P      20 18 15.5 +0.1
      baz=201
F36A  Milaca            71.70  16  eP    P      20 18 15.7 +0.2
      comp=Z,16nm,0.9s
G39A  Holcombe          71.79  18  P     P      20 18 16.0  0.0
      baz=203
N54A  Moraine State     71.91  27  P     P      20 18 17.0 +0.2
      baz=214
N54A  Moraine State     71.91  27  eP    P      20 18 15.9 -0.9
      comp=Z,28nm,1.4s
G40A  Rib Lake          72.05  18  P     P      20 18 18.0 +0.4
      baz=204
A04D  Lummi Island      72.13 355  P     P      20 18 18.2 +0.3
      baz=173
F38A  Pierce - Schro    72.22  17  P     P      20 18 18.3 -0.2
      baz=202
DGMT  Dagmar            72.23   8  P     P      20 18 18.6 -0.1
      baz=191
DGMT  Dagmar            72.23   8  eP    P      20 18 19.0 +0.4
      comp=Z,27nm,1.1s
MDND  Maddock           72.31  11  P     P      20 18 19.0 -0.1
      baz=195
E36A  McGregor          72.38  16  P     P      20 18 18.8 -0.7
      baz=201
F39A  Loretta           72.44  17  P     P      20 18 19.3 -0.6
      baz=203
F40A  Park Falls        72.66  18  P     P      20 18 21.0 -0.3
      baz=204
D35A  Remer             72.72  15  P     P      20 18 21.8 +0.3
      baz=200
F41A  Three Lakes       72.79  19  P     P      20 18 22.2 +0.1
      baz=205
B927  Port Alberni      72.82 353  eP    P      20 18 22.7 +0.7
ERPA  Erie              72.87  27  P     P      20 18 22.2 -0.3
      baz=214
E38A  The Farm, Brul    72.90  17  P     P      20 18 22.5 -0.1
      baz=203
COWI  Conover           73.11  19  eP    P      20 18 24.7 +0.8
      comp=Z,55nm,1.8s
E40A  Wakefield         73.21  18  P     P      20 18 24.3 -0.1
      baz=204
C35A  Jirik Farms, M    73.31  15  P     P      20 18 25.4 +0.4
      baz=200
AGMN  Agassiz Nation    73.46  13  P     P      20 18 25.6 -0.2
      baz=198
AGMN  Agassiz Nation    73.46  13  eP    P      20 18 26.0 +0.1
      comp=Z,15nm,1.4s
F43A  Flat Rock, Esc    73.47  20  P     P      20 18 26.1 +0.2
      baz=207
C36A  Pine Crest Far    73.64  15  P     P      20 18 27.3 +0.4
      baz=201
N59A  State Game Lan    73.73  30  P     P      20 18 27.4 -0.2
      baz=217
C37A  Embarrass         73.78  16  P     P      20 18 28.3 +0.6
      baz=202
B34A  Aery, Baudette    73.90  14  P     P      20 18 27.5 -0.9
      baz=200
B35A  Bob, Littlefor    73.99  15  P     P      20 18 29.0  0.0
      baz=200
B35A  Bob, Littlefor    73.99  15  eP    P      20 18 28.4 -0.6
      comp=Z,8.0nm,0.9s
C38A  Sawbill Land.     74.00  17  P     P      20 18 29.1  0.0
      baz=203
EYMN  Ely               74.15  16  P     P      20 18 30.2 +0.2
      baz=202
EYMN  Ely               74.15  16  eP    P      20 18 30.2 +0.2
      comp=Z,12nm,1.1s
SNAA  Sanae             74.66 162  P     P      20 18 30.7 -2.1
      comp=Z,8.4nm,1.2s,baz=228,slow=9.0,SNR=8.5
SNAA  Sanae             74.66 162  eP    P      20 18 31.8 -1.0
      comp=Z,30nm,1.5s
SNAA  Sanae             74.66 162⇓ eP    P      20 18 32.2 -0.6
ULM   Lac du Bonnet     75.31  13  P     P      20 18 36.3 -0.3
      comp=Z,1.1nm,0.3s,baz=203,slow=5.3,SNR=4.3
ULM   Lac du Bonnet     75.31  13  eP    P      20 18 36.5 -0.1
      comp=Z,11nm,1.3s
ULM   Lac du Bonnet     75.31  13  eP    P      20 18 36.5 -0.1
ULM                                pmax  pmax
      comp=Z,11nm,1.3s
TRQ   Mont Tremblant    78.48  27  eP    P      20 18 55.4 +0.8
FFC   Flin Flon         78.65   8  eP    P      20 18 55.2  0.0
      comp=Z,22nm,1.6s
FFC   Flin Flon         78.65   8  eP    P      20 18 55.3  0.0
FFC                                pmax  pmax
      comp=Z,22nm,1.6s
HNR   Honiara           81.67 263  LR    LR     20 47 54.5
      comp=Z,315nm,19.2s,baz=140,slow=30
DLBC  Dease Lake        82.48 352  eP    P      20 19 17.2 +1.3
      comp=Z,37nm,1.5s
YKA   Yellowknife Ar    85.62   0  P     P      20 19 30.8 -0.9
      comp=Z,11nm,1.2s,baz=174,slow=4.7,SNR=16
YKA                                LR    LR     20 52 41.3
      comp=Z,21nm,20.5s,baz=134,slow=32
YKW3  Yellowknife Ar    85.69   0  eP    P      20 19 32.0 +0.1
      comp=Z,18nm,1.2s
SYO   Syowa Base        86.02 171⇑ ePcP  PcP    20 19 36.0 -0.5
H11S2 WAKE ISLAND Hy    86.87 292  T     T      21 55 26.2
      baz=116,slow=75,SNR=169
H11S1 WAKE ISLAND Hy    86.89 292  T     T      21 55 36.4
      baz=116,slow=75,SNR=167
H11S3 WAKE ISLAND Hy    86.89 292  T     T      21 55 27.6
      baz=116,slow=75,SNR=173
H11N3 WAKE ISLAND Hy    87.23 293  T     T      21 55 58.4
      baz=117,slow=76,SNR=137
H11N1 WAKE ISLAND Hy    87.25 293  T     T      21 55 58.7
      baz=117,slow=76,SNR=57
H11N2 WAKE ISLAND Hy    87.25 293  T     T      21 55 59.0
      baz=117,slow=76,SNR=167
SCHQ  Schefferville     88.22  26  LR    LR     20 55 57.4
      comp=Z,222nm,21.7s,baz=258,slow=33
STKA  Stephens Creek    88.36 236  LR    LR     20 54 39.0
      comp=Z,494nm,18.5s,baz=116,slow=33
DAWY  Dawson            89.24 350  eP    P      20 19 49.4 +0.2
      comp=Z,12nm,1.5s
MAW   Mawson            89.24 179  LR    LR     20 55 42.8
      comp=Z,561nm,19.2s,baz=187,slow=33
RIDG  Independ'e Rid    89.94 347  eP    P      20 19 52.1 -0.4
      comp=Z,11nm,1.1s
SKT   Skwentna          89.95 344  eP    P      20 19 51.2 -1.3
      comp=Z,37nm,2.0s
PPLA  Purkeypile        90.89 344  eP    P      20 19 56.7 -0.4
      comp=Z,40nm,1.8s
TRF   Thorofare Moun    90.89 345  eP    P      20 19 56.5 -0.5
      comp=Z,32nm,1.6s
IL1   Eielson Array     91.28 347  eP    P      20 19 58.7 +0.1
CAST  Castle Rocks      91.30 344  eP    P      20 19 57.9 -0.9
      comp=Z,14nm,1.6s
CCB   Clear Creek Bu    91.36 347  eP    P      20 19 58.2 -0.8
      comp=Z,13nm,1.5s
BPAW  Bear Paw Mtn.     91.61 345  eP    P      20 19 59.3 -0.9
      comp=Z,39nm,2.0s
MDM   Murphy Dome       91.72 347  eP    P      20 19 59.4 -1.3
      comp=Z,6.9nm,0.5s
INK   Inuvik            92.45 353  eP    P      20 20 03.4 -0.6
      comp=Z,11nm,1.4s
INK   Inuvik            92.45 353  eP    P      20 20 03.4 -0.6
INK                                pmax  pmax
      comp=Z,11nm,1.4s
PMG   Port Moresby      93.27 258  LR    LR     20 56 34.1
      comp=Z,282nm,18.8s,baz=89,slow=32
AS31  Alice Springs     98.24 240  eP    P      20 20 30.3 -1.4
      comp=Z,2.7nm,0.6s
ASAR  Alice Springs     98.24 240  P     P      20 20 29.1 -2.5
      comp=Z,0.5nm,0.6s,baz=116,slow=3.7,SNR=8.2
ASAR                               LR    LR     21 04 24.3
      comp=Z,363nm,18.2s,baz=132,slow=35
ERM   Erimo            113.72 307 d iPKIKP PKiKP 20 25 35.3 +3.0
YSS   Yuzh-Sakhalins   114.82 312  eP    Pdif   20 21 46.0 +1.4
YSS                                e            20 32 47.0
YSS                                MLR   MLR
      comp=Z,740nm,18.0s
YSS                                MLR   MLR
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             comp=E,650nm,15.0s
KLR   Kul'dur            122.32 314⇑ePKIKP  PKPdf   20 25 48.8 +0.2
CN2   Changchun          126.81 308 ePKP    PKPdf   20 25 48.8 -8.6
CN2                                 ePP     PP      20 27 50.5 -4.5
CN2                                  SKS    SKSac   20 32 55.5 -7.9
CN2   Changchun          126.81 308 eSS     SS      20 44 53.9 -7.9
CN2                                  AMB    AMB
             comp=Z,200nm,4.0s
CN2                                  LR     LR
             comp=N,330nm,20.0s
CN2                                  LR     LR
             comp=E,230nm,20.0s
CN2                                  LR     LR
             comp=Z,320nm,20.0s
CLL   Collm              131.60  41 ePKIKP  PKPdf   20 26 13.0 +6.7
NJ2   Nanjing            131.85 293 ePKP    PKPdf   20 26 07.8 +0.5
KHC   Kasperske Hory     132.50  44  AMS    AMS     21 22 10.0
             comp=Z,300nm,23.4s
PVCC  Panska Ves         132.76  42  AMS    AMS     21 21 10.0
             comp=Z,200nm,17.2s
PRU   Pruhonice          132.89  43  AMS    AMS     21 16 20.0
             comp=Z,200nm,20.2s
GOPC  GO Pecny, Ondr     133.06  43  AMS    AMS     21 16 30.0
             comp=Z,200nm,18.5s
OKC   Ostrava-Krasne     135.16  42  AMS    AMS     21 20 00.0
             comp=Z,200nm,19.7s
VSU   Vasula             135.74  28⇓ePKIKP  PKPdf   20 26 13.9 +0.1
HHC   Hu-ho-hao-te       137.33 305 ePKP    PKPdf   20 26 13.4 -4.1
HHC                                  SKKS           20 35 57.8
HHC                                  SS     SS      20 47 09.8 -0.6
HHC                                  AMB    AMB
             comp=Z,110nm,8.2s
HHC                                  LR     LR
             comp=Z,260nm,20.0s
HHC                                  LR     LR
             comp=Z,350nm,19.2s
HHC                                  LR     LR
             comp=Z,500nm,20.8s
ULN   Ulaanbaatar        138.62 317⇓ePKIKP  PKPdf   20 26 18.8 -0.9
SONA0 Songino Array      139.05 317 ePKPdf  PKPdf   20 26 18.0 -2.5
SONM  Songino Array      139.05 317  PKP    PKPdf   20 26 18.0 -2.5
             comp=Z,1.9nm,1.2s,baz=151,slow=3.4,SNR=4.1
ZAK   Zakamensk          139.84 322 eP      Pdif    20 23 32.8 -3.2
ZAK                                  pmax   pmax
             comp=Z,2.0nm,1.1s
KIEV  Kiev               141.24  36⇑ePKIKP  PKPdf   20 26 25.4 +1.2
OBN   Obninsk            142.03  26⇑ePKIKP  PKPdf   20 26 25.8 +0.4
OBN                                  pmax   pmax
             comp=Z,5.0nm,1.1s
GYA   Guiyang            142.08 283 ePKP    PKPdf   20 26 26.0 -0.6
GYA                                  PP     PP      20 29 36.6 +3.9
GYA                                  AMB    AMB
             comp=Z,120nm,8.2s
LZH   Lanzhou            144.10 300 ePKP    PKPab   20 26 27.0 -0.5
LZH                                  pPKP   sPKPdf  20 26 37.8 +3.2
LZH                                  sPKP           20 26 42.5
LZH                                  LR     LR
             comp=Z,170nm,18.2s
LZH                                  LR     LR
             comp=Z,170nm,18.0s
LZH                                  LR     LR
             comp=Z,200nm,20.1s
CD2   Chengdu            144.72 291  PKP    PKPdf   20 26 30.5 -0.5
PBKT  Sadao Pong         145.44 265 ePKPdf  PKPbc   20 26 32.0 -0.5
KMI   Kunming            145.49 281  PKPbc  PKPdf   20 26 30.8 -2.0
KMI                                  pPKP   sPKPab  20 26 38.1 +0.5
KMI                                  sPKP           20 26 43.1
KMI                                  PP     PP      20 30 01.0 +7.7
KMI                                  AMB    AMB
             comp=Z,170nm,9.6s
KMI                                  LR     LR
             comp=Z,150nm,18.9s
KMI                                  LR     LR
             comp=Z,280nm,18.3s
KMI                                  LR     LR
             comp=Z,380nm,20.3s
NVS   Novosibirsk        145.75 341 ePKIKP  PKPdf   20 26 29.7 -2.3
NVS                                  pmax   pmax
             comp=Z,47nm,2.0s
NVS                                  pmax   pmax
             comp=E,11nm,1.8s
VSR   Storozhevoye       145.89  29 ePKP2   PKPdf   20 26 32.4 +0.1
VSR                                  pmax   pmax
             comp=Z,30nm,1.2s
ZAA1  Zalesovo Array     146.01 339 ePKPdf  PKPdf   20 26 31.7 -0.7
ZAA0  Zalesovo Array     146.01 339 ePKPdf  PKPdf   20 26 32.0 -0.4
ZALV  Zalesovo Beam      146.01 339  PKPbc  PKPdf   20 26 31.7 -0.7
             comp=Z,3.4nm,0.8s,baz=358,slow=2.3,SNR=8.3
ZALV  Zalesovo Beam      146.01 339 ePKPdf  PKPdf   20 26 32.7 +0.3
ZALV  Zalesovo Beam      146.01 339 ePKP2   PKPdf   20 26 32.7 +0.3
VORD  Divnogorie         146.12  29 ePKP2   PKPdf   20 26 32.9 +0.2
VORD                                 pmax   pmax
             comp=Z,30nm,0.5s
GTA   Gaotai             146.42 307 ⇓PKPbc  PKPdf   20 26 33.8  0.0
GTA                                  PP     PP      20 30 02.3 +4.2
GTA                                  SKKS           20 36 48.1
GTA                                  SS     SS      20 48 53.5 -2.4
GTA                                  AMB    AMB
             comp=Z,87nm,5.5s
GTA                                  LR     LR
             comp=Z,190nm,22.7s
GTA                                  LR     LR
             comp=Z,350nm,21.6s
GTA                                  LR     LR
             comp=Z,420nm,22.7s
ARU   Arti               146.71   6 ePKPdf  PKPbc   20 26 34.7 -0.5
ARU   Arti               146.71   6 i PKP2  PKPbc   20 26 34.8 -0.4
ARU                                  SS     SS      20 48 53.7 -2.8
VRH   Novokhopyorsk      147.00  27 ePKP2   PKPbc   20 26 36.3 +0.1
VRH                                  pmax   pmax
             comp=Z,30nm,1.3s
SIM   Simferopol'        147.03  42 i PKP2  PKPab   20 26 37.5 -0.5
SIM                                  pmax   pmax
             comp=Z,14nm,1.1s
CM01  Chiang Mai Arr     147.80 268 ePKPdf  PKPdf   20 26 36.5  0.0
CM31  Chiang Mai Arr     147.82 268 ePKPdf  PKPdf   20 26 35.2 -1.3
CMAR  Chiang Mai Arr     147.82 268  PKPbc  PKPdf   20 26 37.0 +0.4
             comp=Z,4.9nm,1.0s,baz=82,slow=0.8,SNR=11
CMAR  Chiang Mai Arr     147.82 268  PKPbc  PKPdf   20 26 37.0 +0.4
CMAR  Chiang Mai Arr     147.82 268  PKIKP  PKPdf   20 26 37.0 +0.4
CHTO  Chiang Mai         147.91 268 ePKPdf  PKPdf   20 26 38.0 +1.3
CHTO  Chiang Mai         147.91 268 ePKIKP  PKPdf   20 26 38.0 +1.3
DGZ   Jazzator, Alta     148.35 332 ePKIKP  PKPdf   20 26 35.8 -0.9
ILGA  Ilgaz              148.57  49 ePKPdf  PKPdf   20 26 39.0 +1.6
BR101 Keskin Array S     149.04  51 ePKPdf  PKPbc   20 26 40.4 -1.8
BR131 Keskin Array S     149.04  51 ePKPdf  PKPdf   20 26 40.1 +1.9
BRTR  Keskin Array B     149.04  51  PKPbc  PKPbc   20 26 40.4 -1.8
             comp=Z,5.8nm,1.1s,baz=338,slow=1.3,SNR=9.2
BRVK  Borovoye           150.12 353 ePKPdf  PKPdf   20 26 41.6 +2.4
BRVK                                ePKPbc  PKiKP   20 26 45.1  0.0
BRVK  Borovoye           150.12 353d iPKIKP PKPbc   20 26 45.9 +1.6
BVAR  Borovoye Array     150.14 353  PKPbc  PKPbc   20 26 42.4 -1.9
             comp=Z,2.4nm,0.7s,baz=5.7,slow=1.5,SNR=13
CSS   Mathiatis          150.30  60 ePKPdf  PKPdf   20 26 41.4 +1.3
CSS                                 ePKPbc  PKiKP   20 26 45.7 -0.4
KURK  Kurchatov          150.72 342 epPKPdf pPKPdf  20 26 43.7  0.0
KURK  Kurchatov          150.72 342⇑ePKIKP  PKPdf   20 26 40.4 +0.2
KURBB Kurchatov Arra     150.83 342  PKPbc  PKPbc   20 26 43.7 -2.3
             comp=Z,3.6nm,0.9s,baz=28,slow=1.9,SNR=12
WMQ   Urumqi             152.31 323  PKPbc  PKPdf   20 26 43.3 +0.3
WMQ                                  LR     LR
             comp=Z,560nm,25.1s
WMQ                                  LR     LR
             comp=Z,700nm,24.1s
WMQ                                  LR     LR
             comp=Z,930nm,25.1s
KIV   Kislovodsk         152.60  36 ePKIKP  PKPdf   20 26 41.9 -1.5
KIV                                  pmax   pmax
             comp=Z,3.0nm,1.0s
MK31  Makanchi Array     152.78 333 ePKPdf  PKPdf   20 26 43.0 -0.5
MK31                                ePKPbc  sPKPdf  20 26 49.0 +0.9
MK31                                ePKPab  PKPab   20 26 59.0 -2.5
MK31  Makanchi Array     152.78 333 ePKIKP  PKPdf   20 26 43.1 -0.5
MK31                                e               20 26 49.0
MK31                                e               20 26 59.0
MK32  Makanchi Array     152.78 333 epPKPdf pPKPdf  20 26 47.5 +0.5
MKAR  Makanchi Array     152.78 333  PKPbc  PKPbc   20 26 47.5 -3.2
             comp=Z,1.7nm,0.9s,baz=79,slow=3.1,SNR=4.8
MKAR  Makanchi Array     152.78 333 ePKPdf  PKPdf   20 26 42.1 -1.4
MKAR                                ePKPbc  sPKPdf  20 26 48.9 +0.8
MKAR  Makanchi Array     152.78 333 ePKIKP  PKPdf   20 26 42.1 -1.4
MKAR                                e               20 26 48.9
MK01  Makanchi Array     152.80 333 ePKPdf  PKPdf   20 26 41.9 -1.7
MK01                                ePKPbc  PKiKP   20 26 51.4 +0.5
MAKZ  Makanchi           152.90 334 ePKPdf  PKPdf   20 26 46.3 +2.6
MAKZ  Makanchi           152.90 334 ePKIKP  PKPdf   20 26 46.3 +2.6
KSH   Kashi              161.39 332 ePKP    PKPdf   20 26 56.1 +1.3
KSH                                  PKS    PKSdf   20 30 27.4 -0.8
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ISCJB **17** *20:18:44.0±0.3, 29°.03N±0°.03×102°.60E±0°.03, h10km, mb4.2/22, MS3.1/1, Error ellipse: s-maj=4.3km s-min=4.0km az=167.6*

BJI **17** *20:18:45.2, 29°.01N×102°.26E, h14km, mb4.1/10, mB4.1/3, ML4.0/20, Ms3.8/12, Ms7 3.7/7*

IDC **17** *20:18:48.6±6.0, 29°.01N×102°.56E, h33km±50km, mb3.7/9, mb1 3.8/11, mb1mx3.5/69, mbtmp3.9/11, ML3.8/2, MS3.1/6, Ms1 3.1/6, ms1mx2.8/67, Error ellipse: s-maj=25.0km s-min=14.1km az=60.0*

NEIC **17** *20:18:50.8±0.8, 29°.02N×102°.54E, h55km±8km, mb4.2/19, Error ellipse: s-maj=6.3km s-min=4.9km az=210.0*

ISC 17 20:18:45.9±0.5**, 28°.99N**±0°.04×**102°.49E**±0°.05**, h10km, n59, σ2s.06**/65**, mb4.2**/22**, 2C, Sichuan**

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Code  Station Name         Δ°   AZ°   Phase ID           Time      Res
                                      Op     ISC        h  m  s    ISC
CD2   Chengdu             2.20  30   Pn     Pn      20 19 24.8 +2.2
CD2                                  Pg     Pb      20 19 25.8 -0.1
CD2                                  Sn     Sn      20 19 46.5 -3.5
CD2                                  Sg     Sb      20 19 55.3 +2.0
CD2                                  smax   smax
             comp=N,10µm,0.5s
CD2                                  smax   smax
             comp=E,6µm,0.4s
KMI   Kunming             3.86 177   Pn     Pn      20 19 47.4 +1.8
KMI                                  Sn     Sn      20 20 34.1 +3.0
KMI                                  smax   smax
             comp=N,250nm,1.5s
KMI                                  smax   smax
             comp=E,210nm,1.3s
KMI                                  LR     LR
             comp=N,1µm,8.7s
KMI                                  LR     LR
             comp=Z,730nm,6.9s
GYA   Guiyang             4.48 123⇑iPn     Pn      20 19 56.3 +2.3
GYA                                  Pg     Pg      20 20 12.6 +0.9
GYA                                  Sn     Sb      20 20 56.8 -2.0
GYA                                  Sg     Sg      20 21 11.3 +1.6
GYA                                  smax   smax
             comp=N,230nm,0.7s
GYA                                  smax   smax
             comp=E,210nm,0.9s
ENH   Enshi               6.22  76  ePn     Pn      20 20 19.7 +1.9
XAN   Xi'an               7.44  46   Pn     Pn      20 20 34.8 +0.1
XAN                                  Pg     Pg      20 21 03.8 -4.7
XAN                                  Sn     Sn      20 21 57.6 -1.6
XAN                                  Sg     Sb      20 22 37.8  +14
XAN                                  smax   smax
             comp=N,150nm,1.1s
XAN                                  smax   smax
             comp=E,140nm,1.0s
LSA   Lhasa               9.92 277  ePn     Pn      20 21 10.8 +1.8
SHL   Shillong           10.04 253  ePn     Pn      20 21 13.8 +3.4
WHN   Wuhan              10.42  79  ⇑P      Pn      20 21 27.6  +12
WHN                                  S      Sn      20 23 09.3 -2.9
WHN                                  LR     LR
             comp=N,2µm,11.2s
WHN                                  LR     LR
             comp=E,220nm,2.6s
WHN                                  LR     LR
             comp=Z,660nm,5.8s
CHTO  Chiang Mai         10.64 199  ePn     Pn      20 21 15.4 -3.1
CMAR  Chiang Mai Arr     10.98 198   Pn     Pn      20 21 25.5 +2.3
             comp=Z,0.3nm,0.3s,baz=9.7,slow=14,SNR=5.3
CMAR                                 Lg     Lg      20 24 37.9
             baz=203,slow=29,SNR=4.0
CMAR                                 LR     LR      20 25 59.4
             comp=Z,79nm,20.1s,baz=205,slow=39
BRDH  Bariadhala         11.62 240   LR     LR      20 27 14.5
             comp=Z,121nm,21.9s,baz=79,slow=43
PBKT  Sadao Pong         12.44 187  ePn     Pn      20 21 39.7 -3.5
HHC   Hu-ho-hao-te       13.96  30  eP      Pn      20 22 05.0 +1.1
HHC                                  PP     PnPn    20 22 20.8 +8.9
HHC                                  S      Sn      20 24 43.3 +4.2
HHC                                  sS     S       20 24 51.3  -10
HHC                                  LR     LR
             comp=Z,190nm,7.6s
HHC                                  LR     LR
             comp=Z,160nm,10.7s
BJT   Baijiatuau         15.73  42  ePn     Pn      20 22 26.9 -0.6
             comp=Z,7.7nm,0.9s
SSLB  Suanglung          17.33 103  ePn     Pn      20 22 50.0 +1.9
             comp=Z,6.6nm,1.1s
NACB  Ninganchiao        17.74 101  ePn     Pn      20 22 49.7 -3.4
             comp=Z,13nm,1.0s
WMQ   Urumqi             18.95 325  eP      P       20 23 03.8 -3.4
WMQ                                  LR     LR
             comp=Z,480nm,9.7s
WMQ                                  LR     LR
             comp=Z,330nm,13.9s
WMQ                                  LR     LR
             comp=Z,340nm,11.1s
SONA0 Songino Array      19.05   8  eP      Pn      20 23 09.1  0.0
SONM  Songino Array      19.05   8   P      Pn      20 23 09.1  0.0
             comp=Z,0.2nm,0.3s,baz=188,slow=12,SNR=7.5
SONM                                 LR     LR      20 31 41.3
             comp=Z,50nm,22.0s,baz=186,slow=41
SONA1 Songino Array      19.07   8  eP      Pn      20 23 08.4 -0.9
ULN   Ulaanbaatar        19.17   9  eP      P       20 23 08.0 -1.7
             comp=Z,4.6nm,1.3s
TLY   Talaya             22.68   2   LR     LR      20 33 10.6
             comp=Z,66nm,19.1s,baz=172,slow=38
KSAR  Wonju Array Be     22.80  62   P      P       20 23 48.6 -0.3
KS01  Wonju Array Si     22.82  62  eP      P       20 23 48.3 -0.7
KSRS  Korea Array        22.84  62   P      P       20 23 48.6 -0.6
             comp=Z,2.9nm,0.7s,baz=252,slow=9.9,SNR=8.8
KSRS                                 LR     LR      20 33 08.3
             comp=Z,37nm,20.6s,baz=240,slow=38
PRZ   Przheval'sk        23.64 311  eP      P       20 23 58.2 +0.6
             comp=Z,11nm,1.1s
MK01  Makanchi Array     23.74 324  eP      P       20 23 57.1 -1.1
MK31  Makanchi Array     23.76 324  eP      P       20 23 57.7 -0.7
MK32  Makanchi Array     23.76 324  eP      P       20 23 57.3 -1.1
MKAR  Makanchi Array     23.76 324   P      P       20 23 57.3 -1.1
             comp=Z,1.8nm,0.8s,baz=134,slow=11,SNR=17
MKAR                                 LR     LR      20 33 41.1
             comp=Z,43nm,19.9s,baz=158,slow=38
MKAR  Makanchi Array     23.76 324  eP      P       20 23 57.5 -1.0
             comp=Z,11nm,0.8s
MAKZ  Makanchi           23.93 324  eP      P       20 24 00.3 +0.2
             comp=Z,2.5nm,0.9s
NIL   Nilore             25.36 288  eP      P       20 24 12.9 -0.4
             comp=Z,5.7nm,0.8s
AAK   Ala-Archa          26.33 309   P      P       20 24 23.2 +1.1
             comp=Z,1.3nm,0.4s,baz=93,slow=2.0,SNR=4.8
AAK   Ala-Archa          26.33 309  eP      P       20 24 21.8 -0.4
             comp=Z,8.1nm,1.5s
ZAA0  Zalesovo Array     28.07 338  eP      P       20 24 38.3 +0.8
             comp=Z,2.5nm,0.8s
ZALV  Zalesovo Beam      28.07 338   P      P       20 24 38.2 +0.8
             comp=Z,0.8nm,0.4s,baz=142,slow=12,SNR=5.6
ZALV  Zalesovo Beam      28.07 338  eP      P       20 24 37.9 +0.4
ZAA1  Zalesovo Array     28.08 338  eP      P       20 24 38.2 +0.7
KURBB Kurchatov Arra     28.16 327   P      P       20 24 36.0 -2.2
             comp=Z,2.0nm,0.9s,baz=135,slow=9.3,SNR=13
KURK  Kurchatov          28.18 327  eP      P       20 24 36.0 -2.4
KBL   Kabul              28.89 290  eP      P       20 24 46.4 +1.2
             comp=Z,3.2nm,0.5s
KK31  Karatay Array      29.24 307  eP      P       20 24 47.1 -1.0
KKAR  Karatay Array      29.24 307  eP      P       20 24 47.1 -1.0
INU   Inuyama            29.80  69  eP      P       20 24 52.8 -0.3
             comp=Z,20nm,1.5s
MJB9  Matsu-Tunnel       30.83  67  eP      P       20 25 00.4 -1.7
             comp=Z,25nm,2.0s
MAJO  Matsushiro         30.83  67  eP      P       20 25 00.6 -1.6
             comp=Z,3.6nm,0.8s
BVAR  Borovoye Array     33.64 325   P      P       20 25 24.7 -1.9
             comp=Z,1.2nm,1.0s,baz=121,slow=5.7,SNR=5.7
BRVK  Borovoye           33.71 325  eP      P       20 25 27.5 +0.3
TNTI  Ternate            36.76 135  eP      P       20 25 53.6 -0.2
             comp=Z,28nm,1.3s
GEYT  Alibeck            37.78 295   P      P       20 26 03.5 +1.1
             comp=Z,0.9nm,0.6s,baz=91,slow=8.9,SNR=4.3
ABKAR Akbulak array      38.08 314  eP      P       20 26 05.3 +0.6
WRAB  Tennant Creek      57.55 144  eP      P       20 28 34.0 -1.8
             comp=Z,8.4nm,1.1s
WRA   Warramunga Arr     57.55 144   P      P       20 28 34.4 -1.5
             comp=Z,2.1nm,0.6s,baz=334,slow=7.7,SNR=19
WR1   Warramunga Arr     57.55 144  eP      P       20 28 34.4 -1.5
             comp=Z,17nm,1.4s
WB2   Warramunga Arr     57.55 144  eP      P       20 28 34.8 -1.2
             comp=Z,38nm,1.9s
AS31  Alice Springs      60.46 147  eP      P       20 28 54.8 -1.3
             comp=Z,1.4nm,1.2s
ASAR  Alice Springs      60.46 147   P      P       20 28 55.0 -1.0
             comp=Z,0.8nm,0.5s,baz=328,slow=7.3,SNR=13
AS01  Alice Springs      60.48 147  eP      P       20 28 56.1  0.0
```

IDC **17** *20:21:03.3±1.6, 30°.99S×178°.97W, h0km, mb4.1/4, mb1 4.2/5, mb1mx3.8/40, mbtmp4.1/5, ML3.5/1, Error ellipse: s-maj=44.5km s-min=29.9km az=42.0*

ISCJB **17** *20:21:08.1±1.5, 31°.3S±0°.2×179°.2W±0°.2, h33km, mb4.0/4, Error ellipse: s-maj=31.2km s-min=23.9km az=145.2*

ISC 17 20:21:08.8±1.5**, 31°.1S**±0°.2×**179°.1W**±0°.2**, h35km, n12, σ1s.22**/6**, mb4.1**/4**, Kermadec Islands region**

```
Code  Station Name         Δ°   AZ°   Phase ID           Time      Res
                                      Op     ISC        h  m  s    ISC
URZ   Urewera             7.81 203   Pn     Pn      20 22 59.5 -0.4
             0.6nm,0.3s,baz=345,slow=20,SNR=3.8
WRA   Warramunga Arr     43.19 273   P      P       20 29 06.5  0.0
             2.9nm,0.9s,baz=114,slow=7.7,SNR=6.6
FITZ  Fitzroy Crossi     51.42 271   P      P       20 30 11.7 +1.1
             1.9nm,0.8s,baz=150,slow=8.1,SNR=4.6
QSPA  South Pole Qui     59.03 180   P      P       20 31 05.2 +0.2
             1.4nm,0.6s,baz=108,slow=5.7,SNR=7.7
PLCA  Paso Flores        82.73 133   P      P       20 33 29.8 +0.6
             0.9nm,0.7s,baz=225,slow=6.5,SNR=3.1
H10S2 ASCENSION HYDR137.49 157   T      T       23 14 06.0
             baz=204,slow=74,SNR=4.4
H10S3 ASCENSION HYDR137.49 157   T      T       23 14 06.9
             baz=204,slow=74,SNR=4.3
H10S1 ASCENSION HYDR137.50 157   T      T       23 14 08.4
             baz=204,slow=74,SNR=4.8
H10N3 ASCENSION HYDR138.58 157   T      T       23 15 25.7
             baz=203,slow=75,SNR=6.2
H10N1 ASCENSION HYDR138.58 157   T      T       23 15 28.4
             baz=203,slow=75,SNR=6.9
H10N2 ASCENSION HYDR138.59 157   T      T       23 15 28.1
             baz=203,slow=75,SNR=5.9
FINES FINESS Array B    145.45 339   PKPbc  PKPdf   20 40 40.7 -1.7
             2.2nm,0.9s,baz=23,slow=4.5,SNR=3.4
```

IDC **17** *20:37:31.4±2.0, 31°.00S×179°.03W, h0km, mb4.0/5, mb1 4.1/6, mb1mx3.8/40, mbtmp4.0/6, ML3.5/1, Error ellipse: s-maj=55.1km s-min=26.4km az=34.0*

ISCJB **17** *20:37:35.9±1.5, 31°.3S±0°.2×179°.3W±0°.2, h33km, mb3.9/5, Error ellipse: s-maj=31.0km s-min=21.5km az=140.6*

ISC 17 20:37:37.3±1.7**, 31°.2S**±0°.2×**179°.2W**±0°.2**, h35km, n12, σ0s.40**/6**, mb4.0**/5**, Kermadec Islands region**

```
Code  Station Name         Δ°   AZ°   Phase ID           Time      Res
                                      Op     ISC        h  m  s    ISC
URZ   Urewera             7.72 202   Pn     Pn      20 39 27.0 -0.2
             0.6nm,0.3s,baz=336,slow=12,SNR=4.2
ASAR  Alice Springs      42.08 268   P      P       20 45 25.9 -0.1
             0.7nm,0.7s,baz=106,slow=7.3,SNR=9.5
WRA   Warramunga Arr     43.14 274   P      P       20 45 34.8 +0.2
             2.0nm,0.7s,baz=113,slow=7.9,SNR=12
FITZ  Fitzroy Crossi     51.37 271   P      P       20 46 38.8 +0.1
             3.0nm,1.0s,baz=157,slow=13,SNR=3.7
QSPA  South Pole Qui     58.96 180   P      P       20 47 33.5 +0.5
             1.7nm,0.5s,baz=12,slow=5.3,SNR=11
PLCA  Paso Flores        82.72 133   P      P       20 49 57.4 -0.3
             0.6nm,0.7s,baz=214,slow=7.3,SNR=4.3
H10S2 ASCENSION HYDR137.44 157   T      T       23 30 27.5
             baz=204,slow=74,SNR=8.8
H10S3 ASCENSION HYDR137.44 157   T      T       23 30 27.7
             baz=204,slow=74,SNR=8.7
H10S1 ASCENSION HYDR137.46 157   T      T       23 30 28.6
             baz=204,slow=74,SNR=12
H10N3 ASCENSION HYDR138.53 157   T      T       23 31 48.4
             baz=203,slow=75,SNR=13
H10N1 ASCENSION HYDR138.54 157   T      T       23 31 49.9
             baz=203,slow=75,SNR=13
H10N2 ASCENSION HYDR138.55 157   T      T       23 31 49.8
             baz=203,slow=75,SNR=15
```

ISCJB **17** *21:11:11.9±0.7, 28°.54S±0°.09×177°.4W±0°.1, h57km, mb4.3/12, MS3.4/4, Error ellipse: s-maj=16.8km s-min=11.9km az=20.7*

IDC **17** *21:11:12.7±2.2, 28°.53S×177°.36W, h49km±17km, mb4.0/9, mb1 4.2/9, mb1mx3.9/38, mbtmp4.3/9, MS3.5/7, Ms1 3.5/7, ms1mx3.1/42, Error ellipse: s-maj=25.1km s-min=20.2km az=55.0*

NEIC **17** *21:11:13.0±2.0, 28°.56S×177°.43W, h52km±15km, mb4.6/3, Error ellipse: s-maj=19.1km s-min=14.3km az=48.0*

ISC 17 21:11:13.8±0.7**, 28°.70S**±0°.10×**177°.4W**±0°.1**, h57km, n35, σ1s.60**/26**, mb4.3**/12**, MS3.4**/4**, 1D, Kermadec Islands region**

```
Code  Station Name         Δ°   AZ°   Phase ID           Time      Res
                                      Op     ISC        h  m  s    ISC
RAO   Raoul Island        0.69 218   P      Pn      21 11 28.4 +0.6
             2µm,0.3s,baz=82,slow=2.2,SNR=82
RAO                                  LR     LR      21 11 37.0
             comp=Z,234nm,19.5s,baz=136,slow=28
RAO                                  S      Sn      21 11 41.2 +3.3
             3µm,0.3s,baz=124,slow=22,SNR=59
RAO   Raoul Island        0.69 218  ePn     Pn      21 11 28.1 +0.4
RAO                                 eSn     Sn      21 11 39.1 +1.1
URZ   Urewera            10.56 204   P      Pn      21 13 34.4 -7.9
             0.4nm,0.3s,baz=236,slow=4.4,SNR=5.0
URZ                                  S      Sn      21 15 34.0 -5.0
             1.9nm,0.3s,baz=244,slow=21,SNR=9.9
DZM   Mont Dzumac        15.99 291   LR     LR      21 20 05.3
             comp=Z,310nm,18.0s,baz=82,slow=33
DZM   Mont Dzumac        15.99 291  eLR     LR      21 18 51.0
             470nm,23.6s
RPZ   Rata Peaks         17.60 209   LR     LR      21 21 24.3
             comp=Z,285nm,18.1s,baz=40,slow=34
RAR   Rarotonga          17.65  69   LR     LR      21 21 22.7
             comp=Z,61nm,20.1s,baz=265,slow=35
TBI   Tubuai             25.66  84  eT      T       21 42 59.0
             33nm,0.4s
PAE   Paea               27.79  73  eT      T       21 45 09.9
             7.6nm,0.2s
PPT2  Papeete2           27.83  73  eLR     LR      21 24 00.0
             147nm,24.5s
PPT   Papeete            27.84  73   LR     LR      21 26 30.3
             comp=Z,40nm,20.2s,baz=214,slow=33
TVO   Taravao            28.01  73  eT      T       21 45 27.8
             1.3nm,0.2s
STKA  Stephens Creek     35.38 254   P      P       21 18 05.2 +1.1
             2.1nm,0.5s,baz=98,slow=13,SNR=13
STKA                                 LR     LR      21 29 40.2
             comp=Z,142nm,20.3s,baz=55,slow=31
ASAR  Alice Springs      43.72 265   P      P       21 19 13.4 -0.2
             1.5nm,0.6s,baz=99,slow=6.8,SNR=23
WRAB  Tennant Creek      44.55 270  eP      P       21 19 20.2 -0.1
             3.7nm,0.8s
WRA   Warramunga Arr     44.56 270   P      P       21 19 20.1 -0.3
             3.5nm,0.8s,baz=108,slow=7.8,SNR=9.6
SBA   Scott Base         49.76 184  eP      P       21 20 02.4 +2.4
             6.2nm,1.0s
VNDA  Vanda              49.83 186   P      P       21 20 02.3 +1.8
             0.8nm,0.6s,baz=3.7,slow=6.2,SNR=13
GUMO  Guam               55.65 314   LR     LR      21 42 41.8
             comp=Z,34nm,18.1s,baz=148,slow=34
CASY  Casey              56.87 207  eP      P       21 20 51.1 -1.2
             8.0nm,0.8s
MBWA  Marble Bar         56.92 262  eP      P       21 20 52.5 -0.9
QSPA  South Pole Qui     61.40 180   P      P       21 21 24.9 +1.1
             6.3nm,0.8s,baz=40,slow=5.1,SNR=13
QSPA                                 LR     LR      21 43 57.2
             comp=Z,28nm,21.0s,baz=69,slow=32
MAW   Mawson             74.06 200   P      P       21 22 43.8 +0.5
             3.0nm,0.7s,baz=132,slow=9.3,SNR=12
MJAR  Matsushiro Arr     77.14 325   P      P       21 23 00.9 -0.4
             2.0nm,0.6s,baz=168,slow=6.2,SNR=5.8
SYO   Syowa Base         78.87 193⇓eP      P       21 23 09.8 -0.6
PLCA  Paso Flores        83.30 133   P      P       21 23 34.1 -0.5
             2.5nm,1.0s,baz=229,slow=9.3,SNR=6.7
NVAR  Mina Array Bea     86.66  42   P      P       21 23 51.2 -0.3
             1.5nm,0.7s,baz=218,slow=8.9,SNR=7.4
MKAR  Makanchi Array    117.06 311   PKP    PKPdf   21 29 50.4 -1.7
             0.5nm,0.9s,baz=46,slow=6.2,SNR=3.1
ARCES ARCESS Array B    137.04 348   PKP    PKPdf   21 30 29.9 +0.5
             1.1nm,0.7s,baz=2.9,slow=2.4,SNR=5.4
FINES FINESS Array B    143.72 341   PKhKP  PKPpre  21 30 37.8
```

	1.5nm,0.7s,baz=24,slow=3.8,SNR=6.3						
NB2	**NORSAR Subarra**	**147.15**	**352**	PKP	**PKPdf**	**21 30 48.5**	**+0.9**
	comp=Z,10nm,1.7s,baz=17,slow=2.6						
AKASG	**Malin Array Be**	**150.23**	**325**	PKPbc	**PKPbc**	**21 30 57.3**	**-0.7**
	comp=Z,4.0nm,0.5s,baz=46,slow=2.9,SNR=6.3						
MMAI	**Mount Meron Ar**	**151.55**	**287**	PKPbc	**PKPbc**	**21 31 02.6**	**+0.7**
	comp=Z,6.0nm,0.6s,baz=92,slow=8.9,SNR=9.2						
BRTR	**Keskin Array B**	**152.18**	**301**	PKPbc	**PKPbc**	**21 31 01.8**	**-1.3**
	comp=Z,1.9nm,0.6s,baz=130,slow=4.1,SNR=8.0						
TORD	**Torodi Ar. Bea**	**164.50**	**177**	PKPab	**PKPab**	**21 32 06.4**	**-0.1**
	baz=183,slow=3.5						

IDC 17 21:19:25.3±4.2, 24°.29N×109°.00W, h0^{km}, mb1 3.8/4, mb1mx3.5/52, mbtmp3.4/4, ML3.6/4, Error ellipse: s-maj=64.9km s-min=12.5km az=150.0, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPIG	**La Paz**	**1.21**	**261**	Pg	Pn	21 19 49.5	+0.1
	91nm,0.3s,baz=61,slow=19,SNR=38						
LPIG				Lg	Lg	21 20 03.4	
	194nm,0.3s,baz=324,slow=22,SNR=43						
TXAR	**Lajitas Array**	**6.92**	**42**	Pn	Pn	21 21 07.7	-0.5
	0.1nm,0.3s,baz=222,slow=13,SNR=7.4						
TXAR				Lg	Lg	21 23 03.0	
	1.4nm,0.3s,baz=221,slow=30,SNR=6.3						
ANMO	**Albuquerque**	**10.84**	**11**	Pn	Pn	21 22 03.7	+1.7
	0.1nm,0.3s,baz=197,slow=12,SNR=3.4						
NVAR	**Mina Array Bea**	**16.16**	**333**	Pn	P	21 23 18.8	+1.4
	0.1nm,0.3s,baz=152,slow=10,SNR=6.2						
PDAR	**Pinedale Array**	**18.43**	**359**	P	Pn	21 23 40.8	-1.7
	0.1nm,0.3s,baz=168,slow=10,SNR=15						

NDI 17 21:21:03.3±2.1, 24°.81N×91°.96E, h34^{km}±6^{km}, ML3.3, India-Bangladesh border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHL	**Shillong**	**0.76**	**355**	*e*P	Pn	21 21 17.7	-0.1
SHL				*e*S	Sb	21 21 29.1	+0.5
SHL				IAML		21 21 30.0	
	comp=E,2µm,0.1s						
SHL				IAML		21 21 30.4	
	comp=N,1µm,0.2s						
SILR	**SILCHAR**	**0.77**	**92**	*e*P	Pn	21 21 16.6	-1.1
SILR				*e*S	Sn	21 21 27.4	-0.6
AGT	**Agartala**	**1.12**	**215**	*e*P	Pn	21 21 22.9	+0.3
AGT				*e*S	Sb	21 21 38.4	-0.2
AGT				IAML		21 21 40.5	
	comp=E,1µm,0.5s						
AGT				IAML		21 21 41.2	
	comp=N,900nm,0.4s						
GUWA	**GUWAHATI**	**1.40**	**350**	*e*P	Pn	21 21 27.6	+1.1
GUWA				*e*S	Sn	21 21 45.0	+1.2
GUWA				IAML		21 21 49.1	
	comp=N,166nm,0.1s						
GUWA				IAML		21 21 49.8	
	comp=E,198nm,0.1s						
BELO	**BELONIA**	**1.62**	**197**	*e*P	Pn	21 21 28.7	-0.8
BELO				*e*S	Sn	21 21 49.5	+0.4
BELO				IAML		21 21 53.3	
	comp=E,419nm,0.1s						
BELO				IAML		21 21 53.6	
	comp=N,418nm,0.2s						
TEZP	**TEZPUR**	**1.96**	**23**	*e*P	Pn	21 21 33.7	-0.4
TEZP				IAML		21 22 05.0	
	comp=E,376nm,0.1s						
TEZP				IAML		21 22 05.5	
	comp=N,352nm,0.2s						
KOHI	**KOHIMA**	**2.15**	**64**	*e*x	x	21 21 36.2	
KOHI				*e*S	Sb	21 22 08.3	+0.4
KOHI				IAML		21 22 15.3	
	comp=E,226nm,0.2s						
KOHI				IAML		21 22 19.1	
	comp=N,159nm,0.6s						
MOKO	**MOKOCHONG**	**2.76**	**56**	*e*P	Pn	21 21 44.8	-0.4
MOKO				*e*S	Sn	21 22 16.9	-0.6
MOKO				IAML		21 22 28.1	
	comp=N,152nm,0.2s						
MOKO				IAML		21 22 32.2	
	comp=E,236nm,0.1s						
ZIRO	**ZIRO**	**3.20**	**32**	*e*P	Pn	21 21 51.3	0.0
ZIRO				*e*S	Sn	21 22 27.3	-1.0
ZIRO				IAML		21 22 29.5	
	comp=N,366nm,0.2s						
ZIRO				IAML		21 22 29.6	
	comp=E,336nm,0.3s						

IDC 17 21:30:55.9±1.6, 30°.82S×179°.00W, h0^{km}, mb4.1/4, mb1 4.3/4, mb1mx3.8/37, mbtmp4.1/4, Error ellipse: s-maj=75.1km s-min=31.1km az=10.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**33.55**	**258**	P	P	21 37 38.1	+0.6
	1.6nm,0.7s,baz=77,slow=14,SNR=3.4						
ASAR	**Alice Springs**	**42.23**	**268**	P	P	21 38 50.6	-0.4
	1.8nm,0.7s,baz=104,slow=7.7,SNR=18						
WRA	**Warramunga Arr**	**43.26**	**273**	P	P	21 38 59.0	-0.4
	3.0nm,0.8s,baz=113,slow=7.9,SNR=21						
PLCA	**Paso Flores**	**82.85**	**133**	P	P	21 43 22.2	-0.2
	1.8nm,1.1s,baz=273,slow=9.1,SNR=4.8						
FINES	**FINESS Array B**	**145.23**	**339**	PKPbc	PKPbc	21 50 34.1	-0.3
	1.6nm,0.8s,baz=61,slow=4.0,SNR=4.8						

ISN 17 21:55:35.0±1.5, 32°.43N×47°.23E, h15^{km}, ML2.7

TEH 17 21:55:35.4, 32°.41N×47°.26E, h13^{km}, ML2.7, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IKFM	**Kafar-mosalman**	**1.22**	**24**	*e*Pg	Pn	21 55 57.4	-0.8
IKFM				*e*Sg	Sb	21 56 13.6	-0.4
IKFM				*e*		21 56 15.5	
	comp=Z,99nm,0.2s						
IKOM	**Komasi**	**1.77**	**7**	*e*		21 56 38.7	
	comp=Z,99nm,0.2s						
IKOM				*e*Pn	Pn	21 56 06.4	+0.4
KCHF	**Cheshme Sefid,**	**1.87**	**355**	*e*		21 56 41.8	
	comp=Z,99nm,0.1s						
KCHF				*e*Pn	Pn	21 56 06.5	-0.8
IBZA	**Bozab**	**2.12**	**14**	*e*Pn	Pn	21 56 10.5	-0.3
IBZA				*e*		21 56 45.1	
	comp=Z,99nm,0.2s						
IVIS	**Veis**	**2.14**	**351**	*e*Pn	Pn	21 56 11.4	+0.5
IVIS				*e*		21 56 43.8	
	comp=Z,399nm,0.2s						

NEIC 17 22:03:26.0±0.0, 31°.30S×71°.21W, h52^{km}, mb4.0/4, ML4.1(GUC), After GUC.

NEIC Felt [IV] at Salamanca; [III] at Punitaqui and Rio Hurtado; [II] at Combarbala, Illapel, Monte Patria and Ovalle. Also felt at Santiago.

GUC 17 22:03:26.9±0.8, 31°.30S×71°.21W, h52^{km}±10^{km}, ML4.1

SJA 17 22:03:27.9±0.7, 31°.29S×71°.36W, h40^{km}±999^{km}, ML4.2, MW4.8

IDC 17 22:03:29.5±3.5, 31°.34S×70°.96W, h62^{km}±30^{km}, mb3.7/3, mb1 3.8/7, mb1mx3.5/39, mbtmp3.9/7, ML3.8/4, MS2.9/2, Ms1 2.9/2, ms1mx2.6/32, Error ellipse: s-maj=41.6km s-min=27.5km az=100.0

ISC 17 22:03:25.6±0.9, 31°.33S±0°.02×71°.36W±0°.05, h33^{km}±3^{km}, n54, σ2^{s}.00/69, mb4.0/5, 1C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO04	**Tololo Observa**	**1.25**	**23**	*e*Pn	**Pb**	**22 03 49.6**	**+0.8**
GO04				*e*Sn	**Sb**	**22 04 04.6**	**-0.1**
GO04	**Tololo Observa**	**1.25**	**23**	*e*P	**Pb**	**22 03 49.4**	**+0.5**
GO04				*i* S	**Sb**	**22 04 05.6**	**+0.9**
GO04				IAML		22 04 06.9	
	comp=E,9µm,0.3s						
ROCH	**El Roble**	**1.67**	**170**	*e*P	**Pb**	**22 03 56.0**	**+0.2**
ROCH				*i* S	**Sb**	**22 04 18.8**	**+2.2**
ROCH				IAML		22 04 21.9	
	comp=N,3µm,0.4s						
ROC1	**El Roble**	**1.67**	**170**	*e*Pn	**Pb**	**22 03 56.1**	**+0.1**
ROC1				*e*Sn	**Sb**	**22 04 17.1**	**+0.4**
ROC1	**El Roble**	**1.67**	**170**	*i* P	**Pb**	**22 03 57.2**	**+1.2**
RTLS	**Leoncito**	**1.82**	**105**	*i* P	**Pb**	**22 03 59.2**	**+0.6**
RTLS				IAML		22 04 22.0	
	comp=Z,1µm,0.4s						
RTLS				*i* S	**Sb**	**22 04 22.3**	**+1.1**
PEL	**Peldehue**	**1.90**	**163**	*e*Pn	**Pb**	**22 03 59.1**	**-0.6**
PEL				*e*Sn	**Sb**	**22 04 23.8**	**+0.7**
PEL	**Peldehue**	**1.90**	**163**	*e*P	**Pb**	**22 03 58.8**	**-0.9**
PEL				*e*S	**Sb**	**22 04 22.6**	**-0.4**
PEL				IAML		22 04 28.1	
	comp=N,2µm,0.2s						
AUSP	**Uspallata**	**1.91**	**118**	*i* P	**Pb**	**22 04 00.6**	**+0.7**
AUSP				*i* S	**Sb**	**22 04 24.2**	**+0.7**
AROD	**Rodeo**	**2.00**	**55**	*i* P	**Pb**	**22 04 01.7**	**+0.2**
AROD				*i* S	**Sb**	**22 04 26.4**	**+0.2**
CLCH	**Cerro Calan**	**2.18**	**161**	*e*P	**Pn**	**22 04 02.5**	**+2.9**
CLCH				*i* S	**Sb**	**22 04 29.4**	**-1.7**
CLCH				IAML		22 04 35.6	
	comp=E,2µm,0.8s						
FCH	**Farellones**	**2.19**	**156** ⇑	*e*P	**Pb**	**22 04 03.5**	**-1.3**
FCH				*i* S	**Sb**	**22 04 31.7**	**0.0**
FCH				IAML		22 04 37.3	
	comp=E,2µm,0.3s						
ACDV	**Cuesta del Vie**	**2.25**	**60**	*i* P	**Pb**	**22 04 04.6**	**-1.1**
ACDV				IAML		22 04 38.6	
	comp=Z,248nm,0.2s						
ZON	**Zonda**	**2.31**	**96**	*i* P	**Pb**	**22 04 05.5**	**-1.1**
ZON				IAML		22 04 39.0	
	comp=Z,447nm,0.5s						
ANTU	**Antumapu**	**2.32**	**165**	*e*P	**Pb**	**22 04 05.6**	**-1.2**
ANTU				*i* S	**Sb**	**22 04 33.9**	**-1.2**
LCO	**Las Campanas**	**2.38**	**14**	*e*Pn	**Pn**	**22 04 04.9**	**+2.4**
LCO				*e*Sn	**Sn**	**22 04 32.5**	**+1.8**
LCO	**Las Campanas**	**2.38**	**14**	*i* P	**Pb**	**22 04 05.6**	**-2.4**
RTCV	**Cerro Valdivia**	**2.47**	**103**	*i* P	**Pb**	**22 04 07.8**	**-1.5**
RTLL	**Cerro Villicun**	**2.47**	**91** ⇓	*i*P	**Pb**	**22 04 07.7**	**-1.7**
ASAL	**Salagasta**	**2.49**	**121**	*i* P	**Pb**	**22 04 08.2**	**-1.6**
AMOG	**MOGNA**	**2.49**	**82**	*i* P	**Pb**	**22 04 07.6**	**-2.2**
AAGR	**Agrelo**	**2.77**	**130**	*i* P	**Pb**	**22 04 12.8**	**-1.8**
GO05	**HualaæØ**	**3.70**	**187**	*e*Pn	**Pn**	**22 04 23.1**	**+2.6**
GO05				*e*Sn	**Sn**	**22 05 04.1**	**+1.1**
VCA	**Vinchina**	**3.77**	**47**	*i* P	**Pn**	**22 04 25.9**	**+4.4**
VCA				IAML		22 05 22.7	
	comp=Z,566nm,0.3s						
GO03	**Copiap**	**3.85**	**15**	*e*Pn	**Pn**	**22 04 25.6**	**+3.0**
GO03				*e*Sn	**Sn**	**22 05 07.2**	**+0.5**
GO03	**Copiap**	**3.85**	**15**	*e*P	**Pn**	**22 04 25.2**	**+2.6**
GO03				*i* S	**Sn**	**22 05 08.8**	**+2.1**
CYA	**Choya**	**5.62**	**61**	IAML		22 04 52.6	
	comp=Z,104nm,0.5s						
GO02	**Mina Guanaco**	**6.34**	**15**	*e*Pn	**Pn**	**22 04 58.2**	**+1.2**
GO02				*e*Sn	**Sn**	**22 06 09.2**	**+0.8**
PB04	**IPOC Station P**	**9.02**	**7**	*e*Pn	**Pn**	**22 05 36.0**	**+2.3**
PB04				*e*Sn	**Sn**	**22 07 14.1**	**-0.3**
PLCA	**Paso Flores**	**9.41**	**176**	P	**Pn**	**22 05 41.8**	**+3.0**
	comp=Z,0.1nm,0.3s,baz=15,slow=8.3,SNR=3.2						
PLCA				LR	LR	22 09 16.2	
	comp=Z,86nm,20.2s,baz=216,slow=37						
PLCA	**Paso Flores**	**9.41**	**176**	*e*Pn	**Pn**	**22 05 39.4**	**+0.6**
TRQA	**Tornquist**	**10.23**	**134**	*e*Pn	**Pn**	**22 05 51.4**	**+1.4**
TRQA				*e*Sn	**Sn**	**22 07 46.6**	**+3.0**
MNMC	**Minye Minye**	**12.25**	**8**	*e*Pn	**Pn**	**22 06 18.6**	**+0.5**
CPUP	**Villa Florida**	**13.27**	**71**	P	**Pn**	**22 06 30.7**	**-1.0**
	comp=Z,0.2nm,0.3s,baz=234,slow=9.1,SNR=3.7						
CPUP				LR	LR	22 12 28.1	
	comp=Z,43nm,20.9s,baz=234,slow=42						
CPUP	**Villa Florida**	**13.27**	**71**	*e*Pn	**Pn**	**22 06 30.9**	**-0.8**
LPAZ	**La Paz**	**15.26**	**12**	P	**Pn**	**22 07 01.2**	**+1.9**
	comp=Z,0.2nm,0.3s,baz=177,slow=9.0,SNR=11						
LPAZ	**La Paz**	**15.26**	**12**	*e*Pn	**Pn**	**22 06 55.5**	**-3.7**
	comp=Z,3.4nm,0.8s						
SIV	**San Ignacio**	**17.93**	**34**	P	**Pn**	**22 07 32.4**	**0.0**
	comp=Z,0.6nm,0.3s,baz=228,slow=11,SNR=25						
SAML	**Samuel**	**23.54**	**21**	*e*P	**P**	**22 08 31.2**	**-1.8**
	comp=Z,2.2nm,0.8s						
BDFB	**Brasilia**	**26.42**	**59**	*e*P	**P**	**22 08 57.6**	**-1.8**
	comp=Z,18nm,1.1s						
PTGA	**Pitinga**	**32.29**	**22**	P	**P**	**22 09 51.0**	**-0.5**
	comp=Z,2.7nm,0.7s,baz=197,slow=7.3,SNR=5.1						
PTGA	**Pitinga**	**32.29**	**22**	*e*P	**P**	**22 09 49.8**	**-1.7**
	comp=Z,8.7nm,1.4s						
TXAR	**Lajitas Array**	**67.70**	**330**	P	**P**	**22 14 22.1**	**+2.3**
	comp=Z,0.5nm,0.8s,baz=156,slow=9.6,SNR=4.5						
TOA0	**Torodi Ar. Sit**	**82.76**	**70**	*e*P	**P**	**22 15 44.2**	**-2.4**
TORD	**Torodi Ar. Bea**	**82.76**	**70**	P	**P**	**22 15 46.1**	**-0.6**
	comp=Z,1.2nm,0.9s,baz=246,slow=4.8						
H11N3	**WAKE ISLAND Hy**	**126.69**	**272**	T	T	00 42 05.2	
	baz=112,slow=74,SNR=18						
H11N1	**WAKE ISLAND Hy**	**126.70**	**272**	T	T	00 42 06.2	
	baz=112						
H11N2	**WAKE ISLAND Hy**	**126.71**	**272**	T	T	00 42 02.1	
	baz=112,slow=74,SNR=19						
BVAR	**Borovoye Array**	**144.91**	**41**	PKP	**PKPab**	**22 22 58.1**	**+0.1**
	comp=Z,0.8nm,0.6s,baz=298,slow=3.1,SNR=8.0						
ZALV	**Zalesovo Beam**	**151.65**	**30**	PKPbc	**PKPbc**	**22 23 15.7**	**-0.3**
	comp=Z,2.7nm,0.6s,baz=291,slow=2.4,SNR=11						
MKAR	**Makanchi Array**	**154.53**	**45**	PKPbc	**PKPbc**	**22 23 21.8**	**-0.8**
	comp=Z,0.5nm,0.9s,baz=318,slow=1.9,SNR=3.6						
WMQ	**Urumqi**	**159.31**	**47**	*e*P	**PKPdf**	**22 23 18.3**	**-2.1**
HHC	**Hu-ho-hao-te**	**170.21**	**347**	*e*P	PKPdf	22 23 16.0	-14
HHC				pmax	pmax		
	comp=Z,12nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,5.0s						
LZH	**Lanzhou**	**173.80**	**39**	*e*PKP	**PKPdf**	**22 23 25.0**	**-6.9**
LZH				pPKP	**sPKPdf**	**22 23 52.1**	**+5.4**
LZH				sPKP		22 24 02.5	

IDC 17 22:09:12.6±1.8, 28°.49S×177°.97W, h0^{km}, mb3.6/2, mb1 3.8/2, mb1mx3.4/37, mbtmp3.6/2, Error ellipse: s-maj=49.2km s-min=17.5km az=71.0, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**0.76**	**176**	Pn	Pn	22 09 30.6	+0.1
	319nm,0.3s,baz=38,slow=18,SNR=29						
RAO				Sn	Sn	22 09 43.5	+0.8
	2µm,0.3s,baz=72,slow=20,SNR=59						
ASAR	**Alice Springs**	**43.27**	**265**	P	P	22 17 16.0	-0.2
	0.5nm,0.7s,baz=99,slow=6.7,SNR=4.2						
WRA	**Warramunga Arr**	**44.08**	**270**	P	P	22 17 22.7	-0.1
	0.4nm,0.5s,baz=109,slow=8.0,SNR=8.4						
BVAR	**Borovoye Array**	**125.05**	**317**	PKP	PKPdf	22 28 14.5	0.0
	0.3nm,0.4s,baz=126,slow=2.5,SNR=3.5						
BRTR	**Keskin Array B**	**151.67**	**302**	PKPbc	PKPbc	22 29 08.8	-0.5
	0.5nm,0.6s,baz=174,slow=1.4,SNR=3.6						

GII 17 22:14:18.5±0.0, 33°.28N×35°.35E, h4^{km}, MD1.9/4

CSEM 17 22:14:20.0, 33°.32N×35°.36E, h4^{km}, ML2.7

GRAL 17 22:14:20.0±0.2, 33°.32N×35°.36E, h5^{km}±3^{km}, MD2.7

ISC 17 22:14:18.1±1.1, 33°.33N±0°.03×35°.35E±0°.05, h19^{km}±2^{km}, n22, σ0^{s}.49/34, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNTI	**Hanita**	**0.28**	**211**	Pg	**Pg**	**22 14 24.3**	**-0.1**
HNTI				Sg	**Sg**	**22 14 28.3**	**-0.5**
KSDI	**Kefar Szold**	**0.29**	**117**	Pg	**Pb**	**22 14 24.9**	**+0.2**
KSDI				Sg	**Sb**	**22 14 29.6**	**+0.4**
MMA0B	**Mount Meron ar**	**0.31**	**171**	Pg	**Pg**	**22 14 24.7**	**-0.3**
MMA0B				Sg	**Sb**	**22 14 29.7**	**-0.1**
NATI	**Neve Ativ**	**0.33**	**101**	Pg	**Pb**	**22 14 25.4**	**-0.1**
QRWL	**Qaraoun**	**0.36**	**52**	*e*P	**Pb**	**22 14 26.4**	**+0.4**
QRWL				*e*S	**Sb**	**22 14 31.2**	**-0.2**
QRWL	**Qaraoun**	**0.36**	**52**	*e*P	**Pb**	**22 14 26.4**	**+0.4**
QRWL				*e*S	**Sb**	**22 14 31.2**	**-0.2**
DQRL	**Deir Qamar**	**0.42**	**26**	*e*P	**Pb**	**22 14 27.6**	**+0.5**
DQRL				*e*S	**Sb**	**22 14 33.3**	**0.0**
DQRL	**Deir Qamar**	**0.42**	**26**	*e*P	**Pb**	**22 14 27.6**	**+0.5**
DQRL				*e*S	**Sb**	**22 14 33.3**	**0.0**
RCY	**Rachaya**	**0.44**	**67**	*e*P	**Pb**	**22 14 27.9**	**+0.4**
RCY				*e*S	**Sb**	**22 14 33.6**	**-0.2**
KSHT	**Keshet**	**0.52**	**131**	Pg	**Pb**	**22 14 29.3**	**+0.7**
BLGI	**Bet Lehem HaGe**	**0.60**	**192**	Pg	**Pg**	**22 14 30.3**	**+0.1**
BLGI				Sg	**Sb**	**22 14 39.4**	**+1.4**
BHL	**Bhannes**	**0.63**	**24**	*e*P	**Pn**	**22 14 31.5**	**-0.7**
BHL	**Bhannes**	**0.63**	**24**	*e*P	**Pn**	**22 14 31.5**	**-0.7**
OFRI	**‘Ofer**	**0.77**	**204**	Pg	**Pg**	**22 14 33.3**	**+0.2**
OFRI				Sg	**Sn**	**22 14 44.5**	**-0.4**
MMLI	**Mount Malkishu**	**0.89**	**176**	Pg	**Pg**	**22 14 35.1**	**-0.3**
HWQ	**Hawqa**	**1.07**	**28**	*e*P	**Pg**	**22 14 39.2**	**+0.2**
HWQ	**Hawqa**	**1.07**	**28**	*e*P	**Pg**	**22 14 39.2**	**+0.2**
HMDT	**Nahal Hemdat**	**1.08**	**172**	Pg	**Pg**	**22 14 38.7**	**-0.4**
HMDT				Sg	**Sg**	**22 14 54.2**	**+0.9**
SLTI	**Sal’it**	**1.11**	**193**	Pg	**Pg**	**22 14 39.5**	**-0.2**
SLTI				Sg	**Sg**	**22 14 55.1**	**+0.8**
DSI	**Dead Sea**	**1.75**	**179**	Pn	**Pb**	**22 14 49.6**	**0.0**
AMAZ	**Amatzia**	**1.82**	**192**	Pn	**Pb**	**22 14 51.1**	**+0.2**
YTIR	**Yattir**	**1.97**	**186**	Pn	**Pb**	**22 14 53.1**	**-0.3**

ISCJB 17 22:15:35.5±0.5, 13°.60N±0°.04×120°.77E±0°.10, h130^{km}±5^{km}, mb3.6/5, Error ellipse: s-maj=15.7km s-min=6.7km az=170.9

IDC 17 22:15:35.8±1.0, 13°.71N×121°.16E, h128^{km}±4^{km}, mb3.4/5, mb1 3.6/5, mb1mx3.1/59, mbtmp3.8/5, Error ellipse: s-maj=35.2km s-min=19.2km az=58.0

MAN 17 22:15:37.1, 13°.61N×120°.68E, h103^{km}, mb4.5, ML3.4, MS3.2

ISC 17 22:15:36.5±0.9, 13°.60N±0°.04×120°.78E±0°.09, h124^{km}±7^{km}, n15, σ0^{s}.88/21, mb3.9/5, 2C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PGP	**Puerto Galera**	**0.20**	**120** ⇑	*e*P	**Pn**	**22 15 53.1**	**-0.5**
PGP				*i* S	**Sn**	**22 16 05.8**	**-0.7**
TGY	**Tagaytay City**	**0.52**	**17**	P	**Pn**	**22 15 55.5**	**+0.4**
	386nm,0.3s,baz=135,slow=2.9,SNR=18						
TGY				S	**Sn**	**22 16 10.0**	**+0.8**
	138nm,0.3s,baz=150,slow=20,SNR=13						
TGY	**Tagaytay City**	**0.52**	**17** ⇑	*e*P	**Pn**	**22 15 55.3**	**+0.2**
QVPH	**Quezon City--P**	**1.08**	**15**	*e*P	**Pn**	**22 15 59.4**	**-0.2**
SJMP	**San Jose**	**1.18**	**164**	*e*P	**Pn**	**22 16 01.3**	**+0.6**
SJMP				*e*S	**Sn**	**22 16 19.5**	**+0.5**
BUSP	**Coron**	**1.68**	**200**	*e*P	**Pn**	**22 16 06.2**	**-0.1**
BUSP				*e*S	**Sn**	**22 16 28.0**	**-1.1**
OTRP	**Odiongan**	**1.73**	**135**	*e*P	**Pn**	**22 16 07.6**	**+0.8**
OTRP				*e*S	**Sn**	**22 16 30.5**	**+0.5**
ENPP	**El Nido**	**2.72**	**209**	*e*P	**Pn**	**22 16 19.8**	**+0.5**
CUYO	**Cuyo Island**	**2.74**	**175**	*e*P	**Pn**	**22 16 20.4**	**+0.8**
BOLP	**Bolinao**	**2.89**	**343**	*e*P	**Pn**	**22 16 21.9**	**+0.4**
BOLP				*e*S	**Sn**	**22 16 56.1**	**0.0**
CMAR	**Chiang Mai Arr**	**21.53**	**286**	P	**P**	**22 20 17.9**	**+2.0**
	2.5nm,0.3s,baz=97,slow=7.9,SNR=9.2						
WRA	**Warramunga Arr**	**35.90**	**158**	P	**P**	**22 22 23.4**	**-1.5**
	0.4nm,0.8s,baz=340,slow=9.4,SNR=4.2						
MKAR	**Makanchi Array**	**46.16**	**324**	P	**P**	**22 23 48.9**	**+0.3**
	0.3nm,0.3s,baz=122,slow=7.6,SNR=5.7						
ZALV	**Zalesovo Beam**	**49.18**	**333**	P	**P**	**22 24 10.7**	**-1.1**
	0.8nm,0.4s,baz=118,slow=7.1,SNR=3.7						
KURBB	**Kurchatov Arra**	**50.31**	**326**	P	**P**	**22 24 20.4**	**0.0**
	0.8nm,0.4s,baz=125,slow=8.0,SNR=4.9						

GUC 17 22:39:42.3±0.7, 20°.89S×69°.09W, h112^{km}±4^{km}, ML3.7, 2C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB01	**IPOC Station P**	**0.40**	**247**	*e*P	Pn	22 39 59.1	+0.2
PB01				*i* S	Sn	22 40 12.0	+0.6
PB01				IAML		22 40 12.6	
	comp=N,5µm,0.2s						
PB08	**IPOC Station P**	**0.75**	**355**	*e*P	Pn	22 40 02.1	+0.4
PB08				*i* S	Sn	22 40 16.4	+0.1
PB08				IAML		22 40 17.1	
	comp=E,5µm,0.2s						
PB09	**IPOC Station P**	**0.92**	**189** ⇑	*i*P	Pn	22 40 03.7	+0.6
PB09				*i* S	Sn	22 40 19.6	+0.9
PB09				IAML		22 40 20.2	
	comp=N,2µm,0.8s						
PB07	**IPOC Station P**	**1.12**	**222**	*e*P	Pn	22 40 06.1	+1.0
PB07				*i* S	Sn	22 40 23.6	+1.3
PB11	**IPOC Station P**	**1.24**	**334** ⇑	*i*P	Pn	22 40 07.2	+0.7
PB11				*i* S	Sn	22 40 25.8	+1.1
PB03	**IPOC Station P**	**1.31**	**208**	*e*P	Pn	22 40 08.1	+0.9
PB03				*i* S	Sn	22 40 27.1	+1.0
PB03				IAML		22 40 28.9	
	comp=E,2µm,0.2s						
PSGC	**Pisagua**	**1.61**	**323**	*e*P	Pn	22 40 11.5	+0.8
PSGC				*i* S	Sn	22 40 33.1	+0.8
PSGC				IAML		22 40 37.8	
	comp=E,1µm,0.6s						
PB04	**IPOC Station P**	**1.75**	**214**	*e*P	Pn	22 40 13.6	+1.2
PB04				*i* S	Sn	22 40 36.4	+1.1
PB04				IAML		22 40 44.6	
	comp=N,867nm,0.4s						
PB04				IAML		22 40 45.5	
	comp=E,675nm,0.5s						
PB06	**IPOC Station P**	**1.86**	**194**	*e*P	Pn	22 40 14.5	+0.6
PB06				*i* S	Sn	22 40 39.0	+1.1
PB06				IAML		22 40 42.1	
	comp=N,776nm,0.3s						
PB05	**IPOC Station P**	**2.21**	**208**	*e*P	Pn	22 40 18.7	+0.5
PB05				*i* S	Sn	22 40 45.2	-0.5
PB05				IAML		22 40 56.2	
	comp=E,359nm,0.5s						

IDC 17 22:50:05.5±1.8, 3°.37S×127°.73E, h0^{km}, mb3.4/3, mb1 3.7/4, mb1mx3.4/50, mbtmp3.5/4, ML3.8/1, Error ellipse: s-maj=174.1km s-min=23.8km az=67.0

DJA 17 22:50:06.1±1.0, 3°S±7°×12°9E±°, h15^{km}±11^{km}, M4.2/8, mB4.8/1, mb4.6/2, MLv3.9/8, Mw(mB)4.1/1

ISCJB 17 22:50:07.1±0.7, 2°.85S±0°.07×128°.75E±0°.08, h38^{km}, mb3.5/3, Error ellipse: s-maj=11.9km s-min=9.9km az=153.1

ISC 17 22:50:08.8±1.1, 2°.86S±0°.07×128°.77E±0°.09, h38^{km}, n10, σ1^{s}.19/10, mb3.6/3, Ceram Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**0.51**	**162**	P	**Pn**	**22 50 18.8**	**-0.8**
AAI	**Ambon**	**1.00**	**215**	P	**Pn**	**22 50 26.0**	**-0.3**
LBMI	**Labuha**	**2.55**	**330**	P	**Pn**	**22 50 46.3**	**-1.3**
SWI	**Sorong**	**3.19**	**51**	P	**Pn**	**22 50 56.2**	**-0.2**
FAKI	**Fak Fak**	**3.48**	**91**	P	**Pn**	**22 50 59.9**	**-0.5**
APSI	**Ampana**	**7.38**	**285**	P	**Pn**	**22 51 53.0**	**-1.0**
WRA	**Warramunga Arr**	**17.82**	**163**	P	**Pn**	**22 54 13.8**	**-0.3**
	0.4nm,0.3s,baz=341,slow=13,SNR=15						
ASAR	**Alice Springs**	**21.27**	**167**	P	**P**	**22 54 51.3**	**-0.8**
	2.5nm,0.8s,baz=348,slow=11,SNR=17						
MKAR	**Makanchi Array**	**64.12**	**326**	P	**P**	**23 00 41.3**	**+2.0**
	0.2nm,0.5s,baz=109,slow=6.2,SNR=2.7						
KURBB	**Kurchatov Arra**	**68.37**	**328**	P	**P**	**23 01 07.5**	**+1.2**
	0.2nm,0.3s,baz=111,slow=5.2,SNR=3.9						

IDC 17 23:17:27.4±2.4, 19°.07S×169°.56E, h280^{km}±23^{km}, mb3.3/9, mb1 3.6/11, mb1mx3.4/44, mbtmp4.1/11, Error ellipse: s-maj=21.4km s-min=16.3km az=54.0

ISC 17 23:17:24.1±0.8, 18°.9S±0°.1×169°.7E±0°.2, h246^{km}, n12, σ1^{s}.44/12, mb3.6/8, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**4.41**	**224**	P	**Pn**	**23 18 34.7**	**+2.0**
	4.7nm,0.3s,baz=59,slow=17,SNR=45						
HNR	**Honiara**	**13.37**	**313**	P	**P**	**23 20 27.1**	**+0.9**
	7.8nm,0.3s,baz=283,slow=4.2,SNR=5.7						
URZ	**Urewera**	**20.33**	**163**	P	**P**	**23 21 41.3**	**-0.5**
	3.8nm,0.5s,baz=34,slow=3.6,SNR=4.7						
WRA	**Warramunga Arr**	**33.36**	**262**	P	**P**	**23 23 37.6**	**-2.0**
	0.3nm,0.6s,baz=91,slow=8.4,SNR=3.9						
ASAR	**Alice Springs**	**33.67**	**256**	P	**P**	**23 23 41.4**	**-0.9**
	0.9nm,0.5s,baz=81,slow=9.1,SNR=16						
MJAR	**Matsushiro Arr**	**62.68**	**332**	P	**P**	**23 27 22.9**	**-0.1**
	0.9nm,0.5s,baz=174,slow=7.6,SNR=3.4						
QSPA	**South Pole Qui**	**71.15**	**180**	P	**P**	**23 28 15.1**	**-0.8**
	1.5nm,0.7s,baz=89,slow=2.2,SNR=4.8						
YBH	**Yreka Blue Hor**	**86.73**	**44**	P	**P**	**23 29 42.2**	**+1.6**
	0.8nm,0.4s,baz=277,slow=3.5,SNR=5.4						
SONM	**Songino Array**	**87.24**	**323**	P	**P**	**23 29 42.8**	**-0.1**
	0.5nm,0.6s,baz=153,slow=5.8,SNR=3.7						
NVAR	**Mina Array Bea**	**88.23**	**48**	P	**P**	**23 29 49.3**	**+1.4**
	0.2nm,0.3s,baz=174,slow=5.5,SNR=3.8						
ILAR	**Eielson Array**	**89.77**	**17**	P	**P**	**23 29 53.6**	**-0.6**
	0.5nm,0.8s,baz=240,slow=5.6,SNR=5.2						
GERES	**GERESS Array B**	**144.42**	**333**	PKP	**PKPab**	**23 36 28.2**	**-1.8**
	0.6nm,0.6s,baz=18,slow=4.6,SNR=6.8						

*ISCJB **17** 23:25:34.5±0.5, 33°.71S±0°.08×57°.3E±0°.2, h10^{km}, mb4.2/16, MS3.7/19, Error ellipse: s-maj=20.4km s-min=11.0km az=171.6*

*IDC **17** 23:25:34.8±0.7, 33°.66S×57°.27E, h0^{km}, mb4.2/13, mb1 4.3/14, mb1mx4.0/56, mbtmp4.2/14, ML4.4/1, MS3.6/20, Ms1 3.6/20, ms1mx3.4/50, Error ellipse: s-maj=30.2km s-min=16.2km az=90.0*

*NEIC **17** 23:25:36.3±0.3, 33°.67S×57°.25E, h10^{km}, mb4.3/3, Error ellipse: s-maj=14.9km s-min=8.2km az=78.0*

ISC 17 23:25:36.5±0.6**, 33°.7S**±0°.1×**57°.3E**±0°.2**, h10^{km}, n40, σ1^{s}.03**/23**, mb4.2**/16**, MS3.6**/19**, 2C-1D, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OPO	Ambohidratompo	17.54	326	P	Pn	23 29 40.5	-0.9
	1.3nm,0.3s,baz=159,slow=10,SNR=8.3						
OPO				S	Sn	23 32 43.8	-13
	0.4nm,0.3s,baz=87,slow=4.4,SNR=2.6						
OPO				LR	LR	23 35 22.7	
	comp=Z,167nm,19.2s,baz=170,slow=34						
BOSA	Boshof	27.82	272	LR	LR	23 40 31.3	
	comp=Z,71nm,20.0s,baz=108,slow=32						
LBTB	Lobatse	28.86	279	LR	LR	23 40 49.2	
	comp=Z,88nm,18.8s,baz=111,slow=32						
MAW	Mawson	34.14	176	P	P	23 32 20.3	-0.8
	4.8nm,0.6s,baz=354,slow=10,SNR=24						
MAW				LR	LR	23 44 09.0	
	comp=Z,81nm,19.5s,baz=61,slow=33						
SYO	Syowa Base	36.78	191	⇑eP	P	23 32 42.0	-1.9
SYO	Syowa Base	36.78	191	⇓eP	P	23 32 44.0	+0.1
SYO	Syowa Base	36.78	191	⇑eP	P	23 32 47.1	+3.2
H01W2	Cape Leeuwin H	46.43	108	T	T	00 23 47.0	
	baz=254,slow=74,SNR=8.0						
H01W3	Cape Leeuwin H	46.44	108	T	T	00 23 47.3	
	baz=254,slow=74,SNR=9.5						
H01W1	Cape Leeuwin H	46.45	108	T	T	00 23 46.6	
	baz=254,slow=74,SNR=7.7						
ATD	Arta Tunnel	47.00	340	LR	LR	23 51 28.0	
	comp=Z,43nm,18.9s,baz=264,slow=33						
SNAA	Sanae	49.10	201	P	P	23 34 23.0	-0.7
	1.9nm,1.0s,baz=79,slow=6.9,SNR=3.9						
QSPA	South Pole Qui	56.51	180	P	P	23 35 18.4	-0.2
	11nm,0.7s,baz=262,slow=1.9,SNR=39						
RAYN	Ar Rayn	57.97	347	eP	P	23 35 30.1	+0.9
	1.1nm,0.7s						
VNDA	Vanda	60.47	166	P	P	23 35 46.7	+0.8
	3.7nm,0.9s,baz=262,slow=6.9,SNR=20						
VNDA				LR	LR	23 59 17.9	
	comp=Z,96nm,20.3s,baz=256,slow=34						
BRDH	Bariadhala	64.88	35	LR	LR	00 06 21.3	
	comp=Z,107nm,18.3s,baz=168,slow=38						
CMAR	Chiang Mai Arr	65.30	44	P	P	23 36 18.5	-0.3
	1.1nm,0.4s,baz=237,slow=7.2,SNR=6.1						
CMAR				LR	LR	00 01 51.0	
	comp=Z,60nm,18.4s,baz=200,slow=33						
ASAR	Alice Springs	66.59	104	P	P	23 36 27.4	+0.1
	1.7nm,0.7s,baz=238,slow=6.3,SNR=12						
WRA	Warramunga Arr	68.72	100	P	P	23 36 40.9	+0.2
	3.1nm,0.9s,baz=239,slow=5.2,SNR=14						
WRAB	Tennant Creek	68.73	100	eP	P	23 36 41.0	+0.2
	1.8nm,0.6s						
MMAI	Mount Meron Ar	69.45	340	LR	LR	00 04 00.1	
	comp=Z,33nm,18.8s,baz=185,slow=33						
TORD	Torodi Ar. Bea	70.47	301	LR	LR	00 07 24.9	
	comp=Z,35nm,20.9s,baz=350,slow=36						
DBIC	Dimbokro	71.14	292	LR	LR	00 06 54.5	
	comp=Z,70nm,18.0s,baz=123,slow=35						
GNI	Garni	74.36	350	LR	LR	00 07 13.7	
	comp=Z,26nm,20.4s,baz=184,slow=34						
KOWA	Kowa	75.49	299	LR	LR	00 11 57.5	
	comp=Z,72nm,18.1s,baz=221,slow=37						
BRTR	Keskin Array B	76.23	341	P	P	23 37 25.8	+0.7
	0.7nm,0.8s,baz=152,slow=9.4,SNR=3.9						
BRTR				LR	LR	00 06 39.7	
	comp=Z,12nm,21.6s,baz=104,slow=32						
KBZ	Khabaz	78.14	349	LR	LR	00 12 30.5	
	comp=Z,18nm,18.1s,baz=60,slow=36						
KEST	Kesra	82.32	322	LR	LR	00 15 01.5	
	comp=Z,68nm,18.7s,baz=279,slow=36						
MKAR	Makanchi Array	83.19	17	P	P	23 38 01.8	-0.8
	0.6nm,0.9s,baz=197,slow=5.7,SNR=4.0						
AKTO	Aktyubinsk	83.73	0	LR	LR	00 14 48.1	
	comp=Z,19nm,18.1s,baz=158,slow=35						
KURBB	Kurchatov Arra	85.99	13	P	P	23 38 17.2	+0.7
	0.4nm,0.4s,baz=208,slow=5.9,SNR=3.5						
KURK	Kurchatov	86.10	13	P	P	23 38 17.2	+0.1
BVAR	Borovoye Array	87.08	8	P	P	23 38 21.4	-0.4
	0.9nm,0.8s,baz=180,slow=5.8,SNR=5.9						
BRVK	Borovoye	87.10	8	eP	P	23 38 21.1	-0.8
	1.8nm,0.6s						
MDT	Midelt	88.10	312	LR	LR	00 18 05.0	
	comp=Z,71nm,19.5s,baz=156,slow=36						
ZALV	Zalesovo Beam	90.45	16	P	P	23 38 38.4	+0.6
	0.5nm,0.4s,baz=236,slow=1.6,SNR=2.6						
SONM	Songino Array	92.28	31	P	P	23 38 45.8	-0.8
	0.4nm,0.4s,baz=186,slow=2.9,SNR=3.4						
SONM				LR	LR	00 18 40.8	
	comp=Z,26nm,19.4s,baz=204,slow=34						
KSRS	Korea Array	96.54	49	LR	LR	00 20 28.8	
	comp=Z,25nm,19.0s,baz=250,slow=34						
INK	Inuvik	144.76	7	ePKPdf	PKPdf	23 45 12.8	+0.2
ILAR	Eielson Array	145.54	18	PKPbc	PKPdf	23 45 13.6	-0.4
	1.0nm,0.9s,baz=300,slow=3.5,SNR=6.6						

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*IDC **17** 23:47:04.5±1.0, 14°.74N×120°.30E, h0^{km}, mb3.5/5, mb1 3.6/5, mb1mx3.3/64, mbtmp3.5/5, Error ellipse: s-maj=60.4km s-min=8.9km az=47.0*

*ISCJB **17** 23:47:06.4±0.5, 13°.84N±0°.04×120°.37E±0°.06, h81^{km}±5^{km}, mb3.5/5, Error ellipse: s-maj=10.1km s-min=6.4km az=8.5*

*MAN **17** 23:47:06.2, 13°.85N×120°.38E, h71^{km}, mb4.3, ML3.2, MS2.9*

ISC 17 23:47:07.5±0.9**, 13°.83N**±0°.05×**120°.38E**±0°.07**, h76^{km}**±7^{km}**, n14, σ0^{s}.94**/22**, mb3.7**/5**, 1C-1D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LUBP	Lubang	0.16	233	eP	Pn	23 47 18.7	0.0
LUBP				eS	Sn	23 47 27.1	+0.2
TGY	Tagaytay City	0.61	63	Pg	Pn	23 47 22.1	+0.1
	818nm,0.3s,baz=288,slow=3.2,SNR=18						
TGY				Lg	Lg	23 47 33.3	
	713nm,0.3s,baz=35,slow=20,SNR=13						
TGY	Tagaytay City	0.61	63	⇓iP	Pn	23 47 22.2	+0.2
TGY				iS	Sn	23 47 33.5	+0.8
PGP	Puerto Galera	0.65	120	⇑eP	Pn	23 47 21.7	-0.7
PGP				iS	Sn	23 47 32.3	-1.1
QVPH	Quezon City--P	1.05	39	eP	Pn	23 47 25.8	-1.2
QVPH				eS	Sn	23 47 40.4	-1.1
SJMP	San Jose	1.54	152	eP	Pn	23 47 33.5	+0.2
SJMP				eS	Sn	23 47 52.3	-0.4
BUSP	Coron	1.82	186	eP	Pn	23 47 36.6	-0.4
BUSP				eS	Sn	23 47 58.2	-1.1
OTRP	Odiongan	2.17	132	eP	Pn	23 47 42.0	+0.5
OTRP				eS	Sn	23 48 08.0	+0.4
ENPP	El Nido	2.77	200	eP	Pn	23 47 48.4	-1.3
ENPP				eS	Sn	23 48 22.3	+0.2
CMAR	Chiang Mai Arr	21.09	285	P	P	23 51 48.5	+2.5
	0.8nm,0.7s,baz=97,slow=7.4,SNR=4.7						
SONM	Songino Array	35.85	344	P	P	23 53 59.7	-0.3
	0.6nm,0.6s,baz=166,slow=9.1,SNR=3.4						
MKAR	Makanchi Array	45.74	324	P	P	23 55 21.4	+0.1
	0.1nm,0.4s,baz=130,slow=7.7,SNR=3.2						
KURBB	Kurchatov Arra	49.91	326	P	P	23 55 53.2	-0.1
	0.3nm,0.3s,baz=120,slow=8.2,SNR=3.0						
BVAR	Borovoye Array	55.49	326	P	P	23 56 33.9	-0.6
	0.5nm,0.4s,baz=120,slow=8.8,SNR=5.2						

WEL 17 23:53:10.9±1.1**, 36°S**±21°×**17°9W**±1°4**, h33^{km}, ML4.5**/18**, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	2.52	239	P	Pn	23 53 49.3	-0.2
MXZ				S	Sn	23 54 18.5	-0.7
WMGZ	Waiomatatini S	2.59	233	P	Pn	23 53 51.3	+0.8
WMGZ				S	Sn	23 54 22.3	+1.5
PUZ	Puketiti	2.84	230	P	Pn	23 53 54.5	+0.6
PUZ				S	Sn	23 54 27.6	+0.6
PKGZ	Pakihiroa	2.85	235	P	Pn	23 53 52.7	-1.4
PKGZ				S	Sn	23 54 27.1	-0.1
HAZ	Te Kaha	2.98	240	P	Pn	23 53 56.3	+0.4
HAZ				S	Sn	23 54 32.3	+1.9
TWGZ	Tauwhareparae	3.08	231	P	Pn	23 53 57.9	+0.7
TWGZ				S	Sn	23 54 33.9	+1.0
CNGZ	Carnagh Statio	3.14	225	P	Pn	23 53 58.9	+0.9
RUGZ	Raukumara Rang	3.15	237	P	Pn	23 53 58.7	+0.3
RUGZ				S	Sn	23 54 35.5	+0.5
TKGZ	Te Karaka	3.32	229	P	Pn	23 54 01.1	+0.6
TKGZ				S	Sn	23 54 39.1	+0.3
MWZ	Matawai	3.46	233	P	Pn	23 54 02.6	+0.2
RIGZ	Rimuhau	3.54	226	P	Pn	23 54 04.2	+0.5
RAGZ	Rawiri	3.62	231	P	Pn	23 54 04.5	-0.2
PRGZ	Paritu Road	3.62	223	P	Pn	23 54 04.6	-0.2
URZ	Urewera	3.69	237	P	Pn	23 54 05.8	+0.2
MHGZ	Mahia Peninsul	3.78	220	P	Pn	23 54 06.4	-0.4
KNZ	Kokohu	3.81	223	P	Pn	23 54 07.1	-0.1
SNGZ	Shannon Statio	3.84	229	P	Pn	23 54 07.4	-0.3
RTZ	Ruatahuna	3.97	233	P	Pn	23 54 09.5	-0.1
MUGZ	Murupara	4.03	236	P	Pn	23 54 10.4	+0.1
RAHZ	Arahi	4.08	229	P	Pn	23 54 11.0	-0.1
MTHZ	Maungataniwha	4.20	231	P	Pn	23 54 12.0	-0.6
BKZ	Black Stump Fm	4.60	230	P	Pn	23 54 17.1	-1.1

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*ISCJB **17** 23:54:59.1±1.0, 20°.8S±0°.2×178°.8W±0°.2, h600^{km}, mb3.6/4, Error ellipse: s-maj=26.9km s-min=22.7km az=34.5*

*IDC **17** 23:55:01.4±3.9, 20°.97S×178°.71W, h621^{km}±55^{km}, mb3.0/4, mb1 3.4/4, mb1mx2.9/44, mbtmp4.0/4, Error ellipse: s-maj=77.9km s-min=23.7km az=167.0*

ISC 17 23:54:59.4±0.9**, 20°.7S**±0°.2×**178°.8W**±0°.2**, h600^{km}, n11, σ1^{s}.44**/11**, mb3.6**/4**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	8.54	175	P	P	23 57 03.4	-0.3
	60nm,0.3s,baz=73,slow=20,SNR=3.1						
ASAR	Alice Springs	43.73	257	P	P	00 02 14.6	+1.3
	1.7nm,0.6s,baz=96,slow=7.7,SNR=14						
ASAR				PcP	PcP	00 03 46.8	+0.3
	0.3nm,0.6s,baz=106,slow=3.4,SNR=3.8						
WRA	Warramunga Arr	43.82	262	P	P	00 02 14.9	+0.9
	1.7nm,0.3s,baz=97,slow=7.6,SNR=52						
ILAR	Eielson Array	88.69	13	P	P	00 06 49.3	-0.1
	0.3nm,0.5s,baz=201,slow=4.8,SNR=2.9						
PDAR	Pinedale Array	89.64	44	P	P	00 06 56.4	+1.8
	0.2nm,0.4s,baz=243,slow=4.0,SNR=2.9						
ARCES	ARCESS Array B	129.00	349	PKP	PKPdf	00 12 58.7	-0.5
	0.5nm,0.5s,baz=46,slow=5.2,SNR=4.9						
FINES	FINESS Array B	135.76	343	PKhKP	PKPpre	00 12 58.0	
	0.8nm,0.7s,baz=57,slow=5.1,SNR=1.9						
AKASG	Malin Array Be	142.83	330	PKP	PKPdf	00 13 23.3	-2.0
	0.4nm,0.5s,baz=50,slow=5.1,SNR=5.0						
BRTR	Keskin Array B	146.42	312	PKPbc	PKPab	00 13 35.1	-2.2
	0.6nm,0.6s,baz=155,slow=4.6,SNR=3.7						
MMAI	Mount Meron Ar	147.26	299	PKPbc	PKPbc	00 13 35.9	-1.0
	1.0nm,0.4s,baz=79,slow=7.5,SNR=3.8						
GERES	GERESS Array B	150.20	343	PKPbc	PKPbc	00 13 44.5	+1.0
	0.3nm,0.6s,baz=24,slow=3.6,SNR=4.2						

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*MOS **17** 23:58:50.9±2.4, 48°.11N×156°.99E, h7^{km}, mb4.3/1, Error ellipse: s-maj=93.3km s-min=7.0km az=83.2*

KRSC 17 23:58:50.9±1.3**, 48°.11N**×**156°.99E, h7^{km}**±14^{km}**, ML4.1, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PAU	Pauzhetka	3.37	358	eP	Pn	23 59 46.0	+2.1
PAU				eS	Sn	00 00 26.0	+2.0
PAU	Pauzhetka	3.37	358	PN	Pn	23 59 46.0	+2.1
PAU				S	Sn	00 00 26.0	+2.0
KDTR	Khodutka, Kamc	3.77	10	eP	Pn	23 59 53.3	+3.8
KDTR				eS	Sb	00 00 38.9	-4.8
ASAK	Asacha	4.32	7	eP	Pn	00 00 01.2	+4.1
ASAK	Asacha	4.32	7	PN	Pn	00 00 01.2	+4.1
RUS	Russkaya	4.44	12	eP	Pn	00 00 02.7	+4.1
RUS				eS	Sn	00 00 55.0	+4.5
RUS	Russkaya	4.44	12	PN	Pn	00 00 02.7	+4.1
RUS				S	Sn	00 00 55.0	+4.5
MTVR	Mutnovka	4.45	9	eP	Pn	00 00 03.0	+4.1
MTVR				eS	Sn	00 00 56.7	+5.8
MTVR	Mutnovka	4.45	9	PN	Pn	00 00 03.0	+4.1
MTVR				S	Sn	00 00 56.7	+5.8
KRMR	Karymshinskiy	4.78	8	eP	Pn	00 00 07.1	+3.7
KRMR				eS	Sn	00 01 04.2	+5.2
KRMR	Karymshinskiy	4.78	8	PN	Pn	00 00 07.1	+3.7
KRMR				S	Sn	00 01 04.2	+5.2
APC	Apacha	4.82	1	eP	Pn	00 00 09.1	+5.2
APC	Apacha	4.82	1	PN	Pn	00 00 09.1	+5.2
UGLR	Uglovaya	5.24	12	eP	Pn	00 00 14.4	+4.7
UGLR				eS	Sn	00 01 15.5	+5.1
UGLR	Uglovaya	5.24	12	PN	Pn	00 00 14.4	+4.7
UGLR				S	Sn	00 01 15.5	+5.1
AVH	Avacha	5.28	12	eP	Pn	00 00 14.8	+4.5
AVH	Avacha	5.28	12	PN	Pn	00 00 14.8	+4.5
NLC	Nalytchevo	5.29	16	eS	Sn	00 01 16.9	+5.5
SMAR	Somma	5.29	12	eP	Pn	00 00 14.1	+3.6
SMAR	Somma	5.29	12	PN	Pn	00 00 14.1	+3.6
SDLR	Sedlovina	5.32	12	eP	Pn	00 00 15.6	+4.8
SDLR	Sedlovina	5.32	12	PN	Pn	00 00 15.6	+4.8
SPN	Mys Shipunski	5.36	20	eP	Pn	00 00 16.2	+5.0
SPN				eS	Sn	00 01 18.8	+5.7
SPN	Mys Shipunski	5.36	20	PN	Pn	00 00 16.2	+5.0
SPN				S	Sn	00 01 18.8	+5.7
GNL	Ganaly	5.63	6	eP	Pn	00 00 19.2	+4.1
GNL	Ganaly	5.63	6	PN	Pn	00 00 19.2	+4.1
MKZ	Mys Kozlova	7.11	23	eP	Pn	00 00 39.5	+4.3
MKZ				eS	Sn	00 02 01.4	+5.3
MKZ	Mys Kozlova	7.11	23	PN	Pn	00 00 39.5	+4.3

DJA 18 00:07:12.0±0.8**, 8°S**±7°×**11°9E**±°**, h10^{km}, M3.5**/6**, mb4.8**/1**, MLv2.9**/6**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PLAI	Plampang	1.06	228	P	Pg	00 07 31.9	-0.5
PLAI				S	Sb	00 07 46.7	+0.3
WBSI	Waikabubak, Su	1.72	152	P	Pn	00 07 41.5	-0.6
WBSI				S	Sn	00 08 04.5	+0.2
TWSI	Taliwang, Sumb	1.78	249	P	Pn	00 07 43.0	+0.1
TWSI				S	Sb	00 08 08.0	+0.8

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*DJA **18** 00:07:22.6±0.8, 7°S±4°×12°9E±°, h121^{km}±60^{km}, M4.4/7, mB5.0/2, mb4.3/4, MLv4.5/7, Mw(mB)4.3/2*

*IDC **18** 00:07:25.3±7.5, 7°.13S×129°.64E, h201^{km}±88^{km}, mb3.4/5, mb1 3.6/7, mb1mx3.3/44, mbtmp4.1/7, Error ellipse: s-maj=199.2km s-min=31.5km az=77.0*

ISC 18 00:07:19.0±0.8**, 7°.47S**±0°.06×**129°.12E**±0°.08**, h131^{km}, n14, σ2^{s}.47**/19**, mb3.7**/5**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AAI	Ambon	3.87	346	P	Pn	00 08 19.9	+2.9
SOEI	Soe	5.31	244	P	Pn	00 08 39.2	+2.8
	66nm,0.8s,0.7nm						
SOEI	Soe	5.31	244	P	Pn	00 08 39.1	+2.7
SOEI				S	Sn	00 09 36.3	-0.5
FAKI	Fak Fak	5.49	35	P	Pn	00 08 40.9	+2.3
	40nm,1.2s,0.3nm						
FAKI				S	Sn	00 09 41.4	+0.7
	40nm,1.2s,0.3nm						
BATI	Baumata	6.04	243	P	Pn	00 08 48.9	+2.8
	27nm,0.4s,0.3nm						
BATI				S	Sn	00 09 52.7	-1.5
	27nm,0.4s,0.3nm						
BATI	Baumata	6.04	243	P	Pn	00 08 48.4	+2.3
WRA	Warramunga Arr	13.39	158	P	P	00 10 27.6	-1.2
	2.5nm,0.3s,baz=343,slow=13,SNR=80						
WRA				S	Sn	00 12 50.5	-1.4
	1.6nm,0.3s,baz=334,slow=22,SNR=7.3						
ASAR	Alice Springs	16.75	165	P	P	00 11 11.5	+5.5
	1.8nm,0.3s,baz=339,slow=9.9,SNR=117						
ASAR				S	Sn	00 14 11.4	-1.3
	0.5nm,0.3s,baz=344,slow=22,SNR=6.4						
SONM	Songino Array	58.61	342	P	P	00 17 00.5	-1.8
	0.4nm,0.7s,baz=166,slow=7.0,SNR=3.6						
MKAR	Makanchi Array	68.14	327	P	P	00 18 03.9	-1.1
	1.6nm,0.4s,baz=120,slow=7.9,SNR=39						
ZALV	Zalesovo Beam	71.62	334	P	P	00 18 23.6	-2.4
	0.5nm,0.4s,baz=150,slow=6.1,SNR=3.3						
KURBB	Kurchatov Arra	72.45	329	P	P	00 18 29.4	-1.6
	0.8nm,0.4s,baz=125,slow=5.0,SNR=9.4						
BVAR	Borovoye Array	77.99	328	P	P	00 19 01.4	-1.3
	0.3nm,0.4s,baz=104,slow=6.1,SNR=3.8						
TORD	Torodi Ar. Bea	128.04	281	PKP	PKPdf	00 26 08.6	-1.9
	0.4nm,0.6s,baz=116,slow=2.5						

DJA 18 00:09:57.1±0.6**, 8°S**±5°×**12°2E**±°**, h10^{km}**±5^{km}**, M4.2**/9**, mB5.2**/1**, mb4.7**/1**, MLv4.0**/9**, Mw(mB)4.5**/1**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
EDFI	Ende, Flores	0.41	188	P	Pb	00 10 06.2	-0.4
EDFI				S	Sb	00 10 12.3	-0.6
MMRI	Maumere	0.56	121	P	Pb	00 10 09.0	-0.1
MMRI				S	Sb	00 10 17.3	+0.1
BASI	Baing, Sumba	2.20	212	P	Pn	00 10 33.7	0.0
BATI	Baumata	2.65	135	P	Pb	00 10 44.4	-0.3
WBSI	Waikabubak, Su	2.67	241	P	Pn	00 10 40.1	-0.1
BKSI	Bulukumba	3.41	332	P	Pn	00 10 50.0	-0.3
PLAI	Plampang	3.96	263	P	Pn	00 10 58.5	+0.5
TWSI	Taliwang, Sumb	4.83	265	P	Pn	00 11 10.9	+1.0
SANI	Sanana	7.54	34	P	Pn	00 11 47.3	+0.1

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*SJA **18** 00:26:42.3±0.5, 29°.51S×71°.19W, h10^{km}, ML4.3, MW4.5*

*GUC **18** 00:26:44.8±0.7, 29°.49S×70°.62W, h53^{km}±45^{km}, ML4.0*

*IDC **18** 00:26:45.5±3.9, 29°.43S×70°.78W, h69^{km}±30^{km}, mb3.5/4, mb1 3.5/7, mb1mx3.3/33, mbtmp3.7/7, ML3.5/3, Error ellipse: s-maj=56.5km s-min=23.6km az=107.0*

ISC 18 00:26:42.8±1.5**, 29°.38S**±0°.04×**71°.35W**±0°.08**, h32^{km}**±10^{km}**, n25, σ2^{s}.40**/33**, mb4.0**/4**, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	Las Campanas	0.67	57	iP	Pb	00 26 55.6	-0.7
LCO				iS	Sb	00 27 05.5	0.0
LCO	Las Campanas	0.67	57	eP	Pn	00 26 57.7	+1.3
LCO				iS	Sn	00 27 06.8	+0.9
TLL	Tololo Astrono	0.92	149	eP	Pn	00 27 00.5	+0.8
TLL				iS	Sb	00 27 11.7	-0.7
TLL				IAML		00 27 12.8	
	comp=E,6μm,0.7s						
GO04	Tololo Observa	0.93	149	eP	Pn	00 27 00.6	+0.8
GO04				iS	Sb	00 27 11.6	-1.0
GO04				IAML		00 27 14.7	
	comp=N,13μm,0.5s						
AROD	Rodeo	1.81	116	eP	Pn	00 27 13.0	+1.0
GO03	Copiap	2.03	29	eP	Pn	00 27 16.8	+2.0
GO03				iS	Sn	00 27 41.5	+2.4
GO03				IAML		00 27 45.5	
	comp=N,2μm,0.4s						
AGUA	GUANDACOL	2.50	93	iP	Pn	00 27 23.5	+2.2
VCA	Vinchina	2.83	78	iP	Pn	00 27 28.5	+2.6
VCA				iS	Sn	00 28 03.4	+4.5
VCA				IAML		00 28 08.9	
	comp=Z,2μm,0.3s						
AMOG	MOGNA	2.92	123	iP	Pn	00 27 28.8	+1.7
RTLS	Leoncito	2.99	144	iP	Pn	00 27 30.7	+2.5
RTLS				iS	Sn	00 28 06.0	+2.8
RTLS				IAML		00 28 15.4	
	comp=Z,494nm,0.4s						
RTLL	Cerro Villicun	3.15	129	iP	Pn	00 27 31.8	+1.5
RTLL				iS	Sn	00 28 08.8	+2.0
AUSP	Uspallata	3.30	150	iP	Pn	00 27 35.0	+2.5
RTCV	Cerro Valdivia	3.46	136	iP	Pn	00 27 36.5	+1.9
ROCH	El Roble	3.59	175	eP	Pn	00 27 37.8	+1.3
ROCH				iS	Sn	00 28 22.4	+4.4
ROC1	El Roble	3.60	176	eP	Pn	00 27 39.2	+2.6
PEL	Peldehue	3.80	172	eP	Pn	00 27 40.5	+1.4
PEL				iS	Sn	00 28 25.6	+2.9
PLCA	Paso Flores	11.35	177	P	Pn	00 29 23.8	+1.1
	comp=Z,0.1nm,0.3s,baz=0.0,slow=6.1,SNR=1.7						
CPUP	Villa Florida	12.77	80	P	Pn	00 29 38.6	-3.6
	comp=Z,0.2nm,0.3s,baz=252,slow=9.4,SNR=2.5						
CPUP				S	Sn	00 31 58.4	-4.8
	comp=Z,0.2nm,0.3s,baz=126,slow=20,SNR=1.9						
LPAZ	La Paz	13.36	13	P	Pn	00 29 51.4	+0.6
	comp=Z,0.1nm,0.3s,baz=185,slow=7.5,SNR=4.1						
SNAA	Sanae	55.66	159	P	P	00 36 12.8	-2.7
	comp=Z,1.7nm,1.1s,baz=297,slow=6.8,SNR=2.9						
QSPA	South Pole Qui	60.85	180	P	P	00 36 49.7	-2.2
	comp=Z,0.7nm,0.5s,baz=139,slow=6.0,SNR=2.0						
KOWA	Kowa	78.21	66	P	P	00 38 36.0	-3.6
	comp=Z,0.5nm,0.4s,baz=213,slow=6.2,SNR=2.8						
TORD	Torodi Ar. Bea	82.09	70	P	P	00 38 55.5	-5.0
	comp=Z,0.3nm,0.7s,baz=250,slow=4.3						
ZALV	Zalesovo Beam	149.95	28	PKPbc	PKPdf	00 46 27.1	+2.6
	comp=Z,1.3nm,0.5s,baz=317,slow=4.0,SNR=5.0						
MKAR	Makanchi Array	153.12	42	PKPbc	PKPbc	00 46 35.0	-2.0
	comp=Z,0.3nm,0.7s,baz=321,slow=2.0,SNR=2.6						

WEL 18 00:49:28.2, 45°S±3°×**16°7E**±°**, h71^{km}**±3^{km}**, ML3.9**/14**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MLZ	Mavora Lakes	0.50	117	P	Pn	00 49 41.9	+0.7
MLZ				S	Sn	00 49 51.6	+1.0
MSZ	Milford Sound	0.56	34	P	Pn	00 49 42.0	+0.3
MSZ				S	Sn	00 49 52.0	+0.4
WHZ	Wether Hill Ro	0.82	157	P	Pn	00 49 45.5	+0.9
WHZ				S	Sn	00 49 58.0	+1.4
WKZ	Wanaka	1.13	74	P	Pn	00 49 49.3	+1.0
WKZ				S	Sn	00 50 04.2	+0.7
EAZ	Earnscleugh	1.29	95	P	Pn	00 49 51.8	+1.3
EAZ				S	Sn	00 50 07.7	+0.6
JCZ	Jackson Bay	1.41	41	P	Pn	00 49 52.1	0.0
TUZ	Tuapeka	1.71	119	P	Pn	00 49 57.2	+1.3
APZ	The Paps	1.73	169	P	Pn	00 49 57.5	+1.3
SYZ	Scrubby Hill	1.81	141	P	Pn	00 49 58.5	+1.2
LBZ	Lake Benmore	2.06	69	P	Pn	00 50 00.3	-0.3
ODZ	Otahua Downs	2.24	89	P	Pn	00 50 03.3	+0.2
FOZ	Fox Glacier	2.32	47	P	Pn	00 50 03.4	-0.6
RPZ	Rata Peaks	2.92	62	P	Pn	00 50 11.1	-1.3
WVZ	Waitaha Valley	3.12	50	P	Pn	00 50 14.2	-0.8
OXZ	Oxford	3.74	63	P	Pn	00 50 21.0	-2.4
INZ	Inchbonnie	3.74	51	P	Pn	00 50 22.2	-1.3
LTZ	Lake Taylor	4.18	57	P	Pn	00 50 27.1	-2.4
OKCZ	Okains Bay	4.23	72	P	Pn	00 50 29.4	-0.8
DSZ	Denniston Nort	4.62	44	P	Pn	00 50 34.8	-0.8
THZ	Tophouse	5.19	51	P	Pn	00 50 41.0	-2.3
QRZ	Quartz Range	5.68	42	P	Pn	00 50 49.0	-0.9

MEX 18 01:21:03.1±0.7**, 16°.27N**×**98°.46W, h8^{km}**±6^{km}**, MD3.7, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.34	70	iP	Pg	01 21 09.6	-0.3
PNIG				eS	Sg	01 21 14.6	+0.1
TLIG	Tlapa	1.29	356	iP	Pn	01 21 23.4	-4.1
TLIG				iS	Sb	01 21 39.5	-4.8
VHO	Vista Hermosa	1.84	64	eP	Pn	01 21 31.9	-3.3
VHO				eS	Sn	01 21 53.5	-5.2
CAIG	El Cayaco	1.89	294	iP	Pn	01 21 32.3	-3.4
CAIG				iS	Sn	01 21 55.8	-4.0
PLIG	Platanillo	2.33	335	iP	Pn	01 21 39.5	-2.4
PLIG				eS	Sn	01 22 06.0	-4.7

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*ISCJB **18** 01:37:00.3±0.5, 34°.84N±0°.04×140°.25E±0°.05, h74^{km}±3^{km}, mb3.7/8, Error ellipse: s-maj=7.9km s-min=5.8km az=145.1*

*JMA **18** 01:37:00.5±0.1, 34°.87N×140°.22E, h73^{km}±2^{km}, M3.5 Broadband fault plane solution: P waves. NP1: ϕ_s56.00000°, δ76.00000°, λ-153.00000°. NP2: ϕ_s319.00000°, δ64.00000°, λ-16.00000°. Principal axes: T Plg8.0000°, Azm186.0000°; N Plg60.0000°, Azm82.0000°; P Plg29.0000°, Azm280.0000°;*

JMA Felt I J1.

*NIED **18** 01:37:00.34°.80N×140°.30E, h53^{km}, Mw3.6 Best double couple: $M_0$3.03000×10^{14} NP1:ϕ_s327.00000°, δ50.00000°, λ20.00000°. NP2:ϕ_s224.00000°, δ75.00000°, λ138.00000°.*

*IDC **18** 01:37:00.3±3.2, 34°.88N×140°.44E, h63^{km}±22^{km}, mb3.5/8, mb1 3.7/11, mb1mx3.4/63, mbtmp3.9/11, MS2.3/1, Ms1 2.3/1, ms1mx1.9/43, Error ellipse: s-maj=42.7km s-min=6.1km az=74.0*

ISC 18 01:37:01.1±0.8**, 34°.84N**±0°.05×**140°.24E**±0°.05**, h67^{km}**±7^{km}**, n31, σ1^{s}.20**/36**, mb3.8**/8**, 3C-6D, Near east coast of**

eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO4	**Boso 4**	**0.17**	**29**	⇓P	**Pn**	**01 37 11.7**	**+0.6**
BSO4				X		01 37 19.2	
BSO3	**Boso 3**	**0.23**	**100**	⇓P	**Pn**	**01 37 12.0**	**+0.8**
BSO3				X		01 37 19.8	
KTR	**Katsuura**	**0.31**	**11**	⇑P	**Pn**	**01 37 12.1**	**0.0**
KTR				S	**Sn**	**01 37 20.1**	**+0.1**
TATJ	**Tateyama 2**	**0.34**	**303**	⇑P	**Pn**	**01 37 12.7**	**+0.4**
TATJ				S	**Sn**	**01 37 20.8**	**+0.3**
BSO1	**Boso 1**	**0.64**	**107**	⇓P	**Pn**	**01 37 15.3**	**+0.8**
JIM2	**Oshima 3**	**0.68**	**260**	⇓P	**Pn**	**01 37 15.4**	**-0.2**
JIM2				S	**Sn**	**01 37 26.2**	**-0.1**
JTHY	**Toshimahigashi**	**0.85**	**248**	P	**Pn**	**01 37 17.9**	**+0.3**
JTHY				S	**Sn**	**01 37 30.4**	**+0.7**
JOD2	**Odawara 2**	**1.03**	**294**	⇓P	**Pn**	**01 37 19.4**	**-0.5**
JOD2				*e*S	**Sn**	**01 37 33.0**	**-0.9**
JIZS	**Izushimoda**	**1.13**	**264**	⇓P	**Pn**	**01 37 21.1**	**0.0**
JIZS				S	**Sn**	**01 37 35.8**	**-0.2**
JYN	**Shimob**	**1.54**	**296**	P	**Pn**	**01 37 26.5**	**0.0**
JYN				S	**Sn**	**01 37 45.4**	**-0.3**
JRY	**Ryogami san**	**1.60**	**317**	⇑P	**Pn**	**01 37 27.2**	**-0.2**
JRY				*e*S	**Sn**	**01 37 46.8**	**-0.4**
JHJ	**Hachijo jima 2**	**1.76**	**193**	P	**Pn**	**01 37 30.7**	**+1.2**
	439nm,0.3s,baz=328,slow=21,SNR=113						
JHJ				S	**Sn**	**01 37 51.9**	**+0.9**
	346nm,0.3s,baz=38,slow=22,SNR=17						
MJAR	**Matsushiro Arr**	**2.37**	**316**	P	**Pn**	**01 37 38.0**	**+0.3**
	19nm,0.3s,baz=127,slow=36,SNR=81						
MJAR				S	**Sn**	**01 38 06.6**	**+0.9**
	50nm,0.3s,baz=120,slow=17,SNR=25						
MJAR				LR	LR	01 38 54.3	
	comp=Z,52nm,18.1s,baz=265,slow=47						
MAT	**Matsushiro**	**2.37**	**316**	P	**Pn**	**01 37 38.2**	**+0.5**
MAT				S	**Sn**	**01 38 06.8**	**+1.0**
JCJ	**Chichijima**	**7.90**	**167**	P	**Pn**	**01 38 52.0**	**-1.4**
	baz=0.0,slow=20						
JCJ				S	**Sn**	**01 40 16.4**	**-4.9**
	2.8nm,0.3s,baz=304,slow=20,SNR=2.1						
JNU	**Nakatsue**	**7.96**	**260**	P	**Pn**	**01 38 56.8**	**+2.6**
	0.8nm,0.3s,baz=75,slow=16,SNR=4.6						
KSRS	**Korea Array**	**10.30**	**288**	P	Pn	01 39 31.1	+5.1
	0.2nm,0.3s,baz=104,slow=14,SNR=7.7						
H11N2	**WAKE ISLAND Hy**	**27.95**	**116**	T	T	02 12 06.2	
	baz=309,slow=75,SNR=106						
H11N1	**WAKE ISLAND Hy**	**27.96**	**116**	T	T	02 11 58.6	
	baz=309,slow=75,SNR=76						
H11N3	**WAKE ISLAND Hy**	**27.97**	**116**	T	T	02 12 07.5	
	baz=309,slow=75,SNR=78						
H11S3	**WAKE ISLAND Hy**	**28.57**	**118**	T	T	02 13 04.5	
	baz=311,slow=75,SNR=22						
H11S1	**WAKE ISLAND Hy**	**28.57**	**118**	T	T	02 12 52.5	
	baz=311,slow=75,SNR=26						
H11S2	**WAKE ISLAND Hy**	**28.59**	**118**	T	T	02 12 56.6	
	baz=311,slow=75,SNR=19						
ZALV	**Zalesovo Beam**	**42.72**	**314**	P	**P**	**01 44 51.6**	**+0.2**
	0.5nm,0.3s,baz=93,slow=7.2,SNR=3.6						
MKAR	**Makanchi Array**	**44.51**	**304**	P	**P**	**01 45 05.9**	**0.0**
	0.6nm,0.6s,baz=88,slow=11,SNR=7.1						
KURBB	**Kurchatov Arra**	**46.63**	**310**	P	**P**	**01 45 22.5**	**0.0**
	0.8nm,0.5s,baz=86,slow=7.5,SNR=11						
BVAR	**Borovoye Array**	**51.36**	**313**	P	**P**	**01 46 00.7**	**+2.1**
	0.3nm,0.3s,baz=78,slow=7.5,SNR=3.2						
WRA	**Warramunga Arr**	**54.77**	**187**	P	**P**	**01 46 23.5**	**-0.5**
	0.9nm,0.4s,baz=1.0,slow=7.6,SNR=15						
ASAR	**Alice Springs**	**58.50**	**187**	P	**P**	**01 46 49.8**	**-0.6**
	0.3nm,0.4s,baz=12,slow=9.0,SNR=4.3						
FINES	**FINESS Array B**	**70.31**	**332**	P	**P**	**01 48 06.9**	**-0.2**
	0.9nm,0.8s,baz=61,slow=6.5,SNR=4.5						
AKASG	**Malin Array Be**	**75.44**	**322**	P	**P**	**01 48 37.3**	**-0.4**
	0.5nm,0.4s,baz=52,slow=6.3,SNR=2.2						

DJA 18 01:55:05.4±0.9**, 0°S**±2°×**12°0E**±°**, h16**^{km}±8^{km}**, M3.7**/7**,**
MLv3.7/7**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MPSI	**Mapaga**	**0.87**	**339**	P	Pb	01 55 21.0	-1.1
MPSI				S	Sn	01 55 34.7	-0.7
APSI	**Ampana**	**1.50**	**107**	P	Pn	01 55 31.1	-0.6
APSI				S	Sb	01 55 51.6	-0.1
MRSI	**Marisa**	**1.98**	**61**	P	Pb	01 55 40.6	-0.4
MRSI				S	Sn	01 56 00.8	-1.8
TTSI	**Tana Toraja**	**2.58**	**189**	P	Pn	01 55 46.2	-0.3
TTSI				S	Sn	01 56 19.2	+1.7
LUWI	**Luwuk**	**2.62**	**102**	P	Pn	01 55 48.1	+1.0
SPSI	**Sidrap Palu**	**3.49**	**187**	P	Pn	01 55 57.6	-1.5

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*ATH **18** 02:07:28.4, 37°.73N×26°.77E, h16^{km}±2^{km}, ML2.5/4, Error ellipse: s-maj=3.4km s-min=1.1km az=136.0*
*ISK **18** 02:07:28.8, 37°.81N×26°.78E, h15^{km}, ML2.3/11*
*THE **18** 02:07:29.3, 37°.74N×26°.71E, h2^{km}±3^{km}, ML2.5/3, Error ellipse: s-maj=3.0km s-min=0.8km az=168.0*
*DDA **18** 02:07:29.1, 37°.79N×26°.76E, h13^{km}, Ml2.9*
*CSEM **18** 02:07:29.2±0.2, 37°.75N×26°.73E, h10^{km}, ML2.5, Error ellipse: s-maj=5.4km s-min=3.7km az=62.0*
*ISCJB **18** 02:07:29.0±0.4, 37°.77N±0°.02×26°.75E±0°.03, h6^{km}±3^{km}, Error ellipse: s-maj=3.8km s-min=2.7km az=155.1*
ISC 18 02:07:28.7±0.8**, 37°.75N**±0°.02×**26°.76E**±0°.02**, h13**^{km}±4^{km}**,**
n71, σ0^s.81/121**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMG	**Samos**	**0.07**	**125**	P	**Pg**	**02 07 31.9**	**+0.4**
SMG				S	**Sg**	**02 07 33.4**	**-0.1**
SMG				AML	AML	02 07 33.7	
	comp=N,18670µm,0.3s						
SMG				AML	AML	02 07 34.2	
	comp=E,11232µm,0.2s						
SMG	**Samos**	**0.07**	**125**	P	**Pg**	**02 07 31.7**	**+0.2**
SMG				S	**Sg**	**02 07 33.5**	**+0.1**
SMG	**Samos**	**0.07**	**125**	P	**Pg**	**02 07 31.7**	**+0.2**
SMG				S	**Sg**	**02 07 33.5**	**+0.1**
DGB	**˜zmir**	**0.32**	**18**	*i* P	**Pg**	**02 07 34.5**	**-0.7**
DGB				*i* S	**Sg**	**02 07 38.4**	**-1.1**
GCAM	**G?zelcaml?**	**0.38**	**98**	PG	**Pg**	**02 07 36.7**	**+0.4**
GCAM				SG	**Sb**	**02 07 43.3**	**+0.2**
GCAM	**G?zelcaml?**	**0.38**	**98**	*i* P	**Pg**	**02 07 36.5**	**+0.2**
GCAM				*i* S	**Sb**	**02 07 43.2**	**+0.2**
GCAM	**G?zelcaml?**	**0.38**	**98**	*e*Pg	**Pg**	**02 07 36.7**	**+0.4**
GCAM				S	**Sb**	**02 07 43.2**	**+0.2**
URLA	**Izmir**	**0.62**	**348**	PG	**Pg**	**02 07 40.7**	**-0.2**
URLA				SG	**Sg**	**02 07 49.1**	**0.0**
URLA	**Izmir**	**0.62**	**348**	*i* P	**Pb**	**02 07 41.8**	**+0.3**
URLA				*i* S	**Sg**	**02 07 48.9**	**-0.2**
URLA	**Izmir**	**0.62**	**348**	*e*Pg	**Pg**	**02 07 40.7**	**-0.2**
URLA	**Izmir**	**0.62**	**348**	P	**Pb**	**02 07 41.8**	**+0.3**
URLA				*e*Sg	**Sg**	**02 07 49.1**	**0.0**
BLCB	**Balcova**	**0.67**	**19**	PG	**Pg**	**02 07 41.3**	**-0.5**
BLCB				SG	**Sg**	**02 07 50.0**	**-0.7**
BLCB	**Balcova**	**0.67**	**19**	*e*Pg	**Pg**	**02 07 41.3**	**-0.5**
BLCB				*e*Sg	**Sg**	**02 07 50.0**	**-0.7**
BODT	**Bodrum**	**0.82**	**147**	PG	**Pn**	**02 07 45.5**	**-0.4**
BODT				SG	**Sn**	**02 07 57.9**	**0.0**
BODT	**Bodrum**	**0.82**	**147**	P	**Pn**	**02 07 45.5**	**-0.4**
BODT				S	**Sn**	**02 07 57.2**	**-0.7**
BODT	**Bodrum**	**0.82**	**147**	P	**Pn**	**02 07 45.5**	**-0.4**
BODT				S	**Sn**	**02 07 57.2**	**-0.7**
CHOS	**Chios island**	**0.84**	**319**	PG	**Pg**	**02 07 44.9**	**-0.2**
CHOS				SG	**Sb**	**02 07 56.9**	**+0.3**
CHOS	**Chios island**	**0.84**	**319**	P	**Pb**	**02 07 45.9**	**+0.6**
CHOS				S	**Sg**	**02 07 56.2**	**0.0**
CHOS				AML	AML	02 07 57.9	
	comp=N,425µm,0.4s						
CHOS				AML	AML	02 07 57.9	
	comp=E,591µm,0.3s						
CHOS	**Chios island**	**0.84**	**319**	P	**Pb**	**02 07 45.5**	**+0.2**
CHOS				S	**Sb**	**02 07 56.8**	**+0.2**
CHOS	**Chios island**	**0.84**	**319**	*e*Pg	**Pg**	**02 07 44.9**	**-0.2**
CHOS	**Chios island**	**0.84**	**319**	P	**Pb**	**02 07 45.5**	**+0.2**
CHOS				S	**Sb**	**02 07 56.7**	**+0.2**
BDRM	**Kayabasi**	**0.88**	**141**	*i* P	**Pn**	**02 07 47.1**	**+0.4**
BDRM	**Kayabasi**	**0.88**	**141**	P	**Pn**	**02 07 47.2**	**+0.4**
AYDN	**Tasoluk**	**0.89**	**96**	*i* S	**Sg**	**02 07 55.3**	**-2.4**
AYDN	**Tasoluk**	**0.89**	**96**	S	**Sg**	**02 07 55.3**	**-2.4**
AYDB	**Zeytinkoy-Aydi**	**0.92**	**77**	PG	**Pb**	**02 07 46.6**	**+0.1**
AYDB				SG	**Sb**	**02 07 59.3**	**+0.6**
AYDB	**Zeytinkoy-Aydi**	**0.92**	**77**	*e*Pg	**Pb**	**02 07 46.6**	**+0.1**
AYDB				*e*Sg	**Sb**	**02 07 59.3**	**+0.6**
MLSB	**Milas**	**0.93**	**119**	PG	**Pn**	**02 07 47.7**	**+0.2**
MLSB	**Milas**	**0.93**	**119**	*e*Pg	**Pn**	**02 07 47.7**	**+0.2**
APE	**Apeiranthos**	**1.19**	**236**	PN	**Pg**	**02 07 52.2**	**+0.5**
APE	**Apeiranthos**	**1.19**	**236**	P	**Pn**	**02 07 51.0**	**-0.2**
APE				S	**Sb**	**02 08 06.9**	**+0.3**
APE				AML	AML	02 08 11.6	
	comp=E,147µm,0.4s						
APE				AML	AML	02 08 13.1	
	comp=N,147µm,0.2s						
APE	**Apeiranthos**	**1.19**	**236**	P	**Pn**	**02 07 51.1**	**0.0**
APE				S	**Sg**	**02 08 07.1**	**-0.1**
APE	**Apeiranthos**	**1.19**	**236**	P	**Pn**	**02 07 51.1**	**0.0**
APE	**Apeiranthos**	**1.19**	**236**	*e*Pn	**Pg**	**02 07 52.2**	**+0.5**
APE				S	**Sg**	**02 08 07.1**	**-0.1**
DAT	**Datca**	**1.21**	**147**	PN	**Pg**	**02 07 52.5**	**+0.4**
DAT	**Datca**	**1.21**	**147**	*i* P	**Pb**	**02 07 51.6**	**+0.1**
DAT				*i* S	**Sb**	**02 08 06.8**	**-0.4**
DAT	**Datca**	**1.21**	**147**	P	**Pb**	**02 07 51.7**	**+0.1**
DAT	**Datca**	**1.21**	**147**	*e*Pn	**Pg**	**02 07 52.5**	**+0.4**
DAT				S	**Sb**	**02 08 06.8**	**-0.4**
DKL	**Dikili**	**1.32**	**5**	PN	**Pn**	**02 07 52.5**	**-0.4**
DKL	**Dikili**	**1.32**	**5**	*e*Pn	**Pn**	**02 07 52.5**	**-0.4**
YER	**Yerkesik**	**1.36**	**116**	PN	**Pb**	**02 07 54.1**	**0.0**
YER	**Yerkesik**	**1.36**	**116**	*e*Pn	**Pb**	**02 07 54.1**	**0.0**
AKHS	**Akhisar**	**1.40**	**36**	*i* P	**Pg**	**02 07 56.4**	**+0.8**
AKHS				*i* S	**Sn**	**02 08 11.9**	**-0.3**
AKHS	**Akhisar**	**1.40**	**36**	P	**Pg**	**02 07 56.4**	**+0.8**
AKHS				S	**Sn**	**02 08 11.9**	**-0.3**
PRK	**Paraskevi**	**1.54**	**346**	P	**Pb**	**02 07 56.8**	**-0.4**
PRK				S	**Sg**	**02 08 19.4**	**+1.0**
PRK				AML	AML	02 08 19.7	
	comp=N,327µm,0.7s						
PRK				AML	AML	02 08 19.9	
	comp=E,243µm,0.5s						
PRK	**Paraskevi**	**1.54**	**346**	P	**Pb**	**02 07 57.3**	**+0.2**
PRK				S	**Sg**	**02 08 18.2**	**-0.1**
PRK	**Paraskevi**	**1.54**	**346**	P	**Pb**	**02 07 57.3**	**+0.2**
PRK				S	**Sg**	**02 08 18.2**	**-0.1**
AYVA	**Ayvalik**	**1.56**	**358**	*i* P	**Pb**	**02 07 57.4**	**0.0**
AYVA				*i* S	**Sb**	**02 08 16.9**	**-0.1**
AYVA	**Ayvalik**	**1.56**	**358**	P	**Pb**	**02 07 57.4**	**0.0**
AYVA				S	**Sb**	**02 08 16.9**	**-0.1**
MANT	**Manisa**	**1.60**	**62**	*i* P	**Pg**	**02 07 59.9**	**+0.4**
MANT				*i* S	**Sb**	**02 08 18.9**	**+0.5**
MANT	**Manisa**	**1.60**	**62**	P	**Pg**	**02 07 59.9**	**+0.4**
MANT				S	**Sb**	**02 08 18.9**	**+0.5**
KULA	**Kula-Manisa**	**1.68**	**62**	PN	**Pn**	**02 07 57.7**	**-0.2**
KULA	**Kula-Manisa**	**1.68**	**62**	*e*Pn	**Pn**	**02 07 57.7**	**-0.2**
TURN	**Turunc**	**1.71**	**120**	PN	**Pn**	**02 07 56.9**	**-1.3**
TURN	**Turunc**	**1.71**	**120**	*i* P	**Pn**	**02 07 56.7**	**-1.5**
TURN				*i* S	**Sn**	**02 08 16.8**	**-3.2**
TURN	**Turunc**	**1.71**	**120**	*e*Pn	**Pn**	**02 07 56.9**	**-1.3**
TAVA	**DENIZLI_Tavas**	**1.73**	**99**	*i* P	**Pg**	**02 08 05.0**	**+3.0**
TAVA				*i* S	**Sg**	**02 08 24.8**	**+0.2**
TAVA	**DENIZLI_Tavas**	**1.73**	**99**	P	**Pg**	**02 08 05.0**	**+3.0**
TAVA				S	**Sg**	**02 08 24.8**	**+0.2**
STEP	**BALIKESIR_Sava**	**1.79**	**25**	*i* P	**Pb**	**02 08 02.0**	**+0.6**
STEP				*i* S	**Sn**	**02 08 22.3**	**+0.4**
STEP	**BALIKESIR_Sava**	**1.79**	**25**	P	**Pb**	**02 08 02.0**	**+0.6**
STEP				S	**Sn**	**02 08 22.3**	**+0.4**
BAYC	**CANAKKALE_Bayr**	**1.99**	**355**	*i* P	**Pn**	**02 08 00.9**	**-1.3**
BAYC				*i* S	**Sb**	**02 08 31.0**	**+1.4**
BAYC	**CANAKKALE_Bayr**	**1.99**	**355**	P	**Pn**	**02 08 00.9**	**-1.3**
BAYC				S	**Sb**	**02 08 31.0**	**+1.4**
DEMI	**Demirci**	**2.01**	**49**	*i* P	**Pg**	**02 08 07.6**	**+0.4**
DEMI				*i* S	**Sb**	**02 08 30.8**	**+0.8**
DEMI	**Demirci**	**2.01**	**49**	P	**Pg**	**02 08 07.6**	**+0.4**
DEMI				S	**Sb**	**02 08 30.8**	**+0.8**
BALY	**Balya**	**2.10**	**18**	*i* P	**Pb**	**02 08 07.4**	**+0.8**
BALY				*i* S	**Sg**	**02 08 34.7**	**-1.4**
BALY	**Balya**	**2.10**	**18**	P	**Pb**	**02 08 07.4**	**+0.8**
BALY				S	**Sg**	**02 08 34.7**	**-1.4**
FETY	**Fethiye**	**2.16**	**120**	P	**Pb**	**02 08 06.7**	**-1.1**
KHAL	**Karahalli**	**2.24**	**73**	*i* P	**Pg**	**02 08 12.2**	**+0.5**
KHAL				*i* S	**Sn**	**02 08 34.1**	**+0.8**
KHAL	**Karahalli**	**2.24**	**73**	P	**Pg**	**02 08 12.2**	**+0.5**
KHAL				S	**Sn**	**02 08 34.1**	**+0.8**
DURS	**Dursunbey**	**2.28**	**35**	*i* P	**Pb**	**02 08 10.7**	**+0.8**
DURS				*i* S	**Sn**	**02 08 34.7**	**+0.5**
DURS	**Dursunbey**	**2.28**	**35**	P	**Pb**	**02 08 10.6**	**+0.8**
DURS				S	**Sn**	**02 08 34.7**	**+0.5**

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*SOME **18** 02:24:35.2, 41°.32N×81°.68E, h0^{km}*
*NNC **18** 02:24:38.8±2.7, 41°.33N×81°.55E, h0^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=23.1km s-min=13.9km az=150.0*
ISC 18 02:24:37.8±2.3**, 41°.43N**±0°.09×**81°.69E**±0°.07**, h17**^{km}**, n21,**
σ2^s.47/37**, 5C-6D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**2.24**	**334**	*e*P	**Pg**	**02 25 19.5**	**-1.3**
	104nm,0.2s						
KTMS				*e*S	**Sg**	**02 25 51.3**	**+1.4**
	256nm,0.3s						
SHLS	**Shalkode**	**2.38**	**317**	*e*P	**Pb**	**02 25 18.6**	**-1.8**
	22nm,0.2s						
SHLS				*e*S	**Sb**	**02 25 50.0**	**+0.5**
	161nm,0.4s						
PDGK	**Podgornoye**	**2.50**	**320**	⇑Pn	**Pb**	**02 25 22.0**	**-0.3**
	14nm,0.4s						
PDGK				⇓Lg	Lg	02 25 58.4	
	83nm,0.5s						
UZB	**Uzynbulak**	**2.61**	**312**	*e*P	**Pg**	**02 25 26.4**	**-1.6**
	11nm,0.5s						
UZB				*e*S	**Sg**	**02 26 02.8**	**+0.9**
	86nm,0.5s						
SATY	**Saty**	**2.93**	**305**	*e*P	**Pg**	**02 25 31.8**	**-2.2**
	12nm,0.4s						
SATY				*e*S	**Sg**	**02 26 12.7**	**+0.8**
	76nm,0.4s						
ZHN	**Zhinishke**	**2.97**	**307**	*e*P	**Pb**	**02 25 31.0**	**+0.7**
	7.5nm,0.4s						
ZHN				*e*S	**Sg**	**02 26 11.1**	**-2.1**
	39nm,0.2s						
KPKS	**Kokpek**	**3.01**	**313**	*e*P	**Pg**	**02 25 32.9**	**-2.6**
	19nm,0.4s						
KPKS				*e*S	**Sg**	**02 26 13.9**	**-0.7**
	189nm,0.5s						
DJR	**Jarkent**	**3.21**	**335**	*e*P	**Pg**	**02 25 36.9**	**-2.5**
	4.5nm,0.7s						
DJR				*e*S	**Sg**	**02 26 21.9**	**+0.8**
	10nm,0.6s						
KURS	**Kuram**	**3.31**	**309**	*e*P	**Pb**	**02 25 36.3**	**+0.1**
	6.5nm,0.8s						
KURS				*e*S	**Sb**	**02 26 20.5**	**+4.3**
	30nm,0.6s						
KOTS	**Kotyrbulak**	**3.84**	**299**	*e*P	**Pg**	**02 25 47.8**	**-3.5**
	6.9nm,0.4s						
KOTS				*e*S	**Sg**	**02 26 40.1**	**-1.0**
	25nm,0.4s						
MDOK	**Medeo**	**3.85**	**298**	Pg	**Pb**	**02 25 46.9**	**+1.5**
	4.5nm,0.6s						
MDOK				Lg	Lg	02 26 39.6	
	16nm,0.5s						
TNSS	**Tian-Shan**	**3.87**	**296**	*e*P	**Pg**	**02 25 48.8**	**-3.1**
	6.7nm,0.6s						
TNSS				*e*S	**Sg**	**02 26 41.4**	**-0.6**
	22nm,0.5s						
ARXS	**Arharly**	**3.97**	**316**	*e*P	**Pb**	**02 25 50.1**	**+2.7**
	5.2nm,0.4s						
ARXS				*e*S	**Sg**	**02 26 44.1**	**-1.2**
	25nm,0.5s						
IZV	**Izvestkoviy**	**4.09**	**295**	*e*P	**Pg**	**02 25 52.8**	**-3.4**
	6.6nm,0.6s						
IZV				*e*S	**Sg**	**02 26 48.6**	**-0.6**
	28nm,0.5s						
KAPS	**Kapalarasan**	**4.21**	**337**	*e*P	**Pg**	**02 25 56.9**	**-1.5**
	5.8nm,0.4s						
KAPS				*e*S	**Sg**	**02 26 56.1**	**+3.2**
	11nm,0.8s						
KTBS	**Karatobe**	**4.34**	**303**	*e*P	**Pg**	**02 25 57.8**	**-3.2**
	0.9nm,0.2s						
KTBS				*e*S	**Sg**	**02 26 56.9**	**-0.2**
	25nm,0.5s						
DGS	**Degeres**	**4.74**	**294**	*e*P	**Pg**	**02 26 05.5**	**-3.1**
	4.9nm,0.5s						
DGS				*e*S	**Sg**	**02 27 10.2**	**+0.3**
	10nm,0.5s						
TKM2	**Tokmak 2**	**4.76**	**290**	⇑Pn	Pn	02 25 53.0	+4.0
	2.0nm,0.5s						
TKM2				⇓Lg	Lg	02 27 09.8	
	9.3nm,0.7s						
MK31	**Makanchi Array**	**5.38**	**4**	Pn	**Pn**	**02 26 00.8**	**+3.6**
	0.2nm,0.3s,baz=189,slow=12,SNR=16						
MK31				⇓Pg	**Pg**	**02 26 17.7**	**-3.0**
	0.6nm,0.4s,baz=193,slow=16,SNR=5.8						
MK31				⇑Lg	Lg	02 27 30.6	
	3.1nm,0.5s,baz=183,slow=27,SNR=5.9						
MAKZ	**Makanchi**	**5.38**	**2**	⇓Pn	**Pn**	**02 25 60.0**	**+2.7**
	1.6nm,0.6s						
MAKZ				⇓Sn	**Sb**	**02 27 08.9**	**-6.7**
	2.7nm,0.7s						
MAKZ				⇓Lg	Lg	02 27 29.6	
	8.7nm,0.9s						
AAK	**Ala-Archa**	**5.49**	**285**	⇑Pg	**Pb**	**02 26 14.7**	**+1.4**
	1.7nm,0.5s						
AAK				⇑Lg	Lg	02 27 31.9	
	4.4nm,0.6s						

MEX 18 03:07:05.9±0.4**, 16°.61N**×**100°.46W, h5**^{km}±3^{km}**, MD3.9,**
Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.47**	**23**	*i* P	Pg	03 07 14.6	-0.5
CAIG				*e*S	Sg	03 07 21.8	+0.6
MEIG	**Mezcala**	**1.54**	**31**	*e*P	Pn	03 07 30.8	-3.4
MEIG				*e*S	Sn	03 07 49.4	-5.1
PLIG	**Platanillo**	**2.00**	**27**	*e*P	Pn	03 07 37.1	-3.3
PLIG				*e*S	Sn	03 08 01.3	-4.6
TLIG	**Tlapa**	**2.04**	**62**	*e*P	Pn	03 07 37.7	-3.5
TLIG				*e*S	Sn	03 08 02.9	-4.3

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*BJI **18** 03:16:02.7, 1°.21N×124°.83E, h210^{km}, mb4.5/27, mB4.4/14*
*ISCJB **18** 03:16:06.7±0.3, 1°.65N±0°.03×124°.53E±0°.03, h222^{km}±3^{km}, mb4.4/70, Error ellipse: s-maj=5.9km s-min=4.3km az=146.4*
*IDC **18** 03:16:07.4±1.8, 1°.66N×124°.34E, h212^{km}±16^{km}, mb4.1/31, mb1 4.1/31, mb1mx4.0/57, mbtmp4.6/31, MS2.2/1, Ms1 2.2/1, ms1mx2.1/47, Error ellipse: s-maj=14.9km s-min=8.0km az=81.0*
*NEIC **18** 03:16:08.3±0.7, 1°.65N×124°.48E, h223^{km}±7^{km}, mb4.4/30, Error ellipse: s-maj=7.8km s-min=4.4km az=72.0*
*MOS **18** 03:16:08.2±0.9, 1°.69N×124°.42E, h236^{km}, mb4.4/16, Error ellipse: s-maj=15.6km s-min=6.9km az=108.2*
*DJA **18** 03:16:08.4±0.5, 2°N±5°×12°5E±°, h201^{km}±5^{km}, M4.6/13, mB4.6/1, mb4.3/3, MLv4.8/13, Mw(mB)3.8/1*
ISC 18 03:16:07.8±0.5**, 1°.63N**±0°.04×**124°.56E**±0°.04**, h217**^{km}±4^{km}**,**
n163, σ1^s.25/201**, mb4.5**/69**, 5C-5D, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	**Cibinong**	**1.20**	**209**	P	**Pn**	**03 16 40.1**	**-0.6**
KMSI				S	**S**	**03 17 04.6**	**-1.6**
MRSI	**Marisa**	**2.86**	**247**	P	**Pn**	**03 16 56.9**	**+0.2**
MRSI				S	**S**	**03 17 33.9**	**-0.9**
TNTI	**Ternate**	**2.93**	**107**	P	**Pn**	**03 16 57.5**	**0.0**
TNTI				S	**S**	**03 17 35.4**	**-0.8**
TNTI	**Ternate**	**2.93**	**107**	*e*Pn	**Pn**	**03 16 57.8**	**+0.3**
TNTI				*e*S	**S**	**03 17 34.5**	**-1.6**
LUWI	**Luwuk**	**3.20**	**214**	P	**Pn**	**03 16 59.0**	**-1.7**
LUWI	**Luwuk**	**3.20**	**214**	*e*Pn	Pn	03 16 53.0	-7.6
LUWI				*e*S	**S**	**03 17 44.0**	**+2.1**
LBMI	**Labuha**	**3.70**	**127**	P	**Pn**	**03 17 06.7**	**+0.1**
APSI	**Ampana**	**3.85**	**229**	P	**Pn**	**03 17 08.6**	**+0.2**
APSI				S	**S**	**03 17 55.0**	**-0.9**
SANI	**Sanana**	**3.92**	**159**	P	**Pn**	**03 17 07.5**	**-1.8**
SANI				S	**Pn**	**03 17 07.4**	**-1.8**
MPSI	**Mapaga**	**4.84**	**255**	P	**Pn**	**03 17 20.3**	**-0.3**
DAV	**Davao City (W)**	**5.50**	**11**	LR	LR	03 19 42.0	
	comp=Z,27nm,20.5s,baz=326,slow=39						
AAI	**Ambon**	**6.41**	**145**	P	**Pn**	**03 17 40.8**	**+0.3**
MSAI	**Masohi**	**6.59**	**139**	P	**Pn**	**03 17 43.7**	**+0.8**
MSAI				S	**S**	**03 18 58.1**	**-0.4**
TTSI	**Tana Toraja**	**6.64**	**226**	P	**Pn**	**03 17 44.5**	**+1.0**
MYLDM	**Lahad Datu**	**7.01**	**300**	*e*Pn	**Pn**	**03 17 49.4**	**+1.1**
SBUM	**Sibu**	**12.36**	**274**	*e*Pn	**P**	**03 19 02.9**	**+2.4**
MTN	**Manton Dam**	**15.79**	**156**	*e*P	**Pn**	**03 19 39.1**	**+0.3**
	40nm,0.3s						
YULB	**Yu-li**	**21.87**	**352**	*e*P	**P**	**03 20 41.5**	**-1.9**
	13nm,1.4s						
TPUB	**Ta-pu**	**21.88**	**350**	*e*P	**P**	**03 20 44.0**	**+0.4**
	27nm,1.0s						
MBWA	**Marble Bar**	**23.13**	**192**	*e*P	**P**	**03 20 53.5**	**-1.4**
	12nm,0.6s						
WRAB	**Tennant Creek**	**23.48**	**156**	*e*P	**P**	**03 20 57.1**	**-1.1**
	18nm,0.7s						
WRAB				*e*S	**S**	**03 25 01.0**	**+5.4**
WRAB	**Tennant Creek**	**23.48**	**156**	*d i*P	**P**	**03 20 58.8**	**+0.6**
WRAB				pmax	pmax		
	comp=Z,10.0nm,0.7s						
WR1	**Warramunga Arr**	**23.48**	**156**	*e*P	**P**	**03 20 58.8**	**+0.6**
	comp=Z,24nm,0.6s						
WR1				*e*PcP	**PcP**	**03 24 38.3**	**+0.5**
WR1				*e*S	**S**	**03 24 53.5**	**-2.1**
WR1				*e*ScP	**ScP**	**03 27 56.3**	**+0.8**
WRA	**Warramunga Arr**	**23.48**	**156**	P	**P**	**03 20 58.8**	**+0.6**
	comp=Z,18nm,0.5s,baz=333,slow=10,SNR=99						
WRA				PcP	**PcP**	**03 24 38.3**	**+0.5**
	comp=Z,1.1nm,0.5s,baz=328,slow=2.3,SNR=4.9						
WRA				S	**S**	**03 24 53.5**	**-2.2**
	comp=Z,4.1nm,0.6s,baz=335,slow=16,SNR=7.7						
WRA				ScP	**ScP**	**03 27 56.3**	**+0.8**
	comp=Z,0.5nm,0.8s,baz=333,slow=2.3,SNR=2.9						
WB2	**Warramunga Arr**	**23.49**	**156**	*e*P	**P**	**03 20 58.9**	**+0.7**
	comp=Z,23nm,0.6s						
WB2				*e*S	**S**	**03 24 54.0**	**-1.7**
COEN	**Coen**	**24.08**	**131**	*e*P	**P**	**03 21 04.4**	**+0.7**
	comp=Z,12nm,0.9s						
PSI	**Prapat**	**25.65**	**273**	*e*P	**P**	**03 21 18.2**	**+0.2**
	comp=Z,6.3nm,0.7s						
PSI	**Prapat**	**25.65**	**273**	*e*P	**P**	**03 21 18.2**	**+0.2**
PSI				pmax	pmax		
	comp=Z,6.0nm,0.7s						
AS31	**Alice Springs**	**26.73**	**161**	*e*P	**P**	**03 21 28.6**	**+1.0**
	comp=Z,1.0nm,0.6s						
AS31				*e*PcP	**PcP**	**03 24 45.9**	**+0.7**
AS31				*e*S	**S**	**03 25 44.1**	**-2.9**
AS31				*e*ScP	**ScP**	**03 28 05.4**	**+0.7**
ASAR	**Alice Springs**	**26.73**	**161**	P	**P**	**03 21 28.6**	**+1.0**
	comp=Z,1.9nm,0.6s,baz=340,slow=7.2,SNR=24						
ASAR				PcP	**PcP**	**03 24 45.9**	**+0.7**
	comp=Z,3.4nm,0.4s,baz=346,slow=2.2,SNR=18						
ASAR				S	**S**	**03 25 44.1**	**-2.9**
	comp=Z,1.8nm,0.8s,baz=332,slow=12,SNR=7.5						
ASAR				ScP	**ScP**	**03 28 05.4**	**+0.7**
	comp=Z,1.1nm,0.7s,baz=346,slow=3.0,SNR=5.9						
GSI	**Gunungsitoli**	**26.98**	**270**	*e*P	**P**	**03 21 28.8**	**-1.0**
	comp=Z,74nm,0.2s						
GSI				*e*		03 21 38.5	
GYA	**Guiyang**	**30.09**	**327**	*e*P	**P**	**03 22 00.8**	**+3.4**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CM31	**Chiang Mai Arr**	**30.19**	**305**	*e*P	**P**	**03 21 58.0**	**-0.1**
CM31				*e*PcP	**PcP**	**03 24 54.6**	**+0.8**
CMAR	**Chiang Mai Arr**	**30.19**	**305**	P	**P**	**03 21 58.0**	**-0.1**
	comp=Z,1.9nm,0.3s,baz=133,slow=10.0,SNR=5.7						
CMAR				PcP	**PcP**	**03 24 54.6**	**+0.8**
	comp=Z,1.2nm,0.3s,baz=152,slow=3.0,SNR=4.3						
CBIJ	**Chichi jima**	**30.45**	**32**	*e*P	**P**	**03 22 00.0**	**-0.3**
	comp=Z,80nm,1.0s						
JCJ	**Chichijima**	**30.45**	**32**	P	**P**	**03 22 00.6**	**+0.3**
	comp=Z,54nm,0.9s,baz=180,slow=19						
NJ2	**Nanjing**	**30.74**	**350**	*e*P	**P**	**03 22 04.3**	**+1.5**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
JNU	**Nakatsue**	**31.89**	**10**	P	**P**	**03 22 12.3**	**-0.6**
	comp=Z,8.7nm,0.8s,baz=212,slow=15,SNR=3.0						
JNU	**Nakatsue**	**31.89**	**10**	*e*P	**P**	**03 22 12.3**	**-0.6**
	comp=Z,16nm,1.1s						
FORT	**Forrest**	**32.40**	**174**	*e*P	**P**	**03 22 18.2**	**+0.9**
	comp=Z,25nm,0.7s						
JHJ	**Hachijo jima 2**	**34.43**	**23**	P	**P**	**03 22 36.0**	**+1.1**
	comp=Z,24nm,0.4s,baz=229,slow=19,SNR=3.1						
NWAO	**Narrogin (SRO)**	**35.06**	**191**	*e*P	**P**	**03 22 40.3**	**+0.1**
	comp=Z,27nm,1.4s						
NWAO	**Narrogin (SRO)**	**35.06**	**191**	*e*P	**P**	**03 22 40.3**	**+0.1**
NWAO				pmax	pmax		
	comp=Z,27nm,1.4s						
CD2	**Chengdu**	**35.16**	**328**	*e*P	**P**	**03 22 42.0**	**+0.8**
XAN	**Xi’an**	**35.41**	**337**	P	**P**	**03 22 43.0**	**-0.3**
XAN				pmax	pmax		
	comp=Z,11nm,0.8s						

KS15	Wonju Array Si	35.77	5	eP	P	03 22 46.5	+0.3
KS15				ePcP	PcP	03 25 10.2	+1.2
KSAR	Wonju Array Be	35.77	5	P	P	03 22 46.5	+0.3
KSAR	Wonju Array Be	35.77	5	P	P	03 22 46.5	+0.3
KSRS	Korea Array	35.79	5	P	P	03 22 46.5	+0.2
	comp=Z,0.9nm,0.5s,baz=176,slow=10,SNR=5.8						
KSRS				PcP	PcP	03 25 10.2	+1.2
	comp=Z,1.2nm,0.7s,baz=173,slow=3.4,SNR=5.7						
MAJO	Matsushiro	36.97	18	eP	P	03 22 56.4	+0.1
	comp=Z,10nm,0.7s						
MAJO				eScP	ScP	03 28 39.5	+0.4
MAJO	Matsushiro	36.97	18	⇓iP	P	03 22 56.0	-0.4
MAJO				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MAT	Matsushiro	36.97	18	P	P	03 22 55.9	-0.5
MJAR	Matsushiro Arr	36.97	18	P	P	03 22 56.4	0.0
	comp=Z,8.9nm,0.7s,baz=199,slow=9.8,SNR=25						
MJAR				ScP	ScP	03 28 39.5	+0.4
	comp=Z,1.2nm,0.7s,baz=124,slow=6.7,SNR=4.5						
MJB9	Matsu-Tunnel	36.97	18	eP	P	03 22 56.5	+0.1
	comp=Z,11nm,0.7s						
STKA	Stephens Creek	37.03	156	P	P	03 22 57.8	+0.8
	comp=Z,3.1nm,0.6s,baz=348,slow=13,SNR=5.1						
STKA	Stephens Creek	37.03	156	eP	P	03 22 57.8	+0.8
	comp=Z,2.0nm,1.0s						
STKA	Stephens Creek	37.03	156	eP	P	03 22 57.8	+0.8
STKA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
LZH	Lanzhou	39.30	333	eP	P	03 23 18.4	+2.4
LZH				pP	pP	03 24 00.0	-1.4
LZH				sP	sP	03 24 25.6	-0.5
LZH				ePP	PnPn	03 24 57.3	+1.0
LZH				pmax	pmax		
	comp=Z,16nm,1.1s						
LZH				pmax	pmax		
	comp=Z,79nm,4.8s						
LZH				LR	LR		
	comp=Z,370nm,13.7s						
LZH				LR	LR		
	comp=Z,510nm,15.2s						
LZH				LR	LR		
	comp=Z,630nm,16.3s						
HHC	Hu-ho-hao-te	40.78	345	eP	P	03 23 30.3	+2.3
HHC				pmax	pmax		
	comp=Z,22nm,1.0s						
HHC				pmax	pmax		
	comp=Z,97nm,7.5s						
ARMA	Armidale	41.00	143	eP	P	03 23 30.8	+0.8
	comp=Z,19nm,1.4s						
CN2	Changchun	42.00	1	eP	P	03 23 40.5	+2.8
USA0B	Ussuriysk Arra	42.90	8	eP	P	03 23 46.0	+1.1
	comp=Z,8.3nm,0.9s						
USRK	Ussuriysk Ar.	42.90	8	P	P	03 23 45.7	+0.8
	comp=Z,5.3nm,0.6s,baz=188,slow=8.1						
ODAN	Odare	43.60	308	eP	P	03 23 51.3	+0.1
GTA	Gaotai	43.86	332	⇑P	P	03 23 54.1	+1.2
GTA				pP	pP	03 24 37.3	-1.9
GTA				sP	sP	03 24 59.8	-3.8
GTA				PcP	PcP	03 25 36.1	+0.9
GTA				S	S	03 30 09.3	+1.9
GTA				pmax	pmax		
	comp=Z,11nm,0.8s						
GTA				pmax	pmax		
	comp=Z,33nm,5.8s						
RAMN	Ramite	44.26	308	eP	P	03 23 56.6	+0.2
	comp=Z,22nm,0.8s						
JIRN	Jiri	44.92	309	eP	P	03 24 01.7	-0.1
	comp=Z,10.0nm,0.3s						
ASAJ	Asahikawa	45.24	18	P	P	03 24 04.8	+1.3
	comp=Z,3.3nm,0.5s,baz=204,slow=6.8,SNR=6.6						
ASAJ	Asahikawa	45.24	18	eP	P	03 24 04.2	+0.7
	comp=Z,4.7nm,0.7s						
GUN	Gumba	45.28	309	eP	P	03 24 04.4	-0.2
PKIN	Phulchoki	45.50	308	eP	P	03 24 06.3	+0.1
	comp=Z,5.5nm,0.5s						
KKN	Kakani	45.69	308	eP	P	03 24 08.0	+0.4
DMN	Daman	45.74	308	eP	P	03 24 07.9	-0.2
	comp=Z,23nm,1.0s						
GKN	Gorkha	46.29	308	eP	P	03 24 11.9	-0.4
DANN	Dangsing	47.14	308	eP	P	03 24 17.6	-1.4
	comp=Z,30nm,0.8s						
HIA	Hailar	47.64	356	⇓eP	P	03 24 22.0	-0.1
HIA				pmax	pmax		
	comp=Z,6.0nm,0.4s						
KLR	Kul'dur	47.82	6	P	P	03 24 23.6	+0.2
	comp=Z,0.6nm,0.5s,baz=202,slow=5.4,SNR=24						
KLR	Kul'dur	47.82	6	⇑iP	P	03 24 23.8	+0.3
ULN	Ulaanbaatar	48.49	344	⇑iP	P	03 24 29.4	+0.6
ULN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SONA0	Songino Array	48.64	344	eP	P	03 24 29.3	-0.6
SONA0				ePcP	PcP	03 25 51.0	-0.9
SONM	Songino Array	48.64	344	P	P	03 24 29.3	-0.6
	comp=Z,1.6nm,0.5s,baz=157,slow=9.3,SNR=10						
SONM				PcP	PcP	03 25 51.0	-0.9
	comp=Z,0.2nm,0.4s,baz=163,slow=3.1,SNR=3.5						
SONA1	Songino Array	48.65	344	eP	P	03 24 29.2	-0.8
WMQ	Urumqi	53.25	327	P	P	03 25 04.0	-0.3
BOD	Bodaibo	56.65	353	eP	P	03 25 27.3	-0.9
BOD				pmax	pmax		
	comp=Z,6.0nm,2.1s						
DGZ	Jazzator, Alta	57.39	332	i P	P	03 25 33.4	-0.4
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KSH	Kashi	58.04	317	eP	P	03 25 39.8	+1.3
KSH				ePcP	PcP	03 26 28.5	+0.6
KSH				sP	sP	03 26 49.9	-1.3
KSH				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MK01	Makanchi Array	58.06	327	eP	P	03 25 37.4	-0.9
MK01				epP	pP	03 26 26.7	-0.6
MK31	Makanchi Array	58.08	327	eP	P	03 25 37.9	-0.6
MK31	Makanchi Array	58.08	327	eP	P	03 25 37.9	-0.6
MK32	Makanchi Array	58.08	327	eP	P	03 25 37.8	-0.7
MK32				epP	pP	03 26 27.1	-0.3
MKAR	Makanchi Array	58.08	327	P	P	03 25 37.8	-0.7
	comp=Z,5.2nm,0.4s,baz=124,slow=7.9,SNR=98						
MKAR				PcP	pP	03 26 27.1	-0.3
	comp=Z,3.4nm,0.6s,baz=138,slow=3.6,SNR=15						
MKAR	Makanchi Array	58.08	327	eP	P	03 25 37.9	-0.7
	comp=Z,59nm,0.4s						
MKAR	Makanchi Array	58.08	327	eP	P	03 25 37.9	-0.6
MKAR				pmax	pmax		
	comp=Z,59nm,0.4s						
PETK	Petropavlovsk-	58.19	23	P	P	03 25 40.5	+1.4
	comp=Z,7.8nm,1.0s,baz=209,slow=2.8						
PEA1	Petropavlovsk-	58.19	23	eP	P	03 25 40.5	+1.4
MAKZ	Makanchi	58.26	327	eP	P	03 25 38.9	-0.8
	comp=Z,5.7nm,0.4s						
MAKZ	Makanchi	58.26	327	eP	P	03 25 38.9	-0.8
MAKZ				pmax	pmax		
	comp=Z,6.0nm,0.4s						
PET	Petropavlovsk	58.50	23	eP	P	03 25 41.3	+0.2
PET				pmax	pmax		
	comp=Z,11nm,0.9s						
KDJ	Kajisay	58.51	320	eP	P	03 25 41.8	+0.1
	comp=Z,5.0nm,0.5s						
KDJ	Kajisay	58.51	320	eP	P	03 25 41.8	+0.1
KDJ				pmax	pmax		
	comp=Z,5.0nm,0.5s						
YAK	Yakutsk	60.38	3	P	P	03 25 54.0	+0.2
	comp=Z,25nm,0.3s,baz=352,slow=0.5,SNR=9.4						
YAK	Yakutsk	60.38	3	eP	P	03 25 54.0	+0.2
	comp=Z,57nm,0.7s						
YAK	Yakutsk	60.38	3	eP	P	03 25 53.1	-0.7
YAK				e		03 26 38.1	
YAK				e*PP	pP	03 26 43.1	0.0
YAK				e		03 28 05.3	
YAK				eS	S	03 33 50.1	-0.9
YAK				e		03 35 21.6	
YAK				eSS	SS	03 37 54.3	+1.6
YAK				pmax	pmax		
	comp=Z,36nm,0.8s						
YAK				pmax	pmax		
	comp=N,9.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,10.0nm,0.3s						
YAK				pmax	pmax		
	comp=E,5.0nm,0.6s						
YAK				pmax	pmax		
	comp=N,4.0nm,0.6s						
YAK				smax	smax		
	comp=N,3.0nm,0.4s						
YAK				smax	smax		
	comp=E,4.0nm,0.8s						
AAK	Ala-Archa	60.50	319	P	P	03 25 55.1	-0.1
	comp=E,2.0nm,0.4s,baz=169,slow=4.7,SNR=4.1						
MA2	Magadan	61.27	15	i P	P	03 26 01.1	+1.2
ZALV	Zalesovo Beam	61.51	335	P	P	03 26 00.2	-1.4
	comp=E,1.4nm,0.3s,baz=116,slow=6.8,SNR=4.5						
ZAA1	Zalesovo Array	61.51	335	eP	P	03 26 00.2	-1.4
KURBB	Kurchatov Arra	62.37	329	P	P	03 26 06.2	-1.1
	comp=E,3.1nm,0.5s,baz=133,slow=6.6,SNR=25						
KURK	Kurchatov	62.38	329	eP	P	03 26 06.2	-1.2
KURK	Kurchatov	62.38	329	⇑iP	P	03 26 06.3	-1.2
KURK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KK31	Karatay Array	63.32	318	eP	P	03 26 14.4	+0.6
KK31	Karatay Array	63.32	318	eP	P	03 26 14.5	+0.6
KKAR	Karatay Array	63.32	318	eP	P	03 26 14.4	+0.6
KKAR	Karatay Array	63.32	318	eP	P	03 26 14.5	+0.6
SEY	Seymchan	64.56	14	⇑iP	P	03 26 22.6	+1.1
BVAR	Borovoye Array	67.92	328	P	P	03 26 42.0	-1.0
	comp=Z,3.2nm,1.0s,baz=138,slow=9.1,SNR=9.3						
BVAR	Borovoye Array	67.92	328	P	P	03 26 42.0	-1.0
BRVK	Borovoye	67.99	328	eP	P	03 26 42.6	-0.8
	comp=Z,3.3nm,0.6s						
BRVK	Borovoye	67.99	328	eP	P	03 26 42.6	-0.8
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
CASY	Casey	68.50	186	eP	P	03 26 47.2	+0.9
	comp=Z,4.1nm,0.7s						
TIXI	Tiksi	69.97	1	P	P	03 26 55.0	-0.2
	comp=Z,5.6nm,0.4s,baz=192,slow=2.2,SNR=5.0						
TIXI	Tiksi	69.97	1	⇓iP	P	03 26 54.7	-0.6
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ABKAR	Akbulak array	72.42	322	eP	P	03 27 09.3	-1.1
AKTO	Aktyubinsk	73.97	322	P	P	03 27 18.6	-0.9
	comp=Z,3.0nm,0.6s,baz=109,slow=7.1,SNR=12						
ARU	Arti	75.56	328	P	P	03 27 27.0	-1.5
	comp=Z,5.4nm,0.2s,baz=38,slow=3.9,SNR=4.0						
ARU	Arti	75.56	328	eP	P	03 27 27.0	-1.5
	comp=Z,3.9nm,0.6s						
ARU	Arti	75.56	328	d iP	P	03 27 25.3	-3.1
ARU				S	S	03 36 45.7	-5.3
ARU				pmax	pmax		
	comp=Z,13nm,2.5s						
OPO	Ambohidratompo	78.56	251	P	P	03 27 45.3	-0.8
	comp=Z,3.7nm,0.3s,baz=63,slow=7.7,SNR=6.8						
RAYN	Ar Rayn	79.32	293	eP	P	03 27 48.7	-1.3
	comp=Z,4.1nm,0.8s						
RAYN	Ar Rayn	79.32	293	eP	P	03 27 48.7	-1.3
RAYN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MAW	Mawson	81.05	200	P	P	03 27 58.7	+0.5
	comp=Z,2.5nm,0.6s,baz=82,slow=4.8,SNR=13						
MAW	Mawson	81.05	200	eP	P	03 27 59.2	+1.0
	comp=Z,0.9nm,0.8s						
MAW	Mawson	81.05	200	eP	P	03 27 59.2	+1.0
MAW				pmax	pmax		
	comp=Z,1.0nm,0.8s						
VNDA	Vanda	81.64	172	P	P	03 28 01.6	+0.5
	comp=Z,1.5nm,0.6s,baz=324,slow=6.7,SNR=15						
VNDA	Vanda	81.64	172	eP	P	03 28 01.9	+0.9
	comp=Z,2.3nm,1.0s						
VNDA	Vanda	81.64	172	eP	P	03 28 02.0	+0.9
VNDA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
PRGR	Permogore	83.32	332	eP	P	03 28 09.1	-1.0
PRGR				pmax	pmax		
	comp=Z,7.0nm,0.4s						
VRH	Novokhopyorsk	84.25	321	eP	P	03 28 13.5	-1.5
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KDAK	Kodiak Island	84.81	32	i P	P	03 28 19.3	+1.6
VORD	Divnogorie	85.76	321	eP	P	03 28 20.9	-1.6
VORD				pmax	pmax		
	comp=Z,10.0nm,0.4s						
VSR	Storozhevoye	85.85	321	eP	P	03 28 21.2	-1.8
VSR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
COLD	Coldfoot	86.66	23	eP	P	03 28 28.2	+1.6
	comp=Z,2.7nm,0.5s						
ILAR	Eielson Array	87.92	25	P	P	03 28 31.8	-0.9
	comp=Z,0.4nm,0.4s,baz=256,slow=4.3,SNR=11						
ILB	Eielson Array	87.92	25	eP	P	03 28 31.8	-0.9
ARA0	ARCESS Array S	91.66	340	eP	P	03 28 48.3	-1.7
ARCES	ARCESS Array B	91.66	340	P	P	03 28 48.3	-1.7
	comp=Z,4.4nm,0.8s,baz=82,slow=6.5,SNR=24						
SPA0	Spitsbergen Ar	92.11	349	eP	P	03 28 51.5	-0.4
SPITS	Spitsbergen Ar	92.11	349	P	P	03 28 51.5	-0.4
	comp=Z,2.3nm,0.4s,baz=54,slow=7.3,SNR=19						
FIA0	FINESS Array S	92.65	332	eP	P	03 28 52.8	-1.9
FIA0	FINESS Array S	92.65	332	eP	P	03 28 52.8	-1.9
FINES	FINESS Array B	92.65	332	P	P	03 28 52.8	-1.9
	comp=Z,2.4nm,0.8s,baz=82,slow=4.0,SNR=5.8						
CRVS	Cervenica-Dubn	97.37	320	eP	P	03 29 14.7	-1.9
CRVS	Cervenica-Dubn	97.37	320	eP	P	03 29 14.7	-1.9
HFS	Hagfors	98.85	332	P	Pdif	03 29 20.8	-2.0
	comp=Z,3.2nm,1.0s,baz=88,slow=3.5,SNR=5.2						
ANMO	Albuquerque	120.03	48	PKP	PKPdf	03 34 34.6	+1.2
	comp=Z,0.8nm,0.6s,baz=188,slow=5.4,SNR=4.0						
TORD	Torodi Ar. Bea	121.47	286	PKP	PKPdf	03 34 33.9	-2.5
	comp=Z,1.2nm,0.7s,baz=78,slow=1.7						
TOA1	Torodi Ar. Sit	121.47	286	ePKPdf	PKPdf	03 34 33.9	-2.5
TXAR	Lajitas Array	124.59	52	PKP	PKPdf	03 34 43.5	+1.3
	comp=Z,0.3nm,0.6s,baz=283,slow=0.5,SNR=8.1						
KOWA	Kowa	126.64	289	PKP	PKPdf	03 34 46.3	-0.1
	comp=Z,1.1nm,0.7s,baz=121,slow=5.9,SNR=5.2						
TKL	Tuckaleechee C	134.44	33	PKP	PKPdf	03 35 00.6	0.0
	comp=Z,1.8nm,0.5s,baz=154,slow=3.1,SNR=4.8						
PLCA	Paso Flores	138.74	163	PKP	PKPdf	03 35 09.8	+1.3
	comp=Z,1.9nm,0.9s,baz=338,slow=1.6,SNR=4.0						
LCO	Las Campanas	149.12	153	ePKPbc	PKPbc	03 35 32.2	+0.7
LCO	Las Campanas	149.12	153	ePKP2	PKPbc	03 35 32.2	+0.7

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*ISCJB **18** 03:43:05.6±0.6, 42°.81N±0°.03×7°.22W±0°.06, h14^{km}, Error ellipse: s-maj=6.1km s-min=4.3km az=19.3*

*CSEM **18** 03:43:06.6±0.2, 42°.86N×7°.24W, h19^{km}, ML1.9, Error ellipse: s-maj=4.6km s-min=3.4km az=135.0*

*MDD **18** 03:43:07.7±0.5, 42°.85N×7°.23W, h19^{km}±14^{km}, mbLg1.9/7, Error ellipse: s-maj=5.5km s-min=3.6km az=123.0, PRXIMO*

*INMG **18** 03:43:07.8±1.6, 42°.84N×7°.19W, h19^{km}±10^{km}, ML1.7, Error ellipse: s-maj=4.1km s-min=2.6km az=99.0*

ISC 18 03:43:06.7±0.9**, 42°.87N**±0°.03×**7°.21W**±0°.04**, h14**^{km}**, n31, σ0^{s}.55**/40**, 1C, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EPON	Pontenova	0.46	5	Pg	Pg	03 43 15.9	0.0
	2.5nm,0.1s,SNR=13						
EPON				Lg	Lg	03 43 24.2	
	11nm,0.2s,SNR=22						
EPON	Pontenova	0.46	5	Pg	Pg	03 43 15.9	0.0
	2.5nm,0.1s,SNR=13						
EPON				Lg	Lg	03 43 24.2	
	11nm,0.2s,SNR=22						
EAGO	Agolada(Pontev	0.65	265	⇑Pg	Pb	03 43 19.9	0.0
	6.0nm,0.1s,SNR=18						
EAGO				Lg	Lg	03 43 28.3	
	8.8nm,0.1s,SNR=7.9						
EAGO	Agolada(Pontev	0.65	265	Pg	Pb	03 43 19.9	0.0
	6.0nm,0.1s,SNR=18						
EAGO				Lg	Lg	03 43 28.3	
	8.8nm,0.1s,SNR=7.9						
PBRG	Braganca	1.11	162	ePg	Pg	03 43 28.5	+0.3
PBRG				eSg	Sb	03 43 42.0	-0.2
PBRG				A	A	03 43 46.9	
	5.5nm,0.1s						
PBRG	Braganca	1.11	162	Pg	Pg	03 43 28.5	+0.3
PBRG				Lg	Lg	03 43 42.0	
	2.8nm,0.1s						
PBRG	Braganca	1.11	162	Pg	Pg	03 43 28.5	+0.3
PBRG	Braganca	1.11	162	ePg	Pg	03 43 28.5	+0.3
PBRG				eSg	Sb	03 43 42.0	-0.2
ELOB	Lobios	1.18	213	Pg	Pb	03 43 27.9	-1.0
	1.0nm,0.1s,SNR=14						
ELOB				Lg	Lg	03 43 43.1	
	7.5nm,0.2s,SNR=7.5						
ELOB	Lobios	1.18	213	Pg	Pb	03 43 27.9	-1.0
	1.0nm,0.1s,SNR=14						
ELOB				Lg	Lg	03 43 43.1	
	7.5nm,0.2s,SNR=7.5						
PGAV	Gavieira, Arco	1.20	222	ePg	Pb	03 43 29.5	+0.3
PGAV				eSg	Sb	03 43 44.5	0.0
PGAV				A	A	03 43 48.3	
	8.2nm,0.5s						
PGAV	Gavieira, Arco	1.20	222	ePg	Pb	03 43 29.5	+0.3
PGAV				eSg	Sb	03 43 44.5	0.0
EMAZ	Mazaricos	1.30	274	Pg	Pn	03 43 30.2	-0.3
	2.2nm,0.1s,SNR=7.9						
EMAZ				Lg	Lg	03 43 48.9	
	8.1nm,0.1s,SNR=7.9						
EMAZ	Mazaricos	1.30	274	Pg	Pn	03 43 30.2	-0.3
	2.2nm,0.1s,SNR=7.9						
EMAZ				Lg	Lg	03 43 48.9	
	8.1nm,0.1s,SNR=7.9						
PCAB	Cabril	1.30	208	ePg	Pb	03 43 31.4	+0.4
PCAB				eSg	Sn	03 43 48.0	+0.2
PCAB				A	A	03 43 53.8	
	7.8nm,0.1s						
PCAB	Cabril	1.30	208	Pg	Pb	03 43 31.4	+0.4
PCAB				Lg	Lg	03 43 48.0	
	3.9nm,0.1s						
PCAB	Cabril	1.30	208	Pg	Pb	03 43 31.4	+0.4
PCAB	Cabril	1.30	208	ePg	Pb	03 43 31.4	+0.4
PCAB				eSg	Sn	03 43 48.0	+0.2
EARI	Arriondas	1.53	73	Pn	Pn	03 43 32.7	-0.9
	0.1nm,0.1s,SNR=7.9						
EARI				Pg	Pg	03 43 36.9	+0.9
	0.4nm,0.2s,SNR=10.0						
EARI				Lg	Lg	03 43 55.9	
	0.3nm,0.1s,SNR=6.7						
EARI	Arriondas	1.53	73	Pn	Pn	03 43 32.7	-0.9
	0.1nm,0.1s,SNR=7.9						
EARI	Arriondas	1.53	73	Pg	Pg	03 43 36.9	+0.9
	0.4nm,0.2s,SNR=10.0						
EARI				Lg	Lg	03 43 55.9	
	0.3nm,0.1s,SNR=6.7						
POLO	Lamas de Olo	1.55	197	ePg	Pb	03 43 35.9	+0.6
POLO				eSg	Sb	03 43 55.1	+0.3
POLO				A	A	03 43 58.8	
	2.2nm,0.4s						
POLO	Lamas de Olo	1.55	197	ePg	Pb	03 43 35.9	+0.6
POLO				eSg	Sb	03 43 55.1	+0.3
PVRL	Vila Real	1.63	194	eSg	Sb	03 43 58.1	+1.0
PVRL	Vila Real	1.63	194	Lg	Lg	03 43 58.1	
PVRL	Vila Real	1.63	194	eSg	Sb	03 43 58.1	+1.0
MVO	Moncorvo	1.71	175	ePg	Pg	03 43 39.0	-0.4
MVO				eSg	Sb	03 43 59.6	+0.4
MVO	Moncorvo	1.71	175	Pg	Pb	03 43 37.3	-0.6
	0.4nm,0.1s,SNR=8.6						
MVO				Lg	Lg	03 43 59.0	
	4.1nm,0.2s,SNR=8.7						
MVO	Moncorvo	1.71	175	Pg	Pb	03 43 37.3	-0.6
	0.4nm,0.1s,SNR=8.6						
MVO	Moncorvo	1.71	175	ePg	Pg	03 43 39.0	-0.4
MVO				Lg	Lg	03 43 59.0	
	4.1nm,0.2s,SNR=8.7						
MVO				eSg	Sb	03 43 59.6	+0.4
BBSP	Saint Philip	53.76	253	e	P	03 51 53.2	-35

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*INMG **18** 03:43:38.5±2.0, 42°.86N×7°.22W, h19^{km}±4^{km}, ML2.9, Error ellipse: s-maj=3.4km s-min=2.6km az=109.0*

*IGIL **18** 03:43:38.4, 42°.86N×7°.26W, h11^{km}*

*LDG **18** 03:43:38.3±0.1, 42°.86N×7°.26W, h11^{km}, Ml3.0/17, Error ellipse: s-maj=2.8km s-min=1.9km az=121.0*

CSEM 18 03:43:36.8±0.1**, 42°.82N×7°.23W, h10**^{km}**, ML3.0**/11**, 4C-2D, Error ellipse: s-maj=4.2km s-min=2.3km az=124.0, Spain**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EXBE	Becerrea'	0.06	62	Pg	Pg	03 43 40.2	+1.2
	SNR=7.9						
EXBE				Lg	Lg	03 43 41.7	
	SNR=7.9						
EXBE	Becerrea'	0.06	62	Pg	Pg	03 43 40.2	+1.2
	SNR=7.9						
EXBE				Lg	Lg	03 43 41.7	
	SNR=7.9						
EPON	Pontenova	0.51	7	⇑Pg	Pg	03 43 47.3	+0.6
	17nm,0.1s,SNR=18						
EPON				Lg	Lg	03 43 54.0	
	273nm,0.1s,SNR=45						
EPON	Pontenova	0.51	7	Pg	Pb	03 43 47.3	-0.5
	17nm,0.1s,SNR=18						
EPON				Lg	Lg	03 43 54.0	
	273nm,0.1s,SNR=45						
EAGO	Agolada(Pontev	0.63	268	⇑Pg	Pb	03 43 50.0	+0.1
	98nm,0.1s,SNR=18						
EAGO				Lg	Lg	03 43 58.4	
	104nm,0.1s,SNR=7.9						
EAGO	Agolada(Pontev	0.63	268	Pg	Pb	03 43 50.0	+0.1
	98nm,0.1s,SNR=18						
EAGO				Lg	Lg	03 43 58.4	
	104nm,0.1s,SNR=7.9						
PBRG	Braganca	1.08	160	eP	Pn	03 43 58.1	0.0
PBRG				eS	Sb	03 44 12.0	+0.2
PBRG				A	A	03 44 12.2	
	150nm,0.3s						
PBRG	Braganca	1.08	160	Pg	Pn	03 43 58.1	0.0
PBRG				Lg	Lg	03 44 12.0	
	75nm,0.3s						
PBRG	Braganca	1.08	160	eP	Pn	03 43 58.1	0.0
PBRG				eS	Sb	03 44 12.0	+0.2
ELOB	Lobios	1.14	213	Pn	Pb	03 43 58.2	-0.4
	4.8nm,0.1s,SNR=7.9						
ELOB				Pg	Pn	03 43 59.4	+0.5
	24nm,0.1s,SNR=4.0						
ELOB				Lg	Lg	03 44 13.4	
	70nm,0.1s,SNR=16						
ELOB	Lobios	1.14	213	Pn	Pb	03 43 58.2	-0.4
	4.8nm,0.1s,SNR=7.9						
PGAV	Gavieira, Arco	1.15	222	eP	Pn	03 43 59.5	+0.4
PGAV				eS	Sb	03 44 13.6	-0.3
PGAV				A	A	03 44 19.6	
	198nm,0.6s						
PGAV	Gavieira, Arco	1.15	222	eP	Pn	03 43 59.5	+0.4
PGAV				eS	Sb	03 44 13.6	-0.3
PCAB	Cabril	1.26	208	eP	Pn	03 44 00.5	0.0
PCAB				eS	Sb	03 44 16.9	0.0
PCAB				A	A	03 44 19.3	
	184nm,0.3s						
PCAB	Cabril	1.26	208	Pg	Pn	03 44 00.5	0.0
PCAB				Lg	Lg	03 44 16.9	
	92nm,0.3s						
PCAB	Cabril	1.26	208	eP	Pn	03 44 00.5	0.0
PCAB				eS	Sb	03 44 16.9	0.0
EMAZ	Mazaricos	1.29	276	Pn	Pn	03 44 00.3	-0.6
	4.6nm,0.1s,SNR=7.9						
EMAZ				⇑Pg	Pg	03 44 02.0	+0.5
	48nm,0.2s,SNR=18						
EMAZ				Sn	Sb	03 44 16.3	-1.5
	20nm,0.1s,SNR=7.9						
EMAZ				Lg	Lg	03 44 18.9	
	107nm,0.2s,SNR=7.9						
EMAZ	Mazaricos	1.29	276	Pn	Pn	03 44 00.3	-0.6
	4.6nm,0.1s,SNR=7.9						
POLO	Lamas de Olo	1.51	196	ePg	Pg	03 44 06.0	+0.3
POLO				eSg	Sg	03 44 25.2	-0.1
POLO				A	A	03 44 26.5	
	65nm,0.4s						
POLO	Lamas de Olo	1.51	196	ePg	Pg	03 44 06.0	+0.3
POLO				eSg	Sg	03 44 25.2	-0.1
EARI	Arriondas	1.56	71	⇑Pg	Pg	03 44 06.7	+0.1
	24nm,0.2s,SNR=18						
EARI				Lg	Lg	03 44 27.2	
	56nm,0.3s,SNR=9.3						
EARI	Arriondas	1.56	71	Pg	Pg	03 44 06.7	0.0
	24nm,0.2s,SNR=18						
EARI				Lg	Lg	03 44 27.2	
	56nm,0.3s,SNR=9.3						
PVRL	Vila Real	1.59	193	ePg	Pg	03 44 07.6	+0.3
PVRL				eSg	Sg	03 44 28.1	+0.2
PVRL				A	A	03 44 28.3	
	163nm,0.7s						
PVRL	Vila Real	1.59	193	Pg	Pg	03 44 07.6	+0.3
PVRL				Lg	Lg	03 44 28.1	
	82nm,0.7s						
PVRL	Vila Real	1.59	193	ePg	Pg	03 44 07.6	+0.3
PVRL				eSg	Sg	03 44 28.1	+0.2
MVO	Moncorvo	1.67	175	ePg	Pg	03 44 08.7	0.0
MVO				eSg	Sg	03 44 29.6	-0.7
MVO				A	A	03 44 31.0	
	146nm,0.3s						
MVO	Moncorvo	1.67	175	Pg	Pg	03 44 08.8	+0.1
	11nm,0.1s,SNR=31						
MVO				Lg	Lg	03 44 29.6	

	166nm,0.2s,SNR=5.0						
MVO	**Moncorvo**	**1.67**	**175**	Pg	Pg	03 44 08.8	+0.1
	11nm,0.1s,SNR=31						
MVO				*e*Sg	Sg	03 44 29.6	-0.7
PTO	**Porto**	**1.97**	**212**	*e*Pg	Pg	03 44 14.6	0.0
PTO				*e*Sg	Sg	03 44 40.2	+0.1
PTO				A	A	03 44 41.6	
	57nm,0.7s						
PTO	**Porto**	**1.97**	**212**	Pg	Pg	03 44 14.6	0.0
PTO				Lg	Lg	03 44 40.2	
	28nm,0.7s						
PTO	**Porto**	**1.97**	**212**	*e*Pg	Pg	03 44 14.6	0.0
PTO				*e*Sg	Sg	03 44 40.2	+0.1
PVIS	**Viseu**	**2.16**	**193**	*e*Pn	Pn	03 44 13.4	+0.4
PVIS				*e*Sg	Sg	03 44 44.9	-1.4
PVIS				A	A	03 44 47.3	
	88nm,0.3s						
PVIS	**Viseu**	**2.16**	**193**	Pn	Pn	03 44 13.4	+0.4
PVIS				Lg	Lg	03 44 44.9	
	44nm,0.3s						
PVIS	**Viseu**	**2.16**	**193**	*e*Pn	Pn	03 44 13.4	+0.4
PVIS				*e*Sg	Sg	03 44 44.9	-1.4
MTE	**Manteigas**	**2.43**	**186**	*e*Pn	Pn	03 44 16.6	-0.1
MTE	**Manteigas**	**2.43**	**186**	*e*Pg	Pg	03 44 23.1	-0.3
MTE				*e*Sg	Sg	03 44 54.1	-0.9
MTE				A	A	03 44 57.6	
	76nm,0.5s						
MTE	**Manteigas**	**2.43**	**186**	Pn	Pn	03 44 16.6	-0.1
MTE				Pg	Pg	03 44 23.1	-0.3
MTE				Lg	Lg	03 44 54.1	
	38nm,0.5s						
MTE	**Manteigas**	**2.43**	**186**	*e*Pn	Pn	03 44 16.6	-0.1
MTE	**Manteigas**	**2.43**	**186**	*e*Pg	Pg	03 44 23.1	-0.3
MTE				*e*Sg	Sg	03 44 54.1	-0.9
COI	**Coimbra**	**2.76**	**199**	*e*Pg	Pg	03 44 31.5	+1.8
COI				*e*Sg	Sg	03 45 04.5	-0.9
COI				A	A	03 45 13.6	
	53nm,0.4s						
COI	**Coimbra**	**2.76**	**199**	Pg	Pg	03 44 31.5	+1.8
COI				Lg	Lg	03 45 04.5	
	26nm,0.4s						
COI	**Coimbra**	**2.76**	**199**	*e*Pg	Pg	03 44 31.5	+1.8
COI				*e*Sg	Sg	03 45 04.5	-0.9
ELAN	**Lanestosa**	**2.81**	**80**	Pn	Pn	03 44 23.7	+1.8
	3.0nm,0.5s,SNR=17						
ELAN				Pg	Pb	03 44 28.0	+0.8
	4.6nm,0.2s,SNR=17						
ELAN				Lg	Lg	03 45 05.8	
	31nm,0.2s,SNR=12						
ELAN	**Lanestosa**	**2.81**	**80**	Pn	Pn	03 44 23.7	+1.8
	3.0nm,0.5s,SNR=17						
ELAN				Lg	Lg	03 45 05.8	
	31nm,0.2s,SNR=12						
EPLA	**Plasencia**	**2.89**	**162**	Pn	Pn	03 44 23.2	+0.3
	0.8nm,0.1s,SNR=18						
EPLA				Pg	Pg	03 44 30.8	-1.3
	1.7nm,0.1s,SNR=11						
EPLA				Sn	Sn	03 44 56.3	-1.5
	11nm,0.3s,SNR=7.9						
EPLA				Lg	Lg	03 45 07.2	
	52nm,0.4s,SNR=6.7						
EPLA	**Plasencia**	**2.89**	**162**	Pn	Pn	03 44 23.2	+0.3
	0.8nm,0.1s,SNR=18						
PCAS	**Casmilo, Conde**	**2.93**	**199**	*e*Pn	Pn	03 44 23.8	+0.4
PCAS				*e*Sg	Sg	03 45 09.7	-1.1
PCAS				A	A	03 45 13.4	
	49nm,0.5s						
PCAS	**Casmilo, Conde**	**2.93**	**199**	*e*Pn	Pn	03 44 23.8	+0.4
PCAS				*e*Sg	Sg	03 45 09.7	-1.1
PCBR	**Castelo Branco**	**2.99**	**184**	*e*Pn	Pn	03 44 24.4	+0.2
PCBR	**Castelo Branco**	**2.99**	**184**	*e*Pg	Pg	03 44 33.5	-0.5
PCBR				*e*Sn	Sn	03 44 58.5	-1.6
PCBR				*e*Sg	Sg	03 45 11.7	-1.0
PCBR				A	A	03 45 13.9	
	36nm,0.5s						
PCBR	**Castelo Branco**	**2.99**	**184**	Pn	Pn	03 44 24.4	+0.2
PCBR				Pg	Pg	03 44 33.5	-0.5
PCBR				Sn	Sn	03 44 58.5	-1.6
PCBR				Lg	Lg	03 45 11.7	
	18nm,0.5s						
PCBR	**Castelo Branco**	**2.99**	**184**	*e*Pn	Pn	03 44 24.4	+0.2
PCBR	**Castelo Branco**	**2.99**	**184**	*e*Pg	Pg	03 44 33.5	-0.5
PCBR				*e*Sn	Sn	03 44 58.5	-1.6
PCBR				*e*Sg	Sg	03 45 11.7	-1.0
PTOM	**Tomar**	**3.32**	**196**⇓	*e*Pn	Pn	03 44 29.2	+0.4
PTOM				*e*Sn	Sn	03 45 07.9	-0.5
PTOM				*e*Sg	Sg	03 45 21.7	-1.8
PTOM				A	A	03 45 24.3	
	41nm,0.4s						
PTOM	**Tomar**	**3.32**	**196**	Pn	Pn	03 44 29.2	+0.4
PTOM				Sn	Sn	03 45 07.9	-0.5
PTOM				Lg	Lg	03 45 21.7	
	20nm,0.4s						
PTOM	**Tomar**	**3.32**	**196**⇓	*e*Pn	Pn	03 44 29.2	+0.4
PTOM				*e*Sn	Sn	03 45 07.9	-0.5
PTOM				*e*Sg	Sg	03 45 21.7	-1.8
PMRV	**Marv??o**	**3.40**	**182**	*e*Pn	Pn	03 44 30.1	+0.3
PMRV	**Marv??o**	**3.40**	**182**	*e*Pg	Pg	03 44 41.4	-0.4
PMRV				*e*Sg	Sg	03 45 22.9	-2.9
PMRV				A	A	03 45 24.9	
	20nm,0.4s						
PMRV	**Marv??o**	**3.40**	**182**	Pn	Pn	03 44 30.1	+0.3
PMRV				Pg	Pg	03 44 41.4	-0.4
PMRV				Lg	Lg	03 45 22.9	
	20nm,0.4s						
PMRV	**Marv??o**	**3.40**	**182**	*e*Pn	Pn	03 44 30.1	+0.3
PMRV	**Marv??o**	**3.40**	**182**	*e*Pg	Pg	03 44 41.4	-0.4
PMRV				*e*Sg	Sg	03 45 22.9	-2.9
ALMR	**Almeirim**	**3.80**	**196**	*e*P	Pn	03 44 35.7	+0.2
ALMR	**Almeirim**	**3.80**	**196**	*e*Pn	Pn	03 44 35.8	+0.4
ALMR				*e*Sg	Sg	03 45 37.5	-1.4
ALMR				A	A	03 45 40.3	
	54nm,0.5s						
ALMR	**Almeirim**	**3.80**	**196**	P	Pn	03 44 35.7	+0.2
ALMR				Lg	Lg	03 45 37.5	
	27nm,0.5s						
ALMR	**Almeirim**	**3.80**	**196**	P	Pn	03 44 35.7	+0.3
ALMR				*e*Sg	Sg	03 45 37.5	-1.4
PMTG	**Montargil**	**3.83**	**192**	*e*Pn	Pn	03 44 35.7	0.0
PMTG				*e*Sn	Sn	03 45 19.2	-1.6
PMTG				*e*Sg	Sg	03 45 37.7	-1.9
PMTG				A	A	03 45 45.0	
	18nm,0.7s						
PMTG	**Montargil**	**3.83**	**192**	*e*Pn	Pn	03 44 35.7	0.0
PMTG				*e*Sn	Sn	03 45 19.2	-1.6
PMTG				*e*Sg	Sg	03 45 37.7	-1.9
PAB	**San Pablo**	**3.93**	**145**	Pn	Pn	03 44 38.1	+0.8
	0.0nm,0.1s,SNR=7.9						
PAB				Sn	Sn	03 45 22.9	-0.7
	3.9nm,0.3s,SNR=7.9						
PAB				Lg	Lg	03 45 38.7	
	SNR=7.9						
PAB	**San Pablo**	**3.93**	**145**	Pn	Pn	03 44 38.1	+0.8
	SNR=7.9						
PAB				Sn	Sn	03 45 22.9	-0.6
	3.9nm,0.3s,SNR=7.9						
PAB				Lg	Lg	03 45 38.7	
	SNR=7.9						
PESTR	**Estremoz**	**3.96**	**184**	*e*Pn	Pn	03 44 38.1	+0.5
PESTR				*e*Sg	Sg	03 45 41.3	-2.7
PESTR				A	A	03 45 44.6	
	18nm,0.5s						
PESTR	**Estremoz**	**3.96**	**184**	*e*Pn	Pn	03 44 38.1	+0.5
PESTR				*e*Sg	Sg	03 45 41.3	-2.7
ESDC	**Sonseca Array**	**4.00**	**141**	Pn	Pn	03 44 38.6	+0.4
	0.5nm,0.2s,baz=324,slow=12,SNR=8.2						
ESDC				Pg	Pg	03 44 51.6	-1.7
	0.9nm,0.2s,baz=320,slow=18,SNR=13						
ESDC				Lg	Lg	03 45 43.6	
	4.7nm,0.4s,baz=330,slow=29,SNR=19						
ESDC	**Sonseca Array**	**4.00**	**141**	Pn	Pn	03 44 38.6	+0.5
	0.5nm,0.2s,SNR=8.2						
ESDC	**Sonseca Array**	**4.00**	**141**	Pg	Pg	03 44 51.6	-1.8
	0.9nm,0.2s,SNR=13						
ESDC				Lg	Lg	03 45 43.6	
	4.7nm,0.4s,SNR=19						
EBAD	**Badajoz**	**4.07**	**178**	Pn	Pn	03 44 39.8	+0.7
	0.4nm,0.1s,SNR=5.8						
EBAD				Sn	Sn	03 45 25.4	-1.3
	1.9nm,0.3s,SNR=7.9						
EBAD				Lg	Lg	03 45 43.7	
	29nm,0.5s,SNR=8.8						
EBAD	**Badajoz**	**4.07**	**178**	Pn	Pn	03 44 39.8	+0.7
	0.4nm,0.1s,SNR=5.8						
EBAD				Sn	Sn	03 45 25.4	-1.3
	1.9nm,0.3s,SNR=7.9						
EBAD				Lg	Lg	03 45 43.7	
	29nm,0.5s,SNR=8.8						
PMAFR	**Mafra**	**4.17**	**203**	*e*Pn	Pn	03 44 41.0	+0.6
PMAFR				*e*Sg	Sg	03 45 48.5	-2.0
PMAFR				A	A	03 45 59.1	
	21nm,0.6s						
PMAFR	**Mafra**	**4.17**	**203**	Pn	Pn	03 44 40.9	+0.5
	1.1nm,0.1s,SNR=7.9						
PMAFR				Sn	Sn	03 45 28.3	-0.9
	4.6nm,0.3s,SNR=7.9						
PMAFR				Lg	Lg	03 45 48.6	
	45nm,0.4s,SNR=7.9						
PMAFR	**Mafra**	**4.17**	**203**	Pn	Pn	03 44 40.9	+0.5
	1.1nm,0.1s,SNR=7.9						
PMAFR				Sn	Sn	03 45 28.3	-0.9
	4.6nm,0.3s,SNR=7.9						
PMAFR				*e*Sg	Sg	03 45 48.5	-2.0
PMAFR				Lg	Lg	03 45 48.6	
	45nm,0.4s,SNR=7.9						
EALK	**Alkurruntz**	**4.22**	**83**	Pn	Pn	03 44 42.8	+1.6
	0.6nm,0.3s,SNR=7.9						
EALK	**Alkurruntz**	**4.22**	**83**	Pn	Pn	03 44 42.8	+1.6
	0.6nm,0.3s,SNR=7.9						
EVO	**Evora**	**4.33**	**188**	*e*Pn	Pn	03 44 43.9	+1.2
EVO	**Evora**	**4.33**	**188**	Pn	Pn	03 44 43.9	+1.2
EVO	**Evora**	**4.33**	**188**	*e*Pn	Pn	03 44 43.9	+1.2
EORO	**Oroz-Betelu**	**4.35**	**87**	Pn	Pn	03 44 44.9	+1.8
	0.9nm,0.3s,SNR=10						
EORO				Sn	Sn	03 45 35.6	+1.7
	8.7nm,0.4s,SNR=7.9						
EORO	**Oroz-Betelu**	**4.35**	**87**	Pn	Pn	03 44 44.9	+1.8
	0.9nm,0.3s,SNR=10						
EORO				Sn	Sn	03 45 35.6	+1.7
	8.7nm,0.4s,SNR=7.9						
ETOR	**Torete**	**4.36**	**116**	Pn	Pn	03 44 45.2	+2.0
	0.5nm,0.2s,SNR=9.6						
ETOR				Pg	Pg	03 44 58.6	-1.7
	5.4nm,0.3s,SNR=18						
ETOR				Lg	Lg	03 45 53.9	
	20nm,0.8s,SNR=7.8						
ETOR	**Torete**	**4.36**	**116**	Pn	Pn	03 44 45.2	+2.1
	0.5nm,0.2s,SNR=9.6						
IELO	**Elcoad**	**4.41**	**88**	Pn	Pn	03 44 45.7	+1.9
	0.2nm,0.4s,SNR=7.9						
IELO				Sn	Sn	03 45 35.1	-0.2
	4.7nm,0.4s,SNR=7.9						
IELO	**Elcoad**	**4.41**	**88**	Pn	Pn	03 44 45.7	+1.9
	0.2nm,0.4s,SNR=7.9						
IELO				Sn	Sn	03 45 35.1	-0.1
	4.7nm,0.4s,SNR=7.9						
SJPF	**Ste Jean**	**4.42**	**84**	*e*Pn	Pn	03 44 45.0	+1.1
SJPF	**Ste Jean**	**4.42**	**84**	*e*P	Pn	03 44 47.6	+3.7
SJPF				*e*Sn	Sn	03 45 32.6	-2.8
SJPF				*e*Sg	Sg	03 45 57.5	-1.1
	9.9nm,0.5s						
SJPF	**Ste Jean**	**4.42**	**84**	Pn	Pn	03 44 45.0	+1.1
SJPF				Sn	Sn	03 45 32.6	-2.8
SJPF				Lg	Lg	03 45 57.5	
	4.9nm,0.5s						
SJPF	**Ste Jean**	**4.42**	**84**	*e*Pn	Pn	03 44 45.0	+1.1
SJPF	**Ste Jean**	**4.42**	**84**	*e*P	Pn	03 44 47.6	+3.7
SJPF				*e*Sn	Sn	03 45 32.6	-2.8
SJPF				*e*Sg	Sg	03 45 57.5	-1.1
	4.9nm,0.5s						
PBEJ	**Beja**	**4.82**	**186**	*e*Sg	Sg	03 46 09.3	-2.1
PBEJ				A	A	03 46 16.1	
	8.3nm,0.5s						
PBEJ	**Beja**	**4.82**	**186**	Lg	Lg	03 46 09.3	
	4.2nm,0.5s						
PBEJ	**Beja**	**4.82**	**186**	*e*Sg	Sg	03 46 09.3	-2.1
ETSF	**Etsaut**	**4.91**	**87**	*e*Pn	Pn	03 44 51.7	+1.1
ETSF				*e*Sn	Sn	03 45 44.1	-3.4
	3.4nm,0.3s						
ETSF				*e*Sg	Sg	03 46 13.2	-1.1
	5.2nm,0.5s						
ETSF	**Etsaut**	**4.91**	**87**	Pn	Pn	03 44 51.7	+1.1
ETSF				Sn	Sn	03 45 44.1	-3.4
	1.7nm,0.3s						
ETSF				Lg	Lg	03 46 13.2	
	2.6nm,0.5s						
ETSF	**Etsaut**	**4.91**	**87**	*e*Pn	Pn	03 44 51.7	+1.1
ETSF				*e*Sn	Sn	03 45 44.1	-3.4
	1.7nm,0.3s						
ETSF				*e*Sg	Sg	03 46 13.2	-1.1
	2.6nm,0.5s						
ECAB	**El Cabril**	**4.94**	**163**	Pn	Pn	03 44 51.8	+0.7
	2.8nm,0.5s,SNR=7.3						
ECAB				Sn	Sn	03 45 45.9	-2.4
	2.0nm,0.3s,SNR=5.5						
ECAB				Lg	Lg	03 46 12.3	
	25nm,0.6s,SNR=5.0						
ECAB	**El Cabril**	**4.94**	**163**	Pn	Pn	03 44 51.8	+0.7
	2.8nm,0.5s,SNR=7.3						
ECAB				Sn	Sn	03 45 45.9	-2.4
	2.0nm,0.3s,SNR=5.5						
ECAB				Lg	Lg	03 46 12.3	
	25nm,0.6s,SNR=5.0						
MESJ	**Messejana**	**5.04**	**189**	*e*P	Pn	03 44 52.3	0.0
MESJ	**Messejana**	**5.04**	**189**	*e*Pn	Pn	03 44 52.6	+0.2
MESJ				*e*Sg	Sg	03 46 15.0	-3.4
MESJ				A	A	03 46 19.3	
	9.2nm,0.5s						
MESJ	**Messejana**	**5.04**	**189**	Pn	Pn	03 44 52.6	+0.2
MESJ				Lg	Lg	03 46 15.0	
	9.2nm,0.5s						
MESJ	**Messejana**	**5.04**	**189**	*e*Pn	Pn	03 44 52.6	+0.2
MESJ				*e*Sg	Sg	03 46 15.0	-3.4
EMIN	**Mina Concepcio**	**5.07**	**175**	Pn	Pn	03 44 54.3	+1.5
	0.2nm,0.2s,SNR=7.9						
EMIN				Lg	Lg	03 46 14.2	
	21nm,0.6s,SNR=8.6						
EMIN	**Mina Concepcio**	**5.07**	**175**	Pn	Pn	03 44 54.3	+1.5
	0.2nm,0.2s,SNR=7.9						
EMIN				Lg	Lg	03 46 14.2	
	21nm,0.6s,SNR=8.6						
ESAC	**San Caprasio**	**5.14**	**100**	Lg	Lg	03 46 20.0	
	61nm,0.6s,SNR=7.9						
ESAC	**San Caprasio**	**5.14**	**100**	Lg	Lg	03 46 20.0	
	61nm,0.6s,SNR=7.9						
HORN	**Hornachuelos**	**5.20**	**162**	Pn	Pg	03 45 13.5	-2.8
HORN				Sn	Sb	03 46 13.2	+3.1
PCVE	**Castro Verde**	**5.22**	**187**	*e*Sg	Sg	03 46 24.4	-0.1
PCVE	**Castro Verde**	**5.22**	**187**	Lg	Lg	03 46 24.4	
PCVE	**Castro Verde**	**5.22**	**187**	*e*Sg	Sg	03 46 24.4	-0.1
EGRO	**El Granado**	**5.29**	**182**	Sn	Sn	03 45 55.1	-1.7
	0.9nm,0.2s,SNR=7.9						
EGRO				Lg	Lg	03 46 24.8	
	17nm,0.6s,SNR=7.9						
EGRO	**El Granado**	**5.29**	**182**	Sn	Sn	03 45 55.1	-1.7
	0.9nm,0.2s,SNR=7.9						
EGRO				Lg	Lg	03 46 24.8	
	17nm,0.6s,SNR=7.9						
PTEO	**Sao Teotonio**	**5.39**	**193**	*e*Sg	Sg	03 46 23.1	-6.9
PTEO				A	A	03 46 31.5	
	14nm,0.6s						
PTEO	**Sao Teotonio**	**5.39**	**193**	Lg	Lg	03 46 23.1	
	7.1nm,0.6s						
PTEO	**Sao Teotonio**	**5.39**	**193**	*e*Sg	Sg	03 46 23.1	-6.9
PVAQ	**Vaqueiros**	**5.43**	**184**	*e*Pn	Pn	03 44 58.8	+1.1
PVAQ				*e*Sg	Sg	03 46 27.9	-3.1
PVAQ				A	A	03 46 37.4	
	9.1nm,0.6s						
PVAQ	**Vaqueiros**	**5.43**	**184**	Pn	Pn	03 44 58.8	+1.1
PVAQ				Lg	Lg	03 46 27.9	
	9.1nm,0.6s						
PVAQ	**Vaqueiros**	**5.43**	**184**	*e*Pn	Pn	03 44 58.8	+1.1
PVAQ				*e*Sg	Sg	03 46 27.9	-3.1
ECHI	**Chisagues Biel**	**5.47**	**89**	Pn	Pn	03 45 00.2	+1.8
	0.3nm,0.3s,SNR=7.9						
ECHI				Sn	Sn	03 46 00.8	-0.8
	0.4nm,0.3s,SNR=7.9						
ECHI	**Chisagues Biel**	**5.47**	**89**	Pn	Pn	03 45 00.2	+1.7
	0.3nm,0.3s,SNR=7.9						
EPF	**Esparros**	**5.56**	**85**	*e*Pn	Pn	03 45 01.2	+1.5
EPF				*e*Sn	Sn	03 45 59.5	-4.2
	5.6nm,0.5s						
EPF				*e*Sg	Sg	03 46 33.4	-2.0
	3.8nm,0.4s						
EPF	**Esparros**	**5.56**	**85**	Pn	Pn	03 45 01.2	+1.5
EPF				Sn	Sn	03 45 59.5	-4.2
	2.8nm,0.5s						
EPF				Lg	Lg	03 46 33.4	
	1.9nm,0.4s						
EPF	**Esparros**	**5.56**	**85**	Pn	Pn	03 45 01.2	+1.5
EPF				*e*Sn	Sn	03 45 59.5	-4.2
	2.8nm,0.5s						
EPF				*e*Sg	Sg	03 46 33.4	-2.0
	1.9nm,0.4s						
PBDV	**Barranco-do-Ve**	**5.60**	**186**	*e*Sg	Sg	03 46 33.2	-3.4
PBDV				A	A	03 46 45.3	
	12nm,0.7s						
PBDV	**Barranco-do-Ve**	**5.60**	**186**	Lg	Lg	03 46 33.2	
	12nm,0.7s						
PBDV	**Barranco-do-Ve**	**5.60**	**186**	*e*Sg	Sg	03 46 33.2	-3.4
EMOS	**Mosqueruela**	**5.63**	**114**	Pn	Pn	03 45 02.8	+2.1
	0.1nm,0.1s,SNR=6.6						
EMOS				Sn	Sn	03 46 03.1	-2.5
	2.0nm,0.4s,SNR=7.9						
EMOS				Lg	Lg	03 46 34.9	
	21nm,1.0s,SNR=7.9						
EMOS	**Mosqueruela**	**5.63**	**114**	Pn	Pn	03 45 02.8	+2.1
	0.1nm,0.1s,SNR=6.6						
EMOS				Lg	Lg	03 46 34.9	
	21nm,1.0s,SNR=7.9						
ECHE	**Chera**	**5.72**	**122**	Lg	Lg	03 46 37.7	
	7.3nm,0.4s,SNR=7.9						
ECHE	**Chera**	**5.72**	**122**	Lg	Lg	03 46 37.7	
	7.3nm,0.4s,SNR=7.9						
QUIF	**Quistinic**	**5.84**	**28**	*e*Pn	Pn	03 45 01.9	-1.5
QUIF				*e*Sn	Sn	03 46 03.4	-7.0
	3.1nm,0.2s						
QUIF	**Quistinic**	**5.84**	**28**	Pn	Pn	03 45 01.9	-1.5
QUIF				Sn	Sn	03 46 03.4	-7.0
	1.6nm,0.2s						
QUIF	**Quistinic**	**5.84**	**28**	*e*Pn	Pn	03 45 01.9	-1.5
SESP	**Santiago Espad**	**5.90**	**141**	Lg	Lg	03 46 41.4	
	16nm,0.5s,SNR=7.9						
SESP	**Santiago Espad**	**5.90**	**141**	Lg	Lg	03 46 41.4	
	16nm,0.5s,SNR=7.9						
EQES	**Quesada**	**5.94**	**146**	Lg	Lg	03 46 43.0	
	17nm,0.9s,SNR=7.9						
EQES	**Quesada**	**5.94**	**146**	Lg	Lg	03 46 43.0	
	17nm,0.9s,SNR=7.9						
ERTA	**Horta de San J**	**5.95**	**106**	Pn	Pn	03 45 05.9	+1.0
	0.1nm,0.2s,SNR=7.9						
ERTA				Sn	Sn	03 46 09.2	-3.9
	1.1nm,0.4s,SNR=7.9						
ERTA				Lg	Lg	03 46 43.2	
	9.9nm,0.6s,SNR=7.9						
ERTA	**Horta de San J**	**5.95**	**106**	Pn	Pn	03 45 05.9	+1.0
	0.1nm,0.2s,SNR=7.9						
ERTA				Lg	Lg	03 46 43.2	
	9.9nm,0.6s,SNR=7.9						
ETOB	**Tobarra**	**6.00**	**132**	Pn	Pn	03 45 07.5	+1.8
	0.1nm,0.2s,SNR=4.0						
ETOB				Lg	Lg	03 46 46.2	
	52nm,1.3s,SNR=7.9						
ETOB	**Tobarra**	**6.00**	**132**	Pn	Pn	03 45 07.5	+1.7
	0.1nm,0.2s,SNR=4.0						
ETOB				Lg	Lg	03 46 46.2	
	52nm,1.3s,SNR=7.9						
ROSF	**Rostrenen**	**6.17**	**25**	*e*Pn	Pn	03 45 06.4	-1.5
ROSF				*e*Sn	Sn	03 46 11.6	-6.9
	1.4nm,0.3s						
ROSF	**Rostrenen**	**6.17**	**25**	Pn	Pn	03 45 06.4	-1.5
ROSF				Sn	Sn	03 46 11.6	-6.9
	0.7nm,0.3s						
ROSF	**Rostrenen**	**6.17**	**25**	*e*Pn	Pn	03 45 06.4	-1.5
CSOR	**Sort**	**6.19**	**91**	Pn	Pn	03 45 13.6	+5.3
	1.0nm,0.3s,SNR=7.1						
MFF	**Saint Martin d**	**6.30**	**51**	*e*Pn	Pn	03 45 08.5	-1.3
MFF				*e*Sn	Sn	03 46 14.4	-7.4
	4.3nm,0.3s						
MFF	**Saint Martin d**	**6.30**	**51**	Pn	Pn	03 45 08.5	-1.3
MFF				Sn	Sn	03 46 14.4	-7.4
	2.2nm,0.3s						
MFF	**Saint Martin d**	**6.30**	**51**	*e*Pn	Pn	03 45 08.5	-1.3
SGMF	**Saint Gilles**	**6.34**	**30**	*e*Pn	Pn	03 45 08.4	-1.9
SGMF				*e*Sn	Sn	03 46 17.0	-5.8
	1.2nm,0.3s						
SGMF	**Saint Gilles**	**6.34**	**30**	Pn	Pn	03 45 08.4	-1.9
SGMF				Sn	Sn	03 46 17.0	-5.8
	0.6nm,0.3s						
SGMF	**Saint Gilles**	**6.34**	**30**	*e*Pn	Pn	03 45 08.4	-1.9
RJF	**Les Rejaudoux**	**6.77**	**66**	*e*Sn	Sn	03 46 27.3	-6.1
	2.3nm,0.2s						
MTLF	**Montolieu**	**6.94**	**83**	*e*Pn	Pn	03 45 18.1	-0.4
MTLF				*e*Sn	Sn	03 46 32.7	-4.8
	0.7nm,0.3s						
MTLF	**Montolieu**	**6.94**	**83**	*e*Pn	Pn	03 45 18.1	-0.4
CAF	**Calviac**	**7.04**	**69**	*e*Pn	Pn	03 45 18.9	-1.0
CAF				*e*Sn	Sn	03 46 33.9	-6.1
	1.3nm,0.3s						
CAF				*e*Sg	Sg	03 47 19.3	-3.3
	1.5nm,0.2s						
CAF	**Calviac**	**7.04**	**69**	*e*Pn	Pn	03 45 18.9	-1.0
CAF				*e*Sg	Sg	03 47 19.3	-3.3
	0.8nm,0.2s						
GRR	**Gorron**	**7.13**	**37**	*e*Pn	Pn	03 45 19.6	-1.6
GRR				*e*Sn	Sn	03 46 34.1	-8.1
	5.1nm,0.4s						
GRR	**Gorron**	**7.13**	**37**	*e*Pn	Pn	03 45 19.6	-1.6
TCF	**Toulx Ste Croi**	**7.58**	**60**	*e*Pn	Pn	03 45 26.1	-1.2
TCF				*e*Sn	Sn	03 46 44.1	-9.2
	3.1nm,0.3s						
TCF	**Toulx Ste Croi**	**7.58**	**60**	*e*Pn	Pn	03 45 26.1	-1.2
FLN	**La Foliniere**	**7.58**	**36**	*e*Pn	Pn	03 45 26.2	-1.1
	baz=222						
FLN				*e*Sn	Sn	03 46 45.5	-7.7
	1.9nm,0.4s						
FLN	**La Foliniere**	**7.58**	**36**	*e*Pn	Pn	03 45 26.2	-1.1
LDF	**La Druitiere**	**7.62**	**38**	*e*Pn	Pn	03 45 26.9	-0.9
LDF				*e*Sn	Sn	03 46 45.7	-8.4
	3.7nm,0.4s						
LDF	**La Druitiere**	**7.62**	**38**	*e*Pn	Pn	03 45 26.9	-0.9
AVF	**Avril sur Loir**	**8.51**	**59**	*e*Pn	Pn	03 45 38.6	-1.4
AVF	**Avril sur Loir**	**8.51**	**59**	*e*Pn	Pn	03 45 38.6	-1.4
SSF	**Saint Saulge**	**8.71**	**57**	*e*Pn	Pn	03 45 42.7	-0.1
SSF	**Saint Saulge**	**8.71**	**57**	*e*Pn	Pn	03 45 42.7	-0.1
LOR	**Lormes**	**9.02**	**57**	*e*Pn	Pn	03 45 46.6	-0.4
	baz=241						
LOR	**Lormes**	**9.02**	**57**	*e*Pn	Pn	03 45 46.6	-0.4

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*IDC **18** 03:52:48.1±1.7, 2°.46S×140°.59E, h0^{km}, mb3.4/3, mb1 3.8/4, mb1mx3.5/40, mbtmp3.5/4, ML3.9/1, Error ellipse: s-maj=70.0km s-min=26.6km az=97.0*

*DJA **18** 03:52:52.7±2.0, 2°S±29°×14°1E±°, h12^{km}±5^{km}, M4.1/3, MLv4.1/3*

ISC 18 03:52:52.5±1.0**, 2°.5S**±0°.2×**140°.58E**±0°.07**, h27**^{km}±7^{km}**, n14,** σ**0^s.88**/9**, mb3.5**/3**, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**0.13**	**95**	P	**Pb**	**03 52 57.8**	**+0.1**
JAY				S	**Sb**	**03 53 00.8**	**-0.4**
GENI	**Genyem**	**0.42**	**258**	P	**Pb**	**03 53 01.0**	**-0.5**
GENI				S	**Sb**	**03 53 07.9**	**+0.3**
WAMI	**Wamena**	**2.31**	**234**	P	**Pn**	**03 53 29.9**	**+1.1**
RKPI	**Ransiki, Papua**	**6.47**	**279**	P	Sn	03 55 28.2	-11
WRA	**Warramunga Arr**	**18.37**	**199**	P	**P**	**03 57 04.0**	**-1.4**
	0.4nm,0.3s,baz=23,slow=12,SNR=14						
WRA				S	Sn	04 00 19.1	-11
	0.0nm,0.3s,baz=21,slow=22,SNR=3.0						
ASAR	**Alice Springs**	**22.01**	**197**	P	**P**	**03 57 44.8**	**-0.1**
	1.1nm,0.6s,baz=29,slow=9.8,SNR=9.6						
H11S3	**WAKE ISLAND Hy**	**33.11**	**50**	T	T	04 34 20.2	
	baz=232,slow=75,SNR=27						
H11S2	**WAKE ISLAND Hy**	**33.12**	**50**	T	T	04 34 29.8	
	baz=232,slow=75,SNR=11						
H11S1	**WAKE ISLAND Hy**	**33.12**	**50**	T	T	04 34 25.2	
	baz=232,slow=75,SNR=11						
H11N1	**WAKE ISLAND Hy**	**33.99**	**48**	T	T	04 35 28.0	
	baz=229,slow=74						
H11N2	**WAKE ISLAND Hy**	**34.00**	**48**	T	T	04 35 35.4	
	baz=229,slow=74						
H11N3	**WAKE ISLAND Hy**	**34.01**	**48**	T	T	04 35 34.4	
	baz=229						
MKAR	**Makanchi Array**	**70.77**	**322**	P	**P**	**04 04 06.1**	**-0.4**
	0.2nm,0.6s,baz=101,slow=7.8,SNR=2.5						
ILAR	**Eielson Array**	**84.88**	**24**	P	**P**	**04 05 24.9**	**+0.3**
	0.2nm,0.6s,baz=264,slow=5.5,SNR=3.2						

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*ISCJB **18** 04:06:53.4±0.2, 7°.87S±0°.03×74°.15W±0°.04, h153^{km}, mb4.5/161, Error ellipse: s-maj=6.3km s-min=3.7km az=144.7*

*NEIC **18** 04:06:54.0±0.0, 8°.04S×74°.62W, h163^{km}, mb4.5/147,*

ML4.6(ARE), After ARE.
NEIC Felt [II] at Pucallpa.
*IDC **18** 04:06:55.4±0.5, 8°.06S×74°.32W, h158^{km}±4^{km}, mb4.0/25, mb1 4.2/30, mb1mx4.1/46, mbtmp4.5/30, MS2.6/2, Ms1 2.7/2, ms1mx2.4/40, Error ellipse: s-maj=12.9km s-min=8.7km az=66.0*
ISC 18 04:06:54.7±0.4, **8°.10S**±0°.05×**74°.37W**±0°.06, **h153**^{km}±3^{km}, **h154**^{km}**:pP-P, n517,** σ1^{s}**20**/543, **mb4.6**/161, **Peru-Brazil border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	**4.10**	**283**	P	**Pn**	**04 07 56.4**	**-0.4**
	178nm,0.3s,baz=91,slow=5.0,SNR=662						
ATAH				S	**Sn**	**04 08 42.8**	**-2.2**
	45nm,0.3s,baz=313,slow=16,SNR=6.9						
NNA	**Nana**	**4.56**	**212**	P	**Pn**	**04 08 02.9**	**+0.4**
	14nm,0.3s,baz=43,slow=2.8,SNR=43						
NNA				S	**Sn**	**04 08 51.4**	**-4.0**
	36nm,0.3s,baz=332,slow=19,SNR=7.4						
NNA				LR	LR	04 09 35.0	
	comp=Z,60nm,19.9s,baz=244,slow=34						
NNA	**Nana**	**4.56**	**212**	*e*Pn	**Pn**	**04 08 02.0**	**-0.4**
NNA				*e*Sn	**Sn**	**04 08 51.6**	**-3.7**
OTAV	**Otavalo**	**9.23**	**334**	*e*Pn	**Pn**	**04 09 00.9**	**-4.0**
LPAZ	**La Paz**	**10.17**	**144**	P	**Pn**	**04 09 16.9**	**-0.5**
	1.8nm,0.3s,baz=319,slow=7.6,SNR=100						
LPAZ				LR	LR	04 13 21.3	
	comp=Z,44nm,21.8s,baz=280,slow=38						
LPAZ	**La Paz**	**10.17**	**144**	*e*Pn	**Pn**	**04 09 16.7**	**-0.8**
LPAZ				*e*Sn	**Sn**	**04 11 05.0**	**-5.4**
SAML	**Samuel**	**11.10**	**95**	*e*Pn	**Pn**	**04 09 27.1**	**-2.1**
SAML				*e*Sn	Sn	04 11 24.3	-7.7
MNMC	**Minye Minye**	**11.90**	**158**	*e*Pn	**Pn**	**04 09 39.2**	**-0.7**
MNMC				*e*Sn	**Sn**	**04 11 49.2**	**-2.6**
PB11	**IPOC Station P**	**12.46**	**159**	*e*Pn	**Pn**	**04 09 47.4**	**+0.4**
SIV	**San Ignacio**	**15.18**	**122**	P	**Pn**	**04 10 21.3**	**0.0**
	6.4nm,0.3s,baz=305,slow=12,SNR=81						
PTGA	**Pitinga**	**16.11**	**64**	P	**Pn**	**04 10 32.6**	**-0.2**
	1.5nm,0.3s,baz=316,slow=23,SNR=11						
PTGA	**Pitinga**	**16.11**	**64**	*e*Pn	**Pn**	**04 10 30.6**	**-2.2**
	16nm,0.8s						
SDV	**Santo Domingo**	**17.28**	**13**	*e*P	**P**	**04 10 44.6**	**-1.6**
	14nm,0.5s						
GO02	**Mina Guanaco**	**17.57**	**166**	*e*P	**Pn**	**04 10 51.5**	**+1.0**
	9.8nm,0.9s						
PCRV	**Puerto La Cruz**	**20.58**	**28**	P	**P**	**04 11 23.4**	**+1.6**
	5.9nm,0.5s,baz=287,slow=3.3,SNR=4.8						
CPUP	**Villa Florida**	**24.31**	**140**	P	**P**	**04 11 57.9**	**-0.2**
	8.5nm,0.6s,baz=330,slow=9.6,SNR=31						
CPUP	**Villa Florida**	**24.31**	**140**	*e*P	**P**	**04 11 57.7**	**-0.5**
	9.7nm,0.7s						
BDFB	**Brasilia**	**26.84**	**109**	*e*P	**P**	**04 12 23.2**	**+2.0**
	11nm,0.8s						
SJG	**San Juan**	**27.28**	**17**	P	**P**	**04 12 24.8**	**-0.2**
	9.9nm,0.4s,baz=199,slow=3.9,SNR=7.9						
PLCA	**Paso Flores**	**32.67**	**175**	P	**P**	**04 13 13.1**	**+0.7**
	2.0nm,0.6s,baz=13,slow=9.7,SNR=7.8						
PLCA				pP	**pP**	**04 13 46.8**	**+1.8**
	2.2nm,0.9s,baz=27,slow=8.4,SNR=3.4						
PLCA	**Paso Flores**	**32.67**	**175**	*e*P	**P**	**04 13 13.1**	**+0.7**
	27nm,1.9s						
PLCA				pP	**pP**	**04 13 46.8**	**+1.8**
DWPF	**Disney Wildern**	**36.64**	**350**	P	**P**	**04 13 46.6**	**+0.2**
	baz=169						
657A	**Interlachen**	**38.16**	**349**	P	**P**	**04 13 59.4**	**+0.2**
	baz=168						
557A	**Orange Park**	**38.55**	**350**	P	**P**	**04 14 02.0**	**-0.4**
	baz=169						
556A	**Lake Butler**	**38.66**	**349**	P	**P**	**04 14 02.6**	**-0.8**
	baz=168						
554A	**Perry**	**39.01**	**347**	P	**P**	**04 14 05.9**	**-0.4**
	baz=166						
451A	**Vernon**	**40.01**	**345**	P	**P**	**04 14 13.9**	**-0.7**
	baz=163						
353A	**Camilla**	**40.34**	**347**	P	**P**	**04 14 17.1**	**-0.2**
	baz=165						
256A	**Glennville**	**40.50**	**350**	P	**P**	**04 14 19.1**	**+0.5**
	baz=169						
254A	**Abbeville**	**40.72**	**348**	P	**P**	**04 14 20.6**	**+0.2**
	baz=167						
LNIG	**Linares**	**40.91**	**324**	*e*P	**P**	**04 14 22.5**	**+0.3**
	8.2nm,0.9s						
350A	**Dozier**	**40.93**	**344**	P	**P**	**04 14 22.1**	**-0.1**
	baz=162						
253A	**Americus**	**41.01**	**347**	P	**P**	**04 14 22.4**	**-0.4**
	baz=166						
252A	**Lumpkin**	**41.08**	**347**	P	**P**	**04 14 22.9**	**-0.4**
	baz=165						
349A	**Repton**	**41.10**	**343**	P	**P**	**04 14 23.7**	**+0.1**
	baz=161						
155A	**Kite**	**41.22**	**350**	P	**P**	**04 14 24.4**	**-0.1**
	baz=168						
154A	**Montrose**	**41.33**	**349**	P	**P**	**04 14 25.5**	**0.0**
	baz=167						
154A	**Montrose**	**41.33**	**349**	*e*P	**P**	**04 14 26.0**	**+0.6**
	21nm,0.6s						
251A	**Midway**	**41.34**	**346**	P	**P**	**04 14 25.1**	**-0.4**
	baz=164,SNR=5.5						
NHSC	**New Hope**	**41.35**	**353**	P	**P**	**04 14 26.0**	**+0.5**
	baz=172						
NHSC	**New Hope**	**41.35**	**353**	*e*P	**P**	**04 14 26.7**	**+1.2**
	37nm,0.9s						
249A	**Camden**	**41.67**	**344**	P	**P**	**04 14 27.8**	**-0.3**
	baz=161						
152A	**Waverly Hall**	**41.72**	**347**	P	**P**	**04 14 28.4**	**-0.3**
	baz=165						
152A	**Waverly Hall**	**41.72**	**347**	*e*P	**P**	**04 14 28.7**	**+0.1**
	9.3nm,0.9s						
151A	**Opelika**	**41.73**	**346**	P	**P**	**04 14 28.2**	**-0.5**
	baz=164						
Z54A	**Sparta**	**41.89**	**349**	P	**P**	**04 14 29.5**	**-0.5**
	baz=168						
150A	**Eclectic**	**41.98**	**345**	P	**P**	**04 14 30.1**	**-0.5**
	baz=163						
Z53A	**Monticello**	**42.07**	**348**	P	**P**	**04 14 31.1**	**-0.3**
	baz=167						
Z52A	**Williamson**	**42.16**	**347**	P	**P**	**04 14 31.5**	**-0.7**
	baz=166						
GOGA	**Godfrey**	**42.18**	**349**	P	**P**	**04 14 31.8**	**-0.5**
	baz=167						
Y54A	**Tignall**	**42.47**	**350**	P	**P**	**04 14 34.3**	**-0.3**
	baz=168						
Z50A	**Ashland**	**42.57**	**346**	P	**P**	**04 14 34.8**	**-0.6**
	baz=163						
Z50A	**Ashland**	**42.57**	**346**	*e*P	**P**	**04 14 35.3**	**-0.2**
	3.9nm,0.7s						
Y53A	**Monroe**	**42.63**	**349**	P	**P**	**04 14 35.3**	**-0.7**
	baz=167						
LRAL	**Lakeview Retre**	**42.64**	**344**	P	**P**	**04 14 35.1**	**-0.9**
	baz=162						
Z49A	**Columbiana**	**42.66**	**345**	P	**P**	**04 14 35.4**	**-0.8**
	baz=162						
Y51A	**Rockmart**	**42.98**	**347**	P	**P**	**04 14 38.1**	**-0.7**
	baz=165						
Z47A	**Carrollton**	**43.09**	**343**	P	**P**	**04 14 38.6**	**-1.0**
	baz=160						
Z48A	**Northport**	**43.11**	**344**	P	**P**	**04 14 38.9**	**-0.9**
	baz=161						
341A	**Kurthwood**	**43.14**	**336**	P	**P**	**04 14 40.1**	**0.0**
	baz=153						
X53A	**Estanollee**	**43.21**	**349**	P	**P**	**04 14 39.9**	**-0.7**
	baz=167						
Y49A	**Blount Mountai**	**43.27**	**345**	P	**P**	**04 14 40.0**	**-1.0**
	baz=163						
Z46A	**Louisville**	**43.34**	**342**	P	**P**	**04 14 41.0**	**-0.7**
	baz=159						
KMSC	**Kings Mountain**	**43.51**	**352**	P	**P**	**04 14 42.6**	**-0.3**
	baz=170						
833A	**Chaparral WMA,**	**43.54**	**327**	P	**P**	**04 14 44.4**	**+1.1**
	baz=143						
833A	**Chaparral WMA,**	**43.54**	**327**	*e*P	**P**	**04 14 45.0**	**+1.6**
	11nm,0.8s						
X50B	**Fort Payne**	**43.66**	**346**	P	**P**	**04 14 43.0**	**-1.2**
	baz=164						
Y47A	**UCPARC, Winfie**	**43.69**	**344**	P	**P**	**04 14 43.2**	**-1.3**
	baz=161						
W53A	**Cullowhee**	**43.83**	**350**	P	**P**	**04 14 45.1**	**-0.6**
	baz=168						
X49A	**Woodville**	**43.87**	**346**	P	**P**	**04 14 44.6**	**-1.3**
	baz=163						
Y46A	**Houston**	**43.96**	**343**	P	**P**	**04 14 45.4**	**-1.1**
	baz=160						
X48A	**Hartselle**	**43.99**	**345**	P	**P**	**04 14 45.6**	**-1.2**
	baz=162						
NATX	**Nacogdoches**	**44.13**	**335**	P	**P**	**04 14 47.9**	**-0.1**
	baz=151						
W51A	**Cleveland**	**44.13**	**348**	P	**P**	**04 14 47.4**	**-0.6**
	baz=166						
V53A	**Saluda**	**44.26**	**350**	P	**P**	**04 14 48.4**	**-0.6**
	baz=168						
X47A	**Russelville**	**44.27**	**344**	P	**P**	**04 14 47.6**	**-1.4**
	baz=161						
W50A	**Signal Mountai**	**44.29**	**347**	P	**P**	**04 14 48.5**	**-0.7**
	baz=165						
TKL	**Tuckaleechee C**	**44.42**	**349**	P	**P**	**04 14 50.9**	**+0.7**
	1.5nm,0.7s,baz=171,slow=13,SNR=2.5						
TKL	**Tuckaleechee C**	**44.42**	**349**	*e*P	**P**	**04 14 50.9**	**+0.7**
	14nm,1.6s						
W48A	**Pulaski**	**44.61**	**345**	P	**P**	**04 14 50.7**	**-1.1**
	baz=162						
V50A	**Pikevile**	**44.70**	**348**	P	**P**	**04 14 51.5**	**-1.0**
	baz=165						
U53A	**Fall Branch**	**44.90**	**351**	P	**P**	**04 14 53.1**	**-0.9**
	baz=169						
V48A	**Smith Brothers**	**45.16**	**346**	P	**P**	**04 14 55.0**	**-1.1**
	baz=163						
V48A	**Smith Brothers**	**45.16**	**346**	*e*P	**P**	**04 14 55.4**	**-0.7**
	6.6nm,0.8s						
U50A	**Jamestown**	**45.36**	**348**	P	**P**	**04 14 56.6**	**-1.1**
	baz=166						
VWCC	**Virginia Weste**	**45.41**	**354**	*e*P	**P**	**04 14 58.9**	**+0.8**
BLA	**Blacksburg**	**45.43**	**353**	P	**P**	**04 14 58.5**	**+0.3**
	baz=172						
JCT	**Junction City**	**45.47**	**329**	P	**P**	**04 14 59.2**	**+0.6**
	baz=144						
X41A	**Kaden, Bauxite**	**45.72**	**339**	P	**P**	**04 14 59.7**	**-0.8**
	baz=155						
T51A	**Gray**	**45.72**	**349**	P	**P**	**04 14 59.9**	**-0.6**
	baz=167						
WVT	**Waverly**	**45.78**	**345**	P	**P**	**04 15 00.3**	**-0.7**
	baz=162						
X40A	**Basin Creek Fa**	**45.82**	**339**	P	**P**	**04 15 00.1**	**-1.2**
	baz=154						
UALR	**University of**	**45.91**	**339**	*e*P	**P**	**04 15 01.4**	**-0.5**
	8.7nm,0.9s						
IP06	**Yanceyville**	**45.92**	**356**	*e*P	**P**	**04 15 02.8**	**+0.8**
	6.9nm,0.8s						
IP03	**Louisa**	**46.01**	**356**	*e*P	**P**	**04 15 03.6**	**+1.0**
	12nm,0.7s						
IP04	**Greensprings**	**46.08**	**356**	*e*P	**P**	**04 15 04.3**	**+1.0**
	7.8nm,0.8s						
MIAR	**Mount Ida**	**46.15**	**338**	P	**P**	**04 15 02.9**	**-0.9**
	baz=154						
T49A	**Edmonton**	**46.17**	**348**	P	**P**	**04 15 02.5**	**-1.5**
	baz=165						
W41B	**Gary Mavity, V**	**46.23**	**340**	P	**P**	**04 15 03.6**	**-0.9**
	baz=156						
X39A	**Fountain Ranch**	**46.32**	**337**	P	**P**	**04 15 05.1**	**-0.2**
	baz=153,SNR=5.9						
S50A	**Richmond**	**46.50**	**349**	P	**P**	**04 15 05.8**	**-0.7**
	baz=167						
V42A	**Cord**	**46.52**	**341**	P	**P**	**04 15 05.8**	**-0.9**
	baz=157						
W40A	**Ferguson Farm,**	**46.54**	**339**	P	**P**	**04 15 06.1**	**-0.8**
	baz=154						
U44A	**Portageville**	**46.64**	**343**	P	**P**	**04 15 07.3**	**-0.4**
	baz=159						
LTX	**Lajitas**	**46.70**	**324**	*e*P	**P**	**04 15 09.1**	**+0.6**
LTX				*e*PcP	**PcP**	**04 16 39.6**	**+0.1**
TX31	**Lajitas Ar. Si**	**46.70**	**324**	*e*P	**P**	**04 15 09.4**	**+1.0**
TXAR	**Lajitas Array**	**46.70**	**324**	P	**P**	**04 15 09.1**	**+0.6**
	3.1nm,0.7s,baz=149,slow=8.7,SNR=49						
TXAR				PcP	**PcP**	**04 16 39.6**	**+0.1**
	0.7nm,0.8s,baz=142,slow=8.1,SNR=4.1						
V41A	**Mountainview**	**46.76**	**340**	P	**P**	**04 15 07.3**	**-1.3**
	baz=156						
S49A	**Springfield**	**46.77**	**348**	P	**P**	**04 15 07.3**	**-1.4**
	baz=166						
W39A	**Magazine**	**46.80**	**338**	P	**P**	**04 15 08.6**	**-0.3**
	baz=154						
W39A	**Magazine**	**46.80**	**338**	*e*P	**P**	**04 15 09.0**	**+0.1**
	22nm,1.7s						
S47A	**Hartford**	**46.94**	**346**	P	**P**	**04 15 08.3**	**-1.7**
	baz=163						
U42A	**Revenden**	**46.97**	**341**	P	**P**	**04 15 08.7**	**-1.5**
	baz=157						
V40A	**Witts Springs**	**47.00**	**339**	P	**P**	**04 15 09.5**	**-1.1**
	baz=155,SNR=6.3						
V40A	**Witts Springs**	**47.00**	**339**	*e*P	**P**	**04 15 09.9**	**-0.6**
	6.8nm,0.9s						
R50A	**Paris**	**47.07**	**349**	P	**P**	**04 15 10.1**	**-0.8**
	baz=167						
ABTX	**Abilene, Hawle**	**47.12**	**331**	P	**P**	**04 15 12.1**	**+0.6**
	baz=145,SNR=6.7						
ABTX	**Abilene, Hawle**	**47.12**	**331**	*e*P	**P**	**04 15 12.7**	**+1.2**
	21nm,1.0s						
U41A	**Viola**	**47.19**	**341**	P	**P**	**04 15 10.3**	**-1.7**
	baz=156						
S46A	**Don Dixon Farm**	**47.23**	**346**	P	**P**	**04 15 10.2**	**-1.9**
	baz=162						
V39A	**Pettigrew**	**47.33**	**339**	P	**P**	**04 15 12.3**	**-0.8**
	baz=154,SNR=7.4						
U40A	**Yellville**	**47.51**	**340**	P	**P**	**04 15 13.1**	**-1.3**
	baz=155,SNR=5.8						
Q50A	**Georgetown**	**47.55**	**350**	P	**P**	**04 15 13.8**	**-0.9**
	baz=167						
T42A	**Van Buren**	**47.55**	**342**	P	**P**	**04 15 12.8**	**-1.9**
	baz=158						
U39A	**Green Forest**	**47.75**	**339**	P	**P**	**04 15 15.3**	**-1.1**
	baz=154						
MCWV	**Mont Chateau**	**47.79**	**354**	P	**P**	**04 15 16.0**	**-0.5**
	baz=173						
HHAR	**Hobbs**	**47.83**	**339**	*e*P	**P**	**04 15 16.4**	**-0.5**
	4.7nm,0.7s						
MVL	**Millersville**	**47.89**	**358**	*e*P	**P**	**04 15 18.2**	**+1.0**
	10nm,0.9s						
T40A	**Mansfield**	**48.12**	**340**	P	**P**	**04 15 18.0**	**-1.1**
	baz=156						
Q47A	**Bedord North L**	**48.12**	**347**	P	**P**	**04 15 17.5**	**-1.6**
	baz=164						
TUL1	**Leonard**	**48.20**	**337**	P	**P**	**04 15 19.6**	**-0.1**
	baz=151,SNR=5.7						
TUL1	**Leonard**	**48.20**	**337**	*e*P	**P**	**04 15 19.7**	**-0.1**
	11nm,0.7s						
S41A	**Jillco Farms,**	**48.27**	**341**	P	**P**	**04 15 19.5**	**-0.8**
	baz=157						
O56A	**Blue Knob Stat**	**48.28**	**356**	P	**P**	**04 15 20.8**	**+0.4**
	baz=175						
Q45A	**Warren Harvey,**	**48.48**	**346**	P	**P**	**04 15 21.7**	**-0.1**
	baz=162						
S40A	**Lebanon**	**48.52**	**341**	P	**P**	**04 15 19.9**	**-2.2**
	baz=156,SNR=5.1						
CCM	**Cathedral Cave**	**48.54**	**342**	P	**P**	**04 15 20.7**	**-1.6**
	baz=158						
CCM	**Cathedral Cave**	**48.54**	**342**	*e*P	**P**	**04 15 22.9**	**+0.5**
CCM				*e*PcP	**PcP**	**04 16 46.8**	**+1.0**
SSPA	**Standing Stone**	**48.60**	**356**	P	**P**	**04 15 23.0**	**+0.3**
	baz=176						
P47A	**Martinsville**	**48.62**	**348**	P	**P**	**04 15 21.5**	**-1.4**
	baz=165						
R42A	**Luebbering**	**48.62**	**343**	P	**P**	**04 15 21.5**	**-1.4**
	baz=158						
T38A	**Diamond**	**48.63**	**339**	P	**P**	**04 15 21.9**	**-1.1**
	baz=154						
Q44A	**Meyer Farm, Va**	**48.71**	**345**	P	**P**	**04 15 21.9**	**-1.7**
	baz=161						
ACSO	**Alum Creek Sta**	**48.74**	**351**	P	**P**	**04 15 22.3**	**-1.5**
	baz=169						
R41A	**Rosebud**	**48.81**	**342**	P	**P**	**04 15 22.3**	**-2.1**
	baz=158						
S39A	**Bolivar**	**48.88**	**340**	P	**P**	**04 15 23.5**	**-1.4**
	baz=155,SNR=6.5						
S39A	**Bolivar**	**48.88**	**340**	*e*P	**P**	**04 15 23.8**	**-1.1**
S39A				*e*PcP	**PcP**	**04 16 47.0**	**0.0**
P46A	**Rosedale**	**48.95**	**347**	P	**P**	**04 15 23.8**	**-1.5**
	baz=163						
P45A	**Graceland, Par**	**48.98**	**346**	P	**P**	**04 15 24.8**	**-0.8**
	baz=163						
S38A	**Stockton**	**49.02**	**339**	P	**P**	**04 15 24.6**	**-1.4**
	baz=154						
R40A	**Maddies Statio**	**49.08**	**341**	P	**P**	**04 15 24.9**	**-1.5**
	baz=157						
N54A	**Moraine State**	**49.09**	**354**	P	**P**	**04 15 26.0**	**-0.5**
	baz=173						
O48A	**Farmland**	**49.14**	**349**	P	**P**	**04 15 24.7**	**-2.1**
	baz=166						
P44A	**Sand Creek, Wi**	**49.14**	**345**	P	**P**	**04 15 25.5**	**-1.3**
	baz=162						
O47A	**Sheridan**	**49.32**	**348**	P	**P**	**04 15 26.1**	**-2.0**
	baz=165						
R39A	**Chumby, Stover**	**49.35**	**341**	P	**P**	**04 15 27.1**	**-1.3**
	baz=156						
Q41A	**Truxton**	**49.37**	**343**	P	**P**	**04 15 26.9**	**-1.7**
	baz=158,SNR=5.0						
MNTX	**Cornudas Mount**	**49.45**	**325**	P	**P**	**04 15 29.4**	**0.0**
	baz=138,SNR=6.8						
MNTX	**Cornudas Mount**	**49.45**	**325**	*e*P	**P**	**04 15 25.9**	**-3.4**
	5.0nm,1.1s						
R38A	**Fenwick Farm,**	**49.52**	**340**	P	**P**	**04 15 28.5**	**-1.2**
	baz=155						
P43A	**Skaggs, Pawnee**	**49.53**	**345**	P	**P**	**04 15 28.4**	**-1.4**
	baz=160,SNR=6.3						
M54A	**Oil Creek Stat**	**49.60**	**355**	P	**P**	**04 15 29.8**	**-0.5**
	baz=173						
SFIN	**Lafayette**	**49.65**	**347**	P	**P**	**04 15 28.9**	**-1.8**
	baz=164						
SFIN	**Lafayette**	**49.65**	**347**	*e*P	**P**	**04 15 29.0**	**-1.7**
	11nm,0.5s						
Q40A	**Laux Farm, Aux**	**49.66**	**342**	P	**P**	**04 15 29.4**	**-1.4**
	baz=157						
O45A	**Potomac**	**49.66**	**347**	P	**P**	**04 15 28.8**	**-2.0**
	baz=163,SNR=5.5						
P42A	**Winchester**	**49.70**	**344**	P	**P**	**04 15 29.7**	**-1.4**
	baz=159						
MSTX	**Muleshoe**	**49.76**	**329**	P	**P**	**04 15 31.7**	**-0.1**
	baz=142						
MSTX	**Muleshoe**	**49.76**	**329**	*e*P	**P**	**04 15 32.2**	**+0.4**
	9.4nm,1.0s						
AMTX	**Amarillo**	**49.94**	**330**	P	**P**	**04 15 32.4**	**-0.7**
	baz=144						
AMTX	**Amarillo**	**49.94**	**330**	*e*P	**P**	**04 15 33.2**	**+0.1**
	7.1nm,1.0s						
P41A	**Barry, Barry**	**49.99**	**343**	P	**P**	**04 15 31.5**	**-1.7**
	baz=159,SNR=6.1						
Q39A	**Willow Grove F**	**49.99**	**341**	P	**P**	**04 15 31.8**	**-1.5**
	baz=156,SNR=7.0						
N46A	**Monticello**	**50.06**	**348**	P	**P**	**04 15 31.1**	**-2.7**
	baz=164						
BINY	**Binghamton**	**50.08**	**358**	P	**P**	**04 15 34.2**	**+0.3**
	baz=178,SNR=7.8						
BINY	**Binghamton**	**50.08**	**358**	*e*P	**P**	**04 15 34.8**	**+0.9**
	17nm,0.7s						
O43A	**Sugar Creek Fa**	**50.08**	**345**	P	**P**	**04 15 32.2**	**-1.8**
	baz=161						
Q38A	**Cooks Store, C**	**50.12**	**340**	P	**P**	**04 15 33.2**	**-1.1**
	baz=155						
P40A	**Paris**	**50.14**	**342**	P	**P**	**04 15 33.0**	**-1.5**
	baz=157						
O42A	**Bath**	**50.20**	**344**	P	**P**	**04 15 33.3**	**-1.5**
	baz=160						
N44A	**Piper City**	**50.28**	**346**	P	**P**	**04 15 33.5**	**-1.9**
	baz=162						
P39B	**Salisbury**	**50.32**	**342**	P	**P**	**04 15 34.1**	**-1.7**
	baz=156						
HDIL	**Hopedale**	**50.33**	**345**	P	**P**	**04 15 34.2**	**-1.7**
	baz=161						
HDIL	**Hopedale**	**50.33**	**345**	*e*P	**P**	**04 15 34.5**	**-1.3**
	16nm,0.7s						
O41A	**Passleys Farm,**	**50.34**	**344**	P	**P**	**04 15 34.1**	**-1.8**
	baz=159						
O40A	**La Belle**	**50.64**	**343**	P	**P**	**04 15 36.6**	**-1.5**
	baz=158						
N43A	**Stutzman Famil**	**50.67**	**346**	P	**P**	**04 15 36.6**	**-1.7**
	baz=161						
P38A	**Dawn**	**50.70**	**341**	P	**P**	**04 15 37.3**	**-1.3**
	baz=156						
P38A	**Dawn**	**50.70**	**341**	*e*P	**P**	**04 15 37.5**	**-1.1**
	6.5nm,0.6s						
N42A	**Yates City**	**50.78**	**345**	P	**P**	**04 15 37.5**	**-1.7**
	baz=160						
N41A	**Harden Midland**	**50.89**	**344**	P	**P**	**04 15 38.4**	**-1.6**
	baz=159						
P37A	**Lathrop**	**50.93**	**340**	P	**P**	**04 15 39.0**	**-1.4**
	baz=154						
O39A	**Kirksville**	**50.96**	**342**	P	**P**	**04 15 39.0**	**-1.5**
	baz=157						
M43A	**Waltham Townsh**	**51.08**	**346**	P	**P**	**04 15 39.4**	**-2.1**
	baz=162						
O38A	**Galt**	**51.13**	**341**	P	**P**	**04 15 40.1**	**-1.7**
	baz=156						
N40A	**Mertquake, Sal**	**51.26**	**343**	P	**P**	**04 15 40.9**	**-1.9**
	baz=158						
KSU1	**Kansas State U**	**51.30**	**338**	P	**P**	**04 15 42.2**	**-0.9**
	baz=152						
KSU1	**Kansas State U**	**51.30**	**338**	*e*P	**P**	**04 15 40.6**	**-2.6**
	11nm,1.0s						
M41A	**Milan**	**51.43**	**344**	P	**P**	**04 15 42.1**	**-1.9**
	baz=160						
121A	**Cookes Peak, D**	**51.45**	**324**	P	**P**	**04 15 45.5**	**+1.0**
	baz=136						
N39A	**Derby Farms, D**	**51.52**	**342**	P	**P**	**04 15 43.3**	**-1.4**
	baz=157						
N39A	**Derby Farms, D**	**51.52**	**342**	*e*P	**P**	**04 15 43.5**	**-1.2**
	8.3nm,0.4s						
N38A	**Joes South For**	**51.66**	**342**	P	**P**	**04 15 44.1**	**-1.7**
	baz=156						
M40A	**Post Highland**	**51.72**	**344**	P	**P**	**04 15 44.4**	**-1.7**
	baz=158						
N37A	**Lee Faris, Mou**	**51.94**	**341**	P	**P**	**04 15 46.5**	**-1.4**
	baz=155						
N37A	**Lee Faris, Mou**	**51.94**	**341**	*e*P	**P**	**04 15 47.0**	**-0.8**
	12nm,0.8s						
BNM	**Barren Site**	**51.96**	**326**	*e*P	**P**	**04 15 49.4**	**+1.0**
M39A	**Webster**	**51.97**	**343**	P	**P**	**04 15 46.4**	**-1.6**
	baz=158						
L41A	**Preston**	**52.07**	**345**	P	**P**	**04 15 46.4**	**-2.4**
	baz=160						
M38A	**Pleasantville**	**52.22**	**342**	P	**P**	**04 15 48.0**	**-1.9**
	baz=156						
N36A	**Muff Farm, Cla**	**52.24**	**340**	P	**P**	**04 15 48.7**	**-1.4**
	baz=154						
L40A	**Anamosa**	**52.25**	**344**	P	**P**	**04 15 47.0**	**-3.1**
	baz=159						
BWLO	**Walkerton**	**52.33**	**354**	P	**P**	**04 15 49.9**	**-0.8**
	baz=172						
LAZ	**Ladron**	**52.43**	**326**	*e*P	**P**	**04 15 53.1**	**+1.3**
K42A	**Prairie Point,**	**52.45**	**346**	P	**P**	**04 15 49.9**	**-1.6**
	baz=162						
DELO	**Deloro Mine**	**52.45**	**357**	P	**P**	**04 15 50.4**	**-1.1**
	baz=176						
TASL	**Snake Pit, Alb**	**52.46**	**327**	P	**P**	**04 15 52.5**	**+0.4**
	baz=139,SNR=8.5						
ANMO	**Albuquerque**	**52.46**	**327**	P	**P**	**04 15 52.4**	**+0.4**
	5.2nm,0.9s,baz=144,slow=12,SNR=14						
ANMO	**Albuquerque**	**52.46**	**327**	P	**P**	**04 15 52.4**	**+0.4**
	baz=139						
ANMO	**Albuquerque**	**52.46**	**327**	*e*P	**P**	**04 15 48.6**	**-3.4**
	6.7nm,1.0s						
TASM	**ASL Pad, Albuq**	**52.46**	**327**	P	**P**	**04 15 52.3**	**+0.2**
	baz=139,SNR=9.5						
LONY	**Lake Ozonia**	**52.48**	**360**	P	**P**	**04 15 51.0**	**-0.7**
	baz=180						
M37A	**Trindle Farm,**	**52.48**	**341**	P	**P**	**04 15 50.4**	**-1.4**
	baz=156						
K41A	**Shullsburg**	**52.52**	**345**	P	**P**	**04 15 50.3**	**-1.8**
	baz=160						
JFWS	**Jewell Farm**	**52.79**	**345**	P	**P**	**04 15 52.1**	**-2.0**
	baz=160						
L38A	**Oak Wood Farm,**	**52.81**	**343**	P	**P**	**04 15 52.2**	**-2.1**
	baz=157						
K40A	**Colesburg**	**52.82**	**345**	P	**P**	**04 15 52.2**	**-2.1**
	baz=159						
PLVO	**Plevna**	**52.95**	**358**	P	**P**	**04 15 54.9**	**-0.3**
	baz=177						
BANO	**Bancroft**	**52.97**	**357**	P	**P**	**04 15 54.8**	**-0.6**
	baz=176						
K39A	**Oelwein**	**53.03**	**344**	P	**P**	**04 15 53.5**	**-2.3**
	baz=158						
T25A	**Trinidad**	**53.07**	**330**	P	**P**	**04 15 57.4**	**+0.8**
	baz=142,SNR=11						
T25A	**Trinidad**	**53.07**	**330**	*e*P	**P**	**04 15 57.7**	**+1.2**
	12nm,0.9s						
TUC	**Tucson**	**53.11**	**321**	P	**P**	**04 15 57.5**	**+0.7**
	baz=133						
TUC	**Tucson**	**53.11**	**321**	*e*P	**P**	**04 15 57.3**	**+0.6**
	4.9nm,1.0s						
J41A	**Loganville**	**53.16**	**346**	P	**P**	**04 15 54.9**	**-1.9**
	baz=161						
L36A	**Harm Buss Farm**	**53.30**	**341**	P	**P**	**04 15 56.5**	**-1.4**
	baz=155,SNR=5.0						
PKME	**Peaks-Kenny Pk**	**53.32**	**4**	P	**P**	**04 15 57.7**	**-0.1**
	baz=187						
J40A	**Soldiers Grove**	**53.37**	**345**	P	**P**	**04 15 56.0**	**-2.3**
	baz=160						
I42A	**Draeger Farm,**	**53.40**	**347**	P	**P**	**04 15 55.8**	**-2.7**
	baz=162						
KLBO	**Killbear Provi**	**53.47**	**355**	P	**P**	**04 15 57.0**	**-2.0**
	baz=173						
ALFO	**Alfred**	**53.48**	**360**	P	**P**	**04 15 58.7**	**-0.4**
	baz=180						
BUKO	**Buck Lake**	**53.49**	**356**	P	**P**	**04 15 58.5**	**-0.7**
	baz=174						

J39A	**Decorah**	**53.56**	**344**	P	**P**	**04 15 57.8**	**-1.9**
	baz=159,SNR=6.4						
PEMO	**Pembroke**	**53.59**	**357**	P	**P**	**04 15 59.6**	**-0.2**
	baz=177						
H43A	**Windswept, Lux**	**53.71**	**348**	P	**P**	**04 15 59.0**	**-1.7**
	baz=164						
K36A	**Gilmore City**	**53.72**	**342**	P	**P**	**04 15 59.7**	**-1.1**
	baz=155						
KSCO	**Kaye Shedlock’**	**53.72**	**333**	P	**P**	**04 16 00.8**	**-0.3**
	baz=145						
I41A	**Arkdale**	**53.78**	**346**	P	**P**	**04 15 59.4**	**-1.8**
	baz=161						
I40A	**Norwalk**	**53.80**	**345**	P	**P**	**04 15 60.0**	**-1.5**
	baz=160						
BGNE	**Belgrade**	**53.89**	**338**	P	**P**	**04 16 01.8**	**-0.4**
	baz=151						
BGNE	**Belgrade**	**53.89**	**338**	*e*P	**P**	**04 16 02.1**	**-0.1**
	33nm,0.9s						
I39A	**Houston**	**54.00**	**345**	P	**P**	**04 16 01.2**	**-1.6**
	baz=159						
I39A	**Houston**	**54.00**	**345**	*e*P	**P**	**04 16 01.4**	**-1.5**
	10.0nm,0.8s						
SDCO	**Great Sand Dun**	**54.09**	**330**	P	**P**	**04 16 04.6**	**+0.6**
	baz=141,SNR=17						
SDCO	**Great Sand Dun**	**54.09**	**330**	*e*P	**P**	**04 16 04.8**	**+0.8**
	8.3nm,0.9s						
214A	**Organ Pipe Nat**	**54.16**	**319**	P	**P**	**04 16 05.3**	**+1.0**
	baz=131,SNR=8.7						
H41A	**Junction City**	**54.26**	**347**	P	**P**	**04 16 03.2**	**-1.5**
	baz=162						
H40A	**Chili**	**54.44**	**346**	P	**P**	**04 16 04.5**	**-1.5**
	baz=161						
G42A	**Mountain**	**54.58**	**348**	P	**P**	**04 16 05.4**	**-1.6**
	baz=163						
H39A	**Augusta**	**54.71**	**345**	P	**P**	**04 16 06.4**	**-1.6**
	baz=160						
S22A	**4UR Ranch, Cre**	**54.76**	**329**	P	**P**	**04 16 08.1**	**-0.8**
	baz=140,SNR=8.9						
S22A	**4UR Ranch, Cre**	**54.76**	**329**	*e*P	**P**	**04 16 09.5**	**+0.6**
	10nm,1.4s						
H38A	**Maiden Rock**	**54.96**	**344**	P	**P**	**04 16 07.9**	**-1.9**
	baz=158						
G40A	**Rib Lake**	**55.00**	**346**	P	**P**	**04 16 08.3**	**-1.8**
	baz=161						
OGNE	**Ogallala**	**55.05**	**335**	P	**P**	**04 16 09.4**	**-1.2**
	baz=146						
F41A	**Three Lakes**	**55.20**	**347**	P	**P**	**04 16 10.1**	**-1.5**
	baz=162						
MVCO	**Mesa Verde**	**55.24**	**327**	P	**P**	**04 16 11.5**	**-0.8**
	baz=138						
G38A	**Ridgeland**	**55.31**	**345**	P	**P**	**04 16 10.4**	**-1.9**
	baz=159						
H36A	**Jessenland, He**	**55.33**	**343**	P	**P**	**04 16 11.0**	**-1.4**
	baz=157						
E43A	**Lone Tree Farm**	**55.39**	**349**	P	**P**	**04 16 10.8**	**-2.0**
	baz=165						
ECSD	**EROS Data Cent**	**55.40**	**341**	P	**P**	**04 16 11.7**	**-1.2**
	baz=153						
ECSD	**EROS Data Cent**	**55.40**	**341**	*e*P	**P**	**04 16 12.1**	**-0.9**
	2.6nm,0.6s						
F40A	**Park Falls**	**55.60**	**347**	P	**P**	**04 16 12.9**	**-1.4**
	baz=161						
SPMN	**Marine on St.**	**55.61**	**344**	P	**P**	**04 16 13.0**	**-1.5**
	baz=158						
SPMN	**Marine on St.**	**55.61**	**344**	*e*P	**P**	**04 16 13.3**	**-1.1**
	9.3nm,0.8s						
E42A	**Champion**	**55.62**	**349**	P	**P**	**04 16 12.7**	**-1.8**
	baz=164						
WUAZ	**Wupatki**	**55.66**	**324**	P	**P**	**04 16 16.2**	**+1.0**
	baz=134,SNR=9.3						
WUAZ	**Wupatki**	**55.66**	**324**	*e*P	**P**	**04 16 12.8**	**-2.4**
	10nm,0.8s						
H35A	**Sunnyside Ranc**	**55.70**	**342**	P	**P**	**04 16 13.4**	**-1.7**
	baz=156						
ISCO	**Idaho Springs**	**55.74**	**331**	P	**P**	**04 16 16.2**	**+0.4**
	baz=142,SNR=5.5						
ISCO	**Idaho Springs**	**55.74**	**331**	*e*P	**P**	**04 16 16.8**	**+0.9**
	9.7nm,1.6s						
F39A	**Loretta**	**55.78**	**346**	P	**P**	**04 16 14.0**	**-1.6**
	baz=160						
E41A	**Kenton**	**55.86**	**348**	P	**P**	**04 16 14.6**	**-1.6**
	baz=163						
G36A	**St. Michael**	**55.88**	**344**	P	**P**	**04 16 15.0**	**-1.3**
	baz=157						
SMCO	**Snowmass**	**55.93**	**330**	*e*P	**P**	**04 16 18.1**	**+0.8**
	4.6nm,0.8s						
E40A	**Wakefield**	**56.04**	**347**	P	**P**	**04 16 16.3**	**-1.2**
	baz=162,SNR=6.4						
F38A	**Pierce - Schro**	**56.05**	**345**	P	**P**	**04 16 16.2**	**-1.4**
	baz=159						
G35A	**Watkins**	**56.08**	**343**	P	**P**	**04 16 16.3**	**-1.5**
	baz=156						
PV13	**Radium Mtn., P**	**56.12**	**328**	*e*P	**P**	**04 16 19.5**	**+1.0**
	12nm,0.8s						
E39A	**Mellen**	**56.13**	**347**	P	**P**	**04 16 16.8**	**-1.3**
	baz=161						
PV03	**Paradox Valley**	**56.20**	**328**	*e*P	**P**	**04 16 19.8**	**+0.7**
PV12	**Saucer Basin,**	**56.22**	**328**	*e*P	**P**	**04 16 19.9**	**+0.7**
	8.4nm,1.0s						
PV18	**Skein Mesa, Pa**	**56.23**	**328**	*e*P	**P**	**04 16 20.5**	**+1.2**
	22nm,1.8s						
PV11	**David Mesa, Pa**	**56.25**	**328**	*e*P	**P**	**04 16 20.8**	**+1.4**
	11nm,1.2s						
PV16	**Nyswonger Mesa**	**56.28**	**328**	*e*P	**P**	**04 16 20.8**	**+1.2**
	5.4nm,1.0s						
PV17	**East Wray Mesa**	**56.28**	**328**	*e*P	**P**	**04 16 20.3**	**+0.7**
	4.5nm,0.8s						
D41A	**Chassel**	**56.35**	**348**	P	**P**	**04 16 17.7**	**-1.9**
	baz=163						
PV22	**Blue Mesa, Par**	**56.38**	**328**	*e*P	**P**	**04 16 21.2**	**+0.9**
	5.3nm,0.8s						
F36A	**Milaca**	**56.39**	**344**	P	**P**	**04 16 18.5**	**-1.5**
	baz=157						
F36A	**Milaca**	**56.39**	**344**	*e*P	**P**	**04 16 19.0**	**-1.0**
	7.6nm,0.9s						
Y12C	**Blythe**	**56.42**	**320**	P	**P**	**04 16 21.0**	**+0.7**
	baz=130						
Y12C	**Blythe**	**56.42**	**320**	*e*P	**P**	**04 16 21.7**	**+1.3**
	6.6nm,1.0s						
E38A	**The Farm, Brul**	**56.58**	**346**	P	**P**	**04 16 19.7**	**-1.6**
	baz=160						
G33A	**Ortonville**	**56.64**	**341**	P	**P**	**04 16 20.3**	**-1.4**
	baz=154						
F35A	**Swanville**	**56.68**	**343**	P	**P**	**04 16 20.8**	**-1.2**
	baz=156						
N23A	**Red Feather La**	**56.76**	**332**	P	**P**	**04 16 23.1**	**+0.1**
	baz=142						
N23A	**Red Feather La**	**56.76**	**332**	*e*P	**P**	**04 16 23.8**	**+0.8**
	5.4nm,0.9s						
F34A	**Alexandria**	**56.83**	**343**	P	**P**	**04 16 21.7**	**-1.3**
	baz=155						
PHWY	**Pilot Hill**	**56.85**	**332**	*e*P	**P**	**04 16 24.5**	**+0.8**
	7.2nm,0.9s						
E36A	**McGregor**	**56.93**	**345**	P	**P**	**04 16 22.7**	**-1.0**
	baz=158,SNR=6.5						
BC3	**Big Chuckawall**	**56.95**	**319**	P	**P**	**04 16 25.3**	**+1.0**
	baz=129						
IRM	**Iron Mountain**	**57.07**	**320**	P	**P**	**04 16 26.2**	**+1.1**
	baz=130,SNR=11						
MONP2	**Monument Peak**	**57.12**	**318**	P	**P**	**04 16 26.3**	**+0.7**
	baz=128						
C40A	**Isle Royale Na**	**57.28**	**348**	P	**P**	**04 16 24.8**	**-1.4**
	baz=163						
O20A	**White River Ci**	**57.29**	**329**	P	**P**	**04 16 27.0**	**+0.3**
	baz=139,SNR=5.6						
O20A	**White River Ci**	**57.29**	**329**	*e*P	**P**	**04 16 27.1**	**+0.5**
	7.8nm,1.0s						
D37A	**Cotton**	**57.31**	**345**	P	**P**	**04 16 25.0**	**-1.4**
	baz=159						
F32A	**Veblen**	**57.47**	**341**	P	**P**	**04 16 26.5**	**-1.1**
	baz=153						
D36A	**Goodland**	**57.51**	**345**	P	**P**	**04 16 26.5**	**-1.4**
	baz=158						
BELC	**Belle Mtn. Jos**	**57.52**	**319**	P	**P**	**04 16 29.1**	**+0.8**
	baz=129						
KNB	**Kanab**	**57.54**	**324**	*e*P	**P**	**04 16 30.1**	**+1.6**
	6.6nm,1.0s						
C38A	**Sawbill Land.**	**57.56**	**347**	P	**P**	**04 16 26.4**	**-1.8**
	baz=160						
XPFO	**Piæon Flat**	**57.58**	**319**	*e*P	**P**	**04 16 30.0**	**+1.3**
	4.4nm,0.8s						
PFO	**Pinyon Flats O**	**57.58**	**319**	P	**P**	**04 16 29.8**	**+1.0**
	baz=128						
PFO	**Pinyon Flats O**	**57.58**	**319**	*e*P	**P**	**04 16 30.0**	**+1.2**
	4.7nm,0.9s						
FRD	**Ford Ranch, An**	**57.60**	**318**	P	**P**	**04 16 30.0**	**+1.1**
	baz=128						
LDFC	**Landfair**	**57.64**	**321**	*e*P	**P**	**04 16 30.6**	**+1.5**
	8.9nm,0.8s						
SRU	**San Rafael Swe**	**57.72**	**327**	*e*P	**P**	**04 16 30.4**	**+0.8**
	5.4nm,0.9s						
C37A	**Embarrass**	**57.78**	**346**	P	**P**	**04 16 28.3**	**-1.4**
	baz=159						
LCMT	**Little Creek M**	**57.78**	**324**	*e*P	**P**	**04 16 31.4**	**+1.3**
	5.4nm,1.1s						
GMRC	**Granite Mounta**	**57.80**	**320**	P	**P**	**04 16 31.2**	**+0.9**
	baz=130,SNR=7.3						
EYMN	**Ely**	**57.82**	**346**	P	**P**	**04 16 28.3**	**-1.7**
	baz=160						
EYMN	**Ely**	**57.82**	**346**	*e*P	**P**	**04 16 28.8**	**-1.2**
	7.6nm,0.9s						
MTPU	**Mount Pierson**	**57.88**	**325**	*e*P	**P**	**04 16 32.0**	**+1.0**
	14nm,2.0s						
P18A	**Preston Nutter**	**57.95**	**328**	*e*P	**P**	**04 16 32.3**	**+0.9**
	14nm,1.7s						
C36A	**Pine Crest Far**	**57.97**	**345**	P	**P**	**04 16 29.9**	**-1.1**
	baz=159						
P17A	**Butcher Ranch,**	**58.10**	**327**	*e*P	**P**	**04 16 33.1**	**+0.8**
	6.9nm,0.6s						
MSU	**Marysvale**	**58.20**	**326**	*e*P	**P**	**04 16 34.3**	**+1.2**
CCUT	**Cedar City**	**58.22**	**324**	*e*P	**P**	**04 16 34.9**	**+1.6**
	2.5nm,0.9s						
TMUT	**Trail Mountain**	**58.22**	**327**	*e*P	**P**	**04 16 34.4**	**+1.1**
	14nm,1.7s						
HEC	**Hector,Ludlow**	**58.26**	**320**	P	**P**	**04 16 34.9**	**+1.5**
	baz=129						
TUQ	**Turquoise Moun**	**58.38**	**320**	P	**P**	**04 16 35.2**	**+0.9**
	baz=130						
K22A	**Casper**	**58.40**	**333**	P	**P**	**04 16 34.5**	**+0.2**
	baz=142,SNR=5.8						
K22A	**Casper**	**58.40**	**333**	*e*P	**P**	**04 16 35.1**	**+0.8**
	8.2nm,0.8s						
C34A	**RKJ Ranch, Bem**	**58.41**	**344**	P	**P**	**04 16 32.7**	**-1.5**
	baz=156,SNR=5.4						
RSSD	**Black Hills**	**58.50**	**335**	P	**P**	**04 16 35.4**	**+0.4**
	baz=145						
RSSD	**Black Hills**	**58.50**	**335**	*e*P	**P**	**04 16 35.9**	**+0.8**
	6.9nm,0.9s						
SHPR	**Sheep Range**	**58.59**	**322**	*e*P	**P**	**04 16 36.8**	**+1.0**
	2.5nm,0.7s						
B35A	**Bob, Littlefor**	**58.75**	**345**	P	**P**	**04 16 34.7**	**-1.7**
	baz=158,SNR=7.4						
B35A	**Bob, Littlefor**	**58.75**	**345**	*e*P	**P**	**04 16 35.1**	**-1.3**
	6.6nm,0.6s						
GSC	**Goldstone, Bar**	**58.86**	**320**	P	**P**	**04 16 38.8**	**+1.2**
	baz=129						
GSC	**Goldstone, Bar**	**58.86**	**320**	*e*P	**P**	**04 16 38.9**	**+1.4**
	3.8nm,0.7s						
MPU	**Maple Canyon**	**58.97**	**327**	*e*P	**P**	**04 16 39.3**	**+0.9**
	4.5nm,0.9s						
B34A	**Aery, Baudette**	**59.11**	**344**	P	**P**	**04 16 37.6**	**-1.3**
	baz=157						
PSUT	**Pine Spring**	**59.17**	**324**	*e*P	**P**	**04 16 41.1**	**+1.3**
	5.2nm,0.9s						
AGMN	**Agassiz Nation**	**59.27**	**343**	P	**P**	**04 16 38.9**	**-1.1**
	baz=155,SNR=7.4						
AGMN	**Agassiz Nation**	**59.27**	**343**	*e*P	**P**	**04 16 39.3**	**-0.7**
	7.1nm,0.6s						
AGMN				*e*pP	**pP**	**04 17 16.2**	**+0.2**
JLU	**Jordanelle**	**59.29**	**328**	*e*P	**P**	**04 16 41.6**	**+1.0**
	9.7nm,1.1s						
EDW2	**Edwards Air Fo**	**59.36**	**319**	P	**P**	**04 16 41.7**	**+0.7**
	baz=128						
TPNV	**Topopah Spring**	**59.55**	**322**	P	**P**	**04 16 43.5**	**+1.2**
	baz=130,SNR=8.1						
TPNV	**Topopah Spring**	**59.55**	**322**	*e*P	**P**	**04 16 43.7**	**+1.3**
	7.2nm,0.8s						
FURC	**Furnace Creek,**	**59.62**	**321**	P	**P**	**04 16 43.7**	**+1.1**
	baz=130						
TCUT	**Toone Canyon**	**59.64**	**328**	*e*P	**P**	**04 16 43.7**	**+0.7**
	33nm,0.6s						
DUG	**Dugway, Tooele**	**59.73**	**327**	P	**P**	**04 16 44.4**	**+0.9**
	baz=135,SNR=14						
DUG	**Dugway, Tooele**	**59.73**	**327**	*e*P	**P**	**04 16 44.6**	**+1.1**
	12nm,1.0s						
MPMC	**Manual Prospec**	**59.76**	**320**	P	**P**	**04 16 44.3**	**+0.4**
	baz=129,SNR=6.6						
BW06	**Boulder Array**	**59.92**	**331**	P	**P**	**04 16 44.4**	**-0.5**
	baz=139,SNR=6.5						
BW06	**Boulder Array**	**59.92**	**331**	*e*P	**P**	**04 16 44.9**	**0.0**
	11nm,1.5s						
PD31	**Pinedale Array**	**59.92**	**331**	*e*P	**P**	**04 16 44.9**	**0.0**
PDAR	**Pinedale Array**	**59.92**	**331**	P	**P**	**04 16 44.9**	**0.0**
	1.7nm,0.7s,baz=126,slow=7.5,SNR=16						
PDAR	**Pinedale Array**	**59.92**	**331**	*e*P	**P**	**04 16 44.5**	**-0.4**
MDND	**Maddock**	**60.01**	**341**	P	**P**	**04 16 45.0**	**-0.1**
	baz=151						
MDND	**Maddock**	**60.01**	**341**	*e*P	**P**	**04 16 45.7**	**+0.6**
	19nm,1.0s						
R11A	**Troy Canyon, C**	**60.06**	**323**	P	**P**	**04 16 46.8**	**+0.9**
	baz=132,SNR=8.3						
R11A	**Troy Canyon, C**	**60.06**	**323**	*e*P	**P**	**04 16 46.8**	**+0.9**
	3.2nm,0.8s						
HWUT	**Hardware Ranch**	**60.07**	**328**	*e*P	**P**	**04 16 46.1**	**+0.2**
	12nm,0.6s						
ISA	**Isabella, Lake**	**60.15**	**319**	P	**P**	**04 16 47.2**	**+0.8**
	baz=128						
SPUT	**South Promonto**	**60.32**	**328**	*e*P	**P**	**04 16 48.3**	**+0.8**
	14nm,1.3s						
BGU	**Big Grassy Mou**	**60.36**	**327**	*e*P	**P**	**04 16 48.5**	**+0.7**
	5.8nm,1.1s						
CWC	**Cottonwood Cre**	**60.37**	**320**	P	**P**	**04 16 48.5**	**+0.5**
	baz=128						
PKM	**Mcpherson Peak**	**60.57**	**318**	P	**P**	**04 16 50.3**	**+0.9**
	baz=126						
VES	**Vestal, Richgr**	**60.65**	**319**	P	**P**	**04 16 50.7**	**+1.0**
	baz=127						
HVU	**Hansel Valley**	**60.83**	**328**	*e*P	**P**	**04 16 51.3**	**+0.4**
	5.5nm,0.9s						
TIN	**Tinemaha, Big**	**60.85**	**321**	P	**P**	**04 16 52.0**	**+0.9**
	baz=128						
REDW	**Red Top Meadow**	**61.00**	**330**	*e*P	**P**	**04 16 52.6**	**+0.4**
	22nm,1.8s						
SNOW	**Snow King Moun**	**61.02**	**330**	*e*P	**P**	**04 16 53.0**	**+0.6**
	4.6nm,0.6s						
ULM	**Lac du Bonnet**	**61.05**	**344**	P	**P**	**04 16 51.0**	**-1.0**
	6.4nm,0.7s,baz=154,slow=7.5,SNR=8.5						
ULM	**Lac du Bonnet**	**61.05**	**344**	*e*P	**P**	**04 16 51.0**	**-1.0**
	5.9nm,0.6s						
LOHW	**Long Hollow**	**61.06**	**331**	*e*P	**P**	**04 16 53.1**	**+0.5**
	4.4nm,0.8s						
TPAW	**Teton Pass**	**61.14**	**330**	*e*P	**P**	**04 16 53.7**	**+0.6**
	3.2nm,0.7s						
MOOW	**Moose Ponds**	**61.23**	**331**	*e*P	**P**	**04 16 54.1**	**+0.3**
	19nm,1.8s						
FXWY	**Fox Creek**	**61.29**	**330**	*e*P	**P**	**04 16 54.6**	**+0.5**
	2.7nm,0.8s						
IMW	**Indian Meadow**	**61.44**	**331**	*e*P	**P**	**04 16 55.5**	**+0.4**
	6.6nm,0.7s						
FLWY	**Flagg Ranch**	**61.46**	**331**	*e*P	**P**	**04 16 55.9**	**+0.7**
	14nm,0.8s						
LAO	**LASA Array**	**61.48**	**336**	P	**P**	**04 16 55.0**	**-0.2**
	baz=144						
RLMT	**Red Lodge**	**61.57**	**333**	P	**P**	**04 16 56.1**	**+0.2**
	baz=140,SNR=6.0						
RLMT	**Red Lodge**	**61.57**	**333**	*e*P	**P**	**04 16 56.3**	**+0.3**
	6.6nm,1.0s						
H17A	**Grant Village**	**61.63**	**331**	P	**P**	**04 16 57.1**	**+0.7**
	baz=139						
H17A	**Grant Village**	**61.63**	**331**	*e*P	**P**	**04 16 57.9**	**+1.5**
	3.1nm,0.6s						
YPP	**Pitchstone Pla**	**61.65**	**331**	*e*P	**P**	**04 16 57.8**	**+1.2**
	2.9nm,0.9s						
NV11	**Mina Array Sit**	**61.66**	**322**	*e*P	**P**	**04 16 57.8**	**+1.1**
	0.2nm,0.8s						
OMMB	**Old Mammoth Mi**	**61.67**	**321**	*e*P	**P**	**04 16 58.0**	**+1.1**
	8.3nm,0.9s						
MDPB	**Devils Postpil**	**61.73**	**321**	*e*P	**P**	**04 16 58.4**	**+1.1**
	5.8nm,0.7s						
NV01	**Mina Array Sit**	**61.75**	**322**	*e*P	**P**	**04 16 58.0**	**+0.8**
NVAR	**Mina Array Bea**	**61.75**	**322**	P	**P**	**04 16 58.3**	**+1.0**
	2.3nm,0.7s,baz=130,slow=7.5,SNR=16						
YFT	**Old Faithful**	**61.80**	**331**	*e*P	**P**	**04 17 00.3**	**+2.8**
	17nm,1.5s						
YMR	**Madison River**	**62.02**	**331**	*e*P	**P**	**04 17 01.0**	**+2.0**
	15nm,0.8s						
DGMT	**Dagmar**	**62.15**	**338**	P	**P**	**04 16 59.6**	**+0.1**
	baz=146						
YHB	**Horse Butte**	**62.19**	**331**	*e*P	**P**	**04 17 01.7**	**+1.6**
	19nm,0.7s						
GCMT	**Greycliff**	**62.26**	**333**	*e*P	**P**	**04 17 01.0**	**+0.5**
WAKR	**Walker**	**62.49**	**321**	*e*P	**P**	**04 17 03.8**	**+1.6**
	13nm,1.6s						
YERR	**Yerington**	**62.66**	**322**	*e*P	**P**	**04 17 04.7**	**+1.3**
	18nm,1.5s						
HLID	**Hailey**	**62.94**	**328**	P	**P**	**04 17 05.6**	**+0.5**
	baz=135,SNR=7.3						
HLID	**Hailey**	**62.94**	**328**	*e*P	**P**	**04 17 05.8**	**+0.7**
	3.7nm,0.8s						
SCHQ	**Schefferville**	**63.02**	**5**	P	**P**	**04 17 05.0**	**-0.1**
	3.3nm,0.5s,baz=195,slow=5.0,SNR=7.4						
SCHQ				pP	**pP**	**04 17 41.6**	**+0.1**
	4.5nm,0.7s,baz=157,slow=3.3,SNR=4.0						
BOZ	**Bozeman (W)**	**63.02**	**332**	P	**P**	**04 17 05.9**	**+0.4**
	baz=138,SNR=17						
BOZ	**Bozeman (W)**	**63.02**	**332**	*e*P	**P**	**04 17 06.0**	**+0.4**
	6.8nm,0.8s						
MCMT	**McKenzie Canyo**	**63.05**	**330**	*e*P	**P**	**04 17 07.0**	**+1.2**
PAHR	**Pah Rah Range**	**63.20**	**322**	*e*P	**P**	**04 17 08.3**	**+1.5**
	6.5nm,0.9s						
DLMT	**Dillon**	**63.31**	**331**	*e*P	**P**	**04 17 08.3**	**+0.9**
	4.6nm,0.9s						
LRM	**Limekiln Ridge**	**63.58**	**331**	*e*P	**P**	**04 17 09.7**	**+0.4**
MFID	**Camas Ranch**	**63.59**	**327**	*e*P	**P**	**04 17 10.2**	**+0.9**
	22nm,1.0s						
AFDM	**Forest Hills D**	**63.72**	**321**	*e*P	**P**	**04 17 10.8**	**+0.8**
	3.0nm,0.8s						
BEKR	**Beckworth**	**63.89**	**322**	*e*P	**P**	**04 17 11.8**	**+0.4**
	4.2nm,0.8s						
HRY	**Holter Researc**	**63.94**	**332**	*e*P	**P**	**04 17 12.4**	**+0.9**
EGMT	**Eagleton**	**64.01**	**334**	P	**P**	**04 17 12.0**	**+0.1**
	baz=141,SNR=7.5						
EGMT	**Eagleton**	**64.01**	**334**	*e*P	**P**	**04 17 12.5**	**+0.6**
	8.0nm,0.7s						
J08A	**Circle Bar Ran**	**64.99**	**326**	*e*P	**P**	**04 17 19.0**	**+0.6**
	3.1nm,0.6s						
MSO	**Missoula**	**65.02**	**331**	P	**P**	**04 17 19.0**	**+0.5**
	baz=136,SNR=23						
MSO	**Missoula**	**65.02**	**331**	*e*P	**P**	**04 17 19.2**	**+0.7**
	15nm,0.9s						
O03D	**Paynes Creek**	**65.03**	**322**	P	**P**	**04 17 18.5**	**-0.2**
	baz=127						
MOD	**Modoc Plateau**	**65.11**	**324**	*e*P	**P**	**04 17 20.0**	**+0.8**
	19nm,1.6s						
JTMT	**Jette**	**65.84**	**332**	*e*P	**P**	**04 17 25.0**	**+1.2**
	9.0nm,0.8s						
M04C	**Macdoel**	**65.94**	**323**	P	**P**	**04 17 24.8**	**+0.3**
	baz=127,SNR=5.2						
K05A	**Summer Lake**	**65.96**	**324**	*e*P	**P**	**04 17 26.1**	**+1.4**
	13nm,0.9s						
N02D	**Trinity Center**	**65.99**	**322**	P	**P**	**04 17 25.1**	**+0.3**
	baz=126						
F10A	**Beach Ranch, E**	**66.05**	**329**	*e*P	**P**	**04 17 25.9**	**+0.8**
	8.2nm,0.8s						
M02C	**Callahan**	**66.32**	**322**	P	**P**	**04 17 27.2**	**+0.2**
	baz=126						
YBH	**Yreka Blue Hor**	**66.44**	**322**	P	**P**	**04 17 27.1**	**-0.6**
	1.9nm,0.7s,baz=143,slow=6.9,SNR=6.5						
J05D	**Fort Rock, OR**	**66.50**	**324**	P	**P**	**04 17 28.5**	**+0.4**
	baz=128,SNR=5.4						
G08A	**Pilot Rock**	**66.51**	**327**	*e*P	**P**	**04 17 29.0**	**+0.9**
	5.7nm,1.1s						
WALA	**Waterton Lakes**	**66.62**	**333**	*e*P	**P**	**04 17 29.4**	**+0.7**
	6.0nm,0.6s						
PINE	**Pine Mountain**	**66.65**	**325**	*e*P	**P**	**04 17 30.5**	**+1.4**
	11nm,1.0s						
J04D	**Umpqua Nationa**	**66.98**	**324**	P	**P**	**04 17 30.9**	**-0.3**
	baz=128						
I05D	**Terrebonne, OR**	**67.21**	**325**	P	**P**	**04 17 33.3**	**+0.8**
	baz=129						
L02D	**Cave Junction,**	**67.22**	**322**	P	**P**	**04 17 32.8**	**+0.3**
	baz=126						
I04A	**Tendick Farm,**	**67.49**	**324**	P	**P**	**04 17 34.3**	**0.0**
	baz=127						
G05D	**Wamic, OR**	**67.76**	**326**	P	**P**	**04 17 37.0**	**+1.1**
	baz=129						
C09A	**Chrisman Ranch**	**67.82**	**330**	*e*P	**P**	**04 17 38.1**	**+2.0**
	6.6nm,0.6s						
B08A	**Colville Reser**	**68.72**	**330**	*e*P	**P**	**04 17 42.1**	**+0.4**
	5.7nm,0.7s						
D05A	**Enumclaw**	**69.34**	**327**	*e*P	**P**	**04 17 46.5**	**+1.0**
	12nm,0.7s						
B05A	**Bryant**	**70.07**	**328**	P	**P**	**04 17 49.7**	**-0.2**
	baz=129						
A04D	**Lummi Island**	**70.67**	**328**	P	**P**	**04 17 54.3**	**+0.7**
	baz=129						
DBIC	**Dimbokro**	**70.85**	**80**	P	**P**	**04 17 55.2**	**-0.2**
	4.3nm,0.4s,baz=250,slow=6.3,SNR=11						
DBIC	**Dimbokro**	**70.85**	**80**	*e*P	**P**	**04 17 55.2**	**-0.2**
	23nm,1.3s						
KOWA	**Kowa**	**73.28**	**72**	P	**P**	**04 18 09.6**	**-0.4**
	2.6nm,0.4s,baz=268,slow=8.1,SNR=16						
VNA3	**Neumayer Olymp**	**74.38**	**162**	P	**P**	**04 18 16.2**	**+0.9**
VNA1	**Neumayer--Stat**	**74.59**	**162**	P	**P**	**04 18 18.0**	**+1.5**
SNAA	**Sanae**	**76.58**	**162**	P	**P**	**04 18 28.7**	**+0.9**
SNAA	**Sanae**	**76.58**	**162**	P	**P**	**04 18 28.8**	**+0.9**
	4.6nm,0.6s,baz=286,slow=8.4,SNR=40						
SNAA				pP	**pP**	**04 19 07.3**	**+1.7**
	3.4nm,0.7s,baz=286,slow=5.9,SNR=4.4						
SNAA	**Sanae**	**76.58**	**162**	*e*P	**P**	**04 18 28.6**	**+0.7**
	7.0nm,1.0s						
SNAA				*e*pP	**pP**	**04 19 07.3**	**+1.7**
YKA	**Yellowknife Ar**	**76.88**	**342**	P	**P**	**04 18 29.0**	**-0.5**
	2.1nm,0.5s,baz=140,slow=6.1,SNR=14						
YKB5	**Yellowknife Ar**	**76.88**	**342**	*e*P	**P**	**04 18 29.1**	**-0.5**
MDT	**Midelt**	**77.70**	**54**	P	**P**	**04 18 35.2**	**+0.2**
	1.5nm,0.8s,baz=327,slow=2.7,SNR=3.1						
TOA1	**Torodi Ar. Sit**	**78.42**	**75**	*e*P	**P**	**04 18 37.7**	**-1.4**
TOA0	**Torodi Ar. Sit**	**78.43**	**75**	*e*P	**P**	**04 18 38.5**	**-0.6**
TOA0				*e*pP	**pP**	**04 19 14.4**	**-2.5**
TORD	**Torodi Ar. Bea**	**78.43**	**75**	P	**P**	**04 18 37.7**	**-1.4**
	1.8nm,0.6s,baz=274,slow=3.8						
ESDC	**Sonseca Array**	**80.37**	**48**	P	**P**	**04 18 48.4**	**-0.8**
	1.0nm,0.6s,baz=259,slow=5.1,SNR=6.9						
ES19	**SONSECA Array**	**80.43**	**48**	*e*P	**P**	**04 18 49.5**	**-0.1**
QSPA	**South Pole Qui**	**82.01**	**180**	P	**P**	**04 18 57.9**	**+0.5**
	8.6nm,0.7s,baz=175,slow=1.8,SNR=30						
QSPA				pP	**pP**	**04 19 37.2**	**+1.6**
	3.2nm,0.8s,baz=160,slow=6.4,SNR=3.0						
QSPA	**South Pole Qui**	**82.01**	**180**	*e*P	**P**	**04 18 58.6**	**+1.1**
	10nm,0.8s						
QSPA				*e*pP	**pP**	**04 19 37.2**	**+1.6**
SUMG	**Summit**	**83.79**	**10**	*e*P	**P**	**04 19 06.6**	**-0.2**
SUMG				*e*pP	**pP**	**04 19 44.1**	**-1.0**
SUMG	**Summit**	**83.79**	**10**	*i* P	**P**	**04 19 07.2**	**+0.4**
	20nm,0.7s						
SUMG				*i*		04 19 44.4	
TAM	**Tamanrasset**	**83.89**	**66**	*e*P	**P**	**04 19 09.0**	**+0.9**
	2.2nm,0.9s						
TAM				*e*pP	**pP**	**04 19 45.9**	**-0.4**
INK	**Inuvik**	**86.63**	**341**	*e*P	**P**	**04 19 20.6**	**+0.2**
	12nm,1.4s						
EGAK	**Eagle**	**87.67**	**337**	*e*P	**P**	**04 19 25.6**	**+0.1**
	4.6nm,0.9s						
DIV	**Divide**	**88.23**	**333**	*e*P	**P**	**04 19 28.6**	**+0.2**
	8.1nm,0.8s						
SCRK	**Sand Creek**	**88.48**	**336**	*e*P	**P**	**04 19 29.9**	**+0.3**
	6.6nm,0.6s						
PAX	**Paxson**	**88.74**	**334**	*e*P	**P**	**04 19 30.7**	**0.0**
	5.2nm,0.8s						
RIDG	**Independ’e Rid**	**88.75**	**335**	*e*P	**P**	**04 19 31.1**	**+0.4**
	8.2nm,1.0s						
VNDA	**Vanda**	**89.03**	**190**	P	**P**	**04 19 32.5**	**+0.6**
	1.2nm,0.7s,baz=116,slow=2.5,SNR=7.0						
VNDA				pP	**pP**	**04 20 12.4**	**+1.8**
	1.6nm,0.9s,baz=81,slow=0.9,SNR=4.9						
KEST	**Kesra**	**89.61**	**54**	P	**P**	**04 19 35.8**	**+0.4**
	5.4nm,0.8s,baz=61,slow=5.4,SNR=3.6						
KEST	**Kesra**	**89.61**	**54**	*e*P	**P**	**04 19 35.8**	**+0.4**
	65nm,1.9s						
SML	**Sawmill**	**89.62**	**333**	*e*P	**P**	**04 19 34.8**	**0.0**
	14nm,0.6s						
IL1	**Eielson Array**	**89.94**	**336**	*e*P	**P**	**04 19 35.6**	**-0.6**
ILAR	**Eielson Array**	**89.94**	**336**	P	**P**	**04 19 35.9**	**-0.3**
	0.9nm,0.5s,baz=125,slow=3.9,SNR=15						
ILB	**Eielson Array**	**89.94**	**336**	*e*P	**P**	**04 19 36.1**	**-0.1**
CCB	**Clear Creek Bu**	**90.28**	**336**	*e*P	**P**	**04 19 37.7**	**0.0**
	5.2nm,1.2s						
MDM	**Murphy Dome**	**90.55**	**336**	*e*P	**P**	**04 19 37.1**	**-1.9**
	19nm,1.2s						
KDAK	**Kodiak Island**	**90.56**	**328**	*e*P	**P**	**04 19 39.5**	**+0.3**
	9.3nm,0.8s						
SUA	**Susitna One**	**90.62**	**332**	*e*P	**P**	**04 19 40.0**	**+0.5**
	8.0nm,1.2s						
SKT	**Skwentna**	**91.12**	**333**	*e*P	**P**	**04 19 42.0**	**+0.2**
	7.7nm,0.6s						
SKT				*e*pP	**pP**	**04 20 22.2**	**+1.6**
BPAW	**Bear Paw Mtn.**	**91.44**	**335**	*e*P	**P**	**04 19 43.2**	**0.0**
	5.8nm,0.8s						
CAST	**Castle Rocks**	**91.73**	**334**	*e*P	**P**	**04 19 44.1**	**-0.5**
	6.8nm,1.0s						
TOLK	**Toolik Lake Re**	**92.16**	**339**	P	**P**	**04 19 46.8**	**+0.4**
	baz=107						

NB200	**NORSAR Array S**	**94.89**	**29**	*e*P	**P**	**04 19 59.2**	**+0.1**
NOA	**NORSAR Array B**	**94.89**	**29**	P	**P**	**04 19 59.2**	**+0.1**
	2.2nm,0.8s,baz=118,slow=21,SNR=3.6						
HFS	**Hagfors**	**96.00**	**30**	P	**P**	**04 20 03.9**	**-0.3**
	2.7nm,0.9s,baz=259,slow=2.9,SNR=3.1						
BVAR	**Borovoye Array**	**126.87**	**26**	PKP	**PKPdf**	**04 25 40.8**	**+0.6**
	1.0nm,0.7s,baz=336,slow=3.2,SNR=6.6						
BVAR				pPKP	**pPKPdf**	**04 26 22.2**	**+1.4**
	0.3nm,0.3s,baz=352,slow=2.9,SNR=2.6						
STKA	**Stephens Creek**	**127.46**	**219**	PKP	**PKPdf**	**04 25 42.6**	**+0.6**
	4.8nm,0.9s,baz=82,slow=4.6,SNR=6.4						
ZAA1	**Zalesovo Array**	**131.30**	**16**	*e*PKPdf	**PKPdf**	**04 25 49.2**	**+0.6**
ZALV	**Zalesovo Beam**	**131.30**	**16**	PKP	**PKPdf**	**04 25 49.2**	**+0.6**
	1.7nm,0.5s,baz=273,slow=2.5,SNR=8.3						
ZALV				pPKP	**pPKPdf**	**04 26 30.1**	**+1.0**
	2.9nm,0.7s,baz=276,slow=2.8,SNR=3.6						
KURK	**Kurchatov**	**131.98**	**23**	*e*PKPdf	**PKPdf**	**04 25 50.8**	**+0.9**
KURK				pPKP	**pPKPdf**	**04 26 32.0**	**+1.5**
KURBB	**Kurchatov Arra**	**132.02**	**23**	PKP	**PKPdf**	**04 25 50.8**	**+0.8**
	0.7nm,0.5s,baz=321,slow=2.7,SNR=10						
KURBB				pPKP	**pPKPdf**	**04 26 32.0**	**+1.4**
	1.2nm,0.8s,baz=326,slow=2.8,SNR=5.3						
MK32	**Makanchi Array**	**136.58**	**23**	*e*PKPdf	**PKPdf**	**04 25 59.0**	**+0.2**
MKAR	**Makanchi Array**	**136.58**	**23**	PKP	**PKPdf**	**04 25 59.0**	**+0.2**
	1.3nm,0.7s,baz=355,slow=1.8,SNR=10.0						
MKAR				pPKP	**pPKPdf**	**04 26 40.0**	**+0.6**
	0.9nm,0.7s,baz=302,slow=2.3,SNR=5.7						
AS31	**Alice Springs**	**138.04**	**221**	*e*PKPdf	**PKPdf**	**04 26 02.2**	**0.0**
ASAR	**Alice Springs**	**138.04**	**221**	PKhKP	PKPpre	04 25 55.2	
	1.1nm,0.9s,baz=116,slow=2.9,SNR=4.3						
ASAR				PKP	**PKPdf**	**04 26 02.2**	**0.0**
	2.5nm,0.6s,baz=120,slow=2.2,SNR=18						
ASAR				pPKP	pPKPdf	04 26 43.8	+1.0
	1.1nm,0.7s,baz=124,slow=2.5,SNR=4.2						
WR1	**Warramunga Arr**	**140.31**	**225**	*e*PKPdf	**PKPdf**	**04 26 06.7**	**+0.3**
WRA	**Warramunga Arr**	**140.31**	**225**	PKhKP	PKPpre	04 25 59.8	
	0.5nm,0.4s,baz=130,slow=2.7,SNR=16						
WRA				PKP	**PKPdf**	**04 26 06.7**	**+0.3**
	5.5nm,0.6s,baz=121,slow=2.1,SNR=35						
WRA				pPKP	pPKPdf	04 26 47.6	+0.6
	1.6nm,0.6s,baz=127,slow=1.8,SNR=4.3						
SONM	**Songino Array**	**140.40**	**359**	PKhKP	PKPpre	04 25 58.8	
	0.3nm,0.5s,baz=8.7,slow=1.9,SNR=2.7						
KSRS	**Korea Array**	**144.47**	**329**	PKP	**PKPdf**	**04 26 12.4**	**-0.8**
	2.2nm,0.7s,baz=64,slow=3.0,SNR=8.0						
KS15	**Wonju Array Si**	**144.50**	**329**	*e*PKPdf	**PKPdf**	**04 26 12.4**	**-0.9**
KSAR	**Wonju Array Be**	**144.50**	**329**	PKP	**PKPdf**	**04 26 12.4**	**-0.9**
JNU	**Nakatsue**	**145.86**	**320**	PKPbc	**PKPbc**	**04 26 15.2**	**-1.4**
	11nm,1.0s,baz=284,slow=4.2,SNR=3.5						
CM31	**Chiang Mai Arr**	**167.82**	**32**	*e*PKPab	**PKPab**	**04 27 51.7**	**+0.6**
CMAR	**Chiang Mai Arr**	**167.82**	**32**	PKPab	**PKPab**	**04 27 51.7**	**+0.7**
	0.6nm,0.3s,baz=322,slow=6.2,SNR=4.5						

*IDC **18** 04:25:20.9±0.5, 55°.24S×129°.02W, h0^{km}, mb4.1/15, mb1 4.3/15, mb1mx4.2/33, mbtmp4.1/15, MS5.2/25, Ms1 5.2/25, ms1mx5.0/30, Error ellipse: s-maj=22.2km s-min=17.7km az=138.0*

*ISCJB **18** 04:25:24.9±0.3, 55°.87S±0°.06×129°.1W±0°.1, h10^{km}, mb4.8/47, MS5.4/400, Error ellipse: s-maj=11.5km s-min=7.8km az=25.1*

*NEIC **18** 04:25:25.6±0.3, 55°.66S×128°.89W, h10^{km}, mb5.1/41, MS5.5/298, MW5.8, MW5.9, Error ellipse: s-maj=13.8km s-min=9.8km az=131.0, Moment Tensor Solution. s26 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.71; M$_{\theta\theta}$4.19; M$_{\phi\phi}$-3.48; M$_{r\theta}$0.90; M$_{\theta\phi}$4.75; M$_{\phi r}$-0.43; Best double couple: M$_0$6.20000×10^{17} NP1:ϕ_s20.00000°, δ80.00000°, λ-177.00000°. NP2:ϕ_s289.00000°, δ87.00000°, λ-10.00000°. Principal axes: T 6.5100, Plg5.0000°, Azm335.0000°; N -0.6500, Plg80.0000°, Azm94.0000°; P -5.8700, Plg9.0000°, Azm244.0000°;*

*GCMT **18** 04:25:25.6±0.1, 55°.36S×128°.96W, h20^{km}, MW5.9/134, Moment Tensor Solution. s134,c283; s133,c433; Duration: 2^{s}1 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.29±.06; M$_{\theta\theta}$5.84±.07; M$_{\phi\phi}$-4.55±.06; M$_{r\theta}$-0.28±.12; M$_{\theta\phi}$6.46±.06; M$_{\phi r}$0.41±.11; Best double couple: M$_0$8.30900×10^{17} NP1:ϕ_s109.00000°, δ87.00000°, λ-3.00000°. NP2:ϕ_s199.00000°, δ87.00000°, λ-177.00000°. Principal axes: T 8.9350, Plg0.0000°, Azm154.0000°; N -1.2530, Plg86.0000°, Azm250.0000°; P -7.6830, Plg4.0000°, Azm64.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*NEIC **18** 04:25:29.0±0.0, 55°.50S×128°.77W, h15^{km}, Moment Tensor Solution. s22 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.29; M$_{\theta\theta}$5.15; M$_{\phi\phi}$-3.85; M$_{r\theta}$1.25; M$_{\theta\phi}$6.92; M$_{\phi r}$-1.20; Best double couple: M$_0$8.50000×10^{17} NP1:ϕ_s286.00000°, δ82.00000°, λ-12.00000°. NP2:ϕ_s17.00000°, δ78.00000°, λ-172.00000°. Principal axes: T 8.9300, Plg3.0000°, Azm331.0000°; N -0.9200, Plg75.0000°, Azm73.0000°; P -8.0100, Plg13.0000°, Azm241.0000°;*

ISC 18 04:25:25.9±0.3, **55°.67S**±0°.10×**128°.89W**±0°.08, **h10^{km}**, **n528**, σ**2^s.87**/143, **mb5.0**/46, **MS5.5**/400, **4C-1D**, **Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SBA	**Scott Base**	**30.99**	**202**	*e*P	**P**	**04 31 42.6**	**-0.1**
	38nm,1.3s						
SBA				LR	LR		
	comp=Z,3μm,21.0s						
RPN	**Rapa Nui**	**31.84**	**34**	LR	LR	04 41 32.2	
	comp=Z,2μm,20.4s,baz=202,slow=31						
VNDA	**Vanda**	**32.01**	**203**	P	**P**	**04 31 52.5**	**+0.7**
	comp=Z,0.7nm,0.8s,baz=91,slow=3.6,SNR=2.3						
VNDA				LR	LR	04 40 46.9	
	comp=Z,2μm,21.9s,baz=82,slow=29						
VNDA	**Vanda**	**32.01**	**203**	*e*P	**P**	**04 31 52.5**	**+0.7**
VNDA				*e*pP	**P**	**04 31 53.2**	**+1.5**
PMSA	**Palmer Station**	**32.03**	**133**	LR	LR	04 41 25.5	
	comp=Z,4μm,18.9s,baz=252,slow=30						
RKT	**Rikitea**	**32.82**	**350**	*e*S	S	04 37 03.2	-13
	comp=Z,1μm,30.0s						
RKT				*e*LQ	LQ	04 38 55.8	
	comp=Z,5μm,33.2s						
RKT				*e*LR	LR	04 40 19.7	
	comp=Z,13μm,29.8s,baz=170						
RKT	**Rikitea**	**32.82**	**350**	*e*T	T	05 05 39.5	
	comp=Z,90nm,0.3s						
QSPA	**South Pole Qui**	**34.50**	**180**	P	**P**	**04 32 14.5**	**+0.6**
	comp=Z,8.0nm,0.9s,baz=94,slow=6.1,SNR=11						
QSPA				LR	LR	04 45 10.6	
	comp=Z,7μm,18.6s,baz=86,slow=34						
QSPA	**South Pole Qui**	**34.50**	**180**	*e*P	**P**	**04 32 13.5**	**-0.4**
	comp=Z,31nm,1.0s						
TBI	**Tubuai**	**35.68**	**326**	*e*S	S	04 37 51.3	-9.3
	comp=Z,2μm,30.0s						
TBI				*e*LR	LR	04 41 32.4	
	comp=Z,19μm,29.5s,baz=165						
TBI	**Tubuai**	**35.68**	**326**	*e*T	T	05 09 14.2	
	comp=Z,254nm,0.3s						
BFZ	**Birch Farm**	**38.46**	**269**	PFAKE		04 33 00.0	+12
BFZ				LR	LR		
	comp=Z,8μm,22.0s						
MQZ	**McQueen's Vall**	**38.52**	**263**	PFAKE		04 33 00.0	+12
MQZ				LR	LR		
	comp=Z,8μm,20.0s						
SNZO	**South Karori**	**38.91**	**267**	PFAKE		04 33 00.0	+8.6
SNZO				LR	LR		
	comp=Z,7μm,19.0s						
OXZ	**Oxford**	**39.11**	**263**	PFAKE		04 33 00.0	+6.9
OXZ				LR	LR		
	comp=Z,12μm,20.0s						
BKZ	**Black Stump Fm**	**39.34**	**271**	PFAKE		04 33 10.0	+15
BKZ				LR	LR		
	comp=Z,9μm,18.0s						
RPZ	**Rata Peaks**	**39.42**	**262**	PFAKE		04 33 10.0	+14
RPZ				LR	LR		
	comp=Z,13μm,20.0s						
MXZ	**Matakaoa Point**	**39.43**	**275**	PFAKE		04 33 10.0	+14
MXZ				LR	LR		
	comp=Z,8μm,19.0s						
URZ	**Urewera**	**39.62**	**273**	PFAKE		04 33 10.0	+13
URZ				LR	LR		
	comp=Z,9μm,20.0s						
THZ	**Tophouse**	**39.63**	**265**	PFAKE		04 33 10.0	+12
THZ				LR	LR		
	comp=Z,9μm,19.0s						
WKZ	**Wanaka**	**39.85**	**259**	PFAKE		04 33 10.0	+11
WKZ				LR	LR		
	comp=Z,12μm,21.0s						
PLCA	**Paso Flores**	**40.40**	**94**	LR	LR	04 46 01.3	
	comp=Z,2μm,20.1s,baz=250,slow=31						
EFI	**East Falkland**	**40.48**	**115**	PFAKE		04 33 20.0	+16
EFI				LR	LR		
	comp=Z,4μm,19.0s						
TVO	**Taravao**	**40.87**	**330**	*e*T	T	05 15 43.2	
	comp=Z,3.3nm,0.3s						
PAE	**Paea**	**41.08**	**329**	*e*T	T	05 15 58.9	
	comp=Z,2.7nm,0.4s						
TIAR	**Tiarei**	**41.11**	**330**	*e*T	T	05 16 01.0	
	comp=Z,3.2nm,0.3s						
PPT2	**Papeete2**	**41.14**	**329**	*e*S	S	04 39 14.4	-8.9
	comp=Z,3μm,26.2s						
PPT2				*e*LQ	LQ	04 42 21.6	
	comp=Z,3μm,24.0s						
PPT2				*e*LR	LR	04 44 10.7	
	comp=Z,23μm,26.5s,baz=166						
PPT2	**Papeete2**	**41.14**	**329**	*e*T	T	05 15 53.0	
	comp=Z,3.6nm,0.3s						
PPT	**Papeete**	**41.16**	**329**	LR	LR	04 45 24.7	
	comp=Z,6μm,21.3s,baz=154,slow=30						
RAR	**Rarotonga**	**41.40**	**314**	LR	LR	04 45 04.8	
	comp=Z,3μm,21.6s,baz=148,slow=29						
RAR	**Rarotonga**	**41.40**	**314**	PFAKE		04 33 20.0	+7.8
RAR				LR	LR		
	comp=Z,8μm,22.0s						
VAH	**Vaihoa**	**42.85**	**333**	*e*T	T	05 18 05.9	
	comp=Z,414nm,0.3s						
GO05	**HualaæØ**	**43.60**	**86**	PFAKE		04 33 40.0	+10
GO05				LR	LR		
	comp=Z,1μm,19.0s						
PEL	**Peldehue**	**45.67**	**86**	*e*P	**P**	**04 33 49.8**	**+3.2**
	comp=Z,110nm,1.8s						
PEL				LR	LR		
	comp=Z,2μm,19.0s						
VNA3	**Neumayer Olymp**	**46.35**	**157**	P	**P**	**04 33 47.5**	**-4.0**
TRQA	**Tornquist**	**47.06**	**97**	*e*P	**P**	**04 33 58.4**	**+1.0**
	comp=Z,21nm,1.1s						
TRQA				LR	LR		
	comp=Z,2μm,19.0s						
VNA1	**Neumayer--Stat**	**47.10**	**157**	P	**P**	**04 33 55.9**	**-1.3**
SNAA	**Sanae**	**47.45**	**160**	P	**P**	**04 33 59.1**	**-1.0**
SNAA	**Sanae**	**47.45**	**160**	P	**P**	**04 33 59.1**	**-1.0**
	comp=Z,4.5nm,0.8s,baz=214,slow=8.8,SNR=9.0						
SNAA				LR	LR	04 53 02.8	
	comp=Z,4μm,20.5s,baz=222,slow=35						
SNAA	**Sanae**	**47.45**	**160**	*e*P	**P**	**04 34 01.1**	**+1.0**
	comp=Z,16nm,1.1s						
SNAA				LR	LR		
	comp=Z,4μm,21.0s						
TAOE	**Nuku Hiva Isla**	**47.54**	**345**	*e*S	S	04 40 46.1	-10
	comp=Z,6μm,24.7s						
TAOE				*e*LQ	LQ	04 45 01.7	
	comp=Z,5μm,27.8s						
TAOE				*e*LR	LR	04 47 09.2	
	comp=Z,15μm,25.8s,baz=182						
TAOE	**Nuku Hiva Isla**	**47.54**	**345**	PFAKE		04 34 10.0	+8.6
TAOE				LR	LR		
	comp=Z,6μm,22.0s						
LCO	**Las Campanas**	**48.77**	**82**	PFAKE		04 34 20.0	+8.9
LCO				LR	LR		
	comp=Z,900nm,19.0s						
HOPE	**Hope Point**	**49.19**	**129**	PFAKE		04 34 30.0	+16
HOPE				LR	LR		
	comp=Z,3μm,20.0s						
GO03	**Copiap**	**50.12**	**81**	PFAKE		04 34 30.0	+8.9
GO03				LR	LR		
	comp=Z,600nm,19.0s						
CASY	**Casey**	**50.43**	**207**	*e*P	**P**	**04 34 22.7**	**-0.2**
	comp=Z,59nm,1.6s						
CASY				LR	LR		
	comp=Z,2μm,18.0s						
GO02	**Mina Guanaco**	**52.37**	**80**	*e*P	**P**	**04 34 38.1**	**-0.2**
	comp=Z,31nm,1.4s						
GO02				LR	LR		
	comp=Z,800nm,22.0s						
AFI	**Afiamalu**	**53.13**	**304**	LR	LR	04 50 38.8	
	comp=Z,2μm,20.1s,baz=144,slow=29						
AFI	**Afiamalu**	**53.13**	**304**	*e*P	**P**	**04 34 43.4**	**-0.4**
	comp=Z,165nm,1.5s						
PB04	**IPOC Station P**	**54.30**	**77**	PFAKE		04 35 00.0	+7.6
PB04				LR	LR		
	comp=Z,700nm,19.0s						
LHI	**Lord Howe Isla**	**54.70**	**265**	PFAKE		04 35 10.0	+15
LHI				LR	LR		
	comp=Z,3μm,19.0s						
SYO	**Syowa Base**	**55.34**	**175**⇑	*e*P	**P**	**04 35 00.0**	**+0.9**
SYO	**Syowa Base**	**55.34**	**175**⇓	*e*sP	sP	04 35 08.6	+5.1
PB01	**IPOC Station P**	**55.70**	**77**	PFAKE		04 35 10.0	+7.5
PB01				LR	LR		
	comp=Z,700nm,20.0s						
PB11	**IPOC Station P**	**56.64**	**76**	*e*P	**P**	**04 35 06.4**	**-2.8**
	comp=Z,33nm,1.1s						
PB11				LR	LR		
	comp=Z,900nm,19.0s						
MAW	**Mawson**	**56.73**	**185**	P	**P**	**04 35 08.3**	**-0.7**
	comp=Z,1.8nm,0.9s,baz=187,slow=12,SNR=2.7						
MAW				LR	LR	04 57 25.2	
	comp=Z,2μm,20.7s,baz=164,slow=34						
MAW	**Mawson**	**56.73**	**185**	*e*P	**P**	**04 35 13.2**	**+4.2**
	comp=Z,2.5nm,0.9s						
MNMC	**Minye Minye**	**57.19**	**75**	*e*P	**P**	**04 35 11.3**	**-2.0**
	comp=Z,30nm,0.9s						
MNMC				LR	LR		
	comp=Z,800nm,19.0s						
CAN	**Canberra**	**57.46**	**254**	PFAKE		04 35 30.0	+15
CAN				LR	LR		
	comp=Z,3μm,20.0s						
DZM	**Mont Dzumac**	**57.81**	**278**	P	**P**	**04 35 12.8**	**-4.6**
	comp=Z,5.0nm,0.9s,baz=143,slow=20,SNR=2.4						
DZM				LR	LR	04 54 11.2	
	comp=Z,1μm,20.5s,baz=138,slow=30						
DZM	**Mont Dzumac**	**57.81**	**278**	*e*S	**S**	**04 43 12.9**	**-3.8**
	comp=Z,2μm,25.4s						
DZM				*e*LQ	LQ	04 49 42.4	
	comp=Z,8μm,24.3s						
DZM				*e*LR	LR	04 52 06.7	
	comp=Z,6μm,29.0s						
DZM	**Mont Dzumac**	**57.81**	**278**	*e*P	**P**	**04 35 12.8**	**-4.6**
	comp=Z,39nm,1.4s						
CPUP	**Villa Florida**	**58.38**	**91**	P	**P**	**04 35 19.1**	**-2.2**
	comp=Z,3.0nm,0.9s,baz=223,slow=6.2,SNR=4.3						
CPUP				LR	LR	04 57 16.9	
	comp=Z,2μm,18.6s,baz=225,slow=33						
CPUP	**Villa Florida**	**58.38**	**91**	*e*P	**P**	**04 35 19.1**	**-2.2**
	comp=Z,21nm,1.4s						
NNA	**Nana**	**59.27**	**64**	PFAKE		04 35 40.0	+12
NNA				LR	LR		
	comp=Z,300nm,19.0s						
ARMA	**Armidale**	**59.70**	**260**	*e*P	P	04 35 37.5	+7.0
	comp=Z,23nm,1.2s						
ARMA				LR	LR		
	comp=Z,6μm,19.0s						
LPAZ	**La Paz**	**60.30**	**75**	P	**P**	**04 35 32.2**	**-3.2**
	comp=Z,6.8nm,1.0s,baz=107,slow=4.6,SNR=5.6						
LPAZ				LR	LR	04 54 19.8	
	comp=Z,482nm,21.1s,baz=222,slow=29						
LPAZ	**La Paz**	**60.30**	**75**	*e*P	**P**	**04 35 32.6**	**-2.7**
	comp=Z,32nm,1.1s						
XMAS	**Kiritimati**	**62.09**	**327**	PFAKE		04 36 00.0	+13
XMAS				LR	LR		
	comp=Z,6μm,22.0s						
EIDS	**Eidsvold**	**63.90**	**263**	PFAKE		04 36 10.0	+11
EIDS				LR	LR		
	comp=Z,3μm,19.0s						
STKA	**Stephens Creek**	**64.08**	**251**	P	**P**	**04 35 58.8**	**-1.1**
	comp=Z,2.3nm,0.9s,baz=130,slow=11,SNR=2.0						
STKA	**Stephens Creek**	**64.08**	**251**	*e*P	**P**	**04 35 58.8**	**-1.1**
	comp=Z,10nm,1.8s						
SAML	**Samuel**	**69.05**	**75**	*e*P	P	04 36 26.9	-4.9
	comp=Z,11nm,0.8s						
SAML				LR	LR		
	comp=Z,500nm,20.0s						
OTAV	**Otavalo**	**69.06**	**56**	*e*P	**P**	**04 36 32.0**	**-0.3**
	comp=Z,21nm,1.4s						
OTAV				LR	LR		
	comp=Z,800nm,20.0s						
CTAO	**Charters Tower**	**70.78**	**262**	*e*P	**P**	**04 36 40.8**	**-1.6**
	comp=Z,72nm,0.9s						
CTAO				LR	LR		
	comp=Z,2μm,18.0s						
HNR	**Honiara**	**71.66**	**280**	LR	LR	05 04 18.0	
	comp=Z,466nm,18.4s,baz=140,slow=33						
BDFB	**Brasilia**	**72.10**	**92**	PFAKE		04 37 00.0	+9.5
BDFB				LR	LR		
	comp=Z,3μm,22.0s						
AS01	**Alice Springs**	**74.68**	**251**	*e*P	**P**	**04 37 02.5**	**-3.0**
AS31	**Alice Springs**	**74.70**	**251**	*e*P	**P**	**04 37 05.7**	**-0.1**
	comp=Z,3.1nm,0.9s						
ASAR	**Alice Springs**	**74.70**	**251**	P	**P**	**04 37 02.0**	**-3.7**
	comp=Z,7.0nm,0.8s,baz=143,slow=6.0,SNR=22						
ASAR				LR	LR	05 05 57.8	
	comp=Z,4μm,19.4s,baz=144,slow=33						
H01W1	**Cape Leeuwin H**	**75.04**	**229**	T	T	06 00 38.1	
	baz=147,slow=76,SNR=409						
ROSC	**El Rosal**	**75.04**	**57**	P	P	04 37 03.0	-5.1
	comp=Z,2.5nm,0.3s,baz=224,slow=17,SNR=2.1						
ROSC				LR	LR	05 03 34.6	
	comp=Z,711nm,21.0s,baz=233,slow=31						
ROSC	**El Rosal**	**75.04**	**57**	*e*P	**P**	**04 37 06.5**	**-1.6**
	comp=Z,13nm,1.0s						
H01W2	**Cape Leeuwin H**	**75.04**	**229**	T	T	06 00 38.4	
	baz=147,slow=76,SNR=336						
H01W3	**Cape Leeuwin H**	**75.05**	**229**	T	T	06 00 39.3	
	baz=147,slow=76,SNR=373						
JTS	**JuntasAbangare**	**75.21**	**45**	LR	LR	05 02 20.8	
	comp=Z,986nm,20.6s,baz=258,slow=30						
HELC	**Santa Helena**	**75.65**	**55**	*e*P	**P**	**04 37 10.5**	**-1.0**
	comp=Z,40nm,1.4s						
RUSC	**La Rusia**	**76.55**	**58**	*e*P	**P**	**04 37 17.8**	**+1.0**
	comp=Z,7.8nm,1.3s						
WR0	**Warramunga Arr**	**77.37**	**253**	PFAKE		04 37 30.0	+9.1
WR0				LR	LR		
	comp=Z,4μm,19.0s						
WR9	**Warramunga Arr**	**77.38**	**253**	PFAKE		04 37 30.0	+9.0
WR9				LR	LR		
	comp=Z,3μm,19.0s						
WR8	**Warramunga Arr**	**77.39**	**253**	PFAKE		04 37 30.0	+9.0
WR8				LR	LR		
	comp=Z,3μm,19.0s						
WR7	**Warramunga Arr**	**77.41**	**253**	PFAKE		04 37 30.0	+8.9
WR7				LR	LR		
	comp=Z,3μm,19.0s						
WR6	**Warramunga Arr**	**77.42**	**253**	PFAKE		04 37 30.0	+8.8
WR6				LR	LR		
	comp=Z,3μm,19.0s						
WR5	**Warramunga Arr**	**77.43**	**253**	PFAKE		04 37 30.0	+8.7
WR5				LR	LR		
	comp=Z,3μm,19.0s						
COEN	**Coen**	**77.45**	**264**	PFAKE		04 37 30.0	+8.6
COEN				LR	LR		
	comp=Z,2μm,19.0s						
WR4	**Warramunga Arr**	**77.45**	**253**	PFAKE		04 37 30.0	+8.6
WR4				LR	LR		
	comp=Z,3μm,20.0s						
WR3	**Warramunga Arr**	**77.46**	**253**	PFAKE		04 37 30.0	+8.6
WR3				LR	LR		
	comp=Z,3μm,19.0s						
WC4	**Warramunga Arr**	**77.47**	**253**	PFAKE		04 37 30.0	+8.5
WC4				LR	LR		
	comp=Z,3μm,19.0s						
WR2	**Warramunga Arr**	**77.47**	**253**	PFAKE		04 37 30.0	+8.5
WR2				LR	LR		
	comp=Z,3μm,20.0s						
WB2	**Warramunga Arr**	**77.48**	**253**	*e*P	**P**	**04 37 23.3**	**+1.7**
	comp=Z,11nm,0.9s						
WB2				LR	LR		
	comp=Z,3μm,19.0s						
WC2	**Warramunga Arr**	**77.49**	**253**	PFAKE		04 37 30.0	+8.4
WC2				LR	LR		
	comp=Z,4μm,20.0s						
WR1	**Warramunga Arr**	**77.49**	**253**	*e*P	**P**	**04 37 17.5**	**-4.1**
	comp=Z,10nm,0.8s						
WRA	**Warramunga Arr**	**77.49**	**253**	P	**P**	**04 37 17.5**	**-4.1**
	comp=Z,0.8nm,0.8s,baz=142,slow=5.0,SNR=4.6						
WRA				LR	LR	05 07 56.4	
	comp=Z,3μm,19.7s,baz=150,slow=33						
WRAB	**Tennant Creek**	**77.49**	**253**	*e*P	**P**	**04 37 21.5**	**-0.1**
	comp=Z,9.3nm,0.8s						
WRAB				LR	LR		
	comp=Z,3μm,19.0s						
WB3	**Warramunga Arr**	**77.50**	**253**	PFAKE		04 37 30.0	+8.4
WB3				LR	LR		
	comp=Z,3μm,20.0s						
WC1	**Warramunga Arr**	**77.51**	**253**	PFAKE		04 37 30.0	+8.3
WC1				LR	LR		
	comp=Z,2μm,21.0s						
WB4	**Warramunga Arr**	**77.51**	**253**	PFAKE		04 37 30.0	+8.3
WB4				LR	LR		
	comp=Z,3μm,20.0s						
WB5	**Warramunga Arr**	**77.53**	**253**	PFAKE		04 37 30.0	+8.2
WB5				LR	LR		
	comp=Z,3μm,19.0s						
WB6	**Warramunga Arr**	**77.55**	**253**	PFAKE		04 37 30.0	+8.1
WB6				LR	LR		
	comp=Z,3μm,20.0s						
WB8	**Warramunga Arr**	**77.57**	**253**	PFAKE		04 37 30.0	+8.0
WB8				LR	LR		
	comp=Z,3μm,19.0s						
WB0	**Warramunga Arr**	**77.60**	**253**	PFAKE		04 37 30.0	+7.8
WB0				LR	LR		
	comp=Z,3μm,19.0s						
PTGA	**Pitinga**	**77.64**	**73**	PFAKE		04 37 30.0	+7.6
PTGA				LR	LR		
	comp=Z,900nm,21.0s						
HLP	**Hilina Pali**	**77.96**	**335**	PFAKE		04 37 40.0	+16
HLP				LR	LR		
	comp=Z,4μm,20.0s						
JCUZ	**Jacuzzi**	**78.00**	**335**	PFAKE		04 37 40.0	+16
JCUZ				LR	LR		
	comp=Z,4μm,20.0s						
SDHHI	**Sand Hill**	**78.05**	**335**	PFAKE		04 37 40.0	+15
SDHHI				LR	LR		
	comp=Z,3μm,19.0s						
RIM	**Rim**	**78.05**	**335**	PFAKE		04 37 40.0	+15
RIM				LR	LR		
	comp=Z,3μm,20.0s						
AIN	**Ainahou**	**78.07**	**334**	PFAKE		04 37 40.0	+15
AIN				LR	LR		
	comp=Z,3μm,19.0s						
UWB	**Uwekahuna B**	**78.08**	**335**	PFAKE		04 37 40.0	+15
UWB				LR	LR		
	comp=Z,3μm,20.0s						
UWE	**Uwekahuna**	**78.08**	**335**	PFAKE		04 37 40.0	+15
UWE				LR	LR		
	comp=Z,3μm,20.0s						
MLH	**Mauna Loa**	**78.17**	**335**	PFAKE		04 37 40.0	+15
MLH				LR	LR		
	comp=Z,4μm,20.0s						
MWH	**Moku‘aweowe**	**78.21**	**334**	PFAKE		04 37 40.0	+14
MWH				LR	LR		
	comp=Z,4μm,20.0s						
MLOA	**Mauna Loa Obse**	**78.26**	**334**	PFAKE		04 37 40.0	+14
MLOA				LR	LR		
	comp=Z,4μm,20.0s						
HMH	**Humu‘ula Sheep**	**78.30**	**334**	PFAKE		04 37 40.0	+14
HMH				LR	LR		
	comp=Z,4μm,20.0s						
KHLU	**Kahalu‘u**	**78.39**	**334**	PFAKE		04 37 40.0	+14
KHLU				LR	LR		
	comp=Z,3μm,21.0s						
POHA	**Pohakuloa**	**78.46**	**334**	PFAKE		04 37 40.0	+13
POHA				LR	LR		
	comp=Z,3μm,20.0s						
HUH	**Hualalai**	**78.47**	**334**	PFAKE		04 37 40.0	+13
HUH				LR	LR		
	comp=Z,4μm,19.0s						
HPAH	**Hawaii Prepara**	**78.76**	**334**	PFAKE		04 37 40.0	+12
HPAH				LR	LR		
	comp=Z,3μm,20.0s						
PMG	**Port Moresby**	**78.89**	**270**	LR	LR	05 08 37.3	
	comp=Z,2μm,18.8s,baz=154,slow=33						
HLK	**Haleakala**	**79.60**	**334**	PFAKE		04 37 40.0	+6.8
HLK				LR	LR		
	comp=Z,4μm,20.0s						
KHLH	**Kahului Airpor**	**79.78**	**334**	PFAKE		04 37 40.0	+6.2
KHLH				LR	LR		
	comp=Z,4μm,20.0s						
JOHN	**Johnston Islan**	**79.85**	**321**	PFAKE		04 37 50.0	+16
JOHN				LR	LR		
	comp=Z,2μm,21.0s						
SDV	**Santo Domingo**	**80.33**	**58**	PFAKE		04 37 50.0	+13
SDV				LR	LR		
	comp=Z,600nm,19.0s						
HON	**Honolulu**	**80.58**	**333**	PFAKE		04 37 50.0	+12
HON				LR	LR		
	comp=Z,3μm,20.0s						
KIP	**Kipapa**	**80.68**	**333**	PFAKE		04 37 50.0	+11
KIP				LR	LR		
	comp=Z,4μm,20.0s						
OPA	**Opana**	**80.93**	**333**	PFAKE		04 37 50.0	+10
OPA				LR	LR		
	comp=Z,4μm,20.0s						

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LPIG  La Paz             81.02  17  LR     LR    05 04 57.4
      comp=Z,1µm,20.3s,baz=196,slow=30
ZAIG  Zacatecas          81.28  24  eP     P     04 37 47.9 +5.6
      comp=Z,8.3nm,1.2s
KEKH  Kekaha             81.67 331  PFAKE        04 37 50.0 +6.0
KEKH                                LR     LR
      comp=Z,3µm,19.0s
SRIG  Santa Rosalia      83.87  15  PFAKE        04 38 10.0  +15
SRIG                                LR     LR
      comp=Z,1µm,21.0s
LNIG  Linares            84.08  27  eP     P     04 38 00.5 +4.0
      comp=Z,22nm,1.3s
LNIG                                LR     LR
      comp=Z,800nm,20.0s
PCRV  Puerto La Cruz     84.40  63  LR     LR    05 11 39.3
      comp=Z,2µm,18.5s,baz=199,slow=33
HPIG                     84.64  21  eP     P     04 38 00.7 +1.2
      comp=Z,13nm,1.1s
MTN   Manton Dam         85.05 255  PFAKE        04 38 10.0 +8.3
MTN                                 LR     LR
      comp=Z,3µm,19.0s
HSIG                     85.74  16  PFAKE        04 38 20.0  +15
HSIG                                LR     LR
      comp=Z,1µm,21.0s
RCBR  Riachuelo          86.92  96  PFAKE        04 38 20.0 +8.9
RCBR                                LR     LR
      comp=Z,800nm,19.0s
TX31  Lajitas Ar. Si     87.37  22  eP     P     04 38 13.9 +1.1
TXAR  Lajitas Array      87.37  22  P      P     04 38 07.8  -5.0
      comp=Z,0.7nm,1.0s,baz=189,slow=7.2,SNR=4.4
833A  Chaparral WMA,     87.38  26  P      P     04 38 13.7 +0.9
      baz=196
833A  Chaparral WMA,     87.38  26  eP     P     04 38 14.8 +2.1
      comp=Z,43nm,1.4s
214A  Organ Pipe Nat     88.36  14  P      P     04 38 18.7 +1.3
      baz=189
BAR   Barrett            88.62  10  PFAKE        04 38 30.0  +11
BAR                                 LR     LR
      comp=Z,2µm,21.0s
IKP   In-Ko-Pah, Jac     88.65  11  P      P     04 38 20.7 +1.9
      baz=187
CPE   Camp Elliot        88.78  10  PFAKE        04 38 30.0  +11
CPE                                 LR     LR
      comp=Z,2µm,22.0s
MONP2 Monument Peak      88.85  10  P      P     04 38 21.7 +1.8
      baz=187
SWSC  Sam W. Stewart     88.97  11  P      P     04 38 22.2 +2.1
      baz=187
TUC   Tucson             88.99  15  P      P     04 38 21.8 +1.4
      baz=190
TUC   Tucson             88.99  15  eP     P     04 38 19.1  -1.3
      comp=Z,11nm,1.1s
TUC                                 LR     LR
      comp=Z,2µm,22.0s
GLA   Glamis             89.18  12  P      P     04 38 23.1 +1.9
      baz=188
GLA   Glamis             89.18  12  PFAKE        04 38 30.0 +8.7
GLA                                 LR     LR
      comp=Z,2µm,22.0s
MNTX  Cornudas Mount     89.32  20  P      P     04 38 22.9 +1.0
      baz=193
MNTX  Cornudas Mount     89.32  20  eP     P     04 38 22.9 +1.0
      comp=Z,7.3nm,1.1s
MNTX                                LR     LR
      comp=Z,900nm,20.0s
JCT   Junction City      89.34  25  P      P     04 38 24.0 +1.9
      baz=196
FRD   Ford Ranch, An     89.43  10  P      P     04 38 23.4 +0.9
      baz=187
XPFO  Piæon Flat         89.56  10  PFAKE        04 38 30.0 +6.9
XPFO                                LR     LR
      comp=Z,2µm,21.0s
PFO   Pinyon Flats O     89.56  10  PFAKE        04 38 30.0 +6.9
PFO                                 LR     LR
      comp=Z,2µm,21.0s
CRPR  Cabo Rojo, PR      89.90  57  PFAKE        04 38 40.0  +15
CRPR                                LR     LR
      comp=Z,600nm,20.0s
Y12C  Blythe             89.91  12  PFAKE        04 38 40.0  +15
Y12C                                LR     LR
      comp=Z,1µm,21.0s
PASC  Pasadena Art C     89.95   9  PFAKE        04 38 40.0  +15
PASC                                LR     LR
      comp=Z,2µm,20.0s
BELC  Belle Mtn. Jos     89.99  11  P      P     04 38 27.1 +2.0
      baz=187
MWC   Mount Wilson       90.02   9  PFAKE        04 38 40.0  +15
MWC                                 LR     LR
      comp=Z,2µm,19.0s
FDF   Fort de France     90.04  64  PFAKE        04 38 40.0  +14
FDF                                 LR     LR
      comp=Z,1µm,22.0s
MPR   Mayaguez           90.06  57  PFAKE        04 38 40.0  +14
MPR                                 LR     LR
      comp=Z,300nm,22.0s
BFSC  Mount Baldy Ra     90.07   9  P      P     04 38 26.6 +1.1
      baz=186
ICMP  Isla Caja de M     90.08  58  PFAKE        04 38 40.0  +14
ICMP                                LR     LR
      comp=Z,400nm,20.0s
435B  Jarrell            90.18  27  PFAKE        04 38 40.0  +14
435B                                LR     LR
      comp=Z,700nm,21.0s
IRM   Iron Mountain      90.24  11  P      P     04 38 28.2 +2.0
      baz=188
OSI   Osito Audit: C     90.35   8  PFAKE        04 38 40.0  +13
OSI                                 LR     LR
      comp=Z,2µm,22.0s
SJG   San Juan           90.45  58  PFAKE        04 38 40.0  +13
SJG                                 LR     LR
      comp=Z,400nm,22.0s
HUMP  Col San Antoni     90.62  58  PFAKE        04 38 40.0  +12
HUMP                                LR     LR
      comp=Z,400nm,21.0s
EDW2  Edwards Air Fo     90.67   9  P      P     04 38 30.2 +2.0
      baz=186
HEC   Hector,Ludlow      90.78  10  P      P     04 38 30.7 +2.0
      baz=187
GMRC  Granite Mounta     90.81  11  P      P     04 38 30.3 +1.4
      baz=187
061Z  Ochoppi            90.91  42  P      P     04 38 30.8 +1.4
      baz=205
GDHS  Morne Mazeau,      91.03  62  PFAKE        04 38 40.0  +10
GDHS                                LR     LR
      comp=Z,800nm,20.0s
LDFC  Landfair           91.16  11  PFAKE        04 38 40.0  +10
LDFC                                LR     LR
      comp=Z,2µm,22.0s
GSC   Goldstone, Bar     91.20  10  P      P     04 38 32.3 +1.6
      baz=187
STVI  Saint Thomas       91.23  59  PFAKE        04 38 40.0 +8.9
STVI                                LR     LR
      comp=Z,300nm,20.0s
SOEI  Soe                91.32 251  PFAKE        04 38 40.0 +8.1
SOEI                                LR     LR
      comp=Z,4µm,20.0s
PAGB  Antelope Grade     91.34   7  PFAKE        04 38 40.0 +8.8
PAGB                                LR     LR
      comp=Z,2µm,20.0s
ISA   Isabella, Lake     91.41   8  PFAKE        04 38 40.0 +8.4
ISA                                 LR     LR
      comp=Z,2µm,21.0s
TUQ   Turquoise Moun     91.42  11  P      P     04 38 33.8 +2.0
      baz=187
ABTX  Abilene, Hawle     91.43  24  P      P     04 38 33.0 +1.2
      baz=196
BNM   Barren Site        91.47  18  eP     P     04 38 32.7 +0.6
PMPB  Monarch Peak       91.78   7  PFAKE        04 38 40.0 +6.7
PMPB                                LR     LR
      comp=Z,2µm,22.0s
MPMC  Manual Prospec     91.89   9  P      P     04 38 35.3 +1.3
      baz=186
W18A  Petrified Fore     91.90  16  PFAKE        04 38 40.0 +5.9
W18A                                LR     LR
      comp=Z,1µm,21.0s
MSTX  Muleshoe           92.04  21  eP     P     04 38 36.5 +1.9
      comp=Z,18nm,1.8s
WUAZ  Wupatki            92.06  14  eP     P     04 38 33.0  -1.7
      comp=Z,5.0nm,0.9s
WUAZ                                LR     LR
      comp=Z,2µm,21.0s
DAC   Darwin (Calif)     92.09   9  PFAKE        04 38 50.0  +15
DAC                                 LR     LR
      comp=Z,2µm,20.0s
ANMO  Albuquerque        92.28  18  P      P     04 38 30.5  -5.3
      comp=Z,0.3nm,0.4s,baz=176,slow=13,SNR=2.5
ANMO                                LR     LR    05 10 54.1
      comp=Z,524nm,20.7s,baz=200,slow=30
ANMO  Albuquerque        92.28  18  eP     P     04 38 35.1  -0.6
      comp=Z,6.9nm,1.0s
WAKE  Wake Island        92.28 301  PFAKE        04 38 50.0  +14
WAKE                                LR     LR
      comp=Z,500nm,21.0s
SAO   San Andreas Ge     92.29   6  PFAKE        04 38 50.0  +14
SAO                                 LR     LR
      comp=Z,2µm,18.0s
FURC  Furnace Creek,     92.35  10  P      P     04 38 37.8 +2.0
      baz=187
H11N3 WAKE ISLAND Hy     92.52 302  T      T     06 20 55.3
      baz=147,slow=76,SNR=137
H11N1 WAKE ISLAND Hy     92.53 302  T      T     06 20 56.5
      baz=147,slow=76,SNR=112
H11N2 WAKE ISLAND Hy     92.54 302  T      T     06 20 54.4
      baz=147,slow=76,SNR=101
SHPR  Sheep Range        92.56  11  eP     P     04 38 39.4 +2.4
      comp=Z,9.2nm,1.2s
SHPR                                LR     LR
      comp=Z,2µm,22.0s
FAKI  Fak Fak            92.60 261  PFAKE        04 38 50.0  +12
FAKI                                LR     LR
      comp=Z,2µm,22.0s
TPNV  Topopah Spring     92.89  10  P      P     04 38 40.3 +1.8
      baz=187
TPNV  Topopah Spring     92.89  10  eP     P     04 38 41.1 +2.6
      comp=Z,10nm,1.1s
TPNV                                LR     LR
      comp=Z,2µm,22.0s
AMTX  Amarillo           93.15  22  P      P     04 38 40.8 +1.1
      baz=195
AMTX  Amarillo           93.15  22  eP     P     04 38 39.0  -0.7
      comp=Z,6.9nm,0.9s
OMMB  Old Mammoth Mi     93.30   8  PFAKE        04 38 50.0 +9.4
OMMB                                LR     LR
      comp=Z,2µm,18.0s
MDPB  Devils Postpil     93.31   8  PFAKE        04 38 50.0 +9.4
MDPB                                LR     LR
      comp=Z,1µm,18.0s
KNB   Kanab              93.34  13  PFAKE        04 38 50.0 +9.4
KNB                                 LR     LR
      comp=Z,2µm,22.0s
MMRI  Maumere            93.34 250  PFAKE        04 38 50.0 +8.9
MMRI                                LR     LR
      comp=Z,2µm,21.0s
450A  Crestview          93.41  35  P      P     04 38 42.9 +2.1
      baz=202
MCCM  Marconi Confer     93.59   5  PFAKE        04 38 50.0 +8.5
MCCM                                LR     LR
      comp=Z,2µm,22.0s
CMB   Columbia Colle     93.62   7  PFAKE        04 38 50.0 +8.3
CMB                                 LR     LR
      comp=Z,2µm,21.0s
CCUT  Cedar City         93.80  12  eP     P     04 38 45.2 +2.4
      comp=Z,16nm,2.0s
CCUT                                LR     LR
      comp=Z,1µm,20.0s
PKCU  Pink Cliffs        93.83  13  PFAKE        04 38 50.0 +6.9
PKCU                                LR     LR
      comp=Z,1µm,20.0s
SZCU  Shurtz Canyon      93.88  13  PFAKE        04 38 50.0 +6.8
SZCU                                LR     LR
      comp=Z,1µm,19.0s
MVCO  Mesa Verde         94.14  16  P      P     04 38 45.2 +0.8
      baz=191
MVCO  Mesa Verde         94.14  16  PFAKE        04 39 00.0  +16
MVCO                                LR     LR
      comp=Z,1µm,20.0s
WAKR  Walker             94.16   7  PFAKE        04 39 00.0  +16
WAKR                                LR     LR
      comp=Z,2µm,21.0s
NV01  Mina Array Sit     94.17   8  eP     P     04 38 45.6 +1.2
NVAR  Mina Array Bea     94.17   8  P      P     04 38 38.2  -6.3
      comp=Z,0.2nm,0.6s,baz=223,slow=6.2,SNR=2.8
NVAR                                LR     LR    05 11 19.3
      comp=Z,2µm,21.2s,baz=170,slow=29
NV11  Mina Array Sit     94.18   8  PFAKE        04 39 00.0  +16
NV11                                LR     LR
      comp=Z,200nm,21.0s
GDXM  Geysers            94.25   5  PFAKE        04 39 00.0  +15
GDXM                                LR     LR
      comp=Z,2µm,20.0s
R11A  Troy Canyon, C     94.34  10  P      P     04 38 47.0 +1.7
      baz=188
R11A  Troy Canyon, C     94.34  10  eP     P     04 38 44.9  -0.4
      comp=Z,12nm,1.8s
R11A                                LR     LR
      comp=Z,1µm,21.0s
RYN   Ryan               94.35   8  PFAKE        04 39 00.0  +15
RYN                                 LR     LR
      comp=Z,2µm,21.0s
HOPS  Hopland Field      94.43   5  PFAKE        04 39 00.0  +15
HOPS                                LR     LR
      comp=Z,2µm,21.0s
MTPU  Mount Pierson      94.43  13  PFAKE        04 39 00.0  +14
MTPU                                LR     LR
      comp=Z,2µm,20.0s
RUBR  Rubicon Trail      94.65   7  PFAKE        04 39 00.0  +13
RUBR                                LR     LR
      comp=Z,2µm,21.0s
PSUT  Pine Spring        94.71  12  PFAKE        04 39 00.0  +13
PSUT                                LR     LR
      comp=Z,1µm,20.0s
PNTR  Pine Nut           94.72   7  PFAKE        04 39 00.0  +13
PNTR                                LR     LR
      comp=Z,2µm,21.0s
T25A  Trinidad           94.78  19  P      P     04 38 48.7 +1.3
      baz=194
KVN   Kaiserville        94.80   8  eP     P     04 38 49.3 +1.9
      comp=Z,3.7nm,1.1s
KVN                                 LR     LR
      comp=Z,2µm,21.0s
VCNR  Virginia City      94.93   7  PFAKE        04 39 00.0  +12
VCNR                                LR     LR
      comp=Z,2µm,21.0s
S22A  4UR Ranch, Cre     94.94  17  P      P     04 38 49.0 +0.9
      baz=192
S22A  4UR Ranch, Cre     94.94  17  PFAKE        04 39 00.0  +12
S22A                                LR     LR
      comp=Z,1µm,21.0s
TCRU  Three Creeks R     94.96  13  PFAKE        04 39 00.0  +12
TCRU                                LR     LR
      comp=Z,2µm,21.0s
ORV   Oroville           95.07   6  PFAKE        04 39 00.0  +12
ORV                                 LR     LR
      comp=Z,2µm,22.0s
KCPM  Cahto Peak         95.10   4  PFAKE        04 39 00.0  +11
KCPM                                LR     LR
      comp=Z,2µm,21.0s
SDCO  Great Sand Dun     95.17  18  P      P     04 38 50.0 +0.9
      baz=193
PV12  Saucer Basin,      95.18  16  PFAKE        04 39 00.0  +11
PV12                                LR     LR
      comp=Z,1µm,20.0s
PAHR  Pah Rah Range      95.35   7  PFAKE        04 39 00.0  +10
PAHR                                LR     LR
      comp=Z,2µm,21.0s
PV21  Cone Mtn., Par     95.39  16  PFAKE        04 39 00.0  +10
PV21                                LR     LR
      comp=Z,1µm,21.0s
BEKR  Beckworth          95.45   7  PFAKE        04 39 00.0  +10
BEKR                                LR     LR
      comp=Z,2µm,21.0s
SRU   San Rafael Swe     95.70  14  PFAKE        04 39 00.0 +8.5
SRU                                 LR     LR
      comp=Z,1µm,20.0s
TMUT  Trail Mountain     95.79  14  PFAKE        04 39 00.0 +8.0
TMUT                                LR     LR
      comp=Z,1µm,20.0s
P17A  Butcher Ranch,     96.03  14  PFAKE        04 39 00.0 +7.1
P17A                                LR     LR
      comp=Z,1µm,20.0s
WDC   Whiskeytown Da     96.03   5  PFAKE        04 39 00.0 +7.4
WDC                                 LR     LR
      comp=Z,3µm,22.0s
BMN   Battle Mountai     96.25   9  PFAKE        04 39 00.0 +6.2
BMN                                 LR     LR
      comp=Z,2µm,21.0s
P18A  Preston Nutter     96.25  14  PFAKE        04 39 00.0 +5.9
P18A                                LR     LR
      comp=Z,2µm,21.0s
SMCO  Snowmass           96.31  17  PFAKE        04 39 10.0  +16
SMCO                                LR     LR
      comp=Z,1µm,21.0s
Q24A  Divide             96.42  18  PFAKE        04 39 10.0  +15
Q24A                                LR     LR
      comp=Z,800nm,19.0s
MPU   Maple Canyon       96.45  13  PFAKE        04 39 10.0  +15
MPU                                 LR     LR
      comp=Z,2µm,21.0s
DUG   Dugway, Tooele     96.47  12  PFAKE        04 39 10.0  +15
DUG                                 LR     LR
      comp=Z,1µm,21.0s
KSCO  Kaye Shedlock’     96.94  20  PFAKE        04 39 10.0  +13
KSCO                                LR     LR
      comp=Z,900nm,20.0s
O20A  White River Ci     97.05  16  PFAKE        04 39 10.0  +12
O20A                                LR     LR
      comp=Z,1µm,20.0s
JLU   Jordanelle         97.05  13  PFAKE        04 39 10.0  +12
JLU                                 LR     LR
      comp=Z,2µm,21.0s
CTU   Camp Tracy         97.10  13  PFAKE        04 39 10.0  +12
CTU                                 LR     LR
      comp=Z,1µm,21.0s
ISCO  Idaho Springs      97.15  18  PFAKE        04 39 10.0  +12
ISCO                                LR     LR
      comp=Z,1µm,20.0s
YBH   Yreka Blue Hor     97.17   5  LR     LR    05 12 29.2
      comp=Z,3µm,21.8s,baz=182,slow=29
YBH   Yreka Blue Hor     97.17   5  PFAKE        04 39 10.0  +12
YBH                                 LR     LR
      comp=Z,2µm,20.0s
CBKS  Cedar Bluff        97.35  23  PFAKE        04 39 10.0  +11
CBKS                                LR     LR
      comp=Z,600nm,19.0s
MOD   Modoc Plateau      97.48   6  PFAKE        04 39 10.0  +11
MOD                                 LR     LR
      comp=Z,1µm,21.0s
TCUT  Toone Canyon       97.56  13  PFAKE        04 39 10.0  +10
TCUT                                LR     LR
      comp=Z,2µm,21.0s
SPUT  South Promonto     97.62  12  PFAKE        04 39 10.0  +10
SPUT                                LR     LR
      comp=Z,1µm,20.0s
KAPI  Kappang            97.70 249  PFAKE        04 39 10.0 +9.0
KAPI                                LR     LR
      comp=Z,2µm,20.0s
HWUT  Hardware Ranch     98.02  13  PFAKE        04 39 10.0 +8.1
HWUT                                LR     LR
      comp=Z,1µm,21.0s
HUMO  Hull Mountain      98.04   4  PFAKE        04 39 10.0 +8.3
HUMO                                LR     LR
      comp=Z,2µm,20.0s
HVU   Hansel Valley      98.04  12  PFAKE        04 39 10.0 +8.0
HVU                                 LR     LR
      comp=Z,1µm,22.0s
WVOR  Wild Horse Val     98.12   8  PFAKE        04 39 10.0 +7.7
WVOR                                LR     LR
      comp=Z,1µm,18.0s
N23A  Red Feather La     98.16  17  PFAKE        04 39 10.0 +7.3
N23A                                LR     LR
      comp=Z,1µm,22.0s
TNTI  Ternate            98.37 259  PFAKE        04 39 10.0 +6.0
TNTI                                LR     LR
      comp=Z,400nm,20.0s
PHWY  Pilot Hill         98.64  18  PFAKE        04 39 20.0  +15
PHWY                                LR     LR
      comp=Z,900nm,20.0s
RWWY  Rawlins            98.72  16  PFAKE        04 39 20.0  +15
RWWY                                LR     LR
      comp=Z,900nm,22.0s
OGNE  Ogallala           98.92  20  PFAKE        04 39 20.0  +14
OGNE                                LR     LR
      comp=Z,800nm,21.0s
J08A  Circle Bar Ran     99.05   8  PFAKE        04 39 20.0  +14
J08A                                LR     LR
      comp=Z,2µm,18.0s
AHID  Auburn Hatcher     99.22  13  PFAKE        04 39 20.0  +13
AHID                                LR     LR
      comp=Z,1µm,22.0s
MFID  Camas Ranch        99.33  10  PFAKE        04 39 20.0  +12
MFID                                LR     LR
      comp=Z,2µm,21.0s
LUWI  Luwuk              99.40 254  PFAKE        04 39 20.0  +11
LUWI                                LR     LR
      comp=Z,1µm,21.0s
BW06  Boulder Array      99.43  14  PFAKE        04 39 20.0  +12
BW06                                LR     LR
      comp=Z,2µm,21.0s
PD31  Pinedale Array     99.43  14  eP     Pdif  04 39 04.1  -4.2
PDAR  Pinedale Array     99.43  14  P      Pdif  04 39 04.1  -4.2
      comp=Z,0.2nm,0.7s,baz=188,slow=5.2,SNR=1.9
PDAR                                LR     LR    05 15 03.6
      comp=Z,2µm,21.4s,baz=206,slow=30
SLM   Saint Louis        99.55  30  PFAKE        04 39 20.0  +11
SLM                                 LR     LR
      comp=Z,300nm,19.0s
HLID  Hailey             99.62  11  PFAKE        04 39 20.0  +11
HLID                                LR     LR
      comp=Z,900nm,21.0s
K22A  Casper             99.77  17  PFAKE        04 39 20.0  +10
K22A                                LR     LR
      comp=Z,700nm,20.0s
REDW  Red Top Meadow     99.84  13  PFAKE        04 39 20.0  +10
REDW                                LR     LR
      comp=Z,1µm,22.0s
H04A  Detroit Lake      100.14   5  PFAKE        04 39 20.0 +8.9
H04A                                LR     LR
      comp=Z,2µm,20.0s
TSUM  Tsumeb            100.19 148  PFAKE        04 39 20.0 +7.7
TSUM                                LR     LR
      comp=Z,1µm,20.0s
OLIL  Olney             100.26  31  PFAKE        04 39 20.0 +8.3
OLIL                                LR     LR
      comp=Z,200nm,20.0s
BMO   Blue Mountains    100.63   8  PFAKE        04 39 20.0 +6.7
BMO                                 LR     LR
      comp=Z,1µm,22.0s
G06A  Carlson Farm,     100.78   6  PFAKE        04 39 30.0  +16
G06A                                LR     LR
      comp=Z,2µm,22.0s
G08A  Pilot Rock        100.94   7  PFAKE        04 39 30.0  +15
G08A                                LR     LR
      comp=Z,1µm,20.0s
YMR   Madison River     101.11  13  PFAKE        04 39 30.0  +14
YMR                                 LR     LR
      comp=Z,500nm,20.0s
YHB   Horse Butte       101.16  13  PFAKE        04 39 30.0  +14
YHB                                 LR     LR
      comp=Z,700nm,19.0s
F07A  Phinny Hill Vi    101.48   6  PFAKE        04 39 30.0  +13
F07A                                LR     LR
      comp=Z,2µm,22.0s
RSSD  Black Hills       101.62  18  PFAKE        04 39 30.0  +12
RSSD                                LR     LR
      comp=Z,500nm,18.0s
F10A  Beach Ranch, E    101.75   8  PFAKE        04 39 30.0  +12
F10A                                LR     LR
      comp=Z,1µm,22.0s
RLMT  Red Lodge         101.78  14  PFAKE        04 39 30.0  +11
RLMT                                LR     LR
      comp=Z,2µm,21.0s
BOZ   Bozeman (W)       101.94  12  PFAKE        04 39 30.0  +11
BOZ                                 LR     LR
      comp=Z,1µm,18.0s
HAWA  Hanford           102.00   7  PFAKE        04 39 30.0  +11
HAWA                                LR     LR
      comp=Z,1µm,20.0s
E08A  Dider Farm, El    102.13   7  PFAKE        04 39 30.0  +10
E08A                                LR     LR
      comp=Z,1µm,21.0s
E07A  Sunnyside         102.14   6  PFAKE        04 39 30.0  +10
E07A                                LR     LR
      comp=Z,2µm,22.0s
E09A  Wood Farm, Sta    102.22   8  PFAKE        04 39 30.0  +10
E09A                                LR     LR
      comp=Z,1µm,19.0s
LON   Longmire          102.22   5  PFAKE        04 39 30.0  +10
LON                                 LR     LR
      comp=Z,1µm,22.0s
D05A  Enumclaw          102.65   5  PFAKE        04 39 30.0 +7.9
D05A                                LR     LR
      comp=Z,1µm,20.0s
D08A  Wollman Farm,     102.70   7  PFAKE        04 39 30.0 +7.7
D08A                                LR     LR
      comp=Z,1µm,21.0s
ECSD  EROS Data Cent    102.74  23  PFAKE        04 39 30.0 +7.4
ECSD                                LR     LR
      comp=Z,600nm,21.0s
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NLWA	**Neilton Lookou**	**102.78**	**3**	PFAKE		04 39 30.0	+7.3
NLWA				LR	LR		
	comp=Z,1µm,20.0s						
LTY	**Liberty**	**102.79**	**6**	PFAKE		04 39 30.0	+7.2
LTY				LR	LR		
	comp=Z,2µm,20.0s						
MSO	**Missoula**	**102.90**	**10**	PFAKE		04 39 30.0	+6.6
MSO				LR	LR		
	comp=Z,2µm,20.0s						
ACSO	**Alum Creek Sta**	**103.20**	**34**	PFAKE		04 39 40.0	+15
ACSO				LR	LR		
	comp=Z,200nm,18.0s						
C09A	**Chrisman Ranch**	**103.48**	**7**	PFAKE		04 39 40.0	+14
C09A				LR	LR		
	comp=Z,800nm,20.0s						
LAO	**LASA Array**	**103.76**	**16**	PFAKE		04 39 40.0	+13
LAO				LR	LR		
	comp=Z,800nm,22.0s						
JTMT	**Jette**	**103.77**	**10**	PFAKE		04 39 40.0	+13
JTMT				LR	LR		
	comp=Z,2µm,21.0s						
B08A	**Colville Reser**	**103.97**	**7**	PFAKE		04 39 40.0	+12
B08A				LR	LR		
	comp=Z,2µm,22.0s						
B06A	**Marblemount**	**104.00**	**5**	PFAKE		04 39 40.0	+12
B06A				LR	LR		
	comp=Z,1µm,20.0s						
DAV	**Davao City (W)**	**104.55**	**261**	PFAKE		04 39 40.0	+8.5
DAV				LR	LR		
	comp=Z,900nm,21.0s						
I41A	**Arkdale**	**104.70**	**28**	PFAKE		04 39 40.0	+8.7
I41A				LR	LR		
	comp=Z,300nm,19.0s						
I42A	**Draeger Farm,**	**104.80**	**29**	PFAKE		04 39 40.0	+8.3
I42A				LR	LR		
	comp=Z,400nm,19.0s						
WALA	**Waterton Lakes**	**105.11**	**10**	PFAKE		04 44 00.0	
WALA				LR	LR		
	comp=Z,2µm,20.0s						
PAGS	**Pennsylvania G**	**105.31**	**39**	PFAKE		04 44 00.0	
PAGS				LR	LR		
	comp=Z,300nm,20.0s						
H42A	**Shiocton**	**105.48**	**29**	PFAKE		04 44 00.0	
H42A				LR	LR		
	comp=Z,500nm,19.0s						
H43A	**Windswept, Lux**	**105.65**	**29**	PFAKE		04 44 00.0	
H43A				LR	LR		
	comp=Z,300nm,20.0s						
G40A	**Rib Lake**	**105.73**	**27**	PFAKE		04 44 00.0	
G40A				LR	LR		
	comp=Z,400nm,20.0s						
DGMT	**Dagmar**	**105.81**	**17**	PFAKE		04 44 00.0	
DGMT				LR	LR		
	comp=Z,600nm,20.0s						
MDND	**Maddock**	**106.04**	**20**	PFAKE		04 44 00.0	
MDND				LR	LR		
	comp=Z,900nm,19.0s						
LLLB	**Lillooet**	**106.07**	**5**	PFAKE		04 44 00.0	
LLLB				LR	LR		
	comp=Z,2µm,20.0s						
N59A	**State Game Lan**	**106.26**	**39**	PFAKE		04 44 00.0	
N59A				LR	LR		
	comp=Z,600nm,21.0s						
BRNJ	**Basking Ridge**	**106.49**	**40**	PFAKE		04 44 00.0	
BRNJ				LR	LR		
	comp=Z,500nm,22.0s						
E38A	**The Farm, Brul**	**106.64**	**26**	PFAKE		04 44 00.0	
E38A				LR	LR		
	comp=Z,400nm,18.0s						
LSZ	**Lusaka**	**106.73**	**157**	PFAKE		04 44 00.0	
LSZ				LR	LR		
	comp=Z,1µm,20.0s						
ODNJ	**Ogdensburg**	**106.83**	**40**	PFAKE		04 44 00.0	
ODNJ				LR	LR		
	comp=Z,400nm,20.0s						
MYLDM	**Lahad Datu**	**106.91**	**254**	PFAKE		04 44 00.0	
MYLDM				LR	LR		
	comp=Z,2µm,18.0s						
BINY	**Binghamton**	**107.31**	**38**	PFAKE		04 44 00.0	
BINY				LR	LR		
	comp=Z,600nm,21.0s						
SBUM	**Sibu**	**107.96**	**247**	PFAKE		04 44 00.0	
SBUM				LR	LR		
	comp=Z,1µm,22.0s						
KSM	**Kuching**	**108.12**	**245**	PFAKE		04 44 10.0	
KSM				LR	LR		
	comp=Z,900nm,22.0s						
DIB	**Dawson Inlet,**	**108.55**	**358**	PFAKE		04 44 00.0	
DIB				LR	LR		
	comp=Z,2µm,20.0s						
H02S1	**DAWSON INLET T**	**108.55**	**358**	T	T	06 40 35.1	
	SNR=54						
H02N1	**VAN INLET T-PH**	**108.60**	**358**	T	T	06 40 39.5	
	SNR=34						
KKM	**Kota Kinabalu**	**108.86**	**252**	PFAKE		04 44 10.0	
KKM				LR	LR		
	comp=Z,200nm,19.0s						
ULM	**Lac du Bonnet**	**109.08**	**22**	PFAKE		04 44 10.0	
ULM				LR	LR		
	comp=Z,600nm,20.0s						
ACCN	**Adirondack Com**	**109.17**	**39**	PFAKE		04 44 10.0	
ACCN				LR	LR		
	comp=Z,400nm,19.0s						
HRV	**Adam Dziewonsk**	**109.19**	**41**	PFAKE		04 44 10.0	
HRV				LR	LR		
	comp=Z,400nm,22.0s						
NCB	**Newcomb**	**109.49**	**39**	PFAKE		04 44 10.0	
NCB				LR	LR		
	comp=Z,300nm,21.0s						
LONY	**Lake Ozonia**	**109.92**	**38**	PFAKE		04 44 10.0	
LONY				LR	LR		
	comp=Z,500nm,20.0s						
LBNH	**Lisbon**	**110.55**	**40**	PFAKE		04 44 10.0	
LBNH				LR	LR		
	comp=Z,400nm,22.0s						
MYKOM	**Kota Tinggi**	**111.61**	**239**	PFAKE		04 44 10.0	
MYKOM				LR	LR		
	comp=Z,800nm,22.0s						
WRAK	**Wrangell Islan**	**111.77**	**358**	PFAKE		04 44 10.0	
WRAK				LR	LR		
	comp=Z,2µm,21.0s						
FFC	**Flin Flon**	**112.22**	**16**	PFAKE		04 44 10.0	
FFC				LR	LR		
	comp=Z,1µm,20.0s						
SIT	**Sitka**	**112.49**	**356**	PFAKE		04 44 10.0	
SIT				LR	LR		
	comp=Z,2µm,20.0s						
UNV	**Unalaska Valle**	**113.44**	**337**	PFAKE		04 44 10.0	
UNV				LR	LR		
	comp=Z,3µm,22.0s						
AKUT	**Akutan**	**113.55**	**337**	PFAKE		04 44 10.0	
AKUT				LR	LR		
	comp=Z,2µm,22.0s						
JIS	**Juneau Island**	**113.68**	**357**	PFAKE		04 44 10.0	
JIS				LR	LR		
	comp=Z,2µm,21.0s						
FALS	**False Pass**	**113.73**	**339**	PFAKE		04 44 10.0	
FALS				LR	LR		
	comp=Z,1µm,19.0s						
SII	**Sitkinak Islan**	**113.74**	**345**	PFAKE		04 44 10.0	
SII				LR	LR		
	comp=Z,3µm,19.0s						
DLBC	**Dease Lake**	**113.76**	**359**	PFAKE		04 44 10.0	
DLBC				LR	LR		
	comp=Z,2µm,20.0s						
ATKA	**Atka Island**	**113.84**	**331**	PFAKE		04 44 10.0	
ATKA				LR	LR		
	comp=Z,2µm,21.0s						
BESE	**Bessie Mountai**	**114.00**	**357**	PFAKE		04 44 20.0	
BESE				LR	LR		
	comp=Z,2µm,20.0s						
KDAK	**Kodiak Island**	**114.70**	**346**	PFAKE		04 44 20.0	+15
KDAK				LR	LR		
	comp=Z,3µm,19.0s						
SKAG	**Skagway**	**114.90**	**356**	PFAKE		04 44 20.0	+15
SKAG				LR	LR		
	comp=Z,2µm,20.0s						
IPM	**Ipoh**	**115.32**	**238**	PFAKE		04 44 20.0	+12
IPM				LR	LR		
	comp=Z,600nm,19.0s						
KULM	**Kulim**	**116.20**	**238**	PFAKE		04 44 20.0	+11
KULM				LR	LR		
	comp=Z,700nm,22.0s						
CNPM	**China Poot**	**116.22**	**348**	PFAKE		04 44 20.0	+12
CNPM				LR	LR		
	comp=Z,3µm,20.0s						
RAGM	**Ragged Mountai**	**116.39**	**351**	PFAKE		04 44 20.0	+12
RAGM				LR	LR		
	comp=Z,3µm,22.0s						
HOM	**Homer**	**116.40**	**347**	PFAKE		04 44 20.0	+12
HOM				LR	LR		
	comp=Z,3µm,20.0s						
BRLK	**Bradley Lake**	**116.42**	**348**	PFAKE		04 44 20.0	+12
BRLK				LR	LR		
	comp=Z,4µm,20.0s						
TGL	**Tana Glacier**	**116.61**	**352**	PFAKE		04 44 20.0	+11
TGL				LR	LR		
	comp=Z,2µm,19.0s						
EYAK	**Cordova Ski Ar**	**116.64**	**351**	PFAKE		04 44 20.0	+11
EYAK				LR	LR		
	comp=Z,100nm,20.0s						
BALM	**Baldy**	**116.85**	**353**	PFAKE		04 44 20.0	+11
BALM				LR	LR		
	comp=Z,1µm,21.0s						
BMRM	**Bremner River**	**116.96**	**351**	PFAKE		04 44 20.0	+11
BMRM				LR	LR		
	comp=Z,2µm,22.0s						
DIV	**Divide**	**117.22**	**351**	PFAKE		04 44 20.0	+10
DIV				LR	LR		
	comp=Z,3µm,21.0s						
SPIA	**Saint Paul Isl**	**117.36**	**336**	PFAKE		04 44 20.0	+10
SPIA				LR	LR		
	comp=Z,2µm,20.0s						
RC01	**Rabbit Creek A**	**117.58**	**349**	PFAKE		04 44 20.0	+10
RC01				LR	LR		
	comp=Z,2µm,20.0s						
KLU	**Klutina**	**117.59**	**351**	PFAKE		04 44 20.0	+9.4
KLU				LR	LR		
	comp=Z,2µm,21.0s						
SUA	**Susitna One**	**118.05**	**348**	PFAKE		04 44 20.0	+8.4
SUA				LR	LR		
	comp=Z,3µm,20.0s						
SCM	**Sheep Creek Mo**	**118.06**	**350**	PFAKE		04 44 20.0	+8.5
SCM				LR	LR		
	comp=Z,2µm,21.0s						
SML	**Sawmill**	**118.13**	**350**	PFAKE		04 44 20.0	+8.4
SML				LR	LR		
	comp=Z,2µm,21.0s						
GHO	**Glory Hole Cre**	**118.16**	**349**	PFAKE		04 44 20.0	+8.3
GHO				LR	LR		
	comp=Z,2µm,21.0s						
YKW3	**Yellowknife Ar**	**118.42**	**7**	PFAKE		04 44 20.0	+8.0
YKW3				LR	LR		
	comp=Z,600nm,20.0s						
HARP	**HAARP**	**118.42**	**351**	PFAKE		04 44 20.0	+7.9
HARP				LR	LR		
	comp=Z,2µm,21.0s						
SKT	**Skwentna**	**118.65**	**348**	PFAKE		04 44 20.0	+7.4
SKT				LR	LR		
	comp=Z,3µm,20.0s						
PAX	**Paxson**	**119.01**	**351**	PFAKE		04 44 20.0	+6.7
PAX				LR	LR		
	comp=Z,2µm,20.0s						
DHY	**Denali Highway**	**119.28**	**350**	PFAKE		04 44 30.0	+16
DHY				LR	LR		
	comp=Z,2µm,22.0s						
PPLA	**Purkeypile**	**119.62**	**348**	PFAKE		04 44 30.0	+15
PPLA				LR	LR		
	comp=Z,3µm,21.0s						
DAWY	**Dawson**	**119.68**	**355**	PFAKE		04 44 30.0	+15
DAWY				LR	LR		
	comp=Z,3µm,19.0s						
RIDG	**Independ’e Rid**	**119.72**	**352**	PFAKE		04 44 30.0	+15
RIDG				LR	LR		
	comp=Z,2µm,22.0s						
MSEY	**Mahe Island**	**119.76**	**185**	PFAKE		04 44 30.0	+14
MSEY				LR	LR		
	comp=Z,1µm,20.0s						
SCRK	**Sand Creek**	**119.88**	**352**	PFAKE		04 44 30.0	+15
SCRK				LR	LR		
	comp=Z,1µm,22.0s						
TRF	**Thorofare Moun**	**119.94**	**349**	PFAKE		04 44 30.0	+15
TRF				LR	LR		
	comp=Z,2µm,21.0s						
YOJ	**Yonaguni jima**	**119.98**	**270**	PFAKE		04 44 30.0	+14
YOJ				LR	LR		
	comp=Z,700nm,19.0s						
MCK	**McKinley**	**120.08**	**350**	PFAKE		04 44 30.0	+15
MCK				LR	LR		
	comp=Z,2µm,21.0s						
KTH	**Kantishna Hill**	**120.11**	**349**	PFAKE		04 44 30.0	+15
KTH				LR	LR		
	comp=Z,2µm,22.0s						
CAST	**Castle Rocks**	**120.11**	**348**	PFAKE		04 44 30.0	+15
CAST				LR	LR		
	comp=Z,2µm,20.0s						
EGAK	**Eagle**	**120.49**	**354**	*e*PKPdf	**PKPdf**	**04 44 15.4**	**-0.5**
EGAK				LR	LR		
	comp=Z,2µm,18.0s						
HDA	**Harding Lake**	**120.55**	**351**	PFAKE		04 44 30.0	+14
HDA				LR	LR		
	comp=Z,2µm,22.0s						
BWN	**Browne**	**120.56**	**350**	PFAKE		04 44 30.0	+14
BWN				LR	LR		
	comp=Z,2µm,20.0s						
BPAW	**Bear Paw Mtn.**	**120.65**	**349**	PFAKE		04 44 30.0	+14
BPAW				LR	LR		
	comp=Z,2µm,22.0s						
WRH	**Wood River Hil**	**120.72**	**350**	PFAKE		04 44 30.0	+14
WRH				LR	LR		
	comp=Z,2µm,22.0s						
CCB	**Clear Creek Bu**	**120.86**	**351**	*e*PKPdf	**PKPdf**	**04 44 17.7**	**+1.0**
CCB				LR	LR		
	comp=Z,2µm,22.0s						
ILAR	**Eielson Array**	**120.90**	**351**	PKP	**PKPdf**	**04 44 14.1**	**-2.7**
	comp=Z,2.3nm,0.6s,baz=199,slow=2.2,SNR=20						
ILB	**Eielson Array**	**120.90**	**351**	*e*PKPdf	**PKPdf**	**04 44 17.8**	**+1.0**
COLA	**College**	**121.09**	**351**	PFAKE		04 44 30.0	+13
COLA				LR	LR		
	comp=Z,2µm,22.0s						
MDM	**Murphy Dome**	**121.21**	**351**	PFAKE		04 44 30.0	+13
MDM				LR	LR		
	comp=Z,2µm,22.0s						
SCHQ	**Schefferville**	**121.23**	**37**	PFAKE		04 44 30.0	+12
SCHQ				LR	LR		
	comp=Z,400nm,19.0s						
MBAR	**Mbarara**	**121.50**	**156**	PFAKE		04 44 30.0	+10
MBAR				LR	LR		
	comp=Z,2µm,20.0s						
MLY	**Manley**	**121.53**	**349**	PFAKE		04 44 30.0	+12
MLY				LR	LR		
	comp=Z,2µm,22.0s						
FYU	**Fort Yukon**	**122.54**	**352**	PFAKE		04 44 30.0	+10
FYU				LR	LR		
	comp=Z,2µm,22.0s						
TORD	**Torodi Ar. Bea**	**123.05**	**118**	PKP	**PKPdf**	**04 44 19.0**	**-3.5**
	comp=Z,0.2nm,0.6s,baz=197,slow=1.1						
TOA1	**Torodi Ar. Sit**	**123.05**	**118**	*e*PKPdf	**PKPdf**	**04 44 19.0**	**-3.5**
TOA2	**Torodi Ar. Sit**	**123.05**	**118**	PFAKE		04 44 30.0	+7.5
TOA2				LR	LR		
	comp=Z,700nm,21.0s						
ANM	**Nome**	**123.13**	**342**	PFAKE		04 44 30.0	+8.9
ANM				LR	LR		
	comp=Z,2µm,20.0s						
PET	**Petropavlovsk**	**123.61**	**316**	PFAKE		04 44 30.0	+7.7
PET				LR	LR		
	comp=Z,1µm,22.0s						
COLD	**Coldfoot**	**123.61**	**350**	PFAKE		04 44 30.0	+8.1
COLD				LR	LR		
	comp=Z,2µm,22.0s						
GAMB	**Gambell**	**123.61**	**339**	PFAKE		04 44 30.0	+8.0
GAMB				LR	LR		
	comp=Z,2µm,20.0s						
INK	**Inuvik**	**123.71**	**358**	PFAKE		04 44 30.0	+8.0
INK				LR	LR		
	comp=Z,2µm,22.0s						
PEA0B	**Petropavlovsk-**	**124.05**	**316**	PFAKE		04 44 30.0	+6.8
PEA0B				LR	LR		
	comp=Z,700nm,21.0s						
PETK	**Petropavlovsk-**	**124.05**	**316**	PKP	**PKPdf**	**04 44 18.2**	**-5.0**
	comp=Z,1.6nm,0.4s,baz=112,slow=6.4						
PEA1	**Petropavlovsk-**	**124.05**	**316**	*e*PKPpre	PKPpre	04 44 18.2	
ASAJ	**Asahikawa**	**124.13**	**300**	PFAKE		04 44 30.0	+6.4
ASAJ				LR	LR		
	comp=Z,500nm,21.0s						
TOLK	**Toolik Lake Re**	**124.93**	**351**	*e*PKPdf	**PKPdf**	**04 44 26.5**	**+2.0**
TOLK				LR	LR		
	comp=Z,2µm,22.0s						
RDOG	**Red Dog Mine**	**125.95**	**345**	PFAKE		04 44 40.0	+14
RDOG				LR	LR		
	comp=Z,2µm,22.0s						
YSS	**Yuzh-Sakhalins**	**126.10**	**302**	PFAKE		04 44 40.0	+13
YSS				LR	LR		
	comp=Z,400nm,22.0s						
PALK	**Pallekele**	**126.32**	**217**	PFAKE		04 44 40.0	+11
PALK				LR	LR		
	comp=Z,900nm,19.0s						
NJ2	**Nanjing**	**128.12**	**272**	*e*PKP	**PKPdf**	**04 44 37.8**	**+6.1**
CM31	**Chiang Mai Arr**	**128.34**	**244**	*e*PKPdf	**PKPdf**	**04 44 31.3**	**-1.2**
CMAR	**Chiang Mai Arr**	**128.34**	**244**	PKP	**PKPdf**	**04 44 31.3**	**-1.2**
	comp=Z,1.1nm,0.3s,baz=187,slow=2.4,SNR=2.5						
CHTO	**Chiang Mai**	**128.63**	**244**	PFAKE		04 44 40.0	+6.9
CHTO				LR	LR		
	comp=Z,500nm,20.0s						
WHN	**Wuhan**	**129.55**	**268**	PKP	PKPdf	04 44 42.8	+8.4
GYA	**Guiyang**	**130.72**	**257**	*e*Pdif	**Pdif**	**04 41 35.0**	**+7.3**
GYA				PKP	**sPKPdf**	**04 44 41.8**	**+0.2**
GYA				PP	PP	04 47 06.5	+14
GYA				AMB	AMB		
	comp=Z,120nm,7.8s						
MA2	**Magadan**	**131.37**	**318**	PFAKE		04 44 50.0	+13
MA2				LR	LR		
	comp=Z,800nm,22.0s						
KMI	**Kunming**	**131.81**	**252**	PKP	**PKPdf**	**04 44 43.4**	**+4.2**
KMI				sPKP		04 44 53.3	
KMI				SS	SS	05 04 52.8	+17
KMI				LR	LR		
	comp=Z,240nm,21.2s						
KMI				LR	LR		
	comp=Z,460nm,19.1s						
KMI				LR	LR		
	comp=Z,560nm,28.7s						
ENH	**Enshi**	**132.09**	**263**	PFAKE		04 44 50.0	+11
ENH				LR	LR		
	comp=Z,400nm,22.0s						
CN2	**Changchun**	**132.77**	**288**	*e*P	**PKPdf**	**04 44 35.3**	**-4.8**
TAM	**Tamanrasset**	**133.10**	**115**	PFAKE		04 44 50.0	+8.4
TAM				LR	LR		
	comp=Z,500nm,20.0s						
SFJD	**Kangerlussuaq**	**135.44**	**33**	PFAKE		04 45 00.0	+16
SFJD				LR	LR		
	comp=Z,500nm,18.0s						
ATD	**Arta Tunnel**	**135.49**	**168**	PFAKE		04 45 00.0	+14
ATD				LR	LR		
	comp=Z,1µm,20.0s						
CD2	**Chengdu**	**135.78**	**258**	PKP	**PKPdf**	**04 44 51.4**	**+5.2**
CD2				sPKP		04 44 57.8	
CD2				SKS	**SKSdf**	**04 52 01.8**	**+4.7**
CD2				SKKS	**SKKSac**	**04 54 27.1**	**+7.5**
CD2				SS	SS	05 05 37.9	+15
CD2				AMB	AMB		
	comp=Z,370nm,6.5s						
CD2				LR	LR		
	comp=Z,660nm,20.9s						
CD2				LR	LR		
	comp=Z,680nm,19.9s						
CD2				LR	LR		
	comp=Z,620nm,26.8s						
ILULI	**Ilulissat**	**136.63**	**31**	PFAKE		04 45 00.0	+14
ILULI				LR	LR		
	comp=Z,900nm,19.0s						
SFS	**San Fernando**	**137.25**	**92**	PFAKE		04 45 00.0	+11
SFS				LR	LR		
	comp=Z,200nm,21.0s						
TULEG	**Thule**	**137.30**	**17**	PFAKE		04 45 00.0	+12
TULEG				LR	LR		
	comp=Z,2µm,22.0s						
HHC	**Hu-ho-hao-te**	**138.49**	**275**	*e*PKP	**PKPdf**	**04 44 53.1**	**+2.1**
HHC				SKKS		04 54 38.9	
HHC				SS	**SS**	**05 06 03.3**	**+7.7**
HHC				AMB	AMB		
	comp=Z,71nm,9.2s						
HHC				LR	LR		
	comp=Z,230nm,17.5s						
HHC				LR	LR		
	comp=Z,340nm,17.8s						
HHC				LR	LR		
	comp=Z,500nm,18.8s						
DAMY	**Dhamar**	**138.66**	**170**	PFAKE		04 45 00.0	+7.7
DAMY				LR	LR		
	comp=Z,2µm,20.0s						
HIA	**Hailar**	**139.27**	**291**	PFAKE		04 45 00.0	+7.9
HIA				LR	LR		
	comp=Z,400nm,19.0s						
LZH	**Lanzhou**	**139.56**	**264**	*e*PKP	**PKPdf**	**04 44 55.6**	**+2.4**
LZH				LR	LR		
	comp=Z,170nm,18.2s						
LZH				LR	LR		
	comp=Z,170nm,18.0s						
LZH				LR	LR		
	comp=Z,200nm,20.1s						
ESDC	**Sonseca Array**	**140.75**	**90**	PKP	**PKPdf**	**04 44 52.9**	**-2.2**
	comp=Z,0.4nm,0.6s,baz=219,slow=2.3,SNR=3.8						
ES19	**SONSECA Array**	**140.80**	**90**	*e*PKPdf	**PKPdf**	**04 44 59.4**	**+4.2**
SUMG	**Summit**	**141.91**	**29**	PFAKE		04 45 10.0	+13
SUMG				LR	LR		
	comp=Z,2µm,20.0s						
GTA	**Gaotai**	**144.16**	**264**	⇑PKPbc	PKPbc	04 45 00.3	+0.9
GTA				sPKP		04 45 08.3	
THTN	**Thala**	**144.90**	**107**	PFAKE		04 45 10.0	+7.4
THTN				LR	LR		
	comp=Z,900nm,21.0s						
TIXI	**Tiksi**	**145.05**	**327**	PKP	**PKPbc**	**04 44 57.4**	**-3.7**
	comp=Z,36nm,0.8s,baz=110,slow=5.6,SNR=10						
TIXI	**Tiksi**	**145.05**	**327**	*e*PKPbc	**PKPbc**	**04 44 57.4**	**-3.7**
TIXI				LR	LR		
	comp=Z,1µm,21.0s						
ULN	**Ulaanbaatar**	**145.37**	**281**	PFAKE		04 45 10.0	+6.7
ULN				LR	LR		
	comp=Z,400nm,20.0s						
KEST	**Kesra**	**145.38**	**107**	PKPbc	**PKPbc**	**04 45 00.3**	**-3.1**
	comp=Z,4.0nm,0.8s,baz=214,slow=7.3,SNR=2.4						
KEST	**Kesra**	**145.38**	**107**	*e*PKPbc	**PKPbc**	**04 45 00.3**	**-3.1**
KEST				*e*PKPdf	sPKPbc	04 45 07.9	0.0
KEST				LR	LR		
	comp=Z,800nm,21.0s						
SONA0	**Songino Array**	**145.72**	**280**	*e*PKPdf	**PKPdf**	**04 45 00.4**	**-3.3**
SONM	**Songino Array**	**145.72**	**280**	PKPbc	**PKPdf**	**04 45 00.4**	**-3.3**
	comp=Z,6.5nm,0.7s,baz=149,slow=3.8,SNR=3.5						
SCO	**Scoresbysund**	**146.26**	**35**	PFAKE		04 45 20.0	+14
SCO				LR	LR		
	comp=Z,1µm,22.0s						
RAYN	**Ar Rayn**	**147.62**	**170**	PFAKE		04 45 20.0	+7.6
RAYN				LR	LR		
	comp=Z,1µm,20.0s						
UOSS	**Minazif**	**149.08**	**189**	PFAKE		04 45 20.0	+1.8
UOSS				LR	LR		
	comp=Z,600nm,19.0s						
EKA	**Eskdalemuir Ar**	**149.92**	**68**	PKPbc	**PKPdf**	**04 45 08.9**	**-1.3**
	comp=Z,2.0nm,0.8s,baz=248,slow=3.4,SNR=2.9						
BNI	**Bardonecchia**	**150.23**	**92**	PFAKE		04 45 20.0	-2.6
BNI				LR	LR		
	comp=Z,900nm,21.0s						
CEL	**Celeste**	**150.75**	**112**	PFAKE		04 45 20.0	+2.3
CEL				LR	LR		
	comp=Z,700nm,22.0s						
SENIN	**Lac Senin/Sane**	**151.35**	**90**	PFAKE		04 45 20.0	+0.9
SENIN				LR	LR		
	comp=Z,500nm,22.0s						
VLC	**Villacollemand**	**151.78**	**97**	PFAKE		04 45 20.0	+0.1
VLC				LR	LR		
	comp=Z,700nm,21.0s						
DOU	**Dourbes**	**151.82**	**82**	⇑PKP	**PKPbc**	**04 45 21.8**	**+2.1**
TIP	**Timpagrande**	**151.89**	**111**	PFAKE		04 45 20.0	-0.3
TIP				LR	LR		
	comp=Z,400nm,20.0s						
CUC	**Castrocucco**	**151.98**	**109**	PFAKE		04 45 20.0	-0.5
CUC				LR	LR		
	comp=Z,500nm,19.0s						
AQU	**L’Aquila**	**152.30**	**103**	PFAKE		04 45 30.0	-1.2
AQU				LR	LR		
	comp=Z,800nm,22.0s						
ECH	**Echery**	**152.30**	**87**	PFAKE		04 45 30.0	-1.0
ECH				LR	LR		
	comp=Z,300nm,20.0s						
WLF	**Walferdange**	**152.48**	**84**	PFAKE		04 45 30.0	-1.7
WLF				LR	LR		
	comp=Z,400nm,21.0s						
TUE	**Stuetta**	**152.58**	**92**	*e*PKPbc	**PKPbc**	**04 45 24.8**	**+3.0**
IDI	**Anoyia**	**152.84**	**128**	PFAKE		04 45 30.0	-3.6
IDI				LR	LR		
	comp=Z,700nm,22.0s						
MEM	**Membach**	**152.86**	**82**	⇑APKP	**PKPab**	**04 45 29.6**	**-3.6**
ITM	**Ithomi**	**152.99**	**121**	PFAKE		04 45 30.0	-4.2
ITM				LR	LR		

	comp=Z,500nm,21.0s						
BFO	Black Forest	153.03	88	PFAKE		04 45 30.0	-4.0
BFO				LR	LR		
	comp=Z,400nm,18.0s						
NIL	Nilore	153.15	224	PFAKE		04 45 30.0	-4.9
NIL				LR	LR		
	comp=Z,600nm,21.0s						
FUORN	Ofenpass-Fuorn	153.18	92	ePKPdf	PKPdf	04 45 17.9	+2.2
FUORN				ePKPab	PKPab	04 45 35.6	+0.6
FUORN				LR	LR		
	comp=Z,900nm,21.0s						
KBS	Kingsbay	153.31	16	PFAKE		04 45 30.0	-4.4
KBS				LR	LR		
	comp=Z,1µm,22.0s						
DAVA	Damuels	153.34	91	epPKPbc	PKPbc	04 45 26.1	+2.7
	comp=Z,11nm,1.0s						
FETA	Feichten	153.67	92	ePKPbc	PKPbc	04 45 24.2	+0.1
	comp=Z,9.5nm,1.2s						
STU	Stuttgart	153.75	88	PFAKE		04 45 30.0	+6.0
STU				LR	LR		
	comp=Z,500nm,21.0s						
WMQ	Urumqi	153.88	258	ePKPbc	PKPdf	04 45 19.3	+2.7
WMQ				LR	LR		
	comp=Z,880nm,24.1s						
WMQ				LR	LR		
	comp=Z,430nm,27.1s						
WMQ				LR	LR		
	comp=Z,870nm,24.1s						
RETA	Reutte	153.95	91	P	PKPbc	04 45 30.0	+5.4
	comp=Z,7.3nm,1.2s						
MOTA	Moosalm	154.06	92	eP	PKPab	04 45 33.0	-5.6
	comp=Z,7.2nm,0.9s						
ABTA	Abfaltersbach	154.53	94	P	PKPbc	04 45 24.1	-1.8
	comp=Z,3.9nm,1.0s						
GRFO	Grafenberg	155.36	87	PFAKE		04 45 30.0	+12
GRFO				LR	LR		
	comp=Z,700nm,21.0s						
KBL	Kabul	155.51	218	PFAKE		04 45 30.0	+11
KBL				LR	LR		
	comp=Z,500nm,20.0s						
LIT	Litokhoron	155.53	118	PFAKE		04 45 30.0	+11
LIT				LR	LR		
	comp=Z,300nm,21.0s						
TTG	Podgorica	155.53	109	PFAKE		04 45 30.0	+11
TTG				LR	LR		
	comp=Z,600nm,21.0s						
OBKA	Obir	155.54	97	eP	PKPdf	04 45 26.9	+8.1
	comp=Z,9.3nm,1.1s						
SOKA	Soboth	155.91	97	eP	PKPdf	04 45 24.4	+5.1
	comp=Z,3.5nm,1.1s						
CSS	Mathiatis	155.95	142	PFAKE		04 45 30.0	+10
CSS				LR	LR		
	comp=Z,600nm,22.0s						
MOA	Molln	156.13	94	ePKPdf	PKPdf	04 45 19.9	+0.4
	comp=Z,2.0nm,0.7s						
GEA0	GERESS Array S	156.33	91	ePKPdf	PKPdf	04 45 21.1	+1.3
GEC2	GERESS Array S	156.34	91	ePKPdf	PKPdf	04 45 16.4	-3.5
GEC2				LR	LR		
	comp=Z,600nm,21.0s						
GERES	GERESS Array B	156.34	91	PKP	PKPdf	04 45 16.4	-3.5
	comp=Z,0.5nm,0.8s,baz=177,slow=1.9,SNR=2.7						
KHC	Kasperske Hory	156.41	90	eSS	SS	05 09 19.0	+1.3
ARSA	Arzberg	156.51	96	P	PKPdf	04 45 27.5	+7.5
	comp=Z,2.3nm,0.5s						
KSH	Kashi	156.90	236	ePKP	PKPdf	04 45 27.3	+6.4
DIVS	Divibare	157.06	107	PFAKE		04 45 30.0	+9.1
DIVS				LR	LR		
	comp=Z,700nm,22.0s						
CONA	Conrad Observa	157.07	95	ePKPdf	PKPdf	04 45 21.5	+0.7
	comp=Z,4.2nm,1.0s						
CLL	Collm	157.12	85	e(sPKPdf)	sPKPdf	04 45 28.0	+2.8
	comp=Z,7.0nm,1.2s						
CLL				i		04 45 35.8	
	comp=Z,7.0nm,1.2s						
CLL				ePP	PP	04 49 33.0	+2.1
CLL				ePPP	PPP	04 53 06.0	
CLL				ePSKS		04 59 52.0	
CLL				ePPS	PPS	05 02 42.0	
CLL				e		05 04 30.0	
CLL				eSS	SS	05 09 16.0	-9.1
CLL				eSSS	SSS	05 15 23.0	
CLL				ePSSrev		05 18 14.0	
CLL				eSSSS		05 19 30.0	
CLL				eSSSrev		05 25 00.0	
CLL				LmV		06 06 00.0	
	comp=Z,400nm,21.2s						
CLL	Collm	157.12	85	PFAKE		04 45 30.0	+9.4
CLL				LR	LR		
	comp=Z,500nm,21.0s						
MANT	Manisa	157.12	129	PFAKE		04 45 30.0	+8.6
MANT				LR	LR		
	comp=Z,1µm,20.0s						
PRU	Pruhonice	157.38	89	eSS	SS	05 09 16.7	-11
ISP	Isparta	157.40	134	PFAKE		04 45 30.0	+8.4
ISP				LR	LR		
	comp=Z,400nm,20.0s						
BRG	Berggiesshubel	157.46	87	ePKP	PKPdf	04 45 26.3	+5.3
	comp=Z,6.7nm,1.2s						
BRG	Berggiesshubel	157.46	87	SS	SS	05 09 21.0	-7.7
GOPC	GO Pecny, Ondr	157.49	90	eSS	SS	05 09 23.3	-5.8
KONO	Kongsberg	157.72	63	PFAKE		04 45 30.0	+8.9
KONO				LR	LR		
	comp=Z,900nm,22.0s						
VTS	Vitosha	157.73	114	PFAKE		04 45 30.0	+8.1
VTS				LR	LR		
	comp=Z,700nm,22.0s						
ALN	Alexandroupoli	157.89	121	PFAKE		04 45 30.0	+8.1
ALN				LR	LR		
	comp=Z,500nm,22.0s						
PRZ	Przheval'sk	157.96	245	PFAKE		04 45 30.0	+7.8
PRZ				LR	LR		
	comp=Z,600nm,20.0s						
KDJ	Kajisay	158.32	242	PFAKE		04 45 30.0	+7.3
KDJ				LR	LR		
	comp=Z,700nm,22.0s						
UPC	Upice	158.46	89	eSS	SS	05 09 40.4	+0.9
UPC				AMS	AMS	06 07 40.0	
	comp=Z,600nm,20.8s						
DPC	Dobruska-Polom	158.56	90	eSS	SS	05 09 42.0	+1.3
MKAR	Makanchi Array	158.71	258	PFAKE		04 45 30.0	+7.2
MKAR				LR	LR		
	comp=Z,100nm,20.0s						
MAKZ	Makanchi	158.89	258	PFAKE		04 45 30.0	+7.0
MAKZ				LR	LR		
	comp=Z,700nm,20.0s						
MORC	Moravsky Berou	158.98	92	PFAKE		04 45 30.0	+7.0
MORC				LR	LR		
	comp=Z,500nm,20.0s						
PSZ	Piszkesteto	159.34	99	PFAKE		04 45 30.0	+6.5
PSZ				LR	LR		
	comp=Z,600nm,21.0s						
OKC	Ostrava-Krasne	159.35	93	eSS	SS	05 09 40.8	-8.1

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*MOS **18** 04:33:55.7±1.2, 4°.29S×102°.83E, h46^{km}, mb5.5/69, MS4.0/5, Error ellipse: s-maj=8.4km s-min=4.5km az=111.3*

*KLM **18** 04:33:57.0, 4°.74S×102°.29E, h68^{km}, mb5.6*

*BJI **18** 04:33:58.2, 4°.40S×102°.70E, h68^{km}, mb5.3/64, mB5.0/45, Ms4.6/45, Ms7 4.3/42*

*DJA **18** 04:33:58.5±0.2, 5°S±2°×10°3E±°, h56^{km}±2^{km}, M5.0/47, mB5.4/21, mb5.3/47, MLv5.5/23, Mw(mB)4.9/21*

*ISCJB **18** 04:33:58.3±0.3, 4°.42S±0°.03×102°.73E±0°.02, h72^{km}±2^{km}, mb5.2/192, Error ellipse: s-maj=5.2km s-min=2.5km az=42.9*

*GCMT **18** 04:33:59.3±0.4, 4°.76S×102°.52E, h59^{km}±2^{km}, MW5.0/48, Moment Tensor Solution. s32,c40; s48,c63; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.54±.25; $M_{\theta\theta}$-3.81±.20; $M_{\phi\phi}$0.27±.29; $M_{r\theta}$1.60±.14; $M_{\theta\phi}$1.88±.14; $M_{\phi r}$0.45±.18; Best double couple: $M_0$4.41500×10^{16} NP1:ϕ_s95.00000°, δ57.00000°, λ69.00000°. NP2: ϕ_s310.00000°, δ39.00000°, λ118.00000°. Principal axes: T 4.0700, Plg70.0000°, Azm317.0000°; N 0.6910, Plg17.0000°, Azm107.0000°; P -4.7610, Plg9.0000°, Azm200.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **18** 04:33:59.3±0.5, 4°.38S×102°.79E, h64^{km}±4^{km}, mb5.3/84 Error ellipse: s-maj=5.6km s-min=3.2km az=46.0*

*IDC **18** 04:34:00.3±2.4, 4°.35S×102°.84E, h74^{km}±20^{km}, mb4.8/50, mb1 4.8/50, mb1mx4.7/61, mbtmp5.1/50, MS4.2/11, Ms1 4.2/11, ms1mx3.7/51, Error ellipse: s-maj=10.4km s-min=8.0km az=46.0*

ISC 18 04:33:59.1±0.4, 4°.45S±0°.04×102°.67E±0°.04, h66^{km}±3^{km}, n1066, σ1ˢ.25/1108, mb5.3/203, 47C-27D, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MNAI	Manna	0.30	72	P	Pn	04 34 08.5	-1.4
MNAI				S	Sn	04 34 17.1	-0.7
MNAI	Manna	0.30	72	ePn	Pn	04 34 09.0	-1.0
MNAI				eSn	Sn	04 34 17.4	-0.4
MASI	Maura Aman, Be	1.37	342	P	Pn	04 34 23.4	+1.0
LWLI	Liwa	1.50	112	P	Pn	04 34 23.6	-0.4
MDSI	Maura Dua	1.51	91	P	Pn	04 34 24.3	+0.2
KASI	Kota Agung	2.11	120	P	Pn	04 34 31.3	-0.9
KLI	Kotabumi	2.22	101	P	Pn	04 34 33.6	-0.1
PMBI	Palembang	2.59	54	P	Pn	04 34 39.8	+1.0
KRJI	Kerinci	2.64	333	P	Pn	04 34 42.0	+2.5
BLSI	Bandar Lampung	2.72	110	P	Pn	04 34 41.4	+0.8
PPSI	Pulau Pagai	3.14	302	P	Pn	04 34 47.2	+1.0
PPSI				S	Sn	04 35 21.4	-1.2
CGJI	Cibinong	3.70	126	P	Pn	04 34 52.7	-1.2
SBJI	Serang	3.82	116	P	Pn	04 34 56.6	+1.0
RGRI	Rengat	4.09	355	P	Pn	04 35 02.2	+2.9
TNG	Tangerang	4.31	113	P	Pn	04 35 09.2	+6.9
DSRI	Dabo	4.38	26	P	Pn	04 35 05.1	+1.8
DBJI	Dramaga	4.57	117	P	Pn	04 35 07.1	+1.3
SKJI	Sukabumi	4.63	123	P	Pn	04 35 11.7	+5.1
SISI	Saibi	4.74	311	P	Pn	04 35 08.4	+0.3
BKNI	Bangkinang	5.02	341	P	Pn	04 35 15.5	+3.5
	818nm,0.9s,10µm6.8nm						
BKNI	Bangkinang	5.02	341	ePn	Pn	04 35 14.3	+2.3
BKNI				eSn	Sn	04 36 07.5	-1.2
TPRI	Tanjung Pinang	5.65	19	P	Pn	04 35 24.0	+3.4
	317nm,0.4s,3.6nm						
JCJI	Jatiwangi	5.93	110	P	Pn	04 35 27.5	+3.0
	481nm,0.9s,2.8nm						
CISI	Cisompet, Garu	5.97	121	ePn	Pn	04 35 23.2	-1.9
PBSI	Pulau Batu	6.19	315	P	Pn	04 35 30.6	+2.6
	396nm,1.1s,3.0nm						
MYKOM	Kota Tinggi	6.31	11	P	Pn	04 35 32.0	+2.3
MYKOM	Kota Tinggi	6.31	11	P	Pn	04 35 32.0	+2.3
CMJI	Cimerak	6.63	120	P	Pn	04 35 33.9	-0.1
KPJI	Karang Pucung	6.86	115	P	Pn	04 35 38.3	+1.2
GSI	Gunungsitoli	7.66	318	P	Pn	04 35 47.7	-0.4
	190nm,0.6s,4µm1.0nm						
GSI	Gunungsitoli	7.66	318	ePn	Pn	04 35 46.7	-1.3
GSI				eSn	Sn	04 37 07.6	-5.8
PSI	Prapat	8.12	333	ePn	Pn	04 35 52.9	-1.6
PSI				eSn	Sn	04 37 17.3	-7.6
PSI	Prapat	8.12	333	eP	Pn	04 35 52.9	-1.6
PSI				e		04 37 17.3	
SMRI	Semarang	8.15	109	P	Pn	04 35 54.5	-0.4
	190nm,0.8s						
SMRI	Semarang	8.15	109	ePn	Pn	04 35 57.5	+2.6
UGM	Wanagama	8.53	114	P	Pn	04 36 00.2	+0.1
UGM	Wanagama	8.53	114	ePn	Pn	04 36 00.6	+0.5
UGM				eSn	Sn	04 37 34.1	-0.8
WOJI	Wonogiri, Jawa	8.87	113	P	Pn	04 36 07.2	+2.5
	125nm,0.9s,0.4nm						
NGJI	Ngawi	9.21	109	P	Pn	04 36 20.7	+11
PCJI	Pacitan	9.24	114	P	Pn	04 36 09.4	-0.3
SNSI	Sinabang, Aceh	9.31	317	P	Pn	04 36 10.3	-0.3
	323nm,0.9s						
KCSI	Kotacane, Aceh	9.31	328	P	Pn	04 36 09.4	-1.3
TPTI		9.42	324	P	Pn	04 36 11.4	-0.8
COCO	West Island	9.61	217c	eP	Pn	04 36 12.2	-2.6
PWJI	Pagerwojo	9.75	112	P	Pn	04 36 17.3	+0.6
STKI	Sintang	9.88	63	P	Pn	04 36 23.2	+4.7
	259nm,0.9s						
KULM	Kulim	9.89	348	ePn	Pn	04 36 19.6	+1.0
MLSI	Meulaboh, Aceh	10.69	324	P	Pn	04 36 27.7	-1.8
	334nm,0.7s,5µm						
BLJI	Banyuglugur	11.35	107	P	Pn	04 36 41.9	+3.4
SKLT	Songkhla	11.73	350	P	Pn	04 36 47.5	+3.8
	66nm,1.1s						
SBUM	Sibu	11.75	54	P	Pn	04 36 49.0	+4.9
JAGI	Jajag, Banyuwa	12.09	110	P	Pn	04 36 48.0	-0.7
JAGI	Jajag, Banyuwa	12.09	110	ePn	Pn	04 36 47.1	-1.6
JAGI				eSn	Sn	04 39 04.6	+2.7
BSI	Banda Aceh	12.32	323	P	Pn	04 36 48.5	-3.4
	41nm,0.4s						
TRTT	Trang	12.56	346	P	Pn	04 36 56.0	+0.8
	16nm,0.8s						
MTKI	Muara Teweh, K	12.70	74	P	P	04 37 08.9	+3.0
SRBI	Singaraja	12.98	107	P	Pn	04 37 01.0	+0.2
	118nm,1.8s						
BKB	Balikpapan	14.56	78	P	P	04 37 25.8	-0.8
	256nm,0.8s,3µm						
TWSI	Taliwang, Sumb	14.75	108	P	Pn	04 37 23.5	-0.7
PLAI	Plampang	15.62	107	P	Pn	04 37 32.0	-3.5
SPSI	Sidrap Palu	17.06	89	P	Pn	04 37 53.5	0.0
	71nm,0.9s,857nm						
TTSI	Tana Toraja	17.17	86	P	P	04 37 57.6	+2.0
	86nm,0.8s,941nm						
WBSI	Waikabubak, Su	17.37	108	P	Pn	04 37 56.3	-1.1
	167nm,0.8s						
BKSI	Bulukumba	17.41	94	P	P	04 37 58.3	+0.1
	64nm,0.7s,514nm						
PHET	Kaeng Krachan	17.51	350	P	P	04 38 03.2	+3.9
	11nm,0.9s						
MPSI	Mapaga	17.86	75	P	Pn	04 38 05.3	+2.0
	66nm,0.8s,662nm						
KDM	Kudat	18.10	51	P	Pn	04 38 11.0	+4.8
SRAK	Srakaew	18.36	358	P	Pn	04 38 11.4	+2.1
	154nm,0.7s,1µm						
NAYO	Nakonayok	18.70	356	P	Pn	04 38 13.5	+0.2
	0.7nm,0.7s,17nm						
SRDT	SRDT	19.01	349	P	Pn	04 38 18.6	+1.5
	34nm,0.9s						
APSI	Ampana	19.28	80	P	Pn	04 38 20.6	+0.2
	150nm,0.9s,1µm						
EDFI	Ende, Flores	19.37	104	P	P	04 38 20.3	+0.5
	56nm,0.6s						
MRSI	Marisa	19.87	76	P	P	04 38 26.0	+0.8
	134nm,0.7s,1µm						
MMRI	Maumere	19.88	103	P	Pn	04 38 27.0	-0.4
	123nm,0.7s						
MMRI	Maumere	19.88	103	eP	P	04 38 24.1	-1.2
	91nm,0.6s						
KDI	Kendari	19.90	89	P	Pn	04 38 27.2	-0.5
	149nm,0.7s,2µm						
CHAI	Chaiyaphum	20.24	358	P	P	04 38 30.1	+1.0
	19nm,1.1s,157nm						
LUWI	Luwuk	20.36	81	P	Pn	04 38 32.9	-0.2
	149nm,1.1s,4µm						
LUWI	Luwuk	20.36	81	eP	Pn	04 38 31.7	-1.4
	242nm,1.2s						
KHON	Khomkaen	20.66	0	P	Pn	04 38 37.1	+0.6
	21nm,1.0s						
UMPA	Umpang Tak	20.87	350	P	P	04 38 35.1	-0.9
	18nm,1.1s,1µm						
PBKT	Sadao Pong	20.96	355	eP	P	04 38 37.2	+0.4
PBKT	Sadao Pong	20.96	355	P	P	04 38 38.2	+1.4
	25nm,1.4s,1µm						
GIRL	Giralia	21.27	149	P	P	04 38 40.6	+0.5
	baz=21,SNR=3.5						
SKNT	Sakolnakorn	21.33	3	P	P	04 38 44.9	+4.0
	16nm,1.0s						
BATI	Baumata	21.59	107	P	P	04 38 43.3	-0.4
PHIT	Phitsanulok	21.62	354	P	P	04 38 45.2	+1.3
	133nm,1.0s,1µm						
SUKH	Sukhothai	22.00	352	P	P	04 38 48.9	+0.9
	50nm,1.0s,436nm						
SOEI	Soe	22.06	105	P	P	04 38 51.0	+2.1
	106nm,0.7s						
SOEI	Soe	22.06	105	eP	P	04 38 46.7	-2.3
	67nm,0.6s						
NONG	Nongkai	22.38	1	P	P	04 38 52.4	+0.3
	1.0nm,0.9s						
CM01	Chiang Mai Arr	23.02	351	eP	P	04 38 58.8	0.0
CM01				ePcP	PcP	04 42 47.2	+0.7
CM31	Chiang Mai Arr	23.06	351	eP	P	04 38 59.2	0.0
CM31				ePcP	PcP	04 42 47.8	+1.2
CMAR	Chiang Mai Arr	23.06	351	P	P	04 38 58.9	-0.3
	61nm,0.9s,baz=184,slow=8.7,SNR=144						
CMAR				PcP	PcP	04 42 47.8	+1.2
	6.3nm,0.8s,baz=206,slow=3.0,SNR=9.3						
CMAR				LR	LR	04 48 25.8	
	comp=Z,293nm,18.8s,baz=176,slow=38						
SANI	Sanana	23.40	85	P	P	04 39 02.8	+0.2
	76nm,1.0s,908nm						
CMMT	Chiang Mai	23.41	351	P	P	04 39 01.9	-0.6
	58nm,1.1s,711nm						
CHTO	Chiang Mai	23.41	351	eP	P	04 39 02.0	-0.6
	60nm,1.0s						
CHTO	Chiang Mai	23.41	351	P	P	04 39 02.4	-0.2
	SNR=12						
CHTO	Chiang Mai	23.41	351	eP	P	04 39 02.0	-0.6
CHTO				pmax	pmax		
	comp=Z,60nm,1.0s						
CHTO	Chiang Mai	23.41	351	P	P	04 39 01.9	-0.6
	comp=Z,261nm,1.1s,comp=Z,3µm						
MBWA	Marble Bar	23.46	137	eP	P	04 39 02.9	-0.2
	comp=Z,105nm,1.5s						
QIZ	Qiongzhong	24.38	17	P	P	04 39 12.3	+1.0
QIZ				LR	LR		
	comp=Z,280nm,17.2s						
QIZ				LR	LR		
	comp=Z,240nm,20.1s						
QIZ				LR	LR		
	comp=Z,440nm,28.4s						
CMAI	Chiengmai2	24.49	352	P	P	04 39 13.7	+1.2
	comp=Z,16nm,1.0s						
PALK	Pallekele	24.82	298	P	P	04 39 18.0	+2.5
	comp=Z,28nm,0.9s,baz=116,slow=3.0,SNR=6.2						
PALK				LR	LR	04 48 14.3	
	comp=Z,245nm,21.7s,baz=118,slow=34						
PALK	Pallekele	24.82	298	eP	P	04 39 19.3	+3.8
	comp=Z,53nm,1.1s						
LBMI	Labuha	25.09	82	P	P	04 39 19.9	+2.0
	comp=Z,499nm,0.9s,comp=Z,3µm						
TNTI	Ternate	25.22	79	P	P	04 39 21.4	+2.3
RCP	Roxas	25.54	51⇓	eP	P	04 39 23.1	+1.2
DAV	Davao City (W)	25.57	64	P	P	04 39 23.6	+1.3
	comp=Z,233nm,0.4s,baz=3.2,slow=2.1,SNR=4.2						
DAV	Davao City (W)	25.57	64	eP	P	04 39 23.6	+1.3
	comp=Z,386nm,0.4s						
TGY	Tagaytay City	25.85	44	P	P	04 39 25.3	+0.4
	comp=Z,152nm,0.3s,baz=101,slow=5.2,SNR=4.3						
TGY				LR	LR	04 49 21.4	
	comp=Z,467nm,21.7s,baz=238,slow=36						
MEEK	Meekatharra	26.82	147	P	P	04 39 33.0	-0.4
	baz=27,SNR=7.5						
KNRA	Kununurra	27.97	115	P	P	04 39 42.4	-1.4
	baz=28,SNR=15						
BRDH	Bariadhala	29.04	339	LR	LR	04 53 46.9	
	comp=Z,537nm,20.7s,baz=150,slow=41						
MTN	Manton Dam	29.32	108	P	P	04 39 53.7	-2.2
	baz=29,SNR=6.9						
MTN	Manton Dam	29.32	108	eP	P	04 39 53.7	-2.2
	comp=Z,26nm,0.4s						
KMI	Kunming	29.40	0	P	P	04 39 58.3	+1.7
KMI				pP	pP	04 40 10.6	-2.0
KMI				pmax	pmax		
	comp=Z,17nm,1.2s						
KMI				pmax	pmax		
	comp=Z,85nm,4.7s						
KMI				LR	LR		
	comp=Z,620nm,17.2s						
KMI				LR	LR		
	comp=Z,130nm,15.9s						
KMI				LR	LR		
	comp=Z,570nm,16.6s						
FAKI	Fak Fak	29.56	88	eP	P	04 39 55.7	-2.3
	comp=Z,80nm,1.3s						
BWNR	Bhubaneshwar	29.65	327	eP	P	04 39 58.6	-0.1
H08S2	Diego Garcia H	30.17	262	T	T	05 11 49.2	
	baz=87,slow=75,SNR=73						
H08S3	Diego Garcia H	30.18	263	T	T	05 11 49.2	
	baz=87,slow=75,SNR=18						
H08S1	Diego Carcia H	30.19	262	T	T	05 11 49.2	
	baz=87,slow=75,SNR=25						
IMP	Imphal	30.32	344	eP	P	04 40 02.9	-1.7
KDU	Kakadu	30.56	107	P	P	04 40 03.6	-3.2
	baz=30,SNR=4.3						
GYA	Guiyang	30.97	7⇑	iP	P	04 40 10.4	0.0
GYA				pP	sP	04 40 30.3	-3.9
GYA				PP	PnPn	04 41 17.3	+3.5
GYA				PcP	PcP	04 43 05.5	+0.1
GYA				S	S	04 45 12.0	+1.4
GYA				sS	sS	04 45 41.5	+3.6
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,5.0s						
GYA				LR	LR		
	comp=Z,850nm,17.5s						
GYA				LR	LR		
	comp=Z,700nm,17.0s						
GYA				LR	LR		
	comp=Z,740nm,17.7s						
KOHI	KOHIMA	31.12	345	eP	P	04 40 10.5	-1.3
KOHI				IAmb	IAmb	04 40 11.7	
	comp=Z,84nm,1.0s						
NWAO	Narrogin (SRO)	31.43	156	eP	P	04 40 13.9	-0.3
	comp=Z,27nm,0.9s						
NWAO	Narrogin (SRO)	31.43	156	eP	P	04 40 13.9	-0.3
NWAO				pmax	pmax		
	comp=Z,27nm,0.9s						
MOKO	MOKOCHONG	31.60	346	eP	P	04 40 15.2	-0.7
MOKO				IAmb	IAmb	04 40 15.8	
SHL	Shillong	31.62	341	eP	P	04 40 14.5	-1.7
	comp=Z,44nm,0.4s						
SHL	Shillong	31.62	341	eP	P	04 40 15.2	-1.1
SHL	Shillong	31.62	341	eP	P	04 40 14.5	-1.7
SHL				pmax	pmax		
	comp=Z,44nm,0.4s						
WRKA	Warakurna	32.02	132	P	P	04 40 19.7	+0.1
	baz=32,SNR=27						
H01W3	Cape Leeuwin H	32.09	162	T	T	05 14 10.3	
	baz=338,slow=76,SNR=163						
H01W2	Cape Leeuwin H	32.10	162	T	T	05 14 08.4	
	baz=338,slow=76,SNR=191						
H01W1	Cape Leeuwin H	32.10	162	T	T	05 14 09.1	
	baz=338,slow=76,SNR=117						
HYB	Hyderabad	32.24	313	eP	P	04 40 22.4	+0.9
HYB				IAmb	IAmb	04 40 23.5	
	comp=Z,24nm,1.1s						
KMBL	Kambalda	32.30	148	P	P	04 40 21.6	-0.3
	baz=32,SNR=8.8						
TEZP	TEZPUR	32.33	343	eP	P	04 40 21.1	-1.1
BOK	Bokaro	32.50	331	eP	P	04 40 25.2	+1.5
ITAN	ITANAGAR	32.58	345	eP	P	04 40 23.7	-0.7
DHUB	DHUBRI	32.69	339	ex	P	04 40 11.8	-14
ZIRO	ZIRO	32.91	345	eP	P	04 40 26.5	-1.0
YULB	Yu-li	33.11	32	eP	P	04 40 29.1	0.0
	comp=Z,25nm,1.4s						
PALU	Palau	33.84	70	P	P	04 40 34.4	-1.1
	baz=34,SNR=4.3						
GTK	Tadong	34.39	337	eP	P	04 40 39.7	-0.6
ODAN	Odare	34.46	335	eP	P	04 40 41.4	+0.4
	comp=Z,171nm,0.8s						
WRA	Warramunga Arr	34.47	119	P	P	04 40 39.8	-1.2
	comp=Z,28nm,0.8s,baz=287,slow=10.0,SNR=124						
WRA				PcP	PcP	04 43 15.2	+0.1
	comp=Z,5.5nm,0.7s,baz=299,slow=2.0,SNR=4.7						
WRA				S	S	04 46 00.4	-4.6
	comp=Z,3.9nm,0.9s,baz=289,slow=21,SNR=5.3						
WRA	Warramunga Arr	34.47	119	P	P	04 40 39.8	-1.2
WRA						04 43 15.2	
WRA				S	S	04 46 00.4	-4.6
WRA				pmax	pmax		
	comp=Z,25nm,0.8s						
WRA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
WRA				smax	smax		
	comp=N,4.0nm,0.9s						
WR1	Warramunga Arr	34.47	119	eP	P	04 40 39.8	-1.2
	comp=N,36nm,0.8s						
WR1				ePcP	PcP	04 43 15.2	+0.1
WR1				eS	S	04 46 00.4	-4.6
WRAB	Tennant Creek	34.48	119	eP	P	04 40 40.1	-0.9
	comp=N,36nm,0.8s						
WRAB	Tennant Creek	34.48	119c	iP	P	04 40 39.7	-1.3
WRAB				pmax	pmax		
	comp=Z,45nm,0.8s						
WB2	Warramunga Arr	34.48	119	eP	P	04 40 40.0	-1.0
WB2				ePcP	PcP	04 43 15.3	+0.2
TAPN	Taplejung	34.76	336	eP	P	04 40 44.1	+0.4
	comp=Z,157nm,0.8s						
RAMN	Ramite	34.87	334	eP	P	04 40 44.9	+0.3
	comp=Z,66nm,0.8s						
ENH	Enshi	35.14	10	eP	P	04 40 45.3	-1.3
	comp=Z,58nm,0.4s						
CD2	Chengdu	35.18	2	P	P	04 40 48.0	+1.0
CD2				pP	pP	04 41 04.5	+1.4
CD2				sP	sP	04 41 12.8	+2.0
CD2				PP	PP	04 42 09.4	+1.4
CD2				S	S	04 46 18.1	+2.5
CD2				pmax	pmax		

	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.2s						
CD2				LR	LR		
	comp=Z,1µm,18.4s						
CD2				LR	LR		
	comp=Z,890nm,19.9s						
CD2				LR	LR		
	comp=Z,930nm,17.4s						
FORT	Forrest	35.46	140	eP	P	04 40 48.4	-1.0
	comp=Z,28nm,0.9s						
AS31	Alice Springs	35.67	125	eP	P	04 40 49.9	-1.4
	comp=Z,24nm,0.4s						
AS31				ePcP	PcP	04 43 18.6	0.0
AS31				eS	S	04 46 21.2	-2.2
AS31				eScP	ScP	04 46 59.3	+0.2
ASAR	Alice Springs	35.67	125	P	P	04 40 50.9	-0.4
	comp=Z,22nm,0.6s,baz=296,slow=8.0,SNR=197						
ASAR				PcP	PcP	04 43 18.6	0.0
	comp=Z,8.0nm,0.6s,baz=300,slow=2.3,SNR=11						
ASAR				S	S	04 46 21.2	-2.2
	comp=Z,4.8nm,0.8s,baz=292,slow=16,SNR=9.9						
ASAR				ScP	ScP	04 46 59.3	+0.2
	comp=Z,4.4nm,0.9s,baz=285,slow=4.4,SNR=7.4						
JIRN	Jiri	35.67	334	eP	P	04 40 51.9	+0.3
	comp=Z,449nm,0.9s						
LSA	Lhasa	35.71	343	eP	P	04 40 52.5	+0.5
	comp=Z,33nm,1.1s						
LSA	Lhasa	35.71	343	eP	P	04 40 52.5	+0.5
LSA				pmax	pmax		
	comp=Z,33nm,1.1s						
PKIN	Phulchoki	35.95	333	eP	P	04 40 53.7	-0.1
	comp=Z,76nm,0.8s						
GUN	Gumba	36.02	334	eP	P	04 40 54.9	+0.3
	comp=Z,252nm,0.6s						
DMN	Daman	36.10	333	eP	P	04 40 55.3	+0.1
	comp=Z,131nm,0.8s						
KKN	Kakani	36.18	333	eP	P	04 40 55.8	0.0
	comp=Z,203nm,0.8s						
WHN	Wuhan	36.55	17	⇑iP	P	04 41 00.1	+1.5
WHN				pmax	pmax		
	comp=Z,46nm,1.0s						
WHN				LR	LR		
	comp=Z,1µm,18.1s						
GKN	Gorkha	36.65	333	eP	P	04 41 00.0	+0.3
	comp=Z,336nm,0.9s						
KOLN	Koldanda	36.94	331	eP	P	04 41 02.7	+0.4
	comp=Z,318nm,0.8s						
BHPL	Bhopal	36.94	319	eP	P	04 41 03.1	+1.0
BHPL				IAmb	IAmb	04 41 04.0	
	comp=Z,42nm,0.5s						
DANN	Dangsing	37.35	332	eP	P	04 41 06.1	+0.3
	comp=Z,560nm,0.7s						
PYUN	Piuthan	37.51	331	eP	P	04 41 07.5	+0.4
	comp=Z,346nm,0.9s						
JAY	Jayapura	38.01	88	P	P	04 41 11.4	0.0
	comp=Z,152nm,0.8s						
XAN	Xi’an	38.74	8	P	P	04 41 16.8	-0.3
XAN				sP	sP	04 41 40.3	-0.8
XAN				pmax	pmax		
	comp=Z,80nm,0.7s						
XAN				LR	LR		
	comp=Z,380nm,18.4s						
XAN				LR	LR		
	comp=Z,220nm,15.2s						
XAN				LR	LR		
	comp=Z,490nm,17.8s						
QIS	Mount Isa	39.31	117	P	P	04 41 21.6	-0.5
	baz=39,SNR=36						
NJ2	Nanjing	39.44	22	eP	P	04 41 24.1	+1.2
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
JOW	Kunigami	39.76	37	P	P	04 41 25.6	-0.1
	comp=Z,22nm,0.9s,baz=253,slow=11,SNR=3.3						
JOW	Kunigami	39.76	37	eP	P	04 41 26.4	+0.7
	comp=Z,30nm,1.0s						
LZH	Lanzhou	40.34	1	⇑P	P	04 41 30.8	+0.2
LZH				pP	pP	04 41 49.6	+2.6
LZH				sP	sP	04 41 56.3	+1.6
LZH				ePP	PnPn	04 43 07.6	-1.3
LZH				pmax	pmax		
	comp=Z,91nm,1.6s						
LZH				pmax	pmax		
	comp=Z,170nm,4.9s						
LZH				LR	LR		
	comp=Z,460nm,15.0s						
LZH				LR	LR		
	comp=Z,470nm,15.2s						
LZH				LR	LR		
	comp=Z,540nm,16.7s						
COEN	Coen	41.02	106	P	P	04 41 34.2	-2.1
	baz=41,SNR=5.6						
COEN	Coen	41.02	106	eP	P	04 41 34.4	-1.9
	comp=Z,16nm,0.8s						
NDI	New Delhi	41.05	325	eP	P	04 41 35.0	-1.3
BBOO	Buckleboo	42.05	136	P	P	04 41 44.0	-0.5
	baz=42,SNR=9.7						
BBOO	Buckleboo	42.05	136	eP	P	04 41 44.1	-0.3
	comp=Z,45nm,1.4s						
MTSU	Mount Surprise	42.92	112	P	P	04 41 51.6	-0.2
	baz=43,SNR=65						
SMLA	Simla	42.95	327	eP	P	04 41 51.7	0.0
GTA	Gaotai	43.73	357	⇓P	P	04 41 58.5	+0.4
GTA				pP	pP	04 42 14.8	+0.1
GTA				sP	sP	04 42 21.5	-0.8
GTA				PcP	PcP	04 43 44.5	+0.5
GTA				S	S	04 48 24.6	+1.0
GTA				sS	sS	04 48 50.8	-1.0
GTA				SS	SS	04 51 34.4	-7.1
GTA				pmax	pmax		
	comp=Z,31nm,1.0s						
GTA				pmax	pmax		
	comp=Z,45nm,6.6s						
GTA				LR	LR		
	comp=Z,480nm,19.2s						
GTA				LR	LR		
	comp=Z,290nm,16.5s						
GTA				LR	LR		
	comp=Z,670nm,19.6s						
DHRM	DHARAMSHALA	44.28	327	eP	P	04 42 02.4	-0.4
DHRM				IAmb	IAmb	04 42 03.7	
	comp=Z,136nm,1.5s						
HTT	Hallett	44.39	135	P	P	04 42 03.5	+0.1
	baz=44,SNR=8.0						
PMG	Port Moresby	44.41	99	P	P	04 42 02.9	-0.9
	comp=Z,17nm,0.6s,baz=292,slow=19,SNR=4.5						
MANU	Manus Island	44.69	88	eP	P	04 42 05.0	-1.1
	comp=Z,32nm,0.7s						
CTAO	Charters Tower	45.16	114	eP	P	04 42 09.4	-0.3
	comp=Z,104nm,0.8s						
CTAO	Charters Tower	45.16	114	eP	P	04 42 09.4	-0.3
CTAO				pmax	pmax		
	comp=Z,105nm,0.8s						
QLP	Quilpie	45.39	123	P	P	04 42 11.9	+0.5
	baz=45,SNR=18						
STKA	Stephens Creek	45.54	131	P	P	04 42 12.6	+0.1
	comp=Z,60nm,0.6s,baz=304,slow=8.1,SNR=135						
STKA				PcP	PcP	04 43 50.6	+0.3
	comp=Z,10nm,0.5s,baz=295,slow=11,SNR=2.8						
STKA	Stephens Creek	45.54	131	P	P	04 42 12.6	+0.1
	baz=46,SNR=81						
STKA	Stephens Creek	45.54	131	eP	P	04 42 10.9	-1.6
	comp=Z,13nm,0.6s						
STKA				ePcP	PcP	04 43 50.6	+0.3
STKA	Stephens Creek	45.54	131	eP	P	04 42 10.9	-1.6
GUMO	Guam	45.56	66	P	P	04 42 10.1	-2.8
	comp=Z,43nm,0.5s,baz=174,slow=18,SNR=4.1						
HHC	Hu-ho-hao-te	45.81	9	eP	P	04 42 15.6	+1.0
HHC				pP	pP	04 42 28.3	-3.0
HHC				sP	sP	04 42 43.4	+4.5
HHC				S	S	04 48 55.4	+1.6
HHC				sS	sS	04 49 17.8	-4.4
HHC				SS	ScS	04 52 11.1	+6.5
HHC				pmax	pmax		
	comp=Z,55nm,1.2s						
HHC				pmax	pmax		
	comp=Z,120nm,6.1s						
HHC				LR	LR		
	comp=Z,460nm,15.7s						
HHC				LR	LR		
	comp=Z,460nm,15.7s						
HHC				LR	LR		
	comp=Z,440nm,14.3s						
JNU	Nakatsue	45.95	34	P	P	04 42 15.2	-0.5
	comp=Z,20nm,0.8s,baz=168,slow=2.9,SNR=7.3						
JNU				LR	LR	05 00 34.4	
	comp=Z,155nm,21.1s,baz=117,slow=35						
JNU	Nakatsue	45.95	34	eP	P	04 42 15.3	-0.5
	comp=Z,37nm,1.0s						
BJT	Baijiatuau	45.96	14	eP	P	04 42 15.9	+0.2
	comp=Z,31nm,0.7s						
BJT	Baijiatuau	45.96	14	eP	P	04 42 15.9	+0.2
BJT				pmax	pmax		
	comp=Z,31nm,0.7s						
BJI	Beijing	45.99	14	⇓iP	P	04 42 16.3	+0.5
BJI				pmax	pmax		
	comp=Z,56nm,0.7s						
NIL	Nilore	47.01	326	eP	P	04 42 23.6	-0.4
NIL	Nilore	47.01	326	eP	P	04 42 23.6	-0.4
KS15	Wonju Array Si	47.84	27	eP	P	04 42 30.5	+0.2
KS15				ePcP	PcP	04 43 57.8	-0.4
KSAR	Wonju Array Be	47.84	27	P	P	04 42 30.6	+0.3
KSAR	Wonju Array Be	47.84	27	P	P	04 42 30.6	+0.3
KSRS	Korea Array	47.87	27	P	P	04 42 30.6	+0.1
	comp=Z,9.8nm,0.6s,baz=226,slow=7.3,SNR=47						
KSRS				PcP	PcP	04 43 57.8	-0.5
	comp=Z,7.1nm,1.0s,baz=224,slow=3.6,SNR=8.3						
KS01	Wonju Array Si	47.87	27	eP	P	04 42 30.2	-0.3
ARPS	Mount Arapiles	48.19	137	P	P	04 42 34.0	+0.9
	baz=48,SNR=4.6						
CMSA	Cobar Meteorol	48.51	129	P	P	04 42 35.9	+0.2
	baz=48,SNR=47						
WMQ	Urumqi	49.91	346	P	P	04 42 46.4	+0.2
WMQ				pP	pP	04 43 06.1	+3.0
WMQ				PcP	PcP	04 44 04.3	-1.4
WMQ				S	S	04 49 51.3	-0.4
WMQ				pmax	pmax		
	comp=Z,230nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,630nm,3.8s						
WMQ				LR	LR		
	comp=Z,250nm,31.9s						
WMQ				LR	LR		
	comp=Z,250nm,29.1s						
WMQ				LR	LR		
	comp=Z,430nm,26.3s						
KBL	Kabul	50.08	323	eP	P	04 42 47.8	0.0
	comp=Z,21nm,0.7s						
KBL	Kabul	50.08	323	eP	P	04 42 47.8	0.0
KBL				pmax	pmax		
	comp=Z,21nm,0.7s						
KSH	Kashi	50.20	333	P	P	04 42 46.9	-1.6
KSH				sP	sP	04 43 14.3	+1.3
KSH				PP	PP	04 44 44.0	-0.5
KSH				PcS	PcS	04 47 57.4	-6.8
KSH				S	S	04 49 49.5	-6.4
KSH				pmax	pmax		
	comp=Z,55nm,0.8s						
KSH				pmax	pmax		
	comp=Z,92nm,4.4s						
KSH				LR	LR		
	comp=Z,280nm,9.5s						
KSH				LR	LR		
	comp=Z,340nm,13.3s						
EIDS	Eidsvold	50.84	119	P	P	04 42 53.0	-0.4
	baz=51,SNR=3.8						
EIDS	Eidsvold	50.84	119	eP	P	04 42 52.9	-0.6
	comp=Z,20nm,1.1s						
WSAR	Wadi Sarin	51.02	305	P	P	04 42 57.1	+2.2
	comp=Z,8.2nm,0.6s,baz=109,slow=13,SNR=6.4						
WSAR				PcP	PcP	04 44 11.2	+1.0
	comp=Z,4.1nm,0.7s,baz=150,slow=8.1,SNR=3.0						
PRZ	Przheval’sk	51.65	337	eP	P	04 43 00.7	+1.2
	comp=Z,49nm,0.6s						
PRZ	Przheval’sk	51.65	337	eP	P	04 43 00.7	+1.2
PRZ				pmax	pmax		
	comp=Z,49nm,0.6s						
YNG	Young	51.72	131	P	P	04 43 00.5	+0.4
	baz=52,SNR=8.3						
SHLS	Shalkode	51.83	338	i P	P	04 43 00.2	-0.6
	comp=Z,37nm,0.7s						
SHLS				eS	S	04 50 17.3	-1.1
KDJ	Kajisay	51.84	336	eP	P	04 43 00.8	0.0
	comp=Z,114nm,0.8s						
UZB	Uzynbulak	51.98	338	i P	P	04 43 02.0	+0.2
	comp=Z,22nm,0.7s						
UZB				eS	S	04 50 20.7	+0.2
SATY	Saty	52.14	338	eP	P	04 43 03.2	+0.1
	comp=Z,33nm,0.7s						
SONA0	Songino Array	52.17	3	eP	P	04 43 03.6	+0.5
SONA0				ePcP	PcP	04 44 13.7	-0.4
SONM	Songino Array	52.17	3	P	P	04 43 03.6	+0.5
	comp=Z,62nm,0.6s,baz=182,slow=9.1,SNR=347						
SONM				PcP	PcP	04 44 13.7	-0.4
	comp=Z,8.4nm,0.4s,baz=188,slow=4.0,SNR=12						
SONM				LR	LR	05 09 02.2	
	comp=Z,154nm,18.5s,baz=150,slow=40						
SONA1	Songino Array	52.18	3	eP	P	04 43 02.7	-0.6
ZHN	Zhinishke	52.22	338	eP	P	04 43 03.6	0.0
	comp=Z,9.4nm,0.7s						
CN2	Changchun	52.24	21	eP	P	04 43 06.5	+2.9
ULN	Ulaanbaatar	52.24	4	eP	P	04 43 03.6	-0.1
	comp=Z,47nm,1.0s						
ULN	Ulaanbaatar	52.24	4	P	P	04 43 03.9	+0.2
	SNR=20						
ULN	Ulaanbaatar	52.24	4	c iP	P	04 43 03.9	+0.2
ULN				pmax	pmax		
	comp=Z,63nm,1.3s						
ULHL	Ulahol	52.32	335	P	P	04 43 04.3	-0.2
	SNR=26						
KPKS	Kokpek	52.38	338	⇑iP	P	04 43 04.7	-0.1
	comp=Z,27nm,0.7s						
KPKS				eS	S	04 50 26.1	+0.3
MAJO	Matsushiro	52.58	36	eP	P	04 43 04.7	-1.6
	comp=Z,15nm,0.7s						
MAJO				ePcP	PcP	04 44 15.5	-0.3
MAJO	Matsushiro	52.58	36	i P	P	04 43 04.3	-2.0
MAJO				pmax	pmax		
	comp=Z,16nm,0.9s						
MAT	Matsushiro	52.58	36	P	P	04 43 04.6	-1.7
MJAR	Matsushiro Arr	52.58	36	P	P	04 43 04.9	-1.4
	comp=Z,15nm,0.8s,baz=219,slow=8.4,SNR=38						
MJAR				PcP	PcP	04 44 15.5	-0.3
	comp=Z,6.3nm,0.8s,baz=211,slow=5.2,SNR=5.8						
MJB9	Matsu-Tunnel	52.58	36	eP	P	04 43 04.8	-1.5
	comp=Z,15nm,0.7s						
KZA	Kyzart	52.60	334	P	P	04 43 06.9	+0.1
	SNR=32						
MDOK	Medeo	52.76	337	i P	P	04 43 07.7	+0.1
	comp=Z,292nm,0.9s						
MDOK				eS	S	04 50 31.3	+0.2
ARMA	Armidale	52.82	125	P	P	04 43 09.3	+1.0
	baz=53,SNR=5.7						
ARMA	Armidale	52.82	125	eP	P	04 43 09.8	+1.5
	comp=Z,25nm,1.2s						
TKM2	Tokmak 2	53.14	335	P	P	04 43 10.5	-0.1
	SNR=97						
KBK	Karagaybulak	53.20	335	P	P	04 43 11.5	+0.6
	SNR=8.6						
AML	Almayashu	53.33	333	P	P	04 43 11.8	-0.3
	SNR=34						
AAK	Ala-Archa	53.38	334	P	P	04 43 12.5	+0.3
	comp=Z,17nm,0.9s,baz=160,slow=4.3,SNR=23						
AAK				PcP	PcP	04 44 19.3	+0.5
	comp=Z,11nm,0.8s,baz=90,slow=1.0,SNR=2.9						
AAK	Ala-Archa	53.38	334	P	P	04 43 12.6	+0.4
	SNR=8.1						
AAK	Ala-Archa	53.38	334	eP	P	04 43 12.7	+0.4
FRU1	Bishkek	53.46	334	eP	P	04 43 13.3	+0.6
	comp=Z,53nm,0.6s						
MSHR	Mys Shultsa	53.47	26	⇓iP	P	04 43 12.5	-0.2
FRU	Bishkek	53.49	335	i P	P	04 43 13.0	+0.1
FRU				e		04 43 33.0	
FRU				pmax	pmax		
	comp=Z,57nm,1.5s						
CHMS	Chumysh	53.56	335	P	P	04 43 13.2	-0.3
	SNR=9.9						
KUU	Kurty	53.65	337	⇑iP	P	04 43 13.3	-0.7
	comp=Z,57nm,0.8s						
EKS2	Erkin-Say	53.71	334	P	P	04 43 14.8	+0.1
	SNR=87						
UOSS	Minazif	53.77	305	eP	P	04 43 16.1	+0.9
	comp=Z,46nm,0.9s						
UOSS	Minazif	53.77	305	P	P	04 43 16.0	+0.9
ASHO	Ashiyiah	53.77	305	P	P	04 43 16.5	+1.3
TDK	Taldyqorghan	53.81	339	i P	P	04 43 15.0	-0.2
	comp=Z,35nm,0.7s						
USP	Ospenovka	53.89	335	P	P	04 43 15.4	-0.4
	SNR=17						
ZSN	Zaisan	54.01	345	⇑iP	P	04 43 16.8	+0.2
	comp=Z,13nm,0.9s						
MK01	Makanchi Array	54.09	343	eP	P	04 43 16.5	-0.7
MK31	Makanchi Array	54.12	343	eP	P	04 43 16.8	-0.6
MK31	Makanchi Array	54.12	343	eP	P	04 43 16.8	-0.6
MK32	Makanchi Array	54.12	343	eP	P	04 43 16.8	-0.6
MKAR	Makanchi Array	54.12	343	P	P	04 43 16.8	-0.6
	comp=Z,52nm,0.7s,baz=141,slow=7.8,SNR=270						
MKAR				LR	LR	05 11 06.0	
	comp=Z,176nm,19.6s,baz=164,slow=41						
MKAR	Makanchi Array	54.12	343	eP	P	04 43 16.8	-0.6
	comp=Z,288nm,0.7s						
MAKZ	Makanchi	54.23	343	eP	P	04 43 17.4	-0.8
	comp=Z,33nm,1.0s						
MAKZ	Makanchi	54.23	343	P	P	04 43 16.6	-1.5
MAKZ				pmax	pmax		
	comp=Z,37nm,1.1s						
NAZ	Nazwa, Dubai	54.23	305	P	P	04 43 19.7	+1.2
ASUD	Al Ashush, Dub	54.34	305	P	P	04 43 21.5	+2.2
MDJ	Mudanjiang	54.49	23	P	P	04 43 17.3	-2.8
MDJ				pP	pP	04 43 34.8	-2.4
MDJ				sP	sP	04 43 42.8	-1.9
MDJ				S	S	04 50 57.4	+3.3
MDJ				pmax	pmax		
	comp=Z,23nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,140nm,4.1s						
MDJ				LR	LR		
	comp=Z,310nm,23.9s						
MDJ				LR	LR		
	comp=Z,370nm,22.3s						
MDJ				LR	LR		
	comp=Z,410nm,18.3s						
MDJ	Mudanjiang	54.49	23	eP	P	04 43 19.9	-0.1
	comp=Z,19nm,0.9s						
ZAK	Zakamensk	54.62	0	eP	P	04 43 20.8	-0.2
ZAK				pmax	pmax		
	comp=Z,19nm,1.0s						
ZAK				pmax	pmax		
	comp=Z,16nm,1.4s						
IUG	Iuzhnay	55.05	331	eP	P	04 43 24.3	-0.1
	comp=Z,16nm,0.8s						
USA0B	Ussuriysk Arra	55.13	25	eP	P	04 43 24.2	-0.5
	comp=Z,56nm,0.7s						
USRK	Ussuriysk Ar.	55.13	25	P	P	04 43 24.7	0.0
	comp=Z,54nm,0.7s,baz=213,slow=5.1						
BTLS	Baital	55.52	336	eP	P	04 43 26.5	-1.0
	comp=Z,7.8nm,0.8s						
BTLS				eS	S	04 51 07.6	-0.4
DGZ	Jazzator, Alta	55.53	348	i P	P	04 43 27.9	+0.2
DGZ				pmax	pmax		
	comp=Z,61nm,1.0s						
KK31	Karatay Array	55.55	332	eP	P	04 43 27.1	-0.7
KK31	Karatay Array	55.55	332	eP	P	04 43 26.0	-1.8
KK31				pmax	pmax		
	comp=Z,5.0nm,0.5s						
KKAR	Karatay Array	55.55	332	eP	P	04 43 27.1	-0.7
KKAR	Karatay Array	55.55	332	eP	P	04 43 27.1	-0.7
OPO	Ambohidratompo	55.92	251	P	P	04 43 33.8	+2.7
	comp=Z,1.9nm,0.5s,baz=81,slow=13,SNR=3.3						
MOY	Mondy	55.92	359	eP	P	04 43 30.3	-0.1
MOY				pmax	pmax		
	comp=Z,31nm,1.6s						
TLY	Talaya	55.92	1	eP	P	04 43 31.1	+0.9
	comp=Z,36nm,0.8s						
TLY	Talaya	55.92	1	P	P	04 43 31.3	+1.0
	SNR=20						
TLY	Talaya	55.92	1	eP	P	04 43 30.7	+0.4
TLY				pmax	pmax		
	comp=Z,46nm,0.9s						
TLY				MLR	MLR		
	comp=Z,114nm,19.0s						
SEM	Semipalatinsk	57.96	343	eP	P	04 43 44.1	-0.9
	comp=Z,24nm,0.6s						
KURBB	Kurchatov Arra	58.66	342	P	P	04 43 49.3	-0.3
	comp=Z,50nm,0.9s,baz=160,slow=6.8,SNR=231						
KURBB				PcP	PcP	04 44 39.2	+0.2
	comp=Z,5.1nm,0.7s,baz=155,slow=3.3,SNR=2.9						
KURK	Kurchatov	58.72	342	eP	P	04 43 49.3	-0.7
KURK				ePcP	PcP	04 44 39.2	0.0
KURK	Kurchatov	58.72	342	c iP	P	04 43 49.2	-0.7
KURK				pmax	pmax		
	comp=Z,106nm,1.0s						
GEYT	Alibeck	59.03	320	P	P	04 43 51.5	-1.0
	comp=Z,17nm,0.7s,baz=184,slow=7.1,SNR=11						
GYA0B	ALIBECK ARRAY	59.03	320	eP	P	04 43 52.9	+0.4
	comp=Z,39nm,0.8s						
ERM	Erimo	59.09	34	ceP	P	04 43 52.0	-0.7
ERM				pmax	pmax		
	comp=Z,14nm,0.8s						
KLR	Kul’dur	59.14	22	P	P	04 43 52.5	-0.4
	comp=Z,4.0nm,0.8s,baz=231,slow=5.7,SNR=162						
KLR				LR	LR	05 09 47.4	
	comp=Z,14nm,21.4s,baz=160,slow=36						
ZAA0	Zalesovo Array	60.08	348	eP	P	04 43 58.4	-0.9
	comp=Z,180nm,1.0s						
ZALV	Zalesovo Beam	60.08	348	P	P	04 43 58.5	-0.8
	comp=Z,83nm,0.5s,baz=167,slow=5.1,SNR=234						
ZALV				LR	LR	05 13 07.1	
	comp=Z,348nm,20.4s,baz=104,slow=39						
ZALV	Zalesovo Beam	60.08	348	eP	P	04 43 58.4	-0.9
ZAA1	Zalesovo Array	60.09	348	eP	P	04 43 58.5	-0.8
BRZS	Berezniki	60.10	338	⇑iP	P	04 43 58.6	-0.9
	comp=Z,13nm,0.9s						
ASAJ	Asahikawa	60.19	32	P	P	04 43 59.0	-1.2
	comp=Z,23nm,0.6s,baz=243,slow=10,SNR=19						
ASAJ	Asahikawa	60.19	32	eP	P	04 43 59.5	-0.7
	comp=Z,23nm,0.6s						
DAMY	Dhamar	60.77	289	eP	P	04 44 08.1	+3.0
	comp=Z,31nm,1.0s						
KRAR	Krasnoyarsk	60.80	354	⇑iP	P	04 44 01.7	-2.4
NVS	Novosibirsk	61.25	347	⇓iP	P	04 44 06.2	-1.0
NVS				e		04 44 49.6	
NVS				e		04 46 19.5	
NVS				pmax	pmax		
	comp=Z,42nm,1.2s						
NVS				pmax	pmax		
	comp=N,30nm,1.3s						
NVS				pmax	pmax		
	comp=E,45nm,1.5s						
ZEA	Zeya	61.54	16	eP	P	04 44 09.4	+0.2
ZEA				pmax	pmax		
	comp=E,42nm,0.8s						
ZEA				pmax	pmax		
	comp=N,71nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,110nm,1.0s						
GRNR	Gornyy	62.17	24	eP	P	04 44 15.5	+1.9
YSS	Yuzh-Sakhalins	62.20	30	eP	P	04 44 13.3	-0.5
	comp=Z,54nm,0.8s						
YSS	Yuzh-Sakhalins	62.20	30	eP	P	04 44 13.3	-0.5
YSS				pmax	pmax		
	comp=Z,54nm,0.8s						
RAYN	Ar Rayn	62.25	299	eP	P	04 44 15.1	+0.5
	comp=Z,17nm,0.9s						
RAYN	Ar Rayn	62.25	299	i P	P	04 44 15.5	+0.8
	SNR=16						
RAYN	Ar Rayn	62.25	299	eP	P	04 44 15.1	+0.5
RAYN				pmax	pmax		
	comp=Z,17nm,0.9s						
BOD	Bodaibo	62.74	7	eP	P	04 44 16.6	-0.6
BOD				pmax	pmax		
	comp=Z,45nm,1.0s						
BVA0	Borovoye Array	63.40	339	i P	P	04 44 20.0	-1.7
BVA0				pmax	pmax		
	comp=Z,42nm,1.0s						
BVAR	Borovoye Array	63.40	339	P	P	04 44 20.8	-0.9
	comp=Z,34nm,0.7s,baz=143,slow=9.2,SNR=137						
BRVK	Borovoye	63.47	339	eP	P	04 44 21.1	-0.9
	comp=Z,30nm,0.8s						
BRVK	Borovoye	63.47	339	P	P	04 44 21.3	-0.8
	SNR=12						
BRVK	Borovoye	63.47	339	c iP	P	04 44 21.2	-0.9
BRVK				pmax	pmax		
	comp=Z,33nm,0.8s						
DZM	Mont Dzumac	64.06	112	P	P	04 44 25.7	-1.0
	comp=Z,9.5nm,0.7s,baz=309,slow=6.5,SNR=6.5						
DZM	Mont Dzumac	64.06	112	eP	P	04 44 25.7	-1.0
	comp=Z,32nm,1.4s						
TYV	Tymovskoe	64.89	27	eP	P	04 44 31.6	+0.2
TYV				e		04 53 12.4	
TYV				pmax	pmax		
	comp=Z,11nm,1.3s						
AB31	Akbulak array	65.06	331	i P	P	04 44 31.5	-1.1
AB31				pmax	pmax		
	comp=Z,55nm,0.9s						
ABKAR	Akbulak array	65.06	331	eP	P	04 44 31.9	-0.7
NKL	Nikolayevsk	65.70	24	eP	P	04 44 35.5	-1.1
NKL				pmax	pmax		
	comp=Z,40nm,1.0s						

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AKTO  Aktyubinsk        66.78 331   P       P       04 44 43.0  -0.7
      comp=Z,4.8nm,0.3s,baz=109,slow=4.7,SNR=25
AKTO  Aktyubinsk        66.78 331   P       P       04 44 42.3  -1.3
AKTO                                pmax    pmax
      comp=Z,22nm,1.1s
AKT   Akhty             67.70 318⇓iP        P       04 44 50.6  +0.8
AKT                               e                 04 45 14.0
AKT                               e                 04 47 17.8
AKT                               eS        S       04 53 46.0  +3.5
AKT                                 pmax    pmax
      comp=Z,44nm,0.7s
MAW   Mawson            68.61 195   P       P       04 44 55.9  +1.1
      comp=Z,3.5nm,0.7s,baz=18,slow=5.1,SNR=13
MAW                                 LR      LR      05 09 19.4
      comp=Z,531nm,19.8s,baz=146,slow=31
MAW   Mawson            68.61 195   P       P       04 44 55.9  +1.1
      baz=69,SNR=4.9
MAW   Mawson            68.61 195 eP        P       04 44 56.3  +1.5
      comp=Z,3.0nm,1.0s
MAW   Mawson            68.61 195 eP        P       04 44 56.3  +1.5
MAW                                 pmax    pmax
      comp=Z,3.0nm,1.0s
YAK   Yakutsk           69.47  13   P       P       04 44 59.1  -1.1
      comp=Z,44nm,0.4s,baz=197,slow=1.1,SNR=10
YAK   Yakutsk           69.47  13 eP        P       04 44 59.1  -1.1
      comp=Z,86nm,0.5s
YAK   Yakutsk           69.47  13 eP        P       04 44 57.2  -3.0
YAK                               e*PP      pP      04 45 14.4  -3.5
YAK                               e                 04 45 21.3
YAK                               ePPP      PPP     04 49 07.2
YAK                               eS        S       04 53 59.0  -3.3
YAK                               e*SS      sS      04 54 31.6  -0.8
YAK                               e                 04 54 59.1
YAK                               eSS       SS      04 58 37.5  +6.4
YAK                                 pmax    pmax
      comp=Z,77nm,1.0s
YAK                                 pmax    pmax
      comp=E,20nm,1.3s
YAK                                 pmax    pmax
      comp=N,31nm,1.3s
YAK                                 pmax    pmax
      comp=Z,18nm,0.8s
YAK                                 pmax    pmax
      comp=N,2.0nm,0.7s
YAK                                 pmax    pmax
      comp=E,7.0nm,0.9s
YAK                                 smax    smax
      comp=N,5.0nm,1.3s
YAK                                 smax    smax
      comp=E,5.0nm,0.7s
TBLG  Delisi            69.81 317 eP        P       04 45 03.8  +1.0
      comp=E,57nm,1.0s
TBLG  Delisi            69.81 317 eP        P       04 45 03.8  +1.0
TBLG                                pmax    pmax
      comp=Z,57nm,1.0s
SVE   Sverdlovsk        69.96 337d iP       P       04 45 03.2  -0.1
SVE                                 pmax    pmax
      comp=Z,70nm,1.1s
ARU   Arti              70.51 336   P       P       04 45 06.3  -0.4
      comp=Z,6.4nm,0.3s,baz=270,slow=1.0,SNR=37
ARU   Arti              70.51 336 eP        P       04 45 06.1  -0.6
      comp=Z,50nm,1.1s
ARU   Arti              70.51 336c iP       P       04 45 06.0  -0.7
ARU                                                 04 45 23.7
ARU                                                 04 47 39.9
ARU                                 S       S       04 54 18.4  +3.6
ARU                                 SS      SS      04 58 45.8  -1.6
ARU                                 pmax    pmax
      comp=Z,46nm,1.0s
ZEI   Tsey              70.83 318 eP        P       04 45 08.9  -0.3
ZEI                                 pmax    pmax
      comp=Z,19nm,0.6s
KBZ   Khabaz            71.89 319   P       P       04 45 15.6  +0.3
      comp=Z,30nm,0.9s,baz=119,slow=5.4,SNR=38
MBAR  Mbarara           71.94 271 eP        P       04 45 17.8  +1.4
      comp=Z,10nm,0.8s
OXZ   Oxford            72.00 134 eP        P       04 45 16.4  +0.3
      comp=Z,27nm,0.9s
KIV   Kislovodsk        72.13 319 eP        P       04 45 17.1  +0.2
      comp=Z,39nm,1.1s
KIV   Kislovodsk        72.13 319   P       P       04 45 17.7  +0.8
      SNR=6.0
KIV   Kislovodsk        72.13 319deP        P       04 45 17.3  +0.4
KIV                               e                 04 45 33.8
KIV                               e                 04 48 02.1
KIV                               eS        S       04 54 31.7  -2.5
KIV                               eSS       SS      04 59 10.4  -2.5
KIV                                 pmax    pmax
      comp=Z,35nm,1.0s
KIV                                 MLR     MLR
      comp=Z,108nm,18.0s
ASF   Jabal al Asfar    72.17 306   P       P       04 45 18.9  +1.5
      comp=Z,38nm,0.9s,baz=77,slow=4.9,SNR=57
THZ   Tophouse          72.34 132 eP        P       04 45 18.2   0.0
      comp=Z,47nm,0.8s
KHZ   Kahutara          72.92 133 eP        P       04 45 21.2  -0.3
      comp=Z,32nm,0.7s
PETK  Petropavlovsk-    73.56  31   P       P       04 45 24.0  -1.0
      comp=Z,7.1nm,0.7s,baz=222,slow=1.9
PEA1  Petropavlovsk-    73.57  31 eP        P       04 45 24.0  -1.1
MMAI  Mount Meron Ar    73.62 306   P       P       04 45 27.8  +1.9
      comp=Z,27nm,0.8s,baz=105,slow=9.4,SNR=14
LSZ   Lusaka            73.88 255 eP        P       04 45 29.2  +1.4
      comp=Z,9.7nm,1.0s
SOC   Sochi             73.95 318 eP        P       04 45 26.7  -0.8
SOC                               eS        S       04 54 56.2  +1.5
SOC                                 pmax    pmax
      comp=Z,35nm,0.7s
PET   Petropavlovsk     74.01  31 eP        P       04 45 26.6  -1.0
PET                                 pmax    pmax
      comp=Z,49nm,0.6s
MA2   Magadan           74.19  23   P       P       04 45 28.1  -0.4
      comp=Z,4.5nm,0.5s,baz=172,slow=21,SNR=5.6
BFZ   Birch Farm        74.67 131 eP        P       04 45 32.1  +0.3
      comp=Z,77nm,0.9s
BKZ   Black Stump Fm    74.67 129 eP        P       04 45 31.9   0.0
      comp=Z,79nm,0.7s
URZ   Urewera           75.04 128 eP        P       04 45 33.7  -0.3
      comp=Z,31nm,1.3s
CSS   Mathiatis         75.82 308 eP        P       04 45 39.2  +0.7
      comp=Z,65nm,1.0s
VRH   Novokhopyorsk     75.84 325 eP        P       04 45 37.6  -0.6
VRH                               eS        S       04 55 11.3  -4.0
VRH                                 pmax    pmax
      comp=Z,80nm,0.8s
VRH                                 pmax    pmax
      comp=Z,120nm,1.0s
VRH                                 smax    smax
      comp=E,70nm,1.8s
SYO   Syowa Base        76.43 199⇓eP        P       04 45 41.8  +0.5
BOSA  Boshof            76.83 242   P       P       04 45 45.5  +1.0
      comp=E,7.9nm,0.8s,baz=91,slow=4.7,SNR=14
BOSA  Boshof            76.83 242 eP        P       04 45 45.6  +1.1
SEY   Seymchan          76.92  21   P       P       04 45 43.6  -0.5
      comp=E,6.7nm,0.6s,baz=232,slow=9.0,SNR=15
SEY   Seymchan          76.92  21⇑iP        P       04 45 42.9  -1.2
BR101 Keskin Array S    76.93 312 eP        P       04 45 44.6  -0.3
BR131 Keskin Array S    76.93 312 eP        P       04 45 44.6  -0.3
BRTR  Keskin Array B    76.93 312   P       P       04 45 44.6  -0.3
      comp=E,20nm,0.9s,baz=133,slow=6.9,SNR=53
VORD  Divnogorie        77.13 325 eP        P       04 45 44.5  -1.0
VORD                                pmax    pmax
      comp=Z,20nm,1.0s
ILGA  Ilgaz             77.27 314 eP        P       04 45 46.8  -0.1
      comp=Z,40nm,1.2s
VSR   Storozhevoye      77.30 325 eP        P       04 45 45.3  -1.2
VSR                               eS        S       04 55 26.4  -4.9
VSR                                 pmax    pmax
      comp=Z,50nm,0.8s
VSR                                 smax    smax
      comp=N,20nm,0.9s
ANTO  Ankara            77.60 312 eP        P       04 45 48.7  +0.2
      comp=N,26nm,0.9s
TIXI  Tiksi             77.87   8   P       P       04 45 48.0  -1.2
      comp=N,4.2nm,0.4s,baz=223,slow=3.5,SNR=2.6
TIXI  Tiksi             77.87   8   P       P       04 45 48.0  -1.2
TIXI                                pmax    pmax
      comp=Z,4.0nm,0.4s
SIM   Simferopol'       78.20 318 eP        P       04 45 51.8  +0.2
SIM                               e                 04 45 57.0
SIM                                 pmax    pmax
      comp=Z,41nm,0.8s
PRGR  Permogore         78.97 336 eP        P       04 45 54.7  -0.8
PRGR                              eS        S       04 55 49.9  +1.0
PRGR                                pmax    pmax
      comp=Z,47nm,0.9s
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VNDA  Vanda             79.26 169   P       P       04 45 57.4  +0.5
      comp=Z,3.4nm,0.6s,baz=316,slow=6.0,SNR=24
VNDA                                LR      LR      05 13 57.9
      comp=Z,149nm,20.9s,baz=294,slow=30
VNDA  Vanda             79.26 169 eP        P       04 45 57.6  +0.7
      comp=Z,16nm,1.4s
MOS   Moscow            79.96 329 eP        P       04 46 00.2  -0.8
MOS                               e                 04 46 06.7
MOS                               e                 04 46 21.4
MOS                                 pmax    pmax
      comp=Z,58nm,0.7s
OBN   Obninsk           80.27 328   P       P       04 46 02.8  +0.1
      comp=Z,121nm,0.5s,baz=106,slow=7.4,SNR=13
OBN   Obninsk           80.27 328 eP        P       04 46 02.8  +0.1
      comp=Z,46nm,0.6s
OBN   Obninsk           80.27 328ceP        P       04 46 02.6  -0.1
OBN                               e                 04 46 11.8
OBN                               e                 04 49 05.6
OBN                                 pmax    pmax
      comp=Z,87nm,1.3s
SBA   Scott Base        80.35 169 eP        P       04 46 04.2  +1.4
      comp=Z,6.2nm,0.8s
SBA   Scott Base        80.35 169 eP        P       04 46 04.2  +1.4
SBA                                 pmax    pmax
      comp=Z,6.0nm,0.8s
KARP  Karpathos         80.86 307 eP        P       04 46 07.6  +1.2
      comp=Z,163nm,0.9s
KLMR  Klimovskoe        81.19 334 eP        P       04 46 05.4  -2.1
KLMR                              e                 04 49 12.1
KLMR                                pmax    pmax
      comp=Z,49nm,1.3s
KLMR  Klimovskoe        81.19 334 eP        P       04 46 05.4  -2.1
KLMR                                AMP             04 46 08.0
      comp=Z,49nm,1.3s
KLMR                              ePP       PP      04 49 12.1  -1.5
TIRR  Tirgusor          81.96 316⇓iP        P       04 46 10.6  -1.3
TIRR  Tirgusor          81.96 316 ePKPab    P       04 46 11.9   0.0
TIRR  Tirgusor          81.96 316 eP        P       04 46 11.9   0.0
      comp=Z,18nm,0.8s
TIRR  Tirgusor          81.96 316 ⇓P        P       04 46 10.6  -1.3
TLB   Topalu            82.25 316⇑iP        P       04 46 13.4   0.0
TLB   Topalu            82.25 316 ⇑P        P       04 46 13.4   0.0
CFR   Carcaliu          82.33 317⇑iP        P       04 46 14.2  +0.4
CFR   Carcaliu          82.33 317 ⇑P        P       04 46 14.2  +0.4
LEOM  Leova             82.57 318⇑iP        P       04 46 15.9  +0.9
LEOM  Leova             82.57 318 ⇑P        P       04 46 15.9  +0.9
IDI   Anoyia            82.63 306   P       P       04 46 16.7  +1.0
      comp=Z,35nm,0.9s,baz=100,slow=8.7,SNR=9.2
IDI   Anoyia            82.63 306⇓iP        P       04 46 17.0  +1.3
IDI   Anoyia            82.63 306 eP        P       04 46 16.7  +1.0
      comp=Z,42nm,0.8s
ALN   Alexandroupoli    82.84 312 eP        P       04 46 17.1  +0.5
      comp=Z,16nm,0.9s
SORM  Soroca            82.92 319⇓iP        P       04 46 16.8   0.0
SORM  Soroca            82.92 319 ⇓P        P       04 46 16.8   0.0
AKASG Malin Array Be    83.04 322   P       P       04 46 17.1  -0.3
      comp=Z,15nm,0.8s,baz=85,slow=5.1,SNR=24
AKBB  Malin Array Si    83.04 322 eP        P       04 46 16.7  -0.7
      comp=Z,17nm,0.9s
KIEV  Kiev              83.05 322 eP        P       04 46 16.1  -1.4
      comp=Z,14nm,0.9s
KIEV  Kiev              83.05 322 i P       P       04 46 16.8  -0.6
      SNR=8.8
KIEV  Kiev              83.05 322c iP       P       04 46 17.0  -0.4
KIEV                                pmax    pmax
      comp=Z,17nm,1.0s
AK11  Malin Array Si    83.07 322 eP        P       04 46 17.2  -0.4
VRI   Vrincioaia        83.45 317⇓iP        P       04 46 20.7  +1.0
VRI   Vrincioaia        83.45 317 ⇓P        P       04 46 20.7  +1.0
PLOR  Plostina          83.50 317⇓iP        P       04 46 21.3  +1.3
PLOR  Plostina          83.50 317 ⇓P        P       04 46 21.3  +1.3
TESR  Tescani           83.65 318⇑iP        P       04 46 21.1  +0.4
MLR   Muntele Rosu      83.90 316   P       P       04 46 22.4  +0.3
      comp=Z,10nm,1.0s,baz=127,slow=5.1,SNR=27
MLR   Muntele Rosu      83.90 316⇓iP        P       04 46 22.8  +0.7
MLR   Muntele Rosu      83.90 316 eP        P       04 46 23.0  +0.9
      comp=Z,72nm,1.1s
MLR   Muntele Rosu      83.90 316 ⇓P        P       04 46 22.8  +0.7
TSUM  Tsumeb            83.92 251 eP        P       04 46 24.1  +1.3
      comp=Z,5.5nm,0.9s
PRAR  RASCA             84.13 318⇓iP        P       04 46 24.1  +1.0
DOPR  Dopca             84.39 317⇑iP        P       04 46 25.2  +0.8
ARR   Arges             84.78 316⇑iP        P       04 46 26.7  +0.2
BURAR Bucovina Array    84.85 318⇑iP        P       04 46 28.3  +1.4
BURAR Bucovina Array    84.85 318 ⇑P        P       04 46 28.3  +1.4
BUR04 Bucovina Ar. S    84.85 318 eP        P       04 46 27.9  +1.0
BUR08 Bucovina Ar. S    84.87 318 eP        P       04 46 28.1  +1.2
VTS   Vitosha           85.26 313⇑iP        P       04 46 29.0  -0.1
VTS   Vitosha           85.26 313 eP        P       04 46 28.7  -0.4
      comp=Z,24nm,0.9s
VTS   Vitosha           85.26 313 ⇑P        P       04 46 29.0  -0.1
LIT   Litokhoron        85.36 311 eP        P       04 46 29.8  +0.4
      comp=Z,59nm,0.8s
LIT   Litokhoron        85.36 311 eP        P       04 46 29.8  +0.4
LIT                                 pmax    pmax
      comp=Z,59nm,0.8s
LOT   Lotru             85.39 316⇑iP        P       04 46 28.6  -1.0
VAY   Valandovo         85.50 312 i P       P       04 46 29.7  -0.4
QSPA  South Pole Qui    85.52 180   P       P       04 46 30.1  +0.2
      comp=Z,2.2nm,0.5s,baz=292,slow=1.8,SNR=8.6
QSPA                                LR      LR      05 19 05.3
      comp=Z,145nm,21.5s,baz=306,slow=32
QSPA  South Pole Qui    85.52 180 eP        P       04 46 30.4  +0.6
NACGM Naroch            85.56 326 e         P       04 46 29.0  -1.1
IDID  Didziasalis       85.68 326 eP        P       04 46 31.3  +0.6
IDID                                IAmb    IAmb    04 46 32.6
      comp=Z,16nm,0.9s
CJR   Cluj-Napoca       85.75 317⇑iP        P       04 46 32.5  +1.2
CJR   Cluj-Napoca       85.75 317 ⇑P        P       04 46 32.5  +1.2
STIP  Stip              85.85 312 i P       P       04 46 29.8  -2.1
IIGN  Ignalina          85.98 326 eP        P       04 46 32.7  +0.5
IIGN                                IAmb    IAmb    04 46 34.0
      comp=Z,24nm,0.8s
LVV   L'vov             86.07 320 eP        P       04 46 33.0  +0.3
ISAL  Salakas           86.08 326 eP        P       04 46 33.1  +0.4
ISAL                                IAmb    IAmb    04 46 34.4
      comp=Z,9.8nm,0.8s
APA   Apatity           86.32 339⇓iP        P       04 46 30.6  -2.9
APA                                 pmax    pmax
      comp=Z,5.0nm,1.4s
APA                                 MLR     MLR
      comp=Z,300nm,21.0s
DRGR                    86.36 317⇓iP        P       04 46 35.7  +1.3
DRGR                    86.36 317 ⇓P        P       04 46 35.7  +1.3
VSU   Vasula            86.46 329c iP       P       04 46 34.5  +0.1
VSU                                 pmax    pmax
      comp=Z,92nm,1.0s
KRUS  Krusevo           86.49 312 i P       P       04 46 34.5  -0.6
MDVR  Moldovita         86.70 315⇑iP        P       04 46 36.8  +0.8
TRPA  Tarpa             86.72 319⇓iP        P       04 46 35.6  -0.3
BZS   Buzias            86.91 316⇑iP        P       04 46 37.5  +0.6
BZS   Buzias            86.91 316 ⇑P        P       04 46 37.5  +0.6
FIA1  FINESS Array S    87.51 332 eP        P       04 46 39.7  +0.3
FIA0  FINESS Array S    87.51 332 eP        P       04 46 39.5   0.0
FIA0  FINESS Array S    87.51 332 eP        P       04 46 39.5   0.0
FINES FINESS Array B    87.51 332   P       P       04 46 39.5   0.0
      comp=Z,6.2nm,0.4s,baz=128,slow=6.8,SNR=58
FINES FINESS Array B    87.51 332 eP        P       04 46 38.8  -0.6
CRVS  Cervenica-Dubn    87.56 319 eP        P       04 46 40.6  +0.6
CRVS                                pmax    pmax
      comp=Z,8.0nm,1.1s
CRVS  Cervenica-Dubn    87.56 319 eP        P       04 46 40.6  +0.6
DIVS  Divibare          87.82 314 eP        P       04 46 41.5   0.0
      comp=Z,26nm,1.1s
KECS  Kecovo            88.13 319 eP        P       04 46 43.8  +1.1
KECS  Kecovo            88.13 319 eP        P       04 46 43.8  +1.1
PSZ   Piszkesteto       88.44 318⇑iP        P       04 46 45.1  +0.8
PSZ   Piszkesteto       88.44 318⇑eP        P       04 46 44.8  +0.5
PSZ   Piszkesteto       88.44 318 ⇑P        P       04 46 45.1  +0.8
OJC   Ojcow             88.83 320 eP        P       04 46 46.8  +0.8
      comp=Z,23nm,1.2s
OJC   Ojcow             88.83 320 eP        P       04 46 46.8  +0.8
OJC                                 pmax    pmax
      comp=Z,23nm,1.2s
MORH  M˚‡r˚¡gy, Hung    89.05 316⇑eP        P       04 46 47.4  +0.3
VYHS  Vyhne             89.22 319 eP        P       04 46 48.3  +0.4
VYHS                                pmax    pmax
      comp=Z,11nm,1.3s
VYHS  Vyhne             89.22 319 eP        P       04 46 48.3  +0.4
TIP   Timpagrande       89.61 309⇓iP        P       04 46 49.1  -0.9
ARA0  ARCESS Array S    89.67 340 eP        P       04 46 49.4  -0.1
ARCES ARCESS Array B    89.67 340   P       P       04 46 49.4  -0.1
      comp=Z,5.6nm,0.7s,baz=102,slow=4.8,SNR=18
ARCES ARCESS Array B    89.67 340 eP        P       04 46 49.0  -0.5
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ARCES ARCESS Array B    89.67 340 eP        P       04 46 49.1  -0.5
MATE  Matera            89.81 311⇑iP        P       04 46 52.0  +1.2
OKC   Ostrava-Krasne    89.84 320 ePKP      P       04 46 51.7  +1.0
OKC                                 AMS     AMS     06 03 50.0
      comp=Z,500nm,22.0s
OKC   Ostrava-Krasne    89.84 320 eP        P       04 46 51.7  +1.0
OKC                                 MLR     MLR
      comp=Z,500nm,22.0s
BLY   Banja Luka        89.90 315⇑iP        P       04 46 52.1  +1.0
BLY   Banja Luka        89.90 315 eP        P       04 46 52.3  +1.2
      comp=Z,57nm,0.9s
JAVC  Velka Javorina    90.03 319 eP        P       04 46 52.8  +1.1
CEL   Celeste           90.19 308 eP        P       04 46 54.5  +1.8
      comp=Z,42nm,0.9s
MORC  Moravsky Berou    90.22 320⇑iP        P       04 46 53.4  +0.8
MORC  Moravsky Berou    90.22 320 eP        P       04 46 53.3  +0.7
      comp=Z,18nm,0.8s
MORC  Moravsky Berou    90.22 320 ⇑P        P       04 46 53.4  +0.8
MORC  Moravsky Berou    90.22 320 eP        P       04 46 53.0  +0.4
MODS  Modra-Piesok      90.23 318 eP        P       04 46 53.6  +1.0
MODS                                pmax    pmax
      comp=Z,29nm,1.2s
MODS  Modra-Piesok      90.23 318 eP        P       04 46 53.6  +1.0
BEHE  Becsehely         90.37 316⇑eP        P       04 46 54.3  +1.0
SNAA  Sanae             90.64 198   P       P       04 46 56.1  +1.9
SNAA  Sanae             90.64 198   P       P       04 46 55.6  +1.5
      comp=Z,5.2nm,0.9s,baz=114,slow=5.9,SNR=14
SNAA  Sanae             90.64 198 eP        P       04 46 55.9  +1.8
      comp=Z,14nm,1.2s
SNAA  Sanae             90.64 198⇓iP        P       04 46 53.9  -0.2
SNAA                                pmax    pmax
      comp=Z,456nm,1.1s
KOGS  Kog               90.72 316 i P       P       04 46 55.5  +0.6
VRAC  Vranov            90.78 319 eP        P       04 46 55.6  +0.4
KRUC  Moravsky          90.89 319 eP        P       04 46 56.0  +0.4
DPC   Dobruska-Polom    91.06 320 ePKP      P       04 46 57.8  +1.3
DPC                                 AMS     AMS     06 07 40.0
      comp=Z,600nm,21.0s
DPC   Dobruska-Polom    91.06 320 eP        P       04 46 57.8  +1.3
DPC                                 MLR     MLR
      comp=Z,600nm,21.0s
CONA  Conrad Observa    91.13 318 eP        P       04 46 57.3  +0.4
      comp=Z,4.6nm,1.0s
ARSA  Arzberg           91.30 317 eP        P       04 46 58.2  +0.6
      comp=Z,9.6nm,0.9s
PERS  Pernice           91.52 316 i P       P       04 46 59.2  +0.5
SOKA  Soboth            91.58 317 ePcP      P       04 46 60.0  +1.0
      comp=Z,22nm,1.0s,SNR=11
LJU   Ljubljana         91.88 316 i P       P       04 47 01.2  +0.9
GOPC  GO Pecny, Ondr    92.01 320 ePKP      P       04 47 01.7  +0.9
GOPC                                AMS     AMS     06 08 00.0
      comp=Z,700nm,23.2s
GOPC  GO Pecny, Ondr    92.01 320 eP        P       04 47 01.7  +0.9
CRNS  Crni Vrh          92.07 316 i P       P       04 47 01.5  +0.2
PRU   Pruhonice         92.17 320 ePKP      P       04 47 03.0  +1.5
PRU                                 AMS     AMS     06 08 10.0
      comp=Z,700nm,26.2s
PRU   Pruhonice         92.17 320 eP        P       04 47 03.0  +1.5
PRU                                 MLR     MLR
      comp=Z,700nm,26.2s
PVCC  Panska Ves        92.19 320   AMS     AMS     06 07 30.0
      comp=Z,600nm,21.9s
MOA   Molln             92.19 318   P       P       04 47 00.8  -1.0
      comp=Z,6.9nm,1.4s
BRG   Berggiesshubel    92.61 321 i P       P       04 47 04.0  +0.5
      comp=Z,9.3nm,0.8s
BRG                               eSP       sP      04 47 31.9  +2.7
      comp=Z,3.7nm,0.8s
BRG   Berggiesshubel    92.61 321 i P       P       04 47 04.1  +0.5
BRG                                 pmax    pmax
      comp=Z,9.0nm,0.8s
BRG                                 pmax    pmax
      comp=N,4.0nm,0.8s
VNA1  Neumayer--Stat    92.64 198   P       P       04 47 01.3  -2.0
GEA0  GERESS Array S    92.64 319 eP        P       04 47 04.0  +0.2
GEC2  GERESS Array S    92.64 319 eP        P       04 47 04.7  +0.8
      comp=N,23nm,1.5s
GEC2  GERESS Array S    92.64 319 eP        P       04 47 04.7  +0.8
GEC2                                pmax    pmax
      comp=Z,23nm,1.5s
GERES GERESS Array B    92.64 319   P       P       04 47 04.5  +0.7
      comp=Z,2.8nm,0.6s,baz=96,slow=4.2,SNR=10
GERES                               PP      PP      04 50 49.9  +3.6
      comp=Z,0.2nm,0.3s,baz=87,slow=5.7,SNR=3.7
KHC   Kasperske Hory    92.74 319 ePKP      P       04 47 04.3   0.0
KHC                                 AMS     AMS     06 09 30.0
      comp=Z,600nm,21.8s
KHC   Kasperske Hory    92.74 319 eP        P       04 47 04.3   0.0
KHC                                 MLR     MLR
      comp=Z,600nm,21.8s
VNA3  Neumayer Olymp    92.84 197   P       P       04 47 06.9  +2.6
CLL   Collm             93.23 321 eP        P       04 47 06.0  -0.4
      comp=Z,5.0nm,0.7s
CLL   Collm             93.23 321 eP        P       04 47 06.0  -0.4
CLL                                 pmax    pmax
      comp=Z,5.0nm,0.7s
HFS   Hagfors           93.32 330   P       P       04 47 06.7  +0.1
      comp=Z,13nm,0.9s,baz=110,slow=1.7,SNR=13
ABTA  Abfaltersbach     93.32 316 eP        P       04 47 07.0   0.0
      comp=Z,7.8nm,1.1s
SPA0  Spitsbergen Ar    93.57 348 eP        P       04 47 06.7  -0.8
SPITS Spitsbergen Ar    93.57 348   P       P       04 47 06.7  -0.8
      comp=Z,2.1nm,0.5s,baz=66,slow=8.2,SNR=7.0
SPITS Spitsbergen Ar    93.57 348   P       P       04 47 06.7  -0.8
SPITS                               pmax    pmax
      comp=Z,1.0nm,0.4s
MOTA  Moosalm           94.31 317 ePcP      P       04 47 12.4  +0.7
      comp=Z,10nm,1.0s
RETA  Reutte            94.54 317 eP        P       04 47 12.5  -0.1
      comp=Z,5.3nm,0.7s
FETA  Feichten          94.55 317 ePcP      P       04 47 13.3  +0.4
      comp=Z,5.8nm,0.9s
NB2   NORSAR Subarra    94.57 331   P       P       04 47 11.4  -1.0
      comp=Z,1.5nm,0.7s,baz=94,slow=5.3
DAVOX Davos/Dischmat    95.13 316   P       P       04 47 16.3  +0.8
      comp=Z,3.9nm,0.6s,baz=173,slow=17,SNR=4.3
DAVA  Damuels           95.14 317 ePcP      P       04 47 15.7  +0.2
      comp=Z,7.6nm,0.8s
KEST  Kesra             95.27 305   P       P       04 47 16.8  +0.5
      comp=Z,7.0nm,0.9s,baz=39,slow=6.5,SNR=3.2
KEST  Kesra             95.27 305 eP        P       04 47 16.8  +0.5
      comp=Z,7.6nm,0.9s
TOLK  Toolik Lake Re   100.56  21   P       Pdif    04 47 38.8  -0.5
      baz=285
TORD  Torodi Ar. Bea   101.67 282   P       Pdif    04 47 45.0  -0.3
      comp=Z,0.9nm,1.0s,baz=117,slow=4.3
TOA1  Torodi Ar. Sit   101.67 282 ePdif     Pdif    04 47 45.0  -0.3
ILAR  Eielson Array    102.65  24   P       Pdif    04 47 46.5  -2.1
      comp=Z,0.2nm,0.6s,baz=302,slow=5.2,SNR=3.2
ILAR                                PP      PP      04 51 54.2  -8.1
      comp=Z,0.6nm,0.9s,baz=283,slow=9.1,SNR=6.7
ILB   Eielson Array    102.65  24 ePdif     Pdif    04 47 46.5  -2.1
ILB                               ePP       PP      04 51 54.2  -8.1
MVO   Moncorvo         107.72 312 eP        Pdif    04 48 14.4  +2.7
MVO   Moncorvo         107.72 312 eLR       LR      05 27 33.0
MVO                                 A       A       05 37 31.3
      comp=Z,259nm,22.0s
MTE   Manteigas        108.23 311 eP        Pdif    04 48 14.8  +0.8
MTE   Manteigas        108.23 311 eLR       LR      05 27 15.0
MTE                                 A       A       05 40 06.3
      comp=Z,372nm,20.0s
PMRV  Marv??o          108.28 310 eLR       LR      05 23 14.3
      comp=Z,284nm,22.0s
PGAV  Gavieira, Arco   108.49 313 eLQ       LQ      05 22 40.7
PVAQ  Vaqueiros        108.86 308 eLR       LR      05 27 19.0
      comp=Z,309nm,22.0s
YKA   Yellowknife Ar   115.89  18   PKP     PKPdf   04 52 32.9  -1.1
      comp=Z,1.3nm,0.9s,baz=321,slow=1.7,SNR=3.7
YKB5  Yellowknife Ar   115.89  18 ePKPdf    PKPdf   04 52 32.9  -1.1
PMOZ  Porto Moniz, M   117.36 305 eLR       LR      05 25 18.8
      comp=Z,298nm,20.0s
B05A  Bryant           122.03  34   P       PKPdf   04 52 46.2  -0.1
      baz=304
E03A  Lebam            122.13  36 ePKPdf    PKPdf   04 52 47.6  +1.1
B08A  Colville Reser   123.48  32 ePKPdf    PKPdf   04 52 49.0  -0.2
I03D  Drain, OR        123.73  39   P       PKPdf   04 52 50.3  +0.6
      baz=300
I04A  Tendick Farm,    124.27  38   P       PKPdf   04 52 50.6  -0.2
      baz=301
L02D  Cave Junction,   124.33  41   P       PKPdf   04 52 49.7  -1.2
      baz=299
D08A  Wollman Farm,    124.48  33 ePKPdf    PKPdf   04 52 51.5  +0.4
HUMO  Hull Mountain    124.53  40 ePKPdf    PKPdf   04 52 52.0  +0.7
I05D  Terrebonne, OR   124.63  37   P       PKPdf   04 52 51.7  +0.2
      baz=303
J04D  Umpqua Nationa   124.74  39   P       PKPdf   04 52 52.2  +0.3
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	baz=301						
YBH	Yreka Blue Hor	125.12	41	PKP	PKPdf	04 52 52.7	+0.1
	comp=Z,1.2nm,0.7s,baz=331,slow=6.0,SNR=5.0						
PINE	Pine Mountain	125.17	38	*e*PKPdf	PKPdf	04 52 53.7	+0.9
M02C	Callahan	125.20	41	P	PKPdf	04 52 52.9	+0.2
	baz=300						
G08A	Pilot Rock	125.50	35	*e*PKPdf	PKPdf	04 52 54.8	+1.5
N02D	Trinity Center	125.50	41	P	PKPdf	04 52 53.7	+0.4
	baz=299						
M04C	Macdoel	125.66	40	P	PKPdf	04 52 53.9	+0.2
	baz=301						
K05A	Summer Lake	125.77	39	*e*PKPdf	PKPdf	04 52 54.8	+0.8
F10A	Beach Ranch, E	126.07	34	*e*PKPdf	PKPdf	04 52 54.5	+0.2
O03D	Paynes Creek	126.43	42	P	PKPdf	04 52 54.9	-0.3
	baz=300						
MOD	Modoc Plateau	126.58	39	*e*PKPdf	PKPdf	04 52 56.0	+0.5
J08A	Circle Bar Ran	126.90	37	*e*PKPdf	PKPdf	04 52 56.7	+0.8
MSO	Missoula	127.27	31	P	PKPdf	04 52 56.2	-0.4
	baz=312						
MSO	Missoula	127.27	31	*e*PKPdf	PKPdf	04 52 56.1	-0.4
BEKR	Beckworth	127.61	42	*e*PKPdf	PKPdf	04 52 58.0	+0.5
AFDM	Forest Hills D	127.66	43	*e*PKPdf	PKPdf	04 52 57.9	+0.4
MFID	Camas Ranch	128.42	35	*e*PKPdf	PKPdf	04 52 56.8	-2.1
EGMT	Eagleton	128.47	27	P	PKPdf	04 52 57.9	-0.9
	baz=317						
EGMT	Eagleton	128.47	27	*e*PKPdf	PKPdf	04 52 58.5	-0.3
CMB	Columbia Colle	128.51	44	*e*PKPdf	PKPdf	04 52 59.4	+0.3
CMB	Columbia Colle	128.51	44	*e*PKIKP	PKPdf	04 52 59.4	+0.3
PNTR	Pine Nut	128.51	42	*e*PKPdf	PKPdf	04 53 00.7	+1.4
LRM	Limekiln Ridge	128.71	31	*e*PKPdf	PKPdf	04 52 59.5	0.0
WAKR	Walker	128.92	43	*e*PKPdf	PKPdf	04 53 01.7	+1.6
DLMT	Dillon	128.95	32	*e*PKPdf	PKPdf	04 53 00.4	+0.5
HLID	Hailey	129.14	34	P	PKPdf	04 53 00.9	+0.6
	baz=309						
HLID	Hailey	129.14	34	*e*PKPdf	PKPdf	04 53 01.6	+1.3
BOZ	Bozeman (W)	129.29	31	P	PKPdf	04 53 00.4	-0.1
	baz=314						
BOZ	Bozeman (W)	129.29	31	*e*PKPdf	PKPdf	04 53 00.8	+0.3
BOZ	Bozeman (W)	129.29	31	*e*PKIKP	PKPdf	04 53 00.8	+0.3
KVN	Kaiserville	129.52	41	*e*PKPdf	PKPdf	04 53 01.7	+0.5
KVN	Kaiserville	129.52	41	*e*PKIKP	PKPdf	04 53 01.7	+0.5
MDPB	Devils Postpil	129.60	43	*e*PKPdf	PKPdf	04 53 02.9	+1.4
PAGB	Antelope Grade	129.71	46	*e*PKPdf	PKPdf	04 53 03.3	+1.9
NV01	Mina Array Sit	129.72	42	*e*PKPdf	PKPdf	04 53 02.0	+0.3
NVAR	Mina Array Bea	129.72	42	PKP	PKPdf	04 53 02.4	+0.7
	comp=Z,1.9nm,0.6s,baz=287,slow=2.4,SNR=16						
NV11	Mina Array Sit	129.81	42	*e*PKPdf	PKPdf	04 53 02.5	+0.8
YHB	Horse Butte	130.09	31	*e*PKPdf	PKPdf	04 53 03.3	+1.1
YMR	Madison River	130.27	31	*e*PKPdf	PKPdf	04 53 03.8	+1.3
PKM	Mcpherson Peak	130.42	47	P	PKPdf	04 53 03.0	0.0
	baz=298						
RLMT	Red Lodge	130.81	30	P	PKPdf	04 53 03.6	+0.1
	baz=316						
CWC	Cottonwood Cre	130.90	44	P	PKPdf	04 53 03.9	+0.1
	baz=301						
FXWY	Fox Creek	130.94	32	*e*PKPdf	PKPdf	04 53 04.5	+0.7
LAO	LASA Array	131.06	26	*e*PKPdf	PKPdf	04 53 04.6	+0.9
HVU	Hansel Valley	131.20	35	*e*PKPdf	PKPdf	04 53 05.2	+1.0
REDW	Red Top Meadow	131.22	32	*e*PKPdf	PKPdf	04 53 04.9	+0.6
MPMC	Manual Prospec	131.50	44	P	PKPdf	04 53 05.8	+0.8
	baz=301						
R11A	Troy Canyon, C	131.55	41	P	PKPdf	04 53 05.4	+0.3
	baz=304						
R11A	Troy Canyon, C	131.55	41	*e*PKPdf	PKPdf	04 53 05.5	+0.5
BGU	Big Grassy Mou	131.60	36	*e*PKPdf	PKPdf	04 53 06.6	+1.5
EDW2	Edwards Air Fo	131.74	46	P	PKPdf	04 53 06.0	+0.7
	baz=300						
ULM	Lac du Bonnet	131.76	16	PKP	PKPdf	04 53 04.1	-0.7
	comp=Z,2.3nm,0.6s,baz=112,slow=3.3,SNR=3.4						
TPNV	Topopah Spring	131.88	43	P	PKPdf	04 53 06.0	+0.3
	baz=303						
HWUT	Hardware Ranch	132.00	35	*e*PKPdf	PKPdf	04 53 06.4	+0.6
DUG	Dugway, Tooele	132.18	37	P	PKPdf	04 53 05.5	-0.6
	baz=309						
DUG	Dugway, Tooele	132.18	37	*e*PKPdf	PKPdf	04 53 06.1	-0.1
BW06	Boulder Array	132.32	32	P	PKPdf	04 53 06.8	+0.3
	baz=314						
BW06	Boulder Array	132.32	32	*e*PKPdf	PKPdf	04 53 07.4	+0.9
PD31	Pinedale Array	132.32	32	*e*PKPdf	PKPdf	04 53 07.4	+0.9
PDAR	Pinedale Array	132.32	32	PKhKP	PKPpre	04 53 00.2	
	comp=Z,0.3nm,0.5s,baz=112,slow=1.6,SNR=4.2						
PDAR				PKP	PKPdf	04 53 06.1	-0.3
	comp=Z,0.9nm,0.7s,baz=234,slow=3.9,SNR=8.1						
PDAR	Pinedale Array	132.32	32	PKPpre	PKPpre	04 53 00.2	
PDAR				*e*PKPdf	PKPdf	04 53 05.4	-1.0
GSC	Goldstone, Bar	132.37	45	P	PKPdf	04 53 07.2	+0.6
	baz=301						
GSC	Goldstone, Bar	132.37	45	*e*PKPdf	PKPdf	04 53 07.7	+1.1
SHOC	Shoshone, Teco	132.43	44	P	PKPdf	04 53 06.4	-0.2
	baz=302						
HEC	Hector,Ludlow	132.94	45	P	PKPdf	04 53 09.3	+1.6
	baz=301						
109C	Camp Elliot, M	133.35	48	P	PKPdf	04 53 09.8	+1.4
	baz=299						
FRD	Ford Ranch, An	133.42	47	P	PKPdf	04 53 09.7	+1.0
	baz=300						
GMRC	Granite Mounta	133.44	45	P	PKPdf	04 53 09.8	+1.1
	baz=302						
CCUT	Cedar City	133.44	40	*e*PKPdf	PKPdf	04 53 10.4	+1.6
AGMN	Agassiz Nation	133.53	17	P	PKPdf	04 53 07.5	-0.7
	baz=334						
SZCU	Shurtz Canyon	133.59	40	*e*PKPdf	PKPdf	04 53 10.8	+1.8
BELC	Belle Mtn. Jos	133.60	46	P	PKPdf	04 53 09.2	+0.2
	baz=301						
MSU	Marysvale	133.61	38	*e*PKPdf	PKPdf	04 53 09.7	+0.7
LDFC	Landfair	133.67	44	*e*PKPdf	PKPdf	04 53 10.1	+1.0
TMUT	Trail Mountain	133.71	37	*e*PKPdf	PKPdf	04 53 11.0	+1.8
LCMT	Little Creek M	133.84	41	*e*PKPdf	PKPdf	04 53 09.9	+0.5
MONP2	Monument Peak	133.85	47	P	PKPdf	04 53 09.3	-0.3
	baz=299						
P17A	Butcher Ranch,	133.87	36	*e*PKPdf	PKPdf	04 53 11.2	+1.8
K22A	Casper	133.97	30	P	PKPdf	04 53 08.5	-1.0
	baz=318						
K22A	Casper	133.97	30	*e*PKPdf	PKPdf	04 53 09.0	-0.5
RSSD	Black Hills	134.03	27	P	PKPdf	04 53 08.4	-1.2
	baz=321						
RSSD	Black Hills	134.03	27	*e*PKPpre	PKPpre	04 53 02.8	
RSSD				*e*PKPdf	PKPdf	04 53 09.1	-0.5
RSSD	Black Hills	134.03	27	*e*PKIKP	PKPdf	04 53 02.8	-6.8
B35A	Bob, Littlefor	134.06	15	P	PKPdf	04 53 08.6	-0.6
	baz=337						
P18A	Preston Nutter	134.06	36	*e*PKPdf	PKPdf	04 53 11.2	+1.2
KNB	Kanab	134.11	40	*e*PKPdf	PKPdf	04 53 10.6	+0.7
KNB	Kanab	134.11	40	*e*PKIKP	PKPdf	04 53 10.6	+0.7
IRM	Iron Mountain	134.13	45	P	PKPdf	04 53 10.2	+0.4
	baz=302						
BC3	Big Chuckawall	134.17	46	P	PKPdf	04 53 11.3	+1.3
	baz=301						
PKCU	Pink Cliffs	134.18	40	*e*PKPdf	PKPdf	04 53 12.3	+2.1
IKP	In-Ko-Pah, Jac	134.20	47	P	PKPdf	04 53 11.0	+0.9
	baz=300						
SRU	San Rafael Swe	134.23	36	*e*PKPdf	PKPdf	04 53 11.8	+1.7
SRU	San Rafael Swe	134.23	36	*e*PKIKP	PKPdf	04 53 11.8	+1.7
RWWY	Rawlins	134.32	31	*e*PKPdf	PKPdf	04 53 10.4	+0.1
C35A	Jirik Farms, M	134.60	16	P	PKPdf	04 53 09.2	-1.0
	baz=336						
PLCA	Paso Flores	134.60	187	PKP	PKPdf	04 53 11.9	+1.2
	comp=Z,2.2nm,0.9s,baz=239,slow=5.9,SNR=4.6						
Y12C	Blythe	134.78	45	P	PKPdf	04 53 12.3	+1.3
	baz=302						
Y12C	Blythe	134.78	45	*e*PKPdf	PKPdf	04 53 12.4	+1.3
C36A	Pine Crest Far	134.84	15	P	PKPdf	04 53 09.4	-1.3
	baz=338						
O20A	White River Ci	134.86	34	P	PKPdf	04 53 11.1	-0.1
	baz=314						
O20A	White River Ci	134.86	34	*e*PKPdf	PKPdf	04 53 11.5	+0.2
GLA	Glamis	134.93	46	P	PKPdf	04 53 12.0	+0.6
	baz=301						
EYMN	Ely	134.99	13	P	PKPdf	04 53 10.9	-0.2
	baz=340						
C37A	Embarrass	135.03	14	P	PKPdf	04 53 10.6	-0.5
	baz=339						
D36A	Goodland	135.30	15	P	PKPdf	04 53 11.7	+0.1
	baz=337						
E34A	Wadena	135.34	18	P	PKPdf	04 53 11.4	-0.3
	baz=334						
PV09	Paradox Valley	135.46	36	*e*PKPdf	PKPdf	04 53 13.5	+0.9
PHWY	Pilot Hill	135.50	30	*e*PKPdf	PKPdf	04 53 12.1	-0.5
D37A	Cotton	135.50	15	P	PKPdf	04 53 11.8	-0.2
	baz=338						
E35A	Pequot Lakes	135.52	17	P	PKPdf	04 53 11.3	-0.7
	baz=335						
C40A	Isle Royale Na	135.53	11	P	PKPdf	04 53 11.3	-0.6
	baz=343						
C40A	Isle Royale Na	135.53	11	*e*PKPdf	PKPdf	04 53 11.5	-0.5
N23A	Red Feather La	135.55	31	*e*PKPdf	PKPdf	04 53 13.8	+1.2
PV23	Carpenter Ridg	135.56	36	*e*PKPdf	PKPdf	04 53 14.0	+1.3
PV14	Lion Creek, Pa	135.60	36	*e*PKPdf	PKPdf	04 53 14.6	+1.9
PV22	Blue Mesa, Par	135.63	36	*e*PKPdf	PKPdf	04 53 15.1	+2.4
PV12	Saucer Basin,	135.77	36	*e*PKPdf	PKPdf	04 53 14.9	+1.9
PV03	Paradox Valley	135.78	36	*e*PKPdf	PKPdf	04 53 15.0	+1.9
PV13	Radium Mtn., P	135.87	36	*e*PKPdf	PKPdf	04 53 13.9	+0.6
E36A	McGregor	135.88	16	P	PKPdf	04 53 12.5	-0.2
	baz=337						
PV02	Paradox Valley	135.88	36	*e*PKPdf	PKPdf	04 53 15.6	+2.3
WUAZ	Wupatki	135.94	41	P	PKPdf	04 53 13.2	-0.2
	baz=307						
WUAZ	Wupatki	135.94	41	*e*PKPdf	PKPdf	04 53 14.7	+1.3
F35A	Swanville	136.11	17	P	PKPdf	04 53 12.5	-0.6
	baz=335						
SMCO	Snowmass	136.23	34	*e*PKPdf	PKPdf	04 53 15.0	+0.9
E38A	The Farm, Brul	136.24	14	P	PKPdf	04 53 12.6	-0.7
	baz=339						
F36A	Milaca	136.41	16	P	PKPdf	04 53 12.2	-1.5
	baz=336						
F36A	Milaca	136.41	16	*e*PKPdf	PKPdf	04 53 13.2	-0.5
D41A	Chassel	136.46	11	P	PKPdf	04 53 13.4	-0.3
	baz=344						
ISCO	Idaho Springs	136.52	32	P	PKPdf	04 53 13.8	-0.7
	baz=317						
ISCO	Idaho Springs	136.52	32	*e*PKPdf	PKPdf	04 53 15.2	+0.7
MVCO	Mesa Verde	136.68	37	P	PKPdf	04 53 14.6	-0.1
	baz=311						
E39A	Mellen	136.69	13	P	PKPdf	04 53 13.6	-0.6
	baz=340						
G35A	Watkins	136.71	18	P	PKPdf	04 53 14.2	-0.1
	baz=334						
G35A	Watkins	136.71	18	*e*PKPdf	PKPdf	04 53 14.3	0.0
F38A	Pierce - Schro	136.76	15	P	PKPdf	04 53 14.2	-0.1
	baz=338						
E40A	Wakefield	136.77	13	P	PKPdf	04 53 13.8	-0.6
	baz=341						
G36A	St. Michael	136.91	17	P	PKPdf	04 53 14.1	-0.5
	baz=336						
E41A	Kenton	136.95	12	P	PKPdf	04 53 14.1	-0.6
	baz=343						
214A	Organ Pipe Nat	136.95	46	P	PKPdf	04 53 15.0	-0.1
	baz=302						
F39A	Loretta	137.04	14	P	PKPdf	04 53 13.6	-1.3
	baz=340						
H35A	Sunnyside Ranc	137.07	18	P	PKPdf	04 53 14.4	-0.5
	baz=334						
SPMN	Marine on St.	137.19	16	P	PKPdf	04 53 14.0	-1.1
	baz=337						
F40A	Park Falls	137.22	13	P	PKPdf	04 53 14.7	-0.5
	baz=341						
S22A	4UR Ranch, Cre	137.30	35	P	PKPdf	04 53 16.0	0.0
	baz=314						
S22A	4UR Ranch, Cre	137.30	35	*e*PKPdf	PKPdf	04 53 16.9	+0.8
ECSD	EROS Data Cent	137.33	21	P	PKPdf	04 53 14.7	-0.8
	baz=331						
ECSD	EROS Data Cent	137.33	21	*e*PKPpre	PKPpre	04 53 04.9	
H36A	Jessenland, He	137.46	18	P	PKPdf	04 53 15.3	-0.4
	baz=335						
G38A	Ridgeland	137.50	15	P	PKPdf	04 53 14.0	-1.8
	baz=338						
G39A	Holcombe	137.57	14	P	PKPdf	04 53 14.6	-1.3
	baz=339						
E45A	Wooded Hills,	137.71	8	P	PKPdf	04 53 16.1	0.0
	baz=348						
G40A	Rib Lake	137.82	14	P	PKPdf	04 53 15.9	-0.4
	baz=341						
G40A	Rib Lake	137.82	14	*e*PKPdf	PKPdf	04 53 18.2	+1.9
F43A	Flat Rock, Esc	137.90	10	P	PKPdf	04 53 16.0	-0.5
	baz=345						
SDCO	Great Sand Dun	138.05	34	P	PKPdf	04 53 17.5	+0.2
	baz=315						
SDCO	Great Sand Dun	138.05	34	*e*PKPdf	PKPdf	04 53 17.6	+0.2
H39A	Augusta	138.10	15	P	PKPdf	04 53 15.8	-1.1
	baz=339						
I37A	Lemond, Waseca	138.13	17	P	PKPdf	04 53 15.9	-1.1
	baz=336						
I37A	Lemond, Waseca	138.13	17	*e*PKPdf	PKPdf	04 53 16.5	-0.4
TUC	Tucson	138.20	44	P	PKPdf	04 53 17.6	0.0
	baz=304						
G43A	Wallace	138.36	11	P	PKPdf	04 53 17.3	0.0
	baz=344						
H40A	Chili	138.38	14	P	PKPdf	04 53 16.8	-0.6
	baz=340						
I38A	Scanlan Farm,	138.41	16	P	PKPdf	04 53 16.5	-1.0
	baz=337						
J36A	Seneca 1, Swea	138.46	19	P	PKPdf	04 53 17.1	-0.5
	baz=334						
J36A	Seneca 1, Swea	138.46	19	*e*PKPdf	PKPdf	04 53 16.6	-1.0
BGNE	Belgrade	138.75	24	P	PKPdf	04 53 17.4	-0.8
	baz=328						
BGNE	Belgrade	138.75	24	*e*PKPpre	PKPpre	04 53 11.9	
BGNE				*e*PKPdf	PKPdf	04 53 17.5	-0.8
I39A	Houston	138.81	16	P	PKPdf	04 53 17.0	-1.2
	baz=338						
I39A	Houston	138.81	16	*e*PKPpre	PKPpre	04 53 07.8	
ALFO	Alfred	138.93	357	P	PKPdf	04 53 17.6	-0.7
	baz=3.5						
J38A	Wedel Dairy, R	139.04	17	P	PKPdf	04 53 17.1	-1.5
	baz=336						
K37A	Belmond	139.19	18	P	PKPdf	04 53 16.9	-2.0
	baz=335						
I42A	Draeger Farm,	139.42	13	P	PKPdf	04 53 17.3	-2.0
	baz=342						
ANMO	Albuquerque	139.42	38	PKhKP	PKPpre	04 53 11.7	
	comp=Z,1.5nm,0.9s,baz=244,slow=2.7,SNR=3.5						
ANMO	Albuquerque	139.42	38	*e*PKPpre	PKPpre	04 53 13.5	
L36A	Harm Buss Farm	139.45	20	P	PKPdf	04 53 18.0	-1.4
	baz=333						
BANO	Bancroft	139.59	1	P	PKPdf	04 53 18.5	-1.0
	baz=359						
K39A	Oelwein	139.77	17	P	PKPdf	04 53 18.7	-1.3
	baz=337						
BNM	Barren Site	139.84	39	*e*PKPdf	PKPdf	04 53 20.7	+0.1
K40A	Colesburg	139.99	16	P	PKPdf	04 53 19.9	-0.5
	baz=338						
JFWS	Jewell Farm	140.02	15	P	PKPdf	04 53 19.3	-1.1
	baz=340						
JFWS	Jewell Farm	140.02	15	*e*PKPdf	PKPdf	04 53 20.4	0.0
JFWS	Jewell Farm	140.02	15	*e*PKIKP	PKPdf	04 53 20.4	0.0
M37A	Trindle Farm,	140.28	20	P	PKPdf	04 53 19.5	-1.4
	baz=333						
K41A	Shullsburg	140.29	15	P	PKPdf	04 53 19.8	-1.1
	baz=339						
L40A	Anamosa	140.55	16	P	PKPdf	04 53 20.6	-0.8
	baz=338						
L41A	Preston	140.74	16	P	PKPdf	04 53 19.7	-2.0
	baz=339						
L42A	Oliver, Polo	141.02	15	P	PKPdf	04 53 21.2	-1.0
	baz=340						
N38A	Joes South For	141.10	19	P	PKPdf	04 53 22.0	-0.5
	baz=334						
N39A	Derby Farms, D	141.26	18	*e*PKPpre	PKPpre	04 53 15.9	
L44A	Lake County Fo	141.27	13	P	PKPdf	04 53 21.8	-0.9
	baz=343						
MEDO	Medina	141.44	1	P	PKPdf	04 53 22.2	-0.7
	baz=358						
P37A	Lathrop	141.78	21	P	PKPdf	04 53 23.4	-0.3
	baz=332						
N41A	Harden Midland	141.91	17	*e*PKPpre	PKPpre	04 53 17.6	
N42A	Yates City	142.03	16	P	PKPdf	04 53 22.4	-1.7
	baz=339						
AMTX	Amarillo	142.25	34	*e*PKPdf	PKPdf	04 53 23.3	-1.5
MSTX	Muleshoe	142.29	36	P	PKPdf	04 53 22.6	-2.3
	baz=316						
MSTX	Muleshoe	142.29	36	*e*PKPdf	PKPdf	04 53 23.6	-1.4
BINY	Binghamton	142.40	358	P	PKPdf	04 53 22.3	-2.5
	baz=2.0						
BINY	Binghamton	142.40	358	*e*PKPdf	PKPdf	04 53 25.0	+0.3
P40A	Paris	142.63	19	*e*PKPpre	PKPpre	04 53 19.9	
CPUP	Villa Florida	143.78	211	PKP	PKPbc	04 53 25.9	+0.6
	comp=Z,8.3nm,0.9s,baz=174,slow=1.9,SNR=19						
CPUP	Villa Florida	143.78	211	*e*PKPdf	PKPbc	04 53 26.1	+0.8
CPUP	Villa Florida	143.78	211	PKIKP	PKPbc	04 53 25.9	+0.6
CPUP				pmax	pmax		
	comp=Z,5.0nm,0.6s						
R42A	Luebbering	144.16	18	P	PKPab	04 53 25.2	-0.5
	baz=337						
P47A	Martinsville	144.20	12	P	PKPab	04 53 25.4	-0.4
	baz=344						
S40A	Lebanon	144.21	21	P	PKPab	04 53 25.0	-0.9
	baz=333						
CCM	Cathedral Cave	144.23	19	P	PKPab	04 53 25.8	-0.1
	baz=336						
CCM	Cathedral Cave	144.23	19	*e*PKPdf	PKPab	04 53 26.0	+0.1
CCM	Cathedral Cave	144.23	19	*e*PKIKP	PKPab	04 53 26.0	+0.1
O56A	Blue Knob Stat	144.33	2	P	PKPab	04 53 26.0	-0.3
	baz=358						
Q45A	Warren Harvey,	144.33	15	P	PKPab	04 53 26.1	-0.1
	baz=341						
TUL1	Leonard	144.37	26	P	PKPab	04 53 26.1	-0.4
	baz=327						
P48A	Milroy	144.39	11	P	PKPab	04 53 25.7	-0.8
	baz=346						
T39A	Clever	144.40	22	P	PKPab	04 53 25.9	-0.8
	baz=332						
R43A	Red Bud	144.43	17	P	PKPab	04 53 26.0	-0.6
	baz=338						
P49A	Miami Univ. Ec	144.44	10	P	PKPab	04 53 26.0	-0.7
	baz=347						
S41A	Jillco Farms,	144.48	20	P	PKPab	04 53 26.4	-0.5
	baz=335						
OLIL	Olney	144.50	15	*e*PKPdf	PKPab	04 53 26.7	-0.2
P50A	Jamestown	144.52	9	P	PKPab	04 53 25.8	-1.1
	baz=349						
FVM	French Village	144.55	18	*e*PKPdf	PKPab	04 53 26.9	-0.2
FVM	French Village	144.55	18	*e*PKIKP	PKPab	04 53 26.9	-0.2
MVL	Millersville	144.60	359	*e*PKPdf	PKPab	04 53 26.9	-0.3
T40A	Mansfield	144.61	21	P	PKPab	04 53 26.4	-1.0
	baz=333						
S42A	Caledonia	144.63	19	P	PKPab	04 53 26.0	-1.4
	baz=336						
Q47A	Bedord North L	144.69	12	P	PKPab	04 53 26.9	-0.7
	baz=344						
R44A	Waltonville	144.70	16	P	PKPab	04 53 26.9	-0.8
	baz=339						
BDFB	Brasilia	144.77	235	*e*PKPbc	PKPdf	04 53 30.0	+0.2
Q48A	North Vernon	144.84	11	P	PKPab	04 53 27.2	-1.0
	baz=345						
TX31	Lajitas Ar. Si	144.87	42	*e*PKPdf	PKPab	04 53 27.6	-1.1
TX31				*e*PKPdf	PKPbc	04 53 28.8	0.0
LTX	Lajitas	144.87	42	*e*PKPdf	PKPab	04 53 28.7	0.0
LTX	Lajitas	144.87	42	*e*PKIKP	PKPab	04 53 28.7	0.0
TXAR	Lajitas Array	144.87	42	PKP	PKPab	04 53 28.7	0.0
	comp=Z,34nm,0.8s,baz=274,slow=1.4,SNR=343						
R45A	Skylar, Fairfi	144.87	15	P	PKPab	04 53 27.0	-1.2
	baz=341						
MCWV	Mont Chateau	144.88	3	P	PKPab	04 53 27.5	-0.8
	baz=355						
HPIG		144.91	47	*e*PKPdf	PKPab	04 53 28.9	-0.2
U39A	Green Forest	144.92	23	P	PKPab	04 53 26.8	-1.8
	baz=331						
Q49A	Aurora	144.93	10	P	PKPab	04 53 27.4	-1.1
	baz=347						
T41A	Mountain View	144.97	20	P	PKPab	04 53 27.5	-1.2
	baz=334						
GO04	Tololo Observa	145.01	190	*e*PKPbc	PKPdf	04 53 30.5	+0.5
S43A	Fulton Ridge,	145.04	18	P	PKPbc	04 53 27.6	-1.3
	baz=337						
ABTX	Abilene, Hawle	145.06	34	P	PKPbc	04 53 28.3	-0.8
	baz=319						
ABTX	Abilene, Hawle	145.06	34	*e*PKPbc	PKPbc	04 53 28.8	-0.4
R46A	Gibon Southern	145.14	14	P	PKPbc	04 53 27.9	-1.3
	baz=342						
Q51A	Peebles	145.16	8	P	PKPbc	04 53 27.7	-1.5
	baz=349						
SIUC	Southern Illin	145.16	17	*e*PKPbc	PKPbc	04 53 28.6	-0.7
S44A	Carbondale	145.17	17	P	PKPbc	04 53 28.3	-1.0
	baz=339						
U40A	Yellville	145.19	22	P	PKPbc	04 53 28.2	-1.2
	baz=332						
SDMD	Soldier’s Deli	145.20	359	*e*PKPbc	PKPbc	04 53 28.6	-0.7
T42A	Van Buren	145.21	19	P	PKPbc	04 53 28.3	-1.2
	baz=335						
T42A	Van Buren	145.21	19	*e*PKPbc	PKPbc	04 53 28.5	-0.9
Q50A	Georgetown	145.24	9	P	PKPbc	04 53 28.3	-1.2
	baz=348						
R47A	Wooly Knot Far	145.29	13	P	PKPbc	04 53 28.3	-1.4
	baz=344						
R48A	Northridge Ran	145.33	12	P	PKPbc	04 53 29.0	-0.8
	baz=345						
V39A	Pettigrew	145.33	24	P	PKPbc	04 53 28.7	-1.3
	baz=330						
USIN	University of	145.34	14	*e*PKPbc	PKPbc	04 53 29.2	-0.6
S45A	Carrier Mills	145.37	16	P	PKPbc	04 53 29.2	-0.8
	baz=340						
WCI	Wyandotte Cave	145.40	12	P	PKPbc	04 53 29.0	-1.0
	baz=344						
WCI	Wyandotte Cave	145.40	12	*e*PKPbc	PKPbc	04 53 29.1	-1.0
WCI	Wyandotte Cave	145.40	12	*e*PKIKP	PKPbc	04 53 29.1	-1.0
T43A	Greenville	145.42	18	P	PKPbc	04 53 29.0	-1.2
	baz=337						
U41A	Viola	145.54	21	P	PKPdf	04 53 29.5	-0.9
	baz=334						
R49A	Shelbyville	145.57	11	P	PKPdf	04 53 29.7	-0.7
	baz=346						
S46A	Don Dixon Farm	145.59	15	P	PKPdf	04 53 29.5	-0.9
	baz=341						
T44A	Benton	145.63	18	P	PKPdf	04 53 29.4	-1.1
	baz=338						
PBMO	Poplar Bluff	145.66	19	*e*PKPdf	PKPdf	04 53 29.6	-1.0
V40A	Witts Springs	145.69	23	P	PKPdf	04 53 29.9	-0.8
	baz=332						
V40A	Witts Springs	145.69	23	*e*PKPdf	PKPdf	04 53 29.8	-0.9
R50A	Paris	145.73	10	P	PKPdf	04 53 30.0	-0.7
	baz=347						
U42A	Revenden	145.77	20	P	PKPdf	04 53 30.3	-0.4
	baz=335						
W39A	Magazine	145.83	24	P	PKPdf	04 53 29.8	-1.1
	baz=330						
W39A	Magazine	145.83	24	*e*PKPdf	PKPdf	04 53 30.1	-0.8
R51A	Hillsboro	145.83	9	P	PKPdf	04 53 30.0	-0.9
	baz=349						
S47A	Hartford	145.88	14	P	PKPdf	04 53 29.9	-1.0
	baz=343						
R52A	Catlettsburg	145.93	7	P	PKPdf	04 53 30.0	-1.0
	baz=350						
V41A	Mountainview	145.95	22	P	PKPdf	04 53 30.2	-1.0
	baz=333						
T45A	Paducah	145.97	16	P	PKPbc	04 53 31.6	-0.3
	baz=339						
T45A	Paducah	145.97	16	*e*PKPdf	PKPab	04 53 32.2	-0.2
PARMO	Parma	145.97	18	*e*PKPdf	PKPbc	04 53 31.6	-0.2
S48A	Wiedeman Farm,	146.00	12	P	PKPdf	04 53 31.0	-0.1
	baz=344						
U43A	Rector	146.04	19	P	PKPdf	04 53 30.9	-0.3
	baz=336						
S49A	Springfield	146.04	11	P	PKPdf	04 53 30.4	-0.7
	baz=346						
LCO	Las Campanas	146.12	190	*e*PKPdf	PKPbc	04 53 33.1	+0.1
W40A	Ferguson Farm,	146.12	23	P	PKPdf	04 53 31.0	-0.4
	baz=331						
W40A	Ferguson Farm,	146.12	23	*e*PKPdf	PKPdf	04 53 31.2	-0.2
T46A	Princeton	146.15	15	P	PKPdf	04 53 31.4	0.0
	baz=341						
V42A	Cord	146.21	21	P	PKPdf	04 53 31.0	-0.5
	baz=334						
X39A	Fountain Ranch	146.28	25	P	PKPdf	04 53 31.4	-0.4
	baz=329						
S50A	Richmond	146.31	10	P	PKPdf	04 53 30.6	-1.0
	baz=347						
WHAR	Wooly Hollow	146.34	22	*e*PKPdf	PKPdf	04 53 31.6	-0.2
U44B	Burton Farm, H	146.40	18	P	PKPdf	04 53 32.0	+0.2
	baz=338						
T47A	Sharon Grove	146.40	14	P	PKPdf	04 53 31.4	-0.4
	baz=342						
T47A	Sharon Grove	146.40	14	*e*PKPdf	PKPdf	04 53 31.9	+0.1
CBN	Corbin Frederi	146.41	0	*e*PKPdf	PKPbc	04 53 32.9	-0.2
T48A	Bowling Green	146.45	13	P	PKPdf	04 53 31.6	-0.3
	baz=343						
W41B	Gary Mavity, V	146.46	22	P	PKPdf	04 53 31.0	-0.9
	baz=332						
W41B	Gary Mavity, V	146.46	22	*e*PKPdf	PKPdf	04 53 31.7	-0.3
S51A	Beattyville	146.48	9	P	PKPdf	04 53 31.7	-0.3
	baz=348						
S51A	Beattyville	146.48	9	*e*PKPdf	PKPdf	04 53 32.0	+0.1
GLAT	Glass	146.48	18	*e*PKPdf	PKPbc	04 53 33.4	0.0
MIAR	Mount Ida	146.48	25	P	PKPdf	04 53 31.9	-0.1
	baz=330						
MIAR	Mount Ida	146.48	25	*e*PKPdf	PKPdf	04 53 32.1	+0.1
MIAR	Mount Ida	146.48	25	*e*PKP2	PKPdf	04 53 32.1	+0.1
IP04	Greensprings	146.51	1	*e*PKPdf	PKPdf	04 53 32.1	+0.1
V43A	Jonesboro	146.52	20	P	PKPdf	04 53 32.3	+0.2
	baz=336						
GNAR	Gosnell	146.53	19	*e*PKPdf	PKPbc	04 53 33.4	-0.1
CVRD	Centerville Ro	146.54	1	*e*PKPdf	PKPdf	04 53 32.7	+0.7
JCT	Junction City	146.54	37	P	PKPdf	04 53 32.3	0.0
	baz=316						
JCT	Junction City	146.54	37	*e*PKPdf	PKPdf	04 53 32.6	+0.3
U45A	Rockin P Farm,	146.56	17	P	PKPbc	04 53 33.0	-0.7
	baz=339						
IP03	Louisa	146.59	1	*e*PKPdf	PKPdf	04 53 32.7	+0.6

W42A	Bald Knob	146.64	21	P	PKPdf	04 53 33.0	+0.7
	baz=334						
T49A	Edmonton	146.65	12	P	PKPdf	04 53 32.1	-0.1
	baz=345						
T49A	Edmonton	146.65	12	*e*PKPdf	PKPdf	04 53 32.2	-0.1
IP01	Cuckoo	146.65	1	*e*PKPdf	PKPdf	04 53 32.9	+0.7
IP06	Yanceyville	146.67	1	*e*PKPdf	PKPdf	04 53 32.8	+0.5
IP07	Quail	146.69	1	*e*PKPdf	PKPdf	04 53 32.9	+0.6
U46A	Springville	146.72	16	P	PKPdf	04 53 32.6	+0.2
	baz=340						
WHTX	Lake Whitney,	146.74	32	P	PKPdf	04 53 32.2	-0.3
	baz=321						
WHTX	Lake Whitney,	146.74	32	*e*PKPdf	PKPbc	04 53 34.2	-0.1
UALR	University of	146.78	23	*e*PKPdf	PKPdf	04 53 32.5	0.0
IP05	Hopewell Churc	146.78	1	*e*PKPdf	PKPdf	04 53 33.1	+0.7
X40A	Basin Creek Fa	146.83	24	P	PKPdf	04 53 32.1	-0.5
	baz=331						
X40A	Basin Creek Fa	146.83	24	*e*PKPdf	PKPbc	04 53 33.6	-0.9
T50A	Nancy	146.87	11	P	PKPdf	04 53 31.4	-1.2
	baz=346						
U47A	Clarksville	146.88	15	P	PKPdf	04 53 31.6	-1.0
	baz=342						
X41A	Kaden, Bauxite	146.95	23	P	PKPdf	04 53 32.3	-0.5
	baz=331						
U48A	Cassie Pea, Po	146.99	14	P	PKPdf	04 53 32.3	-0.6
	baz=343						
WVT	Waverly	147.03	16	P	PKPdf	04 53 32.5	-0.4
	baz=340						
WVT	Waverly	147.03	16	*e*PKPdf	PKPdf	04 53 32.5	-0.4
WVT	Waverly	147.03	16	*e*PKIKP	PKPdf	04 53 32.5	-0.4
URVA	University of	147.04	0	*e*PKPdf	PKPbc	04 53 34.6	-0.3
Y40A	Okolona	147.06	25	P	PKPdf	04 53 33.8	+0.8
	baz=330						
V45A	Humboldt	147.07	18	P	PKPdf	04 53 33.0	+0.1
	baz=338						
T51A	Gray	147.08	10	P	PKPdf	04 53 32.9	0.0
	baz=348						
T52A	Hallie	147.09	8	P	PKPdf	04 53 33.7	+0.7
	baz=349						
U49A	Red Boiling Sp	147.16	13	P	PKPdf	04 53 32.8	-0.3
	baz=344						
X42A	Stuttgart	147.25	22	P	PKPdf	04 53 33.1	-0.2
	baz=333						
V46A	Holladay	147.26	16	P	PKPdf	04 53 33.0	-0.3
	baz=340						
BLA	Blacksburg	147.28	5	P	PKPdf	04 53 33.0	-0.3
	baz=354						
BLA	Blacksburg	147.28	5	*e*PKPdf	PKPbc	04 53 34.8	-0.9
BLA	Blacksburg	147.28	5	*e*PKP2	PKPbc	04 53 34.8	-0.9
V47A	Nunnelly	147.39	15	P	PKPdf	04 53 34.3	+0.8
	baz=341						
GO03	Copiap	147.41	192	*e*PKPbc	PKPbc	04 53 37.0	+0.6
U50A	Jamestown	147.45	11	P	PKPdf	04 53 33.3	-0.3
	baz=346						
Y41A	Eaglette Beard	147.45	24	P	PKPdf	04 53 33.2	-0.5
	baz=331						
W45A	Hickory Valley	147.54	18	P	PKPdf	04 53 34.1	+0.3
	baz=338						
X43A	Marvell	147.55	21	P	PKPdf	04 53 34.7	+0.9
	baz=334						
TZTN	Tazewell	147.56	9	P	PKPdf	04 53 34.1	+0.3
	baz=348						
TZTN	Tazewell	147.56	9	*e*PKPdf	PKPdf	04 53 33.6	-0.2
435B	Jarrell	147.60	34	P	PKPdf	04 53 34.2	+0.2
	baz=320						
435B	Jarrell	147.60	34	*e*PKPdf	PKPdf	04 53 34.9	+0.9
U51A	La Follette	147.64	10	P	PKPdf	04 53 33.4	-0.6
	baz=347						
V48A	Smith Brothers	147.66	15	P	PKPdf	04 53 33.6	-0.3
	baz=342						
V48A	Smith Brothers	147.66	15	*e*PKPdf	PKPdf	04 53 33.8	-0.2
U52A	Thorn Hill	147.73	9	P	PKPdf	04 53 34.3	+0.2
	baz=348						
CCAR	Cane Creek	147.75	23	*e*PKPbc	PKPbc	04 53 37.8	+0.7
W46A	Michie	147.81	17	P	PKPdf	04 53 33.6	-0.6
	baz=339						
X44A	Crenshaw	147.82	20	P	PKPdf	04 53 34.4	+0.2
	baz=335						
V49A	McMinnville	147.85	13	P	PKPdf	04 53 33.6	-0.7
	baz=344						
U53A	Fall Branch	147.88	8	P	PKPdf	04 53 33.8	-0.6
	baz=350						
Z41A	Richland Creek	147.91	25	P	PKPdf	04 53 33.4	-1.0
	baz=330						
Z41A	Richland Creek	147.91	25	*e*PKPbc	PKPbc	04 53 37.5	0.0
W47A	Westpoint	147.92	16	P	PKPdf	04 53 33.8	-0.6
	baz=340						
PLAL	Pickwick Lake	148.03	17	*e*PKPdf	PKPdf	04 53 33.7	-0.9
OXF	Oxford	148.06	19	P	PKPdf	04 53 32.4	-2.2
	baz=337						
OXF	Oxford	148.06	19	*e*PKPbc	PKPbc	04 53 37.1	-0.7
140A	Cam and Jess,	148.11	27	*e*PKPbc	PKPbc	04 53 38.3	+0.3
V50A	Pikevile	148.12	12	P	PKPdf	04 53 34.8	0.0
	baz=345						
V51A	Loudon	148.14	11	P	PKPdf	04 53 34.3	-0.5
	baz=346						
V51A	Loudon	148.14	11	*e*PKPbc	PKPbc	04 53 37.4	-0.6
X45A	UM Field Stati	148.15	19	P	PKPdf	04 53 34.2	-0.6
	baz=337						
W48A	Pulaski	148.20	15	P	PKPdf	04 53 34.1	-0.7
	baz=342						
V52A	Sevierville	148.24	10	P	PKPdf	04 53 34.7	-0.2
	baz=348						
V52A	Sevierville	148.24	10	*e*PKPdf	PKPdf	04 53 34.9	-0.1
Z42A	Norrel Spur, H	148.25	24	P	PKPdf	04 53 34.4	-0.6
	baz=331						
X46A	Booneville	148.28	18	P	PKPdf	04 53 34.0	-1.0
	baz=338						
Y44A	Strider, Charl	148.29	21	P	PKPdf	04 53 34.7	-0.4
	baz=335						
833A	Chaparral WMA,	148.32	39	P	PKPdf	04 53 34.0	-1.3
	baz=315						
833A	Chaparral WMA,	148.32	39	*e*PKPdf	PKPdf	04 53 36.2	+0.9
NATX	Nacogdoches	148.34	29	*e*PKPbc	PKPbc	04 53 38.9	+0.2
SWET	Sewanee	148.37	14	*e*PKPdf	PKPdf	04 53 35.0	-0.2
TKL	Tuckaleechee C	148.38	10	PKPbc	PKPbc	04 53 38.1	-0.5
	comp=Z,18nm,0.7s,baz=340,slow=2.2,SNR=31						
TKL	Tuckaleechee C	148.38	10	*e*PKPdf	PKPdf	04 53 35.2	+0.1
TKL	Tuckaleechee C	148.38	10	*e*PKIKP	PKPdf	04 53 35.3	+0.1
W49A	Belvidere	148.38	14	P	PKPdf	04 53 33.9	-1.2
	baz=343						
CPCT	Cooper Cave	148.45	11	*e*PKPdf	PKPdf	04 53 35.4	+0.1
W50A	Signal Mountai	148.53	13	P	PKPdf	04 53 35.1	-0.4
	baz=344						
W50A	Signal Mountai	148.53	13	*e*PKPdf	PKPdf	04 53 35.5	0.0
V53A	Saluda	148.53	9	P	PKPdf	04 53 34.7	-0.8
	baz=349						
V53A	Saluda	148.53	9	*e*PKPdf	PKPdf	04 53 35.5	0.0
X47A	Russelville	148.53	17	P	PKPdf	04 53 34.0	-1.4
	baz=340						
Y45A	Yeager Farm, C	148.61	20	P	PKPdf	04 53 35.2	-0.4
	baz=336						
W51A	Cleveland	148.68	12	P	PKPdf	04 53 34.9	-0.7
	baz=346						
Y46A	Houston	148.82	19	P	PKPdf	04 53 35.1	-0.8
	baz=337						
X48A	Hartselle	148.82	16	P	PKPdf	04 53 34.8	-1.1
	baz=341						
X48A	Hartselle	148.82	16	*e*PKPdf	PKPdf	04 53 34.9	-1.0
Z44A	Pea Ridge, Bel	148.83	22	P	PKPdf	04 53 35.8	-0.1
	baz=334						
W52A	Murphy	148.91	11	P	PKPdf	04 53 35.4	-0.7
	baz=347						
W52A	Murphy	148.91	11	*e*PKPbc	PKPbc	04 53 39.3	-0.8
241A	Mo Tay, Goldon	148.92	26	*e*PKPbc	PKPbc	04 53 40.2	+0.1
X49A	Woodville	148.95	14	P	PKPdf	04 53 35.0	-1.1
	baz=342						
W53A	Cullowhee	148.96	9	P	PKPdf	04 53 36.1	-0.1
	baz=348						
143A	Socs Landing,	148.97	23	P	PKPdf	04 53 36.0	-0.1
	baz=332						
143A	Socs Landing,	148.97	23	*e*PKPbc	PKPbc	04 53 40.3	+0.1
Z45A	Winona	149.01	20	P	PKPdf	04 53 35.8	-0.4
	baz=335						
Z45A	Winona	149.01	20	*e*PKPbc	PKPbc	04 53 40.9	+0.5
Y47A	UCPARC, Winfie	149.11	17	P	PKPdf	04 53 36.0	-0.4
	baz=339						
X50B	Fort Payne	149.16	13	P	PKPdf	04 53 35.4	-1.1
	baz=344						
BG3	Lake Jocassee	149.17	9	*e*PKPbc	PKPbc	04 53 40.5	-0.2
HKT	Hockley	149.19	33	*e*PKPdf	PKPdf	04 53 37.4	+0.9
HKT	Hockley	149.19	33	*e*PKIKP	PKPdf	04 53 37.4	+0.9
242A	Grayson	149.22	25	P	PKPdf	04 53 36.8	+0.2
	baz=330						
X51A	Calhoun	149.24	12	P	PKPdf	04 53 36.4	-0.1
	baz=345						
X51A	Calhoun	149.24	12	*e*PKPdf	PKPdf	04 53 36.8	+0.2
KMSC	Kings Mountain	149.24	6	P	PKPdf	04 53 35.6	-1.0
	baz=352						
KMSC	Kings Mountain	149.24	6	*e*PKPdf	PKPdf	04 53 36.4	-0.2
Y48A	Jasper	149.29	16	P	PKPdf	04 53 35.3	-1.4
	baz=340						
CNNC	Cliffs of the	149.36	1	*e*PKPbc	PKPbc	04 53 41.1	0.0
X52A	Dahlonega	149.39	11	P	PKPdf	04 53 36.2	-0.7
	baz=347						
341A	Kurthwood	149.39	27	P	PKPdf	04 53 36.3	-0.6
	baz=328						
341A	Kurthwood	149.39	27	*e*PKPbc	PKPbc	04 53 41.6	+0.3
PAULI	Pauline	149.50	7	*e*PKPdf	PKPdf	04 53 37.3	+0.3
Y49A	Blount Mountai	149.55	15	P	PKPdf	04 53 35.8	-1.3
	baz=342						
Y49A	Blount Mountai	149.55	15	*e*PKPdf	PKPdf	04 53 37.2	0.0
ZAIG	Zacatecas	149.56	51	*e*PKPdf	PKPdf	04 53 39.2	+1.4
X53A	Estanollee	149.59	10	P	PKPdf	04 53 36.0	-1.1
	baz=348						
GO02	Mina Guanaco	149.61	194	*e*PKPbc	PKPbc	04 53 43.5	+1.0
145A	Houston Renfro	149.62	21	P	PKPdf	04 53 35.8	-1.4
	baz=334						
Y50A	Piedmont	149.69	14	P	PKPdf	04 53 36.9	-0.4
	baz=343						
Z48A	Northport	149.69	17	P	PKPdf	04 53 36.0	-1.3
	baz=339						
Z47A	Carrollton	149.70	18	P	PKPdf	04 53 34.7	-2.7
	baz=338						
VBMS	Vicksburg	149.74	23	*e*PKPbc	PKPbc	04 53 42.4	+0.2
BBSR	BB Station	149.81	338	*e*PKPbc	PKPbc	04 53 42.6	+0.2
Y51A	Rockmart	149.83	13	P	PKPdf	04 53 36.9	-0.7
	baz=344						
244A	Avery, Jackson	149.83	23	P	PKPdf	04 53 37.3	-0.3
	baz=333						
146A	Union	149.89	20	P	PKPdf	04 53 38.1	+0.5
	baz=336						
146A	Union	149.89	20	*e*PKPbc	PKPbc	04 53 42.9	+0.4
HODGE	Hodges	150.02	8	*e*PKPdf	PKPdf	04 53 37.9	+0.1
Y52A	Lilburn	150.07	11	P	PKPdf	04 53 38.2	+0.2
	baz=346						
Y52A	Lilburn	150.07	11	*e*PKPdf	PKPdf	04 53 38.4	+0.4
JSC	Jenkinsville	150.10	7	*e*PKPdf	PKPdf	04 53 38.4	+0.5
147A	Livingston	150.12	19	*e*PKPbc	PKPbc	04 53 42.4	-0.7
245A	Little AP, Sta	150.14	22	P	PKPdf	04 53 37.9	-0.2
	baz=334						
Z49A	Columbiana	150.15	16	P	PKPdf	04 53 36.1	-1.9
	baz=341						
LRAL	Lakeview Retre	150.17	16	*e*PKPdf	PKPdf	04 53 38.0	-0.1
Y53A	Monroe	150.17	10	P	PKPdf	04 53 36.9	-1.2
	baz=347						
Z50A	Ashland	150.25	15	P	PKPdf	04 53 36.8	-1.5
	baz=342						
Z50A	Ashland	150.25	15	*e*PKPdf	PKPdf	04 53 38.2	0.0
Y54A	Tignall	150.32	9	P	PKPdf	04 53 38.3	0.0
	baz=349						
344A	Westbrook Farm	150.34	24	*e*PKPbc	PKPbc	04 53 44.2	+0.6
Z51A	Franklin	150.37	13	P	PKPdf	04 53 38.0	-0.4
	baz=344						
LNIG	Linares	150.58	44	*e*PKPdf	PKPdf	04 53 38.7	-0.3
247A	Quitman	150.58	20	P	PKPdf	04 53 38.9	+0.2
	baz=336						
GOGA	Godfrey	150.63	10	P	PKPdf	04 53 38.3	-0.5
	baz=347						
GOGA	Godfrey	150.63	10	*e*PKPdf	PKPdf	04 53 39.0	+0.2
GOGA	Godfrey	150.63	10	*e*PKIKP	PKPdf	04 53 39.0	+0.2
149A	Jones	150.63	16	P	PKPdf	04 53 37.6	-1.2
	baz=340						
Z52A	Williamson	150.66	12	P	PKPdf	04 53 38.3	-0.6
	baz=345						
Z53A	Monticello	150.74	11	P	PKPdf	04 53 38.3	-0.7
	baz=347						
248A	Dixon Mills	150.82	18	P	PKPdf	04 53 37.9	-1.2
	baz=338						
150A	Eclectic	150.84	15	P	PKPdf	04 53 38.2	-0.9
	baz=342						
346A	Big Creek Wild	150.88	22	P	PKPdf	04 53 38.7	-0.6
	baz=334						
Z54A	Sparta	150.91	10	P	PKPdf	04 53 37.4	-1.8
	baz=348						
151A	Opelika	151.09	14	P	PKPdf	04 53 39.0	-0.6
	baz=343						
152A	Waverly Hall	151.09	13	P	PKPdf	04 53 38.6	-0.9
	baz=344						
152A	Waverly Hall	151.09	13	*e*PKPdf	PKPdf	04 53 39.9	+0.4
249A	Camden	151.12	17	P	PKPdf	04 53 39.3	-0.3
	baz=339						
347A	Saraland	151.20	20	P	PKPdf	04 53 37.5	-2.2
	baz=336						
250A	Grady	151.37	16	P	PKPdf	04 53 39.1	-0.8
	baz=341						
250A	Grady	151.37	16	*e*PKPbc	PKPbc	04 53 46.0	0.0
NHSC	New Hope	151.37	5	*e*PKPbc	PKPbc	04 53 46.5	+0.5
PB10	IPOC Station P	151.43	193	*e*PKPbc	PKPbc	04 53 46.5	+0.1
154A	Montrose	151.47	10	*e*PKPbc	PKPbc	04 53 46.7	+0.5
251A	Midway	151.48	14	P	PKPdf	04 53 40.1	-0.1
	baz=343						
155A	Kite	151.57	9	P	PKPdf	04 53 39.6	-0.7
	baz=349						
252A	Lumpkin	151.73	13	P	PKPdf	04 53 40.2	-0.3
	baz=344						
253A	Americus	151.81	12	P	PKPdf	04 53 40.3	-0.3
	baz=345						
253A	Americus	151.81	12	*e*PKPdf	PKPdf	04 53 41.0	+0.3
350A	Dozier	151.87	16	P	PKPdf	04 53 39.9	-0.8
	baz=341						
254A	Abbeville	152.09	11	P	PKPdf	04 53 39.7	-1.3
	baz=347						
352A	Blakely	152.18	14	P	PKPdf	04 53 39.5	-1.7
	baz=343						
352A	Blakely	152.18	14	*e*PKPdf	PKPdf	04 53 42.1	+0.9
352A				*e*PKPab	PKPab	04 53 57.2	-0.4
351A	Pinckard	152.21	15	P	PKPdf	04 53 40.9	-0.3
	baz=342						
255A	Hazlehurst	152.25	9	*e*PKPab	PKPab	04 53 57.1	-0.7
MOIG	Morelia	152.26	55	*e*PKPbc	PKPbc	04 53 48.9	+0.2
PB04	IPOC Station P	152.47	195	*e*PKPbc	PKPbc	04 53 49.8	+0.7
353A	Camilla	152.47	13	P	PKPdf	04 53 39.2	-2.5
	baz=345						
TIGA	Tifton	152.52	12	P	PKPdf	04 53 41.1	-0.6
	baz=346						
TIGA	Tifton	152.52	12	*e*PKPdf	PKPdf	04 53 43.2	+1.5
PB11	IPOC Station P	154.78	197	*e*PKPdf	PKPdf	04 53 46.5	+1.0
MNMC	Minye Minye	155.36	198	*e*PKPab	PKPab	04 54 13.2	+1.5
LPAZ	La Paz	157.47	204	PKP	PKPdf	04 53 50.4	+0.7
	comp=Z,4.3nm,1.0s,baz=136,slow=2.6,SNR=13						
LPAZ				PKPab	PKPab	04 54 22.9	+1.6
	comp=Z,2.2nm,0.5s,baz=97,slow=5.6,SNR=7.9						
SAML	Samuel	160.60	227	*e*PKPdf	PKPdf	04 53 53.2	+0.6
SAML	Samuel	160.60	227	*e*PKIKP	PKPdf	04 53 53.2	+0.6
PTGA	Pitinga	161.90	254	*e*PKPdf	PKPdf	04 53 54.4	+0.3
OTAV	Otavalo	175.66	165	*e*PKPdf	PKPdf	04 54 03.5	+0.1
OTAV	Otavalo	175.66	165	*e*PKIKP	PKPdf	04 54 03.5	+0.1

IDC ***18*** *04:54:01.5±0.6, 29°.06N×142°.57E, h0^{km}, mb4.2/21, mb1 4.3/25, mb1mx4.1/67, mbtmp4.1/25, ML3.5/3, MS4.9/4, Ms1 4.9/4, ms1mx3.6/54, Error ellipse: s-maj=16.6km s-min=13.4km az=86.0*

BJI ***18*** *04:54:02.1, 28°.85N×143°.24E, h41^{km}, mb4.6/18, mB5.0/14, Ms4.5/7, Ms7 4.2/6*

NEIC ***18*** *04:54:03.4±2.9, 29°.02N×142°.56E, h12^{km}±17^{km}, mb4.6/19, Error ellipse: s-maj=7.9km s-min=5.9km az=87.0*

ISCJB ***18*** *04:54:04.2±0.3, 29°.07N±0°.04×142°.57E±0°.06, h27^{km}, mb4.3/46, MS4.5/8, Error ellipse: s-maj=7.1km s-min=5.1km az=169.2*

MOS ***18*** *04:54:05.2±0.9, 29°.07N×142°.55E, h35^{km}, mb4.5/22, Error ellipse: s-maj=14.6km s-min=8.0km az=117.1*

ISC 18 04:54:06.1±0.5**, 29°.13N**±0°.05×**142°.71E**±0°.07**, h27^{km}, n106, σ1^{s}.92**/111**, mb4.3**/46**, MS4.6**/8**, 6C-1D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	Chichi jima	2.07	193	*e*Pn	Pn	04 54 36.2	-2.9
CBIJ				*e*Sn	Sn	04 54 56.8	-7.3
JCJ	Chichijima	2.07	193	Pn	Pn	04 54 36.6	-2.6
	baz=108,slow=20						
JCJ				Sn	Sn	04 55 01.6	-2.4
	54nm,0.3s,baz=270,slow=20,SNR=11						
JHJ	Hachijo jima 2	4.71	329	Pn	Pn	04 55 12.1	-3.2
	1.7nm,0.3s,baz=248,slow=19,SNR=2.2						
JHJ				Sn	Sn	04 56 03.9	-5.1
	9.2nm,0.3s,baz=253,slow=19,SNR=2.3						
MJAR	Matsushiro Arr	8.31	334	Pn	Pn	04 56 02.9	-1.9
	1.5nm,0.3s,baz=156,slow=10,SNR=13						
MJAR				Sn	Sn	04 57 35.3	-2.4
	0.5nm,0.3s,baz=123,slow=16,SNR=2.3						
MAJO	Matsushiro	8.31	334	*e*Pn	Pn	04 56 03.9	-0.9
MAJO				*e*Sn	Sn	04 57 35.3	-2.4
MAJO	Matsushiro	8.31	334	*e*P	Pn	04 56 03.9	-0.9
MAJO				*e*		04 57 35.3	
MJB9	Matsu-Tunnel	8.31	334	*e*Pn	Pn	04 56 03.9	-1.0
JOW	Kunigami	12.96	263	LR	LR	05 01 29.1	
	comp=Z,288nm,21.2s,baz=124,slow=35						
KSRS	Korea Array	14.88	308	Pn	Pn	04 57 34.7	+0.1
	0.2nm,0.3s,baz=115,slow=12,SNR=7.3						
KS15	Wonju Array Si	14.90	308	*e*Pn	Pn	04 57 34.7	-0.2
KSAR	Wonju Array Be	14.90	308	Pn	Pn	04 57 34.7	-0.2
KSAR	Wonju Array Be	14.90	308	P	Pn	04 57 34.7	-0.2
KS01	Wonju Array Si	14.91	308	*e*Pn	Pn	04 57 35.2	+0.1
SHO	Shikotan	15.08	12	*e*P	Pn	04 57 31.9	-5.3
SHO				MLR	MLR		
	comp=Z,255nm,13.0s						
SHO				MLR	MLR		
	comp=N,250nm,16.0s						
USRK	Ussuriysk Ar.	17.30	333	P	Pn	04 58 05.9	+0.2
	baz=126,slow=9.1						
CN2	Changchun	20.12	321	*e*P	Pn	04 58 42.6	+2.8
SSLB	Suanglung	20.18	260	*e*P	Pn	04 58 42.0	+1.3
	comp=N,12nm,0.7s						
TWG	Pinlang	20.43	257	*e*P	P	04 58 33.6	-7.7
	comp=N,28nm,0.6s						
NJ2	Nanjing	20.73	284	*e*P	P	04 58 44.1	-0.5
NJ2				pmax	pmax		
	comp=N,10.0nm,0.6s						
KLR	Kul’dur	21.76	340	P	P	04 58 54.5	-0.9
	comp=N,0.2nm,0.7s,baz=135,slow=10,SNR=8.9						
KLR	Kul’dur	21.76	340⥣	*e*P	P	04 58 55.5	+0.1
KLR				*i* *SP	sP	04 59 09.9	+3.6
KLR				*i*		04 59 15.8	
GRNR	Gornyy	22.13	349	*e*P	P	04 59 04.6	+5.1
SKR	Severo-Kuril’s	23.79	21	*e*P	P	04 59 04.9	-11
SKR				pmax	pmax		
	comp=Z,200nm,1.5s						
SKR				pmax	pmax		
	comp=Z,100nm,3.5s						
SKR				pmax	pmax		
	comp=Z,88nm,1.4s						
SKR				MLR	MLR		
	comp=Z,200nm,17.0s						
HHC	Hu-ho-hao-te	27.92	303	*e*P	P	04 59 54.9	+0.8
HHC				S	S	05 04 42.0	+5.6
HHC				SS	SnSn	05 06 01.6	+10
HHC				pmax	pmax		
	comp=Z,18nm,1.1s						
HHC				pmax	pmax		
	comp=Z,110nm,4.9s						
HHC				LR	LR		
	comp=Z,270nm,13.7s						
HHC				LR	LR		
	comp=Z,370nm,16.7s						
HHC				LR	LR		
	comp=Z,320nm,14.7s						
MA2	Magadan	30.94	8	*e*P	P	05 00 21.4	+0.9
GYA	Guiyang	31.92	274	*e*P	P	05 00 29.8	+0.1
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ULN	Ulaanbaatar	33.21	314*c*	*e*P	P	05 00 41.1	+0.3
ULN				pmax	pmax		
	comp=Z,2.0nm,0.8s						
LZH	Lanzhou	33.30	292	*e*P	P	05 00 43.3	+1.6
LZH				pP	sP	05 00 53.5	+0.5
LZH				sP	pP	05 00 58.3	+8.6
LZH				*e*PP	PnPn	05 01 53.5	+1.0
LZH				*e*S	S	05 06 00.4	-0.4
LZH				pmax	pmax		
	comp=Z,12nm,1.3s						
LZH				pmax	pmax		
	comp=Z,270nm,6.5s						
LZH				LR	LR		
	comp=Z,330nm,15.7s						
LZH				LR	LR		
	comp=Z,420nm,16.3s						
LZH				LR	LR		
	comp=Z,390nm,16.8s						
SONA1	Songino Array	33.61	314	*e*P	P	05 00 44.4	+0.2
SONA0	Songino Array	33.61	314	*e*P	P	05 00 44.0	-0.2
SONM	Songino Array	33.61	314	P	P	05 00 44.0	-0.2
	comp=Z,2.6nm,0.8s,baz=109,slow=7.7,SNR=13						
SONM	Songino Array	33.61	314	P	P	05 00 44.0	-0.2
SONM	Songino Array	33.61	314	P	P	05 00 44.0	-0.2
SONM				pmax	pmax		
	comp=Z,3.0nm,0.8s						
CD2	Chengdu	33.66	283	*e*P	P	05 00 44.5	-0.3
SEY	Seymchan	34.40	8	P	P	05 00 50.7	0.0
	comp=Z,1.4nm,0.2s,baz=191,slow=7.6,SNR=6.0						
SEY	Seymchan	34.40	8*c*	*e*P	P	05 00 51.1	+0.4
KMI	Kunming	35.68	273	P	P	05 01 05.0	+2.5
KMI				pP	pP	05 01 11.3	+0.8
KMI				sP	sP	05 01 13.9	+0.1
KMI				pmax	pmax		
	comp=Z,5.0nm,1.3s						
KMI				pmax	pmax		
	comp=Z,36nm,3.2s						
ZAK	Zakamensk	36.42	317	*e*P	P	05 01 07.6	-0.8
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.4s						
CMAR	Chiang Mai Arr	41.22	265	P	P	05 01 47.3	-1.6
	comp=Z,2.2nm,0.3s,baz=45,slow=10,SNR=3.0						
WMQ	Urumqi	45.79	304	P	P	05 02 24.0	-1.5
WMQ				pP	pP	05 02 34.0	+0.3
WMQ				pmax	pmax		
	comp=Z,21nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,210nm,4.9s						
WMQ				LR	LR		
	comp=Z,700nm,23.5s						
WMQ				LR	LR		
	comp=Z,500nm,22.1s						
WMQ				LR	LR		
	comp=Z,330nm,24.3s						
DGZ	Jazzator, Alta	46.22	312	*e*P	P	05 02 28.9	0.0
DGZ				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ZAA1	Zalesovo Array	48.28	318	*e*P	P	05 02 43.8	-0.8
ZALV	Zalesovo Beam	48.28	318	P	P	05 02 43.8	-0.8
	comp=Z,0.8nm,0.3s,baz=74,slow=11,SNR=3.1						
WRAB	Tennant Creek	49.44	190	*e*P	P	05 02 50.2	-3.7
	comp=Z,9.6nm,0.8s						
WRAB	Tennant Creek	49.44	190*c*	*e*P	P	05 02 53.2	-0.6
WRAB				*i* *PP	pP	05 03 03.9	+1.8
WRAB				*i*		05 04 14.5	
WRAB				pmax	pmax		
	comp=Z,12nm,1.7s						
WB2	Warramunga Arr	49.44	190	*e*P	P	05 02 52.7	-1.2
	comp=Z,11nm,0.9s						
WR1	Warramunga Arr	49.45	190	*e*P	P	05 02 52.2	-1.7
	comp=Z,11nm,0.9s						
WRA	Warramunga Arr	49.45	190	P	P	05 02 52.2	-1.7
	comp=Z,6.2nm,0.8s,baz=11,slow=8.1,SNR=21						
KURK	Kurchatov	51.91	313	*e*P	P	05 03 11.6	-0.6
KURK	Kurchatov	51.91	313*c*	*i*P	P	05 03 11.5	-0.8
KURK				*i* *PP	pP	05 03 21.6	+1.0
KURK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KURBB	Kurchatov Arra	51.97	313	P	P	05 03 11.6	-1.1
	comp=Z,4.5nm,0.8s,baz=90,slow=7.1,SNR=13						
KDAK	Kodiak Island	52.47	38	P	P	05 03 16.0	-0.3
	comp=Z,3.7nm,0.9s,baz=191,slow=4.3,SNR=5.1						
KDAK	Kodiak Island	52.47	38	*e*P	P	05 03 16.0	-0.3
	comp=Z,12nm,1.3s						
KDAK	Kodiak Island	52.47	38	*i* P	P	05 03 16.1	-0.2
AS31	Alice Springs	53.16	190	*e*P	P	05 03 20.8	-1.0
	comp=Z,0.7nm,0.6s						
ASAR	Alice Springs	53.17	190	P	P	05 03 20.8	-1.0
	comp=Z,0.4nm,0.5s,baz=359,slow=10,SNR=4.5						
KSH	Kashi	54.96	300	*e*P	P	05 03 37.3	+2.3
KSH				*e*sP	sP	05 03 50.3	+3.8
KSH				*e*PcP	PcP	05 04 36.8	+0.1
KSH				*e*PP	PP	05 05 41.8	+3.8
IL1	Eielson Array	55.72	29	*e*P	P	05 03 39.4	-0.5
ILAR	Eielson Array	55.72	29	P	P	05 03 39.4	-0.5
	comp=Z,0.8nm,0.8s,baz=259,slow=6.2,SNR=8.8						
ILAR				LR	LR	05 24 25.2	
	comp=Z,2µm,21.7s,baz=194,slow=33						
ILB	Eielson Array	55.72	29	*e*P	P	05 03 39.4	-0.5
BVAR	Borovoye Array	56.88	317	P	P	05 03 47.9	-0.4
	comp=Z,2.6nm,0.7s,baz=91,slow=8.0,SNR=8.1						
BRVK	Borovoye	56.94	317	*e*P	P	05 03 48.9	+0.2

	comp=Z,3.7nm,0.7s						
BRVK	Borovoye	56.94	317	⇑*i*P	P	05 03 49.2	+0.4
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KK31	Karatay Array	58.29	305	*e*P	P	05 03 57.9	-0.6
KK31	Karatay Array	58.29	305	*e*P	P	05 03 57.9	-0.6
KKAR	Karatay Array	58.29	305	*e*P	P	05 03 57.9	-0.6
KKAR	Karatay Array	58.29	305	*e*P	P	05 03 57.9	-0.6
INK	Inuvik	61.00	25	P	P	05 04 17.6	+1.0
	comp=Z,1.8nm,0.7s,baz=293,slow=4.3,SNR=3.8						
INK	Inuvik	61.00	25	*e*P	P	05 04 17.6	+1.0
	comp=Z,4.0nm,1.1s						
PALK	Pallekele	62.08	262	LR	LR	05 32 03.5	
	comp=Z,831nm,19.2s,baz=67,slow=37						
ARU	Arti	63.12	322	P	P	05 04 29.6	-1.5
	comp=Z,5.2nm,0.2s,baz=73,slow=18,SNR=4.9						
ARU	Arti	63.12	322	*e*P	P	05 04 29.6	-1.5
	comp=Z,5.7nm,0.9s						
ARU	Arti	63.12	322	*d i*P	P	05 04 29.5	-1.6
ARU				S	S	05 12 58.7	-1.5
ARU				pmax	pmax		
	comp=Z,6.0nm,1.0s						
ABKAR	Akbulak array	64.02	314	*e*P	P	05 04 36.7	-0.5
AKTO	Aktyubinsk	64.91	315	P	P	05 04 42.1	-0.9
	comp=Z,0.5nm,0.3s,baz=137,slow=7.7,SNR=3.7						
YKA	Yellowknife Ar	70.14	29	P	P	05 05 16.0	+0.2
	comp=Z,1.0nm,0.7s,baz=290,slow=6.4,SNR=2.9						
YKA	Yellowknife Ar	70.14	29	P	P	05 05 16.0	+0.2
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
LTY	Liberty	73.39	45	*e*P	P	05 05 37.3	+1.5
	comp=Z,7.2nm,0.6s						
WSAR	Wadi Sarin	74.16	288	LR	LR	05 43 52.6	
	comp=Z,538nm,18.3s,baz=198,slow=40						
YBH	Yreka Blue Hor	74.41	51	P	P	05 05 43.2	+1.3
	comp=Z,1.3nm,0.7s,baz=288,slow=3.2,SNR=4.3						
PINE	Pine Mountain	74.70	48	*e*P	P	05 05 45.7	+2.0
	comp=Z,5.8nm,0.9s						
J08A	Circle Bar Ran	76.50	48	*e*P	P	05 05 55.3	+1.5
	comp=Z,2.8nm,0.8s						
BEKR	Beckworth	76.83	52	*e*P	P	05 05 57.0	+1.2
	comp=Z,2.8nm,0.9s						
KBZ	Khabaz	76.97	313	P	P	05 05 56.5	+0.3
	comp=Z,2.7nm,0.8s,baz=138,slow=0.5,SNR=5.3						
KVN	Kaiserville	78.75	52	*e*P	P	05 06 07.8	+1.2
	comp=Z,2.7nm,1.0s						
KVN	Kaiserville	78.75	52	*e*P	P	05 06 07.8	+1.2
KVN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
NV01	Mina Array Sit	78.91	52	*e*P	P	05 06 08.2	+0.7
NVAR	Mina Array Bea	78.91	52	P	P	05 06 08.2	+0.7
	comp=Z,1.2nm,0.7s,baz=278,slow=5.9,SNR=6.6						
HLID	Hailey	79.00	46	*e*P	P	05 06 09.4	+1.5
	comp=Z,3.2nm,1.3s						
YMR	Madison River	80.58	44	*e*P	P	05 06 20.0	+3.6
	comp=Z,19nm,0.4s						
AKASG	Malin Array Be	81.26	324	P	P	05 06 18.4	-1.2
	comp=Z,0.4nm,0.4s,baz=53,slow=5.1,SNR=3.5						
AKBB	Malin Array Si	81.26	324	*e*P	P	05 06 18.4	-1.2
	comp=Z,3.2nm,1.1s						
AKBB	Malin Array Si	81.26	324	*e*P	P	05 06 18.4	-1.2
AKBB				pmax	pmax		
	comp=Z,3.0nm,1.1s						
PD31	Pinedale Array	82.45	45	*e*P	P	05 06 26.5	+0.1
PDAR	Pinedale Array	82.45	45	P	P	05 06 26.5	+0.1
	comp=Z,0.7nm,0.7s,baz=232,slow=1.7,SNR=6.3						
RAYN	Ar Rayn	84.75	294	*e*P	P	05 06 37.9	-0.4
	comp=Z,7.1nm,0.9s						
RAYN	Ar Rayn	84.75	294	*e*P	P	05 06 37.9	-0.4
RAYN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BR101	Keskin Array S	84.96	313	*e*P	P	05 06 38.6	-0.6
BRTR	Keskin Array B	84.96	313	P	P	05 06 38.6	-0.6
	comp=Z,1.3nm,0.8s,baz=90,slow=4.3,SNR=5.8						
ASF	Jabal al Asfar	86.88	305	LR	LR	05 51 17.5	
	comp=Z,438nm,20.4s,baz=119,slow=40						
LTX	Lajitas	94.02	53	*e*P	P	05 07 23.4	+1.1
LTX	Lajitas	94.02	53	*e*P	P	05 07 23.4	+1.1
TXAR	Lajitas Array	94.02	53	P	P	05 07 23.4	+1.1
	comp=Z,1.1nm,1.0s,baz=289,slow=3.8,SNR=8.2						
LPAZ	La Paz	148.92	72	PKPbc	PKPbc	05 13 53.3	+0.5
	comp=Z,2.3nm,0.9s,baz=349,slow=4.7,SNR=11						
LPAZ	La Paz	148.92	72	*e*PKPbc	PKPbc	05 13 53.8	+1.0
SIV	San Ignacio	154.51	64	PKPbc	PKPbc	05 14 05.0	+0.1
	comp=Z,0.6nm,0.5s,baz=280,slow=6.1,SNR=3.8						

*ISCJB **18** 04:54:51.3±1.0, 5°.7S±0°.1×149°.8E±0°.3, h150^{km}, mb4.0/6, Error ellipse: s-maj=39.0km s-min=9.7km az=24.5*
*IDC **18** 04:54:53.1±2.7, 5°.75S×149°.74E, h150^{km}±22^{km}, mb3.8/7, mb1 3.9/8, mb1mx3.5/48, mbtmp4.3/8, MS4.7/1, Ms1 4.7/1, ms1mx3.2/37, Error ellipse: s-maj=42.9km s-min=14.6km az=103.0*
ISC 18 04:54:53.0±1.1**, 5°.7S**±0°.2×**149°.8E**±0°.3**, h150**^{km}**, n8, σ1**^{s}**03**/10**, mb4.1**/6**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	4.49	215	P	Pn	04 56 00.8	+1.2
	4.7nm,0.3s,baz=6.5,slow=9.3,SNR=6.0						
PMG				S	Sn	04 56 50.7	-0.9
	54nm,0.3s,baz=152,slow=21,SNR=17						
WRA	Warramunga Arr	20.62	225	P	P	04 59 19.6	-1.1
	4.5nm,0.3s,baz=48,slow=11,SNR=66						
WRA				ScP	ScP	05 06 47.8	-0.3
	1.3nm,0.8s,baz=55,slow=2.8,SNR=5.1						
ASAR	Alice Springs	23.49	219	P	P	04 59 49.2	-0.2
	7.2nm,0.4s,baz=56,slow=8.5,SNR=167						
KSRS	Korea Array	47.54	336	P	P	05 03 13.7	+0.4
	2.0nm,0.6s,baz=153,slow=8.3,SNR=9.7						
USRK	Ussuriysk Ar.	52.22	344	P	P	05 03 48.7	+0.2
	2.4nm,0.6s,baz=165,slow=6.0						
PETK	Petropavlovsk-	58.99	6	P	P	05 04 37.5	+0.8
	8.1nm,0.5s,baz=167,slow=7.0						
PETK				LR	LR	05 27 10.5	
	comp=Z,593nm,20.9s,baz=149,slow=33						
VNDA	Vanda	72.04	177	P	P	05 06 00.7	+0.5
	0.4nm,0.6s,baz=2.4,slow=6.2,SNR=6.2						
ILAR	Eielson Array	84.15	23	P	P	05 07 05.4	-1.6
	0.3nm,0.6s,baz=243,slow=5.2,SNR=5.1						

NNC 18 04:57:59.2±15.0**, 54°.52N**×**88°.02E, h12**^{km}±89^{km}**, mb3.6, mpv3.3, 5C-5D, Error ellipse: s-maj=142.8km s-min=92.8km az=35.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZAA0	Zalesovo Array	1.97	254	⇑Pn	Pn	04 58 31.9	-0.4
	7.0nm,0.3s						
ZAA0				⇓Sn	Sn	04 58 57.9	+0.9
	39nm,0.6s						
KURK	Kurchatov	6.88	240	⇓Pg	Pg	05 00 05.2	-5.5
	3.3nm,1.0s						
KURK				⇓Lg	Lg	05 01 38.9	
	11nm,1.1s						
KURBB	Kurchatov Arra	6.98	240	⇑Pg	Pb	05 00 05.5	+5.1
	1.8nm,0.8s						
KURBB				⇓Lg	Lg	05 01 38.6	
	18nm,0.9s						
MK31	Makanchi Array	8.55	207	⇑Pn	Pn	05 00 06.6	+3.8
	0.7nm,0.7s,baz=21,slow=14,SNR=11						
MK31				⇑Sn	Sn	05 01 39.4	+0.2
	0.9nm,0.4s,baz=150,slow=28,SNR=6.6						
MAKZ	Makanchi	8.62	209	⇓Pn	Pn	05 00 03.5	-0.3
	1.0nm,0.7s						
MAKZ				⇑Sn	Sn	05 01 41.6	+0.7
	2.4nm,0.8s						

*IDC **18** 05:00:15.5±1.0, 2°.68N×95°.53E, h0^{km}, mb4.1/16, mb1 4.2/17, mb1mx3.9/66, mbtmp4.1/17, ML4.7/1, MS4.5/2, Ms1 4.5/2, ms1mx3.4/61, Error ellipse: s-maj=35.2km s-min=16.8km az=57.0*
*ISCJB **18** 05:00:17.5±0.4, 2°.63N±0°.04×95°.45E±0°.04, h25^{km}, mb4.3/25, MS4.5/4, Error ellipse: s-maj=7.0km s-min=4.5km az=43.0*
*DJA **18** 05:00:18.5±0.9, 3°N±3°×9°5E±°, h21^{km}±6^{km}, M4.2/9, mb4.3/1, MLv4.1/9*
*NEIC **18** 05:00:20.4±1.2, 2°.64N×95°.53E, h36^{km}±10^{km}, mb4.4/8, Error ellipse: s-maj=13.7km s-min=6.0km az=72.0*
ISC 18 05:00:19.2±0.6**, 2°.66N**±0°.04×**95°.47E**±0°.06**, h25**^{km}**, n83, σ1**^{s}**43**/81**, mb4.3**/24**, MS4.5**/4**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNSI	Sinabang, Aceh	0.90	106	P	Pb	05 00 35.0	-1.1
SNSI				S	Sn	05 00 48.0	-0.4
TPTI		1.81	71	P	Pn	05 00 47.4	-1.4
TPTI				S	Sn	05 01 07.4	-3.7
MLSI	Meulaboh, Aceh	1.85	30	P	Pn	05 00 48.0	-1.4
MLSI				S	Sn	05 01 13.1	+1.1
MLSI				Sg	Sb	05 01 18.4	+3.3
KCSI	Kotacane, Aceh	2.46	70	P	Pn	05 00 57.7	0.0
KCSI				S	Sn	05 01 24.7	-2.3
KCSI				Sg	Sb	05 01 38.8	+6.2
GSI	Gunungsitoli	2.50	123	P	Pn	05 00 58.0	-0.4
GSI	Gunungsitoli	2.50	123	*e*Pn	Pn	05 00 58.0	-0.4
BSI	Banda Aceh	2.82	357	P	Pn	05 01 00.9	-1.9
LHMI	Lhok Sumawe	2.95	30	P	Pn	05 01 03.3	-1.2
LHMI	Lhok Sumawe	2.95	30	*e*Pn	Pn	05 01 04.1	-0.3
TSI	Tuntungan	3.21	75	P	Pb	05 01 11.6	-3.9
PSI	Prapat	3.46	88	*e*Pn	Pn	05 01 11.5	-0.2
PBSI	Pulau Batu	3.90	134	P	Pn	05 01 17.4	-0.2
SISI	Saibi	5.37	138	P	Pn	05 01 37.6	-0.2
KULM	Kulim	5.79	63	*e*Pn	Pn	05 01 42.9	-0.7
RGRI	Rengat	7.49	113	P	Pn	05 02 15.5	+8.6
COCO	West Island	14.82	175	*e*Pn	Pn	05 03 46.1	-1.2
PBKT	Sadao Pong	14.84	21	*e*Pn	Pn	05 03 48.2	+0.6
PBKT	Sadao Pong	14.84	21	P	P	05 03 53.7	+0.5
	10.0nm,0.7s						
SUKH	Sukhothai	15.29	15	P	P	05 03 57.2	-0.9
	5.1nm,0.9s						
KHON	Khomkaen	15.40	28	P	P	05 03 59.0	-0.4
	18nm,0.8s						
CMAR	Chiang Mai Arr	16.06	12	Pn	Pn	05 04 04.6	+1.0
	1.0nm,0.3s,baz=201,slow=11,SNR=20						
CHTO	Chiang Mai	16.41	12	*e*Pn	Pn	05 04 07.1	-0.9
	6.2nm,0.8s						
CHTO	Chiang Mai	16.41	12	P	P	05 04 09.6	-1.0
	41nm,1.0s						
CMMT	Chiang Mai	16.41	12	P	P	05 04 09.5	-1.1
	9.4nm,1.0s						
NONG	Nongkai	17.06	26	P	P	05 04 17.4	-0.4
	0.2nm,0.9s						
KMI	Kunming	23.41	17	P	P	05 05 27.1	+0.4
KMI				pmax	pmax		
	comp=Z,14nm,0.8s						
H08S2	Diego Garcia H	25.10	246	T	T	05 31 47.0	
	baz=66,slow=75,SNR=167						
H08S3	Diego Garcia H	25.10	246	T	T	05 31 47.0	
	baz=66,slow=75,SNR=843						
H08S1	Diego Carcia H	25.12	246	T	T	05 31 47.0	
	baz=66,slow=75,SNR=150						
JIRN	Jiri	26.39	341	*e*P	P	05 05 55.9	+1.6
	comp=Z,22nm,0.6s						
PKIN	Phulchoki	26.58	340	*e*P	P	05 05 57.6	+1.8
	comp=Z,6.1nm,0.6s						
DMN	Daman	26.71	339	*e*P	P	05 05 59.9	+2.9
	comp=Z,18nm,0.8s						
GUN	Gumba	26.73	341	*e*P	P	05 05 58.0	+0.8
	comp=Z,11nm,0.5s						
KKN	Kakani	26.82	340	*e*P	P	05 05 59.0	+1.1
	comp=Z,17nm,0.7s						
LSA	Lhasa	27.20	352	*e*P	P	05 06 01.8	+0.2
	comp=Z,7.8nm,0.6s						
GKN	Gorkha	27.24	339	*e*P	P	05 06 03.4	+1.8
	comp=Z,15nm,0.7s						
KOLN	Koldanda	27.42	337	*e*P	P	05 06 05.6	+2.3
	comp=Z,9.5nm,0.6s						
DANN	Dangsing	27.88	338	*e*P	P	05 06 07.9	+0.4
	comp=Z,26nm,0.8s						
WHN	Wuhan	32.99	31	P	P	05 06 56.3	+4.0
WHN				S	S	05 12 28.8	+19
WHN				LR	LR		
	comp=Z,2μm,28.1s						
XAN	Xi’an	33.65	20	P	P	05 06 56.4	-1.7
XAN				pmax	pmax		
	comp=Z,27nm,0.8s						
XAN				LR	LR		
	comp=N,340nm,28.2s						
XAN				LR	LR		
	comp=E,260nm,22.5s						
XAN				LR	LR		
	comp=Z,720nm,26.0s						
KSH	Kashi	40.74	337	*e*P	P	05 07 59.6	+1.3
KSH				*e*PP	PnPn	05 09 36.4	-0.3
H01W3	Cape Leeuwin H	41.26	156	T	T	05 51 46.3	
	baz=332,slow=76,SNR=121						
H01W2	Cape Leeuwin H	41.27	156	T	T	05 51 47.3	
	baz=332,slow=76,SNR=115						
H01W1	Cape Leeuwin H	41.27	156	T	T	05 51 47.5	
	baz=332,slow=76,SNR=107						
AAK	Ala-Archa	43.99	338	P	P	05 08 26.6	+1.8
	comp=Z,1.7nm,0.4s,baz=180,slow=13,SNR=2.5						
WRA	Warramunga Arr	44.27	122	P	P	05 08 26.7	-0.5
	comp=Z,2.0nm,0.7s,baz=299,slow=9.3,SNR=11						
WR1	Warramunga Arr	44.28	122	*e*P	P	05 08 26.7	-0.5
	comp=Z,3.3nm,1.0s						
JNU	Nakatsue	44.90	44	LR	LR	05 30 03.2	
	comp=Z,246nm,18.9s,baz=123,slow=40						
MK01	Makanchi Array	45.41	347	*e*P	P	05 08 35.9	0.0
MKAR	Makanchi Array	45.43	347	P	P	05 08 36.1	+0.2
	comp=Z,9.2nm,0.7s,baz=162,slow=8.3,SNR=58						
MKAR	Makanchi Array	45.43	347	*e*P	P	05 08 36.2	+0.2
	comp=Z,53nm,0.6s						
MK31	Makanchi Array	45.43	347	*e*P	P	05 08 36.2	+0.2
MK32	Makanchi Array	45.43	347	*e*P	P	05 08 36.1	+0.1
MAKZ	Makanchi	45.51	347	*e*P	P	05 08 36.4	-0.3
	comp=Z,7.9nm,0.6s						
KSAR	Wonju Array Be	45.65	37	P	P	05 08 36.8	-1.0
AS31	Alice Springs	45.65	127	*e*P	P	05 08 37.9	-0.3
	comp=Z,0.8nm,0.9s						
ASAR	Alice Springs	45.65	127	P	P	05 08 38.3	+0.1
	comp=Z,0.4nm,0.5s,baz=304,slow=7.8,SNR=8.7						
KSRS	Korea Array	45.68	37	P	P	05 08 36.8	-1.3
	comp=Z,1.2nm,0.7s,baz=242,slow=8.6,SNR=5.3						
SONA0	Songino Array	45.98	10	*e*P	P	05 08 39.9	-0.6
SONA0				*e*PcP	PcP	05 10 17.6	+0.6
SONM	Songino Array	45.98	10	P	P	05 08 39.9	-0.6
	comp=Z,3.1nm,0.9s,baz=194,slow=8.5,SNR=11						
SONM				PcP	PcP	05 10 17.6	+0.6
	comp=Z,0.2nm,0.4s,baz=173,slow=3.2,SNR=3.6						
SONA1	Songino Array	45.99	10	*e*P	P	05 08 39.9	-0.8
KURBB	Kurchatov Arra	49.89	346	P	P	05 09 10.5	0.0
	comp=Z,2.3nm,0.7s,baz=168,slow=6.9,SNR=20						
KURK	Kurchatov	49.95	346	*e*P	P	05 09 10.5	-0.5
ZAA0	Zalesovo Array	51.87	352	*e*P	P	05 09 25.3	0.0
	comp=Z,9.5nm,0.8s						
ZALV	Zalesovo Beam	51.87	352	P	P	05 09 25.4	+0.1
	comp=Z,9.7nm,0.7s,baz=175,slow=7.5,SNR=24						
ZAA1	Zalesovo Array	51.87	352	*e*P	P	05 09 25.4	0.0
BVAR	Borovoye Array	54.32	342	P	P	05 09 43.4	0.0
	comp=Z,3.8nm,0.8s,baz=134,slow=8.5,SNR=18						
BRVK	Borovoye	54.38	342	*e*P	P	05 09 43.9	0.0
	comp=Z,4.9nm,0.9s						
ABKAR	Akbulak array	55.42	332	*e*P	P	05 09 51.7	+0.2
KLR	Kul’dur	55.76	28	P	P	05 09 53.9	0.0
	comp=Z,0.4nm,0.9s,baz=262,slow=8.3,SNR=9.4						
AKTO	Aktyubinsk	57.14	332	P	P	05 10 03.9	+0.2
	comp=Z,0.7nm,0.3s,baz=177,slow=18,SNR=3.0						
ARU	Arti	61.18	338	P	P	05 10 31.2	-0.4
	comp=Z,1.6nm,0.3s,baz=123,slow=8.8,SNR=2.2						
ARU	Arti	61.18	338	*e*P	P	05 10 31.2	-0.4
	comp=Z,3.4nm,0.8s						
FIA0	FINESS Array S	77.91	333	*e*P	P	05 12 14.8	0.0
FINES	FINESS Array B	77.91	333	P	P	05 12 14.8	0.0
	comp=Z,0.5nm,0.6s,baz=70,slow=1.6,SNR=2.4						
ARA0	ARCESS Array S	80.59	340	*e*P	P	05 12 29.6	+0.3
ARCES	ARCESS Array B	80.59	340	P	P	05 12 29.6	+0.3
	comp=Z,0.9nm,0.7s,baz=116,slow=6.3,SNR=3.4						
GERES	GERESS Array B	82.58	319	P	P	05 12 40.3	-0.1
	comp=Z,0.3nm,0.2s,baz=103,slow=3.1,SNR=3.4						
HFS	Hagfors	83.60	330	LR	LR	05 54 02.2	
	comp=Z,649nm,21.2s,baz=328,slow=39						
QSPA	South Pole Qui	92.60	180	P	P	05 13 29.3	+0.8
	comp=Z,0.8nm,0.7s,baz=343,slow=9.7,SNR=3.1						
HDA	Harding Lake	99.17	23	*e*P	Pdif	05 13 59.5	+1.2
	comp=Z,48nm,1.1s						
LTX	Lajitas	143.28	29	*e*PKPpre	PKPpre	05 19 48.8	
TXAR	Lajitas Array	143.28	29	PKhKP	PKPpre	05 19 48.8	
	comp=Z,0.2nm,0.7s,baz=247,slow=4.7,SNR=2.9						

NNC 18 05:18:20.2±6.7**, 37°.11N**×**70°.58E, h0**^{km}**, mb3.8, mpv3.4, 5C-3D, Error ellipse: s-maj=51.6km s-min=43.5km az=163.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	3.69	37	⇑Pn	Pn	05 19 18.6	-0.2
	16nm,0.4s						
SFK				⇓Sn	Sn	05 20 04.0	+0.8
	3.5nm,0.3s						
MNAS	Manas	5.57	15	⇑Pn	Pn	05 19 44.9	+0.4
	0.7nm,0.5s						
MNAS				⇑Sn	Sn	05 20 51.1	+1.8
	2.7nm,0.7s						
KK31	Karatay Array	5.99	359	⇑Pn	Pn	05 19 51.7	+1.7
	1.5nm,0.4s,baz=178,slow=12,SNR=11						
KK31				⇓Sn	Sn	05 21 01.7	+2.3
	0.4nm,0.3s,baz=187,slow=25,SNR=3.8						
AAK	Ala-Archa	6.29	27	⇓Pn	Pn	05 19 54.0	-0.4
	1.1nm,0.3s						
AAK				⇑Sn	Sn	05 21 06.2	-0.8
	2.4nm,0.6s						

*NEIC **18** 05:25:53.8±0.0, 36°.95S×177°.34E, h143^{km}, ML4.0(WEL), After WEL.*
WEL 18 05:25:54.7, 37°S±4°×**17°7E**±°**, h152**^{km}±5^{km}**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HAZ	Te Kaha	0.68	160	P	Pn	05 26 16.9	-0.3
HAZ				S	Sn	05 26 33.3	-1.2
MXZ	Matakaoa Point	0.79	124	Pn	Pn	05 26 17.7	-0.3
MXZ				Sn	Sn	05 26 35.4	-0.4
MXZ	Matakaoa Point	0.79	124	P	Pn	05 26 17.7	-0.2
MXZ				S	Sn	05 26 35.3	-0.5
WHRZ	Whale Island	0.84	209	P	Pn	05 26 19.2	+0.8
RUGZ	Raukumara Rang	0.86	170	P	Pn	05 26 17.9	-0.7
PKGZ	Pakihiroa	0.90	149	P	Pn	05 26 19.2	+0.3
PKGZ				S	Sn	05 26 37.1	-0.3
WMGZ	Waiomatatini S	1.02	134	Pn	Pn	05 26 19.9	+0.1
WMGZ				Sn	Sn	05 26 39.1	+0.1
WMGZ	Waiomatatini S	1.02	134	P	Pn	05 26 19.9	+0.2
WMGZ				S	Sn	05 26 39.1	+0.2
OPRZ	Ohinepanea	1.04	225	P	Pn	05 26 20.0	+0.1
TWGZ	Tauwhareparae	1.13	160	Pn	Pn	05 26 21.4	+0.6
TWGZ				Sn	Sn	05 26 43.2	+2.3
TWGZ	Tauwhareparae	1.13	160	P	Pn	05 26 21.5	+0.8
TWGZ				S	Sn	05 26 41.2	+0.4
PUZ	Puketiti	1.13	147	Pn	Pn	05 26 20.8	+0.1
PUZ	Puketiti	1.13	147	P	Pn	05 26 20.9	+0.1
PUZ				S	Sn	05 26 40.1	-0.7
EDRZ	Edgecumbe	1.15	211	Pn	Pn	05 26 21.4	+0.4
URZ	Urewera	1.18	195	Pn	Pn	05 26 21.2	+0.1
URZ				Sn	Sn	05 26 41.2	-0.4
URZ	Urewera	1.18	195	P	Pn	05 26 21.2	+0.1
URZ				S	Sn	05 26 41.1	-0.4
MWZ	Matawai	1.21	178	Pn	Pn	05 26 21.7	+0.1
MWZ	Matawai	1.21	178	P	Pn	05 26 21.7	+0.1
MWZ				S	Sn	05 26 41.9	-0.4
TKGZ	Te Karaka	1.35	168	Pn	Pn	05 26 23.1	+0.3
TKGZ	Te Karaka	1.35	168	P	Pn	05 26 23.1	+0.3
RAGZ	Rawiri	1.38	182	Pn	Pn	05 26 23.6	+0.4
RAGZ	Rawiri	1.38	182	P	Pn	05 26 23.6	+0.4
KMRZ	Kaimai	1.43	239	P	Pn	05 26 24.4	+0.8
KUZ	Kuaotunu	1.46	284	P	Pn	05 26 23.8	-0.2
MUGZ	Murupara	1.47	202	P	Pn	05 26 24.3	+0.3
CNGZ	Carnagh Statio	1.48	157	Pn	Pn	05 26 24.8	+0.7
CNGZ				Sn	Sn	05 26 49.9	+3.1
CNGZ	Carnagh Statio	1.48	157	P	Pn	05 26 24.8	+0.7
HSRZ	Hossack Road	1.54	219	P	Pn	05 26 26.3	+1.5
RTZ	Ruatahuna	1.55	195	P	Pn	05 26 24.8	-0.1
RIGZ	Rimuhau	1.60	172	P	Pn	05 26 25.4	0.0
SNGZ	Shannon Statio	1.67	184	Pn	Pn	05 26 26.2	+0.1
SNGZ	Shannon Statio	1.67	184	P	Pn	05 26 26.3	+0.1
TOZ	Tahuroa Road	1.69	248	P	Pn	05 26 27.7	+1.3
MTHZ	Maungataniwha	1.81	196	P	Pn	05 26 29.3	+1.6
RAHZ	Arahi	1.82	190	P	Pn	05 26 28.2	+0.3
PRGZ	Paritu Road	1.83	170	Pn	Pn	05 26 27.9	-0.1
PRGZ	Paritu Road	1.83	170	P	Pn	05 26 28.4	+0.5
GRZ	Great Barrier	1.85	297	P	Pn	05 26 28.0	-0.1
MKAZ	Moumakai	1.86	270	Pn	Pn	05 26 29.1	+0.8
MKAZ	Moumakai	1.86	270	P	Pn	05 26 29.1	+0.8
KNZ	Kokohu	1.91	176	Pn	Pn	05 26 28.7	-0.1
KNZ	Kokohu	1.91	176	P	Pn	05 26 28.7	0.0
WIAZ	Waiheke Island	1.91	279	P	Pn	05 26 29.5	+0.6
WHHZ	Waihua	1.96	186	P	Pn	05 26 29.8	+0.4
NMHZ	Naumai	2.05	195	Pn	Pn	05 26 31.4	+0.9
NMHZ	Naumai	2.05	195	P	Pn	05 26 31.1	+0.6
ETAZ	East Tamaki Re	2.05	274	P	Pn	05 26 31.7	+1.2
MHGZ	Mahia Peninsul	2.06	171	Pn	Pn	05 26 31.0	+0.4
MHGZ	Mahia Peninsul	2.06	171	P	Pn	05 26 31.0	+0.4
ARHZ	Aropaoanui	2.18	190	Pn	Pn	05 26 32.1	+0.2
ARHZ	Aropaoanui	2.18	190	P	Pn	05 26 32.2	+0.3
BKZ	Black Stump Fm	2.19	201	Pn	Pn	05 26 32.0	-0.1
BKZ	Black Stump Fm	2.19	201	P	Pn	05 26 32.1	-0.1
ABAZ	Army Bay	2.19	283	P	Pn	05 26 33.0	+0.9
MCHZ	McNeill Hill	2.40	195	Pn	Pn	05 26 34.9	+0.2
MCHZ	McNeill Hill	2.40	195	P	Pn	05 26 35.2	+0.5
KWHZ	Kaweka Forest	2.45	200	P	Pn	05 26 35.0	-0.3
OTVZ	Oturere	2.50	215	Pn	Pn	05 26 36.2	+0.2
NGZ	Ngauruhoe	2.54	215	P	Pn	05 26 37.1	+0.6
CKHZ	Cape Kidnapper	2.56	187	P	Pn	05 26 36.4	-0.1
TUVZ	Tukino	2.59	213	P	Pn	05 26 37.5	+0.4
BHHZ	Black Hill Sta	2.62	205	Pn	Pn	05 26 36.8	-0.5
BHHZ	Black Hill Sta	2.62	205	P	Pn	05 26 36.9	-0.5
FWVZ	Far West T-bar	2.62	215	Pn	Pn	05 26 37.9	+0.3
FWVZ	Far West T-bar	2.62	215	P	Pn	05 26 37.7	+0.1
TRVZ	Turoa	2.66	214	P	Pn	05 26 38.7	+0.7
WNVZ	Wahianoa	2.66	213	Pn	Pn	05 26 37.8	-0.2
MOVZ	Moawhango	2.66	210	Pn	Pn	05 26 37.1	-0.8
MOVZ	Moawhango	2.66	210	P	Pn	05 26 37.1	-0.8
KRHZ	Kereru	2.67	199	P	Pn	05 26 37.0	-1.0
KAHZ	Kahuranaki	2.71	190	Pn	Pn	05 26 37.9	-0.7
KAHZ	Kahuranaki	2.71	190	P	Pn	05 26 38.2	-0.3
MTVZ	Mangateitei	2.76	214	P	Pn	05 26 39.5	+0.3
PXZ	Pawanui	2.95	189	Pn	Pn	05 26 40.5	-0.9
PNHZ	Pukenui	2.97	199	Pn	Pn	05 26 40.4	-1.3
PNHZ	Pukenui	2.97	199	P	Pn	05 26 40.4	-1.3
WPHZ	Waipukurau	3.05	195	Pn	Pn	05 26 41.8	-0.9
WPHZ	Waipukurau	3.05	195	P	Pn	05 26 41.9	-0.8
TSZ	Takapari Road	3.17	202	Pn	Pn	05 26 42.8	-1.5
TSZ	Takapari Road	3.17	202	P	Pn	05 26 42.8	-1.4
PRHZ	Porangahau	3.21	192	Pn	Pn	05 26 43.6	-1.2
PRHZ	Porangahau	3.21	192	P	Pn	05 26 43.6	-1.2
DVHZ	Dannevirke	3.34	198	Pn	Pn	05 26 45.0	-1.4
DVHZ	Dannevirke	3.34	198	P	Pn	05 26 45.0	-1.4
ANWZ	Angora Road	3.43	193	P	Pn	05 26 46.2	-1.3
PRWZ	Pori Road	3.63	199	Pn	Pn	05 26 49.0	-1.1
PRWZ	Pori Road	3.63	199	P	Pn	05 26 49.3	-0.8
BFZ	Birch Farm	3.69	195	Pn	Pn	05 26 48.8	-2.1
BFZ	Birch Farm	3.69	195	P	Pn	05 26 48.9	-2.0
MRZ	Mangatainoka R	3.84	202	Pn	Pn	05 26 50.4	-2.4
MRZ	Mangatainoka R	3.84	202	P	Pn	05 26 50.5	-2.3
TIWZ	Tintock	3.86	198	Pn	Pn	05 26 51.0	-2.1
TIWZ	Tintock	3.86	198	P	Pn	05 26 51.4	-1.7
HOWZ	Holdsworth Sta	4.07	202	Pn	Pn	05 26 53.1	-2.8
HOWZ	Holdsworth Sta	4.07	202	P	Pn	05 26 53.2	-2.7
OGWZ	Otaki Gorge	4.11	205	Pn	Pn	05 26 53.9	-2.4
OGWZ	Otaki Gorge	4.11	205	P	Pn	05 26 53.9	-2.5
TMWZ	Te Maipa	4.17	197	Pn	Pn	05 26 54.6	-2.6
TMWZ	Te Maipa	4.17	197	P	Pn	05 26 54.6	-2.6
KIW	Kapiti Island	4.24	207	Pn	Pn	05 26 55.5	-2.6
KIW	Kapiti Island	4.24	207	P	Pn	05 26 55.4	-2.7
MTW	Mount Morrison	4.32	200	Pn	Pn	05 26 56.1	-3.0
MTW	Mount Morrison	4.32	200	P	Pn	05 26 56.3	-2.8
CAW	Cannon Point	4.41	205	Pn	Pn	05 26 57.1	-3.1
CAW	Cannon Point	4.41	205	P	Pn	05 26 57.2	-3.0
TRWZ	Traveller	4.50	198	Pn	Pn	05 26 58.5	-2.9
TRWZ	Traveller	4.50	198	P	Pn	05 26 58.6	-2.9
PAWZ	Paruwai Farm	4.55	200	Pn	Pn	05 26 59.0	-3.2
PAWZ	Paruwai Farm	4.55	200	P	Pn	05 26 59.0	-3.2
DUWZ	D’Urville Isla	4.61	216	Pn	Pn	05 27 01.1	-1.9
DUWZ	D’Urville Isla	4.61	216	P	Pn	05 27 01.1	-1.8
MSWZ	Moikau Station	4.63	201	Pn	Pn	05 26 59.8	-3.4
PLWZ	Palliser	4.77	201	Pn	Pn	05 27 01.3	-3.7
PLWZ	Palliser	4.77	201	P	Pn	05 27 01.6	-3.4
TCW	Tory Channel	4.79	210	Pn	Pn	05 27 02.1	-3.2
TCW	Tory Channel	4.79	210	P	Pn	05 27 01.8	-3.4
TUWZ	Tuamarina	5.11	211	Pn	Pn	05 27 07.2	-2.2
TUWZ	Tuamarina	5.11	211	P	Pn	05 27 06.3	-3.1
NNZ	Nelson	5.19	217	Pn	Pn	05 27 07.9	-2.6
THZ	Tophouse	5.84	216	Pn	Pn	05 27 15.7	-3.5

THZ	**Tophouse**	**5.84**	**216**	P	Pn	05 27 16.5	-2.7
KHZ	**Kahutara**	**6.10**	**209**	Pn	Pn	05 27 18.9	-3.7
KHZ	**Kahutara**	**6.10**	**209**	P	Pn	05 27 18.6	-4.0

IDC 18 05:41:16.4±1.0,**17°.13S**×**177°.65W**,**h0^{km}**,**mb3.8**/7, **mb1 4.1**/7,**mb1mx3.8**/44,**mbtmp3.8**/7,**MS4.4**/1,**Ms1 4.4**/1, **ms1mx3.0**/47,**Error ellipse: s-maj=48.3km s-min=21.8km az=144.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	**12.07**	**181**	LR	LR	05 47 16.2	
	comp=Z,2µm,21.3s,baz=152,slow=30						
URZ	**Urewera**	**21.55**	**191**	P	P	05 46 07.3	0.0
	4.9nm,0.4s,baz=351,slow=6.2,SNR=3.6						
WRA	**Warramunga Arr**	**45.49**	**259**	P	P	05 49 38.1	+0.2
	0.7nm,0.4s,baz=97,slow=7.4,SNR=15						
ASAR	**Alice Springs**	**45.70**	**253**	P	P	05 49 39.1	-0.5
	1.0nm,0.4s,baz=88,slow=8.2,SNR=13						
NVAR	**Mina Array Bea**	**78.36**	**44**	P	P	05 53 20.2	+1.1
	0.3nm,0.6s,baz=224,slow=7.6,SNR=3.9						
ILAR	**Eielson Array**	**84.97**	**13**	P	P	05 53 52.9	-0.2
	0.4nm,0.7s,baz=215,slow=4.6,SNR=4.9						
TXAR	**Lajitas Array**	**84.97**	**57**	P	P	05 53 54.2	+0.1
	0.7nm,0.7s,baz=218,slow=5.8,SNR=9.9						
PDAR	**Pinedale Array**	**86.29**	**43**	P	P	05 53 59.3	-1.3
	0.1nm,0.4s,baz=198,slow=8.5,SNR=2.3						

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*ISCJB **18** 05:43:29.1±0.4,2°.99N±0°.09×31°.16W±0°.05,h10^{km}, mb4.3/47,MS4.1/13,Error ellipse: s-maj=13.2km s-min=7.2km az=166.7*

*IDC **18** 05:43:29.3±0.6,2°.98N×31°.22W,h0^{km},mb4.1/24, mb1 4.2/24,mb1mx4.1/59,mbtmp4.1/24,MS4.1/13, Ms1 4.1/13,ms1mx3.7/54,Error ellipse: s-maj=19.9km s-min=12.8km az=143.0*

*NEIC **18** 05:43:30.7±0.3,2°.95N×31°.18W,h10^{km},mb4.6/24,Error ellipse: s-maj=10.0km s-min=5.3km az=167.0*

ISC 18 05:43:30.8±0.5,**3°.0N**±0°.1×**31°.19W**±0°.09,**h10^{km}**,**n82**, σ**0^s.86**/70,**mb4.3**/47,**MS4.1**/13,**Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10N3	**ASCENSION HYDR**	**19.82**	**123**	T	T	06 08 29.6	
	baz=302,slow=74,SNR=363						
H10N2	**ASCENSION HYDR**	**19.83**	**123**	T	T	06 08 29.6	
	baz=302,slow=74,SNR=271						
H10N1	**ASCENSION HYDR**	**19.84**	**123**	T	T	06 08 29.6	
	baz=302,slow=74,SNR=312						
H10S3	**ASCENSION HYDR**	**20.30**	**126**	T	T	06 09 09.5	
	baz=305,slow=75,SNR=329						
H10S1	**ASCENSION HYDR**	**20.31**	**126**	T	T	06 09 04.1	
	baz=305,slow=75,SNR=290						
H10S2	**ASCENSION HYDR**	**20.32**	**126**	T	T	06 09 04.1	
	baz=305,slow=75,SNR=191						
DBIC	**Dimbokro**	**26.49**	**81**	P	**P**	**05 49 09.6**	**+0.9**
	6.1nm,1.0s,baz=244,slow=14,SNR=2.6						
DBIC				LR	LR	05 57 38.5	
	comp=Z,457nm,18.9s,baz=231,slow=32						
PTGA	**Pitinga**	**29.00**	**263**	LR	LR	05 59 42.3	
	comp=Z,277nm,19.3s,baz=98,slow=34						
KOWA	**Kowa**	**29.15**	**65**	P	**P**	**05 49 32.4**	**-0.1**
	2.0nm,0.7s,baz=9.0,slow=24,SNR=4.2						
KOWA				LR	LR	06 00 00.7	
	comp=Z,587nm,18.1s,baz=226,slow=34						
KOWA	**Kowa**	**29.15**	**65**	*e*P	**P**	**05 49 32.4**	**-0.1**
KOWA				*e*P	**P**	**05 49 33.7**	**+1.3**
H05N1	**Guadeloupe/Mar**	**32.22**	**296**	T	T	06 23 39.3	
	SNR=6.7						
TOA1	**Torodi Ar. Sit**	**34.04**	**71**	*e*P	**P**	**05 50 13.8**	**-1.7**
TOA0	**Torodi Ar. Sit**	**34.05**	**71**	*e*P	**P**	**05 50 14.6**	**-1.0**
TOA0				*e*P	**P**	**05 50 15.5**	**0.0**
TORD	**Torodi Ar. Bea**	**34.05**	**71**	P	**P**	**05 50 13.8**	**-1.7**
	2.4nm,0.6s,baz=255,slow=7.9						
TORD				LR	LR	06 02 53.0	
	comp=Z,336nm,18.3s,baz=285,slow=34						
PSMA	**Santa Maria**	**34.30**	**9**	*e*T	T	06 25 59.4	
PSMN	**Pico do Norte,**	**34.32**	**9**	*e*T	T	06 25 58.6	
SIV	**San Ignacio**	**35.05**	**237**	P	**P**	**05 50 24.0**	**-0.2**
	0.8nm,0.6s,baz=84,slow=7.8,SNR=6.5						
BART	**Pico Bartolome**	**35.06**	**8**	*e*T	T	06 26 54.7	
CPUP	**Villa Florida**	**38.58**	**219**	P	**P**	**05 50 54.5**	**+0.4**
	1.4nm,0.7s,baz=15,slow=19,SNR=2.1						
CPUP				LR	LR	06 06 11.9	
	comp=Z,153nm,20.6s,baz=38,slow=35						
MDT	**Midelt**	**38.74**	**37**	P	**P**	**05 50 57.5**	**+1.8**
	4.5nm,1.2s,baz=283,slow=10,SNR=3.1						
MDT				LR	LR	06 05 25.3	
	comp=Z,408nm,19.3s,baz=140,slow=34						
TAM	**Tamanrasset**	**40.65**	**58**	*e*P	**P**	**05 51 12.2**	**+0.5**
	3.9nm,1.1s						
LPAZ	**La Paz**	**41.22**	**241**	P	**P**	**05 51 18.4**	**+1.4**
	0.6nm,0.7s,baz=77,slow=17,SNR=3.7						
LPAZ				LR	LR	06 07 53.1	
	comp=Z,444nm,21.2s,baz=82,slow=36						
LPAZ	**La Paz**	**41.22**	**241**	*e*P	**P**	**05 51 17.8**	**+0.8**
LPAZ				*e*sP	**P**	**05 51 18.9**	**+1.9**
ROSC	**El Rosal**	**43.06**	**274**	P	P	05 51 37.9	+6.0
	5.6nm,0.3s,baz=208,slow=17,SNR=4.4						
ROSC				LR	LR	06 08 27.8	
	comp=Z,201nm,21.7s,baz=66,slow=35						
ROSC	**El Rosal**	**43.06**	**274**	*e*P	**P**	**05 51 32.0**	**+0.2**
	5.8nm,0.4s						
ROSC				P	P	05 51 37.9	+6.0
ESDC	**Sonseca Array**	**44.09**	**30**	P	**P**	**05 51 41.0**	**+1.6**
	1.9nm,0.9s,baz=226,slow=8.4,SNR=11						
ESDC	**Sonseca Array**	**44.09**	**30**	*e*P	**P**	**05 51 41.0**	**+1.6**
ES19	**SONSECA Array**	**44.14**	**31**	*e*P	**P**	**05 51 40.5**	**+0.7**
NNA	**Nana**	**47.75**	**251**	LR	LR	06 11 15.2	
	comp=Z,198nm,20.4s,baz=117,slow=35						
BNI	**Bardonecchia**	**53.47**	**33**	*e*P	**P**	**05 52 52.4**	**+0.9**
	8.0nm,1.1s						
JTS	**JuntasAbangare**	**53.83**	**281**	LR	LR	06 16 12.5	
	comp=Z,99nm,21.3s,baz=137,slow=36						
VAE	**Valguarnera**	**54.04**	**45**	P	**P**	**05 52 55.8**	**+0.1**
	51nm,0.5s,baz=297,slow=4.5,SNR=6.3						
255A	**Hazlehurst**	**56.06**	**307**	*e*P	**P**	**05 53 09.1**	**-1.2**
	14nm,1.1s						
DAVOX	**Davos/Dischmat**	**56.29**	**33**	P	**P**	**05 53 12.6**	**+0.6**
	1.1nm,0.4s,baz=237,slow=17,SNR=2.5						
PLCA	**Paso Flores**	**56.41**	**215**	LR	LR	06 16 31.0	
	comp=Z,167nm,19.1s,baz=48,slow=35						
EKA	**Eskdalemuir Ar**	**56.90**	**19**	P	**P**	**05 53 14.9**	**-0.9**
	2.6nm,0.9s,baz=213,slow=5.1,SNR=4.0						
TKL	**Tuckaleechee C**	**58.39**	**311**	LR	LR	06 14 00.7	
	comp=Z,162nm,21.3s,baz=48,slow=31						
Z50A	**Ashland**	**59.24**	**307**	*e*P	**P**	**05 53 33.0**	**+0.3**
	7.0nm,1.1s						
GEC2	**GERESS Array S**	**59.59**	**33**	*e*P	**P**	**05 53 34.8**	**-0.2**
	2.1nm,0.8s						
GERES	**GERESS Array B**	**59.59**	**33**	P	**P**	**05 53 35.2**	**+0.2**
	0.2nm,0.3s,baz=230,slow=14,SNR=2.8						
SWET	**Sewanee**	**59.88**	**309**	*e*P	**P**	**05 53 37.3**	**+0.1**
	9.4nm,1.1s						
LRAL	**Lakeview Retre**	**60.03**	**307**	*e*P	**P**	**05 53 38.5**	**+0.3**
	6.7nm,1.1s						
CLL	**Collm**	**60.68**	**30**	*e*P	**P**	**05 53 41.0**	**-1.2**
T47A	**Sharon Grove**	**61.37**	**311**	*e*P	**P**	**05 53 47.3**	**+0.1**
	6.3nm,0.9s						
PLAL	**Pickwick Lake**	**61.48**	**308**	*e*P	**P**	**05 53 48.9**	**+0.9**
	4.4nm,1.1s						
WVT	**Waverly**	**61.64**	**310**	*e*P	**P**	**05 53 48.4**	**-0.7**
	1.9nm,0.7s						
BOSA	**Boshof**	**62.57**	**124**	P	**P**	**05 53 55.4**	**-0.2**
	9.6nm,1.1s,baz=308,slow=4.1,SNR=6.0						
BOSA	**Boshof**	**62.57**	**124**	*e*P	**P**	**05 53 54.9**	**-0.7**
	13nm,1.1s						
BOSA				*e*P	**P**	**05 53 55.4**	**-0.2**
143A	**Socs Landing,**	**63.51**	**305**	*e*P	**P**	**05 54 02.1**	**+0.5**
	12nm,0.8s						
MLR	**Muntele Rosu**	**65.30**	**41**	*e*P	**P**	**05 54 13.7**	**+0.4**
	6.7nm,1.1s						
NB2	**NORSAR Subarra**	**66.17**	**21**	P	**P**	**05 54 18.3**	**-0.2**
	comp=Z,7.6nm,1.1s,baz=228,slow=6.5						
HFS	**Hagfors**	**66.49**	**23**	P	**P**	**05 54 20.6**	**+0.1**
	comp=Z,1.5nm,0.8s,baz=233,slow=26,SNR=2.4						
BR101	**Keskin Array S**	**68.87**	**48**	*e*P	**P**	**05 54 36.5**	**+0.4**
BRTR	**Keskin Array B**	**68.87**	**48**	P	**P**	**05 54 36.5**	**+0.4**
	comp=Z,0.4nm,0.3s,baz=256,slow=5.8,SNR=3.1						
AKASG	**Malin Array Be**	**69.30**	**36**	P	**P**	**05 54 38.5**	**+0.1**
	comp=Z,1.3nm,0.5s,baz=246,slow=6.8,SNR=4.3						
AKBB	**Malin Array Si**	**69.30**	**36**	*e*P	**P**	**05 54 38.5**	**+0.1**
	comp=Z,6.7nm,1.1s						
ASF	**Jabal al Asfar**	**69.91**	**57**	P	**P**	**05 54 43.2**	**+0.6**
	comp=Z,0.8nm,0.5s,baz=258,slow=14,SNR=2.6						
JCT	**Junction City**	**70.09**	**301**	*e*P	**P**	**05 54 43.9**	**+0.1**
	comp=Z,6.7nm,0.9s						
FIA0	**FINESS Array S**	**72.25**	**25**	*e*P	**P**	**05 54 56.2**	**+0.1**
FINES	**FINESS Array B**	**72.25**	**25**	P	**P**	**05 54 56.2**	**+0.1**
	comp=Z,2.5nm,0.9s,baz=159,slow=16,SNR=4.6						
LTX	**Lajitas**	**73.27**	**300**	*e*P	**P**	**05 55 03.0**	**0.0**
TX31	**Lajitas Ar. Si**	**73.27**	**300**	*e*P	**P**	**05 55 02.9**	**-0.2**
TX31				*e*P	**P**	**05 55 03.2**	**+0.2**
TXAR	**Lajitas Array**	**73.27**	**300**	P	**P**	**05 55 03.0**	**0.0**
	comp=Z,2.3nm,1.1s,baz=116,slow=5.0,SNR=11						
MNTX	**Cornudas Mount**	**74.99**	**302**	*e*P	**P**	**05 55 13.4**	**+0.6**
	comp=Z,2.6nm,1.1s						
SDCO	**Great Sand Dun**	**75.78**	**308**	*e*P	**P**	**05 55 18.7**	**+1.0**
	comp=Z,2.2nm,1.1s						
ARA0	**ARCESS Array S**	**76.04**	**18**	*e*P	**P**	**05 55 17.9**	**-0.2**
ARCES	**ARCESS Array B**	**76.04**	**18**	P	**P**	**05 55 17.9**	**-0.2**
	comp=Z,3.6nm,1.0s,baz=248,slow=3.3,SNR=4.5						
ANMO	**Albuquerque**	**76.22**	**305**	*e*P	**P**	**05 55 22.0**	**+1.8**
	comp=Z,1.6nm,1.1s						
SNAA	**Sanae**	**76.76**	**171**	P	**P**	**05 55 21.9**	**-0.4**
	comp=Z,2.2nm,0.9s,baz=332,slow=5.5,SNR=8.9						
SNAA	**Sanae**	**76.76**	**171**	*e*P	**P**	**05 55 21.9**	**-0.4**
	comp=Z,4.8nm,1.0s						
PDAR	**Pinedale Array**	**79.44**	**313**	P	**P**	**05 55 37.9**	**-0.1**
	comp=Z,0.2nm,0.5s,baz=90,slow=11,SNR=3.0						
TUC	**Tucson**	**79.61**	**302**	*e*P	**P**	**05 55 39.9**	**+0.9**
	comp=Z,2.8nm,1.1s						
RPN	**Rapa Nui**	**80.83**	**242**	LR	LR	06 27 10.1	
	comp=Z,126nm,20.6s,baz=314,slow=32						
CCUT	**Cedar City**	**81.98**	**307**	*e*P	**P**	**05 55 52.1**	**+0.5**
	comp=Z,2.9nm,1.2s						
YKA	**Yellowknife Ar**	**84.32**	**332**	P	**P**	**05 56 02.2**	**-0.7**
	comp=Z,2.2nm,1.0s,baz=89,slow=5.8,SNR=5.1						
BMO	**Blue Mountains**	**85.15**	**315**	*e*P	**P**	**05 56 07.9**	**+0.3**
	comp=Z,2.8nm,1.0s						
NV01	**Mina Array Sit**	**85.90**	**308**	*e*P	**P**	**05 56 10.9**	**-0.8**
NVAR	**Mina Array Bea**	**85.90**	**308**	P	**P**	**05 56 10.9**	**-0.8**
	comp=Z,0.6nm,1.0s,baz=101,slow=1.5,SNR=3.9						
WVOR	**Wild Horse Val**	**86.12**	**312**	*e*P	**P**	**05 56 12.4**	**-0.1**
	comp=Z,8.4nm,0.6s						
IL1	**Eielson Array**	**97.98**	**337**	*e*P	**P**	**05 57 05.6**	**-1.4**
ILAR	**Eielson Array**	**97.98**	**337**	P	**P**	**05 57 05.3**	**-1.7**
	comp=Z,0.8nm,1.0s,baz=67,slow=3.9,SNR=6.7						
ILB	**Eielson Array**	**97.98**	**337**	*e*P	**P**	**05 57 05.3**	**-1.7**

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*DJA **18** 05:55:58.0±1.3,3°S±8°×14°0E±°,h20^{km}±17^{km},M4.1/4, MLv4.1/4*

*IDC **18** 05:56:01.2±1.9,2°.91S×139°.82E,h0^{km},mb3.5/2, mb1 4.0/3,mb1mx3.4/46,mbtmp3.7/3,ML3.9/1,MS3.9/1, Ms1 3.9/1,ms1mx2.8/35,Error ellipse: s-maj=219.9km s-min=29.1km az=108.0*

*ISCJB **18** 05:56:04.2±0.7,2°.96S±0°.07×139°.51E±0°.05,h46^{km}, mb3.5/2,MS3.9/1,Error ellipse: s-maj=10.7km s-min=6.2km az=152.4*

ISC 18 05:56:04.8±1.0,**2°.94S**±0°.09×**139°.49E**±0°.05,**h46^{km}**,**n8**, σ**2^s.68**/11,**Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GENI	**Genyem**	**0.76**	**63**	P	**Pn**	**05 56 17.8**	**-1.5**
GENI				S	**Sn**	**05 56 30.0**	**+0.2**
WAMI	**Wamena**	**1.21**	**220**	P	Pn	05 56 15.2	-10
JAY	**Jayapura**	**1.29**	**71**	P	**Pn**	**05 56 23.5**	**-3.0**
JAY				S	**Sn**	**05 56 41.9**	**-0.7**
SRPI	**Serui, Papua**	**3.42**	**288**	P	**Pn**	**05 56 52.3**	**-3.3**
SRPI				S	**Sn**	**05 57 36.0**	**+1.1**
WRA	**Warramunga Arr**	**17.63**	**196**	P	**P**	**06 00 08.6**	**+0.9**
	0.4nm,0.3s,baz=19,slow=13,SNR=14						
WRA				S	**Sn**	**06 03 19.2**	**-3.6**
	0.1nm,0.3s,baz=15,slow=23,SNR=4.0						
ASAR	**Alice Springs**	**21.30**	**194**	P	**P**	**06 00 51.5**	**+3.7**
	0.9nm,0.4s,baz=20,slow=11,SNR=15						
ASAR				S	**S**	**06 04 43.0**	**+1.0**
	0.2nm,0.5s,baz=325,slow=42,SNR=2.2						
PETK	**Petropavlovsk-**	**57.91**	**13**	LR	LR	06 26 39.5	
	comp=Z,102nm,21.4s,baz=299,slow=32						
ILAR	**Eielson Array**	**85.72**	**24**	P	**P**	**06 08 41.1**	**+2.4**
	0.3nm,0.7s,baz=262,slow=5.1,SNR=3.7						

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*BJI **18** 06:36:47.0,11°.18N×126°.16E,h18^{km},mb5.0/73,mB5.2/68, Ms5.2/84,Ms7 5.0/75*

*NEIC **18** 06:36:48.2±0.1,11°.28N×126°.07E,h10^{km},mb5.2/92, MW5.3,Error ellipse: s-maj=3.8km s-min=2.5km az=82.0, Moment Tensor Solution. s24 Moment tensor: Scale 10^{17}Nm; M_{rr}1.00; $M_{\theta\theta}$-0.17; $M_{\phi\phi}$-0.83; $M_{r\theta}$-0.25; $M_{\theta\phi}$0.05; $M_{\phi r}$0.48; Best double couple: $M_0$1.10000×10^{17} NP1: ϕ_s183.00000°,δ31.00000°,λ105.00000°. NP2: ϕ_s345.00000°,δ60.00000°,λ81.00000°. Principal axes: T 1.1600, Plg73.0000°, Azm233.0000°; N -0.2000, Plg8.0000°, Azm350.0000°; P -0.9600, Plg15.0000°, Azm82.0000°;*

NEIC Felt [III PIVS] at Tacloban and Tolosa and [II PIVS] at Hinunangan, Leyte. Also felt [III PIVS] at Balangiga and Guiuan, Samar. Felt at Surigao, Mindanao.

*GCMT **18** 06:36:48.2±0.2,11°.36N×126°.24E,h15^{km},MW5.3/114, Moment Tensor Solution. s70,c91; s114,c178; Duration: 1^s.0 Moment tensor: Scale 10^{17}Nm; M_{rr}0.64±.01; $M_{\theta\theta}$0.03±.01; $M_{\phi\phi}$-0.67±.01; $M_{r\theta}$-0.04±.05; $M_{\theta\phi}$0.17±.01; $M_{\phi r}$1.05±.04; Best double couple: $M_0$1.24900×10^{17} NP1:ϕ_s356.00000°,δ74.00000°, λ96.00000°. NP2:ϕ_s156.00000°,δ17.00000°,λ71.00000°. Principal axes: T 1.2220, Plg61.0000°, Azm275.0000°; N 0.0550, Plg6.0000°, Azm175.0000°; P -1.2760, Plg29.0000°, Azm82.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*MAN **18** 06:36:49.2,11°.42N×126°.28E,h25^{km},mb5.4,ML4.4, MS4.7*

*ISCJB **18** 06:36:51.4±0.4,11°.31N±0°.02×126°.11E±0°.03,h45^{km}±3^{km}, mb5.0/189,MS4.7/66,Error ellipse: s-maj=4.2km s-min=3.1km az=168.0*

*MOS **18** 06:36:53.2±0.9,11°.32N×125°.97E,h59^{km},mb5.3/68, MS4.6/21,Error ellipse: s-maj=9.0km s-min=4.6km az=112.6*

*IDC **18** 06:36:54.2±1.3,11°.35N×126°.10E,h55^{km}±11^{km},mb4.5/36, mb1 4.5/38,mb1mx4.4/56,mbtmp4.8/38,MS4.6/43, Ms1 4.6/43,ms1mx4.5/53,Error ellipse: s-maj=12.9km s-min=7.8km az=81.0*

*DJA **18** 06:36:57.0±0.9,12°N±6°×12°6E±°,h105^{km}±7^{km},M5.2/36, mb5.1/36,mB5.5/22,MLv6.4/1,Mw(mB)5.0/22*

*KLM **18** 06:37:15.0,11°.16N×126°.30E,h283^{km},mb5.3*

ISC 18 06:36:51.4±0.6,**11°.30N**±0°.02×**126°.17E**±0°.03,**h33^{km}**±2^{km}, **n488**,σ**1^s.78**/556,**mb5.1**/188,**MS4.7**/69,**38C-10D**, **Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BESP	**Borongan**	**0.78**	**293**	*e*P	**Pb**	**06 37 04.8**	**-1.8**
BESP				*e*S	**Sn**	**06 37 17.6**	**+0.9**
PLP	**Palo**	**1.18**	**264**	⇑*i*P	**Pn**	**06 37 10.9**	**-0.6**
PLP				*i* S	**Sn**	**06 37 27.6**	**+1.1**
OCLP	**Ormoc**	**1.55**	**261**	*e*P	**Pb**	**06 37 19.5**	**-0.1**
OCLP				*e*S	**Sb**	**06 37 39.9**	**+1.0**
MSLP	**Maasin**	**1.73**	**228**	*e*P	**Pb**	**06 37 20.3**	**-2.3**
MSLP				*e*S	**Sb**	**06 37 44.8**	**+0.8**
CNP	**Catarman**	**1.91**	**309**	*e*P	**Pn**	**06 37 21.7**	**+0.1**
BUTP	**Butuan**	**2.38**	**193**	*e*P	**Pn**	**06 37 29.0**	**+1.0**
BUTP				*e*S	**Sb**	**06 38 00.7**	**-1.7**
LLP	**Lapu-Lapu**	**2.38**	**246**	⇑*e*P	**Pb**	**06 37 29.7**	**-3.9**
LLP				*e*S	**Sb**	**06 38 02.5**	**0.0**
MMPH	**Masbate**	**2.71**	**293**	*e*P	**Pb**	**06 37 34.8**	**-4.4**
MMPH				*e*S	**Sb**	**06 38 09.3**	**-2.8**
TBP	**Tagbilaran**	**2.78**	**235**	*e*P	**Pb**	**06 37 38.2**	**-2.1**
TBP				*i* S	**Sb**	**06 38 17.5**	**+3.6**
PVCP	**Virac**	**3.02**	**319**	*e*P	**Pn**	**06 37 35.4**	**-1.5**
PVCP				*e*S	Sb	06 38 31.0	+10
CGP	**Cagayan de Oro**	**3.18**	**207**	⇑*e*P	**Pn**	**06 37 40.4**	**+1.3**
CGP				*e*S	**Sb**	**06 38 23.5**	**-1.9**
RCP	**Roxas**	**3.37**	**275**	⇑*e*P	**Pn**	**06 37 43.2**	**+1.5**
RCP				*e*S	**Sn**	**06 38 19.4**	**-1.2**
SNPH	**Sibulan**	**3.48**	**236**	⇑*i*P	**Pn**	**06 37 43.3**	**0.0**
SNPH				*i* S	**Sb**	**06 38 33.5**	**-0.8**
BUKP	**Musuan**	**3.57**	**198**	*e*P	**Pn**	**06 37 45.7**	**+1.3**
BUKP				*e*S	**Sn**	**06 38 28.0**	**+2.4**
JAP	**San Jose, Anti**	**4.18**	**263**	⇓*e*P	Pb	06 37 58.6	-5.7
OTRP	**Odiongan**	**4.20**	**285**	*e*P	**Pn**	**06 37 55.0**	**+1.8**
DAV	**Davao City (W)**	**4.24**	**188**	P	**Pn**	**06 37 56.0**	**+2.3**
	41nm,0.3s,baz=255,slow=18,SNR=1.7						
DAV				S	**Sb**	**06 38 48.8**	**-7.2**
	79nm,0.3s,baz=100,slow=21,SNR=5.4						
DAV				LR	LR	06 40 03.6	
	comp=Z,16µm,20.4s,baz=334,slow=44						
DAV	**Davao City (W)**	**4.24**	**188**	*e*Pn	**Pn**	**06 37 54.2**	**+0.6**
DAV				*e*Pg	Pb	06 37 54.8	-10
DAV				*e*Sg	**Sb**	**06 38 48.8**	**-7.2**
MATI	**Mati**	**4.32**	**179**	*e*P	**Pb**	**06 38 04.8**	**-1.9**
PAGZ	**Pagadian**	**4.39**	**219**	*e*P	**Pn**	**06 37 57.0**	**+1.2**
GQP	**Guinayangan**	**4.47**	**306**	⇑*e*P	**Pb**	**06 38 07.0**	**-2.2**
BOAC	**Boac**	**4.75**	**297**	*e*P	**Pn**	**06 38 01.4**	**+0.8**
SKMP	**Bagumbayan, Su**	**5.01**	**199**	*e*P	**Pb**	**06 38 16.9**	**-1.5**
CUYO	**Cuyo Island**	**5.08**	**265**	*e*P	**Pn**	**06 38 06.6**	**+1.4**
SJMP	**San Jose**	**5.08**	**284**	*e*P	Pn	06 38 00.6	-4.7
TGY	**Tagaytay City**	**5.82**	**299**	P	**Pn**	**06 38 17.3**	**+1.8**
	25nm,0.3s,baz=254,slow=3.2,SNR=9.8						
TGY				LR	LR	06 40 55.3	
	comp=Z,6µm,18.0s,baz=108,slow=42						
BUSP	**Coron**	**5.89**	**277**	*e*P	**Pn**	**06 38 19.4**	**+2.9**
QVPH	**Quezon City--P**	**6.00**	**304**	*e*P	**Pn**	**06 38 18.7**	**+0.9**
LUBP	**Lubang**	**6.28**	**293**	*e*P	**Pn**	**06 38 22.8**	**+1.1**
ENPP	**El Nido**	**6.62**	**270**	*e*P	**Pn**	**06 38 29.5**	**+3.0**
CAUP	**Cauayan**	**7.02**	**324**	*e*P	**Pn**	**06 38 29.3**	**-2.6**
BOLP	**Bolinao**	**7.91**	**310**	*e*P	**Pn**	**06 38 44.5**	**+0.4**
APYP	**Conner**	**8.09**	**324**	*e*P	**Pn**	**06 38 47.3**	**+0.8**
BATP	**Bataraza**	**8.61**	**254**	*e*P	**Pn**	**06 38 57.1**	**+3.3**
TNTI	**Ternate**	**10.52**	**173**	*e*Pn	**Pn**	**06 39 19.8**	**-0.2**
MRSI	**Marisa**	**11.54**	**202**	P	Pn	06 39 44.4	+10
TWG	**Pinlang**	**12.45**	**338**	*e*Pn	**Pn**	**06 39 46.3**	**0.0**
MPSI	**Mapaga**	**12.54**	**210**	P	**P**	**06 39 59.6**	**+0.8**
	12nm,1.0s,600nm						
LUWI	**Luwuk**	**12.71**	**196**	P	**P**	**06 39 58.6**	**-2.1**
	209nm,1.1s,5µm						
LUWI	**Luwuk**	**12.71**	**196**	*e*Pn	**Pn**	**06 39 50.8**	**+0.8**
YULB	**Yu-li**	**12.90**	**340**	*e*Pn	**Pn**	**06 39 51.2**	**-1.2**
APSI	**Ampana**	**12.93**	**201**	P	**P**	**06 40 02.0**	**-1.2**
	77nm,1.2s,2µm						
TPUB	**Ta-pu**	**13.06**	**337**	*e*Pn	**Pn**	**06 39 54.0**	**-0.6**
SANI	**Sanana**	**13.26**	**181**	P	**P**	**06 40 06.8**	**0.0**
SSLB	**Suanglung**	**13.38**	**339**	*e*Pn	**Pn**	**06 39 57.3**	**-1.8**
YOJ	**Yonaguni jima**	**13.44**	**348**	*e*Pn	**Pn**	**06 39 59.6**	**-0.2**
YOJ	**Yonaguni jima**	**13.44**	**348**	*e*P	**Pn**	**06 39 59.6**	**-0.2**
NACB	**Ninganchiao**	**13.53**	**342**	*e*Pn	**Pn**	**06 40 00.9**	**-0.2**
YHNB	**Yeheng**	**14.06**	**342**	*e*Pn	**Pn**	**06 40 09.0**	**+0.6**
RKPI	**Ransiki, Papua**	**15.01**	**147**	P	**P**	**06 40 25.4**	**-0.9**
QZH	**Quanzhou**	**15.36**	**333**	⇑*i*P	**Pn**	**06 40 23.8**	**-2.0**
QZH				S	**Sn**	**06 43 16.8**	**+1.9**
QZH				pmax	pmax		
	comp=Z,620nm,6.3s						
QZH				LR	LR		
	comp=N,2µm,14.2s						
QZH				LR	LR		
	comp=E,1µm,14.2s						
QZH				LR	LR		
	comp=Z,2µm,13.7s						
FAKI	**Fak Fak**	**15.36**	**156**	P	**P**	**06 40 32.4**	**+2.2**
FAKI	**Fak Fak**	**15.36**	**156**	*e*Pn	**Pn**	**06 40 27.0**	**+1.2**
	173nm,1.1s						
JOW	**Kunigami**	**15.58**	**7**	P	**P**	**06 40 30.8**	**-1.8**
	0.8nm,0.3s,baz=151,slow=12,SNR=2.8						
JOW				LR	LR	06 46 29.7	
	comp=Z,3µm,19.1s,baz=186,slow=37						
TTSI	**Tana Toraja**	**15.59**	**204**	P	**P**	**06 40 38.7**	**+6.0**
	99nm,1.1s,2µm						
BAKI	**Biak**	**15.86**	**141**	P	**P**	**06 40 36.9**	**+1.2**
	94nm,1.3s,2µm						
SPSI	**Sidrap Palu**	**16.45**	**203**	P	**P**	**06 40 47.7**	**+5.5**
	66nm,1.1s,994nm						
GZH	**Guangzhou**	**16.95**	**315**	P	**P**	**06 40 47.9**	**+0.2**
GZH				LR	LR		
	comp=N,2µm,13.4s						
GZH				LR	LR		
	comp=E,4µm,14.5s						
QIZ	**Qiongzhong**	**17.53**	**298**	P	**Pn**	**06 40 53.0**	**-0.3**
QIZ				pP	**P**	**06 40 56.8**	**+2.6**
QIZ				S	**Sn**	**06 44 08.3**	**+0.7**
QIZ				sS	sS	06 44 20.0	-8.5
QIZ				LR	LR		
	comp=N,2µm,19.1s						
QIZ				LR	LR		
	comp=E,3µm,15.2s						
QIZ				LR	LR		
	comp=Z,3µm,14.2s						
QIZ	**Qiongzhong**	**17.53**	**298**	*e*Pn	**Pn**	**06 40 52.7**	**-0.6**
	151nm,1.7s						
GUMO	**Guam**	**18.40**	**81**	P	**Pn**	**06 41 09.0**	**+4.9**
	1.9nm,0.3s,baz=255,slow=8.8,SNR=4.6						
GUMO				LR	LR	06 47 39.9	
	comp=Z,2µm,19.1s,baz=258,slow=35						
GUMO	**Guam**	**18.40**	**81**	*e*P	**P**	**06 41 03.9**	**+0.1**
	464nm,1.7s						
GUMO				*e*P	**Pn**	**06 41 09.0**	**+4.9**
GUMO	**Guam**	**18.40**	**81**	*e*P	**P**	**06 41 03.9**	**+0.1**
GUMO				pmax	pmax		
	comp=Z,464nm,1.7s						
GENI	**Genyem**	**19.60**	**134**	P	**Pn**	**06 41 20.8**	**+2.3**
JAY	**Jayapura**	**19.93**	**133**	P	**Pn**	**06 41 22.7**	**+0.2**
	comp=Z,322nm,1.1s,comp=Z,10µm						
MMRI	**Maumere**	**20.18**	**191**	P	Pn	06 41 29.3	+3.9
	comp=Z,231nm,0.7s,comp=Z,8µm						
MMRI	**Maumere**	**20.18**	**191**	*e*P	**P**	**06 41 23.7**	**+0.4**
	comp=Z,186nm,0.9s						
SSE	**Sheshan**	**20.24**	**348**	P	Pn	06 41 25.8	-0.1
SSE				S	**S**	**06 45 10.5**	**+1.3**
SSE				pmax	pmax		
	comp=Z,36nm,1.0s						
SSE				pmax	pmax		
	comp=Z,470nm,6.0s						
SSE				LR	LR		
	comp=Z,1µm,14.4s						
SSE				LR	LR		
	comp=Z,1µm,14.0s						
EDFI	**Ende, Flores**	**20.41**	**193**	P	Pn	06 41 34.4	+6.3
	comp=Z,74nm,1.0s,comp=Z,1µm						
SOEI	**Soe**	**21.00**	**185**	P	P	06 41 40.8	+8.5
	comp=Z,231nm,1.2s,comp=Z,2µm						
SOEI	**Soe**	**21.00**	**185**	*e*P	**P**	**06 41 33.7**	**+1.4**
	comp=Z,385nm,1.3s						
BATI	**Baumata**	**21.51**	**187**	P	**P**	**06 41 39.3**	**+1.6**
	comp=Z,130nm,0.9s,comp=Z,1µm						
PLAI	**Plampang**	**21.67**	**203**	P	**P**	**06 41 43.7**	**+4.4**
	comp=Z,96nm,0.9s						
NJ2	**Nanjing**	**21.73**	**343**	*e*P	**P**	**06 41 40.5**	**+0.6**
NJ2				pP	**pP**	**06 41 45.1**	**-3.7**
NJ2				S	**S**	**06 45 39.1**	**+0.4**
NJ2				sS	Sn	06 45 47.3	-1.5
NJ2				SS	**SnSn**	**06 46 13.3**	**+8.7**
NJ2				pmax	pmax		
	comp=Z,46nm,1.4s						
NJ2				pmax	pmax		
	comp=Z,1µm,7.1s						
NJ2				LR	LR		
	comp=Z,2µm,15.3s						
NJ2				LR	LR		
	comp=Z,2µm,12.4s						
NJ2				LR	LR		
	comp=Z,3µm,15.7s						
CBIJ	**Chichi jima**	**21.77**	**42**	*e*P	**P**	**06 41 42.1**	**+1.7**
	comp=Z,181nm,1.2s						
JCJ	**Chichijima**	**21.77**	**42**	P	**P**	**06 41 42.8**	**+2.4**
	comp=Z,69nm,0.9s,baz=350,slow=11,SNR=3.5						
JCJ				LR	LR	06 51 34.2	
	comp=Z,2µm,18.5s,baz=210,slow=40						
TWSI	**Taliwang, Sumb**	**21.94**	**205**	P	**P**	**06 41 45.4**	**+3.1**
	comp=Z,72nm,0.9s						
WHN	**Wuhan**	**22.08**	**332**	⇑*i*P	**P**	**06 41 44.9**	**+1.3**
WHN				S	**S**	**06 45 49.1**	**+3.8**
WHN				pmax	pmax		
	comp=Z,2µm,8.6s						
WHN				LR	LR		
	comp=Z,5µm,11.8s						
WHN				LR	LR		
	comp=Z,4µm,11.2s						
WHN				LR	LR		
	comp=Z,5µm,15.0s						
JNU	**Nakatsue**	**22.15**	**11**	P	**P**	**06 41 44.1**	**-0.4**
	comp=Z,12nm,0.8s,baz=147,slow=2.7,SNR=5.5						
JNU	**Nakatsue**	**22.15**	**11**	*e*P	**P**	**06 41 45.0**	**+0.6**
	comp=Z,70nm,1.2s						
SKNT	**Sakolnakorn**	**22.24**	**287**	P	**P**	**06 41 45.0**	**-0.5**
	comp=Z,12nm,1.0s,comp=Z,1µm						
BLJI	**Banyuglugur**	**22.68**	**214**	P	**P**	**06 41 53.9**	**+3.7**

	comp=Z,63nm,0.7s,comp=Z,3µm						
JAGI	**Jajag, Banyuwa**	**22.99**	**212**	P	**P**	**06 41 56.1**	**+2.6**
	comp=Z,182nm,1.2s						
JAGI	**Jajag, Banyuwa**	**22.99**	**212**	*e*P	**P**	**06 41 53.0**	**-0.4**
	comp=Z,182nm,1.0s						
KHON	**Khomkaen**	**23.21**	**285**	P	**P**	**06 41 55.8**	**+0.1**
	comp=Z,9.3nm,0.6s						
NONG	**Nongkai**	**23.25**	**290**	P	**P**	**06 41 54.5**	**-1.6**
	comp=Z,0.4nm,0.8s,comp=Z,81nm						
NGJI	**Ngawi**	**23.62**	**219**	P	**P**	**06 42 02.9**	**+3.2**
	comp=Z,148nm,1.2s						
GYA	**Guiyang**	**23.79**	**312**	⇑*i*P	**P**	**06 42 00.8**	**-0.5**
GYA				S	**S**	**06 46 14.0**	**-1.0**
GYA				SS	**SnSn**	**06 47 02.8**	**+7.8**
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,140nm,5.0s						
GYA				LR	LR		
	comp=Z,750nm,17.2s						
GYA				LR	LR		
	comp=Z,680nm,17.5s						
GYA				LR	LR		
	comp=Z,640nm,17.9s						
CHAI	**Chaiyaphum**	**23.94**	**284**	P	**P**	**06 42 01.6**	**-1.2**
	comp=Z,12nm,0.7s						
SMRI	**Semarang**	**24.02**	**221**	P	**P**	**06 42 06.8**	**+3.3**
	comp=Z,185nm,1.3s						
SMRI	**Semarang**	**24.02**	**221**	*e*P	**P**	**06 42 04.0**	**+0.5**
	comp=Z,231nm,1.2s						
MYKOM	**Kota Tinggi**	**24.08**	**249**	P	**P**	**06 42 05.0**	**+0.9**
WOJI	**Wonogiri, Jawa**	**24.32**	**219**	P	**P**	**06 42 10.3**	**+4.1**
	comp=Z,121nm,1.3s						
NAYO	**Nakonayok**	**24.41**	**280**	P	P	06 42 20.7	+14
ENH	**Enshi**	**24.43**	**323**	*e*P	**P**	**06 42 06.7**	**-0.4**
	comp=Z,141nm,1.5s						
MTN	**Manton Dam**	**24.48**	**168**	*e*P	**P**	**06 42 07.5**	**-0.1**
	comp=Z,132nm,1.2s						
MTN				*e*S	**S**	**06 46 31.7**	**+5.8**
TJN	**Taejon**	**25.00**	**2**	*i* P	**P**	**06 42 14.2**	**+2.1**
PBKT	**Sadao Pong**	**25.00**	**285**	*e*P	**P**	**06 42 11.4**	**-1.0**
	comp=Z,29nm,0.7s						
PBKT	**Sadao Pong**	**25.00**	**285**	P	**P**	**06 42 12.1**	**-0.3**
	comp=Z,45nm,0.7s,comp=Z,1µm						
JHJ	**Hachijo jima 2**	**25.06**	**28**	LR	LR	06 52 40.6	
	comp=Z,2µm,18.4s,baz=207,slow=38						
KPJI	**Karang Pucung**	**25.23**	**224**	P	**P**	**06 42 18.1**	**+3.6**
	comp=Z,73nm,0.9s						
SKLT	**Songkhla**	**25.55**	**263**	P	**P**	**06 42 19.2**	**+1.8**
	comp=Z,56nm,1.1s,comp=Z,1µm						
NANT	**Nan**	**25.68**	**290**	P	**P**	**06 42 17.2**	**-1.4**
	comp=Z,16nm,0.6s						
INU	**Inuyama**	**25.89**	**21**	*e*P	**P**	**06 42 20.9**	**+0.6**
	comp=Z,52nm,1.3s						
KULM	**Kulim**	**25.94**	**259**	*e*P	**P**	**06 42 20.1**	**-0.8**
KULM	**Kulim**	**25.94**	**259**	P	**P**	**06 42 23.0**	**+2.0**
INCN	**Inchon**	**26.08**	**1**	*e*P	**P**	**06 42 23.4**	**+1.4**
	comp=Z,165nm,1.9s						
KS15	**Wonju Array Si**	**26.08**	**3**	*e*P	**P**	**06 42 22.3**	**+0.3**
KS15				*e*PcP	**PcP**	**06 45 49.0**	**-0.2**
KSAR	**Wonju Array Be**	**26.08**	**3**	P	**P**	**06 42 21.8**	**-0.2**
KSAR				PcP	**PcP**	**06 45 49.0**	**-0.2**
KSAR	**Wonju Array Be**	**26.08**	**3**	P	**P**	**06 42 21.8**	**-0.2**
KSAR						06 45 49.0	
KSRS	**Korea Array**	**26.09**	**3**	P	**P**	**06 42 21.8**	**-0.3**
	comp=Z,15nm,0.8s,baz=182,slow=10,SNR=50						
KSRS				PcP	**PcP**	**06 45 49.0**	**-0.2**
	comp=Z,1.0nm,0.7s,baz=189,slow=2.5,SNR=3.9						
KSRS				LR	LR	06 53 37.1	
	comp=Z,1µm,18.6s,baz=180,slow=38						
KMI	**Kunming**	**26.11**	**305**	P	**P**	**06 42 22.8**	**+0.2**
KMI				pP	sP	06 42 32.0	-4.2
KMI				sP	pP	06 42 36.1	+4.0
KMI				S	**S**	**06 46 57.3**	**+5.0**
KMI				pmax	pmax		
	comp=Z,17nm,1.1s						
KMI				pmax	pmax		
	comp=Z,400nm,7.8s						
KMI				LR	LR		
	comp=Z,2µm,16.6s						
KMI				LR	LR		
	comp=Z,1µm,16.6s						
KMI				LR	LR		
	comp=Z,2µm,13.4s						
KS01	**Wonju Array Si**	**26.11**	**3**	*e*P	**P**	**06 42 22.6**	**+0.3**
TIA	**Tai’an**	**26.12**	**343**	P	**P**	**06 42 22.8**	**+0.4**
TIA				pmax	pmax		
	comp=Z,15nm,1.3s						
CISI	**Cisompet, Garu**	**26.16**	**225**	*e*P	**P**	**06 42 22.5**	**-0.5**
	comp=Z,84nm,0.9s						
DBJI	**Dramaga**	**26.23**	**228**	P	**P**	**06 42 25.9**	**+2.3**
TRTT	**Trang**	**26.33**	**265**	P	**P**	**06 42 27.4**	**+2.9**
	comp=Z,18nm,0.7s						
SBJI	**Serang**	**26.40**	**230**	P	**P**	**06 42 27.5**	**+2.4**
	comp=Z,323nm,1.8s						
SUKH	**Sukhothai**	**26.42**	**287**	P	**P**	**06 42 25.0**	**-0.2**
	comp=Z,9.2nm,0.7s						
PAYA	**Payao**	**26.58**	**291**	P	**P**	**06 42 26.0**	**-0.7**
	comp=Z,15nm,0.6s,comp=Z,416nm						
LAMP	**Lampang**	**26.61**	**289**	P	**P**	**06 42 26.4**	**-0.6**
	comp=Z,12nm,0.7s,comp=Z,112nm						
MDSI	**Maura Dua**	**26.92**	**236**	P	**P**	**06 42 30.6**	**+0.8**
	comp=Z,14nm,0.8s						
UMPA	**Umpang Tak**	**26.96**	**284**	P	P	06 42 38.3	+8.1
CGJI	**Cibinong**	**27.05**	**230**	P	**P**	**06 42 33.1**	**+2.1**
	comp=Z,77nm,0.9s						
CM01	**Chiang Mai Arr**	**27.22**	**288**	*e*P	**P**	**06 42 31.1**	**-1.4**
CM31	**Chiang Mai Arr**	**27.24**	**288**	*e*P	**P**	**06 42 31.9**	**-0.8**
CMAR	**Chiang Mai Arr**	**27.24**	**288**	P	**P**	**06 42 31.9**	**-0.8**
	comp=Z,10nm,0.8s,baz=100,slow=7.3,SNR=33						
CMAR				ScP	**ScP**	**06 49 29.2**	**-1.2**
	comp=Z,0.6nm,0.4s,baz=197,slow=0.9,SNR=3.0						
CMAR				LR	LR	06 53 21.5	
	comp=Z,444nm,19.2s,baz=100,slow=36						
CMAR	**Chiang Mai Arr**	**27.24**	**288**	P	**P**	**06 42 31.9**	**-0.8**
CMAR				pmax	pmax		
	comp=Z,11nm,0.8s						
CMAR				pmax	pmax		
	comp=N,1.0nm,0.4s						
CMAR				MLR	MLR		
	comp=Z,444nm,19.2s						
CMMT	**Chiang Mai**	**27.31**	**289**	P	**P**	**06 42 32.4**	**-0.9**
	comp=Z,17nm,1.7s						
CHTO	**Chiang Mai**	**27.31**	**289**	*e*P	**P**	**06 42 32.2**	**-1.1**
	comp=Z,15nm,1.0s						
CHTO	**Chiang Mai**	**27.31**	**289**	*e*P	**P**	**06 42 32.2**	**-1.1**
CHTO				pmax	pmax		
	comp=Z,15nm,1.0s						
CHTO	**Chiang Mai**	**27.31**	**289**	P	**P**	**06 42 32.5**	**-0.8**
	comp=Z,78nm,1.8s						
LWLI	**Liwa**	**27.33**	**235**	P	P	06 42 43.6	+10
MAJO	**Matsushiro**	**27.39**	**21**	*e*P	**P**	**06 42 32.9**	**-0.9**
	comp=Z,9.0nm,0.8s						
MAJO				*e*PcP	**PcP**	**06 45 51.6**	**-0.8**
MAJO	**Matsushiro**	**27.39**	**21**	*i* P	**P**	**06 42 33.5**	**-0.3**
MAJO				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MAT	**Matsushiro**	**27.39**	**21**	P	**P**	**06 42 32.9**	**-0.9**
MAT				S	S	06 47 00.6	-11
MJAR	**Matsushiro Arr**	**27.39**	**21**	P	**P**	**06 42 32.4**	**-1.4**
	comp=Z,6.3nm,0.9s,baz=198,slow=9.2,SNR=11						
MJAR				PcP	**PcP**	**06 45 51.6**	**-0.8**
	comp=Z,1.5nm,0.6s,baz=209,slow=3.7,SNR=3.8						
MJAR				LR	LR	06 53 49.3	
	comp=Z,2µm,18.2s,baz=205,slow=37						
MJB9	**Matsu-Tunnel**	**27.39**	**21**	*e*P	**P**	**06 42 32.9**	**-0.9**
	comp=Z,9.5nm,0.9s						
CMAI	**Chiengmai2**	**27.47**	**292**	P	**P**	**06 42 34.6**	**-0.3**
	comp=Z,8.5nm,1.3s,comp=Z,370nm						
XAN	**Xi’an**	**27.59**	**328**	P	**P**	**06 42 35.5**	**-0.2**
XAN				pP	pP	06 42 40.3	-4.9
XAN				S	**S**	**06 47 14.8**	**-0.3**
XAN				SS	**SnSn**	**06 48 32.0**	**+4.2**
XAN				ScP	**ScP**	**06 49 29.0**	**-2.3**
XAN				pmax	pmax		
	comp=Z,45nm,1.0s						
XAN				LR	LR		
	comp=Z,2µm,14.7s						
XAN				LR	LR		
	comp=Z,2µm,13.6s						
XAN				LR	LR		
	comp=Z,4µm,15.5s						
DL2	**Dalian**	**27.79**	**352**	P	**P**	**06 42 38.3**	**+0.9**
DL2				S	**S**	**06 47 17.9**	**-0.2**
DL2				pmax	pmax		
	comp=Z,28nm,0.8s						
DL2				pmax	pmax		
	comp=Z,350nm,10.0s						
DL2				LR	LR		
	comp=Z,1µm,15.2s						
DL2				LR	LR		
	comp=Z,830nm,12.8s						
DL2				LR	LR		
	comp=Z,1µm,14.9s						
PSI	**Prapat**	**28.30**	**255**	*e*P	**P**	**06 42 41.2**	**-1.2**
	comp=Z,17nm,0.9s						
PSI	**Prapat**	**28.30**	**255**	*e*P	**P**	**06 42 41.2**	**-1.2**
PSI				pmax	pmax		
	comp=Z,17nm,0.9s						
CD2	**Chengdu**	**28.50**	**317**	P	**P**	**06 42 43.3**	**-0.5**
CD2				pP	pP	06 42 46.3	-7.1
CD2				S	**S**	**06 47 34.8**	**+5.3**
CD2				pmax	pmax		
	comp=Z,50nm,0.6s						
CD2				pmax	pmax		
	comp=Z,670nm,4.8s						
CD2				LR	LR		
	comp=Z,5µm,16.1s						
CD2				LR	LR		
	comp=Z,5µm,18.1s						
CD2				LR	LR		
	comp=Z,7µm,17.7s						
TIY	**Taiyuan**	**29.05**	**337**	*e*P	**P**	**06 42 50.3**	**+1.6**
TIY				S	**S**	**06 47 32.1**	**-6.0**
TIY				pmax	pmax		
	comp=Z,240nm,4.2s						
TIY				LR	LR		
	comp=Z,1µm,12.7s						
TIY				LR	LR		
	comp=Z,880nm,12.1s						
TIY				LR	LR		
	comp=Z,1µm,14.7s						
KCSI	**Kotacane, Aceh**	**29.18**	**257**	P	**P**	**06 42 49.2**	**-0.9**
	comp=Z,34nm,0.6s						
LHMI	**Lhok Sumawe**	**29.53**	**261**	*e*P	**P**	**06 42 52.4**	**-0.7**
	comp=Z,92nm,0.9s						
BJT	**Baijiatuau**	**29.95**	**344**	*e*P	**P**	**06 42 56.2**	**-0.3**
	comp=Z,61nm,1.7s						
BJT	**Baijiatuau**	**29.95**	**344**	*e*P	**P**	**06 42 56.2**	**-0.3**
BJT				pmax	pmax		
	comp=Z,61nm,1.7s						
BJI	**Beijing**	**29.97**	**345**	⇑*e*P	**P**	**06 42 57.0**	**+0.3**
BJI				S	**S**	**06 47 55.6**	**+3.3**
BJI				pmax	pmax		
	comp=Z,18nm,0.9s						
BJI				LR	LR		
	comp=Z,2µm,14.5s						
BJI				LR	LR		
	comp=Z,1µm,13.7s						
BJI				LR	LR		
	comp=Z,1µm,19.9s						
GSI	**Gunungsitoli**	**30.07**	**253**	*e*P	**P**	**06 42 57.0**	**-1.0**
	comp=Z,81nm,1.6s						
COEN	**Coen**	**30.23**	**146**	*e*P	**P**	**06 42 59.3**	**+0.1**
	comp=Z,85nm,1.4s						
SNY	**Shenyang**	**30.50**	**356**	⇑P	**P**	**06 43 02.8**	**+1.5**
SNY				S	**S**	**06 48 03.8**	**+3.2**
SNY				pmax	pmax		
	comp=Z,32nm,1.4s						
SNY				pmax	pmax		
	comp=Z,150nm,3.5s						
SNY				LR	LR		
	comp=Z,1µm,17.8s						
SNY				LR	LR		
	comp=Z,2µm,15.3s						
SNY				LR	LR		
	comp=Z,2µm,15.2s						
BSI	**Banda Aceh**	**31.07**	**262**	P	P	06 43 18.0	+11
LZH	**Lanzhou**	**31.89**	**324**	⇑P	**P**	**06 43 15.3**	**+1.4**
LZH				pP	pP	06 43 20.9	-2.6
LZH				sP	sP	06 43 23.8	-3.7
LZH				*e*PP	**PnPn**	**06 44 19.8**	**+0.5**
LZH				S	**S**	**06 48 26.0**	**+3.1**
LZH				sS	sS	06 48 33.4	-5.3
LZH				SS	**SnSn**	**06 50 15.9**	**+3.2**
LZH				pmax	pmax		
	comp=Z,60nm,1.5s						
LZH				pmax	pmax		
	comp=Z,310nm,5.4s						
LZH				LR	LR		
	comp=Z,5µm,14.3s						
LZH				LR	LR		
	comp=Z,6µm,14.6s						
LZH				LR	LR		
	comp=Z,8µm,15.2s						
WRAB	**Tennant Creek**	**32.06**	**165**	c*e*P	**P**	**06 43 14.0**	**-1.3**
WRAB				pmax	pmax		
	comp=Z,12nm,1.3s						
WR1	**Warramunga Arr**	**32.07**	**165**	*e*P	**P**	**06 43 14.8**	**-0.6**
	comp=Z,19nm,0.9s						
WR1				*e*PcP	**PcP**	**06 46 04.7**	**+0.1**
WR1				*e*ScP	**ScP**	**06 49 41.5**	**-4.3**
WRA	**Warramunga Arr**	**32.07**	**165**	P	**P**	**06 43 14.8**	**-0.6**
	comp=Z,4.5nm,0.6s,baz=344,slow=9.3,SNR=25						
WRA				PcP	**PcP**	**06 46 04.7**	**+0.1**
	comp=Z,5.9nm,1.0s,baz=338,slow=2.8,SNR=4.9						
WRA				ScP	**ScP**	**06 49 41.5**	**-4.3**
	comp=Z,2.8nm,1.2s,baz=7.8,slow=3.7,SNR=2.6						
WRA				LR	LR	06 59 53.8	
	comp=Z,318nm,18.3s,baz=15,slow=43						
WB2	**Warramunga Arr**	**32.07**	**165**	*e*P	**P**	**06 43 14.8**	**-0.6**
	comp=Z,19nm,1.0s						
HHC	**Hu-ho-hao-te**	**32.13**	**339**	*e*P	**P**	**06 43 19.4**	**+3.5**
HHC				PP	**PP**	**06 44 27.0**	**-1.9**
HHC				S	**S**	**06 48 27.1**	**+0.7**
HHC				pmax	pmax		
	comp=Z,16nm,1.1s						
HHC				pmax	pmax		
	comp=Z,300nm,7.1s						
HHC				LR	LR		
	comp=Z,2µm,14.0s						
HHC				LR	LR		
	comp=Z,840nm,14.8s						
HHC				LR	LR		
	comp=Z,2µm,13.0s						
BTO	**Baotou**	**32.49**	**337**	*e*P	**P**	**06 43 19.1**	**+0.1**
MBWA	**Marble Bar**	**32.87**	**191**	*e*P	**P**	**06 43 21.4**	**-1.0**
	comp=Z,51nm,1.4s						
USA0B	**Ussuriysk Arra**	**33.17**	**8**	*e*P	**P**	**06 43 25.2**	**+0.4**
	comp=Z,14nm,0.8s						
USRK	**Ussuriysk Ar.**	**33.17**	**8**	P	**P**	**06 43 25.2**	**+0.4**
	comp=Z,7.6nm,0.7s,baz=188,slow=8.7						
USRK				LR	LR	06 56 30.4	
	comp=Z,787nm,18.9s,baz=177,slow=36						
MDJ	**Mudanjiang**	**33.33**	**4**	P	**P**	**06 43 25.0**	**-1.2**
MDJ				PP	**PnPn**	**06 44 33.8**	**-3.6**
MDJ				S	**S**	**06 48 44.3**	**-0.4**
MDJ				pmax	pmax		
	comp=Z,18nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,260nm,2.9s						
MDJ				LR	LR		
	comp=Z,1µm,15.5s						
MDJ				LR	LR		
	comp=Z,2µm,14.3s						
MDJ				LR	LR		
	comp=Z,960nm,15.1s						
BRDH	**Bariadhala**	**34.82**	**294**	P	**P**	**06 43 37.8**	**-1.6**
	comp=Z,99nm,0.4s,baz=76,slow=7.2,SNR=4.0						
BRDH				LR	LR	07 00 32.8	
	comp=Z,1µm,18.1s,baz=144,slow=41						
SHL	**Shillong**	**35.36**	**298**	*e*P	**P**	**06 43 43.1**	**-1.1**
	comp=Z,45nm,0.9s						
SHL	**Shillong**	**35.36**	**298**	*e*P	**P**	**06 43 43.0**	**-1.3**
SHL				*e*S	**S**	**06 49 13.5**	**-3.5**
SHL	**Shillong**	**35.36**	**298**	*e*P	**P**	**06 43 43.2**	**-1.1**
SHL				pmax	pmax		
	comp=Z,45nm,0.9s						
AS31	**Alice Springs**	**35.56**	**168**	*e*P	**P**	**06 43 46.1**	**+0.3**
	comp=Z,3.9nm,0.7s						
AS31				*e*PcP	**PcP**	**06 46 14.8**	**+0.4**
ASAR	**Alice Springs**	**35.56**	**168**	P	**P**	**06 43 46.0**	**+0.3**
	comp=Z,4.9nm,0.6s,baz=354,slow=7.6,SNR=24						
ASAR				PcP	**PcP**	**06 46 14.8**	**+0.4**
	comp=Z,4.9nm,0.7s,baz=344,slow=2.8,SNR=7.4						
ASAR				ScP	**ScP**	**06 49 57.0**	**-1.1**
	comp=Z,5.9nm,1.1s,baz=348,slow=4.0,SNR=7.2						
ASAR	**Alice Springs**	**35.56**	**168**	P	**P**	**06 43 46.1**	**+0.3**
ASAR						06 46 14.9	
ASAR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ASAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ASAR				pmax	pmax		
	comp=N,6.0nm,1.1s						
AS01	**Alice Springs**	**35.57**	**168**	*e*P	**P**	**06 43 45.3**	**-0.5**
ASAJ	**Asahikawa**	**35.64**	**20**	P	**P**	**06 43 46.9**	**+0.7**
	comp=N,9.8nm,0.7s,baz=239,slow=9.6,SNR=7.0						
ASAJ				LR	LR	06 59 06.7	
	comp=N,1µm,18.6s,baz=220,slow=37						
ASAJ	**Asahikawa**	**35.64**	**20**	*e*P	**P**	**06 43 47.5**	**+1.2**
	comp=N,62nm,1.7s						
GTA	**Gaotai**	**36.49**	**325**	⇑P	**P**	**06 43 54.9**	**+1.2**
GTA				pP	pP	06 43 58.3	-5.1
GTA				sP	sP	06 44 01.0	-6.4
GTA				PP	**PP**	**06 45 18.0**	**+0.9**
GTA				PcP	**PcP**	**06 46 18.4**	**+1.2**
GTA				S	**S**	**06 49 36.9**	**+3.1**
GTA				sS	sS	06 49 44.5	-5.3
GTA				ScP	**ScP**	**06 50 04.3**	**+2.8**
GTA				SS	**SnSn**	**06 52 02.8**	**-1.3**
GTA				pmax	pmax		
	comp=N,44nm,1.7s						
GTA				pmax	pmax		
	comp=N,500nm,6.9s						
GTA				LR	LR		
	comp=N,1µm,14.1s						
GTA				LR	LR		
	comp=N,2µm,15.8s						
GTA				LR	LR		
	comp=N,2µm,16.2s						
YUK	**Yuzh-Kuril’sk**	**36.78**	**24**	*e*P	**P**	**06 43 56.9**	**+1.0**
YUK				*e*S	**S**	**06 49 38.6**	**+0.8**
YUK				*e*SS	**SnSn**	**06 52 04.0**	**-6.8**
YUK				pmax	pmax		
	comp=Z,134nm,1.2s						
YUK				pmax	pmax		
	comp=N,110nm,1.0s						
YUK				pmax	pmax		
	comp=E,71nm,1.0s						
YUK				pmax	pmax		
	comp=Z,608nm,19.0s						
YUK				MLR	MLR		
	comp=Z,428nm,18.0s						
CTAO	**Charters Tower**	**36.92**	**148**	*e*P	**P**	**06 43 58.5**	**+1.1**
	comp=Z,13nm,0.9s						
CTAO	**Charters Tower**	**36.92**	**148**	*e*P	**P**	**06 43 58.5**	**+1.1**
CTAO				pmax	pmax		
	comp=Z,13nm,0.9s						
LSA	**Lhasa**	**37.36**	**305**	P	**P**	**06 44 02.3**	**+0.6**
LSA	**Lhasa**	**37.36**	**305**	*e*P	**P**	**06 44 01.9**	**+0.2**
	comp=Z,12nm,0.8s						
LSA	**Lhasa**	**37.36**	**305**	*e*P	**P**	**06 44 01.9**	**+0.2**
LSA				pmax	pmax		
	comp=Z,12nm,0.8s						
KLR	**Kul’dur**	**38.10**	**6**	P	**P**	**06 44 07.4**	**+0.3**
	comp=Z,0.6nm,0.6s,baz=208,slow=5.1,SNR=25						
KLR	**Kul’dur**	**38.10**	**6**	c *i*P	**P**	**06 44 06.5**	**-0.6**
KUR	**Kuril’sk**	**38.58**	**25**	P	**P**	**06 44 12.5**	**+1.4**
KUR				*e*		06 45 48.6	
KUR				*i* S	**S**	**06 50 01.5**	**-3.6**
KUR				*e*SSS	SSS	06 53 21.2	
KUR				MLR	MLR		
	comp=Z,606nm,19.0s						
KUR				MLR	MLR		
	comp=E,208nm,12.0s						
KUR				MLR	MLR		
	comp=N,530nm,16.0s						
HNR	**Honiara**	**39.40**	**120**	LR	LR	06 58 28.7	
	comp=N,1µm,21.9s,baz=300,slow=33						
TAPN	**Taplejung**	**39.46**	**299**	*e*P	**P**	**06 44 18.9**	**-0.3**
	comp=N,37nm,0.6s						
ODAN	**Odare**	**39.60**	**299**	*e*P	**P**	**06 44 19.7**	**-0.6**
	comp=N,190nm,0.7s						
H11S3	**WAKE ISLAND Hy**	**39.73**	**75**	T	T	07 27 23.6	
	baz=261,slow=13,SNR=30						
H11S1	**WAKE ISLAND Hy**	**39.75**	**75**	T	T	07 27 23.6	
	baz=261,slow=13,SNR=16						
H11S2	**WAKE ISLAND Hy**	**39.75**	**75**	T	T	07 27 23.6	
	baz=261,slow=13,SNR=17						
ULN	**Ulaanbaatar**	**39.83**	**340**	*e*P	**P**	**06 44 22.7**	**+0.9**
	comp=N,15nm,0.8s						
ULN	**Ulaanbaatar**	**39.83**	**340**	c*e*P	**P**	**06 44 23.0**	**+1.2**
ULN				pmax	pmax		
	comp=Z,54nm,2.5s						
SONA0	**Songino Array**	**40.03**	**339**	*e*P	**P**	**06 44 24.5**	**+1.1**
SONM	**Songino Array**	**40.03**	**339**	P	**P**	**06 44 24.5**	**+1.1**
	comp=Z,8.6nm,0.7s,baz=157,slow=9.2,SNR=49						
SONM				LR	LR	07 02 22.5	
	comp=Z,1µm,18.8s,baz=152,slow=38						
H11N1	**WAKE ISLAND Hy**	**40.03**	**73**	T	T	07 27 53.8	
	baz=265,slow=74,SNR=67						
SONA1	**Songino Array**	**40.04**	**339**	*e*P	**P**	**06 44 23.9**	**+0.4**
H11N2	**WAKE ISLAND Hy**	**40.04**	**73**	T	T	07 27 56.2	
	baz=265,slow=74,SNR=52						
H11N3	**WAKE ISLAND Hy**	**40.05**	**73**	T	T	07 27 56.6	
	baz=265,slow=74,SNR=59						
GRNR	**Gornyy**	**40.25**	**10**	*e*P	**P**	**06 44 29.3**	**+4.3**
GRNR				pmax	pmax		
	comp=Z,63nm,1.0s						
RAMN	**Ramite**	**40.30**	**298**	*e*P	**P**	**06 44 25.7**	**-0.4**
	comp=Z,93nm,0.6s						
JIRN	**Jiri**	**40.84**	**299**	*e*P	**P**	**06 44 30.3**	**-0.4**
	comp=Z,165nm,0.6s						
GUN	**Gumba**	**41.17**	**300**	*e*P	**P**	**06 44 33.0**	**-0.4**
	comp=Z,172nm,0.9s						
PKIN	**Phulchoki**	**41.50**	**299**	*e*P	**P**	**06 44 34.8**	**-1.2**
	comp=Z,42nm,0.7s						
KKN	**Kakani**	**41.65**	**299**	*e*P	**P**	**06 44 36.3**	**-0.9**
	comp=Z,59nm,0.9s						
TYV	**Tymovskoe**	**41.70**	**16**	*e*P	**P**	**06 44 38.9**	**+2.0**
TYV				*e*S	**S**	**06 50 55.4**	**+3.8**
TYV				pmax	pmax		
	comp=Z,300nm,7.1s						
TYV				pmax	pmax		
	comp=Z,22nm,1.5s						
TYV				smax	smax		
	comp=N,13nm,1.8s						
TYV				smax	smax		
	comp=E,1µm,12.2s						
TYV				MLR	MLR		
	comp=E,700nm,21.0s						
TYV				MLR	MLR		
	comp=Z,800nm,21.0s						
DMN	**Daman**	**41.76**	**299**	*e*P	**P**	**06 44 37.0**	**-1.1**
	comp=Z,55nm,0.8s						
FORT	**Forrest**	**41.87**	**178**	*e*P	**P**	**06 44 38.2**	**-0.3**
	comp=Z,137nm,1.4s						
GKN	**Gorkha**	**42.26**	**299**	*e*P	**P**	**06 44 40.9**	**-1.2**
	comp=Z,41nm,0.7s						
ZEA	**Zeya**	**42.34**	**1**	*e*P	**P**	**06 44 42.8**	**+0.7**
ZEA				*e*S	**S**	**06 50 54.0**	**-6.9**
ZEA				pmax	pmax		
	comp=Z,32nm,1.2s						
ZEA				smax	smax		
	comp=N,300nm,13.0s						
ZEA				MLR	MLR		
	comp=Z,2µm,16.0s						
ZEA				MLR	MLR		
	comp=E,700nm,14.0s						
ZEA				MLR	MLR		
	comp=N,1µm,16.0s						
KOLN	**Koldanda**	**43.09**	**299**	*e*P	**P**	**06 44 48.1**	**-0.8**
	comp=N,62nm,0.7s						
DANN	**Dangsing**	**43.09**	**300**	*e*P	**P**	**06 44 48.0**	**-1.0**
	comp=N,95nm,0.8s						
ZAK	**Zakamensk**	**43.28**	**339**	*e*P	**P**	**06 44 50.0**	**+0.1**
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.4s						
NKL	**Nikolayevsk**	**43.34**	**13**	*e*P	**P**	**06 44 51.0**	**+0.8**
NKL				*e*S	**S**	**06 51 18.0**	**+2.4**
NKL				*e*		06 54 18.0	
NKL				pmax	pmax		
	comp=Z,40nm,1.0s						
NKL				pmax	pmax		
	comp=Z,400nm,5.0s						
NKL				smax	smax		
	comp=E,700nm,10.0s						
NKL				MLR	MLR		
	comp=N,450nm,15.0s						
NKL				MLR	MLR		
	comp=E,550nm,15.0s						
NKL				MLR	MLR		
	comp=Z,1µm,14.0s						
PYUN	**Piuthan**	**43.69**	**299**	*e*P	**P**	**06 44 53.0**	**-0.8**
	comp=Z,104nm,0.8s						
TLY	**Talaya**	**44.24**	**340**	*e*P	**P**	**06 44 59.0**	**+1.4**
	comp=Z,17nm,0.8s						
TLY	**Talaya**	**44.24**	**340**	c *i*P	**P**	**06 44 58.8**	**+1.2**

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TLY                                eS     S      06 51 30.5 +1.5
TLY                                pmax   pmax
       comp=Z,13nm,0.7s
TLY                                MLR    MLR
       comp=Z,624nm,17.0s
NWAO   Narrogin (SRO)    44.79 191 eP     P      06 45 02.4 +0.3
       comp=Z,87nm,1.1s
NWAO   Narrogin (SRO)    44.79 191 eP     P      06 45 02.4 +0.3
NWAO                               pmax   pmax
       comp=Z,87nm,1.1s
BBOO   Buckleboo         44.86 168 eP     P      06 45 03.5 +0.8
       comp=Z,34nm,0.7s
PALK   Pallekele         45.02 269 LR     LR     07 04 44.3
       comp=Z,420nm,18.2s,baz=52,slow=37
MOY    Mondy             45.16 338 eP     P      06 45 06.4 +1.4
MOY                                pmax   pmax
       comp=Z,46nm,2.9s
STKA   Stephens Creek    45.40 161 LR     LR     07 06 53.8
       comp=Z,425nm,20.8s,baz=341,slow=40
WMQ    Urumqi            46.36 322 P      P      06 45 15.8 +1.2
WMQ                                PcP    PcP    06 46 49.6 +0.3
WMQ                                S      S      06 52 01.8 +1.9
WMQ                                SS     SS     06 55 24.1  -1.7
WMQ                                pmax   pmax
       comp=Z,16nm,1.1s
WMQ                                pmax   pmax
       comp=Z,1μm,4.7s
WMQ                                LR     LR
       comp=Z,10μm,16.1s
WMQ                                LR     LR
       comp=Z,4μm,17.9s
WMQ                                LR     LR
       comp=Z,3μm,17.9s
BOD    Bodaibo           47.35 351 eP     P      06 45 22.7 +0.8
BOD                                pmax   pmax
       comp=Z,22nm,1.5s
PETK   Petropavlovsk-    48.75  25 P      P      06 45 34.2 +1.4
       comp=Z,5.5nm,0.8s,baz=182,slow=4.3
PETK                               LR     LR     07 08 19.7
       comp=Z,824nm,18.1s,baz=220,slow=39
PETK   Petropavlovsk-    48.75  25 eP     P      06 45 34.9 +2.0
PEA1   Petropavlovsk-    48.75  25 eP     P      06 45 34.2 +1.3
PET    Petropavlovsk     49.09  25 eP     P      06 45 39.3 +3.9
PET                                e             06 47 27.5
PET                                eS     S      06 52 40.7 +2.6
PET                                pmax   pmax
       comp=Z,100nm,11.2s
PET                                pmax   pmax
       comp=Z,200nm,20.2s
PET                                MLR    MLR
       comp=Z,800nm,21.0s
YAK    Yakutsk           50.71   2 eP     P      06 45 47.5  -0.1
YAK                                e*PP   sP     06 46 02.4 +0.9
YAK                                ePPP   PPP    06 48 39.8
YAK                                eS     S      06 52 48.8   -12
YAK                                e             06 55 33.6
YAK                                eSS    SS     06 56 28.4  -6.7
YAK                                pmax   pmax
       comp=Z,27nm,0.8s
YAK                                pmax   pmax
       comp=N,19nm,1.3s
YAK                                pmax   pmax
       comp=E,6.0nm,1.0s
YAK                                pmax   pmax
       comp=Z,68nm,0.9s
YAK                                pmax   pmax
       comp=N,59nm,1.6s
YAK                                pmax   pmax
       comp=E,14nm,1.0s
YAK                                smax   smax
       comp=N,96nm,3.3s
YAK                                smax   smax
       comp=E,183nm,4.0s
MK01   Makanchi Array    51.14 322 eP     P      06 45 51.8 +0.6
CAN    Canberra          51.15 156 eP     P      06 45 53.3 +1.9
       comp=E,161nm,1.9s
CAN    Canberra          51.15 156 eP     P      06 45 53.3 +1.9
CAN                                pmax   pmax
       comp=Z,161nm,1.9s
MK31   Makanchi Array    51.16 322 eP     P      06 45 52.1 +0.8
MK31   Makanchi Array    51.16 322 eP     P      06 45 52.1 +0.8
MK32   Makanchi Array    51.16 322 eP     P      06 45 52.3 +1.0
MK32                               ePcP   PcP    06 47 06.3  -0.2
MK32                               eScP   ScP    06 50 59.8  -0.9
MKAR   Makanchi Array    51.16 322 P      P      06 45 52.3 +1.0
       comp=Z,30nm,0.7s,baz=119,slow=8.2,SNR=317
MKAR                               PcP    PcP    06 47 06.4  -0.2
       comp=Z,7.1nm,0.7s,baz=105,slow=4.3,SNR=2.6
MKAR                               ScP    ScP    06 50 59.8  -0.9
       comp=Z,0.4nm,0.7s,baz=132,slow=4.1,SNR=2.9
MKAR                               LR     LR     07 09 14.3
       comp=Z,678nm,18.4s,baz=120,slow=38
MKAR   Makanchi Array    51.16 322 eP     P      06 45 52.1 +0.7
       comp=Z,210nm,0.7s
MKAR                               PcP    PcP    06 47 06.3  -0.2
MKAR                               ScP    ScP    06 50 59.8  -0.9
MKAR   Makanchi Array    51.16 322 P      P      06 45 52.3 +1.0
MKAR                                             06 47 06.4
MKAR                               pmax   pmax
       comp=Z,30nm,0.7s
MKAR                               pmax   pmax
       comp=Z,7.0nm,0.7s
MKAR                               MLR    MLR
       comp=Z,678nm,18.4s
MAKZ   Makanchi          51.36 322 eP     P      06 45 53.8 +1.1
       comp=Z,28nm,0.8s
MAKZ   Makanchi          51.36 322 i P    P      06 45 52.7  -0.1
MAKZ                               pmax   pmax
       comp=Z,41nm,1.0s
DZM    Mont Dzumac       51.57 130 P      P      06 45 56.0 +1.2
       comp=Z,13nm,0.9s,baz=248,slow=13,SNR=6.8
DZM                                LR     LR     07 08 11.8
       comp=Z,284nm,18.3s,baz=338,slow=36
DZM    Mont Dzumac       51.57 130 eS     S      06 53 08.8  -4.9
       comp=Z,1μm,26.3s
DZM                                eLR    LR     07 00 36.3
       comp=Z,480nm,26.6s
DZM    Mont Dzumac       51.57 130 eP     P      06 45 55.6 +0.8
       comp=Z,75nm,1.5s
KSH    Kashi             52.48 311 P      P      06 46 03.0 +1.6
KSH                                ePcP   PcP    06 47 11.3  -0.5
KSH                                PcS    PcS    06 51 07.5  -2.8
KSH                                S      S      06 53 21.5  -4.4
KSH                                SS     SS     06 57 00.3  -3.9
KSH                                pmax   pmax
       comp=Z,47nm,1.6s
KSH                                pmax   pmax
       comp=Z,240nm,6.1s
KSH                                LR     LR
       comp=Z,610nm,11.6s
KSH                                LR     LR
       comp=Z,2μm,19.6s
KSH                                LR     LR
       comp=Z,1μm,20.1s
KDJ    Kajisay           52.50 315 eP     P      06 46 02.1 +0.5
       comp=Z,52nm,1.8s
NIL    Nilore            53.09 304 eP     P      06 46 05.6  -0.3
       comp=Z,76nm,1.4s
NIL    Nilore            53.09 304 eP     P      06 46 05.6  -0.3
NIL                                pmax   pmax
       comp=Z,76nm,1.4s
ULHL   Ulahol            53.19 315 P      P      06 46 07.5 +0.8
       SNR=14
ZAA0   Zalesovo Array    53.69 331 eP     P      06 46 10.2 +0.3
       comp=Z,20nm,1.1s
ZALV   Zalesovo Beam     53.69 331 P      P      06 46 10.2 +0.3
       comp=Z,7.1nm,0.8s,baz=110,slow=6.5,SNR=17
ZALV                               LR     LR     07 10 15.6
       comp=Z,628nm,18.7s,baz=85,slow=37
ZALV   Zalesovo Beam     53.69 331 eP     P      06 46 09.4  -0.4
ZALV   Zalesovo Beam     53.69 331 eP     P      06 46 09.5  -0.4
ZAA1   Zalesovo Array    53.69 331 eP     P      06 46 10.2 +0.3
KZA    Kyzart            53.83 314 P      P      06 46 13.0 +1.3
       SNR=12
TKM2   Tokmak 2          53.87 315 P      P      06 46 12.2 +0.5
       SNR=8.0
FRU    Bishkek           54.52 315 eP     P      06 46 16.5 +0.3
FRU                                e             06 46 41.0
FRU                                pmax   pmax
       comp=Z,30nm,2.0s
FRU                                MLR    MLR
       comp=E,1μm,16.0s
AAK    Ala-Archa         54.54 315 eP     P      06 46 17.1 +0.6
       comp=E,33nm,1.6s
AAK    Ala-Archa         54.54 315 eP     P      06 46 17.1 +0.6
AAK                                pmax   pmax
       comp=Z,33nm,1.6s
USP    Ospenovka         54.74 315 P      P      06 46 18.4 +0.6
       SNR=9.9
SEY    Seymchan          54.86  14ceP     P      06 46 19.3 +1.1
AML    Almayashu         54.94 314 P      P      06 46 20.7 +0.9
       SNR=12
NVS    Novosibirsk       54.96 331⇓iP     P      06 46 19.9 +0.8
NVS                                i             06 46 33.2
NVS                                eS     S      06 54 03.6 +4.9
NVS                                pmax   pmax
       comp=Z,39nm,1.3s
NVS                                pmax   pmax
       comp=N,19nm,1.2s
NVS                                pmax   pmax
       comp=E,28nm,1.4s
NVS                                smax   smax
       comp=N,23nm,2.3s
NVS                                smax   smax
       comp=E,44nm,2.3s
EKS2   Erkin-Say         55.05 315 P      P      06 46 21.1 +0.9
       SNR=12
KURK   Kurchatov         55.17 325 eP     P      06 46 21.7 +0.9
KURK                               ePcP   PcP    06 47 23.0 +1.4
KURK   Kurchatov         55.17 325ceP     P      06 46 21.4 +0.7
KURK                               pmax   pmax
       comp=Z,69nm,0.9s
KURBB  Kurchatov Arra    55.18 325 P      P      06 46 21.7 +0.9
       comp=Z,28nm,0.6s,baz=126,slow=7.0,SNR=174
KURBB                              PcP    PcP    06 47 23.0 +1.4
       comp=Z,9.7nm,0.9s,baz=125,slow=6.7,SNR=2.5
H08S2  Diego Garcia H    56.62 253 P      P      06 46 31.9 +0.5
H08S3  Diego Garcia H    56.62 253 P      P      06 46 31.9 +0.5
       SNR=6.1
H08S1  Diego Carcia H    56.64 253 P      P      06 46 32.0 +0.5
KBL    Kabul             56.68 304 eP     P      06 46 31.8  -0.3
       comp=Z,20nm,0.7s
KBL    Kabul             56.68 304 eP     P      06 46 31.8  -0.3
KBL                                pmax   pmax
       comp=Z,21nm,0.7s
KK31   Karatay Array     57.47 314 eP     P      06 46 37.6 +0.3
KK31   Karatay Array     57.47 314ceP     P      06 46 37.1  -0.2
KK31                               pmax   pmax
       comp=Z,6.0nm,0.7s
KKAR   Karatay Array     57.47 314 eP     P      06 46 37.6 +0.4
KKAR   Karatay Array     57.47 314 eP     P      06 46 37.7 +0.4
H08N1  Diego Carcia H    57.61 255 P      P      06 46 35.4  -3.0
       baz=58,slow=3.3,SNR=4.1
H08N2  Diego Garcia H    57.62 255 P      P      06 46 35.7  -2.6
       baz=58,slow=3.3,SNR=5.1
H08N3  Diego Garcia H    57.63 255 P      P      06 46 35.6  -2.9
       baz=58,slow=3.3,SNR=4.4
TIXI   Tiksi             60.34   1ceP     P      06 46 57.1 +0.5
TIXI                               pmax   pmax
       comp=Z,8.0nm,1.0s
BVA0   Borovoye Array    60.77 325 P      P      06 46 59.6  -0.4
BVA0                               pmax   pmax
       comp=Z,45nm,1.2s
BVAR   Borovoye Array    60.77 325 P      P      06 46 59.9  -0.1
       comp=Z,12nm,0.6s,baz=117,slow=8.3,SNR=66
BVAR                               LR     LR     07 13 25.3
       comp=Z,519nm,18.5s,baz=120,slow=36
BRVK   Borovoye          60.85 325 eP     P      06 47 01.2 +0.7
       comp=Z,38nm,0.8s
BRVK   Borovoye          60.85 325ceP     P      06 47 01.0 +0.5
BRVK                               pmax   pmax
       comp=Z,33nm,0.6s
GEYT   Alibeck           65.86 307 P      P      06 47 34.5 +0.5
       comp=Z,2.6nm,0.3s,baz=84,slow=15,SNR=3.3
GEYT                               LR     LR     07 19 58.4
       comp=Z,225nm,19.2s,baz=200,slow=39
AB31   Akbulak array     66.04 319ceP     P      06 47 34.5  -0.4
AB31                               pmax   pmax
       comp=Z,16nm,0.8s
ABKAR  Akbulak array     66.04 319 eP     P      06 47 35.1 +0.3
AFI    Afiamalu          66.42 111 LR     LR     07 14 36.5
       comp=Z,602nm,18.2s,baz=288,slow=34
UOSS   Minazif           67.25 292 P      P      06 47 40.8  -2.3
SVE    Sverdlovsk        67.30 327d iP    P      06 47 43.5 +0.7
SVE                                pmax   pmax
       comp=Z,73nm,0.9s
HATD   Hatta, Dubai      67.33 292 P      P      06 47 42.6  -1.0
ASHO   Ashiyiah          67.40 292 P      P      06 47 43.8  -0.2
AKTO   Aktyubinsk        67.48 320 P      P      06 47 43.8  -0.2
       comp=Z,10nm,0.8s,baz=92,slow=12,SNR=36
AKTO                               LR     LR     07 19 41.0
       comp=Z,578nm,18.3s,baz=111,slow=38
ALNE   Al Ain            67.71 291 P      P      06 47 44.7  -1.3
ALNE   Al Ain            67.71 291 P      P      06 47 44.7  -1.3
THZ    Tophouse          68.05 144 eP     P      06 47 48.5 +0.8
       comp=Z,27nm,1.0s
ASUD   Al Ashush, Dub    68.06 292 P      P      06 47 47.0  -1.2
RPZ    Rata Peaks        68.29 147 P      P      06 47 50.1 +1.0
       comp=Z,21nm,0.7s,baz=138,slow=2.4,SNR=5.0
RPZ    Rata Peaks        68.29 147 eP     P      06 47 50.1 +1.0
RPZ                                eP     P      06 47 50.6 +1.5
ARU    Arti              68.32 326 eP     P      06 47 49.3   0.0
       comp=Z,43nm,0.6s
ARU    Arti              68.32 326c iP    P      06 47 49.2   0.0
ARU                                *PP    sP     06 48 06.0 +2.6
ARU                                eS     S      06 56 48.4 +0.5
ARU                                pmax   pmax
       comp=Z,101nm,1.7s
ARU                                MLR    MLR
       comp=Z,467nm,17.0s
BKZ    Black Stump Fm    68.62 140 eP     P      06 47 52.5 +1.1
       comp=Z,34nm,1.0s
SVW2   Sparrevohn        74.50  30 eP     P      06 48 28.2 +1.8
       comp=Z,12nm,1.0s
GROC   Groznyy           75.37 312 eP     P      06 48 28.9  -2.9
GROC                               e             06 48 41.9
GROC                               e*PP   PcP    06 48 46.3 +1.4
GROC                               e*SP   sP     06 48 53.5 +7.5
GROC                               pmax   pmax
       comp=Z,96nm,1.5s
PRGR   Permogore         75.64 331 eP     P      06 48 32.5  -0.5
PRGR                               e             06 48 44.7
PRGR                               pmax   pmax
       comp=Z,17nm,0.8s
RSO    Redoubt South     75.85  30 eP     P      06 48 35.4 +0.9
KDAK   Kodiak Island     75.86  33 P      P      06 48 35.0 +0.7
       comp=Z,13nm,0.9s,baz=261,slow=5.0,SNR=11
KDAK   Kodiak Island     75.86  33 eP     P      06 48 35.7 +1.5
       comp=Z,17nm,0.9s
KDAK   Kodiak Island     75.86  33ceP     P      06 48 35.3 +1.0
TBLG   Delisi            76.21 310 eP     P      06 48 36.9 +0.2
       comp=Z,28nm,0.9s
TBLG   Delisi            76.21 310 eP     P      06 48 36.9 +0.2
TBLG                               pmax   pmax
       comp=Z,28nm,0.9s
PPLA   Purkeypile        76.21  28 eP     P      06 48 37.8 +1.4
       comp=Z,25nm,1.5s
CAST   Castle Rocks      76.28  27 eP     P      06 48 37.8 +1.2
       comp=Z,16nm,1.0s
GNI    Garni             76.29 309 LR     LR     07 25 58.7
       comp=Z,307nm,20.2s,baz=80,slow=39
CNPM   China Poot        76.59  31 eP     P      06 48 38.8 +0.3
       comp=Z,12nm,0.9s
BRLK   Bradley Lake      76.77  31 eP     P      06 48 39.7 +0.2
       comp=Z,10nm,0.8s
ZEI    Tsey              76.77 311 eP     P      06 48 38.0  -2.1
ZEI                                pmax   pmax
       comp=Z,19nm,0.6s
BPAW   Bear Paw Mtn.     76.79  27 eP     P      06 48 40.6 +1.1
       comp=Z,26nm,0.9s
SUA    Susitna One       76.86  29 eP     P      06 48 40.3 +0.2
       comp=Z,16nm,0.9s
MLY    Manley            76.92  26 eP     P      06 48 41.7 +1.5
       comp=Z,14nm,0.9s
TRF    Thorofare Moun    77.09  27 eP     P      06 48 42.2 +0.9
       comp=Z,21nm,1.2s
RAYN   Ar Rayn           77.10 292 eP     P      06 48 41.0  -1.1
       comp=Z,9.2nm,0.8s
RAYN   Ar Rayn           77.10 292 i P    P      06 48 40.9  -1.1
       SNR=5.4
RAYN   Ar Rayn           77.10 292 i P    P      06 48 40.9  -1.1
       SNR=5.4
RAYN   Ar Rayn           77.10 292 eP     P      06 48 41.0  -1.1
RAYN                               pmax   pmax
       comp=Z,9.0nm,0.8s
AKH    Akhalkalaki       77.16 310⇑iP     P      06 48 43.0 +0.7
AKH    Akhalkalaki       77.16 310 eP     P      06 48 42.1  -0.2
       comp=Z,69nm,1.5s
AKH    Akhalkalaki       77.16 310 eP     P      06 48 42.1  -0.2
AKH                                pmax   pmax
       comp=Z,69nm,1.5s
COLD   Coldfoot          77.19  23 eP     P      06 48 43.6 +1.9
       comp=Z,26nm,1.3s
RC01   Rabbit Creek A    77.34  30 eP     P      06 48 43.1 +0.5
       comp=Z,30nm,1.5s
KBZ    Khabaz            77.45 312 P      P      06 48 43.2  -0.3
       comp=Z,9.8nm,1.1s,baz=79,slow=4.1,SNR=13
KBZ                                LR     LR     07 28 46.3
       comp=Z,682nm,18.0s,baz=82,slow=40
TOLK   Toolik Lake Re    77.46  22 eP     P      06 48 44.7 +1.4
       comp=Z,9.5nm,0.8s
KIV    Kislovodsk        77.59 313 eP     P      06 48 44.5   0.0
       comp=Z,28nm,0.9s
KIV    Kislovodsk        77.59 313 i P    P      06 48 44.8 +0.3
       SNR=6.1
KIV    Kislovodsk        77.59 313 i P    P      06 48 44.8 +0.3
       SNR=6.1
KIV    Kislovodsk        77.59 313c iP    P      06 48 44.0  -0.5
KIV                                e             06 48 54.4
KIV                                e             06 51 43.5
KIV                                eS     S      06 58 36.6 +2.6
KIV                                pmax   pmax
       comp=Z,17nm,0.6s
MCK    McKinley          77.69  27 eP     P      06 48 45.1 +0.5
       comp=Z,28nm,0.9s
MCK    McKinley          77.69  27 eP     P      06 48 45.1 +0.5
MCK                                pmax   pmax
       comp=Z,28nm,0.9s
VRH    Novokhopyorsk     77.82 320 eP     P      06 48 44.3  -1.2
VRH                                pmax   pmax
       comp=Z,40nm,0.9s
MDM    Murphy Dome       77.99  26 eP     P      06 48 47.1 +0.9
       comp=Z,7.8nm,0.9s
SML    Sawmill           78.00  29 eP     P      06 48 47.4 +1.0
       comp=Z,27nm,1.0s
SML    Sawmill           78.00  29 eP     P      06 48 47.4 +1.0
SML                                pmax   pmax
       comp=Z,27nm,1.0s
COLA   College           78.15  26 eP     P      06 48 47.7 +0.7
       comp=Z,8.9nm,0.8s
COLA   College           78.15  26 eP     P      06 48 47.7 +0.7
COLA                               pmax   pmax
       comp=Z,9.0nm,0.8s
CCB    Clear Creek Bu    78.17  26 eP     P      06 48 47.5 +0.3
       comp=Z,10nm,1.2s
CASY   Casey             78.22 186 eP     P      06 48 48.2 +1.0
       comp=Z,35nm,1.5s
SCM    Sheep Creek Mo    78.48  29 eP     P      06 48 50.3 +1.3
       comp=Z,28nm,1.0s
ILAR   Eielson Array     78.56  26 P      P      06 48 48.9  -0.5
       comp=Z,2.9nm,0.7s,baz=242,slow=5.9,SNR=36
ILAR                               LR     LR     07 25 50.6
       comp=Z,105nm,18.7s,baz=278,slow=37
ILB    Eielson Array     78.56  26 eP     P      06 48 49.5 +0.1
IL1    Eielson Array     78.56  26 eP     P      06 48 48.5  -0.9
KLMR   Klimovskoe        78.60 330 eP     P      06 48 47.1  -2.5
KLMR                               e             06 51 46.3
KLMR                               pmax   pmax
       comp=Z,50nm,1.5s
KLMR   Klimovskoe        78.60 330 eP     P      06 48 47.2  -2.4
KLMR                               AMP           06 48 50.4
       comp=Z,50nm,1.5s
KLMR                               ePP    PP     06 51 46.4  -1.0
KLMR                               LQ     LQ     07 18 38.2
KLMR                               LQ     LQ     07 18 38.2
KLMR                               LR     LR     07 24 49.8
DIV    Divide            79.26  30 eP     P      06 48 54.2 +0.8
       comp=Z,22nm,0.9s
VORD   Divnogorie        79.37 320 eP     P      06 48 52.6  -1.4
VORD                               pmax   pmax
       comp=Z,10.0nm,0.5s
VSR    Storozhevoye      79.43 320 eP     P      06 48 52.5  -1.8
VSR                                pmax   pmax
       comp=Z,20nm,0.9s
HARP   HAARP             79.47  28 eP     P      06 48 55.2 +0.8
       comp=Z,22nm,1.0s
RIDG   Independ'e Rid    79.51  27 eP     P      06 48 55.2 +0.5
       comp=Z,27nm,1.1s
RAR    Rarotonga         79.55 114 LR     LR     07 17 53.5
       comp=Z,361nm,19.9s,baz=285,slow=31
BMRM   Bremner River     79.84  30 eP     P      06 48 58.0 +1.5
       comp=Z,21nm,1.3s
RAGM   Ragged Mountai    79.86  30 eP     P      06 48 58.2 +1.7
       comp=Z,26nm,1.3s
SCRK   Sand Creek        79.87  27 eP     P      06 48 57.5 +0.8
       comp=Z,14nm,1.3s
MOS    Moscow            79.95 325 eP     P      06 48 56.1  -0.9
OBN    Obninsk           80.61 324ceP     P      06 48 59.9  -0.7
OBN                                e             06 52 05.0
OBN                                eS     S      06 58 53.2   -12
OBN                                pmax   pmax
       comp=Z,86nm,2.0s
OBN                                MLR    MLR
       comp=Z,557nm,17.0s
APA    Apatity           80.70 337⇑iP     P      06 49 00.3  -0.6
APA                                pmax   pmax
       comp=Z,10.0nm,0.7s
APA                                MLR    MLR
       comp=Z,200nm,16.0s
EGAK   Eagle             81.01  26 eP     P      06 49 03.8 +1.2
       comp=Z,6.2nm,0.9s
ANN    Anapa             81.26 314 i P    P      06 49 02.6  -1.7
ANN                                eS     S      06 59 08.7  -3.9
ANN                                pmax   pmax
       comp=Z,78nm,2.0s
ATD    Arta Tunnel       81.35 280 LR     LR     07 24 45.0
       comp=Z,95nm,18.3s,baz=323,slow=35
MIR    Mirnyy            81.36 193 eP     P      06 49 06.0 +1.8
MIR                                pmax   pmax
       comp=Z,42nm,1.0s
DAWY   Dawson            81.87  26 eP     P      06 49 09.0 +1.8
       comp=Z,22nm,1.4s
SPA0   Spitsbergen Ar    83.00 349 eP     P      06 49 12.7  -0.1
SPITS  Spitsbergen Ar    83.00 349 P      P      06 49 12.7  -0.1
       comp=Z,6.6nm,0.7s,baz=44,slow=6.4,SNR=6.4
SPITS                              LR     LR     07 31 30.7
       comp=Z,421nm,19.1s,baz=135,slow=40
ARA0   ARCESS Array S    83.20 340 eP     P      06 49 14.6 +0.5
ARCES  ARCESS Array B    83.20 340 P      P      06 49 14.6 +0.5
       comp=Z,7.1nm,0.8s,baz=79,slow=6.3,SNR=19
ARCES  ARCESS Array B    83.20 340 eP     P      06 49 14.3 +0.3
ARCES  ARCESS Array B    83.20 340 eP     P      06 49 14.3 +0.3
OPO    Ambohidratompo    83.33 250 P      P      06 49 14.7  -1.1
       comp=Z,3.6nm,0.8s,baz=117,slow=10,SNR=3.8
OPO                                LR     LR     07 25 22.5
       comp=Z,448nm,19.3s,baz=30,slow=35
INK    Inuvik            83.37  22 eP     P      06 49 15.9 +1.1
       comp=Z,17nm,1.4s
INK    Inuvik            83.37  22 eP     P      06 49 16.0 +1.1
INK                                pmax   pmax
       comp=Z,17nm,1.4s
ASF    Jabal al Asfar    83.47 301 P      P      06 49 15.8  -0.5
       comp=Z,2.1nm,0.6s,baz=42,slow=11,SNR=4.6
SIM    Simferopol'       83.57 314 P      P      06 49 16.6 +0.2
SIM                                S      S      06 59 28.4  -7.9
SIM                                pmax   pmax
       comp=Z,18nm,0.7s
MMAI   Mount Meron Ar    84.58 302 P      P      06 49 22.0 +0.1
       comp=Z,0.9nm,0.3s,baz=0.0,slow=4.3,SNR=3.4
MMAI                               LR     LR     07 31 07.3
       comp=Z,179nm,21.5s,baz=95,slow=38
SKAG   Skagway           84.65  30 eP     P      06 49 22.4 +0.9
       comp=Z,14nm,0.9s
BR101  Keskin Array S    84.81 309 eP     P      06 49 22.4  -0.6
BR131  Keskin Array S    84.81 309 eP     P      06 49 22.5  -0.6
BRTR   Keskin Array B    84.81 309 P      P      06 49 22.4  -0.6
       comp=Z,4.8nm,0.7s,baz=125,slow=4.6,SNR=20
BRTR                               LR     LR     07 33 20.0
       comp=Z,129nm,18.8s,baz=76,slow=40
FIA1   FINESS Array S    84.95 332 eP     P      06 49 22.8  -0.2
FIA1                               eP     PcP    06 49 23.0  -3.3
FIA0   FINESS Array S    84.95 332 eP     P      06 49 22.9  -0.1
FIA0   FINESS Array S    84.95 332 eP     P      06 49 22.9  -0.1
FINES  FINESS Array B    84.95 332 P      P      06 49 22.9  -0.1
       comp=Z,14nm,1.0s,baz=72,slow=6.2,SNR=15
FINES                              LR     LR     07 32 32.3
       comp=Z,566nm,18.3s,baz=88,slow=39
VSU    Vasula            85.35 329ceP     P      06 49 25.0  -0.1
VSU                                pmax   pmax
       comp=Z,42nm,0.9s
AKASG  Malin Array Be    85.72 321 P      P      06 49 26.4  -0.6
       comp=Z,8.9nm,0.7s,baz=64,slow=4.8,SNR=16
AKASG                              LR     LR     07 30 52.2
       comp=Z,254nm,18.2s,baz=85,slow=38
AKBB   Malin Array Si    85.72 321 eP     P      06 49 26.2  -0.8
       comp=Z,20nm,0.9s
AKBB   Malin Array Si    85.72 321 eP     P      06 49 26.3  -0.8
AKBB                               pmax   pmax
```

	comp=Z,20nm,0.9s						
KIEV	**Kiev**	**85.73**	**321**	eP	**P**	**06 49 26.2**	**-0.9**
	comp=Z,18nm,0.9s						
KIEV	**Kiev**	**85.73**	**321**	i P	**P**	**06 49 26.3**	**-0.9**
	SNR=5.3						
KIEV	**Kiev**	**85.73**	**321**	i P	**P**	**06 49 26.3**	**-0.9**
	SNR=5.3						
KIEV	**Kiev**	**85.73**	**321**	c iP	**P**	**06 49 26.0**	**-1.1**
KIEV				pmax	pmax		
	comp=Z,17nm,1.0s						
AK11	**Malin Array Si**	**85.75**	**321**	eP	**P**	**06 49 27.0**	**-0.3**
CSS	**Mathiatis**	**85.92**	**305**	eP	**P**	**06 49 27.9**	**-0.6**
	comp=Z,22nm,0.8s						
SORM	**Soroca**	**86.84**	**318**	⇓iP	**P**	**06 49 32.1**	**-0.6**
TLCR		**87.20**	**315**	⇓iP	**P**	**06 49 34.5**	**0.0**
TIRR	**Tirgusor**	**87.65**	**315**	⇓iP	**P**	**06 49 36.0**	**-0.7**
CFR	**Carcaliu**	**87.67**	**316**	⇑iP	**P**	**06 49 36.5**	**-0.3**
TLB	**Topalu**	**87.88**	**315**	⇑iP	**P**	**06 49 37.4**	**-0.4**
HARR	**Harsova**	**87.93**	**315**	⇑iP	**P**	**06 49 38.0**	**0.0**
PPT	**Papeete**	**87.97**	**108**	LR	LR	07 23 09.8	
	comp=Z,228nm,19.9s,baz=300,slow=32						
PPT2	**Papeete2**	**87.98**	**108**	eS	**S**	**07 00 18.5**	**-2.1**
	comp=Z,254nm,25.2s						
PPT2	**Papeete2**	**87.98**	**108**	eLR	LR	07 17 31.3	
	comp=Z,345nm,22.2s						
TESR	**Tescani**	**88.36**	**317**	⇑iP	**P**	**06 49 40.1**	**+0.1**
VRI	**Vrincioaia**	**88.47**	**316**	⇓iP	**P**	**06 49 40.2**	**-0.4**
PLOR	**Plostina**	**88.52**	**316**	⇓iP	**P**	**06 49 41.5**	**+0.6**
BURAR	**Bucovina Array**	**89.02**	**318**	⇑iP	**P**	**06 49 43.4**	**+0.2**
BUR04	**Bucovina Ar. S**	**89.02**	**318**	eP	**P**	**06 49 43.2**	**-0.1**
BUR08	**Bucovina Ar. S**	**89.02**	**318**	eP	**P**	**06 49 42.9**	**-0.4**
MLR	**Muntele Rosu**	**89.09**	**316**	P	**P**	**06 49 42.8**	**-0.9**
	comp=Z,1.1nm,0.7s,baz=207,slow=2.3,SNR=6.0						
MLR				LR	LR	07 34 21.3	
	comp=Z,84nm,18.6s,baz=55,slow=39						
MLR	**Muntele Rosu**	**89.09**	**316**	⇑iP	**P**	**06 49 43.2**	**-0.5**
MLR	**Muntele Rosu**	**89.09**	**316**	eP	**P**	**06 49 43.8**	**+0.1**
	comp=Z,35nm,1.7s						
TBI	**Tubuai**	**89.32**	**114**	eS	**S**	**07 00 30.8**	**-2.1**
	comp=Z,354nm,30.0s						
TBI	**Tubuai**	**89.32**	**114**	eLR	LR	07 18 15.6	
	comp=Z,425nm,26.2s						
RES	**Resolute Bay**	**90.51**	**10**	eP	**P**	**06 49 50.2**	**+0.7**
	comp=Z,5.2nm,0.8s						
UZH	**Uzhgorod**	**90.60**	**320**	⇓iP	**P**	**06 49 50.2**	**-0.3**
MAW	**Mawson**	**90.62**	**200**	P	**P**	**06 49 49.4**	**-0.6**
	comp=Z,2.6nm,0.8s,baz=25,slow=9.2,SNR=4.6						
MAW				LR	LR	07 26 18.2	
	comp=Z,114nm,21.8s,baz=60,slow=33						
DRGR		**90.89**	**318**	⇓iP	**P**	**06 49 51.6**	**-0.4**
VNDA	**Vanda**	**90.95**	**173**	P	**P**	**06 49 51.7**	**+0.3**
	comp=Z,6.9nm,0.9s,baz=309,slow=5.6,SNR=20						
VNDA	**Vanda**	**90.95**	**173**	eP	**P**	**06 49 51.9**	**+0.5**
	comp=Z,8.9nm,1.0s						
CRVS	**Cervenica-Dubn**	**91.04**	**320**	eP	**P**	**06 49 53.0**	**+0.4**
CRVS				pmax	pmax		
	comp=Z,44nm,1.8s						
CRVS	**Cervenica-Dubn**	**91.04**	**320**	eP	**P**	**06 49 53.0**	**+0.4**
HFS	**Hagfors**	**91.10**	**332**	P	**P**	**06 49 51.6**	**-1.0**
	comp=Z,2.4nm,0.6s,baz=104,slow=6.1,SNR=7.7						
HFS				LR	LR	07 34 04.1	
	comp=Z,592nm,19.1s,baz=68,slow=38						
NB2	**NORSAR Subarra**	**91.80**	**334**	P	**P**	**06 49 54.5**	**-1.4**
	comp=Z,1.4nm,0.7s,baz=64,slow=4.6						
SBA	**Scott Base**	**91.86**	**172**	eP	**P**	**06 49 56.9**	**+1.4**
	comp=Z,20nm,1.4s						
SBA	**Scott Base**	**91.86**	**172**	eP	**P**	**06 49 56.9**	**+1.4**
SBA				pmax	pmax		
	comp=Z,20nm,1.4s						
YKA	**Yellowknife Ar**	**92.86**	**24**	P	**P**	**06 50 00.9**	**+0.2**
	comp=Z,1.6nm,0.8s,baz=298,slow=5.0,SNR=5.5						
YKA				LR	LR	07 34 10.8	
	comp=Z,11nm,19.9s,baz=296,slow=37						
MORC	**Moravsky Berou**	**93.15**	**322**	eP	**P**	**06 50 02.2**	**-0.1**
JAVC	**Velka Javorina**	**93.41**	**321**	eP	**P**	**06 50 04.7**	**+1.1**
CLL	**Collm**	**95.21**	**325**	eSKSac	**SKSac**	**07 00 45.0**	**-0.1**
CLL				eS	**S**	**07 01 24.0**	**-0.8**
CLL				ePS	PS	07 02 47.0	+1.3
CLL				eSS	**SS**	**07 07 48.0**	**-2.8**
CLL				eSSSS		07 15 00.0	
CLL				Lm	MLR	07 36 00.0	
	comp=N,300nm,18.6s						
CLL				Lm	MLR	07 36 00.0	
	comp=E,300nm,20.5s						
TAOE	**Nuku Hiva Isla**	**95.28**	**98**	eLR	LR	07 20 37.0	
	comp=E,521nm,22.8s						
GEC2	**GERESS Array S**	**95.83**	**322**	eP	**P**	**06 50 14.2**	**-0.5**
	comp=E,17nm,1.8s						
GEC2	**GERESS Array S**	**95.83**	**322**	eP	**P**	**06 50 14.2**	**-0.5**
GEC2				pmax	pmax		
	comp=Z,17nm,1.8s						
GERES	**GERESS Array B**	**95.83**	**322**	P	**P**	**06 50 14.2**	**-0.5**
	comp=Z,0.4nm,0.3s,baz=50,slow=7.1,SNR=5.0						
GEA0	**GERESS Array S**	**95.83**	**322**	eP	**P**	**06 50 14.5**	**-0.2**
TBM	**Table Mountain**	**96.99**	**39**	eP		06 50 21.1	
YBH	**Yreka Blue Hor**	**97.78**	**45**	LR	LR	07 29 25.2	
	comp=Z,139nm,19.5s,baz=296,slow=32						
DAVOX	**Davos/Dischmat**	**99.05**	**321**	LR	LR	07 40 24.0	
	comp=Z,486nm,18.2s,baz=74,slow=38						
SYO	**Syowa Base**	**99.23**	**201**	⇑ePdiff	**Pdif**	**06 50 30.2**	**+0.9**
VAE	**Valguarnera**	**99.87**	**311**	LR	LR	07 44 21.0	
	comp=Z,65nm,20.8s,baz=100,slow=40						
DGMT	**Dagmar**	**105.73**	**32**	ePdif	**Pdif**	**06 50 59.6**	**+0.7**
LTX	**Lajitas**	**117.23**	**49**	ePKPdf	**PKPdf**	**06 55 34.1**	**+0.1**
LTX	**Lajitas**	**117.23**	**49**	ePKIKP	**PKPdf**	**06 55 34.2**	**+0.1**
TXAR	**Lajitas Array**	**117.23**	**49**	PKP	**PKPdf**	**06 55 34.1**	**0.0**
	comp=Z,0.4nm,0.7s,baz=243,slow=1.1,SNR=7.1						
S39A	**Bolivar**	**118.81**	**35**	ePKPdf	**PKPdf**	**06 55 36.9**	**0.0**
R40A	**Maddies Statio**	**118.98**	**34**	ePKPdf	**PKPdf**	**06 55 36.7**	**-0.4**
JCT	**Junction City**	**119.36**	**45**	ePKPdf	**PKPdf**	**06 55 38.3**	**+0.2**
JCT	**Junction City**	**119.36**	**45**	ePKIKP	**PKPdf**	**06 55 38.3**	**+0.2**
TORD	**Torodi Ar. Bea**	**119.80**	**292**	PKP	**PKPdf**	**06 55 37.5**	**-1.7**
	comp=Z,0.5nm,0.7s,baz=28,slow=3.1						
TOA1	**Torodi Ar. Sit**	**119.80**	**292**	ePKPdf	**PKPdf**	**06 55 37.5**	**-1.7**
V40A	**Witts Springs**	**120.42**	**36**	ePKPdf	**PKPdf**	**06 55 40.0**	**+0.1**
T42A	**Van Buren**	**120.53**	**34**	ePKPdf	**PKPdf**	**06 55 40.4**	**+0.3**
MIAR	**Mount Ida**	**120.84**	**38**	ePKPdf	**PKPdf**	**06 55 41.3**	**+0.5**
MIAR	**Mount Ida**	**120.84**	**38**	ePKIKP	**PKPdf**	**06 55 41.3**	**+0.5**
PBMO	**Poplar Bluff**	**121.08**	**34**	ePKPdf	**PKPdf**	**06 55 40.9**	**-0.3**
WVT	**Waverly**	**122.96**	**33**	ePKPdf	**PKPdf**	**06 55 44.9**	**+0.1**
WVT	**Waverly**	**122.96**	**33**	ePKIKP	**PKPdf**	**06 55 44.9**	**+0.1**
341A	**Kurthwood**	**123.26**	**40**	ePKPdf	**PKPdf**	**06 55 46.6**	**+1.1**
PLAL	**Pickwick Lake**	**123.69**	**34**	ePKPdf	**PKPdf**	**06 55 46.1**	**-0.2**
KOWA	**Kowa**	**124.38**	**296**	PKP	**PKPdf**	**06 55 46.9**	**-1.2**
	comp=Z,1.8nm,0.6s,baz=212,slow=11,SNR=4.8						
V52A	**Sevierville**	**125.33**	**30**	ePKPdf	**PKPdf**	**06 55 49.8**	**+0.4**
TKL	**Tuckaleechee C**	**125.39**	**30**	PKP	**PKPdf**	**06 55 49.1**	**-0.4**
	comp=Z,3.8nm,0.7s,baz=322,slow=12,SNR=7.0						
TKL	**Tuckaleechee C**	**125.39**	**30**	ePKPdf	**PKPdf**	**06 55 50.8**	**+1.3**
PLCA	**Paso Flores**	**147.18**	**156**	PKPbc	**PKPbc**	**06 56 31.1**	**-0.5**
	comp=Z,11nm,0.8s,baz=208,slow=3.0,SNR=16						
PLCA	**Paso Flores**	**147.18**	**156**	ePKPbc	**PKPbc**	**06 56 33.0**	**+1.3**
ZARC	**Zaragoza, Cauc**	**151.96**	**49**	eP	**PKPdf**	**06 56 36.1**	**-1.6**
HELC	**Santa Helena**	**152.28**	**52**	eP	**PKPdf**	**06 56 42.3**	**+3.6**
TRQA	**Tornquist**	**152.37**	**166**	ePKPbc	**PKPbc**	**06 56 45.0**	**+0.5**
TRQA	**Tornquist**	**152.37**	**166**	ePKIKP	**PKPbc**	**06 56 45.0**	**+0.5**
PTBC	**PUERTO BERRIO,**	**152.88**	**50**	eP	**PKPdf**	**06 56 39.2**	**+0.1**
YOTC	**Yotoco, Valle**	**152.94**	**57**	eP	**PKPdf**	**06 56 40.7**	**+1.4**
BRRC	**Barranca, Sant**	**153.06**	**48**	eP	**PKPbc**	**06 56 46.0**	**-0.7**
BARC	**Barichara**	**153.79**	**48**	eP	**PKPbc**	**06 56 47.1**	**-1.4**
RUSC	**La Rusia**	**154.33**	**49**	eP	**PKPdf**	**06 56 42.5**	**+0.7**
CHIC	**Chingaza**	**154.65**	**52**	eP	**PKPdf**	**06 56 40.6**	**-1.5**
ATAH	**Atahualpa**	**155.41**	**82**	PKPab	**PKPab**	**06 57 07.7**	**-0.9**
	comp=Z,6.1nm,0.9s,baz=252,slow=3.2,SNR=2.1						
CPUP	**Villa Florida**	**164.68**	**168**	PKP	**PKPdf**	**06 56 53.8**	**+1.2**
	comp=Z,3.1nm,0.9s,baz=118,slow=3.8,SNR=4.2						
CPUP				PKPab	**PKPab**	**06 57 48.2**	**+0.4**
	comp=Z,4.6nm,1.0s,baz=204,slow=1.6,SNR=4.7						
CPUP	**Villa Florida**	**164.68**	**168**	PKIKP	**PKPdf**	**06 56 53.8**	**+1.2**
CPUP						06 57 48.2	
CPUP				pmax	pmax		
	comp=Z,2.0nm,0.9s						
CPUP				pmax	pmax		
	comp=Z,5.0nm,1.0s						
LPAZ	**La Paz**	**165.25**	**111**	PKP	**PKPdf**	**06 56 55.2**	**+1.2**
	comp=Z,1.4nm,0.9s,baz=8.9,slow=4.9,SNR=5.2						
LPAZ				PKPab	**PKPab**	**06 57 53.8**	**+2.2**
	comp=Z,2.6nm,0.8s,baz=256,slow=4.2,SNR=5.9						
LPAZ	**La Paz**	**165.25**	**111**	ePKPdf	**PKPdf**	**06 56 55.6**	**+1.5**
LPAZ				PKPab	**PKPab**	**06 57 53.8**	**+2.2**
LPAZ	**La Paz**	**165.25**	**111**	PKIKP	**PKPdf**	**06 56 55.3**	**+1.2**
LPAZ				pmax	pmax		
	comp=Z,4.0nm,1.2s						
PTGA	**Pitinga**	**167.86**	**31**	PKP	**PKPdf**	**06 56 55.4**	**-0.1**
	comp=Z,1.2nm,0.3s,baz=32,slow=16,SNR=1.6						
PTGA				PKPab	**PKPab**	**06 58 02.4**	**+0.2**
	comp=Z,1.1nm,0.3s,baz=316,slow=6.4,SNR=5.2						
SIV	**San Ignacio**	**171.55**	**124**	PKP	**PKPdf**	**06 56 58.7**	**+1.1**
	comp=Z,2.9nm,1.1s,baz=18,slow=6.8,SNR=5.7						

CSEM ***18*** *06:46:14.6, 45°.91N×15°.54E, h0^{km}, ML0.6*

LJU 18 06:46:14.1, 45°.92N×15°.53E, h7^{km}, ML0.7, 6D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CESS	**Cesta pri Krsk**	**0.07**	**320**	i Pg	Pg	06 46 16.0	0.0
CESS				i Sg	Sg	06 46 17.3	+0.1
	comp=Z,22nm,0.1s						
CESS	**Cesta pri Krsk**	**0.07**	**320**	i Pg	Pg	06 46 16.0	+0.1
CESS				i Sg	Sg	06 46 17.3	+0.1
	comp=Z,22nm,0.1s						
GCIS	**Gornji Cirnik**	**0.09**	**127**	i Pg	Pg	06 46 16.2	0.0
	comp=Z,10.0nm,0.1s						
GCIS	**Gornji Cirnik**	**0.09**	**127**	i Pg	Pg	06 46 16.2	0.0
	comp=Z,10.0nm,0.1s						
CRES	**Cresnjev**	**0.11**	**207**	⇓iPg	Pg	06 46 16.6	+0.1
CRES				i Sg	Sg	06 46 18.5	+0.4
	comp=Z,29nm,0.1s						
CRES	**Cresnjev**	**0.11**	**207**	⇓iPg	Pg	06 46 16.6	+0.1
CRES				i Sg	Sg	06 46 18.5	+0.4
	comp=Z,29nm,0.1s						
GOLS	**Golise**	**0.11**	**37**	⇓iPg	Pg	06 46 16.6	0.0
GOLS				i Sg	Sg	06 46 18.8	+0.4
	comp=Z,9.0nm,0.1s						
GOLS	**Golise**	**0.11**	**37**	⇓iPg	Pg	06 46 16.6	0.0
GOLS				i Sg	Sg	06 46 18.8	+0.4
	comp=Z,9.0nm,0.1s						
DOBS	**Dobrina**	**0.23**	**350**	⇓iPg	Pg	06 46 19.2	+0.5
DOBS				i Sg	Sg	06 46 23.1	+1.2
DOBS	**Dobrina**	**0.23**	**350**	⇓iPg	Pg	06 46 19.2	+0.5
DOBS				i Sg	Sg	06 46 23.1	+1.2
OZLJ	**Ozalj**	**0.31**	**188**	ePg	Pb	06 46 21.3	-0.6
OZLJ				Sg	Sg	06 46 25.6	+1.4

CSEM ***18*** *06:47:14.0±0.2, 50°.09N×19°.13E, h2^{km}, Error ellipse: s-maj=5.8km s-min=3.6km az=2.0*

PRU 18 06:47:14.9, 50°.12N×19°.15E, h0^{km}, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OJC	**Ojcow**	**0.43**	**76**	ePg	Pg	06 47 22.9	-0.2
OJC				eSg	Sg	06 47 28.5	-0.2
OJC	**Ojcow**	**0.43**	**76**	ePg	Pg	06 47 22.9	-0.2
OJC				eSg	Sg	06 47 28.5	-0.2
LANS	**Liptovska Anna**	**0.99**	**168**	ePG	Pg	06 47 34.2	+0.3
LANS				eSG	Sg	06 47 46.6	-0.1
LANS	**Liptovska Anna**	**0.99**	**168**	eSg	Sg	06 47 46.6	-0.1
MORC	**Moravsky Berou**	**1.09**	**252**	ePG	Pg	06 47 36.2	+0.4
MORC				eSG	Sb	06 47 51.0	-0.5
KRLC	**Kraliky**	**1.53**	**269**	eSG	Sg	06 48 03.4	-0.5
KRLC	**Kraliky**	**1.53**	**269**	Sg	Sg	06 48 03.4	-0.5
VYHS	**Vyhne**	**1.64**	**187**	ePN	Pn	06 47 44.2	-0.8
VYHS				eSN	Sn	06 48 05.3	-1.5
VYHS	**Vyhne**	**1.64**	**187**	ePg	Pn	06 47 44.2	-0.8
VYHS				eSn	Sn	06 48 05.3	-1.5
DPC	**Dobruska-Polom**	**1.83**	**278**	ePG	Pb	06 47 48.8	-0.5
DPC				eSG	Sb	06 48 13.0	+0.3
	comp=Z,7.1nm,0.6s						
DPC	**Dobruska-Polom**	**1.83**	**278**	Pg	Pb	06 47 48.8	-0.5
DPC				Sg	Sb	06 48 13.0	+0.3
	7.1nm,0.6s						
UPC	**Upice**	**2.05**	**282**	eSG	Sg	06 48 20.9	+0.2
UPC	**Upice**	**2.05**	**282**	Sg	Sg	06 48 20.9	+0.2
PRU	**Pruhonice**	**2.97**	**269**	eSG	Sb	06 48 47.9	+2.3
	comp=Z,3.3nm,0.6s						
PRU	**Pruhonice**	**2.97**	**269**	Sg	Sb	06 48 47.9	+2.3
	3.3nm,0.6s						
KHC	**Kasperske Hory**	**3.75**	**257**	eSG	Sg	06 49 14.1	-1.4
	comp=Z,2.3nm,0.7s						
KHC	**Kasperske Hory**	**3.75**	**257**	Sg	Sg	06 49 14.1	-1.4
	2.3nm,0.7s						

TRN 18 07:03:54.9, 10°.76N×61°.79W, h47^{km}, MD3.5, 1D, Trinidad

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRN	**Trinidad (W)**	**0.40**	**106**	⇓iP	Pn	07 04 04.4	-0.4
TRN				eS	Sn	07 04 12.0	+0.2
TPP	**Pointe-a-Pierr**	**0.55**	**142**	eP	Pn	07 04 06.9	+0.3
TPP				eS	Sn	07 04 16.1	+1.0
TBH	**Brigand Hill**	**0.76**	**111**	eP	Pn	07 04 09.3	-0.1
TOSP	**Speyside**	**1.35**	**66**	eP	Pn	07 04 16.8	-0.4
TOSP				eS	Sn	07 04 34.4	+0.4
GRHS	**Sauteurs**	**1.47**	**6**	eP	Pn	07 04 19.1	+0.2
GRHS	**Sauteurs**	**1.47**	**6**	e	Sn	07 04 34.6	-2.4
GRHS	**Sauteurs**	**1.47**	**6**	e	Sn	07 04 34.7	-2.3
GRHS				eS	Sn	07 04 37.4	+0.4
GRSS	**Sisters**	**1.54**	**7**	eP	Pn	07 04 20.2	+0.3
GRSS				eS	Sn	07 04 38.3	-0.5
SVB	**Belmont**	**2.56**	**12**	eP	Pn	07 04 34.1	+0.3
SVB				eS	Sn	07 05 03.6	-0.2
SVCV	**St. Vincent, C**	**2.58**	**14**	eP	Pn	07 04 34.0	-0.2
SVCV				eS	Sn	07 05 04.0	-0.4
SVCV				eS	Sn	07 05 04.0	-0.3
SVV	**Soufriere Volc**	**2.61**	**12**	eP	Pn	07 04 35.7	+1.1
SSV	**Crater Summit**	**2.62**	**13**	eP	Pn	07 04 34.8	-0.1
SLB	**Belfond**	**3.14**	**13**	eP	Pn	07 04 42.9	+1.0
MGG	**Marie-Galante**	**5.15**	**5**	eS	Pn	07 05 10.9	+1.4

IDC ***18*** *07:44:06.9±1.1, 6°.26S×147°.09E, h0^{km}, mb3.9/4, mb1 4.1/6, mb1mx3.7/41, mbtmp4.0/6, ML3.7/1, MS3.1/2, Ms1 3.1/2, ms1mx2.7/44, Error ellipse: s-maj=48.9km s-min=21.2km az=102.0*

ISCJB ***18*** *07:44:12.0±1.2, 6°.31S±0°.09×146°.8E±0°.2, h49^{km}, mb3.9/4, MS3.5/1, Error ellipse: s-maj=29.1km s-min=13.1km az=175.3*

ISC 18 07:44:13.7±1.2**, 6°.3S**±0°.1×**147°.0E**±0°.3**, h49^{km}, n8, σ0^{s}.68**/9**, mb3.9**/4**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.08**	**176**	Pn	**Pn**	**07 44 59.4**	**-0.4**
	11nm,0.3s,baz=4.8,slow=12,SNR=14						
PMG				Sn	**Sn**	**07 45 35.8**	**+0.5**
	12nm,0.3s,baz=312,slow=11,SNR=3.3						
PMG				LR	LR	07 46 09.5	
	comp=Z,122nm,21.8s,baz=18,slow=39						
WRA	**Warramunga Arr**	**18.26**	**221**	P	**P**	**07 48 22.6**	**-0.7**
	0.3nm,0.3s,baz=44,slow=12,SNR=18						
ASAR	**Alice Springs**	**21.33**	**215**	P	**P**	**07 48 56.5**	**-0.2**
	1.2nm,0.7s,baz=51,slow=8.3,SNR=16						
STKA	**Stephens Creek**	**25.92**	**190**	P	**P**	**07 49 41.3**	**0.0**
	1.3nm,0.5s,baz=24,slow=10.0,SNR=3.0						
STKA				LR	LR	08 01 31.4	
	comp=Z,117nm,18.4s,baz=189,slow=40						
QSPA	**South Pole Qui**	**83.65**	**180**	P	**P**	**07 56 37.1**	**+0.1**
	1.9nm,0.6s,baz=353,slow=7.9,SNR=12						
ILAR	**Eielson Array**	**85.79**	**23**	P	**P**	**07 56 46.9**	**-0.6**
	0.4nm,0.4s,baz=252,slow=4.9,SNR=12						
TORD	**Torodi Ar. Bea**	**145.12**	**284**	PKPbc	**PKPdf**	**08 03 47.4**	**+0.6**
	baz=64,slow=3.4						
KOWA	**Kowa**	**150.34**	**288**	PKPbc	**PKPbc**	**08 04 01.7**	**+1.1**
	1.3nm,0.4s,baz=326,slow=2.3,SNR=4.4						

IDC 18 07:44:31.6±2.8**, 0°.09S**×**132°.97E, h0^{km}, mb3.5**/2**, mb1 3.8**/3**, mb1mx3.5**/46**, mbtmp3.6**/3**, ML3.8**/1**, Error ellipse: s-maj=150.6km s-min=26.0km az=74.0, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**19.77**	**176**	P	P	07 49 03.2	-0.4
	0.3nm,0.3s,baz=355,slow=11,SNR=6.8						
ASAR	**Alice Springs**	**23.45**	**178**	P	P	07 49 43.2	+0.3
	1.8nm,0.6s,baz=358,slow=11,SNR=14						
H11N1	**WAKE ISLAND Hy**	**38.63**	**57**	T	T	08 33 22.4	
	baz=242,slow=75,SNR=12						
H11N2	**WAKE ISLAND Hy**	**38.64**	**57**	T	T	08 33 21.7	
	baz=242,slow=75,SNR=18						
H11N3	**WAKE ISLAND Hy**	**38.64**	**57**	T	T	08 33 26.1	
	baz=242,slow=75,SNR=10						
MKAR	**Makanchi Array**	**64.26**	**324**	P	P	07 55 08.8	0.0
	0.1nm,0.4s,baz=120,slow=8.5,SNR=2.5						

VKMS ***18*** *07:59:34.0, 52°.30N×35°.42E, M2.3, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

IDC ***18*** *07:59:44.3±3.2, 52°.37N×35°.13E, h0^{km}, mb1 3.7/4, mb1mx3.2/61, mbtmp3.7/4, ML3.1/4, Error ellipse: s-maj=35.9km s-min=11.4km az=117.0*

ISC 18 07:59:42.2±2.1**, 52°.68N**±0°.08×**35°.0E**±0°.1**, h10^{km}, n6, σ1^{s}.98**/10**, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKASG	**Malin Array Be**	**4.12**	**244**	Pn	**Pn**	**08 00 46.0**	**+0.9**
	1.2nm,0.3s,baz=60,slow=15,SNR=2.8						
AKASG				Pg	**Pb**	**08 00 53.7**	**-0.9**
	1.1nm,0.3s,baz=61,slow=15,SNR=2.9						
AKASG				Sn	**Sn**	**08 01 34.1**	**+0.9**
	2.8nm,0.3s,baz=60,slow=19,SNR=5.2						
AKASG				Lg	Lg	08 01 54.1	
	5.6nm,0.3s,baz=65,slow=30,SNR=4.5						
NACGM	**Naroch**	**5.37**	**298**	e	**Sg**	**08 02 35.0**	**+0.6**
FINES	**FINESS Array B**	**10.04**	**335**	Pn	**Pn**	**08 02 08.8**	**+2.7**
	0.3nm,0.3s,baz=150,slow=13,SNR=10.0						
FINES				Sn	**Sn**	**08 03 59.8**	**+1.1**
	0.4nm,0.3s,baz=150,slow=26,SNR=4.5						
FINES				Lg	Lg	08 05 02.9	
	0.2nm,0.3s,baz=159,slow=24,SNR=3.0						
HFS	**Hagfors**	**13.92**	**311**	Pn	**Pn**	**08 02 57.1**	**-2.2**
	0.0nm,0.3s,baz=120,slow=13,SNR=3.3						
NOA	**NORSAR Array B**	**15.40**	**312**	Pn	**Pn**	**08 03 18.8**	**-0.5**
	0.0nm,0.3s,baz=86,slow=9.0,SNR=2.5						
ARCES	**ARCESS Array B**	**17.49**	**349**	Pn	**Pn**	**08 03 47.1**	**+1.3**
	0.3nm,0.3s,baz=163,slow=9.4,SNR=9.9						
ARCES				Sn	**Sn**	**08 06 57.1**	**-3.1**
	0.2nm,0.3s,baz=161,slow=34,SNR=3.5						

MEX 18 08:06:55.5±0.7**, 17°.15N**×**100°.76W, h5^{km}**±11^{km}**, MD3.8, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAIG	**El Cayaco**	**0.48**	**102**	eP	Pg	08 07 04.0	-0.8
CAIG				eS	Sg	08 07 11.5	+0.5
ARIG	**Puente Sto Nin**	**1.19**	**19**	eP	Pg	08 07 14.4	-3.9
ARIG				eS	Sg	08 07 30.4	-3.4
MEIG	**Mezcala**	**1.33**	**54**	eP	Pn	08 07 17.5	-3.4
MEIG				eS	Sg	08 07 33.2	-5.1
PLIG	**Platanillo**	**1.72**	**44**	eP	Pn	08 07 23.1	-3.1
PLIG				eS	Sn	08 07 43.5	-5.2
TLIG	**Tlapa**	**2.13**	**79**	eP	Pn	08 07 28.6	-3.3
TLIG				eS	Sn	08 07 54.3	-4.5

NIED ***18*** *08:07:00, 45°.60N×151°.80E, h20^{km}, Mw4.2 Best double couple: $M_0$1.94000×10^{15} NP1:ϕ_s145.00000°, δ51.00000°, λ-11.00000°. NP2:ϕ_s241.00000°, δ82.00000°, λ-140.00000°.*

JMA ***18*** *08:07:43.1±0.6, 45°.63N×151°.82E, h30^{km}, M4.5*

SKHL ***18*** *08:07:44.7±0.3, 44°.36N×152°.09E, h41^{km}±3^{km}, mb4.5/3*

IDC ***18*** *08:07:47.7±1.0, 45°.56N×151°.74E, h42^{km}±4^{km}, mb3.7/19, mb1 3.8/23, mb1mx3.7/70, mbtmp3.9/23, ML3.4/4, Error ellipse: s-maj=28.6km s-min=12.1km az=174.0*

ISC 18 08:07:43.9±0.7**, 44°.8N**±0°.1×**152°.00E**±0°.07**, h41^{km}, n58, σ2^{s}.10**/71**, mb4.0**/22**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**2.96**	**280**	eP	**Pn**	**08 08 31.9**	**+3.5**
KUR				AMB	AMB	08 08 42.6	
	100nm,0.5s						
KUR				i S	**Sn**	**08 09 07.5**	**+4.8**
KUR				A	A	08 09 18.5	
	344nm,0.6s						
KUR				A	A	08 09 18.5	
	193nm,0.6s						
SHO	**Shikotan**	**3.82**	**258**	eP	**Pn**	**08 08 41.8**	**+1.6**
SHO				AMB	AMB	08 08 53.1	
	32nm,0.3s						
SHO				eS	**Sn**	**08 09 24.4**	**+0.6**
SHO				A	A	08 09 27.4	
	84nm,0.4s						
SHO				A	A	08 09 27.4	
	127nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**4.46**	**262**	eP	**Pn**	**08 08 51.1**	**+2.1**
YUK				AMB	AMB	08 09 02.2	
	30nm,0.4s						
YUK				i S	**Sn**	**08 09 41.0**	**+1.4**
YUK				A	A	08 09 46.9	
	21nm,0.4s						
YUK				A	A	08 09 46.9	
	111nm,0.4s						
LAGR	**Lagunnoye**	**4.51**	**263**	eP	**Pn**	**08 08 52.0**	**+2.4**
LAGR				eS	**Sn**	**08 09 44.0**	**+3.2**
GRPR	**Tuman**	**4.53**	**262**	eP	**Pn**	**08 08 51.9**	**+1.9**
GRPR				eS	**Sn**	**08 09 41.7**	**+0.3**
GRPR				A	A	08 09 45.9	
	117nm,0.4s						
GRPR				A	A	08 09 45.9	
	127nm,0.4s						
NEM2	**Nemuro 2**	**4.73**	**255**	P	**Pn**	**08 08 53.6**	**+1.0**
NEM2				eS	**Sn**	**08 09 46.3**	**+0.2**
GLVR	**Golovnino**	**4.77**	**260**	eP	**Pn**	**08 08 55.1**	**+1.9**
GLVR				eS	**Sn**	**08 09 48.2**	**+1.0**
JRA	**Rausu**	**5.00**	**263**	P	**Pn**	**08 08 59.2**	**+2.8**
JNK	**Nakash**	**5.37**	**260**	P	**Pn**	**08 09 03.3**	**+1.8**
JNK				eS	**Sn**	**08 10 03.9**	**+1.9**
JAK	**Akkeshi**	**5.57**	**254**	P	**Pn**	**08 09 05.2**	**+1.0**
JAK				eS	**Sn**	**08 10 07.6**	**+0.7**
JTKR	**Abashiri--Toko**	**5.86**	**265**	P	**Pn**	**08 09 10.3**	**+2.2**
JAR	**Ashorobuto**	**6.12**	**259**	P	**Pn**	**08 09 14.3**	**+2.6**
JOB	**Onbets**	**6.20**	**255**	P	**Pn**	**08 09 14.6**	**+1.8**
JOB				eS	**Sn**	**08 10 22.5**	**+0.2**
JMP	**Maruseppu**	**6.24**	**266**	P	**Pn**	**08 09 15.7**	**+2.3**
JCH	**Churui**	**6.62**	**254**	P	**Pn**	**08 09 20.8**	**+2.1**
JCH				eS	**Sn**	**08 10 32.9**	**0.0**
JKK2	**Kamakawa 2**	**6.70**	**265**	P	**Pn**	**08 09 22.1**	**+2.4**
ASAJ	**Asahikawa**	**6.76**	**268**	P	**Pn**	**08 09 21.4**	**+0.8**
	0.5nm,0.3s,baz=98,slow=15,SNR=6.8						
ASAJ	**Asahikawa**	**6.76**	**268**	P	**Pn**	**08 09 23.0**	**+2.4**
MYR	**Moyori**	**6.81**	**252**	eP	**Pn**	**08 09 23.1**	**+1.9**
MYR				eS	**Sn**	**08 10 37.0**	**-0.3**
JNBK	**Urakawa-nobuka**	**7.17**	**253**	P	**Pn**	**08 09 27.6**	**+1.4**
JNB	**Noboribetsu**	**8.28**	**258**	P	**Pn**	**08 09 44.1**	**+2.7**
JKB	**Kayabe**	**8.50**	**254**	P	**Pn**	**08 09 45.8**	**+1.4**
JANG	**Nango**	**8.90**	**244**	eS	**Sn**	**08 11 25.2**	**-3.6**
JTH	**Tanohata**	**8.93**	**241**	eS	**Sn**	**08 11 25.0**	**-4.5**
OFUJ	**Ofunato**	**9.57**	**237**	eS	**Sn**	**08 11 42.7**	**-2.7**
MJAR	**Matsushiro Arr**	**13.30**	**237**	P	Pn	08 10 56.7	+6.5
	0.2nm,0.3s,baz=36,slow=11,SNR=3.6						
KLR	**Kul'dur**	**14.50**	**295**	P	**Pn**	**08 11 04.0**	**-2.3**
	0.0nm,0.3s,baz=104,slow=15,SNR=2.6						
SEY	**Seymchan**	**18.18**	**1**	P	**Pn**	**08 11 46.8**	**-6.1**
	0.2nm,0.3s,baz=157,slow=8.5,SNR=3.9						
KSRS	**Korea Array**	**19.52**	**256**	P	**Pn**	**08 12 11.4**	**+2.3**
	0.2nm,0.3s,baz=56,slow=11,SNR=9.2						
H11N2	**WAKE ISLAND Hy**	**27.89**	**149**	T	T	08 44 16.0	
	baz=340,SNR=27						
H11N1	**WAKE ISLAND Hy**	**27.90**	**149**	T	T	08 44 14.9	
	baz=340						
H11N3	**WAKE ISLAND Hy**	**27.90**	**149**	T	T	08 44 15.4	
	baz=340						
H11S1	**WAKE ISLAND Hy**	**28.94**	**150**	T	T	08 45 37.6	
	baz=339,slow=76,SNR=21						
H11S3	**WAKE ISLAND Hy**	**28.95**	**150**	T	T	08 45 37.0	
	baz=339,slow=76,SNR=16						
H11S2	**WAKE ISLAND Hy**	**28.96**	**150**	T	T	08 45 38.2	
	baz=339,slow=76,SNR=17						
SONM	**Songino Array**	**31.30**	**292**	P	**P**	**08 14 00.3**	**+0.3**
	1.5nm,0.8s,baz=72,slow=9.3,SNR=2.2						
KDAK	**Kodiak Island**	**35.97**	**49**	P	**P**	**08 14 39.9**	**-0.4**
	3.7nm,0.7s,baz=257,slow=7.1,SNR=4.8						
ILAR	**Eielson Array**	**38.58**	**37**	P	**P**	**08 15 00.8**	**-1.6**
	0.1nm,0.5s,baz=258,slow=7.9,SNR=3.5						
INK	**Inuvik**	**43.73**	**31**	P	**P**	**08 15 44.2**	**-0.4**
	0.8nm,0.6s,baz=316,slow=12,SNR=3.6						
MKAR	**Makanchi Array**	**47.17**	**299**	P	**P**	**08 16 11.1**	**-1.1**
	1.0nm,0.7s,baz=67,slow=7.6,SNR=8.5						
MKAR				PcP	**PcP**	**08 17 45.1**	**+1.9**
	0.3nm,0.6s,baz=71,slow=3.7,SNR=2.6						
KURBB	**Kurchatov Arra**	**47.91**	**305**	P	**P**	**08 16 15.7**	**-2.1**
	1.3nm,0.8s,baz=71,slow=8.4,SNR=6.1						

BVAR	Borovoye Array	51.52	310	P	P	08 16 43.8	-1.4
	0.3nm,0.3s,baz=58,slow=8.8,SNR=3.6						
BVAR				PcP	PcP	08 18 00.4	+1.5
	0.6nm,0.6s,baz=46,slow=4.2,SNR=2.6						
SPITS	Spitsbergen Ar	54.41	350	P	P	08 17 04.4	-1.8
	5.0nm,0.9s,baz=82,slow=10,SNR=2.9						
KULLO	Kullorsuaq	59.32	9	*i* P	P	08 17 31.2	-10
	12nm,0.8s						
YBH	Yreka Blue Hor	59.38	60	P	P	08 17 44.6	+2.6
	0.9nm,0.8s,baz=243,slow=2.3,SNR=3.8						
ARCES	ARCESS Array B	59.45	341	P	P	08 17 39.1	-2.8
	2.4nm,0.9s,baz=48,slow=5.4,SNR=4.6						
AKTO	Aktyubinsk	59.46	312	P	P	08 17 41.4	-1.0
	1.0nm,0.6s,baz=47,slow=7.7,SNR=4.1						
SUMG	Summit	62.71	4	*i* P	P	08 18 04.8	+0.3
SUMG				*i*		08 18 17.0	
NVAR	Mina Array Bea	64.05	61	P	P	08 18 16.2	+2.5
	1.1nm,0.7s,baz=292,slow=7.0,SNR=12						
NVAR				pP	pP	08 18 28.8	+3.0
	0.7nm,0.6s,baz=296,slow=6.6,SNR=4.4						
FINES	FINESS Array B	65.48	335	P	P	08 18 20.7	-1.6
	4.0nm,0.7s,baz=74,slow=8.1,SNR=12						
FINES				pP	pP	08 18 32.8	-1.6
	4.6nm,0.7s,baz=38,slow=7.2,SNR=5.7						
PDAR	Pinedale Array	66.55	53	P	P	08 18 30.7	+0.9
	0.3nm,0.6s,baz=75,slow=1.7,SNR=4.0						
NB2	NORSAR Subarra	69.83	341	P	P	08 18 48.8	-1.0
	comp=Z,1.3nm,0.7s,baz=28,slow=6.5						
HFS	Hagfors	70.02	339	P	P	08 18 49.7	-1.2
	comp=Z,4.6nm,0.7s,baz=56,slow=7.8,SNR=10.0						
KBZ	Khabaz	71.66	314	P	P	08 19 01.5	+0.4
	comp=Z,7.0nm,0.8s,baz=48,slow=5.4,SNR=11						
KBZ				pP	pP	08 19 14.6	+1.3
	comp=Z,8.4nm,0.8s,baz=82,slow=2.2,SNR=7.5						
AKASG	Malin Array Be	72.74	326	P	P	08 19 06.6	-0.9
	comp=Z,0.4nm,0.3s,baz=36,slow=4.9,SNR=6.1						
AKASG				pP	pP	08 19 19.0	-0.6
	comp=Z,1.5nm,0.6s,baz=34,slow=6.1,SNR=1.4						
TXAR	Lajitas Array	79.15	59	P	P	08 19 46.3	+1.8
	comp=Z,0.3nm,0.6s,baz=296,slow=3.7,SNR=6.4						
TXAR				pP	pP	08 19 59.4	+2.6
	comp=Z,0.4nm,0.7s,baz=300,slow=3.7,SNR=4.8						
BRTR	Keskin Array B	79.28	316	P	P	08 19 46.0	+0.8
	comp=Z,1.8nm,1.0s,baz=108,slow=2.7,SNR=3.8						
BRTR				pP	pP	08 19 58.1	+0.7
	comp=Z,1.9nm,0.8s,baz=46,slow=7.1,SNR=5.0						
GERES	GERESS Array B	79.87	333	P	P	08 19 48.1	0.0
	comp=Z,0.4nm,0.2s,baz=19,slow=5.7,SNR=4.8						
GERES				pP	pP	08 19 59.4	-1.1
	comp=Z,0.8nm,0.4s,baz=25,slow=6.6,SNR=3.3						

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*ISCJB **18** 08:09:43.7±0.5, 20°.77S±0°.02×178°.51W±0°.02, h512^{km}±5^{km}, mb5.4/413, Error ellipse: s-maj=3.9km s-min=2.7km az=158.1*

*BJI **18** 08:09:45.4, 20°.52S×178°.00W, h542^{km}, mb5.4/64, mB5.5/64*

*MOS **18** 08:09:45.7±0.8, 20°.68S×178°.52W, h533^{km}, mb5.5/61, Error ellipse: s-maj=8.1km s-min=6.9km az=77.8*

*GCMT **18** 08:09:46.2±0.1, 20°.78S×178°.49W, h544^{km}, MW5.9/133, Moment Tensor Solution. s133,c279; s93,c101; Duration: 2^{s}2 Moment tensor: Scale 10^{18}Nm; M$_{rr}$-0.56±.01; M$_{\theta\theta}$0.19±.01; M$_{\phi\phi}$0.36±.01; M$_{r\theta}$-0.59±.01; M$_{\theta\phi}$0.31±.01; M$_{\phi r}$-0.45±.01; Best double couple: M$_0$0.94000×10^{18} NP1:ϕ_s49.00000°,δ71.00000°, λ-82.00000°. NP2:ϕ_s204.00000°,δ20.00000°, λ-113.00000°. Principal axes: T 0.9460, Plg26.0000°, Azm133.0000°; N -0.0130, Plg8.0000°, Azm227.0000°; P -0.9340, Plg63.0000°, Azm332.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to mantle waves, cutoff=125s.*

*NEIC **18** 08:09:46.0±0.0, 20°.64S×178°.45W, h540^{km}, Moment Tensor Solution. s32 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-4.99; M$_{\theta\theta}$1.47; M$_{\phi\phi}$3.52; M$_{r\theta}$-4.72; M$_{\theta\phi}$3.24; M$_{\phi r}$-4.49; Best double couple: M$_0$8.50000×10^{17} NP1:ϕ_s45.00000°, δ70.00000°,λ-83.00000°. NP2:ϕ_s205.00000°,δ21.00000°, λ-108.00000°. Principal axes: T 8.8900, Plg24.0000°, Azm129.0000°; N -0.7800, Plg6.0000°, Azm222.0000°; P -8.1100, Plg64.0000°, Azm325.0000°;*

*NEIC **18** 08:09:46.2±0.4, 20°.87S×178°.51W, h537^{km}±4^{km}, mb5.5/299, MW6.0, MW5.9 Error ellipse: s-maj=3.4km s-min=2.4km az=144.0 Best double couple: NP1: ϕ_s50.00000°,δ72.00000°,λ-95.00000°. NP2:ϕ_s246.00000°, δ18.00000°,λ-75.00000°. Principal axes: T 1.0700, Plg27.0000°, Azm144.0000°; N -0.0400, Plg5.0000°, Azm52.0000°; P -1.0300, Plg63.0000°, Azm313.0000°;*

*IDC **18** 08:09:46.8±0.4, 20°.74S×178°.44W, h537^{km}±3^{km}, mb5.1/38, mb1 5.0/40, mb1mx5.0/45, mbtmp5.9/40 Error ellipse: s-maj=7.7km s-min=6.8km az=47.0*

*WEL **18** 08:09:46.0, 20°.87S×178°.51W, h537^{km}*

ISC 18 08:09:46.2±0.2, **20°.85S**±0°.03×**178°.41W**±0°.03, **h539**^{km}±2^{km}, **h540**^{km}**:pP-P, n1753,** σ1^{s}36/1987, **mb5.5**/410, **75C-92D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RIZ	Raoul Island	8.37	177	P	P	08 11 45.9	-1.3
RIZ				S	S	08 13 24.2	-2.3
RAO	Raoul Island	8.38	177	P	P	08 11 45.6	-1.6
	760nm,0.3s,baz=329,slow=5.7,SNR=17						
RAO				S	S	08 13 18.6	-8.0
	314nm,0.3s,baz=65,slow=12,SNR=6.3						
RAO	Raoul Island	8.38	177	*e*P	P	08 11 45.1	-2.1
RAO				*e*P	P	08 11 45.6	-1.6
RAO				*e*S	S	08 13 18.6	-8.0
RAO	Raoul Island	8.38	177	*e*P	P	08 11 45.1	-2.1
RAO				*e*S	S	08 13 18.7	-8.0
GLKZ	Green Lake	8.39	177	P	P	08 11 46.1	-1.2
GLKZ				S	S	08 13 25.6	-1.2
AFI	Afiamalu	9.36	44	P	P	08 11 54.2	-3.4
	39nm,0.3s,baz=82,slow=0.7,SNR=46						
AFI				S	S	08 13 35.5	-10
	26nm,0.3s,baz=209,slow=23,SNR=6.7						
AFI	Afiamalu	9.36	44	*e*P	P	08 11 54.1	-3.5
AFI				*e*		08 11 54.3	
AFI				*e*S	S	08 13 35.5	-10
FUNA	Funafuti	12.47	349	*e*P	P	08 12 28.2	-1.5
DZM	Mont Dzumac	14.16	262	P	P	08 12 47.7	+0.5
	16nm,0.3s,baz=82,slow=17,SNR=106						
DZM				S	S	08 15 16.5	+0.1
	baz=186,slow=17,SNR=6.4						
DZM	Mont Dzumac	14.16	262	*e*P	P	08 12 47.7	+0.5
	742nm,0.8s						
DZM	Mont Dzumac	14.16	262	*e*P	P	08 12 47.1	-0.1
DZM				*e*S	S	08 15 16.5	+0.1
OUZ	Omahuta	15.95	204	*e*P	P	08 13 06.3	+1.0
	174nm,0.5s						
MXZ	Matakaoa Point	16.90	189	*e*P	P	08 13 14.0	-0.3
	133nm,0.6s						
MKAZ	Moumakai	17.14	198	P	P	08 13 17.5	+1.0
HAZ	Te Kaha	17.17	190	P	P	08 13 16.6	-0.2
RUGZ	Raukumara Rang	17.39	190	P	P	08 13 18.0	-1.0
PUZ	Puketiti	17.40	189	P	P	08 13 18.9	-0.1
RAR	Rarotonga	17.40	95	P	P	08 13 19.2	0.0
	10nm,0.3s,baz=242,slow=7.0,SNR=39						
RAR	Rarotonga	17.40	95	*e*P	P	08 13 18.3	-0.9
	370nm,1.0s						
WHRZ	Whale Island	17.41	192	P	P	08 13 20.2	+1.1
TGRZ	Tauranga	17.45	194	P	P	08 13 21.3	+1.9
OPRZ	Ohinepanea	17.49	193	P	P	08 13 20.6	+0.8
MARZ	Manawahe	17.60	193	P	P	08 13 21.6	+0.8
KMRZ	Kaimai	17.63	195	P	P	08 13 22.8	+1.7
TOZ	Tahuroa Road	17.63	196	P	P	08 13 22.6	+1.6
EDRZ	Edgecumbe	17.70	193	P	P	08 13 22.2	+0.4
KARZ	Kaharoa	17.73	194	P	P	08 13 22.4	+0.4
URZ	Urewera	17.78	192	P	P	08 13 20.3	-2.1
	40nm,0.3s,baz=14,slow=4.0,SNR=102						
URZ				S	S	08 16 11.4	-7.1
	4.8nm,0.3s,baz=71,slow=18,SNR=6.9						
URZ				ScP	ScP	08 20 15.0	+1.0
	0.8nm,0.3s,baz=353,slow=5.4,SNR=4.4						
URZ	Urewera	17.78	192	*e*P	P	08 13 19.7	-2.6
	311nm,0.6s						
URZ				*e*P	P	08 13 20.3	-2.1
URZ				*e*S	S	08 16 11.4	-7.1
URZ	Urewera	17.78	192	P	P	08 13 19.7	-2.6
OMRZ	Omania	17.78	194	P	P	08 13 23.1	+0.6
MKRZ	Makatiti	17.79	193	P	P	08 13 24.5	+1.9
CNGZ	Carnagh Statio	17.82	189	P	S	08 16 36.9	+18
NGRZ	Ngongotaha	17.82	194	P	P	08 13 23.2	+0.4
TARZ	Mount Tarawera	17.88	193	P	P	08 13 24.1	+0.7
UTU	Utuhina	17.89	194	P	P	08 13 25.1	+1.7
HLRZ	Highlands Stat	17.93	194	P	P	08 13 24.3	+0.5
HSRZ	Hossack Road	18.01	194	P	P	08 13 25.5	+1.0
GRRZ	Galatos Road	18.07	194	P	P	08 13 26.5	+1.3
HRRZ	Handcock Road	18.07	194	P	P	08 13 25.4	+0.2
RIGZ	Rimuhau	18.10	190	P	P	08 13 23.8	-1.6
RTZ	Ruatahuna	18.15	192	P	S	08 16 22.6	-2.1
TLZ	Tolley Road	18.19	195	P	P	08 13 27.3	+1.1
WPRZ	Whakapapatarin	18.22	194	P	P	08 13 27.0	+0.5
KUTZ	Kaahu Road	18.27	195	P	P	08 13 28.0	+1.1
PRGZ	Paritu Road	18.29	189	P	P	08 13 28.2	+1.1
MTHZ	Maungataniwha	18.40	192	P	P	08 13 26.4	-1.8
WHTZ	Whakaora	18.41	194	P	P	08 13 29.2	+1.0
RAHZ	Arahi	18.42	191	P	P	08 13 26.5	-1.8
RAHZ	Arahi	18.42	191	P	S	08 16 26.4	-2.6
KNZ	Kokohu	18.42	190	P	P	08 13 27.5	-0.7
KNZ	Kokohu	18.42	190	P	S	08 16 32.2	+3.2
MRHZ	Matea Rd	18.47	193	P	P	08 13 27.0	-1.8
WATZ	Wairara	18.50	195	P	P	08 13 29.7	+0.6
MHGZ	Mahia Peninsul	18.52	189	P	P	08 13 29.6	+0.5
HIZ	Hauiti	18.54	197	*e*P	P	08 13 30.3	+1.0
	1μm,1.7s						
HIZ	Hauiti	18.54	197	P	P	08 13 31.6	+2.3
WHHZ	Waihua	18.55	191	P	P	08 13 29.6	+0.2
WHHZ	Waihua	18.55	191	P	S	08 16 28.3	-2.7
RATZ	Rangitukua	18.64	194	P	P	08 13 29.6	-0.8
NMHZ	Naumai	18.65	192	P	P	08 13 28.6	-1.8
NMHZ	Naumai	18.65	192	P	S	08 16 29.8	-3.0
RITZ	Rihia Road	18.73	194	P	P	08 13 30.6	-0.5
KATZ	Kakaramea	18.77	194	P	P	08 13 31.8	+0.3
ARHZ	Aropaoanui	18.77	191	P	P	08 13 30.1	-1.4
ARHZ	Aropaoanui	18.77	191	P	S	08 16 33.5	-1.2
BKZ	Black Stump Fm	18.77	192	*e*P	P	08 13 29.8	-1.7
	113nm,0.6s						
BKZ	Black Stump Fm	18.77	192	P	P	08 13 29.2	-2.4
KRVZ	Karewarewa	18.89	194	P	P	08 13 32.2	-0.5
TWVZ	Taurewa	18.92	195	P	P	08 13 32.6	-0.2
WTVZ	West Tongariro	18.92	195	P	P	08 13 32.4	-0.6
NGZ	Ngauruhoe	18.98	194	P	P	08 13 32.7	-0.8
MCHZ	McNeill Hill	19.00	192	P	P	08 13 31.6	-1.9
MCHZ	McNeill Hill	19.00	192	P	S	08 16 34.9	-3.5
COVZ	Chateau Observ	19.02	195	P	P	08 13 33.3	-0.5
KWHZ	Kaweka Forest	19.04	192	P	P	08 13 31.6	-2.4
KWHZ	Kaweka Forest	19.04	192	P	S	08 16 36.4	-2.7
TUVZ	Tukino	19.05	194	P	P	08 13 33.4	-0.8
FWVZ	Far West T-bar	19.07	194	P	P	08 13 33.6	-0.8
DRZ	Dome Shelter	19.08	194	P	P	08 13 35.8	+1.1
WHVZ	Whangaehu Hut	19.08	194	P	P	08 13 33.8	-0.8
TRVZ	Turoa	19.11	194	P	P	08 13 33.9	-0.9
KNTN	Kanton	19.11	21	*e*P	P	08 13 33.4	-1.4
	233nm,0.8s						
VRZ	Vera Road	19.14	196	P	P	08 13 36.4	+1.6
CKHZ	Cape Kidnapper	19.14	191	P	P	08 13 34.6	-0.2
PKVZ	Pokaka	19.15	195	P	P	08 13 33.7	-1.2
MOVZ	Moawhango	19.16	194	P	P	08 13 33.9	-1.2
BHHZ	Black Hill Sta	19.18	193	P	P	08 13 32.6	-2.6
MTVZ	Mangateitei	19.21	195	P	P	08 13 36.1	+0.6
MHEZ	Mangahewa	19.21	197	P	P	08 13 39.2	+3.7
KRHZ	Kereru	19.26	192	P	P	08 13 33.4	-2.5
KRHZ	Kereru	19.26	192	P	S	08 16 40.9	-1.7
KAHZ	Kahuranaki	19.31	191	P	P	08 13 35.7	-0.7
KAHZ	Kahuranaki	19.31	191	P	S	08 16 39.4	-4.1
DREZ	Durham Road	19.35	198	P	P	08 13 41.0	+4.3
PKE	Pukeiti	19.42	198	P	P	08 13 41.0	+3.7
KHEZ	Kahui Hut	19.50	198	P	P	08 13 41.3	+3.1
PREZ	Palmer Road	19.51	197	P	P	08 13 40.5	+2.3
PXZ	Pawanui	19.54	191	P	P	08 13 37.9	-0.6
PXZ	Pawanui	19.54	191	P	S	08 16 43.8	-3.2
PNHZ	Pukenui	19.55	192	P	P	08 13 37.1	-1.5
PNHZ	Pukenui	19.55	192	P	S	08 16 45.2	-2.1
NMEZ	Namu Road	19.65	198	P	P	08 13 42.6	+3.1
WPHZ	Waipukurau	19.65	192	P	P	08 13 39.0	-0.5
WPHZ	Waipukurau	19.65	192	P	S	08 16 51.1	+2.2
WAZ	Wanganui	19.68	195	P	P	08 13 39.0	-0.7
TSZ	Takapari Road	19.74	193	P	P	08 13 38.4	-1.9
PRHZ	Porangahau	19.81	191	P	P	08 13 40.5	-0.4
PRHZ	Porangahau	19.81	191	P	S	08 16 49.0	-2.4
DVHZ	Dannevirke	19.93	192	P	P	08 13 40.7	-1.3
DVHZ	Dannevirke	19.93	192	P	S	08 16 53.4	+0.1
ANWZ	Angora Road	20.03	191	P	P	08 13 41.8	-1.1
ANWZ	Angora Road	20.03	191	P	S	08 16 53.1	-1.8
POWZ	Post Office Ro	20.10	193	P	P	08 13 43.2	-0.3
POWZ	Post Office Ro	20.10	193	P	S	08 16 55.4	-0.7
PRWZ	Pori Road	20.22	192	P	P	08 13 44.1	-0.5
BFZ	Birch Farm	20.29	192	*e*P	P	08 13 43.5	-1.7
	128nm,0.5s						
BFZ	Birch Farm	20.29	192	P	P	08 13 43.4	-1.8
BFZ	Birch Farm	20.29	192	P	S	08 16 58.1	-0.9
BFZ				P	S	08 16 58.1	-0.9
MRZ	Mangatainoka R	20.40	193	P	P	08 13 44.2	-2.0
TIWZ	Tintock	20.45	192	P	S	08 17 02.6	+1.0
CPWZ	Castlepoint	20.52	192	P	S	08 16 56.8	-5.7
HOWZ	Holdsworth Sta	20.64	193	P	S	08 17 02.4	-2.3
MTW	Mount Morrison	20.89	193	P	S	08 17 06.6	-2.0
CAW	Cannon Point	20.94	194	P	S	08 17 05.9	-3.4
PAWZ	Paruwai Farm	21.13	193	P	S	08 17 09.3	-3.0
MSWZ	Moikau Station	21.20	193	P	S	08 17 10.0	-3.4
SNZO	South Karori	21.22	194	*e*P	P	08 13 52.4	-1.2
	88nm,0.6s						
TCW	Tory Channel	21.23	195	P	S	08 17 10.5	-3.3
PLWZ	Palliser	21.34	193	P	S	08 17 12.5	-3.3
TUWZ	Tuamarina	21.52	196	P	S	08 17 14.3	-4.0
CMWZ	Cape Campbell	21.75	195	P	S	08 17 21.0	-1.0
BSWZ	Blackbirch Sta	21.80	196	P	S	08 17 19.8	-3.1
THZ	Tophouse	22.11	197	*e*P	P	08 14 00.7	-1.0
	109nm,0.5s						
KHZ	Kahutara	22.55	196	*e*P	P	08 14 04.2	-1.3
	95nm,0.6s						
LHI	Lord Howe Isla	22.80	238	*e*P	P	08 14 09.0	+1.1
	176nm,0.8s						
LTZ	Lake Taylor	23.23	198	*e*P	P	08 14 10.1	-1.6
	92nm,0.7s						
LTZ				*e*S	S	08 17 44.4	-1.0
LTZ	Lake Taylor	23.23	198	P	P	08 14 09.9	-1.7
INZ	Inchbonnie	23.42	199	P	P	08 14 12.0	-1.2
TARA	Tarawa	23.64	338	*e*P	P	08 14 15.2	-0.5
	612nm,1.3s						
HNR	Honiara	23.74	295	P	P	08 14 16.3	-0.2
	274nm,0.7s,baz=52,slow=1.1,SNR=4.4						
HNR	Honiara	23.74	295	P	P	08 14 10.0	-6.5
HNR	Honiara	23.74	295	*e*P	P	08 14 16.3	-0.2
HNR				*e*P	P	08 14 16.4	-0.1
OXZ	Oxford	23.79	197	*e*P	P	08 14 15.1	-1.5
	186nm,0.5s						
OXZ	Oxford	23.79	197	P	P	08 14 15.5	-1.1
WVZ	Waitaha Valley	23.95	200	P	P	08 14 17.1	-0.9
MQZ	McQueen’s Vall	23.98	196	*e*P	P	08 14 17.4	-0.8
	119nm,1.5s						
MQZ				*e*S	S	08 17 55.0	-2.1
MQZ	McQueen’s Vall	23.98	196	P	P	08 14 16.9	-1.4
RPZ	Rata Peaks	24.44	199	P	P	08 14 20.9	-1.5
	54nm,0.5s,baz=1.6,slow=4.7,SNR=28						
RPZ	Rata Peaks	24.44	199	*e*P	P	08 14 20.9	-1.5
RPZ				*e*P	P	08 14 21.9	-0.4
RPZ	Rata Peaks	24.44	199	P	P	08 14 21.0	-1.4
FOZ	Fox Glacier	24.66	201	*e*P	P	08 14 23.0	-1.3
	172nm,1.3s						
FOZ	Fox Glacier	24.66	201	P	P	08 14 23.5	-0.8
LBZ	Lake Benmore	25.31	199	*e*P	P	08 14 29.0	-1.1
	32nm,0.6s						
LBZ	Lake Benmore	25.31	199	P	P	08 14 28.2	-1.8
JCZ	Jackson Bay	25.49	202	P	P	08 14 31.7	-0.1
ODZ	Otahua Downs	25.77	198	*e*P	P	08 14 33.5	-0.5
	87nm,1.6s						
ODZ				*e*pP	pP	08 16 05.8	+4.3
ODZ	Otahua Downs	25.77	198	P	P	08 14 32.9	-1.2
WKZ	Wanaka	26.08	201	*e*P	P	08 14 36.1	-0.7
	174nm,1.6s						
WKZ	Wanaka	26.08	201	P	P	08 14 35.3	-1.6
WKZ	Wanaka	26.08	201	P	S	08 18 28.3	-1.9
MSZ	Milford Sound	26.32	202	P	P	08 14 41.8	+3.0
EAZ	Earnscleugh	26.34	200	P	P	08 14 39.3	+0.1
MLZ	Mavora Lakes	26.85	201	*e*P	P	08 14 43.8	+0.1
	48nm,0.6s						
MLZ	Mavora Lakes	26.85	201	P	P	08 14 44.2	+0.5
TUZ	Tuapeka	26.89	199	P	P	08 14 44.0	0.0
TBI	Tubuai	26.92	101	*e*P	P	08 14 45.5	+1.0
	705nm,1.0s						
WHZ	Wether Hill Ro	27.37	201	*e*P	P	08 14 49.0	+0.8
	295nm,0.6s						
PAE	Paea	27.38	88	*e*P	P	08 14 49.2	+0.6
	52nm,1.1s						
PAE				*e*pP	pP	08 16 12.4	-4.4
	19nm,1.1s						
PAE				*e*ScP	ScP	08 20 39.0	-0.7
	8.9nm,0.9s						
PPT2	Papeete2	27.40	88	*e*P	P	08 14 49.4	+0.5
	342nm,1.1s						
PPT2				*e*pP	pP	08 16 12.1	-5.0
	183nm,1.3s						
PPT2				*e*ScP	ScP	08 20 39.2	-0.6
	92nm,1.1s						
PPT	Papeete	27.41	88	P	P	08 14 49.0	+0.1
	308nm,0.9s,baz=2.9,slow=5.8,SNR=22						
PPT				ScP	ScP	08 20 41.9	+2.2
	88nm,0.9s,baz=282,slow=3.9,SNR=7.4						
PPT	Papeete	27.41	88	*e*P	P	08 14 49.0	+0.1
PPT				*e*P	P	08 14 49.2	+0.4
PPT	Papeete	27.41	88	P	P	08 14 49.0	+0.1
PPT				pmax	pmax		
	comp=Z,308nm,0.9s						
PPT				pmax	pmax		
	comp=N,88nm,0.9s						
PPTF	Pamatai, Papee	27.41	88	*e*P	P	08 14 48.7	-0.3
	comp=N,498nm,1.2s						
TIAR	Tiarei	27.62	88	*e*P	P	08 14 51.3	+0.5
	comp=N,98nm,1.0s						
TVO	Taravao	27.67	89	*e*P	P	08 14 51.7	+0.5
	comp=N,104nm,1.5s						
EIDS	Eidsvold	28.39	255	P	P	08 14 57.7	+0.4
	baz=28,SNR=154						
EIDS	Eidsvold	28.39	255	*e*P	P	08 14 57.7	+0.4
	comp=N,172nm,0.6s						
ARMA	Armidale	28.57	244	P	P	08 15 00.4	+1.4
	baz=29,SNR=76						
ARMA	Armidale	28.57	244	*e*P	P	08 15 00.5	+1.4
	comp=N,73nm,0.7s						
PMOR	Pomariorio Ree	29.58	84	*e*P	P	08 15 08.2	+0.4
	comp=N,619nm,1.1s						
PMOR				*e*ScP	ScP	08 20 45.9	-0.8
	comp=N,158nm,1.1s						
MGCD	Mangrove Creek	29.70	239	P	P	08 15 10.1	+1.5
	baz=30,SNR=129						
VAH	Vaihoa	29.77	84	*e*P	P	08 15 09.4	0.0
	comp=N,384nm,1.1s						
RIV	Riverview	29.84	238	P	P	08 15 11.4	+1.6
	baz=30,SNR=15						
RMQ	Roma	30.54	253	P	P	08 15 16.8	+0.8
	baz=31,SNR=154						
XMAS	Kiritimati	30.65	45	*e*P	P	08 15 16.2	-0.8
	comp=N,310nm,1.0s						
CNB	Canberra Magne	31.71	236	P	P	08 15 26.8	+0.8
	baz=32,SNR=16						
CAN	Canberra	32.00	236	*e*P	P	08 15 29.2	+0.8
	comp=N,124nm,0.7s						
CAN	Canberra	32.00	236	*e*P	P	08 15 29.2	+0.8
CAN				pmax	pmax		
	comp=Z,125nm,0.7s						
YNG	Young	32.17	238	P	P	08 15 30.9	+1.0
	baz=32,SNR=26						
MILA	Mila	32.45	233	P	P	08 15 33.2	+1.0
	baz=33,SNR=28						
RABL	Rabaul	33.05	296	*e*P	P	08 15 37.2	-0.4
	comp=Z,237nm,0.7s						
CTAO	Charters Tower	33.08	265	*e*P	P	08 15 38.4	+0.7
	comp=Z,384nm,0.6s						
CTAO	Charters Tower	33.08	265	*e*P	P	08 15 38.4	+0.7
CTAO				pmax	pmax		
	comp=Z,384nm,0.6s						
CMSA	Cobar Meteorol	33.79	244	P	P	08 15 44.2	+0.6
	baz=34,SNR=295						
QLP	Quilpie	34.59	253	P	P	08 15 50.7	+0.4
	baz=35,SNR=189						
PMG	Port Moresby	35.05	284	P	P	08 15 54.6	+0.3
	comp=Z,627nm,0.7s,baz=83,slow=5.8,SNR=156						
PMG				PcP	PcP	08 18 11.1	0.0
	comp=Z,46nm,0.9s,baz=67,slow=4.7,SNR=3.5						
PMG				ScP	ScP	08 21 06.6	+0.9
	comp=Z,21nm,0.8s,baz=133,slow=19,SNR=3.7						
MTSU	Mount Surprise	35.19	268	P	P	08 15 56.0	+0.6
	baz=35,SNR=349						
TOO	Toolangi	35.38	234	P	P	08 15 57.6	+0.8
	baz=36,SNR=294						
PATS	Pohnpei	35.78	318	P	P	08 16 01.1	+0.8
	baz=36,SNR=14						
PATS	Pohnpei	35.78	318	*e*P	P	08 16 01.0	+0.7
	comp=Z,233nm,0.8s						
PATS				*e*PcP	PcP	08 18 15.0	+1.7
MOO	Moorlands	35.99	225	P	P	08 16 02.4	+0.7
	baz=36,SNR=4.3						
COEN	Coen	37.22	274	P	P	08 16 12.7	+0.5
	baz=37,SNR=96						
COEN	Coen	37.22	274	*e*P	P	08 16 12.8	+0.5
	comp=Z,174nm,0.8s						
STKA	Stephens Creek	37.29	244	P	P	08 16 13.4	+0.8
	comp=Z,147nm,0.6s,baz=90,slow=9.8,SNR=238						
STKA				ScP	ScP	08 21 17.0	+3.2
	comp=Z,13nm,0.8s,baz=44,slow=4.6,SNR=3.5						
STKA	Stephens Creek	37.29	244	P	P	08 16 13.4	+0.8
	baz=37,SNR=246						
STKA	Stephens Creek	37.29	244	*e*P	P	08 16 13.3	+0.8
	comp=Z,32nm,0.6s						
MCQ	Macquarie Isla	37.73	202	P	P	08 16 17.8	+2.1
	baz=38,SNR=5.0						
ARPS	Mount Arapiles	37.97	237	P	P	08 16 18.5	+0.4
	baz=38,SNR=66						
MANU	Manus Island	38.24	295	*e*P	P	08 16 21.1	+0.5
	comp=Z,279nm,0.8s						
TAOE	Nuku Hiva Isla	38.75	78	*e*P	P	08 16 25.7	+0.9
	comp=Z,330nm,1.2s						
QIS	Mount Isa	39.19	263	P	P	08 16 27.9	-0.3
	baz=39,SNR=121						
HTT	Hallett	39.73	242	P	P	08 16 32.8	+0.5
	baz=40,SNR=113						
RKT	Rikitea	40.23	101	*e*P	P	08 16 36.8	+0.3
	comp=Z,253nm,1.1s						
RKT				*e*ScP	ScP	08 21 24.8	-0.6
	comp=Z,132nm,1.1s						
BBOO	Buckleboo	42.05	244	P	P	08 16 50.9	+0.1
	baz=42,SNR=439						
BBOO	Buckleboo	42.05	244	*e*P	P	08 16 51.0	+0.2
	comp=Z,368nm,0.6s						
WAKE	Wake Island	42.48	339	*e*P	P	08 16 54.0	-0.3
	comp=Z,645nm,0.7s						
JAY	Jayapura	43.79	289	P	P	08 17 05.4	+0.7
AS01	Alice Springs	44.02	257	*e*P	P	08 17 06.4	0.0
AS31	Alice Springs	44.06	257	*e*P	P	08 17 06.9	+0.2
	comp=Z,129nm,0.6s						
AS31				*e*PcP	PcP	08 18 40.6	+0.3
ASAR	Alice Springs	44.07	257	P	P	08 17 06.9	+0.2
	comp=Z,523nm,0.7s,baz=99,slow=7.9,SNR=4052						
ASAR				PcP	PcP	08 18 40.6	+0.3
	comp=Z,90nm,0.7s,baz=108,slow=3.8,SNR=14						
ASAR				ScP	ScP	08 21 44.1	+3.2
	comp=Z,19nm,0.8s,baz=100,slow=3.7,SNR=7.2						
ASAR				S	S	08 22 58.3	-2.0
	comp=Z,20nm,0.7s,baz=93,slow=15,SNR=16						
ASAR				ScS	ScS	08 26 06.3	+0.6
	comp=Z,4.4nm,0.8s,baz=105,slow=6.5,SNR=4.8						
ASAR				P3KPbc		08 45 55.0	
	comp=Z,0.4nm,0.6s,baz=280,slow=3.5,SNR=6.6						
ASAR				PKP2bc		08 49 07.6	
	comp=Z,3.0nm,1.1s,baz=262,slow=4.0,SNR=8.0						
ASAR				P4KPbc		08 54 53.1	
	comp=Z,0.5nm,0.7s,baz=104,slow=4.5,SNR=5.8						
WB2	Warramunga Arr	44.16	262	*e*P	P	08 17 06.3	-1.1
WB2				*e*P	P	08 17 07.0	-0.5
WRAB	Tennant Creek	44.16	262	*e*P	P	08 17 07.1	-0.4
	comp=Z,290nm,0.8s						
WRAB				*e*S	S	08 22 59.9	-1.8
WRAB	Tennant Creek	44.16	262	*ce*P	P	08 17 06.9	-0.6
WRAB				pmax	pmax		
	comp=Z,257nm,0.7s						
WR1	Warramunga Arr	44.17	262	*e*P	P	08 17 07.0	-0.6
	comp=Z,459nm,0.7s						
WR1				*e*PcP	PcP	08 18 41.1	+0.4
WR1				*e*S	S	08 22 57.6	-4.2
WRA	Warramunga Arr	44.17	262	P	P	08 17 07.0	-0.6
	comp=Z,250nm,0.5s,baz=97,slow=8.9,SNR=1168						
WRA				PcP	PcP	08 18 41.1	+0.4
	comp=Z,40nm,0.9s,baz=95,slow=4.2,SNR=8.6						
WRA				ScP	ScP	08 21 44.2	+2.8
	comp=Z,18nm,1.0s,baz=91,slow=4.5,SNR=5.4						
WRA				S	S	08 22 57.6	-4.2
	comp=Z,35nm,0.9s,baz=95,slow=13,SNR=16						
WRA				PKP2bc		08 49 07.2	
	comp=Z,1.7nm,1.1s,baz=286,slow=3.9,SNR=5.9						
WRA	Warramunga Arr	44.17	262	P	P	08 17 07.0	-0.6

WRA						08 18 41.1	
WRA				S	S	08 22 57.6	-4.2
WRA				pmax	pmax		
	comp=Z,267nm,0.7s						
WRA				pmax	pmax		
	comp=Z,40nm,0.9s						
WRA				pmax	pmax		
	comp=N,18nm,1.0s						
WRA				smax	smax		
	comp=N,35nm,0.9s						
GENI	Genyem	44.23	289	P	P	08 17 07.6	-0.5
KKH	Kailua Kona	45.84	30	*e*P	P	08 17 20.0	-0.2
KKH	Kailua Kona	45.84	30	*e*P	P	08 17 20.0	-0.2
KHLU	Kahaluʻu	45.84	30	*e*P	P	08 17 20.6	+0.3
	comp=N,321nm,0.6s						
MLOA	Mauna Loa Obse	45.94	31	*e*P	P	08 17 21.3	-0.2
	comp=N,163nm,0.9s						
HUH	Hualalai	45.95	30	*e*P	P	08 17 21.7	+0.4
	comp=N,184nm,0.6s						
PUH	Pauahi	45.98	31	*e*P	P	08 17 21.7	+0.3
	comp=N,191nm,0.9s						
MLH	Mauna Loa	46.00	31	*e*P	P	08 17 22.1	+0.4
	comp=N,730nm,1.4s						
MLH	Mauna Loa	46.00	31	*e*P	P	08 17 22.1	+0.4
MLH				pmax	pmax		
	comp=Z,730nm,1.4s						
STCH	Steam Cracks	46.03	31	*e*P	P	08 17 22.1	+0.3
	comp=Z,253nm,0.8s						
HMH	Humuʻula Sheep	46.04	31	*e*P	P	08 17 22.5	+0.3
	comp=Z,461nm,0.7s						
POHA	Pohakuloa	46.15	31	*e*P	P	08 17 22.8	-0.1
	comp=Z,193nm,0.8s						
HPAH	Hawaii Prepara	46.31	30	*e*P	P	08 17 24.0	+0.2
	comp=Z,549nm,0.7s						
KEKH	Kekaha	46.32	24	*e*P	P	08 17 24.3	+0.5
	comp=Z,315nm,0.8s						
MHA	Mahukona	46.35	30	*e*P	P	08 17 24.9	+0.9
HON	Honolulu	46.42	27	*e*P	P	08 17 24.5	0.0
	comp=Z,246nm,0.7s						
HON	Honolulu	46.42	27	*e*P	P	08 17 24.5	0.0
HON				pmax	pmax		
	comp=Z,246nm,0.7s						
KIP	Kipapa	46.50	27	*e*P	P	08 17 25.5	+0.3
	comp=Z,161nm,0.8s						
KIP	Kipapa	46.50	27	*ce*P	P	08 17 26.2	+1.0
KIP				pmax	pmax		
	comp=Z,2µm,1.7s						
KHLH	Kahului Airpor	46.73	29	*e*P	P	08 17 27.2	+0.3
	comp=Z,241nm,0.8s						
OPA	Opana	46.74	26	*e*P	P	08 17 27.4	+0.4
	comp=Z,230nm,1.2s						
OPA	Opana	46.74	26	*e*P	P	08 17 27.4	+0.4
OPA				pmax	pmax		
	comp=Z,230nm,1.2s						
KDU	Kakadu	47.58	272	P	P	08 17 33.3	-0.1
	baz=48,SNR=194						
SRPI	Serui, Papua	48.05	287	P	P	08 17 37.4	+0.3
BAKI	Biak	48.48	288	P	P	08 17 40.2	0.0
MTN	Manton Dam	48.78	271	P	P	08 17 42.0	-0.5
	baz=49,SNR=100						
MTN	Manton Dam	48.78	271	*e*P	P	08 17 42.1	-0.5
	comp=Z,641nm,0.6s						
MTN				*e*S	S	08 24 05.2	-0.9
FORT	Forrest	48.80	247	P	P	08 17 42.2	-0.3
	baz=49,SNR=371						
FORT	Forrest	48.80	247	*e*P	P	08 17 42.2	-0.3
	comp=Z,474nm,0.6s						
FORT				*e*S	S	08 24 04.2	-1.7
WRKA	Warakurna	49.00	254	P	P	08 17 43.9	-0.1
	baz=49,SNR=536						
GUMO	Guam	49.73	310	P	P	08 17 49.7	+0.3
	comp=Z,561nm,0.8s,baz=178,slow=8.7,SNR=43						
GUMO	Guam	49.73	310	*e*P	P	08 17 49.7	+0.3
	comp=Z,686nm,0.8s						
RKPI	Ransiki, Papua	50.06	286	P	P	08 17 51.5	-0.4
SAUI	Saumlaki	50.16	277	P	P	08 17 53.7	+1.1
SAUI	Saumlaki	50.16	277	*e*P	P	08 17 53.2	+0.6
	comp=Z,1µm,0.8s						
KNRA	Kununurra	50.25	267	P	P	08 17 53.4	+0.1
	baz=50,SNR=155						
FAKI	Fak Fak	51.21	284	P	P	08 17 59.3	-1.0
FAKI	Fak Fak	51.21	284	*e*P	P	08 18 00.4	+0.1
	comp=Z,159nm,0.9s						
BNDI	Bandanaira	52.71	281	P	P	08 18 10.6	-0.5
SWI	Sorong	52.97	285	P	P	08 18 12.3	-0.6
MSAI	Masohi	54.07	281	P	P	08 18 20.7	0.0
KMBL	Kambalda	54.07	246	P	P	08 18 20.1	-0.4
	baz=54,SNR=16						
PALU	Palau	54.10	296	P	P	08 18 21.9	+1.0
	baz=54,SNR=20						
AAI	Ambon	54.61	281	P	P	08 18 23.5	-1.0
SOEI	Soe	56.13	272	P	P	08 18 35.3	0.0
SOEI	Soe	56.13	272	*e*P	P	08 18 37.0	+1.7
	comp=Z,2µm,0.6s						
LBMI	Labuha	56.47	284	P	P	08 18 37.0	-0.4
BATI	Baumata	56.55	271	P	P	08 18 38.1	0.0
TNTI	Ternate	57.18	285	P	P	08 18 42.6	+0.3
TNTI	Ternate	57.18	285	*e*P	P	08 18 42.6	+0.3
	comp=Z,480nm,0.9s						
SANI	Sanana	57.27	281	P	P	08 18 42.4	-0.6
	comp=Z,466nm,1.0s,comp=Z,5µm						
MBWA	Marble Bar	57.40	258	*e*P	P	08 18 43.5	-0.3
	comp=Z,403nm,0.7s						
MBWA	Marble Bar	57.40	258	P	P	08 18 43.8	0.0
	SNR=27						
MEEK	Meekatharra	57.44	251	P	P	08 18 43.4	-0.6
	baz=58,SNR=50						
SBA	Scott Base	57.50	184	*e*P	P	08 18 46.4	+3.0
	comp=Z,298nm,1.7s						
VNDA	Vanda	57.53	185	P	P	08 18 45.8	+2.1
	comp=Z,30nm,0.6s,baz=356,slow=7.7,SNR=245						
VNDA				pP	pP	08 20 31.9	+2.8
	comp=Z,17nm,1.1s,baz=8.4,slow=7.1,SNR=2.6						
VNDA				ScP	ScP	08 22 40.1	+2.3
	comp=Z,22nm,0.9s,baz=346,slow=3.8,SNR=11						
VNDA				S	S	08 26 04.8	+5.0
	comp=Z,0.8nm,0.9s,baz=207,slow=21,SNR=6.0						
KLBR	Kellerberrin	57.56	245	P	P	08 18 44.6	-0.1
	baz=58,SNR=19						
NWAO	Narrogin (SRO)	57.87	244	*e*P	P	08 18 46.9	+0.1
	comp=Z,98nm,0.8s						
NWAO	Narrogin (SRO)	57.87	244	*e*P	P	08 18 46.9	+0.1
NWAO				pmax	pmax		
	comp=Z,98nm,0.8s						
RKGY	Rocky Gully	57.94	242	P	P	08 18 48.0	+0.8
	baz=58,SNR=11						
MMRI	Maumere	58.38	273	*e*P	P	08 18 50.4	-0.2
	comp=Z,341nm,0.8s						
BLDU	Ballidu	58.56	246	P	P	08 18 51.3	-0.2
	baz=59,SNR=139						
MUN	Mundaring	58.83	245	P	P	08 18 53.5	+0.3
	baz=59,SNR=39						
MORW	Morawa	59.34	248	P	P	08 18 56.7	0.0
	baz=59,SNR=39						
LUWI	Luwuk	60.62	281	*e*P	P	08 19 05.3	-0.2
	comp=Z,542nm,0.9s						
CBIJ	Chichi jima	61.06	320	*e*P	P	08 19 07.4	-0.6
	comp=Z,282nm,0.9s						
JCJ	Chichijima	61.06	320	P	P	08 19 07.9	-0.1
	comp=Z,226nm,0.8s,baz=118,slow=16,SNR=14						
DAV	Davao City (W)	61.60	291	P	P	08 19 12.2	+0.4
	comp=Z,571nm,0.6s,baz=60,slow=2.5,SNR=14						
DAV	Davao City (W)	61.60	291	⇓*i*P	P	08 19 10.9	-0.9
DAV	Davao City (W)	61.60	291	*e*P	P	08 19 11.4	-0.4
	comp=Z,572nm,0.8s						
DAV	Davao City (W)	61.60	291	P	P	08 19 12.8	+1.0
	SNR=8.0						
GIRL	Giralia	62.09	255	P	P	08 19 16.0	+1.1
	baz=62,SNR=43						
SKMP	Bagumbayan, Su	62.25	290	*e*P	P	08 19 15.8	-0.3
BUKP	Musuan	62.43	291	*e*P	P	08 19 18.1	+0.8
BUTP	Butuan	62.46	293	*e*P	P	08 19 17.9	+0.4
RPN	Rapa Nui	62.73	111	P	P	08 19 21.3	+2.3
	comp=Z,208nm,0.9s,baz=272,slow=6.1,SNR=4.3						
CASY	Casey	63.48	205	*e*P	P	08 19 24.0	+0.9
	comp=Z,126nm,0.9s						
MSLP	Maasin	63.68	293	*e*P	P	08 19 25.3	0.0
PAGZ	Pagadian	63.88	290	*e*P	P	08 19 27.1	+0.5
PLP	Palo	64.09	294	⇓*e*P	P	08 19 27.1	-0.8
OCLP	Ormoc	64.35	294	*e*P	P	08 19 29.8	+0.3
LLP	Lapu-Lapu	64.54	293	⇓*e*P	P	08 19 30.4	-0.3
CNP	Catarman	65.02	295	*e*P	P	08 19 34.3	+0.6
PVCP	Virac	65.99	296	*e*P	P	08 19 40.1	+0.3
JAGI	Jajag, Banyuwa	66.00	270	*e*P	P	08 19 38.9	-1.0
	comp=Z,294nm,0.8s						
RCP	Roxas	66.19	294	⇓*e*P	P	08 19 40.9	-0.1
JHJ2	Mitsune	66.86	323	*e*P	P	08 19 45.4	+0.6
	comp=Z,955nm,1.0s						
JHJ	Hachijo jima 2	66.88	323	P	P	08 19 44.7	-0.2
	comp=Z,366nm,0.4s,baz=175,slow=7.2,SNR=40						
OTRP	Odiongan	67.19	294	*e*P	P	08 19 47.2	0.0
SJMP	San Jose	68.01	294	*e*P	P	08 19 52.9	+0.7
GRJI	Gresik	68.07	271	P	P	08 19 53.5	+0.8
	comp=Z,276nm,0.8s,comp=Z,2µm						
PWJI	Pagerwojo	68.34	269	P	P	08 19 54.1	-0.2
	comp=Z,256nm,0.8s,comp=Z,2µm						
TBJI	Tambak Boyo	68.70	271	P	P	08 19 57.5	+1.0
	comp=Z,278nm,0.9s,comp=Z,3µm						
PCJI	Pacitan	68.87	269	P	P	08 19 57.8	+0.3
	comp=Z,766nm,1.0s,comp=Z,6µm						
TGY	Tagaytay City	68.96	295	P	P	08 19 57.9	-0.1
	comp=Z,572nm,0.8s,baz=262,slow=1.5,SNR=11						
QSPA	South Pole Qui	69.22	180	P	P	08 20 00.5	+1.6
	comp=Z,111nm,0.6s,baz=32,slow=1.4,SNR=444						
QSPA				pP	pP	08 21 49.1	-0.6
	comp=Z,26nm,1.0s,baz=10,slow=3.5,SNR=3.7						
QSPA				S	S	08 28 24.4	+2.4
	comp=Z,7.3nm,1.1s,baz=251,slow=23,SNR=11						
QSPA	South Pole Qui	69.22	180	*e*P	P	08 20 00.3	+1.5
	comp=Z,119nm,0.6s						
QSPA				*e*P	P	08 20 00.5	+1.6
QSPA				*e*pP	pP	08 21 49.1	-0.6
QSPA				*e*S	S	08 28 24.4	+2.4
KKM	Kota Kinabalu	69.48	285	P	P	08 20 02.0	+0.7
UGM	Wanagama	69.57	269	P	P	08 20 02.3	+0.5
	comp=Z,305nm,1.0s						
UGM	Wanagama	69.57	269	*e*P	P	08 20 01.6	-0.2
	comp=Z,188nm,0.7s						
SMRI	Semarang	69.94	270	P	P	08 20 04.6	+0.7
	comp=Z,245nm,0.8s,comp=Z,5µm						
SMRI	Semarang	69.94	270	*e*P	P	08 20 04.1	+0.2
	comp=Z,155nm,0.7s						
INU	Inuyama	70.07	322	*e*P	P	08 20 04.2	0.0
	comp=Z,98nm,1.0s						
JOW	Kunigami	70.10	310	P	P	08 20 05.4	+0.9
	comp=Z,186nm,0.7s,baz=152,slow=5.5,SNR=42						
JOW	Kunigami	70.10	310	*e*P	P	08 20 05.4	+0.9
	comp=Z,260nm,0.9s						
MJAR	Matsushiro Arr	70.26	324	P	P	08 20 05.1	-0.3
	comp=Z,60nm,0.8s,baz=166,slow=5.9,SNR=126						
MJAR				PKP2bc		08 47 59.5	
	comp=Z,2.0nm,1.1s,baz=288,slow=4.0,SNR=5.3						
MJAR	Matsushiro Arr	70.26	324	P	P	08 20 05.1	-0.3
MJAR				pmax	pmax		
	comp=Z,67nm,0.8s						
MAJO	Matsushiro	70.27	324	*e*P	P	08 20 04.7	-0.6
	comp=Z,81nm,0.8s						
MAJO	Matsushiro	70.27	324	*d* *i*P	P	08 20 05.2	-0.2
MAJO				pmax	pmax		
	comp=Z,87nm,0.9s						
MAT	Matsushiro	70.27	324	P	P	08 20 05.1	-0.3
MAT				S	S	08 28 32.4	-2.1
MJB9	Matsu-Tunnel	70.27	324	*e*P	P	08 20 05.3	-0.1
	comp=Z,82nm,0.8s						
PBKI	Pangkalan Bun	70.28	275	P	P	08 20 07.7	+1.7
	comp=Z,424nm,1.0s						
MIR	Mirnyy	70.51	205	⇓*i*P	P	08 20 09.0	+2.7
MIR				pmax	pmax		
	comp=Z,126nm,1.0s						
ERM	Erimo	71.94	331	*e*P	P	08 20 16.6	+1.6
	comp=Z,58nm,0.9s						
ERM	Erimo	71.94	331	*c* *i*P	P	08 20 15.7	+0.7
ERM				pmax	pmax		
	comp=Z,59nm,0.9s						
CISI	Cisompet, Garu	72.22	269	*e*P	P	08 20 16.3	-1.1
JNU	Nakatsue	72.27	317	P	P	08 20 17.4	+0.2
	comp=Z,200nm,0.9s,baz=98,slow=3.6,SNR=50						
JNU	Nakatsue	72.27	317	*e*P	P	08 20 17.4	+0.2
	comp=Z,327nm,1.1s						
YUK	Yuzh-Kuril'sk	72.39	334	*i* P	P	08 20 02.6	-15
YUK				*e*PPP	PPP	08 24 57.0	
YUK				S	S	08 29 00.7	+2.7
YUK				*e*SS	SS	08 33 46.1	-5.5
YUK				*e*SSS	SSS	08 37 12.5	
YUK				pmax	pmax		
	comp=E,119nm,1.5s						
YUK				pmax	pmax		
	comp=N,251nm,1.4s						
KIWB	Kanaga Island	72.40	1	*e*P	P	08 20 16.8	-0.6
KUR	Kuril'sk	72.58	336	*d* *i*P	P	08 20 19.1	+0.5
KUR				*e*		08 23 09.7	
KUR				*e*S	S	08 29 02.3	+2.2
KUR				pmax	pmax		
	comp=Z,363nm,1.5s						
KUR				pmax	pmax		
	comp=E,84nm,1.0s						
KUR				pmax	pmax		
	comp=N,62nm,1.3s						
KUR				pmax	pmax		
	comp=Z,2µm,4.9s						
KUR				MLR	MLR		
	comp=Z,171nm,12.0s						
YOJ	Yonaguni jima	72.62	305	*e*P	P	08 20 19.2	-0.1
	comp=Z,349nm,0.8s						
YOJ	Yonaguni jima	72.62	305	*e*P	P	08 20 19.2	-0.1
YOJ				pmax	pmax		
	comp=Z,349nm,0.8s						
GSTR	Great Sitkin T	72.66	2	*e*P	P	08 20 17.1	-1.9
KSM	Kuching	73.08	278	P	P	08 20 24.0	+1.7
TWG	Pinlang	73.25	303	*e*P	P	08 20 21.4	-1.6
	comp=Z,582nm,0.7s						
YULB	Yu-li	73.37	304	*e*P	P	08 20 22.3	-1.4
	comp=Z,73nm,0.7s						
NACB	Ninganchiao	73.56	304	*e*P	P	08 20 24.2	-0.5
	comp=Z,287nm,0.9s						
SMY	Shemya	73.56	355	*e*P	P	08 20 23.3	-0.7
	comp=Z,341nm,0.9s						
SMY	Shemya	73.56	355	*e*P	P	08 20 23.3	-0.7
SMY				pmax	pmax		
	comp=Z,341nm,0.9s						
TPUB	Ta-pu	73.84	303	*e*P	P	08 20 25.3	-1.1
	comp=Z,608nm,0.8s						
SSLB	Suanglung	73.85	304	*e*P	P	08 20 25.1	-1.4
	comp=Z,166nm,0.8s						
ASAJ	Asahikawa	73.85	332	P	P	08 20 27.6	+1.7
	comp=Z,170nm,0.9s,baz=207,slow=7.8,SNR=74						
ASAJ	Asahikawa	73.85	332	*e*P	P	08 20 27.2	+1.3
	comp=Z,212nm,1.0s						
NIKH	Nikolski High	73.98	6	*e*P	P	08 20 25.0	-1.4
	comp=Z,911nm,1.0s						
YHNB	Yeheng	73.99	305	*e*P	P	08 20 26.9	-0.4
	comp=Z,178nm,0.8s						
TATO	Taipei	74.07	305	*e*P	P	08 20 27.4	-0.1
	comp=Z,341nm,0.9s						
SKR	Severo-Kuril's	74.68	344	*e*P	P	08 20 28.5	-1.9
SKR				*e*		08 23 20.9	
SKR				*e*S	S	08 29 28.2	+5.3
SKR				pmax	pmax		
	comp=Z,164nm,1.4s						
SKR				pmax	pmax		
	comp=Z,1µm,5.1s						
SKR				MLR	MLR		
	comp=Z,300nm,18.0s						
SKR				MLR	MLR		
	comp=Z,600nm,20.0s						
UNV	Unalaska Valle	75.09	7	*e*P	P	08 20 31.8	-0.8
	comp=Z,270nm,0.6s						
AKUT	Akutan	75.47	8	*e*P	P	08 20 33.8	-0.9
	comp=Z,204nm,1.0s						
YSS	Yuzh-Sakhalins	76.04	334	*e*P	P	08 20 39.2	+1.2
	comp=Z,208nm,1.1s						
PET	Petropavlovsk	76.21	346	*e*P	P	08 20 38.6	-0.3
	comp=Z,64nm,0.8s						
PET	Petropavlovsk	76.21	346	κ *i*P	P	08 20 38.2	-0.7
PET				*e**PP	pP	08 22 35.2	+2.4
PET				*i* *SP	sP	08 23 26.5	-1.8
PET				*i* S	S	08 29 39.3	+0.1
PET				*e*PS		08 30 22.2	
PET				*e*SS	SS	08 34 52.8	+4.1
PET				pmax	pmax		
	comp=Z,99nm,0.8s						
PET				pmax	pmax		
	comp=Z,1µm,4.9s						
PET				pmax	pmax		
	comp=Z,700nm,13.3s						
QZH	Quanzhou	76.28	304	⇓*i*P	P	08 20 40.8	+0.8
QZH				sP	sP	08 23 27.3	-2.1
QZH				S	S	08 29 41.6	+0.4
QZH				sS	sS	08 33 10.3	+6.0
QZH				pmax	pmax		
	comp=Z,160nm,0.9s						
QZH				pmax	pmax		
	comp=Z,850nm,6.2s						
FALS	False Pass	76.48	9	*e*P	P	08 20 39.9	-0.5
	comp=Z,310nm,0.6s						
PEA0B	Petropavlovsk-	76.51	345	*e*P	P	08 20 40.6	+0.1
	comp=Z,339nm,1.1s						
PETK	Petropavlovsk-	76.51	345	P	P	08 20 40.8	+0.2
	comp=Z,147nm,0.8s,baz=108,slow=9.3						
PETK	Petropavlovsk-	76.51	345	*e*P	P	08 20 40.3	-0.3
PETK	Petropavlovsk-	76.51	345	*e*P	P	08 20 40.3	-0.3
PEA1	Petropavlovsk-	76.52	345	*e*P	P	08 20 40.8	+0.2
TJN	Taejon	76.57	318	*de*P	P	08 20 40.5	-0.8
KSRS	Korea Array	76.89	319	P	P	08 20 43.8	+0.8
	comp=Z,45nm,0.9s,baz=141,slow=6.3,SNR=123						
KSRS	Korea Array	76.89	319	P	P	08 20 43.8	+0.8
KSRS				pmax	pmax		
	comp=Z,47nm,0.9s						
KS15	Wonju Array Si	76.91	319	*e*P	P	08 20 43.8	+0.6
KSAR	Wonju Array Be	76.91	319	P	P	08 20 43.8	+0.7
KSAR	Wonju Array Be	76.91	319	P	P	08 20 43.8	+0.7
KS01	Wonju Array Si	76.93	319	*e*P	P	08 20 43.3	+0.1
SDPT	Sand Point	77.42	10	*e*P	P	08 20 44.9	-0.5
SSE	Sheshan	77.62	310	P	P	08 20 47.4	+0.3
SSE				S	S	08 29 57.9	+2.8
SSE				pmax	pmax		
	comp=Z,29nm,1.0s						
SSE				pmax	pmax		
	comp=Z,350nm,6.2s						
INCN	Inchon	77.71	318	*e*P	P	08 20 48.4	+0.9
	comp=Z,139nm,1.1s						
INCN	Inchon	77.71	318	*e*P	P	08 20 48.4	+0.9
INCN				pmax	pmax		
	comp=Z,139nm,1.1s						
SNCC	San Nicolas Is	77.76	47	P	P	08 20 49.4	+1.5
	baz=235						
MNAI	Manna	77.85	270	*e*P	P	08 20 48.7	-0.1
	comp=Z,424nm,0.8s						
SPIA	Saint Paul Isl	78.03	5	*e*P	P	08 20 48.7	0.0
	comp=Z,416nm,1.0s						
SCZ2	Santa Cruz Isl	78.12	47	P	P	08 20 50.8	+1.0
	baz=235,SNR=9.4						
SCI2	San Clemente I	78.29	48	P	P	08 20 51.9	+1.2
	baz=236,SNR=16						
SBC	Santa Barbara	78.32	46	P	P	08 20 52.0	+1.2
	baz=235						
BSMM	Soledad Missio	78.33	44	*e*P	P	08 20 52.5	+1.6
MSHR	Mys Shultsa	78.38	324	*ce*P	P	08 20 52.0	+1.1
MCCM	Marconi Confer	78.48	42	*e*P	P	08 20 52.6	+1.0
	comp=Z,216nm,1.4s						
PKM	Mcpherson Peak	78.51	46	P	P	08 20 53.5	+1.4
	baz=234,SNR=29						
SAO	San Andreas Ge	78.54	43	*e*P	P	08 20 52.9	+0.9
	comp=Z,106nm,1.0s						
SAO	San Andreas Ge	78.54	43	*e*P	P	08 20 52.9	+0.9
SAO				pmax	pmax		
	comp=Z,106nm,1.0s						
BLG	Laguna Peak, P	78.57	47	P	P	08 20 52.9	+0.7
	baz=235						
BVL	Bear Valley	78.60	44	*e*P	P	08 20 53.7	+1.4
CIS	Catalina Islan	78.61	48	P	P	08 20 53.4	+0.9
	baz=236,SNR=10						
PMPB	Monarch Peak	78.64	44	*e*P	P	08 20 53.5	+0.9
	comp=Z,154nm,1.4s						
SMMC	Simmler	78.64	45	P	P	08 20 54.0	+1.5
	baz=234,SNR=9.3						
CHGN	Chignik	78.69	11	*e*P	P	08 20 51.8	-0.4
	comp=Z,285nm,0.9s						
PAGB	Antelope Grade	78.71	45	*e*P	P	08 20 54.5	+1.6
	comp=Z,88nm,1.2s						
FMP	Fort Macarthur	78.87	47	P	P	08 20 55.1	+1.3
	baz=236						
HOPS	Hopland Field	78.88	41	*e*P	P	08 20 55.1	+1.4
	comp=Z,201nm,1.1s						
GDXM	Geysers	78.94	41	*e*P	P	08 20 55.2	+1.1
	comp=Z,66nm,1.1s						
KCPM	Cahto Peak	79.01	40	*e*P	P	08 20 56.1	+1.6
	comp=Z,200nm,1.1s						
USA0B	Ussuriysk Arra	79.04	326	*e*P	P	08 20 55.4	+1.0
	comp=Z,197nm,1.2s						
USRK	Ussuriysk Ar.	79.04	326	P	P	08 20 55.2	+0.8
	comp=Z,74nm,0.9s,baz=128,slow=4.0						
NAPC	Atlas Peak	79.05	42	*e*P	P	08 20 56.2	+1.5
OSI	Osito Audit: C	79.09	46	P	P	08 20 56.3	+1.3
	baz=235						
OSI	Osito Audit: C	79.09	46	*e*P	P	08 20 56.1	+1.1
	comp=Z,61nm,1.1s						
DECC	Green Verdugo	79.15	47	P	P	08 20 56.0	+0.7
	baz=236,SNR=6.6						
MYKOM	Kota Tinggi	79.19	276	P	P	08 20 57.0	+1.1
TYV	Tymovskoe	79.20	336	*e*P	P	08 20 55.8	+0.7
TYV				*e*S	S	08 30 05.6	-5.1
TYV				pmax	pmax		
	comp=Z,160nm,1.2s						
TYV				pmax	pmax		
	comp=Z,1µm,5.4s						
TYV				smax	smax		
	comp=N,300nm,5.0s						
PASC	Pasadena Art C	79.21	47	*e*P	P	08 20 56.4	+0.8
	comp=N,54nm,1.0s						
109C	Camp Elliot, M	79.24	49	P	P	08 20 56.8	+1.0
	baz=237,SNR=7.7						
CPE	Camp Elliot	79.24	49	*e*P	P	08 20 57.0	+1.2
	comp=N,116nm,1.4s						
KMRM	Mail Ridge	79.27	39	*e*P	P	08 20 57.5	+1.6
	comp=N,356nm,0.9s						
ARVC	Arvin	79.31	46	P	P	08 20 57.2	+1.1
	baz=235,SNR=14						
MWC	Mount Wilson	79.32	47	*e*P	P	08 20 57.3	+0.9
	comp=N,71nm,1.0s						
MWC	Mount Wilson	79.32	47	*e*P	P	08 20 57.3	+0.9
MWC				pmax	pmax		
	comp=Z,71nm,1.0s						
BAR	Barrett	79.43	49	*e*P	P	08 20 57.8	+1.0
	comp=Z,149nm,1.8s						
JCC	Jacoby Creek,	79.45	39	*e*P	P	08 20 57.7	+1.0
	comp=Z,181nm,1.4s						
VES	Vestal, Richgr	79.55	45	P	P	08 20 58.1	+0.9
	baz=235,SNR=31						
GZH	Guangzhou	79.56	300	P	P	08 20 58.9	+1.3
GZH				sP	sP	08 23 50.0	+2.0
GZH				S	S	08 30 25.9	+10
GZH				pmax	pmax		
	comp=Z,1µm,6.7s						
MURC	Murrieta	79.57	48	P	P	08 20 58.6	+1.1
	baz=236,SNR=20						
BFSC	Mount Baldy Ra	79.61	47	P	P	08 20 58.5	+0.7
	baz=236,SNR=21						
MONP2	Monument Peak	79.73	49	P	P	08 20 60.0	+1.4
	baz=237,SNR=48						
EDW2	Edwards Air Fo	79.73	47	P	P	08 20 59.5	+1.1
	baz=236,SNR=74						
SII	Sitkinak Islan	79.77	13	*e*P	P	08 20 58.5	+0.4
	comp=Z,518nm,0.9s						
NJ2	Nanjing	79.81	310	*e*P	P	08 20 59.8	+1.1
NJ2				sP	sP	08 23 48.4	-0.7
NJ2				S	S	08 30 22.3	+4.5
NJ2				SS	SS	08 35 44.3	+1.3
NJ2				pmax	pmax		
	comp=Z,120nm,1.1s						
NJ2				pmax	pmax		
	comp=Z,1µm,3.7s						
IKP	In-Ko-Pah, Jac	79.82	49	P	P	08 21 00.3	+1.4
	baz=237,SNR=30						
ISA	Isabella, Lake	79.85	46	P	P	08 21 00.3	+1.3
	baz=235,SNR=78						
ISA	Isabella, Lake	79.85	46	*e*P	P	08 20 60.0	+1.0
	comp=Z,181nm,1.5s						
ISA	Isabella, Lake	79.85	46	*e*P	P	08 21 00.0	+1.0
ISA				pmax	pmax		
	comp=Z,181nm,1.5s						
LPIG	La Paz	79.92	59	P	P	08 21 00.5	+1.0
	comp=Z,18nm,1.0s,baz=333,slow=3.8,SNR=3.6						
FRD	Ford Ranch, An	79.93	48	P	P	08 21 00.6	+1.2
	baz=237,SNR=46						
SRIG	Santa Rosalia	79.94	56	*e*P	P	08 20 59.9	+0.3
	comp=Z,164nm,1.6s						
CMB	Columbia Colle	79.98	43	*e*P	P	08 21 00.5	+0.9
	comp=Z,120nm,1.3s						
CMB	Columbia Colle	79.98	43	*e*P	P	08 21 00.5	+0.9
CMB				pmax	pmax		
	comp=Z,120nm,1.3s						
SLBS	Sierra La Lagu	80.01	60	*e*P	P	08 21 01.8	+1.7
	comp=Z,70nm,1.4s						
PFO	Pinyon Flats O	80.09	48	P	P	08 21 01.5	+1.1
	baz=237,SNR=18						
PFO	Pinyon Flats O	80.09	48	*e*P	P	08 21 01.4	+1.1
	comp=Z,61nm,1.3s						
PFO	Pinyon Flats O	80.09	48	*e*P	P	08 21 01.4	+1.0

PFO				pmax	pmax		
	comp=Z,61nm,1.3s						
XPFO	Piæon Flat	80.09	48	*e*P	P	08 21 01.4	+1.0
	comp=Z,60nm,1.3s						
BBRC	Big Bear Solar	80.13	48	P	P	08 21 01.6	+0.9
	baz=236						
AFDM	Forest Hills D	80.15	42	*e*P	P	08 21 01.3	+0.8
	comp=Z,79nm,1.1s						
WDC	Whiskeytown Da	80.19	40	*e*P	P	08 21 01.9	+1.4
	comp=Z,182nm,1.3s						
ORV	Oroville	80.19	41	*e*P	P	08 21 01.8	+1.2
	comp=Z,73nm,1.0s						
ORV	Oroville	80.19	41	*e*P	P	08 21 01.8	+1.2
ORV				pmax	pmax		
	comp=Z,73nm,1.0s						
SWSC	Sam W. Stewart	80.19	49	P	P	08 21 02.0	+1.3
	baz=237,SNR=15						
KBO	Bosley Butte	80.23	38	*e*P	P	08 21 01.4	+0.5
	comp=Z,175nm,1.3s						
LRMC	Laurel Mtn Rad	80.28	46	P	P	08 21 02.4	+1.0
	baz=236,SNR=6.1						
N02D	Trinity Center	80.33	39	P	P	08 21 03.2	+1.7
	baz=232,SNR=81						
RRX	Edison Barstow	80.41	47	P	P	08 21 02.9	+1.0
	baz=236						
O03D	Paynes Creek	80.46	40	P	P	08 21 03.2	+1.1
	baz=232,SNR=86						
O03D	Paynes Creek	80.46	40	*e*P	P	08 21 03.1	+1.1
M02C	Callahan	80.50	39	P	P	08 21 04.2	+1.9
	baz=231,SNR=107						
L02D	Cave Junction,	80.55	38	P	P	08 21 04.1	+1.7
	baz=231,SNR=18						
CWC	Cottonwood Cre	80.56	45	P	P	08 21 03.8	+1.0
	baz=235						
MDPB	Devils Postpil	80.58	44	*e*P	P	08 21 04.1	+1.1
	comp=Z,97nm,1.0s						
MDJ	Mudanjiang	80.58	325	P	P	08 21 01.0	-1.5
MDJ				pP	pP	08 22 56.1	-2.0
MDJ				sP	sP	08 23 51.3	-1.8
MDJ				S	S	08 30 28.1	+2.9
MDJ				sS	sS	08 33 52.4	+1.2
MDJ				SS	SS	08 35 59.8	+5.8
MDJ				pmax	pmax		
	comp=Z,150nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,2µm,5.7s						
MDJ	Mudanjiang	80.58	325	*e*P	P	08 21 03.8	+1.3
	comp=Z,174nm,1.1s						
KEBM	Edson Butte	80.59	37	*e*P	P	08 21 03.7	+1.1
	comp=Z,95nm,1.0s						
OMMB	Old Mammoth Mi	80.62	44	*e*P	P	08 21 04.3	+1.0
	comp=Z,91nm,1.3s						
BELC	Belle Mtn. Jos	80.62	48	P	P	08 21 04.4	+1.2
	baz=237,SNR=56						
QIZ	Qiongzhong	80.65	294	P	P	08 21 01.9	-1.5
QIZ				pP	pP	08 23 03.4	+4.4
QIZ				sP	sP	08 23 49.3	-4.8
QIZ				S	S	08 30 30.8	+3.9
QIZ	Qiongzhong	80.65	294	sS	sS	08 34 05.4	+13
QIZ				pmax	pmax		
	comp=Z,31nm,1.0s						
QIZ				pmax	pmax		
	comp=Z,610nm,8.2s						
QIZ	Qiongzhong	80.65	294	P	P	08 21 03.5	+0.1
QIZ				pP	pP	08 23 02.4	+3.4
QIZ				S	S	08 30 29.3	+2.4
QIZ				pmax	pmax		
	comp=Z,610nm,7.8s						
QIZ	Qiongzhong	80.65	294	*e*P	P	08 21 04.6	+1.2
	comp=Z,37nm,1.1s						
MPMC	Manual Prospec	80.73	46	P	P	08 21 05.1	+1.3
	baz=236,SNR=70						
MLAC	Mammoth, Mammo	80.74	44	P	P	08 21 05.1	+1.3
	baz=235,SNR=14						
GSC	Goldstone, Bar	80.78	47	P	P	08 21 04.7	+0.9
	baz=236,SNR=52						
GSC	Goldstone, Bar	80.78	47	*e*P	P	08 21 04.8	+0.9
	comp=Z,111nm,1.4s						
GSC	Goldstone, Bar	80.78	47	*e*P	P	08 21 04.8	+0.9
GSC				pmax	pmax		
	comp=Z,111nm,1.4s						
DAC	Darwin (Calif)	80.79	46	*e*P	P	08 21 05.0	+1.0
	comp=Z,32nm,1.0s						
DAC	Darwin (Calif)	80.79	46	*e*P	P	08 21 05.0	+1.0
DAC				pmax	pmax		
	comp=Z,32nm,1.0s						
YBH	Yreka Blue Hor	80.80	39	P	P	08 21 05.7	+1.9
	comp=Z,80nm,0.7s,baz=162,slow=3.0,SNR=319						
YBH	Yreka Blue Hor	80.80	39	*e*P	P	08 21 05.3	+1.5
	comp=Z,120nm,0.9s						
YBH	Yreka Blue Hor	80.80	39	*e*P	P	08 21 05.3	+1.5
YBH				pmax	pmax		
	comp=Z,120nm,0.9s						
TIN	Tinemaha, Big	80.80	45	P	P	08 21 05.2	+1.2
	baz=235,SNR=20						
BC3	Big Chuckawall	80.82	49	P	P	08 21 05.6	+1.5
	baz=238,SNR=30						
HEC	Hector,Ludlow	80.84	47	P	P	08 21 05.2	+1.0
	baz=237,SNR=26						
WAKR	Walker	80.86	43	*e*P	P	08 21 05.7	+1.4
	comp=Z,210nm,1.3s						
LGBM	Gray Butte	80.86	39	*e*P	P	08 21 05.8	+1.4
GLA	Glamis	80.94	50	P	P	08 21 06.5	+1.8
	baz=238,SNR=28						
GLA	Glamis	80.94	50	*e*P	P	08 21 06.5	+1.8
	comp=Z,125nm,1.1s						
LBCM	Butte Creek Ri	81.06	40	*e*P	P	08 21 06.6	+1.3
BEKR	Beckworth	81.08	41	*e*P	P	08 21 06.6	+1.1
	comp=Z,268nm,1.6s						
PNTR	Pine Nut	81.10	42	*e*P	P	08 21 07.0	+1.4
	comp=Z,188nm,0.9s						
MAW	Mawson	81.11	200	P	P	08 21 05.9	+1.0
	comp=Z,27nm,0.7s,baz=123,slow=6.0,SNR=52						
MAW				pP	pP	08 23 00.5	0.0
	comp=Z,18nm,1.1s,baz=161,slow=3.5,SNR=4.1						
MAW				S	S	08 30 29.4	-0.5
	comp=Z,1.5nm,0.8s,baz=198,slow=20,SNR=2.5						
PMSA	Palmer Station	81.12	157	P	P	08 21 06.3	+1.3
	comp=Z,74nm,0.8s,baz=226,slow=3.7,SNR=14						
PEAR	Peavine Mounta	81.17	42	*e*P	P	08 21 07.2	+1.2
VCNR	Virginia City	81.19	42	*e*P	P	08 21 07.2	+1.2
	comp=Z,132nm,1.3s						
HUMO	Hull Mountain	81.20	38	*e*P	P	08 21 07.6	+1.8
	comp=Z,203nm,1.2s						
KDAK	Kodiak Island	81.24	14	S	S	08 30 32.2	+1.0
	comp=Z,5.0nm,1.1s,baz=313,slow=19,SNR=5.5						
KDAK	Kodiak Island	81.24	14	*e*P	P	08 21 05.8	+0.2
KDAK				*e*PcP	PcP	08 21 05.9	-4.1
KDAK				*e*S	S	08 30 32.2	+1.0
KDAK	Kodiak Island	81.24	14	*ce*P	P	08 21 05.5	-0.1
GMRC	Granite Mounta	81.28	48	P	P	08 21 07.5	+1.0
	baz=237,SNR=46						
BKNI	Bangkinang	81.28	274	*e*P	P	08 21 06.4	-0.5
	comp=Z,139nm,0.8s						
IRM	Iron Mountain	81.31	49	P	P	08 21 08.2	+1.6
	baz=238,SNR=70						
LHV	Little Huntoon	81.31	44	*e*P	P	08 21 07.9	+1.5
GRAC	Grapevine Rang	81.34	45	P	P	08 21 08.0	+1.3
	baz=236,SNR=25						
M04C	Macdoel	81.34	39	P	P	08 21 08.0	+1.3
	baz=232,SNR=45						
FURC	Furnace Creek,	81.38	46	P	P	08 21 07.8	+1.0
	baz=236,SNR=14						
TUQ	Turquoise Moun	81.45	47	P	P	08 21 08.4	+1.0
	baz=237,SNR=52						
SHOC	Shoshone, Teco	81.47	47	P	P	08 21 08.4	+1.0
	baz=237,SNR=11						
RYN	Ryan	81.51	43	*e*P	P	08 21 08.7	+1.0
	comp=Z,227nm,1.7s						
Y12C	Blythe	81.53	49	P	P	08 21 09.1	+1.5
	baz=238,SNR=18						
Y12C	Blythe	81.53	49	*e*P	P	08 21 09.2	+1.5
	comp=Z,202nm,1.6s						
NV01	Mina Array Sit	81.54	44	*e*P	P	08 21 08.3	+0.4
NVAR	Mina Array Bea	81.54	44	P	P	08 21 08.7	+0.8
	comp=Z,39nm,0.7s,baz=223,slow=8.1,SNR=311						
NVAR				pP	pP	08 23 04.9	+1.1
	comp=Z,6.0nm,1.0s,baz=225,slow=5.0,SNR=4.2						
NVAR				ScS	S	08 30 41.6	+5.9
	comp=Z,0.7nm,0.8s,baz=322,slow=1.9,SNR=3.9						
NVAR				PKKPbc	PKKPbc	08 39 37.7	-0.1
	comp=Z,2.3nm,0.7s,baz=89,slow=3.3,SNR=14						
NVAR				PKPPKP	P'P'df	08 47 34.9	-5.4
	comp=Z,0.6nm,0.7s,baz=0.0,slow=0.3,SNR=3.5						
PAHR	Pah Rah Range	81.59	42	*e*P	P	08 21 09.2	+1.2
	comp=Z,200nm,1.4s						
NV11	Mina Array Sit	81.64	44	*e*P	P	08 21 09.2	+0.8
	comp=Z,13nm,1.3s						
GRNR	Gornyy	81.64	333	*e*P	P	08 21 08.9	+1.1
GRNR				pmax	pmax		
	comp=Z,42nm,1.0s						
I03D	Drain, OR	81.67	37	P	P	08 21 09.4	+1.3
	baz=231,SNR=14						
DL2	Dalian	81.72	317	P	P	08 21 09.0	+0.5
DL2				sP	sP	08 23 57.1	-2.3
DL2				S	S	08 30 35.6	-1.3
DL2				pmax	pmax		
	comp=Z,88nm,1.2s						
DL2				pmax	pmax		
	comp=Z,670nm,6.7s						
NKL	Nikolayevsk	81.76	337	*i* P	P	08 21 08.5	+0.2
NKL				*e*		08 23 58.0	
NKL				pmax	pmax		
	comp=N,43nm,1.0s						
NKL				pmax	pmax		
	comp=E,34nm,1.0s						
NKL				pmax	pmax		
	comp=Z,130nm,1.0s						
NKL				pmax	pmax		
	comp=Z,1µm,9.0s						
HSIG		81.76	55	*e*P	P	08 21 10.0	+1.1
	comp=Z,140nm,1.6s						
LDFC	Landfair	81.82	48	*e*P	P	08 21 10.9	+1.6
	comp=Z,242nm,1.1s						
214A	Organ Pipe Nat	81.83	51	P	P	08 21 11.0	+1.7
	baz=239						
K04D	Chiloquin, OR	81.91	39	P	P	08 21 10.8	+1.3
	baz=232						
NEE2	Needles Airpor	82.00	48	P	P	08 21 11.5	+1.5
	baz=238,SNR=17						
KVN	Kaiserville	82.03	43	*e*P	P	08 21 11.2	+0.9
	comp=Z,182nm,1.3s						
KVN	Kaiserville	82.03	43	*e*P	P	08 21 11.2	+0.9
KVN				pmax	pmax		
	comp=Z,182nm,1.3s						
TPNV	Topopah Spring	82.06	46	P	P	08 21 11.7	+1.2
	baz=237,SNR=111						
TPNV	Topopah Spring	82.06	46	*e*P	P	08 21 11.5	+1.0
	comp=Z,84nm,1.0s						
TPNV	Topopah Spring	82.06	46	*e*P	P	08 21 11.5	+1.0
TPNV				pmax	pmax		
	comp=Z,84nm,1.0s						
J04D	Umpqua Nationa	82.08	38	P	P	08 21 12.0	+1.4
	baz=232,SNR=89						
PDMCI	Parker Dam,Lak	82.09	49	P	P	08 21 12.0	+1.5
	baz=238,SNR=34						
SNY	Shenyang	82.23	320	⇓P	P	08 21 11.3	+0.3
SNY				sP	sP	08 24 00.5	-1.6
SNY				S	S	08 30 38.9	-2.9
SNY				pmax	pmax		
	comp=Z,61nm,1.3s						
SNY				pmax	pmax		
	comp=Z,1µm,8.1s						
COR	Corvallis	82.25	36	*e*P	P	08 21 13.1	+2.1
	comp=Z,168nm,1.3s						
COR	Corvallis	82.25	36	*e*P	P	08 21 13.1	+2.1
COR				pmax	pmax		
	comp=Z,168nm,1.3s						
I04A	Tendick Farm,	82.26	37	P	P	08 21 12.1	+0.9
	baz=231,SNR=25						
MOD	Modoc Plateau	82.33	40	*e*P	P	08 21 12.8	+1.1
	comp=Z,202nm,1.3s						
CN2	Changchun	82.34	323	*e*P	P	08 21 12.1	+0.6
CN2				*e*pP	pP	08 23 08.8	+1.1
CN2				*e*S	S	08 30 43.4	+0.5
CN2				pmax	pmax		
	comp=Z,130nm,1.2s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
WHN	Wuhan	82.34	307	⇓*i*P	P	08 21 12.8	+1.0
WHN				sP	sP	08 24 06.6	+3.7
WHN				S	S	08 30 46.3	+2.8
WHN				pmax	pmax		
	comp=Z,190nm,1.1s						
WHN				pmax	pmax		
	comp=Z,2µm,4.4s						
K05A	Summer Lake	82.47	39	*e*P	P	08 21 13.9	+1.4
	comp=Z,336nm,1.1s						
IRO	Indian Ridge	82.48	37	*e*P	P	08 21 13.5	+1.1
SHPR	Sheep Range	82.55	47	*e*P	P	08 21 14.3	+1.2
	comp=Z,70nm,1.2s						
J05D	Fort Rock, OR	82.62	38	P	P	08 21 14.6	+1.5
	baz=232,SNR=244						
KLR	Kul'dur	82.63	330	PKKPbc	PKKPbc	08 39 33.5	-2.2
	comp=Z,0.2nm,0.8s,baz=313,slow=5.8,SNR=5.6						
KLR	Kul'dur	82.63	330	*di*P	P	08 21 13.5	+0.6
G03D	McMinnville, O	82.67	36	P	P	08 21 14.6	+1.4
	baz=231,SNR=8.6						
H04A	Detroit Lake	82.94	37	*e*P	P	08 21 15.3	+0.7
	comp=Z,253nm,1.3s						
PINE	Pine Mountain	83.09	38	*e*P	P	08 21 16.2	+0.6
	comp=Z,311nm,1.0s						
CNPM	China Poot	83.13	14	*e*P	P	08 21 15.2	0.0
	comp=Z,263nm,1.0s						
HOM	Homer	83.16	13	*e*P	P	08 21 15.7	+0.4
	comp=Z,831nm,0.9s						
I05D	Terrebonne, OR	83.20	37	P	P	08 21 17.2	+1.2
	baz=232,SNR=59						
TIA	Tai'an	83.23	313	P	P	08 21 16.8	+0.6
TIA				sP	sP	08 24 05.3	-2.2
TIA				S	S	08 30 47.4	-4.7
TIA				pmax	pmax		
	comp=Z,66nm,1.2s						
TIA				pmax	pmax		
	comp=Z,860nm,9.5s						
R11A	Troy Canyon, C	83.27	45	P	P	08 21 17.1	+0.5
	baz=237,SNR=39						
R11A	Troy Canyon, C	83.27	45	*e*P	P	08 21 17.1	+0.5
	comp=Z,26nm,1.0s						
E03A	Lebam	83.36	35	*e*P	P	08 21 17.9	+1.4
	comp=Z,305nm,1.1s						
F04D	Rainier, OR	83.36	35	P	P	08 21 18.1	+1.5
	baz=231,SNR=9.5						
BMN	Battle Mountai	83.37	42	*e*P	P	08 21 18.1	+1.1
	comp=Z,132nm,1.1s						
BMN	Battle Mountai	83.37	42	*e*P	P	08 21 18.1	+1.1
BMN				pmax	pmax		
	comp=Z,132nm,1.1s						
BRLK	Bradley Lake	83.42	14	*e*P	P	08 21 16.5	-0.1
	comp=Z,316nm,1.0s						
KULM	Kulim	83.44	278	*e*P	P	08 21 17.8	0.0
	comp=Z,103nm,1.0s						
KULM	Kulim	83.44	278	P	P	08 21 20.0	+2.2
TUC	Tucson	83.50	52	P	P	08 21 19.5	+1.8
	baz=240						
TUC	Tucson	83.50	52	*e*P	P	08 21 19.6	+1.8
	comp=Z,128nm,1.3s						
TUC				*e*pP	pP	08 23 16.0	+1.7
WVOR	Wild Horse Val	83.64	40	*e*P	P	08 21 19.4	+1.1
	comp=Z,116nm,1.1s						
RSO	Redoubt South	83.66	12	*e*P	P	08 21 17.2	-0.8
LVP	Lakeview Peak	83.68	36	*e*P	P	08 21 19.5	+1.2
NLWA	Neilton Lookou	83.74	34	*e*P	P	08 21 20.0	+1.5
	comp=Z,142nm,1.1s						
DIB	Dawson Inlet,	83.76	26	*e*P	P	08 21 19.4	+1.1
	comp=Z,88nm,1.1s						
G05D	Wamic, OR	83.77	37	P	P	08 21 19.9	+1.2
	baz=232						
TDL	Tradedollar La	83.96	35	*e*P	P	08 21 21.2	+1.4
MA2	Magadan	84.02	345	P	P	08 21 19.0	-0.5
	comp=Z,68nm,0.8s,baz=138,slow=4.7,SNR=28						
MA2	Magadan	84.02	345	*e*P	P	08 21 19.1	-0.4
	comp=Z,110nm,1.0s						
I07A	Izee	84.10	38	*e*P	P	08 21 21.9	+1.4
	comp=Z,80nm,1.0s						
LCMT	Little Creek M	84.12	47	*e*P	P	08 21 21.9	+1.1
	comp=Z,94nm,1.3s						
PSI	Prapat	84.14	275	*e*P	P	08 21 20.7	-0.7
	comp=Z,135nm,1.0s						
PSI	Prapat	84.14	275	*e*P	P	08 21 20.7	-0.7
PSI				pmax	pmax		
	comp=Z,135nm,1.0s						
G06A	Carlson Farm,	84.14	37	*e*P	P	08 21 21.4	+0.8
	comp=Z,83nm,1.0s						
SKLT	Songkhla	84.16	280	P	P	08 21 23.0	+1.7
	comp=Z,202nm,1.1s,comp=Z,3µm						
MID	Middleton Isla	84.20	16	*e*P	P	08 21 21.1	+0.7
MID	Middleton Isla	84.20	16	*e*P	P	08 21 21.1	+0.7
J08A	Circle Bar Ran	84.28	39	*e*P	P	08 21 22.3	+1.0
	comp=Z,135nm,1.2s						
CCUT	Cedar City	84.33	46	*e*P	P	08 21 23.2	+1.3
	comp=Z,92nm,1.4s						
KNB	Kanab	84.42	47	*e*P	P	08 21 23.6	+1.3
	comp=Z,189nm,1.6s						
KNB	Kanab	84.42	47	*e*P	P	08 21 23.6	+1.3
KNB				pmax	pmax		
	comp=Z,189nm,1.6s						
LON	Longmire	84.43	35	*e*P	P	08 21 22.5	+0.5
	comp=Z,126nm,1.7s						
LON	Longmire	84.43	35	*e*P	P	08 21 22.5	+0.5
LON				pmax	pmax		
	comp=Z,126nm,1.7s						
GAMB	Gambell	84.51	3	*e*P	P	08 21 23.0	+1.2
	comp=Z,135nm,0.9s						
PSUT	Pine Spring	84.51	45	*e*P	P	08 21 23.6	+0.9
	comp=Z,39nm,1.0s						
SZCU	Shurtz Canyon	84.53	46	*e*P	P	08 21 24.2	+1.3
	comp=Z,98nm,1.5s						
D05A	Enumclaw	84.60	35	*e*P	P	08 21 24.2	+1.5
	comp=Z,371nm,1.4s						
WUAZ	Wupatki	84.66	49	P	P	08 21 24.7	+1.2
	baz=240						
WUAZ	Wupatki	84.66	49	*e*P	P	08 21 24.8	+1.2
	comp=Z,60nm,1.1s						
RC01	Rabbit Creek A	84.86	14	*e*P	P	08 21 23.4	-0.3
	comp=Z,267nm,1.1s						
GSI	Gunungsitoli	84.86	273	*e*P	P	08 21 25.4	+0.6
	comp=Z,472nm,1.2s						
SKNT	Sakolnakorn	84.87	290	P	P	08 21 25.6	+0.9
	comp=Z,113nm,1.0s,comp=Z,1µm						
HPIG		84.94	59	*e*P	P	08 21 25.9	+0.8
	comp=Z,68nm,1.5s						
F07A	Phinny Hill Vi	84.94	37	*e*P	P	08 21 25.6	+1.3
	comp=Z,97nm,1.2s						
PKCU	Pink Cliffs	84.98	47	*e*P	P	08 21 27.2	+2.0
	comp=Z,150nm,1.2s						
SUA	Susitna One	84.98	13	*e*P	P	08 21 23.8	-0.6
	comp=Z,197nm,0.8s						
G08A	Pilot Rock	85.13	38	*e*P	P	08 21 26.5	+1.0
	comp=Z,191nm,1.3s						
A04D	Lummi Island	85.19	33	P	P	08 21 26.8	+1.3
	baz=231,SNR=9.8						
CRAG	Craig	85.19	24	*e*P	P	08 21 27.0	+1.7
	comp=Z,94nm,1.0s						
B05A	Bryant	85.22	34	P	P	08 21 26.7	+1.1
	baz=231,SNR=34						
TRTT	Trang	85.26	280	P	P	08 21 28.4	+1.7
	comp=Z,91nm,1.4s,comp=Z,1µm						
SKT	Skwentna	85.29	12	*e*P	P	08 21 24.5	-1.3
	comp=Z,58nm,1.0s						
LTY	Liberty	85.35	35	*e*P	P	08 21 27.1	+0.7
	comp=Z,83nm,1.1s						
MTPU	Mount Pierson	85.38	46	*e*P	P	08 21 28.9	+1.8
	comp=Z,72nm,1.2s						
SRAK	Srakaew	85.44	287	P	P	08 21 26.8	-0.7
	comp=Z,135nm,1.2s,comp=Z,2µm						
HAWA	Hanford	85.46	36	*e*P	P	08 21 28.2	+1.3
	comp=Z,165nm,1.1s						
RAGM	Ragged Mountai	85.46	16	*e*P	P	08 21 26.8	+0.2
	comp=Z,192nm,1.1s						
SIT	Sitka	85.59	22	*e*P	P	08 21 27.9	+0.7
	comp=Z,49nm,0.9s						
MOIG	Morelia	85.61	67	*e*P	P	08 21 29.5	+0.9
	comp=Z,117nm,1.5s						
MSU	Marysvale	85.62	46	*e*P	P	08 21 29.6	+1.4
W18A	Petrified Fore	85.63	50	P	P	08 21 29.0	+0.8
	baz=241						
C06D	Leavenworth	85.64	35	P	P	08 21 28.3	+0.5
	baz=232						
KHON	Khomkaen	85.64	289	P	P	08 21 30.1	+1.7
	comp=Z,32nm,0.6s						
B06A	Marblemount	85.69	34	*e*P	P	08 21 28.7	+0.8
	comp=Z,65nm,1.0s						
ZAIG	Zacatecas	85.70	64	*e*P	P	08 21 30.5	+1.6
	comp=Z,86nm,1.7s						
E08A	Dider Farm, El	85.78	37	*e*P	P	08 21 29.6	+1.2
	comp=Z,96nm,0.9s						
SML	Sawmill	85.81	14	*e*P	P	08 21 27.9	-0.4
	comp=Z,142nm,1.2s						
SML	Sawmill	85.81	14	*e*P	P	08 21 27.9	-0.4
SML				pmax	pmax		
	comp=Z,142nm,1.2s						
DIV	Divide	85.82	15	*e*P	P	08 21 28.1	-0.2
	comp=Z,232nm,1.0s						
BMO	Blue Mountains	85.83	39	*e*P	P	08 21 29.3	+0.5
	comp=Z,52nm,0.9s						
BMO	Blue Mountains	85.83	39	*e*P	P	08 21 29.3	+0.5
BMO				pmax	pmax		
	comp=Z,52nm,0.9s						
121A	Cookes Peak, D	85.83	53	P	P	08 21 30.9	+1.7
	baz=242						
BJT	Baijiatuau	85.86	316	*e*P	P	08 21 29.6	+0.7
	comp=Z,67nm,1.0s						
BJI	Beijing	85.87	316	⇓*i*P	P	08 21 29.5	+0.5
BJI				pP	pP	08 23 27.8	+1.4
BJI				sP	sP	08 24 18.8	-2.2
BJI				sS	sS	08 34 42.8	-3.9
BJI				pmax	pmax		
	comp=Z,92nm,1.3s						
MFID	Camas Ranch	85.90	40	*e*P	P	08 21 30.0	+0.8
	comp=Z,85nm,1.2s						
ENH	Enshi	85.92	304	*e*P	P	08 21 30.5	+1.0
	comp=Z,323nm,1.1s						
BMRM	Bremner River	85.97	16	*e*P	P	08 21 29.1	+0.1
	comp=Z,214nm,1.0s						
BMRM				*e*S	S	08 31 20.1	+2.5
PPLA	Purkeypile	86.00	12	*e*P	P	08 21 27.5	-1.8
	comp=Z,46nm,1.0s						
PPLA				*e*S	S	08 31 18.1	+0.1
WTV	Waterville	86.01	35	*e*P	P	08 21 30.3	+0.8
SCM	Sheep Creek Mo	86.06	14	*e*P	P	08 21 29.5	0.0
	comp=Z,297nm,0.8s						
SCM	Sheep Creek Mo	86.06	14	*e*P	P	08 21 29.5	0.0
SCM				pmax	pmax		
	comp=Z,297nm,0.8s						
DUG	Dugway, Tooele	86.07	44	P	P	08 21 30.7	+0.5
	baz=239						
DUG	Dugway, Tooele	86.07	44	*e*P	P	08 21 30.7	+0.5
	comp=Z,14nm,1.0s						
DUG	Dugway, Tooele	86.07	44	*e*P	P	08 21 30.7	+0.5
DUG				pmax	pmax		
	comp=Z,14nm,1.0s						
D08A	Wollman Farm,	86.19	36	*e*P	P	08 21 31.4	+1.1
	comp=Z,129nm,1.0s						
WRAK	Wrangell Islan	86.19	24	*e*P	P	08 21 31.1	+1.0
	comp=Z,141nm,1.0s						
NAYO	Nakonayok	86.20	287	P	P	08 21 33.0	+1.9
	comp=Z,1.5nm,1.2s,comp=Z,31nm						
CHAI	Chaiyaphum	86.21	288	P	P	08 21 32.2	+1.0
	comp=Z,14nm,0.8s,comp=Z,152nm						
TGL	Tana Glacier	86.26	17	*e*P	P	08 21 30.9	+0.4
	comp=Z,168nm,1.0s						
E09A	Wood Farm, Sta	86.30	37	*e*P	P	08 21 31.7	+0.8
	comp=Z,163nm,1.1s						
SYO	Syowa Base	86.30	193	⇑*e*P	P	08 21 26.0	-4.6
SYO	Syowa Base	86.30	193	⇑*i*P	P	08 21 30.0	-0.6
BGU	Big Grassy Mou	86.31	44	*e*P	P	08 21 31.5	+0.2
	comp=Z,42nm,1.9s						
NLU	North Lily Min	86.43	45	*e*P	P	08 21 33.2	+1.2
	comp=Z,12nm,1.0s						
GYA	Guiyang	86.49	300	⇓*i*P	P	08 21 33.3	+0.9
GYA				pP	pP	08 23 31.8	+1.7
GYA				sP	sP	08 24 23.4	-1.2
GYA				PP	PP	08 25 07.6	+3.3
GYA				SKS	SKSac	08 31 06.9	-1.1
GYA				S	S	08 31 24.8	+0.7
GYA				sS	sS	08 34 55.4	+1.6
GYA				SS	SS	08 37 24.8	+3.7
GYA				pmax	pmax		
	comp=Z,50nm,1.0s						
GYA				pmax	pmax		
	comp=Z,580nm,8.3s						
CAST	Castle Rocks	86.50	12	*e*P	P	08 21 29.9	-1.5
	comp=Z,177nm,0.9s						
CAST				*e*S	S	08 31 21.4	-1.1
F10A	Beach Ranch, E	86.51	38	*e*P	P	08 21 32.4	+0.4
	comp=Z,257nm,0.9s						
SEY	Seymchan	86.63	347	P	P	08 21 31.9	-0.1
	comp=Z,147nm,0.8s,baz=140,slow=4.5,SNR=17						
SEY	Seymchan	86.63	347	*de*P	P	08 21 32.1	+0.1
TMUT	Trail Mountain	86.67	46	*e*P	P	08 21 34.7	+1.4
	comp=Z,82nm,1.2s						
B08A	Colville Reser	86.74	35	*e*P	P	08 21 33.4	+0.5
	comp=Z,110nm,1.0s						
MPU	Maple Canyon	86.75	45	*e*P	P	08 21 34.4	+1.0
	comp=Z,29nm,1.2s						
LLLB	Lillooet	86.79	32	*e*P	P	08 21 34.1	+1.0
	comp=Z,103nm,1.1s						
HLID	Hailey	86.84	41	P	P	08 21 35.1	+1.4
	baz=237						
HLID	Hailey	86.84	41	*e*P	P	08 21 34.7	+1.0

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      comp=Z,76nm,1.1s
TRF   Thorofare Moun  86.87  12 eP      P       08 21 32.5 -0.9
      comp=Z,277nm,0.9s
SPUT  South Promonto  86.88  44 eP      P       08 21 35.0 +1.0
      comp=Z,30nm,1.0s
HVU   Hansel Valley   86.92  43 eP      P       08 21 35.1 +1.0
      comp=Z,28nm,0.8s
HVU   Hansel Valley   86.92  43 eP      P       08 21 35.1 +1.0
HVU                              pmax   pmax
      comp=Z,28nm,0.8s
BESE  Bessie Mountai  86.92  21 eP      P       08 21 34.6 +1.0
      comp=Z,135nm,1.1s
C09A  Chrisman Ranch  86.98  36 eP      P       08 21 34.9 +0.8
      comp=Z,135nm,1.1s
CTU   Camp Tracy      87.02  44 eP      P       08 21 35.4 +0.7
      comp=Z,24nm,1.0s
SRU   San Rafael Swe  87.04  46 eP      P       08 21 35.6 +0.8
      comp=Z,63nm,1.0s
TLIG  Tlapa           87.06  70 eP      P       08 21 36.7 +1.4
      comp=Z,100nm,1.6s
HARP  HAARP           87.07  15 eP      P       08 21 34.5 +0.3
      comp=Z,129nm,0.9s
P17A  Butcher Ranch,  87.08  46 eP      P       08 21 36.1 +1.2
      comp=Z,73nm,1.3s
PNT   Penticton       87.16  34 eP      P       08 21 35.9 +1.0
JLU   Jordanelle      87.17  45 eP      P       08 21 36.3 +0.8
      comp=Z,47nm,1.3s
LAZ   Ladron          87.17  52 eP      P       08 21 36.8 +1.2
LAZ                             epP     pP      08 23 35.7 +2.2
Y22D  IRIS PASSCAL I  87.18  52  P      P       08 21 37.1 +1.6
      baz=243
Y22D  IRIS PASSCAL I  87.18  52 eP      P       08 21 36.7 +1.1
      comp=Z,182nm,1.6s
Y22E  IRIS PASSCAL I  87.18  52  P      P       08 21 37.1 +1.5
      baz=243
LENM  Lemitar         87.19  52 eP      P       08 21 36.9 +1.3
PHET  Kaeng Krachan   87.19 285  P      P       08 21 38.2 +2.4
      comp=Z,57nm,1.0s,comp=Z,529nm
MNTX  Cornudas Mount  87.27  55  P      P       08 21 37.0 +1.2
      baz=244,SNR=118
MNTX  Cornudas Mount  87.27  55 eP      P       08 21 37.1 +1.2
      comp=Z,100nm,1.2s
MNTX                            epP     pP      08 23 35.3 +1.5
BPAW  Bear Paw Mtn.   87.32  12 eP      P       08 21 33.9 -1.4
      comp=Z,48nm,1.0s
BPAW                            eS      S       08 31 31.1 +1.0
PBKT  Sadao Pong      87.37 289  P      P       08 21 38.3 +1.7
      comp=Z,93nm,1.3s,comp=Z,3µm
MCK   McKinley        87.40  13 eP      P       08 21 35.2 -0.5
      comp=Z,200nm,0.8s
MCK   McKinley        87.40  13 eP      P       08 21 35.2 -0.5
MCK                              pmax   pmax
      comp=Z,201nm,0.8s
BNM   Barren Site     87.43  52 eP      P       08 21 37.9 +1.0
BNM                             epP     pP      08 23 36.8 +1.9
SKAG  Skagway         87.44  20 eP      P       08 21 37.2 +1.3
      comp=Z,168nm,1.3s
TCUT  Toone Canyon    87.46  44 eP      P       08 21 37.9 +1.0
      comp=Z,300nm,1.5s
P18A  Preston Nutter  87.48  46 eP      P       08 21 37.9 +0.9
      comp=Z,77nm,1.5s
PAX   Paxson          87.48  14 eP      P       08 21 35.7 -0.5
      comp=Z,68nm,1.0s
PAX   Paxson          87.48  14 eP      P       08 21 35.7 -0.5
PAX                              pmax   pmax
      comp=Z,68nm,1.0s
LPM   Los Pinos Moun  87.50  52 eP      P       08 21 38.3 +1.2
MVCO  Mesa Verde      87.51  49  P      P       08 21 37.6 +0.4
      baz=242
MVCO  Mesa Verde      87.51  49 eP      P       08 21 37.7 +0.6
      comp=Z,54nm,1.7s
LTX   Lajitas         87.57  57 eP      P       08 21 38.5 +1.1
LTX   Lajitas         87.57  57 eP      P       08 21 38.5 +1.1
TX31  Lajitas Ar. Si  87.57  57 eP      P       08 21 37.9 +0.5
TX31                            eP      P       08 21 38.8 +1.4
TXAR  Lajitas Array   87.57  57  P      P       08 21 38.5 +1.1
      comp=Z,34nm,1.0s,baz=219,slow=5.5,SNR=164
TXAR                             pP     pP      08 23 35.1 -0.3
      comp=Z,12nm,1.1s,baz=214,slow=6.0,SNR=6.7
TXAR                             PKKPbc PKKPbc  08 39 21.8 -1.2
      comp=Z,5.2nm,0.9s,baz=94,slow=3.0,SNR=30
TXAR                             PKPPKP P'P'df  08 47 15.6  -14
      comp=Z,0.3nm,0.8s,baz=108,slow=4.1,SNR=4.0
TXAR  Lajitas Array   87.57  57  P      P       08 21 38.5 +1.1
TXAR                             *PP    pP      08 23 35.1 -0.3
TXAR                             pmax   pmax
      comp=Z,33nm,1.0s
TXAR                             pmax   pmax
      comp=Z,12nm,1.1s
TXAR                             pmax   pmax
      comp=Z,5.0nm,0.9s
HWUT  Hardware Ranch  87.61  44 eP      P       08 21 37.8 +0.3
      comp=Z,16nm,0.9s
SNAA  Sanae           87.67 179  P      P       08 21 36.7 -0.4
SNAA                             SKS    SKSac   08 31 13.0 -0.5
SNAA                             S      S       08 31 33.4 -0.2
SNAA  Sanae           87.67 179  pP     pP      08 23 35.3 +0.1
SNAA  Sanae           87.67 179  PKKP   PKKPdf  08 39 20.5 +5.0
SNAA  Sanae           87.67 179  P      P       08 21 37.6 +0.5
      comp=Z,13nm,0.9s,baz=223,slow=9.3,SNR=83
SNAA                             pP     pP      08 23 34.7 -0.4
      comp=Z,11nm,1.1s,baz=200,slow=5.4,SNR=4.1
SNAA                             S      SKSac   08 31 12.8 -0.7
      comp=Z,5.7nm,1.0s,baz=180,slow=23,SNR=20
SNAA                             PKKPbc PKKPdf  08 39 19.3 +3.8
      comp=Z,2.7nm,0.9s,baz=293,slow=7.7,SNR=12
SNAA                             PKPPKP P'P'df  08 47 20.9 -8.6
      comp=Z,1.9nm,0.8s,baz=248,slow=2.0,SNR=5.8
SNAA  Sanae           87.67 179 eP      P       08 21 37.2  0.0
SNAA                            epP     pP      08 23 34.7 -0.4
SNAA  Sanae           87.67 179c iP     P       08 21 37.1  0.0
BWN   Browne          87.68  12 eP      P       08 21 36.5 -0.5
      comp=Z,412nm,1.1s
PV09  Paradox Valley  87.69  47 eP      P       08 21 38.8 +0.8
PV10  Paradox Valley  87.69  47 eP      P       08 21 38.4 +0.4
PV19  Morning Glory   87.70  47 eP      P       08 21 38.8 +0.8
      comp=Z,32nm,1.0s
PV17  East Wray Mesa  87.70  48 eP      P       08 21 38.6 +0.6
      comp=Z,88nm,1.5s
PV14  Lion Creek, Pa  87.70  47 eP      P       08 21 38.7 +0.6
      comp=Z,38nm,0.9s
PV18  Skein Mesa, Pa  87.72  48 eP      P       08 21 39.1 +1.0
      comp=Z,36nm,1.2s
PV20  West Nyswonger  87.73  47 eP      P       08 21 38.7 +0.6
      comp=Z,81nm,1.5s
PV13  Radium Mtn., P  87.74  48 eP      P       08 21 38.5 +0.3
      comp=Z,51nm,1.3s
PV16  Nyswonger Mesa  87.75  48 eP      P       08 21 39.2 +1.0
      comp=Z,70nm,1.6s
ZEA   Zeya            87.75 331 eP      P       08 21 37.1 -0.4
ZEA                             e               08 24 24.0
ZEA                             e               08 25 12.0
ZEA                             eS      SKSac   08 31 15.0 +1.1
ZEA                             ePS             08 31 38.0
ZEA                             eSSS    SSS     08 37 42.0
ZEA                              pmax   pmax
      comp=N,59nm,1.0s
ZEA                              pmax   pmax
      comp=Z,78nm,1.0s
ZEA                              pmax   pmax
      comp=N,300nm,7.0s
ZEA                              pmax   pmax
      comp=Z,600nm,7.0s
ZEA                              pmax   pmax
      comp=Z,600nm,10.0s
ZEA                              pmax   pmax
      comp=E,200nm,8.0s
ZEA                              smax   smax
      comp=N,300nm,6.0s
PV23  Carpenter Ridg  87.75  47 eP      P       08 21 39.2 +0.9
      comp=N,38nm,0.9s
PV03  Paradox Valley  87.77  48 eP      P       08 21 38.7 +0.5
PV11  David Mesa, Pa  87.77  48 eP      P       08 21 39.3 +1.0
      comp=N,53nm,1.2s
VNA3  Neumayer Olymp  87.82 176  P      P       08 21 37.7  0.0
VNA3                             SKS    SKSac   08 31 14.1 -0.2
VNA3                             S      S       08 31 33.1 -1.8
VNA3  Neumayer Olymp  87.82 176  pP     pP      08 23 35.3 -0.5
VNA3  Neumayer Olymp  87.82 176  PKKP   PKKPdf  08 39 20.0 +4.8
PV02  Paradox Valley  87.82  48 eP      P       08 21 39.2 +0.6
      comp=N,72nm,1.5s
PV21  Cone Mtn., Par  87.83  47 eP      P       08 21 39.5 +0.9
      comp=N,164nm,1.8s
PV12  Saucer Basin,   87.83  48 eP      P       08 21 39.2 +0.6
      comp=N,117nm,1.5s
TASM  ASL Pad, Albuq  87.92  51  P      P       08 21 39.9 +0.9
      baz=243,SNR=80
ANMO  Albuquerque     87.92  51  P      P       08 21 39.7 +0.6
      comp=N,52nm,1.2s,baz=225,slow=6.6,SNR=78
ANMO                             pP     pP      08 23 37.8 +0.6
      comp=N,16nm,1.1s,baz=214,slow=5.0,SNR=13
ANMO  Albuquerque     87.92  51  P      P       08 21 40.0 +1.0
      baz=243
ANMO  Albuquerque     87.92  51 eP      P       08 21 39.8 +0.8
      comp=N,72nm,1.3s
ANMO                            epP     pP      08 23 38.7 +1.4
TASL  Snake Pit, Alb  87.92  51  P      P       08 21 39.9 +0.8
      baz=243,SNR=83
PV22  Blue Mesa, Par  87.94  47 eP      P       08 21 39.9 +0.8
      comp=N,54nm,1.3s
XAN   Xi'an           88.04 308  P      P       08 21 40.4 +1.0
XAN                              pP     pP      08 23 39.3 +1.7
XAN                              sP     sP      08 24 33.1 +1.1
XAN                              SKS    SKSac   08 31 14.5 -2.2
XAN                              S      ScS     08 31 40.3 -1.8
XAN                              sS     sS      08 35 07.8 -1.0
XAN                              SS     SS      08 37 40.5 -2.6
XAN                              pmax   pmax
      comp=N,120nm,1.1s
XAN                              pmax   pmax
      comp=N,770nm,5.3s
PHIT  Phitsanulok     88.09 289  P      P       08 21 41.9 +1.9
      comp=N,102nm,1.1s,comp=N,833nm
SRDT  SRDT            88.19 286  P      P       08 21 42.8 +2.4
      comp=N,98nm,2.0s,comp=N,3µm
MLY   Manley          88.21  11 eP      P       08 21 38.6 -0.9
      comp=N,93nm,0.8s
GDL2  Guadalupe Moun  88.26  55 eP      P       08 21 42.0 +1.4
GDL2                            epP     pP      08 23 40.4 +1.5
RIDG  Independ'e Rid  88.29  14 eP      P       08 21 39.9 -0.1
      comp=N,150nm,1.0s
NVL   N'lazarevskaya  88.35 183⇓iP      P       08 21 41.4 +1.2
NVL                             e*PP    pP      08 23 41.0 +2.6
NVL                             eS      SKSac   08 31 16.2 -1.1
NVL                             e               08 31 44.2
NVL                              pmax   pmax
      comp=Z,75nm,0.7s
HDA   Harding Lake    88.41  13 eP      P       08 21 40.0 -0.3
      comp=Z,168nm,0.8s
CCB   Clear Creek Bu  88.44  13 eP      P       08 21 39.8 -0.7
      comp=Z,212nm,0.8s
CCB                             eS      S       08 31 38.8 -1.5
NANT  Nan             88.46 291  P      P       08 21 42.8 +1.2
      comp=Z,28nm,1.1s,comp=Z,260nm
MCMT  McKenzie Canyo  88.47  40 eP      P       08 21 42.6 +1.2
VNA1  Neumayer--Stat  88.48 177  P      P       08 21 41.4 +0.6
VNA1                             SKS    SKSac   08 31 20.5 +2.4
VNA1  Neumayer--Stat  88.48 177  pP     pP      08 23 39.0  0.0
VNA1  Neumayer--Stat  88.48 177  PKKP   PKKPdf  08 39 18.6 +4.7
AHID  Auburn Hatcher  88.49  43 eP      P       08 21 42.3 +0.7
      comp=Z,62nm,0.9s
DLBC  Dease Lake      88.52  23 eP      P       08 21 42.0 +0.8
      comp=Z,92nm,1.1s
MDM   Murphy Dome     88.63  12 eP      P       08 21 40.5 -0.9
      comp=Z,244nm,0.9s
MDM                             eS      S       08 31 42.4 +0.2
COLA  College         88.63  13 eP      P       08 21 40.7 -0.6
      comp=Z,277nm,0.8s
COLA                            eS      S       08 31 43.0 +1.0
COLA  College         88.63  13 eP      P       08 21 40.7 -0.6
COLA                            eS      S       08 31 43.0 +1.0
COLA                             pmax   pmax
      comp=Z,277nm,0.8s
SCRK  Sand Creek      88.69  14 eP      P       08 21 42.0 +0.1
      comp=Z,79nm,0.8s
IL1   Eielson Array   88.74  13 eP      P       08 21 41.0 -0.9
IL1                             eS      S       08 31 44.1 +1.0
ILAR  Eielson Array   88.74  13  P      P       08 21 41.0 -0.9
      comp=Z,94nm,0.9s,baz=227,slow=5.4,SNR=434
ILAR                             PKiKP  PKiKP   08 26 37.2 -0.6
      comp=Z,1.2nm,0.5s,baz=278,slow=3.2,SNR=14
ILAR                             ScS    S       08 31 43.2 +0.1
      comp=Z,5.3nm,1.2s,baz=251,slow=10,SNR=11
ILAR                             PKKPbc PKKPdf  08 39 18.6 +2.0
      comp=Z,0.3nm,0.4s,baz=330,slow=2.1,SNR=7.8
ILAR                             PKPPKP P'P'df  08 47 18.8 -6.2
      comp=Z,0.7nm,0.9s,baz=9.2,slow=1.6,SNR=5.3
ILB   Eielson Array   88.74  13 eP      P       08 21 41.2 -0.7
ILB                             eS      S       08 31 44.7 +1.6
HIA   Hailar          88.76 325 eP      P       08 21 42.2 -0.2
      comp=Z,61nm,1.0s
MSO   Missoula        88.88  38  P      P       08 21 43.1 -0.1
      baz=238,SNR=23
MSO   Missoula        88.88  38 eP      P       08 21 43.0 -0.1
      comp=Z,53nm,1.4s
DLMT  Dillon          88.90  40 eP      P       08 21 44.1 +0.8
      comp=Z,107nm,1.2s
SUKH  Sukhothai       88.90 289  P      P       08 21 45.6 +1.9
      comp=Z,30nm,1.1s
S22A  4UR Ranch, Cre  88.94  49  P      P       08 21 44.8 +0.9
      baz=242,SNR=58
S22A  4UR Ranch, Cre  88.94  49 eP      P       08 21 44.7 +0.9
      comp=Z,80nm,1.4s
REDW  Red Top Meadow  88.95  42 eP      P       08 21 44.6 +0.9
      comp=Z,172nm,1.2s
TPAW  Teton Pass      88.95  42 eP      P       08 21 44.7 +0.9
      comp=Z,110nm,1.3s
FXWY  Fox Creek       88.98  42 eP      P       08 21 44.9 +1.0
      comp=Z,72nm,1.3s
SNOW  Snow King Moun  89.06  42 eP      P       08 21 45.3 +1.1
      comp=Z,158nm,1.1s
O20A  White River Ci  89.08  46  P      P       08 21 44.7 +0.4
      baz=242,SNR=41
O20A  White River Ci  89.08  46 eP      P       08 21 45.0 +0.6
      comp=Z,116nm,1.4s
LNIG  Linares         89.16  63 eP      P       08 21 44.4 -0.4
      comp=Z,75nm,1.2s
LNIG                            epP     pP      08 23 43.2  0.0
IMW   Indian Meadow   89.16  42 eP      P       08 21 45.8 +1.1
      comp=Z,120nm,1.1s
KMI   Kunming         89.17 297  P      P       08 21 46.6 +1.5
KMI                              pP     pP      08 23 49.3 +5.7
KMI                              sP     sP      08 24 39.0 +1.1
KMI                              PP     PP      08 25 26.3 +0.7
KMI                              SKS    SKSac   08 31 24.8 +0.7
KMI                              S      S       08 31 49.0 -0.2
KMI                              sS     sS      08 35 18.5 -2.1
KMI                              SS     SS      08 38 03.1 +3.2
KMI                              pmax   pmax
      comp=Z,88nm,1.1s
KMI                              pmax   pmax
      comp=Z,660nm,7.3s
JTMT  Jette           89.18  37 eP      P       08 21 44.7 +0.2
      comp=Z,25nm,0.9s
MOOW  Moose Ponds     89.21  42 eP      P       08 21 45.7 +0.8
      comp=Z,100nm,1.6s
LRM   Limekiln Ridge  89.22  40 eP      P       08 21 45.5 +0.6
LOHW  Long Hollow     89.23  42 eP      P       08 21 45.9 +0.9
      comp=Z,162nm,1.5s
LAMP  Lampang         89.29 290  P      P       08 21 47.2 +1.7
      comp=Z,50nm,1.0s,comp=Z,366nm
PLCA  Paso Flores     89.31 134  P      P       08 21 47.0 +1.6
      comp=Z,16nm,0.8s,baz=240,slow=4.8,SNR=25
PLCA                             pP     pP      08 23 44.7 +0.9
      comp=Z,3.6nm,0.9s,baz=252,slow=6.8,SNR=3.0
PLCA                             PKKPbc PKKPbc  08 39 17.7 -1.3
      comp=Z,4.5nm,0.9s,baz=135,slow=2.0,SNR=6.8
PLCA  Paso Flores     89.31 134 eP      P       08 21 46.8 +1.4
      comp=Z,19nm,0.8s
PLCA                             pP     pP      08 23 44.7 +0.9
PLCA  Paso Flores     89.31 134 eP      P       08 21 46.8 +1.4
PLCA                             *PP    pP      08 23 44.7 +0.9
PLCA                             pmax   pmax
      comp=Z,19nm,0.8s
HHC   Hu-ho-hao-te    89.32 315 eP      P       08 21 46.3 +1.0
HHC                              pP     pP      08 23 43.3 -0.6
HHC                              sP     sP      08 24 36.8 -1.3
HHC                              SKS    SKSac   08 31 22.8 -1.2
HHC                              S      S       08 31 48.4 -1.3
HHC                              pmax   pmax
      comp=Z,56nm,1.0s
HHC                              pmax   pmax
      comp=Z,650nm,5.5s
QLMT  Earthquake Lak  89.33  41 eP      P       08 21 47.0 +1.5
RDOG  Red Dog Mine    89.38   6 eP      P       08 21 45.0 +0.2
      comp=Z,81nm,1.0s
PAYA  Payao           89.40 291  P      P       08 21 47.3 +1.3
      comp=Z,42nm,1.0s,comp=Z,1µm
FLWY  Flagg Ranch     89.41  42 eP      P       08 21 47.2 +1.4
      comp=Z,117nm,1.0s
YPP   Pitchstone Pla  89.44  42 eP      P       08 21 47.6 +1.5
      comp=Z,69nm,1.6s
YHB   Horse Butte     89.44  41 eP      P       08 21 46.9 +1.0
      comp=Z,96nm,1.1s
BW06  Boulder Array   89.48  43  P      P       08 21 46.5 +0.3
      baz=241,SNR=118
BW06  Boulder Array   89.48  43 eP      P       08 21 46.4 +0.3
      comp=Z,50nm,0.8s
PD31  Pinedale Array  89.48  43 eP      P       08 21 46.5 +0.4
PDAR  Pinedale Array  89.48  43  P      P       08 21 46.4 +0.2
      comp=Z,30nm,0.6s,baz=211,slow=3.4,SNR=309
PDAR                             pP     pP      08 23 46.7 +2.0
      comp=Z,1.9nm,0.8s,baz=216,slow=4.5,SNR=3.9
PDAR                             PKKPbc PKKPbc  08 39 17.4 -1.8
      comp=Z,2.7nm,0.8s,baz=79,slow=3.8,SNR=17
PDAR                             PKPPKP P'P'df  08 47 24.9 -0.7
      comp=Z,1.5nm,1.0s,baz=114,slow=1.8,SNR=6.7
SMCO  Snowmass        89.49  47 eP      P       08 21 47.0 +0.5
      comp=Z,49nm,1.2s
YFT   Old Faithful    89.51  41 eP      P       08 21 48.4 +2.1
      comp=Z,71nm,1.0s
YMR   Madison River   89.54  41 eP      P       08 21 48.1 +1.7
      comp=Z,74nm,1.0s
BOZ   Bozeman (W)     89.60  40  P      P       08 21 47.5 +1.0
      baz=239,SNR=76
BOZ   Bozeman (W)     89.60  40 eP      P       08 21 47.0 +0.4
      comp=Z,70nm,1.0s
BOZ   Bozeman (W)     89.60  40 eP      P       08 21 47.0 +0.4
BOZ                              pmax   pmax
      comp=Z,70nm,1.0s
H17A  Grant Village   89.64  42  P      P       08 21 48.9 +2.0
      baz=240,SNR=58
H17A  Grant Village   89.64  42 eP      P       08 21 49.0 +2.1
      comp=Z,59nm,0.9s
CM01  Chiang Mai Arr  89.84 290 eP      P       08 21 49.1 +1.0
CM31  Chiang Mai Arr  89.87 290 eP      P       08 21 49.3 +1.1
CMAR  Chiang Mai Arr  89.87 290  P      P       08 21 50.0 +1.7
      comp=Z,66nm,1.0s,baz=120,slow=3.0,SNR=166
CMAR                             PKKPbc PKKPbc  08 39 17.0 +0.1
      comp=Z,1.0nm,0.4s,baz=280,slow=3.5,SNR=6.1
CMAR  Chiang Mai Arr  89.87 290  P      P       08 21 50.0 +1.7
CMAR                             pmax   pmax
      comp=Z,66nm,1.0s
CMAR                             pmax   pmax
      comp=Z,1.0nm,0.4s
SDCO  Great Sand Dun  89.87  49  P      P       08 21 48.5 +0.3
      baz=243,SNR=47
SDCO  Great Sand Dun  89.87  49 eP      P       08 21 48.6 +0.4
      comp=Z,39nm,1.2s
DAWY  Dawson          89.90  16 eP      P       08 21 47.8 +0.4
      comp=Z,161nm,1.0s
CMMT  Chiang Mai      90.00 290  P      P       08 21 50.1 +1.3
      comp=Z,102nm,1.1s,comp=Z,1µm
CHTO  Chiang Mai      90.00 290 eP      P       08 21 50.0 +1.2
      comp=Z,109nm,1.2s
CHTO  Chiang Mai      90.00 290  P      P       08 21 49.9 +1.0
      SNR=15
CHTO  Chiang Mai      90.00 290 eP      P       08 21 50.0 +1.2
CHTO                             pmax   pmax
      comp=Z,109nm,1.2s
CHTO  Chiang Mai      90.00 290  P      P       08 21 50.2 +1.4
      comp=Z,454nm,1.1s,comp=Z,7µm
EGAK  Eagle           90.04  15 eP      P       08 21 47.9  0.0
      comp=Z,176nm,1.0s
HRY   Holter Researc  90.05  39 eP      P       08 21 49.3 +0.7
WALA  Waterton Lakes  90.09  36 eP      P       08 21 49.4 +0.6
      comp=Z,60nm,1.0s
MSTX  Muleshoe        90.23  54  P      P       08 21 50.2 +0.5
      baz=245
MSTX  Muleshoe        90.23  54 eP      P       08 21 50.2 +0.5
      comp=Z,72nm,1.2s
BTO   Baotou          90.24 314 eP      P       08 21 49.6  0.0
COLD  Coldfoot        90.29  11 eP      P       08 21 49.4 +0.3
      comp=Z,111nm,0.9s
CMAI  Chiengmai2      90.33 291  P      P       08 21 52.0 +1.5
      comp=Z,16nm,1.1s,comp=Z,1µm
T25A  Trinidad        90.38  50  P      P       08 21 50.7 +0.2
      baz=244,SNR=21
T25A  Trinidad        90.38  50 eP      P       08 21 50.9 +0.4
      comp=Z,38nm,1.1s
RWWY  Rawlins         90.50  45 eP      P       08 21 51.3 +0.3
      comp=Z,118nm,1.2s
833A  Chaparral WMA,  90.57  60  P      P       08 21 51.9 +0.7
      baz=247
833A  Chaparral WMA,  90.57  60 eP      P       08 21 52.0 +0.8
      comp=Z,82nm,1.4s
833A                            epP     pP      08 23 51.5 +1.6
CD2   Chengdu         90.66 303  P      P       08 21 52.8 +1.1
CD2                              pP     pP      08 23 50.4  0.0
CD2                              sP     sP      08 24 44.5 -0.1
CD2                              PP     PP      08 25 37.3 +0.4
CD2                              SKS    SKSac   08 31 32.4 +0.5
CD2                              S      ScS     08 32 03.0 -1.0
CD2                              SS     SS      08 38 22.4 +1.7
CD2                              pmax   pmax
      comp=Z,30nm,0.4s
CD2                              pmax   pmax
      comp=Z,800nm,6.4s
Q24A  Divide          90.66  48  P      P       08 21 52.6 +0.7
      baz=244,SNR=8.6
Q24A  Divide          90.66  48 eP      P       08 21 53.0 +1.2
      comp=Z,47nm,1.3s
ISCO  Idaho Springs   90.71  47  P      P       08 21 52.6 +0.5
      baz=243,SNR=14
ISCO  Idaho Springs   90.71  47 eP      P       08 21 53.2 +1.1
      comp=Z,17nm,1.1s
ISCO  Idaho Springs   90.71  47 eP      P       08 21 53.2 +1.1
ISCO                             pmax   pmax
      comp=Z,17nm,1.1s
RLMT  Red Lodge       90.81  41  P      P       08 21 53.3 +1.0
      baz=241,SNR=25
RLMT  Red Lodge       90.81  41 eP      P       08 21 53.3 +1.0
      comp=Z,36nm,1.0s
GCMT  Greycliff       90.89  41 eP      P       08 21 53.6 +1.1
N23A  Red Feather La  90.98  46  P      P       08 21 54.0 +0.8
      baz=243,SNR=48
N23A  Red Feather La  90.98  46 eP      P       08 21 54.0 +0.8
      comp=Z,52nm,1.0s
JCT   Junction City   91.09  58  P      P       08 21 53.5 -0.2
      baz=246
JCT   Junction City   91.09  58 eP      P       08 21 54.1 +0.4
      comp=Z,15nm,0.8s
JCT   Junction City   91.09  58 eP      P       08 21 54.1 +0.4
JCT                              pmax   pmax
      comp=Z,15nm,0.8s
K22A  Casper          91.39  45  P      P       08 21 55.3 +0.3
      baz=243,SNR=33
K22A  Casper          91.39  45 eP      P       08 21 55.4 +0.5
      comp=Z,62nm,1.0s
AMTX  Amarillo        91.43  53  P      P       08 21 55.3 +0.1
      baz=246
AMTX  Amarillo        91.43  53 eP      P       08 21 55.9 +0.7
      comp=Z,26nm,1.1s
AMTX                            epP     pP      08 23 57.1 +3.1
PHWY  Pilot Hill      91.49  46 eP      P       08 21 56.1 +0.5
      comp=Z,23nm,0.9s
TOLK  Toolik Lake Re  91.67  10  P      P       08 21 55.5 +0.1
      baz=207
TOLK  Toolik Lake Re  91.67  10 eP      P       08 21 55.5 +0.1
      comp=Z,81nm,1.3s
EGMT  Eagleton        91.93  39  P      P       08 21 57.8 +0.6
      baz=241
EGMT  Eagleton        91.93  39 eP      P       08 21 57.7 +0.6
      comp=Z,49nm,1.3s
ABTX  Abilene, Hawle  92.07  56  P      P       08 21 58.4 +0.3
      baz=247
ABTX  Abilene, Hawle  92.07  56 eP      P       08 21 58.7 +0.6
      comp=Z,110nm,1.4s
YAK   Yakutsk         92.29 338  P      P       08 21 57.7 -0.7
      comp=Z,78nm,0.5s,baz=216,slow=0.8,SNR=21
YAK   Yakutsk         92.29 338 eP      P       08 21 57.7 -0.7
      comp=Z,159nm,0.8s
YAK   Yakutsk         92.29 338 eP      P       08 21 57.1 -1.2
YAK                             e               08 25 43.8
YAK                             eS      SKSac   08 31 36.6 -2.8
YAK                             e               08 32 14.1
YAK                             eSS     SS      08 38 35.2 -7.3
YAK                              pmax   pmax
      comp=Z,164nm,1.0s
YAK                              pmax   pmax
      comp=E,27nm,1.5s
YAK                              pmax   pmax
      comp=N,15nm,1.3s
YAK                              pmax   pmax
      comp=Z,17nm,0.6s
YAK                              pmax   pmax
      comp=N,4.0nm,0.4s
YAK                              pmax   pmax
      comp=E,5.0nm,0.7s
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YAK				smax	smax		
	comp=N,25nm,1.6s						
YAK				smax	smax		
	comp=E,45nm,2.3s						
KSCO	Kaye Shedlock’	92.46	49	P	P	08 22 00.6	+0.7
	baz=245						
KSCO	Kaye Shedlock’	92.46	49	eP	P	08 22 00.6	+0.7
	comp=E,117nm,1.2s						
PEL	Peldehue	92.66	127	eP	P	08 22 02.0	+1.0
	comp=E,31nm,0.9s						
PEL	Peldehue	92.66	127	eP	P	08 22 02.0	+1.0
PEL				pmax	pmax		
	comp=Z,31nm,0.9s						
LZH	Lanzhou	92.68	308	⇓P	P	08 22 02.1	+1.1
LZH				pP	pP	08 24 02.8	+2.9
LZH				sP	sP	08 24 54.3	+0.3
LZH				S	S	08 32 18.3	-1.5
LZH				sS	sS	08 35 51.8	-1.4
LZH				SS	SS	08 38 49.8	+0.4
LZH				pmax	pmax		
	comp=Z,86nm,1.4s						
LZH				pmax	pmax		
	comp=Z,490nm,7.1s						
435B	Jarrell	92.97	58	P	P	08 22 02.9	+0.6
	baz=248						
435B	Jarrell	92.97	58	eP	P	08 22 02.4	+0.1
	comp=Z,58nm,1.4s						
LAO	LASA Array	93.42	41	P	P	08 22 05.2	+1.2
	baz=243						
LAO	LASA Array	93.42	41	eP	P	08 22 05.3	+1.2
	comp=Z,40nm,1.0s						
WHTX	Lake Whitney,	93.53	57	P	P	08 22 04.8	0.0
	baz=248						
WMOK	Wichita Mounta	93.56	54	eP	P	08 22 04.9	0.0
	comp=Z,5.8nm,1.1s						
WMOK	Wichita Mounta	93.56	54	eP	P	08 22 04.9	0.0
WMOK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
RSSD	Black Hills	93.67	44	P	P	08 22 05.6	+0.2
	baz=244						
RSSD	Black Hills	93.67	44	eP	P	08 22 05.4	0.0
	comp=Z,76nm,1.5s						
RSSD	Black Hills	93.67	44	eP	P	08 22 05.4	0.0
RSSD				pmax	pmax		
	comp=Z,76nm,1.5s						
OGNE	Ogallala	93.67	48	P	P	08 22 05.6	+0.2
	baz=246						
OGNE	Ogallala	93.67	48	eP	P	08 22 05.5	+0.2
	comp=Z,56nm,1.5s						
HKT	Hockley	94.06	60	eP	P	08 22 08.4	+1.3
	comp=Z,28nm,1.4s						
HKT	Hockley	94.06	60	eP	P	08 22 08.4	+1.3
HKT				pmax	pmax		
	comp=Z,28nm,1.4s						
CBKS	Cedar Bluff	94.44	50	P	P	08 22 09.2	+0.4
	baz=247						
CBKS	Cedar Bluff	94.44	50	eP	P	08 22 09.8	+0.9
	comp=Z,58nm,1.1s						
LCO	Las Campanas	94.50	123	eP	P	08 22 09.8	+0.1
	comp=Z,64nm,1.9s						
LCO				epP	pP	08 24 09.2	+0.5
INK	Inuvik	94.71	15	PKiKP	PKiKP	08 26 47.2	-0.6
	comp=Z,2.6nm,0.9s,baz=240,slow=3.2,SNR=2.9						
INK	Inuvik	94.71	15	eP	P	08 22 08.6	-0.6
	comp=Z,53nm,1.1s						
INK				PKiKP	PKiKP	08 26 47.2	-0.6
INK	Inuvik	94.71	15	eP	P	08 22 08.6	-0.6
INK				pmax	pmax		
	comp=Z,53nm,1.1s						
ULN	Ulaanbaatar	95.38	319	eP	P	08 22 12.9	-0.1
	comp=Z,12nm,1.0s						
ULN	Ulaanbaatar	95.38	319	P	P	08 22 12.8	-0.1
	SNR=10						
ULN	Ulaanbaatar	95.38	319	ceP	P	08 22 12.7	-0.3
ULN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
DGMT	Dagmar	95.44	40	P	P	08 22 14.0	+0.9
	baz=245						
DGMT	Dagmar	95.44	40	eP	P	08 22 14.0	+0.9
	comp=Z,98nm,1.3s						
DGMT				epP	pP	08 24 13.8	+1.5
NATX	Nacogdoches	95.66	58	P	P	08 22 15.0	+0.6
	baz=249						
SONA0	Songino Array	95.77	319	eP	P	08 22 13.9	-0.8
SONA0				ePP	PP	08 26 10.5	-5.5
SONA0				ePKiKP	PKiKP	08 26 50.7	+0.2
SONA1	Songino Array	95.77	319	eP	P	08 22 13.4	-1.3
SONM	Songino Array	95.77	319	P	P	08 22 13.9	-0.8
	comp=Z,3.5nm,0.9s,baz=131,slow=4.3,SNR=17						
SONM				PP	PP	08 26 10.5	-5.5
	comp=Z,5.0nm,1.0s,baz=125,slow=8.0,SNR=5.3						
SONM				PKiKP	PKiKP	08 26 50.7	+0.2
	comp=Z,2.7nm,0.9s,baz=90,slow=0.3,SNR=4.2						
SONM				PKKPbc	PKKPbc	08 39 02.2	-0.8
	comp=Z,0.8nm,0.6s,baz=278,slow=2.6,SNR=4.5						
SONM				PKKPab	PKKPab	08 39 38.3	
	comp=Z,1.5nm,0.7s,baz=298,slow=5.4,SNR=4.4						
BOD	Bodaibo	96.20	330	eP	P	08 22 14.2	-2.0
BOD				pmax	pmax		
	comp=Z,13nm,1.7s						
TUL1	Leonard	96.26	54	P	P	08 22 17.2	+0.2
	baz=249						
TUL1	Leonard	96.26	54	eP	P	08 22 17.8	+0.7
	comp=Z,8.7nm,0.9s						
BGNE	Belgrade	96.55	48	Pdiff	P	08 22 18.9	+0.7
	baz=248						
BGNE	Belgrade	96.55	48	eP	P	08 22 19.6	+1.4
	comp=Z,79nm,1.0s						
KSU1	Kansas State U	96.80	51	Pdiff	P	08 22 19.9	+0.5
	baz=249						
GTA	Gaotai	96.90	309	⇓P	P	08 22 20.4	+0.4
GTA				pP	pP	08 24 20.3	+1.0
GTA				sP	sP	08 25 14.4	+1.1
GTA				PP	PP	08 26 22.3	-2.5
GTA				SKS	SKSac	08 32 03.4	-1.8
GTA				S	S	08 32 51.4	-4.4
GTA				sS	sS	08 36 28.5	-2.2
GTA				SS	SS	08 39 45.0	-3.4
GTA				pmax	pmax		
	comp=Z,15nm,1.4s						
GTA				pmax	pmax		
	comp=Z,220nm,8.0s						
YKA	Yellowknife Ar	96.99	25	P	P	08 22 19.6	0.0
	comp=Z,8.1nm,0.9s,baz=242,slow=4.3,SNR=30						
YKA				pP	pP	08 24 19.5	+0.6
	comp=Z,1.5nm,1.0s,baz=251,slow=5.1,SNR=2.9						
YKA				PP	PP	08 26 21.1	-3.6
	comp=Z,2.6nm,1.0s,baz=241,slow=7.6,SNR=4.7						
YKA				PKiKP	PKiKP	08 26 51.6	-0.4
	comp=Z,0.5nm,0.6s,baz=210,slow=1.3,SNR=6.1						
YKA				PKKPbc	PKKPbc	08 38 53.1	-6.9
	comp=Z,0.8nm,0.7s,baz=41,slow=3.0,SNR=3.9						
YKA				PKKPab	PKKPab	08 39 30.4	
	comp=Z,1.3nm,0.8s,baz=58,slow=4.3,SNR=4.5						
YKW3	Yellowknife Ar	97.02	25	eP	P	08 22 19.6	-0.2
	comp=Z,15nm,1.2s						
Y40A	Okolona	97.53	57	Pdiff	P	08 22 23.2	+0.4
	baz=250						
W39A	Magazine	97.54	55	Pdiff	P	08 22 23.1	+0.3
	baz=250						
T38A	Diamond	97.79	53	Pdiff	P	08 22 24.0	+0.1
	baz=250						
V39A	Pettigrew	97.87	55	Pdiff	Pdif	08 22 24.0	-0.4
	baz=250						
MDND	Maddock	98.00	42	Pdiff	P	08 22 24.6	0.0
	baz=248						
142A	Monroe	98.09	58	Pdiff	Pdif	08 22 25.2	-0.1
	baz=250						
W40A	Ferguson Farm,	98.09	56	Pdiff	P	08 22 25.5	+0.3
	baz=250						
645A	Chauvin	98.16	62	Pdiff	P	08 22 25.7	0.0
	baz=251						
H32A	Carlson Farm,	98.17	46	Pdiff	Pdif	08 22 24.9	-0.6
	baz=249						
U39A	Green Forest	98.18	54	Pdiff	Pdif	08 22 25.2	-0.4
	baz=250						
G32A	Webster	98.40	45	ePdif	P	08 22 27.5	+1.1
	comp=Z,166nm,0.4s						
ECSD	EROS Data Cent	98.45	46	Pdiff	Pdif	08 22 26.7	0.0
	baz=249						
ECSD	EROS Data Cent	98.45	46	ePdif	P	08 22 26.9	+0.2
	comp=Z,12nm,1.1s						
ECSD				epP	pP	08 24 26.8	+0.7
R38A	Fenwick Farm,	98.47	52	Pdiff	Pdif	08 22 26.6	-0.2
	baz=250						
T39A	Clever	98.47	54	Pdiff	Pdif	08 22 26.8	-0.2
	baz=250						
V40A	Witts Springs	98.49	55	Pdiff	Pdif	08 22 26.8	-0.2
	baz=250						
V40A	Witts Springs	98.49	55	ePdif	P	08 22 27.3	+0.2
	comp=Z,5.1nm,0.9s						
N36A	Muff Farm, Cla	98.59	50	Pdiff	P	08 22 28.4	+0.9
	baz=250						
P37A	Lathrop	98.61	51	Pdiff	Pdif	08 22 27.4	0.0
	baz=250						
U40A	Yellville	98.65	54	Pdiff	Pdif	08 22 27.4	-0.3
	baz=251						
ZAK	Zakamensk	98.66	321	eP	Pdif	08 22 26.1	-1.4
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
W41B	Gary Mavity, V	98.72	56	Pdiff	P	08 22 28.4	+0.3
	baz=251						
S39A	Bolivar	98.73	53	Pdiff	Pdif	08 22 27.7	-0.4
	baz=250						
S39A	Bolivar	98.73	53	ePdif	Pdif	08 22 27.6	-0.5
	comp=Z,6.7nm,1.1s						
S39A				epP	pP	08 24 30.6	+3.0
445A	Amite	98.79	61	Pdiff	P	08 22 28.7	+0.2
	baz=251						
TLY	Talaya	98.93	322	eP	P	08 22 29.1	+0.4
TLY				pmax	pmax		
	comp=Z,4.0nm,0.6s						
Q38A	Cooks Store, C	98.94	52	Pdiff	Pdif	08 22 29.0	0.0
	baz=250						
TIXI	Tiksi	98.98	345	ceP	Pdif	08 22 27.1	-1.2
TIXI				pmax	pmax		
	comp=Z,15nm,1.3s						
G33A	Ortonville	99.08	45	Pdiff	Pdif	08 22 28.9	-0.5
	baz=250						
R39A	Chumby, Stover	99.15	53	Pdiff	Pdif	08 22 29.7	-0.1
	baz=251						
T40A	Mansfield	99.16	54	Pdiff	Pdif	08 22 30.0	0.0
	baz=251						
S40A	Lebanon	99.32	53	Pdiff	Pdif	08 22 30.6	0.0
	baz=251						
U41A	Viola	99.35	55	Pdiff	Pdif	08 22 31.2	+0.3
	baz=251						
M37A	Trindle Farm,	99.43	49	Pdiff	Pdif	08 22 31.6	+0.6
	baz=251						
K36A	Gilmore City	99.56	48	Pdiff	Pdif	08 22 31.9	+0.3
	baz=251						
G34A	Benson	99.63	45	Pdiff	Pdif	08 22 31.6	-0.2
	baz=250						
T41A	Mountain View	99.70	54	Pdiff	Pdif	08 22 32.1	-0.3
	baz=251						
R40A	Maddies Statio	99.72	53	Pdiff	Pdif	08 22 32.3	-0.1
	baz=251						
R40A	Maddies Statio	99.72	53	ePdif	Pdif	08 22 33.9	+1.5
	comp=Z,10nm,1.1s						
J36A	Seneca 1, Swea	99.87	47	Pdiff	Pdif	08 22 32.9	0.0
	baz=251						
J36A	Seneca 1, Swea	99.87	47	ePdif	Pdif	08 22 33.3	+0.3
	comp=Z,8.5nm,0.9s						
U42A	Revenden	99.88	55	Pdiff	Pdif	08 22 33.2	0.0
	baz=251						
L37A	Phoenix Point,	99.88	49	Pdiff	Pdif	08 22 33.1	0.0
	baz=251						
S41A	Jillco Farms,	99.89	54	Pdiff	Pdif	08 22 33.1	0.0
	baz=251						
H35A	Sunnyside Ranc	99.99	46	Pdiff	Pdif	08 22 33.5	+0.1
	baz=251						
M38A	Pleasantville	100.05	50	Pdiff	Pdif	08 22 34.1	+0.3
	baz=251						
F34A	Alexandria	100.07	45	Pdiff	Pdif	08 22 33.6	-0.2
	baz=251						
K37A	Belmond	100.17	48	Pdiff	Pdif	08 22 34.4	+0.1
	baz=251						
T42A	Van Buren	100.20	54	Pdiff	Pdif	08 22 34.6	+0.1
	baz=252						
P40A	Paris	100.28	52	Pdiff	Pdif	08 22 34.2	-0.7
	baz=252						
I36A	Fitzsimmons Fa	100.32	47	Pdiff	Pdif	08 22 34.2	-0.7
	baz=251						
N39A	Derby Farms, D	100.37	50	Pdiff	Pdif	08 22 35.3	+0.1
	baz=252						
R41A	Rosebud	100.38	53	Pdiff	Pdif	08 22 34.6	-0.7
	baz=252						
C33A	Trail	100.39	43	Pdiff	Pdif	08 22 34.7	-0.4
	baz=251						
G35A	Watkins	100.39	46	Pdiff	Pdif	08 22 35.2	-0.1
	baz=251						
CCM	Cathedral Cave	100.41	53	Pdiff	Pdif	08 22 35.6	+0.1
	baz=252						
AGMN	Agassiz Nation	100.51	42	Pdiff	Pdif	08 22 35.1	-0.5
	baz=251						
AGMN	Agassiz Nation	100.51	42	ePdif	Pdif	08 22 35.4	-0.3
AGMN				epP	pP	08 24 38.9	+3.7
F35A	Swanville	100.54	45	Pdiff	Pdif	08 22 35.8	-0.1
	baz=251						
S42A	Caledonia	100.66	54	Pdiff	Pdif	08 22 36.4	-0.2
	baz=252						
I37A	Lemond, Waseca	100.74	47	Pdiff	Pdif	08 22 36.8	0.0
	baz=252						
I37A	Lemond, Waseca	100.74	47	ePdif	Pdif	08 22 37.8	+1.0
M39A	Webster	100.80	50	Pdiff	Pdif	08 22 37.7	+0.6
	baz=252						
E35A	Pequot Lakes	100.88	44	Pdiff	Pdif	08 22 37.7	+0.3
	baz=251						
G36A	St. Michael	100.89	46	Pdiff	Pdif	08 22 37.5	+0.1
	baz=252						
C34A	RKJ Ranch, Bem	100.90	43	Pdiff	Pdif	08 22 37.6	+0.1
	baz=251						
A33A	Warroad	101.01	42	Pdiff	Pdif	08 22 37.5	-0.4
	baz=251						
ULM	Lac du Bonnet	101.14	40	PP	PP	08 26 54.1	-2.0
	comp=Z,2.2nm,0.6s,baz=247,slow=5.8,SNR=4.0						
ULM				PKKP	PKKPdf	08 38 55.8	+2.4
	comp=Z,2.2nm,0.7s,baz=335,slow=5.5,SNR=3.1						
J38A	Wedel Dairy, R	101.16	48	Pdiff	Pdif	08 22 38.0	-0.7
	baz=252						
F36A	Milaca	101.23	45	Pdiff	Pdif	08 22 39.1	+0.2
	baz=252						
H37A	Dierke Farm, C	101.24	47	Pdiff	Pdif	08 22 39.2	+0.1
	baz=252						
I38A	Scanlan Farm,	101.48	47	Pdiff	Pdif	08 22 40.0	-0.1
	baz=252						
N41A	Harden Midland	101.51	51	Pdiff	Pdif	08 22 40.8	+0.5
	baz=252						
C35A	Jirik Farms, M	101.52	43	Pdiff	Pdif	08 22 39.7	-0.4
	baz=252						
SPMN	Marine on St.	101.52	46	ePdif	Pdif	08 22 42.2	+2.0
P42A	Winchester	101.55	52	Pdiff	Pdif	08 22 40.5	0.0
	baz=252						
349A	Repton	101.55	61	Pdiff	Pdif	08 22 40.7	0.0
	baz=253						
E36A	McGregor	101.62	45	Pdiff	Pdif	08 22 40.8	+0.2
	baz=252						
L40A	Anamosa	101.65	49	Pdiff	Pdif	08 22 41.1	+0.2
	baz=252						
J39A	Decorah	101.69	48	Pdiff	Pdif	08 22 41.1	0.0
	baz=252						
F37A	Hinrichs Farm,	101.79	46	Pdiff	Pdif	08 22 41.6	+0.2
	baz=252						
D36A	Goodland	101.88	44	Pdiff	Pdif	08 22 41.1	-0.7
	baz=252						
D36A	Goodland	101.88	44	ePdif	Pdif	08 22 42.1	+0.3
B35A	Bob, Littlefor	101.88	43	Pdiff	Pdif	08 22 41.4	-0.3
	baz=252						
K40A	Colesburg	101.90	49	Pdiff	Pdif	08 22 41.9	-0.2
	baz=253						
I39A	Houston	101.98	48	Pdiff	Pdif	08 22 42.7	+0.3
	baz=253						
G38A	Ridgeland	102.14	46	Pdiff	Pdif	08 22 43.3	+0.3
	baz=253						
149A	Jones	102.24	60	Pdiff	Pdif	08 22 43.4	-0.3
	baz=253						
C36A	Pine Crest Far	102.26	44	Pdiff	Pdif	08 22 43.2	-0.3
	baz=253						
LPAZ	La Paz	102.28	113	P	Pdif	08 22 46.0	+1.0
	comp=Z,3.7nm,0.8s,baz=222,slow=2.4,SNR=20						
LPAZ				PKiKP	PP	08 27 04.7	-0.8
	comp=Z,2.5nm,1.1s,baz=280,slow=4.3,SNR=3.5						
LPAZ				PKKPbc	PKKPbc	08 38 44.6	-0.1
	comp=Z,4.1nm,0.8s,baz=70,slow=1.9,SNR=14						
LPAZ	La Paz	102.28	113	ePdif	Pdif	08 22 49.6	+4.5
LPAZ				PKiKP	PP	08 27 04.7	-0.8
D37A	Cotton	102.35	44	Pdiff	Pdif	08 22 43.9	0.0
	baz=253						
F38A	Pierce - Schro	102.36	45	Pdiff	Pdif	08 22 44.3	+0.4
	baz=253						
H39A	Augusta	102.39	47	Pdiff	Pdif	08 22 43.8	-0.4
	baz=253						
J40A	Soldiers Grove	102.39	48	Pdiff	Pdif	08 22 44.1	-0.1
	baz=253						
X48A	Hartselle	102.57	58	Pdiff	Pdif	08 22 45.3	+0.1
	baz=253						
JFWS	Jewell Farm	102.59	49	Pdiff	Pdif	08 22 45.8	+0.7
	baz=253						
I40A	Norwalk	102.61	48	Pdiff	Pdif	08 22 45.8	+0.6
	baz=253						
G39A	Holcombe	102.64	46	Pdiff	Pdif	08 22 45.9	+0.7
	baz=253						
PALK	Pallekele	102.70	273	PKiKP	PKiKP	08 27 05.6	+1.8
	comp=Z,7.7nm,0.7s,baz=115,slow=11,SNR=3.8						
ODAN	Odare	102.72	294	eP	PKiKP	08 27 03.7	-0.1
	comp=Z,54nm,0.9s						
H40A	Chili	102.98	47	Pdiff	Pdif	08 22 46.9	+0.2
	baz=254						
F39A	Loretta	102.99	46	Pdiff	Pdif	08 22 47.7	+0.9
	baz=254						
EYMN	Ely	103.18	44	Pdiff	Pdif	08 22 47.0	-0.6
	baz=254						
K42A	Prairie Point,	103.19	49	Pdiff	Pdif	08 22 47.0	-0.7
	baz=254						
C38A	Sawbill Land.	103.26	44	Pdiff	Pdif	08 22 47.4	-0.6
	baz=254						
G40A	Rib Lake	103.29	46	Pdiff	Pdif	08 22 48.3	+0.1
	baz=254						
E39A	Mellen	103.36	45	Pdiff	Pdif	08 22 48.8	+0.4
	baz=254						
RAMN	Ramite	103.42	294	eP	PKiKP	08 27 04.8	-0.3
	comp=Z,34nm,0.7s						
F40A	Park Falls	103.52	46	Pdiff	Pdif	08 22 48.8	-0.3
	baz=254						
S47A	Hartford	103.58	55	Pdiff	Pdif	08 22 49.7	+0.1
	baz=254						
453A	Whigham	103.76	62	Pdiff	Pdif	08 22 50.7	+0.1
	baz=254						
E40A	Wakefield	103.81	45	Pdiff	Pdif	08 22 50.6	+0.1
	baz=254						
JIRN	Jiri	103.97	294	eP	PKiKP	08 27 05.8	-0.4
	comp=Z,24nm,0.4s						
GUN	Gumba	104.31	295	eP	PKiKP	08 27 06.2	-0.6
	comp=Z,26nm,0.7s						
PKIN	Phulchoki	104.63	294	eP	PKiKP	08 27 06.4	-0.9
	comp=Z,8.0nm,0.5s						
KKN	Kakani	104.78	294	eP	PKiKP	08 27 06.8	-0.7
	comp=Z,35nm,0.9s						
ROSC	El Rosal	104.86	90	PKKPbc	PKKPbc	08 38 36.5	0.0
	comp=Z,4.7nm,0.7s,baz=168,slow=19,SNR=4.7						
DMN	Daman	104.88	294	eP	PKiKP	08 27 07.2	-0.5
	comp=Z,22nm,0.9s						
GKN	Gorkha	105.39	294	eP	PKiKP	08 27 07.3	-1.2
	comp=Z,19nm,0.9s						
TKL	Tuckaleechee C	105.48	57	PKKPab	PKKPab	08 38 54.0	+1.2
	comp=Z,4.8nm,0.8s,baz=101,slow=8.0,SNR=6.7						
CPUP	Villa Florida	106.09	127	PKKPbc	PKKPbc	08 38 31.8	-1.1
	comp=Z,3.8nm,0.9s,baz=88,slow=1.6,SNR=5.7						
S51A	Beattyville	106.11	55	PKiKP	PKiKP	08 27 08.5	-0.9
	baz=256						
KOLN	Koldanda	106.21	294	eP	PKiKP	08 27 09.1	-1.0
	comp=Z,15nm,0.6s						
DANN	Dangsing	106.23	295	eP	PKiKP	08 27 09.7	-0.6
	comp=Z,27nm,0.5s						
T52A	Hallie	106.45	56	PKiKP	PKiKP	08 27 10.2	+0.1
	baz=256						
PYUN	Piuthan	106.82	294	eP	PKiKP	08 27 10.3	-1.0
WMQ	Urumqi	106.87	311	Pdif	Pdif	08 23 04.8	+0.6
WMQ				PP	PP	08 27 36.6	-1.7
WMQ				SS	SS	08 42 02.8	-1.4
WMQ				AMB	AMB		
	comp=Z,600nm,6.7s						
BLA	Blacksburg	108.47	56	PKiKP	PKiKP	08 27 13.0	-0.8
	baz=258						
N54A	Moraine State	109.56	53	PKiKP	PKiKP	08 27 15.2	-0.6
	baz=259						
M54A	Oil Creek Stat	109.90	52	PKiKP	PKiKP	08 27 15.4	-1.0
	baz=260						
O56A	Blue Knob Stat	110.50	54	PKiKP	PKiKP	08 27 16.8	-0.8
	baz=260						
ZALV	Zalesovo Beam	110.52	321	PKiKP	PKiKP	08 27 16.3	-0.8
	comp=Z,18nm,0.6s,baz=156,slow=1.1,SNR=19						
ZALV				PP	PP	08 28 00.8	-3.2
	comp=Z,6.0nm,0.8s,baz=76,slow=6.3,SNR=4.1						
ZAA1	Zalesovo Array	110.52	321	ePKiKP	PKiKP	08 27 16.3	-0.8
ZAA1				ePP	PP	08 28 00.8	-3.2
SSPA	Standing Stone	111.07	53	PKiKP	PKiKP	08 27 17.9	-0.7
	baz=260						
MK01	Makanchi Array	111.15	313	ePdif	Pdif	08 23 25.2	+2.1
MK31	Makanchi Array	111.16	313	ePdif	Pdif	08 23 24.3	+1.2
MK31	Makanchi Array	111.16	313	eP	Pdif	08 23 24.3	+1.2
MK32	Makanchi Array	111.16	313	ePdif	Pdif	08 23 24.8	+1.7
MK32				ePKiKP	PKiKP	08 27 17.8	-0.8
MKAR	Makanchi Array	111.16	313	Pdiff	Pdif	08 23 24.8	+1.7
	comp=Z,2.8nm,0.8s,baz=90,slow=4.9,SNR=15						
MKAR				PKiKP	PKiKP	08 27 17.8	-0.8
	comp=Z,21nm,0.7s,baz=74,slow=2.3,SNR=70						
MKAR				PKKPbc	PKKPbc	08 38 17.2	-0.2
	comp=Z,2.6nm,0.6s,baz=254,slow=4.7,SNR=12						
MAKZ	Makanchi	111.37	313	PKIKP	PKiKP	08 27 17.0	-2.0
MAKZ				pmax	pmax		
	comp=Z,33nm,0.9s						
NVS	Novosibirsk	111.55	322	i PKIKP	PKiKP	08 27 18.6	-0.4
NVS				pmax	pmax		
	comp=N,12nm,1.0s						
NVS				pmax	pmax		
	comp=Z,32nm,1.0s						
NVS				pmax	pmax		
	comp=E,13nm,0.9s						
N59A	State Game Lan	112.70	53	PKiKP	PKiKP	08 27 21.0	-0.7
	baz=262						
BINY	Binghamton	112.72	52	PKiKP	PKiKP	08 27 21.4	-0.3
	baz=262						
KURK	Kurchatov	113.99	317	ePKiKP	PKiKP	08 27 22.9	-0.9
KURK				ePP	PP	08 28 21.2	-7.3
KURK	Kurchatov	113.99	317	i PKIKP	PKiKP	08 27 22.9	-0.9
KURK						08 38 07.2	
KURK				pmax	pmax		
	comp=Z,27nm,0.8s						
KURK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KURK				pmax	pmax		
	comp=N,5.0nm,0.8s						
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
LONY	Lake Ozonia	114.04	49	PKiKP	PKPdf	08 27 24.1	0.0
	baz=264						
KURBB	Kurchatov Arra	114.04	317	PKiKP	PKPdf	08 27 22.9	-1.1
	comp=Z,27nm,0.8s,baz=92,slow=1.9,SNR=109						
KURBB				PP	PP	08 28 21.2	-7.6
	comp=Z,7.8nm,0.9s,baz=94,slow=7.0,SNR=8.4						
KURBB				SKP		08 30 09.1	
	comp=Z,4.9nm,0.8s,baz=111,slow=1.9,SNR=5.3						
KURBB				PKKPbc	PKKPbc	08 38 07.2	-0.8
	comp=Z,1.6nm,0.8s,baz=262,slow=4.3,SNR=6.8						
TULEG	Thule	114.67	14	ePKPdf	PKPdf	08 27 23.6	-0.9
KSH	Kashi	114.77	305	ePKP	PKPdf	08 27 26.4	+0.5
KSH				ePP	PP	08 28 40.8	+6.4
KSH				esPKP		08 30 24.3	
KSH				PKS	PKSdf	08 31 01.3	-1.4
KSH				SKS	SKSdf	08 33 45.5	-1.6
KSH				AMB	AMB		
	comp=Z,340nm,5.8s						
ULHL	Ulahol	114.89	308	P	PKPdf	08 27 25.9	-0.2
	SNR=12						
TKM2	Tokmak 2	115.43	309	P	PKPdf	08 27 26.4	-0.8
	SNR=8.2						
KZA	Kyzart	115.60	308	P	PKPdf	08 27 28.1	+0.3
	SNR=8.6						
KBK	Karagaybulak	115.88	308	P	PKPdf	08 27 27.6	-0.4
	SNR=13						
LBNH	Lisbon	115.90	50	PKiKP	PKPdf	08 27 27.0	-0.7
	baz=266						
HRV	Adam Dziewonsk	116.02	52	PKiKP	PKPdf	08 27 27.7	-0.3
	baz=265						
CHMS	Chumysh	116.05	309	P	PKPdf	08 27 27.3	-0.9
	SNR=13						
FRU	Bishkek	116.14	308	i PKIKP	PKPdf	08 27 28.0	-0.3
FRU				e		08 28 43.0	
NIL	Nilore	116.14	298	ePKPdf	PKPdf	08 27 27.8	-0.8
NIL	Nilore	116.14	298	ePKIKP	PKPdf	08 27 27.8	-0.8
PTGA	Pitinga	116.16	102	ePKPdf	PKPdf	08 27 28.9	-0.3
AAK	Ala-Archa	116.21	308	PKKPbc	PKKPbc	08 37 59.7	-0.9
	comp=Z,1.0nm,0.3s,baz=214,slow=11,SNR=2.9						
AAK	Ala-Archa	116.21	308	P	PKPdf	08 27 28.2	-0.4
	SNR=7.1						
AAK	Ala-Archa	116.21	308	ePKPdf	PKPdf	08 27 28.4	-0.2
AAK	Ala-Archa	116.21	308	PKIKP	PKPdf	08 27 26.8	-1.8
AAK				pmax	pmax		
	comp=Z,14nm,0.9s						
USP	Ospenovka	116.26	309	P	PKPdf	08 27 28.0	-0.6
	SNR=18						

EKS2	Erkin-Say	116.74	308	P	PKPdf	08 27 29.2	-0.4
	SNR=20						
AML	Almayashu	116.76	308	P	PKPdf	08 27 29.8	-0.2
	SNR=39						
HUMP	Col San Antoni	116.79	80	*e*PKPdf	PKPdf	08 27 29.6	-0.5
PKME	Peaks-Kenny Pk	117.83	49	PKiKP	PKPdf	08 27 30.8	-0.6
	baz=268						
PKME	Peaks-Kenny Pk	117.83	49	*e*PKPdf	PKPdf	08 27 31.4	0.0
KULLO	Kullorsuaq	118.07	15⇓	*i*P	PKPdf	08 27 30.0	-1.0
PQI	Presque Isle	118.75	47	*e*PKPdf	PKPdf	08 27 32.1	-1.1
BVA0	Borovoye Array	119.10	320	*i* PKIKP	PKPdf	08 27 32.7	-0.9
BVA0				pmax	pmax		
	comp=Z,85nm,0.9s						
BVAR	Borovoye Array	119.10	320	PKP	PKPdf	08 27 33.2	-0.4
	comp=Z,41nm,0.4s,baz=121,slow=2.2,SNR=156						
BVAR				PKKPbc	PKKPbc	08 37 49.4	-1.1
	comp=Z,1.7nm,0.7s,baz=74,slow=6.2,SNR=2.9						
BRVK	Borovoye	119.16	320	*e*PKPdf	PKPdf	08 27 33.0	-0.7
BRVK	Borovoye	119.16	320	P	PKPdf	08 27 33.3	-0.4
	SNR=27						
BRVK	Borovoye	119.16	320*d*	*i*PKIKP	PKPdf	08 27 32.8	-0.9
KK31	Karatay Array	119.16	309	*e*PKPdf	PKPdf	08 27 33.3	-0.8
KK31	Karatay Array	119.16	309	*i* PKIKP	PKPdf	08 27 33.1	-1.0
KK31				pmax	pmax		
	comp=Z,28nm,0.8s						
KKAR	Karatay Array	119.16	309	*e*PKPdf	PKPdf	08 27 33.3	-0.8
KBL	Kabul	119.72	299	*e*PKPdf	PKPdf	08 27 35.8	+0.1
KBL	Kabul	119.72	299	*e*PKIKP	PKPdf	08 27 35.8	+0.1
OPO	Ambohidratompo	120.58	232	PKP	PKPdf	08 27 38.5	+0.7
	comp=Z,24nm,0.9s,baz=125,slow=2.9,SNR=18						
MSEY	Mahe Island	121.39	251	P	PKPdf	08 27 39.5	+0.2
MSEY	Mahe Island	121.39	251	*i* PKIKP	PKPdf	08 27 40.6	+1.3
KBS	Kingsbay	121.67	358	*e*PKPdf	PKPdf	08 27 38.3	+0.4
KBS	Kingsbay	121.67	358	*e*PKIKP	PKPdf	08 27 38.3	+0.4
KBS	Kingsbay	121.67	358	*e*PKPdf	PKPdf	08 27 37.8	-0.1
SPA0	Spitsbergen Ar	122.19	356	*e*PKPdf	PKPdf	08 27 38.8	-0.1
SPA0	Spitsbergen Ar	122.19	356	*e*PKPdf	PKPdf	08 27 38.7	-0.3
SPITS	Spitsbergen Ar	122.19	356	PKP	PKPdf	08 27 38.5	-0.5
	comp=Z,72nm,0.8s,baz=10,slow=8.9,SNR=47						
ILULI	Ilulissat	122.20	20	*e*PKPdf	PKPdf	08 27 38.6	-0.5
ILULI	Ilulissat	122.20	20⇓	*i*P	PKPdf	08 27 38.2	-0.9
ILULI	Ilulissat	122.20	20	*e*PKIKP	PKPdf	08 27 38.6	-0.5
DAG	Danmarks Havn	123.12	5⇓	*i*P	PKPdf	08 27 39.4	-1.3
	comp=Z,32nm,0.9s						
SFJD	Kangerlussuaq	123.41	22	PKP	PKPdf	08 27 40.9	-0.5
	comp=Z,14nm,0.4s,baz=193,slow=1.7,SNR=8.7						
SFJD	Kangerlussuaq	123.41	22	*i* P	PKPdf	08 27 40.0	-1.5
	comp=Z,31nm,0.9s						
SFJD				*i*		08 29 25.5	
SUMG	Summit	123.58	13	*e*PKPdf	PKPdf	08 27 41.6	-0.6
SUMG	Summit	123.58	13⇓	*i*P	PKPdf	08 27 42.0	-0.2
	comp=Z,160nm,1.1s						
SUMG				*i*		08 29 28.1	
SUMG	Summit	123.58	13	*e*PKIKP	PKPdf	08 27 41.6	-0.6
SUR	Sutherland	123.97	200	PKP	PKPdf	08 27 44.5	+0.5
	comp=Z,48nm,0.9s,baz=105,slow=1.5,SNR=27						
SUR				pPKP	pPKPdf	08 29 50.6	+0.2
	comp=Z,14nm,0.8s,baz=92,slow=5.1,SNR=2.6						
SUR				PKKPbc	PKKPbc	08 37 30.8	-2.4
	comp=Z,12nm,1.0s,baz=13,slow=9.9,SNR=4.4						
SVE	Sverdlovsk	124.06	325	*e*PKIKP	PKPdf	08 27 42.7	-0.3
SVE				pmax	pmax		
	comp=Z,119nm,1.0s						
ARU	Arti	125.27	325	PKKPbc	PKKPbc	08 37 26.3	-1.1
	comp=Z,5.9nm,0.2s,baz=256,slow=4.3,SNR=5.4						
ARU	Arti	125.27	325	*e*PKPdf	PKPdf	08 27 44.7	-0.6
ARU	Arti	125.27	325	*i* PKIKP	PKPdf	08 27 45.2	-0.1
ARU						08 34 06.0	
BOSA	Boshof	125.78	206	PKP	PKPdf	08 27 48.2	+0.7
	comp=Z,23nm,0.9s,baz=134,slow=2.2,SNR=24						
BOSA				PKKPbc	PKKPbc	08 37 23.8	-2.1
	comp=Z,4.4nm,0.8s,baz=311,slow=3.0,SNR=6.8						
BOSA	Boshof	125.78	206	*e*PKPdf	PKPdf	08 27 48.0	+0.5
BOSA				*e*PKPdf	PKPdf	08 27 48.2	+0.7
BOSA	Boshof	125.78	206	*e*PKIKP	PKPdf	08 27 48.0	+0.5
AB31	Akbulak array	126.08	316	*i* PKIKP	PKPdf	08 27 46.7	-0.4
AB31				pmax	pmax		
	comp=Z,45nm,1.1s						
ABKAR	Akbulak array	126.08	316	*e*PKPdf	PKPdf	08 27 46.9	-0.2
IVI	Ivigtut	127.02	28	*e*PKPdf	PKPdf	08 27 47.5	-1.0
AKTO	Aktyubinsk	127.07	318	PKP	PKPdf	08 27 48.4	-0.6
	comp=Z,52nm,0.8s,baz=68,slow=4.9,SNR=83						
AKTO	Aktyubinsk	127.07	318	PKIKP	PKPdf	08 27 48.0	-1.0
AKTO				pmax	pmax		
	comp=Z,68nm,0.9s						
WSAR	Wadi Sarin	127.36	284	PKP	PKPdf	08 27 50.1	-0.3
	comp=Z,21nm,1.1s,baz=175,slow=1.0,SNR=5.9						
BIDO	Bidbid	127.86	284	P	PKPdf	08 27 53.0	+1.7
	SNR=5.1						
NRS	Narsarsuaq	128.22	27⇓	*i*P	PKPdf	08 27 49.7	-1.1
HAMF	Hammerfest	128.50	351	IAmb	IAmb	08 27 51.6	
	comp=Z,61nm,0.9s						
ANGG	Ammassalik, Gr	128.51	20	*e*PKPdf	PKPdf	08 27 51.0	-0.2
GEYT	Alibeck	128.65	302	PKP	PKPdf	08 27 52.0	-0.4
	comp=Z,10.0nm,0.4s,baz=39,slow=50,SNR=14						
GEYT				PP	pPKPdf	08 30 02.7	+3.8
	comp=Z,4.0nm,0.3s,baz=106,slow=3.2,SNR=5.8						
GEYT				SKPbc	SKPbc	08 30 23.1	
	comp=Z,2.6nm,0.3s,baz=104,slow=6.1,SNR=3.6						
GYA0B	ALIBECK ARRAY	128.65	302	*e*PKPdf	PKPdf	08 27 52.9	+0.4
KEV	Kevo	128.74	349	*e*PKPdf	PKPdf	08 27 51.0	-0.5
KEV	Kevo	128.74	349	*e*PKIKP	PKPdf	08 27 51.1	-0.5
LBTB	Lobatse	128.78	208	PKP	PKPdf	08 27 53.4	+0.1
	comp=Z,12nm,0.8s,baz=171,slow=4.0,SNR=13						
LBTB	Lobatse	128.78	208	*e*PKPdf	PKPdf	08 27 53.5	+0.2
APA	Apatity	129.18	345⇑	*i*PKIKP	PKPdf	08 27 51.5	-1.0
APA				pmax	pmax		
	comp=Z,25nm,0.9s						
ARA0	ARCESS Array S	129.19	349	*e*PKPdf	PKPdf	08 27 51.3	-1.2
ARCES	ARCESS Array B	129.19	349	PKhKP	PKPpre	08 27 40.1	
	comp=Z,1.9nm,0.4s,baz=324,slow=1.6,SNR=16						
ARCES				PKP	PKPdf	08 27 51.3	-1.2
	comp=Z,36nm,0.6s,baz=45,slow=0.9,SNR=37						
ARCES				SKPbc	SKPbc	08 30 24.5	+0.8
	comp=Z,12nm,0.9s,baz=30,slow=5.6,SNR=4.7						
ARCES	ARCESS Array B	129.19	349	*e*PKPdf	PKPdf	08 27 52.2	-0.3
PRGR	Permogore	129.20	335	*e*PKIKP	PKPdf	08 27 49.0	-3.6
PRGR				pmax	pmax		
	comp=Z,57nm,0.9s						
MDH	Madha	129.76	286	P	PKPdf	08 27 53.9	-1.0
UOSS	Minazif	129.80	286	*e*PKPdf	PKPdf	08 27 54.3	-0.7
UOSS	Minazif	129.80	286	*i* P	PKPdf	08 27 54.4	-0.6
	SNR=7.5						
HATD	Hatta, Dubai	129.85	285	P	PKPdf	08 27 56.1	+1.0
	SNR=5.9						
HATD	Hatta, Dubai	129.85	285	*i* P	PKPdf	08 27 55.0	0.0
	SNR=22						
MSFE	Esma-Masafi	129.89	286	*i* P	PKPdf	08 27 55.2	0.0
	SNR=11						
ASHO	Ashiyiah	129.90	285	*i* P	PKPdf	08 27 55.0	-0.2
	SNR=12						
SHME	Shamm	129.98	287	*i* P	PKPdf	08 27 55.6	+0.2
	SNR=8.1						
KTK1	Kautokeino	130.04	350	*e*PKPdf	PKPdf	08 27 53.4	-0.7
TRO	Tromso	130.09	352	*e*PKPdf	PKPdf	08 27 53.4	-0.7
TRO				IAmb	IAmb	08 27 55.5	
	comp=Z,55nm,1.2s						
ALNE	Al Ain	130.09	284	*i* P	PKPdf	08 27 55.7	+0.1
	SNR=12						
NAZ	Nazwa, Dubai	130.29	286	P	PKPdf	08 27 57.0	+1.1
	SNR=7.1						
NAZ	Nazwa, Dubai	130.29	286	*i* P	PKPdf	08 27 55.8	-0.1
	SNR=11						
ASUD	Al Ashush, Dub	130.55	285	*i* P	PKPdf	08 27 56.7	+0.3
	SNR=8.4						
AJN	Ajban	130.85	285	P	PKPdf	08 27 56.9	0.0
KLMR	Klimovskoe	132.04	336	*e*PKHKP	PKPpre	08 27 48.0	
KLMR				*e*		08 30 33.3	
KLMR				pmax	pmax		
	comp=Z,89nm,1.0s						
KLMR	Klimovskoe	132.04	336	*e*PKPdf	PKPpre	08 27 48.0	
KLMR				AMP		08 27 59.2	
	comp=Z,89nm,1.0s						
KLMR				*e*SKP		08 30 33.3	
STEI	Steigen	132.15	353	*e*PKPdf	PKPpre	08 27 53.9	
BORG	Borgarnes	133.56	13	*e*PKPdf	PKPdf	08 28 01.7	+0.9
BORG	Borgarnes	133.56	13	*e*PKIKP	PKPdf	08 28 01.7	+0.9
KONS	Konsvik	133.76	354	*e*PKPdf	PKPdf	08 28 02.1	+1.0
MOR8	Moi Rana	133.93	353	*e*PKPdf	PKPdf	08 27 59.6	-1.9
MOR8				IAmb	IAmb	08 28 02.3	
	comp=Z,33nm,1.0s						
LSZ	Lusaka	135.60	218	PKhKP	PKPpre	08 27 54.8	
	comp=Z,3.0nm,0.4s,baz=197,slow=4.0,SNR=3.2						
LSZ				PKP	PKPdf	08 28 06.6	+0.3
	comp=Z,25nm,0.8s,baz=88,slow=1.9,SNR=20						
LSZ				SKPbc	SKPbc	08 30 46.2	-1.1
	comp=Z,6.9nm,0.8s,baz=146,slow=0.9,SNR=2.5						
LSZ	Lusaka	135.60	218	*e*PKPpre	PKPpre	08 28 04.6	
LSZ				*e*PKPdf	PKPdf	08 28 04.9	-1.4
LSZ	Lusaka	135.60	218	P	PKPdf	08 28 05.0	-1.4
	SNR=6.6						
NSS	Namsos	135.79	354	*e*PKPdf	PKPpre	08 27 53.0	
FIA1	FINESS Array S	136.00	343	*e*PKPdf	PKPdf	08 28 04.5	-0.9
FIA0	FINESS Array S	136.00	343	*e*PKPdf	PKPdf	08 28 04.3	-1.2
FINES	FINESS Array B	136.00	343	PKhKP	PKPpre	08 27 52.1	
	comp=Z,2.5nm,0.4s,baz=44,slow=3.3,SNR=14						
FINES				PKP	PKPdf	08 28 04.3	-1.2
	comp=Z,30nm,0.7s,baz=66,slow=3.5,SNR=20						
FINES				SKPbc	SKPbc	08 30 47.0	+0.2
	comp=Z,40nm,0.9s,baz=34,slow=7.4,SNR=20						
FINES				SKKPbc	SKKPbc	08 39 46.4	-3.1
	comp=Z,1.9nm,0.8s,baz=76,slow=5.9,SNR=3.5						
MOS	Moscow	136.02	331	*e*PKIKP	PKPdf	08 28 06.0	+0.3
PUL	Pulkovo	136.07	339	*e*PKIKP	PKPdf	08 28 05.9	+0.3
AKT	Akhty	136.09	309	*e*PKIKP	PKPdf	08 28 05.5	-0.9
AKT				*e*		08 30 09.7	
AKT				*e*		08 30 55.0	
AKT				pmax	pmax		
	comp=Z,65nm,0.9s						
VRH	Novokhopyorsk	136.46	324	*e*PKIKP	PKPdf	08 28 06.0	-0.6
VRH				pmax	pmax		
	comp=Z,210nm,1.1s						
OBN	Obninsk	136.88	331	*e*PKPdf	PKPdf	08 28 06.8	-0.4
OBN	Obninsk	136.88	331*d*	*i*PKIKP	PKPdf	08 28 06.6	-0.7
OBN				*e*		08 31 00.1	
OBN				pmax	pmax		
	comp=Z,108nm,0.9s						
GROC	Groznyy	137.02	312	*e*PKIKP	PKPdf	08 28 07.2	-0.7
GROC				*e*		08 30 11.6	
GROC				*e*		08 30 57.9	
GROC				*e*		08 34 26.4	
GROC				pmax	pmax		
	comp=Z,35nm,0.6s						
TBLU	Trondheim	137.22	354	*e*PKPdf	PKPpre	08 28 01.9	
TSUM	Tsumeb	137.22	203	SKPbc	SKPbc	08 30 53.2	+1.2
	comp=Z,13nm,0.9s,baz=183,slow=5.6,SNR=9.3						
TSUM	Tsumeb	137.22	203	*e*PKPpre	PKPpre	08 28 04.1	
VSR	Storozhevoye	137.84	325	*e*PKIKP	PKPdf	08 28 08.3	-0.9
VSR				pmax	pmax		
	comp=Z,90nm,1.1s						
VORD	Divnogorie	137.91	325	*e*PKIKP	PKPdf	08 28 08.5	-0.8
VORD				pmax	pmax		
	comp=Z,80nm,1.1s						
MOL	Molde	138.11	356	*e*PKPdf	PKPpre	08 28 01.4	
TBLG	Delisi	138.19	310	*e*PKPpre	PKPpre	08 28 02.0	
TBLG	Delisi	138.19	310	*e*PKHKP	PKPpre	08 28 02.1	
VSU	Vasula	138.25	340*d*	*i*PKIKP	PKPdf	08 28 09.2	-0.5
ZEI	Tsey	138.47	312	*i* PKIKP	PKPpre	08 28 06.3	
ZEI				pmax	pmax		
	comp=Z,32nm,0.9s						
DOMB	Dombas	138.51	355	*e*PKPdf	PKPpre	08 28 00.5	
DOMB				IAmb	IAmb	08 28 04.0	
	comp=Z,46nm,1.2s						
AKN	Aaknes	138.53	356	*e*	PKPpre	08 28 02.5	
GNI	Garni	138.61	308	PKhKP	PKPpre	08 28 03.2	
	comp=Z,7.6nm,0.7s,baz=110,slow=15,SNR=3.2						
GNI				PKP	PKPdf	08 28 11.0	-0.2
	comp=Z,42nm,1.0s,baz=69,slow=0.3,SNR=18						
GNI				SKPbc	SKiKP	08 30 59.9	+1.4
	comp=Z,9.8nm,0.4s,baz=79,slow=3.6,SNR=4.8						
KMBO	Kilima Mbogo	138.84	242	PKP	PKPdf	08 28 17.4	+4.9
	comp=Z,11nm,0.7s,baz=72,slow=4.4,SNR=22						
KMBO				PP	sPKPdf	08 31 11.6	+0.2
	comp=Z,15nm,1.0s,baz=13,slow=4.2,SNR=7.5						
DAMY	Dhamar	138.84	268	*e*PKPdf	PKPdf	08 28 11.9	-0.5
KBZ	Khabaz	138.86	313	PKhKP	PKPpre	08 28 03.5	
	comp=Z,8.0nm,0.8s,baz=77,slow=2.7,SNR=16						
KBZ				SKPab	SKPab	08 31 05.0	-1.3
	comp=Z,9.8nm,0.9s,baz=105,slow=2.9,SNR=4.8						
KIV	Kislovodsk	138.92	314	*e*PKPdf	PKPdf	08 28 11.9	+0.4
KIV	Kislovodsk	138.92	314	P	PKPdf	08 28 12.1	+0.5
	SNR=6.9						
KIV	Kislovodsk	138.92	314	*i* P	PKPdf	08 28 11.0	-0.5
	SNR=5.1						
KIV	Kislovodsk	138.92	314*d*	*e*PKIKP	PKPdf	08 28 11.0	-0.5
KIV				*e*		08 30 13.1	
KIV				*e*		08 31 08.5	
KIV				pmax	pmax		
	comp=Z,42nm,1.0s						
NC204	NORSAR Array S	139.10	353	*e*PKPpre	PKPpre	08 28 02.8	
AKH	Akhalkalaki	139.18	310⇑	*i*P	PKPpre	08 28 05.0	
AKH	Akhalkalaki	139.18	310	*e*PKPpre	PKPpre	08 28 05.6	
NB201	NORSAR Array S	139.26	353	*e*PKPpre	PKPpre	08 28 02.9	
NB2	NORSAR Subarra	139.28	353	PKP	PKPpre	08 28 03.0	
	comp=Z,8.0nm,0.6s,baz=16,slow=3.2						
NB2	NORSAR Subarra	139.28	353	PKP	PKPpre	08 28 03.0	
	baz=16,slow=3.2						
NBO00	NORSAR Array S	139.34	353	*e*PKPpre	PKPpre	08 28 03.5	
RAYN	Ar Rayn	139.37	282	*e*PKPpre	PKPpre	08 28 04.9	
RAYN				*e*PKPdf	PKPdf	08 28 13.3	+0.4
RAYN	Ar Rayn	139.37	282	*i* P	PKPdf	08 28 12.7	-0.2
	SNR=7.4						
ATD	Arta Tunnel	139.41	263	PKhKP	PKPpre	08 28 07.0	
	comp=Z,13nm,0.7s,baz=231,slow=4.9,SNR=6.0						
ATD				SKPbc	SKiKP	08 31 00.9	+0.1
	comp=Z,31nm,0.9s,baz=111,slow=4.6,SNR=8.8						
NAO01	NORSAR Array S	139.51	353	*e*PKPpre	PKPpre	08 28 03.8	
NC602	NORSAR Array S	139.54	352	*e*PKPpre	PKPpre	08 28 03.6	
NC602	NORSAR Array S	139.54	352	*e*P	PKPpre	08 28 06.1	
HYA	Hoyanger	139.59	357	*e*PKPdf	PKPpre	08 28 04.8	
HYA				IAmb	IAmb	08 28 07.2	
	comp=Z,16nm,0.7s						
SUE	Sulen	139.77	358	*e*PKPdf	PKPpre	08 28 05.5	
SUE				IAmb	IAmb	08 28 15.3	
	comp=Z,56nm,1.0s						
HFS	Hagfors	139.82	351	PKhKP	PKPpre	08 28 04.5	
	comp=Z,24nm,0.3s,baz=72,slow=4.7,SNR=115						
HFS				SKPbc	SKPbc	08 30 58.7	+1.0
	comp=Z,20nm,0.9s,baz=160,slow=4.6,SNR=8.9						
ASK	Askoy	140.32	357	*e*PKPdf	PKPpre	08 28 07.7	
ASK				IAmb	IAmb	08 28 08.2	
	comp=Z,28nm,0.8s						
OSL	Oslo	140.41	353	*e*PKP	PKPpre	08 28 06.7	
OSL				IAmb	IAmb	08 28 10.3	
	comp=Z,35nm,0.8s						
BER	Bergen	140.41	357	*e*	PKPpre	08 28 07.8	
IZAR	Zarasai	140.57	338	*e*P	PKPpre	08 28 08.2	
IDID	Didziasalis	140.74	337	*e*P	PKPpre	08 28 08.6	
IDID				IAmb	IAmb	08 28 11.5	
	comp=Z,33nm,0.9s						
ISAL	Salakas	140.76	338	*e*P	PKPpre	08 28 09.2	
ODD1	Odda	140.81	356	*e*PKPdf	PKPpre	08 28 08.9	
ODD1				IAmb	IAmb	08 28 11.0	
	comp=Z,31nm,0.8s						
KONO	Kongsberg	140.82	354	*e*PKPpre	PKPpre	08 28 08.1	
KONO	Kongsberg	140.82	354	*e*PKHKP	PKPpre	08 28 08.1	
KONO	Kongsberg	140.82	354	*e*PKPdf	PKPpre	08 28 08.0	
IIGN	Ignalina	140.90	338	*e*P	PKPpre	08 28 09.0	
MICGM	Minsk	140.94	336	*e*	PKPpre	08 28 10.0	
MNK	Minsk	140.94	336	*e*PKHKP	PKPpre	08 28 10.0	
NACGM	Naroch	141.05	337	*e*P	PKPpre	08 28 09.0	
NACGM				PM		08 28 12.0	
	comp=Z,0.7nm,1.0s						
SOC	Sochi	141.05	314	*e*PKHKP	PKPpre	08 28 09.8	
SOC				*i*		08 28 14.6	
SOC				*e*SSS	SSS	08 54 32.5	
SOC				pmax	pmax		
	comp=Z,27nm,0.9s						
SOC				pmax	pmax		
	comp=Z,34nm,0.7s						
BLS5	Blasjo	141.31	356	*e*PKPdf	PKPpre	08 28 10.2	
BLS5				IAmb	IAmb	08 28 11.9	
	comp=Z,41nm,1.1s						
KMY	Karmoy	141.59	357	*e*PKPdf	PKPpre	08 28 11.5	
ANN	Anapa	142.02	317	*e*PKHKP	PKPpre	08 28 12.3	
ANN				*i*		08 28 18.0	
ANN				pmax	pmax		
	comp=Z,63nm,0.7s						
HOMB	Homborsund	142.29	354	*e*PKPdf	PKPpre	08 28 13.4	
HOMB				IAmb	IAmb	08 28 14.8	
	comp=Z,205nm,0.9s						
SNART	Snartemo	142.33	355	*e*PKPdf	PKPpre	08 28 13.6	
SNART				IAmb	IAmb	08 28 16.7	
	comp=Z,33nm,1.0s						
SHEL	Horse Pasture	142.72	168	*e*PKPdf	PKPdf	08 28 18.4	-0.7
SHEL	Horse Pasture	142.72	168	*i* PKIKP	PKPdf	08 28 18.7	-0.4
LODK	Lodwar	142.85	247	*i* P	PKPdf	08 28 17.8	-1.6
LODK				*i* P	PKPdf	08 28 18.0	-1.5
LODK				*i* P	PKPdf	08 28 18.2	-1.2
LODK				*e*		08 28 20.7	
	baz=260,slow=11						
LODK	Lodwar	142.85	247	*i* P	PKPdf	08 28 18.1	-1.4
LODK				*i* P	PKPdf	08 28 18.3	-1.2
LODK				*i* P	PKPdf	08 28 18.4	-1.1
LODK				*e*		08 28 19.4	
	baz=120,slow=3.5						
SUW	Suwalki	143.03	339	*e*PKP	PKPab	08 28 16.0	+0.1
SUW	Suwalki	143.03	339	*e*PKPpre	PKPdf	08 28 16.1	-2.3
SUW	Suwalki	143.03	339	*e*PKIKP	PKPab	08 28 16.0	+0.1
AKASG	Malin Array Be	143.13	331	PKhKP	PKPpre	08 28 15.8	
	comp=Z,140nm,0.4s,baz=44,slow=4.5,SNR=393						
AKASG				pPKP	pPKPdf	08 30 27.5	+2.2
	comp=Z,8.6nm,0.7s,baz=41,slow=4.3,SNR=3.8						
AKASG				SKPbc	SKiKP	08 31 07.0	-0.3
	comp=Z,15nm,0.9s,baz=45,slow=2.5,SNR=5.8						
AKBB	Malin Array Si	143.13	331	*e*PKPpre	PKPpre	08 28 15.6	
AKBB	Malin Array Si	143.13	331	*e*PKHKP	PKPpre	08 28 15.6	
MCD	Coleburn Disti	143.14	4	*e*P	PKPab	08 28 15.6	-0.7
KIEV	Kiev	143.14	331	*i* P	PKPab	08 28 15.6	-0.8
	SNR=325						
MDO	Dochfour	143.19	5	*e*P	PKPab	08 28 16.1	-0.3
MME1	Meikle Cairn	143.43	4	*e*P	PKPab	08 28 15.8	-1.6
DRUM	Mains of Drumt	143.86	4	*e*P	PKPbc	08 28 17.5	-1.5
MUD	Monsted U’grnd	144.00	353⇓	*i*P	PKPbc	08 28 19.3	0.0
	comp=Z,800nm,1.0s						
SIM	Simferopol’	144.01	319*d*	*i*PKIKP	PKPab	08 28 20.1	+0.1
SIM				pmax	pmax		
	comp=Z,76nm,0.9s						
EDU	Dundee	144.19	4	*e*P	PKPbc	08 28 19.3	-0.7
INVG	Invergeldie, C	144.22	5	*e*P	PKPbc	08 28 19.6	-0.5
COP	Copenhagen	144.28	349⇓	*i*P	PKPbc	08 28 20.1	-0.1
	comp=Z,374nm,1.0s						
BSD	Bornholm Skovb	144.34	347⇓	*i*P	PKPbc	08 28 20.1	-0.4
	comp=Z,708nm,0.9s						
MBAR	Mbarara	144.40	237	*e*PKPbc	PKPab	08 28 22.7	+0.1
MBAR	Mbarara	144.40	237	*e*PKIKP	PKPab	08 28 22.7	+0.1
EAB	Aberfoyle	144.44	6	*e*P	PKPbc	08 28 20.2	-0.6
LLD	Lille Linde	144.65	350⇓	*i*P	PKPbc	08 28 21.3	-0.1
	comp=Z,434nm,1.0s						
PGBU	Glenifferbraes	144.79	6	*e*P	PKPdf	08 28 20.5	-0.9
EDI	Edinburgh	144.79	5	*e*P	PKPdf	08 28 20.8	-0.6
SLMH	Al Salmeh	144.83	304	*e*P	PKPab	08 28 24.7	+1.2
ESY	Stoneypath	144.84	4	*e*P	PKPdf	08 28 20.8	-0.7
IDGL	Inch Island, C	145.15	9	*e*P	PKPdf	08 28 19.4	-2.6
RGN	Rugen	145.20	348	*e*PKPdf	PKPbc	08 28 23.4	+0.3
SORM	Soroca	145.30	328⇑	*i*P	PKPdf	08 28 21.0	-1.5
SORM	Soroca	145.30	328	⇑PKIKP	PKPdf	08 28 21.0	-1.5
CLGH	Cloghs, Cushen	145.33	8	*e*P	PKPbc	08 28 23.4	0.0
EKA	Eskdalemuir Ar	145.38	5	PKPbc	PKPbc	08 28 23.1	-0.6
	comp=Z,197nm,0.9s,baz=353,slow=2.9,SNR=101						
ESK	Eskdalemuir	145.40	5	*e*PKPdf	PKPbc	08 28 23.2	-0.5
ESK	Eskdalemuir	145.40	5	*e*P	PKPdf	08 28 23.1	+0.6
ESK	Eskdalemuir	145.40	5	*e*PKIKP	PKPbc	08 28 23.2	-0.5
GKP	Gorka Klasztor	145.47	343	*e*PKP	PKPbc	08 28 24.0	+0.1
GKP	Gorka Klasztor	145.47	343	*e*PKP2	PKPbc	08 28 24.0	+0.1
BHH	Howats Hill	145.62	5	*e*P	PKPbc	08 28 23.7	-0.6
BEL	Belsk	145.64	339	*e*PKPdf	PKPdf	08 28 23.4	+0.4
BEL				*e*PKPbc	PKPbc	08 28 24.9	+0.4
BEL				*e*PKPab	PKiKP	08 28 27.0	-0.3
BEL	Belsk	145.64	339	*e*PKP2	PKPbc	08 28 24.9	+0.4
KIS	Kishinev	145.81	326	*e*P	PKPdf	08 28 22.0	-1.4
KIS				XM		08 28 24.5	
	comp=Z,900nm,1.0s						
KIS	Kishinev	145.81	326	*e*PKKP	PKKPdf	08 37 44.0	+16
KIS	Kishinev	145.81	326⇓	*i*P	PKPdf	08 28 23.3	-0.1
KIS	Kishinev	145.81	326	*e*PKIKP	PKPdf	08 28 22.0	-1.4
KIS				*e*		08 34 40.0	
KIS				pmax	pmax		
	comp=Z,870nm,1.0s						
KIS				pmax	pmax		
	comp=Z,1µm,6.0s						
KIS				pmax	pmax		
	comp=Z,2µm,12.0s						
EDMD	Edmundbyers	145.97	4	*e*P	PKPdf	08 28 22.7	-0.7
BBO1	Bothel	145.97	5	*e*P	PKPdf	08 28 23.4	0.0
LVV	L’vov	146.05	334	*i* PKIKP	PKPdf	08 28 23.3	-0.5
LVV				*e*		08 30 24.9	
LVV				*e*		08 35 24.8	
LVV				*e*SS	SS	08 50 09.3	+4.7
LVV				*e*SSS	SSS	08 55 41.5	
KESW	Keswick, Cumbr	146.13	5	*e*P	PKPdf	08 28 23.2	-0.5
ILGA	Ilgaz	146.16	314	*e*PKPdf	PKPdf	08 28 24.9	+0.4
IOMK	Kirk Michael	146.31	7	*e*P	PKPbc	08 28 25.3	-1.0
IAS	Iasi	146.33	327⇓	*i*P	PKPdf	08 28 24.2	-0.1
IAS	Iasi	146.33	327	⇓PKIKP	PKPdf	08 28 24.2	-0.1
LEOM	Leova	146.45	326⇑	*i*P	PKPdf	08 28 23.4	-1.1
LEOM	Leova	146.45	326	⇑PKIKP	PKPdf	08 28 23.4	-1.1
ASF	Jabal al Asfar	146.59	297	PKP	PKPdf	08 28 25.9	+0.5
	comp=Z,124nm,0.8s,baz=68,slow=3.0,SNR=139						
ASF				PKPbc	PKPbc	08 28 28.5	+0.5
	comp=Z,124nm,0.8s,baz=57,slow=1.8,SNR=56						
ASF	Jabal al Asfar	146.59	297	PKIKP	PKPdf	08 28 25.9	+0.5
ASF						08 28 28.5	
ASF				pmax	pmax		
	comp=Z,124nm,0.8s						
ASF				pmax	pmax		
	comp=Z,124nm,0.8s						
KWP	Kalwaria Pacla	146.74	335	*e*PKP	PKPbc	08 28 27.8	+0.2
KWP	Kalwaria Pacla	146.74	335	*e*PKP2	PKPbc	08 28 27.8	+0.2
KWP				MLR	MLR		
	comp=Z,400nm,26.9s						
TOTH	TOTAH	146.74	299	*e*P	PKPbc	08 28 29.1	+0.9
BR101	Keskin Array S	146.79	312	*e*PKPdf	PKPdf	08 28 25.1	-0.5
BR101				*e*PKPbc	PKPbc	08 28 27.9	-0.3
BR131	Keskin Array S	146.79	312	*e*PKPdf	PKPdf	08 28 24.9	-0.7
BRTR	Keskin Array B	146.79	312	PKP	PKPdf	08 28 25.1	-0.5
	comp=Z,83nm,0.7s,baz=138,slow=2.9,SNR=136						
BRTR				PKPbc	PKPbc	08 28 27.9	-0.3
	comp=Z,98nm,0.8s,baz=135,slow=3.8,SNR=189						
BRTR				pPKPbc	pPKPab	08 30 33.6	+0.7
	comp=Z,3.7nm,0.8s,baz=147,slow=3.4,SNR=2.3						
BRTR				SKKPbc	SKKPbc	08 39 05.5	-0.2
	comp=Z,3.4nm,0.9s,baz=211,slow=3.6,SNR=8.8						
QASN	Qassioun	146.82	300	*e*P	PKPbc	08 28 29.4	+0.8
HPK	Haverah Park	146.86	3	*e*P	PKPbc	08 28 26.6	-1.2
PRAR	RASCA	146.87	329⇑	*i*P	PKPdf	08 28 24.6	-0.7
HWQ	Hawqa	146.90	301	*e*P	PKPbc	08 28 28.7	0.0
TLCR		146.96	324⇑	*i*P	PKPdf	08 28 25.5	+0.1
TLCR		146.96	324	⇑PKIKP	PKPdf	08 28 25.5	+0.1
DSB	Dublin	147.09	9	*e*PKPdf	PKPdf	08 28 25.1	-0.3
DSB				*e*PKPbc	PKPbc	08 28 28.6	+0.1
GIUM	Giurgiulesti	147.11	325⇑	*i*P	PKPdf	08 28 26.9	+1.3
BRBR	Barbar	147.11	300	*e*P	PKPbc	08 28 30.0	+0.6
BUR08	Bucovina Ar. S	147.16	330	*e*PKPdf	PKPdf	08 28 26.4	+0.6
BUR08				*e*PKPbc	PKiKP	08 28 30.0	-0.8
WPS	Cemaes, Angles	147.17	7	*e*P	PKPdf	08 28 25.5	0.0
BUR04	Bucovina Ar. S	147.17	330	*e*PKPdf	PKPdf	08 28 25.9	0.0
BUR04				*e*PKPbc	PKiKP	08 28 30.2	-0.5
BURAR	Bucovina Array	147.17	330⇑	*i*P	PKPdf	08 28 26.7	+0.8
BURAR	Bucovina Array	147.17	330	⇑PKIKP	PKPdf	08 28 26.7	+0.8
WME	Myndd Eilian	147.19	7	*e*P	PKPdf	08 28 26.0	+0.5
BIZ	Bicaz	147.23	328⇓	*i*P	PKPdf	08 28 25.3	-0.5
BHL	Bhannes	147.23	301	*e*P	PKPbc	08 28 29.8	+0.2
TESR	Tescani	147.25	327⇑	*i*P	PKPdf	08 28 26.2	+0.3
WLF1	Llynfaes	147.29	7	*e*P	PKPbc	08 28 28.1	-0.8
SHBL	Chebaa	147.29	300	*e*P	PKPbc	08 28 30.4	+0.6
YRC	Rhoscolyn	147.31	7	*e*P	PKPdf	08 28 25.0	-0.7
ANTO	Ankara	147.31	312⇑	*i*P	PKPdf	08 28 26.8	+0.5
ANTO	Ankara	147.31	312	*e*PKPdf	PKPdf	08 28 26.0	-0.3
ANTO				*e*PKPbc	PKPbc	08 28 29.7	+0.1
ANTO	Ankara	147.31	312	P	PKPdf	08 28 26.7	+0.5
	SNR=43						
ANTO	Ankara	147.31	312	⇑PKIKP	PKPdf	08 28 26.8	+0.5
BR231	Keskin MP Arra	147.34	312	*e*PKPdf	PKPdf	08 28 26.7	+0.3
BR231				*e*PKPbc	PKPbc	08 28 29.8	+0.1
OJC	Ojcow	147.34	338	*e*PKPdf	PKPdf	08 28 25.6	-0.3
OJC				*e*PKPbc	PKPbc	08 28 29.3	+0.1
OJC				*e*PKPab	PKPab	08 28 33.1	+0.2
OJC	Ojcow	147.34	338	*e*PKPdf	PKPdf	08 28 25.9	0.0
OJC				*e*PKPbc	PKPbc	08 28 29.4	+0.1
OJC	Ojcow	147.34	338	*e*PKIKP	PKPdf	08 28 25.6	-0.3
CFR	Carcaliu	147.34	324⇑	*i*P	PKPdf	08 28 25.8	-0.2
CFR	Carcaliu	147.34	324	⇑PKIKP	PKPdf	08 28 25.8	-0.2
DQRL	Deir Qamar	147.35	300	*e*P	PKPbc	08 28 30.5	+0.6
WPM1	Penmaenmawr	147.37	6	*e*P	PKPdf	08 28 25.5	-0.3
ASCN	Ascension	147.38	150	*e*PKPbc	PKPbc	08 28 29.9	-0.5
LBWR	Ladybower, Pea	147.41	4	*e*P	PKPdf	08 28 25.7	-0.2
LMK	Market Rasen	147.42	2	*e*P	PKPbc	08 28 28.0	-1.2
YLL	Llanberis	147.46	6	*e*P	PKPdf	08 28 25.6	-0.3
PETR	Petresti	147.48	326⇑	*i*P	PKPdf	08 28 27.5	+1.3
VAL	Valentia	147.63	14⇑	*i*P	PKPdf	08 28 27.0	+0.7

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TIRR  Tirgusor          147.64 323⇓iP        PKPdf    08 28 26.4 -0.1
TIRR  Tirgusor          147.64 323 ePKPdf    PKPdf    08 28 26.5 -0.1
TIRR                               ePKPbc    PKPbc    08 28 30.5 +0.4
TIRR  Tirgusor          147.64 323 ⇓PKIKP    PKPdf    08 28 26.4 -0.1
VRI   Vrincioaia        147.65 326⇑iP        PKPdf    08 28 26.6  0.0
VRI   Vrincioaia        147.65 326 ⇑PKIKP    PKPdf    08 28 26.6  0.0
MMAI  Mount Meron Ar    147.65 299  PKPbc    PKPbc    08 28 30.9 +0.3
      comp=Z,369nm,0.8s,baz=69,slow=4.6,SNR=191
MMAI                                pPKPbc   pPKPab   08 30 38.5 +2.3
      comp=Z,22nm,0.8s,baz=79,slow=4.3,SNR=5.7
STNC  Stoke             147.68   4 eP        PKPdf    08 28 26.8 +0.4
UZH   Uzhgorod          147.69 334 ePKP2     PKPbc    08 28 29.9 -0.2
PLOR  Plostina          147.70 326⇓iP        PKPdf    08 28 27.6 +0.9
PLOR  Plostina          147.70 326 ⇓PKIKP    PKPdf    08 28 27.6 +0.9
EFOR  EFORIE            147.75 322⇓iP        PKPdf    08 28 27.4 +0.7
HARR  Harsova           147.76 324⇑iP        PKPdf    08 28 27.0 +0.2
HARR  Harsova           147.76 324 ⇑PKIKP    PKPdf    08 28 27.0 +0.2
TLB   Topalu            147.77 323⇑iP        PKPdf    08 28 27.2 +0.4
TLB   Topalu            147.77 323 ⇑PKIKP    PKPdf    08 28 27.2 +0.4
LLW   Llanuwychllyn     147.80   6 eP        PKPdf    08 28 26.0 -0.6
FOEL  Foel Wylfa        147.80   5 eP        PKPdf    08 28 26.6  0.0
CRVS  Cervenica-Dubn    147.81 335 ePKIKP    PKPdf    08 28 27.1 +0.4
CRVS                               e                  08 28 35.6
CRVS  Cervenica-Dubn    147.81 335 ePKP      PKPdf    08 28 27.1 +0.4
CRVS                               e                  08 28 30.9
CRVS                               e                  08 28 35.6
NIE   Niedzica          147.83 337 ePKPdf    PKPdf    08 28 27.1 +0.3
NIE                                ePKPbc    PKiKP    08 28 31.3 -0.7
NIE                                ePKPab    PKPab    08 28 36.0 +1.1
NIE   Niedzica          147.83 337 ePKIKP    PKPdf    08 28 27.1 +0.3
GRER                    147.84 325⇓iP        PKPdf    08 28 26.5 -0.4
KSP   Ksiaz             147.91 342 ePKPdf    PKPdf    08 28 26.9 +0.1
KSP                                ePKPbc    PKPbc    08 28 31.3 +0.6
KSP                                ePKPab    PKPab    08 28 36.1 +0.9
BMR   Baia Mare         147.91 332⇑iP        PKPdf    08 28 25.6 -1.3
BMR   Baia Mare         147.91 332  PKIKP    PKPdf    08 28 25.6 -1.3
CVDA  Cernavoda         147.93 323⇓iP        PKPbc    08 28 29.7 -1.2
ARCR  ARCALIA           147.96 330⇑iP        PKPdf    08 28 25.4 -1.6
TRPA  Tarpa             147.98 333⇓iP        PKPdf    08 28 26.5 -0.5
TRPA  Tarpa             147.98 333⇓ex        PKPbc    08 28 31.0 +0.1
CWF   Charnwood Fore    148.09   3 eP        PKPdf    08 28 27.1  0.0
PGOR  Pogoanele         148.14 325⇑iP        PKPdf    08 28 28.9 +1.5
AMRR  Amara             148.14 324⇑iP        PKPdf    08 28 27.8 +0.4
WACR  West Acre         148.17   1 eP        PKPbc    08 28 29.9 -1.3
ICOR  Ion Corvin        148.19 323⇓iP        PKPdf    08 28 28.1 +0.6
HLM1  Long Mynd         148.20   5 eP        PKPdf    08 28 26.9 -0.4
AUMIH MIHALICIK         148.21 313 eP        PKPbc    08 28 31.6 -0.4
OKC   Ostrava-Krasne    148.23 339⇑ePKP      PKPbc    08 28 32.5 +1.0
OKC                                epPKP     pPKPdf   08 30 33.2 -1.0
OKC                                ex        x        08 34 54.4
OKC   Ostrava-Krasne    148.23 339 ePKP2     PKPbc    08 28 32.5 +1.0
DOPR  Dopca             148.26 328⇑iP        PKPdf    08 28 28.5 +0.9
UPC   Upice             148.29 342 ePKPDF    PKPdf    08 28 27.9 +0.4
UPC                               ⇑ePKP      PKPbc    08 28 32.2 +0.6
UPC                                epPKP     pPKPab   08 30 38.3 +0.3
UPC                                esPKP              08 31 28.4
UPC                                ex        x        08 34 53.6
MLR   Muntele Rosu      148.31 326⇑iP        PKPdf    08 28 27.9 +0.1
MLR   Muntele Rosu      148.31 326 ePKPdf    PKPdf    08 28 27.2 -0.6
MLR                                ePKPbc    PKPbc    08 28 32.2 +0.2
CLL   Collm             148.31 346 ePKPdf    PKPdf    08 28 28.0 +0.6
      comp=Z,43nm,1.1s
CLL                               ⇓iPKPbc    PKPbc    08 28 31.9 +0.3
      comp=Z,467nm,0.9s
CLL                                ePKPlp             08 28 32.0
      comp=Z,400nm,21.1s
CLL                                ePKPab    PKPab    08 28 36.0 -0.8
      comp=Z,244nm,0.8s
CLL                                e                  08 30 09.0
CLL                                epPKPbc   pPKPbc   08 30 36.0 -0.7
CLL                                i pPKPab  pPKPab   08 30 39.4 +1.4
      comp=Z,33nm,0.8s
CLL                                esPKPbc   sPKPdf   08 31 27.0 +0.4
CLL                                ePP       PP       08 32 06.0 +0.5
CLL                                epPP               08 33 53.0
CLL                                esPP               08 34 50.0
CLL                                ePPP      PPP      08 35 36.0
CLL                                ePPPP              08 37 42.0
CLL                                eSKKSac   SKKSac   08 38 03.0  0.0
CLL                                i SKKPdf  SKKPdf   08 40 06.8 -0.8
CLL                                eSKSP              08 41 30.0
CLL                                ePSKS              08 42 24.0
CLL                                ePPS      PPS      08 45 04.0
CLL                                epPPS              08 46 33.0
CLL                                eSS       SS       08 50 18.0  -11
CLL                                esSS               08 53 48.0
CLL                                esPSPS             08 55 06.0
CLL                                e                  08 58 06.0
CLL                                eSSSS              09 00 12.0
CLL                                eSSSrev            09 09 30.0
CLL   Collm             148.31 346 ePKPdf    PKPdf    08 28 27.3 -0.1
CLL                                ePKPbc    PKPbc    08 28 32.0 +0.3
LADK  Ladik-KONYA       148.32 310 eP        PKPbc    08 28 32.0 -0.3
DPC   Dobruska-Polom    148.34 342 ePKPDF    PKPdf    08 28 28.4 +0.8
DPC                               ⇑ePKP      PKiKP    08 28 32.6 -0.4
DPC                                ePKPAB    PKPab    08 28 38.1 +1.1
DPC                                esPKP              08 31 29.3
DPC                                ex        x        08 34 54.9
LANS  Liptovska Anna    148.36 337 ePKP      PKPdf    08 28 28.4 +0.7
LANS                               e                  08 28 32.9
LANS                               e                  08 28 38.6
AUSIV SIVRIHISAR        148.37 313 eP        PKPbc    08 28 31.9 -0.4
KIZT  Kizilcal          148.38 311 eP        PKPbc    08 28 32.4  0.0
KONT  Konya--Tatoy      148.43 309 eP        PKPbc    08 28 31.7 -0.7
KRLC  Kraliky           148.45 341⇑ePKP      PKPbc    08 28 32.8 +0.7
KRLC  Kraliky           148.45 341 ePKP2     PKPbc    08 28 32.8 +0.7
MORC  Moravsky Berou    148.47 340⇓iP        PKPdf    08 28 25.1 -2.7
MORC  Moravsky Berou    148.47 340 ePKPdf    PKPdf    08 28 27.4 -0.4
MORC                               ePKPbc    PKPbc    08 28 32.6 +0.5
MORC  Moravsky Berou    148.47 340 ⇓PKIKP    PKPdf    08 28 25.1 -2.7
MORC  Moravsky Berou    148.47 340 ePKP      PKPdf    08 28 27.5 -0.4
MORC                               e                  08 28 32.4
PCED  Cedros            148.49  49 ePKP      PKPbc    08 28 30.9 -1.6
BRG   Berggiesshubel    148.50 345 i PKP     PKPdf    08 28 27.7  0.0
      comp=Z,57nm,1.3s
BRG   Berggiesshubel    148.50 345 i PKP     PKPbc    08 28 32.4 +0.3
      comp=Z,220nm,0.9s
BRG   Berggiesshubel    148.50 345 i PKP     PKPab    08 28 37.8 +0.2
      comp=Z,124nm,0.8s
BRG                                i pPKP    pPKPab   08 30 40.5 +1.7
      comp=Z,55nm,1.4s
BRG                                i SKP              08 31 10.9
      comp=Z,17nm,0.9s
BRG                                i PP      PP       08 32 10.0 +3.4
      comp=Z,9.5nm,1.1s
CALA  Caldeira          148.51  49 ePKP      PKPbc    08 28 35.0 +2.3
KECS  Kecovo            148.53 336 ePKP2     PKPbc    08 28 32.4 +0.1
KECS  Kecovo            148.53 336 ePKP      PKPbc    08 28 32.4 +0.1
KECS                               e                  08 28 37.9
SECR                    148.55 326⇓iP        PKPdf    08 28 30.2 +2.1
SAUV  Serdivan-Sakar    148.56 316 eP        PKPbc    08 28 32.4 -0.2
CJR   Cluj-Napoca       148.59 330⇑iP        PKPdf    08 28 27.4 -0.7
CJR   Cluj-Napoca       148.59 330 ⇑PKIKP    PKPdf    08 28 27.4 -0.7
GULT  Gulveren          148.59 315 eP        PKPbc    08 28 32.5 -0.3
SPNC  Sapanca-Adapaz    148.60 315 eP        PKPbc    08 28 31.7 -1.0
PLAR  PLOIESTI          148.65 326⇓iP        PKPdf    08 28 29.8 +1.6
PVCC  Panska Ves        148.66 344⇑ePKP      PKPbc    08 28 33.3 +0.8
PVCC                               ePKPAB    PKPab    08 28 39.5 +1.2
PVCC  Panska Ves        148.66 344 ePKP2     PKPbc    08 28 33.3 +0.8
EIL   Elat              148.67 293  PKPbc    PKPbc    08 28 35.2 +2.0
      comp=Z,19nm,0.8s,baz=7.5,slow=3.8,SNR=13
EIL                                 PKPab    PKPab    08 28 40.6 +1.5
      comp=Z,140nm,0.8s,baz=20,slow=2.2,SNR=70
WTSB  Winterswijk       148.68 354 ePKPdf    PKPdf    08 28 27.8 -0.2
WTSB                               i PKPbc   PKPbc    08 28 32.6 +0.2
WTSB                               ePKPab    PKPab    08 28 38.5 +0.2
SULR                    148.69 325⇑iP        PKPdf    08 28 29.5 +1.3
MCH1  Michaelchurch     148.71   5 eP        PKPdf    08 28 27.6 -0.4
PCAN  Candelaria        148.71  49 ePKP      PKPbc    08 28 34.2 +1.1
PICO  Pico              148.74  49 ePKP      PKPbc    08 28 34.4 +1.2
ROSA  Rosais            148.77  49 ePKP      PKPbc    08 28 34.1 +0.9
ROSA  Rosais            148.77  49 ePKPdf    PKPdf    08 28 30.0 +1.4
ROSA                               ePKPbc    PKiKP    08 28 33.9 -0.3
CSS   Mathiatis         148.78 304 ePKPdf    PKPdf    08 28 28.6 -0.1
CSS                                ePKPbc    PKPbc    08 28 33.4  0.0
CSS   Mathiatis         148.78 304  P        PKPbc    08 28 32.8 -0.6
CSS   Mathiatis         148.78 304  P        PKPbc    08 28 33.5 +0.1
SILT  Sile              148.79 317 eP        PKPbc    08 28 33.3 +0.2
PGRA  Graciosa          148.82  48 ePKP      PKPbc    08 28 34.1 +0.8
LTVH  Lˆ'tavˆ'rtes,     148.83 333⇓ex        PKPbc    08 28 34.3 +1.3
MONM  Monmouth          148.88   5 eP        PKPdf    08 28 27.9 -0.4
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BORA  Eskisehir         148.90 314 eP        PKPbc    08 28 33.6  0.0
PMAN  Manadas           148.92  49 ePKP      PKPbc    08 28 34.6 +1.1
DRGR                    148.93 331⇓iP        PKPdf    08 28 28.6 -0.1
MTUR  Matau             148.94 327⇓iP        PKPdf    08 28 30.3 +1.5
HRT   Hereke            148.95 316 eP        PKPbc    08 28 33.3 -0.3
ARR   Arges             149.06 328⇓iP        PKPdf    08 28 29.6 +0.7
ADVT  Abdulvahap        149.10 315 eP        PKPbc    08 28 33.8 -0.1
PRA   Prague            149.11 344⇑ePKP      PKPbc    08 28 34.3 +0.7
PRA   Prague            149.11 344 ePKP2     PKPbc    08 28 34.3 +0.7
KLYT  Kilyos            149.12 317 eP        PKPbc    08 28 33.5 -0.4
VYHS  Vyhne             149.14 337 ePKP      PKPdf    08 28 28.9  0.0
VYHS                               e                  08 28 33.9
VYHS                               e                  08 28 41.2
CAVI  Cavuskoy          149.15 315 eP        PKPbc    08 28 34.0 -0.1
PRU   Pruhonice         149.16 344⇑ePKP      PKPbc    08 28 34.2 +0.4
PRU                                epPKP     pPKPdf   08 30 35.2 -0.5
PRU                                esPKP              08 31 31.9
PRU                                ex        x        08 34 57.5
GOPC  GO Pecny, Ondr    149.16 343⇑ePKP      PKPbc    08 28 34.3 +0.5
GOPC                               ex        x        08 41 56.7
VRAC  Vranov            149.18 341⇑iP        PKPdf    08 28 24.8 -4.1
VRAC  Vranov            149.18 341 ⇑PKIKP    PKPdf    08 28 24.8 -4.1
VRAC  Vranov            149.18 341 ePKP      PKPdf    08 28 28.5 -0.4
VRAC                               e                  08 28 33.8
SZAC  Souni             149.19 303  P        PKPbc    08 28 34.5 +0.1
KAVV  Kandilli-Istan    149.21 317 eP        PKPbc    08 28 33.8 -0.4
PSZ   Piszkesteto       149.22 336⇓ex        PKPbc    08 28 34.1  0.0
PSZ   Piszkesteto       149.22 336 ePKPdf    PKPdf    08 28 28.6 -0.5
PSZ                                ePKPbc    PKPbc    08 28 34.4 +0.3
PSZ   Piszkesteto       149.22 336 ePKIKP    PKPdf    08 28 28.6 -0.5
PSZ                                e                  08 28 34.4
JAVC  Velka Javorina    149.23 339 ePKP      PKPdf    08 28 29.8 +0.7
JAVC                               e                  08 28 35.4
GOLR                    149.26 326⇑iP        PKPbc    08 28 34.2  0.0
YLV   Yalova            149.27 316 eP        PKPbc    08 28 34.0 -0.4
ALFC  Alefka            149.28 304  P        PKPbc    08 28 34.3 -0.3
LOT   Lotru             149.43 329⇓iP        PKPdf    08 28 30.1 +0.5
NKC   Novy Kostel       149.44 346⇑ePKP      PKPbc    08 28 34.9 +0.4
NKC                                ePKPAB    PKPab    08 28 42.2 +0.6
NKC                                esPKP              08 31 30.1
HUMR  Humele            149.46 326⇑iP        PKPdf    08 28 29.9 +0.4
KRUC  Moravsky          149.46 341 ePKP      PKPdf    08 28 28.8 -0.6
KRUC                               e                  08 28 34.6
CTKS  Kestanelik-??a    149.47 318 eP        PKPbc    08 28 34.6 -0.1
CTYL  Yalikoy Yolu      149.47 318 eP        PKPbc    08 28 34.6 -0.2
DEV   Deva              149.53 330⇓iP        PKPdf    08 28 30.3 +0.7
AKMC  Akamas            149.53 304  P        PKPbc    08 28 34.7 -0.5
SBT5  Esenkoy-Cinarc    149.56 316 eP        PKPbc    08 28 34.8 -0.1
PSCM  Serra do Cume     149.57  48 ePKP      PKPdf    08 28 31.5 +1.6
PPCY  Paphos            149.57 304  P        PKPbc    08 28 34.5 -0.7
SMOL  Smolenice         149.61 339 ePKP      PKPdf    08 28 30.8 +1.2
SMOL                               e                  08 28 35.5
SUTC  Sutluce-Ispart    149.61 309 eP        PKPbc    08 28 34.1 -1.3
SLVT  Silivri           149.66 318 eP        PKPbc    08 28 35.2  0.0
MDNY  Mudanya-Bursa     149.69 316 eP        PKPbc    08 28 34.8 -0.5
MODS  Modra-Piesok      149.78 339 ePKP      PKPdf    08 28 30.5 +0.6
MODS                               e                  08 28 35.8
TVSB  Tavsanli          149.78 314 eP        PKPbc    08 28 35.9 +0.2
SZH   Strazhica         149.78 323 i P       PKPbc    08 28 39.1 +3.6
ISP   Isparta           149.80 310 eP        PKPbc    08 28 35.0 -0.8
ISP   Isparta           149.80 310⇑iP        PKPdf    08 28 30.8 +0.4
ISP   Isparta           149.80 310 ePKPdf    PKPdf    08 28 31.7 +1.3
ISP                                ePKPbc    PKPbc    08 28 35.0 -0.8
ISP   Isparta           149.80 310  P        PKPbc    08 28 34.5 -1.3
ZIMR                    149.84 324⇓iP        PKPbc    08 28 33.3 -2.3
BUD   Budapest          149.91 336⇓ex        PKPbc    08 28 35.7 +0.1
JMB   Yambol            149.91 321 i P       PKPbc    08 28 36.7 +0.9
BEBN  Eben Emael        149.94 355 ⇓PKPbc    PKPbc    08 28 35.7 +0.1
BEBN                               ⇓PKPab    PKPab    08 28 42.7 -0.9
HGN   Heimansgroeve     149.95 354 ePKPdf    PKPdf    08 28 29.9 -0.2
HGN                                i PKPbc   PKPbc    08 28 35.6  0.0
HGN                                ePKPab    PKPab    08 28 42.2 -1.4
SBT3  Marmara-Eregli    150.00 318 eP        PKPbc    08 28 34.9 -0.9
GEDZ  Gediz             150.01 313 eP        PKPbc    08 28 36.3  0.0
HMNX  Herstmonceux      150.03   2 eP        PKPdf    08 28 30.9 +0.7
UCC   Uccle             150.03 356 ⇓PKPbc    PKPbc    08 28 35.8  0.0
UCC                                ⇓PKPab    PKPab    08 28 43.3 -0.6
UCC   Uccle             150.03 356 ePKPdf    PKPdf    08 28 30.3 +0.1
UCC                                ePKPbc    PKiKP    08 28 36.3 -0.1
UCC                                ePKPab    PKPab    08 28 43.9  0.0
UCC   Uccle             150.03 356 ePKIKP    PKPdf    08 28 30.3 +0.1
UCC                                e                  08 28 36.3
UCC                                e                  08 28 43.9
KCTX  Karacabey (Bur    150.09 316 eP        PKPbc    08 28 37.1 +0.8
MEM   Membach           150.10 354 ⇑E        PKPdf    08 28 30.5 +0.2
MEM   Membach           150.10 354 ⇓PKPbc    PKPbc    08 28 36.0  0.0
ANTB  Antalya           150.10 309 eP        PKPbc    08 28 35.1 -1.3
SHAP  Saphane-Kutahy    150.15 313 eP        PKPbc    08 28 36.6  0.0
KHC   Kasperske Hory    150.20 344 ePKPDF    PKPdf    08 28 31.1 +0.5
KHC                               ⇑ePKP      PKiKP    08 28 36.7 -0.2
KHC                                ePKPAB    PKPab    08 28 45.6 +0.8
KHC                                epPKP     pPKPbc   08 30 41.4 -0.5
KHC                                esPKP              08 31 34.9
KHC                                ex        x        08 35 04.9
KHC                                ex        x        08 42 03.8
KHC   Kasperske Hory    150.20 344 ePKPdf    PKPdf    08 28 30.4 -0.2
KHC                                ePKPbc    PKiKP    08 28 36.7 -0.2
KHC                                ePKPab    PKPab    08 28 45.5 +0.8
KHC   Kasperske Hory    150.20 344 ePKIKP    PKPdf    08 28 31.1 +0.5
KHC                                e                  08 28 36.7
KHC                                e                  08 28 45.6
CRAR  CRAIOVA           150.21 327⇓iP        PKPdf    08 28 33.2 +2.5
CRAR  CRAIOVA           150.21 327 ⇓PKIKP    PKPdf    08 28 33.2 +2.5
GRFO  Grafenberg        150.22 347 ePKPdf    PKPdf    08 28 31.3 +0.8
GRFO                               ePKPbc    PKPbc    08 28 36.4 +0.1
GRFO                               ePKPab    PKPab    08 28 45.0 +0.3
CCA1  Carnmenellis      150.23   9 eP        PKPdf    08 28 30.4 -0.1
SRE   Strehaia          150.27 328⇓iP        PKPdf    08 28 32.0 +1.2
SRE   Strehaia          150.27 328 ⇓PKIKP    PKPdf    08 28 32.0 +1.2
KORT  Korkueli          150.28 309 eP        PKPbc    08 28 36.8 -0.2
SIMA  Simav-Kutahya     150.28 314 eP        PKPbc    08 28 36.6 -0.3
CSKK  Csˆ‡kako          150.30 337 ex        PKPbc    08 28 36.5  0.0
BZS   Buzias            150.32 331⇓iP        PKPdf    08 28 30.5 -0.3
BZS   Buzias            150.32 331 ⇓PKIKP    PKPdf    08 28 30.5 -0.3
SNF   Seneffe           150.33 357 ⇓PKPbc    PKPbc    08 28 36.6 +0.2
SNF                                ⇑PKPab    PKPab    08 28 45.1  0.0
BCLA  Clavier           150.34 355 ⇑E        PKPdf    08 28 31.0 +0.3
BCLA                               ⇓PKPbc    PKPbc    08 28 36.3 -0.3
BCLA                               ⇑PKPab    PKPab    08 28 45.0 -0.2
TIM   Timisoara         150.41 332⇑iP        PKPdf    08 28 29.4 -1.5
TIM   Timisoara         150.41 332 ⇑PKIKP    PKPdf    08 28 29.4 -1.5
GEC2  GERESS Array S    150.43 344 ePKPdf    PKPdf    08 28 30.7 -0.3
GEC2                               ePKPbc    PKPbc    08 28 36.6 -0.3
GEC2                               ePKPab    PKPab    08 28 46.2 +0.4
GEC2  GERESS Array S    150.43 344 ePKIKP    PKPdf    08 28 30.7 -0.3
GEC2                               e                  08 28 36.6
GEC2                               e                  08 28 46.2
GERES GERESS Array B    150.43 344  PKP      PKPdf    08 28 30.4 -0.6
      comp=Z,6.7nm,0.9s,baz=75,slow=1.5,SNR=44
GERES                               PKPbc    PKPbc    08 28 36.6 -0.3
      comp=Z,94nm,0.8s,baz=42,slow=2.2,SNR=157
GERES                               pPKPbc   pPKPbc   08 30 43.3 +0.8
      comp=Z,7.3nm,0.9s,baz=64,slow=2.3,SNR=2.9
GEA0  GERESS Array S    150.44 344 ePKPdf    PKPdf    08 28 29.9 -1.1
GEA0                               ePKPbc    PKPbc    08 28 36.8 -0.2
GEA0                               ePKPab    PKPab    08 28 46.4 +0.5
HERR  Herculane         150.50 329⇓iP        PKPdf    08 28 31.2 +0.1
RKY   Sarkoy-Tekirda    150.61 318 eP        PKPbc    08 28 36.9 -0.6
CONA  Conrad Observa    150.63 340 ePKPdf    PKPdf    08 28 31.5 +0.1
      comp=Z,16nm,1.0s,SNR=15
CONA                               ePKiKP    PKiKP    08 28 37.8  0.0
      comp=Z,170nm,0.8s
ELL   Elmali            150.71 309 eP        PKPbc    08 28 37.7 -0.3
BANR  Banloc            150.72 331⇑iP        PKPdf    08 28 30.1 -1.3
DOU   Dourbes           150.72 356 ⇑E        PKPdf    08 28 31.7 +0.4
DOU                                ⇑PKPbc    PKPbc    08 28 37.2 -0.1
DOU                                ⇑PKPab    PKPab    08 28 46.5 -0.3
BALB  Balikesir         150.73 316 eP        PKPbc    08 28 37.5 -0.3
KULA  Kula-Manisa       150.78 313 eP        PKPbc    08 28 37.9 -0.2
MANT  Manisa            150.87 313 ePKPdf    PKPdf    08 28 33.0 +0.9
MANT                               ePKPbc    PKPbc    08 28 38.4 -0.1
MDVR  Moldovita         150.91 330⇑iP        PKPdf    08 28 31.7 -0.1
MPEP  Malo Peshtene     150.92 326 i P       PKPbc    08 28 38.9 +0.8
WLF   Walferdange       151.02 354 ⇓E        PKPdf    08 28 32.7 +0.9
WLF                                ⇑PKPbc    PKiKP    08 28 38.7 +0.2
WLF                                ⇑PKPab    PKPab    08 28 47.6 -0.5
WLF   Walferdange       151.02 354 ePKPdf    PKPdf    08 28 32.7 +0.9
WLF   Walferdange       151.02 354 ePKIKP    PKPdf    08 28 32.7 +0.9
ERIK  Erikli-Kesan      151.03 319 eP        PKPbc    08 28 37.9 -0.5
LPK   Lapseki           151.05 318 eP        PKPbc    08 28 38.3 -0.2
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KDZ   Kurdzhali         151.10 321 i P       PKPbc    08 28 38.4 -0.2
MORH  Mˆ‡rˆ¡gy, Hung    151.11 335⇓ex        PKPbc    08 28 38.3 -0.1
CMLA  Cha da Macela     151.11  48 ePKP      PKPdf    08 28 34.5 +2.2
CMLA  Cha da Macela     151.11  48 ePKPdf    PKPdf    08 28 33.9 +1.6
AKAS  Kas               151.14 308 eP        PKPbc    08 28 38.3 -0.7
MOA   Molln             151.18 342 ePKPdf    PKPdf    08 28 31.9 -0.2
      comp=Z,13nm,1.2s,SNR=6.1
MOA                                i PKPbc   PKPbc    08 28 38.6  0.0
      comp=Z,67nm,0.8s
ALN   Alexandroupoli    151.18 319 eP        PKPbc    08 28 37.9 -0.8
ALN   Alexandroupoli    151.18 319 ePKPbc    PKPbc    08 28 38.2 -0.6
ALN   Alexandroupoli    151.18 319  P        PKPbc    08 28 38.0 -0.8
KSL   Kastellorizon     151.19 308  P        PKPbc    08 28 38.2 -0.7
GELI  Tayfur-Gelibol    151.21 318 eP        PKPbc    08 28 38.3 -0.5
ENEZ  Enez              151.21 319 eP        PKPbc    08 28 38.3 -0.5
PLD   Plovdiv           151.22 323 i P       PKPbc    08 28 38.9 +0.1
ARSA  Arzberg           151.34 340 ePKPdf    PKPdf    08 28 32.2 -0.2
      comp=Z,11nm,1.2s,SNR=8.5
ARSA                               i PKPbc   PKPbc    08 28 38.6 -0.3
      comp=Z,43nm,1.1s
RDO   Rodhopi           151.34 320 eP        PKPbc    08 28 38.7 -0.4
RDO   Rodhopi           151.34 320  P        PKPbc    08 28 38.5 -0.6
FETY  Fethiye           151.35 309 eP        PKPbc    08 28 39.2 -0.1
FETY  Fethiye           151.35 309  P        PKPbc    08 28 39.0 -0.3
BART  Pico Bartolome    151.35  48 ePKP      PKPbc    08 28 38.7 -0.7
STU   Stuttgart         151.48 349 ePKPdf    PKPdf    08 28 32.9 +0.4
STU                                ePKPbc    PKiKP    08 28 39.4 -0.1
STU                                ePKPab    PKPab    08 28 49.0 -1.1
RZN   Rozhen            151.49 322 i P       PKPbc    08 28 39.1 -0.6
JSA   Saint Aubin       151.56   5 eP        PKPdf    08 28 32.7 +0.2
DALY  Dalyan (Mu˜la     151.58 310 eP        PKPbc    08 28 39.6 -0.2
AYDB  Zeytinkoy-Aydi    151.59 313 eP        PKPbc    08 28 40.1 +0.1
BEHE  Becsehely         151.59 338⇓ex        PKPbc    08 28 39.3 -0.2
TURN  Turunc            151.59 310 eP        PKPbc    08 28 40.5 +0.7
EZN   Ezine             151.63 317 eP        PKPbc    08 28 39.5 -0.3
EZN   Ezine             151.63 317  P        PKPbc    08 28 39.4 -0.3
DKL   Dikili            151.68 315 eP        PKPbc    08 28 38.7 -1.2
GADA  Gvkgeada          151.69 318 eP        PKPbc    08 28 37.6 -2.3
YER   Yerkesik          151.70 311 eP        PKPbc    08 28 40.4 +0.2
YER   Yerkesik          151.70 311  P        PKPbc    08 28 40.0 -0.2
VTS   Vitosha           151.73 325⇑iP        PKPdf    08 28 33.4 +0.2
VTS   Vitosha           151.73 325 ePKPdf    PKPdf    08 28 32.9 -0.4
VTS                                ePKPbc    PKPbc    08 28 40.0 -0.2
VTS   Vitosha           151.73 325 i P       PKPbc    08 28 40.1  0.0
VTS   Vitosha           151.73 325  P        PKPbc    08 28 39.9 -0.2
VTS   Vitosha           151.73 325 ⇑PKIKP    PKPdf    08 28 33.4 +0.2
PSMA  Santa Maria       151.75  50 ePKP      PKPdf    08 28 29.2 -4.0
SMTH  Samothraki Isl    151.75 319  P        PKPbc    08 28 39.0 -1.1
BOZC  Bozcaada          151.80 318 eP        PKPbc    08 28 39.1 -1.1
BLCB  Balcova           151.95 314 eP        PKPbc    08 28 39.9 -0.7
MRSB  Marmaris-Mugla    151.96 310 eP        PKPbc    08 28 41.0 +0.3
MLSB  Milas             151.98 311 eP        PKPbc    08 28 40.6 -0.1
PRK   Paraskevi         151.99 316  P        PKPbc    08 28 40.2 -0.4
SOKA  Soboth            152.00 340 ePKPdf    PKPdf    08 28 33.0 -0.4
      comp=Z,22nm,1.2s,SNR=8.8
SOKA                               ePKPbc    PKPbc    08 28 40.1 -0.5
      comp=Z,89nm,1.0s
PERS  Pernice           152.01 340 i PKPdf   PKPdf    08 28 32.4 -1.0
PERS                               i PKPbc   PKPbc    08 28 39.9 -0.7
PERS                               ePKPab    PKPab    08 28 52.1 -0.4
BFO   Black Forest      152.05 350 ePKPdf    PKPdf    08 28 33.2 -0.1
BFO                                ePKPbc    PKPbc    08 28 40.2 -0.3
BFO                                ePKPab    PKPab    08 28 52.2 -0.3
MMB   Musomiste         152.11 323 i P       PKPbc    08 28 41.0 +0.1
KBA   Koelnbreinsper    152.14 343 ePKPdf    PKPdf    08 28 33.1 -0.7
      comp=Z,22nm,1.2s,SNR=7.6
KBA                                ePKPbc    PKPbc    08 28 40.4 -0.5
      comp=Z,92nm,0.8s
NVR   Nevrokopi         152.19 322  P        PKPbc    08 28 40.5 -0.6
DIVS  Divibare          152.23 331 ePKPdf    PKPdf    08 28 33.7 -0.1
DIVS                               ePKPbc    PKiKP    08 28 41.3  0.0
ARG   Arkhangelos       152.23 309 eP        PKPbc    08 28 41.0 -0.3
ARG   Arkhangelos       152.23 309  P        PKPbc    08 28 41.0 -0.3
URLA  Izmir             152.26 314 eP        PKPbc    08 28 40.7 -0.6
SIGR  SIGRI             152.28 317 eP        PKPbc    08 28 40.6 -0.7
SIGR  SIGRI             152.28 317  P        PKPbc    08 28 40.5 -0.7
KKB   Krupnik           152.29 324 i P       PKPbc    08 28 41.4 +0.2
OBKA  Obir              152.30 341 ePKPdf    PKPdf    08 28 33.4 -0.5
      comp=Z,11nm,1.4s
OBKA                               ePKPbc    PKPbc    08 28 40.5 -0.7
      comp=Z,35nm,0.9s,SNR=8.1
LIA   Limnos Island     152.31 319  P        PKPbc    08 28 39.9 -1.4
ECH   Echery            152.33 352 ePKPdf    PKPdf    08 28 33.2 -0.6
ECH                                ePKPbc    PKPbc    08 28 40.9 -0.2
ECH                                ePKPab    PKPab    08 28 53.0 -0.8
ECH   Echery            152.33 352 ePKIKP    PKPdf    08 28 33.2 -0.6
ECH                                e                  08 28 40.9
ECH                                e                  08 28 53.0
WATA  Walderalm         152.36 345 i PKPdf   PKPdf    08 28 34.1 +0.1
      comp=Z,13nm,0.9s
WATA                               i PKiKP   PKiKP    08 28 41.6 +0.1
      comp=Z,115nm,0.9s,SNR=13
DAT   Datca             152.39 311 eP        PKPbc    08 28 40.7 -1.1
RETA  Reutte            152.41 347 i PKPdf   PKPdf    08 28 33.7 -0.3
      comp=Z,12nm,1.0s
RETA                               ePKiKP    PKiKP    08 28 41.5 -0.1
      comp=Z,37nm,0.8s,SNR=6.8
WTTA  Wattenberg        152.42 345 ePKPdf    PKPdf    08 28 33.9 -0.2
      comp=Z,24nm,1.0s,SNR=5.9
WTTA                               i PKiKP   PKPbc    08 28 41.5 -0.1
      comp=Z,120nm,0.9s
BODT  Bodrum            152.42 311 eP        PKPbc    08 28 40.8 -0.9
BODT  Bodrum            152.42 311  P        PKPbc    08 28 41.0 -0.7
MOTA  Moosalm           152.46 346 ePKPdf    PKPdf    08 28 34.1 -0.1
      comp=Z,30nm,1.0s,SNR=8.5
MOTA                               ePKiKP    PKiKP    08 28 42.3 +0.5
      comp=Z,78nm,0.8s
MYKA  Terra Mystica     152.47 342 i PKPdf   PKPdf    08 28 33.2 -0.9
      comp=Z,23nm,1.8s,SNR=13
MYKA                               ePKPbc    PKPbc    08 28 40.6 -1.0
      comp=Z,56nm,0.7s
SRS   Serrai            152.50 322  P        PKPbc    08 28 40.2 -1.5
CHOS  Chios island      152.60 315 eP        PKPbc    08 28 42.6 +0.5
ABTA  Abfaltersbach     152.68 344 ePKPdf    PKPdf    08 28 33.5 -0.9
      comp=Z,60nm,1.0s,SNR=16
ABTA                               ePKPbc    PKPbc    08 28 41.4 -0.6
      comp=Z,132nm,0.7s
LJU   Ljubljana         152.72 340 i PKPdf   PKPdf    08 28 34.1 -0.3
LJU                                i PKPbc   PKPbc    08 28 41.8 -0.2
LJU                                ePKPab    PKPab    08 28 55.0 -0.5
OUR   Ouranopolis       152.77 320 eP        PKPbc    08 28 41.2 -1.1
DAVA  Damuels           152.78 348 ePKPdf    PKPdf    08 28 34.2 -0.4
      comp=Z,19nm,1.1s,SNR=6.2
OZLJ  Ozalj             152.79 338  P        PKPdf    08 28 34.0 -0.5
FETA  Feichten          152.85 346 ePKPdf    PKPdf    08 28 34.1 -0.7
      comp=Z,42nm,0.9s,SNR=23
FETA                               ePKiKP    PKiKP    08 28 42.6  0.0
      comp=Z,124nm,1.0s
KNT   Kendrikon         152.86 323  P        PKPbc    08 28 41.2 -1.3
STIP  Stip              152.90 325 i P       PKPbc    08 28 41.2 -1.4
BLY   Banja Luka        152.90 335⇓iP        PKPdf    08 28 35.4 +0.7
BLY   Banja Luka        152.90 335 ePKPdf    PKPdf    08 28 35.4 +0.7
BLY                                ePKPbc    PKiKP    08 28 42.5  0.0
VAY   Valandovo         152.94 324  P        PKPbc    08 28 41.0 -1.6
VAY   Valandovo         152.94 324 i P       PKPbc    08 28 41.7 -0.9
GBRS  Gornja Briga      153.09 339 ePKPdf    PKPdf    08 28 34.1 -0.8
GBRS                               i PKPbc   PKPbc    08 28 42.7 -0.2
GBRS                               i PKPab   PKPab    08 28 56.7 -0.3
PLE   Pljevlja          153.10 330⇓iPKP      PKPbc    08 28 42.9 -0.2
SKO   Skopje            153.10 326 i P       PKPbc    08 28 42.9 -0.1
HORT  Hortiatis         153.12 322  P        PKPbc    08 28 41.7 -1.5
IVA   Berane            153.21 329⇓iPKP      PKPbc    08 28 43.4 +0.1
KARP  Karpathos         153.23 309 eP        PKPbc    08 28 42.5 -1.0
KARP  Karpathos         153.23 309 ePKPdf    PKPdf    08 28 34.7 -0.8
KARP                               ePKPbc    PKPbc    08 28 42.6 -1.0
TRI   Trieste           153.26 341 ePKPdf    PKPdf    08 28 34.3 -0.8
TRI                                ePKPbc    PKPbc    08 28 42.8 -0.3
TRI                                ePKPab    PKPab    08 28 57.0 -0.7
TRI   Trieste           153.26 341 ePKIKP    PKPdf    08 28 34.3 -0.8
TRI                                e                  08 28 42.8
TRI                                e                  08 28 57.1
DAVOX Davos/Dischmat    153.26 347  PKP      PKPdf    08 28 35.8 +0.4
      comp=Z,20nm,0.9s,baz=89,slow=5.2,SNR=27
DAVOX                               PKPbc    PKiKP    08 28 44.0 +0.5
      comp=Z,124nm,0.6s,baz=0.4,slow=7.1,SNR=54
FUORN Ofenpass-Fuorn    153.34 347 ePKPdf    PKPdf    08 28 35.4 -0.2
FUORN                              ePKPbc    PKiKP    08 28 43.9 +0.2
FUORN                              ePKPab    PKPab    08 28 58.4 +0.1
PVY   Plav              153.39 329⇓iPKP      PKPbc    08 28 43.1 -0.6
KOME  Kolasin           153.41 330⇓iPKP      PKPbc    08 28 43.1 -0.6
UPM   Unac-Piva         153.42 331 ePKP      PKPbc    08 28 42.9 -1.0
AOS   Alonnisos         153.55 319 eP        PKPbc    08 28 42.4 -1.6
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UDBI	Udbina	153.62	337	P	PKPdf	08 28 35.1	-0.7
KRUS	Krusevo	153.62	325	iP	PKPbc	08 28 43.6	-0.6
TUE	Stuetta	153.67	348	ePKPdf	PKPdf	08 28 35.6	-0.4
TUE				ePKPbc	PKPbc	08 28 44.1	-0.2
TUE				ePKPab	PKPab	08 28 59.8	+0.1
NKY	Niksic	153.68	330	⇓iPKP	PKPbc	08 28 43.8	-0.5
NKME	Niksic	153.74	330	⇓iPKP	PKPbc	08 28 43.8	-0.6
LIT	Litokhoron	153.80	322	ePKPdf	PKPdf	08 28 35.3	-0.9
LIT				ePKPbc	PKPbc	08 28 43.9	-0.6
LIT				ePKPab	PKPab	08 29 00.5	+0.1
LIT	Litokhoron	153.80	322	P	PKPbc	08 28 42.9	-1.7
LIT	Litokhoron	153.80	322	ePKIKP	PKPdf	08 28 35.3	-0.9
LIT				e		08 28 43.9	
LIT				e		08 29 00.5	
BRY	Bratogost	153.82	331	ePKP	PKPbc	08 28 43.6	-1.1
PHP	Peshkopia	153.82	327	P	PKPbc	08 28 44.0	-0.6
BIA	Bitola	153.83	325	iP	PKPbc	08 28 44.4	-0.3
PDG	Podgorica	153.85	329	⇑iP	PKPdf	08 28 36.3	+0.2
TTG	Podgorica	153.85	329	⇓iPKP	PKPbc	08 28 43.9	-0.6
TTG	Podgorica	153.85	329	ePKPdf	PKPdf	08 28 35.7	-0.3
TTG				ePKPbc	PKPbc	08 28 43.9	-0.6
NVLJ	Novalja	153.91	338	P	PKPdf	08 28 33.9	-2.2
CEME	Cevo	153.92	330	⇓iPKP	PKPbc	08 28 44.2	-0.6
FNA	Florina	153.97	324	ePKPdf	PKPdf	08 28 35.5	-0.8
FNA				ePKPbc	PKPbc	08 28 44.1	-0.8
FNA	Florina	153.97	324	P	PKPbc	08 28 44.1	-0.8
FNA	Florina	153.97	324	ePKIKP	PKPdf	08 28 35.6	-0.8
FNA				e		08 28 44.1	
OHR	Ohrid	154.05	325	iP	PKPbc	08 28 44.7	-0.4
SANT	Santorini	154.06	312	ePKPbc	PKPbc	08 28 43.5	-1.7
DRME	Dracevica, Mon	154.07	329	⇓iPKP	PKPbc	08 28 44.7	-0.3
BUM	Brajici-Budva	154.12	330	⇓iPKP	PKPbc	08 28 44.8	-0.4
SENIN	Lac Senin/Sane	154.13	351	ePKPdf	PKPdf	08 28 36.9	+0.3
SENIN				ePKPbc	PKiKP	08 28 46.0	+0.7
SENIN				ePKPab	PKPab	08 29 02.2	+0.5
SMIA	Simia	154.14	319	P	PKPbc	08 28 44.8	-0.5
HCY	Herceg Novi	154.20	330	⇓iPKP	PKPbc	08 28 44.3	-1.0
ULC	Ulcinj	154.21	329	⇓iPKP	PKPbc	08 28 45.0	-0.4
STON	Ston	154.22	332	P	PKPdf	08 28 34.3	-2.2
AGG	Agios Georgios	154.59	320	eP	PKPbc	08 28 44.7	-1.6
AGG	Agios Georgios	154.59	320	ePKPdf	PKPdf	08 28 39.2	+1.9
AGG				ePKPbc	PKiKP	08 28 45.6	-0.6
AGG	Agios Georgios	154.59	320	P	PKPbc	08 28 44.6	-1.7
DSF	Desfina	154.85	319	P	PKPbc	08 28 45.4	-1.5
DID	Didima	154.94	316	P	PKPbc	08 28 45.4	-1.7
EVR	Evrytania	154.97	320	P	PKPbc	08 28 46.9	-0.3
IDI	Anoyia	154.99	310	PKP	PKPdf	08 28 38.1	+0.1
	comp=Z,19nm,0.9s,baz=36,slow=5.8,SNR=4.6						
IDI				PKPbc	PKPbc	08 28 47.4	+0.1
	comp=Z,37nm,0.8s,baz=291,slow=9.8,SNR=12						
IDI	Anoyia	154.99	310	eP	PKPdf	08 28 36.9	-1.1
JAN	Janina	155.03	323	P	PKPdf	08 28 47.2	+9.3
ANX	Ano Chora	155.11	320	P	PKPdf	08 28 48.1	+10
SERG	Sergoula	155.14	319	P	PKPdf	08 28 47.1	+9.1
GUR	Goura	155.26	318	P	PKPdf	08 28 46.9	+8.6
BNI	Bardonecchia	155.50	351	ePKPdf	PKPdf	08 28 38.4	-0.1
BNI	Bardonecchia	155.50	351	ePKIKP	PKPdf	08 28 38.4	-0.1
PDO	Prodromos	155.54	321	P	PKPdf	08 28 47.6	+9.1
VLC	Villacollemand	155.63	345	ePKPdf	PKPdf	08 28 38.2	-0.3
VLC				ePKPab	PKPab	08 29 07.8	-0.2
AQU	L'Aquila	156.37	338	ePKPdf	PKPdf	08 28 40.5	+1.0
AQU				ePKPab	PKPab	08 29 12.4	+1.2
AQU	L'Aquila	156.37	338	ePKIKP	PKPdf	08 28 40.5	+1.0
AQU				e		08 29 12.5	
PGAV	Gavieira, Arco	157.36	19	ePKPdf	PKPdf	08 28 41.2	+0.3
PGAV	Gavieira, Arco	157.36	19	ePKPab	PKPab	08 29 14.4	-1.2
PGAV	Gavieira, Arco	157.36	19	ePP	PP	08 32 57.0	+0.8
PGAV	Gavieira, Arco	157.36	19	eSS	SS	08 52 09.9	+2.5
TIP	Timpagrande	157.56	328	ePKPdf	PKPdf	08 28 41.1	-0.1
PCAB	Cabril	157.67	19	ePKPdf	PKPdf	08 28 41.4	+0.2
PCAB	Cabril	157.67	19	ePKPab	PKPab	08 29 17.4	+0.5
PBRG	Braganca	157.95	17	ePKPdf	PKPdf	08 28 41.5	0.0
PBRG	Braganca	157.95	17	ePKPab	PKPab	08 29 18.5	+0.4
POLO	Lamas de Olo	158.05	19	ePKPdf	PKPdf	08 28 42.0	+0.3
POLO	Lamas de Olo	158.05	19	ePKPab	PKPab	08 29 18.9	+0.3
PVRL	Vila Real	158.16	19	ePKPdf	PKPdf	08 28 42.3	+0.5
PVRL	Vila Real	158.16	19	ePKPab	PKPab	08 29 19.4	+0.3
MVO	Moncorvo	158.47	18	ePKPdf	PKPdf	08 28 42.6	+0.4
MVO	Moncorvo	158.47	18	ePKPab	PKPab	08 29 20.8	+0.4
MVO	Moncorvo	158.47	18	ePP	PP	08 33 07.0	+4.9
PVIS	Viseu	158.61	20	ePKPdf	PKPdf	08 28 43.0	+0.6
PVIS	Viseu	158.61	20	ePKPab	PKPab	08 29 21.3	+0.2
CEL	Celeste	158.70	328	ePKPdf	PKPdf	08 28 42.1	-0.4
PCAS	Casmilo, Conde	159.00	22	ePKPdf	PKPdf	08 28 43.0	+0.2
PCAS	Casmilo, Conde	159.00	22	ePKPab	PKPab	08 29 22.8	+0.1
PCAS	Casmilo, Conde	159.00	22	eSS	SS	08 52 27.1	+2.5
MTE	Manteigas	159.01	20	ePKPdf	PKPdf	08 28 42.9	0.0
MTE	Manteigas	159.01	20	ePKPab	PKPab	08 29 23.3	+0.5
MTE	Manteigas	159.01	20	ePP	PP	08 33 15.8	+11
MTE	Manteigas	159.01	20	eSS	SS	08 52 28.9	+4.2
MTE	Manteigas	159.01	20	ePKPdf	PKPdf	08 28 42.8	0.0
PTOM	Tomar	159.42	22	ePKPab	PKPab	08 29 24.7	+0.2
PMOZ	Porto Moniz, M	159.46	51	ePKPdf	PKPdf	08 28 41.2	-2.5
PMOZ	Porto Moniz, M	159.46	51	ePKPab	PKPab	08 29 25.9	+0.7
PMOZ	Porto Moniz, M	159.46	51	ePP	PP	08 33 14.5	+5.9
PMOZ	Porto Moniz, M	159.46	51	eSS	SS	08 52 34.2	+2.7
PCBR	Castelo Branco	159.54	20	ePKPdf	PKPdf	08 28 43.8	+0.4
PCBR	Castelo Branco	159.54	20	ePKPab	PKPab	08 29 24.9	-0.1
PMAFR	Mafra	159.67	25	ePKPdf	PKPdf	08 28 44.1	+0.5
PMAFR	Mafra	159.67	25	ePKPab	PKPab	08 29 26.1	+0.4
PMAFR	Mafra	159.67	25	eSS	SS	08 52 33.1	+1.4
ALMR	Almeirim	159.77	23	ePKP	PKPdf	08 28 44.0	+0.4
ALMR				ePP	PP	08 33 10.6	+1.5
ALMR	Almeirim	159.77	23	ePKPdf	PKPdf	08 28 44.0	+0.4
ALMR	Almeirim	159.77	23	ePKPab	PKPab	08 29 26.1	0.0
LIS	Lisbon	159.93	25	ePKP	PKPdf	08 28 44.2	+0.4
PMRV	Marv??o	159.94	21	ePKPdf	PKPdf	08 28 44.1	+0.2
PMRV	Marv??o	159.94	21	ePKPab	PKPab	08 29 26.9	0.0
PMRV	Marv??o	159.94	21	ePP	PP	08 33 11.7	+1.7
PMTG	Montargil	159.97	23	ePKPdf	PKPdf	08 28 44.2	+0.3
PMTG	Montargil	159.97	23	ePKPab	PKPab	08 29 26.9	-0.1
PMTG	Montargil	159.97	23	eSS	SS	08 52 39.0	+4.3
PESTR	Estremoz	160.38	22	ePKPdf	PKPdf	08 28 45.0	+0.6
PESTR	Estremoz	160.38	22	ePKPab	PKPab	08 29 28.8	0.0
PESTR	Estremoz	160.38	22	eSS	SS	08 52 45.5	+6.6
PESTR	Estremoz	160.38	22	ePKPdf	PKPdf	08 28 45.2	+0.8
PESTR				ePKPab	PKPab	08 29 28.8	0.0
EVO	Evora	160.53	23	ePKPdf	PKPdf	08 28 45.2	+0.7
EVO	Evora	160.53	23	ePKPab	PKPab	08 29 29.1	-0.3
ES19	SONSECA Array	160.63	13	ePKPdf	PKPdf	08 28 44.8	+0.2
ES19				ePKPab	PKPab	08 29 29.6	-0.2
ESDC	Sonseca Array	160.64	13	PKP	PKPdf	08 28 44.8	+0.1
	comp=Z,4.6nm,0.9s,baz=353,slow=3.0,SNR=23						
ESDC				PKPab	PKPab	08 29 30.1	+0.1
	comp=Z,44nm,1.0s,baz=342,slow=4.2,SNR=42						
ESDC				PP	PP	08 33 11.5	-2.1
	comp=Z,3.5nm,0.9s,baz=348,slow=5.1,SNR=6.3						
ESLA	Sonseca Array	160.64	13	ePKPdf	PKPdf	08 28 45.3	+0.6
ESLA				ePKPab	PKPab	08 29 30.1	+0.2
PAB	San Pablo	160.68	14	ePKPdf	PKPdf	08 28 45.7	+0.9
PAB				ePKPab	PKPab	08 29 30.8	+0.6
PAB	San Pablo	160.68	14	ePKIKP	PKPdf	08 28 45.7	+0.9
PAB				e		08 29 30.8	
PBEJ	Beja	161.03	24	ePKPdf	PKPdf	08 28 47.3	+2.2
PBEJ	Beja	161.03	24	ePKPab	PKPab	08 29 32.8	+1.2
MESJ	Messejana	161.05	25	ePKP	PKPdf	08 28 45.4	+0.3
MESJ				ePP	PP	08 33 17.4	+1.4
MESJ	Messejana	161.05	25	ePKPdf	PKPdf	08 28 45.9	+0.8
MESJ	Messejana	161.05	25	ePKPab	PKPab	08 29 31.6	-0.1
PTEO	Sao Teotonio	161.11	26	ePKPdf	PKPdf	08 28 45.8	+0.7
PTEO	Sao Teotonio	161.11	26	ePKPab	PKPab	08 29 32.2	+0.2
PBAR	Barrancos	161.19	22	ePKPdf	PKPdf	08 28 45.6	+0.4
PBAR	Barrancos	161.19	22	ePKPab	PKPab	08 29 32.7	+0.4
PCVE	Castro Verde	161.31	24	ePKPdf	PKPdf	08 28 46.4	+1.0
PCVE	Castro Verde	161.31	24	ePKPab	PKPab	08 29 33.0	+0.1
PCVE	Castro Verde	161.31	24	eSS	SS	08 52 56.2	+7.7
MORF	Marmelete	161.34	26	ePKP	PKPdf	08 28 45.7	+0.2
MORF				ePP	PP	08 33 18.9	+1.3
MORF	Marmelete	161.34	26	ePKPdf	PKPdf	08 28 46.4	+0.9
MORF	Marmelete	161.34	26	ePKPab	PKPab	08 29 33.5	+0.4
PFVI	Vila Bisbo	161.41	27	ePKPdf	PKPdf	08 28 46.4	+0.9
PFVI	Vila Bisbo	161.41	27	ePKPab	PKPab	08 29 33.7	+0.3
PFVI	Vila Bisbo	161.41	27	eSS	SS	08 52 57.2	+7.4
PVAQ	Vaqueiros	161.63	24	ePKPdf	PKPdf	08 28 46.4	+0.7
PVAQ	Vaqueiros	161.63	24	ePKPab	PKPab	08 29 34.7	+0.4
PVAQ	Vaqueiros	161.63	24	ePP	PP	08 33 20.6	+1.6
PVAQ	Vaqueiros	161.63	24	eSS	SS	08 52 57.7	+5.9
PBDV	Barranco-do-Ve	161.69	25	ePKPdf	PKPdf	08 28 46.2	+0.4
KEST	Kesra	163.69	337	PKP	PKPdf	08 28 48.1	+0.3
	comp=Z,10nm,0.9s,baz=358,slow=2.2,SNR=5.6						
KEST				PKPab	PKPab	08 29 43.9	+0.4
	comp=Z,30nm,0.8s,baz=296,slow=2.7,SNR=15						
THTN	Thala	164.07	338	ePKPdf	PKPdf	08 28 49.0	+0.8
LIC	Lamto	164.11	155	ePKIKP	PKPdf	08 28 47.9	-0.8
	comp=Z,156nm,1.0s						
KIC	Kosan Boka	164.34	156	ePKIKP	PKPdf	08 28 48.3	-0.7
	comp=Z,128nm,1.0s						
TIC	Toumodi	164.50	155	ePKIKP	PKPdf	08 28 48.5	-0.6
DBIC	Dimbokro	164.58	155	PKP	PKPdf	08 28 49.0	-0.2
	comp=Z,31nm,0.9s,baz=113,slow=0.8,SNR=20						
DBIC				PKPab	PKPab	08 29 49.3	+1.5
	comp=Z,26nm,0.7s,baz=185,slow=5.6,SNR=16						
DBIC	Dimbokro	164.58	155	ePKPdf	PKPdf	08 28 48.8	-0.4
DBIC				ePKPab	PKPab	08 29 49.5	+1.7
EMHD	Djebel Mahouad	164.66	356	P	PKPab	08 29 37.6	-10
EANR	'Ain N'Sour	164.95	2	P	PKPab	08 29 49.1	+0.2
ETRT	Tiaret	165.51	1	P	PKPab	08 29 52.0	+0.5
MDT	Midelt	166.86	24	PKP	PKPdf	08 28 51.5	+0.9
	comp=Z,27nm,1.1s,baz=26,slow=1.5,SNR=31						
MDT				PKPab	PKPab	08 29 58.5	+0.9
	comp=Z,10.0nm,0.7s,baz=341,slow=5.1,SNR=14						
KOWA	Kowa	171.73	139	PKP	PKPdf	08 28 52.7	-1.2
	comp=Z,25nm,0.9s,baz=265,slow=0.8,SNR=41						
KOWA				PKPab	PKPab	08 30 20.0	+0.5
	comp=Z,30nm,0.8s,baz=221,slow=5.4,SNR=23						
KOWA	Kowa	171.73	139	ePKPdf	PKPdf	08 28 52.7	-1.2
KOWA				ePKPdf	PKPdf	08 28 53.0	-0.9
KOWA				ePKPab	PKPab	08 30 20.0	+0.5
KOWA				ePKPab	PKPab	08 30 20.4	+1.0
TOA0	Torodi Ar. Sit	172.34	181	ePKPdf	PKPdf	08 28 53.1	-1.0
TOA0				ePKPab	PKPab	08 30 21.9	-0.1
TOA0				ePKPab	PKPab	08 30 22.8	+0.8
TORD	Torodi Ar. Bea	172.34	181	PKP	PKPdf	08 28 51.8	-2.4
	comp=Z,24nm,1.0s,baz=133,slow=0.8						
TORD				PKPab	PKPab	08 30 21.9	-0.1
	baz=165,slow=2.8						
TORD				pPKPab	pPKPab	08 32 22.2	+0.7
	baz=187,slow=3.8						
TORD				PP	PP	08 34 12.4	-0.2
	baz=175,slow=5.0						
TOA1	Torodi Ar. Sit	172.35	181	ePKPdf	PKPdf	08 28 51.8	-2.4
TOA1				ePKPab	PKPab	08 30 21.9	-0.2
TOA1				ePP	PP	08 34 12.4	-0.2
TAM	Tamanrasset	175.87	299	ePKPdf	PKPdf	08 28 55.9	+0.6
TAM	Tamanrasset	175.87	299	ePKIKP	PKPdf	08 28 55.9	+0.6

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*CSEM **18** 08:26:31.1, 41°.25N×41°.49E, h7^{km}, ML2.3, Suspected Mining explosion.*

DDA 18 08:26:31.1, 41°.25N×41°.49E, h7^{km}, Ml2.3, Suspected Mining explosion., Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
DBOC	Borcka	0.17	56	iP	Pg	08 26 34.9	+0.4
DBOC				iS	Sg	08 26 37.4	+0.6
DBOC	Borcka	0.17	56	P	Pg	08 26 34.9	+0.4
DBOC				S	Sg	08 26 37.4	+0.6
DBAD	Bademkaya	0.28	146	iP	Pg	08 26 36.9	+0.3
DBAD				iS	Sg	08 26 41.3	+0.8
DBAD	Bademkaya	0.28	146	P	Pg	08 26 36.9	+0.2
DBAD				S	Sg	08 26 41.3	+0.9
ARTV	Artvin	0.34	101	iP	Pg	08 26 38.5	+0.6
ARTV				iS	Sb	08 26 44.0	-1.3
ARTV	Artvin	0.34	101	P	Pg	08 26 38.5	+0.7
ARTV				S	Sb	08 26 44.0	-1.3
DAGI	Agillar	0.37	118	iP	Pg	08 26 38.9	+0.6
DAGI				iS	Sg	08 26 44.5	+1.4
DDEM	Demirkent	0.41	151	iP	Pg	08 26 39.2	+0.1
DDEM				iS	Sg	08 26 45.6	+1.1
DDEM	Demirkent	0.41	151	P	Pg	08 26 39.2	+0.1
DDEM				S	Sg	08 26 45.6	+1.1

MAN 18 08:29:25.4, 11°.76N×126°.09E, h101^{km}, mb4.5, ML3.3, MS3.1, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
BESP	Borongan	0.66	256	eP	Pn	08 29 43.4	+0.9
BESP				eS	Sn	08 29 58.2	+2.8
PLP	Palo	1.24	242	⇓eP	Pn	08 29 49.4	+0.8
PLP				eS	Sn	08 30 04.0	-2.2
MSLP	Maasin	2.02	217	eP	Pn	08 29 59.5	+1.2
MSLP				eS	Sn	08 30 24.0	+0.6

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*IDC **18** 08:43:14.3±2.5, 53°.79N×166°.23W, h0^{km}, mb3.5/5, mb1 3.8/7, mb1mx3.4/81, mbtmp3.6/7, ML3.5/2, Error ellipse: s-maj=43.0km s-min=33.1km az=62.0*

*ISCJB **18** 08:43:25.7±0.5, 54°.1N±0°.1×165°.47W±0°.09, h79^{km}±4^{km}, mb3.4/4, Error ellipse: s-maj=18.7km s-min=5.1km az=154.6*

*NEIC **18** 08:43:26.1±0.0, 53°.95N×165°.37W, h65^{km}, ML3.7(AEIC), After AEIC.*

ISC 18 08:43:26.3±0.9**, 54°.03N**±0°.10×**165°.39W**±0°.06**, h73**^{km}±7^{km}**, n42, σ1^{s}.35**/44**, mb3.4**/4**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
AKSA	Akutan Strait	0.21	301	P	Pn	08 43 36.8	-0.5
AKSA				S	Sn	08 43 45.3	-0.1
AKUT	Akutan	0.25	296	P	Pn	08 43 37.1	-0.4
AKUT				S	Sn	08 43 45.7	0.0
AHB	Akutan Harbor	0.27	289	P	Pn	08 43 37.3	-0.3
AKLV	Akutan Long Va	0.36	292	P	Pn	08 43 38.0	-0.3
AKLV				S	Sn	08 43 47.0	0.0
AKMO	Akutan Morgan	0.37	280	P	Pn	08 43 38.0	-0.3
AKMO				S	Sn	08 43 47.0	-0.1
AKGG	Akutan Green G	0.39	296	P	Pn	08 43 38.6	+0.1
AKRB	Akutan Reef Bi	0.41	285	P	Pn	08 43 38.4	-0.2
WESP	Westdahl Peak	0.61	40	P	Pn	08 43 41.1	+0.5
WESE	West Dahl East	0.65	46	P	Pn	08 43 41.1	+0.1
WEBT	Westdahl Beart	0.68	33	P	Pn	08 43 42.0	+0.8
UNV	Unalaska Valle	0.68	255	P	Pn	08 43 40.5	-0.7
UNV				S	Sn	08 43 51.4	-0.8
MTBL	Makushin Table	0.76	266	P	Pn	08 43 42.1	-0.1
MSW	Makushin Switc	0.83	263	P	Pn	08 43 42.6	-0.4
MSW				S	Sn	08 43 55.4	+0.2
MCIR	Makushin Cirqu	0.89	266	P	Pn	08 43 43.9	+0.2
SSLW	Shishaldin Wes	1.05	44	P	Pn	08 43 46.0	+0.3
SSLN	Shishaldin Nor	1.13	45	P	Pn	08 43 47.5	+0.9
FALS	False Pass	1.42	53	P	Pn	08 43 50.7	+0.4
FALS				S	Sn	08 44 09.9	+1.5
OKER	Okmok East Rim	1.68	251	P	Pn	08 43 54.0	+0.1
OKTU	Okmok Mt. Tuli	1.70	249	P	Pn	08 43 54.4	+0.3
OKAK	Okmok	1.82	257	P	Pn	08 43 56.1	+0.6
DRIA	Deer Island	2.05	61	P	Pn	08 43 58.8	+0.1
DT1	Dutton Round H	2.11	58	P	Pn	08 43 60.0	+0.5
NIKH	Nikolski High	2.32	244	P	Pn	08 44 02.9	+0.6
DOL	Dolgoi Island	2.34	60	P	Pn	08 44 03.1	+0.6
PS4A	Pavlof South-4	2.44	56	P	Pn	08 44 04.4	+0.5
SDPT	Sand Point	3.14	63	P	Pn	08 44 13.9	+0.5
VNFG	Veniaminof 2	4.04	54	P	Pn	08 44 26.5	+0.8
SPIA	Saint Paul Isl	4.19	321	P	Pn	08 44 28.8	+1.2
KDAK	Kodiak Island	8.12	57	Pn	Pn	08 45 20.3	-0.9
	1.8nm,0.3s,baz=251,slow=8.0,SNR=42						
KDAK				Sn	Sn	08 46 44.0	-7.3
	baz=289,slow=18,SNR=2.3						
KDAK	Kodiak Island	8.12	57	ePn	Pn	08 45 20.9	-0.4
	8.7nm,0.4s						
ILAR	Eielson Array	14.24	34	Pn	Pn	08 46 42.7	-1.3
	0.1nm,0.3s,baz=229,slow=11,SNR=3.6						
INK	Inuvik	20.64	34	P	P	08 47 59.7	+0.3
	1.1nm,0.4s,baz=230,slow=14,SNR=9.0						
YKA	Yellowknife Ar	27.34	52	P	P	08 49 05.0	+1.1
	0.4nm,0.4s,baz=274,slow=8.4,SNR=5.5						
NVAR	Mina Array Bea	35.38	97	P	P	08 50 16.5	+1.5
	0.3nm,0.6s,baz=304,slow=8.6,SNR=2.7						
H11N2	WAKE ISLAND Hy	40.27	223	T	T	09 33 46.5	
	baz=25,slow=76,SNR=64						
H11N3	WAKE ISLAND Hy	40.28	223	T	T	09 33 48.2	
	baz=25,slow=76,SNR=120						
H11N1	WAKE ISLAND Hy	40.29	223	T	T	09 33 47.9	
	baz=25,slow=76,SNR=77						
H11S1	WAKE ISLAND Hy	41.45	222	T	T	09 35 08.5	
	baz=25,slow=76,SNR=95						
H11S2	WAKE ISLAND Hy	41.47	222	T	T	09 35 11.1	
	baz=25,slow=76,SNR=101						
H11S3	WAKE ISLAND Hy	41.47	222	T	T	09 35 07.1	
	baz=25,slow=76,SNR=90						
TXAR	Lajitas Array	50.39	93	P	P	08 52 17.0	+0.9
	0.2nm,0.6s,baz=298,slow=5.4,SNR=9.1						
HFS	Hagfors	66.19	1	P	P	08 54 04.3	-1.3
	0.6nm,0.4s,baz=14,slow=3.0,SNR=7.3						

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*AUST **18** 09:20:55.3±0.0, 30°.43S×117°.79E, h2^{km}, Error ellipse: s-maj=0.4km s-min=0.1km az=269.0*

*IDC **18** 09:21:02.2±9.7, 29°.73S×118°.91E, h0^{km}, mb1 4.1/3, mb1mx3.5/44, mbtmp3.9/3, ML3.9/3, Error ellipse: s-maj=128.4km s-min=63.9km az=115.0*

ISC 18 09:20:51.4±1.3**, 30°.25S**±0°.04×**118°.09E**±0°.04**, h25**^{km}±12^{km}**, n12, σ2^{s}.68**/24**, Western Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
BLDU	Ballidu	1.25	253	P	Pn	09 21 12.0	-1.3
	baz=1.0,SNR=616						
BLDU				S	Sn	09 21 23.9	-5.5
	baz=1.0,SNR=29						
KLBR	Kellerberrin	1.37	192	P	Pb	09 21 16.2	-0.2
	baz=1.2,SNR=646						
KLBR				S	Sn	09 21 30.8	-1.5
	baz=1.2,SNR=37						
MORW	Morawa	2.14	303	P	Pb	09 21 28.8	-0.7
	baz=2.0,SNR=61						
MORW				S	Sb	09 21 54.1	-1.4
	baz=2.0,SNR=9.7						
MUN	Mundaring	2.36	223	P	Pn	09 21 29.4	+0.8
	baz=2.1,SNR=38						
MUN				S	Sn	09 21 56.2	-0.6
	baz=2.1,SNR=8.0						
NWAO	Narrogin (SRO)	2.77	195	P	Pn	09 21 35.8	+1.6
	baz=2.5						
NWAO				S	Sn	09 22 05.4	-1.5
	baz=2.5						
KMBL	Kambalda	3.44	110	P	Pb	09 21 50.3	-1.4
	baz=3.6,SNR=43						
KMBL				S	Sb	09 22 32.6	-0.6
	baz=3.6						
MEEK	Meekatharra	3.63	7	P	Pb	09 21 53.9	-1.0
	baz=3.9,SNR=57						
MEEK				S	Sb	09 22 37.8	-0.7
	baz=3.9						
RKGY	Rocky Gully	4.45	192	P	Pn	09 21 59.5	+2.2
	baz=4.2,SNR=19						
RKGY				S	Sn	09 22 47.1	-1.2
	baz=4.2						
GIRL	Giralia	8.32	335	P	Pn	09 22 54.7	+4.2
	baz=8.4						
GIRL				S	Sn	09 24 24.6	+0.8
	baz=8.4						
ASAR	Alice Springs	15.54	69	Pn	Pn	09 24 32.1	+3.1
	0.8nm,0.3s,baz=238,slow=10,SNR=52						
ASAR				Sn	Sn	09 27 17.6	-2.9
	0.3nm,0.3s,baz=243,slow=22,SNR=5.3						
WRA	Warramunga Arr	17.92	59	Pn	P	09 25 02.3	+2.9
	0.4nm,0.3s,baz=232,slow=13,SNR=25						
WRA				Sn	Sn	09 28 11.7	-6.5
	0.1nm,0.3s,baz=234,slow=20,SNR=3.6						
STKA	Stephens Creek	20.19	101	P	Pn	09 25 31.8	+5.5
	0.2nm,0.3s,baz=275,slow=12,SNR=5.4						
STKA				S	S	09 29 08.5	-1.3
	0.2nm,0.3s,baz=238,slow=7.3,SNR=2.8						

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*KRNET **18** 09:29:02.2±0.1, 40°.33N×77°.42E, mb3.1*

*SOME **18** 09:29:05.5, 40°.30N×77°.17E, h15^{km}*

*NNC **18** 09:29:10.7±2.2, 40°.49N×76°.76E, h0^{km}, mb3.7, mpv3.3, Error ellipse: s-maj=22.9km s-min=12.1km az=145.0*

ISC 18 09:29:03.2±1.9**, 40°.15N**±0°.07×**77°.31E**±0°.05**, h5**^{km}±14^{km}**, n39, σ1^{s}.16**/64**, 20C-15D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KDJ	Kajisay	1.98	357	⇑iP	Pn	09 29 36.1	-1.3
	baz=55						
KDJ				⇑iS	Sn	09 30 01.0	-1.7
	baz=55						
ULHL	Ulahol	2.24	339	⇓iP	Pn	09 29 40.6	-0.5
	baz=36						
ULHL				⇓iS	Sn	09 30 08.9	-0.3
	baz=36						
PRZ	Przheval'sk	2.47	19	⇓iP	Pn	09 29 43.6	-0.6
	baz=19						
PRZ				⇓eS	Sn	09 30 13.9	-0.9
	baz=19						
KZA	Kyzart	2.47	322	P	Pn	09 29 45.2	+0.8
	SNR=23						
KZA	Kyzart	2.47	322	⇑eP	Pn	09 29 45.3	+0.8
	baz=18						
KZA				⇑iS	Sn	09 30 16.9	+1.6
	baz=18						
BOOM	Boomskoye usch	2.55	337	⇑iP	Pn	09 29 45.4	+0.1
	baz=33						
BOOM				⇑iS	Sn	09 30 16.9	0.0
	baz=33						
TNSS	Tian-Shan	2.89	355	eP	Pb	09 29 55.1	-0.4
	31nm,0.6s						
TNSS				eS	Sb	09 30 30.9	-0.4
	54nm,0.3s						
SFK	Sufi-Kurgan	2.92	268	⇑Pn	Pb	09 29 54.6	-1.3
	2.1nm,0.4s						
SFK				⇓Lg	Lg	09 30 31.9	
	16nm,0.6s						
SFK	Sufi-Kurgan	2.92	268	⇓eP	Pb	09 29 53.7	-2.2
	baz=65						
SFK				⇓iS	Sb	09 30 31.3	-0.7
	baz=65						
IZV	Izvestkoviy	2.93	350	eP	Pb	09 29 55.2	-0.7
	62nm,0.5s						
IZV				eS	Sb	09 30 30.7	-1.3
	93nm,0.4s						
MDOK	Medeo	3.01	356	Pn	Pn	09 29 52.2	+0.6
	21nm,0.6s						
MDOK				Lg	Lg	09 30 33.7	
	144nm,0.8s						
MDOK	Medeo	3.01	356	eP	Pb	09 29 56.5	-0.9
	23nm,0.3s						
MDOK				eS	Sb	09 30 33.4	-1.2
	51nm,0.4s						
MTBS	Maitube	3.05	348	eP	Pb	09 29 56.6	-1.3
	23nm,0.4s						
MTBS				⇑iS	Sb	09 30 33.7	-1.7
	27nm,0.3s						
TKM2	Tokmak 2	3.05	336	⇑Pn	Pn	09 29 52.4	+0.2
	7.5nm,0.6s						
TKM2				⇓Lg	Lg	09 30 33.7	
	15nm,0.4s						
TKM2	Tokmak 2	3.05	336	P	Pn	09 29 53.3	+1.1
	SNR=10.0						
KST	Kastek	3.06	341	eP	Pb	09 29 57.4	-0.7
	11nm,0.3s						
KST				eS	Sb	09 30 34.5	-1.3
	66nm,0.5s						
KBK	Karagaybulak	3.07	325	P	Pn	09 29 54.0	+1.6
	SNR=8.0						
KNDC	Almaty	3.07	355	⇓Pn	Pb	09 29 58.0	-0.3
	24nm,0.3s						
KNDC				⇓Lg	Lg	09 30 36.6	
	90nm,0.4s						
KOTS	Kotyrbulak	3.08	357	eP	Pb	09 29 58.3	-0.2
	22nm,0.5s						
KOTS				eS	Sb	09 30 36.3	-0.2
	120nm,0.8s						
UZB	Uzynbulak	3.25	23	eP	Pb	09 30 01.0	-0.5
	15nm,0.3s						
UZB				eS	Sb	09 30 40.9	-0.5
	21nm,0.4s						
AAK	Ala-Archa	3.26	320	⇑Pn	Pn	09 29 55.8	+0.7
	7.1nm,0.4s						
AAK				⇑Lg	Lg	09 30 38.9	
	51nm,0.8s						
DGS	Degeres	3.29	340	eP	Pb	09 30 01.7	-0.4
	17nm,0.7s						
DGS				eS	Sb	09 30 41.9	-0.6
	38nm,0.6s						
FRU1	Bishkek	3.33	324	⇑iP	Pn	09 29 56.9	+0.9
	baz=21						
FRU1				⇑iS	Sn	09 30 36.1	+0.2
	baz=21						
AML	Almayashu	3.37	307	P	Pn	09 29 58.2	+1.4
	SNR=12						
AML	Almayashu	3.37	307	⇓iP	Pn	09 29 57.9	+1.1
	baz=4.0						
AML				⇓iS	Sn	09 30 39.8	+2.5

	baz=4.0						
KURS	**Kuram** 16nm,1.0s	**3.39**	**11**	*e*P	**Pb**	**09 30 03.8**	**0.0**
KURS	44nm,0.5s			*e*S	**Sb**	**09 30 45.8**	**+0.4**
SHLS	**Shalkode** 7.8nm,0.4s	**3.41**	**28**	*e*P	**Pg**	**09 30 08.3**	**-0.1**
SHLS	68nm,0.6s			*e*S	**Sg**	**09 30 53.5**	**+0.9**
CHMS	**Chumysh** SNR=13	**3.43**	**327**	P	**Pn**	**09 29 58.5**	**+1.3**
KPKS	**Kokpek** 12nm,0.4s	**3.46**	**17**	*e*P	**Pb**	**09 30 05.0**	**0.0**
KPKS	84nm,0.8s			*e*S	**Sb**	**09 30 48.1**	**+0.6**
PDGK	**Podgornoye** 8.3nm,0.5s	**3.57**	**26**	⇑Pn	**Pb**	**09 30 05.3**	**-1.5**
PDGK	80nm,0.8s			⇑Sn	**Sb**	**09 30 51.7**	**+1.3**
PDGK	**Podgornoye** baz=27	**3.57**	**26**	⇓*i*P	**Pn**	**09 29 58.4**	**-0.9**
PDGK	baz=27			⇓*i*S	**Sn**	**09 30 39.6**	**-2.2**
KTBS	**Karatobe** 1.8nm,0.2s	**3.59**	**353**	*e*P	**Pb**	**09 30 06.2**	**-0.8**
KTBS	30nm,0.7s			*e*S	**Sb**	**09 30 50.3**	**-0.6**
EKS2	**Erkin-Say** SNR=7.0	**3.65**	**314**	P	**Pn**	**09 30 02.7**	**+2.3**
USP	**Ospenovka** SNR=11	**3.75**	**327**	P	**Sb**	**09 30 55.8**	**+0.1**
KTMS	**Ketmen** 1.4nm,0.3s	**4.00**	**34**	*e*P	**Pb**	**09 30 15.7**	**+1.5**
KTMS	37nm,0.7s			*e*S	**Sb**	**09 31 06.0**	**+3.1**
ARXS	**Arharly** 7.1nm,0.6s	**4.08**	**5**	*e*P	**Pb**	**09 30 15.5**	**+0.1**
ARXS	34nm,0.8s			*e*S	**Sb**	**09 31 06.0**	**+1.0**
MNAS	**Manas** 8.1nm,1.0s	**4.30**	**304**	⇓Pn	**Pn**	**09 30 10.5**	**+1.1**
MNAS	7.7nm,1.1s			⇑Lg	Lg	09 31 14.5	
MNAS	**Manas** baz=2.0	**4.30**	**304**	⇑*e*P	**Pn**	**09 30 10.7**	**+1.3**
MNAS	baz=2.0			⇑*e*S	**Sn**	**09 31 00.8**	**+0.8**
KK31	**Karatay Array** 1.0nm,0.6s,baz=120,slow=18,SNR=7.2	**5.88**	**302**	⇑Pg	**Pb**	**09 30 45.8**	**-0.4**
KK31	1.6nm,0.6s,baz=120,slow=32,SNR=6.6			⇑Lg	Lg	09 32 03.4	

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*ISCJB **18** 09:33:22.2±0.6, 54°.9S±0°.1×127°.3W±0°.2, h10^{km}, mb4.2/12, MS4.0/13, Error ellipse: s-maj=21.8km s-min=15.4km az=40.5*

*IDC **18** 09:33:22.4±0.6, 54°.89S×127°.43W, h0^{km}, mb4.1/10, mb1 4.3/10, mb1mx4.1/34, mbtmp4.1/10, MS3.9/13, Ms1 3.9/13, ms1mx3.7/30, Error ellipse: s-maj=25.6km s-min=19.2km az=133.0*

*NEIC **18** 09:33:23.6±0.4, 54°.86S×127°.45W, h10^{km}, mb4.8/2, Error ellipse: s-maj=18.3km s-min=13.6km az=134.0*

ISC 18 09:33:23.6±0.7**, 54°.8S**±0°.1×**127°.4W**±0°.2**, h10**^{km}**, n40,** σ**1**^{s}.**03**/17**, mb4.2**/12**, MS3.9**/13**, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMSA	**Palmer Station** comp=Z,214nm,21.0s,baz=257,slow=28	**32.00**	**134**	LR	LR	09 48 17.5	
RKT	**Rikitea** 1.4nm,0.2s	**32.18**	**347**	*e*T	T	10 13 44.9	
VNDA	**Vanda** 1.0nm,0.9s,baz=94,slow=8.5,SNR=5.3	**33.10**	**202**	P	**P**	**09 40 00.8**	**+1.8**
VNDA	comp=Z,74nm,21.0s,baz=87,slow=32			LR	LR	09 50 49.5	
QSPA	**South Pole Qui** 2.1nm,0.8s,baz=124,slow=2.4,SNR=8.6	**35.34**	**180**	P	**P**	**09 40 18.8**	**0.0**
QSPA	comp=Z,223nm,19.1s,baz=88,slow=34			LR	LR	09 53 04.5	
TBI	**Tubuai** 432nm,28.2s,baz=170	**35.48**	**324**	*e*LR	LR	09 49 42.2	
TBI	**Tubuai** 14nm,0.3s	**35.48**	**324**	*e*T	T	10 17 54.6	
PPT2	**Papeete2** 647nm,26.0s,baz=167	**40.88**	**327**	*e*LR	LR	09 52 24.3	
PPT	**Papeete** comp=Z,192nm,20.6s,baz=158,slow=30	**40.90**	**327**	LR	LR	09 54 11.2	
RAR	**Rarotonga** comp=Z,176nm,18.9s,baz=136,slow=30	**41.46**	**311**	LR	LR	09 53 46.4	
VAH	**Vaihoa** 23nm,0.2s	**42.52**	**330**	*e*T	T	10 26 42.6	
TAOE	**Nuku Hiva Isla** 426nm,26.4s	**46.97**	**343**	*e*LR	LR	09 55 11.5	
SNAA	**Sanae** 0.6nm,0.5s,baz=204,slow=12,SNR=12	**47.94**	**159**	P	**P**	**09 42 00.8**	**-0.9**
SNAA	comp=Z,170nm,18.2s,baz=188,slow=36			LR	LR	10 02 03.0	
AFI	**Afiamalu** comp=Z,98nm,18.9s,baz=156,slow=30	**53.38**	**302**	LR	LR	09 59 57.1	
CPUP	**Villa Florida** 6.6nm,1.2s,baz=138,slow=3.1,SNR=4.7	**57.55**	**90**	P	**P**	**09 43 12.9**	**-0.3**
MAW	**Mawson** comp=Z,83nm,19.8s,baz=227,slow=33	**57.63**	**185**	LR	LR	10 05 02.3	
LPAZ	**La Paz** 13nm,1.1s,baz=195,slow=3.4,SNR=22	**59.27**	**74**	P	**P**	**09 43 26.7**	**+0.6**
LPAZ	comp=Z,48nm,18.9s,baz=112,slow=30			LR	LR	10 03 07.7	
SAML	**Samuel** 9.3nm,1.2s	**68.02**	**74**	*e*P	**P**	**09 44 22.3**	**-0.8**
ASAR	**Alice Springs** 0.7nm,0.7s,baz=138,slow=5.9,SNR=7.7	**75.78**	**249**	P	**P**	**09 45 09.5**	**-0.2**
H01W1	**Cape Leeuwin H** baz=146	**76.22**	**228**	T	T	11 09 42.6	
H01W2	**Cape Leeuwin H** baz=146,slow=74,SNR=5.7	**76.22**	**228**	T	T	11 09 41.5	
H01W3	**Cape Leeuwin H** baz=146,slow=74,SNR=4.7	**76.23**	**228**	T	T	11 09 40.9	
WRA	**Warramunga Arr** 3.2nm,1.1s,baz=146,slow=5.2,SNR=9.1	**78.54**	**252**	P	**P**	**09 45 25.3**	**+0.1**
WRAB	**Tennant Creek** 8.5nm,1.2s	**78.54**	**252**	*e*P	**P**	**09 45 23.4**	**-1.8**
TXAR	**Lajitas Array** 0.7nm,0.8s,baz=182,slow=6.9,SNR=8.3	**86.29**	**21**	P	**P**	**09 46 07.5**	**+2.2**
ANMO	**Albuquerque** 1.8nm,1.1s,baz=195,slow=7.9,SNR=6.0	**91.23**	**17**	P	**P**	**09 46 29.4**	**+0.7**
H11S2	**WAKE ISLAND Hy** baz=157,slow=72,SNR=23	**91.87**	**300**	T	T	11 28 42.7	
H11S3	**WAKE ISLAND Hy** baz=157,slow=72,SNR=14	**91.88**	**300**	T	T	11 28 42.2	
H11S1	**WAKE ISLAND Hy** baz=157,slow=72,SNR=11	**91.89**	**300**	T	T	11 28 41.6	
H11N3	**WAKE ISLAND Hy** baz=158,slow=76,SNR=5.0	**92.81**	**301**	T	T	11 29 46.4	
H11N1	**WAKE ISLAND Hy** baz=158,slow=76,SNR=4.5	**92.81**	**301**	T	T	11 29 47.6	
H11N2	**WAKE ISLAND Hy** baz=158,slow=76,SNR=4.9	**92.82**	**301**	T	T	11 29 47.0	
NVAR	**Mina Array Bea** 0.4nm,0.8s,baz=196,slow=5.6,SNR=2.9	**93.23**	**7**	P	**P**	**09 46 37.6**	**-0.3**
NVAR	comp=Z,82nm,18.7s,baz=254,slow=30			LR	LR	10 20 35.0	
BOSA	**Boshof** comp=Z,96nm,18.8s,baz=204,slow=33	**93.63**	**156**	LR	LR	10 24 48.5	
YBH	**Yreka Blue Hor** comp=Z,76nm,18.1s,baz=184,slow=31	**96.28**	**4**	LR	LR	10 22 38.7	
PDAR	**Pinedale Array** comp=Z,77nm,20.3s,baz=174,slow=30	**98.42**	**13**	LR	LR	10 23 12.0	
ILAR	**Eielson Array** 1.1nm,0.9s,baz=180,slow=2.1,SNR=10	**120.22**	**350**	PKP	**PKPdf**	**09 52 12.9**	**-0.3**
SONM	**Songino Array** 2.3nm,1.0s,baz=156,slow=2.6,SNR=9.8	**146.39**	**281**	PKPbc	**PKPab**	**09 53 04.2**	**-0.6**
RAYN	**Ar Rayn**	**148.28**	**168**	*e*PKPbc	**PKPbc**	**09 53 09.9**	**+0.1**
EKA	**Eskdalemuir Ar** 1.4nm,0.7s,baz=252,slow=3.7,SNR=4.3	**148.82**	**66**	PKPbc	**PKPbc**	**09 53 09.5**	**-0.6**
MKAR	**Makanchi Array** 0.8nm,0.9s,baz=123,slow=4.5,SNR=4.9	**159.69**	**259**	PKPab	**PKPab**	**09 53 59.9**	**-0.7**

IDC 18 09:34:44.9±49.0**, 17°.59S**×**178°.35W, h0**^{km}**, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.5**/47**, mbtmp3.8**/3**, Error ellipse: s-maj=898.0km s-min=152.5km az=79.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek** 0.5nm,0.3s,baz=103,slow=14,SNR=4.6	**38.83**	**241**	P	P	09 42 12.8	+0.9
WRA	**Warramunga Arr** 0.2nm,0.3s,baz=97,slow=7.6,SNR=17	**44.74**	**259**	P	P	09 42 59.9	-0.6
ASAR	**Alice Springs** 1.8nm,0.7s,baz=89,slow=8.4,SNR=33	**44.93**	**254**	P	P	09 43 01.6	-0.4

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*HEL **18** 09:37:14.6±0.3, 64°.59N×30°.75E, h0^{km}, ML2.2, Explosion*

*ISCJB **18** 09:37:15.3±0.6, 64°.72N±0°.03×30°.42E±0°.08, h0^{km}, Error ellipse: s-maj=5.6km s-min=3.6km az=27.0*

*KOLA **18** 09:37:16.9, 64°.62N×31°.22E, h0^{km}*

*MOS **18** 09:37:17.3, 64°.67N×30°.63E, M2.6, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

*UPP **18** 09:37:17.1±2.9, 64°.55N×30°.75E, h4^{km}, ML1.6*

*NAO **18** 09:37:18.1±1.7, 64°.69N×30°.64E, ML2.3*

*IDC **18** 09:37:18.0±2.1, 64°.66N×30°.81E, h0^{km}, mb1 3.2/4, mb1mx2.9/67, mbtmp3.2/4, ML2.5/4, Error ellipse: s-maj=29.0km s-min=9.1km az=102.0*

*CSEM **18** 09:37:18.4±0.7, 64°.77N×30°.34E, h2^{km}, ML2.2, Error ellipse: s-maj=14.4km s-min=7.6km az=106.0, Mining explosion.*

*BER **18** 09:37:18.9±3.9, 64°.75N×30°.43E, h0^{km}±17^{km}, ML2.3(NAO)*

ISC 18 09:37:16.9±1.1**, 64°.71N**±0°.03×**30°.52E**±0°.05**, h0**^{km}**, n63,** σ**1**^{s}.**74**/96**, Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KU6	**Riekki** baz=164	**1.35**	**349**	PG	**Pg**	**09 37 41.6**	**-1.1**
KU6	comp=Z,16nm,0.2s			MSG		09 37 59.2	
KU6				SG	**Sb**	**09 38 00.4**	**-0.4**
KU6	**Riekki**	**1.35**	**349**	Pg	**Pg**	**09 37 41.6**	**-1.1**
KU6	comp=Z,16nm,0.2s			Sg	**Sb**	**09 38 00.4**	**-0.4**
MSF	**Maaselka** baz=155	**1.36**	**334**	PG	**Pg**	**09 37 42.0**	**-0.9**
MSF				SG	**Sg**	**09 38 00.5**	**0.0**
MSF	**Maaselka**	**1.36**	**334**	Pg	**Pg**	**09 37 42.0**	**-0.9**
MSF				Sg	**Sg**	**09 38 00.5**	**0.0**
OUL	**Oulu**	**2.01**	**283**	PG	**Pn**	**09 37 53.4**	**+1.4**
OUL				SG	**Sb**	**09 38 20.2**	**+0.5**
OUL	**Oulu**	**2.01**	**283**	Pg	**Pn**	**09 37 53.4**	**+1.4**
OUL				Sg	**Sb**	**09 38 20.2**	**+0.5**
OUF	**Merijarvi**	**2.52**	**265**	PG	**Pn**	**09 38 00.5**	**+1.4**
OUF	comp=Z,23nm,0.2s			MSG		09 38 31.6	
OUF				SG	**Sb**	**09 38 35.3**	**+0.8**
OUF	**Merijarvi**	**2.52**	**265**	Pg	**Pn**	**09 38 00.5**	**+1.4**
OUF	comp=Z,23nm,0.2s			Sg	**Sb**	**09 38 35.3**	**+0.8**
RNF	**Rovaniemi**	**2.67**	**318**	PB	**Pn**	**09 38 03.0**	**+1.9**
RNF				SB	**Sb**	**09 38 38.4**	**-0.4**
RNF	**Rovaniemi**	**2.67**	**318**	Pb	**Pn**	**09 38 03.0**	**+1.9**
RNF				Sb	**Sb**	**09 38 38.4**	**-0.4**
TOF	**Tornio**	**2.94**	**301**	PB	**Pn**	**09 38 07.2**	**+2.5**
TOF	comp=Z,10nm,0.2s			MSG		09 38 45.0	
TOF				SB	**Sb**	**09 38 46.1**	**-0.3**
TOF	**Tornio**	**2.94**	**301**	Pb	**Pn**	**09 38 07.2**	**+2.5**
TOF				Sb	**Sb**	**09 38 46.1**	**-0.3**
VRF	**Varrio** baz=167	**3.08**	**354**	PN	**Pn**	**09 38 07.2**	**+0.5**
VRF	comp=Z,3.8nm,0.2s			MSG		09 38 48.6	
VRF	**Varrio**	**3.08**	**354**	Pn	**Pn**	**09 38 07.2**	**+0.5**
APA0	**Apatity Array**	**3.08**	**18**	P	**Pn**	**09 38 06.2**	**-0.5**
APA0				S	**Sn**	**09 38 43.0**	**-1.2**
APA	**Apatity**	**3.11**	**21**	P	**Pn**	**09 38 06.3**	**-0.8**
APA				S	**Sn**	**09 38 43.3**	**-1.5**
SGF	**Sodankyl**	**3.19**	**331**	PB	**Pn**	**09 38 09.8**	**+1.5**
SGF	**Sodankyl**	**3.19**	**331**	Pb	**Pn**	**09 38 09.8**	**+1.5**
KALU	**Kalix**	**3.22**	**294**	P	**Pn**	**09 38 10.2**	**+1.5**
KALU				S	**Sn**	**09 38 50.9**	**+3.2**
KALU	**Kalix**	**3.22**	**294**	PB	**Pn**	**09 38 10.1**	**+1.5**
KALU	**Kalix**	**3.22**	**294**	P	**Pn**	**09 38 10.2**	**+1.5**
KALU				S	**Sn**	**09 38 50.9**	**+3.2**
KEF	**Keuruu**	**3.59**	**227**	PB	**Pn**	**09 38 15.9**	**+2.1**
KEF	**Keuruu**	**3.59**	**227**	Pb	**Pn**	**09 38 15.9**	**+2.1**
PAJU	**Pajala**	**3.83**	**311**	P	**Pn**	**09 38 18.1**	**+1.1**
PAJU	**Pajala**	**3.83**	**311**	P	**Pn**	**09 38 18.1**	**+1.1**
FIA0	**FINESS Array S** baz=34,slow=12	**3.85**	**214**	Pn	**Pn**	**09 38 18.0**	**+0.8**
FIA0	baz=35,slow=14			Pg	**Pb**	**09 38 26.2**	**+0.6**
FIA0	baz=38,slow=28			Sn	**Sn**	**09 39 03.2**	**+0.1**
FIA0	baz=36,slow=28			Lg	Lg	09 39 16.2	
FIA0	**FINESS Array S**	**3.85**	**214**	PB	**Pn**	**09 38 18.8**	**+1.6**
FIA0				SB	**Sn**	**09 39 04.0**	**+0.9**
FIA0	**FINESS Array S** SNR=8.0	**3.85**	**214**	Pn	**Pn**	**09 38 18.0**	**+0.8**
FIA0	**FINESS Array S**	**3.85**	**214**	Pb	**Pn**	**09 38 18.8**	**+1.6**
FIA0	SNR=4.6			Sn	**Sn**	**09 39 03.2**	**+0.1**
FIA0				Sb	Sb	09 39 04.0	-8.6
FIA0	baz=36,slow=27,SNR=0.3			Lg	Lg	09 39 16.2	
FIA0	**FINESS Array S** baz=34,slow=12	**3.85**	**214**	Pn	**Pn**	**09 38 18.0**	**+0.8**
FIA0	baz=35,slow=14			Pg	**Pb**	**09 38 26.2**	**+0.6**
FIA0	baz=38,slow=28			Sn	**Sn**	**09 39 03.2**	**+0.1**
FIA0	baz=36,slow=28			Lg	Lg	09 39 16.2	
FINES	**FINESS Array B** comp=Z,0.2nm,0.3s,baz=36,slow=14,SNR=6.6	**3.85**	**214**	Pn	**Pn**	**09 38 18.0**	**+0.8**
FINES	comp=Z,0.8nm,0.3s,baz=36,slow=14,SNR=16			Pg	**Pb**	**09 38 26.3**	**+0.7**
FINES	comp=Z,0.7nm,0.3s,baz=36,slow=19,SNR=5.5			Sn	**Sn**	**09 39 03.6**	**+0.5**
FINES	comp=Z,1.0nm,0.3s,baz=38,slow=28,SNR=6.1			Lg	Lg	09 39 12.7	
VAF	**Ylistaro** baz=68	**3.85**	**248**	PB	**Pn**	**09 38 19.5**	**+2.2**
VAF				SG	**Sb**	**09 39 18.1**	**+5.4**
VAF	**Ylistaro**	**3.85**	**248**	Pb	**Pn**	**09 38 19.5**	**+2.2**
SJUU	**Sjulsmark**	**3.85**	**286**	P	**Pn**	**09 38 18.7**	**+1.4**
SJUU	**Sjulsmark**	**3.85**	**286**	P	**Pn**	**09 38 18.7**	**+1.4**
ERTU	**Ertsjaerv**	**3.92**	**302**	P	**Pn**	**09 38 19.9**	**+1.7**
ERTU	**Ertsjaerv** baz=113	**3.92**	**302**	PN	**Pn**	**09 38 19.9**	**+1.7**
ERTU				SG	**Sg**	**09 39 22.3**	**-0.3**
ERTU	**Ertsjaerv**	**3.92**	**302**	P	**Pn**	**09 38 19.9**	**+1.7**
BURU	**Burvik**	**3.93**	**272**	P	**Pn**	**09 38 18.8**	**+0.4**
BURU	**Burvik**	**3.93**	**272**	PN	**Pn**	**09 38 18.8**	**+0.4**
BURU	**Burvik**	**3.93**	**272**	P	**Pn**	**09 38 18.8**	**+0.4**
ODEU	**Stanfors**	**4.24**	**270**	P	**Pn**	**09 38 22.7**	**0.0**
ODEU	**Stanfors**	**4.24**	**270**	P	**Pn**	**09 38 22.7**	**0.0**
HARU	**Harads**	**4.24**	**294**	P	**Pn**	**09 38 24.9**	**+2.2**
HARU	**Harads**	**4.24**	**294**	P	**Pn**	**09 38 24.9**	**+2.2**
UMAU	**Umeaa**	**4.37**	**264**	P	**Pn**	**09 38 24.4**	**+0.1**
UMAU	**Umeaa**	**4.37**	**264**	PN	**Pn**	**09 38 24.4**	**+0.1**
UMAU				SG	**Sg**	**09 39 34.0**	**-3.0**
UMAU	**Umeaa**	**4.37**	**264**	P	**Pn**	**09 38 24.4**	**+0.1**
SVAU	**Svanoeiden**	**4.72**	**272**	P	**Pn**	**09 38 29.8**	**+0.6**
SVAU	**Svanoeiden**	**4.72**	**272**	P	**Pn**	**09 38 29.8**	**+0.6**
DUNU	**Dundret**	**4.74**	**305**	P	**Pn**	**09 38 31.5**	**+2.0**
HUSU	**Husum**	**5.15**	**260**	P	**Pn**	**09 38 35.8**	**+0.7**
HUSU	**Husum**	**5.15**	**260**	P	**Pn**	**09 38 35.8**	**+0.7**
ARA0	**ARCESS Array S** baz=155,slow=14	**5.23**	**340**	Pn	**Pn**	**09 38 36.1**	**-0.1**
ARA0	baz=157,slow=28			Sn	**Sn**	**09 39 35.2**	**-1.9**
ARA0	baz=154,slow=37			Lg	Lg	09 39 55.8	
ARA0	**ARCESS Array S** baz=155,slow=14	**5.23**	**340**	Pn	**Pn**	**09 38 36.1**	**-0.1**
ARA0	baz=157,slow=28			Sn	**Sn**	**09 39 35.2**	**-1.9**
ARA0	baz=154,slow=37			Lg	Lg	09 39 55.8	
ARCES	**ARCESS Array B** comp=Z,0.6nm,0.3s,baz=153,slow=14,SNR=23	**5.23**	**340**	Pn	**Pn**	**09 38 36.2**	**0.0**
ARCES	comp=Z,0.7nm,0.3s,baz=152,slow=23,SNR=4.6			Sn	**Sn**	**09 39 35.6**	**-1.5**
ARCES	comp=Z,2.3nm,0.3s,baz=154,slow=31,SNR=7.5			Lg	Lg	09 39 55.2	
HFS	**Hagfors** baz=57,slow=12	**9.04**	**247**	Pn	**Pn**	**09 39 28.1**	**-0.3**
HFS	baz=55,slow=28			Sn	**Sn**	**09 41 04.8**	**-5.9**
HFS	**Hagfors** comp=Z,0.4nm,0.3s,baz=58,slow=11,SNR=14	**9.04**	**247**	Pn	**Pn**	**09 39 28.0**	**-0.4**
HFS	comp=Z,0.2nm,0.3s,baz=59,slow=25,SNR=4.2			Sn	**Sn**	**09 41 05.1**	**-5.6**
HFS	comp=Z,0.3nm,0.3s,baz=60,slow=26,SNR=2.6			Lg	Lg	09 41 52.5	
HFS	**Hagfors** baz=57,slow=12	**9.04**	**247**	Pn	**Pn**	**09 39 28.1**	**-0.3**
HFS	baz=55,slow=28			Sn	**Sn**	**09 41 04.8**	**-5.9**
NB2	**NORSAR Subarra** baz=57,slow=14	**9.54**	**256**	Pn	**Pn**	**09 39 36.4**	**+1.1**
NB2	**NORSAR Subarra** baz=57,slow=14	**9.54**	**256**	Pn	**Pn**	**09 39 36.4**	**+1.1**
NRA0	**NORESS Array S** baz=42,slow=12	**9.56**	**254**	Pn	**Pn**	**09 39 36.7**	**+1.1**
NRA0	**NORESS Array S** baz=42,slow=12	**9.56**	**254**	Pn	**Pn**	**09 39 36.7**	**+1.1**

NNC 18 09:41:41.5±2.8**, 37°.13N**×**70°.62E, h0**^{km}**, mb3.6, mpv3.2, 1C-5D, Error ellipse: s-maj=21.6km s-min=19.1km az=173.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan** 1.4nm,0.4s	**3.66**	**37**	⇓Pn	Pn	09 42 39.7	+0.2
SFK	10nm,0.3s			⇓Sn	Sn	09 43 24.9	+1.4
MNAS	**Manas** 2.2nm,0.9s	**5.54**	**15**	⇓Pn	Pn	09 43 04.2	-1.1
MNAS	2.5nm,0.4s			⇓Sn	Sn	09 44 10.4	+0.6
KK31	**Karatay Array** 1.9nm,0.3s,baz=186,slow=14,SNR=21	**5.97**	**359**	⇓Pn	Pn	09 43 12.0	+0.9
KK31	2.5nm,0.7s,baz=185,slow=22,SNR=7.2			⇑Sn	Sn	09 44 21.8	+1.7

IDC 18 09:49:44.4±2.3**, 1°.41N**×**126°.91E, h0**^{km}**, mb3.3**/3**, mb1 3.6**/3**, mb1mx3.3**/54**, mbtmp3.4**/3**, Error ellipse: s-maj=175.4km s-min=28.1km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr** 0.7nm,0.4s,baz=340,slow=11,SNR=17	**22.44**	**161**	P	P	09 54 45.4	+0.2
ASAR	**Alice Springs** 0.2nm,0.4s,baz=349,slow=7.2,SNR=4.2	**25.84**	**165**	P	P	09 55 17.5	-0.3
MKAR	**Makanchi Array** 0.2nm,0.4s,baz=123,slow=7.1,SNR=3.1	**59.55**	**326**	P	P	09 59 49.9	0.0

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*ISK **18** 10:08:11.4, 40°.58N×36°.88E, h5^{km}, ML2.2/6*

*DDA **18** 10:08:11.8, 40°.58N×36°.97E, h8^{km}, Ml2.7*

*ISCJB **18** 10:08:12.0±0.6, 40°.59N±0°.03×36°.97E±0°.03, h1^{km}±5^{km}, Error ellipse: s-maj=4.8km s-min=3.6km az=18.9*

*CSEM **18** 10:08:12.4±0.1, 40°.58N×36°.94E, h2^{km}, ML2.7, Error ellipse: s-maj=2.9km s-min=2.4km az=18.0*

ISC 18 10:08:12.2±1.0**, 40°.58N**±0°.03×**36°.95E**±0°.02**, h7**^{km}±9^{km}**, n28,** σ**0**^{s}.**40**/49**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERBA	**Erbaa**	**0.18**	**305**	*i* P	**Pg**	**10 08 15.8**	**-0.1**
ERBA				*i* S	**Sg**	**10 08 19.1**	**+0.7**
ERBA	**Erbaa**	**0.18**	**305**	P	**Pg**	**10 08 15.8**	**-0.1**
ERBA				S	**Sg**	**10 08 19.1**	**+0.7**
TOKT	**Tokat**	**0.40**	**231**	PG	**Pg**	**10 08 19.4**	**-0.6**
TOKT				SG	**Sg**	**10 08 25.5**	**+0.2**
TOKT	**Tokat**	**0.40**	**231**	*e*Pg	**Pg**	**10 08 19.4**	**-0.6**
SVSK	**Karacayir**	**0.66**	**177**	PG	**Pb**	**10 08 25.9**	**-0.1**
SVSK	**Karacayir**	**0.66**	**177**	*e*Pg	**Pb**	**10 08 25.9**	**-0.1**
ORDU	**Ordu-Boztepe**	**0.80**	**59**	*i* P	**Pb**	**10 08 28.4**	**-0.1**
ORDU				*i* S	**Sg**	**10 08 37.4**	**-0.6**
ORDU	**Ordu-Boztepe**	**0.80**	**59**	P	**Pb**	**10 08 28.4**	**-0.1**
ORDU				S	**Sg**	**10 08 37.4**	**-0.6**
CUZAR	**Zara_SIVAS**	**0.93**	**137**	*i* P	**Pb**	**10 08 30.9**	**+0.2**
CUZAR				*i* S	**Sg**	**10 08 42.6**	**+0.5**
CUZAR	**Zara_SIVAS**	**0.93**	**137**	P	**Pb**	**10 08 31.0**	**+0.2**
CUZAR				S	**Sg**	**10 08 42.6**	**+0.5**
SAMS	**Samsun-Alacam**	**0.97**	**324**	*i* P	**Pb**	**10 08 31.1**	**-0.3**
SAMS				*i* S	**Sb**	**10 08 44.7**	**+0.2**
SAMS	**Samsun-Alacam**	**0.97**	**324**	P	**Pb**	**10 08 31.1**	**-0.3**
SAMS				S	**Sb**	**10 08 44.7**	**+0.2**
SUSE	**Susehri**	**1.02**	**111**	*i* P	**Pb**	**10 08 32.2**	**-0.1**
SUSE				*i* S	**Sg**	**10 08 45.2**	**+0.1**
SUSE	**Susehri**	**1.02**	**111**	P	**Pb**	**10 08 32.2**	**-0.1**
SUSE				S	**Sg**	**10 08 45.2**	**+0.1**
CUSAR	**Sarkisla-SIVAS**	**1.28**	**205**	*i* P	**Pn**	**10 08 36.1**	**-0.5**
CUSAR				*i* S	**Sn**	**10 08 54.3**	**+0.2**
CUSAR	**Sarkisla-SIVAS**	**1.28**	**205**	P	**Pn**	**10 08 36.1**	**-0.5**
CUSAR				S	**Sn**	**10 08 54.3**	**+0.2**
ESPY	**Espiye-Giresun**	**1.39**	**75**	PN	**Pg**	**10 08 38.9**	**+0.1**
ESPY	**Espiye-Giresun**	**1.39**	**75**	*e*Pn	**Pg**	**10 08 38.9**	**+0.1**
YOZ	**Yozgat**	**1.56**	**234**	PN	**Pb**	**10 08 41.2**	**-0.3**
YOZ				SN	**Sg**	**10 09 02.9**	**+0.5**
YOZ	**Yozgat**	**1.56**	**234**	*e*Pn	**Pb**	**10 08 41.2**	**-0.3**
YOZ				*e*Sn	**Sg**	**10 09 02.9**	**+0.5**
DIKM	**Dikmen**	**1.67**	**310**	PN	**Pb**	**10 08 42.9**	**-0.4**
DIKM				SN	**Sb**	**10 09 04.6**	**+0.1**
DIKM	**Dikmen**	**1.67**	**310**	*e*Pn	**Pb**	**10 08 42.9**	**-0.4**
DIKM				*e*Sn	**Sb**	**10 09 04.6**	**+0.1**
KEMA	**Kemaliye**	**1.76**	**137**	*i* P	**Pn**	**10 08 43.9**	**+0.7**
KEMA				*i* S	**Sg**	**10 09 08.6**	**-0.3**
KEMA	**Kemaliye**	**1.76**	**137**	P	**Pn**	**10 08 43.9**	**+0.7**
KEMA				S	**Sg**	**10 09 08.6**	**-0.3**
KELT	**Kelkit**	**1.81**	**103**	*i* P	**Pb**	**10 08 45.2**	**-0.6**
KELT				*i* S	**Sn**	**10 09 07.3**	**0.0**
KELT	**Kelkit**	**1.81**	**103**	P	**Pb**	**10 08 45.2**	**-0.6**
KELT				S	**Sn**	**10 09 07.3**	**0.0**
CORM	**Corum**	**1.82**	**258**	PN	**Pn**	**10 08 44.5**	**+0.5**
CORM	**Corum**	**1.82**	**258**	*e*Pn	**Pn**	**10 08 44.5**	**+0.5**

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*ISCJB **18** 10:17:24.0±0.4, 32°.25N±0°.02×115°.21W±0°.03, h28^{km}±3^{km}, Error ellipse: s-maj=4.9km s-min=3.6km az=140.4*

*NEIC **18** 10:17:25.5±0.0, 32°.20N×115°.31W, h6^{km}, MD3.3(ECX), MD3.8(MEX), ML3.1(PAS), After ECX.*

*ECX **18** 10:17:25.5±0.6, 32°.20N×115°.31W, h6^{km}, MD3.0, ML3.3*

*MEX **18** 10:17:26.5±0.3, 32°.28N×115°.20W, h17^{km}±12^{km}, MD3.8*

ISC 18 10:17:23.7±1.0**, 32°.22N**±0°.02×**115°.28W**±0°.03**, h17**^{km}±8^{km}**, n43,** σ**1**^{s}.**10**/66**, 3C-8D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPBX	**Cerro Prieto**	**0.20**	**353**	⇓*e*P	**Pb**	**10 17 29.5**	**+0.7**
CPBX				*e*S	**Sb**	**10 17 33.1**	**+0.8**
CPBX	comp=E,14μm,0.3s			IAML		10 17 35.4	
CPBX				⇓*e*		10 17 35.4	
CPBX				⇑*e*		10 17 36.4	
CPBX	comp=N,17μm,0.4s			IAML		10 17 36.4	
MBIG	**Mexicali**	**0.20**	**20**	⇓*e*P	**Pb**	**10 17 29.9**	**+1.1**
MBIG	**Mexicali**	**0.20**	**20**	*e*P	**Pb**	**10 17 29.7**	**+0.8**
MBIG				*e*S	**Sg**	**10 17 32.0**	**+0.4**
DREC	**Desert Rsrch C**	**0.60**	**346**	⇓*i*P	**Pb**	**10 17 36.7**	**+1.0**
ERPC	**Ernies Place**	**0.61**	**328**	⇑*i*P	**Pb**	**10 17 36.9**	**+0.9**
WESC	**Westside Schoo**	**0.66**	**324**	*e*P	**Pb**	**10 17 37.2**	**+0.5**
YUH	**Yuha Desert**	**0.69**	**308**	⇓*i*P	**Pb**	**10 17 37.5**	**+0.3**
YMD	**Yuma Desert**	**0.70**	**62**	⇑*i*P	**Pb**	**10 17 37.7**	**+0.3**
COK	**Cook Ranch**	**0.73**	**329**	*e*P	**Pb**	**10 17 38.5**	**+0.6**
ECBX	**El Chinero**	**0.77**	**166**	*e*P	**Pg**	**10 17 39.1**	**+0.4**
ECBX				*e*S	**Sg**	**10 17 49.4**	**+0.4**
RMX	**La Rumorosa**	**0.78**	**299**	*e*P	**Pb**	**10 17 38.2**	**-0.6**
RMX				*e*		10 17 48.5	
RMX	comp=E,1μm,0.3s			IAML		10 17 48.5	
IKP	**In-Ko-Pah, Jac** baz=118,SNR=79	**0.82**	**301**	P	**Pb**	**10 17 39.8**	**+0.2**
IKP	baz=118			S	**Sb**	**10 17 50.8**	**+0.3**
IKP	**In-Ko-Pah, Jac**	**0.82**	**301**	⇓*i*P	**Pb**	**10 17 39.8**	**+0.2**
IKP				*e*S	**Sb**	**10 17 50.8**	**+0.3**
SWSC	**Sam W. Stewart**	**0.84**	**329**	P	**Pb**	**10 17 39.4**	**-0.5**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	baz=146,SNR=34						
SWSC				S	Sb	10 17 50.4	-0.6
	baz=146						
GLA	Glamis	0.91	25	P	Pb	10 17 40.6	-0.5
	baz=205,SNR=149						
GLA				S	Sb	10 17 51.7	-1.2
	baz=205						
ZAX	El Zacaton	1.10	230	eP	Pb	10 17 44.0	-0.3
MONP2	Monument Peak	1.17	305	P	Pn	10 17 45.1	-0.5
	baz=122,SNR=64						
MONP2				S	Sb	10 18 01.1	+0.4
	baz=122						
CBX	Cerro Bola	1.18	275	e	Sg	10 18 02.7	+0.8
CBX				IAML		10 18 02.7	
	comp=E,1μm,0.3s						
CBX	Cerro Bola	1.18	275	eP	Pn	10 17 45.6	0.0
CBX				eS	Sb	10 18 00.5	-0.2
CBX	Cerro Bola	1.18	275	ePn	Pn	10 17 45.6	0.0
CBX				eSn	Sb	10 18 00.5	-0.2
SPIG	San Pedro Mart	1.19	188	⇓eP	Pn	10 17 45.9	+0.1
SPIG				eS	Sn	10 18 01.5	-0.2
SPIG	San Pedro Mart	1.19	188	eP	Pn	10 17 45.9	+0.1
SPIG				eS	Sb	10 18 01.1	0.0
SPIG	San Pedro Mart	1.19	188	ePg	Pn	10 17 45.9	+0.1
SPIG				eSn	Sb	10 18 01.1	0.0
SPX	San Pedro Mart	1.19	188	⇓eP	Pn	10 17 45.9	+0.1
SPX				eS	Sn	10 18 01.4	-0.3
SPX	San Pedro Mart	1.19	188	ePg	Pn	10 17 45.8	0.0
SPX				eSn	Sb	10 18 00.7	-0.4
TJIG	Tijuana	1.20	280	eP	Pn	10 17 45.7	0.0
TJIG				eS	Sb	10 18 00.8	-0.5
BC3	Big Chuckawall	1.44	354	P	Pn	10 17 48.2	-0.8
	baz=173,SNR=77						
Y12C	Blythe	1.65	22	Pb	Pn	10 17 52.9	+1.0
	baz=203						
109C	Camp Elliot, M	1.68	294	P	Pn	10 17 52.6	+0.3
	baz=111,SNR=26						
109C				Sb	Sb	10 18 16.1	+1.1
	baz=111						
CPE	Camp Elliot	1.68	294	ePn	Pn	10 17 53.1	+0.8
CPE				eSn	Sb	10 18 16.4	+1.3
FRD	Ford Ranch, An	1.69	319	P	Pn	10 17 51.9	-0.6
	baz=137,SNR=18						
FRD				Sb	Sb	10 18 15.8	+0.5
	baz=137						
PFO	Pinyon Flats O	1.70	325	P	Pn	10 17 52.2	-0.6
	baz=143,SNR=22						
PFO				S	Sn	10 18 12.8	-1.5
	baz=143						
BELC	Belle Mtn. Jos	1.87	341	P	Pn	10 17 54.4	-0.7
	baz=160,SNR=16						
IRM	Iron Mountain	1.93	3	P	Pn	10 17 55.2	-0.6
	baz=183						
214A	Organ Pipe Nat	2.11	97	P	Pn	10 17 57.7	-0.5
	baz=279,SNR=19						
MURC	Murrieta	2.12	311	P	Pn	10 17 58.3	-0.1
	baz=129,SNR=14						
MURC				Sb	Sb	10 18 30.1	+2.4
	baz=129						
GMRC	Granite Mounta	2.57	353	P	Pn	10 18 04.4	-0.4
	baz=172,SNR=15						
BFSC	Mount Baldy Ra	2.83	316	Sb	Sb	10 18 51.2	+2.8
	baz=134						
CIS	Catalina Islan	2.89	295	Sb	Sb	10 18 52.0	+2.0
	baz=112						
FMP	Fort Macarthur	2.94	301	Sb	Sb	10 18 53.7	+2.5
	baz=119						
PASC	Pasadena Art C	3.12	309	ePn	Pb	10 18 19.8	+1.1
PASC				ePg	Pg	10 18 20.0	-3.4
PASC				eSn	Sb	10 19 00.5	+4.1
ISA	Isabella, Lake	4.34	323	ePg	Pg	10 18 46.2	-0.6
121A	Cookes Peak, D	6.35	85	P	Pn	10 18 56.9	+0.3
	baz=270						

DDA ***18*** *10:46:51.0, 40°.61N×36°.94E, h7^{km}, Ml2.8*

CSEM ***18*** *10:46:51.5±0.2, 40°.58N×36°.96E, h2^{km}, ML2.8, Error ellipse: s-maj=5.3km s-min=3.9km az=167.0*

ISK ***18*** *10:46:51.1, 40°.51N×37°.02E, h6^{km}, ML2.2/5*

ISC 18 10:46:51.1±1.1**, 40°.59N**±0°.03×**36°.95E**±0°.03**, h5**^{km}±12^{km}**, n20, σ0^{s}.53**/32**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ERBA	Erbaa	0.17	301	iP	Pg	10 46 54.1	-0.4
ERBA	Erbaa	0.17	301	P	Pg	10 46 54.1	-0.4
TOKT	Tokat	0.41	229	PG	Pg	10 46 59.4	+0.4
TOKT				SG	Sg	10 47 05.4	+1.0
TOKT	Tokat	0.41	229	ePg	Pg	10 46 59.4	+0.4
TOKT				eSg	Sg	10 47 05.4	+1.0
SVSK	Karacayir	0.68	177	PG	Pg	10 47 04.0	0.0
SVSK				SG	Sg	10 47 11.7	-1.1
SVSK	Karacayir	0.68	177	ePg	Pg	10 47 04.0	0.0
SVSK				eSg	Sg	10 47 11.7	-1.1
ORDU	Ordu-Boztepe	0.80	60	iP	Pb	10 47 07.1	-0.3
ORDU				iS	Sg	10 47 17.5	+0.8
ORDU	Ordu-Boztepe	0.80	60	P	Pb	10 47 07.1	-0.3
ORDU				S	Sg	10 47 17.5	+0.8
CUZAR	Zara_SIVAS	0.94	138	iP	Pb	10 47 09.8	-0.2
CUZAR				iS	Sb	10 47 23.0	+0.2
CUZAR	Zara_SIVAS	0.94	138	P	Pb	10 47 09.8	-0.2
CUZAR				S	Sb	10 47 23.0	+0.2
SUSE	Susehri	1.03	111	iP	Pb	10 47 11.4	-0.1
SUSE				iS	Sb	10 47 25.4	0.0
SUSE	Susehri	1.03	111	P	Pb	10 47 11.4	-0.1
SUSE				S	Sb	10 47 25.4	0.0
ESPY	Espiye-Giresun	1.39	76	PN	Pn	10 47 16.9	-0.3
ESPY				SN	Sn	10 47 36.2	+0.3
ESPY	Espiye-Giresun	1.39	76	ePn	Pn	10 47 16.9	-0.3
ESPY				eSn	Sn	10 47 36.2	+0.3
YOZ	Yozgat	1.57	233	PN	Pb	10 47 20.9	+0.2
YOZ	Yozgat	1.57	233	ePn	Pb	10 47 20.9	+0.2
DIKM	Dikmen	1.66	310	PN	Pg	10 47 23.0	+0.1
DIKM	Dikmen	1.66	310	ePn	Pg	10 47 23.0	+0.1
CORM	Corum	1.82	258	PN	Pb	10 47 24.3	-0.6
CORM	Corum	1.82	258	ePn	Pb	10 47 24.3	-0.6

IDC ***18*** *10:55:42.4±0.5, 9°.06S×123°.27E, h0^{km}, mb4.4/17, mb1 4.5/19, mb1mx4.3/53, mbtmp4.4/19, ML5.0/2, MS3.2/2, Ms1 3.3/2, ms1mx2.6/42, Error ellipse: s-maj=24.7km s-min=12.9km az=68.0*

ISCJB ***18*** *10:55:52.3±0.2, 9°.29S±0°.03×123°.36E±0°.03, h100^{km}, mb4.4/25, Error ellipse: s-maj=5.3km s-min=3.8km az=35.2*

NEIC ***18*** *10:55:54.2±0.7, 9°.29S×123°.29E, h104^{km}±6^{km}, mb4.4/7, Error ellipse: s-maj=10.4km s-min=7.0km az=60.0*

DJA ***18*** *10:55:55.6±0.3, 9°S±3°×12°3E±°, h101^{km}±5^{km}, M4.8/19, mB5.2/12, mb4.8/19, MLv4.9/18, Mw(mB)4.7/12*

ISC 18 10:55:54.5±0.4**, 9°.33S**±0°.05×**123°.34E**±0°.05**, h100**^{km}**, n90, σ2^{s}.24**/96**, mb4.5**/25**, 2D, Timor region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	0.93	160	P	Pn	10 56 16.9	+2.7
SOEI	Soe	1.01	115	P	Pn	10 56 18.3	+3.2
SOEI	Soe	1.01	115	ePn	Pn	10 56 18.3	+3.2
SOEI				eSn	Sn	10 56 32.0	+1.3
MMRI	Maumere	1.29	302	P	Pn	10 56 18.2	0.0
MMRI				S	Sn	10 56 35.2	-0.9
MMRI	Maumere	1.29	302	ePn	Pn	10 56 17.0	-1.3
EDFI	Ende, Flores	1.73	289	P	Pn	10 56 24.0	+0.3
BASI	Baing, Sumba	2.86	252	P	Pn	10 56 39.4	+1.0
BASI				S	Sn	10 57 11.8	-0.4
WSI	Waingapu	3.02	263	P	Pn	10 56 41.3	+0.8
WBSI	Waikabubak, Su	3.91	265	P	Pn	10 56 51.5	-1.0
BKSI	Bulukumba	5.10	321	P	Pn	10 57 08.2	-0.4
	102nm,1.1s,1μm0.4nm						
KDI	Kendari	5.38	352	P	Pn	10 57 12.7	+0.2
	171nm,0.7s,2μm0.6nm						
PLAI	Plampang	5.52	275	P	Pn	10 57 14.1	-0.2
	515nm,0.7s,8μm						
SPSI	Sidrap Palu	6.40	326	P	Pn	10 57 29.2	+2.9
	30nm,0.6s,0.2nm						
TWSI	Taliwang, Sumb	6.40	275	P	Pn	10 57 26.6	+0.3
	113nm,0.6s,4μm1.1nm						
TTSI	Tana Toraja	7.16	331	P	Pn	10 57 40.4	+3.8
	50nm,1.1s,2μm0.2nm						
SANI	Sanana	7.70	20	P	Pn	10 57 48.4	+4.5
SAUI	Saumlaki	7.99	81	P	Pn	10 57 48.9	+1.1
SAUI	Saumlaki	7.99	81	ePn	Pn	10 57 49.1	+1.3
SAUI				eSn	Sn	10 59 11.6	-4.9
IGBI	Denpasar	8.11	273	P	Pn	10 57 48.9	-0.6
SRBI	Singaraja	8.13	278	P	Pn	10 57 48.9	-0.9
MSAI	Masohi	8.13	43	P	Pn	10 57 54.7	+4.8
	68nm,0.7s,766nm0.2nm						
LUWI	Luwuk	8.25	356	P	Pn	10 57 53.5	+2.0
LUWI	Luwuk	8.25	356	ePn	Pn	10 57 52.9	+1.4
MTN	Manton Dam	8.41	115	ePn	Pn	10 57 54.4	+0.8
MTN				eSn	Sn	10 59 23.5	-3.4
APSI	Ampana	8.53	349	P	Pn	10 57 57.1	+1.8
FITZ	Fitzroy Crossi	9.00	166	ePn	Pn	10 58 01.7	0.0
FITZ				eSn	Sn	10 59 37.6	-3.6
JAGI	Jajag, Banyuwa	9.12	275	ePn	Pn	10 58 00.2	-3.1
JAGI				eSn	Sn	10 59 34.2	-10
MRSI	Marisa	9.84	352	P	Pn	10 58 17.7	+4.6
	24nm,0.9s						
MPSI	Mapaga	10.20	340	P	Pn	10 58 20.0	+2.0
FAKI	Fak Fak	10.91	55	ePn	Pn	10 58 28.4	+0.8
MBWA	Marble Bar	12.26	196	ePn	Pn	10 58 46.5	+0.8
RKPI	Ransiki, Papua	13.29	55	P	Pn	10 59 01.0	+1.7
WRA	Warramunga Arr	14.98	136	Pn	Pn	10 59 18.6	-2.4
	5.9nm,0.3s,baz=310,slow=14,SNR=169						
WRA				Sn	Sn	11 01 53.5	-13
	7.3nm,0.3s,baz=310,slow=24,SNR=6.8						
WRAB	Tennant Creek	14.98	136	ePn	Pn	10 59 18.8	-2.2
WB2	Warramunga Arr	14.98	136	ePn	Pn	10 59 18.8	-2.4
SBUM	Sibu	16.11	316	ePn	P	10 59 37.9	+1.2
	8.9nm,0.8s						
AS31	Alice Springs	17.47	146	eP	Pn	10 59 52.7	+0.7
	16nm,0.6s						
ASAR	Alice Springs	17.47	146	P	Pn	10 59 52.5	+0.5
	5.7nm,0.3s,baz=322,slow=12,SNR=201						
ASAR				S	Sn	11 02 58.6	-8.0
	1.9nm,0.3s,baz=317,slow=22,SNR=9.4						
AS01	Alice Springs	17.50	146	eP	Pn	10 59 52.8	+0.5
COEN	Coen	19.96	105	eP	Pn	11 00 25.1	+3.5
	13nm,0.6s						
FORT	Forrest	21.79	169	eP	P	11 00 38.4	0.0
	202nm,0.6s						
PMG	Port Moresby	23.50	92	P	P	11 00 53.8	-1.9
	10nm,0.6s,baz=278,slow=14,SNR=2.1						
MANU	Manus Island	24.96	75	eP	P	11 01 08.4	-0.6
	71nm,1.1s						
GSI	Gunungsitoli	27.75	291	eP	P	11 01 37.8	+3.7
	9.9nm,0.6s						
STKA	Stephens Creek	28.11	146	P	P	11 01 39.9	+2.9
	9.1nm,0.6s,baz=318,slow=9.7,SNR=28						
STKA	Stephens Creek	28.11	146	eP	P	11 01 36.4	-0.6
	3.9nm,1.3s						
CMAR	Chiang Mai Arr	36.63	319	P	P	11 02 49.5	-2.0
	1.4nm,0.5s,baz=147,slow=6.6,SNR=7.1						
CMAR				LR	LR	11 21 45.0	
	comp=Z,24nm,18.4s,baz=195,slow=43						
KSAR	Wonju Array Be	46.72	5	P	P	11 04 11.9	-1.6
KSRS	Korea Array	46.73	5	P	P	11 04 11.9	-1.7
	0.6nm,0.5s,baz=182,slow=8.5,SNR=4.7						
MAJO	Matsushiro	47.72	16	eP	P	11 04 18.8	-2.5
	5.7nm,0.7s						
MJAR	Matsushiro Arr	47.72	16	P	P	11 04 18.9	-2.5
	3.6nm,0.5s,baz=195,slow=9.3,SNR=14						
MJB9	Matsu-Tunnel	47.73	16	eP	P	11 04 19.4	-1.9
	5.7nm,0.7s						
LZH	Lanzhou	48.77	339	eP	P	11 04 30.3	+0.8
LZH				pP	sP	11 05 01.3	-3.3
LZH				sP	pP	11 05 15.8	+22
LZH				ePP	PP	11 06 30.3	+6.6
LZH				pmax	pmax		
	comp=Z,11nm,1.3s						
LZH				pmax	pmax		
	comp=Z,170nm,4.3s						
LZH				LR	LR		
	comp=N,260nm,15.0s						
LZH				LR	LR		
	comp=E,270nm,16.2s						
LZH				LR	LR		
	comp=Z,340nm,17.7s						
RAMN	Ramite	50.70	316	eP	P	11 04 43.1	-1.4
	comp=Z,19nm,0.6s						
HHC	Hu-ho-hao-te	51.10	349	eP	P	11 04 49.3	+2.3
HHC				pmax	pmax		
	comp=Z,26nm,1.0s						
HHC				pmax	pmax		
	comp=Z,99nm,5.2s						
JIRN	Jiri	51.44	317	eP	P	11 04 48.4	-1.7
	comp=Z,24nm,0.7s						
GUN	Gumba	51.81	317	eP	P	11 04 50.5	-2.4
	comp=Z,40nm,0.6s						
PKIN	Phulchoki	51.92	316	eP	P	11 04 51.4	-2.2
	comp=Z,9.0nm,0.5s						
KKN	Kakani	52.14	316	eP	P	11 04 53.3	-1.9
	comp=Z,15nm,0.7s						
DMN	Daman	52.14	316	eP	P	11 04 53.4	-1.8
	comp=Z,14nm,0.7s						
GKN	Gorkha	52.71	316	eP	P	11 04 57.3	-2.0
	comp=Z,21nm,0.8s						
CN2	Changchun	52.91	2	eP	P	11 05 02.0	+1.7
KOLN	Koldanda	53.28	315	eP	P	11 05 01.5	-2.1
	comp=Z,8.0nm,0.6s						
DANN	Dangsing	53.53	316	eP	P	11 05 03.5	-2.0
	comp=Z,32nm,0.6s						
USRK	Ussuriysk Ar.	53.85	8	P	P	11 05 05.8	-1.3
	comp=Z,3.4nm,0.7s,baz=194,slow=8.5						
ASAJ	Asahikawa	55.99	17	P	P	11 05 21.6	-1.0
	comp=Z,6.4nm,0.7s,baz=257,slow=4.6,SNR=9.2						
SONM	Songino Array	58.86	347	P	P	11 05 41.9	-1.0
	comp=Z,3.4nm,0.5s,baz=163,slow=8.3,SNR=20						
SONA1	Songino Array	58.87	347	eP	P	11 05 41.8	-1.2
WMQ	Urumqi	62.00	331	P	P	11 06 05.4	+1.1
KSH	Kashi	65.48	321	P	P	11 06 26.6	-0.7
KSH				ePcP	PcP	11 06 57.8	-0.6
KSH				sP	sP	11 07 11.3	+8.1
KSH				ePP	PP	11 08 54.0	+1.3
KSH				S	S	11 14 56.3	-8.1
KSH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KSH				pmax	pmax		
	comp=Z,67nm,3.9s						
KSH				LR	LR		
	comp=N,880nm,14.8s						
KSH				LR	LR		
	comp=E,580nm,13.0s						
MKAR	Makanchi Array	66.77	331	P	P	11 06 34.7	-0.6
	comp=E,3.9nm,0.6s,baz=136,slow=7.6,SNR=49						
AAK	Ala-Archa	68.25	323	P	P	11 06 44.3	-0.5
	comp=E,2.4nm,0.5s,baz=197,slow=11,SNR=2.7						
PETK	Petropavlovsk-	68.73	21	P	P	11 06 47.2	-0.2
	comp=E,7.6nm,0.8s,baz=190,slow=7.3						
ZALV	Zalesovo Beam	70.94	337	P	P	11 06 58.9	-2.0
	comp=E,2.9nm,0.6s,baz=146,slow=6.9,SNR=5.1						
VNDA	Vanda	71.02	172	P	P	11 07 03.0	+1.9
	comp=E,0.4nm,0.5s,baz=326,slow=7.1,SNR=6.7						
VNDA				LR	LR	11 36 54.7	
	comp=E,19nm,19.1s,baz=248,slow=35						
KURBB	Kurchatov Arra	71.22	332	P	P	11 07 01.5	-1.1
	comp=E,1.4nm,0.4s,baz=144,slow=5.1,SNR=10						
KURK	Kurchatov	71.25	332	P	P	11 07 01.5	-1.3
SEY	Seymchan	75.43	13	P	P	11 07 26.3	-0.8
	comp=E,2.7nm,0.6s,baz=190,slow=3.8,SNR=11						
BVAR	Borovoye Array	76.65	330	P	P	11 07 32.2	-2.1
	comp=E,0.5nm,0.5s,baz=130,slow=6.6,SNR=2.7						
SYO	Syowa Base	79.11	201	⇓eX	P	11 07 50.0	+2.4
SYO	Syowa Base	79.11	201	⇓ePP	PP	11 10 39.2	-8.7
SNAA	Sanae	91.81	195	P	P	11 08 52.8	+1.8
	comp=E,1.1nm,0.7s,baz=159,slow=6.4,SNR=8.0						
NVAR	Mina Array Bea	117.90	51	PKP	PKPdf	11 14 28.9	-1.2
	comp=E,0.3nm,0.7s,baz=251,slow=3.6,SNR=3.4						
TORD	Torodi Ar. Bea	122.74	280	PKP	PKPdf	11 14 39.6	-0.1
	comp=E,0.4nm,0.5s,baz=102,slow=1.9						
PDAR	Pinedale Array	123.19	45	PKP	PKPdf	11 14 40.5	+0.4
	comp=E,0.2nm,0.7s,baz=270,slow=1.5,SNR=3.6						
ANMO	Albuquerque	127.97	53	PKP	PKPdf	11 14 50.0	+0.5
	comp=E,0.9nm,0.8s,baz=263,slow=12,SNR=4.0						
ANMO	Albuquerque	127.97	53	PKP	PKPdf	11 14 50.0	+0.5
TXAR	Lajitas Array	131.77	59	PKP	PKPdf	11 14 56.8	0.0
	comp=E,0.2nm,0.6s,baz=313,slow=1.2,SNR=4.1						
CPUP	Villa Florida	144.55	179	PKP	PKPdf	11 15 21.1	+1.0
	comp=E,3.1nm,0.8s,baz=160,slow=0.8,SNR=4.9						
LPAZ	La Paz	152.13	156	PKPbc	PKPbc	11 15 43.8	+3.6
	comp=E,0.5nm,0.5s,baz=153,slow=4.5,SNR=2.7						
LPAZ				PKPab	PKPab	11 15 52.4	+2.6
	comp=E,1.9nm,0.5s,baz=163,slow=7.7,SNR=9.9						

NNC 18 11:03:07.6±2.3**, 37°.80N**×**72°.14E, h209**^{km}±21^{km}**, mb2.4, mpv3.5, 8C-5D, Error ellipse: s-maj=25.7km s-min=19.6km az=69.0, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	2.45	25	⇑P	Pn	11 03 51.5	-0.2
	3.7nm,0.4s						
SFK				⇑S	S	11 04 26.7	+0.8
	22nm,0.3s						
MNAS	Manas	4.69	3	⇓P	Pn	11 04 19.1	+0.7
	11nm,0.5s						
MNAS				⇓S	S	11 05 15.5	+1.6
	8.9nm,0.6s						
AAK	Ala-Archa	5.15	20	⇑P	Pn	11 04 25.1	+0.8
	6.5nm,0.8s						
AAK				⇓S	S	11 05 26.9	+2.3
	7.6nm,0.8s						
KK31	Karatay Array	5.44	347	⇑P	Pn	11 04 28.3	+0.6
	3.5nm,0.5s,baz=163,slow=11,SNR=27						
KK31				⇑S	S	11 05 31.5	+0.6
	4.1nm,0.5s,baz=174,slow=21,SNR=8.7						
TKM2	Tokmak 2	5.75	26	⇑P	Pn	11 04 31.8	-0.1
	2.7nm,0.6s						
TKM2				⇓S	S	11 05 37.1	-1.4
	1.6nm,0.5s						
AB31	Akbulak array	14.44	326	⇑P	P	11 06 23.2	-0.4
	0.8nm,0.7s,baz=132,slow=13,SNR=8.1						
AB31				⇓S	S	11 08 58.0	-4.4
	0.5nm,0.5s						
AKTO	Aktyubinsk	16.16	326	⇑P	P	11 06 41.5	-0.9
	0.3nm,0.3s						

WAR ***18*** *11:10:33.9, 50°.36N×18°.92E, h1^{km}, Mw2.5*

ISC 18 11:10:33.0±1.9**, 50°.41N**±0°.09×**18°.89E**±0°.03**, h6**^{km}±9^{km}**, n11, σ0^{s}.88**/20**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHZP	Chorzow	0.14	150	ePg	Pg	11 10 35.8	0.0
CHZP				eSg	Sg	11 10 37.3	-0.4
CHZP	Chorzow	0.14	150	ePg	Pg	11 10 35.8	0.0
CHZP				eSg	Sg	11 10 37.3	-0.4
OJC	Ojcow	0.62	108	ePg	Pg	11 10 44.9	+0.1
OJC				eSg	Sb	11 10 53.8	-1.3
OJC	Ojcow	0.62	108	ePg	Pg	11 10 44.9	+0.1
OJC				eSg	Sb	11 10 53.8	-1.3
MORC	Moravsky Berou	1.07	234	ePG	Pg	11 10 53.5	-0.1
MORC				eSG	Sg	11 11 07.2	-0.3
LANS	Liptovska Anna	1.32	163	ePG	Pb	11 10 57.9	-0.3
LANS				eSG	Sb	11 11 14.4	-0.9
NIE	Niedzica	1.35	137	ePg	Pg	11 10 59.2	+0.3
NIE				eSg	Sg	11 11 18.1	+1.8
NIE	Niedzica	1.35	137	ePg	Pg	11 10 59.2	+0.3
NIE				eSg	Sg	11 11 18.1	+1.8
VRAC	Vranov	1.85	234	ePN	Pn	11 11 06.1	+0.8
VRAC				eSG	Sb	11 11 30.7	+0.1
VYHS	Vyhne	1.92	181	eSN	Sn	11 11 30.1	-0.6
VYHS				eLG	Lg	11 11 32.6	
KRUC	Moravsky	2.10	231	eSG	Sb	11 11 37.4	-0.6

NIED ***18*** *11:14:00, 37°.20N×141°.40E, h53^{km}, Mw3.9 Best double couple: $M_0$8.95000×10^{14} NP1:ϕ_s218.00000°, δ20.00000°, λ116.00000°. NP2:ϕ_s11.00000°, δ72.00000°, λ81.00000°.*

IDC ***18*** *11:14:35.4±0.8, 37°.18N×141°.67E, h0^{km}, mb3.7/12, mb1 3.9/16, mb1mx3.7/67, mbtmp3.8/16, ML3.7/3, MS2.6/4, Ms1 2.6/4, ms1mx2.4/62, Error ellipse: s-maj=18.6km s-min=15.6km az=93.0*

ISCJB ***18*** *11:14:39.5±0.9, 37°.11N±0°.04×141°.59E±0°.07, h42^{km}±8^{km}, mb3.7/12, Error ellipse: s-maj=9.8km s-min=6.1km az=10.0*

JMA ***18*** *11:14:42.4±0.1, 37°.19N×141°.38E, h48^{km}±1^{km}, M3.9*

JMA Felt II J1.

ISC 18 11:14:39.5±1.5**, 37°.10N**±0°.04×**141°.61E**±0°.06**, h28**^{km}±11^{km}**, n34, σ1^{s}.68**/37**, mb3.7**/12**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	0.64	294	P	Pb	11 14 52.6	+0.3
JFK				S	Sb	11 14 59.5	-1.4
ONAJ	Iwakimizuishiy	0.65	270	P	Pb	11 14 53.1	+0.7
ONAJ				S	Sb	11 15 00.5	-0.6
JFFD	Fukushimafurud	0.84	270	P	Pn	11 14 55.5	0.0
JFFD				S	Sn	11 15 04.6	-2.2
JHO	Hitachi	0.97	240	P	Pn	11 14 57.7	+0.5
JMM	Marumori	1.00	320	P	Pn	11 14 57.5	-0.2
JMM				S	Sn	11 15 08.4	-2.5
JFT	Otama	1.10	293	P	Pn	11 14 59.4	+0.4
JFT				S	Sn	11 15 11.3	-1.9
JIO	Ouri	1.36	351	P	Pb	11 15 03.3	-1.1
MJAR	Matsushiro Arr	2.78	259	Pn	Pn	11 15 23.6	+1.4
	10nm,0.3s,baz=60,slow=14,SNR=62						
MJAR				Sn	Sb	11 15 59.3	-2.9
	8.3nm,0.3s,baz=56,slow=13,SNR=6.1						
MJAR				LR	LR	11 16 44.6	
	comp=Z,235nm,20.3s,baz=75,slow=46						
MAT	Matsushiro	2.79	259	P	Pn	11 15 24.0	+1.7
MAT				S	Sn	11 15 54.9	0.0
JHJ	Hachijo jima 2	4.25	201	Pn	Pn	11 15 42.8	+0.5
	19nm,0.3s,baz=341,slow=20,SNR=16						
JHJ				Sn	Sn	11 16 31.3	+0.3
	31nm,0.3s,baz=13,slow=19,SNR=4.2						
ASAJ	Asahikawa	7.05	6	Pn	Pn	11 16 20.1	-0.7
	1.0nm,0.3s,baz=201,slow=14,SNR=12						
ASAJ				Sn	Sn	11 17 40.9	+1.0
	0.6nm,0.3s,baz=90,slow=20,SNR=2.5						
JNU	Nakatsue	9.64	249	LR	LR	11 21 16.9	
	comp=Z,46nm,20.0s,baz=125,slow=41						
JCJ	Chichijima	9.99	177	Pn	Pn	11 17 00.8	-0.4
	baz=354,slow=18						
JCJ				Sn	Sn	11 18 47.5	-4.8
	baz=11,slow=16						
USRK	Ussuriysk Ar.	10.18	317	Pn	Pn	11 17 07.8	+4.2
	baz=130,slow=13						
USRK				LR	LR	11 20 31.4	
	comp=Z,45nm,22.0s,baz=21,slow=35						
KSRS	Korea Array	10.91	276	Pn	Pn	11 17 17.1	+3.4
	0.2nm,0.3s,baz=86,slow=14,SNR=5.2						
KLR	Kul'dur	14.08	333	Pn	Pn	11 17 58.8	+1.9
	0.0nm,0.3s,baz=164,slow=16,SNR=2.9						
KLR				LR	LR	11 22 36.0	
	comp=Z,4.9nm,18.5s,baz=182,slow=34						
SONM	Songino Array	27.88	304	P	P	11 20 26.5	-0.4
	1.2nm,0.6s,baz=100,slow=9.1,SNR=7.8						
H11N2	WAKE ISLAND Hy	28.05	121	T	T	11 50 04.9	
	baz=314,slow=75,SNR=124						
H11N1	WAKE ISLAND Hy	28.06	121	T	T	11 50 06.6	
	baz=314,slow=75,SNR=136						
H11N3	WAKE ISLAND Hy	28.07	121	T	T	11 50 05.5	
	baz=314,slow=75,SNR=117						
H11S1	WAKE ISLAND Hy	28.77	123	T	T	11 51 01.6	
	baz=316,slow=76,SNR=75						
H11S3	WAKE ISLAND Hy	28.77	123	T	T	11 51 01.1	
	baz=316,slow=76,SNR=47						
H11S2	WAKE ISLAND Hy	28.78	123	T	T	11 51 01.6	
	baz=316,slow=76,SNR=49						
ZALV	Zalesovo Beam	41.98	312	P	P	11 22 28.1	+0.3
	3.2nm,0.6s,baz=96,slow=7.9,SNR=4.7						
MKAR	Makanchi Array	44.21	302	P	P	11 22 46.0	-0.1
	0.8nm,0.6s,baz=86,slow=10,SNR=9.6						
KURBB	Kurchatov Arra	46.08	308	P	P	11 23 00.2	-0.5
	2.6nm,0.5s,baz=82,slow=7.6,SNR=29						
ILAR	Eielson Array	49.35	32	P	P	11 23 26.6	+0.6
	0.2nm,0.6s,baz=277,slow=5.7,SNR=4.8						
BVAR	Borovoye Array	50.64	312	P	P	11 23 35.1	-0.8
	0.8nm,0.5s,baz=130,slow=5.8,SNR=4.5						
WRA	Warramunga Arr	57.15	188	P	P	11 24 24.8	+1.1
	0.5nm,0.4s,baz=6.4,slow=7.1,SNR=22						
AKTO	Aktyubinsk	58.74	312	P	P	11 24 34.5	-0.2
	0.6nm,0.5s,baz=112,slow=5.4,SNR=3.5						
ASAR	Alice Springs	60.88	188	P	P	11 24 49.7	+0.1
	0.3nm,0.7s,baz=360,slow=6.2,SNR=4.1						
NVAR	Mina Array Bea	74.82	53	P	P	11 26 17.2	-0.4
	0.1nm,0.3s,baz=310,slow=4.5,SNR=2.2						
PDAR	Pinedale Array	77.51	46	P	P	11 26 32.3	-0.6
	0.1nm,0.5s,baz=293,slow=5.8,SNR=2.2						
TXAR	Lajitas Array	89.96	52	P	P	11 27 36.7	+0.2
	0.2nm,0.9s,baz=270,slow=3.2,SNR=2.5						

ISCJB ***18*** *11:17:50.8±0.9, 33°.39N±0°.04×140°.89E±0°.10, h69^{km}±11^{km}, mb3.5/2, Error ellipse: s-maj=13.8km s-min=6.9km az=0.5*

JMA ***18*** *11:17:51.5±0.1, 33°.47N×140°.91E, h41^{km}, M3.2*

*IDC **18** 11:17:56.8±0.8, 33°.19N×139°.77E, h91^{km}±5^{km}, mb3.1/2, mb1 3.3/3, mb1mx2.9/63, mbtmp3.3/3, Error ellipse: s-maj=10.5km s-min=3.9km az=154.0*

ISC 18 11:17:51.3±1.8, **33°.38N**±0°.05×**140°.9E**±0°.1, **h51**^{km}±21^{km}, **n15, σ0^{s}.98**/24, **Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHJ2	Mitsune	0.98	254	P	Pn	11 18 09.1	+0.3
JHJ2				eS	Sn	11 18 21.9	+0.2
JHJ	Hachijo jima 2	1.01	255	P	Pn	11 18 09.3	+0.2
	162nm,0.3s,baz=334,slow=21,SNR=43						
JHJ				S	Sn	11 18 20.7	-1.6
	56nm,0.3s,baz=27,slow=24,SNR=7.0						
JHCJ	Hachijojimakas	1.01	252	P	Pn	11 18 09.3	+0.1
JHCJ				eS	Sn	11 18 22.7	+0.3
JMKN	Mikurajimanish	1.24	295	P	Pn	11 18 11.7	-0.5
JMKN				S	Sn	11 18 27.5	-0.4
BSO1	Boso 1	1.27	1	P	Pn	11 18 12.2	+0.1
JAOM	Aogashimamukai	1.35	228	P	Pn	11 18 15.1	+1.3
BSO3	Boso 3	1.46	346	P	Pn	11 18 14.7	-0.3
BSO4	Boso 4	1.68	343	P	Pn	11 18 18.6	+0.4
JKO	Kozu shima	1.71	299	P	Pn	11 18 18.9	+0.3
JKO				eS	Sn	11 18 39.2	0.0
JTHY	Toshimahigashi	1.79	310	P	Pn	11 18 20.0	+0.3
JTHY				eS	Sn	11 18 41.5	+0.3
JOD2	Odawara 2	2.42	321	P	Pn	11 18 28.4	-0.1
JOD2				eS	Sn	11 18 55.6	-1.3
MJAR	Matsushiro Arr	3.87	325	P	Pn	11 18 50.0	+1.7
	1.1nm,0.3s,baz=156,slow=12,SNR=12						
MJAR				S	Sn	11 19 31.9	-0.6
	0.2nm,0.3s,baz=141,slow=15,SNR=2.7						
MAT	Matsushiro	3.87	325	P	Pn	11 18 50.3	+2.0
MAT				S	Sn	11 19 34.1	+1.6
WRA	Warramunga Arr	53.40	188	P	P	11 27 06.1	+0.2
	0.3nm,0.4s,baz=7.0,slow=7.6,SNR=8.9						
ASAR	Alice Springs	57.13	188	P	P	11 27 31.3	-1.4
	0.2nm,0.7s,baz=5.9,slow=6.6,SNR=4.5						

IDC 18 11:25:09.4±3.4, **31°.21S**×**59°.41E**, **h0**^{km}, **mb3.9**/3, **mb1 4.2**/4, **mb1mx3.6**/66, **mbtmp3.9**/4, **ML4.0**/1, **MS3.4**/13, **Ms1 3.4**/13, **ms1mx3.1**/57, **Error ellipse: s-maj=106.0km s-min=40.2km az=43.0, Southwest Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OPO	Ambohidratompo	16.76	316	Pn	Pn	11 29 05.8	0.0
	0.5nm,0.3s,baz=112,slow=19,SNR=4.0						
OPO				Sn	Sn	11 31 55.0	-18
	0.4nm,0.3s,baz=351,slow=13,SNR=4.1						
OPO				LR	LR	11 34 06.4	
	comp=Z,127nm,21.8s,baz=171,slow=32						
H08S1	Diego Carcia H	26.43	30	T	T	11 57 58.4	
	baz=207						
H08S2	Diego Garcia H	26.44	30	T	T	11 57 51.4	
	baz=207						
H08S3	Diego Garcia H	26.45	30	T	T	11 58 00.7	
	baz=207						
H08N3	Diego Garcia H	27.01	26	T	T	11 58 28.1	
	baz=213,slow=76,SNR=7.3						
H08N1	Diego Carcia H	27.02	26	T	T	11 58 28.3	
	baz=213						
H08N2	Diego Garcia H	27.04	26	T	T	11 58 30.0	
	baz=213,slow=76,SNR=9.0						
SUR	Sutherland	32.71	258	LR	LR	11 42 45.8	
	comp=Z,65nm,18.5s,baz=109,slow=32						
MAW	Mawson	36.48	178	LR	LR	11 43 40.3	
	comp=Z,95nm,19.7s,baz=60,slow=30						
ATD	Arta Tunnel	45.37	337	LR	LR	11 48 56.7	
	comp=Z,49nm,21.9s,baz=38,slow=32						
SNAA	Sanae	52.02	201	LR	LR	11 51 53.6	
	comp=Z,46nm,20.2s,baz=350,slow=31						
CMAR	Chiang Mai Arr	62.29	43	P	P	11 35 33.5	-0.1
	1.0nm,0.4s,baz=230,slow=6.7,SNR=3.9						
CMAR				LR	LR	11 59 01.4	
	comp=Z,25nm,19.2s,baz=195,slow=33						
ASAR	Alice Springs	65.43	104	P	P	11 35 54.1	-0.3
	0.5nm,0.9s,baz=242,slow=5.9,SNR=3.3						
WRA	Warramunga Arr	67.39	100	P	P	11 36 07.3	+0.3
	2.0nm,1.1s,baz=241,slow=5.7,SNR=5.1						
GEYT	Alibeck	68.79	359	LR	LR	12 04 28.0	
	comp=Z,16nm,18.1s,baz=200,slow=34						
GNI	Garni	72.29	348	LR	LR	12 05 28.6	
	comp=Z,25nm,21.4s,baz=155,slow=34						
IDI	Anoyia	73.68	331	LR	LR	12 09 56.2	
	comp=Z,18nm,18.2s,baz=124,slow=36						
BRTR	Keskin Array B	74.53	340	LR	LR	12 07 33.7	
	comp=Z,13nm,18.5s,baz=133,slow=34						
KOWA	Kowa	75.94	297	LR	LR	12 10 12.7	
	comp=Z,39nm,18.4s,baz=211,slow=36						
KBZ	Khabaz	76.09	348	LR	LR	12 09 20.6	
	comp=Z,26nm,20.0s,baz=188,slow=35						
AKTO	Aktyubinsk	81.30	359	LR	LR	12 09 57.2	
	comp=Z,15nm,21.3s,baz=169,slow=33						

*ISCJB **18** 11:58:34.0±0.3, 32°.16N±0°.02×115°.22W±0°.02, h22^{km}±3^{km}, Error ellipse: s-maj=3.2km s-min=2.7km az=23.1*
*NEIC **18** 11:58:35.1±0.0, 32°.15N×115°.24W, h9^{km}, MD3.8(ECX), MD3.8(MEX), ML3.7(PAS), After ECX.*
*ECX **18** 11:58:35.1±0.5, 32°.15N×115°.24W, h9^{km}, MD3.6, ML3.8*
*MEX **18** 11:58:36.1±0.5, 32°.22N×115°.15W, h17^{km}±68^{km}, MD3.8*
ISC 18 11:58:34.0±1.0, **32°.17N**±0°.02×**115°.23W**±0°.02, **h19**^{km}±2^{km}, **n77, σ2^{s}.15**/101, **2C-6D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MBIG	Mexicali	0.24	6	⇓iP	Pg	11 58 40.3	+0.6
MBIG	Mexicali	0.24	6	eP	Pg	11 58 40.2	+0.5
MBIG				eS	Sb	11 58 42.6	-0.5
CPBX	Cerro Prieto	0.26	345	⇓eP	Pg	11 58 40.3	+0.3
CPBX				eS	Sg	11 58 44.7	+0.6
CPBX				IAML		11 58 45.5	
	comp=N,42μm,0.3s						
CPBX				e		11 58 45.5	
ERPC	Ernies Place	0.68	327	⇑iP	Pb	11 58 47.4	+0.1
YMD	Yuma Desert	0.69	56	⇑iP	Pb	11 58 47.1	-0.4
ECBX	El Chinero	0.71	168	eP	Pb	11 58 47.1	-0.7
ECBX				eS	Sg	11 58 57.0	-0.5
YUH	Yuha Desert	0.76	309	⇓iP	Pb	11 58 48.3	-0.3
COK	Cook Ranch	0.80	328	⇓iP	Pb	11 58 48.9	-0.4
IKP	In-Ko-Pah, Jac	0.89	303	P	Pb	11 58 50.5	-0.4
	baz=124,SNR=470						
IKP				S	Sb	11 59 02.7	+0.3
	baz=124						
SWSC	Sam W. Stewart	0.91	328	P	Pb	11 58 50.1	-1.2
	baz=149,SNR=106						
SWSC				S	Sb	11 59 02.0	-1.0
	baz=149						
GLA	Glamis	0.94	21	P	Pb	11 58 50.7	-1.1
	baz=201,SNR=144						
GLA				S	Sb	11 59 02.3	-1.6
	baz=201						
GLA	Glamis	0.94	21	ePn	Pb	11 58 51.0	-0.8
GLA				eSg	Sb	11 59 03.1	-0.8
SPIG	San Pedro Mart	1.14	190	eP	Pn	11 58 54.8	-0.5
SPIG				eS	Sb	11 59 09.7	-0.1
SPIG	San Pedro Mart	1.14	190	eP	Pn	11 58 54.7	-0.5
SPIG				eS	Sb	11 59 09.4	-0.4
SPIG	San Pedro Mart	1.14	190	ePn	Pn	11 58 54.7	-0.5
SPIG				eSn	Sb	11 59 09.4	-0.4
SPX	San Pedro Mart	1.14	190	⇓eP	Pn	11 58 54.7	-0.6
SPX	San Pedro Mart	1.14	190	ePn	Pn	11 58 54.6	-0.6
SPX				eSn	Sb	11 59 08.8	-1.0
CBX	Cerro Bola	1.23	277	⇓eP	Pn	11 58 56.1	-0.2
CBX				eS	Sn	11 59 12.7	+0.3
CBX	Cerro Bola	1.23	277	eP	Pn	11 58 56.0	-0.2
CBX				eS	Sb	11 59 11.3	-0.9
CBX	Cerro Bola	1.23	277	ePn	Pn	11 58 56.0	-0.2
CBX				eSn	Sb	11 59 11.3	-0.9
MONP2	Monument Peak	1.24	306	P	Pn	11 58 55.7	-0.8
	baz=126,SNR=261						
MONP2				S	Sb	11 59 12.8	+0.1
	baz=126						
TJIG	Tijuana	1.25	283	eP	Pn	11 58 56.2	-0.4
TJIG				eS	Sb	11 59 10.8	-2.1
BAR	Barrett	1.33	293	ePn	Pn	11 58 57.6	+0.1
BAR				eSn	Sb	11 59 15.2	+0.3
BC3	Big Chuckawall	1.50	353	P	Pn	11 58 59.0	-1.0
	baz=173,SNR=135						
BC3				S	Sn	11 59 17.7	-1.3
	baz=173						
Y12C	Blythe	1.68	20	P	Pn	11 59 01.5	-0.9
	baz=201,SNR=39						
Y12C				S	Sn	11 59 21.8	-1.8
	baz=201						
Y12C	Blythe	1.68	20	ePn	Pn	11 59 03.4	+0.9
109C	Camp Elliot, M	1.74	295	P	Pn	11 59 03.3	0.0
	baz=115,SNR=61						
109C				S	Sn	11 59 25.2	+0.2
	baz=115						
CPE	Camp Elliot	1.74	295	ePn	Pn	11 59 03.7	+0.5
CPE				eSn	Sn	11 59 25.5	+0.5
FRD	Ford Ranch, An	1.76	319	P	Pn	11 59 02.8	-0.8
	baz=139,SNR=119						
FRD				S	Sn	11 59 24.4	-1.1
	baz=139						
XPFO	Piæon Flat	1.77	325	ePn	Pn	11 59 03.0	-0.8
PFO	Pinyon Flats O	1.77	325	P	Pn	11 59 02.8	-1.0
	baz=145,SNR=77						
PFO	Pinyon Flats O	1.77	325	ePn	Pn	11 59 03.0	-0.8
PFO				eSn	Sb	11 59 27.4	-0.6
BELC	Belle Mtn. Jos	1.94	341	P	Pn	11 59 05.0	-1.1
	baz=161,SNR=38						
IRM	Iron Mountain	1.98	2	P	Pn	11 59 05.8	-0.8
	baz=182,SNR=48						
IRM				Sb	Sb	11 59 33.1	-0.8
	baz=182						
214A	Organ Pipe Nat	2.06	95	P	Pn	11 59 06.4	-1.3
	baz=276,SNR=151						
214A				S	Sn	11 59 32.5	-0.4
	baz=276						
PDMCI	Parker Dam,Lak	2.31	23	S	Sn	11 59 37.1	-1.9
	baz=203						
GMRC	Granite Mounta	2.63	352	P	Pn	11 59 15.0	-0.7
	baz=172						
LDFC	Landfair	2.90	2	ePn	Pn	11 59 22.2	+2.8
SCI2	San Clemente I	2.92	287	S	Sn	11 59 55.0	+1.1
	baz=106						
CIS	Catalina Islan	2.96	295	Sb	Sb	12 00 03.6	+1.7
	baz=114						
FMP	Fort Macarthur	3.00	302	Sb	Sb	12 00 05.7	+2.5
	baz=121						
DECC	Green Verdugo	3.33	309	Sb	Sb	12 00 14.7	+2.0
	baz=128						
EDW2	Edwards Air Fo	3.56	320	Sb	Sb	12 00 22.1	+2.8
	baz=139						
BLG	Laguna Peak, P	3.76	302	Sb	Sb	12 00 23.8	-1.1
	baz=120						
TUC	Tucson	3.77	87	S	Sn	12 00 13.8	-1.2
	baz=269						
TUC	Tucson	3.77	87	ePn	Pn	11 59 29.9	-1.2
OSI	Osito Audit: C	3.81	311	Sb	Sb	12 00 28.5	+2.1
	baz=129						
SCZ2	Santa Cruz Isl	4.13	297	Sb	Sb	12 00 41.0	+5.5
	baz=115						
ARVC	Arvin	4.21	315	Sb	Sb	12 00 40.3	+2.3
	baz=134						
SHPR	Sheep Range	4.33	1	ePn	Pn	11 59 40.6	+1.6
WUAZ	Wupatki	4.63	43	ePn	Pn	11 59 45.1	+2.0
LCMT	Little Creek M	5.10	18	ePn	Pn	11 59 51.5	+1.9
W18A	Petrified Fore	5.44	56	ePn	Pn	11 59 56.2	+2.0
CCUT	Cedar City	5.58	15	ePn	Pn	11 59 58.7	+2.4
SZCU	Shurtz Canyon	5.69	17	ePn	Pn	11 59 59.8	+2.0
PKCU	Pink Cliffs	5.78	24	ePn	Pn	12 00 01.7	+2.6
R11A	Troy Canyon, C	6.17	357	ePn	Pn	12 00 04.9	+0.6
LRV	Little Rabbit	6.40	313	ePn	Pn	12 00 10.0	+2.6
LRV				eSg	Sg	12 01 54.5	-5.0
SCKWR	San Luis Creek	6.94	318	ePn	Pn	12 00 15.8	+1.1
SCKWR				ePg	Pb	12 00 35.1	+1.1
SCKWR				eSg	Sg	12 02 08.5	-8.2
LAZ	Ladron	7.13	70	ePn	Pn	12 00 19.2	+1.7
BNM	Barren Site	7.47	72	ePn	Pn	12 00 23.9	+1.7
ANMO	Albuquerque	7.83	67	ePn	Pn	12 00 30.4	+3.4
PV13	Radium Mtn., P	7.95	39	ePn	Pn	12 00 33.2	+4.5
PV17	East Wray Mesa	7.96	38	ePn	Pn	12 00 33.5	+4.6
PV18	Skein Mesa, Pa	7.97	39	ePn	Pn	12 00 33.6	+4.6
PV10	Paradox Valley	8.00	38	ePn	Pn	12 00 33.6	+4.2
PV14	Lion Creek, Pa	8.00	38	ePn	Pn	12 00 34.5	+5.0
PV03	Paradox Valley	8.00	39	ePn	Pn	12 00 33.6	+4.1
PV16	Nyswonger Mesa	8.01	38	ePn	Pn	12 00 34.2	+4.6
PV11	David Mesa, Pa	8.02	39	ePn	Pn	12 00 34.6	+4.8
PV02	Paradox Valley	8.03	40	ePn	Pn	12 00 34.3	+4.5
PV12	Saucer Basin,	8.07	39	ePn	Pn	12 00 34.8	+4.3
PV21	Cone Mtn., Par	8.17	37	ePn	Pn	12 00 36.9	+5.1
PV22	Blue Mesa, Par	8.24	38	ePn	Pn	12 00 37.6	+4.8
MNTX	Cornudas Mount	8.38	91	ePn	Pn	12 00 35.0	+0.6
SMCO	Snowmass	9.69	42	ePn	Pn	12 00 57.0	+4.2
TX31	Lajitas Ar. Si	10.34	103	ePn	Pn	12 01 03.9	+2.5

DJA 18 12:10:20.8±0.5, **1°S**±2°×**12°0E**±°, **h11**^{km}±4^{km}, **M3.6**/11, **MLv3.6**/11, **Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCI	Palu	0.28	316	P	Pb	12 10 27.7	-0.2
MPSI	Mapaga	1.44	355	P	Pn	12 10 46.1	-0.8
MPSI				S	Sb	12 11 06.7	+0.6
APSI	Ampana	1.63	83	P	Pn	12 10 48.9	-0.6
APSI				S	Sb	12 11 11.5	0.0
TTSI	Tana Toraja	1.93	186	P	Pn	12 10 53.9	+0.3
TTSI				S	Sn	12 11 19.1	+1.1
MRSI	Marisa	2.48	50	P	Pn	12 11 01.8	+0.7
MRSI				S	Sn	12 11 32.2	+0.8
LUWI	Luwuk	2.74	89	P	Pn	12 11 04.7	-0.1
LUWI				S	Sn	12 11 39.1	+1.2
SPSI	Sidrap Palu	2.85	185	P	Pn	12 11 06.1	-0.1
SPSI				S	Sn	12 11 41.3	+0.8
KDI	Kendari	3.83	138	P	Pn	12 11 19.0	-0.8
BKSI	Bulukumba	4.18	179	P	Pn	12 11 25.2	+0.6
KMSI	Cibinong	4.29	67	P	Pn	12 11 26.2	+0.1

MEX 18 12:10:21.9±0.4, **16°.00N**×**96°.69W**, **h16**^{km}±6^{km}, **MD3.7, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HUIG	Huatulco	0.61	112	eP	Pg	12 10 31.9	-2.0
HUIG				eS	Sg	12 10 39.2	-2.9
VHO	Vista Hermosa	1.07	358	eP	Pb	12 10 38.5	-3.6
VHO				eS	Sb	12 10 51.2	-4.7
PNIG	Pinotepa	1.43	286	eP	Pn	12 10 43.6	-3.7
PNIG				eS	Sn	12 11 00.5	-5.3
TLIG	Tlapa	2.37	311	i P	Pn	12 10 56.6	-3.7
TLIG				i S	Sn	12 11 25.7	-3.5

IDC 18 12:20:17.1±3.0, **55°.24S**×**147°.69E**, **h0**^{km}, **mb3.5**/4, **mb1 3.7**/4, **mb1mx3.5**/36, **mbtmp3.5**/4, **Error ellipse: s-maj=266.9km s-min=22.9km az=77.0, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	Vanda	22.94	172	P	P	12 25 23.0	+0.7
	0.8nm,0.9s,baz=335,slow=12,SNR=2.1						
H01W1	Cape Leeuwin H	30.77	297	T	T	12 58 21.3	
	baz=142,slow=76,SNR=24						
H01W2	Cape Leeuwin H	30.77	297	T	T	12 58 25.8	
	baz=142,slow=76,SNR=30						
H01W3	Cape Leeuwin H	30.79	297	T	T	12 58 26.6	
	baz=142,slow=76,SNR=24						
ASAR	Alice Springs	33.15	336	P	P	12 26 55.8	+0.7
	0.3nm,0.8s,baz=160,slow=8.9,SNR=2.6						
QSPA	South Pole Qui	34.87	180	P	P	12 27 09.2	-0.5
	1.9nm,0.8s,baz=344,slow=11,SNR=4.9						
WRA	Warramunga Arr	36.66	339	P	P	12 27 24.5	-0.7
	0.5nm,0.9s,baz=166,slow=7.3,SNR=4.0						
H08S2	Diego Garcia H	75.32	278	T	T	13 53 53.1	
	baz=139,slow=76						
H08S1	Diego Carcia H	75.33	278	T	T	13 53 54.6	
	baz=139						
H08S3	Diego Garcia H	75.34	278	T	T	13 53 54.1	
	baz=139,slow=76						

*ISCJB **18** 12:20:41.6±0.6, 32°.12N±0°.02×115°.20W±0°.02, h5^{km}±4^{km}, Error ellipse: s-maj=3.9km s-min=3.2km az=24.1*
*NEIC **18** 12:20:44.8±0.0, 32°.16N×115°.25W, h6^{km}, MD3.5(ECX), MD3.8(MEX), ML3.4(PAS), After ECX.*
*ECX **18** 12:20:44.8±0.6, 32°.16N×115°.25W, h6^{km}, MD3.3, ML3.5*
*MEX **18** 12:20:46.3±0.5, 32°.25N×115°.20W, h16^{km}±6^{km}, MD3.8*
ISC 18 12:20:41.7±1.3, **32°.14N**±0°.03×**115°.31W**±0°.02, **h4**^{km}±10^{km}, **n66, σ1^{s}.33**/92, **3C-4D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPBX	Cerro Prieto	0.28	1	⇓eP	Pb	12 20 49.9	+0.6
CPBX				eS	Sb	12 20 53.8	-0.6
CPBX				IAML		12 20 56.3	
	comp=N,25μm,0.4s						
CPBX				⇑e		12 20 56.3	
MBIG	Mexicali	0.28	19	eP	Pb	12 20 49.8	+0.4
MBIG	Mexicali	0.28	19	eP	Pb	12 20 49.7	+0.3
MBIG				eS	Sg	12 20 52.0	+1.0
ERPC	Ernies Place	0.67	334	eP	Pb	12 20 57.0	+1.0
DREC	Desert Rsrch C	0.68	350	eP	Pb	12 20 56.9	+0.8
WESC	Westside Schoo	0.71	330	⇓iP	Pb	12 20 57.4	+0.7
YUH	Yuha Desert	0.73	315	⇓iP	Pb	12 20 57.8	+0.8
YMD	Yuma Desert	0.77	57	⇑iP	Pg	12 20 56.6	+0.1
COK	Cook Ranch	0.79	334	eP	Pn	12 20 59.0	-0.7
RMX	La Rumorosa	0.80	306	eP	Pb	12 20 58.6	+0.3
RMX				eS	Sb	12 21 09.0	-0.5
RMX				IAML		12 21 10.3	
	comp=N,2μm,0.3s						
IKP	In-Ko-Pah, Jac	0.85	307	P	Pn	12 21 00.0	-0.5
	baz=124,SNR=159						
IKP				S	Sn	12 21 12.3	-1.1
	baz=124						
IKP	In-Ko-Pah, Jac	0.85	307	⇓iP	Pn	12 21 00.0	-0.5
IKP				i S	Sn	12 21 12.3	-1.1
SWSC	Sam W. Stewart	0.91	333	P	Pb	12 20 59.6	-0.3
	baz=149,SNR=35						
SWSC				S	Sb	12 21 13.5	+1.1
	baz=149						
GLA	Glamis	1.00	24	P	Pg	12 21 00.3	-0.6
	baz=202,SNR=111						
GLA				S	Sg	12 21 12.1	-1.7
	baz=202						
GLA	Glamis	1.00	24	ePg	Pg	12 21 00.4	-0.5
GLA				eSg	Sg	12 21 12.5	-1.3
SPIG	San Pedro Mart	1.10	187	eP	Pn	12 21 05.5	+1.3
SPIG				eS	Sn	12 21 19.2	-0.7
SPIG	San Pedro Mart	1.10	187	ePn	Pn	12 21 05.5	+1.3
SPIG				eSn	Sn	12 21 19.2	-0.7
SPX	San Pedro Mart	1.10	187	eP	Pn	12 21 04.6	+0.5
SPX	San Pedro Mart	1.10	187	ePn	Pn	12 21 05.1	+1.0
SPX				eSn	Sn	12 21 19.2	-0.7
CBX	Cerro Bola	1.16	279	eP	Pn	12 21 05.6	+0.7
CBX				eS	Sn	12 21 22.1	+0.9
CBX				IAML		12 21 24.9	
	comp=E,2μm,0.5s						
CBX				⇑e		12 21 24.9	
CBX	Cerro Bola	1.16	279	eP	Pn	12 21 05.4	+0.6
CBX				eS	Sb	12 21 20.0	+0.2
CBX	Cerro Bola	1.16	279	ePn	Pn	12 21 05.4	+0.6
CBX				eSn	Sb	12 21 20.0	+0.2
TJIG	Tijuana	1.19	285	eP	Pn	12 21 05.6	+0.5
TJIG				i S	Sb	12 21 20.3	-0.4
MONP2	Monument Peak	1.20	309	P	Pb	12 21 05.3	+0.1
	baz=126,SNR=96						
MONP2				S	Sn	12 21 22.5	+0.1
	baz=126						
BAR	Barrett	1.27	296	ePn	Pn	12 21 06.8	+0.5
BAR				eSg	Sn	12 21 24.8	+1.0
BC3	Big Chuckawall	1.52	355	P	Pn	12 21 08.4	-1.3
	baz=173,SNR=92						
109C	Camp Elliot, M	1.69	297	P	Pb	12 21 12.7	-0.7
	baz=114,SNR=32						
109C				S	Sb	12 21 34.9	-0.1
	baz=114						
CPE	Camp Elliot	1.69	297	ePn	Pb	12 21 12.9	-0.5
FRD	Ford Ranch, An	1.74	322	P	Pn	12 21 12.3	-0.5
	baz=139,SNR=53						
FRD				Sb	Sg	12 21 38.5	+0.9
	baz=139						
Y12C	Blythe	1.74	22	Pg	Pb	12 21 14.6	+0.4
	baz=201						
Y12C				S	Sn	12 21 33.7	-1.6
	baz=201						
Y12C	Blythe	1.74	22	ePn	Pg	12 21 14.8	-0.3
Y12C				eSn	Sg	12 21 37.3	-0.3
XPFO	Piæon Flat	1.76	327	ePn	Pn	12 21 12.3	-0.7
PFO	Pinyon Flats O	1.76	327	P	Pn	12 21 12.4	-0.7
	baz=145,SNR=29						
PFO				Sb	Sg	12 21 39.1	+0.8
	baz=145						
PFO	Pinyon Flats O	1.76	327	ePn	Pn	12 21 12.3	-0.7
BELC	Belle Mtn. Jos	1.95	343	P	Pn	12 21 15.7	0.0
	baz=161,SNR=44						
IRM	Iron Mountain	2.02	4	P	Pn	12 21 15.8	-0.8
	baz=182,SNR=59						
214A	Organ Pipe Nat	2.13	94	P	Pn	12 21 15.7	-2.4
	baz=276,SNR=21						
MURC	Murrieta	2.15	313	P	Pn	12 21 18.3	-0.2
	baz=131						
MURC				Sb	Sg	12 21 51.5	+0.5
	baz=131						
PDMCI	Parker Dam,Lak	2.37	24	Sb	Sb	12 21 55.4	+0.8
	baz=204						
GMRC	Granite Mounta	2.66	354	P	Pn	12 21 24.6	-0.8
	baz=172						
SCI2	San Clemente I	2.86	288	Sb	Sg	12 22 13.1	-0.5
	baz=106						
BFSC	Mount Baldy Ra	2.88	317	Sb	Sg	12 22 12.7	-1.4
	baz=135						
CIS	Catalina Islan	2.90	297	P	Pn	12 21 29.2	+0.4
	baz=114,SNR=6.1						
CIS				Sb	Sg	12 22 13.3	-1.7
	baz=114						
LDFC	Landfair	2.94	3	ePn	Pn	12 21 30.0	+0.8
FMP	Fort Macarthur	2.96	303	Sb	Sg	12 22 15.2	-1.7
	baz=120						
MWC	Mount Wilson	3.10	313	ePn	Pn	12 21 31.5	-0.2
PASC	Pasadena Art C	3.15	311	ePn	Pn	12 21 33.6	+1.5
DECC	Green Verdugo	3.30	311	Sb	Sg	12 22 26.0	-1.7
	baz=128						
EDW2	Edwards Air Fo	3.54	321	Sb	Sg	12 22 33.0	-2.4
	baz=139						
OSI	Osito Audit: C	3.78	312	eSg	Sg	12 22 43.2	+0.2
TUC	Tucson	3.84	86	ePn	Pn	12 21 41.7	+0.1
SHPR	Sheep Range	4.36	2	ePn	Pn	12 21 50.1	+1.2
SHPR				ePg	Pg	12 22 04.7	-0.6
ISA	Isabella, Lake	4.39	324	Sb	Sg	12 22 58.4	-4.4
	baz=142						
ISA	Isabella, Lake	4.39	324	ePn	Pn	12 21 47.6	-1.6
WUAZ	Wupatki	4.70	43	P	Pn	12 21 53.9	+0.3
	baz=225,SNR=11						
WUAZ	Wupatki	4.70	43	ePn	Pn	12 21 54.6	+1.0
TPNV	Topopah Spring	4.86	351	ePg	Pg	12 22 18.6	+3.7
LCMT	Little Creek M	5.15	19	ePn	Pn	12 22 01.3	+1.5
W18A	Petrified Fore	5.52	56	P	Pn	12 22 04.8	0.0
	baz=239,SNR=7.0						
W18A	Petrified Fore	5.52	56	ePn	Pn	12 22 05.8	+1.0
SZCU	Shurtz Canyon	5.74	18	ePg	Pg	12 22 33.2	+1.4
PKCU	Pink Cliffs	5.84	24	ePg	Pg	12 22 36.3	+2.7
121A	Cookes Peak, D	6.38	84	P	Pn	12 22 15.3	-1.4
	baz=269,SNR=8.4						
MVCO	Mesa Verde	7.55	46	ePn	Pn	12 22 35.8	+3.0
PV12	Saucer Basin,	8.14	39	ePn	Pn	12 22 45.4	+4.5
PV12				ePg	Pg	12 23 14.8	-2.9
TX31	Lajitas Ar. Si	10.40	103	ePn	Pn	12 23 13.8	+2.1

GUC 18 12:21:23.7±0.3, **22°.80S**×**67°.42W**, **h245**^{km}±7^{km}, **ML3.5, 8C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	IPOC Station P	1.96	300	⇑iP	Pn	12 22 07.4	+1.7
PB09				i S	S	12 22 40.4	+1.8
PB06	IPOC Station P	1.99	272	⇑iP	Pn	12 22 07.2	+1.3
PB06				i S	S	12 22 40.8	+1.7
PB03	IPOC Station P	2.29	289	⇑iP	Pn	12 22 10.3	+1.6
PB03				i S	S	12 22 46.1	+2.0
PB03				IAML		12 22 46.5	
	comp=E,148nm,0.1s						
PB07	IPOC Station P	2.52	295	⇑iP	Pn	12 22 13.1	+2.0
PB07				i S	S	12 22 50.3	+1.9
PB07				IAML		12 22 50.8	
	comp=N,173nm,0.2s						
PB04	IPOC Station P	2.57	280	⇑iP	Pn	12 22 13.7	+2.2
PB04				i S	S	12 22 51.3	+2.2
PB04				IAML		12 22 55.8	
	comp=N,89nm,0.2s						
PB05	IPOC Station P	2.57	268	⇑iP	Pn	12 22 13.4	+2.0
PB05				i S	S	12 22 51.1	+2.1

PB05				IAML		12 22 56.8	
	comp=E,31nm,0.5s						
PB01	**IPOC Station P**	2.60	312	⇑iP	Pn	12 22 13.4	+1.6
PB01				iS	S	12 22 51.6	+1.9
PB10	**IPOC Station P**	2.97	256	⇑iP	Pn	12 22 17.7	+2.1
PB10				iS	S	12 22 58.6	+2.1

MAN 18 12:22:41.2,10°.31N×126°.53E,h25^{km},mb4.7,ML3.6, MS3.5,1D,Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BUTP	**Butuan**	1.61	214	eP	Pn	12 23 08.0	0.0
BUTP				eS	Sb	12 23 29.4	-0.8
MSLP	**Maasin**	1.66	264	eP	Pn	12 23 09.1	+0.4
MSLP				eS	Sn	12 23 29.3	+0.1
BESP	**Borongan**	1.67	320	eP	Pb	12 23 11.6	+0.3
PLP	**Palo**	1.75	299	⇓eP	Pn	12 23 10.4	+0.4
PLP				eS	Sn	12 23 32.2	+0.7
BUKP	**Musuan**	2.82	211	eP	Pn	12 23 25.1	+0.3
CNP	**Catarman**	2.85	320	eP	Pn	12 23 25.6	+0.4
CNP				eS	Sn	12 24 00.8	+2.1

GUC 18 12:36:20.6±0.6,23°.74S×67°.26W,h240^{km}±17^{km},ML3.9, 10C,Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB06	**IPOC Station P**	2.37	295	⇑iP	Pn	12 37 07.9	+1.9
PB06				iS	S	12 37 43.9	+2.3
GO02	**Mina Guanaco**	2.56	236	⇑iP	Pn	12 37 07.7	-0.4
GO02				iS	S	12 37 44.8	-0.5
PB09	**IPOC Station P**	2.67	316	⇑iP	Pn	12 37 11.3	+2.2
PB05	**IPOC Station P**	2.85	287	⇑iP	Pn	12 37 13.0	+2.0
PB05				iS	S	12 37 52.7	+2.0
PB03	**IPOC Station P**	2.85	306	⇑iP	Pn	12 37 13.1	+2.0
PB03				iS	S	12 37 53.1	+2.3
PB03				IAML		12 37 54.0	
	comp=E,155nm,0.3s						
PB04	**IPOC Station P**	3.01	297	⇑iP	Pn	12 37 14.9	+2.1
PB04				iS	S	12 37 56.4	+2.5
PB04				IAML		12 38 00.6	
	comp=E,140nm,0.2s						
PB10	**IPOC Station P**	3.03	274	⇑iP	Pn	12 37 14.8	+2.0
PB10				iS	S	12 37 56.7	+2.6
PB10				IAML		12 37 58.9	
	comp=N,84nm,0.3s						
PB07	**IPOC Station P**	3.15	309	⇑iP	Pn	12 37 16.4	+2.0
PB07				iS	S	12 37 59.0	+2.3
PB07				IAML		12 38 00.2	
	comp=N,134nm,0.2s						
PB01	**IPOC Station P**	3.39	322	⇑iP	Pn	12 37 18.7	+1.7
PB01				iS	S	12 38 03.8	+2.3
PB08	**IPOC Station P**	3.99	333	⇑iP	Pn	12 37 26.5	+2.2
PB08				iS	S	12 38 17.7	+3.0
PB08				IAML		12 38 22.5	
	comp=E,49nm,0.7s						

WEL 18 12:44:46.7±1.3,49°S±14°×16°5E±1°3,h5^{km},ML4.8/11,Off west coast of South Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
APZ	**The Paps**	2.93	48	P	Pn	12 45 33.8	-0.2
APZ				S	Sn	12 46 09.9	+0.4
WHZ	**Wether Hill Ro**	3.63	37	P	Pn	12 45 43.1	-0.5
WHZ				S	Sn	12 46 25.6	-1.1
SYZ	**Scrubby Hill**	3.72	54	P	Pn	12 45 44.8	+0.1
SYZ				S	Sn	12 46 29.6	+0.6
MLZ	**Mavora Lakes**	4.14	35	P	Pn	12 45 50.7	+0.2
MLZ				S	Sn	12 46 41.4	+2.1
TUZ	**Tuapeka**	4.36	51	P	Pn	12 45 53.6	0.0
TUZ				S	Sn	12 46 47.1	+2.3
MSZ	**Milford Sound**	4.68	29	P	Pn	12 45 58.3	+0.4
EAZ	**Earnscleugh**	4.74	42	P	Pn	12 45 58.7	-0.1
EAZ				S	Sn	12 46 55.4	+1.3
HHSZ	**Highcliff Hill**	4.92	55	P	Pn	12 46 02.1	+0.8
WKZ	**Wanaka**	4.94	37	P	Pn	12 46 02.2	+0.7
JCZ	**Jackson Bay**	5.49	32	P	Pn	12 46 09.8	+0.5
ODZ	**Otahua Downs**	5.51	49	P	Pn	12 46 08.3	-1.0
LBZ	**Lake Benmore**	5.79	42	P	Pn	12 46 11.3	-1.9
FOZ	**Fox Glacier**	6.34	35	P	Pn	12 46 20.6	-0.1

IDC 18 12:49:10.3±2.6,55°.61S×144°.96E,h0^{km},mb3.6/4, mb1 3.8/4,mb1mx3.6/38,mbtmp3.6/4,MS3.4/2,Ms1 3.3/2, ms1mx2.8/29,Error ellipse: s-maj=306.9km s-min=22.1km az=79.0,West of Macquarie Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNDA	**Vanda**	22.81	171	P	P	12 54 15.0	+0.8
	1.0nm,0.9s,baz=329,slow=7.9,SNR=3.4						
H01W1	**Cape Leeuwin H**	29.59	302	T	T	13 27 16.8	
	baz=142,slow=74						
H01W2	**Cape Leeuwin H**	29.60	301	T	T	13 27 17.3	
	baz=142,slow=74						
H01W3	**Cape Leeuwin H**	29.61	302	T	T	13 27 18.0	
	baz=142						
NWAO	**Narrogin (SRO)**	29.78	308	LR	LR	13 04 23.2	
	comp=Z,88nm,19.6s,baz=198,slow=31						
ASAR	**Alice Springs**	32.93	341	P	P	12 55 46.7	+0.4
	0.4nm,0.8s,baz=164,slow=8.5,SNR=3.9						
QSPA	**South Pole Qui**	34.50	180	P	P	12 55 59.1	-0.7
	1.9nm,0.9s,baz=337,slow=4.9,SNR=2.6						
WRA	**Warramunga Arr**	36.50	343	P	P	12 56 16.9	-0.3
	1.0nm,0.8s,baz=167,slow=7.7,SNR=12						
MAW	**Mawson**	37.77	218	LR	LR	13 11 05.9	
	comp=Z,36nm,19.4s,baz=252,slow=35						
H08S2	**Diego Garcia H**	73.84	280	T	T	14 22 44.5	
	baz=140,slow=76						
H08S1	**Diego Carcia H**	73.85	280	T	T	14 22 50.2	
	baz=140						
H08S3	**Diego Garcia H**	73.86	280	T	T	14 22 44.7	
	baz=140,slow=76						

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*ISCJB **18** 13:13:41.7±0.8,37°.78S±0°.04×179°.91W±0°.06,h33^{km}±5^{km}, mb4.6/22,MS3.6/13,Error ellipse: s-maj=8.4km s-min=6.1km az=152.7*

*WEL **18** 13:13:41.9,38°S±11°×18°0W±°,h33^{km},ML4.9/39*

*NEIC **18** 13:13:47.5±1.5,37°.57S×179°.71E,h52^{km}±11^{km},mb4.7/7, Error ellipse: s-maj=14.3km s-min=10.0km az=59.0*

*BJI **18** 13:13:47.4,37°.53S×179°.85E,h55^{km},mb5.1/4,Ms5.0/1, Ms7 4.7/1*

*IDC **18** 13:13:48.0±2.1,37°.54S×179°.69E,h53^{km}±15^{km},mb4.1/12, mb1 4.2/14,mb1mx4.0/42,mbtmp4.3/14,ML4.1/2,MS3.5/13, Ms1 3.6/13,ms1mx3.3/39,Error ellipse: s-maj=18.9km s-min=11.4km az=14.0*

ISC 18 13:13:45.9±1.1,37°.94S±0°.05×179°.76E±0°.05,h34^{km}±3^{km}, n209,σ1^{s}76/228,mb4.7/22,MS3.6/13,1C,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	1.07	276	Sn	Sb	13 14 22.0	+2.3
WMGZ	**Waiomatatini S**	1.07	276	P	Pn	13 14 04.7	+0.2
WMGZ				S	Sb	13 14 21.9	+2.3
PUZ	**Puketiti**	1.19	263	Sn	Sb	13 14 26.2	+3.1
PUZ	**Puketiti**	1.19	263	P	Pn	13 14 07.1	+0.9
PUZ				S	Sb	13 14 25.6	+2.4
MXZ	**Matakaoa Point**	1.21	288	Pn	Pn	13 14 05.2	-1.3
MXZ				Sn	Sb	13 14 23.9	+0.2
MXZ	**Matakaoa Point**	1.21	288	P	Pn	13 14 05.5	-1.0
MXZ				S	Sn	13 14 22.7	+1.0
PKGZ	**Pakihiroa**	1.33	272	P	Pn	13 14 08.2	0.0
CNGZ	**Carnagh Statio**	1.34	246	P	Pb	13 14 10.4	0.0
TWGZ	**Tauwhareparae**	1.42	260	P	Pn	13 14 10.5	+1.1
HAZ	**Te Kaha**	1.57	276	P	Pn	13 14 11.6	+0.2
TKGZ	**Te Karaka**	1.58	251	P	Pn	13 14 13.2	+1.6
TKGZ				S	Sb	13 14 37.1	+2.8
RUGZ	**Raukumara Rang**	1.65	269	P	Pn	13 14 12.8	+0.3
RIGZ	**Rimuhau**	1.75	243	P	Pn	13 14 15.4	+1.6
RIGZ				S	Sb	13 14 41.3	+2.4
PRGZ	**Paritu Road**	1.77	236	P	Pb	13 14 16.2	-1.5
MWZ	**Matawai**	1.80	257	P	Pn	13 14 15.3	+0.7
MWZ				S	Sb	13 14 40.3	-0.3
MHGZ	**Mahia Peninsul**	1.89	230	P	Pn	13 14 17.7	+1.9
RAGZ	**Rawiri**	1.93	253	P	Pn	13 14 17.5	+1.1
KNZ	**Kokohu**	1.96	236	P	Pn	13 14 18.3	+1.6
SNGZ	**Shannon Statio**	2.08	245	P	Pn	13 14 20.1	+1.6
WIZ	**White Island**	2.08	281	P	Pn	13 14 18.3	0.0
URZ	**Urewera**	2.11	261	P	Pn	13 14 20.5	+1.7
	102nm,0.3s,baz=260,slow=1.6,SNR=329						
URZ				S	Sb	13 14 48.0	-1.3
	231nm,0.3s,baz=55,slow=9.2,SNR=11						
URZ	**Urewera**	2.11	261	P	Pn	13 14 20.2	+1.4
URZ				S	Sb	13 14 48.1	-1.3
WHRZ	**Whale Island**	2.20	271	P	Pn	13 14 20.9	+0.8
WHHZ	**Waihua**	2.28	239	P	Pn	13 14 23.2	+2.1
WHHZ				S	Sb	13 14 54.4	+0.2
WHHZ	**Waihua**	2.28	239	P	Sb	13 14 54.5	+0.2
RTZ	**Ruatahuna**	2.29	252	P	Pn	13 14 22.9	+1.6
RTZ				S	Sb	13 14 53.7	-0.8
RAHZ	**Arahi**	2.31	244	P	Pn	13 14 23.7	+2.1
EDRZ	**Edgecumbe**	2.39	265	P	Pn	13 14 23.7	+0.9
MUGZ	**Murupara**	2.41	256	P	Pn	13 14 24.2	+1.2
MARZ	**Manawahe**	2.44	268	P	Pn	13 14 24.8	+1.5
MTHZ	**Maungataniwha**	2.47	247	P	Pn	13 14 25.6	+1.8
MTHZ	**Maungataniwha**	2.47	247	P	Sb	13 14 58.6	-0.9
ARHZ	**Aropaoanui**	2.54	238	P	Pn	13 14 26.6	+2.0
ARHZ				S	Sb	13 15 01.0	-0.5
OPRZ	**Ohinepanea**	2.54	271	P	Pn	13 14 24.5	-0.1
TARZ	**Mount Tarawera**	2.58	262	P	Pn	13 14 26.4	+1.0
NMHZ	**Naumai**	2.59	243	P	Pn	13 14 27.4	+2.0
RRRZ	**Republican Roa**	2.59	260	P	Pn	13 14 26.5	+1.1
MKRZ	**Makatiti**	2.61	265	P	Pn	13 14 27.1	+1.4
OMRZ	**Omania**	2.68	265	P	Pn	13 14 27.4	+0.7
HLRZ	**Highlands Stat**	2.71	262	P	Pn	13 14 28.1	+1.0
CKHZ	**Cape Kidnapper**	2.71	230	P	Pn	13 14 28.7	+1.6
PRRZ	**Plateau Road**	2.71	257	P	Pn	13 14 28.2	+1.1
ALRZ	**Allen Road**	2.76	256	P	Pn	13 14 29.2	+1.4
ALRZ				S	Sn	13 15 03.8	+3.8
MRHZ	**Matea Rd**	2.77	250	P	Pn	13 14 29.5	+1.5
MRHZ				P	Pn	13 14 29.5	+1.5
HRRZ	**Handcock Road**	2.78	260	P	Pn	13 14 29.1	+1.1
KARZ	**Kaharoa**	2.78	267	P	Pn	13 14 28.6	+0.5
TGRZ	**Tauranga**	2.78	273	P	Pn	13 14 27.9	0.0
HSRZ	**Hossack Road**	2.80	261	P	Pb	13 14 29.5	-5.6
HSRZ				P	Pn	13 14 29.4	+1.1
UTU	**Utuhina**	2.82	264	P	Pn	13 14 30.3	+1.6
UTU				P	Pb	13 14 32.5	-3.1
NGRZ	**Ngongotaha**	2.83	266	P	Pn	13 14 29.7	+1.0
MCHZ	**McNeill Hill**	2.83	237	P	Pn	13 14 30.3	+1.6
BKZ	**Black Stump Fm**	2.84	243	ePn	Pn	13 14 30.0	+1.1
BKZ	**Black Stump Fm**	2.84	243	P	Pn	13 14 30.6	+1.8
WPRZ	**Whakapapatarin**	2.89	257	P	Pn	13 14 31.1	+1.5
GRRZ	**Galatos Road**	2.91	261	P	Pn	13 14 31.0	+1.2
KAHZ	**Kahuranaki**	2.91	230	P	Pn	13 14 31.3	+1.4
KWHZ	**Kaweka Forest**	3.00	239	P	Pn	13 14 32.5	+1.4
KMRZ	**Kaimai**	3.02	271	P	Pn	13 14 31.3	0.0
PXZ	**Pawanui**	3.07	226	P	Pn	13 14 32.5	+0.4
WHTZ	**Whakaora**	3.08	255	P	Pn	13 14 34.9	+2.7
KRHZ	**Kereru**	3.15	236	P	Pn	13 14 34.0	+0.9
KUTZ	**Kaahu Road**	3.15	259	P	Pn	13 14 34.1	+1.0
RITZ	**Rihia Road**	3.23	250	P	Pn	13 14 36.2	+1.9
RATZ	**Rangitukua**	3.27	252	P	Pn	13 14 36.6	+1.9
RATZ				P	Pn	13 14 36.6	+1.9
BHHZ	**Black Hill Sta**	3.28	241	P	Pn	13 14 36.3	+1.3
WPHZ	**Waipukurau**	3.34	230	P	Pn	13 14 36.6	+0.8
TLZ	**Tolley Road**	3.35	262	P	Pn	13 14 36.4	+0.4
KATZ	**Kakaramea**	3.35	251	P	Pn	13 14 39.4	+3.4
KATZ				P	Pn	13 14 39.4	+3.4
PRHZ	**Porangahau**	3.36	225	P	Pn	13 14 36.4	+0.3
TOZ	**Tahuroa Road**	3.38	272	P	Pn	13 14 36.1	-0.1
PNHZ	**Pukenui**	3.40	234	P	Pn	13 14 37.2	+0.6
KRVZ	**Karewarewa**	3.43	249	P	Pn	13 14 38.4	+1.3
KUZ	**Kuaotunu**	3.43	289	P	Pn	13 14 35.0	-2.0
MOVZ	**Moawhango**	3.46	244	P	Pn	13 14 39.0	+1.6
WTVZ	**West Tongariro**	3.47	249	P	Pn	13 14 39.9	+2.2
TUVZ	**Tukino**	3.48	246	P	Pn	13 14 40.8	+3.0
NGZ	**Ngauruhoe**	3.48	248	P	Pn	13 14 39.3	+1.5
WHVZ	**Whangaehu Hut**	3.53	246	P	Pn	13 14 40.2	+1.7
COVZ	**Chateau Observ**	3.54	248	P	Pn	13 14 39.9	+1.4
FWVZ	**Far West T-bar**	3.55	247	P	Pn	13 14 40.2	+1.4
TRVZ	**Turoa**	3.57	246	P	Pn	13 14 42.3	+3.3
TWVZ	**Taurewa**	3.57	250	P	Pn	13 14 40.5	+1.5
ANWZ	**Angora Road**	3.58	224	P	Pn	13 14 39.0	0.0
TSZ	**Takapari Road**	3.64	233	P	Pn	13 14 40.1	+0.2
DVHZ	**Dannevirke**	3.65	229	P	Pn	13 14 40.4	+0.3
MTVZ	**Mangateitei**	3.65	245	P	Pn	13 14 41.7	+1.6
PKVZ	**Pokaka**	3.71	247	P	Pn	13 14 42.9	+2.0
MKAZ	**Moumakai**	3.75	281	P	Pn	13 14 40.5	-0.8
GRZ	**Great Barrier**	3.83	295	P	Pn	13 14 40.8	-1.6
WIAZ	**Waiheke Island**	3.86	286	P	Pn	13 14 41.7	-1.2
BFZ	**Birch Farm**	3.86	224	ePn	Pn	13 14 42.0	-0.9
BFZ	**Birch Farm**	3.86	224	P	Pn	13 14 42.1	-0.8
HIZ	**Hauiti**	3.90	260	ePn	Pn	13 14 45.0	+1.5
HIZ	**Hauiti**	3.90	260	P	Pn	13 14 45.1	+1.6
PRWZ	**Pori Road**	3.93	227	P	Pn	13 14 44.3	+0.5
POWZ	**Post Office Ro**	3.95	230	P	Pn	13 14 44.8	+0.6
KBAZ	**Karaka Road Bo**	3.96	281	P	Pn	13 14 44.3	0.0
ETAZ	**East Tamaki Re**	3.97	283	P	Pn	13 14 43.9	-0.5
CPWZ	**Castlepoint**	4.05	222	P	Pn	13 14 47.0	+1.6
VRZ	**Vera Road**	4.09	252	P	Pn	13 14 48.4	+2.3
TIWZ	**Tintock**	4.13	225	P	Pn	13 14 46.7	+0.2
EPAZ	**Eden Park BICE**	4.13	283	P	Pn	13 14 46.7	+0.1
WAZ	**Wanganui**	4.14	243	P	Pn	13 14 48.8	+2.0
HBAZ	**Herne Bay Bore**	4.15	284	P	Pn	13 14 46.8	-0.1
ABAZ	**Army Bay**	4.15	287	P	Pn	13 14 46.1	-0.8
AWAZ	**Awhitu Peninsu**	4.16	281	P	Pn	13 14 47.2	+0.2
MRZ	**Mangatainoka R**	4.23	229	P	Pn	13 14 47.7	-0.2
WTAZ	**Waiatarua**	4.25	282	P	Pn	13 14 48.5	+0.3
RVAZ	**Riverhead Bore**	4.29	284	P	Pn	13 14 48.5	-0.3
TMWZ	**Te Maipa**	4.35	222	P	Pn	13 14 48.7	-0.9
MHEZ	**Mangahewa**	4.41	253	P	Pn	13 14 54.6	+4.1
HOWZ	**Holdsworth Sta**	4.42	227	P	Pn	13 14 50.0	-0.5
HOWZ	**Holdsworth Sta**	4.42	227	P	Pn	13 14 50.0	-0.5
LREZ	**Lake Rotokare**	4.46	248	P	Pn	13 14 53.8	+2.8
DREZ	**Durham Road**	4.53	252	P	Pn	13 14 56.1	+4.0
OGWZ	**Otaki Gorge**	4.57	230	P	Pn	13 14 52.2	-0.4
MTW	**Mount Morrison**	4.60	224	P	Pn	13 14 51.6	-1.4
PREZ	**Palmer Road**	4.60	251	P	Pn	13 14 57.1	+4.0
TRWZ	**Traveller**	4.67	221	P	Pn	13 14 51.8	-2.2
PKE	**Pukeiti**	4.69	253	P	Pn	13 14 58.0	+3.6
KHEZ	**Kahui Hut**	4.70	252	P	Pn	13 14 58.2	+3.7
KIW	**Kapiti Island**	4.75	231	P	Pn	13 14 55.0	-0.2
WCZ	**Waipu Caves**	4.78	293	P	Pn	13 14 54.1	-1.3
PAWZ	**Paruwai Farm**	4.79	223	P	Pn	13 14 54.3	-1.4
CAW	**Cannon Point**	4.81	227	P	Pn	13 14 55.2	-0.8
MSWZ	**Moikau Station**	4.91	224	P	Pn	13 14 55.4	-1.9
PLWZ	**Palliser**	5.02	222	P	Pn	13 14 57.2	-1.6
BHW	**Baring Head**	5.12	226	P	Pn	13 14 58.8	-1.3
SNZO	**South Karori**	5.15	228	ePn	Pn	13 14 59.2	-1.4
TCW	**Tory Channel**	5.35	231	P	Pn	13 15 02.2	-1.1
DUWZ	**D'Urville Isla**	5.35	236	P	Pn	13 15 03.0	-0.4
OUZ	**Omahuta**	5.65	297	ePn	Pn	13 15 06.3	-1.1
OUZ	**Omahuta**	5.65	297	P	Pn	13 15 06.4	-1.1
TUWZ	**Tuamarina**	5.68	230	P	Pn	13 15 06.1	-1.7
BSWZ	**Blackbirch Sta**	5.89	228	P	Pn	13 15 09.2	-1.5
NNZ	**Nelson**	5.91	234	P	Pn	13 15 10.3	-0.8
CTZ	**Chatham Island**	6.41	156	P	Pn	13 15 18.8	+1.0
THZ	**Tophouse**	6.51	232	ePn	Pn	13 15 17.4	-1.9
THZ	**Tophouse**	6.51	232	P	Pn	13 15 17.5	-1.8
KHZ	**Kahutara**	6.53	225	ePn	Pn	13 15 17.0	-2.5
KHZ	**Kahutara**	6.53	225	P	Pn	13 15 17.1	-2.4
LTZ	**Lake Taylor**	7.49	227	ePn	Pn	13 15 29.2	-3.5
MQZ	**McQueen's Vall**	7.88	221	ePn	Pn	13 15 35.9	-2.2
OXZ	**Oxford**	7.96	225	ePn	Pn	13 15 37.1	-2.0
RPZ	**Rata Peaks**	8.76	226	P	Pn	13 15 49.0	-1.1
	2.6nm,0.3s,baz=194,slow=3.1,SNR=12						
RPZ				S	Sn	13 17 23.4	-4.3
	12nm,0.3s,baz=326,slow=21,SNR=17						
RPZ	**Rata Peaks**	8.76	226	ePn	Pn	13 15 48.5	-1.6
RPZ				S	Sn	13 17 23.4	-4.3
FOZ	**Fox Glacier**	9.38	230	ePn	Pn	13 15 57.9	-0.7
FOZ	**Fox Glacier**	9.38	230	P	Pn	13 15 59.2	+0.6
LBZ	**Lake Benmore**	9.67	225	ePn	Pn	13 16 01.1	-1.4
ODZ	**Otahua Downs**	9.85	221	ePn	Pn	13 16 03.6	-1.4
JCZ	**Jackson Bay**	10.30	230	P	Pn	13 16 11.5	+0.2
WKZ	**Wanaka**	10.60	226	ePn	Pn	13 16 13.7	-1.6
MLZ	**Mavora Lakes**	11.43	226	ePn	Pn	13 16 25.2	-1.5
WHZ	**Wether Hill Ro**	11.85	224	ePn	Pn	13 16 30.2	-2.1
DZM	**Mont Dzumac**	19.54	320	P	P	13 18 07.9	-2.8
	0.3nm,0.3s,baz=114,slow=20,SNR=3.4						
DZM				LR	LR	13 24 29.3	
	comp=Z,374nm,20.0s,baz=116,slow=33						
RAR	**Rarotonga**	24.30	52	LR	LR	13 27 18.4	
	comp=Z,52nm,18.8s,baz=122,slow=34						
STKA	**Stephens Creek**	31.72	269	P	P	13 20 06.9	+0.3
	5.0nm,0.9s,baz=104,slow=14,SNR=2.9						
STKA				LR	LR	13 33 10.1	
	comp=Z,138nm,18.4s,baz=36,slow=37						
HNR	**Honiara**	33.53	323	LR	LR	13 31 43.0	
	comp=Z,55nm,20.7s,baz=199,slow=32						
CTA	**Charters Tower**	34.03	292	P	P	13 20 25.7	-1.2
	2.8nm,0.9s,baz=127,slow=12,SNR=5.2						
COEN	**Coen**	40.26	296	eP	P	13 21 18.0	-1.7
	16nm,0.8s						
VNDA	**Vanda**	40.42	186	P	P	13 21 22.8	+2.4
	0.7nm,0.8s,baz=1.5,slow=5.7,SNR=3.5						
VNDA				LR	LR	13 34 00.8	
	comp=Z,49nm,19.7s,baz=357,slow=30						
PMG	**Port Moresby**	40.83	306	LR	LR	13 35 41.3	
	comp=Z,109nm,19.3s,baz=132,slow=32						
AS01	**Alice Springs**	41.44	277	eP	P	13 21 28.0	-1.4
AS31	**Alice Springs**	41.47	277	eP	P	13 21 28.1	-1.7
	3.5nm,0.8s						
ASAR	**Alice Springs**	41.47	277	P	P	13 21 28.7	-1.0
	10nm,0.8s,baz=120,slow=6.9,SNR=49						
ASAR				PcP	PcP	13 23 25.4	-1.7
	1.3nm,0.7s,baz=126,slow=3.9,SNR=4.0						
ASAR				S	S	13 27 41.3	-1.7
	0.7nm,1.0s,baz=108,slow=15,SNR=5.5						
ASAR				LR	LR	13 38 10.3	
	comp=Z,54nm,18.2s,baz=140,slow=35						
FORT	**Forrest**	42.82	264	eP	P	13 21 40.2	-0.4
	23nm,0.7s						
WB2	**Warramunga Arr**	43.13	282	eP	P	13 21 41.6	-1.7
WRAB	**Tennant Creek**	43.14	282	eP	P	13 21 41.4	-1.9
	24nm,1.6s						
WRA	**Warramunga Arr**	43.14	281	P	P	13 21 41.8	-1.6
	2.2nm,0.3s,baz=123,slow=7.0,SNR=74						
WRA				PcP	PcP	13 23 31.8	-0.9
	1.8nm,0.7s,baz=123,slow=3.3,SNR=5.0						
WRA				S	S	13 28 04.1	-3.5
	0.7nm,0.9s,baz=120,slow=14,SNR=3.4						
FITZ	**Fitzroy Crossi**	50.96	277	P	P	13 22 43.2	-1.2
	8.5nm,0.8s,baz=153,slow=8.4,SNR=8.8						
FITZ				LR	LR	13 45 23.8	
	comp=Z,52nm,20.0s,baz=94,slow=37						
QSPA	**South Pole Qui**	52.19	180	P	P	13 22 56.9	+3.9
	7.0nm,0.8s,baz=41,slow=1.9,SNR=21						
QSPA				LR	LR	13 43 15.9	
	comp=Z,48nm,18.6s,baz=20,slow=34						
QSPA	**South Pole Qui**	52.19	180	eP	P	13 22 55.0	+2.0
	8.7nm,0.8s						
MAW	**Mawson**	64.63	202	P	P	13 24 22.0	+2.5
	2.8nm,0.8s,baz=122,slow=9.4,SNR=4.1						
SYO	**Syowa Base**	69.37	194	⇑eX		13 24 40.0	
SNAA	**Sanae**	70.67	179	P	P	13 24 59.7	+2.0
SNAA	**Sanae**	70.67	179	P	P	13 24 59.9	+2.1
	0.9nm,0.6s,baz=188,slow=15,SNR=5.7						
SNAA	**Sanae**	70.67	179	eP	P	13 24 59.8	+2.1
	9.3nm,1.4s						
VNA3	**Neumayer Olymp**	70.91	177	P	P	13 25 01.7	+2.6
PLCA	**Paso Flores**	78.72	133	P	P	13 25 46.6	+1.7
	3.4nm,0.9s,baz=278,slow=2.5,SNR=5.7						
BKNI	**Bangkinang**	81.30	277	eP	P	13 25 55.3	-3.8
	185nm,0.5s						
ASAJ	**Asahikawa**	88.33	334	LR	LR	14 00 02.5	
	comp=Z,26nm,20.0s,baz=183,slow=32						
KSRS	**Korea Array**	88.97	321	P	P	13 26 35.8	-1.0
	0.7nm,0.7s,baz=146,slow=4.3,SNR=3.2						
KSAR	**Wonju Array Be**	88.98	321	P	P	13 26 35.8	-1.1
NJ2	**Nanjing**	89.82	312	eP	P	13 26 40.8	-0.2
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
NNA	**Nana**	93.03	108	LR	LR	14 00 14.9	
	comp=Z,29nm,18.1s,baz=186,slow=30						
MNMC	**Minye Minye**	93.67	118	eP	P	13 27 01.2	+1.5
	9.1nm,0.7s						
GYA	**Guiyang**	93.74	301	eP	P	13 26 59.8	+0.3
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
DAC	**Darwin (Calif)**	93.85	46	eP	P	13 26 59.6	-0.2
	3.7nm,1.0s						
CMAR	**Chiang Mai Arr**	94.18	290	P	P	13 27 01.2	-0.3
	1.1nm,0.7s,baz=162,slow=6.6,SNR=3.6						
CMAR				LR	LR	14 14 05.0	
	comp=Z,19nm,18.1s,baz=175,slow=38						
KMI	**Kunming**	95.60	297	P	P	13 27 08.9	+0.8
KMI				pmax	pmax		
	comp=Z,6.0nm,1.0s						
LPAZ	**La Paz**	96.61	116	LR	LR	14 00 18.4	
	comp=Z,22nm,20.2s,baz=170,slow=29						
HHC	**Hu-ho-hao-te**	100.15	314	eP	Pdif	13 27 27.5	-0.6
LZH	**Lanzhou**	101.72	307	eP	Pdif	13 27 35.3	0.0
LZH				pP	sPdif	13 27 52.6	+2.7
LZH				sP	pP	13 28 00.4	+14
LZH				ePP	PP	13 31 48.9	+2.3
LZH				LR	LR		
	comp=N,180nm,17.5s						
LZH				LR	LR		
	comp=E,190nm,18.0s						
LZH				LR	LR		
	comp=Z,240nm,19.2s						
WMQ	**Urumqi**	116.30	306	ePKP	PKPdf	13 32 25.1	-0.4
MKAR	**Makanchi Array**	121.03	307	PKP	PKPdf	13 32 32.3	-2.1
	0.4nm,0.7s,baz=193,slow=1.1,SNR=4.4						
KSH	**Kashi**	122.26	297	ePKP	PKPdf	13 32 39.5	+2.3
KSH				ePP	PP	13 34 19.8	+6.2
KSH				PKS	PKSdf	13 36 15.1	+1.2
KURK	**Kurchatov**	124.73	311	PKP	PKPdf	13 32 39.6	-1.7
KURBB	**Kurchatov Arra**	124.75	310	PKP	PKPdf	13 32 39.6	-1.8
	1.1nm,0.7s,baz=106,slow=1.8,SNR=9.6						
BVAR	**Borovoye Array**	130.27	312	PKP	PKPdf	13 32 50.9	-1.0
	0.8nm,0.6s,baz=48,slow=2.2,SNR=5.4						
SPITS	**Spitsbergen Ar**	139.06	355	PKP	PKPdf	13 33 07.1	-0.6
	2.0nm,0.7s,baz=36,slow=12,SNR=4.5						
ARCES	**ARCESS Array B**	145.45	344	PKPbc	PKPdf	13 33 17.8	-1.4
	6.0nm,0.7s,baz=41,slow=3.1,SNR=28						
ARCES	**ARCESS Array B**	145.45	344	ePKPbc	PKPdf	13 33 17.7	-1.6
KBZ	**Khabaz**	147.14	294	PKPbc	PKPdf	13 33 23.6	+0.8
	2.5nm,0.6s,baz=160,slow=4.5,SNR=4.7						
DBIC	**Dimbokro**	148.59	171	PKPbc	PKPbc	13 33 30.6	+0.8
	4.0nm,0.7s,baz=128,slow=6.1,SNR=3.4						
FIA1	**FINESS Array S**	151.34	334	ePKPbc	PKPbc	13 33 33.1	-1.9
FINES	**FINESS Array B**	151.34	334	PKPbc	PKPbc	13 33 33.5	-1.5
	5.5nm,0.6s,baz=24,slow=5.3,SNR=20						
BRTR	**Keskin Array B**	153.63	285	PKPbc	PKPbc	13 33 40.7	-0.4
	1.0nm,0.5s,baz=132,slow=2.1,SNR=3.0						
TOA0	**Torodi Ar. Sit**	155.25	185	ePKPab	PKPab	13 34 01.0	0.0
TORD	**Torodi Ar. Bea**	155.25	185	PKPbc	PKPbc	13 33 45.3	
	baz=104,slow=0.6						
TORD				PKPab	PKPab	13 34 01.3	+0.4
	baz=143,slow=4.6						

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*IDC **18** 13:15:10.7±1.1,34°.00S×71°.50W,h0^{km},mb3.8/4, mb1 3.9/6,mb1mx3.7/34,mbtmp3.8/6,ML4.0/2,MS3.0/2, Ms1 3.0/2,ms1mx2.7/27,Error ellipse: s-maj=48.9km s-min=24.8km az=79.0*

*GUC **18** 13:15:13.1±0.5,34°.08S×72°.02W,h20^{km}±15^{km},ML3.4*

ISC 18 13:15:11.9±1.8,34°.08S±0°.05×72°.34W±0°.08,h15^{km}±10^{km}, n25,σ2^{s}41/34,mb3.9/4,1C,Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO05	**HualaæØ**	0.99	160	iP	Pg	13 15 28.0	-3.1
GO05				iS	Sn	13 15 49.1	+4.0
GO05	**HualaæØ**	0.99	160	eP	Pb	13 15 31.0	+0.2
GO05				iS	Sb	13 15 44.5	+0.9
GO05				IAML		13 15 48.8	
	comp=N,2μm,0.4s						
ROC1	**El Roble**	1.56	46	iP	Pn	13 15 39.4	0.0
ROC1				iS	Sg	13 16 09.1	+6.8
ROCH	**El Roble**	1.57	46	eP	Pn	13 15 38.0	-1.5
ROCH				iS	Sn	13 15 57.1	-2.5
CLCH	**Cerro Calan**	1.65	66	eP	Pn	13 15 39.3	-1.2
CLCH				iS	Sn	13 15 58.4	-3.1
CLCH				IAML		13 16 17.9	
	comp=E,1μm,0.7s						
PEL	**Peldehue**	1.67	56	⇑eP	Pn	13 15 39.4	-1.3
PEL				iS	Sn	13 16 01.0	-0.9
PEL				IAML		13 16 10.4	
	comp=E,1μm,0.7s						
FCH	**Farellones**	1.87	67	eP	Pn	13 15 42.9	-0.8
FCH				iS	Sn	13 16 05.9	-1.3
FCH				IAML		13 16 13.8	
	comp=N,599nm,0.6s						
AUSP	**Uspallata**	3.09	54	iP	Pn	13 16 02.0	+1.5
AAGR	**Agrelo**	3.10	72	iP	Pn	13 16 03.6	+3.2
ARCO	**CERRO ARCO**	3.11	68	iP	Pn	13 16 02.8	+2.2

ARCO				IAML		13 16 11.1	
	comp=Z,305nm,0.4s						
ARCO				*i* S	Sg	13 16 49.8	-1.9
ASAL	Salagasta	3.29	64	*i* P	Pn	13 16 05.5	+2.4
ASAL				*i* S	Sb	13 16 53.4	+3.5
RTLS	Leoncito	3.42	49	*i* P	Pn	13 16 06.0	+1.0
RTLS				*i* S	Sb	13 16 55.0	+0.9
RTLS				IAML		13 17 02.8	
	comp=Z,84nm,0.6s						
RTCV	Cerro Valdivia	3.89	56	*i* P	Pn	13 16 13.3	+2.1
RTLL	Cerro Villicun	4.26	51	*i* P	Pn	13 16 17.6	+1.3
PLCA	Paso Flores	6.79	168	Pn	Pn	13 16 52.0	+0.8
	comp=Z,0.3nm,0.3s,baz=3.4,slow=13,SNR=10						
PLCA				Lg	Lg	13 18 36.8	
	baz=67,slow=18,SNR=2.3						
PLCA				LR	LR	13 19 36.7	
	comp=Z,121nm,21.0s,baz=16,slow=39						
LPAZ	La Paz	18.12	13	P	Pn	13 19 22.7	-1.0
	comp=Z,0.7nm,0.3s,baz=193,slow=7.0,SNR=4.5						
NNA	Nana	22.37	348	LR	LR	13 27 04.0	
	comp=Z,34nm,18.9s,baz=186,slow=32						
SNAA	Sanae	51.61	158	P	P	13 24 17.1	-0.3
	comp=Z,1.6nm,0.9s,baz=269,slow=7.0,SNR=5.7						
TXAR	Lajitas Array	69.68	331	P	P	13 26 24.1	+3.0
	comp=Z,0.1nm,0.4s,baz=159,slow=7.7,SNR=3.0						
KOWA	Kowa	80.90	66	P	P	13 27 23.0	-2.8
	comp=Z,1.2nm,0.5s,baz=243,slow=6.8,SNR=3.6						
TORD	Torodi Ar. Bea	84.47	70	P	P	13 27 42.7	-1.8
	comp=Z,0.7nm,0.8s,baz=217,slow=4.5						
BVAR	Borovoye Array	147.51	43	PKPbc	PKPdf	13 34 54.5	+2.1
	comp=Z,0.8nm,0.6s,baz=263,slow=1.2,SNR=4.6						
KURBB	Kurchatov Arra	153.10	43	PKPbc	PKPbc	13 35 07.9	-0.6
	comp=Z,0.2nm,0.6s,baz=306,slow=2.8,SNR=4.9						
ZALV	Zalesovo Beam	154.43	32	PKPbc	PKPbc	13 35 10.5	-0.8
	comp=Z,0.9nm,0.4s,baz=302,slow=2.7,SNR=3.6						
MKAR	Makanchi Array	157.01	49	PKPab	PKPab	13 35 35.1	-1.8
	comp=Z,0.4nm,0.6s,baz=320,slow=3.4,SNR=3.9						

SJA 18 13:29:16.5±0.5, 33°.99S×72°.69W, h10^{km}, ML3.1, MW3.8, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO05	HualaæØ	1.20	149	*i* P	Pb	13 29 39.0	-0.3
GO05				*i* S	Sn	13 29 56.2	+0.5
ROC1	El Roble	1.73	55	*i* P	Pb	13 29 48.6	+0.2
ROC1				*i* S	Sg	13 30 12.6	+0.6
AUSP	Uspallata	3.28	59	*i* P	Pn	13 30 11.6	+3.4
ARCO	CERRO ARCO	3.34	71	*i* P	Pn	13 30 12.2	+3.2
ARCO				IAML		13 30 19.0	
	comp=Z,42nm,0.4s						
AAGR	Agrelo	3.35	76	*i* P	Pn	13 30 11.9	+2.9
ASAL	Salagasta	3.52	68	*i* P	Pn	13 30 14.5	+3.2
RTLS	Leoncito	3.59	54	*i* P	Pn	13 30 16.0	+3.5
RTLS				IAML		13 31 14.9	
	comp=Z,29nm,0.5s						
RTLL	Cerro Villicun	4.43	54	*i* P	Pn	13 30 27.3	+3.4

IDC 18 13:35:31.0±1.0, 39°.96N×53°.31E, h0^{km}, mb3.7/11, mb1 4.0/20, mb1mx3.8/66, mbtmp3.9/20, ML3.7/7, Error ellipse: s-maj=18.9km s-min=9.5km az=180.0

MOS 18 13:35:34.3±2.0, 40°.09N×53°.51E, h38^{km}, mb4.2/8, Error ellipse: s-maj=8.4km s-min=6.5km az=35.8

ISCJB 18 13:35:34.4±0.2, 40°.06N±0°.04×53°.59E±0°.02, h45^{km}, mb4.1/16, Error ellipse: s-maj=5.7km s-min=2.2km az=8.2

CSEM 18 13:35:35.6±0.2, 40°.08N×53°.61E, h30^{km}, mb4.3/5, Error ellipse: s-maj=9.5km s-min=4.1km az=1.0

AZER 18 13:35:35.8±99.0, 39°.71N×53°.34E, h35^{km}±4^{km}, ml4.4/19, Error ellipse: s-maj=40.7km s-min=4.8km az=275.0

NEIC 18 13:35:36.0±0.8, 40°.19N×53°.50E, h35^{km}, mb4.1/6, Error ellipse: s-maj=16.4km s-min=7.3km az=14.0

NNC 18 13:35:39.4±3.8, 40°.50N×54°.64E, h0^{km}, mb4.1, mpv4.3, Error ellipse: s-maj=40.7km s-min=14.3km az=73.0

ISC 18 13:35:35.3±0.5, 40°.00N±0°.05×53°.64E±0°.03, h45^{km}, n157, σ2^{s}18/208, mb4.0/17, 58C-57D, Turkmenistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GOBA	Gobu	3.02	279	⇑P	Pn	13 36 21.7	+1.2
GOBA				⇑S	Sn	13 36 56.0	+0.6
GOBA	Gobu	3.02	279	⇑P	Pn	13 36 21.7	+1.2
GOBA				⇑S	Sn	13 36 56.0	+0.6
ALIB	Äli-Bayra	3.56	271	⇑P	Pn	13 36 28.2	+0.2
ALIB				⇓S	Sn	13 37 07.8	-0.9
ALIB	Äli-Bayra	3.56	271	⇑P	Pn	13 36 28.2	+0.2
ALIB				⇓S	Sn	13 37 07.8	-0.9
GBS	Qobustan	3.63	280	⇓P	Pn	13 36 30.1	+1.1
	SNR=6.8						
GBS				⇓S	Sn	13 37 11.1	+0.4
GBS	Qobustan	3.63	280	⇓P	Pn	13 36 30.1	+1.1
	SNR=6.8						
GBS				⇓S	Sn	13 37 11.1	+0.4
ATGJ	Altiaghaj	3.69	285	P	Pn	13 36 31.3	+1.5
	SNR=4.2						
ATGJ				⇑S	Sn	13 37 13.1	+1.0
ATGJ	Altiaghaj	3.69	285	P	Pn	13 36 31.3	+1.5
	SNR=4.2						
ATGJ				⇑S	Sn	13 37 13.1	+1.0
SIZA	Siyzn	3.77	288	⇓P	Pn	13 36 32.7	+1.8
	SNR=6.1						
SIZA				⇓S	Sn	13 37 15.9	+1.9
SIZA	Siyzn	3.77	288	⇓P	Pn	13 36 32.7	+1.8
	SNR=6.1						
SIZA				⇓S	Sn	13 37 15.9	+1.9
PQL	Pirkuli	3.93	283	⇑P	Pn	13 36 34.3	+1.1
	SNR=3.0						
PQL				⇓S	Sn	13 37 19.0	+0.8
PQL	Pirkuli	3.93	283	⇑P	Pn	13 36 34.3	+1.1
	SNR=3.0						
PQL				⇓S	Sn	13 37 19.0	+0.8
LKRN	Lenkeran, Azer	3.98	253	P	Pn	13 36 33.9	+0.1
LKRN	Lenkeran, Azer	3.98	253	P	Pn	13 36 33.9	+0.1
LKRN	Lenkeran, Azer	3.98	253	⇑P	Pn	13 36 32.7	-1.0
	SNR=3.7						
LKRN				⇓S	Sn	13 37 16.9	-2.2
ASTR	Astara	4.03	251	⇓P	Pn	13 36 33.1	-1.3
	SNR=6.6						
ASTR	Astara	4.03	251	⇓P	Pn	13 36 33.1	-1.3
	SNR=6.6						
ASTR				⇓S	Sn	13 37 17.0	-3.3
GEYT	Alibeck	4.06	119	Pn	Pn	13 36 37.0	+2.1
	8.0nm,0.3s,baz=297,slow=14,SNR=66						
GEYT				Sn	Sn	13 37 25.7	+4.5
	17nm,0.3s,baz=286,slow=41,SNR=8.3						
GYA0B	ALIBECK ARRAY	4.06	119	⇓Pn	Pn	13 36 37.9	+2.9
	17nm,0.4s						
GYA0B				⇑Sn	Sn	13 37 22.6	+1.4
	98nm,0.6s						
GYA0B	ALIBECK ARRAY	4.06	119	*e*Pn	Pn	13 36 37.5	+2.6
GYA0B	ALIBECK ARRAY	4.06	119	*e*Pn	Pn	13 36 37.5	+2.6
GYA0B				Sn	Sn	13 37 22.6	+1.4
	98nm,0.6s						
GLBA	Clilabad	4.12	261	⇓P	Pn	13 36 35.8	+0.1
	SNR=2.9						
GLBA	Clilabad	4.12	261	⇓P	Pn	13 36 35.8	+0.1
	SNR=2.9						
GLBA				⇓S	Sn	13 37 20.3	-2.3
QUBA	Quba, Azerbaij	4.14	291	⇓P	Pn	13 36 38.0	+2.0
	SNR=4.4						
QUBA				⇓S	Sn	13 37 25.6	+2.5
QUBA	Quba, Azerbaij	4.14	291	⇓P	Pn	13 36 38.0	+2.0
	SNR=4.4						
QUBA				⇓S	Sn	13 37 25.6	+2.5
ASHT	Ashkhabad	4.23	118	⇓Pn	Pn	13 36 40.9	+3.6
	48nm,0.3s						
ASHT				⇓Sn	Sn	13 37 28.4	+3.0
	169nm,0.5s						
ASHT	Ashkhabad	4.23	118	Pn	Pn	13 36 40.9	+3.6
	48nm,0.3s						
ASHT				Sn	Sn	13 37 28.4	+3.0
	169nm,0.5s						
IML	Ismayilli	4.24	282	⇑P	Pn	13 36 38.7	+1.3
IML				⇑S	Sn	13 37 26.5	+0.9
IML	Ismayilli	4.24	282	⇑P	Pn	13 36 38.7	+1.3
IML				⇑S	Sn	13 37 26.5	+0.9
LRK	Lerik	4.33	253	⇓P	Pn	13 36 37.7	-1.0
	SNR=54						
LRK	Lerik	4.33	253	⇓P	Pn	13 36 37.7	-1.0
	SNR=54						
LRK				⇑S	Sn	13 37 24.6	-3.4
XNQ	Khinaliq	4.34	287	⇑P	Pn	13 36 40.6	+1.6
	SNR=8.1						
XNQ				⇑S	Sn	13 37 29.9	+1.4
XNQ	Khinaliq	4.34	287	⇑P	Pn	13 36 40.6	+1.6
	SNR=8.1						
XNQ				⇑S	Sn	13 37 29.9	+1.4
QSAR	Qusar	4.35	292	⇑P	Pn	13 36 41.0	+2.1
	SNR=4.5						
QSAR				⇓S	Sn	13 37 31.0	+2.6
QSAR	Qusar	4.35	292	⇑P	Pn	13 36 41.0	+2.1
	SNR=4.5						
QSAR				⇓S	Sn	13 37 31.0	+2.6
QBL	Gabala	4.52	284	⇓P	Pn	13 36 42.5	+1.2
QBL				⇓S	Sn	13 37 33.9	+1.3
QBL	Gabala	4.52	284	⇓P	Pn	13 36 42.5	+1.2
QBL				⇓S	Sn	13 37 33.9	+1.3
ZRD	Zardab	4.57	275	⇑P	Pn	13 36 42.4	+0.6
ZRD				⇓S	Sn	13 37 33.4	-0.2
ZRD	Zardab	4.57	275	⇑P	Pn	13 36 42.4	+0.6
ZRD				⇓S	Sn	13 37 33.4	-0.2
AKT	Akhty	4.72	290	*e*P	Pn	13 36 45.8	+1.7
AKT				*e*S	Sn	13 37 37.8	+0.2
AKT				pmax	pmax		
	comp=Z,48nm,0.5s						
AKT				smax	smax		
	comp=N,331nm,0.4s						
AKT				smax	smax		
	comp=E,138nm,0.6s						
AKT				smax	smax		
	comp=N,288nm,0.4s						
AKT	Akhty	4.72	290	*e*P	Pn	13 36 45.8	+1.7
	comp=N,48nm,0.5s						
AKT				*e*S	Sn	13 37 37.8	+0.2
	comp=N,288nm,0.4s						
BRDA	Brd	4.96	275	⇑P	Pn	13 36 47.7	+0.5
BRDA				⇓S	Sn	13 37 43.0	-0.2
BRDA	Brd	4.96	275	⇑P	Pn	13 36 47.7	+0.5
BRDA				⇓S	Sn	13 37 43.0	-0.2
SEKA	Sheki	5.05	286	P	Pn	13 36 48.9	+0.5
SEKA	Sheki	5.05	286	⇑P	Pn	13 36 49.0	+0.5
	SNR=6.0						
SEKA				⇑S	Sn	13 37 45.8	+0.3
SEKA	Sheki	5.05	286	⇑P	Pn	13 36 49.0	+0.5
	SNR=6.0						
SEKA				⇑S	Sn	13 37 45.8	+0.3
MNGR	Mingechevir, A	5.06	281	⇑P	Pn	13 36 49.8	+1.2
MNGR	Mingechevir, A	5.06	281	⇑P	Pn	13 36 49.8	+1.2
ZKTA	Zakatala	5.57	289	⇑P	Pn	13 36 57.1	+1.5
ZKTA				⇑S	Sn	13 37 59.6	+1.4
GANJ	Ganja	5.63	279	⇓P	Pn	13 36 57.6	+1.2
	SNR=12						
GANJ				⇑S	Sn	13 37 58.0	-1.8
GANJ	Ganja	5.63	279	⇓P	Pn	13 36 57.6	+1.2
	SNR=12						
GANJ				⇑S	Sn	13 37 58.0	-1.8
ORD	Ordubad	6.01	262	⇓P	Pn	13 37 01.2	-0.5
ORD	Ordubad	6.01	262	⇓P	Pn	13 37 01.2	-0.5
ORD				⇓S	Sn	13 38 07.2	-2.1
GDB	GEDABAY	6.06	279	⇓P	Pn	13 37 03.2	+0.7
	SNR=7.5						
GDB	GEDABAY	6.06	279	⇓P	Pn	13 37 03.2	+0.7
	SNR=7.5						
GDB				⇑S	Sn	13 38 08.6	-2.1
SBZ	Shahbuz	6.26	267	⇑P	Pn	13 37 05.3	+0.1
SBZ	Shahbuz	6.26	267	⇑P	Pn	13 37 05.3	+0.1
NAX	Nakhchivan	6.34	265	⇑P	Pn	13 37 05.9	-0.4
NAX	Nakhchivan	6.34	265	⇑P	Pn	13 37 06.0	-0.4
QZX	Qazax, Azerbai	6.38	282	⇑P	Pn	13 37 08.0	+1.2
	SNR=5.6						
QZX				⇓S	Sn	13 38 16.6	-1.8
QZX	Qazax, Azerbai	6.38	282	⇑P	Pn	13 37 08.0	+1.2
	SNR=5.6						
QZX				⇓S	Sn	13 38 16.6	-1.8
DGRG	David-gareji	6.44	286	P	Pn	13 37 07.8	+0.1
DGRG				S	Sn	13 38 17.9	-1.9
DGRG	David-gareji	6.44	286	*e*P	Pn	13 37 07.7	+0.1
DGRG				*e*S	Sn	13 38 17.9	-1.9
DGRG	David-gareji	6.44	286	*e*P	Pn	13 37 07.7	+0.1
DGRG				*e*S	Sn	13 38 17.9	-1.9
GROC	Groznyy	6.69	301	*e*P	Pn	13 37 10.0	-0.9
GROC				*e*S	Sn	13 38 28.0	+2.2
GROC				pmax	pmax		
	comp=Z,19nm,0.6s						
GROC	Groznyy	6.69	301	*e*P	Pn	13 37 10.0	-0.9
	comp=Z,19nm,0.6s						
GROC				*e*S	Sn	13 38 28.0	+2.2
GNI	Garni	6.82	274	Pn	Pn	13 37 12.0	-1.0
	comp=Z,2.3nm,0.3s,baz=100,slow=17,SNR=2.1						
GNI				Sn	Sn	13 38 33.7	+4.3
	comp=Z,0.9nm,0.3s,baz=323,slow=20,SNR=3.3						
ONI	Oni	8.09	292	P	Pn	13 37 33.0	+2.8
ONI	Oni	8.09	292	*e*P	Pn	13 37 33.0	+2.8
ONI	Oni	8.09	292	*e*P	Pn	13 37 33.0	+2.8
NEY	Neytrino	8.79	295	*i* P	Pn	13 37 45.0	+5.1
KBZ	Khabaz	8.83	298	Pn	Pn	13 37 38.9	-1.3
	comp=Z,1.3nm,0.3s,baz=125,slow=4.4,SNR=13						
KBZ				Sn	Sn	13 39 12.9	-5.6
	comp=Z,1.8nm,0.3s,baz=294,slow=18,SNR=4.5						
KVAR	Kislovodsk Arr	9.05	299	Pn	Pn	13 37 42.2	-1.3
	baz=203,slow=2.5,SNR=6.3						
KVAR				Sn	Sn	13 39 18.3	-5.7
	baz=204,slow=20,SNR=9.2						
KIV	Kislovodsk	9.06	299	*e*Pn	Pn	13 37 41.7	-1.8
KIV	Kislovodsk	9.06	299	*ce*P	Pn	13 37 44.3	+0.8
KIV				*e*S	Sn	13 39 21.8	-2.4
KIV				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KIV	Kislovodsk	9.06	299	*e*Pn	Pn	13 37 41.7	-1.8
KIV	Kislovodsk	9.06	299	*e*P	Pn	13 37 44.3	+0.8
	comp=Z,6.0nm,0.7s						
AB31	Akbulak array	10.28	24	⇑Pn	Pn	13 37 57.9	-2.2
	comp=Z,0.8nm,0.4s,baz=199,slow=12,SNR=22						
AB31				⇑Sn	Sn	13 39 46.3	-7.5
	comp=Z,4.4nm,0.3s,baz=196,slow=24,SNR=8.8						
ABKAR	Akbulak array	10.28	24	*e*Pn	Pn	13 37 58.2	-1.9
ABKAR	Akbulak array	10.28	24	*e*Pn	Pn	13 37 58.2	-1.9
AKTO	Aktyubinsk	10.88	15	Pn	Pn	13 38 06.7	-1.5
	comp=Z,0.7nm,0.3s,baz=198,slow=14,SNR=8.6						
AKTO				Sn	Sn	13 39 56.7	-12
	comp=Z,2.9nm,0.3s,baz=53,slow=23,SNR=15						
AKTO	Aktyubinsk	10.88	15	⇓Pn	Pn	13 38 06.7	-1.5
	comp=Z,2.4nm,0.5s						
AKTO				⇑Sn	Sn	13 40 00.2	-8.2
	comp=Z,15nm,0.8s						
KK31	Karatay Array	13.01	71	⇑Pn	Pn	13 38 33.0	-4.5
	comp=Z,0.7nm,0.3s,baz=282,slow=12,SNR=13						
KK31				⇓Sn	Sn	13 40 54.9	-5.9
	comp=Z,2.8nm,0.5s,baz=262,slow=20,SNR=6.7						
KK31	Karatay Array	13.01	71	*e*Pn	Pn	13 38 38.0	+0.5
KK31	Karatay Array	13.01	71	*e*P	Pn	13 38 38.0	+0.5
KK31	Karatay Array	13.01	71	*e*P	Pn	13 38 38.0	+0.5
KKAR	Karatay Array	13.01	71	*e*Pn	Pn	13 38 38.1	+0.6
KKAR	Karatay Array	13.01	71	*e*P	Pn	13 38 38.1	+0.6
KKAR	Karatay Array	13.01	71	*e*P	Pn	13 38 38.1	+0.6
KBL	Kabul	13.42	109	*e*Pn	Pn	13 38 44.7	+1.4
KBL	Kabul	13.42	109	*e*P	Pn	13 38 44.7	+1.4
KBL	Kabul	13.42	109	*e*P	Pn	13 38 44.7	+1.4
VRH	Novokhopyorsk	13.94	327	*e*P	Pn	13 38 44.8	-5.2
VRH				*e*S	Sn	13 41 13.1	-10
VRH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VRH				smax	smax		
	comp=N,40nm,0.8s						
MNAS	Manas	14.41	74	⇑Pn	Pn	13 38 52.1	-4.5
	comp=N,2.5nm,1.0s						
MNAS				⇑Sn	Sn	13 41 30.0	-5.0
	comp=N,3.1nm,1.1s						
VORD	Divnogorie	14.85	322	*e*P	Pn	13 38 59.1	-3.0
VORD				pmax	pmax		
	comp=Z,6.0nm,0.7s						
VSR	Storozhevoye	15.08	323	*e*P	Pn	13 39 01.3	-3.8
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SFK	Sufi-Kurgan	15.23	84	⇑Pn	Pn	13 39 05.3	-2.2
	comp=Z,0.7nm,0.4s						
SFK				⇑Sn	Sn	13 41 47.4	-7.6
	comp=Z,1.7nm,0.6s						
BRTR	Keskin Array B	15.36	275	Pn	Pn	13 39 10.2	+1.1
	comp=Z,0.1nm,0.3s,baz=87,slow=7.8,SNR=2.9						
BRTR	Keskin Array B	15.36	275	*ce*P	P	13 39 15.8	+2.7
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRTR	Keskin Array B	15.36	275	*e*P	P	13 39 15.8	+2.7
	comp=Z,1.0nm,0.5s						
AAK	Ala-Archa	15.89	74	Pn	Pn	13 39 16.7	+0.8
	comp=Z,0.4nm,0.3s,baz=278,slow=7.1,SNR=2.2						
TKM2	Tokmak 2	16.71	73	⇑Pn	Pn	13 39 25.5	-0.8
	comp=Z,5.9nm,1.1s						
TKM2				⇓Sn	Sn	13 42 20.4	-11
	comp=Z,4.0nm,1.0s						
TKM2	Tokmak 2	16.71	73	Pn	Pn	13 39 25.5	-0.8
	comp=Z,5.9nm,1.1s						
ARU	Arti	16.75	10	Pn	Pn	13 39 23.6	-2.9
	comp=Z,0.0nm,0.3s,baz=227,slow=6.1,SNR=5.3						
ARU				Sn	Sn	13 42 14.1	-17
	comp=Z,0.0nm,0.3s,baz=107,slow=19,SNR=4.0						
ARU	Arti	16.75	10	*e*Pn	Pn	13 39 23.4	-3.1
	comp=Z,12nm,0.9s						
ARU	Arti	16.75	10	*c i*P	P	13 39 29.2	+1.0
ARU				S	Sn	13 42 30.2	-1.2
ARU				pmax	pmax		
	comp=Z,18nm,1.2s						
KSH	Kashi	17.18	84	*e*P	Pn	13 39 33.0	+0.9
KSH				sP	pP	13 39 44.8	+1.0
BRVK	Borovoye	17.31	36	*e*Pn	Pn	13 39 34.4	+1.0
	comp=Z,3.8nm,0.8s						
BRVK	Borovoye	17.31	36	*ce*P	P	13 39 37.6	+3.2
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BVAR	Borovoye Array	17.34	36	P	Pn	13 39 32.6	-1.2
	comp=Z,0.4nm,0.3s,baz=229,slow=17,SNR=8.1						
BVAR				S	Sn	13 42 32.6	-13
	comp=Z,0.5nm,0.3s,baz=224,slow=22,SNR=3.7						
KDJ	Kajisay	17.87	76	*e*Pn	P	13 39 44.9	+4.0
	comp=Z,5.0nm,1.1s						
OBN	Obninsk	18.92	329	⇓*e*P	P	13 39 53.2	+1.1
OBN				*e*S	Sn	13 43 23.9	+0.1
OBN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,39nm,19.0s						
TLB	Topalu	19.45	292	⇓*i*P	P	13 39 58.2	+0.3
TLB	Topalu	19.45	292	⇓*i*P	P	13 39 58.2	+0.3
AKASG	Malin Array Be	20.12	310	P	P	13 40 05.2	0.0
	comp=Z,3.6nm,0.3s,baz=100,slow=8.8,SNR=11						
AKBB	Malin Array Si	20.12	310	*e*P	P	13 40 04.5	-0.7
	comp=Z,18nm,1.2s						
AKBB	Malin Array Si	20.12	310	*e*P	P	13 40 04.5	-0.7
	comp=Z,18nm,1.2s						
KIEV	Kiev	20.13	310	*e*P	P	13 40 04.3	-1.0
	comp=Z,20nm,1.3s						
KIEV	Kiev	20.13	310	*i* P	P	13 40 05.0	-0.3
KIEV				pmax	pmax		
	comp=Z,15nm,1.2s						
AK11	Malin Array Si	20.15	310	*e*P	P	13 40 05.0	-0.6
KURBB	Kurchatov Arra	20.38	50	P	P	13 40 10.9	+2.9
	comp=Z,0.6nm,0.7s,baz=252,slow=13,SNR=3.9						
KURK	Kurchatov	20.47	50	*ce*P	Pn	13 40 13.8	+2.4
KURK				pmax	pmax		
	comp=Z,6.0nm,1.5s						
MLR	Muntele Rosu	21.01	294	P	P	13 40 14.4	-0.6
	comp=Z,0.4nm,0.5s,baz=175,slow=9.8,SNR=3.3						
MLR	Muntele Rosu	21.01	294	⇓*i*P	P	13 40 17.1	+2.1
BURAR	Bucovina Array	21.79	300	⇓*i*P	P	13 40 24.2	+0.9
BURAR	Bucovina Array	21.79	300	⇓*i*P	P	13 40 24.2	+0.9
BUR04	Bucovina Ar. S	21.79	300	*e*P	P	13 40 23.3	-0.1
BUR08	Bucovina Ar. S	21.80	300	*e*P	P	13 40 23.5	0.0
MK31	Makanchi Array	21.82	62	*e*P	P	13 40 26.6	+3.0
MK31	Makanchi Array	21.82	62	*e*P	P	13 40 26.6	+3.0
MK31	Makanchi Array	21.82	62	*e*P	P	13 40 26.6	+3.0
MKAR	Makanchi Array	21.82	62	P	P	13 40 26.4	+2.8
	comp=Z,1.5nm,0.7s,baz=248,slow=11,SNR=17						
MKAR	Makanchi Array	21.82	62	*e*P	P	13 40 26.6	+3.0
	comp=Z,16nm,0.6s						
MKAR	Makanchi Array	21.82	62	*e*P	P	13 40 26.8	+3.2
MKAR	Makanchi Array	21.82	62	*e*P	P	13 40 26.6	+3.0
	comp=Z,16nm,0.6s						
MK01	Makanchi Array	21.82	62	*e*P	P	13 40 26.4	+2.7
MK01	Makanchi Array	21.82	62	*e*P	P	13 40 26.4	+2.7
KLMR	Klimovskoe	22.63	342	*e*P	P	13 40 33.3	+1.2
KLMR				pmax	pmax		
	comp=Z,48nm,0.8s						
KLMR	Klimovskoe	22.63	342	*e*P	P	13 40 33.4	+1.3
KLMR				AMP		13 40 35.8	
	comp=Z,48nm,0.8s						
IDI	Anoyia	23.19	267	P	P	13 40 36.5	-1.7
	comp=Z,11nm,0.9s,baz=151,slow=13,SNR=2.7						
DRGR		23.37	297	⇓*i*P	P	13 40 42.1	+2.3
ZALV	Zalesovo Beam	25.19	46	P	P	13 40 59.6	+3.3
	comp=Z,0.5nm,0.3s,baz=187,slow=10,SNR=2.3						
WMQ	Urumqi	25.52	70	P	P	13 41 01.8	+2.2
DGZ	Jazzator, Alta	25.65	57	*i* P	P	13 41 07.8	+7.0
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.2s						
FINES	FINESS Array B	27.29	331	P	P	13 41 14.4	-0.7
	comp=Z,1.7nm,0.7s,baz=132,slow=9.5,SNR=4.8						
FINES	FINESS Array B	27.29	331	*i* P	P	13 41 23.3	+8.1
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
VRAC	Vranov	27.70	302	P	P	13 41 17.3	-1.8
	comp=Z,1.7nm,0.4s,baz=60,slow=20,SNR=2.2						
GERES	GERESS Array B	29.57	301	P	P	13 41 36.2	+0.4
	comp=Z,0.3nm,0.2s,baz=106,slow=14,SNR=2.4						
HFS	Hagfors	31.89	323	P	P	13 41 55.7	-0.3
	comp=Z,0.6nm,0.3s,baz=118,slow=8.7,SNR=6.6						
ULN	Ulaanbaatar	38.59	60	*i* P	P	13 43 02.1	+8.2
ULN				pmax	pmax		
	comp=Z,4.0nm,2.1s						
LZH	Lanzhou	39.31	79	*e*P	P	13 43 05.6	+5.5
LZH				pP	pP	13 43 14.9	+2.6
LZH				sP	sP	13 43 18.8	+1.2
LZH				*e*PP	PnPn	13 44 39.1	+5.3
LZH				pmax	pmax		
	comp=Z,13nm,1.0s						
LZH				pmax	pmax		
	comp=Z,71nm,4.9s						
EKA	Eskdalemuir Ar	40.02	312	P	P	13 43 06.3	+0.8
	comp=Z,1.8nm,0.8s,baz=88,slow=8.0,SNR=3.5						
HHC	Hu-ho-hao-te	43.40	69	*e*P	P	13 43 35.4	+1.9
HHC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,90nm,5.3s						
HIA	Hailar	46.56	56	*i* P	P	13 44 05.5	+7.1
HIA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
YAK	Yakutsk	49.31	37	*e*P	P	13 44 27.3	+7.9
YAK				pmax	pmax		
	comp=Z,8.0nm,0.5s						
TORD	Torodi Ar. Bea	52.70	255	P	P	13 44 45.1	-0.4
	comp=Z,0.2nm,0.3s,baz=46,slow=4.9						
PET	Petropavlovsk	67.04	39	*e*P	P	13 46 30.5	+7.1
PET				pmax	pmax		
	comp=Z,38nm,2.5s						

SJA 18 13:38:06.0±0.5, 34°.19S×73°.24W, h22^{km}±20^{km}, ML3.6, MW4.2, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO05	HualaæØ	1.35	128	*i* P	Pb	13 38 31.8	+1.1
GO05				*i* S	Sb	13 38 50.5	+2.9
ROC1	El Roble	2.21	57	*i* P	Pb	13 38 44.1	-1.4
AUSP	Uspallata	3.77	60	*i* P	Pn	13 39 06.9	+3.7
AAGR	Agrelo	3.84	75	*i* P	Pn	13 39 07.0	+3.1
ARCO	CERRO ARCO	3.84	71	*i* P	Pn	13 39 07.3	+3.4
ARCO				IAML		13 39 11.9	
	comp=Z,150nm,0.3s						
ASAL	Salagasta	4.01	68	*i* P	Pn	13 39 09.9	+3.7
RTLS	Leoncito	4.08	55	*i* P	Pn	13 39 11.1	+3.7
RTLS				*i* S	Sn	13 39 59.5	+5.0
RTLS				IAML		13 39 59.7	
	comp=Z,53nm,0.6s						
RTCV	Cerro Valdivia	4.58	61	*i* P	Pn	13 39 17.2	+3.2
RTLL	Cerro Villicun	4.92	56	*i* P	Pn	13 39 22.7	+4.0

ISCJB 18 13:41:08.7±2.1, 11°.31N±0°.04×126°.42E±0°.06, h13^{km}±13^{km}, mb4.0/14, MS3.1/1, Error ellipse: s-maj=9.6km s-min=6.7km az=176.8

IDC 18 13:41:09.1±0.8, 11°.26N×126°.15E, h0^{km}, mb4.0/12, mb1 4.1/12, mb1mx3.8/62, mbtmp4.0/12, MS3.1/3, Ms1 3.1/3, ms1mx2.7/51, Error ellipse: s-maj=47.4km s-min=13.7km az=69.0

NEIC 18 13:41:10.6±0.5, 11°.27N×126°.15E, h10^{km}, mb4.5/2, Error ellipse: s-maj=27.1km s-min=7.9km az=70.0

MAN 18 13:41:15.1, 11°.46N×126°.04E, h25^{km}, mb4.9, ML3.8, MS3.8

ISC 18 13:41:09.9±2.3, 11°.30N±0°.05×126°.23E±0°.08, h5^{km}±14^{km}, n37, σ1^s.27/40, mb4.1/14, 1C-2D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	Borongan	0.83	291	eP	Pb	13 41 27.1	+0.3
PLP	Palo	1.23	264	⇓iP	Pn	13 41 33.8	0.0
PLP				i S	Sg	13 41 48.1	-1.4
OCLP	Ormoc	1.61	261	eP	Pg	13 41 40.4	-0.3
MSLP	Maasin	1.77	229	eP	Pn	13 41 41.9	+0.6
MSLP				eS	Sg	13 42 07.0	+0.1
CNP	Catarman	1.95	308	eP	Pn	13 41 44.1	+0.5
CNP				eS	Sn	13 42 05.0	-3.5
BUTP	Butuan	2.39	195	eP	Pb	13 41 54.1	+0.7
BUTP				eS	Sg	13 42 25.6	-1.1
LLP	Lapu-Lapu	2.43	247	⇑eP	Pb	13 41 53.8	-0.3
LLP				eS	Sg	13 42 27.8	-0.1
PVCP	Virac	3.05	319	eP	Pn	13 41 58.6	-0.2
PVCP				eS	Sn	13 42 38.1	+2.3
RCP	Roxas	3.42	275	⇓eP	Pn	13 42 06.5	+2.5
BUKP	Musuan	3.59	199	eP	Pn	13 42 05.1	-1.1
BUKP				eS	Sn	13 42 47.9	-1.2
GUIM	Jordan	3.63	260	eP	Pn	13 42 08.2	+1.4
DAV	Davao City (W)	4.25	189	LR	LR	13 44 26.4	
	comp=Z,278nm,19.8s,baz=344,slow=47						
MATI	Mati	4.33	180	eP	Pb	13 42 28.0	+1.5
PAGZ	Pagadian	4.43	220	eP	Pn	13 42 19.3	+1.5
BOAC	Boac	4.79	297	eP	Pn	13 42 23.3	+0.5
BUSP	Coron	5.95	277	eP	Pn	13 42 42.2	+3.6
GUMO	Guam	18.35	81	LR	LR	13 51 49.6	
	comp=Z,46nm,18.6s,baz=228,slow=35						
KSAR	Wonju Array Be	26.07	3	P	P	13 46 44.4	-0.1
KSRS	Korea Array	26.09	3	P	P	13 46 44.4	-0.2
	0.4nm,0.4s,baz=184,slow=11,SNR=3.3						
CMAR	Chiang Mai Arr	27.29	288	P	P	13 46 54.6	-1.0
	1.4nm,0.7s,baz=98,slow=7.3,SNR=5.6						
MJAR	Matsushiro Arr	27.36	21	LR	LR	13 58 10.2	
	comp=Z,45nm,18.0s,baz=190,slow=37						
FITZ	Fitzroy Crossi	29.21	181	P	P	13 47 13.1	+0.4
	1.0nm,0.4s,baz=208,slow=3.9,SNR=3.9						
WRAB	Tennant Creek	32.05	165	eP	P	13 47 38.2	+0.4
	2.5nm,0.9s						
WRA	Warramunga Arr	32.05	166	P	P	13 47 36.7	-1.1
	0.8nm,0.7s,baz=345,slow=9.4,SNR=9.1						
WRA				PcP	PcP	13 50 27.9	+0.2
	0.2nm,0.5s,baz=340,slow=2.7,SNR=3.7						
ASAR	Alice Springs	35.55	168	P	P	13 48 07.4	-0.9
	0.5nm,0.4s,baz=353,slow=7.8,SNR=21						
ASAR				PcP	PcP	13 50 37.2	-0.3
	0.4nm,0.7s,baz=335,slow=2.4,SNR=4.2						
H11N1	WAKE ISLAND Hy	39.98	73	T	T	14 32 12.7	
	baz=265,slow=74,SNR=9.3						
H11N2	WAKE ISLAND Hy	39.99	73	T	T	14 32 18.9	
	baz=265,slow=74,SNR=4.8						
H11N3	WAKE ISLAND Hy	40.00	73	T	T	14 32 19.6	
	baz=265,slow=74,SNR=5.2						
SONM	Songino Array	40.05	339	P	P	13 48 46.8	+0.6
	0.5nm,0.5s,baz=157,slow=8.0,SNR=3.9						
STKA	Stephens Creek	45.38	162	P	P	13 49 30.4	+0.9
	2.9nm,0.7s,baz=328,slow=12,SNR=3.8						
MKAR	Makanchi Array	51.19	322	P	P	13 50 14.6	+0.4
	3.2nm,0.6s,baz=120,slow=8.5,SNR=22						
ZALV	Zalesovo Beam	53.71	331	P	P	13 50 31.6	-1.2
	0.9nm,0.3s,baz=141,slow=5.5,SNR=3.5						
KURK	Kurchatov	55.20	325	P	P	13 50 44.0	+0.3
KURBB	Kurchatov Arra	55.21	325	P	P	13 50 44.0	+0.2
	4.2nm,0.5s,baz=126,slow=7.1,SNR=29						
BVAR	Borovoye Array	60.80	325	P	P	13 51 23.0	0.0
	1.3nm,0.6s,baz=126,slow=7.5,SNR=7.8						
BRVK	Borovoye	60.87	325	eP	P	13 51 23.3	-0.1
	6.2nm,0.6s						
FINES	FINESS Array B	84.97	332	P	P	13 53 45.4	-0.7
	0.6nm,0.5s,baz=46,slow=6.0,SNR=5.8						

MAN 18 14:03:08.9, 15°.82N×123°.04E, h75^{km}, mb4.8, ML3.7, MS3.7, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BALP	Baler	1.41	267	eP	Pn	14 03 30.3	-2.7
BALP				eS	Sn	14 03 46.5	-4.6
CAUP	Cauayan	1.62	314	eP	Pn	14 03 36.4	+0.8
CAUP				eS	Sn	14 03 49.3	-6.6
PVCP	Virac	2.46	154	eP	Pn	14 03 47.2	+0.3
BOAC	Boac	2.62	206	eP	Pn	14 03 50.1	+1.1
APYP	Conner	2.66	320	eP	Pn	14 03 51.0	+1.4
APYP				eS	Sn	14 04 21.9	+0.9
BOLP	Bolinao	3.06	281	eP	Pn	14 03 56.4	+1.4

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*NIED **18** 14:18:00, 40°.90N×143°.30E, h29^{km}, Mw3.5 Best double couple: $M_0$2.25000×10^{14} NP1: ϕ_s256.00000°, δ42.00000°, λ141.00000°. NP2: ϕ_s17.00000°, δ65.00000°, λ55.00000°.*

*JMA **18** 14:18:18.5±0.2, 40°.86N×143°.32E, h18^{km}±4^{km}, M3.5*

*ISCJB **18** 14:18:19.6±0.7, 40°.86N±0°.04×143°.40E±0°.07, h48^{km}±9^{km}, mb3.6/4, Error ellipse: s-maj=9.8km s-min=4.4km az=31.0*

*IDC **18** 14:18:22.0±3.1, 40°.93N×143°.32E, h47^{km}±25^{km}, mb3.3/4, mb1 3.3/6, mb1mx3.1/61, mbtmp3.4/6, ML2.9/2, MS2.0/1, Ms1 2.0/1, ms1mx1.8/26, Error ellipse: s-maj=60.5km s-min=19.2km az=90.0*

ISC 18 14:18:19.8±2.7, 40°.87N±0°.05×143°.38E±0°.07, h29^{km}±20^{km}, n27, σ0^s.86/32, mb3.6/4, 3C-1D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JEM	Erimo	1.15	352	P	Pn	14 18 39.6	-0.3
JTHR	Tokachihiroo	1.42	358	P	Pn	14 18 44.0	+0.5
JTHR				eS	Sn	14 19 01.7	+0.5
JNBK	Urakawa-nobuka	1.48	342	P	Pn	14 18 44.7	+0.3
JNBK				eS	Sb	14 19 04.4	-0.7
JTH	Tanohata	1.49	232	⇑P	Pn	14 18 44.1	-0.4
JTH				eS	Sn	14 19 02.1	-0.8
JANG	Nango	1.50	251	⇑P	Pn	14 18 44.0	-0.7
JANG				eS	Sn	14 19 03.3	0.0
JCH	Churui	1.74	360	P	Pn	14 18 48.5	+0.5
JCH				eS	Sn	14 19 09.3	+0.1
JTM	Tenmabayashi	1.75	268	P	Pn	14 18 48.5	+0.3
JTM				eS	Sn	14 19 09.4	-0.1
JOT	Ohata	1.83	287	⇑P	Pn	14 18 49.0	-0.2
JOT				eS	Sn	14 19 11.6	+0.2
JKB	Kayabe	2.04	301	P	Pn	14 18 52.0	0.0
JKB				eS	Sn	14 19 17.1	+0.7
JOM	Ohasama	2.12	229	P	Pn	14 18 54.0	+0.7
JAK	Akkeshi	2.34	24	P	Pn	14 18 56.7	+0.5
JAK				S	Sn	14 19 23.2	-0.7
JFR	Furan	2.36	346	P	Pn	14 18 58.5	+1.9
JEW	Eniwo	2.44	324	P	Pn	14 18 59.3	+1.7
JAR	Ashorobuto	2.44	7	⇓P	Pn	14 18 57.6	0.0
JAR				S	Sn	14 19 25.2	-1.2
JMK	Ichinoseki	2.54	222	P	Pn	14 19 00.2	+1.3
ASAJ	Asahikawa	3.29	350	P	Pn	14 19 10.6	+1.3
	1.0nm,0.3s,baz=201,slow=13,SNR=22						
ASAJ				S	Sn	14 19 47.7	+0.3
	1.6nm,0.3s,baz=164,slow=15,SNR=3.2						
MJAR	Matsushiro Arr	5.92	225	P	Pn	14 19 47.3	+1.8
	0.3nm,0.3s,baz=30,slow=14,SNR=4.3						
MJAR				LR	LR	14 21 58.0	
	comp=Z,15nm,20.4s,baz=245,slow=36						
H11N2	WAKE ISLAND Hy	29.10	129	T	T	14 55 04.7	
	baz=322,slow=74,SNR=20						
H11N1	WAKE ISLAND Hy	29.11	129	T	T	14 55 05.5	
	baz=322,slow=74,SNR=23						
H11N3	WAKE ISLAND Hy	29.12	129	T	T	14 55 06.1	
	baz=322,slow=74,SNR=18						
H11S1	WAKE ISLAND Hy	29.95	131	T	T	14 56 10.2	
	baz=323,slow=76,SNR=8.6						
H11S3	WAKE ISLAND Hy	29.95	131	T	T	14 56 10.4	
	baz=323,slow=76,SNR=7.3						
H11S2	WAKE ISLAND Hy	29.96	131	T	T	14 56 10.4	
	baz=323,slow=76,SNR=7.4						
MKAR	Makanchi Array	43.49	299	P	P	14 26 19.3	-0.9
	0.4nm,0.7s,baz=81,slow=9.2,SNR=5.1						
KURBB	Kurchatov Arra	44.94	305	P	P	14 26 31.6	-0.2
	1.1nm,0.6s,baz=79,slow=8.7,SNR=5.9						
BVAR	Borovoye Array	49.19	310	P	P	14 27 05.2	+0.2
	0.3nm,0.4s,baz=79,slow=9.2,SNR=2.4						
WRA	Warramunga Arr	61.08	190	P	P	14 28 30.9	-0.1
	0.3nm,0.8s,baz=5.3,slow=6.8,SNR=2.2						

MAN 18 14:47:06.6, 10°.84N×126°.30E, h92^{km}, mb4.7, ML3.5, MS3.4, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	Borongan	1.14	312	eP	Pn	14 47 28.1	+0.1
PLP	Palo	1.34	284	⇓eP	Pn	14 47 31.1	+0.7
PLP				eS	Sn	14 47 49.5	+1.0
OCLP	Ormoc	1.68	277	eP	Pn	14 47 38.6	+4.0
CNP	Catarman	2.31	316	eP	Pn	14 47 44.1	+1.2
CNP				eS	Sn	14 48 11.4	+0.6
PVCP	Virac	3.45	323	eP	Pn	14 47 59.5	+1.2

IDC 18 15:14:14.4±427.0, 46°.99N×47°.64E, h0^{km}, Error ellipse: s-maj=174.5km s-min=142.1km az=15.0, Ukraine-Moldova-Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I31KZ	AKTYUBINSK INF	7.68	60	i		16 02 10.0	
	baz=248,slow=318,SNR=0.5						
I43RU	DUBNA INFRASON	11.67	330	i		16 29 10.0	
	baz=142,slow=324,SNR=0.7						
I26DE	FREYUNG INFRAS	22.71	287	i		17 32 50.0	
	baz=82,slow=312,SNR=2.9						

IDC 18 15:18:26.9±2.3, 1°.62N×90°.04E, h0^{km}, mb3.5/4, mb1 3.7/5, mb1mx3.3/70, mbtmp3.7/5, ML3.9/1, Error ellipse: s-maj=69.5km s-min=28.5km az=47.0, North Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	Pallekele	10.87	301	Pn	Pn	15 21 03.0	-0.9
	0.8nm,0.3s,baz=116,slow=6.0,SNR=6.6						
PALK				Sn	Sn	15 22 53.0	-13
	0.7nm,0.3s,baz=116,slow=3.8,SNR=3.8						
MKAR	Makanchi Array	45.50	353	P	P	15 26 48.3	+0.1
	0.3nm,0.8s,baz=163,slow=8.9,SNR=3.8						
SONM	Songino Array	48.17	15	P	P	15 27 08.8	-0.4
	0.4nm,0.4s,baz=190,slow=7.3,SNR=3.0						
WRA	Warramunga Arr	48.43	119	P	P	15 27 11.3	-0.2
	0.6nm,0.7s,baz=296,slow=8.6,SNR=5.3						
KURBB	Kurchatov Arra	49.80	350	P	P	15 27 21.6	+0.2
	0.4nm,0.7s,baz=159,slow=8.0,SNR=3.3						

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*KRSC **18** 15:30:22.5±1.8, 50°.72N×155°.91E, h175^{km}±12^{km}, ML4.3*

*SKHL **18** 15:30:22.1±0.7, 51°.03N×155°.09E, h156^{km}±3^{km}, mb4.8/4, msh5.3/2*

*MOS **18** 15:30:23.7±1.1, 50°.96N×155°.36E, h176^{km}, mb4.2/15, Error ellipse: s-maj=14.9km s-min=4.2km az=65.0*

*ISCJB **18** 15:30:23.4±0.3, 50°.93N±0°.04×155°.41E±0°.07, h173^{km}±2^{km}, mb4.1/50, Error ellipse: s-maj=8.9km s-min=4.1km az=136.9*

*NEIC **18** 15:30:25.5±0.5, 51°.15N×155°.16E, h175^{km}±5^{km}, mb4.3/32, Error ellipse: s-maj=14.1km s-min=5.1km az=142.0*

*IDC **18** 15:30:25.5±1.2, 51°.08N×155°.30E, h174^{km}±9^{km}, mb3.5/17, mb1 3.7/22, mb1mx3.5/73, mbtmp4.1/22, MS2.1/1, Ms1 2.1/1, ms1mx1.9/56, Error ellipse: s-maj=15.5km s-min=9.6km az=155.0*

ISC 18 15:30:24.1±0.6, 50°.88N±0°.06×155°.52E±0°.06, h171^{km}±5^{km}, n162, σ1^s.61/198, mb4.2/50, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.42	117	eP	Pn	15 30 47.1	-0.4
SKR				AMB	AMB	15 30 47.6	
	1μm,0.7s						
SKR				eS	Sn	15 31 06.0	+0.6
SKR				A	A	15 31 09.2	
	780nm,0.5s						
SKR				A	A	15 31 09.2	
	1μm,0.5s						
SKR	Severo-Kuril's	0.42	117	eP	Pn	15 30 46.9	-0.6
SKR				eS	Sn	15 31 04.5	-1.0
SKR	Severo-Kuril's	0.42	117	ePN	Pn	15 30 47.1	-0.4
SKR				eS	Sn	15 31 04.4	-1.0
SKR				pmax	pmax		
	comp=Z,1μm,0.7s						
SKR				smax	smax		
	comp=N,576nm,0.6s						
SKR				smax	smax		
	comp=E,1μm,0.8s						
PAU	Pauzhetka	1.00	54	eP	Pn	15 30 50.7	-0.1
PAU				AMB	AMB	15 30 51.1	
	comp=E,140nm,0.5s						
PAU				eS	Sn	15 31 13.3	+1.8
PAU				A	A	15 31 25.6	
	comp=E,760nm,0.5s						
PAU				A	A	15 31 25.6	
	comp=E,390nm,0.5s						
PAU	Pauzhetka	1.00	54	eP	Pn	15 30 50.5	-0.3
PAU				eS	Sn	15 31 11.0	-0.5
PAU	Pauzhetka	1.00	54	ePN	Pn	15 30 50.7	-0.1
PAU				eS	Sn	15 31 13.3	+1.8
MIPR	Malaya Ipel'ka	1.60	28	eP	Pn	15 30 56.8	+0.6
MIPR	Malaya Ipel'ka	1.60	28	PN	Pn	15 30 56.8	+0.6
KDTR	Khodutka, Kamc	1.85	59	eP	Pn	15 30 58.2	-0.6
KDTR				eS	Sn	15 31 23.0	-2.8
ASAK	Asacha	2.11	44	eP	Pn	15 31 02.1	+0.3
ASAK	Asacha	2.11	44	PN	Pn	15 31 02.1	+0.3
APC	Apacha	2.29	26	i P	Pn	15 31 04.0	+0.3
APC				i S	Sn	15 31 34.6	+0.1
APC	Apacha	2.29	26	PN	Pn	15 31 04.0	+0.3
APC				S	Sn	15 31 34.6	+0.1
MTVR	Mutnovka	2.31	45	eP	Pn	15 31 04.4	+0.3
MTVR				i S	Sn	15 31 35.6	+0.4
MTVR	Mutnovka	2.31	45	PN	Pn	15 31 04.4	+0.3
MTVR				S	Sn	15 31 35.6	+0.4
RUS	Russkaya	2.43	49	eP	Pn	15 31 05.3	0.0
RUS				eS	Sn	15 31 35.9	-1.5
RUS	Russkaya	2.43	49	PN	Pn	15 31 05.3	0.0
RUS				S	Sn	15 31 35.9	-1.5
KRMR	Karymshinskiy	2.54	39	eP	Pn	15 31 06.7	+0.1
KRMR				i S	Sn	15 31 38.0	-1.7
KRMR	Karymshinskiy	2.54	39	PN	Pn	15 31 06.7	+0.1
KRMR				S	Sn	15 31 38.0	-1.7
PEA0B	Petropavlovsk-	2.61	30	ePn	Pn	15 31 08.2	+0.8
PETK	Petropavlovsk-	2.61	30	P	Pn	15 31 08.6	+1.1
	baz=188,slow=10.0						
PETK				S	Sn	15 31 41.0	-0.2
	baz=242,slow=14						
PETK				LR	LR	15 31 56.2	
	comp=E,37nm,21.3s,baz=239,slow=36						
PETK	Petropavlovsk-	2.61	30	ePn	Pn	15 31 08.1	+0.6
PET	Petropavlovsk	2.89	41	eP	Pn	15 31 11.1	+0.2
PET	Petropavlovsk	2.89	41	ePn	Pn	15 31 12.2	+1.3
PET	Petropavlovsk	2.89	41	eP	Pn	15 31 12.4	+1.6
PET				eS	Sn	15 31 47.1	-0.3
PET	Petropavlovsk	2.89	41	ePN	Pn	15 31 12.5	+1.6
PET				eS	Sn	15 31 47.2	-0.2
PET				smax	smax		
	comp=N,107nm,0.4s						
PET				smax	smax		
	comp=E,76nm,0.5s						
KOK	Koryaka	3.09	37	eP	Pn	15 31 14.8	+1.4
KOK	Koryaka	3.09	37	PN	Pn	15 31 14.8	+1.4
UGLR	Uglovaya	3.10	40	eP	Pn	15 31 15.4	+1.8
UGLR	Uglovaya	3.10	40	PN	Pn	15 31 15.4	+1.8
AVH	Avacha	3.11	38	eP	Pn	15 31 15.4	+1.8
AVH	Avacha	3.11	38	PN	Pn	15 31 15.4	+1.8
SMAR	Somma	3.13	39	eP	Pn	15 31 15.8	+1.8
SMAR	Somma	3.13	39	PN	Pn	15 31 15.8	+1.8
KRX	Arik	3.14	37	i P	Pn	15 31 15.7	+1.6
KRX				eS	Sn	15 31 54.3	+1.1
KRX	Arik	3.14	37	PN	Pn	15 31 15.7	+1.6
KRX				S	Sn	15 31 54.3	+1.1
SDLR	Sedlovina	3.17	39	eP	Pn	15 31 16.1	+1.6
SDLR				eS	Sn	15 31 54.6	+0.8
SDLR	Sedlovina	3.17	39	PN	Pn	15 31 16.1	+1.6
SDLR				S	Sn	15 31 54.6	+0.8
GNL	Ganaly	3.19	27	eP	Pn	15 31 15.3	+0.6
GNL	Ganaly	3.19	27	PN	Pn	15 31 15.3	+0.6
NLC	Nalytchevo	3.29	44	eP	Pn	15 31 15.5	-0.3
NLC				i S	Sn	15 31 53.4	-2.8
NLC	Nalytchevo	3.29	44	PN	Pn	15 31 15.5	-0.3
NLC				S	Sn	15 31 53.4	-2.8
SPN	Mys Shipunski	3.56	50	eP	Pn	15 31 18.7	-0.5
SPN				eS	Sn	15 31 57.2	-5.1
SPN	Mys Shipunski	3.56	50	PN	Pn	15 31 18.7	-0.5
KII	Karymskiy	3.97	36	eP	Pn	15 31 25.9	+1.4
KII	Karymskiy	3.97	36	PN	Pn	15 31 25.9	+1.4
TUMR	Tumrok	5.22	30	eP	Pn	15 31 41.8	+1.1
TUMR				eS	Sn	15 32 38.4	-2.4
TUMR	Tumrok	5.22	30	PN	Pn	15 31 41.8	+1.1
TUMR				S	Sn	15 32 38.4	-2.4
MKZ	Mys Kozlova	5.27	43	i P	Pn	15 31 40.4	-0.8
MKZ				eS	Sn	15 32 35.3	-6.5
MKZ	Mys Kozlova	5.27	43	PN	Pn	15 31 40.4	-0.8
ESO	Esso	5.40	19	eP	Pn	15 31 44.2	+1.2
ESO	Esso	5.40	19	PN	Pn	15 31 44.2	+1.2
KMNR	Kamenistaya	5.64	28	eP	Pn	15 31 47.7	+1.5
KMNR	Kamenistaya	5.64	28	PN	Pn	15 31 47.7	+1.5
KOZ	Kozyrevsk	5.80	25	eP	Pn	15 31 49.8	+1.6
KOZ	Kozyrevsk	5.80	25	PN	Pn	15 31 49.8	+1.6
KPT	Kopyto	5.82	27	eP	Pn	15 31 50.0	+1.5
KPT	Kopyto	5.82	27	PN	Pn	15 31 50.0	+1.5
LGNR	Loginova	6.06	29	eP	Pn	15 31 52.2	+0.4
LGNR	Loginova	6.06	29	PN	Pn	15 31 52.2	+0.4
KLY	Klyuchi	6.24	27	eP	Pn	15 31 54.8	+0.8
KLY	Klyuchi	6.24	27	PN	Pn	15 31 54.8	+0.8
SRKR	Sorokina	6.68	28	eP	Pn	15 32 01.1	+1.2
SRKR	Sorokina	6.68	28	PN	Pn	15 32 01.1	+1.2
SMKR	Semkarok	6.71	29	eP	Pn	15 32 00.0	-0.3
SMKR	Semkarok	6.71	29	PN	Pn	15 32 00.0	-0.3
KBTR	Krutoberegovo	6.88	36	eP	Pn	15 32 00.9	-1.5
KBTR				eS	Sn	15 33 13.0	-7.0
KBTR	Krutoberegovo	6.88	36	PN	Pn	15 32 00.9	-1.5
KUR	Kuril'sk	7.63	225	eP	Pn	15 32 11.7	-0.7
KUR				AMB	AMB	15 32 21.6	
	comp=E,17nm,0.6s						
KUR				eS	Sn	15 33 37.5	-0.4
KUR	Kuril'sk	7.63	225	ePN	Pn	15 32 14.3	+1.9
KUR				eS	Sn	15 33 41.6	+3.7
KUR				pmax	pmax		
	comp=E,4.0nm,0.6s						
KUR				pmax	pmax		
	comp=Z,17nm,0.6s						
KUR				pmax	pmax		
	comp=N,7.0nm,0.2s						
BKI	Bering	7.64	51	eP	Pn	15 32 12.1	-0.4
BKI				eS	Sn	15 33 28.9	-9.1
BKI	Bering	7.64	51	PN	Pn	15 32 12.1	-0.4
SHO	Shikotan	9.16	223	eP	Pn	15 32 30.2	-2.4
SHO				AMB	AMB	15 32 32.1	
	comp=N,18nm,0.5s						
SHO				eS	Sn	15 34 10.6	-3.9
SHO	Shikotan	9.16	223	PN	Pn	15 32 30.1	-2.5
SHO				eS	Sn	15 34 09.3	-5.2
SHO				pmax	pmax		
	comp=E,8.0nm,0.5s						
SHO				pmax	pmax		
	comp=Z,18nm,0.5s						
SHO				pmax	pmax		
	comp=N,11nm,0.2s						
ASAJ	Asahikawa	11.05	237	P	Pn	15 32 59.2	+1.9
	comp=N,1.5nm,0.3s,baz=68,slow=14,SNR=21						
ASAJ	Asahikawa	11.05	237	ePn	Pn	15 32 59.9	+2.6
SEY	Seymchan	12.21	353	P	Pn	15 33 10.3	-1.7
	comp=N,0.0nm,0.3s,baz=164,slow=14,SNR=2.8						
ERM	Erimo	12.29	229	ePn	Pn	15 33 12.4	-0.9
ERM	Erimo	12.29	229	ePN	Pn	15 33 12.4	-0.9
YAK	Yakutsk	17.98	318	P	P	15 34 18.8	-2.4
	baz=70,slow=3.1,SNR=11						
YAK	Yakutsk	17.98	318	eP	P	15 34 18.1	-3.2
	comp=N,37nm,1.0s						
YAK	Yakutsk	17.98	318	eP	P	15 34 20.7	-0.6
YAK				eS	S	15 37 36.7	-1.7
YAK				pmax	pmax		
	comp=Z,33nm,1.0s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,13nm,1.5s						
YAK				smax	smax		
	comp=N,58nm,5.3s						
YAK				smax	smax		
	comp=E,47nm,4.1s						
MJB9	Matsu-Tunnel	18.96	228	eP	P	15 34 33.5	+1.3
	comp=E,12nm,1.4s						
MAJO	Matsushiro	18.96	228	eP	P	15 34 32.9	+0.7
MAJO	Matsushiro	18.96	228	eP	P	15 34 33.4	+1.3
	comp=E,10nm,1.4s						
MAJO	Matsushiro	18.96	228	eP	P	15 34 33.4	+1.3
MAJO				pmax	pmax		
	comp=Z,10.0nm,1.4s						
MAT	Matsushiro	18.96	228	P	P	15 34 34.0	+1.8
MJAR	Matsushiro Arr	18.96	228	P	P	15 34 34.0	+1.8
	comp=Z,0.3nm,0.3s,baz=17,slow=11,SNR=5.8						
CAST	Castle Rocks	30.13	45	eP	P	15 36 18.4	+1.1
	comp=Z,3.0nm,0.5s						
BPAW	Bear Paw Mtn.	30.61	44	eP	P	15 36 22.3	+0.7
	comp=Z,3.3nm,0.7s						
SUA	Susitna One	30.84	49	eP	P	15 36 23.8	+0.1
	comp=Z,4.3nm,0.6s						
TRF	Thorofare Moun	30.93	45	eP	P	15 36 25.1	+0.5
	comp=Z,7.5nm,1.1s						
SONM	Songino Array	31.67	284	P	P	15 36 31.3	+0.1
	comp=Z,0.3nm,0.4s,baz=49,slow=4.6,SNR=2.6						
SONM				PcP	PcP	15 39 19.5	+0.8
	comp=Z,0.4nm,0.4s,baz=108,slow=3.2,SNR=2.7						
HHC	Hu-ho-hao-te	31.78	269	eP	P	15 36 32.0	-0.2
HHC				pmax	pmax		
	comp=Z,20nm,1.1s						
HHC				pmax	pmax		
	comp=Z,91nm,6.8s						
CCB	Clear Creek Bu	31.98	43	eP	P	15 36 33.9	+0.3
	comp=Z,6.0nm,1.1s						
IL1	Eielson Array	32.37	43	eP	P	15 36 36.9	0.0
ILAR	Eielson Array	32.37	43	P	P	15 36 37.0	+0.1
	comp=Z,4.9nm,0.7s,baz=262,slow=7.4,SNR=46						
ILB	Eielson Array	32.37	43	eP	P	15 36 37.0	+0.1
SCM	Sheep Creek Mo	32.42	48	eP	P	15 36 38.1	+0.6
	comp=Z,10.0nm,0.8s						
SCM	Sheep Creek Mo	32.42	48	eP	P	15 36 38.1	+0.6
SCM				pmax	pmax		
	comp=Z,10.0nm,0.8s						
FYU	Fort Yukon	32.99	39	eP	P	15 36 43.5	+1.3
	comp=Z,17nm,1.4s						
DIV	Divide	33.26	49	eP	P	15 36 45.4	+0.6
DIV	Divide	33.26	49	eP	P	15 36 45.4	+0.6
	comp=Z,6.5nm,0.6s						
RIDG	Independ'e Rid	33.34	44	eP	P	15 36 44.9	-0.5
	comp=Z,3.7nm,0.6s						
HARP	HAARP	33.36	47	eP	P	15 36 45.8	+0.3
	comp=Z,10nm,0.5s						
SCRK	Sand Creek	33.69	44	eP	P	15 36 48.1	-0.4
	comp=Z,6.7nm,1.0s						
BMRM	Bremner River	33.85	49	eP	P	15 36 50.5	+0.7
	comp=Z,8.1nm,1.0s						
EGAK	Eagle	34.82	42	eP	P	15 36 58.0	0.0
	comp=Z,5.8nm,0.5s						
INK	Inuvik	37.33	35	P	P	15 37 17.8	-1.5
	comp=Z,2.6nm,0.5s,baz=301,slow=8.6,SNR=5.6						
LZH	Lanzhou	39.47	268	eP	P	15 37 35.0	-2.8
LZH				pP	pP	15 38 11.8	-2.7
LZH				sP	sP	15 38 31.3	-2.6
LZH				ePP	PP	15 39 13.1	+1.3
LZH				pmax	pmax		
	comp=Z,40nm,1.0s						
LZH				pmax	pmax		
	comp=Z,260nm,4.9s						
DLBC	Dease Lake	41.64	50	eP	P	15 37 57.6	+2.5
	comp=Z,3.8nm,0.6s						
WMQ	Urumqi	45.02	289	P	P	15 38 22.1	-0.2
KURK	Kurchatov	46.49	301	P	P	15 38 34.1	+0.5
KURK						15 40 05.2	
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	Makanchi Array	46.55	295	P	P	15 38 34.2	0.0
	comp=Z,0.6nm,0.7s,baz=39,slow=4.8,SNR=5.5						
KURBB	Kurchatov Arra	46.58	301	P	P	15 38 34.1	-0.3
	comp=Z,1.0nm,0.5s,baz=61,slow=7.4,SNR=9.0						
KURBB				PcP	PcP	15 40 05.2	-0.3
	comp=Z,0.7nm,0.6s,baz=59,slow=3.5,SNR=5.3						
YKA	Yellowknife Ar	46.69	40	P	P	15 38 36.1	+1.0
	comp=Z,3.8nm,0.6s,baz=301,slow=7.6,SNR=15						
KMI	Kunming	47.62	258	P	P	15 38 43.4	+0.4
KMI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KMI				pmax	pmax		
	comp=Z,73nm,4.0s						
SPITS	Spitsbergen Ar	48.83	350	P	P	15 38 50.2	-1.2

	comp=Z,0.4nm,0.5s,baz=62,slow=21,SNR=1.8						
SPITS	Spitsbergen Ar	48.83	350	P	P	15 38 50.2	-1.2
SPITS				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BVAR	Borovoye Array	49.53	308	P	P	15 38 56.3	-0.6
	comp=Z,1.0nm,0.4s,baz=56,slow=8.8,SNR=7.4						
BVAR				PcP	PcP	15 40 15.1	-1.0
	comp=Z,0.3nm,0.4s,baz=64,slow=3.4,SNR=3.3						
YBH	Yreka Blue Hor	54.48	66	P	P	15 39 36.4	+2.6
	comp=Z,1.5nm,0.5s,baz=301,slow=5.9,SNR=6.4						
ABKAR	Akbulak array	57.03	309	*e*P	P	15 39 50.9	-0.8
BOZ	Bozeman (W)	58.07	56	*e*P	P	15 40 00.7	+1.5
BOZ	Bozeman (W)	58.07	56	*e*P	P	15 40 00.7	+1.5
	comp=Z,3.0nm,1.0s						
BOZ	Bozeman (W)	58.07	56	*e*P	P	15 40 00.7	+1.5
BOZ				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SCKWR	San Luis Creek	58.42	69	*e*P	P	15 40 02.7	+1.2
WAKR	Walker	58.49	66	*e*P	P	15 40 03.8	+1.6
	comp=Z,5.7nm,1.4s						
KVN	Kaiserville	58.89	65	*e*P	P	15 40 06.5	+1.5
	comp=Z,4.9nm,1.2s						
KVN	Kaiserville	58.89	65	*e*P	P	15 40 06.6	+1.5
KVN				pmax	pmax		
	comp=Z,5.0nm,1.2s						
NV01	Mina Array Sit	59.19	66	*e*P	P	15 40 08.7	+1.5
NVAR	Mina Array Bea	59.19	66	P	P	15 40 09.2	+2.0
	comp=Z,1.1nm,0.5s,baz=301,slow=7.4,SNR=11						
H17A	Grant Village	59.43	56	*e*P	P	15 40 11.9	+3.2
	comp=Z,4.9nm,1.0s						
RLMT	Red Lodge	59.62	55	*e*P	P	15 40 11.7	+1.7
	comp=Z,5.8nm,0.6s						
HWUT	Hardware Ranch	60.81	59	*e*P	P	15 40 20.0	+1.9
	comp=Z,2.6nm,0.8s						
FINES	FINESS Array B	60.98	335	P	P	15 40 17.9	-0.7
	comp=Z,0.6nm,0.6s,baz=27,slow=9.4,SNR=3.0						
BW06	Boulder Array	61.09	57	*e*P	P	15 40 20.8	+0.8
	comp=Z,3.6nm,0.9s						
PD31	Pinedale Array	61.09	57	*e*P	P	15 40 21.2	+1.2
PDAR	Pinedale Array	61.09	57	P	P	15 40 21.5	+1.5
	comp=Z,2.1nm,0.7s,baz=317,slow=2.4,SNR=20						
PDAR	Pinedale Array	61.09	57	*e*P	P	15 40 21.0	+1.0
PDAR	Pinedale Array	61.09	57	*e*P	P	15 40 21.0	+1.0
TPNV	Topopah Spring	61.39	66	*e*P	P	15 40 23.4	+1.5
	comp=Z,2.9nm,0.8s						
TPNV	Topopah Spring	61.39	66	*e*P	P	15 40 23.5	+1.5
TPNV				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GSC	Goldstone, Bar	62.21	67	*e*P	P	15 40 29.1	+1.7
	comp=Z,12nm,1.6s						
GSC	Goldstone, Bar	62.21	67	*e*P	P	15 40 29.1	+1.7
GSC				pmax	pmax		
	comp=Z,12nm,1.6s						
TMUT	Trail Mountain	62.61	61	*e*P	P	15 40 31.9	+1.6
	comp=Z,3.4nm,0.7s						
SRU	San Rafael Swe	63.12	60	*e*P	P	15 40 35.2	+1.7
	comp=Z,6.1nm,0.8s						
SRU	San Rafael Swe	63.12	60	*e*P	P	15 40 35.2	+1.7
SRU				pmax	pmax		
	comp=Z,6.0nm,0.8s						
PV10	Paradox Valley	64.46	60	*e*P	P	15 40 44.7	+2.3
HFS	Hagfors	65.13	340	P	P	15 40 46.2	+0.2
	comp=Z,3.2nm,1.1s,baz=44,slow=6.4,SNR=2.8						
S22A	4UR Ranch, Cre	66.12	59	*e*P	P	15 40 55.3	+2.2
	comp=Z,2.9nm,1.1s						
ECSD	EROS Data Cent	66.91	49	*e*P	P	15 40 58.3	+0.6
	comp=Z,4.3nm,0.8s						
ANMO	Albuquerque	68.37	61	P	P	15 41 08.9	+1.7
	comp=Z,1.3nm,0.6s,baz=332,slow=9.3,SNR=4.0						
MNTX	Cornudas Mount	71.38	63	*e*P	P	15 41 26.9	+1.5
	comp=Z,5.3nm,1.5s						
WMOK	Wichita Mounta	72.68	56	*e*P	P	15 41 33.8	+0.8
	comp=Z,2.4nm,0.8s						
WMOK	Wichita Mounta	72.68	56	*e*P	P	15 41 33.8	+0.8
WMOK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
WRA	Warramunga Arr	72.94	201	P	P	15 41 35.0	+0.5
	comp=Z,0.4nm,0.9s,baz=15,slow=6.6,SNR=4.0						
TX31	Lajitas Ar. Si	74.14	63	*e*P	P	15 41 43.0	+1.3
TXAR	Lajitas Array	74.14	63	P	P	15 41 43.2	+1.5
	comp=Z,2.8nm,0.6s,baz=296,slow=4.3,SNR=19						
ASAR	Alice Springs	76.64	200	P	P	15 41 57.5	+1.8
	comp=Z,0.2nm,0.4s,baz=14,slow=5.1,SNR=13						
QSPA	South Pole Qui	140.62	180	PKhKP	PKPpre	15 49 26.1	
	comp=Z,0.6nm,0.7s,baz=308,slow=5.6,SNR=4.8						
CPUP	Villa Florida	144.98	58	PKP	PKPbc	15 49 40.6	+0.4
	comp=Z,2.0nm,0.8s,baz=231,slow=3.4,SNR=3.9						
PLCA	Paso Flores	146.82	90	PKPbc	PKPdf	15 49 44.3	+0.9
	comp=Z,0.6nm,0.6s,baz=339,slow=5.8,SNR=3.3						

ISCJB ***18*** *15:44:03.0±1.3, 7°.4S±0°.2×68°.4E±0°.1, h10^{km}, mb3.5/6, MS3.4/12, Error ellipse: s-maj=25.0km s-min=13.1km az=18.6*

IDC ***18*** *15:44:02.5±2.0, 7°.59S×68°.13E, h0^{km}, mb3.5/6, mb1 3.7/6, mb1mx3.4/63, mbtmp3.5/6, MS3.3/13, Ms1 3.3/13, ms1mx3.0/53, Error ellipse: s-maj=59.5km s-min=30.2km az=50.0*

ISC 18 15:44:05.5±1.5**, 7°.3S**±0°.2×**68°.4E**±0°.2**, h10^{km}, n28,** σ**1ˢ.07**/13**, mb3.7**/6**, MS3.4**/12**, Chagos Archipelago region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08N3	Diego Garcia H	2.75	70	Pn	Pn	15 44 48.4	-1.1
H08N3				T	T	15 48 10.5	
	baz=242						
H08N2	Diego Garcia H	2.77	70	Pn	Pn	15 44 48.4	-1.3
H08N2				T	T	15 48 04.9	
	baz=242						
H08N1	Diego Carcia H	2.77	70	Pn	Pn	15 44 48.4	-1.4
H08N1				T	T	15 48 05.4	
	baz=242						
H08S1	Diego Carcia H	4.06	95	Pn	Pn	15 45 07.5	-0.1
	baz=336,slow=21,SNR=16						
H08S3	Diego Garcia H	4.07	95	Pn	Pn	15 45 07.5	-0.2
	baz=336,slow=21,SNR=11						
H08S2	Diego Garcia H	4.08	95	Pn	Pn	15 45 07.5	-0.4
	baz=336,slow=21,SNR=11						
PALK	Pallekele	18.98	41	LR	LR	15 53 37.3	
	comp=Z,64nm,18.8s,baz=117,slow=30						
ATD	Arta Tunnel	31.56	306	LR	LR	16 00 58.6	
	comp=Z,42nm,19.4s,baz=108,slow=32						
CMAR	Chiang Mai Arr	39.54	49	P	P	15 51 38.8	+1.7
	0.3nm,0.4s,baz=252,slow=8.4,SNR=4.7						
BOSA	Boshof	45.84	237	LR	LR	16 09 58.8	
	comp=Z,53nm,18.0s,baz=68,slow=34						
GEYT	Alibeck	46.01	349	LR	LR	16 10 17.7	
	comp=Z,18nm,19.0s,baz=230,slow=34						
H01W3	Cape Leeuwin H	50.13	130	T	T	16 46 51.9	
	baz=292,slow=75,SNR=19						
H01W2	Cape Leeuwin H	50.14	130	T	T	16 46 51.9	
	baz=292,slow=75,SNR=23						
H01W1	Cape Leeuwin H	50.15	130	T	T	16 46 52.8	
	baz=292,slow=75,SNR=22						
MKAR	Makanchi Array	55.26	12	P	P	15 53 39.8	+0.8
	0.2nm,0.7s,baz=193,slow=5.2,SNR=3.0						
BRTR	Keskin Array B	56.76	328	P	P	15 53 48.8	-1.2
	0.5nm,0.8s,baz=120,slow=8.5,SNR=3.2						
BRTR				LR	LR	16 19 13.8	
	comp=Z,15nm,18.0s,baz=148,slow=37						
DAV	Davao City (W)	58.80	77	LR	LR	16 18 40.0	
	comp=Z,27nm,20.1s,baz=226,slow=35						
BVAR	Borovoye Array	60.12	1	LR	LR	16 19 42.8	
	comp=Z,25nm,19.7s,baz=226,slow=35						
ZALV	Zalesovo Beam	62.58	11	LR	LR	16 21 37.2	
	comp=Z,25nm,19.1s,baz=201,slow=36						
SONM	Songino Array	64.32	27	P	P	15 54 42.3	+0.8
	0.4nm,0.5s,baz=190,slow=7.3,SNR=2.3						
ASAR	Alice Springs	64.70	113	P	P	15 54 43.6	-0.8
	0.6nm,1.0s,baz=270,slow=6.0,SNR=4.4						
WRA	Warramunga Arr	64.97	109	P	P	15 54 45.7	-0.5
	0.7nm,0.8s,baz=278,slow=6.9,SNR=3.8						
TORD	Torodi Ar. Bea	69.28	287	LR	LR	16 25 56.8	
	comp=Z,38nm,18.4s,baz=260,slow=36						
DBIC	Dimbokro	74.37	279	LR	LR	16 26 55.0	
	comp=Z,20nm,19.6s,baz=124,slow=35						
KOWA	Kowa	74.99	287	LR	LR	16 27 17.6	
	comp=Z,35nm,18.2s,baz=217,slow=35						
GUMO	Guam	78.69	75	LR	LR	16 34 53.3	
	comp=Z,11nm,18.3s,baz=210,slow=39						
SPITS	Spitsbergen Ar	89.87	351	LR	LR	16 39 38.0	
	comp=Z,18nm,19.0s,baz=20,slow=37						
NVAR	Mina Array Bea	148.43	10	PKPbc	PKPbc	16 03 53.1	0.0
	0.2nm,0.5s,baz=345,slow=1.0,SNR=3.7						

IDC ***18*** *15:59:10.9±2.7, 22°.90N×12°.02W, h0^{km}, mb3.8/3, mb1 3.8/5, mb1mx3.5/61, mbtmp3.8/5, ML3.7/1, Error ellipse: s-maj=77.4km s-min=25.8km az=68.0*

ISCJB ***18*** *15:59:14.9±4.5, 23°.0N±0°.3×11°.0W±0°.8, h10^{km}, mb3.6/3, Error ellipse: s-maj=111.0km s-min=11.1km az=157.2*

ISC 18 15:59:17.1±2.6**, 23°.1N**±0°.2×**11°.0W**±0°.5**, h10^{km}, n9,** σ**0ˢ.71**/8**, mb3.7**/3**, Mauritania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOWA	Kowa	10.80	141	Pn	Pn	16 01 52.0	+0.1
	0.5nm,0.3s,baz=321,slow=13,SNR=8.2						
KOWA				Sn	Sn	16 03 52.8	-0.2
	0.2nm,0.3s,baz=183,slow=19,SNR=3.8						
KOWA				Lg	Lg	16 05 10.5	
	0.1nm,0.3s,baz=338,slow=11,SNR=2.5						
I11CV	MAIO ISLAND IN	13.88	238	*i*		17 09 23.7	
	baz=52,slow=338,SNR=1.6						
TORD	Torodi Ar. Bea	15.59	127	Pn	P	16 03 01.2	-0.2
	baz=311,slow=12						
I42PT	GRACIOSA ISLAN	21.51	322	*i*		18 04 00.0	
	baz=141,slow=322,SNR=0.9						
GERES	GERESS Array B	32.30	31	P	P	16 05 47.0	+0.8
	0.7nm,0.8s,baz=223,slow=8.1,SNR=4.5						
HFS	Hagfors	40.87	19	P	P	16 06 57.8	-1.2
	2.5nm,0.8s,baz=199,slow=8.5,SNR=4.3						
MKAR	Makanchi Array	75.72	45	P	P	16 11 03.3	+0.3
	0.3nm,0.5s,baz=286,slow=5.6,SNR=4.1						
WRA	Warramunga Arr	147.66	91	PKPbc	PKPdf	16 19 00.0	+0.1
	0.4nm,0.7s,baz=299,slow=1.9,SNR=5.4						
ASAR	Alice Springs	147.84	98	PKPbc	PKPdf	16 19 00.6	+0.4
	0.5nm,0.7s,baz=298,slow=2.0,SNR=8.6						

IDC 18 16:07:44.6±4.3**, 20°.87S**×**168°.08E, h0^{km}, mb3.3**/2**, mb1 3.6**/2**, mb1mx3.4**/48**, mbtmp3.3**/2**, Error ellipse: s-maj=129.2km s-min=32.3km az=132.0, Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	1.93	231	Pn	Pn	16 08 18.8	-0.1
	20nm,0.3s,baz=83,slow=19,SNR=366						
DZM				Sn	Sb	16 08 45.5	-0.1
	39nm,0.3s,baz=139,slow=19,SNR=11						
WRA	Warramunga Arr	31.60	266	P	P	16 14 09.7	+0.3
	0.3nm,0.9s,baz=98,slow=8.0,SNR=3.8						
ASAR	Alice Springs	31.70	259	P	P	16 14 09.7	-0.6
	0.5nm,0.8s,baz=85,slow=8.3,SNR=6.3						
GERES	GERESS Array B	145.38	330	PKPbc	PKPbc	16 27 23.9	-0.6
	0.9nm,0.6s,baz=35,slow=3.9,SNR=6.3						

IDC ***18*** *16:27:59.7±4.1, 20°.32N×121°.56E, h0^{km}, mb3.2/3, mb1 3.4/3, mb1mx3.1/62, mbtmp3.2/3, Error ellipse: s-maj=324.9km s-min=26.2km az=61.0*

ISCJB ***18*** *16:28:03.6±1.1, 20°.33N±0°.08×121°.31E±0°.10, h35^{km}, mb3.1/3, Error ellipse: s-maj=15.2km s-min=8.8km az=40.0*

MAN ***18*** *16:28:05.7, 19°.99N×122°.02E, h26^{km}, mb4.7, ML3.6, MS3.5*

ISC 18 16:28:05.0±1.3**, 20°.31N**±0°.10×**121°.4E**±0°.1**, h35^{km}, n6,** σ**0ˢ.85**/8**, mb3.3**/3**, 1C, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBP	Basco	0.56	76	⇑*e*P	Pn	16 28 16.3	-0.2
BBP				*e*S	Sn	16 28 25.1	+0.6
APYP	Conner	2.43	183	*e*P	Pn	16 28 42.2	-0.1
APYP				*e*S	Sn	16 29 12.1	+1.2
ABRA	Dolores	2.72	194	*e*P	Pn	16 28 45.7	-0.6
MKAR	Makanchi Array	41.31	319	P	P	16 35 47.7	+0.5
	0.1nm,0.4s,baz=115,slow=9.2,SNR=3.7						
WRA	Warramunga Arr	41.96	162	P	P	16 35 51.7	-1.1
	0.5nm,0.9s,baz=342,slow=8.9,SNR=4.8						
ASAR	Alice Springs	45.38	164	P	P	16 36 20.1	-0.1
	0.2nm,0.4s,baz=352,slow=6.8,SNR=9.6						

IDC ***18*** *16:42:12.3±3.6, 17°.26S×178°.91W, h523^{km}±36^{km}, mb3.1/6, mb1 3.4/6, mb1mx3.0/44, mbtmp4.0/6, Error ellipse: s-maj=95.4km s-min=23.4km az=154.0*

ISCJB ***18*** *16:42:13.1±1.4, 17°.0S±0°.8×179°.2W±0°.4, h539^{km}, mb3.6/6, Error ellipse: s-maj=122.6km s-min=19.5km az=154.1*

ISC 18 16:42:13.9±1.4**, 17°.1S**±0°.8×**179°.0W**±0°.4**, h539^{km}, n6,** σ**0ˢ.77**/8**, mb3.5**/6**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.51	240	P	P	16 48 50.0	-0.3
	1.2nm,0.3s,baz=74,slow=9.9,SNR=8.6						
WRA	Warramunga Arr	44.20	259	P	P	16 49 34.8	-0.7
	1.5nm,0.7s,baz=94,slow=8.2,SNR=48						
ASAR	Alice Springs	44.45	253	P	P	16 49 37.2	-0.2
	9.1nm,0.5s,baz=89,slow=7.8,SNR=281						
ASAR				PcP	PcP	16 51 08.8	-0.5
	0.2nm,0.4s,baz=100,slow=4.2,SNR=2.9						
ASAR				ScP	ScP	16 54 11.4	+1.1
	0.4nm,0.8s,baz=109,slow=5.1,SNR=3.1						
FITZ	Fitzroy Crossi	52.58	260	P	P	16 50 38.6	+0.8
	0.7nm,0.3s,baz=106,slow=9.4,SNR=10						
TXAR	Lajitas Array	86.06	58	P	P	16 53 58.4	+0.3
	0.2nm,0.7s,baz=210,slow=7.1,SNR=3.4						
PDAR	Pinedale Array	87.17	44	P	P	16 54 02.7	-0.4
	0.2nm,0.5s,baz=190,slow=2.5,SNR=3.0						

TAP 18 16:59:27.0, 24°.40N×121°.44E, h3^{km}, ML0.4, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNSB	Datong	0.06	295	*i* P	Pg	16 59 28.8	+0.6
	baz=295						
NNSB				S	Sg	16 59 30.2	+1.0
	baz=295						
NNS	Nan Shan	0.07	300	*e*P	Pg	16 59 29.0	+0.5
	baz=301						
NNS				*e*S	Sg	16 59 30.5	+1.0
	baz=301						
NACB	Ninganchiao	0.27	149	*e*P	Pb	16 59 33.4	-1.0
	baz=148						
NACB				*e*S	Sb	16 59 38.3	-1.2
	baz=148						
YHNB	Yeheng	0.27	347	*e*P	Pb	16 59 35.5	+0.8
	baz=347						
YHNB				*e*S	Sb	16 59 38.4	-1.3
	baz=347						

TAP 18 16:59:26.0, 24°.47N×121°.82E, h18^{km}, ML1.2, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NANB	Nanao	0.08	237	*i* P	Pg	16 59 29.9	+0.4
	baz=237						
NANB				*e*S	Sg	16 59 32.6	+0.7
	baz=237						
ENA	Nanau	0.08	240	*i* P	Pg	16 59 29.9	+0.3
	baz=236						
ENA				*e*S	Sg	16 59 32.8	+0.8
	baz=236						
TWC	Suao	0.14	11	*i* P	Pg	16 59 30.7	+0.5
	baz=14						
TWC				*e*S	Sg	16 59 34.0	+1.0
	baz=14						
ENTT	Nioudou	0.29	306	P	Pb	16 59 32.8	+0.2
	baz=306						
ENTT				*e*S	Sb	16 59 37.8	+0.8
	baz=306						
TWE	Neicheng	0.29	331	*e*P	Pb	16 59 32.8	+0.2
	baz=333						
TWE				*e*S	Sb	16 59 37.8	+0.8
	baz=333						
EOS1	EOS1	0.29	74	*e*P	Pb	16 59 33.2	+0.5
	baz=74						
EOS1				*e*S	Sb	16 59 38.1	+1.0
	baz=74						
NACB	Ninganchiao	0.36	215	*e*P	Pb	16 59 34.2	+0.3
	baz=214						
NACB				*e*S	Sb	16 59 39.0	-0.2
	baz=214						

IDC ***18*** *17:07:25.6±2.4, 36°.34N×140°.39E, h0^{km}, mb3.2/3, mb1 3.4/4, mb1mx3.2/66, mbtmp3.4/4, ML3.4/1, MS2.4/1, Ms1 2.4/1, ms1mx2.0/20, Error ellipse: s-maj=56.9km s-min=23.4km az=65.0*

ISCJB ***18*** *17:07:32.8±0.7, 36°.04N±0°.06×139°.92E±0°.07, h57^{km}±6^{km}, mb3.2/3, Error ellipse: s-maj=10.6km s-min=7.5km az=43.8*

JMA ***18*** *17:07:34.5±0.1, 36°.09N×139°.88E, h46^{km}±1^{km}, M3.0*

JMA Felt I J1.

ISC 18 17:07:33.9±1.0**, 36°.06N**±0°.06×**139°.90E**±0°.06**, h50^{km}**±10^{km}**, n10,** σ**0ˢ.73**/17**, mb3.2**/3**, Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYT	Yasato	0.29	55	P	Pn	17 07 43.2	+0.3
JYT				S	Sn	17 07 49.3	0.0
JAG	Ashikaga	0.51	315	P	Pn	17 07 45.4	+0.1
JAG				S	Sn	17 07 53.0	-0.5
JRY	Ryogami san	0.81	267	P	Pn	17 07 49.3	+0.2
JRY				S	Sn	17 07 59.9	-0.4
JKT	Katashina	0.88	323	P	Pn	17 07 50.0	-0.1
JKT				*e*S	Sn	17 08 01.5	-0.4
MJAR	Matsushiro Arr	1.45	290	Pn	Pn	17 07 57.1	-0.6
	8.2nm,0.3s,baz=98,slow=14,SNR=85						
MJAR				Sn	Sn	17 08 15.6	0.0
	4.8nm,0.3s,baz=77,slow=20,SNR=9.9						
MJAR				LR	LR	17 08 19.7	
	comp=Z,11nm,18.6s,baz=275,slow=31						
MAT	Matsushiro	1.45	290	P	Pn	17 07 58.5	+0.8
MAT				S	Sn	17 08 17.0	+1.3
JHJ	Hachijo jima 2	2.94	182	Pn	Pn	17 08 18.8	+0.7
	11nm,0.3s,baz=143,slow=20,SNR=13						
JHJ				Sn	Sn	17 08 50.6	-1.5
	6.7nm,0.3s,baz=254,slow=20,SNR=4.5						
JHJ				LR	LR	17 09 21.9	
	comp=Z,58nm,20.6s,baz=86,slow=36						
MKAR	Makanchi Array	43.61	303	P	P	17 15 33.2	+0.1
	0.2nm,0.7s,baz=64,slow=6.7,SNR=2.3						
KURBB	Kurchatov Arra	45.65	309	P	P	17 15 48.4	-0.8
	0.3nm,0.4s,baz=84,slow=7.6,SNR=5.8						
WRA	Warramunga Arr	55.95	186	P	P	17 17 07.4	+0.4
	0.2nm,0.8s,baz=1.6,slow=7.4,SNR=3.5						

IDC 18 17:14:26.6±12.0**, 7°.37S**×**124°.06E, h0^{km}, mb4.0**/1**, mb1 3.8**/4**, mb1mx3.4**/51**, mbtmp3.6**/4**, ML3.2**/3**, Error ellipse: s-maj=184.4km s-min=110.4km az=125.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	10.78	172	Pn	Pn	17 17 00.6	-1.8
	0.1nm,0.3s,baz=355,slow=11,SNR=3.8						
FITZ				Sn	Sn	17 18 48.0	-16
	0.1nm,0.3s,baz=214,slow=3.6,SNR=2.6						
WRA	Warramunga Arr	15.99	142	Pn	Pn	17 18 13.8	+0.6
	0.1nm,0.3s,baz=319,slow=13,SNR=6.5						
ASAR	Alice Springs	18.76	151	P	Pn	17 18 49.2	+1.4
	0.1nm,0.3s,baz=330,slow=13,SNR=10.0						
STKA	Stephens Creek	29.36	148	P	P	17 20 30.8	-0.7
	0.9nm,0.5s,baz=322,slow=8.1,SNR=2.5						

ISCJB ***18*** *17:23:08.4±0.4, 6°.82N±0°.03×73°.14W±0°.03, h159^{km}±3^{km}, mb3.7/7, Error ellipse: s-maj=5.3km s-min=4.7km az=17.5*

RSNC ***18*** *17:23:09.8±1.0, 6°.79N×73°.14W, h152^{km}±5^{km}, ML4.0, Mw4.1*

IDC ***18*** *17:23:09.7±1.7, 6°.79N×73°.03W, h170^{km}±15^{km}, mb3.5/7, mb1 3.8/10, mb1mx3.4/47, mbtmp4.0/10, Error ellipse: s-maj=25.2km s-min=17.2km az=73.0*

ISC 18 17:23:08.9±0.7**, 6°.81N**±0°.04×**73°.12W**±0°.04**, h157^{km}**±5^{km}**, n35,** σ**0ˢ.89**/53**, mb3.7**/7**, 2D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BARC	Barichara	0.22	197	*i* P	Pn	17 23 30.2	-0.2
BARC				*e*S	Sn	17 23 45.6	-1.2
BRRC	Barranca, Sant	0.66	297	*i* P	Pn	17 23 32.1	+0.2
BRRC				*i*		17 23 32.4	
	comp=Z,3µm,0.2s						
BRRC				*e*S	Sn	17 23 49.8	+0.3
PAMC	Pamplona, Colo	0.67	38	*i* P	Pn	17 23 33.0	+0.4
PAMC				*e*S	Sn	17 23 50.3	-0.3
RUSC	La Rusia	0.91	178	⇓*i*P	Pn	17 23 34.0	-0.3
RUSC				*e*S	Sn	17 23 52.7	-0.9
RUSC				*i*		17 23 54.5	
	comp=Z,790nm,0.4s						
PTBC	PUERTO BERRIO,	1.36	259	*e*P	Pn	17 23 36.7	-0.8
PTBC				*e*S	Sn	17 23 58.2	-1.4
PTBC				*i*		17 24 05.6	
	comp=Z,1µm,0.5s						
TAMC	Tame, Arauca	1.37	106	⇓*i*P	Pn	17 23 38.3	+0.7
TAMC				*i*		17 23 38.8	
	comp=Z,2µm,0.4s						
TAMC				*e*S	Sn	17 24 00.2	+0.4
OCAC	Ocana	1.44	352	*e*P	Pn	17 23 38.5	-0.1
OCAC				*e*S	Sn	17 24 01.5	+0.2
OCAC				*i*		17 24 04.8	
	comp=Z,2µm,0.2s						
YOPC	Yopal, Colombi	1.60	154	*e*P	Pn	17 23 40.6	+0.4
YOPC				*e*S	Sn	17 24 03.9	-0.3
ZARC	Zaragoza, Cauc	1.86	292	*e*P	Pn	17 23 42.5	-0.3
ZARC				*e*S	Sn	17 24 09.8	+0.8
ZARC				*i*		17 24 14.7	
	comp=Z,1µm,0.4s						
NORC	Norcasia	2.14	235	*e*P	Pn	17 23 46.0	-0.1
NORC				*e*S	Sn	17 24 14.3	-0.5
CHIC	Chingaza	2.25	196	*e*P	Pn	17 23 47.8	0.0
CHIC				*e*S	Sn	17 24 16.4	-1.4
CHIC				*i*		17 24 28.2	
	comp=Z,280nm,0.6s						
ROSC	El Rosal	2.29	212	P	Pn	17 23 49.7	+1.4
	comp=Z,55nm,0.3s,baz=340,slow=4.4,SNR=83						
ROSC				S	Sn	17 24 16.3	-2.3
	comp=Z,41nm,0.3s,baz=254,slow=21,SNR=8.6						
HELC	Santa Helena	2.48	256	*e*P	Pn	17 23 50.1	-0.3
HELC				*e*S	Sn	17 24 21.8	-0.6
HELC				*i*		17 24 29.1	
	comp=Z,673nm,0.3s						
UREC	San Jos˜' de U	2.58	292	*e*P	Pn	17 23 50.8	-0.5
UREC				*e*S	Sn	17 24 24.8	+0.8
VILC	Villavicencio,	2.74	192	*e*P	Pn	17 23 53.1	-0.3
VILC				*e*S	Sn	17 24 27.8	-0.1
VILC				*i*		17 24 31.9	
	comp=Z,136nm,0.5s						
DBBC	Dabeiba	3.08	274	*e*P	Pn	17 23 57.6	-0.1
TOLC	Tolima	3.11	225	*e*P	Pn	17 23 59.6	+1.4
CODC	Agustˆ›n Codaz	3.12	354	*e*P	Pn	17 23 57.8	-0.4
CODC				*e*S	Sn	17 24 35.9	-0.4
CODC				*i*		17 24 42.4	
	comp=Z,289nm,0.3s						
SDV	Santo Domingo	3.21	50	*e*P	Pn	17 23 59.6	+0.2
PRAC	Prado	3.54	210	*e*P	Pn	17 24 03.9	+0.4
PLMC	San Jos˜' del	3.67	239	*e*P	Pn	17 24 06.0	+0.7
PLMC				*e*S	Sn	17 24 49.2	+0.3
HORQ	Saladito	4.81	227	*e*P	Pn	17 24 21.4	+1.2
PCRV	Puerto La Cruz	9.03	68	P	Pn	17 25 16.8	+0.8
	comp=Z,0.9nm,0.3s,baz=270,slow=3.0,SNR=2.6						
JTS	JuntasAbangare	12.21	287	P	Pn	17 25 60.0	+2.2
	comp=Z,0.8nm,0.3s,baz=80,slow=5.1,SNR=4.5						
PTGA	Pitinga	15.11	119	P	P	17 26 37.0	+1.0
	comp=Z,0.4nm,0.3s,baz=301,slow=13,SNR=12						
LPAZ	La Paz	23.47	168	P	P	17 28 05.2	+0.1
	comp=Z,0.6nm,0.3s,baz=308,slow=7.2,SNR=3.9						
TXAR	Lajitas Array	36.48	312	P	P	17 29 59.6	+0.4
	comp=Z,1.2nm,0.6s,baz=124,slow=8.9,SNR=7.2						
TXAR				PcP	PcP	17 32 19.9	+0.1
	comp=Z,0.4nm,0.8s,baz=165,slow=3.7,SNR=4.1						
ULM	Lac du Bonnet	47.30	340	P	P	17 31 25.6	-0.9
	comp=Z,4.3nm,0.6s,baz=136,slow=4.4,SNR=5.1						
PDAR	Pinedale Array	48.09	324	P	P	17 31 32.7	-0.4
	comp=Z,0.8nm,0.6s,baz=116,slow=8.3,SNR=6.4						
NVAR	Mina Array Bea	51.50	315	P	P	17 31 59.3	+0.5
	comp=Z,1.2nm,0.8s,baz=146,slow=6.6,SNR=2.6						
YKA	Yellowknife Ar	63.28	340	P	P	17 33 20.1	-0.5
	comp=Z,2.3nm,0.6s,baz=132,slow=6.6,SNR=16						
ILAR	Eielson Array	76.98	335	P	P	17 34 44.3	+0.3
	comp=Z,0.6nm,0.8s,baz=99,slow=5.6,SNR=3.7						
MKAR	Makanchi Array	122.33	20	PKP	PKPdf	17 41 43.6	-2.0
	comp=Z,0.1nm,0.3s,baz=48,slow=2.1,SNR=4.4						
ASAR	Alice Springs	149.11	234	PKPbc	PKPbc	17 42 38.0	-1.5
	comp=Z,0.5nm,0.5s,baz=119,slow=3.5,SNR=12						
WRA	Warramunga Arr	150.33	241	PKPbc	PKPbc	17 42 41.4	-1.2
	comp=Z,0.5nm,0.4s,baz=107,slow=2.6,SNR=17						

IDC ***18*** *17:24:27.0±3.2, 13°.61N×90°.07W, h0^{km}, mb3.7/5, mb1 4.1/6, mb1mx3.7/49, mbtmp3.8/6, ML2.9/1, MS3.2/2, Ms1 3.3/2, ms1mx2.6/43, Error ellipse: s-maj=61.1km s-min=37.8km az=10.0*

ISC 18 17:24:34.1±3.3**, 13°.7N**±0°.4×**90°.0W**±0°.2**, h58^{km}, n7, σ0^{s}47**/7**, mb3.9**/4**, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**5.84**	**306**	Pn	Pn	17 25 52.4	-5.8
	0.3nm,0.3s,baz=130,slow=7.9,SNR=3.6						
CMIG				Sn	**Sn**	**17 27 03.6**	**-0.2**
	0.5nm,0.3s,baz=41,slow=20,SNR=2.2						
TXAR	**Lajitas Array**	**20.11**	**323**	P	**P**	**17 29 03.5**	**+0.2**
	1.8nm,0.7s,baz=153,slow=12,SNR=16						
TKL	**Tuckaleechee C**	**22.61**	**13**	P	**P**	**17 29 29.8**	**-0.2**
	1.4nm,0.6s,baz=125,slow=12,SNR=2.1						
TKL				LR	LR	17 39 33.7	
	comp=Z,64nm,18.8s,baz=200,slow=40						
PDAR	**Pinedale Array**	**33.58**	**333**	P	**P**	**17 31 08.6**	**-0.3**
	0.1nm,0.4s,baz=131,slow=12,SNR=2.7						
NVAR	**Mina Array Bea**	**35.19**	**320**	P	**P**	**17 31 23.3**	**+0.3**
	2.2nm,0.8s,baz=134,slow=8.8,SNR=12						
NVAR				LR	LR	17 48 13.1	
	comp=Z,38nm,18.4s,baz=272,slow=41						
ULM	**Lac du Bonnet**	**36.81**	**354**	P	**P**	**17 31 36.8**	**+0.5**
	3.8nm,0.7s,baz=169,slow=10,SNR=4.9						
CMAR	**Chiang Mai Arr**	**146.90**	**344**	PKPbc	**PKPab**	**17 44 11.7**	**-0.6**
	0.8nm,0.6s,baz=337,slow=3.1,SNR=6.8						

ISCJB ***18*** *17:37:37.3±0.7, 36°.16N±0°.05×142°.31E±0°.07, h23^{km}, mb3.6/6, Error ellipse: s-maj=8.4km s-min=6.8km az=173.5*

IDC ***18*** *17:37:37.0±1.1, 36°.10N×142°.26E, h0^{km}, mb3.6/6, mb1 3.7/10, mb1mx3.5/70, mbtmp3.7/10, ML3.6/4, Error ellipse: s-maj=25.3km s-min=17.7km az=81.0*

JMA ***18*** *17:37:40.7±0.2, 36°.20N×141°.95E, h78^{km}±4^{km}, M2.7*

ISC 18 17:37:39.6±1.0**, 36°.12N**±0°.06×**142°.27E**±0°.09**, h23^{km}, n28, σ1^{s}85**/25**, mb3.5**/6**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**1.22**	**251**	P	**Pn**	**17 37 59.9**	**-1.3**
JHYU	**Hitachinakayam**	**1.38**	**280**	P	**Pn**	**17 38 01.4**	**-2.0**
JHO	**Hitachi**	**1.46**	**290**	P	**Pn**	**17 38 01.8**	**-2.7**
ONAJ	**Iwakimizuishiy**	**1.54**	**310**	P	**Pn**	**17 38 03.4**	**-2.3**
JFK	**Kawauchi**	**1.68**	**318**	P	**Pn**	**17 38 05.3**	**-2.2**
BSO1	**Boso 1**	**1.81**	**216**	P	**Pn**	**17 38 08.9**	**+0.1**
JFT	**Otama**	**2.09**	**313**	P	**Pn**	**17 38 11.6**	**-1.6**
JMM	**Marumori**	**2.11**	**326**	P	**Pn**	**17 38 11.5**	**-1.9**
JAG	**Ashikaga**	**2.30**	**278**	P	**Pn**	**17 38 14.1**	**-2.0**
JRY	**Ryogami san**	**2.73**	**269**	P	**Pn**	**17 38 20.2**	**-1.9**
JMK	**Ichinoseki**	**2.95**	**344**	S	**Sn**	**17 38 57.0**	**-2.7**
MJAR	**Matsushiro Arr**	**3.31**	**279**	Pn	**Pn**	**17 38 29.3**	**-0.7**
	2.4nm,0.3s,baz=292,slow=20,SNR=26						
MJAR				Sn	**Sn**	**17 39 09.6**	**+1.0**
	0.8nm,0.3s,baz=11,slow=33,SNR=5.3						
MAT	**Matsushiro**	**3.31**	**279**	P	**Pn**	**17 38 29.2**	**-0.8**
MAT				S	**Sn**	**17 39 08.9**	**+0.3**
JHJ	**Hachijo jima 2**	**3.63**	**215**	Pn	**Pn**	**17 38 33.5**	**-0.8**
	16nm,0.3s,baz=79,slow=5.2,SNR=7.4						
JHJ				Sn	**Sn**	**17 39 12.5**	**-3.9**
	14nm,0.3s,baz=73,slow=19,SNR=8.4						
ASAJ	**Asahikawa**	**7.99**	**2**	Pn	**Pn**	**17 39 32.7**	**-1.5**
	0.6nm,0.3s,baz=216,slow=8.5,SNR=4.2						
JCJ	**Chichijima**	**9.00**	**181**	Pn	**Pn**	**17 39 46.6**	**-1.5**
	3.0nm,0.3s,baz=270,slow=20,SNR=5.7						
JCJ				Sn	Sn	17 41 19.9	-8.8
	0.4nm,0.3s,baz=285,slow=20,SNR=2.5						
H11N2	**WAKE ISLAND Hy**	**27.09**	**120**	T	T	18 11 50.5	
	baz=313,slow=75,SNR=14						
H11N1	**WAKE ISLAND Hy**	**27.09**	**120**	T	T	18 11 58.7	
	baz=313,slow=75,SNR=10						
H11N3	**WAKE ISLAND Hy**	**27.11**	**120**	T	T	18 11 52.5	
	baz=313,slow=75,SNR=6.8						
H11S1	**WAKE ISLAND Hy**	**27.78**	**123**	T	T	18 12 45.5	
	baz=314,slow=75,SNR=9.0						
H11S3	**WAKE ISLAND Hy**	**27.78**	**123**	T	T	18 12 45.5	
	baz=314,slow=75,SNR=7.9						
H11S2	**WAKE ISLAND Hy**	**27.80**	**123**	T	T	18 12 44.0	
	baz=314,slow=75,SNR=7.5						
SONM	**Songino Array**	**28.87**	**305**	P	**P**	**17 43 37.1**	**+0.6**
	0.3nm,0.3s,baz=96,slow=12,SNR=2.6						
MKAR	**Makanchi Array**	**45.19**	**303**	P	**P**	**17 45 56.1**	**+1.5**
	0.3nm,0.8s,baz=86,slow=7.4,SNR=3.3						
KURBB	**Kurchatov Arra**	**47.11**	**309**	P	**P**	**17 46 11.0**	**+1.4**
	2.1nm,0.2s,baz=79,slow=7.8,SNR=4.9						
ILAR	**Eielson Array**	**49.90**	**32**	P	**P**	**17 46 32.1**	**+1.2**
	0.4nm,0.9s,baz=269,slow=7.8,SNR=2.9						
WRA	**Warramunga Arr**	**56.26**	**189**	P	**P**	**17 47 18.4**	**+0.2**
	0.6nm,1.1s,baz=0.0,slow=7.6,SNR=2.5						
ASAR	**Alice Springs**	**59.99**	**189**	P	**P**	**17 47 46.0**	**+1.7**
	0.5nm,1.1s,baz=23,slow=12,SNR=2.9						

NIED ***18*** *17:45:00, 33°.90N×141°.60E, h5^{km}, Mw3.9 Best double couple: M$_0$8.47000×10^{14} NP1:φ$_s$159.00000°, δ42.00000°, λ42.00000°. NP2:φ$_s$35.00000°, δ63.00000°, λ123.00000°.*

IDC ***18*** *17:45:53.7±0.7, 33°.90N×141°.66E, h0^{km}, mb3.9/17, mb1 4.0/20, mb1mx3.8/68, mbtmp3.9/20, ML3.9/3, MS2.9/7, Ms1 2.9/7, ms1mx2.7/67, Error ellipse: s-maj=19.6km s-min=13.3km az=88.0*

NEIC ***18*** *17:45:57.0±2.2, 33°.91N×141°.71E, h21^{km}±15^{km}, mb4.5/3, Error ellipse: s-maj=12.6km s-min=6.9km az=78.0*

ISCJB ***18*** *17:45:57.1±0.9, 33°.88N±0°.04×141°.68E±0°.07, h37^{km}±7^{km}, mb3.9/19, MS3.1/2, Error ellipse: s-maj=9.8km s-min=5.9km az=162.3*

JMA ***18*** *17:45:57.8±0.3, 33°.93N×141°.63E, h44^{km}±5^{km}, M3.7*

ISC 18 17:45:56.3±3.5**, 33°.88N**±0°.05×**141°.81E**±0°.07**, h22^{km}**±26^{km}**, n52, σ1^{s}94**/53**, mb3.9**/19**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	**Boso 1**	**1.04**	**319**	P	**Pn**	**17 46 14.2**	**-0.8**
BSO1				X		17 46 26.0	
BSO3	**Boso 3**	**1.42**	**311**	P	**Pn**	**17 46 19.9**	**-0.6**
BSO3				S	**Sn**	**17 46 36.0**	**-2.3**
BSO4	**Boso 4**	**1.65**	**313**	P	**Pn**	**17 46 23.4**	**-0.4**
KTR	**Katsuura**	**1.77**	**316**	P	**Pn**	**17 46 25.6**	**0.0**
KTR				S	**Sn**	**17 46 45.1**	**-2.3**
JHJ2	**Mitsune**	**1.83**	**246**	P	**Pn**	**17 46 26.5**	**+0.1**
JMKN	**Mikurajimanish**	**1.84**	**271**	P	**Pn**	**17 46 25.7**	**-0.9**
JMKN				S	**Sn**	**17 46 46.6**	**-2.7**
JHJ	**Hachijo jima 2**	**1.85**	**247**	Pn	**Pn**	**17 46 26.6**	**-0.2**
	68nm,0.3s,baz=69,slow=22,SNR=35						
JHJ				Sn	**Sn**	**17 46 48.3**	**-1.2**
	88nm,0.3s,baz=54,slow=22,SNR=8.6						
JHCJ	**Hachijojimakas**	**1.86**	**245**	P	**Pn**	**17 46 26.8**	**-0.1**
JIM2	**Oshima 3**	**2.14**	**294**	P	**Pn**	**17 46 29.6**	**-1.1**
JIM2				S	**Sn**	**17 46 52.9**	**-3.7**
JKO	**Kozu shima**	**2.24**	**279**	P	**Pn**	**17 46 31.2**	**-0.9**
JIZS	**Izushimoda**	**2.57**	**290**	P	**Pn**	**17 46 35.9**	**-0.7**
JIZS				S	**Sn**	**17 47 04.1**	**-3.0**
JOD2	**Odawara 2**	**2.64**	**302**	P	**Pn**	**17 46 36.4**	**-1.2**
MJAR	**Matsushiro Arr**	**3.97**	**313**	Pn	**Pn**	**17 46 56.1**	**+0.2**
	7.0nm,0.3s,baz=339,slow=3.0,SNR=56						
MJAR				Sn	**Sn**	**17 47 41.7**	**-0.1**
	5.7nm,0.3s,baz=146,slow=22,SNR=6.5						
MJAR				LR	LR	17 48 43.8	
	comp=Z,126nm,20.5s,baz=140,slow=44						
MAJO	**Matsushiro**	**3.97**	**313**	*e*Pn	**Pn**	**17 46 55.8**	**-0.1**
MAT	**Matsushiro**	**3.97**	**313**	P	**Pn**	**17 46 56.3**	**+0.4**
MAT				S	**Sn**	**17 47 41.4**	**-0.4**
CBIJ	**Chichi jima**	**6.77**	**177**	Pn	**Pn**	**17 47 35.2**	**+0.9**
CBIJ				Sn	**Sn**	**17 48 45.4**	**-5.2**
JCJ	**Chichijima**	**6.77**	**177**	Pn	**Pn**	**17 47 35.2**	**+0.9**
	3.1nm,0.3s,baz=319,slow=19,SNR=6.4						
JCJ				Sn	**Sn**	**17 48 45.4**	**-5.2**
	4.7nm,0.3s,baz=164,slow=20,SNR=3.1						
JNU	**Nakatsue**	**9.16**	**268**	LR	LR	17 51 28.2	
	comp=Z,71nm,20.2s,baz=121,slow=37						
ASAJ	**Asahikawa**	**10.24**	**3**	Pn	**Pn**	**17 48 20.8**	**-1.1**
	1.0nm,0.3s,baz=234,slow=10,SNR=9.7						
ASAJ				Sn	**Sn**	**17 50 08.7**	**-7.4**
	0.3nm,0.3s,baz=12,slow=20,SNR=2.9						
KSRS	**Korea Array**	**11.84**	**291**	Pn	**Pn**	**17 48 45.0**	**+1.1**
	baz=108,slow=14,SNR=3.7						
KSRS				LR	LR	17 53 39.7	
	comp=Z,55nm,19.4s,baz=82,slow=40						
KSAR	**Wonju Array Be**	**11.87**	**291**	Pn	**Pn**	**17 48 45.0**	**+0.7**
JOW	**Kunigami**	**13.62**	**243**	LR	LR	17 54 51.9	
	comp=Z,67nm,18.1s,baz=110,slow=40						
KLR	**Kul'dur**	**17.06**	**337**	P	**Pn**	**17 49 53.6**	**+0.2**
	0.0nm,0.3s,baz=131,slow=11,SNR=3.5						
KLR				LR	LR	17 57 26.8	
	comp=Z,6.8nm,18.1s,baz=150,slow=41						
H11N2	**WAKE ISLAND Hy**	**26.36**	**116**	T	T	18 19 22.9	
	baz=309						
H11N1	**WAKE ISLAND Hy**	**26.37**	**116**	T	T	18 19 26.3	
	baz=309						
H11N3	**WAKE ISLAND Hy**	**26.38**	**116**	T	T	18 19 38.4	
	baz=309						
MA2	**Magadan**	**26.38**	**10**	LR	LR	18 03 12.4	
	comp=Z,45nm,19.6s,baz=206,slow=39						
H11S3	**WAKE ISLAND Hy**	**26.98**	**118**	T	T	18 20 14.7	
	baz=314						
H11S1	**WAKE ISLAND Hy**	**26.98**	**118**	T	T	18 20 12.5	
	baz=314						
H11S2	**WAKE ISLAND Hy**	**26.99**	**118**	T	T	18 20 11.1	
	baz=314						
SONM	**Songino Array**	**29.91**	**308**	P	**P**	**17 52 03.7**	**+1.2**
	0.3nm,0.4s,baz=97,slow=12,SNR=4.3						
CMAR	**Chiang Mai Arr**	**41.11**	**259**	P	**P**	**17 53 37.7**	**-1.2**
	0.5nm,0.6s,baz=48,slow=6.7,SNR=5.1						
MKAR	**Makanchi Array**	**46.12**	**305**	P	**P**	**17 54 19.0**	**+0.1**
	0.8nm,0.7s,baz=92,slow=9.4,SNR=7.4						
KURK	**Kurchatov**	**48.18**	**310**	P	**P**	**17 54 34.5**	**-0.3**
KURBB	**Kurchatov Arra**	**48.24**	**310**	P	**P**	**17 54 34.5**	**-0.8**
	2.2nm,0.7s,baz=86,slow=7.7,SNR=17						
ILAR	**Eielson Array**	**52.01**	**31**	P	**P**	**17 55 05.4**	**+1.7**
	1.4nm,1.0s,baz=269,slow=6.9,SNR=7.1						
AAK	**Ala-Archa**	**52.32**	**301**	LR	LR	18 16 45.3	
	comp=Z,28nm,20.8s,baz=60,slow=36						
BVAR	**Borovoye Array**	**52.97**	**314**	P	**P**	**17 55 10.6**	**-0.3**
	0.9nm,0.7s,baz=64,slow=6.6,SNR=7.6						
BRVK	**Borovoye**	**53.02**	**314**	*e*P	**P**	**17 55 11.7**	**+0.3**
	4.0nm,0.7s						
FITZ	**Fitzroy Crossi**	**53.93**	**199**	P	**P**	**17 55 19.0**	**+0.8**
	0.9nm,0.5s,baz=319,slow=20,SNR=10						
WRAB	**Tennant Creek**	**53.98**	**189**	*e*P	**P**	**17 55 20.9**	**+2.2**
	4.2nm,1.0s						
WRA	**Warramunga Arr**	**53.99**	**189**	P	**P**	**17 55 18.9**	**+0.3**
	0.9nm,0.5s,baz=2.7,slow=7.7,SNR=18						
ASAR	**Alice Springs**	**57.72**	**189**	P	**P**	**17 55 46.5**	**+1.1**
	0.5nm,0.5s,baz=360,slow=5.6,SNR=15						
ARU	**Arti**	**58.96**	**320**	P	**P**	**17 55 53.3**	**-0.5**
	3.1nm,0.5s,baz=94,slow=4.1,SNR=9.0						
ARU	**Arti**	**58.96**	**320**	*e*P	**P**	**17 55 53.7**	**0.0**
	4.6nm,0.7s						
AKTO	**Aktyubinsk**	**61.05**	**313**	P	**P**	**17 56 07.8**	**-0.4**
	1.1nm,0.6s,baz=78,slow=13,SNR=4.6						
FINES	**FINESS Array B**	**71.76**	**333**	P	**P**	**17 57 16.7**	**+0.2**
	1.0nm,0.7s,baz=39,slow=9.0,SNR=3.4						
AKASG	**Malin Array Be**	**77.00**	**323**	P	**P**	**17 57 46.9**	**-0.3**
	0.8nm,0.4s,baz=47,slow=5.9,SNR=3.5						
HFS	**Hagfors**	**77.10**	**336**	P	**P**	**17 57 48.4**	**+0.8**
	0.5nm,0.4s,baz=10,slow=1.7,SNR=6.6						
PDAR	**Pinedale Array**	**79.65**	**45**	P	**P**	**17 58 04.8**	**+2.5**
	0.2nm,0.3s,baz=278,slow=6.3,SNR=3.2						
BRTR	**Keskin Array B**	**81.19**	**312**	P	**P**	**17 58 11.7**	**+1.1**
	1.0nm,1.0s,baz=75,slow=7.5,SNR=3.1						
GERES	**GERESS Array B**	**85.56**	**329**	P	**P**	**17 58 32.7**	**-0.2**
	0.2nm,0.3s,baz=29,slow=8.2,SNR=2.9						

HLW ***18*** *17:46:42.5, 37°.22N×28°.37E, h10^{km}±16^{km}, Md4.2, Ml4.1*

NIC ***18*** *17:46:43.0±0.3, 37°.20N×27°.93E, h25^{km}, mb4.3, ML3.9*

DDA ***18*** *17:46:43.7, 37°.17N×28°.29E, h25^{km}, Ml4.0*

ISCJB ***18*** *17:46:44.9±0.2, 37°.09N±0°.01×28°.39E±0°.02, h29^{km}±2^{km}, mb3.5/7, MS3.3/1, Error ellipse: s-maj=2.6km s-min=2.3km az=136.0*

CSEM ***18*** *17:46:44.9±0.1, 37°.14N×28°.34E, h10^{km}, ML3.9, Error ellipse: s-maj=2.5km s-min=2.3km az=62.0*

ATH ***18*** *17:46:44.4, 37°.16N×28°.30E, h25^{km}±3^{km}, ML3.8/6, Error ellipse: s-maj=4.8km s-min=1.3km az=220.0*

ISK ***18*** *17:46:44.5, 37°.15N×28°.38E, h5^{km}, ML3.8/35*

NSSC ***18*** *17:46:44.3±0.8, 37°.01N×28°.20E, h33^{km}±999^{km}, ML3.2*

THE ***18*** *17:46:45.6, 37°.10N×28°.34E, h12^{km}±1^{km}, ML3.9/2, Error ellipse: s-maj=2.8km s-min=1.3km az=26.0*

IDC ***18*** *17:46:46.9±2.6, 37°.14N×28°.42E, h35^{km}±25^{km}, mb3.4/7, mb1 3.6/14, mb1mx3.4/59, mbtmp3.6/14, ML3.6/6, MS2.6/4, Ms1 2.6/4, ms1mx2.4/41, Error ellipse: s-maj=16.9km s-min=14.3km az=170.0*

GII ***18*** *17:46:50.2±0.0, 36°.96N×28°.81E, h15^{km}*

ISC 18 17:46:44.5±0.8**, 37°.16N**±0°.01×**28°.34E**±0°.01**, h19^{km}**±2^{km}**, n258, σ1^{s}52**/323**, mb3.5**/7**, 23C-10D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	**Yerkesik**	**0.05**	**239**	PG	**Pg**	**17 46 47.7**	**-0.3**
YER	**Yerkesik**	**0.05**	**239**	P	**Pg**	**17 46 47.9**	**-0.1**
YER				S	**Sg**	**17 46 50.2**	**-0.1**
YER	**Yerkesik**	**0.05**	**239**	P	**Pg**	**17 46 47.9**	**-0.1**
YER				S	**Sg**	**17 46 50.2**	**-0.1**
TURN	**Turunc**	**0.36**	**143**	PG	**Pg**	**17 46 52.2**	**+0.1**
TURN				SG	**Sb**	**17 46 58.9**	**+1.3**
TURN	**Turunc**	**0.36**	**143**	⇑*i*P	**Pg**	**17 46 52.1**	**+0.1**
TURN				*i* S	**Sb**	**17 46 59.1**	**+1.4**
TURN	**Turunc**	**0.36**	**143**	P	**Pg**	**17 46 52.2**	**+0.1**
TURN				S	**Sb**	**17 46 59.1**	**+1.4**
DALY	**Dalyan (Mu˜la**	**0.43**	**143**	PG	**Pg**	**17 46 52.8**	**-0.5**
DALY				SG	**Sg**	**17 46 59.5**	**+0.2**
DALY	**Dalyan (Mu˜la**	**0.43**	**143**	⇑*i*P	**Pg**	**17 46 52.7**	**-0.5**
DALY				*i* S	**Sg**	**17 46 59.4**	**+0.2**
DALY	**Dalyan (Mu˜la**	**0.43**	**143**	*e*Pg	**Pg**	**17 46 52.8**	**-0.5**
DALY				S	**Sg**	**17 46 59.4**	**+0.2**
MRSB	**Marmaris-Mugla**	**0.46**	**194**	PG	**Pg**	**17 46 53.5**	**-0.4**
MRSB				SG	**Sb**	**17 47 00.9**	**+0.4**
MRSB	**Marmaris-Mugla**	**0.46**	**194**	*e*Pg	**Pg**	**17 46 53.5**	**-0.4**
MLSB	**Milas**	**0.47**	**287**	PG	**Pb**	**17 46 54.8**	**+0.6**
MLSB	**Milas**	**0.47**	**287**	*e*Pg	**Pb**	**17 46 54.8**	**+0.6**
TAVA	**DENIZLI_Tavas**	**0.55**	**56**	⇑*i*P	**Pg**	**17 46 55.1**	**-0.5**
TAVA				*i* S	**Sg**	**17 47 02.7**	**-0.3**
TAVA	**DENIZLI_Tavas**	**0.55**	**56**	P	**Pg**	**17 46 55.1**	**-0.5**
TAVA				S	**Sg**	**17 47 02.7**	**-0.3**
AYDN	**Tasoluk**	**0.62**	**324**	⇓*i*P	**Pb**	**17 46 57.5**	**+0.8**
AYDN				*i* S	**Sb**	**17 47 05.3**	**+0.3**
AYDN	**Tasoluk**	**0.62**	**324**	P	**Pb**	**17 46 57.5**	**+0.8**
AYDN				S	**Sb**	**17 47 05.3**	**+0.3**
DATC	**Datca-Mugla**	**0.67**	**234**	PG	**Pb**	**17 46 58.3**	**+0.7**
DATC	**Datca-Mugla**	**0.67**	**234**	*e*Pg	**Pb**	**17 46 58.3**	**+0.7**
DAT	**Datca**	**0.75**	**235**	PG	**Pn**	**17 46 59.7**	**-0.5**
DAT	**Datca**	**0.75**	**235**	⇑*i*P	**Pg**	**17 46 58.4**	**-0.8**
DAT				*i* S	**Sn**	**17 47 11.6**	**+0.5**
DAT	**Datca**	**0.75**	**235**	P	**Pg**	**17 46 58.4**	**-0.8**
DAT	**Datca**	**0.75**	**235**	*e*Pg	**Pn**	**17 46 59.7**	**-0.5**
DNZL	**Cakiroluk**	**0.77**	**47**	⇑*i*P	**Pb**	**17 46 59.1**	**-0.4**
DNZL				*i* S	**Sb**	**17 47 09.2**	**-0.5**
DNZL	**Cakiroluk**	**0.77**	**47**	P	**Pb**	**17 46 59.1**	**-0.4**
DNZL				S	**Sb**	**17 47 09.2**	**-0.5**
FETY	**Fethiye**	**0.80**	**131**	PG	**Pb**	**17 46 59.6**	**-0.2**
FETY	**Fethiye**	**0.80**	**131**	P	**Pb**	**17 46 59.1**	**-0.7**
FETY	**Fethiye**	**0.80**	**131**	P	**Pb**	**17 46 59.1**	**-0.7**
FETY	**Fethiye**	**0.80**	**131**	*e*Pg	**Pb**	**17 46 59.6**	**-0.2**
FETY				S	**Sb**	**17 47 09.6**	**-0.6**
DENT	**Denizli**	**0.81**	**43**	PG	**Pb**	**17 46 59.6**	**-0.5**
DENT	**Denizli**	**0.81**	**43**	*e*Pg	**Pb**	**17 46 59.6**	**-0.5**
BODT	**Bodrum**	**0.83**	**263**	PG	**Pn**	**17 47 01.4**	**+0.2**
BODT	**Bodrum**	**0.83**	**263**	P	**Pg**	**17 47 00.7**	**0.0**
BODT				S	**Sn**	**17 47 12.4**	**-0.5**
BODT	**Bodrum**	**0.83**	**263**	P	**Pg**	**17 47 00.7**	**0.0**
BODT	**Bodrum**	**0.83**	**263**	*e*Pg	**Pn**	**17 47 01.4**	**+0.2**
BODT				S	**Sn**	**17 47 12.4**	**-0.5**
AYDB	**Zeytinkoy-Aydi**	**0.86**	**336**	PG	**Pn**	**17 47 01.9**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**0.86**	**336**	*e*Pg	**Pn**	**17 47 01.9**	**+0.1**
ARG	**Arkhangelos**	**0.96**	**190**	PG	**Pn**	**17 47 03.2**	**+0.2**
ARG	**Arkhangelos**	**0.96**	**190**	P	**Pb**	**17 47 01.9**	**-0.7**
ARG				S	**Sg**	**17 47 15.6**	**-0.2**
ARG				AML	AML	17 47 19.6	
	comp=N,16168µm,0.6s						
ARG				AML	AML	17 47 19.7	
	comp=E,11762µm,0.5s						
ARG	**Arkhangelos**	**0.96**	**190**	P	**Pb**	**17 47 02.1**	**-0.4**
ARG				S	**Sg**	**17 47 15.8**	**0.0**
ARG	**Arkhangelos**	**0.96**	**190**	P	**Pb**	**17 47 02.3**	**-0.2**
ARG	**Arkhangelos**	**0.96**	**190**	*e*Pg	**Pn**	**17 47 03.2**	**+0.2**
ARG				S	**Sg**	**17 47 15.8**	**0.0**
GOLH	**Golhisar**	**0.98**	**85**	*i* P	**Pb**	**17 47 03.4**	**+0.4**
GOLH				*i* S	**Sn**	**17 47 18.0**	**+1.1**
GOLH	**Golhisar**	**0.98**	**85**	P	**Pb**	**17 47 03.4**	**+0.4**
GOLH				S	**Sn**	**17 47 18.0**	**+1.1**
NISR	**Nisiros**	**1.11**	**241**	P	**Pg**	**17 47 05.7**	**-0.3**
NISR				S	**Sg**	**17 47 22.0**	**+1.3**
NISR				AML	AML	17 47 25.7	
	comp=N,7872µm,0.5s						
NISR				AML	AML	17 47 30.7	
	comp=E,9851µm,0.6s						
NISR	**Nisiros**	**1.11**	**241**	P	**Pg**	**17 47 05.8**	**-0.3**
NISR	**Nisiros**	**1.11**	**241**	P	**Pg**	**17 47 05.8**	**-0.3**
NISR				S	**Sg**	**17 47 21.2**	**+0.5**
SMG	**Samos**	**1.31**	**295**	P	**Pb**	**17 47 08.9**	**+0.2**
SMG				AML	AML	17 47 31.9	
	comp=E,5268µm,0.4s						
SMG				AML	AML	17 47 32.0	
	comp=N,5831µm,0.8s						
SMG	**Samos**	**1.31**	**295**	P	**Pb**	**17 47 08.7**	**+0.1**
SMG	**Samos**	**1.31**	**295**	P	**Pb**	**17 47 08.8**	**+0.2**
ELL	**Elmali**	**1.32**	**108**	PN	**Pb**	**17 47 09.4**	**+0.5**
ELL	**Elmali**	**1.32**	**108**	*e*Pn	**Pb**	**17 47 09.4**	**+0.5**
MANT	**Manisa**	**1.34**	**7**	⇑*i*P	**Pn**	**17 47 08.9**	**+0.4**
MANT				*i* S	**Sn**	**17 47 25.9**	**0.0**
MANT	**Manisa**	**1.34**	**7**	P	**Pn**	**17 47 08.9**	**+0.4**
MANT				S	**Sn**	**17 47 25.9**	**0.0**
KULA	**Kula-Manisa**	**1.38**	**11**	PN	**Pb**	**17 47 10.3**	**+0.6**
KULA	**Kula-Manisa**	**1.38**	**11**	*e*Pn	**Pb**	**17 47 10.3**	**+0.6**
AKAS	**Kas**	**1.38**	**132**	PN	**Pg**	**17 47 10.7**	**-0.4**
AKAS	**Kas**	**1.38**	**132**	⇓*i*P	**Pb**	**17 47 10.5**	**+0.7**
AKAS				*i* S	**Sg**	**17 47 29.7**	**+0.6**
AKAS	**Kas**	**1.38**	**132**	P	**Pb**	**17 47 10.5**	**+0.7**
AKAS				S	**Sg**	**17 47 29.7**	**+0.6**
KSL	**Kastellorizon**	**1.42**	**135**	P	**Pg**	**17 47 11.6**	**-0.3**
KSL				S	**Sg**	**17 47 31.1**	**+0.7**
KSL				AML	AML	17 47 33.7	
	comp=E,11608µm,0.6s						
KSL				AML	AML	17 47 35.7	
	comp=N,5333µm,0.6s						
KSL	**Kastellorizon**	**1.42**	**135**	P	**Pb**	**17 47 11.2**	**+0.8**
KSL				S	**Sg**	**17 47 31.6**	**+1.1**
DGB	**˜zmir**	**1.46**	**308**	*i* P	**Pn**	**17 47 10.4**	**+0.6**
DGB				*i* S	**Sn**	**17 47 28.8**	**+0.3**
BRDR	**BURDUR-Merkez**	**1.47**	**68**	*i* P	**Pb**	**17 47 11.7**	**+0.3**
BRDR				*i* S	**Sg**	**17 47 31.6**	**-0.6**
BRDR	**BURDUR-Merkez**	**1.47**	**68**	P	**Pb**	**17 47 11.7**	**+0.3**
BRDR				S	**Sg**	**17 47 31.6**	**-0.6**
KHL	**Karahalli**	**1.49**	**39**	PN	**Pb**	**17 47 12.6**	**+0.9**
KHL	**Karahalli**	**1.49**	**39**	*e*Pn	**Pb**	**17 47 12.6**	**+0.9**
KHAL	**Karahalli**	**1.52**	**37**	⇑*i*P	**Pn**	**17 47 11.5**	**+0.7**
KHAL				*i* S	**Sb**	**17 47 31.5**	**+0.5**
KHAL	**Karahalli**	**1.52**	**37**	P	**Pn**	**17 47 11.5**	**+0.7**
KHAL				S	**Sb**	**17 47 31.5**	**+0.5**
BLCB	**Balcova**	**1.60**	**320**	PN	**Pg**	**17 47 14.4**	**-0.9**
BLCB	**Balcova**	**1.60**	**320**	*e*Pn	**Pg**	**17 47 14.4**	**-0.9**
KORT	**Korkueli**	**1.62**	**95**	PN	**Pb**	**17 47 13.9**	**0.0**
KORT	**Korkueli**	**1.62**	**95**	*i* P	**Pb**	**17 47 14.6**	**+0.7**
KORT				*i* S	**Sg**	**17 47 37.3**	**+0.5**
KORT	**Korkueli**	**1.62**	**95**	*e*Pn	**Pb**	**17 47 13.9**	**0.0**
KORT	**Korkueli**	**1.62**	**95**	P	**Pb**	**17 47 14.6**	**+0.7**
KORT				S	**Sg**	**17 47 37.3**	**+0.5**
AKHS	**Akhisar**	**1.76**	**347**	*i* P	**Pn**	**17 47 14.4**	**+0.3**
AKHS	**Akhisar**	**1.76**	**347**	P	**Pn**	**17 47 14.4**	**+0.3**
AKS	**Akhisar**	**1.76**	**347**	PN	**Pb**	**17 47 17.1**	**+0.8**
AKS	**Akhisar**	**1.76**	**347**	*e*Pn	**Pb**	**17 47 17.1**	**+0.8**
KZIL	**AFYON_Kizioren**	**1.80**	**52**	*i* P	**Pn**	**17 47 15.9**	**+1.2**
KZIL				*i* S	**Sg**	**17 47 43.1**	**+0.5**
KZIL	**AFYON_Kizioren**	**1.80**	**52**	P	**Pn**	**17 47 15.9**	**+1.2**
KZIL				S	**Sg**	**17 47 43.1**	**+0.5**
URLA	**Izmir**	**1.83**	**311**	PN	**Pb**	**17 47 17.9**	**+0.5**
URLA	**Izmir**	**1.83**	**311**	*i* P	**Pg**	**17 47 20.0**	**+0.3**
URLA				*i* S	**Sg**	**17 47 45.4**	**+2.0**
URLA	**Izmir**	**1.83**	**311**	*e*Pn	**Pb**	**17 47 17.9**	**+0.5**
URLA	**Izmir**	**1.83**	**311**	P	**Pg**	**17 47 20.0**	**+0.3**
ISP	**Isparta**	**1.86**	**69**	PN	**Pb**	**17 47 17.8**	**-0.2**
ISP	**Isparta**	**1.86**	**69**	⇑*i*P	**Pb**	**17 47 17.4**	**-0.6**
ISP	**Isparta**	**1.86**	**69**	P	**Pn**	**17 47 17.1**	**+1.6**
ISP	**Isparta**	**1.86**	**69**	Pn	**Pb**	**17 47 17.3**	**-0.7**
ISP	**Isparta**	**1.86**	**69**	P	**Pn**	**17 47 17.1**	**+1.6**
ISP	**Isparta**	**1.86**	**69**	*e*Pn	**Pb**	**17 47 17.8**	**-0.2**
ISP				S	**Sg**	**17 47 43.8**	**-0.7**
KARP	**Karpathos**	**1.87**	**211**	PN	**Pb**	**17 47 18.1**	**0.0**
KARP	**Karpathos**	**1.87**	**211**	P	**Pn**	**17 47 16.2**	**+0.6**
KARP				AML	AML	17 47 50.0	
	comp=N,3341µm,0.4s						
KARP				AML	AML	17 47 50.1	
	comp=E,1704µm,0.4s						
KARP	**Karpathos**	**1.87**	**211**	P	**Pn**	**17 47 15.7**	**+0.1**
KARP	**Karpathos**	**1.87**	**211**	P	**Pn**	**17 47 16.4**	**+0.8**
KARP	**Karpathos**	**1.87**	**211**	*e*Pn	**Pb**	**17 47 18.1**	**0.0**
DEMI	**Demirci**	**1.90**	**9**	*i* P	**Pn**	**17 47 16.5**	**+0.4**
DEMI	**Demirci**	**1.90**	**9**	P	**Pn**	**17 47 16.5**	**+0.4**
AMGA	**Amorgos Island**	**1.98**	**261**	P	**Pn**	**17 47 17.1**	**-0.1**
AMGA	**Amorgos Island**	**1.98**	**261**	P	**Pn**	**17 47 17.6**	**+0.5**
SIMA	**Simav-Kutahya**	**1.98**	**15**	PN	**Pb**	**17 47 19.8**	**-0.3**
SIMA	**Simav-Kutahya**	**1.98**	**15**	*e*Pn	**Pb**	**17 47 19.8**	**-0.3**
SHAP	**Saphane-Kutahy**	**1.99**	**20**	PN	**Pb**	**17 47 19.7**	**-0.4**
SHAP	**Saphane-Kutahy**	**1.99**	**20**	*e*Pn	**Pb**	**17 47 19.7**	**-0.4**
KRBN	**Karaburun**	**2.01**	**316**	PN	**Pb**	**17 47 21.0**	**+0.5**
KRBN	**Karaburun**	**2.01**	**316**	*e*Pn	**Pb**	**17 47 21.0**	**+0.5**
GEDZ	**Gediz**	**2.06**	**24**	PN	**Pb**	**17 47 20.8**	**-0.6**
GEDZ	**Gediz**	**2.06**	**24**	*e*Pn	**Pb**	**17 47 20.8**	**-0.6**
BAGO	**Egridir - ISPA**	**2.12**	**66**	*i* P	**Pn**	**17 47 20.6**	**+1.6**
BAGO				*i* S	**Sg**	**17 47 51.5**	**-1.2**
GDZ	**Gediz**	**2.13**	**25**	*i* P	**Pn**	**17 47 19.5**	**+0.3**
GDZ				*i* S	**Sn**	**17 47 46.0**	**+0.8**
GDZ	**Gediz**	**2.13**	**25**	P	**Pn**	**17 47 19.5**	**+0.3**
GDZ				S	**Sn**	**17 47 46.0**	**+0.8**
SUTC	**Sutluce-Ispart**	**2.15**	**81**	PN	**Pb**	**17 47 21.7**	**-1.2**
SUTC	**Sutluce-Ispart**	**2.15**	**81**	*e*Pn	**Pb**	**17 47 21.7**	**-1.2**
CHOS	**Chios island**	**2.18**	**305**	PN	**Pb**	**17 47 23.1**	**-0.4**
CHOS	**Chios island**	**2.18**	**305**	P	**Pn**	**17 47 20.6**	**+0.7**
CHOS				S	**Sn**	**17 47 48.4**	**+1.9**
CHOS				AML	AML	17 48 01.8	
	comp=N,1643µm,0.7s						
CHOS				AML	AML	17 48 04.2	
	comp=E,2660µm,0.6s						
CHOS	**Chios island**	**2.18**	**305**	P	**Pn**	**17 47 20.9**	**+1.0**
CHOS	**Chios island**	**2.18**	**305**	*e*Pn	**Pb**	**17 47 23.1**	**-0.4**
CHOS				S	**Sn**	**17 47 48.2**	**+1.7**
DKL	**Dikili**	**2.22**	**330**	PN	**Pb**	**17 47 23.4**	**-0.6**
DKL	**Dikili**	**2.22**	**330**	*e*Pn	**Pb**	**17 47 23.4**	**-0.6**
APE	**Apeiranthos**	**2.25**	**268**	PN	**Pb**	**17 47 23.9**	**-0.6**
APE	**Apeiranthos**	**2.25**	**268**	P	**Pn**	**17 47 20.7**	**0.0**
APE	**Apeiranthos**	**2.25**	**268**	⇑*i*P	**Pn**	**17 47 21.5**	**+0.7**
APE	**Apeiranthos**	**2.25**	**268**	P	**Pn**	**17 47 21.3**	**+0.5**
APE	**Apeiranthos**	**2.25**	**268**	*e*Pn	**Pb**	**17 47 23.9**	**-0.6**
APE				S	**Sn**	**17 47 49.6**	**+1.6**
TVSB	**Tavsanli**	**2.45**	**21**	PN	**Pb**	**17 47 26.3**	**-1.8**
TVSB	**Tavsanli**	**2.45**	**21**	*e*Pn	**Pb**	**17 47 26.3**	**-1.8**
BALB	**Balikesir**	**2.50**	**352**	PN	**Pb**	**17 47 27.5**	**-1.3**
BALB	**Balikesir**	**2.50**	**352**	*e*Pn	**Pb**	**17 47 27.5**	**-1.3**
KUTH	**Kutahya**	**2.59**	**30**	PN	**Pn**	**17 47 28.1**	**+2.5**
KUTH	**Kutahya**	**2.59**	**30**	*e*Pn	**Pn**	**17 47 28.1**	**+2.5**
KEPZ	**Antalya-Kepez**	**2.63**	**95**	*i* P	**Pn**	**17 47 28.8**	**+2.8**
KEPZ	**Antalya-Kepez**	**2.63**	**95**	P	**Pn**	**17 47 28.8**	**+2.8**
ZKR	**Zakros**	**2.67**	**221**	P	**Pn**	**17 47 28.1**	**+1.6**
ZKR	**Zakros**	**2.67**	**221**	P	**Pn**	**17 47 28.0**	**+1.5**
NPS	**Neapolis**	**2.91**	**230**	P	**Pn**	**17 47 30.3**	**+0.5**
NPS	**Neapolis**	**2.91**	**230**	P	**Pn**	**17 47 30.8**	**+1.0**
LAST	**Lasithi**	**3.06**	**230**	P	**Pn**	**17 47 32.5**	**+0.6**
LAST	**Lasithi**	**3.06**	**230**	P	**Pn**	**17 47 32.9**	**+1.0**
CAVI	**Cavuskoy**	**3.26**	**21**	PN	**Pn**	**17 47 38.2**	**+3.6**
CAVI	**Cavuskoy**	**3.26**	**21**	*e*Pn	**Pn**	**17 47 38.2**	**+3.6**
KIZT	**Kizilcal**	**3.28**	**57**	PN	**Pn**	**17 47 37.9**	**+2.8**
KIZT	**Kizilcal**	**3.28**	**57**	*e*Pn	**Pn**	**17 47 37.9**	**+2.8**
KONT	**Konya--Tatoy**	**3.29**	**75**	PN	**Pn**	**17 47 37.9**	**+2.8**
KONT	**Konya--Tatoy**	**3.29**	**75**	*e*Pn	**Pn**	**17 47 37.9**	**+2.8**
GAZI	**Gazipasa**	**3.33**	**105**	PN	**Pn**	**17 47 37.4**	**+1.8**
GAZI	**Gazipasa**	**3.33**	**105**	*e*Pn	**Pn**	**17 47 37.4**	**+1.8**
IDI	**Anoyia**	**3.36**	**237**	Pn	**Pn**	**17 47 37.6**	**+1.6**
	comp=E,6.9nm,0.3s,baz=63,slow=6.5,SNR=36						
IDI				Sn	**Sn**	**17 48 17.6**	**+2.2**
	comp=E,6.4nm,0.3s,baz=16,slow=16,SNR=7.1						
IDI				LR	LR	17 49 00.3	
	comp=E,56nm,19.2s,baz=76,slow=39						
IDI	**Anoyia**	**3.36**	**237**	PN	**Pn**	**17 47 39.6**	**+3.6**
IDI	**Anoyia**	**3.36**	**237**	⇑*i*P	**Pn**	**17 47 38.2**	**+2.2**
IDI	**Anoyia**	**3.36**	**237**	⇑*i*P	**Pn**	**17 47 38.2**	**+2.2**
IDI	**Anoyia**	**3.36**	**237**	*e*Pn	**Pn**	**17 47 39.6**	**+3.6**
LADK	**Ladik-KONYA**	**3.36**	**71**	PN	**Pn**	**17 47 38.9**	**+2.8**
LADK	**Ladik-KONYA**	**3.36**	**71**	*e*Pn	**Pn**	**17 47 38.9**	**+2.8**
ADVT	**Abdulvahap**	**3.45**	**18**	PN	**Pn**	**17 47 40.5**	**+3.3**
ADVT	**Abdulvahap**	**3.45**	**18**	*e*Pn	**Pn**	**17 47 40.5**	**+3.3**
SBT5	**Esenkoy-Cinarc**	**3.49**	**7**	PN	**Pn**	**17 47 41.3**	**+3.5**
SBT5	**Esenkoy-Cinarc**	**3.49**	**7**	*e*Pn	**Pn**	**17 47 41.3**	**+3.5**

YLV	Yalova	3.50	13	PN	Pn	17 47 41.2	+3.2
YLV	Yalova	3.50	13	ePn	Pn	17 47 41.2	+3.2
GELI	Tayfur-Gelibol	3.54	336	PN	Pn	17 47 40.5	+1.9
GELI	Tayfur-Gelibol	3.54	336	ePn	Pn	17 47 40.5	+1.9
GADA	Gvkgeada	3.58	329	PN	Pn	17 47 41.3	+2.3
GADA	Gvkgeada	3.58	329	ePn	Pn	17 47 41.3	+2.3
AKMC	Akamas	3.87	122	P	Pn	17 47 44.4	+1.3
	baz=302						
AKMC	Akamas	3.87	122	P	Pn	17 47 44.4	+1.3
PPCY	Paphos	3.96	124	P	Pn	17 47 45.6	+1.3
	baz=304						
PPCY	Paphos	3.96	124	P	Pn	17 47 45.6	+1.3
ALFC	Alefka	3.99	119	P	Pn	17 47 45.7	+1.0
	baz=299						
ALFC	Alefka	3.99	119	P	Pn	17 47 45.7	+1.0
SZAC	Souni	4.40	122	P	Pn	17 47 51.5	+1.1
	baz=302						
SZAC				S	Sn	17 48 44.5	+3.4
SZAC	Souni	4.40	122	P	Pn	17 47 51.5	+1.1
SZAC				S	Sn	17 48 44.5	+3.4
MAMC	Mammari	4.42	115	P	Pn	17 47 51.8	+1.2
	baz=296						
MAMC	Mammari	4.42	115	P	Pn	17 47 51.8	+1.2
CSS	Mathiatis	4.60	117	P	Pn	17 47 53.5	+0.4
CSS	Mathiatis	4.60	117	P	Pn	17 47 54.1	+1.0
	baz=298						
CSS				S	Sn	17 48 51.1	+5.0
CSS	Mathiatis	4.60	117	Pn	Pn	17 47 53.1	0.0
CSS	Mathiatis	4.60	117	P	Pn	17 47 54.1	+1.0
CSS				S	Sn	17 48 51.1	+5.0
BRTR	Keskin Array B	4.89	57	Pn	Pn	17 47 59.5	+2.3
	comp=E,3.5nm,0.3s,baz=242,slow=17,SNR=74						
BRTR				Sn	Sn	17 48 53.8	+0.5
	comp=E,1.9nm,0.3s,baz=233,slow=27,SNR=6.6						
KDZ	Kurdzhali	5.02	334	P	Pn	17 48 00.0	+1.1
RZN	Rozhen	5.32	329	P	Pn	17 48 04.7	+1.6
MMB	Musomiste	5.68	323	P	Pn	17 48 10.0	+2.0
KKB	Krupnik	6.21	321	P	Pn	17 48 17.4	+2.2
VTS	Vitosha	6.71	326	⇓iP	Pn	17 48 22.6	+0.5
VTS	Vitosha	6.71	326	P	Pn	17 48 25.1	+3.0
VTS	Vitosha	6.71	326	⇓iP	Pn	17 48 22.6	+0.5
HWQ	Hawqa	6.83	113	eP	Pn	17 48 23.8	0.0
HNTI	Hanita	6.92	124	Pn	Pn	17 48 24.8	-0.2
OFRI	‘Ofer	7.09	128	Pn	Pn	17 48 26.8	-0.6
OFRI				Sn	Sn	17 49 42.7	-4.9
MMA0B	Mount Meron ar	7.12	123	Pn	Pn	17 48 27.1	-0.6
MMA0B				Sn	Sn	17 49 44.6	-3.5
MMAI	Mount Meron Ar	7.12	123	Pn	Pn	17 48 27.2	-0.5
	comp=E,16nm,0.3s,baz=305,slow=13,SNR=58						
MMAI				Sn	Sn	17 49 44.2	-4.0
	comp=E,13nm,0.3s,baz=313,slow=26,SNR=8.3						
BLGI	Bet Lehem HaGe	7.15	126	Pn	Pn	17 48 28.5	+0.3
BLGI				Sn	Sn	17 49 44.8	-4.1
SHBL	Chebaa	7.15	120	eP	Pn	17 48 28.1	-0.2
KSDI	Kefar Szold	7.18	121	Pn	Pn	17 48 28.1	-0.5
NATI	Neve Ativ	7.20	121	Pn	Pn	17 48 28.6	-0.1
BRBR	Barbar	7.26	119	eP	Pn	17 48 29.8	-0.1
BRBR				eS	Sn	17 49 46.1	-5.8
BRBR				AML	AML	17 49 52.9	
	comp=E,22nm,0.6s						
BRBR				AML	AML	17 49 59.6	
	comp=N,38nm,0.6s						
TIRR	Tirgusor	7.29	0	⇑iP	Pn	17 48 31.2	+1.2
TIRR	Tirgusor	7.29	0	⇑iP	Pn	17 48 31.2	+1.2
SLTI	Sal’it	7.38	130	Pn	Pn	17 48 32.5	+1.1
SLTI				Sn	Sn	17 49 50.9	-3.8
KSHT	Keshet	7.41	122	Pn	Pn	17 48 31.8	0.0
TLB	Topalu	7.42	358	⇑iP	Pn	17 48 32.3	+0.5
TLB	Topalu	7.42	358	⇑iP	Pn	17 48 32.3	+0.5
QASN	Qassioun	7.43	117	eP	Pn	17 48 32.7	+0.7
QASN				eS	Sn	17 49 50.8	-5.0
QASN				AML	AML	17 49 59.0	
	comp=N,33nm,0.6s						
QASN				AML	AML	17 49 59.6	
	comp=E,67nm,0.6s						
MMLI	Mount Malkishu	7.49	127	Pn	Pn	17 48 32.5	-0.4
TOTH	TOTAH	7.63	117	eP	Pn	17 48 35.4	+0.7
TOTH				eS	Sn	17 49 54.5	-6.2
TOTH				AML	AML	17 50 01.8	
	comp=E,21nm,0.7s						
TOTH				AML	AML	17 50 11.1	
	comp=N,14nm,0.5s						
RSH		7.63	143	P	Pn	17 48 34.5	-0.2
	baz=143						
RSH		7.63	143	P	Pn	17 48 34.5	-0.2
HMDT	Nahal Hemdat	7.68	127	Pn	Pn	17 48 34.8	-0.6
SLMH	Al Salmeh	7.76	94	eP	Pn	17 48 37.7	+1.2
KOT	Kottamia	7.78	157	P	Pn	17 48 36.7	-0.1
	baz=157						
KOT	Kottamia	7.78	157	P	Pn	17 48 36.7	-0.1
AMAZ	Amatzia	7.82	134	Pn	Pn	17 48 37.4	+0.1
HHAG	Hagoal	7.84	155	P	Pn	17 48 38.2	+0.5
	baz=155						
HHAG				AMP		17 48 00.0	
	baz=155						
HHAG	Hagoal	7.84	155	P	Pn	17 48 38.2	+0.5
HSAF	As Saff	7.99	159	P	Pn	17 48 39.5	-0.2
	baz=159						
HSAF	As Saff	7.99	159	P	Pn	17 48 39.5	-0.2
CFR	Carcaliu	8.01	359	⇓iP	Pn	17 48 40.4	+0.5
CFR	Carcaliu	8.01	359	⇓iP	Pn	17 48 40.4	+0.5
KZIT	Kziot	8.01	139	Pn	Pn	17 48 39.8	-0.2
YTIR	Yattir	8.06	134	Pn	Pn	17 48 40.8	+0.2
DSI	Dead Sea	8.06	132	Pn	Pn	17 48 41.2	+0.6
DSI				Sn	Sn	17 50 06.7	-4.6
MLR	Muntele Rosu	8.51	349	Pn	Pn	17 48 49.2	+2.2
	comp=N,0.1nm,0.3s,baz=134,slow=3.4,SNR=4.2						
MLR				LR	LR	17 52 23.1	
	comp=N,6.1nm,21.3s,baz=156,slow=39						
MLR	Muntele Rosu	8.51	349	⇓iP	Pn	17 48 48.0	+1.1
MLR	Muntele Rosu	8.51	349	⇓iP	Pn	17 48 48.0	+1.1
HNKL	Nakhl	8.61	145	P	Pn	17 48 47.9	-0.3
	baz=145						
HNKL	Nakhl	8.61	145	P	Pn	17 48 47.9	-0.3
ASF	Jabal al Asfar	8.63	123	Pn	Pn	17 48 48.4	-0.1
	comp=N,0.9nm,0.3s,baz=227,slow=3.5,SNR=6.2						
ASF				Sn	Sn	17 50 24.2	-1.2
	comp=N,0.2nm,0.3s,baz=24,slow=20,SNR=2.3						
PRNI	Paran	8.77	139	Pn	Pn	17 48 50.1	-0.3
PLOR	Plostina	8.77	352	⇑iP	Pn	17 48 50.6	+0.2
PLOR	Plostina	8.77	352	⇑iP	Pn	17 48 50.6	+0.2
VRI	Vrincioaia	8.78	353	⇑iP	Pn	17 48 51.9	+1.4
VRI	Vrincioaia	8.78	353	⇑iP	Pn	17 48 51.9	+1.4
NBNS	Bani Suef	8.87	163	P	Pn	17 48 51.6	-0.1
	baz=163						
NBNS	Bani Suef	8.87	163	P	Pn	17 48 51.6	-0.1
HRFI	Mount Harif	9.04	140	Pn	Pn	17 48 53.8	-0.2
MDVR	Moldovita	9.11	329	⇑iP	Pn	17 48 55.2	+0.2
MDVR	Moldovita	9.11	329	⇑iP	Pn	17 48 55.2	+0.2
MBRI	Mt Berech	9.17	141	Pn	Pn	17 48 56.3	+0.4
EIL	Elat	9.29	142	Pn	Pn	17 48 56.3	-1.2
	comp=N,1.5nm,0.3s,baz=233,slow=2.1,SNR=11						
EIL				Sn	Sn	17 50 36.5	-5.0
	comp=N,3.0nm,0.3s,baz=101,slow=22,SNR=11						
EIL	Elat	9.29	142	Pn	Pn	17 48 57.3	-0.2
HBST	Basata	9.56	144	P	Pn	17 49 01.6	+0.4
	baz=144						
HBST				S	Sn	17 50 42.9	-5.3
	baz=144						
HBST	Basata	9.56	144	P	Pn	17 49 01.6	+0.4
HKAT	Jabal Katrina	9.84	149	P	Pn	17 49 05.5	+0.3
	baz=149						
HKAT	Jabal Katrina	9.84	149	P	Pn	17 49 05.5	+0.3
BIZ	Bicaz	9.91	351	⇓iP	Pn	17 49 06.8	+0.9
BIZ	Bicaz	9.91	351	⇓iP	Pn	17 49 06.8	+0.9
BURAR	Bucovina Array	10.70	349	⇑iP	Pn	17 49 18.4	+1.6
BURAR	Bucovina Array	10.70	349	⇑iP	Pn	17 49 18.4	+1.6
HDK1	Dakhla	11.62	175	P	Pn	17 49 30.3	+0.9
	baz=175						
HDK1	Dakhla	11.62	175	P	Pn	17 49 30.3	+0.9
GERES	GERESS Array B	15.81	322	Pn	P	17 50 30.4	+0.6
	comp=N,0.1nm,0.3s,baz=131,slow=12,SNR=3.6						
DAVOX	Davos/Dischmat	16.72	311	LR	LR	17 58 23.8	
	comp=N,51nm,19.0s,baz=80,slow=42						
FINES	FINESS Array B	24.35	357	P	P	17 52 01.6	+0.6
	comp=N,1.3nm,0.7s,baz=161,slow=18,SNR=3.4						
HFS	Hagfors	24.83	342	P	P	17 52 04.6	-0.7
	comp=N,1.0nm,0.7s,baz=146,slow=14,SNR=2.8						
ESDC	Sonseca Array	25.36	286	P	P	17 52 11.0	+0.5
	comp=N,0.2nm,0.4s,baz=85,slow=9.2,SNR=2.2						
TORD	Torodi Ar. Bea	33.74	232	P	P	17 53 26.0	+1.0
	comp=N,0.3nm,0.5s,baz=46,slow=8.7						
KOWA	Kowa	36.56	240	LR	LR	18 10 15.9	
	comp=N,50nm,18.4s,baz=43,slow=38						
KURBB	Kurchatov Arra	37.87	53	P	P	17 54 00.5	+0.5
	comp=N,0.4nm,0.8s,baz=272,slow=7.1,SNR=2.6						
CMAR	Chiang Mai Arr	63.83	86	P	P	17 57 15.6	-0.3
	comp=N,0.8nm,0.8s,baz=296,slow=7.5,SNR=4.7						
KSRS	Korea Array	75.03	54	P	P	17 58 24.4	-0.5
	comp=N,1.2nm,0.7s,baz=313,slow=5.1,SNR=5.1						

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*ISCJB **18** 18:09:15.5±0.4, 32°.21N±0°.02×115°.24W±0°.02, h23^{km}±3^{km}, Error ellipse: s-maj=3.9km s-min=3.2km az=19.2*

*NEIC **18** 18:09:16.9±0.0, 32°.20N×115°.25W, h6^{km}, ML3.6(ECX), ML3.7(PAS), After ECX.*

*ECX **18** 18:09:16.9±0.6, 32°.20N×115°.26W, h6^{km}, MD3.6, ML3.8*

*MEX **18** 18:09:17.9±0.5, 32°.27N×115°.18W, h16^{km}±34^{km}, MD3.8*

ISC 18 18:09:15.6±0.9**, 32°.18N**±0°.03×**115°.25W**±0°.02**, h22**^{km}±2^{km}**, n65, **σ1^{s}**51**/82**, 8C-8D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBIG	Mexicali	0.23	12	⇓eP	Pb	18 09 21.3	-0.3
MBIG	Mexicali	0.23	12	eP	Pb	18 09 21.0	-0.6
MBIG				eS	Sb	18 09 23.4	-2.3
CPBX	Cerro Prieto	0.24	350	⇓eP	Pb	18 09 21.1	-0.6
CPBX				eS	Sb	18 09 24.6	-1.3
CPBX				IAML		18 09 26.9	
	comp=N,38µm,0.3s						
SGL	Mount Signal	0.62	320	⇓iP	Pb	18 09 27.6	-0.1
DREC	Desert Rsrch C	0.65	346	eP	Pb	18 09 28.4	+0.2
COA	Coachella	0.69	9	⇑iP	Pb	18 09 28.6	-0.4
WESC	Westside Schoo	0.71	325	⇓iP	Pb	18 09 29.4	+0.1
YMD	Yuma Desert	0.71	58	⇑iP	Pb	18 09 28.8	-0.4
ECBX	El Chinero	0.72	166	⇓eP	Pb	18 09 29.4	-0.1
ECBX				eS	Sb	18 09 39.6	+0.6
YUH	Yuha Desert	0.73	310	⇑iP	Pb	18 09 29.4	-0.3
RMX	La Rumorosa	0.82	302	⇑eP	Pb	18 09 30.1	-1.0
RMX				eS	Sb	18 09 40.3	-1.5
RMX				⇑e		18 09 40.5	
RMX				IAML		18 09 40.5	
	comp=N,4µm,0.2s						
IKP	In-Ko-Pah, Jac	0.86	303	P	Pb	18 09 31.8	-0.1
	baz=122,SNR=145						
IKP				S	Sb	18 09 42.7	-0.4
	baz=122						
IKP	In-Ko-Pah, Jac	0.86	303	⇑iP	Pb	18 09 31.7	-0.3
IKP				iS	Sb	18 09 43.1	0.0
SWSC	Sam W. Stewart	0.89	329	P	Pb	18 09 31.2	-1.2
	baz=148,SNR=54						
SWSC				S	Sb	18 09 42.6	-1.3
	baz=148						
GLA	Glamis	0.94	22	P	Pb	18 09 32.0	-1.2
	baz=203,SNR=122						
GLA				S	Sb	18 09 43.5	-1.9
	baz=203						
GLA	Glamis	0.94	22	ePn	Pb	18 09 32.1	-1.2
SPIG	San Pedro Mart	1.14	189	⇓eP	Pb	18 09 37.0	+0.2
SPIG	San Pedro Mart	1.14	189	eP	Pb	18 09 37.0	+0.2
SPIG				eS	Sn	18 09 51.6	-0.1
SPIG	San Pedro Mart	1.14	189	ePn	Pb	18 09 37.0	+0.2
SPIG				eSn	Sn	18 09 51.6	-0.1
SPX	San Pedro Mart	1.14	189	⇓eP	Pb	18 09 37.0	+0.2
SPX				⇓e		18 09 54.5	
CBX	Cerro Bola	1.20	277	⇑eP	Pb	18 09 37.5	-0.3
CBX				eS	Sn	18 09 53.5	+0.6
CBX				IAML		18 09 58.5	
	comp=N,3µm,0.5s						
CBX	Cerro Bola	1.20	277	eP	Pb	18 09 37.4	-0.3
CBX				eS	Sb	18 09 52.0	-0.8
CBX	Cerro Bola	1.20	277	eSn	Sb	18 09 52.0	-0.8
MONP2	Monument Peak	1.22	306	P	Pn	18 09 36.9	-0.6
	baz=125,SNR=84						
MONP2				Sb	Sb	18 09 53.1	-0.3
	baz=125						
TJIG	Tijuana	1.23	282	eP	Pn	18 09 37.6	+0.1
TJIG				eS	Sn	18 09 52.0	-1.4
BAR	Barrett	1.30	293	⇑eP	Pn	18 09 38.7	+0.2
BAR	Barrett	1.30	293	ePn	Pn	18 09 38.5	0.0
BC3	Big Chuckawall	1.48	354	P	Pn	18 09 40.0	-1.1
	baz=173,SNR=75						
BC3				S	Sn	18 09 57.7	-2.1
	baz=173						
Y12C	Blythe	1.69	21	Pb	Pn	18 09 44.4	+0.7
	baz=202						
Y12C	Blythe	1.69	21	ePn	Pb	18 09 45.8	-0.1
109C	Camp Elliot, M	1.72	295	P	Pn	18 09 44.4	+0.2
	baz=113,SNR=17						
109C				Sb	Sb	18 10 08.3	+0.8
	baz=113						
CPE	Camp Elliot	1.72	295	ePn	Pn	18 09 44.7	+0.6
FRD	Ford Ranch, An	1.74	320	P	Pn	18 09 43.7	-0.8
	baz=138,SNR=34						
FRD				S	Sn	18 10 04.5	-1.6
	baz=138						
XPFO	Piæon Flat	1.75	325	ePn	Pn	18 09 43.9	-0.8
PFO	Pinyon Flats O	1.75	325	P	Pn	18 09 43.7	-1.1
	baz=144,SNR=28						
PFO				S	Sn	18 10 04.6	-2.0
	baz=144						
PFO	Pinyon Flats O	1.75	325	ePn	Pn	18 09 43.9	-0.9
IRM	Iron Mountain	1.98	3	Pb	Pn	18 09 48.9	+1.1
	baz=183,SNR=78						
214A	Organ Pipe Nat	2.09	95	P	Pn	18 09 48.5	-0.8
	baz=277,SNR=36						
214A				S	Sn	18 10 14.8	+0.2
	baz=277						
MURC	Murrieta	2.16	312	Pb	Pb	18 09 53.6	-0.5
	baz=130,SNR=11						
SCI2	San Clemente I	2.89	287	Sb	Sb	18 10 43.1	+1.7
	baz=105						
LDFC	Landfair	2.90	2	ePn	Pn	18 10 02.2	+1.7
CIS	Catalina Islan	2.93	295	P	Pn	18 10 01.0	+0.1
	baz=114						
CIS				Sb	Sb	18 10 44.3	+1.8
	baz=114						
FMP	Fort Macarthur	2.98	302	Sb	Sb	18 10 45.8	+1.9
	baz=120						
PASC	Pasadena Art C	3.16	310	ePn	Pn	18 10 01.3	-2.8
DECC	Green Verdugo	3.31	310	Sb	Sb	18 10 55.4	+2.0
	baz=128						
BLG	Laguna Peak, P	3.73	302	Sb	Sb	18 11 05.1	-0.5
	baz=120						
TUC	Tucson	3.79	87	ePn	Pb	18 10 17.8	-4.0
SHPR	Sheep Range	4.32	1	ePn	Pn	18 10 21.9	+1.7
WUAZ	Wupatki	4.64	43	P	Pn	18 10 26.2	+1.6
	baz=225,SNR=9.0						
WUAZ	Wupatki	4.64	43	ePn	Pn	18 10 26.6	+2.1
TPNV	Topopah Spring	4.83	350	ePn	Pn	18 10 28.2	+1.1
LCMT	Little Creek M	5.10	18	ePn	Pn	18 10 30.5	-0.3
W18A	Petrified Fore	5.46	56	P	Pn	18 10 37.5	+1.7
	baz=239,SNR=7.1						
W18A	Petrified Fore	5.46	56	ePn	Pn	18 10 38.0	+2.2
CCUT	Cedar City	5.58	16	ePn	Pn	18 10 41.2	+3.7
PKCU	Pink Cliffs	5.79	24	ePn	Pn	18 10 44.9	+4.5
OMMB	Old Mammoth Mi	6.24	331	ePn	Pn	18 10 48.6	+2.0
121A	Cookes Peak, D	6.33	85	P	Pn	18 10 48.1	+0.4
	baz=269						
121A				S	Sn	18 11 58.3	-1.2
	baz=269						
MSU	Marysvale	6.80	21	ePn	Pn	18 11 00.4	+6.1
SRU	San Rafael Swe	7.92	28	ePn	Pn	18 11 12.9	+3.4
SRU				eLg	Lg	18 13 37.6	
PV11	David Mesa, Pa	8.03	39	ePn	Pn	18 11 15.4	+4.3
PV11				ePg	Pb	18 11 50.7	+17
PV23	Carpenter Ridg	8.07	37	ePn	Pn	18 11 17.9	+6.1
PV21	Cone Mtn., Par	8.18	37	ePn	Pn	18 11 19.2	+6.0
PV22	Blue Mesa, Par	8.25	38	ePn	Pn	18 11 19.3	+5.1
LTIM	Timbered Crate	10.28	333	ePn	Pn	18 11 39.9	-2.0

IDC 18 18:17:27.4±5.8**, 55°.15S**×**140°.79W, h0**^{km}**, mb3.5**/2**, mb1 3.8**/2**, mb1mx3.5**/41**, mbtmp3.5**/2**, Error ellipse: s-maj=1009.0km s-min=101.1km az=165.0, Pacific-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	68.29	260	P	P	18 28 30.6	+0.4
	0.6nm,1.1s,baz=143,slow=6.5,SNR=4.2						
WRA	Warramunga Arr	70.98	262	P	P	18 28 46.5	-0.3
	0.3nm,0.7s,baz=144,slow=5.6,SNR=5.5						
H08S2	Diego Garcia H	111.56	216	T	T	20 38 34.5	
	baz=159,slow=77,SNR=5.8						
H08S1	Diego Carcia H	111.57	216	T	T	20 38 38.6	
	baz=159,slow=77,SNR=8.6						
H08S3	Diego Garcia H	111.58	216	T	T	20 38 37.2	
	baz=159,slow=77,SNR=8.6						
MKAR	Makanchi Array	152.01	271	PKPbc	PKPbc	18 37 23.4	-0.1
	0.4nm,0.7s,baz=146,slow=3.8,SNR=3.5						

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*ISCJB **18** 18:24:07.3±0.9, 20°.51S±0°.03×70°.38W±0°.04, h15^{km}±6^{km}, mb5.0/217, MS4.5/131, Error ellipse: s-maj=7.6km s-min=3.8km az=155.9*

*NEIC **18** 18:24:08.7±1.4, 20°.69S×70°.37W, h11^{km}±9^{km}, mb5.1/193, MS4.5/89, MW5.1, Error ellipse: s-maj=7.3km s-min=4.1km az=73.0, Moment Tensor Solution. s15 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.75; M$_{\theta\theta}$0.41; M$_{\phi\phi}$-2.15; M$_{r\theta}$0.46; M$_{\theta\phi}$0.00; M$_{\phi r}$-4.45; Best double couple: M$_0$4.90000×10^{16} NP1:φ$_s$8.00000°, δ12.00000°, λ104.00000°. NP2: φ$_s$174.00000°, δ78.00000°, λ87.00000°. Principal axes: T 4.6900, Plg57.0000°, Azm81.0000°; N 0.3800, Plg3.0000°, Azm175.0000°; P -5.0800, Plg33.0000°, Azm267.0000°;*

NEIC Felt [IV] at Iquique.

*GCMT **18** 18:24:08.7±0.2, 20°.79S×70°.90W, h29^{km}, MW5.2/77, Moment Tensor Solution. s65,c88; s77,c116; Duration: 1^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$0.59±.02; M$_{\theta\theta}$0.03±.01; M$_{\phi\phi}$-0.62±.02; M$_{r\theta}$0.11±.02; M$_{\theta\phi}$0.07±.01; M$_{\phi r}$-0.62±.03; Best double couple: M$_0$0.87700×10^{17} NP1:φ$_s$171.00000°, δ68.00000°, λ88.00000°. NP2: φ$_s$358.00000°, δ22.00000°, λ96.00000°. Principal axes: T 0.8590, Plg67.0000°, Azm77.0000°; N 0.0370, Plg2.0000°, Azm172.0000°; P -0.8950, Plg23.0000°, Azm263.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*GUC **18** 18:24:10.6±0.7, 20°.80S×70°.56W, h28^{km}±16^{km}, ML5.2*

*MOS **18** 18:24:11.9±1.1, 20°.37S×70°.34W, h33^{km}, mb5.2/47, MS4.5/15, Error ellipse: s-maj=13.8km s-min=7.3km az=110.5*

*IDC **18** 18:24:12.1±2.6, 20°.68S×70°.34W, h34^{km}±18^{km}, mb4.6/23, mb1 4.7/27, mb1mx4.6/41, mbtmp4.8/27, ML4.0/4, MS4.5/36, Ms1 4.4/36, ms1mx4.4/42, Error ellipse: s-maj=17.1km s-min=11.3km az=70.0*

ISC 18 18:24:10.7±0.8**, 20°.76S**±0°.03×**70°.54W**±0°.05**, h26**^{km}±5^{km}**, n895, **σ1^{s}**36**/840**, mb5.1**/217**, MS4.5**/131**, 9C-2D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB02	IPOC Station P	0.82	133	eP	Pb	18 24 25.6	-0.9
PB02				iS	Sb	18 24 36.3	-1.0
PB02				IAML		18 24 39.6	
	comp=E,215µm,0.4s						
PB01	IPOC Station P	1.03	106	ePg	Pn	18 24 29.2	-0.2
PB01	IPOC Station P	1.03	106	eP	Pn	18 24 29.2	-0.2
PB01				iS	Sb	18 24 42.6	-0.4
PB07	IPOC Station P	1.14	148	eP	Pn	18 24 30.5	-0.7
PB07				iS	Sn	18 24 45.2	-0.9
PB07				IAML		18 24 48.7	
	comp=E,50µm,0.9s						
PSGC	Pisagua	1.22	19	eP	Pn	18 24 32.4	+0.2
PSGC				iS	Sb	18 24 49.0	+0.4
PSGC				IAML		18 24 52.1	
	comp=N,87µm,0.5s						
PB11	IPOC Station P	1.30	40	ePn	Pb	18 24 34.1	-0.4
PB11	IPOC Station P	1.30	40	eP	Pb	18 24 34.0	-0.5
PB11				iS	Sb	18 24 51.7	+0.9
PB08	IPOC Station P	1.44	65	eP	Pb	18 24 36.3	-0.8
PB08				iS	Sb	18 24 55.7	+0.5
PB08				IAML		18 24 58.9	
	comp=E,84µm,0.4s						
PB03	IPOC Station P	1.48	150	eP	Pn	18 24 35.4	-0.3
PB03				iS	Sn	18 24 54.9	+0.5
PB09	IPOC Station P	1.59	131	eP	Pn	18 24 38.1	+0.7
PB09				iS	Sb	18 24 58.6	-0.8
PB09				IAML		18 25 01.5	
	comp=E,61µm,1.6s						
PB04	IPOC Station P	1.61	167	ePn	Pn	18 24 36.8	-0.8
PB04	IPOC Station P	1.61	167	eP	Pn	18 24 36.5	-1.0
PB04				iS	Sn	18 24 58.5	+0.9
PB04				IAML		18 25 05.4	
	comp=E,52µm,1.1s						
MNMC	Minye Minye	1.85	29	ePn	Pn	18 24 42.0	+1.0
GO02	Mina Guanaco	4.47	169	ePn	Pn	18 25 15.8	-1.3
LPAZ	La Paz	5.00	28	Pn	Pn	18 25 24.9	+0.2
	comp=E,0.1nm,0.3s,baz=202,slow=6.3,SNR=6.5						
LPAZ	La Paz	5.00	28	ePn	Pn	18 25 28.9	+4.3
LPAZ	La Paz	5.00	28	eP	Pn	18 25 28.9	+4.3
GO03	Copiap	6.81	178	ePn	Pn	18 25 46.5	-2.5
LCO	Las Campanas	8.22	181	ePn	Pn	18 26 06.3	-2.2
GO04	Tololo Observa	9.38	181	ePn	Pn	18 26 21.9	-2.5
SIV	San Ignacio	10.16	64	LR	LR	18 31 08.3	
	comp=E,4µm,18.8s,baz=262,slow=42						
NNA	Nana	10.61	324	Pn	Pn	18 26 40.9	-0.2
	comp=E,2.1nm,0.3s,baz=219,slow=13,SNR=2.5						
NNA				Sn	Sn	18 28 31.8	-7.3
	comp=E,2.4nm,0.3s,baz=270,slow=14,SNR=3.2						
NNA				Lg	Lg	18 29 27.5	
	comp=E,1.8nm,0.3s,baz=50,slow=19,SNR=6.5						
NNA				LR	LR	18 30 52.1	
	comp=E,2µm,18.9s,baz=159,slow=38						
NNA	Nana	10.61	324	ePn	Pn	18 26 41.5	+0.4
NNA				Sn	Sn	18 28 31.8	-7.3
NNA				Lg	Lg	18 29 27.5	
NNA	Nana	10.61	324	eP	Pn	18 26 41.5	+0.4
NNA						18 28 31.8	
CPUP	Villa Florida	13.32	117	Pn	Pn	18 27 15.0	-3.1
	comp=E,0.1nm,0.3s,baz=282,slow=14,SNR=3.9						
CPUP				Lg	Lg	18 30 41.8	
	comp=E,0.1nm,0.3s,baz=53,slow=16,SNR=2.8						
CPUP				LR	LR	18 33 21.6	
	comp=E,2µm,20.9s,baz=295,slow=42						
CPUP	Villa Florida	13.32	117	ePn	Pn	18 27 16.8	-1.4
CPUP				Lg	Lg	18 30 41.8	
CPUP	Villa Florida	13.32	117	eP	Pn	18 27 16.8	-1.4
ATAH	Atahualpa	15.53	330	Pn	Pn	18 27 49.6	+1.2
	comp=E,0.5nm,0.3s,baz=114,slow=20,SNR=2.3						
ATAH				LR	LR	18 33 34.7	
	comp=E,966nm,20.6s,baz=175,slow=36						
LPA	La Plata	17.95	144	ceP	Pn	18 28 17.0	-1.4
LPA				PPP	PPP	18 28 37.0	
LPA				SSS	SSS	18 33 12.0	
LPA				SSS(2)		18 34 01.0	
TRQA	Tornquist	18.77	159	eP	P	18 28 27.1	-0.7
	comp=E,52nm,0.9s						
TRQA	Tornquist	18.77	159	eP	P	18 28 27.1	-0.7
TRQA				pmax	pmax		
	comp=Z,52nm,0.9s						
PLCA	Paso Flores	19.91	180	P	P	18 28 41.2	+0.8
	comp=Z,0.3nm,0.3s,baz=27,slow=13,SNR=33						
PLCA				LR	LR	18 35 49.9	
	comp=Z,1µm,20.6s,baz=22,slow=35						
PLCA	Paso Flores	19.91	180	eP	P	18 28 40.5	+0.1
	comp=Z,149nm,1.4s						
PLCA	Paso Flores	19.91	180	eP	P	18 28 40.5	+0.1
PLCA				pmax	pmax		
	comp=Z,149nm,1.4s						
BDFB	Brasilia	21.99	80	eP	P	18 29 01.7	-1.4
	comp=Z,92nm,0.9s						
BDFB	Brasilia	21.99	80	eP	P	18 29 01.7	-1.4
BDFB				pmax	pmax		
	comp=Z,93nm,0.9s						
OTAV	Otavalo	22.25	339	eP	P	18 29 04.2	-2.0
	comp=Z,45nm,0.9s						
OTAV				LR	LR		
	comp=Z,738nm,19.0s						
OTAV	Otavalo	22.25	339	eP	P	18 29 13.2	+7.0
OTAV	Otavalo	22.25	339	eP	P	18 29 04.2	-2.0
OTAV				pmax	pmax		
	comp=Z,45nm,0.9s						
OTAV				MLR	MLR		
	comp=Z,738nm,19.0s						
PTGA	Pitinga	22.43	29	P	P	18 29 04.9	-2.7
	comp=Z,79nm,0.9s,baz=302,slow=19,SNR=43						
PTGA				S	S	18 33 07.3	-5.3
	comp=Z,2.0nm,0.6s,baz=307,slow=20,SNR=1.8						
PTGA				LR	LR	18 38 23.1	
	comp=Z,3µm,18.5s,baz=206,slow=38						
PTGA	Pitinga	22.43	29	eP	P	18 29 05.5	-2.2
	comp=Z,91nm,0.9s						
PTGA				S	S	18 33 07.3	-5.3
CRUC	La Cruz	23.06	343	eP	P	18 29 21.0	+6.4
SOTA	Rioblanco	23.52	345	eP	P	18 29 19.8	+0.5
PCON	Cinco Dias	23.65	345	eP	P	18 29 22.8	+2.1
BETC	Betania	23.78	348	eP	P	18 29 22.2	+0.8

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PRAC  Prado              24.69 350  eP     P      18 29 29.7   0.0
      comp=Z,70nm,1.0s
HORQ  Saladito           24.82 345  eP     P      18 29 30.4  -0.8
VILC  Villavicencio,     24.91 353  eP     P      18 29 31.6  -0.2
YOTC  Yotoco, Valle      25.24 346  eP     P      18 29 36.3  +1.5
CHIC  Chingaza           25.42 353  eP     P      18 29 36.8   0.0
ROSC  El Rosal           25.71 351   P     P      18 29 39.6  +0.3
      comp=Z,17nm,0.7s,baz=193,slow=4.4,SNR=8.7
ROSC  El Rosal           25.71 351  eP     P      18 29 38.2  -1.1
      comp=Z,102nm,1.8s
RUSC  La Rusia           26.60 354  eP     P      18 29 48.1  +0.5
      comp=Z,74nm,1.1s
RUSC  La Rusia           26.60 354  eP     P      18 29 49.9  +2.3
HELC  Santa Helena       27.23 349  eP     P      18 29 52.8  -0.2
      comp=Z,156nm,1.5s
BARC  Barichara          27.30 354  eP     P      18 29 55.2  +1.6
PAYG  Puerto Ayora       27.76 314   PFAKE        18 30 10.0   +13
PAYG                                 LR     LR
      comp=Z,817nm,21.0s
ZARC  Zaragoza, Cauc     28.39 351  eP     P      18 30 00.5  -2.6
SDV   Santo Domingo      29.46 360  eP     P      18 30 11.4  -1.3
      comp=Z,32nm,0.9s
SDV                                  LR     LR
      comp=Z,1µm,22.0s
BCIP  Isla Barro Col     31.11 342   PFAKE        18 30 40.0   +13
BCIP                                 LR     LR
      comp=Z,721nm,20.0s
PCRV  Puerto La Cruz     31.29  11   P     P      18 30 28.1  -0.6
      comp=Z,25nm,1.1s,baz=180,slow=1.0,SNR=6.0
PCRV                                 LR     LR    18 44 12.1
      comp=Z,3µm,18.2s,baz=182,slow=38
EFI   East Falkland      32.36 165   PFAKE        18 30 50.0   +12
EFI                                  LR     LR
      comp=Z,3µm,19.0s
GRGR  Grenville          33.83  16  eP     P      18 30 48.7  -2.3
      comp=Z,187nm,1.0s
GRGR                                 LR     LR
      comp=Z,959nm,19.0s
JTS   JuntasAbangare     33.95 334   PFAKE        18 31 00.0  +7.9
JTS                                  LR     LR
      comp=Z,482nm,19.0s
SVB   Belmont            35.03  16  eP     P      18 30 58.3  -3.1
      comp=Z,84nm,0.5s
BBGH  Gun Hill           35.38  19   PFAKE        18 31 20.0   +16
BBGH                                 LR     LR
      comp=Z,2µm,20.0s
RPN   Rapa Nui           35.91 252   LR     LR    18 41 57.9
      comp=Z,2µm,18.9s,baz=94,slow=30
FDF   Fort de France     36.46  15  eP     P      18 31 10.9  -2.7
      comp=Z,109nm,1.0s
FDF   Fort de France     36.46  15  eP     P      18 31 10.9  -2.7
FDF                                  pmax   pmax
      comp=Z,109nm,1.0s
RCBR  Riachuelo          36.72  71  eP     P      18 31 15.6  -0.4
      comp=Z,58nm,0.8s
RCBR                                 LR     LR
      comp=Z,17µm,21.0s
RCBR  Riachuelo          36.72  71  eP     P      18 31 15.6  -0.4
RCBR                                 pmax   pmax
      comp=Z,58nm,0.8s
RCBR                                 MLR    MLR
      comp=Z,17µm,21.0s
ICMP  Isla Caja de M     38.61   6  eP     P      18 31 31.1  -0.6
      comp=Z,93nm,0.9s
CRPR  Cabo Rojo, PR      38.67   5  eP     P      18 31 30.6  -1.7
      comp=Z,149nm,0.9s
OBIP  Obispado Ponce     38.75   6  eP     P      18 31 30.3  -2.7
      comp=Z,64nm,1.0s
SJG   San Juan           38.87   7  eP     P      18 31 31.8  -2.1
      comp=Z,104nm,0.9s
SJG                                  LR     LR
      comp=Z,608nm,19.0s
SJG   San Juan           38.87   7  eP     P      18 31 31.8  -2.1
SJG                                  pmax   pmax
      comp=Z,104nm,0.9s
SJG                                  MLR    MLR
      comp=Z,608nm,19.0s
MPR   Mayaguez           38.87   5  eP     P      18 31 31.7  -2.3
      comp=Z,54nm,0.8s
MTP   Monte Pirata       38.92   8  eP     P      18 31 31.9  -2.5
      comp=Z,135nm,1.0s
HUMP  Col San Antoni     38.93   7  eP     P      18 31 31.4  -3.1
      comp=Z,78nm,1.2s
AOPR  Arecibo Observ     39.04   6  eP     P      18 31 33.6  -1.8
      comp=Z,58nm,0.8s
CBYP  Canovanas          39.06   7  eP     P      18 31 33.1  -2.5
      comp=Z,163nm,0.9s
ANWB  Willy Bob          39.14  13   PFAKE        18 31 50.0   +14
ANWB                                 LR     LR
      comp=Z,779nm,20.0s
MTDJ  Mount Denham       39.34 349   PFAKE        18 31 50.0   +12
MTDJ                                 LR     LR
      comp=Z,597nm,19.0s
GTBY  Guantanamo Bay     40.68 353   PFAKE        18 32 00.0   +11
GTBY                                 LR     LR
      comp=Z,390nm,19.0s
GRTK  Grand Turk         42.02 359   PFAKE        18 32 10.0   +10
GRTK                                 LR     LR
      comp=Z,941nm,19.0s
HOPE  Hope Point         42.26 151   PFAKE        18 32 10.0  +8.4
HOPE                                 LR     LR
      comp=Z,551nm,19.0s
PMSA  Palmer Station     44.21 176   LR     LR    18 50 29.5
      comp=Z,490nm,19.4s,baz=352,slow=36
061Z  Ochoppi            47.43 347   P     P      18 32 43.4  +0.4
      baz=167
060A  Indiantown         48.45 348   P     P      18 32 51.4  +0.4
      baz=168
958A  Wauchula           49.27 347   P     P      18 32 57.7  +0.4
      baz=166
859A  Kempfer Cattle     49.55 348   P     P      18 32 59.8  +0.5
      baz=167
857A  Zephyrhills        50.03 347   P     P      18 33 05.0  +2.0
      baz=166
758A  Lake Helen         50.49 348   P     P      18 33 08.3  +1.8
      baz=167
757A  Oxford             50.65 347   P     P      18 33 07.8  +0.1
      baz=166
658A  Bunnell            50.95 348   P     P      18 33 10.1  +0.2
      baz=167
656A  Willston           51.16 347   P     P      18 33 11.4  -0.1
      baz=165
657A  Interlachen        51.23 347   P     P      18 33 12.4  +0.4
      baz=166
553A  Crawfordville      52.39 345   P     P      18 33 21.5  +0.8
      baz=163
455A  Stateville         52.59 346   P     P      18 33 21.9  -0.3
      baz=165
454A  Quitman            52.70 346   P     P      18 33 22.5  -0.5
      baz=164
453A  Whigham            53.00 345   P     P      18 33 25.4  +0.3
      baz=164
BBSR  BB Station         53.12   6   PFAKE        18 33 40.0   +14
BBSR                                 LR     LR
      comp=Z,302nm,19.0s
355A  Pearson            53.13 347   P     P      18 33 26.1   0.0
      baz=165
353A  Camilla            53.44 345   P     P      18 33 28.3  -0.1
      baz=164
BRAL  Brewton            54.01 342   PFAKE        18 33 40.0  +7.4
BRAL                                 LR     LR
      comp=Z,364nm,20.0s
156A  Sylvania           54.13 349   P     P      18 33 33.3  -0.2
      baz=167
252A  Lumpkin            54.19 345   P     P      18 33 32.8  -1.1
      baz=163
349A  Repton             54.22 342   P     P      18 33 33.8  -0.3
      baz=161
155A  Kite               54.29 348   P     P      18 33 34.1  -0.5
      baz=166
NHSC  New Hope           54.35 350   PFAKE        18 33 50.0   +15
NHSC                                 LR     LR
      comp=Z,436nm,21.0s
154A  Montrose           54.41 347   P     P      18 33 35.1  -0.4
      baz=165
251A  Midway             54.45 344   P     P      18 33 35.0  -0.8
      baz=163
250A  Grady              54.56 344   P     P      18 33 35.7  -0.9
      baz=162
PTCN  Pitcairn Islan     54.65 253   PFAKE        18 33 50.0   +12
PTCN                                 LR     LR
      comp=Z,15nm,22.0s
152A  Waverly Hall       54.83 345   P     P      18 33 37.9  -0.7
      baz=164
152A  Waverly Hall       54.83 345  eP     P      18 33 37.1  -1.4
      comp=Z,9.3nm,0.9s
KVTX  Kingsville         54.83 330   PFAKE        18 33 50.0   +11
KVTX                                 LR     LR
      comp=Z,327nm,19.0s
151A  Opelika            54.84 345   P     P      18 33 38.0  -0.6
      baz=163
Z54A  Sparta             54.96 347   P     P      18 33 38.6  -0.9
      baz=166
248A  Dixon Mills        55.07 342   P     P      18 33 39.7  -0.6
      baz=160
150A  Eclectic           55.09 344   P     P      18 33 39.5  -0.9
      baz=162
Z53A  Monticello         55.16 347   P     P      18 33 40.0  -0.9
      baz=165
Z52A  Williamson         55.26 346   P     P      18 33 40.2  -1.4
      baz=164
GOGA  Godfrey            55.26 347   P     P      18 33 40.7  -1.0
      baz=165
GOGA  Godfrey            55.26 347   PFAKE        18 33 50.0  +8.4
GOGA                                 LR     LR
      comp=Z,287nm,21.0s
344A  Westbrook Farm     55.41 339   P     P      18 33 42.1  -0.7
      baz=157
Y54A  Tignall            55.53 348   P     P      18 33 42.9  -0.8
      baz=166
148A  Greensboro         55.55 343   P     P      18 33 42.8  -0.9
      baz=160
Z51A  Franklin           55.56 345   P     P      18 33 42.9  -0.9
      baz=163
245A  Little AP, Sta     55.67 340   P     P      18 33 44.5  -0.1
      baz=158
Z50A  Ashland            55.68 344   P     P      18 33 43.7  -1.0
      baz=162,SNR=6.6
Z50A  Ashland            55.68 344  eP     P      18 33 43.6  -1.0
      comp=Z,15nm,0.9s
LRAL  Lakeview Retre     55.75 343   P     P      18 33 44.1  -1.1
      baz=161
LRAL  Lakeview Retre     55.75 343  eP     P      18 33 43.6  -1.6
      comp=Z,14nm,1.1s
Z49A  Columbiana         55.78 344   P     P      18 33 44.0  -1.3
      baz=162
Y52A  Lilburn            55.83 346   P     P      18 33 45.1  -0.7
      baz=164
342A  Flagon Creek P     55.89 337   P     P      18 33 46.1  -0.1
      baz=155
244A  Avery, Jackson     55.93 339   P     P      18 33 46.1  -0.4
      baz=157
146A  Union              55.97 341   P     P      18 33 46.0  -0.7
      baz=159
Y51A  Rockmart           56.09 345   P     P      18 33 46.6  -1.0
      baz=163
CNNC  Cliffs of the      56.12 353   PFAKE        18 34 00.0   +12
CNNC                                 LR     LR
      comp=Z,1µm,20.0s
833A  Chaparral WMA,     56.20 329   P     P      18 33 48.1  -0.4
      baz=147
Z48A  Northport          56.23 343   P     P      18 33 47.5  -1.1
      baz=161
Y50A  Piedmont           56.24 345   P     P      18 33 47.5  -1.2
      baz=163
X53A  Estanollee         56.28 347   P     P      18 33 47.7  -1.3
      baz=166
Y49A  Blount Mountai     56.38 344   P     P      18 33 48.7  -1.0
      baz=162
X52A  Dahlonega          56.50 347   P     P      18 33 49.7  -0.9
      baz=165
KMSC  Kings Mountain     56.53 349   P     P      18 33 49.7  -1.1
      baz=168
Y48A  Jasper             56.63 343   P     P      18 33 49.9  -1.6
      baz=161
X51A  Calhoun            56.68 346   P     P      18 33 50.6  -1.2
      baz=164
X51A  Calhoun            56.68 346  eP     P      18 33 50.6  -1.2
      comp=Z,15nm,0.9s
X50B  Fort Payne         56.76 345   P     P      18 33 51.2  -1.2
      baz=163
Y47A  UCPARC, Winfie     56.80 343   P     P      18 33 51.5  -1.2
      baz=160
W53A  Cullowhee          56.90 348   P     P      18 33 53.0  -0.4
      baz=166,SNR=6.0
X49A  Woodville          56.98 344   P     P      18 33 52.6  -1.3
      baz=162
W52A  Murphy             56.98 347   P     P      18 33 53.2  -0.8
      baz=165
Z44A  Pea Ridge, Bel     56.99 340   P     P      18 33 53.5  -0.5
      baz=158
Y46A  Houston            57.07 342   P     P      18 33 53.3  -1.2
      baz=159
X48A  Hartselle          57.10 344   P     P      18 33 53.3  -1.5
      baz=161
X48A  Hartselle          57.10 344  eP     P      18 33 53.6  -1.2
      comp=Z,50nm,1.6s
NATX  Nacogdoches        57.11 336   PFAKE        18 34 10.0   +15
NATX                                 LR     LR
      comp=Z,186nm,20.0s
141A  Papa Simpson,      57.21 338   P     P      18 33 55.9  +0.3
      baz=155
W51A  Cleveland          57.23 346   P     P      18 33 54.9  -0.8
      baz=164
Y45A  Yeager Farm, C     57.26 341   P     P      18 33 55.6  -0.3
      baz=159
V53A  Saluda             57.31 348   P     P      18 33 55.3  -1.0
      baz=166
X47A  Russelville        57.38 343   P     P      18 33 55.2  -1.6
      baz=161
W50A  Signal Mountai     57.39 346   P     P      18 33 55.8  -1.0
      baz=163
W50A  Signal Mountai     57.39 346  eP     P      18 33 55.4  -1.5
      comp=Z,30nm,1.4s
CPCT  Cooper Cave        57.45 346  eP     P      18 33 56.0  -1.2
      comp=Z,20nm,1.2s
435B  Jarrell            57.46 332   P     P      18 33 55.8  -1.6
      baz=150
140A  Cam and Jess,      57.48 337   P     P      18 33 58.1  +0.5
      baz=154
TKL   Tuckaleechee C     57.49 347   P     P      18 33 56.6  -0.9
      comp=Z,9.6nm,0.9s,baz=144,slow=5.6,SNR=6.5
TKL                                  LR     LR    18 58 58.6
      comp=Z,250nm,20.9s,baz=152,slow=36
TKL   Tuckaleechee C     57.49 347  eP     P      18 33 56.3  -1.2
      comp=Z,18nm,1.1s
TKL   Tuckaleechee C     57.49 347  eP     P      18 33 56.3  -1.2
TKL                                  pmax   pmax
      comp=Z,18nm,1.1s
W49A  Belvidere          57.54 345   P     P      18 33 57.2  -0.7
      baz=162
SWET  Sewanee            57.55 345  eP     P      18 33 56.8  -1.2
      comp=Z,22nm,1.2s
V52A  Sevierville        57.63 347   P     P      18 33 57.6  -0.9
      baz=165,SNR=6.0
V52A  Sevierville        57.63 347  eP     P      18 33 57.4  -1.2
      comp=Z,25nm,1.1s
W48A  Pulaski            57.73 344   P     P      18 33 57.9  -1.3
      baz=162
V51A  Loudon             57.75 347   P     P      18 33 58.7  -0.6
      baz=164
V50A  Pikevile           57.79 346   P     P      18 33 58.9  -0.7
      baz=164,SNR=8.9
OXF   Oxford             57.82 342   P     P      18 33 59.3  -0.6
      baz=159
PLAL  Pickwick Lake      57.88 343  eP     P      18 33 58.1  -2.2
      comp=Z,12nm,1.0s
U53A  Fall Branch        57.94 349   P     P      18 33 59.9  -0.9
      baz=166
Z40A  Long Farm, Mag     57.98 337   P     P      18 34 01.4  +0.4
      baz=154
W47A  Westpoint          58.01 344   P     P      18 33 59.7  -1.4
      baz=161
V49A  McMinnville        58.07 345   P     P      18 34 00.5  -1.1
      baz=163
SACV  Santiago Islan     58.19  56   PFAKE        18 34 10.0  +7.2
SACV                                 LR     LR
      comp=Z,296nm,21.0s
JCT   Junction City      58.20 330   PFAKE        18 34 20.0   +17
JCT                                  LR     LR
      comp=Z,121nm,20.0s
U51A  La Follette        58.24 347   P     P      18 34 01.7  -1.1
      baz=165
V48A  Smith Brothers     58.27 344   P     P      18 34 02.0  -1.0
      baz=162
V48A  Smith Brothers     58.27 344  eP     P      18 34 01.7  -1.3
      comp=Z,15nm,0.9s
BLA   Blacksburg         58.41 351   P     P      18 34 02.9  -1.1
      baz=169
BLA   Blacksburg         58.41 351   PFAKE        18 34 20.0   +16
BLA                                  LR     LR
      comp=Z,393nm,21.0s
WHTX  Lake Whitney,      58.44 333   P     P      18 34 04.4  +0.1
      baz=150
U50A  Jamestown          58.45 346   P     P      18 34 03.2  -1.1
      baz=164
V47A  Nunnelly           58.53 344   P     P      18 34 03.3  -1.5
      baz=161
Y40A  Okolona            58.62 338   P     P      18 34 05.2  -0.2
      baz=155
IP05  Hopewell Churc     58.67 353  eP     P      18 34 05.5  -0.2
      comp=Z,23nm,1.2s
T52A  Hallie             58.74 348   P     P      18 34 05.2  -1.1
      baz=166
U49A  Red Boiling Sp     58.75 346   P     P      18 34 05.3  -1.1
      baz=163
IP07  Quail              58.79 353  eP     P      18 34 06.6  +0.1
      comp=Z,59nm,1.3s
T51A  Gray               58.79 347   P     P      18 34 05.7  -0.9
      baz=165
IP06  Yanceyville        58.80 353  eP     P      18 34 06.9  +0.3
      comp=Z,38nm,1.1s
IP01  Cuckoo             58.81 353  eP     P      18 34 06.9  +0.2
      comp=Z,36nm,1.1s
IP03  Louisa             58.89 353  eP     P      18 34 07.2   0.0
      comp=Z,43nm,1.1s
WVT   Waverly            58.90 344   P     P      18 34 05.7  -1.6
      baz=161
WVT   Waverly            58.90 344  eP     P      18 34 05.5  -1.9
      comp=Z,9.2nm,0.8s
WVT   Waverly            58.90 344  eP     P      18 34 05.5  -1.9
WVT                                  pmax   pmax
      comp=Z,9.0nm,0.8s
CVRD  Centerville Ro     58.91 353  eP     P      18 34 07.5  +0.1
      comp=Z,28nm,1.0s
U48A  Cassie Pea, Po     58.93 345   P     P      18 34 06.7  -0.9
      baz=162
IP04  Greensprings       58.97 353  eP     P      18 34 08.0  +0.2
      comp=Z,44nm,1.2s
CBN   Corbin Frederi     59.00 354   PFAKE        18 34 20.0   +12
CBN                                  LR     LR
      comp=Z,337nm,21.0s
T50A  Nancy              59.03 347   P     P      18 34 07.0  -1.3
      baz=164
LPIG  La Paz             59.05 317   LR     LR    18 54 12.5
      comp=Z,156nm,20.5s,baz=46,slow=30
U47A  Clarksville        59.05 344   P     P      18 34 06.9  -1.5
      baz=162
TXAR  Lajitas Array      59.16 326   P     P      18 34 09.6  +0.1
      comp=Z,1.2nm,0.9s,baz=146,slow=9.1,SNR=9.1
TXAR                                 LR     LR    18 56 54.2
      comp=Z,203nm,20.5s,baz=0.0,slow=33
TX31  Lajitas Ar. Si     59.16 326  eP     P      18 34 08.8  -0.6
MIAR  Mount Ida          59.20 338   P     P      18 34 09.2  -0.3
      baz=155,SNR=11
MIAR  Mount Ida          59.20 338  eP     P      18 34 08.7  -0.8
      comp=Z,50nm,1.4s
MIAR                                 LR     LR
      comp=Z,170nm,21.0s
MIAR  Mount Ida          59.20 338  eP     P      18 34 08.7  -0.8
MIAR                                 pmax   pmax
      comp=Z,50nm,1.4s
MIAR                                 MLR    MLR
      comp=Z,170nm,21.0s
T49A  Edmonton           59.26 346   P     P      18 34 08.9  -1.0
      baz=164,SNR=7.0
T49A  Edmonton           59.26 346  eP     P      18 34 08.4  -1.4
      comp=Z,41nm,1.3s
W41B  Gary Mavity, V     59.32 339   P     P      18 34 09.4  -0.9
      baz=156
W41B  Gary Mavity, V     59.32 339  eP     P      18 34 09.0  -1.3
      comp=Z,20nm,1.3s
X39A  Fountain Ranch     59.36 337   P     P      18 34 10.9  +0.3
      baz=154,SNR=9.6
S51A  Beattyville        59.37 348   P     P      18 34 09.6  -1.0
      baz=166
RKT   Rikitea            59.37 255  eS     S      18 42 18.3  -0.2
      comp=Z,867nm,25.2s
RKT                                 eLR     LR    18 51 45.0
      comp=Z,668nm,26.0s
WHAR  Wooly Hollow       59.44 339  eP     P      18 34 11.1   0.0
      comp=Z,11nm,1.0s
T48A  Bowling Green      59.47 345   P     P      18 34 10.1  -1.2
      baz=163
U44B  Burton Farm, H     59.51 342   P     P      18 34 10.8  -0.8
      baz=159
T47A  Sharon Grove       59.52 345   P     P      18 34 10.8  -0.8
      baz=162
T47A  Sharon Grove       59.52 345  eP     P      18 34 10.4  -1.3
      comp=Z,50nm,1.3s
S50A  Richmond           59.57 347   P     P      18 34 11.1  -0.9
      baz=165,SNR=5.7
W40A  Ferguson Farm,     59.61 339   P     P      18 34 12.3  +0.1
      baz=155
W40A  Ferguson Farm,     59.61 339  eP     P      18 34 12.1  -0.2
      comp=Z,51nm,1.1s
V42A  Cord               59.62 340   P     P      18 34 11.4  -1.0
      baz=157
T46A  Princeton          59.77 344   P     P      18 34 12.2  -1.2
      baz=161,SNR=6.4
V41A  Mountainview       59.85 340   P     P      18 34 12.9  -1.1
      baz=156
W39A  Magazine           59.86 338   P     P      18 34 14.2  +0.2
      baz=155,SNR=7.6
W39A  Magazine           59.86 338  eP     P      18 34 13.6  -0.4
      comp=Z,33nm,1.3s
S49A  Springfield        59.86 347   P     P      18 34 13.0  -1.0
      baz=164
S48A  Wiedeman Farm,     59.91 346   P     P      18 34 12.7  -1.6
      baz=163
ABTX  Abilene, Hawle     59.93 332   P     P      18 34 14.6  -0.1
      baz=148
ABTX  Abilene, Hawle     59.93 332  eP     P      18 34 14.2  -0.5
      comp=Z,26nm,1.2s
T45A  Paducah            59.95 343   P     P      18 34 13.1  -1.5
      baz=160
R51A  Hillsboro          60.01 348   P     P      18 34 13.9  -1.1
      baz=166
S47A  Hartford           60.05 345   P     P      18 34 13.8  -1.5
      baz=162
U42A  Revenden           60.08 341   P     P      18 34 14.4  -1.1
      baz=157
V40A  Witts Springs      60.08 339   P     P      18 34 14.6  -1.0
      baz=156
R50A  Paris              60.14 348   P     P      18 34 14.7  -1.1
      baz=165
T44A  Benton             60.27 343   P     P      18 34 15.9  -1.0
      baz=159
U41A  Viola              60.28 340   P     P      18 34 15.8  -1.1
      baz=157
R49A  Shelbyville        60.32 347   P     P      18 34 15.6  -1.6
      baz=164
S46A  Don Dixon Farm     60.34 344   P     P      18 34 15.9  -1.4
      baz=161
V39A  Pettigrew          60.39 338   P     P      18 34 17.6  -0.2
      baz=155,SNR=11
WCI   Wyandotte Cave     60.51 346   P     P      18 34 17.2  -1.2
      baz=163
WCI   Wyandotte Cave     60.51 346  eP     P      18 34 17.0  -1.4
      comp=Z,20nm,1.2s
WCI   Wyandotte Cave     60.51 346  eP     P      18 34 17.0  -1.4
WCI                                  pmax   pmax
      comp=Z,20nm,1.2s
S45A  Carrier Mills      60.55 344   P     P      18 34 17.7  -1.0
      baz=160
R48A  Northridge Ran     60.58 346   P     P      18 34 18.1  -0.8
      baz=163
U40A  Yellville          60.60 339   P     P      18 34 18.6  -0.5
      baz=156,SNR=7.2
Q50A  Georgetown         60.61 348   P     P      18 34 17.8  -1.3
      baz=165
R47A  Wooly Knot Far     60.63 346   P     P      18 34 18.1  -1.1
      baz=163
T42A  Van Buren          60.66 341   P     P      18 34 18.0  -1.4
      baz=158
T42A  Van Buren          60.66 341  eP     P      18 34 17.8  -1.6
      comp=Z,6.7nm,0.9s
Q51A  Peebles            60.67 349   P     P      18 34 18.3  -1.2
      baz=166
MVL   Millersville       60.68 355  eP     P      18 34 19.7  +0.1
      comp=Z,16nm,1.0s
MCWV  Mont Chateau       60.73 352   P     P      18 34 19.3  -0.5
      baz=170
S44A  Carbondale         60.75 343   P     P      18 34 19.2  -0.8
      baz=160
SIUC  Southern Illin     60.76 343  eP     P      18 34 19.2  -0.9
      comp=Z,24nm,1.0s
R46A  Gibon Southern     60.79 345   P     P      18 34 18.7  -1.6
      baz=162
U39A  Green Forest       60.83 339   P     P      18 34 19.9  -0.8
      baz=155,SNR=5.9
S43A  Fulton Ridge,      60.86 342   P     P      18 34 19.8  -1.1
      baz=159
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T41A	Mountain View	60.88	341	P	P	18 34 19.6	-1.4
	baz=157						
HHAR	Hobbs	60.89	338	*e*P	P	18 34 21.2	+0.1
	comp=Z,21nm,1.2s						
Q49A	Aurora	60.95	347	P	P	18 34 20.2	-1.2
	baz=164						
R45A	Skylar, Fairfi	61.05	344	P	P	18 34 20.8	-1.4
	baz=161						
Q48A	North Vernon	61.06	346	P	P	18 34 20.8	-1.3
	baz=164						
O56A	Blue Knob Stat	61.17	353	P	P	18 34 23.5	+0.5
	baz=171,SNR=9.0						
O56A	Blue Knob Stat	61.17	353	*e*P	P	18 34 22.8	-0.1
	comp=Z,36nm,1.1s						
T40A	Mansfield	61.21	340	P	P	18 34 22.6	-0.7
	baz=156						
Q47A	Bedord North L	61.22	346	P	P	18 34 21.3	-1.9
	baz=163						
TUL1	Leonard	61.22	337	P	P	18 34 22.8	-0.5
	baz=153						
S42A	Caledonia	61.26	342	P	P	18 34 22.1	-1.4
	baz=158						
VNA3	Neumayer Olymp	61.27	161	P	P	18 34 23.3	+0.1
P50A	Jamestown	61.32	348	P	P	18 34 22.8	-1.1
	baz=166						
FVM	French Village	61.35	342	*e*P	P	18 34 22.9	-1.2
	comp=Z,46nm,1.4s						
FVM	French Village	61.35	342	*e*P	P	18 34 22.9	-1.2
FVM				pmax	pmax		
	comp=Z,46nm,1.4s						
WMOK	Wichita Mounta	61.37	334	P	P	18 34 23.5	-0.9
	baz=150						
WMOK	Wichita Mounta	61.37	334	PFAKE		18 34 40.0	+16
WMOK				LR	LR		
	comp=Z,167nm,20.0s						
S41A	Jillco Farms,	61.37	341	P	P	18 34 23.4	-1.0
	baz=157,SNR=7.5						
T39A	Clever	61.38	339	P	P	18 34 23.5	-0.8
	baz=155						
P49A	Miami Univ. Ec	61.42	348	P	P	18 34 23.0	-1.7
	baz=165						
SSPA	Standing Stone	61.46	354	P	P	18 34 25.0	+0.1
	baz=172						
SSPA	Standing Stone	61.46	354	*e*P	P	18 34 24.7	-0.1
	comp=Z,44nm,1.4s						
R43A	Red Bud	61.48	343	P	P	18 34 24.1	-0.9
	baz=159						
VNA1	Neumayer--Stat	61.49	160	P	P	18 34 25.8	+1.1
P48A	Milroy	61.50	347	P	P	18 34 23.2	-1.9
	baz=164						
PAL	Palisades	61.53	357	P	P	18 34 25.1	-0.2
	baz=176						
N59A	State Game Lan	61.55	355	P	P	18 34 25.9	+0.4
	baz=174						
Q45A	Warren Harvey,	61.59	344	P	P	18 34 24.2	-1.6
	baz=161						
S40A	Lebanon	61.62	340	P	P	18 34 24.7	-1.3
	baz=156,SNR=5.8						
CCM	Cathedral Cave	61.65	342	P	P	18 34 26.2	0.0
	baz=158						
CCM	Cathedral Cave	61.65	342	*e*P	P	18 34 25.7	-0.5
	comp=Z,14nm,0.9s						
CCM	Cathedral Cave	61.65	342	*e*P	P	18 34 25.7	-0.5
CCM				pmax	pmax		
	comp=Z,14nm,0.9s						
T38A	Diamond	61.70	339	P	P	18 34 26.0	-0.5
	baz=155,SNR=9.7						
P47A	Martinsville	61.71	346	P	P	18 34 25.2	-1.3
	baz=163						
R42A	Luebbering	61.73	342	P	P	18 34 25.5	-1.2
	baz=158						
ACSO	Alum Creek Sta	61.77	349	P	P	18 34 26.0	-1.0
	baz=167						
ACSO	Alum Creek Sta	61.77	349	*e*P	P	18 34 25.6	-1.3
	comp=Z,40nm,1.1s						
ACSO				LR	LR		
	comp=Z,228nm,20.0s						
O50A	Cable	61.80	349	P	P	18 34 25.9	-1.3
	baz=166						
Q44A	Meyer Farm, Va	61.82	344	P	P	18 34 25.8	-1.5
	baz=160						
R41A	Rosebud	61.92	342	P	P	18 34 27.2	-0.7
	baz=158,SNR=9.9						
MNTX	Cornudas Mount	61.93	327	P	P	18 34 27.9	-0.3
	baz=143,SNR=7.2						
MNTX	Cornudas Mount	61.93	327	*e*P	P	18 34 27.0	-1.2
	comp=Z,5.8nm,1.1s						
MNTX				LR	LR		
	comp=Z,288nm,19.0s						
S39A	Bolivar	61.97	340	P	P	18 34 27.4	-0.9
	baz=156,SNR=12						
S39A	Bolivar	61.97	340	*e*P	P	18 34 27.1	-1.2
	comp=Z,23nm,1.0s						
O49A	Covington	61.98	348	P	P	18 34 26.8	-1.5
	baz=165						
M65A	Busby, Falmout	62.00	360	P	P	18 34 24.9	-3.5
	baz=180						
N54A	Moraine State	62.03	352	P	P	18 34 26.4	-2.3
	baz=170						
N54A	Moraine State	62.03	352	*e*P	P	18 34 28.4	-0.3
	comp=Z,22nm,0.9s						
Q43A	New Douglas	62.04	343	P	P	18 34 27.2	-1.6
	baz=160						
P46A	Rosedale	62.05	345	P	P	18 34 27.1	-1.7
	baz=162						
P45A	Graceland, Par	62.09	345	P	P	18 34 27.4	-1.6
	baz=162,SNR=5.1						
P45A	Graceland, Par	62.09	345	*e*P	P	18 34 27.1	-2.0
	comp=Z,25nm,1.0s						
S38A	Stockton	62.10	339	P	P	18 34 28.4	-0.9
	baz=155,SNR=6.6						
R40A	Maddies Statio	62.18	341	P	P	18 34 28.7	-1.0
	baz=157,SNR=6.0						
R40A	Maddies Statio	62.18	341	*e*P	P	18 34 28.6	-1.1
	comp=Z,17nm,1.0s						
KSPA	Keystone Colle	62.19	356	*e*P	P	18 34 30.2	+0.5
	comp=Z,46nm,1.5s						
O48A	Farmland	62.21	347	P	P	18 34 28.6	-1.3
	baz=164						
Q42A	Golden Eagle	62.24	342	P	P	18 34 29.0	-1.2
	baz=159						
P44A	Sand Creek, Wi	62.25	344	P	P	18 34 28.9	-1.2
	baz=161						
N50A	Nevada	62.33	349	P	P	18 34 29.2	-1.4
	baz=166						
BRYW	Bryant College	62.37	359	*e*P	P	18 34 31.4	+0.5
	comp=Z,80nm,1.0s						
O47A	Sheridan	62.40	347	P	P	18 34 29.2	-2.0
	baz=163						
R39A	Chumby, Stover	62.44	340	P	P	18 34 30.8	-0.7
	baz=156						
Q41A	Truxton	62.48	342	P	P	18 34 31.1	-0.6
	baz=158,SNR=5.7						
MSTX	Muleshoe	62.49	330	P	P	18 34 30.9	-1.1
	baz=146						
M54A	Oil Creek Stat	62.52	352	P	P	18 34 31.9	-0.1
	baz=170,SNR=8.2						
M54A	Oil Creek Stat	62.52	352	*e*P	P	18 34 31.4	-0.6
	comp=Z,28nm,1.0s						
R38A	Fenwick Farm,	62.61	339	P	P	18 34 32.0	-0.5
	baz=155,SNR=9.5						
P43A	Skaggs, Pawnee	62.65	344	P	P	18 34 31.7	-1.1
	baz=160						
AMTX	Amarillo	62.74	331	P	P	18 34 32.7	-1.0
	baz=147						
SFIN	Lafayette	62.75	346	P	P	18 34 31.6	-1.9
	baz=162						
SFIN	Lafayette	62.75	346	*e*P	P	18 34 31.4	-2.1
	comp=Z,13nm,0.8s						
Q40A	Laux Farm, Aux	62.77	341	P	P	18 34 32.9	-0.8
	baz=157						
O45A	Potomac	62.77	345	P	P	18 34 32.0	-1.7
	baz=162						
P42A	Winchester	62.82	343	P	P	18 34 32.8	-1.1
	baz=159						
P42A	Winchester	62.82	343	*e*P	P	18 34 32.1	-1.8
	comp=Z,22nm,1.1s						
BINY	Binghamton	62.84	355	P	P	18 34 34.3	+0.2
	baz=174						
BINY	Binghamton	62.84	355	*e*P	P	18 34 33.7	-0.4
	comp=Z,42nm,1.4s						
BINY				LR	LR		
	comp=Z,398nm,22.0s						
M50A	Fremont	62.92	349	P	P	18 34 33.4	-1.2
	baz=167						
HRV	Adam Dziewonsk	62.95	359	P	P	18 34 34.7	0.0
	baz=179						
HRV	Adam Dziewonsk	62.95	359	*e*P	P	18 34 34.8	0.0
	comp=Z,61nm,1.1s						
HRV	Adam Dziewonsk	62.95	359	*e*P	P	18 34 34.8	0.0
HRV				pmax	pmax		
	comp=Z,61nm,1.1s						
Q39A	Willow Grove F	63.09	341	P	P	18 34 35.1	-0.6
	baz=156						
P41A	Barry, Barry	63.10	342	P	P	18 34 34.6	-1.3
	baz=158						
M49A	Liberty Center	63.16	349	P	P	18 34 35.1	-1.1
	baz=166						
N46A	Monticello	63.16	346	P	P	18 34 34.8	-1.4
	baz=163						
ERPA	Erie	63.16	352	P	P	18 34 35.7	-0.5
	baz=170						
O43A	Sugar Creek Fa	63.20	344	P	P	18 34 34.9	-1.6
	baz=160						
Q38A	Cooks Store, C	63.22	340	P	P	18 34 36.2	-0.4
	baz=156,SNR=10						
TRY	Troy	63.24	357	*e*P	P	18 34 35.8	-0.9
	comp=Z,65nm,1.3s						
P40A	Paris	63.25	341	P	P	18 34 36.2	-0.7
	baz=157,SNR=5.9						
P40A	Paris	63.25	341	*e*P	P	18 34 35.9	-0.9
	comp=Z,15nm,0.9s						
N45A	Kentland	63.29	346	P	P	18 34 35.3	-1.8
	baz=162						
O42A	Bath	63.32	343	P	P	18 34 35.7	-1.6
	baz=159						
N44A	Piper City	63.39	345	P	P	18 34 35.7	-2.0
	baz=161						
Q37A	Longview Farm,	63.41	339	P	P	18 34 36.9	-1.0
	baz=155						
P39B	Salisbury	63.43	341	P	P	18 34 37.4	-0.6
	baz=157,SNR=5.0						
HDIL	Hopedale	63.45	344	P	P	18 34 36.6	-1.6
	baz=160						
HDIL	Hopedale	63.45	344	PFAKE		18 34 50.0	+12
HDIL				LR	LR		
	comp=Z,233nm,20.0s						
O41A	Passleys Farm,	63.46	343	P	P	18 34 36.5	-1.7
	baz=159						
SNAA	Sanae	63.48	161	P	P	18 34 38.3	+0.3
SNAA	Sanae	63.48	161	P	P	18 34 38.4	+0.3
	comp=Z,39nm,1.0s,baz=271,slow=7.4,SNR=82						
SNAA				LR	LR	19 03 44.5	
	comp=Z,258nm,18.2s,baz=298,slow=37						
SNAA	Sanae	63.48	161	*e*P	P	18 34 37.8	-0.3
	comp=Z,65nm,1.1s						
SNAA	Sanae	63.48	161	*c* *i*P	P	18 34 38.1	0.0
MMNY	Mt. Morris Dam	63.54	354	*e*P	P	18 34 38.4	-0.3
	comp=Z,87nm,1.6s						
M46A	Old House Fiel	63.56	347	P	P	18 34 37.0	-1.8
	baz=163						
M45A	Boilermakers S	63.74	346	P	P	18 34 38.3	-1.7
	baz=162						
O40A	La Belle	63.75	342	P	P	18 34 38.5	-1.6
	baz=158						
N43A	Stutzman Famil	63.78	344	P	P	18 34 39.2	-1.0
	baz=160,SNR=9.2						
P38A	Dawn	63.80	340	P	P	18 34 39.6	-0.9
	baz=156						
121A	Cookes Peak, D	63.85	325	P	P	18 34 40.3	-0.9
	baz=141						
N42A	Yates City	63.90	344	P	P	18 34 39.7	-1.3
	baz=160						
AAM	Ann Arbor	63.90	349	P	P	18 34 40.1	-0.9
	baz=166						
AAM	Ann Arbor	63.90	349	PFAKE		18 34 50.0	+8.9
AAM				LR	LR		
	comp=Z,283nm,20.0s						
M44A	Midewin, Midew	63.93	345	P	P	18 34 39.5	-1.8
	baz=162						
N41A	Harden Midland	64.00	343	P	P	18 34 40.3	-1.5
	baz=159						
N41A	Harden Midland	64.00	343	*e*P	P	18 34 39.7	-2.1
	comp=Z,43nm,1.3s						
P37A	Lathrop	64.02	340	P	P	18 34 41.0	-1.0
	baz=155						
O39A	Kirksville	64.07	341	P	P	18 34 41.5	-0.7
	baz=157						
HNH	Hanover	64.16	359	*e*P	P	18 34 44.3	+1.6
	comp=Z,41nm,1.3s						
M43A	Waltham Townsh	64.19	345	P	P	18 34 41.5	-1.5
	baz=161						
O38A	Galt	64.23	341	P	P	18 34 42.3	-1.0
	baz=156						
KSU1	Kansas State U	64.35	338	P	P	18 34 43.0	-1.1
	baz=153						
KSU1	Kansas State U	64.35	338	PFAKE		18 35 00.0	+16
KSU1				LR	LR		
	comp=Z,193nm,19.0s						
N40A	Mertquake, Sal	64.37	342	P	P	18 34 43.0	-1.1
	baz=158						
M42A	Sheffield	64.41	344	P	P	18 34 42.9	-1.5
	baz=160						
O37A	Wolven Farm, M	64.48	340	P	P	18 34 44.1	-0.9
	baz=155						
NCB	Newcomb	64.50	357	*e*P	P	18 34 45.7	+0.8
	comp=Z,15nm,1.1s						
BNM	Barren Site	64.51	327	*e*P	P	18 34 47.1	+1.5
M41A	Milan	64.54	343	P	P	18 34 43.7	-1.6
	baz=159						
N39A	Derby Farms, D	64.63	342	P	P	18 34 44.9	-0.9
	baz=157						
N39A	Derby Farms, D	64.63	342	*e*P	P	18 34 45.5	-0.3
	comp=Z,15nm,0.9s						
LBNH	Lisbon	64.69	359	P	P	18 34 47.1	+0.8
	baz=178,SNR=6.1						
LBNH	Lisbon	64.69	359	*e*P	P	18 34 47.5	+1.3
	comp=Z,37nm,1.3s						
LBNH	Lisbon	64.69	359	*e*P	P	18 34 47.5	+1.3
LBNH				pmax	pmax		
	comp=Z,37nm,1.3s						
N38A	Joes South For	64.77	341	P	P	18 34 46.1	-0.7
	baz=156						
M40A	Post Highland	64.83	343	P	P	18 34 46.1	-1.1
	baz=158						
L43A	Garden Prairie	64.85	345	P	P	18 34 46.1	-1.2
	baz=161						
L42A	Oliver, Polo	64.91	344	P	P	18 34 46.3	-1.3
	baz=160						
LAZ	Ladron	64.97	327	*e*P	P	18 34 50.3	+1.8
N37A	Lee Faris, Mou	65.04	340	P	P	18 34 48.1	-0.5
	baz=155,SNR=5.5						
N37A	Lee Faris, Mou	65.04	340	*e*P	P	18 34 48.6	+0.1
	comp=Z,40nm,0.9s						
TASL	Snake Pit, Alb	65.05	328	P	P	18 34 49.1	+0.1
	baz=143						
ANMO	Albuquerque	65.06	328	P	P	18 34 49.5	+0.5
	comp=Z,1.7nm,0.8s,baz=182,slow=6.9,SNR=7.3						
ANMO				LR	LR	19 01 22.7	
	comp=Z,145nm,21.8s,baz=130,slow=34						
ANMO	Albuquerque	65.06	328	P	P	18 34 49.4	+0.3
	baz=143						
ANMO	Albuquerque	65.06	328	*e*P	P	18 34 50.4	+1.4
	comp=Z,7.0nm,1.1s						
ANMO	Albuquerque	65.06	328	*e*P	P	18 34 50.4	+1.4
ANMO				pmax	pmax		
	comp=Z,7.0nm,1.1s						
TASM	ASL Pad, Albuq	65.06	328	P	P	18 34 49.5	+0.4
	baz=143						
M39A	Webster	65.09	342	P	P	18 34 47.4	-1.5
	baz=158						
LONY	Lake Ozonia	65.16	357	P	P	18 34 49.6	+0.3
	baz=176						
LONY	Lake Ozonia	65.16	357	*e*P	P	18 34 50.0	+0.7
	comp=Z,27nm,1.4s						
LONY				LR	LR		
	comp=Z,390nm,20.0s						
L41A	Preston	65.19	344	P	P	18 34 48.0	-1.4
	baz=159						
K43A	Burlington	65.24	346	P	P	18 34 48.4	-1.4
	baz=162						
CBKS	Cedar Bluff	65.27	335	P	P	18 34 50.1	-0.1
	baz=150						
CBKS	Cedar Bluff	65.27	335	*e*P	P	18 34 51.0	+0.8
	comp=Z,27nm,1.0s						
CBKS	Cedar Bluff	65.27	335	*e*P	P	18 34 51.0	+0.8
CBKS				pmax	pmax		
	comp=Z,27nm,1.0s						
TUC	Tucson	65.32	323	PFAKE		18 35 00.0	+9.3
TUC				LR	LR		
	comp=Z,396nm,22.0s						
M38A	Pleasantville	65.33	341	P	P	18 34 49.5	-1.0
	baz=156,SNR=5.5						
N36A	Muff Farm, Cla	65.33	340	P	P	18 34 50.0	-0.4
	baz=155						
L40A	Anamosa	65.37	343	P	P	18 34 49.3	-1.3
	baz=159						
L40A	Anamosa	65.37	343	*e*P	P	18 34 50.6	0.0
	comp=Z,24nm,1.0s						
K42A	Prairie Point,	65.56	345	P	P	18 34 50.8	-1.1
	baz=160						
M37A	Trindle Farm,	65.58	341	P	P	18 34 51.4	-0.6
	baz=156						
K41A	Shullsburg	65.63	344	P	P	18 34 50.8	-1.6
	baz=160						
L39A	Vinton	65.64	343	P	P	18 34 50.9	-1.5
	baz=158						
SADO	Sadowa	65.68	353	*e*P	P	18 34 52.2	-0.4
	comp=Z,19nm,1.0s						
PKME	Peaks-Kenny Pk	65.71	1	PFAKE		18 35 00.0	+7.2
PKME				LR	LR		
	comp=Z,324nm,20.0s						
SCIA	State Center	65.79	342	P	P	18 34 52.5	-0.8
	baz=157						
SCIA	State Center	65.79	342	PFAKE		18 35 10.0	+17
SCIA				LR	LR		
	comp=Z,238nm,20.0s						
T25A	Trinidad	65.85	331	P	P	18 34 54.2	0.0
	baz=145						
T25A	Trinidad	65.85	331	*e*P	P	18 34 55.5	+1.4
	comp=Z,17nm,1.4s						
M36A	Felix, Anita	65.86	340	P	P	18 34 53.2	-0.7
	baz=155						
J43A	Natural Harves	65.90	346	P	P	18 34 52.9	-1.2
	baz=162						
JFWS	Jewell Farm	65.91	344	P	P	18 34 52.8	-1.3
	baz=160						
JFWS	Jewell Farm	65.91	344	*e*P	P	18 34 53.9	-0.2
	comp=Z,11nm,0.8s						
JFWS				LR	LR		
	comp=Z,223nm,21.0s						
JFWS	Jewell Farm	65.91	344	*e*P	P	18 34 53.9	-0.2
JFWS				pmax	pmax		
	comp=Z,11nm,0.8s						
JFWS				MLR	MLR		
	comp=Z,223nm,21.0s						
L38A	Oak Wood Farm,	65.93	342	P	P	18 34 53.5	-0.8
	baz=157,SNR=6.3						
K40A	Colesburg	65.94	344	P	P	18 34 53.1	-1.2
	baz=159,SNR=5.7						
J42A	Columbus	66.01	345	P	P	18 34 53.7	-1.1
	baz=161						
K39A	Oelwein	66.14	343	P	P	18 34 54.5	-1.2
	baz=158,SNR=6.9						
L37A	Phoenix Point,	66.15	341	P	P	18 34 54.8	-0.8
	baz=156						
214A	Organ Pipe Nat	66.23	321	P	P	18 34 57.7	+1.2
	baz=136,SNR=6.0						
J41A	Loganville	66.27	345	P	P	18 34 55.5	-1.0
	baz=160						
I43A	Langenfeld Bro	66.32	346	P	P	18 34 56.1	-0.6
	baz=162						
K38A	Parkersburg	66.34	342	P	P	18 34 56.0	-0.9
	baz=157						
L36A	Harm Buss Farm	66.40	341	P	P	18 34 56.7	-0.6
	baz=155						
J40A	Soldiers Grove	66.48	344	P	P	18 34 56.7	-1.1
	baz=159,SNR=5.0						
I42A	Draeger Farm,	66.50	346	P	P	18 34 57.0	-0.9
	baz=161						
I42A	Draeger Farm,	66.50	346	*e*P	P	18 34 57.7	-0.2
	comp=Z,57nm,1.8s						
KSCO	Kaye Shedlock'	66.62	333	P	P	18 34 59.4	+0.4
	baz=147						
J39A	Decorah	66.68	343	P	P	18 34 58.2	-0.9
	baz=158						
TRQ	Mont Tremblant	66.76	357	*e*P	P	18 34 59.9	+0.3
H43A	Windswept, Lux	66.80	347	P	P	18 34 58.9	-0.9
	baz=162						
K36A	Gilmore City	66.83	341	P	P	18 34 59.8	-0.2
	baz=156						
SDCO	Great Sand Dun	66.84	330	P	P	18 35 01.4	+0.8
	baz=144,SNR=17						
SDCO	Great Sand Dun	66.84	330	*e*P	P	18 35 01.6	+1.0
	comp=Z,16nm,1.3s						
SDCO				LR	LR		
	comp=Z,132nm,19.0s						
W18A	Petrified Fore	66.87	326	P	P	18 35 01.9	+1.2
	baz=140						
J38A	Wedel Dairy, R	66.88	343	P	P	18 34 59.4	-1.0
	baz=158,SNR=7.6						
I40A	Norwalk	66.92	344	P	P	18 34 59.8	-0.8
	baz=159						
BGNE	Belgrade	66.94	338	P	P	18 35 01.0	+0.1
	baz=152						
BGNE	Belgrade	66.94	338	*e*P	P	18 35 01.3	+0.5
	comp=Z,74nm,1.0s						
H42A	Shiocton	67.00	346	P	P	18 35 00.0	-1.1
	baz=162						
I39A	Houston	67.11	344	P	P	18 35 00.8	-1.0
	baz=159						
I39A	Houston	67.11	344	*e*P	P	18 35 01.6	-0.2
	comp=Z,15nm,0.7s						
J37A	Redenius Farm,	67.17	342	P	P	18 35 01.3	-0.9
	baz=156						
H41A	Junction City	67.36	345	P	P	18 35 02.3	-1.1
	baz=160						
H41A	Junction City	67.36	345	*e*P	P	18 35 02.9	-0.5
	comp=Z,10nm,1.0s						
J36A	Seneca 1, Swea	67.42	341	P	P	18 35 02.8	-0.9
	baz=156						
F46A	Macinaw City C	67.46	349	P	P	18 35 03.3	-0.7
	baz=165						
S22A	4UR Ranch, Cre	67.47	329	*e*P	P	18 35 05.5	+0.9
	comp=Z,5.5nm,1.0s						
I38A	Scanlan Farm,	67.50	343	P	P	18 35 03.6	-0.7
	baz=158,SNR=7.3						
G43A	Wallace	67.53	347	P	P	18 35 03.2	-1.2
	baz=162						
G43A	Wallace	67.53	347	*e*P	P	18 35 03.9	-0.5
	comp=Z,28nm,1.3s						
H40A	Chili	67.55	345	P	P	18 35 03.6	-0.9
	baz=160,SNR=7.4						
G42A	Mountain	67.67	346	P	P	18 35 04.2	-1.2
	baz=162						
G42A	Mountain	67.67	346	*e*P	P	18 35 05.0	-0.4
	comp=Z,21nm,1.1s						
Q24A	Divide	67.67	331	P	P	18 35 06.4	+0.5
	baz=145						
I37A	Lemond, Waseca	67.78	342	P	P	18 35 06.0	-0.1
	baz=157						
H39A	Augusta	67.82	344	P	P	18 35 05.7	-0.6
	baz=159						
MVCO	Mesa Verde	67.85	328	P	P	18 35 07.8	+0.8
	baz=142						
MVCO	Mesa Verde	67.85	328	*e*P	P	18 35 08.5	+1.5
	comp=Z,8.4nm,0.8s						
MVCO				LR	LR		
	comp=Z,250nm,21.0s						
TAOE	Nuku Hiva Isla	67.90	269	*e*LR	LR	18 55 25.3	
	comp=Z,393nm,26.8s						
F44A	Big Bay de Noc	67.96	348	P	P	18 35 06.9	-0.2
	baz=164						
F43A	Flat Rock, Esc	67.97	348	P	P	18 35 06.9	-0.3
	baz=163						
OGNE	Ogallala	68.01	335	P	P	18 35 08.0	+0.3
	baz=148						
WUAZ	Wupatki	68.04	325	P	P	18 35 09.3	+1.2
	baz=139						
WUAZ	Wupatki	68.04	325	*e*P	P	18 35 10.2	+2.1
	comp=Z,9.4nm,0.9s						
WUAZ				LR	LR		
	comp=Z,168nm,19.0s						
NVL	N'lazarevskaya	68.06	159	*e*P	P	18 35 08.4	+0.9
NVL				pmax	pmax		
	comp=Z,72nm,1.2s						
H38A	Maiden Rock	68.08	343	P	P	18 35 07.5	-0.4
	baz=158						
E45A	Wooded Hills,	68.10	349	P	P	18 35 07.5	-0.5
	baz=165						
GLA	Glamis	68.20	321	P	P	18 35 10.0	+1.0
	baz=135						
F41A	Three Lakes	68.30	346	P	P	18 35 08.5	-0.8
	baz=161						
G39A	Holcombe	68.36	344	P	P	18 35 08.8	-0.9
	baz=159						
E43A	Lone Tree Farm	68.46	348	P	P	18 35 09.3	-0.9
	baz=163						
ECSD	EROS Data Cent	68.49	340	P	P	18 35 10.4	-0.1
	baz=154						
ECSD	EROS Data Cent	68.49	340	*e*P	P	18 35 10.3	-0.2
	comp=Z,23nm,1.3s						
ECSD				LR	LR		
	comp=Z,211nm,20.0s						

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ISCO  Idaho Springs    68.56 332  P      P       18 35 12.2 +0.7
      baz=145
ISCO  Idaho Springs    68.56 332  eP     P       18 35 12.8 +1.3
      comp=Z,25nm,1.8s
ISCO                              LR     LR
      comp=Z,167nm,22.0s
ISCO  Idaho Springs    68.56 332  eP     P       18 35 12.8 +1.3
ISCO                              pmax   pmax
      comp=Z,25nm,1.8s
ISCO                              MLR    MLR
      comp=Z,167nm,22.0s
COWI  Conover          68.65 346  eP     P       18 35 11.1  -0.3
      comp=Z,15nm,1.1s
COWI                              LR     LR
      comp=Z,260nm,19.0s
SMCO  Snowmass         68.68 330  eP     P       18 35 13.5 +1.2
      comp=Z,8.6nm,1.1s
IKP   In-Ko-Pah, Jac   68.68 320  P      P       18 35 12.9 +0.8
      baz=134
E42A  Champion         68.70 347  P      P       18 35 11.1  -0.7
      baz=162
F40A  Park Falls       68.70 345  P      P       18 35 11.1  -0.6
      baz=160,SNR=9.2
SPMN  Marine on St.    68.73 343  P      P       18 35 10.8  -1.1
      baz=158
SPMN  Marine on St.    68.73 343  eP     P       18 35 11.2  -0.8
      comp=Z,18nm,1.0s
PV02  Paradox Valley   68.75 328  eP     P       18 35 14.2 +1.7
      comp=Z,9.1nm,1.1s
H35A  Sunnyside Ranc   68.81 342  P      P       18 35 11.7  -0.8
      baz=156
PV03  Paradox Valley   68.84 328  eP     P       18 35 14.7 +1.5
F39A  Loretta          68.89 345  P      P       18 35 12.2  -0.8
      baz=159
F37A  Hinrichs Farm,   69.14 344  P      P       18 35 13.6  -0.9
      baz=158
E40A  Wakefield        69.14 346  P      P       18 35 14.0  -0.5
      baz=160,SNR=8.6
F38A  Pierce - Schro   69.17 344  P      P       18 35 13.9  -0.8
      baz=158
IRM   Iron Mountain    69.17 321  P      P       18 35 15.9 +1.0
      baz=135
G35A  Watkins          69.19 342  P      P       18 35 14.1  -0.7
      baz=156
E39A  Mellen           69.23 345  P      P       18 35 14.4  -0.7
      baz=160
QSPA  South Pole Qui   69.43 180  P      P       18 35 17.2 +0.8
      comp=Z,24nm,0.9s,baz=154,slow=6.2,SNR=58
QSPA  South Pole Qui   69.43 180  P      P       18 35 17.2 +0.8
QSPA                              LR     LR
      comp=Z,303nm,19.0s
D41A  Chassel          69.43 347  P      P       18 35 15.4  -0.8
      baz=162
H32A  Carlson Farm,    69.44 340  P      P       18 35 16.0  -0.5
      baz=153,SNR=6.9
F36A  Milaca           69.51 343  P      P       18 35 15.8  -1.0
      baz=157,SNR=6.5
BELC  Belle Mtn. Jos   69.56 321  P      P       18 35 18.7 +1.1
      baz=135
PFO   Pinyon Flats O   69.56 320  P      P       18 35 18.6 +1.0
      baz=134
FRD   Ford Ranch, An   69.56 320  P      P       18 35 19.2 +1.7
      baz=134
N23A  Red Feather La   69.60 332  P      P       18 35 18.5 +0.7
      baz=145,SNR=5.6
N23A  Red Feather La   69.60 332  eP     P       18 35 19.1 +1.3
      comp=Z,13nm,1.2s
LIC   Lamto            69.66  75  eP     P       18 35 17.1  -1.3
      comp=Z,66nm,1.0s
PHWY  Pilot Hill       69.72 333  eP     P       18 35 19.7 +1.1
      comp=Z,19nm,1.4s
G33A  Ortonville       69.75 341  P      P       18 35 17.4  -0.8
      baz=154
F35A  Swanville        69.80 342  P      P       18 35 18.0  -0.6
      baz=156
TIC   Toumodi          69.84  74  eP     P       18 35 18.4  -1.2
GMRC  Granite Mounta   69.91 322  P      P       18 35 21.0 +1.3
      baz=135
F34A  Alexandria       69.94 342  P      P       18 35 19.4  -0.1
      baz=155
KIC   Kosan Boka       69.97  75  eP     P       18 35 19.2  -1.2
      comp=Z,94nm,0.9s
DBIC  Dimbokro         70.00  74  P      P       18 35 19.6  -0.9
      comp=Z,48nm,0.9s,baz=216,slow=5.5,SNR=38
DBIC                              LR     LR      19 05 02.4
      comp=Z,790nm,19.4s,baz=234,slow=35
DBIC  Dimbokro         70.00  74  eP     P       18 35 20.1  -0.4
      comp=Z,62nm,0.9s
DBIC  Dimbokro         70.00  74  eP     P       18 35 20.1  -0.4
DBIC                              pmax   pmax
      comp=Z,62nm,0.9s
O20A  White River Ci   70.03 330  P      P       18 35 21.1 +0.7
      baz=142,SNR=5.3
O20A  White River Ci   70.03 330  eP     P       18 35 22.1 +1.6
      comp=Z,16nm,1.1s
E36A  McGregor         70.04 344  P      P       18 35 19.6  -0.5
      baz=157
SRU   San Rafael Swe   70.33 328  eP     P       18 35 23.8 +1.5
      comp=Z,13nm,1.1s
SRU   San Rafael Swe   70.33 328  eP     P       18 35 23.8 +1.5
SRU                               pmax   pmax
      comp=Z,13nm,1.1s
HEC   Hector,Ludlow    70.34 321  P      P       18 35 23.9 +1.7
      baz=134
C40A  Isle Royale Na   70.37 347  P      P       18 35 21.6  -0.4
      baz=161
D37A  Cotton           70.42 344  P      P       18 35 22.2  -0.1
      baz=158
TUQ   Turquoise Moun   70.52 322  P      P       18 35 24.7 +1.3
      baz=135
E34A  Wadena           70.57 342  P      P       18 35 22.6  -0.7
      baz=155
P18A  Preston Nutter   70.59 328  eP     P       18 35 25.9 +1.9
      comp=Z,32nm,1.5s
P17A  Butcher Ranch,   70.72 328  eP     P       18 35 26.2 +1.6
      comp=Z,23nm,1.3s
RWWY  Rawlins          70.81 332  eP     P       18 35 26.6 +1.4
      comp=Z,27nm,1.5s
TMUT  Trail Mountain   70.82 328  eP     P       18 35 27.1 +1.8
      comp=Z,8.9nm,1.2s
SHPR  Sheep Range      70.85 323  eP     P       18 35 27.7 +2.2
      comp=Z,6.9nm,1.0s
C37A  Embarrass        70.89 345  P      P       18 35 24.3  -0.9
      baz=158
EYMN  Ely              70.93 345  P      P       18 35 24.4  -1.0
      baz=159
EYMN  Ely              70.93 345  PFAKE          18 35 40.0  +15
EYMN                              LR     LR
      comp=Z,260nm,21.0s
GSC   Goldstone, Bar   70.94 321  eP     P       18 35 28.3 +2.4
      comp=Z,18nm,1.4s
GSC   Goldstone, Bar   70.94 321  eP     P       18 35 28.3 +2.4
GSC                               pmax   pmax
      comp=Z,18nm,1.4s
C36A  Pine Crest Far   71.08 344  P      P       18 35 25.2  -1.2
      baz=158,SNR=5.8
K22A  Casper           71.28 333  P      P       18 35 28.3 +0.4
      baz=144
C35A  Jirik Farms, M   71.33 344  P      P       18 35 26.6  -1.3
      baz=157,SNR=5.5
EDW2  Edwards Air Fo   71.35 320  P      P       18 35 29.0 +0.5
      baz=133
RSSD  Black Hills      71.48 335  P      P       18 35 29.7 +0.6
      baz=147
RSSD  Black Hills      71.48 335  eP     P       18 35 30.1 +0.9
      comp=Z,8.2nm,0.8s
RSSD  Black Hills      71.48 335  eP     P       18 35 30.1 +0.9
RSSD                              pmax   pmax
      comp=Z,8.0nm,0.8s
BLG   Laguna Peak, P   71.48 319  P      P       18 35 29.9 +0.8
      baz=132
MPU   Maple Canyon     71.58 328  eP     P       18 35 31.9 +2.0
      comp=Z,14nm,1.2s
LRMC  Laurel Mtn Rad   71.58 321  P      P       18 35 29.0  -0.8
      baz=134
NLU   North Lily Min   71.75 328  eP     P       18 35 32.8 +2.0
      comp=Z,11nm,1.1s
TPNV  Topopah Spring   71.78 323  P      P       18 35 32.9 +1.9
      baz=135,SNR=9.7
TPNV  Topopah Spring   71.78 323  eP     P       18 35 33.3 +2.2
      comp=Z,9.3nm,1.0s
TPNV  Topopah Spring   71.78 323  eP     P       18 35 33.3 +2.2
TPNV                              pmax   pmax
      comp=Z,9.0nm,1.0s
FURC  Furnace Creek,   71.79 322  P      P       18 35 32.8 +1.9
      baz=134,SNR=6.6
B35A  Bob, Littlefor   71.87 344  P      P       18 35 30.0  -1.1
      baz=157,SNR=7.2
B35A  Bob, Littlefor   71.87 344  eP     P       18 35 30.7  -0.4
      comp=Z,15nm,0.9s
MPMC  Manual Prospec   71.87 321  P      P       18 35 32.3 +0.6
      baz=134
JLU   Jordanelle       71.93 328  eP     P       18 35 33.9 +1.9
      comp=Z,16nm,1.2s
DAC   Darwin (Calif)   72.08 322  eP     P       18 35 34.8 +1.9
      comp=Z,7.7nm,1.0s
DAC   Darwin (Calif)   72.08 322  eP     P       18 35 34.8 +1.9
DAC                               pmax   pmax
      comp=Z,8.0nm,1.0s
ISA   Isabella, Lake   72.17 321  P      P       18 35 35.2 +1.8
      baz=133,SNR=9.2
ISA   Isabella, Lake   72.17 321  eP     P       18 35 35.3 +1.9
      comp=Z,8.9nm,1.0s
ISA   Isabella, Lake   72.17 321  eP     P       18 35 35.3 +1.9
ISA                               pmax   pmax
      comp=Z,9.0nm,1.0s
TBI   Tubuai           72.29 251  eS     S       18 44 54.7  -1.4
      comp=Z,406nm,29.8s
TBI   Tubuai           72.29 251  eLR    LR      18 57 41.9
      comp=Z,678nm,26.5s,baz=107
DUG   Dugway, Tooele   72.30 327  P      P       18 35 35.9 +1.8
      baz=139
DUG   Dugway, Tooele   72.30 327  eP     P       18 35 36.2 +2.1
      comp=Z,17nm,1.3s
DUG                               LR     LR
      comp=Z,191nm,21.0s
DUG   Dugway, Tooele   72.30 327  eP     P       18 35 36.2 +2.1
DUG                               pmax   pmax
      comp=Z,17nm,1.3s
DUG                               MLR    MLR
      comp=Z,191nm,21.0s
AGMN  Agassiz Nation   72.39 343  P      P       18 35 33.6  -0.6
      baz=155,SNR=8.0
AGMN  Agassiz Nation   72.39 343  eP     P       18 35 32.9  -1.3
      comp=Z,14nm,0.9s
R11A  Troy Canyon, C   72.41 324  P      P       18 35 36.5 +1.7
      baz=136,SNR=7.5
PKM   Mcpherson Peak   72.46 319  P      P       18 35 36.9 +1.7
      baz=132
CWC   Cottonwood Cre   72.47 321  P      P       18 35 36.7 +1.4
      baz=134
VES   Vestal, Richgr   72.66 320  P      P       18 35 37.5 +1.4
      baz=133
BW06  Boulder Array    72.72 331  P      P       18 35 37.1 +0.4
      baz=142
BW06  Boulder Array    72.72 331  eP     P       18 35 37.4 +0.8
      comp=Z,7.0nm,1.1s
BW06                              LR     LR
      comp=Z,229nm,21.0s
PD31  Pinedale Array   72.72 331  eP     P       18 35 37.5 +0.9
PDAR  Pinedale Array   72.72 331  P      P       18 35 37.1 +0.5
      comp=Z,1.6nm,0.9s,baz=142,slow=7.5,SNR=14
PDAR                              LR     LR      19 10 25.1
      comp=Z,120nm,18.2s,baz=123,slow=38
PDAR  Pinedale Array   72.72 331  eP     P       18 35 36.7 +0.1
HWUT  Hardware Ranch   72.76 329  eP     P       18 35 37.6 +0.8
      comp=Z,19nm,1.3s
HWUT                              LR     LR
      comp=Z,251nm,19.0s
A33A  Warroad          72.84 343  P      P       18 35 36.4  -0.5
      baz=156,SNR=5.2
BGU   Big Grassy Mou   72.96 328  eP     P       18 35 39.7 +1.7
      comp=Z,10nm,1.1s
SPUT  South Promonto   72.96 328  eP     P       18 35 40.0 +2.0
      comp=Z,16nm,1.2s
MDND  Maddock          73.11 340  P      P       18 35 38.9 +0.4
      baz=152,SNR=5.4
MDND  Maddock          73.11 340  eP     P       18 35 39.4 +0.9
      comp=Z,72nm,1.0s
AHID  Auburn Hatcher   73.43 330  eP     P       18 35 41.8 +1.0
      comp=Z,19nm,1.0s
AHID                              LR     LR
      comp=Z,276nm,21.0s
HVU   Hansel Valley    73.48 328  eP     P       18 35 42.3 +1.3
      comp=Z,9.5nm,1.0s
HVU   Hansel Valley    73.48 328  eP     P       18 35 42.3 +1.3
HVU                               pmax   pmax
      comp=Z,10.0nm,1.0s
REDW  Red Top Meadow   73.77 331  eP     P       18 35 44.0 +1.1
      comp=Z,16nm,1.2s
OMMB  Old Mammoth Mi   73.81 322  eP     P       18 35 45.0 +1.7
      comp=Z,11nm,1.0s
LOHW  Long Hollow      73.85 331  eP     P       18 35 44.4 +1.1
      comp=Z,9.9nm,1.0s
NV11  Mina Array Sit   73.89 323  eP     P       18 35 45.1 +1.6
      comp=Z,0.5nm,1.2s
TPAW  Teton Pass       73.92 331  eP     P       18 35 45.3 +1.6
      comp=Z,14nm,1.1s
PMPB  Monarch Peak     73.94 320  eP     P       18 35 46.8 +3.0
      comp=Z,17nm,1.1s
NV01  Mina Array Sit   73.98 323  eP     P       18 35 45.6 +1.4
NVAR  Mina Array Bea   73.98 323  P      P       18 35 45.4 +1.3
      comp=Z,3.2nm,0.9s,baz=155,slow=6.8,SNR=15
NVAR                              LR     LR      19 04 43.7
      comp=Z,111nm,20.2s,baz=254,slow=33
PPT2  Papeete2         74.00 257  eS     S       18 45 15.9 +0.1
      comp=Z,821nm,26.2s
PPT2  Papeete2         74.00 257  eLR    LR      18 58 30.3
      comp=Z,658nm,24.2s,baz=110
PPT   Papeete          74.00 257  LR     LR      18 59 44.5
      comp=Z,408nm,18.7s,baz=132,slow=29
MOOW  Moose Ponds      74.03 331  eP     P       18 35 45.6 +1.3
      comp=Z,11nm,1.4s
FXWY  Fox Creek        74.07 331  eP     P       18 35 45.9 +1.3
      comp=Z,9.5nm,1.1s
KOWA  Kowa             74.13  67  P      P       18 35 44.0  -1.2
      comp=Z,18nm,0.8s,baz=242,slow=6.0,SNR=16
KOWA                              LR     LR      19 07 22.6
      comp=Z,1μm,20.7s,baz=218,slow=35
KOWA  Kowa             74.13  67  eP     P       18 35 44.3  -0.9
      comp=Z,51nm,1.3s
ULM   Lac du Bonnet    74.16 343  P      P       18 35 44.0  -0.6
      comp=Z,8.5nm,0.9s,baz=153,slow=5.9,SNR=9.1
ULM                               LR     LR      19 10 24.0
      comp=Z,262nm,21.9s,baz=131,slow=37
ULM   Lac du Bonnet    74.16 343  eP     P       18 35 44.0  -0.6
      comp=Z,30nm,1.4s
ULM   Lac du Bonnet    74.16 343  eP     P       18 35 44.0  -0.6
ULM                               pmax   pmax
      comp=Z,30nm,1.4s
IMW   Indian Meadow    74.23 331  eP     P       18 35 46.8 +1.2
      comp=Z,15nm,1.2s
FLWY  Flagg Ranch      74.26 331  eP     P       18 35 47.3 +1.6
      comp=Z,24nm,0.9s
KVN   Kaiserville      74.29 323  eP     P       18 35 47.6 +1.7
      comp=Z,9.6nm,1.0s
KVN   Kaiserville      74.29 323  eP     P       18 35 47.6 +1.7
KVN                               pmax   pmax
      comp=Z,10.0nm,1.0s
RLMT  Red Lodge        74.45 333  P      P       18 35 47.6 +0.9
      baz=142,SNR=12
RLMT  Red Lodge        74.45 333  eP     P       18 35 48.0 +1.2
      comp=Z,28nm,1.3s
H17A  Grant Village    74.45 331  P      P       18 35 47.8 +1.0
      baz=141
LAO   LASA Array       74.47 335  P      P       18 35 47.5 +0.9
      baz=145,SNR=5.7
LAO   LASA Array       74.47 335  eP     P       18 35 48.0 +1.4
      comp=Z,34nm,1.1s
LAO                               LR     LR
      comp=Z,154nm,19.0s
LKWY  Lake             74.51 332  PFAKE          18 36 00.0  +13
LKWY                              LR     LR
      comp=Z,534nm,21.0s
WAKR  Walker           74.67 322  eP     P       18 35 50.3 +2.1
      comp=Z,7.2nm,1.1s
SCKWR San Luis Creek   74.74 320  eP     P       18 35 50.9 +2.6
YMR   Madison River    74.84 331  eP     P       18 35 52.0 +3.0
      comp=Z,29nm,0.4s
YERR  Yerington        74.89 323  eP     P       18 35 51.6 +2.2
      comp=Z,19nm,1.5s
GCMT  Greycliff        75.15 333  eP     P       18 35 51.5 +0.9
PNTR  Pine Nut         75.17 323  eP     P       18 35 53.6 +2.5
      comp=Z,11nm,1.0s
DGMT  Dagmar           75.20 338  P      P       18 35 51.5 +0.8
      baz=147,SNR=6.1
DGMT  Dagmar           75.20 338  eP     P       18 35 52.2 +1.5
      comp=Z,32nm,0.9s
DGMT                              LR     LR
      comp=Z,173nm,19.0s
SCHQ  Schefferville    75.35   2  P      P       18 35 51.4  -0.1
      comp=Z,8.1nm,0.8s,baz=163,slow=4.0,SNR=4.3
SCHQ                              LR     LR      19 08 17.8
      comp=Z,212nm,21.8s,baz=216,slow=35
PAHR  Pah Rah Range    75.47 323  eP     P       18 35 54.7 +2.1
      comp=Z,17nm,1.0s
HLID  Hailey           75.61 329  P      P       18 35 55.0 +1.5
      baz=138,SNR=9.0
HLID  Hailey           75.61 329  eP     P       18 35 55.5 +2.1
      comp=Z,14nm,1.1s
HLID                              LR     LR
      comp=Z,207nm,19.0s
MCMT  McKenzie Canyo   75.82 330  eP     P       18 35 56.4 +1.7
BOZ   Bozeman (W)      75.86 332  P      P       18 35 56.1 +1.3
      baz=141
BOZ   Bozeman (W)      75.86 332  eP     P       18 35 56.2 +1.5
      comp=Z,9.5nm,1.1s
BOZ                               LR     LR
      comp=Z,168nm,19.0s
BOZ   Bozeman (W)      75.86 332  eP     P       18 35 56.2 +1.5
BOZ                               pmax   pmax
      comp=Z,9.0nm,1.1s
BOZ                               MLR    MLR
      comp=Z,168nm,19.0s
AFDM  Forest Hills D   75.86 322  eP     P       18 35 56.4 +1.7
      comp=Z,6.3nm,1.0s
DLMT  Dillon           76.11 331  eP     P       18 35 58.0 +1.8
      comp=Z,16nm,1.3s
BEKR  Beckworth        76.12 323  eP     P       18 35 58.5 +2.0
      comp=Z,7.9nm,1.1s
MFID  Camas Ranch      76.20 328  eP     P       18 35 58.6 +1.9
      comp=Z,12nm,1.2s
SBA   Scott Base       76.28 191  eP     P       18 35 59.1 +2.6
      comp=Z,30nm,1.4s
SBA   Scott Base       76.28 191  eP     P       18 35 59.1 +2.6
SBA                               pmax   pmax
      comp=Z,30nm,1.4s
LRM   Limekiln Ridge   76.40 331  eP     P       18 35 59.1 +1.2
WVOR  Wild Horse Val   76.94 326  PFAKE          18 36 10.0 +9.0
WVOR                              LR     LR
      comp=Z,216nm,19.0s
EGMT  Eagleton         76.96 334  P      P       18 36 01.3 +0.5
      baz=142,SNR=7.9
EGMT  Eagleton         76.96 334  eP     P       18 36 01.9 +1.1
      comp=Z,27nm,1.1s
EGMT                              LR     LR
      comp=Z,175nm,21.0s
O03D  Paynes Creek     77.23 322  P      P       18 36 02.8 +0.2
      baz=132
VNDA  Vanda            77.31 190  P      P       18 36 03.9 +1.5
      comp=Z,3.2nm,0.9s,baz=137,slow=4.9,SNR=16
VNDA  Vanda            77.31 190  eP     P       18 36 04.8 +2.4
      comp=Z,17nm,1.4s
VNDA  Vanda            77.31 190  eP     P       18 36 04.8 +2.4
VNDA                              pmax   pmax
      comp=Z,17nm,1.4s
MOD   Modoc Plateau    77.47 324  eP     P       18 36 05.8 +1.8
      comp=Z,8.9nm,1.0s
SYO   Syowa Base       77.73 160⇑eP     P       18 36 03.2  -1.6
SYO   Syowa Base       77.73 160⇓ipP    P       18 36 08.4 +3.6
MSO   Missoula         77.83 331  P      P       18 36 06.9 +1.1
      baz=139
MSO   Missoula         77.83 331  eP     P       18 36 07.8 +1.9
      comp=Z,26nm,1.6s
WDC   Whiskeytown Da   77.84 322  eP     P       18 36 06.1 +0.2
      comp=Z,8.7nm,1.3s
WDC   Whiskeytown Da   77.84 322  eP     P       18 36 06.1 +0.2
WDC                               pmax   pmax
      comp=Z,9.0nm,1.3s
BMO   Blue Mountains   77.97 328  eP     P       18 36 08.1 +1.5
      comp=Z,9.5nm,1.1s
BMO   Blue Mountains   77.97 328  eP     P       18 36 08.1 +1.5
BMO                               pmax   pmax
      comp=Z,10.0nm,1.1s
N02D  Trinity Center   78.20 322  P      P       18 36 08.4 +0.4
      baz=131
M04C  Macdoel          78.24 323  P      P       18 36 09.2 +1.0
      baz=132,SNR=5.1
K05A  Summer Lake      78.36 325  eP     P       18 36 11.1 +2.1
      comp=Z,16nm,1.0s
TORD  Torodi Ar. Bea   78.55  71  P      P       18 36 08.6  -1.7
      comp=Z,58nm,0.9s,baz=252,slow=5.5
TORD                              LR     LR      19 10 37.5
      comp=Z,925nm,18.4s,baz=275,slow=36
M02C  Callahan         78.56 323  P      P       18 36 10.6 +0.7
      baz=131
JTMT  Jette            78.68 332  eP     P       18 36 12.2 +1.7
      comp=Z,9.2nm,1.0s
YBH   Yreka Blue Hor   78.70 323  P      P       18 36 10.3  -0.4
      comp=Z,2.1nm,0.8s,baz=297,slow=2.3,SNR=7.2
YBH                               LR     LR      19 09 43.0
      comp=Z,84nm,19.9s,baz=128,slow=35
F10A  Beach Ranch, E   78.74 329  eP     P       18 36 12.4 +1.6
      comp=Z,11nm,1.1s
PINE  Pine Mountain    79.10 325  eP     P       18 36 15.1 +2.1
      comp=Z,16nm,1.0s
G08A  Pilot Rock       79.11 327  eP     P       18 36 14.6 +1.7
      comp=Z,21nm,1.8s
J04D  Umpqua Nationa   79.36 324  P      P       18 36 15.3 +0.9
      baz=132
L02D  Cave Junction,   79.48 323  P      P       18 36 15.6 +0.7
      baz=130
WALA  Waterton Lakes   79.51 333  eP     P       18 36 16.3 +1.3
      comp=Z,20nm,1.0s
I05D  Terrebonne, OR   79.68 326  P      P       18 36 17.5 +1.5
      baz=132
FFC   Flin Flon        79.85 342  eP     P       18 36 17.4 +0.8
      comp=Z,18nm,1.4s
FFC                               LR     LR
      comp=Z,232nm,20.0s
FFC   Flin Flon        79.85 342  eP     P       18 36 17.4 +0.8
FFC                               pmax   pmax
      comp=Z,18nm,1.4s
FFC                               MLR    MLR
      comp=Z,232nm,20.0s
I04A  Tendick Farm,    79.89 325  P      P       18 36 17.9 +0.7
      baz=132
HAWA  Hanford          80.17 328  eP     P       18 36 20.1 +1.6
      comp=Z,28nm,1.1s
SUR   Sutherland       80.27 121  eP     P       18 36 20.5 +0.7
      comp=Z,39nm,1.0s
G05D  Wamic, OR        80.28 326  P      P       18 36 20.6 +1.5
      baz=133
I03D  Drain, OR        80.34 324  P      P       18 36 21.2 +1.8
      baz=131
C09A  Chrisman Ranch   80.55 330  eP     P       18 36 22.3 +1.8
      comp=Z,34nm,1.3s
LTY   Liberty          81.33 328  eP     P       18 36 25.8 +1.0
      comp=Z,19nm,1.1s
B08A  Colville Reser   81.45 330  eP     P       18 36 25.4 +0.1
      comp=Z,9.7nm,0.9s
LON   Longmire         81.56 327  eP     P       18 36 26.9 +0.9
      comp=Z,11nm,1.1s
LON   Longmire         81.56 327  eP     P       18 36 26.9 +0.9
LON                               pmax   pmax
      comp=Z,11nm,1.1s
TSUM  Tsumeb           81.72 107  eP     P       18 36 28.2 +0.6
      comp=Z,74nm,1.0s
TSUM                              LR     LR
      comp=Z,484nm,21.0s
D05A  Enumclaw         81.94 327  eP     P       18 36 29.3 +1.4
      comp=Z,40nm,1.0s
MORF  Marmelete        82.02  45  eP     P       18 36 28.8 +0.1
MORF                              AMb    AMB     18 36 29.1
      comp=Z,66nm,2.3s
MORF  Marmelete        82.02  45  eP     P       18 36 28.7 +0.1
RAR   Rarotonga        82.04 250  LR     LR      19 05 02.6
      comp=Z,171nm,21.1s,baz=105,slow=30
MDT   Midelt           82.45  51  P      P       18 36 31.3 +0.2
      comp=Z,17nm,1.1s,baz=218,slow=3.6,SNR=14
MDT                               LR     LR      19 14 00.7
      comp=Z,274nm,18.4s,baz=254,slow=36
MESJ  Messejana        82.59  45  eP     P       18 36 31.6 +0.1
MESJ                              AMb    AMB     18 36 32.1
      comp=Z,43nm,1.5s
MESJ  Messejana        82.59  45  eP     P       18 36 32.1 +0.6
MESJ  Messejana        82.59  45  eP     P       18 36 31.6 +0.1
PCVE  Castro Verde     82.60  45  eP     P       18 36 32.3 +0.7
      comp=Z,30nm,1.8s
PVAQ  Vaqueiros        82.69  46  eLR    LR      19 05 22.0
      comp=Z,396nm,22.0s
B05A  Bryant           82.72 328  P      P       18 36 32.4 +0.5
      baz=132
SHUK  Shuksan-Mt. Ba   82.92 329  eP     P       18 36 34.5 +1.3
PBEJ  Beja             82.93  45  eP     P       18 36 35.0 +1.7
      comp=Z,23nm,2.1s
PMTG  Montargil        83.27  44  eP     P       18 36 35.7 +0.7
      comp=Z,42nm,1.6s
PMRV  Marv??o          84.00  44  eP     P       18 36 38.8   0.0
      comp=Z,14nm,1.5s
PMRV  Marv??o          84.00  44  eLR    LR      19 06 58.9
      comp=Z,216nm,22.0s
LLLB  Lillooet         84.21 330  eP     P       18 36 40.4 +0.8
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	comp=Z,26nm,1.1s						
PVIS	**Viseu**	**84.38**	**43**	*e*P	**P**	**18 36 41.5**	**+0.8**
	comp=Z,53nm,1.6s						
MTE	**Manteigas**	**84.43**	**43**	*e*P	**P**	**18 36 40.7**	**-0.3**
	comp=Z,32nm,1.2s						
MTE	**Manteigas**	**84.43**	**43**	*e*LR	LR	19 07 07.7	
	comp=Z,480nm,20.0s						
MTE	**Manteigas**	**84.43**	**43**	*e*P	**P**	**18 36 41.4**	**+0.4**
	comp=Z,18nm,0.9s						
POLO	**Lamas de Olo**	**84.81**	**42**	*e*P	**P**	**18 36 44.1**	**+1.2**
	comp=Z,19nm,1.6s						
PGAV	**Gavieira, Arco**	**84.84**	**42**	*e*LR	LR	19 07 35.5	
	comp=Z,520nm,18.0s						
BOSA	**Boshof**	**85.14**	**119**	P	**P**	**18 36 44.6**	**-0.4**
	comp=Z,21nm,1.0s,baz=239,slow=4.5,SNR=23						
BOSA				LR	LR	19 11 05.9	
	comp=Z,358nm,20.6s,baz=226,slow=33						
BOSA	**Boshof**	**85.14**	**119**	*e*P	**P**	**18 36 45.3**	**+0.2**
	comp=Z,36nm,1.1s						
BOSA	**Boshof**	**85.14**	**119**	*e*P	**P**	**18 36 45.3**	**+0.2**
BOSA				pmax	pmax		
	comp=Z,36nm,1.1s						
MVO	**Moncorvo**	**85.18**	**43**	*e*P	**P**	**18 36 44.6**	**-0.2**
	comp=Z,34nm,1.3s						
MVO	**Moncorvo**	**85.18**	**43**	*e*LR	LR	19 07 37.3	
	comp=Z,447nm,18.0s						
MAW	**Mawson**	**85.47**	**164**	P	**P**	**18 36 46.4**	**+0.7**
	comp=Z,16nm,1.0s,baz=215,slow=6.4,SNR=14						
MAW				LR	LR	19 15 04.7	
	comp=Z,294nm,19.1s,baz=238,slow=36						
MAW	**Mawson**	**85.47**	**164**	*e*P	**P**	**18 36 46.7**	**+1.0**
	comp=Z,5.8nm,1.1s						
MAW	**Mawson**	**85.47**	**164**	*e*P	**P**	**18 36 46.7**	**+1.0**
MAW				pmax	pmax		
	comp=Z,6.0nm,1.1s						
PBRG	**Braganca**	**85.70**	**42**	*e*P	**P**	**18 36 47.6**	**+0.3**
	comp=Z,33nm,1.4s						
TAM	**Tamanrasset**	**85.86**	**64**	*e*P	**P**	**18 36 48.7**	**0.0**
	comp=Z,42nm,1.2s						
TAM	**Tamanrasset**	**85.86**	**64**	*e*P	**P**	**18 36 48.7**	**0.0**
TAM				pmax	pmax		
	comp=Z,42nm,1.2s						
PAB	**San Pablo**	**86.06**	**45**	*e*P	**P**	**18 36 49.6**	**+0.4**
	comp=Z,12nm,1.0s						
PAB				LR	LR		
	comp=Z,439nm,20.0s						
PAB	**San Pablo**	**86.06**	**45**	*e*P	**P**	**18 36 49.6**	**+0.4**
PAB				pmax	pmax		
	comp=Z,12nm,1.0s						
PAB				MLR	MLR		
	comp=Z,439nm,20.0s						
ESDC	**Sonseca Array**	**86.39**	**45**	P	**P**	**18 36 50.6**	**-0.2**
	comp=Z,4.0nm,1.0s,baz=242,slow=5.4,SNR=15						
ESDC				LR	LR	19 11 48.6	
	comp=Z,317nm,21.9s,baz=260,slow=33						
ESLA	**Sonseca Array**	**86.39**	**45**	*e*P	**P**	**18 36 51.0**	**+0.3**
	comp=Z,16nm,1.4s						
ES19	**SONSECA Array**	**86.44**	**45**	*e*P	**P**	**18 36 51.0**	**0.0**
LBTB	**Lobatse**	**86.71**	**115**	*e*P	**P**	**18 36 53.4**	**+0.5**
	comp=Z,20nm,0.9s						
LBTB	**Lobatse**	**86.71**	**115**	*e*P	**P**	**18 36 53.4**	**+0.5**
LBTB				pmax	pmax		
	comp=Z,21nm,0.9s						
XMAS	**Kiritimati**	**87.82**	**273**	PFAKE		18 37 10.0	+12
XMAS				LR	LR		
	comp=Z,6.0nm,19.0s						
SFJD	**Kangerlussuaq**	**88.75**	**8**	PFAKE		18 37 10.0	+8.6
SFJD				LR	LR		
	comp=Z,173nm,19.0s						
YKA	**Yellowknife Ar**	**89.99**	**341**	P	**P**	**18 37 07.3**	**+0.1**
	comp=Z,8.6nm,0.8s,baz=137,slow=4.8,SNR=48						
YKA				LR	LR	19 21 06.4	
	comp=Z,25nm,20.2s,baz=123,slow=38						
YKW3	**Yellowknife Ar**	**90.05**	**341**	*e*P	**P**	**18 37 07.5**	**0.0**
	comp=Z,22nm,1.1s						
LSZ	**Lusaka**	**92.57**	**107**	*e*P	**P**	**18 37 22.7**	**+2.1**
	comp=Z,20nm,1.3s						
LSZ				LR	LR		
	comp=Z,577nm,19.0s						
LSZ	**Lusaka**	**92.57**	**107**	*e*P	**P**	**18 37 22.7**	**+2.1**
LSZ				pmax	pmax		
	comp=Z,20nm,1.3s						
LSZ				MLR	MLR		
	comp=Z,577nm,19.0s						
WRAK	**Wrangell Islan**	**92.71**	**331**	PFAKE		18 37 30.0	+10
WRAK				LR	LR		
	comp=Z,137nm,20.0s						
DLBC	**Dease Lake**	**92.85**	**333**	LR	LR	19 22 39.0	
	comp=Z,139nm,19.6s,baz=120,slow=38						
DLBC	**Dease Lake**	**92.85**	**333**	*e*P	**P**	**18 37 21.9**	**+1.1**
	comp=Z,10nm,1.0s						
KEST	**Kesra**	**94.08**	**53**	P	**P**	**18 37 26.5**	**-0.5**
	comp=Z,5.3nm,1.0s,baz=207,slow=6.8,SNR=4.0						
KEST				LR	LR	19 19 54.8	
	comp=Z,439nm,20.2s,baz=204,slow=36						
EKA	**Eskdalemuir Ar**	**94.79**	**32**	LR	LR	19 16 19.3	
	comp=Z,168nm,20.8s,baz=235,slow=33						
AFI	**Afiamalu**	**95.33**	**253**	LR	LR	19 09 57.8	
	comp=Z,212nm,21.6s,baz=117,slow=29						
RES	**Resolute Bay**	**96.49**	**354**	LR	LR	19 22 34.6	
	comp=Z,136nm,21.2s,baz=154,slow=36						
BFO	**Black Forest**	**98.16**	**41**	PFAKE		18 38 00.0	+15
BFO				LR	LR		
	comp=Z,13nm,21.0s						
VAE	**Valguarnera**	**98.51**	**53**	LR	LR	19 24 43.7	
	comp=Z,376nm,18.3s,baz=288,slow=37						
INK	**Inuvik**	**99.73**	**340**	LR	LR	19 27 27.9	
	comp=Z,150nm,19.0s,baz=118,slow=38						
MBAR	**Mbarara**	**100.34**	**95**	PFAKE		18 38 10.0	+14
MBAR				LR	LR		
	comp=Z,508nm,19.0s						
EGAK	**Eagle**	**100.68**	**336**	PFAKE		18 38 10.0	+14
EGAK				LR	LR		
	comp=Z,163nm,19.0s						
CLL	**Collm**	**102.02**	**40**	*e*Pdif	**Pdif**	**18 38 03.0**	**+0.7**
CLL				*e*PP	**PP**	**18 42 11.0**	**-3.2**
CLL				*e*SKSac	**SKSac**	**18 48 42.0**	**+2.1**
CLL				*e*Sdif	**Sdif**	**18 49 48.0**	**+5.0**
CLL				*e*PS	**PS**	**18 51 20.0**	**+0.3**
CLL				*e*PPS	PPS	18 52 12.0	
CLL				*e*SS	**SS**	**18 56 48.0**	**-0.1**
CLL				*e*		19 02 18.0	
CLL				Lm	MLR	19 20 00.0	
	comp=Z,400nm,20.6s						
CLL	**Collm**	**102.02**	**40**	*e*P	**Pdif**	**18 38 03.0**	**+0.7**
CLL				*e*		18 42 11.0	
CLL				MLR	MLR		
	comp=Z,400nm,20.6s						
ILAR	**Eielson Array**	**102.92**	**335**	P	**Pdif**	**18 38 05.7**	**-0.3**
	comp=Z,0.3nm,0.7s,baz=123,slow=3.3,SNR=3.2						
COLA	**College**	**103.35**	**335**	PFAKE		18 38 20.0	+12
COLA				LR	LR		
	comp=Z,1.0nm,20.0s						
FUNA	**Funafuti**	**105.58**	**254**	PFAKE		18 42 40.0	
FUNA				LR	LR		
	comp=Z,6µm,21.0s						
KBS	**Kingsbay**	**108.79**	**12**	PFAKE		18 42 50.0	
KBS				LR	LR		
	comp=Z,156nm,21.0s						
DZM	**Mont Dzumac**	**109.96**	**236**	*e*LR	LR	19 15 09.4	
	comp=Z,370nm,24.1s						
KIEV	**Kiev**	**111.88**	**42**	PFAKE		18 42 50.0	
KIEV				LR	LR		
	comp=Z,340nm,22.0s						
KEV	**Kevo**	**111.91**	**22**	PFAKE		18 42 50.0	
KEV				LR	LR		
	comp=Z,198nm,21.0s						
ANTO	**Ankara**	**113.03**	**54**	PFAKE		18 43 00.0	
ANTO				LR	LR		
	comp=Z,371nm,19.0s						
BRTR	**Keskin Array B**	**113.65**	**55**	*c i*PKIKP	**PKiKP**	**18 42 45.9**	**-1.2**
OBN	**Obninsk**	**116.53**	**38**	PFAKE		18 43 00.0	+8.2
OBN				LR	LR		
	comp=Z,193nm,20.0s						
OBN	**Obninsk**	**116.53**	**38**	*ce*PKIKP	**PKPdf**	**18 42 52.3**	**+0.5**
OBN				*e*		18 43 58.8	
OBN				*e*		18 49 43.7	
OBN				*i* SS	SS	19 00 10.1	+7.3
OBN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
OBN				MLR	MLR		
	comp=Z,296nm,20.0s						
KLMR	**Klimovskoe**	**117.67**	**31**	*e*PKIKP	**PKPdf**	**18 42 53.2**	**-0.6**
KLMR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KLMR	**Klimovskoe**	**117.67**	**31**	*e*PKPdf	**PKPdf**	**18 42 53.3**	**-0.6**
KLMR				AMP		18 42 55.0	
	comp=Z,10.0nm,1.1s						
KIV	**Kislovodsk**	**120.68**	**51**	PFAKE		18 43 10.0	+10
KIV				LR	LR		
	comp=Z,142nm,22.0s						
KIV	**Kislovodsk**	**120.68**	**51**	*de*PKIKP	**PKPdf**	**18 43 00.4**	**0.0**
KIV				*e*		18 49 49.4	
KIV				*i* SS	SS	19 00 50.3	-7.3
KIV				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,96nm,20.0s						
NEY	**Neytrino**	**120.71**	**51**	*i* PKIKP	**PKPdf**	**18 43 00.2**	**-0.4**
KBZ	**Khabaz**	**120.84**	**51**	PKP	**PKPdf**	**18 43 00.1**	**-0.5**
	comp=Z,6.8nm,0.9s,baz=275,slow=0.3,SNR=8.8						
RAYN	**Ar Rayn**	**121.13**	**74**	*e*PKPdf	**PKPdf**	**18 43 02.3**	**+0.5**
RAYN				LR	LR		
	comp=Z,311nm,21.0s						
RAYN	**Ar Rayn**	**121.13**	**74**	*e*PKIKP	**PKPdf**	**18 43 02.3**	**+0.5**
RAYN				MLR	MLR		
	comp=Z,311nm,21.0s						
NCK	**Nalchik**	**121.34**	**51**	*c i*PKIKP	**PKPdf**	**18 43 03.1**	**+1.5**
HNR	**Honiara**	**122.01**	**244**	PFAKE		18 43 20.0	+16
HNR				LR	LR		
	comp=Z,293nm,21.0s						
GNI	**Garni**	**122.19**	**55**	PFAKE		18 43 20.0	+17
GNI				LR	LR		
	comp=Z,757nm,19.0s						
GNI	**Garni**	**122.19**	**55**	*i* PKIKP	**PKPdf**	**18 43 03.0**	**-0.5**
H11S2	**WAKE ISLAND Hy**	**126.27**	**278**	T	T	21 02 26.1	
	baz=103,slow=74,SNR=830						
H11S1	**WAKE ISLAND Hy**	**126.28**	**278**	T	T	21 02 31.6	
	baz=103,slow=74,SNR=597						
H11S3	**WAKE ISLAND Hy**	**126.28**	**278**	T	T	21 02 30.1	
	baz=103,slow=74,SNR=536						
H11N3	**WAKE ISLAND Hy**	**126.33**	**280**	T	T	21 02 30.8	
	baz=102,slow=75,SNR=478						
H11N2	**WAKE ISLAND Hy**	**126.35**	**280**	T	T	21 02 30.8	
	baz=102,slow=75,SNR=349						
H11N1	**WAKE ISLAND Hy**	**126.35**	**280**	T	T	21 02 28.6	
	baz=102,slow=75,SNR=310						
WAKE	**Wake Island**	**126.48**	**279**	PFAKE		18 43 20.0	+8.0
WAKE				LR	LR		
	comp=Z,569nm,19.0s						
TIXI	**Tiksi**	**127.86**	**352**	PFAKE		18 43 30.0	+17
TIXI				LR	LR		
	comp=Z,155nm,20.0s						
TIXI	**Tiksi**	**127.86**	**352**	*i* PKIKP	**PKPdf**	**18 43 15.8**	**+2.6**
TIXI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
ARU	**Arti**	**128.38**	**33**	*e*PKPdf	**PKPdf**	**18 43 14.9**	**+0.3**
ARU				LR	LR		
	comp=Z,146nm,20.0s						
ARU	**Arti**	**128.38**	**33**	*i* PKIKP	**PKPdf**	**18 43 15.3**	**+0.7**
ARU						18 45 21.0	
ARU						18 50 17.7	
ARU				SP	SP	18 55 20.2	-2.7
SEY	**Seymchan**	**128.81**	**336**	PKP	**PKPdf**	**18 43 15.9**	**+0.7**
	comp=Z,10nm,0.9s,baz=110,slow=2.1,SNR=21						
SEY	**Seymchan**	**128.81**	**336**	*i* PKIKP	**PKPdf**	**18 43 15.3**	**+0.1**
AS01	**Alice Springs**	**129.81**	**210**	*e*PKPdf	**PKPdf**	**18 43 18.0**	**-0.5**
ASAR	**Alice Springs**	**129.83**	**210**	PKP	**PKPdf**	**18 43 18.1**	**-0.4**
	comp=Z,4.2nm,0.9s,baz=144,slow=2.4,SNR=26						
AS31	**Alice Springs**	**129.83**	**210**	*e*PKPdf	**PKPdf**	**18 43 18.4**	**-0.1**
AKTO	**Aktyubinsk**	**130.09**	**41**	PKP	**PKPdf**	**18 43 18.3**	**+0.3**
	comp=Z,3.7nm,0.9s,baz=309,slow=1.8,SNR=16						
PETK	**Petropavlovsk-**	**131.06**	**323**	PKP	**PKPdf**	**18 43 20.2**	**+0.4**
	comp=Z,5.3nm,0.9s,baz=117,slow=5.0						
MA2	**Magadan**	**131.38**	**333**	PFAKE		18 43 30.0	+10
MA2				LR	LR		
	comp=Z,137nm,20.0s						
MA2	**Magadan**	**131.38**	**333**	*i* PKIKP	**PKPdf**	**18 43 20.6**	**+0.4**
ABKAR	**Akbulak array**	**131.63**	**42**	*e*PKPdf	**PKPdf**	**18 43 22.0**	**+1.0**
WB2	**Warramunga Arr**	**132.78**	**213**	*e*PKPdf	**PKPdf**	**18 43 24.1**	**-0.1**
WRA	**Warramunga Arr**	**132.78**	**213**	PKP	**PKPdf**	**18 43 24.1**	**0.0**
	comp=Z,3.1nm,0.8s,baz=156,slow=1.8,SNR=23						
WRA				SKPbc	**SKPbc**	**18 46 47.2**	**-2.7**
	comp=Z,4.7nm,1.3s,baz=155,slow=3.1,SNR=6.3						
BRVK	**Borovoye**	**135.96**	**33**	PFAKE		18 43 40.0	+11
BRVK				LR	LR		
	comp=Z,125nm,20.0s						
BRVK	**Borovoye**	**135.96**	**33**	*c i*PKIKP	**PKPdf**	**18 43 30.7**	**+1.7**
BRVK				pmax	pmax		
	comp=Z,11nm,1.3s						
BVAR	**Borovoye Array**	**136.03**	**33**	PKP	**PKPdf**	**18 43 28.1**	**-1.1**
	comp=Z,4.1nm,0.9s,baz=327,slow=2.4,SNR=17						
YAK	**Yakutsk**	**136.45**	**346**	PFAKE		18 43 40.0	+10
YAK				LR	LR		
	comp=Z,145nm,22.0s						
YAK	**Yakutsk**	**136.45**	**346**	*e*PKIKP	**PKPdf**	**18 43 30.6**	**+1.0**
YAK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
NVS	**Novosibirsk**	**140.63**	**24**	⇑*i*PKIKP	**PKPdf**	**18 43 39.0**	**+1.5**
NVS				pmax	pmax		
	comp=Z,16nm,1.5s						
NVS				pmax	pmax		
	comp=N,3.0nm,1.3s						
NVS				pmax	pmax		
	comp=E,7.0nm,1.5s						
KURK	**Kurchatov**	**141.52**	**32**	PKPpre	PKPpre	18 43 33.2	
KURK				PKP	**PKPdf**	**18 43 39.7**	**+0.4**
KURK	**Kurchatov**	**141.52**	**32**	*i* PKIKP	**PKPdf**	**18 43 39.0**	**-0.2**
KURBB	**Kurchatov Arra**	**141.54**	**32**	PKhKP	PKPpre	18 43 33.2	
	comp=E,1.7nm,0.8s,baz=301,slow=2.8,SNR=10						
KURBB				PKP	**PKPdf**	**18 43 39.7**	**+0.4**
	comp=E,6.0nm,0.9s,baz=295,slow=2.5,SNR=21						
ZALV	**Zalesovo Beam**	**141.91**	**24**	PKhKP	PKPpre	18 43 34.6	
	comp=E,3.2nm,0.7s,baz=318,slow=4.1,SNR=8.1						
ZALV				PKP	**PKPdf**	**18 43 40.5**	**+0.7**
	comp=E,18nm,0.9s,baz=306,slow=3.2,SNR=8.6						
BOD	**Bodaibo**	**142.84**	**356**	*e*PKHKP	PKPpre	18 43 35.1	
BOD				pmax	pmax		
	comp=Z,9.0nm,1.4s						
GRNR	**Gornyy**	**143.31**	**331**	*e*PKIKP	**PKPdf**	**18 43 44.0**	**+1.5**
FRU	**Bishkek**	**143.49**	**45**	*e*PKIKP	PKPbc	18 43 41.0	+0.6
AAK	**Ala-Archa**	**143.49**	**45**	*e*PKPdf	**PKPdf**	**18 43 42.5**	**-0.7**
AAK	**Ala-Archa**	**143.49**	**45**	*e*PKIKP	**PKPdf**	**18 43 42.5**	**-0.7**
ASAJ	**Asahikawa**	**143.98**	**318**	PKP	**PKPdf**	**18 43 43.0**	**-0.8**
	comp=Z,12nm,0.9s,baz=63,slow=4.5,SNR=6.0						
ZEA	**Zeya**	**144.37**	**342**	*e*PKIKP	PKPbc	18 43 42.8	+0.2
ZEA				pmax	pmax		
	comp=N,29nm,1.6s						
ZEA				pmax	pmax		
	comp=Z,61nm,1.6s						
ERM	**Erimo**	**144.60**	**314**	PFAKE		18 44 00.0	+15
ERM				LR	LR		
	comp=Z,177nm,21.0s						
NIL	**Nilore**	**145.51**	**60**	PFAKE		18 44 00.0	+13
NIL				LR	LR		
	comp=Z,149nm,20.0s						
KSH	**Kashi**	**145.80**	**49**	*e*PKPbc	**PKPab**	**18 43 48.1**	**-0.2**
KSH				pPKP	sPKPdf	18 43 58.4	-0.8
KSH				*e*PP	**PP**	**18 47 12.8**	**+3.8**
KSH				PKS	**PKSdf**	**18 47 20.9**	**-1.9**
KSH				SKS	**SKSdf**	**18 50 50.8**	**-4.1**
KSH				AMB	AMB		
	comp=Z,100nm,5.7s						
KSH				LR	LR		
	comp=Z,210nm,15.7s						
KSH				LR	LR		
	comp=Z,60nm,7.5s						
MK31	**Makanchi Array**	**145.90**	**34**	*e*PKPdf	**PKPbc**	**18 43 47.6**	**-0.2**
MK31	**Makanchi Array**	**145.90**	**34**	*e*PKIKP	**PKPbc**	**18 43 47.6**	**-0.2**
MKAR	**Makanchi Array**	**145.90**	**34**	PKPbc	**PKPab**	**18 43 47.9**	**-0.3**
	comp=Z,30nm,0.8s,baz=327,slow=2.4,SNR=168						
MKAR	**Makanchi Array**	**145.90**	**34**	*e*PKPdf	**PKPbc**	**18 43 47.6**	**-0.2**
MKAR	**Makanchi Array**	**145.90**	**34**	*e*PKIKP	**PKPbc**	**18 43 47.6**	**-0.2**
MK01	**Makanchi Array**	**145.92**	**34**	*e*PKPdf	**PKPdf**	**18 43 47.1**	**-0.1**
PRZ	**Przheval’sk**	**146.12**	**43**	*e*PKPdf	**PKPab**	**18 43 50.2**	**+0.8**
PRZ	**Przheval’sk**	**146.12**	**43**	*e*PKP2	**PKPab**	**18 43 50.2**	**+0.8**
DGZ	**Jazzator, Alta**	**146.23**	**26**	*i* PKIKP	**PKPdf**	**18 43 47.2**	**-0.6**
SOEI	**Soe**	**146.36**	**207**	*e*PKPdf	**PKPab**	**18 43 51.1**	**+0.1**
KLR	**Kul’dur**	**146.48**	**333**	*i* PKIKP	**PKPdf**	**18 43 47.7**	**-0.3**
HVS	**Khovu-Aksy**	**147.26**	**18**	*i* PKIKP	**PKPdf**	**18 43 48.9**	**-0.5**
MOY	**Mondy**	**148.45**	**10**	*e*PKP2	**PKPbc**	**18 43 55.7**	**+0.8**
MOY				pmax	pmax		
	comp=Z,63nm,1.9s						
TLY	**Talaya**	**148.81**	**7**	*e*PKPbc	**PKPbc**	**18 43 57.2**	**+1.5**
TLY				LR	LR		
	comp=Z,113nm,20.0s						
TLY	**Talaya**	**148.81**	**7**	*e*PKP2	**PKPbc**	**18 43 56.9**	**+1.2**
TLY				*e*SS	SS	19 06 34.9	+1.7
TLY				pmax	pmax		
	comp=Z,23nm,1.3s						
ZAK	**Zakamensk**	**150.04**	**8**	*e*PKP2	**PKPbc**	**18 43 58.4**	**-0.5**
ZAK				pmax	pmax		
	comp=Z,22nm,1.3s						
USRK	**Ussuriysk Ar.**	**150.06**	**326**	PKPbc	**PKPbc**	**18 43 59.6**	**+0.6**
	baz=48,slow=2.1						
HIA	**Hailar**	**150.39**	**346**	PFAKE		18 44 10.0	+4.0
HIA				LR	LR		
	comp=Z,119nm,19.0s						
MJAR	**Matsushiro Arr**	**150.42**	**308**	PKP	**PKPdf**	**18 43 54.5**	**-0.3**
	comp=Z,0.5nm,0.5s,baz=57,slow=4.6,SNR=4.7						
MJAR				PKPbc	**PKiKP**	**18 44 00.7**	**-0.2**
	comp=Z,12nm,0.8s,baz=104,slow=0.9,SNR=42						
MAJO	**Matsushiro**	**150.42**	**308**	*e*PKPbc	**PKPbc**	**18 44 00.6**	**+0.5**
MAJO				LR	LR		
	comp=Z,238nm,20.0s						
MAJO	**Matsushiro**	**150.42**	**308**	*c i*PKIKP	**PKPbc**	**18 44 00.8**	**+0.7**
MAJO				pmax	pmax		
	comp=Z,26nm,0.7s						
MAT	**Matsushiro**	**150.42**	**308**	PKP	**PKPbc**	**18 44 00.3**	**+0.2**
MJB9	**Matsu-Tunnel**	**150.42**	**308**	*e*PKPbc	**PKPbc**	**18 44 00.9**	**+0.8**
HYB	**Hyderabad**	**150.63**	**91**	*i* PKP	**PKPbc**	**18 44 02.0**	**+0.8**
WMQ	**Urumqi**	**150.72**	**33**	*e*PKPbc	**PKPdf**	**18 43 56.3**	**+1.1**
WMQ				LR	LR		
	comp=Z,180nm,23.7s						
WMQ				LR	LR		
	comp=Z,230nm,26.3s						
WMQ				LR	LR		
	comp=Z,390nm,24.5s						
MDJ	**Mudanjiang**	**150.94**	**330**	PFAKE		18 44 10.0	+1.6
MDJ				LR	LR		
	comp=Z,173nm,21.0s						
KAPI	**Kappang**	**152.47**	**203**	PFAKE		18 44 10.0	+4.5
KAPI				LR	LR		
	comp=Z,181nm,21.0s						
SONA1	**Songino Array**	**152.86**	**5**	*e*PKPdf	**PKPdf**	**18 43 59.0**	**+0.6**
SONM	**Songino Array**	**152.88**	**5**	PKP	**PKPdf**	**18 43 58.9**	**+0.5**
	comp=Z,2.4nm,0.9s,baz=345,slow=0.7,SNR=14						
SONM				PKPbc	**PKiKP**	**18 44 05.9**	**+0.1**
	comp=Z,5.4nm,0.8s,baz=323,slow=1.3,SNR=18						
SONM				PKPab	**sPKPbc**	**18 44 17.8**	**+0.4**
	comp=Z,5.4nm,0.8s,baz=338,slow=2.6,SNR=7.8						
ULN	**Ulaanbaatar**	**152.89**	**4**	*e*PKPdf	**PKPdf**	**18 43 59.6**	**+1.2**
ULN				*e*PKPbc	**PKiKP**	**18 44 06.1**	**+0.3**
ULN				*e*PKPab	**PKPab**	**18 44 16.5**	**-0.1**
ULN				LR	LR		
	comp=Z,140nm,19.0s						
ULN	**Ulaanbaatar**	**152.89**	**4**	*e*PKIKP	**PKPdf**	**18 43 59.6**	**+1.2**
ULN				*e*		18 44 06.1	
ULN				*e*		18 44 16.5	
ULN				MLR	MLR		
	comp=Z,140nm,19.0s						
CN2	**Changchun**	**153.44**	**334**	*e*PKPbc	**PKPdf**	**18 43 57.3**	**-1.8**
KSRS	**Korea Array**	**156.90**	**320**	PKP	**PKPdf**	**18 44 04.5**	**+0.6**
	comp=Z,2.2nm,0.9s,baz=11,slow=1.3,SNR=8.0						
KS01	**Wonju Array Si**	**156.90**	**320**	*e*PKPdf	**PKPdf**	**18 44 04.3**	**+0.3**
KSAR	**Wonju Array Be**	**156.93**	**320**	PKP	**PKPdf**	**18 44 04.5**	**+0.5**
KSAR	**Wonju Array Be**	**156.93**	**320**	PKIKP	**PKPdf**	**18 44 04.6**	**+0.5**
GSI	**Gunungsitoli**	**157.45**	**148**	*e*PKPab	**PKPab**	**18 44 38.4**	**+1.6**
PSI	**Prapat**	**159.41**	**149**	*e*PKPab	**PKPab**	**18 44 45.8**	**+0.3**
GTA	**Gaotai**	**159.65**	**22**	PKP	**PKPdf**	**18 44 08.1**	**+0.6**
GTA				pPKP	pPKPdf	18 44 15.8	-0.6
GTA				sPKP		18 44 19.8	
GTA				PKPab	**PKPab**	**18 44 46.0**	**+0.1**
GTA				PP	**PP**	**18 48 31.0**	**+4.4**
GTA				SKS	**SKSdf**	**18 51 10.1**	**-1.3**
GTA				SS	**SS**	**19 08 32.8**	**+0.9**
GTA				AMB	AMB		
	comp=Z,79nm,7.9s						
GTA				LR	LR		
	comp=Z,160nm,20.3s						
GTA				LR	LR		
	comp=Z,110nm,22.7s						
GTA				LR	LR		
	comp=Z,140nm,20.6s						
HHC	**Hu-ho-hao-te**	**159.89**	**355**	*e*PKP	**PKPdf**	**18 44 04.5**	**-3.2**
HHC				SKS	**SKSdf**	**18 51 09.5**	**-2.0**
HHC				SS	**SS**	**19 08 34.8**	**+1.0**
HHC				AMB	AMB		
	comp=Z,120nm,10.4s						
HHC				LR	LR		
	comp=Z,130nm,18.6s						
HHC				LR	LR		
	comp=Z,150nm,18.0s						
HHC				LR	LR		
	comp=Z,150nm,18.2s						
BJT	**Baijiatuau**	**159.96**	**345**	PFAKE		18 44 20.0	+12
BJT				LR	LR		
	comp=Z,246nm,21.0s						
LSA	**Lhasa**	**161.22**	**58**	PFAKE		18 44 20.0	+10
LSA				LR	LR		
	comp=Z,178nm,22.0s						
LZH	**Lanzhou**	**163.96**	**17**	*e*PKP	**PKPdf**	**18 44 09.0**	**-3.1**
LZH				pPKP	pPKPdf	18 44 20.3	-0.6
LZH				sPKP		18 44 23.0	
LZH				LR	LR		
	comp=Z,170nm,18.2s						
LZH				LR	LR		
	comp=Z,170nm,18.0s						
LZH				LR	LR		
	comp=Z,200nm,20.1s						
NJ2	**Nanjing**	**165.96**	**325**	*e*PKP	**PKPdf**	**18 44 14.6**	**+1.0**
TATO	**Taipei**	**168.14**	**293**	PFAKE		18 44 30.0	+15
TATO				LR	LR		
	comp=Z,182nm,19.0s						
CD2	**Chengdu**	**168.67**	**26**	PKP	**PKPdf**	**18 44 15.3**	**-0.4**
WHN	**Wuhan**	**169.31**	**337**	*e*PKP	**PKPdf**	**18 44 18.8**	**+2.7**
CMAR	**Chiang Mai Arr**	**169.83**	**101**	PKP	**PKPdf**	**18 44 16.8**	**0.0**
	comp=Z,2.2nm,0.9s,baz=298,slow=2.3,SNR=10						
CMAR				PKPab	**PKPab**	**18 45 29.2**	**-2.1**
	comp=Z,2.0nm,0.9s,baz=245,slow=6.7,SNR=7.7						
CMAR				PP	**PP**	**18 49 22.8**	**+1.2**
	comp=Z,1.2nm,0.8s,baz=236,slow=5.2,SNR=5.7						
CHTO	**Chiang Mai**	**169.92**	**99**	*e*PKPab	**PKPab**	**18 45 31.4**	**-0.3**
CHTO				LR	LR		
	comp=Z,199nm,19.0s						
CHTO	**Chiang Mai**	**169.92**	**99**	*e*PKP2	**PKPab**	**18 45 31.4**	**-0.3**
CHTO				MLR	MLR		
	comp=Z,199nm,19.0s						
ENH	**Enshi**	**170.53**	**360**	PFAKE		18 44 30.0	+13
ENH				LR	LR		
	comp=Z,205nm,21.0s						
KMI	**Kunming**	**172.44**	**54**	PKP	**PKPdf**	**18 44 18.1**	**-0.1**
KMI				sPKP		18 44 26.6	
KMI				LR	LR		
	comp=Z,140nm,23.4s						
KMI				LR	LR		
	comp=Z,150nm,21.0s						
KMI				LR	LR		
	comp=Z,180nm,21.0s						
GYA	**Guiyang**	**173.78**	**24**	*e*PKP	**PKPdf**	**18 44 18.0**	**-0.6**
GYA				PKPab	**PKPab**	**18 45 49.6**	**+1.2**
GYA				PKS	**PKSdf**	**18 47 48.4**	**-2.6**
GYA				PP	**PP**	**18 49 42.3**	**+3.0**
GYA				AMB	AMB		
	comp=Z,120nm,8.0s						
QIZ	**Qiongzhong**	**178.24**	**192**	PFAKE		18 44 30.0	+10
QIZ				LR	LR		
	comp=Z,213nm,20.0s						

JMA 18 18:32:12.8±0.1, 37.°07N×141.°05E, h27^{km}±1^{km}, M0.9, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.20**	**279**	P	Pb	18 32 18.6	-0.2
ONAJ				S	Sb	18 32 22.8	-0.1
JFK	**Kawauchi**	**0.33**	**335**	S	Sb	18 32 25.2	-0.4
JFFD	**Fukushimafurud**	**0.39**	**273**	P	Pb	18 32 21.1	-0.3
JFFD				*e*S	Sb	18 32 27.0	-0.2
JMM	**Marumori**	**0.82**	**346**	S	Sb	18 32 38.4	-0.8

ISCJB ***18*** *18:32:43.5±0.3, 45.°25N±0.°07×137.°21E±0.°06, h350^{km}, mb3.2/10, Error ellipse: s-maj=10.0km s-min=4.9km az=25.9*

IDC ***18*** *18:32:44.4±1.1, 45.°30N×137.°13E, h341^{km}±13^{km}, mb3.1/10, mb1 3.0/14, mb1mx2.9/68, mbtmp3.7/14, Error ellipse: s-maj=17.4km s-min=14.6km az=35.0*

ISC 18 18:32:44.4±0.6, **45.°14N**±0.°08×**137.°23E**±0.°07, **h350**^{km}, **n37**, σ**1^{s}12**/39, **mb3.4**/10, **Primorye**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSK	**Shakotan**	**2.94**	**126**	P	**Pn**	**18 33 43.4**	**+0.2**

JSH	**Shimam**	3.22	140	P	Pn	18 33 45.7	-0.1
JWK2	**Keihoku**	3.30	85	P	Pn	18 33 47.3	+0.8
JOSM	**Okushiri--Mats**	3.46	151	P	Pn	18 33 48.6	+0.5
JHR	**Hokuryu**	3.51	112	P	Pn	18 33 49.1	+0.6
JSE	**Soyaes**	3.80	91	P	Pn	18 33 52.0	+0.7
USRK	**Ussuriysk Ar.**	3.85	258	P	Pn	18 33 51.4	-0.5
	baz=70,slow=12						
ASAJ	**Asahikawa**	3.97	103	P	Pn	18 33 53.7	+0.7
	3.3nm,0.3s,baz=289,slow=5.2,SNR=37						
JKK2	**Kamakawa 2**	4.15	106	P	Pn	18 33 55.2	+0.3
JKB	**Kayabe**	4.27	138	P	Pn	18 33 57.0	+0.8
JFR	**Furan**	4.34	115	P	Pn	18 33 56.9	0.0
JOT	**Ohata**	4.68	142	P	Pn	18 34 01.3	+0.8
JTKR	**Abashiri--Toko**	4.92	101	P	Pn	18 34 03.2	+0.2
JNBK	**Urakawa-nobuka**	4.92	124	P	Pn	18 34 03.9	+0.8
JNBK				*e*S	S	18 35 07.0	+0.2
JCH	**Churui**	5.10	117	P	Pn	18 34 03.9	-1.2
KLR	**Kul'dur**	5.54	320	P	Pn	18 34 08.5	-1.4
	0.0nm,0.3s,baz=122,slow=12,SNR=5.8						
NEM2	**Nemuro 2**	6.37	103	P	Pn	18 34 18.4	-1.0
JMK	**Ichinoseki**	6.86	153	P	Pn	18 34 24.7	-0.5
JMK				*e*S	S	18 35 43.3	-3.7
MJAR	**Matsushiro Arr**	8.62	175	P	Pn	18 34 46.5	+0.5
	0.3nm,0.3s,baz=348,slow=11,SNR=4.4						
KSRS	**Korea Array**	10.38	226	P	P	18 35 08.3	+0.3
	0.2nm,0.3s,baz=41,slow=11,SNR=5.1						
SONM	**Songino Array**	21.33	288	P	P	18 37 03.0	-1.4
	2.5nm,0.8s,baz=78,slow=9.2,SNR=10						
ZALV	**Zalesovo Beam**	34.41	304	P	P	18 38 58.6	-1.0
	2.0nm,0.5s,baz=89,slow=8.6,SNR=7.8						
MKAR	**Makanchi Array**	37.57	293	P	P	18 39 25.3	-1.0
	0.7nm,0.7s,baz=87,slow=9.4,SNR=8.6						
KURBB	**Kurchatov Arra**	38.85	300	P	P	18 39 35.9	-0.8
	1.1nm,0.2s,baz=74,slow=9.1,SNR=13						
JIRN	**Jiri**	43.86	264	*e*P	P	18 40 18.8	+1.0
	9.8nm,0.3s						
RAMN	**Ramite**	44.01	263	*e*P	P	18 40 19.5	+0.7
	7.5nm,0.3s						
KKN	**Kakani**	44.43	265	*e*P	P	18 40 22.9	+0.8
	2.6nm,0.2s						
ILAR	**Eielson Array**	44.58	36	P	P	18 40 22.5	+0.1
	0.2nm,0.6s,baz=260,slow=5.4,SNR=3.7						
GKN	**Gorkha**	44.75	266	*e*P	P	18 40 25.1	+0.6
	5.4nm,0.3s						
DANN	**Dangsing**	45.16	267	*e*P	P	18 40 28.8	+0.9
	16nm,0.4s						
PYUN	**Piuthan**	45.86	267	*e*P	P	18 40 34.2	+1.0
	3.6nm,0.2s						
AKTO	**Aktyubinsk**	51.11	306	P	P	18 41 12.1	-0.1
	0.6nm,0.4s,baz=58,slow=10,SNR=6.8						
GEYT	**Alibeck**	57.44	293	P	P	18 41 59.3	+1.6
	0.6nm,0.5s,baz=52,slow=4.6,SNR=2.8						
FINES	**FINESS Array B**	60.21	329	P	P	18 42 14.5	-1.6
	0.7nm,0.5s,baz=44,slow=12,SNR=4.7						
HFS	**Hagfors**	65.42	333	P	P	18 42 49.6	-0.5
	0.4nm,0.4s,baz=42,slow=4.5,SNR=2.5						
ASAR	**Alice Springs**	68.54	183	P	P	18 43 11.9	+1.9
	0.4nm,0.9s,baz=359,slow=7.8,SNR=3.9						
ASAR	**Alice Springs**	68.54	183	PKIKP	P	18 43 11.9	+1.9

ROM 18 18:59:18.6±0.6, 44°.73N±0°.04×11°.02E±0°.02, h29^{km}±2^{km}, ML2.2/1, Northern Italy

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAVA	**Ravarino**	0.08	71	P	Pb	18 59 23.6	+0.1
RAVA				S	Sb	18 59 27.7	+0.7
RAVA				AML	AML		
	comp=E,2405µm,0.3s						
RAVA				AML	AML		
	comp=N,1555µm,0.3s						
RAVA				AML	AML		
	comp=E,2405µm,0.3s						
RAVA				AML	AML		
	comp=N,1555µm,0.3s						
RAVA				AML	AML		
	comp=N,1555µm,0.3s						
RAVA				AML	AML		
	comp=E,2405µm,0.3s						
RAVA	**Ravarino**	0.08	71	P	Pb	18 59 23.6	0.0
RAVA				S	Sb	18 59 27.7	+0.8
RAVA				AML	AML		
	comp=E,2405µm,0.3s						
RAVA				AML	AML		
	comp=N,1555µm,0.3s						
RAVA				AML	AML		
	comp=E,2405µm,0.3s						
RAVA				AML	AML		
	comp=N,1555µm,0.3s						
RAVA				AML	AML		
	comp=N,1555µm,0.3s						
RAVA				AML	AML		
	comp=E,2405µm,0.3s						
NDIM	**Novi di Modena**	0.18	332	P	Pb	18 59 21.6	-2.7
NDIM				S	Sb	18 59 24.0	-4.3
NDIM				AML	AML		
	comp=E,3030µm,0.2s						
NDIM				AML	AML		
	comp=N,3350µm,0.5s						
NDIM				AML	AML		
	comp=E,3090µm,0.2s						
NDIM				AML	AML		
	comp=N,3320µm,0.5s						
NDIM				AML	AML		
	comp=E,3030µm,0.2s						
NDIM				AML	AML		
	comp=N,3350µm,0.5s						
NDIM				AML	AML		
	comp=E,3090µm,0.2s						
NDIM				AML	AML		
	comp=N,3320µm,0.5s						
NDIM				AML	AML		
	comp=E,3030µm,0.2s						
NDIM				AML	AML		
	comp=E,3090µm,0.2s						
NDIM				AML	AML		
	comp=N,3350µm,0.5s						
NDIM				AML	AML		
	comp=N,3320µm,0.5s						
NDIM	**Novi di Modena**	0.18	332	AML	AML		
	comp=N,3350µm,0.5s						
NDIM				AML	AML		
	comp=E,3030µm,0.2s						
NDIM				AML	AML		
	comp=E,3090µm,0.2s						
NDIM				AML	AML		
	comp=N,3320µm,0.5s						
NDIM				AML	AML		
	comp=E,3030µm,0.2s						
NDIM				AML	AML		
	comp=N,3350µm,0.5s						
NDIM				AML	AML		
	comp=E,3090µm,0.2s						
NDIM				AML	AML		
	comp=N,3320µm,0.5s						
NDIM				AML	AML		
	comp=E,3030µm,0.2s						
NDIM				AML	AML		
	comp=E,3090µm,0.2s						
NDIM				AML	AML		
	comp=N,3350µm,0.5s						
NDIM				AML	AML		
	comp=N,3320µm,0.5s						
T0826	**Rio Saliceto (**	0.18	307	P	Pb	18 59 23.0	-1.4
T0826				S	Sb	18 59 26.5	-1.8
T0802	**SanFelice sul**	0.19	39	P	Pb	18 59 23.5	-1.0
T0802				S	Sb	18 59 27.4	-1.1
T0800	**Massa Finalese**	0.20	55	P	Pb	18 59 24.2	-0.4
T0800				S	Sb	18 59 28.8	0.0
T0800				AML	AML		
	comp=E,1215µm,0.1s						
T0800				AML	AML		
	comp=N,1375µm,0.4s						
T0800				AML	AML		
	comp=E,1310µm,0.1s						
T0800				AML	AML		
	comp=N,1450µm,0.4s						
T0800				AML	AML		
	comp=E,1215µm,0.1s						
T0800				AML	AML		
	comp=N,1375µm,0.4s						
T0800				AML	AML		
	comp=E,1310µm,0.1s						
T0800				AML	AML		
	comp=N,1450µm,0.4s						
T0800				AML	AML		
	comp=N,1450µm,0.4s						
T0800				AML	AML		
	comp=N,1375µm,0.4s						
T0800				AML	AML		
	comp=E,1310µm,0.1s						
T0800				AML	AML		
	comp=E,1215µm,0.1s						
T0800	**Massa Finalese**	0.20	55	AML	AML		
	comp=N,1375µm,0.4s						
T0800				AML	AML		
	comp=E,1215µm,0.1s						
T0800				AML	AML		
	comp=E,1310µm,0.1s						
T0800				AML	AML		
	comp=N,1450µm,0.4s						
T0800				AML	AML		
	comp=E,1215µm,0.1s						
T0800				AML	AML		
	comp=N,1375µm,0.4s						
T0800				AML	AML		
	comp=E,1310µm,0.1s						
T0800				AML	AML		
	comp=N,1450µm,0.4s						
T0800				AML	AML		
	comp=N,1450µm,0.4s						
T0800				AML	AML		
	comp=N,1375µm,0.4s						
T0800				AML	AML		
	comp=E,1310µm,0.1s						
T0800				AML	AML		
	comp=E,1215µm,0.1s						
NOVE	**Novellara**	0.22	288	P	Pb	18 59 24.5	-0.4
NOVE				S	Sb	18 59 29.8	+0.7
NOVE				AML	AML		
	comp=E,368µm,1.5s						
NOVE				AML	AML		
	comp=N,350µm,0.2s						
NOVE	**Novellara**	0.22	288	P	Pb	18 59 24.7	-0.2
NOVE				S	Sb	18 59 29.8	+0.6
NOVE				AML	AML		
	comp=E,368µm,1.5s						
NOVE				AML	AML		
	comp=N,350µm,0.2s						
T0825	**Gonzaga (MN)**	0.27	334	P	Pb	18 59 24.5	-1.0
T0825				S	Sb	18 59 28.8	-1.4
T0825				AML	AML		
	comp=E,4045µm,0.7s						
T0825				AML	AML		
	comp=N,5370µm,0.1s						
T0825				AML	AML		
	comp=N,5370µm,0.1s						
T0825				AML	AML		
	comp=E,4045µm,0.7s						
T0825	**Gonzaga (MN)**	0.27	334	AML	AML		
	comp=E,4045µm,0.7s						
T0825				AML	AML		
	comp=E,4045µm,0.7s						
T0825				AML	AML		
	comp=N,5370µm,0.1s						
T0825				AML	AML		
	comp=N,5370µm,0.1s						
SBPO	**S.Benedetto Po**	0.33	348	P	Pb	18 59 24.7	-1.5
MAIM	**Mastiano**	0.90	205	P	Pb	18 59 41.7	+6.2
ROVR	**Roverˆ¤ Verone**	0.92	3	P	Pn	18 59 35.6	0.0
ROVR				AML	AML		
	comp=E,100µm,0.9s						
ROVR				AML	AML		
	comp=N,178µm,1.4s						
ROVR				AML	AML		
	comp=E,100µm,0.9s						
ROVR				AML	AML		
	comp=N,178µm,1.4s						
ROVR				AML	AML		
	comp=N,178µm,1.4s						
ROVR				AML	AML		
	comp=E,100µm,0.9s						
ROVR	**Roverˆ¤ Verone**	0.92	3	P	Pn	18 59 35.2	-0.4
ROVR				S	Sn	18 59 48.1	+0.1
ROVR				AML	AML		
	comp=E,100µm,0.9s						
ROVR				AML	AML		
	comp=N,178µm,1.4s						
ROVR				AML	AML		
	comp=E,100µm,0.9s						
ROVR				AML	AML		
	comp=N,178µm,1.4s						
ROVR				AML	AML		
	comp=N,178µm,1.4s						
ROVR				AML	AML		
	comp=E,100µm,0.9s						
SALO	**Salr**	0.95	339	P	Pb	18 59 37.6	+1.1
SALO	**Salr**	0.95	339	P	Pb	18 59 36.9	+0.4
MABI	**Malga Bissina**	1.37	345	P	Pn	18 59 42.7	+0.8
MABI				AML	AML		
	comp=E,20µm,1.1s						
MABI				AML	AML		
	comp=N,12µm,1.2s						
MABI				AML	AML		
	comp=E,20µm,1.1s						
MABI				AML	AML		
	comp=N,12µm,1.2s						
MABI	**Malga Bissina**	1.37	345	P	Pb	18 59 42.9	-0.7
MABI				AML	AML		
	comp=E,20µm,1.1s						
MABI				AML	AML		
	comp=N,12µm,1.2s						
MABI				AML	AML		
	comp=E,20µm,1.1s						
MABI				AML	AML		
	comp=N,12µm,1.2s						

DJA 18 19:17:47.1±0.6, 3°S±4°×14°0E±°, h21^{km}±6^{km}, M4.4/6, mb4.5/1, MLv4.3/6, Near north coast of Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GENI	**Genyem**	0.47	35	P	Pb	19 17 57.5	+0.9
GENI				S	Sn	19 18 05.6	-0.7
JAY	**Jayapura**	0.93	60	P	Pn	19 18 04.9	0.0
JAY				S	Sn	19 18 17.2	-0.4
WAMI	**Wamena**	1.49	233	P	Pn	19 18 12.0	-0.6
WAMI				S	Sn	19 18 31.3	-0.1
SRPI	**Serui, Papua**	3.82	287	P	Pn	19 18 45.3	+0.6
SRPI				S	Sn	19 19 29.6	+0.6
BAKI	**Biak**	4.19	295	P	Pn	19 18 50.1	+0.3
RKPI	**Ransiki, Papua**	5.90	284	P	Pn	19 19 12.3	-1.1

MAN 18 19:30:37.2, 14°.04N×120°.64E, h136^{km}, mb4.2, ML3.0, MS2.7, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	**Lubang**	0.49	232	*e*P	Pn	19 30 58.3	+1.5
PGP	**Puerto Galera**	0.61	150	⇑*i*P	Pn	19 30 59.1	+1.5
PGP				*i* S	Sn	19 31 15.6	+2.4
SJMP	**San Jose**	1.64	163	*e*P	Pn	19 31 08.0	+0.7
BUSP	**Coron**	2.07	192	*e*S	Sn	19 31 38.5	-0.8
BOLP	**Bolinao**	2.43	343	*e*P	Pn	19 31 17.6	+0.8

ISCJB ***18*** *19:34:56.3±0.5, 24°.63S±0°.09×177°.4W±0°.1, h100^{km}, mb4.0/16, Error ellipse: s-maj=16.6km s-min=10.9km az=35.0*

IDC ***18*** *19:34:57.2±2.9, 24°.62S×177°.29W, h97^{km}±24^{km}, mb3.8/14, mb1 4.1/15, mb1mx3.8/43, mbtmp4.2/15, Error ellipse: s-maj=20.7km s-min=15.2km az=140.0*

NEIC ***18*** *19:34:58.7±2.3, 24°.50S×177°.29W, h110^{km}±19^{km}, mb4.8/2, Error ellipse: s-maj=17.5km s-min=11.2km az=141.0*

ISC 18 19:34:57.4±0.5, 24°.6S±0°.1×177°.3W±0°.1, h100^{km}, n39, σ1^{s}.12/40, mb4.0/16, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	11.85	27	P	**Pn**	**19 37 42.0**	**-1.2**
	6.3nm,0.3s,baz=267,slow=1.8,SNR=5.5						
AFI				S	Sn	19 39 40.1	-13
	4.4nm,0.3s,baz=330,slow=20,SNR=3.0						
URZ	**Urewera**	14.41	198	P	**Pn**	**19 38 13.8**	**-2.8**
	0.3nm,0.3s,baz=7.1,slow=8.1,SNR=2.9						
URZ				S	Sn	19 40 39.1	-16
	1.0nm,0.3s,baz=110,slow=23,SNR=9.3						
CTA	**Charters Tower**	33.96	270	P	**P**	**19 41 32.8**	**+1.3**
	3.4nm,0.4s,baz=94,slow=9.4,SNR=15						
CTAO	**Charters Tower**	33.96	270	*e*P	**P**	**19 41 33.2**	**+1.7**
ASAR	**Alice Springs**	44.37	261	P	**P**	**19 42 57.7**	**-0.5**
	0.8nm,0.4s,baz=93,slow=7.1,SNR=13						
ASAR				PcP	**PcP**	**19 44 40.5**	**0.0**
	0.5nm,0.5s,baz=118,slow=4.0,SNR=4.6						
WRAB	**Tennant Creek**	44.83	266	*e*P	**P**	**19 43 02.0**	**+0.2**
WRA	**Warramunga Arr**	44.83	266	P	**P**	**19 43 02.2**	**+0.3**
	5.4nm,0.5s,baz=103,slow=8.1,SNR=42						
WRA				PcP	**PcP**	**19 44 41.9**	**-0.3**
	1.1nm,0.9s,baz=101,slow=3.8,SNR=4.5						
WRA				ScP	**ScP**	**19 48 25.9**	**+0.4**
	0.3nm,0.7s,baz=115,slow=3.3,SNR=2.9						
FITZ	**Fitzroy Crossi**	53.24	265	P	**P**	**19 44 05.8**	**-0.2**
	3.7nm,0.8s,baz=108,slow=11,SNR=9.8						
SBA	**Scott Base**	53.83	184	*e*P	**P**	**19 44 12.0**	**+2.5**
	2.1nm,0.8s						
QSPA	**South Pole Qui**	65.47	180	P	**P**	**19 45 29.9**	**+0.2**
	1.8nm,0.9s,baz=63,slow=1.8,SNR=4.9						
MJAR	**Matsushiro Arr**	73.91	324	P	**P**	**19 46 20.4**	**-1.2**
	0.8nm,0.7s,baz=167,slow=7.2,SNR=4.1						
MAW	**Mawson**	77.94	200	P	**P**	**19 46 44.4**	**+0.3**
	1.1nm,0.4s,baz=123,slow=5.2,SNR=9.7						
PETK	**Petropavlovsk-**	80.40	345	P	**P**	**19 46 58.3**	**+0.8**
	1.1nm,0.7s,baz=156,slow=7.4						
NVAR	**Mina Array Bea**	83.57	43	P	**P**	**19 47 16.0**	**+1.2**
	0.6nm,0.6s,baz=228,slow=8.0,SNR=2.9						
SNAA	**Sanae**	83.90	178	P	**P**	**19 47 15.3**	**-0.6**
	0.4nm,0.5s,baz=194,slow=5.8,SNR=7.3						
TXAR	**Lajitas Array**	88.72	57	P	**P**	**19 47 41.6**	**+1.5**
	0.4nm,0.7s,baz=213,slow=6.5,SNR=3.4						
PDAR	**Pinedale Array**	91.50	43	P	**P**	**19 47 53.5**	**+0.6**
	0.5nm,0.8s,baz=231,slow=5.7,SNR=2.6						
CMAR	**Chiang Mai Arr**	92.10	289	P	**P**	**19 47 56.4**	**+0.4**
	0.6nm,0.7s,baz=93,slow=5.4,SNR=3.8						
ILAR	**Eielson Array**	92.16	13	P	**P**	**19 47 55.8**	**+0.6**
	0.6nm,0.6s,baz=218,slow=5.4,SNR=7.0						
EGMT	**Eagleton**	94.21	38	*e*P	**P**	**19 48 04.6**	**-0.5**
	11nm,0.8s						
ZALV	**Zalesovo Beam**	114.08	320	PKP	**PKiKP**	**19 53 23.5**	**-1.1**
	0.5nm,0.5s,baz=64,slow=4.0,SNR=2.8						
MKAR	**Makanchi Array**	114.47	312	PKP	PKPdf	19 53 24.8	-0.8
	0.6nm,0.6s,baz=115,slow=2.4,SNR=6.6						
KURK	**Kurchatov**	117.43	316	PKP	**PKPdf**	**19 53 30.2**	**-0.9**
KURBB	**Kurchatov Arra**	117.48	316	PKP	**PKPdf**	**19 53 30.2**	**-1.0**
	0.6nm,0.5s,baz=121,slow=1.9,SNR=6.5						
BVAR	**Borovoye Array**	122.61	318	PKP	**PKPdf**	**19 53 40.0**	**-1.1**
	1.2nm,0.5s,baz=62,slow=3.2,SNR=8.5						
ARU	**Arti**	128.93	324	PKP	**PKPdf**	**19 53 53.3**	**+0.3**
	2.2nm,0.5s,baz=225,slow=0.2,SNR=6.4						
AKTO	**Aktyubinsk**	130.53	316	PKP	**PKPdf**	**19 53 55.6**	**-0.6**
	0.9nm,0.6s,baz=332,slow=2.9,SNR=3.9						
ARCES	**ARCESS Array B**	133.07	349	PKP	**PKPdf**	**19 54 01.4**	**+0.9**
	0.7nm,0.5s,baz=350,slow=3.7,SNR=5.3						
FINES	**FINESS Array B**	139.89	343	PKP	**PKPdf**	**19 54 13.0**	**-0.2**
	1.6nm,0.8s,baz=67,slow=5.0,SNR=5.4						
NB2	**NORSAR Subarra**	143.13	353	PKP	PKPbc	19 54 16.5	+0.1
	comp=Z,0.8nm,0.7s,baz=17,slow=2.6						
HFS	**Hagfors**	143.69	351	PKP	PKPbc	19 54 17.4	-0.5
	comp=Z,3.3nm,0.4s,baz=82,slow=3.3,SNR=39						
AKASG	**Malin Array Be**	146.89	329	PKPbc	**PKPdf**	**19 54 25.8**	**-0.1**
	comp=Z,3.5nm,0.4s,baz=42,slow=4.5,SNR=14						
EKA	**Eskdalemuir Ar**	149.01	7	PKPbc	**PKPbc**	**19 54 33.4**	**0.0**
	comp=Z,1.7nm,0.7s,baz=0.6,slow=4.6,SNR=5.0						
ASF	**Jabal al Asfar**	149.10	292	PKPbc	**PKPbc**	**19 54 35.6**	**+1.0**
	comp=Z,2.2nm,0.7s,baz=79,slow=5.2,SNR=4.3						
BRTR	**Keskin Array B**	149.98	308	PKPbc	**PKPbc**	**19 54 36.2**	**-0.3**
	comp=Z,1.6nm,0.8s,baz=155,slow=4.7,SNR=6.9						
MMAI	**Mount Meron Ar**	150.26	294	PKPbc	**PKPbc**	**19 54 38.1**	**+0.8**
	comp=Z,2.1nm,0.4s,baz=75,slow=7.9,SNR=7.8						
CLL	**Collm**	152.20	346	*e*PKPbc	**PKPbc**	**19 54 41.0**	**-0.1**
	comp=Z,4.0nm,0.9s						
CLL				*i* PKPab	**PKPab**	**19 54 48.3**	**-2.8**
	comp=Z,10.0nm,0.9s						
CLL				LmV		21 43 00.0	
	comp=Z,100nm,19.1s						
BRG	**Berggiesshubel**	152.39	345	*e*PKP	**PKPbc**	**19 54 42.1**	**+0.5**
	comp=Z,4.5nm,1.2s						
BRG				*e*		19 54 49.1	
	comp=Z,4.1nm,0.9s						
GERES	**GERESS Array B**	154.32	343	PKPbc	**PKPbc**	**19 54 44.4**	**-1.6**
	comp=Z,0.2nm,0.4s,baz=3.8,slow=5.9,SNR=2.7						

PDG ***18*** *19:37:12.3±0.2, 34°.19N×25°.39E, h13^{km}±4^{km}, ML4.8/12, Error ellipse: s-maj=10.5km s-min=7.1km az=90.0*

NEIC ***18*** *19:37:16.9±0.2, 34°.13N×25°.20E, h10^{km}, mb4.9/88, ML4.5(THE), Error ellipse: s-maj=4.0km s-min=3.1km az=15.0*

ISCJB ***18*** *19:37:16.9±0.4, 34°.14N±0°.02×25°.29E±0°.02, h25^{km}±3^{km}, mb4.8/142, MS3.9/22, Error ellipse: s-maj=2.8km s-min=1.9km az=25.2*

ISK ***18*** *19:37:17.9, 34°.13N×25°.14E, h34^{km}±1^{km}, ML4.4/18*

BJI ***18*** *19:37:17.5, 34°.22N×24°.94E, h38^{km}, mb4.8/41, mB4.9/31, Ms4.8/11, Ms7 4.5/4*

MOS ***18*** *19:37:17.5±1.2, 34°.23N×25°.19E, h24^{km}, mb5.0/51, Error ellipse: s-maj=5.5km s-min=2.8km az=88.9*

HLW ***18*** *19:37:18.0, 34°.34N×25°.44E, h27^{km}±13^{km}, Md4.7*

ATH ***18*** *19:37:18.3, 34°.12N×25°.21E, h27^{km}±3^{km}, ML4.4/7, Error ellipse: s-maj=6.0km s-min=1.9km az=355.0*

CSEM ***18*** *19:37:19.5±0.1, 34°.15N×25°.25E, h30^{km}, mb4.9/93, Error ellipse: s-maj=3.0km s-min=2.0km az=25.0*

THE ***18*** *19:37:21.7, 34°.29N×25°.25E, h11^{km}±2^{km}, ML4.5/3, Error ellipse: s-maj=2.5km s-min=1.1km az=95.0*

IDC ***18*** *19:37:21.4±1.2, 34°.23N×25°.19E, h43^{km}±10^{km}, mb4.4/32, mb1 4.5/43, mb1mx4.4/64, mbtmp4.6/43, ML4.1/8, MS3.8/25, Ms1 3.8/25, ms1mx3.6/57, Error ellipse: s-maj=10.5km s-min=9.4km az=152.0*

GII ***18*** *19:37:25.0±0.7, 34°.06N×25°.82E, h40^{km}, mb4.6/6, MD4.5/6*

DDA ***18*** *19:37:25.6, 34°.24N×25°.22E, h12^{km}, Ml4.5*

NIC ***18*** *19:37:26.2±0.3, 34°.65N×25°.87E, h70^{km}, mb4.8, ML4.4*

TIR ***18*** *19:38:15.9, 37°.33N×21°.95E, h6^{km}, Md4.5/4*

ISC 18 19:37:19.6±0.5, 34°.20N±0°.03×25°.28E±0°.02, h32^{km}±3^{km}, h32^{km}:pP-P, n1161, σ1^{s}.57/1256, mb4.9/145, MS3.9/23, 34C-26D, Crete

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIVA	**Sivas**	0.90	334	P	**Pb**	**19 37 36.9**	**+0.1**
SIVA				S	**Sn**	**19 37 51.5**	**+3.5**
SIVA				AML	AML	19 37 59.3	
SIVA				AML	AML	19 37 59.6	
SIVA	**Sivas**	0.90	334	P	**Pb**	**19 37 36.8**	**+0.1**
SIVA				S	**Sn**	**19 37 50.1**	**+2.1**
SIVA	**Sivas**	0.90	334	P	**Pb**	**19 37 36.8**	**+0.1**
SIVA				S	**Sb**	**19 37 48.2**	**-0.2**
SIVA	**Sivas**	0.90	334	P	**Pb**	**19 37 36.9**	**+0.1**
SIVA				S	**Sn**	**19 37 50.1**	**+2.1**
TMBK	**Timbaki Herakl**	0.96	334	P	**Pb**	**19 37 38.4**	**+0.6**
TMBK				S	**Sb**	**19 37 52.1**	**+1.9**
TMBK	**Timbaki Herakl**	0.96	334	P	**Pb**	**19 37 38.4**	**+0.6**
TMBK				S	**Sb**	**19 37 52.1**	**+1.9**
LAST	**Lasithi**	0.97	9	P	**Pb**	**19 37 38.0**	**+0.1**
LAST				S	**Sb**	**19 37 53.1**	**+2.7**
LAST				AML	AML	19 38 00.4	
	comp=N,31426µm,0.6s						
LAST				AML	AML	19 38 01.7	
	comp=E,52727µm,0.8s						
LAST	**Lasithi**	0.97	9	P	**Pb**	**19 37 38.7**	**+0.8**
LAST				S	**Sb**	**19 37 52.6**	**+2.2**
LAST	**Lasithi**	0.97	9	P	**Pb**	**19 37 38.5**	**+0.6**
LAST				S	**Sn**	**19 37 50.4**	**+0.6**
LAST	**Lasithi**	0.97	9	P	**Pb**	**19 37 38.5**	**+0.6**
LAST				S	**Sb**	**19 37 52.6**	**+2.2**
NPS	**Neapolis**	1.09	14	P	**Pb**	**19 37 40.8**	**+0.8**
NPS				AML	AML	19 38 10.9	
	comp=N,22974µm,0.7s						
NPS				AML	AML	19 38 10.9	
	comp=E,43680µm,0.8s						
NPS	**Neapolis**	1.09	14	P	**Pb**	**19 37 40.7**	**+0.8**
NPS	**Neapolis**	1.09	14	P	**Pb**	**19 37 40.7**	**+0.8**
NPS	**Neapolis**	1.09	14	P	**Pb**	**19 37 40.7**	**+0.8**
NPS	**Neapolis**	1.09	14	P	**Pb**	**19 37 40.7**	**+0.8**
KSTL	**Kastelli Herak**	1.11	351	P	**Pn**	**19 37 39.2**	**+0.3**
KSTL	**Kastelli Herak**	1.11	351	P	**Pn**	**19 37 39.2**	**+0.3**
IACM	**Heraklion**	1.11	351	P	**Pb**	**19 37 42.1**	**+1.8**
IACM	**Heraklion**	1.11	351	P	**Pb**	**19 37 41.1**	**+0.8**
IACM	**Heraklion**	1.11	351	P	**Pb**	**19 37 41.1**	**+0.8**
IDI	**Anoyia**	1.13	343	P	**Pb**	**19 37 40.7**	**+0.2**
	comp=E,340nm,0.3s,baz=173,slow=16,SNR=527						
IDI				S	**Sn**	**19 37 54.9**	**+1.1**
	comp=E,470nm,0.3s,baz=105,slow=20,SNR=15						

IDI				LR	LR	19 38 26.7	
	comp=E,5µm,18.4s,baz=99,slow=60						
IDI	Anoyia	1.13	343	⇑iP	Pb	19 37 40.8	+0.2
IDI				S	Sb	19 37 55.8	+0.8
GVD	Gavdhos	1.17	303	P	Pb	19 37 41.8	+0.5
GVD	Gavdhos	1.17	303	P	Pb	19 37 41.1	-0.2
GVD				S	Sb	19 37 56.6	+0.4
GVD	Gavdhos	1.17	303	P	Pb	19 37 41.1	-0.2
GVD	Gavdhos	1.17	303	P	Pb	19 37 41.1	-0.2
GVD				S	Sb	19 37 56.6	+0.4
GVDS	Gavdos	1.17	303	P	Pb	19 37 41.3	0.0
GVDS				S	Sb	19 37 57.6	+1.4
GVDS	Gavdos	1.17	303	P	Pb	19 37 41.3	0.0
GVDS				S	Sb	19 37 57.6	+1.4
ZKR	Zakros	1.19	40	P	Pb	19 37 43.4	+1.8
ZKR				AML	AML	19 38 14.3	
	comp=E,40020µm,0.9s						
ZKR				AML	AML	19 38 15.1	
	comp=N,11308µm,0.5s						
ZKR	Zakros	1.19	40	P	Pb	19 37 42.7	+1.1
ZKR	Zakros	1.19	40	P	Pb	19 37 42.7	+1.1
ZKR	Zakros	1.19	40	P	Pb	19 37 42.7	+1.1
PRNS	Prines Rethymn	1.32	331	P	Pb	19 37 43.8	0.0
PRNS				S	Sb	19 38 01.5	+1.0
PRNS	Prines Rethymn	1.32	331	P	Pb	19 37 43.8	0.0
PRNS				S	Sb	19 38 01.5	+1.0
VAM	Vamos	1.50	324	P	Pb	19 37 45.9	-0.8
VAM				AML	AML	19 38 17.9	
	comp=E,24625µm,0.6s						
VAM				AML	AML	19 38 32.7	
	comp=N,19575µm,0.8s						
VAM	Vamos	1.50	324	P	Pb	19 37 46.0	-0.8
VAM	Vamos	1.50	324	P	Pb	19 37 45.6	-1.1
VAM	Vamos	1.50	324	P	Pb	19 37 46.0	-0.8
VAM	Vamos	1.50	324	P	Pb	19 37 45.6	-1.1
IMMV	Iera Moni Meta	1.65	320	P	Pb	19 37 48.1	-1.3
IMMV	Iera Moni Meta	1.65	320	P	Pb	19 37 48.0	-1.3
IMMV	Iera Moni Meta	1.65	320	P	Pb	19 37 48.0	-1.3
CHAN	Chania	1.66	322	P	Pb	19 37 48.4	-1.1
CHAN	Chania	1.66	322	P	Pb	19 37 48.4	-1.1
KARP	Karpathos	2.04	49	P	Pb	19 37 55.6	-0.5
KARP				S	Sb	19 38 21.7	+0.6
KARP				AML	AML	19 38 22.6	
	comp=E,7896µm,0.6s						
KARP				AML	AML	19 38 22.7	
	comp=N,8743µm,0.6s						
KARP	Karpathos	2.04	49	ePn	Pb	19 37 54.9	-1.1
KARP				P	Pb	19 37 55.2	-0.8
KARP				S	Sb	19 38 21.1	0.0
KARP	Karpathos	2.04	49	P	Pb	19 37 55.2	-0.8
KARP				S	Sn	19 38 19.1	+2.8
KARP	Karpathos	2.04	49	ePn	Pb	19 37 54.9	-1.1
KARP				S	Sn	19 38 19.1	+2.8
THR6	Thira Island,	2.15	2	P	Pn	19 37 54.1	+0.9
THR6	Thira Island,	2.15	2	P	Pn	19 37 54.1	+0.9
THR6	Thira Island,	2.15	2	P	Pn	19 37 54.1	+0.9
SAP1	Santorini-Akro	2.15	2	P	Pb	19 37 56.1	-1.8
SANT	Santorini	2.17	4	PN	Pn	19 37 54.0	+0.5
SANT				SN	Sn	19 38 20.2	+0.9
SANT	Santorini	2.17	4	P	Pn	19 37 54.7	+1.2
SANT	Santorini	2.17	4	ePn	Pn	19 37 54.0	+0.5
SANT	Santorini	2.17	4	ePn	Pn	19 37 54.0	+0.5
SANT	Santorini	2.17	4	P	Pn	19 37 55.4	+1.9
SANT				eSn	Sn	19 38 20.2	+0.9
THT1	Athinios (Pele	2.18	3	P	Pn	19 37 54.7	+1.1
THT1	Athinios (Pele	2.18	3	P	Pn	19 37 54.7	+1.1
THR3	Thira Island,	2.20	2	P	Pn	19 37 55.5	+1.6
THR3	Thira Island,	2.20	2	P	Pn	19 37 55.5	+1.6
THR3	Thira Island,	2.20	2	P	Pn	19 37 55.5	+1.6
SAP2K	Karterados	2.21	3	P	Pn	19 37 55.3	+1.3
THR5	Thira Island,	2.21	1	P	Pn	19 37 55.3	+1.3
THR5	Thira Island,	2.21	1	P	Pn	19 37 55.3	+1.3
THR2	Thira island,	2.24	3	P	Pn	19 37 55.5	+1.0
THR2	Thira island,	2.24	3	P	Pn	19 37 55.5	+1.0
THR2	Thira island,	2.24	3	P	Pn	19 37 55.5	+1.0
ANKY	Antikythira Is	2.32	316	P	Pn	19 37 57.0	+1.4
ANKY	Antikythira Is	2.32	316	P	Pn	19 37 57.4	+1.8
ANKY	Antikythira Is	2.32	316	P	Pn	19 37 57.4	+1.8
ANKY	Antikythira Is	2.32	316	P	Pn	19 37 57.2	+1.6
IOSP	Ios island	2.51	0	P	Pn	19 37 58.8	+0.6
IOSP	Ios island	2.51	0	P	Pn	19 37 59.9	+1.7
MHLO	Agia Marina, M	2.58	344	P	Pn	19 37 59.8	+0.6
MHLO	Agia Marina, M	2.58	344	P	Pn	19 37 59.8	+0.6
AMGA	Amorgos Island	2.67	11	P	Pn	19 38 01.7	+1.3
AMGA	Amorgos Island	2.67	11	P	Pn	19 38 01.7	+1.3
SLUM	Salum	2.71	181	P	Pn	19 38 01.6	+0.7
	baz=184						
SLUM				S	Sn	19 38 32.9	+0.4
	baz=184						
SLUM	Salum	2.71	181	P	Pn	19 38 01.6	+0.7
SLUM				S	Sn	19 38 32.9	+0.4
KYTH	Kithira	2.75	319	P	Pn	19 38 02.9	+1.4
KYTH	Kithira	2.75	319	P	Pn	19 38 03.1	+1.6
KYTH	Kithira	2.75	319	P	Pn	19 38 03.1	+1.6
KTHR	Kythira	2.77	318	P	Pn	19 38 03.5	+1.7
KTHR	Kythira	2.77	318	P	Pn	19 38 03.5	+1.7
APE	Apeiranthos	2.87	4	PN	Pn	19 38 03.8	+0.7
APE				SN	Sn	19 38 36.9	+0.4
APE	Apeiranthos	2.87	4	⇓iP	Pn	19 38 04.7	+1.6
APE	Apeiranthos	2.87	4	P	Pn	19 38 04.3	+1.2
APE	Apeiranthos	2.87	4	P	Pn	19 38 04.3	+1.2
APE	Apeiranthos	2.87	4	ceP	Pn	19 38 04.7	+1.6
APE	Apeiranthos	2.87	4	ePn	Pn	19 38 03.8	+0.7
APE	Apeiranthos	2.87	4	P	Pn	19 38 04.3	+1.2
APE				eSn	Sn	19 38 36.9	+0.4
ARG	Arkhangelos	3.07	48	PN	Pn	19 38 08.0	+2.1
ARG	Arkhangelos	3.07	48	P	Pn	19 38 08.6	+2.6
ARG				AML	AML	19 38 46.7	
	comp=E,3699µm,0.3s						
ARG				AML	AML	19 38 50.5	
	comp=N,2079µm,0.7s						
ARG	Arkhangelos	3.07	48	P	Pn	19 38 08.7	+2.8
ARG	Arkhangelos	3.07	48	P	Pn	19 38 08.7	+2.8
ARG	Arkhangelos	3.07	48	P	Pn	19 38 08.7	+2.8
ARG	Arkhangelos	3.07	48	ePn	Pn	19 38 08.0	+2.1
ARG	Arkhangelos	3.07	48	P	Pn	19 38 08.7	+2.8
DAT	Datca	3.14	36	PN	Pn	19 38 08.3	+1.4
DAT	Datca	3.14	36	i P	Pn	19 38 07.6	+0.7
DAT				i S	Sn	19 38 43.0	-0.4
DAT	Datca	3.14	36	P	Pn	19 38 07.6	+0.7
DAT	Datca	3.14	36	ePn	Pn	19 38 08.3	+1.4
DAT				S	Sn	19 38 43.0	-0.4
VLI	Veliai	3.16	323	P	Pn	19 38 06.5	-0.5
VLI	Veliai	3.16	323	P	Pn	19 38 07.6	+0.5
VLI	Veliai	3.16	323	P	Pn	19 38 07.6	+0.5
VLI	Veliai	3.16	323	P	Pn	19 38 07.9	+0.8
DATC	Datca-Mugla	3.20	37	PN	Pn	19 38 09.4	+1.7
DATC	Datca-Mugla	3.20	37	ePn	Pn	19 38 09.4	+1.7
BODT	Bodrum	3.29	29	PN	Pn	19 38 10.4	+1.4
BODT	Bodrum	3.29	29	P	Pn	19 38 10.7	+1.7
BODT	Bodrum	3.29	29	P	Pn	19 38 10.7	+1.7
BODT	Bodrum	3.29	29	ePn	Pn	19 38 10.4	+1.4
BODT	Bodrum	3.29	29	P	Pn	19 38 10.7	+1.7
MRSB	Marmaris-Mugla	3.45	43	PN	Pn	19 38 13.0	+1.8
MRSB	Marmaris-Mugla	3.45	43	ePn	Pn	19 38 13.0	+1.8
DYR	Agios Nikonas	3.51	318	P	Pn	19 38 12.8	+0.9
DYR	Agios Nikonas	3.51	318	P	Pn	19 38 12.8	+0.9
KRND	KRANIDI	3.62	332	P	Pn	19 38 13.7	+0.3
KRND	KRANIDI	3.62	332	P	Pn	19 38 13.7	+0.3
DID	Didima	3.69	334	P	Pn	19 38 14.4	0.0
DID	Didima	3.69	334	P	Pn	19 38 14.4	0.0
DID	Didima	3.69	334	P	Pn	19 38 14.4	0.0
MLSB	Milas	3.69	33	PN	Pn	19 38 16.2	+1.8
MLSB	Milas	3.69	33	ePn	Pn	19 38 16.2	+1.8
SMG	Samos	3.72	19	P	Pn	19 38 16.1	+1.3
SMG	Samos	3.72	19	P	Pn	19 38 16.1	+1.3
SMG	Samos	3.72	19	P	Pn	19 38 16.1	+1.3
DALY	Dalyan (Mu˜la	3.79	46	PN	Pn	19 38 17.7	+2.0
DALY	Dalyan (Mu˜la	3.79	46	i P	Pn	19 38 18.3	+2.6
DALY				i S	Sn	19 38 59.6	+0.4
DALY	Dalyan (Mu˜la	3.79	46	ePn	Pn	19 38 17.7	+2.0
DALY	Dalyan (Mu˜la	3.79	46	P	Pn	19 38 18.3	+2.6
DALY				S	Sn	19 38 59.6	+0.4
TURN	Turunc	3.80	45	PN	Pn	19 38 13.9	-1.9
TURN	Turunc	3.80	45	i P	Pn	19 38 12.8	-3.1
TURN				i S	Sn	19 38 50.8	-8.6
TURN	Turunc	3.80	45	P	Pn	19 38 12.8	-3.1
TURN	Turunc	3.80	45	ePn	Pn	19 38 13.9	-1.9
YER	Yerkesik	3.81	39	PN	Pn	19 38 18.0	+1.9
YER	Yerkesik	3.81	39	P	Pn	19 38 18.4	+2.3
YER	Yerkesik	3.81	39	P	Pn	19 38 18.4	+2.3
YER	Yerkesik	3.81	39	P	Pn	19 38 18.4	+2.3
YER	Yerkesik	3.81	39	ePn	Pn	19 38 18.0	+1.9
YER	Yerkesik	3.81	39	P	Pn	19 38 18.4	+2.3
VLY	Voula,Athens	3.83	342	P	Pn	19 38 17.3	+0.9
VLY	Voula,Athens	3.83	342	P	Pn	19 38 17.3	+0.9
VLY	Voula,Athens	3.83	342	P	Pn	19 38 17.3	+0.9
FETY	Fethiye	3.94	51	PN	Pn	19 38 19.6	+1.8
FETY	Fethiye	3.94	51	P	Pn	19 38 19.1	+1.3
FETY	Fethiye	3.94	51	P	Pn	19 38 19.1	+1.3
FETY	Fethiye	3.94	51	P	Pn	19 38 19.1	+1.3
FETY	Fethiye	3.94	51	ePn	Pn	19 38 19.6	+1.8
VLX	Vlachokerasia	3.94	324	P	Pn	19 38 19.0	+1.0
VLX	Vlachokerasia	3.94	324	P	Pn	19 38 19.0	+1.0
VLX	Vlachokerasia	3.94	324	P	Pn	19 38 19.0	+1.0
ATHU	Athens Univers	3.95	343	P	Pn	19 38 18.5	+0.6
ATHU	Athens Univers	3.95	343	P	Pn	19 38 18.5	+0.6
ATHU	Athens Univers	3.95	343	P	Pn	19 38 18.5	+0.6
ATH	Athens Observa	3.97	342	P	Pn	19 38 19.1	+0.9
ATH	Athens Observa	3.97	342	P	Pn	19 38 19.1	+0.9
ATH	Athens Observa	3.97	342	P	Pn	19 38 19.1	+0.9
ATH	Athens Observa	3.97	342	P	Pn	19 38 19.1	+0.9
KSL	Kastellorizon	4.02	60	P	Pn	19 38 20.5	+1.6
KSL	Kastellorizon	4.02	60	P	Pn	19 38 20.5	+1.6
ITM	Ithomi	4.04	318	ePn	Pn	19 38 20.2	+1.0
ITM	Ithomi	4.04	318	P	Pn	19 38 19.3	+0.1
ITM	Ithomi	4.04	318	P	Pn	19 38 19.3	+0.1
ITM	Ithomi	4.04	318	ePn	Pn	19 38 20.2	+1.0
AYDN	Tasoluk	4.04	31	i P	Pn	19 38 21.3	+2.0
AYDN				i S	Sn	19 39 04.5	-1.1
AYDN	Tasoluk	4.04	31	P	Pn	19 38 21.3	+2.0
AYDN				S	Sn	19 39 04.5	-1.1
AKAS	Kas	4.08	59	PN	Pn	19 38 21.4	+1.6
AKAS	Kas	4.08	59	i P	Pn	19 38 20.9	+1.1
AKAS				i S	Sn	19 38 57.5	-9.0
AKAS	Kas	4.08	59	P	Pn	19 38 20.9	+1.1
AKAS	Kas	4.08	59	ePn	Pn	19 38 21.4	+1.6
TRIP	Tripoli	4.12	324	P	Pn	19 38 21.8	+1.4
TRIP	Tripoli	4.12	324	P	Pn	19 38 21.8	+1.4
CHOS	Chios island	4.22	8	PN	Pn	19 38 23.0	+1.3
CHOS	Chios island	4.22	8	P	Pn	19 38 23.1	+1.3
CHOS	Chios island	4.22	8	P	Pn	19 38 23.1	+1.3
CHOS	Chios island	4.22	8	ePn	Pn	19 38 23.0	+1.3
LTK	Loutraki	4.25	334	P	Pn	19 38 22.4	+0.3
LTK	Loutraki	4.25	334	P	Pn	19 38 22.4	+0.3
LTK	Loutraki	4.25	334	P	Pn	19 38 22.4	+0.3
URLA	Izmir	4.28	14	PN	Pn	19 38 24.0	+1.5
URLA	Izmir	4.28	14	ePn	Pn	19 38 24.0	+1.5
AYDB	Zeytinkoy-Aydi	4.29	29	PN	Pn	19 38 24.8	+2.0
AYDB	Zeytinkoy-Aydi	4.29	29	ePn	Pn	19 38 24.8	+2.0
THAL	Thalero	4.37	332	P	Pn	19 38 24.7	+0.9
THAL	Thalero	4.37	332	P	Pn	19 38 24.7	+0.9
TAVA	DENIZLI_Tavas	4.39	41	i P	Pn	19 38 24.4	+0.3
TAVA				i S	Sn	19 39 07.3	-6.9
TAVA	DENIZLI_Tavas	4.39	41	P	Pn	19 38 24.4	+0.3
BLCB	Balcova	4.41	18	PN	Pn	19 38 26.2	+2.0
BLCB	Balcova	4.41	18	ePn	Pn	19 38 26.2	+2.0
GUR	Goura	4.42	328	P	Pn	19 38 25.0	+0.5
GUR	Goura	4.42	328	P	Pn	19 38 25.0	+0.5
GUR	Goura	4.42	328	P	Pn	19 38 25.0	+0.5
PROD	Prodromos	4.48	335	P	Pn	19 38 25.2	-0.1
PROD	Prodromos	4.48	335	P	Pn	19 38 25.2	-0.1
ELL	Elmali	4.55	55	PN	Pn	19 38 28.5	+2.2
ELL	Elmali	4.55	55	ePn	Pn	19 38 28.5	+2.2
KLV	Kalavryta, Ach	4.59	327	P	Pn	19 38 27.0	+0.1
KLV	Kalavryta, Ach	4.59	327	P	Pn	19 38 27.0	+0.1
KLV	Kalavryta, Ach	4.59	327	P	Pn	19 38 27.0	+0.1
GOLH	Golhisar	4.61	48	i P	Pn	19 38 29.0	+1.8
GOLH	Golhisar	4.61	48	P	Pn	19 38 29.0	+1.8
DENT	Denizli	4.67	40	PN	Pn	19 38 30.2	+2.3
DENT	Denizli	4.67	40	ePn	Pn	19 38 30.2	+2.3
TRAZ	Trapeza	4.67	329	P	Pn	19 38 28.2	+0.3
TRAZ	Trapeza	4.67	329	P	Pn	19 38 28.2	+0.3
DRO	Drossia	4.73	323	P	Pn	19 38 29.9	+1.2
DRO	Drossia	4.73	323	P	Pn	19 38 29.9	+1.2
DSF	Desfina	4.75	333	P	Pn	19 38 29.2	+0.2
DSF	Desfina	4.75	333	P	Pn	19 38 29.2	+0.2
DSF	Desfina	4.75	333	P	Pn	19 38 29.2	+0.2
LKR	Lokris	4.80	338	P	Pn	19 38 29.9	+0.2
LKR	Lokris	4.80	338	P	Pn	19 38 29.9	+0.2
LKR	Lokris	4.80	338	P	Pn	19 38 29.9	+0.2
SWA2		4.95	178	P	Pn	19 38 32.1	+0.4
	baz=179						
SWA2		4.95	178	P	Pn	19 38 32.1	+0.4
SMIA	Simia	4.96	341	P	Pn	19 38 33.1	+1.3
SMIA	Simia	4.96	341	P	Pn	19 38 33.1	+1.3
KORT	Korkueli	4.98	54	PN	Pn	19 38 34.9	+2.6
KORT	Korkueli	4.98	54	i P	Pn	19 38 33.8	+1.5
KORT				i S	Sn	19 39 28.6	-0.3
KORT	Korkueli	4.98	54	P	Pn	19 38 33.8	+1.5
KORT	Korkueli	4.98	54	ePn	Pn	19 38 34.9	+2.6
KORT				S	Sn	19 39 28.6	-0.3
SIGR	SIGRI	5.02	5	PN	Pn	19 38 34.2	+1.6
SIGR	SIGRI	5.02	5	P	Pn	19 38 34.0	+1.4
SIGR	SIGRI	5.02	5	P	Pn	19 38 34.0	+1.4
SIGR	SIGRI	5.02	5	P	Pn	19 38 34.0	+1.4
MANT	Manisa	5.03	31	i P	Pn	19 38 34.2	+1.2
MANT				i S	Sn	19 39 23.9	-6.2
MANT	Manisa	5.03	31	ePn	Pn	19 38 35.6	+2.6
MANT	Manisa	5.03	31	P	Pn	19 38 34.2	+1.2
MANT	Manisa	5.03	31	ePn	Pn	19 38 35.6	+2.6
DKL	Dikili	5.03	15	PN	Pn	19 38 34.1	+1.3
DKL	Dikili	5.03	15	ePn	Pn	19 38 34.1	+1.3
AOS	Alonnisos	5.08	348	P	Pn	19 38 34.4	+0.9
AOS	Alonnisos	5.08	348	P	Pn	19 38 34.4	+0.9
AOS	Alonnisos	5.08	348	P	Pn	19 38 34.4	+0.9
KULA	Kula-Manisa	5.09	31	PN	Pn	19 38 36.1	+2.4
KULA	Kula-Manisa	5.09	31	ePn	Pn	19 38 36.1	+2.4
PRK	Paraskevi	5.09	9	P	Pn	19 38 35.0	+1.3
PRK	Paraskevi	5.09	9	P	Pn	19 38 35.0	+1.3
PRK	Paraskevi	5.09	9	P	Pn	19 38 35.0	+1.3
PRK	Paraskevi	5.09	9	P	Pn	19 38 35.0	+1.3
ANX	Ano Chora	5.15	329	P	Pn	19 38 35.0	+0.4
ANX	Ano Chora	5.15	329	P	Pn	19 38 35.0	+0.4
SKIA	Skiathos	5.16	344	P	Pn	19 38 35.7	+1.1
SKIA	Skiathos	5.16	344	P	Pn	19 38 35.7	+1.1
BRDR	BURDUR-Merkez	5.21	47	i P	Pn	19 38 36.5	+1.1
BRDR				i S	Sn	19 39 13.0	-21
BRDR	BURDUR-Merkez	5.21	47	P	Pn	19 38 36.5	+1.1
NEO	Neokhori	5.35	343	P	Pn	19 38 38.2	+0.9
NEO	Neokhori	5.35	343	P	Pn	19 38 38.2	+0.9
NEO	Neokhori	5.35	343	P	Pn	19 38 38.2	+0.9
AGG	Agios Georgios	5.36	335	ePn	Pn	19 38 38.5	+1.1
AGG	Agios Georgios	5.36	335	P	Pn	19 38 38.0	+0.6
AGG	Agios Georgios	5.36	335	eP	Pn	19 38 38.5	+1.1
AGG	Agios Georgios	5.36	335	eP	Pn	19 38 38.5	+1.1
XOR	Xorichti	5.42	343	P	Pn	19 38 38.8	+0.6
XOR	Xorichti	5.42	343	P	Pn	19 38 38.8	+0.6
XOR	Xorichti	5.42	343	P	Pn	19 38 38.8	+0.6
EVR	Evrytania	5.47	330	P	Pn	19 38 39.6	+0.6
EVR	Evrytania	5.47	330	P	Pn	19 38 39.6	+0.6
EVR	Evrytania	5.47	330	P	Pn	19 38 39.6	+0.6
FYTO	Fytoko, Volos	5.52	341	P	Pn	19 38 40.3	+0.7
FYTO	Fytoko, Volos	5.52	341	P	Pn	19 38 40.3	+0.7
FYTO	Fytoko, Volos	5.52	341	P	Pn	19 38 40.3	+0.7
DEMI	Demirci	5.56	29	i P	Pn	19 38 41.2	+1.0
DEMI	Demirci	5.56	29	P	Pn	19 38 41.2	+1.0
ISP	Isparta	5.57	48	PN	Pn	19 38 43.1	+2.7
ISP	Isparta	5.57	48	⇓iP	Pn	19 38 42.2	+1.8
ISP	Isparta	5.57	48	S	Sn	19 39 44.4	+1.0
ISP	Isparta	5.57	48	ePn	Pn	19 38 41.7	+1.3
ISP	Isparta	5.57	48	P	Pn	19 38 42.0	+1.7
ISP	Isparta	5.57	48	Pn	Pn	19 38 42.5	+2.1
ISP	Isparta	5.57	48	i P	Pn	19 38 42.1	+1.7
ISP	Isparta	5.57	48	ePn	Pn	19 38 41.7	+1.3
ISP	Isparta	5.57	48	P	Pn	19 38 42.0	+1.7
SUTC	Sutluce-Ispart	5.67	53	PN	Pn	19 38 44.7	+2.9
SUTC	Sutluce-Ispart	5.67	53	ePn	Pn	19 38 44.7	+2.9
SIMA	Simav-Kutahya	5.71	30	PN	Pn	19 38 44.6	+2.4
SIMA	Simav-Kutahya	5.71	30	ePn	Pn	19 38 44.6	+2.4
EVGI	Lefkada island	5.77	321	P	Pn	19 38 44.5	+1.5
EVGI	Lefkada island	5.77	321	P	Pn	19 38 44.5	+1.5
KEPZ	Antalya-Kepez	5.81	61	i P	Pn	19 38 42.1	-1.5
KEPZ				i S	Sn	19 39 43.0	-6.2
BAGO	Egridir - ISPA	5.84	48	i P	Pn	19 38 40.3	-3.7
BAGO				i S	Sn	19 39 46.3	-3.7
PAIG	Paliouri	5.85	348	P	Pn	19 38 45.3	+1.2
PAIG	Paliouri	5.85	348	P	Pn	19 38 45.3	+1.2
PAIG	Paliouri	5.85	348	P	Pn	19 38 45.3	+1.2
PAIG	Paliouri	5.85	348	P	Pn	19 38 45.3	+1.2
PPCY	Paphos	5.87	81	P	Pn	19 38 44.9	+0.6
	baz=269						
PPCY	Paphos	5.87	81	P	Pn	19 38 44.9	+0.6
AKMC	Akamas	5.87	80	P	Pn	19 38 44.6	+0.2
	baz=267						
AKMC	Akamas	5.87	80	P	Pn	19 38 44.6	+0.2
DSL	Palaion Diasel	5.96	327	P	Pn	19 38 45.8	+0.2
DSL	Palaion Diasel	5.96	327	P	Pn	19 38 45.8	+0.2
DSL	Palaion Diasel	5.96	327	P	Pn	19 38 45.8	+0.2
ALFC	Alefka	6.10	79	P	Pn	19 38 47.3	-0.3
	baz=266						
ALFC	Alefka	6.10	79	P	Pn	19 38 47.3	-0.3
GAZI	Gazipasa	6.10	69	i P	Pn	19 38 46.8	-0.8
GAZI				i S	Sn	19 39 48.8	-7.5
GAZI	Gazipasa	6.10	69	P	Pn	19 38 46.8	-0.8
TVSB	Tavsanli	6.21	31	PN	Pn	19 38 51.3	+2.1
TVSB	Tavsanli	6.21	31	ePn	Pn	19 38 51.3	+2.1
LIT	Litokhoron	6.29	340	ePn	Pn	19 38 51.1	+0.9
LIT	Litokhoron	6.29	340	P	Pn	19 38 50.3	+0.1
LIT	Litokhoron	6.29	340	eP	Pn	19 38 51.1	+0.9
LIT	Litokhoron	6.29	340	eP	Pn	19 38 51.1	+0.9
SZAC	Souni	6.30	83	P	Pn	19 38 51.0	+0.7
	baz=270						
SZAC				S	Sn	19 39 56.5	-4.7
SZAC	Souni	6.30	83	P	Pn	19 38 51.0	+0.7
LEF	Lefka	6.33	80	P	Pn	19 38 50.6	-0.1
DOGA	KONYA_Doganhis	6.47	51	i P	Pn	19 38 54.9	+2.1
DOGA				i S	Sn	19 39 54.1	-11
DOGA	KONYA_Doganhis	6.47	51	P	Pn	19 38 54.8	+2.1
MAMC	Mammari	6.61	79	P	Pn	19 38 54.9	+0.4
	baz=267						
MAMC	Mammari	6.61	79	P	Pn	19 38 54.9	+0.4
CSS	Mathiatis	6.68	81	ePn	Pn	19 38 55.3	-0.2
CSS	Mathiatis	6.68	81	P	Pn	19 38 55.6	+0.1
CSS	Mathiatis	6.68	81	P	Pn	19 38 55.6	+0.1
	baz=269						
CSS				S	Sn	19 40 06.8	-3.7
CSS	Mathiatis	6.68	81	Pn	Pn	19 38 54.9	-0.6
CSS	Mathiatis	6.68	81	ePn	Pn	19 38 55.3	-0.2
CSS	Mathiatis	6.68	81	P	Pn	19 38 55.6	+0.1
ERMK	Ermenek	6.69	67	i P	Pn	19 38 56.8	+1.0
ERMK				i S	Sn	19 40 02.3	-8.6
ERMK	Ermenek	6.69	67	P	Pn	19 38 56.8	+1.0
ALN	Alexandroupoli	6.71	5	ePn	Pn	19 38 58.2	+2.4
ALN	Alexandroupoli	6.71	5	P	Pn	19 38 57.2	+1.4
ALN	Alexandroupoli	6.71	5	eP	Pn	19 38 58.2	+2.4
ALN	Alexandroupoli	6.71	5	P	Pn	19 38 57.2	+1.4
ALN	Alexandroupoli	6.71	5	ePn	Pn	19 38 58.2	+2.4
SGD	Sagiada	6.74	325	P	Pn	19 38 55.5	-0.8
SGD	Sagiada	6.74	325	P	Pn	19 38 55.5	-0.8
KONT	Konya--Tatoy	6.84	55	i P	Pn	19 38 59.2	+1.6
KONT				i S	Sn	19 40 11.0	-3.5
RDO	Rodhopi	6.93	2	P	Pn	19 39 00.1	+1.2
RDO	Rodhopi	6.93	2	P	Pn	19 39 00.1	+1.2
RDO	Rodhopi	6.93	2	P	Pn	19 39 00.1	+1.2
KOT	Kottamia	7.00	126	P	Pn	19 38 59.3	-0.7
	baz=127						
KOT	Kottamia	7.00	126	P	Pn	19 38 59.3	-0.7
KEK	Kerkira	7.04	323	P	Pn	19 38 58.6	-1.7
KEK	Kerkira	7.04	323	P	Pn	19 38 58.6	-1.7
KEK	Kerkira	7.04	323	P	Pn	19 38 58.6	-1.7
GULN	MERSIN_Gulnar	7.04	71	i P	Pn	19 38 59.5	-1.0
GULN				i S	Sn	19 40 08.3	-11
GULN	MERSIN_Gulnar	7.04	71	P	Pn	19 38 59.5	-1.0
SRN	Sarande	7.07	325	i PN	Pn	19 39 00.5	-0.2
SRN				i SN	Pb	19 39 25.4	+3.9
GRG	Griva	7.12	342	P	Pn	19 39 01.7	+0.2
GRG	Griva	7.12	342	P	Pn	19 39 01.7	+0.2
GRG	Griva	7.12	342	P	Pn	19 39 01.7	+0.2
GRG	Griva	7.12	342	P	Pn	19 39 01.7	+0.2
GLL	Jalalah	7.15	128	P	Pn	19 39 01.4	-0.6
	baz=130						
GLL	Jalalah	7.15	128	P	Pn	19 39 01.4	-0.6
KNT	Kendrikon	7.20	345	P	Pn	19 39 04.1	+1.5
KNT	Kendrikon	7.20	345	P	Pn	19 39 04.1	+1.5
KNT	Kendrikon	7.20	345	P	Pn	19 39 04.1	+1.5
FNA	Florina	7.26	336	ePn	Pn	19 39 03.9	+0.4
FNA	Florina	7.26	336	eP	Pn	19 39 03.9	+0.4
FNA	Florina	7.26	336	eP	Pn	19 39 03.9	+0.4
KBN	Korca	7.34	332	i PN	Pb	19 39 18.4	-7.8
KBN				i SN	Sn	19 39 58.4	-28
VAY	Valandovo	7.42	344	i Pn	Pn	19 39 07.5	+1.8
NBNS	Bani Suef	7.57	136	P	Pn	19 39 07.2	-0.5
	baz=137						
NBNS	Bani Suef	7.57	136	P	Pn	19 39 07.2	-0.5
OHR	Ohrid	7.76	334	i Pn	Pn	19 39 11.3	+1.1
RSH		7.82	112	P	Pn	19 39 09.8	-1.4
	baz=113						
RSH		7.82	112	P	Pn	19 39 09.8	-1.4
KRUS	Krusevo	7.83	337	i Pn	Pn	19 39 12.8	+1.4
STIP	Stip	7.87	343	i Pn	Pn	19 39 11.9	+0.1
BR231	Keskin MP Arra	8.22	45	ePn	Pn	19 39 14.8	-1.9
BR231	Keskin MP Arra	8.22	45	ePn	Pn	19 39 14.8	-1.9
ANTO	Ankara	8.24	45	⇓iP	Pn	19 39 18.6	+1.6
ANTO	Ankara	8.24	45	ePn	Pn	19 39 19.4	+2.4
ANTO	Ankara	8.24	45	eP	Pn	19 39 19.4	+2.4
ANTO	Ankara	8.24	45	eP	Pn	19 39 19.4	+2.4
OFRI	‘Ofer	8.26	98	Pn	Pn	19 39 17.0	-0.3
OFRI	‘Ofer	8.26	98	Pn	Pn	19 39 17.0	-0.3
HNTI	Hanita	8.32	95	Pn	Pn	19 39 17.9	-0.1
HNTI				Sn	Sn	19 40 45.9	-5.1
HNTI	Hanita	8.32	95	Pn	Pn	19 39 17.9	-0.1
KZIT	Kziot	8.37	111	Pn	Pn	19 39 17.1	-1.5
KZIT				Sn	Sn	19 40 46.4	-5.6
KZIT	Kziot	8.37	111	Pn	Pn	19 39 17.1	-1.5
SLTI	Sal’it	8.41	101	Pn	Pn	19 39 18.1	-1.1
SLTI	Sal’it	8.41	101	Pn	Pn	19 39 18.1	-1.1
BLGI	Bet Lehem HaGe	8.41	97	Pn	Pn	19 39 19.2	0.0
BLGI	Bet Lehem HaGe	8.41	97	Pn	Pn	19 39 19.2	0.0
TIP	Timpagrande	8.46	308	⇓iP	Pn	19 39 18.2	-1.7
TIP	Timpagrande	8.46	308	ePn	Pn	19 39 18.9	-1.0
TIP	Timpagrande	8.46	308	ePn	Pn	19 39 18.9	-1.0
HNKL	Nakhl	8.52	118	P	Pn	19 39 19.6	-1.2
	baz=119						
HNKL	Nakhl	8.52	118	P	Pn	19 39 19.6	-1.2
MMA0B	Mount Meron ar	8.52	95	Pn	Pn	19 39 20.5	-0.4
MMA0B	Mount Meron ar	8.52	95	Pn	Pn	19 39 20.5	-0.4
MMAI	Mount Meron Ar	8.52	95	P	Pn	19 39 20.3	-0.6
	comp=N,12nm,0.3s,baz=271,slow=12,SNR=42						
MMAI				S	Sn	19 40 51.0	-5.0
	comp=N,62nm,0.3s,baz=278,slow=20,SNR=10						
AMAZ	Amatzia	8.53	106	Pn	Pn	19 39 20.2	-0.7
AMAZ	Amatzia	8.53	106	Pn	Pn	19 39 20.2	-0.7
VTS	Vitosha	8.53	350	⇓iP	Pn	19 39 22.7	+1.7
VTS	Vitosha	8.53	350	ePn	Pn	19 39 22.5	+1.5
VTS	Vitosha	8.53	350	eP	Pn	19 39 22.5	+1.5
VTS	Vitosha	8.53	350	eP	Pn	19 39 22.5	+1.5
DQRL	Deir Qamar	8.56	90	eP	Pn	19 39 21.6	+0.2
CEL	Celeste	8.60	301	ePn	Pn	19 39 21.7	-0.1
CEL	Celeste	8.60	301	ePn	Pn	19 39 21.7	-0.1
BHL	Bhannes	8.61	89	eP	Pn	19 39 22.3	+0.2
BR131	Keskin Array S	8.66	48	ePn	Pn	19 39 25.0	+2.2
BR131	Keskin Array S	8.66	48	ePn	Pn	19 39 25.0	+2.2
BRTR	Keskin Array B	8.66	48	P	Pn	19 39 23.3	+0.5
	comp=N,1.0nm,0.3s,baz=222,slow=15,SNR=22						
BRTR				S	Sn	19 40 57.1	-2.3
	comp=N,2.5nm,0.3s,baz=218,slow=25,SNR=12						
BRTR				LR	LR	19 43 39.4	
	comp=N,738nm,18.9s,baz=229,slow=43						
BRTR				ScP	ScP	19 49 19.8	+0.4
	comp=N,0.1nm,0.3s,baz=188,slow=3.1,SNR=4.1						
BRTR	Keskin Array B	8.66	48	i P	Pn	19 39 24.3	+1.5
BRTR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BRTR	Keskin Array B	8.66	48	i P	Pn	19 39 24.3	+1.5
	comp=Z,6.0nm,0.6s						
BRTR				S	Sn	19 40 57.1	-2.3
MMLI	Mount Malkishu	8.66	99	Pn	Pn	19 39 21.8	-1.0
MMLI	Mount Malkishu	8.66	99	Pn	Pn	19 39 21.8	-1.0
KSDI	Kefar Szold	8.70	94	Pn	Pn	19 39 22.4	-0.9
KSDI	Kefar Szold	8.70	94	Pn	Pn	19 39 22.4	-0.9
YTIR	Yattir	8.75	106	Pn	Pn	19 39 23.7	-0.3
YTIR	Yattir	8.75	106	Pn	Pn	19 39 23.7	-0.3
SHBL	Chebaa	8.75	93	eP	Pn	19 39 24.1	+0.1
NATI	Neve Ativ	8.76	93	Pn	Pn	19 39 23.2	-0.8
HMDT	Nahal Hemdat	8.80	100	Pn	Pn	19 39 24.0	-0.6
HMDT	Nahal Hemdat	8.80	100	Pn	Pn	19 39 24.0	-0.6
RCY	Rachaya	8.81	92	eP	Pn	19 39 23.7	-1.1
HWQ	Hawqa	8.83	87	eP	Pn	19 39 24.3	-0.8
KSHT	Keshet	8.87	95	Pn	Pn	19 39 25.5	-0.1

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KSHT  Keshet             8.87  95   Pn     Pn     19 39 25.5 -0.1
DSI   Dead Sea           8.89 104   Pn     Pn     19 39 25.9 +0.1
DSI                                 Sn     Sn     19 40 58.9 -5.9
DSI   Dead Sea           8.89 104   Pn     Pn     19 39 25.9 +0.1
CGL1  Ceglie Messapi     8.94 318  ePn     Pn     19 39 25.4 -1.1
TAR1  Taranto            8.96 317  ePn     Pn     19 39 24.5 -2.2
TAR1                                Sn     Sn     19 40 56.5  -10
MZDA  Masada             8.96 106   Pn     Pn     19 39 26.2 -0.6
MZDA  Masada             8.96 106   Pn     Pn     19 39 26.2 -0.6
PRNI  Paran              9.08 112   Pn     Pn     19 39 27.7 -0.8
PRNI  Paran              9.08 112   Pn     Pn     19 39 27.7 -0.8
ULC   Ulcinj             9.09 330⇑iPn     Pn     19 39 25.9 -2.6
ULC                                eSn     Sn     19 41 05.3 -4.5
MASS  Massafra           9.11 317  ePn     Pn     19 39 27.0 -1.8
FASA  Fasano             9.12 319  ePn     Pn     19 39 26.1 -2.8
FASA                                Sn     Sn     19 41 00.9  -10
ZFRI  Zfri               9.12 111   Pn     Pn     19 39 27.9 -1.1
ZFRI  Zfri               9.12 111   Pn     Pn     19 39 27.9 -1.1
FKH   Fakeheh            9.21  87  eP      Pn     19 39 31.1 +0.7
HRFI  Mount Harif        9.26 114   Pn     Pn     19 39 30.4 -0.5
HRFI                                Sn     Sn     19 41 07.6 -6.3
HRFI  Mount Harif        9.26 114   Pn     Pn     19 39 30.4 -0.5
MBRI  Mt Berech          9.28 116   Pn     Pn     19 39 30.6 -0.7
MBRI  Mt Berech          9.28 116   Pn     Pn     19 39 30.6 -0.7
DRME  Dracevica, Mon     9.30 331  ePn     Pn     19 39 29.9 -1.5
DRME                               eSn     Sn     19 41 11.3 -3.6
DRME  Dracevica, Mon     9.30 331  ePn     Pn     19 39 29.9 -1.5
HKAT  Jabal Katrina      9.35 125   P      Pn     19 39 31.3 -1.0
      baz=126
HKAT  Jabal Katrina      9.35 125   P      Pn     19 39 31.3 -1.0
PVY   Plav               9.36 335  ePn     Pn     19 39 30.3 -2.0
PVY                                eSn     Sn     19 41 12.5 -4.0
EIL   Elat               9.37 116   P      Pn     19 39 36.6 +4.2
      comp=Z,10nm,0.3s,baz=281,slow=1.9,SNR=100
EIL                                 S      Sn     19 41 16.1 -0.8
      comp=Z,6.0nm,0.3s,baz=352,slow=3.9,SNR=3.8
EIL   Elat               9.37 116   Pn     Pn     19 39 31.7 -0.8
EIL   Elat               9.37 116   Pn     Pn     19 39 31.7 -0.8
VAE   Valguarnera        9.41 293   P      Pn     19 39 35.1 +2.1
      comp=Z,1.7nm,0.3s,baz=132,slow=5.5,SNR=6.2
VAE                                 S      Sn     19 41 12.9 -4.8
      comp=Z,3.4nm,0.3s,baz=331,slow=19,SNR=2.1
PDG   Podgorica          9.48 332⇓iP      Pn     19 39 32.8 -1.0
TTG   Podgorica          9.48 332⇑iPn     Pn     19 39 31.9 -1.9
TTG                                eSn     Sn     19 41 15.3 -3.9
TTG   Podgorica          9.48 332  ePn     Pn     19 39 30.9 -2.9
TTG   Podgorica          9.48 332  eP      Pn     19 39 30.9 -2.9
TTG   Podgorica          9.48 332  ePn     Pn     19 39 30.9 -2.9
CUC   Castrocucco        9.51 310  ePn     Pn     19 39 34.4  0.0
CUC   Castrocucco        9.51 310  ePn     Pn     19 39 34.4  0.0
SG1   Sgolgore (BA)      9.51 317  ePn     Pn     19 39 32.8 -1.6
SG1                                 Sn     Sn     19 41 09.9  -10
BUM   Brajici-Budva      9.52 330⇑iPn     Pn     19 39 32.0 -2.4
BUM                                eSn     Sn     19 41 16.3 -3.9
BAI   Bari               9.58 318  ePn     Pn     19 39 34.1 -1.1
BAI                                 Sn     Sn     19 41 15.5 -6.2
IVA   Berane             9.63 336⇓iPn     Pn     19 39 34.1 -1.8
IVA                                eSn     Sn     19 41 19.1 -3.9
HAQS  Haql               9.69 119   P      Pn     19 39 36.3 -0.5
CEME  Cevo               9.71 331⇓iPn     Pn     19 39 34.2 -2.9
CEME                               eSn     Sn     19 41 20.2 -4.8
KOME  Kolasin            9.74 334  ePn     Pn     19 39 34.7 -2.8
KOME                               eSn     Sn     19 41 21.9 -3.9
HCY   Herceg Novi        9.80 329⇑iPn     Pn     19 39 36.4 -1.9
HCY                                eSn     Sn     19 41 23.3 -3.9
NKME  Niksic             9.88 332⇑iPn     Pn     19 39 36.9 -2.5
NKME                               eSn     Sn     19 41 25.3 -3.9
ASF   Jabal al Asfar     9.94  99   P      Pn     19 39 40.0 -0.3
      comp=Z,1.4nm,0.3s,baz=42,slow=3.9,SNR=9.4
ASF                                 S      Sn     19 41 23.6 -7.2
      comp=Z,4.4nm,0.3s,baz=315,slow=19,SNR=4.6
ASF   Jabal al Asfar     9.94  99   P      Pn     19 39 40.0 -0.3
ASF                                 pmax   pmax
      comp=Z,1.0nm,0.3s
ICOR  Ion Corvin        10.09  10⇓iP      Pn     19 39 43.2 +1.0
BRY   Bratogost         10.16 331⇑iPn     Pn     19 39 40.9 -2.4
BRY                                eSn     Sn     19 41 32.2 -4.0
BRY   Bratogost         10.16 331  ePn     Pn     19 39 42.7 -0.6
PLE   Pljevlja          10.21 335⇑iPn     Pn     19 39 41.9 -2.0
PLE                                eSn     Sn     19 41 32.8 -4.4
UPM   Unac-Piva         10.27 333⇓iPn     Pn     19 39 42.2 -2.7
UPM                                eSn     Sn     19 41 35.0 -4.0
JLOS                    10.28 119   P      Pn     19 39 44.2 -0.8
CLTB  Caltabellotta     10.35 292  ePn     Pn     19 39 49.4 +3.5
CLTB  Caltabellotta     10.35 292  ePn     Pn     19 39 49.4 +3.5
STON  Ston              10.49 328  ePn     Pn     19 39 43.6 -4.1
STON                                Sn     Sn     19 41 33.1  -11
MS1   Monte Sant'Ang    10.50 318  ePn     Pn     19 39 45.6 -2.4
MS1                                 Sn     Sn     19 41 34.3  -10
TIRR  Tirgusor          10.52  12  ePn     Pn     19 39 50.1 +2.0
TIRR  Tirgusor          10.52  12  eP      Pn     19 39 50.1 +2.0
TIRR  Tirgusor          10.52  12  eP      Pn     19 39 50.1 +2.0
TLB   Topalu            10.58  11⇑iP      Pn     19 39 49.7 +0.8
DIVS  Divibare          10.70 339  ePn     Pn     19 39 49.9 -0.7
DIVS  Divibare          10.70 339  ePn     Pn     19 39 49.9 -0.7
HERR  Herculane         10.89 349⇑iP      Pn     19 39 54.2 +1.1
MDVR  Moldovita         10.92 346⇓iP      Pn     19 39 52.9 -0.7
VOIR                    11.22 359⇓iP      Pn     19 39 58.7 +0.9
MLR   Muntele Rosu      11.28   2   P      Pn     19 40 00.3 +1.6
      baz=170,slow=12
MLR                                 LR     LR     19 45 13.0
      comp=Z,210nm,18.0s,baz=184,slow=42
MLR   Muntele Rosu      11.28   2⇑iP      Pn     19 40 00.4 +1.7
MLR   Muntele Rosu      11.28   2  ePn     Pn     19 39 60.0 +1.3
MLR   Muntele Rosu      11.28   2  eP      Pn     19 40 00.0 +1.3
MLR   Muntele Rosu      11.28   2  eP      Pn     19 40 00.0 +1.3
PLOR  Plostina          11.68   5⇑iP      Pn     19 40 05.8 +1.8
VRI   Vrincioaia        11.70   5⇓iP      Pn     19 40 06.4 +2.1
BZS   Buzias            11.74 347⇓iP      Pn     19 40 04.2 -0.6
BLY   Banja Luka        12.24 332⇓iP      Pn     19 40 10.4 -1.2
BLY   Banja Luka        12.24 332  ePn     Pn     19 40 09.4 -2.2
BLY   Banja Luka        12.24 332  ePn     Pn     19 40 09.4 -2.2
TESR  Tescani           12.34   4⇑iP      Pn     19 40 15.7 +2.8
AQU   L'Aquila          12.37 315  ePn     Pn     19 40 12.7 -0.8
AQU   L'Aquila          12.37 315  eP      Pn     19 40 12.7 -0.8
AQU   L'Aquila          12.37 315  eP      Pn     19 40 12.7 -0.8
UDBI  Udbina            12.66 327  ePn     Pn     19 40 14.4 -3.0
UDBI                                Sn     Sn     19 42 28.7 -8.5
SIM   Simferopol'       12.70  30   P      P      19 40 26.9 -1.8
SIM                                 pmax   pmax
      comp=Z,26nm,0.3s
SIM                                 MLR    MLR
      comp=Z,200nm,11.2s
DRGR                    12.72 352⇓iP      Pn     19 40 18.7 +0.4
BIZ   Bicaz             12.74   3⇓iP      Pn     19 40 20.0 +1.6
MORH  Mˆ‡rˆ¡gy, Hung    13.02 339⇓ePn     Pn     19 40 18.8 -3.4
KIS   Kishinev          13.06  11  e       P      19 40 30.0 -2.7
KIS                                 LRM    MLR    19 46 04.0
      comp=Z,500nm,14.0s
NVLJ  Novalja           13.10 325  ePn     Pn     19 40 20.3 -3.0
NVLJ                                Sn     Sn     19 42 37.1  -11
KEST  Kesra             13.16 281   P      Pn     19 40 24.5 +0.1
      comp=Z,0.1nm,0.3s,baz=24,slow=10.0,SNR=2.5
KEST                                S      Sn     19 42 39.0  -11
      comp=Z,0.2nm,0.3s,baz=0.0,slow=19,SNR=1.8
BURAR Bucovina Array    13.40 360⇑iP      Pn     19 40 29.7 +2.2
BUR04 Bucovina Ar. S    13.40 360  ePn     Pn     19 40 27.2 -0.3
BUR04 Bucovina Ar. S    13.40 360  ePn     Pn     19 40 27.2 -0.3
BUR08 Bucovina Ar. S    13.43 360  ePn     Pn     19 40 30.9 +3.0
BUR08 Bucovina Ar. S    13.43 360  ePn     Pn     19 40 30.9 +3.0
OZLJ  Ozalj             13.65 330  ePn     Pn     19 40 28.2 -2.6
TRPA  Tarpa             14.06 352⇑iP      Pn     19 40 36.3 -0.2
ANN   Anapa             14.12  38  eP      Pn     19 40 36.7 -0.6
ANN                                eS      Sn     19 43 14.0 +1.2
ANN                                 pmax   pmax
      comp=Z,22nm,1.1s
CSKK  Csˆ‡kako          14.17 340  ePn     P      19 40 42.2 -2.9
PSZ   Piszkesteto       14.29 345  ePn     Pn     19 40 40.1 +0.5
PSZ   Piszkesteto       14.29 345  ePn     Pn     19 40 38.8 -0.8
PSZ   Piszkesteto       14.29 345  eP      Pn     19 40 38.8 -0.8
PSZ   Piszkesteto       14.29 345  ePn     Pn     19 40 38.8 -0.8
TRI   Trieste           14.47 326  ePn     Pn     19 40 39.1 -3.0
TRI   Trieste           14.47 326  eP      Pn     19 40 39.1 -3.0
TRI   Trieste           14.47 326  ePn     Pn     19 40 39.1 -3.0
UZH   Uzhgorod          14.59 352  eP      Pn     19 40 39.2 -4.4
SOC   Sochi             14.61  46  eP      Pn     19 40 45.2 +1.2
SOC                                e              19 43 28.6
SOC                                 MLR    MLR
      comp=Z,96nm,9.0s
SOKA  Soboth            14.68 331  ePn     Pn     19 40 40.6 -4.4
      comp=Z,6.1nm,0.6s,SNR=20
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KECS  Kecovo            14.71 347  eP      P      19 40 53.7 +2.7
KECS  Kecovo            14.71 347  eP      P      19 40 53.7 +2.7
KECS  Kecovo            14.71 347  eP      P      19 40 53.7 +2.7
OBKA  Obir              14.75 330  ePn     Pn     19 40 42.7 -3.2
      comp=Z,3.8nm,1.0s
CRVS  Cervenica-Dubn    14.96 350  eP      P      19 40 53.1 -0.7
CRVS  Cervenica-Dubn    14.96 350  eP      P      19 40 53.1 -0.7
CRVS  Cervenica-Dubn    14.96 350  eP      P      19 40 53.1 -0.7
ARSA  Arzberg           14.97 333  ePn     Pn     19 40 45.5 -3.3
      comp=Z,3.4nm,0.8s
SOP   Sopron            14.98 337  ePn     P      19 40 54.7 +0.7
VYHS  Vyhne             15.07 343  eP      Pn     19 40 49.2 -0.9
VYHS  Vyhne             15.07 343  ePN     Pn     19 40 49.2 -0.9
VYHS  Vyhne             15.07 343  ePn     Pn     19 40 49.2 -0.9
MYKA  Terra Mystica     15.23 328  eP      P      19 40 58.1 +1.2
      comp=Z,2.1nm,0.6s
MYKA  Terra Mystica     15.23 328   P      P      19 40 58.1 +1.2
      comp=Z,2.1nm,0.6s
MODS  Modra-Piesok      15.37 339  eP      P      19 40 59.0 +0.6
MODS  Modra-Piesok      15.37 339  eP      P      19 40 59.0 +0.6
MODS  Modra-Piesok      15.37 339  eP      P      19 40 59.0 +0.6
CONA  Conrad Observa    15.42 336  ePn     Pn     19 40 55.8 +0.9
      comp=Z,1.5nm,0.6s
CONA  Conrad Observa    15.42 336   Pn     Pn     19 40 55.8 +0.9
      comp=Z,1.5nm,0.6s
SMOL  Smolenice         15.45 340  eP      P      19 40 59.5 +0.2
SMOL  Smolenice         15.45 340  eP      P      19 40 59.5 +0.2
SMOL  Smolenice         15.45 340  eP      P      19 40 59.5 +0.2
LANS  Liptovska Anna    15.54 346  eP      P      19 41 01.6 +1.2
LANS  Liptovska Anna    15.54 346  eP      P      19 41 01.5 +1.2
LANS  Liptovska Anna    15.54 346  eP      P      19 41 01.6 +1.2
LVV   L'vov             15.63 357  eP      Pn     19 40 57.1 -0.3
LVV                                eS      Sn     19 43 46.2 -3.3
LVV                                 MLR    MLR
      comp=E,100nm,13.0s
LVV                                 MLR    MLR
      comp=N,200nm,12.0s
LVV                                 MLR    MLR
      comp=Z,300nm,12.0s
NIE   Niedzica          15.64 348  eP      Pn     19 40 58.7 +1.1
NIE                                 LMZ    LR     19 46 46.8
      comp=Z,200nm,26.8s
NIE   Niedzica          15.64 348  eP      Pn     19 40 58.7 +1.1
NIE                                 MLR    MLR
      comp=Z,200nm,26.8s
JAVC  Velka Javorina    15.70 341  ePN     P      19 41 01.6 -0.5
KBA   Koelnbreinsper    15.71 329   Pn     Pn     19 40 55.8 -2.8
      comp=Z,2.7nm,0.8s,SNR=19
ABTA  Abfaltersbach     15.83 326   Pn     Pn     19 40 56.2 -3.9
      comp=Z,5.9nm,0.7s,SNR=20
MOA   Molln             15.94 332  ePn     Pn     19 40 57.6 -3.9
      comp=Z,3.9nm,0.8s,SNR=11
AKH   Akhalkalaki       16.07  58  ePn     P      19 41 06.3 -0.1
      comp=Z,22nm,1.1s
AKH   Akhalkalaki       16.07  58  eP      P      19 41 06.3 -0.1
AKH                                 pmax   pmax
      comp=Z,23nm,1.1s
AKH   Akhalkalaki       16.07  58  eP      P      19 41 06.3 -0.1
      comp=Z,23nm,1.1s
KRUC  Moravsky          16.25 339  ePN     Pn     19 41 06.6 +1.3
NEY   Neytrino          16.31  51deP      P      19 41 09.3 +0.3
NEY                                 pmax   pmax
      comp=Z,10.0nm,1.0s
NEY   Neytrino          16.31  51  eP      P      19 41 09.3 +0.3
      comp=Z,10.0nm,1.0s
VRAC  Vranov            16.41 340   P      Pn     19 41 06.6 -0.8
      comp=Z,0.6nm,0.3s,baz=144,slow=10,SNR=35
VRAC                                LR     LR     19 48 58.4
      comp=Z,355nm,19.6s,baz=166,slow=43
VRAC  Vranov            16.41 340⇑iP      Pn     19 41 08.1 +0.7
VRAC  Vranov            16.41 340  ePN     Pn     19 41 05.8 -1.6
OKC   Ostrava-Krasne    16.48 344  eP      P      19 41 09.6 -1.1
OKC                                ex      x      19 41 12.1
OKC                                epP     pP     19 41 18.4 -0.6
OKC                                 AMS    AMS    19 48 50.0
      comp=Z,300nm,15.1s
OKC   Ostrava-Krasne    16.48 344  eP      P      19 41 09.6 -1.1
OKC                                 MLR    MLR
      comp=Z,300nm,15.1s
OKC   Ostrava-Krasne    16.48 344  eP      P      19 41 09.6 -1.1
      comp=Z,300nm,15.1s
OJC   Ojcow             16.50 348  eP      Pn     19 41 06.7 -1.8
OJC                                 LMZ    LR     19 47 25.4
      comp=Z,300nm,24.7s
OJC   Ojcow             16.50 348  ePn     Pn     19 41 06.8 -1.8
      comp=Z,10nm,0.9s
OJC   Ojcow             16.50 348  eP      Pn     19 41 06.8 -1.8
OJC                                 pmax   pmax
      comp=Z,10.0nm,0.9s
OJC   Ojcow             16.50 348  ePn     Pn     19 41 06.8 -1.8
      comp=Z,10nm,0.9s
MORC  Moravsky Berou    16.57 342⇑iP      Pn     19 41 08.2 -1.3
MORC  Moravsky Berou    16.57 342  ePn     Pn     19 41 07.9 -1.6
      comp=Z,8.7nm,0.7s
MORC  Moravsky Berou    16.57 342  eP      Pn     19 41 07.9 -1.6
MORC                                pmax   pmax
      comp=Z,9.0nm,0.7s
MORC  Moravsky Berou    16.57 342  ePn     Pn     19 41 07.9 -1.6
      comp=Z,8.7nm,0.7s
MORC  Moravsky Berou    16.57 342  ePN     Pn     19 41 07.6 -1.9
GNI   Garni             16.59  63   P      Pn     19 41 11.1 +1.2
      comp=Z,1.1nm,0.3s,baz=305,slow=5.6,SNR=8.7
GNI                                 LR     LR     19 49 11.0
      comp=Z,560nm,20.0s,baz=271,slow=43
GNI   Garni             16.59  63  ePn     P      19 41 13.9 +1.7
      comp=Z,21nm,0.8s
GNI   Garni             16.59  63  i P     P      19 41 13.4 +1.2
      SNR=6.4
GNI   Garni             16.59  63ceP      P      19 41 13.8 +1.6
GNI                                 pmax   pmax
      comp=Z,37nm,0.6s
GNI   Garni             16.59  63   P      P      19 41 13.4 +1.2
      SNR=6.4
GNI   Garni             16.59  63  ePn     P      19 41 13.9 +1.7
      comp=Z,21nm,0.8s
WTTA  Wattenberg        16.61 326  ePn     Pn     19 41 10.0 -0.2
      comp=Z,9.7nm,0.8s,SNR=12
WTTA  Wattenberg        16.61 326   Pn     Pn     19 41 10.0 -0.2
      comp=Z,9.7nm,0.8s,SNR=12
KIV   Kislovodsk        16.62  49  ePn     Pn     19 41 11.6 +1.3
      comp=Z,39nm,0.8s
KIV   Kislovodsk        16.62  49  i P     Pn     19 41 11.5 +1.3
      SNR=14
KIV   Kislovodsk        16.62  49ceP      Pn     19 41 11.2 +1.0
KIV                                i S     Sn     19 44 19.6 +5.7
KIV                                 pmax   pmax
      comp=Z,35nm,1.0s
KIV                                 MLR    MLR
      comp=Z,171nm,21.0s
KIV   Kislovodsk        16.62  49  ePn     Pn     19 41 11.6 +1.3
      comp=Z,39nm,0.8s
KBZ   Khabaz            16.65  50   P      Pn     19 41 10.3  0.0
      comp=Z,0.2nm,0.3s,baz=237,slow=8.5,SNR=9.0
KBZ                                 LR     LR     19 50 03.1
      comp=Z,144nm,18.9s,baz=258,slow=46
WATA  Walderalm         16.70 326  ePn     Pn     19 41 11.4 +0.2
      comp=Z,7.4nm,0.6s,SNR=11
WATA  Walderalm         16.70 326   Pn     Pn     19 41 11.4 +0.2
      comp=Z,7.4nm,0.6s,SNR=11
AK11  Malin Array Si    16.71   9  ePn     Pn     19 41 10.2 -0.9
AK11  Malin Array Si    16.71   9  ePn     Pn     19 41 10.2 -0.9
KIEV  Kiev              16.73   9  ePn     Pn     19 41 10.8 -0.6
      comp=Z,47nm,0.7s
KIEV  Kiev              16.73   9  i P     Pn     19 41 12.5 +1.1
      SNR=46
KIEV  Kiev              16.73   9ceP      Pn     19 41 10.4 -1.0
KIEV                                pmax   pmax
      comp=Z,37nm,0.6s
KIEV  Kiev              16.73   9  ePn     Pn     19 41 10.8 -0.6
      comp=Z,47nm,0.7s
KIEV  Kiev              16.73   9   P      Pn     19 41 12.5 +1.1
      SNR=46
AKASG Malin Array Be    16.74   9   P      Pn     19 41 10.3 -1.2
      comp=Z,17nm,0.3s,baz=199,slow=10,SNR=43
AKASG                               S      Sn     19 44 18.7 +2.4
      baz=193,slow=22,SNR=4.1
AKASG                               LR     LR     19 48 18.6
      comp=Z,282nm,19.2s,baz=205,slow=39
AKBB  Malin Array Si    16.74   9  ePn     Pn     19 41 10.8 -0.7
      comp=Z,48nm,0.7s
AKBB  Malin Array Si    16.74   9  eP      Pn     19 41 10.8 -0.7
AKBB                                pmax   pmax
      comp=Z,48nm,0.7s
AKBB  Malin Array Si    16.74   9  ePn     Pn     19 41 10.8 -0.7
      comp=Z,48nm,0.7s
FUORN Ofenpass-Fuorn    16.83 322  ePn     Pn     19 41 12.8 -0.2
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      comp=Z,58nm,1.1s
FUORN Ofenpass-Fuorn    16.83 322  ePn     Pn     19 41 12.8 -0.2
      comp=Z,58nm,1.1s
FETA  Feichten          16.88 324  ePn     Pn     19 41 12.6 -0.8
      comp=Z,27nm,0.9s,SNR=13
FETA  Feichten          16.88 324   Pn     Pn     19 41 12.6 -0.8
      comp=Z,27nm,0.9s,SNR=13
ZEI   Tsey              16.88  54  eP      P      19 41 15.0 -0.4
ZEI                                 pmax   pmax
      comp=Z,21nm,0.6s
MOTA  Moosalm           16.92 325  ePn     Pn     19 41 13.8 -0.2
      comp=Z,5.5nm,1.0s,SNR=5.4
MOTA  Moosalm           16.92 325   Pn     Pn     19 41 13.8 -0.2
      comp=Z,5.5nm,1.0s,SNR=5.4
GEA0  GERESS Array S    16.97 333  ePn     Pn     19 41 12.9 -1.6
GEA0  GERESS Array S    16.97 333  ePn     Pn     19 41 12.9 -1.6
GEC2  GERESS Array S    16.98 333  ePn     Pn     19 41 13.5 -1.1
      comp=Z,31nm,0.8s
GEC2  GERESS Array S    16.98 333  eP      Pn     19 41 13.5 -1.1
GEC2                                pmax   pmax
      comp=Z,31nm,0.8s
GEC2  GERESS Array S    16.98 333  ePn     Pn     19 41 13.5 -1.1
      comp=Z,31nm,0.8s
GERES GERESS Array B    16.98 333   P      Pn     19 41 13.2 -1.4
      comp=Z,1.7nm,0.3s,baz=146,slow=11,SNR=28
GERES                               LR     LR     19 49 18.8
      comp=Z,456nm,18.6s,baz=124,slow=42
GERES                               ScP    ScP    19 49 30.8 -1.2
      baz=129,slow=1.4,SNR=4.8
NCK   Nalchik           16.99  52ceP      P      19 41 18.6 +2.2
NCK                                 pmax   pmax
      comp=Z,29nm,0.9s
NCK   Nalchik           16.99  52  eP      P      19 41 18.6 +2.2
      comp=Z,29nm,0.9s
KRLC  Kraliky           17.05 341  eP      P      19 41 17.4 +0.4
KRLC                               ex      x      19 41 23.4
KRLC  Kraliky           17.05 341  eP      P      19 41 17.4 +0.4
KRLC  Kraliky           17.05 341  eP      P      19 41 17.4 +0.4
DAVOX Davos/Dischmat    17.14 322   P      Pn     19 41 16.5 -0.3
      comp=Z,0.2nm,0.3s,baz=137,slow=19,SNR=2.6
DAVOX                               LR     LR     19 49 48.6
      comp=Z,291nm,20.1s,baz=110,slow=44
RETA  Reutte            17.19 325  ePn     P      19 41 17.9 -0.7
      comp=Z,24nm,0.7s,SNR=14
RETA  Reutte            17.19 325   Pn     P      19 41 17.9 -0.7
      comp=Z,24nm,0.7s,SNR=14
TUE   Stuetta           17.21 320  ePn     Pn     19 41 17.1 -0.7
      comp=Z,18nm,0.7s
TUE   Stuetta           17.21 320  ePn     Pn     19 41 17.0 -0.7
      comp=Z,18nm,0.7s
KHC   Kasperske Hory    17.26 333  eP      P      19 41 18.9 -0.4
KHC                                ex      x      19 41 20.8
KHC                                ex      x      19 41 24.9
KHC                                 AMS    AMS    19 49 00.0
      comp=Z,600nm,12.4s
KHC   Kasperske Hory    17.26 333  ePn     Pn     19 41 16.4 -1.7
      comp=Z,8.2nm,0.9s
KHC   Kasperske Hory    17.26 333  eP      P      19 41 18.9 -0.4
KHC                                 MLR    MLR
      comp=Z,600nm,12.4s
KHC   Kasperske Hory    17.26 333  ePn     Pn     19 41 16.4 -1.7
      comp=Z,8.2nm,0.9s
KHC   Kasperske Hory    17.26 333  eP      P      19 41 18.9 -0.4
      comp=Z,600nm,12.4s
DPC   Dobruska-Polom    17.42 341  eP      P      19 41 20.8 -0.3
DPC                                 AMS    AMS    19 49 00.0
      comp=Z,200nm,15.4s
DPC   Dobruska-Polom    17.42 341  eP      P      19 41 20.8 -0.3
DPC                                 MLR    MLR
      comp=Z,200nm,15.4s
DPC   Dobruska-Polom    17.42 341  eP      P      19 41 20.8 -0.3
      comp=Z,200nm,15.4s
DAVA  Damuels           17.48 323  ePn     P      19 41 21.2 -0.7
      comp=Z,17nm,0.7s,SNR=17
DAVA  Damuels           17.48 323   Pn     P      19 41 21.2 -0.7
      comp=Z,17nm,0.7s,SNR=17
GOPC  GO Pecny, Ondr    17.50 337  eP      P      19 41 22.2 +0.2
GOPC  GO Pecny, Ondr    17.50 337  eP      P      19 41 22.2 +0.2
GOPC  GO Pecny, Ondr    17.50 337  eP      P      19 41 22.2 +0.2
PRU   Pruhonice         17.64 337  eP      P      19 41 23.5  0.0
PRU                                ex      x      19 41 26.0
PRU                                ex      x      19 41 29.0
PRU                                 AMS    AMS    19 50 20.0
      comp=Z,200nm,13.0s
PRU   Pruhonice         17.64 337  eP      P      19 41 23.5  0.0
PRU                                 MLR    MLR
      comp=Z,200nm,13.0s
PRU   Pruhonice         17.64 337  eP      P      19 41 23.5  0.0
      comp=Z,200nm,13.0s
UPC   Upice             17.65 340  eP      P      19 41 24.3 +0.7
UPC                                 AMS    AMS    19 49 30.0
      comp=Z,200nm,17.9s
UPC   Upice             17.65 340  eP      P      19 41 24.3 +0.7
UPC                                 MLR    MLR
      comp=Z,200nm,17.9s
UPC   Upice             17.65 340  eP      P      19 41 24.3 +0.7
      comp=Z,200nm,17.9s
PRA   Prague            17.75 337  eP      P      19 41 24.7  0.0
PRA   Prague            17.75 337  eP      P      19 41 24.7  0.0
PRA   Prague            17.75 337  eP      P      19 41 24.7  0.0
KSP   Ksiaz             17.88 341  eP      P      19 41 26.4 +0.3
KSP                                 LMZ    LR     19 47 53.2
      comp=Z,200nm,25.1s
KSP   Ksiaz             17.88 341  eP      P      19 41 26.4 +0.3
KSP                                 MLR    MLR
      comp=Z,200nm,25.1s
KSP   Ksiaz             17.88 341  eP      P      19 41 26.4 +0.3
      comp=Z,200nm,25.1s
BEL   Belsk             17.92 351  eS      Sn     19 44 32.7  -12
BEL                                 LMZ    LR     19 47 55.1
      comp=Z,300nm,28.6s
BNI   Bardonecchia      17.92 313  ePn     P      19 41 28.9 +2.1
      comp=Z,29nm,1.3s
BNI   Bardonecchia      17.92 313  eP      P      19 41 28.9 +2.1
BNI                                 pmax   pmax
      comp=Z,29nm,1.3s
BNI   Bardonecchia      17.92 313  eP      P      19 41 28.9 +2.1
      comp=Z,29nm,1.3s
PVCC  Panska Ves        18.10 338  eP      P      19 41 28.6  0.0
PVCC  Panska Ves        18.10 338  eP      P      19 41 28.6  0.0
PVCC  Panska Ves        18.10 338  eP      P      19 41 28.6  0.0
SENIN Lac Senin/Sane    18.27 317  ePn     Pn     19 41 30.9 +0.2
      comp=Z,18nm,0.8s
SENIN Lac Senin/Sane    18.27 317  ePn     Pn     19 41 31.0 +0.2
      comp=Z,18nm,0.8s
NKC   Novy Kostel       18.58 333  eP      Pn     19 41 34.0 -0.3
NKC                                epP     sP     19 41 46.4 +0.1
NKC                                 AMS    AMS    19 49 50.0
      comp=Z,600nm,13.8s
NKC   Novy Kostel       18.58 333  eP      Pn     19 41 34.0 -0.3
NKC                                 MLR    MLR
      comp=Z,600nm,13.8s
NKC   Novy Kostel       18.58 333  eP      Pn     19 41 34.0 -0.3
      comp=Z,600nm,13.8s
BRG   Berggiesshubel    18.60 337  eP      P      19 41 33.8 -0.2
      comp=Z,4.4nm,0.9s
BRG   Berggiesshubel    18.60 337  eP      P      19 41 33.8 -0.2
BRG                                 pmax   pmax
      comp=Z,4.0nm,0.9s
BRG   Berggiesshubel    18.60 337  eP      P      19 41 33.8 -0.2
      comp=Z,4.0nm,0.9s
GRFO  Grafenberg        18.63 330  eP      Pn     19 41 34.5 -0.4
      comp=Z,168nm,1.6s
GRFO  Grafenberg        18.63 330  eP      Pn     19 41 34.5 -0.4
GRFO                                pmax   pmax
      comp=Z,168nm,1.6s
GRFO  Grafenberg        18.63 330  eP      Pn     19 41 34.5 -0.4
      comp=Z,168nm,1.6s
STU   Stuttgart         18.84 325  eP      Pn     19 41 37.2 -0.2
      comp=Z,43nm,0.8s
STU   Stuttgart         18.84 325  eP      Pn     19 41 37.2 -0.2
STU                                 pmax   pmax
      comp=Z,43nm,0.8s
STU   Stuttgart         18.84 325  eP      Pn     19 41 37.2 -0.2
      comp=Z,43nm,0.8s
BFO   Black Forest      18.95 323  eP      Pn     19 41 38.5 -0.3
      comp=Z,25nm,0.9s
BFO   Black Forest      18.95 323ceP      Pn     19 41 38.8  0.0
BFO                                 pmax   pmax
      comp=Z,3.0nm,0.8s
BFO   Black Forest      18.95 323  eP      Pn     19 41 38.5 -0.3
      comp=Z,25nm,0.9s
AKT   Akhty             19.13  61  eP      Pn     19 41 43.9 +2.8
AKT                                 pmax   pmax
      comp=Z,10.0nm,0.8s
CLL   Collm             19.28 336  i P     P      19 41 41.8 +0.3
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      comp=Z,23nm,0.8s
CLL                               i sP    pP     19 41 45.7 -4.2
CLL                               i              19 41 49.8
CLL                               ePPP    PPP    19 42 01.0
CLL                               eS      S      19 45 12.0 -5.9
CLL                               eSSS    SSS    19 45 54.0
CLL   Collm             19.28 336 eP      P      19 41 41.4 -0.1
      comp=Z,24nm,0.9s
CLL   Collm             19.28 336 i P     P      19 41 41.8 +0.3
CLL                                 pmax  pmax
      comp=Z,23nm,0.8s
CLL   Collm             19.28 336 i P     P      19 41 41.8 +0.3
      comp=Z,23nm,0.8s
ECH   Echery            19.47 321 eP      P      19 41 43.4 -0.3
      comp=Z,25nm,1.0s
ECH   Echery            19.47 321 eP      P      19 41 43.4 -0.3
ECH                                 pmax  pmax
      comp=Z,25nm,1.0s
ECH   Echery            19.47 321 eP      P      19 41 43.4 -0.3
      comp=Z,25nm,1.0s
VORD  Divnogorie        19.61  27 eP      P      19 41 45.0 -0.1
VORD                                pmax  pmax
      comp=Z,60nm,1.1s
VORD  Divnogorie        19.61  27 eP      P      19 41 45.0 -0.1
      comp=Z,60nm,1.1s
VSR   Storozhevoye      19.77  26 eP      P      19 41 46.2 -0.6
VSR                               eS      S      19 45 30.2 +2.4
VSR                                 pmax  pmax
      comp=Z,10.0nm,0.6s
VSR                                 smax  smax
      comp=N,10.0nm,1.2s
VSR   Storozhevoye      19.77  26 eP      P      19 41 46.2 -0.6
      comp=N,10.0nm,0.6s
VSR                               eS      S      19 45 30.2 +2.4
      comp=N,10.0nm,1.2s
SUW   Suwalki           19.86 356 eP      P      19 41 44.5 -3.3
SUW                                 LMZ   LR     19 49 23.5
      comp=N,500nm,28.2s
SUW   Suwalki           19.86 356 eP      P      19 41 46.5 -1.3
      comp=N,176nm,1.0s
SUW                               eS      S      19 45 26.7 -2.8
SUW   Suwalki           19.86 356 eP      P      19 41 44.5 -3.3
SUW                                 MLR   MLR
      comp=Z,500nm,28.2s
SUW   Suwalki           19.86 356 eP      P      19 41 46.5 -1.3
      comp=Z,176nm,1.0s
SUW                               eS      S      19 45 26.7 -2.8
GKP   Gorka Klasztor    19.90 346 eP      P      19 41 48.2  0.0
GKP                                 LMZ   LR     19 51 01.4
      comp=Z,300nm,20.1s
GKP   Gorka Klasztor    19.90 346 eP      P      19 41 48.2  0.0
GKP                                 MLR   MLR
      comp=Z,300nm,20.1s
GKP   Gorka Klasztor    19.90 346 eP      P      19 41 48.2  0.0
      comp=Z,300nm,20.1s
RAYN  Ar Rayn           20.62 116 eP      Pn     19 41 59.8 +1.0
      comp=Z,17nm,1.0s
RAYN  Ar Rayn           20.62 116   P     Pn     19 41 59.3 +0.5
RAYN  Ar Rayn           20.62 116 eP      Pn     19 41 59.8 +1.0
      comp=Z,17nm,1.0s
TAM   Tamanrasset       20.72 242 eP      Pn     19 42 00.1 +0.1
      comp=Z,51nm,1.8s
TAM   Tamanrasset       20.72 242 eP      Pn     19 42 00.1 +0.1
      comp=Z,51nm,1.8s
NACGM Naroch            20.72   2 eP      P      19 41 55.0 -2.1
NACGM                             eS      S      19 45 46.0 -0.7
VRH   Novokhopyorsk     20.76  30 eP      P      19 41 57.7 +0.1
VRH                               eS      S      19 45 45.3 -2.3
VRH                                 pmax  pmax
      comp=Z,70nm,0.6s
VRH                                 smax  smax
      comp=E,60nm,0.8s
VRH   Novokhopyorsk     20.76  30 eP      P      19 41 57.7 +0.1
      comp=E,70nm,0.6s
WLF   Walferdange       20.91 323 ⇓P      P      19 41 59.7 +0.4
      comp=Z,30nm,0.8s
WLF   Walferdange       20.91 323 eP      P      19 41 59.4 +0.1
      comp=Z,39nm,0.9s
WLF   Walferdange       20.91 323 eP      P      19 41 59.4 +0.1
WLF                                 pmax  pmax
      comp=Z,39nm,0.9s
WLF   Walferdange       20.91 323 eP      P      19 41 59.4 +0.1
      comp=Z,39nm,0.9s
IDID  Didziasalis       21.13   2 eP      P      19 41 59.9 -1.7
IDID                                IAmb  IAmb   19 42 14.1
      comp=Z,13nm,1.0s
IDID  Didziasalis       21.13   2 eP      P      19 41 59.8 -1.7
IIGN  Ignalina          21.16   1 eP      P      19 41 59.6 -2.2
IIGN                                IAmb  IAmb   19 42 15.4
      comp=Z,25nm,1.0s
IIGN  Ignalina          21.16   1 eP      P      19 41 59.6 -2.2
ISAL  Salakas           21.37   1 eP      P      19 42 01.2 -2.9
ISAL                                IAmb  IAmb   19 42 13.7
      comp=Z,19nm,1.0s
ISAL  Salakas           21.37   1 eP      P      19 42 01.2 -2.9
MEM   Membach           21.61 325 ⇑P      P      19 42 07.2 +0.5
      comp=Z,78nm,0.8s
BCLA  Clavier           21.82 324 ⇑P      P      19 42 11.5 +2.5
BCLA  Clavier           21.82 324   P     P      19 42 11.5 +2.5
DOU   Dourbes           21.96 323 ⇑P      P      19 42 10.1 -0.5
      comp=Z,30nm,1.1s
DOU                               ⇑AP     sP     19 42 36.9  +14
DOU   Dourbes           21.96 323   P     P      19 42 10.0 -0.5
BSD   Bornholm Skovb    22.12 344 i P     P      19 42 09.2 -3.0
OBN   Obninsk           22.34  17 eP      P      19 42 14.9 +0.4
      comp=Z,40nm,0.7s
OBN   Obninsk           22.34  17ceP      P      19 42 14.2 -0.3
OBN                               e              19 42 40.0
OBN                                 pmax  pmax
      comp=Z,34nm,0.6s
OBN                                 MLR   MLR
      comp=Z,372nm,22.0s
OBN   Obninsk           22.34  17 eP      P      19 42 14.9 +0.4
      comp=Z,40nm,0.7s
SNF   Seneffe           22.38 323 ⇓P      P      19 42 15.1 +0.1
SNF   Seneffe           22.38 323   P     P      19 42 15.1 +0.1
UCC   Uccle             22.52 324 eP      P      19 42 16.9 +0.4
      comp=Z,159nm,2.0s
UCC   Uccle             22.52 324 eP      P      19 42 16.9 +0.4
UCC                                 pmax  pmax
      comp=Z,159nm,2.0s
UCC   Uccle             22.52 324 eP      P      19 42 16.9 +0.4
      comp=Z,159nm,2.0s
MOS   Moscow            23.17  18 eP      P      19 42 27.3 +4.2
MOS                               e              19 42 58.2
ES19  SONSECA Array     23.90 292 eP      P      19 42 30.6  0.0
ES19  SONSECA Array     23.90 292 eP      P      19 42 30.5  0.0
ESDC  Sonseca Array     23.95 292   P     P      19 42 30.7 -0.2
      comp=Z,5.3nm,0.6s,baz=83,slow=9.5,SNR=47
ESLA  Sonseca Array     23.95 292 eP      P      19 42 31.2 +0.3
      comp=Z,75nm,1.9s
ESLA  Sonseca Array     23.95 292 eP      P      19 42 31.2 +0.3
      comp=Z,75nm,1.9s
PAB   San Pablo         24.24 291 eP      P      19 42 33.6 -0.1
      comp=Z,25nm,1.3s
PAB   San Pablo         24.24 291 eP      P      19 42 33.6 -0.1
PAB                                 pmax  pmax
      comp=Z,25nm,1.3s
PAB   San Pablo         24.24 291 eP      P      19 42 33.6 -0.1
      comp=Z,25nm,1.3s
VSU   Vasula            24.28   2ceP      P      19 42 31.9 -1.8
VSU                                 pmax  pmax
      comp=Z,32nm,0.9s
MUD   Monsted U'grnd    24.84 338 i P     P      19 42 38.4 -0.4
      comp=Z,37nm,0.8s
MDT   Midelt            24.93 275   P     P      19 42 40.1 +0.1
      comp=Z,3.4nm,0.7s,baz=83,slow=6.5,SNR=7.4
PUL   Pulkovo           25.79   6 i P     P      19 42 45.9 -1.4
PBRG  Braganca          26.24 296 eP      P      19 42 52.0 +0.2
      comp=Z,34nm,1.0s
PBRG  Braganca          26.24 296 eP      P      19 42 52.0 +0.2
MVO   Moncorvo          26.39 295 eP      P      19 42 53.7 +0.5
      comp=Z,26nm,0.9s
MVO   Moncorvo          26.39 295 eP      P      19 42 53.7 +0.5
PMRV  Marv??o           26.58 291 eP      P      19 42 55.0 +0.1
      comp=Z,26nm,1.7s
PMRV  Marv??o           26.58 291 eP      P      19 42 55.0 +0.1
GEYT  Alibeck           26.72  72   P     P      19 42 55.9 -0.2
      comp=Z,1.4nm,0.7s,baz=282,slow=7.2,SNR=5.0
GYA0B ALIBECK ARRAY     26.72  72 eP      P      19 42 55.7 -0.5
      comp=Z,9.7nm,0.6s
GYA0B ALIBECK ARRAY     26.72  72 eP      P      19 42 55.7 -0.5
      comp=Z,9.7nm,0.6s
PESTR Estremoz          26.73 290 eP      P      19 42 56.9 +0.7
      comp=Z,25nm,0.9s
PESTR Estremoz          26.73 290 eP      P      19 42 56.0 -0.2
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      comp=Z,59nm,1.9s
PESTR Estremoz          26.73 290 eP      P      19 42 56.0 -0.2
      comp=Z,59nm,1.9s
PVAQ  Vaqueiros         26.88 286 eP      P      19 42 57.7 +0.2
      comp=Z,60nm,1.9s
PVAQ  Vaqueiros         26.88 286 eP      P      19 42 57.7 +0.2
PBEJ  Beja              26.97 288 eP      P      19 43 03.0 +4.7
      comp=Z,34nm,1.3s
POLO  Lamas de Olo      26.99 295 eP      P      19 42 54.7 -3.9
      comp=Z,17nm,1.5s
PVIS  Viseu             27.02 294 eP      P      19 42 59.4 +0.6
      comp=Z,33nm,1.5s
PVIS  Viseu             27.02 294 eP      P      19 42 59.4 +0.6
HFS   Hagfors           27.03 347   P     P      19 42 56.9 -1.7
      comp=Z,13nm,0.7s,baz=146,slow=11,SNR=31
HFS                                 LR    LR     19 55 43.3
      comp=Z,224nm,18.1s,baz=160,slow=41
PBDV  Barranco-do-Ve    27.06 286 eP      P      19 42 59.5 +0.3
      comp=Z,69nm,1.6s
PBDV  Barranco-do-Ve    27.06 286 eP      P      19 42 59.5 +0.3
EVO   Evora             27.07 289 eP      P      19 42 58.0 -1.2
      comp=Z,23nm,2.1s
EVO   Evora             27.07 289 eP      P      19 42 58.0 -1.2
PCVE  Castro Verde      27.12 287 eP      P      19 43 01.0 +1.3
      comp=Z,52nm,1.9s
PCVE  Castro Verde      27.12 287 eP      P      19 43 01.0 +1.3
PCAB  Cabril            27.19 296 eP      P      19 43 00.8 +0.5
      comp=Z,28nm,1.4s
PCAB  Cabril            27.19 296 eP      P      19 43 00.8 +0.5
PMTG  Montargil         27.23 290 eP      P      19 43 02.7 +2.1
      comp=Z,26nm,1.5s
PMTG  Montargil         27.23 290 eP      P      19 43 02.7 +2.1
MESJ  Messejana         27.26 287 eP      P      19 43 00.5 -0.3
MESJ                                AMb   AMB    19 43 02.8
      comp=Z,29nm,1.7s
MESJ  Messejana         27.26 287 eP      P      19 43 00.6 -0.3
      comp=Z,39nm,1.9s
MESJ  Messejana         27.26 287 eP      P      19 43 00.5 -0.3
MESJ  Messejana         27.26 287 eP      P      19 43 00.6 -0.3
FINES FINESS Array B    27.26   1   P     P      19 42 59.3 -1.3
      comp=Z,14nm,0.8s,baz=161,slow=10,SNR=55
FINES                               LR    LR     19 54 45.2
      comp=Z,237nm,18.2s,baz=182,slow=38
FIA1  FINESS Array S    27.26   1 eP      P      19 42 59.1 -1.6
KONO  Kongsberg         27.47 343 eP      P      19 43 01.6 -1.0
      comp=Z,28nm,1.3s
KONO  Kongsberg         27.47 343ceP      P      19 43 01.4 -1.1
KONO                                pmax  pmax
      comp=Z,26nm,1.7s
ATD   Arta Tunnel       27.68 140   LR    LR     19 52 32.9
      comp=Z,117nm,19.8s,baz=350,slow=33
BANOM Banah             28.00  99   P     P      19 43 09.3 +1.6
BANOM Banah             28.00  99   P     P      19 43 09.3 +1.6
NC602 NORSAR Array S    28.00 346 eP      P      19 43 06.5 -0.9
KLMR  Klimovskoe        28.21  15 eP      P      19 43 07.0 -2.2
KLMR                                pmax  pmax
      comp=Z,19nm,0.9s
KLMR  Klimovskoe        28.21  15 eP      P      19 43 07.0 -2.2
KLMR                                AMP          19 43 15.8
      comp=Z,19nm,0.9s
NAO01 NORSAR Array S    28.24 345 eP      P      19 43 08.6 -0.8
NC405 NORSAR Array S    28.31 346 eP      P      19 43 08.6 -1.5
HATD  Hatta, Dubai      28.34 101   P     P      19 43 12.3 +1.6
HATD  Hatta, Dubai      28.34 101   P     P      19 43 12.3 +1.6
ASHO  Ashiyiah          28.34 101   P     P      19 43 11.9 +1.2
NB201 NORSAR Array S    28.34 346 eP      P      19 43 09.5 -0.8
UOSS  Minazif           28.34 101   P     P      19 43 12.0 +1.3
UOSS  Minazif           28.34 101   P     P      19 43 12.0 +1.3
NB2   NORSAR Subarra    28.35 346   P     P      19 43 09.2 -1.2
      comp=Z,9.5nm,0.9s,baz=157,slow=9.3
NBO00 NORSAR Array S    28.43 345 eP      P      19 43 10.8 -0.3
NC303 NORSAR Array S    28.48 346 eP      P      19 43 10.7 -0.9
NC204 NORSAR Array S    28.66 345 eP      P      19 43 12.4 -0.8
AKTO  Aktyubinsk        28.83  46   P     P      19 43 15.2 +0.4
      comp=Z,2.5nm,0.3s,baz=256,slow=9.1,SNR=20
AKTO                                LR    LR     19 58 29.5
      comp=Z,117nm,20.4s,baz=253,slow=44
AKTO  Aktyubinsk        28.83  46 i P     P      19 43 15.0 +0.2
AKTO                                pmax  pmax
      comp=Z,12nm,0.8s
EKA   Eskdalemuir Ar    28.88 326   P     P      19 43 14.8 -0.4
      comp=Z,13nm,0.8s,baz=126,slow=9.2,SNR=24
AB31  Akbulak array     29.61  49 i P     P      19 43 22.4 +0.7
AB31                                pmax  pmax
      comp=Z,1.0nm,0.3s
AB31  Akbulak array     29.61  49 i P     P      19 43 22.4 +0.7
      comp=Z,1.0nm,0.3s
ABKAR Akbulak array     29.61  49 eP      P      19 43 22.6 +0.9
ABKAR Akbulak array     29.61  49 eP      P      19 43 22.6 +0.9
TOA0  Torodi Ar. Sit    29.96 231 eP      P      19 43 25.6 +0.4
TORD  Torodi Ar. Bea    29.96 231   P     P      19 43 25.8 +0.6
      comp=Z,4.3nm,0.5s,baz=53,slow=8.1
TORD                                LR    LR     19 58 26.6
      comp=Z,269nm,20.1s,baz=0.0,slow=42
PRGR  Permogore         30.38  19 eP      P      19 43 26.9 -1.4
PRGR                              e*PP    pP     19 43 35.1 -2.4
PRGR                              eS      S      19 48 24.2 -2.3
PRGR                                pmax  pmax
      comp=Z,24nm,0.6s
ARU   Arti              31.77  35   P     P      19 43 40.4 -0.2
      comp=Z,8.2nm,0.3s,baz=251,slow=9.8,SNR=26
ARU   Arti              31.77  35 eP      P      19 43 40.4 -0.2
      comp=Z,12nm,0.5s
ARU   Arti              31.77  35d iP     P      19 43 40.7  0.0
ARU                                              19 44 44.5
ARU                                              19 46 27.4
ARU                                 S     S      19 48 46.5 -2.0
ARU                                 SS    SnSn   19 50 35.2 -1.7
ARU                                 pmax  pmax
      comp=Z,8.0nm,0.6s
KOWA  Kowa              32.94 241   P     P      19 43 50.2 -1.2
      comp=Z,2.1nm,0.5s,baz=72,slow=10,SNR=4.6
KOWA  Kowa              32.94 241 eP      P      19 43 50.2 -1.2
      comp=Z,7.8nm,0.8s
SVE   Sverdlovsk        32.96  36⇑iP      P      19 43 51.9 +0.8
SVE                               eS      S      19 49 05.5 -1.6
SVE                                 pmax  pmax
      comp=Z,29nm,0.7s
APA   Apatity           33.74   6⇓iP      P      19 43 56.2 -1.5
APA                                 pmax  pmax
      comp=Z,12nm,0.8s
APA                                 MLR   MLR
      comp=Z,200nm,12.0s
ARCES ARCESS Array B    35.38   0   P     P      19 44 10.7 -1.3
      comp=Z,3.8nm,0.5s,baz=187,slow=10,SNR=28
KK31  Karatay Array     36.05  62 eP      P      19 44 19.6 +1.5
KK31  Karatay Array     36.05  62 i P     P      19 44 19.1 +1.0
KK31                                pmax  pmax
      comp=Z,3.0nm,0.4s
KKAR  Karatay Array     36.05  62 eP      P      19 44 19.6 +1.5
KKAR  Karatay Array     36.05  62 eP      P      19 44 19.6 +1.5
BRVK  Borovoye          36.88  45 eP      P      19 44 26.2 +1.3
      comp=Z,5.8nm,0.9s
BRVK  Borovoye          36.88  45ceP      P      19 44 26.5 +1.5
BRVK                                pmax  pmax
      comp=Z,18nm,1.7s
BVA0  Borovoye Array    36.94  45 i P     P      19 44 25.2 -0.3
BVA0                                pmax  pmax
      comp=Z,6.0nm,1.0s
BVAR  Borovoye Array    36.94  45   P     P      19 44 26.5 +1.0
      comp=Z,3.1nm,0.7s,baz=268,slow=5.6,SNR=27
BVAR                                LR    LR     20 02 21.0
      comp=Z,120nm,20.9s,baz=264,slow=41
AAK   Ala-Archa         39.00  63   P     P      19 44 44.9 +1.7
      comp=Z,3.4nm,0.4s,baz=254,slow=6.9,SNR=8.6
AAK   Ala-Archa         39.00  63 eP      P      19 44 45.4 +2.2
      comp=Z,5.3nm,0.7s
AAK   Ala-Archa         39.00  63 i P     P      19 44 43.8 +0.6
AAK                                 pmax  pmax
      comp=Z,4.0nm,0.6s
AAK   Ala-Archa         39.00  63 i P     P      19 44 43.8 +0.6
      comp=Z,4.0nm,0.6s
DBIC  Dimbokro          39.06 232   P     P      19 44 43.4 -0.3
      comp=Z,2.8nm,0.5s,baz=43,slow=11,SNR=8.1
DBIC                                LR    LR     20 05 00.8
      comp=Z,300nm,18.3s,baz=24,slow=42
FRU   Bishkek           39.07  62 eP      P      19 44 46.0 +2.3
KSH   Kashi             40.47  67 eP      P      19 44 56.4 +1.0
KSH                                 pP    sP     19 45 07.8 -0.7
KSH                                 PP    PnPn   19 46 33.9 +1.2
KSH                               ePcP    PcP    19 47 00.6 +2.9
KSH                                 S     S      19 50 58.8 -3.3
KSH                                 SS    SS     19 53 53.6 -8.3
KSH                                 pmax  pmax
      comp=Z,56nm,3.6s
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CMLA  Cha da Macela     40.86 290 i P     P      19 44 58.2 -0.3
CMLA  Cha da Macela     40.86 290 i P     P      19 44 58.2 -0.3
JMIC  Jan Mayen         41.03 344   P     P      19 44 59.3 -0.1
      comp=Z,23nm,0.5s,baz=135,slow=4.3,SNR=4.1
KDJ   Kajisay           41.03  63 eP      P      19 45 01.8 +1.8
      comp=Z,7.1nm,0.8s
KDJ   Kajisay           41.03  63 eP      P      19 45 01.8 +1.8
      comp=Z,7.1nm,0.8s
KURBB Kurchatov Arra    41.65  50   P     P      19 45 05.8 +1.0
      comp=Z,9.4nm,0.7s,baz=278,slow=8.8,SNR=70
KURBB                               ScP   ScP    19 50 48.8 -0.3
      comp=Z,0.5nm,0.6s,baz=276,slow=5.4,SNR=4.2
KURK  Kurchatov         41.71  50   P     P      19 45 05.8 +0.5
KURK                                ScP   ScP    19 50 48.8 -0.5
KURK  Kurchatov         41.71  50ceP      P      19 45 06.1 +0.8
KURK                                pmax  pmax
      comp=Z,9.0nm,0.8s
MAKZ  Makanchi          44.01  56 eP      P      19 45 25.2 +1.2
      comp=Z,10.0nm,0.8s
MAKZ  Makanchi          44.01  56 i P     P      19 45 24.5 +0.5
MAKZ                                pmax  pmax
      comp=Z,10.0nm,0.8s
MK31  Makanchi Array    44.22  56 eP      P      19 45 27.1 +1.3
MK31  Makanchi Array    44.22  56 i P     P      19 45 26.8 +1.1
MK31                                pmax  pmax
      comp=Z,12nm,0.5s
MKAR  Makanchi Array    44.22  56   P     P      19 45 26.9 +1.1
      comp=Z,16nm,0.6s,baz=279,slow=6.3,SNR=169
MKAR                                ScP   ScP    19 50 59.8 +0.2
      comp=Z,0.4nm,0.5s,baz=267,slow=2.4,SNR=5.2
MKAR  Makanchi Array    44.22  56 eP      P      19 45 27.1 +1.3
      comp=Z,142nm,0.8s
MKAR                                ScP   ScP    19 50 59.8 +0.2
MK01  Makanchi Array    44.23  56 eP      P      19 45 26.8 +1.0
SPITS Spitsbergen Ar    44.24 357   P     P      19 45 25.5  0.0
      comp=Z,1.9nm,0.3s,baz=134,slow=6.0,SNR=29
SPITS                               LR    LR     20 05 21.5
      comp=Z,155nm,21.6s,baz=190,slow=38
NVS   Novosibirsk       44.70  44⇓iP      P      19 45 31.2 +1.9
NVS                                 pmax  pmax
      comp=N,4.0nm,0.7s
NVS                                 pmax  pmax
      comp=E,7.0nm,0.7s
NVS                                 pmax  pmax
      comp=Z,14nm,0.7s
ZAA0  Zalesovo Array    45.59  45 eP      P      19 45 37.0 +0.6
      comp=Z,13nm,0.8s
ZALV  Zalesovo Beam     45.59  45   P     P      19 45 36.9 +0.4
      comp=Z,9.6nm,0.3s,baz=269,slow=8.8,SNR=57
ZALV                                PP    PP     19 47 24.2 +0.9
      comp=Z,2.9nm,0.6s,baz=278,slow=8.8,SNR=2.8
ZALV                                LR    LR     20 08 31.8
      comp=Z,79nm,21.2s,baz=250,slow=41
ZALV  Zalesovo Beam     45.59  45 eP      P      19 45 36.5 +0.1
ZALV                                PP    PP     19 47 24.2 +0.9
ZALV  Zalesovo Beam     45.59  45 eP      P      19 45 36.6 +0.1
ZALV                                             19 47 24.3
DAG   Danmarks Havn     47.00 347 i P     P      19 45 47.4 +0.2
      comp=Z,10nm,0.7s
DGZ   Jazzator, Alta    47.39  51 i P     P      19 45 52.2 +1.3
DGZ                                 pmax  pmax
      comp=Z,3.0nm,0.8s
WMQ   Urumqi            48.40  59   P     P      19 45 58.8 +0.1
WMQ                                 pP    pP     19 46 06.5 -1.7
WMQ                                 pmax  pmax
      comp=Z,27nm,0.7s
WMQ                                 pmax  pmax
      comp=Z,330nm,4.5s
WMQ                                 LR    LR
      comp=Z,360nm,29.7s
WMQ                                 LR    LR
      comp=Z,190nm,24.3s
PYUN  Piuthan           49.20  81 eP      P      19 46 06.7 +1.5
      comp=Z,28nm,0.7s
DANN  Dangsing          49.74  80 eP      P      19 46 11.2 +1.8
      comp=Z,53nm,0.6s
KOLN  Koldanda          49.83  81 eP      P      19 46 10.8 +0.8
      comp=Z,17nm,0.7s
GKN   Gorkha            50.59  80 eP      P      19 46 16.6 +0.9
      comp=Z,20nm,0.6s
DMN   Daman             51.12  80 eP      P      19 46 20.7 +0.9
      comp=Z,21nm,0.6s
KKN   Kakani            51.19  80 eP      P      19 46 21.1 +0.8
      comp=Z,11nm,0.5s
HVS   Khovu-Aksy        51.20  49c iP     P      19 46 21.2 +1.3
HVS                                 pmax  pmax
      comp=Z,16nm,0.9s
PKIN  Phulchoki         51.37  80 eP      P      19 46 23.0 +1.3
      comp=Z,12nm,0.7s
GUN   Gumba             51.64  80 eP      P      19 46 24.9 +1.1
      comp=Z,18nm,0.4s
JIRN  Jiri              51.99  80 eP      P      19 46 27.3 +0.9
      comp=Z,18nm,0.5s
RAMN  Ramite            52.60  80 eP      P      19 46 31.2 +0.4
      comp=Z,7.2nm,0.5s
SFJD  Kangerlussuaq     53.57 332   LR    LR     20 11 11.1
      comp=Z,56nm,19.1s,baz=84,slow=38
LSA   Lhasa             55.20  75 eP      P      19 46 51.7 +1.6
      comp=Z,3.8nm,0.6s
LSA   Lhasa             55.20  75   P     P      19 46 51.5 +1.4
LSA   Lhasa             55.20  75 eP      P      19 46 51.7 +1.6
LSA                                 pmax  pmax
      comp=Z,4.0nm,0.6s
LSA   Lhasa             55.20  75   P     P      19 46 51.5 +1.4
MOY   Mondy             55.58  47 eP      P      19 46 54.1 +2.0
MOY                                 pmax  pmax
      comp=Z,15nm,1.5s
ZAK   Zakamensk         57.30  48 eP      P      19 47 05.8 +1.5
ZAK                                 pmax  pmax
      comp=Z,11nm,0.9s
GTA   Gaotai            58.33  61 ⇓P      P      19 47 13.3 +1.6
GTA                                 pP    sP     19 47 24.8 -0.3
GTA                                 sP    pP     19 47 31.0  +10
GTA                                 S     S      19 55 10.1 -2.1
GTA                                 pmax  pmax
      comp=Z,7.0nm,1.1s
GTA                                 pmax  pmax
      comp=Z,84nm,5.7s
GTA                                 LR    LR
      comp=Z,140nm,21.0s
GTA                                 LR    LR
      comp=Z,130nm,18.5s
SONM  Songino Array     60.02  50   P     P      19 47 24.7 +1.4
      comp=Z,14nm,0.6s,baz=284,slow=8.1,SNR=73
SONM                                ScP   ScP    19 52 08.4 +0.6
      comp=Z,0.3nm,0.4s,baz=316,slow=4.0,SNR=2.2
SONA1 Songino Array     60.02  50 eP      P      19 47 24.4 +1.1
ULN   Ulaanbaatar       60.42  50 eP      P      19 47 27.6 +1.5
      comp=Z,16nm,0.8s
ULN   Ulaanbaatar       60.42  50 eP      P      19 47 27.6 +1.5
ULN                                 pmax  pmax
      comp=Z,16nm,0.8s
BOD   Bodaibo           61.15  38 eP      P      19 47 30.7 +0.1
BOD                                 pmax  pmax
      comp=Z,15nm,0.7s
TIXI  Tiksi             62.02  20 eP      P      19 47 37.6 +1.3
TIXI                                pmax  pmax
      comp=Z,6.0nm,0.8s
BOSA  Boshof            62.48 180   P     P      19 47 41.0 +1.0
      comp=Z,1.4nm,0.3s,baz=348,slow=5.0,SNR=4.8
BOSA                                LR    LR     20 17 13.0
      comp=Z,103nm,18.5s,baz=3.5,slow=38
BOSA  Boshof            62.48 180   P     P      19 47 41.0 +1.0
BOSA                                pmax  pmax
      comp=Z,1.0nm,0.4s
BOSA                                MLR   MLR
      comp=Z,103nm,18.5s
LZH   Lanzhou           62.53  63 eP      P      19 47 42.6 +2.1
LZH                                 pP    sP     19 47 55.6 +1.6
LZH                                 sP    pP     19 48 01.8  +12
LZH                               ePP     PP     19 50 00.8 +2.8
LZH                                 pmax  pmax
      comp=Z,15nm,0.9s
LZH                                 pmax  pmax
      comp=Z,150nm,4.3s
LZH                                 LR    LR
      comp=Z,280nm,17.5s
LZH                                 LR    LR
      comp=Z,290nm,17.7s
LZH                                 LR    LR
      comp=Z,340nm,18.2s
SCHQ  Schefferville     63.98 320   P     P      19 47 50.0 +0.4
      comp=Z,22nm,0.9s,baz=62,slow=8.8,SNR=3.9
HHC   Hu-ho-hao-te      66.08  56 eP      P      19 48 05.3 +1.6
HHC                                 sP    sP     19 48 24.4 +7.2
HHC                                 S     S      19 56 52.8 +2.9
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HHC				ScS	SKSac	19 57 48.5	-9.1
HHC				pmax	pmax		
	comp=Z,31nm,1.0s						
HHC				pmax	pmax		
	comp=Z,79nm,7.5s						
HHC				LR	LR		
	comp=Z,110nm,17.1s						
HHC				LR	LR		
	comp=Z,160nm,17.7s						
KMI	Kunming	66.46	75	P	P	19 48 06.1	-0.3
KMI				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KMI				pmax	pmax		
	comp=Z,64nm,4.2s						
CMAR	Chiang Mai Arr	66.58	83	P	P	19 48 07.8	+0.8
	comp=Z,1.1nm,0.6s,baz=302,slow=8.1,SNR=7.4						
YAK	Yakutsk	66.65	30	*e*P	P	19 48 06.0	-0.7
YAK				pmax	pmax		
	comp=Z,15nm,1.0s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.4s						
YAK				pmax	pmax		
	comp=N,4.0nm,1.5s						
XAN	Xi'an	67.17	64	P	P	19 48 11.6	+1.0
XAN				pmax	pmax		
	comp=N,7.0nm,0.7s						
GYA	Guiyang	68.94	72	*e*P	P	19 48 24.0	+2.0
GYA				pmax	pmax		
	comp=N,10.0nm,1.0s						
BJI	Beijing	69.59	55⇓	*e*P	P	19 48 26.3	+0.7
BJI				pP	sP	19 48 37.0	-2.1
BJI				sP	PcP	19 48 41.6	-6.9
BJI				pmax	pmax		
	comp=N,13nm,0.4s						
ZEA	Zeya	69.63	38	*e*P	P	19 48 25.1	-0.5
ZEA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
WHN	Wuhan	72.87	65	P	P	19 48 54.5	+8.9
LONY	Lake Ozonia	73.13	313	P	P	19 48 46.5	-0.4
	baz=59						
SEY	Seymchan	74.40	22	*i*P	P	19 48 54.1	+0.1
KLR	Kul'dur	74.42	41	*i*P	P	19 48 55.7	+1.3
NJ2	Nanjing	75.42	61	*e*P	P	19 49 00.8	+0.4
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
GRNR	Gornyy	75.97	38	*e*P	P	19 49 07.0	+3.7
GRNR				pmax	pmax		
	comp=Z,26nm,1.0s						
MA2	Magadan	76.30	25	*e*P	P	19 49 06.0	+1.0
	comp=Z,14nm,0.8s						
MA2	Magadan	76.30	25	*e*P	P	19 49 06.0	+1.0
MA2				pmax	pmax		
	comp=Z,14nm,0.8s						
INK	Inuvik	76.58	352	*e*P	P	19 49 06.8	+0.5
	comp=Z,4.7nm,0.8s						
INK	Inuvik	76.58	352	*e*P	P	19 49 06.8	+0.5
INK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SSPA	Standing Stone	77.33	311	P	P	19 49 12.1	+0.9
	baz=56						
TOLK	Toolik Lake Re	77.39	358	P	P	19 49 11.7	+0.6
	baz=4.4						
TOLK	Toolik Lake Re	77.39	358	*e*P	P	19 49 12.5	+1.4
	comp=Z,5.5nm,0.9s						
USRK	Ussuriysk Ar.	77.44	45	P	P	19 49 12.6	+0.9
	comp=Z,10nm,0.7s,baz=288,slow=5.3						
YKA	Yellowknife Ar	78.39	342	P	P	19 49 16.8	+0.3
	comp=Z,3.0nm,0.7s,baz=31,slow=5.5,SNR=12						
YKA	Yellowknife Ar	78.39	342	*i*P	P	19 49 19.6	+3.0
YKA				pmax	pmax		
	comp=Z,3.0nm,0.7s						
N54A	Moraine State	78.46	312	P	P	19 49 17.6	+0.1
	baz=55						
KS01	Wonju Array Si	78.75	52	*e*P	P	19 49 20.0	+0.9
KS15	Wonju Array Si	78.76	52	*e*P	P	19 49 20.5	+1.4
KSAR	Wonju Array Be	78.76	52	P	P	19 49 20.6	+1.4
KSAR	Wonju Array Be	78.76	52	P	P	19 49 20.6	+1.4
KSRS	Korea Array	78.78	52	P	P	19 49 20.6	+1.3
	comp=Z,5.6nm,0.6s,baz=307,slow=4.6,SNR=33						
KSRS				LR	LR	20 26 52.5	
	comp=Z,58nm,21.8s,baz=240,slow=38						
COLD	Coldfoot	78.83	358	*e*P	P	19 49 20.3	+1.3
	comp=Z,13nm,1.3s						
F45A	CMU Biological	78.89	318	P	P	19 49 19.5	-0.2
	baz=52						
MCWV	Mont Chateau	79.12	311	P	P	19 49 21.4	+0.3
	baz=54						
F44A	Big Bay de Noc	79.21	319	P	P	19 49 21.4	-0.1
	baz=52						
E43A	Lone Tree Farm	79.27	319	P	P	19 49 21.9	+0.2
	baz=51						
C40A	Isle Royale Na	79.43	321	P	P	19 49 22.3	-0.3
	baz=50						
F43A	Flat Rock, Esc	79.70	319	P	P	19 49 23.8	-0.3
	baz=51						
E42A	Champion	79.73	320	P	P	19 49 23.6	-0.7
	baz=51						
E41A	Kenton	80.27	320	P	P	19 49 26.9	-0.3
	baz=50						
G43A	Wallace	80.35	319	P	P	19 49 27.6	0.0
	baz=51						
M49A	Liberty Center	80.57	314	P	P	19 49 29.4	+0.5
	baz=52						
COWI	Conover	80.59	320	*e*P	P	19 49 30.1	+1.2
	comp=Z,14nm,0.8s						
ACSO	Alum Creek Sta	80.73	313	P	P	19 49 30.3	+0.5
	baz=53						
G42A	Mountain	80.76	319	P	P	19 49 30.0	+0.1
	baz=50						
E40A	Wakefield	80.77	321	P	P	19 49 30.0	+0.1
	baz=50						
EGAK	Eagle	80.77	354	*e*P	P	19 49 30.7	+1.2
	comp=Z,16nm,1.6s						
F41A	Three Lakes	80.81	320	P	P	19 49 30.3	+0.2
	baz=50						
H43A	Windswept, Lux	80.89	318	P	P	19 49 30.5	-0.1
	baz=51						
MDM	Murphy Dome	81.03	357	*e*P	P	19 49 32.2	+1.2
	comp=Z,14nm,0.9s						
C37A	Embarrass	81.10	323	P	P	19 49 30.6	-1.1
	baz=48						
ULM	Lac du Bonnet	81.16	326	P	P	19 49 32.6	+0.8
	comp=Z,2.9nm,0.7s,baz=9.9,slow=5.2,SNR=3.9						
ULM				LR	LR	20 25 52.0	
	comp=Z,72nm,21.7s,baz=52,slow=36						
E39A	Mellen	81.16	321	P	P	19 49 31.6	-0.3
	baz=49						
IL1	Eielson Array	81.16	357	*e*P	P	19 49 31.9	+0.3
ILAR	Eielson Array	81.16	357	P	P	19 49 32.1	+0.5
	comp=Z,3.5nm,0.7s,baz=354,slow=3.7,SNR=35						
ILB	Eielson Array	81.16	357	*e*P	P	19 49 32.5	+0.9
O50A	Cable	81.17	313	P	P	19 49 31.7	-0.4
	baz=52						
F40A	Park Falls	81.23	320	P	P	19 49 32.0	-0.3
	baz=49						
CCB	Clear Creek Bu	81.33	357	*e*P	P	19 49 33.1	+0.6
	comp=Z,9.0nm,0.8s						
C36A	Pine Crest Far	81.41	323	P	P	19 49 33.3	0.0
	baz=48						
B35A	Bob, Littlefor	81.44	324	P	P	19 49 33.2	-0.2
	baz=47						
I43A	Langenfeld Bro	81.47	318	P	P	19 49 32.9	-0.7
	baz=50						
HDA	Harding Lake	81.52	357	*e*P	P	19 49 34.2	+0.6
	comp=Z,16nm,0.8s						
O49A	Covington	81.58	313	P	P	19 49 34.1	-0.1
	baz=52						
D37A	Cotton	81.60	322	P	P	19 49 34.1	-0.2
	baz=48						
P50A	Jamestown	81.61	312	P	P	19 49 34.3	-0.1
	baz=52						
F39A	Loretta	81.65	321	P	P	19 49 34.7	+0.1
	baz=49						
Q51A	Peebles	81.68	312	P	P	19 49 34.5	-0.3
	baz=52						
G40A	Rib Lake	81.70	320	P	P	19 49 34.9	0.0
	baz=49						
G40A	Rib Lake	81.70	320	*e*P	P	19 49 35.9	+1.1
	comp=Z,6.9nm,0.8s						
SCRK	Sand Creek	81.78	355	*e*P	P	19 49 36.5	+1.4
	comp=Z,8.2nm,1.0s						
B34A	Aery, Baudette	81.80	324	P	P	19 49 34.6	-0.7
	baz=46						
H41A	Junction City	81.83	319	P	P	19 49 35.3	-0.2
	baz=49						
A33A	Warroad	81.84	325	P	P	19 49 34.9	-0.6
	baz=46						
I42A	Draeger Farm,	81.89	318	P	P	19 49 35.7	-0.2
	baz=50						
J43A	Natural Harves	81.95	318	P	P	19 49 36.3	+0.1
	baz=50						
BPAW	Bear Paw Mtn.	81.98	358	*e*P	P	19 49 36.6	+0.6
	comp=Z,12nm,0.8s						
RIDG	Independ'e Rid	82.07	356	*e*P	P	19 49 37.9	+1.4
	comp=Z,10.0nm,0.9s						
F38A	Pierce - Schro	82.12	321	P	P	19 49 36.7	-0.3
	baz=48						
G39A	Holcombe	82.20	320	P	P	19 49 36.7	-0.8
	baz=48,SNR=6.1						
P49A	Miami Univ. Ec	82.21	313	P	P	19 49 36.8	-0.8
	baz=52						
H40A	Chili	82.22	319	P	P	19 49 37.4	-0.2
	baz=49						
R51A	Hillsboro	82.27	311	P	P	19 49 37.6	-0.4
	baz=52						
MCK	McKinley	82.29	357	*e*P	P	19 49 38.5	+0.9
	comp=Z,12nm,0.9s						
MCK	McKinley	82.29	357	*e*P	P	19 49 38.5	+0.9
MCK				pmax	pmax		
	comp=Z,12nm,0.9s						
I41A	Arkdale	82.31	319	P	P	19 49 38.1	+0.1
	baz=49						
K43A	Burlington	82.33	317	P	P	19 49 37.6	-0.6
	baz=50						
J42A	Columbus	82.38	318	P	P	19 49 37.8	-0.7
	baz=50						
AGMN	Agassiz Nation	82.51	325	P	P	19 49 38.3	-0.7
	baz=46						
AGMN	Agassiz Nation	82.51	325	*e*P	P	19 49 39.6	+0.5
	comp=Z,13nm,1.5s						
TRF	Thorofare Moun	82.61	358	*e*P	P	19 49 40.4	+0.9
	comp=Z,14nm,0.8s						
G38A	Ridgeland	82.64	321	P	P	19 49 39.2	-0.5
	baz=48						
O47A	Sheridan	82.65	314	P	P	19 49 39.2	-0.7
	baz=51						
H39A	Augusta	82.67	320	P	P	19 49 39.2	-0.7
	baz=48						
F37A	Hinrichs Farm,	82.67	321	P	P	19 49 39.7	-0.2
	baz=48						
CAST	Castle Rocks	82.69	359	*e*P	P	19 49 40.3	+0.7
	comp=Z,12nm,1.0s						
U53A	Fall Branch	82.81	309	P	P	19 49 40.8	0.0
	baz=53						
J41A	Loganville	82.84	318	P	P	19 49 40.3	-0.6
	baz=49						
C33A	Trail	82.85	324	P	P	19 49 40.6	-0.2
	baz=46						
K42A	Prairie Point,	82.86	318	P	P	19 49 40.7	-0.2
	baz=49						
F36A	Milaca	83.04	322	P	P	19 49 41.2	-0.6
	baz=47						
F36A	Milaca	83.04	322	*e*P	P	19 49 42.5	+0.7
	comp=Z,5.9nm,0.8s						
NHSC	New Hope	83.18	305	P	P	19 49 42.1	-0.6
	baz=54						
H38A	Maiden Rock	83.20	320	P	P	19 49 42.0	-0.7
	baz=48						
Q48A	North Vernon	83.20	313	P	P	19 49 42.1	-0.6
	baz=51						
PPLA	Purkeypile	83.21	359	*e*P	P	19 49 43.8	+1.3
	comp=Z,18nm,0.8s						
J40A	Soldiers Grove	83.22	319	P	P	19 49 42.6	-0.2
	baz=49						
R49A	Shelbyville	83.26	312	P	P	19 49 42.8	-0.3
	baz=51						
JFWS	Jewell Farm	83.27	318	P	P	19 49 42.7	-0.3
	baz=49						
T51A	Gray	83.31	310	P	P	19 49 43.0	-0.4
	baz=52						
I39A	Houston	83.34	319	P	P	19 49 43.0	-0.5
	baz=48						
ASAJ	Asahikawa	83.44	40	P	P	19 49 45.1	+1.2
	comp=Z,4.5nm,0.6s,baz=320,slow=10,SNR=4.8						
S49A	Springfield	83.65	312	P	P	19 49 44.9	-0.1
	baz=51						
PETK	Petropavlovsk-	83.72	27	P	P	19 49 44.8	-0.4
	comp=Z,1.2nm,0.7s,baz=288,slow=0.5						
PETK				LR	LR	20 32 40.1	
	comp=Z,40nm,18.5s,baz=299,slow=40						
U51A	La Follette	83.72	310	P	P	19 49 45.2	-0.4
	baz=52						
V52A	Sevierville	83.78	309	P	P	19 49 45.7	-0.1
	baz=52						
J39A	Decorah	83.79	319	P	P	19 49 45.6	-0.2
	baz=48						
T50A	Nancy	83.84	311	P	P	19 49 46.0	-0.1
	baz=52						
N43A	Stutzman Famil	83.95	316	P	P	19 49 46.6	0.0
	baz=49						
L41A	Preston	83.96	318	P	P	19 49 46.6	0.0
	baz=49						
P45A	Graceland, Par	84.03	314	P	P	19 49 46.5	-0.5
	baz=50						
SCM	Sheep Creek Mo	84.11	356	*e*P	P	19 49 48.7	+1.6
	comp=Z,13nm,0.8s						
SKT	Skwentna	84.12	358	*e*P	P	19 49 47.3	+0.3
	comp=Z,13nm,0.7s						
SML	Sawmill	84.19	357	*e*P	P	19 49 48.7	+1.2
	comp=Z,13nm,0.9s						
SML	Sawmill	84.19	357	*e*P	P	19 49 48.7	+1.2
SML				pmax	pmax		
	comp=Z,13nm,0.9s						
S48A	Wiedeman Farm,	84.20	312	P	P	19 49 47.3	-0.6
	baz=51						
J38A	Wedel Dairy, R	84.22	320	P	P	19 49 47.6	-0.3
	baz=48						
U50A	Jamestown	84.22	310	P	P	19 49 47.6	-0.5
	baz=51						
T49A	Edmonton	84.22	311	P	P	19 49 48.3	+0.3
	baz=51						
I37A	Lemond, Waseca	84.23	320	P	P	19 49 47.8	-0.2
	baz=47						
K39A	Oelwein	84.31	319	P	P	19 49 47.1	-1.3
	baz=48						
L40A	Anamosa	84.37	318	P	P	19 49 47.9	-0.8
	baz=48						
L40A	Anamosa	84.37	318	*e*P	P	19 49 49.6	+0.9
	comp=Z,17nm,0.8s						
Y54A	Tignall	84.40	307	P	P	19 49 48.3	-0.7
	baz=52						
H35A	Sunnyside Ranc	84.51	322	P	P	19 49 48.9	-0.5
	baz=46						
N42A	Yates City	84.52	316	P	P	19 49 49.1	-0.4
	baz=49						
SUA	Susitna One	84.62	358	*e*P	P	19 49 50.9	+1.2
	comp=Z,18nm,0.7s						
Q45A	Warren Harvey,	84.68	314	P	P	19 49 50.2	-0.1
	baz=50						
X52A	Dahlonega	84.74	309	P	P	19 49 50.0	-0.8
	baz=52						
S47A	Hartford	84.74	312	P	P	19 49 49.4	-1.3
	baz=50						
U49A	Red Boiling Sp	84.75	311	P	P	19 49 50.5	-0.2
	baz=51						
T48A	Bowling Green	84.75	312	P	P	19 49 49.9	-0.9
	baz=51						
L39A	Vinton	84.76	318	P	P	19 49 50.1	-0.6
	baz=48						
J37A	Redenius Farm,	84.80	320	P	P	19 49 50.6	-0.2
	baz=47,SNR=7.8						
BMRM	Bremner River	84.81	355	*e*P	P	19 49 52.0	+1.3
	comp=Z,5.2nm,0.8s						
V50A	Pikevile	84.85	310	P	P	19 49 51.1	-0.1
	baz=51						
RC01	Rabbit Creek A	84.96	358	*e*P	P	19 49 52.5	+1.2
	comp=Z,18nm,0.8s						
P43A	Skaggs, Pawnee	85.00	315	P	P	19 49 51.7	-0.3
	baz=49						
155A	Kite	85.01	306	P	P	19 49 52.5	+0.4
	baz=52						
SVW2	Sparrevohn	85.04	0	*e*P	P	19 49 53.2	+1.5
	comp=Z,8.6nm,0.8s						
N41A	Harden Midland	85.07	317	P	P	19 49 52.2	0.0
	baz=48						
R45A	Skylar, Fairfi	85.15	314	P	P	19 49 52.6	-0.1
	baz=50						
Q44A	Meyer Farm, Va	85.19	314	P	P	19 49 52.6	-0.3
	baz=49						
GOGA	Godfrey	85.19	307	P	P	19 49 53.1	+0.1
	baz=52						
S46A	Don Dixon Farm	85.20	313	P	P	19 49 52.6	-0.4
	baz=50						
J36A	Seneca 1, Swea	85.20	320	P	P	19 49 52.8	-0.1
	baz=46,SNR=14						
J36A	Seneca 1, Swea	85.20	320	*e*P	P	19 49 54.1	+1.2
	comp=Z,44nm,0.6s						
K37A	Belmond	85.22	320	P	P	19 49 52.4	-0.6
	baz=47						
T47A	Sharon Grove	85.27	312	P	P	19 49 52.4	-1.0
	baz=50						
L38A	Oak Wood Farm,	85.28	319	P	P	19 49 52.9	-0.4
	baz=47						
M39A	Webster	85.29	318	P	P	19 49 52.8	-0.6
	baz=48						
V49A	McMinnville	85.30	310	P	P	19 49 53.4	-0.1
	baz=51						
N40A	Mertquake, Sal	85.36	317	P	P	19 49 53.3	-0.4
	baz=48						
RAGM	Ragged Mountai	85.39	355	*e*P	P	19 49 55.3	+1.8
	comp=Z,9.1nm,1.0s						
DLBC	Dease Lake	85.42	347	*e*P	P	19 49 56.1	+2.3
	comp=Z,19nm,1.8s						
G32A	Webster	85.46	323	P	P	19 49 53.4	-0.7
	baz=44						
G32A	Webster	85.46	323	*e*P	P	19 49 55.4	+1.2
	comp=Z,25nm,0.9s						
O41A	Passleys Farm,	85.48	316	P	P	19 49 53.8	-0.5
	baz=48						
Q43A	New Douglas	85.57	315	P	P	19 49 54.4	-0.3
	baz=49						
RSO	Redoubt South	85.66	359	*e*P	P	19 49 55.7	+0.6
L37A	Phoenix Point,	85.72	319	P	P	19 49 54.8	-0.6
	baz=47,SNR=5.6						
T46A	Princeton	85.72	312	P	P	19 49 55.3	-0.2
	baz=50						
S45A	Carrier Mills	85.73	313	P	P	19 49 55.3	-0.2
	baz=50						
U47A	Clarksville	85.73	312	P	P	19 49 55.4	-0.2
	baz=50						
K36A	Gilmore City	85.74	320	P	P	19 49 55.2	-0.3
	baz=46						
P41A	Barry, Barry	85.87	316	P	P	19 49 56.4	+0.1
	baz=48						
N39A	Derby Farms, D	85.88	318	P	P	19 49 56.2	-0.1
	baz=47						
MAT	Matsushiro	85.89	48	P	P	19 49 57.0	+0.6
MJAR	Matsushiro Arr	85.89	48	P	P	19 49 57.3	+0.9
	comp=Z,4.1nm,0.8s,baz=314,slow=4.3,SNR=15						
M38A	Pleasantville	85.90	318	P	P	19 49 55.3	-1.0
	baz=47						
Y51A	Rockmart	85.93	309	P	P	19 49 55.8	-0.9
	baz=51						
W49A	Belvidere	85.93	310	P	P	19 49 55.9	-0.7
	baz=51						
Z52A	Williamson	85.95	308	P	P	19 49 56.3	-0.5
	baz=51						
X50B	Fort Payne	85.96	309	P	P	19 49 56.6	-0.3
	baz=51						
254A	Abbeville	85.97	306	P	P	19 49 56.1	-0.8
	baz=52						
O40A	La Belle	86.04	317	P	P	19 49 56.9	-0.2
	baz=48						
Q42A	Golden Eagle	86.08	315	P	P	19 49 56.9	-0.4
	baz=48						
ECSD	EROS Data Cent	86.10	322	P	P	19 49 56.6	-0.7
	baz=45						
ECSD	EROS Data Cent	86.10	322	*e*P	P	19 49 58.1	+0.7
	comp=Z,9.8nm,0.8s						
S44A	Carbondale	86.12	314	P	P	19 49 56.5	-1.0
	baz=49						
R43A	Red Bud	86.14	314	P	P	19 49 57.5	-0.2
	baz=49						
DGMT	Dagmar	86.16	329	P	P	19 49 56.5	-1.1
	baz=40						
L36A	Harm Buss Farm	86.23	320	P	P	19 49 57.5	-0.5
	baz=46						
WVT	Waverly	86.27	312	P	P	19 49 57.4	-0.9
	baz=50						
WVT	Waverly	86.27	312	*e*P	P	19 49 58.7	+0.4
	comp=Z,5.2nm,0.7s						
WVT	Waverly	86.27	312	*e*P	P	19 49 58.7	+0.4
WVT				pmax	pmax		
	comp=Z,5.0nm,0.7s						
V47A	Nunnelly	86.27	311	P	P	19 49 57.2	-1.1
	baz=50						
JIS	Juneau Island	86.31	349	*e*P	P	19 50 00.2	+2.3
	comp=Z,6.8nm,0.7s						
BRLK	Bradley Lake	86.32	358	*e*P	P	19 49 59.4	+1.3
	comp=Z,13nm,0.4s						
W48A	Pulaski	86.34	311	P	P	19 49 58.7	0.0
	baz=50						
N38A	Joes South For	86.35	318	P	P	19 49 57.7	-0.9
	baz=47						
X49A	Woodville	86.36	310	P	P	19 49 58.9	+0.1
	baz=50						
758A	Lake Helen	86.36	303	P	P	19 49 59.0	+0.2
	baz=53						
Y50A	Piedmont	86.37	309	P	P	19 49 58.5	-0.3
	baz=51						
M37A	Trindle Farm,	86.38	319	P	P	19 49 58.0	-0.7
	baz=46						
Q41A	Truxton	86.45	316	P	P	19 49 59.5	+0.4
	baz=48						
253A	Americus	86.46	307	P	P	19 49 59.7	+0.4
	baz=52						
152A	Waverly Hall	86.47	307	P	P	19 49 59.2	-0.2
	baz=51						
P40A	Paris	86.54	317	P	P	19 49 59.5	0.0
	baz=48						
P40A	Paris	86.54	317	*e*P	P	19 50 00.7	+1.1
	comp=Z,5.9nm,0.8s						
556A	Lake Butler	86.56	304	P	P	19 49 59.5	-0.3
	baz=52						
FVM	French Village	86.63	315	*e*P	P	19 50 02.3	+2.3
	comp=Z,12nm,0.6s						
FVM	French Village	86.63	315	*e*P	P	19 50 02.3	+2.3
FVM				pmax	pmax		
	comp=Z,12nm,0.6s						
R42A	Luebbering	86.65	315	P	P	19 49 60.0	-0.1
	baz=48						
V46A	Holladay	86.66	312	P	P	19 49 59.9	-0.3
	baz=50						
W47A	Westpoint	86.69	311	P	P	19 50 00.4	0.0
	baz=50						
S43A	Fulton Ridge,	86.69	314	P	P	19 50 00.3	0.0
	baz=49						
859A	Kempfer Cattle	86.69	302	P	P	19 50 00.5	0.0
	baz=53						
U45A	Rockin P Farm,	86.70	312	P	P	19 49 59.9	-0.5
	baz=49						
M36A	Felix, Anita	86.75	319	P	P	19 50 00.4	-0.2
	baz=46						
Y49A	Blount Mountai	86.83	309	P	P	19 50 00.4	-0.8
	baz=50						
X48A	Hartselle	86.85	310	P	P	19 50 01.1	-0.1
	baz=50						
X48A	Hartselle	86.85	310	*e*P	P	19 50 02.1	+1.0
	comp=Z,7.0nm,0.8s						
Z50A	Ashland	86.89	309	P	P	19 50 01.7	+0.2
	baz=51						
N37A	Lee Faris, Mou	86.91	319	P	P	19 50 01.1	-0.3
	baz=46						
N37A	Lee Faris, Mou	86.91	319	*e*P	P	19 50 02.5	+1.1
	comp=Z,18nm,0.6s						
Q40A	Laux Farm, Aux	86.91	316	P	P	19 50 01.2	-0.2
	baz=48						
O38A	Galt	86.94	318	P	P	19 50 01.4	-0.1
	baz=47						
454A	Quitman	86.96	305	P	P	19 50 02.2	+0.4
	baz=52						
P39B	Salisbury	86.97	317	P	P	19 50 02.0	+0.3
	baz=47						
R41A	Rosebud	86.98	315	P	P	19 50 02.0	+0.3
	baz=48						
S42A	Caledonia	86.99	315	P	P	19 50 02.2	+0.4
	baz=48						
DWPF	Disney Wildern	87.04	302	P	P	19 50 01.6	-0.6
	baz=53						
CCM	Cathedral Cave	87.06	315	P	P	19 50 02.6	+0.4
	baz=48						
CCM	Cathedral Cave	87.06	315	*e*P	P	19 50 03.9	+1.8
	comp=Z,10nm,0.6s						
CCM	Cathedral Cave	87.06	315	*e*P	P	19 50 03.9	+1.8
CCM				pmax	pmax		
	comp=Z,10.0nm,0.6s						
P38A	Dawn	87.31	317	P	P	19 50 03.0	-0.3
	baz=47						
Z49A	Columbiana	87.33	309	P	P	19 50 03.3	-0.2
	baz=50						
150A	Eclectic	87.37	308	P	P	19 50 03.7	0.0
	baz=51						
Q39A	Willow Grove F	87.39	317	P	P	19 50 03.7	0.0

	baz=47						
R40A	Maddies Statio	87.50	316	P	P	19 50 04.1	-0.2
	baz=47						
R40A	Maddies Statio	87.50	316	*e*P	P	19 50 05.4	+1.1
	comp=Z,10.0nm,0.8s						
T42A	Van Buren	87.66	314	P	P	19 50 04.6	-0.4
	baz=48						
T42A	Van Buren	87.66	314	*e*P	P	19 50 05.8	+0.8
	comp=Z,6.5nm,0.8s						
S41A	Jillco Farms,	87.67	315	P	P	19 50 04.8	-0.3
	baz=48						
LRAL	Lakeview Retre	87.73	309	P	P	19 50 05.5	+0.1
	baz=50						
LRAL	Lakeview Retre	87.73	309	*e*P	P	19 50 06.5	+1.0
	comp=Z,16nm,1.0s						
X46A	Booneville	87.75	311	P	P	19 50 05.2	-0.3
	baz=49						
P37A	Lathrop	87.79	318	P	P	19 50 05.3	-0.3
	baz=46						
Q38A	Cooks Store, C	87.81	317	P	P	19 50 05.6	-0.2
	baz=46						
Z48A	Northport	87.87	309	P	P	19 50 05.9	-0.2
	baz=50						
149A	Jones	87.87	308	P	P	19 50 05.6	-0.5
	baz=50						
R39A	Chumby, Stover	87.93	316	P	P	19 50 06.3	0.0
	baz=47						
T41A	Mountain View	88.05	315	P	P	19 50 06.4	-0.5
	baz=48						
S40A	Lebanon	88.10	315	P	P	19 50 06.7	-0.4
	baz=47						
KDAK	Kodiak Island	88.35	359	*i* P	P	19 50 09.5	+1.6
Y46A	Houston	88.37	311	P	P	19 50 07.5	-1.0
	baz=49						
LAO	LASA Array	88.41	329	P	P	19 50 08.1	-0.4
	baz=38						
LAO	LASA Array	88.41	329	*e*P	P	19 50 10.4	+1.9
	comp=Z,16nm,0.8s						
R38A	Fenwick Farm,	88.51	317	P	P	19 50 07.8	-1.2
	baz=46						
V41A	Mountainview	89.13	314	P	P	19 50 11.1	-0.9
	baz=47						
RSSD	Black Hills	89.43	326	P	P	19 50 12.3	-1.2
	baz=40						
T38A	Diamond	89.53	316	P	P	19 50 12.8	-1.1
	baz=46						
JTMT	Jette	90.73	334	*e*P	P	19 50 21.4	+2.0
	comp=Z,9.3nm,1.1s						
MIAR	Mount Ida	90.82	314	P	P	19 50 19.6	-0.3
	baz=46						
RLMT	Red Lodge	90.94	330	P	P	19 50 19.7	-0.9
	baz=36						
BOZ	Bozeman (W)	91.52	331	P	P	19 50 22.0	-1.1
	baz=34						
545A	Edgard	91.93	309	P	P	19 50 24.4	-0.7
	baz=48						
PHWY	Pilot Hill	92.27	325	*e*P	P	19 50 27.4	+0.5
	comp=Z,6.3nm,0.8s						
544A	White Castle	92.32	309	P	P	19 50 25.8	-1.1
	baz=48						
N23A	Red Feather La	92.82	325	P	P	19 50 28.7	-0.8
	baz=39						
BW06	Boulder Array	92.97	328	P	P	19 50 29.1	-1.0
	baz=36						
PDAR	Pinedale Array	92.97	328	P	P	19 50 30.0	0.0
	comp=Z,1.2nm,0.7s,baz=55,slow=5.5,SNR=7.5						
PDAR				LR	LR	20 33 54.8	
	comp=Z,74nm,20.6s,baz=45,slow=36						
PDAR	Pinedale Array	92.97	328	*e*P	P	19 50 29.2	-0.9
HTW	Haystack Looko	93.19	338	*e*P	P	19 50 32.3	+1.6
LON	Longmire	94.14	338	*e*P	P	19 50 36.2	+1.2
	comp=Z,16nm,0.8s						
LON	Longmire	94.14	338	*e*P	P	19 50 36.3	+1.2
LON				pmax	pmax		
	comp=Z,16nm,0.8s						
HWUT	Hardware Ranch	94.78	329	*e*P	P	19 50 38.9	+0.6
	comp=Z,4.1nm,0.8s						
SDCO	Great Sand Dun	95.05	323	P	P	19 50 39.1	-0.7
	baz=39						
SDCO	Great Sand Dun	95.05	323	*e*P	P	19 50 40.0	+0.2
	comp=Z,2.0nm,1.0s						
S22A	4UR Ranch, Cre	95.71	324	*e*P	P	19 50 43.6	+0.8
	comp=Z,3.0nm,0.4s						
TMUT	Trail Mountain	96.52	327	*e*pP	pP	19 50 58.5	+1.9
I04A	Tendick Farm,	96.97	337	P	P	19 50 47.5	-0.6
	baz=26						
ANMO	Albuquerque	97.71	322	LR	LR	20 36 47.4	
	comp=Z,42nm,19.6s,baz=21,slow=36						
YBH	Yreka Blue Hor	98.92	336	LR	LR	20 37 36.8	
	comp=Z,43nm,21.9s,baz=9.0,slow=37						
WRA	Warramunga Arr	116.38	97	PKP	PKPdf	19 56 00.6	+0.2
	comp=Z,0.4nm,0.8s,baz=315,slow=1.4,SNR=4.7						
ASAR	Alice Springs	117.77	101	PKP	PKPdf	19 56 03.4	+0.3
	comp=Z,0.3nm,0.4s,baz=330,slow=0.9,SNR=6.8						
QSPA	South Pole Qui	124.06	180	PKP	PKPdf	19 56 14.5	+0.7
	comp=Z,1.0nm,0.5s,baz=286,slow=3.1,SNR=4.9						

MAN 18 19:55:03.3, 13°.70N×120°.68E, h157^{km}, mb4.2, ML3.0, MS2.7, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PGP	Puerto Galera	0.33	126	⇑*e*P	Pn	19 55 25.5	+0.6
PGP				*i* S	Sn	19 55 43.4	+2.2
LUBP	Lubang	0.42	275	*e*P	Pn	19 55 26.8	+1.8
LUBP				*e*S	Sn	19 55 43.4	+1.7
SJMP	San Jose	1.30	161	*e*P	Pn	19 55 31.7	+0.2
BUSP	Coron	1.75	196	*e*P	Pn	19 55 36.7	+0.7
SCZP	Santa Cruz	2.20	340	*e*P	Pn	19 55 41.8	+0.7
BOLP	Bolinao	2.77	345	*e*P	Pn	19 55 48.5	+0.4

MEX 18 19:59:11.4±0.7, 17°.30N×100°.67W, h17^{km}±171^{km}, MD3.9, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.46	123	*e*P	Pg	19 59 18.8	-1.9
CAIG				*e*S	Sg	19 59 25.8	-1.1
ZIIG	Zihuatanejo	0.82	292	*e*P	Pb	19 59 24.7	-2.4
ZIIG				*e*S	Sb	19 59 34.0	-3.8
ARIG	Puente Sto Nin	1.02	17	*e*P	Pb	19 59 27.3	-3.4
ARIG				*i* S	Sb	19 59 39.9	-3.9
MEIG	Mezcala	1.18	58	*e*P	Pn	19 59 29.6	-3.6
MEIG				*e*S	Sb	19 59 43.2	-5.2
PLIG	Platanillo	1.56	45	*e*P	Pn	19 59 35.2	-3.2
PLIG				*i* S	Sn	19 59 53.9	-4.3
TLIG	Tlapa	2.03	82	*e*P	Pn	19 59 41.3	-3.6
TLIG				*i* S	Sn	20 00 05.4	-4.5
PNIG	Pinotepa	2.60	110	*e*P	Pn	19 59 50.0	-2.7
PNIG				*i* S	Sn	20 00 19.8	-4.0

KRSC 18 20:09:47.9±1.3, 50°.97N×158°.14E, h46^{km}±17^{km}, ML3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KDTR	Khodutka, Kamc	0.84	357	*e*P	Pn	20 10 04.7	+1.3
KDTR				*e*S	Sn	20 10 15.2	+0.5
PAU	Pauzhetka	0.97	301	*e*P	Pn	20 10 06.7	+1.6
PAU				*e*S	Sn	20 10 18.5	+0.7
SKR	Severo-Kuril’s	1.31	258	*e*P	Pn	20 10 11.2	+1.4
SKR				*e*S	Sn	20 10 26.8	+0.7
ASAK	Asacha	1.43	354	*e*P	Pn	20 10 13.1	+1.7
ASAK				*e*S	Sn	20 10 30.2	+1.2
RUS	Russkaya	1.48	9	*e*P	Pn	20 10 13.4	+1.3
RUS				*e*S	Sn	20 10 30.6	+0.3
MTVR	Mutnovka	1.52	1	*e*P	Pn	20 10 14.5	+1.8
MTVR				*e*S	Sn	20 10 32.4	+1.1
MIPR	Malaya Ipel’ka	1.57	327	*e*P	Pn	20 10 15.4	+2.1
GRL	Gorelyy	1.59	359	*e*P	Pn	20 10 15.9	+2.2
GRL				*e*S	Sn	20 10 34.7	+1.7
KRMR	Karymshinskiy	1.86	360	*e*P	Pn	20 10 19.7	+2.4
KRMR				*e*S	Sn	20 10 42.9	+3.3
APC	Apacha	2.05	343	*e*P	Pn	20 10 22.4	+2.5
PET	Petropavlovsk	2.08	9	*e*P	Pn	20 10 22.9	+2.6
PET				*e*S	Sn	20 10 46.6	+1.6
UGLR	Uglovaya	2.28	10	*e*P	Pn	20 10 25.9	+2.7
AVH	Avacha	2.33	9	*e*P	Pn	20 10 27.5	+3.7
AVH				*e*S	Sn	20 10 56.0	+4.8
SMAR	Somma	2.33	10	*e*P	Pn	20 10 27.4	+3.4
KOK	Koryaka	2.35	7	*e*S	Sn	20 10 55.9	+4.2
SDLR	Sedlovina	2.36	11	*e*P	Pn	20 10 26.4	+2.2
KRX	Arik	2.42	7	*e*P	Pn	20 10 28.0	+3.0
KRX				*e*S	Sn	20 10 57.6	+4.2
SPN	Mys Shipunski	2.43	28	*e*P	Pn	20 10 28.0	+2.9
SPN				*e*S	Sn	20 10 57.1	+3.6
GNL	Ganaly	2.73	358	*e*P	Pn	20 10 32.3	+2.9
GNL				*e*S	Sn	20 11 06.4	+5.2
MKZ	Mys Kozlova	4.20	30	*e*P	Pn	20 10 52.5	+3.1
KBTR	Krutoberegovo	5.94	26	*e*P	Pn	20 11 17.2	+4.0

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*NIED **18** 20:38:00, 37°.00N×141°.40E, h5^{km}, Mw3.9 Best double couple: $M_0$8.87000×10^{14} NP1:ϕ_s25.00000°, δ39.00000°, λ-88.00000°. NP2:ϕ_s203.00000°, δ51.00000°, λ-92.00000°.*

*ISCJB **18** 20:38:20.5±1.0, 36°.94N±0°.04×141°.43E±0°.06, h19^{km}±6^{km}, mb3.9/17, MS3.0/6, Error ellipse: s-maj=7.6km s-min=6.0km az=13.5*

*JMA **18** 20:38:21.5±0.1, 36°.95N×141°.35E, h27^{km}±1^{km}, M4.2*

JMA Felt I J1.

*IDC **18** 20:38:27.9±2.3, 36°.91N×140°.96E, h57^{km}±21^{km}, mb3.7/17, mb1 3.8/20, mb1mx3.7/68, mbtmp4.0/20, ML3.5/2, MS3.0/11, Ms1 3.0/11, ms1mx2.7/66, Error ellipse: s-maj=17.9km s-min=12.1km az=78.0*

ISC 18 20:38:22.1±1.6, **36°.96N**±0°.04×**141°.31E**±0°.05, **h14**^{km}±9^{km}, **n44, σ1^s.16**/43, **mb4.0**/17, **MS3.0**/6, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.43	289	P	Pg	20 38 30.9	+0.2
ONAJ				*e*S	Sb	20 38 37.5	-0.3
JFK	Kawauchi	0.53	320	P	Pg	20 38 32.6	0.0
JFK				S	Sb	20 38 40.4	-0.3
JFFD	Fukushimafurud	0.61	282	P	Pb	20 38 33.8	-0.7
JFFD				*e*S	Sb	20 38 42.5	-0.5
JHO	Hitachi	0.69	240	P	Pb	20 38 35.0	-0.8
JHO				S	Sb	20 38 45.0	-0.2
JFT	Otama	0.95	306	P	Pb	20 38 40.1	-0.3
JFT				S	Sg	20 38 53.3	+0.3
JMM	Marumori	0.99	336	P	Pb	20 38 39.9	-1.1
JMM				S	Sb	20 38 53.4	-0.5
JSB	Shiboa	1.11	271	P	Pb	20 38 42.9	-0.2
JSB				S	Sn	20 38 58.3	0.0
JFY	Yanaizu	1.35	290	P	Pn	20 38 46.4	-0.2
JFY				S	Sb	20 39 04.7	+0.3
MJAR	Matsushiro Arr	2.52	261	P	Pn	20 39 03.1	+0.4
	8.3nm,0.3s,baz=91,slow=14,SNR=143						
MJAR				S	Sn	20 39 35.1	+2.0
	14nm,0.3s,baz=71,slow=14,SNR=5.6						
MJAR				LR	LR	20 40 16.0	
	comp=Z,307nm,18.9s,baz=65,slow=49						
MAT	Matsushiro	2.52	261	P	Pn	20 39 03.5	+0.8
MAT				*e*S	Sn	20 39 34.8	+1.6
JHJ	Hachijo jima 2	4.03	198	P	Pn	20 39 25.0	+1.6
	18nm,0.3s,baz=266,slow=22,SNR=7.8						
JHJ				S	Sn	20 40 10.1	-0.3
	18nm,0.3s,baz=60,slow=23,SNR=6.8						
JNU	Nakatsue	9.37	249	LR	LR	20 44 40.4	
	comp=Z,72nm,18.3s,baz=128,slow=41						
JCJ	Chichijima	9.87	175	P	Pn	20 40 41.7	-1.8
	3.3nm,0.3s,baz=293,slow=18,SNR=3.5						
JCJ				S	Sn	20 42 20.6	-13
	1.5nm,0.3s,baz=311,slow=19,SNR=2.4						
USRK	Ussuriysk Ar.	10.12	318	LR	LR	20 44 14.0	
	comp=Z,107nm,20.8s,baz=142,slow=35						
KSRS	Korea Array	10.69	277	P	Pn	20 40 57.7	+3.1
	0.1nm,0.3s,baz=90,slow=13,SNR=5.2						
KSRS				LR	LR	20 44 41.4	
	comp=Z,103nm,19.8s,baz=105,slow=36						
KLR	Kul’dur	14.09	333	LR	LR	20 46 23.9	
	comp=Z,5.7nm,18.6s,baz=146,slow=34						
PETK	Petropavlovsk-	19.79	30	P	Pn	20 42 55.6	+2.3
	baz=226,slow=9.5						
GUMO	Guam	23.49	171	LR	LR	20 52 15.2	
	comp=Z,22nm,21.2s,baz=28,slow=35						
YAK	Yakutsk	26.12	348	LR	LR	20 53 37.4	
	comp=Z,30nm,18.9s,baz=124,slow=35						
SONM	Songino Array	27.75	304	P	P	20 44 10.2	-0.1
	0.9nm,0.6s,baz=104,slow=9.3,SNR=3.3						
SONM				LR	LR	20 55 10.3	
	comp=Z,41nm,21.4s,baz=228,slow=36						
H11N2	WAKE ISLAND Hy	28.19	121	T	T	21 13 43.8	
	baz=313,slow=76,SNR=369						
H11N1	WAKE ISLAND Hy	28.19	121	T	T	21 13 44.6	
	baz=313,slow=76,SNR=324						
H11N3	WAKE ISLAND Hy	28.20	121	T	T	21 13 41.6	
	baz=313,slow=76,SNR=260						
H11S1	WAKE ISLAND Hy	28.89	123	T	T	21 14 37.1	
	baz=312,slow=74						
H11S3	WAKE ISLAND Hy	28.89	123	T	T	21 14 36.4	
	baz=312,slow=74						
H11S2	WAKE ISLAND Hy	28.91	123	T	T	21 14 37.5	
	baz=312						
CMAR	Chiang Mai Arr	41.39	255	LR	LR	21 05 51.7	
	comp=Z,19nm,18.9s,baz=190,slow=40						
ZALV	Zalesovo Beam	41.90	312	P	P	20 46 10.5	-1.3
	2.4nm,0.7s,baz=100,slow=7.5,SNR=8.5						
ZALV				LR	LR	21 04 12.4	
	comp=Z,32nm,18.4s,baz=244,slow=37						
MKAR	Makanchi Array	44.08	302	P	P	20 46 28.6	-1.0
	1.7nm,0.7s,baz=89,slow=10.0,SNR=21						
KURBB	Kurchatov Arra	45.98	308	P	P	20 46 43.4	-1.2
	4.0nm,0.9s,baz=83,slow=7.9,SNR=21						
ILAR	Eielson Array	49.60	32	P	P	20 47 13.4	+1.0
	0.9nm,0.7s,baz=265,slow=6.8,SNR=7.2						
BVAR	Borovoye Array	50.56	312	P	P	20 47 18.2	-1.7
	0.5nm,0.5s,baz=90,slow=5.9,SNR=3.3						
BVAR				LR	LR	21 09 29.8	
	comp=Z,26nm,18.0s,baz=283,slow=37						
FITZ	Fitzroy Crossi	56.72	198	P	P	20 48 04.3	-1.1
	2.5nm,0.9s,baz=0.0,slow=13,SNR=4.3						
WRA	Warramunga Arr	56.98	188	P	P	20 48 06.9	-0.3
	1.8nm,0.6s,baz=4.0,slow=7.2,SNR=44						
ASAR	Alice Springs	60.70	188	P	P	20 48 33.3	+0.2
	1.1nm,0.8s,baz=13,slow=5.8,SNR=7.7						
FINES	FINESS Array B	68.84	332	P	P	20 49 25.8	+0.2
	2.2nm,0.8s,baz=34,slow=14,SNR=5.0						
HFS	Hagfors	74.12	336	P	P	20 49 57.3	-0.2
	0.8nm,0.7s,baz=28,slow=6.5,SNR=3.4						
AKASG	Malin Array Be	74.30	322	P	P	20 49 57.4	-1.4
	1.3nm,0.6s,baz=50,slow=6.1,SNR=5.0						
NVAR	Mina Array Bea	75.10	53	P	P	20 50 06.4	+2.5
	0.5nm,0.2s,baz=279,slow=6.2,SNR=4.0						
PDAR	Pinedale Array	77.78	45	P	P	20 50 20.5	+1.4
	0.3nm,0.6s,baz=250,slow=2.6,SNR=3.1						
BRTR	Keskin Array B	78.83	311	P	P	20 50 25.1	+0.3
	0.5nm,0.7s,baz=90,slow=5.8,SNR=3.0						
ASF	Jabal al Asfar	81.47	304	P	P	20 50 37.8	-1.4
	1.4nm,0.6s,baz=18,slow=3.2,SNR=3.4						
GERES	GERESS Array B	82.73	328	P	P	20 50 45.4	0.0
	0.5nm,0.6s,baz=90,slow=2.0,SNR=2.8						
LPAZ	La Paz	146.80	60	PKPbc	PKPbc	20 58 04.6	-0.4
	0.9nm,0.7s,baz=246,slow=5.4,SNR=4.2						

SJA 18 21:00:59.4±0.5, 31°.19S×68°.71W, h108^{km}±2^{km}, ML2.5, MW3.7, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTLL	Cerro Villicun	0.24	125	*i* P	Pn	21 01 15.4	+0.7
RTLL				*i* S	Sn	21 01 26.7	+0.5
AMOG	MOGNA	0.31	36	*i* P	Pn	21 01 15.9	+0.9
RTCV	Cerro Valdivia	0.69	168	*i* P	Pn	21 01 18.1	+0.6
RTCV				*i* S	Sn	21 01 32.1	+1.1
RTLS	Leoncito	0.79	220	*i* P	Pn	21 01 19.8	+1.1
RTLS				*i* S	Sn	21 01 35.1	+1.9
RTLS				IAML		21 01 36.6	
	comp=Z,92nm,0.2s						
AUSP	Uspallata	1.18	209	*i* P	Pn	21 01 24.1	+1.4
AUSP				*i* S	Sn	21 01 42.2	+1.9
AROD	Rodeo	1.22	327	*i* P	Pn	21 01 24.3	+1.2
AROD				*i* S	Sn	21 01 42.9	+1.9
ASAL	Salagasta	1.40	184	*i* P	Pn	21 01 26.0	+1.0
ASAL				*i* S	Sn	21 01 45.8	+1.4
ACAN	Cantantal	1.69	130	*i* P	Pn	21 01 29.4	+1.0
ACAN				*i* S	Sn	21 01 51.6	+1.2
AAGR	Agrelo	1.89	183	*i* P	Pn	21 01 32.0	+0.9
AAGR				*i* S	Sn	21 01 56.2	+1.1

IDC 18 21:11:25.7±50.0, **17°.00S**×**179°.35W, h0**^{km}, **mb4.4**/3, **mb1 4.6**/3, **mb1mx3.8**/49, **mbtmp4.4**/3, **MS2.6**/1, **Ms1 2.6**/1, **ms1mx2.3**/42, **Error ellipse: s-maj=913.3km s-min=140.4km az=77.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	7.92	68	LR	LR	21 16 05.3	
	comp=Z,41nm,19.9s,baz=116,slow=35						
STKA	Stephens Creek	38.29	240	P	P	21 18 48.3	+0.2
	2.1nm,0.5s,baz=94,slow=9.3,SNR=11						
WRA	Warramunga Arr	43.92	259	P	P	21 19 34.6	-0.1
	1.3nm,0.3s,baz=94,slow=7.4,SNR=73						
ASAR	Alice Springs	44.18	253	P	P	21 19 36.2	-0.5
	6.7nm,0.5s,baz=87,slow=8.8,SNR=113						

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*ISCJB **18** 21:26:35.3±1.2, 56°.9N±0°.2×33°.9W±0°.3, h13^{km}, mb3.8/10, MS3.2/18, Error ellipse: s-maj=29.3km s-min=17.8km az=23.2*

*IDC **18** 21:26:35.0±1.5, 56°.87N×33°.95W, h0^{km}, mb3.8/9, mb1 3.9/9, mb1mx3.5/66, mbtmp3.8/9, MS3.2/22, Ms1 3.2/22, ms1mx3.1/62, Error ellipse: s-maj=37.3km s-min=24.8km az=29.0*

*CSEM **18** 21:26:36.4, 56°.86N×33°.98W, h10^{km}, mb4.2/1*

*NEIC **18** 21:26:36.4±0.9, 56°.86N×33°.98W, h10^{km}, mb4.2/1, Error ellipse: s-maj=24.6km s-min=14.8km az=202.0*

ISC 18 21:26:37.0±1.3, **56°.9N**±0°.2×**33°.9W**±0°.2, **h13**^{km}, **n39, σ0^s.68**/12, **mb3.7**/10, **MS3.2**/18, **Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFJD	Kangerlussuaq	12.79	329	LR	LR	21 33 44.3	
	comp=Z,104nm,19.3s,baz=168,slow=34						
JMIC	Jan Mayen	17.81	27	LR	LR	21 35 59.5	
	comp=Z,50nm,20.1s,baz=256,slow=32						
FRB	Frobisher Bay	18.28	306	LR	LR	21 37 05.0	
	comp=Z,11nm,18.4s,baz=186,slow=34						
SCHQ	Schefferville	18.48	278	LR	LR	21 36 42.6	
	comp=Z,93nm,20.0s,baz=117,slow=33						
HFS	Hagfors	24.67	62	LR	LR	21 40 34.2	
	comp=Z,35nm,18.7s,baz=284,slow=34						
ARCES	ARCESS Array B	28.30	40	P	P	21 32 28.5	-1.1
	0.7nm,0.6s,baz=268,slow=6.9,SNR=4.4						
DAVOX	Davos/Dischmat	28.43	92	LR	LR	21 43 12.5	
	comp=Z,89nm,20.1s,baz=264,slow=35						
RES	Resolute Bay	28.78	331	LR	LR	21 43 43.5	
	comp=Z,38nm,19.6s,baz=80,slow=36						
GERES	GERESS Array B	29.33	85	LR	LR	21 44 03.1	
	comp=Z,46nm,18.2s,baz=280,slow=36						
FINES	FINESS Array B	30.14	56	LR	LR	21 43 24.5	
	comp=Z,37nm,20.2s,baz=298,slow=34						
ULM	Lac du Bonnet	36.23	287	LR	LR	21 46 57.5	
	comp=Z,42nm,19.4s,baz=38,slow=34						
KIEV	Kiev	36.61	72	*e*P	P	21 33 43.0	+0.5
	1.5nm,0.4s						
AKASG	Malin Array Be	36.62	72	P	P	21 33 43.5	+1.0
	0.3nm,0.4s,baz=308,slow=8.5,SNR=3.2						
MLR	Muntele Rosu	38.02	81	LR	LR	21 50 35.6	
	comp=Z,15nm,18.1s,baz=330,slow=38						
YKA	Yellowknife Ar	38.60	313	P	P	21 33 59.4	+0.3
	0.7nm,0.7s,baz=66,slow=8.7,SNR=3.3						
TKL	Tuckaleechee C	39.34	259	LR	LR	21 49 12.3	
	comp=Z,73nm,20.5s,baz=24,slow=34						
IDI	Anoyia	44.51	93	LR	LR	21 54 54.6	
	comp=Z,22nm,19.5s,baz=246,slow=38						
BRTR	Keskin Array B	46.09	82	LR	LR	21 55 50.7	
	comp=Z,14nm,18.4s,baz=282,slow=38						
PDAR	Pinedale Array	48.26	287	LR	LR	21 54 25.8	
	comp=Z,54nm,18.6s,baz=76,slow=35						
ILAR	Eielson Array	48.45	328	P	P	21 35 18.6	+0.2
	0.6nm,0.8s,baz=46,slow=7.7,SNR=4.9						
AKTO	Aktyubinsk	50.91	55	P	P	21 35 37.5	+0.1
	0.9nm,0.5s,baz=297,slow=9.0,SNR=3.4						
AKTO				LR	LR	21 56 22.4	
	comp=Z,16nm,19.7s,baz=314,slow=35						
TORD	Torodi Ar. Bea	51.41	133	P	P	21 35 41.3	-0.2
	1.1nm,1.0s,baz=339,slow=7.7						
GNI	Garni	51.73	73	LR	LR	21 59 33.9	
	comp=Z,21nm,19.0s,baz=314,slow=38						
MMAI	Mount Meron Ar	51.98	86	LR	LR	21 58 49.1	
	comp=Z,26nm,19.2s,baz=140,slow=37						
ANMO	Albuquerque	52.26	278	LR	LR	21 57 07.3	
	comp=Z,64nm,18.2s,baz=78,slow=35						
BVAR	Borovoye Array	54.27	46	P	P	21 36 02.4	+0.2
	0.5nm,0.7s,baz=317,slow=6.1,SNR=4.4						
TXAR	Lajitas Array	55.01	271	LR	LR	21 59 16.1	
	comp=Z,36nm,18.6s,baz=0.0,slow=36						
YBH	Yreka Blue Hor	55.74	295	LR	LR	21 59 04.2	
	comp=Z,64nm,18.1s,baz=54,slow=35						
NVAR	Mina Array Bea	55.97	289	LR	LR	21 59 23.1	
	comp=Z,37nm,18.5s,baz=302,slow=35						
KURK	Kurchatov	59.26	43	P	P	21 36 38.0	+0.4
KURBB	Kurchatov Arra	59.30	43	P	P	21 36 38.0	+0.1
	1.1nm,0.3s,baz=330,slow=6.6,SNR=4.9						
MKAR	Makanchi Array	63.87	43	P	P	21 37 09.2	+0.4
	1.0nm,0.9s,baz=345,slow=6.1,SNR=2.9						
H10N2	ASCENSION HYDR	66.42	159	T	T	22 49 06.4	
	baz=350						
H10N3	ASCENSION HYDR	66.43	159	T	T	22 49 16.4	
	baz=350						
H10N1	ASCENSION HYDR	66.44	159	T	T	22 49 09.9	
	baz=350						
H10S1	ASCENSION HYDR	67.47	159	T	T	22 50 32.6	
	baz=350						
H10S3	ASCENSION HYDR	67.48	159	T	T	22 50 34.1	
	baz=350						
H10S2	ASCENSION HYDR	67.49	159	T	T	22 50 35.3	
	baz=350						
ASAR	Alice Springs	145.67	20	PKPbc	PKPdf	21 46 13.8	-1.1
	0.9nm,1.1s,baz=347,slow=2.9,SNR=4.9						

NNC 18 21:34:44.9±2.7, **37°.25N**×**70°.76E, h18**^{km}±12^{km}, **mb3.9, mpv3.6, 4C-7D, Error ellipse: s-maj=21.4km s-min=12.8km az=88.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.50	37	⇓Pn	Pn	21 35 39.7	+1.0
	6.1nm,0.3s						
SFK				⇑Lg	Lg	21 36 35.4	
	16nm,0.3s						
AML	Almayashu	5.38	24	P	Pn	21 36 04.6	0.0
	SNR=25						
MNAS	Manas	5.40	14	⇑Pn	Pn	21 36 04.0	-0.7
	1.3nm,0.5s						
MNAS				⇓Sn	Sn	21 37 07.5	+1.0
	3.8nm,0.6s						
MNAS				⇓Lg	Lg	21 37 38.1	
	15nm,0.8s						
KK31	Karatay Array	5.85	358	⇑Pn	Pn	21 36 10.7	0.0
	0.9nm,0.3s,baz=178,slow=12,SNR=11						
KK31				⇓Sn	Sn	21 37 18.4	+1.0
	1.7nm,0.4s,baz=187,slow=24,SNR=4.0						
KK31				⇓Lg	Lg	21 37 53.3	
	14nm,0.9s,baz=180,slow=31,SNR=6.3						
EKS2	Erkin-Say	5.88	22	P	Pn	21 36 12.1	+0.8
	SNR=9.8						
AAK	Ala-Archa	6.10	27	⇓Pn	Pn	21 36 14.2	-0.1
	4.9nm,0.5s						
AAK				Lg	Lg	21 37 57.4	
	8.7nm,1.1s						
AAK	Ala-Archa	6.10	27	P	Pn	21 36 14.7	+0.3
	SNR=5.2						
CHMS	Chumysh	6.51	27	P	Pn	21 36 19.6	-0.2
	SNR=15						
USP	Ospenovka	6.66	24	P	Pn	21 36 21.5	-0.4
	SNR=6.5						
TKM2	Tokmak 2	6.77	32	⇑Pn	Pn	21 36 22.3	-1.3
	5.8nm,0.5s						
TKM2				⇓Lg	Lg	21 38 21.0	
	2.6nm,0.8s						
TKM2	Tokmak 2	6.77	32	P	Pn	21 36 23.3	-0.3
	SNR=18						

IDC 18 21:40:57.9±1.9, **56°.68N**×**34°.60W, h0**^{km}, **mb3.5**/4, **mb1 3.7**/4, **mb1mx3.3**/61, **mbtmp3.5**/4, **MS3.0**/7, **Ms1 3.0**/7, **ms1mx2.7**/56, **Error ellipse: s-maj=59.5km s-min=32.8km az=54.0, Reykjanes Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCHQ	Schefferville	18.15	278	LR	LR	21 51 15.2	
	comp=Z,42nm,18.6s,baz=141,slow=34						
HFS	Hagfors	25.07	62	LR	LR	21 56 02.5	
	comp=Z,14nm,18.0s,baz=246,slow=36						
DAVOX	Davos/Dischmat	28.79	91	LR	LR	21 57 26.8	

	comp=Z,49nm,20.0s,baz=265,slow=34						
GERES	**GERESS Array B**	29.70	84	LR	LR	21 57 58.3	
	comp=Z,25nm,19.3s,baz=66,slow=34						
MLR	**Muntele Rosu**	38.40	80	LR	LR	22 03 53.5	
	comp=Z,7.2nm,20.5s,baz=357,slow=36						
PDAR	**Pinedale Array**	47.96	287	LR	LR	22 08 17.7	
	comp=Z,32nm,19.1s,baz=80,slow=34						
ILAR	**Eielson Array**	48.41	328	P	P	21 49 40.8	-0.3
	0.5nm,0.9s,baz=37,slow=6.1,SNR=3.8						
AKTO	**Aktyubinsk**	51.31	55	P	P	21 50 03.2	-0.2
	0.6nm,0.5s,baz=338,slow=5.4,SNR=1.9						
TORD	**Torodi Ar. Bea**	51.55	133	P	P	21 50 05.3	-0.2
	0.2nm,0.4s,baz=335,slow=6.4						
CMIG	**Matias Romero**	59.66	254	LR	LR	22 16 25.8	
	comp=Z,25nm,20.1s,baz=12,slow=36						
MKAR	**Makanchi Array**	64.25	43	P	P	21 51 34.2	-0.1
	0.4nm,0.6s,baz=346,slow=5.2,SNR=4.0						
ASAR	**Alice Springs**	145.96	19	PKPbc	PKPbc	22 00 38.8	-0.3
	0.4nm,0.7s,baz=350,slow=2.8,SNR=3.0						

NEIC ***18*** *21:42:56.6±1.0,10°.37S×112°.53E,h10^{km},mb4.0/1,Error ellipse: s-maj=41.2km s-min=10.5km az=51.0*

IDC ***18*** *21:42:57.2±1.6,9°.95S×112°.80E,h0^{km},mb3.9/8, mb1 4.1/8,mb1mx3.7/52,mbtmp3.9/8,Error ellipse: s-maj=70.8km s-min=16.9km az=51.0*

ISCJB ***18*** *21:42:59.2±0.5,10°.31S±0°.05×112°.58E±0°.04,h33^{km}, mb3.9/9,Error ellipse: s-maj=7.3km s-min=4.8km az=31.2*

DJA ***18*** *21:43:00.2±1.0,10°S±7°×11°3E±°,h18^{km}±13^{km},M4.5/22, mB5.1/2,mb4.8/5,MLv4.3/22,Mw(mB)4.4/2*

ISC 18 21:43:01.0±0.8,**10°.28S**±0°.08×**112°.59E**±0°.05,**h35^{km},n34,** σ**1^s.03**/35,**mb3.9**/9,**South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAGI	**Jajag, Banyuwa**	2.37	41	P	Pn	21 43 37.4	-0.1
JAGI				S	Sn	21 44 04.6	-0.8
PCJI	**Pacitan**	2.50	326	P	Pn	21 43 38.5	-0.7
PCJI				S	Sn	21 44 10.0	+1.5
BLJI	**Banyuglugur**	2.71	22	P	Pn	21 43 42.5	+0.4
BLJI				S	Sn	21 44 14.3	+0.5
IGBI	**Denpasar**	2.92	60	P	Pn	21 43 45.0	+0.1
WOJI	**Wonogiri, Jawa**	2.93	326	P	Pn	21 43 45.2	0.0
DNP	**Denpasar**	3.04	59	P	Pn	21 43 46.6	-0.1
NGJI	**Ngawi**	3.10	339	P	Pn	21 43 47.4	-0.1
NGJI				S	Sn	21 44 24.7	+1.3
UGM	**Wanagama**	3.12	319	P	Pn	21 43 47.1	-0.6
GRJI	**Gresik**	3.35	358	P	Pn	21 43 51.0	+0.1
SRBI	**Singaraja**	3.39	50	P	Pn	21 43 51.0	-0.5
TBJI	**Tambak Boyo**	3.52	348	P	Pn	21 43 52.9	-0.4
SMRI	**Semarang**	3.85	326	P	Pn	21 43 57.5	-0.3
TWSI	**Taliwang, Sumb**	4.51	70	P	Pn	21 44 07.6	+0.8
KPJI	**Karang Pucung**	4.65	309	P	Pn	21 44 08.5	-0.3
CMJI	**Cimerak**	4.78	301	P	Pn	21 44 10.9	+0.3
PLAI	**Plampang**	5.32	75	P	Pn	21 44 18.5	+0.5
LEM	**Lembang**	6.00	305	P	Pn	21 44 27.8	+0.3
WBSI	**Waikabubak, Su**	6.73	85	P	Pn	21 44 38.0	+0.5
PBKI	**Pangkalan Bun**	7.58	353	P	Pn	21 44 49.8	+0.6
MBWA	**Marble Bar**	12.81	148	*e*Pn	Pn	21 45 57.1	-3.6
FITZ	**Fitzroy Crossi**	14.84	123	Pn	Pn	21 46 25.9	-2.5
	1.9nm,0.3s,baz=310,slow=9.1,SNR=53						
FITZ				Sn	Sn	21 48 57.9	-14
	0.3nm,0.3s,baz=83,slow=20,SNR=1.7						
WRA	**Warramunga Arr**	23.07	117	P	P	21 48 04.3	+0.6
	1.9nm,0.5s,baz=295,slow=11,SNR=27						
WRA				S	S	21 52 15.4	+2.9
	0.9nm,1.0s,baz=287,slow=25,SNR=2.9						
WRAB	**Tennant Creek**	23.07	117	*e*P	P	21 48 03.7	0.0
	2.8nm,0.6s						
ASAR	**Alice Springs**	24.30	126	P	P	21 48 17.0	+1.5
	3.7nm,0.6s,baz=301,slow=9.4,SNR=40						
ASAR				S	S	21 52 45.8	+13
	0.4nm,0.6s,baz=304,slow=23,SNR=2.8						
CMAR	**Chiang Mai Arr**	31.57	335	P	P	21 49 20.8	+0.3
	1.2nm,0.6s,baz=169,slow=8.5,SNR=8.4						
STKA	**Stephens Creek**	34.37	133	P	P	21 49 46.7	+1.9
	3.1nm,0.7s,baz=304,slow=10,SNR=6.2						
H08S2	**Diego Garcia H**	39.67	270	T	T	22 32 12.9	
	baz=96,slow=74						
H08S3	**Diego Garcia H**	39.68	270	T	T	22 32 13.4	
	baz=96,slow=74						
H08S1	**Diego Carcia H**	39.69	270	T	T	22 32 12.2	
	baz=96						
MJAR	**Matsushiro Arr**	52.45	26	P	P	21 52 09.2	-1.2
	0.8nm,0.5s,baz=203,slow=9.3,SNR=4.2						
SONM	**Songino Array**	58.12	355	P	P	21 52 49.7	-1.4
	0.7nm,0.7s,baz=179,slow=7.3,SNR=2.9						
MKAR	**Makanchi Array**	62.94	337	P	P	21 53 23.5	-0.5
	0.3nm,0.5s,baz=155,slow=8.0,SNR=6.1						
BVAR	**Borovoye Array**	72.60	335	P	P	21 54 25.1	+0.4
	0.2nm,0.4s,baz=127,slow=6.2,SNR=2.4						
BRVK	**Borovoye**	72.67	335	*e*P	P	21 54 25.4	+0.3

ISCJB ***18*** *22:06:56.7±0.3,26°.34S±0°.02×69°.84W±0°.06,h85^{km}±3^{km}, mb4.5/51,Error ellipse: s-maj=9.4km s-min=3.9km az=0.4*

GUC ***18*** *22:06:56.1±0.7,26°.34S×70°.09W,h104^{km}±3^{km},ML4.8*

NEIC ***18*** *22:06:57.5±0.5,26°.34S×69°.80W,h76^{km}±4^{km},mb4.6/33, ML4.8(GUC),Error ellipse: s-maj=8.1km s-min=4.7km az=83.0*

NEIC Felt [V] at Copiapo, Los Loros and Tierra Amarilla, [IV] at Diego de Almagro and [III] at Taltal.

GCMT ***18*** *22:06:57.5±0.4,26°.62S×70°.17W,h109^{km}±5^{km},MW4.9/65, Moment Tensor Solution. s18,c20; s65,c88; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.76±.11; $M_{\theta\theta}$-1.30±.13; $M_{\phi\phi}$2.05±.14; $M_{r\theta}$1.05±.06; $M_{\theta\phi}$-0.92±.11; $M_{\phi r}$0.69±.10; Best double couple: $M_0$2.38000×10^{16} NP1:ϕ_s205.00000°,δ72.00000°,λ-33.00000°. NP2: ϕ_s307.00000°,δ58.00000°,λ-158.00000°. Principal axes: T 2.3490, Plg9.0000°, Azm258.0000°; N 0.0570, Plg52.0000°, Azm359.0000°; P -2.4110, Plg36.0000°, Azm162.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

IDC ***18*** *22:06:58.6±0.4,26°.29S×69°.80W,h88^{km}±3^{km},mb4.1/18, mb1 4.2/21,mb1mx4.0/43,mbtmp4.4/21,MS3.4/14, Ms1 3.4/14,ms1mx3.2/32 Error ellipse: s-maj=17.0km s-min=11.0km az=68.0*

ISC 18 22:06:57.8±0.4,**26°.36S**±0°.03×**69°.97W**±0°.07,**h87^{km}**±3^{km}, **h87^{km}:pP-P,n112,**σ**1^s.91**/129,**mb4.6**/51,**5C-2D,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CPCH	**Copiapo**	1.05	199	⇑*i*P	Pn	22 07 17.7	-0.3
CPCH				*i* S	Sn	22 07 34.2	+1.1
GO02	**Mina Guanaco**	1.24	16	*e*Pn	Pn	22 07 20.8	+0.3
GO02				*e*Sn	Sn	22 07 37.3	-0.2
GO02	**Mina Guanaco**	1.24	16	*e*P	Pn	22 07 20.9	+0.4
GO02				*i* S	Sn	22 07 37.7	+0.1
GO02				IAML		22 07 38.4	
	comp=N,32µm,0.4s						
GO03	**Copiap**	1.25	191	*e*Pn	Pn	22 07 21.2	+0.7
GO03				*e*Sn	Sn	22 07 38.2	+0.7
GO03	**Copiap**	1.25	191	⇑*i*P	Pn	22 07 21.2	+0.7
GO03				*i* S	Sn	22 07 39.2	+1.8
GO03				IAML		22 07 40.6	
	comp=E,16µm,0.3s						
PB14	**IPOC Station P**	1.77	347	⇓*i*P	Pn	22 07 27.3	+0.1
PB14				*i* S	Sn	22 07 48.9	-0.6
PB14				IAML		22 07 50.9	
	comp=N,14µm,0.5s						
VACH	**Vallenar**	2.32	197	*e*P	Pn	22 07 33.9	-0.3
VACH				*i* S	Sn	22 07 57.8	-4.2
LCO	**Las Campanas**	2.72	194	*e*Pn	Pn	22 07 39.7	-0.1
LCO				*e*Sn	Sn	22 08 02.3	-10
LCO	**Las Campanas**	2.72	194	*e*P	Pn	22 07 39.8	-0.1
LCO				*i* S	Sn	22 08 03.8	-8.3
LCO				IAML		22 08 34.2	
	comp=E,2µm,0.3s						
VCA	**Vinchina**	2.84	147	*e*P	Pn	22 07 44.7	+3.4
VCA				IAML		22 08 23.6	
	comp=N,3µm,0.8s						
PB10	**IPOC Station P**	2.88	349	*e*P	Pn	22 07 40.6	-1.1
PB10				*i* S	Sn	22 08 13.4	-2.2
PB10				IAML		22 08 16.0	
	comp=E,2µm,0.8s						
PB15	**IPOC Station P**	3.17	8	⇑*i*P	Pn	22 07 46.1	+0.3
TLL	**Tololo Astrono**	3.87	191	*e*P	Pn	22 07 55.1	-0.1
TLL				*i* S	Sn	22 08 39.8	+0.1
GO04	**Tololo Observa**	3.87	191	*e*Pn	Pn	22 07 55.5	+0.2
GO04	**Tololo Observa**	3.87	191	⇑*i*P	Pn	22 07 55.1	-0.2
PB04	**IPOC Station P**	4.01	358	*e*Pn	Pn	22 07 55.3	-1.9
PB01	**IPOC Station P**	5.31	5	*e*Pn	Pn	22 08 12.8	-2.0
PB01				*e*Sn	Sn	22 09 09.7	-5.1
PB11	**IPOC Station P**	6.57	3	*e*Pn	Pn	22 08 28.5	-3.6
ROC1	**El Roble**	6.66	188	*e*Pn	Pn	22 08 31.3	-2.0
PEL	**Peldehue**	6.79	185	*e*Pn	Pn	22 08 33.8	-1.0
LPAZ	**La Paz**	10.17	10	P	Pn	22 09 20.4	-1.0
	comp=E,1.1nm,0.3s,baz=198,slow=6.2,SNR=26						
LPAZ	**La Paz**	10.17	10	*e*Pn	Pn	22 09 18.7	-2.8
CPUP	**Villa Florida**	11.34	93	P	Pn	22 09 36.0	-0.8
	comp=E,0.2nm,0.3s,baz=269,slow=14,SNR=5.0						
CPUP				LR	LR	22 13 25.5	
	comp=E,148nm,21.2s,baz=265,slow=35						
SIV	**San Ignacio**	13.23	41	P	Pn	22 09 56.5	-5.9
	comp=E,7.5nm,0.3s,baz=254,slow=9.4,SNR=72						
TRQA	**Tornquist**	13.47	152	*e*Pn	Pn	22 10 03.7	-1.7
PLCA	**Paso Flores**	14.35	182	P	Pn	22 10 16.5	-0.2
	comp=E,0.4nm,0.3s,baz=23,slow=10,SNR=16						
PLCA				LR	LR	22 17 02.4	
	comp=E,41nm,19.1s,baz=9.5,slow=42						
NNA	**Nana**	15.69	334	LR	LR	22 16 20.6	
	comp=E,65nm,18.4s,baz=164,slow=36						
SAML	**Samuel**	18.47	22	*e*P	P	22 11 06.7	-0.2
	comp=E,11nm,0.7s						
BDFB	**Brasilia**	23.07	67	*e*P	P	22 11 56.1	-0.2
	comp=E,50nm,1.3s						
PTGA	**Pitinga**	27.24	22	P	P	22 12 31.7	-2.2
	comp=E,1.2nm,0.3s,baz=314,slow=20,SNR=3.0						
ROSC	**El Rosal**	31.30	352	LR	LR	22 25 52.2	
	comp=E,115nm,19.4s,baz=223,slow=36						
RPN	**Rapa Nui**	35.07	260	LR	LR	22 23 24.2	
	comp=E,50nm,19.0s,baz=295,slow=28						
PMSA	**Palmer Station**	38.61	176	LR	LR	22 28 41.7	
	comp=E,31nm,21.6s,baz=330,slow=34						
BBGH	**Gun Hill**	40.55	16	*e*P	P	22 14 26.0	-2.8
	comp=E,696nm,1.5s						
CMIG	**Matias Romero**	49.52	328	P	P	22 15 40.5	+0.7
	comp=E,1.7nm,0.8s,baz=243,slow=2.3,SNR=3.8						
CMIG				pP	pP	22 16 00.7	-0.3
	comp=E,5.6nm,1.0s,baz=178,slow=8.5,SNR=3.9						
VNA3	**Neumayer Olymp**	55.83	160	P	P	22 16 26.1	+0.4
VNA1	**Neumayer--Stat**	56.08	159	P	P	22 16 28.2	+0.8
SNAA	**Sanae**	58.05	160	P	P	22 16 41.7	+0.3
SNAA	**Sanae**	58.05	160	P	P	22 16 41.7	+0.3
	comp=E,10nm,0.5s,baz=284,slow=5.9,SNR=98						
SNAA				pP	pP	22 17 03.2	0.0
	comp=E,2.2nm,0.6s,baz=251,slow=8.3,SNR=2.5						
SNAA				LR	LR	22 43 36.4	
	comp=E,20nm,18.1s,baz=294,slow=38						
TKL	**Tuckaleechee C**	63.05	347	P	P	22 17 15.3	-0.4
	comp=E,2.0nm,0.6s,baz=78,slow=4.0,SNR=3.9						
JCT	**Junction City**	63.32	331	*e*P	P	22 17 19.0	+1.3
	comp=E,7.7nm,0.7s						
QSPA	**South Pole Qui**	63.85	180	P	P	22 17 22.0	+1.1
	comp=E,7.5nm,0.4s,baz=207,slow=0.6,SNR=74						
QSPA				LR	LR	22 45 33.7	
	comp=E,35nm,18.7s,baz=147,slow=36						
QSPA	**South Pole Qui**	63.85	180	*e*P	P	22 17 21.8	+0.8
TXAR	**Lajitas Array**	64.12	327	P	P	22 17 24.6	+1.6
	comp=E,0.6nm,0.6s,baz=150,slow=9.8,SNR=5.5						
TXAR				pP	pP	22 17 46.1	+1.0
	comp=E,2.6nm,1.1s,baz=146,slow=9.1,SNR=5.5						
W41B	**Gary Mavity, V**	64.73	340	*e*P	P	22 17 27.4	+0.6
	comp=E,3.2nm,0.8s						
T49A	**Edmonton**	64.80	346	*e*P	P	22 17 27.3	+0.1
	comp=E,4.6nm,0.7s						
T47A	**Sharon Grove**	65.04	345	*e*P	P	22 17 28.9	+0.1
	comp=E,19nm,1.5s						
ABTX	**Abilene, Hawle**	65.11	333	*e*P	P	22 17 30.0	+0.6
	comp=E,24nm,1.4s						
W39A	**Magazine**	65.24	339	*e*P	P	22 17 30.1	0.0
	comp=E,24nm,1.8s						
FVM	**French Village**	66.82	343	*e*P	P	22 17 41.6	+1.4
	comp=E,7.8nm,0.8s						
MNTX	**Cornudas Mount**	66.90	328	*e*P	P	22 17 41.7	+0.9
	comp=E,4.7nm,1.0s						
CCM	**Cathedral Cave**	67.11	342	*e*P	P	22 17 43.0	+1.0
	comp=E,5.8nm,0.8s						
S39A	**Bolivar**	67.38	340	*e*P	P	22 17 44.6	+0.8
	comp=E,12nm,0.8s						
S39A				*e*S	S	22 26 38.0	+5.4
MSTX	**Muleshoe**	67.60	331	*e*P	P	22 17 46.5	+1.2
	comp=E,10nm,0.8s						
MSTX				*e*pP	pP	22 18 08.3	+0.6
R40A	**Maddies Statio**	67.62	341	*e*P	P	22 17 45.9	+0.7
	comp=E,13nm,0.7s						
R40A				*e*pP	pP	22 18 07.6	+0.1
P40A	**Paris**	68.71	342	*e*P	P	22 17 52.8	+0.8
	comp=E,10.0nm,0.6s						
ANMO	**Albuquerque**	70.08	329	P	P	22 18 02.6	+1.7
	comp=E,1.4nm,0.6s,baz=137,slow=5.9,SNR=5.0						
ANMO				LR	LR	22 45 05.5	
	comp=E,49nm,19.6s,baz=50,slow=33						
LIC	**Lamto**	70.72	73	*e*P	P	22 18 05.5	+0.6
	comp=E,56nm,1.4s						
L40A	**Anamosa**	70.86	343	*e*P	P	22 18 05.5	+0.4
	comp=E,9.0nm,0.8s						
TIC	**Toumodi**	70.94	72	*e*P	P	22 18 06.9	+0.6
T25A	**Trinidad**	70.98	331	*e*P	P	22 18 08.4	+2.1
	comp=E,17nm,1.7s						
KIC	**Kosan Boka**	71.03	73	*e*P	P	22 18 07.2	+0.3
	comp=E,15nm,0.5s						
DBIC	**Dimbokro**	71.09	72	P	P	22 18 07.6	+0.4
	comp=E,2.4nm,0.5s,baz=230,slow=8.0,SNR=6.9						
DBIC				pP	pP	22 18 30.4	+0.8
	comp=E,8.3nm,0.5s,baz=211,slow=6.7,SNR=6.3						
DBIC				LR	LR	22 47 36.3	
	comp=E,32nm,19.9s,baz=170,slow=34						
SADO	**Sadowa**	71.28	353	P	P	22 18 07.8	+0.2
	comp=E,1.4nm,0.4s,baz=242,slow=5.7,SNR=3.7						
VNDA	**Vanda**	71.92	190	P	P	22 18 13.1	+2.0
	comp=E,1.4nm,0.7s,baz=135,slow=7.2,SNR=5.7						
VNDA	**Vanda**	71.92	190	*e*P	P	22 18 13.2	+2.0
	comp=E,14nm,1.8s						
SYO	**Syowa Base**	72.32	159	⇑*e*P	P	22 18 10.0	-3.7
SYO	**Syowa Base**	72.32	159	⇓*e*PcP	PcP	22 18 29.0	-2.2
SMCO	**Snowmass**	73.80	331	*e*P	P	22 18 25.6	+2.4
	comp=E,3.6nm,0.8s						
SMCO				*e*pP	pP	22 18 48.8	+2.9
ECSD	**EROS Data Cent**	73.91	340	*e*P	P	22 18 23.7	+0.4
	comp=E,3.3nm,0.8s						
MTPU	**Mount Pierson**	75.31	327	*e*P	P	22 18 33.9	+1.9
	comp=E,12nm,1.8s						
CCUT	**Cedar City**	75.51	326	*e*P	P	22 18 36.2	+3.2
	comp=E,4.3nm,0.7s						
MSU	**Marysvale**	75.67	327	*e*P	P	22 18 36.5	+2.6
KOWA	**Kowa**	75.86	66	P	P	22 18 35.8	+0.6
	comp=E,3.8nm,0.4s,baz=255,slow=8.1,SNR=7.3						
KOWA				pP	pP	22 18 58.2	+0.4
	comp=E,8.6nm,0.8s,baz=245,slow=6.7,SNR=6.6						
RWWY	**Rawlins**	75.97	332	*e*P	P	22 18 37.8	+2.2
	comp=E,4.5nm,0.8s						
PSUT	**Pine Spring**	76.52	326	*e*P	P	22 18 41.6	+2.9
	comp=E,2.6nm,0.8s						
HWUT	**Hardware Ranch**	77.82	329	*e*P	P	22 18 47.6	+1.7
	comp=E,3.6nm,0.9s						
PDAR	**Pinedale Array**	77.86	331	P	P	22 18 47.5	+1.4
	comp=E,0.4nm,0.6s,baz=110,slow=6.9,SNR=5.4						
PDAR				pP	pP	22 19 09.5	+0.6
	comp=E,0.3nm,0.4s,baz=130,slow=8.0,SNR=3.6						
HVU	**Hansel Valley**	78.51	329	*e*P	P	22 18 51.7	+2.1
	comp=E,2.8nm,0.7s						
NVAR	**Mina Array Bea**	78.75	323	P	P	22 18 53.1	+2.1
	comp=E,1.0nm,0.8s,baz=147,slow=6.8,SNR=5.2						
NVAR				pP	pP	22 19 14.5	+0.5
	comp=E,0.9nm,0.8s,baz=123,slow=5.5,SNR=2.7						
TSUM	**Tsumeb**	79.59	106	*e*P	P	22 18 57.2	+1.1
	comp=E,11nm,1.4s						
ULM	**Lac du Bonnet**	79.66	343	P	P	22 18 54.1	-1.3
	comp=E,2.8nm,0.6s,baz=165,slow=3.1,SNR=5.1						
LAO	**LASA Array**	79.76	336	*e*P	P	22 18 57.9	+1.7
	comp=E,8.0nm,0.9s						
TOA0	**Torodi Ar. Sit**	79.91	70	*e*P	P	22 18 57.9	+0.3
	comp=E,19nm,1.0s						
TORD	**Torodi Ar. Bea**	79.91	70	P	P	22 18 56.1	-1.5
	comp=E,6.9nm,0.5s,baz=264,slow=4.2						
TORD				pP	pP	22 19 20.2	-0.3
	baz=264,slow=5.3						
TORD				LR	LR	22 53 07.8	
	comp=E,28nm,20.0s,baz=180,slow=35						
MAW	**Mawson**	79.97	163	P	P	22 18 58.1	+1.1
	comp=E,15nm,0.8s,baz=206,slow=6.0,SNR=26						
MAW				LR	LR	22 55 45.3	
	comp=E,34nm,18.3s,baz=269,slow=37						
MAW	**Mawson**	79.97	163	*e*P	P	22 18 58.2	+1.1
	comp=E,3.2nm,0.8s						
PAHR	**Pah Rah Range**	80.25	324	*e*P	P	22 19 02.1	+3.0
PAHR				*e*pP	pP	22 19 24.1	+2.1
HLID	**Hailey**	80.66	329	*e*P	P	22 19 02.7	+1.5
HLID				*e*pP	pP	22 19 19.4	-4.8
BOSA	**Boshof**	82.03	118	P	P	22 19 08.6	-0.4
	comp=E,1.8nm,0.6s,baz=266,slow=5.4,SNR=6.1						
BOSA				LR	LR	22 52 56.8	
	comp=E,24nm,19.1s,baz=118,slow=34						
LBTB	**Lobatse**	83.87	115	*e*P	P	22 19 19.0	+0.5
	comp=E,11nm,0.9s						
MDT	**Midelt**	85.59	50	LR	LR	22 58 29.5	
	comp=E,20nm,18.2s,baz=142,slow=36						
CASY	**Casey**	87.66	180	*e*P	P	22 19 38.0	+1.7
	comp=E,10nm,1.0s						
LSZ	**Lusaka**	90.41	107	*e*P	P	22 19 50.8	+0.5
	comp=E,6.8nm,1.2s						
YKA	**Yellowknife Ar**	95.43	341	P	P	22 20 12.5	+0.5
	comp=E,1.2nm,0.7s,baz=134,slow=4.4,SNR=7.2						
ASAR	**Alice Springs**	125.17	207	PKP	PKPdf	22 25 48.9	-0.1
	comp=E,1.2nm,0.4s,baz=127,slow=1.7,SNR=32						
H11S2	**WAKE ISLAND Hy**	127.38	274	T	T	00 45 58.7	
	baz=108,slow=75,SNR=85						
H11S1	**WAKE ISLAND Hy**	127.39	274	T	T	00 45 57.1	
	baz=108,slow=75,SNR=84						
H11S3	**WAKE ISLAND Hy**	127.39	274	T	T	00 45 54.2	
	baz=108,slow=75,SNR=68						
H11N3	**WAKE ISLAND Hy**	127.59	275	T	T	00 46 08.8	
	baz=107,slow=75,SNR=15						
H11N1	**WAKE ISLAND Hy**	127.60	275	T	T	00 46 24.1	
	baz=107,slow=75,SNR=12						
H11N2	**WAKE ISLAND Hy**	127.60	275	T	T	00 46 11.5	
	baz=107,slow=75,SNR=11						
WRA	**Warramunga Arr**	128.28	210	PKP	PKPdf	22 25 55.1	+0.2
	comp=E,0.9nm,0.4s,baz=154,slow=1.8,SNR=4.5						
BVAR	**Borovoye Array**	140.29	37	PKP	PKPdf	22 26 17.6	+1.3
	comp=E,0.3nm,0.4s,baz=289,slow=4.4,SNR=4.4						
KURK	**Kurchatov**	145.86	36	PKPbc	PKPbc	22 26 27.9	+1.0
KURK				pPKPbc	pPKPab	22 26 50.9	-0.2
KURBB	**Kurchatov Arra**	145.86	36	PKPbc	PKPbc	22 26 27.9	+1.0
	comp=E,2.2nm,0.6s,baz=297,slow=3.3,SNR=12						
KURBB				pPKPbc	pPKPab	22 26 50.9	-0.2
	comp=E,2.1nm,0.6s,baz=304,slow=3.6,SNR=8.0						
ZALV	**Zalesovo Beam**	146.72	27	PKPbc	PKPdf	22 26 28.1	+0.7
	comp=E,5.5nm,0.5s,baz=301,slow=3.5,SNR=19						
ZALV				pPKPbc	pPKPbc	22 26 53.3	-0.1
	comp=E,17nm,1.0s,baz=316,slow=4.1,SNR=8.5						
KSH	**Kashi**	148.74	57	*e*PKPbc	PKPdf	22 26 28.5	-3.0
KSH				pPKP	pPKPdf	22 26 56.1	+0.3
KSH				*e*sPKP		22 27 06.8	
KSH				PKS	PP	22 30 02.4	-4.1
KSH				PP	PP	22 30 05.5	-1.0
KSH				SKS	SKSdf	22 33 26.1	-6.0
KSH				AMB	AMB		
	comp=Z,77nm,4.3s						
MKAR	**Makanchi Array**	150.05	40	PKPbc	PKPbc	22 26 38.9	+0.6
	comp=Z,4.9nm,0.6s,baz=304,slow=2.6,SNR=33						
MKAR				pPKPbc	pPKPbc	22 27 02.5	0.0
	comp=Z,4.4nm,0.8s,baz=299,slow=2.5,SNR=6.4						
SONM	**Songino Array**	158.37	7	PKP	PKPdf	22 26 45.8	+0.8
	comp=Z,1.0nm,0.8s,baz=60,slow=0.4,SNR=6.0						
SONM				pPKP	pPKPdf	22 27 09.5	+0.2
	comp=Z,0.9nm,0.9s,baz=48,slow=2.2,SNR=3.7						
CMAR	**Chiang Mai Arr**	167.08	125	PKPab	PKPab	22 27 59.1	+0.5
	comp=Z,0.5nm,0.3s,baz=234,slow=6.2,SNR=4.6						
LZH	**Lanzhou**	168.95	27	*e*PKP	PKPdf	22 26 52.8	-2.4
LZH				pPKP	pPKPdf	22 27 21.3	+1.7
LZH				sPKP		22 27 31.6	
LZH				LR	LR		
	comp=N,65nm,17.9s						
LZH				LR	LR		
	comp=E,71nm,18.0s						
LZH				LR	LR		
	comp=Z,90nm,20.0s						

IDC 18 22:10:53.4±1.6,**3°.88S**×**142°.68E,h0^{km},mb3.8**/4, **mb1 4.2**/5,**mb1mx3.7**/44,**mbtmp4.0**/5,**ML4.5**/1,**Error ellipse: s-maj=74.5km s-min=24.0km az=114.0,Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	17.92	206	P	P	22 15 05.0	+0.1
	1.7nm,0.3s,baz=24,slow=13,SNR=48						
ASAR	**Alice Springs**	21.42	203	P	P	22 15 43.3	+0.1
	1.5nm,0.7s,baz=36,slow=12,SNR=12						
FITZ	**Fitzroy Crossi**	21.86	228	P	P	22 15 47.5	-0.5
	1.6nm,0.5s,baz=59,slow=10,SNR=8.6						
BVAR	**Borovoye Array**	82.54	325	P	P	22 23 18.4	+0.2
	0.5nm,0.5s,baz=108,slow=7.0,SNR=8.3						
ILAR	**Eielson Array**	85.27	24	P	P	22 23 31.7	-0.1
	1.3nm,0.6s,baz=254,slow=4.9,SNR=11						

ISCJB ***18*** *22:27:40.9±0.5,14°.23N±0°.04×120°.20E±0°.08,h120^{km}, mb3.7/7,Error ellipse: s-maj=11.5km s-min=5.9km az=167.1*

IDC ***18*** *22:27:40.4±2.5,13°.95N×120°.25E,h126^{km}±30^{km},mb3.3/7, mb1 3.4/7,mb1mx3.1/64,mbtmp3.7/7,Error ellipse: s-maj=108.1km s-min=14.4km az=66.0*

MAN ***18*** *22:27:41.2,14°.19N×120°.41E,h124^{km},mb4.0,ML2.8, MS2.4*

ISC 18 22:27:41.1±0.8,**14°.19N**±0°.05×**120°.38E**±0°.09,**h120^{km},n20,** σ**1^s.77**/22,**mb3.8**/7,**2C,Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	0.47	195	*e*P	Pn	22 28 01.3	+2.4
TGY	**Tagaytay City**	0.55	99	P	Pn	22 28 01.4	+1.9
	141nm,0.3s,baz=180,slow=2.1,SNR=8.3						
TGY				S	Sn	22 28 16.3	+3.0
	168nm,0.3s,baz=287,slow=7.6,SNR=9.8						
TGY	**Tagaytay City**	0.55	99	⇑*i*P	Pn	22 28 01.4	+1.9
QVPH	**Quezon City--P**	0.80	55	*e*P	Pn	22 27 53.9	-7.5
PGP	**Puerto Galera**	0.89	141	⇑*e*P	Pn	22 28 03.2	+1.1
PGP				*i* S	Sn	22 28 20.2	+2.2
SCZP	**Santa Cruz**	1.64	344	*e*P	Pn	22 28 10.8	+0.7
SJMP	**San Jose**	1.87	157	*e*P	Pn	22 28 14.0	+1.0
BALP	**Baler**	1.93	37	*e*P	Pn	22 28 14.7	+1.0
BUSP	**Coron**	2.18	185	*e*P	Pn	22 28 17.9	+1.0
BUSP				*e*S	Sn	22 28 44.9	+0.6
BOLP	**Bolinao**	2.22	348	*e*P	Pn	22 28 18.5	+1.1
OTRP	**Odiongan**	2.42	138	*e*P	Pn	22 28 20.3	+0.4
ENPP	**El Nido**	3.11	197	*e*P	Pn	22 28 31.0	+2.1
APYP	**Conner**	3.74	13	*e*P	Pn	22 28 38.4	+1.2
SONM	**Songino Array**	35.50	344	P	P	22 34 26.7	+0.3
	0.9nm,0.6s,baz=163,slow=11,SNR=4.7						
WRA	**Warramunga Arr**	36.60	158	P	P	22 34 32.4	-3.5
	0.3nm,0.4s,baz=332,slow=10.0,SNR=7.6						
ASAR	**Alice Springs**	39.88	160	P	P	22 35 00.8	-2.5
	0.6nm,0.4s,baz=336,slow=6.7,SNR=13						
MKAR	**Makanchi Array**	45.45	324	P	P	22 35 48.2	+0.1
	0.2nm,0.4s,baz=116,slow=8.2,SNR=4.2						
ZALV	**Zalesovo Beam**	48.48	333	P	P	22 36 10.4	-1.0
	0.5nm,0.4s,baz=127,slow=7.3,SNR=2.7						
KURBB	**Kurchatov Arra**	49.61	326	P	P	22 36 20.2	+0.1
	0.5nm,0.3s,baz=131,slow=8.3,SNR=6.2						
BVAR	**Borovoye Array**	55.19	326	P	P	22 37 00.8	-0.5
	0.7nm,0.5s,baz=106,slow=7.6,SNR=8.7						

ISCJB ***18*** *22:33:17.7±1.4,36°.94N±0°.05×141°.44E±0°.07,h10^{km}±6^{km}, mb3.4/2,MS3.1/1,Error ellipse: s-maj=9.3km s-min=8.3km az=168.5*

IDC ***18*** *22:33:17.2±2.5,37°.01N×141°.53E,h0^{km},mb3.4/2, mb1 3.5/3,mb1mx3.2/62,mbtmp3.2/3,ML2.7/1,MS2.7/2, Ms1 2.7/2,ms1mx2.3/33,Error ellipse: s-maj=50.3km s-min=34.1km az=37.0*

JMA ***18*** *22:33:19.6±0.1,36°.94N×141°.34E,h25^{km}±1^{km},M3.1*

ISC 18 22:33:19.2±2.1,**36°.97N**±0°.05×**141°.36E**±0°.08,**h11^{km}**±10^{km}, **n20,**σ**0^s.59**/22,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONAJ	**Iwakimizuishiy**	0.47	287	P	Pb	22 33 28.8	-0.7
ONAJ				S	Sg	22 33 35.9	+1.3
JFK	**Kawauchi**	0.55	316	P	Pb	22 33 30.6	-0.4
JFK				S	Sb	22 33 38.5	-0.4
JFFD	**Fukushimafurud**	0.65	281	P	Pg	22 33 31.8	0.0
JFFD				S	Sg	22 33 40.4	+0.1
JHO	**Hitachi**	0.73	241	P	Pg	22 33 32.9	-0.4
JHO				S	Sg	22 33 42.7	-0.1
JFT	**Otama**	0.98	304	P	Pb	22 33 38.2	-0.1
JFT				S	Sg	22 33 51.3	+0.4

JMM	**Marumori**	1.00	334	P	Pg	22 33 38.0	-0.5
JMM				S	Sb	22 33 51.8	0.0
JSB	**Shiboa**	1.15	270	P	Pb	22 33 40.7	-0.4
JSB				*e*S	Sb	22 33 56.2	+0.1
JFY	**Yanaizu**	1.39	289	P	Pn	22 33 44.5	-0.1
JFY				S	Sn	22 34 02.5	-0.4
MJAR	**Matsushiro Arr**	2.56	261	Pn	Pn	22 34 01.2	+0.5
	1.3nm,0.3s,baz=90,slow=14,SNR=16						
MJAR				Sn	Sb	22 34 37.1	+0.3
	2.8nm,0.3s,baz=89,slow=16,SNR=5.3						
MAT	**Matsushiro**	2.56	261	P	Pn	22 34 01.6	+0.9
MAT				S	Sb	22 34 35.6	-1.2
KSRS	**Korea Array**	10.73	277	LR	LR	22 39 29.0	
	comp=Z,18nm,21.1s,baz=65,slow=34						
H11N2	**WAKE ISLAND Hy**	28.15	121	T	T	23 08 39.9	
	baz=313,slow=75,SNR=45						
H11N1	**WAKE ISLAND Hy**	28.16	121	T	T	23 08 40.9	
	baz=313,slow=75,SNR=45						
H11N3	**WAKE ISLAND Hy**	28.17	121	T	T	23 08 41.3	
	baz=313,slow=75,SNR=45						
H11S1	**WAKE ISLAND Hy**	28.86	123	T	T	23 09 31.2	
	baz=315,slow=76,SNR=30						
H11S3	**WAKE ISLAND Hy**	28.86	123	T	T	23 09 31.6	
	baz=315,slow=76,SNR=29						
H11S2	**WAKE ISLAND Hy**	28.88	123	T	T	23 09 35.1	
	baz=315,slow=76,SNR=18						
MKAR	**Makanchi Array**	44.11	302	P	P	22 41 27.9	+0.4
	0.3nm,0.6s,baz=77,slow=9.6,SNR=3.1						
WRA	**Warramunga Arr**	56.99	188	P	P	22 43 05.0	+0.1
	0.3nm,0.5s,baz=4.4,slow=7.3,SNR=5.4						
SPITS	**Spitsbergen Ar**	60.58	349	LR	LR	23 13 55.3	
	comp=Z,12nm,19.0s,baz=340,slow=40						

ISC 18 23:55:44.7±1.7**, 51°.63N**±0°.07×**16°.03E**±0°.05**, h0^{km}, n19, σ0ˢ.79**/41**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	0.80	168	*e*Pg	Pg	23 56 00.6	+0.6
KSP				*e*Sg	Sg	23 56 10.6	+0.1
UPC	**Upice**	1.12	181	*e*PG	Pg	23 56 06.4	+0.3
UPC				*e*SG	Sg	23 56 20.9	+0.2
	comp=Z,19nm,0.4s						
DPC	**Dobruska-Polom**	1.29	172	*e*PG	Pg	23 56 09.5	+0.1
DPC				*e*SG	Sg	23 56 26.0	-0.1
	comp=Z,13nm,0.5s						
PVCC	**Panska Ves**	1.44	221	*e*PG	Pb	23 56 12.4	+0.1
PVCC				*e*SG	Sn	23 56 31.7	+0.2
	comp=Z,24nm,0.2s						
BRG	**Berggiesshubel**	1.51	241	PG	Pb	23 56 13.7	+0.1
BRG				SG	Sg	23 56 33.5	+0.2
	23nm,0.6s						
KRLC	**Kraliky**	1.63	163	*e*PG	Pn	23 56 15.1	+0.5
KRLC				*e*SG	Sn	23 56 36.2	-0.1
	comp=Z,2.6nm,0.4s						
PRA	**Prague**	1.86	214	*e*PN	Pn	23 56 17.8	+0.1
PRA				*e*SG	Sg	23 56 44.1	-0.3
GOPC	**GO Pecny, Ondr**	1.89	205	*e*PG	Pb	23 56 20.2	+0.2
GOPC				*e*SG	Sb	23 56 44.1	-0.1
	comp=Z,3.4nm,0.3s						
PRU	**Pruhonice**	1.89	210	*e*PN	Pn	23 56 18.6	+0.4
PRU				*e*PG	Pb	23 56 19.7	-0.4
PRU				*e*SG	Sb	23 56 44.3	0.0
	comp=Z,7.4nm,0.4s						
CLL	**Collm**	1.92	262	*e*Pn	Pn	23 56 18.0	-0.6
CLL				*e*Pg	Pb	23 56 21.0	+0.5
CLL				*e*Sg	Sg	23 56 46.0	-0.3
	comp=Z,5.0nm,0.4s						
MORC	**Moravsky Berou**	2.09	152	*e*PN	Pn	23 56 20.6	-0.3
MORC				*e*SG	Sn	23 56 47.4	-0.2
OKC	**Ostrava-Krasne**	2.24	142	*e*SG	Sg	23 56 56.9	+0.3
	comp=Z,7.1nm,0.6s						
VRAC	**Vranov**	2.35	171	*e*PN	Pn	23 56 24.4	-0.1
VRAC				*e*SG	Sg	23 56 59.6	-0.5
KRUC	**Moravsky**	2.58	175	*e*PN	Pn	23 56 28.1	+0.4
KRUC				*e*SG	Sg	23 57 06.8	-0.7
NKC	**Novy Kostel**	2.66	240	*e*PN	Pn	23 56 30.3	+1.5
NKC				*e*PG	Pg	23 56 35.1	-0.6
NKC				*e*SG	Sg	23 57 09.4	-0.7
	comp=Z,7.6nm,0.3s						
KHC	**Kasperske Hory**	2.95	213	*e*PG	Pb	23 56 39.3	+1.2
KHC				*e*SN	Sn	23 57 07.8	-1.1
KHC				*e*SG	Sg	23 57 18.8	-0.6
	comp=Z,2.2nm,0.4s						
CONA	**Conrad Observa**	3.71	182	*e*Pn	Pn	23 56 44.5	+1.3
	comp=Z,0.3nm,0.3s						
CONA				Sg	Sg	23 57 42.9	-0.7
	comp=Z,1.3nm,0.3s						
MOA	**Molln**	3.95	198	*i* Pn	Pn	23 56 47.6	+1.0
	comp=Z,0.5nm,0.2s						
MOA				*e*Sg	Sg	23 57 51.0	-0.5
	comp=Z,0.2nm,0.1s						
ARSA	**Arzberg**	4.39	185	*e*Pg	Pb	23 57 00.3	-2.4
	comp=Z,0.7nm,0.2s						
ARSA				Sg	Sg	23 58 08.0	+2.2
	comp=Z,0.6nm,0.2s						

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*ARO **18** 23:58:16.4, 16°N±30°×4°2E±10°0, h15^{km}±99^{km}, Ml3.7*

ISC 18 23:58:16.5±4.6**, 15°.6N**±0°.3×**42°.0E**±0°.1**, h10^{km}, n10, σ1ˢ.67**/12**, Red Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAOD	**Malaho**	3.53	176	*e*P	Pn	23 59 09.8	-1.8
OBO	**Obock**	3.85	160	*e*P	Pn	23 59 15.0	-0.9
BDHA	**Al Bayda'**	3.87	115	*i* P	Pg	23 59 32.8	+2.1
BDHA				*e*		23 59 33.2	
	baz=280,slow=18						
BDHA				*i* S	Sb	00 00 09.1	-2.9
BDHA				AML	AML	00 00 31.4	
	comp=N,157nm,0.5s						
TDD	**Tadjoura Ara**	3.92	166	*e*P	Pn	23 59 15.9	-1.0
LDLD	**Lac de Lave**	4.06	172	*e*P	Pn	23 59 17.3	-1.5
ATD	**Arta Tunnel**	4.17	168	*e*P	Pn	23 59 19.6	-0.8
ATD	**Arta Tunnel**	4.17	168	*e*P	Pn	23 59 19.6	-0.8
ATD				*e*S	Sn	00 00 11.0	+1.7
SGH	**Sud-Ghoubbet**	4.22	171	*e*P	Pn	23 59 20.6	-0.5
ATA	**Atar**	4.33	164	*e*P	Pn	23 59 22.0	-0.5
GBR	**Grand-Bara**	4.48	174	*e*P	Pn	23 59 24.3	-0.3

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*ISCJB **19** 00:24:58.6±0.5, 38°.07N±0°.03×42°.61E±0°.03, h3^{km}±5^{km}, Error ellipse: s-maj=4.3km s-min=3.9km az=168.5*

*CSEM **19** 00:24:58.4±0.1, 38°.07N×42°.63E, h10^{km}, ML2.5, Error ellipse: s-maj=3.0km s-min=2.9km az=160.0*

*DDA **19** 00:24:58.3, 38°.06N×42°.62E, h7^{km}, Ml2.5*

*ISK **19** 00:24:58.3, 38°.09N×42°.63E, h8^{km}, ML1.8/4*

ISC 19 00:24:58.6±1.0**, 38°.07N**±0°.02×**42°.62E**±0°.02**, h10^{km}**±9^{km}**, n23, σ0ˢ.55**/42**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GEVA	**Gevas**	0.42	54	*i* P	Pg	00 25 06.5	-0.4
GEVA				*i* S	Sb	00 25 14.2	-0.7
GEVA	**Gevas**	0.42	54	P	Pg	00 25 06.6	-0.4
GEVA				S	Sb	00 25 14.1	-0.7
SRTM	**Siirt_Merkez**	0.56	263	*i* P	Pg	00 25 09.4	0.0
SRTM				*i* S	Sg	00 25 17.3	+0.6
SRTM	**Siirt_Merkez**	0.56	263	P	Pg	00 25 09.4	0.0
SRTM				S	Sg	00 25 17.3	+0.6
SIRT	**Sirnak**	0.58	194	PG	Pb	00 25 10.5	-0.4
SIRT				SG	Sb	00 25 19.1	-0.1
SIRT	**Sirnak**	0.58	194	*e*Pg	Pb	00 25 10.5	-0.4
SIRT				*e*Sg	Sb	00 25 19.1	-0.1
SIRN	**S˜–rnak**	0.59	196	*i* P	Pg	00 25 09.3	-0.7
SIRN				*i* S	Sg	00 25 18.1	+0.2
SIRN	**S˜–rnak**	0.59	196	P	Pg	00 25 09.3	-0.7
SIRN				S	Sg	00 25 18.1	+0.2
GURO	**Guroymak-BITLI**	0.67	316	PG	Pg	00 25 11.5	-0.1
GURO				SG	Sb	00 25 21.1	-0.8
GURO	**Guroymak-BITLI**	0.67	316	*e*Pg	Pg	00 25 11.5	-0.1
GURO				*e*Sg	Sb	00 25 21.1	-0.8
ADCV	**BITLIS_Adilcev**	0.75	6	*i* P	Pg	00 25 12.7	-0.3
ADCV				*i* S	Sb	00 25 23.5	-0.6
ADCV	**BITLIS_Adilcev**	0.75	6	P	Pg	00 25 12.7	-0.3
ADCV				S	Sb	00 25 23.5	-0.6
HAKT	**HAKKARI**	1.00	120	*i* P	Pg	00 25 17.4	-0.4
HAKT				*i* S	Sb	00 25 32.2	+0.8
HAKT	**HAKKARI**	1.00	120	P	Pg	00 25 17.4	-0.4
HAKT				S	Sb	00 25 32.2	+0.8
BTMN	**Batman**	1.08	261	*i* P	Pg	00 25 19.3	0.0
BTMN				*i* S	Sn	00 25 35.0	+0.1
BTMN	**Batman**	1.08	261	P	Pg	00 25 19.3	0.0
BTMN				S	Sn	00 25 35.0	+0.1
SVAN	**Silvan-Diyarba**	1.12	275	PN	Pb	00 25 20.3	+0.2
SVAN				SN	Sn	00 25 36.5	+0.5
SVAN	**Silvan-Diyarba**	1.12	275	*e*Pn	Pb	00 25 20.3	+0.2
YOVA	**Hakkari_Yˆ…kse**	1.41	109	*i* P	Pn	00 25 24.3	-0.1
YOVA				*i* S	Sg	00 25 45.5	+1.7
YOVA	**Hakkari_Yˆ…kse**	1.41	109	P	Pn	00 25 24.3	-0.1
MARD	**Mardin**	1.64	243	*i* P	Pn	00 25 27.6	0.0
MARD				*i* S	Sg	00 25 50.9	-0.5
BNGB	**Bingˆ¶l**	1.78	302	PN	Pn	00 25 30.4	+0.9
BINT	**Bingol**	1.86	296	*e*Pn	Pn	00 25 30.4	-0.2

IDC 19 00:29:21.4±2.0**, 2°.78N**×**126°.95E, h0^{km}, mb3.4**/4**, mb1 3.6**/4**, mb1mx3.4**/53**, mbtmp3.4**/4**, Error ellipse: s-maj=171.9km s-min=24.2km az=67.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	23.72	162	P	P	00 34 35.5	+0.2
	0.9nm,0.6s,baz=342,slow=10,SNR=5.8						
ASAR	**Alice Springs**	27.14	166	P	P	00 35 05.9	-0.7
	0.2nm,0.4s,baz=345,slow=7.0,SNR=1.8						
MKAR	**Makanchi Array**	58.46	325	P	P	00 39 19.7	+0.5
	0.4nm,0.8s,baz=117,slow=6.9,SNR=1.5						
KURBB	**Kurchatov Arra**	62.65	328	P	P	00 39 47.6	-0.2
	0.2nm,0.6s,baz=126,slow=6.2,SNR=1.7						

RSNC 19 00:44:48.2±0.9**, 6°.81N**×**73°.15W, h146^{km}**±4^{km}**, ML3.5, Mw3.8, 2C-2D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	0.21	188	*i* P	Pn	00 45 07.9	-0.5
BARC				*e*S	Sn	00 45 22.9	-0.8
BARC				*i*		00 45 24.7	
	comp=Z,850nm,0.3s						
BRRC	**Barranca, Sant**	0.63	298	⇑*i*P	Pn	00 45 09.8	-0.1
BRRC				*i*		00 45 10.1	
	comp=Z,2µm,0.2s						
BRRC				*e*S	Sn	00 45 26.2	-0.1
PAMC	**Pamplona, Colo**	0.69	40	*i* P	Pn	00 45 10.7	-0.1
PAMC				*e*S	Sn	00 45 28.0	0.0
RUSC	**La Rusia**	0.91	176	⇓*i*P	Pn	00 45 11.8	-0.7
RUSC				*e*S	Sn	00 45 30.3	-0.6
RUSC				*i*		00 45 31.8	
	comp=Z,409nm,0.4s						
PTBC	**PUERTO BERRIO,**	1.32	259	⇑*i*P	Pn	00 45 14.4	-1.3
PTBC				*e*S	Sn	00 45 35.9	-0.6
PTBC				*i*		00 45 43.2	
	comp=Z,500nm,0.5s						
TAMC	**Tame, Arauca**	1.40	105	⇓*i*P	Pn	00 45 16.1	-0.4
TAMC				*i*		00 45 16.2	
	comp=Z,190nm,0.3s						
TAMC				*e*S	Sn	00 45 37.7	-0.3
OCAC	**Ocana**	1.43	353	*e*P	Pn	00 45 15.9	-1.1
OCAC				*e*S	Sn	00 45 38.1	-0.8
OCAC				*i*		00 45 43.9	
	comp=Z,826nm,0.3s						
YOPC	**Yopal, Colombi**	1.61	153	*i* P	Pn	00 45 18.3	-0.5
YOPC				*e*S	Sn	00 45 41.9	-0.4
YOPC				*i*		00 45 43.4	
	comp=Z,105nm,0.2s						
ZARC	**Zaragoza, Cauc**	1.82	292	*e*P	Pn	00 45 20.2	-0.9
ZARC				*e*S	Sn	00 45 45.7	-0.6
ZARC				*i*		00 45 53.0	
	comp=Z,557nm,0.3s						
NORC	**Norcasia**	2.11	234	*e*P	Pn	00 45 23.7	-0.7
NORC				*e*S	Sn	00 45 51.4	-0.9
CHIC	**Chingaza**	2.24	195	*e*P	Pn	00 45 25.6	-0.8
CHIC				*i*		00 45 28.6	
	comp=Z,116nm,0.2s						
CHIC				*e*S	Sn	00 45 55.8	+0.1
ROSC	**El Rosal**	2.27	211	*e*P	Pn	00 45 27.2	+0.4
ROSC				*e*S	Sn	00 45 56.2	-0.1
ROSC				*i*		00 46 05.6	
	comp=Z,275nm,0.4s						
HELC	**Santa Helena**	2.44	256	*e*P	Pn	00 45 29.4	+0.6
HELC				*e*S	Sn	00 45 59.6	-0.3
HELC				*i*		00 46 06.6	
	comp=Z,244nm,0.4s						
UREC	**San Josˆ' de U**	2.54	292	*e*P	Pn	00 45 29.8	+0.2
UREC				*i*		00 46 09.8	
	comp=Z,417nm,0.3s						
VILC	**Villavicencio,**	2.73	191	*e*P	Pn	00 45 30.8	-1.4
VILC				*e*S	Sn	00 46 05.6	-0.5
VILC				*i*		00 46 22.9	
	comp=Z,53nm,0.5s						
DBBC	**Dabeiba**	3.04	274	*e*P	Pn	00 45 36.0	-0.1
TOLC	**Tolima**	3.09	224	*e*P	Pn	00 45 37.3	+0.4
TOLC				*e*S	Sn	00 46 14.0	-0.4
CODC	**Agustˆ›n Codaz**	3.12	355	*e*P	Pn	00 45 35.8	-1.2
CODC				*e*S	Sn	00 46 14.5	-0.3
CODC				*i*		00 46 22.5	
	comp=Z,104nm,0.7s						
PRAC	**Prado**	3.52	209	*e*P	Pn	00 45 41.5	-0.8
PRAC				*e*S	Sn	00 46 22.8	-1.3

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*NIED **19** 00:44:00, 39°.60N×143°.50E, h23^{km}, Mw3.8 Best double couple: M$_0$5.12000×10^{14} NP1:ϕ$_s$205.00000°, δ31.00000°, λ85.00000°. NP2:ϕ$_s$32.00000°, δ59.00000°, λ93.00000°.*

JMA 19 00:44:59.2±0.2**, 39°.59N**×**143°.54E, h27^{km}, M3.5, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIYJ	**Miyakonagasawa**	1.33	270	P	Pn	00 45 22.5	+0.5
MIYJ				*e*S	Sn	00 45 38.9	+0.1
JTH	**Tanohata**	1.34	286	P	Pn	00 45 22.6	+0.5
JTH				*e*S	Sb	00 45 40.4	+0.1
OFUJ	**Ofunato**	1.54	251	P	Pn	00 45 25.3	+0.5
JANG	**Nango**	1.74	297	P	Pn	00 45 27.8	+0.1
JOM	**Ohasama**	1.74	267	P	Pn	00 45 29.0	+1.3
JOM				*e*S	Sb	00 45 50.5	-1.4
JMK	**Ichinoseki**	1.91	251	P	Pn	00 45 30.9	+0.9
JIO	**Ouri**	2.05	237	P	Pn	00 45 32.2	+0.3
JRG	**Rokugo**	2.26	266	P	Pn	00 45 36.3	+1.6
JYK	**Kaneyama**	2.56	256	P	Pn	00 45 40.8	+1.9
JYK				*e*S	Sn	00 46 11.8	+2.7
JNBK	**Urakawa-nobuka**	2.75	348	P	Pn	00 45 44.2	+2.7
JNBK				*e*S	Sn	00 46 16.5	+2.6
JCH	**Churui**	3.02	358	P	Pn	00 45 47.1	+1.8
JCH				*e*S	Sn	00 46 20.9	+0.3
MAT	**Matsushiro**	5.19	236	P	Pn	00 46 18.0	+2.9
MAT				*e*S	Sn	00 47 18.7	+4.6

NNC 19 00:53:57.7±8.7**, 37°.98N**×**71°.75E, h0^{km}, mb3.7, mpv3.3, 5C-3D, Error ellipse: s-maj=66.9km s-min=51.5km az=167.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	2.45	33	⇓Pn	Pn	00 54 39.3	+0.2
	2.8nm,0.3s						
SFK				⇑Sn	Sb	00 55 12.6	-0.9
	34nm,0.5s						
MNAS	**Manas**	4.54	7	⇓Pn	Pn	00 55 07.2	-0.6
	4.3nm,0.3s						
MNAS				⇓Sn	Sn	00 56 01.9	+0.6
	7.9nm,0.5s						
AAK	**Ala-Archa**	5.10	23	⇑Pn	Pn	00 55 13.1	-2.4
	2.4nm,0.7s						
AAK				⇑Sn	Sn	00 56 13.8	-1.4
	8.8nm,0.7s						
KK31	**Karatay Array**	5.21	350	⇑Pn	Pn	00 55 16.5	-0.3
	1.7nm,0.4s,baz=153,slow=14						
KK31				⇑Sn	Sn	00 56 18.3	+0.7
	14nm,0.3s,baz=161,slow=22						

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*IDC **19** 01:05:39.2±2.8, 36°.26N×70°.82E, h183^{km}±25^{km}, mb3.5/9, mb1 3.5/15, mb1mx3.2/64, mbtmp4.0/15, Error ellipse: s-maj=20.7km s-min=16.2km az=20.0*

*ISCJB **19** 01:05:40.8±0.4, 36°.48N±0°.04×70°.73E±0°.05, h200^{km}, mb3.5/10, Error ellipse: s-maj=6.5km s-min=4.6km az=145.6*

*NNC **19** 01:05:43.5±2.5, 37°.02N×70°.31E, h0^{km}, mb4.2, mpv3.8, Error ellipse: s-maj=20.5km s-min=14.8km az=166.0*

ISC 19 01:05:42.0±0.6**, 36°.52N**±0°.06×**70°.74E**±0°.06**, h200^{km}, n36, σ1ˢ.85**/45**, mb3.6**/10**, 7C-7D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	4.11	31	⇓P	Pn	01 06 45.5	+0.3
	14nm,0.6s						
SFK				⇑S	Sn	01 07 32.7	-2.4
	35nm,0.5s						
MNAS	**Manas**	6.11	12	⇑P	Pn	01 07 11.7	+1.0
	4.4nm,0.4s						
MNAS				⇓S	Sn	01 08 17.3	-3.7
	30nm,0.5s						
KK31	**Karatay Array**	6.57	359	⇓P	Pn	01 07 16.6	0.0
	4.1nm,0.6s,baz=188,slow=14,SNR=36						
KK31				⇑S	Sn	01 08 27.0	-4.6
	22nm,0.4s,baz=185,slow=24,SNR=9.0						
AAK	**Ala-Archa**	6.76	24	P	Pn	01 07 19.3	+0.2
	2.4nm,0.3s,baz=193,slow=4.0,SNR=9.9						
AAK				S	Sn	01 08 33.0	-3.2
	1.8nm,0.3s,baz=188,slow=7.2,SNR=5.2						
AAK	**Ala-Archa**	6.76	24	⇑P	Pn	01 07 19.3	+0.2
	3.3nm,0.5s						
AAK				⇑S	Sn	01 08 35.0	-1.2
	14nm,0.8s						
TKM2	**Tokmak 2**	7.40	29	⇓P	Pn	01 07 27.3	-0.3
	3.8nm,0.5s						
TKM2				⇓S	Sn	01 08 53.1	+1.7
	2.7nm,0.6s						
GEYT	**Alibeck**	10.17	282	P	Pn	01 08 02.3	-1.1
	0.3nm,0.3s,baz=99,slow=16,SNR=4.7						
GEYT				S	Sn	01 09 52.5	-4.4
	0.5nm,0.3s,baz=84,slow=20,SNR=4.0						
PYUN	**Piuthan**	13.32	126	*e*P	Pn	01 08 43.1	-0.7
MKAR	**Makanchi Array**	13.39	36	P	Pn	01 08 43.9	-0.4
	0.2nm,0.3s,baz=215,slow=9.7,SNR=6.5						
DANN	**Dangsing**	13.68	123	*e*P	Pn	01 08 47.4	-0.8
KOLN	**Koldanda**	13.95	125	*e*P	Pn	01 08 51.7	+0.2
	9.2nm,0.3s						
GKN	**Gorkha**	14.49	122	*e*P	Pn	01 08 57.9	-0.3
	12nm,0.3s						
AB31	**Akbulak array**	14.96	332	⇑P	P	01 09 06.7	+2.4
	2.4nm,0.5s,baz=143,slow=11,SNR=6.8						
AB31				⇑S	S	01 11 47.2	-2.3
	3.4nm,1.0s,baz=153,slow=22,SNR=5.1						
DMN	**Daman**	15.06	122	*e*P	Pn	01 09 04.8	-0.4
	10nm,0.3s						
KKN	**Kakani**	15.07	121	*e*P	Pn	01 09 04.5	-0.8
	11nm,0.4s						
KURBB	**Kurchatov Arra**	15.17	19	P	P	01 09 07.0	+0.5
	0.1nm,0.3s,baz=211,slow=11,SNR=4.4						
PKIN	**Phulchoki**	15.28	122	*e*P	Pn	01 09 07.4	-0.5
PKIN	**Phulchoki**	15.28	122	*e*P	P	01 09 07.9	-0.4
	9.4nm,0.3s						
GUN	**Gumba**	15.41	120	*e*P	P	01 09 10.1	+0.3
	15nm,0.4s						
JIRN	**Jiri**	15.78	120	*e*P	Pn	01 09 14.4	+0.3
	38nm,0.4s						
BVAR	**Borovoye Array**	16.50	359	P	Pn	01 09 22.7	+0.6
	0.6nm,0.3s,baz=165,slow=12,SNR=9.7						
RAMN	**Ramite**	16.51	121	*e*P	P	01 09 21.6	-0.2
	9.3nm,0.4s						
AKTO	**Aktyubinsk**	16.66	331	P	Pn	01 09 25.1	+1.1
	1.1nm,0.3s,baz=131,slow=8.3,SNR=15						
AKTO	**Aktyubinsk**	16.66	331	⇓P	Pn	01 09 28.2	+4.2
	9.1nm,0.8s						
AKTO				⇓S	S	01 12 28.6	+1.9
	5.8nm,1.4s						
ODAN	**Odare**	17.11	120	*e*P	Pn	01 09 29.0	-0.8
	14nm,0.5s						
ZALV	**Zalesovo Beam**	19.98	25	P	P	01 09 58.7	-0.2
	2.3nm,0.4s,baz=224,slow=12,SNR=8.2						
MLR	**Muntele Rosu**	34.59	299	P	P	01 12 15.6	+3.8
	0.7nm,0.9s,baz=81,slow=19,SNR=6.1						
FINES	**FINESS Array B**	37.35	326	P	P	01 12 36.4	+1.5
	1.0nm,0.6s,baz=115,slow=13,SNR=4.4						
ARCES	**ARCESS Array B**	41.04	338	P	P	01 13 06.9	+1.5
	1.8nm,0.7s,baz=109,slow=8.1,SNR=10						
HFS	**Hagfors**	42.92	322	P	P	01 13 20.5	-0.1
	0.6nm,0.3s,baz=96,slow=10,SNR=7.5						
NB2	**NORSAR Subarra**	44.24	323	P	P	01 13 32.2	+1.1
	comp=Z,0.4nm,0.5s,baz=99,slow=7.9						
TORD	**Torodi Ar. Bea**	65.51	268	P	P	01 16 03.1	-1.1
	comp=Z,0.4nm,0.4s,baz=52,slow=5.7						
ILAR	**Eielson Array**	74.81	16	P	P	01 16 59.6	-0.2
	comp=Z,0.5nm,0.8s,baz=316,slow=5.0,SNR=6.0						
YKA	**Yellowknife Ar**	81.23	3	P	P	01 17 35.7	+0.6
	comp=Z,1.2nm,0.4s,baz=349,slow=5.4,SNR=10						
WRA	**Warramunga Arr**	82.18	122	P	P	01 17 38.4	-2.3
	comp=Z,2.7nm,1.0s,baz=325,slow=5.0,SNR=12						
ASAR	**Alice Springs**	84.44	125	P	P	01 17 51.1	-1.1
	comp=Z,1.4nm,0.6s,baz=313,slow=4.7,SNR=16						

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*ISCJB **19** 01:17:58.1±0.6, 60°.42S±0°.10×51°.2W±0°.3, h10^{km}, mb4.7/11, MS3.3/7, Error ellipse: s-maj=20.7km s-min=11.3km az=149.5*

*NEIC **19** 01:17:58.8±0.5, 60°.43S×51°.35W, h10^{km}, mb4.5/6, Error ellipse: s-maj=20.8km s-min=14.7km az=61.0*

*IDC **19** 01:17:58.0±1.0, 60°.35S×51°.24W, h0^{km}, mb4.2/7, mb1 4.3/7, mb1mx4.0/30, mbtmp4.2/7, MS3.4/7, Ms1 3.4/7, ms1mx3.2/29, Error ellipse: s-maj=40.9km s-min=22.0km az=75.0*

ISC 19 01:17:59.4±0.7**, 60°.4S**±0°.1×**51°.1W**±0°.2**, h10^{km}, n34, σ1ˢ.52**/26**, mb4.4**/10**, MS3.4**/7**, Scotia Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA3	**Neumayer Olymp**	19.62	140	P	Pn	01 22 30.1	+1.1
VNA1	**Neumayer--Stat**	19.97	138	P	Pn	01 22 34.2	+1.2
SNAA	**Sanae**	21.85	141	P	P	01 22 53.8	+2.1
SNAA	**Sanae**	21.85	141	P	P	01 22 53.4	+1.8
	6.1nm,0.9s,baz=278,slow=11,SNR=20						
SNAA				S	S	01 26 49.6	-3.2
	1.7nm,0.8s,baz=24,slow=21,SNR=3.8						
SNAA				LR	LR	01 29 27.3	
	comp=Z,72nm,20.3s,baz=276,slow=31						
SNAA	**Sanae**	21.85	141	*e*P	P	01 22 53.8	+2.1
	10nm,1.0s						
SNAA				S	S	01 26 49.6	-3.2
PLCA	**Paso Flores**	23.10	320	P	P	01 23 04.8	-0.3
	1.5nm,0.9s,baz=164,slow=7.4,SNR=4.2						
PLCA				LR	LR	01 32 05.8	
	comp=Z,70nm,18.6s,baz=178,slow=37						
PLCA	**Paso Flores**	23.10	320	*e*P	P	01 23 04.8	-0.3
	23nm,1.8s						
QSPA	**South Pole Qui**	29.80	180	P	P	01 24 08.0	+1.9
	5.7nm,0.8s,baz=166,slow=6.5,SNR=14						
QSPA				LR	LR	01 38 03.1	
	comp=Z,82nm,18.0s,baz=155,slow=40						
QSPA	**South Pole Qui**	29.80	180	*e*P	P	01 24 06.5	+0.4
	5.4nm,0.8s						
MAW	**Mawson**	43.55	149	P	P	01 26 03.4	+0.8
	1.6nm,0.6s,baz=248,slow=5.4,SNR=3.8						
MAW				LR	LR	01 42 19.2	
	comp=Z,75nm,21.9s,baz=244,slow=34						
LPAZ	**La Paz**	45.78	337	LR	LR	01 46 51.9	
	comp=Z,60nm,18.3s,baz=216,slow=38						
RPN	**Rapa Nui**	51.19	284	LR	LR	01 43 21.6	
	comp=Z,34nm,18.0s,baz=245,slow=30						
NNA	**Nana**	51.95	327	LR	LR	01 48 15.0	
	comp=Z,17nm,18.3s,baz=170,slow=35						
SUR	**Sutherland**	53.64	93	*e*P	P	01 27 20.2	-0.7
	67nm,1.8s						
H10S2	**ASCENSION HYDR**	58.12	44	T	T	02 31 23.0	
	baz=202,slow=75,SNR=8.0						
H10S3	**ASCENSION HYDR**	58.12	44	T	T	02 31 39.3	
	baz=202,slow=75,SNR=8.5						
H10S1	**ASCENSION HYDR**	58.13	44	T	T	02 31 33.6	
	baz=202,slow=75,SNR=9.9						
H10N3	**ASCENSION HYDR**	59.21	43	T	T	02 32 49.4	
	baz=199						
H10N1	**ASCENSION HYDR**	59.21	44	T	T	02 32 54.0	
	baz=199						
H10N2	**ASCENSION HYDR**	59.22	43	T	T	02 32 55.9	
	baz=199						
LBTB	**Lobatse**	62.06	92	*e*P	P	01 28 19.2	-0.9
	22nm,1.7s						
HIZ	**Hauiti**	74.44	216	*e*P	P	01 29 35.4	-1.9
	165nm,1.5s						
KOWA	**Kowa**	83.64	46	P	P	01 30 28.9	+1.1
	1.6nm,0.6s,baz=162,slow=4.5,SNR=7.9						
TORD	**Torodi Ar. Bea**	84.52	51	P	P	01 30 32.3	0.0
	2.1nm,0.8s,baz=216,slow=4.7						
TOA1	**Torodi Ar. Sit**	84.52	51	*e*P	P	01 30 32.4	0.0
447A	**Lucedale**	95.97	328	*e*P	P	01 31 27.3	+1.3

	238nm,1.4s						
WRA	**Warramunga Arr**	**99.78**	**185**	P	**Pdif**	**01 31 42.5**	**-1.2**
	0.8nm,1.0s,baz=169,slow=4.2,SNR=2.8						
ILAR	**Eielson Array**	**143.70**	**314**	PKP	**PKPdf**	**01 37 31.4**	**-1.4**
	0.5nm,0.6s,baz=129,slow=1.9,SNR=6.5						
ILB	**Eielson Array**	**143.70**	**314**	*e*PKPpre	PKPpre	01 37 29.6	
BVAR	**Borovoye Array**	**148.07**	**77**	PKPbc	**PKPbc**	**01 37 43.7**	**-0.1**
	0.7nm,0.5s,baz=228,slow=3.7,SNR=6.4						
MK32	**Makanchi Array**	**149.90**	**96**	*e*PKPbc	**PKPbc**	**01 37 47.8**	**-0.9**
MKAR	**Makanchi Array**	**149.90**	**96**	PKPbc	**PKPbc**	**01 37 47.8**	**-0.9**
	0.8nm,0.9s,baz=236,slow=4.0,SNR=3.8						
KURBB	**Kurchatov Arra**	**150.58**	**87**	PKPbc	**PKPbc**	**01 37 49.9**	**-0.2**
	0.8nm,0.7s,baz=231,slow=3.7,SNR=7.9						
KURK	**Kurchatov**	**150.68**	**87**	*e*PKPbc	**PKPbc**	**01 37 49.9**	**-0.5**

LSZ 19 01:20:02.7±2.0, 15°.61S×28°.32E, h10^{km}±35^{km}, MD2.6, ML3.0, Zambia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LSZ	**Lusaka**	**0.35**	**340**	*i* P	Pg	01 20 10.4	+0.7
	comp=Z,10µm,baz=160						
LSZ				*i* SG	Sg	01 20 13.5	-0.9
LSZ	**Lusaka**	**0.35**	**340**	*i* P	Pg	01 20 10.4	+0.7
	comp=Z,10µm,baz=160						
LSZ				*i* SG	Sg	01 20 13.5	-0.9
ITZ	**Itezhi-Tezhi**	**2.22**	**266**	*i* P	Pb	01 20 41.4	-1.6
ITZ				AMP		01 20 45.8	
	comp=Z,1µm,6.3s						
ITZ				*i*		01 20 59.3	
	baz=195,slow=1.3						
ITZ				*i* S	Sn	01 21 07.4	+0.1
ITZ				*i* Sg	Sg	01 21 12.6	-1.5
ITZ	**Itezhi-Tezhi**	**2.22**	**266**	*i* P	Pn	01 20 38.5	-1.2
ITZ				*i* S	Sn	01 21 07.4	+0.1
ITZ	**Itezhi-Tezhi**	**2.22**	**266**	*i* P	Pn	01 20 38.5	-1.2
ITZ				*i* S	Sn	01 21 07.4	+0.1
ITZ	**Itezhi-Tezhi**	**2.22**	**266**	*i* P	Pb	01 20 41.4	-1.6
ITZ				AMP		01 20 45.8	
	comp=Z,1µm,6.3s						
ITZ				*i*		01 20 59.3	
	baz=195,slow=1.3						
ITZ				*i* S	Sn	01 21 07.4	+0.1
ITZ				*i* Sg	Sg	01 21 12.6	-1.5

MEX 19 01:31:14.0±0.4, 27°.13N×111°.37W, h16^{km}±28^{km}, MD3.5, Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRIG	**Santa Rosalia**	**0.80**	**284**	*e*P	Pb	01 31 26.5	-3.0
SRIG				*i* S	Sb	01 31 36.6	-3.6
GUYB	**Guaymas**	**0.89**	**30**	*e*P	Pb	01 31 27.8	-3.2
GUYB				*i* S	Sb	01 31 38.0	-4.6
HSIG		**1.92**	**11**	*i* P	Pn	01 31 43.5	-2.6
HSIG				*i* S	Sn	01 32 05.1	-4.8

SJA ***19*** *01:31:12.1±0.5, 26°.03S×69°.33W, h164^{km}±8^{km}, ML4.0, MW4.2*
ISCJB ***19*** *01:31:14.1±0.4, 26°.05S±0°.03×69°.25W±0°.07, h110^{km}±5^{km}, mb3.7/8, Error ellipse: s-maj=10.5km s-min=5.0km az=177.2*
GUC ***19*** *01:31:14.3±0.6, 26°.02S×69°.52W, h115^{km}±4^{km}, ML4.4*
IDC ***19*** *01:31:16.3±0.6, 26°.20S×69°.22W, h113^{km}±4^{km}, mb3.6/8, mb1 3.8/8, mb1mx3.6/34, mbtmp3.9/8, Error ellipse: s-maj=28.4km s-min=18.7km az=57.0*

ISC 19 01:31:15.8±0.6, 26°.07S±0°.04×69°.27W±0°.07, h112^{km}±4^{km}, n34, σ1^{s}.45/46, mb3.7/8, 10C, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO02	**Mina Guanaco**	**0.94**	**342**	⇑*i*P	**Pn**	**01 31 36.2**	**-0.6**
GO02				*i* S	**Sn**	**01 31 52.2**	**-0.6**
CPCH	**Copiapo**	**1.61**	**217**	⇑*i*P	**Pn**	**01 31 41.1**	**-2.9**
CPCH				*i* S	**Sn**	**01 32 02.6**	**-3.0**
GO03	**Copiap**	**1.75**	**209**	*e*P	**Pn**	**01 31 44.7**	**-1.1**
GO03				*i* S	**Sn**	**01 32 07.5**	**-1.1**
PB14	**IPOC Station P**	**1.76**	**324**	*i* P	**Pn**	**01 31 46.1**	**-0.1**
PB14				*i* S	**Sn**	**01 32 10.9**	**+1.6**
PB14	**IPOC Station P**	**1.76**	**324**	⇑*i*P	**Pn**	**01 31 46.1**	**-0.1**
PB14				*i* S	**Sn**	**01 32 09.0**	**-0.3**
PB14				IAML		01 32 10.6	
	comp=N,6µm,0.5s						
PB10	**IPOC Station P**	**2.80**	**335**	*i* P	**Pn**	**01 31 57.5**	**-1.7**
PB10	**IPOC Station P**	**2.80**	**335**	IAML		01 32 31.4	
	comp=E,645nm,0.3s						
VCA	**Vinchina**	**2.82**	**161**	*i* P	**Pn**	**01 31 59.2**	**-0.5**
VCA				IAML		01 32 00.6	
	comp=Z,388nm,0.3s						
VCA				*i* S	**Sn**	**01 32 34.5**	**+1.1**
VACH	**Vallenar**	**2.83**	**208**	⇑*i*P	**Pn**	**01 31 58.2**	**-1.4**
PB05	**IPOC Station P**	**3.31**	**345**	⇑*i*P	**Pn**	**01 32 04.5**	**-1.5**
PB06	**IPOC Station P**	**3.35**	**355**	⇑*i*P	**Pn**	**01 32 05.8**	**-0.9**
PB06				IAML		01 33 12.5	
	comp=E,747nm,0.4s						
AHML	**Horco Molle**	**3.60**	**102**	*i* P	**Pn**	**01 32 09.4**	**-0.4**
PB04	**IPOC Station P**	**3.80**	**348**	⇑*i*P	**Pn**	**01 32 10.8**	**-1.9**
PB03	**IPOC Station P**	**4.02**	**354**	⇑*i*P	**Pn**	**01 32 13.9**	**-1.7**
PB03				*i* S	**Sn**	**01 32 59.5**	**-2.5**
ACDV	**Cuesta del Vie**	**4.09**	**178**	*i* P	**Pn**	**01 32 15.9**	**-0.6**
PB09	**IPOC Station P**	**4.25**	**0**	⇑*i*P	**Pn**	**01 32 17.8**	**-0.9**
PB07	**IPOC Station P**	**4.36**	**352**	⇑*i*P	**Pn**	**01 32 18.0**	**-2.1**
HJA	**Humahuaca**	**4.52**	**52**	*i* P	**Pn**	**01 32 21.4**	**-1.0**
LPAZ	**La Paz**	**9.79**	**6**	P	**Pn**	**01 33 32.4**	**-1.7**
	comp=E,0.6nm,0.3s,baz=201,slow=1.5,SNR=10						
CPUP	**Villa Florida**	**10.73**	**94**	P	**Pn**	**01 33 42.4**	**-3.8**
	comp=E,0.2nm,0.3s,baz=276,slow=18,SNR=2.8						
SIV	**San Ignacio**	**12.60**	**39**	P	Pn	01 34 06.0	-5.2
	comp=E,1.0nm,0.3s,baz=238,slow=12,SNR=16						
SNAA	**Sanae**	**58.11**	**160**	P	**P**	**01 40 56.9**	**-0.3**
	comp=E,0.3nm,0.4s,baz=291,slow=9.9,SNR=7.4						
SNAA				pP	**pP**	**01 41 23.6**	**-0.5**
	comp=E,0.6nm,0.6s,baz=249,slow=8.6,SNR=2.2						
TXAR	**Lajitas Array**	**64.21**	**327**	P	**P**	**01 41 40.5**	**+1.6**
	comp=E,0.4nm,0.5s,baz=155,slow=8.1,SNR=6.5						
TXAR				pP	**pP**	**01 42 07.4**	**+1.0**
	comp=E,0.2nm,0.7s,baz=153,slow=8.0,SNR=2.0						
ANMO	**Albuquerque**	**70.16**	**328**	P	**P**	**01 42 17.3**	**+0.8**
	comp=E,0.3nm,0.3s,baz=158,slow=5.4,SNR=2.8						
KOWA	**Kowa**	**75.17**	**65**	P	**P**	**01 42 46.6**	**+0.3**
	comp=E,1.6nm,0.7s,baz=251,slow=6.3,SNR=3.8						
PDAR	**Pinedale Array**	**77.90**	**331**	P	**P**	**01 43 02.8**	**+1.3**
	comp=E,0.2nm,0.4s,baz=123,slow=6.6,SNR=3.6						
NVAR	**Mina Array Bea**	**78.89**	**323**	P	**P**	**01 43 09.0**	**+2.0**
	comp=E,0.3nm,0.3s,baz=162,slow=6.6,SNR=4.0						
TORD	**Torodi Ar. Bea**	**79.22**	**70**	P	**P**	**01 43 08.6**	**-0.4**
	comp=E,1.7nm,0.6s,baz=255,slow=5.1						
TORD				pP	**pP**	**01 43 37.5**	**0.0**
	baz=250,slow=6.2						
TORD				sP	**sP**	**01 43 51.8**	**+2.4**
	baz=255,slow=4.3						
YKA	**Yellowknife Ar**	**95.36**	**341**	P	**P**	**01 44 26.1**	**-0.7**
	comp=E,0.8nm,0.7s,baz=144,slow=4.1,SNR=3.2						
ASAR	**Alice Springs**	**125.71**	**206**	PKP	**PKPdf**	**01 50 04.2**	**-0.6**
	comp=E,0.6nm,0.5s,baz=136,slow=1.3,SNR=8.1						
WRA	**Warramunga Arr**	**128.84**	**209**	PKP	**PKPdf**	**01 50 10.3**	**-0.6**
	comp=E,0.8nm,0.6s,baz=169,slow=1.7,SNR=7.8						
WRA				pPKP	**pPKPdf**	**01 50 40.8**	**-0.5**
	comp=E,0.4nm,0.6s,baz=136,slow=2.1,SNR=1.8						
KURBB	**Kurchatov Arra**	**145.25**	**37**	PKPbc	**PKPab**	**01 50 40.8**	**+0.7**
	comp=E,1.2nm,0.6s,baz=297,slow=3.7,SNR=11						
KURBB				pPKPbc	**pPKPdf**	**01 51 10.6**	**+0.2**
	comp=E,0.8nm,0.8s,baz=308,slow=3.6,SNR=3.8						
ZALV	**Zalesovo Beam**	**146.17**	**28**	PKPbc	**PKPbc**	**01 50 42.6**	**0.0**
	comp=E,4.3nm,0.5s,baz=309,slow=4.1,SNR=12						
ZALV				pPKPbc	pPKPbc	01 51 12.2	-0.4
	comp=E,1.6nm,0.8s,baz=329,slow=1.7,SNR=2.0						
MKAR	**Makanchi Array**	**149.42**	**40**	PKPbc	**PKPbc**	**01 50 52.4**	**+0.7**
	comp=E,1.8nm,0.6s,baz=305,slow=2.7,SNR=16						
MKAR				pPKPbc	**pPKPbc**	**01 51 21.9**	**+0.1**
	comp=E,1.4nm,0.7s,baz=303,slow=2.1,SNR=6.2						

IDC 19 02:43:24.1±2.3, 2°.85S×152°.25E, h0^{km}, mb3.6/3, mb1 3.9/3, mb1mx3.4/46, mbtmp3.6/3, Error ellipse: s-maj=169.0km s-min=28.7km az=123.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.38**	**225**	P	P	02 48 42.9	-1.3
	2.5nm,0.9s,baz=49,slow=9.1,SNR=7.7						
H11N1	**WAKE ISLAND Hy**	**26.64**	**32**	T	T	03 17 28.6	
	baz=222						
H11N3	**WAKE ISLAND Hy**	**26.65**	**32**	T	T	03 17 25.6	
	baz=222						
H11N2	**WAKE ISLAND Hy**	**26.66**	**32**	T	T	03 17 25.0	
	baz=222						
ASAR	**Alice Springs**	**27.26**	**219**	P	P	02 49 11.2	+0.9
	0.4nm,0.7s,baz=48,slow=8.9,SNR=5.0						
ILAR	**Eielson Array**	**80.57**	**22**	P	P	02 55 37.4	-0.8
	0.4nm,0.7s,baz=238,slow=6.2,SNR=6.1						
TORD	**Torodi Ar. Bea**	**149.14**	**291**	PKPbc	PKPbc	03 03 16.3	+0.7
	baz=67,slow=3.7						

IDC ***19*** *02:49:48.6±1.6, 24°.69N×122°.08E, h0^{km}, mb3.6/2, mb1 3.8/4, mb1mx3.3/63, mbtmp3.8/4, ML3.5/2, MS2.7/1, Ms1 2.7/1, ms1mx2.2/54, Error ellipse: s-maj=38.8km s-min=29.8km az=61.0*
ISCJB ***19*** *02:50:05.8±0.7, 25°.17N±0°.09×123°.07E±0°.07, h184^{km}±7^{km}, mb3.4/2, Error ellipse: s-maj=16.0km s-min=8.6km az=158.4*
JMA ***19*** *02:50:07.5±0.2, 25°.13N×123°.06E, h176^{km}±3^{km}, M3.5*

ISC 19 02:50:05.4±1.0, 25°.3N±0°.1×123°.02E±0°.08, h179^{km}±10^{km}, n18, σ1^{s}.37/29, Northeast of Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOJ	**Yonaguni jima**	**0.87**	**181**	P	**Pn**	**02 50 32.8**	**+0.7**
YOJ				*e*S	**Sn**	**02 50 51.9**	**-0.8**
JYNG	**Yonagunijimaku**	**0.88**	**185**	P	**Pn**	**02 50 32.9**	**+0.7**
JYNG				S	**Sn**	**02 50 52.9**	**0.0**
IRIF	**Iriomote-Funau**	**1.18**	**147**	P	**Pn**	**02 50 34.8**	**+0.3**
IRIF				S	**Sn**	**02 50 55.7**	**-1.2**
JISG	**Ishigakijimahi**	**1.38**	**122**	P	**Pn**	**02 50 36.8**	**+0.6**
JISG				S	**Sn**	**02 50 59.2**	**-0.8**
JIJ	**Ishigaki jima**	**1.40**	**133**	P	**Pn**	**02 50 36.8**	**+0.4**
JIJ				S	**Sn**	**02 50 58.5**	**-1.8**
JKRS	**Kuro-shima**	**1.41**	**140**	P	**Pn**	**02 50 37.3**	**+0.8**
JKRS				S	**Sn**	**02 50 59.5**	**-1.0**
HATJ	**Hateruma jima**	**1.46**	**151**	P	**Pn**	**02 50 37.6**	**+0.7**
HATJ				S	**Sn**	**02 51 00.4**	**-0.8**
JTJ	**Tarama**	**1.67**	**114**	P	**Pn**	**02 50 40.1**	**+1.1**
JTJ				S	**Sn**	**02 51 04.4**	**-0.5**
JIRB	**Irabujima**	**2.01**	**104**	P	**Pn**	**02 50 44.0**	**+1.5**
JIRB				S	**Sn**	**02 51 10.9**	**-0.4**
JIKM	**Ikemajima**	**2.06**	**101**	P	**Pn**	**02 50 44.9**	**+1.9**
JIKM				S	**Sn**	**02 51 12.6**	**+0.4**
JMJ	**Miyako jima 2**	**2.12**	**104**	*e*S	**Sn**	**02 51 13.4**	**-0.1**
JOGS	**Gusukube**	**2.24**	**104**	*e*S	**Sn**	**02 51 15.9**	**+0.2**
JKE	**Kume jima 2**	**3.53**	**73**	P	**Pn**	**02 51 02.7**	**+2.2**
JKE				*e*S	**Sn**	**02 51 45.0**	**+1.4**
JOW	**Kunigami**	**4.95**	**71**	Pn	**Pn**	**02 51 18.4**	**-0.3**
	2.6nm,0.3s,baz=125,slow=14,SNR=6.2						
JOW				Sn	**Sn**	**02 52 11.8**	**-4.5**
	4.2nm,0.3s,baz=114,slow=24,SNR=6.7						
KSRS	**Korea Array**	**12.79**	**18**	Pn	**P**	**02 53 03.8**	**-1.1**
	0.2nm,0.3s,baz=197,slow=12,SNR=5.9						
ASAJ	**Asahikawa**	**24.59**	**35**	LR	LR	03 05 14.9	
	comp=Z,17nm,18.4s,baz=182,slow=36						
MKAR	**Makanchi Array**	**38.71**	**314**	P	**P**	**02 57 12.8**	**+0.9**
	0.4nm,0.3s,baz=101,slow=8.9,SNR=8.8						
WRA	**Warramunga Arr**	**46.33**	**165**	P	**P**	**02 58 13.4**	**0.0**
	0.4nm,0.4s,baz=350,slow=10,SNR=4.7						

NIED ***19*** *02:51:00, 37°.80N×144°.00E, h5^{km}, Mw3.7 Best double couple: M$_0$3.51000×10^{14} NP1:φ$_s$16.00000°, δ22.00000°, λ-94.00000°. NP2:φ$_s$200.00000°, δ68.00000°, λ-88.00000°.*
ISCJB ***19*** *02:51:31.9±0.8, 37°.84N±0°.04×144°.12E±0°.06, h33^{km}, mb3.7/4, Error ellipse: s-maj=6.5km s-min=6.0km az=22.7*
JMA ***19*** *02:51:33.1±0.2, 37°.79N×144°.01E, h45^{km}, M3.8*
IDC ***19*** *02:51:34.6±5.3, 37°.72N×144°.13E, h38^{km}±47^{km}, mb3.4/4, mb1 3.6/6, mb1mx3.3/64, mbtmp3.6/6, ML3.5/2, MS2.4/2, Ms1 2.4/2, ms1mx2.1/40, Error ellipse: s-maj=38.9km s-min=21.8km az=112.0*

ISC 19 02:51:33.6±1.1, 37°.80N±0°.06×144°.13E±0°.08, h35^{km}, n20, σ1^{s}.72/30, mb3.7/4, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIO	**Ouri**	**2.29**	**287**	P	**Pn**	**02 52 08.3**	**-0.5**
JIO				*e*S	**Sn**	**02 52 34.5**	**-1.2**
OFUJ	**Ofunato**	**2.32**	**304**	P	**Pn**	**02 52 09.0**	**-0.2**
OFUJ				*e*S	**Sn**	**02 52 35.9**	**-0.6**
JMK	**Ichinoseki**	**2.56**	**298**	P	**Pn**	**02 52 12.6**	**+0.1**
JMK				*e*S	**Sn**	**02 52 42.1**	**-0.3**
JOM	**Ohasama**	**2.78**	**308**	P	**Pn**	**02 52 16.0**	**+0.4**
JOM				*e*S	**Sn**	**02 52 47.7**	**-0.2**
JFT	**Otama**	**3.02**	**266**	P	**Pn**	**02 52 19.1**	**+0.2**
JFT				*e*S	**Sn**	**02 52 53.2**	**-0.7**
JYK	**Kaneyama**	**3.17**	**292**	P	**Pn**	**02 52 21.2**	**+0.3**
JYK				*e*S	**Sn**	**02 52 57.9**	**+0.5**
JANG	**Nango**	**3.28**	**322**	*e*S	**Sn**	**02 52 59.1**	**-1.1**
JOT	**Ohata**	**4.30**	**327**	*e*S	**Sn**	**02 53 23.3**	**-2.0**
JRY	**Ryogami san**	**4.55**	**249**	P	**Pn**	**02 52 39.0**	**-1.0**
JRY				*e*S	**Sn**	**02 53 27.9**	**-3.8**
JKB	**Kayabe**	**4.73**	**331**	*e*S	**Sn**	**02 53 33.9**	**-1.9**
JOD2	**Odawara 2**	**4.78**	**240**	*e*S	**Sn**	**02 53 34.0**	**-3.4**
JCH	**Churui**	**4.84**	**353**	P	**Pn**	**02 52 44.2**	**+0.3**
JCH				*e*S	**Sn**	**02 53 33.5**	**-5.3**
MJAR	**Matsushiro Arr**	**4.89**	**257**	Pn	**Pn**	**02 52 45.8**	**+1.1**
	2.2nm,0.3s,baz=73,slow=10.0,SNR=7.1						
MJAR				Sn	**Sn**	**02 53 40.0**	**-0.1**
	0.8nm,0.3s,baz=136,slow=49,SNR=1.5						
MJAR				LR	LR	02 54 56.8	
	comp=Z,33nm,18.5s,baz=85,slow=42						
JTKR	**Abashiri--Toko**	**6.17**	**359**	P	**Pn**	**02 53 02.1**	**0.0**
JTKR				*e*S	**Sn**	**02 54 08.5**	**-2.8**
ASAJ	**Asahikawa**	**6.42**	**350**	Pn	**Pn**	**02 53 06.9**	**+1.4**
	1.0nm,0.3s,baz=171,slow=13,SNR=3.3						
ASAJ				Sn	**Sn**	**02 54 17.1**	**-0.3**
	0.1nm,0.3s,baz=32,slow=28,SNR=1.7						
KSRS	**Korea Array**	**12.86**	**273**	LR	LR	02 58 55.4	
	comp=Z,21nm,21.5s,baz=115,slow=34						
KURBB	**Kurchatov Arra**	**47.24**	**308**	P	**P**	**03 00 04.0**	**+1.0**
	0.3nm,0.4s,baz=79,slow=8.2,SNR=3.1						
ILAR	**Eielson Array**	**47.69**	**33**	P	**P**	**03 00 07.5**	**+1.2**
	0.5nm,0.7s,baz=265,slow=5.8,SNR=8.2						
WRA	**Warramunga Arr**	**58.17**	**191**	P	**P**	**03 01 23.9**	**-0.1**
	1.2nm,0.7s,baz=12,slow=7.4,SNR=8.8						
ASAR	**Alice Springs**	**61.89**	**191**	P	**P**	**03 01 49.8**	**+0.3**
	0.3nm,0.6s,baz=12,slow=9.8,SNR=4.1						

ISN ***19*** *02:51:43.8±1.1, 36°.58N×42°.99E, h0^{km}±9^{km}, ML2.9*
CSEM ***19*** *02:51:46.5±0.2, 36°.63N×42°.87E, h2^{km}, ML2.9, Error ellipse: s-maj=4.7km s-min=4.2km az=39.0*
DDA ***19*** *02:51:47.0, 36°.71N×42°.82E, h6^{km}, Ml3.1*
ISK ***19*** *02:51:48.4, 36°.77N×42°.88E, h11^{km}, ML2.9/6*

ISC 19 02:51:46.4±1.5, 36°.65N±0°.05×42°.85E±0°.03, h9^{km}±11^{km}, n26, σ0^{s}.90/43, Iraq

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CUKT	**Cukurca**	**0.85**	**45**	PG	**Pb**	**02 52 03.6**	**+0.2**
CUKT				SG	**Sb**	**02 52 14.3**	**-0.7**
CUKT	**Cukurca**	**0.85**	**45**	*i* P	**Pb**	**02 52 03.3**	**-0.1**
CUKT				*i* S	**Sb**	**02 52 14.4**	**-0.6**
CUKT	**Cukurca**	**0.85**	**45**	P	**Pb**	**02 52 03.3**	**-0.1**
CUKT	**Cukurca**	**0.85**	**45**	*e*Pg	**Pb**	**02 52 03.6**	**+0.2**
CUKT				S	**Sb**	**02 52 14.4**	**-0.6**
SIRT	**Sirnak**	**0.92**	**339**	PG	**Pb**	**02 52 04.2**	**-0.3**
SIRT				SG	**Sb**	**02 52 16.4**	**-0.4**
SIRT	**Sirnak**	**0.92**	**339**	*e*Pg	**Pb**	**02 52 04.2**	**-0.3**
SIRT				*e*Sg	**Sb**	**02 52 16.4**	**-0.4**
SIRN	**S˜–rnak**	**0.92**	**338**	*i* P	**Pg**	**02 52 03.5**	**-0.6**
SIRN				*i* S	**Sb**	**02 52 16.7**	**-0.2**
SIRN	**S˜–rnak**	**0.92**	**338**	P	**Pg**	**02 52 03.5**	**-0.6**
SIRN				S	**Sb**	**02 52 16.7**	**-0.2**
HAKT	**HAKKARI**	**1.14**	**37**	*i* P	**Pb**	**02 52 08.4**	**0.0**
HAKT				*i* S	**Sn**	**02 52 23.6**	**-1.0**
HAKT	**HAKKARI**	**1.14**	**37**	P	**Pb**	**02 52 08.4**	**0.0**
HAKT				S	**Sn**	**02 52 23.6**	**-1.0**
YOVA	**Hakkari_Yˆ…kse**	**1.48**	**50**	*i* P	**Pg**	**02 52 14.4**	**-0.5**
YOVA				*i* S	**Sg**	**02 52 35.4**	**+1.2**
YOVA	**Hakkari_Yˆ…kse**	**1.48**	**50**	P	**Pg**	**02 52 14.4**	**-0.5**
YOVA				S	**Sg**	**02 52 35.4**	**+1.2**
SRTM	**Siirt_Merkez**	**1.53**	**331**	*i* P	**Pn**	**02 52 14.6**	**+0.5**
SRTM				*i* S	**Sg**	**02 52 35.4**	**-0.3**
SRTM	**Siirt_Merkez**	**1.53**	**331**	P	**Pn**	**02 52 14.6**	**+0.5**
SRTM				S	**Sg**	**02 52 35.4**	**-0.3**
BTMN	**Batman**	**1.77**	**315**	*i* P	**Pn**	**02 52 17.5**	**+0.2**
BTMN				*i* S	**Sb**	**02 52 42.3**	**+0.9**
BTMN	**Batman**	**1.77**	**315**	P	**Pn**	**02 52 17.5**	**+0.2**
BTMN				S	**Sb**	**02 52 42.3**	**+0.9**
MARD	**Mardin**	**1.79**	**293**	*i* P	**Pn**	**02 52 17.3**	**-0.3**
MARD				*i* S	**Sn**	**02 52 41.1**	**+0.7**
SVAN	**Silvan-Diyarba**	**2.00**	**319**	PN	**Pb**	**02 52 22.1**	**-0.8**
SVAN	**Silvan-Diyarba**	**2.00**	**319**	*e*Pn	**Pb**	**02 52 22.1**	**-0.8**
GURO	**Guroymak-BITLI**	**2.01**	**341**	PN	**Pn**	**02 52 21.6**	**+1.0**
GURO	**Guroymak-BITLI**	**2.01**	**341**	*e*Pn	**Pn**	**02 52 21.6**	**+1.0**
MAZI	**Mazidag**	**2.09**	**294**	PN	**Pb**	**02 52 24.3**	**-0.2**
MAZI	**Mazidag**	**2.09**	**294**	*e*Pn	**Pb**	**02 52 24.3**	**-0.2**
SVRC	**Sivrice-ELAZID**	**3.31**	**303**	PN	**Pn**	**02 52 41.1**	**+2.6**
SVRC	**Sivrice-ELAZID**	**3.31**	**303**	*e*Pn	**Pn**	**02 52 41.1**	**+2.6**
RTB	**Rutbah**	**4.17**	**211**	*e*Pn	**Pn**	**02 52 51.0**	**+0.8**
	SNR=3.0						
RTB				*e*Sn	**Sn**	**02 53 37.5**	**-1.6**
	SNR=3.0						

CSEM ***19*** *02:54:37.0, 39°.45N×29°.77W, h10^{km}, ML2.2*

PDA 19 02:54:37.0±0.3, 39°.45N×29°.77W, h10^{km}, MD3.6, ML2.2, Error ellipse: s-maj=5.3km s-min=2.2km az=50.0, Azores Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCED	**Cedros**	**1.17**	**135**	*e*P	Pb	02 54 54.6	-4.7
PCED				*e*S	Sb	02 55 07.8	-6.7
PCED				A	A	02 55 11.6	
	24nm,0.3s						
PCED	**Cedros**	**1.17**	**135**	*e*P	Pb	02 54 54.6	-4.7
PCED				*e*S	Sb	02 55 07.8	-6.7
CALA	**Caldeira**	**1.20**	**136**	*e*P	Pb	02 54 55.2	-4.7
CALA				*e*S	Sb	02 55 09.0	-6.5
CALA	**Caldeira**	**1.20**	**136**	*e*P	Pb	02 54 55.2	-4.7
CALA				*e*S	Sb	02 55 09.0	-6.5
ROSA	**Rosais**	**1.40**	**121**	*e*P	Pn	02 54 57.8	-4.7
ROSA				*e*S	Sb	02 55 13.3	-7.7
ROSA				A	A	02 55 15.1	
	11nm,0.2s						
ROSA	**Rosais**	**1.40**	**121**	*e*P	Pn	02 54 57.8	-4.7
ROSA				*e*S	Sb	02 55 13.3	-7.7
PCAN	**Candelaria**	**1.41**	**134**	*e*P	Pn	02 54 58.0	-4.7
PCAN				*e*S	Sn	02 55 13.9	-7.4
PCAN				A	A	02 55 18.2	
	15nm,0.1s						
PCAN	**Candelaria**	**1.41**	**134**	*e*P	Pn	02 54 58.0	-4.7
PCAN				*e*S	Sn	02 55 13.9	-7.4
PICO	**Pico**	**1.41**	**132**	*e*P	Pn	02 54 58.2	-4.6
PICO				*e*S	Sn	02 55 14.0	-7.5
PICO				A	A	02 55 17.7	
	34nm,0.2s						
PICO	**Pico**	**1.41**	**132**	*e*P	Pn	02 54 58.2	-4.6
PICO				*e*S	Sn	02 55 14.0	-7.5
PMAN	**Manadas**	**1.54**	**122**	*e*P	Pn	02 54 59.8	-4.7
PMAN				*e*S	Sn	02 55 17.1	-7.5
PMAN				A	A	02 55 18.1	
	14nm,0.3s						
PMAN	**Manadas**	**1.54**	**122**	*e*P	Pn	02 54 59.8	-4.7
PMAN				*e*S	Sn	02 55 17.1	-7.5

TRN 19 03:00:24.1, 13°.90N×60°.27W, h27^{km}, MD3.7, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLB	**Belfond**	**0.75**	**264**	*e*P	Pn	03 00 40.8	+1.7
SLB				*e*S	Sn	03 00 51.0	+1.3
MVM	**Montagne Vaucl**	**0.89**	**317**	*e*P	Pb	03 00 41.3	+0.4
LPMF	**Morne Lapointe**	**0.95**	**315**	*e*P	Pb	03 00 42.8	+0.8
TRMF	**Trois Ilets**	**0.98**	**310**	*e*P	Pb	03 00 43.4	+0.8
BIM	**Bigot**	**0.99**	**308**	*e*P	Pb	03 00 43.2	+0.5
BIM				*e*S	Sn	03 00 58.6	+3.2
ZAM	**Aeronautique**	**0.99**	**312**	*e*P	Pb	03 00 42.9	+0.2
BBGH	**Gun Hill**	**1.02**	**137**	*e*P	Pb	03 00 44.2	+1.0
BBGH				*e*S	Sb	03 00 58.7	+2.4
SVCV	**St. Vincent, C**	**1.06**	**234**	*e*P	Pn	03 00 43.5	+0.3
SVCV				*e*S	Sb	03 00 58.9	+1.6
SSV	**Crater Summit**	**1.06**	**238**	*e*P	Pb	03 00 44.9	+0.9
SVV	**Soufriere Volc**	**1.09**	**238**	*e*P	Pb	03 00 44.1	-0.2
SVV				*e*S	Sb	03 00 59.9	+1.8
BBSP	**Saint Philip**	**1.12**	**135**	*e*P	Pb	03 00 44.8	0.0
BBSP				*e*S	Sb	03 01 00.4	+1.4
SVB	**Belmont**	**1.14**	**237**	*e*P	Pb	03 00 45.1	-0.1
SVB				*e*S	Sb	03 01 01.0	+1.3
FDF	**Fort de France**	**1.19**	**314**	*e*P	Pb	03 00 46.4	+0.4
FDF				*e*S	Sb	03 01 02.0	+1.0
FCV	**Fort Charlotte**	**1.20**	**232**	*e*P	Pb	03 00 46.7	+0.4
FCV				*e*S	Sb	03 01 03.4	+1.9
PML	**Morne Lenard**	**1.24**	**315**	*e*P	Pb	03 00 47.2	+0.2
BAMF	**Morne Balai**	**1.24**	**317**	*e*P	Pb	03 00 47.3	+0.3
PCM	**Pelee Case Pet**	**1.29**	**315**	*e*P	Pb	03 00 47.1	-0.6
PCM	**Pelee Case Pet**	**1.29**	**315**	*e*P	Pb	03 00 47.7	0.0
GRSS	**Sisters**	**2.06**	**220**	*e*P	Pn	03 00 58.0	+1.0
GRHS	**Sauteurs**	**2.14**	**219**	*e*P	Pn	03 00 59.7	+1.6
GRGR	**Grenville**	**2.22**	**218**	*e*P	Pn	03 01 00.3	+1.1
GRGR				*e*S	Sn	03 01 27.5	+1.8

NEIC ***19*** *03:15:35.7±0.0, 18°.10N×67°.61W, h151^{km}, MD3.5(RSPR), After RSPR.*

RSPR 19 03:15:35.7, 18°.10N×67°.61W, h151^{km}, MD3.5/11, 25C-2D, Mona Passage

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IDE	**Isla Desecheo**	**0.31**	**25**	⇓*e*P	Pn	03 15 56.1	-0.3
IDE	**Isla Desecheo**	**0.31**	**25**	*e*S	Sn	03 16 11.9	-0.4
IDE	**Isla Desecheo**	**0.31**	**25**	⇓*e*P	Pn	03 15 56.1	-0.3
IDE				*e*S	Sn	03 16 11.9	-0.4
CRPR	**Cabo Rojo, PR**	**0.49**	**101**	⇑*e*P	Pn	03 15 56.5	-0.6
CRPR	**Cabo Rojo, PR**	**0.49**	**101**	*e*S	Sn	03 16 13.1	-0.3
CRPR	**Cabo Rojo, PR**	**0.49**	**101**	⇑*e*P	Pn	03 15 56.5	-0.6
CRPR				*e*S	Sn	03 16 13.1	-0.3
LSP	**Las Mesas**	**0.51**	**81**	⇑*e*P	Pn	03 15 57.2	-0.1
LSP	**Las Mesas**	**0.51**	**81**	*e*S	Sn	03 16 13.9	+0.2
LSP	**Las Mesas**	**0.51**	**81**	⇑*e*P	Pn	03 15 57.2	-0.1
LSP				*e*S	Sn	03 16 13.9	+0.2
AGPR	**Aguadilla, PR**	**0.60**	**52**	⇑*e*P	Pn	03 15 58.0	+0.2
AGPR	**Aguadilla, PR**	**0.60**	**52**	*e*S	Sn	03 16 14.7	+0.1
AGPR	**Aguadilla, PR**	**0.60**	**52**	⇑*e*P	Pn	03 15 58.0	+0.2
AGPR				*e*S	Sn	03 16 14.7	+0.1
AOPR	**Arecibo Observ**	**0.85**	**73**	⇑*e*P	Pn	03 15 58.8	-0.7
AOPR				*e*S	Sn	03 16 17.3	-0.2
AOPR	**Arecibo Observ**	**0.85**	**73**	⇑*e*P	Pn	03 15 59.2	-0.3
AOPR	**Arecibo Observ**	**0.85**	**73**	⇑*e*P	Pn	03 15 59.2	-0.3
AOPR				*e*S	Sn	03 16 17.4	-0.2
OBIP	**Obispado Ponce**	**0.96**	**93**	⇑*e*P	Pn	03 16 00.1	-0.2
OBIP	**Obispado Ponce**	**0.96**	**93**	*e*S	Sn	03 16 19.0	+0.1
OBIP	**Obispado Ponce**	**0.96**	**93**	⇑*e*P	Pn	03 16 00.1	-0.2
OBIP				*e*S	Sn	03 16 19.0	+0.1
EMPR	**Esperanza - Ma**	**1.09**	**70**	⇑*e*P	Pn	03 16 01.1	-0.4
EMPR	**Esperanza - Ma**	**1.09**	**70**	*e*S	Sn	03 16 20.7	-0.3
EMPR	**Esperanza - Ma**	**1.09**	**70**	⇑*e*P	Pn	03 16 01.1	-0.4
EMPR				*e*S	Sn	03 16 20.7	-0.3
SJG	**San Juan**	**1.39**	**89**	*e*S	Sn	03 16 26.6	+0.6
SJG	**San Juan**	**1.39**	**89**	⇑*e*P	Pn	03 16 04.1	-0.1
SJG	**San Juan**	**1.39**	**89**	⇑*e*P	Pn	03 16 04.1	-0.1
SJG				*e*S	Sn	03 16 26.6	+0.6
HUMP	**Col San Antoni**	**1.68**	**88**	*e*S	Sn	03 16 31.7	+0.3
HUMP	**Col San Antoni**	**1.68**	**88**	⇑*e*P	Pn	03 16 07.1	-0.1
HUMP	**Col San Antoni**	**1.68**	**88**	⇑*e*P	Pn	03 16 07.1	-0.2
HUMP				*e*S	Sn	03 16 32.2	+0.8
HUMP	**Col San Antoni**	**1.68**	**88**	⇑*e*P	Pn	03 16 07.1	-0.2
HUMP				*e*S	Sn	03 16 31.7	+0.3
CBYP	**Canovanas**	**1.68**	**84**	*e*S	Sn	03 16 31.8	+0.2
CBYP	**Canovanas**	**1.68**	**84**	⇑*e*P	Pn	03 16 07.3	-0.1
CBYP	**Canovanas**	**1.68**	**84**	⇑*e*P	Pn	03 16 07.4	0.0
CBYP	**Canovanas**	**1.68**	**84**	⇑*e*P	Pn	03 16 07.4	0.0
CBYP				*e*S	Sn	03 16 31.8	+0.2
DR12	**Loma Pena Alta**	**1.81**	**292**	⇑*e*P	Pn	03 16 08.2	-0.6
DR12	**Loma Pena Alta**	**1.81**	**292**	⇑*e*P	Pn	03 16 08.2	-0.6
MTP	**Monte Pirata**	**1.96**	**90**	⇑*e*P	Pn	03 16 10.5	0.0
MTP	**Monte Pirata**	**1.96**	**90**	*e*S	Sn	03 16 37.6	+0.5
MTP	**Monte Pirata**	**1.96**	**90**	⇑*e*P	Pn	03 16 10.5	0.0
MTP				*e*S	Sn	03 16 37.6	+0.5

ISN ***19*** *03:17:24.3±0.3, 37°.03N×42°.78E, h0^{km}, ML2.7*

DDA ***19*** *03:17:37.8, 37°.06N×42°.71E, h7^{km}, Ml2.7*

CSEM ***19*** *03:17:39.6±0.4, 37°.18N×42°.75E, h5^{km}, ML2.6, Error ellipse: s-maj=12.3km s-min=3.7km az=12.0*

ISK ***19*** *03:17:40.1, 37°.27N×42°.75E, h7^{km}, ML2.6/4*

ISC 19 03:17:38.4±1.5**, 37°.12N**±0°.06×**42°.74E**±0°.03**, h2**^{km}±11^{km}**, n23, σ0**^{s}**36**/38**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIRT	**Sirnak**	0.45	328	PG	Pg	03 17 47.2	+0.2
SIRT				SG	Sg	03 17 52.4	-0.4
SIRT	**Sirnak**	0.45	328	ePg	Pg	03 17 47.2	+0.2
SIRT				eSg	Sg	03 17 52.4	-0.4
SIRN	**S˜–rnak**	0.46	326	i P	Pn	03 17 51.8	-0.2
SIRN				i S	Sg	03 17 53.7	+0.6
SIRN	**S˜–rnak**	0.46	326	P	Pn	03 17 51.8	-0.2
SIRN				S	Sg	03 17 53.7	+0.6
CUKT	**Cukurca**	0.71	79	PG	Pb	03 17 53.7	+0.2
CUKT				SG	Sb	03 18 03.8	+0.1
CUKT	**Cukurca**	0.71	79	i P	Pg	03 17 51.6	-0.4
CUKT				i S	Sb	03 18 03.6	-0.1
CUKT	**Cukurca**	0.71	79	P	Pg	03 17 51.6	-0.4
CUKT	**Cukurca**	0.71	79	ePg	Pb	03 17 53.7	+0.2
CUKT				S	Sb	03 18 03.6	-0.1
HAKT	**HAKKARI**	0.89	60	i P	Pg	03 17 55.6	+0.1
HAKT				i S	Sb	03 18 08.4	-0.7
HAKT	**HAKKARI**	0.89	60	P	Pg	03 17 55.6	+0.1
HAKT				S	Sb	03 18 08.4	-0.7
SRTM	**Siirt_Merkez**	1.08	324	i P	Pb	03 17 59.9	-0.1
SRTM				i S	Sb	03 18 14.2	-0.3
SRTM	**Siirt_Merkez**	1.08	324	P	Pb	03 17 59.8	-0.1
SRTM				S	Sb	03 18 14.2	-0.3
YOVA	**Hakkari_Yˆ…kse**	1.32	69	i P	Pg	03 18 03.8	0.0
YOVA				i S	Sn	03 18 23.0	+0.6
YOVA	**Hakkari_Yˆ…kse**	1.32	69	P	Pg	03 18 03.8	0.0
YOVA				S	Sn	03 18 23.0	+0.6
BTMN	**Batman**	1.40	304	i P	Pn	03 18 05.1	+0.2
BTMN				i S	Sn	03 18 24.2	+0.2
BTMN	**Batman**	1.40	304	P	Pn	03 18 05.1	+0.2
GURO	**Guroymak-BITLI**	1.53	339	PN	Pn	03 18 06.6	-0.3
GURO	**Guroymak-BITLI**	1.53	339	ePn	Pn	03 18 06.6	-0.3
MARD	**Mardin**	1.57	278	i P	Pn	03 18 07.1	-0.3
MARD				i S	Sg	03 18 29.5	+0.5
SVAN	**Silvan-Diyarba**	1.60	311	PN	Pb	03 18 08.6	0.0
SVAN	**Silvan-Diyarba**	1.60	311	ePn	Pb	03 18 08.6	0.0
MAZI	**Mazidag**	1.86	281	PN	Pb	03 18 12.9	-0.2
MAZI	**Mazidag**	1.86	281	ePn	Pb	03 18 12.9	-0.2

IDC 19 03:19:50.9±1.3**, 1°.20N×126°.59E, h0**^{km}**, mb3.6**/5**, mb1 3.7**/5**, mb1mx3.5**/52**, mbtmp3.6**/5**, Error ellipse: s-maj=141.0km s-min=20.0km az=68.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	22.35	161	P	P	03 24 50.0	-0.6
	0.6nm,0.5s,baz=340,slow=11,SNR=5.6						
ASAR	**Alice Springs**	25.72	164	P	P	03 25 23.6	+0.4
	0.8nm,0.9s,baz=348,slow=7.7,SNR=3.4						
SONM	**Songino Array**	49.64	342	P	P	03 28 44.7	+0.4
	0.4nm,0.5s,baz=142,slow=7.3,SNR=2.3						
MKAR	**Makanchi Array**	59.55	326	P	P	03 29 56.0	-0.4
	0.4nm,0.4s,baz=127,slow=6.9,SNR=6.7						
KURBB	**Kurchatov Arra**	63.79	328	P	P	03 30 24.6	-0.2
	0.6nm,0.4s,baz=132,slow=6.4,SNR=5.7						

IDC ***19*** *03:34:22.3±0.8, 43°.10N×45°.63E, h0^{km}, mb3.6/4, mb1 3.7/9, mb1mx3.4/59, mbtmp3.6/9, ML3.4/3, MS2.5/3, Ms1 2.5/3, ms1mx2.1/57, Error ellipse: s-maj=12.0km s-min=10.0km az=10.0*

TIF ***19*** *03:34:22.9, 43°.16N×45°.79E, h11^{km}±2^{km}*

MOS ***19*** *03:34:23.3±0.0, 43°.06N×45°.87E, h21^{km}, MPVA4.6*

NORS ***19*** *03:34:23.3±0.0, 43°.03N×45°.87E, h15^{km}*

DDA ***19*** *03:34:23.8, 43°.15N×45°.42E, h5^{km}, Ml3.1*

ISCJB ***19*** *03:34:24.0±0.3, 43°.16N±0°.02×45°.89E±0°.02, h9^{km}±2^{km}, mb3.5/4, MS3.0/1, Error ellipse: s-maj=3.2km s-min=1.6km az=21.5*

CSEM ***19*** *03:34:24.8±0.1, 43°.15N×45°.88E, h10^{km}, mb4.1, Error ellipse: s-maj=3.3km s-min=2.0km az=21.0*

MOS ***19*** *03:34:24.4±1.2, 43°.19N×45°.89E, h14^{km}, mb4.1/2, Error ellipse: s-maj=6.1km s-min=4.3km az=40.0*

DRS ***19*** *03:34:25.8±0.0, 43°.01N×45°.85E, h15^{km}*

AZER ***19*** *03:34:26.6±0.3, 43°.01N×45°.86E, h39^{km}±20^{km}, ml3.2/17, Error ellipse: s-maj=66.6km s-min=10.1km az=336.0*

ISC 19 03:34:25.1±0.8**, 43°.08N**±0°.02×**45°.87E**±0°.01**, h14**^{km}±5^{km}**, n193, σ1**^{s}**61**/323**, mb3.6**/4**, 42C-35D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GROC	**Groznyy**	0.13	334	ePG	Pg	03 34 28.2	-0.4
GROC				pmax	pmax		
	comp=Z,2µm,0.2s						
GROC	**Groznyy**	0.13	334	ePg	Pg	03 34 28.2	-0.4
	comp=Z,2µm,0.2s						
GROC	**Groznyy**	0.13	334	i Pg	Pg	03 34 28.5	-0.1
GROC				eSg	Sb	03 34 32.6	+0.4
DVE	**Vedeno**	0.22	124	⇓iPG	Pg	03 34 29.5	-0.5
DVE	**Vedeno**	0.22	124	i Pg	Pg	03 34 29.5	-0.5
DVE	**Vedeno**	0.22	124	i Pg	Pg	03 34 29.5	-0.5
DVE				i Sg	Sg	03 34 33.9	+0.5
BTLR	**Botlikh**	0.49	149	⇓iPG	Pg	03 34 33.8	-1.0
BTLR				i		03 34 41.4	
BTLR				pmax	pmax		
	comp=Z,633nm,0.6s						
BTLR				smax	smax		
	comp=N,2µm,0.2s						
BTLR	**Botlikh**	0.49	149	i Pg	Pg	03 34 33.8	-1.0
	comp=N,633nm,0.6s						
BTLR				i Sg	Sg	03 34 41.4	0.0
	comp=N,2µm,0.2s						
BTLR	**Botlikh**	0.49	149	i Pg	Pg	03 34 33.9	-1.0
BTLR				i Sg	Sg	03 34 41.4	0.0
DLMR	**Dylym**	0.55	91	ePG	Pg	03 34 36.0	0.0
DLMR				eS	Sb	03 34 45.0	+0.6
DLMR				pmax	pmax		
	comp=Z,160nm,0.2s						
DLMR	**Dylym**	0.55	91	ePg	Pg	03 34 36.0	0.0
	comp=Z,160nm,0.2s						
DLMR				eSg	Sb	03 34 45.0	+0.6
DLMR	**Dylym**	0.55	91	ePg	Pg	03 34 36.0	0.0
DLMR				eSg	Sb	03 34 45.0	+0.6
DBC	**Dubki**	0.70	95	⇑iPG	Pg	03 34 38.4	-0.4
DBC				i		03 34 49.2	
DBC	**Dubki**	0.70	95	i Pg	Pg	03 34 38.4	-0.4
DBC				i Sg	Sb	03 34 49.2	+0.5
DBC	**Dubki**	0.70	95	ePg	Pg	03 34 38.5	-0.4
DBC				eSg	Sb	03 34 49.2	+0.5
KMGR	**Komgaron**	0.74	268	ePG	Pg	03 34 39.1	-0.3
KMGR				eS	Sb	03 34 50.8	+1.1
KMGR	**Komgaron**	0.74	268	ePg	Pg	03 34 39.1	-0.3
KMGR				eSg	Sb	03 34 50.8	+1.1
KMGR	**Komgaron**	0.74	268	i Pg	Pg	03 34 39.1	-0.3
KMGR				eSg	Sb	03 34 50.1	+0.4
UNCR	**Uncukul**	0.77	118	⇓iPG	Pb	03 34 39.0	-1.3
UNCR				i S	Sb	03 34 50.0	-0.6
UNCR				pmax	pmax		
	comp=Z,759nm,0.1s						
UNCR	**Uncukul**	0.77	118	i Pg	Pb	03 34 39.0	-1.3
	comp=Z,759nm,0.1s						
UNCR				i Sg	Sb	03 34 50.0	-0.6
UNCR	**Uncukul**	0.77	118	i Pg	Pb	03 34 39.0	-1.3
UNCR				i Sg	Sb	03 34 50.0	-0.6
KRNR	**Karanay**	0.80	108	i PG	Pb	03 34 40.0	-0.8
KRNR				eS	Sb	03 34 51.5	0.0
KRNR				pmax	pmax		
	comp=Z,129nm,0.2s						
KRNR	**Karanay**	0.80	108	i Pg	Pb	03 34 40.0	-0.8
	comp=Z,129nm,0.2s						
KRNR				eSg	Sb	03 34 51.5	0.0
KRNR	**Karanay**	0.80	108	i Pg	Pb	03 34 40.0	-0.8
KRNR				eSg	Sb	03 34 51.5	0.0
XNZR	**Khunzakh**	0.82	131	ePG	Pb	03 34 40.7	-0.4
XNZR				eS	Sg	03 34 52.2	+0.5
XNZR	**Khunzakh**	0.82	131	ePg	Pb	03 34 40.7	-0.4
XNZR				eSg	Sg	03 34 52.2	+0.5
XNZR	**Khunzakh**	0.82	131	ePg	Pb	03 34 40.7	-0.4
XNZR				eSg	Sg	03 34 52.2	+0.5
VLKR	**Vladikavkaz**	0.88	268	ePG	Pb	03 34 42.1	0.0
VLKR				eS	Sn	03 34 55.8	+0.2
VLKR	**Vladikavkaz**	0.88	268	ePg	Pb	03 34 42.1	0.0
VLKR				eSg	Sn	03 34 55.8	+0.2
VLKR	**Vladikavkaz**	0.88	268	ePg	Pb	03 34 41.9	-0.2
VLKR				eSg	Sg	03 34 54.8	+1.2
BUJR	**Buynaksk**	0.94	106	⇓iPG	Pn	03 34 44.0	+0.1
BUJR				i S	Sn	03 34 59.0	+1.8
BUJR				pmax	pmax		
	comp=Z,136nm,0.2s						
BUJR	**Buynaksk**	0.94	106	i Pg	Pn	03 34 44.0	+0.1
	comp=Z,136nm,0.2s						
BUJR				i Sg	Sn	03 34 59.0	+1.8
BUJR	**Buynaksk**	0.94	106	i Pg	Pn	03 34 44.0	+0.1
BUJR				i Sg	Sn	03 34 59.0	+1.8
ARKR	**Arakani**	0.95	120	⇓iPG	Pb	03 34 43.0	-0.4
ARKR				eS	Sg	03 34 56.3	+0.3
ARKR				pmax	pmax		
	comp=Z,430nm,0.3s						
ARKR	**Arakani**	0.95	120	i Pg	Pb	03 34 43.0	-0.4
	comp=Z,430nm,0.3s						
ARKR				eSg	Sg	03 34 56.3	+0.3
ARKR	**Arakani**	0.95	120	i Pg	Pb	03 34 43.0	-0.4
ARKR				eSg	Sg	03 34 56.3	+0.3
BTKR	**Batakoyurt**	1.01	287	⇓iPG	Pb	03 34 44.8	+0.4
BTKR				eS	Sn	03 35 00.5	+1.5
BTKR	**Batakoyurt**	1.01	287	i Pg	Pb	03 34 44.8	+0.4
BTKR				eSg	Sn	03 35 00.5	+1.5
BTKR	**Batakoyurt**	1.01	287	i Pg	Pb	03 34 44.6	+0.1
BTKR				eSg	Sn	03 34 58.9	-0.1
TRKR	**Terskaya**	1.05	308	ePG	Pb	03 34 45.3	+0.3
TRKR				eS	Sn	03 35 01.8	+2.0
TRKR	**Terskaya**	1.05	308	ePg	Pb	03 34 45.3	+0.3
TRKR				eSg	Sn	03 35 01.8	+2.0
TRKR	**Terskaya**	1.05	308	ePg	Pb	03 34 45.3	+0.3
TRKR				eSg	Sn	03 34 59.9	+0.1
ARNR	**Ardon**	1.17	275	ePG	Pn	03 34 46.9	-0.1
ARNR				eS	Sg	03 35 04.6	+1.8
ARNR	**Ardon**	1.17	275	ePg	Pn	03 34 46.9	-0.1
ARNR				eSg	Sg	03 35 04.6	+1.8
ARNR	**Ardon**	1.17	275	i Pg	Pn	03 34 46.9	-0.1
ARNR				eSg	Sg	03 35 03.2	+0.4
MAK	**Makhachkala**	1.20	95	⇑iPG	Pg	03 34 48.6	+0.4
MAK				e		03 35 05.6	
MAK				pmax	pmax		
	comp=Z,172nm,0.3s						
MAK				smax	smax		
	comp=N,3µm,0.4s						
MAK				smax	smax		
	comp=N,3µm,0.5s						
MAK	**Makhachkala**	1.20	95	i Pg	Pg	03 34 48.6	+0.4
	comp=N,172nm,0.3s						
MAK				eSg	Sg	03 35 05.6	+1.7
	comp=N,3µm,0.5s						
MAK	**Makhachkala**	1.20	95	ePg	Pn	03 34 47.0	-0.4
MAK				eSg	Sn	03 35 03.5	-0.1
KMKR	**Kumukh**	1.31	136	i PG	Pn	03 34 49.5	+0.3
KMKR				i S	Sg	03 35 07.5	0.0
KMKR				pmax	pmax		
	comp=Z,294nm,0.2s						
KMKR	**Kumukh**	1.31	136	i Pg	Pn	03 34 49.5	+0.3
	comp=Z,294nm,0.2s						
KMKR				i Sg	Sg	03 35 07.5	0.0
KMKR	**Kumukh**	1.31	136	i Pg	Pn	03 34 49.5	+0.3
KMKR				i Sg	Sg	03 35 07.5	0.0
DUS	**Dusheti**	1.32	221	P	Pn	03 34 49.1	-0.1
DUS				S	Sb	03 35 07.4	+1.0
DUS	**Dusheti**	1.32	221	⇑ePG	Pn	03 34 49.0	-0.1
DUS				eS	Sb	03 35 07.3	+1.0
DUS	**Dusheti**	1.32	221	P	Pn	03 34 49.1	-0.1
DUS				S	Sb	03 35 07.4	+1.0
KORR	**Kora**	1.32	271	ePg	Pn	03 34 49.4	+0.3
KORR				eSg	Sg	03 35 07.8	+0.1
PRTR	**Priterechnaya**	1.34	300	ePG	Pb	03 34 49.8	-0.1
PRTR				eS	Sg	03 35 09.4	+1.2
PRTR	**Priterechnaya**	1.34	300	ePg	Pb	03 34 49.8	-0.1
PRTR				eSg	Sg	03 35 09.4	+1.2
PRTR	**Priterechnaya**	1.34	300	ePg	Pb	03 34 49.8	-0.1
PRTR				eSg	Sg	03 35 08.6	+0.3
STDR	**Stavd-Durt**	1.35	283	ePG	Pb	03 34 50.3	+0.1
STDR				eS	Sg	03 35 10.3	+1.6
STDR	**Stavd-Durt**	1.35	283	ePg	Pb	03 34 50.3	+0.1
STDR				eSg	Sg	03 35 10.3	+1.6
STDR	**Stavd-Durt**	1.35	283	i Pg	Pn	03 34 50.1	+0.5
STDR				eSg	Sg	03 35 09.1	+0.3
SGKR	**Sergokala**	1.45	115	ePG	Pb	03 34 52.5	+0.6
SGKR				i S	Sg	03 35 15.5	+3.6
SGKR	**Sergokala**	1.45	115	ePg	Pb	03 34 52.5	+0.6
SGKR				i Sg	Sg	03 35 15.5	+3.6
SGKR	**Sergokala**	1.45	115	ePg	Pb	03 34 52.5	+0.6
ZEI	**Tsey**	1.48	259	ePG	Pn	03 34 51.3	-0.1
ZEI				eS	Sn	03 35 10.4	-0.3
ZEI	**Tsey**	1.48	259	ePg	Pn	03 34 51.4	0.0
ZEI				eSg	Sn	03 35 10.8	+0.1
LSNR	**Lesken**	1.51	278	ePG	Pn	03 34 52.4	+0.6
LSNR				eS	Sg	03 35 14.0	+0.3
LSNR	**Lesken**	1.51	278	ePg	Pn	03 34 52.4	+0.6
LSNR				i Sg	Sb	03 35 13.2	+1.3
SEAG	**Tbilisi Sea**	1.54	211	P	Pb	03 34 54.1	+0.7
SEAG				S	Sg	03 35 15.5	+0.9
SEAG	**Tbilisi Sea**	1.54	211	P	Pb	03 34 54.1	+0.7
SEAG				S	Sg	03 35 15.5	+0.9
ZKTA	**Zakatala**	1.55	159	⇓P	Pb	03 34 53.2	-0.3
ZKTA				⇓S	Sb	03 35 13.4	+0.5
URKR	**Urkarakh**	1.59	125	⇑iPN	Pb	03 34 54.7	+0.4
URKR				eS	Sg	03 35 18.8	+2.5
URKR	**Urkarakh**	1.59	125	i Pn	Pb	03 34 54.7	+0.4
URKR				eSg	Sg	03 35 18.8	+2.5
URKR	**Urkarakh**	1.59	125	i Pg	Pb	03 34 54.7	+0.4
TBLG	**Delisi**	1.59	212	P	Pn	03 34 53.6	+0.7
TBLG				S	Sb	03 35 15.5	+1.2
TBLG	**Delisi**	1.59	212	⇑iPN	Pn	03 34 53.5	+0.7
TBLG	**Delisi**	1.59	212	P	Pn	03 34 53.6	+0.7
TBLG				S	Sb	03 35 15.5	+1.2
DDFL	**Dedoflistskaro**	1.65	174	P	Pg	03 34 58.0	+1.3
DDFL	**Dedoflistskaro**	1.65	174	P	Pg	03 34 58.0	+1.3
DGRG	**David-gareji**	1.67	193	P	Pb	03 34 56.2	+0.5
DGRG				S	Sg	03 35 20.6	+1.7
DGRG	**David-gareji**	1.67	193	ePN	Pb	03 34 56.2	+0.5
DGRG				eS	Sg	03 35 20.6	+1.7
DGRG	**David-gareji**	1.67	193	P	Pb	03 34 56.2	+0.5
DGRG				S	Sg	03 35 19.2	+0.3
DIGR	**Digorskoe uzhe**	1.69	265	ePN	Pn	03 34 54.4	0.0
DIGR	**Digorskoe uzhe**	1.69	265	ePn	Pn	03 34 54.4	0.0
DIGR	**Digorskoe uzhe**	1.69	265	ePg	Pn	03 34 54.0	-0.4
DIGR				eSg	Sb	03 35 16.9	-0.5
NCK	**Nalchik**	1.71	285	ePN	Pn	03 34 55.5	+1.0
NCK				eS	Sg	03 35 20.3	+0.1
NCK	**Nalchik**	1.71	285	ePn	Pn	03 34 55.5	+1.0
NCK				eSg	Sg	03 35 20.3	+0.1
NCK	**Nalchik**	1.71	285	ePg	Pn	03 34 55.4	+1.0
NCK				eSg	Sb	03 35 18.8	+1.1
ONI	**Oni**	1.85	255	P	Pn	03 34 57.2	+0.7
ONI				S	Sn	03 35 20.8	+1.2
ONI	**Oni**	1.85	255	ePN	Pn	03 34 57.1	+0.7
ONI	**Oni**	1.85	255	ePn	Pn	03 34 57.1	+0.7
ONI				S	Sn	03 35 20.8	+1.2
KBTC	**Kuba-Taba**	1.94	293	ePg	Pn	03 34 58.5	+0.8
KBTC				eSg	Sb	03 35 24.2	0.0
QZX	**Qazax, Azerbai**	2.06	191	⇓P	Pn	03 35 00.2	+0.9
QZX				⇑S	Sn	03 35 25.8	+1.0
QZX	**Qazax, Azerbai**	2.06	191	⇓P	Pn	03 35 00.2	+0.9
QZX				⇑S	Sn	03 35 25.8	+1.0
DRN	**Derbent**	2.10	119	⇓ePN	Pg	03 35 05.0	-0.3
DRN				e		03 35 33.6	
DRN				pmax	pmax		
	comp=Z,118nm,0.6s						
DRN				smax	smax		
	comp=N,232nm,0.7s						
DRN	**Derbent**	2.10	119	ePn	Pg	03 35 05.0	-0.3
	comp=N,118nm,0.6s						
DRN				eSb	Sg	03 35 33.6	+1.1
	comp=N,232nm,0.7s						
AKT	**Akhty**	2.11	139	⇑iPN	Pb	03 35 02.3	-0.9
AKT				e		03 35 28.9	
AKT				pmax	pmax		
	comp=Z,138nm,0.6s						
AKT				smax	smax		
	comp=N,266nm,0.6s						
AKT	**Akhty**	2.11	139	i Pn	Pb	03 35 02.3	-0.9
	comp=N,138nm,0.6s						
AKT				eSn	Sb	03 35 28.9	-0.4
	comp=N,266nm,0.6s						
SEKA	**Sheki**	2.12	152	⇓P	Pb	03 35 02.0	-1.2
SEKA				⇑S	Sb	03 35 28.6	-0.8
SEKA	**Sheki**	2.12	152	⇓P	Pb	03 35 02.0	-1.2
SEKA				⇑S	Sb	03 35 28.6	-0.8
KSMR	**Kasumkent**	2.23	131	⇑iPN	Pb	03 35 05.8	+0.6
KSMR				eS	Sg	03 35 39.5	+2.7
KSMR				pmax	pmax		
	comp=Z,98nm,0.3s						
KSMR	**Kasumkent**	2.23	131	i Pn	Pb	03 35 05.8	+0.6
	comp=Z,98nm,0.3s						
KSMR				eSb	Sg	03 35 39.5	+2.7
KBZ	**Khabaz**	2.26	288	Pn	Pn	03 35 01.1	-0.9
	comp=Z,5.0nm,0.3s,baz=107,slow=14,SNR=21						
KBZ				Sn	Sn	03 35 29.7	0.0
	comp=Z,11nm,0.3s,baz=105,slow=12,SNR=5.9						
NEY	**Neytrino**	2.31	275	ePN	Pn	03 35 03.4	+0.5
NEY				eS	Sn	03 35 31.5	+0.3
NEY				pmax	pmax		
	comp=Z,26nm,0.2s						
NEY				smax	smax		
	comp=E,100nm,0.4s						
NEY	**Neytrino**	2.31	275	ePn	Pn	03 35 03.4	+0.5
	comp=E,26nm,0.2s						
NEY				eSn	Sn	03 35 31.5	+0.3
NEY	**Neytrino**	2.31	275	ePn	Pn	03 35 04.0	+1.1
NEY				eSn	Sb	03 35 34.0	-1.1
GDB	**GEDABAY**	2.36	182	⇑P	Pn	03 35 04.5	+0.9
GDB				⇑S	Sn	03 35 32.5	+0.1
GDB	**GEDABAY**	2.36	182	⇑P	Pn	03 35 04.5	+0.9
GDB				⇑S	Sn	03 35 32.5	+0.1
QSAR	**Qusar**	2.37	131	⇑P	Pn	03 35 05.2	+1.7
QSAR				⇓S	Sn	03 35 34.3	+2.0
QSAR	**Qusar**	2.37	131	⇑P	Pn	03 35 05.2	+1.7
QSAR				⇓S	Sn	03 35 34.3	+2.0
AKH	**Akhalkalaki**	2.43	227	P	Pn	03 35 06.5	+1.9
AKH				S	Sn	03 35 36.6	+2.4
AKH	**Akhalkalaki**	2.43	227	ePN	Pn	03 35 06.4	+1.9
AKH				eS	Sn	03 35 36.6	+2.4
AKH	**Akhalkalaki**	2.43	227	ePn	Pn	03 35 06.4	+1.9
AKH				S	Sn	03 35 36.6	+2.4
SHA1	**Shidzhatmaz**	2.43	287	ePn	Pn	03 35 03.8	-0.8
SHA1				eSn	Sn	03 35 35.3	+1.0
GANJ	**Ganja**	2.46	172	⇑P	Pn	03 35 05.6	+0.8
GANJ				⇑S	Sn	03 35 35.9	+1.3
GANJ	**Ganja**	2.46	172	⇑P	Pn	03 35 05.6	+0.8
GANJ				⇑S	Sn	03 35 35.9	+1.3
KVAR	**Kislovodsk Arr**	2.47	292	Pn	Pn	03 35 04.3	-0.7
	baz=115,slow=0.8						
KVAR				Sn	Sn	03 35 33.0	-2.0
	baz=187,slow=17,SNR=8.3						
KVAR				Lg	Lg	03 35 42.5	
	baz=24,slow=20,SNR=8.1						
KIV	**Kislovodsk**	2.48	292	cePN	Pn	03 35 04.5	-0.6
KIV				pmax	pmax		
	comp=Z,164nm,0.7s						
KIV	**Kislovodsk**	2.48	292	ePn	Pn	03 35 04.5	-0.6
	comp=Z,164nm,0.7s						
MNGR	**Mingechevir, A**	2.48	158	⇓P	Pn	03 35 06.0	+1.0
MNGR	**Mingechevir, A**	2.48	158	⇓P	Pn	03 35 06.0	+1.0
BGD	**Bogdanovka**	2.48	224	P	Pn	03 35 06.4	+1.1
BGD				S	Sb	03 35 39.0	-1.1
BGD	**Bogdanovka**	2.48	224	P	Pn	03 35 06.4	+1.1
BGD				S	Sb	03 35 39.0	-1.1
XNQ	**Khinaliq**	2.55	138	⇑P	Pn	03 35 07.7	+1.5
XNQ				⇑S	Sn	03 35 38.8	+1.7
XNQ	**Khinaliq**	2.55	138	⇑P	Pn	03 35 07.7	+1.5
XNQ				⇑S	Sn	03 35 38.8	+1.7
QUBA	**Quba, Azerbaij**	2.60	131	⇓P	Pn	03 35 08.3	+1.6
QUBA				⇓S	Sn	03 35 40.5	+2.3
QUBA	**Quba, Azerbaij**	2.60	131	⇓P	Pn	03 35 08.3	+1.6
QUBA				⇓S	Sn	03 35 40.5	+2.3
EPOS	**Posof**	2.82	237	i P	Pb	03 35 12.9	-2.3
EPOS				i S	Sb	03 35 47.0	-2.7
EPOS	**Posof**	2.82	237	P	Pb	03 35 12.9	-2.3
EPOS				S	Sb	03 35 47.0	-2.7
GOF	**Gofitskoye**	2.84	315	i Pn	Pn	03 35 10.6	+0.7
GOF				eSn	Sn	03 35 46.2	+2.3
EAK	**Akyaka**	2.93	216	i P	Pn	03 35 13.7	+2.3
EAK				i S	Sb	03 35 52.7	-0.3
EAK	**Akyaka**	2.93	216	P	Pn	03 35 13.7	+2.3
EAK				S	Sb	03 35 52.7	-0.3
SIZA	**Siyzn**	3.02	131	⇓P	Pn	03 35 14.2	+1.7
SIZA				⇑S	Sn	03 35 50.3	+1.8
SIZA	**Siyzn**	3.02	131	⇓P	Pn	03 35 14.2	+1.7
SIZA				⇑S	Sn	03 35 50.3	+1.8
GNI	**Garni**	3.05	197	Pn	Pn	03 35 14.4	+1.3
	comp=Z,6.3nm,0.3s,baz=317,slow=6.2,SNR=8.0						
GNI				LR	LR	03 35 58.0	
	comp=Z,13nm,21.9s,baz=213,slow=32						
GNI				Lg	Lg	03 35 59.1	
	comp=Z,11nm,0.3s,baz=53,slow=20,SNR=4.8						
PQL	**Pirkuli**	3.06	138	⇓P	Pn	03 35 14.8	+1.7
PQL				⇑S	Sn	03 35 50.8	+1.1
PQL	**Pirkuli**	3.06	138	⇓P	Pn	03 35 14.8	+1.7
PQL				⇑S	Sn	03 35 50.8	+1.1
ATGJ	**Altiaghaj**	3.19	133	⇑P	Pn	03 35 16.5	+1.7
ATGJ				⇓S	Sn	03 35 54.5	+1.8
ATGJ	**Altiaghaj**	3.19	133	⇑P	Pn	03 35 16.5	+1.7
ATGJ				⇓S	Sn	03 35 54.5	+1.8
GBS	**Qobustan**	3.43	137	⇓P	Pn	03 35 19.3	+1.2
GBS				⇑S	Sn	03 35 59.8	+1.3
GBS	**Qobustan**	3.43	137	⇓P	Pn	03 35 19.3	+1.2
GBS				⇑S	Sn	03 35 59.8	+1.3
ARTV	**Artvin**	3.49	238	i P	Pn	03 35 18.8	-0.4
ARTV				i S	Sb	03 36 10.0	+0.8
ARTV	**Artvin**	3.49	238	P	Pn	03 35 18.8	-0.4
DAGI	**Agillar**	3.56	237	i P	Pn	03 35 19.9	-0.1
DAGI				i S	Sg	03 36 16.0	-3.5
SBZ	**Shahbuz**	3.69	184	⇓P	Pn	03 35 23.1	+1.3
SBZ				⇑S	Sn	03 36 04.4	-0.8
SBZ	**Shahbuz**	3.69	184	⇓P	Pn	03 35 23.1	+1.3
SBZ				⇑S	Sn	03 36 04.4	-0.8
NAX	**Nakhchivan**	3.92	184	⇑P	Pn	03 35 26.4	+1.6
NAX	**Nakhchivan**	3.92	184	⇑P	Pn	03 35 26.4	+1.6
ORD	**Ordubad**	4.15	179	⇓P	Pn	03 35 30.0	+1.9
ORD	**Ordubad**	4.15	179	⇓P	Pn	03 35 30.0	+1.9
SOC	**Sochi**	4.52	278	ePN	Pn	03 35 27.7	-5.3
SOC				MLR	MLR		
	comp=Z,55nm,7.0s						
SOC	**Sochi**	4.52	278	ePn	Pn	03 35 27.7	-5.3
	comp=Z,55nm,7.0s						
LRK	**Lerik**	4.81	156	⇓P	Pn	03 35 39.0	+1.7
LRK	**Lerik**	4.81	156	⇓P	Pn	03 35 39.0	+1.7
ANN	**Anapa**	6.33	289	eP	Pn	03 35 56.4	-1.5
ANN	**Anapa**	6.33	289	eP	Pn	03 35 56.4	-1.5
VRH	**Novokhopyorsk**	8.60	342	eP	Pn	03 36 29.2	+0.2
VRH				eS	Sn	03 38 10.5	+4.8
VRH				pmax	pmax		
	comp=Z,5.0nm,0.5s						
VRH				smax	smax		
	comp=N,40nm,0.9s						
VRH	**Novokhopyorsk**	8.60	342	eP	Pn	03 36 29.2	+0.2
	comp=N,5.0nm,0.5s						
VRH				eS	Sn	03 38 10.5	+4.8
	comp=N,40nm,0.9s						
VSR	**Storozhevoye**	9.33	333	eP	Pn	03 36 38.2	-0.8
VSR				eS	Sn	03 38 29.9	+6.3
VSR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
VSR				smax	smax		
	comp=E,20nm,1.3s						
VSR	**Storozhevoye**	9.33	333	eP	Pn	03 36 38.2	-0.8
	comp=E,3.0nm,0.6s						
VSR				eS	Sn	03 38 29.9	+6.3
GEYT	**Alibeck**	10.65	115	LR	LR	03 42 10.4	
	comp=E,35nm,18.0s,baz=20,slow=43						
AKTK	**Aktyubinsk**	11.10	44	P	Pn	03 37 03.3	0.0
AKTO	**Aktyubinsk**	11.10	44	Pn	Pn	03 37 03.2	0.0
	comp=E,0.3nm,0.3s,baz=238,slow=13,SNR=4.0						
AKTO				Sn	Sn	03 38 57.7	-9.4
	comp=E,0.3nm,0.3s,baz=162,slow=20,SNR=4.0						
AKTO	**Aktyubinsk**	11.10	44	⇑Pn	Pn	03 37 02.1	-1.2
	comp=E,2.0nm,0.8s						
AKTO				⇑Sn	Sn	03 38 59.2	-7.9
	comp=E,3.5nm,0.7s						
AKTO	**Aktyubinsk**	11.10	44	Pn	Pn	03 37 02.1	-1.2
	comp=E,2.0nm,0.8s						
AKTO				Sn	Sn	03 38 59.2	-7.9
	comp=E,3.5nm,0.7s						
AB31	**Akbulak array**	11.54	53	⇑Pn	Pn	03 37 08.8	-0.4
	comp=E,0.4nm,0.3s,baz=243,slow=11,SNR=22						

AB31				⇑Sn	Sn	03 39 08.3	-9.4
	comp=E,2.2nm,0.6s,baz=235,slow=22,SNR=5.1						
AB31	Akbulak array	11.54	53	Pn	Pn	03 37 08.8	-0.4
	comp=E,0.4nm,0.3s,SNR=22						
AB31				Sn	Sn	03 39 08.3	-9.4
	comp=E,2.2nm,0.6s,SNR=5.1						
TVSB	Tavsanli	12.87	259	PG	P	03 37 38.2	-0.2
TVSB	Tavsanli	12.87	259	*e*Pg	P	03 37 38.2	-0.2
SHAP	Saphane-Kutahy	13.21	258	PG	Pn	03 37 33.6	+1.4
SHAP	Saphane-Kutahy	13.21	258	*e*Pg	Pn	03 37 33.6	+1.4
SMAA	Simav-Kutahya	13.35	258	PG	Pn	03 37 32.5	-1.6
SMAA				SG	Pn	03 37 35.5	+1.4
SMAA	Simav-Kutahya	13.35	258	*e*Pg	Pn	03 37 32.5	-1.6
SMAA				*e*Sg	Pn	03 37 35.5	+1.4
SIMA	Simav-Kutahya	13.35	258	PG	Pn	03 37 33.0	-1.2
SIMA				SG	Pn	03 37 34.9	+0.7
SIMA	Simav-Kutahya	13.35	258	*e*Pg	Pn	03 37 33.0	-1.2
SIMA				*e*Sg	Pn	03 37 34.9	+0.7
AKASG	Malin Array Be	13.68	310	*i* P	Pn	03 37 41.9	+3.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KULA	Kula-Manisa	13.81	257	PG	Pn	03 37 42.9	+2.5
KULA	Kula-Manisa	13.81	257	*e*Pg	Pn	03 37 42.9	+2.5
ARU	Arti	15.63	27	P	P	03 38 07.8	-1.1
ARU				S	Sn	03 41 04.5	+6.8
KLMR	Klimovskoe	18.21	350	*e*P	Pn	03 38 31.0	-6.0
KLMR				pmax	pmax		
	comp=Z,7.0nm,1.3s						
KLMR	Klimovskoe	18.21	350	*e*Pn	Pn	03 38 31.1	-6.0
KLMR				AMP		03 38 48.7	
	comp=Z,7.0nm,1.3s						
BRVK	Borovoye	19.03	50	*i* P	P	03 38 46.5	+0.1
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.2s						
BVAR	Borovoye Array	19.08	50	P	P	03 38 47.0	0.0
	comp=Z,0.3nm,0.3s,baz=247,slow=11,SNR=7.0						
BVAR	Borovoye Array	19.08	50	P	P	03 38 47.0	0.0
BVAR	Borovoye Array	19.08	50	P	P	03 38 47.0	0.0
VSU	Vasula	19.47	329	*i* P	Pn	03 38 53.5	+1.1
VSU				pmax	pmax		
	comp=Z,29nm,1.1s						
FINES	FINESS Array B	21.86	334	P	P	03 39 15.3	-1.6
	comp=Z,5.6nm,1.0s,baz=146,slow=15,SNR=5.7						
KURBB	Kurchatov Arra	23.43	60	P	P	03 39 34.1	+0.6
	comp=Z,0.3nm,0.4s,baz=266,slow=10,SNR=5.9						
KURK	Kurchatov	23.49	60	*i* P	P	03 39 38.6	+4.4
MKAR	Makanchi Array	25.89	69	P	P	03 39 56.1	-0.3
	comp=Z,0.4nm,0.5s,baz=279,slow=8.5,SNR=5.1						
MKAR	Makanchi Array	25.89	69	*i* P	P	03 39 56.5	+0.1
HFS	Hagfors	25.89	322	P	P	03 39 54.1	-2.1
	comp=Z,1.0nm,0.4s,baz=127,slow=9.8,SNR=11						
KEST	Kesra	28.99	268	LR	LR	03 54 08.7	
	comp=Z,40nm,18.9s,baz=285,slow=41						

NNC 19 03:44:24.5±3.2, 37°.08N×71°.02E, h0^{km}, mb3.7, mpv3.3, 3C-2D, Error ellipse: s-maj=25.0km s-min=22.2km az=157.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.52	33	⇑Pn	Pn	03 45 20.5	-0.1
	0.9nm,0.2s						
SFK				⇓Sn	Sn	03 46 04.5	+1.5
	3.1nm,0.3s						
MNAS	Manas	5.52	11	⇓Pn	Pn	03 45 47.9	-0.1
	1.6nm,0.4s						
MNAS				⇑Sn	Sn	03 46 52.2	-0.1
	8.6nm,0.6s						
KK31	Karatay Array	6.03	356	Pn	Pn	03 45 55.2	+0.3
	2.4nm,0.3s,baz=180,slow=13,SNR=49						
KK31				⇑Sn	Sn	03 47 06.8	+2.1
	0.5nm,0.3s,baz=170,slow=22,SNR=5.8						

*IDC **19** 03:54:54.3±0.7, 17°.06N×46°.31W, h0^{km}, mb3.9/11, mb1 4.1/12, mb1mx3.8/60, mbtmp3.9/12, ML3.9/1, MS3.8/40, Ms1 3.8/40, ms1mx3.8/52, Error ellipse: s-maj=22.1km s-min=16.8km az=133.0*

*ISCJB **19** 03:54:55.3±0.4, 16°.95N±0°.08×46°.26W±0°.07, h15^{km}, mb4.2/19, MS3.9/39, Error ellipse: s-maj=11.9km s-min=9.6km az=151.0*

*NEIC **19** 03:54:56.2±0.4, 16°.94N×46°.25W, h10^{km}, mb4.6/11, Error ellipse: s-maj=11.5km s-min=9.8km az=148.0*

*GCMT **19** 03:54:56.2±0.3, 17°.35N×46°.41W, h12^{km}, MW4.8/86, Moment Tensor Solution. s17,c18; s86,c112; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.07±.07; $M_{\theta\theta}$0.21±.07; $M_{\phi\phi}$1.86±.05; $M_{r\theta}$1.38±.36; $M_{\theta\phi}$0.18±.06; $M_{\phi r}$-0.51±.22; Best double couple: $M_0$2.35400×10^{16} NP1:ϕ_s339.00000°, δ57.00000°, λ-120.00000°. NP2: ϕ_s206.00000°, δ43.00000°, λ-53.00000°. Principal axes: T 1.9260, Plg7.0000°, Azm90.0000°; N 0.8550, Plg25.0000°, Azm357.0000°; P -2.7830, Plg64.0000°, Azm195.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 19 03:54:56.9±0.6, **17°.0N**±0°.1×**46°.3W**±0°.1, **h15^{km}, n68, σ1^{s}.13**/30, **mb4.2**/19, **MS3.9**/39, **Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SJG	San Juan	18.98	276	LR	LR	04 05 13.4	
	comp=Z,571nm,21.3s,baz=88,slow=33						
PCRV	Puerto La Cruz	19.06	252	P	P	03 59 18.6	-0.3
	0.4nm,0.3s,baz=46,slow=12,SNR=2.0						
PTGA	Pitinga	22.16	219	P	P	03 59 51.9	-0.5
	5.1nm,0.6s,baz=33,slow=13,SNR=9.1						
PTGA				LR	LR	04 07 49.6	
	comp=Z,551nm,19.5s,baz=37,slow=35						
ROSC	El Rosal	30.00	250	LR	LR	04 15 09.3	
	comp=Z,146nm,19.0s,baz=90,slow=40						
SIV	San Ignacio	35.84	205	P	P	04 01 57.2	+0.9
	2.1nm,1.0s,baz=55,slow=9.9,SNR=7.2						
TKL	Tuckaleechee C	38.12	307	LR	LR	04 14 47.6	
	comp=Z,295nm,21.8s,baz=104,slow=31						
SADO	Sadowa	39.09	322	LR	LR	04 15 34.9	
	comp=Z,163nm,20.0s,baz=25,slow=32						
LPAZ	La Paz	39.44	214	P	P	04 02 26.8	-0.6
	2.4nm,0.9s,baz=19,slow=7.2,SNR=10						
LPAZ				LR	LR	04 18 06.2	
	comp=Z,164nm,21.5s,baz=16,slow=35						
LPAZ	La Paz	39.44	214	*e*P	P	04 02 27.3	-0.1
	12nm,1.3s						
H10N3	ASCENSION HYDR	39.94	126	T	T	04 45 09.4	
	baz=308,slow=74,SNR=118						
H10N2	ASCENSION HYDR	39.94	126	T	T	04 45 09.7	
	baz=308,slow=74,SNR=135						
H10N1	ASCENSION HYDR	39.96	126	T	T	04 45 12.4	
	baz=308,slow=74,SNR=160						
H10S3	ASCENSION HYDR	40.51	127	T	T	04 45 52.4	
	baz=309,slow=74,SNR=99						
H10S1	ASCENSION HYDR	40.51	127	T	T	04 45 57.8	
	baz=309,slow=74,SNR=92						
H10S2	ASCENSION HYDR	40.52	127	T	T	04 45 51.7	
	baz=309,slow=74,SNR=93						
MDT	Midelt	40.68	59	LR	LR	04 18 09.7	
	comp=Z,157nm,18.0s,baz=274,slow=34						
KOWA	Kowa	40.70	87	LR	LR	04 17 17.5	
	comp=Z,450nm,19.8s,baz=222,slow=33						
SCHQ	Schefferville	40.98	342	LR	LR	04 17 07.9	
	comp=Z,147nm,21.4s,baz=65,slow=33						
NNA	Nana	41.71	228	LR	LR	04 19 27.7	
	comp=Z,124nm,20.8s,baz=18,slow=35						
DBIC	Dimbokro	41.73	99	LR	LR	04 17 06.6	
	comp=Z,356nm,20.1s,baz=254,slow=32						
ESDC	Sonseca Array	43.07	50	LR	LR	04 16 39.5	
	comp=Z,163nm,21.1s,baz=235,slow=30						
PB11	IPOC Station P	43.12	213	*e*P	P	04 02 55.3	-1.7
	9.8nm,0.8s						
CPUP	Villa Florida	44.35	194	P	P	04 03 07.6	+0.9
	2.1nm,0.9s,baz=42,slow=5.4,SNR=3.7						
CPUP				LR	LR	04 22 20.1	
	comp=Z,112nm,18.5s,baz=10,slow=37						
CPUP	Villa Florida	44.35	194	*e*P	P	04 03 07.6	+0.9
	3.3nm,0.8s						
TOA1	Torodi Ar. Sit	46.40	88	*e*P	P	04 03 22.6	-0.6
TOA0	Torodi Ar. Sit	46.40	88	*e*P	P	04 03 22.9	-0.4
TORD	Torodi Ar. Bea	46.40	88	P	P	04 03 22.6	-0.6
	1.2nm,1.0s,baz=279,slow=6.8						
TORD				LR	LR	04 21 08.1	
	comp=Z,382nm,18.6s,baz=285,slow=34						
GO02	Mina Guanaco	47.63	209	*e*P	P	04 03 34.4	+1.3
	7.6nm,1.0s						
ULM	Lac du Bonnet	51.64	321	P	P	04 04 02.3	-0.7
	1.0nm,0.3s,baz=111,slow=8.0,SNR=2.9						
KEST	Kesra	52.55	58	P	P	04 04 10.1	0.0
	2.7nm,0.9s,baz=173,slow=8.1,SNR=3.0						
KEST				LR	LR	04 26 26.7	
	comp=Z,147nm,18.0s,baz=241,slow=36						
KEST	Kesra	52.55	58	*e*P	P	04 04 10.1	0.0
	11nm,1.3s						
TXAR	Lajitas Array	53.72	294	P	P	04 04 18.3	-0.6
	0.4nm,0.8s,baz=104,slow=6.6,SNR=6.3						
TXAR				LR	LR	04 28 13.3	
	comp=Z,89nm,18.8s,baz=0.0,slow=37						
DAVOX	Davos/Dischmat	54.77	44	LR	LR	04 24 46.3	
	comp=Z,156nm,20.2s,baz=263,slow=33						
MNTX	Cornudas Mount	55.21	297	*e*P	P	04 04 29.6	0.0
	5.2nm,1.1s						
ANMO	Albuquerque	56.20	301	LR	LR	04 25 50.1	
	comp=Z,315nm,21.8s,baz=64,slow=33						
VAE	Valguarnera	56.75	56	LR	LR	04 26 53.2	
	comp=Z,77nm,20.0s,baz=224,slow=34						
PD31	Pinedale Array	59.13	310	*e*P	P	04 04 57.2	-0.1
PDAR	Pinedale Array	59.13	310	P	P	04 04 57.2	-0.1
	0.3nm,0.7s,baz=85,slow=11,SNR=3.7						
LPIG	La Paz	59.95	288	LR	LR	04 34 10.9	
	comp=Z,56nm,18.1s,baz=28,slow=39						
IMW	Indian Meadow	60.23	311	*e*P	P	04 05 05.8	+0.8
	2.6nm,0.9s						
HWUT	Hardware Ranch	60.53	309	*e*P	P	04 05 08.8	+1.8
	11nm,1.5s						
HFS	Hagfors	60.62	30	LR	LR	04 27 13.8	
	comp=Z,38nm,18.1s,baz=259,slow=32						
BGU	Big Grassy Mou	61.61	308	*e*P	P	04 05 17.1	+2.8
	5.4nm,1.3s						
PLCA	Paso Flores	61.67	201	LR	LR	04 32 36.5	
	comp=Z,96nm,21.2s,baz=39,slow=37						
CCUT	Cedar City	61.82	304	*e*P	P	04 05 17.8	+1.9
	5.4nm,1.4s						
YKA	Yellowknife Ar	65.11	332	LR	LR	04 31 33.2	
	comp=Z,12nm,19.6s,baz=104,slow=34						
IDI	Anoyia	65.20	59	LR	LR	04 32 20.0	
	comp=Z,69nm,21.7s,baz=272,slow=34						
MLR	Muntele Rosu	65.70	47	LR	LR	04 31 27.4	
	comp=Z,20nm,21.7s,baz=261,slow=33						
MLR	Muntele Rosu	65.70	47	*e*P	P	04 05 42.9	+1.7
	5.8nm,1.2s						
NVAR	Mina Array Bea	65.70	305	LR	LR	04 33 02.9	
	comp=Z,93nm,20.0s,baz=276,slow=35						
FINES	FINESS Array B	66.82	30	LR	LR	04 29 56.5	
	comp=Z,68nm,21.6s,baz=258,slow=32						
BPO	Bald Peter	67.96	312	*e*P	P	04 05 56.7	+1.0
SPITS	Spitsbergen Ar	68.02	11	LR	LR	04 28 46.6	
	comp=Z,44nm,21.8s,baz=10.0,slow=30						
YBH	Yreka Blue Hor	68.88	309	LR	LR	04 35 20.8	
	comp=Z,95nm,19.2s,baz=101,slow=35						
BR101	Keskin Array S	71.72	53	*e*P	P	04 06 18.7	-0.2
BRTR	Keskin Array B	71.72	53	P	P	04 06 18.7	-0.2
	0.5nm,0.7s,baz=266,slow=5.8,SNR=4.0						
BRTR				LR	LR	04 35 22.0	
	comp=Z,30nm,21.0s,baz=254,slow=34						
MMAI	Mount Meron Ar	74.13	60	LR	LR	04 39 00.8	
	comp=Z,21nm,21.0s,baz=305,slow=36						
KBZ	Khabaz	77.90	48	LR	LR	04 42 14.7	
	comp=Z,23nm,18.2s,baz=331,slow=36						
IL1	Eielson Array	79.25	335	*e*P	P	04 07 00.5	-0.9
ILAR	Eielson Array	79.25	335	P	P	04 06 59.3	-2.2
	0.6nm,0.7s,baz=83,slow=4.3,SNR=9.2						
ILAR				LR	LR	04 42 33.2	
	comp=Z,27nm,19.1s,baz=106,slow=36						
ILB	Eielson Array	79.25	335	*e*P	P	04 07 01.7	+0.3
GNI	Garni	80.03	51	LR	LR	04 42 55.5	
	comp=Z,24nm,18.9s,baz=257,slow=36						
BOSA	Boshof	82.63	123	LR	LR	04 35 31.9	
	comp=Z,84nm,21.8s,baz=286,slow=30						
ATD	Arta Tunnel	85.88	79	LR	LR	04 45 52.6	
	comp=Z,159nm,18.7s,baz=326,slow=36						
AKTO	Aktyubinsk	85.89	38	LR	LR	04 44 28.0	
	comp=Z,60nm,18.8s,baz=285,slow=35						
BVAR	Borovoye Array	91.63	33	LR	LR	04 45 58.1	
	comp=Z,47nm,20.1s,baz=278,slow=34						
WSAR	Wadi Sarin	96.48	63	LR	LR	04 55 14.6	
	comp=Z,89nm,18.9s,baz=298,slow=38						
ZALV	Zalesovo Beam	97.94	27	LR	LR	04 51 54.9	
	comp=Z,32nm,18.0s,baz=269,slow=35						

*DDA **19** 04:24:55.0, 39°.11N×28°.16E, h7^{km}, Ml2.8*

*ISK **19** 04:24:54.9, 39°.08N×28°.16E, h7^{km}, ML2.6/12*

*ISCJB **19** 04:24:55.2±0.4, 39°.08N±0°.02×28°.17E±0°.03, h10^{km}±4^{km}, Error ellipse: s-maj=4.0km s-min=3.5km az=168.0*

*CSEM **19** 04:24:55.2±0.1, 39°.08N×28°.15E, h10^{km}, ML2.8, Error ellipse: s-maj=2.0km s-min=1.8km az=57.0*

ISC 19 04:24:55.2±1.0, **39°.09N**±0°.02×**28°.15E**±0°.02, **h10^{km}**±9^{km}, **n33, σ0^{s}.49**/57, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKHS	Akhisar	0.34	232	*i* P	Pg	04 25 02.2	+0.3
AKHS				*i* S	Sb	04 25 07.5	-1.3
AKHS	Akhisar	0.34	232	P	Pg	04 25 02.2	+0.3
AKHS				S	Sb	04 25 07.5	-1.3
DEMI	Demirci	0.44	96	*i* P	Pg	04 25 03.9	+0.1
DEMI				*i* S	Sg	04 25 10.2	+0.5
DEMI	Demirci	0.44	96	P	Pg	04 25 03.9	+0.1
DEMI				S	Sg	04 25 10.2	+0.5
DURS	Dursunbey	0.57	26	*i* P	Pg	04 25 06.0	-0.3
DURS				*i* S	Sg	04 25 13.6	-0.3
DURS	Dursunbey	0.57	26	P	Pg	04 25 06.1	-0.3
DURS				S	Sg	04 25 13.6	-0.3
BALB	Balikesir	0.59	339	PG	Pb	04 25 07.6	-0.1
BALB				SG	Sb	04 25 16.4	+0.3
SIMA	Simav-Kutahya	0.65	90	PG	Pb	04 25 08.1	-0.6
SIMA				SG	Sb	04 25 16.8	-1.0
SIMA	Simav-Kutahya	0.65	90	*e*Pg	Pb	04 25 08.1	-0.6
SIMA				*e*Sg	Sb	04 25 16.8	-1.0
MANT	Manisa	0.67	152	*i* P	Pg	04 25 08.4	+0.1
MANT				*i* S	Sg	04 25 16.8	-0.3
MANT	Manisa	0.67	152	P	Pg	04 25 08.4	+0.1
MANT				S	Sg	04 25 16.8	-0.3
KULA	Kula-Manisa	0.70	145	PG	Pb	04 25 09.2	-0.3
KULA				SG	Sb	04 25 18.1	-1.1
KULA	Kula-Manisa	0.70	145	*e*Pg	Pb	04 25 09.2	-0.3
KULA				*e*Sg	Sb	04 25 18.1	-1.1
BALY	Balya	0.77	328	*i* P	Pg	04 25 10.0	-0.2
BALY				*i* S	Sg	04 25 20.1	-0.1
BALY	Balya	0.77	328	P	Pg	04 25 10.0	-0.2
BALY				S	Sg	04 25 20.1	-0.1
SHAP	Saphane-Kutahy	0.83	94	PG	Pb	04 25 11.4	-0.5
SHAP				SG	Sb	04 25 23.1	-0.1
SHAP	Saphane-Kutahy	0.83	94	*e*Pg	Pb	04 25 11.4	-0.5
SHAP				*e*Sg	Sb	04 25 23.1	-0.1
GONE	Gonen-Balikesi	1.02	339	PG	Pg	04 25 14.7	-0.2
GONE	Gonen-Balikesi	1.02	339	*e*Pg	Pg	04 25 14.7	-0.2
TVSB	Tavsanli	1.08	70	PG	Pb	04 25 16.1	0.0
TVSB				SG	Sb	04 25 30.4	+0.1
TVSB	Tavsanli	1.08	70	*e*Pg	Pb	04 25 16.1	0.0
TVSB				*e*Sg	Sb	04 25 30.4	+0.1
BLCB	Balcova	1.12	231	PN	Pb	04 25 16.6	0.0
BLCB				SN	Sn	04 25 32.6	+0.2
BLCB	Balcova	1.12	231	*e*Pn	Pb	04 25 16.6	0.0
BLCB				*e*Sn	Sn	04 25 32.6	+0.2
AYDB	Zeytinkoy-Aydi	1.16	190	PN	Pb	04 25 17.3	-0.1
AYDB				SN	Sb	04 25 32.7	+0.2
AYDB	Zeytinkoy-Aydi	1.16	190	*e*Pn	Pb	04 25 17.3	-0.1
AYDB				*e*Sn	Sb	04 25 32.7	+0.2
KCTX	Karacabey (Bur	1.19	8	PN	Pn	04 25 18.2	+0.2
KCTX				SN	Sn	04 25 34.1	-0.1
EDC	Edincik	1.28	350	PN	Pg	04 25 19.8	0.0
EDC	Edincik	1.28	350	*e*Pn	Pg	04 25 19.8	0.0
MDNY	Mudanya-Bursa	1.40	24	PN	Pb	04 25 21.5	0.0
ARMT	Armutlu	1.57	20	PN	Pb	04 25 24.2	-0.3
YLV	Yalova	1.75	32	PN	Pn	04 25 26.4	+0.6
BORA	Eskisehir	1.95	65	PN	Pn	04 25 29.4	+0.9
BORA	Eskisehir	1.95	65	*e*Pn	Pn	04 25 29.4	+0.9

*CSEM **19** 04:51:10.3±0.2, 40°.81N×21°.34E, h8^{km}, ML2.2, Error ellipse: s-maj=4.8km s-min=2.5km az=136.0*

*SKO **19** 04:51:10.7, 40°.78N×21°.39E, h10^{km}, M1.9, ML2.3*

*ATH **19** 04:51:10.8, 40°.79N×21°.36E, h9^{km}±1^{km}, ML2.5/3, Error ellipse: s-maj=3.0km s-min=1.6km az=334.0*

*ISCJB **19** 04:51:11.1±0.4, 40°.78N±0°.02×21°.38E±0°.04, h6^{km}±4^{km}, Error ellipse: s-maj=5.4km s-min=3.9km az=9.4*

*THE **19** 04:51:11.1, 40°.79N×21°.38E, h8^{km}, ML2.2/4, Error ellipse: s-maj=0.7km s-min=0.4km az=312.0*

ISC 19 04:51:10.9±0.8, **40°.77N**±0°.02×**21°.38E**±0°.03, **h7^{km}**±4^{km}, **n32, σ0^{s}.84**/51, **1C-1D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FNA	Florina	0.01	360	P	Pg	04 51 12.6	+0.3
FNA				S	Sg	04 51 13.2	+0.1
FNA				AML	AML	04 51 13.5	
	comp=N,31114μm,0.2s						
FNA				AML	AML	04 51 13.6	
	comp=E,29194μm,0.2s						
FNA	Florina	0.01	360	P	Pg	04 51 12.5	+0.3
FNA				S	Sg	04 51 13.4	+0.2
FNA	Florina	0.01	360	P	Pg	04 51 12.5	+0.3
FNA				S	Sg	04 51 13.4	+0.2
NEST	Nestorio	0.43	215	P	Pg	04 51 19.2	-0.1
NEST				S	Sg	04 51 26.4	+1.4
NEST				AML	AML	04 51 27.0	
	comp=E,1351μm,0.2s						
NEST				AML	AML	04 51 30.2	
	comp=N,697μm,0.3s						
NEST	Nestorio	0.43	215	P	Pg	04 51 19.4	+0.1
NEST				S	Sg	04 51 26.5	+1.5
NEST	Nestorio	0.43	215	P	Pg	04 51 19.4	+0.1
NEST				S	Sg	04 51 26.0	+1.0
KZN	Kozani	0.55	147	P	Pg	04 51 21.7	+0.3
KZN				S	Sb	04 51 31.1	0.0
KZN				AML	AML	04 51 33.0	
	comp=E,674μm,0.3s						
KZN				AML	AML	04 51 33.2	
	comp=N,718μm,0.3s						
KZN	Kozani	0.55	147	P	Pg	04 51 21.8	+0.3
KZN				S	Sg	04 51 30.1	+1.4
KZN	Kozani	0.55	147	P	Pg	04 51 21.9	+0.4
KZN				S	Sg	04 51 30.1	+1.4
OHR	Ohrid	0.56	308	⇓*i*Pg	Pb	04 51 21.9	-1.1
OHR				*i* Sg	Sb	04 51 31.1	-0.1
OHR				*e*Lg	Lg	04 51 31.5	
	comp=N,135nm,0.3s						
OHR				*e*Lg	Lg	04 51 31.6	
	comp=E,192nm,0.5s						
PENT	Pentalofos	0.60	198	P	Pg	04 51 23.1	+0.6
PENT	Pentalofos	0.60	198	P	Pg	04 51 22.7	+0.3
PENT				S	Sb	04 51 31.9	-0.6
PENT	Pentalofos	0.60	198	P	Pg	04 51 22.8	+0.3
PENT				S	Sb	04 51 31.9	-0.6
KRUS	Krusevo	0.61	351	⇑*e*Pg	Pg	04 51 22.5	-0.1
KRUS				*i* Sg	Sb	04 51 31.6	-1.2
GRG	Griva	0.80	76	P	Pb	04 51 26.6	-0.6
GRG	Griva	0.80	76	P	Pg	04 51 26.2	-0.1
GRG	Griva	0.80	76	P	Pg	04 51 26.2	-0.1
KPRO	Kipourio	0.81	181	P	Pg	04 51 26.5	0.0
KPRO	Kipourio	0.81	181	P	Pg	04 51 26.8	+0.3
KPRO	Kipourio	0.81	181	P	Pg	04 51 26.8	+0.3
VAY	Valandovo	1.06	58	*i* Pg	Pb	04 51 31.0	-0.6
VAY				*i* Sg	Sb	04 51 45.4	-0.3
VAY				*e*Lg	Lg	04 51 50.7	
	comp=E,68nm,0.7s						
VAY				*e*Lg	Lg	04 51 51.4	
	comp=N,32nm,0.6s						
LIT	Litokhoron	1.08	128	P	Pg	04 51 31.4	-0.3
LIT	Litokhoron	1.08	128	P	Pg	04 51 31.6	0.0
LIT				S	Sn	04 51 47.6	-0.2
LIT	Litokhoron	1.08	128	P	Pg	04 51 31.6	0.0
LIT				S	Sn	04 51 47.6	-0.2
STIP	Stip	1.11	33	*e*Pg	Pn	04 51 34.2	+1.4
STIP				*i* Sg	Sn	04 51 51.9	+3.5
SKO	Skopje	1.20	2	*e*Pg	Pn	04 51 33.9	-0.3
KNT	Kendrikon	1.22	71	P	Pg	04 51 34.1	-0.1
KNT	Kendrikon	1.22	71	P	Pb	04 51 33.6	-0.7
KNT				S	Sn	04 51 50.9	-0.2
KNT	Kendrikon	1.22	71	P	Pb	04 51 33.6	-0.7
KNT				S	Sn	04 51 50.9	-0.2
THL	Klokotos Trika	1.30	158	P	Pn	04 51 33.9	-1.5
THL	Klokotos Trika	1.30	158	P	Pn	04 51 34.7	-0.7
THL	Klokotos Trika	1.30	158	P	Pn	04 51 34.8	-0.7

*BJI **19** 05:03:21.7, 4°.88S×143°.84E, h110^{km}, mb4.8/19, mB5.0/13*

*ISCJB **19** 05:03:27.1±1.1, 4°.35S±0°.04×143°.39E±0°.06, h119^{km}±11^{km}, mb4.5/32, Error ellipse: s-maj=10.1km s-min=6.8km az=8.7*

*NEIC **19** 05:03:27.6±0.3, 4°.28S×143°.35E, mb4.6/12, Error ellipse: s-maj=8.1km s-min=5.1km az=87.0*

*IDC **19** 05:03:27.4±0.5, 4°.30S×143°.46E, h113^{km}±4^{km}, mb4.1/18, mb1 4.2/21, mb1mx4.0/46, mbtmp4.5/21, MS2.8/2, Ms1 2.8/2, ms1mx2.5/41, Error ellipse: s-maj=16.7km s-min=8.0km az=83.0*

ISC 19 05:03:28.0±0.5, **4°.41S**±0°.05×**143°.41E**±0°.08, **h112^{km}**±5^{km}, **h112^{km}:pP-P, n73, σ1^{s}.48**/87, **mb4.5**/32, **1D, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MANU	Manus Island	4.59	59	*e*Pn	Pn	05 04 37.1	+1.7
PMG	Port Moresby	6.20	143	P	Pn	05 04 58.0	+0.9
	8.3nm,0.3s,baz=350,slow=5.6,SNR=11						
PMG				S	Sn	05 06 07.2	+0.5
	8.1nm,0.3s,baz=133,slow=18,SNR=5.7						
COEN	Coen	9.49	181	*e*Pn	Pn	05 05 42.6	+0.9
SAUI	Saumlaki	12.55	253	*e*Pn	Pn	05 06 22.5	-0.3
MTN	Manton Dam	14.74	235	*e*Pn	Pn	05 06 51.1	+0.1
CTA	Charters Tower	15.83	170	P	P	05 07 07.0	+0.9
	0.4nm,0.3s,baz=352,slow=14,SNR=3.2						
CTAO	Charters Tower	15.83	170	*e*Pn	P	05 07 06.5	+0.3
	9.7nm,0.8s						
WRAB	Tennant Creek	17.78	209	*e*P	Pn	05 07 28.6	+0.2
	45nm,0.6s						
WB2	Warramunga Arr	17.79	209	*e*P	Pn	05 07 29.4	+0.9
WRA	Warramunga Arr	17.79	209	P	Pn	05 07 28.4	-0.3
	5.0nm,0.3s,baz=30,slow=12,SNR=170						
WRA				S	S	05 10 40.0	-7.0
	0.2nm,0.3s,baz=23,slow=22,SNR=3.7						
SOEI	Soe	19.72	253	*e*P	P	05 07 48.7	-0.4
	48nm,0.8s						
AS01	Alice Springs	21.21	205	*e*P	P	05 08 05.5	+0.5
AS31	Alice Springs	21.23	205	*e*P	P	05 08 05.7	+0.5
	11nm,0.6s						
ASAR	Alice Springs	21.23	205	P	P	05 08 05.3	+0.1
	11nm,0.8s,baz=29,slow=12,SNR=66						
ASAR				S	S	05 11 56.4	+1.5
	0.9nm,0.9s,baz=17,slow=25,SNR=4.0						
FITZ	Fitzroy Crossi	22.08	231	P	P	05 08 13.0	-1.2
	11nm,0.6s,baz=50,slow=7.6,SNR=25						
FITZ	Fitzroy Crossi	22.08	231	*e*P	P	05 08 13.9	-0.2
	11nm,0.6s						
EIDS	Eidsvold	22.10	161	*e*P	P	05 08 16.0	+1.7
	28nm,0.8s						
STKA	Stephens Creek	27.38	183	P	P	05 09 03.8	+0.9
	14nm,0.7s,baz=354,slow=8.6,SNR=31						
STKA	Stephens Creek	27.38	183	*e*P	P	05 09 04.1	+1.2
	3.0nm,0.7s						
DZM	Mont Dzumac	28.39	130	P	P	05 09 12.5	+0.3
	5.4nm,0.9s,baz=336,slow=20,SNR=5.1						
BBOO	Buckleboo	29.08	193	*e*P	P	05 09 19.0	+1.0
	36nm,0.8s						
JNU	Nakatsue	39.17	343	P	P	05 10 43.1	-1.9
	8.8nm,0.8s,baz=179,slow=5.7,SNR=4.2						
MJAR	Matsushiro Arr	41.03	354	P	P	05 10 57.9	-2.4
	1.9nm,0.6s,baz=181,slow=9.1,SNR=5.4						
MJAR				LR	LR	05 26 03.4	
	comp=Z,16nm,18.7s,baz=285,slow=33						
NJ2	Nanjing	43.13	329	*e*P	P	05 11 19.3	+1.8
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KSRS	Korea Array	44.08	342	P	P	05 11 23.7	-1.2
	7.0nm,0.7s,baz=162,slow=9.8,SNR=15						
KSRS				LR	LR	05 26 29.6	
	comp=Z,9.8nm,20.3s,baz=285,slow=31						
KSAR	Wonju Array Be	44.08	342	P	P	05 11 23.7	-1.3
KS01	Wonju Array Si	44.11	342	*e*P	P	05 11 25.1	-0.1
GYA	Guiyang	46.97	313	*e*P	P	05 11 49.0	+0.8
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CMAR	Chiang Mai Arr	49.36	299	P	P	05 12 06.2	-0.3
	5.9nm,1.1s,baz=123,slow=6.5,SNR=9.7						
USRK	Ussuriysk Ar.	49.47	349	P	P	05 12 06.0	-0.8
	3.5nm,0.7s,baz=161,slow=9.2						
CN2	Changchun	50.65	343	*e*P	P	05 12 17.5	+1.7
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
BJI	Beijing	50.83	333	⇓*e*P	P	05 12 16.8	-0.4

BJI				pmax	pmax		
	comp=Z,18nm,0.8s						
HHC	**Hu-ho-hao-te**	53.65	330	eP	P	05 12 39.5	+1.3
HHC				pP	pP	05 13 06.4	+1.5
HHC				sP	sP	05 13 19.6	+2.3
HHC				S	S	05 20 05.8	+2.3
HHC				pmax	pmax		
	comp=Z,12nm,1.0s						
HHC				pmax	pmax		
	comp=Z,83nm,4.6s						
LZH	**Lanzhou**	54.71	321	eP	P	05 12 48.4	+2.4
LZH				pP	pP	05 13 14.8	+2.0
LZH				sP	sP	05 13 27.5	+2.3
LZH				ePP	PP	05 14 51.6	+1.7
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
LZH				pmax	pmax		
	comp=Z,120nm,5.4s						
LZH				LR	LR		
	comp=N,280nm,17.5s						
LZH				LR	LR		
	comp=E,290nm,17.7s						
LZH				LR	LR		
	comp=Z,340nm,18.2s						
SHL	**Shillong**	58.17	304	eP	P	05 13 10.5	-0.3
	6.6nm,0.5s						
ULN	**Ulaanbaatar**	61.04	333	eP	P	05 13 30.3	+0.3
	24nm,1.9s						
SONM	**Songino Array**	61.32	332	P	P	05 13 31.1	-0.8
	1.0nm,0.5s,baz=152,slow=7.7,SNR=5.2						
SONA1	**Songino Array**	61.32	332	eP	P	05 13 31.6	-0.4
RAMN	**Ramite**	63.08	303	eP	P	05 13 45.1	+0.9
	11nm,0.5s						
JIRN	**Jiri**	63.67	304	eP	P	05 13 48.8	+0.5
	15nm,0.5s						
GUN	**Gumba**	64.02	304	eP	P	05 13 50.8	+0.3
	16nm,0.5s						
PKIN	**Phulchoki**	64.30	303	eP	P	05 13 52.5	+0.2
	8.1nm,0.6s						
KKN	**Kakani**	64.47	304	eP	P	05 13 53.2	-0.1
	17nm,0.7s						
DMN	**Daman**	64.56	303	eP	P	05 13 53.9	0.0
	11nm,0.6s						
GKN	**Gorkha**	65.08	304	eP	P	05 13 56.9	-0.3
	15nm,0.6s						
KOLN	**Koldanda**	65.87	303	eP	P	05 14 01.7	-0.6
	9.8nm,0.7s						
DANN	**Dangsing**	65.93	304	eP	P	05 14 02.1	-0.7
	24nm,0.6s						
PYUN	**Piuthan**	66.49	303	eP	P	05 14 05.5	-0.8
	19nm,0.6s						
WMQ	**Urumqi**	69.28	320	P	P	05 14 23.8	+0.5
VNDA	**Vanda**	73.72	176	P	P	05 14 50.2	+0.9
	1.4nm,0.6s,baz=326,slow=6.4,SNR=12						
VNDA				pP	pP	05 15 17.0	-0.5
	1.3nm,0.9s,baz=318,slow=5.1,SNR=3.1						
MK01	**Makanchi Array**	74.00	321	eP	P	05 14 50.7	-0.8
MK31	**Makanchi Array**	74.02	321	eP	P	05 14 51.1	-0.5
MKAR	**Makanchi Array**	74.02	321	P	P	05 14 51.0	-0.7
	4.9nm,0.6s,baz=101,slow=7.5,SNR=46						
MKAR				pP	pP	05 15 19.9	+0.1
	1.2nm,0.6s,baz=120,slow=7.3,SNR=3.9						
MKAR	**Makanchi Array**	74.02	321	eP	P	05 14 51.1	-0.5
	24nm,0.6s						
MKAR				pP	pP	05 15 19.9	+0.1
MAKZ	**Makanchi**	74.22	321	eP	P	05 14 52.3	-0.4
	7.0nm,0.6s						
KSH	**Kashi**	75.67	312	eP	P	05 15 03.0	+1.6
KSH				epP	pP	05 15 31.3	+1.6
KSH				PP	PP	05 17 55.8	+3.2
ZAA0	**Zalesovo Array**	75.79	329	eP	P	05 14 59.8	-1.8
	5.3nm,0.8s						
ZALV	**Zalesovo Beam**	75.79	329	P	P	05 15 00.1	-1.5
	5.3nm,0.6s,baz=113,slow=5.8,SNR=15						
ZALV	**Zalesovo Beam**	75.79	329	eP	P	05 14 59.7	-1.9
KURK	**Kurchatov**	77.82	324	eP	P	05 15 12.5	-0.6
	3.7nm,0.8s						
KURK				pP	pP	05 15 41.6	+0.1
KURBB	**Kurchatov Arra**	77.84	324	P	P	05 15 12.0	-1.2
	1.7nm,0.5s,baz=104,slow=8.7,SNR=14						
KURBB				pP	pP	05 15 41.6	0.0
	0.7nm,0.6s,baz=112,slow=5.2,SNR=3.1						
MAW	**Mawson**	82.34	202	P	P	05 15 38.3	+1.3
	2.7nm,0.8s,baz=84,slow=8.5,SNR=3.6						
BVAR	**Borovoye Array**	83.40	324	P	P	05 15 42.0	-0.8
	7.5nm,0.6s,baz=104,slow=6.3,SNR=25						
BVAR				pP	pP	05 16 12.0	+0.5
	1.7nm,0.5s,baz=116,slow=6.8,SNR=2.5						
ILAR	**Eielson Array**	85.45	24	P	P	05 15 50.2	-2.7
	0.7nm,0.6s,baz=254,slow=4.5,SNR=12						
ILAR				pP	pP	05 16 19.9	-1.9
	1.8nm,0.9s,baz=259,slow=5.2,SNR=7.1						
QSPA	**South Pole Qui**	85.55	180	P	P	05 15 54.3	+0.8
	2.2nm,0.7s,baz=310,slow=1.5,SNR=9.4						
QSPA				pP	pP	05 16 21.4	-1.0
	2.7nm,0.5s,baz=346,slow=3.3,SNR=5.3						
ABKAR	**Akbulak array**	89.05	319	eP	P	05 16 08.4	-2.1
EKA	**Eskdalemuir Ar**	122.56	338	PKP	PKPdf	05 22 06.8	-3.5
	0.3nm,0.4s,baz=26,slow=3.5,SNR=5.2						
MNMC	**Minye Minye**	139.96	127	ePKPpre	PKPpre	05 22 37.8	
TORD	**Torodi Ar. Bea**	141.23	285	PKP	PKPdf	05 22 44.1	-2.5
	0.3nm,0.4s,baz=56,slow=3.1						
LPAZ	**La Paz**	142.63	124	PKP	PKPdf	05 22 46.4	-3.4
	1.6nm,0.5s,baz=347,slow=2.6,SNR=18						
KOWA	**Kowa**	146.40	290	PKPbc	PKPdf	05 22 55.4	-0.1
	1.8nm,0.3s,baz=44,slow=3.6,SNR=10						
KOWA				pPKPbc	pPKPdf	05 23 26.0	0.0
	3.8nm,0.5s,baz=67,slow=4.2,SNR=5.0						
DBIC	**Dimbokro**	148.34	276	PKPbc	PKPbc	05 23 02.0	-0.4
	3.0nm,0.9s,baz=148,slow=13,SNR=4.8						
SAML	**Samuel**	150.35	117	ePKPbc	PKPbc	05 23 07.2	-0.2

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*MOS **19** 05:14:25.2±1.1, 56°.04S×27°.86W, h90^{km}, mb5.3/18, Error ellipse: s-maj=20.8km s-min=10.2km az=110.1*

*NEIC **19** 05:14:27.9±1.0, 56°.04S×27°.81W, h105^{km}±9^{km}, mb5.4/46, Error ellipse: s-maj=7.7km s-min=5.3km az=219.0*

*GCMT **19** 05:14:27.9±0.2, 56°.24S×27°.53W, h80^{km}±3^{km}, MW5.1/103, Moment Tensor Solution. s63,c83; s103,c149; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.42±.19; $M_{\theta\theta}$0.60±.22; $M_{\phi\phi}$-1.02±.21; $M_{r\theta}$-3.77±.11; $M_{\theta\phi}$1.43±.15; $M_{\phi r}$-4.15±.10; Best double couple: $M_0$5.71000×10^{16} NP1:ϕ_s38.00000°,δ89.00000°,λ-101.00000°. NP2: ϕ_s302.00000°,δ11.00000°,λ-6.00000°. Principal axes: T 6.4560, Plg43.0000°, Azm139.0000°; N -1.4890, Plg11.0000°, Azm38.0000°; P -4.9640, Plg45.0000°, Azm297.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*ISCJB **19** 05:14:28.0±0.2, 56°.02S±0°.05×27°.86W±0°.08, h121^{km}, mb5.2/59 Error ellipse: s-maj=7.6km s-min=5.1km az=135.1*

*IDC **19** 05:14:28.7±0.9, 56°.08S×27°.85W, h109^{km}±6^{km}, mb4.8/23, mb1 4.8/25, mb1mx4.8/31, mbtmp5.2/25, MS3.9/28, Ms1 3.8/28, ms1mx3.8/31, Error ellipse: s-maj=11.6km s-min=7.9km az=49.0*

ISC 19 05:14:29.6±0.2, **56°.09S**±0°.06×**28°.02W**±0°.05, **h121**^{km}, **n210,** σ**1**^{s}**61**/275, **mb5.2**/56, **5C-1D, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	5.18	287	ePn	Pn	05 15 42.5	-2.4
HOPE				eSn	Sn	05 16 37.2	-6.3
VNA1	**Neumayer--Stat**	16.93	157	P	P	05 18 16.8	-1.9
VNA3	**Neumayer Olymp**	17.11	160	P	P	05 18 18.0	-2.7
EFI	**East Falkland**	18.17	271	eP	Pn	05 18 34.3	+0.5
	160nm,0.8s						
EFI	**East Falkland**	18.17	271	ceP	Pn	05 18 33.9	+0.1
EFI				pmax	pmax		
	comp=Z,183nm,1.0s						
SNAA	**Sanae**	18.90	155	P	P	05 18 39.3	-1.0
SNAA	**Sanae**	18.90	155	P	P	05 18 39.3	-1.0
	comp=Z,14nm,0.3s,baz=304,slow=10.0,SNR=1167						
SNAA				S	S	05 22 07.6	-0.8
	comp=Z,0.2nm,0.3s,baz=301,slow=18,SNR=2.1						
SNAA				LR	LR	05 24 40.5	
	comp=Z,352nm,21.4s,baz=299,slow=32						
SNAA				ScP	ScP	05 26 27.1	+2.0
	comp=Z,0.5nm,0.3s,baz=337,slow=2.6,SNR=26						
SNAA	**Sanae**	18.90	155	eP	P	05 18 39.2	-1.1
	comp=Z,491nm,1.5s						
SNAA				S	S	05 22 07.6	-0.8
SNAA				ScP	ScP	05 26 27.1	+2.0
SNAA	**Sanae**	18.90	155	ceP	P	05 18 39.1	-1.2
PMSA	**Palmer Station**	19.52	229	P	Pn	05 18 48.6	-0.9
	comp=Z,0.8nm,0.3s,baz=85,slow=11,SNR=3.1						
PMSA				LR	LR	05 25 56.9	
	comp=Z,292nm,18.1s,baz=79,slow=35						
PMSA	**Palmer Station**	19.52	229	eP	P	05 18 48.2	+1.1
	comp=Z,332nm,0.8s						
NVL	**N'lazarevskaya**	22.49	146	eP	P	05 19 17.8	-0.6
NVL				pmax	pmax		
	comp=Z,40nm,0.9s						
GO10	**Punta Arenas**	24.79	259	eP	P	05 19 43.2	+3.3
	comp=Z,115nm,1.1s						
TRQA	**Tornquist**	28.91	294	eP	P	05 20 17.6	+0.6
	comp=Z,30nm,0.6s						
TRQA	**Tornquist**	28.91	294	eP	P	05 20 17.6	+0.6
TRQA				pmax	pmax		
	comp=Z,30nm,0.6s						
PLCA	**Paso Flores**	31.55	281	P	P	05 20 39.9	-0.4
	comp=Z,9.3nm,0.8s,baz=166,slow=9.2,SNR=23						
PLCA				PcP	PcP	05 23 30.6	+0.8
	comp=Z,2.0nm,0.6s,baz=60,slow=10,SNR=3.0						
PLCA				ScP	ScP	05 27 01.9	+0.4
	comp=Z,3.1nm,0.7s,baz=138,slow=4.5,SNR=6.1						
PLCA				LR	LR	05 33 44.6	
	comp=Z,190nm,18.8s,baz=156,slow=36						
PLCA	**Paso Flores**	31.55	281	eP	P	05 20 39.4	-0.9
	comp=Z,14nm,0.9s						
PLCA				PcP	PcP	05 23 30.6	+0.8
PLCA				ScP	ScP	05 27 01.9	+0.4
PLCA	**Paso Flores**	31.55	281	eP	P	05 20 39.4	-0.9
PLCA						05 23 30.6	
PLCA				pmax	pmax		
	comp=Z,14nm,0.9s						
SYO	**Syowa Base**	31.85	141	⇓eP	P	05 20 39.8	-2.6
QSPA	**South Pole Qui**	34.16	180	P	P	05 21 04.0	+1.2
	comp=Z,98nm,0.6s,baz=196,slow=5.1,SNR=371						
QSPA				ScP	ScP	05 27 11.2	+1.0
	comp=Z,7.0nm,0.6s,baz=315,slow=0.7,SNR=12						
QSPA				LR	LR	05 35 26.7	
	comp=Z,106nm,18.2s,baz=190,slow=37						
QSPA	**South Pole Qui**	34.16	180	eP	P	05 21 03.8	+1.0
	comp=Z,105nm,0.7s						
QSPA				ScP	ScP	05 27 11.2	+1.0
SPB	**Sao Paulo**	35.46	328	eP	P	05 21 15.7	+1.6
	comp=Z,106nm,1.0s						
CPUP	**Villa Florida**	36.49	312	P	P	05 21 23.2	+0.3
	comp=Z,34nm,0.6s,baz=150,slow=7.4,SNR=98						
CPUP				PcP	PcP	05 23 44.5	+0.5
	comp=Z,3.8nm,0.6s,baz=108,slow=0.4,SNR=3.5						
CPUP				ScP	ScP	05 27 20.2	+1.2
	comp=Z,3.6nm,0.7s,baz=174,slow=4.1,SNR=5.1						
CPUP				LR	LR	05 35 31.4	
	comp=Z,198nm,20.1s,baz=154,slow=34						
CPUP	**Villa Florida**	36.49	312	eP	P	05 21 23.2	+0.3
	comp=Z,50nm,0.9s						
CPUP				PcP	PcP	05 23 44.5	+0.5
CPUP				ScP	ScP	05 27 20.2	+1.2
CPUP	**Villa Florida**	36.49	312	eP	P	05 21 23.2	+0.3
CPUP						05 23 44.5	
CPUP				pmax	pmax		
	comp=Z,50nm,0.9s						
PEL	**Peldehue**	37.21	290	eP	P	05 21 28.7	-0.3
	comp=Z,63nm,0.6s						
PEL	**Peldehue**	37.21	290	eP	P	05 21 28.7	-0.3
PEL				pmax	pmax		
	comp=Z,63nm,0.6s						
ROC1	**El Roble**	37.52	290	eP	P	05 21 32.2	+0.3
	comp=Z,59nm,0.7s						
GO04	**Tololo Observa**	39.61	293	eP	P	05 21 49.4	0.0
	comp=Z,26nm,0.6s						
MAW	**Mawson**	40.39	144	P	P	05 21 55.1	0.0
	comp=Z,36nm,0.8s,baz=233,slow=7.9,SNR=69						
MAW				PcP	PcP	05 23 56.9	+1.3
	comp=Z,12nm,0.8s,baz=272,slow=3.0,SNR=4.5						
MAW				ScP	ScP	05 27 35.2	+1.9
	comp=Z,20nm,1.0s,baz=223,slow=3.9,SNR=17						
MAW				LR	LR	05 36 08.5	
	comp=Z,258nm,21.5s,baz=242,slow=32						
MAW	**Mawson**	40.39	144	eP	P	05 21 54.6	-0.4
	comp=Z,10nm,0.9s						
MAW				PcP	PcP	05 23 56.9	+1.3
MAW				ScP	ScP	05 27 35.2	+1.9
LCO	**Las Campanas**	40.49	294	eP	P	05 21 56.8	+0.1
	comp=Z,34nm,0.7s						
LCO	**Las Campanas**	40.49	294	eP	P	05 21 56.8	+0.1
LCO				pmax	pmax		
	comp=Z,34nm,0.7s						
SUR	**Sutherland**	41.10	76	P	P	05 22 00.8	-0.7
	comp=Z,15nm,1.0s,baz=208,slow=11,SNR=12						
SUR				PcP	PcP	05 24 00.2	+1.5
	comp=Z,8.6nm,0.9s,baz=231,slow=6.5,SNR=5.8						
SUR				LR	LR	05 35 57.2	
	comp=Z,308nm,18.6s,baz=207,slow=31						
GO03	**Copiap**	41.41	296	eP	P	05 22 03.8	-0.2
	comp=Z,41nm,0.7s						
GO02	**Mina Guanaco**	43.10	298	eP	P	05 22 18.8	+0.8
	comp=Z,122nm,1.0s						
BDFB	**Brasilia**	43.17	331	eP	P	05 22 19.6	+1.2
	comp=Z,60nm,0.7s						
BDFB	**Brasilia**	43.17	331	eP	P	05 22 19.6	+1.2
BDFB				pmax	pmax		
	comp=Z,60nm,0.7s						
PB04	**IPOC Station P**	45.75	300	eP	P	05 22 39.7	+0.7
	comp=Z,128nm,1.1s						
SBA	**Scott Base**	46.01	184	eP	P	05 22 41.5	+1.5
	comp=Z,59nm,1.0s						
SBA	**Scott Base**	46.01	184	eP	P	05 22 41.5	+1.5
SBA				pmax	pmax		
	comp=Z,59nm,1.0s						
BOSA	**Boshof**	46.43	77	P	P	05 22 42.5	-1.6
	comp=Z,10nm,1.0s,baz=217,slow=6.9,SNR=8.5						
BOSA				PcP	PcP	05 24 17.0	+0.2
	comp=Z,6.6nm,0.9s,baz=204,slow=6.2,SNR=5.1						
BOSA				ScP	ScP	05 27 59.9	+1.2
	comp=Z,8.0nm,0.9s,baz=189,slow=4.5,SNR=9.5						
BOSA				LR	LR	05 39 03.4	
	comp=Z,401nm,18.5s,baz=208,slow=32						
BOSA	**Boshof**	46.43	77	eP	P	05 22 42.4	-1.7
	comp=Z,18nm,1.2s						
BOSA				PcP	PcP	05 24 17.0	+0.2
BOSA				ScP	ScP	05 27 59.9	+1.2
BOSA	**Boshof**	46.43	77	eP	P	05 22 42.4	-1.7
BOSA						05 24 17.0	
BOSA				pmax	pmax		
	comp=Z,18nm,1.2s						
VNDA	**Vanda**	46.51	183	P	P	05 22 45.7	+1.7
	comp=Z,57nm,0.7s,baz=186,slow=6.7,SNR=309						
VNDA				ScP	ScP	05 28 00.0	+1.9
	comp=Z,5.6nm,0.9s,baz=213,slow=3.4,SNR=8.4						
VNDA				LR	LR	05 41 26.7	
	comp=Z,27nm,20.1s,baz=172,slow=35						
VNDA	**Vanda**	46.51	183	eP	P	05 22 45.7	+1.7
	comp=Z,63nm,0.8s						
VNDA				ScP	ScP	05 28 00.0	+1.9
PB01	**IPOC Station P**	46.53	302	eP	P	05 22 46.0	+1.0
	comp=Z,168nm,0.9s						
PB11	**IPOC Station P**	47.71	302	eP	P	05 22 55.1	+1.0
	comp=Z,173nm,1.0s						
H10S2	**ASCENSION HYDR**	48.18	18	T	T	06 15 43.4	
	baz=189,slow=74,SNR=35						
H10S3	**ASCENSION HYDR**	48.18	18	T	T	06 15 43.7	
	baz=189,slow=74,SNR=33						
H10S1	**ASCENSION HYDR**	48.19	18	T	T	06 15 44.7	
	baz=189,slow=74,SNR=29						
MNMC	**Minye Minye**	48.23	303	eP	P	05 22 59.3	+1.1
	comp=Z,173nm,0.8s						
LBTB	**Lobatse**	49.47	74	eP	P	05 23 06.0	-1.5
	comp=Z,17nm,0.8s						
LBTB	**Lobatse**	49.47	74	eP	P	05 23 06.0	-1.5
LBTB				pmax	pmax		
	comp=Z,17nm,0.8s						
MIR	**Mirnyy**	49.96	153	⇑iP	P	05 23 12.0	+1.5
MIR				i		05 23 29.0	
MIR				pmax	pmax		
	comp=Z,108nm,1.5s						
LPAZ	**La Paz**	50.02	306	P	P	05 23 13.7	+1.4
	comp=Z,68nm,0.6s,baz=139,slow=5.6,SNR=259						
LPAZ				PcP	PcP	05 24 32.3	+1.8
	comp=Z,11nm,0.6s,baz=138,slow=5.4,SNR=2.1						
LPAZ				ScP	ScP	05 28 15.9	+1.3
	comp=Z,4.2nm,0.8s,baz=155,slow=2.7,SNR=6.8						
LPAZ				S	S	05 30 17.1	+2.6
	comp=Z,1.4nm,1.1s,baz=225,slow=10.0,SNR=2.9						
LPAZ				LR	LR	05 45 19.2	
	comp=Z,54nm,21.5s,baz=156,slow=37						
LPAZ	**La Paz**	50.02	306	eP	P	05 23 13.7	+1.4
	comp=Z,77nm,0.6s						
LPAZ				PcP	PcP	05 24 32.3	+1.8
LPAZ				ScP	ScP	05 28 15.9	+1.3
LPAZ				S	S	05 30 17.1	+2.6
TSUM	**Tsumeb**	50.11	62	eP	P	05 23 11.4	-1.0
	comp=Z,8.4nm,0.8s						
CASY	**Casey**	54.02	161	eP	P	05 23 41.6	+1.0
	comp=Z,67nm,0.8s						
SAML	**Samuel**	54.50	316	eP	P	05 23 44.3	-0.4
	comp=Z,59nm,0.8s						
SAML	**Samuel**	54.50	316	eP	P	05 23 44.3	-0.4
SAML				pmax	pmax		
	comp=Z,59nm,0.8s						
NNA	**Nana**	57.86	300	P	P	05 24 09.8	+1.2
	comp=Z,24nm,0.7s,baz=181,slow=11,SNR=9.8						
NNA				LR	LR	05 50 59.3	
	comp=Z,24nm,20.4s,baz=142,slow=38						
NNA	**Nana**	57.86	300	eP	P	05 24 09.2	+0.5
	comp=Z,37nm,0.8s						
NNA	**Nana**	57.86	300	ceP	P	05 24 09.9	+1.2
NNA				pmax	pmax		
	comp=Z,202nm,1.7s						
LSZ	**Lusaka**	58.82	70	eP	P	05 24 14.3	-1.1
	comp=Z,14nm,0.8s						
LSZ	**Lusaka**	58.82	70	eP	P	05 24 14.3	-1.1
LSZ				pmax	pmax		
	comp=Z,14nm,0.8s						
PTGA	**Pitinga**	60.92	323	eP	P	05 24 29.3	-0.3
	comp=Z,22nm,0.9s						
RPN	**Rapa Nui**	63.19	261	LR	LR	05 49 25.0	
	comp=Z,26nm,22.0s,baz=177,slow=33						
LIC	**Lamto**	64.93	25	eP	P	05 24 55.4	-0.6
	comp=Z,70nm,1.1s						
KIC	**Kosan Boka**	65.13	26	eP	P	05 24 57.0	-0.3
	comp=Z,42nm,1.1s						
TIC	**Toumodi**	65.34	25	eP	P	05 24 58.0	-0.7
DBIC	**Dimbokro**	65.40	25	P	P	05 24 58.9	-0.2
	comp=Z,6.3nm,0.7s,baz=193,slow=9.0,SNR=6.0						
DBIC				LR	LR	05 47 45.6	
	comp=Z,87nm,18.4s,baz=176,slow=31						
OPO	**Ambohidratompo**	66.55	89	P	P	05 25 07.7	+0.9
	comp=Z,13nm,0.9s,baz=225,slow=7.8,SNR=8.3						
OPO				LR	LR	05 49 27.4	
	comp=Z,292nm,18.9s,baz=182,slow=32						
OTAV	**Otavalo**	69.29	305	eP	P	05 25 25.1	+0.9
	comp=Z,106nm,1.4s						
OTAV	**Otavalo**	69.29	305	eP	P	05 25 25.8	+1.6
OTAV	**Otavalo**	69.29	305	eP	P	05 25 25.1	+0.9
OTAV				pmax	pmax		
	comp=Z,106nm,1.4s						
SJAC	**San Juan de Ar**	69.99	310	eP	P	05 25 28.3	+0.2
PCON	**Cinco Dias**	70.21	307	eP	P	05 25 30.5	+0.6
PRAC	**Prado**	70.79	310	eP	P	05 25 33.2	+0.4
	comp=Z,38nm,1.0s						
PRAC	**Prado**	70.79	310	eP	P	05 25 33.0	+0.2
CHIC	**Chingaza**	71.11	311	eP	P	05 25 34.8	-0.4
HORQ	**Saladito**	71.34	308	eP	P	05 25 36.1	-0.4
ROSC	**El Rosal**	71.55	311	P	P	05 25 39.2	+1.4
	comp=Z,13nm,0.7s,baz=27,slow=23,SNR=12						
ROSC				LR	LR	05 57 43.5	
	comp=Z,39nm,21.4s,baz=152,slow=36						
ROSC	**El Rosal**	71.55	311	eP	P	05 25 37.8	-0.1
	comp=Z,17nm,1.0s						
ROSC	**El Rosal**	71.55	311	eP	P	05 25 38.6	+0.7
YOTC	**Yotoco, Valle**	71.66	308	eP	P	05 25 38.0	-0.2
RUSC	**La Rusia**	71.98	312	eP	P	05 25 40.1	-0.4
	comp=Z,16nm,1.0s						
RUSC	**La Rusia**	71.98	312	eP	P	05 25 39.7	-0.8
MALC	**Bahia Malaga**	72.13	307	eP	P	05 25 41.6	+0.8
NORC	**Norcasia**	72.44	310	eP	P	05 25 41.1	-1.6
BARC	**Barichara**	72.65	312	eP	P	05 25 42.2	-2.0
PCRV	**Puerto La Cruz**	72.69	322	P	P	05 25 45.5	+1.4
	comp=Z,113nm,0.6s,baz=158,slow=4.0,SNR=56						
PCRV				LR	LR	05 58 29.6	
	comp=Z,130nm,20.5s,baz=118,slow=36						
PAMC	**Pamplona, Colo**	73.13	313	eP	P	05 25 46.3	-1.0
PTBC	**PUERTO BERRIO,**	73.14	311	eP	P	05 25 44.4	-2.4
KOWA	**Kowa**	73.15	24	P	P	05 25 47.3	+0.6
	comp=Z,8.0nm,0.9s,baz=178,slow=6.0,SNR=12						
KOWA				LR	LR	05 50 21.6	
	comp=Z,74nm,21.4s,baz=222,slow=30						
KOWA	**Kowa**	73.15	24	eP	P	05 25 47.2	+0.4
	comp=Z,16nm,1.1s						
HELC	**Santa Helena**	73.28	310	eP	P	05 25 46.9	-1.2
	comp=Z,27nm,0.8s						
HELC	**Santa Helena**	73.28	310	eP	P	05 25 46.5	-1.6
TOA0	**Torodi Ar. Sit**	73.32	30	eP	P	05 25 47.9	+0.1
TORD	**Torodi Ar. Bea**	73.32	30	P	P	05 25 46.9	-0.9
	comp=Z,13nm,0.8s,baz=207,slow=6.1						
TORD				LR	LR	05 53 06.0	
	comp=Z,83nm,19.3s,baz=265,slow=32						
BRRC	**Barranca, Sant**	73.34	312	eP	P	05 25 45.7	-2.3
SDV	**Santo Domingo**	73.71	316	eP	P	05 25 50.9	+0.5
	comp=Z,66nm,0.8s						
ZARC	**Zaragoza, Cauc**	74.17	311	eP	P	05 25 51.2	-1.6
OCAC	**Ocana**	74.20	313	eP	P	05 25 51.1	-2.1
DBBC	**Dabeiba**	74.31	310	eP	P	05 25 54.0	+0.2
SJCC	**San Jacinto, C**	76.46	312	eP	P	05 26 06.3	+0.4
GDHS	**Morne Mazeau,**	77.47	327	eP	P	05 26 12.7	+1.2
	comp=Z,207nm,0.7s						
RPZ	**Rata Peaks**	79.27	194	P	P	05 26 21.9	+0.7
	comp=Z,8.9nm,0.7s,baz=140,slow=8.4,SNR=4.7						
RKT	**Rikitea**	80.05	243	eT	T	06 55 11.7	
	comp=Z,1.7nm,0.3s						
HDC	**Heredia**	80.50	304	eP	P	05 26 30.0	+1.8
	comp=Z,110nm,1.3s						
CBYP	**Canovanas**	80.65	324	eP	P	05 26 29.0	+0.2
	comp=Z,33nm,0.8s						
JTS	**JuntasAbangare**	81.14	303	P	P	05 26 32.1	+0.6
	comp=Z,34nm,1.1s,baz=302,slow=8.3,SNR=10						
JTS				LR	LR	06 05 24.2	
	comp=Z,22nm,19.8s,baz=190,slow=38						
JTS	**JuntasAbangare**	81.14	303	eP	P	05 26 32.2	+0.7
	comp=Z,55nm,1.2s						
JTS	**JuntasAbangare**	81.14	303	eP	P	05 26 32.2	+0.7
JTS				pmax	pmax		
	comp=Z,55nm,1.2s						
TAM	**Tamanrasset**	83.56	31	eP	P	05 26 44.0	0.0
	comp=Z,9.8nm,1.4s						
TAM	**Tamanrasset**	83.56	31	eP	P	05 26 44.0	0.0
TAM				pmax	pmax		
	comp=Z,10.0nm,1.4s						
URZ	**Urewera**	83.61	200	LR	LR	06 02 22.2	
	comp=Z,41nm,18.0s,baz=175,slow=34						
ESTN	**Estel**	84.26	304	eP	P	05 26 48.1	+0.4
	comp=Z,29nm,1.0s						
NWAO	**Narrogin (SRO)**	86.52	151	P	P	05 26 58.6	-0.1
	comp=Z,16nm,0.7s,baz=52,slow=3.9,SNR=12						
NWAO				LR	LR	06 01 26.5	
	comp=Z,109nm,20.5s,baz=180,slow=33						
ATD	**Arta Tunnel**	89.11	68	LR	LR	06 06 52.5	
	comp=Z,75nm,18.5s,baz=312,slow=35						
MDT	**Midelt**	90.78	20	P	P	05 27 19.9	+1.3
	comp=Z,6.9nm,0.9s,baz=214,slow=6.7,SNR=11						
MDT				LR	LR	06 03 39.3	
	comp=Z,67nm,18.6s,baz=205,slow=32						
PPT2	**Papeete2**	91.78	234	eLR	LR	05 57 07.2	
	comp=Z,193nm,29.0s						
PPT	**Papeete**	91.80	234	LR	LR	05 59 33.5	
	comp=Z,27nm,21.4s,baz=136,slow=29						
STKA	**Stephens Creek**	91.94	171	P	P	05 27 23.6	-0.6
	comp=Z,3.1nm,0.8s,baz=116,slow=6.3,SNR=4.3						
STKA				LR	LR	06 07 12.1	
	comp=Z,76nm,18.8s,baz=204,slow=34						
CMLA	**Cha da Macela**	93.51	2	iP	P	05 27 27.6	-3.4
KEST	**Kesra**	96.84	30	LR	LR	06 10 08.6	
	comp=Z,68nm,19.6s,baz=286,slow=34						
ESDC	**Sonseca Array**	97.56	19	P	P	05 27 48.8	-0.6
	comp=Z,0.2nm,0.3s,baz=183,slow=6.8,SNR=4.3						
ESDC				LR	LR	06 07 22.3	
	comp=Z,34nm,19.8s,baz=295,slow=32						
ASAR	**Alice Springs**	99.09	163	P	Pdif	05 27 56.6	-0.3
	comp=Z,6.1nm,0.9s,baz=193,slow=4.1,SNR=33						
ASAR				PP	PP	05 31 53.5	-6.1
	comp=Z,2.0nm,0.8s,baz=191,slow=6.0,SNR=6.8						
ASAR				PKKP	PKKPdf	05 44 21.3	-0.1
	comp=Z,0.5nm,0.5s,baz=19,slow=1.6,SNR=4.9						
ASAR				LR	LR	06 12 15.2	
	comp=Z,81nm,18.3s,baz=192,slow=35						
AS31	**Alice Springs**	99.09	163	eP	Pdif	05 27 56.9	-0.1
	comp=Z,2.1nm,0.8s						
AS01	**Alice Springs**	99.10	163	eP	Pdif	05 27 55.3	-1.7
VAE	**Valguarnera**	99.94	33	P	Pdif	05 28 00.6	+0.5
	comp=Z,10nm,0.4s,baz=225,slow=2.9,SNR=2.3						
WRA	**Warramunga Arr**	102.81	163	Pdiff	Pdif	05 28 12.8	-0.6
	comp=Z,1.5nm,0.9s,baz=198,slow=4.0,SNR=5.3						
WRA				PP	PP	05 32 23.1	-4.5
	comp=Z,1.2nm,0.7s,baz=193,slow=5.8,SNR=3.6						

WRA				PKKP	PKKPbc	05 44 10.8	+2.3
	comp=Z,0.7nm,0.4s,baz=358,slow=2.9,SNR=11						
TXAR	Lajitas Array	106.40	298	Pdiff	Pdif	05 28 31.4	+2.3
	comp=Z,0.1nm,0.5s,baz=108,slow=4.8,SNR=3.2						
TXAR				PKiKP	PKiKP	05 32 40.5	+0.9
	comp=Z,0.4nm,0.9s,baz=128,slow=5.8,SNR=3.5						
TXAR				PP	PP	05 32 52.6	-2.9
	comp=Z,0.3nm,0.7s,baz=134,slow=5.4,SNR=3.9						
TXAR				PKKPbc	PKKPbc	05 43 59.6	+1.3
	comp=Z,0.1nm,0.3s,baz=9.5,slow=1.3,SNR=4.0						
TXAR				PKKPab	PKKPab	05 44 15.7	+2.0
	comp=Z,0.6nm,0.8s,baz=298,slow=2.7,SNR=7.7						
SCHQ	Schefferville	115.01	336	PKKPbc	PKKPbc	05 43 33.0	+2.0
	comp=Z,4.5nm,0.5s,baz=240,slow=13,SNR=2.9						
SCHQ				PKKP	PKKPdf	05 43 54.4	-0.7
	comp=Z,5.4nm,0.5s,baz=279,slow=18,SNR=4.0						
MTKI	Muara Teweh, K	115.69	138	PKP	PKPdf	05 32 54.1	-3.5
KIV	Kislovodsk	116.05	49	i PKIKP	PKPdf	05 32 58.6	+1.2
KIV				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KIEV	Kiev	116.50	37	i PKIKP	PKPdf	05 32 59.8	+1.9
P18A	Preston Nutter	117.88	300	ePKPdf	PKPdf	05 33 02.4	+1.0
SHPR	Sheep Range	117.91	294	ePKPdf	PKPdf	05 33 02.9	+1.6
MSU	Marysvale	117.96	298	ePKPdf	PKPdf	05 33 03.0	+1.6
MSU	Marysvale	117.96	298	ePKIKP	PKPdf	05 33 03.0	+1.6
DUG	Dugway, Tooele	119.57	299	ePKPdf	PKPdf	05 33 04.9	+0.5
DUG				epPKPdf	pPKPdf	05 33 29.1	-7.8
ULM	Lac du Bonnet	119.96	317	PKP	PKPdf	05 33 03.0	-1.6
	comp=Z,1.6nm,0.4s,baz=129,slow=2.5,SNR=3.0						
PDAR	Pinedale Array	119.97	303	PKP	PKPdf	05 33 03.6	-1.5
	comp=Z,0.5nm,0.5s,baz=121,slow=4.2,SNR=9.1						
PDAR				PP	PP	05 34 30.6	-1.3
	comp=Z,0.8nm,0.9s,baz=129,slow=7.1,SNR=3.1						
PDAR				SKP		05 36 29.6	
	comp=Z,0.2nm,0.4s,baz=92,slow=4.9,SNR=3.8						
PDAR				PKKPbc	PKKPab	05 43 13.6	-0.4
	comp=Z,0.4nm,0.7s,baz=101,slow=1.5,SNR=4.6						
HWUT	Hardware Ranch	120.04	301	ePKPdf	PKPdf	05 33 05.3	0.0
HFS	Hagfors	120.50	23	PKP	PKPdf	05 33 04.2	-1.1
	comp=Z,0.6nm,0.5s,baz=182,slow=6.5,SNR=4.7						
NVAR	Mina Array Bea	120.99	294	PKP	PKPdf	05 33 08.9	+1.6
	comp=Z,1.0nm,0.5s,baz=140,slow=2.9,SNR=9.7						
NVAR				PP	PP	05 34 37.0	-1.9
	comp=Z,0.2nm,0.5s,baz=170,slow=2.7,SNR=3.0						
NVAR				PKKPab	PKKPab	05 43 11.7	+1.7
	comp=Z,1.4nm,1.0s,baz=295,slow=4.9,SNR=6.2						
LAO	LASA Array	121.46	308	ePKPdf	PKPdf	05 33 07.7	0.0
LAO				eSKPdf	SKiKP	05 36 35.2	+3.2
CMB	Columbia Colle	121.77	292	ePKPdf	PKPdf	05 33 10.0	+1.5
CMB	Columbia Colle	121.77	292	ePKIKP	PKPdf	05 33 10.0	+1.5
OBN	Obninsk	122.66	38	i PKIKP	PKPdf	05 33 11.9	+2.4
OBN				e		05 34 48.6	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
WVOR	Wild Horse Val	124.14	297	ePKPdf	PKPdf	05 33 14.7	+1.6
FINES	FINESS Array B	124.64	28	PKP	PKPdf	05 33 13.2	0.0
	comp=Z,3.0nm,0.5s,baz=135,slow=0.7,SNR=25						
FINES				SKP		05 36 37.6	
	comp=Z,1.6nm,0.6s,baz=147,slow=3.9,SNR=4.4						
BMO	Blue Mountains	125.25	299	ePKPdf	PKPdf	05 33 16.0	+0.9
CMAR	Chiang Mai Arr	125.48	111	PKP	PKPdf	05 33 16.4	+0.2
	comp=Z,5.8nm,0.8s,baz=236,slow=4.0,SNR=20						
CMAR				PP	PP	05 35 03.9	-4.8
	comp=Z,0.6nm,0.3s,baz=233,slow=7.3,SNR=4.5						
YBH	Yreka Blue Hor	125.70	293	PKP	PKPdf	05 33 15.2	-0.8
	comp=Z,1.7nm,0.8s,baz=124,slow=18,SNR=5.4						
AKTO	Aktyubinsk	127.73	54	PKP	PKPdf	05 33 18.6	-0.9
	comp=Z,0.8nm,0.3s,baz=175,slow=5.9,SNR=4.8						
AKTO				SKPbc	SKPbc	05 36 26.8	
	comp=Z,2.9nm,0.9s,baz=197,slow=3.7,SNR=5.6						
KSH	Kashi	129.03	75	ePKP	PKPdf	05 33 21.1	-1.4
KSH				ePP	PP	05 35 32.9	+0.5
KSH				PKS	PKSdf	05 36 58.1	-0.9
NLWA	Neilton Lookou	130.28	298	ePKPdf	PKPdf	05 33 26.4	+2.0
AAK	Ala-Archa	130.43	71	PKP	PKPdf	05 33 25.6	+0.5
	comp=Z,2.2nm,0.4s,baz=174,slow=5.2,SNR=4.7						
AAK				SKPbc	SKPbc	05 36 38.7	+1.5
	comp=Z,2.2nm,0.4s,baz=207,slow=5.6,SNR=8.6						
AAK	Ala-Archa	130.43	71	PKIKP	PKPdf	05 33 25.6	+0.5
AAK				pmax	pmax		
	comp=Z,2.0nm,0.4s						
AAK				pmax	pmax		
	comp=N,2.0nm,0.4s						
ARCES	ARCESS Array B	131.15	22	PKP	PKPdf	05 33 25.3	-0.1
	comp=N,2.9nm,0.5s,baz=184,slow=1.7,SNR=32						
ARCES				SKPbc	SKPbc	05 36 38.6	-0.1
	comp=N,8.9nm,0.9s,baz=183,slow=2.6,SNR=13						
ARCES				PKKP	PKKPdf	05 43 26.5	+2.4
	comp=N,5.4nm,1.0s,baz=356,slow=16,SNR=4.2						
ARU	Arti	132.07	48	SKPbc	SKPab	05 36 43.1	-0.4
	comp=N,6.0nm,0.2s,baz=199,slow=3.1,SNR=4.9						
ARU	Arti	132.07	48	i PKIKP	PKPdf	05 33 31.3	+3.8
ARU						05 35 53.4	
ARU				SS	SS	05 53 27.0	+8.1
BRVK	Borovoye	135.17	58	i PKIKP	PKPdf	05 33 34.5	+1.1
BVAR	Borovoye Array	135.19	58	PKP	PKPdf	05 33 32.1	-1.4
	comp=N,1.3nm,0.5s,baz=248,slow=1.6,SNR=7.0						
BVAR				SKPbc	SKPbc	05 36 53.7	+0.9
	comp=N,1.6nm,0.7s,baz=264,slow=1.5,SNR=6.1						
YKA	Yellowknife Ar	135.89	318	PKP	PKPdf	05 33 34.3	-0.2
	comp=N,3.5nm,0.5s,baz=128,slow=2.3,SNR=24						
YKA				PP	PP	05 36 12.9	-2.8
	comp=N,2.8nm,0.9s,baz=115,slow=7.0,SNR=5.8						
YKA				SKPbc	SKPbc	05 36 55.6	+0.9
	comp=N,1.7nm,0.7s,baz=117,slow=1.8,SNR=7.1						
GYA	Guiyang	136.08	113	ePdif	Pdif	05 30 41.0	-0.2
GYA				PKP	PKiKP	05 33 37.3	-0.6
GYA				sPKP		05 34 10.4	
GYA				PP	PP	05 36 21.3	+4.1
GYA				AMB	AMB		
	comp=N,150nm,7.9s						
SPITS	Spitsbergen Ar	136.70	12	PKhKP	PKPpre	05 33 28.3	
	comp=N,3.0nm,0.9s,baz=172,slow=2.3,SNR=3.3						
SPITS				PKP	PKiKP	05 33 37.4	-0.1
	comp=N,0.8nm,0.5s,baz=25,slow=2.2,SNR=4.6						
SPITS				SKPbc	SKPbc	05 36 56.5	-0.3
	comp=N,4.2nm,0.7s,baz=116,slow=9.8,SNR=3.1						
SPITS				SKP		05 37 00.5	
	comp=N,0.7nm,0.4s,baz=348,slow=6.3,SNR=4.9						
SPITS	Spitsbergen Ar	136.70	12	PKHKP	PKPpre	05 33 28.3	
SPITS						05 33 37.4	
SPITS				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SPITS				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SPITS				pmax	pmax		
	comp=N,4.0nm,0.7s						
MKAR	Makanchi Array	137.34	72	PKhKP	PKPpre	05 33 26.3	
	comp=N,0.8nm,0.7s,baz=232,slow=1.3,SNR=5.7						
MKAR				PKP	PKPdf	05 33 37.9	+0.2
	comp=N,1.1nm,0.6s,baz=218,slow=0.8,SNR=9.2						
MKAR				SKPbc	SKPbc	05 36 59.8	+0.2
	comp=N,2.4nm,0.7s,baz=245,slow=2.5,SNR=12						
MKAR				SKPab	SKPab	05 37 07.8	+0.7
	comp=N,0.8nm,0.6s,baz=248,slow=5.1,SNR=5.1						
KURBB	Kurchatov Arra	137.74	65	PKhKP	PKPpre	05 33 28.9	
	comp=N,0.6nm,0.7s,baz=226,slow=3.4,SNR=5.9						
KURBB				PKP	PKPdf	05 33 37.8	-0.5
	comp=N,1.0nm,0.6s,baz=233,slow=2.9,SNR=8.0						
KURBB				SKPbc	SKPbc	05 37 01.3	+0.7
	comp=N,4.5nm,1.0s,baz=232,slow=3.4,SNR=17						
KURBB				SKPab	SKPab	05 37 09.9	+1.3
	comp=N,0.8nm,0.8s,baz=239,slow=3.8,SNR=4.5						
KURK	Kurchatov	137.84	65	PKPpre	PKPpre	05 33 28.9	
KURK				PKP	PKPdf	05 33 37.8	-0.7
KURK				SKPbc	SKPbc	05 37 01.3	+0.4
KURK				SKPab	SKPab	05 37 09.9	+0.8
KURK	Kurchatov	137.84	65c	i PKIKP	PKPdf	05 33 41.6	+3.1
KURK				pmax	pmax		
	comp=Z,24nm,1.0s						
CD2	Chengdu	138.09	106	PKP	PKPdf	05 33 40.0	+0.3
WMQ	Urumqi	138.37	79	PKP	PKPdf	05 33 41.5	+1.7
WMQ				LR	LR		
	comp=Z,95nm,30.9s						
WMQ				LR	LR		
	comp=Z,180nm,39.3s						
WMQ				LR	LR		
	comp=Z,120nm,24.1s						
LZH	Lanzhou	142.06	101	ePKP	PKPdf	05 33 46.1	-0.8
LZH				sPKP		05 34 23.8	
LZH				LR	LR		
	comp=Z,270nm,18.2s						
LZH				LR	LR		
	comp=Z,280nm,18.0s						
LZH				LR	LR		
	comp=Z,300nm,20.1s						
GTA	Gaotai	142.19	94	ePKP	PKPdf	05 33 48.4	+1.5
GTA				pPKP	pPKPdf	05 34 13.3	-6.2
GTA				sPKP		05 34 26.8	
GTA				LR	LR		
	comp=Z,79nm,16.5s						
GTA				LR	LR		
	comp=Z,95nm,17.5s						
GTA				LR	LR		
	comp=Z,130nm,16.8s						
NVS	Novosibirsk	142.47	62	ePKIKP	PKPpre	05 33 42.6	
ZALV	Zalesovo Beam	142.81	64	PKhKP	PKPpre	05 33 43.0	
	comp=Z,2.0nm,0.4s,baz=249,slow=3.9,SNR=8.1						
ZALV				PKP	PKPdf	05 33 48.7	+1.4
	comp=Z,2.8nm,0.4s,baz=223,slow=4.1,SNR=7.3						
WHN	Wuhan	143.29	118	PKP	PKPab	05 33 44.8	-0.3
INK	Inuvik	145.54	321	PKPbc	PKPab	05 33 52.7	+0.2
	baz=92,slow=3.0						
INK				SKPbc	SKiKP	05 37 21.3	+1.0
	comp=Z,6.3nm,0.8s,baz=103,slow=6.5,SNR=6.0						
JOW	Kunigami	146.14	140	PKPbc	PKPab	05 33 56.0	-0.1
	comp=Z,58nm,0.8s,baz=237,slow=2.7,SNR=12						
DAWY	Dawson	146.47	312	ePKPbc	PKPbc	05 33 55.5	+0.3
DAWY				ePKPab	PKiKP	05 33 57.5	-0.4
NJ2	Nanjing	146.72	122	ePKPbc	PKPbc	05 33 56.3	-0.4
EGAK	Eagle	147.42	313	ePKPbc	PKPbc	05 33 57.7	+0.1
EGAK				ePKPab	PKPab	05 34 00.9	+0.9
HHC	Hu-ho-hao-te	149.69	103	ePKPbc	PKPdf	05 33 58.4	-1.2
HHC				SKS	SKSdf	05 40 58.5	+2.4
HHC				AMB	AMB		
	comp=Z,71nm,9.8s						
HHC				LR	LR		
	comp=Z,110nm,17.7s						
HHC				LR	LR		
	comp=Z,200nm,18.8s						
HHC				LR	LR		
	comp=Z,120nm,17.3s						
ILAR	Eielson Array	149.79	312	PKP	PKPdf	05 33 56.8	-2.0
	comp=Z,0.4nm,0.6s,baz=207,slow=1.8,SNR=8.5						
ILAR				PKPbc	PKiKP	05 34 04.2	-0.4
	comp=Z,39nm,0.9s,baz=126,slow=1.6,SNR=239						
ILAR				PP	PP	05 37 32.7	-6.8
	comp=Z,2.1nm,1.0s,baz=116,slow=2.1,SNR=5.4						
ILAR	Eielson Array	149.79	312	PKIKP	PKPdf	05 33 56.8	-2.0
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CBIJ	Chichi jima	150.18	162	PKPbc	PKPbc	05 34 04.6	-1.2
JCJ	Chichijima	150.18	162	PKPbc	PKPbc	05 34 04.6	-1.2
	baz=270,slow=20						
KDAK	Kodiak Island	150.42	297	ePKPbc	PKPbc	05 34 06.6	+1.2
KDAK				ePKPab	PKPab	05 34 13.6	+1.2
KDAK	Kodiak Island	150.42	297	i PKIKP	PKPbc	05 34 06.1	+0.7
ZAK	Zakamensk	150.81	80	ePKIKP	PKPbc	05 34 06.3	-0.4
ZAK				pmax	pmax		
	comp=Z,17nm,1.1s						
SONM	Songino Array	151.19	87	PKP	PKPdf	05 34 01.7	0.0
	comp=Z,1.1nm,0.8s,baz=232,slow=1.9,SNR=4.3						
SONM				PKPbc	PKPbc	05 34 07.8	0.0
	comp=Z,34nm,0.7s,baz=226,slow=3.1,SNR=123						
SONM				PKPab	PKPab	05 34 16.6	+0.4
	comp=Z,4.9nm,0.6s,baz=238,slow=2.8,SNR=5.5						
SONM				PP	PP	05 37 41.8	-6.2
	comp=Z,0.4nm,0.4s,baz=249,slow=4.0,SNR=3.4						
ULN	Ulaanbaatar	151.58	88	ePKPbc	PKPbc	05 34 08.5	-0.2
ULN				ePKPab	PKPab	05 34 17.3	-0.5
BJI	Beijing	151.60	109	PKPbc	PKPbc	05 34 08.8	+0.1
TLY	Talaya	151.65	78	PKPbc	PKPbc	05 34 08.8	+0.3
	comp=Z,10.0nm,0.8s,baz=257,slow=4.7,SNR=15						
TLY	Talaya	151.65	78	ePKPdf	PKPdf	05 34 01.3	-0.8
TLY				ePKPbc	PKPbc	05 34 08.9	+0.3
TLY				ePKPab	PKPab	05 34 18.7	+0.9
TLY	Talaya	151.65	78	ePKIKP	PKPbc	05 34 08.7	+0.3
TLY				pmax	pmax		
	comp=Z,14nm,0.9s						
JNU	Nakatsue	152.77	139	PKPbc	PKPbc	05 34 11.5	-0.2
	comp=Z,16nm,0.8s,baz=137,slow=19,SNR=8.6						
KSAR	Wonju Array Be	155.31	129	PKPab	PKPab	05 34 34.4	+0.8
KSAR	Wonju Array Be	155.31	129	PKP2	PKPab	05 34 34.4	+0.8
KSRS	Korea Array	155.34	129	PKPab	PKPab	05 34 34.4	+0.7
	comp=Z,2.9nm,0.8s,baz=235,slow=3.1,SNR=5.5						
MJAR	Matsushiro Arr	158.33	149	PKPab	PKPab	05 34 46.5	-0.2
	comp=Z,5.7nm,0.7s,baz=194,slow=5.6,SNR=9.5						
CN2	Changchun	159.11	115	ePKP	PKPdf	05 34 11.1	-1.3
CN2				epPKP	pPKPdf	05 34 37.0	-8.1
CN2				ePP	PP	05 38 33.0	+1.3
CN2				eSS	SS	05 58 28.8	+2.6
CN2				AMB	AMB		
	comp=Z,200nm,6.0s						
CN2				LR	LR		
	comp=Z,200nm,20.0s						
CN2				LR	LR		
	comp=Z,200nm,20.0s						
CN2				LR	LR		
	comp=Z,200nm,21.0s						
BOD	Bodaibo	159.40	69	ePKP2	PKPab	05 34 50.5	-0.3
BOD				pmax	pmax		
	comp=Z,7.0nm,1.1s						
TIXI	Tiksi	161.59	23	PKPab	PKPab	05 35 00.4	+0.4
	comp=Z,4.2nm,0.7s,baz=294,slow=10.0,SNR=3.1						
USRK	Ussuriysk Ar.	162.59	125	PKPab	PKPab	05 35 03.7	-1.3
	baz=101,slow=1.5						
KLR	Kul'dur	165.97	111	PKPab	PKPab	05 35 18.8	-1.1
	comp=Z,0.9nm,0.9s,baz=261,slow=4.7,SNR=18						

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*ATH **19** 05:15:58.9, 34.°58N×24.°01E, h14km±5km, ML3.6/4, Error ellipse: s-maj=5.7km s-min=2.3km az=34.0*

*THE **19** 05:15:59.1, 34.°59N×23.°98E, h13km±1km, ML3.8/3, Error ellipse: s-maj=1.8km s-min=1.2km az=355.0*

*CSEM **19** 05:16:00.0±0.7, 34.°62N×24.°08E, h10km, ML3.8, Error ellipse: s-maj=12.7km s-min=8.6km az=11.0*

ISC 19 05:16:02.0±1.8**, 34.°8N**±0.°1×**24.°11E**±0.°07**, h18**km±3km**, n22, σ0.s63**/37**, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVD	Gavdhos	0.08	345	P	Pg	05 16 05.4	-0.2
GVD				S	Sg	05 16 08.5	+0.5
GVD				AML	AML	05 16 08.8	
	comp=N,55823μm,0.3s						
GVD				AML	AML	05 16 09.2	
	comp=E,79180μm,0.3s						
GVD	Gavdhos	0.08	345	P	Pg	05 16 04.9	-0.7
GVD				S	Sg	05 16 08.7	+0.7
GVD	Gavdhos	0.08	345	P	Pg	05 16 04.9	-0.7
GVD				S	Sg	05 16 08.7	+0.7
GVDS	Gavdos	0.09	348	P	Pg	05 16 05.0	-0.6
GVDS				S	Sg	05 16 08.6	+0.6
GVDS	Gavdos	0.09	348	P	Pg	05 16 05.0	-0.6
GVDS				S	Sg	05 16 08.6	+0.6
SIVA	Sivas	0.63	66	P	Pb	05 16 13.8	-0.5
SIVA				S	Sn	05 16 26.0	+0.5
SIVA				AML	AML	05 16 36.4	
	comp=E,6366μm,0.6s						
SIVA				AML	AML	05 16 39.4	
	comp=N,3096μm,0.6s						
SIVA	Sivas	0.63	66	P	Pb	05 16 14.0	-0.3
SIVA				S	Sn	05 16 26.3	+0.8
SIVA	Sivas	0.63	66	P	Pb	05 16 14.0	-0.3
SIVA				S	Sn	05 16 25.5	0.0
VAM	Vamos	0.65	6	P	Pb	05 16 13.8	-0.9
VAM				S	Sn	05 16 26.8	+0.8
VAM				AML	AML	05 16 27.9	
	comp=E,3012μm,0.3s						
VAM				AML	AML	05 16 30.8	
	comp=N,3219μm,0.4s						
VAM	Vamos	0.65	6	P	Pb	05 16 14.5	-0.2
VAM	Vamos	0.65	6	P	Pb	05 16 14.5	-0.2
VAM				S	Sn	05 16 26.8	+0.8
PRNS	Prines Rethymn	0.68	28	P	Pb	05 16 14.6	-0.7
PRNS				S	Sn	05 16 27.2	+0.4
PRNS	Prines Rethymn	0.68	28	P	Pb	05 16 14.6	-0.7
PRNS				S	Sn	05 16 27.2	+0.4
IMMV	Iera Moni Meta	0.71	351	P	Pb	05 16 15.0	-0.7
IMMV				S	Sn	05 16 28.2	+0.7
IMMV				AML	AML	05 16 29.4	
	comp=E,15014μm,0.2s						
IMMV				AML	AML	05 16 29.5	
	comp=N,15032μm,0.2s						
IMMV	Iera Moni Meta	0.71	351	P	Pb	05 16 15.3	-0.4
IMMV				S	Sn	05 16 28.1	+0.6
IMMV	Iera Moni Meta	0.71	351	P	Pb	05 16 15.4	-0.3
IMMV				S	Sn	05 16 28.1	+0.6
LAST	Lasithi	1.19	70	P	Pn	05 16 23.8	+0.1
LAST	Lasithi	1.19	70	P	Pb	05 16 24.0	0.0
ANKY	Antikythira Is	1.29	329	P	Pb	05 16 26.1	+0.4
ANKY	Antikythira Is	1.29	329	P	Pb	05 16 25.8	+0.1
VLI	Veliai	2.17	334	P	Pb	05 16 40.0	-0.8
VLI	Veliai	2.17	334	P	Pb	05 16 39.4	-1.4

MEX 19 05:19:15.6±0.9**, 16.°76N**×**99.°69W, h14**km±4km**, MD4.0, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACP2	Acapulco	0.22	302	i P	Pg	05 19 19.8	-0.7
ACP2				i S	Sg	05 19 23.8	-0.1
CAIG	El Cayaco	0.62	298	eP	Pg	05 19 25.7	-2.1
CAIG				i S	Sg	05 19 34.3	-1.7
MEIG	Mezcala	1.16	3	eP	Pn	05 19 33.3	-4.2
MEIG				eS	Sb	05 19 47.0	-5.5
TLIG	Tlapa	1.34	53	eP	Pn	05 19 36.4	-3.6
TLIG				i S	Sb	05 19 53.3	-4.4
PNIG	Pinotepa	1.54	103	eP	Pn	05 19 39.0	-3.7
PNIG				i S	Sn	05 19 57.4	-5.2
PLIG	Platanillo	1.64	6	eP	Pn	05 19 41.0	-3.1
PLIG				eS	Sn	05 19 59.9	-5.0
ARIG	Puente Sto Nin	1.64	338	eP	Pn	05 19 41.3	-2.7
ARIG				i S	Sn	05 20 00.5	-4.4

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*ISCJB **19** 05:33:52.0±0.4, 37.°08N±0.°03×28.°55E±0.°03, h0km, Error ellipse: s-maj=3.9km s-min=3.0km az=22.5*

*ISK **19** 05:33:51.6, 37.°03N×28.°51E, h5km, ML1.9/12*

*DDA **19** 05:33:51.5, 37.°08N×28.°55E, h7km, Ml2.5, Suspected Mining explosion.*

*CSEM **19** 05:33:52.0±0.2, 37.°07N×28.°55E, h1km, ML1.9, Error ellipse: s-maj=4.5km s-min=3.4km az=33.0, Suspected Mining explosion.*

ISC 19 05:33:51.5±0.8**, 37.°14N**±0.°02×**28.°59E**±0.°02**, h0**km**, n41, σ1.s13**/58**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	Yerkesik	0.24	270	PG	Pg	05 33 56.8	+0.6
YER				SG	Sg	05 34 00.8	+1.4
YER	Yerkesik	0.24	270	ePg	Pg	05 33 56.8	+0.6
YER				eSg	Sg	05 34 00.8	+1.4
TURN	Turunc	0.26	178	PG	Pb	05 33 58.9	-0.2
TURN				SG	Sb	05 34 04.9	+0.7
TURN	Turunc	0.26	178	i P	Pb	05 33 58.6	-0.5
TURN	Turunc	0.26	178	P	Pb	05 33 58.6	-0.5
DALY	Dalyan (Mu˜la	0.32	171	PG	Pg	05 33 57.4	-0.3
DALY				SG	Sg	05 34 02.0	+0.1
DALY	Dalyan (Mu˜la	0.32	171	i P	Pg	05 33 56.8	-0.9
DALY	Dalyan (Mu˜la	0.32	171	P	Pg	05 33 56.8	-0.9
DALY	Dalyan (Mu˜la	0.32	171	ePg	Pg	05 33 57.4	-0.3
DALY				eSg	Sg	05 34 02.0	+0.1
TAVA	DENIZLI_Tavas	0.42	38	i P	Pb	05 34 01.1	-0.7
TAVA				i S	Sb	05 34 08.4	-0.4
TAVA	DENIZLI_Tavas	0.42	38	P	Pb	05 34 01.1	-0.7
TAVA				S	Sb	05 34 08.4	-0.4
MRSB	Marmaris-Mugla	0.53	217	PG	Pg	05 34 00.5	-1.0
MRSB	Marmaris-Mugla	0.53	217	ePg	Pg	05 34 00.5	-1.0
FETY	Fethiye	0.64	142	PG	Pg	05 34 04.1	+0.4
FETY	Fethiye	0.64	142	P	Pg	05 34 02.4	-1.3
FETY	Fethiye	0.64	142	ePg	Pg	05 34 04.1	+0.4
FETY				S	Sg	05 34 12.1	+0.1
AYDN	Tasoluk	0.77	313	i P	Pb	05 34 06.7	-1.1
AYDN				i S	Sb	05 34 17.8	-1.1
AYDN	Tasoluk	0.77	313	P	Pb	05 34 06.7	-1.1
AYDN				S	Sb	05 34 17.8	-1.1
GOLH	Golhisar	0.78	82	i P	Pg	05 34 02.8	-3.7
GOLH				i S	Sb	05 34 20.4	+1.2
DAT	Datca	0.91	244	PG	Pg	05 34 08.2	-0.7
DAT	Datca	0.91	244	i P	Pg	05 34 07.2	-1.6
DAT				i S	Sb	05 34 21.8	-1.1
DAT	Datca	0.91	244	P	Pg	05 34 07.2	-1.6
DAT	Datca	0.91	244	ePg	Pg	05 34 08.2	-0.7
DAT				S	Sb	05 34 21.8	-1.1
BDRM	Kayabasi	0.92	266	i P	Pg	05 34 08.7	-0.4
BDRM				i S	Sb	05 34 22.6	-0.5
BDRM	Kayabasi	0.92	266	P	Pg	05 34 08.7	-0.4
BDRM				S	Sb	05 34 22.6	-0.5
AYDB	Zeytinkoy-Aydi	0.98	326	PG	Pn	05 34 11.6	-1.0
AYDB	Zeytinkoy-Aydi	0.98	326	ePg	Pn	05 34 11.6	-1.0
ARG	Arkhangelos	0.99	202	PG	Pg	05 34 09.4	-1.1
ARG	Arkhangelos	0.99	202	ePg	Pg	05 34 09.4	-1.1
BODT	Bodrum	1.02	266	PG	Pb	05 34 11.2	-0.9
BODT	Bodrum	1.02	266	ePg	Pb	05 34 11.2	-0.9
ELL	Elmali	1.13	110	PN	Pn	05 34 14.8	+0.2
ELL	Elmali	1.13	110	ePn	Pn	05 34 14.8	+0.2
AKAS	Kas	1.22	138	PN	Pn	05 34 15.6	-0.3
AKAS	Kas	1.22	138	i P	Pb	05 34 15.3	-0.2
AKAS				i S	Sn	05 34 35.5	+2.4
AKAS	Kas	1.22	138	P	Pb	05 34 15.3	-0.2
AKAS	Kas	1.22	138	ePn	Pn	05 34 15.6	-0.3
AKAS				S	Sn	05 34 35.5	+2.4
GCAM	G?zelcaml?	1.22	298	PN	Pn	05 34 15.9	+0.2
GCAM	G?zelcaml?	1.22	298	ePn	Pn	05 34 15.9	+0.2
KULA	Kula-Manisa	1.38	2	PN	Pb	05 34 20.4	+2.2
KULA	Kula-Manisa	1.38	2	ePn	Pb	05 34 20.4	+2.2

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*IDC **19** 05:34:10.8±7.0, 49.°00N×155.°59E, h0km, mb3.5/3, mb1 3.7/4, mb1mx3.3/74, mbtmp3.4/4, Error ellipse: s-maj=183.4km s-min=48.8km az=90.0*

*MOS **19** 05:34:18.5±2.1, 49.°46N×157.°05E, h15km, mb4.1/1, Error ellipse: s-maj=34.1km s-min=5.4km az=81.4*

*KRSC **19** 05:34:18.5±2.5, 49.°46N×157.°05E, h15km±39km, ML4.2*

ISC 19 05:34:21.8±1.9**, 49.°5N**±0.°1×**156.°2E**±0.°1**, h54**km**, n46, σ1.s26**/59**, mb3.2**/3**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.22	356	eP	Pn	05 34 40.4	-2.1
SKR				eS	Sn	05 34 56.4	-1.6
SKR	Severo-Kuril's	1.22	356	ePN	Pn	05 34 40.4	-2.1
SKR				eS	Sn	05 34 56.3	-1.7
SKR				pmax	pmax		
	comp=Z,132nm,0.4s						
SKR				smax	smax		
	comp=N,426nm,0.2s						
SKR				smax	smax		
	comp=E,1μm,0.2s						
PAU	Pauzhetka	2.03	10	eP	Pn	05 34 52.7	-0.9
PAU				eS	Sn	05 35 17.0	-0.8
PAU	Pauzhetka	2.03	10	PN	Pn	05 34 52.7	-0.9
PAU				S	Sn	05 35 17.0	-0.8
KDTR	Khodutka, Kamc	2.62	26	eP	Pn	05 35 00.0	-1.6
KDTR				eS	Sn	05 35 30.3	-1.8
ASAK	Asacha	3.10	19	eP	Pn	05 35 08.4	+0.1
ASAK				eS	Sn	05 35 45.1	+1.0
ASAK	Asacha	3.10	19	PN	Pn	05 35 08.4	+0.1
ASAK				S	Sn	05 35 45.1	+1.0
MTVR	Mutnovka	3.26	21	eP	Pn	05 35 10.5	0.0
MTVR				eS	Sn	05 35 47.9	-0.2
MTVR	Mutnovka	3.26	21	PN	Pn	05 35 10.5	0.0
MTVR				S	Sn	05 35 47.9	-0.2
RUS	Russkaya	3.30	25	eP	Pn	05 35 10.0	-0.9
RUS				eS	Sn	05 35 46.9	-1.9
RUS	Russkaya	3.30	25	PN	Pn	05 35 10.0	-0.9
RUS				S	Sn	05 35 46.9	-1.9
KRMR	Karymshinskiy	3.57	19	eP	Pn	05 35 14.8	+0.2
KRMR				eS	Sn	05 35 57.0	+1.5
KRMR	Karymshinskiy	3.57	19	PN	Pn	05 35 14.8	+0.2
KRMR				S	Sn	05 35 57.0	+1.5
PETK	Petropavlovsk-	3.76	14	Pn	Pn	05 35 19.0	+1.8
	baz=178,slow=12						
PETK				Sn	Sn	05 36 10.5	+10
	baz=185,slow=16						
PET	Petropavlovsk	3.87	22	eS	Sn	05 36 03.6	+0.8
DALK	Dalny	3.90	23	eP	Pn	05 35 19.2	+0.1
DALK				eS	Sn	05 36 03.5	-0.1
DALK	Dalny	3.90	23	PN	Pn	05 35 19.2	+0.1
DALK				S	Sn	05 36 03.5	-0.1
UGLR	Uglovaya	4.08	22	eP	Pn	05 35 22.4	+0.7
UGLR	Uglovaya	4.08	22	PN	Pn	05 35 22.4	+0.7
AVH	Avacha	4.11	21	eP	Pn	05 35 23.8	+1.7
AVH	Avacha	4.11	21	PN	Pn	05 35 23.8	+1.7
KOK	Koryaka	4.11	20	eP	Pn	05 35 23.8	+1.6
KOK	Koryaka	4.11	20	PN	Pn	05 35 23.8	+1.6
SMAR	Somma	4.12	22	eP	Pn	05 35 23.4	+1.0
SMAR	Somma	4.12	22	PN	Pn	05 35 23.4	+1.0

SDLR	Sedlovina	4.16	22	*e*P	Pn	05 35 22.8	0.0
SDLR	Sedlovina	4.16	22	PN	Pn	05 35 22.8	0.0
KRX	Arik	4.18	20	*e*P	Pn	05 35 24.8	+1.7
KRX				*e*S	Sn	05 36 12.9	+2.3
KRX	Arik	4.18	20	PN	Pn	05 35 24.8	+1.7
KRX				S	Sn	05 36 12.9	+2.3
SPN	Mys Shipunski	4.34	32	*e*P	Pn	05 35 24.5	-0.7
SPN				*e*S	Sn	05 36 13.6	-0.8
SPN	Mys Shipunski	4.34	32	PN	Pn	05 35 24.5	-0.7
SPN				S	Sn	05 36 13.6	-0.8
GNL	Ganaly	4.36	13	*e*P	Pn	05 35 27.1	+1.5
GNL	Ganaly	4.36	13	PN	Pn	05 35 27.1	+1.5
MKZ	Mys Kozlova	6.12	32	*e*P	Pn	05 35 47.9	-1.6
MKZ	Mys Kozlova	6.12	32	PN	Pn	05 35 47.9	-1.6
KBTR	Krutoberegovo	7.83	28	*e*P	Pn	05 36 11.7	-1.3
KBTR	Krutoberegovo	7.83	28	PN	Pn	05 36 11.7	-1.3
H11N2	WAKE ISLAND Hy	30.87	160	T	T	06 13 21.0	
	baz=347,slow=76,SNR=12						
H11N1	WAKE ISLAND Hy	30.89	160	T	T	06 13 24.1	
	baz=347,slow=76,SNR=7.7						
H11N3	WAKE ISLAND Hy	30.89	160	T	T	06 13 21.9	
	baz=347,slow=76,SNR=19						
H11S1	WAKE ISLAND Hy	32.02	161	T	T	06 14 45.6	
	baz=347,slow=76,SNR=85						
H11S3	WAKE ISLAND Hy	32.03	161	T	T	06 14 47.2	
	baz=347,slow=76,SNR=103						
H11S2	WAKE ISLAND Hy	32.03	161	T	T	06 14 47.9	
	baz=347,slow=76,SNR=71						
ILAR	Eielson Array	33.12	41	P	P	05 40 52.3	0.0
	comp=E,0.3nm,0.7s,baz=255,slow=7.2,SNR=4.3						
INK	Inuvik	38.23	34	P	P	05 41 36.9	+1.0
	comp=E,1.8nm,1.2s,baz=281,slow=5.2,SNR=3.6						
TXAR	Lajitas Array	74.36	63	P	P	05 45 54.6	+0.8
	comp=E,0.1nm,0.4s,baz=296,slow=4.1,SNR=3.6						

IDC 19 05:37:35.3±8.6**,16°.34S**×**171°.71W,h0**^{km}**,mb3.9**/3**,mb1 4.3**/3**,mb1mx3.6**/48**,mbtmp3.9**/3**,MS3.4**/1**,Ms1 3.4**/1**,ms1mx2.5**/48**,Error ellipse: s-maj=377.4km s-min=35.7km az=139.0,Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPZ	Rata Peaks	30.97	205	LR	LR	05 55 51.7	
	comp=Z,74nm,21.4s,baz=184,slow=35						
WRA	Warramunga Arr	51.22	257	P	P	05 46 40.7	-0.4
	0.7nm,0.6s,baz=95,slow=6.9,SNR=9.0						
ASAR	Alice Springs	51.38	253	P	P	05 46 42.4	+0.1
	5.3nm,0.6s,baz=88,slow=8.2,SNR=64						
ILAR	Eielson Array	83.06	10	P	P	05 50 02.3	0.0
	0.3nm,0.7s,baz=189,slow=3.6,SNR=3.0						

WEL 19 06:03:33.4,45°S±2°×**16°8E**±°**,h78**^{km}±2^{km}**,ML3.6**/12**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DCZ	Deep Cove	0.47	212	P	Pn	06 03 47.1	+0.5
DCZ				S	Sn	06 03 56.9	+0.5
MSZ	Milford Sound	0.49	37	P	Pn	06 03 47.4	+0.5
MSZ				S	Sn	06 03 56.9	+0.2
MLZ	Mavora Lakes	0.52	125	P	Pn	06 03 47.9	+0.8
MLZ				S	Sn	06 03 58.3	+1.0
WHZ	Wether Hill Ro	0.88	160	P	Pn	06 03 51.8	+1.0
WHZ				S	Sn	06 04 05.0	+1.2
WKZ	Wanaka	1.10	78	P	Pn	06 03 54.6	+1.1
WKZ				S	Sn	06 04 09.2	+0.6
EAZ	Earnscleugh	1.28	98	P	Pn	06 03 57.0	+1.2
EAZ				S	Sn	06 04 13.2	+0.5
JCZ	Jackson Bay	1.35	43	P	Pn	06 03 56.6	-0.2
TUZ	Tuapeka	1.73	121	P	Pn	06 04 02.7	+1.1
TUZ				S	Sn	06 04 23.7	+0.6
APZ	The Paps	1.79	169	P	Pn	06 04 03.6	+1.2
APZ				S	Sn	06 04 26.0	+1.4
SYZ	Scrubby Hill	1.86	143	P	Pn	06 04 04.4	+1.1
SYZ				S	Sn	06 04 26.9	+0.9
LBZ	Lake Benmore	2.03	71	P	Pn	06 04 05.3	-0.3
ODZ	Otahua Downs	2.22	90	P	Pn	06 04 08.3	+0.2
FOZ	Fox Glacier	2.26	48	P	Pn	06 04 08.2	-0.4
HHSZ	Highcliff Hill	2.32	112	P	Pn	06 04 10.6	+1.1
RPZ	Rata Peaks	2.88	63	P	Pn	06 04 16.0	-1.1
WVZ	Waitaha Valley	3.06	51	P	Pn	06 04 18.5	-1.0
INZ	Inchbonnie	3.69	52	P	Pn	06 04 27.0	-1.0
MQZ	McQueen's Vall	3.93	72	P	Pn	06 04 30.1	-1.2
LTZ	Lake Taylor	4.13	58	P	Pn	06 04 32.0	-2.1
DSZ	Denniston Nort	4.56	45	P	Pn	06 04 39.5	-0.5
THZ	Tophouse	5.13	52	P	Pn	06 04 45.8	-2.0
QRZ	Quartz Range	5.62	43	P	Pn	06 04 53.4	-0.9
NNZ	Nelson	5.77	50	P	Pn	06 04 57.2	+0.9
PKE	Pukeiti	7.59	42	P	Pn	06 05 22.4	+1.1

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*IDC **19** 06:10:50.9±2.6, 39°.87N×140°.04E, h0^{km}, mb4.0/6, mb1 3.9/7, mb1mx3.6/64, mbtmp3.9/7, ML3.0/1, Error ellipse: s-maj=64.5km s-min=33.5km az=100.0*

*ISCJB **19** 06:11:02.2±0.5, 39°.02N±0°.06×140°.07E±0°.08, h150^{km}±4^{km}, mb3.8/6, Error ellipse: s-maj=11.8km s-min=8.6km az=38.5*

*JMA **19** 06:11:03.4±0.1, 38°.99N×140°.10E, h146^{km}±1^{km}, M3.1*

ISC 19 06:11:03.0±0.9**,38°.96N**±0°.07×**140°.09E**±0°.07**,h150**^{km}±6^{km}**, n27,**σ**0^{s}.84**/29**,mb3.9**/6**,Eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYYZ	Yamagatayuza	0.13	293	*e*S	Sn	06 11 39.2	+0.8
JYK	Kaneyama	0.22	102	P	Pn	06 11 23.1	-0.2
JYK				*e*S	Sn	06 11 37.9	-0.8
JYA	Atsumi	0.47	218	P	Pn	06 11 24.4	+0.2
JYA				S	Sn	06 11 40.0	-0.3
JTB	Tobi-shima	0.47	299	P	Pn	06 11 24.1	0.0
JTB				*e*S	Sn	06 11 39.8	-0.5
JRG	Rokugo	0.60	44	P	Pn	06 11 24.9	0.0
JRG				S	Sn	06 11 41.5	-0.1
JYS	Shirataka	0.74	181	P	Pn	06 11 26.0	+0.2
JYS				S	Sn	06 11 43.5	+0.4
JOU	Okura	0.75	143	P	Pn	06 11 26.1	+0.3
JAW	Awa shima	0.83	233	P	Pn	06 11 26.5	+0.1
JAW				*e*S	Sn	06 11 43.8	-0.4
JMK	Ichinoseki	0.88	90	P	Pn	06 11 26.8	+0.1
JIO	Ouri	1.11	117	P	Pn	06 11 28.3	-0.4
JIO				S	Sn	06 11 48.5	+0.3
JNS	Sasagawa	1.29	208	P	Pn	06 11 30.9	+0.4
JFT	Otama	1.46	172	P	Pn	06 11 32.6	+0.5
JANG	Nango	1.79	38	S	Sn	06 11 59.8	-0.9
MAT	Matsushiro	2.84	212	P	Pn	06 11 49.3	+0.9
MAT				*e*S	Sn	06 12 20.6	-2.8
MJAR	Matsushiro Arr	2.84	212	Pn	Pn	06 11 48.3	-0.1
	1.2nm,0.3s,baz=20,slow=15,SNR=13						
H11N2	WAKE ISLAND Hy	30.05	122	T	T	06 48 00.2	
	baz=317,slow=75,SNR=25						
H11N1	WAKE ISLAND Hy	30.05	122	T	T	06 48 05.6	
	baz=317,slow=75,SNR=28						
H11N3	WAKE ISLAND Hy	30.06	122	T	T	06 48 07.1	
	baz=317,slow=75,SNR=36						
H11S1	WAKE ISLAND Hy	30.79	124	T	T	06 48 56.9	
	baz=319,slow=76,SNR=7.6						
H11S3	WAKE ISLAND Hy	30.80	124	T	T	06 48 58.3	
	baz=319,slow=76,SNR=9.6						
H11S2	WAKE ISLAND Hy	30.81	124	T	T	06 49 04.8	
	baz=319,slow=76,SNR=7.1						
MKAR	Makanchi Array	42.23	300	P	P	06 18 41.3	+0.2
	0.3nm,0.4s,baz=87,slow=10,SNR=5.6						
KURBB	Kurchatov Arra	44.00	306	P	P	06 18 55.1	-0.1
	1.5nm,0.4s,baz=78,slow=7.9,SNR=21						
BVAR	Borovoye Array	48.51	311	P	P	06 19 30.8	+0.4
	1.3nm,0.5s,baz=64,slow=8.5,SNR=5.8						
ARCES	ARCESS Array B	61.82	339	P	P	06 21 04.8	-0.7
	2.4nm,1.0s,baz=64,slow=8.1,SNR=3.3						
FINES	FINESS Array B	66.62	331	P	P	06 21 38.9	+2.1
	1.5nm,0.8s,baz=74,slow=5.1,SNR=2.7						
HFS	Hagfors	71.90	335	P	P	06 22 09.5	+0.2
	1.2nm,0.7s,baz=41,slow=4.6,SNR=6.1						

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*IDC **19** 06:11:39.8±1.2, 5°.78S×148°.79E, h140^{km}±10^{km}, mb4.0/22, mb1 4.1/26, mb1mx4.0/50, mbtmp4.4/26, MS3.3/1, Ms1 3.3/1, ms1mx2.5/35, Error ellipse: s-maj=15.1km s-min=7.1km az=101.0*

*ISCJB **19** 06:11:40.5±0.3, 5°.79S±0°.03×148°.58E±0°.07, h163^{km}, mb4.4/39, Error ellipse: s-maj=10.0km s-min=4.6km az=10.3*

*NEIC **19** 06:11:40.1±0.6, 5°.78S×148°.70E, h145^{km}±6^{km}, mb4.9/15, Error ellipse: s-maj=8.0km s-min=5.1km az=102.0*

*BJI **19** 06:11:40.0, 5°.78S×148°.37E, h178^{km}, mb4.7/20, mB4.8/11*

ISC 19 06:11:40.9±0.4**,5°.71S**±0°.04×**148°.62E**±0°.06**,h163**^{km}**,n68,** σ**2^{s}.69**/77**,mb4.5**/39**,1D,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	3.84	67	*e*Pn	Pn	06 12 36.6	-3.0
MANU	Manus Island	3.85	341	*e*Pn	Pn	06 12 40.3	+0.7
PMG	Port Moresby	3.95	201	P	Pn	06 12 38.3	-2.6
	24nm,0.3s,baz=19,slow=6.8,SNR=24						
PMG				S	Sn	06 13 26.6	-1.1
	262nm,0.3s,baz=56,slow=18,SNR=15						
COEN	Coen	9.79	213	*e*Pn	Pn	06 13 56.2	-1.9
COEN				*e*Sn	Sn	06 15 43.8	-3.0
HNR	Honiara	11.83	109	P	P	06 14 30.0	-1.2
	56nm,0.3s,baz=227,slow=7.1,SNR=5.7						
HNR	Honiara	11.83	109	*e*Pn	Pn	06 14 22.4	-2.3
CTA	Charters Tower	14.48	189	P	Pn	06 14 58.3	-0.1
	0.2nm,0.3s,baz=6.8,slow=17,SNR=4.5						
CTAO	Charters Tower	14.48	189	*e*Pn	Pn	06 14 59.5	+1.1
MTN	Manton Dam	18.64	246	*e*P	P	06 15 46.6	+0.1
	27nm,0.6s						
GUMO	Guam	19.53	349	P	P	06 15 56.0	0.0
	4.0nm,0.3s,baz=139,slow=20,SNR=4.0						
EIDS	Eidsvold	19.69	173	*e*P	P	06 15 58.6	+0.9
	24nm,0.8s						
WRAB	Tennant Creek	19.81	223	*e*P	P	06 16 00.3	+1.3
	51nm,0.9s						
WB2	Warramunga Arr	19.81	223	*e*P	P	06 16 00.2	+1.1
WRA	Warramunga Arr	19.82	223	P	P	06 16 00.6	+1.4
	9.7nm,0.3s,baz=51,slow=11,SNR=216						
WRA				S	S	06 19 36.5	+2.9
	baz=42,slow=21,SNR=5.1						
WRA				ScP	ScP	06 23 36.0	+4.8
	0.0nm,0.3s,baz=40,slow=2.2,SNR=4.7						
AS01	Alice Springs	22.76	217	*e*P	P	06 16 30.1	+0.6
AS31	Alice Springs	22.79	217	*e*P	P	06 16 30.8	+1.0
	6.7nm,0.3s						
ASAR	Alice Springs	22.79	217	P	P	06 16 31.4	+1.7
	6.6nm,0.3s,baz=54,slow=8.6,SNR=141						
ASAR				S	S	06 20 32.7	+6.2
	2.9nm,1.1s,baz=30,slow=19,SNR=4.9						
ASAR				ScP	ScP	06 23 43.8	+5.2
	0.8nm,0.8s,baz=56,slow=3.5,SNR=5.3						
ASAR				LR	LR	06 24 31.1	
	comp=Z,86nm,21.5s,baz=40,slow=34						
DZM	Mont Dzumac	23.70	135	P	P	06 16 37.9	-0.2
	6.0nm,0.6s,baz=246,slow=12,SNR=8.7						
DZM	Mont Dzumac	23.70	135	*e*P	P	06 16 37.4	-0.8
	38nm,1.6s						
ARMA	Armidale	24.74	174	*e*P	P	06 16 48.8	+1.3
	36nm,1.4s						
TARA	Tarawa	25.27	75	*e*P	P	06 16 48.0	-4.4
	114nm,1.0s						
FITZ	Fitzroy Crossi	25.59	239	P	P	06 16 56.7	+1.5
	28nm,0.5s,baz=61,slow=7.6,SNR=110						
FITZ	Fitzroy Crossi	25.59	239	*e*P	P	06 16 55.9	+0.7
	30nm,0.6s						
MMRI	Maumere	26.33	262	*e*P	P	06 17 01.0	-0.9
	87nm,1.2s						
STKA	Stephens Creek	26.85	193	P	P	06 17 06.6	+0.2
	1.5nm,0.4s,baz=357,slow=13,SNR=8.9						
CAN	Canberra	29.47	179	*e*P	P	06 17 29.8	+0.1
	37nm,1.5s						
FORT	Forrest	31.55	215	*e*P	P	06 17 48.4	+0.4
	35nm,1.1s						
MBWA	Marble Bar	31.93	238	*e*P	P	06 17 52.2	+0.8
CBIJ	Chichi jima	33.20	349	P	P	06 18 05.4	+3.1
	80nm,1.3s						
JCJ	Chichijima	33.20	349	P	P	06 18 05.4	+3.1
	24nm,0.7s,baz=288,slow=20,SNR=2.4						
KKM	Kota Kinabalu	34.39	289	*e*P	P	06 18 08.6	-4.3
	50nm,1.1s						
JOW	Kunigami	37.87	330	P	P	06 18 45.1	+2.9
	5.9nm,0.4s,baz=134,slow=14,SNR=6.1						
JNU	Nakatsue	42.13	338	P	P	06 19 20.2	+2.9
	12nm,0.6s,baz=163,slow=1.5,SNR=12						
RPZ	Rata Peaks	42.70	156	P	P	06 19 22.0	+0.2
	3.9nm,0.4s,baz=90,slow=8.1,SNR=4.0						
MJAR	Matsushiro Arr	43.14	348	P	P	06 19 27.9	+2.5
	1.0nm,0.4s,baz=153,slow=11,SNR=4.1						
NJ2	Nanjing	47.05	325	*e*P	P	06 19 54.1	-2.1
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
KSRS	Korea Array	47.08	337	P	P	06 19 59.3	+3.0
	7.4nm,0.6s,baz=156,slow=8.5,SNR=20						
KSAR	Wonju Array Be	47.08	337	P	P	06 19 59.4	+3.0
GYA	Guiyang	51.71	310	*e*P	P	06 20 30.0	-1.8
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
USRK	Ussuriysk Ar.	51.89	345	P	P	06 20 35.3	+2.6
	4.6nm,0.6s,baz=192,slow=6.6						
CN2	Changchun	53.54	339	*e*P	P	06 20 42.0	-2.8
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KMI	Kunming	54.10	307	P	P	06 20 50.0	+0.5
KMI				pmax	pmax		
	comp=Z,5.0nm,0.5s						
CD2	Chengdu	56.24	313	*e*P	P	06 21 01.4	-3.1
KLR	Kul'dur	56.66	347	P	P	06 21 09.7	+2.7
	0.4nm,0.7s,baz=178,slow=5.0,SNR=14						
HHC	Hu-ho-hao-te	57.45	327	*e*P	P	06 21 10.8	-2.1
HHC				sP	sP	06 22 11.3	+2.7
HHC				S	S	06 28 54.3	-3.1
HHC				ScS	ScS	06 30 36.4	-10
HHC				SS	SS	06 32 42.1	-7.9
HHC				pmax	pmax		
	comp=Z,19nm,1.1s						
HHC				pmax	pmax		
	comp=Z,52nm,7.0s						
LZH	Lanzhou	59.05	318	*e*P	P	06 21 23.0	-1.2
LZH				pP	pP	06 22 03.3	+1.1
LZH				sP	sP	06 22 28.5	+8.5
LZH				*e*PP	PP	06 23 31.4	-5.3
LZH				pmax	pmax		
	comp=Z,18nm,1.1s						
LZH				pmax	pmax		
	comp=Z,100nm,5.4s						
LZH				LR	LR		
	comp=N,380nm,17.5s						
LZH				LR	LR		
	comp=E,390nm,17.7s						
LZH				LR	LR		
	comp=Z,440nm,18.2s						
PETK	Petropavlovsk-	59.10	6	P	P	06 21 26.7	+2.7
	6.7nm,0.6s,baz=143,slow=5.0						
SONM	Songino Array	64.94	330	P	P	06 22 06.0	+2.7
	0.5nm,0.3s,baz=165,slow=2.9,SNR=3.5						
SEY	Seymchan	68.51	2	P	P	06 22 27.5	+2.2
	1.7nm,0.8s,baz=181,slow=6.8,SNR=4.1						
VNDA	Vanda	72.11	177	P	P	06 22 47.9	+0.9
	0.9nm,0.7s,baz=335,slow=7.0,SNR=7.1						
WMQ	Urumqi	73.63	319	P	P	06 22 54.3	-2.4
WMQ				pP	pP	06 23 38.5	+2.3
WMQ				pmax	pmax		
	comp=Z,14nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,200nm,4.5s						
WMQ				LR	LR		
	comp=N,44nm,39.3s						
WMQ				LR	LR		
	comp=E,47nm,39.2s						
WMQ				LR	LR		
	comp=Z,52nm,15.7s						
MKAR	Makanchi Array	78.30	320	P	P	06 23 23.8	+0.7
	0.4nm,0.5s,baz=101,slow=8.7,SNR=6.7						
ZALV	Zalesovo Beam	79.63	327	P	P	06 23 30.6	+0.6
	0.7nm,0.3s,baz=120,slow=5.4,SNR=3.3						
KURK	Kurchatov	81.94	323	P	P	06 23 43.5	+1.1
KURBB	Kurchatov Arra	81.97	323	P	P	06 23 43.5	+1.0
	0.2nm,0.2s,baz=94,slow=2.4,SNR=3.1						
MAW	Mawson	83.13	203	P	P	06 23 49.3	+1.1
	1.5nm,0.6s,baz=42,slow=14,SNR=4.7						
QSPA	South Pole Qui	84.26	180	P	P	06 23 55.1	+0.9
	1.8nm,0.6s,baz=26,slow=11,SNR=8.9						
IL1	Eielson Array	84.59	23	*e*P	P	06 23 55.9	+0.3
ILAR	Eielson Array	84.59	23	P	P	06 23 55.9	+0.2
	2.4nm,0.7s,baz=252,slow=5.1,SNR=28						
EGAK	Eagle	86.85	24	*e*P	P	06 24 08.5	+1.8
	4.0nm,1.1s						
DAWY	Dawson	87.33	25	*e*P	P	06 24 11.6	+2.4
	6.4nm,1.3s						
SYO	Syowa Base	91.42	200⇓	*e*X	P	06 24 37.2	+9.1
PLCA	Paso Flores	121.47	146	PKP	PKPdf	06 30 15.7	+0.2
	2.2nm,1.0s,baz=218,slow=3.8,SNR=3.9						
GERES	GERESS Array B	122.57	326	PKP	PKPdf	06 30 18.3	+0.9
	0.5nm,0.5s,baz=77,slow=2.1,SNR=3.0						
EKA	Eskdalemuir Ar	125.60	341	PKP	PKPdf	06 30 22.8	0.0
	0.7nm,0.5s,baz=36,slow=2.6,SNR=3.5						
LPAZ	La Paz	137.58	122	PKP	PKPdf	06 30 48.4	+1.1
	0.6nm,0.5s,baz=192,slow=0.8,SNR=5.2						
TORD	Torodi Ar. Bea	146.57	285	PKPbc	PKPbc	06 31 04.5	+0.2
	baz=60,slow=3.3						
PTGA	Pitinga	150.75	102	PKPbc	PKPbc	06 31 16.9	+1.8
	3.2nm,0.3s,baz=280,slow=2.3,SNR=8.8						

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*ISCJB **19** 06:13:07.5±0.9, 31°.34S±0°.03×69°.43W±0°.05, h112^{km}±9^{km}, Error ellipse: s-maj=7.4km s-min=4.6km az=178.9*

*GUC **19** 06:13:07.4±0.7, 31°.35S×69°.78W, h134^{km}±15^{km}, ML2.8*

*SJA **19** 06:13:07.5±0.6, 31°.35S×69°.42W, h104^{km}±4^{km}, ML2.8, MW3.7*

ISC 19 06:13:08.3±1.8**,31°.35S**±0°.03×**69°.45W**±0°.06**, h106**^{km}±15^{km}**,n17,**σ**0^{s}.50**/29**,San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTLS	Leoncito	0.47	164	*i* P	Pn	06 13 24.6	-0.2
RTLS				*i* S	Sn	06 13 37.8	+0.6
RTLS				IAML		06 13 38.3	
	comp=Z,280nm,0.3s						
RTLL	Cerro Villicun	0.83	89	*i* P	Pn	06 13 26.9	-0.6
RTLL				*i* S	Sn	06 13 41.2	-0.8
AUSP	Uspallata	0.88	177	*i* P	Pn	06 13 28.2	0.0
AUSP				*i* S	Sn	06 13 44.0	+0.8
AMOG	MOGNA	0.92	64	*i* P	Pn	06 13 28.0	-0.3
RTCV	Cerro Valdivia	0.93	124	*i* P	Pn	06 13 28.2	-0.3
RTCV				*i* S	Sn	06 13 43.9	+0.2
AROD	Rodeo	1.18	359	*i* P	Pn	06 13 32.0	+0.6
ACDV	Cuesta del Vie	1.21	14	*i* P	Pn	06 13 31.8	+0.2
ACDV				*i* S	Sn	06 13 49.5	+0.4
ASAL	Salagasta	1.35	157	*i* P	Pn	06 13 33.0	-0.1
ARCO	CERRO ARCO	1.56	164	*i* P	Pn	06 13 35.9	+0.2
ARCO				*i* S	Sn	06 13 56.3	-0.2
ARCO				IAML		06 13 58.7	
	comp=Z,90nm,0.3s						
GO04	Tololo Observa	1.65	315	*e*P	Pn	06 13 36.8	-0.1
GO04				*e*S	Sn	06 13 58.4	-0.2
GO04				IAML		06 14 03.4	
	comp=E,252nm,0.6s						
TLL	Tololo Astrono	1.66	315	*e*P	Pn	06 13 36.9	-0.1
TLL				*i* S	Sn	06 13 59.2	+0.4
TLL				IAML		06 14 02.5	
	comp=N,130nm,0.7s						
AGUA	GUANDACOL	2.03	24	*i* P	Pn	06 13 42.0	+0.4
PEL	Peldehue	2.08	210	*e*P	Pn	06 13 41.5	-0.6
PEL				*e*S	Sn	06 14 07.6	-0.4
ROCH	El Roble	2.09	219	*e*P	Pn	06 13 41.8	-0.7
ROCH				*i* S	Sn	06 14 08.2	-0.4
ROCH				IAML		06 14 10.1	
	comp=N,72nm,0.2s						
FCH	Farellones	2.10	200	*e*P	Pn	06 13 43.1	+0.4
FCH				*e*S	Sn	06 14 10.2	+1.2
FCH				IAML		06 14 13.4	
	comp=E,38nm,0.5s						
LCO	Las Campanas	2.57	335	*e*P	Pn	06 13 48.3	-0.4
LCO				*i* S	Sn	06 14 19.4	-0.2
LCO				IAML		06 14 20.4	
	comp=E,40nm,0.4s						
LMEL	Las Melosas	2.58	194	*e*P	Pn	06 13 49.0	+0.3
LMEL				IAML		06 14 32.0	
	comp=N,31nm,0.2s						

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*IDC **19** 06:13:35.3±1.9, 33°.62N×141°.84E, h0^{km}, mb3.6/3, mb1 3.7/5, mb1mx3.4/64, mbtmp3.6/5, ML3.5/2, MS2.5/1, Ms1 2.5/1, ms1mx2.1/52, Error ellipse: s-maj=35.9km s-min=24.0km az=67.0*

*ISCJB **19** 06:13:38.0±1.0, 33°.63N±0°.06×141°.85E±0°.09, h41^{km}, mb3.7/3, Error ellipse: s-maj=11.3km s-min=9.1km az=6.0*

*JMA **19** 06:13:40.9±0.4, 33°.75N×141°.52E, h34^{km}, M3.1*

ISC 19 06:13:40.4±1.5**,33°.64N**±0°.07×**141°.8E**±0°.1**,h41**^{km}**,n16,** σ**1^{s}.19**/17**,mb3.7**/3**,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	1.21	327	P	Pn	06 13 59.0	-1.3
BSO3	Boso 3	1.56	318	P	Pn	06 14 04.7	-0.7
JHJ2	Mitsune	1.72	253	P	Pn	06 14 07.1	-0.7
JHJ	Hachijo jima 2	1.74	253	Pn	Pn	06 14 07.2	-0.9
	21nm,0.3s,baz=30,slow=16,SNR=11						
JHJ				Sn	Sn	06 14 31.0	+1.8
	21nm,0.3s,baz=45,slow=20,SNR=4.2						
JHCJ	Hachijojimakas	1.75	252	P	Pn	06 14 07.6	-0.6
JHCJ				S	Sn	06 14 27.6	-1.6
JMKN	Mikurajimanish	1.83	278	P	Pn	06 14 08.5	-0.9
JIM2	Oshima 3	2.22	300	P	Pn	06 14 13.0	-1.7
JKO	Kozu shima	2.26	285	P	Pn	06 14 14.0	-1.2
JOD2	Odawara 2	2.75	307	P	Pn	06 14 20.6	-1.3
JYN	Shimob	3.24	306	P	Pn	06 14 28.4	-0.4
MJAR	Matsushiro Arr	4.11	316	Pn	Pn	06 14 40.9	+0.2
	1.3nm,0.3s,baz=175,slow=8.9,SNR=5.8						
JCJ	Chichijima	6.53	177	Pn	Pn	06 15 13.0	-1.0
	1.8nm,0.3s,baz=270,slow=20,SNR=3.8						
JNU	Nakatsue	9.12	270	LR	LR	06 19 10.6	
	comp=Z,28nm,18.8s,baz=123,slow=36						
MKAR	Makanchi Array	46.23	305	P	P	06 22 02.5	+1.1
	0.6nm,0.7s,baz=89,slow=9.5,SNR=5.1						
KURBB	Kurchatov Arra	48.37	310	P	P	06 22 18.6	+0.6
	0.7nm,0.7s,baz=83,slow=7.7,SNR=6.6						
WRA	Warramunga Arr	53.75	189	P	P	06 22 59.1	+0.4
	0.6nm,0.8s,baz=6.6,slow=7.7,SNR=4.8						

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*NIED **19** 06:21:00, 39°.60N×143°.60E, h23^{km}, Mw3.9 Best double couple: $M_0$9.40000×10^{14} NP1:ϕ_s201.00000°, δ33.00000°, λ85.00000°. NP2:ϕ_s27.00000°, δ57.00000°, λ93.00000°.*

*ISCJB **19** 06:21:39.7±0.6, 39°.59N±0°.04×143°.62E±0°.06, h11^{km}, mb3.9/12, Error ellipse: s-maj=7.3km s-min=5.1km az=32.8*

*IDC **19** 06:21:39.6±1.2, 39°.57N×143°.59E, h0^{km}, mb4.0/11, mb1 4.0/14, mb1mx3.8/67, mbtmp4.0/14, ML3.4/2, MS3.2/3, Ms1 3.2/3, ms1mx2.5/63, Error ellipse: s-maj=27.1km s-min=20.3km az=101.0*

*JMA **19** 06:21:40.1±0.2, 39°.59N×143°.64E, h19^{km}, M4.1*

ISC 19 06:21:41.5±1.0**,39°.58N**±0°.06×**143°.52E**±0°.08**,h11**^{km}**,n33,** σ**0^{s}.77**/34**,mb4.0**/12**,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	1.32	270	P	Pn	06 22 05.0	-0.8
MIYJ				*e*S	Sn	06 22 22.8	-0.5
JTH	Tanohata	1.33	286	P	Pn	06 22 05.0	-0.9
JTH				*e*S	Sn	06 22 23.7	+0.1
OFUJ	Ofunato	1.52	251	P	Pn	06 22 08.1	-0.5
JOM	Ohasama	1.73	267	P	Pn	06 22 11.5	0.0
JANG	Nango	1.73	298	P	Pn	06 22 10.4	-1.1
JMK	Ichinoseki	1.90	251	P	Pn	06 22 13.5	-0.2
JIO	Ouri	2.04	237	P	Pn	06 22 14.8	-0.9
JTM	Tenmabayashi	2.23	303	P	Pn	06 22 18.5	+0.1
JTM				*e*S	Sn	06 22 46.3	+0.4
JYK	Kaneyama	2.54	256	P	Pn	06 22 23.0	+0.3
JNBK	Urakawa-nobuka	2.76	348	P	Pn	06 22 26.3	+0.7
JNBK				*e*S	Sn	06 22 58.6	-0.2
JKB	Kayabe	2.98	321	P	Pn	06 22 30.0	+1.4
JCH	Churui	3.03	358	P	Pn	06 22 29.5	+0.2
JCH				*e*S	Sn	06 23 03.4	-2.2
ASAJ	Asahikawa	4.58	352	Pn	Pn	06 22 50.6	-0.1
	1.2nm,0.3s,baz=143,slow=12,SNR=3.9						
ASAJ				Sn	Sn	06 23 43.5	-0.4
	3.0nm,0.3s,baz=338,slow=19,SNR=2.9						
MJAR	Matsushiro Arr	5.18	236	Pn	Pn	06 23 00.3	+1.4
	2.6nm,0.3s,baz=38,slow=12,SNR=39						
MJAR				LR	LR	06 25 11.8	
	comp=Z,128nm,18.1s,baz=10.0,slow=41						
MAT	Matsushiro	5.18	236	P	Pn	06 23 00.3	+1.4
USRK	Ussuriysk Ar.	9.76	302	Pn	Pn	06 24 01.9	+0.2
	baz=110,slow=16						
JNU	Nakatsue	12.06	242	LR	LR	06 29 38.2	
	comp=Z,152nm,18.6s,baz=132,slow=40						
KSRS	Korea Array	12.40	265	LR	LR	06 29 31.2	
	comp=Z,119nm,19.6s,baz=160,slow=38						
SEY	Seymchan	23.98	10	P	P	06 26 55.8	+0.1
	2.6nm,0.8s,baz=155,slow=5.0,SNR=6.0						
SONM	Songino Array	27.86	300	P	P	06 27 31.8	+0.7
	1.6nm,0.8s,baz=100,slow=7.3,SNR=6.9						
H11N2	WAKE ISLAND Hy	28.21	128	T	T	06 58 30.4	

	baz=320,slow=75						
H11N1	WAKE ISLAND Hy	28.22	128	T	T	06 58 31.2	
	baz=320,slow=75						
H11N3	WAKE ISLAND Hy	28.23	128	T	T	06 58 36.5	
	baz=320,slow=75						
ZALV	Zalesovo Beam	41.48	310	P	P	06 29 27.2	-0.9
	2.5nm,0.3s,baz=81,slow=8.9,SNR=5.0						
MKAR	Makanchi Array	44.22	300	P	P	06 29 50.6	+0.1
	1.5nm,0.7s,baz=81,slow=9.3,SNR=9.6						
KURBB	Kurchatov Arra	45.78	306	P	P	06 30 02.9	0.0
	4.6nm,0.8s,baz=81,slow=8.7,SNR=23						
ILAR	Eielson Array	46.45	34	P	P	06 30 08.1	0.0
	0.2nm,0.5s,baz=261,slow=6.0,SNR=4.2						
BVAR	Borovoye Array	50.12	311	P	P	06 30 37.0	+0.5
	1.7nm,0.5s,baz=35,slow=9.0,SNR=5.8						
AKTO	Aktyubinsk	58.22	311	P	P	06 31 35.4	-0.1
	0.6nm,0.3s,baz=77,slow=13,SNR=4.4						
WRA	Warramunga Arr	59.83	190	P	P	06 31 46.2	-0.8
	0.4nm,0.7s,baz=5.1,slow=6.8,SNR=2.7						
FINES	FINESS Array B	67.33	332	P	P	06 32 36.0	0.0
	1.2nm,0.9s,baz=94,slow=8.6,SNR=3.9						
HFS	Hagfors	72.44	336	P	P	06 33 08.1	+0.7
	1.6nm,0.6s,baz=27,slow=8.1,SNR=7.6						
NB2	NORSAR Subarra	72.47	338	P	P	06 33 08.0	+0.3
	comp=Z,0.4nm,0.6s,baz=40,slow=5.9						

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*NIED **19** 06:23:00,39˚60N×143˚60E,h23^{km},Mw3.8 Best double couple: M$_0$5.40000×10^{14} NP1:ϕ$_s$192.00000°,δ32.00000°, λ75.00000°. NP2:ϕ$_s$29.00000°,δ59.00000°,λ99.00000°.*

*IDC **19** 06:23:23.8±1.8,39˚53N×143˚78E,h0^{km},mb3.9/6, mb1 3.9/8,mb1mx3.6/66,mbtmp3.9/8,ML3.6/1,Error ellipse: s-maj=47.8km s-min=25.6km az=74.0*

*JMA **19** 06:23:25.1±0.3,39˚56N×143˚58E,h9^{km}±4^{km},M4.1*

*ISCJB **19** 06:23:26.0±1.8,39˚54N±0˚04×143˚67E±0˚07, h26^{km}±15^{km},mb3.9/6,Error ellipse: s-maj=10.2km s-min=5.9km az=30.3*

ISC 19 06:23:27.8±2.8**,39˚56N**±0˚06×**143˚6E**±0˚1**,h22**^{km}±29^{km}**, n28,**σ1^s**20**/31**,mb4.0**/6**,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIYJ	Miyakonagasawa	1.37	271	P	Pn	06 23 49.9	-1.7
MIYJ				*e*S	Sn	06 24 07.6	-1.4
JTH	Tanohata	1.38	286	P	Pn	06 23 50.0	-1.8
JTH				*e*S	Sn	06 24 08.6	-0.8
OFUJ	Ofunato	1.56	253	P	Pn	06 23 52.9	-1.4
JOM	Ohasama	1.78	268	P	Pn	06 23 56.5	-0.7
JANG	Nango	1.79	298	P	Pn	06 23 55.6	-1.8
JMK	Ichinoseki	1.94	252	P	Pn	06 23 58.9	-0.5
JMK				*e*S	Sn	06 24 22.9	-0.2
JIO	Ouri	2.06	238	P	Pn	06 23 59.9	-1.3
JIO				*e*S	Sn	06 24 25.9	-0.3
JTM	Tenmabayashi	2.29	303	P	Pn	06 24 04.1	-0.1
JTM				*e*S	Sn	06 24 33.4	+1.7
JRG	Rokugo	2.29	267	P	Pn	06 24 04.6	+0.3
JRG				S	Sn	06 24 33.5	+1.6
JYK	Kaneyama	2.59	257	P	Pn	06 24 08.3	-0.1
JOT	Ohata	2.66	314	P	Pn	06 24 09.3	0.0
JNBK	Urakawa-nobuka	2.79	347	P	Pn	06 24 11.7	+0.6
JNBK				*e*S	Sn	06 24 44.2	+0.1
JCH	Churui	3.06	357	P	Pn	06 24 14.8	0.0
JCH				*e*S	Sn	06 24 48.4	-2.3
MJAR	Matsushiro Arr	5.21	236	Pn	Pn	06 24 44.7	+0.3
	1.8nm,0.3s,baz=40,slow=12,SNR=6.1						
MAT	Matsushiro	5.21	236	P	Pn	06 24 45.1	+0.7
MAT				*e*S	Sn	06 25 45.7	+1.9
USRK	Ussuriysk Ar.	9.81	302	Pn	Pn	06 25 50.0	+2.5
	baz=99,slow=15						
SONM	Songino Array	27.91	300	P	P	06 29 16.7	+0.3
	0.6nm,0.7s,baz=86,slow=8.5,SNR=4.2						
H11N2	WAKE ISLAND Hy	28.16	128	T	T	07 00 17.5	
	baz=318,slow=74,SNR=3.5						
H11N1	WAKE ISLAND Hy	28.16	128	T	T	07 00 18.7	
	baz=318,slow=74,SNR=2.1						
H11N3	WAKE ISLAND Hy	28.17	128	T	T	07 00 20.6	
	baz=318,slow=74,SNR=4.2						
H11S1	WAKE ISLAND Hy	28.97	130	T	T	07 01 28.4	
	baz=337						
H11S3	WAKE ISLAND Hy	28.98	130	T	T	07 01 13.9	
	baz=337						
H11S2	WAKE ISLAND Hy	28.99	130	T	T	07 01 05.4	
	baz=337						
MKAR	Makanchi Array	44.28	300	P	P	06 31 35.6	0.0
	1.1nm,0.7s,baz=79,slow=9.9,SNR=5.0						
KURBB	Kurchatov Arra	45.84	306	P	P	06 31 48.1	+0.1
	2.8nm,0.7s,baz=81,slow=8.8,SNR=8.3						
BVAR	Borovoye Array	50.17	311	P	P	06 32 21.1	-0.4
	1.3nm,0.6s,baz=78,slow=13,SNR=4.4						
WRA	Warramunga Arr	59.82	190	P	P	06 33 30.9	-0.6
	0.6nm,0.8s,baz=7.9,slow=6.8,SNR=3.2						
HFS	Hagfors	72.48	336	P	P	06 34 53.0	+0.7
	1.2nm,0.7s,baz=22,slow=4.7,SNR=5.4						

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*TRN **19** 06:27:35.4,18˚97N×65˚18W,h162^{km},MD4.5*

*NEIC **19** 06:27:39.0±0.0,18˚46N×65˚34W,h114^{km},mb4.1/2, MD4.0(RSPR),After RSPR.*

NEIC Felt [II] at Naguabo and Guaynabo. Also felt at Aibonito, Barranquitas, Bayamon, Caguas, Canovanas, Carolina, Ceiba, Comerio, Corozal, Culebra, Fajardo, Naranjito, San Juan, Toa Alta and Utuado. Felt on Saint Thomas, Virgin Islands.

*IDC **19** 06:27:39.8±0.9,18˚33N×65˚37W,h107^{km}±8^{km},mb3.6/11, mb1 3.8/12,mb1mx3.5/56,mbtmp3.9/12,Error ellipse: s-maj=19.5km s-min=15.5km az=71.0*

*RSPR **19** 06:27:40.7,18˚58N×65˚37W,h99^{km},MD4.0/20*

ISC 19 06:27:40.3±0.6**,18˚37N**±0˚05×**65˚39W**±0˚03**,h106**^{km}±5^{km}**, n230,**σ1^s**99**/167**,mb3.8**/12**,28C-19D,Puerto Rico region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CUPR	Culebra, Puert	0.12	122	⇑*e*P	Pn	06 27 54.6	-0.5
CUPR				*e*S	Sn	06 28 05.5	-0.6
CUPR	Culebra, Puert	0.12	122	⇑*e*P	Pn	06 27 54.6	-0.5
MTP	Monte Pirata	0.31	209	⇓*e*P	Pn	06 27 56.0	+0.3
MTP	Monte Pirata	0.31	209	⇓*e*P	Pn	06 27 56.0	+0.3
MTP				*e*S	Sn	06 28 08.0	+0.8
STVI	Saint Thomas	0.42	93	⇓*e*P	Pn	06 27 55.5	-0.6
STVI	Saint Thomas	0.42	93	⇓*e*P	Pn	06 27 55.6	-0.6
STVI				*e*S	Sn	06 28 07.5	-0.6
STVI	Saint Thomas	0.42	93	⇓*e*P	Pn	06 27 55.5	-0.6
CBYP	Canovanas	0.45	257	⇓*e*P	Pn	06 27 56.2	-0.3
CBYP	Canovanas	0.45	257	⇓*e*P	Pn	06 27 56.2	-0.3
CBYP	Canovanas	0.45	257	*e*S	Sn	06 28 08.4	-0.2
CBYP	Canovanas	0.45	257	⇓*e*P	Pn	06 27 56.2	-0.3
HUMP	Col San Antoni	0.49	242	⇓*e*P	Pn	06 27 56.9	+0.2
HUMP				*e*S	Sn	06 28 09.6	+0.6
HUMP	Col San Antoni	0.49	242	⇓*e*P	Pn	06 27 56.9	+0.2
HUMP	Col San Antoni	0.49	242	⇓*e*P	Pn	06 27 56.9	+0.2
HUMP				*e*S	Sn	06 28 09.6	+0.6
TBVI	Tortola	0.74	86	⇑*i*P	Pn	06 27 57.6	-0.9
TBVI				*e*S	Sn	06 28 11.1	-1.2
TBVI	Tortola	0.74	86	*i* Pu	Pn	06 27 57.6	-0.9
SJG	San Juan	0.77	250	⇑*e*P	Pn	06 27 59.2	+0.3
SJG	San Juan	0.77	250	*e*S	Sn	06 28 13.5	+0.7
SJG	San Juan	0.77	250	P	Pn	06 27 59.2	+0.3
	471nm,0.3s,baz=240,slow=20,SNR=592						
SJG				S	Sn	06 28 13.6	+0.7
	1µm,0.3s,baz=336,slow=18,SNR=73						
SJG	San Juan	0.77	250	⇑*e*P	Pn	06 27 59.2	+0.3
SJG				*e*S	Sn	06 28 13.5	+0.7
SJG				*e*Sn	Sn	06 28 13.7	+0.8
CDVI	St. Croix	0.86	136	⇑*e*P	Pn	06 27 59.2	-0.5
CDVI	St. Croix	0.86	136	⇑*e*P	Pn	06 27 59.2	-0.5
CDVI				*e*S	Sn	06 28 13.8	-0.5
ABVI	Anegada Island	1.06	70	⇓*e*P	Pn	06 28 01.7	-0.1
ABV	Anegada	1.07	70	⇓*e*P	Pn	06 28 01.7	-0.2
ABV	Anegada	1.07	70	*e*S	Sn	06 28 17.8	-0.4
EMPR	Esperanza - Ma	1.09	276	⇑*e*P	Pn	06 28 02.4	+0.3
EMPR	Esperanza - Ma	1.09	276	⇑*e*P	Pn	06 28 02.4	+0.3
EMPR				*e*S	Sn	06 28 18.8	+0.2
CELP	Cerrillos	1.17	255	⇓*i*P	Pn	06 28 03.7	+0.7
CELP	Cerrillos	1.17	255	⇓*i*P	Pn	06 28 03.7	+0.7
ICMP	Isla Caja de M	1.18	246	⇓*e*P	Pn	06 28 03.9	+0.7
ICMP	Isla Caja de M	1.18	246	⇓*e*P	Pn	06 28 03.9	+0.7
ICMP				*e*S	Sn	06 28 22.4	+2.0
OBIP	Obispado Ponce	1.20	254	⇑*e*P	Pn	06 28 03.8	+0.4
OBIP	Obispado Ponce	1.20	254	⇑*e*P	Pn	06 28 03.8	+0.4
OBIP				*e*S	Sn	06 28 22.6	+1.8
AOPR	Arecibo Observ	1.29	269	⇑*e*P	Pn	06 28 04.5	0.0
AOPR				*e*S	Sn	06 28 22.8	0.0
AOPR	Arecibo Observ	1.29	269	⇑*e*P	Pn	06 28 04.5	0.0
AOPR	Arecibo Observ	1.29	269	⇑*e*P	Pn	06 28 04.5	0.0
GBPR	Guanica, Bosqu	1.47	255	*e*S	Sn	06 28 27.4	+1.0
GBPR	Guanica, Bosqu	1.47	255	⇑*e*P	Pn	06 28 07.5	+1.0
GBPR	Guanica, Bosqu	1.47	255	⇑*e*P	Pn	06 28 07.5	+1.0
GBPR				*e*S	Sn	06 28 27.4	+1.0
LSP	Las Mesas	1.62	263	*e*S	Sn	06 28 30.7	+0.9
LSP	Las Mesas	1.62	263	⇑*e*P	Pn	06 28 08.8	+0.4
LSP	Las Mesas	1.62	263	⇑*e*P	Pn	06 28 08.8	+0.4
LSP				*e*S	Sn	06 28 30.7	+0.9
AGPR	Aguadilla, PR	1.64	274	*e*S	Sn	06 28 29.6	-0.4
AGPR	Aguadilla, PR	1.64	274	⇑*e*P	Pn	06 28 08.5	-0.1
AGPR	Aguadilla, PR	1.64	274	⇑*e*P	Pn	06 28 08.5	-0.1
AGPR				*e*S	Sn	06 28 29.6	-0.4
AGP	Aguadilla	1.66	271	*e*Pn	Pn	06 28 08.5	-0.3
MPR	Mayaguez	1.67	265	⇑*e*P	Pn	06 28 09.2	+0.2
MPR				*e*S	Sn	06 28 31.3	+0.6
MPR	Mayaguez	1.67	265	⇑*e*P	Pn	06 28 09.2	+0.2
CRPR	Cabo Rojo, PR	1.67	258	⇑*e*P	Pn	06 28 09.6	+0.6
CRPR	Cabo Rojo, PR	1.67	258	⇑*e*P	Pn	06 28 09.6	+0.6
CRPR				*e*S	Sn	06 28 31.9	+1.1
IDE	Isla Desecheo	1.98	271	⇓*e*P	Pn	06 28 12.7	-0.1
IDE	Isla Desecheo	1.98	271	*e*S	Sn	06 28 37.6	-0.1
IDE	Isla Desecheo	1.98	271	⇓*e*P	Pn	06 28 12.7	-0.1
IDE				*e*S	Sn	06 28 37.6	-0.1
IMPR	Mona Island, P	2.43	263	⇑*e*P	Pn	06 28 19.5	+0.8
IMPR	Mona Island, P	2.43	263	*e*S	Sn	06 28 49.0	+0.8
NVRH	Round Hill, Ne	2.91	114	*e*P	Pn	06 28 25.3	+0.3
NVRH				*e*S	Sn	06 29 01.2	+1.7
NEV	Hard Times	2.96	114	*e*P	Pn	06 28 25.9	+0.3
NEV	Hard Times	2.96	114	*e*P	Pn	06 28 25.9	+0.3
NEV				*e*S	Sn	06 29 02.2	+1.6
MBWH		3.46	117	⇑*i*P	Pn	06 28 31.8	-0.6
MBWH				*e*S	Sn	06 29 11.1	-1.5
MLYT	Lee’s Yard	3.47	118	*e*P	Pn	06 28 31.9	-0.5
MLYT				*e*S	Sn	06 29 13.6	+0.8
ANWB	Willy Bob	3.50	101	*e*P	Pn	06 28 30.4	-2.4
ANWB				*e*S	Sn	06 29 09.7	-3.8
BPA	Boggy Peak	3.62	111	*e*P	Pn	06 28 34.1	-0.3
BPA	Boggy Peak	3.62	111	*e*P	Pn	06 28 33.4	-1.1
BPA				*e*S	Sn	06 29 14.8	-1.6
DR12	Loma Pena Alta	3.81	277	⇑*e*P	Pn	06 28 37.0	-0.1
DR12	Loma Pena Alta	3.81	277	⇑*e*P	Pn	06 28 37.0	-0.1
GDHS	Morne Mazeau,	4.04	121	*e*P	Pn	06 28 39.6	-0.6
LZG	Guadaloupe-1	4.11	122	⇑*i*P	Pn	06 28 40.8	-0.2
TBG	Guadaloupe-3	4.37	124	*e*P	Pn	06 28 43.9	-0.7
MGG	Marie-Galante	4.60	121	*e*P	Pn	06 28 47.7	+0.1
MGG	Marie-Galante	4.60	121	*e*P	Pn	06 28 47.7	+0.1
H05N1	Guadeloupe/Mar	4.62	116	P	Pn	06 28 46.2	-1.7
	SNR=44						
MDPO	Dominica; Chan	4.69	126	*e*P	Pn	06 28 48.6	-0.2
BBL	Barber’s Block	4.70	126	*e*P	Pn	06 28 48.6	-0.5
BBL	Barber’s Block	4.70	126	*e*P	Pn	06 28 48.6	-0.5
BANI	BANI	4.72	271	*e*Pn	Pn	06 28 51.1	+1.7
MDN	Morne-Daniel	4.89	128	*e*P	Pn	06 28 52.3	+0.8
MDN	Morne-Daniel	4.89	128	*e*P	Pn	06 28 52.3	+0.8
DBCT	Belle View Cho	4.95	128	*e*P	Pn	06 28 53.2	+0.7
DBCT	Belle View Cho	4.95	128	*e*P	Pn	06 28 53.2	+0.7
DSHT	Scott’s Head	4.97	129	*e*P	Pn	06 28 53.4	+0.7
DSHT	Scott’s Head	4.97	129	*e*P	Pn	06 28 53.4	+0.7
FDF	Fort de France	5.44	131	*e*P	Pn	06 28 58.3	-0.9
FDF	Fort de France	5.44	131	*e*P	Pn	06 28 58.3	-0.9
H05S1	Guadeloupe/Mar	5.87	131	P	Pn	06 29 05.6	+0.7
	SNR=29						
GRTK	Grand Turk	6.24	301	*e*Pn	Pn	06 29 07.3	-2.5
	142nm,0.3s						
GRTK				*e*Sn	Sn	06 30 12.4	-7.3
SVV	Soufriere Volc	6.43	141	*e*P	Pn	06 29 12.3	-0.2
SVV	Soufriere Volc	6.43	141	*e*P	Pn	06 29 12.3	-0.2
SVB	Belmont	6.45	141	*e*Pn	Pn	06 29 12.1	-0.6
SVB	Belmont	6.45	141	*e*P	Pn	06 29 13.0	+0.2
SVCV	St. Vincent, C	6.51	141	*e*P	Pn	06 29 13.3	-0.3
FCV	Fort Charlotte	6.54	142	*e*P	Pn	06 29 13.7	-0.4
FCV	Fort Charlotte	6.54	142	*e*P	Pn	06 29 14.6	+0.6
GRGR	Grenville	7.18	149	*e*P	Pn	06 29 22.9	+0.3
GRGR	Grenville	7.18	149	*e*P	Pn	06 29 22.9	+0.3
PCRV	Puerto La Cruz	8.18	175	P	Pn	06 29 35.8	-0.5
	0.4nm,0.3s,baz=94,slow=16,SNR=3.8						
PCRV				S	Sn	06 31 01.1	-6.0
	1.0nm,0.3s,baz=129,slow=14,SNR=3.8						
TOSP	Speyside	8.46	146	*e*P	Pn	06 29 42.2	+2.2
URIC	Uribia, Colomb	9.20	225	*e*P	Sn	06 31 23.7	-8.1
GTBY	Guantanamo Bay	9.32	281	*e*Pn	Pn	06 29 46.7	-5.0
GTBY				*e*Sn	Sn	06 31 26.2	-8.4
OCAC	Ocana	12.68	218	*e*P	Pn	06 30 37.9	+0.8
PAMC	Pamplona, Colo	13.07	214	*e*P	Pn	06 30 43.9	+1.4
BRRC	Barranca, Sant	13.82	217	*e*P	Pn	06 30 51.2	-0.6
BARC	Barichara	13.96	214	*e*P	P	06 30 56.5	-1.8
ZARC	Zaragoza, Cauc	14.21	222	*e*P	Pn	06 30 56.5	-0.2
RUSC	La Rusia	14.50	212	*e*P	Pn	06 30 59.8	-1.1
PTBC	PUERTO BERRIO,	14.71	218	*e*P	Pn	06 31 05.1	+2.0
HELC	Santa Helena	15.63	221	*e*Pn	P	06 31 16.5	-0.5
	17nm,1.0s						
HELC	Santa Helena	15.63	221	*e*P	Pn	06 31 15.8	+0.7
ROSC	El Rosal	16.03	214	P	P	06 31 24.1	+2.6
	1.4nm,0.3s,baz=355,slow=22,SNR=7.3						
ROSC	El Rosal	16.03	214	*e*Pn	P	06 31 24.0	+2.5
	6.1nm,0.7s						
060Z	West Palm Beac	16.13	302	P	P	06 31 21.7	-0.4
	baz=116						
061Z	Ochoppi	16.19	300	P	P	06 31 22.6	-0.2
	baz=114						
060A	Indiantown	16.27	305	P	Pn	06 31 22.2	-0.3
	baz=119						
859A	Kempfer Cattle	17.19	307	P	Pn	06 31 36.6	+2.8
	baz=121						
858A	St. Cloud	17.62	307	P	Pn	06 31 42.8	+3.7
	baz=120						
DWPF	Disney Wildern	17.62	306	P	Pn	06 31 43.0	+3.9
	baz=120						
YOTC	Yotoco, Valle	17.87	218	*e*P	P	06 31 39.7	-1.8
658A	Bunnell	18.18	310	P	Pn	06 31 48.2	+2.4
	baz=124						
757A	Oxford	18.53	308	P	Pn	06 31 53.3	+3.4
	baz=121						
657A	Interlachen	18.72	310	P	Pn	06 31 57.5	+5.4
	baz=123						
557A	Orange Park	18.85	311	P	Pn	06 31 58.3	+4.5
	baz=124						
457A	Yulee	19.08	313	P	Pn	06 32 02.0	+5.6
	baz=126						
656A	Willston	19.10	308	P	Pn	06 32 02.6	+6.0
	baz=121						
556A	Lake Butler	19.34	310	P	Pn	06 32 05.7	+6.3
	baz=123						
456A	Hilliard	19.46	312	P	Pn	06 32 07.6	+6.7
	baz=125						
357A	Townsend	19.51	315	P	Pn	06 32 07.7	+6.3
	baz=128						
257A	Skidaway Islan	19.55	317	P	Pn	06 32 09.8	+7.9
	baz=130						
655A	Horseshoe Beac	19.71	308	P	Pn	06 32 11.4	+7.7
	baz=120						
NHSC	New Hope	19.78	321	P	pP	06 32 14.6	-7.4
	baz=134,SNR=5.5						
555A	McAlpin	19.81	309	P	pP	06 32 11.7	-11
	baz=122						
356A	Blackshear	19.89	314	P	pP	06 32 13.4	-10
	baz=126						
256A	Glennville	20.12	315	P	pP	06 32 16.8	-9.0
	baz=128						
455A	Stateville	20.19	311	P	pP	06 32 18.2	-8.3
	baz=123						
156A	Sylvania	20.30	318	P	pP	06 32 19.9	-7.8
	baz=130						
355A	Pearson	20.40	313	P	pP	06 32 20.8	-8.1
	baz=125						
255A	Hazlehurst	20.49	314	P	pP	06 32 21.7	-8.0
	baz=127,SNR=5.8						
454A	Quitman	20.61	310	P	pP	06 32 23.2	-7.9
	baz=122						
155A	Kite	20.91	316	P	pP	06 32 27.7	-6.7
	baz=128,SNR=8.2						
254A	Abbeville	21.06	313	P	pP	06 32 29.2	-6.8
	baz=126,SNR=15						
Z55A	Blythe	21.07	318	P	pP	06 32 30.5	-5.7
	baz=130,SNR=20						
154A	Montrose	21.33	315	P	pP	06 32 33.1	-5.8
	baz=127						
Z54A	Sparta	21.54	317	P	pP	06 32 36.7	-4.5
	baz=129						
253A	Americus	21.70	312	P	pP	06 32 37.6	-5.5
	baz=124						
Y54A	Tignall	21.84	318	P	pP	06 32 40.7	-3.8
	baz=130,SNR=53						
KMSC	Kings Mountain	21.89	323	P	pP	06 32 43.9	-1.1
	baz=136,SNR=7.6						
Z53A	Monticello	22.04	316	P	pP	06 32 43.0	-3.7
	baz=128,SNR=19						
GOGA	Godfrey	22.05	316	P	pP	06 32 43.1	-3.7
	baz=128,SNR=43						
CBN	Corbin Frederi	22.36	335	P	pP	06 32 50.0	-0.1
	baz=149						
Y53A	Monroe	22.41	317	P	pP	06 32 48.9	-1.7
	baz=129						
152A	Waverly Hall	22.46	313	P	pP	06 32 49.3	-1.9
	baz=124						
251A	Midway	22.63	311	P	pP	06 32 50.7	-2.4
	baz=122						
X53A	Estanollee	22.64	319	P	pP	06 32 52.4	-0.8
	baz=130,SNR=27						
Y52A	Lilburn	22.72	316	P	pP	06 32 52.5	-1.6
	baz=128,SNR=28						
BLA	Blacksburg	22.94	328	P	pP	06 32 59.0	+2.6
	baz=141						
W53A	Cullowhee	23.00	320	P	pP	06 32 58.0	+0.9
	baz=132,SNR=18						
X52A	Dahlonega	23.08	318	P	pP	06 32 57.8	-0.1
	baz=130,SNR=16						
V53A	Saluda	23.12	322	P	pP	06 33 00.2	+1.8
	baz=134,SNR=53						
250A	Grady	23.19	310	P	pP	06 32 59.1	0.0
	baz=121						
150A	Eclectic	23.34	311	P	pP	06 33 01.1	+0.3
	baz=122						
Y51A	Rockmart	23.41	315	P	pP	06 33 02.8	+1.4
	baz=126						
W52A	Murphy	23.41	319	P	pP	06 33 03.6	+2.1
	baz=130						
U53A	Fall Branch	23.47	323	P	pP	06 33 05.5	+3.3
	baz=135,SNR=9.1						
Z50A	Ashland	23.62	313	P	pP	06 33 05.2	+1.5
	baz=124						
X51A	Calhoun	23.67	317	P	pP	06 33 06.6	+2.4
	baz=128						
V52A	Sevierville	23.71	321	P	pP	06 33 07.8	+3.2
	baz=132,SNR=23						
249A	Camden	23.82	309	P	pP	06 33 07.4	+1.6
	baz=119						
Y50A	Piedmont	23.86	314	P	pP	06 33 07.5	+1.3
	baz=125						
149A	Jones	23.89	310	P	pP	06 33 08.1	+1.6
	baz=121						
U52A	Thorn Hill	23.95	322	P	pP	06 33 11.8	+4.6
	baz=134,SNR=9.2						
W51A	Cleveland	23.98	318	P	pP	06 33 11.2	+3.7
	baz=129,SNR=9.1						
Z49A	Columbiana	24.02	312	P	pP	06 33 09.7	+1.9
	baz=123						
X50B	Fort Payne	24.13	316	P	pP	06 33 12.0	+3.0
	baz=126,SNR=12						
V51A	Loudon	24.14	320	P	pP	06 33 13.1	+4.1
	baz=131,SNR=10						
TZTN	Tazewell	24.16	322	P	pP	06 33 14.0	+4.7
	baz=134,SNR=31						
T52A	Hallie	24.23	324	P	pP	06 33 16.5	+6.5
	baz=136						
LRAL	Lakeview Retre	24.27	311	P	pP	06 33 13.1	+2.8
	baz=122						
Y49A	Blount Mountai	24.30	314	P	pP	06 33 13.9	+3.2
	baz=124						
U51A	La Follette	24.32	321	P	pP	06 33 16.5	+5.6
	baz=132,SNR=18						
W50A	Signal Mountai	24.36	317	P	pP	06 33 14.3	+3.0
	baz=128						
V50A	Pikevile	24.52	319	P	pP	06 33 18.1	+5.2
	baz=129,SNR=17						
X49A	Woodville	24.61	315	P	pP	06 33 18.2	+4.4
	baz=125,SNR=11						
T51A	Gray	24.68	322	P	pP	06 33 20.9	+6.5
	baz=134,SNR=14						
S52A	Salyersville	24.69	325	P	pP	06 33 23.0	+8.4
	baz=136						
U50A	Jamestown	24.84	320	P	pP	06 33 22.6	+6.5
	baz=131,SNR=12						
W49A	Belvidere	24.93	316	P	pP	06 33 22.3	+5.4
	baz=126,SNR=11						
S51A	Beattyville	24.95	324	P	pP	06 33 25.8	+8.8
	baz=135						
X48A	Hartselle	25.07	314	P	pP	06 33 23.0	+4.9
	baz=124						
V49A	McMinnville	25.09	318	P	pP	06 33 23.9	+5.6
	baz=128,SNR=7.3						
T50A	Nancy	25.24	321	P	pP	06 33 28.8	+9.1
	baz=132,SNR=10.0						
W48A	Pulaski	25.38	315	P	pP	06 33 27.9	+6.9
	baz=126						
R51A	Hillsboro	25.42	325	P	pP	06 33 33.1	+12
	baz=136,SNR=6.1						
S50A	Richmond	25.43	323	P	pP	06 33 32.0	+11
	baz=134						
U49A	Red Boiling Sp	25.48	319	P	pP	06 33 31.1	+9.3
	baz=130,SNR=9.7						
T49A	Edmonton	25.71	321	P	pP	06 33 35.0	+11
	baz=131						
R50A	Paris	25.81	324	P	pP	06 33 36.9	+12
	baz=135						
Q51A	Peebles	25.82	327	P	pP	06 33 38.2	+13
	baz=138,SNR=18						
W47A	Westpoint	25.89	315	P	pP	06 33 35.8	+10
	baz=125						
S49A	Springfield	26.02	322	P	pP	06 33 38.8	+12
	baz=132						
Q50A	Georgetown	26.02	325	P	pP	06 33 40.1	+13
	baz=136						
M54A	Oil Creek Stat	26.09	335	P	pP	06 33 42.4	+15
	baz=148						
V47A	Nunnelly	26.17	316	P	pP	06 33 38.5	+10
	baz=126,SNR=5.6						
T48A	Bowling Green	26.24	320	P	pP	06 33 42.1	+13
	baz=130						
R49A	Shelbyville	26.30	323	P	pP	06 33 42.3	+13
	baz=133						
S48A	Wiedeman Farm,	26.39	321	P	pP	06 33 42.5	+12
	baz=131,SNR=10						
U47A	Clarksville	26.39	317	P	pP	06 33 42.8	+13
	baz=127						
P50A	Jamestown	26.49	327	P	pP	06 33 47.0	+16
	baz=138,SNR=7.6						
244A	Avery, Jackson	26.54	306	P	pP	06 33 42.9	+11
	baz=115						
WVT	Waverly	26.55	316	P	pP	06 33 42.9	+11
	baz=126						
V46A	Holladay	26.55	315	P	pP	06 33 42.9	+11
	baz=125						
T47A	Sharon Grove	26.61	319	P	pP	06 33 45.4	+13
	baz=128						
Q49A	Aurora	26.64	325	P	pP	06 33 47.0	+15
	baz=135						
543A	St. Martinvill	26.73	301	P	pP	06 33 47.3	+14
	baz=110						
R48A	Northridge Ran	26.77	322	P	pP	06 33 48.6	+15
	baz=132						
O50A	Cable	26.80	328	P	pP	06 33 50.6	+17
	baz=139						
S47A	Hartford	26.84	320	P	pP	06 33 47.5	+13
	baz=130						
U46A	Springville	26.92	316	P	pP	06 33 47.0	+12
	baz=126						
P49A	Miami Univ. Ec	26.92	326	P	pP	06 33 51.8	+17
	baz=136						
W45A	Hickory Valley	26.93	313	P	pP	06 33 45.9	+11
	baz=122						
NNA	Nana	32.21	201	P	P	06 33 57.5	-1.1
	5.1nm,0.4s,baz=324,slow=14,SNR=4.2						
LPAZ	La Paz	34.55	185	P	P	06 34 18.3	-1.2
	1.0nm,0.8s,baz=149,slow=3.4,SNR=6.0						
TXAR	Lajitas Array	36.52	295	P	P	06 34 36.0	+0.3
	0.4nm,0.5s,baz=115,slow=7.6,SNR=9.4						
TXAR				PcP	PcP	06 36 58.1	+0.8
	0.2nm,0.6s,baz=107,slow=5.8,SNR=4.3						
ULM	Lac du Bonnet	40.04	330	P	P	06 35 03.4	-1.4
	2.3nm,0.6s,baz=115,slow=7.7,SNR=3.4						
PDAR	Pinedale Array	44.47	313	P	P	06 35 40.9	-0.3
	0.1nm,0.4s,baz=114,slow=9.0,SNR=2.6						
PDAR				PcP	PcP	06 37 22.1	-0.9
	0.5nm,0.6s,baz=98,slow=5.1,SNR=5.6						
YKA	Yellowknife Ar	55.56	335	P	P	06 37 03.5	-0.9
	0.6nm,0.5s,baz=14,slow=25,SNR=4.2						
EKA	Eskdalemuir Ar	59.34	36	P	P	06 37 31.1	+0.1
	0.5nm,0.4s,baz=260,slow=4.1,SNR=4.9						

TORD	Torodi Ar. Bea	64.47	84	P	P	06 38 04.9	-1.2
	0.5nm,0.6s,baz=292,slow=5.8						
NB2	NORSAR Subarra	67.62	31	P	P	06 38 25.8	+0.3
	comp=Z,0.6nm,0.7s,baz=268,slow=6.5						
CLL	Collm	68.67	41	*e*P	P	06 38 33.0	+0.9
ILAR	Eielson Array	69.92	333	P	P	06 38 39.0	-0.7
	comp=Z,0.7nm,0.8s,baz=110,slow=4.4,SNR=6.7						
ARCES	ARCESS Array B	73.26	22	P	P	06 38 59.8	+0.2
	comp=Z,1.0nm,0.6s,baz=272,slow=5.7,SNR=7.6						
FINES	FINESS Array B	74.75	30	P	P	06 39 08.3	0.0
	comp=Z,0.9nm,0.3s,baz=256,slow=5.5,SNR=6.6						

IDC 19 06:39:12.8±2.4,**0°.20S**×**16°.24W,h0**^{km}**,mb3.5**/2, **mb1 3.8**/3,**mb1mx3.4**/56,**mbtmp3.6**/3,**ML3.5**/1,**MS2.9**/2, **Ms1 2.9**/2,**ms1mx2.5**/33,**Error ellipse: s-maj=99.0km s-min=36.9km az=152.0,North of Ascension Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10N2	ASCENSION HYDR	7.78	167	T	T	06 49 07.7	
	baz=345,slow=74,SNR=15						
H10N3	ASCENSION HYDR	7.79	167	T	T	06 49 19.6	
	baz=345,slow=74,SNR=14						
H10N1	ASCENSION HYDR	7.79	167	T	T	06 49 19.4	
	baz=345,slow=74,SNR=16						
H10S1	ASCENSION HYDR	8.83	170	T	T	06 50 39.8	
	baz=348,slow=74,SNR=9.4						
H10S3	ASCENSION HYDR	8.84	170	T	T	06 50 32.9	
	baz=348,slow=74,SNR=10						
H10S2	ASCENSION HYDR	8.85	170	T	T	06 50 37.0	
	baz=348,slow=74,SNR=8.9						
DBIC	Dimbokro	13.25	59	LR	LR	06 46 41.3	
	comp=Z,45nm,18.7s,baz=184,slow=34						
KOWA	Kowa	18.96	39	P	P	06 43 35.2	-0.6
	0.1nm,0.3s,baz=236,slow=11,SNR=3.7						
KOWA				LR	LR	06 50 30.7	
	comp=Z,36nm,18.8s,baz=196,slow=36						
TORD	Torodi Ar. Bea	22.18	53	P	P	06 44 11.3	+0.5
	1.2nm,0.8s,baz=239,slow=10						
TXAR	Lajitas Array	87.85	299	P	P	06 52 05.0	+0.1
	0.7nm,1.1s,baz=112,slow=6.9,SNR=3.9						
WRA	Warramunga Arr	144.91	126	PKP	PKPbc	06 58 52.1	0.0
	0.7nm,0.8s,baz=238,slow=2.4,SNR=5.2						

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*ISCJB **19** 07:25:06.6±0.9,45°.7N±0°.2×152°.0E±0°.2,h35^{km},mb3.8/10, Error ellipse: s-maj=25.1km s-min=15.9km az=166.7*

*IDC **19** 07:25:12.9±4.9,45°.55N×151°.79E,h78^{km}±44^{km},mb3.5/10, mb1 3.6/11,mb1mx3.3/70,mbtmp3.8/11,ML3.7/1,MS2.9/1, Ms1 2.9/1,ms1mx2.2/53,Error ellipse: s-maj=26.5km s-min=22.2km az=26.0*

ISC 19 07:25:08.5±1.0,**45°.7N**±0°.2×**152°.0E**±0°.1,**h35**^{km}**,n17,** σ**1**^{s}**.04**/11,**mb3.8**/10,**East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAJ	Asahikawa	6.87	260	P	Pn	07 26 48.2	+1.5
	1.5nm,0.3s,baz=89,slow=17,SNR=5.4						
ASAJ				LR	LR	07 29 38.4	
	comp=Z,92nm,18.6s,baz=230,slow=40						
H11N2	WAKE ISLAND Hy	28.64	150	T	T	08 01 39.8	
	baz=338,slow=75,SNR=22						
H11N1	WAKE ISLAND Hy	28.66	150	T	T	08 01 42.8	
	baz=338,slow=75,SNR=21						
H11N3	WAKE ISLAND Hy	28.66	150	T	T	08 01 34.9	
	baz=338,slow=75,SNR=20						
H11S1	WAKE ISLAND Hy	29.70	151	T	T	08 02 56.3	
	baz=339,slow=76,SNR=22						
H11S3	WAKE ISLAND Hy	29.71	151	T	T	08 03 02.2	
	baz=339,slow=76,SNR=13						
H11S2	WAKE ISLAND Hy	29.72	151	T	T	08 02 58.2	
	baz=339,slow=76,SNR=14						
SONM	Songino Array	30.98	291	P	P	07 31 22.7	+0.2
	0.3nm,0.4s,baz=84,slow=5.2,SNR=2.6						
MKAR	Makanchi Array	46.76	298	P	P	07 33 33.5	-0.7
	0.2nm,0.6s,baz=71,slow=8.1,SNR=4.0						
KURBB	Kurchatov Arra	47.42	304	P	P	07 33 38.1	-1.1
	0.7nm,0.6s,baz=73,slow=8.5,SNR=5.2						
ARCES	ARCESS Array B	58.62	341	P	P	07 35 01.2	-0.2
	4.4nm,0.9s,baz=50,slow=6.0,SNR=3.8						
NVAR	Mina Array Bea	63.62	61	P	P	07 35 37.3	+1.2
	0.2nm,0.6s,baz=289,slow=8.5,SNR=3.2						
FINES	FINESS Array B	64.69	335	P	P	07 35 42.8	+0.4
	2.4nm,0.6s,baz=35,slow=7.0,SNR=8.0						
HFS	Hagfors	69.20	339	P	P	07 36 10.8	-0.3
	1.6nm,0.6s,baz=54,slow=7.3,SNR=7.9						
ASAR	Alice Springs	70.94	198	P	P	07 36 20.8	-1.4
	0.3nm,0.7s,baz=28,slow=4.2,SNR=2.9						
AKASG	Malin Array Be	72.01	326	P	P	07 36 27.9	-0.5
	0.7nm,0.5s,baz=36,slow=6.2,SNR=4.1						
TXAR	Lajitas Array	78.69	60	P	P	07 37 07.9	+0.6
	0.5nm,0.7s,baz=310,slow=4.5,SNR=9.5						

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*ISCJB **19** 07:36:32.5±0.3,37°.19N±0°.01×71°.35E±0°.01,h84^{km}±2^{km}, mb5.5/317,Error ellipse: s-maj=2.4km s-min=1.7km az=25.0*

*MOS **19** 07:36:34.5±0.9,37°.22N×71°.38E,h105^{km},mb5.6/90, MS4.7/35,Error ellipse: s-maj=4.5km s-min=3.4km az=124.0*

*IDC **19** 07:36:35.6±1.8,37°.19N×71°.41E,h101^{km}±16^{km},mb5.0/54, mb1 5.1/58,mb1mx5.1/61,mbtmp5.4/58,MS4.6/41, Ms1 4.6/41,ms1mx4.4/60,Error ellipse: s-maj=8.8km s-min=6.0km az=6.0*

*NNC **19** 07:36:35.1±1.6,37°.59N×71°.05E,h0^{km},mb6.3,mpv6.0, Error ellipse: s-maj=12.7km s-min=9.0km az=164.0*

*NEIC **19** 07:36:35.5±0.1,37°.25N×71°.38E,mb5.5/157,MW5.6, MW5.6,Error ellipse: s-maj=3.4km s-min=2.3km az=194.0, Moment Tensor Solution. s34 Moment tensor: Scale 10^{17}Nm; M_{rr}2.83; $M_{\theta\theta}$-2.76; $M_{\phi\phi}$-0.07; $M_{r\theta}$1.33; $M_{\theta\phi}$-0.03; $M_{\phi r}$-0.04; Best double couple: $M_0$3.10000×10^{17} NP1: ϕ_s90.00000°,δ58.00000°,λ91.00000°. NP2:ϕ_s268.00000°, δ32.00000°,λ88.00000°. Principal axes: T 3.1300, Plg77.0000°, Azm4.0000°; N -0.0700, Plg1.0000°, Azm270.0000°; P -3.0600, Plg13.0000°, Azm180.0000°;*

NEIC Felt at Jurm. Also felt at Islamabad, Lahore and Muzaffarabad, Pakistan; Dushanbe, Tajikistan; Zarafshon, Uzbekistan.

*GCMT **19** 07:36:35.5±0.1,37°.12N×71°.19E,h111^{km},MW5.7/138, Moment Tensor Solution. s126,c217; s138,c307; Duration: 1^{s}.6 Moment tensor: Scale 10^{17}Nm; M_{rr}3.43±.04; $M_{\theta\theta}$-3.63±.04; $M_{\phi\phi}$0.20±.04; $M_{r\theta}$1.19±.04; $M_{\theta\phi}$0.40±.04; $M_{\phi r}$-0.31±.03; Best double couple: $M_0$3.75800×10^{17} NP1:ϕ_s99.00000°,δ55.00000°, λ94.00000°. NP2:ϕ_s273.00000°,δ36.00000°,λ85.00000°. Principal axes: T 3.6420, Plg80.0000°, Azm24.0000°; N 0.2400, Plg3.0000°, Azm277.0000°; P -3.8730, Plg9.0000°, Azm186.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*BJI **19** 07:36:36.0,37°.30N×71°.58E,h105^{km},mb5.4/77,mB5.6/66*

*NEIC **19** 07:36:36.0±0.0,37°.28N×71°.10E,h110^{km},Moment Tensor Solution. s32 Moment tensor: Scale 10^{17}Nm; M_{rr}2.83; $M_{\theta\theta}$-2.48; $M_{\phi\phi}$-0.36; $M_{r\theta}$1.35; $M_{\theta\phi}$0.23; $M_{\phi r}$0.29; Best double couple: $M_0$3.00000×10^{17} NP1:ϕ_s88.00000°, δ58.00000°,λ83.00000°. NP2:ϕ_s282.00000°,δ32.00000°, λ102.00000°. Principal axes: T 3.1900, Plg75.0000°, Azm337.0000°; N -0.3800, Plg6.0000°, Azm92.0000°; P -2.8100, Plg13.0000°, Azm183.0000°;*

ISC 19 07:36:35.4±0.2,**37°.23N**±0°.02×**71°.37E**±0°.02,**h101**^{km}±1^{km}, **h101**^{km}**:pP-P,n1381,**σ**1**^{s}**.59**/1747,**mb5.6**/357,**138C-51D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	3.25	30	⇓Pn	Pn	07 37 25.9	+1.3
	3μm,0.7s						
SFK				⇓Lg	Lg	07 38 14.1	
	10μm,0.4s						
SFK	Sufi-Kurgan	3.25	30	PN	Pn	07 37 25.9	+1.3
KBL	Kabul	3.28	216	*e*Pn	Pn	07 37 26.6	+1.5
KBL				*e*Sn	Sn	07 38 06.7	+3.3
KBL	Kabul	3.28	216	*e*PN	Pn	07 37 26.6	+1.5
KBL				*e*		07 38 06.7	
CEP	Cherat	3.42	172	P	Pn	07 37 28.1	+1.1
CHCP	Chirah Chowk	3.88	156	P	Pn	07 37 34.7	+1.6
CHCP				S	Sn	07 38 20.0	+2.3
CHCP	Chirah Chowk	3.88	156	P	Sn	07 38 20.3	+2.6
NIL	Nilore	3.89	156	*e*Pn	Pn	07 37 35.3	+2.2
NIL				*e*Sn	Sn	07 38 20.3	+2.5
NIL	Nilore	3.89	156	*e*PN	Pn	07 37 35.3	+2.2
NIL				*e*		07 38 20.3	
SRNI	Srinagar	4.22	137	*e*x	Pn	07 37 30.0	-7.5
SRNI				*e*S	Sn	07 38 22.0	-3.6
KSH	Kashi	4.28	56	P	Pn	07 37 35.4	-3.1
KSH				sP		07 38 02.1	
KSH				S	Sn	07 38 20.6	-6.8
KSH				smax	smax		
	comp=N,100μm,0.9s						
KSH				smax	smax		
	comp=E,59μm,0.7s						
TAS	Tashkent	4.40	339	⇓Pn	Pn	07 37 39.0	-1.0
	3μm,0.6s						
TAS				⇓Sn	Sn	07 38 26.5	-3.6
	16μm,0.6s						
TAS				⇑Lg	Lg	07 38 43.3	
	24μm,0.8s						
TAS	Tashkent	4.40	339	PN	Pn	07 37 39.3	-0.7
THW	Thamme Wali	4.43	176	P	Pn	07 37 42.3	+1.8
AML	Almayashu	5.22	19	P	Pn	07 37 51.5	+0.1
	SNR=2899						
MNAS	Manas	5.33	9	⇓Pn	Pn	07 37 52.4	-0.2
	898nm,0.5s						
MNAS				⇓Sn	Sn	07 38 50.0	-2.7
	4μm,0.9s						
MNAS				⇓Lg	Lg	07 39 16.0	
	7μm,1.0s						
JMU	Jammu	5.35	146	*e*P	Pn	07 37 50.5	-2.4
JMU				*e*S	Sn	07 38 47.5	-5.7
SARP	Sargodha	5.40	168	P	Pn	07 37 52.3	-1.3
UCH	Uchtor	5.55	25	P	Pn	07 37 56.3	+0.3
	SNR=74						
KZA	Kyzart	5.70	31	P	Pn	07 37 58.1	+0.2
	SNR=329						
EKS2	Erkin-Say	5.73	18	P	Pn	07 37 58.6	+0.4
	SNR=1002						
KK31	Karatay Array	5.91	354	⇑Pn	Pn	07 37 59.3	-1.1
	641nm,0.4s,baz=186,slow=14,SNR=8300						
KK31				⇓Pg		07 38 13.9	
	758nm,0.5s,baz=182,slow=13,SNR=2.9						
KK31				⇓Sn	Sn	07 39 02.7	-3.9
	1μm,0.4s,baz=192,slow=25,SNR=10						
KK31				⇓Lg	Lg	07 39 31.8	
	4μm,0.7s						
KK31	Karatay Array	5.91	354	*e*Pn	Pn	07 37 59.6	-0.7
KK31				*e*Sn	Sn	07 39 02.4	-4.2
KK31	Karatay Array	5.91	354	*e*PN	Pn	07 37 59.7	-0.7
KKAR	Karatay Array	5.91	354	*e*Pn	Pn	07 37 59.7	-0.7
KKAR				*e*Sn	Sn	07 39 02.6	-4.1
KKAR	Karatay Array	5.91	354	*e*PN	Pn	07 37 59.7	-0.7
AAK	Ala-Archa	5.91	23	P	Pn	07 38 01.3	+0.7
	105nm,0.3s,baz=194,slow=14,SNR=624						
AAK				S	Sn	07 39 06.9	-0.1
	249nm,0.3s,baz=330,slow=21,SNR=17						
AAK				LR	LR	07 40 29.2	
	comp=Z,7μm,19.8s,baz=172,slow=39						
AAK	Ala-Archa	5.91	23	⇓Pn	Pn	07 38 01.1	+0.5
	2μm,1.3s						
AAK				⇓Sn	Sn	07 39 06.4	-0.6
	3μm,0.9s						
AAK				⇓Lg	Lg	07 39 37.9	
	6μm,1.2s						
AAK	Ala-Archa	5.91	23	P	Pn	07 38 01.3	+0.7
	SNR=375						
AAK	Ala-Archa	5.91	23	*e*Pn	Pn	07 38 01.2	+0.7
AAK				*e*Sn	Sn	07 39 06.6	-0.5
KBK	Karagaybulak	6.08	26	P	Pn	07 38 03.5	+0.6
	SNR=165						
FRU	Bishkek	6.13	23	⇓*i*PN	Pn	07 38 04.0	+0.6
FRU				pmax	pmax		
	comp=E,2μm,4.0s						
ULHL	Ulahol	6.26	35	P	Pn	07 38 05.5	+0.2
	SNR=178						
CHMS	Chumysh	6.32	23	P	Pn	07 38 06.5	+0.5
	SNR=931						
DHRM	DHARAMSHALA	6.41	139	*e*P	Pn	07 38 06.7	-0.8
DHRM				*e*S	Sn	07 39 16.1	-3.3
DHRM				IAML		07 39 22.6	
	comp=E,31μm,0.4s						
DHRM				IAML		07 39 22.7	
	comp=N,22μm,0.3s						
USP	Ospenovka	6.49	21	P	Pn	07 38 08.3	-0.1
	SNR=126						
TKM2	Tokmak 2	6.54	28	⇑Pn	Pn	07 38 09.4	+0.2
	comp=N,2μm,1.1s						
TKM2				⇑Sn	Sn	07 39 23.9	+1.5
	comp=N,1μm,0.8s						
TKM2				⇓Lg	Lg	07 39 59.0	
	comp=N,3μm,1.1s						
TKM2	Tokmak 2	6.54	28	P	Pn	07 38 09.6	+0.4
	SNR=1522						
KDJ	Kajisay	6.64	41	*e*Pn	Pn	07 38 11.1	+0.6
AAA	Alma-Ata	7.33	34	*e*PN	Pn	07 38 22.7	+3.0
KNDC	Almaty	7.36	34	⇓Pn	Pn	07 38 21.0	+0.9
	comp=N,778nm,0.8s						
KNDC				⇓Sn	Sn	07 39 47.1	+5.1
	comp=N,5μm,1.4s						
KNDC				⇓Lg	Lg	07 40 25.8	
	comp=N,8μm,1.1s						
PRZ	Przheval'sk	7.54	44	*e*Pn	Pn	07 38 24.1	+1.4
PRZ	Przheval'sk	7.54	44	*e*PN	Pn	07 38 24.1	+1.4
SMLA	Simla	7.75	140	*e*P	Pn	07 38 22.9	-2.5
SMLA				*e*S	Sn	07 39 45.0	-6.6
SMLA				IAML		07 39 51.1	
	comp=N,11μm,0.7s						
SMLA				IAML		07 39 51.8	
	comp=E,7μm,0.5s						
KKR	Kurukshetra	8.55	146	*e*P	Pn	07 38 35.6	-0.8
DDI	Dehra Dun	8.85	139	*e*P	Pn	07 38 38.9	-1.6
DDI				*e*S	Sn	07 40 11.1	-7.5
JOSI	Joshimath	9.52	132	*e*P	Pn	07 38 48.4	-1.3
JOSI				*e*S	Sn	07 40 27.1	-7.8
BHGR	Bahadurgarh	9.71	150	*e*P	Pn	07 38 50.4	-1.8
KHET	Khetri	9.86	156	*e*P	Pn	07 38 51.1	-3.1
KHET				*e*S	Sn	07 40 32.7	-10
KHET				IAML		07 40 36.0	
	comp=E,2μm,0.4s						
KHET				IAML		07 40 39.0	
	comp=N,2μm,0.5s						
JASL	Jaisalmer	10.28	182	*e*P	Pn	07 38 56.2	-3.7
ASHT	Ashkhabad	10.33	278	⇑Pn	Pn	07 38 58.8	-1.7
	comp=N,309nm,0.6s						
ASHT				⇑Sn	Sn	07 40 54.8	+0.5
	comp=N,3μm,0.9s						
ASHT	Ashkhabad	10.33	278	P	Pn	07 38 58.8	-1.7
GEYT	Alibeck	10.54	278	P	Pn	07 38 57.6	-5.9
	comp=N,32nm,0.3s,baz=133,slow=6.3,SNR=92						
GEYT				S	Sn	07 40 49.3	-10
	comp=N,106nm,0.3s,baz=25,slow=29,SNR=9.8						
GEYT				LR	LR	07 44 38.9	
	comp=N,7μm,18.9s,baz=280,slow=46						
GYA0B	ALIBECK ARRAY	10.54	278	*e*Pn	Pn	07 38 58.8	-4.6
MAKZ	Makanchi	12.39	36	*e*Pn	Pn	07 39 27.5	-0.6
MAKZ	Makanchi	12.39	36	*e*P	Pn	07 39 27.5	-0.6
MK01	Makanchi Array	12.52	37	*e*Pn	Pn	07 39 28.9	-0.9
MK31	Makanchi Array	12.53	37	*e*Pn	Pn	07 39 29.0	-1.0
MK31	Makanchi Array	12.53	37	*e*P	Pn	07 39 29.0	-1.0
MKAR	Makanchi Array	12.53	37	P	Pn	07 39 28.8	-1.2
	comp=N,11nm,0.3s,baz=219,slow=12,SNR=393						
MKAR	Makanchi Array	12.53	37	*e*Pn	Pn	07 39 29.0	-0.9
MKAR	Makanchi Array	12.53	37	*ce*P	Pn	07 39 28.7	-1.2
MKAR				pmax	pmax		
	comp=Z,205nm,0.8s						
PYUN	Piuthan	13.36	130	*e*P	Pn	07 39 37.2	-3.9
	comp=Z,736nm,0.3s						
PYUN				*e*S	Sn	07 41 54.0	-14
DANN	Dangsing	13.66	127	*e*P	Pn	07 39 40.9	-4.3
	comp=Z,638nm,0.4s						
KOLN	Koldanda	13.97	129	*e*P	Pn	07 39 45.6	-3.5
	comp=Z,749nm,0.4s						
BHJ	Bhuj	14.01	187	*e*P	Pn	07 39 46.1	-3.3
WMQ	Urumqi	14.05	57	P	Pn	07 39 48.8	-1.0
WMQ				sP	sP	07 40 17.8	
WMQ				S	Sn	07 42 17.5	-7.0
WMQ				sS	S	07 42 40.3	+1.4
WMQ				pmax	pmax		
	comp=Z,3μm,3.6s						
WMQ				LR	LR		
	comp=Z,7μm,30.5s						
WMQ				LR	LR		
	comp=Z,9μm,33.5s						
WMQ				LR	LR		
	comp=Z,8μm,31.3s						
KURBB	Kurchatov Arra	14.34	19	P	Pn	07 39 49.4	-4.1
	comp=Z,1.0nm,0.3s,baz=211,slow=12,SNR=129						
KURK	Kurchatov	14.45	19	*e*Pn	Pn	07 39 50.8	-4.0
KURK				*e*Sn	Sn	07 42 26.1	-7.8
KURK	Kurchatov	14.45	19	P	Pn	07 39 51.0	-3.8
	SNR=75						
KURK	Kurchatov	14.45	19	*de*P	Pn	07 39 51.4	-3.4
GKN	Gorkha	14.47	126	*e*P	Pn	07 39 51.2	-4.2
AB31	Akbulak array	14.60	329	⇓Pn	Pn	07 39 53.6	-3.3
	comp=Z,182nm,0.6s,baz=139,slow=12,SNR=3293						
AB31				⇑Sn	Sn	07 42 33.3	-4.4
	comp=Z,877nm,0.8s,baz=148,slow=23,SNR=24						
ABKAR	Akbulak array	14.60	329	*e*Pn	Pn	07 39 53.0	-3.8
BHPL	Bhopal	14.88	158	*e*P	Pn	07 39 57.4	-3.3
KKN	Kakani	15.03	125	*e*P	Pn	07 39 58.2	-4.5
	comp=Z,671nm,0.5s						
DMN	Daman	15.04	126	*e*P	Pn	07 39 59.1	-3.7
PKIN	Phulchoki	15.25	125	*e*P	Pn	07 40 01.7	-3.8
	comp=Z,842nm,0.5s						
GUN	Gumba	15.35	123	*e*P	Pn	07 40 02.3	-4.5
	comp=Z,384nm,0.3s						
JIRN	Jiri	15.72	123	*e*P	Pn	07 40 07.3	-4.2
	comp=Z,731nm,0.3s						
BVAR	Borovoye Array	15.81	358	P	Pn	07 40 09.4	-2.6
	comp=Z,19nm,0.3s,baz=171,slow=10,SNR=92						
BVAR				S	Sn	07 42 58.9	-8.0
	comp=Z,23nm,0.3s,baz=164,slow=23,SNR=8.8						
BVAR				LR	LR	07 46 56.8	
	comp=Z,5μm,20.7s,baz=178,slow=39						
BRVK	Borovoye	15.85	358	*e*Pn	Pn	07 40 10.1	-2.4
	comp=Z,203nm,0.6s						
BRVK				*e*Sn	S	07 43 12.7	-2.7
BRVK	Borovoye	15.85	358	P	Pn	07 40 10.3	-2.2
	SNR=267						
BRVK	Borovoye	15.85	358	*d i*P	Pn	07 40 09.8	-2.7
BRVK				pmax	pmax		
	comp=Z,810nm,2.5s						
AKTO	Aktyubinsk	16.31	328	P	Pn	07 40 15.8	-2.5
	comp=Z,16nm,0.3s,baz=134,slow=12,SNR=210						
AKTO				S	Sn	07 43 08.5	-10
	comp=Z,29nm,0.3s,baz=345,slow=8.3,SNR=6.5						
AKTO	Aktyubinsk	16.31	328	⇓Pn	Pn	07 40 17.9	-0.4
	comp=Z,712nm,0.6s						
AKTO				⇑Sn	Sn	07 43 17.7	-1.1
	comp=Z,1μm,1.4s						
RAMN	Ramite	16.46	124	*e*P	Pn	07 40 17.2	-3.4
	comp=Z,1μm,0.6s						
TAPN	Taplejung	16.95	121	*e*P	Pn	07 40 23.4	-3.2
	comp=Z,1μm,0.8s						
DGZ	Jazzator, Alta	17.02	38	*e*P	Pn	07 40 25.0	-2.2
ODAN	Odare	17.05	123	*e*P	Pn	07 40 24.7	-3.0
	comp=Z,1μm,0.6s						
BANOM	Banah	17.06	233	P	P	07 40 28.7	+0.8
	SNR=45						
BANOM	Banah	17.06	233	*i* P	Pn	07 40 27.3	-0.4
	SNR=81						
SHME	Shamm	17.07	234	*i* P	Pn	07 40 26.2	-1.6
	SNR=42						
NGP	Nagpur	17.36	155	*e*P	P	07 40 28.7	-2.5
NGP				*e*x	x	07 40 35.1	
	comp=Z,496nm,1.7s						
NGP				*e*x	x	07 43 36.2	
MDH	Madha	17.50	231	*i* P	P	07 40 30.8	-1.9
	SNR=51						
MSFE	Esma-Masafi	17.55	232	*i* P	P	07 40 33.3	0.0
	SNR=51						
GTK	Tadong	17.58	119	*e*P	P	07 40 31.4	-2.3
WSAR	Wadi Sarin	17.74	222	P	P	07 40 35.4	0.0
	comp=Z,6.6nm,0.3s,baz=63,slow=12,SNR=52						
UMQ	Umm Al-Quwin	17.75	233	*i* P	Pn	07 40 36.1	+0.1
	SNR=26						
BIDO	Bidbid	17.78	224	P	P	07 40 36.1	+0.3
	SNR=31						
UOSS	Minazif	17.82	231	*e*P	P	07 40 35.7	-0.5
	comp=Z,195nm,1.0s						
UOSS	Minazif	17.82	231	*i* P	P	07 40 36.0	-0.2
	SNR=62						
HATD	Hatta, Dubai	17.95	231	P	Pn	07 40 38.1	-0.4
	SNR=65						
HATD	Hatta, Dubai	17.95	231	*i* P	P	07 40 37.3	-0.4
	SNR=32						
WBK	Wadi Bani Khal	18.07	220	P	Pn	07 40 41.1	+1.1
	SNR=37						
ASHO	Ashiyiah	18.10	231	P	Pn	07 40 40.7	+0.4
	SNR=251						
ASHO	Ashiyiah	18.10	231	*i* P	Pn	07 40 40.1	-0.2
	SNR=410						
LSA	Lhasa	18.11	109	P	Pn	07 40 41.6	+0.7
LSA				S	S	07 43 47.8	-15
LSA				pmax	pmax		
	comp=Z,170nm,1.2s						
LSA				LR	LR		
	comp=Z,3μm,11.2s						
LSA	Lhasa	18.11	109	*e*P	Pn	07 40 41.1	+0.2
	comp=Z,266nm,0.7s						
LSA				*e*S	S	07 44 01.9	-0.6
LSA				*e*ScP	ScP	07 48 36.6	+1.1
LSA	Lhasa	18.11	109	P	Pn	07 40 42.2	+1.3
LSA	Lhasa	18.11	109	*e*P	Pn	07 40 41.1	+0.2
LSA				*e*S	S	07 44 01.9	-0.6
LSA				pmax	pmax		
	comp=Z,266nm,0.7s						
NAZ	Nazwa, Dubai	18.13	232	P	Pn	07 40 41.0	+0.4
	SNR=47						
NAZ	Nazwa, Dubai	18.13	232	*i* P	P	07 40 39.9	+0.3
	SNR=46						
HOQ	Hoqain	18.19	226	P	Pn	07 40 45.0	+3.6
	SNR=33						
SMDO	Samad	18.19	223	P	Pn	07 40 42.0	+0.5
	SNR=15						
BOK	Bokaro	18.29	133	*e*P	P	07 40 38.9	-2.5
BOM	Bombay	18.31	176	*e*P	P	07 40 28.1	-14
BOM				*e*S	S	07 43 54.5	-11
ASUD	Al Ashush, Dub	18.60	232	P	Pn	07 40 47.0	+0.8
	SNR=15						
ASUD	Al Ashush, Dub	18.60	232	*i* P	Pn	07 40 45.7	-0.5
	SNR=14						
JMDO	Jabal Madar	18.72	221	P	Pn	07 40 51.0	+3.3
	SNR=25						
AKT	Akhty	18.75	290	⇑*i*P	P	07 40 46.1	-0.3
AKT				*e*S	S	07 44 14.3	-0.2
AKT				pmax	pmax		
	comp=Z,105nm,0.4s						
AKT				smax	smax		
	comp=N,252nm,0.6s						
AKT				smax	smax		
	comp=E,127nm,0.4s						
ALNE	Al Ain	18.75	230	*i* P	P	07 40 46.6	+0.2
	SNR=43						
POO	Poona	18.76	173	*e*P	P	07 40 44.1	-2.5
POO				IAmb	IAmb	07 40 48.7	
	comp=Z,99nm,0.3s						
ARQ	Araqi	18.83	227	P	Pn	07 40 53.0	+3.9
	SNR=47						
AJN	Ajban	18.86	233	*i* P	P	07 40 47.9	+0.3
	SNR=14						
BSY	Bisya	18.91	224	P	Pn	07 40 52.0	+2.0
	SNR=29						
MAK	Makhachkala	19.11	295	*e*P	Pn	07 40 52.2	+0.2
MAK				*e*S	S	07 44 23.2	+1.8
MAK				pmax	pmax		
	comp=Z,475nm,1.1s						
MAK				MLR	MLR		
	comp=Z,3μm,15.0s						
ZAA0	Zalesovo Array	19.13	25	*e*P	P	07 40 50.2	-0.1
	comp=Z,229nm,0.6s						
ZALV	Zalesovo Beam	19.13	25	P	P	07 40 49.9	-0.5
	comp=Z,57nm,0.3s,baz=221,slow=11,SNR=319						
ZALV				S	S	07 44 20.2	-1.5
	comp=Z,1.4nm,0.3s,baz=208,slow=15,SNR=6.2						
ZALV	Zalesovo Beam	19.13	25	*e*P	P	07 40 47.4	-2.9
ZALV				S	S	07 44 20.2	-1.5
ZALV	Zalesovo Beam	19.13	25	*e*P	P	07 40 47.4	-2.9
ZALV				S	S	07 44 20.2	-1.5
SRSP	Sriramsagar	19.23	160	*e*P	P	07 40 51.9	+0.2
SRSP				*e*S	S	07 44 14.6	-10
NVS	Novosibirsk	19.40	21	*e*P	P	07 40 52.6	-0.6
NVS				*e*		07 44 25.0	
RPR	Rampur	19.58	157	*e*P	P	07 40 56.1	+0.7
TURI	Tura	19.90	120	*e*P	P	07 40 57.1	-1.9
TURI				IAmb	IAmb	07 41 01.2	
	comp=Z,404nm,0.7s						
GROC	Groznyy	20.38	295	*e*P	P	07 41 04.7	+0.8
GROC				*e**SP	sP	07 41 36.7	+1.0
GROC				*e*S	S	07 44 51.4	+4.8
GROC				*e**SS	sS	07 45 21.3	+2.9
GROC				pmax	pmax		

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           comp=Z,975nm,1.2s
GUWA  GUWAHATI          20.45 117  eP     P       07 41 05.4 +0.6
GUWA                               IAmb   IAmb    07 41 07.6
           comp=Z,408nm,0.7s
HYBB  Hyderabad (bro    20.73 160  eP     P       07 41 08.3 +0.4
HYBB                               eS     S       07 44 46.0 -7.8
HYB   Hyderabad         20.73 160  i P    P       07 41 08.5 +0.6
HYB                                esP    sP      07 41 40.0 +0.3
HYB                                eS     S       07 44 58.0 +4.2
HYB   Hyderabad         20.73 160  eP     P       07 41 06.0 -1.9
HYB                                IAmb   IAmb    07 41 12.1
           comp=Z,570nm,1.1s
SVE   Sverdlovsk        20.88 343d iP     P       07 41 08.9 -0.3
SVE                                eS     S       07 44 52.1 -4.0
SVE                                pmax   pmax
           comp=Z,302nm,0.8s
MZR   Muzera            20.93 232  i P    P       07 41 10.4 +0.3
           SNR=19
GNI   Garni             20.96 286  P      Pn      07 41 12.2 -1.7
           comp=Z,490nm,0.9s,baz=124,slow=1.6,SNR=118
GNI   Garni             20.96 286  eP     Pn      07 41 12.7 -1.3
           comp=Z,1µm,1.1s
GNI                                eS     S       07 44 58.3 -0.1
GNI   Garni             20.96 286  P      Pn      07 41 12.9 -1.0
           SNR=180
GNI   Garni             20.96 286  i P    Pn      07 41 12.6 -1.3
           SNR=71
GNI   Garni             20.96 286c iP     Pn      07 41 12.6 -1.3
GNI                                pmax   pmax
           comp=Z,4µm,1.2s
SHL   Shillong          20.97 118  eP     P       07 41 11.0 +0.3
           comp=Z,594nm,0.7s
SHL   Shillong          20.97 118  eP     P       07 41 09.9 -0.7
SHL                                IAmb   IAmb    07 41 12.8
           comp=Z,706nm,1.1s
SHL                                ex     S       07 44 54.0 -4.8
TEZP  TEZPUR            21.00 114  eP     P       07 41 09.9 -0.9
TBLG  Delisi            21.00 291  eP     P       07 41 11.3 +0.6
           comp=Z,475nm,1.0s
ARU   Arti              21.05 340  P      P       07 41 11.0  0.0
           comp=Z,92nm,0.5s,baz=139,slow=7.2,SNR=120
ARU                                S      S       07 44 56.7 -2.7
           comp=Z,42nm,0.6s,baz=127,slow=20,SNR=6.5
ARU                                LR     LR      07 50 21.5
           comp=Z,6µm,19.1s,baz=154,slow=39
ARU   Arti              21.05 340  eP     P       07 41 10.8 -0.2
           comp=Z,288nm,0.9s
ARU                                S      S       07 44 56.7 -2.7
ARU   Arti              21.05 340d iP     P       07 41 10.4 -0.6
ARU                                e              07 41 38.6
ARU                                eS     S       07 44 57.6 -1.8
ARU                                SS     SnSn    07 45 39.0 +9.1
ARU                                pmax   pmax
           comp=Z,479nm,1.2s
ARU                                MLR    MLR
           comp=Z,5µm,21.0s
ZIRO  ZIRO              21.27 111  eP     P       07 41 13.6 -0.2
ZIRO                               IAmb   IAmb    07 41 19.5
           comp=Z,432nm,0.9s
AGT   Agartala          21.62 122  eP     P       07 41 17.4  0.0
AGT                                eS     S       07 45 11.3 +0.2
ZEI   Tsey              21.71 293  eP     P       07 41 14.8 -3.6
ZEI                                pmax   pmax
           comp=Z,219nm,1.2s
CHLP  Challavanipeta    21.72 146  i Pg   P       07 41 18.9 +0.4
CHLP                               eS     S       07 45 10.1 -3.0
NJS   Nagarjunasagar    21.76 159  eP     P       07 41 19.3 +0.5
NJS                                eS     S       07 45 09.9 -3.8
GOA   Goa               21.76 174  eP     P       07 41 16.4 -2.5
GOA                                IAmb   IAmb    07 41 21.3
           comp=Z,236nm,1.2s
PVM   Polavaram         21.86 153  eP     P       07 41 21.7 +1.7
PVM                                eS     S       07 45 12.3 -3.3
AKH   Akhalkalaki       21.92 290⇓iP     P       07 41 22.6 +1.9
AKH   Akhalkalaki       21.92 290  eP     P       07 41 22.6 +1.9
           comp=Z,511nm,1.1s
AKH   Akhalkalaki       21.92 290  eP     P       07 41 22.6 +1.9
AKH                                pmax   pmax
           comp=Z,511nm,1.1s
JORH  JORHAT            21.99 112  eP     P       07 41 21.6 +0.3
JORH                               ex     S       07 45 13.0 -4.9
NCK   Nalchik           22.01 295⇑iP     P       07 41 20.7 -0.7
NCK                                pmax   pmax
           comp=Z,465nm,1.6s
SRLM  Srisailam         22.07 160  eP     P       07 41 22.9 +0.6
SRLM                               eS     S       07 45 19.1 -0.3
DIBR  DIBRUGARH         22.09 109  eP     P       07 41 23.4 +1.0
VIS   Vishakhapatnam    22.10 148  eP     P       07 41 21.7 -0.8
VIS                                IAmb   IAmb    07 41 25.6
           comp=Z,92nm,0.4s
VIS                                i x    S       07 45 25.9 +6.1
SILR  SILCHAR           22.11 118  eP     P       07 41 20.4 -2.2
BELO  BELONIA           22.19 123  eP     P       07 41 21.5 -1.9
BELO                               ex     S       07 45 20.3 -1.0
GTA   Gaotai            22.39  76 ⇑P      P       07 41 26.3 +0.7
GTA                                pP     pP      07 41 50.5 +5.4
GTA                                sP     sP      07 42 04.5 +6.9
GTA                                S      S       07 45 24.5 -0.2
GTA                                pmax   pmax
           comp=Z,460nm,1.1s
GTA                                pmax   pmax
           comp=Z,2µm,5.1s
GTA                                LR     LR
           comp=Z,2µm,11.9s
GTA                                LR     LR
           comp=Z,2µm,13.5s
GTA                                LR     LR
           comp=Z,2µm,14.3s
MOKO  MOKOCHONG         22.43 112  eP     P       07 41 27.3 +1.3
MOKO                               eS     S       07 45 27.0 +1.5
KOHI  KOHIMA            22.48 114  eP     P       07 41 27.7 +1.2
KOHI                               ex     S       07 45 28.7 +2.4
KBZ   Khabaz            22.54 296  P      P       07 41 25.8 -1.1
           comp=Z,50nm,1.0s,baz=93,slow=8.0,SNR=38
KBZ                                LR     LR      07 52 43.5
           comp=Z,1µm,18.7s,baz=102,slow=43
NEY   Neytrino          22.61 294⇓eP     P       07 41 28.2 +0.3
BRDH  Bariadhala        22.71 124  P      P       07 41 29.7 +0.9
           comp=Z,234nm,0.6s,baz=284,slow=2.0,SNR=13
KVAR  Kislovodsk Arr    22.71 296  P      P       07 41 28.1 -0.7
           comp=Z,52nm,0.7s,baz=282,slow=7.0,SNR=47
KVAR                               LR     LR      07 52 38.1
           comp=Z,2µm,19.2s,baz=82,slow=42
KIV   Kislovodsk        22.72 296  eP     P       07 41 28.2 -0.6
           comp=Z,181nm,0.9s
KIV                                epP    pP      07 41 47.7 -0.9
KIV   Kislovodsk        22.72 296  P      P       07 41 27.5 -1.3
           SNR=40
KIV   Kislovodsk        22.72 296  i P    P       07 41 28.1 -0.7
           SNR=25
KIV   Kislovodsk        22.72 296c iP     P       07 41 27.3 -1.5
KIV                                i              07 41 46.7
KIV                                i              07 42 03.5
KIV                                i S    S       07 45 33.5 +3.7
KIV                                i SS   SnSn    07 46 17.0 +6.2
KIV                                pmax   pmax
           comp=Z,81nm,1.1s
KIV                                MLR    MLR
           comp=Z,2µm,18.0s
URV   Uravakonda        22.80 165  eP     P       07 41 30.1 +0.3
LKP   Lekhapani         22.87 108  eP     P       07 41 31.0 +0.6
LKP                                eS     S       07 45 35.8 +3.5
IMP   Imphal            22.89 116  eP     P       07 41 31.1 +0.4
KRAR  Krasnoyarsk       23.72  31c eP     P       07 41 37.1 -0.9
SAIH  SAIHA             23.74 122  eP     P       07 41 38.7 +0.1
SAIH                               ex     S       07 45 52.4 +5.8
SKHT  Srikalahasti      24.55 160  eP     P       07 41 46.2 +0.5
SOC   Sochi             24.82 295c iP     P       07 41 48.4 +0.3
SOC                                e*PP   pP      07 42 10.4 +0.2
SOC                                e*SP   sP      07 42 21.7 -0.3
SOC                                eS     S       07 46 07.8 +4.4
SOC                                e*SS   sS      07 46 45.6 +3.6
SOC                                pmax   pmax
           comp=Z,326nm,1.6s
SOC                                MLR    MLR
           comp=Z,927nm,14.0s
VRH   Novokhopyorsk     25.22 313  eP     P       07 41 51.1 -0.5
VRH                                e*SP   sP      07 42 23.9 -1.6
VRH                                eS     S       07 46 10.0 +0.6
VRH                                pmax   pmax
           comp=Z,220nm,0.8s
VRH                                pmax   pmax
           comp=Z,400nm,1.1s
VRH                                smax   smax
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           comp=E,500nm,1.8s
MDRS  Chennai           25.34 159  eP     P       07 41 51.3 -1.7
MDRS                               IAmb   IAmb    07 42 18.1
           comp=Z,518nm,0.1s
MOY   Mondy             25.39  46  eP     P       07 41 55.1 +1.8
MOY                                pmax   pmax
           comp=Z,373nm,1.9s
ABTO  Aybut             25.41 224  P      P       07 41 60.0 +6.3
           SNR=6.1
LZH   Lanzhou           26.01  83 ⇑P      P       07 42 00.8 +1.7
LZH                                pP     pP      07 42 23.4 +2.0
LZH                                sP     sP      07 42 38.4 +5.3
LZH                                PP     PnPn    07 42 48.3 +5.1
LZH                                S      S       07 46 20.9 -1.8
LZH                                sS     sS      07 47 02.1 +0.5
LZH                                SS     SnSn    07 47 37.5 +6.4
LZH                                pmax   pmax
           comp=Z,220nm,1.8s
LZH                                pmax   pmax
           comp=Z,1µm,5.0s
LZH                                LR     LR
           comp=Z,3µm,10.8s
LZH                                LR     LR
           comp=Z,3µm,11.1s
LZH                                LR     LR
           comp=Z,4µm,12.4s
RAYN  Ar Rayn           26.06 246  eP     P       07 41 59.0 -0.5
           comp=Z,116nm,1.0s
RAYN                               eS     S       07 46 19.4 -4.0
RAYN  Ar Rayn           26.06 246  i P    P       07 41 59.1 -0.4
           SNR=43
RAYN  Ar Rayn           26.06 246  eP     P       07 41 59.0 -0.5
RAYN                               eS     S       07 46 19.4 -4.0
RAYN                               pmax   pmax
           comp=Z,116nm,1.0s
ZAK   Zakamensk         26.29  50  eP     P       07 42 02.0 +0.6
ZAK                                pmax   pmax
           comp=Z,92nm,1.2s
ANN   Anapa             26.55 297c iP     P       07 42 03.8 +0.1
ANN                                e*PP   pP      07 42 26.2 +0.3
ANN                                e              07 42 36.5
ANN                                eS     S       07 46 31.1 +0.4
ANN                                i *SS  sS      07 47 09.0 -0.6
ANN                                pmax   pmax
           comp=E,59nm,1.5s
ANN                                pmax   pmax
           comp=N,67nm,1.4s
ANN                                MLR    MLR
           comp=Z,2µm,12.0s
VORD  Divnogorie        26.57 311  eP     P       07 42 03.5 -0.3
VORD                               pmax   pmax
           comp=Z,190nm,1.4s
VSR   Storozhevoye      26.73 312  eP     P       07 42 04.8 -0.4
VSR                                e*SP   sP      07 42 37.8 -1.4
VSR                                e              07 42 50.9
VSR                                eS     S       07 46 33.0 -0.3
VSR                                pmax   pmax
           comp=Z,150nm,1.1s
VSR                                smax   smax
           comp=E,170nm,1.3s
SLMH  Al Salmeh         26.75 278  eP     P       07 42 07.5 +1.9
SLMH                               AMB    AMB     07 42 08.9
           comp=N,335nm,1.3s
SLMH                               AMB    AMB     07 42 48.9
           comp=E,268nm,2.0s
VORR  Voronezh          26.86 313  eP     P       07 42 06.0 -0.3
VORR                               pmax   pmax
           comp=Z,500nm,1.8s
TLY   Talaya            26.93  47  P      P       07 42 08.2 +1.2
           comp=Z,25nm,0.7s,baz=239,slow=8.1,SNR=81
TLY   Talaya            26.93  47  eP     P       07 42 09.0 +2.0
           comp=Z,52nm,1.0s
TLY   Talaya            26.93  47  P      P       07 42 09.2 +2.2
           SNR=51
TLY   Talaya            26.93  47c iP     P       07 42 08.8 +1.8
TLY                                ePPP   PPP     07 42 47.2
TLY                                eS     S       07 46 38.4 +1.9
TLY                                pmax   pmax
           comp=Z,45nm,1.3s
TLY                                MLR    MLR
           comp=Z,502nm,12.0s
CD2   Chengdu           27.47  94 ⇑P      P       07 42 13.6 +1.4
CD2                                pP     pP      07 42 36.9 +2.4
CD2                                sP     sP      07 42 49.4 +3.2
CD2                                S      S       07 46 48.3 +2.7
CD2                                pmax   pmax
           comp=Z,150nm,0.6s
CD2                                pmax   pmax
           comp=Z,550nm,4.2s
CD2                                LR     LR
           comp=Z,3µm,13.4s
CD2                                LR     LR
           comp=Z,2µm,12.9s
CD2                                LR     LR
           comp=Z,3µm,12.4s
IRK   Irkutsk           27.48  46  eP     P       07 42 13.1 +1.1
IRK                                pmax   pmax
           comp=Z,280nm,2.0s
SONM  Songino Array     27.68  56  P      P       07 42 15.3 +1.3
           comp=Z,88nm,0.8s,baz=258,slow=9.9,SNR=292
SONM                               LR     LR      07 53 33.0
           comp=Z,2µm,21.8s,baz=262,slow=37
SONA1 Songino Array     27.69  56  eP     P       07 42 15.6 +1.5
ULN   Ulaanbaatar       28.13  56  eP     P       07 42 18.6 +0.6
           comp=Z,111nm,0.8s
ULN   Ulaanbaatar       28.13  56  P      P       07 42 19.7 +1.8
           SNR=54
ULN   Ulaanbaatar       28.13  56c iP     P       07 42 18.9 +1.0
ULN                                pmax   pmax
           comp=Z,100nm,0.7s
TOTH  TOTAH             28.68 273  eP     P       07 42 24.3 +1.5
TOTH                               AML    AML     07 43 17.0
           comp=E,24nm,0.5s
TOTH                               AML    AML     07 43 20.3
           comp=N,18nm,0.5s
ASF   Jabal al Asfar    28.68 270  P      P       07 42 24.4 +1.4
           comp=N,3.8nm,0.5s,baz=27,slow=1.7,SNR=19
ASF                                LR     LR      07 56 44.8
           comp=N,2µm,19.4s,baz=28,slow=42
QASN  Qassioun          28.75 273  eP     P       07 42 25.9 +2.4
QASN                               AMB    AMB     07 43 41.1
           comp=N,75nm,2.9s
QASN                               AML    AML     07 44 22.4
           comp=E,46nm,0.5s
QASN                               eS     S       07 47 07.2 +1.5
SIM   Simferopol'       28.92 297  i P    P       07 42 25.0 +0.2
SIM                                i *PP  pP      07 42 48.0 +0.8
SIM                                i              07 42 59.0
SIM                                eS     S       07 47 06.9 -1.0
SIM                                pmax   pmax
           comp=Z,260nm,2.1s
BRBR  Barbar            29.04 273  eP     P       07 42 26.2 -0.1
BRBR                               AMB    AMB     07 42 29.5
           comp=E,161nm,87.3s
BRBR                               AMB    AMB     07 43 36.7
           comp=N,98nm,42.3s
BRBR                               eS     S       07 47 14.2 +3.7
PRGR  Permogore         29.23 335⇑eP     P       07 42 27.5 +0.2
PRGR                               pmax   pmax
           comp=Z,56nm,0.6s
MOS   Moscow            29.29 320  i P    P       07 42 29.1 +1.2
MOS                                e*PP   pP      07 42 52.7 +2.4
MOS                                e              07 43 01.9
MOS                                e              07 43 34.5
MOS                                e              07 53 00.0
MOS                                pmax   pmax
           comp=Z,1µm,2.0s
MOS                                pmax   pmax
           comp=Z,607nm,1.5s
KMI   Kunming           29.29 105  P      P       07 42 29.3 +0.7
KMI                                pP     pP      07 42 52.9 +1.9
KMI                                sP     sP      07 43 04.1 +1.4
KMI                                S      S       07 47 14.6  0.0
KMI                                sS     sS      07 47 55.8 +2.2
KMI                                SS     SnSn    07 48 54.0 +2.8
KMI                                pmax   pmax
           comp=Z,26nm,1.5s
KMI                                pmax   pmax
           comp=Z,530nm,3.5s
KMI                                LR     LR
           comp=Z,870nm,13.0s
KMI                                LR     LR
           comp=Z,1µm,11.7s
KMI                                LR     LR
           comp=Z,2µm,26.5s
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ILGA  Ilgaz             29.30 289  eP     P       07 42 30.1 +1.6
           comp=Z,51nm,1.1s
ILGA                               epP    pP      07 42 51.9 +0.9
BR131 Keskin Array S    29.50 287  eP     P       07 42 31.3 +1.1
BR131                              epP    pP      07 42 54.2 +1.6
BRTR  Keskin Array B    29.50 287  P      P       07 42 31.1 +1.0
           comp=Z,18nm,0.9s,baz=103,slow=6.4,SNR=77
BRTR                               PcP    PcP     07 45 34.0 +0.9
           comp=Z,3.7nm,0.5s,baz=135,slow=1.9,SNR=8.2
BRTR                               LR     LR      07 57 28.1
           comp=Z,544nm,22.0s,baz=100,slow=42
OBN   Obninsk           29.58 318  eP     P       07 42 30.9 +0.4
           comp=Z,261nm,0.6s
OBN   Obninsk           29.58 318c iP     P       07 42 30.8 +0.3
OBN                                e*PP   pP      07 42 55.0 +2.0
OBN                                i              07 43 05.2
OBN                                e              07 43 28.9
OBN                                eS     S       07 47 18.4 +0.4
OBN                                eSS    ScP     07 49 04.7 -0.7
OBN                                pmax   pmax
           comp=Z,599nm,1.4s
OBN                                MLR    MLR
           comp=Z,2µm,17.0s
MMAI  Mount Meron Ar    29.60 273  P      P       07 42 32.4 +1.4
           comp=Z,5.3nm,0.6s,baz=68,slow=10.0,SNR=11
MMAI                               PcP    PcP     07 45 34.8 +1.3
           comp=Z,4.9nm,0.5s,baz=63,slow=7.1,SNR=4.8
MMAI                               LR     LR      07 57 58.3
           comp=Z,732nm,18.0s,baz=60,slow=43
CMAI  Chiengmai2        29.64 118  P      P       07 42 32.0 +0.4
           comp=Z,6.3nm,0.7s,comp=Z,117nm
KIZK  Mersin            29.67 280  i P    P       07 42 33.0 +1.5
BTO   Baotou            30.10  71  eP     P       07 42 36.3 +0.9
BTO                                pmax   pmax
           comp=Z,23nm,0.9s
ANTO  Ankara            30.13 287⇑iP     P       07 42 37.0 +1.4
ANTO  Ankara            30.13 287  eP     P       07 42 37.0 +1.4
           comp=Z,40nm,0.9s
ANTO                               epP    pP      07 42 59.6 +1.5
ANTO  Ankara            30.13 287  P      P       07 42 37.5 +1.8
           SNR=28
ANTO  Ankara            30.13 287  eP     P       07 42 37.0 +1.4
ANTO                               e*PP   pP      07 42 59.6 +1.5
ANTO                               pmax   pmax
           comp=Z,40nm,0.9s
BR231 Keskin MP Arra    30.14 287  eP     P       07 42 37.8 +2.0
CHTO  Chiang Mai        30.31 120  eP     P       07 42 37.8 +0.4
           comp=Z,31nm,0.9s
CHTO  Chiang Mai        30.31 120  P      P       07 42 40.2 +2.8
           SNR=8.0
CHTO  Chiang Mai        30.31 120  eP     P       07 42 37.8 +0.4
CHTO                               pmax   pmax
           comp=Z,31nm,0.9s
CHTO  Chiang Mai        30.31 120  P      P       07 42 39.1 +1.7
           comp=Z,188nm,1.5s,comp=Z,4µm
CMMT  Chiang Mai        30.32 120  P      P       07 42 39.1 +1.7
           comp=Z,41nm,1.5s,comp=Z,896nm
CM31  Chiang Mai Arr    30.55 120  eP     P       07 42 41.2 +1.7
CMAR  Chiang Mai Arr    30.55 120  P      P       07 42 39.8 +0.3
           comp=Z,19nm,0.7s,baz=312,slow=8.8,SNR=36
XAN   Xi'an             30.56  85  P      P       07 42 40.0 +0.5
XAN                                pP     pP      07 43 03.3 +1.3
XAN                                S      S       07 47 36.0 +2.1
XAN                                sS     sS      07 48 16.8 +3.8
XAN                                pmax   pmax
           comp=Z,84nm,1.1s
XAN                                LR     LR
           comp=Z,2µm,11.8s
XAN                                LR     LR
           comp=Z,950nm,7.4s
XAN                                LR     LR
           comp=Z,1µm,17.7s
CM01  Chiang Mai Arr    30.59 120  eP     P       07 42 40.7 +0.8
PAYA  Payao             30.60 118  P      P       07 42 40.7 +0.8
           comp=Z,15nm,0.7s,comp=Z,173nm
ERMK  Ermenek           30.60 281  i P    P       07 42 41.9 +1.9
CSS   Mathiatis         30.68 277  eP     P       07 42 39.9 -0.6
           comp=Z,30nm,1.1s
KONT  Konya--Tatoy      30.77 283  i P    P       07 42 43.6 +2.4
KMER  Konya-Meram       30.80 283  i P    P       07 42 43.5 +1.9
KDHN  Kadinhani         30.85 285  i P    P       07 42 43.3 +1.2
LAMP  Lampang           30.99 119  P      P       07 42 44.2 +0.9
           comp=Z,20nm,0.8s,comp=Z,158nm
KLMR  Klimovskoe        31.00 330  eP     P       07 42 40.6 -2.3
KLMR                               eS     S       07 47 36.9 -3.2
KLMR                               pmax   pmax
           comp=Z,148nm,1.5s
KLMR  Klimovskoe        31.00 330  eP     P       07 42 40.7 -2.2
KLMR                               AMP            07 42 44.0
           comp=Z,148nm,1.5s
KLMR                               eS     S       07 47 36.9 -3.2
KLMR                               eS     S       07 47 36.9 -3.2
KLMR                               LQ     LQ      07 52 50.7
KLMR                               LQ     LQ      07 52 50.7
KLMR                               LR     LR      07 54 13.7
PALK  Pallekele         31.00 162  P      P       07 42 44.5 +1.0
           comp=Z,22nm,0.6s,baz=295,slow=7.0,SNR=15
PALK                               LR     LR      07 55 52.5
           comp=Z,2µm,18.5s,baz=317,slow=37
PALK  Pallekele         31.00 162  eP     P       07 42 44.8 +1.3
           comp=Z,55nm,1.1s
PALK  Pallekele         31.00 162  P      P       07 42 44.8 +1.3
PALK  Pallekele         31.00 162  i P    P       07 42 50.4 +6.9
GAZI  Gazipasa          31.17 280  i P    P       07 42 45.5 +0.7
HHC   Hu-ho-hao-te      31.24  71  eP     P       07 42 46.9 +1.4
HHC                                sP     sP      07 43 20.8 +1.1
HHC                                PP     PnPn    07 43 51.8 +0.3
HHC                                S      S       07 47 42.8 -1.8
HHC                                pmax   pmax
           comp=Z,81nm,1.9s
HHC                                pmax   pmax
           comp=Z,300nm,4.1s
HHC                                LR     LR
           comp=Z,1µm,10.4s
HHC                                LR     LR
           comp=Z,1µm,10.8s
HHC                                LR     LR
           comp=Z,1µm,10.4s
KEPZ  Antalya-Kepez     31.57 282  i P    P       07 42 49.1 +0.7
GYA   Guiyang           31.68 100⇑iP     P       07 42 50.3 +0.8
GYA                                pP     pP      07 43 16.0 +3.9
GYA                                sP     sP      07 43 29.5 +5.8
GYA                                PP     PP      07 44 00.6 -2.2
GYA                                PcP    PcP     07 45 41.4 +2.3
GYA                                S      S       07 47 57.8 +6.0
GYA                                sS     sS      07 48 34.0 +3.0
GYA                                ScP    ScP     07 49 14.4 +1.3
GYA                                SS     SnSn    07 49 49.3 +0.4
GYA                                ScS    ScS     07 53 10.8 -0.8
GYA                                pmax   pmax
           comp=Z,140nm,0.9s
GYA                                pmax   pmax
           comp=Z,310nm,4.9s
GYA                                LR     LR
           comp=Z,2µm,12.3s
GYA                                LR     LR
           comp=Z,2µm,12.0s
GYA                                LR     LR
           comp=Z,2µm,12.0s
SUKH  Sukhothai         31.70 121  P      P       07 42 51.0 +1.5
           comp=Z,26nm,0.8s
UMPA  Umpang Tak        32.08 123  P      P       07 42 56.1 +3.2
           comp=Z,26nm,0.8s,comp=Z,1µm
ISP   Isparta           32.22 284  eP     P       07 42 54.8 +0.7
           comp=Z,37nm,0.9s
ISP   Isparta           32.22 284c iP     P       07 42 54.5 +0.4
ISP                                pmax   pmax
           comp=Z,162nm,2.7s
ENH   Enshi             32.28  91  eP     P       07 42 55.2 +0.5
           comp=Z,60nm,0.9s
TIY   Taiyuan           32.41  76  eP     P       07 42 56.9 +1.2
TIY                                pP     pP      07 43 21.3 +3.0
TIY                                sP     sP      07 43 31.6 +1.6
TIY                                PP     PP      07 44 11.9 +1.2
TIY                                S      S       07 48 09.5 +6.7
TIY                                sS     sS      07 48 47.0 +4.9
TIY                                SS     SnSn    07 50 05.3 -0.9
TIY                                pmax   pmax
           comp=Z,86nm,0.5s
TIY                                LR     LR
           comp=Z,2µm,6.2s
TIY                                LR     LR
           comp=Z,610nm,8.0s
TIY                                LR     LR
           comp=Z,1µm,11.9s
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Code	Station	Dist	Azi	Phase	Reported	Time	Res
PHIT	Phitsanulok	32.44	120	P	P	07 42 57.9	+1.9
	comp=Z,52nm,0.8s,comp=Z,540nm						
KORT	Korkueli	32.53	282	i P	P	07 42 58.1	+1.3
KIS	Kishinev	32.68	301	⇑iP	P	07 42 58.0	+0.1
	comp=Z,400nm,1.7s						
KIS				epP	pP	07 43 20.5	0.0
KIS				esP	sP	07 43 31.5	-0.7
KIS	Kishinev	32.68	301	ePP	PP	07 44 14.0	+0.5
KIS	Kishinev	32.68	301	ePPP	PPP	07 44 33.0	
KIS				eS	S	07 48 05.0	-1.7
KIS				esS	sS	07 48 45.0	-0.9
KIS				eSS	SnSn	07 50 07.0	-5.4
KIS				eLQ	LQ	07 57 53.0	
	comp=Z,1µm,15.0s						
KIS	Kishinev	32.68	301	i P	P	07 42 58.0	+0.1
KIS				e*PP	pP	07 43 20.5	0.0
KIS				e*SP	sP	07 43 31.5	-0.7
KIS				e		07 44 14.0	
KIS				ePPP	PPP	07 44 33.0	
KIS				eS	S	07 48 05.0	-1.7
KIS				e*SS	sS	07 48 45.0	-0.9
KIS				eSS	SnSn	07 50 07.0	-5.4
KIS				pmax	pmax		
	comp=Z,440nm,1.7s						
AKASG	Malin Array Be	32.73	308	P	P	07 42 58.2	0.0
	comp=Z,31nm,0.5s,baz=80,slow=7.8,SNR=135						
AKASG				PcP	PcP	07 45 42.0	+0.6
	comp=Z,9.6nm,0.5s,baz=80,slow=3.7,SNR=5.0						
AKASG				LR	LR	07 58 10.1	
	comp=Z,1µm,20.3s,baz=80,slow=40						
AKBB	Malin Array Si	32.73	308	eP	P	07 42 58.2	+0.1
	comp=Z,42nm,0.6s						
AKBB	Malin Array Si	32.73	308	eP	P	07 42 58.3	+0.1
AKBB				pmax	pmax		
	comp=Z,42nm,0.6s						
KIEV	Kiev	32.73	308	eP	P	07 42 58.2	0.0
	comp=Z,42nm,0.5s						
KIEV	Kiev	32.73	308	i P	P	07 42 58.3	0.0
	SNR=59						
KIEV	Kiev	32.73	308	c iP	P	07 42 58.1	-0.2
KIEV				pmax	pmax		
	comp=Z,71nm,1.4s						
AK11	Malin Array Si	32.76	308	eP	P	07 42 58.2	-0.3
KHAL	Karahalli	32.91	285	i P	P	07 43 00.7	+0.6
CIT	Chita	32.95	50	eP	P	07 43 01.2	+0.9
CIT				pmax	pmax		
	comp=Z,261nm,1.4s						
TIRR	Tirgusor	32.98	296	⇓iP	P	07 43 01.1	+0.6
TIRR	Tirgusor	32.98	296	eP	P	07 43 00.8	+0.3
	comp=Z,6.5nm,0.8s						
TIRR	Tirgusor	32.98	296	eP	P	07 43 00.8	+0.3
SORM	Soroca	33.05	303	⇑iP	P	07 43 01.2	+0.2
GOLH	Golhisar	33.09	283	i P	P	07 43 03.6	+1.9
CFR	Carcaliu	33.16	298	⇑iP	P	07 43 02.8	+0.8
PBKT	Sadao Pong	33.25	120	eP	P	07 43 04.5	+1.5
	comp=Z,40nm,0.7s						
PBKT	Sadao Pong	33.25	120	P	P	07 43 04.4	+1.3
	comp=Z,75nm,1.0s,comp=Z,2µm						
AKAS	Kas	33.29	281	i P	P	07 43 02.8	-0.7
KSL	Kastellorizon	33.33	281	P	P	07 43 03.7	+0.1
KSL	Kastellorizon	33.33	281	P	P	07 43 03.7	+0.1
SRDT	SRDT	33.59	125	P	P	07 43 07.9	+1.8
	comp=Z,202nm,1.4s,comp=Z,3µm						
MANT	Manisa	33.60	286	eP	P	07 43 07.0	+0.7
	comp=Z,196nm,1.1s						
NONG	Nongkai	33.78	116	P	P	07 43 08.2	+0.5
	comp=Z,1.5nm,0.6s,comp=Z,66nm						
VRI	Vrincioaia	34.13	299	⇑iP	P	07 43 12.1	+1.6
TESR	Tescani	34.17	300	⇑iP	P	07 43 11.8	+1.0
PLOR	Plostina	34.18	299	⇑iP	P	07 43 12.7	+1.7
MICGM	Minsk	34.20	314	⇑iP	P	07 43 10.0	-0.9
MICGM				PM		07 43 12.0	
	comp=Z,0.7nm,1.5s						
MICGM				PM		07 43 13.0	
	comp=E,0.8nm,2.0s						
MICGM				epP	pP	07 43 32.0	-1.6
MICGM				esP	sP	07 43 44.0	-1.3
MICGM				ePP	PnPn	07 44 20.0	-8.2
MICGM				ePPP	PPP	07 45 00.0	
MICGM				eS	S	07 48 24.0	-5.9
MICGM				esS	sS	07 48 42.0	-27
MICGM				eSS	ScP	07 49 24.0	+2.8
MICGM				eSSS	SSS	07 50 08.0	
MICGM				eLR	LR	07 57 50.0	
MNK	Minsk	34.20	314	⇑iP	P	07 43 10.0	-0.9
MNK				eS	S	07 48 24.0	-5.9
MNK				pmax	pmax		
	comp=Z,700nm,1.5s						
ISR	Istrita	34.28	298	⇓iP	P	07 43 13.6	+1.7
CHAI	Chaiyaphum	34.41	120	P	P	07 43 14.6	+1.4
	comp=Z,21nm,0.7s,comp=Z,320nm						
ARG	Arkhangelos	34.45	282	P	P	07 43 14.1	+0.7
ARG	Arkhangelos	34.45	282	P	P	07 43 14.1	+0.7
ARG	Arkhangelos	34.45	282	P	P	07 43 14.1	+0.7
JMB	Yambol	34.47	293	i P	P	07 43 15.3	+1.9
PUL	Pulkovo	34.49	324	⇓eP	P	07 43 14.5	+1.1
PUL				pmax	pmax		
	comp=Z,515nm,1.2s						
BIZ	Bicaz	34.54	301	⇓iP	P	07 43 15.2	+1.2
BOD	Bodaibo	34.60	40	⇓iP	P	07 43 14.5	+0.1
BOD				pmax	pmax		
	comp=Z,275nm,1.2s						
MLR	Muntele Rosu	34.69	298	P	P	07 43 16.9	+1.4
	comp=Z,48nm,1.3s,baz=57,slow=4.1,SNR=108						
MLR				PcP	PcP	07 45 47.4	+0.1
	comp=Z,8.4nm,0.7s,baz=73,slow=4.5,SNR=2.9						
MLR				LR	LR	08 00 56.5	
	comp=Z,220nm,18.9s,baz=82,slow=42						
MLR	Muntele Rosu	34.69	298	⇑iP	P	07 43 17.6	+2.1
MLR	Muntele Rosu	34.69	298	eP	P	07 43 17.6	+2.1
	comp=Z,83nm,1.0s						
MLR				PcP	PcP	07 45 47.4	+0.1
KHON	Khomkaen	34.70	118	P	P	07 43 16.8	+1.2
	comp=Z,68nm,0.7s,comp=Z,802nm						
BJT	Baijiatuau	34.84	71	eP	P	07 43 17.1	+0.4
	comp=Z,32nm,0.6s						
BJT				ePcP	PcP	07 45 48.3	+0.7
BJT	Baijiatuau	34.84	71	eP	P	07 43 17.1	+0.4
BJT				e		07 45 48.3	
BJT				pmax	pmax		
	comp=Z,32nm,0.6s						
BJI	Beijing	34.84	71	⇑iP	P	07 43 17.9	+1.3
BJI				pP	pP	07 43 41.3	+1.9
BJI				sP	sP	07 43 51.6	+0.6
BJI				PP	PP	07 44 37.3	-0.1
BJI				S	S	07 48 43.4	+3.3
BJI				sS	ScP	07 49 21.8	-1.9
BJI				ScS	ScS	07 53 30.8	+3.5
BJI				pmax	pmax		
	comp=Z,57nm,0.9s						
BJI				pmax	pmax		
	comp=Z,810nm,4.3s						
SZH	Strazhica	34.86	294	i P	P	07 43 17.7	+0.9
NACGM	Naroch	34.91	315	eP	P	07 43 16.0	-1.0
NACGM				eP	P	07 43 17.0	0.0
NACGM				ePPP	PPP	07 45 07.0	
NACGM				eS	S	07 48 40.0	-0.8
NACGM				eScP	ScP	07 49 18.0	-5.7
NACGM				eSS	SnSn	07 50 26.0	-40
NACGM				eLQ	LQ	07 54 18.0	
PHET	Kaeng Krachan	34.99	126	P	P	07 43 20.3	+2.1
	comp=Z,46nm,0.8s,comp=Z,440nm						
IDID	Didziasalis	35.02	316	⇑eP	P	07 43 18.8	+0.8
IDID				IAmb	IAmb	07 43 20.6	
	comp=Z,123nm,1.2s						
DOPR	Dopca	35.06	299	⇑iP	P	07 43 20.0	+1.5
ALN	Alexandroupoli	35.08	290	eP	P	07 43 20.3	+1.6
	comp=Z,50nm,1.2s						
ALN	Alexandroupoli	35.08	290	P	P	07 43 19.4	+0.7
ALN	Alexandroupoli	35.08	290	eP	P	07 43 20.3	+1.6
ALN				pmax	pmax		
	comp=Z,50nm,1.2s						
SKNT	Sakolnakorn	35.09	116	P	P	07 43 19.5	+0.4
	comp=Z,71nm,0.9s,comp=Z,931nm						
BURAR	Bucovina Array	35.14	302	⇓iP	P	07 43 20.1	+0.8
BUR04	Bucovina Ar. S	35.15	302	eP	P	07 43 20.0	+0.7
BUR04				epP	pP	07 43 42.5	+0.4
BUR08	Bucovina Ar. S	35.16	302	eP	P	07 43 20.3	+0.9
IIGN	Ignalina	35.31	316	⇑eP	P	07 43 21.5	+1.0
IIGN				IAmb	IAmb	07 43 23.2	
	comp=Z,107nm,1.1s						
MTUR	Matau	35.32	298	⇓iP	P	07 43 22.7	+1.8
IZAR	Zarasai	35.38	316	⇑eP	P	07 43 22.2	+1.1
IZAR				IAmb	IAmb	07 43 23.7	
	comp=Z,90nm,1.0s						
KARP	Karpathos	35.39	281	eP	P	07 43 22.2	+0.7
	comp=Z,437nm,1.1s						
KARP	Karpathos	35.39	281	P	P	07 43 22.2	+0.7
ISAL	Salakas	35.41	316	⇑eP	P	07 43 22.3	+1.0
ISAL				IAmb	IAmb	07 43 24.2	
	comp=Z,127nm,1.2s						
RDO	Rodhopi	35.42	291	P	P	07 43 21.9	+0.3
RDO	Rodhopi	35.42	291	P	P	07 43 21.9	+0.3
KDZ	Kurdzhali	35.44	292	i P	P	07 43 22.9	+1.1
ARR	Arges	35.62	298	⇑iP	P	07 43 24.4	+1.0
SRAK	Srakaew	35.78	122	P	P	07 43 30.2	+5.3
	comp=Z,257nm,0.7s,comp=Z,2µm						
VSU	Vasula	35.80	321	c iP	P	07 43 24.9	+0.3
VSU				pmax	pmax		
	comp=Z,565nm,1.1s						
RZN	Rozhen	35.95	292	i P	P	07 43 27.5	+1.1
LVV	L'vov	35.97	306	eP	P	07 43 26.9	+0.7
LVV				e*PP	pP	07 43 49.1	0.0
LVV				e		07 44 48.3	
LVV				ePPP	PPP	07 45 06.9	
LVV				eS	S	07 48 55.5	-1.7
LVV				eSSS	SSS	07 51 55.2	
LVV				MLR	MLR		
	comp=N,500nm,15.0s						
LVV				MLR	MLR		
	comp=Z,700nm,15.0s						
WHN	Wuhan	36.06	88	P	P	07 43 28.3	+1.1
WHN				S	S	07 49 02.4	+3.4
WHN				pmax	pmax		
	comp=Z,180nm,0.9s						
WHN				LR	LR		
	comp=Z,3µm,16.2s						
WHN				LR	LR		
	comp=Z,2µm,6.9s						
WHN				LR	LR		
	comp=Z,2µm,18.1s						
ATD	Arta Tunnel	36.20	232	P	P	07 43 29.8	+1.2
	comp=Z,24nm,0.9s,baz=48,slow=3.1,SNR=6.9						
ATD	Arta Tunnel	36.20	232	eP	P	07 43 29.4	+0.9
	comp=Z,38nm,1.1s						
LOT	Lotru	36.22	298	⇑iP	P	07 43 29.7	+1.1
PGB	Panagyurishte	36.23	293	i P	P	07 43 30.2	+1.6
APE	Apeiranthos	36.26	284	⇑iP	P	07 43 29.3	+0.4
APE	Apeiranthos	36.26	284	deP	P	07 43 29.9	+1.0
APE				pmax	pmax		
	comp=Z,329nm,1.5s						
CJR	Cluj-Napoca	36.27	301	⇑iP	P	07 43 30.7	+1.8
TIA	Tai'an	36.42	77	P	P	07 43 31.4	+1.2
TIA				S	S	07 49 06.6	+2.2
TIA				pmax	pmax		
	comp=Z,81nm,1.1s						
TIA				pmax	pmax		
	comp=Z,700nm,5.7s						
TIA				LR	LR		
	comp=Z,440nm,9.8s						
TIA				LR	LR		
	comp=Z,660nm,8.1s						
TIA				LR	LR		
	comp=Z,760nm,10.7s						
SANT	Santorini	36.49	283	⇑iP	P	07 43 30.8	-0.1
HIA	Hailar	36.63	55	eP	P	07 43 33.0	+1.1
	comp=Z,55nm,0.8s						
HIA	Hailar	36.63	55	eP	P	07 43 33.0	+1.1
HIA				pmax	pmax		
	comp=Z,55nm,0.8s						
NVR	Nevrokopi	36.64	292	P	P	07 43 32.7	+0.6
NVR	Nevrokopi	36.64	292	P	P	07 43 32.7	+0.6
MMB	Musomiste	36.70	292	i P	pP	07 43 53.6	-1.9
LAST	Lasithi	36.81	281	P	P	07 43 34.4	+0.7
LAST	Lasithi	36.81	281	P	P	07 43 34.4	+0.7
KWP	Kalwaria Pacla	36.82	305	eP	P	07 43 34.8	+1.3
KWP				epP	pP	07 43 57.5	+1.1
KWP				esP	sP	07 44 08.6	+0.6
KWP				LMZ	LR	07 56 32.9	
	comp=Z,1µm,34.7s						
KWP	Kalwaria Pacla	36.82	305	eP	P	07 43 35.2	+1.8
	comp=Z,628nm,1.0s						
KWP	Kalwaria Pacla	36.82	305	eP	P	07 43 34.8	+1.3
KWP				e*PP	pP	07 43 57.5	+1.1
KWP				e*SP	sP	07 44 08.6	+0.6
SUW	Suwalki	36.83	313	eP	P	07 43 33.5	0.0
SUW				esP	sP	07 44 06.6	-1.4
SUW				LMZ	LR	08 00 34.9	
	comp=Z,2µm,21.2s						
SUW	Suwalki	36.83	313	eP	P	07 43 34.0	+0.6
	comp=Z,71nm,0.8s						
SUW	Suwalki	36.83	313	eP	P	07 43 33.5	0.0
SUW				e*SP	sP	07 44 06.6	-1.4
SUW				MLR	MLR		
	comp=Z,2µm,21.2s						
SRS	Serrai	36.88	291	P	P	07 43 34.1	0.0
SRS	Serrai	36.88	291	P	P	07 43 34.1	0.0
SRS	Serrai	36.88	291	P	P	07 43 34.1	0.0
VTS	Vitosha	36.93	294	⇑iP	P	07 43 35.8	+1.2
VTS	Vitosha	36.93	294	eP	P	07 43 35.3	+0.6
	comp=Z,14nm,0.9s						
VTS	Vitosha	36.93	294	i P	P	07 43 35.8	+1.2
VTS	Vitosha	36.93	294	P	P	07 43 35.6	+1.0
VTS	Vitosha	36.93	294	eP	P	07 43 35.3	+0.6
VTS				pmax	pmax		
	comp=Z,14nm,0.9s						
TRPA	Tarpa	36.94	303	⇑iP	P	07 43 35.8	+1.3
TRPA	Tarpa	36.94	303	⇑eP	P	07 43 35.7	+1.3
PAIG	Paliouri	37.03	289	P	P	07 43 35.6	+0.2
PAIG	Paliouri	37.03	289	P	P	07 43 35.6	+0.2
PAIG	Paliouri	37.03	289	P	P	07 43 35.6	+0.2
FIA1	FINESS Array S	37.05	325	eP	P	07 43 35.8	+0.6
FINES	FINESS Array B	37.05	325	P	P	07 43 35.7	+0.5
	comp=Z,48nm,0.5s,baz=115,slow=9.1,SNR=186						
FINES				LR	LR	07 59 38.0	
	comp=Z,3µm,19.9s,baz=106,slow=37						
FINES	FINESS Array B	37.05	325	P	P	07 43 35.7	+0.5
FINES				pmax	pmax		
	comp=Z,48nm,0.5s						
FINES				MLR	MLR		
	comp=Z,3µm,19.9s						
UZH	Uzhgorod	37.09	304	⇑iP	P	07 43 35.6	-0.2
UZH				eS	S	07 49 12.8	-1.5
PLG	Polygyros	37.12	290	P	P	07 43 37.2	+1.0
PLG	Polygyros	37.12	290	P	P	07 43 37.2	+1.0
PLG	Polygyros	37.12	290	P	P	07 43 37.2	+1.0
KKB	Krupnik	37.13	293	i P	P	07 43 36.9	+0.7
IDI	Anoyia	37.24	281	P	P	07 43 37.3	0.0
	comp=Z,75nm,1.3s,baz=51,slow=12,SNR=11						
IDI	Anoyia	37.24	281	⇑iP	P	07 43 37.7	+0.4
KNT	Kendrikon	37.39	291	P	P	07 43 38.8	+0.4
KNT	Kendrikon	37.39	291	P	P	07 43 38.8	+0.4
KNT	Kendrikon	37.39	291	P	P	07 43 38.8	+0.4
LTVH	L˜‡tav˜‡rtes,	37.40	302	⇑eP	P	07 43 41.5	+3.2
XOR	Xorichti	37.52	288	P	P	07 43 39.7	+0.2
XOR	Xorichti	37.52	288	P	P	07 43 39.7	+0.2
VAY	Valandovo	37.60	292	⇑iP	P	07 43 41.0	+0.8
CRVS	Cervenica-Dubn	37.64	304	eP	P	07 43 41.1	+0.6
CRVS				pmax	pmax		
	comp=Z,35nm,1.6s						
CRVS	Cervenica-Dubn	37.64	304	eP	P	07 43 41.0	+0.6
CRVS				ePP	PcP	07 45 36.3	-20
CRVS				eSS	SS	07 51 47.5	-24
MDVR	Moldovita	37.73	298	⇑iP	P	07 43 42.5	+1.2
GRG	Griva	37.79	291	P	P	07 43 42.2	+0.4
GRG	Griva	37.79	291	P	P	07 43 42.2	+0.4
GRG	Griva	37.79	291	P	P	07 43 42.2	+0.4
STIP	Stip	37.82	292	⇑iP	P	07 43 40.7	-1.3
LIT	Litokhoron	37.89	290	eP	P	07 43 43.4	+0.7
	comp=Z,16nm,0.8s						
LIT	Litokhoron	37.89	290	P	P	07 43 41.8	-0.9
LIT	Litokhoron	37.89	290	eP	P	07 43 43.4	+0.7
LIT				pmax	pmax		
	comp=Z,16nm,0.8s						
BEL	Belsk	38.10	309	eP	P	07 43 44.7	+0.5
BEL				epP	pP	07 44 08.2	+0.9
BEL				esP	sP	07 44 18.4	-0.5
BEL				ePcP	PcP	07 45 44.9	-12
BEL				LMZ	LR	07 58 24.1	
	comp=Z,1µm,27.3s						
BEL	Belsk	38.10	309	eP	P	07 43 44.7	+0.5
BEL				e*PP	pP	07 44 08.2	+0.9
BEL				e*SP	sP	07 44 18.3	-0.5
BEL				e		07 45 44.9	
QIZ	Qiongzhong	38.15	108	P	P	07 43 44.3	-0.7
QIZ				pP	pP	07 44 09.8	+1.7
QIZ				S	S	07 49 23.8	-7.1
QIZ				pmax	pmax		
	comp=Z,330nm,5.5s						
QIZ				LR	LR		
	comp=Z,480nm,15.7s						
QIZ				LR	LR		
	comp=Z,740nm,19.1s						
QIZ				LR	LR		
	comp=Z,940nm,32.9s						
QIZ	Qiongzhong	38.15	108	eP	P	07 43 45.1	+0.1
	comp=Z,17nm,0.6s						
QIZ				epP	pP	07 44 09.0	+1.0
QIZ				esP	sP	07 44 20.6	+1.0
AGG	Agios Georgios	38.25	288	eP	P	07 43 46.3	+0.7
	comp=Z,72nm,1.0s						
AGG	Agios Georgios	38.25	288	P	P	07 43 45.1	-0.6
AGG	Agios Georgios	38.25	288	eP	P	07 43 46.3	+0.7
AGG				pmax	pmax		
	comp=Z,72nm,1.0s						
KECS	Kecovo	38.30	304	eP	P	07 43 46.8	+0.9
KECS				e		07 45 45.7	
KECS	Kecovo	38.30	304	eP	P	07 43 46.8	+0.9
KECS				ePP	PcP	07 45 45.7	-12
SKO	Skopje	38.32	293	i P	P	07 43 46.9	+0.7
THL	Klokotos Trika	38.36	289	P	P	07 43 46.6	0.0
NIE	Niedzica	38.39	305	eP	P	07 43 48.4	+1.6
NIE				esP	sP	07 44 21.7	+0.3
NIE				ePP	PP	07 45 16.2	-0.1
NIE				ePcP	PcP	07 45 46.4	-12
NIE				eS	S	07 49 30.6	-3.4
NIE				eSS	SS	07 52 24.3	-2.4
NIE				LMZ	LR	07 56 09.7	
	comp=Z,600nm,27.8s						
NIE	Niedzica	38.39	305	eP	P	07 43 48.4	+1.6
NIE				e*SP	sP	07 44 21.7	+0.3
NIE				e		07 45 16.2	
NIE				e		07 45 46.4	
NIE				eS	S	07 49 30.6	-3.4
NIE				eSS	SS	07 52 24.3	-2.4
BSI	Banda Aceh	38.41	139	P	P	07 43 46.1	-1.1
KRUS	Krusevo	38.57	292	⇑eP	P	07 43 49.0	+0.5
FNA	Florina	38.59	291	eP	P	07 43 48.9	+0.4
	comp=Z,33nm,1.0s						
FNA	Florina	38.59	291	P	P	07 43 47.9	-0.6
FNA	Florina	38.59	291	eP	P	07 43 48.9	+0.4
FNA				pmax	pmax		
	comp=Z,33nm,1.0s						
GZH	Guangzhou	38.62	99	P	P	07 43 49.8	+0.9
GZH				pP	pP	07 44 12.1	+0.1
GZH				sP	sP	07 44 23.3	-0.2
GZH				S	S	07 49 40.3	+2.4
GZH				sS	sS	07 50 18.5	+0.7
GZH				SS	SS	07 52 26.3	-5.6
GZH				pmax	pmax		
	comp=Z,600nm,4.7s						
GZH				LR	LR		
	comp=Z,930nm,11.5s						
GZH				LR	LR		
	comp=Z,1µm,10.6s						
ANX	Ano Chora	38.66	288	P	P	07 43 49.0	-0.2
EVR	Evrytania	38.67	288	P	P	07 43 49.1	-0.2
EVR	Evrytania	38.67	288	P	P	07 43 49.1	-0.2
LAKA	Lakka	38.70	287	P	P	07 43 48.5	-1.0
LAKA	Lakka	38.70	287	P	P	07 43 48.5	-1.0
OJC	Ojcow	38.70	306	eP	P	07 43 49.9	+0.6
OJC				esP	sP	07 44 23.1	-0.8
OJC				eS	S	07 49 39.1	+0.4
OJC				esS	sS	07 50 15.6	-3.0
OJC				LMZ	LR	07 56 05.0	
	comp=Z,2µm,47.0s						
OJC	Ojcow	38.70	306	eP	P	07 43 49.9	+0.6
	comp=Z,38nm,1.0s						
OJC	Ojcow	38.70	306	eP	P	07 43 49.9	+0.6
OJC				e*SP	sP	07 44 23.1	-0.8
OJC				eS	S	07 49 39.1	+0.4
PSZ	Piszkesteto	38.72	303	⇑eP	P	07 43 50.8	+1.2
PSZ	Piszkesteto	38.72	303	eP	P	07 43 50.7	+1.1
	comp=Z,34nm,1.1s						
PSZ	Piszkesteto	38.72	303	eP	P	07 43 50.7	+1.1
PSZ				pmax	pmax		
	comp=Z,34nm,1.1s						
KPRO	Kipourio	38.77	290	P	P	07 43 49.8	-0.3
DYR	Agios Nikonas	38.81	285	P	P	07 43 50.2	-0.2
LANS	Liptovska Anna	38.95	305	eP	P	07 43 52.9	+1.5
LANS				e		07 45 53.1	
LANS	Liptovska Anna	38.95	305	eP	P	07 43 52.9	+1.5
LANS				ePP	PcP	07 45 53.1	-6.8
TRTT	Trang	38.95	132	P	P	07 43 52.8	+1.1
	comp=Z,55nm,1.7s,comp=Z,716nm						
ITM	Ithomi	39.01	285	eP	P	07 43 51.5	-0.6
	comp=Z,34nm,1.0s						
DIVS	Divibare	39.04	297	eP	P	07 43 52.6	+0.4
	comp=Z,41nm,1.1s						
NJ2	Nanjing	39.09	83	eP	P	07 43 53.6	+0.9
NJ2				pP	pP	07 44 17.0	+1.2
NJ2				sP	sP	07 44 28.0	+0.7
NJ2				S	S	07 49 42.1	-2.7
NJ2				sS	sS	07 50 26.0	+1.3
NJ2				pmax	pmax		
	comp=Z,67nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,710nm,4.5s						
NJ2				LR	LR		
	comp=Z,1µm,15.7s						
NJ2				LR	LR		
	comp=Z,870nm,11.9s						
NJ2				LR	LR		
	comp=Z,1µm,13.0s						
DSL	Palaion Diasel	39.16	289	P	P	07 43 52.9	-0.3
DSL	Palaion Diasel	39.16	289	P	P	07 43 52.9	-0.3
DL2	Dalian	39.20	72	⇑iP	P	07 43 54.8	+1.2
DL2				sP	sP	07 44 28.8	+0.6
DL2				S	S	07 49 47.3	+1.0
DL2				sS	sS	07 50 27.4	+1.2
DL2				pmax	pmax		
	comp=Z,140nm,0.7s						
DL2				pmax	pmax		
	comp=Z,730nm,6.4s						
PDO	Prodromos	39.22	288	P	P	07 43 53.6	-0.1
PYL	PYLOS	39.23	285	P	P	07 43 51.7	-2.2
PYL	PYLOS	39.23	285	P	P	07 43 51.7	-2.2
MCO	Taipa Grande	39.29	100	P	P	07 43 56.0	+1.5
PVY	Plav	39.30	294	eP	P	07 43 55.2	+0.7
IVA	Berane	39.30	295	⇓iP	P	07 43 55.7	+1.2
BUD	Budapest	39.34	302	⇑eP	P	07 43 55.9	+1.3
VYHS	Vyhne	39.40	304	eP	P	07 43 56.1	+1.0
VYHS				e		07 44 28.9	
VYHS				e		07 45 56.2	
VYHS				eSS	SS	07 52 34.2	-12
VYHS				pmax	pmax		
	comp=Z,85nm,1.6s						
VYHS	Vyhne	39.40	304	eP	P	07 43 56.1	+1.0
VYHS				esP	sP	07 44 28.9	-0.9
VYHS				ePP	PcP	07 45 56.2	-5.1
VYHS				eSS	SS	07 52 34.2	-12
LKD2	Lefkada island	39.57	288	P	P	07 43 55.7	-1.0
LKD2	Lefkada island	39.57	288	P	P	07 43 55.7	-1.0
KOME	Kolasin	39.58	295	⇓iP	P	07 43 57.9	+1.1
IGT	Igoumenitsa	39.64	290	P	P	07 43 55.9	-1.3
IGT	Igoumenitsa	39.64	290	P	P	07 43 55.9	-1.3
IGT	Igoumenitsa	39.64	290	P	P	07 43 55.9	-1.3
KFL	Anninata	39.64	287	P	P	07 43 56.4	-0.8
MORH	M˜‡r˜¡gy, Hung	39.72	300	⇑eP	P	07 43 58.9	+1.1
VLS	Valsamata	39.77	287	P	P	07 43 56.5	-1.9
VLS	Valsamata	39.77	287	P	P	07 43 56.5	-1.9
VLS	Valsamata	39.77	287	P	P	07 43 56.5	-1.9
OKC	Ostrava-Krasne	39.78	306	eP	P	07 43 59.3	+1.1
OKC				esP	sP	07 44 32.8	-0.1
OKC				eS	S	07 49 57.6	+2.9
OKC				AMS	AMS	08 03 20.0	
	comp=Z,800nm,14.7s						
OKC	Ostrava-Krasne	39.78	306	eP	P	07 43 59.3	+1.1
OKC				e		07 44 32.8	
OKC				eS	S	07 49 57.6	+2.9
OKC				MLR	MLR		
	comp=Z,800nm,14.7s						
TTG	Podgorica	39.84	294	⇓iP	P	07 43 59.3	+0.5
TTG	Podgorica	39.84	294	eP	P	07 43 59.1	+0.3
	comp=Z,24nm,0.9s						
TTG	Podgorica	39.84	294	eP	P	07 43 59.1	+0.3
TTG				pmax	pmax		
	comp=Z,24nm,0.9s						
ULC	Ulcinj	39.93	293	⇓iP	P	07 43 59.8	+0.1
DRME	Dracevica, Mon	39.94	294	⇓iP	P	07 43 59.8	+0.2

Sta	Name	Dist	Azi	Phase	ISC phase	Time	Res
UPM	Unac-Piva	39.96	295	⇓iP	P	07 44 01.0	+1.0
NKY	Niksic	39.96	295	⇓iP	P	07 44 00.8	+0.8
NKME	Niksic	40.00	295	⇓iP	P	07 44 00.7	+0.5
SNY	Shenyang	40.02	67	⇑P	P	07 44 00.9	+0.6
SNY				S	S	07 50 01.0	+2.5
SNY				pmax	pmax		
	comp=Z,64nm,0.7s						
SNY				pmax	pmax		
	comp=Z,670nm,4.6s						
SNY				LR	LR		
	comp=Z,650nm,13.2s						
SNY				LR	LR		
	comp=Z,1µm,17.6s						
SNY				LR	LR		
	comp=Z,2µm,14.7s						
SKLT	Songkhla	40.03	131	P	P	07 44 01.7	+1.1
	comp=Z,149nm,1.0s,comp=Z,2µm						
CEME	Cevo	40.06	294	⇓iP	P	07 44 01.0	+0.2
BUM	Brajici-Budva	40.12	294	⇓iP	P	07 44 01.4	+0.1
JAVC	Velka Javorina	40.14	304	eP	P	07 44 03.2	+1.9
JAVC				ePCP	PcP	07 46 06.0	+2.2
JAVC				eS	S	07 50 03.6	+3.3
MORC	Moravsky Berou	40.17	306	⇑iP	P	07 44 02.5	+0.9
MORC	Moravsky Berou	40.17	306	eP	P	07 44 02.4	+0.9
	comp=Z,29nm,1.1s						
MORC	Moravsky Berou	40.17	306	eP	P	07 44 02.3	+0.7
MORC				ePCP	PcP	07 46 05.5	+1.7
MORC				eS	S	07 50 03.9	+3.2
KEV	Kevo	40.24	338	eP	P	07 44 02.3	+0.6
	comp=Z,60nm,0.7s						
KEV	Kevo	40.24	338	eP	P	07 44 02.3	+0.6
KEV				pmax	pmax		
	comp=Z,60nm,0.7s						
BRY	Bratogost	40.27	295	⇓iP	P	07 44 03.1	+0.5
GKP	Gorka Klasztor	40.31	311	eP	P	07 44 03.2	+0.7
GKP				epP	pP	07 44 26.1	+0.4
GKP				esP	sP	07 44 36.9	-0.5
GKP				ePcP	PcP	07 46 05.4	+1.3
GKP				eS	S	07 50 04.0	+1.4
GKP				LMZ	LR	08 00 34.8	
	comp=Z,1µm,32.3s						
GKP	Gorka Klasztor	40.31	311	eP	P	07 44 03.2	+0.7
GKP				e*PP	pP	07 44 26.1	+0.4
GKP				e*SP	sP	07 44 36.8	-0.5
GKP				e		07 46 05.4	
GKP				eS	S	07 50 04.0	+1.4
HCY	Herceg Novi	40.39	294	⇓iP	P	07 44 03.8	+0.4
MODS	Modra-Piesok	40.44	304	eP	P	07 44 04.9	+1.2
MODS				e		07 44 38.5	
MODS				e		07 46 04.1	
MODS				eSS	SS	07 53 08.9	+1.5
MODS				pmax	pmax		
	comp=Z,111nm,1.4s						
MODS	Modra-Piesok	40.44	304	eP	P	07 44 04.9	+1.2
MODS				esP	sP	07 44 38.5	0.0
MODS				ePP	PcP	07 46 04.1	-0.6
MODS				eSS	SS	07 53 08.9	+1.5
ARCES	ARCESS Array B	40.59	337	P	P	07 44 05.3	+0.6
	comp=Z,70nm,0.5s,baz=108,slow=8.6,SNR=210						
ARCES	ARCESS Array B	40.59	337	eP	P	07 44 05.4	+0.7
VRAC	Vranov	40.82	305	⇑iP	P	07 44 08.3	+1.5
VRAC	Vranov	40.82	305	eP	P	07 44 08.1	+1.3
VRAC				ePCP	PcP	07 46 12.8	+6.9
VRAC				eS	S	07 50 13.5	+3.2
STON	Ston	40.88	295	i P	P	07 44 07.2	-0.2
KSP	Ksiaz	40.92	307	eP	P	07 44 08.5	+0.9
KSP				epP	pP	07 44 31.4	+0.5
KSP				esP	sP	07 44 41.4	-1.0
KSP				ePcP	PcP	07 46 14.5	+8.4
KSP				eS	S	07 50 14.1	+2.3
KSP				LMZ	LR	07 57 54.4	
	comp=Z,1µm,37.8s						
KSP	Ksiaz	40.92	307	eP	P	07 44 08.5	+0.9
KSP				e*PP	pP	07 44 31.4	+0.5
KSP				e*SP	sP	07 44 41.4	-1.0
KSP				e		07 46 14.5	
KSP				eS	S	07 50 14.1	+2.3
DPC	Dobruska-Polom	40.93	307	eP	P	07 44 09.3	+1.5
DPC				epP	pP	07 44 32.3	+1.2
DPC				esP	sP	07 44 42.1	-0.4
DPC				ePCP	PcP	07 46 06.3	0.0
DPC				eS	S	07 50 14.0	+2.0
DPC				eXS	sS	07 50 52.9	+0.8
DPC				AMS	AMS	08 03 40.0	
	comp=Z,800nm,11.7s						
DPC	Dobruska-Polom	40.93	307	eP	P	07 44 09.3	+1.5
DPC				e		07 44 32.3	
DPC				e		07 44 42.1	
DPC				e		07 46 06.3	
DPC				eS	S	07 50 14.0	+2.0
DPC				e		07 50 52.9	
DPC				MLR	MLR		
	comp=Z,800nm,11.7s						
BLY	Banja Luka	40.93	298	eP	P	07 44 08.9	+1.1
	comp=Z,20nm,1.0s						
KRUC	Moravsky	40.97	305	eP	P	07 44 09.2	+1.2
KRUC				ePCP	PcP	07 46 14.6	+8.3
KRUC				eS	S	07 50 13.5	+1.1
BEHE	Becsehely	40.98	301	⇑eP	P	07 44 08.9	+0.8
SOP	Sopron	40.98	303	⇑eP	P	07 44 09.1	+0.9
CN2	Changchun	41.01	63	⇑P	P	07 44 09.1	+0.6
CN2				epP	pP	07 44 33.0	+1.2
CN2				eS	S	07 50 12.8	-0.5
CN2				pmax	pmax		
	comp=Z,40nm,0.9s						
CN2				pmax	pmax		
	comp=Z,200nm,6.0s						
CN2				LR	LR		
	comp=Z,2µm,13.0s						
CN2				LR	LR		
	comp=Z,900nm,13.0s						
CN2				LR	LR		
	comp=Z,1µm,15.0s						
KTK1	Kautokeino	41.07	336	eP	P	07 44 09.0	+0.4
UPC	Upice	41.12	307	eP	P	07 44 10.3	+1.0
UPC				ePP	PcP	07 46 02.2	-4.6
UPC				eS	S	07 50 15.8	+1.1
UPC				eXS	sS	07 50 56.6	+1.8
UPC	Upice	41.12	307	eP	P	07 44 10.3	+1.0
UPC				e		07 46 02.2	
UPC				eS	S	07 50 15.8	+1.1
UPC				e		07 50 56.6	
TPTI		41.29	139	P	P	07 44 10.3	-0.7
SSE	Sheshan	41.29	83	P	P	07 44 12.3	+1.4
SSE				S	S	07 50 21.8	+4.2
SSE				pmax	pmax		
	comp=Z,53nm,1.2s						
SSE				pmax	pmax		
	comp=Z,450nm,5.5s						
SSE				LR	LR		
	comp=Z,700nm,18.4s						
SSE				LR	LR		
	comp=Z,380nm,12.0s						
KOGS	Kog	41.34	301	⇑iP	P	07 44 11.9	+0.8
ZEA	Zeya	41.36	48	c iP	P	07 44 13.4	+2.2
ZEA				e		07 44 39.0	
ZEA				ePPP	PPP	07 46 25.0	
ZEA				eS	S	07 50 20.0	+1.8
ZEA				e		07 51 03.0	
ZEA				pmax	pmax		
	comp=N,71nm,1.0s						
ZEA				pmax	pmax		
	comp=E,120nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,240nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,800nm,8.0s						
ZEA				smax	smax		
	comp=E,600nm,12.0s						
ZEA				MLR	MLR		
	comp=Z,2µm,16.0s						
ZEA				MLR	MLR		
	comp=E,1µm,13.0s						
KCSI	Kotacane, Aceh	41.38	138	P	P	07 44 10.1	-1.7
CONA	Conrad Observa	41.42	303	i P	P	07 44 13.1	+1.2
	comp=E,194nm,1.4s,SNR=97						
KULM	Kulim	41.55	133	eP	P	07 44 14.2	+1.1
	comp=E,35nm,0.8s						
SNSI	Sinabang, Aceh	41.57	141	P	P	07 44 14.0	+0.7
HAMF	Hammerfest	41.66	338	eP	P	07 44 14.1	+0.8
HAMF				IAmb	IAmb	07 44 15.5	
	comp=Z,210nm,0.7s						
BSD	Bornholm Skovb	41.71	314	⇑iP	P	07 44 13.4	-0.6
	comp=Z,79nm,0.9s						
BSD				i pP	sP	07 44 47.0	-1.8
ARSA	Arzberg	41.73	302	i P	P	07 44 15.2	+0.8
	comp=Z,66nm,1.5s,SNR=21						
GROS	Grobnik	41.85	301	i P	P	07 44 16.1	+0.7
BAI	Bari	41.85	293	eP	P	07 44 15.5	+0.2
QZH	Quanzhou	41.86	93	⇑iP	P	07 44 16.0	+0.4
QZH				pP	pP	07 44 40.1	+1.1
QZH				S	S	07 50 29.1	+2.9
QZH				pmax	pmax		
	comp=Z,390nm,6.3s						
QZH				LR	LR		
	comp=Z,950nm,20.8s						
QZH				LR	LR		
	comp=Z,890nm,17.1s						
QZH				LR	LR		
	comp=Z,880nm,21.8s						
GOPC	GO Pecny, Ondr	41.94	306	eP	P	07 44 17.0	+1.0
GOPC				epP	pP	07 44 40.1	+0.7
GOPC				eS	S	07 50 27.4	+0.5
GOPC				eXS	sS	07 51 07.2	0.0
GOPC				AMS	AMS	08 04 30.0	
	comp=Z,1µm,16.4s						
GOPC	GO Pecny, Ondr	41.94	306	eP	P	07 44 17.0	+1.0
GOPC				e		07 44 40.1	
GOPC				eS	S	07 50 27.4	+0.5
GOPC				e		07 51 07.2	
GOPC				MLR	MLR		
	comp=Z,1µm,16.4s						
UDBI	Udbina	41.97	298	i P	P	07 44 16.6	+0.2
OZLJ	Ozalj	42.00	300	i P	P	07 44 16.2	-0.3
PVCC	Panska Ves	42.04	307	eP	P	07 44 17.9	+1.1
PVCC				esP	sP	07 44 51.4	-0.2
PVCC	Panska Ves	42.04	307	eP	P	07 44 17.9	+1.1
PVCC				e		07 44 51.4	
SG1	Sgolgore (BA)	42.06	292	eP	P	07 44 17.7	+0.6
PERS	Pernice	42.09	301	⇑iP	P	07 44 18.2	+0.9
PRU	Pruhonice	42.10	306	eP	P	07 44 18.4	+1.2
PRU				esP	sP	07 44 51.6	-0.5
PRU				ePP	PcP	07 46 20.6	+11
PRU				eS	S	07 50 27.3	-1.8
PRU				eXS	sS	07 51 10.1	+0.7
PRU				AMS	AMS	08 04 40.0	
	comp=Z,1µm,13.3s						
PRU	Pruhonice	42.10	306	eP	P	07 44 18.4	+1.2
PRU				e		07 44 51.6	
PRU				eS	S	07 50 27.3	-1.8
PRU				e		07 51 10.1	
PRU				MLR	MLR		
	comp=Z,1µm,13.3s						
SOKA	Soboth	42.14	301	i P	P	07 44 18.8	+1.0
	comp=Z,162nm,1.5s,SNR=96						
PRA	Prague	42.16	306	eP	P	07 44 19.3	+1.6
PRA	Prague	42.16	306	eP	P	07 44 19.3	+1.6
BOJS	Bojanci	42.16	300	⇑iP	P	07 44 18.7	+0.8
BOJS				epP	pP	07 44 41.8	+0.5
BOJS				esP	sP	07 44 52.6	-0.1
BOJS				ePcP	PcP	07 46 11.1	+0.8
BOJS				eS	S	07 50 31.4	+1.2
BOJS				eScS	ScS	07 54 08.5	-1.1
MS1	Monte Sant'Ang	42.40	294	eP	P	07 44 20.1	+0.2
BRG	Berggiesshubel	42.41	308	⇑iP	P	07 44 20.9	+1.1
	comp=Z,182nm,1.4s						
BRG				i pP	pP	07 44 44.1	+0.9
	comp=Z,157nm,1.4s						
BRG				sP	sP	07 44 53.0	-1.6
BRG				PP	PP	07 45 58.0	-1.7
BRG				eSCP	ScP	07 49 55.6	+3.1
	comp=Z,48nm,2.0s						
BRG				S	S	07 50 36.0	+2.3
BRG				e		07 53 25.2	
	comp=Z,22nm,1.6s						
BRG				SS	SS	07 53 44.0	-2.1
BRG	Berggiesshubel	42.41	308	⇑iP	P	07 44 20.9	+1.1
BRG				i *PP	pP	07 44 44.1	+0.9
BRG				*SP	sP	07 44 53.0	-1.6
BRG						07 45 58.0	
BRG				S	S	07 50 36.0	+2.3
BRG				SS	SS	07 53 44.0	-2.1
BRG				pmax	pmax		
	comp=Z,182nm,1.4s						
BRG				pmax	pmax		
	comp=N,48nm,2.0s						
TIP	Timpagrande	42.41	290	⇑iP	P	07 44 20.0	0.0
TIP	Timpagrande	42.41	290	eP	P	07 44 18.8	-1.2
	comp=N,34nm,1.1s						
TIP	Timpagrande	42.41	290	P	P	07 44 19.5	-0.5
IPM	Ipoh	42.42	133	eP	P	07 44 18.8	-1.5
	comp=N,160nm,0.6s						
OBKA	Obir	42.49	301	i P	P	07 44 21.8	+1.2
	comp=N,154nm,1.5s,SNR=35						
MOA	Molln	42.50	303	i P	P	07 44 21.3	+0.7
	comp=N,121nm,1.5s,SNR=42						
LJU	Ljubljana	42.58	300	⇑iP	P	07 44 22.5	+1.2
LJU				epP	pP	07 44 45.4	+0.8
LJU				esP	sP	07 44 56.2	+0.1
LJU				ePP	PP	07 46 03.4	+1.7
LJU				i PcP	PcP	07 46 12.7	+1.0
LJU				e		07 46 34.5	
LJU				eS	S	07 50 38.0	+1.7
LJU				eSS	SS	07 53 53.5	+3.9
LJU				eScS	ScS	07 54 12.0	-0.1
NVLJ	Novalja	42.59	298	i P	P	07 44 20.9	-0.4
PSI	Prapat	42.60	137	eP	P	07 44 21.1	-0.8
	comp=N,62nm,0.7s						
PSI	Prapat	42.60	137	eP	P	07 44 21.1	-0.8
PSI				pmax	pmax		
	comp=Z,62nm,0.7s						
RGN	Rugen	42.63	313	eP	P	07 44 23.1	+1.6
	comp=Z,151nm,0.8s						
HFS	Hagfors	42.68	321	P	P	07 44 22.5	+0.6
	comp=Z,307nm,0.5s,baz=98,slow=10,SNR=1053						
HFS				LR	LR	08 02 57.7	
	comp=Z,1µm,19.0s,baz=102,slow=37						
TRO	Tromso	42.72	336	eP	P	07 44 22.4	+0.4
TRO				IAmb	IAmb	07 44 23.2	
	comp=Z,51nm,0.7s						
GEC2	GERESS Array S	42.75	305	eP	P	07 44 23.5	+0.8
	comp=Z,11nm,0.9s						
GEC2	GERESS Array S	42.75	305	eP	P	07 44 23.5	+0.8
GEC2				pmax	pmax		
	comp=Z,11nm,0.9s						
GERES	GERESS Array B	42.75	305	P	P	07 44 23.5	+0.8
	comp=Z,4.7nm,0.5s,baz=88,slow=6.9,SNR=49						
GERES				PcP	PcP	07 46 13.3	+0.9
	comp=Z,10nm,0.8s,baz=83,slow=4.2,SNR=4.6						
GERES				LR	LR	08 05 20.4	
	comp=Z,538nm,19.1s,baz=88,slow=40						
GEA0	GERESS Array S	42.76	305	eP	P	07 44 22.6	-0.1
KHC	Kasperske Hory	42.80	305	eP	P	07 44 24.2	+1.2
KHC				epP	pP	07 44 46.9	+0.4
KHC				esP	sP	07 44 56.9	-1.0
KHC				eS	S	07 50 39.1	-0.5
KHC				AMS	AMS	08 05 20.0	
	comp=Z,800nm,10.8s						
KHC	Kasperske Hory	42.80	305	eP	P	07 44 23.6	+0.5
	comp=Z,5.8nm,0.9s						
KHC	Kasperske Hory	42.80	305	eP	P	07 44 24.2	+1.2
KHC				e		07 44 46.9	
KHC				e		07 44 56.9	
KHC				eS	S	07 50 39.1	-0.5
KHC				MLR	MLR		
	comp=Z,800nm,10.8s						
CUC	Castrocucco	42.90	291	eP	P	07 44 24.9	+0.9
	comp=Z,54nm,0.7s						
CLL	Collm	42.97	308	⇑iP	P	07 44 24.8	+0.6
	comp=Z,184nm,1.6s						
CLL				i pP	pP	07 44 48.1	+0.4
CLL				i sP	sP	07 44 58.7	-0.5
CLL				i		07 45 02.9	
CLL				ePP	PP	07 46 05.0	-0.7
CLL				epPP		07 46 23.0	
CLL				ePPP	PPP	07 46 41.0	
CLL				ePcS	PcS	07 50 05.0	-0.1
CLL				eS	S	07 50 44.0	+2.2
CLL				esS	sS	07 51 23.0	+0.8
CLL				e		07 52 07.0	
CLL				eSS	SS	07 54 00.0	+3.1
CLL				eSSS	SSS	07 54 42.0	
CLL				Lm	MLR	08 05 00.0	
	comp=N,400nm,21.1s						
CLL				Lm	MLR	08 05 00.0	
	comp=E,900nm,18.7s						
CLL	Collm	42.97	308	eP	P	07 44 24.9	+0.6
	comp=E,18nm,0.7s						
CLL	Collm	42.97	308	⇑iP	P	07 44 24.8	+0.6
CLL				i *PP	pP	07 44 48.1	+0.4
CLL				i *SP	sP	07 44 58.7	-0.5
CLL				eS	S	07 50 44.0	+2.2
CLL				e*SS	sS	07 51 23.0	+0.8
CLL				pmax	pmax		
	comp=Z,184nm,1.6s						
CADS	Cadrg	43.09	301	⇑iP	P	07 44 26.0	+0.6
CADS				epP	pP	07 44 49.0	+0.1
CADS				esP	sP	07 44 59.8	-0.5
CADS				i PcP	PcP	07 46 13.4	-0.1
CADS				eS	S	07 50 43.2	-0.7
CADS				e		07 51 25.4	
CADS				eScS	ScS	07 54 14.6	-0.8
CADS				e		07 57 40.7	
MYKA	Terra Mystica	43.09	301	i P	P	07 44 26.3	+0.9
	comp=Z,41nm,1.2s,SNR=24						
COP	Copenhagen	43.13	315	⇑iP	P	07 44 26.6	+1.1
	comp=Z,148nm,1.0s						
COP				i		07 45 00.1	
GSI	Gunungsitoli	43.15	140	P	P	07 44 27.3	+1.1
GSI	Gunungsitoli	43.15	140	eP	P	07 44 27.2	+1.1
	comp=Z,303nm,0.7s						
TRI	Trieste	43.16	300	eP	P	07 44 26.3	+0.4
	comp=Z,22nm,0.7s						
TRI	Trieste	43.16	300	eP	P	07 44 26.3	+0.4
TRI				pmax	pmax		
	comp=Z,22nm,0.7s						
YAK	Yakutsk	43.20	36	P	P	07 44 26.7	+0.7
	comp=Z,524nm,0.7s,baz=281,slow=2.4,SNR=77						
YAK	Yakutsk	43.20	36	eP	P	07 44 26.4	+0.4
	comp=Z,620nm,0.8s						
YAK	Yakutsk	43.20	36	c iP	P	07 44 26.2	+0.2
YAK				e*PP	pP	07 44 49.8	+0.3
YAK				e		07 46 07.6	
YAK				e		07 46 13.0	
YAK				ePPP	PPP	07 46 47.1	
YAK				eS	S	07 50 45.8	+0.8
YAK				eSS	SS	07 53 57.7	-3.5
YAK				e		07 54 19.1	
YAK				eSSS	SSS	07 54 46.2	
YAK				pmax	pmax		
	comp=Z,493nm,0.9s						
YAK				pmax	pmax		
	comp=N,48nm,0.9s						
YAK				pmax	pmax		
	comp=E,52nm,1.0s						
YAK				pmax	pmax		
	comp=Z,91nm,1.0s						
YAK				pmax	pmax		
	comp=E,50nm,1.1s						
YAK				pmax	pmax		
	comp=N,51nm,1.4s						
YAK				smax	smax		
	comp=N,255nm,1.4s						
YAK				smax	smax		
	comp=E,811nm,2.0s						
KBA	Koelnbreinsper	43.23	302	i P	P	07 44 27.3	+0.6
	comp=E,77nm,1.4s,SNR=37						
LLD	Lille Linde	43.26	314	i P	P	07 44 27.7	+1.2
LLD				i		07 45 01.9	
CEL	Celeste	43.31	289	eP	P	07 44 27.8	+0.5
	comp=E,46nm,1.1s						
MOR8	Moi Rana	43.33	330	eP	P	07 44 26.9	-0.1
MOR8				IAmb	IAmb	07 44 27.9	
	comp=Z,236nm,0.8s						
INCN	Inchon	43.38	72	eP	P	07 44 28.8	+1.0
	comp=Z,70nm,0.9s						
INCN	Inchon	43.38	72	eP	P	07 44 28.8	+1.0
INCN				pmax	pmax		
	comp=Z,70nm,0.9s						
NKC	Novy Kostel	43.41	307	eP	P	07 44 29.3	+1.4
NKC	Novy Kostel	43.41	307	eP	P	07 44 29.3	+1.4
STEI	Steigen	43.46	333	eP	P	07 44 28.5	+0.5
STEI				IAmb	IAmb	07 44 29.1	
	comp=Z,181nm,1.1s						
NC405	NORSAR Array S	43.74	323	eP	P	07 44 30.7	+0.3
MDJ	Mudanjiang	43.79	61	P	P	07 44 28.4	-2.6
MDJ				pP	pP	07 44 52.8	-1.7
MDJ				sP	sP	07 45 05.0	-0.9
MDJ				PP	PP	07 46 13.3	-1.3
MDJ				S	S	07 50 52.4	-1.6
MDJ				pmax	pmax		
	comp=Z,88nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,800nm,3.7s						
MDJ				LR	LR		
	comp=Z,2µm,10.4s						
MDJ				LR	LR		
	comp=Z,880nm,13.5s						
MDJ				LR	LR		
	comp=Z,2µm,18.7s						
MDJ	Mudanjiang	43.79	61	eP	P	07 44 30.9	-0.1
	comp=Z,42nm,0.7s						
NC602	NORSAR Array S	43.80	322	eP	P	07 44 30.7	-0.1
ABTA	Abfaltersbach	43.84	302	i P	P	07 44 31.5	0.0
	comp=Z,45nm,1.3s,SNR=17						
STRU	Stroemstad	43.88	320	eP	P	07 44 31.3	-0.1
NC303	NORSAR Array S	43.92	323	eP	P	07 44 32.1	+0.3
KONS	Konsvik	43.92	331	eP	P	07 44 32.1	+0.4
KONS				IAmb	IAmb	07 44 34.3	
	comp=Z,81nm,0.9s						
NB201	NORSAR Array S	43.94	323	eP	P	07 44 32.2	+0.2
NB2	NORSAR Subarra	43.98	323	P	P	07 44 32.3	0.0
	comp=Z,112nm,0.5s,baz=94,slow=7.9						
NB2	NORSAR Subarra	43.98	323	P	P	07 44 32.3	0.0
	baz=94,slow=7.9						
NOA	NORSAR Array B	43.98	323	P	P	07 44 32.3	0.0
	comp=Z,90nm,0.5s,baz=141,slow=6.3,SNR=374						
NSS	Namsos	44.04	328	eP	P	07 44 32.3	-0.3
NSS				IAmb	IAmb	07 44 34.2	
	comp=Z,94nm,1.2s						
AQU	L'Aquila	44.09	295	eP	P	07 44 34.7	+1.2
	comp=Z,66nm,1.1s						
AQU	L'Aquila	44.09	295	eP	P	07 44 34.7	+1.2
AQU				pmax	pmax		
	comp=Z,66nm,1.1s						
NAO01	NORSAR Array S	44.12	322	eP	P	07 44 33.2	-0.2
NAO01	NORSAR Array S	44.12	322	eP	P	07 44 33.3	-0.2
NAO01				IAmb	IAmb	07 44 34.4	
	comp=Z,424nm,1.1s						
LOF	Lofoten	44.13	333	eP	P	07 44 32.8	-0.5
LOF				IAmb	IAmb	07 44 33.5	
	comp=Z,148nm,1.5s						
NBO00	NORSAR Array S	44.19	323	eP	P	07 44 34.1	+0.1
YHNB	Yeheng	44.21	92	eP	P	07 44 35.9	+1.2
	comp=Z,25nm,0.8s						
NC204	NORSAR Array S	44.22	323	eP	P	07 44 34.3	0.0
GRFO	Grafenberg	44.27	306	eP	P	07 44 36.5	+1.8
	comp=Z,51nm,1.1s						
TJN	Taejon	44.28	73	ceP	P	07 44 34.7	-0.3
TPUB	Ta-pu	44.29	94	eP	P	07 44 37.2	+2.0
	comp=Z,16nm,0.9s						
SSLB	Suanglung	44.30	93	eP	P	07 44 37.1	+1.7
	comp=Z,37nm,0.8s						
KS01	Wonju Array Si	44.34	72	eP	P	07 44 35.1	-0.4
KS15	Wonju Array Si	44.34	72	eP	P	07 44 36.3	+0.9
KSAR	Wonju Array Be	44.34	72	P	P	07 44 36.2	+0.7
KSAR	Wonju Array Be	44.34	72	P	P	07 44 36.2	+0.7
WTTA	Wattenberg	44.35	303	i P	P	07 44 35.7	0.0
	comp=Z,51nm,0.8s,SNR=20						
KSRS	Korea Array	44.37	72	P	P	07 44 36.2	+0.5
	comp=Z,45nm,0.9s,baz=282,slow=6.5,SNR=80						
KSRS				LR	LR	08 06 06.2	
	comp=Z,824nm,18.9s,baz=295,slow=40						
WATA	Walderalm	44.38	303	i P	P	07 44 36.3	+0.5
	comp=Z,112nm,1.4s,SNR=8.3						
KLR	Kul'dur	44.48	54	P	P	07 44 37.2	+0.8
	comp=Z,6.4nm,0.7s,baz=281,slow=8.0,SNR=190						
KLR	Kul'dur	44.48	54	c iP	P	07 44 37.0	+0.6
BJO	Bjornoya	44.62	342	eP	P	07 44 38.1	+1.0
BJO				IAmb	IAmb	07 44 39.4	
	comp=Z,396nm,0.6s						
TBLU	Trondheim	44.62	326	eP	P	07 44 36.6	-0.7
NACB	Ninganchiao	44.63	92	eP	P	07 44 41.4	+3.5
MNSI	Mandailing Nat	44.63	138	P	P	07 44 38.6	+0.6
PBSI	Pulau Batu	44.67	140	P	P	07 44 39.8	+1.5
KONO	Kongsberg	44.71	321	eP	P	07 44 38.3	+0.3
	comp=Z,132nm,0.6s						
KONO	Kongsberg	44.71	321	c iP	P	07 44 38.2	+0.1
KONO				pmax	pmax		
	comp=Z,138nm,0.7s						
KONO	Kongsberg	44.71	321	eP	P	07 44 38.4	+0.3

KONO				IAmb	IAmb	07 44 39.4	
	comp=Z,138nm,0.6s						
YULB	**Yu-li**	**44.77**	**93**	*e*P	**P**	**07 44 41.2**	**+2.1**
	comp=Z,17nm,0.7s						
TWG	**Pinlang**	**44.88**	**94**	*e*P	**P**	**07 44 41.5**	**+1.5**
	comp=Z,192nm,0.9s						
TWG				*e*pP	**pP**	**07 45 08.1**	**+4.5**
RETA	**Reutte**	**44.90**	**303**	*i* P	**P**	**07 44 40.0**	**+0.1**
	comp=Z,56nm,1.3s,SNR=22						
MUD	**Monsted U’grnd**	**44.95**	**316**⇑	*i*P	**P**	**07 44 41.0**	**+1.0**
	comp=Z,310nm,1.5s						
TIXI	**Tiksi**	**44.99**	**22**	P	**P**	**07 44 40.6**	**+0.4**
	comp=Z,268nm,0.5s,baz=267,slow=4.7,SNR=112						
TIXI	**Tiksi**	**44.99**	**22**	*e*P	**P**	**07 44 40.4**	**+0.2**
	comp=Z,267nm,0.7s						
TIXI	**Tiksi**	**44.99**	**22***c*	*i*P	**P**	**07 44 40.5**	**+0.4**
TIXI				pmax	pmax		
	comp=Z,322nm,0.8s						
FETA	**Feichten**	**45.00**	**303**	*i* P	**P**	**07 44 40.7**	**-0.1**
	comp=Z,76nm,1.3s,SNR=31						
DOMB	**Dombas**	**45.08**	**324**	*e*P	**P**	**07 44 41.1**	**+0.1**
DOMB				IAmb	IAmb	07 44 43.0	
	comp=Z,127nm,1.0s						
HOMB	**Homborsund**	**45.27**	**319**	*e*P	**P**	**07 44 42.5**	**+0.1**
HOMB				IAmb	IAmb	07 44 43.9	
	comp=Z,173nm,1.0s						
MSHR	**Mys Shultsa**	**45.35**	**64**⇑	*e*P	**P**	**07 44 45.9**	**+2.5**
FUORN	**Ofenpass-Fuorn**	**45.39**	**302**	*e*P	**P**	**07 44 43.8**	**-0.2**
	comp=Z,26nm,0.6s						
DAVA	**Damuels**	**45.52**	**303**	*i* P	**P**	**07 44 45.2**	**+0.3**
	comp=Z,77nm,0.5s,SNR=52						
CLTB	**Caltabellotta**	**45.54**	**289**	*e*P	**P**	**07 44 45.0**	**-0.1**
	comp=Z,50nm,0.9s						
USRK	**Ussuriysk Ar.**	**45.56**	**61**	P	**P**	**07 44 45.4**	**+0.4**
	comp=Z,29nm,0.6s,baz=275,slow=7.0						
USRK				LR	LR	08 05 17.1	
	comp=Z,907nm,18.7s,baz=270,slow=38						
DAVOX	**Davos/Dischmat**	**45.62**	**302**	P	**P**	**07 44 45.7**	**0.0**
	comp=Z,36nm,0.5s,baz=66,slow=7.9,SNR=53						
DAVOX				PcP	**PcP**	**07 46 23.6**	**+1.2**
	comp=Z,26nm,0.6s,baz=211,slow=8.4,SNR=3.5						
STU	**Stuttgart**	**45.71**	**305**	*e*P	**P**	**07 44 47.0**	**+0.9**
	comp=Z,56nm,1.1s						
STU	**Stuttgart**	**45.71**	**305**	*e*P	**P**	**07 44 47.1**	**+0.9**
STU				pmax	pmax		
	comp=Z,56nm,1.1s						
MOL	**Molde**	**45.81**	**325**	*e*P	**P**	**07 44 47.4**	**+0.7**
MOL				IAmb	IAmb	07 44 48.2	
	comp=Z,49nm,0.7s						
BKNI	**Bangkinang**	**45.82**	**136**	*e*P	**P**	**07 44 47.1**	**-0.2**
	comp=Z,349nm,0.8s						
VLC	**Villacollemand**	**45.82**	**299**	*e*P	**P**	**07 44 47.8**	**+0.7**
	comp=Z,67nm,1.0s						
SNART	**Snartemo**	**45.95**	**319**	*e*P	**P**	**07 44 48.6**	**+0.7**
SNART				IAmb	IAmb	07 44 50.1	
	comp=Z,49nm,0.8s						
TUE	**Stuetta**	**46.04**	**302**	*e*P	**P**	**07 44 48.6**	**-0.4**
	comp=Z,17nm,1.0s						
AKN	**Aaknes**	**46.05**	**324**	*e*P	**P**	**07 44 50.0**	**+1.3**
AKN				IAmb	IAmb	07 44 54.2	
	comp=Z,518nm,4.4s						
SISI	**Saibi**	**46.17**	**140**	P	**P**	**07 44 51.6**	**+1.5**
ODD1	**Odda**	**46.21**	**321**	*e*P	**P**	**07 44 51.0**	**+1.0**
ODD1				IAmb	IAmb	07 44 52.5	
	comp=Z,91nm,0.7s						
MYKOM	**Kota Tinggi**	**46.24**	**132**	*e*P	**P**	**07 44 50.8**	**+0.1**
	comp=Z,125nm,0.7s						
BLS5	**Blasjo**	**46.31**	**320**	*e*P	**P**	**07 44 51.7**	**+1.0**
BLS5				IAmb	IAmb	07 44 52.8	
	comp=Z,385nm,1.3s						
BFO	**Black Forest**	**46.36**	**305**	*e*P	**P**	**07 44 51.5**	**+0.2**
	comp=Z,20nm,0.9s						
BFO	**Black Forest**	**46.36**	**305**	*i* P	**P**	**07 44 51.9**	**+0.6**
HYA	**Hoyanger**	**46.42**	**323**	*e*P	**P**	**07 44 52.1**	**+0.6**
HYA				IAmb	IAmb	07 44 53.8	
	comp=Z,69nm,0.8s						
HSPB	**Hornsund (broa**	**46.51**	**345**	*e*P	**P**	**07 44 53.6**	**+1.6**
HSPB				*e*		07 45 27.6	
HSPB				*e*S	**S**	**07 51 36.0**	**+3.6**
HSPB				*e*S	**sS**	**07 52 15.4**	**+2.2**
BER	**Bergen**	**46.85**	**322**	*e*P	**P**	**07 44 55.5**	**+0.7**
BER				IAmb	IAmb	07 44 56.7	
	comp=Z,166nm,0.6s						
SPA0	**Spitsbergen Ar**	**46.85**	**347**	*e*P	**P**	**07 44 56.1**	**+1.3**
SPA0	**Spitsbergen Ar**	**46.85**	**347**	*e*P	**P**	**07 44 55.7**	**+1.0**
SPA0				IAmb	IAmb	07 44 57.2	
	comp=Z,171nm,0.8s						
SPITS	**Spitsbergen Ar**	**46.85**	**347**	P	**P**	**07 44 55.8**	**+1.1**
	comp=Z,90nm,0.6s,baz=92,slow=10,SNR=113						
SPITS				LR	LR	08 07 25.4	
	comp=Z,1µm,18.6s,baz=145,slow=39						
ASK	**Askoy**	**46.92**	**322**	*e*P	**P**	**07 44 56.2**	**+0.8**
ASK				IAmb	IAmb	07 44 57.1	
	comp=Z,111nm,0.6s						
KMY	**Karmoy**	**46.94**	**320**	*e*P	**P**	**07 44 56.7**	**+1.2**
KMY				IAmb	IAmb	07 44 57.3	
	comp=Z,441nm,1.5s						
SUE	**Sulen**	**47.12**	**322**	*e*P	**P**	**07 44 57.1**	**+0.2**
SUE				IAmb	IAmb	07 44 57.9	
	comp=Z,170nm,1.3s						
LODK	**Lodwar**	**47.13**	**233**	*i* P	**P**	**07 44 59.0**	**+1.3**
LODK				*e*		07 45 11.4	
	baz=59,slow=9.3						
ECH	**Echery**	**47.15**	**305**	*e*P	**P**	**07 44 57.2**	**-0.2**
	comp=Z,15nm,1.0s						
ECH	**Echery**	**47.15**	**305**	*e*P	**P**	**07 44 57.2**	**-0.2**
ECH				pmax	pmax		
	comp=Z,15nm,1.0s						
GRNR	**Gornyy**	**47.22**	**52**⇑	*i*P	**P**	**07 45 01.5**	**+3.5**
GRNR				pmax	pmax		
	comp=Z,210nm,1.0s						
MEM	**Membach**	**47.44**	**308**	⇑P	**P**	**07 45 00.4**	**+0.7**
	comp=Z,42nm,1.4s						
SENIN	**Lac Senin/Sane**	**47.45**	**302**	*e*P	**P**	**07 45 00.1**	**+0.1**
	comp=Z,45nm,0.9s						
WLF	**Walferdange**	**47.52**	**307**	⇓P	**P**	**07 45 01.6**	**+1.3**
	comp=Z,74nm,1.2s						
WLF	**Walferdange**	**47.52**	**307**	*e*P	**P**	**07 45 00.4**	**+0.1**
	comp=Z,82nm,0.8s						
WLF	**Walferdange**	**47.52**	**307**	*e*P	**P**	**07 45 00.4**	**+0.1**
WLF				pmax	pmax		
	comp=Z,82nm,0.8s						
BEBN	**Eben Emael**	**47.62**	**308**	⇑P	**P**	**07 45 02.0**	**+1.0**
BCLA	**Clavier**	**47.92**	**308**	⇑P	**P**	**07 45 04.2**	**+0.8**
KBS	**Kingsbay**	**47.97**	**347**	*e*P	**P**	**07 45 04.4**	**+1.0**
	comp=Z,219nm,0.8s						
KBS	**Kingsbay**	**47.97**	**347**	*e*P	**P**	**07 45 04.4**	**+1.0**
KBS				pmax	pmax		
	comp=Z,219nm,0.8s						
KBS	**Kingsbay**	**47.97**	**347**	*e*P	**P**	**07 45 04.3**	**+1.0**
KBS				IAmb	IAmb	07 45 05.7	
	comp=Z,227nm,0.8s						
KRJI	**Kerinci**	**48.06**	**138**	P	**P**	**07 45 05.1**	**+0.2**
JNU	**Nakatsue**	**48.13**	**76**	P	**P**	**07 45 05.6**	**+0.3**
	comp=Z,145nm,0.7s,baz=312,slow=4.7,SNR=71						
JNU				LR	LR	08 07 56.1	
	comp=Z,610nm,18.1s,baz=302,slow=39						
JNU	**Nakatsue**	**48.13**	**76**	*e*P	**P**	**07 45 06.0**	**+0.7**
	comp=Z,192nm,0.9s						
BNI	**Bardonecchia**	**48.18**	**301**	*e*P	**P**	**07 45 05.6**	**0.0**
	comp=Z,90nm,1.1s						
BNI	**Bardonecchia**	**48.18**	**301**	*e*P	**P**	**07 45 05.6**	**0.0**
BNI				pmax	pmax		
	comp=Z,90nm,1.1s						
DOU	**Dourbes**	**48.43**	**308**	⇑P	**P**	**07 45 08.2**	**+1.0**
	comp=Z,48nm,1.5s						
UCC	**Uccle**	**48.44**	**309**	⇑P	**P**	**07 45 07.3**	**0.0**
DSRI	**Dabo**	**48.49**	**133**	P	**P**	**07 45 09.4**	**+1.3**
SNF	**Seneffe**	**48.54**	**308**	⇑P	**P**	**07 45 09.0**	**+0.9**
TEY	**Ternei**	**48.56**	**59**⇑	*i*P	**P**	**07 45 09.0**	**+0.7**
TEY				pmax	pmax		
	comp=Z,90nm,0.8s						
JOW	**Kunigami**	**48.71**	**85**	P	**P**	**07 45 10.0**	**+0.3**
	comp=Z,26nm,0.5s,baz=289,slow=8.7,SNR=11						
JOW				LR	LR	08 10 26.9	
	comp=Z,471nm,18.3s,baz=288,slow=42						
JOW	**Kunigami**	**48.71**	**85**	*e*P	**P**	**07 45 10.1**	**+0.3**
	comp=Z,58nm,1.0s						
TAMR	**Tamra**	**48.80**	**290**	*e*P	**P**	**07 45 12.0**	**+1.7**
	comp=Z,69nm,1.1s						
KEST	**Kesra**	**49.09**	**288**	P	**P**	**07 45 13.7**	**+1.1**
	comp=Z,20nm,0.4s,baz=326,slow=2.2,SNR=45						
KEST	**Kesra**	**49.09**	**288**	*e*P	**P**	**07 45 13.8**	**+1.1**
	comp=Z,43nm,1.0s						
MASI	**Maura Aman, Be**	**49.36**	**138**	P	**P**	**07 45 13.2**	**-1.6**
NKL	**Nikolayevsk**	**49.40**	**48**	*i* P	**P**	**07 45 15.0**	**+0.4**
NKL				*e*		07 45 42.0	
NKL				*e*		07 52 12.0	
NKL				pmax	pmax		
	comp=N,80nm,0.9s						
NKL				pmax	pmax		
	comp=Z,370nm,0.9s						
NKL				pmax	pmax		
	comp=E,500nm,5.0s						
NKL				pmax	pmax		
	comp=Z,1µm,5.0s						
NKL				MLR	MLR		
	comp=E,1µm,14.0s						
NKL				MLR	MLR		
	comp=Z,2µm,14.0s						
TGY	**Tagaytay City**	**49.60**	**104**	P	**P**	**07 45 16.6**	**-0.1**
	comp=Z,148nm,0.4s,baz=261,slow=4.8,SNR=4.3						
THTN	**Thala**	**49.65**	**288**	*e*P	**P**	**07 45 18.4**	**+1.5**
	comp=Z,31nm,0.9s						
LRW	**Lerwick**	**50.11**	**322**⇑	*e*P	**P**	**07 45 20.1**	**+0.2**
LRW				IAmb	IAmb	07 45 21.3	
	comp=Z,130nm,0.8s						
CMAH	**Djebel Manchou**	**50.22**	**290**	P	**P**	**07 45 19.3**	**-1.9**
ABSA	**Djebel Ababsia**	**50.30**	**289**	P	**P**	**07 45 20.1**	**-1.7**
ELSH	**Elham, Standar**	**50.36**	**310**⇑	*e*P	**P**	**07 45 22.2**	**+0.3**
ELSH				IAmb	IAmb	07 45 23.7	
	comp=Z,301nm,0.7s						
KSM	**Kuching**	**50.51**	**125**	*e*P	**P**	**07 45 24.4**	**+0.9**
	comp=Z,32nm,0.7s						
CAEH	**’Ain El Ouahch**	**50.59**	**290**	P	**P**	**07 45 22.0**	**-1.9**
CKFL	**Kef-Lekhel**	**50.83**	**290**	P	**P**	**07 45 23.8**	**-2.0**
SBUM	**Sibu**	**51.04**	**123**	*e*P	**P**	**07 45 29.4**	**+2.0**
	comp=Z,45nm,1.0s						
CASM	**Ain Smara**	**51.05**	**290**	P	**P**	**07 45 25.4**	**-2.0**
TYV	**Tymovskoe**	**51.08**	**50**	*e*P	**P**	**07 45 27.2**	**-0.1**
TYV				*e*S	**S**	**07 52 38.4**	**+1.3**
TYV				pmax	pmax		
	comp=Z,80nm,0.8s						
TYV				pmax	pmax		
	comp=Z,1µm,5.3s						
TYV				smax	smax		
	comp=N,400nm,8.8s						
CTEI	**Djebel Teioual**	**51.19**	**290**	P	**P**	**07 45 27.2**	**-1.3**
KKM	**Kota Kinabalu**	**51.26**	**116**	*e*P	**P**	**07 45 31.1**	**+1.8**
	comp=N,160nm,0.9s						
KKM				*e*pP	**pP**	**07 45 56.7**	**+3.3**
DRUM	**Mains of Drumt**	**51.28**	**318**⇑	*e*P	**P**	**07 45 28.5**	**-0.2**
DRUM				IAmb	IAmb	07 45 30.1	
	comp=Z,390nm,1.5s						
HPK	**Haverah Park**	**51.40**	**314**⇑	*e*P	**P**	**07 45 29.8**	**+0.2**
EDMD	**Edmundbyers**	**51.41**	**315**⇑	*e*P	**P**	**07 45 29.9**	**+0.2**
EDMD				IAmb	IAmb	07 45 31.1	
	comp=Z,408nm,1.4s						
DFRA	**Djebel Bou Aff**	**51.41**	**290**	P	**P**	**07 45 28.2**	**-1.9**
MME1	**Meikle Cairn**	**51.47**	**318**⇑	*e*P	**P**	**07 45 29.9**	**-0.2**
ESY	**Stoneypath**	**51.55**	**316**⇑	*e*P	**P**	**07 45 30.8**	**+0.1**
MCD	**Coleburn Disti**	**51.57**	**318**⇑	*e*P	**P**	**07 45 31.3**	**+0.4**
BIGH	**Upper Bighouse**	**51.74**	**320**	*e*P	**P**	**07 45 32.0**	**-0.1**
BIGH				IAmb	IAmb	07 45 33.7	
	comp=Z,372nm,1.0s						
EDI	**Edinburgh**	**51.86**	**316**⇑	*e*P	**P**	**07 45 33.1**	**+0.1**
EDI				IAmb	IAmb	07 45 33.6	
	comp=Z,263nm,1.4s						
CKHR	**Kef el Ahmar**	**51.88**	**290**	P	**P**	**07 45 31.9**	**-1.8**
SET	**Setif**	**51.89**	**290**	P	**P**	**07 45 35.0**	**+1.3**
EKA	**Eskdalemuir Ar**	**51.97**	**316**	P	**P**	**07 45 33.9**	**0.0**
	comp=Z,27nm,0.6s,baz=93,slow=8.0,SNR=62						
EKA				LR	LR	08 10 10.7	
	comp=Z,1µm,18.4s,baz=60,slow=39						
INU	**Inuyama**	**51.98**	**71**	*e*P	**P**	**07 45 33.7**	**-0.5**
	comp=Z,93nm,0.8s						
ESK	**Eskdalemuir**	**52.00**	**316**	*e*P	**P**	**07 45 34.3**	**+0.2**
	comp=Z,70nm,1.1s						
ESK	**Eskdalemuir**	**52.00**	**316**⇑	*e*P	**P**	**07 45 34.1**	**0.0**
ESK				IAmb	IAmb	07 45 35.3	
	comp=Z,186nm,1.3s						
ESK	**Eskdalemuir**	**52.00**	**316**	*e*P	**P**	**07 45 34.3**	**+0.2**
ESK				pmax	pmax		
	comp=Z,71nm,1.1s						
JMIC	**Jan Mayen**	**52.04**	**336**	*e*P	**P**	**07 45 37.0**	**+2.8**
BHH	**Howats Hill**	**52.06**	**315**	*e*P	**P**	**07 45 34.5**	**0.0**
KESW	**Keswick, Cumbr**	**52.10**	**315**⇑	*e*P	**P**	**07 45 35.1**	**+0.2**
KESW				IAmb	IAmb	07 45 36.5	
	comp=Z,325nm,1.4s						
BBO1	**Bothel**	**52.15**	**315**	*e*P	**P**	**07 45 34.3**	**-0.9**
YSS	**Yuzh-Sakhalins**	**52.17**	**55**	*e*P	**P**	**07 45 35.8**	**+0.4**
	comp=Z,188nm,0.8s						
YSS	**Yuzh-Sakhalins**	**52.17**	**55**α	*i*P	**P**	**07 45 35.7**	**+0.3**
YSS				*e**PP	**pP**	**07 46 00.0**	**+0.4**
YSS				*e**SP	**sP**	**07 46 12.9**	**+2.0**
YSS				*e*		07 47 37.0	
YSS				*e*S	**S**	**07 52 54.0**	**+1.9**
YSS				pmax	pmax		
	comp=Z,800nm,8.0s						
YSS				pmax	pmax		
	comp=Z,200nm,0.7s						
YSS				MLR	MLR		
	comp=Z,1µm,11.0s						
YSS				MLR	MLR		
	comp=E,800nm,16.0s						
MDO	**Dochfour**	**52.18**	**318**⇑	*e*P	**P**	**07 45 35.5**	**+0.1**
INVG	**Invergeldie, C**	**52.23**	**317**⇑	*e*P	**P**	**07 45 35.4**	**-0.4**
INVG				IAmb	IAmb	07 45 36.9	
	comp=Z,174nm,1.4s						
MJB9	**Matsu-Tunnel**	**52.41**	**69**	*e*P	**P**	**07 45 37.2**	**-0.3**
	comp=Z,109nm,0.8s						
MAJO	**Matsushiro**	**52.41**	**69**	*e*P	**P**	**07 45 37.1**	**-0.4**
	comp=Z,106nm,0.8s						
MAJO	**Matsushiro**	**52.41**	**69***c*	*i*P	**P**	**07 45 36.9**	**-0.6**
MAJO				pmax	pmax		
	comp=Z,94nm,0.8s						
MAT	**Matsushiro**	**52.41**	**69**	P	**P**	**07 45 36.9**	**-0.6**
MAT				S	**S**	**07 52 58.0**	**+2.1**
MJAR	**Matsushiro Arr**	**52.42**	**69**	P	**P**	**07 45 37.5**	**0.0**
	comp=Z,66nm,0.8s,baz=288,slow=10,SNR=131						
MJAR				LR	LR	08 09 11.6	
	comp=Z,389nm,20.4s,baz=290,slow=37						
EAB	**Aberfoyle**	**52.44**	**317**⇑	*e*P	**P**	**07 45 37.4**	**0.0**
HLM1	**Long Mynd**	**52.46**	**312**⇑	*e*P	**P**	**07 45 37.5**	**-0.1**
HLM1				IAmb	IAmb	07 45 38.9	
	comp=Z,196nm,1.7s						
FOEL	**Foel Wylfa**	**52.56**	**313**	*e*P	**P**	**07 45 38.2**	**-0.1**
FOEL				IAmb	IAmb	07 45 39.9	
	comp=Z,384nm,1.8s						
MONM	**Monmouth**	**52.59**	**311**	*e*P	**P**	**07 45 38.3**	**-0.2**
MONM				IAmb	IAmb	07 45 39.5	
	comp=Z,389nm,1.4s						
PGBU	**Glenifferbraes**	**52.60**	**316**⇑	*e*P	**P**	**07 45 38.8**	**+0.3**
PGBU				IAmb	IAmb	07 45 39.3	
	comp=Z,298nm,1.4s						
HGH	**Gray Hill**	**52.64**	**311**⇑	*e*P	**P**	**07 45 38.4**	**-0.5**
MCH1	**Michaelchurch**	**52.66**	**312**⇑	*e*P	**P**	**07 45 38.8**	**-0.2**
MCH1				IAmb	IAmb	07 45 40.3	
	comp=Z,150nm,0.8s						
LLW	**Llanuwychllyn**	**52.84**	**313**⇑	*e*P	**P**	**07 45 40.4**	**0.0**
KPL	**Plockton**	**52.89**	**319**⇑	*e*P	**P**	**07 45 40.6**	**+0.1**
KPL				IAmb	IAmb	07 45 42.3	
	comp=Z,114nm,0.8s						
JSA	**Saint Aubin**	**52.91**	**308**⇑	*e*P	**P**	**07 45 40.4**	**-0.5**
ASAJ	**Asahikawa**	**52.92**	**59**	P	**P**	**07 45 40.6**	**-0.5**
	comp=Z,37nm,0.6s,baz=292,slow=14,SNR=17						
ASAJ				LR	LR	08 09 31.2	
	comp=Z,720nm,18.6s,baz=289,slow=37						
ASAJ	**Asahikawa**	**52.92**	**59**	*e*P	**P**	**07 45 40.3**	**-0.8**
	comp=Z,43nm,0.8s						
GAL1	**Galloway**	**52.95**	**315**⇑	*e*P	**P**	**07 45 41.0**	**-0.1**
GAL1				IAmb	IAmb	07 45 42.5	
	comp=Z,88nm,1.4s						
IOMK	**Kirk Michael**	**53.01**	**315**⇑	*e*P	**P**	**07 45 42.0**	**+0.4**
IOMK				IAmb	IAmb	07 45 43.2	
	comp=Z,367nm,1.5s						
WIM	**Isle of Man**	**53.10**	**314**⇑	*e*P	**P**	**07 45 42.7**	**+0.4**
YRC	**Rhoscolyn**	**53.27**	**313**⇑	*e*P	**P**	**07 45 43.8**	**+0.3**
MYLDM	**Lahad Datu**	**53.50**	**115**	*e*P	**P**	**07 45 47.9**	**+2.3**
	comp=Z,74nm,0.9s						
MA2	**Magadan**	**53.61**	**38**	*e*P	**P**	**07 45 45.0**	**-0.9**
	comp=Z,78nm,0.9s						
MA2	**Magadan**	**53.61**	**38**	*e*P	**P**	**07 45 45.0**	**-0.9**
MA2				pmax	pmax		
	comp=Z,78nm,0.9s						
SEY	**Seymchan**	**53.65**	**34***c*	*i*P	**P**	**07 45 47.0**	**+0.9**
ERM	**Erimo**	**54.01**	**61**	*e*P	**P**	**07 45 49.0**	**0.0**
	comp=Z,56nm,0.6s						
ERM	**Erimo**	**54.01**	**61***d*	*e*P	**P**	**07 45 49.0**	**0.0**
ERM				pmax	pmax		
	comp=Z,47nm,1.1s						
DAG	**Danmarks Havn**	**54.12**	**343**⇑	*i*P	**P**	**07 45 50.2**	**+0.9**
	comp=Z,180nm,0.8s						
DAG				*i*		07 46 24.5	
DSB	**Dublin**	**54.32**	**314**	*e*P	**P**	**07 45 51.3**	**+0.2**
	comp=Z,25nm,1.1s						
CCA1	**Carnmenellis**	**54.52**	**310**⇑	*e*P	**P**	**07 45 53.5**	**+0.9**
CCA1				IAmb	IAmb	07 45 53.7	
	comp=Z,79nm,0.8s						
JHJ	**Hachijo jima 2**	**54.97**	**72**	LR	LR	08 11 21.0	
	comp=Z,428nm,20.6s,baz=136,slow=38						
YUK	**Yuzh-Kuril’sk**	**55.17**	**58***c*	*i*P	P	07 45 49.5	-7.9
YUK				*i*		07 46 52.0	
YUK				*i*		07 48 00.0	
YUK				*i* PPP	PPP	07 49 14.4	
YUK				*i*		07 55 34.4	
YUK				*i* SS	SKiKP	07 57 13.6	+21
YUK				pmax	pmax		
	comp=Z,554nm,1.2s						
YUK				pmax	pmax		
	comp=N,284nm,1.0s						
YUK				pmax	pmax		
	comp=Z,382nm,1.0s						
YUK				pmax	pmax		
	comp=E,256nm,0.6s						
YUK				MLR	MLR		
	comp=Z,504nm,15.0s						
YUK				MLR	MLR		
	comp=N,426nm,14.0s						
YUK				MLR	MLR		
	comp=E,322nm,15.0s						
VAL	**Valentia**	**56.96**	**313**⇓	*i*P	**P**	**07 46 12.3**	**+2.3**
VAL				*i* S	**S**	**07 53 58.4**	**+2.2**
SMRI	**Semarang**	**57.21**	**132**	*e*P	**P**	**07 46 12.8**	**+0.6**
	comp=E,71nm,0.5s						
ES19	**SONSECA Array**	**57.32**	**298**	*e*P	**P**	**07 46 13.3**	**+0.4**
ESDC	**Sonseca Array**	**57.38**	**298**	P	**P**	**07 46 13.6**	**+0.3**
	comp=E,25nm,0.4s,baz=55,slow=7.6,SNR=174						
ESLA	**Sonseca Array**	**57.38**	**298**	*e*P	**P**	**07 46 13.6**	**+0.3**
	comp=E,64nm,1.1s						
DAV	**Davao City (W)**	**57.52**	**107**	LR	LR	08 13 10.7	
	comp=E,316nm,20.7s,baz=334,slow=38						
DAV	**Davao City (W)**	**57.52**	**107**⇑	*i*P	**P**	**07 46 14.0**	**-0.5**
PAB	**San Pablo**	**57.70**	**298**	*e*P	**P**	**07 46 16.0**	**+0.4**
	comp=E,26nm,1.0s						
TAM	**Tamanrasset**	**57.76**	**275**	*e*P	**P**	**07 46 15.7**	**-0.6**
	comp=E,16nm,1.0s						
TAM	**Tamanrasset**	**57.76**	**275**	*e*P	**P**	**07 46 15.7**	**-0.6**
TAM				pmax	pmax		
	comp=Z,17nm,1.0s						
BORG	**Borgarnes**	**58.12**	**330**	*e*P	**P**	**07 46 20.6**	**+2.6**
	comp=Z,83nm,0.8s						
BORG	**Borgarnes**	**58.12**	**330**	*e*P	**P**	**07 46 20.6**	**+2.6**
BORG				pmax	pmax		
	comp=Z,83nm,0.8s						
PBRG	**Braganca**	**58.47**	**301**	*e*P	**P**	**07 46 21.3**	**+0.5**
	comp=Z,102nm,1.6s						
PBRG				*e*pP	**pP**	**07 46 45.3**	**-0.2**
PBRG				*e*sP	**sP**	**07 46 56.6**	**0.0**
MVO	**Moncorvo**	**58.92**	**300**	*e*P	**P**	**07 46 24.9**	**+0.9**
	comp=Z,124nm,1.7s						
MVO				*e*pP	**pP**	**07 46 48.3**	**-0.4**
MVO				*e*sP	**sP**	**07 46 59.8**	**0.0**
MVO	**Moncorvo**	**58.92**	**300**	*e*PcP	**PcP**	**07 47 13.4**	**+1.2**
PEA0B	**Petropavlovsk-**	**59.24**	**44**	*e*P	**P**	**07 46 25.8**	**-0.2**
	comp=Z,28nm,0.8s						
PETK	**Petropavlovsk-**	**59.24**	**44**	P	**P**	**07 46 26.3**	**+0.3**
	comp=Z,19nm,0.6s,baz=330,slow=1.5						
PETK				LR	LR	08 13 13.7	
	comp=Z,568nm,19.6s,baz=282,slow=37						
PETK	**Petropavlovsk-**	**59.24**	**44**	*e*P	**P**	**07 46 25.2**	**-0.7**
PETK	**Petropavlovsk-**	**59.24**	**44**	*e*P	**P**	**07 46 25.3**	**-0.7**
SKR	**Severo-Kuril’s**	**59.25**	**47**	*e*P	**P**	**07 46 24.0**	**-2.0**
SKR				*e**PP	**pP**	**07 46 48.7**	**-2.0**
SKR				*e*S	**S**	**07 54 20.0**	**-6.0**
SKR				pmax	pmax		
	comp=Z,500nm,2.5s						
SKR				pmax	pmax		
	comp=Z,100nm,5.0s						
SKR				pmax	pmax		
	comp=Z,116nm,2.6s						
SKR				MLR	MLR		
	comp=Z,700nm,16.0s						
POLO	**Lamas de Olo**	**59.36**	**301**	*e*P	**P**	**07 46 27.5**	**+0.4**
	comp=Z,45nm,1.6s						
POLO				*e*pP	**pP**	**07 46 51.8**	**0.0**
POLO				*e*sP	**sP**	**07 47 02.7**	**-0.2**
POLO	**Lamas de Olo**	**59.36**	**301**	*e*PcP	**PcP**	**07 47 14.2**	**+0.2**
PCAB	**Cabril**	**59.38**	**301**	*e*P	**P**	**07 46 27.7**	**+0.6**
	comp=Z,206nm,1.7s						
PCAB				*e*pP	**pP**	**07 46 52.1**	**+0.2**
PCAB				*e*sP	**sP**	**07 47 02.8**	**-0.2**
PGAV	**Gavieira, Arco**	**59.44**	**302**	*e*P	**P**	**07 46 28.3**	**+0.7**
	comp=Z,166nm,1.7s						
PGAV				*e*pP	**pP**	**07 46 52.2**	**-0.2**
PGAV				*e*sP	**sP**	**07 47 03.5**	**0.0**
CBIJ	**Chichi jima**	**59.55**	**78**	P	**P**	**07 46 26.8**	**-1.7**
JCJ	**Chichijima**	**59.55**	**78**	P	**P**	**07 46 26.8**	**-1.7**
	comp=Z,18nm,0.5s,baz=180,slow=20,SNR=3.8						
MTE	**Manteigas**	**59.59**	**300**	*e*P	**P**	**07 46 29.4**	**+0.7**
	comp=Z,236nm,1.5s						
MTE				*e*pP	**pP**	**07 46 53.2**	**-0.2**
MTE				*e*sP	**sP**	**07 47 04.7**	**+0.2**
MTE	**Manteigas**	**59.59**	**300**	*e*P	**P**	**07 46 29.6**	**+0.9**
	comp=Z,45nm,0.9s						
PVIS	**Viseu**	**59.70**	**300**	*e*P	**P**	**07 46 30.2**	**+0.8**
	comp=Z,173nm,1.7s						
PVIS				*e*pP	**pP**	**07 46 54.7**	**+0.6**
PVIS				*e*sP	**sP**	**07 47 05.3**	**+0.1**
PCBR	**Castelo Branco**	**59.78**	**299**	*e*P	**P**	**07 46 30.4**	**+0.5**
	comp=Z,98nm,1.7s						
PCBR				*e*pP	**pP**	**07 46 54.9**	**+0.3**
PCBR				*e*sP	**sP**	**07 47 05.4**	**-0.3**
PET	**Petropavlovsk**	**59.81**	**44***c*	*e*P	**P**	**07 46 28.3**	**-1.5**
PET				*e**SP	**sP**	**07 47 03.2**	**-2.4**
PET				*e*		07 48 43.0	
PET				*e*S	**S**	**07 54 29.2**	**-3.9**
PET				*e*SS	**SS**	**07 58 34.3**	**+4.2**
PET				pmax	pmax		
	comp=Z,500nm,3.7s						
PET				pmax	pmax		
	comp=Z,74nm,1.0s						
PET				pmax	pmax		
	comp=Z,300nm,17.8s						
PET				MLR	MLR		
	comp=Z,500nm,14.0s						
PET				MLR	MLR		
	comp=Z,700nm,12.0s						
PMRV	**Marv??o**	**59.90**	**299**	*e*P	**P**	**07 46 31.3**	**+0.6**
	comp=Z,178nm,1.5s						
PMRV				*e*pP	**pP**	**07 46 55.3**	**-0.1**
PMRV				*e*sP	**sP**	**07 47 06.0**	**-0.6**
OPO	**Ambohidratompo**	**60.00**	**207**	P	**P**	**07 46 32.6**	**+1.0**
	comp=Z,16nm,0.9s,baz=13,slow=7.3,SNR=18						
OPO				LR	LR	08 09 56.3	
	comp=Z,673nm,21.6s,baz=14,slow=33						
PBAR	**Barrancos**	**60.19**	**297**	*e*P	**P**	**07 46 33.1**	**+0.5**
	comp=Z,611nm,1.6s						
PBAR				*e*pP	**pP**	**07 46 57.3**	**-0.1**
PBAR				*e*sP	**sP**	**07 47 08.2**	**-0.3**
COI	**Coimbra**	**60.28**	**300**	*e*P	**P**	**07 46 34.3**	**+1.1**
	comp=Z,264nm,1.6s						
COI				*e*pP	**pP**	**07 46 58.3**	**+0.3**
COI				*e*sP	**sP**	**07 47 09.6**	**+0.5**
PESTR	**Estremoz**	**60.28**	**298**	*e*P	**P**	**07 46 33.7**	**+0.4**
	comp=Z,138nm,1.7s						
PESTR				*e*pP	**pP**	**07 46 58.1**	**0.0**
PESTR				*e*sP	**sP**	**07 47 09.0**	**-0.2**
PESTR	**Estremoz**	**60.28**	**298**	*e*P	**P**	**07 46 33.8**	**+0.4**
	comp=Z,17nm,1.1s						
ABPO	**Ambohimpanom**	**60.40**	**206**	*e*P	**P**	**07 46 34.9**	**+0.5**
	comp=Z,17nm,0.8s						
ABPO	**Ambohimpanom**	**60.40**	**206**	*e*P	**P**	**07 46 34.9**	**+0.5**
ABPO				pmax	pmax		
	comp=Z,17nm,0.8s						
PCAS	**Casmilo, Conde**	**60.40**	**300**	*e*P	**P**	**07 46 34.6**	**+0.5**
	comp=Z,116nm,1.6s						
PCAS				*e*pP	**pP**	**07 46 58.9**	**0.0**
PCAS				*e*sP	**sP**	**07 47 11.1**	**+1.1**
SUMG	**Summit**	**60.47**	**341**	*e*P	**P**	**07 46 35.9**	**+1.4**
	comp=Z,324nm,0.7s						
SUMG	**Summit**	**60.47**	**341**⇑	*i*P	**P**	**07 46 35.9**	**+1.4**
	comp=Z,303nm,0.7s						
SUMG	**Summit**	**60.47**	**341**	*e*P	**P**	**07 46 35.9**	**+1.4**
SUMG				pmax	pmax		
	comp=Z,324nm,0.7s						

PTOM	**Tomar**	**60.53**	**299**	*e*P	**P**	**07 46 35.9**	**+1.0**
	comp=Z,259nm,1.5s						
PTOM				*e*pP	**pP**	**07 47 00.3**	**+0.6**
PTOM				*e*sP	**sP**	**07 47 11.3**	**+0.5**
PMTG	**Montargil**	**60.63**	**299**	*e*P	**P**	**07 46 36.3**	**+0.6**
	comp=Z,98nm,1.6s						
PMTG				*e*pP	**pP**	**07 47 00.5**	**0.0**
EVO	**Evora**	**60.72**	**298**	*e*P	**P**	**07 46 37.0**	**+0.7**
	comp=Z,178nm,1.6s						
EVO				*e*pP	**pP**	**07 47 01.1**	**0.0**
EVO				*e*sP	**sP**	**07 47 11.8**	**-0.4**
MDT	**Midelt**	**60.81**	**291**	P	**P**	**07 46 37.3**	**+0.2**
	comp=Z,5.8nm,0.4s,baz=89,slow=11,SNR=21						
PBEJ	**Beja**	**60.84**	**297**	*e*P	**P**	**07 46 38.7**	**+1.6**
	comp=Z,196nm,1.6s						
PBEJ				*e*pP	**pP**	**07 47 02.5**	**+0.6**
PBEJ				*e*sP	**sP**	**07 47 13.7**	**+0.7**
ALMR	**Almeirim**	**60.84**	**299**	*e*P	**P**	**07 46 37.8**	**+0.7**
ALMR				AMb	AMB	07 46 39.4	
	comp=Z,164nm,1.2s						
ALMR	**Almeirim**	**60.84**	**299**	*e*P	**P**	**07 46 37.7**	**+0.6**
	comp=Z,167nm,1.5s						
ALMR				*e*pP	**pP**	**07 47 01.8**	**-0.1**
ALMR				*e*sP	**sP**	**07 47 13.2**	**+0.2**
ALMR	**Almeirim**	**60.84**	**299**	*e*P	**P**	**07 46 37.8**	**+0.7**
PVAQ	**Vaqueiros**	**61.01**	**297**	*e*P	**P**	**07 46 38.8**	**+0.6**
	comp=Z,291nm,1.5s						
PVAQ				*e*pP	**pP**	**07 47 03.0**	**-0.1**
PVAQ				*e*sP	**sP**	**07 47 14.0**	**-0.2**
PCVE	**Castro Verde**	**61.13**	**297**	*e*P	**P**	**07 46 40.1**	**+1.0**
	comp=Z,155nm,1.6s						
PCVE				*e*pP	**pP**	**07 47 03.6**	**-0.3**
PCVE				*e*sP	**sP**	**07 47 14.9**	**-0.1**
MESJ	**Messejana**	**61.17**	**297**	*e*P	**P**	**07 46 40.0**	**+0.7**
MESJ				AMb	AMB	07 46 43.1	
	comp=Z,158nm,1.2s						
MESJ				*e*S	**S**	**07 54 51.9**	**+0.8**
MESJ	**Messejana**	**61.17**	**297**	*e*P	**P**	**07 46 40.1**	**+0.7**
	comp=Z,159nm,1.4s						
MESJ				*e*pP	**pP**	**07 47 04.5**	**+0.3**
MESJ	**Messejana**	**61.17**	**297**	*e*P	**P**	**07 46 40.0**	**+0.7**
MESJ				*e*S	**S**	**07 54 51.8**	**+0.8**
PBDV	**Barranco-do-Ve**	**61.23**	**297**	*e*P	**P**	**07 46 40.7**	**+0.9**
	comp=Z,289nm,1.4s						
PBDV				*e*pP	**pP**	**07 47 04.6**	**0.0**
PBDV				*e*sP	**sP**	**07 47 15.8**	**+0.1**
PMAFR	**Mafra**	**61.42**	**299**	*e*P	**P**	**07 46 41.9**	**+0.8**
	comp=Z,275nm,1.5s						
PMAFR				*e*pP	**pP**	**07 47 05.8**	**-0.1**
PMAFR				*e*sP	**sP**	**07 47 17.1**	**+0.1**
LIS	**Lisbon**	**61.44**	**299**	*e*P	**P**	**07 46 41.8**	**+0.7**
LIS				AMb	AMB	07 46 43.7	
	comp=Z,171nm,1.6s						
LIS	**Lisbon**	**61.44**	**299**	*e*P	**P**	**07 46 41.8**	**+0.7**
PMST	**Lisbon--Monsan**	**61.45**	**299**	*e*P	**P**	**07 46 42.1**	**+0.9**
	comp=Z,280nm,1.4s						
PMST				*e*pP	**pP**	**07 47 06.4**	**+0.3**
PMST				*e*sP	**sP**	**07 47 17.1**	**-0.1**
PTEO	**Sao Teotonio**	**61.66**	**297**	*e*P	**P**	**07 46 43.4**	**+0.8**
	comp=Z,281nm,1.5s						
PTEO				*e*pP	**pP**	**07 47 08.1**	**+0.6**
PTEO				*e*sP	**sP**	**07 47 18.7**	**+0.1**
MORF	**Marmelete**	**61.71**	**297**	*e*P	**P**	**07 46 43.9**	**+0.8**
MORF				AMb	AMB	07 46 46.4	
	comp=Z,105nm,1.5s						
MORF				*e*S	**S**	**07 54 58.9**	**+0.9**
MORF	**Marmelete**	**61.71**	**297**	*e*P	**P**	**07 46 43.9**	**+0.8**
MORF				*e*S	**S**	**07 54 58.9**	**+0.9**
PFVI	**Vila Bisbo**	**61.92**	**297**	*e*P	**P**	**07 46 45.1**	**+0.7**
	comp=Z,332nm,1.7s						
PFVI				*e*pP	**pP**	**07 47 09.4**	**+0.1**
PFVI				*e*sP	**sP**	**07 47 20.1**	**-0.2**
PFVI	**Vila Bisbo**	**61.92**	**297**	*e*P	**P**	**07 46 45.4**	**+1.0**
	comp=Z,34nm,0.8s						
TNTI	**Ternate**	**62.98**	**111**	*e*P	**P**	**07 46 52.5**	**+0.8**
	comp=Z,71nm,1.0s						
KULLO	**Kullorsuaq**	**63.43**	**346**	⇑*i*P	**P**	**07 46 54.4**	**+0.6**
	comp=Z,55nm,0.7s						
ANGG	**Ammassalik, Gr**	**63.89**	**334**	*e*P	**P**	**07 46 56.4**	**-0.5**
	comp=Z,132nm,0.7s						
ILULI	**Ilulissat**	**65.81**	**341**	*e*P	**P**	**07 47 10.3**	**+1.0**
	comp=Z,149nm,0.6s						
ILULI	**Ilulissat**	**65.81**	**341**	⇑*i*P	**P**	**07 47 10.1**	**+0.8**
	comp=Z,144nm,0.7s						
ILULI	**Ilulissat**	**65.81**	**341**	*e*P	**P**	**07 47 10.3**	**+1.0**
ILULI				pmax	pmax		
	comp=Z,149nm,0.6s						
TORD	**Torodi Ar. Bea**	**66.03**	**269**	P	**P**	**07 47 10.0**	**-1.6**
	comp=Z,10nm,0.4s,baz=62,slow=6.3						
TORD				LR	LR	08 18 36.0	
	comp=Z,120nm,20.5s,baz=355,slow=38						
LSZ	**Lusaka**	**66.17**	**226**	*e*P	**P**	**07 47 12.0**	**-0.5**
	comp=Z,38nm,1.0s						
LSZ	**Lusaka**	**66.17**	**226**	P	**P**	**07 47 12.5**	**0.0**
	SNR=11						
LSZ	**Lusaka**	**66.17**	**226**	*e*P	**P**	**07 47 12.0**	**-0.5**
LSZ				pmax	pmax		
	comp=Z,38nm,1.0s						
SFJD	**Kangerlussuaq**	**67.19**	**339**	P	**P**	**07 47 18.3**	**+0.2**
	comp=Z,42nm,0.8s,baz=48,slow=7.9,SNR=14						
SFJD				LR	LR	08 16 52.8	
	comp=Z,1µm,21.7s,baz=45,slow=36						
SFJD	**Kangerlussuaq**	**67.19**	**339**	*e*P	**P**	**07 47 18.7**	**+0.6**
	comp=Z,51nm,0.9s						
SFJD				*e*pP	**PcP**	**07 47 45.8**	**+0.5**
SFJD	**Kangerlussuaq**	**67.19**	**339**	⇑*i*P	**P**	**07 47 18.5**	**+0.4**
RES	**Resolute Bay**	**68.00**	**356**	*e*P	**P**	**07 47 24.1**	**+1.1**
	comp=Z,22nm,1.1s						
SMY	**Shemya**	**68.21**	**40**	*e*P	**P**	**07 47 23.4**	**-1.4**
	comp=Z,87nm,0.9s						
SMY	**Shemya**	**68.21**	**40**	*e*P	**P**	**07 47 23.4**	**-1.4**
SMY				pmax	pmax		
	comp=Z,87nm,0.9s						
GUMO	**Guam**	**68.83**	**89**	P	**P**	**07 47 29.2**	**0.0**
	comp=Z,19nm,0.6s,baz=180,slow=11,SNR=2.4						
GUMO				LR	LR	08 20 08.7	
	comp=Z,170nm,21.0s,baz=305,slow=38						
NRS	**Narsarsuaq**	**69.36**	**332**	⇑*i*P	**P**	**07 47 32.6**	**+0.8**
	comp=Z,88nm,0.6s						
KOWA	**Kowa**	**69.82**	**273**	P	**P**	**07 47 35.5**	**+0.1**
	comp=Z,23nm,0.5s,baz=61,slow=5.3,SNR=61						
KOWA				LR	LR	08 22 58.1	
	comp=Z,281nm,18.2s,baz=60,slow=40						
KOWA	**Kowa**	**69.82**	**273**	*e*P	**P**	**07 47 34.9**	**-0.5**
	comp=Z,43nm,0.8s						
PMOZ	**Porto Moniz, M**	**70.01**	**296**	*e*P	**P**	**07 47 36.8**	**+0.4**
	comp=Z,225nm,1.1s						
PMOZ				*e*pP	**pP**	**07 48 02.1**	**+0.3**
TOLK	**Toolik Lake Re**	**70.14**	**15**	P	**P**	**07 47 37.5**	**+1.0**
	baz=326,SNR=301						
IVI	**Ivigtut**	**70.33**	**333**	*e*P	**P**	**07 47 36.9**	**-0.8**
	comp=Z,30nm,0.6s						
CBTN	**Chibotane**	**71.07**	**218**	*e*S	**P**	**07 47 43.2**	**+0.5**
CBTN				IAML		07 47 44.0	
	comp=Z,121nm,0.5s						
INK	**Inuvik**	**73.14**	**9**	*e*P	**P**	**07 47 55.2**	**+0.8**
	comp=Z,147nm,0.6s						
INK				*e*pP	**pP**	**07 48 19.5**	**-0.5**
INK	**Inuvik**	**73.14**	**9**	*e*P	**P**	**07 47 55.2**	**+0.8**
INK				*e**PP	**pP**	**07 48 19.5**	**-0.5**
INK				pmax	pmax		
	comp=Z,147nm,0.6s						
COLA	**College**	**73.70**	**16**	*e*P	**P**	**07 47 57.3**	**-0.4**
	comp=Z,337nm,0.9s						
COLA	**College**	**73.70**	**16**	*e*P	**P**	**07 47 57.3**	**-0.4**
COLA				pmax	pmax		
	comp=Z,337nm,0.9s						
MBWA	**Marble Bar**	**73.81**	**133**	*e*P	**P**	**07 47 58.2**	**-0.8**
	comp=Z,60nm,0.8s						
ILAR	**Eielson Array**	**74.00**	**16**	P	**P**	**07 47 59.5**	**-0.1**
	comp=Z,80nm,0.9s,baz=327,slow=4.2,SNR=438						
ILAR				PP	**PP**	**07 50 48.5**	**+3.2**
	comp=Z,7.8nm,0.7s,baz=318,slow=6.5,SNR=5.9						
ILAR				LR	LR	08 23 49.6	
	comp=Z,289nm,19.9s,baz=338,slow=38						
ILB	**Eielson Array**	**74.00**	**16**	*e*P	**P**	**07 47 59.4**	**-0.1**
ROSA	**Rosais**	**74.27**	**307**	*e*P	**P**	**07 48 03.0**	**+1.4**
	comp=Z,16nm,0.8s						
SVW2	**Sparrevohn**	**74.82**	**22**	*e*P	**P**	**07 48 05.0**	**+0.6**
	comp=Z,99nm,1.0s						
DBIC	**Dimbokro**	**75.03**	**267**	P	**P**	**07 48 06.2**	**-0.1**
	comp=Z,5.5nm,0.5s,baz=13,slow=6.4,SNR=13						
DBIC				LR	LR	08 24 27.1	
	comp=Z,287nm,18.9s,baz=39,slow=38						
FITZ	**Fitzroy Crossi**	**75.09**	**127**	P	**P**	**07 48 05.8**	**-0.7**
	comp=Z,11nm,0.8s,baz=293,slow=3.6,SNR=12						
KIC	**Kosan Boka**	**75.12**	**267**	*e*P	**P**	**07 48 06.6**	**-0.3**
	comp=Z,100nm,1.2s						
EGAK	**Eagle**	**75.17**	**14**	*e*P	**P**	**07 48 06.9**	**+0.6**
	comp=Z,130nm,1.0s						
TIC	**Toumodi**	**75.17**	**267**	*e*P	**P**	**07 48 06.6**	**-0.6**
LBTB	**Lobatse**	**75.42**	**222**	*e*P	**P**	**07 48 08.3**	**0.0**
	comp=Z,86nm,0.8s						
LBTB	**Lobatse**	**75.42**	**222**	*e*P	**P**	**07 48 08.3**	**0.0**
LBTB				pmax	pmax		
	comp=Z,86nm,0.8s						
LIC	**Lamto**	**75.43**	**267**	*e*P	**P**	**07 48 08.0**	**-0.6**
	comp=Z,79nm,1.2s						
TSUM	**Tsumeb**	**75.60**	**232**	*e*P	**P**	**07 48 08.5**	**-1.0**
	comp=Z,15nm,1.0s						
DAWY	**Dawson**	**76.15**	**13**	*e*P	**P**	**07 48 12.5**	**+0.5**
	comp=Z,216nm,1.1s						
DAWY				*e*pP	**pP**	**07 48 37.4**	**-0.3**
DAWY				*e*sP	**sP**	**07 48 47.1**	**-1.5**
RSO	**Redoubt South**	**76.15**	**21**	*e*P	**P**	**07 48 13.1**	**+0.9**
PMR	**Palmer**	**76.19**	**19**	*e*P	**P**	**07 48 12.3**	**+0.2**
	comp=Z,108nm,0.8s						
PMR	**Palmer**	**76.19**	**19**	*e*P	**P**	**07 48 12.3**	**+0.2**
PMR				pmax	pmax		
	comp=Z,109nm,0.8s						
AKUT	**Akutan**	**76.57**	**31**	*e*P	**P**	**07 48 13.6**	**-0.8**
	comp=Z,58nm,0.8s						
CHGN	**Chignik**	**77.71**	**26**	*e*P	**P**	**07 48 21.2**	**+0.5**
	comp=Z,46nm,0.7s						
KDAK	**Kodiak Island**	**78.41**	**22**	*e*P	**P**	**07 48 25.2**	**+0.6**
	comp=Z,300nm,0.9s						
BOSA	**Boshof**	**78.49**	**220**	P	**P**	**07 48 25.1**	**-0.5**
	comp=Z,40nm,0.6s,baz=8.1,slow=3.2,SNR=106						
BOSA				PKKPbc	**PKKPbc**	**08 07 22.8**	**+0.9**
	comp=Z,1.3nm,0.6s,baz=304,slow=15,SNR=4.5						
BOSA				LR	LR	08 23 29.5	
	comp=Z,209nm,20.3s,baz=36,slow=36						
YKA	**Yellowknife Ar**	**80.51**	**3**	P	**P**	**07 48 36.5**	**+0.6**
	comp=Z,91nm,0.5s,baz=349,slow=5.5,SNR=264						
YKA				LR	LR	08 29 51.9	
	comp=Z,43nm,18.2s,baz=360,slow=40						
YKA	**Yellowknife Ar**	**80.51**	**3**	P	**P**	**07 48 36.5**	**+0.6**
YKA				pmax	pmax		
	comp=Z,88nm,0.5s						
SCHQ	**Schefferville**	**81.54**	**337**	P	**P**	**07 48 42.0**	**+0.4**
	comp=Z,38nm,0.8s,baz=37,slow=5.8,SNR=12						
SCHQ				LR	LR	08 24 39.2	
	comp=Z,898nm,21.6s,baz=44,slow=35						
NWAO	**Narrogin (SRO)**	**81.86**	**142**	P	**P**	**07 48 42.1**	**-1.3**
	comp=Z,40nm,0.8s,baz=184,slow=4.7,SNR=21						
NWAO				LR	LR	08 25 05.9	
	comp=Z,147nm,19.8s,baz=152,slow=36						
NWAO	**Narrogin (SRO)**	**81.86**	**142**	*e*P	**P**	**07 48 41.7**	**-1.7**
	comp=Z,98nm,0.6s						
NWAO				*e*pP	**pP**	**07 49 07.5**	**-2.0**
NWAO	**Narrogin (SRO)**	**81.86**	**142**	*e*P	**P**	**07 48 41.7**	**-1.7**
NWAO				*e**PP	**pP**	**07 49 07.5**	**-2.0**
NWAO				pmax	pmax		
	comp=Z,98nm,0.6s						
WRA	**Warramunga Arr**	**82.13**	**122**	P	**P**	**07 48 43.7**	**-1.4**
	comp=Z,9.1nm,0.7s,baz=323,slow=5.1,SNR=76						
WRA				PKKPbc	**PKKPbc**	**08 07 13.9**	**+1.1**
	comp=Z,5.0nm,0.6s,baz=132,slow=2.2,SNR=77						
WRA				PKPPKP	**P'P'df**	**08 15 16.4**	**-1.4**
	comp=Z,1.9nm,0.8s,baz=111,slow=2.0,SNR=8.2						
WRA	**Warramunga Arr**	**82.13**	**122**	P	**P**	**07 48 43.7**	**-1.4**
WRA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
WRAB	**Tennant Creek**	**82.13**	**122**	*e*P	**P**	**07 48 42.8**	**-2.3**
	comp=Z,23nm,0.8s						
WRAB	**Tennant Creek**	**82.13**	**122**	⇓*e*P	**P**	**07 48 43.5**	**-1.6**
WRAB				pmax	pmax		
	comp=Z,13nm,0.7s						
WAKE	**Wake Island**	**82.63**	**72**	*e*P	**P**	**07 48 47.3**	**-0.5**
	comp=Z,210nm,1.2s						
DLBC	**Dease Lake**	**83.03**	**11**	*e*P	**P**	**07 48 49.9**	**+0.6**
	comp=Z,180nm,1.1s						
DLBC				*e*pP	**pP**	**07 49 15.9**	**+0.5**
DLBC				*e*sP	**sP**	**07 49 25.8**	**-0.5**
DLBC				*e*PP	**PP**	**07 52 01.5**	**+1.0**
ASAR	**Alice Springs**	**84.43**	**125**	P	**P**	**07 48 55.5**	**-1.4**
	comp=Z,4.5nm,0.6s,baz=312,slow=4.9,SNR=80						
ASAR				PKKP	**PKKPdf**	**08 07 00.8**	**+0.6**
	comp=Z,0.5nm,0.8s,baz=132,slow=1.4,SNR=5.0						
ASAR				PKKPbc	**PKKPbc**	**08 07 08.7**	**+1.1**
	comp=Z,3.5nm,0.6s,baz=124,slow=2.7,SNR=30						
ASAR				PKP2bc		08 15 13.2	
	comp=Z,2.1nm,1.0s,baz=121,slow=2.9,SNR=7.9						
ASAR				LR	LR	08 30 06.3	
	comp=Z,87nm,20.4s,baz=310,slow=38						
PMG	**Port Moresby**	**84.52**	**106**	P	**P**	**07 48 56.8**	**-0.7**
	comp=Z,24nm,0.7s,baz=14,slow=9.5,SNR=7.5						
WRAK	**Wrangell Islan**	**84.56**	**13**	*e*P	**P**	**07 48 58.2**	**+1.1**
	comp=Z,132nm,0.8s						
WRAK				*e*pP	**pP**	**07 49 24.0**	**+0.7**
WRAK				*e*sP	**sP**	**07 49 34.0**	**-0.1**
SACV	**Santiago Islan**	**84.97**	**285**	*e*P	**P**	**07 48 59.5**	**-0.3**
	comp=Z,30nm,1.4s						
SACV				*e*pP	**pP**	**07 49 24.8**	**-1.2**
FFC	**Flin Flon**	**88.23**	**356**	*e*P	**P**	**07 49 14.7**	**-0.3**
	comp=Z,323nm,1.4s						
FFC				*e*pP	**pP**	**07 49 42.0**	**+0.5**
FFC				*e*sP	**sP**	**07 49 52.2**	**+0.1**
FFC	**Flin Flon**	**88.23**	**356**	*e*P	**P**	**07 49 14.7**	**-0.3**
FFC				*e**PP	**pP**	**07 49 42.0**	**+0.5**
FFC				*e**SP	**sP**	**07 49 52.3**	**+0.1**
FFC				pmax	pmax		
	comp=Z,323nm,1.4s						
PKME	**Peaks-Kenny Pk**	**90.54**	**333**	P	**P**	**07 49 27.1**	**+1.1**
	baz=30						
PKME	**Peaks-Kenny Pk**	**90.54**	**333**	*e*P	**P**	**07 49 27.0**	**+1.0**
	comp=Z,14nm,0.7s						
CTA	**Charters Tower**	**90.58**	**115**	P	**P**	**07 49 25.4**	**-1.1**
	comp=Z,5.0nm,0.6s,baz=333,slow=4.5,SNR=9.9						
CTAO	**Charters Tower**	**90.58**	**115**	*e*P	**P**	**07 49 25.6**	**-0.9**
	comp=Z,32nm,0.6s						
CTAO	**Charters Tower**	**90.58**	**115**	*e*P	**P**	**07 49 25.6**	**-0.9**
CTAO				pmax	pmax		
	comp=Z,32nm,0.6s						
ULM	**Lac du Bonnet**	**92.17**	**352**	P	**P**	**07 49 33.8**	**+0.3**
	comp=Z,21nm,0.8s,baz=9.3,slow=4.5,SNR=31						
ULM				LR	LR	08 33 18.1	
	comp=Z,509nm,21.0s,baz=360,slow=37						
LBNH	**Lisbon**	**92.36**	**335**	P	**P**	**07 49 35.3**	**+0.8**
	baz=28						
LONY	**Lake Ozonia**	**92.90**	**336**	P	**P**	**07 49 37.8**	**+0.8**
	baz=26,SNR=11						
LONY	**Lake Ozonia**	**92.90**	**336**	*e*P	**P**	**07 49 36.7**	**-0.3**
	comp=Z,20nm,0.7s						
LONY				*e*pP	**pP**	**07 50 03.2**	**-0.2**
A33A	**Warroad**	**93.41**	**351**	P	**P**	**07 49 39.3**	**+0.1**
	baz=10,SNR=18						
C40A	**Isle Royale Na**	**93.47**	**347**	P	**P**	**07 49 39.5**	**+0.1**
	baz=15,SNR=21						
A04D	**Lummi Island**	**93.52**	**9**	P	**P**	**07 49 40.8**	**+1.2**
	baz=349,SNR=10						
HRV	**Adam Dziewonsk**	**93.75**	**333**	P	**P**	**07 49 40.2**	**-0.7**
	baz=29						
B34A	**Aery, Baudette**	**93.76**	**351**	P	**P**	**07 49 40.9**	**+0.1**
	baz=11,SNR=21						
B35A	**Bob, Littlefor**	**93.76**	**350**	P	**P**	**07 49 40.8**	**0.0**
	baz=12,SNR=11						
EYMN	**Ely**	**93.83**	**349**	P	**P**	**07 49 41.5**	**+0.3**
	baz=14,SNR=9.2						
EYMN	**Ely**	**93.83**	**349**	*e*P	**P**	**07 49 41.4**	**+0.2**
	comp=Z,19nm,0.6s						
EYMN				*e*pP	**pP**	**07 50 07.0**	**-0.7**
EYMN				*e*sP	**sP**	**07 50 16.1**	**-2.3**
WALA	**Waterton Lakes**	**93.96**	**3**	*e*P	**P**	**07 49 41.8**	**-0.1**
	comp=Z,64nm,0.9s						
C38A	**Sawbill Land.**	**94.02**	**348**	P	**P**	**07 49 41.6**	**-0.4**
	baz=14						
B05A	**Bryant**	**94.04**	**9**	P	**P**	**07 49 42.9**	**+0.8**
	baz=349,SNR=40						
E44A	**Grand Marais A**	**94.08**	**345**	P	**P**	**07 49 42.8**	**+0.5**
	baz=18						
AGMN	**Agassiz Nation**	**94.09**	**351**	P	**P**	**07 49 42.6**	**+0.2**
	baz=10						
AGMN	**Agassiz Nation**	**94.09**	**351**	*e*P	**P**	**07 49 42.4**	**+0.1**
	comp=Z,14nm,0.6s						
AGMN				*e*pP	**pP**	**07 50 07.9**	**-1.0**
AGMN				*e*sP	**sP**	**07 50 18.3**	**-1.2**
SADO	**Sadowa**	**94.13**	**339**	*e*P	**P**	**07 49 42.4**	**-0.2**
	comp=Z,52nm,1.5s						
C37A	**Embarrass**	**94.15**	**349**	P	**P**	**07 49 42.6**	**-0.1**
	baz=13,SNR=6.7						
E45A	**Wooded Hills,**	**94.16**	**344**	P	**P**	**07 49 43.3**	**+0.6**
	baz=18,SNR=7.6						
D41A	**Chassel**	**94.18**	**346**	P	**P**	**07 49 43.1**	**+0.3**
	baz=16,SNR=7.7						
C36A	**Pine Crest Far**	**94.22**	**349**	P	**P**	**07 49 42.9**	**0.0**
	baz=12,SNR=5.2						
M65A	**Busby, Falmout**	**94.24**	**332**	P	**P**	**07 49 43.7**	**+0.5**
	baz=29						
C35A	**Jirik Farms, M**	**94.44**	**350**	P	**P**	**07 49 43.6**	**-0.4**
	baz=12,SNR=11						
HNR	**Honiara**	**94.50**	**98**	P	**P**	**07 49 45.5**	**+0.7**
	comp=Z,172nm,0.8s,baz=126,slow=8.1,SNR=2.2						
C06D	**Leavenworth**	**94.52**	**8**	P	**P**	**07 49 44.5**	**+0.1**
	baz=350						
E43A	**Lone Tree Farm**	**94.53**	**345**	P	**P**	**07 49 44.5**	**+0.1**
	baz=17,SNR=7.5						
DGMT	**Dagmar**	**94.59**	**357**	P	**P**	**07 49 46.0**	**+1.3**
	baz=3.5						
DGMT	**Dagmar**	**94.59**	**357**	*e*P	**P**	**07 49 45.8**	**+1.2**
	comp=Z,146nm,1.3s						
DGMT				*e*pP	**pP**	**07 50 11.5**	**+0.4**
DGMT				*e*sP	**sP**	**07 50 21.6**	**-0.2**
DGMT				*e*PP	**PP**	**07 53 34.4**	**+1.7**
C34A	**RKJ Ranch, Bem**	**94.61**	**351**	P	**P**	**07 49 44.8**	**0.0**
	baz=11,SNR=16						
C33A	**Trail**	**94.61**	**351**	P	**P**	**07 49 45.1**	**+0.3**
	baz=10,SNR=13						
F46A	**Macinaw City C**	**94.62**	**343**	P	**P**	**07 49 44.7**	**-0.1**
	baz=19						
NLWA	**Neilton Lookou**	**94.66**	**10**	*e*P	**P**	**07 49 46.5**	**+1.4**
	comp=Z,30nm,0.8s						
NLWA				*e*pP	**pP**	**07 50 13.9**	**+2.4**
NLWA				*e*sP	**sP**	**07 50 23.9**	**+1.6**
E42A	**Champion**	**94.66**	**346**	P	**P**	**07 49 45.0**	**-0.1**
	baz=16,SNR=11						
D37A	**Cotton**	**94.75**	**349**	P	**P**	**07 49 45.3**	**-0.1**
	baz=13,SNR=5.7						
F44A	**Big Bay de Noc**	**94.80**	**345**	P	**P**	**07 49 46.0**	**+0.4**
	baz=18						
E41A	**Kenton**	**94.83**	**346**	P	**P**	**07 49 45.7**	**-0.1**
	baz=16,SNR=13						
D36A	**Goodland**	**94.84**	**349**	P	**P**	**07 49 45.7**	**-0.1**
	baz=12,SNR=9.2						
F45A	**CMU Biological**	**94.88**	**344**	P	**P**	**07 49 46.4**	**+0.4**
	baz=18						
MDND	**Maddock**	**94.92**	**354**	P	**P**	**07 49 46.5**	**+0.4**
	baz=7.2,SNR=7.4						
STKA	**Stephens Creek**	**94.98**	**127**	P	**P**	**07 49 47.2**	**+0.7**
	comp=Z,2.3nm,0.8s,baz=301,slow=8.8,SNR=3.3						
STKA				PP	**PP**	**07 53 37.6**	**+0.1**
	comp=Z,2.4nm,0.6s,baz=309,slow=8.1,SNR=4.4						
STKA				PKKP	**PKKPdf**	**08 06 43.1**	**+1.4**
	comp=Z,1.8nm,0.6s,baz=58,slow=7.5,SNR=3.1						
STKA				LR	LR	08 37 51.6	
	comp=Z,166nm,21.3s,baz=292,slow=39						
E40A	**Wakefield**	**95.02**	**347**	P	**P**	**07 49 47.2**	**+0.6**
	baz=15,SNR=13						
D35A	**Remer**	**95.06**	**350**	P	**P**	**07 49 46.9**	**+0.1**
	baz=12,SNR=8.0						
F43A	**Flat Rock, Esc**	**95.09**	**345**	P	**P**	**07 49 47.4**	**+0.5**
	baz=17						
EGMT	**Eagleton**	**95.12**	**1**	P	**P**	**07 49 47.7**	**+0.5**
	baz=359						
EGMT	**Eagleton**	**95.12**	**1**	*e*P	**P**	**07 49 47.6**	**+0.4**
	comp=Z,116nm,1.2s						
EGMT				*e*pP	**pP**	**07 50 13.9**	**+0.2**
EGMT				*e*sP	**sP**	**07 50 23.4**	**-1.0**
E38A	**The Farm, Brul**	**95.15**	**348**	P	**P**	**07 49 47.1**	**-0.1**
	baz=14,SNR=7.7						
E39A	**Mellen**	**95.20**	**348**	P	**P**	**07 49 47.4**	**-0.1**
	baz=14,SNR=11						
COWI	**Conover**	**95.22**	**347**	*e*P	**P**	**07 49 47.6**	**0.0**
	comp=Z,12nm,0.7s						
COWI				*e*pP	**pP**	**07 50 13.7**	**-0.4**
COWI				*e*sP	**sP**	**07 50 24.0**	**-0.8**
E37A	**Wrenshall**	**95.32**	**349**	P	**P**	**07 49 48.3**	**+0.3**
	baz=13						
F42A	**Maple Grove Fa**	**95.35**	**346**	P	**P**	**07 49 48.4**	**+0.2**
	baz=16						
E36A	**McGregor**	**95.50**	**349**	P	**P**	**07 49 49.0**	**+0.2**
	baz=12,SNR=14						
BINY	**Binghamton**	**95.52**	**336**	P	**P**	**07 49 49.1**	**+0.1**
	baz=26						
BINY	**Binghamton**	**95.52**	**336**	*e*P	**P**	**07 49 49.2**	**+0.2**
	comp=Z,19nm,1.0s						
F41A	**Three Lakes**	**95.56**	**346**	P	**P**	**07 49 49.4**	**+0.3**
	baz=16,SNR=12						
F40A	**Park Falls**	**95.57**	**347**	P	**P**	**07 49 49.0**	**-0.2**
	baz=15						
E35A	**Pequot Lakes**	**95.62**	**350**	P	**P**	**07 49 49.5**	**+0.2**
	baz=11,SNR=16						
F39A	**Loretta**	**95.71**	**348**	P	**P**	**07 49 49.8**	**0.0**
	baz=14,SNR=7.9						
G43A	**Wallace**	**95.74**	**345**	P	**P**	**07 49 50.2**	**+0.3**
	baz=17,SNR=7.1						
E34A	**Wadena**	**95.76**	**351**	P	**P**	**07 49 50.2**	**+0.1**
	baz=11,SNR=7.4						
F38A	**Pierce - Schro**	**95.83**	**348**	P	**P**	**07 49 50.9**	**+0.6**
	baz=13,SNR=17						
PAL	**Palisades**	**95.90**	**334**	P	**P**	**07 49 50.4**	**-0.3**
	baz=27						
G42A	**Mountain**	**95.91**	**346**	P	**P**	**07 49 50.7**	**0.0**
	baz=16,SNR=6.5						
F04D	**Rainier, OR**	**96.06**	**10**	P	**P**	**07 49 52.3**	**+0.9**
	baz=348						
G41A	**Antigo**	**96.08**	**346**	P	**P**	**07 49 51.5**	**0.0**
	baz=15						
F37A	**Hinrichs Farm,**	**96.17**	**349**	P	**P**	**07 49 52.3**	**+0.3**
	baz=13,SNR=8.0						
F36A	**Milaca**	**96.18**	**349**	P	**P**	**07 49 51.9**	**0.0**
	baz=12,SNR=12						
HAWA	**Hanford**	**96.18**	**8**	*e*P	**P**	**07 49 52.6**	**+0.7**
	comp=Z,9.0nm,0.7s						
HAWA				*e*pP	**pP**	**07 50 19.3**	**+0.9**
HAWA				*e*sP	**sP**	**07 50 30.2**	**+1.0**
MSO	**Missoula**	**96.19**	**4**	P	**P**	**07 49 52.3**	**+0.3**
	baz=356,SNR=19						
G40A	**Rib Lake**	**96.21**	**347**	P	**P**	**07 49 52.4**	**+0.3**
	baz=15,SNR=10						
F35A	**Swanville**	**96.33**	**350**	P	**P**	**07 49 52.6**	**0.0**
	baz=11						
G39A	**Holcombe**	**96.36**	**348**	P	**P**	**07 49 52.8**	**0.0**
	baz=14,SNR=6.4						
LAO	**LASA Array**	**96.43**	**358**	P	**P**	**07 49 54.6**	**+1.4**
	baz=1.9						
LAO	**LASA Array**	**96.43**	**358**	*e*P	**P**	**07 49 54.1**	**+1.0**
	comp=Z,328nm,1.7s						
LAO				*e*pP	**pP**	**07 50 20.6**	**+1.0**
LAO				*e*sP	**sP**	**07 50 30.1**	**-0.2**
F34A	**Alexandria**	**96.48**	**351**	P	**P**	**07 49 53.3**	**0.0**
	baz=11						
H43A	**Windswept, Lux**	**96.51**	**345**	P	**P**	**07 49 53.6**	**+0.1**
	baz=17						
G38A	**Ridgeland**	**96.59**	**348**	P	**P**	**07 49 53.8**	**-0.1**
	baz=13,SNR=8.8						
N59A	**State Game Lan**	**96.61**	**336**	P	**P**	**07 49 54.1**	**+0.1**
	baz=26						
H42A	**Shiocton**	**96.63**	**346**	P	**P**	**07 49 54.3**	**+0.3**
	baz=16,SNR=7.6						
F32A	**Veblen**	**96.63**	**352**	P	**P**	**07 49 54.1**	**+0.1**
	baz=9.2						
SPMN	**Marine on St.**	**96.69**	**349**	P	**P**	**07 49 54.6**	**+0.3**
	baz=13						
H41A	**Junction City**	**96.74**	**346**	P	**P**	**07 49 54.7**	**+0.2**
	baz=15						
ERPA	**Erie**	**96.81**	**339**	P	**P**	**07 49 54.9**	**0.0**
	baz=23						
G36A	**St. Michael**	**96.82**	**349**	P	**P**	**07 49 55.0**	**+0.2**
	baz=12						
H40A	**Chili**	**96.87**	**347**	P	**P**	**07 49 55.3**	**+0.2**
	baz=14,SNR=8.4						
G03D	**McMinnville, O**	**96.88**	**10**	P	**P**	**07 49 56.4**	**+1.3**
	baz=348						
G35A	**Watkins**	**96.94**	**350**	P	**P**	**07 49 55.8**	**+0.4**
	baz=11						
H39A	**Augusta**	**96.97**	**348**	P	**P**	**07 49 55.9**	**+0.4**
	baz=14,SNR=5.8						
G34A	**Benson**	**97.07**	**351**	P	Pdif	07 49 56.2	+0.2
	baz=10,SNR=5.3						
G05D	**Wamic, OR**	**97.11**	**9**	P	Pdif	07 49 57.1	+0.8
	baz=350						
H38A	**Maiden Rock**	**97.14**	**348**	P	Pdif	07 49 56.6	+0.2
	baz=13,SNR=6.6						
I43A	**Langenfeld Bro**	**97.15**	**345**	P	Pdif	07 49 56.9	+0.4
	baz=16						
G33A	**Ortonville**	**97.22**	**351**	P	Pdif	07 49 56.9	+0.2
	baz=9.7						
G32A	**Webster**	**97.28**	**352**	P	Pdif	07 49 57.2	+0.2
	baz=8.9						
M54A	**Oil Creek Stat**	**97.28**	**338**	P	Pdif	07 49 57.2	+0.1

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        baz=23
I42A    Draeger Farm,     97.30 346   P        P        07 49 57.0  0.0
        baz=16
I41A    Arkdale           97.32 346   P        Pdif     07 49 57.2  0.0
        baz=15,SNR=5.6
H37A    Dierke Farm, C    97.33 349   P        Pdif     07 49 57.7 +0.5
        baz=12,SNR=5.4
H36A    Jessenland, He    97.49 349   P        Pdif     07 49 58.7 +0.7
        baz=12
H35A    Sunnyside Ranc    97.50 350   P        Pdif     07 49 58.5 +0.5
        baz=11,SNR=9.5
BOZ     Bozeman (W)       97.51   2   P        Pdif     07 49 58.8 +0.6
        baz=358,SNR=40
BOZ     Bozeman (W)       97.51   2  eP        P        07 49 56.9 -1.2
        comp=Z,40nm,1.3s
BOZ                                  epP       pP       07 50 23.6 -1.1
BOZ                                  esP       sP       07 50 34.6 -0.8
BOZ                                  ePP       PP       07 53 53.3 -2.1
BOZ     Bozeman (W)       97.51   2  eP        P        07 49 56.9 -1.2
BOZ                                  e*PP      pP       07 50 23.6 -1.1
BOZ                                  e*SP      sP       07 50 34.6 -0.8
BOZ                                  e                  07 53 53.3
BOZ                                   pmax     pmax
        comp=Z,40nm,1.3s
SSPA    Standing Stone    97.54 337   P        P        07 49 58.2  0.0
        baz=24
SSPA    Standing Stone    97.54 337  eP        P        07 49 57.5 -0.7
        comp=Z,18nm,0.6s
I40A    Norwalk           97.62 347   P        Pdif     07 49 58.8 +0.2
        baz=14,SNR=6.4
AAM     Ann Arbor         97.63 342   P        P        07 49 58.4 -0.1
        baz=20
J43A    Natural Harves    97.69 345   P        Pdif     07 49 58.9 +0.1
        baz=16
I38A    Scanlan Farm,     97.77 348   P        Pdif     07 49 59.3 +0.1
        baz=13,SNR=7.0
I39A    Houston           97.81 348   P        P        07 49 59.2 -0.1
        baz=14,SNR=6.2
N54A    Moraine State     97.88 339   P        Pdif     07 49 59.9 +0.2
        baz=23
J42A    Columbus          97.89 346   P        Pdif     07 49 59.8  0.0
        baz=16
BMO     Blue Mountains    97.92   6  eP        Pdif     07 50 00.1 +0.1
        comp=Z,14nm,1.5s
BMO                                  epP       pP       07 50 26.5  0.0
BMO                                  esP       sP       07 50 36.7 -0.5
BMO     Blue Mountains    97.92   6  eP        Pdif     07 50 00.1 +0.1
BMO                                  e*PP      pP       07 50 26.5  0.0
BMO                                  e*SP      sP       07 50 36.7 -0.5
BMO                                   pmax     pmax
        comp=Z,14nm,1.5s
I37A    Lemond, Waseca    97.96 349   P        Pdif     07 50 00.5 +0.4
        baz=12,SNR=6.2
I05D    Terrebonne, OR    98.00   9   P        Pdif     07 50 01.1 +0.8
        baz=350,SNR=6.8
H32A    Carlson Farm,     98.02 352   P        Pdif     07 50 00.7 +0.4
        baz=9.0,SNR=22
J41A    Loganville        98.02 346   P        P        07 50 00.2 -0.1
        baz=15,SNR=7.4
RLMT    Red Lodge         98.03   0   P        Pdif     07 50 01.6 +1.0
        baz=360,SNR=25
RLMT    Red Lodge         98.03   0  eP        Pdif     07 50 01.6 +1.0
        comp=Z,122nm,1.6s
I36A    Fitzsimmons Fa    98.05 349   P        Pdif     07 50 00.9 +0.4
        baz=12,SNR=5.9
O56A    Blue Knob Stat    98.09 337   P        Pdif     07 50 00.8  0.0
        baz=24
J40A    Soldiers Grove    98.12 347   P        P        07 50 00.7 -0.1
        baz=14
SUSD    Miller            98.24 353   P        Pdif     07 50 01.5 +0.3
        baz=7.8
M50A    Fremont           98.32 341   P        P        07 50 01.3 -0.3
        baz=20
K43A    Burlington        98.32 345   P        Pdif     07 50 01.8 +0.2
        baz=16
J39A    Decorah           98.35 348   P        P        07 50 01.7 -0.1
        baz=14,SNR=10
I03D    Drain, OR         98.35  11   P        Pdif     07 50 02.6 +0.9
        baz=348,SNR=6.0
I04A    Tendick Farm,     98.39  10   P        Pdif     07 50 02.3 +0.2
        baz=349,SNR=5.8
K42A    Prairie Point,    98.45 346   P        P        07 50 02.2 -0.1
        baz=15
M49A    Liberty Center    98.49 342   P        P        07 50 02.4  0.0
        baz=20
J38A    Wedel Dairy, R    98.50 348   P        P        07 50 02.3 -0.1
        baz=13
JFWS    Jewell Farm       98.50 346   P        P        07 50 02.4  0.0
        baz=15
JFWS    Jewell Farm       98.50 346  eP        P        07 50 02.4  0.0
        comp=Z,23nm,0.6s
JFWS                                 epP       pP       07 50 28.2 -0.8
JFWS    Jewell Farm       98.50 346  eP        P        07 50 02.4  0.0
JFWS                                 e*PP      pP       07 50 28.2 -0.8
JFWS                                  pmax     pmax
        comp=Z,23nm,0.6s
J37A    Redenius Farm,    98.67 349   P        Pdif     07 50 03.7 +0.5
        baz=12,SNR=11
ECSD    EROS Data Cent    98.68 351   P        Pdif     07 50 03.7 +0.4
        baz=9.6,SNR=18
ECSD    EROS Data Cent    98.68 351  eP        P        07 50 03.0 -0.3
        comp=Z,34nm,1.3s
ECSD                                 epP       pP       07 50 29.6 -0.2
ECSD                                 esP       sP       07 50 38.8 -1.7
H17A    Grant Village     98.74   1   P        Pdif     07 50 06.1 +2.3
        baz=358,SNR=20
L44A    Lake County Fo    98.74 345   P        Pdif     07 50 03.8 +0.3
        baz=16
J36A    Seneca 1, Swea    98.77 349   P        Pdif     07 50 04.2 +0.5
        baz=11,SNR=11
K41A    Shullsburg        98.81 346   P        Pdif     07 50 03.8  0.0
        baz=15
K40A    Colesburg         98.87 347   P        P        07 50 04.1  0.0
        baz=14
L43A    Garden Prairie    98.91 345   P        Pdif     07 50 04.7 +0.4
        baz=16
RSSD    Black Hills       98.92 357   P        Pdif     07 50 05.3 +0.7
        baz=3.7
RSSD    Black Hills       98.92 357  eP        Pdif     07 50 05.3 +0.7
        comp=Z,43nm,1.4s
RSSD    Black Hills       98.92 357  eP        Pdif     07 50 05.3 +0.7
RSSD                                  pmax     pmax
        comp=Z,43nm,1.4s
N50A    Nevada            98.94 341   P        P        07 50 04.4 -0.1
        baz=20
J04D    Umpqua Nationa    98.98  10   P        Pdif     07 50 05.2 +0.4
        baz=349,SNR=9.8
K39A    Oelwein           98.99 348   P        P        07 50 04.2 -0.4
        baz=13
MCWV    Mont Chateau      99.04 338   P        Pdif     07 50 05.1 +0.2
        baz=23
J05D    Fort Rock, OR     99.05   9   P        Pdif     07 50 05.6 +0.5
        baz=350,SNR=10
M46A    Old House Fiel    99.13 343   P        Pdif     07 50 05.4 +0.1
        baz=18
K38A    Parkersburg       99.20 348   P        Pdif     07 50 05.5 -0.1
        baz=13
K37A    Belmond           99.22 349   P        Pdif     07 50 05.8 +0.1
        baz=12
L42A    Oliver, Polo      99.27 346   P        Pdif     07 50 06.1 +0.2
        baz=15
L41A    Preston           99.36 346   P        Pdif     07 50 06.1 -0.1
        baz=14
ACSO    Alum Creek Sta    99.40 340   P        Pdif     07 50 06.5  0.0
        baz=20
ACSO    Alum Creek Sta    99.40 340  eP        Pdif     07 50 06.4 -0.1
        comp=Z,11nm,0.8s
HLID    Hailey            99.42   4   P        Pdif     07 50 07.5 +0.8
        baz=355,SNR=13
HLID    Hailey            99.42   4  ePdif     Pdif     07 50 07.0 +0.2
        comp=Z,11nm,1.3s
K36A    Gilmore City      99.47 349   P        Pdif     07 50 07.1 +0.4
        baz=11
MFID    Camas Ranch       99.47   5  ePdif     Pdif     07 50 07.7 +0.7
        comp=Z,13nm,1.0s
HUMO    Hull Mountain     99.48  11  ePdif     Pdif     07 50 05.9 -0.9
        comp=Z,42nm,0.9s
L40A    Anamosa           99.50 347   P        Pdif     07 50 06.9  0.0
        baz=14
M44A    Midewin, Midew    99.52 344   P        Pdif     07 50 07.4 +0.3
        baz=16
L39A    Vinton            99.58 348   P        Pdif     07 50 07.0 -0.3
        baz=13
O50A    Cable             99.65 341   P        Pdif     07 50 07.6 -0.1
        baz=20
M43A    Waltham Townsh    99.67 345   P        Pdif     07 50 07.9 +0.2
        baz=16
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N46A    Monticello        99.70 343   P        Pdif     07 50 08.0 +0.2
        baz=18
L38A    Oak Wood Farm,    99.72 348   P        Pdif     07 50 07.9  0.0
        baz=13
O49A    Covington         99.79 341   P        Pdif     07 50 08.3  0.0
        baz=19
M42A    Sheffield         99.81 346   P        Pdif     07 50 08.4 +0.1
        baz=15
L37A    Phoenix Point,    99.86 349   P        Pdif     07 50 08.5 -0.1
        baz=12
N45A    Kentland          99.92 344   P        Pdif     07 50 09.2 +0.4
        baz=17
O48A    Farmland          99.93 342   P        Pdif     07 50 08.9  0.0
        baz=19
SCIA    State Center      99.99 348   P        Pdif     07 50 09.4 +0.3
        baz=12
L36A    Harm Buss Farm   100.03 349   P        Pdif     07 50 09.6 +0.4
        baz=11
M41A    Milan            100.04 346   P        Pdif     07 50 09.3 -0.1
        baz=14
N44A    Piper City       100.11 344   P        Pdif     07 50 10.2 +0.5
        baz=16
M40A    Post Highland    100.19 347   P        Pdif     07 50 09.7 -0.3
        baz=14
N43A    Stutzman Famil   100.19 345   P        Pdif     07 50 10.2 +0.2
        baz=16
WVOR    Wild Horse Val   100.19   8  ePdif     Pdif     07 50 10.9 +0.7
        comp=Z,8.8nm,0.8s
WVOR    Wild Horse Val   100.19   8  eP        Pdif     07 50 10.9 +0.7
WVOR                                  pmax     pmax
        comp=Z,9.0nm,0.8s
P50A    Jamestown        100.20 341   P        Pdif     07 50 09.8 -0.3
        baz=20
O47A    Sheridan         100.20 343   P        Pdif     07 50 09.8 -0.3
        baz=18
M39A    Webster          100.23 348   P        Pdif     07 50 10.2  0.0
        baz=13
AHID    Auburn Hatcher   100.35   2  ePdif     Pdif     07 50 11.3 +0.4
        comp=Z,16nm,1.4s
YBH     Yreka Blue Hor   100.37  11   P        Pdif     07 50 11.8 +0.9
        comp=Z,3.0nm,0.8s,baz=39,slow=7.4,SNR=8.5
BW06    Boulder Array    100.38   1   P        Pdif     07 50 11.5 +0.4
        baz=359,SNR=6.9
BW06    Boulder Array    100.38   1  ePdif     Pdif     07 50 11.3 +0.2
        comp=Z,12nm,1.4s
PDAR    Pinedale Array   100.38   1   P        Pdif     07 50 12.2 +1.0
        comp=Z,2.3nm,0.6s,baz=42,slow=2.9,SNR=24
PDAR                                 PKiKP     PKiKP    07 54 36.5 -1.0
        comp=Z,2.2nm,0.9s,baz=338,slow=3.9,SNR=4.9
PDAR                                 PKKPbc    PKKPbc   08 06 24.2 -2.2
        comp=Z,0.5nm,0.8s,baz=134,slow=5.2,SNR=3.9
M38A    Pleasantville    100.47 348   P        Pdif     07 50 11.3 +0.1
        baz=12
N42A    Yates City       100.47 346   P        Pdif     07 50 11.2  0.0
        baz=15
K22A    Casper           100.47 358   P        Pdif     07 50 11.6 +0.1
        baz=1.7,SNR=5.7
P49A    Miami Univ. Ec   100.51 341   P        Pdif     07 50 11.1 -0.4
        baz=19
MOD     Modoc Plateau    100.53   9  ePdif     Pdif     07 50 12.5 +0.8
        comp=Z,32nm,1.5s
MOD                                  ePP       PP       07 54 18.8 +0.4
O45A    Potomac          100.54 344   P        Pdif     07 50 11.8 +0.2
        baz=17
HDIL    Hopedale         100.58 345   P        Pdif     07 50 12.1 +0.3
        baz=16
M37A    Trindle Farm,    100.62 349   P        Pdif     07 50 12.4 +0.5
        baz=12
Q51A    Peebles          100.62 340   P        Pdif     07 50 12.0  0.0
        baz=20
M36A    Felix, Anita     100.68 349   P        Pdif     07 50 12.1 -0.1
        baz=11
M02C    Callahan         100.68  11   P        Pdif     07 50 13.3 +1.0
        baz=348,SNR=5.5
N40A    Mertquake, Sal   100.71 347   P        Pdif     07 50 12.5 +0.1
        baz=14
N41A    Harden Midland   100.75 346   P        Pdif     07 50 12.6 +0.1
        baz=14
P48A    Milroy           100.75 342   P        Pdif     07 50 12.4 -0.1
        baz=19
O44A    Mansfield        100.80 344   P        Pdif     07 50 13.3 +0.6
        baz=16
O43A    Sugar Creek Fa   100.85 345   P        Pdif     07 50 13.1 +0.2
        baz=16
N39A    Derby Farms, D   100.88 348   P        Pdif     07 50 13.3 +0.2
        baz=13
P47A    Martinsville     100.94 343   P        Pdif     07 50 13.2 -0.1
        baz=18
Q50A    Georgetown       100.97 341   P        Pdif     07 50 13.2 -0.3
        baz=20
P46A    Rosedale         101.03 343   P        Pdif     07 50 14.0 +0.2
        baz=17
Q49A    Aurora           101.05 341   P        Pdif     07 50 13.8 -0.1
        baz=19
R52A    Catlettsburg     101.08 339   P        Pdif     07 50 13.8 -0.2
        baz=21
N38A    Joes South For   101.08 348   P        Pdif     07 50 14.0  0.0
        baz=12
O42A    Bath             101.09 346   P        Pdif     07 50 13.8 -0.2
        baz=15
BGNE    Belgrade         101.15 352   P        Pdif     07 50 14.9 +0.6
        baz=8.5
P45A    Graceland, Par   101.24 344   P        Pdif     07 50 14.8 +0.1
        baz=17
N37A    Lee Faris, Mou   101.27 349   P        Pdif     07 50 14.9  0.0
        baz=12
O41A    Passleys Farm,   101.32 346   P        Pdif     07 50 14.8 -0.2
        baz=14
N36A    Muff Farm, Cla   101.33 349   P        Pdif     07 50 15.3 +0.3
        baz=11
Q48A    North Vernon     101.33 342   P        Pdif     07 50 14.9 -0.2
        baz=18
R51A    Hillsboro        101.37 340   P        Pdif     07 50 15.1 -0.2
        baz=20
BLA     Blacksburg       101.47 337   P        Pdif     07 50 15.8  0.0
        baz=22
P44A    Sand Creek, Wi   101.49 344   P        Pdif     07 50 16.2 +0.4
        baz=16
O39A    Kirksville       101.49 348   P        Pdif     07 50 15.9 +0.1
        baz=13
HWUT    Hardware Ranch   101.50   2  ePdif     Pdif     07 50 16.1  0.0
        comp=Z,37nm,1.3s
Q47A    Bedord North L   101.50 342   P        Pdif     07 50 16.0 +0.1
        baz=18
O40A    La Belle         101.50 347   P        Pdif     07 50 16.1 +0.3
        baz=14
P43A    Skaggs, Pawnee   101.51 345   P        Pdif     07 50 16.2 +0.3
        baz=15
R50A    Paris            101.59 341   P        Pdif     07 50 16.2 -0.1
        baz=20
Q46A    CEJHS Indians,   101.63 343   P        Pdif     07 50 16.5  0.0
        baz=17
O38A    Galt             101.78 348   P        Pdif     07 50 17.1 +0.1
        baz=12
P41A    Barry, Barry     101.78 346   P        Pdif     07 50 17.2 +0.1
        baz=14
R49A    Shelbyville      101.80 341   P        Pdif     07 50 17.1 -0.1
        baz=19
S52A    Salyersville     101.81 340   P        Pdif     07 50 17.4 +0.1
        baz=20
O37A    Wolven Farm, M   101.84 349   P        Pdif     07 50 17.6 +0.3
        baz=12
R48A    Northridge Ran   101.87 342   P        Pdif     07 50 17.6  0.0
        baz=18
O03D    Paynes Creek     101.91  10   P        Pdif     07 50 17.5 -0.3
        baz=349
Q45A    Warren Harvey,   101.94 344   P        Pdif     07 50 18.3 +0.5
        baz=16
OGNE    Ogallala         101.97 355   P        Pdif     07 50 18.3 +0.3
        baz=5.3
S51A    Beattyville      101.99 340   P        Pdif     07 50 18.1  0.0
        baz=20
P40A    Paris            102.11 347   P        Pdif     07 50 18.6 +0.1
        baz=13
Q44A    Meyer Farm, Va   102.11 344   P        Pdif     07 50 18.5 -0.1
        baz=16
R47A    Wooly Knot Far   102.13 342   P        Pdif     07 50 18.7  0.0
        baz=18
WCI     Wyandotte Cave   102.14 342   P        Pdif     07 50 18.7  0.0
        baz=18
S50A    Richmond         102.17 341   P        Pdif     07 50 18.9  0.0
        baz=20
N23A    Red Feather La   102.21 358   P        Pdif     07 50 18.7 -0.7
        baz=2.2
Q43A    New Douglas      102.22 345   P        Pdif     07 50 19.7 +0.6
        baz=15
P38A    Dawn             102.27 348   P        Pdif     07 50 19.5 +0.2
        baz=12
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S49A    Springfield      102.30 341   P        Pdif     07 50 18.9 -0.6
        baz=19
BMN     Battle Mountai   102.31   7  ePdif     Pdif     07 50 20.6 +0.9
        comp=Z,10nm,1.0s
BMN     Battle Mountai   102.31   7  eP        Pdif     07 50 20.6 +0.9
BMN                                   pmax     pmax
        comp=Z,10.0nm,1.0s
Q42A    Golden Eagle     102.42 346   P        Pdif     07 50 20.0  0.0
        baz=15
P37A    Lathrop          102.44 349   P        Pdif     07 50 19.9 -0.1
        baz=12
Q41A    Truxton          102.51 346   P        Pdif     07 50 20.6 +0.3
        baz=14
S48A    Wiedeman Farm,   102.62 342   P        Pdif     07 50 20.9  0.0
        baz=18
Q40A    Laux Farm, Aux   102.63 347   P        Pdif     07 50 21.0 +0.1
        baz=13
T51A    Gray             102.72 340   P        Pdif     07 50 21.6 +0.3
        baz=20
Q39A    Willow Grove F   102.74 348   P        Pdif     07 50 21.6 +0.2
        baz=13
R44A    Waltonville      102.76 344   P        Pdif     07 50 21.8 +0.3
        baz=16
DUG     Dugway, Tooele   102.86   3   P        Pdif     07 50 23.6 +1.5
        baz=357,SNR=9.8
DUG     Dugway, Tooele   102.86   3  ePdif     Pdif     07 50 23.6 +1.5
        comp=Z,59nm,2.0s
DUG     Dugway, Tooele   102.86   3  eP        Pdif     07 50 23.6 +1.5
DUG                                   pmax     pmax
        comp=Z,59nm,2.0s
S47A    Hartford         102.88 342   P        Pdif     07 50 22.3 +0.2
        baz=18
U53A    Fall Branch      102.89 339   P        Pdif     07 50 22.4 +0.2
        baz=21
T50A    Nancy            102.91 341   P        Pdif     07 50 22.2  0.0
        baz=19
R43A    Red Bud          102.91 345   P        Pdif     07 50 22.3 +0.1
        baz=15
Q38A    Cooks Store, C   102.93 348   P        Pdif     07 50 22.5 +0.2
        baz=12
S46A    Don Dixon Farm   102.99 343   P        Pdif     07 50 22.6 +0.1
        baz=17
TZTN    Tazewell         103.00 339   P        Pdif     07 50 23.1 +0.4
        baz=20
T49A    Edmonton         103.01 341   P        Pdif     07 50 22.4 -0.2
        baz=19
O20A    White River Ci   103.01 360   P        Pdif     07 50 24.0 +1.1
        baz=0.3,SNR=9.9
R42A    Luebbering       103.08 346   P        Pdif     07 50 23.4 +0.5
        baz=14
U52A    Thorn Hill       103.09 339   P        Pdif     07 50 23.1  0.0
        baz=20
Q37A    Longview Farm,   103.15 349   P        Pdif     07 50 23.6 +0.4
        baz=12
R41A    Rosebud          103.18 346   P        Pdif     07 50 23.7 +0.3
        baz=14
S45A    Carrier Mills    103.20 344   P        Pdif     07 50 23.8 +0.4
        baz=16
T48A    Bowling Green    103.22 342   P        Pdif     07 50 23.8 +0.3
        baz=18
KSU1    Kansas State U   103.24 350   P        Pdif     07 50 24.3 +0.7
        baz=9.8
U51A    La Follette      103.29 340   P        Pdif     07 50 24.0 +0.1
        baz=20
ISCO    Idaho Springs    103.30 358   P        Pdif     07 50 24.8 +0.6
        baz=2.5
ISCO    Idaho Springs    103.30 358  ePdif     Pdif     07 50 25.3 +1.0
        comp=Z,1.8nm,0.9s
ISCO                                 ePP       PP       07 54 38.6 -0.7
ISCO    Idaho Springs    103.30 358  eP        Pdif     07 50 25.3 +1.0
ISCO                                 e                  07 54 38.6
ISCO                                  pmax     pmax
        comp=Z,2.0nm,0.9s
S44A    Carbondale       103.33 344   P        Pdif     07 50 24.2 +0.2
        baz=16
CCM     Cathedral Cave   103.39 346   P        Pdif     07 50 24.8 +0.5
        baz=14
R39A    Chumby, Stover   103.47 347   P        Pdif     07 50 24.9 +0.3
        baz=13
U50A    Jamestown        103.48 340   P        Pdif     07 50 24.8 +0.1
        baz=19
T47A    Sharon Grove     103.51 342   P        Pdif     07 50 24.8 -0.1
        baz=17
S42A    Caledonia        103.57 346   P        Pdif     07 50 24.3 -0.9
        baz=14
V53A    Saluda           103.61 339   P        Pdif     07 50 25.5 +0.1
        baz=21
S43A    Fulton Ridge,    103.62 345   P        Pdif     07 50 25.3  0.0
        baz=15
T46A    Princeton        103.65 343   P        Pdif     07 50 25.6 +0.1
        baz=17
V52A    Sevierville      103.67 339   P        Pdif     07 50 25.8 +0.2
        baz=20
R38A    Fenwick Farm,    103.74 348   P        Pdif     07 50 25.6 -0.3
        baz=12
U48A    Cassie Pea, Po   103.83 342   P        Pdif     07 50 26.0 -0.2
        baz=18
T45A    Paducah          103.84 344   P        Pdif     07 50 26.5 +0.2
        baz=16
TKL     Tuckaleechee C   103.90 339  Pdiff     Pdif     07 50 27.4 +0.7
        comp=Z,2.2nm,0.6s,baz=7.1,slow=8.1,SNR=4.9
V51A    Loudon           103.92 340   P        Pdif     07 50 26.9 +0.1
        baz=20
KSCO    Kaye Shedlock'   103.93 355   P        Pdif     07 50 27.0 +0.1
        baz=4.9
S41A    Jillco Farms,    103.94 346   P        Pdif     07 50 26.8  0.0
        baz=14
S40A    Lebanon          104.06 347   P        Pdif     07 50 27.7 +0.4
        baz=13
U47A    Clarksville      104.08 342   P        Pdif     07 50 27.5 +0.1
        baz=17
Q24A    Divide           104.11 357   P        Pdif     07 50 27.9 -0.1
        baz=2.9
S39A    Bolivar          104.12 348   P        Pdif     07 50 27.2 -0.4
        baz=12
T43A    Greenville       104.13 345   P        Pdif     07 50 27.5 -0.1
        baz=15
W53A    Cullowhee        104.18 339   P        Pdif     07 50 28.1  0.0
        baz=21
NVAR    Mina Array Bea   104.19   8  Pdiff     Pdif     07 50 29.8 +1.7
        comp=Z,3.9nm,0.8s,baz=359,slow=3.4,SNR=28
NVAR                                 PKiKP     PKiKP    07 54 43.9 -0.6
        comp=Z,1.6nm,0.6s,baz=340,slow=4.9,SNR=5.2
NVAR                                 PKKPbc    PKKPbc   08 06 14.8 -0.5
        comp=Z,0.7nm,0.7s,baz=184,slow=6.0,SNR=6.0
V50A    Pikevile         104.25 340   P        Pdif     07 50 28.0 -0.2
        baz=19
S38A    Stockton         104.28 348   P        Pdif     07 50 28.3  0.0
        baz=12
T42A    Van Buren        104.35 346   P        Pdif     07 50 28.6  0.0
        baz=14
T40A    Mansfield        104.50 347   P        Pdif     07 50 29.4 +0.1
        baz=13
R11A    Troy Canyon, C   104.52   6   P        Pdif     07 50 29.2 -0.4
        baz=354
V48A    Smith Brothers   104.63 342   P        Pdif     07 50 29.7 -0.2
        baz=18
W51A    Cleveland        104.64 340   P        Pdif     07 50 29.8 -0.1
        baz=19
MAW     Mawson           104.71 183  Pdiff     Pdif     07 50 29.7 +0.5
        comp=Z,1.7nm,0.7s,baz=63,slow=16,SNR=4.4
MAW                                  PKKPbc    PKKPbc   08 06 13.1 -1.8
        comp=Z,1.6nm,0.7s,baz=176,slow=4.9,SNR=7.0
V47A    Nunnelly         104.72 342   P        Pdif     07 50 30.1 -0.1
        baz=17
W50A    Signal Mountai   104.75 340   P        Pdif     07 50 30.3 -0.2
        baz=19
T39A    Clever           104.78 347   P        Pdif     07 50 30.6 +0.1
        baz=12
X53A    Estanollee       104.84 339   P        Pdif     07 50 30.5 -0.3
        baz=21
U43A    Rector           104.85 345   P        Pdif     07 50 30.7 -0.1
        baz=15
V46A    Holladay         104.89 343   P        Pdif     07 50 30.8 -0.2
        baz=17
T38A    Diamond          104.92 348   P        Pdif     07 50 30.8 -0.4
        baz=12
U42A    Revenden         105.03 346   P        Pdif     07 50 31.5 -0.1
        baz=14
W49A    Belvidere        105.08 341   P        Pdif     07 50 31.4 -0.5
        baz=18
W48A    Pulaski          105.23 342   P        Pdif     07 50 32.3 -0.2
        baz=18
Y54A    Tignall          105.26 338   P        Pdif     07 50 32.0 -0.7
        baz=21
W47A    Westpoint        105.28 342   P        Pdif     07 50 32.6 -0.2
        baz=17
U40A    Yellville        105.34 347   P        Pdif     07 50 33.0  0.0
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	baz=13						
SDCO	Great Sand Dun	105.34	357	P	Pdif	07 50 33.7	+0.3
	baz=2.6,SNR=6.0						
SDCO	Great Sand Dun	105.34	357	ePdif	Pdif	07 50 34.8	+1.4
	comp=Z,14nm,1.8s						
S22A	4UR Ranch, Cre	105.38	359	P	Pdif	07 50 35.1	+1.5
	baz=1.5,SNR=7.5						
X50B	Fort Payne	105.54	340	P	PKiKP	07 54 47.6	+0.8
	baz=19						
Y52A	Lilburn	105.66	339	P	PKiKP	07 54 48.1	+1.1
	baz=20						
X49A	Woodville	105.67	341	P	PKiKP	07 54 47.2	+0.2
	baz=18						
V41A	Mountainview	105.76	346	P	PKiKP	07 54 47.4	+0.2
	baz=14						
GOGA	Godfrey	105.91	338	P	PKiKP	07 54 47.7	+0.2
	baz=21						
X48A	Hartselle	105.91	342	P	PKiKP	07 54 47.6	+0.1
	baz=18						
MVCO	Mesa Verde	105.93	360	P	PKiKP	07 54 47.3	-0.5
	baz=0.1						
156A	Sylvania	106.00	336	P	PKiKP	07 54 48.2	+0.5
	baz=22						
X47A	Russelville	106.05	342	P	PKiKP	07 54 47.6	-0.1
	baz=17						
Z53A	Monticello	106.06	338	P	PKiKP	07 54 48.1	+0.3
	baz=20						
TUL1	Leonard	106.26	349	P	PKiKP	07 54 48.5	+0.4
	baz=11						
Y49A	Blount Mountai	106.31	341	P	PKiKP	07 54 48.5	+0.3
	baz=18						
DAC	Darwin (Calif)	106.39	8	ePKPdf	PKiKP	07 54 50.5	+1.8
Z52A	Williamson	106.39	339	P	PKiKP	07 54 48.4	0.0
	baz=20						
Y48A	Jasper	106.45	342	P	PKiKP	07 54 48.5	0.0
	baz=18						
257A	Skidaway Islan	106.48	336	P	PKiKP	07 54 48.9	+0.3
	baz=23						
X45A	UM Field Stati	106.50	343	P	PKiKP	07 54 48.4	-0.1
	baz=16						
Y47A	UCPARC, Winfie	106.63	342	P	PKiKP	07 54 48.6	-0.2
	baz=17						
X43A	Marvell	106.73	345	P	PKiKP	07 54 49.3	+0.3
	baz=15						
Z50A	Ashland	106.75	340	P	PKiKP	07 54 49.4	+0.3
	baz=19						
DZM	Mont Dzumac	106.89	105	eLR	LR	08 26 06.7	
	comp=Z,552nm,35.4s						
Y46A	Houston	106.89	343	P	PKiKP	07 54 49.7	+0.4
	baz=16						
152A	Waverly Hall	106.97	339	P	PKiKP	07 54 50.1	+0.6
	baz=20						
Z49A	Columbiana	106.97	341	P	PKiKP	07 54 49.8	+0.3
	baz=18						
255A	Hazlehurst	106.99	337	P	PKiKP	07 54 49.9	+0.4
	baz=22						
Z48A	Northport	107.06	342	P	PKiKP	07 54 49.8	+0.2
	baz=17						
357A	Townsend	107.14	336	P	PKiKP	07 54 50.5	+0.7
	baz=22						
254A	Abbeville	107.22	338	P	PKiKP	07 54 49.5	-0.5
	baz=21						
MIAR	Mount Ida	107.23	347	P	PKiKP	07 54 50.1	+0.1
	baz=12						
LRAL	Lakeview Retre	107.24	341	P	PKiKP	07 54 50.7	+0.7
	baz=18						
151A	Opelika	107.27	340	P	PKiKP	07 54 50.7	+0.6
	baz=19						
Z47A	Carrollton	107.36	342	P	PKiKP	07 54 50.9	+0.7
	baz=17						
X39A	Fountain Ranch	107.36	347	P	PKiKP	07 54 50.3	+0.1
	baz=12						
GSC	Goldstone, Bar	107.44	7	P	PKiKP	07 54 50.2	-0.2
	baz=353						
WUAZ	Wupatki	107.58	2	ePdif	Pdif	07 50 42.7	-0.5
	comp=Z,2.4nm,0.9s						
149A	Jones	107.60	341	P	PKiKP	07 54 51.1	+0.4
	baz=18						
252A	Lumpkin	107.60	339	P	PKiKP	07 54 51.1	+0.4
	baz=20						
251A	Midway	107.70	339	P	PKiKP	07 54 51.3	+0.4
	baz=19						
WMOK	Wichita Mounta	107.81	351	P	PKiKP	07 54 51.4	+0.4
	baz=8.2						
147A	Livingston	107.91	342	P	PKiKP	07 54 51.8	+0.5
	baz=17						
AMTX	Amarillo	107.96	354	P	PKiKP	07 54 51.3	-0.1
	baz=5.8						
ANMO	Albuquerque	108.16	358	Pdiff	Pdif	07 50 48.9	+3.0
	comp=Z,0.7nm,0.3s,baz=339,slow=3.6,SNR=6.7						
ANMO	Albuquerque	108.16	358	ePdif	Pdif	07 50 46.3	+0.4
	comp=Z,2.2nm,1.0s						
ANMO	Albuquerque	108.16	358	eP	Pdif	07 50 46.3	+0.4
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SYO	Syowa Base	108.51	192⇑	ePdiff	Pdif	07 50 49.0	+3.0
SYO	Syowa Base	108.51	192⇑	iP	PKKPbc	08 06 01.7	-1.3
SYO	Syowa Base	108.51	192⇓	eP	PKKPab	08 06 08.0	-3.3
351A	Pinckard	108.53	339	P	PKiKP	07 54 53.2	+0.8
	baz=19						
247A	Quitman	108.58	342	P	PKiKP	07 54 52.8	+0.2
	baz=17						
IRM	Iron Mountain	108.72	6	P	PKiKP	07 54 53.4	+0.6
	baz=354						
BRAL	Brewton	109.03	341	P	PKiKP	07 54 54.0	+0.6
	baz=18						
347A	Saraland	109.19	342	P	PKiKP	07 54 54.3	+0.6
	baz=17						
451A	Vernon	109.19	339	P	PKiKP	07 54 55.1	+1.4
	baz=19						
BC3	Big Chuckawall	109.19	6	P	PKiKP	07 54 53.9	+0.1
	baz=354						
241A	Mo Tay, Goldon	109.56	346	P	PKiKP	07 54 55.4	+1.0
	baz=13						
345A	Thompson Farm,	109.63	343	P	PKiKP	07 54 55.5	+1.0
	baz=16						
240A	Hunter Patters	109.70	347	P	PKiKP	07 54 55.2	+0.6
	baz=12						
ANWB	Willy Bob	109.80	312	eP	Pdif	07 51 00.0	+6.9
ABTX	Abilene, Hawle	110.00	352	P	PKiKP	07 54 55.8	+0.6
	baz=7.6						
859A	Kempfer Cattle	110.03	334	P	PKiKP	07 54 56.1	+0.7
	baz=23						
342A	Flagon Creek P	110.07	345	P	PKiKP	07 54 55.9	+0.6
	baz=14						
IKP	In-Ko-Pah, Jac	110.13	7	P	PKiKP	07 54 55.3	-0.3
	baz=354						
NATX	Nacogdoches	110.14	347	ePKPdf	PKiKP	07 54 55.8	+0.4
NATX				ePP	PP	07 55 29.9	+0.7
341A	Kurthwood	110.28	346	P	PKiKP	07 54 56.1	+0.3
	baz=13						
WHTX	Lake Whitney,	110.35	350	P	PKiKP	07 54 56.5	+0.6
	baz=9.4						
959A	Okeechobee	110.51	334	P	PKiKP	07 54 56.6	+0.3
	baz=23						
121A	Cookes Peak, D	110.59	359	P	PKiKP	07 54 56.5	0.0
	baz=0.7						
TUC	Tucson	110.79	2	P	PKiKP	07 54 57.4	+0.6
	baz=358						
TUC	Tucson	110.79	2	ePKPdf	PKiKP	07 54 58.1	+1.3
214A	Organ Pipe Nat	111.06	4	P	PKiKP	07 54 57.4	+0.1
	baz=356						
058A	Arcadia	111.26	334	P	PKiKP	07 54 57.9	+0.2
	baz=23						
MNTX	Cornudas Mount	111.36	357	P	PKiKP	07 54 58.2	+0.4
	baz=2.8						
MNTX	Cornudas Mount	111.36	357	ePKPdf	PKiKP	07 54 57.9	0.0
JCT	Junction City	112.14	352	P	PKiKP	07 54 59.7	+0.4
	baz=7.5						
JCT	Junction City	112.14	352	ePKPdf	PKiKP	07 54 59.9	+0.5
TXAR	Lajitas Array	113.62	355	Pdiff	Pdif	07 51 13.3	+3.2
	comp=Z,0.5nm,0.7s,baz=33,slow=2.1,SNR=8.5						
TXAR				PKiKP	PKiKP	07 55 03.1	+0.8
	comp=Z,1.7nm,0.7s,baz=128,slow=1.5,SNR=13						
TXAR				PKKPbc	PKKPbc	08 05 44.0	-1.1
	comp=Z,0.8nm,0.7s,baz=181,slow=6.7,SNR=11						
833A	Chaparral WMA,	114.22	351	P	PKPdf	07 55 03.8	+0.5
	baz=8.0						
PCRV	Puerto La Cruz	117.36	310	PKP	PKPdf	07 55 08.3	-1.4
	comp=Z,12nm,0.8s,baz=71,slow=5.3,SNR=8.1						
SNAA	Sanae	120.18	201	PKP	PKPdf	07 55 13.0	-0.4
SNAA	Sanae	120.18	201	P	PKKPbc	08 05 21.8	-1.1
SNAA	Sanae	120.18	201	PKP	PKPdf	07 55 12.7	-0.7
	comp=Z,2.4nm,0.7s,baz=315,slow=1.1,SNR=19						
SNAA				PKKPbc	PKKPbc	08 05 21.8	-1.1
	comp=Z,5.2nm,0.6s,baz=221,slow=6.4,SNR=50						
VNA1	Neumayer--Stat	121.34	203	PKP	PKPdf	07 55 15.1	-0.4
VNA1	Neumayer--Stat	121.34	203	P	PKKPbc	08 05 17.8	-0.6
SDV	Santo Domingo	121.94	314	ePKPdf	PKPdf	07 55 19.1	+0.3
VNA3	Neumayer Olymp	121.99	202	PKP	PKPdf	07 55 16.3	-0.5
VNA3	Neumayer Olymp	121.99	202	P	PKKPbc	08 05 15.3	-0.7
CODC	Agustˆ›n Codaz	122.64	318	eP	PKPdf	07 55 18.3	-1.5
URZ	Urewera	122.82	116	PKP	PKPdf	07 55 17.1	-2.2
	comp=Z,3.3nm,0.6s,baz=153,slow=6.8,SNR=2.6						
SJCC	San Jacinto, C	123.59	319	eP	PKPdf	07 55 21.5	-0.2
OCAC	Ocana	123.98	316	eP	PKPdf	07 55 21.9	-0.7
PAMC	Pamplona, Colo	124.38	315	eP	PKPdf	07 55 23.7	-0.1
TAMC	Tame, Arauca	124.59	314	eP	PKPdf	07 55 23.7	+0.1
BRRC	Barranca, Sant	125.13	316	eP	PKPdf	07 55 23.6	-1.0
BARC	Barichara	125.26	315	eP	PKPdf	07 55 23.0	-2.2
ZARC	Zaragoza, Cauc	125.44	317	eP	PKPdf	07 55 25.0	-0.2
RUSC	La Rusia	125.78	315	eP	PKPdf	07 55 26.3	-0.2
CAPC	Capurgana	125.78	321	eP	PKPdf	07 55 26.3	+0.5
PTBC	PUERTO BERRIO,	126.01	316	eP	PKPdf	07 55 26.5	+0.2
VNDA	Vanda	126.12	164	PKP	PKPdf	07 55 23.1	-1.4
	comp=Z,1.5nm,0.8s,baz=303,slow=3.4,SNR=11						
VNDA	Vanda	126.12	164	PKIKP	PKPdf	07 55 23.1	-1.4
VNDA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BCIP	Isla Barro Col	126.54	324	ePKPdf	PKPdf	07 55 27.2	0.0
BCIP	Isla Barro Col	126.54	324	eP	PKPdf	07 55 25.0	-2.3
DBBC	Dabeiba	126.56	319	eP	PKPdf	07 55 27.0	-0.5
HELC	Santa Helena	126.89	317	eP	PKPdf	07 55 27.0	-1.5
QSPA	South Pole Qui	127.02	180	PKP	PKPdf	07 55 25.5	-1.1
	comp=Z,7.7nm,0.8s,baz=241,slow=1.6,SNR=19						
QSPA	South Pole Qui	127.02	180	ePKPdf	PKPdf	07 55 25.4	-1.3
QSPA				epPKPdf	pPKPdf	07 55 51.8	-2.4
QSPA				ePP	PP	07 57 24.6	-2.2
NORC	Norcasia	127.05	316	eP	PKPdf	07 55 28.7	+0.3
CHIC	Chingaza	127.17	314	eP	PKPdf	07 55 27.0	-2.1
ROSC	El Rosal	127.33	315	PKP	PKPdf	07 55 30.6	+1.3
	comp=Z,155nm,0.8s,baz=230,slow=0.8,SNR=110						
ROSC	El Rosal	127.33	315	eP	PKPdf	07 55 30.0	+0.7
VILC	Villavicencio,	127.57	314	eP	PKPdf	07 55 29.6	+0.1
TOLC	Tolima	128.10	316	eP	PKPdf	07 55 31.2	+0.5
PLMC	San Josˆ' del	128.37	317	eP	PKPdf	07 55 31.9	+1.0
SJAC	San Juan de Ar	128.40	314	eP	PKPdf	07 55 30.6	-0.4
PRAC	Prado	128.58	315	eP	PKPdf	07 55 31.9	+0.7
YOTC	Yotoco, Valle	129.17	317	eP	PKPdf	07 55 31.7	-0.8
MALC	Bahia Malaga	129.68	318	eP	PKPdf	07 55 32.9	-0.4
HORQ	Saladito	129.74	317	eP	PKPdf	07 55 32.3	-1.5
MARP	Paez Belalcaza	129.89	315	eP	PKPdf	07 55 32.3	-1.8
SAML	Samuel	130.26	293	ePKPdf	PKPdf	07 55 34.7	+0.4
SAML	Samuel	130.26	293	ePKIKP	PKPdf	07 55 34.7	+0.4
POPC	Popayan, Colom	130.54	316	eP	PKPdf	07 55 35.9	+0.6
PCON	Cinco Dias	130.56	315	eP	PKPdf	07 55 37.6	+1.9
SOTA	Rioblanco	130.84	316	eP	PKPdf	07 55 37.1	+0.9
GCUF	Volcan Galeras	132.00	316	eP	PKPdf	07 55 37.6	-0.7
CMBC	Cumbal	132.50	316	eP	PKPdf	07 55 40.2	+1.0
SIV	San Ignacio	133.08	284	PKP	PKPdf	07 55 39.4	-0.1
	comp=Z,8.2nm,0.6s,baz=91,slow=3.0						
OTAV	Otavalo	133.43	316	ePKPdf	PKPdf	07 55 42.3	+1.4
OTAV				epPKPdf	pPKPdf	07 56 10.1	+1.6
OTAV	Otavalo	133.43	316	eP	PKPdf	07 55 42.4	+1.4
OTAV	Otavalo	133.43	316	ePKIKP	PKPdf	07 55 42.3	+1.4
OTAV				e		07 56 10.1	
CPUP	Villa Florida	135.53	269	PKP	PKPdf	07 55 43.9	0.0
	comp=Z,8.2nm,0.8s,baz=45,slow=1.9,SNR=20						
LPAZ	La Paz	138.66	289	PKhKP	PKPpre	07 55 44.2	
	comp=Z,1.7nm,0.5s,baz=336,slow=0.8,SNR=19						
PPT2	Papeete2	139.11	73	eLR	LR	08 40 59.9	
	comp=Z,284nm,25.2s						
ATAH	Atahualpa	139.34	310	PKP	PKPdf	07 55 53.3	+1.5
	comp=Z,18nm,0.6s,baz=47,slow=1.3,SNR=11						
NNA	Nana	142.01	303	PKhKP	PKPpre	07 55 52.5	
	comp=Z,21nm,0.8s,baz=321,slow=4.3,SNR=7.8						
NNA	Nana	142.01	303	ePKPdf	PKPdf	07 55 56.7	+0.6
NNA				epPKPdf	pPKPdf	07 56 23.8	0.0
TBI	Tubuai	142.42	80	eLR	LR	08 42 34.0	
	comp=Z,315nm,24.5s						
TRQA	Tornquist	143.35	254	ePKPdf	PKPbc	07 55 56.0	+0.8
TRQA	Tornquist	143.35	254	ePKIKP	PKPbc	07 55 56.0	+0.8
LCO	Las Campanas	147.36	273	ePKPdf	PKPdf	07 56 04.0	-1.3
LCO				epPKPdf	pPKPbc	07 56 34.3	-0.9
LCO	Las Campanas	147.36	273	ePKIKP	PKPdf	07 56 04.0	-1.3
LCO				e		07 56 34.3	
PLCA	Paso Flores	150.34	251	PKPbc	PKPbc	07 56 15.6	+0.8
	comp=Z,10nm,0.6s,baz=132,slow=2.5,SNR=17						

JMA ***19*** *07:44:32.9±0.2, 43°.04N×146°.87E, h63^{km}±3^{km}, M3.3*

SKHL ***19*** *07:44:33.9±0.5, 43°.10N×146°.84E, h66^{km}±3^{km}, mb4.3/5*

ISC 19 07:44:32.7±2.1, 43°.1N±0°.1×146°.94E±0°.09, h57^{km}±29^{km}, n15, σ0^{s}.66/29, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHO	Shikotan	0.82	355	iP	Pn	07 44 49.0	+0.7
SHO				AMB	AMB	07 44 49.0	
	114nm,0.2s						
SHO				AMB	AMB	07 44 49.0	
	81nm,0.2s						
SHO				AMB	AMB	07 44 49.0	
	113nm,0.2s						
SHO				iS	Sn	07 45 00.0	+0.2
SHO				A	A	07 45 02.0	
	344nm,0.2s						
SHO				A	A	07 45 02.0	
	811nm,0.2s						
NEM2	Nemuro 2	0.93	290	P	Pn	07 44 49.7	+0.1
NEM2				eS	Sn	07 45 02.3	+0.2
GLVR	Golovnino	1.24	304	iP	Pn	07 44 53.0	-0.8
GLVR				iS	Sn	07 45 09.0	-0.5
GLVR				A	A	07 45 12.0	
	135nm,0.2s						
GLVR				A	A	07 45 12.0	
	587nm,0.2s						
YUK	Yuzh-Kuril'sk	1.26	322	iP	Pn	07 44 54.0	0.0
YUK				AMB	AMB	07 44 54.0	
	31nm,0.3s						
YUK				AMB	AMB	07 44 54.0	
	70nm,0.3s						
YUK				AMB	AMB	07 44 54.0	
	316nm,0.3s						
YUK				iS	Sn	07 45 10.0	+0.1
YUK				A	A	07 45 11.0	
	612nm,0.6s						
YUK				A	A	07 45 11.0	
	636nm,0.6s						
GRPR	Tuman	1.27	318	iP	Pn	07 44 54.0	-0.1
GRPR				AMB	AMB	07 44 54.0	
	84nm,0.4s						
GRPR				AMB	AMB	07 44 54.0	
	26nm,0.4s						
GRPR				AMB	AMB	07 44 54.0	
	130nm,0.4s						
GRPR				iS	Sn	07 45 09.0	-1.2
GRPR				A	A	07 45 12.0	
	558nm,0.2s						
GRPR				A	A	07 45 12.0	
	561nm,0.2s						
LAGR	Lagunnoye	1.31	321	iP	Pn	07 44 54.0	-0.7
LAGR				AMB	AMB	07 44 55.0	
	212nm,0.1s						
LAGR				AMB	AMB	07 44 55.0	
	23nm,0.1s						
LAGR				AMB	AMB	07 44 55.0	
	40nm,0.1s						
LAGR				iS	Sn	07 45 11.0	-0.1
LAGR				A	A	07 45 12.0	
	677nm,0.4s						
LAGR				A	A	07 45 12.0	
	588nm,0.4s						
JRA	Rausu	1.59	305	P	Pn	07 44 58.8	+0.3
JRA				eS	Sn	07 45 18.4	+0.4
JAK	Akkeshi	1.64	269	P	Pn	07 44 59.3	+0.1
JAK				eS	Sn	07 45 18.6	-0.6
JNK	Nakash	1.71	289	P	Pn	07 44 59.8	-0.2
JNK				eS	Sn	07 45 20.3	-0.5
JOB	Onbets	2.28	267	P	Pn	07 45 08.1	+0.2
JOB				eS	Sn	07 45 34.1	-0.7
KUR	Kuril'sk	2.28	17	iP	Pn	07 45 08.0	+0.1
KUR				AMB	AMB	07 45 10.0	
	9.0nm,0.3s						
KUR				AMB	AMB	07 45 10.0	
	13nm,0.3s						
KUR				AMB	AMB	07 45 10.0	
	17nm,0.3s						
KUR				iS	Sn	07 45 34.0	-0.8
KUR				A	A	07 45 37.0	
	49nm,0.2s						
KUR				A	A	07 45 37.0	
	68nm,0.2s						
JAR	Ashorobuto	2.33	277	P	Pn	07 45 09.1	+0.6
JAR				eS	Sn	07 45 36.3	+0.3
JTKR	Abashiri--Toko	2.39	294	P	Pn	07 45 10.4	+1.1
JTKR				eS	Sn	07 45 38.7	+1.3
JCH	Churui	2.67	262	P	Pn	07 45 13.5	+0.4
JCH				eS	Sn	07 45 42.9	-1.3
JNBK	Urakawa-nobuka	3.18	257	P	Pn	07 45 20.6	+0.4

ATH ***19*** *07:45:39.6, 38°.09N×25°.73E, h33^{km}±4^{km}, ML2.6/6, Error ellipse: s-maj=4.5km s-min=0.9km az=70.0*

DDA ***19*** *07:45:39.7, 38°.19N×25°.58E, h7^{km}, Ml3.4*

ISK ***19*** *07:45:39.5, 38°.12N×25°.61E, h7^{km}, ML2.4/8*

ISCJB ***19*** *07:45:40.3±0.6, 38°.10N±0°.02×25°.66E±0°.04, h10^{km}±4^{km}, Error ellipse: s-maj=5.0km s-min=3.6km az=29.7*

CSEM ***19*** *07:45:40.5±0.2, 38°.10N×25°.65E, h12^{km}, ML2.6, Error ellipse: s-maj=5.0km s-min=3.4km az=122.0*

ISC 19 07:45:39.8±1.1, 38°.12N±0°.02×25°.65E±0°.02, h14^{km}±9^{km}, n50, σ0^{s}.76/72, Aegean Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHOS	Chios island	0.42	50	P	Pb	07 45 49.3	+0.3
CHOS				S	Sg	07 45 54.3	+0.4
CHOS				AML	AML	07 45 55.8	
	comp=E,9258µm,0.3s						
CHOS				AML	AML	07 45 56.2	
	comp=N,3502µm,0.2s						
CHOS	Chios island	0.42	50	P	Pb	07 45 49.1	+0.1
CHOS				S	Sb	07 45 54.9	-0.4
PSRA	Psara	0.43	351	P	Pn	07 45 50.5	-1.1
PSRA				S	Sb	07 45 56.6	+1.1
PSRA				AML	AML	07 45 58.8	
	comp=N,3115µm,0.2s						
PSRA				AML	AML	07 45 60.0	
	comp=E,1950µm,0.1s						
PSRA	Psara	0.43	351	P	Pb	07 45 50.2	+1.1
PSRA				S	Sb	07 45 57.1	+1.7
CESE	ˆe¯me	0.55	68	PG	Pb	07 45 51.6	+0.3
CESE	ˆe¯me	0.55	68	ePg	Pb	07 45 51.6	+0.3
TNSA	Tinos	0.70	214	P	Pn	07 45 54.9	-0.3
TNSA				S	Sb	07 46 04.2	+1.1
TNSA				AML	AML	07 46 06.9	
	comp=N,1101µm,0.2s						
TNSA				AML	AML	07 46 07.0	
	comp=E,990µm,0.3s						
TNSA	Tinos	0.70	214	P	Pb	07 45 54.4	+0.7
TNSA				S	Sb	07 46 04.3	+1.1
URLA	Izmir	0.78	72	PG	Pb	07 45 55.5	+0.2
URLA				SG	Sb	07 46 06.9	+1.1
URLA	Izmir	0.78	72	iP	Pb	07 45 55.5	+0.2
URLA				iS	Sn	07 46 07.6	-0.5
URLA	Izmir	0.78	72	P	Pb	07 45 55.5	+0.2
URLA				eSg	Sb	07 46 06.9	+1.1
URLA				S	Sn	07 46 07.6	-0.5
KRBN	Karaburun	0.85	56	PG	Pn	07 45 57.0	-0.4
KRBN	Karaburun	0.85	56	ePg	Pn	07 45 57.0	-0.4
DGB	˜zmir	0.98	94	iP	Pb	07 45 58.4	-0.1
DGB				iS	Sg	07 46 11.8	+0.3
SMG	Samos	1.03	113	P	Pb	07 45 58.2	-1.2
SMG				S	Sb	07 46 11.3	-1.4
SMG				AML	AML	07 46 13.9	
	comp=N,626µm,0.2s						
SMG				AML	AML	07 46 13.9	
	comp=E,451µm,0.3s						
SMG	Samos	1.03	113	P	Pb	07 45 58.1	-1.3
SMG				S	Sb	07 46 11.4	-1.4
FOCM	Foˆ§a	1.04	55	PG	Pn	07 46 00.3	+0.4
FOCM	Foˆ§a	1.04	55	ePg	Pn	07 46 00.3	+0.4
APE	Apeiranthos	1.05	185	PG	Pg	07 46 00.0	-0.2
APE	Apeiranthos	1.05	185	P	Pg	07 46 00.1	0.0
APE				S	Sb	07 46 12.8	-0.7
APE				AML	AML	07 46 16.3	
	comp=N,452µm,0.2s						
APE				AML	AML	07 46 16.8	
	comp=E,430µm,0.2s						
APE	Apeiranthos	1.05	185	P	Pb	07 45 59.6	-0.3
APE	Apeiranthos	1.05	185	ePg	Pg	07 46 00.0	-0.2
APE				S	Sb	07 46 13.1	-0.5
SIGR	SIGRI	1.10	8	PN	Pb	07 46 00.7	0.0
SIGR	SIGRI	1.10	8	P	Pb	07 46 00.7	0.0
SIGR	SIGRI	1.10	8	P	Pb	07 46 00.6	-0.1
BLCB	Balcova	1.13	76	PN	Pg	07 46 01.6	0.0
BLCB	Balcova	1.13	76	ePn	Pg	07 46 01.6	0.0
PRK	Paraskevi	1.23	23	P	Pn	07 46 01.8	-0.8
PRK				S	Sn	07 46 18.9	0.0
PRK				AML	AML	07 46 25.5	
	comp=N,407µm,0.5s						
PRK				AML	AML	07 46 28.7	
	comp=E,265µm,0.6s						
PRK	Paraskevi	1.23	23	P	Pn	07 46 02.0	-0.6
PRK				S	Sn	07 46 18.9	0.0
DION	Dionisos Attik	1.35	269	P	Pb	07 46 04.8	-0.1
DION	Dionisos Attik	1.35	269	P	Pb	07 46 04.9	-0.1
DKL	Dikili	1.37	46	PN	Pg	07 46 06.0	-0.1
DKL	Dikili	1.37	46	ePn	Pg	07 46 06.0	-0.1
AYVA	Ayvalik	1.44	34	iP	Pg	07 46 07.4	-0.1
AYVA				iS	Sg	07 46 25.6	-0.6
AYVA	Ayvalik	1.44	34	P	Pg	07 46 07.4	-0.1
AYVA				S	Sg	07 46 25.6	-0.6
VLY	Voula,Athens	1.49	260	P	Pb	07 46 06.8	-0.5
VLY	Voula,Athens	1.49	260	P	Pb	07 46 06.8	-0.5
BODT	Bodrum	1.69	128	PN	Pb	07 46 10.5	-0.2
BODT	Bodrum	1.69	128	ePn	Pb	07 46 10.5	-0.2
BAYC	CANAKKALE_Bayr	1.76	23	iP	Pb	07 46 11.3	-0.7
BAYC				iS	Sb	07 46 33.4	-0.6
BAYC	CANAKKALE_Bayr	1.76	23	P	Pb	07 46 11.3	-0.7
BAYC				S	Sb	07 46 33.4	-0.6
AYDB	Zeytinkoy-Aydi	1.78	95	PN	Pb	07 46 12.8	+0.5
AYDB	Zeytinkoy-Aydi	1.78	95	ePn	Pb	07 46 12.8	+0.5
AYDN	Tasoluk	1.82	104	iP	Pb	07 46 12.6	-0.4
AYDN	Tasoluk	1.82	104	P	Pb	07 46 12.6	-0.4
DAT	Datca	2.07	132	PN	Pn	07 46 15.6	+1.3
DAT	Datca	2.07	132	ePn	Pn	07 46 15.6	+1.3
BALY	Balya	2.23	43	iP	Pg	07 46 23.0	+0.4
BALY				iS	Sb	07 46 46.3	-1.1
KULA	Kula-Manisa	2.40	80	PN	Pn	07 46 20.8	+2.0
KULA	Kula-Manisa	2.40	80	ePn	Pn	07 46 20.8	+2.0

CASC 19 08:03:29.5±4.4, 12°.68N×87°.93W, h66^{km}±35^{km}, MD3.6, ML3.8, 1D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CSGN	Cosiguina Volc	0.47	51	eP	Pn	08 03 42.0	+0.3
CSGN				eS	Sn	08 03 51.3	+0.6
CNCH	Conchagua	0.60	9	eP	Pn	08 03 44.0	+0.9
CNCH				eS	Sn	08 03 54.8	+1.7
CNCH				IAML		08 03 58.6	
	comp=E,5µm,0.5s						
LCND	La Caˆ–ada	0.63	3⇓	iP	Pn	08 03 43.3	0.0
LCND				IAML		08 03 55.3	
	comp=Z,2µm,0.4s						
VSM	San Miguel	0.82	336	eP	Pn	08 03 46.0	+0.2
LCY	Lacayo	0.82	334	eP	Pn	08 03 45.5	-0.2
LCY				eS	Sn	08 03 57.3	-0.3
PACA	Pacayal	0.87	334	eP	Pn	08 03 46.0	-0.4
PACA				eS	Sn	08 03 59.0	+0.2
PACA				IAML		08 04 02.0	
	comp=E,3µm,0.1s						
TECA	Tecapa	0.98	325	eP	Pn	08 03 47.0	-0.8
TEL3	Telica 3	1.06	96	eP	Pn	08 03 55.2	+6.6
MOMN	Momotombo	1.38	101	eP	Pn	08 03 52.7	-0.2
MOMN				eS	Sn	08 04 10.4	0.0
COPN	Copaltepe	1.40	111	eP	Pn	08 03 52.6	-0.4
COPN				eS	Sn	08 04 08.6	-2.0
LFRS	El Faro	1.45	310	eP	Pn	08 03 53.4	-0.3
ESTN	Estel	1.58	74	eP	Pn	08 03 55.7	+0.2
ESTN				eS	Sn	08 04 15.6	+0.6
RCON	San Juan de Ri	1.90	65	eP	Pn	08 04 00.6	+0.7
MATN	Matagalpa	1.97	83	eP	Pn	08 04 00.7	-0.1
MATN				eS	Sn	08 04 24.6	+0.1

IDC 19 08:13:53.0±12.0, 46°.23N×149°.77E, h0^{km}, mb3.9/5, mb1 4.1/5, mb1mx3.5/66, mbtmp3.9/5, Error ellipse: s-maj=385.4km s-min=33.6km az=21.0, Kuril Islands

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

H11N2	WAKE ISLAND Hy	29.95	146	T	T	08 50 24.9	
	baz=338,slow=75,SNR=10.0						
H11N1	WAKE ISLAND Hy	29.96	146	T	T	08 50 26.9	
	baz=338,slow=75,SNR=3.3						
H11N3	WAKE ISLAND Hy	29.96	146	T	T	08 50 26.0	
	baz=338,slow=75,SNR=7.2						
H11S1	WAKE ISLAND Hy	30.99	148	T	T	08 51 44.3	
	baz=339,slow=76,SNR=8.1						
H11S3	WAKE ISLAND Hy	31.00	148	T	T	08 51 42.3	
	baz=339,slow=76,SNR=7.0						
H11S2	WAKE ISLAND Hy	31.01	148	T	T	08 51 45.9	
	baz=339,slow=76,SNR=8.0						
ARCES	ARCESS Array B	57.56	340	P	P	08 23 44.1	+0.3
	3.4nm,0.9s,baz=52,slow=7.9,SNR=3.6						
FINES	FINESS Array B	63.50	333	P	P	08 24 24.4	+0.1
	0.9nm,0.4s,baz=30,slow=8.8,SNR=7.2						
NVAR	Mina Array Bea	64.71	60	P	P	08 24 32.8	-0.2
	0.3nm,0.6s,baz=303,slow=5.3,SNR=3.1						
HFS	Hagfors	68.10	338	P	P	08 24 53.7	-0.4
	1.6nm,0.7s,baz=31,slow=3.4,SNR=5.8						
TXAR	Lajitas Array	79.75	58	P	P	08 26 03.3	+0.3
	0.1nm,0.5s,baz=301,slow=3.9,SNR=2.6						

WEL 19 08:45:09.4±1.3**, 34°S**±29°×**17°9W**±5°0**, h33^{km}, ML4.2**/11**,**
South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.43	210	P	Pn	08 46 16.3	+2.0
WMGZ	Waiomatatini S	4.61	207	P	Pn	08 46 17.9	+1.2
WMGZ				S	Sn	08 47 10.2	+1.1
PKGZ	Pakihiroa	4.80	210	P	Pn	08 46 19.1	-0.4
PKGZ				S	Sn	08 47 14.2	+0.2
HAZ	Te Kaha	4.82	213	P	Pn	08 46 18.4	-1.3
HAZ				S	Sn	08 47 16.3	+2.0
PUZ	Puketiti	4.89	207	P	Pn	08 46 20.3	-0.3
PUZ				S	Sn	08 47 15.1	-0.9
RUGZ	Raukumara Rang	5.04	212	P	Pn	08 46 22.5	-0.3
RUGZ				S	Sn	08 47 20.7	+0.8
TWGZ	Tauwhareparae	5.09	209	P	Pn	08 46 22.8	-0.6
TWGZ				S	Sn	08 47 21.9	+0.8
CNGZ	Carnagh Statio	5.27	205	P	Pn	08 46 27.7	+1.9
MWZ	Matawai	5.41	211	P	Pn	08 46 27.6	-0.3
RAGZ	Rawiri	5.59	211	P	Pn	08 46 30.4	0.0
RIGZ	Rimuhau	5.63	207	P	Pn	08 46 29.8	-1.0
MTHZ	Maungataniwha	6.14	213	P	Pn	08 46 36.8	-1.1
BKZ	Black Stump Fm	6.55	213	P	Pn	08 46 43.8	+0.2

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*ISCJB **19** 08:48:55.3±0.5, 39°.69N±0°.03×29°.49E±0°.05, h0^{km}, Error ellipse: s-maj=6.1km s-min=4.2km az=10.4*
*DDA **19** 08:48:55.3, 39°.70N×29°.46E, h7^{km}, Ml2.6, Suspected Mining explosion.*
*CSEM **19** 08:48:55.4±0.3, 39°.65N×29°.50E, h1^{km}, ML2.0, Error ellipse: s-maj=7.0km s-min=4.7km az=110.0, Suspected Mining explosion.*
*ISK **19** 08:48:55.0, 39°.66N×29°.54E, h4^{km}±1^{km}, ML2.0/6*
ISC 19 08:48:56.0±0.9**, 39°.67N**±0°.03×**29°.49E**±0°.03**, h0^{km}, n27, σ0^{s}.96**/35**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TVSB	Tavsanli	0.22	186	PG	Pg	08 48 59.7	-0.4
TVSB				SG	Sg	08 49 03.9	+1.0
TVSB	Tavsanli	0.22	186	*e*Pg	Pg	08 48 59.7	-0.4
TVSB				*e*Sg	Sg	08 49 03.9	+1.0
CAVI	Cavuskoy	0.60	27	PG	Pg	08 49 06.4	-1.1
CAVI	Cavuskoy	0.60	27	*e*Pg	Pg	08 49 06.4	-1.1
BORA	Eskisehir	0.77	74	PG	Pg	08 49 10.3	-0.5
BORA	Eskisehir	0.77	74	*i* P	Pg	08 49 10.1	-0.7
BORA	Eskisehir	0.77	74	*e*Pg	Pg	08 49 10.3	-0.5
DURS	Dursunbey	0.79	266	*i* P	Pg	08 49 09.3	-1.8
DURS				*i* S	Sg	08 49 21.7	+0.4
DURS	Dursunbey	0.79	266	P	Pg	08 49 09.3	-1.8
DURS				S	Sg	08 49 21.7	+0.4
MDNY	Mudanya-Bursa	0.84	327	PG	Pb	08 49 13.3	-0.2
MDNY	Mudanya-Bursa	0.84	327	*e*Pg	Pb	08 49 13.3	-0.2
DEMI	Demirci	0.86	224	*i* P	Pg	08 49 12.3	-0.2
DEMI				*i* S	Sn	08 49 29.1	+0.2
DEMI	Demirci	0.86	224	P	Pg	08 49 12.4	-0.2
YLV	Yalova	0.91	354	PG	Pg	08 49 13.3	-0.1
YLV	Yalova	0.91	354	*e*Pg	Pg	08 49 13.3	-0.1
ARMT	Armutlu	1.02	332	PG	Pg	08 49 15.1	-0.5
ARMT	Armutlu	1.02	332	*e*Pg	Pg	08 49 15.1	-0.5
GEYV	SAKARYA_Geyve	1.02	37	*i* P	Pb	08 49 15.9	-0.7
GEYV	SAKARYA_Geyve	1.02	37	P	Pb	08 49 15.9	-0.7
SBT5	Esenkoy-Cinarc	1.07	334	PN	Pg	08 49 16.4	-0.2
SBT5	Esenkoy-Cinarc	1.07	334	*e*Pn	Pg	08 49 16.4	-0.2
BALB	Balikesir	1.24	269	PN	Pn	08 49 20.9	+0.3
BALB	Balikesir	1.24	269	*e*Pn	Pn	08 49 20.9	+0.3
KHAL	Karahalli	1.29	180	*i* P	Pg	08 49 19.4	-1.3
KHAL				*i* S	Sn	08 49 40.0	+0.5
KHAL	Karahalli	1.29	180	P	Pg	08 49 19.5	-1.3
KHAL				S	Sn	08 49 40.0	+0.5
MANT	Manisa	1.38	212	*i* P	Pg	08 49 21.0	-1.5
MANT				*i* S	Sn	08 49 44.3	+2.5
MANT	Manisa	1.38	212	P	Pg	08 49 21.0	-1.5

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*ISCJB **19** 08:56:33.3±0.5, 32°.21N±0°.03×115°.23W±0°.03, h21^{km}±4^{km}, Error ellipse: s-maj=5.1km s-min=4.4km az=0.4*
*ECX **19** 08:56:34.8±0.5, 32°.21N×115°.29W, h6^{km}, MD2.9, ML3.1*
*NEIC **19** 08:56:34.8±0.0, 32°.21N×115°.29W, h6^{km}, MD3.1(ECX), ML3.0(PAS), After ECX.*
*MEX **19** 08:56:35.7±0.3, 32°.26N×115°.22W, h10^{km}±3^{km}, MD3.8*
ISC 19 08:56:33.3±1.0**, 32°.23N**±0°.03×**115°.25W**±0°.03**, h18^{km}**±3^{km}**, n44, σ1^{s}.16**/59**, 3C-6D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBIG	Mexicali	0.19	14	⇑*e*P	Pg	08 56 38.7	+0.7
MBIG	Mexicali	0.19	14	*e*P	Pg	08 56 38.6	+0.6
MBIG				*e*S	Sb	08 56 40.8	+0.1
CPBX	Cerro Prieto	0.20	347	*e*P	Pg	08 56 38.4	+0.2
CPBX				*e*S	Sg	08 56 42.1	+0.5
CPBX				IAML		08 56 43.7	
	comp=E,12μm,0.3s						
DREC	Desert Rsrch C	0.60	344	*e*P	Pn	08 56 46.0	-1.0
ERPC	Ernies Place	0.62	326	*e*P	Pg	08 56 46.0	+0.3
WESC	Westside Schoo	0.67	323	⇓*i*P	Pg	08 56 46.6	+0.1
YMD	Yuma Desert	0.68	61	⇑*i*P	Pg	08 56 47.2	+0.5
YUH	Yuha Desert	0.71	307	⇓*i*P	Pb	08 56 46.7	-0.4
COK	Cook Ranch	0.74	327	*e*P	Pg	08 56 47.6	-0.3
RMX	La Rumorosa	0.80	298	*e*P	Pb	08 56 47.3	-1.4
RMX				IAML		08 56 57.4	
	comp=N,699nm,0.1s						
RMX				⇓*e*		08 56 57.4	
IKP	In-Ko-Pah, Jac	0.84	300	P	Pb	08 56 49.1	-0.3
	baz=122,SNR=21						
IKP				S	Sb	08 56 59.8	-0.6
	baz=122						
IKP	In-Ko-Pah, Jac	0.84	300	⇑*i*P	Pb	08 56 49.1	-0.3
IKP				*e*S	Sb	08 57 00.1	-0.4
SWSC	Sam W. Stewart	0.85	327	P	Pb	08 56 48.8	-0.8
	baz=149,SNR=70						
SWSC				S	Sb	08 57 00.8	+0.1
	baz=149						
GLA	Glamis	0.90	23	P	Pb	08 56 50.0	-0.3
	baz=205,SNR=19						
GLA				S	Sb	08 57 01.5	-0.5
	baz=205						
GLA	Glamis	0.90	23	*e*Pn	Pb	08 56 50.1	-0.3
SPIG	San Pedro Mart	1.19	189	⇓*e*P	Pb	08 56 55.4	-0.1
SPIG	San Pedro Mart	1.19	189	*e*P	Pb	08 56 55.4	-0.1
SPIG				*e*S	Sg	08 57 11.8	-0.2
SPX	San Pedro Mart	1.19	189	⇓*e*P	Pb	08 56 55.4	-0.1
MONP2	Monument Peak	1.19	304	P	Pn	08 56 54.4	-0.9
	baz=125,SNR=32						
MONP2				S	Sb	08 57 10.1	-0.6
	baz=125						
CBX	Cerro Bola	1.20	275	⇓*e*P	Pb	08 56 55.2	-0.4
CBX				*e*S	Sn	08 57 10.9	-0.4
CBX				IAML		08 57 11.9	
	comp=N,554nm,0.4s						
CBX	Cerro Bola	1.20	275	*e*P	Pb	08 56 55.1	-0.5
CBX				*i* S	Sn	08 57 10.8	-0.4
CBX	Cerro Bola	1.20	275	*e*Pn	Pb	08 56 55.1	-0.5
CBX				*e*Sn	Sn	08 57 10.8	-0.4
TJIG	Tijuana	1.22	280	*e*P	Pn	08 56 55.2	-0.3
TJIG				*e*S	Sb	08 57 10.8	-0.5
BAR	Barrett	1.28	291	*e*Pg	Pb	08 56 56.9	0.0
BC3	Big Chuckawall	1.44	353	P	Pn	08 56 57.7	-0.8
	baz=174,SNR=41						
Y12C	Blythe	1.64	22	*e*Pn	Pg	08 57 04.7	-0.1
109C	Camp Elliot, M	1.70	293	P	Pn	08 57 01.7	-0.4
	baz=113						
109C				S	Sb	08 57 25.1	0.0
	baz=113						
CPE	Camp Elliot	1.70	293	*e*Pg	Pn	08 57 02.0	-0.1
FRD	Ford Ranch, An	1.70	318	P	Pn	08 57 01.3	-0.8
	baz=139						
FRD				S	Sb	08 57 25.6	+0.4
	baz=139						
XPFO	Piæon Flat	1.71	324	*e*Pn	Pn	08 57 01.5	-0.9
PFO	Pinyon Flats O	1.72	324	P	Pn	08 57 01.5	-0.9
	baz=145,SNR=11						
PFO	Pinyon Flats O	1.72	324	*e*Pn	Pn	08 57 01.5	-0.9
IRM	Iron Mountain	1.93	3	P	Pn	08 57 05.0	-0.3
	baz=184,SNR=14						
214A	Organ Pipe Nat	2.09	97	P	Pn	08 57 07.1	-0.3
	baz=278,SNR=17						
214A				Sg	Sg	08 57 39.3	-1.2
	baz=278						
214A	Organ Pipe Nat	2.09	97	*e*P	Pn	08 57 07.2	-0.2
MURC	Murrieta	2.13	310	Sb	Sb	08 57 39.5	+1.9
	baz=130						
PDMCI	Parker Dam,Lak	2.27	24	Sb	Sg	08 57 44.1	-2.3
	baz=205						
BBRC	Big Bear Solar	2.47	326	Sb	Sg	08 57 50.1	-2.6
	baz=146						
BFSC	Mount Baldy Ra	2.85	315	Sb	Sb	08 58 00.6	+2.4
	baz=135						
LDFC	Landfair	2.85	2	*e*Pn	Pn	08 57 19.6	+1.6
CIS	Catalina Islan	2.91	295	Sb	Sb	08 58 01.7	+1.7
	baz=114						
GSC	Goldstone, Bar	3.33	338	*e*Pg	Pg	08 57 41.1	+3.9
EDW2	Edwards Air Fo	3.50	320	Sb	Sb	08 58 20.3	+3.3
	baz=139						
SHPR	Sheep Range	4.27	1	*e*Pn	Pn	08 57 39.9	+2.3

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*NEIC **19** 08:59:21.0±0.0, 32°.21N×115°.30W, h6^{km}, MD2.8(ECX), ML2.7(PAS), After ECX.*
ECX 19 08:59:20.9±0.5**, 32°.22N×115°.30W, h6^{km}, MD2.6, ML2.8, 5C-4D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CPBX	Cerro Prieto	0.20	358	⇓*e*P	Pg	08 59 24.5	-0.4
CPBX				*e*S	Sg	08 59 28.2	+0.6
CPBX				IAML		08 59 29.8	
	comp=E,6μm,0.3s						
CPBX				⇓*e*		08 59 29.8	
CPBX				IAML		08 59 30.4	
	comp=N,6μm,0.1s						
CPBX				⇑*e*		08 59 30.4	
MBIG	Mexicali	0.21	23	*e*P	Pg	08 59 24.8	-0.2
DREC	Desert Rsrch C	0.60	348	*e*P	Pg	08 59 32.1	-0.4
ERPC	Ernies Place	0.61	330	*e*P	Pg	08 59 32.0	-0.7
WESC	Westside Schoo	0.66	326	*e*P	Pg	08 59 32.8	-0.7
YUH	Yuha Desert	0.68	309	⇑*i*P	Pg	08 59 32.8	-1.3
YMD	Yuma Desert	0.72	62	⇑*i*P	Pg	08 59 33.3	-1.4
COK	Cook Ranch	0.73	330	*e*P	Pg	08 59 33.7	-1.2
RMX	La Rumorosa	0.77	300	⇑*e*P	Pg	08 59 33.4	-2.3
RMX				*e*S	Sg	08 59 42.8	-2.8
RMX				⇓*e*		08 59 43.5	
RMX				IAML		08 59 43.5	
	comp=N,331nm,0.1s						
IKP	In-Ko-Pah, Jac	0.81	302	⇑*i*P	Pg	08 59 35.2	-1.3
GLA	Glamis	0.92	25	*e*Pg	Pg	08 59 37.0	-1.6
ZAX	El Zacaton	1.09	230	*e*P	Pg	08 59 40.1	-1.7
ZAX				*e*S	Sg	08 59 54.5	-1.4
CBX	Cerro Bola	1.16	275	*e*P	Pg	08 59 41.4	-1.9
CBX				*e*S	Sg	08 59 57.0	-1.3
CBX				IAML		08 59 58.1	
	comp=E,290nm,0.4s						
SPIG	San Pedro Mart	1.18	187	*e*P	Pg	08 59 41.4	-2.1
SPX	San Pedro Mart	1.18	187	*e*P	Pg	08 59 41.5	-2.0
SPX				IAML		08 59 59.7	
	comp=N,97nm,0.2s						
SPX				⇓*e*		08 59 59.7	
SPX				*e*		09 00 00.9	
BAR	Barrett	1.25	292	*e*Pg	Pg	08 59 43.1	-1.9
BAR				*e*Sg	Sg	08 59 58.9	-2.3
Y12C	Blythe	1.66	23	*e*Pn	Pn	08 59 50.5	-0.1
CPE	Camp Elliot	1.67	294	*e*Pn	Pn	08 59 50.3	-0.4
CPE				*e*Sn	Sn	09 00 11.7	-0.7
XPFO	Piæon Flat	1.70	325	*e*Pn	Pn	08 59 47.6	-3.7
PFO	Pinyon Flats O	1.70	325	*e*Pn	Pn	08 59 47.6	-3.7
ISA	Isabella, Lake	4.34	323	*e*Pn	Pn	09 00 24.0	-3.5
HSIG		4.92	129	*e*Pn	Pn	09 00 40.3	+5.0
W18A	Petrified Fore	5.46	57	*e*Pn	Pn	09 00 42.7	-0.3
PHBM	Huron Fishing	5.65	317	*e*Sn	Sn	09 01 48.4	-2.1
SZCU	Shurtz Canyon	5.67	18	*e*Pn	Pn	09 00 44.4	-1.5

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*CNRM **19** 09:25:04.6, 34°.95N×2°.82W, h29^{km}, ML2.7*
*CSEM **19** 09:25:07.8±0.4, 35°.11N×3°.05W, h20^{km}, ML2.4/12, Error ellipse: s-maj=9.2km s-min=5.1km az=129.0*
*MDD **19** 09:25:07.1±0.9, 35°.02N×3°.10W, h12^{km}±7^{km}, mb3.5/10, Error ellipse: s-maj=15.2km s-min=6.1km az=124.0, PRXIMO*
*ISCJB **19** 09:25:08.1±0.6, 35°.18N±0°.04×3°.08W±0°.05, h28^{km}±4^{km}, Error ellipse: s-maj=8.0km s-min=4.7km az=136.3*
*SFS **19** 09:25:09.0, 35°.27N×3°.22W, h0^{km}, ML2.2*
ISC 19 09:25:07.8±1.4**, 35°.17N**±0°.04×**3°.10W**±0°.04**, h21^{km}**±2^{km}**, n65, σ1^{s}.40**/100**, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EMEL	Melilla	0.17	42	Pg	Pb	09 25 12.7	-0.9
	73nm,0.2s,SNR=7.9						
EMEL				Lg	Lg	09 25 18.2	
	327nm,0.2s,SNR=7.9						
EMLI	Melilla	0.18	43	Pg	Pb	09 25 12.7	-0.8
	73nm,0.2s,SNR=7.9						
EMLI				Lg	Lg	09 25 18.2	
	327nm,0.2s,SNR=7.9						
MELI	Melilla	0.18	47	Pg	Pb	09 25 12.5	-1.0
	0.1nm,0.2s,SNR=7.9						
MELI				Lg	Lg	09 25 17.5	
	168nm,0.1s,SNR=7.9						
MELI	Melilla	0.18	47	Pg	Pb	09 25 12.5	-1.0
	0.1nm,0.2s,SNR=7.9						
MELI	Melilla	0.18	47	*i* P	Pb	09 25 13.7	+0.2
MELI				*i* S	Sb	09 25 17.5	0.0
MPAL	Palemas	0.69	275	Pg	Pn	09 25 22.6	+0.2
MPAL	Palemas	0.69	275	P	Pn	09 25 22.6	+0.2
MPAL				S	Sn	09 25 33.4	+0.8
EBER	Berja	1.73	6	Pn	Pn	09 25 37.7	+0.8
	1.0nm,0.3s,SNR=7.9						
EBER				Sn	Sn	09 25 59.0	+0.5
	4.1nm,0.2s,SNR=7.9						
EBER	Berja	1.73	6	Pn	Pn	09 25 37.7	+0.8
	1.0nm,0.3s,SNR=7.9						
EBER				Sn	Sn	09 25 59.0	+0.5
	4.1nm,0.2s,SNR=7.9						
ELGU	Los Guajares,	1.75	346	Pn	Pn	09 25 37.2	+0.2
	3.4nm,0.2s,SNR=7.9						
ELGU				Sn	Sb	09 26 00.2	-0.5
	3.8nm,0.3s,SNR=7.9						
ELGU	Los Guajares,	1.75	346	Pn	Pn	09 25 37.2	+0.2
	3.4nm,0.2s,SNR=7.9						
ELGU				Sn	Sb	09 26 00.2	-0.5
	3.8nm,0.3s,SNR=7.9						
ENIJ	Nijar	1.94	22	Pn	Pn	09 25 38.3	-1.2
	2.0nm,0.2s,SNR=7.9						
ENIJ				Sn	Sn	09 26 02.4	-0.9
	7.6nm,0.3s,SNR=7.9						
ENIJ	Nijar	1.94	22	Pn	Pn	09 25 38.3	-1.2
	2.0nm,0.2s,SNR=7.9						
ENIJ				Sn	Sn	09 26 02.4	-0.9
	7.6nm,0.3s,SNR=7.9						
EMIJ	Mijas	1.95	316	Pn	Pn	09 25 38.7	-1.0
	1.8nm,0.1s,SNR=8.2						
EMIJ				Sn	Sn	09 26 03.3	-0.2
	3.3nm,0.2s,SNR=5.7						
EMIJ	Mijas	1.95	316	Pn	Pn	09 25 38.7	-1.0
	1.8nm,0.1s,SNR=8.2						
EMIJ				Sn	Sn	09 26 03.3	-0.2
	3.3nm,0.2s,SNR=5.7						
EQUE	Quentar	2.05	352	Pn	Pb	09 25 43.1	-1.3
	2.4nm,0.2s,SNR=10						
EQUE				Sn	Sn	09 26 06.6	+0.4
	0.7nm,0.2s,SNR=7.9						
EQUE	Quentar	2.05	352	Pn	Pb	09 25 43.1	-1.3
	2.4nm,0.2s,SNR=10						
EQUE				Sn	Sn	09 26 06.6	+0.4
	0.7nm,0.2s,SNR=7.9						
EGOR	Sierra Gorda,	2.10	337	Pn	Pn	09 25 42.5	+0.6
	0.7nm,0.1s,SNR=7.9						
EGOR				Sn	Sn	09 26 07.3	-0.3
	1.1nm,0.2s,SNR=7.9						
EGOR	Sierra Gorda,	2.10	337	Pn	Pn	09 25 42.5	+0.6
	0.7nm,0.1s,SNR=7.9						
EGOR				Sn	Sn	09 26 07.3	-0.3
	1.1nm,0.2s,SNR=7.9						
EQES	Quesada	2.63	0	Pn	Pn	09 25 51.5	+2.4
	4.0nm,0.2s,SNR=14						
EQES				Sn	Sb	09 26 26.6	+0.5
	12nm,0.4s,SNR=5.0						
EQES	Quesada	2.63	0	Pn	Pn	09 25 51.5	+2.4
	4.0nm,0.2s,SNR=14						
EQES				Sn	Sb	09 26 26.6	+0.5
	12nm,0.4s,SNR=5.0						
CZD	Col de Zad	2.67	218	P	Pn	09 25 50.1	+0.2
CZD				S	Sn	09 26 23.2	+1.4
SESP	Santiago Espad	2.98	8	Pn	Pn	09 25 56.7	+2.7
	3.6nm,0.1s,SNR=7.9						
SESP				Sn	Sn	09 26 30.0	+0.8
	0.5nm,0.2s,SNR=7.9						
SESP	Santiago Espad	2.98	8	Pn	Pn	09 25 56.7	+2.7
	3.6nm,0.1s,SNR=7.9						
SESP				Sn	Sn	09 26 30.0	+0.8
	0.5nm,0.2s,SNR=7.9						
SESP				S	Sb	09 26 34.2	-2.0
EMUR	La Murta	3.06	29	Pn	Pn	09 25 55.1	+0.1
	1.5nm,0.2s,SNR=7.9						
EMUR				Sn	Sn	09 26 29.4	-1.6
	1.2nm,0.2s,SNR=7.9						
EMUR	La Murta	3.06	29	Pn	Pn	09 25 55.1	+0.1
	1.5nm,0.2s,SNR=7.9						
EMUR				Sn	Sn	09 26 29.4	-1.6
	1.2nm,0.2s,SNR=7.9						
HORN	Hornachuelos	3.19	328	P	Pn	09 25 59.6	+2.9
HORN				S	Sb	09 26 42.9	+0.8
EADA	Adamuz	3.22	339	Pn	Pn	09 25 59.0	+1.8
	1.1nm,0.1s,SNR=7.9						
EADA				Sn	Sn	09 26 36.0	+1.1
	0.4nm,0.2s,SNR=7.9						
EADA	Adamuz	3.22	339	Pn	Pn	09 25 59.0	+1.8
	1.1nm,0.1s,SNR=7.9						
EADA				Sn	Sn	09 26 36.0	+1.1
	0.4nm,0.2s,SNR=7.9						
ECAB	El Cabril	3.45	328	Pn	Pn	09 26 02.5	+2.2
	0.2nm,0.3s,SNR=7.9						
ECAB				Sn	Sn	09 26 41.0	+0.4
	0.2nm,0.1s,SNR=7.9						
ECAB	El Cabril	3.45	328	Pn	Pn	09 26 02.5	+2.2
	0.2nm,0.3s,SNR=7.9						
ECAB				Sn	Sn	09 26 41.0	+0.4
	0.2nm,0.1s,SNR=7.9						
ETOB	Tobarra	3.68	19	Pn	Pn	09 26 06.3	+2.7
	0.5nm,0.2s,SNR=7.9						
ETOB				Sn	Sn	09 26 46.1	-0.4
	0.5nm,0.2s,SNR=7.9						
ETOB	Tobarra	3.68	19	Pn	Pn	09 26 06.3	+2.7
	0.5nm,0.2s,SNR=7.9						
ETOB				Sn	Sn	09 26 46.1	-0.4
	0.5nm,0.2s,SNR=7.9						
EMIN	Mina Concepcio	3.88	313	Pn	Pn	09 26 07.3	+1.1
	1.3nm,0.2s,SNR=9.7						
EMIN				Sn	Sn	09 26 49.3	-1.8
	0.2nm,0.2s,SNR=5.0						
EMIN	Mina Concepcio	3.88	313	Pn	Pn	09 26 07.3	+1.1
	1.3nm,0.2s,SNR=9.7						
EMIN				Sn	Sn	09 26 49.3	-1.8
	0.2nm,0.2s,SNR=5.0						
EGRO	El Granado	4.25	305	Pn	Pn	09 26 12.5	+1.2
	0.6nm,0.2s,SNR=15						
EGRO				Sn	Sn	09 27 00.1	-0.3
	0.2nm,0.3s,SNR=5.0						
EGRO	El Granado	4.25	305	Pn	Pn	09 26 12.5	+1.2
	0.6nm,0.2s,SNR=15						
EGRO				Sn	Sn	09 27 00.1	-0.3
	0.2nm,0.3s,SNR=5.0						
PVAQ	Vaqueiros	4.35	302	*e*Pn	Pn	09 26 13.6	+0.9
PVAQ	Vaqueiros	4.35	302	Pn	Pn	09 26 13.6	+0.9
PVAQ	Vaqueiros	4.35	302	Pn	Pn	09 26 13.6	+0.9
PBAR	Barrancos	4.36	315	*e*Pn	Pn	09 26 13.4	+0.5
PBAR	Barrancos	4.36	315	Pn	Pn	09 26 13.4	+0.5
PBAR	Barrancos	4.36	315	Pn	Pn	09 26 13.4	+0.5
PBDV	Barranco-do-Ve	4.42	299	*e*Pn	Pn	09 26 14.2	+0.5
PBDV	Barranco-do-Ve	4.42	299	Pn	Pn	09 26 14.2	+0.5
PBDV	Barranco-do-Ve	4.42	299	Pn	Pn	09 26 14.2	+0.5
PAB	San Pablo	4.48	348	Pn	Pn	09 26 17.3	+2.7
	0.9nm,0.2s,SNR=7.9						
PAB	San Pablo	4.48	348	Pn	Pn	09 26 17.3	+2.7
	0.9nm,0.2s,SNR=7.9						
PCVE	Castro Verde	4.68	303	*e*Pn	Pn	09 26 18.4	+1.1
PCVE	Castro Verde	4.68	303	Pn	Pn	09 26 18.4	+1.1
PCVE	Castro Verde	4.68	303	Pn	Pn	09 26 18.4	+1.1
EBAD	Badajoz	4.76	320	Pn	Pn	09 26 19.6	+1.3
	0.6nm,0.3s,SNR=7.7						
EBAD				Sn	Sn	09 27 10.1	-2.7
	0.8nm,0.2s,SNR=5.0						
EBAD	Badajoz	4.76	320	Pn	Pn	09 26 19.6	+1.3
	0.6nm,0.3s,SNR=7.7						
EBAD				Sn	Sn	09 27 10.1	-2.7
	0.8nm,0.2s,SNR=5.0						
MESJ	Messejana	4.91	304	*e*Pn	Pn	09 26 22.1	+1.7
MESJ	Messejana	4.91	304	Pn	Pn	09 26 22.1	+1.7
MESJ	Messejana	4.91	304	Pn	Pn	09 26 22.1	+1.7
PFVI	Vila Bisbo	5.03	295	*e*Pn	Pn	09 26 23.4	+1.3
EVO	Evora	5.18	312	*e*Pn	Pn	09 26 25.9	+1.8
EVO	Evora	5.18	312	Pn	Pn	09 26 25.9	+1.8
EVO	Evora	5.18	312	Pn	Pn	09 26 25.9	+1.8
PNCL	Nicolau / Gran	5.26	305	*e*Pn	Pn	09 26 26.4	+1.2
PMRV	Marv??o	5.46	322	*e*Pn	Pn	09 26 30.0	+2.1
PMRV	Marv??o	5.46	322	Pn	Pn	09 26 30.0	+2.1
PMRV	Marv??o	5.46	322	Pn	Pn	09 26 30.0	+2.1
PMTG	Montargil	5.65	315	*e*Pn	Pn	09 26 32.3	+1.7

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*ISCJB **19** 09:27:47.6±0.9, 18°.5S±0°.2×169°.2E±0°.2, h240^{km}, mb3.6/7, Error ellipse: s-maj=34.1km s-min=11.2km az=37.6*
*IDC **19** 09:27:48.1±3.3, 18°.61S×169°.30E, h235^{km}±37^{km}, mb3.5/7, mb1 3.7/8, mb1mx3.4/43, mbtmp4.0/8, Error ellipse: s-maj=62.6km s-min=20.4km az=159.0*
ISC 19 09:27:48.5±1.0**, 18°.7S**±0°.2×**169°.3E**±0°.2**, h240^{km}, n8, σ0^{s}.48**/9**, mb3.7**/7**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.34	218	P	Pn	09 28 55.6	-0.4
	1.8nm,0.3s,baz=113,slow=17,SNR=14						
DZM				S	S	09 29 49.9	+0.4
	3.4nm,0.3s,baz=114,slow=19,SNR=3.6						
STKA	Stephens Creek	28.22	237	P	P	09 33 19.3	0.0
	2.3nm,0.7s,baz=67,slow=9.0,SNR=7.7						
WRA	Warramunga Arr	33.00	262	P	P	09 34 01.4	0.0
	0.7nm,0.7s,baz=83,slow=5.9,SNR=18						
ASAR	Alice Springs	33.34	255	P	P	09 34 04.4	+0.1
	5.1nm,0.5s,baz=83,slow=9.1,SNR=131						
SONM	Songino Array	86.79	323	P	P	09 40 06.2	+0.4
	0.4nm,0.5s,baz=131,slow=5.9,SNR=2.5						
NVAR	Mina Array Bea	88.36	48	P	P	09 40 13.9	+0.4
	1.2nm,0.9s,baz=220,slow=8.3,SNR=7.5						
ILAR	Eielson Array	89.65	17	P	P	09 40 17.8	-0.8
	0.2nm,0.6s,baz=205,slow=6.0,SNR=5.0						
TXAR	Lajitas Array	96.42	61	P	P	09 40 51.0	+0.2
	0.5nm,1.0s,baz=255,slow=7.0,SNR=3.1						

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*ISCJB **19** 09:35:13.4±0.9, 38°.07N±0°.03×20°.34E±0°.06, h11^{km}±4^{km}, Error ellipse: s-maj=7.4km s-min=4.4km az=169.1*
*THE **19** 09:35:14.2, 38°.06N×20°.40E, h12^{km}, ML3.1/5, Error ellipse: s-maj=1.0km s-min=0.5km az=74.0*
*CSEM **19** 09:35:14.0±0.3, 38°.09N×20°.41E, h10^{km}, ML2.8, Error ellipse: s-maj=6.0km s-min=2.8km az=77.0*
*ATH **19** 09:35:14.1, 38°.08N×20°.44E, h20^{km}±1^{km}, ML2.8/8, Error ellipse: s-maj=1.9km s-min=0.9km az=82.0*
ISC 19 09:35:13.9±1.1**, 38°.08N**±0°.02×**20°.39E**±0°.04**, h18^{km}**±5^{km}**, n70, σ0^{s}.59**/96**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLS	Valsamata	0.19	58	P	Pb	09 35 18.6	-0.2
VLS				S	Sg	09 35 21.7	-0.1

VLS				AML	AML	09 35 21.9	
	comp=N,21938μm,0.1s						
VLS				AML	AML	09 35 22.0	
	comp=E,33478μm,0.1s						
VLS	Valsamata	0.19	58	P	Pg	09 35 18.5	-0.1
VLS				S	Sg	09 35 21.8	-0.1
VLS	Valsamata	0.19	58	P	Pg	09 35 18.5	-0.1
VLS				S	Sg	09 35 21.8	-0.1
KFL	Anninata	0.32	84	P	Pg	09 35 20.3	-0.3
KFL				S	Sb	09 35 25.4	-0.4
KFL	Anninata	0.32	84	P	Pg	09 35 20.4	-0.3
KFL				S	Sg	09 35 25.2	-0.1
KFL	Anninata	0.32	84	P	Pg	09 35 20.3	-0.3
KFL				S	Sg	09 35 25.2	-0.1
FSK	Fiskardo	0.41	19	P	Pg	09 35 22.2	0.0
FSK	Fiskardo	0.41	19	P	Pg	09 35 22.3	0.0
FSK				S	Sb	09 35 28.7	+0.2
ZKS	Zakynthos	0.49	140	P	Pg	09 35 23.0	-0.9
ZKS				S	Sb	09 35 30.9	0.0
ZKS	Zakynthos	0.49	140	P	Pg	09 35 23.4	-0.4
ZKS				S	Sg	09 35 30.3	-0.2
ZKS	Zakynthos	0.49	140	P	Pg	09 35 23.3	-0.5
ZKS				S	Sg	09 35 30.3	-0.2
EVGI	Lefkada island	0.58	21	P	Pg	09 35 25.3	-0.2
EVGI	Lefkada island	0.58	21	P	Pg	09 35 25.3	-0.2
MGNA	Meganis‚„	0.66	28	P	Pb	09 35 27.7	+0.8
MGNA	Meganis‚„	0.66	28	P	Pb	09 35 27.1	+0.2
LKD2	Lefkada island	0.74	16	P	Pg	09 35 28.0	-0.4
LKD2				S	Sb	09 35 38.4	+0.2
LKD2				AML	AML	09 35 45.1	
	comp=N,1518μm,0.6s						
LKD2				AML	AML	09 35 46.6	
	comp=E,1587μm,0.2s						
LKD2	Lefkada island	0.74	16	P	Pg	09 35 28.2	-0.3
LKD2	Lefkada island	0.74	16	P	Pg	09 35 28.1	-0.4
LKD2				S	Sb	09 35 38.4	+0.2
PDO	Prodromos	0.81	50	P	Pg	09 35 29.2	-0.6
PDO				S	Sg	09 35 40.3	-0.2
PDO				AML	AML	09 35 48.2	
	comp=N,2492μm,0.4s						
PDO				AML	AML	09 35 48.2	
	comp=E,2280μm,0.5s						
PDO	Prodromos	0.81	50	P	Pg	09 35 29.2	-0.6
PDO	Prodromos	0.81	50	P	Pg	09 35 29.2	-0.6
PDO				S	Sg	09 35 40.2	-0.3
RLS	Riolos of Patr	0.85	91	P	Pg	09 35 29.5	-1.0
RLS				S	Sg	09 35 40.8	-0.9
RLS				AML	AML	09 35 46.2	
	comp=E,510μm,0.5s						
RLS				AML	AML	09 35 47.2	
	comp=N,737μm,0.4s						
RLS	Riolos of Patr	0.85	91	P	Pg	09 35 29.7	-0.8
RLS	Riolos of Patr	0.85	91	P	Pg	09 35 29.7	-0.8
RLS				S	Sg	09 35 40.9	-0.8
PVO	Paravola	1.04	59	P	Pg	09 35 33.9	-0.2
PVO				S	Sg	09 35 47.2	-0.6
PVO				AML	AML	09 35 54.5	
	comp=E,1342μm,0.6s						
PVO				AML	AML	09 35 55.6	
	comp=N,1088μm,0.7s						
PVO	Paravola	1.04	59	P	Pb	09 35 33.5	0.0
PVO				S	Sn	09 35 48.4	+0.6
PVO	Paravola	1.04	59	P	Pb	09 35 33.5	0.0
PVO				S	Sg	09 35 47.3	-0.6
DRO	Drossia	1.05	96	P	Pb	09 35 33.3	-0.3
DRO	Drossia	1.05	96	P	Pb	09 35 33.3	-0.3
AMT	Artemida-Makis	1.18	117	P	Pb	09 35 35.2	-0.6
AMT	Artemida-Makis	1.18	117	P	Pb	09 35 35.5	-0.3
DSL	Palaion Diasel	1.19	27	P	Pb	09 35 35.7	-0.4
DSL				S	Sb	09 35 51.9	+0.7
DSL				AML	AML	09 35 57.7	
	comp=N,1017μm,0.4s						
DSL				AML	AML	09 35 58.6	
	comp=E,790μm,0.4s						
DSL	Palaion Diasel	1.19	27	P	Pb	09 35 36.0	0.0
DSL	Palaion Diasel	1.19	27	P	Pb	09 35 36.0	0.0
DSL				S	Sg	09 35 52.2	-0.4
EFP	Efpalio	1.24	73	P	Pn	09 35 36.0	-0.5
EFP	Efpalio	1.24	73	P	Pn	09 35 36.4	0.0
EFP	Efpalio	1.24	73	P	Pn	09 35 36.4	0.0
LAKA	Lakka	1.26	82	P	Pn	09 35 36.7	-0.1
LAKA	Lakka	1.26	82	P	Pn	09 35 36.7	-0.1
LAKA	Lakka	1.26	82	P	Pn	09 35 37.0	+0.3
ANX	Ano Chora	1.31	66	P	Pg	09 35 39.3	+0.1
ANX	Ano Chora	1.31	66	P	Pg	09 35 38.7	-0.5
MES3	Kyparissia	1.31	129	P	Pb	09 35 38.6	+0.6
MES3	Kyparissia	1.31	129	P	Pb	09 35 38.6	+0.6
SERG	Sergoula	1.35	75	P	Pg	09 35 39.7	-0.3
SERG	Sergoula	1.35	75	P	Pn	09 35 38.2	+0.2
SERG	Sergoula	1.35	75	P	Pn	09 35 38.2	+0.2
TRIZ	Trizonia	1.36	77	P	Pn	09 35 38.2	+0.2
TRIZ	Trizonia	1.36	77	P	Pn	09 35 38.2	+0.2
KLV	Kalavryta, Ach	1.39	91	P	Pg	09 35 40.2	-0.6
KLV	Kalavryta, Ach	1.39	91	P	Pn	09 35 38.8	+0.3
KLV	Kalavryta, Ach	1.39	91	P	Pn	09 35 38.8	+0.3
EVR	Evrytania	1.39	53	P	Pg	09 35 40.5	-0.3
EVR				S	Sn	09 35 57.4	+0.8
EVR				AML	AML	09 36 08.9	
	comp=N,183μm,0.4s						
EVR				AML	AML	09 36 10.6	
	comp=E,208μm,0.7s						
EVR	Evrytania	1.39	53	P	Pb	09 35 40.1	+0.6
EVR				S	Sg	09 35 58.0	-1.0
ITM	Ithomi	1.51	126	P	Pn	09 35 41.1	+1.0
ITM	Ithomi	1.51	126	P	Pn	09 35 41.4	+1.2
SGD	Sagiada	1.54	355	P	Pn	09 35 41.0	+0.5
SGD	Sagiada	1.54	355	P	Pn	09 35 41.0	+0.5
GUR	Goura	1.55	95	P	Pn	09 35 41.4	+0.6
GUR				S	Sb	09 36 02.5	+1.0
GUR				AML	AML	09 36 12.2	
	comp=N,687μm,0.4s						
GUR				AML	AML	09 36 12.6	
	comp=E,678μm,0.4s						
GUR	Goura	1.55	95	P	Pn	09 35 41.0	+0.3
GUR	Goura	1.55	95	P	Pn	09 35 41.0	+0.3
GUR				S	Sb	09 36 02.5	+1.0
PYL	PYLOS	1.60	137	P	Pn	09 35 42.3	+1.0
PYL	PYLOS	1.60	137	P	Pn	09 35 42.7	+1.4
DSF	Desfina	1.71	78	P	Pb	09 35 44.9	-0.1
DSF	Desfina	1.71	78	P	Pb	09 35 44.7	-0.3
PROD	Prodromos	1.99	84	P	Pn	09 35 48.5	+1.7
PROD	Prodromos	1.99	84	P	Pn	09 35 48.4	+1.7
DYR	Agios Nikonas	2.03	130	P	Pb	09 35 50.1	-0.2
DYR	Agios Nikonas	2.03	130	P	Pb	09 35 49.6	-0.7
STON	Ston	5.21	338	*e*Pn	Pn	09 36 30.6	-0.3
STON				Sn	Sn	09 37 29.1	-1.5

IDC 19 09:51:51.7±1.6**,7°.52S×123°.01E,h0^{km},mb3.7**/1**, mb1 3.8**/4**,mb1mx3.5**/51**,mbtmp3.6**/4**,ML3.6**/3**,Error ellipse: s-maj=143.6km s-min=25.1km az=62.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	10.82	167	Pn	Pn	09 54 28.6	+0.7
	0.2nm,0.3s,baz=345,slow=13,SNR=3.3						
FITZ				Sn	Sn	09 56 17.4	-13
	0.4nm,0.3s,baz=270,slow=20,SNR=4.1						
WRA	Warramunga Arr	16.52	139	Pn	Pn	09 55 45.9	+0.9
	0.2nm,0.3s,baz=313,slow=12,SNR=11						
WRA				Sn	Sn	09 58 35.4	-14
	0.2nm,0.3s,baz=316,slow=24,SNR=3.5						
ASAR	Alice Springs	19.16	148	P	P	09 56 16.2	-0.7
	0.3nm,0.3s,baz=329,slow=13,SNR=19						
ASAR				S	Sn	09 59 36.4	-17
	0.0nm,0.3s,baz=310,slow=20,SNR=2.7						
MKAR	Makanchi Array	65.05	330	P	P	10 02 33.9	0.0
	0.5nm,0.5s,baz=139,slow=7.8,SNR=7.1						

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*IDC **19** 10:17:40.0±1.3,11°.38N×145°.02E,h0^{km},mb3.8/8, mb1 4.0/9,mb1mx3.7/55,mbtmp3.8/9,ML3.9/1,Error ellipse: s-maj=49.7km s-min=18.6km az=93.0*

*ISCJB **19** 10:17:43.1±1.1,11°.39N±0°.07×145°.0E±0°.3,h33^{km}, mb3.8/8,Error ellipse: s-maj=45.8km s-min=9.7km az=2.9*

ISC 19 10:17:45.3±1.4**,11°.42N**±0°.10×**145°.0E**±0°.4**,h35^{km},n15, σ0s.72**/10**,mb3.8**/8**,South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	2.16	355	Pn	Pn	10 18 18.6	-0.2
	38nm,0.3s,baz=148,slow=5.6,SNR=30						
GUMO				Sn	Sn	10 18 43.5	-0.9
	27nm,0.3s,baz=183,slow=16,SNR=5.9						
H11S3	WAKE ISLAND Hy	22.05	69	T	T	10 45 45.3	
	baz=254,slow=75,SNR=50						
H11S1	WAKE ISLAND Hy	22.06	69	T	T	10 45 46.8	
	baz=254,slow=75,SNR=22						
H11S2	WAKE ISLAND Hy	22.06	69	T	T	10 45 45.3	
	baz=254,slow=75,SNR=90						
H11N1	WAKE ISLAND Hy	22.58	66	T	T	10 46 30.1	
	baz=249,SNR=13						
H11N2	WAKE ISLAND Hy	22.59	66	T	T	10 46 30.7	
	baz=249,slow=74,SNR=8.1						
H11N3	WAKE ISLAND Hy	22.60	66	T	T	10 46 28.4	
	baz=249,slow=74,SNR=9.0						
MJAR	Matsushiro Arr	25.76	347	P	P	10 23 12.4	-0.4
	1.4nm,0.5s,baz=162,slow=8.0,SNR=4.5						
WRA	Warramunga Arr	32.90	199	P	P	10 24 15.4	-0.9
	0.6nm,0.7s,baz=21,slow=9.7,SNR=4.7						
ASAR	Alice Springs	36.53	197	P	P	10 24 47.5	-0.2
	0.2nm,0.7s,baz=24,slow=7.4,SNR=3.5						
SONM	Songino Array	48.60	326	P	P	10 26 26.8	+1.2
	1.2nm,0.5s,baz=138,slow=5.7,SNR=6.5						
MKAR	Makanchi Array	63.17	317	P	P	10 28 09.6	-0.3
	0.3nm,0.4s,baz=116,slow=6.7,SNR=5.9						
KURBB	Kurchatov Arra	66.39	320	P	P	10 28 30.9	+0.3
	1.7nm,0.2s,baz=106,slow=6.4,SNR=6.5						
ILAR	Eielson Array	70.45	25	P	P	10 28 56.3	+0.5
	0.5nm,0.5s,baz=247,slow=5.8,SNR=6.9						
BVAR	Borovoye Array	71.73	322	P	P	10 29 03.7	-0.1
	0.4nm,0.4s,baz=95,slow=12,SNR=3.1						

IDC 19 10:22:33.3±12.0**,3°.52N×127°.19E,h0^{km},mb3.7**/4**, mb1 4.0**/4**,mb1mx3.5**/53**,mbtmp3.8**/4**,Error ellipse: s-maj=212.5km s-min=107.1km az=144.0,Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	21.53	184	P	P	10 27 23.9	-0.4
	1.6nm,0.8s,baz=347,slow=7.3,SNR=2.9						
WRA	Warramunga Arr	24.35	164	P	P	10 27 52.0	-1.1
	1.3nm,0.6s,baz=344,slow=10.0,SNR=13						
ASAR	Alice Springs	27.80	167	P	P	10 28 25.5	+1.2
	1.3nm,0.8s,baz=349,slow=9.8,SNR=9.6						
STKA	Stephens Creek	37.77	160	P	P	10 29 51.3	0.0
	2.7nm,0.9s,baz=329,slow=8.6,SNR=4.2						

MEX 19 10:31:53.5±0.5**,16°.00N×98°.32W,h2^{km}**±4^{km}**,MD3.6,Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.43	25	*e*P	Pg	10 32 01.2	-0.6
PNIG				*i* S	Sg	10 32 08.0	+0.6
TLIG	Tlapa	1.57	351	*e*P	Pn	10 32 18.7	-3.9
TLIG				*i* S	Sn	10 32 38.6	-5.0
VHO	Vista Hermosa	1.85	55	*e*P	Pn	10 32 23.4	-3.2
VHO				*e*S	Sn	10 32 45.6	-5.1
MEIG	Mezcala	2.29	327	*i* P	Pn	10 32 29.4	-3.0
MEIG				*e*S	Sn	10 32 57.0	-4.2

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*NIED **19** 10:39:00,37°.10N×141°.20E,h14^{km},Mw4.0 Best double couple: $M_0$1.17000×10^{15} NP1:ϕ_s73.00000°,δ41.00000°, λ-76.00000°. NP2:ϕ_s235.00000°,δ51.00000°, λ-101.00000°.*

*IDC **19** 10:39:14.4±0.6,37°.00N×141°.20E,h0^{km},mb3.8/13, mb1 4.0/17,mb1mx3.8/71,mbtmp3.8/17,ML3.6/3,MS2.6/4, Ms1 2.6/4,ms1mx2.4/64,Error ellipse: s-maj=19.2km s-min=13.4km az=116.0*

*ISCJB **19** 10:39:15.5±0.9,37°.02N±0°.03×141°.31E±0°.05,h18^{km}±6^{km}, mb4.0/18,MS3.3/2,Error ellipse: s-maj=6.8km s-min=4.8km az=38.2*

*JMA **19** 10:39:17.4±0.1,37°.05N×141°.16E,h29^{km}±1^{km},M3.9*

JMA Felt II J1.

*NEIC **19** 10:39:18.3±2.0,36°.98N×141°.26E,h27^{km}±15^{km},mb4.7/3, Error ellipse: s-maj=8.3km s-min=6.2km az=121.0*

NEIC Recorded [2 JMA] in Fukushima.

ISC 19 10:39:15.4±1.6**,37°.05N**±0°.04×**141°.29E**±0°.05**,h8^{km}**±10^{km}**, n61,**σ**1s.46**/66**,mb4.0**/18**,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONAJ	Iwakimizuishiy	0.39	278	P	Pb	10 39 24.5	-0.1
ONAJ				S	Sb	10 39 29.4	-1.5
JFK	Kawauchi	0.46	315	P	Pb	10 39 25.8	0.0
JFK				S	Sb	10 39 31.5	-1.3
JFFD	Fukushimafurud	0.58	275	P	Pb	10 39 27.2	-0.6
JFFD				S	Sg	10 39 34.1	-0.1
JHO	Hitachi	0.72	233	P	Pg	10 39 29.5	+0.3
JHO				*e*S	Sg	10 39 38.8	+0.2
JFT	Otama	0.89	302	P	Pb	10 39 33.0	-0.1
JFT				*e*S	Sg	10 39 44.0	-0.1
JMM	Marumori	0.91	335	P	Pb	10 39 32.9	-0.5
JSB	Shiboa	1.09	266	P	Pb	10 39 36.4	-0.2
JSB				S	Sg	10 39 49.8	-0.8
JFY	Yanaizu	1.31	286	P	Pn	10 39 39.4	-0.7
JFY				S	Sb	10 39 55.6	-1.7
MJAR	Matsushiro Arr	2.52	259	Pn	Pn	10 39 56.5	-0.1
	7.3nm,0.3s,baz=145,slow=6.5,SNR=59						
MJAR				Sn	Sn	10 40 28.0	+0.4
	6.9nm,0.3s,baz=101,slow=25,SNR=6.5						
MAJO	Matsushiro	2.52	259	*e*Pn	Pn	10 39 57.5	+0.8
MAJO				*e*Sn	Sn	10 40 28.0	+0.4
MAT	Matsushiro	2.52	259	P	Pn	10 39 57.4	+0.7
MAT				S	Sn	10 40 27.6	0.0
MJB9	Matsu-Tunnel	2.52	260	*e*Pn	Pn	10 39 57.5	+0.8
INU	Inuyama	3.84	245	*e*Pn	Pn	10 40 16.1	+1.3
JHJ2	Mitsune	4.11	197	*e*Pn	Pn	10 40 19.4	+0.9
JHJ	Hachijo jima 2	4.11	198	Pn	Pn	10 40 18.6	+0.1
	25nm,0.3s,baz=323,slow=19,SNR=18						
JHJ				Sn	Sn	10 41 05.5	-1.2
	27nm,0.3s,baz=87,slow=23,SNR=5.8						
ERM	Erimo	5.17	16	*e*Pn	Pn	10 40 33.8	+0.7
ASAJ	Asahikawa	7.13	8	Pn	Pn	10 40 59.8	-0.3
	1.0nm,0.3s,baz=220,slow=14,SNR=14						
ASAJ				Sn	Sn	10 42 18.6	-2.6
	0.1nm,0.3s,baz=255,slow=20,SNR=1.8						
CBIJ	Chichi jima	9.95	175	*e*Pn	Pn	10 41 36.5	-2.2
CBIJ				*e*Sn	Sn	10 43 19.8	-11
JCJ	Chichijima	9.95	175	Pn	Pn	10 41 36.5	-2.2
	baz=292,slow=19						
JCJ				Sn	Sn	10 43 19.8	-11
	baz=356,slow=15						
USRK	Ussuriysk Ar.	10.04	318	Pn	Pn	10 41 44.5	+4.5
	baz=134,slow=12						
KSRS	Korea Array	10.66	276	LR	LR	10 45 17.7	
	comp=Z,32nm,20.4s,baz=79,slow=34						
INCN	Inchon	11.69	277	*e*Pn	Pn	10 42 04.3	+1.9
KLR	Kul’dur	14.01	333	Pn	P	10 42 38.5	-3.6
	0.0nm,0.3s,baz=124,slow=10,SNR=5.0						
KLR				LR	LR	10 47 57.5	
	comp=Z,8.0nm,18.4s,baz=172,slow=37						
PETK	Petropavlovsk-	19.73	30	P	Pn	10 43 46.4	-0.3
	baz=221,slow=13						
PETK				LR	LR	10 52 44.6	
	comp=Z,35nm,18.3s,baz=141,slow=41						
PEA1	Petropavlovsk-	19.73	30	*e*P	Pn	10 43 46.4	-0.4
MA2	Magadan	23.36	12	P	P	10 44 30.7	+6.6
	11nm,0.8s,baz=191,slow=4.2,SNR=6.0						
SEY	Seymchan	26.80	11	P	P	10 44 57.5	+1.8
	1.7nm,1.1s,baz=196,slow=19,SNR=2.7						
SONA1	Songino Array	27.69	304	*e*P	P	10 45 03.9	-0.1
SONA0	Songino Array	27.69	304	*e*P	P	10 45 03.8	-0.3
SONM	Songino Array	27.69	304	P	P	10 45 03.8	-0.3
	0.3nm,0.4s,baz=92,slow=8.7,SNR=2.6						
H11N2	WAKE ISLAND Hy	28.24	121	T	T	11 14 46.9	
	baz=314,slow=75,SNR=194						
H11N1	WAKE ISLAND Hy	28.25	121	T	T	11 14 47.5	
	baz=314,slow=75,SNR=236						
H11N3	WAKE ISLAND Hy	28.26	121	T	T	11 14 48.2	
	baz=314,slow=75,SNR=200						
H11S1	WAKE ISLAND Hy	28.95	123	T	T	11 15 35.9	
	baz=315,slow=76,SNR=132						
H11S3	WAKE ISLAND Hy	28.95	123	T	T	11 15 36.1	
	baz=315,slow=76,SNR=80						
H11S2	WAKE ISLAND Hy	28.97	123	T	T	11 15 37.3	
	baz=315,slow=76,SNR=67						
TIXI	Tiksi	35.27	353	LR	LR	11 01 06.7	
	comp=Z,11nm,18.2s,baz=91,slow=37						
ZAA1	Zalesovo Array	41.83	312	*e*P	P	10 47 05.3	-0.2
ZALV	Zalesovo Beam	41.83	312	P	P	10 47 05.3	-0.2
	1.6nm,0.3s,baz=74,slow=11,SNR=3.9						
MK32	Makanchi Array	44.02	302	*e*P	P	10 47 22.7	-0.8
MKAR	Makanchi Array	44.02	302	P	P	10 47 22.7	-0.8
	0.5nm,0.6s,baz=88,slow=9.5,SNR=2.8						
CHGN	Chignik	44.03	44	*e*P	P	10 47 22.3	-0.9
	88nm,1.1s						
KURK	Kurchatov	45.84	308	*e*P	P	10 47 37.5	-0.3
	8.5nm,0.8s						
IL1	Eielson Array	49.54	32	*e*P	P	10 48 06.8	+0.5
ILAR	Eielson Array	49.54	32	P	P	10 48 07.1	+0.8
	1.3nm,0.7s,baz=269,slow=6.4,SNR=25						
ILB	Eielson Array	49.54	32	*e*P	P	10 48 06.9	+0.6
INK	Inuvik	54.42	27	P	P	10 48 42.3	-0.3
	0.9nm,0.6s,baz=337,slow=7.7,SNR=3.6						
WR1	Warramunga Arr	57.06	188	*e*P	P	10 49 01.2	-0.8
	5.8nm,0.9s						
WR1				*e*PcP	PcP	10 49 57.5	+0.5
WRA	Warramunga Arr	57.06	188	P	P	10 49 01.2	-0.8
	0.6nm,0.5s,baz=5.5,slow=7.4,SNR=21						
WRA				PcP	PcP	10 49 57.5	+0.5
	0.6nm,0.6s,baz=1.6,slow=4.3,SNR=4.7						
ASAR	Alice Springs	60.79	188	P	P	10 49 27.7	-0.3
	0.4nm,0.8s,baz=8.8,slow=5.4,SNR=4.5						
FIA0	FINESS Array S	68.76	332	*e*P	P	10 50 19.0	-0.5
FINES	FINESS Array B	68.76	332	P	P	10 50 19.0	-0.5
	1.3nm,0.7s,baz=60,slow=8.2,SNR=2.4						
AFDM	Forest Hills D	73.05	54	*e*P	P	10 50 48.0	+1.9
	5.2nm,0.6s						
NV01	Mina Array Sit	75.06	53	*e*P	P	10 50 59.0	+1.0
NVAR	Mina Array Bea	75.06	53	P	P	10 50 59.5	+1.5
	0.8nm,0.8s,baz=284,slow=5.8,SNR=8.2						
PD31	Pinedale Array	77.73	45	*e*P	P	10 51 14.0	+0.9
PDAR	Pinedale Array	77.73	45	P	P	10 51 14.0	+0.9
	0.3nm,0.5s,baz=318,slow=2.0,SNR=5.8						
URZ	Urewera	81.91	152	LR	LR	11 24 11.2	
	comp=Z,65nm,19.2s,baz=329,slow=33						
ANMO	Albuquerque	84.66	50	P	P	10 51 50.7	+0.6
	0.4nm,0.4s,baz=339,slow=8.6,SNR=4.8						
TXAR	Lajitas Array	90.20	52	P	P	10 52 17.7	+0.9
	0.4nm,0.6s,baz=316,slow=3.2,SNR=8.8						
LPAZ	La Paz	146.78	59	PKPbc	PKPbc	10 58 59.7	+0.5
	2.1nm,0.7s,baz=18,slow=6.1,SNR=9.7						

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*NNC **19** 10:44:13.3±2.9,53°.51N×87°.69E,h0^{km},mb3.5,mpv3.2, Error ellipse: s-maj=23.0km s-min=11.5km az=63.0, Suspected Mining explosion.*

IDC 19 10:44:13.8±2.5**,53°.46N×87°.72E,h0^{km},mb1 3.3**/3**, mb1mx3.0**/69**,mbtmp3.3**/3**,ML3.0**/3**,5C-4D,Error ellipse: s-maj=22.3km s-min=13.2km az=65.0,Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.79	287	*i*		10 55 50.4	
	baz=105,slow=334,SNR=4.2						
ZAA0	Zalesovo Array	1.79	287	⇑Pg	Pn	10 44 44.9	-1.0
	9.1nm,0.6s						
ZAA0				⇓Lg	Lg	10 45 10.6	
	16nm,0.8s						
ZALV	Zalesovo Beam	1.79	287	Pg	Pn	10 44 44.6	-1.4
	2.9nm,0.3s,baz=101,slow=15,SNR=35						
ZALV				Lg	Lg	10 45 10.8	
	6.1nm,0.3s,baz=100,slow=26,SNR=13						
KURK	Kurchatov	6.24	248	⇓Lg	Lg	10 47 32.1	
	14nm,1.3s						
KURBB	Kurchatov Arra	6.34	247	Pn	Pn	10 45 47.8	-0.6
	0.2nm,0.3s,baz=62,slow=14,SNR=4.1						
KURBB				Sn	Sn	10 47 01.3	-0.1
	baz=59,slow=24,SNR=2.7						
KURBB				Lg	Lg	10 47 32.7	
	0.1nm,0.3s,baz=64,slow=32,SNR=4.9						
KURBB	Kurchatov Arra	6.34	247	⇑Pn	Pn	10 45 48.5	+0.1
	2.3nm,0.5s						
KURBB				⇑Sn	Sn	10 47 01.0	-0.4
	8.4nm,0.6s						
KURBB				⇑Lg	Lg	10 47 33.3	
	12nm,0.7s						
MK31	Makanchi Array	7.53	210	⇓Pn	Pn	10 46 06.3	+1.6
	0.6nm,0.6s,baz=32,slow=14,SNR=12						
MK31				⇑Sn	Sn	10 47 32.5	+1.8
	184nm,0.1s,baz=83,slow=10.0,SNR=3.8						
MK31				⇓Lg	Lg	10 48 12.3	
	1.9nm,0.7s,baz=34,slow=30,SNR=4.5						
MKAR	Makanchi Array	7.53	210	Pn	Pn	10 46 06.1	+1.3
	0.3nm,0.3s,baz=28,slow=13,SNR=14						
MKAR				Sn	Sn	10 47 30.9	+0.1
	0.1nm,0.3s,baz=26,slow=30,SNR=8.1						
MKAR				Lg	Lg	10 48 12.2	
	0.2nm,0.3s,baz=31,slow=31,SNR=7.2						
BVAR	Borovoye Array	10.40	275	Pn	Pn	10 46 43.9	-0.2
	0.2nm,0.3s,baz=62,slow=19,SNR=2.7						

MAN 19 10:45:45.3,6°.59N×125°.89E,h151^{km},mb4.5,ML3.4, MS3.2,1C,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	Mati	0.51	46	*e*P	Pn	10 46 08.1	+1.3
MATI				*e*S	Sn	10 46 25.5	+2.3
GSPH	General Santos	1.06	242	⇑*i*P	Pn	10 46 10.5	-0.3
GSPH				*i* S	Sn	10 46 27.7	-2.5
SKMP	Bagumbayan, Su	1.34	267	*e*P	Pn	10 46 13.2	0.0
SKMP				*e*S	Sn	10 46 36.4	+1.7
BUKP	Musuan	1.52	328	*e*P	Pn	10 46 20.9	+5.7
BUKP				*e*S	Sn	10 46 48.5	+10

IDC 19 10:47:32.2±22.0**,6°.68S×149°.22E,h299^{km}**±182^{km}**, mb3.1**/2**,mb1 3.2**/3**,mb1mx2.7**/48**,mbtmp3.6**/3**,Error ellipse: s-maj=139.1km s-min=86.9km az=57.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	19.56	226	P	P	10 51 38.8	+0.2
	0.1nm,0.3s,baz=51,slow=10,SNR=7.1						
ASAR	Alice Springs	22.41	219	P	P	10 52 05.9	-0.2
	0.7nm,0.7s,baz=57,slow=8.7,SNR=10						
FITZ	Fitzroy Crossi	25.64	242	P	P	10 52 35.1	-0.2
	2.8nm,1.1s,baz=49,slow=9.3,SNR=2.1						
TORD	Torodi Ar. Bea	147.40	284	PKPbc	PKPbc	11 06 41.3	-0.6
	baz=58,slow=2.1						

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*IDC **19** 10:51:26.9±4.4,36°.69S×176°.49E,h294^{km}±85^{km},mb2.9/3, mb1 3.3/3,mb1mx3.0/40,mbtmp3.5/3,Error ellipse: s-maj=217.6km s-min=28.8km az=177.0*

*ISCJB **19** 10:51:28.1±0.7,36°.88S±0°.08×176°.25E±0°.09,h303^{km}, mb3.0/3,Error ellipse: s-maj=10.8km s-min=9.7km az=139.0*

*NEIC **19** 10:51:30.4±0.0,36°.73S×176°.36E,h275^{km},ML4.0(WEL), After WEL.*

ISC 19 10:51:28.7±1.4**,37°.0S**±0°.1×**176°.34E**±0°.09**,h303^{km},n51,** σ**0s.97**/53**,mb2.9**/3**,Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	1.43	155	P	Pn	10 52 12.2	+0.6
	8.8nm,0.3s,baz=280,slow=2.9,SNR=91						
URZ				S	S	10 52 44.9	-0.9
	8.6nm,0.3s,baz=286,slow=18,SNR=34						
MWZ	Matawai	1.66	146	Pn	Pn	10 52 13.5	+0.4
RAGZ	Rawiri	1.75	151	Pn	Pn	10 52 14.7	+0.8
TWGZ	Tauwhareparae	1.78	133	Pn	Pn	10 52 14.8	+0.7
WMGZ	Waiomatatini S	1.86	118	Pn	Pn	10 52 14.9	+0.3
TKGZ	Te Karaka	1.90	141	Pn	Pn	10 52 15.2	+0.3
SNGZ	Shannon Statio	1.98	157	Pn	Pn	10 52 16.4	+0.9
CNGZ	Carnagh Statio	2.12	136	Pn	Pn	10 52 17.1	+0.5
NMHZ	Naumai	2.16	170	Pn	Pn	10 52 18.6	+1.6
BKZ	Black Stump Fm	2.20	177	Pn	Pn	10 52 18.2	+0.9
OTVZ	Oturere	2.26	193	Pn	Pn	10 52 18.9	+1.0
NGZ	Ngauruhoe	2.28	194	Pn	Pn	10 52 20.3	+2.2
KNZ	Kokohu	2.31	153	Pn	Pn	10 52 18.3	+0.2
ARHZ	Aropaoanui	2.35	167	Pn	Pn	10 52 19.6	+1.0
TUVZ	Tukino	2.36	193	Pn	Pn	10 52 20.7	+1.9
FWVZ	Far West T-bar	2.37	195	Pn	Pn	10 52 20.8	+1.8
WHVZ	Whangaehu Hut	2.39	194	Pn	Pn	10 52 20.9	+1.8
WNVZ	Wahianoa	2.43	194	Pn	Pn	10 52 21.1	+1.7
MOVZ	Moawhango	2.48	190	Pn	Pn	10 52 20.9	+1.1
MCHZ	McNeill Hill	2.49	174	Pn	Pn	10 52 21.0	+1.2

MTVZ	Mangateitei	2.51	196	Pn	Pn	10 52 21.8	+1.8
MHGZ	Mahia Peninsul	2.51	151	Pn	Pn	10 52 20.3	+0.4
BHHZ	Black Hill Sta	2.53	185	Pn	Pn	10 52 21.2	+1.1
KAHZ	Kahuranaki	2.86	172	Pn	Pn	10 52 24.1	+0.9
PNHZ	Pukenui	2.95	182	Pn	Pn	10 52 24.6	+0.5
WAZ	Wanganui	2.98	200	Pn	Pn	10 52 26.3	+1.9
PXZ	Pawanui	3.09	172	Pn	Pn	10 52 25.8	+0.4
PXZ				Sn	S	10 53 12.4	+1.7
WPHZ	Waipukurau	3.10	179	Pn	Pn	10 52 26.1	+0.6
TSZ	Takapari Road	3.10	185	Pn	Pn	10 52 26.0	+0.4
DVHZ	Dannevirke	3.33	182	Pn	Pn	10 52 28.4	+0.5
POWZ	Post Office Ro	3.45	187	Pn	Pn	10 52 29.5	+0.4
PRWZ	Pori Road	3.60	184	Pn	Pn	10 52 31.4	+0.8
BFZ	Birch Farm	3.71	181	Pn	Pn	10 52 31.9	+0.1
MRZ	Mangatainoka R	3.74	189	Pn	Pn	10 52 32.0	-0.1
MRZ				Sn	S	10 53 22.2	-0.7
TIWZ	Tintock	3.82	185	Pn	Pn	10 52 33.2	+0.2
OGWZ	Otaki Gorge	3.95	193	Pn	Pn	10 52 34.6	+0.2
HOWZ	Holdsworth Sta	3.98	189	Pn	Pn	10 52 34.6	-0.1
KIW	Kapiti Island	4.05	196	Pn	Pn	10 52 35.6	+0.1
MTW	Mount Morrison	4.24	189	Pn	Pn	10 52 37.0	-0.5
CAW	Cannon Point	4.25	193	Pn	Pn	10 52 37.5	-0.2
TCW	Tory Channel	4.53	200	Pn	Pn	10 52 41.3	+0.5
NNZ	Nelson	4.83	208	Pn	Pn	10 52 44.4	+0.2
TUWZ	Tuamarina	4.83	202	Pn	Pn	10 52 44.5	+0.3
QRZ	Quartz Range	4.87	216	Pn	Pn	10 52 44.8	+0.1
THZ	Tophouse	5.48	208	Pn	Pn	10 52 52.1	+0.2
KHZ	Kahutara	5.86	201	Pn	Pn	10 52 56.7	+0.5
LTZ	Lake Taylor	6.60	207	Pn	Pn	10 53 04.6	-0.5
MQZ	McQueen's Vall	7.30	202	Pn	Pn	10 53 13.1	-0.5
ASAR	Alice Springs	38.65	278	P	P	10 58 23.6	-0.2
	0.3nm,0.5s,baz=123,slow=8.0,SNR=7.1						
WRA	Warramunga Arr	40.27	283	P	P	10 58 36.1	-1.0
	0.8nm,1.2s,baz=122,slow=7.8,SNR=6.9						
NVAR	Mina Array Bea	96.22	46	P	P	11 04 20.2	-2.5
	0.1nm,0.4s,baz=208,slow=3.7,SNR=2.4						

IDC 19 10:53:14.7±3.3, 33°.11S×178°.32W, h0^{km}, mb3.5/2, mb1 3.8/3, mb1mx3.5/42, mbtmp3.6/3, ML3.5/1, Error ellipse: s-maj=74.4km s-min=37.1km az=116.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	6.34	215	Pn	Pn	10 54 50.2	+0.8
	1.0nm,0.3s,baz=37,slow=20,SNR=7.9						
URZ				Sn	Sn	10 56 01.0	-1.5
	0.4nm,0.3s,baz=93,slow=18,SNR=2.5						
ASAR	Alice Springs	42.76	270	P	P	11 01 14.2	+0.2
	0.2nm,0.5s,baz=112,slow=7.7,SNR=6.5						
WRA	Warramunga Arr	43.99	275	P	P	11 01 23.9	-0.2
	0.6nm,0.5s,baz=116,slow=7.8,SNR=19						
FINES	FINESS Array B	147.57	338	PKPbc	PKPbc	11 12 59.1	-1.0
	2.1nm,0.9s,baz=62,slow=3.9,SNR=3.9						

NNC 19 11:05:02.0±5.2, 44°.28N×83°.11E, h0^{km}, mb2.6, mpv2.3, Error ellipse: s-maj=49.1km s-min=16.3km az=119.0

SOME 19 11:05:05.2, 44°.40N×82°.87E, h0^{km}

ISC 19 11:05:06.3±2.4, 44°.26N±0°.09×83°.1E±0°.1, h17^{km}, n7, σ1^s.48/11, 4C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	2.12	248	*e*P	Pn	11 05 43.2	+2.2
	5.2nm,0.3s						
KTMS				*e*S	Sb	11 06 10.4	+0.2
	7.4nm,0.2s						
DJR	Jarkent	2.34	273	*e*P	Pb	11 05 47.3	-0.8
	1.7nm,0.2s						
DJR				*e*S	Sb	11 06 17.4	+0.6
	3.2nm,0.3s						
MK31	Makanchi Array	2.59	348	⇑Pg	Pb	11 05 50.6	-1.7
	0.2nm,0.2s,baz=162,slow=17,SNR=13						
MK31				⇑Lg	Lg	11 06 23.0	
	0.6nm,0.3s,baz=160,slow=28,SNR=11						
MAKZ	Makanchi	2.66	344	⇑Pg	Pn	11 05 50.0	+1.7
	1.6nm,0.7s						
MAKZ				⇑Lg	Lg	11 06 25.0	
	0.6nm,0.3s						
PDGK	Podgornoye	2.74	251	⇓Pg	Pb	11 05 53.0	-1.9
	1.4nm,0.8s						
PDGK				⇓Lg	Lg	11 06 28.9	
	2.2nm,0.5s						
KAPS	Kapalarasan	2.83	293	*e*P	Pb	11 05 54.9	-1.4
	0.3nm,0.2s						
KAPS				*e*S	Sb	11 06 30.7	+0.1
	1.8nm,0.2s						
SHLS	Shalkode	2.83	248	*e*P	Pn	11 05 51.1	+0.4
	3.3nm,0.2s						
SHLS				*e*S	Sn	11 06 24.2	-0.3
	12nm,0.3s						

JMA 19 11:06:43.4±0.2, 24°.94N×122°.36E, h155^{km}±3^{km}, M2.4

TAP 19 11:06:43.7, 25°.02N×122°.40E, h154^{km}, ML3.1, C

ISCJB 19 11:06:44.1±0.7, 25°.01N±0°.04×122°.40E±0°.02, h144^{km}±5^{km}, Error ellipse: s-maj=6.8km s-min=3.6km az=174.2

ISC 19 11:06:43.2±2.1, 25°.04N±0°.07×122°.39E±0°.03, h155^{km}±11^{km}, n52, σ0^s.50/94, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.36	265	*e*P	Pn	11 07 04.7	+0.3
	baz=259						
TWB1				*e*S	Sn	11 07 20.5	0.0
	baz=259						
TIPB	Shuangxi	0.51	262	P	Pn	11 07 05.3	+0.2
	baz=254						
TIPB				*e*S	Sn	11 07 21.5	-0.4
	baz=254						
EOS1	EOS1	0.54	206	*i* P	Pn	11 07 05.8	+0.6
	baz=198						
EOS1				*i* S	Sn	11 07 21.9	-0.1
	baz=198						
NWF	Wu-fen Shan	0.55	273	*e*P	Pn	11 07 05.8	+0.4
	baz=267						
NWF				*e*S	Sn	11 07 22.4	+0.2
	baz=267						
WFSB	Wu-fen Shan	0.55	273	*e*P	Pn	11 07 05.5	+0.3
	baz=267						
WFSB				*e*S	Sn	11 07 22.6	+0.5
	baz=267						
TWC	Suao	0.65	229	*e*P	Pn	11 07 06.5	+0.6
	baz=237						
TWC				*e*S	Sn	11 07 23.1	-0.1
	baz=237						
YM07	YM07	0.71	281	*e*P	Pn	11 07 06.5	+0.3
	baz=278						
YM07				*e*S	Sn	11 07 23.0	-0.8
	baz=278						
TWE	Neicheng	0.73	244	P	Pn	11 07 07.0	+0.7
	baz=252						
TWE				*e*S	Sn	11 07 23.5	-0.4
	baz=252						
JYNG	Yonagunijimaku	0.78	139	P	Pn	11 07 06.9	+0.2
JYNG				S	Sn	11 07 24.2	-0.4
YM04	YM04	0.78	278	*e*P	Pn	11 07 07.1	+0.4
	baz=274						
YM04				*e*S	Sn	11 07 24.0	-0.6
	baz=274						
YOJ	Yonaguni jima	0.81	135	P	Pn	11 07 07.1	+0.2
	baz=142						
YOJ				S	Sn	11 07 24.4	-0.6
	baz=142						
YOJ	Yonaguni jima	0.81	135	P	Pn	11 07 07.2	+0.3
YOJ				S	Sn	11 07 24.8	-0.2
NANB	Nanao	0.84	223	*e*P	Pn	11 07 07.6	+0.4
	baz=222						
NANB				*e*S	Sn	11 07 25.2	-0.2
	baz=222						
NWLT	Wulai	0.84	252	P	Pn	11 07 07.5	+0.3
	baz=256						
NWLT				S	Sn	11 07 24.8	-0.7
	baz=256						
ENTT	Nioudou	0.85	242	P	Pn	11 07 07.6	+0.4
	baz=246						
ENTT				S	Sn	11 07 25.3	-0.2
	baz=246						
ENA	Nanau	0.85	224	*e*P	Pn	11 07 08.0	+0.8
	baz=222						
ENA				S	Sn	11 07 25.1	-0.5
	baz=222						
NTST	Danshui	0.86	278	*e*P	Pn	11 07 07.0	-0.2
	baz=275						
YHNB	Yeheng	0.99	248	*e*P	Pn	11 07 08.6	+0.2
	baz=243						
YHNB				*e*S	Sn	11 07 27.1	-0.5
	baz=243						
NSK	Sanguang	1.00	249	P	Pn	11 07 08.6	+0.2
	baz=243						
NSK				S	Sn	11 07 27.4	-0.4
	baz=243						
WLTB	Daxi	1.05	260	*e*P	Pn	11 07 09.3	+0.6
	baz=262						
WLTB				*e*S	Sn	11 07 28.2	-0.1
	baz=262						
NCU	National Centr	1.09	266	*e*P	Pn	11 07 09.7	+0.5
	baz=276						
NCUH	Zhongli	1.09	266	*e*P	Pn	11 07 09.4	+0.3
	baz=259						
NCUH				*e*S	Sn	11 07 28.6	-0.4
	baz=259						
NNSB	Datong	1.10	236	*e*P	Pn	11 07 09.7	+0.4
	baz=243						
NNSB				*e*S	Sn	11 07 29.0	-0.3
	baz=243						
NNSH	Datong	1.10	236	P	Pn	11 07 09.7	+0.3
	baz=243						
NNSH				S	Sn	11 07 29.0	-0.4
	baz=243						
NNS	Nan Shan	1.10	237	P	Pn	11 07 09.7	+0.3
	baz=244						
NNS				S	Sn	11 07 28.9	-0.4
	baz=244						
NACB	Ninganchiao	1.13	220	*e*P	Pn	11 07 09.3	-0.1
	baz=217						
NACB				*e*S	Sn	11 07 28.4	-1.2
	baz=217						
TWD	Chiawan	1.20	217	*e*P	Pn	11 07 09.8	-0.4
	baz=217						
TWD				*e*S	Sn	11 07 29.6	-1.1
	baz=217						
LIOB	Emei	1.31	253	*e*P	Pn	11 07 11.5	+0.3
	baz=248						
LIOB				*e*S	Sn	11 07 32.2	-0.3
	baz=248						
NSTT	Nanjuang	1.32	252	P	Pn	11 07 11.2	-0.1
	baz=248						
NSTT				*e*S	Sn	11 07 31.9	-0.9
	baz=248						
ENLB	Shoufeng	1.34	212	*e*P	Pn	11 07 12.0	+0.6
	baz=213						
ENLB				*e*S	Sn	11 07 33.1	-0.1
	baz=213						
WHF	Hehuan Shan	1.36	229	P	Pn	11 07 12.4	+0.3
	baz=230						
WHF				S	Sn	11 07 33.4	-0.8
	baz=230						
TDCB	Techi	1.37	235	*e*P	Pn	11 07 12.6	+0.7
	baz=241						
TDCB				*e*S	Sn	11 07 33.6	-0.2
	baz=241						
IRIF	Iriomote-Funau	1.41	120	S	Sn	11 07 35.1	+0.8
CHGB	Renai	1.48	229	*e*P	Pn	11 07 13.5	+0.4
	baz=230						
CHGB				S	Sn	11 07 35.5	-0.5
	baz=230						
ESL	Shilin	1.50	216	*e*P	Pn	11 07 13.8	+0.7
	baz=216						
ESL				*e*S	Sn	11 07 36.3	+0.3
	baz=216						
NSY	Sanyi	1.60	247	*e*P	Pn	11 07 14.8	+0.6
	baz=249						
NSY				*e*S	Sn	11 07 37.6	-0.4
	baz=249						
HATJ	Hateruma jima	1.62	127	S	Sn	11 07 38.6	+0.3
JKRS	Kuro-shima	1.68	118	P	Pn	11 07 15.4	+0.4
JKRS				S	Sn	11 07 39.5	+0.1
JIJ	Ishigaki jima	1.73	113	P	Pn	11 07 15.8	+0.2
JIJ				S	Sn	11 07 39.1	-1.3
HGSD	Ruisui	1.78	210	*e*S	Sn	11 07 41.4	+0.1
	baz=219						
SMLT	Sun Moon Lake	1.78	230	*e*P	Pn	11 07 16.0	-0.2
	baz=231						
SMLT				*e*S	Sn	11 07 41.7	+0.1
	baz=231						
TYC	Yuchr	1.80	231	P	Pn	11 07 16.7	+0.5
	baz=232						
TYC				S	Sn	11 07 41.5	-0.2
	baz=232						
JISG	Ishigakijimahi	1.81	104	P	Pn	11 07 16.6	+0.2
JISG				S	Sn	11 07 41.2	-0.6
SSLB	Suanglung	1.81	227	*e*P	Pn	11 07 16.6	+0.2
	baz=230						
SSLB				*e*S	Sn	11 07 42.0	+0.1
	baz=230						
EHY	Hungye	1.81	213	*e*P	Pn	11 07 16.2	-0.3
	baz=216						
YULB	Yu-li	1.92	211	*e*P	Pn	11 07 17.0	-0.7
	baz=217						
YULB				*e*S	Sn	11 07 43.2	-1.1
	baz=217						
TWF1	Yuli	1.96	211	*e*P	Pn	11 07 18.7	+0.6
	baz=215						
YUS	Yu-Shan	2.03	221	*e*P	Pn	11 07 20.1	+0.7
	baz=216						
YUS				*e*S	Sn	11 07 47.0	-0.1
	baz=216						
CHN5	Tsauling	2.12	228	*e*P	Pn	11 07 21.0	+0.9
	baz=236						
CHN5				*e*S	Sn	11 07 48.3	-0.2
	baz=236						
JTJ	Tarama	2.14	100	S	Sn	11 07 48.1	-0.6
CHKT	Chengkung	2.15	206	*e*S	Sn	11 07 48.6	-0.3
	baz=200						
JIRB	Irabujima	2.54	94	S	Sn	11 07 56.8	-0.4

IDC 19 11:09:34.1±8.9, 5°.63S×102°.06E, h0^{km}, mb3.4/3, mb1 3.6/3, mb1mx3.3/64, mbtmp3.4/3, Error ellipse: s-maj=435.6km s-min=27.2km az=50.0, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08S2	Diego Garcia H	29.44	264	T	T	11 46 43.0	
	baz=87						
H08S3	Diego Garcia H	29.45	264	T	T	11 46 42.1	
	baz=87,SNR=3.0						
H08S1	Diego Carcia H	29.45	264	T	T	11 46 43.9	
	baz=87						
WRA	Warramunga Arr	34.45	117	P	P	11 16 23.9	0.0
	0.6nm,1.0s,baz=289,slow=9.6,SNR=2.7						
ASAR	Alice Springs	35.50	124	P	P	11 16 32.8	-0.2
	0.4nm,0.9s,baz=295,slow=7.1,SNR=3.4						
MKAR	Makanchi Array	55.06	344	P	P	11 19 07.6	-0.2
	0.2nm,0.4s,baz=149,slow=8.7,SNR=6.8						
TXAR	Lajitas Array	146.13	43	PKPbc	PKPdf	11 29 16.5	+0.2
	0.3nm,0.4s,baz=307,slow=1.6,SNR=8.5						

NNC 19 11:21:40.1±2.4, 54°.17N×87°.23E, h0^{km}, mb3.5, mpv3.3, Error ellipse: s-maj=29.5km s-min=12.2km az=4.0, Suspected Mining explosion.

IDC 19 11:21:44.5±2.5, 53°.94N×86°.93E, h0^{km}, mb1 3.1/3, mb1mx3.0/68, mbtmp3.1/3, ML2.8/3, 8C-1D, Error ellipse: s-maj=22.4km s-min=13.7km az=72.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.25	271	*i*		11 30 20.0	
	baz=89,slow=313,SNR=2.8						
ZAA0	Zalesovo Array	1.25	271	⇑P	Pg	11 22 06.4	-2.1
	4.9nm,0.3s						
ZAA0				⇑S	Sn	11 22 26.4	-0.3
	16nm,0.7s						
ZALV	Zalesovo Beam	1.25	271	Pg	Pg	11 22 06.7	-1.8
	5.7nm,0.3s,baz=85,slow=17,SNR=29						
ZALV				Lg	Lg	11 22 24.1	
	1.3nm,0.3s,baz=86,slow=22,SNR=4.3						
ZALV				Rg	Rg	11 22 29.4	
	9.9nm,0.5s,baz=91,slow=28,SNR=9.4						
KURK	Kurchatov	6.03	241	⇑Pn	Pn	11 23 15.4	+0.4
	3.7nm,1.0s						
KURK				⇑Lg	Lg	11 25 01.0	
	7.1nm,0.9s						
KURBB	Kurchatov Arra	6.13	241	Pn	Pn	11 23 16.8	+0.5
	0.1nm,0.3s,baz=55,slow=14,SNR=15						
KURBB				Sn	Sn	11 24 27.2	0.0
	0.0nm,0.3s,baz=60,slow=20,SNR=3.7						
KURBB				Lg	Lg	11 24 59.6	
	0.0nm,0.3s,baz=58,slow=33,SNR=3.5						
KURBB	Kurchatov Arra	6.13	241	⇑Pn	Pn	11 23 16.3	0.0
	5.2nm,1.2s						
KURBB				⇓Sn	Sn	11 24 29.1	+2.0
	7.1nm,0.8s						
KURBB				⇑Lg	Lg	11 25 05.7	
	7.5nm,0.7s						
MK31	Makanchi Array	7.75	204	⇑Pn	Pn	11 23 38.5	0.0
	0.6nm,0.7s,baz=27,slow=12,SNR=5.2						
MK31				⇑Lg	Lg	11 25 54.0	
	3.9nm,0.8s,baz=37,slow=30,SNR=4.0						
MKAR	Makanchi Array	7.75	204	Pn	Pn	11 23 39.5	+1.0
	0.1nm,0.3s,baz=20,slow=12,SNR=4.7						
MKAR				Sn	Sn	11 25 06.0	-1.0
	0.0nm,0.3s,baz=23,slow=23,SNR=2.6						
MKAR				Lg	Lg	11 25 50.5	
	0.1nm,0.3s,baz=18,slow=25,SNR=2.5						
BVAR	Borovoye Array	9.91	271	Pn	Pn	11 24 08.5	+0.5
	0.2nm,0.3s,baz=80,slow=13,SNR=3.9						

CSEM 19 11:43:08.8, 38°.26N×6°.12W, h0^{km}, ML0.5, Mining explosion., Spain

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ECAB	El Cabril	0.58	108	Pg	Pg	11 43 19.3	-0.6
	SNR=7.9						
ECAB				Lg	Lg	11 43 27.6	
	1.5nm,0.2s,SNR=7.9						
EBAD	Badajoz	0.86	305	Pg	Pg	11 43 25.2	-0.1
	SNR=7.9						
EBAD				Lg	Lg	11 43 35.9	
	0.8nm,0.2s,SNR=7.9						
EGRO	El Granado	1.30	237	Pg	Pg	11 43 31.2	-2.5
	SNR=7.9						
EGRO				Lg	Lg	11 43 51.3	
	SNR=7.9						

IDC 19 11:46:26.1±0.7, 6°.10N×127°.46E, h0^{km}, mb4.1/11, mb1 4.3/12, mb1mx3.9/54, mbtmp4.2/12, ML4.6/1, MS3.0/9, Ms1 3.0/9, ms1mx2.7/52, Error ellipse: s-maj=41.5km s-min=13.8km az=68.0

MAN 19 11:46:32.2, 5°.62N×126°.67E, h114^{km}, mb5.1, ML4.1, MS4.2

NEIC 19 11:46:33.8±1.3, 5°.98N×127°.18E, h55^{km}±11^{km}, mb4.2/6, Error ellipse: s-maj=15.2km s-min=6.8km az=67.0

ISCJB 19 11:46:34.8±0.8, 5°.81N±0°.04×126°.87E±0°.09, h78^{km}±6^{km}, mb4.0/13, Error ellipse: s-maj=15.9km s-min=4.7km az=163.7

DJA 19 11:46:35.9±0.6, 6°N±3°×12°6E±°, h10^{km}, M4.5/7, mb4.6/4, mB4.7/3, MLv4.5/7, Mw(mB)3.9/3

ISC 19 11:46:36.5±1.1, 5°.82N±0°.05×126°.85E±0°.09, h82^{km}±10^{km}, n55, σ1^s.99/55, mb4.2/13, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MATI	Mati	1.26	332	*e*P	Pn	11 46 57.1	-1.7
MATI				*e*S	Sn	11 47 15.2	-0.5
DAV	Davao City (W)	1.77	315	Pn	Pn	11 47 04.5	-0.9
	182nm,0.3s,baz=177,slow=1.0,SNR=9.0						
DAV				Sn	Sn	11 47 26.5	-0.8
	131nm,0.3s,baz=40,slow=7.2,SNR=7.2						
DAV				LR	LR	11 48 28.6	
	comp=Z,231nm,19.1s,baz=152,slow=58						
DAV	Davao City (W)	1.77	315	*e*Pn	Pn	11 47 04.4	-1.0
DAV				*e*		11 47 04.6	
DAV				*e*		11 47 26.5	
DAV				*e*Sn	Sn	11 47 26.8	-0.6
DMPH	Davao City--Mi	1.83	313	⇑*i*P	Pn	11 47 11.8	+5.6
DMPH				*i* S	Sn	11 47 36.0	+7.2
GSPH	General Santos	1.91	278	⇓*i*P	Pn	11 47 01.4	-5.9
GSPH				*i* S	Sn	11 47 17.4	-13
SKMP	Bagumbayan, Su	2.40	287	*e*P	Pn	11 47 09.8	-4.0
SKMP				*e*S	Sn	11 47 37.9	-4.4
BUKP	Musuan	2.71	319	*e*P	Pn	11 47 17.0	-1.0
BUKP				*e*S	Sn	11 47 49.7	-0.1
BUTP	Butuan	3.35	339	*e*P	Pn	11 47 29.0	+2.3
BUTP				*e*S	Sn	11 48 17.5	+12
PAGZ	Pagadian	3.99	300	*e*P	Pn	11 47 31.7	-3.6
TNTI	Ternate	5.04	174	P	Pn	11 47 49.6	-0.1
TNTI				S	Sn	11 48 45.4	-1.3
TNTI	Ternate	5.04	174	*e*Pn	Pn	11 47 49.0	-0.8
LBMI	Labuha	6.45	174	P	Pn	11 48 09.1	+0.2
LBMI				S	Sn	11 49 21.9	+0.8
MRSI	Marisa	7.23	223	P	Pn	11 48 15.9	-3.6
MRSI				S	Sn	11 49 29.0	-11
LUWI	Luwuk	7.94	211	*e*Pn	Pn	11 48 31.0	+1.7
APSI	Ampana	8.47	218	P	Pn	11 48 36.7	+0.2
NLAI	Namlea	9.01	178	P	Pn	11 48 41.1	-2.7
TTSI	Tana Toraja	11.27	219	P	Pn	11 49 15.6	+1.0
SBUM	Sibu	14.97	258	*e*Pn	P	11 50 07.9	+0.6
	25nm,0.7s						
EDFI	Ende, Flores	15.36	200	P	P	11 50 11.4	-0.4
KSM	Kuching	17.06	256	*e*Pn	Pn	11 50 30.7	+0.7
	10nm,0.7s						
GUMO	Guam	19.35	65	LR	LR	11 55 51.5	
	comp=Z,16nm,20.8s,baz=220,slow=30						
FITZ	Fitzroy Crossi	23.80	183	P	P	11 51 42.1	+0.2
	4.3nm,0.4s,baz=4.4,slow=8.4,SNR=39						
FITZ	Fitzroy Crossi	23.80	183	*e*P	P	11 51 43.2	+1.3
	4.2nm,0.6s						
WR1	Warramunga Arr	26.64	164	*e*P	P	11 52 08.1	+0.4
	6.5nm,1.0s						
WRA	Warramunga Arr	26.64	164	P	P	11 52 08.1	+0.4
	1.4nm,0.5s,baz=343,slow=10,SNR=21						
ASAR	Alice Springs	30.11	167	P	P	11 52 39.4	+0.8
	1.5nm,0.5s,baz=348,slow=7.3,SNR=24						
ASAR				PcP	PcP	11 55 40.4	+1.9
	0.5nm,0.4s,baz=349,slow=2.7,SNR=7.0						
KSRS	Korea Array	31.50	2	LR	LR	12 05 03.9	
	comp=Z,11nm,21.8s,baz=195,slow=36						
MAJO	Matsushiro	32.30	17	*e*P	P	11 52 54.4	-3.3
	4.1nm,1.1s						
MAJO				*e*S	S	11 58 01.7	-3.8
MJAR	Matsushiro Arr	32.30	17	LR	LR	12 04 40.2	
	comp=Z,13nm,21.5s,baz=170,slow=34						
STKA	Stephens Creek	40.04	160	P	P	11 54 03.6	-0.1
	4.6nm,1.1s,baz=328,slow=16,SNR=2.5						
ASAJ	Asahikawa	40.57	17	LR	LR	12 09 21.5	
	comp=Z,18nm,20.2s,baz=167,slow=34						
H11S3	WAKE ISLAND Hy	40.82	68	T	T	12 38 14.2	
	baz=233,SNR=4.5						
H11S1	WAKE ISLAND Hy	40.84	68	T	T	12 38 11.7	
	baz=233,SNR=4.5						
H11S2	WAKE ISLAND Hy	40.84	68	T	T	12 38 12.2	
	baz=233,SNR=4.4						
H11N1	WAKE ISLAND Hy	41.29	67	T	T	12 38 49.3	
	baz=260						
H11N2	WAKE ISLAND Hy	41.30	67	T	T	12 38 48.7	
	baz=260						
H11N3	WAKE ISLAND Hy	41.31	67	T	T	12 38 50.4	
	baz=260						
MK01	Makanchi Array	55.91	324	*e*P	P	11 56 06.7	+0.7
MK31	Makanchi Array	55.92	324	*e*P	P	11 56 06.9	+0.8
MK32	Makanchi Array	55.92	324	*e*P	P	11 56 07.0	+0.9
MK32				*e*PcP	PcP	11 57 05.9	+2.0
MKAR	Makanchi Array	55.92	324	P	P	11 56 07.0	+0.9
	1.2nm,0.5s,baz=127,slow=8.1,SNR=12						
MKAR				PcP	PcP	11 57 05.9	+2.0
	0.5nm,0.5s,baz=128,slow=5.9,SNR=2.9						
MKAR				LR	LR	12 22 48.0	
	comp=Z,30nm,19.3s,baz=181,slow=39						
MKAR	Makanchi Array	55.92	324	*e*P	P	11 56 06.8	+0.7
	8.2nm,0.5s						
MKAR				PcP	PcP	11 57 05.9	+2.0
KURK	Kurchatov	60.06	327	*e*P	P	11 56 35.1	+0.3
KURK				*e*P	P	11 56 35.6	+0.7
KURBB	Kurchatov Arra	60.06	327	P	P	11 56 35.1	+0.3
	0.9nm,0.4s,baz=128,slow=6.6,SNR=16						
BVAR	Borovoye Array	65.65	326	P	P	11 57 12.9	+1.0
	0.6nm,0.5s,baz=116,slow=6.6,SNR=4.7						
AKTO	Aktyubinsk	72.11	321	P	P	11 57 51.9	-0.2
	1.6nm,0.4s,baz=125,slow=1.7,SNR=3.1						
KDAK	Kodiak Island	80.07	32	LR	LR	12 27 17.9	
	comp=Z,16nm,21.0s,baz=201,slow=31						
ILAR	Eielson Array	83.17	26	P	P	11 58 51.0	-2.4
	0.2nm,0.7s,baz=250,slow=4.7,SNR=2.6						
ARA0	ARCESS Array S	88.54	340	*e*P	P	11 59 21.3	+1.5
ARCES	ARCESS Array B	88.54	340	P	P	11 59 21.3	+1.5

	2.1nm,0.8s,baz=77,slow=6.4,SNR=6.0						
FIA0	**FINESS Array S**	**90.06**	**332**	*e*P	**P**	**11 59 28.1**	**+1.1**
FINES	**FINESS Array B**	**90.06**	**332**	P	**P**	**11 59 28.1**	**+1.1**
	1.4nm,0.6s,baz=27,slow=4.7,SNR=5.0						
FINES				LR	LR	12 45 28.9	
	comp=Z,16nm,18.2s,baz=355,slow=39						
NOA	**NORSAR Array B**	**96.97**	**334**	LR	LR	12 46 59.6	
	comp=Z,8.6nm,21.9s,baz=70,slow=38						
TORD	**Torodi Ar. Bea**	**122.36**	**289**	PKP	**PKPdf**	**12 05 24.0**	**+0.8**
	0.4nm,0.6s,baz=93,slow=2.2						
TOA1	**Torodi Ar. Sit**	**122.36**	**289**	*e*PKPdf	**PKPdf**	**12 05 24.0**	**+0.7**

MEX 19 11:49:47.5±0.8, 19.°17N×102.°75W, h5^{km}, MD3.8, Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMIG	**Aquila**	**1.04**	**213**	*e*P	Pg	11 50 03.9	-3.6
MMIG				*e*S	Sg	11 50 19.0	-2.1
MOIG	**Morelia**	**1.56**	**71**	*e*P	Pn	11 50 12.2	-3.9
MOIG				*e*S	Sn	11 50 31.8	-5.0
ZIIG	**Zihuatanejo**	**1.98**	**142**	*e*P	Pn	11 50 18.6	-3.1
ZIIG				*i* S	Sn	11 50 42.6	-4.2
CJM	**Chamela**	**2.19**	**279**	*e*P	Pn	11 50 21.0	-3.6
CJM				*e*S	Sn	11 50 48.2	-3.8
ARIG	**Puente Sto Nin**	**2.45**	**111**	*e*P	Pn	11 50 25.5	-2.6
ARIG				*i* S	Sn	11 50 54.7	-3.8
ANIG	**Ahuacatlan**	**2.50**	**319**	*e*P	Pn	11 50 26.1	-2.9
ANIG				*i* S	Sn	11 50 56.1	-3.9
ZAIG	**Zacatecas**	**3.58**	**3**	*i* P	Pn	11 50 40.9	-3.2
ZAIG				*i* S	Sn	11 51 22.9	-4.1

SOME 19 11:50:02.8, 44.°23N×81.°72E, h0^{km}

NNC 19 11:50:04.5±2.0, 44.°34N×81.°63E, h0^{km}, mb2.5, mpv2.2, Error ellipse: s-maj=31.0km s-min=4.4km az=124.0

ISC 19 11:50:03.5±2.0, 44.°27N±0.°07×81.°68E±0.°09, h12^{km}±13^{km}, n7, $\sigma 1.^{s}89$/12, 3C-3D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.26**	**230**	*e*P	**Pg**	**11 50 27.2**	**-0.6**
	4.2nm,0.2s						
KTMS				*e*S	**Sg**	**11 50 45.0**	**+0.7**
	5.6nm,0.2s						
DJR	**Jarkent**	**1.36**	**273**	*e*P	**Pg**	**11 50 28.4**	**-1.2**
	1.9nm,0.2s						
DJR				*e*S	**Sg**	**11 50 46.6**	**-0.6**
	2.3nm,0.4s						
PDGK	**Podgornoye**	**1.84**	**240**	⇓P	**Pn**	**11 50 37.5**	**+2.5**
	1.3nm,0.3s						
PDGK				⇑S	**Sb**	**11 51 02.5**	**+2.3**
	5.8nm,0.4s						
KAPS	**Kapalarasan**	**1.94**	**302**	*e*P	**Pb**	**11 50 39.8**	**+1.0**
	4.3nm,0.2s						
KAPS				*e*S	**Sg**	**11 51 06.5**	**+0.5**
	12nm,0.4s						
SHLS	**Shalkode**	**1.95**	**236**	*e*P	**Pn**	**11 50 35.0**	**-1.6**
	3.6nm,0.3s						
SHLS				*e*S	**Sn**	**11 50 58.0**	**-3.0**
	14nm,0.3s						
MAKZ	**Makanchi**	**2.55**	**5**	⇓Pg	**Pb**	**11 50 48.8**	**-0.5**
	0.5nm,0.3s						
MAKZ				⇓Lg	Lg	11 51 24.5	
	1.7nm,0.4s						
MK31	**Makanchi Array**	**2.56**	**9**	⇑Pg	**Pb**	**11 50 50.6**	**+1.1**
	0.2nm,0.3s,baz=195,slow=17,SNR=8.2						
MK31				⇑Lg	Lg	11 51 24.7	
	0.8nm,0.4s,baz=190,slow=29,SNR=7.3						

NNC 19 12:00:11.2±1.5, 37.°02N×70.°42E, h0^{km}, mb4.0, mpv3.6, 4C, Error ellipse: s-maj=11.4km s-min=10.3km az=172.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**3.85**	**38**	⇑Pn	Pn	12 01 11.7	-0.2
	7.1nm,0.3s						
SFK				Sn	Sn	12 01 59.3	+1.4
	7.4nm,0.4s						
MNAS	**Manas**	**5.69**	**16**	⇑Pn	Pn	12 01 37.1	0.0
	2.9nm,0.5s						
MNAS				⇑Sn	Sn	12 02 44.0	+0.7
	5.7nm,0.7s						
KK31	**Karatay Array**	**6.08**	**1**	Pn	Pn	12 01 42.7	+0.4
	2.7nm,0.3s,baz=182,slow=12,SNR=42						
KK31				⇑Sn	Sn	12 02 54.0	+1.5
	0.5nm,0.3s,baz=185,slow=21,SNR=6.4						

SOME 19 13:01:24.5, 44.°68N×82.°22E, h20^{km}

NNC 19 13:01:25.4±1.3, 44.°74N×81.°94E, h0^{km}, mb3.2, mpv2.8, Error ellipse: s-maj=18.7km s-min=7.3km az=121.0

ISC 19 13:01:22.9±2.2, 44.°53N±0.°07×82.°3E±0.°1, h2^{km}±15^{km}, n12, $\sigma 0.^{s}58$/21, 5C-1D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.80**	**234**	*e*P	**Pg**	**13 01 57.4**	**0.0**
	1.9nm,0.2s						
KTMS				*e*S	**Sg**	**13 02 21.0**	**+0.3**
	21nm,0.5s						
DJR	**Jarkent**	**1.84**	**265**	*e*P	**Pb**	**13 01 56.7**	**-0.6**
	1.9nm,0.2s						
DJR				*e*S	**Sn**	**13 02 20.0**	**+0.6**
	9.5nm,0.2s						
KAPS	**Kapalarasan**	**2.25**	**291**	*e*P	**Pn**	**13 02 02.1**	**+0.9**
	1.7nm,0.2s						
KAPS				*e*S	**Sn**	**13 02 29.3**	**-0.2**
	9.5nm,0.3s						
MK31	**Makanchi Array**	**2.27**	**359**	⇑Pn	**Pn**	**13 02 02.0**	**+0.6**
	4.0nm,0.2s,baz=181,slow=14,SNR=152						
MK31				⇓Lg	Lg	13 02 29.8	
	6.8nm,0.5s,baz=186,slow=26,SNR=21						
MAKZ	**Makanchi**	**2.29**	**354**	⇑Pn	**Pn**	**13 02 01.8**	**0.0**
	2.8nm,0.5s						
MAKZ				⇑Lg	Lg	13 02 30.3	
	4.9nm,0.3s						
PDGK	**Podgornoye**	**2.38**	**241**	⇑Pg	**Pb**	**13 02 06.0**	**-0.6**
	2.6nm,0.8s						
PDGK				⇑Lg	Lg	13 02 38.0	
	12nm,0.5s						
SHLS	**Shalkode**	**2.49**	**238**	*e*P	**Pn**	**13 02 05.1**	**+0.5**
	7.2nm,0.2s						
SHLS				*e*S	**Sn**	**13 02 34.8**	**-0.8**
	35nm,0.3s						
UZB	**Uzynbulak**	**2.77**	**241**	*e*P	**Pb**	**13 02 12.9**	**-0.3**
	1.6nm,0.3s						
UZB				*e*S	**Sb**	**13 02 47.5**	**-0.1**
	6.2nm,0.3s						
TDK	**Taldyqorghan**	**2.84**	**281**	*e*P	**Pb**	**13 02 14.0**	**-0.3**
	30nm,0.2s						
TDK				*e*S	**Sb**	**13 02 49.5**	**0.0**
	43nm,0.4s						
KPKS	**Kokpek**	**2.84**	**249**	*e*P	**Pb**	**13 02 14.2**	**-0.2**
	4.4nm,0.3s						
KPKS				*e*S	**Sb**	**13 02 49.8**	**+0.1**
	23nm,0.2s						
ARXS	**Arharly**	**3.25**	**266**	*e*P	**Pb**	**13 02 20.4**	**-0.9**
	1.4nm,0.4s						
ARXS				*e*S	**Sb**	**13 03 00.4**	**-1.0**
	8.0nm,0.3s						
KTBS	**Karatobe**	**4.16**	**261**	*e*P	**Pb**	**13 02 36.4**	**-0.3**
	0.4nm,0.4s						
KTBS				*e*S	**Sb**	**13 03 27.8**	**+0.4**
	2.2nm,0.5s						

ISN 19 13:02:02.9±1.2, 34.°35N×45.°53E, h11^{km}±29^{km}, ML2.5

TEH 19 13:02:03.7, 34.°33N×45.°49E, h8^{km}, ML2.5, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IVIS	**Veis**	**1.14**	**80**	*e*Pg	Pn	13 02 26.4	+0.3
IVIS				*e*		13 02 45.6	
	comp=Z,1µm,0.2s						
ILIN	**Lien**	**1.35**	**64**	*e*Pg	Pg	13 02 30.5	+0.8
ILIN				*e*Sg	Sn	13 02 50.3	+2.9
ILIN				*e*		13 02 56.5	
	comp=Z,609nm,0.2s						
IKOM	**Komasi**	**1.68**	**95**	*e*Pn	Pg	13 02 36.3	+0.3
IKOM				*e*		13 03 03.1	
	comp=Z,99nm,0.2s						
IKFM	**Kafar-mosalman**	**2.12**	**112**	*e*		13 03 18.6	
	comp=Z,99nm,0.3s						

ISCJB 19 13:16:04.4±2.4, 20.°8S±0.°6×178.°7W±0.°4, h579^{km}, mb3.5/6, Error ellipse: s-maj=90.4km s-min=18.8km az=150.8

IDC 19 13:16:07.4±7.6, 20.°95S×178.°69W, h609^{km}±86^{km}, mb2.9/6, mb1 3.1/7, mb1mx2.9/41, mbtmp3.9/7, Error ellipse: s-maj=77.2km s-min=36.0km az=139.0

ISC 19 13:16:04.4±2.3, 21.°0S±0.°6×178.°6W±0.°3, h579^{km}, n9, $\sigma 1.^{s}36$/8, mb3.5/6, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**13.98**	**263**	P	**P**	**13 19 03.3**	**-0.2**
	0.3nm,0.3s,baz=90,slow=20,SNR=3.7						
CTA	**Charters Tower**	**32.91**	**265**	P	**P**	**13 21 52.4**	**+0.2**
	2.6nm,0.7s,baz=90,slow=13,SNR=3.4						
ASAR	**Alice Springs**	**43.88**	**257**	P	**P**	**13 23 21.9**	**+0.9**
	0.9nm,0.5s,baz=98,slow=7.8,SNR=19						
WRA	**Warramunga Arr**	**44.00**	**263**	P	**P**	**13 23 21.6**	**-0.2**
	0.4nm,0.3s,baz=97,slow=7.4,SNR=40						
PETK	**Petropavlovsk-**	**76.59**	**346**	P	**P**	**13 26 56.6**	**+0.7**
	1.5nm,0.9s,baz=132,slow=6.4						
ILAR	**Eielson Array**	**88.90**	**13**	P	**P**	**13 27 56.3**	**-1.0**
	0.3nm,0.6s,baz=220,slow=5.4,SNR=4.7						
PDAR	**Pinedale Array**	**89.68**	**43**	P	**P**	**13 28 03.0**	**+1.2**
	0.3nm,0.7s,baz=224,slow=3.8,SNR=2.9						
HFS	**Hagfors**	**139.92**	**350**	PKhKP	PKPpre	13 34 21.5	
	2.1nm,1.0s,baz=45,slow=4.3,SNR=3.7						
AKASG	**Malin Array Be**	**143.16**	**330**	PKP	**PKPdf**	**13 34 30.7**	**-2.3**
	2.1nm,0.6s,baz=42,slow=4.3,SNR=7.2						

IDC 19 13:23:32.7±1.2, 5.°30S×146.°21E, h0^{km}, mb3.6/3, mb1 3.9/6, mb1mx3.6/47, mbtmp3.7/6, ML3.6/2, Error ellipse: s-maj=52.1km s-min=23.5km az=101.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.19**	**167**	Pn	Pn	13 24 37.3	-0.5
	5.0nm,0.3s,baz=347,slow=13,SNR=16						
PMG				Sn	Sn	13 25 15.4	-12
	10nm,0.3s,baz=204,slow=17,SNR=6.3						
CTA	**Charters Tower**	**14.70**	**180**	Pn	Pn	13 27 03.6	+1.5
	0.2nm,0.3s,baz=6.9,slow=16,SNR=4.1						
WRA	**Warramunga Arr**	**18.58**	**217**	P	P	13 27 51.6	+0.1
	0.2nm,0.3s,baz=42,slow=12,SNR=5.5						
WRA				PcP	PcP	13 32 20.9	-0.4
	0.0nm,0.3s,baz=51,slow=1.3,SNR=4.8						
ASAR	**Alice Springs**	**21.77**	**212**	P	P	13 28 26.1	-0.2
	1.4nm,0.6s,baz=48,slow=8.6,SNR=20						
ILAR	**Eielson Array**	**85.15**	**23**	P	P	13 36 10.8	+0.3
	0.4nm,0.5s,baz=254,slow=4.4,SNR=8.2						
BVAR	**Borovoye Array**	**85.74**	**324**	P	P	13 36 13.3	-0.4
	0.2nm,0.4s,baz=116,slow=3.4,SNR=2.9						

IDC 19 13:31:44.0±1.8, 60.°82S×29.°33W, h0^{km}, mb4.1/1, mb1 4.3/2, mb1mx3.7/29, mbtmp4.3/2, ML4.3/1, MS3.8/15, Ms1 3.7/15, ms1mx3.6/31, Error ellipse: s-maj=85.3km s-min=50.3km az=76.0

ISC 19 13:31:45.5±1.9, 60.°9S±0.°3×29.°4W±0.°6, h10^{km}, n26, $\sigma 0.^{s}34$/7, MS3.7/13, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA1	**Neumayer--Stat**	**13.02**	**148**	P	**Pn**	**13 34 50.5**	**+0.3**
VNA3	**Neumayer Olymp**	**13.06**	**151**	P	**Pn**	**13 34 50.5**	**-0.2**
VNA3				S	Sn	13 37 03.4	-12
SNAA	**Sanae**	**15.05**	**147**	P	**Pn**	**13 35 18.2**	**+0.3**
SNAA	**Sanae**	**15.05**	**147**	Pn	**Pn**	**13 35 17.4**	**-0.5**
	1.3nm,0.3s,baz=318,slow=14,SNR=124						
SNAA				Sn	Sn	13 37 51.1	-13
	0.1nm,0.3s,baz=117,slow=9.1,SNR=3.2						
SNAA				LR	LR	13 39 46.6	
	comp=Z,118nm,18.2s,baz=65,slow=32						
PMSA	**Palmer Station**	**16.17**	**241**	LR	LR	13 41 13.5	
	comp=Z,406nm,20.1s,baz=76,slow=35						
QSPA	**South Pole Qui**	**29.38**	**180**	LR	LR	13 49 15.3	
	comp=Z,156nm,21.7s,baz=214,slow=36						
PLCA	**Paso Flores**	**32.12**	**290**	LR	LR	13 51 05.7	
	comp=Z,124nm,18.5s,baz=162,slow=36						
MAW	**Mawson**	**37.06**	**141**	LR	LR	13 52 24.2	
	comp=Z,51nm,18.9s,baz=240,slow=34						
CPUP	**Villa Florida**	**39.39**	**319**	LR	LR	13 53 42.2	
	comp=Z,51nm,22.0s,baz=147,slow=34						
BOSA	**Boshof**	**48.37**	**74**	LR	LR	13 56 49.1	
	comp=Z,72nm,19.7s,baz=210,slow=31						
LPAZ	**La Paz**	**52.42**	**311**	LR	LR	14 04 07.1	
	comp=Z,33nm,20.6s,baz=244,slow=37						
H10S2	**ASCENSION HYDR**	**52.94**	**18**	T	T	14 38 00.8	
	baz=188,slow=75,SNR=6.0						
H10S3	**ASCENSION HYDR**	**52.95**	**18**	T	T	14 37 58.9	
	baz=188,slow=75,SNR=6.3						
H10S1	**ASCENSION HYDR**	**52.96**	**18**	T	T	14 37 59.7	
	baz=188,slow=75,SNR=7.6						
H10N1	**ASCENSION HYDR**	**54.06**	**18**	T	T	14 39 29.3	
	baz=188						
H10N3	**ASCENSION HYDR**	**54.06**	**18**	T	T	14 39 26.2	
	baz=188,SNR=5.6						
H10N2	**ASCENSION HYDR**	**54.08**	**18**	T	T	14 39 30.2	
	baz=188						
OPO	**Ambohidratompo**	**67.44**	**88**	LR	LR	14 04 39.3	
	comp=Z,198nm,18.7s,baz=180,slow=29						
DBIC	**Dimbokro**	**70.02**	**26**	LR	LR	14 06 36.2	
	comp=Z,42nm,20.9s,baz=138,slow=30						
KOWA	**Kowa**	**77.79**	**25**	LR	LR	14 10 16.4	
	comp=Z,81nm,21.1s,baz=223,slow=30						
TORD	**Torodi Ar. Bea**	**77.80**	**31**	P	**P**	**13 43 42.6**	**-0.1**
	0.9nm,0.5s,baz=205,slow=5.4						
TORD				LR	LR	14 10 22.7	
	comp=Z,81nm,21.9s,baz=195,slow=30						
PPT	**Papeete**	**88.46**	**236**	LR	LR	14 17 12.7	
	comp=Z,86nm,21.1s,baz=131,slow=31						
MDT	**Midelt**	**95.51**	**21**	LR	LR	14 22 16.7	
	comp=Z,72nm,19.3s,baz=161,slow=32						
DZM	**Mont Dzumac**	**96.38**	**195**	LR	LR	14 28 56.0	
	comp=Z,122nm,18.0s,baz=168,slow=36						
SONM	**Songino Array**	**151.74**	**97**	PKPbc	**PKPbc**	**13 51 39.4**	**+0.2**
	1.0nm,0.5s,baz=210,slow=3.1,SNR=6.6						
ILAR	**Eielson Array**	**152.21**	**305**	PKPbc	**PKPbc**	**13 51 39.6**	**0.0**
	0.5nm,0.9s,baz=131,slow=1.9,SNR=3.2						

CSEM 19 13:35:06.1±0.1, 39.°00N×22.°17E, h10^{km}, ML1.4, Error ellipse: s-maj=2.4km s-min=1.6km az=123.0

ATH 19 13:35:06.2, 38.°99N×22.°18E, h14^{km}±3^{km}, ML1.4/8, Error ellipse: s-maj=3.0km s-min=0.7km az=19.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGG	**Agios Georgios**	**0.12**	**75**	P	Pg	13 35 09.3	-0.4
AGG				S	Sg	13 35 12.5	+0.4
AGG				AML	AML	13 35 12.7	
	comp=E,1457µm,0.2s						
AGG				AML	AML	13 35 12.7	
	comp=N,1759µm,0.2s						
AGG	**Agios Georgios**	**0.12**	**75**	P	Pg	13 35 09.5	-0.2
AGG				S	Sg	13 35 12.3	+0.2
EVR	**Evrytania**	**0.29**	**256**	P	Pg	13 35 11.7	-0.7
EVR				S	Sg	13 35 16.7	+0.1
EVR				AML	AML	13 35 18.5	
	comp=N,41µm,0.1s						
EVR				AML	AML	13 35 20.2	
	comp=E,57µm,0.1s						
EVR	**Evrytania**	**0.29**	**256**	P	Pg	13 35 12.0	-0.4
EVR				S	Sg	13 35 16.7	+0.1
ANX	**Ano Chora**	**0.44**	**207**	P	Pg	13 35 14.3	-0.8
ANX				S	Sb	13 35 22.3	-0.2
ANX				AML	AML	13 35 23.0	
	comp=N,156µm,0.2s						
ANX				AML	AML	13 35 23.8	
	comp=E,194µm,0.5s						
ANX	**Ano Chora**	**0.44**	**207**	P	Pg	13 35 14.6	-0.5
ANX				S	Sb	13 35 21.8	-0.7
DLFA	**Delphi**	**0.57**	**154**	P	Pb	13 35 18.1	+0.1
DLFA				S	Sg	13 35 25.3	+0.3
DLFA	**Delphi**	**0.57**	**154**	P	Pg	13 35 17.7	+0.3
DLFA				S	Sg	13 35 25.3	+0.3
SERG	**Sergoula**	**0.58**	**189**	P	Pg	13 35 17.7	0.0
SERG				S	Sb	13 35 26.0	-0.4
SERG				AML	AML	13 35 29.3	
	comp=E,133µm,0.2s						
SERG				AML	AML	13 35 29.6	
	comp=N,117µm,0.2s						
SERG	**Sergoula**	**0.58**	**189**	P	Pg	13 35 17.6	-0.1
SERG				S	Sg	13 35 25.9	+0.5
THL	**Klokotos Trika**	**0.59**	**348**	P	Pg	13 35 17.2	-0.6
THL				S	Sb	13 35 26.2	-0.3
THL				AML	AML	13 35 29.8	
	comp=E,24µm,0.3s						
THL				AML	AML	13 35 29.8	
	comp=N,23µm,0.4s						
THL	**Klokotos Trika**	**0.59**	**348**	P	Pg	13 35 17.4	-0.4
THL				S	Sg	13 35 26.0	+0.4
KALE	**Kalithea**	**0.60**	**183**	P	Pg	13 35 16.8	-1.2
KALE				S	Sb	13 35 26.6	-0.3
KALE				AML	AML	13 35 29.2	
	comp=N,136µm,0.3s						
KALE				AML	AML	13 35 29.6	
	comp=E,98µm,0.1s						
KALE	**Kalithea**	**0.60**	**183**	P	Pg	13 35 17.3	-0.7
KALE				S	Sg	13 35 26.4	+0.5
EFP	**Efpalio**	**0.60**	**201**	P	Pg	13 35 17.8	-0.2
EFP				S	Sg	13 35 26.1	+0.1
EFP	**Efpalio**	**0.60**	**201**	P	Pg	13 35 17.8	-0.2
EFP				S	Sg	13 35 26.2	+0.3
TRIZ	**Trizonia**	**0.63**	**187**	P	Pg	13 35 18.4	-0.1
TRIZ				S	Sb	13 35 27.3	-0.4
TRIZ	**Trizonia**	**0.63**	**187**	P	Pg	13 35 18.4	-0.1
TRIZ				S	Sg	13 35 27.2	+0.4
PVO	**Paravola**	**0.63**	**234**	P	Pb	13 35 18.8	-0.2
PVO	**Paravola**	**0.63**	**234**	P	Pg	13 35 18.6	+0.1
DSF	**Desfina**	**0.64**	**154**	P	Pg	13 35 18.7	-0.1
DSF				S	Sg	13 35 27.4	+0.2
DSF				AML	AML	13 35 28.7	
	comp=N,190µm,0.1s						
DSF				AML	AML	13 35 29.8	
	comp=E,131µm,0.1s						
DSF	**Desfina**	**0.64**	**154**	P	Pg	13 35 18.6	-0.2
DSF				S	Sg	13 35 27.5	+0.3
FYTO	**Fytoko, Volos**	**0.73**	**55**	P	Pg	13 35 20.3	-0.1
FYTO	**Fytoko, Volos**	**0.73**	**55**	P	Pg	13 35 20.2	-0.2
LKR	**Lokris**	**0.73**	**118**	P	Pg	13 35 19.5	-0.9
LKR				S	Sg	13 35 29.8	-0.2
LKR				AML	AML	13 35 31.8	
	comp=N,55µm,0.3s						
LKR				AML	AML	13 35 31.9	
	comp=E,74µm,0.2s						
LKR	**Lokris**	**0.73**	**118**	P	Pg	13 35 19.8	-0.6
LKR				S	Sg	13 35 30.1	+0.1
LAKA	**Lakka**	**0.77**	**192**	P	Pb	13 35 21.2	-0.1
LAKA	**Lakka**	**0.77**	**192**	P	Pg	13 35 21.1	0.0
NEO	**Neokhori**	**0.87**	**68**	P	Pb	13 35 23.5	+0.3
NEO	**Neokhori**	**0.87**	**68**	P	Pg	13 35 23.2	0.0
XOR	**Xorichti**	**0.88**	**64**	P	Pg	13 35 22.7	-0.5
XOR				S	Sb	13 35 35.6	+0.8
XOR	**Xorichti**	**0.88**	**64**	P	Pg	13 35 22.8	-0.4
XOR				S	Sb	13 35 35.3	+0.5

CSEM 19 13:35:27.9±0.1, 37.°83N×21.°27E, h22^{km}±1^{km}, ML1.8, Error ellipse: s-maj=2.8km s-min=2.0km az=40.0

THE 19 13:35:28.2, 37.°82N×21.°25E, h18^{km}±1^{km}, ML1.8/10, Error ellipse: s-maj=1.2km s-min=0.7km az=128.0

ATH 19 13:35:27.1, 37.°83N×21.°26E, h31^{km}, ML1.8/7, Error ellipse: s-maj=1.1km s-min=0.7km az=224.0, Southern Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VTN	**Vitineika**	**0.11**	**325**	P	Pb	13 35 31.9	-0.7
VTN	**Vitineika**	**0.11**	**325**	P	Pn	13 35 32.8	0.0
VTN				S	Sb	13 35 36.9	+0.4
VTN	**Vitineika**	**0.11**	**325**	P	Pn	13 35 32.8	+0.1
VTN				S	Sb	13 35 36.9	+0.4
VTN	**Vitineika**	**0.11**	**325**	P	Pb	13 35 31.6	-1.1
RLS	**Riolos of Patr**	**0.28**	**35**	P	Pb	13 35 34.3	-0.2
RLS				S	Sn	13 35 40.7	+0.4
RLS				AML	AML	13 35 42.0	
	comp=E,434µm,0.3s						
RLS				AML	AML	13 35 42.0	
	comp=N,484µm,0.2s						
RLS	**Riolos of Patr**	**0.28**	**35**	P	Pb	13 35 34.4	-0.1
RLS				S	Sn	13 35 40.1	-0.2
RLS	**Riolos of Patr**	**0.28**	**35**	P	Pb	13 35 34.4	-0.1
RLS				S	Sn	13 35 40.3	0.0
RLS	**Riolos of Patr**	**0.28**	**35**	S	Sn	13 35 40.1	-0.2
DRO	**Drossia**	**0.38**	**70**	P	Pb	13 35 35.8	0.0
DRO				S	Sn	13 35 42.4	-0.3
DRO	**Drossia**	**0.38**	**70**	P	Pb	13 35 35.8	0.0
DRO	**Drossia**	**0.38**	**70**	S	Sn	13 35 42.4	-0.3
ZKS	**Zakynthos**	**0.40**	**251**	P	Pb	13 35 36.4	+0.2
ZKS				S	Sn	13 35 43.7	+0.5
ZKS				AML	AML	13 35 46.9	
	comp=N,898µm,0.4s						
ZKS				AML	AML	13 35 46.9	
	comp=E,568µm,0.2s						
ZKS	**Zakynthos**	**0.40**	**251**	P	Pb	13 35 35.7	-0.4
ZKS				S	Sn	13 35 42.9	-0.4
ZKS	**Zakynthos**	**0.40**	**251**	P	Pb	13 35 36.3	+0.2
ZKS				S	Sn	13 35 42.9	-0.4
ZKS	**Zakynthos**	**0.40**	**251**	P	Pb	13 35 35.7	-0.4
AMT	**Artemida-Makis**	**0.46**	**130**	P	Pn	13 35 37.9	+0.3
AMT				S	Sb	13 35 43.7	-0.1
AMT				AML	AML	13 35 47.9	
	comp=E,161µm,0.4s						
AMT				AML	AML	13 35 50.4	
	comp=N,137µm,0.2s						
AMT	**Artemida-Makis**	**0.46**	**130**	P	Pn	13 35 37.5	-0.1
AMT				S	Sn	13 35 45.7	+0.9
AMT	**Artemida-Makis**	**0.46**	**130**	P	Pn	13 35 37.5	-0.1
AMT				S	Sb	13 35 44.2	+0.4
KFL	**Anninata**	**0.47**	**307**	P	Pn	13 35 37.5	-0.2
KFL				S	Sn	13 35 44.6	-0.4
KFL				AML	AML	13 35 48.9	
	comp=N,237µm,0.5s						
KFL				AML	AML	13 35 49.6	
	comp=E,165µm,0.3s						
KFL	**Anninata**	**0.47**	**307**	P	Pb	13 35 37.1	-0.1
KFL				S	Sn	13 35 44.6	-0.4
KFL	**Anninata**	**0.47**	**307**	P	Pn	13 35 37.5	-0.2
KFL				S	Sn	13 35 44.6	-0.4
VLS	**Valsamata**	**0.64**	**303**	P	Pn	13 35 41.1	+1.1
VLS				S	Sn	13 35 49.5	+0.3
VLS				AML	AML	13 35 51.0	
	comp=N,110µm,0.3s						
VLS				AML	AML	13 35 51.7	
	comp=E,155µm,0.2s						
VLS	**Valsamata**	**0.64**	**303**	P	Pb	13 35 39.7	-0.2
VLS				S	Sn	13 35 50.1	+1.0
VLS	**Valsamata**	**0.64**	**303**	P	Pn	13 35 40.7	+0.7
VLS				S	Sn	13 35 49.6	+0.5
VLS	**Valsamata**	**0.64**	**303**	S	Sn	13 35 50.1	+1.0
KLV	**Kalavryta, Ach**	**0.73**	**73**	P	Pb	13 35 42.1	+0.6
KLV	**Kalavryta, Ach**	**0.73**	**73**	P	Pb	13 35 42.0	+0.5
PDO	**Prodromos**	**0.77**	**355**	P	Pb	13 35 42.6	+0.5
PDO	**Prodromos**	**0.77**	**355**	P	Pb	13 35 43.1	+1.0
PDO				S	Sn	13 35 54.8	+2.3
PDO	**Prodromos**	**0.77**	**355**	P	Pb	13 35 42.6	+0.5
PDO				S	Sn	13 35 54.8	+2.3
EFP	**Efpalio**	**0.78**	**40**	P	Pb	13 35 42.4	+0.1
EFP	**Efpalio**	**0.78**	**40**	P	Pn	13 35 42.1	+0.1
EFP	**Efpalio**	**0.78**	**40**	P	Pb	13 35 42.6	+0.3
PVO	**Paravola**	**0.81**	**15**	P	Pb	13 35 43.8	+0.9
PVO				S	Sb	13 35 56.0	+2.4
PVO				AML	AML	13 35 58.8	
	comp=N,85µm,0.3s						
PVO				AML	AML	13 35 59.4	
	comp=E,98µm,0.3s						
PVO	**Paravola**	**0.81**	**15**	P	Pb	13 35 43.6	+0.8
PVO				S	Sb	13 35 55.8	+2.3
PVO	**Paravola**	**0.81**	**15**	P	Pb	13 35 43.5	+0.7
PVO				S	Sb	13 35 55.5	+2.0
ITM	**Ithomi**	**0.83**	**141**	P	Pb	13 35 43.3	+0.1
ITM	**Ithomi**	**0.83**	**141**	P	Pb	13 35 43.4	+0.2
ITM				S	Sb	13 35 55.5	+1.4
ITM	**Ithomi**	**0.83**	**141**	P	Pb	13 35 43.4	+0.2
ITM				S	Sb	13 35 55.5	+1.4
TRIZ	**Trizonia**	**0.83**	**50**	P	Pn	13 35 42.8	+0.1
TRIZ	**Trizonia**	**0.83**	**50**	P	Pb	13 35 43.2	+0.1
FSK	**Fiskardo**	**0.84**	**319**	P	Pb	13 35 44.0	+0.8
FSK				S	Sb	13 35 55.1	+0.9
FSK	**Fiskardo**	**0.84**	**319**	P	Pn	13 35 42.9	+0.1
FSK				S	Sb	13 35 56.2	+2.0
SERG	**Sergoula**	**0.86**	**47**	P	Pb	13 35 43.4	-0.2

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SERG	Sergoula	0.86	47	P	Pb	13 35 43.8	+0.2
SERG	Sergoula	0.86	47	P	Pb	13 35 43.8	+0.2
GUR	Goura	0.86	82	P	Pb	13 35 44.3	+0.7
GUR				S	Sb	13 35 57.0	+2.0
GUR				AML	AML	13 36 03.8	
	comp=E,152µm,0.3s						
GUR				AML	AML	13 36 03.9	
	comp=N,187µm,0.3s						
GUR	Goura	0.86	82	P	Pb	13 35 44.2	+0.5
GUR				S	Sb	13 35 56.7	+1.8
KALE	Kalithea	0.89	51	P	Pb	13 35 44.1	-0.1
KALE	Kalithea	0.89	51	P	Pb	13 35 44.3	+0.1
MGNA	Meganis‚„	0.91	336	P	Pb	13 35 44.3	-0.1
MGNA	Meganis‚„	0.91	336	P	Pb	13 35 44.5	+0.1
ANX	Ano Chora	0.92	34	P	Pb	13 35 45.2	+0.4
ANX	Ano Chora	0.92	34	P	Pb	13 35 45.1	+0.4
EVGI	Lefkada island	0.93	329	P	Pb	13 35 44.9	+0.2
EVGI	Lefkada island	0.93	329	P	Pb	13 35 45.0	+0.3
EVGI	Lefkada island	0.93	329	P	Pb	13 35 45.0	+0.3
PYL	PYLOS	1.00	158	P	Pn	13 35 45.4	+0.3
PYL				S	Sb	13 36 01.3	+2.4
PYL	PYLOS	1.00	158	P	Pb	13 35 45.6	-0.4
PYL				S	Sb	13 36 01.6	+2.7
PYL	PYLOS	1.00	158	P	Pb	13 35 45.9	-0.1
PYL				S	Sb	13 36 00.8	+1.9
LKD2	Lefkada island	1.07	334	P	Pb	13 35 47.5	+0.4
LKD2	Lefkada island	1.07	334	P	Pb	13 35 47.5	+0.3
LKD2				S	Sb	13 36 03.5	+2.7
LKD2	Lefkada island	1.07	334	P	Pb	13 35 47.5	+0.3
LKD2				S	Sb	13 36 03.5	+2.7
THAL	Thalero	1.13	79	P	Pb	13 35 48.5	+0.5
THAL	Thalero	1.13	79	P	Pb	13 35 48.4	+0.4
DYR	Agios Nikonas	1.36	141	P	Pb	13 35 52.0	0.0
DYR	Agios Nikonas	1.36	141	P	Pb	13 35 52.0	-0.1

IDC 19 13:38:26.7±1.4**, 7°.22S**×**127°.83E, h0^{km}, mb4.0**/5**, mb1 4.1**/7**, mb1mx3.8**/50**, mbtmp4.0**/7**, ML4.0**/2**, Error ellipse: s-maj=152.9km s-min=27.9km az=67.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.14	154	Pn	Pn	13 41 47.0	-1.5
	0.7nm,0.3s,baz=323,slow=14,SNR=42						
WRA				Sn	Sn	13 44 09.8	-16
	2.7nm,0.3s,baz=334,slow=22,SNR=16						
ASAR	Alice Springs	17.36	161	P	P	13 42 31.6	-0.5
	0.7nm,0.3s,baz=341,slow=11,SNR=66						
ASAR				S	Sn	13 45 28.1	-17
	0.3nm,0.3s,baz=320,slow=22,SNR=4.2						
SONM	Songino Array	57.99	343	P	P	13 48 20.8	-0.5
	0.6nm,0.5s,baz=151,slow=7.9,SNR=2.7						
MKAR	Makanchi Array	67.25	328	P	P	13 49 24.2	+1.1
	0.5nm,0.4s,baz=125,slow=8.2,SNR=7.2						
ZALV	Zalesovo Beam	70.84	335	P	P	13 49 43.5	-1.6
	0.7nm,0.4s,baz=149,slow=6.4,SNR=3.6						
KURBB	Kurchatov Arra	71.58	329	P	P	13 49 50.4	+0.6
	1.3nm,0.5s,baz=132,slow=5.2,SNR=14						
BVAR	Borovoye Array	77.11	329	P	P	13 50 21.8	-0.1
	0.5nm,0.4s,baz=122,slow=7.6,SNR=3.4						

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*BJI **19** 13:48:35.3, 42°.91N×85°.39E, h7^{km}, mb3.8/1, ML3.7/11*
*IDC **19** 13:48:36.8±1.2, 43°.34N×85°.38E, h0^{km}, mb3.7/3, mb1 3.7/7, mb1mx3.4/69, mbtmp3.6/7, ML3.2/4, MS3.4/2, Ms1 3.5/2, ms1mx2.3/67, Error ellipse: s-maj=61.2km s-min=12.8km az=55.0*
*NNC **19** 13:48:36.7±1.9, 43°.10N×85°.23E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=18.0km s-min=10.6km az=116.0*
ISC 19 13:48:37.0±1.0**, 43°.18N**±0°.09×**85°.35E**±0°.06**, h10^{km}, n17,** σ**1^{s}.90**/19**, mb3.7**/3**, 8C-4D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMQ	Urumqi	1.82	69	Pg	Pn	13 49 08.3	-0.2
WMQ				Sg	Sn	13 49 32.4	+0.8
WMQ				smax	smax		
	comp=N,810nm,0.7s						
WMQ				smax	smax		
	comp=E,1µm,0.9s						
MK31	Makanchi Array	4.22	330	⇑Pn	Pn	13 49 43.2	+1.9
	1.4nm,0.4s,baz=154,slow=15,SNR=60						
MK31				⇑Pg	Pb	13 49 53.8	+2.6
	4.6nm,0.3s,baz=142,slow=15,SNR=25						
MK31				⇓Lg	Lg	13 50 52.1	
	49nm,0.5s,baz=140,slow=29,SNR=9.7						
MKAR	Makanchi Array	4.22	330	Pn	Pn	13 49 42.9	+1.5
	1.3nm,0.3s,baz=153,slow=13,SNR=54						
MKAR				Sn	Sn	13 50 28.6	-2.1
	5.4nm,0.3s,baz=151,slow=18,SNR=7.0						
MKAR				Lg	Lg	13 50 48.0	
	14nm,0.3s,baz=143,slow=30,SNR=12						
PDGK	Podgornoye	4.29	274	⇑Pn	Pn	13 49 41.8	-0.6
	7.7nm,0.5s						
PDGK				⇓Pg	Pb	13 49 53.8	+1.3
	34nm,0.8s						
PDGK				⇓Lg	Lg	13 50 50.0	
	227nm,1.0s						
MAKZ	Makanchi	4.35	328	⇑Pn	Pn	13 49 44.8	+1.6
	3.6nm,0.7s						
MAKZ				⇑Pg	Pb	13 49 55.8	+2.3
	8.8nm,0.6s						
MAKZ				⇑Lg	Lg	13 50 56.2	
	61nm,0.7s						
AAK	Ala-Archa	7.99	270	Lg	Lg	13 52 47.6	
	0.4nm,0.3s,baz=319,slow=20,SNR=2.9						
KURBB	Kurchatov Arra	8.79	330	Pn	Pn	13 50 43.0	-1.0
	0.1nm,0.3s,baz=143,slow=12,SNR=6.8						
KURBB				Lg	Lg	13 53 12.1	
	0.2nm,0.3s,baz=148,slow=32,SNR=5.2						
KURBB	Kurchatov Arra	8.79	330	⇓Pn	Pn	13 50 43.6	-0.4
	4.0nm,0.5s						
KURBB				⇑Lg	Lg	13 53 14.6	
	62nm,0.8s						
KURK	Kurchatov	8.83	331	⇑Lg	Lg	13 53 15.0	
	66nm,1.3s						
ZALV	Zalesovo Beam	10.78	358	Pn	Pn	13 51 09.8	-1.5
	1.1nm,0.3s,baz=180,slow=14,SNR=11						
ZALV				Sn	Sn	13 53 07.3	-4.7
	0.8nm,0.3s,baz=180,slow=17,SNR=4.9						
BVAR	Borovoye Array	14.01	320	Pn	Pn	13 51 53.6	-1.8
	0.2nm,0.3s,baz=143,slow=14,SNR=2.6						
BVAR				Lg	Lg	13 55 57.3	
	0.1nm,0.3s,baz=141,slow=30,SNR=3.6						
HHC	Hu-ho-hao-te	19.59	88	*e*P	Pn	13 53 04.9	-1.7
HHC				PP	PnPn	13 53 22.4	+2.5
HHC				S	S	13 56 43.3	-3.1
HHC				sS	sS	13 56 52.8	+1.9
ARCES	ARCESS Array B	39.87	332	P	P	13 56 09.0	-1.4
	2.0nm,0.7s,baz=96,slow=8.7,SNR=4.7						
KEST	Kesra	57.29	290	LR	LR	14 26 17.7	
	comp=Z,38nm,19.1s,baz=144,slow=40						
ESDC	Sonseca Array	63.88	301	LR	LR	14 29 46.5	
	comp=Z,27nm,18.5s,baz=280,slow=39						
WRA	Warramunga Arr	77.27	133	P	P	14 00 33.9	+2.3
	0.5nm,0.7s,baz=331,slow=5.3,SNR=4.6						
ASAR	Alice Springs	80.11	136	P	P	14 00 49.1	+1.9
	0.3nm,0.8s,baz=339,slow=5.9,SNR=3.6						

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*ISCJB **19** 14:02:32.7±0.4, 35°.19N±0°.05×139°.06E±0°.08, h157^{km}±3^{km}, mb3.3/7, Error ellipse: s-maj=11.4km s-min=7.2km az=163.7*
*IDC **19** 14:02:33.0±0.6, 35°.21N×139°.13E, h144^{km}±5^{km}, mb3.2/7, mb1 3.3/11, mb1mx3.1/65, mbtmp3.6/11, Error ellipse: s-maj=18.8km s-min=6.6km az=70.0*
*JMA **19** 14:02:33.8±0.1, 35°.12N×139°.02E, h152^{km}±1^{km}, M3.1*
ISC 19 14:02:33.8±0.8**, 35°.19N**±0°.06×**139°.03E**±0°.08**, h153^{km}**±6^{km}**, n26,** σ**1^{s}.01**/32**, mb3.5**/7**, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOD2	Odawara 2	0.08	34	P	Pn	14 02 54.4	+0.2
JOD2				*e*S	Sn	14 03 10.1	+0.2
AJI	Ajiro2	0.16	162	P	Pn	14 02 54.2	-0.1
JIZS	Izushimoda	0.49	195	P	Pn	14 02 55.3	-0.1
JIZS				*e*S	Sn	14 03 11.6	-0.2
JYN	Shimob	0.50	307	P	Pn	14 02 55.8	+0.3
JYN				*e*S	Sn	14 03 12.4	+0.3
JIM2	Oshima 3	0.58	145	P	Pn	14 02 55.9	0.0
SHZ3	Shizuoka 3	0.69	259	P	Pn	14 02 56.3	-0.2
JRY	Ryogami san	0.83	353	P	Pn	14 02 58.6	+1.1
JRY				*e*S	Sn	14 03 16.7	+1.0
JAG	Ashikaga	1.27	15	P	Pn	14 03 02.0	+0.7
MJAR	Matsushiro Arr	1.50	334	P	Pn	14 03 01.7	-1.9
	2.9nm,0.3s,baz=305,slow=15,SNR=4.2						
MJAR				S	Sn	14 03 24.2	-2.3
	2.3nm,0.3s,baz=291,slow=23,SNR=7.3						
MAT	Matsushiro	1.50	334	P	Pn	14 03 04.2	+0.6
MAT	Matsushiro	1.50	334	P	Pn	14 03 04.2	+0.6
MAT				S	Sn	14 03 25.2	-1.3
TK02	Tokai 2	1.63	221	P	Pn	14 03 04.7	0.0
BSO1	Boso 1	1.69	108	P	Pn	14 03 05.6	+0.7
JIE	Ise	2.07	248	P	Pn	14 03 09.5	-0.4
JHJ	Hachijo jima 2	2.16	163	P	Pn	14 03 10.3	-0.7
	46nm,0.3s,baz=162,slow=23,SNR=27						
JHJ				S	Sn	14 03 38.5	-1.0
	19nm,0.3s,baz=73,slow=19,SNR=6.9						
JNU	Nakatsue	7.07	255	P	Pn	14 04 15.2	+0.5
	0.4nm,0.3s,baz=50,slow=7.9,SNR=4.5						
JCJ	Chichijima	8.51	161	S	Sn	14 05 56.9	-12
	1.2nm,0.3s,baz=270,slow=20,SNR=2.8						
KSRS	Korea Array	9.24	287	P	Pn	14 04 45.1	+1.5
	0.1nm,0.3s,baz=95,slow=14,SNR=3.7						
ASAJ	Asahikawa	9.32	16	P	Pn	14 04 42.1	-2.5
	0.6nm,0.3s,baz=277,slow=10,SNR=5.5						
ZALV	Zalesovo Beam	41.76	314	P	P	14 10 07.9	+0.1
	0.6nm,0.3s,baz=101,slow=8.0,SNR=3.2						
MKAR	Makanchi Array	43.49	303	P	P	14 10 22.6	+0.7
	0.3nm,0.5s,baz=85,slow=9.6,SNR=5.9						
KURBB	Kurchatov Arra	45.64	309	P	P	14 10 39.9	+1.2
	0.4nm,0.3s,baz=90,slow=7.8,SNR=8.8						
ILAR	Eielson Array	52.07	32	P	P	14 11 27.4	-0.1
	0.3nm,0.8s,baz=27,slow=38,SNR=3.2						
WRA	Warramunga Arr	55.01	185	P	P	14 11 48.9	-0.6
	0.7nm,1.0s,baz=1.0,slow=7.8,SNR=17						
ASAR	Alice Springs	58.74	186	P	P	14 12 15.1	-0.6
	0.3nm,0.5s,baz=17,slow=10,SNR=6.4						
NVAR	Mina Array Bea	77.64	52	P	P	14 14 14.1	+0.5
	0.5nm,0.7s,baz=300,slow=5.9,SNR=4.8						

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*ISK **19** 14:12:28.9, 38°.70N×41°.61E, h5^{km}, ML2.2/8*
*ISCJB **19** 14:12:30.7±0.6, 38°.73N±0°.03×41°.61E±0°.04, h7^{km}±6^{km}, Error ellipse: s-maj=6.6km s-min=4.0km az=38.8*
*CSEM **19** 14:12:30.5±0.2, 38°.75N×41°.60E, h8^{km}, ML2.2, Error ellipse: s-maj=5.4km s-min=4.4km az=40.0*
*DDA **19** 14:12:31.2, 38°.75N×41°.58E, h7^{km}, Ml2.6*
ISC 19 14:12:30.1±1.2**, 38°.75N**±0°.03×**41°.60E**±0°.03**, h1^{km}**±14^{km}**, n30,** σ**0^{s}.43**/40**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GURO	Guroymak-BITLI	0.39	121	PG	Pg	14 12 37.1	-0.5
GURO				SG	Sg	14 12 43.5	+0.9
GURO	Guroymak-BITLI	0.39	121	*e*Pg	Pg	14 12 37.1	-0.5
GURO				*e*Sg	Sg	14 12 43.5	+0.9
BNGL	BINGOL	0.41	300	*i* P	Pb	14 12 39.5	-0.8
BNGL				*i* S	Sb	14 12 47.0	-0.1
EKAR	Karacoban	0.62	35	*i* P	Pb	14 12 43.6	-0.3
EKAR	Karacoban	0.62	35	P	Pb	14 12 43.6	-0.3
SVAN	Silvan-Diyarba	0.68	208	PG	Pg	14 12 42.7	-0.4
SVAN				SG	Sg	14 12 52.1	+0.2
SVAN	Silvan-Diyarba	0.68	208	*e*Pg	Pg	14 12 42.7	-0.4
SVAN				*e*Sg	Sg	14 12 52.1	+0.2
BNGB	Bingˆ¶l	0.76	289	PG	Pg	14 12 44.9	+0.2
BNGB				SG	Sb	14 12 57.2	+0.1
BGOL	Bingol	0.77	288	*i* P	Pg	14 12 45.1	+0.3
BGOL				*i* S	Sb	14 12 57.4	+0.1
BGOL	Bingol	0.77	288	P	Pg	14 12 45.1	+0.3
BGOL				S	Sb	14 12 57.4	+0.1
SRTM	Siirt_Merkez	0.80	162	*i* P	Pb	14 12 46.8	0.0
SRTM				*i* S	Sb	14 12 58.7	+0.6
SRTM	Siirt_Merkez	0.80	162	P	Pb	14 12 46.8	0.0
SRTM				S	Sb	14 12 58.7	+0.6
BINT	Bingol	0.88	279	*e*Sg	Sg	14 12 57.2	-1.2
HANI	Diyarbakir_Han	1.00	251	*i* P	Pg	14 12 49.5	+0.2
HANI	Diyarbakir_Han	1.00	251	P	Pg	14 12 49.5	+0.2
YEDI	Yedisu-Bingol	1.07	310	PN	Pb	14 12 51.4	-0.2
YEDI	Yedisu-Bingol	1.07	310	*e*Pn	Pb	14 12 51.4	-0.2
ERZM	Erzurum	1.17	351	*i* P	Pb	14 12 53.4	+0.2
ERZM	Erzurum	1.17	351	P	Pb	14 12 53.4	+0.2
DIY	Diyarbakir	1.38	232	*e*Pn	Pb	14 12 56.7	0.0
DYBB	Diyarbakir	1.40	236	PN	Pn	14 12 56.7	-0.1
SIRT	Sirnak	1.41	152	PN	Pn	14 12 56.5	-0.5
SIRT	Sirnak	1.41	152	*e*Pn	Pn	14 12 56.5	-0.5
MARD	Mardin	1.57	205	*i* P	Pn	14 12 59.6	+0.3
MAZI	Mazidag	1.58	216	PN	Pn	14 12 58.9	-0.4
MAZI	Mazidag	1.58	216	*e*Pn	Pn	14 12 58.9	-0.4
PTK	Pertek	1.73	275	PN	Pn	14 13 01.8	+0.3
PTK	Pertek	1.73	275	*e*Pn	Pn	14 13 01.8	+0.3
SVRC	Sivrice-ELAZID	1.84	259	PN	Pn	14 13 03.2	+0.2
SVRC	Sivrice-ELAZID	1.84	259	*e*Pn	Pn	14 13 03.2	+0.2

MAN 19 14:16:49.7, 11°.41N×125°.15E, h15^{km}, mb3.9, ML2.6, MS2.2, 1D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLP	Palo	0.29	214	⇓*i*P	Pb	14 16 57.7	+1.1
PLP				*e*S	Sn	14 17 06.6	+1.1
BESP	Borongan	0.35	56	*e*P	Pb	14 16 58.0	+0.3
BESP				*e*S	Sn	14 17 07.9	+0.9
OCLP	Ormoc	0.63	236	*e*P	Pg	14 17 01.5	-0.7
OCLP				*e*S	Sn	14 17 14.8	+0.8
CNP	Catarman	1.20	337	*e*P	Pn	14 17 09.9	-2.0
CNP				*e*S	Sg	14 17 29.1	+0.7

KRSC 19 14:20:14.3±1.0**, 54°.99N**×**162°.31E, h40^{km}**±15^{km}**, ML3.8, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKZ	Mys Kozlova	0.55	218	*e*P	Pn	14 20 26.5	+0.9
MKZ				*e*S	Sn	14 20 34.6	+1.0
TUMD	Tumrok D	1.12	282	*e*P	Pn	14 20 34.4	+1.0
TUMD				*e*S	Sn	14 20 48.3	+0.7
KBTR	Krutoberegovo	1.25	13	*e*P	Pn	14 20 36.0	+0.7
KBTR				*e*S	Sn	14 20 53.1	+2.1
TUMR	Tumrok	1.27	284	*e*P	Pn	14 20 37.3	+1.6
TUMR				*e*S	Sn	14 20 54.2	+2.6
KBG	Krutoberegovo	1.29	10	*e*P	Pn	14 20 37.3	+1.6
KBG				*e*S	Sn	14 20 54.9	+3.2
BZGR	Bezymyannyi-Gr	1.32	317	*e*P	Pn	14 20 37.7	+1.4
ZLN	Zelenaya	1.34	321	*e*P	Pn	14 20 38.2	+1.7
ZLN				*e*S	Sn	14 20 55.0	+1.8
BZMR	Bezymyannaya	1.40	313	*e*P	Pn	14 20 38.7	+1.2
KMNR	Kamenistaya	1.41	304	*e*P	Pn	14 20 39.1	+1.6
BZWR	Bezymyannyi-We	1.42	314	*e*P	Pn	14 20 39.0	+1.3
LGNR	Loginova	1.43	321	*e*P	Pn	14 20 39.7	+1.7
CIRR	Tsirk	1.43	322	*e*P	Pn	14 20 39.5	+1.6
KIRR	Kirishev	1.48	312	*e*P	Pn	14 20 40.3	+1.8
KPT	Kopyto	1.54	310	*e*P	Pn	14 20 41.4	+2.1
KRSR	Krestovskiy	1.58	322	*e*P	Pn	14 20 40.8	+1.0
KLY	Klyuchi	1.62	325	*e*P	Pn	14 20 41.0	+0.7
SMKR	Semkarok	1.66	344	*e*P	Pn	14 20 42.6	+1.6
BDR	Baidarnaya	1.70	339	*e*P	Pn	14 20 43.3	+1.8
KOZ	Kozyrevsk	1.75	309	*e*P	Pn	14 20 44.3	+2.2
SRKR	Sorokina	1.79	339	*e*P	Pn	14 20 44.6	+1.9
KII	Karymskiy	1.92	241	*e*P	Pn	14 20 47.6	+3.1
KII				*e*S	Sn	14 21 09.9	+2.4
ESO	Esso	2.26	296	*e*P	Pn	14 20 50.4	+1.3
SPN	Mys Shipunski	2.33	216	*e*P	Pn	14 20 50.9	+0.9
SPN				*e*S	Sn	14 21 17.4	+0.1
NLC	Nalytchevo	2.52	225	*e*S	Sn	14 21 23.9	+1.8
SDLR	Sedlovina	2.65	231	*e*P	Pn	14 20 57.4	+2.9
SDLR				*e*S	Sn	14 21 28.7	+3.3
SMAR	Somma	2.69	231	*e*P	Pn	14 20 58.3	+3.1
SMAR				*e*S	Sn	14 21 30.3	+3.6
KRX	Arik	2.70	234	*e*P	Pn	14 20 59.8	+4.5
KRX				*e*S	Sn	14 21 31.2	+4.4
UGLR	Uglovaya	2.72	230	*e*P	Pn	14 20 59.0	+3.5
UGLR				*e*S	Sn	14 21 30.8	+3.6
AVH	Avacha	2.72	232	*e*P	Pn	14 21 00.1	+4.6
AVH				*e*S	Sn	14 21 31.9	+4.7
GNL	Ganaly	2.87	245	*e*P	Pn	14 21 01.7	+4.2
DALK	Dalny	2.87	228	*e*P	Pn	14 21 00.3	+2.8
DALK				*e*S	Sn	14 21 33.3	+2.5
PET	Petropavlovsk	2.92	229	*e*P	Pn	14 21 02.0	+3.9
PET				*e*S	Sn	14 21 35.1	+3.2
KRMR	Karymshinskiy	3.28	230	*e*P	Pn	14 21 07.4	+4.3
KRMR				*e*S	Sn	14 21 45.2	+4.3
RUS	Russkaya	3.41	223	*e*P	Pn	14 21 08.0	+3.1
RUS				*e*S	Sn	14 21 47.8	+3.7
MTVR	Mutnovka	3.51	226	*e*P	Pn	14 21 11.2	+4.8
MTVR				*e*S	Sn	14 21 51.1	+4.4
ASAK	Asacha	3.70	227	*e*P	Pn	14 21 13.6	+4.7
MIPR	Malaya Ipel’ka	4.28	233	*e*P	Pn	14 21 21.7	+4.9

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*IDC **19** 14:50:03.6±0.8, 3°.37S×143°.64E, h0^{km}, mb4.1/9, mb1 4.2/11, mb1mx4.0/43, mbtmp4.1/11, ML4.3/1, MS3.1/5, Ms1 3.1/5, ms1mx2.8/41, Error ellipse: s-maj=30.2km s-min=10.1km az=106.0*
*ISCJB **19** 14:50:05.5±0.6, 3°.31S±0°.07×143°.9E±0°.1, h25^{km}, mb4.0/9, MS3.1/4, Error ellipse: s-maj=20.3km s-min=9.6km az=10.5*
ISC 19 14:50:07.6±0.8**, 3°.32S**±0°.08×**143°.7E**±0°.2**, h25^{km}, n22,** σ**1^{s}.01**/14**, mb4.1**/9**, MS3.1**/4**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.94	151	Pn	Pn	14 51 47.4	-0.2
	2.0nm,0.3s,baz=8.8,slow=4.0,SNR=9.0						
GUMO	Guam	16.84	4	LR	LR	14 59 57.1	
	comp=Z,34nm,20.5s,baz=174,slow=35						
CTA	Charters Tower	16.84	172	Pn	P	14 54 05.4	+1.6
	0.3nm,0.3s,baz=351,slow=14,SNR=5.2						
WRA	Warramunga Arr	18.89	208	P	P	14 54 26.0	-0.4
	1.0nm,0.3s,baz=24,slow=10,SNR=58						
WRA				S	Sn	14 57 56.2	-1.8
	0.1nm,0.3s,baz=21,slow=23,SNR=3.0						
DAV	Davao City (W)	20.85	300	LR	LR	15 02 35.4	
	comp=Z,44nm,18.4s,baz=162,slow=36						
ASAR	Alice Springs	22.34	204	P	P	14 55 03.8	-0.1
	1.5nm,0.3s,baz=27,slow=12,SNR=46						
ASAR				S	S	14 59 09.6	+1.3
	0.6nm,0.8s,baz=26,slow=15,SNR=4.5						
ASAR				LR	LR	15 04 37.8	
	comp=Z,123nm,18.2s,baz=44,slow=39						
STKA	Stephens Creek	28.48	184	P	P	14 56 00.8	0.0
	2.2nm,0.6s,baz=352,slow=8.6,SNR=8.0						
H11S3	WAKE ISLAND Hy	31.32	45	T	T	15 29 29.0	
	baz=228,slow=76,SNR=303						
H11S2	WAKE ISLAND Hy	31.34	45	T	T	15 29 29.6	
	baz=228,slow=76,SNR=204						
H11S1	WAKE ISLAND Hy	31.34	45	T	T	15 29 30.6	
	baz=228,slow=76,SNR=310						
H11N1	WAKE ISLAND Hy	32.28	44	T	T	15 30 40.5	
	baz=227,slow=76,SNR=96						
H11N2	WAKE ISLAND Hy	32.30	44	T	T	15 30 41.2	
	baz=227,slow=76,SNR=133						
H11N3	WAKE ISLAND Hy	32.30	44	T	T	15 30 41.4	
	baz=227,slow=76,SNR=77						
JNU	Nakatsue	38.23	342	LR	LR	15 13 18.5	
	comp=Z,24nm,18.7s,baz=122,slow=36						
KSRS	Korea Array	43.15	342	LR	LR	15 16 29.7	
	comp=Z,23nm,18.2s,baz=248,slow=37						
PETK	Petropavlovsk-	57.44	10	P	P	14 59 54.5	+0.4
	2.0nm,0.9s,baz=170,slow=5.2						
MKAR	Makanchi Array	73.38	321	P	P	15 01 38.2	+0.7
	0.4nm,0.6s,baz=111,slow=7.9,SNR=3.4						
VNDA	Vanda	74.78	176	P	P	15 01 45.5	+0.4
	1.1nm,0.7s,baz=329,slow=6.4,SNR=8.8						
ZALV	Zalesovo Beam	75.03	328	P	P	15 01 47.0	0.0
	0.6nm,0.3s,baz=138,slow=8.8,SNR=2.8						
BVAR	Borovoye Array	82.71	324	P	P	15 02 29.5	+0.4
	0.6nm,0.5s,baz=96,slow=5.8,SNR=3.2						
ILAR	Eielson Array	84.34	24	P	P	15 02 35.8	-1.4
	1.6nm,0.8s,baz=256,slow=5.2,SNR=19						
QSPA	South Pole Qui	86.63	180	P	P	15 02 48.2	-0.7
	3.1nm,0.8s,baz=331,slow=1.6,SNR=9.0						

IDC 19 14:55:42.9±1.8**, 1°.29N**×**126°.63E, h0^{km}, mb3.5**/4**, mb1 3.6**/4**, mb1mx3.4**/54**, mbtmp3.5**/4**, Error ellipse: s-maj=181.3km s-min=21.6km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.41	161	P	P	15 00 42.3	-1.0
	0.3nm,0.3s,baz=339,slow=11,SNR=6.4						
ASAR	Alice Springs	25.79	165	P	P	15 01 16.6	+0.8
	0.4nm,0.8s,baz=341,slow=10,SNR=5.9						
MKAR	Makanchi Array	59.51	326	P	P	15 05 49.0	+1.0
	0.2nm,0.4s,baz=121,slow=5.6,SNR=2.7						
KURBB	Kurchatov Arra	63.74	328	P	P	15 06 15.5	-1.0
	0.4nm,0.6s,baz=116,slow=6.3,SNR=3.5						

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*CNRM **19** 15:04:33.1, 32°.26N×7°.77W, h0^{km}, ML2.9*
*INMG **19** 15:04:33.2±1.4, 32°.05N×8°.09W, h25^{km}, ML2.5, Error ellipse: s-maj=14.7km s-min=6.7km az=53.0*
*MDD **19** 15:04:34.0±0.8, 32°.22N×7°.95W, h0^{km}, mb4.3/6, Error ellipse: s-maj=26.4km s-min=6.3km az=92.0, PRXIMO*
*SFS **19** 15:04:34.0, 32°.25N×7°.78W, h0^{km}, ML4.1*
*CSEM **19** 15:04:35.1±0.3, 32°.20N×7°.90W, h20^{km}, mb4.3, Error ellipse: s-maj=15.7km s-min=5.4km az=85.0*
ISC 19 15:04:33.5±1.2**, 32°.26N**±0°.06×**7°.8W**±0°.1**, h10^{km}, n36,** σ**1^{s}.62**/50**, 2C, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OUK	Oukaimeden	1.04	182	P	Pg	15 04 53.0	-0.6
OUK	Oukaimeden	1.04	182	P	Pg	15 04 53.0	-0.6
AVE	Averroes	1.09	18	*e*P	Pn	15 04 55.9	+1.0
AVE				*e*S	Sn	15 05 13.7	+3.6
PFVI	Vila Bisbo	4.94	351	*e*Pn	Pn	15 05 49.2	+1.5
PFVI	Vila Bisbo	4.94	351	P	Pn	15 05 49.0	+1.3
	2.1nm,0.1s,SNR=7.9						
PFVI				S	Sn	15 06 44.6	-0.3
	12nm,0.5s,SNR=7.9						
PFVI	Vila Bisbo	4.94	351	P	Pn	15 05 49.0	+1.3
	2.1nm,0.1s,SNR=7.9						
MORF	Marmelete	5.08	352	*e*Pn	Pn	15 05 50.9	+1.1
MORF	Marmelete	5.08	352	*e*Pn	Pn	15 05 50.9	+1.1
PVAQ	Vaqueiros	5.14	1	*e*Pn	Pn	15 05 51.6	+1.2
PVAQ				*e*Sn	Sn	15 06 48.5	-1.3
PVAQ				A	A	15 06 49.8	
	3.6nm,0.4s						
PVAQ	Vaqueiros	5.14	1	P	Pn	15 05 51.6	+1.2
PVAQ	Vaqueiros	5.14	1	P	Pn	15 05 51.6	+1.2
PVAQ				*e*Sn	Sn	15 06 48.5	-1.3
EGRO	El Granado	5.27	3	P	Pn	15 05 53.7	+1.4
	1.5nm,0.1s,SNR=16						
EGRO				S	Sn	15 06 52.2	-0.9
	3.0nm,0.3s,SNR=6.4						
EGRO	El Granado	5.27	3	P	Pn	15 05 53.7	+1.4
	1.5nm,0.1s,SNR=16						
EGRO				S	Sn	15 06 52.2	-0.9
	3.0nm,0.3s,SNR=6.4						
PTEO	Sao Teotonio	5.33	352	*e*Pn	Pn	15 05 54.4	+1.3
PTEO	Sao Teotonio	5.33	352	*e*Pn	Pn	15 05 54.4	+1.3
PCVE	Castro Verde	5.37	358	⇑*e*Pn	Pn	15 05 55.3	+1.7
PCVE				*e*Sn	Sn	15 06 54.3	-1.2
PCVE				A	A	15 06 59.6	
	3.3nm,0.5s						
PCVE	Castro Verde	5.37	358	⇑*e*Pn	Pn	15 05 55.3	+1.7
PCVE				*e*Sn	Sn	15 06 54.3	-1.2
EMIN	Mina Concepcio	5.58	9	P	Pn	15 05 57.4	+0.9
	0.6nm,0.1s,SNR=7.6						
EMIN				S	Sn	15 06 58.2	-2.5
	2.4nm,0.4s,SNR=7.9						
EMIN	Mina Concepcio	5.58	9	P	Pn	15 05 57.4	+0.9
	0.6nm,0.1s,SNR=7.6						
MESJ	Messejana	5.58	357	*e*P	Pn	15 05 58.2	+1.7
MESJ				*e*Sn	Sn	15 06 58.6	-2.1
MESJ				A	A	15 07 05.5	
	2.9nm,0.5s						
MESJ	Messejana	5.58	357	*e*P	Pn	15 05 58.2	+1.7
PNCL	Nicolau / Gran	5.87	355	*e*P	Pn	15 06 02.4	+1.9
PNCL				*e*Sn	Sn	15 07 06.8	-1.1
PNCL				A	A	15 07 07.7	
	2.7nm,0.9s						
PNCL	Nicolau / Gran	5.87	355	*e*P	Pn	15 06 02.4	+1.9
HORN	Hornachuelos	5.96	20	P	Pn	15 06 02.4	+0.6
ECAB	El Cabril	6.13	18	P	Pn	15 06 04.9	+0.8
	0.2nm,0.1s,SNR=6.3						
ECAB				S	Sn	15 07 11.5	-2.8
	1.4nm,0.3s,SNR=7.9						
ECAB	El Cabril	6.13	18	P	Pn	15 06 04.9	+0.8
	0.2nm,0.1s,SNR=6.3						
EADA	Adamuz	6.47	23	P	Pn	15 06 09.4	+0.7

	0.5nm,0.1s,SNR=7.9						
EADA				S	**Sn**	**15 07 19.6**	**-3.0**
	2.1nm,0.5s,SNR=7.9						
EADA	**Adamuz**	**6.47**	**23**	P	**Pn**	**15 06 09.4**	**+0.7**
	0.5nm,0.1s,SNR=7.9						
EBAD	**Badajoz**	**6.52**	**6**	P	**Pn**	**15 06 10.6**	**+1.2**
	0.5nm,0.1s,SNR=7.9						
EBAD				S	**Sn**	**15 07 21.3**	**-2.6**
	1.5nm,0.2s,SNR=7.9						
EBAD	**Badajoz**	**6.52**	**6**	P	**Pn**	**15 06 10.6**	**+1.2**
	0.5nm,0.1s,SNR=7.9						
EQES	**Quesada**	**6.77**	**34**	P	**Pn**	**15 06 15.4**	**+2.5**
	0.2nm,0.1s,SNR=7.9						
EQES	**Quesada**	**6.77**	**34**	P	**Pn**	**15 06 15.4**	**+2.5**
	0.2nm,0.1s,SNR=7.9						
PMTG	**Montargil**	**6.81**	**357**	*e*Pn	**Pn**	**15 06 14.8**	**+1.4**
PMTG	**Montargil**	**6.81**	**357**	*e*Pn	**Pn**	**15 06 14.8**	**+1.4**
EPLA	**Plasencia**	**7.92**	**10**	P	**Pn**	**15 06 30.0**	**+1.3**
	0.5nm,0.1s,SNR=7.9						
EPLA	**Plasencia**	**7.92**	**10**	P	**Pn**	**15 06 30.0**	**+1.3**
	0.5nm,0.1s,SNR=7.9						

MEX 19 15:09:02.9±0.8, 15°.19N×92°.90W, h127^{km}±9^{km}, MD3.8, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		**0.59**	**329**	*i* P	Pn	15 09 20.9	-1.3
PCIG				*e*S	Sn	15 09 35.0	-1.8
CCIG	**Comitan**	**1.31**	**34**	*e*P	Pn	15 09 27.3	-1.6
CCIG				*i* S	Sn	15 09 46.4	-2.2
TGIG		**1.59**	**352**	*e*P	Pn	15 09 31.1	-0.7
TGIG				*i* S	Sn	15 09 52.3	-1.7
HUIG	**Huatulco**	**3.15**	**281**	*e*P	Pn	15 09 50.8	-0.5
HUIG				*i* S	Sn	15 10 26.0	-2.7

IDC 19 15:43:27.8±1.4, 47°.04N×111°.77E, h0^{km}, mb3.2/4, mb1 3.4/5, mb1mx3.2/70, mbtmp3.3/5, ML3.7/1, Error ellipse: s-maj=35.9km s-min=18.1km az=25.0, Mongolia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONM	**Songino Array**	**3.73**	**284**	Pn	Pn	15 44 26.1	-0.7
	5.3nm,0.3s,baz=99,slow=13,SNR=34						
SONM				Pg	Pg	15 44 37.4	-1.9
	15nm,0.3s,baz=100,slow=16,SNR=21						
SONM				Sn	Sn	15 45 12.6	+1.1
	4.2nm,0.3s,baz=90,slow=20,SNR=4.6						
SONM				Lg	Lg	15 45 26.8	
	19nm,0.3s,baz=96,slow=28,SNR=21						
MKAR	**Makanchi Array**	**20.09**	**280**	P	P	15 48 02.6	-0.2
	0.3nm,0.4s,baz=86,slow=13,SNR=6.0						
KURBB	**Kurchatov Arra**	**22.06**	**292**	P	P	15 48 22.8	-1.2
	0.1nm,0.4s,baz=84,slow=10,SNR=2.4						
SPITS	**Spitsbergen Ar**	**45.53**	**343**	P	P	15 51 49.1	+0.6
	0.7nm,0.5s,baz=66,slow=12,SNR=3.9						
ASAR	**Alice Springs**	**73.16**	**159**	P	P	15 55 00.1	0.0
	0.4nm,0.9s,baz=338,slow=5.5,SNR=3.1						

*NIED **19** 16:11:00, 37°.60N×141°.90E, h26^{km}, Mw4.3 Best double couple: $M_0$3.32000×10^{15} NP1:ϕ_s235.00000°, δ21.00000°, λ169.00000°. NP2:ϕ_s335.00000°, δ86.00000°, λ70.00000°.*
*BJI **19** 16:11:34.1, 37°.55N×141°.72E, h6^{km}, mb4.7/55, mB4.8/34, Ms4.2/36, Ms7 3.9/33*
*ISCJB **19** 16:11:37.0±0.1, 37°.57N±0°.02×141°.82E±0°.02, h24^{km}, mb4.6/154, MS3.7/26, Error ellipse: s-maj=3.1km s-min=2.2km az=156.1*
*JMA **19** 16:11:37.4±0.1, 37°.58N×141°.85E, h29^{km}±2^{km}, M4.5*
JMA Felt II J1.
*MOS **19** 16:11:38.2±1.1, 37°.67N×141°.81E, h33^{km}, mb4.7/51, Error ellipse: s-maj=7.1km s-min=5.2km az=91.4*
*NEIC **19** 16:11:40.0±1.1, 37°.57N×141°.72E, h34^{km}±8^{km}, mb4.7/103, Error ellipse: s-maj=4.1km s-min=2.7km az=133.0*
NEIC Recorded [2 JMA] in Fukushima.
*IDC **19** 16:11:40.7±1.7, 37°.58N×141°.83E, h41^{km}±15^{km}, mb4.1/31, mb1 4.2/38, mb1mx4.1/69, mbtmp4.3/38, ML4.0/5, MS3.5/20, Ms1 3.5/20, ms1mx3.2/69, Error ellipse: s-maj=12.1km s-min=9.4km az=115.0*

ISC 19 16:11:38.1±0.3, 37°.55N±0°.03×141°.90E±0°.03, h24^{km}, n323, σ1^{s}.60/348, mb4.6/154, MS3.8/26, 10C-7D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	**Kawauchi**	**0.84**	**258**	P	**Pb**	**16 11 52.4**	**-1.6**
JFK				S	**Sb**	**16 12 02.4**	**-2.5**
JMM	**Marumori**	**0.94**	**290**	P	**Pb**	**16 11 53.7**	**-2.0**
JMM				S	**Sb**	**16 12 04.9**	**-2.8**
ONAJ	**Iwakimizuishiy**	**0.99**	**244**	P	**Pb**	**16 11 54.6**	**-2.0**
ONAJ				S	**Sb**	**16 12 06.5**	**-2.7**
JIO	**Ouri**	**1.01**	**334**	P	**Pn**	**16 11 54.7**	**-2.0**
JIO				S	**Sb**	**16 12 06.5**	**-3.2**
JFT	**Otama**	**1.25**	**269**	P	**Pn**	**16 11 59.2**	**-0.8**
JFT				S	**Sn**	**16 12 14.5**	**-1.6**
JOU	**Okura**	**1.28**	**310**	P	**Pn**	**16 11 59.3**	**-1.2**
JOU				S	**Sn**	**16 12 15.1**	**-1.8**
JMK	**Ichinoseki**	**1.50**	**339**	P	**Pn**	**16 12 02.3**	**-1.3**
JMK				*e*S	**Sn**	**16 12 20.6**	**-1.8**
JYS	**Shirataka**	**1.60**	**295**	P	**Pn**	**16 12 04.2**	**-0.8**
JYS				S	**Sn**	**16 12 24.4**	**-0.5**
JFY	**Yanaizu**	**1.75**	**266**	P	**Pn**	**16 12 06.6**	**-0.5**
JFY				S	**Sn**	**16 12 28.3**	**-0.4**
JYK	**Kaneyama**	**1.83**	**319**	P	**Pn**	**16 12 07.2**	**-0.9**
MJA0	**Matsu Arr-Jizo**	**3.09**	**252**	*e*P	**Pn**	**16 12 26.1**	**+0.6**
MJA0				pmax	pmax		
	comp=Z,18nm,0.3s						
MJAR	**Matsushiro Arr**	**3.12**	**252**	P	**Pn**	**16 12 26.1**	**+0.3**
	comp=Z,18nm,0.3s,baz=80,slow=16,SNR=93						
MJAR				S	**Sn**	**16 13 03.3**	**+0.9**
	comp=Z,24nm,0.3s,baz=80,slow=15,SNR=5.3						
MJAR				LR	LR	16 13 46.1	
	comp=Z,1μm,19.3s,baz=75,slow=41						
MAJO	**Matsushiro**	**3.12**	**252**	*e*Pn	**Pn**	**16 12 26.4**	**+0.5**
MAJO				*e*Sn	**Sn**	**16 13 03.3**	**+0.9**
MAJO	**Matsushiro**	**3.12**	**252**	*c* *i*P	**Pn**	**16 12 26.3**	**+0.5**
MAT	**Matsushiro**	**3.12**	**252**	P	**Pn**	**16 12 26.5**	**+0.6**
MAT				*e*S	**Sb**	**16 13 06.1**	**-4.5**
MJB9	**Matsu-Tunnel**	**3.12**	**252**	*e*Pn	**Pn**	**16 12 26.5**	**+0.6**
INU	**Inuyama**	**4.51**	**242**	*e*Pn	**Pn**	**16 12 45.8**	**+0.9**
ERM	**Erimo**	**4.57**	**12**	*e*Pn	**Pn**	**16 12 45.4**	**-0.3**
ERM				*e*Sn	**Sn**	**16 13 37.2**	**-0.7**
ERM	**Erimo**	**4.57**	**12**	⇑*e*P	**Pn**	**16 12 45.5**	**-0.2**
JHJ2	**Mitsune**	**4.74**	**202**	*e*Pn	**Pn**	**16 12 47.6**	**-0.5**
JHJ2				*e*Sn	**Sn**	**16 13 40.0**	**-2.3**
JHJ	**Hachijo jima 2**	**4.74**	**202**	P	**Pn**	**16 12 47.8**	**-0.3**
	comp=Z,97nm,0.3s,baz=314,slow=22,SNR=48						
JHJ				S	**Sn**	**16 13 36.8**	**-5.5**
	comp=Z,27nm,0.3s,baz=270,slow=20,SNR=2.5						
JHJ				LR	LR	16 14 46.0	
	comp=Z,572nm,20.0s,baz=88,slow=39						
ASAJ	**Asahikawa**	**6.59**	**4**	P	**Pn**	**16 13 13.0**	**-0.4**
	comp=Z,3.2nm,0.3s,baz=219,slow=9.9,SNR=39						
ASAJ				S	**Sn**	**16 14 24.6**	**-3.1**
	comp=Z,2.8nm,0.3s,baz=186,slow=19,SNR=3.1						
ASAJ	**Asahikawa**	**6.59**	**4**	*e*Pn	**Pn**	**16 13 14.1**	**+0.7**
ASAJ				S	**Sn**	**16 14 24.6**	**-3.1**
YUK	**Yuzh-Kuril'sk**	**7.14**	**24**	*e*P	**Pn**	**16 13 20.7**	**-0.3**
YUK				*e*S	**Sn**	**16 14 35.0**	**-6.4**
YUK				pmax	pmax		
	comp=N,69nm,0.5s						
YUK				pmax	pmax		
	comp=Z,154nm,0.5s						
YUK				pmax	pmax		
	comp=E,57nm,0.3s						
SHO	**Shikotan**	**7.34**	**29**	*d* *i*P	**Pn**	**16 13 22.0**	**-1.7**
SHO				*i* S	**Sn**	**16 14 39.0**	**-7.2**
SHO				pmax	pmax		
	comp=Z,29nm,0.4s						
SHO				pmax	pmax		
	comp=E,9.0nm,0.3s						
SHO				pmax	pmax		
	comp=N,5.0nm,0.4s						
TEY	**Ternei**	**8.48**	**334**	*e*P	Pn	16 13 47.9	+8.6
KUR	**Kuril'sk**	**8.89**	**28**	*e*P	**Pn**	**16 13 43.9**	**-1.1**
KUR				*e*S	**Sn**	**16 15 17.0**	**-7.3**
KUR				pmax	pmax		
	comp=Z,44nm,0.5s						
KUR				pmax	pmax		
	comp=N,10.0nm,0.4s						
KUR				pmax	pmax		
	comp=E,8.0nm,0.5s						
KUR				pmax	pmax		
	comp=Z,876nm,3.5s						
KUR				smax	smax		
	comp=E,82nm,0.6s						
KUR				smax	smax		
	comp=N,57nm,0.4s						
KUR				smax	smax		
	comp=E,1μm,3.2s						
KUR				smax	smax		
	comp=N,901nm,2.8s						
YSS	**Yuzh-Sakhalins**	**9.42**	**4**	*e*Pn	**Pn**	**16 13 54.4**	**+2.1**
YSS	**Yuzh-Sakhalins**	**9.42**	**4**	*e*P	Pn	16 13 57.9	+5.6
YSS				*e*S	**Sn**	**16 15 36.8**	**-0.6**
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
YSS				MLR	MLR		
	comp=Z,400nm,13.0s						
YSS				MLR	MLR		
	comp=N,200nm,12.0s						
YSS				MLR	MLR		
	comp=E,500nm,12.0s						
USRK	**Ussuriysk Ar.**	**10.02**	**315**	P	**Pn**	**16 14 02.4**	**+1.9**
	baz=117,slow=14						
USRK				LR	LR	16 17 38.7	
	comp=E,116nm,19.7s,baz=117,slow=36						
USA0B	**Ussuriysk Arra**	**10.02**	**315**	*e*Pn	**Pn**	**16 14 02.5**	**+2.0**
JNU	**Nakatsue**	**10.03**	**247**	P	**Pn**	**16 14 02.5**	**+1.9**
	comp=E,0.8nm,0.3s,baz=71,slow=1.8,SNR=14						
JNU				LR	LR	16 18 15.8	
	comp=E,506nm,18.8s,baz=122,slow=40						
JNU	**Nakatsue**	**10.03**	**247**	*e*Pn	**Pn**	**16 14 01.1**	**+0.4**
CBIJ	**Chichi jima**	**10.42**	**179**	*e*Pn	**Pn**	**16 14 03.8**	**-2.3**
CBIJ				*e*Sn	Sn	16 15 52.6	-10
JCJ	**Chichijima**	**10.42**	**179**	P	**Pn**	**16 14 03.5**	**-2.6**
	comp=E,4.9nm,0.3s,baz=281,slow=14,SNR=16						
JCJ				S	Sn	16 15 51.7	-10
	baz=315,slow=20						
KSRS	**Korea Array**	**11.11**	**274**	P	**Pn**	**16 14 17.4**	**+1.9**
	comp=E,0.4nm,0.3s,baz=88,slow=14,SNR=9.9						
KSRS				LR	LR	16 18 32.3	
	comp=E,385nm,18.0s,baz=67,slow=37						
KS01	**Wonju Array Si**	**11.13**	**274**	*e*Pn	**Pn**	**16 14 13.6**	**-2.1**
KS15	**Wonju Array Si**	**11.14**	**274**	*e*Pn	**Pn**	**16 14 13.6**	**-2.2**
KSAR	**Wonju Array Be**	**11.14**	**274**	P	**Pn**	**16 14 17.4**	**+1.5**
KSAR	**Wonju Array Be**	**11.14**	**274**	P	**Pn**	**16 14 17.4**	**+1.5**
MDJ	**Mudanjiang**	**11.66**	**311**	*e*Pn	**Pn**	**16 14 21.2**	**-1.8**
TYV	**Tymovskoe**	**13.33**	**2**	*e*P	**P**	**16 14 56.0**	**+0.9**
TYV				pmax	pmax		
	comp=Z,12nm,1.5s						
GRNR	**Gornyy**	**13.79**	**345**	*e*P	P	16 15 05.7	+5.5
KLR	**Kul'dur**	**13.80**	**331**	P	**Pn**	**16 14 52.9**	**+0.8**
	comp=Z,0.0nm,0.3s,baz=165,slow=19,SNR=2.0						
KLR	**Kul'dur**	**13.80**	**331**	⇑*e*P	**Pn**	**16 14 52.4**	**+0.3**
CN2	**Changchun**	**13.96**	**302**	*e*P	**Pn**	**16 14 56.6**	**+2.3**
CN2				*e*S	**Sn**	**16 17 27.8**	**-0.6**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,190nm,10.0s						
CN2				LR	LR		
	comp=Z,190nm,10.0s						
CN2				LR	LR		
	comp=Z,190nm,10.0s						
JOW	**Kunigami**	**15.70**	**231**	*e*Pn	**Pn**	**16 15 16.4**	**-1.4**
	comp=Z,36nm,1.0s						
PEA0B	**Petropavlovsk-**	**19.05**	**30**	*e*P	**P**	**16 15 58.5**	**+0.1**
	comp=Z,61nm,1.5s						
PETK	**Petropavlovsk-**	**19.05**	**30**	P	**P**	**16 15 58.5**	**+0.1**
	baz=209,slow=9.3						
PETK				LR	LR	16 23 39.7	
	comp=Z,58nm,21.1s,baz=221,slow=38						
PETK	**Petropavlovsk-**	**19.05**	**30**	*e*P	**P**	**16 15 57.8**	**-0.6**
PETK	**Petropavlovsk-**	**19.05**	**30**	*e*P	**P**	**16 15 57.8**	**-0.6**
PEA1	**Petropavlovsk-**	**19.05**	**30**	*e*P	**P**	**16 15 58.5**	**+0.1**
ZEA	**Zeya**	**19.10**	**333**	*e*P	**P**	**16 15 58.2**	**-0.7**
ZEA				pmax	pmax		
	comp=Z,29nm,1.0s						
ZEA				MLR	MLR		
	comp=Z,200nm,12.0s						
PET	**Petropavlovsk**	**19.38**	**32**	*e*P	**P**	**16 16 01.6**	**-0.4**
	comp=Z,56nm,1.6s						
PET	**Petropavlovsk**	**19.38**	**32**	*e*P	**P**	**16 16 01.6**	**-0.4**
PET				pmax	pmax		
	comp=Z,56nm,1.6s						
NJ2	**Nanjing**	**19.69**	**261**	*e*P	**Pn**	**16 16 06.3**	**-0.8**
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
BJI	**Beijing**	**20.19**	**285**	⇓*e*P	**P**	**16 16 08.3**	**-2.6**
BJI				pmax	pmax		
	comp=Z,12nm,1.4s						
BJT	**Baijiatuau**	**20.20**	**285**	*e*P	**P**	**16 16 08.6**	**-2.4**
	comp=Z,16nm,0.9s						
BJT	**Baijiatuau**	**20.20**	**285**	*e*P	**P**	**16 16 08.6**	**-2.4**
BJT				pmax	pmax		
	comp=Z,16nm,0.9s						
YOJ	**Yonaguni jima**	**20.74**	**236**	*e*P	**P**	**16 16 15.4**	**-1.6**
	comp=Z,46nm,1.0s						
YOJ	**Yonaguni jima**	**20.74**	**236**	*e*P	**P**	**16 16 15.4**	**-1.6**
YOJ				pmax	pmax		
	comp=Z,46nm,1.0s						
TATO	**Taipei**	**21.43**	**240**	*e*P	**P**	**16 16 23.2**	**-1.3**
	comp=Z,131nm,1.6s						
NACB	**Ninganchiao**	**21.89**	**238**	*e*P	**P**	**16 16 27.9**	**-1.5**
	comp=Z,15nm,0.9s						
SSLB	**Suanglung**	**22.58**	**239**	*e*P	**P**	**16 16 34.0**	**-2.8**
	comp=Z,10nm,0.8s						
YULB	**Yu-li**	**22.61**	**237**	*e*P	**P**	**16 16 35.1**	**-2.1**
	comp=Z,14nm,1.2s						
MA2	**Magadan**	**22.77**	**12**	P	**P**	**16 16 37.9**	**-0.6**
	comp=Z,5.1nm,0.6s,baz=165,slow=16,SNR=2.2						
MA2				LR	LR	16 26 52.8	
	comp=Z,74nm,18.4s,baz=241,slow=40						
MA2	**Magadan**	**22.77**	**12**	*e*P	**P**	**16 16 38.5**	**-0.1**
	comp=Z,30nm,1.2s						
TPUB	**Ta-pu**	**23.12**	**238**	*e*P	**P**	**16 16 38.4**	**-4.1**
	comp=Z,17nm,0.7s						
TWG	**Pinlang**	**23.16**	**237**	*e*P	**P**	**16 16 41.5**	**-1.3**
	comp=Z,68nm,0.8s						
TIY	**Taiyuan**	**23.30**	**279**	*e*P	**P**	**16 16 49.1**	**+4.8**
TIY				pP	sP	16 17 52.0	+58
TIY				S	S	16 20 23.3	-32
TIY	**Taiyuan**	**23.30**	**279**	ScS	ScS	16 27 40.0	-14
TIY				pmax	pmax		
	comp=Z,150nm,4.3s						
TIY				LR	LR		
	comp=N,260nm,15.1s						
TIY				LR	LR		
	comp=E,190nm,7.4s						
TIY				LR	LR		
	comp=Z,200nm,16.0s						
HHC	**Hu-ho-hao-te**	**23.69**	**287**	*e*P	**P**	**16 16 47.5**	**-0.5**
HHC				sP	sP	16 16 57.8	-0.2
HHC				PP	**PnPn**	**16 17 22.3**	**+6.7**
HHC				S	**S**	**16 21 00.9**	**-0.7**
HHC				SS	**SnSn**	**16 21 43.3**	**+3.5**
HHC				pmax	pmax		
	comp=Z,18nm,1.0s						
HHC				pmax	pmax		
	comp=Z,69nm,6.5s						
HHC				LR	LR		
	comp=Z,240nm,10.0s						
HHC				LR	LR		
	comp=Z,180nm,10.6s						
HHC				LR	LR		
	comp=Z,130nm,11.2s						
WHN	**Wuhan**	**23.82**	**261**	⇓P	**P**	**16 16 49.3**	**0.0**
WHN				S	**S**	**16 21 02.3**	**-1.4**
WHN				pmax	pmax		
	comp=Z,36nm,0.8s						
WHN				LR	LR		
	comp=Z,640nm,12.6s						
WHN				LR	LR		
	comp=Z,640nm,13.9s						
WHN				LR	LR		
	comp=Z,760nm,19.5s						
YAK	**Yakutsk**	**25.66**	**347**	*e*P	**P**	**16 17 05.1**	**-0.6**
	comp=Z,38nm,1.0s						
YAK	**Yakutsk**	**25.66**	**347**	*e*P	**P**	**16 17 04.4**	**-1.3**
YAK				*e**PP	**sP**	**16 17 16.2**	**+0.4**
YAK				*e*PPP	PPP	16 17 47.0	
YAK				*e*S	**S**	**16 21 30.9**	**-1.6**
YAK				*e**SS	**sS**	**16 21 43.6**	**-0.7**
YAK				*e*SSS	SSS	16 22 47.2	
YAK				*e*		16 28 02.9	
YAK				pmax	pmax		
	comp=Z,11nm,0.9s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,45nm,2.4s						
YAK				pmax	pmax		
	comp=N,23nm,2.1s						
YAK				smax	smax		
	comp=E,34nm,1.9s						
YAK				smax	smax		
	comp=N,29nm,1.9s						
YAK				pmax	pmax		
	comp=N,107nm,17.0s						
YAK				pmax	pmax		
	comp=E,115nm,18.0s						
YAK				pmax	pmax		
	comp=Z,93nm,17.0s						
YAK				pmax	pmax		
	comp=N,170nm,17.0s						
SEY	**Seymchan**	**26.21**	**11**	P	**P**	**16 17 11.9**	**+1.2**
	comp=N,5.5nm,0.9s,baz=184,slow=8.3,SNR=11						
XAN	**Xi'an**	**26.90**	**273**	P	**P**	**16 17 16.0**	**-1.3**
XAN				pmax	pmax		
	comp=N,12nm,0.6s						
SMY	**Shemya**	**27.03**	**45**	*e*P	**P**	**16 17 19.7**	**+1.5**
	comp=N,68nm,1.6s						
SMY	**Shemya**	**27.03**	**45**	*e*P	**P**	**16 17 19.7**	**+1.5**
SMY				pmax	pmax		
	comp=Z,68nm,1.6s						
BOD	**Bodaibo**	**27.31**	**327**	*e*P	**P**	**16 17 19.7**	**-1.0**
BOD				pmax	pmax		
	comp=Z,16nm,0.7s						
ULN	**Ulaanbaatar**	**27.40**	**303**	*e*P	**P**	**16 17 21.1**	**-0.7**
	comp=Z,3.6nm,0.8s						
ULN	**Ulaanbaatar**	**27.40**	**303**	*de*P	**P**	**16 17 22.4**	**+0.6**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ENH	**Enshi**	**27.77**	**265**	*e*P	**P**	**16 17 23.8**	**-1.3**
	comp=Z,37nm,0.8s						
SONA1	**Songino Array**	**27.83**	**303**	*e*P	**P**	**16 17 25.8**	**+0.2**
SONA0	**Songino Array**	**27.83**	**303**	*e*P	**P**	**16 17 25.5**	**-0.1**
SONM	**Songino Array**	**27.83**	**303**	P	**P**	**16 17 25.5**	**-0.1**
	comp=Z,3.9nm,0.6s,baz=97,slow=9.2,SNR=12						
SONM				LR	LR	16 29 57.1	
	comp=Z,59nm,19.2s,baz=52,slow=40						
SONM	**Songino Array**	**27.83**	**303**	*e*P	**P**	**16 17 26.1**	**+0.5**
SONM				pmax	pmax		
	comp=Z,4.0nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**28.08**	**122**	T	T	16 46 55.0	
	baz=315,slow=75,SNR=493						
H11N1	**WAKE ISLAND Hy**	**28.09**	**122**	T	T	16 47 00.2	
	baz=315,slow=75,SNR=504						
H11N3	**WAKE ISLAND Hy**	**28.10**	**122**	T	T	16 46 52.6	
	baz=315,slow=75,SNR=442						
H11S1	**WAKE ISLAND Hy**	**28.82**	**124**	T	T	16 47 50.3	
	baz=317,slow=76,SNR=198						
H11S3	**WAKE ISLAND Hy**	**28.82**	**124**	T	T	16 47 53.4	
	baz=317,slow=76,SNR=583						
H11S2	**WAKE ISLAND Hy**	**28.83**	**124**	T	T	16 47 51.5	
	baz=317,slow=76,SNR=208						
ZAK	**Zakamensk**	**30.26**	**308**	*e*P	**P**	**16 17 45.9**	**-1.3**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
TLY	**Talaya**	**30.30**	**310**	*e*P	**P**	**16 17 46.9**	**-0.4**
TLY				pmax	pmax		
	comp=Z,5.0nm,0.9s						
TLY				MLR	MLR		
	comp=Z,79nm,17.0s						
LZH	**Lanzhou**	**30.37**	**279**	*e*P	**P**	**16 17 48.8**	**+0.5**
LZH				pP	pP	16 17 51.9	-3.6
LZH				sP	sP	16 17 54.4	-4.1
LZH				*e*PP	**PnPn**	**16 18 45.9**	**-0.9**
LZH				pmax	pmax		
	comp=Z,24nm,1.3s						
LZH				pmax	pmax		
	comp=Z,190nm,4.3s						
LZH				LR	LR		
	comp=Z,280nm,14.1s						
LZH				LR	LR		
	comp=Z,400nm,14.6s						
LZH				LR	LR		
	comp=Z,390nm,15.2s						
GYA	**Guiyang**	**31.69**	**260**	⇑*i*P	**P**	**16 17 58.6**	**-1.4**
GYA				PP	**PnPn**	**16 19 04.8**	**+0.6**
GYA				S	**S**	**16 23 08.9**	**+0.6**
GYA				SS	**SnSn**	**16 24 57.6**	**+2.1**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,110nm,5.0s						
GYA				LR	LR		
	comp=Z,410nm,16.3s						
GYA				LR	LR		
	comp=Z,450nm,16.0s						
GYA				LR	LR		
	comp=Z,420nm,16.5s						
CD2	**Chengdu**	**32.07**	**270**	*e*P	**P**	**16 18 02.5**	**-0.7**
CD2				pP	pP	16 18 04.9	-5.5
CD2				sP	sP	16 18 06.3	-7.0
CD2				S	**S**	**16 23 14.9**	**+1.0**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,4.8s						
CD2				LR	LR		
	comp=Z,610nm,10.4s						
CD2				LR	LR		
	comp=Z,710nm,13.4s						
CD2				LR	LR		
	comp=Z,300nm,11.4s						
GTA	**Gaotai**	**32.79**	**286**	P	**P**	**16 18 08.4**	**-1.1**
GTA				pP	pP	16 18 13.0	-3.7
GTA				sP	sP	16 18 15.6	-4.1
GTA				PcP	**PcP**	**16 20 55.3**	**+1.0**
GTA				S	**S**	**16 23 25.4**	**+0.2**
GTA				ScS	**ScS**	**16 28 36.3**	**-0.4**
GTA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,54nm,5.1s						
GTA				LR	LR		
	comp=Z,180nm,18.7s						
GTA				LR	LR		
	comp=Z,110nm,16.2s						
GTA				LR	LR		
	comp=Z,170nm,15.9s						
DAV	**Davao City (W)**	**33.77**	**210**	LR	LR	16 31 32.9	
	comp=Z,25nm,21.5s,baz=55,slow=35						
KMI	**Kunming**	**35.43**	**261**	P	**P**	**16 18 32.8**	**+0.2**
KMI				pP	pP	16 18 34.8	-5.1
KMI				sP	sP	16 18 36.8	-6.0
KMI				pmax	pmax		
	comp=Z,26nm,0.9s						
KMI				LR	LR		
	comp=Z,160nm,14.1s						
KMI				LR	LR		
	comp=Z,220nm,9.7s						
KMI				LR	LR		
	comp=Z,140nm,13.1s						
TNTI	**Ternate**	**38.97**	**204**	*e*P	**P**	**16 19 02.0**	**-0.5**
	comp=Z,9.7nm,0.6s						
NONG	**Nongkai**	**39.04**	**251**	P	**P**	**16 19 04.2**	**+1.1**
	comp=Z,0.3nm,0.8s						
SKNT	**Sakolnakorn**	**39.09**	**249**	P	**P**	**16 19 04.6**	**+1.0**
	comp=Z,4.7nm,0.9s						
DGZ	**Jazzator, Alta**	**40.41**	**305**	*i* P	**P**	**16 19 14.9**	**+0.5**
DGZ				pmax	pmax		
	comp=Z,16nm,0.9s						
WMQ	**Urumqi**	**40.96**	**296**	P	**P**	**16 19 19.5**	**+0.6**
WMQ				pP	pP	16 19 25.1	-1.1
WMQ				sP	sP	16 19 27.6	-1.5
WMQ				pmax	pmax		
	comp=Z,34nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,130nm,3.7s						
WMQ				LR	LR		
	comp=Z,200nm,27.5s						
WMQ				LR	LR		
	comp=Z,130nm,24.1s						
WMQ				LR	LR		
	comp=Z,120nm,22.3s						

FAKI	Fak Fak	41.25	195	eP	P	16 19 22.4	+1.1
	comp=Z,51nm,1.2s						
CHAI	Chaiyaphum	41.25	249	P	P	16 19 22.9	+1.4
	comp=Z,4.3nm,0.7s						
PBKT	Sadao Pong	41.60	251	eP	P	16 19 24.9	+0.6
CMMT	Chiang Mai	41.79	256	P	P	16 19 27.2	+1.3
	comp=Z,6.0nm,1.3s						
CHTO	Chiang Mai	41.80	256	eP	P	16 19 25.8	-0.1
	comp=Z,25nm,1.8s						
CHTO	Chiang Mai	41.80	256	eP	P	16 19 25.8	-0.1
CHTO				pmax	pmax		
	comp=Z,25nm,1.8s						
CHTO	Chiang Mai	41.80	256	P	P	16 19 27.3	+1.4
	comp=Z,30nm,1.5s						
ZAA0	Zalesovo Array	41.86	312	eP	P	16 19 24.9	-1.1
	comp=Z,8.4nm,0.8s						
ZAA1	Zalesovo Array	41.86	312	eP	P	16 19 25.9	-0.2
ZALV	Zalesovo Beam	41.86	312	P	P	16 19 25.9	-0.2
	comp=Z,4.7nm,0.7s,baz=95,slow=8.9,SNR=13						
ZALV	Zalesovo Beam	41.86	312	eP	P	16 19 26.0	0.0
CM31	Chiang Mai Arr	42.01	255	eP	P	16 19 28.1	+0.5
CMAR	Chiang Mai Arr	42.01	255	P	P	16 19 27.2	-0.4
	comp=Z,1.3nm,0.5s,baz=48,slow=7.5,SNR=14						
CMAR				LR	LR	16 37 54.9	
	comp=Z,64nm,18.4s,baz=117,slow=38						
CMAR	Chiang Mai Arr	42.01	255	eP	P	16 19 29.6	+2.0
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
CM01	Chiang Mai Arr	42.01	255	eP	P	16 19 28.1	+0.4
LUWI	Luwuk	42.28	209	eP	P	16 19 33.2	+3.4
	comp=Z,46nm,1.2s						
SRAK	Srakaew	42.42	247	P	P	16 19 36.2	+5.2
	comp=Z,36nm,0.7s						
LSA	Lhasa	42.55	275	eP	P	16 19 31.8	-0.8
	comp=Z,29nm,1.8s						
LSA	Lhasa	42.55	275	eP	P	16 19 31.8	-0.8
LSA				pmax	pmax		
	comp=Z,29nm,1.8s						
NVS	Novosibirsk	42.77	313	eP	P	16 19 32.8	-0.6
CHGN	Chignik	43.33	45	eP	P	16 19 37.9	+0.1
MK01	Makanchi Array	44.18	302	eP	P	16 19 44.0	-0.9
MK31	Makanchi Array	44.18	302	eP	P	16 19 43.9	-1.0
MK31	Makanchi Array	44.18	302	eP	P	16 19 43.9	-1.0
MK32	Makanchi Array	44.18	302	eP	P	16 19 44.8	-0.2
MKAR	Makanchi Array	44.18	302	P	P	16 19 44.8	-0.2
	comp=Z,2.5nm,0.6s,baz=85,slow=10,SNR=29						
MKAR	Makanchi Array	44.18	302	eP	P	16 19 44.1	-0.9
	comp=Z,60nm,0.8s						
MKAR	Makanchi Array	44.18	302	eP	P	16 19 44.1	-0.9
MKAR				pmax	pmax		
	comp=Z,60nm,0.8s						
MAKZ	Makanchi	44.39	302	eP	P	16 19 46.0	-0.6
	comp=Z,15nm,1.0s						
MAKZ	Makanchi	44.39	302	eP	P	16 19 46.0	-0.6
MAKZ				pmax	pmax		
	comp=Z,15nm,1.0s						
SVW2	Sparrevohn	44.88	38	eP	P	16 19 51.3	+1.0
	comp=Z,19nm,1.6s						
PHET	Kaeng Krachan	44.91	248	P	P	16 19 54.1	+3.0
	comp=Z,9.9nm,0.7s						
BRDH	Bariadhala	45.42	266	LR	LR	16 42 56.0	
	comp=Z,142nm,18.1s,baz=150,slow=41						
KURK	Kurchatov	45.93	308	eP	P	16 19 57.9	-0.8
	comp=Z,28nm,0.8s						
KURK	Kurchatov	45.93	308c	iP	P	16 19 57.7	-1.0
KURK				pmax	pmax		
	comp=Z,14nm,0.7s						
KURBB	Kurchatov Arra	46.00	308	P	P	16 19 58.6	-0.7
	comp=Z,9.6nm,0.7s,baz=82,slow=7.7,SNR=56						
KDAK	Kodiak Island	46.46	42	eP	P	16 20 03.5	+0.7
	comp=Z,192nm,2.0s						
KDAK	Kodiak Island	46.46	42	iP	P	16 20 03.3	+0.5
ODAN	Odare	46.77	273	eP	P	16 20 05.5	-0.5
JIRN	Jiri	47.36	275	eP	P	16 20 10.9	+0.2
	comp=Z,24nm,0.6s						
GUN	Gumba	47.49	275	eP	P	16 20 12.0	+0.3
	comp=Z,16nm,0.4s						
TOLK	Toolik Lake Re	47.84	27	eP	P	16 20 14.4	+0.9
	comp=Z,32nm,2.0s						
PRZ	Przheval'sk	47.88	297	eP	P	16 20 13.8	-0.6
	comp=Z,21nm,1.1s						
PRZ	Przheval'sk	47.88	297	eP	P	16 20 13.8	-0.6
PRZ				pmax	pmax		
	comp=Z,21nm,1.1s						
KKN	Kakani	48.02	276	eP	P	16 20 15.6	-0.1
	comp=Z,31nm,0.8s						
PKIN	Phulchoki	48.03	275	eP	P	16 20 15.8	0.0
	comp=Z,19nm,0.7s						
GKN	Gorkha	48.44	276	eP	P	16 20 18.5	-0.3
	comp=Z,49nm,0.8s						
KDJ	Kajisay	48.85	297	eP	P	16 20 21.1	-0.8
	comp=Z,7.2nm,0.9s						
IL1	Eielson Array	48.85	33	eP	P	16 20 21.4	+0.1
ILAR	Eielson Array	48.85	33	P	P	16 20 21.9	+0.5
	comp=Z,2.3nm,0.7s,baz=266,slow=6.2,SNR=27						
ILB	Eielson Array	48.85	33	eP	P	16 20 21.4	+0.1
DANN	Dangsing	48.97	277	eP	P	16 20 23.0	-0.1
	comp=Z,92nm,0.7s						
KULM	Kulim	49.41	240	eP	P	16 20 26.6	+0.4
	comp=Z,25nm,1.3s						
SOEI	Soe	49.87	203	eP	P	16 20 29.9	+0.2
	comp=Z,27nm,0.9s						
BVAR	Borovoye Array	50.52	312	P	P	16 20 33.6	-0.6
	comp=Z,0.7nm,0.6s,baz=236,slow=38,SNR=6.4						
BVAR				PcP	PcP	16 21 52.2	+0.4
	comp=Z,1.3nm,0.7s,baz=103,slow=3.1,SNR=2.7						
KSH	Kashi	50.56	294	eP	P	16 20 39.4	+4.6
KSH				PcS	PcS	16 25 51.8	+2.0
KSH				S	S	16 27 54.8	+7.0
KSH				ScS	ScS	16 30 28.1	+3.8
KSH				pmax	pmax		
	comp=Z,3.0nm,0.5s						
BRVK	Borovoye	50.57	312	eP	P	16 20 33.8	-0.7
	comp=Z,3.5nm,1.0s						
BRVK	Borovoye	50.57	312d	eP	P	16 20 34.4	-0.2
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AAK	Ala-Archa	50.59	298	eP	P	16 20 34.5	-0.6
	comp=Z,3.8nm,0.6s						
AAK	Ala-Archa	50.59	298	eP	P	16 20 34.5	-0.6
AAK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
MTN	Manton Dam	51.13	194	eP	P	16 20 39.6	+0.6
	comp=Z,48nm,1.5s						
PSI	Prapat	52.39	239	eP	P	16 20 48.3	-0.5
	comp=Z,5.1nm,0.7s						
PSI	Prapat	52.39	239	eP	P	16 20 48.3	-0.5
PSI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KK31	Karatay Array	53.21	300	eP	P	16 20 53.1	-1.3
KK31	Karatay Array	53.21	300	eP	P	16 20 53.1	-1.3
KKAR	Karatay Array	53.21	300	eP	P	16 20 53.6	-0.7
KKAR	Karatay Array	53.21	300	eP	P	16 20 53.7	-0.7
INK	Inuvik	53.75	27	eP	P	16 20 59.3	+1.4
	comp=Z,3.7nm,0.9s						
INK	Inuvik	53.75	27	eP	P	16 20 59.3	+1.4
INK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GSI	Gunungsitoli	54.40	239	eP	P	16 21 02.2	-1.2
	comp=Z,26nm,0.9s						
SVE	Sverdlovsk	55.02	318⇑	eP	P	16 21 07.9	+0.5
SVE				pmax	pmax		
	comp=Z,16nm,0.9s						
ARU	Arti	56.24	318	eP	P	16 21 15.2	-0.8
	comp=Z,13nm,1.0s						
ARU	Arti	56.24	318c	iP	P	16 21 15.6	-0.5
ARU						16 22 10.1	
ARU						16 23 17.2	
ARU				S	S	16 29 04.3	+0.2
ARU				SS	SS	16 32 47.0	-3.3
ARU				pmax	pmax		
	comp=Z,13nm,1.0s						
FITZ	Fitzroy Crossi	57.43	198	P	P	16 21 24.7	-0.2
	comp=Z,1.5nm,0.8s,baz=131,slow=20,SNR=3.5						
FITZ	Fitzroy Crossi	57.43	198	eP	P	16 21 25.3	+0.5
	comp=Z,30nm,1.8s						
CTA	Charters Tower	57.47	175	P	P	16 21 26.1	+1.0
	comp=Z,2.8nm,0.7s,baz=301,slow=5.9,SNR=2.4						
WRAK	Wrangell Islan	57.51	41	eP	P	16 21 27.3	+2.3
	comp=Z,99nm,1.9s						
WRAB	Tennant Creek	57.61	188	eP	P	16 21 25.8	-0.4
	comp=Z,5.2nm,0.8s						
WRAB	Tennant Creek	57.61	188⇓	eP	P	16 21 26.4	+0.3
WRAB				pmax	pmax		
	comp=Z,7.0nm,0.9s						
WB2	Warramunga Arr	57.62	188	eP	P	16 21 24.9	-1.3
	comp=Z,25nm,1.6s						
WR1	Warramunga Arr	57.62	188	eP	P	16 21 26.1	-0.1
	comp=Z,6.3nm,0.6s						
WRA	Warramunga Arr	57.62	188	P	P	16 21 26.1	-0.1
	comp=Z,2.2nm,0.5s,baz=6.4,slow=7.2,SNR=40						
ABKAR	Akbulak array	57.91	310	eP	P	16 21 27.2	-0.8
DLBC	Dease Lake	57.98	38	eP	P	16 21 30.2	+1.8
	comp=Z,8.5nm,1.2s						
AKTO	Aktyubinsk	58.62	312	P	P	16 21 33.0	0.0
	comp=Z,3.8nm,0.7s,baz=71,slow=14,SNR=9.6						
AKTO	Aktyubinsk	58.62	312	P	P	16 21 33.0	0.0
AKTO				pmax	pmax		
	comp=Z,4.0nm,0.7s						
SPA0	Spitsbergen Ar	60.10	349	eP	P	16 21 43.1	+0.3
SPITS	Spitsbergen Ar	60.10	349	P	P	16 21 43.2	+0.3
	comp=Z,2.2nm,0.9s,baz=264,slow=39,SNR=2.5						
SPITS				LR	LR	16 50 43.9	
	comp=Z,42nm,18.9s,baz=350,slow=39						
KBS	Kingsbay	60.22	350	eP	P	16 21 43.0	-0.6
	comp=Z,6.6nm,0.7s						
KBS	Kingsbay	60.22	350	eP	P	16 21 43.0	-0.6
KBS				pmax	pmax		
	comp=Z,7.0nm,0.7s						
AS01	Alice Springs	61.34	188	eP	P	16 21 51.7	-0.2
AS31	Alice Springs	61.35	188	eP	P	16 21 51.8	-0.2
	comp=Z,1.2nm,0.8s						
ASAR	Alice Springs	61.35	188	P	P	16 21 52.5	+0.6
	comp=Z,3.1nm,0.8s,baz=14,slow=6.4,SNR=29						
MBWA	Marble Bar	62.01	204	eP	P	16 21 56.9	+0.5
	comp=Z,11nm,0.7s						
YKA	Yellowknife Ar	63.17	30	P	P	16 22 04.6	+0.9
	comp=Z,2.2nm,0.7s,baz=304,slow=7.0,SNR=4.0						
ARA0	ARCESS Array S	63.66	339	eP	P	16 22 05.2	-1.6
ARCES	ARCESS Array B	63.66	339	P	P	16 22 05.2	-1.6
	comp=Z,5.6nm,0.9s,baz=78,slow=26,SNR=2.7						
ARCES	ARCESS Array B	63.66	339	P	P	16 22 05.2	-1.6
ARCES				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GEYT	Alibeck	63.93	299	P	P	16 22 10.0	+0.8
	comp=Z,1.4nm,0.6s,baz=79,slow=9.0,SNR=2.1						
GYA0B	ALIBECK ARRAY	63.93	299	eP	P	16 22 07.8	-1.4
	comp=Z,3.9nm,0.8s						
LLLB	Lillooet	65.61	44	eP	P	16 22 20.8	+0.8
	comp=Z,3.9nm,0.6s						
VRH	Novokhopyorsk	67.46	318	eP	P	16 22 35.1	+3.4
VRH				pmax	pmax		
	comp=Z,20nm,0.9s						
OBN	Obninsk	67.92	323	eP	P	16 22 33.0	-1.5
	comp=Z,53nm,0.4s						
OBN	Obninsk	67.92	323c	eP	P	16 22 33.3	-1.2
OBN				e		16 25 13.3	
OBN				pmax	pmax		
	comp=Z,27nm,0.5s						
OBN				MLR	MLR		
	comp=Z,42nm,15.0s						
B08A	Colville Reser	68.20	45	eP	P	16 22 37.2	+0.8
	comp=Z,5.0nm,1.1s						
FIA1	FINESS Array S	68.54	332	eP	P	16 22 38.2	-0.1
FIA0	FINESS Array S	68.54	332	eP	P	16 22 38.1	-0.2
FIA0	FINESS Array S	68.54	332	eP	P	16 22 38.1	-0.2
FINES	FINESS Array B	68.54	332	P	P	16 22 38.1	-0.2
	comp=Z,4.6nm,0.8s,baz=64,slow=4.4,SNR=7.5						
VSR	Storozhevoye	68.81	319	eP	P	16 22 39.0	-1.1
VSR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
VORD	Divnogorie	68.88	319	eP	P	16 22 40.2	-0.3
VORD				pmax	pmax		
	comp=Z,6.0nm,0.5s						
STKA	Stephens Creek	69.06	180	P	P	16 22 42.1	+0.3
	comp=Z,1.4nm,0.7s,baz=360,slow=8.5,SNR=4.7						
STKA	Stephens Creek	69.06	180	eP	P	16 22 42.4	+0.6
	comp=Z,4.1nm,1.5s						
FORT	Forrest	69.19	193	eP	P	16 22 43.4	+0.8
	comp=Z,18nm,0.8s						
PINE	Pine Mountain	69.71	50	eP	P	16 22 48.0	+1.9
	comp=Z,12nm,0.8s						
YBH	Yreka Blue Hor	69.72	53	P	P	16 22 46.7	+0.6
	comp=Z,1.8nm,0.8s,baz=342,slow=3.2,SNR=4.4						
K05A	Summer Lake	70.32	51	eP	P	16 22 51.9	+2.0
	comp=Z,11nm,0.9s						
KBZ	Khabaz	70.87	311	P	P	16 22 53.5	+0.6
	comp=Z,3.8nm,0.7s,baz=23,slow=11,SNR=6.9						
KIV	Kislovodsk	70.87	311	iP	P	16 22 47.7	-5.4
KIV				i		16 22 59.7	
KIV				i		16 23 14.4	
KIV				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KIV				MLR	MLR		
	comp=Z,40nm,18.0s						
NEY	Neytrino	71.24	310⇑	eP	P	16 22 57.3	+1.9
NEY				pmax	pmax		
	comp=Z,2.0nm,1.2s						
BMO	Blue Mountains	71.30	48	eP	P	16 22 56.8	+1.2
	comp=Z,3.0nm,0.9s						
BMO	Blue Mountains	71.30	48	eP	P	16 22 56.8	+1.2
BMO				pmax	pmax		
	comp=Z,3.0nm,0.9s						
JTMT	Jette	71.36	44	eP	P	16 22 57.5	+1.5
	comp=Z,3.9nm,0.7s						
J08A	Circle Bar Ran	71.44	49	eP	P	16 22 58.3	+1.7
	comp=Z,13nm,1.3s						
BEKR	Beckworth	72.24	53	eP	P	16 23 02.6	+1.1
	comp=Z,5.8nm,0.8s						
PAHR	Pah Rah Range	72.95	53	eP	P	16 23 07.0	+1.3
	comp=Z,5.2nm,1.0s						
CMB	Columbia Colle	73.25	55	eP	P	16 23 08.1	+0.7
	comp=Z,5.5nm,0.9s						
CMB	Columbia Colle	73.25	55	eP	P	16 23 08.1	+0.7
CMB				pmax	pmax		
	comp=Z,6.0nm,0.9s						
YERR	Yerington	73.45	53	eP	P	16 23 10.3	+1.6
	comp=Z,6.9nm,1.0s						
WAKR	Walker	73.60	54	eP	P	16 23 11.2	+1.5
	comp=Z,6.1nm,1.1s						
DLMT	Dillon	73.70	45	eP	P	16 23 10.7	+0.6
	comp=Z,11nm,1.3s						
HLID	Hailey	73.74	47	eP	P	16 23 11.9	+1.6
	comp=Z,3.4nm,0.9s						
HFS	Hagfors	73.78	336	P	P	16 23 09.9	-0.1
	comp=Z,1.8nm,0.7s,baz=8.1,slow=3.1,SNR=6.9						
HFS				LR	LR	16 58 33.2	
	comp=Z,44nm,18.2s,baz=35,slow=38						
NB2	NORSAR Subarra	73.87	337	P	P	16 23 10.7	+0.1
	comp=Z,2.4nm,0.9s,baz=41,slow=6.5						
NOA	NORSAR Array B	73.87	337	P	P	16 23 10.1	-0.5
	comp=Z,1.6nm,0.8s,baz=38,slow=5.9,SNR=7.2						
NOA				LR	LR	16 59 02.7	
	comp=Z,35nm,20.1s,baz=30,slow=38						
BMN	Battle Mountai	73.89	51	eP	P	16 23 11.9	+0.6
	comp=Z,5.0nm,1.0s						
BOZ	Bozeman (W)	74.10	44	eP	P	16 23 13.5	+1.1
	comp=Z,6.1nm,1.0s						
BOZ	Bozeman (W)	74.10	44	eP	P	16 23 13.5	+1.1
BOZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
AKASG	Malin Array Be	74.13	322	P	P	16 23 11.8	-0.5
	comp=Z,2.8nm,0.5s,baz=45,slow=6.0,SNR=9.7						
AKBB	Malin Array Si	74.13	322	eP	P	16 23 11.8	-0.4
	comp=Z,5.2nm,0.9s						
KVN	Kaiserville	74.14	53	eP	P	16 23 14.3	+1.5
	comp=Z,11nm,1.2s						
KVN	Kaiserville	74.14	53	eP	P	16 23 14.3	+1.5
KVN				pmax	pmax		
	comp=Z,11nm,1.2s						
KIEV	Kiev	74.14	322	eP	P	16 23 11.7	-0.6
	comp=Z,5.8nm,1.0s						
KIEV	Kiev	74.14	322⇓	eP	P	16 23 12.0	-0.3
KIEV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
NV01	Mina Array Sit	74.37	53	eP	P	16 23 15.3	+1.1
NVAR	Mina Array Bea	74.37	53	P	P	16 23 15.2	+1.0
	comp=Z,4.2nm,0.9s,baz=284,slow=6.2,SNR=26						
NV11	Mina Array Sit	74.46	53	eP	P	16 23 15.7	+1.0
	comp=Z,0.3nm,1.0s						
YPP	Pitchstone Pla	75.38	45	eP	P	16 23 21.9	+1.9
	comp=Z,2.2nm,0.7s						
H17A	Grant Village	75.43	45	eP	P	16 23 23.3	+3.1
	comp=Z,9.7nm,0.8s						
IMW	Indian Meadow	75.54	46	eP	P	16 23 22.7	+1.8
	comp=Z,6.6nm,0.8s						
FXWY	Fox Creek	75.65	46	eP	P	16 23 22.0	+0.6
	comp=Z,5.2nm,1.0s						
MOOW	Moose Ponds	75.74	46	eP	P	16 23 23.7	+1.7
	comp=Z,5.0nm,1.0s						
R11A	Troy Canyon, C	76.14	52	eP	P	16 23 25.3	+1.0
	comp=Z,9.3nm,1.3s						
TPNV	Topopah Spring	76.56	54	eP	P	16 23 27.8	+1.1
	comp=Z,11nm,1.0s						
TPNV	Topopah Spring	76.56	54	eP	P	16 23 27.8	+1.1
TPNV				pmax	pmax		
	comp=Z,11nm,1.0s						
HWUT	Hardware Ranch	76.60	48	eP	P	16 23 28.3	+1.5
	comp=Z,6.1nm,1.0s						
BW06	Boulder Array	77.03	46	eP	P	16 23 30.1	+0.7
	comp=Z,3.0nm,0.7s						
PD31	Pinedale Array	77.03	46	eP	P	16 23 30.1	+0.7
PDAR	Pinedale Array	77.03	46	P	P	16 23 30.4	+1.1
	comp=Z,2.4nm,0.6s,baz=262,slow=2.6,SNR=30						
PDAR	Pinedale Array	77.03	46	eP	P	16 23 29.4	0.0
PSUT	Pine Spring	77.11	51	eP	P	16 23 31.0	+1.2
	comp=Z,4.4nm,1.0s						
SHPR	Sheep Range	77.52	54	eP	P	16 23 33.6	+1.5
	comp=Z,5.6nm,1.0s						
CCUT	Cedar City	78.02	52	eP	P	16 23 36.6	+1.7
	comp=Z,5.8nm,1.2s						
BUR08	Bucovina Ar. S	78.14	322	eP	P	16 23 35.9	+0.6
BUR04	Bucovina Ar. S	78.15	322	eP	P	16 23 35.2	-0.1
MSU	Marysvale	78.16	50	eP	P	16 23 37.5	+1.8
MSU	Marysvale	78.16	50	eP	P	16 23 37.5	+1.8
P17A	Butcher Ranch,	78.42	49	eP	P	16 23 38.7	+1.6
	comp=Z,7.8nm,0.7s						
LCMT	Little Creek M	78.43	52	eP	P	16 23 38.9	+1.8
	comp=Z,5.8nm,1.0s						
Q16A	Castle Valley	78.51	50	eP	P	16 23 39.2	+1.5
	comp=Z,10nm,1.5s						
P18A	Preston Nutter	78.62	49	eP	P	16 23 39.0	+0.7
SRU	San Rafael Swe	78.78	49	eP	P	16 23 39.7	+0.6
	comp=Z,6.3nm,0.8s						
SRU	San Rafael Swe	78.78	49	eP	P	16 23 39.7	+0.6
SRU				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BR101	Keskin Array S	78.81	312	eP	P	16 23 38.8	-0.3
BRTR	Keskin Array B	78.81	312	P	P	16 23 38.8	-0.3
	comp=Z,0.7nm,0.4s,baz=69,slow=6.1,SNR=3.6						
MLR	Muntele Rosu	79.25	320	LR	LR	17 01 38.8	
	comp=Z,48nm,18.5s,baz=64,slow=38						
PV23	Carpenter Ridg	80.11	49	eP	P	16 23 47.9	+1.4
	comp=Z,6.2nm,0.8s						
PV14	Lion Creek, Pa	80.16	49	eP	P	16 23 48.1	+1.5
	comp=Z,12nm,1.0s						
PV22	Blue Mesa, Par	80.19	49	eP	P	16 23 48.2	+1.4
	comp=Z,5.2nm,1.0s						
PV20	West Nyswonger	80.21	49	eP	P	16 23 48.4	+1.5
	comp=Z,11nm,0.8s						
PV19	Morning Glory	80.22	49	eP	P	16 23 48.3	+1.4
	comp=Z,9.6nm,0.9s						
PV17	East Wray Mesa	80.25	49	eP	P	16 23 48.2	+1.1
	comp=Z,14nm,1.0s						
PV16	Nyswonger Mesa	80.26	49	eP	P	16 23 48.3	+1.1
	comp=Z,6.3nm,0.9s						
PV11	David Mesa, Pa	80.29	49	eP	P	16 23 48.9	+1.5
	comp=Z,26nm,1.5s						
N23A	Red Feather La	80.30	45	eP	P	16 23 48.8	+1.4
	comp=Z,5.8nm,1.0s						
PV18	Skein Mesa, Pa	80.31	49	eP	P	16 23 48.5	+1.1
	comp=Z,35nm,2.0s						
PV12	Saucer Basin,	80.32	49	eP	P	16 23 49.1	+1.6
	comp=Z,32nm,1.9s						
PV03	Paradox Valley	80.34	49	eP	P	16 23 48.5	+1.0
PV13	Radium Mtn., P	80.42	49	eP	P	16 23 49.6	+1.6
	comp=Z,8.7nm,0.9s						
WUAZ	Wupatki	80.54	52	eP	P	16 23 50.2	+1.5
	comp=Z,7.0nm,0.9s						
CLL	Collm	80.85	330	iP	P	16 23 49.7	-0.1
	comp=Z,5.0nm,0.8s						
CLL	Collm	80.85	330	iP	P	16 23 49.7	-0.1
CLL				pmax	pmax		
	comp=Z,5.0nm,0.8s						
S22A	4UR Ranch, Cre	81.87	48	eP	P	16 23 57.5	+1.6
	comp=Z,2.9nm,0.9s						
MMAI	Mount Meron Ar	81.99	306	P	P	16 23 57.0	+0.7
	comp=Z,0.6nm,0.3s,baz=15,slow=12,SNR=2.9						
KHC	Kasperske Hory	82.31	329	eP	P	16 23 59.0	+1.4
KHC				epP	sP	16 24 07.7	-0.6
KHC	Kasperske Hory	82.31	329	eP	P	16 23 59.0	+1.4
KHC				e		16 24 07.7	
GEC2	GERESS Array S	82.48	328	eP	P	16 23 57.7	-0.9
	comp=Z,7.7nm,1.6s						
GEC2	GERESS Array S	82.48	328	eP	P	16 23 57.7	-0.9
GEC2				pmax	pmax		
	comp=Z,8.0nm,1.6s						
GERES	GERESS Array B	82.48	328	P	P	16 23 57.6	-1.0
	comp=Z,1.0nm,0.8s,baz=117,slow=2.1,SNR=3.9						
GERES	GERESS Array B	82.48	328	eP	P	16 24 01.2	+2.6
GERES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ECSD	EROS Data Cent	83.27	38	eP	P	16 24 02.7	0.0
	comp=Z,3.7nm,0.8s						
T25A	Trinidad	83.71	47	eP	P	16 24 06.2	+0.9
ANMO	Albuquerque	83.96	50	eP	P	16 24 08.2	+1.6
	comp=Z,7.1nm,1.3s						
ANMO	Albuquerque	83.96	50⇑	eP	P	16 24 08.3	+1.7
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.3s						
PPT	Papeete	84.51	117	LR	LR	17 03 08.0	
	comp=Z,36nm,19.0s,baz=32,slow=36						
SCHQ	Schefferville	84.74	16	LR	LR	17 05 18.5	
	comp=Z,42nm,19.3s,baz=274,slow=38						
LPIG	La Paz	88.59	61	LR	LR	17 02 41.4	
	comp=Z,20nm,18.5s,baz=130,slow=34						
TX31	Lajitas Ar. Si	89.50	53	eP	P	16 24 34.0	+0.4
LTX	Lajitas	89.50	53	eP	P	16 24 34.5	+1.0
LTX	Lajitas	89.50	53	eP	P	16 24 34.6	+1.0
TXAR	Lajitas Array	89.50	53	P	P	16 24 34.5	+0.9
	comp=Z,1.6nm,0.7s,baz=298,slow=2.9,SNR=21						
TXAR				LR	LR	17 03 34.4	
	comp=Z,16nm,18.6s,baz=0.0,slow=35						
R40A	Maddies Statio	89.52	40	eP	P	16 24 33.6	+0.2
	comp=Z,21nm,1.8s						
ATD	Arta Tunnel	90.12	285	LR	LR	17 11 10.1	
	comp=Z,26nm,18.9s,baz=346,slow=40						
TOA1	Torodi Ar. Sit	117.24	315	ePKPdf	PKPdf	16 30 20.9	-1.0
TORD	Torodi Ar. Bea	117.25	315	PKP	PKPdf	16 30 20.9	-1.0
	comp=Z,0.4nm,0.7s,baz=174,slow=2.9						
LPAZ	La Paz	146.10	60	PKPbc	PKPbc	16 31 17.6	+0.3
	comp=Z,4.3nm,0.6s,baz=5.9,slow=7.7,SNR=19						
LPAZ	La Paz	146.10	60	ePKPdf	PKPbc	16 31 17.8	+0.5

ISCJB ***19*** *16:19:06.3±0.4, 49°.83N±0°.02×18°.47E±0°.03, h0^{km}, Error ellipse: s-maj=3.3km s-min=2.5km az=2.5*

CSEM ***19*** *16:19:06.8±0.3, 49°.84N×18°.49E, h2^{km}, ML2.9/7, Error ellipse: s-maj=6.4km s-min=3.9km az=10.0*

IPEC ***19*** *16:19:07.0±0.2, 49°.84N×18°.58E, h0^{km}, Error ellipse: s-maj=1.4km s-min=1.1km az=155.0*

ISC 19 16:19:07.1±0.7, **49°.80N**±0°.02×**18°.54E**±0°.02, **h0^{km}, n42, σ0^{s}.67**/83, **4D, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.26	279⇓	iPG	Pg	16 19 13.0	+0.9
OKC				eSG	Sg	16 19 15.6	+0.2
	comp=Z,167nm,0.5s						
OKC	Ostrava-Krasne	0.26	279	Pg	Pg	16 19 13.0	+0.9
OKC				Sg	Sg	16 19 15.6	+0.2
	167nm,0.5s						
CHZP	Chorzow	0.57	30	ePg	Pg	16 19 18.2	+0.1
CHZP				eSg	Sg	16 19 26.6	+1.0
MORC	Moravsky Berou	0.65	268	ePg	Pg	16 19 19.9	+0.4
MORC				eSg	Sg	16 19 27.9	0.0
MORC	Moravsky Berou	0.65	268	ePG	Pg	16 19 19.9	+0.4
MORC				eSG	Sg	16 19 27.9	0.0
MORC	Moravsky Berou	0.65	268	ePg	Pg	16 19 19.9	+0.4
	baz=84						
MORC				eSg	Sg	16 19 27.9	0.0
	59nm,0.3s,baz=84						
OJC	Ojcow	0.92	62	ePg	Pg	16 19 24.1	-0.5
OJC				eSg	Sg	16 19 37.1	+0.6
OJC	Ojcow	0.92	62	ePg	Pg	16 19 24.1	-0.5
OJC				eSg	Sg	16 19 37.1	+0.6
JAVC	Velka Javorina	1.10	212	ePg	Pb	16 19 29.0	0.0
JAVC				eSg	Sg	16 19 42.9	+0.5
JAVC	Velka Javorina	1.10	212	ePG	Pb	16 19 29.1	0.0
JAVC				eSG	Sg	16 19 43.0	+0.5
JAVC	Velka Javorina	1.10	212	ePg	Pb	16 19 29.0	0.0
	baz=31						
JAVC				eSg	Sg	16 19 42.9	+0.5
	45nm,0.6s,baz=31						
KRLC	Kraliky	1.17	284	ePG	Pg	16 19 29.0	-0.5
KRLC				eSG	Sg	16 19 43.0	-1.7
	comp=Z,20nm,0.7s						
KRLC	Kraliky	1.17	284	Pg	Pg	16 19 29.0	-0.5

KRLC				Sg	Sg	16 19 43.0	-1.7
	20nm,0.7s						
NIE	Niedzica	1.21	108	*e*Pg	Pg	16 19 30.3	+0.1
NIE				*e*Sg	Sn	16 19 48.4	0.0
NIE	Niedzica	1.21	108	*e*Pg	Pg	16 19 30.3	+0.1
NIE				*e*Sg	Sn	16 19 48.4	0.0
VYHS	Vyhne	1.32	171	*e*PG	Pg	16 19 32.0	-0.4
VYHS				*e*SG	Sb	16 19 50.5	+0.3
VYHS				*e*LG	Lg	16 19 52.9	
VYHS	Vyhne	1.32	171	*e*Pg	Pg	16 19 32.0	-0.4
VYHS				*e*Sn	Sb	16 19 50.5	+0.3
VRAC	Vranov	1.36	250	*e*Pg	Pg	16 19 33.1	-0.1
VRAC				*e*Sg	Sg	16 19 50.7	0.0
VRAC	Vranov	1.36	250	*e*PG	Pg	16 19 33.1	-0.1
VRAC				*e*SG	Sg	16 19 50.8	0.0
VRAC	Vranov	1.36	250	*e*Pg	Pg	16 19 33.1	-0.1
	baz=67						
VRAC				*e*Sg	Sg	16 19 50.7	0.0
	41nm,0.3s,baz=67						
SMOL	Smolenice	1.48	210	*e*PN	Pn	16 19 34.3	-0.7
SMOL				*e*SN	Sg	16 19 54.7	+0.1
SMOL	Smolenice	1.48	210	*e*Pn	Pn	16 19 34.4	-0.6
SMOL				*e*Sn	Sg	16 19 54.7	+0.1
DPC	Dobruska-Polom	1.53	292	*e*PG	Pn	16 19 35.0	-0.8
DPC				*e*SG	Sg	16 19 55.8	-0.5
	comp=Z,24nm,0.4s						
DPC	Dobruska-Polom	1.53	292	Pg	Pn	16 19 35.0	-0.8
DPC				Sg	Sg	16 19 55.8	-0.5
	24nm,0.4s						
KRUC	Moravsky	1.58	243	*e*Pg	Pn	16 19 36.3	-0.1
KRUC				*e*Sg	Sb	16 19 57.9	+0.1
KRUC	Moravsky	1.58	243	*e*PG	Pn	16 19 36.4	0.0
KRUC				*e*SG	Sb	16 19 57.9	+0.1
KRUC	Moravsky	1.58	243	*e*Pg	Pn	16 19 36.3	-0.1
	baz=61						
KRUC				*e*Sg	Sb	16 19 57.9	+0.1
	24nm,0.2s,baz=61						
MODS	Modra-Piesok	1.65	211	*e*PN	Pn	16 19 37.0	-0.4
MODS				*e*SN	Sn	16 19 59.3	0.0
MODS				*e*LG	Lg	16 20 00.2	
MODS	Modra-Piesok	1.65	211	*e*Pn	Pn	16 19 37.0	-0.4
MODS				*e*Sn	Sn	16 19 59.3	0.0
UPC	Upice	1.77	295⇓	*e*PG	Pn	16 19 39.6	+0.5
UPC				*e*SG	Sb	16 20 03.5	+0.2
	comp=Z,23nm,0.5s						
UPC	Upice	1.77	295	Pg	Pn	16 19 39.6	+0.5
UPC				Sg	Sb	16 20 03.5	+0.2
	23nm,0.5s						
KSP	Ksiaz	1.78	307	*e*Pn	Pn	16 19 38.4	-0.7
KSP				Pb	Pb	16 19 40.1	-0.5
KSP				*e*Pg	Pg	16 19 41.6	+0.3
KSP				*e*Sg	Sn	16 20 02.9	+0.4
CRVS	Cervenica-Dubn	2.11	114	*e*PN	Pb	16 19 46.0	-0.2
CRVS	Cervenica-Dubn	2.11	114	*e*Pn	Pb	16 19 46.0	-0.2
PRU	Pruhonice	2.59	276⇓	*e*PG	Pb	16 19 54.4	-0.1
PRU				*e*SG	Sb	16 20 27.5	+0.7
	comp=Z,9.0nm,0.4s						
PRU	Pruhonice	2.59	276	Pg	Pb	16 19 54.4	-0.1
PRU				Sg	Sb	16 20 27.5	+0.7
	9.0nm,0.4s						
PVCC	Panska Ves	2.66	287⇓	*e*PG	Pb	16 19 55.8	+0.3
PVCC				*e*SG	Sg	16 20 31.2	-1.2
	comp=Z,34nm,0.7s						
PVCC	Panska Ves	2.66	287	Pg	Pb	16 19 55.8	+0.3
PVCC				Sg	Sg	16 20 31.2	-1.2
	34nm,0.7s						
BRG	Berggiesshubel	3.14	292	PG	Pb	16 20 04.0	+0.3
BRG				SG	Sb	16 20 44.4	+1.9
	9.3nm,0.5s						
KHC	Kasperske Hory	3.31	260	*e*PN	Pn	16 20 00.7	+0.6
KHC				*e*PG	Pb	16 20 07.3	+0.7
KHC				*e*SG	Sg	16 20 50.5	-2.8
	comp=Z,10nm,0.4s						
KHC	Kasperske Hory	3.31	260	Pn	Pn	16 20 00.7	+0.6
CLL	Collm	3.84	295	*e*Sg	Sg	16 21 09.0	-1.4
	comp=Z,9.0nm,0.5s						

DDA ***19*** *16:33:09.1, 38.°68N×43.°87E, h7^{km}, Ml2.6*
ISCJB ***19*** *16:33:10.8±0.8, 38.°72N±0.°03×43.°78E±0.°06, h11^{km}±4^{km}, Error ellipse: s-maj=7.9km s-min=4.8km az=25.0*
ISK ***19*** *16:33:10.1, 38.°79N×43.°61E, h2^{km}, ML2.5/4*
CSEM ***19*** *16:33:11.1±0.4, 38.°75N×43.°71E, h10^{km}, ML2.5, Error ellipse: s-maj=9.5km s-min=5.4km az=116.0*
ISC 19 16:33:10.0±1.3**, 38.°72N**±0.°03×**43.°76E**±0.°04**, h10**^{km}±10^{km}**, n27, σ0.ˢ66**/40**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VMUR	Van-Muradiye	0.31	332	*i* P	Pg	16 33 16.7	+0.3
VMUR				*i* S	Sb	16 33 23.0	0.0
VMUR	Van-Muradiye	0.31	332	P	Pg	16 33 16.7	+0.3
VMUR				S	Sb	16 33 23.0	0.0
VANB	Van	0.32	248	PG	Pg	16 33 16.9	+0.5
VANB				SG	Sb	16 33 22.6	-0.5
VANB	Van	0.32	248	*e*Pg	Pg	16 33 16.9	+0.5
VANB				*e*Sg	Sb	16 33 22.6	-0.5
TVAN	Van	0.34	236	*i* P	Pg	16 33 16.9	+0.1
TVAN				*i* S	Sb	16 33 23.5	-0.2
TVAN	Van	0.34	236	P	Pg	16 33 16.9	+0.1
TVAN				S	Sb	16 33 23.5	-0.2
CLDR	Caldiran	0.44	16	PG	Pg	16 33 19.2	+0.4
CLDR				SG	Sb	16 33 26.1	-0.8
CLDR	Caldiran	0.44	16	*i* P	Pg	16 33 19.2	+0.4
CLDR	Caldiran	0.44	16	P	Pg	16 33 19.2	+0.4
CLDR				*e*Sg	Sb	16 33 26.1	-0.8
GEVA	Gevas	0.68	234	*i* P	Pg	16 33 22.6	-0.7
ADCV	BITLIS_Adilcev	0.82	277	*i* P	Pb	16 33 26.5	+0.1
ADCV				*i* S	Sn	16 33 39.5	-0.5
ADCV	BITLIS_Adilcev	0.82	277	P	Pb	16 33 26.5	+0.1
ADCV				S	Sn	16 33 39.5	-0.5
TUTA	Tutak	1.01	313	*i* P	Pg	16 33 29.4	-0.1
TUTA	Tutak	1.01	313	P	Pg	16 33 29.4	-0.1
HAKT	HAKKARI	1.16	182	*i* P	Pb	16 33 30.6	-1.6
HAKT				*i* S	Sn	16 33 49.9	+1.5
TASB	TASBURUN-IGDIR	1.32	16	PN	Pg	16 33 35.8	+0.4
TASB	TASBURUN-IGDIR	1.32	16	*e*Pn	Pg	16 33 35.8	+0.4
GURO	Guroymak-BITLI	1.36	264	PN	Pn	16 33 35.1	-0.1
GURO				SN	Sb	16 33 52.9	-0.4
GURO	Guroymak-BITLI	1.36	264	*e*Pn	Pn	16 33 35.1	-0.1
GURO				*e*Sn	Sb	16 33 52.9	-0.4
EKAR	Karacoban	1.43	293	*i* P	Pg	16 33 38.8	+1.3
EKAR	Karacoban	1.43	293	P	Pg	16 33 38.8	+1.3
CUKT	Cukurca	1.47	185	PN	Pg	16 33 39.5	+1.2
CUKT	Cukurca	1.47	185	*e*Pn	Pg	16 33 39.5	+1.2
EATA	Eleskirt	1.51	320	*i* P	Pn	16 33 37.8	+0.4
EATA	Eleskirt	1.51	320	P	Pn	16 33 37.8	+0.4
SRTM	Siirt_Merkez	1.62	244	*i* P	Pn	16 33 38.8	+0.1
SRTM	Siirt_Merkez	1.62	244	P	Pn	16 33 38.8	+0.1

IDC ***19*** *16:35:13.6±1.1, 3.°90S×153.°22E, h0^{km}, mb3.8/8, mb1 4.1/8, mb1mx3.7/42, mbtmp3.8/8, MS2.9/2, Ms1 2.9/2, ms1mx2.5/48, Error ellipse: s-maj=49.8km s-min=19.2km az=113.0*
ISCJB ***19*** *16:35:17.7±0.4, 3.°93S±0.°06×153.°17E±0.°08, h35^{km}, mb4.5/21, Error ellipse: s-maj=11.4km s-min=8.3km az=25.8*
NEIC ***19*** *16:35:23.4±0.9, 3.°99S×153.°12E, h74^{km}±8^{km}, mb4.7/10, Error ellipse: s-maj=8.3km s-min=8.0km az=95.0*
ISC 19 16:35:19.5±0.6**, 3.°81S**±0.°09×**153.°21E**±0.°07**, h35**^{km}**, n40, σ1.ˢ83**/32**, mb4.3**/21**, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	1.11	250	*e*Pn	Pn	16 35 40.1	+1.5
RABL				*e*Sn	Sn	16 35 57.7	+4.9
MANU	Manus Island	6.09	287	*e*Pn	Pn	16 36 52.1	+4.9
HNR	Honiara	8.71	130	LR	LR	16 40 48.8	
	comp=Z,143nm,19.6s,baz=297,slow=39						
HNR	Honiara	8.71	130	*e*Pn	Pn	16 37 26.3	+3.1
HNR				*e*		16 40 48.8	
COEN	Coen	14.13	224	*e*Pn	Pn	16 38 38.4	+1.0
GUMO	Guam	19.16	335	LR	LR	16 45 54.2	
	comp=Z,22nm,20.8s,baz=147,slow=33						
EIDS	Eidsvold	21.54	185	*e*P	P	16 40 04.4	-1.4
	42nm,1.6s						
MTN	Manton Dam	23.60	246	*e*P	P	16 40 25.7	-1.7
	56nm,1.7s						
WRAB	Tennant Creek	24.39	227	*e*P	P	16 40 33.3	-1.5
	9.4nm,0.9s						
WB2	Warramunga Arr	24.40	227	*e*P	P	16 40 33.3	-1.6
WR1	Warramunga Arr	24.41	227	*e*P	P	16 40 33.5	-1.4
	9.8nm,1.0s						
WRA	Warramunga Arr	24.41	227	P	P	16 40 33.5	-1.4
	3.3nm,0.6s,baz=52,slow=9.6,SNR=34						
H11S3	WAKE ISLAND Hy	25.84	30	T	T	17 07 36.0	
	baz=210,slow=76,SNR=127						
H11S2	WAKE ISLAND Hy	25.84	31	T	T	17 07 36.8	
	baz=210,slow=76,SNR=63						
H11S1	WAKE ISLAND Hy	25.85	31	T	T	17 07 35.4	
	baz=210,slow=76,SNR=70						
H11N1	WAKE ISLAND Hy	26.97	29	T	T	17 09 15.4	
	baz=212,slow=76						
H11N3	WAKE ISLAND Hy	26.98	29	T	T	17 09 18.0	
	baz=212,slow=76						
H11N2	WAKE ISLAND Hy	26.99	29	T	T	17 09 16.7	
	baz=212,slow=76						
AS01	Alice Springs	27.12	222	*e*P	P	16 40 58.3	-1.2
AS31	Alice Springs	27.15	222	*e*P	P	16 40 59.5	-0.3
	1.2nm,1.1s						
ASAR	Alice Springs	27.16	222	P	P	16 40 58.2	-1.6
	0.4nm,0.6s,baz=57,slow=8.9,SNR=6.2						
STKA	Stephens Creek	29.98	200	P	P	16 41 24.6	-0.2
	1.4nm,0.7s,baz=26,slow=14,SNR=4.2						
STKA	Stephens Creek	29.98	200	*e*P	P	16 41 24.2	-0.5
	5.8nm,1.8s						
MYLDM	Lahad Datu	35.80	284	*e*P	P	16 42 13.6	-2.3
	36nm,1.5s						
FORT	Forrest	35.81	219	*e*P	P	16 42 14.0	-1.8
	35nm,1.2s						
AFI	Afiamalu	35.97	108	*e*P	P	16 42 16.7	-0.7
	303nm,2.0s						
MBWA	Marble Bar	36.82	239	*e*P	P	16 42 22.7	-1.8
	63nm,1.9s						
RAO	Raoul Island	37.28	136	*e*P	P	16 42 27.3	-1.0
	799nm,1.3s						
MAJO	Matsushiro	42.52	342	*e*P	P	16 43 14.3	+2.6
	26nm,1.7s						
MJB9	Matsu-Tunnel	42.52	342	*e*P	P	16 43 14.2	+2.5
	34nm,1.8s						
KSRS	Korea Array	47.31	332	P	P	16 43 50.4	+0.7
	0.8nm,0.7s,baz=145,slow=6.7,SNR=2.9						
KSAR	Wonju Array Be	47.32	332	P	P	16 43 50.4	+0.6
RAR	Rarotonga	48.81	115	*e*P	P	16 44 03.3	+1.6
	101nm,1.5s						
PETK	Petropavlovsk-	56.83	3	P	P	16 45 01.5	+1.1
	0.8nm,0.8s,baz=172,slow=7.1						
PEA1	Petropavlovsk-	56.84	3	*e*P	P	16 45 01.5	+1.0
ILAR	Eielson Array	81.09	22	P	P	16 47 30.0	-0.9
	0.7nm,0.8s,baz=250,slow=5.9,SNR=6.2						
BVAR	Borovoye Array	88.70	323	P	P	16 48 09.2	-0.1
	0.4nm,0.6s,baz=103,slow=6.2,SNR=3.3						
NVAR	Mina Array Bea	91.15	52	P	P	16 48 21.7	+0.3
	0.5nm,0.8s,baz=244,slow=5.9,SNR=3.7						
TORD	Torodi Ar. Bea	150.37	290	PKPbc	PKPbc	16 55 06.3	-2.1
	baz=99,slow=2.7						
TOA1	Torodi Ar. Sit	150.37	290	*e*PKPbc	PKPbc	16 55 06.3	-2.1

IDC 19 16:43:27.8±1.7**, 3.°80N×126.°30E, h0**^{km}**, mb3.4**/5**, mb1 3.6**/5**, mb1mx3.4**/57**, mbtmp3.4**/5**, Error ellipse: s-maj=117.8km s-min=20.9km az=70.0, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FITZ	Fitzroy Crossi	21.77	182	P	P	16 48 23.1	+1.9
	1.3nm,0.7s,baz=350,slow=11						
WRA	Warramunga Arr	24.88	162	P	P	16 48 52.5	0.0
	0.4nm,0.3s,baz=338,slow=10,SNR=9.9						
ASAR	Alice Springs	28.29	165	P	P	16 49 21.4	-1.8
	0.2nm,0.7s,baz=345,slow=10,SNR=4.1						
MKAR	Makanchi Array	57.25	325	P	P	16 53 17.6	+0.4
	0.2nm,0.4s,baz=123,slow=8.8,SNR=4.5						
KURBB	Kurchatov Arra	61.45	328	P	P	16 53 45.7	-0.4
	0.3nm,0.3s,baz=129,slow=6.0,SNR=4.5						

CSEM ***19*** *16:57:12.8±0.3, 38.°72N×43.°53E, h12^{km}, ML2.5, Error ellipse: s-maj=7.9km s-min=5.0km az=119.0*
ISK ***19*** *16:57:12.3, 38.°72N×43.°46E, h17^{km}, ML2.5/4*
ISCJB ***19*** *16:57:13.4±0.6, 38.°73N±0.°03×43.°53E±0.°06, h14^{km}±5^{km}, Error ellipse: s-maj=7.8km s-min=4.1km az=16.4*
DDA ***19*** *16:57:13.5, 38.°74N×43.°50E, h7^{km}, Ml2.6*
ISC 19 16:57:13.1±1.0**, 38.°72N**±0.°02×**43.°53E**±0.°03**, h16**^{km}±8^{km}**, n30, σ0.ˢ77**/47**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VANB	Van	0.16	221	PG	Pb	16 57 17.7	-0.2
VANB	Van	0.16	221	*e*Pg	Pb	16 57 17.7	-0.2
TVAN	Van	0.21	206	*i* P	Pg	16 57 17.8	-0.4
TVAN				*i* S	Sg	16 57 22.6	+1.0
TVAN	Van	0.21	206	P	Pg	16 57 17.8	-0.4
TVAN				S	Sg	16 57 22.6	+1.0
VMUR	Van-Muradiye	0.27	8	*i* P	Pg	16 57 18.3	-0.9
VMUR				*i* S	Sb	16 57 24.0	-0.3
VMUR	Van-Muradiye	0.27	8	P	Pg	16 57 18.3	-0.9
VMUR				S	Sb	16 57 24.0	-0.3
CLDR	Caldiran	0.52	36	PG	Pg	16 57 23.7	+0.1
CLDR				SG	Sb	16 57 32.1	+0.6
CLDR	Caldiran	0.52	36	*i* P	Pg	16 57 23.3	-0.3
CLDR				*i* S	Sb	16 57 32.4	+0.8
CLDR	Caldiran	0.52	36	P	Pg	16 57 23.3	-0.3
CLDR	Caldiran	0.52	36	*e*Pg	Pg	16 57 23.7	+0.1
CLDR				*e*Sg	Sb	16 57 32.1	+0.6
GEVA	Gevas	0.55	222	*i* P	Pg	16 57 23.2	-0.8
GEVA				*i* S	Sb	16 57 33.5	+1.4
GEVA	Gevas	0.55	222	P	Pg	16 57 23.2	-0.8
GEVA				S	Sb	16 57 33.5	+1.4
ADCV	BITLIS_Adilcev	0.63	278	*i* P	Pg	16 57 24.9	-0.7
ADCV				*i* S	Sb	16 57 35.3	+0.7
ADCV	BITLIS_Adilcev	0.63	278	P	Pg	16 57 24.9	-0.7
ADCV				S	Sb	16 57 35.3	+0.7
TUTA	Tutak	0.88	321	*i* P	Pg	16 57 29.0	-1.2
TUTA				*i* S	Sb	16 57 41.7	-0.1
TUTA	Tutak	0.88	321	P	Pg	16 57 29.0	-1.2
TUTA				S	Sb	16 57 41.7	-0.1
AGRB	Hanur-Agry	0.95	334	PG	Pg	16 57 30.9	-0.7
AGRB				SG	Sb	16 57 44.2	+0.4
AGRB	Hanur-Agry	0.95	334	*e*Pg	Pg	16 57 30.9	-0.7
AGRB				*e*Sg	Sb	16 57 44.2	+0.4
HAKT	HAKKARI	1.17	173	*i* P	Pb	16 57 34.1	-1.0
HAKT	HAKKARI	1.17	173	P	Pb	16 57 34.1	-1.0
GURO	Guroymak-BITLI	1.18	262	PN	Pb	16 57 33.9	-1.4
GURO				SN	Sb	16 57 49.8	-0.6
GURO	Guroymak-BITLI	1.18	262	*e*Pn	Pb	16 57 33.9	-1.4
GURO				*e*Sn	Sb	16 57 49.8	-0.6
EKAR	Karacoban	1.26	296	*i* P	Pg	16 57 38.3	+0.8
EKAR	Karacoban	1.26	296	P	Pg	16 57 38.3	+0.8
EATA	Eleskirt	1.40	325	*i* P	Pb	16 57 39.0	0.0
EATA	Eleskirt	1.40	325	P	Pb	16 57 39.0	0.0
SRTM	Siirt_Merkez	1.45	241	*i* P	Pg	16 57 41.0	-0.1
SRTM	Siirt_Merkez	1.45	241	P	Pg	16 57 41.0	-0.1
ERZM	Erzurum	2.05	306	*i* P	Pb	16 57 50.8	+0.6
ERZM	Erzurum	2.05	306	P	Pb	16 57 50.8	+0.6

IDC ***19*** *17:02:10.7±0.6, 59.°51N×154.°29W, h0^{km}, mb4.1/21, mb1 4.3/24, mb1mx4.1/73, mbtmp4.1/24, ML4.1/3, MS3.1/8, Ms1 3.1/8, ms1mx2.7/67, Error ellipse: s-maj=18.2km s-min=10.1km az=31.0*
ISCJB ***19*** *17:02:11.4±0.4, 59.°37N±0.°02×154.°29W±0.°04, h22^{km}±3^{km}, mb4.2/28, MS3.2/6, Error ellipse: s-maj=3.7km s-min=2.8km az=27.8*
NEIC ***19*** *17:02:11.3±0.0, 59.°37N×154.°35W, h9^{km}, mb4.5/7, ML3.9(AEIC), After AEIC.*
ISC 19 17:02:11.1±1.4**, 59.°35N**±0.°03×**154.°32W**±0.°04**, h7**^{km}±9^{km}**, n396, σ0.ˢ85**/403**, mb4.2**/28**, MS3.2**/6**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MCNL	McNeil River	0.17	183	P	Pg	17 02 14.3	-0.1
AUNW	Augustine NWes	0.43	86	P	Pg	17 02 19.9	+0.5
AUW	Augustine West	0.43	87	P	Pg	17 02 19.9	+0.5
AUI	Augustine Isla	0.46	92	P	Pg	17 02 20.4	+0.5
CDD	Cape Douglas	0.55	140	P	Pg	17 02 21.7	+0.1
KAPH	Katmai Pasha	0.76	181	P	Pg	17 02 25.7	+0.1
KAWH	Katmai	1.00	195	P	Pb	17 02 29.8	-1.0
ILIM	Iliamna	1.00	43	P	Pb	17 02 29.2	-1.7
KELA	Mount Kelaz	1.18	220	P	Pn	17 02 32.7	-1.3
ACHA	Angle Creek He	1.26	205	P	Pn	17 02 34.6	-0.6
ACHA				S	Sb	17 02 51.0	-0.6
ANCK	Angle Creek	1.31	208	P	Pn	17 02 35.5	-0.3
RDWB	Redoubt West	1.36	33	P	Pn	17 02 34.7	-1.9
HOM	Homer	1.40	76	P	Pn	17 02 36.1	-0.8
HOM				S	Sn	17 02 55.0	-0.6
CAHL	Cahill	1.40	202	P	Pn	17 02 37.6	+0.5
RDJH	Redoubt Jeurge	1.46	31	P	Pn	17 02 37.1	-0.9
RDJH				S	Sn	17 02 57.1	-0.3
DFR	Drift River	1.49	33	P	Pn	17 02 37.1	-1.2
DFR				S	Sn	17 02 58.2	+0.1
CNPM	China Poot	1.58	82	P	Pn	17 02 38.5	-1.1
CNPM				S	Sn	17 02 59.7	-0.6
BRLK	Bradley Lake	1.80	75	P	Pn	17 02 41.5	-0.9
BRLK				S	Sn	17 03 05.0	-0.6
KDAK	Kodiak Island	1.82	149	Pn	Pn	17 02 42.6	-0.1
	193nm,0.3s,baz=15,slow=7.0,SNR=579						
KDAK				Sn	Sn	17 03 05.8	-0.2
	172nm,0.3s,baz=347,slow=9.2,SNR=10						
KDAK				LR	LR	17 03 42.5	
	comp=Z,748nm,22.0s,baz=310,slow=47						
KDAK	Kodiak Island	1.82	149	Pn	Pn	17 02 42.6	-0.1
KDAK				Sn	Sn	17 03 05.8	-0.2
KDAK				S	Sb	17 03 07.4	-0.1
SVW2	Sparrevohn	1.86	341	P	Pn	17 02 43.1	-0.3
BGL	Barrier Glacie	2.15	26	P	Pn	17 02 48.1	+0.7
SPCP	Crater Peak Br	2.20	28	P	Pn	17 02 48.9	+0.7
OHAK	Old Harbor	2.20	165	P	Pn	17 02 48.6	+0.6
SPCG	Spurr Capps Gl	2.26	29	P	Pn	17 02 49.3	+0.4
FIB	Fire Island	2.75	47	P	Pn	17 02 56.2	+0.7
SUA	Susitna One	2.76	38	P	Pn	17 02 56.5	+0.6
SII	Sitkinak Islan	2.80	178	P	Pn	17 02 57.9	+1.6
RC01	Rabbit Creek A	2.88	51	P	Pn	17 02 58.0	+0.8
SKT	Skwentna	2.97	26	P	Pn	17 02 59.5	+0.9
ANNW	Aniakchak Nort	3.16	222	P	Pn	17 03 01.9	+0.7
PMR	Palmer	3.41	47	P	Pn	17 03 05.9	+1.3
KNK	Knik Glacier	3.57	52	P	Pn	17 03 07.7	+0.9
GHO	Glory Hole Cre	3.60	45	P	Pn	17 03 08.5	+1.1
TT01	Tatalina	3.66	348	P	Pn	17 03 08.0	-0.1
PPLA	Purkeypile	3.70	15	P	Pn	17 03 10.0	+1.2
SML	Sawmill	3.84	48	P	Pn	17 03 11.7	+1.0
GLI	Glacier Island	3.93	64	P	Pn	17 03 11.0	-0.8
VNHG	Veniaminof 1	4.07	222	P	Pn	17 03 14.5	+0.7
HIN	Hinchinbrook I	4.08	72	P	Pn	17 03 13.6	-0.2
VNFG	Veniaminof 2	4.16	225	P	Pn	17 03 15.6	+0.6
FID	Port Fidalgo	4.17	67	P	Pn	17 03 13.9	-1.2
JPK	Jack Peak	4.21	63	P	Pn	17 03 15.9	+0.2
CAST	Castle Rocks	4.22	14	P	Pn	17 03 16.7	+0.9
SCM	Sheep Creek Mo	4.25	51	P	Pn	17 03 17.2	+1.0
VNWF	Veniaminof 8	4.26	223	P	Pn	17 03 18.1	+1.7
KTH	Kantishna Hill	4.52	20	P	Pn	17 03 20.9	+1.0
TRF	Thorofare Moun	4.55	23	P	Pn	17 03 22.0	+1.6
DIV	Divide	4.62	64	P	Pn	17 03 21.0	-0.3
KLU	Klutina	4.68	59	P	Pn	17 03 22.2	0.0
RAGM	Ragged Mountai	4.97	74	P	Pn	17 03 25.6	-0.4
BPAW	Bear Paw Mtn.	5.02	17	P	Pn	17 03 27.2	+0.4
DHY	Denali Highway	5.02	39	P	Pn	17 03 28.4	+1.5
KAIM	Kayak Island	5.06	79	P	Pn	17 03 27.4	+0.2
MCK	McKinley	5.09	28	P	Pn	17 03 29.9	+2.1
BMRM	Bremner River	5.12	67	P	Pn	17 03 28.3	+0.2
HMT	Hamilton	5.17	75	P	Pn	17 03 29.8	+1.0
NICHA	Nichawak Mount	5.30	76	P	Pn	17 03 31.2	+0.5
HARP	HAARP	5.42	52	P	Pn	17 03 33.0	+0.8
BERG	Berg Lake	5.45	74	P	Pn	17 03 32.8	+0.2
GCSA	Galena City Sc	5.55	349	P	Pn	17 03 34.5	+0.6
PAX	Paxson	5.61	46	P	Pn	17 03 36.2	+1.3
GLB	Gilahina Butte	5.62	64	P	Pn	17 03 34.6	-0.3
KHIT	Khitrov Hills	5.68	74	P	Pn	17 03 36.5	+0.6
VRDI	Verde Repeater	5.72	66	P	Pn	17 03 36.0	-0.5
NEA	Nenana	5.80	23	P	Pn	17 03 38.2	+0.8
WRH	Wood River Hil	5.92	27	P	Pn	17 03 39.5	+0.5
KULT	Kultieth River	5.92	76	P	Pn	17 03 39.0	-0.2
TGL	Tana Glacier	5.92	71	P	Pn	17 03 39.8	+0.5
BARK	Barkley Ridge	6.05	75	P	Pn	17 03 41.3	+0.3
CCB	Clear Creek Bu	6.13	27	P	Pn	17 03 43.6	+1.7
ISLE	Juniper Island	6.14	73	P	Pn	17 03 42.3	+0.1
HDA	Harding Lake	6.15	31	P	Pn	17 03 43.7	+1.5
PTPK	Patty Peak	6.18	68	P	Pn	17 03 42.9	+0.1
KIAG	Kiagna River	6.18	70	P	Pn	17 03 42.9	+0.1
BALM	Baldy	6.21	69	P	Pn	17 03 42.8	-0.3
BAGL	Bagley Icefiel	6.25	74	P	Pn	17 03 45.1	+1.4
MDM	Murphy Dome	6.31	24	P	Pn	17 03 45.6	+1.2
RIDG	Independ’e Rid	6.31	42	P	Pn	17 03 46.1	+1.6
YAH	Yahtse	6.42	76	P	Pn	17 03 47.0	+0.9
ILAR	Eielson Array	6.46	30	Pn	Pn	17 03 48.4	+1.9
	5.9nm,0.3s,baz=211,slow=13,SNR=112						
ILAR				Lg	Lg	17 05 27.6	
	1.1nm,0.3s,baz=208,slow=30,SNR=5.0						
ILAR				LR	LR	17 06 30.7	
	comp=Z,155nm,18.1s,baz=214,slow=41						
ILB	Eielson Array	6.46	30	P	Pn	17 03 47.9	+1.4
BARN	Barnard Glacie	6.54	69	P	Pn	17 03 48.4	+0.7
CTGM	Chitina Glacie	6.68	70	P	Pn	17 03 50.7	+1.1
CHX	Chaix Hills	6.72	78	P	Pn	17 03 51.4	+1.3
SAMH	Samovar Hills	6.89	78	P	Pn	17 03 52.9	+0.5
YUK2	White River	7.07	64	P	Pn	17 03 55.2	+0.2
BCA3	Beaver Creek A	7.10	53	P	Pn	17 03 55.7	+0.4
YUK3	Moose Creek	7.25	64	P	Pn	17 03 57.5	+0.1
YUK1	Sand Pete Hill	7.31	62	P	Pn	17 03 59.0	+0.6
ANM	Nome	7.38	320	P	Pn	17 03 59.9	+0.9
PRP	Porcupine Dome	7.41	30	P	Pn	17 04 00.2	+0.6
PNL	Peninsula	7.60	81	P	Pn	17 04 02.5	+0.4
COLD	Coldfoot	8.12	11	P	Pn	17 04 09.2	0.0
YUK6	Outpost Mounta	8.12	72	P	Pn	17 04 10.6	+1.2
EGAK	Eagle	8.22	43	*e*Pn	Pn	17 04 11.0	+0.3
	17nm,0.6s						
DAWY	Dawson	8.51	50	*e*Pn	Pn	17 04 15.2	+0.5
	11nm,0.6s						
BM3	Burnt Mountain	9.18	24	P	Pn	17 04 24.3	+0.5
RDOG	Red Dog Mine	9.52	340	P	Pn	17 04 29.2	+0.8
TOLK	Toolik Lake Re	9.55	11	P	Pn	17 04 31.3	+2.4
	baz=195						
TOLK	Toolik Lake Re	9.55	11	P	Pn	17 04 29.3	+0.4
DLBC	Dease Lake	12.57	84	Pn	Pn	17 05 10.8	+0.5
	0.4nm,0.3s,baz=273,slow=10.0,SNR=4.3						
DLBC				Lg	Lg	17 08 42.3	
	0.2nm,0.3s,baz=336,slow=20,SNR=3.8						
INK	Inuvik	12.76	37	Pn	Pn	17 05 12.5	-0.1
	0.4nm,0.3s,baz=241,slow=19,SNR=12						
YKA	Yellowknife Ar	19.33	64	P	P	17 06 36.9	+0.3
	2.2nm,0.3s,baz=277,slow=9.8,SNR=25						
YKA				LR	LR	17 14 18.5	
	comp=Z,11nm,18.4s,baz=296,slow=38						
A04D	Lummi Island	21.18	106	P	P	17 06 56.5	-0.2
	baz=312						
B05A	Bryant	21.79	106	P	P	17 07 04.2	+0.9
	baz=313						
I03D	Drain, OR	24.52	116	P	P	17 07 30.5	-0.3
	baz=321						
I04A	Tendick Farm,	24.88	115	P	P	17 07 34.4	+0.2
	baz=320						
I05D	Terrebonne, OR	24.97	112	P	P	17 07 34.4	-0.6
	baz=319						
SEY	Seymchan	25.35	301	P	P	17 07 38.8	+0.7
	3.7nm,0.9s,baz=95,slow=6.6,SNR=6.3						
YBH	Yreka Blue Hor	26.35	118	P	P	17 07 49.3	+1.7
	1.1nm,0.6s,baz=336,slow=1.6,SNR=4.4						
YBH				LR	LR	17 15 16.7	
	comp=Z,35nm,21.1s,baz=307,slow=30						
BMO	Blue Mountains	26.54	107	*e*Pn	P	17 07 50.9	+1.6
	3.7nm,0.8s						
MFID	Camas Ranch	28.32	107	*e*Pn	P	17 08 06.7	+1.5
	5.3nm,0.9s						
BOZ	Bozeman (W)	28.84	99	P	P	17 08 10.2	+0.2
	baz=314						
HLID	Hailey	28.90	105	P	P	17 08 11.4	+0.9
	baz=317						
HLID	Hailey	28.90	105	*e*Pn	P	17 08 12.0	+1.5
	2.0nm,0.8s						
RLMT	Red Lodge	30.37	98	P	P	17 08 22.9	-0.7
	baz=314						
LAO	LASA Array	30.86	93	P	P	17 08 27.1	-0.6
	baz=312						
NVAR	Mina Array Bea	31.01	116	P	P	17 08 30.3	+1.0
	1.8nm,0.9s,baz=311,slow=9.3,SNR=11						
NVAR				PcP	PcP	17 11 25.9	+0.9
	0.5nm,0.7s,baz=286,slow=1.6,SNR=3.5						
HWUT	Hardware Ranch	31.76	105	*e*P	P	17 08 38.1	+2.3
	12nm,1.0s						
BW06	Boulder Array	31.91	101	P	P	17 08 36.3	-0.8
	baz=317						
PDAR	Pinedale Array	31.91	101	P	P	17 08 39.0	+1.8
	2.9nm,0.8s,baz=306,slow=4.3,SNR=20						
DUG	Dugway, Tooele	32.22	108	P	P	17 08 40.3	+0.5
	baz=321						

R11A	**Troy Canyon, C** baz=323	**32.34**	**113**	P	**P**	**17 08 42.4**	**+1.4**
TPNV	**Topopah Spring** baz=325	**33.16**	**115**	P	**P**	**17 08 49.6**	**+1.5**
ISA	**Isabella, Lake** baz=327	**33.21**	**119**	P	**P**	**17 08 49.8**	**+1.3**
PKM	**Mcpherson Peak** baz=328	**33.27**	**122**	P	**P**	**17 08 50.4**	**+1.3**
MDND	**Maddock** baz=311	**33.48**	**85**	P	**P**	**17 08 51.5**	**+0.9**
LRMC	**Laurel Mtn Rad** baz=327	**33.72**	**119**	P	**P**	**17 08 52.8**	**-0.1**
RSSD	**Black Hills** baz=315	**33.74**	**94**	P	**P**	**17 08 51.4**	**-1.7**
ULM	**Lac du Bonnet** 2.4nm,0.5s,baz=322,slow=12,SNR=3.8	**33.84**	**79**	P	**P**	**17 08 54.2**	**+0.5**
BLG	**Laguna Peak, P** baz=328	**34.26**	**122**	P	**P**	**17 08 56.2**	**-1.3**
O20A	**White River Ci** baz=320	**34.53**	**103**	P	**P**	**17 09 00.9**	**+0.9**
A33A	**Warroad** baz=310	**34.91**	**81**	P	**P**	**17 09 03.5**	**+0.5**
AGMN	**Agassiz Nation** baz=311	**35.09**	**82**	P	**P**	**17 09 05.0**	**+0.5**
N23A	**Red Feather La** baz=318	**35.11**	**100**	P	**P**	**17 09 05.2**	**+0.1**
B34A	**Aery, Baudette** baz=311	**35.58**	**81**	P	**P**	**17 09 08.8**	**+0.1**
IRM	**Iron Mountain** baz=327	**35.97**	**117**	P	**P**	**17 09 13.0**	**+0.7**
B35A	**Bob, Littlefor** baz=311	**36.13**	**80**	P	**P**	**17 09 12.2**	**-1.3**
C35A	**Jirik Farms, M** baz=312	**36.44**	**81**	P	**P**	**17 09 15.7**	**-0.4**
WUAZ	**Wupatki** baz=324	**36.62**	**111**	P	**P**	**17 09 18.5**	**+0.6**
E34A	**Wadena** baz=313	**36.63**	**84**	P	**P**	**17 09 18.0**	**+0.3**
MVCO	**Mesa Verde** baz=322	**36.66**	**106**	P	**P**	**17 09 19.6**	**+1.2**
D35A	**Remer** baz=312	**36.81**	**82**	P	**P**	**17 09 19.9**	**+0.6**
H32A	**Carlson Farm,** baz=314	**36.85**	**88**	P	**P**	**17 09 20.1**	**+0.5**
Q24A	**Divide** baz=320	**36.97**	**101**	P	**P**	**17 09 21.1**	**+0.1**
C36A	**Pine Crest Far** baz=312	**36.98**	**80**	P	**P**	**17 09 20.7**	**+0.1**
GLA	**Glamis** baz=327	**37.04**	**118**	P	**P**	**17 09 22.0**	**+0.6**
OGNE	**Ogallala** baz=318	**37.06**	**96**	P	**P**	**17 09 22.1**	**+0.5**
S22A	**4UR Ranch, Cre** baz=321	**37.07**	**104**	P	**P**	**17 09 22.2**	**+0.3**
F34A	**Alexandria** baz=313	**37.07**	**85**	P	**P**	**17 09 21.8**	**+0.3**
D36A	**Goodland** baz=312	**37.20**	**81**	P	**P**	**17 09 22.5**	**-0.1**
C37A	**Embarrass** baz=312	**37.32**	**80**	P	**P**	**17 09 22.9**	**-0.7**
F35A	**Swanville** baz=313	**37.38**	**84**	P	**P**	**17 09 24.1**	**0.0**
EYMN	**Ely** baz=312	**37.53**	**79**	P	**P**	**17 09 25.3**	**-0.1**
D37A	**Cotton** baz=312	**37.58**	**81**	P	**P**	**17 09 25.9**	**0.0**
E36A	**McGregor** baz=313	**37.60**	**82**	P	**P**	**17 09 26.8**	**+0.9**
SDCO	**Great Sand Dun** baz=321	**37.73**	**103**	P	**P**	**17 09 29.2**	**+1.7**
SDCO	**Great Sand Dun** 8.2nm,1.2s	**37.73**	**103**	*e*P	**P**	**17 09 29.6**	**+2.1**
ECSD	**EROS Data Cent** baz=315	**37.81**	**88**	P	**P**	**17 09 27.2**	**-0.6**
F36A	**Milaca** baz=313	**37.91**	**83**	P	**P**	**17 09 29.3**	**+0.7**
G36A	**St. Michael** baz=314	**38.22**	**84**	P	**P**	**17 09 31.8**	**+0.6**
E38A	**The Farm, Brul** baz=313	**38.40**	**81**	P	**P**	**17 09 32.2**	**-0.5**
F37A	**Hinrichs Farm,** baz=314	**38.46**	**83**	P	**P**	**17 09 33.3**	**+0.1**
H36A	**Jessenland, He** baz=315	**38.59**	**85**	P	**P**	**17 09 33.2**	**-1.2**
F38A	**Pierce - Schro** baz=314,SNR=5.1	**38.68**	**82**	P	**P**	**17 09 34.2**	**-0.9**
BGNE	**Belgrade** baz=317	**38.70**	**92**	P	**P**	**17 09 36.2**	**+0.8**
C40A	**Isle Royale Na** baz=312	**38.72**	**77**	P	**P**	**17 09 35.6**	**+0.2**
T25A	**Trinidad** baz=321	**38.74**	**102**	P	**P**	**17 09 36.8**	**+0.8**
I36A	**Fitzsimmons Fa** baz=315	**38.94**	**86**	P	**P**	**17 09 36.1**	**-1.2**
H37A	**Dierke Farm, C** baz=315	**39.10**	**84**	P	**P**	**17 09 37.6**	**-1.0**
F39A	**Loretta** baz=314	**39.19**	**81**	P	**P**	**17 09 39.7**	**+0.3**
G38A	**Ridgeland** baz=314	**39.23**	**83**	P	**P**	**17 09 39.5**	**-0.3**
I37A	**Lemond, Waseca** baz=315	**39.26**	**85**	P	**P**	**17 09 40.5**	**+0.6**
J36A	**Seneca 1, Swea** baz=316	**39.26**	**87**	P	**P**	**17 09 40.0**	**0.0**
H38A	**Maiden Rock** baz=315	**39.36**	**84**	P	**P**	**17 09 41.2**	**+0.4**
TASM	**ASL Pad, Albuq** baz=323	**39.46**	**107**	P	**P**	**17 09 42.7**	**+0.8**
ANMO	**Albuquerque** 1.6nm,0.6s,baz=330,slow=7.9,SNR=5.0	**39.46**	**107**	P	**P**	**17 09 43.5**	**+1.6**
ANMO	**Albuquerque** baz=323	**39.46**	**107**	P	**P**	**17 09 41.6**	**-0.3**
TASL	**Snake Pit, Alb** baz=323	**39.46**	**107**	P	**P**	**17 09 42.7**	**+0.7**
G39A	**Holcombe** baz=314	**39.50**	**82**	P	**P**	**17 09 41.7**	**-0.3**
F40A	**Park Falls** baz=314	**39.59**	**80**	P	**P**	**17 09 41.6**	**-1.1**
J37A	**Redenius Farm,** baz=316,SNR=5.6	**39.68**	**86**	P	**P**	**17 09 43.3**	**-0.2**
K36A	**Gilmore City** baz=316	**39.70**	**88**	P	**P**	**17 09 43.5**	**-0.2**
I38A	**Scanlan Farm,** baz=315	**39.78**	**84**	P	**P**	**17 09 44.2**	**-0.1**
E41A	**Kenton** baz=313	**39.80**	**79**	P	**P**	**17 09 43.7**	**-0.8**
CBKS	**Cedar Bluff** baz=319	**39.82**	**96**	P	**P**	**17 09 44.7**	**0.0**
H39A	**Augusta** baz=315	**39.87**	**83**	P	**P**	**17 09 43.8**	**-1.2**
L36A	**Harm Buss Farm** baz=317	**39.98**	**88**	P	**P**	**17 09 45.6**	**-0.3**
G40A	**Rib Lake** baz=314	**40.00**	**81**	P	**P**	**17 09 46.3**	**+0.2**
K37A	**Belmond** baz=316,SNR=6.0	**40.02**	**87**	P	**P**	**17 09 46.4**	**0.0**
F41A	**Three Lakes** baz=314	**40.23**	**80**	P	**P**	**17 09 47.5**	**-0.5**
I39A	**Houston** baz=315	**40.33**	**84**	P	**P**	**17 09 47.1**	**-1.7**
E42A	**Champion** baz=314	**40.35**	**78**	P	**P**	**17 09 47.9**	**-1.2**
H40A	**Chili** baz=315	**40.36**	**82**	P	**P**	**17 09 49.5**	**+0.4**
L37A	**Phoenix Point,** baz=317	**40.43**	**87**	P	**P**	**17 09 48.4**	**-1.3**
121A	**Cookes Peak, D** baz=325	**40.77**	**110**	P	**P**	**17 09 54.3**	**+1.5**
E43A	**Lone Tree Farm** baz=314	**40.85**	**78**	P	**P**	**17 09 53.3**	**+0.2**
G42A	**Mountain** baz=315	**40.92**	**80**	P	**P**	**17 09 55.5**	**+1.8**
K39A	**Oelwein** baz=316	**40.96**	**85**	P	**P**	**17 09 53.4**	**-0.7**
I41A	**Arkdale** baz=315	**41.02**	**82**	P	**P**	**17 09 54.6**	**0.0**
J40A	**Soldiers Grove** baz=316	**41.05**	**84**	P	**P**	**17 09 54.7**	**-0.1**
N37A	**Lee Faris, Mou** baz=318	**41.20**	**89**	P	**P**	**17 09 56.3**	**+0.3**
M38A	**Pleasantville** baz=317	**41.23**	**88**	P	**P**	**17 09 56.9**	**+0.6**
G43A	**Wallace** baz=315	**41.28**	**79**	P	**P**	**17 09 56.8**	**+0.2**
J41A	**Loganville** baz=316	**41.44**	**83**	P	**P**	**17 09 57.3**	**-0.7**
I42A	**Draeger Farm,** baz=316	**41.63**	**82**	P	**P**	**17 09 59.7**	**+0.2**
O37A	**Wolven Farm, M** baz=318	**41.67**	**90**	P	**P**	**17 09 59.3**	**-0.6**
N38A	**Joes South For** baz=318	**41.67**	**88**	P	**P**	**17 10 00.0**	**+0.1**
K41A	**Shullsburg** baz=316	**41.84**	**84**	P	**P**	**17 10 01.5**	**+0.2**
AMTX	**Amarillo** baz=323	**41.88**	**102**	P	**P**	**17 10 01.4**	**-0.5**
N39A	**Derby Farms, D** baz=318	**41.98**	**88**	P	**P**	**17 10 01.7**	**-0.8**
P37A	**Lathrop** baz=319,SNR=6.0	**41.99**	**91**	P	**P**	**17 10 02.9**	**+0.4**
I43A	**Langenfeld Bro** baz=316	**42.02**	**81**	P	**P**	**17 10 02.6**	**-0.1**
O38A	**Galt** baz=318	**42.04**	**89**	P	**P**	**17 10 02.4**	**-0.6**
MSTX	**Muleshoe** baz=323	**42.06**	**104**	P	**P**	**17 10 04.0**	**+0.6**
F45A	**CMU Biological** baz=315	**42.07**	**77**	P	**P**	**17 10 03.3**	**+0.1**
L41A	**Preston** baz=317	**42.13**	**85**	P	**P**	**17 10 04.2**	**+0.6**
O39A	**Kirksville** baz=318	**42.42**	**88**	P	**P**	**17 10 06.5**	**+0.5**
SPITS	**Spitsbergen Ar** 0.9nm,0.6s,baz=150,slow=16,SNR=3.0	**42.60**	**3**	P	**P**	**17 10 06.4**	**-0.7**
MNTX	**Cornudas Mount** baz=325,SNR=10	**42.62**	**108**	P	**P**	**17 10 09.3**	**+1.5**
K43A	**Burlington** baz=317	**42.77**	**83**	P	**P**	**17 10 09.1**	**+0.2**
Q38A	**Cooks Store, C** baz=319,SNR=7.2	**42.84**	**91**	P	**P**	**17 10 09.2**	**-0.3**
O40A	**La Belle** baz=318	**42.86**	**88**	P	**P**	**17 10 09.3**	**-0.3**
P39B	**Salisbury** baz=319	**42.88**	**89**	P	**P**	**17 10 09.5**	**-0.3**
Q39A	**Willow Grove F** baz=319,SNR=7.0	**43.10**	**90**	P	**P**	**17 10 11.2**	**-0.4**
P40A	**Paris** baz=319	**43.22**	**89**	P	**P**	**17 10 12.6**	**+0.1**
R38A	**Fenwick Farm,** baz=320	**43.28**	**92**	P	**P**	**17 10 12.7**	**-0.3**
WMOK	**Wichita Mounta** baz=322	**43.46**	**99**	P	**P**	**17 10 15.7**	**+1.1**
Q40A	**Laux Farm, Aux** baz=319	**43.60**	**89**	P	**P**	**17 10 15.3**	**-0.3**
P41A	**Barry, Barry** baz=319	**43.61**	**88**	P	**P**	**17 10 15.2**	**-0.5**
R39A	**Chumby, Stover** baz=320,SNR=8.3	**43.62**	**91**	P	**P**	**17 10 15.2**	**-0.6**
N43A	**Stutzman Famil** baz=318	**43.64**	**85**	P	**P**	**17 10 15.1**	**-0.8**
S38A	**Stockton** baz=320	**43.70**	**92**	P	**P**	**17 10 15.7**	**-0.8**
HDIL	**Hopedale** baz=318	**43.86**	**85**	P	**P**	**17 10 17.3**	**-0.4**
S39A	**Bolivar** baz=320,SNR=5.3	**43.95**	**92**	P	**P**	**17 10 17.4**	**-1.1**
T38A	**Diamond** baz=320	**43.96**	**93**	P	**P**	**17 10 17.9**	**-0.6**
R40A	**Maddies Statio** baz=320,SNR=6.7	**44.04**	**90**	P	**P**	**17 10 18.5**	**-0.6**
TUL1	**Leonard** baz=321	**44.06**	**95**	P	**P**	**17 10 19.0**	**-0.4**
Q41A	**Truxton** baz=319	**44.07**	**89**	P	**P**	**17 10 19.0**	**-0.3**
N44A	**Piper City** baz=318	**44.27**	**84**	P	**P**	**17 10 21.1**	**+0.1**
P43A	**Skaggs, Pawnee** baz=319	**44.43**	**86**	P	**P**	**17 10 22.2**	**0.0**
T39A	**Clever** baz=320	**44.43**	**92**	P	**P**	**17 10 21.9**	**-0.4**
S40A	**Lebanon** baz=320	**44.44**	**91**	P	**P**	**17 10 22.3**	**-0.1**
Q42A	**Golden Eagle** baz=319	**44.45**	**88**	P	**P**	**17 10 22.4**	**0.0**
SCHQ	**Schefferville** comp=Z,36nm,18.3s,baz=90,slow=40	**44.48**	**56**	LR	LR	17 31 42.2	
R41A	**Rosebud** baz=320	**44.49**	**89**	P	**P**	**17 10 21.9**	**-0.8**
N45A	**Kentland** baz=318	**44.55**	**84**	P	**P**	**17 10 22.8**	**-0.4**
ABTX	**Abilene, Hawle** baz=324	**44.70**	**102**	P	**P**	**17 10 24.8**	**+0.3**
CCM	**Cathedral Cave** baz=320	**44.74**	**89**	P	**P**	**17 10 23.7**	**-1.1**
S41A	**Jillco Farms,** baz=320,SNR=21	**44.84**	**90**	P	**P**	**17 10 24.7**	**-0.8**
Q43A	**New Douglas** baz=319,SNR=6.7	**44.86**	**87**	P	**P**	**17 10 25.3**	**-0.4**
U39A	**Green Forest** baz=321	**44.88**	**93**	P	**P**	**17 10 25.4**	**-0.4**
O45A	**Potomac** baz=318	**44.89**	**84**	P	**P**	**17 10 25.7**	**-0.3**
P44A	**Sand Creek, Wi** baz=319	**45.02**	**86**	P	**P**	**17 10 26.5**	**-0.4**
SFIN	**Lafayette** baz=318	**45.11**	**84**	P	**P**	**17 10 26.9**	**-0.7**
S42A	**Caledonia** baz=320,SNR=6.0	**45.19**	**89**	P	**P**	**17 10 27.5**	**-0.8**
V39A	**Pettigrew** baz=321	**45.21**	**93**	P	**P**	**17 10 28.3**	**-0.3**
U40A	**Yellville** baz=321	**45.22**	**92**	P	**P**	**17 10 28.3**	**-0.3**
Q44A	**Meyer Farm, Va** baz=319	**45.24**	**87**	P	**P**	**17 10 28.5**	**-0.2**
R43A	**Red Bud** baz=320	**45.24**	**88**	P	**P**	**17 10 28.7**	**0.0**
T41A	**Mountain View** baz=320	**45.24**	**91**	P	**P**	**17 10 28.0**	**-0.8**
TXAR	**Lajitas Array** 3.2nm,0.8s,baz=326,slow=6.1,SNR=42	**45.40**	**108**	P	**P**	**17 10 32.1**	**+1.9**
T42A	**Van Buren** baz=320,SNR=6.1	**45.60**	**90**	P	**P**	**17 10 30.4**	**-1.1**
P46A	**Rosedale** baz=319	**45.62**	**85**	P	**P**	**17 10 31.7**	**-0.1**
W39A	**Magazine** baz=322	**45.64**	**94**	P	**P**	**17 10 32.0**	**+0.1**
V40A	**Witts Springs** baz=321,SNR=10	**45.66**	**93**	P	**P**	**17 10 31.4**	**-0.7**
Q45A	**Warren Harvey,** baz=319	**45.68**	**86**	P	**P**	**17 10 32.2**	**-0.1**
O47A	**Sheridan** baz=318	**45.69**	**83**	P	**P**	**17 10 31.2**	**-1.1**
U41A	**Viola** baz=321	**45.70**	**92**	P	**P**	**17 10 32.1**	**-0.3**
S43A	**Fulton Ridge,** baz=320,SNR=12	**45.71**	**89**	P	**P**	**17 10 31.9**	**-0.6**
T43A	**Greenville** baz=320,SNR=15	**45.97**	**89**	P	**P**	**17 10 34.3**	**-0.2**
W40A	**Ferguson Farm,** baz=322	**46.01**	**94**	P	**P**	**17 10 33.6**	**-1.3**
X39A	**Fountain Ranch** baz=322	**46.01**	**95**	P	**P**	**17 10 34.8**	**0.0**
V41A	**Mountainview** baz=321	**46.02**	**92**	P	**P**	**17 10 33.5**	**-1.4**
S44A	**Carbondale** baz=320	**46.03**	**88**	P	**P**	**17 10 34.2**	**-0.8**
U42A	**Revenden** baz=321	**46.05**	**91**	P	**P**	**17 10 33.6**	**-1.6**
R45A	**Skylar, Fairfi** baz=320	**46.08**	**87**	P	**P**	**17 10 34.5**	**-0.8**
O48A	**Farmland** baz=319	**46.19**	**82**	P	**P**	**17 10 35.3**	**-0.9**
P47A	**Martinsville** baz=319	**46.20**	**84**	P	**P**	**17 10 35.6**	**-0.7**
MIAR	**Mount Ida** baz=322	**46.25**	**95**	P	**P**	**17 10 36.9**	**+0.1**
WHTX	**Lake Whitney,** baz=324	**46.31**	**100**	P	**P**	**17 10 37.5**	**+0.3**
T44A	**Benton** baz=320	**46.33**	**89**	P	**P**	**17 10 36.8**	**-0.5**
JCT	**Junction City** baz=325,SNR=16	**46.36**	**104**	P	**P**	**17 10 39.1**	**+1.4**
JCT	**Junction City** 37nm,0.7s	**46.36**	**104**	*e*P	**P**	**17 10 39.0**	**+1.3**
S45A	**Carrier Mills** baz=320	**46.39**	**87**	P	**P**	**17 10 37.0**	**-0.8**
V42A	**Cord** baz=321	**46.39**	**92**	P	**P**	**17 10 36.6**	**-1.2**
M50A	**Fremont** baz=318	**46.41**	**80**	P	**P**	**17 10 36.1**	**-1.8**
U43A	**Rector** baz=321	**46.46**	**90**	P	**P**	**17 10 37.7**	**-0.7**
Q47A	**Bedord North L** baz=319	**46.54**	**85**	P	**P**	**17 10 39.2**	**+0.2**
P48A	**Milroy** baz=319	**46.65**	**83**	P	**P**	**17 10 39.4**	**-0.4**
N50A	**Nevada** baz=318	**46.82**	**80**	P	**P**	**17 10 40.5**	**-0.7**
Q48A	**North Vernon** baz=319	**46.90**	**84**	P	**P**	**17 10 40.9**	**-0.9**
R47A	**Wooly Knot Far** baz=320	**46.97**	**85**	P	**P**	**17 10 41.5**	**-0.9**
O50A	**Cable** baz=319	**47.05**	**81**	P	**P**	**17 10 43.0**	**0.0**
WCI	**Wyandotte Cave** baz=320	**47.14**	**85**	P	**P**	**17 10 44.1**	**+0.4**
T46A	**Princeton** baz=320	**47.23**	**87**	P	**P**	**17 10 44.2**	**-0.2**
P50A	**Jamestown** baz=319	**47.37**	**82**	P	**P**	**17 10 45.4**	**0.0**
U46A	**Springville** baz=321	**47.61**	**88**	P	**P**	**17 10 47.5**	**+0.2**
R49A	**Shelbyville** baz=320	**47.66**	**84**	P	**P**	**17 10 47.5**	**-0.3**
S48A	**Wiedeman Farm,** baz=320	**47.70**	**85**	P	**P**	**17 10 48.3**	**+0.3**
W44A	**Shelby Farms P** baz=322	**47.71**	**91**	P	**P**	**17 10 46.4**	**-1.8**
Y42A	**Garnett, Star** baz=322	**47.73**	**94**	P	**P**	**17 10 45.5**	**-2.8**
WVT	**Waverly** baz=321	**47.96**	**88**	P	**P**	**17 10 50.3**	**+0.2**
S49A	**Springfield** baz=320	**47.99**	**85**	P	**P**	**17 10 50.1**	**-0.2**
U47A	**Clarksville** baz=321	**48.00**	**87**	P	**P**	**17 10 50.2**	**-0.2**
M54A	**Oil Creek Stat** baz=318	**48.02**	**77**	P	**P**	**17 10 49.5**	**-1.0**
W45A	**Hickory Valley** baz=321	**48.02**	**90**	P	**P**	**17 10 49.9**	**-0.7**
Q51A	**Peebles** baz=320	**48.03**	**82**	P	**P**	**17 10 49.3**	**-1.4**
V46A	**Holladay** baz=321,SNR=10	**48.07**	**89**	P	**P**	**17 10 51.0**	**+0.1**
R50A	**Paris** baz=320	**48.10**	**83**	P	**P**	**17 10 51.0**	**-0.1**
MJAR	**Matsushiro Arr** 0.3nm,0.4s,baz=27,slow=5.8,SNR=4.2	**48.15**	**273**	P	**P**	**17 10 52.2**	**+0.7**
LONY	**Lake Ozonia** baz=318	**48.21**	**70**	P	**P**	**17 10 50.9**	**-1.0**
N54A	**Moraine State** baz=319	**48.27**	**78**	P	**P**	**17 10 51.5**	**-0.9**
833A	**Chaparral WMA,** baz=326	**48.33**	**105**	P	**P**	**17 10 54.2**	**+1.2**
U48A	**Cassie Pea, Po** baz=321	**48.33**	**87**	P	**P**	**17 10 52.9**	**0.0**
V47A	**Nunnelly** baz=321,SNR=5.8	**48.36**	**88**	P	**P**	**17 10 53.3**	**+0.1**
T49A	**Edmonton** baz=320	**48.39**	**85**	P	**P**	**17 10 53.6**	**+0.2**
OXF	**Oxford** baz=322,SNR=6.7	**48.41**	**91**	P	**P**	**17 10 54.1**	**+0.5**
OXF	**Oxford** 30nm,0.7s	**48.41**	**91**	*e*P	**P**	**17 10 54.3**	**+0.7**
W46A	**Michie** baz=322	**48.46**	**90**	P	**P**	**17 10 53.9**	**0.0**
R51A	**Hillsboro** baz=320	**48.47**	**83**	P	**P**	**17 10 53.7**	**-0.3**
X45A	**UM Field Stati** baz=322	**48.49**	**91**	P	**P**	**17 10 53.5**	**-0.7**
Z43A	**Armstrong Fami** baz=323	**48.50**	**94**	P	**P**	**17 10 53.4**	**-0.8**
S50A	**Richmond** baz=320	**48.52**	**84**	P	**P**	**17 10 52.8**	**-1.6**
U49A	**Red Boiling Sp** baz=321	**48.72**	**86**	P	**P**	**17 10 56.2**	**+0.3**
W47A	**Westpoint** baz=321	**48.77**	**89**	P	**P**	**17 10 56.8**	**+0.5**
V48A	**Smith Brothers** baz=321	**48.78**	**88**	P	**P**	**17 10 56.4**	**0.0**
X46A	**Booneville** baz=322,SNR=12	**48.80**	**90**	P	**P**	**17 10 57.1**	**+0.5**
T50A	**Nancy** baz=320	**48.81**	**85**	P	**P**	**17 10 56.7**	**+0.1**
Y46A	**Houston** baz=322,SNR=14	**49.19**	**91**	P	**P**	**17 11 00.2**	**+0.6**
W48A	**Pulaski** baz=322	**49.19**	**88**	P	**P**	**17 10 59.3**	**-0.3**
X47A	**Russelville** baz=322	**49.20**	**90**	P	**P**	**17 11 00.2**	**+0.5**
V49A	**McMinnville** baz=321	**49.23**	**87**	P	**P**	**17 10 59.2**	**-0.7**
U50A	**Jamestown** baz=321	**49.27**	**85**	P	**P**	**17 10 59.5**	**-0.7**
T51A	**Gray** baz=321	**49.30**	**84**	P	**P**	**17 10 59.9**	**-0.5**
BINY	**Binghamton** baz=319	**49.33**	**74**	P	**P**	**17 11 00.1**	**-0.4**
W49A	**Belvidere** baz=322	**49.55**	**88**	P	**P**	**17 11 01.8**	**-0.5**
SSPA	**Standing Stone** baz=319	**49.56**	**76**	P	**P**	**17 11 01.5**	**-0.8**
X48A	**Hartselle** baz=322	**49.67**	**89**	P	**P**	**17 11 01.7**	**-1.5**
Y47A	**UCPARC, Winfie** baz=322	**49.69**	**90**	P	**P**	**17 11 02.7**	**-0.7**
244A	**Avery, Jackson** baz=323	**49.71**	**94**	P	**P**	**17 11 03.4**	**-0.1**
LBNH	**Lisbon** baz=318	**49.77**	**69**	P	**P**	**17 11 03.7**	**-0.2**
TZTN	**Tazewell** baz=321	**49.83**	**84**	P	**P**	**17 11 04.4**	**-0.1**
X49A	**Woodville** baz=322	**49.99**	**88**	P	**P**	**17 11 04.6**	**-1.1**
541A	**Lake Charles** baz=324	**50.02**	**98**	P	**P**	**17 11 05.2**	**-0.8**
Y48A	**Jasper** baz=322	**50.03**	**89**	P	**P**	**17 11 05.5**	**-0.4**
U52A	**Thorn Hill** baz=321	**50.04**	**84**	P	**P**	**17 11 05.2**	**-0.9**
146A	**Union** baz=323	**50.07**	**92**	P	**P**	**17 11 06.4**	**+0.1**
Z47A	**Carrollton** baz=322	**50.13**	**91**	P	**P**	**17 11 05.9**	**-0.8**
Z48A	**Northport** baz=322	**50.25**	**90**	P	**P**	**17 11 06.9**	**-0.7**
W51A	**Cleveland** baz=322	**50.29**	**86**	P	**P**	**17 11 06.9**	**-1.0**
V52A	**Sevierville** baz=321	**50.35**	**85**	P	**P**	**17 11 08.0**	**-0.4**
X50B	**Fort Payne** baz=322	**50.38**	**88**	P	**P**	**17 11 08.8**	**+0.1**
N59A	**State Game Lan** baz=320	**50.40**	**75**	P	**P**	**17 11 08.0**	**-0.7**
TKL	**Tuckaleechee C** 2.6nm,0.7s,baz=317,slow=1.9,SNR=4.0	**50.40**	**85**	P	**P**	**17 11 08.7**	**-0.1**
Y49A	**Blount Mountai** baz=322	**50.46**	**89**	P	**P**	**17 11 08.8**	**-0.5**
X51A	**Calhoun** baz=322	**50.70**	**87**	P	**P**	**17 11 10.2**	**-0.8**
W52A	**Murphy** baz=322	**50.77**	**86**	P	**P**	**17 11 10.7**	**-0.8**
Y50A	**Piedmont** baz=322	**50.78**	**88**	P	**P**	**17 11 11.4**	**-0.3**
V53A	**Saluda** baz=321	**50.88**	**84**	P	**P**	**17 11 12.2**	**-0.3**
BLA	**Blacksburg** baz=321	**50.91**	**81**	P	**P**	**17 11 11.3**	**-1.3**
W53A	**Cullowhee** baz=322	**51.10**	**85**	P	**P**	**17 11 13.5**	**-0.6**
Y51A	**Rockmart** baz=322	**51.12**	**88**	P	**P**	**17 11 13.7**	**-0.5**
X52A	**Dahlonega** baz=322	**51.16**	**86**	P	**P**	**17 11 13.0**	**-1.6**
Z50A	**Ashland** baz=322	**51.19**	**89**	P	**P**	**17 11 13.8**	**-0.9**
149A	**Jones** baz=323	**51.26**	**90**	P	**P**	**17 11 14.0**	**-1.3**
ARCES	**ARCESS Array B** 2.6nm,0.8s,baz=37,slow=18,SNR=3.2	**51.41**	**0**	P	**P**	**17 11 15.0**	**-0.9**
Z51A	**Franklin** baz=322	**51.52**	**88**	P	**P**	**17 11 16.4**	**-0.8**
249A	**Camden** baz=323	**51.59**	**91**	P	**P**	**17 11 16.5**	**-1.2**
Y52A	**Lilburn** baz=322	**51.66**	**87**	P	**P**	**17 11 17.3**	**-0.9**
CBN	**Corbin Frederi** baz=321	**51.68**	**78**	P	**P**	**17 11 16.4**	**-1.9**
Z52A	**Williamson** baz=322	**52.01**	**88**	P	**P**	**17 11 20.1**	**-0.7**
GOGA	**Godfrey** baz=322	**52.32**	**87**	P	**P**	**17 11 21.6**	**-1.6**
Y54A	**Tignall** baz=322	**52.36**	**86**	P	**P**	**17 11 22.5**	**-1.0**

Z53A	**Monticello**	**52.37**	**87**	P	**P**	**17 11 22.9**	**-0.6**
	baz=322						
KSRS	**Korea Array**	**52.66**	**282**	P	**P**	**17 11 27.2**	**+1.6**
	4.6nm,0.9s,baz=40,slow=6.7,SNR=18						
KSAR	**Wonju Array Be**	**52.69**	**282**	P	**P**	**17 11 27.2**	**+1.3**
Z54A	**Sparta**	**52.78**	**86**	P	**P**	**17 11 25.5**	**-1.1**
	baz=323						
254A	**Abbeville**	**53.57**	**88**	P	**P**	**17 11 31.7**	**-0.7**
	baz=323						
453A	**Whigham**	**53.92**	**89**	P	**P**	**17 11 33.1**	**-1.9**
	baz=324						
552A	**Lynn Haven**	**54.00**	**91**	P	**P**	**17 11 34.0**	**-1.5**
	baz=324						
SONM	**Songino Array**	**54.62**	**305**	P	**P**	**17 11 41.6**	**+1.5**
	5.8nm,0.7s,baz=45,slow=7.0,SNR=12						
ZALV	**Zalesovo Beam**	**57.49**	**323**	P	**P**	**17 12 01.1**	**+0.7**
	3.9nm,0.7s,baz=26,slow=6.7,SNR=16						
ZALV				LR	LR	17 39 40.2	
	comp=Z,19nm,18.7s,baz=68,slow=39						
060A	**Indiantown**	**59.03**	**89**	P	**P**	**17 12 10.0**	**-1.4**
	baz=325						
FINES	**FINESS Array B**	**59.53**	**360**	P	**P**	**17 12 14.1**	**-0.3**
	1.7nm,0.9s,baz=337,slow=21,SNR=3.1						
HFS	**Hagfors**	**60.48**	**7**	P	**P**	**17 12 19.7**	**-1.2**
	1.8nm,1.0s,baz=176,slow=7.9,SNR=3.0						
KURK	**Kurchatov**	**62.18**	**325**	P	**P**	**17 12 32.4**	**-0.2**
KURBB	**Kurchatov Arra**	**62.29**	**325**	P	**P**	**17 12 32.4**	**-0.9**
	1.0nm,0.6s,baz=26,slow=7.3,SNR=7.5						
BVAR	**Borovoye Array**	**62.32**	**331**	P	**P**	**17 12 33.3**	**-0.2**
	2.6nm,0.8s,baz=22,slow=4.2,SNR=13						
BVAR				LR	LR	17 43 04.8	
	comp=Z,41nm,19.5s,baz=19,slow=40						
MKAR	**Makanchi Array**	**64.51**	**321**	P	**P**	**17 12 47.8**	**-0.4**
	1.2nm,0.8s,baz=47,slow=5.3,SNR=11						
AKTO	**Aktyubinsk**	**67.45**	**338**	LR	LR	17 44 45.7	
	comp=Z,13nm,19.4s,baz=38,slow=38						
AKASG	**Malin Array Be**	**70.27**	**358**	P	**P**	**17 13 23.0**	**-1.4**
	0.5nm,0.3s,baz=15,slow=7.1,SNR=4.8						
DAVOX	**Davos/Dischmat**	**73.44**	**11**	LR	LR	17 47 37.8	
	comp=Z,7.8nm,20.6s,baz=220,slow=37						
CMAR	**Chiang Mai Arr**	**82.52**	**294**	P	**P**	**17 14 34.0**	**-0.4**
	1.2nm,0.6s,baz=13,slow=4.5,SNR=5.5						
QSPA	**South Pole Qui**	**149.15**	**180**	PKPbc	**PKPbc**	**17 21 58.1**	**-0.5**
	3.1nm,0.9s,baz=112,slow=1.5,SNR=11						

MEX 19 17:11:03.2±0.8**, 16°.68N**×**99°.87W, h15**^{km}±12^{km}**, MD3.9, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.52**	**314**	*e*P	Pg	17 11 11.9	-1.7
CAIG				*i* S	Sg	17 11 19.0	-1.7
MEIG	**Mezcala**	**1.26**	**11**	*e*P	Pn	17 11 22.2	-4.2
MEIG				*i* S	Sb	17 11 37.2	-5.6
TLIG	**Tlapa**	**1.52**	**55**	*e*P	Pn	17 11 26.4	-3.6
TLIG				*i* S	Sn	17 11 45.0	-4.7
ARIG	**Puente Sto Nin**	**1.65**	**344**	*e*P	Pn	17 11 28.9	-2.7
ARIG				*i* S	Sn	17 11 48.2	-4.5
PLIG	**Platanillo**	**1.73**	**12**	*e*P	Pn	17 11 29.9	-3.0
PLIG				*i* S	Sn	17 11 50.7	-4.1
ZIIG	**Zihuatanejo**	**1.78**	**301**	*i* P	Pn	17 11 30.4	-3.0
ZIIG				*i* S	Sn	17 11 50.6	-5.1

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*NEIC **19** 17:34:39.1±0.0, 40°.56S×173°.34E, h3^{km}, ML4.1(WEL), After WEL.*

WEL 19 17:34:39.6, 41°S±4°×**17°3E**±°**, h12**^{km}**, ML4.2**/27**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUWZ	**D'Urville Isla**	**0.45**	**115**	Pg	Pg	17 34 48.7	+0.2
DUWZ				Sg	Sb	17 34 55.8	-0.3
DUWZ	**D'Urville Isla**	**0.45**	**115**	P	Pg	17 34 48.7	+0.3
DUWZ				S	Sb	17 34 55.9	-0.3
NNZ	**Nelson**	**0.60**	**180**	P*	Pb	17 34 52.1	+0.1
NNZ	**Nelson**	**0.60**	**180**	P	Pb	17 34 52.2	+0.1
NNZ				S	Sb	17 35 01.5	+1.0
QRZ	**Quartz Range**	**0.68**	**252**	P*	Pg	17 34 52.8	-0.1
QRZ				Sg	Sn	17 35 04.3	-1.3
QRZ	**Quartz Range**	**0.68**	**252**	P	Pg	17 34 53.1	+0.2
QRZ				S	Sb	17 35 03.3	+0.5
TCW	**Tory Channel**	**0.90**	**132**	P*	Pg	17 34 56.5	-0.4
TCW	**Tory Channel**	**0.90**	**132**	P	Pg	17 34 56.5	-0.4
TUWZ	**Tuamarina**	**0.92**	**153**	P*	Pg	17 34 57.2	-0.1
TUWZ	**Tuamarina**	**0.92**	**153**	P	Pg	17 34 57.1	-0.2
BSWZ	**Blackbirch Sta**	**1.16**	**162**	P*	Pg	17 35 02.1	+0.3
BSWZ	**Blackbirch Sta**	**1.16**	**162**	P	Pg	17 35 02.2	+0.3
BSWZ				S	Sn	17 35 18.1	+0.7
KIW	**Kapiti Island**	**1.18**	**102**	P*	Pn	17 35 01.6	-0.4
KIW				S*	Sb	17 35 16.8	-0.4
KIW	**Kapiti Island**	**1.18**	**102**	P	Pn	17 35 01.7	-0.3
KIW				S	Sb	17 35 17.2	0.0
THZ	**Tophouse**	**1.20**	**197**	P*	Pn	17 35 02.1	-0.2
THZ				S*	Sn	17 35 20.9	+2.3
THZ	**Tophouse**	**1.20**	**197**	P	Pb	17 35 02.4	+0.1
THZ				S	Sn	17 35 20.2	+1.6
WEL	**Wellington**	**1.24**	**123**	P*	Pg	17 35 03.5	+0.1
NMEZ	**Namu Road**	**1.26**	**18**	P*	Pn	17 35 02.0	-1.0
NMEZ	**Namu Road**	**1.26**	**18**	P	Pn	17 35 02.0	-1.0
NMEZ				S	Sb	17 35 19.4	0.0
CMWZ	**Cape Campbell**	**1.29**	**151**	P*	Pg	17 35 05.2	+0.7
CMWZ	**Cape Campbell**	**1.29**	**151**	P	Pg	17 35 05.3	+0.8
CAW	**Cannon Point**	**1.37**	**112**	Pn	Pb	17 35 05.3	+0.3
CAW	**Cannon Point**	**1.37**	**112**	P	Pg	17 35 05.5	-0.3
OGWZ	**Otaki Gorge**	**1.37**	**99**	Pn	Pb	17 35 05.1	-0.1
OGWZ	**Otaki Gorge**	**1.37**	**99**	P	Pb	17 35 05.2	+0.1
BHW	**Baring Head**	**1.38**	**126**	Pn	Pb	17 35 05.3	+0.1
BHW	**Baring Head**	**1.38**	**126**	P	Pb	17 35 05.4	+0.1
LREZ	**Lake Rotokare**	**1.39**	**34**	P	Pn	17 35 05.1	+0.2
PREZ	**Palmer Road**	**1.40**	**25**	Pn	Pn	17 35 04.1	-0.9
PREZ	**Palmer Road**	**1.40**	**25**	P	Pn	17 35 05.0	0.0
KHEZ	**Kahui Hut**	**1.41**	**20**	P*	Pn	17 35 04.3	-0.8
KHEZ	**Kahui Hut**	**1.41**	**20**	P	Pn	17 35 04.2	-0.9
NEZ	**North Egmont**	**1.45**	**22**	Pn	Pn	17 35 04.9	-0.8
PKE	**Pukeiti**	**1.49**	**18**	Pn	Pn	17 35 05.3	-0.9
PKE	**Pukeiti**	**1.49**	**18**	P	Pn	17 35 05.3	-0.9
WAZ	**Wanganui**	**1.50**	**55**	Pn	Pn	17 35 06.1	-0.2
WAZ	**Wanganui**	**1.50**	**55**	P	Pn	17 35 06.1	-0.2
OHWZ	**Ohakea**	**1.53**	**75**	P	Pb	17 35 07.5	-0.3
DREZ	**Durham Road**	**1.56**	**24**	Pn	Pn	17 35 06.8	-0.3
DREZ	**Durham Road**	**1.56**	**24**	P	Pb	17 35 07.8	-0.6
MSWZ	**Moikau Station**	**1.62**	**120**	Pn	Pb	17 35 09.3	-0.1
MSWZ	**Moikau Station**	**1.62**	**120**	P	Pb	17 35 09.3	-0.1
HOWZ	**Holdsworth Sta**	**1.64**	**101**	Pn	Pn	17 35 08.9	+0.7
HOWZ	**Holdsworth Sta**	**1.64**	**101**	P	Pn	17 35 09.0	+0.7
DSZ	**Denniston Nort**	**1.64**	**226**	Pn	Pn	17 35 07.7	-0.6
DSZ	**Denniston Nort**	**1.64**	**226**	P	Pn	17 35 08.9	+0.5
MRZ	**Mangatainoka R**	**1.67**	**92**	Pn	Pn	17 35 09.2	+0.5
MRZ	**Mangatainoka R**	**1.67**	**92**	P	Pn	17 35 09.2	+0.5
MTW	**Mount Morrison**	**1.69**	**109**	Pn	Pn	17 35 09.6	+0.6
MTW	**Mount Morrison**	**1.69**	**109**	P	Pn	17 35 09.6	+0.6
MHEZ	**Mangahewa**	**1.70**	**25**	Pn	Pn	17 35 08.3	-0.7
MHEZ	**Mangahewa**	**1.70**	**25**	P	Pn	17 35 08.8	-0.2
PLWZ	**Palliser**	**1.70**	**125**	Pn	Pn	17 35 09.9	+0.7
PLWZ	**Palliser**	**1.70**	**125**	P	Pn	17 35 09.9	+0.7
PAWZ	**Paruwai Farm**	**1.72**	**117**	Pn	Pb	17 35 11.0	-0.2
PAWZ	**Paruwai Farm**	**1.72**	**117**	P	Pb	17 35 10.9	-0.3
KHZ	**Kahutara**	**1.80**	**176**	Pn	Pb	17 35 12.6	+0.1
KHZ	**Kahutara**	**1.80**	**176**	P	Pb	17 35 12.6	+0.1
VRZ	**Vera Road**	**1.83**	**36**	Pn	Pn	17 35 10.1	-0.7
VRZ	**Vera Road**	**1.83**	**36**	P	Pn	17 35 10.1	-0.7
POWZ	**Post Office Ro**	**1.83**	**84**	Pn	Pb	17 35 12.0	-1.0
POWZ	**Post Office Ro**	**1.83**	**84**	P	Pb	17 35 12.1	-0.9
TIWZ	**Tintock**	**1.91**	**96**	Pn	Pn	17 35 12.2	+0.3
TIWZ	**Tintock**	**1.91**	**96**	P	Pn	17 35 12.3	+0.3
TRWZ	**Traveller**	**1.91**	**115**	Pn	Pb	17 35 15.1	+0.8
TRWZ	**Traveller**	**1.91**	**115**	P	Pb	17 35 15.2	+0.9
TMWZ	**Te Maipa**	**1.96**	**105**	Pn	Pb	17 35 14.6	-0.6
TMWZ	**Te Maipa**	**1.96**	**105**	P	Pb	17 35 14.8	-0.5
PRWZ	**Pori Road**	**1.97**	**89**	Pn	Pn	17 35 13.1	+0.4
PRWZ	**Pori Road**	**1.97**	**89**	P	Pn	17 35 13.3	+0.5
PKVZ	**Pokaka**	**2.01**	**49**	Pn	Pn	17 35 13.3	0.0
PKVZ	**Pokaka**	**2.01**	**49**	P	Pn	17 35 13.4	0.0
MTVZ	**Mangateitei**	**2.02**	**53**	Pn	Pn	17 35 13.7	+0.2
MTVZ	**Mangateitei**	**2.02**	**53**	P	Pn	17 35 13.7	+0.2
TSZ	**Takapari Road**	**2.04**	**75**	Pn	Pn	17 35 14.8	+0.9
TSZ	**Takapari Road**	**2.04**	**75**	P	Pn	17 35 14.8	+0.9
TRVZ	**Turoa**	**2.12**	**52**	Pn	Pn	17 35 15.0	-0.1
TRVZ	**Turoa**	**2.12**	**52**	P	Pn	17 35 15.0	0.0
WNVZ	**Wahianoa**	**2.13**	**54**	Pn	Pn	17 35 15.2	+0.1
DRZ	**Dome Shelter**	**2.14**	**52**	Pn	Pn	17 35 16.6	+1.1
DRZ	**Dome Shelter**	**2.14**	**52**	P	Pn	17 35 16.6	+1.2
DVHZ	**Dannevirke**	**2.15**	**82**	Pn	Pn	17 35 15.7	+0.5
DVHZ	**Dannevirke**	**2.15**	**82**	P	Pn	17 35 15.8	+0.6
FWVZ	**Far West T-bar**	**2.15**	**51**	Pn	Pn	17 35 15.6	+0.1
FWVZ	**Far West T-bar**	**2.15**	**51**	P	Pn	17 35 15.6	+0.2
WHVZ	**Whangaehu Hut**	**2.15**	**53**	Pn	Pn	17 35 15.7	+0.1
WHVZ	**Whangaehu Hut**	**2.15**	**53**	P	Pn	17 35 15.7	+0.1
CPWZ	**Castlepoint**	**2.16**	**99**	P	Pb	17 35 17.7	-0.9
BFZ	**Birch Farm**	**2.18**	**93**	Pn	Pn	17 35 15.4	-0.2
BFZ	**Birch Farm**	**2.18**	**93**	P	Pn	17 35 15.4	-0.2
COVZ	**Chateau Observ**	**2.18**	**50**	P	Pn	17 35 16.2	+0.4
MOVZ	**Moawhango**	**2.18**	**57**	Pn	Pn	17 35 16.4	+0.7
MOVZ	**Moawhango**	**2.18**	**57**	P	Pn	17 35 16.5	+0.7
TUVZ	**Tukino**	**2.20**	**53**	Pn	Pn	17 35 16.5	+0.4
TUVZ	**Tukino**	**2.20**	**53**	P	Pn	17 35 16.5	+0.4
TWVZ	**Taurewa**	**2.21**	**46**	Pn	Pn	17 35 15.7	-0.4
TWVZ	**Taurewa**	**2.21**	**46**	P	Pn	17 35 16.3	+0.1
NGZ	**Ngauruhoe**	**2.23**	**51**	Pn	Pn	17 35 16.7	+0.2
NGZ	**Ngauruhoe**	**2.23**	**51**	P	Pn	17 35 16.7	+0.2
WTVZ	**West Tongariro**	**2.26**	**49**	Pn	Pn	17 35 17.4	+0.5
WTVZ	**West Tongariro**	**2.26**	**49**	P	Pn	17 35 17.4	+0.5
PNHZ	**Pukenui**	**2.26**	**73**	Pn	Pn	17 35 17.9	+1.0
PNHZ	**Pukenui**	**2.26**	**73**	P	Pn	17 35 18.0	+1.2
OTVZ	**Oturere**	**2.28**	**51**	Pn	Pn	17 35 17.4	+0.2
KRVZ	**Karewarewa**	**2.31**	**50**	Pn	Pn	17 35 18.2	+0.6
KRVZ	**Karewarewa**	**2.31**	**50**	P	Pn	17 35 18.7	+1.2
LTZ	**Lake Taylor**	**2.32**	**201**	Pn	Pn	17 35 19.3	+1.6
LTZ	**Lake Taylor**	**2.32**	**201**	P	Pn	17 35 19.4	+1.7
BHHZ	**Black Hill Sta**	**2.34**	**62**	Pn	Pn	17 35 19.0	+1.0
BHHZ	**Black Hill Sta**	**2.34**	**62**	P	Pn	17 35 19.1	+1.1
ANWZ	**Angora Road**	**2.36**	**87**	P	Pb	17 35 22.1	+0.1
HIZ	**Hauiti**	**2.39**	**29**	Pn	Pn	17 35 17.0	-1.5
HIZ	**Hauiti**	**2.39**	**29**	P	Pn	17 35 17.1	-1.5
WPHZ	**Waipukurau**	**2.40**	**78**	Pn	Pb	17 35 21.8	-0.9
WPHZ	**Waipukurau**	**2.40**	**78**	P	Pb	17 35 21.8	-0.9
KATZ	**Kakaramea**	**2.42**	**48**	Pn	Pn	17 35 19.7	+0.7
KATZ	**Kakaramea**	**2.42**	**48**	P	Pn	17 35 19.6	+0.5
KRHZ	**Kereru**	**2.48**	**68**	P	Pn	17 35 20.6	+0.7
PRHZ	**Porangahau**	**2.50**	**83**	P	Pb	17 35 25.6	+1.1
RITZ	**Rihia Road**	**2.51**	**50**	Pn	Pb	17 35 22.9	-1.7
RITZ	**Rihia Road**	**2.51**	**50**	P	Pb	17 35 23.0	-1.6
RATZ	**Rangitukua**	**2.54**	**47**	Pn	Pn	17 35 21.2	+0.6
RATZ	**Rangitukua**	**2.54**	**47**	P	Pn	17 35 21.3	+0.7
INZ	**Inchbonnie**	**2.56**	**214**	P	Pn	17 35 21.8	+0.9
KWHZ	**Kaweka Forest**	**2.62**	**64**	P	Pn	17 35 23.2	+1.4
WATZ	**Wairara**	**2.63**	**44**	Pn	Pn	17 35 22.4	+0.5
WATZ	**Wairara**	**2.63**	**44**	P	Pb	17 35 25.0	-1.6
PXZ	**Pawanui**	**2.72**	**79**	P	Pb	17 35 29.6	+1.5
WHTZ	**Whakaora**	**2.78**	**46**	P	Pb	17 35 29.4	+0.1
BKZ	**Black Stump Fm**	**2.79**	**60**	Pn	Pn	17 35 24.8	+0.7
BKZ	**Black Stump Fm**	**2.79**	**60**	P	Pn	17 35 24.9	+0.8
KAHZ	**Kahuranaki**	**2.80**	**74**	Pn	Pn	17 35 24.3	+0.1
KAHZ	**Kahuranaki**	**2.80**	**74**	P	Pn	17 35 24.4	+0.2
MCHZ	**McNeill Hill**	**2.80**	**66**	P	Pn	17 35 24.8	+0.7
TLZ	**Tolley Road**	**2.83**	**37**	Pn	Pn	17 35 23.5	-1.1
TLZ	**Tolley Road**	**2.83**	**37**	P	Pn	17 35 23.7	-0.9
KUTZ	**Kaahu Road**	**2.84**	**42**	P	Pb	17 35 27.6	-2.6
OXZ	**Oxford**	**2.89**	**200**	Pn	Pn	17 35 26.5	+1.1
OXZ	**Oxford**	**2.89**	**200**	P	Pn	17 35 26.5	+1.1
EYCZ	**Eyrewell**	**2.91**	**195**	P	Pn	17 35 26.8	+1.2
MRHZ	**Matea Rd**	**2.94**	**54**	P	Pn	17 35 28.1	+2.0
NMHZ	**Naumai**	**3.04**	**61**	*e*Pn	Pn	17 35 27.8	+0.3
NMHZ	**Naumai**	**3.04**	**61**	P	Pn	17 35 27.8	+0.3
ALRZ	**Allen Road**	**3.07**	**49**	P	Pn	17 35 30.0	+2.1
ARHZ	**Aropaoanui**	**3.09**	**65**	P	Pb	17 35 33.0	-1.4
OKCZ	**Okains Bay**	**3.12**	**184**	P	Pn	17 35 29.9	+1.3
MQZ	**McQueen's Vall**	**3.14**	**190**	Pn	Pn	17 35 28.5	-0.3
MQZ	**McQueen's Vall**	**3.14**	**190**	P	Pn	17 35 28.6	-0.2
WVZ	**Waitaha Valley**	**3.15**	**218**	Pn	Pn	17 35 30.1	+1.1
WVZ	**Waitaha Valley**	**3.15**	**218**	P	Pn	17 35 30.2	+1.2
MTHZ	**Maungataniwha**	**3.19**	**58**	P	Pn	17 35 31.1	+1.5
UTU	**Utuhina**	**3.27**	**43**	P	Pb	17 35 35.2	-2.3
AKCZ	**Akaroa Harbour**	**3.27**	**186**	P	Pn	17 35 31.9	+1.2
TOZ	**Tahuroa Road**	**3.32**	**30**	Pn	Pn	17 35 29.6	-1.6
TOZ	**Tahuroa Road**	**3.32**	**30**	P	Pn	17 35 29.7	-1.6
RAHZ	**Arahi**	**3.32**	**60**	P	Pb	17 35 36.0	-2.4
MUGZ	**Murupara**	**3.38**	**52**	P	Pb	17 35 37.5	-1.9
RPZ	**Rata Peaks**	**3.55**	**208**	Pn	Pn	17 35 35.7	+1.2
RPZ	**Rata Peaks**	**3.55**	**208**	P	Pn	17 35 35.8	+1.3
KNZ	**Kokohu**	**3.67**	**66**	Pn	Pn	17 35 34.6	-1.5
AWAZ	**Awhitu Peninsu**	**3.68**	**16**	P	Pn	17 35 35.2	-1.1
URZ	**Urewera**	**3.72**	**52**	Pn	Pn	17 35 37.9	+1.0
URZ	**Urewera**	**3.72**	**52**	P	Pn	17 35 38.0	+1.1
RAGZ	**Rawiri**	**3.77**	**57**	P	Pb	17 35 42.0	-4.0
MKAZ	**Moumakai**	**3.77**	**22**	Pn	Pn	17 35 36.4	-1.1
MKAZ	**Moumakai**	**3.77**	**22**	P	Pn	17 35 36.3	-1.2
WTAZ	**Waiatarua**	**3.79**	**15**	Pn	Pn	17 35 37.0	-0.8
WTAZ	**Waiatarua**	**3.79**	**15**	P	Pn	17 35 37.2	-0.7
ETAZ	**East Tamaki Re**	**3.85**	**19**	Pn	Pn	17 35 37.5	-1.1
ETAZ	**East Tamaki Re**	**3.85**	**19**	P	Pn	17 35 37.7	-0.9
RIGZ	**Rimuhau**	**3.88**	**62**	P	Pn	17 35 41.1	+2.0
MWZ	**Matawai**	**3.93**	**56**	Pn	Pn	17 35 40.6	+0.8
MWZ	**Matawai**	**3.93**	**56**	P	Pn	17 35 41.1	+1.3
FOZ	**Fox Glacier**	**3.94**	**221**	Pn	Pn	17 35 40.4	+0.5
FOZ	**Fox Glacier**	**3.94**	**221**	P	Pn	17 35 40.4	+0.5
RVAZ	**Riverhead Bore**	**3.95**	**14**	Pn	Pn	17 35 38.7	-1.3
RVAZ	**Riverhead Bore**	**3.95**	**14**	P	Pn	17 35 38.7	-1.3
WIAZ	**Waiheke Island**	**4.05**	**20**	P	Pn	17 35 40.5	-0.9
RUGZ	**Raukumara Rang**	**4.25**	**53**	P	Pn	17 35 46.2	+1.9
KUZ	**Kuaotunu**	**4.27**	**26**	Pn	Pn	17 35 42.5	-1.9
KUZ	**Kuaotunu**	**4.27**	**26**	P	Pn	17 35 42.5	-1.9
TWGZ	**Tauwhareparae**	**4.31**	**57**	Pn	Pn	17 35 44.0	-1.0
TWGZ	**Tauwhareparae**	**4.31**	**57**	P	Pn	17 35 44.1	-0.9
LBZ	**Lake Benmore**	**4.45**	**211**	Pn	Pn	17 35 47.2	+0.4
LBZ	**Lake Benmore**	**4.45**	**211**	P	Pn	17 35 47.5	+0.6
HAZ	**Te Kaha**	**4.45**	**52**	P	Pn	17 35 47.3	+0.4
WCZ	**Waipu Caves**	**4.73**	**9**	Pn	Pn	17 35 49.3	-1.4
WCZ	**Waipu Caves**	**4.73**	**9**	P	Pn	17 35 49.2	-1.5
JCZ	**Jackson Bay**	**4.85**	**223**	Pn	Pn	17 35 52.8	+0.3
JCZ	**Jackson Bay**	**4.85**	**223**	P	Pn	17 35 52.8	+0.3
ODZ	**Otahua Downs**	**4.86**	**204**	Pn	Pn	17 35 52.7	+0.2
ODZ	**Otahua Downs**	**4.86**	**204**	P	Pn	17 35 52.9	+0.3
WKZ	**Wanaka**	**5.30**	**216**	Pn	Pn	17 35 58.6	+0.1
WKZ	**Wanaka**	**5.30**	**216**	P	Pn	17 36 00.2	+1.7
OUZ	**Omahuta**	**5.39**	**2**	Pn	Pn	17 35 58.5	-1.3
OUZ	**Omahuta**	**5.39**	**2**	P	Pn	17 35 58.9	-0.8
MSZ	**Milford Sound**	**5.71**	**223**	P	Pn	17 36 04.9	+0.7
TUZ	**Tuapeka**	**6.00**	**206**	P	Pn	17 36 08.3	+0.2
WHZ	**Wether Hill Ro**	**6.60**	**215**	P	Pn	17 36 18.5	+2.1

MAN 19 17:56:13.7, 11°.38N×**125°.97E, h6**^{km}**, mb4.5, ML3.3, MS3.1, 1D, Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.57**	**293**	*e*P	Pb	17 56 25.4	-0.6
BESP				*e*S	Sn	17 56 38.3	+0.3
PLP	**Palo**	**1.00**	**258**	⇓*e*P	Pg	17 56 32.3	-0.5
PLP				*e*S	Sg	17 56 44.4	-1.4
OCLP	**Ormoc**	**1.38**	**256**	*e*P	Pn	17 56 39.4	-0.1
OCLP				*e*S	Sn	17 56 58.1	+0.1
CNP	**Catarman**	**1.71**	**311**	*e*P	Pn	17 56 43.2	-0.8
CNP				*e*S	Sg	17 57 12.9	+4.3

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*ZUR **19** 18:10:58.6, 47°.11N×9°.64E, h-2^{km}±2^{km}, ML2.0/10*

*CSEM **19** 18:10:59.2±0.2, 47°.07N×9°.60E, h5^{km}, ML2.5/13, Error ellipse: s-maj=3.6km s-min=2.6km az=171.0*

*ROM **19** 18:10:59.6±0.3, 47°.06N±0°.02×9°.61E±0°.01, h4^{km}±1^{km}, ML2.2/3*

*VIE **19** 18:10:59.1±0.3, 47°.11N×9°.57E, h9^{km}±3^{km}, mb1.8/8, ml2.4/11, Error ellipse: s-maj=2.1km s-min=1.8km az=132.0 4 km SE of Vaduz*

*BGR **19** 18:10:59.5±0.6, 47°.07N×9°.66E, h10^{km}, ML2.1/7, Error ellipse: s-maj=6.7km s-min=3.3km az=163.0*

*LDG **19** 18:10:59.3±0.1, 47°.11N×9°.64E, h2^{km}, Md2.5/2, Ml2.5/10, Error ellipse: s-maj=3.0km s-min=2.2km az=119.0*

*ISCJB **19** 18:10:59.1±0.3, 47°.07N±0°.02×9°.56E±0°.02, h7^{km}±4^{km}, Error ellipse: s-maj=3.5km s-min=2.3km az=0.6*

ISC 19 18:10:59.7±0.9**, 47°.11N**±0°.02×**9°.61E**±0°.01**, h6**^{km}±7^{km}**, n87, σ1^{s}.12**/134**, 10C-10D, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SBUB	**Buchserberg Ma**	**0.13**	**287**	⇓*i*Pg	**Pg**	**18 11 01.9**	**-0.6**
SBUB				*i* Sg	**Sg**	**18 11 05.1**	**+0.8**
SBUB	**Buchserberg Ma**	**0.13**	**287**	⇓*i*Pg	**Pg**	**18 11 01.9**	**-0.6**
SBUB				*i* Sg	**Sg**	**18 11 05.1**	**+0.8**
PLONS	**Plons/SG**	**0.17**	**249**	⇓*i*Pg	**Pg**	**18 11 02.9**	**-0.3**
	259nm,0.5s						
PLONS	**Plons/SG**	**0.17**	**249**	*e*Pg	**Pg**	**18 11 02.9**	**-0.3**
PLONS				*e*Sg	**Sg**	**18 11 06.1**	**+0.6**
PLONS	**Plons/SG**	**0.17**	**249**	⇓*i*Pg	**Pg**	**18 11 02.9**	**-0.3**
PLONS				Sg	**Sg**	**18 11 06.1**	**+0.6**
PLONS	**Plons/SG**	**0.17**	**249**	P	**Pg**	**18 11 02.9**	**-0.3**
PLONS				S	**Sg**	**18 11 06.1**	**+0.6**
LIENZ	**Kamor/St.Gall**	**0.20**	**337**	⇓*i*Pg	**Pg**	**18 11 03.1**	**-0.7**
	406nm,0.6s						
LIENZ	**Kamor/St.Gall**	**0.20**	**337**	⇓*i*Pg	**Pg**	**18 11 03.1**	**-0.7**
DAVA	**Damuels**	**0.26**	**46**	⇓*i*Pg	**Pg**	**18 11 03.9**	**-0.9**
	562nm,0.3s						
DAVA	**Damuels**	**0.26**	**46**	*e*Pg	**Pg**	**18 11 03.9**	**-0.9**
DAVA	**Damuels**	**0.26**	**46**	*e*Pg	**Pg**	**18 11 03.9**	**-0.9**
	31nm,0.2s,SNR=92						
DAVA				*i* Sg	**Sg**	**18 11 08.8**	**+0.6**
	115nm,0.2s						
DAVA	**Damuels**	**0.26**	**46**	Pg	**Pg**	**18 11 03.9**	**-0.9**
	31nm,0.2s,SNR=92						
DAVA				Sg	**Sg**	**18 11 08.8**	**+0.6**
	115nm,0.2s						
SGT04	**Schlatt-Haslen**	**0.31**	**322**	⇑*i*Pg	**Pg**	**18 11 05.5**	**-0.3**
	178nm,0.6s						
SGT04	**Schlatt-Haslen**	**0.31**	**322**	⇑*i*Pg	**Pg**	**18 11 05.5**	**-0.3**
SGT05	**Eggersriet**	**0.35**	**342**	⇑*i*Pg	**Pg**	**18 11 06.7**	**+0.1**
	392nm,0.7s						
SGT05	**Eggersriet**	**0.35**	**342**	⇑*i*Pg	**Pg**	**18 11 06.7**	**+0.1**
DAVOX	**Davos/Dischmat**	**0.38**	**151**	⇑*i*Pg	**Pg**	**18 11 06.7**	**-0.4**
	196nm,0.3s						
DAVOX	**Davos/Dischmat**	**0.38**	**151**	⇑*i*Pg	**Pg**	**18 11 06.7**	**-0.4**
DAVOX	**Davos/Dischmat**	**0.38**	**151**	P	**Pg**	**18 11 06.7**	**-0.4**
SGT00	**Sennhˆ...lsen**	**0.38**	**327**	⇓*i*Pg	**Pg**	**18 11 07.4**	**+0.3**
SGT00	**Sennhˆ...lsen**	**0.38**	**327**	⇓*i*Pg	**Pg**	**18 11 07.4**	**+0.3**
SGT03	**Degersheim**	**0.38**	**313**	⇑*i*Pg	**Pg**	**18 11 07.5**	**+0.3**
	271nm,0.4s						
SGT03	**Degersheim**	**0.38**	**313**	⇑*i*Pg	**Pg**	**18 11 07.5**	**+0.3**
PANIX	**Pigniu (Panix)**	**0.44**	**231**	*e*Pg	**Pg**	**18 11 08.1**	**-0.2**
	98nm,0.2s						
PANIX	**Pigniu (Panix)**	**0.44**	**231**	*e*Pg	**Pg**	**18 11 08.1**	**-0.2**
WILA	**Wila**	**0.57**	**303**	*e*Pg	**Pg**	**18 11 11.0**	**+0.3**
	544nm,0.3s						
WILA	**Wila**	**0.57**	**303**	*e*Pg	**Pg**	**18 11 11.1**	**+0.4**
WILA				*e*Sg	**Sb**	**18 11 19.6**	**-0.9**
WILA	**Wila**	**0.57**	**303**	*e*Pg	**Pg**	**18 11 11.0**	**+0.3**
WILA				Sg	**Sb**	**18 11 19.6**	**-0.9**
TUE	**Stuetta**	**0.66**	**196**	P	**Pg**	**18 11 12.0**	**-0.5**
TUE				AML	AML		
	comp=E,42µm,1.5s						
TUE				AML	AML		
	comp=N,27µm,0.7s						
TUE				AML	AML		
	comp=E,42µm,1.5s						
TUE				AML	AML		
	comp=N,27µm,0.7s						
TUE				AML	AML		
	comp=E,42µm,1.5s						
TUE				AML	AML		
	comp=N,27µm,0.7s						
FUORN	**Ofenpass-Fuorn**	**0.66**	**137**	P	**Pg**	**18 11 12.1**	**-0.4**
FUORN				S	**Sb**	**18 11 22.8**	**-0.6**
UBR	**Ueberruh**	**0.67**	**30**	⇓*i*Pg	**Pb**	**18 11 12.6**	**-1.1**
UBR	**Ueberruh**	**0.67**	**30**	*e*Pg	**Pb**	**18 11 12.7**	**-1.1**
UBR				*e*Sg	**Sb**	**18 11 22.1**	**-1.2**
UBR	**Ueberruh**	**0.67**	**30**	Pg	**Pb**	**18 11 12.7**	**-1.1**
UBR				Sg	**Sb**	**18 11 22.1**	**-1.2**
MUO	**Muotathal**	**0.68**	**258**	⇑*i*Pg	**Pg**	**18 11 12.6**	**-0.2**
	comp=N,120nm,0.5s						
MUO	**Muotathal**	**0.68**	**258**	⇑*i*Pg	**Pg**	**18 11 12.6**	**-0.2**
FETA	**Feichten**	**0.77**	**96**	*e*Pg	**Pg**	**18 11 13.8**	**-0.7**
FETA				Sg	**Sb**	**18 11 26.1**	**-0.2**
	comp=N,3.3nm,0.2s,SNR=5.0						
FETA	**Feichten**	**0.77**	**96**	Pg	**Pg**	**18 11 13.8**	**-0.7**
FETA				Sg	**Sb**	**18 11 26.1**	**-0.2**
	comp=N,3.3nm,0.2s,SNR=5.0						
BNALP	**Bannalp**	**0.85**	**254**	P	**Pg**	**18 11 15.8**	**-0.1**
RETA	**Reutte**	**0.87**	**64**	*e*Sg	**Sn**	**18 11 30.0**	**-1.6**
	comp=N,12nm,0.2s						
RETA	**Reutte**	**0.87**	**64**	Sg	**Sn**	**18 11 30.0**	**-1.6**
	comp=N,12nm,0.2s						
FUSIO	**Fusio**	**0.92**	**225**	P	**Pg**	**18 11 17.4**	**0.0**
SLE	**Schleitheim**	**1.00**	**311**	*e*Pg	**Pg**	**18 11 18.9**	**-0.1**
SLE				*e*Sg	**Sb**	**18 11 33.3**	**+0.3**
SLE	**Schleitheim**	**1.00**	**311**	Pg	**Pg**	**18 11 18.9**	**-0.1**
SLE				Sg	**Sb**	**18 11 33.3**	**+0.3**
SULZ	**Cheisacher**	**1.10**	**293**	*e*Pg	**Pn**	**18 11 22.2**	**+0.5**
SULZ				*e*Sg	**Sb**	**18 11 36.4**	**+0.5**
SULZ	**Cheisacher**	**1.10**	**293**	Pg	**Pn**	**18 11 22.2**	**+0.5**
SULZ				Sg	**Sb**	**18 11 36.4**	**+0.5**
BALST	**Balsthal**	**1.33**	**281**	*e*Pn	**Pn**	**18 11 24.3**	**-0.5**
BALST				*e*Pg	**Pg**	**18 11 26.0**	**+0.8**
BALST				*e*Sg	**Sn**	**18 11 43.2**	**+0.4**
BALST	**Balsthal**	**1.33**	**281**	Pn	**Pn**	**18 11 24.3**	**-0.5**
BALST	**Balsthal**	**1.33**	**281**	Pg	**Pg**	**18 11 26.0**	**+0.8**
BALST				Sg	**Sn**	**18 11 43.2**	**+0.4**
WATA	**Walderalm**	**1.36**	**80**	*e*Pg	**Pb**	**18 11 27.5**	**+1.9**
	comp=N,2.5nm,0.2s						
WATA				Sg	**Sn**	**18 11 46.7**	**+3.0**
	comp=N,4.6nm,0.2s						
WATA	**Walderalm**	**1.36**	**80**	Pg	**Pb**	**18 11 27.5**	**+1.9**
	comp=N,2.5nm,0.2s						
WATA				Sg	**Sn**	**18 11 46.7**	**+3.0**
	comp=N,4.6nm,0.2s						
VARE	**Varese**	**1.37**	**205**	P	**Pn**	**18 11 25.3**	**-0.2**
VARE				AML	AML		
	comp=E,99µm,0.9s						
VARE				AML	AML		
	comp=N,110µm,0.4s						
VARE				AML	AML		
	comp=E,99µm,0.9s						
VARE				AML	AML		
	comp=N,110µm,0.4s						
WTTA	**Wattenberg**	**1.39**	**83**	*e*Pg	**Pg**	**18 11 27.7**	**+1.3**
	comp=N,1.3nm,0.2s						
WTTA				Sg	**Sn**	**18 11 47.9**	**+3.3**
	comp=N,16nm,0.4s						
WTTA	**Wattenberg**	**1.39**	**83**	Pg	**Pg**	**18 11 27.7**	**+1.3**
	comp=N,1.3nm,0.2s						
WTTA				Sg	**Sn**	**18 11 47.9**	**+3.3**
	comp=N,16nm,0.4s						
BFO	**Black Forest**	**1.50**	**325**	*e*Pg	**Pg**	**18 11 28.2**	**-0.2**
BFO	**Black Forest**	**1.50**	**325**	Pg	**Pg**	**18 11 28.2**	**-0.2**
RISI	**Rein**	**1.70**	**95**	P	**Pb**	**18 11 31.0**	**-0.4**
RISI				AML	AML		
	comp=E,73µm,0.6s						
RISI				AML	AML		
	comp=N,220µm,0.5s						
RISI				AML	AML		
	comp=E,73µm,0.6s						
RISI				AML	AML		
	comp=N,220µm,0.5s						
ECH	**Echery**	**1.99**	**305**	*e*Pn	**Pn**	**18 11 33.6**	**-0.4**
ECH				*e*Sg	**Sg**	**18 12 03.7**	**-0.1**
ECH	**Echery**	**1.99**	**305**	Pn	**Pn**	**18 11 33.6**	**-0.4**
ECH				Sg	**Sg**	**18 12 03.7**	**-0.1**
HINF	**Hinteralfeld**	**2.00**	**292**	*e*Pn	**Pn**	**18 11 33.0**	**-1.1**
HINF				*e*Sg	**Sb**	**18 12 02.9**	**+1.2**
	comp=N,6.7nm,0.3s						
HINF	**Hinteralfeld**	**2.00**	**292**	*e*Pn	**Pn**	**18 11 33.0**	**-1.1**
HINF				*e*Sg	**Sb**	**18 12 02.9**	**+1.2**
	comp=N,3.3nm,0.3s						
CDF	**Champ du Feu**	**2.04**	**310**	*e*Pn	**Pn**	**18 11 34.3**	**-0.4**
CDF				*e*Sg	**Sg**	**18 12 04.6**	**-0.8**
	comp=N,27nm,0.7s						
CDF	**Champ du Feu**	**2.04**	**310**	*e*Pn	**Pn**	**18 11 34.3**	**-0.4**
CDF				*e*Sg	**Sg**	**18 12 04.6**	**-0.8**
	comp=N,13nm,0.7s						
HAU	**Haudompre**	**2.38**	**293**	*e*P	**Pn**	**18 11 39.2**	**-0.1**
HAU				*e*Sg	**Sb**	**18 12 13.7**	**+1.0**
	comp=N,10nm,0.3s						
HAU	**Haudompre**	**2.38**	**293**	*e*P	**Pn**	**18 11 39.2**	**-0.1**
HAU				*e*Sg	**Sb**	**18 12 13.7**	**+1.0**
	comp=N,5.1nm,0.3s						
CABF	**La Chapelle**	**2.47**	**260**	*e*Pg	**Pg**	**18 11 46.2**	**-0.8**
CABF				*e*Sg	**Sg**	**18 12 18.1**	**-0.9**
	comp=N,5.0nm,0.5s						
CABF	**La Chapelle**	**2.47**	**260**	*e*Pg	**Pg**	**18 11 46.2**	**-0.8**
CABF				*e*Sg	**Sg**	**18 12 18.1**	**-0.9**
	comp=N,2.5nm,0.5s						
KBA	**Koelnbreinsper**	**2.55**	**89**	Pg	**Pg**	**18 11 47.4**	**-1.2**
	comp=N,0.1nm,0.0s						
KBA				Sg	**Sg**	**18 12 22.1**	**+0.4**
	comp=N,1.4nm,0.3s						
KBA	**Koelnbreinsper**	**2.55**	**89**	Pg	**Pg**	**18 11 47.4**	**-1.2**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	comp=N,0.1nm,0.0s						
KBA				Sg	Sg	18 12 22.1	+0.4
	comp=N,1.4nm,0.3s						
LPL	La Plagne	2.55	232	*e*Pg	Pg	18 11 47.6	-1.0
LPL				*e*Sg	Sg	18 12 21.9	+0.2
	comp=N,4.5nm,0.6s						
LPL	La Plagne	2.55	232	*e*Pg	Pg	18 11 47.6	-1.0
LPL				*e*Sg	Sg	18 12 21.9	+0.2
	comp=N,2.2nm,0.6s						
LPG	La Plagne	2.55	232	*e*Pg	Pb	18 11 46.7	+0.6
LPG				*e*Sg	Sg	18 12 20.6	-1.2
	comp=N,16nm,0.9s						
LPG	La Plagne	2.55	232	*e*Pg	Pb	18 11 46.7	+0.6
LPG				*e*Sg	Sg	18 12 20.6	-1.2
	comp=N,7.8nm,0.9s						
PAGF	Fort de Pagny	2.99	300	*e*P	Pn	18 11 48.3	+0.6
PAGF	Fort de Pagny	2.99	300	*e*P	Pn	18 11 48.3	+0.6
MBDF	Montbardon	3.10	221	*e*Pg	Pb	18 11 56.6	+1.3
MBDF				*e*Sg	Sg	18 12 37.3	-1.9
	comp=N,8.4nm,0.6s						
MBDF	Montbardon	3.10	221	*e*Pg	Pb	18 11 56.6	+1.3
MBDF				*e*Sg	Sg	18 12 37.3	-1.9
	comp=N,4.2nm,0.6s						
MOA	Molln	3.24	75	Pg	Pg	18 12 00.6	-1.2
	comp=N,0.3nm,0.1s						
MOA	Molln	3.24	75	Pg	Pg	18 12 00.6	-1.2
	comp=N,0.3nm,0.1s						
ORIF	Oris-en-Rattie	3.40	231	*e*Pg	Pg	18 12 03.0	-1.8
ORIF				*e*Sg	Sg	18 12 46.4	-2.5
	comp=N,2.3nm,0.4s						
ORIF	Oris-en-Rattie	3.40	231	*e*Pg	Pg	18 12 03.0	-1.8
ORIF				*e*Sg	Sg	18 12 46.4	-2.5
	comp=N,1.1nm,0.4s						
LOR	Lormes	3.93	274	*e*P	Pn	18 12 02.0	+1.5
	baz=97						
LOR				*e*Sg	Sg	18 13 02.8	-2.9
	comp=N,2.3nm,0.3s						
LOR	Lormes	3.93	274	*e*P	Pn	18 12 02.0	+1.5
LOR				*e*Sg	Sg	18 13 02.8	-2.9
	comp=N,1.1nm,0.3s						
SSF	Saint Saulge	4.17	272	*e*P	Pn	18 12 04.5	+0.6
SSF	Saint Saulge	4.17	272	*e*P	Pn	18 12 04.5	+0.6
GIVF	Givet	4.37	315	*e*Pn	Pn	18 12 04.7	-1.8
GIVF	Givet	4.37	315	*e*Pn	Pn	18 12 04.7	-1.8
BRG	Berggiesshubel	4.72	36	SG	Sg	18 13 31.8	+0.4
	comp=N,3.8nm,0.8s						

DJA 19 18:19:17.2±0.8**, 1°S**±5°×**13°7E**±°**, h17km**±8km**, M4.0**/7**,**
MLv4.0/7**, Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BAKI	Biak	0.98	273	P	Pb	18 19 34.2	-1.6
SRPI	Serui, Papua	1.05	234	P	Pb	18 19 35.5	-1.4
SRPI				S	Sb	18 19 50.4	0.0
RKPI	Ransiki, Papua	2.92	265	P	Pn	18 20 03.3	+0.3
RKPI				S	Sn	18 20 38.8	+1.1
GENI	Genyem	3.35	113	P	Pn	18 20 09.0	+0.1
GENI				S	Sn	18 20 50.1	+1.8
JAY	Jayapura	3.83	109	P	Pn	18 20 15.2	-0.2

MEX 19 18:28:50.5±0.6**, 14°.68N×93°.89W, h15km, MD4.0, Near**
coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.21	32	*e*P	Pn	18 29 08.6	-4.3
PCIG				*i* S	Sb	18 29 23.7	-4.8
TGIG		2.22	19	*i* P	Pn	18 29 23.9	-2.9
TGIG				*i* S	Sn	18 29 50.4	-3.6
CCIG	Comitan	2.33	46	*e*P	Pn	18 29 25.8	-2.6
CCIG				*i* S	Sn	18 29 52.8	-4.0
HUIG	Huatulco	2.40	297	*i* P	Pn	18 29 27.1	-2.2
HUIG				*e*S	Sn	18 29 54.9	-3.5

NNC 19 18:31:40.9±2.9**, 37°.08N×70°.76E, h0km, mb3.9, mpv3.5,**
8C, Error ellipse: s-maj=23.2km s-min=20.5km az=144.0,
Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.63	35	⇑Pn	Pn	18 32 38.5	-0.1
	2.2nm,0.3s						
SFK				⇑Sn	Sn	18 33 24.0	+1.8
	4.3nm,0.2s						
AML	Almayashu	5.53	23	P	Pn	18 33 03.9	-0.9
	SNR=21						
MNAS	Manas	5.56	13	⇑Pn	Pn	18 33 05.3	+0.3
	1.2nm,0.4s						
MNAS				⇑Sn	Sn	18 34 10.1	+0.4
	6.6nm,0.4s						
KK31	Karatay Array	6.02	358	⇑Pn	Pn	18 33 12.2	+1.0
	2.6nm,0.4s,baz=179,slow=13,SNR=97						
KK31				⇑Sn	Sn	18 34 22.5	+1.8
	0.9nm,0.3s,baz=186,slow=24,SNR=7.7						
EKS2	Erkin-Say	6.03	22	P	Pn	18 33 11.4	-0.1
	SNR=12						
AAK	Ala-Archa	6.25	26	⇑Pn	Pn	18 33 13.1	-1.3
	3.8nm,0.4s						
AAK				⇑Sn	Sn	18 34 26.6	+0.1
	5.4nm,0.8s						
AAK	Ala-Archa	6.25	26	P	Pn	18 33 13.3	-1.1
	SNR=7.7						
USP	Ospenovka	6.80	24	P	Pn	18 33 20.9	-1.1
	SNR=6.0						
TKM2	Tokmak 2	6.91	31	P	Pn	18 33 21.8	-1.8
	SNR=7.3						

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*IDC **19** 19:01:44.1±2.1, 6°.05S×147°.23E, h0km, mb3.4/2,*
mb1 3.8/5, mb1mx3.6/44, mbtmp3.7/5, ML3.8/2, MS3.6/1,
Ms1 3.6/1, ms1mx2.6/22, Error ellipse: s-maj=65.4km
s-min=22.6km az=90.0
*ISCJB **19** 19:01:52.4±2.2, 6°.2S±0°.1×147°.1E±0°.3, h78km, mb3.2/2,*
Error ellipse: s-maj=49.4km s-min=13.9km az=168.7
ISC 19 19:01:53.2±2.1**, 6°.3S**±0°.1×**147°.2E**±0°.4**, h78km, n7,** σ**1s.59**/7**,**
Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.14	182	Pn	Pn	19 02 38.8	-1.7
	13nm,0.3s,baz=6.8,slow=4.8,SNR=46						
PMG				Sn	Sn	19 03 18.7	+1.8
	15nm,0.3s,baz=28,slow=23,SNR=6.0						
CTA	Charters Tower	13.79	184	Pn	Pn	19 05 05.8	+0.4
	0.3nm,0.3s,baz=356,slow=16,SNR=3.7						
WRA	Warramunga Arr	18.51	221	P	Pn	19 06 03.5	-0.9
	0.3nm,0.3s,baz=49,slow=11,SNR=16						
ASAR	Alice Springs	21.55	215	P	P	19 06 37.0	+0.6
	1.1nm,0.4s,baz=50,slow=8.5,SNR=35						
DZM	Mont Dzumac	24.32	132	LR	LR	19 14 36.9	
	comp=Z,124nm,18.2s,baz=226,slow=32						
MKAR	Makanchi Array	77.84	320	P	P	19 13 43.5	+1.2
	0.1nm,0.5s,baz=98,slow=6.1,SNR=2.8						
TORD	Torodi Ar. Bea	145.39	284	PKPbc	PKPbc	19 21 22.2	-1.1
	baz=80,slow=3.8						

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*IDC **19** 19:03:08.8±1.7, 46°.21N×154°.33E, h0km, mb3.8/6,*
mb1 3.9/9, mb1mx3.6/66, mbtmp3.9/9, ML3.6/1, MS2.7/3,
Ms1 2.7/3, ms1mx2.3/64, Error ellipse: s-maj=50.2km
s-min=21.7km az=175.0
*ISCJB **19** 19:03:10.1±1.3, 46°.3N±0°.2×154°.3E±0°.2, h19km, mb3.8/6,*
MS2.9/1, Error ellipse: s-maj=31.5km s-min=12.9km
az=155.5
ISC 19 19:03:11.7±1.5**, 46°.2N**±0°.2×**154°.3E**±0°.1**, h19km, n10,**
σ**1s.35**/9**, mb3.8**/6**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	7.26	17	Pn	Pn	19 04 57.1	+0.3
	baz=187,slow=11						
PETK				LR	LR	19 07 59.9	
	comp=Z,59nm,19.8s,baz=166,slow=40						
ASAJ	Asahikawa	8.51	260	Pn	Pn	19 05 15.3	+1.5
	0.8nm,0.3s,baz=89,slow=9.5,SNR=7.3						
ASAJ				LR	LR	19 10 03.0	
	comp=Z,26nm,18.1s,baz=327,slow=48						
USRK	Ussuriysk Ar.	15.83	271	Pn	P	19 06 54.7	-2.3
	baz=65,slow=13						
MKAR	Makanchi Array	47.90	298	P	P	19 11 49.0	+0.5
	0.6nm,0.7s,baz=57,slow=8.8,SNR=5.9						
KURBB	Kurchatov Arra	48.42	304	P	P	19 11 50.9	-1.5
	0.6nm,0.6s,baz=66,slow=9.1,SNR=3.6						
NVAR	Mina Array Bea	61.98	63	P	P	19 13 30.8	+0.1
	0.3nm,0.6s,baz=308,slow=5.0,SNR=2.9						
FINES	FINESS Array B	64.87	335	P	P	19 13 49.7	+0.6
	2.2nm,1.0s,baz=46,slow=5.5,SNR=4.6						
NOA	NORSAR Array B	69.00	342	LR	LR	19 48 33.3	
	comp=Z,6.2nm,18.8s,baz=35,slow=40						
HFS	Hagfors	69.25	340	P	P	19 14 17.2	+0.3
	0.4nm,0.4s,baz=56,slow=5.4,SNR=6.9						
TXAR	Lajitas Array	77.06	61	P	P	19 15 03.4	-0.3
	0.4nm,0.6s,baz=298,slow=3.6,SNR=7.1						

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*ISN **19** 19:11:42.0±0.3, 37°.24N×42°.73E, h0km, ML2.4*
*ISK **19** 19:11:57.5, 37°.28N×42°.48E, h5km, ML2.3/4*
*ISCJB **19** 19:11:58.4±1.0, 37°.26N±0°.05×42°.51E±0°.04, h0km±7km,*
Error ellipse: s-maj=8.9km s-min=4.8km az=24.2
*CSEM **19** 19:11:58.5±0.3, 37°.26N×42°.50E, h2km, ML2.3, Error*
ellipse: s-maj=7.8km s-min=3.0km az=18.0
*DDA **19** 19:11:58.3, 37°.27N×42°.51E, h7km, Ml2.6*
ISC 19 19:11:58.4±1.4**, 37°.27N**±0°.06×**42°.54E**±0°.03**, h6km**±11km**,**
n23, σ**0s.51**/40**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIRT	Sirnak	0.25	342	PG	Pg	19 12 02.9	-0.5
SIRT				SG	Sg	19 12 06.9	+0.2
SIRT	Sirnak	0.25	342	*e*Pg	Pg	19 12 02.9	-0.5
SIRT				*e*Sg	Sg	19 12 06.9	+0.2
SIRN	S˜–rnak	0.25	337	*i* P	Pg	19 12 03.0	-0.4
SIRN				*i* S	Sg	19 12 06.5	-0.2
SIRN	S˜–rnak	0.25	337	P	Pg	19 12 03.0	-0.4
SIRN				S	Sg	19 12 06.6	-0.2
CUKT	Cukurca	0.85	91	PG	Pb	19 12 15.7	0.0
CUKT				SG	Sn	19 12 29.5	-0.4
CUKT	Cukurca	0.85	91	*i* P	Pb	19 12 15.4	-0.3
CUKT				*i* S	Sn	19 12 29.2	-0.7
CUKT	Cukurca	0.85	91	P	Pb	19 12 15.4	-0.3
CUKT	Cukurca	0.85	91	*e*Pg	Pb	19 12 15.7	0.0
CUKT				S	Sn	19 12 29.2	-0.7
SRTM	Siirt_Merkez	0.88	326	*i* P	Pg	19 12 15.4	+0.2
SRTM				*i* S	Sb	19 12 27.9	-0.2
SRTM	Siirt_Merkez	0.88	326	P	Pg	19 12 15.4	+0.2
SRTM				S	Sb	19 12 27.9	-0.2
HAKT	HAKKARI	0.98	72	*i* P	Pg	19 12 17.3	+0.1
HAKT				*i* S	Sb	19 12 31.6	+0.5
HAKT	HAKKARI	0.98	72	P	Pg	19 12 17.3	+0.1
HAKT				S	Sb	19 12 31.6	+0.5
BTMN	Batman	1.19	302	*i* P	Pg	19 12 21.6	+0.4
BTMN	Batman	1.19	302	P	Pg	19 12 21.6	+0.4
GURO	Guroymak-BITLI	1.34	343	PN	Pb	19 12 24.1	0.0
GURO				SN	Sg	19 12 43.1	+1.4
GURO	Guroymak-BITLI	1.34	343	*e*Pn	Pb	19 12 24.1	0.0
GURO				*e*Sn	Sg	19 12 43.1	+1.4
SVAN	Silvan-Diyarba	1.38	310	PN	Pb	19 12 24.5	-0.2
SVAN				SN	Sg	19 12 43.7	+0.8
SVAN	Silvan-Diyarba	1.38	310	*i* P	Pb	19 12 24.3	-0.4
SVAN				*i* S	Sg	19 12 43.4	+0.5
SVAN	Silvan-Diyarba	1.38	310	P	Pb	19 12 24.3	-0.4
SVAN	Silvan-Diyarba	1.38	310	*e*Pn	Pb	19 12 24.5	-0.2
SVAN				S	Sg	19 12 43.4	+0.5
MARD	Mardin	1.40	273	*i* P	Pn	19 12 24.2	-0.4
MARD				*i* S	Sg	19 12 44.0	+0.4
MAZI	Mazidag	1.68	277	PN	Pn	19 12 28.5	+0.1
MAZI	Mazidag	1.68	277	*e*Pn	Pn	19 12 28.5	+0.1

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*IDC **19** 19:14:40.6±2.4, 5°.60S×146°.28E, h0km, mb3.3/3,*
mb1 3.7/6, mb1mx3.5/39, mbtmp3.5/6, ML3.7/2, MS3.2/7,
Ms1 3.2/7, ms1mx2.9/25, Error ellipse: s-maj=64.2km
s-min=23.9km az=81.0
ISC 19 19:14:46.5±6.3**, 5°.7S**±0°.5×**146°.2E**±0°.5**, h35km, n11,**
σ**0s.22**/5**, mb3.4**/3**, MS3.1**/5**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.77	165	Pn	Pn	19 15 42.1	-0.1
	7.6nm,0.3s,baz=0.0,slow=9.1,SNR=30						
PMG				Sn	Sn	19 16 25.3	-0.1
	18nm,0.3s,baz=104,slow=23,SNR=10.0						
PMG				LR	LR	19 17 25.2	
	comp=Z,244nm,18.6s,baz=354,slow=42						
HNR	Honiara	14.13	106	LR	LR	19 22 27.4	
	comp=Z,94nm,20.1s,baz=238,slow=33						
CTA	Charters Tower	14.26	180	Pn	Pn	19 18 06.3	+0.2
	0.4nm,0.3s,baz=346,slow=14,SNR=3.8						
WRA	Warramunga Arr	18.22	218	P	P	19 18 56.6	-0.2
	0.2nm,0.3s,baz=38,slow=11,SNR=10						
ASAR	Alice Springs	21.39	212	P	P	19 19 31.4	+0.1
	0.5nm,0.7s,baz=50,slow=9.1,SNR=12						
ASAR				LR	LR	19 28 52.8	
	comp=Z,107nm,19.8s,baz=51,slow=40						
DZM	Mont Dzumac	25.45	132	LR	LR	19 28 20.3	
	comp=Z,97nm,18.3s,baz=330,slow=32						
JNU	Nakatsue	41.29	340	LR	LR	19 37 30.3	
	comp=Z,11nm,18.1s,baz=123,slow=33						
MJAR	Matsushiro Arr	42.72	351	LR	LR	19 39 44.8	
	comp=Z,20nm,18.8s,baz=115,slow=35						
KSRS	Korea Array	46.22	340	LR	LR	19 42 00.9	
	comp=Z,20nm,20.0s,baz=188,slow=36						
CMAR	Chiang Mai Arr	52.41	298	P	P	19 23 55.2	-0.7
	0.3nm,0.3s,baz=120,slow=6.5,SNR=3.7						
MKAR	Makanchi Array	76.78	321	P	P	19 26 34.2	-0.5
	0.3nm,0.8s,baz=126,slow=6.6,SNR=2.5						

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*IDC **19** 19:22:33.0±3.9, 13°.69N×124°.88E, h0km, mb3.4/3,*
mb1 3.6/3, mb1mx3.3/56, mbtmp3.4/3, MS2.3/1, Ms1 2.3/1,
ms1mx2.1/37, Error ellipse: s-maj=310.5km s-min=26.4km
az=64.0
*MAN **19** 19:23:04.7, 10°.40N×124°.93E, h1km, mb4.6, ML3.5, MS3.4*
ISC 19 19:23:04.3±1.2**, 10°.38N**±0°.04×**124°.98E**±0°.07**, h13km**±9km**,**
n10, σ**2s.55**/15**, 1C-1D, Leyte**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSLP	Maasin	0.27	205	*e*P	Pg	19 23 10.6	+0.7
MSLP				*e*S	Sb	19 23 17.5	+2.1
OCLP	Ormoc	0.76	332	*e*P	Pb	19 23 19.2	-0.1
OCLP				*e*S	Sn	19 23 37.9	+5.9
PLP	Palo	0.78	0	⇓*e*P	Pg	19 23 19.0	-0.5
PLP				*e*S	Sb	19 23 30.2	0.0
LLP	Lapu-Lapu	0.99	267	*e*P	Pg	19 23 23.1	-0.4
LLP				*e*S	Sn	19 23 39.2	+1.4
BESP	Borongan	1.30	20	*e*P	Pn	19 23 27.2	-0.9
BESP				*e*S	Sg	19 23 49.8	+3.6
CNP	Catarman	2.14	352	*e*P	Pb	19 23 41.8	-1.1
CNP				*e*S	Sg	19 24 11.2	-1.9
RCP	Roxas	2.48	298	⇑*e*P	Pb	19 23 47.0	-1.8
GUMO	Guam	19.72	79	LR	LR	19 33 36.2	
	comp=Z,9.3nm,19.2s,baz=261,slow=34						
WRA	Warramunga Arr	31.51	163	P	P	19 29 23.5	-2.7
	0.5nm,1.0s,baz=346,slow=9.3,SNR=2.5						
ASAR	Alice Springs	34.95	166	P	P	19 29 55.5	-0.6
	0.2nm,0.3s,baz=339,slow=7.2,SNR=5.4						

MAN 19 19:40:33.1, 10°.06N×122°.43E, h28km, mb4.0, ML2.7,
MS2.3, 1C-1D, Panay

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIM	Jordan	0.58	15	*e*P	Pb	19 40 45.1	+0.3
GUIM				*e*S	Sn	19 40 55.1	+0.9
SNPH	Sibulan	1.07	132	⇑*i*P	Pn	19 40 52.5	+0.2
SNPH				*i* S	Sn	19 41 06.0	-0.2
RCP	Roxas	1.52	12	⇓*e*P	Pb	19 41 03.8	+3.1
CUYO	Cuyo Island	1.60	300	*e*P	Pn	19 40 59.9	+0.3
CUYO				*e*S	Sn	19 41 18.9	-0.3
SJMP	San Jose	2.71	332	*e*P	Pn	19 41 16.0	+1.1
SJMP				*e*S	Sn	19 41 48.9	+2.1

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*IDC **19** 19:47:40.4±0.5, 7°.40S×125°.79E, h0km, mb4.4/23,*
mb1 4.4/24, mb1mx4.3/54, mbtmp4.3/24, ML3.7/1, MS3.2/10,
Ms1 3.2/10, ms1mx3.0/48, Error ellipse: s-maj=24.9km
s-min=11.3km az=70.0
*BJI **19** 19:47:41.0, 7°.40S×125°.90E, h15km, mb4.4/9, mB4.5/5,*
Ms4.1/1
*ISCJB **19** 19:47:44.0±0.4, 7°.32S±0°.04×125°.93E±0°.05, h33km,*
mb4.3/32, MS3.2/9, Error ellipse: s-maj=6.8km
s-min=5.4km az=9.5
*NEIC **19** 19:47:45.4±0.3, 7°.50S×125°.78E, h35km, mb4.6/5, Error*
ellipse: s-maj=15.6km s-min=7.7km az=68.0
*DJA **19** 19:47:46.9±0.4, 7°S±2°×12°6E±°, h10km, M4.5/13, mB5.3/2,*
mb4.5/12, MLv4.4/13, Mw(mB)4.7/2
ISC 19 19:47:45.9±0.5**, 7°.37S**±0°.06×**125°.92E**±0°.07**, h35km, n65,**
σ**1s.20**/60**, mb4.4**/32**, MS3.1**/9**, 1C, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	2.88	214	P	Pn	19 48 30.9	+1.5
BATI	Baumata	3.60	218	P	Pn	19 48 40.0	+0.8
BATI				S	Sn	19 49 23.0	+2.5
MMRI	Maumere	3.86	251	P	Pn	19 48 41.4	-1.3
NLAI	Namlea	4.26	16	P	Pn	19 49 00.6	+12
AAI	Ambon	4.30	32	P	Pn	19 48 57.9	+9.1
EDFI	Ende, Flores	4.41	252	P	Pn	19 48 49.5	-0.9
KDI	Kendari	4.72	316	P	Pn	19 48 53.4	-1.2
WSI	Waingapu	6.01	247	P	Pn	19 49 12.8	+0.4
BKSI	Bulukumba	6.11	289	P	Pn	19 49 12.1	-1.6
	58nm,0.8s,559nm						
BKSI				S	Sn	19 50 20.6	-1.8
	58nm,0.8s,559nm						
WBSI	Waikabubak, Su	6.84	250	P	Pn	19 49 26.3	+2.5
LBMI	Labuha	6.87	13	P	Pn	19 49 26.7	+2.6
SPSI	Sidrap Palu	6.99	299	P	Pn	19 49 25.5	-0.3
	23nm,0.7s						
LUWI	Luwuk	7.02	333	P	Pn	19 49 26.3	0.0
TTSI	Tana Toraja	7.44	305	P	Pn	19 49 32.9	+0.9
	27nm,0.8s						
PLAI	Plampang	8.19	259	P	Pn	19 49 44.3	+2.0
MRSI	Marisa	8.74	333	P	Pn	19 49 50.3	+0.4
PCI	Palu	8.83	316	P	Pn	19 49 51.9	+0.8
	37nm,0.9s						
MPSI	Mapaga	9.73	322	P	Pn	19 50 05.5	+2.1
DAV	Davao City (W)	14.35	359	LR	LR	19 56 48.1	
	comp=Z,95nm,21.4s,baz=160,slow=38						
WRAB	Tennant Creek	14.93	148	*e*P	Pn	19 51 09.6	-4.9
	8.9nm,0.7s						
WRA	Warramunga Arr	14.93	148	Pn	Pn	19 51 09.5	-5.0
	0.6nm,0.3s,baz=319,slow=14,SNR=23						
WRA				Sn	Sn	19 53 45.9	-13
	2.0nm,0.3s,baz=336,slow=22,SNR=9.2						
MBWA	Marble Bar	14.96	203	*e*P	Pn	19 51 09.3	-5.5
ASAR	Alice Springs	17.93	156	P	Pn	19 51 49.9	-2.7
	0.2nm,0.3s,baz=325,slow=9.7,SNR=20						
ASAR				S	Sn	19 55 00.5	-11
	0.5nm,0.3s,baz=317,slow=18,SNR=10.0						
ASAR				LR	LR	19 58 38.0	
	comp=Z,198nm,22.0s,baz=342,slow=37						
CTA	Charters Tower	23.42	125	P	P	19 52 52.6	+0.6
	2.0nm,0.5s,baz=317,slow=11,SNR=5.7						
CTAO	Charters Tower	23.42	125	*e*P	P	19 52 52.1	+0.2
GUMO	Guam	28.06	42	LR	LR	20 06 31.8	
	comp=Z,13nm,18.3s,baz=224,slow=40						
STKA	Stephens Creek	28.43	151	P	P	19 53 37.7	+0.3
	4.0nm,0.6s,baz=320,slow=10,SNR=17						
STKA				LR	LR	20 06 22.7	
	comp=Z,74nm,19.8s,baz=338,slow=39						
PANO	Nakornpanom	32.20	319	P	P	19 54 13.2	+2.4
	0.3nm,1.0s,229nm						
SKNT	Sakolnakorn	32.49	318	P	P	19 54 15.2	+1.8
	3.4nm,1.2s						
CMAR	Chiang Mai Arr	36.97	314	P	P	19 54 52.5	+0.4
	4.4nm,0.7s,baz=144,slow=7.0,SNR=31						
CMAR				LR	LR	20 11 29.9	
	comp=Z,34nm,19.3s,baz=160,slow=39						
CMMT	Chiang Mai	37.20	315	P	P	19 54 55.5	+1.4
	9.2nm,1.3s						
CHTO	Chiang Mai	37.20	315	*e*P	P	19 54 54.6	+0.5
	4.2nm,1.0s						
CHTO	Chiang Mai	37.20	315	P	P	19 54 55.6	+1.5
	41nm,1.3s						
JNU	Nakatsue	40.54	6	LR	LR	20 10 08.4	
	comp=Z,25nm,22.0s,baz=120,slow=33						
KSAR	Wonju Array Be	44.61	2	P	P	19 55 54.1	-0.7
KSAR				PcP	PP	19 57 38.4	-1.1
KSRS	Korea Array	44.62	2	P	P	19 55 54.1	-0.8
	0.8nm,0.7s,baz=191,slow=5.0,SNR=2.7						
KSRS				PcP	PcP	19 57 38.4	+1.1
	1.5nm,0.7s,baz=173,slow=4.3,SNR=4.2						
KSRS				LR	LR	20 17 41.0	
	comp=Z,21nm,18.0s,baz=203,slow=40						
MJAR	Matsushiro Arr	45.17	14	P	P	19 55 59.1	-0.2
	4.5nm,0.9s,baz=193,slow=9.6,SNR=6.9						
MJAR				LR	LR	20 13 55.5	
	comp=Z,20nm,20.1s,baz=240,slow=35						
LSA	Lhasa	49.75	319	*e*P	P	19 56 36.5	+0.8
	3.6nm,0.8s						
USRK	Ussuriysk Ar.	51.62	6	P	P	19 56 49.4	+0.6
	3.4nm,0.7s,baz=207,slow=7.1						
GTA	Gaotai	52.45	335	⇑P	P	19 56 55.8	+0.5
GTA				pP	pP	19 56 59.8	-6.0
GTA				sP	sP	19 57 02.8	-7.2
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,37nm,4.9s						
GTA				LR	LR		
	comp=N,83nm,18.7s						
GTA				LR	LR		
	comp=E,58nm,17.8s						
ASAJ	Asahikawa	53.42	15	LR	LR	20 18 49.3	
	comp=Z,23nm,20.4s,baz=204,slow=35						
RPZ	Rata Peaks	53.48	140	P	P	19 57 02.9	+0.1
	3.7nm,0.5s,baz=326,slow=2.7,SNR=3.3						
ULN	Ulaanbaatar	57.46	345	*e*P	P	19 57 31.6	+0.2
	6.9nm,1.1s						
SONM	Songino Array	57.61	345	P	P	19 57 32.3	-0.1
	3.0nm,0.8s,baz=152,slow=8.3,SNR=7.2						
KSH	Kashi	65.61	319	*e*P	P	19 58 27.1	+0.5
KSH				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PETK	Petropavlovsk-	66.00	20	P	P	19 58 30.5	+1.8
	6.9nm,0.7s,baz=180,slow=4.5						
MKAR	Makanchi Array	66.38	329	P	P	19 58 30.9	-0.4
	3.0nm,0.7s,baz=129,slow=7.8,SNR=21						
AAK	Ala-Archa	68.26	322	P	P	19 58 43.5	+0.1
	3.1nm,0.6s,baz=134,slow=4.6,SNR=5.4						
ZALV	Zalesovo Beam	70.18	336	P	P	19 58 53.8	-1.1
	2.6nm,0.8s,baz=123,slow=5.5,SNR=11						
KURBB	Kurchatov Arra	70.76	330	P	P	19 58 58.0	-0.4
	1.9nm,0.6s,baz=135,slow=5.3,SNR=22						
KURK	Kurchatov	70.77	330	P	P	19 58 58.0	-0.5
VNDA	Vanda	72.60	172	P	P	19 59 09.2	+0.1
	1.4nm,0.6s,baz=321,slow=6.3,SNR=15						
VNDA				LR	LR	20 30 18.7	
	comp=Z,46nm,19.1s,baz=336,slow=35						
MAW	Mawson	73.15	201	P	P	19 59 12.3	-0.3
	3.1nm,0.6s,baz=86,slow=6.0,SNR=13						
BVAR	Borovoye Array	76.26	329	P	P	19 59 29.6	-1.2
	1.3nm,0.6s,baz=120,slow=8.7,SNR=9.3						
GEYT	Alibeck	77.39	311	P	P	19 59 36.9	-0.6
	1.0nm,0.6s,baz=118,slow=17,SNR=5.2						
AKTO	Aktyubinsk	81.91	323	P	P	20 00 02.0	+0.2
	2.7nm,0.7s,baz=86,slow=5.2,SNR=9.5						
QSPA	South Pole Qui	82.61	180	P	P	20 00 05.5	+0.1
	7.9nm,0.7s,baz=306,slow=2.2,SNR=34						
QSPA	South Pole Qui	82.61	180	*e*P	P	20 00 05.0	-0.4
	29nm,0.7s						
ARU	Arti	83.90	329	P	P	20 00 12.0	+0.1
	3.1nm,0.6s,baz=175,slow=2.8,SNR=8.3						
RAYN	Ar Rayn	84.20	295	*e*P	P	20 00 13.9	-0.4
	6.0nm,0.9s						
SNAA	Sanae	94.34	194	P	P	20 01 01.8	+0.2
	1.0nm,0.8s,baz=176,slow=9.2,SNR=14						
ILAR	Eielson Array	95.41	25	P	P	20 01 05.2	-1.2
	0.7nm,0.8s,baz=264,slow=4.6,SNR=5.7						
BRTR	Keskin Array B	96.40	309	P	P	20 01 11.2	-0.5
	0.8nm,0.7s,baz=121,slow=5.4,SNR=3.2						
TORD	Torodi Ar. Bea	124.90	281	PKP	PKPdf	20 06 41.1	-2.1
	0.8nm,0.8s,baz=48,slow=2.1						
LPAZ	La Paz	152.69	149	PKPbc	PKPbc	20 07 40.3	-0.5
	0.7nm,0.6s,baz=298,slow=12,SNR=3.8						

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*IDC **19** 20:00:13.5±4.1, 36°.19N×71°.52E, h170km±29km, mb3.5/6,*
mb1 3.4/11, mb1mx3.1/72, mbtmp3.9/11, MS3.2/2,
Ms1 3.2/2, ms1mx2.2/54, Error ellipse: s-maj=51.0km
s-min=22.5km az=145.0
*NNC **19** 20:00:20.8±3.0, 37°.26N×70°.78E, h0km, mb4.5, mpv4.2,*
Error ellipse: s-maj=23.5km s-min=17.7km az=165.0
ISC 19 20:00:14.5±1.9**, 36°.5N**±0°.2×**71°.3E**±0°.1**, h150km, n28,**
σ**1s.56**/30**, mb3.9**/5**, 7C-2D, Afghanistan-Tajikistan border**

region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.93	25	Pn	Pn	20 01 16.9	+2.9
	18nm,0.3s						
SFK				⇑Sn	Sn	20 01 60.0	-0.3
	75nm,0.5s						
AML	Almayashu	5.95	17	P	Pn	20 01 42.1	+1.3
	SNR=113						
MNAS	Manas	6.08	8	Pn	Pn	20 01 43.5	+1.2
	15nm,0.3s						
MNAS				⇓Sn	Sn	20 02 46.9	-4.2
	40nm,0.5s						
UCH	Uchtor	6.26	22	P	Sn	20 02 52.5	-3.3
	SNR=13						
KZA	Kyzart	6.37	27	P	Pn	20 01 47.7	+1.2
	SNR=6.9						
EKS2	Erkin-Say	6.47	16	P	Pn	20 01 49.0	+1.5
	SNR=22						
AAK	Ala-Archa	6.63	21	P	Pn	20 01 51.5	+1.8
	6.8nm,0.3s,baz=192,slow=6.6,SNR=23						
AAK				S	Sn	20 03 02.0	-2.2
	1.7nm,0.3s,baz=322,slow=23,SNR=14						
AAK	Ala-Archa	6.63	21	Pn	Pn	20 01 51.1	+1.4
	10nm,0.4s						
AAK				⇑Sn	Sn	20 03 02.3	-1.9
	28nm,0.9s						
AAK	Ala-Archa	6.63	21	P	Pn	20 01 51.0	+1.3
	SNR=13						
KK31	Karatay Array	6.66	355	⇑Pn	Pn	20 01 50.4	+0.5
	10.0nm,0.3s,baz=177,slow=12,SNR=52						
KK31				⇑Sn	Sn	20 02 57.9	-6.9
	20nm,0.8s,baz=182,slow=22,SNR=14						
CHMS	Chumysh	7.04	21	P	Pn	20 01 56.5	+1.6
	SNR=5.6						
TKM2	Tokmak 2	7.23	26	⇑Pn	Pn	20 01 58.9	+1.1
	10.0nm,0.6s						
TKM2				⇑Sn	Sn	20 03 19.1	+0.3
	11nm,1.2s						
TKM2	Tokmak 2	7.23	26	P	Pn	20 01 59.1	+1.3
	SNR=23						
GEYT	Alibeck	10.65	282	P	Pn	20 02 44.6	+1.4
	0.2nm,0.3s,baz=324,slow=21,SNR=3.6						
GEYT				S	Sn	20 04 35.6	-5.4
	0.4nm,0.3s,baz=346,slow=29,SNR=3.4						
MKAR	Makanchi Array	13.16	35	P	Pn	20 03 16.6	+1.0
	0.1nm,0.3s,baz=212,slow=12,SNR=7.2						
KURBB	Kurchatov Arra	15.07	18	P	Pn	20 03 39.8	+0.2
	0.1nm,0.3s,baz=207,slow=10,SNR=4.1						
AB31	Akbulak array	15.25	331	⇓Pn	Pn	20 03 44.3	+2.5
	0.9nm,0.3s,baz=142,slow=12,SNR=50						
AB31				⇑Sn	Sn	20 06 24.5	-6.7
	2.0nm,0.5s,baz=153,slow=23,SNR=7.9						
BVAR	Borovoye Array	16.57	358	P	P	20 03 57.1	-0.8
	0.3nm,0.3s,baz=165,slow=12,SNR=7.2						
AKTO	Aktyubinsk	16.95	330	P	P	20 04 02.5	+0.4
	0.5nm,0.3s,baz=153,slow=4.9,SNR=5.4						
ZALV	Zalesovo Beam	19.83	24	P	P	20 04 33.0	-0.4
	3.1nm,0.6s,baz=223,slow=11,SNR=9.8						
PALK	Pallekele	30.29	161	LR	LR	20 18 02.1	
	comp=Z,82nm,18.1s,baz=118,slow=36						
MLR	Muntele Rosu	35.04	299	LR	LR	20 24 47.2	
	comp=Z,13nm,18.0s,baz=92,slow=42						
FINES	FINESS Array B	37.67	326	P	P	20 07 14.5	-0.3
	1.9nm,0.8s,baz=116,slow=8.7,SNR=5.8						
ARCES	ARCESS Array B	41.28	338	P	P	20 07 44.2	-0.4
	7.3nm,1.1s,baz=113,slow=8.9,SNR=3.4						
HFS	Hagfors	43.27	322	P	P	20 08 00.2	-0.5
	1.8nm,0.5s,baz=96,slow=12,SNR=17						
NB2	NORSAR Subarra	44.58	323	P	P	20 08 10.2	-1.0
	comp=Z,0.5nm,0.5s,baz=94,slow=7.9						
NOA	NORSAR Array B	44.58	323	P	P	20 08 10.6	-0.7
	comp=Z,0.5nm,0.5s,baz=96,slow=7.7,SNR=5.7						
TORD	Torodi Ar. Bea	66.00	269	P	P	20 10 42.6	-2.5
	comp=Z,0.6nm,0.6s,baz=46,slow=5.8						

*IDC **19** 20:05:21.6±2.8,36°.27N×70°.59E,h177km±25km,mb3.6/9,mb1 3.7/15,mb1mx3.3/74,mbtmp4.2/15,Error ellipse: s-maj=20.8km s-min=15.1km az=12.0*

*ISCJB **19** 20:05:24.2±0.4,36°.57N±0°.03×70°.62E±0°.05,h204km,mb3.7/8,Error ellipse: s-maj=5.8km s-min=4.1km az=160.1*

*NNC **19** 20:05:25.1±3.3,37°.03N×70°.09E,h0km,mb4.7,mpv4.6,Error ellipse: s-maj=26.9km s-min=19.8km az=163.0*

ISC 19 20:05:24.9±0.6,**36°.59N**±0°.05×**70°.55E**±0°.06,**h204**km,**n43**,σ**1s.37**/52,**mb3.7**/8,**8C-6D,Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	2.98	158	⇑P	Pn	20 06 13.5	-1.2
CHCP	Chirah Chowk	3.68	142	P	Pn	20 06 22.4	-0.5
CHCP				S	S	20 07 08.0	+0.2
CHCP	Chirah Chowk	3.68	142	P	S	20 07 07.9	+0.2
SFK	Sufi-Kurgan	4.13	33	⇑P	Pn	20 06 28.7	+0.1
	24nm,0.4s						
SFK				⇑S	S	20 07 17.9	-0.4
	92nm,0.3s						
AML	Almayashu	6.04	23	P	Pn	20 06 52.9	-0.1
	SNR=428						
MNAS	Manas	6.08	14	⇑P	Pn	20 06 53.3	0.0
	20nm,0.3s						
MNAS				⇑S	S	20 08 00.6	-2.4
	141nm,0.6s						
UCH	Uchtor	6.41	27	P	Pn	20 06 57.9	+0.1
	SNR=13						
KK31	Karatay Array	6.50	360	⇓P	Pn	20 06 58.4	-0.2
	26nm,0.3s,baz=172,slow=12,SNR=42						
KK31				⇑S	S	20 08 09.0	-3.8
	12nm,0.3s,baz=178,slow=16,SNR=8.2						
EKS2	Erkin-Say	6.55	21	P	Pn	20 06 59.5	+0.2
	SNR=99						
KZA	Kyzart	6.58	32	P	Pn	20 06 59.6	-0.4
	SNR=31						
AAK	Ala-Archa	6.76	26	P	Pn	20 07 02.2	+0.2
	13nm,0.3s,baz=156,slow=5.3,SNR=37						
AAK				S	S	20 08 17.2	-1.9
	8.2nm,0.3s,baz=306,slow=22,SNR=29						
AAK	Ala-Archa	6.76	26	⇓P	Pn	20 07 01.9	-0.2
	14nm,0.4s						
AAK				⇓S	S	20 08 16.8	-2.3
	107nm,0.8s						
AAK	Ala-Archa	6.76	26	P	Pn	20 07 02.1	0.0
	SNR=24						
KBK	Karagaybulak	6.94	28	P	Pn	20 07 04.5	+0.1
	SNR=11						
ULHL	Ulahol	7.16	36	P	Pn	20 07 06.9	-0.4
	SNR=14						
CHMS	Chumysh	7.17	26	P	Pn	20 07 07.4	+0.2
	SNR=24						
USP	Ospenovka	7.32	23	P	Pn	20 07 08.8	-0.4
	SNR=32						
TKM2	Tokmak 2	7.42	30	⇑P	Pn	20 07 10.5	-0.2
	35nm,0.4s						
TKM2				⇓S	S	20 08 35.2	+0.5
	24nm,0.8s						
TKM2	Tokmak 2	7.42	30	P	Pn	20 07 10.7	0.0
	SNR=96						
GEYT	Alibeck	10.00	281	P	Pn	20 07 42.6	-1.4
	0.3nm,0.3s,baz=91,slow=16,SNR=5.1						
GEYT				S	S	20 09 35.8	-0.5
	0.7nm,0.3s,baz=336,slow=25,SNR=4.3						
MKAR	Makanchi Array	13.43	37	P	Pn	20 08 28.5	+1.1
	2.7nm,0.3s,baz=219,slow=14,SNR=61						
KOLN	Koldanda	14.11	125	*e*P	Pn	20 08 34.2	-2.1
	5.0nm,0.3s						
GKN	Gorkha	14.66	122	*e*P	Pn	20 08 42.0	-0.9
	11nm,0.3s						
AB31	Akbulak array	14.83	332	⇑P	P	20 08 47.0	+1.6
	0.9nm,0.3s,baz=143,slow=12,SNR=37						
AB31				⇓S	S	20 11 25.9	-3.1
	1.5nm,0.5s,baz=139,slow=26,SNR=4.3						
KURBB	Kurchatov Arra	15.15	20	P	P	20 08 49.7	+0.7
	0.4nm,0.3s,baz=208,slow=12,SNR=5.0						
DMN	Daman	15.23	122	*e*P	Pn	20 08 49.3	-0.7
	6.1nm,0.3s						
KKN	Kakani	15.23	121	*e*P	Pn	20 08 49.5	-0.5
	4.4nm,0.2s						
PKIN	Phulchoki	15.45	121	*e*P	Pn	20 08 52.3	-0.4
	16nm,0.6s						
JIRN	Jiri	15.95	120	*e*P	Pn	20 08 59.3	+0.5
	24nm,0.4s						
BVAR	Borovoye Array	16.43	360	P	Pn	20 09 05.2	+1.3
	1.1nm,0.3s,baz=164,slow=10,SNR=22						
AKTO	Aktyubinsk	16.52	331	P	Pn	20 09 06.3	+1.3
	0.9nm,0.3s,baz=146,slow=11,SNR=11						
AKTO	Aktyubinsk	16.52	331	⇓P	Pn	20 09 08.8	+3.8
	3.0nm,0.5s						
ODAN	Odare	17.28	119	*e*P	Pn	20 09 14.8	+0.3
	8.2nm,0.2s						
ZALV	Zalesovo Beam	19.98	25	P	P	20 09 42.6	+1.1
	11nm,0.3s,baz=221,slow=11,SNR=35						
ARU	Arti	21.43	342	P	P	20 09 58.6	+1.9
	3.7nm,0.6s,baz=140,slow=6.9,SNR=7.9						
FINES	FINESS Array B	37.20	326	P	P	20 12 18.0	+1.8
	1.6nm,0.4s,baz=122,slow=9.5,SNR=18						
ARCES	ARCESS Array B	40.92	338	P	P	20 12 49.0	+2.1
	2.6nm,0.6s,baz=108,slow=8.0,SNR=9.5						
HFS	Hagfors	42.77	322	P	P	20 13 03.5	+1.6
	4.2nm,0.4s,baz=98,slow=10,SNR=46						
NB2	NORSAR Subarra	44.09	323	P	P	20 13 13.4	+1.0
	comp=Z,1.6nm,0.4s,baz=97,slow=7.9						
NOA	NORSAR Array B	44.09	323	P	P	20 13 13.4	+1.0
	comp=Z,0.3nm,0.3s,baz=104,slow=7.3,SNR=14						
TORD	Torodi Ar. Bea	65.36	268	P	P	20 15 45.1	-0.5
	comp=Z,0.2nm,0.4s,baz=47,slow=5.0						
WRA	Warramunga Arr	82.35	122	P	P	20 17 23.0	-1.0
	comp=Z,0.6nm,0.6s,baz=325,slow=5.0,SNR=7.6						
ASAR	Alice Springs	84.61	125	P	P	20 17 34.2	-1.3
	comp=Z,0.4nm,0.5s,baz=314,slow=4.6,SNR=9.1						

*IDC **19** 20:08:42.3±1.3,1°.37N×126°.08E,h0km,mb3.9/7,mb1 4.0/7,mb1mx3.7/55,mbtmp3.9/7,MS3.7/3,Ms1 3.7/3,ms1mx2.6/52,Error ellipse: s-maj=152.5km s-min=16.3km az=65.0*

ISC 19 20:08:46.8±2.7,**1°.6N**±1°.0×**12°7E**±°,**h35**km,**n9**,σ**0s.83**/7,**mb3.8**/7,**MS3.8**/3,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.70	161	P	P	20 13 46.1	+0.6
	1.8nm,0.5s,baz=338,slow=10,SNR=25						
ASAR	Alice Springs	26.09	165	P	P	20 14 17.9	+0.5
	0.5nm,0.5s,baz=338,slow=7.7,SNR=13						
STKA	Stephens Creek	36.18	158	P	P	20 15 46.1	0.0
	1.9nm,0.9s,baz=321,slow=14,SNR=2.7						
PALK	Pallekele	46.19	278	LR	LR	20 39 42.7	
	comp=Z,42nm,18.8s,baz=344,slow=41						
MKAR	Makanchi Array	59.28	326	P	P	20 18 46.0	+1.0
	1.9nm,0.6s,baz=120,slow=8.7,SNR=27						
KURBB	Kurchatov Arra	63.50	328	P	P	20 19 13.3	-0.1
	1.3nm,0.5s,baz=127,slow=6.1,SNR=6.6						
BVAR	Borovoye Array	69.07	327	P	P	20 19 48.3	-0.8
	0.5nm,0.6s,baz=104,slow=9.1,SNR=3.5						
OPO	Ambohidratompo	80.58	251	LR	LR	20 54 20.3	
	comp=Z,51nm,18.9s,baz=299,slow=34						
VNDA	Vanda	81.34	173	P	P	20 20 58.5	-0.7
	0.3nm,0.7s,baz=323,slow=5.1,SNR=5.4						
VNDA				LR	LR	20 58 58.8	
	comp=Z,43nm,18.3s,baz=340,slow=37						

*ISCJB **19** 20:29:26.6±1.7,33°.6N±0°.3×89°.1E±0°.8,h10km,mb3.4/3,MS3.1/1,Error ellipse: s-maj=101.8km s-min=11.4km az=156.0*

*IDC **19** 20:29:29.3±2.0,33°.86N×89°.98E,h0km,mb3.5/3,mb1 3.7/6,mb1mx3.3/67,mbtmp3.4/6,ML2.9/3,MS2.9/2,Ms1 2.9/2,ms1mx2.4/53,Error ellipse: s-maj=215.2km s-min=20.0km az=58.0*

ISC 19 20:29:29.3±1.5,**33°.6N**±0°.3×**89°.3E**±0°.5,**h10**km,**n9**,σ**1s.70**/7,**mb3.8**/3,**Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMQ	Urumqi	10.30	354	*e*P	Pn	20 31 57.3	+0.2
MKAR	Makanchi Array	14.22	340	Pn	Pn	20 32 49.3	-1.5
	0.0nm,0.3s,baz=156,slow=14,SNR=3.0						
AAK	Ala-Archa	14.70	312	LR	LR	20 38 35.1	
	comp=Z,28nm,18.6s,baz=135,slow=36						
CMAR	Chiang Mai Arr	17.38	148	P	Pn	20 33 31.1	-0.9
	0.1nm,0.3s,baz=330,slow=11,SNR=3.1						
KURBB	Kurchatov Arra	18.76	338	P	P	20 33 47.5	-0.8
	0.0nm,0.3s,baz=152,slow=12,SNR=8.6						
BVAR	Borovoye Array	23.66	331	P	P	20 34 43.5	+2.7
	0.2nm,0.5s,baz=129,slow=11,SNR=2.9						
ASAJ	Asahikawa	42.20	59	LR	LR	20 56 22.0	
	comp=Z,28nm,20.5s,baz=337,slow=39						
WRA	Warramunga Arr	68.42	134	P	P	20 40 32.0	+0.5
	0.7nm,0.6s,baz=315,slow=6.4,SNR=9.6						
ASAR	Alice Springs	71.05	137	P	P	20 40 48.0	+0.3
	0.7nm,0.8s,baz=312,slow=5.9,SNR=5.6						

*SKO **19** 20:38:04.1,41°.87N×19°.72E,h15km,M1.8,ML2.0*

*ATH **19** 20:38:19.9,41°.39N×20°.78E,h12km±3km,ML2.4/2,Error ellipse: s-maj=6.2km s-min=2.7km az=121.0*

*TIR **19** 20:38:21.4,41°.29N×20°.96E,h10km,Md2.9/4*

*THE **19** 20:38:22.8,41°.30N×20°.94E,h0km±2km,ML2.3/6,Error ellipse: s-maj=2.5km s-min=0.8km az=296.0*

*PDG **19** 20:38:23.6±0.3,41°.25N×20°.96E,h4km,ML2.6/8,Error ellipse: s-maj=0.6km s-min=0.6km az=90.0*

*CSEM **19** 20:38:23.9±0.2,41°.24N×21°.03E,h2km,ML2.3,Error ellipse: s-maj=4.1km s-min=2.9km az=56.0*

*BEO **19** 20:38:25.0±0.8,41°.24N×21°.02E,h0km,ML1.8/6*

ISC 19 20:38:23.0±1.0,**41°.26N**±0°.01×**20°.94E**±0°.02,**h5**km±9km,**n81**,σ**1s.35**/142,**10C-8D,Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHR	Ohrid	0.18	215	⇑*i*Pg	Pg	20 38 26.0	-0.5
OHR				*i* Sg	Sg	20 38 28.8	0.0
OHR				*e*Lg	Lg	20 38 28.9	
	comp=N,620nm,0.3s						
OHR				*e*Lg	Lg	20 38 29.0	
	comp=E,873nm,0.3s						
KRUS	Krusevo	0.26	64	⇑*i*Pg	Pg	20 38 28.6	+0.5
KRUS				*i* Sg	Sg	20 38 33.3	+1.6
PHP	Peshkopia	0.57	319	P	Pg	20 38 32.9	-1.0
PHP				S	Sg	20 38 41.4	+0.2
PHP	Peshkopia	0.57	319	*i* Pg	Pb	20 38 35.5	0.0
PHP				*i* Sg	Sg	20 38 41.5	+0.2
PHP	Peshkopia	0.57	319	*i* PG	Pb	20 38 35.5	0.0
PHP				*i* SG	Sg	20 38 41.5	+0.2
FNA	Florina	0.58	145	P	Pg	20 38 33.4	-0.7
FNA	Florina	0.58	145	P	Pg	20 38 33.9	-0.2
FNA				S	Sg	20 38 42.9	+1.3
FNA	Florina	0.58	145	P	Pg	20 38 33.9	-0.2
KBN	Korca	0.64	190	P	Pg	20 38 35.5	+0.2
KBN				S	Sb	20 38 45.9	-0.2
KBN	Korca	0.64	190	P	Pg	20 38 35.5	+0.2
KBN	Korca	0.64	190	*i* Pg	Pn	20 38 38.4	-0.5
KBN				S	Sb	20 38 45.9	-0.2
KBN				*i* Sg	Sb	20 38 46.3	+0.3
KBN	Korca	0.64	190	*i* PG	Pn	20 38 38.4	-0.5
KBN				*i* SG	Sb	20 38 46.4	+0.3
SKO	Skopje	0.81	28	*e*Pg	Pg	20 38 38.6	0.0
SKO				*e*Sg	Sg	20 38 49.5	+0.4
SKO	Skopje	0.81	28	P	Pg	20 38 38.6	0.0
SKO				S	Sb	20 38 50.1	-0.8
SKO	Skopje	0.81	28	P	Pg	20 38 38.6	0.0
SKO				*e*Sg	Sg	20 38 49.5	+0.4
SKO				S	Sb	20 38 50.1	-0.8
NEST	Nestorio	0.84	174	P	Pg	20 38 38.6	-0.6
NEST				S	Sn	20 38 53.3	-1.2
NEST				AML	AML	20 38 57.3	
	comp=N,206µm,0.2s						
NEST				AML	AML	20 38 57.3	
	comp=E,284µm,0.2s						
NEST	Nestorio	0.84	174	P	Pg	20 38 38.7	-0.5
NEST				S	Sn	20 38 53.8	-0.7
NEST	Nestorio	0.84	174	P	Pg	20 38 38.7	-0.5
NEST				S	Sn	20 38 52.9	-1.6
STIP	Stip	1.04	65	*i* Pg	Pn	20 38 45.5	+1.3
STIP				*i* Sg	Sn	20 39 03.2	+4.1
PENT	Pentalofos	1.07	172	P	Pb	20 38 43.5	-0.6
PENT				S	Sn	20 39 00.9	+0.8
PENT	Pentalofos	1.07	172	P	Pb	20 38 43.5	-0.6
PUK	Puka	1.11	316	*i* Pg	Pb	20 38 42.2	-2.6
	baz=14						
PUK				*i* Sg	Sg	20 38 58.4	-0.3
	baz=14						
PUK	Puka	1.11	316	*i* PG	Pb	20 38 42.1	-2.6
PUK				*i* SG	Sg	20 38 58.4	-0.3
KZN	Kozani	1.14	146	P	Pb	20 38 44.1	-1.2
KZN				S	Sn	20 39 03.3	+1.4
KZN				AML	AML	20 39 04.3	
	comp=E,618µm,0.5s						
KZN				AML	AML	20 39 04.8	
	comp=N,349µm,0.6s						
KZN	Kozani	1.14	146	P	Pb	20 38 44.2	-1.1
KZN				S	Sn	20 39 03.2	+1.4
KZN	Kozani	1.14	146	P	Pb	20 38 44.5	-0.8
GRG	Griva	1.15	105	P	Pb	20 38 44.6	-0.8
GRG	Griva	1.15	105	P	Pb	20 38 44.6	-0.8
GRG	Griva	1.15	105	P	Pb	20 38 44.5	-0.9
VAY	Valandovo	1.23	86	*e*Pg	Pn	20 38 45.8	-1.2
VAY				*e*Sg	Sb	20 39 02.3	-0.8
VAY	Valandovo	1.23	86	P	Pn	20 38 46.1	-0.8
VAY				S	Sg	20 39 03.5	+0.8
VAY	Valandovo	1.23	86	*i* Pg	Pn	20 38 46.1	-0.8
VAY				*e*Sg	Sg	20 39 04.7	+2.0
VAY				*e*Lg	Lg	20 39 08.3	
	comp=E,24nm,0.5s						
VAY				*e*Lg	Lg	20 39 09.7	
	comp=N,36nm,0.9s						
VAY	Valandovo	1.23	86	*e*Pg	Pn	20 38 45.8	-1.2
VAY	Valandovo	1.23	86	P	Pn	20 38 46.1	-0.8
VAY				*e*Sg	Sb	20 39 02.3	-0.8
VAY				S	Sg	20 39 03.5	+0.8
KPRO	Kipourio	1.34	166	P	Pg	20 38 48.9	+0.2
KPRO	Kipourio	1.34	166	P	Pg	20 38 48.6	-0.1
KPRO				S	Sg	20 39 08.1	+2.1
KPRO	Kipourio	1.34	166	P	Pg	20 38 48.5	-0.1
ULC	Ulcinj	1.45	300	⇑*i*Pg	Pg	20 38 50.6	-0.2
ULC				*e*Sg	Sg	20 39 13.9	+4.3
ULC	Ulcinj	1.45	300	⇑*i*Pg	Pg	20 38 50.6	-0.2
ULC				*e*Sg	Sg	20 39 13.9	+4.3
KNT	Kendrikon	1.48	93	P	Pb	20 38 50.9	-0.2
KNT	Kendrikon	1.48	93	P	Pb	20 38 50.5	-0.6
KNT				S	Sg	20 39 11.7	+1.0
KNT	Kendrikon	1.48	93	P	Pb	20 38 50.5	-0.6
PVY	Plav	1.52	332	⇓*i*Pg	Pg	20 38 52.4	+0.2
PVY				*e*Sg	Sg	20 39 15.9	+3.9
PVY	Plav	1.52	332	⇓*i*Pg	Pg	20 38 52.4	+0.2
PVY				*e*Sg	Sg	20 39 15.9	+3.9
DRME	Dracevica, Mon	1.61	306	*e*Pn	Pg	20 38 53.2	-0.6
DRME				*e*Sn	Sg	20 39 18.3	+3.7
DRME	Dracevica, Mon	1.61	306	*e*Pn	Pg	20 38 53.2	-0.6
DRME				*e*Sn	Sg	20 39 18.3	+3.7
LIT	Litokhoron	1.65	134	P	Pn	20 38 52.7	-0.1
LIT	Litokhoron	1.65	134	P	Pb	20 38 53.0	-1.0
BARS	Barje	1.69	23	*e*Pg	Pg	20 38 55.0	-0.4
BARS				*e*Sg	Sg	20 39 18.9	+1.5
BARS	Barje	1.69	23	*e*Pg	Pg	20 38 55.0	-0.4
BARS				*e*Sg	Sg	20 39 18.9	+1.5
PDG	Podgorica	1.72	314	⇓*i*Pn	Pg	20 38 55.0	-0.9
PDG				*e*Sn	Sg	20 39 20.9	+2.7
TTG	Podgorica	1.72	314	⇓*i*Pn	Pg	20 38 55.0	-0.9
TTG				*e*Sn	Sg	20 39 20.9	+2.7
BEY	Berane	1.79	335	*e*Pn	Pb	20 38 55.5	-0.9
BEY				*e*Sn	Sg	20 39 22.2	+1.6
IVA	Berane	1.79	335	*e*Pn	Pb	20 38 55.5	-0.9
IVA				*e*Sn	Sg	20 39 22.2	+1.6
BUM	Brajici-Budva	1.85	305	⇓*i*Pn	Pb	20 38 57.0	-0.4
BUM				*e*Sn	Sg	20 39 23.6	+1.2
BUM	Brajici-Budva	1.85	305	⇓*i*Pn	Pb	20 38 57.0	-0.4
BUM				*e*Sn	Sg	20 39 23.6	+1.2
THL	Klokotos Trika	1.88	154	P	Pb	20 38 57.0	-0.8
THL	Klokotos Trika	1.88	154	P	Pb	20 38 56.7	-1.1
KOME	Kolasin	1.91	327	*e*Pn	Pg	20 38 59.0	-0.7
KOME				*e*Sn	Sg	20 39 26.1	+1.6
KOME	Kolasin	1.91	327	*e*Pn	Pg	20 38 59.0	-0.7
KOME				*e*Sn	Sg	20 39 26.1	+1.6
SELS	Selova	1.97	4	*e*Sn	Pg	20 38 59.8	-0.9
SELS	Selova	1.97	4	*e*Pn	Sg	20 39 25.3	-0.9
CEME	Cevo	1.98	311	⇑*i*Pn	Pb	20 38 59.3	-0.3
CEME				*e*Sn	Sg	20 39 27.1	+0.4
CEME	Cevo	1.98	311	⇑*i*Pn	Pb	20 38 59.3	-0.3
CEME				*e*Sn	Sg	20 39 27.1	+0.4
NKME	Niksic	2.11	316	⇑*i*Pn	Pb	20 39 01.1	-0.7
NKME				*e*Sn	Sg	20 39 30.1	-0.8
NKME	Niksic	2.11	316	⇑*i*Pn	Pb	20 39 01.1	-0.7
NKME				*e*Sn	Sg	20 39 30.1	-0.8
NKY	Niksic	2.12	318	⇓*i*Pn	Pb	20 39 01.1	-1.0
NKY				*e*Sn	Sg	20 39 30.4	-0.9
NKY	Niksic	2.12	318	⇓*i*Pn	Pb	20 39 01.1	-1.0
NKY				*e*Sn	Sg	20 39 30.4	-0.9
SJES	Sjenica	2.13	341	*e*Sn	Pg	20 39 02.3	-1.5
SJES	Sjenica	2.13	341	*e*Pn	Sg	20 39 29.8	-1.6
VTS	Vitosha	2.16	51	*e*Pn	Pb	20 39 01.1	-1.6
VTS				*e*Sn	Sb	20 39 29.3	-0.5
VTS	Vitosha	2.16	51	*e*Pn	Pb	20 39 01.1	-1.6
VTS				*e*Sn	Sb	20 39 29.3	-0.5
HCY	Herceg Novi	2.18	304	*e*Pn	Pb	20 39 01.5	-1.4
HCY				*e*Sn	Sg	20 39 31.9	-1.1
HCY	Herceg Novi	2.18	304	*e*Pn	Pb	20 39 01.5	-1.4
HCY				*e*Sn	Sg	20 39 31.9	-1.1
ZAPS	Zavoj	2.38	31	*e*Pn	Pb	20 39 05.2	-1.2
ZAPS				*e*Sn	Sb	20 39 34.9	-1.2
TREB	Trebinje	2.42	308	*e*Pn	Pb	20 39 07.4	+0.4
BRY	Bratogost	2.43	313	⇑*i*Pn	Pb	20 39 05.6	-1.6
BRY				*e*Sn	Sb	20 39 38.0	+0.5
BRY	Bratogost	2.43	313	⇑*i*Pn	Pb	20 39 05.6	-1.6
BRY				*e*Sn	Sb	20 39 38.0	+0.5
UPM	Unac-Piva	2.46	323	*e*Pn	Pb	20 39 06.0	-1.9
UPM				*e*Sn	Sb	20 39 39.0	+0.4
UPM	Unac-Piva	2.46	323	*e*Pn	Pb	20 39 06.0	-1.9
UPM				*e*Sn	Sb	20 39 39.0	+0.4
UDBI	Udbina	5.01	312	*e*Pn	Pn	20 39 40.8	+1.9

*ISCJB **19** 20:45:25.2±1.4,21°.40N±0°.08×143°.4E±0°.3,h300km,mb3.3/8,Error ellipse: s-maj=43.9km s-min=10.5km az=178.5*

*IDC **19** 20:45:27.7±2.2,21°.56N×143°.39E,h306km±20km,mb3.2/7,mb1 3.3/9,mb1mx3.0/61,mbtmp4.0/9,Error ellipse: s-maj=46.6km s-min=16.0km az=85.0*

ISC 19 20:45:27.4±1.7,**21°.52N**±0°.10×**143°.3E**±0°.4,**h300**km,**n10**,σ**0s.56**/12,**mb3.2**/8,**Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	5.64	350	P	Pn	20 46 53.4	+1.0
	6.7nm,0.3s,baz=303,slow=23,SNR=3.3						
JCJ				S	S	20 48 00.5	-0.5
	4.7nm,0.3s,baz=300,slow=23,SNR=2.8						
JHJ	Hachijo jima 2	11.97	346	P	Pn	20 48 09.7	+0.2
	2.7nm,0.3s,baz=49,slow=21,SNR=2.1						
JHJ				S	S	20 50 22.4	-0.3
	2.1nm,0.3s,baz=44,slow=19,SNR=1.7						
KLR	Kul'dur	29.14	344	P	P	20 51 01.4	+0.3
	0.1nm,0.4s,baz=290,slow=14,SNR=2.0						
CMAR	Chiang Mai Arr	41.71	274	P	P	20 52 48.0	+0.2
	0.1nm,0.3s,baz=82,slow=7.6,SNR=4.2						
WRA	Warramunga Arr	42.13	193	P	P	20 52 51.2	+0.1
	0.2nm,0.2s,baz=14,slow=8.9,SNR=14						
MKAR	Makanchi Array	54.91	313	P	P	20 54 27.6	0.0
	0.2nm,0.5s,baz=94,slow=9.9,SNR=3.6						
KURBB	Kurchatov Arra	57.74	317	P	P	20 54 47.0	-0.3
	0.8nm,0.5s,baz=95,slow=7.2,SNR=11						
BVAR	Borovoye Array	62.88	320	P	P	20 55 22.1	+0.1
	1.5nm,0.4s,baz=97,slow=8.0,SNR=18						
ARCES	ARCESS Array B	79.13	342	P	P	20 56 58.2	-0.4
	4.7nm,1.0s,baz=70,slow=9.1,SNR=5.0						
FINES	FINESS Array B	83.39	335	P	P	20 57 20.0	-1.1
	0.9nm,0.6s,baz=108,slow=6.2,SNR=7.1						

IDC 19 21:24:21.8±2.3,**4°.00N**×**123°.40E,h0**km,**mb3.5**/3,**mb1 3.7**/3,**mb1mx3.2**/59,**mbtmp3.5**/3,**Error ellipse: s-maj=320.4km s-min=26.4km az=63.0,Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	26.11	156	P	P	21 29 58.0	+0.3
	0.4nm,0.3s,baz=336,slow=9.5,SNR=8.9						
ASAR	Alice Springs	29.34	160	P	P	21 30 26.3	-0.3
	0.4nm,0.9s,baz=340,slow=7.9,SNR=4.0						
MKAR	Makanchi Array	55.48	327	P	P	21 33 58.5	-0.1
	0.3nm,0.5s,baz=130,slow=8.5,SNR=5.3						

*NIED **19** 21:39:00,23°.90N×126°.00E,h11km,Mw4.2 Best double couple: $M_0$2.14000×10^{15} NP1:ϕ_s254.00000°,δ33.00000°,λ110.00000°. NP2:ϕ_s50.00000°,δ59.00000°,λ77.00000°.*

*IDC **19** 21:39:24.9±0.9,23°.98N×125°.92E,h0km,mb3.9/13,mb1 4.0/15,mb1mx3.8/64,mbtmp3.9/15,ML3.5/2,MS3.3/10,Ms1 3.3/10,ms1mx3.0/59,Error ellipse: s-maj=29.4km s-min=18.4km az=74.0*

ISCJB ***19*** *21:39:25.7±1.4, 23°.86N±0°.05×126°.05E±0°.04, h25^{km}±10^{km}, mb3.9/14, MS3.3/9, Error ellipse: s-maj=8.9km s-min=5.7km az=177.2*

JMA ***19*** *21:39:26.4±0.2, 23°.89N×126°.05E, h72^{km}, M3.7*

NEIC ***19*** *21:39:29.7±0.8, 24°.04N×125°.96E, h35^{km}, mb4.1/2, Error ellipse: s-maj=17.5km s-min=14.6km az=147.0*

ISC 19 21:39:24.7±2.1**, 23°.90N**±0°.07×**126°.08E**±0°.04**, h8^{km}**±12^{km}**, n48, σ1^{s}.54**/47**, mb4.0**/14**, MS3.2**/9**, Southeast of Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOGS	**Gusukube**	1.05	324	P	Pn	21 39 45.8	+0.1
JOGS				*e*S	Sn	21 40 00.1	-0.5
JMJ	**Miyako jima 2**	1.16	322	P	Pn	21 39 47.1	-0.1
JMJ				*e*S	Sn	21 40 02.8	-0.4
JIRB	**Irabujima**	1.24	318	P	Pg	21 39 48.0	-0.5
JIRB				*e*S	Sn	21 40 04.3	-0.9
JIKM	**Ikemajima**	1.27	323	P	Pg	21 39 48.6	-0.5
JIKM				*e*S	Sn	21 40 05.7	-0.2
JTJ	**Tarama**	1.46	301	P	Pn	21 39 50.9	-0.4
JISG	**Ishigakijimahi**	1.75	293	P	Pn	21 39 54.7	-0.7
JIJ	**Ishigaki jima**	1.83	285	P	Pn	21 39 55.8	-0.6
JKRS	**Kuro-shima**	1.92	280	P	Pn	21 39 57.9	+0.2
JKRS				*e*S	Sn	21 40 19.5	-2.5
HATJ	**Hateruma jima**	2.09	275	P	Pn	21 39 59.7	-0.2
HATJ				*e*S	Sn	21 40 22.6	-3.5
IRIF	**Iriomote-Funau**	2.19	282	P	Pn	21 40 01.3	-0.1
JKE	**Kume jima 2**	2.50	15	P	Pn	21 40 05.4	-0.2
YOJ	**Yonaguni jima**	2.86	282	P	Pn	21 40 11.0	+0.5
JAGN	**Aguni-jima**	2.88	21	P	Pn	21 40 11.7	+0.9
JYNG	**Yonagunijimaku**	2.92	281	P	Pn	21 40 10.9	-0.4
JNTH	**Nagotoyohara**	3.14	34	P	Pn	21 40 15.2	+0.7
JOW	**Kunigami**	3.53	34	Pn	Pn	21 40 20.7	+0.9
	6.4nm,0.3s,baz=269,slow=30,SNR=20						
JOW				Sn	Sn	21 40 58.1	-3.7
	12nm,0.3s,baz=119,slow=27,SNR=5.0						
JOW	**Kunigami**	3.53	34	P	Pn	21 40 20.5	+0.7
JIH	**Iheya**	3.56	28	P	Pn	21 40 22.4	+2.3
JYRO	**Yoronjima**	3.78	34	P	Pn	21 40 23.5	+0.3
TATO	**Taipei**	4.32	285	Pn	Pn	21 40 29.5	-1.2
JMZ	**Minamidaito 2**	5.04	67	P	Pn	21 40 40.3	-0.3
JMZ				*e*S	Sn	21 41 33.7	-5.4
MJAR	**Matsushiro Arr**	16.37	37	Pn	P	21 43 18.3	+0.6
	0.2nm,0.3s,baz=238,slow=11,SNR=2.5						
DAV	**Davao City (W)**	16.74	182	LR	LR	21 49 35.9	
	comp=Z,39nm,20.1s,baz=345,slow=36						
GUMO	**Guam**	20.51	117	LR	LR	21 53 08.2	
	comp=Z,39nm,18.1s,baz=352,slow=40						
USRK	**Ussuriysk Ar.**	20.82	12	P	P	21 44 07.5	+1.0
	1.4nm,0.6s,baz=188,slow=9.7						
ERM	**Erimo**	22.98	34	P	P	21 44 28.7	-0.9
	2.1nm,0.5s						
CMAR	**Chiang Mai Arr**	25.86	263	LR	LR	21 54 31.3	
	comp=Z,65nm,18.4s,baz=104,slow=35						
SONM	**Songino Array**	28.56	332	LR	LR	21 58 20.2	
	comp=Z,49nm,21.4s,baz=63,slow=40						
PETK	**Petropavlovsk-**	37.69	31	LR	LR	22 04 40.8	
	comp=Z,33nm,18.6s,baz=208,slow=40						
MKAR	**Makanchi Array**	41.70	314	P	P	21 47 13.6	-0.3
	1.1nm,0.5s,baz=101,slow=10,SNR=28						
ZALV	**Zalesovo Beam**	42.98	325	P	P	21 47 23.2	-0.9
	0.9nm,0.4s,baz=119,slow=8.6,SNR=4.5						
ZALV				LR	LR	22 04 40.5	
	comp=Z,21nm,19.5s,baz=72,slow=35						
WRA	**Warramunga Arr**	44.32	169	P	P	21 47 36.5	+1.3
	2.6nm,0.9s,baz=350,slow=8.7,SNR=7.6						
KURK	**Kurchatov**	45.22	319	P	P	21 47 42.0	-0.2
KURBB	**Kurchatov Arra**	45.25	319	P	P	21 47 42.0	-0.4
	0.7nm,0.5s,baz=108,slow=8.4,SNR=6.0						
ASAR	**Alice Springs**	47.89	170	P	P	21 48 06.5	+3.0
	0.4nm,0.6s,baz=357,slow=14,SNR=5.0						
BVAR	**Borovoye Array**	50.75	320	P	P	21 48 25.8	+0.8
	0.6nm,0.6s,baz=106,slow=4.7,SNR=4.9						
AKTO	**Aktyubinsk**	58.10	316	LR	LR	22 16 20.1	
	comp=Z,48nm,18.0s,baz=130,slow=38						
GEYT	**Alibeck**	58.79	301	P	P	21 49 24.1	+0.5
	0.8nm,0.6s,baz=132,slow=2.2,SNR=4.6						
KBZ	**Khabaz**	69.13	310	P	P	21 50 32.8	+1.3
	2.1nm,0.6s,baz=156,slow=3.6,SNR=4.0						
KBS	**Kingsbay**	71.16	349	*e*P	P	21 50 40.6	-2.7
	2.4nm,0.7s						
FINES	**FINESS Array B**	73.92	330	P	P	21 51 01.1	+1.1
	1.0nm,0.5s,baz=108,slow=6.2,SNR=7.7						
AKASG	**Malin Array Be**	76.03	319	LR	LR	22 27 32.6	
	comp=Z,15nm,21.9s,baz=35,slow=38						
BRTR	**Keskin Array B**	76.92	308	P	P	21 51 19.4	+1.5
	1.5nm,1.0s,baz=90,slow=5.4,SNR=4.8						
HFS	**Hagfors**	79.96	332	P	P	21 51 34.9	+0.8
	1.3nm,0.7s,baz=66,slow=7.0,SNR=3.7						
NB2	**NORSAR Subarra**	80.52	333	P	P	21 51 37.6	+0.4
	comp=Z,0.4nm,0.5s,baz=57,slow=5.3						
NOA	**NORSAR Array B**	80.52	333	P	P	21 51 37.8	+0.6
	comp=Z,0.8nm,0.6s,baz=53,slow=5.9,SNR=3.6						
NOA				LR	LR	22 31 38.1	
	comp=Z,26nm,19.3s,baz=60,slow=39						
CLL	**Collm**	84.93	325	*e*(pP)	pP	21 52 09.0	+6.0
DAVOX	**Davos/Dischmat**	89.14	322	LR	LR	22 34 17.0	
	comp=Z,24nm,19.0s,baz=182,slow=37						

ISCJB ***19*** *21:46:56.7±0.4, 50°.19N±0°.03×18°.88E±0°.03, h0^{km}, Error ellipse: s-maj=4.1km s-min=2.6km az=2.5*

CSEM ***19*** *21:46:56.9±0.4, 50°.28N×18°.96E, h2^{km}, ML2.5/6, Error ellipse: s-maj=14.2km s-min=4.9km az=11.0*

PRU ***19*** *21:46:57.6, 50°.22N×18°.97E, h0^{km}*

WAR ***19*** *21:46:58.2, 50°.24N×18°.97E, h1^{km}, Mw2.6*

ISC 19 21:46:57.3±0.8**, 50°.16N**±0°.03×**18°.96E**±0°.02**, h0^{km}, n35, σ0^{s}.72**/67**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHZP	**Chorzow**	0.13	8	*e*Pg	Pg	21 46 59.6	-0.1
CHZP				*e*Sg	Sg	21 47 01.6	+0.2
CHZP	**Chorzow**	0.13	8	*e*Pg	Pg	21 46 59.6	-0.1
CHZP				*e*Sg	Sg	21 47 01.6	+0.2
OJC	**Ojcow**	0.54	84	*i* Pg	Pg	21 47 07.0	-0.6
OJC				*e*Sg	Sg	21 47 14.8	+0.2
OJC	**Ojcow**	0.54	84	*i* Pg	Pg	21 47 07.0	-0.6
OJC				*e*Sg	Sg	21 47 14.8	+0.2
OJC	**Ojcow**	0.54	84	*i* Pg	Pg	21 47 07.0	-0.6
OJC				*e*Sg	Sg	21 47 14.8	+0.2
OKC	**Ostrava-Krasne**	0.62	238	*e*PG	Pb	21 47 11.1	+0.1
OKC				*e*SG	Sb	21 47 20.6	+0.4
	comp=Z,15nm,0.5s						
OKC	**Ostrava-Krasne**	0.62	238	Pg	Pb	21 47 11.1	+0.1
OKC				Sg	Sb	21 47 20.6	+0.4
	15nm,0.5s						
MORC	**Moravsky Berou**	1.00	248	*e*PG	Pg	21 47 16.6	+0.2
MORC				*e*SG	Sb	21 47 31.7	+0.6
NIE	**Niedzica**	1.14	130	*e*Pg	Pg	21 47 19.3	+0.2
NIE				*e*Sg	Sn	21 47 36.6	-0.3
NIE	**Niedzica**	1.14	130	*e*Pg	Pg	21 47 19.3	+0.2
NIE				*e*Sg	Sn	21 47 36.6	-0.3
NIE	**Niedzica**	1.14	130	*e*Pg	Pg	21 47 19.3	+0.2
NIE				*e*Sg	Sn	21 47 36.6	-0.3
KRLC	**Kraliky**	1.41	267	*e*PG	Pn	21 47 23.7	-0.5
KRLC				*e*SG	Sn	21 47 43.6	+0.1
	comp=Z,4.0nm,0.6s						
KRLC	**Kraliky**	1.41	267	Pg	Pn	21 47 23.7	-0.5
KRLC				Sg	Sn	21 47 43.6	+0.1
	4.0nm,0.6s						
JAVC	**Velka Javorina**	1.56	213	*e*PN	Pg	21 47 27.1	0.0
JAVC				*e*SG	Sg	21 47 48.5	+1.3
VYHS	**Vyhne**	1.67	183	*e*PN	Pn	21 47 27.8	0.0
VYHS				*e*SN	Sn	21 47 50.0	0.0
VYHS				*e*LG	Lg	21 47 53.7	
VYHS	**Vyhne**	1.67	183	*e*Pg	Pn	21 47 27.8	0.0
VYHS				*e*Sn	Sn	21 47 50.0	0.0
DPC	**Dobruska-Polom**	1.71	277	*e*PG	Pn	21 47 28.4	+0.1
DPC				*e*SG	Sg	21 47 52.0	0.0
	comp=Z,13nm,0.6s						
DPC	**Dobruska-Polom**	1.71	277	Pg	Pn	21 47 28.4	+0.1
DPC				Sg	Sg	21 47 52.0	0.0
	13nm,0.6s						
VRAC	**Vranov**	1.76	242	*e*PN	Pb	21 47 29.9	-0.5
VRAC				*e*SG	Sb	21 47 53.0	-0.1
KSP	**Ksiaz**	1.83	293	*e*Pg	Pg	21 47 32.2	-0.2
KSP				*e*Sg	Sg	21 47 56.4	+0.2
KSP	**Ksiaz**	1.83	293	*e*Pg	Pg	21 47 32.2	-0.2
KSP				*e*Sg	Sg	21 47 56.4	+0.2
UPC	**Upice**	1.92	281	*e*PG	Pg	21 47 34.5	+0.4
UPC				*e*SG	Sg	21 48 00.9	+1.9
UPC	**Upice**	1.92	281	Pg	Pg	21 47 34.5	+0.4
UPC				Sg	Sg	21 48 00.9	+1.9
KRUC	**Moravsky**	2.00	238	*e*PN	Pb	21 47 33.9	-0.6
KRUC				*e*SG	Sb	21 48 00.9	+0.9
CRVS	**Cervenica-Dubn**	2.06	127	*e*PN	Pb	21 47 35.7	+0.2
CRVS	**Cervenica-Dubn**	2.06	127	*e*Pn	Pb	21 47 35.7	+0.2
GOPC	**GO Pecny, Ondr**	2.70	266	*e*PN	Pn	21 47 41.5	-0.5
GOPC				*e*PG	Pb	21 47 46.4	-0.1
GOPC				*e*SG	Sg	21 48 22.6	-1.5
	comp=Z,8.0nm,0.7s						
GOPC	**GO Pecny, Ondr**	2.70	266	Pn	Pn	21 47 41.5	-0.5
GOPC				Sg	Sg	21 48 22.6	-1.5
	8.0nm,0.7s						
PVCC	**Panska Ves**	2.84	279	*e*PG	Pg	21 47 50.9	-0.8
PVCC				*e*SG	Sg	21 48 28.5	+0.1
	comp=Z,8.0nm,0.4s						
PVCC	**Panska Ves**	2.84	279	Pg	Pg	21 47 50.9	-0.8
PVCC				Sg	Sg	21 48 28.5	+0.1
	8.0nm,0.4s						
PRU	**Pruhonice**	2.85	268	*e*PG	Pb	21 47 49.8	+0.7
PRU				*e*SG	Sg	21 48 27.7	-1.2
	comp=Z,2.6nm,0.3s						
PRU	**Pruhonice**	2.85	268	Pg	Pb	21 47 49.8	+0.7
PRU				Sg	Sg	21 48 27.7	-1.2
	2.6nm,0.3s						
BRG	**Berggiesshubel**	3.28	284	SG	Sg	21 48 42.8	+0.1
	4.3nm,0.7s						
KHC	**Kasperske Hory**	3.65	256	*e*PN	Pn	21 47 55.7	+0.7
KHC				*e*x	x	21 48 02.0	
KHC				*e*x	x	21 48 08.2	
KHC				*e*SG	Sg	21 48 51.7	-2.8
	comp=Z,5.4nm,0.4s						
KHC	**Kasperske Hory**	3.65	256	Pn	Pn	21 47 55.7	+0.7

ISCJB ***19*** *21:48:41.0±1.0, 1°.6N±0°.2×99°.5E±0°.3, h166^{km}, mb3.8/11, Error ellipse: s-maj=41.0km s-min=14.9km az=147.4*

IDC ***19*** *21:48:43.2±12.0, 1°.53N×99°.45E, h172^{km}±109^{km}, mb3.5/11, mb1 3.6/12, mb1mx3.3/65, mbtmp4.0/12, Error ellipse: s-maj=77.3km s-min=14.1km az=57.0*

ISC 19 21:48:42.5±1.2**, 1°.5N**±0°.2×**99°.5E**±0°.3**, h166^{km}, n12, σ0^{s}.62**/12**, mb3.8**/11**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	16.82	358	P	Pn	21 52 29.1	+0.6
	baz=195,slow=10,SNR=4.4						
WRA	**Warramunga Arr**	40.30	124	P	P	21 56 04.3	+0.4
	1.8nm,0.5s,baz=302,slow=9.1,SNR=25						
ASAR	**Alice Springs**	41.81	129	P	P	21 56 16.0	-0.2
	0.4nm,0.5s,baz=307,slow=7.8,SNR=6.7						
SONM	**Songino Array**	46.50	6	P	P	21 56 52.3	-0.9
	1.1nm,0.7s,baz=207,slow=12,SNR=3.6						
MKAR	**Makanchi Array**	47.50	344	P	P	21 57 01.4	+0.5
	1.3nm,0.5s,baz=155,slow=8.2,SNR=24						
KURBB	**Kurchatov Arra**	52.03	343	P	P	21 57 35.4	+0.5
	0.4nm,0.5s,baz=163,slow=6.8,SNR=4.9						
ZALV	**Zalesovo Beam**	53.62	349	P	P	21 57 46.7	+0.2
	2.3nm,0.4s,baz=178,slow=6.6,SNR=12						
BVAR	**Borovoye Array**	56.71	339	P	P	21 58 07.6	-1.1
	1.1nm,0.5s,baz=127,slow=8.0,SNR=9.4						
BRTR	**Keskin Array B**	70.58	312	P	P	21 59 39.8	-0.2
	0.6nm,0.6s,baz=106,slow=4.7,SNR=3.6						
FINES	**FINESS Array B**	80.76	332	P	P	22 00 37.3	+0.1
	0.9nm,0.6s,baz=97,slow=9.8,SNR=4.8						
ARCES	**ARCESS Array B**	82.99	340	P	P	22 00 48.6	-0.1
	7.7nm,1.2s,baz=66,slow=3.0,SNR=4.4						
HFS	**Hagfors**	86.57	330	P	P	22 01 07.3	+0.6
	1.5nm,0.9s,baz=97,slow=7.4,SNR=8.1						

SOME ***19*** *22:03:54.2, 42°.27N×79°.52E, h5^{km}*

KRNET ***19*** *22:03:55.0±0.1, 42°.23N×79°.55E, h20^{km}, mb4.0*

NNC ***19*** *22:03:56.6±0.9, 42°.34N×79°.54E, h0^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=7.5km s-min=3.4km az=120.0*

ISC 19 22:03:55.7±1.6**, 42°.34N**±0°.05×**79°.48E**±0°.04**, h2^{km}**±10^{km}**, n51, σ1^{s}.11**/97**, 22C-26D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	**Przheval'sk**	0.81	280	⇑*i*P	Pg	22 04 11.5	+0.2
	baz=87						
PRZ				⇑*i*S	Sb	22 04 24.1	-0.1
	baz=87						
SHLS	**Shalkode**	0.81	359	*e*P	Pn	22 04 13.1	-1.3
	baz=15						
SHLS				*e*S	Sn	22 04 26.8	-0.4
	baz=15						
SHLS	**Shalkode**	0.81	359	*e*P	Pn	22 04 13.1	-1.3
	326nm,0.1s						
SHLS				*e*S	Sn	22 04 26.8	-0.4
	373nm,0.2s						
UZB	**Uzynbulak**	0.87	337	*e*P	Pb	22 04 13.3	-0.4
	baz=37						
UZB				*e*S	Sn	22 04 26.9	-1.8
	baz=37						
UZB	**Uzynbulak**	0.87	337	*e*P	Pb	22 04 13.3	-0.4
	7.0nm,0.1s						
UZB				*e*S	Sn	22 04 26.9	-1.8
	117nm,0.2s						
PDGK	**Podgornoye**	0.99	0	⇓P	Pg	22 04 14.8	+0.1
	31nm,0.4s						
PDGK				⇑S	Sn	22 04 29.6	-1.8
	153nm,0.7s						
PDGK	**Podgornoye**	0.99	0	⇓*i*P	Pb	22 04 15.0	-0.7
	baz=58						
PDGK				⇓*i*S	Sn	22 04 29.7	-1.8
	baz=58						
SATY	**Saty**	1.07	313	*e*P	Pg	22 04 16.4	+0.2
	44nm,0.2s						
SATY				*e*S	Sn	22 04 32.0	-1.4
	198nm,0.1s						
ZHN	**Zhinishke**	1.13	317	*e*P	Pb	22 04 17.7	-0.4
	baz=19						
ZHN				*e*S	Sn	22 04 34.5	-0.4
	baz=19						
ZHN	**Zhinishke**	1.13	317	*e*P	Pb	22 04 17.6	-0.4
	39nm,0.2s						
ZHN				*e*S	Sn	22 04 34.5	-0.4
	621nm,0.3s						
KPKS	**Kokpek**	1.27	333	*e*P	Pg	22 04 20.5	+0.5
	baz=32						
KPKS				*e*S	Sn	22 04 39.0	+0.7
	baz=32						
KPKS	**Kokpek**	1.27	333	*e*P	Pg	22 04 20.5	+0.5
	27nm,0.1s						
KPKS				*e*S	Sn	22 04 39.0	+0.7
	242nm,0.2s						
KTMS	**Ketmen**	1.28	30	*e*P	Pg	22 04 20.0	-0.2
	baz=25						
KTMS				*e*S	Sn	22 04 38.8	+0.2
	baz=25						
KTMS	**Ketmen**	1.28	30	*e*P	Pg	22 04 20.0	-0.2
	168nm,0.2s						
KTMS				*e*S	Sn	22 04 38.9	+0.2
	145nm,0.3s						
KURS	**Kuram**	1.50	320	*e*P	Pg	22 04 24.5	+0.1
	baz=22						
KURS				*e*S	Sg	22 04 46.0	+2.2
	baz=22						
KURS	**Kuram**	1.50	320	*e*P	Pg	22 04 24.4	+0.1
	46nm,0.3s						
KURS				*e*S	Sg	22 04 46.0	+2.2
	74nm,0.5s						
KDJ	**Kajisay**	1.72	264	⇑*i*P	Pn	22 04 26.3	-0.6
	baz=67						
KDJ				⇑*i*S	Sb	22 04 50.2	-0.1
	baz=67						
KOTS	**Kotyrbulak**	1.96	298	*e*P	Pg	22 04 33.2	0.0
	43nm,0.2s						
KOTS				*e*S	Sg	22 05 01.5	+2.9
	128nm,0.5s						
MDOK	**Medeo**	1.97	295	*e*P	Pb	22 04 32.2	-0.2
	80nm,0.2s						
MDOK				*e*S	Sg	22 04 59.6	+0.6
	75nm,0.3s						
TNSS	**Tian-Shan**	1.99	291	*e*P	Pb	22 04 32.5	-0.5
	134nm,0.2s						
TNSS				*e*S	Sg	22 05 00.3	+0.6
	102nm,0.3s						
DJR	**Jarkent**	2.00	6	*e*P	Pb	22 04 32.9	-0.1
	69nm,0.4s						
DJR				*e*S	Sg	22 05 00.5	+0.4
	177nm,0.4s						
KNDC	**Almaty**	2.05	296	⇓Pn	Pb	22 04 33.6	-0.1
	94nm,0.7s						
KNDC				⇓Lg	Lg	22 05 02.7	
	71nm,0.5s						
AAA	**Alma-Ata**	2.08	296	*e*P	Pb	22 04 34.5	+0.3
	108nm,0.2s						
AAA				*e*S	Sg	22 05 03.9	+1.4
	95nm,0.4s						
IZV	**Izvestkoviy**	2.22	289	*e*P	Pb	22 04 36.5	-0.3
	112nm,0.2s						
IZV				*e*S	Sg	22 05 07.3	+0.1
	295nm,0.5s						
ARXS	**Arharly**	2.23	328	*e*P	Pb	22 04 36.8	0.0
	25nm,0.3s						
ARXS				*e*S	Sg	22 05 07.4	+0.1
	525nm,0.4s						
CHKK	**Chushkaly**	2.37	310	*e*P	Pb	22 04 39.5	+0.3
	58nm,0.2s						
CHKK				*e*S	Sg	22 05 11.9	+0.1
	346nm,0.4s						
MTBS	**Maitube**	2.38	290	*e*P	Pb	22 04 39.5	+0.2
	27nm,0.2s						
MTBS				*e*S	Sg	22 05 12.2	0.0
	79nm,0.3s						
ULHL	**Ulahol**	2.40	269	⇓*i*P	Pn	22 04 36.4	+0.1
	baz=71						
ULHL				⇓*i*S	Sn	22 05 07.0	+0.5
	baz=71						
KTBS	**Karatobe**	2.47	305	*e*P	Pb	22 04 41.3	+0.5
	25nm,0.2s						
KTBS				*e*S	Sg	22 05 15.2	+0.2
	140nm,0.3s						
BOOM	**Boomskoye usch**	2.62	274	⇓*i*P	Pn	22 04 40.0	+0.7
	baz=77						
BOOM				⇓*i*S	Sn	22 05 12.9	+1.0
	baz=77						
KST	**Kastek**	2.69	286	*e*P	Pb	22 04 45.3	+0.7
	104nm,0.5s						
KST				*e*S	Sg	22 05 21.7	-0.2
	113nm,0.5s						
KUU	**Kurty**	2.77	305	*e*P	Pb	22 04 46.3	+0.3
	17nm,0.3s						
KUU				*e*S	Sg	22 05 23.5	-1.3
	71nm,0.3s						
DGS	**Degeres**	2.87	290	*e*P	Pb	22 04 47.5	-0.3
	19nm,0.3s						
DGS				*e*S	Sg	22 05 26.3	-1.7
	76nm,0.3s						
TKM2	**Tokmak 2**	2.92	283	⇓Pn	Pb	22 04 45.8	-2.9
	11nm,0.4s						
TKM2				⇓Lg	Lg	22 05 29.6	
	31nm,0.5s						
TKM2	**Tokmak 2**	2.92	283	⇓*i*P	Pn	22 04 43.9	+0.4
	baz=85						
TKM2				⇓*i*S	Sn	22 05 19.9	+0.6
	baz=85						
KAPS	**Kapalarasan**	2.94	358	*e*P	Pb	22 04 49.3	+0.3
	18nm,0.4s						
KAPS				*e*S	Sg	22 05 29.1	-1.2
	186nm,0.5s						
KZA	**Kyzart**	3.15	267	⇑*e*P	Pn	22 04 46.8	0.0
	baz=69						
KZA				⇑*i*S	Sn	22 05 25.1	-0.1
	baz=69						
CHMS	**Chumysh**	3.55	282	⇓*i*P	Pn	22 04 52.4	+0.5
	baz=84						
CHMS				⇓*i*S	Sn	22 05 34.5	+0.1
	baz=84						
FRU1	**Bishkek**	3.61	279	⇑*i*P	Pn	22 04 53.7	+0.9
	baz=81						
FRU1				⇑*i*S	Sn	22 05 35.1	-1.0
	baz=81						
UCH	**Uchtor**	3.69	270	*e*P	Pn	22 04 54.2	0.0
	baz=72						
UCH				*e*S	Sn	22 05 37.8	-0.7
	baz=72						
AAK	**Ala-Archa**	3.70	276	⇓Pn	Pn	22 04 57.2	+3.1
	1.7nm,0.2s						
AAK				⇑Pg	Pg	22 05 04.5	-2.1
	12nm,0.5s						
AAK				⇓Lg	Lg	22 05 53.6	
	18nm,0.6s						
AAK	**Ala-Archa**	3.70	276	⇑*i*P	Pn	22 04 54.5	+0.4
	baz=78						
AAK				⇑*i*S	Sn	22 05 38.4	+0.1
	baz=78						
USP	**Ospenovka**	3.78	286	⇓*i*P	Pn	22 04 55.8	+0.7
	baz=87						
USP				⇓*i*S	Sn	22 05 40.3	+0.1
	baz=87						
EKS2	**Erkin-Say**	4.23	276	⇓*e*P	Pn	22 05 02.0	+0.7
	baz=78						
EKS2				⇓*i*S	Sn	22 05 50.8	-0.6
	baz=78						
AML	**Almayashu**	4.30	269	⇑*i*P	Pn	22 05 03.0	+0.4
	baz=71						
AML				⇑*i*S	Sn	22 05 52.8	-0.7
	baz=71						
MAKZ	**Makanchi**	4.81	21	⇓Pn	Pn	22 05 10.3	+1.1
	0.8nm,0.2s						
MAKZ				⇑Sn	Sn	22 06 08.0	+2.5
	2.1nm,0.4s						
MAKZ				⇑Lg	Lg	22 06 27.8	
	4.0nm,0.6s						
MK31	**Makanchi Array**	4.88	23	Pn	Pn	22 05 11.2	+1.0
	0.9nm,0.2s,baz=202,slow=13,SNR=176						
MK31				⇓Pg	Pg	22 05 26.4	-2.9
	1.8nm,0.4s,baz=201,slow=15,SNR=4.7						
MK31				Sn	Sn	22 06 09.2	+1.8
	0.4nm,0.2s,baz=235,slow=24,SNR=4.5						
MK31				⇓Lg	Lg	22 06 30.4	
	8.9nm,0.7s,baz=210,slow=18,SNR=6.9						
SFK	**Sufi-Kurgan**	5.07	245	⇑Pg	Pg	22 05 31.1	-1.8
	4.0nm,0.8s						
SFK				⇓Lg	Lg	22 06 38.2	
	10.0nm,0.9s						
MNAS	**Manas**	5.17	274	⇑Pg	Pb	22 05 30.0	+3.1
	5.6nm,1.0s						
MNAS				⇓Lg	Lg	22 06 41.6	
	9.3nm,0.8s						
MNAS	**Manas**	5.17	274	⇑*e*P	Pn	22 05 14.6	+0.4
	baz=75						
MNAS				⇑*i*S	Sn	22 06 13.2	-1.3
	baz=75						
KK31	**Karatay Array**	6.65	280	⇑Pg	Pb	22 05 57.7	+5.6
	0.6nm,0.3s,baz=96,slow=16,SNR=5.0						
KK31				⇑Lg	Lg	22 07 27.8	
	1.7nm,0.5s,baz=94,slow=32,SNR=4.2						

IDC ***19*** *22:49:56.9±1.3, 5°.17N×94°.22E, h0^{km}, mb3.9/9, mb1 4.0/10, mb1mx3.7/65, mbtmp3.9/10, ML4.1/1, Error ellipse: s-maj=56.0km s-min=19.6km az=57.0*

NEIC ***19*** *22:49:58.8±3.3, 5°.15N×94°.21E, h14^{km}±22^{km}, mb4.3/2, Error ellipse: s-maj=10.7km s-min=7.3km az=75.0*

ISCJB ***19*** *22:49:59.7±0.6, 5°.15N±0°.07×94°.2E±0°.1, h34^{km}, mb4.0/11, Error ellipse: s-maj=15.6km s-min=10.2km az=162.9*

ISC 19 22:50:01.5±0.8**, 5°.2N**±0°.1×**94°.2E**±0°.1**, h34^{km}, n19, σ0^{s}.71**/16**, mb4.0**/11**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	**Pallekele**	13.58	280	P	Pn	22 53 11.3	-0.6
	1.4nm,0.6s						
CMAR	**Chiang Mai Arr**	14.02	19	Pn	Pn	22 53 17.9	0.0
	0.3nm,0.3s,baz=212,slow=12,SNR=3.3						
CHTO	**Chiang Mai**	14.35	18	Pn	Pn	22 53 21.3	-1.1
COCO	**West Island**	17.42	171	Pn	Pn	22 54 01.4	-0.6
H08S3	**Diego Garcia H**	25.11	240	T	T	23 22 41.5	
	baz=60,slow=75,SNR=6.3						
H08S2	**Diego Garcia H**	25.11	240	T	T	23 22 42.3	
	baz=60,slow=75,SNR=5.5						
H08S1	**Diego Carcia H**	25.12	240	T	T	23 22 45.3	
	baz=60,slow=75,SNR=4.6						
MKAR	**Makanchi Array**	42.75	348	P	P	22 57 55.8	+0.2
	1.6nm,0.6s,baz=167,slow=7.9,SNR=19						
SONM	**Songino Array**	43.80	12	P	P	22 58 03.0	-1.2
	0.9nm,0.7s,baz=186,slow=10.0,SNR=3.9						
WRA	**Warramunga Arr**	46.68	124	P	P	22 58 27.4	+0.1
	0.4nm,0.5s,baz=302,slow=9.4,SNR=5.2						
WRAB	**Tennant Creek**	46.68	124	P	P	22 58 27.3	-0.1
	2.7nm,0.7s						
TLY	**Talaya**	47.04	8	P	P	22 58 30.3	+0.7
	1.1nm,0.6s						
KURBB	**Kurchatov Arra**	47.19	346	P	P	22 58 31.8	+1.0
	2.4nm,0.6s,baz=169,slow=7.1,SNR=31						
KURK	**Kurchatov**	47.26	347	P	P	22 58 31.8	+0.5
ASAR	**Alice Springs**	48.16	128	P	P	22 58 39.5	+0.6
	0.5nm,0.5s,baz=300,slow=7.5,SNR=3.6						

ZALV	**Zalesovo Beam**	**49.25**	**353**	P	**P**	**22 58 46.6**	**-0.1**
	1.1nm,0.2s,baz=174,slow=6.0,SNR=7.2						
BVAR	**Borovoye Array**	**51.58**	**342**	P	**P**	**22 59 05.2**	**+0.9**
	0.6nm,0.3s,baz=154,slow=11,SNR=5.3						
FINES	**FINESS Array B**	**75.14**	**333**	P	**P**	**23 01 40.4**	**+0.3**
	2.7nm,1.0s,baz=120,slow=8.3,SNR=2.8						
GERES	**GERESS Array B**	**79.89**	**319**	P	**P**	**23 02 07.5**	**+0.5**
	0.3nm,0.5s,baz=72,slow=3.2,SNR=3.9						

BJI 19 23:03:35.3, 42°.03N×97°.01E, h5km, ML3.5/5, Western Nei Mongol

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTA	**Gaotai**	**3.38**	**140**	Pn	Pn	23 04 30.8	+2.0
GTA				Pg	Pb	23 04 36.5	+0.8
GTA				Sg	Sb	23 05 18.9	+1.9
GTA				smax	smax		
	comp=N,41nm,0.8s						
GTA				smax	smax		
	comp=E,45nm,0.7s						
WMQ	**Urumqi**	**7.07**	**288**	Pn	Pn	23 05 20.8	+1.4
WMQ				Sn	Sn	23 06 38.3	-1.9
WMQ				smax	smax		
	comp=N,21nm,0.9s						
WMQ				smax	smax		
	comp=E,39nm,0.9s						
LZH	**Lanzhou**	**7.96**	**136**	*e*Pg	Pb	23 06 00.8	+6.9
LZH				Sg	Sg	23 07 44.0	-7.0
LZH				smax	smax		
	comp=N,37nm,0.9s						
LZH				smax	smax		
	comp=E,39nm,1.1s						
HHC	**Hu-ho-hao-te**	**10.99**	**91**	*e*P	Pn	23 06 15.3	+2.0

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*ISCJB **19** 23:26:17.0±0.3, 2°.49S±0°.03×136°.64E±0°.03, h10km, mb4.3/25, MS3.8/14, Error ellipse: s-maj=5.1km s-min=3.7km az=24.8*

*IDC **19** 23:26:17.4±0.7, 2°.35S×136°.62E, h0km, mb4.2/10, mb1 4.4/11, mb1mx4.1/43, mbtmp4.3/11, ML4.0/1, MS3.8/14, Ms1 3.7/14, ms1mx3.4/45, Error ellipse: s-maj=42.9km s-min=15.4km az=70.0*

*BJI **19** 23:26:17.5, 2°.40S×136°.70E, h10km, mb4.6/20, mB4.8/11, Ms4.6/3, Ms7 4.4/1*

*NEIC **19** 23:26:18.8±0.3, 2°.43S×136°.66E, h10km, mb4.7/10, Error ellipse: s-maj=10.3km s-min=5.8km az=78.0*

NEIC Felt [III] at Serui and Waren.

*DJA **19** 23:26:20.2±0.5, 2°S±4°×13°7E±°, h21km±4km, M5.0/8, mB4.9/1, mb4.9/6, MLv5.1/8, Mw(mB)4.1/1*

ISC 19 23:26:19.0±0.4, 2°.50S±0°.04×136°.65E±0°.04, h10km, n64, σ1s99/67, mb4.4/25, MS3.9/15, 1C, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRPI	**Serui, Papua**	**0.74**	**327**	P	**Pg**	**23 26 31.9**	**-1.4**
SRPI				S	**Sg**	**23 26 41.3**	**-1.7**
BAKI	**Biak**	**1.40**	**337**	P	**Pn**	**23 26 41.2**	**-3.5**
RKPI	**Ransiki, Papua**	**2.65**	**292**	P	**Pn**	**23 27 02.1**	**+0.2**
RKPI				S	**Sn**	**23 27 33.8**	**-0.3**
GENI	**Genyem**	**3.52**	**92**	P	**Pn**	**23 27 14.1**	**+0.3**
GENI				S	**Sn**	**23 27 55.8**	**+0.3**
JAY	**Jayapura**	**4.06**	**90**	P	**Pn**	**23 27 20.2**	**-1.0**
JAY				S	**Sn**	**23 28 07.4**	**-1.4**
FAKI	**Fak Fak**	**4.41**	**264**	P	**Pn**	**23 27 26.2**	**+0.1**
FAKI				S	**Sn**	**23 28 17.5**	**0.0**
FAKI	**Fak Fak**	**4.41**	**264**	*e*Pn	**Pn**	**23 27 27.1**	**+1.0**
SWI	**Sorong**	**5.62**	**287**	P	**Pn**	**23 27 42.6**	**-0.1**
	84nm,0.6s,1.2nm						
SWI				S	**Sn**	**23 28 45.1**	**-2.3**
	84nm,0.6s,1.2nm						
NLAI	**Namlea**	**9.56**	**265**	P	**Pn**	**23 28 37.7**	**+0.9**
NLAI				S	**Sn**	**23 30 25.0**	**+0.6**
MTN	**Manton Dam**	**11.64**	**208**	*e*Pn	**Pn**	**23 29 06.8**	**+1.5**
COEN	**Coen**	**13.09**	**151**	*e*Pn	**Pn**	**23 29 26.5**	**+1.3**
COEN				*e*Sn	**Sn**	**23 31 48.4**	**-2.6**
WRAB	**Tennant Creek**	**17.48**	**187**	*e*Pn	**Pn**	**23 30 23.1**	**+0.1**
	40nm,1.0s						
WB2	**Warramunga Arr**	**17.48**	**187**	*e*Pn	**P**	**23 30 25.0**	**+0.7**
	33nm,0.9s						
WRA	**Warramunga Arr**	**17.49**	**187**	P	**Pn**	**23 30 21.9**	**-1.3**
	1.3nm,0.3s,baz=4.9,slow=12,SNR=37						
WRA				S	Sn	23 33 26.6	-11
	0.6nm,0.3s,baz=4.9,slow=23,SNR=6.6						
WRA				LR	LR	23 37 57.6	
	comp=Z,520nm,20.7s,baz=340,slow=40						
FITZ	**Fitzroy Crossi**	**18.89**	**214**	*e*P	**P**	**23 30 40.3**	**+0.5**
	8.6nm,0.7s						
FITZ				*e*Sn	**Sn**	**23 34 05.0**	**-7.0**
CTA	**Charters Tower**	**19.84**	**152**	P	**P**	**23 30 51.4**	**+1.1**
	0.3nm,0.3s,baz=5.3,slow=16,SNR=3.8						
AS01	**Alice Springs**	**21.20**	**187**	*e*P	**P**	**23 31 04.8**	**-0.2**
ASAR	**Alice Springs**	**21.21**	**187**	P	**P**	**23 31 06.0**	**+0.9**
	11nm,0.6s,baz=12,slow=11,SNR=61						
ASAR				S	**S**	**23 34 59.9**	**-1.2**
	2.8nm,0.8s,baz=8.2,slow=24,SNR=4.7						
ASAR				LR	LR	23 39 50.2	
	comp=Z,544nm,21.8s,baz=9.5,slow=38						
HNR	**Honiara**	**24.16**	**108**	LR	LR	23 41 36.2	
	comp=Z,120nm,21.9s,baz=317,slow=38						
MBWA	**Marble Bar**	**24.81**	**220**	*e*P	**P**	**23 31 41.5**	**0.0**
	14nm,0.8s						
STKA	**Stephens Creek**	**29.59**	**171**	P	**P**	**23 32 25.6**	**+1.2**
	4.8nm,0.7s,baz=337,slow=8.6,SNR=11						
STKA				LR	LR	23 45 37.8	
	comp=Z,259nm,18.2s,baz=357,slow=39						
STKA	**Stephens Creek**	**29.59**	**171**	*e*P	**P**	**23 32 23.3**	**-1.1**
	8.4nm,1.9s						
DZM	**Mont Dzumac**	**34.88**	**126**	*e*LR	LR	23 42 31.0	
	255nm,22.8s						
JNU	**Nakatsue**	**35.84**	**352**	LR	LR	23 44 56.5	
	comp=Z,62nm,21.9s,baz=124,slow=31						
PANO	**Nakornpanom**	**37.15**	**303**	P	P	23 33 38.2	+7.9
	0.3nm,1.1s,206nm						
SKNT	**Sakolnakorn**	**37.60**	**302**	P	**P**	**23 33 34.4**	**+0.2**
	6.8nm,1.5s						
NONG	**Nongkai**	**38.81**	**303**	P	P	23 33 51.1	+6.7
	0.3nm,1.3s						
KSRS	**Korea Array**	**40.56**	**349**	LR	LR	23 48 28.4	
	comp=Z,33nm,20.6s,baz=171,slow=33						
GYA	**Guiyang**	**40.84**	**317**	*e*P	**P**	**23 34 03.9**	**+2.6**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NANT	**Nan**	**41.21**	**302**	P	P	23 34 12.4	+8.1
	2.9nm,1.1s						
CM01	**Chiang Mai Arr**	**42.52**	**301**	*e*P	**P**	**23 34 14.0**	**-1.0**
CMAR	**Chiang Mai Arr**	**42.55**	**301**	P	**P**	**23 34 15.2**	**-0.1**
	1.2nm,0.6s,baz=120,slow=6.8,SNR=6.0						
KMI	**Kunming**	**42.83**	**312**	P	**P**	**23 34 21.8**	**+4.0**
KMI				pP	sP	23 34 23.4	+1.3
KMI				sP	pP	23 34 25.5	+4.6
KMI				pmax	pmax		
	comp=Z,4.0nm,0.5s						
USRK	**Ussuriysk Ar.**	**46.67**	**355**	LR	LR	23 51 01.0	
	comp=Z,60nm,21.8s,baz=172,slow=32						
HHC	**Hu-ho-hao-te**	**48.83**	**335**	*e*P	**P**	**23 35 06.1**	**+1.3**
HHC				sP	sP	23 35 14.3	+5.1
HHC				S	**S**	**23 42 13.3**	**+5.0**
HHC				ScS	**ScS**	**23 44 50.8**	**-6.9**
HHC				pmax	pmax		
	comp=Z,20nm,1.1s						
HHC				pmax	pmax		
	comp=Z,110nm,5.7s						
LZH	**Lanzhou**	**49.09**	**325**	*e*P	**P**	**23 35 07.1**	**+0.2**
LZH				pP	sP	23 35 13.3	+2.0
LZH				sP	pP	23 35 15.8	+5.7
LZH				*e*PP	**PP**	**23 37 03.8**	**+3.1**
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				pmax	pmax		
	comp=Z,110nm,4.9s						
LZH				LR	LR		
	comp=N,260nm,15.0s						
LZH				LR	LR		
	comp=E,270nm,16.2s						
LZH				LR	LR		
	comp=Z,340nm,17.7s						
BKZ	**Black Stump Fm**	**51.43**	**140**	*e*P	**P**	**23 35 23.9**	**-0.6**
	29nm,1.4s						
SNZO	**South Karori**	**51.61**	**144**	*e*P	**P**	**23 35 24.6**	**-1.1**
	93nm,1.3s						
GTA	**Gaotai**	**53.69**	**325**	⇑P	**P**	**23 35 41.3**	**0.0**
GTA				pP	sP	23 35 48.9	+3.1
GTA				sP	pP	23 35 52.1	+7.6
GTA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SONM	**Songino Array**	**56.67**	**336**	LR	LR	00 00 06.0	
	comp=Z,42nm,21.4s,baz=74,slow=36						
SONA1	**Songino Array**	**56.67**	**336**	*e*P	**P**	**23 36 02.9**	**+0.1**
PETK	**Petropavlovsk-**	**58.16**	**15**	*e*P	**P**	**23 36 12.9**	**0.0**
WMQ	**Urumqi**	**63.57**	**322**	P	**P**	**23 36 53.3**	**+3.2**
WMQ				pP	sP	23 36 57.3	+2.8
WMQ				sP	pP	23 37 00.5	+7.2
WMQ				LR	LR		
	comp=N,81nm,22.1s						
WMQ				LR	LR		
	comp=E,45nm,32.3s						
MK01	**Makanchi Array**	**68.35**	**323**	*e*P	**P**	**23 37 20.0**	**-0.7**
MK31	**Makanchi Array**	**68.37**	**323**	*e*P	**P**	**23 37 20.4**	**-0.4**
MKAR	**Makanchi Array**	**68.37**	**323**	P	**P**	**23 37 20.4**	**-0.4**
	1.8nm,0.6s,baz=111,slow=8.0,SNR=28						
MKAR	**Makanchi Array**	**68.37**	**323**	*e*P	**P**	**23 37 20.4**	**-0.4**
	24nm,1.0s						
MAKZ	**Makanchi**	**68.57**	**323**	*e*P	**P**	**23 37 21.4**	**-0.7**
	8.8nm,1.1s						
KSH	**Kashi**	**69.44**	**314**	P	**P**	**23 37 28.8**	**+1.0**
KSH				*e*sP	sP	23 37 36.3	+4.0
KSH				*e*PcP	**PcP**	**23 37 52.8**	**+1.7**
KSH				S	**S**	**23 46 33.8**	**-1.7**
KSH				ScS	**SKSac**	**23 47 24.9**	**-3.8**
KSH				SS	**SS**	**23 51 02.8**	**-0.2**
KSH				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KSH				pmax	pmax		
	comp=Z,78nm,4.3s						
ZALV	**Zalesovo Beam**	**70.72**	**331**	P	**P**	**23 37 33.5**	**-1.7**
	0.9nm,0.5s,baz=125,slow=7.7,SNR=4.1						
KURK	**Kurchatov**	**72.37**	**326**	*e*P	**P**	**23 37 44.3**	**-0.9**
	8.4nm,1.1s						
KURBB	**Kurchatov Arra**	**72.37**	**325**	P	**P**	**23 37 44.0**	**-1.2**
	1.5nm,0.8s,baz=116,slow=6.4,SNR=11						
PPT	**Papeete**	**73.79**	**107**	LR	LR	00 06 47.0	
	comp=Z,48nm,21.6s,baz=200,slow=33						
PPT2	**Papeete2**	**73.79**	**107**	*e*LR	LR	00 00 33.5	
	73nm,22.8s						
VNDA	**Vanda**	**76.18**	**175**	P	**P**	**23 38 07.8**	**+0.8**
	1.7nm,0.7s,baz=331,slow=7.3,SNR=12						
BVAR	**Borovoye Array**	**77.97**	**326**	P	**P**	**23 38 16.7**	**-0.7**
	2.5nm,0.7s,baz=110,slow=8.4,SNR=11						
MAW	**Mawson**	**81.55**	**202**	LR	LR	00 14 28.3	
	comp=Z,70nm,18.2s,baz=64,slow=35						
ILAR	**Eielson Array**	**86.50**	**25**	P	**P**	**23 38 60.0**	**-1.9**
	0.4nm,0.6s,baz=259,slow=5.9,SNR=4.3						
ILAR				LR	LR	00 11 10.8	
	comp=Z,19nm,21.8s,baz=219,slow=31						
QSPA	**South Pole Qui**	**87.45**	**180**	P	**P**	**23 39 06.3**	**-0.3**
	5.2nm,1.0s,baz=339,slow=2.8,SNR=9.5						
QSPA				LR	LR	00 18 54.9	
	comp=Z,126nm,18.3s,baz=9.0,slow=36						
GNI	**Garni**	**93.05**	**310**	LR	LR	00 25 43.5	
	comp=Z,98nm,19.7s,baz=88,slow=38						
ASF	**Jabal al Asfar**	**99.58**	**302**	LR	LR	00 29 47.8	
	comp=Z,57nm,20.4s,baz=222,slow=38						
YKA	**Yellowknife Ar**	**100.80**	**27**	P	**Pdif**	**23 40 07.9**	**+0.1**
	1.0nm,0.7s,baz=278,slow=4.3,SNR=3.2						
CPUP	**Villa Florida**	**148.32**	**156**	PKPbc	**PKPbc**	**23 46 07.5**	**+1.1**
	1.7nm,0.8s,baz=256,slow=1.1,SNR=4.7						
LPAZ	**La Paz**	**149.22**	**128**	PKPbc	**PKPbc**	**23 46 11.5**	**+1.8**
	0.7nm,0.7s,baz=177,slow=2.1,SNR=4.3						

IDC 20 00:01:00.9±3.2, 34°.70S×179°.35W, h0km, mb4.1/2, mb1 4.3/3, mb1mx3.8/42, mbtmp4.1/3, ML3.8/1, MS3.9/1, Ms1 3.9/1, ms1mx2.8/38, Error ellipse: s-maj=73.7km s-min=36.7km az=119.0, South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**4.55**	**218**	Pn	Pn	00 02 11.6	+0.5
	4.1nm,0.3s,baz=71,slow=5.6,SNR=16						
URZ				Sn	Sn	00 03 04.2	-0.5
	3.6nm,0.3s,baz=131,slow=18,SNR=4.6						
PMG	**Port Moresby**	**39.65**	**301**	LR	LR	00 22 42.6	
	comp=Z,149nm,19.1s,baz=186,slow=33						
ASAR	**Alice Springs**	**41.94**	**272**	P	P	00 08 53.5	-0.1
	2.2nm,0.8s,baz=114,slow=8.0,SNR=18						
WRA	**Warramunga Arr**	**43.32**	**277**	P	P	00 09 04.7	-0.1
	2.1nm,0.7s,baz=119,slow=7.5,SNR=7.9						
FINES	**FINESS Array B**	**148.71**	**337**	PKPbc	PKPbc	00 20 48.6	-0.7
	2.0nm,0.8s,baz=101,slow=1.9,SNR=4.1						

IDC 20 00:04:20.4±10.0, 4°.40N×91°.91E, h0km, mb3.8/5, mb1 3.9/6, mb1mx3.5/63, mbtmp3.8/6, ML4.2/1, Error ellipse: s-maj=235.7km s-min=67.0km az=136.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.57**	**26**	Pn	Pn	00 08 02.4	+1.0
	0.4nm,0.3s,baz=213,slow=13,SNR=3.6						
MKAR	**Makanchi Array**	**43.05**	**350**	P	P	00 12 22.4	+0.4
	1.1nm,0.5s,baz=168,slow=8.8,SNR=12						
KURBB	**Kurchatov Arra**	**47.42**	**348**	P	P	00 12 55.2	-1.4
	1.0nm,0.6s,baz=168,slow=6.8,SNR=7.2						
ZALV	**Zalesovo Beam**	**49.73**	**355**	P	P	00 13 14.0	-0.3
	1.4nm,0.5s,baz=181,slow=6.7,SNR=5.3						
BVAR	**Borovoye Array**	**51.61**	**344**	P	P	00 13 28.7	+0.2
	0.6nm,0.6s,baz=144,slow=12,SNR=4.6						
GERES	**GERESS Array B**	**78.94**	**319**	P	P	00 16 26.5	+0.3
	0.3nm,0.6s,baz=96,slow=5.4,SNR=3.7						

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*NEIC **20** 00:16:49.5±0.0, 35°.25N×58°.11E, h14km, mb4.4/14, ML4.4(THR), MN4.4(TEH), After TEH.*

*TEH **20** 00:16:49.6, 35°.27N×58°.14E, h10km, ML4.5*

*IDC **20** 00:16:49.7±1.1, 35°.34N×57°.94E, h0km, mb4.0/8, mb1 4.3/15, mb1mx3.9/61, mbtmp4.2/15, ML4.0/7, MS3.5/24, Ms1 3.5/24, ms1mx3.4/56, Error ellipse: s-maj=17.2km s-min=15.1km az=3.0*

*THR **20** 00:16:51.4±0.5, 35°.22N×58°.08E, h26km±7km, ML4.4*

*CSEM **20** 00:16:51.7±0.1, 35°.28N×58°.15E, h10km, mb4.2/14, Error ellipse: s-maj=4.8km s-min=3.9km az=149.0*

*ISCJB **20** 00:16:51.4±0.2, 35°.31N±0°.02×58°.13E±0°.02, h18km, mb4.3/30, MS3.6/20, Error ellipse: s-maj=3.2km s-min=2.6km az=168.4*

*BJI **20** 00:16:52.3, 35°.50N×58°.20E, h20km, mb4.6/17, mB4.7/13, Ms4.2/6, Ms7 4.0/5*

*MOS **20** 00:16:53.9±1.7, 35°.42N×58°.12E, h33km, mb4.3/17, Error ellipse: s-maj=6.9km s-min=5.1km az=131.6*

*NNC **20** 00:16:57.8±4.3, 35°.46N×58°.47E, h31km±25km, mb4.5, mpv4.7, Error ellipse: s-maj=28.5km s-min=15.3km az=37.0*

ISC 20 00:16:53.5±0.5, 35°.30N±0°.03×58°.14E±0°.04, h18km, n281, σ1s88/265, mb4.4/30, MS3.6/20, 20C-25D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IMOG	**Moghan**	**1.26**	**50**	*e*Pg	**Pn**	**00 17 14.0**	**-2.5**
IMOG				*e*		00 17 38.4	
	comp=Z,39µm,0.3s						
IMOG				*e*		00 17 41.4	
	comp=N,59µm,0.2s						
IMOG				*e*		00 17 41.8	
	comp=E,57µm,0.3s						
IMOG	**Moghan**	**1.26**	**50**	*e*Pg	**Pn**	**00 17 14.0**	**-2.5**
IAKL	**Akhelmad**	**1.39**	**21**	*e*Pn	**Pn**	**00 17 16.1**	**-2.2**
IAKL				*e*		00 17 40.6	
	comp=N,82µm,0.3s						
IAKL				*e*		00 17 40.8	
	comp=Z,46µm,0.2s						
IAKL				*e*		00 17 41.0	
	comp=E,64µm,0.2s						
ISRO	**Mashad**	**1.48**	**47**	*e*Pn	**Pn**	**00 17 17.3**	**-2.0**
ISRO	**Mashad**	**1.48**	**47**	*e*Pn	**Pn**	**00 17 17.3**	**-2.0**
IKRD	**Kardeh**	**1.50**	**11**	*e*Pn	**Pg**	**00 17 24.4**	**+1.9**
IKRD				*e*		00 17 30.3	
	comp=Z,28µm,0.2s						
IKRD				*e*		00 17 56.7	
	comp=N,35µm,0.2s						
IKRD				*e*		00 17 58.5	
	comp=E,45µm,0.4s						
ISFR	**Sfrayin**	**1.75**	**356**	*e*Pn	**Pn**	**00 17 22.9**	**-0.4**
ISFR				*e*		00 17 53.7	
	comp=E,28µm,0.3s						
ISFR				*e*		00 17 54.1	
	comp=Z,34µm,0.3s						
ISFR				*e*		00 17 54.2	
	comp=N,62µm,0.3s						
IQHU	**Qucahn**	**1.80**	**10**	*e*		00 17 57.6	
	comp=Z,34µm,0.2s						
TNSJ	**Nastanj**	**1.84**	**224**	*e*Pn	**Pn**	**00 17 22.7**	**-1.6**
TNSJ				*e*		00 17 56.3	
	comp=Z,99nm,0.4s						
TNSJ	**Nastanj**	**1.84**	**224**	*e*Pn	**Pn**	**00 17 22.7**	**-1.6**
TABS	**Tabas**	**1.85**	**208**	*e*Pg	**Pn**	**00 17 22.9**	**-1.5**
TABS				IAML		00 18 02.3	
	comp=N,3µm,0.6s						
TABS	**Tabas**	**1.85**	**208**	*e*Pg	**Pn**	**00 17 22.9**	**-1.5**
TABS	**Tabas**	**1.85**	**208**	*e*Pg	**Pn**	**00 17 22.9**	**-1.5**
SHRO	**Shahrood**	**1.87**	**292**	*e*Pn	**Pn**	**00 17 23.6**	**-1.1**
SHRO	**Shahrood**	**1.87**	**292**	*e*Pn	**Pn**	**00 17 23.7**	**-1.1**
SHRO	**Shahrood**	**1.87**	**292**	*e*Pn	**Pn**	**00 17 23.6**	**-1.1**
TKDS	**Koohdasht(Taba**	**1.88**	**207**	*e*Pn	**Pn**	**00 17 23.3**	**-1.6**
TKDS				*e*		00 18 04.8	
	comp=Z,99nm,0.4s						
TKDS	**Koohdasht(Taba**	**1.88**	**207**	*e*Pn	**Pn**	**00 17 23.3**	**-1.6**
IMYA	**Miami**	**1.90**	**56**	*e*Pg	**Pn**	**00 17 25.3**	**+0.1**
IMYA				*e*		00 17 27.4	
	comp=Z,35µm,0.3s						
IMYA				*e*		00 17 55.3	
	comp=E,70µm,0.3s						
IMYA				*e*		00 17 55.6	
	comp=N,61µm,0.4s						
IMYA	**Miami**	**1.90**	**56**	*e*Pg	**Pn**	**00 17 25.3**	**+0.1**
IEMG	**Emamgholi**	**2.15**	**11**	*e*Pn	**Pn**	**00 17 28.9**	**+0.2**
IEMG				*e*		00 18 03.8	
	comp=E,73µm,0.5s						
IEMG				*e*		00 18 06.3	
	comp=Z,17µm,0.5s						
IEMG				*e*		00 18 07.0	
	comp=N,38µm,0.4s						
IEMG	**Emamgholi**	**2.15**	**11**	*e*Pn	**Pn**	**00 17 28.9**	**+0.2**
ISHV	**Shirvan**	**2.26**	**351**	*e*		00 18 06.6	
	comp=Z,52µm,0.5s						
SHRT	**Shahrakht**	**2.42**	**132**	*e*Pn	**Pn**	**00 17 31.1**	**-1.2**
SHRT				IAML		00 18 12.4	
	comp=E,3µm,0.4s						
SHRT				IAML		00 18 14.5	
	comp=N,3µm,0.4s						
SHRT	**Shahrakht**	**2.42**	**132**	*e*Pn	**Pn**	**00 17 31.1**	**-1.2**
SHRT	**Shahrakht**	**2.42**	**132**	*e*Pn	**Pn**	**00 17 31.1**	**-1.2**
ITEG	**Tejag**	**2.45**	**168**	*e*Pn	**Pn**	**00 17 32.1**	**-0.6**
ITEG				*e*		00 18 12.4	
	comp=Z,30µm,0.3s						
ITEG				*e*		00 18 12.6	
	comp=N,40µm,0.3s						
ITEG				*e*		00 18 17.7	
	comp=E,37µm,0.4s						
ITEG	**Tejag**	**2.45**	**168**	*e*Pn	**Pn**	**00 17 32.1**	**-0.6**
IMON	**Monand**	**2.45**	**149**	*e*Pn	**Pn**	**00 17 32.7**	**-0.1**
IMON				*e*		00 18 17.4	
	comp=Z,21µm,0.2s						
IMON				*e*		00 18 28.5	
	comp=E,5µm,0.2s						
IMON	**Monand**	**2.45**	**149**	*e*Pn	**Pn**	**00 17 32.7**	**-0.1**
TPRV	**Parvadeh(Tabas**	**2.57**	**208**	*e*Pn	**Pn**	**00 17 33.0**	**-1.3**
TPRV				*e*		00 19 01.7	
	comp=Z,99nm,1.3s						
TPRV	**Parvadeh(Tabas**	**2.57**	**208**	*e*Pn	**Pn**	**00 17 33.0**	**-1.3**
GEYT	**Alibeck**	**2.62**	**360**	Pn	**Pn**	**00 17 34.5**	**-0.5**
	comp=Z,9.3nm,0.3s,baz=200,slow=12,SNR=116						
GEYT				Lg	Lg	00 18 10.5	
	comp=Z,13nm,0.3s,baz=162,slow=25,SNR=5.1						
GYA0B	**ALIBECK ARRAY**	**2.62**	**360**	⇓Pn	**Pn**	**00 17 35.8**	**+0.8**
	comp=Z,344nm,1.1s						
GYA0B				⇓Lg	Lg	00 18 17.4	
	comp=Z,2µm,0.9s						
GYA0B	**ALIBECK ARRAY**	**2.62**	**360**	*e*Pn	**Pn**	**00 17 35.2**	**+0.2**
GYA0B	**ALIBECK ARRAY**	**2.62**	**360**	*e*Pn	**Pn**	**00 17 35.2**	**+0.2**
GYA0B				Lg	Lg	00 18 17.4	
	comp=Z,2µm,0.9s						
ASHT	**Ashkhabad**	**2.64**	**4**	⇑Pn	**Pn**	**00 17 36.0**	**+0.8**
	comp=Z,804nm,1.0s						
ASHT				⇑Lg	Lg	00 18 17.5	
	comp=Z,4µm,0.9s						
ASHT	**Ashkhabad**	**2.64**	**4**	Pn	**Pn**	**00 17 36.0**	**+0.8**
	comp=Z,804nm,1.0s						
ASHT				Lg	Lg	00 18 17.5	
	comp=Z,4µm,0.9s						
MRVT	**Maraveh tapeh**	**2.88**	**325**	*e*Pn	**Pn**	**00 17 38.5**	**0.0**
MRVT	**Maraveh tapeh**	**2.88**	**325**	*e*Pn	**Pn**	**00 17 38.5**	**0.0**
MRVT	**Maraveh tapeh**	**2.88**	**325**	*e*Pn	**Pn**	**00 17 38.5**	**0.0**
IDAH	**Dahanechah**	**2.93**	**150**	*e*		00 18 27.1	
	comp=Z,10µm,0.3s						
IDAH				*e*		00 18 40.9	
	comp=N,18µm,0.2s						
IDAH				*e*		00 18 43.3	
	comp=E,20µm,0.2s						
IKOO	**Kooshah**	**2.96**	**166**	*e*Pn	**Pn**	**00 17 38.7**	**-1.1**
IKOO				*e*		00 18 34.3	
	comp=Z,15µm,0.4s						
IKOO				*e*		00 18 43.7	
	comp=E,15µm,0.3s						
IKOO				*e*		00 18 43.7	
	comp=N,11µm,0.4s						
IKOO	**Kooshah**	**2.96**	**166**	*e*Pn	**Pn**	**00 17 38.7**	**-1.1**
IANJ	**Anjilo**	**3.46**	**274**	*e*Pn	**Pn**	**00 17 46.5**	**-0.2**
IANJ				*e*		00 18 55.8	
	comp=Z,6µm,0.4s						
IANJ	**Anjilo**	**3.46**	**274**	*e*Pn	**Pn**	**00 17 46.5**	**-0.2**
ISHM	**Shahmirzad**	**3.99**	**279**	*e*Pn	**Pn**	**00 17 52.9**	**-1.1**
ISHM				*e*		00 18 11.4	
	comp=Z,4µm,0.5s						
ANAR	**Anarak**	**4.22**	**241**	*e*Pn	**Pn**	**00 17 55.1**	**-1.9**
ANAR				*e*		00 18 19.8	
	comp=Z,99nm,0.4s						
ANAR				*e*		00 19 22.5	
	comp=N,99nm,0.5s						
ANAR				*e*		00 19 29.6	
	comp=E,99nm,0.4s						
ANAR	**Anarak**	**4.22**	**241**	*e*Pn	**Pn**	**00 17 55.1**	**-1.9**
ILAS	**Lasjerd**	**4.24**	**273**	*e*Pn	**Pn**	**00 17 57.7**	**+0.3**
ILAS				*e*		00 19 37.8	
	comp=E,10µm,0.5s						
ILAS	**Lasjerd**	**4.24**	**273**	*e*Pn	**Pn**	**00 17 57.7**	**+0.3**
ICHK	**Chekchek**	**4.36**	**227**	*e*Pn	**Pn**	**00 17 57.8**	**-1.2**
ICHK				*e*		00 19 12.6	
	comp=E,7µm,0.5s						
ICHK				*e*		00 19 18.4	
	comp=Z,7µm,0.5s						
ICHK				*e*		00 19 20.0	
	comp=N,6µm,0.4s						
ICHK	**Chekchek**	**4.36**	**227**	*e*Pn	**Pn**	**00 17 57.8**	**-1.2**
IFIR	**Firoozkooh**	**4.41**	**276**	*e*Pn	**Pn**	**00 17 59.3**	**-0.5**
IFIR				*e*		00 19 53.0	
	comp=E,5µm,0.6s						
IFIR	**Firoozkooh**	**4.41**	**276**	*e*Pn	**Pn**	**00 17 59.3**	**-0.5**
IMEH	**Mehriz**	**4.89**	**218**	*e*Pn	**Pn**	**00 18 05.8**	**-0.6**
IMEH				*e*		00 19 41.8	
	comp=Z,4µm,0.5s						
IMEH	**Mehriz**	**4.89**	**218**	*e*Pn	**Pn**	**00 18 05.8**	**-0.6**
IDMV	**Damavand**	**5.00**	**275**	*e*Pn	**Pn**	**00 18 07.2**	**-0.7**
IDMV	**Damavand**	**5.00**	**275**	*e*Pn	**Pn**	**00 18 07.2**	**-0.7**
ISAD	**Sadrabad**	**5.02**	**229**	*e*		00 19 45.5	
	comp=N,3µm,0.4s						
ISAD				*e*		00 19 52.3	
	comp=E,6µm,0.4s						
ISAD				*e*		00 19 58.0	
	comp=Z,6µm,0.5s						
NASN	**Na’in**	**5.08**	**242**	*e*Pn	**Pn**	**00 18 07.4**	**-1.7**
NASN	**Na’in**	**5.08**	**242**	*e*Pn	**Pn**	**00 18 07.4**	**-1.7**
NASN	**Na’in**	**5.08**	**242**	*e*Pn	**Pn**	**00 18 07.4**	**-1.7**
KHGB	**Koh Gabri**	**5.11**	**196**	*e*Pn	**Pn**	**00 18 09.5**	**+0.2**
KHGB				*e*		00 19 50.0	
	comp=Z,99nm,0.6s						
KHGB				*e*		00 19 56.4	
	comp=N,99nm,0.5s						
KHGB	**Koh Gabri**	**5.11**	**196**	*e*Pn	**Pn**	**00 18 09.5**	**+0.2**
IVRN	**Varamin**	**5.27**	**269**	*e*Pn	**Pn**	**00 18 10.6**	**-0.8**
IVRN				*e*		00 20 07.4	
	comp=E,2µm,0.5s						
IVRN	**Varamin**	**5.27**	**269**	*e*Pn	**Pn**	**00 18 10.6**	**-0.8**
IZEF	**Zefreh**	**5.39**	**245**	*e*Pn	**Pn**	**00 18 12.0**	**-1.2**
IZEF				*e*		00 20 08.8	
	comp=N,1µm,0.4s						
IZEF				*e*		00 20 13.4	
	comp=E,2µm,0.6s						
IZEF				*e*		00 20 18.6	
	comp=Z,2µm,0.6s						

IZEF	Zefreh	5.39	245	ePn	Pn	00 18 12.0	-1.2
KRBR	Kerman	5.43	193	IAML		00 19 58.8	
	comp=E,202nm,0.6s						
KRBR				IAML		00 20 04.9	
	comp=N,244nm,0.7s						
CHMN	Cheshme madani	5.45	186	e		00 00 00.0	
	comp=N,99nm,0.0s						
CHMN				ePn	Pn	00 18 11.8	-2.3
CHMN				e		00 19 55.4	
	comp=E,99nm,0.9s						
CHMN				e		00 20 04.1	
	comp=Z,99nm,0.4s						
GHVR	GHOM	5.69	264	ePn	Pn	00 18 16.4	-0.8
GHVR				IAML		00 20 20.4	
	comp=E,122nm,0.6s						
GHVR				IAML		00 20 21.8	
	comp=N,63nm,0.6s						
GHVR	GHOM	5.69	264	ePn	Pn	00 18 16.4	-0.8
GHVR	GHOM	5.69	264	ePn	Pn	00 18 16.4	-0.8
NGRK	Negar Kerman	5.76	192	e		00 20 23.9	
	comp=Z,99nm,0.6s						
IKLH	Kolahrood	5.78	252	ePn	Pn	00 18 18.9	+0.3
IKLH				e		00 20 22.5	
	comp=N,3µm,0.4s						
IKLH				e		00 20 30.7	
	comp=Z,2µm,0.5s						
IKLH				e		00 20 36.4	
	comp=E,2µm,0.4s						
IKLH	Kolahrood	5.78	252	ePn	Pn	00 18 18.9	+0.3
IGAR	Gharneh	5.84	242	ePn	Pn	00 18 18.1	-1.3
IGAR				e		00 20 13.3	
	comp=N,1µm,0.4s						
IGAR				e		00 20 25.7	
	comp=Z,1µm,0.6s						
IRAM	Ramesheh	5.94	236	ePn	Pn	00 18 18.9	-1.8
IRAM				e		00 18 51.0	
	comp=Z,1µm,0.4s						
IRAM				e		00 20 07.0	
	comp=E,2µm,0.5s						
IRAM				e		00 20 42.2	
	comp=N,1µm,0.4s						
IRAM	Ramesheh	5.94	236	ePn	Pn	00 18 18.9	-1.8
ZHSF	Zahedan	6.09	158	ePn	Pn	00 18 21.7	-1.1
ZHSF	Zahedan	6.09	158	ePn	Pn	00 18 21.7	-1.1
ZHSF	Zahedan	6.09	158	ePn	Pn	00 18 21.7	-1.1
IPIR	Pirpir	6.56	249	ePn	Pn	00 18 28.8	-0.6
IPIR				e		00 20 34.3	
	comp=N,1µm,0.4s						
IPIR				e		00 20 39.0	
	comp=E,1µm,0.3s						
IPIR				e		00 21 04.1	
	comp=Z,2µm,0.5s						
IPIR	Pirpir	6.56	249	ePn	Pn	00 18 28.8	-0.6
IRAZ	Razeghan	6.71	273	ePn	Pn	00 18 28.6	-2.8
IRAZ	Razeghan	6.71	273	ePn	Pn	00 18 28.6	-2.8
GRMI	Germi	8.91	296	ePn	Pn	00 19 00.3	-1.1
GRMI	Germi	8.91	296	ePn	Pn	00 19 00.3	-1.1
GRMI	Germi	8.91	296	ePn	Pn	00 19 00.3	-1.1
KBL	Kabul	8.98	92	ePn	Pn	00 19 03.8	+1.3
KBL	Kabul	8.98	92	eP	Pn	00 19 03.8	+1.3
KBL	Kabul	8.98	92	eP	Pn	00 19 03.8	+1.3
AKT	Akhty	10.24	310	⇓iP	Pn	00 19 18.1	-1.5
AKT				eS	Sn	00 21 11.7	-2.2
AKT				pmax	pmax		
	comp=Z,24nm,0.8s						
AKT				smax	smax		
	comp=N,20nm,0.9s						
AKT				smax	smax		
	comp=E,12nm,0.8s						
AKT	Akhty	10.24	310	i P	Pn	00 19 18.1	-1.5
	comp=E,24nm,0.8s						
UOSS	Minazif	10.46	190	ePn	Pn	00 19 27.0	+4.5
GNI	Garni	11.66	298	Pn	Pn	00 19 41.6	+2.5
	comp=E,0.5nm,0.3s,baz=20,slow=4.6,SNR=7.1						
GNI	Garni	11.66	298	ePn	Pn	00 19 41.4	+2.3
GNI	Garni	11.66	298	⇓eP	Pn	00 19 40.8	+1.7
GNI				pmax	pmax		
	comp=Z,29nm,0.7s						
GNI	Garni	11.66	298	eP	Pn	00 19 40.8	+1.7
	comp=Z,29nm,0.7s						
DGRG	David-gareji	11.75	305	eP	Pn	00 19 38.4	-1.8
DGRG	David-gareji	11.75	305	eP	Pn	00 19 38.4	-1.8
TBLG	Delisi	12.30	305	ePn	Pn	00 19 49.8	+2.1
TBLG	Delisi	12.30	305	eP	Pn	00 19 45.6	-2.1
TBLG	Delisi	12.30	305	eP	Pn	00 19 45.6	-2.1
KK31	Karatay Array	12.35	47	⇑Pn	Pn	00 19 46.5	-1.9
	comp=Z,13nm,1.1s,baz=241,slow=20,SNR=33						
KK31	Karatay Array	12.35	47	ePn	Pn	00 19 46.7	-1.7
KK31	Karatay Array	12.35	47	eP	Pn	00 19 46.7	-1.7
KK31	Karatay Array	12.35	47	eP	Pn	00 19 46.7	-1.7
KKAR	Karatay Array	12.35	47	ePn	Pn	00 19 45.9	-2.5
KKAR	Karatay Array	12.35	47	eP	Pn	00 19 45.9	-2.5
KKAR	Karatay Array	12.35	47	eP	Pn	00 19 45.9	-2.5
GROC	Groznyy	12.39	313	eP	Pn	00 19 46.6	-2.4
GROC				eS	Sn	00 22 07.3	+0.7
GROC				pmax	pmax		
	comp=Z,32nm,0.8s						
GROC	Groznyy	12.39	313	eP	Pn	00 19 46.6	-2.4
	comp=Z,32nm,0.8s						
GROC				eS	Sn	00 22 07.3	+0.7
DUS	Dusheti	12.49	307	eP	Pn	00 19 49.2	-1.2
DUS	Dusheti	12.49	307	eP	Pn	00 19 49.2	-1.2
NIL	Nilore	12.58	93	ePn	Pn	00 19 52.4	+0.9
NIL	Nilore	12.58	93	eP	Pn	00 19 52.4	+0.9
NIL	Nilore	12.58	93	eP	Pn	00 19 52.4	+0.9
AKH	Akhalkalaki	13.01	302	ePn	Pn	00 19 58.2	+0.6
AKH	Akhalkalaki	13.01	302	eP	Pn	00 19 58.2	+0.6
AKH	Akhalkalaki	13.01	302	eP	Pn	00 19 58.2	+0.6
SFK	Sufi-Kurgan	13.04	64	⇓Pn	Pn	00 19 56.1	-2.0
	comp=Z,13nm,0.9s						
SFK	Sufi-Kurgan	13.04	64	Pn	Pn	00 19 56.1	-2.0
	comp=Z,13nm,0.9s						
MNAS	Manas	13.28	53	⇓Pn	Pn	00 19 58.7	-2.5
	comp=Z,30nm,1.4s						
MNAS	Manas	13.28	53	Pn	Pn	00 19 58.7	-2.5
	comp=Z,30nm,1.4s						
ZEI	Tsey	13.35	308	eP	Pn	00 19 59.2	-3.0
ZEI				pmax	pmax		
	comp=Z,7.0nm,0.4s						
ONI	Oni	13.54	307	eP	Pn	00 20 04.0	-0.7
ONI	Oni	13.54	307	eP	Pn	00 20 04.0	-0.7
NCK	Nalchik	13.90	310	⇑eP	Pn	00 20 08.5	-1.0
NCK	Nalchik	13.90	310	eP	Pn	00 20 08.5	-1.0
AML	Almayashu	13.92	56	P	Pn	00 20 06.8	-3.3
	SNR=36						
AB31	Akbulak array	14.01	5	Pn	Pn	00 20 12.6	+1.6
	comp=Z,14nm,1.1s,baz=197,slow=13,SNR=58						
AB31				⇓Sn	Sn	00 22 43.2	-2.7
	comp=Z,3.7nm,0.7s,baz=190,slow=23,SNR=2.5						
AB31	Akbulak array	14.01	5	Pn	Pn	00 20 12.6	+1.6
	comp=Z,14nm,1.1s,SNR=58						
ABKAR	Akbulak array	14.01	5	ePn	Pn	00 20 09.7	-1.3
ABKAR	Akbulak array	14.01	5	ePn	Pn	00 20 09.7	-1.3
EKS2	Erkin-Say	14.20	54	P	Pn	00 20 11.6	-2.2
	SNR=46						
NEY	Neytrino	14.33	308	⇓eP	Pn	00 20 17.5	+1.9
KBZ	Khabaz	14.45	310	Pn	Pn	00 20 13.6	-3.4
	comp=Z,0.3nm,0.3s,baz=126,slow=8.6,SNR=13						
KBZ				LR	LR	00 27 36.5	
	comp=Z,84nm,21.7s,baz=140,slow=45						
AAK	Ala-Archa	14.66	55	Pn	Pn	00 20 17.9	-2.3
	comp=Z,1.5nm,0.3s,baz=231,slow=13,SNR=42						
AAK				LR	LR	00 26 50.7	
	comp=Z,185nm,20.1s,baz=244,slow=41						
AAK	Ala-Archa	14.66	55	P	Pn	00 20 18.0	-2.1
	SNR=20						
AAK	Ala-Archa	14.66	55	ePn	Pn	00 20 18.0	-2.1
AAK				eSn	Sn	00 23 06.3	+4.1
AAK	Ala-Archa	14.66	55	eP	Pn	00 20 18.0	-2.1
AAK				e		00 23 06.3	
AAK	Ala-Archa	14.66	55	ePn	Pn	00 20 18.0	-2.1
KVAR	Kislovodsk Arr	14.69	311	Pn	Pn	00 20 17.0	-3.5
	baz=252,slow=9.9,SNR=15						
KVAR				LR	LR	00 27 41.8	
	comp=Z,99nm,19.4s,baz=110,slow=45						
KIV	Kislovodsk	14.70	311	ePn	Pn	00 20 17.4	-3.2
KIV	Kislovodsk	14.70	311	c iP	Pn	00 20 16.9	-3.6
KIV				S	Sn	00 22 59.0	-4.0
KIV				pmax	pmax		
	comp=Z,49nm,1.7s						
KIV				MLR	MLR		
	comp=Z,71nm,17.0s						
KIV	Kislovodsk	14.70	311	ePn	Pn	00 20 17.4	-3.2
KSH	Kashi	14.78	68	P	Pn	00 20 12.4	-9.3
KSH				esP	P	00 20 25.1	-2.5
KSH				S	Sn	00 22 44.8	-20
KSH				pmax	pmax		
	comp=Z,43nm,1.7s						
KSH				pmax	pmax		
	comp=Z,100nm,3.8s						
KSH				LR	LR		
	comp=Z,520nm,16.1s						
KSH				LR	LR		
	comp=Z,470nm,12.9s						
FRU	Bishkek	14.83	55	⇓eP	Pn	00 20 20.0	-2.3
FRU				eS	Sn	00 22 58.0	-8.0
FRU				pmax	pmax		
	comp=Z,160nm,2.5s						
FRU				smax	smax		
	comp=E,70nm,2.0s						
USP	Ospenovka	14.94	53	P	Pn	00 20 20.5	-3.3
	SNR=10.0						
KZA	Kyzart	14.96	58	P	Pn	00 20 21.6	-2.8
	SNR=24						
KBK	Karagaybulak	14.98	56	P	Pn	00 20 22.2	-2.2
	SNR=17						
AKTO	Aktyubinsk	15.13	360	Pn	Pn	00 20 22.5	-3.7
	comp=E,1.2nm,0.3s,baz=181,slow=15,SNR=19						
AKTO				LR	LR	00 26 55.4	
	comp=E,142nm,19.8s,baz=169,slow=40						
AKTO	Aktyubinsk	15.13	360	⇑Pn	Pn	00 20 22.2	-3.9
	comp=E,14nm,1.1s						
AKTO				⇑Sn	Sn	00 23 12.2	-0.9
	comp=E,8.9nm,0.7s						
TKM2	Tokmak 2	15.52	55	⇓Pn	Pn	00 20 28.5	-3.1
	comp=E,12nm,0.8s						
TKM2	Tokmak 2	15.52	55	P	Pn	00 20 28.2	-3.4
	SNR=19						
ULHL	Ulahol	15.71	58	P	Pn	00 20 31.3	-2.8
	SNR=7.5						
ASF	Jabal al Asfar	17.94	266	P	Pn	00 21 00.9	-1.2
	comp=E,0.0nm,0.3s,baz=78,slow=7.0,SNR=7.8						
ANN	Anapa	18.43	307	eP	Pn	00 21 08.4	+0.5
ANN				pmax	pmax		
	comp=Z,25nm,1.0s						
ANN	Anapa	18.43	307	eP	Pn	00 21 08.4	+0.5
	comp=Z,25nm,1.0s						
MMAI	Mount Meron Ar	18.95	270	LR	LR	00 29 07.2	
	comp=Z,84nm,19.5s,baz=125,slow=39						
BRVK	Borovoye	19.72	22	eP	P	00 21 21.9	0.0
	comp=Z,17nm,0.9s						
BRVK	Borovoye	19.72	22	⇑eP	P	00 21 21.4	-0.5
BRVK				pmax	pmax		
	comp=Z,27nm,1.3s						
BRVK	Borovoye	19.72	22	eP	P	00 21 21.9	0.0
	comp=Z,17nm,0.9s						
BVA0	Borovoye Array	19.73	22	⇓P	P	00 21 21.8	-0.1
	comp=Z,14nm,1.0s,baz=204,slow=10,SNR=51						
BVAR	Borovoye Array	19.73	22	P	P	00 21 21.6	-0.4
	comp=Z,2.0nm,0.3s,baz=201,slow=10,SNR=69						
BVAR				LR	LR	00 30 11.1	
	comp=Z,155nm,19.0s,baz=209,slow=41						
VRH	Novokhopyorsk	19.82	328	eP	P	00 21 23.5	+0.6
VRH				pmax	pmax		
	comp=Z,20nm,0.8s						
VRH	Novokhopyorsk	19.82	328	eP	P	00 21 23.5	+0.6
	comp=Z,20nm,0.8s						
BR131	Keskin Array S	19.91	290	eP	Pn	00 21 25.8	-0.1
BR131	Keskin Array S	19.91	290	eP	Pn	00 21 25.8	-0.1
BRTR	Keskin Array B	19.91	290	P	P	00 21 22.2	-2.1
	comp=Z,0.1nm,0.3s,baz=98,slow=8.1,SNR=17						
ILGA	Ilgaz	20.02	294	eP	Pn	00 21 28.0	+0.8
	comp=Z,39nm,1.7s						
CSS	Mathiatis	20.29	276	eP	Pn	00 21 29.9	-0.3
	comp=Z,26nm,1.5s						
CSS	Mathiatis	20.29	276	eP	Pn	00 21 29.9	-0.4
	comp=Z,26nm,1.5s						
ANTO	Ankara	20.57	290	eP	P	00 21 31.6	+0.2
	comp=Z,8.2nm,0.9s						
ANTO	Ankara	20.57	290	eP	P	00 21 31.6	+0.2
ANTO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ANTO	Ankara	20.57	290	eP	P	00 21 31.6	+0.2
	comp=Z,8.2nm,0.9s						
SIM	Simferopol’	20.68	305	d iP	P	00 21 33.0	+0.6
SIM				S	S	00 25 25.0	+2.3
SIM				pmax	pmax		
	comp=Z,17nm,1.0s						
SIM	Simferopol’	20.68	305	i P	P	00 21 33.0	+0.6
	comp=Z,17nm,1.0s						
SIM				S	S	00 25 25.0	+2.3
VSR	Storozhevoye	20.98	325	eP	P	00 21 35.9	+0.4
VSR				pmax	pmax		
	comp=Z,30nm,1.6s						
ARU	Arti	21.14	1	P	P	00 21 37.3	+0.1
	comp=Z,19nm,0.6s,baz=180,slow=4.9,SNR=46						
ARU				LR	LR	00 30 09.4	
	comp=Z,76nm,19.6s,baz=182,slow=38						
ARU	Arti	21.14	1	eP	P	00 21 36.6	-0.5
	comp=Z,36nm,0.8s						
ARU	Arti	21.14	1	c iP	P	00 21 37.5	+0.3
ARU						00 21 56.0	
ARU				S	S	00 25 32.1	+0.7
ARU				SS	SnSn	00 25 54.1	+0.8
ARU				pmax	pmax		
	comp=Z,38nm,1.0s						
MAKZ	Makanchi	21.25	50	⇓P	P	00 21 37.9	-0.7
	comp=Z,9.3nm,1.0s						
MAKZ	Makanchi	21.25	50	eP	P	00 21 38.6	+0.1
	comp=Z,8.2nm,0.8s						
MAKZ	Makanchi	21.25	50	eP	P	00 21 38.6	+0.1
MAKZ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MAKZ	Makanchi	21.25	50	eP	P	00 21 38.6	+0.1
	comp=Z,8.2nm,0.8s						
KURBB	Kurchatov Arra	21.27	38	P	P	00 21 39.3	+0.6
	comp=Z,14nm,1.0s,baz=231,slow=12,SNR=43						
KURBB	Kurchatov Arra	21.27	38	⇑P	P	00 21 39.5	+0.8
	comp=Z,25nm,1.1s						
KURBB	Kurchatov Arra	21.27	38	P	P	00 21 39.5	+0.8
	comp=Z,25nm,1.1s						
KURK	Kurchatov	21.38	38	eP	P	00 21 40.7	+0.8
	comp=Z,24nm,1.0s						
KURK	Kurchatov	21.38	38	deP	P	00 21 40.6	+0.8
KURK				pmax	pmax		
	comp=Z,33nm,1.3s						
KURK	Kurchatov	21.38	38	eP	P	00 21 40.6	+0.8
	comp=Z,33nm,1.3s						
MK01	Makanchi Array	21.43	50	eP	P	00 21 40.1	-0.4
MK01	Makanchi Array	21.43	50	eP	P	00 21 40.2	-0.4
MK31	Makanchi Array	21.44	50	⇑P	P	00 21 40.4	-0.2
	comp=Z,5.4nm,0.8s,baz=238,slow=8.7,SNR=22						
MK31	Makanchi Array	21.44	50	eP	P	00 21 40.6	0.0
MK31	Makanchi Array	21.44	50	eP	P	00 21 40.6	0.0
MK31	Makanchi Array	21.44	50	P	P	00 21 40.4	-0.2
	comp=Z,5.4nm,0.8s,SNR=22						
MKAR	Makanchi Array	21.44	50	P	P	00 21 40.2	-0.4
	comp=Z,3.5nm,0.7s,baz=239,slow=10,SNR=26						
MKAR	Makanchi Array	21.44	50	eP	P	00 21 40.6	0.0
	comp=Z,28nm,0.8s						
MKAR	Makanchi Array	21.44	50	eP	P	00 21 40.6	0.0
	comp=Z,28nm,0.8s						
SVE	Sverdlovsk	21.60	4	eP	P	00 21 42.4	+0.3
SVE				pmax	pmax		
	comp=Z,18nm,1.2s						
PYUN	Piuthan	22.29	102	eP	P	00 21 48.5	-1.6
	comp=Z,82nm,1.1s						
DANN	Dangsing	22.80	101	eP	P	00 21 54.0	-1.6
	comp=Z,29nm,0.6s						
KOLN	Koldanda	22.92	102	eP	P	00 21 55.6	-1.1
	comp=Z,34nm,0.6s						
GKN	Gorkha	23.65	101	eP	P	00 22 02.2	-1.9
	comp=Z,36nm,0.9s						
DMN	Daman	24.19	101	eP	P	00 22 08.3	-1.0
	comp=Z,92nm,1.4s						
WMQ	Urumqi	24.22	60	eP	P	00 22 10.8	+1.6
WMQ				pP	sP	00 22 19.3	+2.4
WMQ				sP	pP	00 22 23.9	+9.2
WMQ				pmax	pmax		
	comp=Z,24nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,180nm,4.5s						
WMQ				LR	LR		
	comp=Z,330nm,10.1s						
WMQ				LR	LR		
	comp=Z,350nm,14.3s						
WMQ				LR	LR		
	comp=Z,320nm,17.3s						
KKN	Kakani	24.26	100	eP	P	00 22 09.6	-0.2
	comp=Z,49nm,1.1s						
PKIN	Phulchoki	24.44	101	eP	P	00 22 10.1	-1.5
	comp=Z,59nm,1.2s						
GUN	Gumba	24.69	100	eP	P	00 22 14.4	+0.5
	comp=Z,39nm,0.6s						
TLB	Topalu	24.76	301	⇑iP	P	00 22 14.4	+0.5
TLB	Topalu	24.76	301	⇑P	P	00 22 14.4	+0.5
OBN	Obninsk	24.79	330	⇑eP	P	00 22 15.1	+1.0
OBN				e		00 22 24.0	
OBN				e		00 23 05.4	
OBN				eSSS	SSS	00 27 39.2	
OBN				pmax	pmax		
	comp=Z,6.0nm,1.4s						
OBN				MLR	MLR		
	comp=Z,90nm,18.0s						
CFR	Carcaliu	24.82	303	⇑iP	P	00 22 20.5	+6.0
CFR	Carcaliu	24.82	303	⇑P	P	00 22 20.5	+6.0
JIRN	Jiri	25.05	100	eP	P	00 22 18.0	+0.9
	comp=Z,69nm,0.9s						
SORM	Soroca	25.49	309	⇓iP	P	00 22 19.9	-0.7
SORM	Soroca	25.49	309	⇓P	P	00 22 19.9	-0.7
SORM	Soroca	25.49	309	P	P	00 22 19.9	-0.7
RAMN	Ramite	25.68	101	eP	P	00 22 22.6	-0.1
	comp=Z,48nm,0.8s						
DGZ	Jazzator, Alta	25.75	47	eP	P	00 22 21.5	-1.6
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.1s						
VRI	Vrincioaia	25.93	304	⇓iP	P	00 22 31.0	+6.3
VRI	Vrincioaia	25.93	304	⇓P	P	00 22 31.0	+6.3
AKASG	Malin Array Be	25.94	315	P	P	00 22 23.3	-1.3
	comp=Z,1.6nm,0.5s,baz=116,slow=8.7,SNR=7.6						
AKBB	Malin Array Si	25.94	315	eP	P	00 22 26.4	+1.8
	comp=Z,11nm,1.0s						
KIEV	Kiev	25.95	315	eP	P	00 22 25.8	+1.1
	comp=Z,10nm,1.0s						
KIEV	Kiev	25.95	315	⇓eP	P	00 22 26.2	+1.6
KIEV				pmax	pmax		
	comp=Z,13nm,1.3s						
PLOR	Plostina	25.98	304	⇓iP	P	00 22 27.1	+2.0
PLOR	Plostina	25.98	304	⇓P	P	00 22 27.1	+2.0
PLOR	Plostina	25.98	304	⇓iP	P	00 22 27.1	+2.0
ODAN	Odare	26.35	100	eP	P	00 22 29.0	+0.2
	comp=Z,58nm,0.8s						
ZAA0	Zalesovo Array	26.36	37	eP	P	00 22 30.0	+1.7
	comp=Z,8.8nm,1.2s						
ZALV	Zalesovo Beam	26.36	37	P	P	00 22 28.1	-0.2
	comp=Z,2.3nm,0.6s,baz=238,slow=8.5,SNR=9.1						
ZALV	Zalesovo Beam	26.36	37	eP	P	00 22 28.9	+0.5
MLR	Muntele Rosu	26.39	303	eP	P	00 22 31.4	+2.4
	comp=Z,8.6nm,1.0s						
BIZ	Bicaz	26.61	306	⇓iP	P	00 22 34.3	+3.6
PRAR	RASCA	26.63	307	⇓iP	P	00 22 39.1	+8.2
DOPR	Dopca	26.87	303	⇑iP	P	00 22 42.3	+9.2
BURAR	Bucovina Array	27.36	307	⇑iP	P	00 22 41.5	+3.9
BURAR	Bucovina Array	27.36	307	⇑P	P	00 22 41.5	+3.9
BUR04	Bucovina Ar. S	27.36	307	eP	P	00 22 41.4	+3.8
BUR08	Bucovina Ar. S	27.38	307	eP	P	00 22 40.7	+2.9
ATD	Arta Tunnel	27.44	214	LR	LR	00 35 08.7	
	comp=Z,261nm,19.7s,baz=2.0,slow=40						
KLMR	Klimovskoe	28.23	341	eP	P	00 22 45.3	+0.3
KLMR				pmax	pmax		
	comp=Z,11nm,1.4s						
KLMR	Klimovskoe	28.23	341	eP	P	00 22 45.4	+0.4
KLMR				AMP		00 22 46.9	
	comp=Z,11nm,1.4s						
LIT	Litokhoron	28.49	290	eP	P	00 22 50.5	+2.8
	comp=Z,8.4nm,1.1s						
LIT	Litokhoron	28.49	290	eP	P	00 22 50.5	+2.8
LIT				pmax	pmax		
	comp=Z,8.0nm,1.1s						
BRDH	Bariadhala	31.73	104	LR	LR	00 39 33.3	
	comp=Z,146nm,18.2s,baz=262,slow=43						
FINES	FINESS Array B	33.12	332	LR	LR	00 39 07.8	
	comp=Z,68nm,18.0s,baz=108,slow=40						
FINES	FINESS Array B	33.12	332	i P	P	00 23 30.7	+2.6
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GTA	Gaotai	33.16	70	eP	P	00 23 31.1	+2.1
GTA				pP	sP	00 23 36.9	+0.1
GTA				sP	pP	00 23 39.9	+5.3
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
PALK	Pallekele	34.74	138	LR	LR	00 38 47.7	
	comp=Z,96nm,20.4s,baz=309,slow=38						
GERES	GERESS Array B	35.15	307	LR	LR	00 40 40.7	
	comp=Z,53nm,19.6s,baz=102,slow=41						
LZH	Lanzhou	36.86	75	eP	P	00 24 03.5	+2.5
LZH				pP	sP	00 24 12.6	+3.8
LZH				sP	pP	00 24 16.4	+10
LZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
FUORN	Ofenpass-Fuorn	37.35	303	eP	P	00 24 06.5	+1.4
	comp=Z,3.4nm,1.0s						
DAVOX	Davos/Dischmat	37.62	303	LR	LR	00 42 40.0	
	comp=Z,45nm,21.2s,baz=84,slow=41						
SONM	Songino Array	37.62	55	LR	LR	00 40 55.9	
	comp=Z,107nm,19.1s,baz=263,slow=38						
SONA1	Songino Array	37.63	55	eP	P	00 24 07.4	+0.1
HFS	Hagfors	37.79	325	LR	LR	00 40 53.2	
	comp=Z,50nm,21.6s,baz=98,slow=38						
ULN	Ulaanbaatar	38.06	55	⇑eP	P	00 24 12.3	+1.2
ULN				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NOA	NORSAR Array B	39.25	326	LR	LR	00 42 24.6	
	comp=Z,74nm,18.3s,baz=85,slow=39						
KMI	Kunming	39.57	92	P	P	00 24 24.6	+0.6
KMI				pmax	pmax		
	comp=Z,9.0nm,0.5s						
CMAR	Chiang Mai Arr	39.76	104	P	P	00 24 24.5	-0.8
	comp=Z,2.1nm,0.7s,baz=305,slow=7.8,SNR=9.0						
CMAR				LR	LR	00 42 42.5	
	comp=Z,77nm,18.1s,baz=280,slow=39						
CMAR	Chiang Mai Arr	39.76	104	i P	P	00 24 25.2	-0.1
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
HHC	Hu-ho-hao-te	41.88	66	eP	P	00 24 42.8	+0.1
HHC				pmax	pmax		
	comp=Z,28nm,1.1s						
HHC				pmax	pmax		
	comp=Z,67nm,5.5s						
GYA	Guiyang	42.22	88	eP	P	00 24 47.0	+1.3
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TIXI	Tiksi	50.86	23	deP	P	00 25 53.3	+0.6
TIXI				pmax	pmax		
	comp=Z,16nm,1.2s						
KSAR	Wonju Array Be	54.99	66	P	P	00 26 23.9	+0.2
KSAR	Wonju Array Be	54.99	66	P	P	00 26 23.9	+0.2
KSRS	Korea Array	55.02	66	P	P	00 26 23.9	+0.1
	comp=Z,0.8nm,0.5s,baz=284,slow=6.1,SNR=3.9						
KSRS				LR	LR	00 53 27.1	
	comp=Z,80nm,18.1s,baz=289,slow=40						
TORD	Torodi Ar. Bea	55.22	261	P	P	00 26 23.4	-2.2
	comp=Z,1.8nm,0.9s,baz=56,slow=6.4						
YSS	Yuzh-Sakhalins	61.85	51	eP	P	00 27 11.9	+0.5
YSS				pmax	pmax		
	comp=Z,20nm,1.3s						
ASAJ	Asahikawa	62.87	54	LR	LR	00 56 48.2	
	comp=Z,52nm,20.3s,baz=340,slow=38						
MJAR	Matsushiro Arr	62.95	63	LR	LR	00 56 33.6	
	comp=Z,45nm,21.1s,baz=210,slow=38						
JHJ	Hachijo jima 2	65.63	66	LR	LR	01 00 15.5	
	comp=Z,60nm,18.1s,baz=166,slow=40						
TSUM	Tsumeb	66.47	222	LR	LR	01 00 35.4	
	comp=Z,61nm,20.3s,baz=340,slow=40						
BOSA	Boshof	70.74	210	LR	LR	01 02 02.5	
	comp=Z,34nm,18.0s,baz=26,slow=38						
ULM	Lac du Bonnet	91.78	344	LR	LR	01 13 16.1	
	comp=Z,33nm,19.1s,baz=302,slow=37						

ISN ***20*** *00:41:15.0±0.4, 32°.41N×46°.79E, h0km±2km, ML2.5*

TEH 20 00:41:17.2, 32°.38N×46°.87E, h8km, ML2.5, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKFM	Kafar-mosalman	1.41	36	ePg	Pn	00 41 42.7	-0.4
IKFM				eSg	Sb	00 42 00.9	-0.8
IKFM				e		00 42 12.0	
	comp=Z,99nm,0.2s						
IVIS	Veis	2.14	360	ePn	Pn	00 41 52.6	-0.7
IVIS				e		00 42 35.6	
	comp=E,286nm,0.1s						
HSAM	Samen	2.33	38	ePn	Pn	00 41 56.3	+0.2
HAGD	Aghdareh	3.08	37	ePn	Pn	00 42 06.5	+0.1
IKLH	Kolahrood	4.08	76	ePn	Pn	00 42 19.4	-0.7

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IKLH				*e*		00 42 41.8	
	comp=Z,43nm,0.2s						

NNC 20 00:41:40.6±2.5, 37°.89N×71°.49E, h0^{km}, mb4.0, mpv3.6, 5C-1D, Error ellipse: s-maj=19.7km s-min=15.6km az=167.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	2.63	36	⇑P	Pn	00 42 24.7	+0.1
	11nm,0.2s						
SFK				⇑S	Sn	00 42 59.3	+1.8
	62nm,0.3s						
MNAS	**Manas**	4.66	9	⇑P	Pn	00 42 52.8	+0.5
	3.9nm,0.3s						
MNAS				⇓S	Sn	00 43 47.8	+0.6
	56nm,0.8s						
KK31	**Karatay Array**	5.26	352	P	Pn	00 43 02.0	+1.5
	2.7nm,0.3s,baz=339,slow=0.8,SNR=67						
KK31				S	Sn	00 44 03.5	+1.7
	6.8nm,0.3s,baz=164,slow=16,SNR=24						
AAK	**Ala-Archa**	5.27	25	⇑P	Pn	00 42 59.3	-1.5
	2.8nm,0.5s						
AAK				⇑S	Sn	00 44 02.2	-0.1
	16nm,0.7s						
AB31	**Akbulak array**	14.09	327	P	Pn	00 44 59.2	-2.2
	0.9nm,0.5s,baz=139,slow=12,SNR=24						

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*ISCJB **20** 00:43:48.9±0.5, 38°.72N±0°.02×43°.55E±0°.05, h11^{km}±4^{km}, Error ellipse: s-maj=6.2km s-min=3.7km az=19.4*

*CSEM **20** 00:43:48.2±0.2, 38°.72N×43°.58E, h5^{km}, ML2.5, Error ellipse: s-maj=6.5km s-min=4.3km az=102.0*

*DDA **20** 00:43:48.0, 38°.72N×43°.57E, h15^{km}, Ml2.8*

*ISK **20** 00:43:48.0, 38°.74N×43°.44E, h11^{km}, ML2.5/7*

ISC 20 00:43:48.5±0.9, **38°.72N**±0°.02×**43°.56E**±0°.03, **h12**^{km}±7^{km}, **n56**, σ**0^{s}84**/73, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	**Van**	0.18	227	PG	Pb	00 43 53.3	-0.6
VANB	**Van**	0.18	227	*e*Pg	Pb	00 43 53.3	-0.6
TVAN	**Van**	0.23	212	*i* P	Pg	00 43 53.4	-0.1
TVAN				*i* S	Sg	00 43 58.1	+1.2
TVAN	**Van**	0.23	212	P	Pg	00 43 53.4	-0.1
TVAN				S	Sg	00 43 58.1	+1.2
VMUR	**Van-Muradiye**	0.27	2	*i* P	Pg	00 43 54.0	-0.3
VMUR				*i* S	Sb	00 44 00.5	+0.5
VMUR	**Van-Muradiye**	0.27	2	P	Pg	00 43 54.0	-0.3
VMUR				S	Sb	00 44 00.5	+0.5
ERCV	**ERCIS-VAN**	0.35	330	PG	Pg	00 43 54.7	-0.9
ERCV	**ERCIS-VAN**	0.35	330	*e*Pg	Pg	00 43 54.7	-0.9
CLDR	**Caldiran**	0.51	33	PG	Pb	00 43 58.8	-0.7
CLDR				SG	Sb	00 44 07.7	+0.8
CLDR	**Caldiran**	0.51	33	*i* P	Pb	00 43 58.5	-1.0
CLDR				*i* S	Sb	00 44 07.9	+1.0
CLDR	**Caldiran**	0.51	33	P	Pb	00 43 58.5	-1.0
CLDR	**Caldiran**	0.51	33	*e*Pg	Pb	00 43 58.8	-0.7
CLDR				S	Sb	00 44 07.9	+1.0
GEVA	**Gevas**	0.57	224	*i* P	Pg	00 43 58.6	-1.0
GEVA				*i* S	Sb	00 44 08.7	+0.2
GEVA	**Gevas**	0.57	224	P	Pg	00 43 58.6	-1.0
GEVA				S	Sb	00 44 08.7	+0.2
ADCV	**BITLIS_Adilcev**	0.66	278	*i* P	Pg	00 44 01.0	-0.4
ADCV				*i* S	Sb	00 44 11.3	+0.1
ADCV	**BITLIS_Adilcev**	0.66	278	P	Pg	00 44 01.0	-0.4
ADCV				S	Sb	00 44 11.3	+0.1
DYDN	**Diyadin**	0.83	7	*i* P	Pg	00 44 04.0	-0.6
DYDN	**Diyadin**	0.83	7	P	Pg	00 44 04.0	-0.6
TUTA	**Tutak**	0.90	320	*i* P	Pg	00 44 04.9	-0.9
TUTA	**Tutak**	0.90	320	P	Pg	00 44 04.9	-0.9
AGRB	**Hanur-Agry**	0.96	333	PG	Pg	00 44 05.7	-1.4
AGRB				SG	Sg	00 44 18.9	-0.8
AGRB	**Hanur-Agry**	0.96	333	*e*Pg	Pg	00 44 05.7	-1.4
AGRB				*e*Sg	Sg	00 44 18.9	-0.8
HAKT	**HAKKARI**	1.17	174	*i* P	Pb	00 44 09.6	-1.1
HAKT	**HAKKARI**	1.17	174	P	Pb	00 44 09.6	-1.1
GURO	**Guroymak-BITLI**	1.21	262	PN	Pn	00 44 10.0	-1.3
GURO				SN	Sb	00 44 25.7	-1.3
GURO	**Guroymak-BITLI**	1.21	262	*e*Pn	Pn	00 44 10.0	-1.3
IGDI	**IGDIR**	1.22	19	*i* P	Pg	00 44 11.5	-0.4
IGDI				*i* S	Sn	00 44 30.9	+3.1
YOVA	**Hakkari_Yˆ…kse**	1.27	153	*i* P	Pn	00 44 11.5	-0.7
YOVA	**Hakkari_Yˆ…kse**	1.27	153	P	Pn	00 44 11.5	-0.7
EKAR	**Karacoban**	1.28	295	*i* P	Pg	00 44 14.1	+0.9
EKAR	**Karacoban**	1.28	295	P	Pg	00 44 14.1	+0.9
TASB	**TASBURUN-IGDIR**	1.37	22	PN	Pb	00 44 13.8	-0.3
TASB	**TASBURUN-IGDIR**	1.37	22	*e*Pn	Pb	00 44 13.8	-0.3
EATA	**Eleskirt**	1.41	324	*i* P	Pb	00 44 14.6	-0.3
EATA				*i* S	Sg	00 44 35.1	+1.1
EATA	**Eleskirt**	1.41	324	P	Pb	00 44 14.6	-0.3
EATA				S	Sg	00 44 35.1	+1.1
CUKT	**Cukurca**	1.47	179	PN	Pb	00 44 15.3	-0.5
CUKT	**Cukurca**	1.47	179	*i* P	Pg	00 44 16.3	-0.5
CUKT	**Cukurca**	1.47	179	*e*Pn	Pb	00 44 15.3	-0.5
CUKT	**Cukurca**	1.47	179	P	Pg	00 44 16.3	-0.5
SRTM	**Siirt_Merkez**	1.48	241	*i* P	Pb	00 44 15.8	-0.2
SRTM	**Siirt_Merkez**	1.48	241	P	Pb	00 44 15.8	-0.2
SIRT	**Sirnak**	1.50	216	PN	Pn	00 44 14.9	-0.4
SIRT	**Sirnak**	1.50	216	*e*Pn	Pn	00 44 14.9	-0.4
SIRN	**S˜–rnak**	1.52	217	*i* P	Pg	00 44 17.9	+0.2
SIRN	**S˜–rnak**	1.52	217	P	Pg	00 44 17.9	+0.2
GNI	**Garni**	1.70	32	PN	Pb	00 44 19.3	-0.4
GNI	**Garni**	1.70	32	*e*Pn	Pb	00 44 19.3	-0.4
DIGO	**Kars**	1.70	355	*i* P	Pb	00 44 19.7	-0.1
DIGO	**Kars**	1.70	355	P	Pb	00 44 19.7	-0.1
BNGL	**BINGOL**	1.90	278	*i* P	Pb	00 44 22.8	-0.3
SVAN	**Silvan-Diyarba**	1.94	254	PN	Pn	00 44 20.7	-0.6
SVAN	**Silvan-Diyarba**	1.94	254	*i* P	Pb	00 44 24.4	+0.6
SVAN	**Silvan-Diyarba**	1.94	254	*e*Pn	Pn	00 44 20.7	-0.6
SVAN	**Silvan-Diyarba**	1.94	254	P	Pb	00 44 24.4	+0.6
BTMN	**Batman**	1.98	246	*i* P	Pb	00 44 23.8	-0.8
BTMN	**Batman**	1.98	246	P	Pb	00 44 23.8	-0.8

JMA 20 00:48:25.0±0.2, **37°.61N×143°.76E, h43**^{km}**, M3.8, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIO	**Ouri**	2.08	295	P	Pn	00 48 58.9	+1.5
JIO				*e*S	Sn	00 49 24.0	+1.9
OFUJ	**Ofunato**	2.20	312	P	Pn	00 49 00.1	+1.0
OFUJ				*e*S	Sn	00 49 25.9	+0.8
JMK	**Ichinoseki**	2.41	305	P	Pn	00 49 03.6	+1.7
JMK				*e*S	Sn	00 49 32.0	+1.9
JOM	**Ohasama**	2.68	315	P	Pn	00 49 07.4	+1.7
JOM				S	Sn	00 49 38.8	+1.9
JFT	**Otama**	2.72	269	P	Pn	00 49 08.4	+2.2
JFT				S	Sn	00 49 40.0	+2.1
JYK	**Kaneyama**	2.98	297	P	Pn	00 49 11.9	+2.2
JYK				*e*S	Sn	00 49 47.3	+3.1
JANG	**Nango**	3.27	328	*e*S	Sn	00 49 51.5	+0.2
JAG	**Ashikaga**	3.64	252	P	Pn	00 49 20.2	+1.3
JAG				S	Sn	00 50 00.8	+0.2
BSO1	**Boso 1**	3.71	218	*e*S	Sn	00 50 00.6	-0.9
JRY	**Ryogami san**	4.21	249	P	Pn	00 49 27.4	+0.7
JRY				*e*S	Sn	00 50 13.6	-1.0

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*IDC **20** 00:56:48.9±3.9, 35°.77N×71°.34E, h205^{km}±29^{km}, mb3.4/6, mb1 3.4/11, mb1mx3.0/66, mbtmp4.0/11, MS2.6/1, Ms1 2.6/1, ms1mx2.1/53, Error ellipse: s-maj=46.0km s-min=21.6km az=148.0*

*NNC **20** 00:57:00.3±1.7, 36°.84N×71°.20E, h232^{km}±18^{km}, mb2.7, mpv3.7, Error ellipse: s-maj=18.5km s-min=15.1km az=58.0*

ISC 20 00:56:51.5±2.0, **36°.2N**±0°.2×**71°.2E**±0°.2, **h200**^{km}**, n39**, σ**1^{s}60**/30, **mb3.6**/6, **6C-6D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	4.24	24	⇑P	Pn	00 57 58.8	+2.4
	7.2nm,0.4s						
SFK				⇓S	Sn	00 58 46.7	-0.8
	48nm,0.4s						
AML	**Almayashu**	6.26	17	P	Pn	00 58 24.2	+1.8
	SNR=52						
MNAS	**Manas**	6.39	8	⇑P	Pn	00 58 25.2	+1.3
	7.2nm,0.4s						
MNAS				⇓S	Sn	00 59 32.6	-4.4
	47nm,0.8s						
UCH	**Uchtor**	6.57	22	P	Sn	00 59 37.6	-4.0
	SNR=16						
KZA	**Kyzart**	6.68	27	P	Pn	00 58 28.2	+0.4
	SNR=5.7						
EKS2	**Erkin-Say**	6.78	16	P	Pn	00 58 31.2	+2.3
	SNR=5.8						
AAK	**Ala-Archa**	6.94	20	P	Pn	00 58 33.1	+2.1
	3.2nm,0.3s,baz=169,slow=5.8,SNR=12						
AAK				S	Sn	00 59 46.5	-3.4
	1.2nm,0.3s,baz=134,slow=22,SNR=8.5						
AAK	**Ala-Archa**	6.94	20	⇑P	Pn	00 58 33.1	+2.1
	4.6nm,0.4s						
AAK				⇑S	Sn	00 59 47.5	-2.5
	9.0nm,0.6s						
AAK	**Ala-Archa**	6.94	20	P	Pn	00 58 33.4	+2.4
	SNR=7.0						
KK31	**Karatay Array**	6.95	356	P	Pn	00 58 31.7	+0.7
	1.3nm,0.4s,baz=182,slow=12,SNR=37						
KK31				S	Sn	00 59 43.9	-6.2
	15nm,0.5s,baz=183,slow=19,SNR=20						
TKM2	**Tokmak 2**	7.54	25	⇑P	Pn	00 58 40.2	+1.4
	3.6nm,0.6s						
TKM2				⇓S	Sn	00 59 58.8	-5.3
	5.7nm,1.0s						
TKM2	**Tokmak 2**	7.54	25	P	Pn	00 58 40.5	+1.7
	SNR=10						
GEYT	**Alibeck**	10.64	283	P	Pn	00 59 18.8	-0.1
	0.2nm,0.3s,baz=107,slow=9.5,SNR=6.6						
PYUN	**Piuthan**	12.79	126	*e*P	P	00 59 51.9	+1.8
	8.1nm,0.3s						
DANN	**Dangsing**	13.14	123	*e*P	P	00 59 57.1	+3.0
	14nm,0.3s						
MAKZ	**Makanchi**	13.32	34	⇓P	Pn	00 59 52.7	-0.1
	4.2nm,0.5s						
KOLN	**Koldanda**	13.41	125	*e*P	P	01 00 00.0	+3.0
	20nm,0.4s						
MK31	**Makanchi Array**	13.45	34	⇓P	Pn	00 59 55.7	+1.2
	0.8nm,0.4s,baz=220,slow=14,SNR=14						
MKAR	**Makanchi Array**	13.45	34	P	Pn	00 59 55.1	+0.6
	0.4nm,0.3s,baz=223,slow=10.0,SNR=12						
GKN	**Gorkha**	13.96	122	*e*P	P	01 00 06.7	+3.7
	20nm,0.3s						
DMN	**Daman**	14.53	122	*e*P	P	01 00 13.6	+4.1
	14nm,0.5s						
KKN	**Kakani**	14.54	121	*e*P	P	01 00 13.4	+3.9
	29nm,0.5s						
PKIN	**Phulchoki**	14.75	122	*e*P	P	01 00 16.3	+4.4
	12nm,0.3s						
GUN	**Gumba**	14.88	119	*e*P	P	01 00 18.1	+4.7
	11nm,0.3s						
JIRN	**Jiri**	15.25	120	*e*P	P	01 00 22.6	+5.0
	35nm,0.4s						
KURBB	**Kurchatov Arra**	15.38	18	P	P	01 00 19.2	+0.8
	0.1nm,0.3s,baz=205,slow=12,SNR=5.8						
AB31	**Akbulak array**	15.47	331	⇓P	P	01 00 19.8	+0.5
	0.4nm,0.4s,baz=139,slow=11,SNR=10						
RAMN	**Ramite**	15.97	121	*e*P	Pn	01 00 30.8	+5.0
	28nm,0.7s						
ODAN	**Odare**	16.58	119	*e*P	Pn	01 00 39.3	+6.2
	13nm,0.6s						
AKTO	**Aktyubinsk**	17.17	330	P	P	01 00 38.6	+0.6
	0.9nm,0.3s,baz=133,slow=8.5,SNR=15						
AKTO	**Aktyubinsk**	17.17	330	⇑P	P	01 00 38.6	+0.6
	5.4nm,0.8s						
ZALV	**Zalesovo Beam**	20.14	24	P	P	01 01 10.6	+0.5
	1.4nm,0.5s,baz=224,slow=12,SNR=5.4						
ZALV				LR	LR	01 09 45.8	
	comp=Z,15nm,19.0s,baz=74,slow=38						
BRTR	**Keskin Array B**	29.72	288	P	P	01 02 40.6	+1.5
	0.5nm,0.6s,baz=94,slow=2.0,SNR=3.8						
FINES	**FINESS Array B**	37.87	326	P	P	01 03 48.9	+0.1
	1.6nm,0.6s,baz=121,slow=10,SNR=11						
ARCES	**ARCESS Array B**	41.53	338	P	P	01 04 19.0	+0.2
	6.0nm,0.9s,baz=116,slow=8.4,SNR=6.3						
HFS	**Hagfors**	43.45	322	P	P	01 04 34.3	-0.1
	0.8nm,0.4s,baz=106,slow=11,SNR=12						
NB2	**NORSAR Subarra**	44.77	323	P	P	01 04 44.0	-0.8
	comp=Z,0.5nm,0.5s,baz=97,slow=7.9						
NOA	**NORSAR Array B**	44.77	323	P	P	01 04 44.3	-0.6
	comp=Z,0.9nm,0.6s,baz=96,slow=7.7,SNR=4.2						
TORD	**Torodi Ar. Bea**	65.91	269	P	P	01 07 13.5	-2.8
	comp=Z,0.6nm,0.5s,baz=58,slow=6.2						

IDC 20 00:57:41.4±4.4, **5°.18S×132°.13E, h0**^{km}**, mb3.6**/1, **mb1 4.0**/3, **mb1mx3.4**/49, **mbtmp3.8**/3, **ML3.8**/2, **Error ellipse: s-maj=286.6km s-min=31.6km az=74.0, Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	14.84	172	Pn	Pn	01 01 10.9	-1.7
	0.3nm,0.3s,baz=353,slow=13,SNR=7.2						
WRA				Sn	Sn	01 03 49.2	-8.7
	0.2nm,0.3s,baz=360,slow=23,SNR=5.3						
ASAR	**Alice Springs**	18.46	175	P	P	01 01 59.6	+0.6
	0.6nm,0.3s,baz=1.7,slow=9.0,SNR=30						
MKAR	**Makanchi Array**	67.90	325	P	P	01 08 41.9	0.0
	0.3nm,0.5s,baz=136,slow=7.6,SNR=4.9						

MAN 20 01:01:54.0, 13°.17N×120°.51E, h19^{km}**, mb4.1, ML2.8, MS2.5, 1D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PGP	**Puerto Galera**	0.54	53	⇓*e*P	Pb	01 02 04.3	-0.6
PGP				*i* S	Sb	01 02 11.8	-0.5
LUBP	**Lubang**	0.61	336	*e*P	Pn	01 02 07.0	-0.7
LUBP				*e*S	Sn	01 02 17.3	+0.2
SJMP	**San Jose**	0.93	140	*e*P	Pb	01 02 11.2	-0.2
SJMP				*e*S	Sb	01 02 23.8	+0.5
BUSP	**Coron**	1.20	195	*e*P	Pn	01 02 15.5	-0.3
BUSP				*e*S	Sn	01 02 31.9	+0.3
BOAC	**Boac**	1.33	78	*e*P	Pn	01 02 17.7	+0.1
BOAC				*e*S	Sb	01 02 35.9	+0.8
OTRP	**Odiongan**	1.68	118	*e*P	Pn	01 02 21.6	-0.8
OTRP				*e*S	Sn	01 02 41.9	-1.6

IDC 20 01:11:13.2±4.9, **17°.02N×146°.85E, h0**^{km}**, mb3.8**/6, **mb1 3.9**/6, **mb1mx3.6**/65, **mbtmp3.8**/6, **Error ellipse: s-maj=193.1km s-min=21.9km az=83.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	20.90	340	P	P	01 15 58.0	+0.7
	2.9nm,0.7s,baz=165,slow=9.9,SNR=6.5						
WRA	**Warramunga Arr**	38.73	199	P	P	01 18 39.0	-0.3
	1.1nm,0.7s,baz=24,slow=9.1,SNR=5.9						
ASAR	**Alice Springs**	42.37	198	P	P	01 19 09.8	+0.4
	0.4nm,0.7s,baz=25,slow=8.4,SNR=4.9						
MKAR	**Makanchi Array**	60.41	314	P	P	01 21 24.6	0.0
	0.5nm,0.7s,baz=99,slow=7.5,SNR=5.3						
KURBB	**Kurchatov Arra**	63.30	319	P	P	01 21 43.2	-0.7
	0.8nm,0.6s,baz=95,slow=7.4,SNR=12						
BVAR	**Borovoye Array**	68.46	321	P	P	01 22 17.2	0.0
	2.0nm,0.6s,baz=99,slow=8.2,SNR=15						

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*BJI **20** 01:19:51.1, 49°.37N×156°.64E, h10^{km}, mb4.9/63, mB4.9/45, Ms4.6/53, Ms7 4.5/50*

*IDC **20** 01:19:54.6±0.5, 49°.37N×156°.14E, h0^{km}, mb4.7/32, mb1 4.8/35, mb1mx4.6/73, mbtmp4.7/35, ML5.4/2, MS4.0/33, Ms1 4.0/33, ms1mx3.9/58, Error ellipse: s-maj=13.9km s-min=11.4km az=151.0*

*KRSC **20** 01:19:56.0±2.2, 49°.06N×157°.09E, h38^{km}±34^{km}, ML5.4*

*NEIC **20** 01:19:57.9±2.5, 49°.35N×156°.03E, h18^{km}±15^{km}, mb4.8/95, Error ellipse: s-maj=6.0km s-min=3.0km az=166.0*

*ISCJB **20** 01:19:57.9±0.7, 49°.22N±0°.03×156°.17E±0°.03, h32^{km}±4^{km}, mb4.8/192, MS4.3/57, Error ellipse: s-maj=5.0km s-min=2.5km az=140.9*

*GCMT **20** 01:19:57.9±0.5, 49°.25N×156°.42E, h23^{km}±1^{km}, MW4.9/57, Moment Tensor Solution. s21,c28; s57,c73; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.22±.16; $M_{\theta\theta}$-0.58±.10; $M_{\phi\phi}$-1.64±.12; $M_{r\theta}$0.40±.17; $M_{\theta\phi}$-1.04±.07; $M_{\phi r}$0.84±.15; Best double couple: $M_0$2.43300×10^{16} NP1:ϕ_s29.00000°, δ56.00000°, λ87.00000°. NP2: ϕ_s214.00000°, δ34.00000°, λ94.00000°. Principal axes: T 2.4060, Plg79.0000°, Azm290.0000°; N 0.0530, Plg2.0000°, Azm31.0000°; P -2.4600, Plg11.0000°, Azm121.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*SKHL **20** 01:19:58.5±0.1, 49°.07N×156°.49E, h62^{km}±2^{km}, mb5.6/1, Ms5.0/7*

*MOS **20** 01:19:59.5±1.0, 49°.30N×156°.15E, h46^{km}, mb5.0/81, MS4.2/22, Error ellipse: s-maj=6.3km s-min=2.8km az=82.6*

ISC 20 01:19:59.5±0.4, **49°.16N**±0°.05×**156°.28E**±0°.04, **h39**^{km}±2^{km}, **n595**, σ**1^{s}43**/628, **mb4.9**/195, **MS4.3**/57, **30C-38D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	1.53	356	*e*P	Pn	01 20 24.0	-0.2
SKR				AMB	AMB	01 20 24.0	
	4µm,1.4s						
SKR				AMB	AMB	01 20 25.0	
	5µm,0.6s						
SKR				*e*S	Sn	01 20 43.0	+0.2
SKR				A	A	01 20 45.6	
	14µm,0.5s						
SKR				A	A	01 20 45.6	
	10µm,0.5s						
SKR				AMS	AMS	01 21 04.0	
	80µm,17.0s						
SKR				AMS	AMS	01 21 04.0	
	133µm,17.0s						
SKR	**Severo-Kuril's**	1.53	356	*e*P	Pn	01 20 24.1	-0.2
SKR				*e*S	Sn	01 20 44.0	+1.2
SKR	**Severo-Kuril's**	1.53	356	*e*PN	Pn	01 20 24.0	-0.2
SKR				*e*S	Sn	01 20 43.4	+0.6
SKR				pmax	pmax		
	comp=Z,4µm,1.4s						
SKR				pmax	pmax		
	comp=Z,400nm,0.9s						
SKR				pmax	pmax		
	comp=Z,5µm,0.6s						
SKR				smax	smax		
	comp=N,14µm,0.5s						
SKR				smax	smax		
	comp=E,10µm,0.5s						
PAU	**Pauzhetka**	2.33	8	*e*P	Pn	01 20 35.7	+0.4
PAU				AMB	AMB	01 20 37.7	
	comp=E,870nm,0.5s						
PAU				*e*S	Sn	01 21 03.7	+1.0
PAU				A	A	01 21 07.8	
	comp=E,8µm,0.6s						
PAU				AMS	AMS	01 22 30.0	
	comp=E,74µm,15.0s						
PAU				AMS	AMS	01 22 30.0	
	comp=E,18µm,15.0s						
PAU	**Pauzhetka**	2.33	8	*e*P	Pn	01 20 35.7	+0.4
PAU				*e*S	Sn	01 21 03.7	+1.0
PAU	**Pauzhetka**	2.33	8	PN	Pn	01 20 35.7	+0.4
PAU				S	Sn	01 21 03.7	+1.0
KDTR	**Khodutka, Kamc**	2.89	23	*e*P	Pn	01 20 41.9	-1.0
KDTR				*e*S	Sn	01 21 14.6	-1.8
MIPR	**Malaya Ipel'ka**	3.14	5	*e*P	Pn	01 20 47.1	+0.8
MIPR	**Malaya Ipel'ka**	3.14	5	PN	Pn	01 20 47.1	+0.8
ASAK	**Asacha**	3.39	17	*e*P	Pn	01 20 49.6	-0.2
ASAK	**Asacha**	3.39	17	PN	Pn	01 20 49.6	-0.2
MTVR	**Mutnovka**	3.54	19	*e*P	Pn	01 20 51.8	-0.2
MTVR	**Mutnovka**	3.54	19	PN	Pn	01 20 51.8	-0.2
RUS	**Russkaya**	3.57	23	*e*P	Pn	01 20 50.9	-1.4
RUS				*e*S	Sn	01 21 32.4	-0.8
RUS	**Russkaya**	3.57	23	PN	Pn	01 20 50.9	-1.4
RUS				S	Sn	01 21 32.4	-0.8
GRL	**Gorelyy**	3.58	18	*e*P	Pn	01 20 53.1	+0.5
GRL	**Gorelyy**	3.58	18	PN	Pn	01 20 53.1	+0.5
APC	**Apacha**	3.81	8	*e*P	Pn	01 20 57.0	+1.4
APC	**Apacha**	3.81	8	PN	Pn	01 20 57.0	+1.4
KRMR	**Karymshinskiy**	3.86	17	*e*P	Pn	01 20 56.7	+0.5
KRMR				*e*S	Sn	01 21 43.2	+3.0
KRMR	**Karymshinskiy**	3.86	17	PN	Pn	01 20 56.7	+0.5
KRMR				S	Sn	01 21 43.2	+3.0
PEA0B	**Petropavlovsk-**	4.05	12	*e*Pn	Pn	01 21 00.0	+1.1
PEA0B				*e*Sn	Sn	01 21 41.7	-3.4
PETK	**Petropavlovsk-**	4.05	12	Pn	Pn	01 20 59.8	+0.9
	baz=177,slow=13						
PETK				LR	LR	01 22 43.9	
	comp=E,2µm,20.7s,baz=193,slow=44						
PETK	**Petropavlovsk-**	4.05	12	*e*Pn	Pn	01 20 59.8	+0.9
PETK				*e*Sn	Sn	01 21 41.9	-3.2
PETK	**Petropavlovsk-**	4.05	12	*e*PN	Pn	01 20 59.8	+0.9
PETK				*e*		01 21 41.9	
PET	**Petropavlovsk**	4.15	20	*e*P	Pn	01 20 59.9	-0.3
PET				*e*S	Sn	01 21 50.2	+2.8
PET	**Petropavlovsk**	4.15	20	*e*Pn	Pn	01 20 59.5	-0.7
PET				*e*Sn	Sn	01 21 42.9	-4.5
PET	**Petropavlovsk**	4.15	20	*e*P	Pn	01 21 00.1	-0.1
PET				*e*S	Sn	01 21 48.0	+0.6
PET	**Petropavlovsk**	4.15	20	*e*PN	Pn	01 20 59.7	-0.5
PET				*e*S	Sn	01 21 48.0	+0.6
PET				pmax	pmax		
	comp=Z,200nm,1.3s						
PET				pmax	pmax		
	comp=Z,301nm,0.6s						
PET				smax	smax		
	comp=E,600nm,4.9s						
PET				smax	smax		
	comp=E,2µm,1.7s						
PET				smax	smax		
	comp=N,2µm,0.8s						
PET				smax	smax		
	comp=N,3µm,0.5s						
PET				smax	smax		
	comp=E,2µm,0.5s						
PET				MLR	MLR		
	comp=Z,2µm,14.0s						
PET				MLR	MLR		
	comp=Z,1µm,11.0s						
DALK	**Dalny**	4.18	21	*e*P	Pn	01 21 00.3	-0.3
DALK				*e*S	Sn	01 21 49.0	+0.9
DALK	**Dalny**	4.18	21	PN	Pn	01 21 00.3	-0.3
DALK				S	Sn	01 21 49.0	+0.9
UGLR	**Uglovaya**	4.36	21	*e*P	Pn	01 21 03.7	+0.5
UGLR	**Uglovaya**	4.36	21	PN	Pn	01 21 03.7	+0.5
AVH	**Avacha**	4.39	20	*e*P	Pn	01 21 04.4	+0.8
AVH	**Avacha**	4.39	20	PN	Pn	01 21 04.4	+0.8
KOK	**Koryaka**	4.40	19	*e*P	Pn	01 21 05.0	+1.3
KOK	**Koryaka**	4.40	19	PN	Pn	01 21 05.0	+1.3
SMAR	**Somma**	4.41	20	*e*P	Pn	01 21 05.1	+1.2
SMAR	**Somma**	4.41	20	PN	Pn	01 21 05.1	+1.2
SDLR	**Sedlovina**	4.44	21	*e*P	Pn	01 21 03.7	-0.6
SDLR	**Sedlovina**	4.44	21	PN	Pn	01 21 03.7	-0.6
NLC	**Nalytchevo**	4.46	25	*e*P	Pn	01 21 03.2	-1.2
NLC	**Nalytchevo**	4.46	25	PN	Pn	01 21 03.2	-1.2
KRX	**Arik**	4.46	19	*e*P	Pn	01 21 05.7	+1.1
KRX	**Arik**	4.46	19	PN	Pn	01 21 05.7	+1.1
SPN	**Mys Shipunski**	4.59	29	*e*P	Pn	01 21 05.2	-1.1
SPN				*e*S	Sn	01 21 57.0	-1.4
SPN	**Mys Shipunski**	4.59	29	PN	Pn	01 21 05.2	-1.1
SPN				S	Sn	01 21 57.0	-1.4
GNL	**Ganaly**	4.66	12	*e*P	Pn	01 21 08.5	+1.2
GNL	**Ganaly**	4.66	12	PN	Pn	01 21 08.5	+1.2
KII	**Karymskiy**	5.27	21	*e*P	Pn	01 21 16.6	+1.0
KII	**Karymskiy**	5.27	21	PN	Pn	01 21 16.6	+1.0
MKZ	**Mys Kozlova**	6.37	30	*e*P	Pn	01 21 28.6	-2.1
MKZ				*e*S	Sn	01 22 40.5	-1.6
MKZ	**Mys Kozlova**	6.37	30	PN	Pn	01 21 28.6	-2.1
TUMD	**Tumrok D**	6.56	21	*e*P	Pn	01 21 32.8	-0.5
TUMR	**Tumrok**	6.58	20	*e*P	Pn	01 21 33.9	+0.3
TUMR	**Tumrok**	6.58	20	PN	Pn	01 21 32.8	-0.8
ESO	**Esso**	6.94	11	*e*P	Pn	01 21 39.6	+1.1
ESO	**Esso**	6.94	11	PN	Pn	01 21 39.6	+1.1
KUR	**Kuril'sk**	6.95	239	*e*P	Pn	01 21 40.5	+1.9
KUR				AMB	AMB	01 21 46.0	
	comp=Z,80nm,0.5s						
KUR				AMB	AMB	01 21 46.0	
	comp=Z,51nm,0.5s						
KUR				AMB	AMB	01 21 46.0	
	comp=Z,312nm,0.5s						
KUR				*i* S	Sn	01 22 57.0	+0.8
KUR				AMS	AMS	01 24 21.1	
	comp=Z,6µm,15.0s						
KUR				AMS	AMS	01 24 21.1	
	comp=Z,14µm,15.0s						
KUR	**Kuril'sk**	6.95	239	*d i*PN	Pn	01 21 41.2	+2.6
KUR				pmax	pmax		
	comp=Z,1µm,3.5s						
KUR				pmax	pmax		
	comp=Z,320nm,0.5s						
KUR				pmax	pmax		

	comp=E,50nm,0.4s						
KUR				pmax	pmax		
	comp=N,79nm,0.5s						
KMNR	Kamenistaya	7.04	19	eP	Pn	01 21 42.5	+2.6
KMNR	Kamenistaya	7.04	19	PN	Pn	01 21 42.5	+2.6
KPT	Kopyto	7.23	18	eP	Pn	01 21 44.1	+1.6
KPT	Kopyto	7.23	18	PN	Pn	01 21 44.1	+1.6
KIRR	Kirishev	7.24	18	eP	Pn	01 21 44.1	+1.3
KIRR	Kirishev	7.24	18	PN	Pn	01 21 44.1	+1.3
BZMR	Bezymyannaya	7.25	19	eP	Pn	01 21 43.6	+0.6
BZMR	Bezymyannaya	7.25	19	PN	Pn	01 21 43.6	+0.6
BZWR	Bezymyannyi-We	7.28	19	eP	Pn	01 21 43.6	+0.2
BZWR	Bezymyannyi-We	7.28	19	PN	Pn	01 21 43.6	+0.2
BZGR	Bezymyannyi-Gr	7.30	20	eP	Pn	01 21 44.8	+1.2
BZGR	Bezymyannyi-Gr	7.30	20	PN	Pn	01 21 44.8	+1.2
ZLN	Zelenaya	7.40	20	eP	Pn	01 21 46.0	+1.1
ZLN	Zelenaya	7.40	20	PN	Pn	01 21 46.0	+1.1
LGNR	Loginova	7.43	19	eP	Pn	01 21 47.3	+1.8
LGNR	Loginova	7.43	19	PN	Pn	01 21 47.3	+1.8
CIRR	Tsirk	7.48	20	eP	Pn	01 21 47.8	+1.8
CIRR	Tsirk	7.48	20	PN	Pn	01 21 47.8	+1.8
KRSR	Krestovskiy	7.53	19	eP	Pn	01 21 48.0	+1.3
KRSR	Krestovskiy	7.53	19	PN	Pn	01 21 48.0	+1.3
BDR	Baidarnaya	8.00	20	eP	Pn	01 21 53.7	+0.7
BDR	Baidarnaya	8.00	20	PN	Pn	01 21 53.7	+0.7
SRKR	Sorokina	8.07	20	eP	Pn	01 21 54.2	+0.2
SRKR	Sorokina	8.07	20	PN	Pn	01 21 54.2	+0.2
SMKR	Semkarok	8.07	21	eP	Pn	01 21 55.0	+1.0
SMKR	Semkarok	8.07	21	PN	Pn	01 21 55.0	+1.0
KBTR	Krutoberegovo	8.10	27	eP	Pn	01 21 52.6	-1.8
KBTR	Krutoberegovo	8.10	27	PN	Pn	01 21 52.6	-1.8
KBG	Krutoberegovo	8.11	26	eP	Pn	01 21 53.8	-0.6
KBG	Krutoberegovo	8.11	26	PN	Pn	01 21 53.8	-0.6
SHO	Shikotan	8.39	234	eP	Pn	01 21 57.0	-1.4
SHO				AMB	AMB	01 22 16.0	
	comp=N,86nm,0.4s						
SHO				AMB	AMB	01 22 16.0	
	comp=N,48nm,0.4s						
SHO				AMB	AMB	01 22 16.0	
	comp=N,106nm,0.4s						
SHO				i S	Sn	01 23 29.0	-2.7
SHO				AMS	AMS	01 25 04.2	
	comp=N,7µm,14.0s						
SHO				AMS	AMS	01 25 04.2	
	comp=N,5µm,14.0s						
SHO	Shikotan	8.39	234	ePN	Pn	01 21 57.9	-0.5
SHO				pmax	pmax		
	comp=Z,106nm,0.4s						
SHO				pmax	pmax		
	comp=N,86nm,0.3s						
SHO				pmax	pmax		
	comp=E,48nm,0.3s						
SHO				MLR	MLR		
	comp=N,757nm,14.0s						
SHO				MLR	MLR		
	comp=Z,524nm,14.0s						
BKI	Bering	8.49	41	P	Pn	01 21 57.7	-2.0
BKI				eS	Sn	01 23 24.5	-10
BKI	Bering	8.49	41	PN	Pn	01 21 57.7	-2.0
YUK	Yuzh-Kuril'sk	8.81	238	eP	Pn	01 22 05.0	+0.8
YUK				AMB	AMB	01 22 09.0	
	comp=Z,77nm,0.4s						
YUK				AMB	AMB	01 22 09.0	
	comp=Z,57nm,0.4s						
YUK				AMB	AMB	01 22 09.0	
	comp=Z,521nm,0.4s						
YUK				eS	Sn	01 23 43.0	+0.9
YUK				AMS	AMS	01 25 35.7	
	comp=Z,7µm,15.0s						
YUK				AMS	AMS	01 25 35.7	
	comp=Z,5µm,15.0s						
YUK				AMS	AMS	01 25 35.7	
	comp=Z,16µm,15.0s						
YUK	Yuzh-Kuril'sk	8.81	238	ePN	Pn	01 22 05.9	+1.7
YUK				pmax	pmax		
	comp=E,57nm,0.3s						
YUK				pmax	pmax		
	comp=Z,521nm,0.3s						
YUK				pmax	pmax		
	comp=N,77nm,0.5s						
YUK				MLR	MLR		
	comp=Z,2µm,17.0s						
YUK				MLR	MLR		
	comp=N,682nm,15.0s						
YUK				MLR	MLR		
	comp=E,464nm,13.0s						
TYV	Tymovskoe	8.94	286	eP	Pn	01 22 08.6	+2.7
TYV				AMB	AMB	01 22 12.6	
	comp=E,40nm,1.0s						
TYV				AMS	AMS	01 26 36.2	
	comp=E,2µm,15.0s						
TYV				AMS	AMS	01 26 36.2	
	comp=E,3µm,15.0s						
TYV				AMS	AMS	01 26 36.2	
	comp=E,3µm,15.0s						
TYV	Tymovskoe	8.94	286	ePN	Pn	01 22 10.3	+4.4
TYV				eS	Sn	01 23 49.2	+4.0
TYV				pmax	pmax		
	comp=Z,42nm,1.3s						
TYV				smax	smax		
	comp=N,21nm,1.3s						
YSS	Yuzh-Sakhalins	9.32	261	ePn	Pn	01 22 11.5	+0.4
YSS	Yuzh-Sakhalins	9.32	261	ePN	Pn	01 22 13.6	+2.4
YSS				pmax	pmax		
	comp=Z,30nm,0.4s						
YSS				pmax	pmax		
	comp=N,10.0nm,0.3s						
YSS				pmax	pmax		
	comp=E,30nm,0.3s						
YSS				MLR	MLR		
	comp=E,1µm,15.0s						
UGL	Uglegorsk	9.32	275	eP	Pn	01 22 13.7	+2.5
UGL				AMB	AMB	01 22 17.5	
	comp=E,400nm,2.0s						
UGL				AMB	AMB	01 22 17.5	
	comp=E,180nm,0.6s						
UGL				AMS	AMS	01 26 22.0	
	comp=E,3µm,14.0s						
UGL				AMS	AMS	01 26 22.0	
	comp=E,3µm,14.0s						
OKH	Okha	9.43	303	ePN	Pn	01 22 15.6	+3.0
OKH				eS	Sn	01 24 07.9	+11
OKH				pmax	pmax		
	comp=Z,100nm,8.8s						
NKL	Nikolayevsk	10.58	298	ePN	Pn	01 22 31.0	+2.7
NKL				pmax	pmax		
	comp=Z,400nm,3.0s						
NKL				pmax	pmax		
	comp=Z,43nm,1.0s						
NKL				MLR	MLR		
	comp=N,450nm,14.0s						
NKL				MLR	MLR		
	comp=E,700nm,14.0s						
NKL				MLR	MLR		
	comp=Z,2µm,14.0s						
ASAJ	Asahikawa	10.67	247	Pn	Pn	01 22 32.1	+2.5
	comp=Z,40nm,0.3s,baz=67,slow=15,SNR=42						
ASAJ	Asahikawa	10.67	247	ePn	Pn	01 22 32.3	+2.7
MA2	Magadan	10.91	345	Pn	Pn	01 22 33.6	+0.7
	comp=Z,6.4nm,0.3s,baz=161,slow=9.0,SNR=27						
MA2				LR	LR	01 27 25.4	
	comp=Z,997nm,18.1s,baz=167,slow=42						
MA2	Magadan	10.91	345	eP	Pn	01 22 33.2	+0.3
MA2	Magadan	10.91	345	ePn	Pn	01 22 34.0	+1.1
MA2	Magadan	10.91	345	ePN	Pn	01 22 34.0	+1.1
ERM	Erimo	11.63	237	eP	Pn	01 22 43.5	+0.7
ERM	Erimo	11.63	237	ePn	Pn	01 22 43.2	+0.4
ERM				eSn	Sn	01 24 44.2	-7.0
ERM	Erimo	11.63	237	dePN	Pn	01 22 43.5	+0.7
SMY	Shemya	11.79	66	ePn	Pn	01 22 42.6	-2.3
SMY				eSn	Sn	01 24 43.7	-11
SMY	Shemya	11.79	66	ePN	Pn	01 22 42.6	-2.3
GRNR	Gornyy	12.88	285	ePN	Pn	01 23 01.5	+1.6
SEY	Seymchan	13.97	353	eP	Pn	01 23 13.8	-0.8
SEY	Seymchan	13.97	353	⇓eP	Pn	01 23 13.8	-0.8
TEY	Ternei	14.01	260	eP	P	01 23 21.1	-1.4
KLR	Kul'dur	16.02	280	Pn	P	01 23 44.1	-0.6
	comp=Z,0.1nm,0.3s,baz=74,slow=12,SNR=37						
KLR	Kul'dur	16.02	280	deP	Pn	01 23 42.7	+1.0
USRK	Ussuriysk Ar.	17.36	263	P	Pn	01 23 58.1	-0.5
	baz=68,slow=12						
USRK				LR	LR	01 30 38.6	
	comp=Z,298nm,19.2s,baz=53,slow=37						
MJAR	Matsushiro Arr	18.23	233	P	P	01 24 09.8	+0.5
	comp=Z,1.6nm,0.3s,baz=33,slow=8.1,SNR=19						
MJAR				LR	LR	01 32 06.2	
	comp=Z,506nm,19.8s,baz=50,slow=40						
MJB9	Matsu-Tunnel	18.23	233	ePn	P	01 24 09.4	+0.1
	comp=Z,36nm,0.6s						
MAJO	Matsushiro	18.23	233	eP	Pn	01 24 10.0	+0.6
MAJO	Matsushiro	18.23	233	ePn	P	01 24 08.4	-0.9
	comp=Z,35nm,0.6s						
MAJO	Matsushiro	18.23	233	deP	Pn	01 24 10.0	+0.6
MAT	Matsushiro	18.23	233	P	P	01 24 08.3	-1.0
MAT				S	S	01 27 38.2	+2.4
ZEA	Zeya	18.59	295	eP	Pn	01 24 13.8	+0.2
ZEA				pmax	pmax		
	comp=Z,36nm,1.2s						
ZEA				MLR	MLR		
	comp=Z,1µm,14.0s						
ZEA				MLR	MLR		
	comp=E,600nm,13.0s						
MDJ	Mudanjiang	18.75	266	P	P	01 24 12.5	-2.4
MDJ				sP	Pn	01 24 18.8	+3.2
MDJ				pmax	pmax		
	comp=E,620nm,4.0s						
MDJ	Mudanjiang	18.75	266	eP	P	01 24 14.6	-0.3
	comp=E,41nm,0.9s						
YAK	Yakutsk	19.61	321	LR	LR	01 32 23.0	
	comp=E,461nm,18.4s,baz=90,slow=39						
YAK	Yakutsk	19.61	321	eP	P	01 24 21.7	-2.4
YAK				eS	S	01 27 59.8	-3.3
YAK				pmax	pmax		
	comp=Z,63nm,1.0s						
YAK				pmax	pmax		
	comp=N,12nm,1.2s						
YAK				pmax	pmax		
	comp=E,30nm,1.2s						
YAK				pmax	pmax		
	comp=Z,38nm,0.8s						
YAK				pmax	pmax		
	comp=N,17nm,1.1s						
YAK				pmax	pmax		
	comp=E,53nm,1.5s						
YAK				smax	smax		
	comp=N,67nm,3.3s						
YAK				smax	smax		
	comp=E,82nm,3.5s						
YAK				MLR	MLR		
	comp=Z,571nm,14.0s						
YAK				MLR	MLR		
	comp=N,335nm,15.0s						
YAK				MLR	MLR		
	comp=E,295nm,14.0s						
INU	Inuyama	19.76	233	eP	P	01 24 26.9	+0.8
	comp=E,32nm,0.8s						
JHJ	Hachijo jima 2	20.20	224	LR	LR	01 34 29.0	
	comp=E,46nm,18.1s,baz=88,slow=43						
CN2	Changchun	21.80	267	eP	P	01 24 45.9	-2.1
CN2				pmax	pmax		
	comp=E,20nm,1.5s						
CN2				pmax	pmax		
	comp=E,200nm,3.0s						
CN2				LR	LR		
	comp=E,640nm,15.0s						
CN2				LR	LR		
	comp=E,490nm,15.0s						
CN2				LR	LR		
	comp=E,680nm,12.0s						
KSRS	Korea Array	23.57	251	P	P	01 25 06.9	+0.5
	comp=E,13nm,0.8s,baz=51,slow=9.7,SNR=34						
KSRS				LR	LR	01 33 50.3	
	comp=E,386nm,18.9s,baz=61,slow=35						
KS01	Wonju Array Si	23.58	251	eP	P	01 25 05.9	-0.5
KS15	Wonju Array Si	23.61	251	eP	P	01 25 08.1	+1.4
KSAR	Wonju Array Be	23.61	251	P	P	01 25 06.9	+0.2
KSAR	Wonju Array Be	23.61	251	P	P	01 25 06.9	+0.2
HIA	Hailar	23.72	284	eP	P	01 25 07.6	-0.1
HIA	Hailar	23.72	284	eP	P	01 25 07.6	-0.1
	comp=E,18nm,0.6s						
HIA	Hailar	23.72	284	eP	P	01 25 07.6	-0.1
HIA				pmax	pmax		
	comp=Z,18nm,0.6s						
TJN	Taejon	24.60	250	deP	P	01 25 17.5	+1.6
JNU	Nakatsue	24.78	239	P	P	01 25 18.6	+1.0
	comp=Z,30nm,0.9s,baz=52,slow=6.7,SNR=11						
JNU				LR	LR	01 36 13.6	
	comp=Z,153nm,19.3s,baz=121,slow=40						
JNU	Nakatsue	24.78	239	eP	P	01 25 18.8	+1.2
	comp=Z,42nm,1.1s						
TIXI	Tiksi	25.83	340	P	P	01 25 24.5	-2.1
	comp=Z,34nm,0.8s,baz=126,slow=12,SNR=12						
TIXI				LR	LR	01 36 51.4	
	comp=Z,310nm,18.1s,baz=144,slow=40						
TIXI	Tiksi	25.83	340	eP	P	01 25 24.4	-2.2
TIXI	Tiksi	25.83	340	eP	P	01 25 23.9	-2.7
TIXI	Tiksi	25.83	340	deP	P	01 25 24.4	-2.2
TIXI				pmax	pmax		
	comp=Z,28nm,0.9s						
BOD	Bodaibo	26.21	305	eP	P	01 25 28.3	-1.9
BOD				pmax	pmax		
	comp=Z,11nm,1.0s						
DL2	Dalian	26.72	261	P	P	01 25 35.8	+0.8
DL2				eS	S	01 30 08.9	+1.0
DL2				pmax	pmax		
	comp=Z,28nm,0.8s						
DL2				pmax	pmax		
	comp=Z,95nm,10.0s						
DL2				LR	LR		
	comp=Z,410nm,16.5s						
DL2				LR	LR		
	comp=Z,340nm,14.9s						
DL2				LR	LR		
	comp=Z,340nm,14.4s						
H11N2	WAKE ISLAND Hy	30.57	160	T	T	01 58 56.5	
	baz=345,slow=76,SNR=144						
H11N1	WAKE ISLAND Hy	30.59	160	T	T	01 58 55.2	
	baz=345,slow=76,SNR=59						
H11N3	WAKE ISLAND Hy	30.59	160	T	T	01 59 12.2	
	baz=345,slow=76,SNR=63						
TIA	Tai'an	31.20	260	P	P	01 26 14.9	0.0
TIA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
H11S1	WAKE ISLAND Hy	31.71	161	T	T	02 00 15.6	
	baz=346,slow=76,SNR=1100						
H11S3	WAKE ISLAND Hy	31.73	161	T	T	02 00 20.9	
	baz=346,slow=76,SNR=1149						
H11S2	WAKE ISLAND Hy	31.73	161	T	T	02 00 12.0	
	baz=346,slow=76,SNR=1165						
ULN	Ulaanbaatar	32.18	287	eP	P	01 26 22.4	-1.2
ULN	Ulaanbaatar	32.18	287	eP	P	01 26 21.9	-1.7
	comp=Z,2.7nm,0.8s						
ULN	Ulaanbaatar	32.18	287	⇓eP	P	01 26 22.4	-1.2
ULN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HHC	Hu-ho-hao-te	32.28	272	eP	P	01 26 23.8	-0.7
HHC				sP	pP	01 26 32.3	-3.0
HHC				S	S	01 31 35.9	+0.5
HHC				sS	sS	01 31 48.1	-5.2
HHC				pmax	pmax		
	comp=Z,24nm,1.0s						
HHC				pmax	pmax		
	comp=Z,220nm,5.7s						
HHC				LR	LR		
	comp=Z,380nm,12.1s						
HHC				LR	LR		
	comp=Z,580nm,13.8s						
HHC				LR	LR		
	comp=Z,850nm,15.6s						
TOLK	Toolik Lake Re	32.57	33	eP	P	01 26 27.4	+0.8
	comp=Z,7.6nm,0.7s						
SONM	Songino Array	32.60	287	P	P	01 26 26.1	-1.2
	comp=Z,1.2nm,0.5s,baz=77,slow=7.4,SNR=5.9						
SONM				PcP	PcP	01 29 13.1	+0.4
	comp=Z,1.2nm,0.7s,baz=80,slow=2.8,SNR=3.8						
SONM				LR	LR	01 40 58.8	
	comp=Z,536nm,18.5s,baz=78,slow=39						
NJ2	Nanjing	32.74	253	eP	P	01 26 30.9	+2.5
NJ2				sP	pP	01 26 34.4	-4.8
NJ2				S	S	01 31 47.8	+5.4
NJ2				pmax	pmax		
	comp=Z,20nm,0.8s						
NJ2				LR	LR		
	comp=Z,440nm,11.9s						
NJ2				LR	LR		
	comp=Z,460nm,13.6s						
NJ2				LR	LR		
	comp=Z,920nm,15.2s						
COLA	College	32.92	41	eP	P	01 26 31.0	+1.3
	comp=Z,15nm,0.9s						
COLA	College	32.92	41	eP	P	01 26 31.0	+1.3
COLA				pmax	pmax		
	comp=Z,15nm,0.9s						
TLY	Talaya	33.03	295	eP	P	01 26 30.6	-0.2
TLY	Talaya	33.03	295	eP	P	01 26 31.2	+0.4
TLY				pmax	pmax		
	comp=Z,18nm,0.9s						
TLY				MLR	MLR		
	comp=Z,381nm,14.0s						
ILAR	Eielson Array	33.34	41	P	P	01 26 32.7	-0.6
	comp=Z,1.2nm,0.8s,baz=252,slow=7.8,SNR=14						
ILB	Eielson Array	33.34	41	eP	P	01 26 33.2	-0.1
IL1	Eielson Array	33.34	41	eP	P	01 26 32.7	-0.6
EGAK	Eagle	35.79	41	eP	P	01 26 54.4	0.0
	comp=Z,10nm,0.8s						
WHN	Wuhan	36.60	255	⇑P	P	01 27 02.1	+0.3
WHN				S	S	01 32 41.3	-0.5
WHN				LR	LR		
	comp=Z,620nm,13.6s						
DAWY	Dawson	36.63	42	eP	P	01 27 02.8	+1.1
	comp=Z,5.7nm,1.0s						
GUMO	Guam	36.70	199	LR	LR	01 41 23.6	
	comp=Z,44nm,18.9s,baz=346,slow=35						
XAN	Xi'an	37.85	265	P	P	01 27 11.5	-0.9
XAN				pP	pP	01 27 17.1	-6.2
XAN				S	S	01 33 02.8	+1.9
XAN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,96nm,4.7s						
XAN				LR	LR		
	comp=Z,300nm,14.7s						
XAN				LR	LR		
	comp=Z,410nm,15.7s						
INK	Inuvik	38.47	34	eP	P	01 27 18.5	+1.4
	comp=Z,12nm,0.9s						
INK	Inuvik	38.47	34	eP	P	01 27 18.5	+1.4
INK				pmax	pmax		
	comp=Z,12nm,0.9s						
ENH	Enshi	39.90	259	eP	P	01 27 29.5	-0.1
	comp=Z,11nm,0.6s						
LZH	Lanzhou	39.95	271	eP	P	01 27 30.6	+0.5
LZH				pP	pP	01 27 35.9	-5.2
LZH				sP	sP	01 27 39.1	-6.6
LZH				S	S	01 33 31.8	-1.0
LZH				sS	sS	01 33 47.8	-3.1
LZH				pmax	pmax		
	comp=Z,37nm,0.8s						
LZH				pmax	pmax		
	comp=Z,100nm,4.2s						
LZH				LR	LR		
	comp=Z,850nm,13.0s						
LZH				LR	LR		
	comp=Z,550nm,13.7s						
LZH				LR	LR		
	comp=Z,1µm,14.6s						
GTA	Gaotai	40.71	278	P	P	01 27 36.0	-0.4
GTA				pP	pP	01 27 40.5	-6.8
GTA				sP	sP	01 27 43.3	-8.6
GTA				S	S	01 33 43.3	-0.7
GTA				pmax	pmax		
	comp=Z,12nm,1.2s						
GTA				pmax	pmax		
	comp=Z,44nm,4.8s						
GTA				LR	LR		
	comp=Z,480nm,15.2s						
GTA				LR	LR		
	comp=Z,690nm,15.6s						
GTA				LR	LR		
	comp=Z,1µm,16.2s						
GZH	Guangzhou	42.55	248	P	P	01 27 47.8	-3.5
GZH				S	S	01 34 06.1	-5.0
GZH				LR	LR		
	comp=Z,160nm,12.1s						
GZH				LR	LR		
	comp=Z,200nm,12.7s						
ZAA0	Zalesovo Array	42.96	305	eP	P	01 27 53.0	-1.3
	comp=Z,5.5nm,0.7s						
ZALV	Zalesovo Beam	42.96	305	P	P	01 27 52.6	-1.7
	comp=Z,5.6nm,0.6s,baz=59,slow=6.8,SNR=23						
ZALV				PcP	PcP	01 29 44.8	+0.6
	comp=Z,3.5nm,0.7s,baz=60,slow=3.6,SNR=7.3						
CD2	Chengdu	43.20	265	eP	P	01 27 56.0	-0.7
CD2				pP	pP	01 28 00.8	-6.9
CD2				sP	sP	01 28 02.8	-9.5
CD2				PP	PP	01 29 35.9	-1.4
CD2				S	S	01 34 21.4	+0.6
CD2				SS	SS	01 37 34.8	+0.4
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,160nm,5.2s						
CD2				LR	LR		
	comp=Z,300nm,11.9s						
CD2				LR	LR		
	comp=Z,390nm,12.9s						
CD2				LR	LR		
	comp=Z,480nm,13.9s						
DGZ	Jazzator, Alta	43.32	298	eP	P	01 27 57.8	+0.3
DGZ				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NVS	Novosibirsk	43.44	306	⇑iP	P	01 27 57.8	-0.4
NVS				pmax	pmax		
	comp=Z,34nm,1.6s						
NVS				pmax	pmax		
	comp=N,10.0nm,1.5s						
NVS				pmax	pmax		
	comp=E,14nm,1.4s						
GYA	Guiyang	44.31	258	P	P	01 28 07.0	+1.3
GYA				PP	PcP	01 29 51.4	+2.0
GYA				S	S	01 34 39.6	+2.5
GYA				SS	SS	01 37 49.6	-6.7
GYA				pmax	pmax		
	comp=E,20nm,1.0s						
GYA				pmax	pmax		
	comp=E,120nm,5.0s						
GYA				LR	LR		
	comp=E,460nm,17.3s						
GYA				LR	LR		
	comp=E,480nm,17.0s						
GYA				LR	LR		
	comp=E,420nm,17.5s						
WMQ	Urumqi	46.05	291	P	P	01 28 19.9	+0.7
WMQ				pP	pP	01 28 24.5	-5.9
WMQ				sP	sP	01 28 29.1	-5.8
WMQ				pmax	pmax		
	comp=E,25nm,0.7s						
WMQ				pmax	pmax		
	comp=E,180nm,3.7s						
WMQ				LR	LR		
	comp=E,780nm,11.7s						
WMQ				LR	LR		
	comp=E,780nm,14.1s						
WMQ				LR	LR		
	comp=E,440nm,16.3s						
YKA	Yellowknife Ar	47.72	39	P	P	01 28 32.1	+0.2
	comp=E,4.7nm,0.9s,baz=295,slow=7.4,SNR=7.9						
MK31	Makanchi Array	47.74	297	eP	P	01 28 31.5	-0.8
MK31				ePcP	PcP	01 30 01.1	+0.1
MK31	Makanchi Array	47.74	297	eP	P	01 28 31.5	-0.8
MK31				e		01 30 01.1	
MKAR	Makanchi Array	47.74	297	P	P	01 28 31.1	-1.2
	comp=E,8.7nm,0.8s,baz=62,slow=7.8,SNR=78						
MKAR				LR	LR	01 50 04.6	
	comp=E,704nm,18.4s,baz=35,slow=38						
MKAR	Makanchi Array	47.74	297	i P	P	01 28 31.3	-1.0
MKAR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
QIZ	Qiongzhong	47.74	248	eP	P	01 28 32.8	+0.2
MK01	Makanchi Array	47.74	297	eP	P	01 28 30.9	-1.4
MK01				ePcP	PcP	01 30 00.4	-0.6
KMI	Kunming	47.77	260	P	P	01 28 34.0	+1.0
KMI				pP	pP	01 28 37.8	-6.4
KMI				sP	sP	01 28 40.0	-8.7
KMI				pmax	pmax		
	comp=Z,29nm,0.9s						
KMI				pmax	pmax		
	comp=Z,76nm,3.7s						
KMI				LR	LR		
	comp=Z,190nm,14.2s						
KMI				LR	LR		
	comp=Z,260nm,15.5s						
KMI				LR	LR		
	comp=Z,170nm,13.5s						
KURK	Kurchatov	47.82	303	eP	P	01 28 31.5	-1.3
KURK	Kurchatov	47.82	303	eP	P	01 28 32.1	-0.7
KURK				ePcP	PcP	01 30 01.3	+0.2

KURK	Kurchatov	47.82	303	P	P	01 28 31.6	-1.3
	SNR=14						
KURK	Kurchatov	47.82	303	ceP	P	01 28 31.5	-1.3
KURK				pmax	pmax		
	comp=Z,35nm,0.8s						
RES	Resolute Bay	47.86	20	eP	P	01 28 33.1	+0.3
	comp=Z,5.1nm,0.6s						
RES	Resolute Bay	47.86	20	eP	P	01 28 33.1	+0.3
RES				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KURBB	Kurchatov Arra	47.91	303	P	P	01 28 32.6	-0.9
	comp=Z,27nm,0.8s,baz=64,slow=8.0,SNR=105						
MAKZ	Makanchi	47.91	297	eP	P	01 28 32.9	-0.8
	comp=Z,6.6nm,0.7s						
MAKZ	Makanchi	47.91	297	eP	P	01 28 32.9	-0.8
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.7s						
KBS	Kingsbay	50.43	352	eP	P	01 28 51.8	-0.6
SPITS	Spitsbergen Ar	50.61	350	P	P	01 28 52.1	-1.7
	comp=Z,3.9nm,0.5s,baz=39,slow=9.7,SNR=17						
SPITS				LR	LR	01 52 00.5	
	comp=Z,160nm,19.7s,baz=20,slow=38						
BVAR	Borovoye Array	50.98	309	P	P	01 28 56.1	-0.9
	comp=Z,7.0nm,0.4s,baz=55,slow=7.8,SNR=75						
BRVK	Borovoye	51.01	309	eP	P	01 28 55.6	-1.6
BRVK	Borovoye	51.01	309	eP	P	01 28 56.4	-0.8
BRVK				ePcP	PcP	01 30 10.5	-2.3
BRVK	Borovoye	51.01	309	P	P	01 28 56.0	-1.2
	SNR=13						
BRVK	Borovoye	51.01	309	ceP	P	01 28 55.6	-1.6
BRVK				i *PP	pP	01 29 07.3	-1.1
BRVK				pmax	pmax		
	comp=Z,26nm,0.8s						
LSA	Lhasa	52.26	273	eP	P	01 29 08.1	+0.7
	comp=Z,7.3nm,0.5s						
LSA	Lhasa	52.26	273	P	P	01 29 08.4	+1.1
LSA	Lhasa	52.26	273	eP	P	01 29 08.1	+0.7
LSA				pmax	pmax		
	comp=Z,7.0nm,0.5s						
PANO	Nakornpanom	52.38	251	P	P	01 29 10.4	+2.6
	comp=Z,0.4nm,1.0s,comp=Z,110nm						
NONG	Nongkai	52.61	253	P	P	01 29 11.3	+1.8
	comp=Z,1.4nm,0.8s						
SKNT	Sakolnakorn	52.91	252	P	P	01 29 13.3	+1.6
	comp=Z,14nm,1.1s						
SVE	Sverdlovsk	53.51	317	eP	P	01 29 14.9	-0.7
SVE				pmax	pmax		
	comp=Z,33nm,0.8s						
SVE				MLR	MLR		
	comp=Z,324nm,16.0s						
KHON	Khomkaen	54.11	252	P	P	01 29 22.4	+1.9
	comp=Z,15nm,0.7s						
DAG	Danmarks Havn	54.30	359	⇑iP	P	01 29 20.3	-0.8
	comp=Z,7.5nm,0.8s						
LAMP	Lampang	54.50	257	P	P	01 29 25.7	+2.3
	comp=Z,13nm,0.9s,comp=Z,122nm						
SHL	Shillong	54.55	269	eP	P	01 29 24.5	+0.6
SHL				pmax	pmax		
	comp=Z,27nm,0.7s						
AAK	Ala-Archa	54.67	296	eP	P	01 29 24.5	0.0
	comp=Z,4.9nm,0.8s						
AAK	Ala-Archa	54.67	296	eP	P	01 29 24.5	0.0
AAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ARU	Arti	54.67	318	eP	P	01 29 22.6	-1.5
ARU	Arti	54.67	318	eP	P	01 29 22.6	-1.5
ARU	Arti	54.67	318	c iP	P	01 29 22.8	-1.3
ARU				*PP	pP	01 29 34.2	-1.2
ARU						01 30 24.6	
ARU				S	S	01 37 00.1	-1.0
ARU				SS	SS	01 40 40.6	-2.9
ARU				pmax	pmax		
	comp=Z,44nm,0.8s						
CMMT	Chiang Mai	54.73	258	P	P	01 29 26.9	+1.9
	comp=Z,34nm,1.5s						
CHTO	Chiang Mai	54.73	258	eP	P	01 29 26.0	+1.0
CHTO	Chiang Mai	54.73	258	P	P	01 29 26.6	+1.6
	SNR=10						
CHTO	Chiang Mai	54.73	258	eP	P	01 29 26.0	+1.0
CHTO	Chiang Mai	54.73	258	P	P	01 29 26.9	+1.9
	comp=Z,150nm,1.1s						
LAB	Little Aspen B	54.82	64	eP	P	01 29 29.7	+4.1
PHIT	Phitsanulok	54.99	255	P	P	01 29 30.1	+3.2
	comp=Z,22nm,0.8s						
CMAR	Chiang Mai Arr	54.99	257	P	P	01 29 28.6	+1.6
	comp=Z,15nm,0.9s,baz=32,slow=6.9,SNR=30						
CMAR				LR	LR	01 53 50.5	
	comp=Z,120nm,20.3s,baz=40,slow=37						
CM01	Chiang Mai Arr	55.01	257	eP	P	01 29 27.8	+0.8
PBKT	Sadao Pong	55.10	254	eP	P	01 29 29.9	+2.2
PBKT	Sadao Pong	55.10	254	P	P	01 29 30.6	+2.9
	comp=Z,22nm,0.6s,comp=Z,815nm						
K05A	Summer Lake	55.23	63	eP	P	01 29 32.6	+4.0
	comp=Z,16nm,1.2s						
KSH	Kashi	55.69	293	P	P	01 29 35.8	+3.9
KSH				sP	pP	01 29 43.1	-0.2
KSH				ePcP	PcP	01 30 34.9	+4.0
KSH				S	S	01 37 19.4	+3.9
KSH				SS	SS	01 41 04.3	+3.7
KSH				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KSH				pmax	pmax		
	comp=Z,69nm,4.1s						
KSH				LR	LR		
	comp=Z,740nm,18.5s						
KSH				LR	LR		
	comp=Z,380nm,18.2s						
MOD	Modoc Plateau	56.08	63	eP	P	01 29 36.1	+1.4
	comp=Z,20nm,1.4s						
ARCES	ARCESS Array B	56.26	341	P	P	01 29 35.0	-0.4
	comp=Z,4.1nm,0.8s,baz=54,slow=7.9,SNR=5.7						
ARCES	ARCESS Array B	56.26	341	P	P	01 29 35.0	-0.4
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SRAK	Srakaew	56.36	251	P	P	01 29 36.4	-0.4
	comp=Z,50nm,0.9s,comp=Z,510nm						
PRGR	Permogore	56.48	328	eP	P	01 29 35.2	-1.8
PRGR				pmax	pmax		
	comp=Z,14nm,1.0s						
NAYO	Nakonayok	56.58	252	P	P	01 29 40.8	+2.5
	comp=Z,0.1nm,0.7s						
ODAN	Odare	56.62	274	eP	P	01 29 39.8	+1.0
	comp=Z,7.2nm,0.5s						
KK31	Karatay Array	56.69	299	eP	P	01 29 38.3	-0.5
KK31	Karatay Array	56.69	299	eP	P	01 29 38.3	-0.5
KKAR	Karatay Array	56.69	299	eP	P	01 29 38.3	-0.5
KKAR	Karatay Array	56.69	299	eP	P	01 29 38.3	-0.5
BRDH	Bariadhala	56.71	267	LR	LR	01 58 56.7	
	comp=Z,129nm,18.1s,baz=8.5,slow=41						
UMPA	Umpang Tak	56.71	256	P	P	01 29 44.3	+5.1
	comp=Z,16nm,1.0s						
JIRN	Jiri	56.86	275	eP	P	01 29 41.1	+0.4
	comp=Z,36nm,0.6s						
GUN	Gumba	56.90	276	eP	P	01 29 41.4	+0.5
	comp=Z,29nm,0.4s						
RAMN	Ramite	57.07	274	eP	P	01 29 42.7	+0.7
	comp=Z,56nm,0.6s						
KKN	Kakani	57.37	276	eP	P	01 29 45.3	+1.2
	comp=Z,23nm,0.6s						
PKIN	Phulchoki	57.44	276	eP	P	01 29 45.1	+0.5
	comp=Z,12nm,0.6s						
DMN	Daman	57.60	276	eP	P	01 29 46.6	+0.8
	comp=Z,48nm,0.9s						
GKN	Gorkha	57.64	277	eP	P	01 29 46.5	+0.6
	comp=Z,68nm,1.0s						
DANN	Dangsing	57.98	277	eP	P	01 29 49.2	+0.7
	comp=Z,32nm,0.6s						
PAHR	Pah Rah Range	58.00	65	eP	P	01 29 53.6	+5.4
	comp=Z,8.9nm,1.3s						
SUMG	Summit	58.13	5	i P	P	01 29 49.4	+0.4
	comp=Z,52nm,0.9s						
SUMG	Summit	58.13	5	eP	P	01 29 49.2	+0.2
SUMG				pmax	pmax		
	comp=Z,54nm,0.9s						
HLID	Hailey	58.41	59	eP	P	01 29 53.0	+1.9
	comp=Z,6.4nm,1.2s						
HNR	Honiara	58.43	176	LR	LR	01 51 10.8	
	comp=Z,85nm,21.8s,baz=334,slow=32						
CMB	Columbia Colle	58.47	67	eP	P	01 29 57.5	+6.1
	comp=Z,8.8nm,1.5s						
CMB	Columbia Colle	58.47	67	eP	P	01 29 57.5	+6.1
CMB				pmax	pmax		
	comp=Z,9.0nm,1.5s						
KOLN	Koldanda	58.48	277	eP	P	01 29 53.0	+1.2
	comp=Z,38nm,0.5s						
ABKAR	Akbulak array	58.50	310	eP	P	01 29 50.7	-0.8
YERR	Yerington	58.54	65	eP	P	01 29 53.9	+1.8
	comp=Z,5.3nm,1.1s						
BOZ	Bozeman (W)	58.65	55	eP	P	01 29 53.3	+0.6
	comp=Z,5.9nm,1.0s						
BOZ	Bozeman (W)	58.65	55	eP	P	01 29 53.3	+0.6
BOZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
PYUN	Piuthan	58.65	278	eP	P	01 29 53.4	+0.4
	comp=Z,62nm,0.9s						
AKTO	Aktyubinsk	58.69	312	P	P	01 29 51.8	-1.0
	comp=Z,6.0nm,0.6s,baz=66,slow=8.2,SNR=17						
PHET	Kaeng Krachan	58.71	252	P	P	01 29 59.2	+5.9
WAKR	Walker	58.74	66	eP	P	01 29 55.7	+2.2
	comp=Z,6.0nm,1.1s						
BMN	Battle Mountai	58.81	63	eP	P	01 29 54.7	+0.8
	comp=Z,4.9nm,1.0s						
BMN	Battle Mountai	58.81	63	eP	P	01 29 54.7	+0.8
BMN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KLMR	Klimovskoe	59.13	329	eP	P	01 29 53.0	-2.5
KLMR				pmax	pmax		
	comp=Z,11nm,0.9s						
KLMR	Klimovskoe	59.13	329	eP	P	01 29 53.1	-2.5
KLMR				AMP		01 29 57.6	
	comp=Z,11nm,0.9s						
KVN	Kaiserville	59.18	65	eP	P	01 29 58.2	+1.7
	comp=Z,6.2nm,1.1s						
KVN	Kaiserville	59.18	65	eP	P	01 29 58.2	+1.7
KVN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
RYN	Ryan	59.20	65	eP	P	01 29 58.7	+2.0
	comp=Z,5.8nm,1.3s						
QLMT	Earthquake Lak	59.25	56	eP	P	01 29 59.1	+2.1
NV01	Mina Array Sit	59.46	65	eP	P	01 29 59.7	+1.1
NVAR	Mina Array Bea	59.46	65	P	P	01 29 59.6	+1.1
	comp=Z,1.3nm,0.8s,baz=296,slow=7.0,SNR=9.0						
H17A	Grant Village	59.99	56	eP	P	01 30 05.4	+3.3
	comp=Z,7.6nm,1.0s						
IMW	Indian Meadow	60.12	56	eP	P	01 30 06.2	+3.1
	comp=Z,9.8nm,1.4s						
RLMT	Red Lodge	60.22	54	eP	P	01 30 05.2	+1.6
	comp=Z,10nm,1.0s						
MOOW	Moose Ponds	60.33	56	eP	P	01 30 06.4	+2.0
	comp=Z,3.6nm,1.2s						
TPAW	Teton Pass	60.38	57	eP	P	01 30 07.5	+2.7
	comp=Z,8.5nm,1.1s						
LOHW	Long Hollow	60.49	56	eP	P	01 30 08.0	+2.5
	comp=Z,5.1nm,1.1s						
REDW	Red Top Meadow	60.52	57	eP	P	01 30 08.2	+2.4
	comp=Z,12nm,1.1s						
R11A	Troy Canyon, C	61.13	64	eP	P	01 30 11.2	+1.3
	comp=Z,3.6nm,0.9s						
NIL	Nilore	61.15	289	eP	P	01 30 10.6	+0.7
NIL	Nilore	61.15	289	eP	P	01 30 10.6	+0.7
DUG	Dugway, Tooele	61.51	61	eP	P	01 30 14.4	+2.0
	comp=Z,9.9nm,1.4s						
DUG	Dugway, Tooele	61.51	61	eP	P	01 30 14.4	+2.0
DUG				pmax	pmax		
	comp=Z,10.0nm,1.3s						
PD31	Pinedale Array	61.62	57	eP	P	01 30 14.8	+1.5
PDAR	Pinedale Array	61.62	57	P	P	01 30 14.0	+0.7
	comp=Z,3.3nm,1.0s,baz=304,slow=2.7,SNR=19						
PDAR	Pinedale Array	61.62	57	eP	P	01 30 13.6	+0.4
SFJD	Kangerlussuaq	62.38	12	P	P	01 30 17.6	0.0
	comp=Z,5.5nm,0.4s,baz=3.5,slow=3.6,SNR=3.8						
SFJD				LR	LR	02 01 18.8	
	comp=Z,172nm,18.3s,baz=341,slow=40						
SHPR	Sheep Range	62.61	65	eP	P	01 30 24.3	+4.5
	comp=Z,4.0nm,1.0s						
FINES	FINESS Array B	62.74	336	P	P	01 30 19.3	-0.8
	comp=Z,3.1nm,0.5s,baz=31,slow=7.3,SNR=32						
FINES				LR	LR	02 00 51.0	
	comp=Z,196nm,18.4s,baz=24,slow=39						
CCUT	Cedar City	62.97	63	eP	P	01 30 24.2	+1.9
	comp=Z,4.6nm,1.0s						
TMUT	Trail Mountain	63.03	60	eP	P	01 30 24.7	+1.9
	comp=Z,4.6nm,1.1s						
KBL	Kabul	63.13	292	eP	P	01 30 22.4	-1.0
	comp=Z,8.9nm,1.0s						
KBL	Kabul	63.13	292	eP	P	01 30 22.4	-1.0
KBL				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ULM	Lac du Bonnet	63.31	43	P	P	01 30 24.4	+0.3
	comp=Z,2.3nm,0.8s,baz=311,slow=8.0,SNR=3.5						
MTPU	Mount Pierson	63.32	62	eP	P	01 30 27.4	+2.6
	comp=Z,3.3nm,0.9s						
P18A	Preston Nutter	63.35	60	eP	P	01 30 27.0	+2.0
	comp=Z,5.4nm,1.1s						
LCMT	Little Creek M	63.40	64	eP	P	01 30 27.0	+1.9
	comp=Z,6.5nm,1.0s						
SRU	San Rafael Swe	63.55	60	eP	P	01 30 27.7	+1.6
	comp=Z,6.7nm,0.8s						
SRU	San Rafael Swe	63.55	60	eP	P	01 30 27.7	+1.6
SRU				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KNB	Kanab	63.64	63	eP	P	01 30 28.9	+2.2
	comp=Z,11nm,1.1s						
KNB	Kanab	63.64	63	eP	P	01 30 28.9	+2.2
KNB				pmax	pmax		
	comp=Z,11nm,1.1s						
RSSD	Black Hills	63.65	52	eP	P	01 30 27.7	+1.0
	comp=Z,9.1nm,0.8s						
RSSD	Black Hills	63.65	52	eP	P	01 30 27.7	+1.0
RSSD				pmax	pmax		
	comp=Z,9.0nm,0.9s						
OBN	Obninsk	64.50	326	eP	P	01 30 30.4	-1.3
OBN	Obninsk	64.50	326	⇓eP	P	01 30 30.4	-1.3
OBN				e*PP	pP	01 30 40.6	-2.7
OBN				e		01 31 05.8	
OBN				eSS	SS	01 43 23.9	+6.5
OBN				pmax	pmax		
	comp=Z,8.0nm,0.6s						
OBN				MLR	MLR		
	comp=Z,210nm,18.0s						
PV21	Cone Mtn., Par	64.81	60	eP	P	01 30 36.0	+1.6
	comp=Z,7.3nm,1.1s						
PV22	Blue Mesa, Par	64.93	60	eP	P	01 30 36.6	+1.5
	comp=Z,9.9nm,1.2s						
PV17	East Wray Mesa	65.01	60	eP	P	01 30 37.2	+1.6
	comp=Z,17nm,1.1s						
PV16	Nyswonger Mesa	65.01	60	eP	P	01 30 37.3	+1.6
	comp=Z,11nm,1.2s						
VSU	Vasula	65.03	333	deP	P	01 30 34.8	-0.4
VSU				pmax	pmax		
	comp=Z,54nm,1.7s						
PV11	David Mesa, Pa	65.05	60	eP	P	01 30 37.5	+1.6
	comp=Z,28nm,1.4s						
PV18	Skein Mesa, Pa	65.06	60	eP	P	01 30 37.6	+1.6
	comp=Z,9.3nm,1.0s						
PV12	Saucer Basin,	65.07	60	eP	P	01 30 38.3	+2.2
	comp=Z,18nm,1.3s						
PV03	Paradox Valley	65.09	60	eP	P	01 30 37.3	+1.1
PV13	Radium Mtn., P	65.17	60	eP	P	01 30 38.4	+1.6
	comp=Z,15nm,1.2s						
VRH	Novokhopyorsk	65.50	321	eP	P	01 30 36.2	-2.1
VRH				pmax	pmax		
	comp=Z,30nm,0.7s						
ISCO	Idaho Springs	65.82	57	eP	P	01 30 42.4	+1.4
	comp=Z,2.8nm,0.7s						
ISCO	Idaho Springs	65.82	57	eP	P	01 30 42.4	+1.4
ISCO				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NC204	NORSAR Array S	66.48	343	eP	P	01 30 44.0	-0.6
VSR	Storozhevoye	66.53	322	eP	P	01 30 43.2	-1.7
VSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
NB2	NORSAR Subarra	66.61	342	P	P	01 30 44.1	-1.3
	comp=Z,6.8nm,1.1s,baz=24,slow=6.5						
NOA	NORSAR Array B	66.61	342	P	P	01 30 44.1	-1.3
	comp=Z,2.2nm,0.7s,baz=28,slow=6.0,SNR=8.7						
NOA				LR	LR	02 04 25.5	
	comp=Z,198nm,19.2s,baz=30,slow=40						
HFS	Hagfors	66.91	341	P	P	01 30 45.9	-1.4
	comp=Z,3.2nm,0.5s,baz=46,slow=4.2,SNR=24						
HFS				LR	LR	02 02 31.3	
	comp=Z,148nm,20.0s,baz=22,slow=38						
GEYT	Alibeck	67.17	302	P	P	01 30 49.0	-0.3
	comp=Z,5.5nm,0.5s,baz=45,slow=4.4,SNR=32						
GEYT				LR	LR	02 02 25.2	
	comp=Z,131nm,18.3s,baz=35,slow=38						
GYA0B	ALIBECK ARRAY	67.17	302	eP	P	01 30 50.1	+0.8
	comp=Z,12nm,0.6s						
ECSD	EROS Data Cent	67.69	48	eP	P	01 30 52.8	+0.3
	comp=Z,16nm,1.4s						
IVI	Ivigtut	68.24	12	eP	P	01 30 55.6	0.0
	comp=Z,40nm,1.0s						
ANMO	Albuquerque	68.78	61	eP	P	01 31 01.0	+1.3
	comp=Z,3.6nm,1.0s						
ANMO	Albuquerque	68.78	61	eP	P	01 31 01.0	+1.3
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
I37A	Lemond, Waseca	69.03	46	eP	P	01 31 01.8	+0.9
	comp=Z,17nm,0.8s						
HYB	Hyderabad	69.04	273	i P	P	01 31 02.5	+1.2
MAK	Makhachkala	69.07	312	eP	P	01 31 00.9	-0.2
MAK				eS	S	01 40 05.6	+2.3
MAK				pmax	pmax		
	comp=Z,94nm,1.3s						
MAK				MLR	MLR		
	comp=Z,184nm,15.0s						
AKT	Akhty	70.07	311	eP	P	01 31 07.5	+0.1
AKT				e		01 31 30.5	
AKT				pmax	pmax		
	comp=Z,28nm,0.9s						
SCHQ	Schefferville	70.25	25	LR	LR	02 07 05.3	
	comp=Z,116nm,18.4s,baz=328,slow=40						
NCK	Nalchik	70.54	315	⇓eP	P	01 31 10.7	+0.5
NCK				pmax	pmax		
	comp=Z,18nm,0.8s						
KIV	Kislovodsk	70.61	315	eP	P	01 31 10.5	-0.2
KIV	Kislovodsk	70.61	315	eP	P	01 31 11.2	+0.6
	comp=Z,17nm,0.8s						
KIV	Kislovodsk	70.61	315	P	P	01 31 10.8	+0.2
KIV	Kislovodsk	70.61	315	c iP	P	01 31 10.8	+0.2
KIV				i *SP	sP	01 31 26.0	-0.8
KIV						01 31 32.0	
KIV				i S	S	01 40 21.4	-0.1
KIV				i PS	PnS	01 40 50.2	-2.1
KIV				e		01 41 13.5	
KIV				SSS	SSS	01 47 58.0	
KIV				pmax	pmax		
	comp=Z,22nm,1.0s						
KBZ	Khabaz	70.68	315	P	P	01 31 11.5	+0.5
	comp=Z,14nm,0.7s,baz=64,slow=4.0,SNR=27						
AKASG	Malin Array Be	70.69	327	P	P	01 31 09.7	-1.2
	comp=Z,4.2nm,0.4s,baz=33,slow=6.4,SNR=15						
AKASG	Malin Array Be	70.69	327	ceP	P	01 31 10.1	-0.8
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.4s						
KIEV	Kiev	70.70	327	eP	P	01 31 09.6	-1.4
KIEV	Kiev	70.70	327	eP	P	01 31 09.9	-1.0
KIEV	Kiev	70.70	327	⇑eP	P	01 31 09.6	-1.4
KIEV				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ZEI	Tsey	70.94	314	eP	P	01 31 11.2	-1.6
ZEI				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NEY	Neytrino	71.14	315	⇓eP	P	01 31 14.3	+0.3
NEY				pmax	pmax		
	comp=Z,1.0nm,0.6s						
TBLG	Delisi	71.35	313	eP	P	01 31 16.0	+0.9
	comp=Z,20nm,0.9s						
TBLG	Delisi	71.35	313	eP	P	01 31 16.0	+0.9
TBLG				pmax	pmax		
	comp=Z,20nm,0.9s						
DZM	Mont Dzumac	71.48	170	LR	LR	01 55 21.7	
	comp=Z,84nm,21.6s,baz=56,slow=30						
WRAB	Tennant Creek	71.50	202	⇑eP	P	01 31 16.4	+0.3
WRAB				pmax	pmax		
	comp=Z,5.0nm,0.7s						
WRA	Warramunga Arr	71.51	202	P	P	01 31 16.7	+0.5
	comp=Z,5.4nm,0.8s,baz=18,slow=6.8,SNR=6.6						
WRA	Warramunga Arr	71.51	202	eP	P	01 31 17.5	+1.4
WRA	Warramunga Arr	71.51	202	i P	P	01 31 17.6	+1.4
WRA				pmax	pmax		
	comp=Z,6.0nm,0.9s						
AKH	Akhalkalaki	72.19	313	⇑iP	P	01 31 21.8	+1.4
AKH	Akhalkalaki	72.19	313	eP	P	01 31 21.7	+1.4
	comp=Z,11nm,0.8s						
AKH	Akhalkalaki	72.19	313	eP	P	01 31 21.7	+1.4
AKH				pmax	pmax		
	comp=Z,11nm,0.8s						
ANN	Anapa	72.28	319	eP	P	01 31 20.0	-0.6
ANN				pmax	pmax		
	comp=Z,11nm,0.7s						
GNI	Garni	72.56	312	eP	P	01 31 21.7	-0.8
	comp=Z,14nm,0.8s						
GNI	Garni	72.56	312	ceP	P	01 31 23.7	+1.2
GNI				pmax	pmax		
	comp=Z,78nm,1.2s						
P40A	Paris	73.10	49	eP	P	01 31 25.9	+0.4
	comp=Z,15nm,1.0s						
LVV	L’vov	73.21	330	eP	P	01 31 25.4	-0.6
LVV				i S	S	01 40 51.5	+0.4
LVV				MLR	MLR		
	comp=N,50nm,16.0s						
LVV				MLR	MLR		
	comp=E,100nm,16.0s						
LVV				MLR	MLR		
	comp=Z,80nm,16.0s						
WMOK	Wichita Mounta	73.23	56	eP	P	01 31 26.5	0.0
	comp=Z,4.3nm,0.9s						
WMOK	Wichita Mounta	73.23	56	eP	P	01 31 26.5	0.0
WMOK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SIM	Simferopol’	73.56	321	eP	P	01 31 29.5	+1.3
SIM				S	SKSac	01 41 34.0	+2.5
SIM				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SIM				MLR	MLR		
	comp=Z,200nm,15.0s						
KWP	Kalwaria Pacla	73.80	331	eP	P	01 31 30.4	+0.8
KWP	Kalwaria Pacla	73.80	331	eP	P	01 31 30.3	+0.8
R40A	Maddies Statio	73.94	50	eP	P	01 31 30.3	-0.2
	comp=Z,6.5nm,0.7s						
OJC	Ojcow	74.20	333	eP	P	01 31 32.5	+0.6
OJC	Ojcow	74.20	333	eP	P	01 31 32.2	+0.4
	comp=Z,24nm,1.2s						
OJC	Ojcow	74.20	333	eP	P	01 31 32.2	+0.4
OJC				pmax	pmax		
	comp=Z,24nm,1.2s						
LPIG	La Paz	74.30	71	LR	LR	01 56 30.6	
	comp=Z,38nm,20.8s,baz=329,slow=30						
EKA	Eskdalemuir Ar	74.46	348	P	P	01 31 33.2	-0.1
	comp=Z,4.5nm,0.5s,baz=17,slow=5.1,SNR=42						
TX31	Lajitas Ar. Si	74.48	63	eP	P	01 31 34.9	+1.0
TXAR	Lajitas Array	74.48	63	P	P	01 31 34.7	+0.8
	comp=Z,4.2nm,0.9s,baz=298,slow=4.2,SNR=46						
ESK	Eskdalemuir	74.48	348	eP	P	01 31 33.3	-0.1
	comp=Z,6.1nm,0.6s						
ESK	Eskdalemuir	74.48	348	eP	P	01 31 33.3	-0.1
ESK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KSP	Ksiaz	74.66	335	eP	P	01 31 35.6	+1.1
KSP	Ksiaz	74.66	335	eP	P	01 31 35.6	+1.1
BUR08	Bucovina Ar. S	74.69	328	eP	P	01 31 34.8	-0.1
BUR04	Bucovina Ar. S	74.71	328	eP	P	01 31 34.4	-0.6
BURAR	Bucovina Array	74.71	328	⇓iP	P	01 31 34.8	-0.2
NIE	Niedzica	74.75	332	eP	P	01 31 36.1	+1.0
NIE	Niedzica	74.75	332	eP	P	01 31 36.1	+1.0
CRVS	Cervenica-Dubn	74.84	331	eP	P	01 31 35.9	+0.3
CRVS				pmax	pmax		
	comp=Z,9.0nm,1.4s						
CRVS	Cervenica-Dubn	74.84	331	eP	P	01 31 35.9	+0.3
OKC	Ostrava-Krasne	75.03	333	AMS	AMS	02 10 40.0	
	comp=Z,300nm,15.3s						
UPC	Upice	75.04	335	AMS	AMS	02 07 50.0	
	comp=Z,300nm,20.3s						
DPC	Dobruska-Polom	75.09	335	eP	P	01 31 37.9	+0.8
DPC				AMS	AMS	02 08 30.0	
	comp=Z,300nm,14.7s						
DPC	Dobruska-Polom	75.09	335	eP	P	01 31 37.9	+0.8
DPC				MLR	MLR		
	comp=Z,300nm,14.7s						
PALK	Pallekele	75.10	264	eP	P	01 31 38.3	+0.7
	comp=Z,16nm,0.8s						
CLL	Collm	75.11	337	⇓iP	P	01 31 37.2	+0.1
	comp=Z,28nm,1.3s						
CLL	Collm	75.11	337	eP	P	01 31 36.8	-0.3
	comp=Z,16nm,0.9s						
CLL	Collm	75.11	337	⇓iP	P	01 31 37.2	+0.1
CLL				pmax	pmax		
	comp=Z,28nm,1.3s						
TESR	Tescani	75.14	327	⇓iP	P	01 31 37.8	+0.4
TRPA	Tarpa	75.17	330	⇑iP	P	01 31 38.0	+0.6
TRPA	Tarpa	75.17	330	⇓eP	P	01 31 38.6	+1.2
KRLC	Kraliky	75.21	334	eP	P	01 31 38.2	+0.5
KRLC	Kraliky	75.21	334	eP	P	01 31 38.2	+0.5
MORC	Moravsky Berou	75.26	334	⇑iP	P	01 31 38.3	+0.3
MORC	Moravsky Berou	75.26	334	eP	P	01 31 37.6	-0.4
	comp=Z,27nm,1.2s						
MORC	Moravsky Berou	75.26	334	eP	P	01 31 37.6	-0.4

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MORC                                pmax     pmax
      comp=Z,27nm,1.2s
MORC  Moravsky Berou    75.26 334  eP       P        01 31 38.4 +0.4
BRG   Berggiesshubel    75.26 336  eP       P        01 31 37.9 -0.1
      comp=Z,10nm,1.1s
      comp=N,257nm,16.8s
      comp=E,199nm,15.5s
      comp=Z,319nm,12.1s
BRG   Berggiesshubel    75.26 336  eP       P        01 31 37.9 -0.1
BRG                                 pmax     pmax
      comp=Z,11nm,1.1s
BRG                                 MLR      MLR
      comp=N,257nm,16.8s
BRG                                 MLR      MLR
      comp=E,199nm,15.5s
BRG                                 MLR      MLR
      comp=Z,319nm,12.1s
PVCC  Panska Ves        75.41 336   AMS      AMS     02 08 40.0
      comp=Z,300nm,16.1s
TLCR                    75.46 325⇓iP        P        01 31 39.8 +0.6
PLOR  Plostina          75.71 326⇑iP        P        01 31 40.9 +0.2
CFR   Carcaliu          75.73 325⇓iP        P        01 31 41.1 +0.4
PRA   Prague            75.86 336   AMS      AMS     02 08 40.0
      comp=Z,300nm,15.1s
PRU   Pruhonice         75.91 336  eP       P        01 31 42.1 +0.4
PRU                                epP      pP       01 31 46.5 -6.9
PRU                                 AMS      AMS     02 08 50.0
      comp=Z,300nm,16.6s
PRU   Pruhonice         75.91 336  eP       P        01 31 42.1 +0.4
PRU                                 MLR      MLR
      comp=Z,300nm,16.6s
GOPC  GO Pecny, Ondr    75.91 335  eP       P        01 31 42.4 +0.7
GOPC                                AMS      AMS     02 08 50.0
      comp=Z,300nm,20.5s
GOPC  GO Pecny, Ondr    75.91 335  eP       P        01 31 42.4 +0.7
GOPC                                MLR      MLR
      comp=Z,300nm,20.5s
VRAC  Vranov            75.95 334⇓iP        P        01 31 43.1 +1.1
VRAC  Vranov            75.95 334  eP       P        01 31 42.6 +0.6
VYHS  Vyhne             76.02 332  eP       P        01 31 42.8 +0.4
VYHS                                pmax     pmax
      comp=Z,14nm,1.3s
VYHS  Vyhne             76.02 332  eP       P        01 31 42.8 +0.4
JAVC  Velka Javorina    76.04 333  eP       P        01 31 44.1 +1.6
CJR   Cluj-Napoca       76.04 329⇑iP        P        01 31 43.3 +0.7
DOPR  Dopca             76.06 327⇓iP        P        01 31 43.7 +1.0
MIAR  Mount Ida         76.16  53  eP       P        01 31 43.3 -0.1
      comp=Z,20nm,1.4s
MIAR  Mount Ida         76.16  53  eP       P        01 31 43.3 -0.1
MIAR                                pmax     pmax
      comp=Z,20nm,1.4s
PSZ   Piszkesteto       76.20 331⇑iP        P        01 31 44.1 +0.6
PSZ   Piszkesteto       76.20 331⇓eP        P        01 31 44.9 +1.4
PSZ   Piszkesteto       76.20 331  eP       P        01 31 44.4 +0.9
      comp=Z,21nm,1.2s
PSZ   Piszkesteto       76.20 331  eP       P        01 31 44.4 +0.9
PSZ                                 pmax     pmax
      comp=Z,21nm,1.2s
HARR  Harsova           76.22 325⇑iP        P        01 31 43.9 +0.4
KRUC  Moravsky          76.23 334  eP       P        01 31 44.2 +0.7
TIRR  Tirgusor          76.23 324⇓iP        P        01 31 44.1 +0.5
NKC   Novy Kostel       76.24 337  eP       P        01 31 44.0 +0.4
NKC   Novy Kostel       76.24 337  eP       P        01 31 44.0 +0.4
TLB   Topalu            76.27 325⇓iP        P        01 31 44.2 +0.4
MLR   Muntele Rosu      76.27 326⇑iP        P        01 31 45.4 +1.4
MLR   Muntele Rosu      76.27 326  eP       P        01 31 44.0  0.0
      comp=Z,23nm,1.0s
MLR   Muntele Rosu      76.27 326  eP       P        01 31 44.0  0.0
MLR                                 pmax     pmax
      comp=Z,23nm,1.0s
DRGR                    76.28 329⇓iP        P        01 31 44.2 +0.3
ISR   Istrita           76.37 326⇓iP        P        01 31 45.7 +1.2
SMOL  Smolenice         76.42 333  eP       P        01 31 46.1 +1.5
SMOL  Smolenice         76.42 333  eP       P        01 31 46.1 +1.5
MODS  Modra-Piesok      76.59 333  eP       P        01 31 46.6 +1.0
MODS                                pmax     pmax
      comp=Z,20nm,1.1s
MODS  Modra-Piesok      76.59 333  eP       P        01 31 46.6 +1.0
VOIR                    76.64 327⇑iP        P        01 31 46.7 +0.7
ARR   Arges             76.85 327⇑iP        P        01 31 48.6 +1.4
SULR                    76.85 326⇓iP        P        01 31 47.9 +0.8
BUD   Budapest          76.86 332⇓eP        P        01 31 48.8 +1.7
DSB   Dublin            76.92 349  eP       P        01 31 47.8 +0.5
      comp=Z,26nm,0.8s
ILGA  Ilgaz             76.92 319  eP       P        01 31 49.6 +1.8
      comp=Z,44nm,0.8s
KHC   Kasperske Hory    76.95 336  eP       P        01 31 48.4 +0.7
KHC                                 AMS      AMS     02 09 40.0
      comp=Z,400nm,17.5s
KHC   Kasperske Hory    76.95 336  eP       P        01 31 48.5 +0.9
      comp=Z,7.4nm,0.9s
KHC   Kasperske Hory    76.95 336  eP       P        01 31 48.4 +0.7
KHC                                 MLR      MLR
      comp=Z,400nm,17.5s
BANOM Banah             76.96 294   P       P        01 31 48.6 +0.5
      SNR=5.3
BANOM Banah             76.96 294  i P      P        01 31 48.7 +0.6
      SNR=18
SHME  Shamm             76.96 295  i P      P        01 31 48.5 +0.4
      SNR=7.8
GRFO  Grafenberg        77.05 338  eP       P        01 31 49.0 +0.9
GRFO  Grafenberg        77.05 338  eP       P        01 31 49.1 +0.9
GRFO                                pmax     pmax
      comp=Z,50nm,1.2s
LOT   Lotru             77.08 328⇓iP        P        01 31 48.2 -0.4
GEC2  GERESS Array S    77.18 336  eP       P        01 31 49.5 +0.5
      comp=Z,6.7nm,0.7s
GEC2  GERESS Array S    77.18 336  eP       P        01 31 49.5 +0.5
GEC2                                pmax     pmax
      comp=Z,7.0nm,0.7s
GERES GERESS Array B    77.18 336   P       P        01 31 49.0  0.0
      comp=Z,4.0nm,0.5s,baz=36,slow=5.9,SNR=50
GERES                               LR       LR      02 10 11.4
      comp=Z,384nm,18.2s,baz=24,slow=39
GEA0  GERESS Array S    77.19 336  eP       P        01 31 48.8 -0.3
CSKK  Csˆ‡kako          77.20 332⇓eP        P        01 31 50.4 +1.4
BEBN  Eben Emael        77.29 341  ⇑P       P        01 31 49.6 +0.2
SGRR  Singureni         77.35 326⇑iP        P        01 31 49.8 -0.1
MEM   Membach           77.40 341  ⇑P       P        01 31 50.1 +0.1
      comp=Z,30nm,0.9s
CONA  Conrad Observa    77.41 334  i P      P        01 31 51.5 +1.2
      comp=Z,14nm,0.7s,SNR=13
MDH   Madha             77.43 294  i P      P        01 31 50.4 -0.2
      SNR=7.8
HUMR  Humele            77.45 327⇓iP        P        01 31 51.3 +0.8
MSFE  Esma-Masafi       77.47 294  i P      P        01 31 51.0  0.0
      SNR=10
UCC   Uccle             77.56 342  ⇑P       P        01 31 51.1 +0.2
UCC   Uccle             77.56 342  eP       P        01 31 51.5 +0.5
      comp=Z,8.8nm,0.9s
UCC   Uccle             77.56 342  eP       P        01 31 51.5 +0.5
UCC                                 pmax     pmax
      comp=Z,9.0nm,0.9s
BZS   Buzias            77.67 329⇓iP        P        01 31 51.8 +0.1
BCLA  Clavier           77.72 341  ⇑P       P        01 31 52.1 +0.2
      comp=Z,15nm,0.7s
UOSS  Minazif           77.75 294  i P      P        01 31 52.9 +0.5
      SNR=26
SNF   Seneffe           77.85 342  ⇑P       P        01 31 53.0 +0.4
HATD  Hatta, Dubai      77.88 294   P       P        01 31 53.8 +0.6
      SNR=9.8
HATD  Hatta, Dubai      77.88 294  i P      P        01 31 53.9 +0.7
      SNR=35
MOA   Molln             77.93 335  i P      P        01 31 54.0 +0.9
      comp=Z,8.8nm,0.7s,SNR=6.3
ASHO  Ashiyiah          78.03 294   P       P        01 31 54.5 +0.5
      SNR=7.9
ASHO  Ashiyiah          78.03 294  i P      P        01 31 54.8 +0.7
      SNR=14
BANR  Banloc            78.04 329⇓iP        P        01 31 54.5 +0.8
NAZ   Nazwa, Dubai      78.04 294   P       P        01 31 54.8 +0.7
      SNR=5.4
NAZ   Nazwa, Dubai      78.04 294  i P      P        01 31 54.8 +0.7
      SNR=17
BR131 Keskin Array S    78.05 318  eP       P        01 31 54.5 +0.4
BRTR  Keskin Array B    78.05 318   P       P        01 31 54.5 +0.4
      comp=Z,18nm,0.9s,baz=59,slow=3.3,SNR=68
HERR  Herculane         78.05 328⇓iP        P        01 31 53.6 -0.2
MORH  Mˆ‡rˆ¡gy, Hung    78.11 331⇓eP        P        01 31 54.5 +0.4
ARSA  Arzberg           78.12 334  i P      P        01 31 55.2 +1.0
      comp=Z,17nm,1.1s,SNR=8.0
DOU   Dourbes           78.18 342  ⇑P       P        01 31 54.6 +0.2
ANTO  Ankara            78.29 319⇑iP        P        01 31 56.3 +0.9
ANTO  Ankara            78.29 319  eP       P        01 31 56.3 +0.9
ANTO  Ankara            78.29 319   P       P        01 31 56.2 +0.9
      SNR=5.3
ANTO  Ankara            78.29 319  eP       P        01 31 56.3 +0.9
ANTO                                pmax     pmax
      comp=Z,22nm,0.7s
BR231 Keskin MP Arra    78.32 319  eP       P        01 31 56.7 +1.1
MDVR  Moldovita         78.37 329⇓iP        P        01 31 55.3 -0.4
ASUD  Al Ashush, Dub    78.51 294   P       P        01 31 57.5 +0.9
      SNR=7.3
ASUD  Al Ashush, Dub    78.51 294  i P      P        01 31 57.8 +1.1
      SNR=16
ALNE  Al Ain            78.69 294  i P      P        01 31 58.4 +0.7
      SNR=25
AJN   Ajban             78.77 294  i P      P        01 31 58.3 +0.3
      SNR=6.1
SOKA  Soboth            78.78 334  eP       P        01 31 58.5 +0.6
      comp=Z,38nm,1.1s,SNR=26
GROS  Grobnik           78.84 334  i P      P        01 31 58.5 +0.3
GROS  Grobnik           78.84 334  i P      P        01 31 58.5 +0.3
KBA   Koelnbreinsper    78.89 335  epP      P        01 32 00.1 +1.4
      comp=Z,97nm,1.1s,SNR=26
BFO   Black Forest      79.02 339  eP       P        01 31 59.5 +0.5
      comp=Z,14nm,0.9s
BFO   Black Forest      79.02 339  eP       P        01 31 59.6 +0.5
BFO                                 pmax     pmax
      comp=Z,14nm,0.9s
OBKA  Obir              79.07 334  eP       P        01 32 00.2 +0.7
      comp=Z,13nm,0.6s,SNR=7.0
WATA  Walderalm         79.13 336  epP      P        01 32 02.0 +2.1
      comp=Z,9.9nm,0.6s
WTTA  Wattenberg        79.18 336  i pP     P        01 32 01.5 +1.3
      comp=Z,31nm,1.0s,SNR=8.3
RETA  Reutte            79.20 337  eP       P        01 32 01.1 +0.9
      comp=Z,12nm,0.7s,SNR=8.9
MYKA  Terra Mystica     79.22 335  eP       P        01 32 00.7 +0.4
      comp=Z,8.4nm,0.6s
GCIS  Gornji Cirnik     79.34 333  i P      P        01 32 01.1 +0.3
GCIS  Gornji Cirnik     79.34 333  i P      P        01 32 01.1 +0.2
ECH   Echery            79.40 340  eP       P        01 32 01.6 +0.4
      comp=Z,21nm,1.0s
ECH   Echery            79.40 340  eP       P        01 32 01.6 +0.4
ECH                                 pmax     pmax
      comp=Z,21nm,1.0s
ABTA  Abfaltersbach     79.42 336  eP       P        01 32 02.1 +0.7
      comp=Z,34nm,1.2s,SNR=11
LJU   Ljubljana         79.50 334  i P      P        01 32 01.8  0.0
LJU   Ljubljana         79.50 334  i P      P        01 32 01.8  0.0
DIVS  Divibare          79.56 330  eP       P        01 32 01.9 -0.3
      comp=Z,29nm,0.9s
DAVA  Damuels           79.61 337  eP       P        01 32 03.4 +0.8
      comp=Z,27nm,1.0s,SNR=11
OZLJ  Ozalj             79.62 333   P       P        01 32 02.1 -0.2
VISS  Visnje            79.63 334  i P      P        01 32 02.5  0.0
VISS  Visnje            79.63 334  i P      P        01 32 02.5  0.0
FETA  Feichten          79.64 337  eP       P        01 32 03.8 +1.1
      comp=Z,22nm,1.1s,SNR=12
VTS   Vitosha           79.77 327⇑iP        P        01 32 03.8 +0.3
VTS   Vitosha           79.77 327  eP       P        01 32 02.9 -0.6
      comp=Z,36nm,0.9s
VTS   Vitosha           79.77 327   P       P        01 32 03.4 -0.1
VTS   Vitosha           79.77 327  eP       P        01 32 02.9 -0.6
VTS                                 pmax     pmax
      comp=Z,36nm,0.9s
BLY   Banja Luka        79.88 332⇓iP        P        01 32 03.9 +0.1
BLY   Banja Luka        79.88 332  eP       P        01 32 03.7 -0.1
      comp=Z,6.5nm,0.8s
GBRS  Gornja Briga      79.89 334  i P      P        01 32 04.0 +0.1
GBRS  Gornja Briga      79.89 334  i P      P        01 32 04.0 +0.1
TAOE  Nuku Hiva Isla    80.02 116  eLR      LR       01 57 06.5
      comp=Z,341nm,23.4s
DAVOX Davos/Dischmat    80.08 337   LR      LR       02 12 15.7
      comp=Z,180nm,18.2s,baz=20,slow=39
FUORN Ofenpass-Fuorn    80.13 337  eP       P        01 32 06.7 +1.2
      comp=Z,30nm,1.0s
TKL   Tuckaleechee C    80.16  46   LR      LR       02 11 05.3
      comp=Z,94nm,18.6s,baz=332,slow=38
ALN   Alexandroupoli    80.18 324  eP       P        01 32 06.0 +0.5
      comp=Z,20nm,1.0s
ALN   Alexandroupoli    80.18 324  eP       P        01 32 06.0 +0.5
ALN                                 pmax     pmax
      comp=Z,21nm,1.0s
RAR   Rarotonga         80.23 139   LR      LR       02 02 45.7
      comp=Z,81nm,19.0s,baz=303,slow=32
UDBI  Udbina            80.51 333   P       P        01 32 06.5 -0.9
NVLJ  Novalja           80.75 333   P       P        01 32 07.6 -0.8
SENIN Lac Senin/Sane    81.11 339  eP       P        01 32 11.2 +0.5
      comp=Z,6.3nm,0.8s
TTG   Podgorica         81.28 329  eP       P        01 32 10.5 -0.9
TTG                                 pmax     pmax
      comp=Z,40nm,0.9s
STON  Ston              81.40 331   P       P        01 32 10.8 -1.2
FNA   Florina           82.01 327  eP       P        01 32 15.2 -0.1
      comp=Z,17nm,1.0s
FNA   Florina           82.01 327  eP       P        01 32 15.2 -0.1
FNA                                 pmax     pmax
      comp=Z,17nm,1.0s
CSS   Mathiatis         82.12 316  eP       P        01 32 16.5 +0.6
      comp=Z,15nm,0.7s
LIT   Litokhoron        82.21 326  eP       P        01 32 16.3 -0.1
      comp=Z,11nm,0.9s
LIT   Litokhoron        82.21 326  eP       P        01 32 16.3 -0.1
LIT                                 pmax     pmax
      comp=Z,11nm,0.9s
BNI   Bardonecchia      82.49 339  eP       P        01 32 18.8 +0.9
      comp=Z,8.8nm,0.8s
BNI   Bardonecchia      82.49 339  eP       P        01 32 18.8 +0.9
BNI                                 pmax     pmax
      comp=Z,9.0nm,0.8s
MMAI  Mount Meron Ar    82.76 313   P       P        01 32 20.2 +0.8
      comp=Z,13nm,0.5s,baz=39,slow=6.3,SNR=27
AQU   L'Aquila          83.20 333  eP       P        01 32 22.9 +1.4
      comp=Z,17nm,0.9s
AQU   L'Aquila          83.20 333  eP       P        01 32 22.9 +1.4
AQU                                 pmax     pmax
      comp=Z,17nm,0.9s
AGG   Agios Georgios    83.21 326  eP       P        01 32 21.0 -0.6
AGG                                 pmax     pmax
      comp=Z,43nm,1.2s
TIP   Timpagrande       85.04 330⇓iP        P        01 32 31.5 +0.6
RAYN  Ar Rayn           85.09 301  eP       P        01 32 31.9 +0.5
RAYN  Ar Rayn           85.09 301  i P      P        01 32 32.0 +0.5
      SNR=23
RAYN  Ar Rayn           85.09 301  eP       P        01 32 31.9 +0.5
IDI   Anoyia            85.48 322   LR      LR       02 17 12.7
      comp=Z,47nm,18.1s,baz=336,slow=40
TBI   Tubuai            86.84 132  eLR      LR       02 00 12.7
      comp=Z,181nm,25.5s
VAE   Valguarnera       87.35 331   LR      LR       02 16 16.5
      comp=Z,78nm,18.3s,baz=356,slow=39
ESDC  Sonseca Array     89.84 345   P       P        01 32 53.4 -0.6
      comp=Z,0.6nm,0.5s,baz=13,slow=4.3,SNR=12
KEST  Kesra             90.52 334   P       P        01 32 58.9 +1.6
      comp=Z,5.2nm,0.6s,baz=311,slow=1.6,SNR=16
KEST                                LR       LR      02 16 53.5
      comp=Z,185nm,21.1s,baz=285,slow=38
ATD   Arta Tunnel       96.09 295   LR      LR       02 22 41.5
      comp=Z,168nm,18.4s,baz=1.0,slow=39
MDT   Midelt            96.63 344   LR      LR       02 25 47.0
      comp=Z,42nm,18.1s,baz=46,slow=41
SAML  Samuel           128.12  53  ePKPdf   PKPdf    01 39 03.1 +1.5
SAML  Samuel           128.12  53  ePKIKP   PKPdf    01 39 03.1 +1.5
LPAZ  La Paz           131.35  64   PKP     PKPdf    01 39 09.7 +1.3
      comp=Z,0.8nm,0.8s,baz=353,slow=6.0,SNR=5.0
CPUP  Villa Florida    145.43  61   PKPbc   PKPbc    01 39 33.4 +0.3
      comp=Z,4.5nm,0.8s,baz=332,slow=2.8,SNR=10.0
PLCA  Paso Flores      146.27  94   PKPbc   PKPbc    01 39 36.0 +0.6
      comp=Z,3.5nm,0.9s,baz=333,slow=2.8,SNR=7.4
PLCA  Paso Flores      146.27  94   PKP2    PKPbc    01 39 36.0 +0.6
PLCA                                pmax     pmax
      comp=Z,4.0nm,0.9s
TRQA  Tornquist        150.46  82  ePKPbc   PKPbc    01 39 47.0 +0.6
TRQA  Tornquist        150.46  82  ePKIKP   PKPbc    01 39 47.0 +0.6
SNAA  Sanae            155.46 196   PKPab   PKPab    01 40 14.0 +0.8
      comp=Z,3.1nm,0.9s,baz=149,slow=5.6,SNR=7.9
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DDA ***20*** *01:20:13.8, 37°.24N×36°.19E, h7^{km}, Ml2.5*
ISK ***20*** *01:20:13.5, 37°.27N×36°.23E, h3^{km}±1^{km}, ML1.8/4*
ISCJB ***20*** *01:20:14.7±0.5, 37°.25N±0°.03×36°.18E±0°.05, h15^{km}, Error ellipse: s-maj=5.8km s-min=4.6km az=161.5*
CSEM ***20*** *01:20:14.5±0.2, 37°.26N×36°.20E, h2^{km}, ML2.5, Error ellipse: s-maj=4.9km s-min=4.3km az=27.0*
ISC 20 01:20:14.6±1.0**, 37°.26N**±0°.03×**36°.21E**±0°.03**, h15^{km}, n25, σ0ˢ.61**/32**, Turkey**

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Code  Station Name        Δ°   AZ°     Phase ID         Time        Res
                                     Op      ISC       h  m  s     ISC
ANDN  Andirin            0.34  18  i P      Pg       01 20 20.6 -1.0
ANDN                               i S      Sg       01 20 26.8 +0.4
ANDN  Andirin            0.34  18    P      Pg       01 20 20.6 -1.0
ANDN                                 S      Sg       01 20 26.8 +0.4
KMRS  Kahramanmaras      0.60  66    PG     Pg       01 20 25.1 -1.3
KMRS  Kahramanmaras      0.60  66  ePg      Pg       01 20 25.1 -1.3
SAIM  ADANA              0.72 352  i P      Pg       01 20 29.1 +0.4
SAIM                               i S      Sb       01 20 39.0 +0.3
SAIM  ADANA              0.72 352    P      Pg       01 20 29.1 +0.4
SAIM                                 S      Sb       01 20 39.0 +0.3
GAZ   Gaziantep          0.80  96    PG     Pg       01 20 29.9 -0.3
GAZ   Gaziantep          0.80  96  ePg      Pg       01 20 29.9 -0.3
KUZU  Kuzuini            0.84 125  i P      Pb       01 20 31.2 +0.2
KUZU                               i S      Sg       01 20 42.5 +0.4
KUZU  Kuzuini            0.84 125    P      Pb       01 20 31.2 +0.2
KUZU                                 S      Sg       01 20 42.5 +0.4
TAHT  Tahtakopru-Hat     0.88 181    PG     Pb       01 20 30.9 -0.7
TAHT  Tahtakopru-Hat     0.88 181  ePg      Pb       01 20 30.9 -0.7
KARA  Karaisali          0.92 270    PG     Pb       01 20 32.2 -0.1
KARA  Karaisali          0.92 270  ePg      Pb       01 20 32.2 -0.1
KRTS  Karatas            0.96 225    PG     Pb       01 20 33.2 +0.3
KRTS  Karatas            0.96 225  ePg      Pb       01 20 33.2 +0.3
YAHY  KAYSERI_Yahyal     1.07 321  i P      Pb       01 20 34.0 -0.9
YAHY  KAYSERI_Yahyal     1.07 321    P      Pb       01 20 34.0 -0.9
SARI  SarD1z-Kayseri     1.16   8    PN     Pb       01 20 36.4  0.0
SARI                                 SN     Sn       01 20 52.7 +0.6
KERG  Konya-Eregli       1.67 276  i P      Pb       01 20 45.0 -0.1
KERG  Konya-Eregli       1.67 276    P      Pb       01 20 45.0 -0.1
ATAB  Bozova             1.67  82  i P      Pb       01 20 45.7 +0.6
ATAB  Bozova             1.67  82    P      Pb       01 20 45.7 +0.6
SURC  SANLIURFA_SURC     1.96 100  i P      Pb       01 20 49.8 -0.2
SURC  SANLIURFA_SURC     1.96 100    P      Pb       01 20 49.8 -0.2
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ISCJB ***20*** *01:24:42.7±1.2, 44°.42N±0°.08×148°.8E±0°.1, h55^{km}, mb3.4/1, Error ellipse: s-maj=14.0km s-min=7.6km az=43.2*
MOS ***20*** *01:24:44.3±1.9, 44°.61N×148°.88E, h33^{km}, mb3.9/1, Error ellipse: s-maj=19.9km s-min=15.5km az=60.8*
SKHL ***20*** *01:24:46.8±0.8, 44°.62N×148°.73E, h54^{km}±3^{km}, mb4.1/2*
JMA ***20*** *01:24:49.7±0.2, 44°.07N×148°.16E, h90^{km}, M3.2*
ISC 20 01:24:47.9±1.5**, 44°.58N**±0°.09×**148°.6E**±0°.1**, h55^{km}, n21, σ2ˢ.74**/22**, 1D, Kuril Islands**

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Code  Station Name        Δ°   AZ°     Phase ID         Time        Res
                                     Op      ISC       h  m  s     ISC
KUR   Kuril'sk           0.83 322  i P      Pn       01 25 02.0 -1.5
KUR                                  AMB    AMB      01 25 05.0
      79nm,0.3s
KUR                                  AMB    AMB      01 25 05.0
      64nm,0.3s
KUR                                  AMB    AMB      01 25 05.0
      134nm,0.3s
KUR                                i S      Sn       01 25 14.0 -0.9
KUR                                  A      A        01 25 14.0
      513nm,0.3s
KUR                                  A      A        01 25 14.0
      926nm,0.3s
KUR   Kuril'sk           0.83 322 d iPN     Pn       01 25 02.9 -0.6
KUR                                i S      Sn       01 25 14.2 -0.7
KUR                                  pmax   pmax
      comp=Z,187nm,0.2s
KUR                                  smax   smax
      comp=E,928nm,0.3s
KUR                                  smax   smax
      comp=N,512nm,0.2s
SHO   Shikotan           1.45 241  eP       Pn       01 25 09.0 -2.7
SHO                                  AMB    AMB      01 25 11.0
      comp=N,15nm,0.1s
SHO                                i S      Sn       01 25 25.0 -4.7
SHO                                  A      A        01 25 25.8
      comp=N,220nm,0.2s
SHO                                  A      A        01 25 25.8
      comp=N,199nm,0.2s
SHO   Shikotan           1.45 241  ePN      Pn       01 25 08.5 -3.2
SHO                                  pmax   pmax
      comp=Z,15nm,0.1s
YUK   Yuzh-Kuril'sk      2.03 255  i S      Sn       01 25 43.5 -0.4
NEM2  Nemuro 2           2.39 240    P      Pn       01 25 20.9 -3.6
NEM2                               eS       Sn       01 25 44.3 -8.2
JNK   Nakash             2.96 252    P      Pn       01 25 29.8 -2.6
JAK   Akkeshi            3.23 242    P      Pn       01 25 32.4 -3.7
JAK                                eS       Sn       01 26 05.7 -7.6
ERM   Erimo              4.72 239  eP       Pn       01 25 58.2 +1.7
ERM   Erimo              4.72 239  i PN     Pn       01 25 58.2 +1.7
SKR   Severo-Kuril's     7.94  37  eP       Pn       01 26 38.8 -1.7
SKR   Severo-Kuril's     7.94  37  ePN      Pn       01 26 38.8 -1.7
MAJO  Matsushiro        11.25 228  eP       Pn       01 27 29.3 +3.4
MAJO  Matsushiro        11.25 228  i PN     Pn       01 27 29.3 +3.4
KLR   Kul'dur           12.41 298  eP       Pn       01 27 43.5 +1.9
KLR   Kul'dur           12.41 298  i PN     Pn       01 27 43.5 +1.9
SEY   Seymchan          18.52   5  i P      P        01 28 56.2 -3.2
HIA   Hailar            20.19 294  eP       Pn       01 29 21.4 +1.3
HIA   Hailar            20.19 294  i P      Pn       01 29 21.4 +1.3
HIA                                  pmax   pmax
      comp=Z,2.0nm,0.8s
ULN   Ulaanbaatar       28.68 291  eP       P        01 30 42.2 +2.7
ULN   Ulaanbaatar       28.68 291  i P      P        01 30 42.2 +2.7
ULN                                  pmax   pmax
      comp=Z,1.0nm,1.2s
```

ISCJB ***20*** *01:26:03.4±0.4, 5°.46S±0°.04×146°.79E±0°.07, h150^{km}, mb4.3/25, Error ellipse: s-maj=10.2km s-min=5.1km az=7.8*
IDC ***20*** *01:26:04.3±0.9, 5°.39S×146°.73E, h150^{km}±6^{km}, mb3.8/11, mb1 4.1/13, mb1mx3.8/42, mbtmp4.3/13, Error ellipse: s-maj=25.3km s-min=10.7km az=96.0*
NEIC ***20*** *01:26:05.7±0.6, 5°.42S×146°.78E, h161^{km}±6^{km}, mb4.4/9, Error ellipse: s-maj=9.7km s-min=5.6km az=108.0*
NEIC Felt at Lae.
ISC 20 01:26:05.0±0.5**, 5°.49S**±0°.05×**146°.78E**±0°.09**, h150^{km}, n47, σ1ˢ.33**/53**, mb4.5**/24**, Eastern New Guinea region**

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Code  Station Name        Δ°   AZ°     Phase ID         Time        Res
                                     Op      ISC       h  m  s     ISC
MANU  Manus Island       3.47  10  ePn      Pn       01 26 59.2 +0.7
PMG   Port Moresby       3.91 175    P      Pn       01 27 03.8 -0.4
      5.6nm,0.3s,baz=353,slow=9.4,SNR=8.2
PMG                                  S      Sn       01 27 47.9 -2.2
      21nm,0.3s,baz=149,slow=23,SNR=5.7
RABL  Rabaul             5.51  77  ePn      Pn       01 27 26.4 +1.0
COEN  Coen               9.13 203  ePn      Pn       01 28 16.3 +2.7
COEN                               eSn      Sn       01 29 54.5 -0.6
CTA   Charters Tower    14.52 182    P      P        01 29 29.2 +3.2
      0.9nm,0.3s,baz=355,slow=11,SNR=15
CTAO  Charters Tower    14.52 182  eP       P        01 29 28.5 +2.4
WRAB  Tennant Creek     18.77 219  eP       P        01 30 13.3 +0.5
      34nm,0.9s
WB2   Warramunga Arr    18.78 219  eP       P        01 30 11.9 -1.0
WRA   Warramunga Arr    18.79 219    P      P        01 30 13.7 +0.6
      3.6nm,0.3s,baz=39,slow=12,SNR=87
WRA                                  S      S        01 33 36.4 -2.6
      0.0nm,0.3s,baz=43,slow=21,SNR=6.2
EIDS  Eidsvold          20.19 169  eP       Pn       01 30 30.4 -1.3
      23nm,1.0s
AS01  Alice Springs     21.89 213  eP       P        01 30 46.5 +0.1
AS01                               eS       S        01 34 38.9 +0.8
AS31  Alice Springs     21.92 213  eP       P        01 30 47.1 +0.5
      3.8nm,0.6s
ASAR  Alice Springs     21.92 213    P      P        01 30 47.0 +0.4
      13nm,0.7s,baz=47,slow=8.1,SNR=99
ASAR                                 S      S        01 34 38.3 -0.3
      4.0nm,0.9s,baz=27,slow=19,SNR=6.3
FITZ  Fitzroy Crossi    24.16 237  eP       P        01 31 07.4 -0.1
      12nm,0.8s
STKA  Stephens Creek    26.70 190    P      P        01 31 30.6 +0.3
      4.0nm,0.6s,baz=360,slow=9.7,SNR=9.8
STKA  Stephens Creek    26.70 190  eP       P        01 31 30.9 +0.6
      1.6nm,0.9s
FORT  Forrest           30.71 213  eP       P        01 32 06.5 +0.7
      34nm,0.7s
KHZ   Kahutara          43.77 151  eP       P        01 33 55.3 -0.4
      53nm,1.4s
NJ2   Nanjing           45.84 326  eP       P        01 34 14.0 +1.8
NJ2                                  pmax   pmax
      comp=Z,8.0nm,0.5s
BKNI  Bangkinang        46.04 276  eP       P        01 34 14.9 +0.7
      58nm,0.5s
KSRS  Korea Array       46.20 339    P      P        01 34 14.1 -0.8
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	1.5nm,0.7s,baz=152,slow=9.0,SNR=9.9						
KSAR	Wonju Array Be	46.20	339	P	P	01 34 14.1	-0.8
GYA	Guiyang	50.19	311	*e*P	P	01 34 48.0	+2.1
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KMI	Kunming	52.52	307	P	P	01 35 03.9	+0.5
KMI				pmax	pmax		
	comp=Z,10.0nm,0.5s						
XAN	Xi'an	53.15	320	P	P	01 35 06.8	-0.9
XAN				pP	pP	01 35 43.3	+1.0
XAN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
CD2	Chengdu	54.77	314	*e*P	P	01 35 20.0	+0.5
HHC	Hu-ho-hao-te	56.29	328	*e*P	P	01 35 31.5	+1.3
HHC				pmax	pmax		
	comp=Z,18nm,1.1s						
HHC				pmax	pmax		
	comp=Z,85nm,7.0s						
ULN	Ulaanbaatar	63.56	331	*e*P	P	01 36 19.1	-0.7
	2.2nm,0.5s						
SONM	Songino Array	63.86	331	P	P	01 36 21.2	-0.5
	0.8nm,0.5s,baz=144,slow=7.2,SNR=6.4						
SONA1	Songino Array	63.86	331	*e*P	P	01 36 21.5	-0.2
CASY	Casey	65.69	195	*e*P	P	01 36 32.9	-0.1
	6.1nm,1.1s						
WMQ	Urumqi	72.27	319	P	P	01 37 15.8	+1.6
WMQ				pP	pP	01 37 52.5	+1.7
WMQ				pmax	pmax		
	comp=Z,20nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,150nm,5.3s						
VNDA	Vanda	72.43	177	P	P	01 37 15.0	+0.5
	5.6nm,0.9s,baz=329,slow=5.9,SNR=18						
MKAR	Makanchi Array	76.97	320	P	P	01 37 39.5	-1.7
	0.3nm,0.5s,baz=96,slow=7.8,SNR=4.1						
MKAR				pP	pP	01 38 17.2	-1.0
	0.5nm,0.6s,baz=103,slow=6.5,SNR=3.5						
ZALV	Zalesovo Beam	78.47	328	P	P	01 37 47.6	-1.7
	1.1nm,0.5s,baz=126,slow=6.6,SNR=4.7						
ZALV				pP	pP	01 38 24.8	-1.6
	2.7nm,0.7s,baz=118,slow=7.0,SNR=6.0						
KSH	Kashi	78.88	312	*e*P	P	01 37 55.9	+3.9
KURK	Kurchatov	80.67	323	P	P	01 37 59.7	-1.6
KURK				pP	pP	01 38 36.9	-1.7
KURBB	Kurchatov Arra	80.70	323	P	P	01 37 59.7	-1.7
	0.4nm,0.4s,baz=108,slow=4.4,SNR=3.4						
KURBB				pP	pP	01 38 36.9	-1.8
	1.0nm,0.7s,baz=114,slow=4.5,SNR=2.9						
MAW	Mawson	82.63	203	P	P	01 38 10.8	-0.4
	3.5nm,0.6s,baz=105,slow=6.8,SNR=14						
ILAR	Eielson Array	85.10	23	P	P	01 38 21.7	-2.1
	2.9nm,0.7s,baz=254,slow=5.0,SNR=36						
DAWY	Dawson	87.90	25	*e*P	P	01 38 36.5	-0.9
	8.2nm,1.6s						
NVAR	Mina Array Bea	97.23	52	P	Pdif	01 39 20.6	-0.8
	0.6nm,0.8s,baz=283,slow=7.3,SNR=4.2						
PLCA	Paso Flores	122.66	147	PKP	PKPdf	01 44 43.1	-0.3
	2.8nm,0.9s,baz=300,slow=4.5,SNR=7.2						
LPAZ	La Paz	139.24	123	PKP	PKPdf	01 45 16.1	0.0
	0.9nm,0.8s,baz=32,slow=2.1,SNR=4.2						
CPUP	Villa Florida	140.67	145	PKP	PKPdf	01 45 17.5	-0.1
	1.8nm,0.8s,baz=322,slow=2.4,SNR=3.9						
TORD	Torodi Ar. Bea	144.75	285	PKP	PKPab	01 45 22.3	-2.1
	1.1nm,0.9s,baz=79,slow=3.0						
SAML	Samuel	146.86	115	*e*PKPbc	PKPbc	01 45 29.7	-1.1

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*ATH **20** 01:28:18.5, 36°.52N×28°.93E, h25^{km}±4^{km}, ML1.9/3, Error ellipse: s-maj=6.5km s-min=1.2km az=181.0*
*DDA **20** 01:28:19.6, 36°.47N×28°.90E, h7^{km}, Ml2.7*
*ISK **20** 01:28:19.3, 36°.45N×28°.91E, h18^{km}, ML2.3/8*
*ISCJB **20** 01:28:20.2±0.4, 36°.46N±0°.03×28°.91E±0°.03, h28^{km}±4^{km}, Error ellipse: s-maj=5.9km s-min=4.4km az=17.8*
*CSEM **20** 01:28:20.0±0.2, 36°.45N×28°.93E, h21^{km}±1^{km}, ML2.7, Error ellipse: s-maj=4.3km s-min=2.9km az=8.0*
ISC 20 01:28:19.9±1.0**, 36°.45N**±0°.03×**28°.93E**±0°.02**, h21**^{km}±2^{km}**, n52, σ0^{s}68**/76**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FETY	Fethiye	0.23	33	PG	Pb	01 28 25.4	-0.5
FETY	Fethiye	0.23	33	*e*Pg	Pb	01 28 25.4	-0.5
FETY				S	Sb	01 28 30.8	+0.7
DALY	Dalyan (Mu˜la	0.43	329	PG	Pb	01 28 28.3	-0.5
DALY				SG	Sb	01 28 34.8	+0.1
DALY	Dalyan (Mu˜la	0.43	329	*i* P	Pb	01 28 28.2	-0.5
DALY				*i* S	Sb	01 28 35.2	+0.5
DALY	Dalyan (Mu˜la	0.43	329	*e*Pg	Pb	01 28 28.3	-0.5
DALY				*e*Sg	Sb	01 28 34.8	+0.1
DALY				S	Sb	01 28 35.2	+0.5
TURN	Turunc	0.50	329	PG	Pn	01 28 32.1	+0.3
TURN				SG	Sn	01 28 41.1	+1.3
TURN	Turunc	0.50	329	*i* P	Pn	01 28 32.1	+0.3
TURN				*i* S	Sn	01 28 41.3	+1.4
TURN	Turunc	0.50	329	P	Pn	01 28 32.1	+0.3
TURN				*e*Sg	Sn	01 28 41.1	+1.3
AKAS	Kas	0.59	111	PG	Pb	01 28 31.3	-0.4
AKAS	Kas	0.59	111	*i* P	Pb	01 28 31.3	-0.4
AKAS				*i* S	Sn	01 28 41.4	-0.8
AKAS	Kas	0.59	111	P	Pb	01 28 31.3	-0.4
AKAS				S	Sn	01 28 41.4	-0.8
KSL	Kastellorizon	0.61	119	P	Pb	01 28 31.4	-0.5
KSL				S	Sn	01 28 41.6	-0.9
KSL				AML	AML	01 28 42.6	
	comp=E,374μm,0.4s						
KSL				AML	AML	01 28 43.0	
	comp=N,135μm,0.5s						
MRSB	Marmaris-Mugla	0.65	295	PG	Pb	01 28 32.4	-0.2
MRSB	Marmaris-Mugla	0.65	295	*e*Pg	Pb	01 28 32.4	-0.2
ARG	Arkhangelos	0.69	251	PG	Pb	01 28 32.7	-0.5
ARG				SG	Sb	01 28 43.3	+1.0
ARG	Arkhangelos	0.69	251	P	Pb	01 28 32.3	-0.9
ARG				AML	AML	01 28 43.3	
	comp=N,84μm,0.5s						
ARG				S	Sn	01 28 44.2	-0.2
ARG				AML	AML	01 28 47.1	
	comp=E,103μm,0.2s						
ARG	Arkhangelos	0.69	251	*e*Pg	Pb	01 28 32.7	-0.5
ARG				*e*Sg	Sb	01 28 43.3	+1.0
ELL	Elmali	0.84	69	PG	Pb	01 28 36.1	+0.1
ELL	Elmali	0.84	69	*e*Pg	Pb	01 28 36.1	+0.1
YER	Yerkesik	0.86	323	PG	Pb	01 28 35.6	-0.6
YER	Yerkesik	0.86	323	*e*Pg	Pb	01 28 35.6	-0.6
GOLH	Golhisar	0.94	33	*i* P	Pb	01 28 36.9	-0.7
GOLH				*i* S	Sn	01 28 51.4	+0.5
GOLH	Golhisar	0.94	33	P	Pb	01 28 36.9	-0.7
GOLH				S	Sn	01 28 51.4	+0.5
TAVA	DENIZLI_Tavas	1.02	359	*i* P	Pb	01 28 38.1	-0.8
TAVA				*i* S	Sb	01 28 52.0	+0.1
TAVA	DENIZLI_Tavas	1.02	359	P	Pb	01 28 38.1	-0.8
TAVA				S	Sb	01 28 52.0	+0.1
DATC	Datca-Mugla	1.07	287	PG	Pn	01 28 39.8	+0.2
DATC	Datca-Mugla	1.07	287	*e*Pg	Pn	01 28 39.8	+0.2
DAT	Datca	1.12	285	PN	Pn	01 28 40.4	-0.1
DAT	Datca	1.12	285	*i* P	Pn	01 28 40.5	-0.1
DAT	Datca	1.12	285	P	Pn	01 28 40.5	-0.1
MLSB	Milas	1.25	313	PN	Pn	01 28 42.4	+0.1
MLSB	Milas	1.25	313	*e*Pn	Pn	01 28 42.4	+0.1
KORT	Korkueli	1.27	64	PN	Pb	01 28 43.1	-0.1
KORT	Korkueli	1.27	64	*i* P	Pn	01 28 42.8	+0.3
KORT	Korkueli	1.27	64	P	Pn	01 28 42.8	+0.3
KORT	Korkueli	1.27	64	*e*Pn	Pb	01 28 43.1	-0.1
BDRM	Kayabasi	1.34	298	*i* P	Pn	01 28 43.5	0.0
BDRM				*i* S	Sn	01 28 58.3	-2.4
BDRM	Kayabasi	1.34	298	P	Pn	01 28 43.5	0.0
BDRM				S	Sn	01 28 58.3	-2.4
BODT	Bodrum	1.44	296	PN	Pn	01 28 44.8	0.0
BODT	Bodrum	1.44	296	*e*Pn	Pn	01 28 44.8	0.0
AYDN	Tasoluk	1.48	326	*i* P	Pn	01 28 45.6	+0.4
AYDN	Tasoluk	1.48	326	P	Pn	01 28 45.7	+0.4
BRDR	BURDUR-Merkez	1.54	36	*i* P	Pn	01 28 46.2	-0.1
BRDR	BURDUR-Merkez	1.54	36	P	Pn	01 28 46.2	-0.1
AYDB	Zeytinkoy-Aydi	1.71	331	PN	Pn	01 28 48.1	-0.5
AYDB	Zeytinkoy-Aydi	1.71	331	*e*Pn	Pn	01 28 48.1	-0.5
SMG	Samos	2.10	308	P	Pn	01 28 53.9	+0.1
SMG				S	Sn	01 29 20.2	+1.0
SMG				AML	AML	01 29 21.2	
	comp=N,106μm,0.4s						
SMG				AML	AML	01 29 23.8	
	comp=E,94μm,0.4s						
SMG	Samos	2.10	308	P	Pn	01 28 53.7	-0.1
SMG				S	Sn	01 29 19.7	+0.5
NPS	Neapolis	2.94	247	P	Pn	01 29 06.3	+0.9
NPS	Neapolis	2.94	247	P	Pn	01 29 06.5	+1.1
CHOS	Chios island	3.00	311	P	Pn	01 29 05.5	-0.8
CHOS				S	Sn	01 29 42.1	+0.5
CHOS	Chios island	3.00	311	P	Pn	01 29 05.9	-0.4
CHOS				S	Sn	01 29 41.7	+0.1

SJA 20 01:33:36.3±0.4**, 31°.58S×69°.36W, h99**^{km}±2^{km}**, ML2.7, MW3.5, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTLS	Leoncito	0.23	166	*i* P	Pn	01 33 51.9	+1.0
RTLS				*i* S	Sn	01 34 03.6	+1.8
RTLS				IAML		01 34 04.3	
	comp=Z,314nm,0.2s						
AUSP	Uspallata	0.64	182	*i* P	Pn	01 33 54.4	+0.9
AUSP				*i* S	Sn	01 34 08.2	+1.8
RTCV	Cerro Valdivia	0.75	112	*i* P	Pn	01 33 55.1	+0.9
RTCV				*i* S	Sn	01 34 08.9	+1.2
RTLL	Cerro Villicun	0.80	72	*i* P	Pn	01 33 55.3	+0.6
RTLL				*i* S	Sn	01 34 09.7	+1.2
AMOG	MOGNA	0.98	50	*i* P	Pn	01 33 57.5	+0.9
AMOG				*i* S	Sn	01 34 12.8	+1.0
ARCO	CERRO ARCO	1.31	164	*i* P	Pn	01 34 01.5	+1.1
ARCO				*i* S	Sn	01 34 19.9	+1.4
ARCO				IAML		01 34 21.5	
	comp=Z,74nm,0.3s						
AROD	Rodeo	1.41	356	*i* P	Pn	01 34 03.4	+1.6

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*CSEM **20** 01:39:24.4, 45°.92N×15°.54E, h0^{km}, ML-0.3*
LJU 20 01:39:24.4, 45°.92N×15°.54E, h3^{km}**, 2D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CESS	Cesta pri Krsk	0.08	313	*i* Pg	Pg	01 39 26.3	+0.3
CESS				*i* Sg	Sg	01 39 27.1	+0.1
CESS	Cesta pri Krsk	0.08	313	*i* Pg	Pg	01 39 26.3	+0.3
CESS				*i* Sg	Sg	01 39 27.1	+0.1
GCIS	Gornji Cirnik	0.08	132	*i* Pg	Pg	01 39 26.1	+0.1
GCIS	Gornji Cirnik	0.08	132	*i* Pg	Pg	01 39 26.1	+0.1
	1.0nm,0.1s						
GOLS	Golise	0.11	32	*i* Pg	Pg	01 39 26.2	-0.3
GOLS				*e*Sg	Sg	01 39 28.2	+0.2
	comp=Z,1.0nm,0.1s						
GOLS	Golise	0.11	32	*i* Pg	Pg	01 39 26.2	-0.3
GOLS				*e*Sg	Sg	01 39 28.2	+0.2
	comp=Z,1.0nm,0.1s						
CRES	Cresnjev	0.11	212	⇓*i*Pg	Pg	01 39 26.4	-0.2
CRES				*i* Sg	Sg	01 39 28.4	+0.3
	comp=Z,2.0nm,0.1s						
CRES	Cresnjev	0.11	212	⇓*i*Pg	Pg	01 39 26.4	-0.2
CRES				*i* Sg	Sg	01 39 28.4	+0.3
	comp=Z,2.0nm,0.1s						
LEGS	Legarje	0.16	280	*i* Pg	Pg	01 39 27.7	+0.2
LEGS	Legarje	0.16	280	*i* Pg	Pg	01 39 27.7	+0.2
DOBS	Dobrina	0.23	347	*i* Pg	Pg	01 39 29.0	+0.1
DOBS	Dobrina	0.23	347	*i* Pg	Pg	01 39 29.0	+0.1

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*IDC **20** 01:55:01.6±1.8, 49°.26N×156°.21E, h0^{km}, mb3.7/9, mb1 3.9/9, mb1mx3.6/69, mbtmp3.7/9, MS3.0/8, Ms1 3.0/8, ms1mx2.7/66, Error ellipse: s-maj=54.7km s-min=21.2km az=166.0*
*MOS **20** 01:55:04.7±2.2, 49°.30N×157°.24E, h10^{km}, mb4.0/6, Error ellipse: s-maj=17.4km s-min=4.9km az=83.8*
*KRSC **20** 01:55:04.7±2.4, 49°.31N×157°.24E, h10^{km}±44^{km}, ML4.2*
*SKHL **20** 01:55:05.0±1.1, 50°.17N×153°.57E, h60^{km}, mb4.5/2*
ISC 20 01:55:04.4±1.9**, 49°.39N**±0°.07×**156°.73E**±0°.09**, h14**^{km}±10^{km}**, n62, σ3^{s}01**/63**, mb3.8**/10**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.35	343	*e*P	Pg	01 55 31.0	+0.7
SKR				AMB	AMB	01 55 32.0	
	339nm,0.6s						
SKR				AMB	AMB	01 55 35.0	
	400nm,1.0s						
SKR				*e*S	Sg	01 55 51.0	+3.0
SKR				A	A	01 55 59.8	
	941nm,0.6s						
SKR				A	A	01 55 59.8	
	864nm,0.6s						
SKR				A	A	01 56 17.0	
	1μm,11.0s						
SKR	Severo-Kuril's	1.35	343	*e*P	Pg	01 55 31.1	+0.7
SKR				*e*S	Sg	01 55 50.3	+2.3
SKR	Severo-Kuril's	1.35	343	*e*PN	Pg	01 55 31.1	+0.7
SKR				*e*S	Sg	01 55 51.5	+3.5
SKR				pmax	pmax		
	comp=Z,339nm,0.6s						
SKR				pmax	pmax		
	comp=Z,400nm,1.0s						
SKR				smax	smax		
	comp=N,941nm,0.6s						
SKR				smax	smax		
	comp=E,864nm,0.6s						
PAU	Pauzhetka	2.08	1	*e*P	Pb	01 55 43.0	+1.0
PAU				AMB	AMB	01 55 43.3	
	comp=E,127nm,0.6s						
PAU				*e*S	Sg	01 56 10.5	-0.7
PAU				A	A	01 56 17.3	
	comp=E,700nm,0.4s						
PAU	Pauzhetka	2.08	1	*e*P	Pb	01 55 42.9	+1.0
PAU				*e*S	Sg	01 56 10.6	-0.7
PAU	Pauzhetka	2.08	1	PN	Pb	01 55 42.9	+1.0
PAU				S	Sg	01 56 10.6	-0.7
KDTR	Khodutka, Kamc	2.57	19	*e*P	Pb	01 55 49.0	-1.2
KDTR				*e*S	Sb	01 56 21.5	-0.2
ASAK	Asacha	3.09	13	*e*P	Pb	01 55 56.7	-2.4
ASAK	Asacha	3.09	13	PN	Pb	01 55 56.7	-2.4
MTVR	Mutnovka	3.23	16	*e*P	Pb	01 55 59.0	-2.6
MTVR				*e*S	Sb	01 56 39.0	-1.9
MTVR	Mutnovka	3.23	16	PN	Pb	01 55 59.0	-2.6
MTVR				S	Sb	01 56 39.0	-1.9
RUS	Russkaya	3.25	20	*e*P	Pn	01 55 58.0	+3.1
RUS				*e*S	Sn	01 56 36.9	+3.5
RUS	Russkaya	3.25	20	PN	Pn	01 55 58.0	+3.1
RUS				S	Sn	01 56 36.9	+3.5
APC	Apacha	3.55	4	*e*P	Pb	01 56 04.2	-2.8
APC	Apacha	3.55	4	PN	Pb	01 56 04.2	-2.8
KRMR	Karymshinskiy	3.56	14	*e*P	Pn	01 56 02.4	+3.3
KRMR	Karymshinskiy	3.56	14	PN	Pn	01 56 02.4	+3.3
PETK	Petropavlovsk-	3.77	9	Pn	Pb	01 56 07.2	-3.5
	baz=171,slow=14						
PETK				LR	LR	01 57 38.1	
	comp=E,115nm,18.4s,baz=188,slow=39						
PET	Petropavlovsk	3.83	18	*e*P	Pn	01 56 07.6	+4.6
PET				*e*S	Sb	01 56 55.0	-3.1
PET	Petropavlovsk	3.83	18	*e*PN	Pn	01 56 06.9	+3.9
PET				*e*S	Sb	01 56 55.4	-2.7
PET				pmax	pmax		
	comp=Z,28nm,0.6s						
PET				smax	smax		
	comp=N,149nm,0.5s						
PET				smax	smax		
	comp=E,132nm,0.5s						
PET				MLR	MLR		
	comp=Z,300nm,12.0s						
PET				MLR	MLR		
	comp=Z,200nm,14.0s						
PET				pmax	pmax		
	comp=Z,700nm,12.6s						
PET				pmax	pmax		
	comp=Z,523nm,0.6s						
PET				smax	smax		
	comp=E,11μm,2.5s						
PET				smax	smax		
	comp=N,5μm,0.5s						
PET				smax	smax		
	comp=E,6μm,0.5s						
DALK	Dalny	3.86	18	*e*P	Pn	01 56 07.5	+4.2
DALK				*e*S	Sb	01 56 55.0	-3.8
DALK	Dalny	3.86	18	PN	Pn	01 56 07.5	+4.2
DALK				S	Sb	01 56 55.0	-3.8
UGLR	Uglovaya	4.04	18	*e*P	Pb	01 56 11.2	-4.2
UGLR	Uglovaya	4.04	18	PN	Pb	01 56 11.2	-4.2
AVH	Avacha	4.08	17	*e*P	Pb	01 56 12.0	-4.0
AVH				*e*P	Pn	01 56 12.5	+6.1
AVH	Avacha	4.08	17	PN	Pb	01 56 12.0	-4.0
KOK	Koryaka	4.09	16	P	Pb	01 56 12.4	-3.8
KOK	Koryaka	4.09	16	PN	Pb	01 56 12.4	-3.8
SMAR	Somma	4.09	18	*e*P	Pb	01 56 12.1	-4.2
SMAR	Somma	4.09	18	PN	Pb	01 56 12.1	-4.2
SDLR	Sedlovina	4.12	18	*e*P	Pn	01 56 11.0	+4.0
SDLR	Sedlovina	4.12	18	PN	Pn	01 56 11.0	+4.0
KRX	Arik	4.15	16	*e*P	Pb	01 56 13.1	-4.2
KRX	Arik	4.15	16	PN	Pb	01 56 13.1	-4.2
SPN	Mys Shipunski	4.25	28	*e*P	Pn	01 56 12.7	+4.0
SPN				*e*S	Sn	01 57 02.3	+4.2
SPN	Mys Shipunski	4.25	28	PN	Pn	01 56 12.7	+4.0
SPN				S	Sn	01 57 02.3	+4.2
GNL	Ganaly	4.38	9	*e*P	Pn	01 56 15.8	+5.2
GNL	Ganaly	4.38	9	PN	Pn	01 56 15.8	+5.2
TUMD	Tumrok D	6.24	20	*e*P	Pn	01 56 41.3	+5.2
TUMR	Tumrok	6.26	18	P	Pn	01 56 43.0	+6.6
TUMR	Tumrok	6.26	18	PN	Pn	01 56 41.3	+4.9
KBTR	Krutoberegovo	7.76	26	*e*P	Pn	01 57 00.3	+3.5
KBTR	Krutoberegovo	7.76	26	PN	Pn	01 57 00.3	+3.5
MA2	Magadan	10.77	344	LR	LR	02 01 42.7	
	comp=E,74nm,18.6s,baz=158,slow=37						
ASAJ	Asahikawa	11.03	247	Pn	Pn	01 57 39.0	-2.7
	comp=E,1.0nm,0.3s,baz=170,slow=27,SNR=3.4						
ASAJ				LR	LR	02 01 25.9	
	comp=E,107nm,18.1s,baz=310,slow=36						
KLR	Kul'dur	16.27	279	Pn	Pn	01 58 52.3	-0.1
	comp=E,0.0nm,0.3s,baz=56,slow=12,SNR=4.0						
KLR				LR	LR	02 04 46.7	
	comp=E,7.2nm,19.4s,baz=56,slow=37						
MJAR	Matsushiro Arr	18.61	233	LR	LR	02 07 14.0	
	comp=E,57nm,18.9s,baz=165,slow=40						
YAK	Yakutsk	19.62	320	LR	LR	02 06 50.9	
	comp=E,59nm,20.4s,baz=82,slow=36						
KSRS	Korea Array	23.93	251	P	P	02 00 14.1	-3.8
	comp=E,1.2nm,0.8s,baz=54,slow=9.4,SNR=5.2						
KSRS				LR	LR	02 08 48.3	
	comp=E,28nm,18.5s,baz=90,slow=35						
H11S1	WAKE ISLAND Hy	31.84	162	T	T	02 35 51.0	
	baz=347,slow=76,SNR=9.0						
H11S3	WAKE ISLAND Hy	31.85	162	T	T	02 35 41.5	
	baz=347,slow=76,SNR=8.2						
H11S2	WAKE ISLAND Hy	31.86	162	T	T	02 35 51.3	
	baz=347,slow=76,SNR=5.6						
INK	Inuvik	38.11	34	P	P	02 02 23.6	+1.2
	comp=E,1.4nm,0.9s,baz=276,slow=6.1,SNR=3.4						
YKA	Yellowknife Ar	47.35	39	P	P	02 03 39.6	+2.3
	comp=E,1.2nm,0.8s,baz=308,slow=7.0,SNR=3.1						
MKAR	Makanchi Array	47.90	297	P	P	02 03 39.0	-2.9
	comp=E,0.8nm,0.8s,baz=58,slow=9.1,SNR=5.3						
MKAR				LR	LR	02 24 44.7	
	comp=E,57nm,18.1s,baz=44,slow=37						
KURK	Kurchatov	47.94	303	P	P	02 03 40.2	-1.9
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KURBB	Kurchatov Arra	48.03	303	P	P	02 03 40.2	-2.6
	comp=Z,1.9nm,0.8s,baz=63,slow=7.9,SNR=9.7						
BVAR	Borovoye Array	51.06	309	P	P	02 04 03.6	-2.3
	comp=Z,0.4nm,0.3s,baz=54,slow=7.3,SNR=6.4						
TXAR	Lajitas Array	74.11	64	P	P	02 06 41.7	+1.4
	comp=Z,0.3nm,0.6s,baz=292,slow=4.1,SNR=6.6						
GERES	GERESS Array B	77.09	336	P	P	02 06 56.9	-0.2
	comp=Z,0.4nm,0.5s,baz=30,slow=6.3,SNR=4.8						
BRTR	Keskin Array B	78.07	319	P	P	02 07 01.8	-1.0
	comp=Z,1.3nm,0.9s,baz=64,slow=5.9,SNR=6.9						
BRTR	Keskin Array B	78.07	319	P	P	02 07 01.8	-1.0
BRTR				pmax	pmax		
	comp=Z,2.0nm,1.0s						

MEX 20 01:55:17.1±0.6**, 16°.28N×98°.27W, h5**^{km}**, MD3.7, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.18	51	*e*P	Pg	01 55 20.0	-0.7
PNIG				*i* S	Sg	01 55 22.8	-0.2
TLIG	Tlapa	1.31	348	*e*P	Pn	01 55 38.4	-3.8
TLIG				*i* S	Sg	01 55 54.8	-4.4
VHO	Vista Hermosa	1.67	62	*i* P	Pn	01 55 43.8	-3.5
VHO				*i* S	Sn	01 56 05.0	-4.1
CAIG	El Cayaco	2.06	292	*e*P	Pn	01 55 48.1	-4.3
CAIG				*i* S	Sn	01 56 14.6	-3.9
MEIG	Mezcala	2.08	322	*e*P	Pn	01 55 49.9	-2.9
MEIG				*i* S	Sn	01 56 14.7	-4.5
HUIG	Huatulco	2.14	103	*e*P	Pn	01 55 50.2	-3.3
HUIG				*i* S	Sn	01 56 15.9	-4.6

GUC 20 02:14:09.4±0.4**, 23°.71S×67°.20W, h240**^{km}**, ML3.7, 7C-1D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB06	IPOC Station P	2.40	294	⇑*i*P	Pn	02 14 57.1	+2.0
PB06				*i* S	S	02 15 33.5	+2.5
PB06				IAML		02 15 36.2	
	comp=N,194nm,0.2s						
PB09	IPOC Station P	2.68	315	⇑*i*P	Pn	02 15 00.3	+2.2
PB09				*i* S	S	02 15 38.7	+2.4
PB09				IAML		02 15 41.2	
	comp=N,53nm,0.4s						
PB03	IPOC Station P	2.88	305	⇑*i*P	Pn	02 15 02.2	+2.0
PB03				*i* S	S	02 15 42.4	+2.3
PB03				IAML		02 15 46.3	
	comp=N,180nm,0.2s						
PB05	IPOC Station P	2.89	287	⇑*i*P	Pn	02 15 02.2	+2.0
PB05				*i* S	S	02 15 42.4	+2.1
PB05				IAML		02 15 45.3	
	comp=E,84nm,0.2s						
PB04	IPOC Station P	3.04	296	⇑*i*P	Pn	02 15 04.2	+2.2
PB10	IPOC Station P	3.08	273	⇑*i*P	Pn	02 15 04.3	+2.1
PB10				*i* S	S	02 15 45.9	+2.1
PB10				IAML		02 15 49.3	
	comp=N,63nm,0.3s						
PB07	IPOC Station P	3.17	308	⇑*i*P	Pn	02 15 05.5	+2.1
PB07				*i* S	S	02 15 48.2	+2.2
PB07				IAML		02 15 49.9	
	comp=N,127nm,0.5s						
PB02	IPOC Station P	3.45	313	⇓*i*P	Pn	02 15 08.4	+1.9
PB08	IPOC Station P	3.99	333	*e*P	Pn	02 15 15.2	+2.1

IDC 20 02:41:37.5±6.6**, 62°.44S×155°.19E, h0**^{km}**, mb3.7**/2**, mb1 4.0**/3**, mb1mx3.8**/38**, mbtmp3.8**/3**, ML3.7**/1**, MS3.8**/13**, Ms1 3.8**/13**, ms1mx3.5**/36**, Error ellipse: s-maj=428.9km s-min=41.7km az=76.0, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNDA	Vanda	15.30	175	Pn	Pn	02 45 14.4	0.0
	0.3nm,0.3s,baz=346,slow=14,SNR=15						
VNDA				Sn	Sn	02 47 59.3	-5.0
	0.1nm,0.3s,baz=173,slow=6.6,SNR=2.0						
VNDA				LR	LR	02 50 39.8	
	comp=Z,472nm,20.1s,baz=360,slow=35						
RPZ	Rata Peaks	20.93	34	LR	LR	02 52 56.0	
	comp=Z,315nm,19.3s,baz=178,slow=32						
QSPA	South Pole Qui	27.65	180	P	P	02 47 31.4	+4.8
	3.7nm,1.1s,baz=358,slow=8.2,SNR=4.8						
QSPA				LR	LR	02 58 40.0	
	comp=Z,110nm,19.4s,baz=18,slow=37						
STKA	Stephens Creek	31.80	338	LR	LR	02 57 43.2	
	comp=Z,125nm,20.2s,baz=188,slow=30						
MAW	Mawson	35.86	221	LR	LR	03 03 26.8	
	comp=Z,210nm,20.8s,baz=84,slow=36						
H01W1	Cape Leeuwin H	37.58	298	T	T	03 28 47.7	
	baz=147						
H01W2	Cape Leeuwin H	37.58	298	T	T	03 28 43.5	
	baz=147						
H01W3	Cape Leeuwin H	37.60	298	T	T	03 28 47.7	
	baz=147						
NWAO	Narrogin (SRO)	38.06	303	LR	LR	03 00 23.0	
	comp=Z,160nm,18.6s,baz=344,slow=30						
DZM	Mont Dzumac	41.07	16	LR	LR	03 02 14.4	
	comp=Z,144nm,19.5s,baz=214,slow=30						
DZM	Mont Dzumac	41.07	16	*e*LR	LR	03 00 27.5	
	229nm,25.4s						
ASAR	Alice Springs	41.35	330	P	P	02 49 24.9	0.0
	1.0nm,0.9s,baz=164,slow=9.6,SNR=5.3						
WRA	Warramunga Arr	44.84	332	P	P	02 49 52.8	-0.3
	1.7nm,1.1s,baz=164,slow=7.1,SNR=3.8						
SNAA	Sanae	45.31	190	LR	LR	03 09 40.7	
	comp=Z,419nm,18.1s,baz=204,slow=37						
HNR	Honiara	53.02	6	LR	LR	03 09 17.8	
	comp=Z,121nm,18.4s,baz=156,slow=31						
PMG	Port Moresby	53.26	350	LR	LR	03 10 11.3	

	comp=Z,102nm,18.1s,baz=173,slow=32						
TBI	**Tubuai**	**53.70**	**70**	*e*T	T	03 48 36.4	
	12nm,0.3s						
AFI	**Afiamalu**	**53.83**	**41**	LR	LR	03 10 52.3	
	comp=Z,68nm,21.4s,baz=105,slow=33						
PAE	**Paea**	**58.67**	**66**	*e*T	T	03 54 46.7	
	2.8nm,0.3s						
TVO	**Taravao**	**58.71**	**67**	*e*T	T	03 54 50.9	
	1.0nm,0.3s						
PPT2	**Papeete2**	**58.74**	**66**	*e*LR	LR	03 09 03.9	
	82nm,24.0s						
PPT2	**Papeete2**	**58.74**	**66**	*e*T	T	03 54 52.0	
	1.7nm,0.3s						
RKT	**Rikitea**	**60.45**	**83**	*e*T	T	03 57 11.0	
	3.2nm,0.3s						
VAH	**Vaihoa**	**61.67**	**67**	*e*T	T	03 58 31.4	
	73nm,0.3s						
PLCA	**Paso Flores**	**70.81**	**145**	LR	LR	03 18 30.7	
	comp=Z,29nm,19.4s,baz=44,slow=31						
BOSA	**Boshof**	**80.84**	**223**	LR	LR	03 25 37.3	
	comp=Z,22nm,20.9s,baz=205,slow=33						

JMA 20 03:02:22.5±0.4**, 32°.97N**×**139°.34E, h190**^{km}±4^{km}**, M3.5,**
Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHCJ	**Hachijojimakas**	**0.40**	**75**	P	Pn	03 02 48.7	+0.6
JHJ2	**Mitsune**	**0.42**	**70**	P	Pn	03 02 48.3	+0.2
JHJ2				*e*S	Sn	03 03 08.9	+1.0
JAOM	**Aogashimamukai**	**0.62**	**145**	P	Pn	03 02 49.1	+0.1
JMKN	**Mikurajimanish**	**0.94**	**13**	P	Pn	03 02 51.0	+0.2
JIM2	**Oshima 3**	**1.75**	**2**	P	Pn	03 02 59.0	+1.4
BSO1	**Boso 1**	**2.16**	**39**	P	Pn	03 03 01.7	+0.3
BSO1				S	Sn	03 03 32.7	+0.8
JOD2	**Odawara 2**	**2.30**	**355**	P	Pn	03 03 04.6	+1.1
JIE	**Ise**	**2.61**	**304**	P	Pn	03 03 06.6	-0.4

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*GUC **20** 03:12:18.8±0.6, 34°.26S×72°.31W, h25*^{km}*±5*^{km}*, ML3.7*
ISC 20 03:12:15.9±2.7**, 34°.28S**±0°.05×**72°.4W**±0°.1**, h10**^{km}±14^{km}**,**
n16, σ**1**^{s}**.72**/28**, 3C-3D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO05	**HualaæØ**	**0.81**	**155**	⇓*i*P	**Pb**	**03 12 32.8**	**+0.6**
GO05				⇓*i*P	**Pb**	**03 12 32.9**	**+0.6**
GO05				*i* S	**Sg**	**03 12 43.2**	**+1.0**
GO05				*i* S	**Sg**	**03 12 43.3**	**+1.0**
GO05				IAML		03 12 45.4	
	comp=E,11μm,0.3s						
ANTU	**Antumapu**	**1.59**	**64**	*e*P	**Pn**	**03 12 44.5**	**+0.3**
ANTU				*i* S	**Sn**	**03 13 03.8**	**-1.1**
ANTU				IAML		03 13 20.9	
	comp=N,1μm,0.6s						
ROC1	**El Roble**	**1.71**	**41**	*i* P	**Pb**	**03 12 47.1**	**-0.5**
CLCH	**Cerro Calan**	**1.75**	**60**	⇑*i*P	**Pn**	**03 12 47.0**	**+0.6**
CLCH				*i* S	**Sn**	**03 13 08.3**	**-0.5**
CLCH				IAML		03 13 15.7	
	comp=N,2μm,0.8s						
PEL	**Peldehue**	**1.79**	**51**	⇑*i*P	**Pn**	**03 12 47.5**	**+0.6**
PEL				*i* S	**Sn**	**03 13 08.9**	**-0.9**
PEL				IAML		03 13 21.4	
	comp=N,912nm,0.6s						
LMEL	**Las Melosas**	**1.84**	**77**	⇑*i*P	**Pn**	**03 12 48.5**	**+0.8**
LMEL				*i* S	**Sn**	**03 13 10.9**	**-0.1**
LMEL				IAML		03 13 16.3	
	comp=N,1μm,0.3s						
FCH	**Farellones**	**1.96**	**62**	⇓*i*P	**Pn**	**03 12 50.2**	**+0.6**
FCH				*i* S	**Sn**	**03 13 14.8**	**+0.4**
CCHI	**Chillan**	**2.33**	**175**	*i* P	**Pn**	**03 12 51.5**	**-2.9**
AAGR	**Agrelo**	**3.17**	**69**	*i* P	**Pb**	**03 13 10.3**	**-2.1**
ARCO	**CERRO ARCO**	**3.19**	**64**	*i* P	**Pb**	**03 13 10.6**	**-2.3**
ARCO				IAML		03 13 19.7	
	comp=Z,156nm,0.6s						
ARCO				*i* S	**Sg**	**03 13 59.5**	**+0.9**
AUSP	**Uspallata**	**3.22**	**51**	*i* P	**Pn**	**03 13 09.5**	**+2.6**
AUSP				*i* S	**Sg**	**03 13 58.2**	**-1.2**
AVIZ	**Vizcacheras**	**3.29**	**77**	*i* P	**Pb**	**03 13 12.8**	**-1.7**
ASAL	**Salagasta**	**3.39**	**61**	*i* P	**Pb**	**03 13 13.0**	**-3.2**
ASAL				*i* S	**Sg**	**03 14 03.3**	**-1.5**
RTLS	**Leoncito**	**3.56**	**47**	*i* P	**Pn**	**03 13 13.9**	**+2.3**
RTLS				*i* S	**Sb**	**03 14 04.6**	**+2.0**
RTLS				IAML		03 14 14.8	
	comp=Z,92nm,0.7s						
RTCV	**Cerro Valdivia**	**4.00**	**54**	*i* P	**Pn**	**03 13 19.9**	**+2.4**
RTLL	**Cerro Villicun**	**4.39**	**49**	*i* P	**Pn**	**03 13 25.1**	**+2.3**

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*IDC **20** 03:40:06.7±0.5, 49°.35N×156°.11E, h0*^{km}*, mb4.7/30,*
mb1 4.8/34, mb1mx4.6/72, mbtmp4.7/34, ML5.7/1, MS4.9/62,
Ms1 4.9/62, ms1mx4.9/71, Error ellipse: s-maj=13.5km
s-min=10.9km az=133.0
*KRSC **20** 03:40:08.7±2.8, 49°.13N×156°.91E, h43*^{km}*±43*^{km}*, ML5.7*
*SKHL **20** 03:40:09.9±0.6, 49°.03N×156°.60E, h58*^{km}*±2*^{km}*, mb6.1/1,*
mbh6.0/1, Ms5.2/7
SKHL Felt (II) at Severo-Kurilsk.
*BJI **20** 03:40:10.7, 49°.51N×156°.00E, h22*^{km}*, mb5.0/69, mB5.2/64,*
Ms5.4/81, Ms7 5.3/73
*ISCJB **20** 03:40:10.9±0.7, 49°.42N±0°.02×155°.85E±0°.02, h23*^{km}*±5*^{km}*,*
mb5.1/360, MS5.0/201, Error ellipse: s-maj=4.1km
s-min=2.1km az=158.6
*GCMT **20** 03:40:12.1±0.1, 49°.22N×156°.50E, h25*^{km}*, MW5.5/122,*
Moment Tensor Solution. s114,c207; s122,c239;
Duration: 1^{s}*.3 Moment tensor: Scale 10*^{17}*Nm;*
M_{rr}1.34±.02; $M_{\theta\theta}$-0.51±.02; $M_{\phi\phi}$-0.82±.02; $M_{r\theta}$0.58±.04;
$M_{\theta\phi}$-0.70±.01; $M_{\phi r}$1.20±.04; Best double couple:
*$M_0$1.90600×10*^{17} *NP1:ϕ_s30.00000°, δ67.00000°,*
λ83.00000°. NP2:ϕ_s228.00000°, δ24.00000°, λ107.00000°.
Principal axes: T 1.9000, Plg67.0000°, Azm286.0000°;
N 0.0160, Plg7.0000°, Azm32.0000°; P -1.9130,
Plg22.0000°, Azm125.0000°; nsta1 refers to body waves,
cutoff=40s. nsta2 refers to surface waves, cutoff=50s.
*NEIC **20** 03:40:12.2±2.1, 49°.51N×155°.60E, h15*^{km}*±13*^{km}*,*
mb5.3/254, MS5.0/108 Error ellipse: s-maj=5.8km
s-min=2.9km az=163.0
*MOS **20** 03:40:14.2±1.6, 49°.54N×155°.90E, h47*^{km}*, mb5.3/113,*
MS5.1/45, Error ellipse: s-maj=5.9km s-min=2.8km
az=81.4
MOS Felt (II) at Severo-Kuril'sk.
ISC 20 03:40:11.6±0.5**, 49°.28N**±0°.04×**156°.09E**±0°.04**, h17**^{km}±2^{km}**,**
h17^{km}**:pP-P, n1356,** σ**1**^{s}**.90**/1341**, mb5.2**/365**, MS5.0**/202**,**
60C-45D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**1.41**	**1**	*e*P	**Pn**	**03 40 36.0**	**-0.3**
SKR				AMB	AMB	03 40 37.0	
	2μm,0.5s						
SKR				AMB	AMB	03 40 37.0	
	2μm,0.6s						
SKR				*e*S	**Sb**	**03 40 56.0**	**+1.1**
SKR				A	A	03 41 03.0	
	37μm,0.5s						
SKR				A	A	03 41 03.0	
	46μm,0.5s						
SKR				AMS	AMS	03 41 20.7	
	91μm,13.0s						
SKR				AMS	AMS	03 41 20.7	
	99μm,13.0s						
SKR				AMS	AMS	03 41 20.7	
	92μm,13.0s						
SKR	**Severo-Kuril's**	**1.41**	**1**	*e*P	**Pn**	**03 40 36.3**	**0.0**
SKR				*e*S	**Sn**	**03 40 53.6**	**-0.8**
SKR	**Severo-Kuril's**	**1.41**	**1**	*e*PN	**Pn**	**03 40 36.1**	**-0.3**
SKR				pmax	pmax		
	comp=Z,2μm,0.5s						
SKR				pmax	pmax		
	comp=Z,2μm,0.6s						
PAU	**Pauzhetka**	**2.24**	**12**	*e*P	**Pn**	**03 40 47.9**	**+0.1**
PAU				AMB	AMB	03 40 49.4	
	comp=Z,900nm,0.4s						
PAU				*e*S	**Sn**	**03 41 16.0**	**+1.0**
PAU				A	A	03 41 23.2	
	comp=Z,21μm,0.3s						
PAU	**Pauzhetka**	**2.24**	**12**	*e*P	**Pn**	**03 40 47.9**	**+0.1**
PAU				*e*S	**Sn**	**03 41 15.6**	**+0.6**
PAU	**Pauzhetka**	**2.24**	**12**	PN	**Pn**	**03 40 47.9**	**+0.1**
PAU				S	**Sn**	**03 41 15.6**	**+0.6**
KDTR	**Khodutka, Kamc**	**2.83**	**26**	*e*P	**Pn**	**03 40 54.0**	**-1.9**
KDTR				*e*S	**Sn**	**03 41 27.1**	**-2.5**
MIPR	**Malaya Ipel'ka**	**3.03**	**8**	*e*P	**Pn**	**03 40 59.3**	**+0.6**
MIPR	**Malaya Ipel'ka**	**3.03**	**8**	PN	**Pn**	**03 40 59.3**	**+0.6**
ASAK	**Asacha**	**3.31**	**20**	*e*P	**Pn**	**03 41 01.9**	**-0.7**
ASAK	**Asacha**	**3.31**	**20**	PN	**Pn**	**03 41 01.9**	**-0.7**
MTVR	**Mutnovka**	**3.47**	**22**	*e*P	**Pn**	**03 41 03.9**	**-1.0**
MTVR	**Mutnovka**	**3.47**	**22**	PN	**Pn**	**03 41 03.9**	**-1.0**
GRL	**Gorelyy**	**3.51**	**20**	*e*P	**Pn**	**03 41 05.2**	**-0.2**
GRL	**Gorelyy**	**3.51**	**20**	PN	**Pn**	**03 41 05.2**	**-0.2**
RUS	**Russkaya**	**3.51**	**25**	*e*P	**Pn**	**03 41 03.2**	**-2.1**
RUS				*e*S	**Sn**	**03 41 43.9**	**-2.4**
RUS	**Russkaya**	**3.51**	**25**	PN	**Pn**	**03 41 03.2**	**-2.1**
RUS				S	**Sn**	**03 41 43.9**	**-2.4**
APC	**Apacha**	**3.71**	**10**	*e*P	**Pn**	**03 41 08.6**	**+0.6**
APC	**Apacha**	**3.71**	**10**	PN	**Pn**	**03 41 08.6**	**+0.6**
KRMR	**Karymshinskiy**	**3.78**	**19**	*e*P	**Pn**	**03 41 08.8**	**-0.2**
KRMR	**Karymshinskiy**	**3.78**	**19**	PN	**Pn**	**03 41 08.8**	**-0.2**
PEA0B	**Petropavlovsk-**	**3.97**	**14**	*e*Pn	**Pn**	**03 41 12.0**	**+0.5**
PEA0B				*e*Sn	**Sn**	**03 41 57.3**	**-0.3**
PETK	**Petropavlovsk-**	**3.97**	**14**	Pn	**Pn**	**03 41 12.1**	**+0.6**
	baz=180,slow=14						
PETK				LR	LR	03 42 59.7	
	comp=Z,18μm,21.3s,baz=190,slow=44						
PETK	**Petropavlovsk-**	**3.97**	**14**	*e*Pn	**Pn**	**03 41 11.8**	**+0.2**
PETK				*e*Sn	**Sn**	**03 41 57.2**	**-0.4**
PETK	**Petropavlovsk-**	**3.97**	**14**	*e*PN	**Pn**	**03 41 11.8**	**+0.2**
PETK				*e*		03 41 57.2	
PET	**Petropavlovsk**	**4.08**	**22**	*e*P	**Pn**	**03 41 11.4**	**-1.7**
PET				*e*S	**Sn**	**03 41 57.1**	**-3.3**
PET				AMS	AMS	03 43 05.0	
	comp=Z,14μm,16.0s						
PET				AMS	AMS	03 43 05.0	
	comp=Z,20μm,16.0s						
PET	**Petropavlovsk**	**4.08**	**22**	*e*Pn	**Pn**	**03 41 11.7**	**-1.4**
PET				*e*Sn	**Sn**	**03 41 56.2**	**-4.2**
PET	**Petropavlovsk**	**4.08**	**22**	*e*P	**Pn**	**03 41 12.3**	**-0.8**
PET				*e*S	**Sn**	**03 41 59.3**	**-1.1**
PET	**Petropavlovsk**	**4.08**	**22**	PN	**Pn**	**03 41 12.3**	**-0.8**
PET				S	**Sn**	**03 41 59.3**	**-1.1**
DALK	**Dalny**	**4.11**	**23**	*e*P	**Pn**	**03 41 12.5**	**-1.0**
DALK				*e*S	**Sn**	**03 42 00.4**	**-0.8**
DALK	**Dalny**	**4.11**	**23**	PN	**Pn**	**03 41 12.5**	**-1.0**
DALK				S	**Sn**	**03 42 00.4**	**-0.8**
UGLR	**Uglovaya**	**4.29**	**23**	*i* P	**Pn**	**03 41 15.7**	**-0.4**
UGLR	**Uglovaya**	**4.29**	**23**	PN	**Pn**	**03 41 15.7**	**-0.4**
AVH	**Avacha**	**4.32**	**22**	*i* P	**Pn**	**03 41 16.7**	**+0.2**
AVH	**Avacha**	**4.32**	**22**	PN	**Pn**	**03 41 16.7**	**+0.2**
KOK	**Koryaka**	**4.33**	**21**	*e*P	**Pn**	**03 41 17.3**	**+0.8**
KOK	**Koryaka**	**4.33**	**21**	PN	**Pn**	**03 41 17.3**	**+0.8**
SMAR	**Somma**	**4.34**	**22**	*e*P	**Pn**	**03 41 16.9**	**+0.1**
SMAR	**Somma**	**4.34**	**22**	PN	**Pn**	**03 41 16.9**	**+0.1**
SDLR	**Sedlovina**	**4.37**	**23**	*i* P	**Pn**	**03 41 16.2**	**-1.0**
SDLR	**Sedlovina**	**4.37**	**23**	PN	**Pn**	**03 41 16.2**	**-1.0**
SPN	**Mys Shipunski**	**4.55**	**31**	*e*P	**Pn**	**03 41 17.5**	**-2.1**
SPN				*e*S	**Sn**	**03 42 08.2**	**-3.8**
SPN	**Mys Shipunski**	**4.55**	**31**	PN	**Pn**	**03 41 17.5**	**-2.1**
GNL	**Ganaly**	**4.57**	**14**	*i* P	**Pn**	**03 41 20.8**	**+0.9**
GNL	**Ganaly**	**4.57**	**14**	PN	**Pn**	**03 41 20.8**	**+0.9**
KII	**Karymskiy**	**5.20**	**22**	*e*P	**Pn**	**03 41 29.0**	**+0.4**
KII	**Karymskiy**	**5.20**	**22**	PN	**Pn**	**03 41 29.0**	**+0.4**
MKZ	**Mys Kozlova**	**6.33**	**31**	*e*P	**Pn**	**03 41 40.7**	**-3.2**
MKZ				S	**Sn**	**03 42 51.2**	**-4.5**
MKZ	**Mys Kozlova**	**6.33**	**31**	PN	**Pn**	**03 41 40.7**	**-3.2**
TUMD	**Tumrok D**	**6.50**	**22**	*e*P	**Pn**	**03 41 46.4**	**+0.1**
TUMR	**Tumrok**	**6.51**	**21**	*e*P	**Pn**	**03 41 46.8**	**+0.3**
TUMR	**Tumrok**	**6.51**	**21**	PN	**Pn**	**03 41 46.4**	**-0.1**
ESO	**Esso**	**6.84**	**12**	P	**Pn**	**03 41 53.7**	**+2.7**
ESO	**Esso**	**6.84**	**12**	PN	**Pn**	**03 41 53.7**	**+2.7**
KUR	**Kuril'sk**	**6.91**	**237**	*e*P	**Pn**	**03 41 53.3**	**+1.4**
KUR				AMB	AMB	03 42 12.0	
	comp=Z,42nm,0.7s						
KUR				AMB	AMB	03 42 12.0	
	comp=Z,101nm,0.7s						
KUR				AMB	AMB	03 42 12.0	
	comp=Z,494nm,0.7s						
KUR				*i* S	**Sn**	**03 43 12.5**	**+2.5**
KUR				AMS	AMS	03 44 52.3	
	comp=Z,10μm,13.0s						
KUR				AMS	AMS	03 44 52.3	
	comp=Z,3μm,13.0s						
KUR				AMS	AMS	03 44 52.3	
	comp=Z,7μm,13.0s						
KUR	**Kuril'sk**	**6.91**	**237**	d*i*PN	**Pn**	**03 41 54.2**	**+2.3**
KUR				pmax	pmax		
	comp=Z,4μm,4.2s						
KUR				pmax	pmax		
	comp=N,3μm,3.3s						
KUR				pmax	pmax		
	comp=Z,515nm,0.8s						
KUR				pmax	pmax		
	comp=E,127nm,0.6s						
KMNR	**Kamenistaya**	**6.96**	**20**	*e*P	**Pn**	**03 41 55.0**	**+2.3**
KMNR	**Kamenistaya**	**6.96**	**20**	PN	**Pn**	**03 41 55.0**	**+2.3**
KPT	**Kopyto**	**7.15**	**19**	*e*P	**Pn**	**03 41 54.9**	**-0.4**
KPT	**Kopyto**	**7.15**	**19**	PN	**Pn**	**03 41 54.9**	**-0.4**
KIRR	**Kirishev**	**7.17**	**20**	P	**Pn**	**03 41 57.0**	**+1.4**
KIRR	**Kirishev**	**7.17**	**20**	PN	**Pn**	**03 41 57.0**	**+1.4**
KOZ	**Kozyrevsk**	**7.17**	**17**	*e*P	**Pn**	**03 41 57.3**	**+1.8**
KOZ	**Kozyrevsk**	**7.17**	**17**	PN	**Pn**	**03 41 57.3**	**+1.8**
BZMR	**Bezymyannaya**	**7.18**	**20**	*e*P	**Pn**	**03 41 56.4**	**+0.6**
BZMR	**Bezymyannaya**	**7.18**	**20**	PN	**Pn**	**03 41 56.4**	**+0.6**
BZWR	**Bezymyannyi-We**	**7.21**	**20**	*e*P	**Pn**	**03 41 56.8**	**+0.6**
BZWR	**Bezymyannyi-We**	**7.21**	**20**	PN	**Pn**	**03 41 56.8**	**+0.6**
BZGR	**Bezymyannyi-Gr**	**7.24**	**21**	*e*P	**Pn**	**03 41 56.1**	**-0.4**
BZGR	**Bezymyannyi-Gr**	**7.24**	**21**	PN	**Pn**	**03 41 56.1**	**-0.4**
ZLN	**Zelenaya**	**7.33**	**21**	P	**Pn**	**03 41 58.3**	**+0.5**
ZLN	**Zelenaya**	**7.33**	**21**	PN	**Pn**	**03 41 58.3**	**+0.5**
LGNR	**Loginova**	**7.37**	**21**	P	**Pn**	**03 41 59.5**	**+1.1**
LGNR	**Loginova**	**7.37**	**21**	PN	**Pn**	**03 41 59.5**	**+1.1**
CIRR	**Tsirk**	**7.41**	**21**	P	**Pn**	**03 41 58.8**	**-0.1**
CIRR	**Tsirk**	**7.41**	**21**	PN	**Pn**	**03 41 58.8**	**-0.1**
KRSR	**Krestovskiy**	**7.46**	**20**	P	**Pn**	**03 42 00.2**	**+0.6**
KRSR	**Krestovskiy**	**7.46**	**20**	PN	**Pn**	**03 42 00.2**	**+0.6**
BDR	**Baidarnaya**	**7.93**	**21**	*e*P	**Pn**	**03 42 04.5**	**-1.4**
BDR	**Baidarnaya**	**7.93**	**21**	PN	**Pn**	**03 42 04.5**	**-1.4**
SRKR	**Sorokina**	**8.00**	**21**	*e*P	**Pn**	**03 42 05.2**	**-1.7**
SRKR	**Sorokina**	**8.00**	**21**	PN	**Pn**	**03 42 05.2**	**-1.7**
SMKR	**Semkarok**	**8.00**	**22**	*e*P	**Pn**	**03 42 06.1**	**-0.9**
KBTR	**Krutoberegovo**	**8.05**	**28**	*e*P	**Pn**	**03 42 05.2**	**-2.3**
KBTR	**Krutoberegovo**	**8.05**	**28**	PN	**Pn**	**03 42 05.2**	**-2.3**
SHO	**Shikotan**	**8.36**	**233**	*e*P	**Pn**	**03 42 10.0**	**-1.8**
SHO				AMB	AMB	03 42 24.0	
	comp=E,169nm,0.5s						
SHO				*e*S	**Sn**	**03 43 39.0**	**-6.8**
SHO				AMS	AMS	03 45 25.6	
	comp=E,6μm,19.0s						
SHO				AMS	AMS	03 45 25.6	
	comp=E,3μm,19.0s						
SHO				AMS	AMS	03 45 25.6	
	comp=E,5μm,19.0s						
SHO	**Shikotan**	**8.36**	**233**	*e*PN	**Pn**	**03 42 10.2**	**-1.6**
SHO				pmax	pmax		
	comp=Z,169nm,0.5s						
SHO				MLR	MLR		
	comp=Z,5μm,20.0s						
SHO				MLR	MLR		
	comp=N,6μm,19.0s						
SHO				MLR	MLR		
	comp=E,3μm,15.0s						
BKI	**Bering**	**8.48**	**42**	*e*P	**Pn**	**03 42 10.8**	**-2.6**
BKI				*e*S	Sn	03 43 36.7	-12
BKI	**Bering**	**8.48**	**42**	PN	**Pn**	**03 42 10.8**	**-2.6**
YUK	**Yuzh-Kuril'sk**	**8.77**	**237**	*e*P	**Pn**	**03 42 16.2**	**-1.3**
YUK				AMB	AMB	03 42 27.0	
	comp=E,287nm,0.5s						
YUK				AMB	AMB	03 42 27.0	
	comp=E,318nm,0.5s						
YUK				AMB	AMB	03 42 27.0	
	comp=E,638nm,0.5s						
YUK				*e*S	**Sn**	**03 43 57.5**	**+1.6**
YUK				AMS	AMS	03 45 52.8	
	comp=E,6μm,15.0s						
YUK				AMS	AMS	03 45 52.8	
	comp=E,3μm,15.0s						
YUK				AMS	AMS	03 45 52.8	
	comp=E,15μm,15.0s						
YUK	**Yuzh-Kuril'sk**	**8.77**	**237**	*e*PN	Pn	03 42 22.0	+4.5
YUK				*i* S	**Sn**	**03 44 03.6**	**+7.7**
YUK				pmax	pmax		
	comp=Z,638nm,0.6s						
YUK				pmax	pmax		
	comp=E,318nm,0.4s						
YUK				pmax	pmax		
	comp=N,287nm,0.5s						
YUK				MLR	MLR		
	comp=Z,15μm,17.0s						
YUK				MLR	MLR		
	comp=N,6μm,13.0s						
YUK				MLR	MLR		
	comp=E,3μm,15.0s						
TYV	**Tymovskoe**	**8.79**	**285**	*e*P	**Pn**	**03 42 20.0**	**+2.3**
TYV				AMB	AMB	03 42 28.4	
	comp=E,140nm,1.8s						
TYV				AMS	AMS	03 46 43.5	
	comp=E,14μm,14.0s						
TYV				AMS	AMS	03 46 43.5	
	comp=E,20μm,14.0s						
TYV				AMS	AMS	03 46 43.5	
	comp=E,26μm,14.0s						
TYV	**Tymovskoe**	**8.79**	**285**	*e*PN	Pn	03 42 26.5	+8.8
TYV				pmax	pmax		
	comp=Z,2μm,3.1s						
TYV				pmax	pmax		
	comp=Z,140nm,1.8s						
TYV				MLR	MLR		
	comp=E,20μm,14.0s						
TYV				MLR	MLR		
	comp=Z,26μm,15.0s						
YSS	**Yuzh-Sakhalins**	**9.22**	**260**	*e*P	**Pn**	**03 42 25.0**	**+1.4**
YSS				AMB	AMB	03 42 33.0	
	comp=Z,900nm,3.9s						
YSS				AMB	AMB	03 42 33.0	
	comp=Z,3μm,3.9s						
YSS				AMB	AMB	03 42 33.0	
	comp=Z,2μm,3.9s						
YSS				AMB	AMB	03 42 35.0	
	comp=Z,100nm,1.5s						
YSS				AMB	AMB	03 42 35.0	
	comp=Z,220nm,1.5s						
YSS				AMB	AMB	03 42 35.0	
	comp=Z,170nm,1.5s						
YSS				*e*S	**Sn**	**03 44 08.0**	**+1.1**
YSS				A	A	03 44 11.0	
	comp=Z,60nm,0.8s						
YSS				AMS	AMS	03 47 08.0	
	comp=Z,4μm,15.0s						
YSS				AMS	AMS	03 47 08.0	
	comp=Z,6μm,15.0s						
YSS				AMS	AMS	03 47 08.0	
	comp=Z,7μm,15.0s						
YSS	**Yuzh-Sakhalins**	**9.22**	**260**	*e*Pn	**Pn**	**03 42 20.5**	**-3.2**
YSS	**Yuzh-Sakhalins**	**9.22**	**260**	*e*PN	**Pn**	**03 42 25.9**	**+2.3**
YSS				pmax	pmax		
	comp=Z,2μm,3.8s						
YSS				pmax	pmax		
	comp=N,900nm,4.1s						
YSS				pmax	pmax		
	comp=E,3μm,3.9s						
YSS				pmax	pmax		
	comp=Z,170nm,1.5s						
YSS				pmax	pmax		
	comp=N,100nm,1.6s						
YSS				pmax	pmax		
	comp=E,220nm,1.4s						
YSS				MLR	MLR		
	comp=Z,7μm,15.0s						
YSS				MLR	MLR		
	comp=N,4μm,13.0s						
OKH	**Okha**	**9.27**	**302**	⇑*i*PN	Pn	03 42 33.8	+10
OKH				pmax	pmax		
	comp=Z,900nm,14.8s						
NKL	**Nikolayevsk**	**10.41**	**298**	*e*PN	**Pn**	**03 42 43.0**	**+3.1**
NKL				pmax	pmax		
	comp=N,500nm,4.0s						
NKL				pmax	pmax		
	comp=E,2μm,4.0s						
NKL				pmax	pmax		
	comp=Z,2μm,4.0s						
NKL				pmax	pmax		
	comp=Z,130nm,0.9s						
NKL				MLR	MLR		
	comp=N,2μm,14.0s						
NKL				MLR	MLR		
	comp=E,8μm,14.0s						
NKL				MLR	MLR		
	comp=Z,14μm,14.0s						
ASAJ	**Asahikawa**	**10.61**	**246**	Pn	**Pn**	**03 42 44.7**	**+2.1**
	comp=Z,28nm,0.3s,baz=68,slow=15,SNR=29						
ASAJ				LR	LR	03 46 45.0	
	comp=Z,11μm,18.2s,baz=66,slow=37						
MA2	**Magadan**	**10.77**	**345**	Pn	**Pn**	**03 42 45.8**	**+1.0**
	comp=Z,5.8nm,0.3s,baz=150,slow=10,SNR=17						
MA2				LR	LR	03 47 41.6	
	comp=Z,10μm,18.2s,baz=168,slow=42						
MA2	**Magadan**	**10.77**	**345**	*e*Pn	**Pn**	**03 42 43.1**	**-1.7**
ERM	**Erimo**	**11.60**	**236**	*e*P	**Pn**	**03 42 55.9**	**-0.2**
ERM	**Erimo**	**11.60**	**236**	*e*Pn	**Pn**	**03 42 55.1**	**-1.0**
ERM	**Erimo**	**11.60**	**236**	c*e*PN	**Pn**	**03 42 55.9**	**-0.2**
SMY	**Shemya**	**11.85**	**66**	*e*PN	Pn	03 42 54.2	-5.4
GRNR	**Gornyy**	**12.74**	**284**	*e*PN	**P**	**03 43 19.3**	**-3.5**
GRNR				pmax	pmax		
	comp=Z,44nm,0.9s						
SEY	**Seymchan**	**13.84**	**353**	Pn	**Pn**	**03 43 25.9**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=155,slow=14,SNR=6.5						
SEY				LR	LR	03 49 58.4	
	comp=Z,13μm,18.3s,baz=151,slow=43						
SEY	**Seymchan**	**13.84**	**353**	*e*P	**Pn**	**03 43 25.7**	**-1.0**
SEY	**Seymchan**	**13.84**	**353**	⇓*e*P	**Pn**	**03 43 25.7**	**-1.0**
TEY	**Ternei**	**13.92**	**260**	⇑*e*P	Pn	03 43 22.6	-5.2
TEY				*e*		03 46 01.8	
TEY				pmax	pmax		
	comp=Z,140nm,1.1s						
TEY				MLR	MLR		
	comp=N,4μm,15.0s						
TEY				MLR	MLR		
	comp=Z,4μm,14.0s						
KLR	**Kul'dur**	**15.88**	**279**	Pn	**P**	**03 43 56.7**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=82,slow=12,SNR=28						
KLR				LR	LR	03 50 38.1	
	comp=Z,1μm,19.0s,baz=83,slow=40						
KLR	**Kul'dur**	**15.88**	**279**	*e*P	**P**	**03 43 56.5**	**-1.1**
KLR	**Kul'dur**	**15.88**	**279**	⇑*e*P	**P**	**03 43 56.6**	**-1.1**
USRK	**Ussuriysk Ar.**	**17.25**	**262**	P	**Pn**	**03 44 10.1**	**-1.4**
	baz=64,slow=11						
USRK				LR	LR	03 50 55.5	
	comp=Z,3μm,18.2s,baz=56,slow=38						
MJB9	**Matsu-Tunnel**	**18.21**	**232**	*e*Pn	**Pn**	**03 44 21.8**	**-1.6**
MJB9				*e*P	**P**	**03 44 22.5**	**-1.0**
MAJO	**Matsushiro**	**18.21**	**232**	*e*P	**Pn**	**03 44 22.5**	**-0.8**
MAJO	**Matsushiro**	**18.21**	**232**	*e*Pn	**Pn**	**03 44 21.5**	**-1.8**
	comp=Z,75nm,0.8s						
MAJO	**Matsushiro**	**18.21**	**232**	⇓*e*P	**Pn**	**03 44 22.5**	**-0.8**
MAJO				pmax	pmax		
	comp=Z,24nm,0.8s						
MAT	**Matsushiro**	**18.21**	**232**	P	**Pn**	**03 44 21.0**	**-2.3**
MAT				S	**S**	**03 47 49.2**	**-2.0**
MJAR	**Matsushiro Arr**	**18.21**	**232**	P	**Pn**	**03 44 22.1**	**-1.2**
	comp=Z,0.8nm,0.3s,baz=28,slow=8.4,SNR=21						
MJAR				LR	LR	03 52 13.2	
	comp=Z,5μm,20.0s,baz=50,slow=40						
ZEA	**Zeya**	**18.43**	**295**	*e*P	**Pn**	**03 44 29.4**	**+3.5**
ZEA				pmax	pmax		
	comp=Z,1μm,6.0s						
ZEA				pmax	pmax		
	comp=E,1μm,5.0s						
ZEA				pmax	pmax		
	comp=N,24nm,1.0s						
ZEA				pmax	pmax		
	comp=E,43nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,64nm,1.2s						
ZEA				pmax	pmax		
	comp=N,1μm,12.0s						
ZEA				pmax	pmax		
	comp=E,1μm,12.0s						
ZEA				MLR	MLR		
	comp=N,11μm,14.0s						
ZEA				MLR	MLR		
	comp=E,8μm,14.0s						
MDJ	**Mudanjiang**	**18.64**	**266**	P	**Pn**	**03 44 27.6**	**-0.9**
MDJ				pP	sP	03 44 33.6	-1.7
MDJ				sP	pP	03 44 36.5	+3.4
MDJ				pmax	pmax		
	comp=E,44nm,0.8s						
MDJ				pmax	pmax		
	comp=E,790nm,4.7s						
MDJ				LR	LR		
	comp=E,7μm,17.4s						

MDJ				LR	LR		
	comp=E,5µm,16.1s						
MDJ				LR	LR		
	comp=E,8µm,13.8s						
MDJ	Mudanjiang	18.64	266	*e*P	P	03 44 26.3	-1.9
	comp=E,80nm,0.9s						
YAK	Yakutsk	19.44	321	LR	LR	03 52 39.5	
	comp=E,5µm,18.4s,baz=91,slow=39						
YAK	Yakutsk	19.44	321	*e*P	Pn	03 44 38.9	+0.9
YAK	Yakutsk	19.44	321	*e*P	P	03 44 33.7	-3.1
	comp=E,143nm,0.8s						
YAK	Yakutsk	19.44	321	*e*P	Pn	03 44 38.6	+0.6
YAK				pmax	pmax		
	comp=Z,81nm,0.9s						
YAK				pmax	pmax		
	comp=N,23nm,1.5s						
YAK				pmax	pmax		
	comp=E,47nm,1.3s						
YAK				pmax	pmax		
	comp=Z,305nm,1.8s						
YAK				pmax	pmax		
	comp=N,170nm,1.9s						
YAK				pmax	pmax		
	comp=E,341nm,1.9s						
YAK				MLR	MLR		
	comp=Z,6µm,15.0s						
YAK				MLR	MLR		
	comp=N,4µm,14.0s						
YAK				MLR	MLR		
	comp=E,3µm,14.0s						
INU	Inuyama	19.74	232	*e*P	P	03 44 39.2	-1.1
	comp=E,136nm,0.8s						
JHJ	Hachijo jima 2	20.21	223	LR	LR	03 55 03.9	
	comp=E,534nm,18.0s,baz=104,slow=44						
CN2	Changchun	21.69	267	*e*P	P	03 45 00.8	-0.5
CN2				*e*S	S	03 48 52.8	-7.8
CN2				pmax	pmax		
	comp=E,30nm,1.1s						
CN2				pmax	pmax		
	comp=E,200nm,10.0s						
CN2				LR	LR		
	comp=E,6µm,16.0s						
CN2				LR	LR		
	comp=E,3µm,16.0s						
CN2				LR	LR		
	comp=E,5µm,16.0s						
GAMB	Gambell	22.60	38	*e*P	P	03 45 17.7	+6.9
	comp=E,58nm,1.1s						
KSRS	Korea Array	23.50	250	P	P	03 45 18.9	-1.4
	comp=E,20nm,0.8s,baz=45,slow=9.9,SNR=17						
KSRS				LR	LR	03 54 07.3	
	comp=E,4µm,19.0s,baz=61,slow=36						
KS01	Wonju Array Si	23.50	251	*e*P	P	03 45 19.0	-1.3
KS01				*e*pP	P	03 45 19.5	-0.9
KS15	Wonju Array Si	23.53	250	*e*P	P	03 45 20.0	-0.7
KS15				*e*pP	P	03 45 20.8	+0.1
KSAR	Wonju Array Be	23.53	250	P	P	03 45 18.9	-1.7
KSAR	Wonju Array Be	23.53	250	P	P	03 45 18.9	-1.7
HIA	Hailar	23.58	284	*e*P	P	03 45 18.1	-3.0
	comp=E,22nm,0.6s						
HIA				LR	LR		
	comp=Z,7µm,19.0s						
HIA	Hailar	23.58	284	*e*P	P	03 45 18.1	-3.0
HIA				pmax	pmax		
	comp=Z,22nm,0.6s						
HIA				MLR	MLR		
	comp=Z,7µm,19.0s						
INCN	Inchon	24.28	252	*e*P	P	03 45 26.9	-0.9
INCN				LR	LR		
	comp=Z,4µm,20.0s						
INCN	Inchon	24.28	252	P	P	03 45 30.8	+3.1
	SNR=8.2						
INCN	Inchon	24.28	252	*e*P	P	03 45 26.9	-0.9
INCN				MLR	MLR		
	comp=Z,4µm,20.0s						
TJN	Taejon	24.53	249	*ce*P	P	03 45 28.3	-1.7
JNU	Nakatsue	24.74	239	P	P	03 45 30.7	-1.3
	comp=Z,16nm,0.7s,baz=46,slow=5.4,SNR=11						
JNU				LR	LR	03 56 30.4	
	comp=Z,2µm,18.9s,baz=66,slow=40						
JNU	Nakatsue	24.74	239	*e*P	P	03 45 30.1	-1.9
	comp=Z,98nm,0.9s						
ANM	Nome	25.47	39	*e*P	P	03 45 30.8	-7.4
	comp=Z,56nm,1.1s						
ANM	Nome	25.47	39	*e*P	P	03 45 30.8	-7.4
ANM				pmax	pmax		
	comp=Z,56nm,1.0s						
TIXI	Tiksi	25.68	340	P	P	03 45 36.8	-3.3
	comp=Z,46nm,0.7s,baz=167,slow=5.1,SNR=7.6						
TIXI	Tiksi	25.68	340	*e*P	P	03 45 37.7	-2.3
TIXI	Tiksi	25.68	340	*e*P	P	03 45 36.6	-3.4
	comp=Z,44nm,0.7s						
TIXI				LR	LR		
	comp=Z,3µm,19.0s						
TIXI	Tiksi	25.68	340	*e*P	P	03 45 34.6	-5.4
BOD	Bodaibo	26.04	305	*e*P	P	03 45 44.0	+0.5
BOD				pmax	pmax		
	comp=Z,24nm,0.9s						
DL2	Dalian	26.62	260	P	P	03 45 48.8	-0.1
DL2				S	S	03 50 23.5	+0.6
DL2				pmax	pmax		
	comp=Z,17nm,0.8s						
DL2				pmax	pmax		
	comp=Z,340nm,6.7s						
DL2				LR	LR		
	comp=Z,2µm,15.3s						
DL2				LR	LR		
	comp=Z,3µm,17.9s						
DL2				LR	LR		
	comp=Z,3µm,17.1s						
RDOG	Red Dog Mine	27.62	32	*e*P	P	03 45 54.6	-3.0
MIDW	Midway	29.25	126	PFAKE		03 46 30.0	+18
MIDW				LR	LR		
	comp=Z,2µm,19.0s						
BJI	Beijing	29.56	267	P	P	03 46 17.3	+2.2
BJI				pmax	pmax		
	comp=Z,15nm,0.9s						
BJI				LR	LR		
	comp=Z,5µm,14.2s						
BJI				LR	LR		
	comp=Z,5µm,14.2s						
BJI				LR	LR		
	comp=Z,3µm,15.6s						
BJT	Baijiatuau	29.57	267	PFAKE		03 46 30.0	+15
BJT				LR	LR		
	comp=Z,3µm,20.0s						
H11N2	WAKE ISLAND Hy	30.73	160	T	T	04 19 40.5	
	baz=347,slow=76,SNR=104						
H11N1	WAKE ISLAND Hy	30.74	160	T	T	04 19 18.6	
	baz=347,slow=76,SNR=103						
H11N3	WAKE ISLAND Hy	30.74	160	T	T	04 19 25.0	
	baz=347,slow=76,SNR=77						
PPLA	Purkeypile	30.95	44	*e*P	P	03 46 26.2	-1.2
	comp=Z,24nm,1.2s						
KDAK	Kodiak Island	30.98	54	PFAKE		03 46 40.0	+13
KDAK				LR	LR		
	comp=Z,1µm,20.0s						
TIA	Tai’an	31.10	260	P	P	03 46 25.0	-3.8
TIA				pmax	pmax		
	comp=Z,9.0nm,1.2s						
TIA				pmax	pmax		
	comp=Z,270nm,5.1s						
TIA				LR	LR		
	comp=Z,2µm,17.2s						
TIA				LR	LR		
	comp=Z,2µm,18.6s						
TIA				LR	LR		
	comp=Z,2µm,17.9s						
WAKE	Wake Island	31.11	160	PFAKE		03 46 40.0	+11
WAKE				LR	LR		
	comp=Z,3µm,20.0s						
CNPM	China Poot	31.50	51	*e*P	P	03 46 35.5	+3.3
	comp=Z,29nm,0.8s						
BPAW	Bear Paw Mtn.	31.53	42	*e*P	P	03 46 34.4	+2.0
	comp=Z,14nm,0.9s						
BRLK	Bradley Lake	31.66	50	*e*P	P	03 46 37.1	+3.5
	comp=Z,27nm,0.9s						
TRF	Thorofare Moun	31.82	43	*e*P	P	03 46 37.9	+2.8
	comp=Z,29nm,1.1s						
H11S1	WAKE ISLAND Hy	31.87	161	T	T	04 20 59.7	
	baz=347,slow=76,SNR=441						
H11S3	WAKE ISLAND Hy	31.88	161	T	T	04 20 47.8	
	baz=347,slow=76,SNR=522						
H11S2	WAKE ISLAND Hy	31.89	161	T	T	04 20 37.4	
	baz=347,slow=76,SNR=480						
SSE	Sheshan	31.89	248	P	P	03 46 36.6	+0.9
SSE				S	S	03 51 46.9	+1.2
SSE				pmax	pmax		
	comp=Z,19nm,0.7s						
SSE				pmax	pmax		
	comp=Z,240nm,5.8s						
ULN	Ulaanbaatar	32.03	286	*e*P	P	03 46 38.3	+1.2
ULN	Ulaanbaatar	32.03	286	*e*P	P	03 46 35.8	-1.3
	comp=Z,5.5nm,0.6s						
ULN				LR	LR		
	comp=Z,5µm,19.0s						
ULN	Ulaanbaatar	32.03	286	⇑*e*P	P	03 46 38.3	+1.2
ULN				pmax	pmax		
	comp=Z,5.0nm,0.6s						
COLD	Coldfoot	32.11	36	*e*P	P	03 46 35.6	-1.8
	comp=Z,18nm,0.8s						
HHC	Hu-ho-hao-te	32.16	272	*e*P	P	03 46 38.1	-0.1
HHC				sP	sP	03 46 49.3	+3.6
HHC				PP	PP	03 47 49.6	-1.2
HHC				S	S	03 51 47.4	-2.7
HHC				sS	sS	03 52 03.1	+4.2
HHC				pmax	pmax		
	comp=Z,49nm,0.9s						
HHC				pmax	pmax		
	comp=Z,270nm,5.3s						
HHC				LR	LR		
	comp=Z,3µm,13.0s						
HHC				LR	LR		
	comp=Z,5µm,14.7s						
HHC				LR	LR		
	comp=Z,6µm,14.7s						
BWN	Browne	32.20	42	*e*P	P	03 46 41.7	+3.5
	comp=Z,156nm,1.2s						
IRK	Irkutsk	32.34	295	*e*P	P	03 46 37.1	-2.5
IRK				*e*		03 47 47.9	
IRK				pmax	pmax		
	comp=Z,32nm,1.8s						
PMR	Palmer	32.40	47	*e*P	P	03 46 44.1	+4.2
	comp=Z,16nm,1.3s						
PMR	Palmer	32.40	47	*e*P	P	03 46 44.1	+4.2
PMR				pmax	pmax		
	comp=Z,17nm,1.2s						
MCK	McKinley	32.43	43	*e*P	P	03 46 44.9	+4.6
MCK				pmax	pmax		
	comp=Z,25nm,0.9s						
SONM	Songino Array	32.45	287	P	P	03 46 37.0	-3.7
	comp=Z,0.8nm,0.5s,baz=76,slow=6.5,SNR=3.0						
SONM				LR	LR	04 01 15.4	
	comp=Z,5µm,18.5s,baz=76,slow=39						
TOLK	Toolik Lake Re	32.53	34	P	P	03 46 38.6	-2.6
	baz=262,SNR=8.9						
TOLK	Toolik Lake Re	32.53	34	*e*P	P	03 46 39.5	-1.6
	comp=Z,18nm,0.6s						
NJ2	Nanjing	32.66	252	*e*P	P	03 46 43.3	+0.7
NJ2				sP	sP	03 46 52.3	+2.3
NJ2				S	S	03 52 01.0	+3.2
NJ2				sS	sS	03 52 09.3	+2.7
NJ2				pmax	pmax		
	comp=Z,40nm,1.2s						
NJ2				LR	LR		
	comp=Z,4µm,13.3s						
NJ2				LR	LR		
	comp=Z,3µm,15.5s						
NJ2				LR	LR		
	comp=Z,6µm,14.4s						
MDM	Murphy Dome	32.75	41	*e*P	P	03 46 43.0	-0.1
	comp=Z,26nm,1.0s						
SML	Sawmill	32.77	46	*e*P	P	03 46 42.6	-0.7
	comp=Z,71nm,0.8s						
SML	Sawmill	32.77	46	*e*P	P	03 46 42.6	-0.7
SML				pmax	pmax		
	comp=Z,71nm,0.8s						
WRH	Wood River Hil	32.80	41	*e*P	P	03 46 41.6	-1.9
	comp=Z,34nm,1.2s						
TLY	Talaya	32.87	295	*e*P	P	03 46 42.4	-1.9
TLY	Talaya	32.87	295	*e*P	P	03 46 42.1	-2.1
	comp=Z,26nm,0.8s						
TLY				LR	LR		
	comp=Z,4µm,19.0s						
TLY	Talaya	32.87	295	P	P	03 46 42.5	-1.8
	SNR=13						
TLY	Talaya	32.87	295	*e*P	P	03 46 43.0	-1.3
TLY				*e*		03 47 57.2	
TLY				*e*PPP	PPP	03 48 05.5	
TLY				pmax	pmax		
	comp=Z,27nm,0.8s						
TLY				MLR	MLR		
	comp=Z,3µm,13.0s						
COLA	College	32.91	41	*e*P	P	03 46 46.6	+2.2
	comp=Z,48nm,0.9s						
COLA				LR	LR		
	comp=Z,1.0nm,19.0s						
COLA	College	32.91	41	*e*P	P	03 46 46.6	+2.2
COLA				pmax	pmax		
	comp=Z,48nm,1.0s						
CCB	Clear Creek Bu	32.93	41	*e*P	P	03 46 42.3	-2.3
	comp=Z,41nm,1.1s						
DHY	Denali Highway	33.15	44	*e*P	P	03 46 47.9	+1.2
	comp=Z,34nm,1.1s						
SCM	Sheep Creek Mo	33.24	46	*e*P	P	03 46 49.3	+1.9
	comp=Z,33nm,0.9s						
SCM	Sheep Creek Mo	33.24	46	*e*P	P	03 46 49.3	+1.9
SCM				pmax	pmax		
	comp=Z,33nm,0.9s						
TIY	Taiyuan	33.27	266	*e*P	P	03 46 50.3	+2.4
TIY				S	S	03 52 03.8	-3.6
TIY				pmax	pmax		
	comp=Z,35nm,0.6s						
TIY				LR	LR		
	comp=Z,2µm,13.1s						
TIY				LR	LR		
	comp=Z,970nm,12.2s						
TIY				LR	LR		
	comp=Z,1µm,12.2s						
ILAR	Eielson Array	33.32	41	P	P	03 46 45.0	-3.1
	comp=Z,1.5nm,0.6s,baz=259,slow=8.4,SNR=17						
ILAR	Eielson Array	33.32	41	P	P	03 46 45.0	-3.1
ILB	Eielson Array	33.32	41	*e*P	P	03 46 47.8	-0.3
IL1	Eielson Array	33.33	41	*e*P	P	03 46 44.8	-3.2
GLI	Glacier Island	33.44	48	*e*P	P	03 46 51.2	+2.2
	comp=Z,26nm,0.8s						
ZAK	Zakamensk	33.49	292	*e*P	P	03 46 47.6	-2.2
ZAK				pmax	pmax		
	comp=Z,14nm,1.0s						
KLU	Klutina	33.94	47	*e*P	P	03 46 56.6	+3.0
	comp=Z,61nm,1.4s						
FYU	Fort Yukon	34.02	38	*e*P	P	03 46 53.0	-1.1
	comp=Z,53nm,0.8s						
RIDG	Independ’e Rid	34.25	43	*e*P	P	03 46 57.2	+1.1
	comp=Z,32nm,0.9s						
MOY	Mondy	34.45	295	*e*P	P	03 46 57.1	-1.0
MOY				pmax	pmax		
	comp=Z,31nm,2.9s						
SCRK	Sand Creek	34.61	42	*e*P	P	03 46 59.3	0.0
	comp=Z,32nm,1.2s						
BMRM	Bremner River	34.64	48	*e*P	P	03 47 01.6	+2.1
	comp=Z,36nm,1.0s						
RAGM	Ragged Mountai	34.68	49	*e*P	P	03 47 03.4	+3.5
	comp=Z,22nm,0.9s						
EGAK	Eagle	35.77	41	*e*P	P	03 47 06.5	-2.7
EGAK				LR	LR		
	comp=Z,1µm,20.0s						
TATO	Taipei	36.24	241	PFAKE		03 47 20.0	+6.4
TATO				LR	LR		
	comp=Z,2µm,20.0s						
WHN	Wuhan	36.51	255	⇑P	P	03 47 14.1	-1.8
WHN				LR	LR		
	comp=Z,7µm,20.1s						
WHN				LR	LR		
	comp=Z,6µm,16.6s						
WHN				LR	LR		
	comp=Z,5µm,14.4s						
DAWY	Dawson	36.62	42	*e*P	P	03 47 19.0	+2.5
	comp=Z,24nm,1.0s						
GUMO	Guam	36.77	198	LR	LR	04 01 20.6	
	comp=Z,393nm,19.6s,baz=13,slow=35						
KRAR	Krasnoyarsk	37.72	305	⇓*e*P	P	03 47 27.4	+1.6
XAN	Xi’an	37.74	264	P	P	03 47 28.4	+2.0
XAN				pP	sP	03 47 34.9	+1.0
XAN				PP	PnPn	03 48 57.8	+4.2
XAN				S	S	03 53 19.8	+3.8
XAN				pmax	pmax		
	comp=Z,16nm,1.2s						
XAN				pmax	pmax		
	comp=Z,210nm,5.3s						
XAN				LR	LR		
	comp=Z,3µm,17.7s						
XAN				LR	LR		
	comp=Z,3µm,16.7s						
XAN				LR	LR		
	comp=Z,4µm,16.7s						
QZH	Quanzhou	37.95	244	⇑*i*P	P	03 47 31.3	+3.3
QZH				PP	PnPn	03 49 01.3	+5.2
QZH				S	S	03 53 21.6	+2.6
QZH				pmax	pmax		
	comp=Z,400nm,4.6s						
QZH				LR	LR		
	comp=Z,2µm,17.4s						
QZH				LR	LR		
	comp=Z,1µm,15.4s						
QZH				LR	LR		
	comp=Z,1µm,15.6s						
INK	Inuvik	38.44	34	P	P	03 47 28.7	-3.0
	comp=Z,7.1nm,0.7s,baz=286,slow=7.7,SNR=12						
INK				LR	LR	04 05 27.3	
	comp=Z,1µm,20.7s,baz=272,slow=40						
INK	Inuvik	38.44	34	*e*P	P	03 47 30.4	-1.3
	comp=Z,39nm,1.0s						
WHY	Whitehorse	39.36	46	*e*P	P	03 47 42.4	+2.7
	comp=Z,31nm,1.0s						
ENH	Enshi	39.80	259	*e*P	P	03 47 42.0	-1.6
	comp=Z,38nm,0.9s						
ENH				LR	LR		
	comp=Z,2µm,20.0s						
LZH	Lanzhou	39.83	271	*e*P	P	03 47 42.8	-1.2
LZH				pP	pP	03 47 47.8	-1.6
LZH				sP	sP	03 47 50.8	-0.7
LZH				S	S	03 53 54.8	+7.1
LZH				sS	sS	03 54 05.5	+9.0
LZH				pmax	pmax		
	comp=Z,40nm,1.4s						
LZH				pmax	pmax		
	comp=Z,230nm,5.4s						
LZH				LR	LR		
	comp=Z,7µm,12.4s						
LZH				LR	LR		
	comp=Z,4µm,13.6s						
LZH				LR	LR		
	comp=Z,8µm,15.7s						
GTA	Gaotai	40.58	278	⇑P	P	03 47 52.5	+2.4
GTA				PP	PnPn	03 49 29.6	+2.2
GTA				S	S	03 53 59.9	+1.2
GTA				sS	sS	03 54 15.6	+8.0
GTA				SS	SS	03 56 54.8	-3.7
GTA				pmax	pmax		
	comp=Z,28nm,1.6s						
GTA				pmax	pmax		
	comp=Z,220nm,5.6s						
GTA				LR	LR		
	comp=Z,4µm,14.9s						
GTA				LR	LR		
	comp=Z,6µm,16.2s						
GTA				LR	LR		
	comp=Z,10µm,16.2s						
WRAK	Wrangell Islan	41.98	52	PFAKE		03 48 20.0	+19
WRAK				LR	LR		
	comp=Z,1µm,19.0s						
DLBC	Dease Lake	42.41	49	*e*P	P	03 48 07.7	+2.9
	comp=Z,32nm,1.3s						
GZH	Guangzhou	42.48	248	P	P	03 48 04.3	-1.4
GZH				PP	PP	03 49 45.8	+1.7
GZH				S	S	03 54 24.9	-1.9
GZH				SS	SS	03 57 29.9	-6.4
GZH				LR	LR		
	comp=Z,2µm,17.5s						
GZH				LR	LR		
	comp=Z,2µm,17.3s						
ZAA0	Zalesovo Array	42.79	305	*e*P	P	03 48 05.5	-2.3
	comp=Z,9.0nm,0.7s						
ZALV	Zalesovo Beam	42.79	305	P	P	03 48 04.9	-3.0
	comp=Z,8.1nm,0.5s,baz=57,slow=6.3,SNR=13						
ZALV				LR	LR	04 07 01.9	
	comp=Z,1µm,19.3s,baz=59,slow=38						
ZALV	Zalesovo Beam	42.79	305	*e*P	P	03 48 05.0	-2.9
CD2	Chengdu	43.09	265	P	P	03 48 11.8	+1.1
CD2				pP	sP	03 48 18.5	+0.3
CD2				sP	pP	03 48 21.4	+5.3
CD2				PP	PP	03 49 51.4	+0.7
CD2				S	S	03 54 35.5	-0.4
CD2				sS	sS	03 54 47.3	+2.5
CD2				pmax	pmax		
	comp=Z,80nm,0.6s						
CD2				pmax	pmax		
	comp=Z,450nm,4.1s						
CD2				LR	LR		
	comp=Z,3µm,19.3s						
CD2				LR	LR		
	comp=Z,3µm,15.3s						
CD2				LR	LR		
	comp=Z,3µm,15.9s						
NVS	Novosibirsk	43.27	306	⇓*i*P	P	03 48 10.3	-1.4
NVS				*i*		03 50 08.0	
NVS				pmax	pmax		
	comp=Z,160nm,2.3s						
NVS				pmax	pmax		
	comp=N,74nm,2.2s						
NVS				pmax	pmax		
	comp=E,87nm,2.2s						
GYA	Guiyang	44.22	258	P	P	03 48 21.3	+1.5
GYA				pP	sP	03 48 27.8	+0.4
GYA				PP	PcP	03 50 06.0	+1.7
GYA				S	S	03 54 51.5	-1.0
GYA				sS	sS	03 55 03.3	+1.9
GYA				SS	SS	03 58 01.9	-8.6
GYA				pmax	pmax		
	comp=E,20nm,1.0s						
GYA				pmax	pmax		
	comp=E,140nm,5.0s						
GYA				LR	LR		
	comp=E,660nm,17.3s						
GYA				LR	LR		
	comp=E,580nm,17.0s						
GYA				LR	LR		
	comp=E,620nm,17.5s						
KIP	Kipapa	45.64	111	PFAKE		03 48 50.0	+19
KIP				LR	LR		
	comp=Z,3µm,19.0s						
WMQ	Urumqi	45.90	290	P	P	03 48 35.8	+2.9
WMQ				sP	sP	03 48 45.1	+4.6
WMQ				PcP	PcP	03 50 10.0	+0.2
WMQ				PP	PP	03 50 24.8	+4.5
WMQ				S	S	03 55 17.6	+1.2
WMQ				ScS	ScS	03 58 26.9	-0.9
WMQ				pmax	pmax		
	comp=Z,29nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,380nm,4.7s						
WMQ				LR	LR		
	comp=Z,6µm,14.5s						
WMQ				LR	LR		
	comp=Z,7µm,14.5s						
WMQ				LR	LR		
	comp=Z,4µm,17.1s						
MK31	Makanchi Array	47.58	297	*e*P	P	03 48 43.6	-2.4
MK31	Makanchi Array	47.58	297	*i* P	P	03 48 43.3	-2.7
MK31				pmax	pmax		
	comp=Z,12nm,0.7s						
MKAR	Makanchi Array	47.58	297	P	P	03 48 43.5	-2.5
	comp=Z,16nm,0.9s,baz=61,slow=7.4,SNR=40						
MKAR				LR	LR	04 10 21.2	
	comp=Z,7µm,18.4s,baz=39,slow=38						
MKAR	Makanchi Array	47.58	297	*i* P	P	03 48 43.7	-2.3
MKAR				pmax	pmax		
	comp=Z,11nm,0.8s						
MK01	Makanchi Array	47.58	297	*e*P	P	03 48 43.2	-2.8
KURK	Kurchatov	47.65	303	*e*P	P	03 48 43.8	-2.6
KURK	Kurchatov	47.65	303	*e*P	P	03 48 44.0	-2.4
	comp=Z,45nm,0.8s						
KURK				LR	LR		
	comp=Z,3µm,20.0s						
KURK	Kurchatov	47.65	303	P	P	03 48 43.9	-2.6
	SNR=20						
KURK	Kurchatov	47.65	303	*ce*P	P	03 48 43.8	-2.6
KURK				pmax	pmax		
	comp=Z,50nm,0.8s						
YKW3	Yellowknife Ar	47.66	39	*e*P	P	03 48 47.9	+1.6
	comp=Z,42nm,1.5s						
KMI	Kunming	47.67	260	P	P	03 48 49.9	+2.7
KMI				pP	sP	03 48 56.8	+2.0
KMI				sP	pP	03 49 00.5	+7.9
KMI				S	S	03 55 40.0	-2.4
KMI				sS	sS	03 55 54.0	+2.6
KMI				SS	SS	03 59 00.8	-10

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KMI                                 pmax    pmax
      comp=Z,55nm,1.3s
KMI                                 pmax    pmax
      comp=Z,550nm,5.6s
KMI                                 LR      LR
      comp=Z,2µm,16.6s
KMI                                 LR      LR
      comp=Z,2µm,18.0s
KMI                                 LR      LR
      comp=Z,1µm,18.3s
QIZ   Qiongzhong        47.67 248   P       P       03 48 51.0 +4.0
QIZ                                 LR      LR
      comp=Z,860nm,16.2s
QIZ                                 LR      LR
      comp=Z,2µm,15.7s
QIZ                                 LR      LR
      comp=Z,1µm,18.1s
QIZ   Qiongzhong        47.67 248  eP       P       03 48 46.3 -0.7
      comp=Z,16nm,0.8s
QIZ                                 LR      LR
      comp=Z,2µm,20.0s
YKA   Yellowknife Ar    47.70  39   P       P       03 48 44.6 -2.1
      comp=Z,6.1nm,0.8s,baz=296,slow=7.7,SNR=14
KURBB Kurchatov Arra    47.75 303   P       P       03 48 44.5 -2.7
      comp=Z,39nm,0.8s,baz=65,slow=7.9,SNR=72
MAKZ  Makanchi          47.75 297  eP       P       03 48 48.4 +1.0
      comp=Z,15nm,1.0s
MAKZ  Makanchi          47.75 297   P       P       03 48 47.8 +0.4
MAKZ                                pmax    pmax
      comp=Z,18nm,1.1s
RES   Resolute Bay      47.79  20   P       P       03 48 46.0 -1.2
      comp=Z,5.8nm,0.6s,baz=309,slow=8.6,SNR=8.9
RES   Resolute Bay      47.79  20  eP       P       03 48 46.6 -0.6
      comp=Z,15nm,0.7s
RES   Resolute Bay      47.79  20   P       P       03 48 46.0 -1.2
RES                                 pmax    pmax
      comp=Z,5.0nm,0.5s
DAV   Davao City (W)    49.28 222   PFAKE           03 49 10.0  +11
DAV                                 LR      LR
      comp=Z,593nm,20.0s
KBS   Kingsbay          50.30 352  eP       P       03 49 04.2 -2.2
KBS   Kingsbay          50.30 352   PFAKE           03 49 20.0  +14
KBS                                 LR      LR
      comp=Z,1µm,19.0s
SPITS Spitsbergen Ar    50.47 350   P       P       03 49 03.5 -4.3
      comp=Z,3.3nm,0.6s,baz=27,slow=16,SNR=7.6
SPITS                               LR      LR      04 12 44.9
      comp=Z,1µm,18.9s,baz=20,slow=39
A04D  Lummi Island      50.76  58   P       P       03 49 09.9 -0.3
      baz=304
BVAR  Borovoye Array    50.81 309   P       P       03 49 08.0 -2.6
      comp=Z,6.3nm,0.3s,baz=54,slow=7.8,SNR=20
BVAR                                LR      LR      04 12 40.7
      comp=Z,2µm,18.3s,baz=62,slow=38
BVAR  Borovoye Array    50.81 309   P       P       03 49 08.0 -2.6
BVAR                                pmax    pmax
      comp=Z,6.0nm,0.3s
BVAR                                MLR     MLR
      comp=Z,2µm,18.3s
NLWA  Neilton Lookou    50.84  60  eP       P       03 49 13.9 +2.9
      comp=Z,32nm,1.2s
NLWA                                LR      LR
      comp=Z,735nm,19.0s
BRVK  Borovoye          50.85 309  eP       P       03 49 08.3 -2.6
BRVK  Borovoye          50.85 309  eP       P       03 49 08.8 -2.1
BRVK                                LR      LR
      comp=Z,1µm,21.0s
BRVK  Borovoye          50.85 309   P       P       03 49 08.3 -2.6
      SNR=26
BRVK  Borovoye          50.85 309ceP        P       03 49 08.3 -2.6
BRVK                                pmax    pmax
      comp=Z,9.0nm,0.6s
PDGK  Podgornoye        51.14 294   P       P       03 49 11.1 -2.3
PDGK                                pmax    pmax
      comp=Z,18nm,1.2s
B05A  Bryant            51.35  58   P       P       03 49 14.5 -0.2
      baz=304
E03A  Lebam             51.49  60  eP       P       03 49 18.6 +2.8
      comp=Z,50nm,1.4s
LSA   Lhasa             52.13 273  eP       P       03 49 20.6 -0.8
      comp=Z,17nm,0.6s
LSA                                 LR      LR
      comp=Z,3µm,20.0s
LSA   Lhasa             52.13 273   P       P       03 49 21.0 -0.4
LSA   Lhasa             52.13 273  eP       P       03 49 20.6 -0.8
LSA                                 pmax    pmax
      comp=Z,17nm,0.6s
LSA                                 MLR     MLR
      comp=Z,3µm,20.0s
PANO  Nakornpanom       52.31 251   P       P       03 49 25.2 +3.0
      comp=Z,0.9nm,1.2s
NONG  Nongkai           52.53 253   P       P       03 49 24.6 +0.7
      comp=Z,2.1nm,0.7s
B08A  Colville Reser    52.82  56  eP       P       03 49 27.3 +1.6
      comp=Z,31nm,1.1s
SKNT  Sakolnakorn       52.83 251   P       P       03 49 25.9 -0.2
      comp=Z,26nm,1.4s
I03D  Drain, OR         53.26  63   P       P       03 49 29.8 +0.9
      baz=307
SVE   Sverdlovsk        53.34 317⇑eP        P       03 49 27.3 -2.1
SVE                                 pmax    pmax
      comp=Z,46nm,0.9s
SVE                                 MLR     MLR
      comp=Z,2µm,15.0s
H04A  Detroit Lake      53.35  62  eP       P       03 49 32.5 +2.8
      comp=Z,24nm,1.1s
G05D  Wamic, OR         53.52  61   P       P       03 49 31.0 +0.1
      baz=307
I04A  Tendick Farm,     53.75  63   P       P       03 49 33.0 +0.4
      baz=307,SNR=5.5
HAWA  Hanford           53.85  59  eP       P       03 49 34.6 +1.4
      comp=Z,28nm,1.2s
HAWA                                LR      LR
      comp=Z,531nm,21.0s
L02D  Cave Junction,    54.03  65   P       P       03 49 34.7  0.0
      baz=308
KHON  Khomkaen          54.03 252   P       P       03 49 35.3 +0.4
      comp=Z,32nm,0.8s,comp=Z,985nm
HUMO  Hull Mountain     54.14  64  eP       P       03 49 37.7 +2.2
      comp=Z,20nm,1.3s
DAG   Danmarks Havn     54.18 359  i P      P       03 49 36.1 +0.9
      comp=Z,13nm,0.9s
      comp=Z,1µm,20.0s
J04D  Umpqua Nationa    54.26  63   P       P       03 49 37.0 +0.4
      baz=308
LAMP  Lampang           54.41 257   P       P       03 49 38.4 +0.7
      comp=Z,22nm,1.1s,comp=Z,213nm
KULLO Kullorsuaq        54.43  10  i P      P       03 49 38.0 +1.0
SHL   Shillong          54.43 269  eP       P       03 49 39.2 +1.2
      comp=Z,36nm,0.7s
SHL   Shillong          54.43 269  eP       P       03 49 38.0  0.0
SHL   Shillong          54.43 269  eP       P       03 49 39.2 +1.2
SHL                                 pmax    pmax
      comp=Z,36nm,0.7s
ARU   Arti              54.50 317  eP       P       03 49 34.7 -3.1
ARU   Arti              54.50 317  eP       P       03 49 35.0 -2.9
ARU                                 LR      LR
      comp=Z,2µm,21.0s
ARU   Arti              54.50 317c iP       P       03 49 34.8 -3.1
ARU                                                 03 50 37.0
ARU                                                 03 51 37.8
ARU                                 S       S       03 57 15.3 -0.4
ARU                                 pmax    pmax
      comp=Z,51nm,0.8s
ARU                                 MLR     MLR
      comp=Z,2µm,17.0s
AAK   Ala-Archa         54.51 296  eP       P       03 49 39.2 +0.9
      comp=Z,7.1nm,0.8s
AAK   Ala-Archa         54.51 296  eP       P       03 49 39.2 +0.9
AAK                                 pmax    pmax
      comp=Z,7.0nm,0.8s
PINE  Pine Mountain     54.60  62  eP       P       03 49 42.0 +2.9
      comp=Z,28nm,1.1s
CMMT  Chiang Mai        54.63 257   P       P       03 49 39.9 +0.6
      comp=Z,91nm,1.7s,comp=Z,1µm
CHTO  Chiang Mai        54.64 257  eP       P       03 49 39.1 -0.2
CHTO                                LR      LR
      comp=Z,1µm,21.0s
CHTO  Chiang Mai        54.64 257   P       P       03 49 39.2 -0.2
      SNR=22
CHTO  Chiang Mai        54.64 257  eP       P       03 49 39.1 -0.2
CHTO                                pmax    pmax
      comp=Z,110nm,1.1s
CHTO  Chiang Mai        54.64 257   P       P       03 49 39.9 +0.6
      comp=Z,409nm,1.8s,comp=Z,6µm
KHMM  Horse Mountain    54.73  66  eP       P       03 49 43.5 +3.5
      comp=Z,36nm,1.2s
J05D  Fort Rock, OR     54.74  62   P       P       03 49 40.0  0.0
      baz=308
YBH   Yreka Blue Hor    54.82  65   LR      LR      04 09 27.2
      comp=Z,1µm,21.5s,baz=312,slow=32
YBH   Yreka Blue Hor    54.82  65  eP       P       03 49 43.0 +2.5
      comp=Z,25nm,1.1s
YBH   Yreka Blue Hor    54.82  65  eP       P       03 49 43.0 +2.5
YBH                                 pmax    pmax
      comp=Z,25nm,1.1s
K04D  Chiloquin, OR     54.84  63   P       P       03 49 40.3 -0.3
      baz=308
CMAR  Chiang Mai Arr    54.90 257   P       P       03 49 40.9 -0.3
      comp=Z,17nm,0.8s,baz=30,slow=6.7,SNR=18
CMAR                                LR      LR      04 14 06.9
      comp=Z,1µm,20.6s,baz=51,slow=37
CMAR  Chiang Mai Arr    54.90 257  i P      P       03 49 44.2 +3.0
CMAR                                pmax    pmax
      comp=Z,17nm,0.8s
PHIT  Phitsanulok       54.90 255   P       P       03 49 43.3 +2.1
      comp=Z,40nm,1.0s
CM01  Chiang Mai Arr    54.92 257  eP       P       03 49 40.8 -0.6
M02C  Callahan          54.94  65   P       P       03 49 41.8 +0.4
      baz=308,SNR=5.2
PBKT  Sadao Pong        55.02 254  eP       P       03 49 42.5 +0.5
      comp=Z,31nm,1.0s
PBKT  Sadao Pong        55.02 254   P       P       03 49 43.0 +1.0
      comp=Z,34nm,0.7s
N02D  Trinity Center    55.29  66   P       P       03 49 43.4 -0.5
      baz=309,SNR=6.2
M04C  Macdoel           55.30  64   P       P       03 49 43.4 -0.6
      baz=308,SNR=8.2
WALA  Waterton Lakes    55.30  53  eP       P       03 49 41.8 -2.1
      comp=Z,10nm,0.8s
KSH   Kashi             55.54 292   P       P       03 49 51.8 +6.0
KSH                                 sP      sP      03 50 00.8 +7.4
KSH                                ePcP     PcP     03 50 51.0 +5.5
KSH                                 PcS     PcS     03 54 50.3 +4.5
KSH                                 S       S       03 57 35.0 +4.7
KSH                                 pmax    pmax
      comp=Z,77nm,1.9s
KSH                                 pmax    pmax
      comp=Z,230nm,6.7s
KSH                                 LR      LR
      comp=Z,4µm,16.0s
KSH                                 LR      LR
      comp=Z,2µm,15.0s
KSH                                 LR      LR
      comp=Z,4µm,16.6s
KCPM  Cahto Peak        55.56  67  eP       P       03 49 48.6 +2.7
      comp=Z,27nm,1.1s
KEV   Kevo              55.62 341   PFAKE           03 50 00.0  +14
KEV                                 LR      LR
      comp=Z,4µm,19.0s
WDC   Whiskeytown Da    55.63  66  eP       P       03 49 48.7 +2.5
      comp=Z,17nm,0.9s
WDC   Whiskeytown Da    55.63  66  eP       P       03 49 48.7 +2.5
WDC                                 pmax    pmax
      comp=Z,17nm,1.0s
MNAS  Manas             55.76 297   P       P       03 49 45.2 -2.1
MNAS                                pmax    pmax
      comp=Z,7.0nm,0.9s
APA   Apatity           55.80 337⇓iP        P       03 49 58.8  +12
APA                                 pmax    pmax
      comp=Z,19nm,1.3s
APA                                 MLR     MLR
      comp=Z,2µm,16.0s
JTMT  Jette             55.91  55  eP       P       03 49 51.0 +2.7
      comp=Z,20nm,1.2s
BMO   Blue Mountains    56.03  59  eP       P       03 49 51.2 +2.1
      comp=Z,19nm,1.1s
BMO                                 LR      LR
      comp=Z,638nm,20.0s
BMO   Blue Mountains    56.03  59  eP       P       03 49 51.2 +2.1
BMO                                 pmax    pmax
      comp=Z,19nm,1.1s
MOD   Modoc Plateau     56.13  63  eP       P       03 49 51.4 +1.4
      comp=Z,33nm,1.0s
O03D  Paynes Creek      56.25  66   P       P       03 49 50.2 -0.6
      baz=309,SNR=12
J08A  Circle Bar Ran    56.29  61  eP       P       03 49 54.0 +3.0
      comp=Z,23nm,1.0s
SRAK  Srakaew           56.29 251   P       P       03 49 50.2 -1.0
      comp=Z,97nm,0.8s,comp=Z,1µm
PRGR  Permogore         56.31 327  eP       P       03 49 49.1 -1.7
PRGR                                pmax    pmax
      comp=Z,31nm,1.0s
NAYO  Nakonayok         56.51 252   P       P       03 49 56.2 +3.5
      comp=Z,0.6nm,1.2s
KK31  Karatay Array     56.53 299  eP       P       03 49 50.8 -1.9
KK31  Karatay Array     56.53 299  i P      P       03 49 50.2 -2.5
KK31                                pmax    pmax
      comp=Z,3.0nm,0.7s
KKAR  Karatay Array     56.53 299  eP       P       03 49 50.8 -1.9
KKAR  Karatay Array     56.53 299  eP       P       03 49 50.8 -1.9
BRDH  Bariadhala        56.59 267   LR      LR      04 16 56.9
      comp=Z,1µm,18.4s,baz=44,slow=39
UMPA  Umpang Tak        56.62 255   P       P       03 49 59.9 +6.3
MSO   Missoula          56.66  55   P       P       03 49 52.6 -1.0
      baz=309,SNR=6.4
MSO   Missoula          56.66  55  eP       P       03 49 55.5 +1.8
      comp=Z,36nm,1.2s
JIRN  Jiri              56.73 275  eP       P       03 49 53.9 -0.8
      comp=Z,84nm,0.8s
GUN   Gumba             56.76 275  eP       P       03 49 53.9 -1.0
      comp=Z,36nm,0.5s
WVOR  Wild Horse Val    56.77  62  eP       P       03 49 57.2 +2.7
      comp=Z,39nm,1.2s
WVOR                                LR      LR
      comp=Z,693nm,20.0s
WVOR  Wild Horse Val    56.77  62  eP       P       03 49 57.2 +2.7
WVOR                                pmax    pmax
      comp=Z,39nm,1.2s
RAMN  Ramite            56.94 274  eP       P       03 49 55.9 -0.2
      comp=Z,124nm,0.8s
KKN   Kakani            57.24 276  eP       P       03 49 56.8 -1.3
PKIN  Phulchoki         57.30 275  eP       P       03 49 57.6 -1.1
      comp=Z,82nm,1.3s
BEKR  Beckworth         57.38  65  eP       P       03 49 60.0 +1.1
      comp=Z,20nm,1.1s
DMN   Daman             57.47 276  eP       P       03 49 59.3 -0.5
      comp=Z,102nm,1.1s
GKN   Gorkha            57.51 276  eP       P       03 49 58.6 -1.4
      comp=Z,116nm,1.1s
FFC   Flin Flon         57.52  42   PFAKE           03 50 10.0  +11
FFC                                 LR      LR
      comp=Z,1µm,21.0s
AFDM  Forest Hills D    57.59  66  eP       P       03 50 02.3 +2.0
      comp=Z,11nm,1.2s
MFID  Camas Ranch       57.76  59  eP       P       03 50 01.2 -0.2
      comp=Z,26nm,1.2s
DANN  Dangsing          57.85 277  eP       P       03 50 03.4 +0.9
      comp=Z,96nm,0.9s
SRDT  SRDT              57.85 254   P       P       03 50 07.6 +5.3
      comp=Z,35nm,0.7s,comp=Z,2µm
HRY   Holter Researc    57.86  54  eP       P       03 50 02.8 +0.6
SUMG  Summit            58.02   5  eP       P       03 50 01.3 -1.9
      comp=Z,94nm,0.9s
SUMG  Summit            58.02   5  i P      P       03 50 01.9 -1.3
      comp=Z,88nm,0.9s
SUMG  Summit            58.02   5  eP       P       03 50 01.3 -1.9
SUMG                                pmax    pmax
      comp=Z,94nm,0.9s
PAHR  Pah Rah Range     58.06  65  eP       P       03 50 05.5 +1.9
      comp=Z,25nm,1.4s
LRM   Limekiln Ridge    58.09  55  eP       P       03 50 06.1 +2.2
EGMT  Eagleton          58.11  52   P       P       03 50 02.4 -1.4
      baz=310
EGMT  Eagleton          58.11  52  eP       P       03 50 04.6 +0.7
      comp=Z,15nm,0.9s
EGMT                                LR      LR
      comp=Z,906nm,20.0s
VCNR  Virginia City     58.16  65  eP       P       03 50 07.1 +2.7
      comp=Z,19nm,1.1s
DLMT  Dillon            58.30  56  eP       P       03 50 08.0 +2.7
      comp=Z,22nm,1.4s
PNTR  Pine Nut          58.32  65  eP       P       03 50 08.1 +2.5
      comp=Z,17nm,0.7s
AB31  Akbulak array     58.34 310  i P      P       03 50 02.6 -2.7
AB31                                pmax    pmax
      comp=Z,16nm,0.7s
ABKAR Akbulak array     58.34 310  eP       P       03 50 02.8 -2.4
KOLN  Koldanda          58.34 277  eP       P       03 50 06.2 +0.3
      comp=Z,28nm,0.7s
HLID  Hailey            58.45  59   P       P       03 50 05.2 -1.2
      baz=310,SNR=21
HLID  Hailey            58.45  59  eP       P       03 50 08.8 +2.3
      comp=Z,28nm,1.4s
HLID                                LR      LR
      comp=Z,669nm,21.0s
MCMT  McKenzie Canyo    58.51  57  eP       P       03 50 08.0 +1.2
PYUN  Piuthan           58.52 278  eP       P       03 50 06.5 -0.6
      comp=Z,106nm,1.0s
AKTO  Aktyubinsk        58.52 312   LR      LR      04 17 05.3
      comp=Z,901nm,21.2s,baz=45,slow=38
AKTO  Aktyubinsk        58.52 312   P       P       03 50 03.3 -3.3
AKTO                                pmax    pmax
      comp=Z,4.0nm,0.9s
CMB   Columbia Colle    58.53  67  eP       P       03 50 07.9 +1.0
      comp=Z,16nm,1.3s
CMB   Columbia Colle    58.53  67  eP       P       03 50 08.6 +1.7
CMB                                 pmax    pmax
      comp=Z,16nm,1.3s
HNR   Honiara           58.55 176   LR      LR      04 11 27.1
      comp=Z,914nm,21.8s,baz=355,slow=32
YERR  Yerington         58.60  65  eP       P       03 50 05.7 -1.9
      comp=Z,25nm,1.2s
PHET  Kaeng Krachan     58.63 252   P       P       03 50 11.9 +4.2
      comp=Z,16nm,0.7s,comp=Z,168nm
BOZ   Bozeman (W)       58.68  55   P       P       03 50 06.9 -1.1
      baz=310,SNR=16
BOZ   Bozeman (W)       58.68  55  eP       P       03 50 06.2 -1.7
      comp=Z,29nm,1.3s
BOZ                                 LR      LR
      comp=Z,643nm,20.0s
BOZ   Bozeman (W)       58.68  55  eP       P       03 50 06.2 -1.7
BOZ                                 pmax    pmax
      comp=Z,29nm,1.3s
WAKR  Walker            58.80  66  eP       P       03 50 10.9 +2.0
      comp=Z,23nm,1.2s
BMN   Battle Mountai    58.86  63  eP       P       03 50 11.3 +2.0
      comp=Z,14nm,1.0s
BMN   Battle Mountai    58.86  63  eP       P       03 50 11.3 +2.0
BMN                                 pmax    pmax
      comp=Z,14nm,1.0s
PMG   Port Moresby      58.96 190   LR      LR      04 13 12.0
      comp=Z,393nm,20.2s,baz=1.5,slow=34
KLMR  Klimovskoe        58.97 329  eP       P       03 50 07.9 -1.5
KLMR                                pmax    pmax
      comp=Z,20nm,1.0s
KLMR  Klimovskoe        58.97 329  eP       P       03 50 08.0 -1.5
KLMR                                AMP             03 50 11.1
      comp=Z,20nm,1.0s
KLMR                                LQ      LQ      04 11 43.4
KLMR                                LQ      LQ      04 11 43.4
KLMR                                LR      LR      04 16 32.0
KVN   Kaiserville       59.24  65  eP       P       03 50 13.4 +1.5
      comp=Z,22nm,1.0s
KVN   Kaiserville       59.24  65  eP       P       03 50 13.4 +1.5
KVN                                 pmax    pmax
      comp=Z,22nm,1.0s
RYN   Ryan              59.26  65  eP       P       03 50 13.4 +1.3
      comp=Z,25nm,1.2s
QLMT  Earthquake Lak    59.28  56  eP       P       03 50 14.7 +2.5
YHB   Horse Butte       59.46  56  eP       P       03 50 14.1 +0.6
      comp=Z,59nm,1.2s
NV01  Mina Array Sit    59.52  65  eP       P       03 50 15.0 +1.0
NVAR  Mina Array Bea    59.52  65   P       P       03 50 12.1 -1.8
      comp=Z,6.6nm,0.8s,baz=286,slow=6.5,SNR=14
NVAR                                LR      LR      04 12 19.2
      comp=Z,630nm,21.8s,baz=58,slow=32
MDPB  Devils Postpil    59.58  66  eP       P       03 50 16.4 +1.9
      comp=Z,12nm,1.0s
GCMT  Greycliff         59.60  54  eP       P       03 50 17.0 +2.7
NV11  Mina Array Sit    59.61  65  eP       P       03 50 15.7 +1.2
      comp=Z,1.4nm,1.2s
YMR   Madison River     59.64  56  eP       P       03 50 17.9 +3.3
      comp=Z,45nm,1.1s
OMMB  Old Mammoth Mi    59.64  66  eP       P       03 50 17.1 +2.2
      comp=Z,11nm,1.3s
YFT   Old Faithful      59.85  56  eP       P       03 50 18.1 +2.0
      comp=Z,26nm,0.9s
YPP   Pitchstone Pla    59.98  56  eP       P       03 50 20.5 +3.3
      comp=Z,13nm,1.1s
H17A  Grant Village     60.03  56   P       P       03 50 17.2 -0.2
      baz=312
H17A  Grant Village     60.03  56  eP       P       03 50 21.6 +4.2
      comp=Z,38nm,1.1s
PAGB  Antelope Grade    60.12  69  eP       P       03 50 20.4 +2.6
      comp=Z,25nm,1.2s
ILULI Ilulissat         60.13  11  eP       P       03 50 18.7 +1.3
      comp=Z,25nm,0.9s
ILULI Ilulissat         60.13  11  i P      P       03 50 14.6 -2.8
      comp=Z,25nm,0.9s
      comp=Z,2µm,20.0s
ILULI Ilulissat         60.13  11  eP       P       03 50 18.7 +1.3
ILULI                               pmax    pmax
      comp=Z,25nm,0.9s
IMW   Indian Meadow     60.16  56  eP       P       03 50 21.3 +3.0
      comp=Z,53nm,1.4s
FLWY  Flagg Ranch       60.16  56  eP       P       03 50 20.9 +2.6
      comp=Z,21nm,1.0s
RLMT  Red Lodge         60.25  54   P       P       03 50 19.9 +1.0
      baz=312,SNR=14
RLMT  Red Lodge         60.25  54  eP       P       03 50 21.7 +2.8
      comp=Z,58nm,1.3s
RLMT                                LR      LR
      comp=Z,803nm,20.0s
FXWY  Fox Creek         60.28  57  eP       P       03 50 21.9 +2.8
MOOW  Moose Ponds       60.36  56  eP       P       03 50 22.5 +2.8
      comp=Z,16nm,1.0s
TPAW  Teton Pass        60.42  57  eP       P       03 50 23.1 +3.0
      comp=Z,55nm,1.3s
TIN   Tinemaha, Big     60.47  66   P       P       03 50 20.1 -0.2
      baz=312
LOHW  Long Hollow       60.53  56  eP       P       03 50 23.6 +2.9
      comp=Z,51nm,1.4s
HVU   Hansel Valley     60.53  59  eP       P       03 50 24.1 +3.3
      comp=Z,14nm,1.0s
HVU   Hansel Valley     60.53  59  eP       P       03 50 24.1 +3.3
HVU                                 pmax    pmax
      comp=Z,14nm,1.0s
SNOW  Snow King Moun    60.54  57  eP       P       03 50 24.2 +3.2
      comp=Z,47nm,1.3s
SMMC  Simmler           60.55  69   P       P       03 50 20.6 -0.2
      baz=312
REDW  Red Top Meadow    60.56  57  eP       P       03 50 23.7 +2.7
      comp=Z,73nm,1.2s
DGMT  Dagmar            60.62  49   P       P       03 50 21.1  0.0
      baz=313
DGMT  Dagmar            60.62  49  eP       P       03 50 23.2 +2.0
      comp=Z,75nm,1.4s
DGMT                                LR      LR
      comp=Z,2µm,22.0s
VES   Vestal, Richgr    60.75  68   P       P       03 50 22.6 +0.4
      baz=312
LAO   LASA Array        60.80  51   P       P       03 50 21.3 -1.1
      baz=312
LAO   LASA Array        60.80  51  eP       P       03 50 25.0 +2.6
      comp=Z,64nm,1.0s
LAO                                 LR      LR
      comp=Z,1µm,20.0s
AHID  Auburn Hatcher    60.81  57  eP       P       03 50 25.6 +2.9
      comp=Z,24nm,1.3s
AHID                                LR      LR
      comp=Z,569nm,19.0s
PKM   Mcpherson Peak    60.94  69   P       P       03 50 23.0 -0.7
      baz=312
CWC   Cottonwood Cre    60.96  67   P       P       03 50 22.3 -1.4
      baz=312
NIL   Nilore            60.99 289  eP       P       03 50 21.6 -2.3
NIL                                 LR      LR
      comp=Z,1µm,20.0s
NIL   Nilore            60.99 289  eP       P       03 50 21.6 -2.3
NIL                                 MLR     MLR
      comp=Z,1µm,20.0s
GRAC  Grapevine Rang    61.02  66   P       P       03 50 23.0 -1.0
      baz=312
SPUT  South Promonto    61.03  59  eP       P       03 50 24.9 +0.8
      comp=Z,33nm,1.3s
R11A  Troy Canyon, C    61.18  64   P       P       03 50 26.5 +1.3
      baz=312,SNR=14
R11A  Troy Canyon, C    61.18  64  eP       P       03 50 24.0 -1.2
      comp=Z,12nm,1.1s
ISA   Isabella, Lake    61.24  68   P       P       03 50 25.9 +0.3
      baz=312
ISA   Isabella, Lake    61.24  68  eP       P       03 50 26.5 +0.9
      comp=Z,15nm,1.4s
ISA   Isabella, Lake    61.24  68  eP       P       03 50 26.5 +0.9
ISA                                 pmax    pmax
      comp=Z,15nm,1.4s
SBC   Santa Barbara     61.30  70   P       P       03 50 26.2 +0.3
      baz=312
HWUT  Hardware Ranch    61.32  59  eP       P       03 50 28.1 +1.9
      comp=Z,28nm,1.4s
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HWUT				LR	LR		
	comp=Z,588nm,20.0s						
ARVC	**Arvin**	**61.38**	**68**	P	**P**	**03 50 26.0**	**-0.4**
	baz=312						
DUG	**Dugway, Tooele**	**61.56**	**61**	P	**P**	**03 50 26.7**	**-1.1**
	baz=312,SNR=10						
DUG	**Dugway, Tooele**	**61.56**	**61**	*e*P	**P**	**03 50 29.6**	**+1.8**
	comp=Z,63nm,1.5s						
DUG				LR	LR		
	comp=Z,577nm,20.0s						
DUG	**Dugway, Tooele**	**61.56**	**61**	*e*P	**P**	**03 50 26.6**	**-1.1**
DUG				pmax	pmax		
	comp=Z,63nm,1.5s						
MPMC	**Manual Prospec**	**61.58**	**67**	P	**P**	**03 50 26.7**	**-1.3**
	baz=312,SNR=14						
KSM	**Kuching**	**61.59**	**235**	*e*P	**P**	**03 50 29.5**	**+1.5**
	comp=Z,32nm,1.2s						
SCZ2	**Santa Cruz Isl**	**61.65**	**70**	P	**P**	**03 50 27.1**	**-1.1**
	baz=313						
BW06	**Boulder Array**	**61.66**	**57**	P	**P**	**03 50 25.7**	**-2.8**
	baz=313,SNR=21						
BW06	**Boulder Array**	**61.66**	**57**	*e*P	**P**	**03 50 30.6**	**+2.1**
	comp=Z,35nm,1.1s						
BW06				LR	LR		
	comp=Z,554nm,21.0s						
PD31	**Pinedale Array**	**61.66**	**57**	*e*P	**P**	**03 50 30.4**	**+1.9**
PDAR	**Pinedale Array**	**61.66**	**57**	P	**P**	**03 50 26.3**	**-2.2**
	comp=Z,4.0nm,0.9s,baz=261,slow=0.9,SNR=33						
PDAR	**Pinedale Array**	**61.66**	**57**	*e*P	**P**	**03 50 26.0**	**-2.5**
FURC	**Furnace Creek,**	**61.68**	**66**	P	**P**	**03 50 27.7**	**-0.7**
	baz=312,SNR=16						
TPNV	**Topopah Spring**	**61.72**	**65**	P	**P**	**03 50 27.3**	**-1.6**
	baz=312,SNR=13						
TPNV	**Topopah Spring**	**61.72**	**65**	*e*P	**P**	**03 50 27.8**	**-1.1**
	comp=Z,30nm,1.0s						
TPNV	**Topopah Spring**	**61.72**	**65**	*e*P	**P**	**03 50 27.8**	**-1.1**
TPNV				pmax	pmax		
	comp=Z,30nm,1.0s						
TCUT	**Toone Canyon**	**61.74**	**59**	*e*P	**P**	**03 50 32.0**	**+2.9**
	comp=Z,47nm,1.3s						
OSI	**Osito Audit: C**	**61.79**	**69**	P	**P**	**03 50 29.4**	**+0.1**
	baz=313						
OSI	**Osito Audit: C**	**61.79**	**69**	*e*P	**P**	**03 50 31.7**	**+2.4**
	comp=Z,30nm,0.9s						
CTU	**Camp Tracy**	**61.83**	**60**	*e*P	**P**	**03 50 32.3**	**+2.7**
	comp=Z,9.4nm,0.9s						
LRMC	**Laurel Mtn Rad**	**61.84**	**67**	P	**P**	**03 50 29.6**	**-0.1**
	baz=313						
EDW2	**Edwards Air Fo**	**62.06**	**68**	P	**P**	**03 50 31.6**	**+0.6**
	baz=313,SNR=8.2						
JLU	**Jordanelle**	**62.06**	**59**	*e*P	**P**	**03 50 34.1**	**+2.8**
	comp=Z,30nm,1.5s						
PSUT	**Pine Spring**	**62.07**	**63**	*e*P	**P**	**03 50 33.6**	**+2.3**
	comp=Z,33nm,1.4s						
NLU	**North Lily Min**	**62.14**	**60**	*e*P	**P**	**03 50 34.5**	**+2.8**
	comp=Z,12nm,0.9s						
DECC	**Green Verdugo**	**62.27**	**69**	P	**P**	**03 50 32.3**	**-0.2**
	baz=313						
SFJD	**Kangerlussuaq**	**62.29**	**12**	LR	LR	04 21 25.3	
	comp=Z,2µm,18.2s,baz=344,slow=40						
MPU	**Maple Canyon**	**62.35**	**60**	*e*P	**P**	**03 50 35.9**	**+2.7**
	comp=Z,14nm,1.0s						
SHOC	**Shoshone, Teco**	**62.41**	**66**	P	**P**	**03 50 34.6**	**+1.2**
	baz=313						
MWC	**Mount Wilson**	**62.46**	**69**	*e*P	**P**	**03 50 35.6**	**+1.7**
	comp=Z,34nm,1.1s						
MWC	**Mount Wilson**	**62.46**	**69**	*e*P	**P**	**03 50 35.6**	**+1.7**
MWC				pmax	pmax		
	comp=Z,35nm,1.1s						
GSC	**Goldstone, Bar**	**62.49**	**67**	P	**P**	**03 50 34.5**	**+0.5**
	baz=313,SNR=8.0						
GSC	**Goldstone, Bar**	**62.49**	**67**	*e*P	**P**	**03 50 34.3**	**+0.3**
	comp=Z,12nm,0.9s						
GSC	**Goldstone, Bar**	**62.49**	**67**	*e*P	**P**	**03 50 34.3**	**+0.3**
GSC				pmax	pmax		
	comp=Z,12nm,0.9s						
FIA1	**FINESS Array S**	**62.59**	**336**	*e*P	**P**	**03 50 31.1**	**-3.0**
FINES	**FINESS Array B**	**62.59**	**336**	P	**P**	**03 50 31.3**	**-2.8**
	comp=Z,2.9nm,0.5s,baz=30,slow=8.1,SNR=18						
FINES				LR	LR	04 21 07.4	
	comp=Z,2µm,18.2s,baz=22,slow=39						
KAPI	**Kappang**	**62.62**	**222**	PFAKE		03 50 50.0	+15
KAPI				LR	LR		
	comp=Z,304nm,22.0s						
SHPR	**Sheep Range**	**62.67**	**65**	*e*P	**P**	**03 50 37.2**	**+1.9**
	comp=Z,12nm,1.1s						
BFSC	**Mount Baldy Ra**	**62.69**	**68**	P	**P**	**03 50 35.0**	**-0.5**
	baz=313						
CIS	**Catalina Islan**	**62.80**	**70**	P	**P**	**03 50 36.9**	**+0.9**
	baz=313						
TUQ	**Turquoise Moun**	**62.93**	**66**	P	**P**	**03 50 35.5**	**-1.5**
	baz=313,SNR=9.2						
KBL	**Kabul**	**62.98**	**292**	*e*P	**P**	**03 50 37.4**	**0.0**
	comp=Z,15nm,1.0s						
KBL	**Kabul**	**62.98**	**292**	*e*P	**P**	**03 50 37.4**	**0.0**
KBL				pmax	pmax		
	comp=Z,15nm,1.0s						
CCUT	**Cedar City**	**63.02**	**63**	*e*P	**P**	**03 50 36.8**	**-0.9**
	comp=Z,21nm,1.1s						
MSU	**Marysvale**	**63.06**	**62**	*e*P	**P**	**03 50 40.4**	**+2.5**
MSU	**Marysvale**	**63.06**	**62**	*e*P	**P**	**03 50 40.4**	**+2.5**
TMUT	**Trail Mountain**	**63.08**	**60**	*e*P	**P**	**03 50 40.7**	**+2.6**
	comp=Z,12nm,0.9s						
HEC	**Hector,Ludlow**	**63.10**	**67**	P	**P**	**03 50 36.6**	**-1.4**
	baz=313,SNR=10						
BBRC	**Big Bear Solar**	**63.13**	**68**	P	**P**	**03 50 38.8**	**+0.4**
	baz=313						
SZCU	**Shurtz Canyon**	**63.15**	**63**	*e*P	**P**	**03 50 40.9**	**+2.3**
	comp=Z,16nm,1.3s						
MDND	**Maddock**	**63.28**	**47**	P	**P**	**03 50 38.4**	**-0.6**
	baz=315						
ULM	**Lac du Bonnet**	**63.30**	**43**	LR	LR	04 19 51.2	
	comp=Z,908nm,19.8s,baz=320,slow=38						
ULM	**Lac du Bonnet**	**63.30**	**43**	*e*P	**P**	**03 50 40.5**	**+1.4**
	comp=Z,21nm,1.0s						
ULM	**Lac du Bonnet**	**63.30**	**43**	*e*P	**P**	**03 50 40.5**	**+1.4**
ULM				pmax	pmax		
	comp=Z,21nm,1.0s						
MTPU	**Mount Pierson**	**63.37**	**62**	*e*P	**P**	**03 50 42.8**	**+2.6**
	comp=Z,14nm,1.1s						
K22A	**Casper**	**63.38**	**55**	P	**P**	**03 50 39.6**	**-0.3**
	baz=314						
K22A	**Casper**	**63.38**	**55**	*e*P	**P**	**03 50 42.6**	**+2.7**
	comp=Z,24nm,1.3s						
P18A	**Preston Nutter**	**63.40**	**60**	*e*P	**P**	**03 50 43.0**	**+2.7**
	comp=Z,26nm,1.3s						
MURC	**Murrieta**	**63.41**	**69**	P	**P**	**03 50 39.6**	**-0.5**
	baz=314						
LCMT	**Little Creek M**	**63.45**	**63**	*e*P	**P**	**03 50 39.3**	**-1.1**
	comp=Z,17nm,1.0s						
GMRC	**Granite Mounta**	**63.53**	**67**	P	**P**	**03 50 39.6**	**-1.4**
	baz=314,SNR=9.2						
SRU	**San Rafael Swe**	**63.59**	**60**	*e*P	**P**	**03 50 40.0**	**-1.4**
	comp=Z,25nm,0.8s						
SRU	**San Rafael Swe**	**63.59**	**60**	*e*P	**P**	**03 50 40.0**	**-1.4**
SRU				pmax	pmax		
	comp=Z,25nm,0.8s						
LDFC	**Landfair**	**63.66**	**66**	*e*P	**P**	**03 50 43.0**	**+1.2**
	comp=Z,62nm,1.2s						
RWWY	**Rawlins**	**63.67**	**56**	*e*P	**P**	**03 50 43.3**	**+1.3**
	comp=Z,27nm,1.2s						
RSSD	**Black Hills**	**63.68**	**52**	P	**P**	**03 50 40.6**	**-1.3**
	baz=314						
RSSD	**Black Hills**	**63.68**	**52**	*e*P	**P**	**03 50 39.9**	**-2.0**
	comp=Z,26nm,0.8s						
RSSD	**Black Hills**	**63.68**	**52**	*e*P	**P**	**03 50 39.9**	**-2.0**
RSSD				pmax	pmax		
	comp=Z,27nm,0.8s						
KNB	**Kanab**	**63.70**	**63**	*e*P	**P**	**03 50 42.1**	**0.0**
	comp=Z,35nm,1.2s						
KNB	**Kanab**	**63.70**	**63**	*e*P	**P**	**03 50 42.1**	**0.0**
KNB				pmax	pmax		
	comp=Z,35nm,1.1s						
PKCU	**Pink Cliffs**	**63.70**	**63**	*e*P	**P**	**03 50 45.3**	**+3.0**
	comp=Z,12nm,1.0s						
FRD	**Ford Ranch, An**	**63.84**	**68**	P	**P**	**03 50 43.0**	**0.0**
	baz=314						
PFO	**Pinyon Flats O**	**63.85**	**68**	P	**P**	**03 50 43.4**	**+0.3**
	baz=314						
PFO	**Pinyon Flats O**	**63.85**	**68**	PFAKE		03 51 00.0	+17
PFO				LR	LR		
	comp=Z,974nm,21.0s						
BELC	**Belle Mtn. Jos**	**63.86**	**68**	P	**P**	**03 50 43.3**	**+0.1**
	baz=314						
109C	**Camp Elliot, M**	**63.95**	**69**	P	**P**	**03 50 43.6**	**0.0**
	baz=314						
NEE2	**Needles Airpor**	**64.17**	**66**	P	**P**	**03 50 45.8**	**+0.8**
	baz=314						
O20A	**White River Ci**	**64.17**	**58**	P	**P**	**03 50 45.0**	**-0.2**
	baz=314						
IRM	**Iron Mountain**	**64.27**	**67**	P	**P**	**03 50 44.3**	**-1.5**
	baz=314,SNR=10						
OBN	**Obninsk**	**64.33**	**326**	PFAKE		03 51 00.0	+14
OBN				LR	LR		
	comp=Z,1µm,19.0s						
BAR	**Barrett**	**64.36**	**69**	*e*P	**P**	**03 50 48.2**	**+1.9**
	comp=Z,18nm,1.1s						
MONP2	**Monument Peak**	**64.36**	**69**	P	**P**	**03 50 47.4**	**+0.8**
	baz=314						
BC3	**Big Chuckawall**	**64.43**	**68**	P	**P**	**03 50 47.1**	**+0.3**
	baz=314						
SWSC	**Sam W. Stewart**	**64.71**	**68**	P	**P**	**03 50 49.3**	**+0.7**
	baz=314						
AGMN	**Agassiz Nation**	**64.72**	**45**	P	**P**	**03 50 48.0**	**-0.3**
	baz=317						
AGMN	**Agassiz Nation**	**64.72**	**45**	*e*P	**P**	**03 50 49.8**	**+1.4**
	comp=Z,30nm,1.1s						
AGMN				LR	LR		
	comp=Z,802nm,22.0s						
IKP	**In-Ko-Pah, Jac**	**64.72**	**69**	P	**P**	**03 50 49.3**	**+0.5**
	baz=314						
PDMCI	**Parker Dam,Lak**	**64.78**	**66**	P	**P**	**03 50 49.6**	**+0.7**
	baz=314						
PV09	**Paradox Valley**	**64.80**	**60**	*e*P	**P**	**03 50 52.1**	**+2.6**
PV21	**Cone Mtn., Par**	**64.85**	**60**	*e*P	**P**	**03 50 52.1**	**+2.4**
	comp=Z,41nm,1.2s						
VSU	**Vasula**	**64.88**	**333⇑**	*e*P	**P**	**03 50 46.2**	**-3.0**
VSU				pmax	pmax		
	comp=Z,25nm,0.9s						
MYKOM	**Kota Tinggi**	**64.90**	**241**	*e*P	**P**	**03 50 53.6**	**+3.7**
PV23	**Carpenter Ridg**	**64.91**	**60**	*e*P	**P**	**03 50 48.2**	**-1.9**
	comp=Z,31nm,1.0s						
N23A	**Red Feather La**	**64.91**	**56**	P	**P**	**03 50 49.3**	**-0.8**
	baz=315						
N23A	**Red Feather La**	**64.91**	**56**	*e*P	**P**	**03 50 51.4**	**+1.3**
	comp=Z,20nm,1.1s						
Y12C	**Blythe**	**64.93**	**67**	P	**P**	**03 50 51.1**	**+1.1**
	baz=314						
Y12C	**Blythe**	**64.93**	**67**	*e*P	**P**	**03 50 50.9**	**+1.0**
	comp=Z,18nm,1.0s						
PV14	**Lion Creek, Pa**	**64.95**	**60**	*e*P	**P**	**03 50 53.1**	**+2.7**
	comp=Z,40nm,1.0s						
PV22	**Blue Mesa, Par**	**64.97**	**60**	*e*P	**P**	**03 50 52.5**	**+2.0**
	comp=Z,26nm,1.0s						
PV20	**West Nyswonger**	**65.01**	**60**	*e*P	**P**	**03 50 53.2**	**+2.5**
	comp=Z,72nm,1.3s						
PV19	**Morning Glory**	**65.02**	**60**	*e*P	**P**	**03 50 53.0**	**+2.2**
	comp=Z,37nm,1.0s						
PV17	**East Wray Mesa**	**65.05**	**60**	*e*P	**P**	**03 50 53.5**	**+2.5**
	comp=Z,42nm,0.8s						
PV16	**Nyswonger Mesa**	**65.06**	**60**	*e*P	**P**	**03 50 53.1**	**+2.1**
	comp=Z,68nm,1.3s						
PV11	**David Mesa, Pa**	**65.09**	**60**	*e*P	**P**	**03 50 53.7**	**+2.5**
	comp=Z,56nm,1.0s						
PV18	**Skein Mesa, Pa**	**65.11**	**60**	*e*P	**P**	**03 50 51.8**	**+0.5**
	comp=Z,49nm,1.1s						
B34A	**Aery, Baudette**	**65.13**	**44**	P	**P**	**03 50 51.0**	**-0.1**
	baz=318						
PV03	**Paradox Valley**	**65.13**	**60**	*e*P	**P**	**03 50 53.3**	**+1.8**
C33A	**Trail**	**65.15**	**45**	P	**P**	**03 50 51.3**	**0.0**
	baz=317						
GLA	**Glamis**	**65.23**	**68**	P	**P**	**03 50 51.9**	**0.0**
	baz=314						
GLA	**Glamis**	**65.23**	**68**	*e*P	**P**	**03 50 54.0**	**+2.0**
	comp=Z,28nm,1.0s						
PV02	**Paradox Valley**	**65.23**	**60**	*e*P	**P**	**03 50 54.7**	**+2.5**
	comp=Z,36nm,1.3s						
VRH	**Novokhopyorsk**	**65.33**	**321**	*e*P	**P**	**03 50 48.6**	**-3.7**
VRH				pmax	pmax		
	comp=Z,20nm,0.8s						
VRH				MLR	MLR		
	comp=Z,2µm,17.0s						
SMCO	**Snowmass**	**65.54**	**58**	*e*P	**P**	**03 50 53.2**	**-1.2**
	comp=Z,26nm,1.2s						
WUAZ	**Wupatki**	**65.58**	**64**	P	**P**	**03 50 54.1**	**-0.2**
	baz=315						
WUAZ	**Wupatki**	**65.58**	**64**	*e*P	**P**	**03 50 57.1**	**+2.7**
	comp=Z,46nm,1.3s						
WUAZ				LR	LR		
	comp=Z,870nm,20.0s						
B35A	**Bob, Littlefor**	**65.64**	**43**	P	**P**	**03 50 54.5**	**+0.1**
	baz=318						
ISCO	**Idaho Springs**	**65.86**	**57**	P	**P**	**03 50 55.4**	**-0.9**
	baz=315,SNR=18						
ISCO	**Idaho Springs**	**65.86**	**57**	*e*P	**P**	**03 50 57.2**	**+1.0**
	comp=Z,13nm,0.9s						
ISCO				LR	LR		
	comp=Z,799nm,20.0s						
ISCO	**Idaho Springs**	**65.86**	**57**	*e*P	**P**	**03 50 54.7**	**-1.6**
ISCO				pmax	pmax		
	comp=Z,13nm,1.0s						
C35A	**Jirik Farms, M**	**66.02**	**44**	P	**P**	**03 50 56.8**	**0.0**
	baz=318						
MVCO	**Mesa Verde**	**66.06**	**60**	P	**P**	**03 50 57.9**	**+0.3**
	baz=315						
MVCO	**Mesa Verde**	**66.06**	**60**	*e*P	**P**	**03 50 59.9**	**+2.3**
	comp=Z,13nm,0.8s						
MVCO				LR	LR		
	comp=Z,521nm,20.0s						
NC405	**NORSAR Array S**	**66.29**	**342**	*e*P	**P**	**03 51 00.1**	**+1.7**
BORG	**Borgarnes**	**66.30**	**359**	*e*P	**P**	**03 50 57.6**	**-0.7**
	comp=Z,41nm,1.0s						
BORG				LR	LR		
	comp=Z,264nm,22.0s						
BORG	**Borgarnes**	**66.30**	**359**	*e*P	**P**	**03 51 01.8**	**+3.5**
BORG				pmax	pmax		
	comp=Z,41nm,1.0s						
NC204	**NORSAR Array S**	**66.33**	**343**	*e*P	**P**	**03 50 59.9**	**+1.3**
VSR	**Storozhevoye**	**66.36**	**322**	*e*P	**P**	**03 50 56.0**	**-2.9**
VSR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
VSR				MLR	MLR		
	comp=Z,2µm,16.0s						
NB201	**NORSAR Array S**	**66.43**	**342**	*e*P	**P**	**03 51 01.1**	**+1.8**
D35A	**Remer**	**66.44**	**45**	P	**P**	**03 50 59.3**	**-0.3**
	baz=318						
NB2	**NORSAR Subarra**	**66.45**	**342**	P	**P**	**03 50 56.1**	**-3.3**
	comp=Z,12nm,1.1s,baz=29,slow=6.5						
NOA	**NORSAR Array B**	**66.45**	**342**	P	**P**	**03 50 56.1**	**-3.3**
	comp=Z,3.6nm,0.8s,baz=26,slow=6.3,SNR=17						
NOA				LR	LR	04 24 41.9	
	comp=Z,2µm,19.3s,baz=25,slow=40						
C36A	**Pine Crest Far**	**66.49**	**43**	P	**P**	**03 50 59.3**	**-0.6**
	baz=319						
VORD	**Divnogorie**	**66.50**	**322**	*e*P	**P**	**03 50 56.8**	**-3.0**
VORD				pmax	pmax		
	comp=Z,9.0nm,0.6s						
S22A	**4UR Ranch, Cre**	**66.63**	**59**	P	**P**	**03 51 00.6**	**-0.7**
	baz=315,SNR=18						
S22A	**4UR Ranch, Cre**	**66.63**	**59**	*e*P	**P**	**03 51 03.7**	**+2.5**
	comp=Z,46nm,1.4s						
E35A	**Pequot Lakes**	**66.67**	**45**	P	**P**	**03 51 00.9**	**-0.1**
	baz=318						
G33A	**Ortonville**	**66.71**	**47**	P	**P**	**03 50 60.0**	**-1.3**
	baz=318						
H32A	**Carlson Farm,**	**66.73**	**48**	P	**P**	**03 51 00.9**	**-0.6**
	baz=317						
HFS	**Hagfors**	**66.76**	**341**	P	**P**	**03 50 58.7**	**-2.6**
	comp=Z,2.6nm,0.3s,baz=46,slow=4.2,SNR=21						
HFS				LR	LR	04 22 47.4	
	comp=Z,1µm,20.0s,baz=22,slow=38						
HFS	**Hagfors**	**66.76**	**341**	P	**P**	**03 50 58.7**	**-2.6**
HFS				pmax	pmax		
	comp=Z,3.0nm,0.3s						
HFS				MLR	MLR		
	comp=Z,1µm,20.0s						
D36A	**Goodland**	**66.78**	**44**	P	**P**	**03 51 01.6**	**-0.1**
	baz=319						
C37A	**Embarrass**	**66.81**	**43**	P	**P**	**03 51 00.4**	**-1.5**
	baz=319						
W18A	**Petrified Fore**	**66.81**	**63**	P	**P**	**03 51 00.4**	**-1.9**
	baz=315						
F34A	**Alexandria**	**66.83**	**46**	P	**P**	**03 51 01.4**	**-0.7**
	baz=318						
EYMN	**Ely**	**66.95**	**42**	P	**P**	**03 51 02.1**	**-0.6**
	baz=319						
EYMN	**Ely**	**66.95**	**42**	*e*P	**P**	**03 51 02.7**	**-0.1**
	comp=Z,26nm,0.9s						
EYMN				LR	LR		
	comp=Z,1µm,20.0s						
PSI	**Prapat**	**66.96**	**246**	*e*P	**P**	**03 51 05.9**	**+2.5**
	comp=Z,13nm,0.8s						
PSI	**Prapat**	**66.96**	**246**	*e*P	**P**	**03 51 05.9**	**+2.5**
PSI				pmax	pmax		
	comp=Z,13nm,0.8s						
OGNE	**Ogallala**	**66.97**	**54**	*e*P	**P**	**03 51 04.9**	**+1.8**
OGNE				LR	LR		
	comp=Z,723nm,21.0s						
GEYT	**Alibeck**	**67.00**	**302**	LR	LR	04 22 41.8	
	comp=Z,1µm,18.2s,baz=315,slow=38						
G34A	**Benson**	**67.06**	**47**	P	**P**	**03 51 02.3**	**-1.2**
	baz=318						
F35A	**Swanville**	**67.11**	**46**	P	**P**	**03 51 03.6**	**-0.2**
	baz=318						
D37A	**Cotton**	**67.12**	**44**	P	**P**	**03 51 03.3**	**-0.6**
	baz=319						
214A	**Organ Pipe Nat**	**67.21**	**67**	P	**P**	**03 51 03.5**	**-1.2**
	baz=315						
C38A	**Sawbill Land.**	**67.22**	**43**	P	**P**	**03 51 02.9**	**-1.6**
	baz=320						
E36A	**McGregor**	**67.23**	**44**	P	**P**	**03 51 02.5**	**-2.0**
	baz=319						
SDCO	**Great Sand Dun**	**67.37**	**58**	P	**P**	**03 51 05.0**	**-1.0**
	baz=316,SNR=8.9						
SDCO	**Great Sand Dun**	**67.37**	**58**	*e*P	**P**	**03 51 08.0**	**+2.1**
	comp=Z,20nm,1.3s						
SDCO				LR	LR		
	comp=Z,664nm,20.0s						
ISAL	**Salakas**	**67.48**	**332**	*e*P	**P**	**03 51 04.9**	**-1.1**
ISAL				IAmb	IAmb	03 51 40.7	
	comp=Z,7.0nm,0.9s						
IDID	**Didziasalis**	**67.50**	**331**	*e*P	**P**	**03 51 04.9**	**-1.2**
IDID				IAmb	IAmb	03 51 38.9	
	comp=Z,9.6nm,0.9s						
F36A	**Milaca**	**67.59**	**45**	P	**P**	**03 51 04.0**	**-2.9**
	baz=319						
G35A	**Watkins**	**67.62**	**46**	P	**P**	**03 51 05.1**	**-2.0**
	baz=319						
G35A	**Watkins**	**67.62**	**46**	*e*P	**P**	**03 51 08.9**	**+1.8**
	comp=Z,34nm,1.1s						
IIGN	**Ignalina**	**67.63**	**332**	*e*P	**P**	**03 51 05.9**	**-1.0**
IIGN				IAmb	IAmb	03 51 38.8	
	comp=Z,12nm,0.6s						
ECSD	**EROS Data Cent**	**67.70**	**48**	P	**P**	**03 51 06.8**	**-0.8**
	baz=318,SNR=5.4						
ECSD	**EROS Data Cent**	**67.70**	**48**	*e*P	**P**	**03 51 04.9**	**-2.7**
	comp=Z,16nm,0.8s						
ECSD				LR	LR		
	comp=Z,1µm,21.0s						
H35A	**Sunnyside Ranc**	**67.85**	**47**	P	**P**	**03 51 07.8**	**-0.7**
	baz=319,SNR=7.4						
E38A	**The Farm, Brul**	**67.93**	**43**	P	**P**	**03 51 06.7**	**-2.3**
	baz=320						
E38A	**The Farm, Brul**	**67.93**	**43**	*e*P	**P**	**03 51 10.2**	**+1.2**
	comp=Z,18nm,0.8s						
C40A	**Isle Royale Na**	**68.00**	**41**	P	**P**	**03 51 08.0**	**-1.3**
	baz=321						
IVI	**Ivigtut**	**68.15**	**12**	*e*P	**P**	**03 51 08.5**	**-1.5**
	comp=Z,37nm,0.9s						
TUC	**Tucson**	**68.17**	**66**	P	**P**	**03 51 10.4**	**-0.5**
	baz=316						
TUC	**Tucson**	**68.17**	**66**	*e*P	**P**	**03 51 12.3**	**+1.5**
	comp=Z,14nm,1.2s						
TUC				LR	LR		
	comp=Z,583nm,20.0s						
TUC	**Tucson**	**68.17**	**66**	*e*P	**P**	**03 51 12.3**	**+1.5**
TUC				pmax	pmax		
	comp=Z,14nm,1.2s						
TUC				MLR	MLR		
	comp=Z,583nm,20.0s						
F38A	**Pierce - Schro**	**68.28**	**44**	P	**P**	**03 51 09.3**	**-1.9**
	baz=320						
H36A	**Jessenland, He**	**68.36**	**46**	P	**P**	**03 51 11.1**	**-0.6**
	baz=319						
SPMN	**Marine on St.**	**68.41**	**45**	P	**P**	**03 51 11.8**	**-0.2**
	baz=319						
SPMN	**Marine on St.**	**68.41**	**45**	*e*P	**P**	**03 51 12.8**	**+0.8**
	comp=Z,20nm,0.9s						
T25A	**Trinidad**	**68.41**	**58**	P	**P**	**03 51 11.7**	**-0.8**
	baz=316,SNR=9.2						
T25A	**Trinidad**	**68.41**	**58**	*e*P	**P**	**03 51 14.3**	**+1.9**
	comp=Z,29nm,1.1s						
E39A	**Mellen**	**68.56**	**43**	P	**P**	**03 51 12.2**	**-0.7**
	baz=320						
BGNE	**Belgrade**	**68.64**	**51**	P	**P**	**03 51 12.8**	**-0.8**
	baz=318						
F39A	**Loretta**	**68.75**	**44**	P	**P**	**03 51 12.1**	**-2.0**
	baz=320						
E40A	**Wakefield**	**68.80**	**43**	P	**P**	**03 51 12.8**	**-1.6**
	baz=321						
TASM	**ASL Pad, Albuq**	**68.83**	**61**	P	**P**	**03 51 15.3**	**+0.3**
	baz=316,SNR=10						
ANMO	**Albuquerque**	**68.83**	**61**	LR	LR	04 20 23.0	
	comp=Z,337nm,19.8s,baz=329,slow=35						
ANMO	**Albuquerque**	**68.83**	**61**	P	**P**	**03 51 14.7**	**-0.4**
	baz=316						
ANMO	**Albuquerque**	**68.83**	**61**	*e*P	**P**	**03 51 17.3**	**+2.2**
	comp=Z,8.1nm,0.8s						
ANMO	**Albuquerque**	**68.83**	**61**	*e*P	**P**	**03 51 17.3**	**+2.2**
ANMO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
TASL	**Snake Pit, Alb**	**68.83**	**61**	P	**P**	**03 51 14.7**	**-0.4**
	baz=316,SNR=12						
H37A	**Dierke Farm, C**	**68.84**	**46**	P	**P**	**03 51 13.9**	**-0.8**
	baz=320						
G38A	**Ridgeland**	**68.89**	**45**	P	**P**	**03 51 14.0**	**-1.0**
	baz=320						
MAK	**Makhachkala**	**68.91**	**312**	*e*P	**P**	**03 51 14.7**	**-0.4**
MAK				pmax	pmax		
	comp=Z,184nm,2.1s						
MAK				MLR	MLR		
	comp=Z,1µm,14.0s						
D41A	**Chassel**	**68.91**	**41**	P	**P**	**03 51 14.0**	**-1.1**
	baz=321						
HYB	**Hyderabad**	**68.92**	**272**	*i* P	**P**	**03 51 14.0**	**-1.6**
AFI	**Afiamalu**	**69.02**	**146**	LR	LR	04 18 28.4	
	comp=Z,471nm,19.1s,baz=330,slow=33						
I37A	**Lemond, Waseca**	**69.04**	**46**	P	**P**	**03 51 14.5**	**-1.5**
	baz=319						
I37A	**Lemond, Waseca**	**69.04**	**46**	*e*P	**P**	**03 51 17.7**	**+1.7**
	comp=Z,72nm,0.8s						
H38A	**Maiden Rock**	**69.06**	**45**	P	**P**	**03 51 15.2**	**-1.0**
	baz=320						
F40A	**Park Falls**	**69.10**	**43**	P	**P**	**03 51 15.6**	**-0.7**
	baz=321						
J36A	**Seneca 1, Swea**	**69.11**	**47**	P	**P**	**03 51 16.0**	**-0.4**
	baz=319						
J36A	**Seneca 1, Swea**	**69.11**	**47**	*e*P	**P**	**03 51 18.2**	**+1.8**
	comp=Z,20nm,0.8s						
G39A	**Holcombe**	**69.11**	**44**	P	**P**	**03 51 16.6**	**+0.2**
	baz=320						
E41A	**Kenton**	**69.19**	**42**	P	**P**	**03 51 16.6**	**-0.3**
	baz=321						
COWI	**Conover**	**69.40**	**42**	*e*P	**P**	**03 51 18.5**	**+0.3**
	comp=Z,26nm,1.2s						
COWI				LR	LR		
	comp=Z,1µm,20.0s						
GOF	**Gofitskoye**	**69.43**	**316**	*e*P	**P**	**03 51 20.2**	**+1.9**
GOF				pmax	pmax		
	comp=Z,90nm,0.8s						
J37A	**Redenius Farm,**	**69.50**	**47**	P	**P**	**03 51 19.1**	**+0.3**
	baz=320						
H39A	**Augusta**	**69.52**	**45**	P	**P**	**03 51 19.3**	**+0.3**
	baz=320						
I38A	**Scanlan Farm,**	**69.52**	**46**	P	**P**	**03 51 19.0**	**0.0**
	baz=320						
GROC	**Groznyy**	**69.55**	**313**	*e*P	P	03 51 13.5	-5.6
GROC				*e*		03 51 35.0	
GROC				pmax	pmax		
	comp=Z,14nm,0.5s						
G40A	**Rib Lake**	**69.56**	**44**	P	**P**	**03 51 18.7**	**-0.5**
	baz=321						
G40A	**Rib Lake**	**69.56**	**44**	*e*P	**P**	**03 51 21.6**	**+2.4**
	comp=Z,20nm,1.0s						
K36A	**Gilmore City**	**69.57**	**48**	P	**P**	**03 51 19.4**	**+0.1**
	baz=319						
CTAO	**Charters Tower**	**69.61**	**190**	PFAKE		03 51 30.0	+10
CTAO				LR	LR		
	comp=Z,670nm,19.0s						
E42A	**Champion**	**69.68**	**42**	P	**P**	**03 51 20.1**	**+0.2**
	baz=322						
F41A	**Three Lakes**	**69.69**	**43**	P	**P**	**03 51 19.2**	**-0.8**
	baz=321						
F41A	**Three Lakes**	**69.69**	**43**	*e*P	**P**	**03 51 21.1**	**+1.1**
	comp=Z,36nm,1.0s						
CBKS	**Cedar Bluff**	**69.73**	**54**	P	**P**	**03 51 20.0**	**-0.3**
	baz=318						
CBKS	**Cedar Bluff**	**69.73**	**54**	*e*P	**P**	**03 51 20.9**	**+0.5**
	comp=Z,34nm,1.0s						
CBKS				LR	LR		
	comp=Z,836nm,21.0s						
CBKS	**Cedar Bluff**	**69.73**	**54**	*e*P	**P**	**03 51 20.9**	**+0.5**
CBKS				pmax	pmax		
	comp=Z,34nm,1.0s						

CBKS				MLR	MLR		
	comp=Z,836nm,21.0s						
121A	Cookes Peak, D	69.79	64	P	P	03 51 21.5	+0.5
	baz=317						
K37A	Belmond	69.87	47	P	P	03 51 21.2	+0.1
	baz=320						
L36A	Harm Buss Farm	69.87	48	P	P	03 51 20.9	-0.2
	baz=319						
AKT	Akhty	69.90	311	*e*P	P	03 51 19.6	-1.9
AKT				*e*		03 51 39.0	
AKT				pmax	pmax		
	comp=Z,47nm,1.0s						
H40A	Chili	69.98	44	P	P	03 51 21.5	-0.3
	baz=321						
J38A	Wedel Dairy, R	70.00	46	P	P	03 51 21.9	-0.1
	baz=320						
I39A	Houston	70.04	45	P	P	03 51 22.1	-0.1
	baz=320						
I39A	Houston	70.04	45	*e*P	P	03 51 23.5	+1.3
	comp=Z,33nm,0.9s						
F42A	Maple Grove Fa	70.11	42	P	P	03 51 22.1	-0.4
	baz=322						
E43A	Lone Tree Farm	70.12	41	P	P	03 51 22.6	0.0
	baz=322						
SCHQ	Schefferville	70.19	25	LR	LR	04 27 29.7	
	comp=Z,1µm,18.3s,baz=348,slow=40						
L37A	Phoenix Point,	70.30	48	P	P	03 51 23.4	-0.3
	baz=320						
H41A	Junction City	70.31	44	P	P	03 51 23.4	-0.4
	baz=321						
J39A	Decorah	70.35	46	P	P	03 51 23.6	-0.5
	baz=320						
NCK	Nalchik	70.37	314	⇑*e*P	P	03 51 23.5	-0.7
K38A	Parkersburg	70.37	47	P	P	03 51 22.9	-1.3
	baz=320						
G42A	Mountain	70.38	43	P	P	03 51 23.5	-0.7
	baz=322						
E44A	Grand Marais A	70.39	40	P	P	03 51 23.7	-0.5
	baz=323						
I40A	Norwalk	70.43	45	P	P	03 51 24.3	-0.2
	baz=321						
KIV	Kislovodsk	70.44	315	*e*P	P	03 51 24.0	-0.7
KIV	Kislovodsk	70.44	315	*e*P	P	03 51 23.8	-0.9
	comp=Z,21nm,0.7s						
KIV				LR	LR		
	comp=Z,721nm,20.0s						
KIV	Kislovodsk	70.44	315	P	P	03 51 23.8	-0.9
	SNR=8.5						
KIV	Kislovodsk	70.44	315	*i* P	P	03 51 23.9	-0.7
	SNR=9.2						
KIV	Kislovodsk	70.44	315	⇓*e*P	P	03 51 23.8	-0.9
KIV				*e**PP	sP	03 51 33.7	+1.3
KIV				*i* *SP	PcP	03 51 40.9	-5.2
KIV				*e*		03 51 42.5	
KIV						03 53 59.0	
KIV				*e*PPP	PPP	03 55 37.1	
KIV				*e*S	S	04 00 33.3	-3.3
KIV				pmax	pmax		
	comp=Z,23nm,0.7s						
F43A	Flat Rock, Esc	70.47	41	P	P	03 51 24.7	0.0
	baz=322						
KBZ	Khabaz	70.52	315	P	P	03 51 23.5	-1.5
	comp=Z,15nm,0.7s,baz=32,slow=3.4,SNR=18						
KBZ				LR	LR	04 26 59.2	
	comp=Z,1µm,18.7s,baz=24,slow=40						
AKASG	Malin Array Be	70.53	327	P	P	03 51 22.1	-2.8
	comp=Z,6.9nm,0.5s,baz=32,slow=6.5,SNR=13						
AKASG				LR	LR	04 24 53.5	
	comp=Z,1µm,20.1s,baz=15,slow=38						
AKBB	Malin Array Si	70.53	327	*e*P	P	03 51 25.8	+0.8
	comp=Z,11nm,0.8s						
AKBB	Malin Array Si	70.53	327	*e*P	P	03 51 25.8	+0.8
AKBB				pmax	pmax		
	comp=Z,11nm,0.8s						
KIEV	Kiev	70.54	327	*e*P	P	03 51 25.1	+0.1
	comp=Z,11nm,0.8s						
KIEV				LR	LR		
	comp=Z,1µm,21.0s						
KIEV	Kiev	70.54	327	P	P	03 51 23.1	-1.9
KIEV	Kiev	70.54	327	*e*P	P	03 51 25.6	+0.6
KIEV				pmax	pmax		
	comp=Z,11nm,0.8s						
AK11	Malin Array Si	70.57	327	*e*P	P	03 51 24.4	-0.8
I41A	Arkdale	70.65	44	P	P	03 51 25.9	0.0
	baz=321						
L38A	Oak Wood Farm,	70.67	47	P	P	03 51 26.4	+0.4
	baz=320						
F44A	Big Bay de Noc	70.68	41	P	P	03 51 25.7	-0.3
	baz=322						
G43A	Wallace	70.69	42	P	P	03 51 26.1	0.0
	baz=322						
SCIA	State Center	70.72	48	P	P	03 51 26.8	+0.4
	baz=320						
SCIA	State Center	70.72	48	*e*P	P	03 51 28.0	+1.7
SCIA				LR	LR		
	comp=Z,1µm,19.0s						
K39A	Oelwein	70.75	46	P	P	03 51 26.9	+0.4
	baz=320						
ZEI	Tsey	70.77	314	*e*P	P	03 51 24.5	-2.4
ZEI				pmax	pmax		
	comp=Z,29nm,1.4s						
E45A	Wooded Hills,	70.91	40	P	P	03 51 27.5	+0.1
	baz=323						
NEY	Neytrino	70.97	315	⇓*e*P	P	03 51 27.0	-1.0
M38A	Pleasantville	71.10	48	P	P	03 51 28.8	+0.1
	baz=320						
N37A	Lee Faris, Mou	71.11	49	P	P	03 51 29.1	+0.3
	baz=320						
N37A	Lee Faris, Mou	71.11	49	*e*P	P	03 51 30.2	+1.5
	comp=Z,47nm,1.1s						
K40A	Colesburg	71.11	46	P	P	03 51 28.6	0.0
	baz=321						
J41A	Loganville	71.12	45	P	P	03 51 28.6	-0.1
	baz=321						
L39A	Vinton	71.14	47	P	P	03 51 28.1	-0.8
	baz=321						
KSU1	Kansas State U	71.14	52	P	P	03 51 29.1	+0.1
	baz=319						
KSU1	Kansas State U	71.14	52	*e*P	P	03 51 29.8	+0.8
	comp=Z,15nm,0.8s						
KSU1				LR	LR		
	comp=Z,1µm,20.0s						
TBLG	Delisi	71.18	313	*e*P	P	03 51 30.4	+1.3
	comp=Z,29nm,0.9s						
TBLG	Delisi	71.18	313	*e*P	P	03 51 30.4	+1.3
TBLG				pmax	pmax		
	comp=Z,29nm,0.9s						
F45A	CMU Biological	71.30	41	P	P	03 51 29.5	-0.2
	baz=323						
JFWS	Jewell Farm	71.36	45	PFAKE		03 51 40.0	+10
JFWS				LR	LR		
	comp=Z,1µm,19.0s						
F46A	Macinaw City C	71.55	40	P	P	03 51 29.9	-1.3
	baz=323						
M39A	Webster	71.55	47	P	P	03 51 31.8	+0.4
	baz=321						
L40A	Anamosa	71.56	46	P	P	03 51 30.5	-0.9
	baz=321						
N38A	Joes South For	71.56	48	P	P	03 51 31.9	+0.5
	baz=320						
J42A	Columbus	71.56	44	P	P	03 51 30.9	-0.5
	baz=322						
AMTX	Amarillo	71.56	58	P	P	03 51 32.1	+0.4
	baz=318						
AMTX	Amarillo	71.56	58	*e*P	P	03 51 33.7	+2.0
	comp=Z,41nm,1.4s						
WRAB	Tennant Creek	71.57	202	*e*P	P	03 51 32.4	+0.9
WRAB				LR	LR		
	comp=Z,583nm,21.0s						
WRAB	Tennant Creek	71.57	202	⇑*e*P	P	03 51 32.4	+0.9
WRAB				pmax	pmax		
	comp=Z,9.0nm,1.0s						
K41A	Shullsburg	71.57	45	P	P	03 51 30.7	-0.8
	baz=321						
WB2	Warramunga Arr	71.58	202	*e*P	P	03 51 33.0	+1.5
	comp=Z,26nm,1.2s						
WRA	Warramunga Arr	71.58	202	P	P	03 51 28.6	-3.0
	comp=Z,4.0nm,0.8s,baz=19,slow=6.0,SNR=11						
WRA				LR	LR	04 20 34.5	
	comp=Z,391nm,21.8s,baz=25,slow=34						
WRA	Warramunga Arr	71.58	202	*i* P	P	03 51 30.0	-1.6
WRA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
O37A	Wolven Farm, M	71.59	49	P	P	03 51 31.8	+0.2
	baz=320						
DZM	Mont Dzumac	71.62	170	LR	LR	04 17 48.5	
	comp=Z,468nm,21.2s,baz=8.0,slow=32						
DZM	Mont Dzumac	71.62	170	*e*S	S	04 00 48.5	-2.0
	comp=Z,1µm,27.6s						
DZM	Mont Dzumac	71.62	170	*e*LR	LR	04 13 26.7	
	comp=Z,1µm,25.8s						
MSTX	Muleshoe	71.63	59	P	P	03 51 32.4	+0.3
	baz=318						
MNTX	Cornudas Mount	71.80	63	P	P	03 51 32.6	-0.4
	baz=318,SNR=14						
MNTX	Cornudas Mount	71.80	63	*e*P	P	03 51 34.8	+1.8
	comp=Z,34nm,1.4s						
MNTX				LR	LR		
	comp=Z,461nm,19.0s						
J43A	Natural Harves	71.84	44	P	P	03 51 32.8	-0.3
	baz=322						
N39A	Derby Farms, D	71.85	48	P	P	03 51 32.5	-0.7
	baz=321						
L41A	Preston	71.89	46	P	P	03 51 32.8	-0.6
	baz=321						
P37A	Lathrop	71.93	50	P	P	03 51 31.8	-1.8
	baz=320						
M40A	Post Highland	71.93	47	P	P	03 51 32.6	-1.0
	baz=321						
AKH	Akhalkalaki	72.02	313	⇓*i*P	P	03 51 33.8	-0.6
AKH	Akhalkalaki	72.02	313	*e*P	P	03 51 34.9	+0.4
	comp=Z,16nm,0.7s						
AKH	Akhalkalaki	72.02	313	*e*P	P	03 51 34.9	+0.4
AKH				pmax	pmax		
	comp=Z,16nm,0.7s						
GKP	Gorka Klasztor	72.06	335	*e*P	P	03 51 36.2	+2.0
GKP	Gorka Klasztor	72.06	335	*e*P	P	03 51 36.2	+2.0
SOC	Sochi	72.08	317	*c* *i*P	P	03 51 35.3	+0.8
SOC				*e*		03 54 13.1	
SOC				*e*PPP	PPP	03 55 56.8	
SOC				*e*S	S	04 00 57.3	+1.9
SOC				pmax	pmax		
	comp=Z,31nm,0.6s						
SOC				MLR	MLR		
	comp=Z,1µm,16.0s						
ANN	Anapa	72.12	319	*e*P	P	03 51 34.6	-0.1
ANN				pmax	pmax		
	comp=Z,54nm,1.8s						
N40A	Mertquake, Sal	72.29	47	P	P	03 51 36.1	+0.3
	baz=321						
P38A	Dawn	72.31	49	P	P	03 51 36.3	+0.4
	baz=320						
O39A	Kirksville	72.31	48	P	P	03 51 35.7	-0.3
	baz=321						
L42A	Oliver, Polo	72.34	45	P	P	03 51 34.6	-1.5
	baz=322						
GNI	Garni	72.39	311	LR	LR	04 27 46.5	
	comp=Z,1µm,18.3s,baz=44,slow=40						
GNI	Garni	72.39	311	*e*P	P	03 51 34.7	-1.9
	comp=Z,54nm,1.0s						
GNI	Garni	72.39	311	*i* P	P	03 51 35.4	-1.3
	SNR=11						
GNI	Garni	72.39	311	*c* *i*P	P	03 51 39.5	+2.9
GNI				pmax	pmax		
	comp=Z,279nm,1.7s						
M41A	Milan	72.41	46	P	P	03 51 36.2	-0.3
	baz=321						
O40A	La Belle	72.74	48	P	P	03 51 38.7	+0.2
	baz=321						
Q38A	Cooks Store, C	72.77	50	P	P	03 51 38.4	-0.3
	baz=320						
N41A	Harden Midland	72.78	47	P	P	03 51 38.6	-0.1
	baz=321						
N41A	Harden Midland	72.78	47	*e*P	P	03 51 40.0	+1.3
	comp=Z,72nm,0.9s						
P39B	Salisbury	72.80	49	P	P	03 51 38.6	-0.2
	baz=321						
SORM	Soroca	72.99	326	⇑*i*P	P	03 51 39.8	0.0
SORM	Soroca	72.99	326	⇑P	P	03 51 39.8	0.0
L44A	Lake County Fo	73.01	44	P	P	03 51 40.1	+0.1
	baz=322						
Q39A	Willow Grove F	73.03	50	P	P	03 51 40.3	+0.1
	baz=321						
LVV	L'vov	73.05	330	*e*P	P	03 51 41.7	+1.5
LVV				*e*		03 54 25.1	
LVV				*e*PS	PnS	04 01 50.0	+12
N42A	Yates City	73.08	46	P	P	03 51 40.8	+0.3
	baz=322						
P40A	Paris	73.11	49	P	P	03 51 40.7	0.0
	baz=321						
P40A	Paris	73.11	49	*e*P	P	03 51 41.7	+1.0
	comp=Z,42nm,0.9s						
R38A	Fenwick Farm,	73.22	51	P	P	03 51 41.6	+0.3
	baz=320						
O41A	Passleys Farm,	73.23	47	P	P	03 51 41.3	-0.1
	baz=322						
WMOK	Wichita Mounta	73.27	56	P	P	03 51 42.2	+0.5
	baz=319,SNR=10						
WMOK	Wichita Mounta	73.27	56	*e*P	P	03 51 43.3	+1.5
	comp=Z,23nm,1.0s						
WMOK				LR	LR		
	comp=Z,557nm,20.0s						
WMOK	Wichita Mounta	73.27	56	*e*P	P	03 51 43.3	+1.5
WMOK				pmax	pmax		
	comp=Z,23nm,1.0s						
SIM	Simferopol'	73.39	321	*e*P	P	03 51 42.4	+0.1
SIM				*e*S	S	04 01 11.0	+0.6
SIM				pmax	pmax		
	comp=Z,12nm,1.2s						
SIM				MLR	MLR		
	comp=Z,2µm,15.0s						
N43A	Stutzman Famil	73.40	46	P	P	03 51 42.6	+0.3
	baz=322						
P41A	Barry, Barry	73.48	48	P	P	03 51 43.1	+0.2
	baz=322						
Q40A	Laux Farm, Aux	73.51	49	P	P	03 51 43.1	0.0
	baz=321						
O42A	Bath	73.55	47	P	P	03 51 43.7	+0.4
	baz=322						
R39A	Chumby, Stover	73.56	50	P	P	03 51 43.5	+0.1
	baz=321						
KWP	Kalwaria Pacla	73.64	330	*e*P	P	03 51 45.5	+1.8
KWP	Kalwaria Pacla	73.64	330	*e*P	P	03 51 42.3	-1.4
S38A	Stockton	73.64	51	P	P	03 51 44.3	+0.4
	baz=321						
HDIL	Hopedale	73.64	46	P	P	03 51 43.7	-0.2
	baz=322						
HDIL	Hopedale	73.64	46	*e*P	P	03 51 45.1	+1.3
HDIL				LR	LR		
	comp=Z,797nm,21.0s						
KIS	Kishinev	73.77	325	*e*P	P	03 51 46.5	+2.0
	comp=Z,300nm,2.5s						
KIS				*e*LR	LR	04 17 20.0	
	comp=Z,2µm,16.0s						
KIS	Kishinev	73.77	325	*e*P	P	03 51 46.5	+2.0
KIS				*e*		03 52 04.0	
KIS				pmax	pmax		
	comp=Z,330nm,2.5s						
KIS				MLR	MLR		
	comp=N,1µm,15.0s						
O43A	Sugar Creek Fa	73.85	46	P	P	03 51 45.3	+0.3
	baz=322						
S39A	Bolivar	73.89	51	P	P	03 51 45.3	0.0
	baz=321						
S39A	Bolivar	73.89	51	*e*P	P	03 51 46.2	+0.8
	comp=N,20nm,1.2s						
P42A	Winchester	73.90	47	P	P	03 51 45.5	+0.1
	baz=322						
P42A	Winchester	73.90	47	*e*P	P	03 51 48.2	+2.8
	comp=N,36nm,1.0s						
T38A	Diamond	73.90	52	P	P	03 51 45.2	-0.2
	baz=321						
Q41A	Truxton	73.96	48	P	P	03 51 46.1	+0.4
	baz=322						
R40A	Maddies Statio	73.96	50	P	P	03 51 46.0	+0.2
	baz=321						
R40A	Maddies Statio	73.96	50	*e*P	P	03 51 46.2	+0.5
	comp=N,37nm,0.9s						
TUL1	Leonard	73.98	53	P	P	03 51 46.0	+0.1
	baz=320						
TUL1	Leonard	73.98	53	*e*P	P	03 51 47.9	+2.0
	comp=N,29nm,1.1s						
N44A	Piper City	74.00	45	P	P	03 51 46.2	+0.3
	baz=323						
OJC	Ojcow	74.04	333	*e*P	P	03 51 48.1	+2.1
OJC	Ojcow	74.04	333	*e*P	P	03 51 44.1	-1.9
	comp=N,69nm,1.5s						
OJC	Ojcow	74.04	333	*e*P	P	03 51 44.1	-1.9
OJC				pmax	pmax		
	comp=Z,69nm,1.5s						
N45A	Kentland	74.25	45	P	P	03 51 47.5	+0.1
	baz=323						
EKA	Eskdalemuir Ar	74.32	348	P	P	03 51 45.3	-2.3
	comp=Z,5.0nm,0.5s,baz=22,slow=5.5,SNR=38						
EKA				LR	LR	04 27 21.8	
	comp=Z,357nm,18.3s,baz=10.0,slow=38						
Q42A	Golden Eagle	74.33	48	P	P	03 51 47.8	-0.1
	baz=322						
ESK	Eskdalemuir	74.34	348	*e*P	P	03 51 45.8	-1.9
	comp=Z,18nm,0.8s						
ESK				LR	LR		
	comp=Z,801nm,19.0s						
ESK	Eskdalemuir	74.34	348	*e*P	P	03 51 45.8	-1.9
ESK				pmax	pmax		
	comp=Z,18nm,0.9s						
O44A	Mansfield	74.35	46	P	P	03 51 47.8	-0.2
	baz=323						
ABTX	Abilene, Hawle	74.38	58	P	P	03 51 48.7	+0.4
	baz=319						
ABTX	Abilene, Hawle	74.38	58	*e*P	P	03 51 50.0	+1.7
	comp=Z,39nm,1.3s						
LPIG	La Paz	74.38	71	LR	LR	04 20 13.3	
	comp=Z,190nm,19.8s,baz=292,slow=32						
S40A	Lebanon	74.38	50	P	P	03 51 48.6	+0.4
	baz=321						
T39A	Clever	74.38	51	P	P	03 51 48.3	+0.1
	baz=321						
R41A	Rosebud	74.40	49	P	P	03 51 47.6	-0.7
	baz=322						
LEOM	Leova	74.43	325	⇑*i*P	P	03 51 44.9	-3.4
LEOM	Leova	74.43	325	⇑P	P	03 51 44.9	-3.4
CLWO	Collingwood	74.47	38	P	P	03 51 49.5	+0.9
	baz=326						
KSP	Ksiaz	74.50	335	*e*P	P	03 51 50.9	+2.2
KSP	Ksiaz	74.50	335	*e*P	P	03 51 50.9	+2.2
BUR08	Bucovina Ar. S	74.52	328	*e*P	P	03 51 46.8	-2.2
TX31	Lajitas Ar. Si	74.53	63	*e*P	P	03 51 47.1	-2.3
TXAR	Lajitas Array	74.53	63	P	P	03 51 46.5	-2.8
	comp=Z,12nm,0.9s,baz=298,slow=4.1,SNR=48						
TXAR				LR	LR	04 21 34.5	
	comp=Z,413nm,21.2s,baz=0.0,slow=33						
TXAR	Lajitas Array	74.53	63	P	P	03 51 46.5	-2.8
TXAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BUR04	Bucovina Ar. S	74.54	328	*e*P	P	03 51 46.5	-2.5
BURAR	Bucovina Array	74.54	328	⇓*i*P	P	03 51 46.9	-2.2
BURAR	Bucovina Array	74.54	328	⇓P	P	03 51 46.9	-2.2
NIE	Niedzica	74.59	332	*e*P	P	03 51 51.6	+2.4
NIE	Niedzica	74.59	332	*e*P	P	03 51 51.6	+2.4
O45A	Potomac	74.62	45	P	P	03 51 48.9	-0.6
	baz=323						
UZH	Uzhgorod	74.65	330	*e*P	P	03 51 50.9	+1.4
UZH				*e*		03 52 00.1	
UZH				*e*		03 52 09.3	
PEMO	Pembroke	74.65	36	P	P	03 51 48.9	-0.7
	baz=328						
CCM	Cathedral Cave	74.65	49	P	P	03 51 49.5	-0.3
	baz=322						
CCM	Cathedral Cave	74.65	49	*e*P	P	03 51 51.7	+1.9
	comp=Z,38nm,1.0s						
CCM	Cathedral Cave	74.65	49	*e*P	P	03 51 51.7	+1.9
CCM				pmax	pmax		
	comp=Z,38nm,1.0s						
HHAR	Hobbs	74.66	52	*e*P	P	03 51 50.7	+0.9
	comp=Z,21nm,1.0s						
CRVS	Cervenica-Dubn	74.68	331	*e*P	P	03 51 48.2	-1.6
CRVS				pmax	pmax		
	comp=Z,94nm,2.3s						
CRVS	Cervenica-Dubn	74.68	331	*e*P	P	03 51 48.1	-1.6
CRVS				*e*		03 51 52.2	
CRVS				*e*L	L	04 30 09.6	
R42A	Luebbering	74.70	49	P	P	03 51 50.1	0.0
	baz=322						
Q43A	New Douglas	74.72	48	P	P	03 51 50.0	-0.1
	baz=322						
T40A	Mansfield	74.72	50	P	P	03 51 50.6	+0.4
	baz=321						
S41A	Jillco Farms,	74.77	50	P	P	03 51 48.0	-2.4
	baz=322						
BIZ	Bicaz	74.81	327	⇓*i*P	P	03 51 49.1	-1.4
SFIN	Lafayette	74.81	45	P	P	03 51 49.9	-0.8
	baz=323						
AAM	Ann Arbor	74.81	42	P	P	03 51 49.0	-1.6
	baz=325						
AAM	Ann Arbor	74.81	42	*e*P	P	03 51 51.7	+1.1
	comp=Z,35nm,0.9s						
AAM				LR	LR		
	comp=Z,930nm,21.0s						
P44A	Sand Creek, Wi	74.82	46	P	P	03 51 51.2	+0.5
	baz=323						
U39A	Green Forest	74.82	52	P	P	03 51 50.7	-0.1
	baz=321						
OKC	Ostrava-Krasne	74.87	333	AMS	AMS	04 28 30.0	
	comp=Z,2µm,17.5s						
UPC	Upice	74.88	335	AMS	AMS	04 28 30.0	
	comp=Z,2µm,17.0s						
DPC	Dobruska-Polom	74.93	335	*e*P	P	03 51 50.9	-0.3
DPC				*e*pP	pP	03 51 54.1	-2.8
DPC				AMS	AMS	04 28 40.0	
	comp=Z,3µm,17.4s						
DPC	Dobruska-Polom	74.93	335	*e*P	P	03 51 50.9	-0.3
DPC				MLR	MLR		
	comp=Z,3µm,17.4s						
BANO	Bancroft	74.94	36	P	P	03 51 51.8	+0.5
	baz=327						
CLL	Collm	74.95	337	*e*P	P	03 51 49.0	-2.3
CLL				*e*Pmax		03 51 51.0	
CLL				⇑*i*Pmax		03 51 53.0	
	comp=Z,155nm,2.0s						
CLL				*e*		03 52 02.0	
CLL				*i*		03 52 08.6	
CLL				*e*PP	PP	03 54 36.0	-2.2
CLL				*e*PPP	PPP	03 56 24.0	
CLL				*e*S	S	04 01 23.0	-4.6
CLL				*e*(SS)		04 07 00.0	
CLL				*e*		04 10 24.0	
CLL				Lm	MLR	04 28 00.0	
	comp=Z,2µm,18.7s						
CLL				Lmax		04 30 00.0	
CLL	Collm	74.95	337	*e*P	P	03 51 51.1	-0.2
	comp=Z,58nm,1.4s						
CLL	Collm	74.95	337	*e*P	P	03 51 49.0	-2.3
CLL				*e*S	S	04 01 23.0	-4.6
CLL				pmax	pmax		
	comp=Z,155nm,2.0s						
CLL				MLR	MLR		
	comp=Z,2µm,18.7s						
TESR	Tescani	74.98	326	⇑*i*P	P	03 51 49.9	-1.6
PALK	Pallekele	75.00	264	LR	LR	04 29 42.1	
	comp=Z,309nm,18.5s,baz=171,slow=40						
PALK	Pallekele	75.00	264	*e*P	P	03 51 51.0	-1.1
TRPA	Tarpa	75.00	330	⇑*i*P	P	03 51 50.6	-1.0
S42A	Caledonia	75.10	49	P	P	03 51 52.8	+0.5
	baz=322						
MORC	Moravsky Berou	75.10	334	⇓*i*P	P	03 51 51.3	-0.9
MORC	Moravsky Berou	75.10	334	*e*P	P	03 51 50.9	-1.3
	comp=Z,25nm,1.0s						
MORC	Moravsky Berou	75.10	334	*e*P	P	03 51 50.9	-1.3
MORC				pmax	pmax		
	comp=Z,25nm,1.0s						
MORC	Moravsky Berou	75.10	334	*e*P	P	03 51 50.5	-1.7
MORC				*e*		03 51 54.6	
BRG	Berggiesshubel	75.11	336	*e*P	P	03 51 53.8	+1.6
	comp=Z,39nm,1.5s						
BRG				*e*PCP	PcP	03 52 08.1	+2.4
	comp=Z,15nm,1.1s						
BRG				S	S	04 01 32.0	+2.6
BRG				SS	SS	04 06 21.0	+3.8
	comp=N,2µm,18.0s						
	comp=E,1µm,15.2s						
	comp=Z,3µm,16.4s						
BRG	Berggiesshubel	75.11	336	*e*P	P	03 51 53.8	+1.6
BRG				*e*		03 52 08.1	
BRG				S	S	04 01 32.0	+2.6
BRG				SS	SS	04 06 21.0	+3.8
BRG				pmax	pmax		
	comp=Z,39nm,1.5s						
BRG				MLR	MLR		
	comp=N,2µm,18.0s						
BRG				MLR	MLR		
	comp=E,1µm,15.2s						
BRG				MLR	MLR		
	comp=Z,3µm,16.4s						
FVM	French Village	75.11	49	*e*P	P	03 51 54.6	+2.3
	comp=Z,29nm,1.0s						
FVM	French Village	75.11	49	*e*P	P	03 51 54.7	+2.3
FVM				pmax	pmax		
	comp=Z,29nm,1.0s						
R43A	Red Bud	75.12	48	P	P	03 51 53.0	+0.5
	baz=322						

HPIG		75.13	66	eP	P	03 51 54.9	+1.9
	comp=Z,11nm,0.8s						
V39A	Pettigrew	75.15	52	P	P	03 51 53.0	+0.2
	baz=321						
U40A	Yellville	75.16	51	P	P	03 51 52.9	+0.1
	baz=321						
P45A	Graceland, Par	75.18	46	P	P	03 51 52.9	+0.1
	baz=323						
TRQ	Mont Tremblant	75.19	34	eP	P	03 51 53.9	+1.1
PLVO	Plevna	75.25	36	P	P	03 51 53.7	+0.6
	baz=328						
AS01	Alice Springs	75.25	201	eP	P	03 51 51.1	-2.1
PVCC	Panska Ves	75.25	336	AMS	AMS	04 28 50.0	
	comp=Z,3µm,19.2s						
AS31	Alice Springs	75.26	201	eP	P	03 51 54.4	+1.1
	comp=Z,1.9nm,0.7s						
ASAR	Alice Springs	75.26	201	P	P	03 51 50.9	-2.4
	comp=Z,3.2nm,0.9s,baz=14,slow=5.9,SNR=14						
ASAR				LR	LR	04 22 39.4	
	comp=Z,435nm,21.7s,baz=26,slow=34						
ASAR	Alice Springs	75.26	201	P	P	03 51 50.9	-2.4
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ARCR	ARCALIA	75.30	328	⇓iP	P	03 51 52.8	-0.5
TLCR		75.30	324	⇓iP	P	03 51 53.2	-0.1
TLCR		75.30	324	⇓P	P	03 51 53.2	-0.1
M49A	Liberty Center	75.34	42	P	P	03 51 52.5	-1.1
	baz=325						
O47A	Sheridan	75.35	44	P	P	03 51 53.8	+0.1
	baz=324						
P46A	Rosedale	75.36	45	P	P	03 51 54.1	+0.3
	baz=323						
DELO	Deloro Mine	75.48	37	P	P	03 51 54.3	-0.1
	baz=327						
Q45A	Warren Harvey,	75.49	47	P	P	03 51 55.0	+0.4
	baz=323						
VRI	Vrincioaia	75.50	326	⇓iP	P	03 51 55.4	+0.9
VRI	Vrincioaia	75.50	326	⇓P	P	03 51 55.4	+0.9
T42A	Van Buren	75.53	50	P	P	03 51 54.9	+0.1
	baz=322						
PLOR	Plostina	75.54	326	⇑iP	P	03 51 55.4	+0.6
PLOR	Plostina	75.54	326	⇑P	P	03 51 55.4	+0.6
R44A	Waltonville	75.56	48	P	P	03 51 55.0	0.0
	baz=323						
CFR	Carcaliu	75.56	325	⇑iP	P	03 51 53.2	-1.6
CFR	Carcaliu	75.56	325	⇑P	P	03 51 53.2	-1.6
W39A	Magazine	75.58	53	P	P	03 51 55.5	+0.4
	baz=321						
W39A	Magazine	75.58	53	eP	P	03 51 56.9	+1.8
	comp=Z,25nm,1.1s						
ALFO	Alfred	75.58	34	P	P	03 51 54.8	-0.1
	baz=329						
V40A	Witts Springs	75.60	52	P	P	03 51 55.4	+0.1
	baz=321						
S43A	Fulton Ridge,	75.61	49	P	P	03 51 55.4	+0.1
	baz=322						
U41A	Viola	75.64	51	P	P	03 51 55.8	+0.3
	baz=322						
PRA	Prague	75.71	336	AMS	AMS	04 29 10.0	
	comp=Z,3µm,16.6s						
PRU	Pruhonice	75.75	336	eP	P	03 51 54.1	-1.8
PRU				epP	pP	03 51 58.4	-3.2
PRU				eS	S	04 01 44.8	+8.2
PRU				AMS	AMS	04 29 00.0	
	comp=Z,3µm,17.9s						
PRU	Pruhonice	75.75	336	eP	P	03 51 54.1	-1.8
PRU				MLR	MLR		
	comp=Z,3µm,17.9s						
GOPC	GO Pecny, Ondr	75.75	335	eP	P	03 51 54.7	-1.2
GOPC				epP	pP	03 51 58.2	-3.4
GOPC				eS	S	04 01 38.7	+2.1
GOPC				AMS	AMS	04 29 00.0	
	comp=Z,2µm,19.9s						
GOPC	GO Pecny, Ondr	75.75	335	eP	P	03 51 54.7	-1.2
GOPC				eS	S	04 01 38.7	+2.1
GOPC				MLR	MLR		
	comp=Z,2µm,19.9s						
VRAC	Vranov	75.79	334	⇓iP	P	03 51 55.2	-1.0
VRAC	Vranov	75.79	334	⇓P	P	03 51 55.2	-1.0
VRAC	Vranov	75.79	334	eP	P	03 51 54.7	-1.5
VRAC				e		03 51 58.8	
O48A	Farmland	75.80	44	P	P	03 51 56.4	+0.1
	baz=324						
WTSB	Winterswijk	75.80	341	i P	P	03 51 58.2	+2.2
	comp=Z,73nm,1.2s						
VYHS	Vyhne	75.86	332	eP	P	03 51 55.2	-1.3
VYHS				pmax	pmax		
	comp=Z,42nm,1.6s						
VYHS	Vyhne	75.86	332	eP	P	03 51 55.2	-1.3
VYHS				e		03 51 59.0	
CJR	Cluj-Napoca	75.88	328	⇑iP	P	03 51 56.2	-0.5
CJR	Cluj-Napoca	75.88	328	⇑P	P	03 51 56.2	-0.5
JAVC	Velka Javorina	75.88	333	eP	P	03 51 56.0	-0.7
JAVC				e		03 52 00.1	
T43A	Greenville	75.88	49	P	P	03 51 57.7	+0.8
	baz=322						
DOPR	Dopca	75.90	327	⇓iP	P	03 51 56.8	0.0
JCT	Junction City	75.90	60	P	P	03 51 57.7	+0.6
	baz=320						
JCT	Junction City	75.90	60	eP	P	03 51 58.5	+1.4
	comp=Z,34nm,1.0s						
JCT				LR	LR		
	comp=Z,698nm,20.0s						
JCT	Junction City	75.90	60	eP	P	03 51 58.5	+1.4
JCT				pmax	pmax		
	comp=Z,34nm,1.0s						
P47A	Martinsville	75.91	45	P	P	03 51 57.6	+0.7
	baz=324						
R45A	Skylar, Fairfi	75.91	47	P	P	03 51 57.4	+0.5
	baz=323						
S44A	Carbondale	75.91	48	P	P	03 51 57.3	+0.4
	baz=323						
X39A	Fountain Ranch	75.93	53	P	P	03 51 57.6	+0.4
	baz=321						
W40A	Ferguson Farm,	75.95	52	P	P	03 51 57.9	+0.6
	baz=321						
W40A	Ferguson Farm,	75.95	52	eP	P	03 51 59.0	+1.7
	comp=Z,46nm,0.9s						
V41A	Mountainview	75.96	51	P	P	03 51 57.6	+0.3
	baz=322						
U42A	Revenden	75.98	50	P	P	03 51 58.0	+0.6
	baz=322						
PSZ	Piszkesteto	76.04	331	⇑iP	P	03 51 56.3	-1.4
PSZ	Piszkesteto	76.04	331	eP	P	03 51 59.7	+2.0
	comp=Z,31nm,1.2s						
PSZ	Piszkesteto	76.04	331	eP	P	03 51 59.7	+2.0
PSZ				pmax	pmax		
	comp=Z,31nm,1.2s						
PBMO	Poplar Bluff	76.05	49	eP	P	03 51 59.1	+1.3
	comp=Z,68nm,1.4s						
HARR	Harsova	76.05	325	⇑iP	P	03 51 55.9	-1.8
HARR	Harsova	76.05	325	⇑P	P	03 51 55.9	-1.8
WHTX	Lake Whitney,	76.06	57	P	P	03 51 58.0	+0.1
	baz=320						
TIRR	Tirgusor	76.07	324	⇓iP	P	03 51 56.1	-1.6
TIRR	Tirgusor	76.07	324	eP	P	03 51 55.9	-1.9
	comp=Z,36nm,1.2s						
TIRR	Tirgusor	76.07	324	eP	P	03 51 55.9	-1.9
TIRR				pmax	pmax		
	comp=Z,36nm,1.2s						
KRUC	Moravsky	76.07	334	eP	P	03 51 56.1	-1.6
KRUC				e		03 52 00.4	
NKC	Novy Kostel	76.08	337	eP	P	03 51 55.6	-2.2
NKC				epP	pP	03 52 00.3	-3.2
NKC				AMS	AMS	04 30 20.0	
	comp=Z,2µm,16.5s						
NKC	Novy Kostel	76.08	337	eP	P	03 51 55.6	-2.2
NKC				MLR	MLR		
	comp=Z,2µm,16.5s						
TLB	Topalu	76.10	325	⇑iP	P	03 51 56.0	-1.9
TLB	Topalu	76.10	325	⇑P	P	03 51 56.0	-1.9
MLR	Muntele Rosu	76.11	326	LR	LR	04 27 57.2	
	comp=Z,1µm,20.8s,baz=38,slow=38						
MLR	Muntele Rosu	76.11	326	⇓iP	P	03 51 57.2	-1.0
MLR	Muntele Rosu	76.11	326	eP	P	03 51 56.9	-1.2
	comp=Z,31nm,0.8s						
MLR	Muntele Rosu	76.11	326	eP	P	03 51 56.9	-1.2
MLR				pmax	pmax		
	comp=Z,31nm,0.8s						
DRGR		76.11	329	⇓iP	P	03 51 56.3	-1.8
DRGR		76.11	329	⇓P	P	03 51 56.3	-1.8
MIAR	Mount Ida	76.19	53	P	P	03 51 58.9	+0.3
	baz=321						
MIAR	Mount Ida	76.19	53	eP	P	03 51 56.0	-2.6
	comp=Z,31nm,1.0s						
MIAR				LR	LR		
	comp=Z,890nm,20.0s						
MIAR	Mount Ida	76.19	53	eP	P	03 51 56.0	-2.6
MIAR				pmax	pmax		
	comp=Z,31nm,1.0s						
MIAR				MLR	MLR		
	comp=Z,890nm,20.0s						
ISR	Istrita	76.21	326	⇑iP	P	03 51 57.8	-0.8
ISR	Istrita	76.21	326	⇑P	P	03 51 57.8	-0.8
O49A	Covington	76.22	43	P	P	03 51 58.8	0.0
	baz=325						
T44A	Benton	76.23	49	P	P	03 51 59.5	+0.7
	baz=323						
S45A	Carrier Mills	76.25	48	P	P	03 51 59.1	+0.2
	baz=323						
Q47A	Bedord North L	76.27	45	P	P	03 51 59.2	+0.1
	baz=324						
WHAR	Wooly Hollow	76.28	52	eP	P	03 52 03.5	+4.4
	comp=Z,44nm,1.1s						
N50A	Nevada	76.28	42	P	P	03 51 59.3	+0.3
	baz=325						
P48A	Milroy	76.31	44	P	P	03 51 59.5	+0.2
	baz=324						
V42A	Cord	76.33	51	P	P	03 51 59.7	+0.2
	baz=322						
U43A	Rector	76.39	50	P	P	03 51 59.5	-0.2
	baz=322						
W41B	Gary Mavity, V	76.39	52	P	P	03 52 00.5	+0.8
	baz=322						
W41B	Gary Mavity, V	76.39	52	eP	P	03 52 01.0	+1.2
	comp=Z,38nm,1.0s						
MODS	Modra-Piesok	76.43	333	eP	P	03 51 59.0	-0.8
MODS				pmax	pmax		
	comp=Z,211nm,2.2s						
MODS	Modra-Piesok	76.43	333	eP	P	03 51 59.0	-0.8
MODS				e		03 52 03.2	
MODS				eL	L	04 32 03.1	
VOIR		76.47	327	⇑iP	P	03 51 59.2	-1.0
ERPA	Erie	76.52	39	P	P	03 52 00.0	-0.4
	baz=326						
LONY	Lake Ozonia	76.55	35	P	P	03 52 01.0	+0.5
	baz=329						
LONY	Lake Ozonia	76.55	35	PFAKE		03 52 10.0	+9.5
LONY				LR	LR		
	comp=Z,729nm,22.0s						
P49A	Miami Univ. Ec	76.58	44	P	P	03 52 01.2	+0.4
	baz=324						
ICOR	Ion Corvin	76.59	324	⇓iP	P	03 51 59.9	-0.8
Q48A	North Vernon	76.60	45	P	P	03 52 01.4	+0.5
	baz=324						
X40A	Basin Creek Fa	76.62	52	P	P	03 52 01.1	+0.1
	baz=322						
U44A	Portageville	76.64	49	P	P	03 52 03.0	+1.9
	baz=323						
S46A	Don Dixon Farm	76.66	47	P	P	03 52 01.4	+0.2
	baz=323						
R47A	Wooly Knot Far	76.74	46	P	P	03 52 01.9	+0.2
	baz=324						
ILGA	Ilgaz	76.75	319	eP	P	03 52 01.6	-0.4
	comp=Z,77nm,0.8s						
Y40A	Okolona	76.75	53	P	P	03 52 02.4	+0.5
	baz=322						
DSB	Dublin	76.78	349	eP	P	03 51 59.7	-1.9
	comp=Z,42nm,0.8s						
X41A	Kaden, Bauxite	76.78	52	P	P	03 52 02.8	+0.8
	baz=322						
ACSO	Alum Creek Sta	76.79	42	PFAKE		03 52 10.0	+8.0
ACSO				LR	LR		
	comp=Z,1µm,20.0s						
KHC	Kasperske Hory	76.79	336	eP	P	03 52 00.3	-1.6
KHC				epP	pP	03 52 04.8	-2.8
KHC				ex	x	03 56 00.5	
KHC				eS	S	04 01 53.5	+5.4
KHC				AMS	AMS	04 29 30.0	
	comp=Z,4µm,18.6s						
KHC	Kasperske Hory	76.79	336	eP	P	03 52 00.6	-1.3
	comp=Z,17nm,1.1s						
KHC	Kasperske Hory	76.79	336	eP	P	03 52 00.3	-1.6
KHC				MLR	MLR		
	comp=Z,4µm,18.6s						
BANOM	Banah	76.81	294	P	P	03 52 00.6	-1.7
	SNR=9.8						
BANOM	Banah	76.81	294	P	P	03 52 00.6	-1.7
SHME	Shamm	76.81	294	i P	P	03 52 00.5	-1.8
	SNR=12						
GRFO	Grafenberg	76.89	337	eP	P	03 52 01.2	-1.2
	comp=Z,40nm,0.9s						
GRFO	Grafenberg	76.89	337	eP	P	03 52 01.2	-1.2
GRFO				pmax	pmax		
	comp=Z,41nm,0.9s						
WCI	Wyandotte Cave	76.90	46	P	P	03 52 02.8	+0.2
	baz=324						
WCI	Wyandotte Cave	76.90	46	eP	P	03 52 04.1	+1.5
WCI	Wyandotte Cave	76.90	46	eP	P	03 52 04.1	+1.5
WCI				pmax	pmax		
	comp=Z,53nm,0.8s						
435B	Jarrell	76.91	58	P	P	03 52 04.5	+1.7
	baz=320						
P50A	Jamestown	76.93	43	P	P	03 52 02.9	+0.1
	baz=325						
R48A	Northridge Ran	76.96	45	P	P	03 52 03.5	+0.6
	baz=324						
GEC2	GERESS Array S	77.02	336	eP	P	03 52 01.7	-1.5
	comp=Z,13nm,0.8s						
GEC2	GERESS Array S	77.02	336	eP	P	03 52 01.7	-1.5
GEC2				pmax	pmax		
	comp=Z,13nm,0.8s						
GERES	GERESS Array B	77.02	336	P	P	03 52 01.2	-2.1
	comp=Z,6.5nm,0.6s,baz=35,slow=5.9,SNR=29						
GERES				LR	LR	04 30 27.9	
	comp=Z,4µm,18.5s,baz=20,slow=39						
GEA0	GERESS Array S	77.03	336	eP	P	03 52 01.3	-1.9
V44A	Blytheville	77.06	50	P	P	03 52 04.6	+1.1
	baz=323						
T46A	Princeton	77.09	48	P	P	03 52 04.4	+0.8
	baz=323						
HGN	Heimansgroeve	77.11	341	i P	P	03 52 05.6	+2.1
	comp=Z,109nm,1.1s						
HGN				ePP	PP	03 55 03.9	+7.5
HGN				eS	S	04 01 59.1	+7.7
HGN				eSS	SS	04 07 06.2	+19
S47A	Hartford	77.13	47	P	P	03 52 03.1	-0.9
	baz=324						
BEBN	Eben Emael	77.14	341	⇑P	P	03 52 02.0	-1.7
BEBN				⇑AP	pP	03 52 05.9	-3.5
Y41A	Eaglette Beard	77.20	53	P	P	03 52 05.2	+0.8
	baz=322						
MBWA	Marble Bar	77.23	215	PFAKE		03 52 20.0	+16
MBWA				LR	LR		
	comp=Z,367nm,19.0s						
MEM	Membach	77.25	341	⇑P	P	03 52 02.1	-2.2
MEM				⇑AP	pP	03 52 06.4	-3.6
	comp=Z,40nm,0.9s						
CONA	Conrad Observa	77.25	334	eP	P	03 52 03.3	-1.2
	comp=Z,7.6nm,0.6s,SNR=29						
Z40A	Long Farm, Mag	77.28	54	P	P	03 52 05.7	+0.9
	baz=322						
MSFE	Esma-Masafi	77.31	294	i P	P	03 52 03.0	-2.1
	SNR=7.2						
R49A	Shelbyville	77.37	45	P	P	03 52 05.8	+0.5
	baz=324						
WSAR	Wadi Sarin	77.39	291	LR	LR	04 31 10.0	
	comp=Z,2µm,19.3s,baz=68,slow=40						
UCC	Uccle	77.41	342	⇑P	P	03 52 03.1	-2.1
UCC				⇑AP	pP	03 52 07.0	-3.9
UCC	Uccle	77.41	342	eP	P	03 52 07.5	+2.3
UCC				pmax	pmax		
	comp=Z,23nm,0.8s						
S48A	Wiedeman Farm,	77.47	46	P	P	03 52 05.9	+0.1
	baz=324						
Q50A	Georgetown	77.47	44	P	P	03 52 06.6	+0.8
	baz=325						
N54A	Moraine State	77.48	40	P	P	03 52 06.2	+0.3
	baz=327						
BZS	Buzias	77.51	329	⇑iP	P	03 52 03.7	-2.2
BZS	Buzias	77.51	329	⇑P	P	03 52 03.7	-2.2
T47A	Sharon Grove	77.51	47	P	P	03 52 06.3	+0.2
	baz=324						
PRD	Provadia	77.52	324	P	P	03 52 01.7	-4.3
BCLA	Clavier	77.57	341	⇑P	P	03 52 04.2	-2.0
BCLA				⇑AP	pP	03 52 08.3	-3.6
Z41A	Richland Creek	77.59	53	P	P	03 52 07.3	+0.8
	baz=322						
UOSS	Minazif	77.59	294	eP	P	03 52 05.0	-1.7
	comp=Z,91nm,1.0s						
UOSS	Minazif	77.59	294	i P	P	03 52 04.9	-1.8
	SNR=28						
Q51A	Peebles	77.61	43	P	P	03 52 06.9	+0.3
	baz=325						
140A	Cam and Jess,	77.66	54	P	P	03 52 07.5	+0.6
	baz=322						
Y42A	Garnett, Star	77.67	52	P	P	03 52 06.0	-0.9
	baz=322						
SNF	Seneffe	77.70	342	⇑P	P	03 52 05.0	-1.8
SNF				⇓AP	pP	03 52 09.2	-3.3
	comp=Z,44nm,1.0s						
HATD	Hatta, Dubai	77.72	294	P	P	03 52 05.8	-1.7
	SNR=21						
HATD	Hatta, Dubai	77.72	294	i P	P	03 52 06.1	-1.4
	SNR=36						
S49A	Springfield	77.73	45	P	P	03 52 07.5	+0.3
	baz=324						
T48A	Bowling Green	77.75	47	P	P	03 52 04.8	-2.6
	baz=324						
833A	Chaparral WMA,	77.76	61	P	P	03 52 08.4	+0.8
	baz=320						
NATX	Nacogdoches	77.76	55	eP	P	03 52 09.4	+1.9
NATX				LR	LR		
	comp=Z,614nm,21.0s						
MOA	Molln	77.77	335	eP	P	03 52 05.9	-1.4
	comp=Z,3.0nm,0.6s,SNR=9.4						
WVT	Waverly	77.84	48	P	P	03 52 07.6	-0.4
	baz=324						
WVT	Waverly	77.84	48	eP	P	03 52 09.4	+1.5
	comp=Z,21nm,0.9s						
WVT	Waverly	77.84	48	eP	P	03 52 09.4	+1.5
WVT				pmax	pmax		
	comp=Z,21nm,1.0s						
U47A	Clarksville	77.86	48	P	P	03 52 07.3	-0.7
	baz=324						
PKME	Peaks-Kenny Pk	77.87	31	P	P	03 52 08.3	+0.4
	baz=332						
PKME	Peaks-Kenny Pk	77.87	31	PFAKE		03 52 20.0	+12
PKME				LR	LR		
	comp=Z,941nm,20.0s						
ASHO	Ashiyiah	77.88	294	P	P	03 52 06.7	-1.6
	SNR=21						
ASHO	Ashiyiah	77.88	294	P	P	03 52 06.9	-1.5
BR131	Keskin Array S	77.88	318	eP	P	03 52 06.5	-1.7
BRTR	Keskin Array B	77.88	318	P	P	03 52 06.5	-1.7
	comp=Z,19nm,0.9s,baz=54,slow=4.0,SNR=29						
BRTR				LR	LR	04 29 41.2	
	comp=Z,401nm,21.1s,baz=14,slow=38						
HERR	Herculane	77.88	328	⇓iP	P	03 52 05.7	-2.3
NAZ	Nazwa, Dubai	77.89	294	P	P	03 52 11.0	+2.7
	SNR=9.5						
NAZ	Nazwa, Dubai	77.89	294	i P	P	03 52 06.9	-1.4
	SNR=5.7						
ARSA	Arzberg	77.96	334	eP	P	03 52 07.2	-1.2
	comp=Z,12nm,0.8s,SNR=12						
V46A	Holladay	77.97	48	P	P	03 52 09.3	+0.7
	baz=323						
SZH	Strazhica	78.02	325	P	P	03 52 06.2	-2.6
Z42A	Norrel Spur, H	78.02	53	P	P	03 52 09.4	+0.4
	baz=322						
DOU	Dourbes	78.03	342	⇑P	P	03 52 06.8	-1.9
DOU				⇑AP	pP	03 52 10.8	-3.6
240A	Hunter Patters	78.03	55	P	P	03 52 09.7	+0.7
	baz=322						
Y43A	Makayla and Ka	78.05	51	P	P	03 52 09.3	+0.2
	baz=322						
BINY	Binghamton	78.07	37	P	P	03 52 09.2	+0.1
	baz=329						
BINY	Binghamton	78.07	37	PFAKE		03 52 20.0	+11
BINY				LR	LR		
	comp=Z,815nm,20.0s						
R51A	Hillsboro	78.09	44	P	P	03 52 10.0	+0.7
	baz=325						
WLF	Walferdange	78.11	341	⇑P	P	03 52 08.4	-0.7
WLF				⇑AP	pP	03 52 11.9	-2.9
WLF	Walferdange	78.11	341	eP	P	03 52 13.0	+3.9
WLF				pmax	pmax		
	comp=Z,20nm,1.0s						
ANTO	Ankara	78.12	319	⇑iP	P	03 52 08.8	-0.7
ANTO	Ankara	78.12	319	eP	P	03 52 08.0	-1.5
	comp=Z,40nm,0.8s						
ANTO				LR	LR		
	comp=Z,831nm,19.0s						
ANTO	Ankara	78.12	319	P	P	03 52 08.2	-1.3
	SNR=15						
ANTO	Ankara	78.12	319	eP	P	03 52 08.0	-1.5
ANTO				pmax	pmax		
	comp=Z,40nm,0.8s						
BR231	Keskin MP Arra	78.15	319	eP	P	03 52 09.1	-0.7
T49A	Edmonton	78.16	46	P	P	03 52 10.4	+0.7
	baz=324						
T49A	Edmonton	78.16	46	eP	P	03 52 12.7	+3.0
	comp=Z,24nm,0.9s						
MDVR	Moldovita	78.21	329	⇓iP	P	03 52 07.8	-2.1
S50A	Richmond	78.23	45	P	P	03 52 10.5	+0.5
	baz=325						
V47A	Nunnelly	78.24	48	P	P	03 52 10.9	+0.8
	baz=324						
OXF	Oxford	78.35	50	P	P	03 52 11.5	+0.8
	baz=323						
OXF	Oxford	78.35	50	eP	P	03 52 11.6	+0.8
ASUD	Al Ashush, Dub	78.36	294	P	P	03 52 09.7	-1.3
Z43A	Armstrong Fami	78.44	52	P	P	03 52 11.9	+0.6
	baz=322						
KOGS	Kog	78.47	333	eP	P	03 52 13.1	+1.8
R52A	Catlettsburg	78.49	43	P	P	03 52 11.8	+0.3
	baz=326						
VAL	Valentia	78.49	351	⇓iP	P	03 52 10.8	-0.4
HKT	Hockley	78.52	57	eP	P	03 52 13.2	+1.5
	comp=Z,85nm,1.5s						
HKT	Hockley	78.52	57	eP	P	03 52 13.2	+1.5
HKT				pmax	pmax		
	comp=Z,85nm,1.5s						
U49A	Red Boiling Sp	78.52	46	P	P	03 52 11.4	-0.3
	baz=324						
ALNE	Al Ain	78.53	293	i P	P	03 52 10.5	-1.4
	SNR=6.2						
T50A	Nancy	78.56	46	P	P	03 52 12.4	+0.5
	baz=325						
142A	Monroe	78.59	53	P	P	03 52 13.1	+1.0
	baz=322						
SOKA	Soboth	78.62	334	eP	P	03 52 10.6	-1.6
	comp=Z,29nm,0.8s,SNR=41						
SSPA	Standing Stone	78.63	39	P	P	03 52 12.6	+0.4
	baz=328						
S51A	Beattyville	78.63	44	P	P	03 52 12.1	-0.2
	baz=325						
V48A	Smith Brothers	78.64	48	P	P	03 52 12.4	0.0
	baz=324						
O56A	Blue Knob Stat	78.66	40	P	P	03 52 12.7	+0.3
	baz=328						
W47A	Westpoint	78.66	48	P	P	03 52 12.7	+0.2
	baz=324						
AUMIH	MIHALICIK	78.68	320	i P	P	03 52 11.0	-1.7
X46A	Booneville	78.72	50	P	P	03 52 13.1	+0.3
	baz=323						
KBA	Koelnbreinsper	78.73	335	eP	P	03 52 11.9	-0.9
	comp=Z,14nm,0.5s,SNR=49						
Y45A	Yeager Farm, C	78.79	51	P	P	03 52 13.9	+0.7
	baz=323						
S52A	Salyersville	78.83	44	P	P	03 52 13.6	+0.2
	baz=326						
BFO	Black Forest	78.86	339	eP	P	03 52 11.3	-2.1
	comp=Z,22nm,0.8s						
BFO	Black Forest	78.86	339	i P	P	03 52 11.7	-1.7
242A	Grayson	78.86	53	P	P	03 52 14.6	+1.0
	baz=322						
341A	Kurthwood	78.89	55	P	P	03 52 14.8	+1.0
	baz=322						
341A	Kurthwood	78.89	55	eP	P	03 52 18.3	+4.5
	comp=Z,59nm,1.3s						
OBKA	Obir	78.91	334	eP	P	03 52 12.1	-1.7
	comp=Z,5.3nm,0.5s,SNR=8.5						
WATA	Walderalm	78.97	336	i P	P	03 52 13.9	-0.3
	comp=Z,16nm,0.8s,SNR=8.0						
T51A	Gray	79.02	45	P	P	03 52 14.1	-0.3
	baz=325						
WTTA	Wattenberg	79.02	336	eP	P	03 52 13.6	-0.9
	comp=Z,8.3nm,0.6s,SNR=24						
RETA	Reutte	79.05	337	eP	P	03 52 13.0	-1.5
	comp=Z,6.0nm,0.7s,SNR=26						
U50A	Jamestown	79.05	46	P	P	03 52 14.3	-0.3
	baz=325						
MYKA	Terra Mystica	79.06	335	eP	P	03 52 13.2	-1.3
	comp=Z,4.4nm,0.5s,SNR=11						
V49A	McMinnville	79.07	47	P	P	03 52 15.2	+0.5
	baz=324						
W48A	Pulaski	79.07	48	P	P	03 52 15.0	+0.2

	baz=324						
BORA	Eskisehir	79.11	320	iP	P	03 52 14.1	-0.9
Z45A	Winona	79.11	51	P	P	03 52 15.0	0.0
	baz=323						
X47A	Russelville	79.12	49	P	P	03 52 15.2	+0.2
	baz=324						
Y46A	Houston	79.12	50	P	P	03 52 14.0	-1.0
	baz=323						
KVTX	Kingsville	79.21	60	PFAKE		03 52 30.0	+14
KVTX				LR	LR		
	comp=Z,567nm,20.0s						
ESKT	Eskisehir	79.24	320	iP	P	03 52 13.4	-2.3
ECH	Echery	79.24	339	eP	P	03 52 13.6	-1.9
	comp=Z,26nm,0.8s						
ECH	Echery	79.24	339	eP	P	03 52 13.6	-1.9
ECH				pmax	pmax		
	comp=Z,26nm,0.8s						
N59A	State Game Lan	79.25	37	P	P	03 52 16.6	+1.0
	baz=329						
342A	Flagon Creek P	79.31	54	P	P	03 52 16.8	+0.7
	baz=322						
T52A	Hallie	79.34	44	P	P	03 52 17.0	+0.8
	baz=326						
LJU	Ljubljana	79.34	334	iP	P	03 52 17.9	+1.8
243A	Waterproof	79.36	53	P	P	03 52 18.0	+1.7
	baz=322						
DIVS	Divibare	79.39	329	eP	P	03 52 14.0	-2.5
	comp=Z,32nm,0.8s						
W49A	Belvidere	79.41	48	P	P	03 52 17.2	+0.6
	baz=324						
DAVA	Damuels	79.46	337	eP	P	03 52 15.3	-1.5
	comp=Z,4.3nm,0.5s,SNR=8.8						
U51A	La Follette	79.46	45	P	P	03 52 17.1	+0.2
	baz=325						
FETA	Feichten	79.48	337	iP	P	03 52 15.5	-1.5
	comp=Z,6.1nm,0.9s,SNR=12						
SWET	Sewanee	79.50	47	eP	P	03 52 18.2	+1.1
	comp=Z,37nm,1.0s						
V50A	Pikevile	79.53	47	P	P	03 52 17.2	0.0
	baz=325						
TZTN	Tazewell	79.54	45	P	P	03 52 18.2	+0.9
	baz=325						
X48A	Hartselle	79.57	49	P	P	03 52 18.0	+0.5
	baz=324						
VTS	Vitosha	79.60	327	⇑iP	P	03 52 15.9	-1.8
VTS	Vitosha	79.60	327	eP	P	03 52 15.2	-2.5
	comp=Z,51nm,0.9s						
VTS	Vitosha	79.60	327	P	P	03 52 15.6	-2.1
VTS	Vitosha	79.60	327	eP	P	03 52 15.2	-2.5
VTS				pmax	pmax		
	comp=Z,51nm,0.9s						
KDZ	Kurdzhali	79.60	325	P	P	03 52 15.7	-1.8
Y47A	UCPARC, Winfie	79.61	49	P	P	03 52 18.1	+0.4
	baz=324						
BOJS	Bojanci	79.62	333	iP	P	03 52 19.5	+1.9
244A	Avery, Jackson	79.65	53	P	P	03 52 17.7	-0.2
	baz=323						
BLY	Banja Luka	79.72	332	⇓iP	P	03 52 15.1	-3.0
BLY	Banja Luka	79.72	332	eP	P	03 52 20.1	+2.0
	comp=Z,12nm,0.9s						
U52A	Thorn Hill	79.75	45	P	P	03 52 19.5	+1.1
	baz=326						
V51A	Loudon	79.77	46	P	P	03 52 19.4	+0.9
	baz=325						
W50A	Signal Mountai	79.81	47	P	P	03 52 19.6	+0.8
	baz=325						
W50A	Signal Mountai	79.81	47	eP	P	03 52 21.2	+2.5
	comp=Z,24nm,0.9s						
RZN	Rozhen	79.83	325	P	P	03 52 17.0	-2.0
X49A	Woodville	79.87	48	P	P	03 52 19.0	-0.1
	baz=324						
541A	Lake Charles	79.88	55	P	P	03 52 18.6	-0.5
	baz=322						
PAL	Palisades	79.90	36	P	P	03 52 19.6	+0.5
	baz=330						
DAVOX	Davos/Dischmat	79.93	337	LR	LR	04 32 32.0	
	comp=Z,2µm,18.1s,baz=18,slow=39						
Y48A	Jasper	79.94	49	P	P	03 52 19.1	-0.3
	baz=324						
FUORN	Ofenpass-Fuorn	79.98	337	eP	P	03 52 19.0	-0.8
	comp=Z,47nm,0.9s						
ALN	Alexandroupoli	80.01	324	eP	P	03 52 18.5	-1.2
	comp=Z,23nm,1.1s						
ALN	Alexandroupoli	80.01	324	eP	P	03 52 18.5	-1.2
ALN				pmax	pmax		
	comp=Z,23nm,1.0s						
146A	Union	80.01	51	P	P	03 52 21.3	+1.5
	baz=323						
245A	Little AP, Sta	80.06	52	P	P	03 52 21.1	+1.0
	baz=323						
Z47A	Carrollton	80.06	50	P	P	03 52 19.9	-0.3
	baz=324						
344A	Westbrook Farm	80.09	53	P	P	03 52 21.5	+1.2
	baz=323						
V52A	Sevierville	80.10	45	P	P	03 52 19.1	-1.2
	baz=326						
ZAIG	Zacatecas	80.10	67	eP	P	03 52 23.2	+2.4
	comp=Z,15nm,1.1s						
W51A	Cleveland	80.10	47	P	P	03 52 20.3	0.0
	baz=325						
U53A	Fall Branch	80.14	44	P	P	03 52 20.2	-0.4
	baz=326						
DURS	Dursunbey	80.16	322	iP	P	03 52 17.9	-2.8
TKL	Tuckaleechee C	80.16	46	LR	LR	04 31 30.2	
	comp=Z,1µm,18.5s,baz=334,slow=38						
TAOE	Nuku Hiva Isla	80.18	116	eS	S	04 02 26.6	+1.3
	comp=Z,439nm,25.9s						
TAOE	Nuku Hiva Isla	80.18	116	eLR	LR	04 17 33.5	
	comp=Z,3µm,23.0s						
Z48A	Northport	80.18	50	P	P	03 52 20.2	-0.6
	baz=324						
X50B	Fort Payne	80.24	48	P	P	03 52 21.6	+0.4
	baz=325						
PLE	Pljevlja	80.28	329	⇓iP	P	03 52 19.3	-2.0
KKB	Krupnik	80.28	326	P	P	03 52 19.2	-2.0
MMB	Musomiste	80.29	326	P	P	03 52 19.4	-1.9
TUE	Stuetta	80.35	337	eP	P	03 52 20.4	-1.3
	comp=Z,57nm,0.8s						
Y49A	Blount Mountai	80.36	48	P	P	03 52 22.3	+0.6
	baz=324						
147A	Livingston	80.38	50	P	P	03 52 23.0	+1.2
	baz=324						
RAR	Rarotonga	80.40	139	LR	LR	04 21 10.2	
	comp=Z,707nm,19.3s,baz=303,slow=31						
BLA	Blacksburg	80.41	42	P	P	03 52 22.9	+0.9
	baz=327						
BLA	Blacksburg	80.41	42	eP	P	03 52 23.5	+1.5
	comp=Z,25nm,1.0s						
BLA				LR	LR		
	comp=Z,701nm,21.0s						
IVA	Berane	80.51	329	⇓iP	P	03 52 20.2	-2.3
UPM	Unac-Piva	80.55	330	⇓iP	P	03 52 20.3	-2.5
BAGO	Egridir - ISPA	80.55	319	iP	P	03 52 21.0	-1.8
W52A	Murphy	80.55	46	P	P	03 52 23.9	+1.1
	baz=325						
345A	Thompson Farm,	80.57	53	P	P	03 52 23.1	+0.2
	baz=323						
NVLJ	Novalja	80.59	333	P	P	03 52 17.6	-5.1
V53A	Saluda	80.60	45	P	P	03 52 24.1	+1.1
	baz=326						
STEP	BALIKESIR_Sava	80.65	322	iP	P	03 52 20.0	-3.3
KOME	Kolasin	80.66	329	⇓iP	P	03 52 21.0	-2.3
Y50A	Piedmont	80.66	48	P	P	03 52 24.1	+0.7
	baz=325						
MZR	Muzera	80.69	294	iP	P	03 52 22.4	-1.3
	SNR=17						
247A	Quitman	80.71	51	P	P	03 52 24.7	+1.1
	baz=324						
LRAL	Lakeview Retre	80.73	49	eP	P	03 52 25.7	+2.0
	comp=Z,14nm,1.0s						
PVY	Plav	80.74	329	⇓iP	P	03 52 21.1	-2.7
KHAL	Karahalli	80.78	320	iP	P	03 52 20.0	-4.1
PMOR	Pomariorio Ree	80.83	126	eT	T	05 21 43.9	
	comp=Z,3.1nm,0.2s						
Z49A	Columbiana	80.83	49	P	P	03 52 24.7	+0.4
	baz=324						
W53A	Cullowhee	80.85	45	P	P	03 52 25.3	+0.8
	baz=326						
NKY	Niksic	80.87	330	⇓iP	P	03 52 21.9	-2.6
CBN	Corbin Frederi	80.89	40	PFAKE		03 52 40.0	+16
CBN				LR	LR		
	comp=Z,949nm,19.0s						
NKME	Niksic	80.92	330	eP	P	03 52 22.0	-2.7
BRY	Bratogost	80.94	330	⇓iP	P	03 52 22.0	-2.9
SENIN	Lac Senin/Sane	80.95	339	eP	P	03 52 25.2	+0.2
	comp=Z,20nm,0.9s						
X52A	Dahlonega	80.97	46	P	P	03 52 25.7	+0.7
	baz=326						
Y51A	Rockmart	80.98	48	P	P	03 52 25.5	+0.5
	baz=325						
AKHS	Akhisar	81.04	322	iP	P	03 52 26.9	+1.5
MANT	Manisa	81.07	321	iP	P	03 52 17.0	-8.7
Z50A	Ashland	81.09	49	P	P	03 52 26.4	+0.8
	baz=325						
Z50A	Ashland	81.09	49	eP	P	03 52 26.7	+1.1
	comp=Z,38nm,0.9s						
BRDR	BURDUR-Merkez	81.11	320	iP	P	03 52 23.9	-1.8
PDG	Podgorica	81.12	329	⇑iP	P	03 52 23.3	-2.4
TTG	Podgorica	81.12	329	⇓iP	P	03 52 23.5	-2.1
TTG	Podgorica	81.12	329	eP	P	03 52 23.2	-2.4
	comp=Z,50nm,0.9s						
TTG	Podgorica	81.12	329	eP	P	03 52 23.2	-2.4
TTG				pmax	pmax		
	comp=Z,50nm,0.9s						
CEME	Cevo	81.13	329	⇓iP	P	03 52 23.1	-2.7
149A	Jones	81.19	49	P	P	03 52 26.4	+0.2
	baz=324						
347A	Saraland	81.26	51	P	P	03 52 27.0	+0.4
	baz=324						
446A	Poplarville	81.32	52	P	P	03 52 27.7	+0.8
	baz=324						
545A	Edgard	81.33	54	P	P	03 52 27.6	+0.7
	baz=323						
X53A	Estanollee	81.33	46	P	P	03 52 27.3	+0.4
	baz=326						
BUM	Brajici-Budva	81.36	329	⇓iP	P	03 52 24.1	-2.9
HCY	Herceg Novi	81.36	330	⇓iP	P	03 52 23.8	-3.1
DRME	Dracevica, Mon	81.36	329	⇓iP	P	03 52 24.9	-2.1
Y52A	Lilburn	81.49	47	P	P	03 52 28.5	+0.8
	baz=326						
249A	Camden	81.52	50	P	P	03 52 28.5	+0.6
	baz=324						
ULC	Ulcinj	81.54	329	⇓iP	P	03 52 25.5	-2.4
RAO	Raoul Island	81.55	157	PFAKE		03 52 40.0	+12
RAO				LR	LR		
	comp=Z,1µm,19.0s						
150A	Eclectic	81.56	49	P	P	03 52 28.1	0.0
	baz=325						
447A	Lucedale	81.69	52	P	P	03 52 29.0	+0.2
	baz=324						
GOLH	Golhisar	81.71	320	iP	P	03 52 27.3	-1.7
KMSC	Kings Mountain	81.72	44	P	P	03 52 28.9	-0.1
	baz=327						
TAVA	DENIZLI_Tavas	81.79	320	iP	P	03 52 27.9	-1.6
STKA	Stephens Creek	81.82	192	LR	LR	04 28 06.8	
	comp=Z,428nm,20.3s,baz=10,slow=35						
STKA	Stephens Creek	81.82	192	eP	P	03 52 33.9	+4.7
	comp=Z,1.9nm,1.0s						
STKA	Stephens Creek	81.82	192	eP	P	03 52 33.9	+4.7
STKA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
FNA	Florina	81.85	327	eP	P	03 52 27.4	-2.1
	comp=Z,34nm,1.1s						
FNA	Florina	81.85	327	eP	P	03 52 27.5	-2.1
FNA				pmax	pmax		
	comp=Z,34nm,1.1s						
Z52A	Williamson	81.87	48	P	P	03 52 30.5	+0.7
	baz=325						
250A	Grady	81.95	49	P	P	03 52 31.1	+0.9
	baz=325						
CSS	Mathiatis	81.95	316	eP	P	03 52 30.6	+0.4
	comp=Z,30nm,0.7s						
CSS	Mathiatis	81.95	316	P	P	03 52 30.2	0.0
151A	Opelika	81.97	49	P	P	03 52 30.7	+0.4
	baz=325						
URLA	Izmir	81.98	322	iP	P	03 52 28.5	-1.8
448A	Bay Minette	81.99	51	P	P	03 52 30.9	+0.5
	baz=324						
349A	Repton	81.99	51	P	P	03 52 31.4	+1.0
	baz=324						
LIT	Litokhoron	82.04	326	eP	P	03 52 32.1	+1.5
	comp=Z,14nm,0.7s						
LIT	Litokhoron	82.04	326	eP	P	03 52 32.1	+1.5
LIT				pmax	pmax		
	comp=Z,14nm,0.7s						
PPT	Papeete	82.09	129	LR	LR	04 28 52.1	
	comp=Z,360nm,18.2s,baz=321,slow=36						
PPT2	Papeete2	82.11	129	eS	S	04 02 46.0	+0.9
	comp=Z,1µm,33.2s						
PPT2	Papeete2	82.11	129	eLR	LR	04 18 05.3	
	comp=Z,430nm,21.8s						
ALFC	Alefka	82.12	316	P	P	03 52 29.6	-1.5
Y54A	Tignall	82.14	46	P	P	03 52 31.7	+0.4
	baz=326						
GOGA	Godfrey	82.15	47	P	P	03 52 31.7	+0.5
	baz=326						
GOGA	Godfrey	82.15	47	eP	P	03 52 31.5	+0.3
	comp=Z,9.3nm,0.9s						
GOGA				LR	LR		
	comp=Z,725nm,19.0s						
GOGA	Godfrey	82.15	47	eP	P	03 52 31.5	+0.3
GOGA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
GOGA				MLR	MLR		
	comp=Z,725nm,19.0s						
152A	Waverly Hall	82.15	48	P	P	03 52 32.1	+0.8
	baz=325						
Z53A	Monticello	82.20	47	P	P	03 52 31.9	+0.3
	baz=326						
BRAL	Brewton	82.21	51	P	P	03 52 32.3	+0.8
	baz=324						
BRAL	Brewton	82.21	51	PFAKE		03 52 40.0	+8.4
BRAL				LR	LR		
	comp=Z,928nm,19.0s						
VLC	Villacollemand	82.23	336	eP	P	03 52 30.5	-1.0
	comp=Z,100nm,1.3s						
251A	Midway	82.28	49	P	P	03 52 32.2	+0.3
	baz=325						
SZAC	Souni	82.33	316	P	P	03 52 30.2	-2.0
BNI	Bardonecchia	82.33	339	eP	P	03 52 31.4	-0.8
	comp=Z,22nm,0.9s						
BNI	Bardonecchia	82.33	339	eP	P	03 52 31.4	-0.8
BNI				pmax	pmax		
	comp=Z,22nm,0.9s						
AKMC	Akamas	82.35	316	P	P	03 52 28.6	-3.7
350A	Dozier	82.36	50	P	P	03 52 33.4	+1.0
	baz=325						
449A	Pace	82.45	51	P	P	03 52 33.2	+0.4
	baz=324						
PPCY	Paphos	82.46	316	P	P	03 52 32.0	-0.8
ASF	Jabal al Asfar	82.56	312	LR	LR	04 33 24.1	
	comp=Z,462nm,19.7s,baz=320,slow=39						
Z54A	Sparta	82.59	46	P	P	03 52 34.4	+0.9
	baz=326						
MMAI	Mount Meron Ar	82.59	313	P	P	03 52 32.5	-1.2
	comp=Z,12nm,0.5s,baz=35,slow=6.0,SNR=6.0						
MMAI				LR	LR	04 35 26.5	
	comp=Z,726nm,18.4s,baz=0.0,slow=40						
153A	Fort Valley	82.59	47	P	P	03 52 34.3	+0.7
	baz=326						
351A	Pinckard	82.85	49	P	P	03 52 35.3	+0.4
	baz=325						
253A	Americus	82.93	48	P	P	03 52 36.1	+0.8
	baz=326						
Z55A	Blythe	82.93	46	P	P	03 52 35.6	+0.3
	baz=326						
154A	Montrose	82.97	47	P	P	03 52 35.7	+0.2
	baz=326						
AQU	L'Aquila	83.04	333	eP	P	03 52 38.5	+2.7
AQU				pmax	pmax		
	comp=Z,46nm,0.9s						
AGG	Agios Georgios	83.05	325	eP	P	03 52 36.8	+0.9
AGG				pmax	pmax		
	comp=Z,36nm,1.0s						
CNNC	Cliffs of the	83.17	42	PFAKE		03 52 50.0	+13
CNNC				LR	LR		
	comp=Z,1µm,19.0s						
254A	Abbeville	83.43	47	P	P	03 52 38.4	+0.5
	baz=326						
MATE	Matera	83.56	330	⇓iP	P	03 52 36.7	-1.7
255A	Hazlehurst	83.84	47	P	P	03 52 41.3	+1.3
	baz=326						
NHSC	New Hope	83.94	45	PFAKE		03 52 50.0	+10
NHSC				LR	LR		
	comp=Z,1µm,22.0s						
CUC	Castrocucco	84.44	330	eP	P	03 52 44.4	+1.4
	comp=Z,37nm,1.4s						
TIP	Timpagrande	84.87	329	⇑iP	P	03 52 47.3	+2.1
RAYN	Ar Rayn	84.92	300	eP	P	03 52 43.9	-1.8
RAYN				LR	LR		
	comp=Z,809nm,19.0s						
RAYN	Ar Rayn	84.92	300	iP	P	03 52 44.0	-1.7
	SNR=37						
RAYN	Ar Rayn	84.92	300	eP	P	03 52 43.9	-1.8
RAYN				MLR	MLR		
	comp=Z,809nm,19.0s						
IDI	Anoyia	85.31	322	LR	LR	04 37 19.6	
	comp=Z,312nm,18.6s,baz=352,slow=40						
657A	Interlachen	86.07	48	P	P	03 52 51.0	-0.2
	baz=327						
TBI	Tubuai	87.01	132	eS	S	04 03 33.0	-0.5
	comp=Z,358nm,25.2s						
TBI	Tubuai	87.01	132	eLR	LR	04 20 21.4	
	comp=Z,1µm,31.5s,baz=327						
TBI	Tubuai	87.01	132	eT	T	05 29 25.0	
	comp=Z,1.8nm,0.3s						
VAE	Valguarnera	87.19	330	LR	LR	04 36 43.4	
	comp=Z,577nm,19.3s,baz=17,slow=39						
859A	Kempfer Cattle	87.80	48	P	P	03 52 59.9	+0.2
	baz=327						
NWAO	Narrogin (SRO)	88.85	212	LR	LR	04 35 32.2	
	comp=Z,198nm,18.8s,baz=292,slow=37						
ES19	SONSECA Array	89.65	345	eP	P	03 53 05.9	-2.5
ESDC	Sonseca Array	89.69	345	P	P	03 53 06.1	-2.4
	comp=Z,2.5nm,0.7s,baz=13,slow=4.5,SNR=14						
ESDC				LR	LR	04 41 48.5	
	comp=Z,653nm,18.0s,baz=15,slow=41						
ESLA	Sonseca Array	89.69	345	eP	P	03 53 09.5	+1.0
	comp=Z,16nm,1.4s						
PAB	San Pablo	89.88	345	PFAKE		03 53 20.0	+11
PAB				LR	LR		
	comp=Z,2µm,19.0s						
KEST	Kesra	90.36	334	P	P	03 53 10.6	-1.1
	comp=Z,9.4nm,0.8s,baz=81,slow=1.6,SNR=12						
KEST				LR	LR	04 37 54.0	
	comp=Z,2µm,21.1s,baz=328,slow=38						
KEST	Kesra	90.36	334	eP	P	03 53 12.6	+0.9
	comp=Z,14nm,0.8s						
THTN	Thala	90.70	334	eP	P	03 53 14.9	+1.5
	comp=Z,14nm,1.1s						
ALMR	Almeirim	90.91	348	eP	P	03 53 15.2	+1.0
ALMR	Almeirim	90.91	348	eP	P	03 53 15.1	+1.0
BBSR	BB Station	90.97	34	PFAKE		03 53 30.0	+16
BBSR				LR	LR		
	comp=Z,531nm,19.0s						
SNZO	South Karori	91.69	166	PFAKE		03 53 30.0	+13
SNZO				LR	LR		
	comp=Z,667nm,20.0s						
MESJ	Messejana	92.15	348	eP	P	03 53 21.1	+1.2
MESJ				eSKS	SKSac	04 03 52.6	+0.5
MESJ				AMS	AMS	04 42 57.5	
	comp=Z,1µm,20.4s						
MESJ	Messejana	92.15	348	eP	P	03 53 21.1	+1.2
MESJ				e		04 03 52.6	
MORF	Marmelete	92.73	348	eP	P	03 53 23.9	+1.2
MORF				AMS	AMS	04 43 08.1	
	comp=Z,1µm,16.6s						
MORF	Marmelete	92.73	348	eP	P	03 53 23.8	+1.2
ATD	Arta Tunnel	95.93	295	LR	LR	04 42 49.6	
	comp=Z,1µm,18.2s,baz=38,slow=39						
MDT	Midelt	96.48	344	LR	LR	04 43 12.4	
	comp=Z,462nm,20.0s,baz=38,slow=39						
GTBY	Guantanamo Bay	97.47	48	PFAKE		03 54 00.0	+15
GTBY				LR	LR		
	comp=Z,880nm,19.0s						
MTDJ	Mount Denham	97.71	51	PFAKE		03 54 00.0	+14
MTDJ				LR	LR		
	comp=Z,634nm,20.0s						
GRTK	Grand Turk	97.97	44	PFAKE		03 54 00.0	+13
GRTK				LR	LR		
	comp=Z,603nm,20.0s						
JTS	JuntasAbangare	100.25	61	PFAKE		03 54 10.0	+13
JTS				LR	LR		
	comp=Z,352nm,20.0s						
MSEY	Mahe Island	100.45	275	PFAKE		03 54 10.0	+12
MSEY				LR	LR		
	comp=Z,1µm,19.0s						
MSEY	Mahe Island	100.45	275	iP	Pdif	03 53 56.5	-1.4
SJG	San Juan	103.16	41	PFAKE		03 54 20.0	+10
SJG				LR	LR		
	comp=Z,391nm,20.0s						
BCIP	Isla Barro Col	104.04	57	PFAKE		03 54 30.0	+16
BCIP				LR	LR		
	comp=Z,320nm,19.0s						
ANWB	Willy Bob	105.36	37	PFAKE		03 58 50.0	
ANWB				LR	LR		
	comp=Z,335nm,20.0s						
PAYG	Puerto Ayora	105.74	72	PFAKE		03 58 50.0	
PAYG				LR	LR		
	comp=Z,359nm,19.0s						
SDV	Santo Domingo	109.12	50	PFAKE		03 58 50.0	
SDV				LR	LR		
	comp=Z,459nm,22.0s						
BBGH	Gun Hill	110.34	37	PFAKE		03 59 00.0	
BBGH				LR	LR		
	comp=Z,1µm,20.0s						
GRGR	Grenville	110.40	40	PFAKE		03 59 00.0	
GRGR				LR	LR		
	comp=Z,373nm,20.0s						
OTAV	Otavalo	112.14	62	PFAKE		03 59 00.0	
OTAV				LR	LR		
	comp=Z,257nm,20.0s						
SACV	Santiago Islan	116.04	360	PFAKE		03 59 10.0	+16
SACV				LR	LR		
	comp=Z,213nm,19.0s						
LSZ	Lusaka	125.89	290	PFAKE		03 59 20.0	+7.3
LSZ				LR	LR		
	comp=Z,731nm,20.0s						
SAML	Samuel	128.15	53	ePKPdf	PKPdf	03 59 18.8	+1.9
SAML				LR	LR		
	comp=Z,469nm,21.0s						
SAML	Samuel	128.15	53	ePKIKP	PKPdf	03 59 18.8	+1.9
SAML				MLR	MLR		
	comp=Z,469nm,21.0s						
TSUM	Tsumeb	135.29	297	ePKPdf	PKPdf	03 59 31.4	+1.0
TSUM				LR	LR		
	comp=Z,810nm,20.0s						
ASCN	Ascension	138.02	346	PFAKE		03 59 50.0	+15
ASCN				LR	LR		
	comp=Z,666nm,19.0s						
QSPA	South Pole Qui	139.02	180	ePKPdf	PKPdf	03 59 37.0	+1.3
LCO	Las Campanas	139.23	78	PFAKE		03 59 50.0	+12
LCO				LR	LR		
	comp=Z,554nm,20.0s						
SUR	Sutherland	142.80	280	PFAKE		04 00 00.0	+16
SUR				LR	LR		
	comp=Z,1µm,19.0s						
SYO	Syowa Base	144.12	213	⇑eP	PKPab	03 59 39.9	-2.5
SYO	Syowa Base	144.12	213	⇑ePKPdf	PKPdf	03 59 45.4	+0.7
CPUP	Villa Florida	145.48	61	PKPbc	PKPdf	03 59 45.7	-2.7
	comp=Z,4.8nm,1.0s,baz=338,slow=6.8,SNR=4.0						
PLCA	Paso Flores	146.40	93	PKPbc	PKPdf	03 59 48.1	-1.6
	comp=Z,6.5nm,0.9s,baz=232,slow=5.3,SNR=5.2						
TRQA	Tornquist	150.56	82	ePKPdf	PKPdf	03 59 58.3	+1.9
TRQA				ePKPbc	PKPbc	04 00 03.1	+1.2
TRQA				ePKPab	PKPab	04 00 10.6	+1.9
TRQA				LR	LR		
	comp=Z,654nm,20.0s						
TRQA	Tornquist	150.56	82	ePKIKP	PKPbc	04 00 03.1	+1.2
TRQA				MLR	MLR		
	comp=Z,654nm,20.0s						
SNAA	Sanae	155.54	196	PKP	PKPab	04 00 30.9	+2.2
VNA3	Neumayer Olymp	156.99	192	PKP	PKPab	04 00 36.5	+1.6
VNA1	Neumayer--Stat	157.32	193	PKP	PKPab	04 00 40.9	+4.6
HOPE	Hope Point	170.74	128	PFAKE		04 00 30.0	+13
HOPE				LR	LR		
	comp=Z,499nm,20.0s						

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*CSEM **20** 03:40:48.5±0.7, 41.°85N×20.°09E, h20^{km}, ML2.4, Error ellipse: s-maj=24.0km s-min=14.1km az=40.0*

TIR 20 03:40:46.9, 41.°81N×20.°08E, h20^{km}, Md2.4/4, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PUK	Puka	0.27	329	iPg	Pb	03 40 53.5	+0.3
PUK				iSg	Sb	03 40 58.0	+0.6
PUK	Puka	0.27	329	iPG	Pb	03 40 53.5	+0.3
PUK				iSG	Sb	03 40 58.0	+0.6
PHP	Peshkopia	0.30	115	iPg	Pn	03 40 55.5	-0.6
PHP	Peshkopia	0.30	115	iPG	Pn	03 40 55.5	-0.6
PHP				iSG	Sb	03 40 58.7	+0.6
BCI	Bajram Curri	0.56	359	iPg	Pb	03 40 58.7	+0.7
BCI				iSg	Sn	03 41 07.1	-1.3
BCI	Bajram Curri	0.56	359	iPG	Pb	03 40 58.7	+0.7
BCI				iSG	Sn	03 41 07.1	-1.3
DRME	Dracevica, Mon	0.77	300	ePn	Pb	03 41 02.0	+0.5
PDG	Podgorica	0.87	316	ePn	Pn	03 41 03.7	-0.3
OHR	Ohrid	0.88	142	ePn	Pb	03 41 01.4	-2.1

OHR				eSn	Sn	03 41 17.5	+1.0
KRUS	**Krusevo**	**0.98**	**116**	ePn	Pn	03 41 05.6	0.0
KRUS				eSn	Sn	03 41 19.4	+0.5
HCY	**Herceg Novi**	**1.34**	**299**	ePn	Pb	03 41 12.3	+1.0
TREB	**Trebinje**	**1.57**	**306**	ePn	Pb	03 41 15.2	0.0
BRY	**Bratogost**	**1.58**	**314**	ePn	Pb	03 41 16.8	+1.3
STIP	**Stip**	**1.58**	**93**	ePn	Pb	03 41 16.4	+1.1
UPM	**Unac-Piva**	**1.64**	**328**	ePn	Pb	03 41 19.4	+2.9
STON	**Ston**	**2.06**	**302**	ePn	Pb	03 41 24.2	+0.7
STON				Sn	Sb	03 41 55.8	+7.2
STON	**Ston**	**2.06**	**302**	ePn	Pb	03 41 23.6	+0.1

SJA 20 03:40:49.6±0.4**, 29°.90S**×**72°.90W, h33**^{km}±48^{km}**, ML3.0, MW3.8, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROC1	**El Roble**	**3.46**	**153**	i P	Pn	03 41 43.7	+2.3
ROC1				i S	Sn	03 42 23.7	+2.4
AUSP	**Uspallata**	**3.80**	**128**	i P	Pn	03 41 48.2	+2.2
AGUA	**GUANDACOL**	**3.85**	**85**	i P	Pn	03 41 48.7	+2.0
AMOG	**MOGNA**	**3.94**	**106**	i P	Pn	03 41 49.8	+1.9
RTCV	**Cerro Valdivia**	**4.22**	**119**	i P	Pn	03 41 53.7	+2.0
VCA	**Vinchina**	**4.26**	**75**	i P	Pn	03 41 54.1	+1.9
VCA				IAML		03 41 56.5	
	comp=Z,16nm,0.3s						

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*IDC **20** 03:44:06.1±0.6, 49°.28N×156°.21E, h0^{km}, mb4.3/23, mb1 4.5/26, mb1mx4.3/70, mbtmp4.3/26, ML5.0/2, Error ellipse: s-maj=16.5km s-min=13.4km az=139.0*

*NEIC **20** 03:44:07.7±0.3, 49°.29N×156°.22E, h10^{km}, mb4.6/8, Error ellipse: s-maj=10.0km s-min=5.4km az=145.0*

*ISCJB **20** 03:44:09.4±0.6, 49°.13N±0°.05×156°.36E±0°.08, h40^{km}±5^{km}, mb4.4/36, Error ellipse: s-maj=10.8km s-min=4.1km az=41.3*

*KRSC **20** 03:44:09.5±2.3, 49°.16N×157°.21E, h42^{km}±40^{km}, ML5.0*

*MOS **20** 03:44:09.8±1.3, 49°.17N×156°.33E, h45^{km}, mb4.6/25, Error ellipse: s-maj=10.8km s-min=3.8km az=76.4*

*SKHL **20** 03:44:09.4±0.0, 49°.00N×156°.50E, h43^{km}±8^{km}, mb5.3/5*

ISC 20 03:44:10.1±1.2**, 49°.10N**±0°.06×**156°.49E**±0°.06**, h34**^{km}±3^{km}**, n155, σ1^s.50**/171**, mb4.5**/50**, 5C-4D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.60**	**351**	eP	**Pn**	**03 44 36.0**	**+0.1**
SKR				AMB	AMB	03 44 37.0	
	2μm,0.8s						
SKR				eS	**Sb**	**03 44 56.0**	**-3.0**
SKR				A	A	03 44 58.0	
	4μm,0.5s						
SKR				A	A	03 44 58.0	
	4μm,0.5s						
SKR	**Severo-Kuril's**	**1.60**	**351**	eP	**Pn**	**03 44 36.1**	**+0.1**
SKR				eS	**Sb**	**03 44 56.5**	**-2.5**
SKR	**Severo-Kuril's**	**1.60**	**351**	ePN	**Pn**	**03 44 36.2**	**+0.3**
SKR				eS	**Sb**	**03 44 56.3**	**-2.7**
SKR				pmax	pmax		
	comp=Z,2μm,0.8s						
SKR				smax	smax		
	comp=N,4μm,0.5s						
SKR				smax	smax		
	comp=E,4μm,0.5s						
PAU	**Pauzhetka**	**2.38**	**5**	eP	**Pn**	**03 44 47.5**	**+1.0**
PAU				AMB	AMB	03 44 48.6	
	comp=E,400nm,0.3s						
PAU				eS	**Sn**	**03 45 16.1**	**+1.6**
PAU				A	A	03 45 20.0	
	comp=E,4μm,0.3s						
PAU	**Pauzhetka**	**2.38**	**5**	eP	**Pn**	**03 44 47.6**	**+1.0**
PAU				eS	**Sn**	**03 45 15.8**	**+1.3**
PAU	**Pauzhetka**	**2.38**	**5**	PN	**Pn**	**03 44 47.6**	**+1.0**
PAU				S	**Sn**	**03 45 15.8**	**+1.3**
KDTR	**Khodutka, Kamc**	**2.89**	**20**	eP	**Pn**	**03 44 53.7**	**0.0**
KDTR				eS	**Sn**	**03 45 27.0**	**-0.3**
MIPR	**Malaya Ipel'ka**	**3.18**	**3**	eP	**Pn**	**03 44 59.1**	**+1.4**
MIPR	**Malaya Ipel'ka**	**3.18**	**3**	PN	**Pn**	**03 44 59.1**	**+1.4**
ASAK	**Asacha**	**3.41**	**15**	eP	**Pn**	**03 45 01.5**	**+0.7**
ASAK	**Asacha**	**3.41**	**15**	PN	**Pn**	**03 45 01.5**	**+0.7**
MTVR	**Mutnovka**	**3.55**	**17**	eP	**Pn**	**03 45 03.6**	**+0.7**
MTVR				eS	**Sn**	**03 45 43.9**	**+0.2**
MTVR	**Mutnovka**	**3.55**	**17**	PN	**Pn**	**03 45 03.6**	**+0.7**
MTVR				S	**Sn**	**03 45 43.9**	**+0.2**
RUS	**Russkaya**	**3.57**	**20**	eP	**Pn**	**03 45 02.8**	**-0.2**
RUS				eS	**Sn**	**03 45 43.4**	**-0.6**
RUS	**Russkaya**	**3.57**	**20**	PN	**Pn**	**03 45 02.8**	**-0.2**
RUS				S	**Sn**	**03 45 43.4**	**-0.6**
GRL	**Gorelyy**	**3.60**	**16**	eP	**Pn**	**03 45 04.6**	**+1.1**
GRL	**Gorelyy**	**3.60**	**16**	PN	**Pn**	**03 45 04.6**	**+1.1**
APC	**Apacha**	**3.85**	**6**	eP	**Pn**	**03 45 09.5**	**+2.6**
APC	**Apacha**	**3.85**	**6**	PN	**Pn**	**03 45 09.5**	**+2.6**
KRMR	**Karymshinskiy**	**3.87**	**15**	eP	**Pn**	**03 45 08.5**	**+1.3**
KRMR	**Karymshinskiy**	**3.87**	**15**	PN	**Pn**	**03 45 08.5**	**+1.3**
PETK	**Petropavlovsk-**	**4.08**	**10**	Pn	**Pn**	**03 45 12.0**	**+1.9**
	baz=172,slow=13						
PET	**Petropavlovsk**	**4.16**	**18**	eP	**Pn**	**03 45 11.7**	**+0.6**
PET				eS	**Sn**	**03 45 58.0**	**-0.4**
PET	**Petropavlovsk**	**4.16**	**18**	ePn	**Pn**	**03 45 11.3**	**+0.3**
PET				eSn	**Sn**	**03 45 55.9**	**-2.5**
PET	**Petropavlovsk**	**4.16**	**18**	eP	**Pn**	**03 45 11.4**	**+0.3**
PET	**Petropavlovsk**	**4.16**	**18**	ePN	**Pn**	**03 45 11.7**	**+0.6**
PET				eS	**Sn**	**03 46 00.8**	**+2.4**
PET				pmax	pmax		
	comp=Z,184nm,0.5s						
PET				smax	smax		
	comp=N,948nm,0.6s						
PET				smax	smax		
	comp=E,730nm,0.6s						
DALK	**Dalny**	**4.18**	**19**	eP	**Pn**	**03 45 11.8**	**+0.4**
DALK	**Dalny**	**4.18**	**19**	PN	**Pn**	**03 45 11.8**	**+0.4**
UGLR	**Uglovaya**	**4.37**	**19**	eP	**Pn**	**03 45 16.1**	**+2.0**
UGLR	**Uglovaya**	**4.37**	**19**	PN	**Pn**	**03 45 16.1**	**+2.0**
AVH	**Avacha**	**4.40**	**18**	eP	**Pn**	**03 45 16.8**	**+2.3**
AVH	**Avacha**	**4.40**	**18**	PN	**Pn**	**03 45 16.8**	**+2.3**
KOK	**Koryaka**	**4.41**	**17**	P	**Pn**	**03 45 16.4**	**+1.8**
KOK	**Koryaka**	**4.41**	**17**	PN	**Pn**	**03 45 16.4**	**+1.8**
SMAR	**Somma**	**4.41**	**18**	eP	**Pn**	**03 45 16.5**	**+1.7**
SMAR	**Somma**	**4.41**	**18**	PN	**Pn**	**03 45 16.5**	**+1.7**
SDLR	**Sedlovina**	**4.45**	**19**	eP	**Pn**	**03 45 15.8**	**+0.7**
SDLR	**Sedlovina**	**4.45**	**19**	PN	**Pn**	**03 45 15.8**	**+0.7**
NLC	**Nalytchevo**	**4.45**	**23**	eP	**Pn**	**03 45 14.7**	**-0.4**
NLC	**Nalytchevo**	**4.45**	**23**	PN	**Pn**	**03 45 14.7**	**-0.4**
KRX	**Arik**	**4.47**	**17**	eP	**Pn**	**03 45 17.9**	**+2.3**
KRX	**Arik**	**4.47**	**17**	PN	**Pn**	**03 45 17.9**	**+2.3**
SPN	**Mys Shipunski**	**4.58**	**28**	eP	**Pn**	**03 45 17.1**	**+0.3**
SPN				eS	**Sn**	**03 46 08.1**	**-0.7**
SPN	**Mys Shipunski**	**4.58**	**28**	PN	**Pn**	**03 45 17.1**	**+0.3**
GNL	**Ganaly**	**4.69**	**11**	eP	**Pn**	**03 45 20.4**	**+1.9**
GNL	**Ganaly**	**4.69**	**11**	PN	**Pn**	**03 45 20.4**	**+1.9**
KII	**Karymskiy**	**5.27**	**19**	eP	**Pn**	**03 45 28.4**	**+1.9**
KII	**Karymskiy**	**5.27**	**19**	PN	**Pn**	**03 45 28.4**	**+1.9**
MKZ	**Mys Kozlova**	**6.35**	**29**	eP	**Pn**	**03 45 40.2**	**-1.0**
MKZ	**Mys Kozlova**	**6.35**	**29**	PN	**Pn**	**03 45 40.2**	**-1.0**
TUMD	**Tumrok D**	**6.57**	**20**	eP	**Pn**	**03 45 45.7**	**+1.5**
TUMR	**Tumrok**	**6.58**	**19**	eP	**Pn**	**03 45 46.1**	**+1.6**
TUMR	**Tumrok**	**6.58**	**19**	PN	**Pn**	**03 45 45.7**	**+1.2**
KUR	**Kuril'sk**	**7.04**	**240**	i P	**Pn**	**03 45 52.0**	**+1.4**
KUR				AMB	AMB	03 45 57.0	
	comp=E,46nm,0.6s						
KUR				AMB	AMB	03 45 57.0	
	comp=E,31nm,0.6s						
KUR				AMB	AMB	03 45 57.0	
	comp=E,125nm,0.6s						
KUR				i S	**Sn**	**03 47 10.0**	**+0.7**
KUR	**Kuril'sk**	**7.04**	**240**	⇓iPN	**Pn**	**03 45 53.0**	**+2.4**
KUR				pmax	pmax		
	comp=Z,132nm,0.6s						
KUR				pmax	pmax		
	comp=E,29nm,0.5s						
KUR				pmax	pmax		
	comp=N,47nm,0.2s						
ZLN	**Zelenaya**	**7.41**	**19**	eP	**Pn**	**03 45 58.2**	**+2.4**
ZLN	**Zelenaya**	**7.41**	**19**	PN	**Pn**	**03 45 58.2**	**+2.4**
KBTR	**Krutoberegovo**	**8.09**	**26**	eP	**Pn**	**03 46 04.4**	**-0.6**
KBTR	**Krutoberegovo**	**8.09**	**26**	PN	**Pn**	**03 46 04.4**	**-0.6**
BKI	**Bering**	**8.44**	**40**	eP	**Pn**	**03 46 10.0**	**+0.2**
BKI				eS	**Sn**	**03 47 36.4**	**-7.3**
BKI	**Bering**	**8.44**	**40**	PN	**Pn**	**03 46 10.0**	**+0.2**
SHO	**Shikotan**	**8.47**	**235**	i P	**Pn**	**03 46 09.0**	**-1.3**
SHO				AMB	AMB	03 46 18.0	
	comp=N,24nm,0.5s						
SHO				AMB	AMB	03 46 18.0	
	comp=N,43nm,0.5s						
SHO				i S	**Sn**	**03 47 38.0**	**-6.6**
SHO	**Shikotan**	**8.47**	**235**	c iPN	**Pn**	**03 46 09.3**	**-1.0**
SHO				pmax	pmax		
	comp=Z,43nm,0.5s						
SHO				pmax	pmax		
	comp=E,24nm,0.3s						
SHO				pmax	pmax		
	comp=N,24nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**8.90**	**239**	i P	**Pn**	**03 46 16.0**	**-0.2**
YUK				AMB	AMB	03 46 21.0	
	comp=N,35nm,0.4s						
YUK				AMB	AMB	03 46 21.0	
	comp=N,58nm,0.4s						
YUK				AMB	AMB	03 46 21.0	
	comp=N,235nm,0.4s						
YUK				eS	**Sn**	**03 47 53.0**	**-2.2**
YUK	**Yuzh-Kuril'sk**	**8.90**	**239**	⇓iPN	**Pn**	**03 46 16.4**	**+0.2**
YUK				pmax	pmax		
	comp=N,35nm,0.2s						
YUK				pmax	pmax		
	comp=E,58nm,0.2s						
YUK				pmax	pmax		
	comp=Z,235nm,0.2s						
ASAJ	**Asahikawa**	**10.78**	**248**	Pn	**Pn**	**03 46 44.4**	**+2.5**
	comp=Z,17nm,0.3s,baz=63,slow=12,SNR=17						
MA2	**Magadan**	**11.01**	**345**	Pn	**Pn**	**03 46 46.5**	**+1.6**
	comp=Z,2.6nm,0.3s,baz=170,slow=12,SNR=4.7						
ERM	**Erimo**	**11.72**	**238**	ePn	**Pn**	**03 46 56.0**	**+1.3**
ERM	**Erimo**	**11.72**	**238**	ePN	**Pn**	**03 46 56.0**	**+1.3**
USRK	**Ussuriysk Ar.**	**17.49**	**263**	P	**Pn**	**03 48 10.9**	**-0.2**
	baz=61,slow=15						
MJAR	**Matsushiro Arr**	**18.31**	**234**	P	**P**	**03 48 21.5**	**+0.4**
	comp=Z,0.7nm,0.3s,baz=33,slow=6.2,SNR=5.1						
MAJO	**Matsushiro**	**18.31**	**234**	ePn	**P**	**03 48 20.6**	**-0.6**
MAJO	**Matsushiro**	**18.31**	**234**	eP	**P**	**03 48 20.6**	**-0.6**
KSRS	**Korea Array**	**23.69**	**251**	P	**P**	**03 49 18.8**	**+0.3**
	comp=Z,5.8nm,0.7s,baz=50,slow=9.5,SNR=5.9						
KSAR	**Wonju Array Be**	**23.72**	**251**	P	**P**	**03 49 18.8**	**0.0**
KSAR	**Wonju Array Be**	**23.72**	**251**	P	**P**	**03 49 18.8**	**0.0**
H11S1	**WAKE ISLAND Hy**	**31.61**	**161**	T	T	04 24 27.1	
	baz=352						
H11S3	**WAKE ISLAND Hy**	**31.62**	**161**	T	T	04 24 49.1	
	baz=352						
H11S2	**WAKE ISLAND Hy**	**31.63**	**161**	T	T	04 24 42.9	
	baz=352						
SONM	**Songino Array**	**32.75**	**287**	PcP	**PcP**	**03 53 24.0**	**-0.3**
	comp=Z,2.2nm,0.8s,baz=85,slow=2.3,SNR=4.4						
TLY	**Talaya**	**33.18**	**295**	eP	**P**	**03 50 42.5**	**-0.8**
	comp=Z,6.5nm,0.6s						
TLY	**Talaya**	**33.18**	**295**	eP	**P**	**03 50 42.5**	**-0.8**
TLY				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ILAR	**Eielson Array**	**33.29**	**41**	P	**P**	**03 50 44.0**	**0.0**
	comp=Z,1.5nm,1.0s,baz=257,slow=8.0,SNR=3.4						
ZAK	**Zakamensk**	**33.80**	**293**	eP	**P**	**03 50 47.4**	**-1.3**
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
EGAK	**Eagle**	**35.74**	**41**	eP	**P**	**03 51 05.5**	**+0.4**
	comp=Z,6.2nm,0.7s						
INK	**Inuvik**	**38.44**	**34**	P	**P**	**03 51 29.9**	**+2.0**
	comp=Z,4.6nm,0.7s,baz=278,slow=7.0,SNR=4.1						
YKA	**Yellowknife Ar**	**47.67**	**39**	P	**P**	**03 52 43.6**	**+1.0**
	comp=Z,2.7nm,0.9s,baz=296,slow=7.5,SNR=4.6						
MKAR	**Makanchi Array**	**47.89**	**297**	P	**P**	**03 52 43.2**	**-1.4**
	comp=Z,3.1nm,0.7s,baz=67,slow=7.1,SNR=5.8						
KURK	**Kurchatov**	**47.97**	**303**	P	**P**	**03 52 44.7**	**-0.4**
KURK	**Kurchatov**	**47.97**	**303**	P	**P**	**03 52 44.7**	**-0.4**
KURK				pmax	pmax		
	comp=Z,13nm,0.9s						
KURBB	**Kurchatov Arra**	**48.06**	**303**	P	**P**	**03 52 44.7**	**-1.1**
	comp=Z,13nm,0.9s,baz=64,slow=7.9,SNR=13						
BVAR	**Borovoye Array**	**51.12**	**309**	P	**P**	**03 53 07.7**	**-1.4**
	comp=Z,2.5nm,0.3s,baz=64,slow=6.7,SNR=13						
BRVK	**Borovoye**	**51.16**	**309**	eP	**P**	**03 53 07.0**	**-2.4**
BRVK	**Borovoye**	**51.16**	**309**	eP	**P**	**03 53 07.0**	**-2.4**
ARU	**Arti**	**54.81**	**318**	eP	**P**	**03 53 34.6**	**-1.6**
ARU	**Arti**	**54.81**	**318**	P	**P**	**03 53 34.5**	**-1.7**
CHTO	**Chiang Mai**	**54.85**	**258**	eP	**P**	**03 53 37.0**	**0.0**
CHTO	**Chiang Mai**	**54.85**	**258**	eP	**P**	**03 53 37.0**	**0.0**
CMAR	**Chiang Mai Arr**	**55.12**	**258**	P	**P**	**03 53 40.7**	**+1.8**
	comp=Z,2.4nm,0.4s,baz=30,slow=7.0,SNR=5.6						
CMAR	**Chiang Mai Arr**	**55.12**	**258**	P	**P**	**03 53 40.7**	**+1.8**
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.4s						
BMO	**Blue Mountains**	**55.89**	**59**	eP	**P**	**03 53 46.4**	**+2.0**
	comp=Z,1.4nm,0.5s						
BMO	**Blue Mountains**	**55.89**	**59**	eP	**P**	**03 53 46.4**	**+2.0**
BMO				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MOD	**Modoc Plateau**	**55.98**	**63**	eP	**P**	**03 53 46.5**	**+1.4**
	comp=Z,5.7nm,0.9s						
NVAR	**Mina Array Bea**	**59.36**	**65**	P	**P**	**03 54 11.4**	**+2.5**
	comp=Z,1.2nm,0.7s,baz=289,slow=7.6,SNR=3.7						
NIL	**Nilore**	**61.30**	**289**	eP	**P**	**03 54 21.6**	**-0.4**
NIL	**Nilore**	**61.30**	**289**	eP	**P**	**03 54 21.6**	**-0.4**
DUG	**Dugway, Tooele**	**61.42**	**61**	eP	**P**	**03 54 23.1**	**+0.2**
	comp=Z,2.2nm,0.7s						
DUG	**Dugway, Tooele**	**61.42**	**61**	eP	**P**	**03 54 23.1**	**+0.2**
DUG				pmax	pmax		
	comp=Z,2.0nm,0.7s						
PDAR	**Pinedale Array**	**61.54**	**57**	P	**P**	**03 54 25.8**	**+2.0**
	comp=Z,1.4nm,0.9s,baz=295,slow=2.6,SNR=4.5						
FINES	**FINESS Array B**	**62.85**	**336**	P	**P**	**03 54 31.0**	**-1.0**
	comp=Z,0.7nm,0.3s,baz=37,slow=7.6,SNR=5.7						
FINES	**FINESS Array B**	**62.85**	**336**	P	**P**	**03 54 31.0**	**-1.0**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
NOA	**NORSAR Array B**	**66.70**	**342**	P	**P**	**03 54 56.2**	**-1.0**
	comp=Z,0.9nm,0.7s,baz=66,slow=2.9,SNR=6.5						
HFS	**Hagfors**	**67.01**	**341**	P	**P**	**03 54 58.4**	**-0.7**
	comp=Z,0.9nm,0.3s,baz=29,slow=3.3,SNR=24						
AKASG	**Malin Array Be**	**70.82**	**328**	P	**P**	**03 55 22.1**	**-0.7**
	comp=Z,1.7nm,0.4s,baz=33,slow=6.3,SNR=5.1						
KBZ	**Khabaz**	**70.82**	**315**	P	**P**	**03 55 23.2**	**+0.3**
	comp=Z,5.1nm,0.7s,baz=92,slow=3.5,SNR=4.3						
KIEV	**Kiev**	**70.83**	**328**	eP	**P**	**03 55 21.9**	**-1.0**
	comp=Z,2.2nm,0.5s						
KIEV	**Kiev**	**70.83**	**328**	eP	**P**	**03 55 21.9**	**-1.0**
KIEV				pmax	pmax		
	comp=Z,2.0nm,0.5s						
WRA	**Warramunga Arr**	**71.51**	**202**	P	**P**	**03 55 27.8**	**+0.5**
	comp=Z,2.9nm,0.8s,baz=19,slow=6.6,SNR=5.3						
TXAR	**Lajitas Array**	**74.38**	**63**	P	**P**	**03 55 46.2**	**+1.7**
	comp=Z,1.2nm,0.4s,baz=301,slow=5.0,SNR=9.3						
EKA	**Eskdalemuir Ar**	**74.55**	**348**	P	**P**	**03 55 44.9**	**0.0**
	comp=Z,1.9nm,0.4s,baz=18,slow=5.1,SNR=23						
ASAR	**Alice Springs**	**75.19**	**201**	P	**P**	**03 55 50.8**	**+1.9**
	comp=Z,1.2nm,0.8s,baz=11,slow=5.8,SNR=3.3						
CLL	**Collm**	**75.22**	**337**	⇓iP	**P**	**03 55 48.9**	**+0.1**
	comp=Z,12nm,1.0s						
CLL	**Collm**	**75.22**	**337**	⇓iP	**P**	**03 55 48.9**	**+0.1**
CLL				pmax	pmax		
	comp=Z,12nm,1.0s						
BRG	**Berggiesshubel**	**75.37**	**337**	eP	**P**	**03 55 50.1**	**+0.4**
	comp=Z,5.2nm,1.1s						
VYHS	**Vyhne**	**76.13**	**333**	eP	**P**	**03 55 54.7**	**+0.5**
VYHS	**Vyhne**	**76.13**	**333**	eP	**P**	**03 55 54.7**	**+0.5**
GRFO	**Grafenberg**	**77.15**	**338**	eP	**P**	**03 55 60.0**	**+0.1**
	comp=Z,8.4nm,1.0s						
GRFO	**Grafenberg**	**77.15**	**338**	eP	**P**	**03 56 00.0**	**+0.1**
GRFO				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GERES	**GERESS Array B**	**77.29**	**336**	P	**P**	**03 56 01.1**	**+0.3**
	comp=Z,1.6nm,0.6s,baz=38,slow=6.4,SNR=8.5						
BEBN	**Eben Emael**	**77.39**	**342**	⇑P	**P**	**03 56 01.6**	**+0.5**
MEM	**Membach**	**77.50**	**341**	⇑P	**P**	**03 56 02.3**	**+0.5**
	comp=Z,17nm,1.1s						
CONA	**Conrad Observa**	**77.52**	**334**	epP	**P**	**03 56 03.3**	**+1.2**
	comp=Z,5.8nm,0.8s						
BCLA	**Clavier**	**77.82**	**342**	⇑P	**P**	**03 56 04.1**	**+0.5**
MOA	**Molln**	**78.04**	**335**	epP	**P**	**03 56 05.6**	**+0.7**
	comp=Z,2.8nm,0.7s						
BRTR	**Keskin Array B**	**78.18**	**319**	P	**P**	**03 56 06.2**	**+0.2**
	comp=Z,7.5nm,0.9s,baz=55,slow=3.0,SNR=10						
ARSA	**Arzberg**	**78.23**	**334**	epP	**P**	**03 56 07.0**	**+1.0**
	comp=Z,9.3nm,1.2s						
DOU	**Dourbes**	**78.28**	**342**	⇑P	**P**	**03 56 06.3**	**+0.2**
ANTO	**Ankara**	**78.43**	**319**	eP	**P**	**03 56 06.8**	**-0.4**
ANTO	**Ankara**	**78.43**	**319**	eP	**P**	**03 56 06.8**	**-0.4**
SOKA	**Soboth**	**78.89**	**334**	epP	**P**	**03 56 10.6**	**+0.9**
	comp=Z,13nm,1.0s						
KBA	**Koelnbreinsper**	**79.00**	**335**	epP	**P**	**03 56 12.0**	**+1.6**
	comp=Z,16nm,0.5s						
OBKA	**Obir**	**79.19**	**334**	epP	**P**	**03 56 12.0**	**+0.7**
	comp=Z,3.7nm,0.5s						
WATA	**Walderalm**	**79.24**	**337**	epP	**P**	**03 56 13.8**	**+2.1**
	comp=Z,1.6nm,0.4s						
WTTA	**Wattenberg**	**79.29**	**336**	epP	**P**	**03 56 13.2**	**+1.2**
	comp=Z,19nm,1.2s						
RETA	**Reutte**	**79.31**	**337**	epP	**P**	**03 56 12.6**	**+0.7**
	comp=Z,6.1nm,0.9s						
MYKA	**Terra Mystica**	**79.33**	**335**	epP	**P**	**03 56 12.5**	**+0.4**
	comp=Z,3.1nm,0.6s						
SQTA	**Sankt Quirin**	**79.44**	**337**	epP	**P**	**03 56 14.9**	**+2.2**
	comp=Z,0.2nm,0.4s						
ABTA	**Abfaltersbach**	**79.53**	**336**	epP	**P**	**03 56 14.1**	**+0.9**
	comp=Z,13nm,1.3s						
DAVA	**Damuels**	**79.72**	**338**	epP	**P**	**03 56 15.2**	**+0.9**
	comp=Z,12nm,1.1s						
FETA	**Feichten**	**79.75**	**337**	epP	**P**	**03 56 15.4**	**+0.9**
	comp=Z,4.2nm,0.7s						
MMAI	**Mount Meron Ar**	**82.90**	**314**	P	**P**	**03 56 32.2**	**+0.9**
	comp=Z,3.9nm,0.5s,baz=48,slow=6.6,SNR=8.4						
RAYN	**Ar Rayn**	**85.24**	**301**	eP	**P**	**03 56 43.4**	**+0.1**
	comp=Z,7.5nm,0.7s						
RAYN	**Ar Rayn**	**85.24**	**301**	eP	**P**	**03 56 43.4**	**+0.1**
RAYN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
ESDC	**Sonseca Array**	**89.93**	**345**	P	**P**	**03 57 05.7**	**+0.1**
	comp=Z,2.0nm,1.0s,baz=10,slow=4.0,SNR=4.0						
CPUP	**Villa Florida**	**145.34**	**61**	PKPbc	**PKPab**	**04 03 45.3**	**+1.2**
	comp=Z,4.6nm,1.0s,baz=264,slow=2.9,SNR=4.0						

CASC 20 03:52:16.1±1.5**, 12°.12N**×**86°.60W, h111**^{km}±6^{km}**, MD3.9, ML3.3, 2D, Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.06**	**7**	⇓eP	Pn	03 52 31.3	-0.1
COPN				eS	Sn	03 52 42.5	-0.3
MOMN	**Momotombo**	**0.29**	**11**	⇓eP	Pn	03 52 32.2	+0.1
MOMN				eS	Sn	03 52 45.0	+1.0
MGAN	**Managua**	**0.34**	**85**	eP	Pn	03 52 32.1	-0.1
MGAN				eS	Sn	03 52 44.8	+0.5
CNGN	**Cerro Negro**	**0.39**	**346**	eP	Pn	03 52 33.3	+0.8
CNGN				eS	Sn	03 52 46.1	+1.3
CNGN				IAML		03 52 50.2	
	comp=N,482nm,0.2s						
ESTN	**Estel**	**1.00**	**13**	eP	Pn	03 52 39.4	+1.9
ESTN				eS	Sn	03 52 55.7	+2.0
CSGN	**Cosiguina Volc**	**1.27**	**312**	eP	Pn	03 52 42.1	+1.7
CSGN				eS	Sn	03 53 00.9	+2.2
LCND	**La Caˆ–ada**	**1.73**	**313**	eP	Pn	03 52 46.3	+0.5
LCND				eS	Sn	03 53 09.2	+0.9
TGUH	**Tegucigalpa,Un**	**2.04**	**341**	eS	Sn	03 53 15.4	+0.3
LCY	**Lacayo**	**2.10**	**308**	eP	Pn	03 52 51.4	+0.8
LCY				eS	Sn	03 53 17.8	+0.9
PACA	**Pacayal**	**2.15**	**309**	eP	Pn	03 52 52.6	+1.4
PACA				eS	Sn	03 53 19.0	+1.0
TECA	**Tecapa**	**2.31**	**307**	eP	Pn	03 52 54.5	+1.3
TECA				eS	Sn	03 53 23.0	+1.4
JTS	**JuntasAbangare**	**2.43**	**138**	eP	Pn	03 52 53.8	-0.9
LFRS	**El Faro**	**2.83**	**302**	eP	Pn	03 53 00.9	+0.9
LFRS				eS	Sn	03 53 34.4	+0.7
SNET	**Serv Nac Est T**	**3.00**	**302**	IAML		03 53 41.3	
	comp=Z,211nm,0.3s						
UEES	**San Salvador**	**3.03**	**302**	IAML		03 53 43.6	
	comp=Z,132nm,0.2s						
SBLS	**San Blas**	**3.41**	**300**	eP	Pn	03 53 09.0	+1.2
SBLS				eS	Sn	03 53 48.8	+1.1
IXG	**Ixpaco**	**4.28**	**299**	eP	Pn	03 53 19.8	+0.4

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*ISCJB **20** 03:56:41.2±1.7, 39°.40N±0°.06×143°.23E±0°.07, h11^{km}±12^{km}, mb3.7/7, Error ellipse: s-maj=10.0km s-min=8.6km az=170.8*

*JMA **20** 03:56:43.0±0.2, 39°.36N×143°.11E, h20^{km}±2^{km}, M4.2*

*IDC **20** 03:56:49.7±4.7, 39°.28N×142°.96E, h66^{km}±44^{km}, mb3.4/7, mb1 3.5/8, mb1mx3.2/63, mbtmp3.7/8, ML3.4/1, Error ellipse: s-maj=31.3km s-min=26.2km az=66.0*

ISC 20 03:56:43.4±3.3**, 39°.41N**±0°.06×**143°.01E**±0°.09**, h11**^{km}±19^{km}**, n24, σ1^s.01**/27**, mb3.7**/7**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**0.94**	**281**	P	**Pb**	**03 57 01.7**	**+0.1**
MIYJ				S	**Sn**	**03 57 15.2**	**-0.6**
JTH	**Tanohata**	**1.03**	**301**	P	**Pb**	**03 57 03.2**	**0.0**
OFUJ	**Ofunato**	**1.09**	**253**	P	**Pb**	**03 57 03.8**	**-0.5**
JOM	**Ohasama**	**1.33**	**273**	P	**Pb**	**03 57 08.1**	**-0.2**
JOM				S	**Sb**	**03 57 26.2**	**+0.8**
JMK	**Ichinoseki**	**1.47**	**252**	P	**Pn**	**03 57 09.8**	**+0.1**
JANG	**Nango**	**1.50**	**310**	P	**Pn**	**03 57 09.9**	**-0.3**
JIO	**Ouri**	**1.61**	**234**	P	**Pn**	**03 57 11.2**	**-0.5**
JRG	**Rokugo**	**1.84**	**270**	P	**Pb**	**03 57 16.5**	**-0.5**
JRG				S	**Sg**	**03 57 42.5**	**-0.1**
JAH	**Hinai**	**1.99**	**294**	P	**Pb**	**03 57 18.5**	**-1.0**
JAH				S	**Sb**	**03 57 45.1**	**+0.8**
JTM	**Tenmabayashi**	**2.03**	**313**	P	**Pn**	**03 57 18.3**	**+0.9**
JTM				S	**Sb**	**03 57 45.1**	**-0.3**
JOU	**Okura**	**2.11**	**241**	P	**Pn**	**03 57 19.6**	**+1.1**
JOU				eS	**Sb**	**03 57 47.3**	**-0.4**
JYK	**Kaneyama**	**2.12**	**257**	P	**Pb**	**03 57 20.2**	**-1.6**
MJAR	**Matsushiro Arr**	**4.75**	**234**	P	**Pn**	**03 57 57.3**	**+2.4**
	1.8nm,0.3s,baz=35,slow=13,SNR=24						
MAT	**Matsushiro**	**4.75**	**234**	P	**Pn**	**03 57 57.5**	**+2.6**
SONM	**Songino Array**	**27.60**	**300**	P	**P**	**04 02 30.6**	**0.0**
	0.8nm,0.9s,baz=90,slow=7.2,SNR=3.8						
H11N2	**WAKE ISLAND Hy**	**28.42**	**127**	T	T	04 33 15.7	
	baz=318						
H11N1	**WAKE ISLAND Hy**	**28.43**	**127**	T	T	04 33 18.6	
	baz=318,slow=74						
H11N3	**WAKE ISLAND Hy**	**28.44**	**127**	T	T	04 33 20.6	
	baz=318,slow=74						
ZALV	**Zalesovo Beam**	**41.29**	**310**	P	**P**	**04 04 28.8**	**+0.4**
	0.7nm,0.4s,baz=95,slow=10,SNR=3.3						
MKAR	**Makanchi Array**	**43.97**	**300**	P	**P**	**04 04 50.3**	**0.0**
	0.5nm,0.5s,baz=92,slow=9.5,SNR=7.2						
KURBB	**Kurchatov Arra**	**45.57**	**306**	P	**P**	**04 05 03.0**	**-0.1**
	2.1nm,0.5s,baz=81,slow=8.5,SNR=17						
ILAR	**Eielson Array**	**46.82**	**34**	P	**P**	**04 05 13.3**	**+0.6**
	0.2nm,0.8s,baz=269,slow=5.4,SNR=3.6						
BVAR	**Borovoye Array**	**49.93**	**311**	P	**P**	**04 05 37.3**	**+0.4**
	0.7nm,0.4s,baz=76,slow=8.0,SNR=3.5						
WRA	**Warramunga Arr**	**59.60**	**189**	P	**P**	**04 06 45.7**	**-1.5**
	0.8nm,0.9s,baz=7.4,slow=6.9,SNR=4.7						

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*MOS **20** 03:59:41.9±1.1, 38°.32N×141°.79E, h33^{km}, mb4.6/30, Error ellipse: s-maj=11.0km s-min=5.9km az=97.7*

*ISCJB **20** 03:59:43.3±0.6, 38°.30N±0°.03×141°.94E±0°.05, h49^{km}±4^{km}, mb4.3/43, MS4.5/1, Error ellipse: s-maj=8.0km s-min=4.4km az=32.2*

*JMA **20** 03:59:44.6±0.1, 38°.30N×141°.87E, h47^{km}±1^{km}, M4.1*

JMA Felt II J1.

*IDC **20** 03:59:45.1±0.6, 38°.23N×141°.78E, h48^{km}±5^{km}, mb4.0/22, mb1 4.2/25, mb1mx4.0/65, mbtmp4.3/25, MS3.0/1, Ms1 3.0/1, ms1mx2.8/61, Error ellipse: s-maj=15.2km s-min=12.6km az=97.0*

*NEIC **20** 03:59:45.5±0.7, 38°.31N×141°.83E, h51^{km}±5^{km}, mb4.4/9, Error ellipse: s-maj=7.8km s-min=5.5km az=134.0*

ISC 20 03:59:44.5±0.6**, 38°.34N**±0°.05×**141°.97E**±0°.05**, h45**^{km}±4^{km}**, h45**^{km}**:pP-P, n106, σ1^s.51**/124**, mb4.4**/43**, 7C-1D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIO	**Ouri**	**0.50**	**284**	P	**Pn**	**03 59 55.0**	**-0.4**
JIO				S	**Sn**	**04 00 02.2**	**-1.0**
OFUJ	**Ofunato**	**0.78**	**343**	P	**Pn**	**03 59 59.5**	**+0.4**
OFUJ				eS	**Sn**	**04 00 09.9**	**+0.2**
JMK	**Ichinoseki**	**0.85**	**317**	P	**Pn**	**04 00 00.3**	**+0.2**
JMK				S	**Sn**	**04 00 11.4**	**0.0**
JOU	**Okura**	**1.03**	**272**	P	**Pn**	**04 00 02.0**	**-0.5**
JOU				eS	**Sn**	**04 00 14.6**	**-1.1**
JMM	**Marumori**	**1.04**	**244**	P	**Pn**	**04 00 01.3**	**-1.3**
JMM				S	**Sn**	**04 00 13.3**	**-2.7**
JOM	**Ohasama**	**1.25**	**335**	P	**Pn**	**04 00 06.2**	**+0.6**
JFK	**Kawauchi**	**1.30**	**222**	P	**Pn**	**04 00 04.9**	**-1.3**
JFK				eS	**Sn**	**04 00 19.6**	**-2.8**
JYK	**Kaneyama**	**1.39**	**295**	P	**Pn**	**04 00 07.3**	**-0.1**
JRG	**Rokugo**	**1.49**	**316**	P	**Pn**	**04 00 09.2**	**+0.4**
JYS	**Shirataka**	**1.50**	**266**	P	**Pn**	**04 00 08.5**	**-0.5**
JYS				eS	**Sn**	**04 00 26.4**	**-1.0**

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JFT   Otama               1.53 238   P      Pn      04 00 08.8 -0.5
JFT                                  S      Sn      04 00 26.5 -1.5
JYA   Atsumi              1.79 279   P      Pn      04 00 12.8 -0.1
MJAR  Matsushiro Arr      3.49 240   P      Pn      04 00 36.7 +0.4
      6.6nm,0.3s,baz=42,slow=11,SNR=21
MAJO  Matsushiro          3.49 240  ePn     Pn      04 00 36.4 +0.1
MAJO  Matsushiro          3.49 240  i P     Pn      04 00 37.2 +0.9
MAT   Matsushiro          3.49 240   P      Pn      04 00 37.0 +0.7
MAT                                  S      Sn      04 01 19.2 +2.9
ERM   Erimo               3.79  14  ePn     Pn      04 00 41.0 +0.7
ERM   Erimo               3.79  14  i P     Pn      04 00 40.8 +0.5
JHJ   Hachijo jima 2      5.50 199   P      Pn      04 01 02.9 -0.9
      17nm,0.3s,baz=328,slow=22,SNR=7.0
ASAJ  Asahikawa           5.79   4   P      Pn      04 01 08.9 +1.0
      5.7nm,0.3s,baz=224,slow=16,SNR=9.7
YUK   Yuzh-Kuril'sk       6.41  26  eP      Pn      04 01 16.9 +0.7
YUK                                 eS      Sn      04 02 23.9 -4.1
YUK                                  pmax   pmax
      comp=Z,102nm,0.4s
YUK                                  pmax   pmax
      comp=N,32nm,0.1s
YUK                                  pmax   pmax
      comp=E,65nm,0.5s
YUK                                  smax   smax
      comp=N,368nm,0.3s
YUK                                  smax   smax
      comp=E,189nm,0.3s
SHO   Shikotan            6.64  32  eP      Pn      04 01 19.5 +0.1
SHO                                 i S     Sn      04 02 29.2 -4.5
SHO                                  pmax   pmax
      comp=Z,17nm,0.5s
SHO                                  pmax   pmax
      comp=N,7.0nm,0.2s
SHO                                  pmax   pmax
      comp=E,14nm,0.5s
SHO                                  smax   smax
      comp=N,197nm,0.5s
SHO                                  smax   smax
      comp=E,141nm,0.3s
KUR   Kuril'sk            8.18  31   P      Pn      04 01 41.7 +1.2
KUR                                 i S     Sn      04 03 07.8 -3.7
KUR                                  pmax   pmax
      comp=Z,13nm,0.1s
YSS   Yuzh-Sakhalins      8.63   4  eP      Pn      04 01 47.0 +0.3
YSS                                 eS      Sn      04 03 17.9 -4.8
YSS                                  pmax   pmax
      comp=Z,20nm,0.9s
YSS                                  smax   smax
      comp=E,30nm,0.4s
YSS                                  MLR    MLR
      comp=Z,600nm,12.0s
USRK  Ussuriysk Ar.       9.52 311   P      Pn      04 01 60.0 +1.0
      baz=131,slow=14
KSRS  Korea Array        11.14 270   P      Pn      04 02 24.1 +3.0
      comp=Z,0.3nm,0.3s,baz=79,slow=15,SNR=5.4
KSAR  Wonju Array Be     11.17 270   P      Pn      04 02 24.1 +2.6
KSAR  Wonju Array Be     11.17 270   P      Pn      04 02 24.1 +2.6
MDJ   Mudanjiang         11.20 308  ePn     Pn      04 02 21.5 -0.4
      comp=Z,33nm,1.1s
KLR   Kul'dur            13.14 329   LR     LR      04 07 27.2
      comp=Z,64nm,18.3s,baz=140,slow=35
KLR   Kul'dur            13.14 329  i P     Pn      04 02 45.9 -2.5
ZEA   Zeya               18.43 331  eP      P       04 03 55.2 -0.7
HIA   Hailar             19.34 312  i P     P       04 04 05.6 -0.4
HIA                                  pmax   pmax
      comp=Z,4.0nm,0.8s
MA2   Magadan            21.99  12   P      P       04 04 37.3 +2.8
      comp=Z,14nm,0.7s,baz=184,slow=11,SNR=5.2
YAK   Yakutsk            24.91 346  i P     P       04 05 03.5 +0.6
YAK                                  pmax   pmax
      comp=Z,16nm,0.8s
SEY   Seymchan           25.43  11   P      P       04 05 09.7 +2.0
      comp=Z,4.9nm,0.9s,baz=182,slow=6.4,SNR=12
BOD   Bodaibo            26.68 326  eP      P       04 05 17.4 -1.7
BOD                                  pmax   pmax
      comp=Z,9.0nm,0.9s
ULN   Ulaanbaatar        27.01 302  eP      P       04 05 21.7 -0.7
      comp=Z,5.3nm,1.1s
ULN   Ulaanbaatar        27.01 302ceP      P       04 05 22.1 -0.3
ULN                                  pmax   pmax
      comp=Z,5.0nm,1.3s
SONM  Songino Array      27.45 302   P      P       04 05 26.6 +0.3
      comp=Z,2.0nm,1.0s,baz=79,slow=11,SNR=6.0
ENH   Enshi              27.90 263  eP      P       04 05 29.1 -1.3
      comp=Z,13nm,0.6s
H11N2 WAKE ISLAND Hy     28.47 124   T      T       04 35 49.2
      baz=316,slow=75,SNR=115
H11N1 WAKE ISLAND Hy     28.48 124   T      T       04 35 49.9
      baz=316,slow=75,SNR=60
H11N3 WAKE ISLAND Hy     28.49 124   T      T       04 35 50.6
      baz=316,slow=75,SNR=162
H11S1 WAKE ISLAND Hy     29.23 126   T      T       04 36 47.0
      baz=318,slow=76,SNR=67
H11S3 WAKE ISLAND Hy     29.23 126   T      T       04 36 48.0
      baz=318,slow=76,SNR=334
H11S2 WAKE ISLAND Hy     29.24 126   T      T       04 36 46.6
      baz=318,slow=76,SNR=80
ZAK   Zakamensk          29.83 306  eP      P       04 05 46.1 -1.3
ZAK                                  pmax   pmax
      comp=Z,4.0nm,1.0s
TLY   Talaya             29.83 309  eP      P       04 05 47.0 -0.3
      comp=Z,4.3nm,0.8s
TLY   Talaya             29.83 309  eP      P       04 05 47.0 -0.3
TLY                                  pmax   pmax
      comp=Z,4.0nm,0.8s
DGZ   Jazzator, Alta     40.00 305  i P     P       04 07 15.8 +0.9
DGZ                                  pmax   pmax
      comp=Z,10.0nm,0.8s
ZALV  Zalesovo Beam      41.38 311   P      P       04 07 26.0  0.0
      comp=Z,5.1nm,0.5s,baz=85,slow=6.8,SNR=14
MKAR  Makanchi Array     43.81 301   P      P       04 07 45.6 -0.3
      comp=Z,3.1nm,0.6s,baz=86,slow=9.7,SNR=29
KURK  Kurchatov          45.49 307  eP      P       04 07 58.5 -0.7
KURK  Kurchatov          45.49 307ceP      P       04 07 58.6 -0.6
KURK                                 pmax   pmax
      comp=Z,15nm,0.7s
KURBB Kurchatov Arra     45.56 307   P      P       04 07 59.3 -0.4
      comp=Z,12nm,0.8s,baz=82,slow=8.2,SNR=94
ILAR  Eielson Array      48.16  33   P      P       04 08 20.7 +0.8
      comp=Z,1.2nm,0.7s,baz=271,slow=6.8,SNR=20
BVAR  Borovoye Array     50.03 312   P      P       04 08 33.9 -0.4
      comp=Z,1.1nm,0.5s,baz=67,slow=11,SNR=5.0
BVAR                                 PcP    PcP     04 09 53.7 +0.1
      comp=Z,2.0nm,0.6s,baz=132,slow=2.1,SNR=5.6
BRVK  Borovoye           50.09 312  i P     P       04 08 34.0 -0.7
BRVK                                 pmax   pmax
      comp=Z,3.0nm,0.8s
KSH   Kashi              50.29 293   P      P       04 08 42.3 +5.7
KSH                                 ePP     PP      04 10 39.4 +7.3
KSH                                  pmax   pmax
      comp=Z,3.0nm,0.8s
INK   Inuvik             53.03  28   P      P       04 08 58.2 +1.8
      comp=Z,0.8nm,0.4s,baz=280,slow=7.6,SNR=3.6
ARU   Arti               55.68 318  eP      P       04 09 15.5 -0.4
ARU   Arti               55.68 318d iP      P       04 09 15.3 -0.6
ARU                                  S      S       04 16 59.0 +0.2
ARU                                  SS     SS      04 20 43.3 -0.6
ARU                                  pmax   pmax
      comp=Z,12nm,1.2s
WRA   Warramunga Arr     58.41 188   P      P       04 09 34.5 -1.1
      comp=Z,1.9nm,0.7s,baz=4.9,slow=7.1,SNR=14
WRA                                  pP     pP      04 09 48.0 -0.2
      comp=Z,2.9nm,0.7s,baz=5.9,slow=7.1,SNR=6.2
ASAR  Alice Springs      62.14 188   P      P       04 10 00.4 -0.6
      comp=Z,1.4nm,0.8s,baz=12,slow=6.8,SNR=11
ARCES ARCESS Array B     62.94 339   P      P       04 10 06.2 +0.4
      comp=Z,1.8nm,0.5s,baz=44,slow=7.5,SNR=8.6
FINES FINESS Array B     67.87 332   P      P       04 10 37.7 -0.1
      comp=Z,7.8nm,0.9s,baz=46,slow=11,SNR=12
FINES FINESS Array B     67.87 332ceP      P       04 10 37.9 +0.1
FINES                                pmax   pmax
      comp=Z,8.0nm,0.9s
KIV   Kislovodsk         70.39 311  eP      P       04 10 55.0 +1.1
      comp=Z,13nm,0.9s
KIV   Kislovodsk         70.39 311ceP      P       04 10 54.9 +1.0
KIV                                 e*PP    pP      04 11 05.8 -1.0
KIV                                 e*SP    sP      04 11 10.4 -1.5
KIV                                                 04 11 14.0
KIV                                 eS      S       04 19 58.5 -4.7
KIV                                  SS     SS      04 24 40.0 +6.2
KIV                                  pmax   pmax
      comp=Z,17nm,1.0s
KIV                                  MLR    MLR
      comp=Z,247nm,17.0s
KBZ   Khabaz             70.39 311   P      P       04 10 54.4 +0.7
      comp=Z,3.9nm,0.7s,baz=45,slow=4.2,SNR=8.2
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BMO   Blue Mountains     70.73  48  eP      P       04 10 56.2 +0.3
BMO   Blue Mountains     70.73  48  eP      P       04 10 56.3 +0.3
NEY   Neytrino           70.77 310  i P     P       04 10 56.6 +0.3
NEY                                  pmax   pmax
      comp=Z,1.0nm,0.9s
EGMT  Eagleton           73.01  42  eP      P       04 11 10.2 +0.6
      comp=Z,3.8nm,0.8s
HFS   Hagfors            73.08 336   P      P       04 11 09.6 -0.1
      comp=Z,7.0nm,0.8s,baz=48,slow=4.7,SNR=23
NB2   NORSAR Subarra     73.16 337   P      P       04 11 09.8 -0.3
      comp=Z,2.9nm,0.7s,baz=37,slow=6.2
NOA   NORSAR Array B     73.16 337   P      P       04 11 10.2 +0.1
      comp=Z,4.3nm,0.7s,baz=38,slow=5.9,SNR=20
AKASG Malin Array Be     73.54 322   P      P       04 11 12.0 -0.5
      comp=Z,3.0nm,0.5s,baz=47,slow=6.1,SNR=12
AKASG Malin Array Be     73.54 322ceP      P       04 11 11.3 -1.2
AKASG                                pmax   pmax
      comp=Z,2.0nm,0.4s
KIEV  Kiev               73.55 322  eP      P       04 11 11.5 -1.0
      comp=Z,6.3nm,0.9s
KIEV  Kiev               73.55 322  i P     P       04 11 12.1 -0.4
KIEV                                 pmax   pmax
      comp=Z,5.0nm,0.9s
NVAR  Mina Array Bea     73.86  54   P      P       04 11 16.9 +2.0
      comp=Z,0.3nm,0.6s,baz=277,slow=7.6,SNR=4.1
NVAR                                 pP     PcP     04 11 31.0 +0.7
      comp=Z,1.2nm,0.8s,baz=285,slow=6.1,SNR=7.4
PDAR  Pinedale Array     76.44  46   P      P       04 11 30.5 +0.8
      comp=Z,0.7nm,0.5s,baz=248,slow=0.9,SNR=9.3
PDAR                                 pP     pP      04 11 44.7 +1.9
      comp=Z,1.3nm,0.6s,baz=275,slow=1.8,SNR=10
BRTR  Keskin Array B     78.32 312   P      P       04 11 39.9 -0.2
      comp=Z,1.6nm,1.0s,baz=116,slow=2.9,SNR=5.1
BRTR  Keskin Array B     78.32 312ceP      P       04 11 40.0 -0.2
BRTR                                 pmax   pmax
      comp=Z,2.0nm,1.0s
VYHS  Vyhne              79.90 326  eP      P       04 11 48.5  0.0
VYHS  Vyhne              79.90 326  eP      P       04 11 48.5  0.0
BRG   Berggiesshubel     80.16 330  eP      P       04 11 50.6 +0.8
      comp=Z,3.2nm,0.9s
CLL   Collm              80.19 330  i P     P       04 11 50.2 +0.3
      comp=Z,7.0nm,1.0s
CLL                                 epP     pP      04 12 05.0 +1.9
CLL   Collm              80.19 330  i P     P       04 11 50.2 +0.3
CLL                                 e               04 12 05.0
CLL                                  pmax   pmax
      comp=Z,7.0nm,1.0s
RAYN  Ar Rayn            80.57 292  eP      P       04 11 51.5 -1.0
      comp=Z,1.6nm,0.3s
RAYN  Ar Rayn            80.57 292  eP      P       04 11 51.5 -1.0
RAYN                                 pmax   pmax
      comp=Z,2.0nm,0.3s
MODS  Modra-Piesok       80.68 326  eP      P       04 11 53.6 +0.9
MODS                                 pmax   pmax
      comp=Z,5.0nm,0.5s
MODS  Modra-Piesok       80.68 326  eP      P       04 11 53.6 +0.9
MODS                                ePCP    PcP     04 11 56.6 -2.7
KHC   Kasperske Hory     81.66 329  eP      P       04 11 58.5 +0.6
KHC   Kasperske Hory     81.66 329  eP      P       04 11 58.5 +0.6
GERES GERESS Array B     81.84 328   P      P       04 11 58.8 -0.1
      comp=Z,1.2nm,0.8s,baz=22,slow=4.7,SNR=9.1
GRFO  Grafenberg         82.16 330  eP      P       04 12 01.1 +0.6
      comp=Z,4.2nm,0.6s
GRFO  Grafenberg         82.16 330  eP      P       04 12 01.1 +0.6
GRFO                                 pmax   pmax
      comp=Z,4.0nm,0.6s
BFO   Black Forest       84.38 331  eP      P       04 12 11.4 -0.5
      comp=Z,1.7nm,1.4s
BFO   Black Forest       84.38 331ceP      P       04 12 12.7 +0.7
TXAR  Lajitas Array      88.98  53   P      P       04 12 35.9 +1.0
      comp=Z,0.6nm,0.7s,baz=297,slow=2.9,SNR=11
TXAR                                 pP     pP      04 12 49.4 +1.2
      comp=Z,1.1nm,0.6s,baz=298,slow=3.2,SNR=13
LPAZ  La Paz            145.65  59   PKPbc  PKPbc   04 19 19.9 +0.4
      comp=Z,1.7nm,0.8s,baz=314,slow=3.9,SNR=13
LCO   Las Campanas      151.39  81  ePKPbc  PKPbc   04 19 34.1 +0.3
LCO   Las Campanas      151.39  81  ePKIKP  PKPbc   04 19 34.1 +0.3
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CSEM ***20*** *04:24:42.6±0.2, 46°.65N×1°.27W, h2^{km}, ML3.3/24, Error ellipse: s-maj=3.7km s-min=2.8km az=62.0*

STR ***20*** *04:24:44.3±0.5, 47°N±5°×°±°, h5^{km}, M3.4/6, MLv3.4/6*

LDG ***20*** *04:24:44.7±0.1, 46°.67N×1°.30W, h2^{km}, Md3.1/4, Ml3.2/30, Error ellipse: s-maj=2.4km s-min=1.8km az=59.0*

ISC 20 04:24:43.3±1.1**, 46°.70N**±0°.02×**1°.26W**±0°.02**, h10**^{km}±9^{km}**, n123,** σ1^{s}.**49**/216**, France**

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Code  Station Name         Δ°   AZ°    Phase ID          Time      Res
                                      Op     ISC      h  m  s     ISC
MFF   Saint Martin d      0.77  97  ePg     Pb      04 24 59.2 +0.4
MFF   Saint Martin d      0.77  97  ePn     Pn      04 25 01.7 +1.5
MFF                                 eSg     Sb      04 25 10.1 +0.8
      212nm,0.3s
MFF                                 eSn     Sn      04 25 13.3 +1.4
MFF   Saint Martin d      0.77  97  ePg     Pb      04 24 59.2 +0.4
MFF   Saint Martin d      0.77  97  ePn     Pn      04 25 01.7 +1.5
MFF                                 eSg     Sb      04 25 10.1 +0.8
      106nm,0.3s
MFF                                 eSn     Sn      04 25 13.3 +1.4
GRR   Gorron              1.71   9  ePn     Pn      04 25 13.5 +0.3
GRR   Gorron              1.71   9  eP      Pg      04 25 15.9 -0.3
GRR                                 eSn     Sb      04 25 36.0 -0.5
GRR                                 eSg     Sg      04 25 38.8 +0.3
      53nm,0.2s
GRR   Gorron              1.71   9  ePn     Pn      04 25 13.5 +0.3
GRR   Gorron              1.71   9  eP      Pg      04 25 15.9 -0.3
GRR                                 eSn     Sb      04 25 36.0 -0.5
GRR                                 eSg     Sg      04 25 38.8 +0.3
      26nm,0.2s
QUIF  Quistinic           1.78 314  ePn     Pn      04 25 15.8 +1.7
QUIF                                eSn     Sn      04 25 37.7 +0.9
      46nm,0.2s
QUIF  Quistinic           1.78 314  ePn     Pn      04 25 15.8 +1.7
QUIF                                eSn     Sn      04 25 37.7 +0.9
      23nm,0.2s
SGMF  Saint Gilles        1.79 331  ePn     Pb      04 25 16.4 +0.2
SGMF                                eSg     Sb      04 25 39.9 +1.2
      34nm,0.2s
SGMF  Saint Gilles        1.79 331  ePn     Pb      04 25 16.4 +0.2
SGMF                                eSg     Sb      04 25 39.9 +1.2
      17nm,0.2s
LDF   La Druitiere        2.05  22  ePn     Pn      04 25 18.5 +0.7
LDF   La Druitiere        2.05  22  ePg     Pg      04 25 22.5 -0.1
LDF                                 eSn     Sn      04 25 43.3 -0.1
LDF                                 eSg     Sg      04 25 49.3 +0.2
      25nm,0.2s
LDF   La Druitiere        2.05  22  ePn     Pn      04 25 18.5 +0.7
LDF   La Druitiere        2.05  22  ePg     Pg      04 25 22.5 -0.1
LDF                                 eSn     Sn      04 25 43.3 -0.1
LDF                                 eSg     Sg      04 25 49.3 +0.2
      13nm,0.2s
FLN   La Foliniere        2.13  14  ePn     Pn      04 25 19.6 +0.6
      baz=191
FLN   La Foliniere        2.13  14  ePg     Pg      04 25 24.3 +0.1
      baz=199
FLN                                 eSn     Sn      04 25 46.0 +0.5
FLN                                 eSg     Sg      04 25 51.3 -0.6
      47nm,0.3s,baz=207
FLN   La Foliniere        2.13  14  ePn     Pn      04 25 19.6 +0.6
FLN   La Foliniere        2.13  14  ePg     Pg      04 25 24.3 +0.1
FLN                                 eSn     Sn      04 25 46.0 +0.5
FLN                                 eSg     Sg      04 25 51.3 -0.6
      24nm,0.3s
ROSF  Rostrenen           2.14 321  ePn     Pb      04 25 22.2 +0.1
ROSF                                eSg     Sb      04 25 49.3 +0.7
      29nm,0.2s
ROSF  Rostrenen           2.14 321   Pn     Pn      04 25 18.3 -0.7
ROSF                                 Sg     Sb      04 25 50.5 +1.9
ROSF  Rostrenen           2.14 321  ePn     Pb      04 25 22.2 +0.1
ROSF                                eSg     Sb      04 25 49.3 +0.7
      14nm,0.2s
LFF   La Frestale         2.24 141  ePn     Pb      04 25 23.9  0.0
LFF                                 eSn     Sn      04 25 50.8 +2.6
      48nm,0.3s
LFF                                 eSg     Sg      04 25 55.1 -0.3
LFF   La Frestale         2.24 141  ePn     Pb      04 25 23.9  0.0
LFF                                 eSn     Sn      04 25 50.8 +2.6
      24nm,0.3s
LFF                                 eSg     Sg      04 25 55.1 -0.3
RJF   Les Rejaudoux       2.38 125  ePn     Pn      04 25 23.7 +1.3
RJF   Les Rejaudoux       2.38 125  ePg     Pb      04 25 28.1 +1.8
RJF                                 eSg     Sg      04 25 59.4 -0.4
      38nm,0.2s
RJF   Les Rejaudoux       2.38 125  ePn     Pn      04 25 23.7 +1.3
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RJF   Les Rejaudoux       2.38 125  ePg     Pb      04 25 28.1 +1.8
RJF                                 eSg     Sg      04 25 59.4 -0.4
      19nm,0.2s
TCF   Toulx Ste Croi      2.43  98  ePn     Pn      04 25 24.0 +0.9
TCF   Toulx Ste Croi      2.43  98  ePg     Pg      04 25 30.6 +0.7
TCF                                 eSn     Sn      04 25 52.9 +0.1
TCF                                 eSg     Sg      04 26 01.7 +0.3
      29nm,0.3s
TCF   Toulx Ste Croi      2.43  98  ePn     Pn      04 25 24.0 +0.9
TCF   Toulx Ste Croi      2.43  98  ePg     Pg      04 25 30.6 +0.7
TCF                                 eSn     Sn      04 25 52.9 +0.1
TCF                                 eSg     Sg      04 26 01.7 +0.3
      14nm,0.3s
JSA   Saint Aubin         2.57 346   Pn     Pn      04 25 24.3 -0.6
JSA   Saint Aubin         2.57 346   Pn     Pn      04 25 24.3 -0.6
HYF   Humbligny           2.73  76  ePn     Pn      04 25 28.9 +1.7
HYF   Humbligny           2.73  76  ePg     Pg      04 25 36.2 +0.6
HYF                                 eSn     Sn      04 25 59.0 -1.2
HYF                                 eSg     Sg      04 26 10.8 -0.1
HYF   Humbligny           2.73  76  ePn     Pn      04 25 28.9 +1.7
HYF   Humbligny           2.73  76  ePg     Pg      04 25 36.2 +0.6
HYF                                 eSn     Sn      04 25 59.0 -1.2
HYF                                 eSg     Sg      04 26 10.8 -0.1
BGF   Bois d'Agland       2.83  91  ePn     Pn      04 25 30.1 +1.5
BGF   Bois d'Agland       2.83  91  ePg     Pg      04 25 41.0 +3.4
BGF                                 eSn     Sn      04 26 01.9 -0.8
      49nm,0.3s
BGF                                 eSg     Sg      04 26 14.5 +0.3
BGF   Bois d'Agland       2.83  91  ePn     Pn      04 25 30.1 +1.5
BGF   Bois d'Agland       2.83  91  ePg     Pg      04 25 41.0 +3.4
BGF                                 eSn     Sn      04 26 01.9 -0.8
      24nm,0.3s
BGF                                 eSg     Sg      04 26 14.5 +0.3
CAF   Calviac             2.92 126  ePn     Pn      04 25 30.6 +0.8
CAF   Calviac             2.92 126  ePg     Pg      04 25 38.5 -0.8
CAF                                 eSn     Sn      04 26 04.2 -0.8
CAF                                 eSg     Sg      04 26 15.9 -1.2
      21nm,0.2s
CAF   Calviac             2.92 126  ePn     Pn      04 25 30.6 +0.8
CAF   Calviac             2.92 126  ePg     Pg      04 25 38.5 -0.8
CAF                                 eSn     Sn      04 26 04.2 -0.8
CAF                                 eSg     Sg      04 26 15.9 -1.2
      10nm,0.2s
PYM   Petit Puy Mans      3.11 106   Pn     Pn      04 25 34.5 +2.1
PYM   Petit Puy Mans      3.11 106   Pn     Pn      04 25 34.5 +2.1
AVF   Avril sur Loir      3.17  87  ePn     Pn      04 25 34.0 +0.8
AVF                                 eSn     Sn      04 26 10.3 -0.8
AVF                                 eSg     Sg      04 26 24.5 -0.6
      14nm,0.4s
AVF   Avril sur Loir      3.17  87  ePn     Pn      04 25 34.0 +0.8
AVF                                 eSn     Sn      04 26 10.3 -0.8
AVF                                 eSg     Sg      04 26 24.5 -0.6
      7.2nm,0.4s
SSF   Saint Saulge        3.29  82  ePn     Pn      04 25 36.1 +1.3
SSF   Saint Saulge        3.29  82  ePg     Pg      04 25 46.3  0.0
SSF                                 eSn     Sn      04 26 12.9 -1.0
SSF                                 eSg     Sg      04 26 27.7 -1.2
      9.1nm,0.2s
SSF   Saint Saulge        3.29  82  ePn     Pn      04 25 36.1 +1.3
SSF   Saint Saulge        3.29  82  ePg     Pg      04 25 46.3  0.0
SSF                                 eSn     Sn      04 26 12.9 -1.0
SSF                                 eSg     Sg      04 26 27.7 -1.2
      4.6nm,0.2s
EALK  Alkurruntz          3.48 183   Pn     Pn      04 25 36.9 -0.7
EALK  Alkurruntz          3.48 183   Pn     Pn      04 25 36.9 -0.7
SMF   Signal de Mont      3.51  89  ePn     Pn      04 25 38.7 +0.8
SMF   Signal de Mont      3.51  89  ePg     Pg      04 25 50.7 +0.1
SMF                                 eSg     Sg      04 26 35.2 -0.8
      9.4nm,0.2s
SMF   Signal de Mont      3.51  89  ePn     Pn      04 25 38.7 +0.8
SMF   Signal de Mont      3.51  89  ePg     Pg      04 25 50.7 +0.1
SMF                                 eSg     Sg      04 26 35.2 -0.8
      4.7nm,0.2s
LOR   Lormes              3.55  79  ePn     Pn      04 25 39.4 +1.0
      baz=256
LOR   Lormes              3.55  79  ePg     Pg      04 25 51.3  0.0
      baz=265
LOR                                 eSn     Sn      04 26 19.0 -1.4
LOR                                 eSg     Sg      04 26 34.6 -2.6
      11nm,0.2s,baz=244
LOR   Lormes              3.55  79  ePn     Pn      04 25 39.4 +1.0
LOR   Lormes              3.55  79  ePg     Pg      04 25 51.3  0.0
LOR                                 eSn     Sn      04 26 19.0 -1.4
LOR                                 eSg     Sg      04 26 34.6 -2.6
      5.5nm,0.2s
SJPF  Ste Jean            3.58 180  ePn     Pn      04 25 39.8 +0.9
SJPF  Ste Jean            3.58 180  ePg     Pb      04 25 48.0 +1.2
SJPF                                eSn     Sb      04 26 32.1 +1.8
      7.9nm,0.3s
SJPF  Ste Jean            3.58 180  ePn     Pn      04 25 39.8 +0.9
SJPF  Ste Jean            3.58 180  ePg     Pb      04 25 48.0 +1.2
SJPF                                eSn     Sb      04 26 32.1 +1.8
      4.0nm,0.3s
ETSF  Etsaut              3.83 172  ePn     Pn      04 25 39.8 -2.6
ETSF  Etsaut              3.83 172  ePg     Pb      04 25 53.6 +2.6
ETSF                                eSg     Sb      04 26 41.8 +4.4
      5.4nm,0.3s
ETSF  Etsaut              3.83 172  ePn     Pn      04 25 39.8 -2.6
ETSF  Etsaut              3.83 172  ePg     Pb      04 25 53.6 +2.6
ETSF                                eSg     Sb      04 26 41.8 +4.4
      2.7nm,0.3s
EPF   Esparros            3.84 162  ePn     Pn      04 25 43.4 +1.0
EPF   Esparros            3.84 162  ePg     Pb      04 25 54.2 +3.1
EPF                                 eSn     Sn      04 26 23.6 -4.0
EPF                                 eSg     Sg      04 26 44.5 -2.0
      9.9nm,0.2s
EPF   Esparros            3.84 162  ePn     Pn      04 25 43.4 +1.0
EPF   Esparros            3.84 162  ePg     Pb      04 25 54.2 +3.1
EPF                                 eSn     Sn      04 26 23.6 -4.0
EPF                                 eSg     Sg      04 26 44.5 -2.0
      4.9nm,0.2s
MTLF  Montolieu           4.16 142  ePn     Pn      04 25 46.8 -0.1
MTLF  Montolieu           4.16 142  ePg     Pg      04 26 01.0 -2.0
MTLF                                eSn     Sn      04 26 34.7 -0.8
      3.5nm,0.2s
MTLF                                eSg     Sg      04 26 55.1 -1.8
MTLF  Montolieu           4.16 142  ePn     Pn      04 25 46.8 -0.1
MTLF  Montolieu           4.16 142  ePg     Pg      04 26 01.0 -2.0
MTLF                                eSn     Sn      04 26 34.7 -0.8
      1.8nm,0.2s
MTLF                                eSg     Sg      04 26 55.1 -1.8
CCA1  Carnmenellis        4.38 324   Pn     Pn      04 25 49.1 -0.7
CCA1  Carnmenellis        4.38 324   Pn     Pn      04 25 49.1 -0.7
LASF  Ste Croix           4.45 124  ePn     Pn      04 25 51.5 +0.6
LASF  Ste Croix           4.45 124  ePg     Pg      04 26 07.5 -1.1
LASF                                eSg     Sg      04 27 04.8 -1.5
      6.3nm,0.3s
LASF  Ste Croix           4.45 124  ePn     Pn      04 25 51.5 +0.6
LASF  Ste Croix           4.45 124  ePg     Pg      04 26 07.5 -1.1
LASF                                eSg     Sg      04 27 04.8 -1.5
      3.2nm,0.3s
SFTF  Sexfontaines        4.53  68  ePn     Pn      04 25 52.5 +0.6
      baz=247
SFTF  Sexfontaines        4.53  68  ePg     Pg      04 26 09.4 -0.7
SFTF                                eSg     Sg      04 27 08.0 -0.7
      10nm,0.4s
SFTF  Sexfontaines        4.53  68  ePn     Pn      04 25 52.5 +0.6
SFTF  Sexfontaines        4.53  68  ePg     Pg      04 26 09.4 -0.7
SFTF                                eSg     Sg      04 27 08.0 -0.7
      5.1nm,0.4s
VIVF  Saint-Julien-l      4.54 112  ePg     Pg      04 26 08.9 -1.3
VIVF                                eSg     Sg      04 27 08.0 -1.0
      8.1nm,0.4s
VIVF  Saint-Julien-l      4.54 112  ePg     Pg      04 26 08.9 -1.3
VIVF                                eSg     Sg      04 27 08.0 -1.0
      4.1nm,0.4s
MEZF  Maizieres J'vi      4.63  65  ePn     Pn      04 25 53.9 +0.6
      baz=248
MEZF  Maizieres J'vi      4.63  65  ePg     Pg      04 26 11.8 -0.3
MEZF                                eSg     Sg      04 27 10.9 -1.2
      12nm,0.5s
MEZF  Maizieres J'vi      4.63  65  ePn     Pn      04 25 53.9 +0.6
MEZF  Maizieres J'vi      4.63  65  ePg     Pg      04 26 11.8 -0.3
MEZF                                eSg     Sg      04 27 10.9 -1.2
      6.2nm,0.5s
HTL   Hartland            4.80 335   Pn     Pn      04 25 54.8 -0.8
HTL   Hartland            4.80 335   Pn     Pn      04 25 54.8 -0.8
BAIF  Baives              4.96  45  ePn     Pn      04 25 58.7 +0.9
BAIF  Baives              4.96  45  ePn     Pn      04 25 58.7 +0.9
CABF  La Chapelle         5.06  88  eSg     Sg      04 27 24.2 -1.5
      13nm,0.8s
CABF  La Chapelle         5.06  88  eSg     Sg      04 27 24.2 -1.5
      6.7nm,0.8s
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GIVF	Givet	5.29	48	*e*Pn	Pn	04 26 03.5	+1.1
GIVF	Givet	5.29	48	*e*Pn	Pn	04 26 03.5	+1.1
ORIF	Oris-en-Rattie	5.30	107	*e*Sg	Sg	04 27 31.4	-1.9
ORIF	Oris-en-Rattie	5.30	107	*e*Sg	Sg	04 27 31.4	-1.9
HAU	Haudompre	5.33	73	*e*Pn	Pn	04 26 03.9	+0.9
HAU				*e*Sn	Sn	04 27 01.2	-3.2
HAU				*e*Sg	Sg	04 27 31.1	-3.3
	6.1nm,0.4s						
HAU	Haudompre	5.33	73	*e*Pn	Pn	04 26 03.9	+0.9
HAU				*e*Sn	Sn	04 27 01.2	-3.2
HAU				*e*Sg	Sg	04 27 31.1	-3.3
	3.0nm,0.4s						
SMRF	Simiane la Rot	5.53	117	*e*Pn	Pn	04 26 06.4	+0.7
SMRF	Simiane la Rot	5.53	117	*e*Pg	Pg	04 26 27.9	-1.3
SMRF	Simiane la Rot	5.53	117	*e*Pn	Pn	04 26 06.4	+0.7
SMRF	Simiane la Rot	5.53	117	*e*Pg	Pg	04 26 27.9	-1.3
HINF	Hinteralfeld	5.63	76	*e*Pn	Pn	04 26 07.8	+0.7
HINF	Hinteralfeld	5.63	76	*e*Pg	Pg	04 26 31.0	-0.2
HINF				*e*Sn	Sn	04 27 09.2	-2.7
HINF				*e*Sg	Sg	04 27 43.0	-1.1
	5.3nm,0.4s						
HINF	Hinteralfeld	5.63	76	*e*Pn	Pn	04 26 07.8	+0.7
HINF	Hinteralfeld	5.63	76	*e*Pg	Pg	04 26 31.0	-0.2
HINF				*e*Sn	Sn	04 27 09.2	-2.7
HINF				*e*Sg	Sg	04 27 43.0	-1.1
	2.7nm,0.4s						
LPL	La Plagne	5.68	99	*e*Pg	Pg	04 26 30.9	-1.2
LPL				*e*Sn	Sn	04 27 10.3	-2.9
LPL				*e*Sg	Sg	04 27 43.2	-2.4
LPL	La Plagne	5.68	99	*e*Pg	Pg	04 26 30.9	-1.2
LPL				*e*Sn	Sn	04 27 10.3	-2.9
LPL				*e*Sg	Sg	04 27 43.2	-2.4
LPG	La Plagne	5.70	99	*e*Sn	Sn	04 27 10.6	-3.2
LPG				*e*Sg	Sg	04 27 45.5	-0.7
LPG	La Plagne	5.70	99	*e*Sn	Sn	04 27 10.6	-3.2
LPG				*e*Sg	Sg	04 27 45.5	-0.7
PGAV	Gavieira, Arco	6.90	229	*e*Pn	Pn	04 26 21.9	-2.7
PGAV				*e*Sn	Sn	04 27 35.7	-7.5
MVO	Moncorvo	6.92	219	*e*Pn	Pn	04 26 22.6	-2.2
MVO				*e*Sn	Sn	04 27 35.7	-7.9
MVO				A	A	04 27 38.2	
	1.2nm,0.8s						

ISCJB ***20*** *04:29:45.5±0.5, 40°.89N±0°.02×31°.75E±0°.02, h1km±4km, Error ellipse: s-maj=3.9km s-min=2.8km az=6.1*

DDA ***20*** *04:29:45.8, 40°.88N×31°.77E, h14km, Ml3.4*

ISK ***20*** *04:29:46.0, 40°.85N×31°.75E, h7km, ML3.2/25*

CSEM ***20*** *04:29:46.3±0.1, 40°.86N×31°.77E, h5km, ML3.2, Error ellipse: s-maj=3.1km s-min=2.1km az=21.0*

ISC 20 04:29:46.1±1.1**, 40°.88N**±0°.02×**31°.77E**±0°.02**, h8**km±9km**, n116, σ0s80**/137**, 3C-8D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MDUB	Mudurnu	0.59	227	PG	Pg	04 29 57.7	+0.1
MDUB	Mudurnu	0.59	227	*e*Pg	Pg	04 29 57.7	+0.1
BTAS	Taskesti	0.66	243	*i* P	Pg	04 29 58.8	0.0
BTAS				*i* S	Sg	04 30 07.3	-0.1
CMDR	Camlidere-ANKA	0.66	125	*i* P	Pg	04 29 58.6	-0.2
CMDR				*i* S	Sg	04 30 07.7	+0.3
CMDR	Camlidere-ANKA	0.66	125	P	Pg	04 29 58.6	-0.2
CMDR				S	Sg	04 30 07.7	+0.3
SAHE	Sakarya_HENDEK	0.69	268	*i* P	Pg	04 29 59.4	0.0
SAHE				*i* S	Sb	04 30 09.4	-0.7
BTIN	Bart˜–n	0.84	25	*i* P	Pg	04 30 01.8	-0.4
BTIN				*i* S	Sg	04 30 13.5	+0.3
AUMIH	MIHALICIK	1.03	192	PG	Pb	04 30 06.1	-0.1
AUMIH				SG	Sb	04 30 19.9	0.0
AUMIH	MIHALICIK	1.03	192	*i* P	Pg	04 30 05.6	-0.2
AUMIH				*i* S	Sb	04 30 19.7	-0.2
AUMIH	MIHALICIK	1.03	192	*e*Pg	Pb	04 30 06.1	-0.1
AUMIH				S	Sb	04 30 19.7	-0.2
GULT	Gulveren	1.05	245	PG	Pg	04 30 05.8	-0.5
GULT	Gulveren	1.05	245	*e*Pg	Pg	04 30 05.8	-0.5
SAUV	Serdivan-Sakar	1.10	263	PN	Pg	04 30 06.8	-0.4
SAUV				SN	Sb	04 30 22.4	+0.6
SAUV	Serdivan-Sakar	1.10	263	*e*Pn	Pg	04 30 06.8	-0.4
SAUV				*e*Sn	Sb	04 30 22.4	+0.6
SPNC	Sapanca-Adapaz	1.12	261	PN	Pn	04 30 07.9	-0.2
SPNC				SN	Sn	04 30 23.3	-0.4
SPNC	Sapanca-Adapaz	1.12	261	*e*Pn	Pn	04 30 07.9	-0.2
SPNC				*e*Sn	Sn	04 30 23.3	-0.4
GEYV	SAKARYA_Geyve	1.19	251	*i* P	Pg	04 30 08.4	-0.4
GEYV				*i* S	Sn	04 30 25.2	0.0
GEYV	SAKARYA_Geyve	1.19	251	P	Pg	04 30 08.4	-0.4
GEYV				S	Sn	04 30 25.2	0.0
KAND	Kocaeli-Kandir	1.21	281	*i* P	Pb	04 30 08.9	-0.3
KAND				*i* S	Sn	04 30 26.0	+0.2
KAND	Kocaeli-Kandir	1.21	281	P	Pb	04 30 08.9	-0.3
KAND				S	Sn	04 30 26.0	+0.2
LOD	Lodumlu	1.25	142	PN	Pn	04 30 09.8	0.0
LOD	Lodumlu	1.25	142	*e*Pn	Pn	04 30 09.8	0.0
ANTO	Ankara	1.28	142	PN	Pg	04 30 10.8	+0.2
ANTO	Ankara	1.28	142	*e*Pn	Pg	04 30 10.8	+0.2
ELDT	Eldivan	1.32	106	*i* P	Pn	04 30 10.6	-0.3
ELDT				*i* S	Sn	04 30 28.7	-0.1
ELDT	Eldivan	1.32	106	P	Pn	04 30 10.6	-0.3
ELDT				S	Sn	04 30 28.7	-0.1
BORA	Eskisehir	1.41	226	PN	Pb	04 30 12.5	-0.2
BORA	Eskisehir	1.41	226	*i* P	Pn	04 30 11.9	-0.2
BORA	Eskisehir	1.41	226	P	Pn	04 30 11.9	-0.2
BORA	Eskisehir	1.41	226	*e*Pn	Pb	04 30 12.5	-0.2
CANT	Cankiri	1.43	100	PN	Pb	04 30 13.0	0.0
AUSIV	SIVRIHISAR	1.45	187	PN	Pg	04 30 13.2	-0.6
AUSIV	SIVRIHISAR	1.45	187	*i* P	Pg	04 30 13.7	-0.1
AUSIV				*i* S	Sg	04 30 32.6	0.0
AUSIV	SIVRIHISAR	1.45	187	*e*Pn	Pg	04 30 13.2	-0.6
AUSIV	SIVRIHISAR	1.45	187	P	Pg	04 30 13.7	-0.1
AUSIV				S	Sg	04 30 32.6	0.0
ILGA	Ilgaz	1.49	83	*i* P	Pb	04 30 14.0	-0.1
ILGA				*i* S	Sg	04 30 35.3	+1.5
ESKT	Eskisehir	1.53	208	PN	Pb	04 30 14.5	-0.1
ESKT	Eskisehir	1.53	208	*i* P	Pb	04 30 14.6	-0.1
ESKT	Eskisehir	1.53	208	*e*Pn	Pb	04 30 14.5	-0.1
SEYT	Eskypehyr	1.53	208	P	Pb	04 30 14.6	-0.1
HRT	Hereke	1.59	269	PN	Pb	04 30 15.2	-0.6
HRT	Hereke	1.59	269	*e*Pn	Pb	04 30 15.2	-0.6
ADVT	Abdulvahap	1.61	255	PN	Pn	04 30 15.2	+0.5
ADVT	Abdulvahap	1.61	255	*e*Pn	Pn	04 30 15.2	+0.5
CAVI	Cavuskoy	1.61	246	PN	Pb	04 30 15.6	-0.5
CAVI	Cavuskoy	1.61	246	*e*Pn	Pb	04 30 15.6	-0.5
SILT	Sile	1.63	280	PN	Pb	04 30 15.8	-0.6
SILT	Sile	1.63	280	*e*Pn	Pb	04 30 15.8	-0.6
BBAL	Bala	1.69	142	*i* P	Pg	04 30 17.8	-0.7
AFSR	Af¯ar-Bala (A	1.74	145	PN	Pb	04 30 17.4	-0.9
AFSR	Af¯ar-Bala (A	1.74	145	*e*Pn	Pb	04 30 17.4	-0.9
IZI	Iznik	1.83	254	PN	Pn	04 30 18.3	+0.5
IZI	Iznik	1.83	254	*e*Pn	Pn	04 30 18.3	+0.5
YLV	Yalova	1.85	261	PN	Pn	04 30 18.2	+0.1
YLV	Yalova	1.85	261	*e*Pn	Pn	04 30 18.2	+0.1
KKUL	Konya-Kulu	1.92	152	*i* P	Pg	04 30 22.7	-0.2
KKUL	Konya-Kulu	1.92	152	P	Pg	04 30 22.7	-0.2
KIZT	Kizilcal	2.00	177	PN	Pn	04 30 19.9	-0.3
KIZT	Kizilcal	2.00	177	*e*Pn	Pn	04 30 19.9	-0.3
GEMT	Gemlik	2.01	258	PN	Pn	04 30 20.6	+0.3
GEMT	Gemlik	2.01	258	*e*Pn	Pn	04 30 20.6	+0.3
ISK	Istanbul-Kandi	2.06	276	PN	Pn	04 30 21.7	+0.8
ISK	Istanbul-Kandi	2.06	276	*e*Pn	Pn	04 30 21.7	+0.8
KAVV	Kandilli-Istan	2.06	276	PN	Pn	04 30 21.8	+0.9
KAVV	Kandilli-Istan	2.06	276	*e*Pn	Pn	04 30 21.8	+0.9
KLYT	Kilyos	2.10	281	PN	Pn	04 30 22.2	+0.8
KLYT	Kilyos	2.10	281	*e*Pn	Pn	04 30 22.2	+0.8
SBT5	Esenkoy-Cinarc	2.21	265	PN	Pn	04 30 23.9	+1.0
SBT5	Esenkoy-Cinarc	2.21	265	*e*Pn	Pn	04 30 23.9	+1.0
ARMT	Armutlu	2.23	263	PN	Pn	04 30 23.5	+0.2
ARMT	Armutlu	2.23	263	*e*Pn	Pn	04 30 23.5	+0.2
BOLV	Bolvadin	2.25	197	*i* P	Pn	04 30 24.4	+0.8
BOLV	Bolvadin	2.25	197	P	Pn	04 30 24.4	+0.8
TVSB	Tavsanli	2.27	232	PN	Pn	04 30 23.9	0.0
TVSB	Tavsanli	2.27	232	*e*Pn	Pn	04 30 23.9	0.0
CORM	Corum	2.29	107	PN	Pn	04 30 24.8	+0.6
CORM	Corum	2.29	107	*e*Pn	Pn	04 30 24.8	+0.6
CDAG	Cicekdag	2.35	121	*i* P	Pn	04 30 25.5	+0.4
KDHN	Kadinhani	2.37	173	*i* P	Pn	04 30 25.2	-0.1
KDHN	Kadinhani	2.37	173	P	Pn	04 30 25.2	-0.1
BOYT	Boyabat	2.43	76	*i* P	Pb	04 30 30.1	+0.1
BOYT	Boyabat	2.43	76	P	Pb	04 30 30.1	+0.1
GDZ	Gediz	2.50	225	*i* P	Pn	04 30 27.3	+0.1
GDZ	Gediz	2.50	225	P	Pn	04 30 27.3	+0.1
COAL	Corum-Alaca	2.53	103	*i* P	Pn	04 30 27.8	+0.3
KCTX	Karacabey (Bur	2.67	258	PN	Pn	04 30 30.3	+1.0
KCTX	Karacabey (Bur	2.67	258	*e*Pn	Pn	04 30 30.3	+1.0
CTYL	Yalikoy Yolu	2.69	284	PN	Pn	04 30 30.8	+1.2
CTYL	Yalikoy Yolu	2.69	284	*e*Pn	Pn	04 30 30.8	+1.2
SLVT	Silivri	2.71	279	PN	Pn	04 30 31.4	+1.5
SLVT	Silivri	2.71	279	*e*Pn	Pn	04 30 31.4	+1.5
SIMA	Simav-Kutahya	2.79	231	PN	Pn	04 30 32.3	+1.2
SIMA	Simav-Kutahya	2.79	231	*e*Pn	Pn	04 30 32.3	+1.2
DURS	Dursunbey	2.83	244	*i* P	Pn	04 30 31.4	-0.1
DURS	Dursunbey	2.83	244	P	Pn	04 30 31.5	-0.1
SBT3	Marmara-Eregli	2.88	271	PN	Pn	04 30 33.6	+1.6
SBT3	Marmara-Eregli	2.88	271	*e*Pn	Pn	04 30 33.6	+1.6
KONT	Konya--Tatoy	2.96	171	PN	Pn	04 30 34.0	+0.6
KONT	Konya--Tatoy	2.96	171	*i* P	Pn	04 30 33.9	+0.5
KONT	Konya--Tatoy	2.96	171	*e*Pn	Pn	04 30 34.0	+0.6
BAGO	Egridir - ISPA	2.98	195	*i* P	Pn	04 30 34.6	+0.9
EDC	Edincik	3.02	261	PN	Pn	04 30 35.7	+1.6
EDC	Edincik	3.02	261	*e*Pn	Pn	04 30 35.7	+1.6
BALB	Balikesir	3.22	249	PN	Pn	04 30 37.9	+1.0
BALB	Balikesir	3.22	249	*e*Pn	Pn	04 30 37.9	+1.0
TIRR	Tirgusor	4.35	326	⇑*i*P	Pn	04 30 52.3	-0.1
TIRR	Tirgusor	4.35	326	⇑*i*P	Pn	04 30 52.3	-0.1
TLB	Topalu	4.61	325	⇓*i*P	Pn	04 30 57.0	+1.0
TLB	Topalu	4.61	325	⇓*i*P	Pn	04 30 57.0	+1.0
CFR	Carcaliu	5.06	329	⇓*i*P	Pn	04 31 00.2	-1.9
CFR	Carcaliu	5.06	329	⇓*i*P	Pn	04 31 00.2	-1.9
VRI	Vrincioaia	6.19	325	⇑*i*P	Pn	04 31 14.4	-3.3
MLR	Muntele Rosu	6.27	319	⇓*i*P	Pn	04 31 19.9	+0.9
MLR	Muntele Rosu	6.27	319	⇓*i*P	Pn	04 31 19.9	+0.9
VOIR		6.70	315	⇓*i*P	Pn	04 31 27.5	+2.7
VOIR		6.70	315	⇓*i*P	Pn	04 31 27.5	+2.7

NEIC ***20*** *04:42:37.4±0.0, 16°.26N×98°.51W, h15km, MD4.0(MEX), After MEX.*

MEX 20 04:42:36.9±0.4**, 16°.30N×98°.51W, h6**km±3km**, MD4.0, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.38	76	*i* P	Pg	04 42 43.7	-0.5
PNIG				*i* S	Sg	04 42 49.3	+0.1
PNIG	Pinotepa	0.38	76	*i* P	Pg	04 42 43.7	-0.5
PNIG				*i* S	Sg	04 42 49.3	+0.1
TLIG	Tlapa	1.26	357	*e*P	Pg	04 42 57.4	-3.7
TLIG				*e*S	Sg	04 43 13.0	-4.4
TLIG	Tlapa	1.26	357	*e*P	Pg	04 42 57.4	-3.7
TLIG				*e*S	Sg	04 43 13.0	-4.4
ACP2	Acapulco	1.44	294	*i* P	Pn	04 43 00.2	-3.4
ACP2				*i* S	Sb	04 43 18.4	-4.4
HMTT	Tlapaneco	1.49	358	*i* P	Pn	04 43 00.8	-3.6
HMTT				*i* S	Sn	04 43 19.1	-5.3
CAIG	El Cayaco	1.84	294	*e*P	Pn	04 43 05.3	-3.8
CAIG				*i* S	Sn	04 43 27.9	-5.0
CAIG	El Cayaco	1.84	294	*e*P	Pn	04 43 05.3	-3.8
VHO	Vista Hermosa	1.87	65	*e*P	Pn	04 43 06.4	-3.2
VHO				*i* S	Sn	04 43 28.4	-5.3
VHO	Vista Hermosa	1.87	65	*e*P	Pn	04 43 07.1	-2.6
MEIG	Mezcala	1.94	327	*e*P	Pn	04 43 07.0	-3.5
MEIG				*i* S	Sn	04 43 30.7	-4.6
MEIG	Mezcala	1.94	327	*e*P	Pn	04 43 07.0	-3.5
HUIG	Huatulco	2.37	103	*e*P	Pn	04 43 13.1	-3.3
HUIG				*e*S	Sn	04 43 41.0	-4.8
HUIG	Huatulco	2.37	103	*e*P	Pn	04 43 13.1	-3.3

IDC 20 05:07:04.7±1.3**, 52°.09N×160°.41E, h0**km**, mb3.3**/4**, mb1 3.7**/4**, mb1mx3.3**/66**, mbtmp3.3**/4**, MS3.0**/1**, Ms1 3.0**/1**, ms1mx2.5**/32**, Error ellipse: s-maj=46.1km s-min=29.0km az=151.0, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ILAR	Eielson Array	29.39	44	P	P	05 13 08.5	-0.7
	0.2nm,0.4s,baz=252,slow=6.8,SNR=7.3						
GUMO	Guam	40.38	204	LR	LR	05 31 01.2	
	comp=Z,18nm,19.6s,baz=191,slow=36						
MKAR	Makanchi Array	48.77	297	P	P	05 15 51.3	+0.3
	0.1nm,0.5s,baz=41,slow=9.5,SNR=2.3						
TXAR	Lajitas Array	70.85	67	P	P	05 18 23.7	+0.4
	0.3nm,0.7s,baz=296,slow=4.0,SNR=3.7						
WRA	Warramunga Arr	75.25	205	P	P	05 18 49.0	-0.1
	0.6nm,1.1s,baz=4.9,slow=7.5,SNR=4.6						

MEX 20 05:22:20.9±0.6**, 16°.54N×98°.43W, h7**km±6km**, MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.33	116	*i* P	Pg	05 22 26.9	-0.5
PNIG				*e*S	Sg	05 22 31.9	+0.2
TLIG	Tlapa	1.03	353	*e*P	Pg	05 22 37.4	-3.3
TLIG				*e*S	Sg	05 22 50.9	-3.1
VHO	Vista Hermosa	1.71	72	*e*P	Pn	05 22 47.9	-3.4
VHO				*i* S	Sn	05 23 09.3	-4.2
MEIG	Mezcala	1.79	321	*e*P	Pn	05 22 49.3	-2.9
MEIG				*e*S	Sn	05 23 11.1	-4.1
PLIG	Platanillo	2.11	331	*e*P	Pn	05 22 53.3	-3.4
PLIG				*i* S	Sn	05 23 18.9	-4.3
HUIG	Huatulco	2.36	109	*e*P	Pn	05 22 56.9	-3.2
HUIG				*i* S	Sn	05 23 24.6	-4.7

IDC 20 05:51:18.1±4.5**, 6°.58S×149°.18E, h103**km±41km**, mb3.3**/2**, mb1 3.8**/4**, mb1mx3.2**/45**, mbtmp3.9**/4**, Error ellipse: s-maj=113.8km s-min=33.7km az=127.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	3.45	215	P	Pn	05 52 11.1	+1.1
	2.8nm,0.3s,baz=42,slow=14,SNR=4.3						
PMG				S	Sn	05 52 49.8	-0.2
	9.5nm,0.3s,baz=41,slow=20,SNR=7.6						
WRA	Warramunga Arr	19.60	226	P	P	05 55 37.6	-0.8
	1.4nm,0.3s,baz=51,slow=11,SNR=54						
ASAR	Alice Springs	22.45	219	P	P	05 56 10.1	+1.2
	1.7nm,0.4s,baz=55,slow=9.0,SNR=31						
ILAR	Eielson Array	85.17	23	P	P	06 03 42.4	-0.2
	0.3nm,0.7s,baz=261,slow=5.4,SNR=5.3						

KRSC ***20*** *06:10:21.6±2.3, 49°.02N×156°.56E, h53km±30km, ML6.4*

IDC ***20*** *06:10:21.1±0.4, 49°.35N×156°.01E, h0km, mb5.5/37, mb1 5.5/40, mb1mx5.4/66, mbtmp5.4/40, ML4.5/3, MS5.7/69, Ms1 5.7/69, ms1mx5.7/72, Error ellipse: s-maj=11.1km s-min=9.2km az=109.0*

BJI ***20*** *06:10:21.2, 49°.44N×156°.16E, h12km, mb5.8/83, mB5.9/68, Ms6.2/94, Ms7 6.2/81*

GCMT ***20*** *06:10:25.2±0.1, 49°.22N×156°.41E, h27km, MW6.0/142, Moment Tensor Solution. s132,c312; s142,c486; Duration: 2s4 Moment tensor: Scale 10^{18}Nm; M_{rr}0.93±.01; $M_{\theta\theta}$-0.29±.01; $M_{\phi\phi}$-0.63±.01; $M_{r\theta}$0.43±.01; $M_{\theta\phi}$-0.47±.00; $M_{\phi r}$0.67±.01; Best double couple: $M_0$1.23800×10^{18} NP1:ϕ_s33.00000°, δ65.00000°, λ89.00000°. NP2:ϕ_s217.00000°, δ25.00000°, λ93.00000°. Principal axes: T 1.2210, Plg70.0000°, Azm300.0000°; N 0.0350, Plg1.0000°, Azm34.0000°; P -1.2550, Plg20.0000°, Azm124.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

NEIC ***20*** *06:10:25.0±0.0, 49°.15N×156°.23E, h23km Best double couple: NP1:ϕ_s28.00000°, δ71.00000°, λ84.00000°. NP2:ϕ_s227.00000°, δ20.00000°, λ108.00000°. Principal axes: T 1.1800, Plg63.0000°, Azm288.0000°; N -0.1000, Plg6.0000°, Azm30.0000°; P -1.0800, Plg26.0000°, Azm123.0000°;*

NEIC ***20*** *06:10:25.2±0.1, 49°.41N×155°.91E, h19km, mb5.7/298, ME6.0, MS5.7/298, MW5.9, MW6.1, MW6.0 Error ellipse: s-maj=2.7km s-min=1.4km az=157.0, Moment Tensor Solution. s10 Moment tensor: Scale 10^{17}Nm; M_{rr}5.60; $M_{\theta\theta}$-0.98; $M_{\phi\phi}$-4.62; $M_{r\theta}$4.24; $M_{\theta\phi}$-2.62; $M_{\phi r}$4.86; Best double couple: $M_0$8.70000×10^{17} NP1:ϕ_s197.00000°, δ22.00000°, λ70.00000°. NP2:ϕ_s38.00000°, δ69.00000°, λ98.00000°. Principal axes: T 8.5800, Plg65.0000°, Azm321.0000°; N 0.1900, Plg7.0000°, Azm215.0000°; P -8.7700, Plg24.0000°, Azm122.0000°; Broadband fault plane solution: P waves. NP1:ϕ_s210.00000°, δ12.00000°, λ90.00000°. NP2:ϕ_s30.00000°, δ78.00000°, λ90.00000°. Principal axes: T Plg57.0000°, Azm300.0000°; N Plg0.0000°, Azm0.0000°; P Plg33.0000°, Azm120.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

ISCJB ***20*** *06:10:25.8±0.3, 49°.30N±0°.02×156°.08E±0°.02, h40km±2km, mb5.7/705, MS5.8/702 Error ellipse: s-maj=2.9km s-min=1.5km az=163.7*

SKHL ***20*** *06:10:26.9±0.9, 49°.14N×156°.31E, h69km±6km, mb6.6/3, mbh6.4/2, Ms6.1/7, msh6.4/1*

SKHL Felt (IV-V) at Severo-Kurilsk.

MOS ***20*** *06:10:26.9±1.1, 49°.39N×155°.94E, h47km, mb6.0/117, MS5.9/123, Error ellipse: s-maj=5.6km s-min=2.6km az=81.6 Broadband fault plane solution: P waves. $M_0$7.20000×10^{18} NP1:ϕ_s32.00000°, δ71.00000°, λ86.00000°. NP2:ϕ_s224.00000°, δ20.00000°, λ101.00000°. Principal axes: T Plg64.0000°, Azm296.0000°; N Plg4.0000°, Azm34.0000°; P Plg26.0000°, Azm125.0000°;*

MOS Fault plane solution: P-wave C204, D29 . Felt (IV-V) at Severo-Kuril'sk.

NEIC ***20*** *06:10:32.7±0.0, 49°.53N×156°.72E, h36km, Moment Tensor Solution. s22 Moment tensor: Scale 10^{18}Nm; M_{rr}0.99; $M_{\theta\theta}$-0.51; $M_{\phi\phi}$-0.48; $M_{r\theta}$0.17; $M_{\theta\phi}$-0.49; $M_{\phi r}$1.06; Best double couple: $M_0$1.50000×10^{18} NP1:ϕ_s243.00000°, δ27.00000°, λ128.00000°. NP2:ϕ_s21.00000°, δ69.00000°, λ73.00000°. Principal axes: T 1.5500, Plg62.0000°, Azm265.0000°; N -0.2000, Plg16.0000°, Azm28.0000°; P -1.3500, Plg22.0000°, Azm124.0000°;*

ISC 20 06:10:27.3±0.3**, 49°.25N**±0°.03×**156°.11E**±0°.03**, h38**km±1km**, h38**km**:pP-P, n2456, σ1s50**/2454**, mb5.7**/745**, MS5.8**/733**, 215C-49D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.44	0	*i* P	Pn	06 10 51.0	+0.2
SKR				AMB	AMB	06 10 53.0	
	41μm,0.5s						
SKR				*e*S	Sn	06 11 08.9	+0.5
SKR				A	A	06 11 15.0	
	107μm,0.6s						
SKR				A	A	06 11 15.0	
	129μm,0.6s						
SKR				AMS	AMS	06 11 37.0	
	609μm,14.0s						
SKR	Severo-Kuril's	1.44	0	*e*P	Pn	06 10 50.4	-0.4
SKR				*e*S	Sn	06 11 09.9	+1.5
SKR	Severo-Kuril's	1.44	0	⇓*i*PN	Pn	06 10 50.3	-0.5
SKR				*e*S	Sn	06 11 09.1	+0.7
SKR				pmax	pmax		
	comp=Z,42μm,0.6s						
SKR				pmax	pmax		
	comp=Z,41μm,0.5s						
SKR				smax	smax		
	comp=E,129μm,0.6s						
SKR				smax	smax		
	comp=N,107μm,0.5s						
PAU	Pauzhetka	2.27	11	*e*P	Pn	06 11 02.5	+0.3
PAU				AMB	AMB	06 11 05.0	
	comp=N,9μm,0.6s						
PAU				*e*S	Sn	06 11 30.0	+1.1
PAU				A	A	06 11 41.8	
	comp=N,77μm,0.5s						
PAU				AMS	AMS	06 12 12.9	
	comp=N,250μm,12.0s						
PAU	Pauzhetka	2.27	11	*e*P	Pn	06 11 02.2	0.0
PAU				*e*S	Sn	06 11 31.4	+2.5
PAU	Pauzhetka	2.27	11	PN	Pn	06 11 02.2	0.0
PAU				S	Sn	06 11 31.4	+2.5
KDTR	Khodutka, Kamc	2.86	25	*e*P	Pn	06 11 08.5	-1.8
KDTR				*e*S	Sn	06 11 42.6	-0.7
MIPR	Malaya Ipel'ka	3.06	7	*e*P	Pn	06 11 13.4	+0.3
MIPR	Malaya Ipel'ka	3.06	7	PN	Pn	06 11 13.4	+0.3
ASAK	Asacha	3.34	19	*e*P	Pn	06 11 16.3	-0.7
ASAK	Asacha	3.34	19	PN	Pn	06 11 16.3	-0.7
MTVR	Mutnovka	3.50	21	*e*P	Pn	06 11 18.5	-0.7
MTVR	Mutnovka	3.50	21	PN	Pn	06 11 18.5	-0.7
GRL	Gorelyy	3.54	20	*e*P	Pn	06 11 19.0	-0.7
GRL	Gorelyy	3.54	20	PN	Pn	06 11 19.0	-0.7
RUS	Russkaya	3.54	25	*e*P	Pn	06 11 17.6	-2.0
RUS	Russkaya	3.54	25	PN	Pn	06 11 17.6	-2.0
APC	Apacha	3.74	10	*e*P	Pn	06 11 24.2	+1.8
APC	Apacha	3.74	10	PN	Pn	06 11 24.2	+1.8
KRMR	Karymshinskiy	3.81	19	*e*P	Pn	06 11 23.3	0.0
KRMR				*e*S	Sn	06 12 09.8	+3.0
KRMR	Karymshinskiy	3.81	19	PN	Pn	06 11 23.3	0.0
KRMR				S	Sn	06 12 09.8	+3.0
I44RU	PETROPAVLOVSK-	3.99	14	Pn	Pn	06 11 30.2	+4.3
	baz=168,slow=14,SNR=2.0						
PEA0B	Petropavlovsk-	3.99	14	*e*Pn	Pn	06 11 26.6	+0.6
PETK	Petropavlovsk-	3.99	14	Pn	Pn	06 11 26.3	+0.3
	baz=181,slow=12						
PETK				LR	LR	06 13 11.3	
	comp=N,141μm,20.9s,baz=196,slow=44						
PETK	Petropavlovsk-	3.99	14	*e*Pn	Pn	06 11 27.0	+1.0
PET	Petropavlovsk	4.11	22	*e*P	Pn	06 11 27.0	-0.5
PET				*e*S	Sn	06 12 13.9	-0.3
PET				AMS	AMS	06 13 19.0	
	comp=N,107μm,12.0s						
PET				AMS	AMS	06 13 19.0	
	comp=N,98μm,12.0s						
PET	Petropavlovsk	4.11	22	*e*Pn	Pn	06 11 26.9	-0.5
PET	Petropavlovsk	4.11	22	*e*P	Pn	06 11 26.7	-0.7
PET				*e*S	Sn	06 12 16.4	+2.2
PET	Petropavlovsk	4.11	22	*ce*PN	Pn	06 11 26.5	-0.9
PET				*e*S	Sn	06 12 15.6	+1.4
PET				pmax	pmax		
	comp=Z,8μm,5.0s						
PET				pmax	pmax		
	comp=Z,4μm,13.1s						
PET				pmax	pmax		
	comp=Z,3μm,0.6s						
PET				smax	smax		
	comp=E,84μm,1.8s						
PET				smax	smax		
	comp=E,34μm,0.7s						
PET				smax	smax		
	comp=N,27μm,0.8s						
PET				MLR	MLR		
	comp=Z,77μm,12.0s						
INSR	Institute	4.13	21	*e*P	Pn	06 11 28.3	+0.5
INSR				*e*S	Sn	06 12 15.9	+1.0
INSR	Institute	4.13	21	PN	Pn	06 11 28.3	+0.5
INSR				S	Sn	06 12 15.9	+1.0
DALK	Dalny	4.14	23	*e*P	Pn	06 11 27.1	-0.8
DALK				*e*S	Sn	06 12 16.2	+1.3
DALK	Dalny	4.14	23	PN	Pn	06 11 27.1	-0.8
DALK				S	Sn	06 12 16.2	+1.3
UGLR	Uglovaya	4.32	22	*i* P	Pn	06 11 30.1	-0.4
UGLR	Uglovaya	4.32	22	PN	Pn	06 11 30.1	-0.4
KOK	Koryaka	4.35	20	*e*P	Pn	06 11 31.8	+0.9
KOK	Koryaka	4.35	20	PN	Pn	06 11 31.8	+0.9
SMAR	Somma	4.36	22	*i* P	Pn	06 11 30.9	-0.3
SMAR	Somma	4.36	22	PN	Pn	06 11 30.9	-0.3
SDLR	Sedlovina	4.40	22	*i* P	Pn	06 11 30.6	-1.0
SDLR	Sedlovina	4.40	22	PN	Pn	06 11 30.6	-1.0
KRX	Arik	4.42	20	*e*P	Pn	06 11 32.8	+1.0
KRX	Arik	4.42	20	PN	Pn	06 11 32.8	+1.0
SPN	Mys Shipunski	4.57	31	*e*P	Pn	06 11 32.4	-1.5
SPN				*e*S	Sn	06 12 25.4	-0.3
SPN	Mys Shipunski	4.57	31	PN	Pn	06 11 32.4	-1.5
SPN				S	Sn	06 12 25.4	-0.3
GNL	Ganaly	4.60	14	*e*P	Pn	06 11 34.9	+0.6
GNL	Ganaly	4.60	14	PN	Pn	06 11 34.9	+0.6
KII	Karymskiy	5.23	22	*e*P	Pn	06 11 44.0	+1.1
KII	Karymskiy	5.23	22	PN	Pn	06 11 44.0	+1.1
MKZ	Mys Kozlova	6.35	31	*e*P	Pn	06 11 55.5	-2.7
MKZ				*e*S	Sn	06 13 05.5	-3.9
MKZ	Mys Kozlova	6.35	31	PN	Pn	06 11 55.5	-2.7
TUMD	Tumrok D	6.52	22	*e*P	Pn	06 11 59.8	-0.8
TUMD				*e*S	Sn	06 13 15.7	+2.1
TUMR	Tumrok	6.53	21	*e*P	Pn	06 12 01.4	+0.5
TUMR	Tumrok	6.53	21	PN	Pn	06 11 59.8	-1.1
TUMR				S	Sn	06 13 15.7	+1.6
ESO	Esso	6.87	12	*e*P	Pn	06 12 06.4	+1.0
ESO	Esso	6.87	12	PN	Pn	06 12 06.4	+1.0
KUR	Kuril'sk	6.90	238	*e*P	Pn	06 12 07.0	+1.2
KUR				AMB	AMB	06 12 20.0	

	comp=Z,531nm,0.5s						
KUR				AMB	AMB	06 12 20.0	
	comp=Z,250nm,0.5s						
KUR				AMB	AMB	06 12 20.0	
	comp=Z,2µm,0.5s						
KUR				*i* S	**Sn**	**06 13 21.5**	**-1.4**
KUR				AMS	AMS	06 14 53.4	
	comp=Z,98µm,15.0s						
KUR				AMS	AMS	06 14 53.4	
	comp=Z,17µm,15.0s						
KUR				AMS	AMS	06 14 53.4	
	comp=Z,85µm,15.0s						
KUR	**Kuril'sk**	**6.90**	**238**	*e*PN	**Pn**	**06 12 07.8**	**+2.0**
KUR				*i* S	**Sn**	**06 13 26.8**	**+3.9**
KUR				pmax	pmax		
	comp=Z,21µm,3.6s						
KUR				pmax	pmax		
	comp=N,14µm,3.7s						
KUR				pmax	pmax		
	comp=E,22µm,3.9s						
KUR				pmax	pmax		
	comp=Z,2µm,0.7s						
KUR				pmax	pmax		
	comp=N,770nm,0.5s						
KUR				pmax	pmax		
	comp=E,662nm,0.5s						
KUR				smax	smax		
	comp=E,3µm,1.6s						
KUR				smax	smax		
	comp=N,2µm,1.5s						
KUR				smax	smax		
	comp=N,56µm,2.1s						
KUR				smax	smax		
	comp=E,50µm,2.0s						
KUR				MLR	MLR		
	comp=Z,97µm,16.0s						
KUR				MLR	MLR		
	comp=N,119µm,15.0s						
KMNR	**Kamenistaya**	**6.99**	**20**	*e*P	**Pn**	**06 12 08.8**	**+1.7**
KMNR	**Kamenistaya**	**6.99**	**20**	PN	**Pn**	**06 12 08.8**	**+1.7**
KPT	**Kopyto**	**7.18**	**19**	*e*P	**Pn**	**06 12 10.8**	**+1.1**
KPT	**Kopyto**	**7.18**	**19**	PN	**Pn**	**06 12 10.8**	**+1.1**
KIRR	**Kirishev**	**7.19**	**19**	*e*P	**Pn**	**06 12 11.8**	**+1.8**
KIRR	**Kirishev**	**7.19**	**19**	PN	**Pn**	**06 12 11.8**	**+1.8**
KOZ	**Kozyrevsk**	**7.20**	**17**	*e*P	**Pn**	**06 12 10.6**	**+0.7**
KOZ	**Kozyrevsk**	**7.20**	**17**	PN	**Pn**	**06 12 10.6**	**+0.7**
BZMR	**Bezymyannaya**	**7.21**	**20**	*e*P	**Pn**	**06 12 11.2**	**+1.0**
BZMR	**Bezymyannaya**	**7.21**	**20**	PN	**Pn**	**06 12 11.2**	**+1.0**
BZWR	**Bezymyannyi-We**	**7.24**	**20**	*e*P	**Pn**	**06 12 11.2**	**+0.6**
BZWR	**Bezymyannyi-We**	**7.24**	**20**	PN	**Pn**	**06 12 11.2**	**+0.6**
BZGR	**Bezymyannyi-Gr**	**7.26**	**21**	*e*P	**Pn**	**06 12 10.3**	**-0.5**
BZGR	**Bezymyannyi-Gr**	**7.26**	**21**	PN	**Pn**	**06 12 10.3**	**-0.5**
ZLN	**Zelenaya**	**7.36**	**21**	*e*P	**Pn**	**06 12 12.6**	**+0.5**
ZLN	**Zelenaya**	**7.36**	**21**	PN	**Pn**	**06 12 12.6**	**+0.5**
LGNR	**Loginova**	**7.39**	**20**	*e*P	**Pn**	**06 12 14.1**	**+1.3**
LGNR	**Loginova**	**7.39**	**20**	PN	**Pn**	**06 12 14.1**	**+1.3**
CIRR	**Tsirk**	**7.43**	**20**	*e*P	**Pn**	**06 12 15.0**	**+1.8**
CIRR	**Tsirk**	**7.43**	**20**	PN	**Pn**	**06 12 15.0**	**+1.8**
KRSR	**Krestovskiy**	**7.49**	**19**	*e*P	**Pn**	**06 12 15.2**	**+1.3**
KRSR	**Krestovskiy**	**7.49**	**19**	PN	**Pn**	**06 12 15.2**	**+1.3**
KLY	**Klyuchi**	**7.59**	**20**	*e*P	**Pn**	**06 12 16.7**	**+1.4**
KLY	**Klyuchi**	**7.59**	**20**	PN	**Pn**	**06 12 16.7**	**+1.4**
BDR	**Baidarnaya**	**7.95**	**21**	*e*P	**Pn**	**06 12 21.0**	**+0.7**
BDR	**Baidarnaya**	**7.95**	**21**	PN	**Pn**	**06 12 21.0**	**+0.7**
SRKR	**Sorokina**	**8.02**	**20**	*e*P	**Pn**	**06 12 21.6**	**+0.4**
SRKR	**Sorokina**	**8.02**	**20**	PN	**Pn**	**06 12 21.6**	**+0.4**
SMKR	**Semkarok**	**8.03**	**22**	*e*P	**Pn**	**06 12 21.3**	**0.0**
SMKR	**Semkarok**	**8.03**	**22**	PN	**Pn**	**06 12 21.3**	**0.0**
KBTR	**Krutoberegovo**	**8.07**	**28**	*i* P	**Pn**	**06 12 19.7**	**-2.1**
KBTR				*e*S	**Sn**	**06 13 51.1**	**-0.6**
KBTR	**Krutoberegovo**	**8.07**	**28**	PN	**Pn**	**06 12 19.7**	**-2.1**
KBG	**Krutoberegovo**	**8.08**	**27**	*e*P	**Pn**	**06 12 20.7**	**-1.2**
KBG	**Krutoberegovo**	**8.08**	**27**	PN	**Pn**	**06 12 20.7**	**-1.2**
SHO	**Shikotan**	**8.35**	**233**	*e*P	**Pn**	**06 12 25.2**	**-0.5**
SHO				AMB	AMB	06 12 48.0	
	comp=N,475nm,0.6s						
SHO				AMB	AMB	06 12 48.0	
	comp=N,480nm,0.6s						
SHO				*i* S	**Sn**	**06 13 55.1**	**-3.6**
SHO				AMS	AMS	06 16 25.9	
	comp=N,106µm,17.0s						
SHO				AMS	AMS	06 16 25.9	
	comp=N,54µm,17.0s						
SHO				AMS	AMS	06 16 25.9	
	comp=N,42µm,17.0s						
SHO	**Shikotan**	**8.35**	**233**	*e*PN	**Pn**	**06 12 23.8**	**-1.9**
SHO				pmax	pmax		
	comp=Z,480nm,0.6s						
SHO				pmax	pmax		
	comp=N,475nm,0.7s						
SHO				MLR	MLR		
	comp=N,107µm,17.0s						
SHO				MLR	MLR		
	comp=Z,42µm,17.0s						
SHO				MLR	MLR		
	comp=E,54µm,11.0s						
BKI	**Bering**	**8.49**	**42**	*e*P	**Pn**	**06 12 25.0**	**-2.6**
BKI	**Bering**	**8.49**	**42**	PN	**Pn**	**06 12 25.0**	**-2.6**
YUK	**Yuzh-Kuril'sk**	**8.77**	**237**	*i* P	**Pn**	**06 12 32.0**	**+0.6**
YUK				AMB	AMB	06 12 45.0	
	comp=E,1µm,0.7s						
YUK				AMB	AMB	06 12 45.0	
	comp=E,2µm,0.7s						
YUK				AMB	AMB	06 12 45.0	
	comp=E,2µm,0.7s						
YUK				*i* S	**Sn**	**06 14 07.0**	**-1.8**
YUK				AMS	AMS	06 16 09.6	
	comp=E,23µm,14.0s						
YUK				AMS	AMS	06 16 09.6	
	comp=E,35µm,14.0s						
YUK				AMS	AMS	06 16 09.6	
	comp=E,97µm,14.0s						
YUK	**Yuzh-Kuril'sk**	**8.77**	**237**	*d* *i*PN	**Pn**	**06 12 32.0**	**+0.6**
YUK				pmax	pmax		
	comp=E,2µm,0.7s						
YUK				pmax	pmax		
	comp=Z,2µm,0.7s						
YUK				pmax	pmax		
	comp=N,1µm,0.4s						
YUK				MLR	MLR		
	comp=Z,97µm,16.0s						
YUK				MLR	MLR		
	comp=N,23µm,14.0s						
YUK				MLR	MLR		
	comp=E,35µm,13.0s						
TYV	**Tymovskoe**	**8.81**	**286**	*e*P	**Pn**	**06 12 35.7**	**+3.7**
TYV				AMB	AMB	06 12 40.0	
	comp=E,7µm,2.0s						
TYV				AMB	AMB	06 12 41.0	
	comp=E,640nm,1.0s						
TYV				AMS	AMS	06 16 46.5	
	comp=E,101µm,15.0s						
TYV				AMS	AMS	06 16 46.5	
	comp=E,132µm,15.0s						
TYV				AMS	AMS	06 16 46.5	
	comp=E,176µm,15.0s						
TYV	**Tymovskoe**	**8.81**	**286**	*e*PN	Pn	06 12 37.3	+5.3
TYV				*e*S	**Sn**	**06 14 14.5**	**+4.7**
TYV				pmax	pmax		
	comp=Z,7µm,2.4s						
TYV				pmax	pmax		
	comp=Z,642nm,1.1s						
TYV				smax	smax		
	comp=E,127nm,1.3s						
TYV				MLR	MLR		
	comp=Z,176µm,15.0s						
TYV				MLR	MLR		
	comp=N,102µm,16.0s						
TYV				MLR	MLR		
	comp=E,132µm,16.0s						
UGL	**Uglegorsk**	**9.21**	**274**	*e*P	**Pn**	**06 12 40.7**	**+3.3**
UGL				AMB	AMB	06 12 47.0	
	comp=E,2µm,1.0s						
UGL				AMB	AMB	06 12 47.0	
	comp=E,10µm,5.0s						
UGL				AMB	AMB	06 12 47.0	
	comp=E,10µm,5.0s						
UGL				*e*S	**Sn**	**06 14 20.9**	**+1.3**
UGL				A	A	06 14 52.5	
	comp=E,27µm,9.0s						
UGL				AMS	AMS	06 17 43.0	
	comp=E,95µm,13.0s						
UGL				AMS	AMS	06 17 43.0	
	comp=E,77µm,13.0s						
YSS	**Yuzh-Sakhalins**	**9.23**	**261**	*e*P	**Pn**	**06 12 41.0**	**+3.3**
YSS				AMB	AMB	06 12 46.0	
	comp=E,3µm,5.6s						
YSS				AMB	AMB	06 12 46.0	
	comp=E,9µm,5.6s						
YSS				AMB	AMB	06 12 46.0	
	comp=E,7µm,5.6s						
YSS				AMB	AMB	06 12 47.0	
	comp=E,460nm,1.0s						
YSS				AMB	AMB	06 12 47.0	
	comp=E,1µm,1.0s						
YSS				AMB	AMB	06 12 47.0	
	comp=E,680nm,1.0s						
YSS				*e*S	**Sn**	**06 14 20.0**	**-0.1**
YSS				A	A	06 14 25.0	
	comp=E,290nm,0.6s						
YSS				A	A	06 14 25.0	
	comp=E,170nm,0.6s						
YSS				AMS	AMS	06 16 23.0	
	comp=E,12µm,20.0s						
YSS				AMS	AMS	06 16 23.0	
	comp=E,52µm,20.0s						
YSS				AMS	AMS	06 16 23.0	
	comp=E,63µm,20.0s						
YSS	**Yuzh-Sakhalins**	**9.23**	**261**	*e*Pn	**Pn**	**06 12 41.2**	**+3.5**
YSS	**Yuzh-Sakhalins**	**9.23**	**261**	α*e*PN	**Pn**	**06 12 41.5**	**+3.8**
YSS				*e*S	**Sn**	**06 14 24.2**	**+4.1**
YSS				pmax	pmax		
	comp=Z,7µm,5.6s						
YSS				pmax	pmax		
	comp=N,3µm,4.8s						
YSS				pmax	pmax		
	comp=E,9µm,2.5s						
YSS				pmax	pmax		
	comp=Z,680nm,0.9s						
YSS				pmax	pmax		
	comp=N,460nm,1.0s						
YSS				pmax	pmax		
	comp=E,1µm,1.1s						
YSS				smax	smax		
	comp=N,290nm,0.9s						
YSS				smax	smax		
	comp=E,170nm,0.6s						
YSS				MLR	MLR		
	comp=Z,63µm,16.0s						
YSS				MLR	MLR		
	comp=E,52µm,16.0s						
OKH	**Okha**	**9.29**	**303**	⇑*i*PN	Pn	06 12 44.2	+5.7
OKH				*e*S	Sn	06 14 34.3	+13
OKH				pmax	pmax		
	comp=Z,5µm,7.4s						
PALN	**Palana**	**10.12**	**11**	*e*P	**Pn**	**06 12 50.7**	**+0.9**
PALN	**Palana**	**10.12**	**11**	PN	**Pn**	**06 12 50.7**	**+0.9**
NKL	**Nikolayevsk**	**10.44**	**298**	*i* PN	**Pn**	**06 12 58.0**	**+3.8**
NKL				*e*		06 14 52.0	
NKL				pmax	pmax		
	comp=N,330nm,1.1s						
NKL				pmax	pmax		
	comp=Z,1µm,1.1s						
NKL				pmax	pmax		
	comp=N,2µm,4.0s						
NKL				pmax	pmax		
	comp=E,8µm,4.0s						
NKL				pmax	pmax		
	comp=Z,7µm,4.0s						
NKL				MLR	MLR		
	comp=N,18µm,14.0s						
NKL				MLR	MLR		
	comp=E,37µm,14.0s						
NKL				MLR	MLR		
	comp=Z,95µm,14.0s						
ASAJ	**Asahikawa**	**10.60**	**246**	Pn	**Pn**	**06 12 58.8**	**+2.2**
	comp=Z,36nm,0.3s,baz=77,slow=13,SNR=106						
ASAJ				LR	LR	06 16 46.2	
	comp=Z,72µm,19.3s,baz=64,slow=36						
MA2	**Magadan**	**10.80**	**345**	Pn	**Pn**	**06 12 60.0**	**+0.8**
	comp=Z,58nm,0.3s,baz=162,slow=9.8,SNR=171						
MA2				LR	LR	06 17 52.4	
	comp=Z,61µm,18.0s,baz=170,slow=42						
MA2	**Magadan**	**10.80**	**345**	*e*P	**Pn**	**06 13 00.1**	**+0.9**
MA2	**Magadan**	**10.80**	**345**	*e*Pn	**Pn**	**06 12 59.8**	**+0.6**
MA2	**Magadan**	**10.80**	**345**	PN	**Pn**	**06 13 00.0**	**+0.8**
MA2				pmax	pmax		
	comp=Z,58nm,0.3s						
MA2				MLR	MLR		
	comp=Z,61µm,18.0s						
ERM	**Erimo**	**11.59**	**236**	*e*Pn	**Pn**	**06 13 10.5**	**+0.5**
ERM	**Erimo**	**11.59**	**236**	*c* *e*PN	**Pn**	**06 13 09.1**	**-0.9**
ERM				pmax	pmax		
	comp=Z,192nm,0.6s						
SMY	**Shemya**	**11.86**	**66**	*e*Pn	**Pn**	**06 13 08.9**	**-4.7**
SMY	**Shemya**	**11.86**	**66**	*e*PN	**Pn**	**06 13 08.9**	**-4.7**
TILK	**Tilichiki**	**12.60**	**23**	*e*P	**Pn**	**06 13 24.3**	**+0.5**
TILK	**Tilichiki**	**12.60**	**23**	PN	**Pn**	**06 13 24.3**	**+0.5**
GRNR	**Gornyy**	**12.76**	**284**	*e*PN	**P**	**06 13 33.0**	**-3.4**
GRNR				pmax	pmax		
	comp=E,110nm,0.8s						
GRNR				pmax	pmax		
	comp=Z,130nm,0.8s						
SEY	**Seymchan**	**13.87**	**353**	Pn	**Pn**	**06 13 41.6**	**+0.6**
	comp=Z,2.2nm,0.3s,baz=155,slow=10,SNR=63						
SEY				LR	LR	06 20 01.0	
	comp=Z,68µm,18.1s,baz=158,slow=42						
SEY	**Seymchan**	**13.87**	**353**	*e*P	**Pn**	**06 13 42.7**	**+1.6**
SEY	**Seymchan**	**13.87**	**353**	*c* *i*P	**Pn**	**06 13 42.7**	**+1.6**
TEY	**Ternei**	**13.92**	**260**	⇑*e*P	**Pn**	**06 13 45.0**	**+3.2**
TEY				pmax	pmax		
	comp=Z,310nm,1.2s						
KLR	**Kul'dur**	**15.90**	**279**	Pn	**P**	**06 14 10.7**	**-0.6**
	comp=Z,0.2nm,0.3s,baz=77,slow=12,SNR=133						
KLR				LR	LR	06 20 48.4	
	comp=Z,8µm,18.9s,baz=82,slow=40						
USRK	**Ussuriysk Ar.**	**17.26**	**262**	P	**Pn**	**06 14 25.4**	**+0.1**
	baz=68,slow=9.6						
USRK				LR	LR	06 21 05.8	
	comp=Z,19µm,18.0s,baz=55,slow=38						
MJB9	**Matsu-Tunnel**	**18.20**	**232**	*e*Pn	**P**	**06 14 34.6**	**-2.2**
	comp=Z,343nm,0.9s						
MAJO	**Matsushiro**	**18.20**	**232**	*e*P	**P**	**06 14 35.1**	**-1.7**
MAJO	**Matsushiro**	**18.20**	**232**	*e*Pn	**P**	**06 14 34.7**	**-2.1**
	comp=Z,338nm,0.9s						
MAJO	**Matsushiro**	**18.20**	**232**	*c* *i*P	**P**	**06 14 35.1**	**-1.7**
MAT	**Matsushiro**	**18.20**	**232**	P	**P**	**06 14 34.8**	**-2.0**
MAT				S	**Sn**	**06 18 00.3**	**+1.5**
MJAR	**Matsushiro Arr**	**18.20**	**232**	P	**P**	**06 14 33.3**	**-3.5**
	comp=Z,3.6nm,0.3s,baz=25,slow=8.1,SNR=50						
MJAR				LR	LR	06 22 24.4	
	comp=Z,29µm,20.2s,baz=45,slow=40						
ZEA	**Zeya**	**18.45**	**295**	*c* *e*P	**P**	**06 14 39.0**	**-0.5**
ZEA				pmax	pmax		
	comp=N,200nm,1.0s						
ZEA				pmax	pmax		
	comp=E,140nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,260nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,19µm,12.0s						
ZEA				pmax	pmax		
	comp=E,16µm,11.0s						
ZEA				MLR	MLR		
	comp=Z,74µm,14.0s						
ZEA				MLR	MLR		
	comp=N,4µm,13.0s						
ZEA				MLR	MLR		
	comp=E,50µm,13.0s						
MSHR	**Mys Shultsa**	**18.55**	**258**	*i* P	**P**	**06 14 39.8**	**-0.8**
MDJ	**Mudanjiang**	**18.65**	**266**	P	**P**	**06 14 38.0**	**-3.7**
MDJ				pP	Pn	06 14 44.3	+2.0
MDJ				S	**Sn**	**06 18 07.3**	**-2.3**
MDJ				pmax	pmax		
	comp=E,97nm,1.0s						
MDJ				pmax	pmax		
	comp=E,4µm,4.9s						
MDJ				LR	LR		
	comp=E,42µm,17.0s						
MDJ				LR	LR		
	comp=E,29µm,17.6s						
MDJ				LR	LR		
	comp=E,66µm,14.7s						
MDJ	**Mudanjiang**	**18.65**	**266**	*e*P	**P**	**06 14 41.0**	**-0.7**
	comp=E,729nm,1.0s						
YAK	**Yakutsk**	**19.47**	**321**	P	**P**	**06 14 48.9**	**-1.6**
	comp=E,0.0nm,0.3s,baz=241,slow=22,SNR=50						
YAK				LR	LR	06 22 49.4	
	comp=E,26µm,18.6s,baz=90,slow=39						
YAK	**Yakutsk**	**19.47**	**321**	*e*P	**P**	**06 14 49.6**	**-0.9**
	comp=E,823nm,0.9s						
YAK	**Yakutsk**	**19.47**	**321**	⇑*i*P	**P**	**06 14 49.2**	**-1.3**
YAK				*e*S	**S**	**06 18 26.0**	**-2.3**
YAK				pmax	pmax		
	comp=Z,842nm,1.0s						
YAK				pmax	pmax		
	comp=E,527nm,1.4s						
YAK				pmax	pmax		
	comp=N,204nm,1.0s						
YAK				pmax	pmax		
	comp=Z,3µm,2.5s						
YAK				pmax	pmax		
	comp=N,2µm,2.7s						
YAK				pmax	pmax		
	comp=E,3µm,2.5s						
YAK				smax	smax		
	comp=N,1µm,3.5s						
YAK				smax	smax		
	comp=E,2µm,3.7s						
YAK				MLR	MLR		
	comp=Z,35µm,14.0s						
YAK				MLR	MLR		
	comp=N,28µm,15.0s						
YAK				MLR	MLR		
	comp=E,21µm,14.0s						
INU	**Inuyama**	**19.73**	**232**	*e*P	**P**	**06 14 53.2**	**-0.4**
	comp=E,551nm,0.9s						
JHJ	**Hachijo jima 2**	**20.19**	**223**	P	Pn	06 15 00.9	+0.1
	comp=E,812nm,0.8s,baz=124,slow=3.2,SNR=13						
CN2	**Changchun**	**21.70**	**267**	*e*P	**P**	**06 15 12.1**	**-2.7**
CN2				*e*pP	pP	06 15 18.9	-5.7
CN2				*e*sP	sP	06 15 22.6	-6.7
CN2				*e*S	**S**	**06 19 03.4**	**-9.3**
CN2				pmax	pmax		
	comp=E,10.0nm,0.8s						
CN2				LR	LR		
	comp=E,33µm,16.0s						
CN2				LR	LR		
	comp=E,23µm,16.0s						
CN2				LR	LR		
	comp=E,28µm,15.0s						
NIKH	**Nikolski High**	**22.17**	**67**	PFAKE		06 15 30.0	+10
NIKH				LR	LR		
	comp=Z,19µm,21.0s						
GAMB	**Gambell**	**22.62**	**38**	*e*P	**P**	**06 15 23.3**	**-1.0**
	comp=Z,364nm,1.5s						
KSRS	**Korea Array**	**23.50**	**251**	P	**P**	**06 15 32.8**	**-0.8**
	comp=Z,183nm,1.0s,baz=49,slow=11,SNR=74						
KSRS				PcP	**PcP**	**06 19 19.1**	**+0.8**
	comp=Z,22nm,0.9s,baz=10,slow=0.9,SNR=9.1						
KSRS				LR	LR	06 24 17.2	
	comp=Z,29µm,18.8s,baz=62,slow=36						
KSRS	**Korea Array**	**23.50**	**251**	P	**P**	**06 15 32.8**	**-0.8**
KSRS						06 19 19.1	
KSRS				pmax	pmax		
	comp=Z,284nm,1.1s						
KSRS				MLR	MLR		
	comp=Z,29µm,18.8s						
KS01	**Wonju Array Si**	**23.50**	**251**	*e*P	**P**	**06 15 32.4**	**-1.2**
UNV	**Unalaska Valle**	**23.51**	**64**	PFAKE		06 15 40.0	+6.5
UNV				LR	LR		
	comp=Z,17µm,21.0s						
KS15	**Wonju Array Si**	**23.53**	**251**	*e*P	**P**	**06 15 33.8**	**0.0**
KSAR	**Wonju Array Be**	**23.53**	**251**	P	**P**	**06 15 32.8**	**-1.1**
KSAR				PcP	**PcP**	**06 19 19.1**	**+0.8**
KSAR	**Wonju Array Be**	**23.53**	**251**	P	**P**	**06 15 32.8**	**-1.1**
KSAR						06 19 19.1	
HIA	**Hailar**	**23.60**	**284**	*e*P	**P**	**06 15 33.5**	**-0.9**
	comp=Z,250nm,1.2s						
HIA				LR	LR		
	comp=Z,46µm,19.0s						
SNY	**Shenyang**	**23.83**	**264**	⇑P	P	06 15 28.9	-7.7
SNY				S	**S**	**06 19 49.3**	**-0.4**
SNY				pmax	pmax		
	comp=Z,230nm,1.0s						
SNY				pmax	pmax		
	comp=Z,5µm,11.1s						
SNY				LR	LR		
	comp=N,36µm,18.6s						
SNY				LR	LR		
	comp=E,26µm,16.1s						
SNY				LR	LR		
	comp=Z,40µm,14.5s						
AKUT	**Akutan**	**23.92**	**64**	PFAKE		06 15 50.0	+13
AKUT				LR	LR		
	comp=Z,16µm,20.0s						
INCN	**Inchon**	**24.28**	**252**	*e*P	**P**	**06 15 41.7**	**+0.8**
	comp=Z,452nm,1.1s						
INCN				LR	LR		
	comp=Z,21µm,20.0s						
INCN	**Inchon**	**24.28**	**252**	P	**P**	**06 15 42.2**	**+1.3**
	SNR=49						
INCN	**Inchon**	**24.28**	**252**	*e*P	**P**	**06 15 41.7**	**+0.8**
INCN				pmax	pmax		
	comp=Z,452nm,1.1s						
INCN				MLR	MLR		
	comp=Z,21µm,20.0s						
TJN	**Taejon**	**24.53**	**249**	*c* *i*P	**P**	**06 15 43.6**	**+0.5**
CBIJ	**Chichi jima**	**24.60**	**211**	*e*P	**P**	**06 15 45.4**	**+1.6**
	comp=Z,238nm,1.0s						
JCJ	**Chichijima**	**24.60**	**211**	P	**P**	**06 15 43.1**	**-0.7**
	comp=Z,117nm,0.9s,baz=17,slow=6.7,SNR=11						
JCJ				LR	LR	06 27 34.0	
	comp=Z,3µm,18.6s,baz=7.5,slow=42						
JNU	**Nakatsue**	**24.73**	**239**	P	**P**	**06 15 44.0**	**-1.0**
	comp=Z,345nm,1.0s,baz=39,slow=9.4,SNR=81						
JNU				LR	LR	06 24 57.7	
	comp=Z,13µm,21.9s,baz=44,slow=36						
JNU	**Nakatsue**	**24.73**	**239**	*e*P	**P**	**06 15 46.0**	**+0.9**
FALS	**False Pass**	**25.24**	**62**	PFAKE		06 16 00.0	+11
FALS				LR	LR		
	comp=Z,22µm,21.0s						
ANM	**Nome**	**25.48**	**39**	*e*P	**P**	**06 15 53.3**	**+1.8**
	comp=Z,630nm,1.3s						
TIXI	**Tiksi**	**25.71**	**340**	P	**P**	**06 15 51.2**	**-2.3**
	comp=Z,157nm,0.6s,baz=127,slow=11,SNR=70						
TIXI				LR	LR	06 27 18.2	
	comp=Z,20µm,18.2s,baz=125,slow=40						
TIXI				PKPPKP	**P'P'df**	**06 50 35.2**	**-7.4**
	comp=Z,9.3nm,0.8s,baz=272,slow=1.6,SNR=3.6						
TIXI	**Tiksi**	**25.71**	**340**	*e*P	**P**	**06 15 50.8**	**-2.7**
TIXI	**Tiksi**	**25.71**	**340**	*e*P	**P**	**06 15 51.0**	**-2.5**
	comp=Z,219nm,0.8s						
TIXI				P'P'		06 50 35.2	
TIXI	**Tiksi**	**25.71**	**340**	*d* *i*P	**P**	**06 15 50.8**	**-2.7**
TIXI				pmax	pmax		
	comp=Z,201nm,0.7s						
TIXI				MLR	MLR		
	comp=Z,37µm,15.0s						
BOD	**Bodaibo**	**26.07**	**305**	*e*P	**P**	**06 15 55.9**	**-1.0**
BOD				*e*		06 26 49.8	
BOD				pmax	pmax		
	comp=Z,163nm,1.4s						
DL2	**Dalian**	**26.63**	**260**	⇑*i*P	**P**	**06 16 01.8**	**-0.3**
DL2				S	**S**	**06 20 37.3**	**+2.9**
DL2				pmax	pmax		
	comp=Z,310nm,1.0s						
DL2				pmax	pmax		
	comp=Z,2µm,7.3s						
DL2				LR	LR		
	comp=Z,16µm,15.9s						
DL2				LR	LR		
	comp=Z,16µm,16.9s						
DL2				LR	LR		
	comp=Z,20µm,17.1s						
CIT	**Chita**	**26.85**	**292**	*e*P	**P**	**06 16 03.2**	**-0.9**
CIT				*e*		06 16 12.2	
CIT				*e*		06 16 25.4	
CIT				*e*		06 16 51.0	
CIT				*e*		06 17 08.4	
CIT				pmax	pmax		
	comp=Z,221nm,1.0s						
SDPT	**Sand Point**	**26.89**	**60**	PFAKE		06 16 20.0	+16
SDPT				LR	LR		
	comp=Z,8µm,18.0s						
RDOG	**Red Dog Mine**	**27.64**	**32**	*e*P	**P**	**06 16 11.2**	**+0.3**
	comp=Z,212nm,1.0s						
RDOG				LR	LR		
	comp=Z,16µm,20.0s						
CHGN	**Chignik**	**27.96**	**58**	*e*P	**P**	**06 16 13.8**	**-0.1**
	comp=Z,48nm,1.0s						
MIDW	**Midway**	**29.22**	**126**	PFAKE		06 16 40.0	+15
MIDW				LR	LR		
	comp=Z,11µm,20.0s						
SVW2	**Sparrevohn**	**29.31**	**48**	*e*P	**P**	**06 16 26.1**	**+0.2**
	comp=Z,42nm,0.9s						
SVW2				LR	LR		
	comp=Z,12µm,20.0s						

BJI	**Beijing**	**29.57**	**267**	P	**P**	**06 16 27.4**	**-0.9**
BJI				S	**S**	**06 21 26.1**	**+5.5**
BJI				pmax	pmax		
	comp=Z,63nm,0.9s						
BJT	**Baijiatuau**	**29.58**	**267**	*e*P	**P**	**06 16 27.5**	**-1.0**
	comp=Z,174nm,1.2s						
BJT				LR	LR		
	comp=Z,14µm,21.0s						
BJT	**Baijiatuau**	**29.58**	**267**	*e*P	**P**	**06 16 27.5**	**-1.0**
BJT				pmax	pmax		
	comp=Z,174nm,1.2s						
BJT				MLR	MLR		
	comp=Z,14µm,21.0s						
SII	**Sitkinak Islan**	**30.27**	**57**	PFAKE		06 16 50.0	+16
SII				LR	LR		
	comp=Z,27µm,21.0s						
OHAK	**Old Harbor**	**30.68**	**55**	*e*P	**P**	**06 16 35.6**	**-2.3**
H11N2	**WAKE ISLAND Hy**	**30.70**	**160**	T	T	06 49 46.2	
	baz=347,slow=77,SNR=345						
RSO	**Redoubt South**	**30.70**	**49**	*e*P	**P**	**06 16 38.5**	**+0.1**
H11N1	**WAKE ISLAND Hy**	**30.71**	**160**	T	T	06 49 50.2	
	baz=347,slow=77,SNR=631						
H11N3	**WAKE ISLAND Hy**	**30.71**	**160**	T	T	06 49 57.3	
	baz=347,slow=77,SNR=422						
PPLA	**Purkeypile**	**30.96**	**44**	*e*P	**P**	**06 16 40.9**	**+0.2**
	comp=Z,447nm,1.6s						
PPLA				LR	LR		
	comp=Z,14µm,20.0s						
KDAK	**Kodiak Island**	**30.99**	**54**	*e*P	**P**	**06 16 39.4**	**-1.2**
	comp=Z,70nm,0.8s						
KDAK				LR	LR		
	comp=Z,19µm,21.0s						
KDAK	**Kodiak Island**	**30.99**	**54**	*i* P	**P**	**06 16 39.2**	**-1.4**
KDAK				*i*		06 27 04.7	
SPU	**Mount Spurr**	**31.02**	**48**	*e*P	**P**	**06 16 41.6**	**+0.5**
JOW	**Kunigami**	**31.03**	**234**	P	**P**	**06 16 40.4**	**-0.9**
	comp=Z,108nm,0.9s,baz=50,slow=7.0,SNR=15						
JOW				LR	LR	06 29 38.5	
	comp=Z,10µm,20.5s,baz=39,slow=37						
JOW	**Kunigami**	**31.03**	**234**	*e*P	**P**	**06 16 41.1**	**-0.2**
	comp=Z,197nm,1.0s						
CAST	**Castle Rocks**	**31.03**	**43**	*e*P	**P**	**06 16 40.9**	**-0.1**
	comp=Z,38nm,0.9s						
CAST				LR	LR		
	comp=Z,12µm,20.0s						
WAKE	**Wake Island**	**31.07**	**160**	PFAKE		06 17 00.0	+18
WAKE				LR	LR		
	comp=Z,23µm,18.0s						
TIA	**Tai’an**	**31.10**	**260**	P	**P**	**06 16 41.1**	**-0.9**
TIA				S	**S**	**06 21 49.5**	**+4.7**
TIA				pmax	pmax		
	comp=Z,2µm,4.7s						
TIA				LR	LR		
	comp=Z,11µm,16.6s						
TIA				LR	LR		
	comp=Z,12µm,19.1s						
TIA				LR	LR		
	comp=Z,9µm,17.8s						
SKT	**Skwentna**	**31.26**	**46**	*e*P	**P**	**06 16 43.6**	**+0.5**
	comp=Z,60nm,1.0s						
SKT				LR	LR		
	comp=Z,17µm,21.0s						
HOM	**Homer**	**31.30**	**51**	*e*P	**P**	**06 16 43.0**	**-0.4**
	comp=Z,222nm,1.1s						
HOM				LR	LR		
	comp=Z,9µm,20.0s						
CNPM	**China Poot**	**31.52**	**51**	*e*P	**P**	**06 16 44.6**	**-0.8**
	comp=Z,95nm,1.1s						
CNPM				LR	LR		
	comp=Z,11µm,21.0s						
BPAW	**Bear Paw Mtn.**	**31.55**	**42**	*e*P	**P**	**06 16 46.2**	**+0.6**
	comp=Z,48nm,0.9s						
BPAW				LR	LR		
	comp=Z,12µm,19.0s						
KTH	**Kantishna Hill**	**31.56**	**43**	*e*P	**P**	**06 16 46.5**	**+0.7**
	comp=Z,204nm,1.3s						
KTH				LR	LR		
	comp=Z,13µm,20.0s						
SUA	**Susitna One**	**31.65**	**47**	*e*P	**P**	**06 16 46.9**	**+0.3**
	comp=Z,91nm,1.0s						
SUA				LR	LR		
	comp=Z,10µm,21.0s						
BRLK	**Bradley Lake**	**31.67**	**50**	*e*P	**P**	**06 16 46.9**	**+0.1**
	comp=Z,52nm,0.8s						
BRLK				LR	LR		
	comp=Z,12µm,21.0s						
MLY	**Manley**	**31.71**	**40**	*e*P	**P**	**06 16 47.8**	**+0.8**
	comp=Z,65nm,1.0s						
MLY				LR	LR		
	comp=Z,8µm,19.0s						
H11S1	**WAKE ISLAND Hy**	**31.83**	**161**	T	T	06 51 11.0	
	baz=347,slow=76,SNR=2203						
TRF	**Thorofare Moun**	**31.84**	**43**	*e*P	**P**	**06 16 48.6**	**+0.2**
	comp=Z,57nm,0.9s						
TRF				LR	LR		
	comp=Z,12µm,19.0s						
H11S3	**WAKE ISLAND Hy**	**31.84**	**161**	T	T	06 51 10.6	
	baz=347,slow=76,SNR=1623						
H11S2	**WAKE ISLAND Hy**	**31.85**	**161**	T	T	06 50 44.3	
	baz=347,slow=76,SNR=1900						
SSE	**Sheshan**	**31.88**	**248**	P	**P**	**06 16 50.3**	**+1.5**
SSE				S	**S**	**06 21 56.6**	**-0.4**
SSE				pmax	pmax		
	comp=Z,35nm,0.7s						
SSE				pmax	pmax		
	comp=Z,1µm,7.3s						
SSE				LR	LR		
	comp=Z,6µm,17.3s						
SSE				LR	LR		
	comp=Z,6µm,16.1s						
ULN	**Ulaanbaatar**	**32.05**	**287**	*e*P	**P**	**06 16 48.2**	**-2.1**
ULN	**Ulaanbaatar**	**32.05**	**287**	*e*P	**P**	**06 16 49.0**	**-1.3**
	comp=Z,20nm,0.8s						
ULN				LR	LR		
	comp=Z,42µm,18.0s						
ULN	**Ulaanbaatar**	**32.05**	**287**	P	**P**	**06 16 49.3**	**-1.0**
	SNR=12						
ULN	**Ulaanbaatar**	**32.05**	**287**	*c i*P	**P**	**06 16 48.2**	**-2.1**
ULN				pmax	pmax		
	comp=Z,29nm,1.1s						
ULN				MLR	MLR		
	comp=Z,44µm,16.0s						
COLD	**Coldfoot**	**32.13**	**36**	*e*P	**P**	**06 16 50.1**	**-0.6**
	comp=Z,106nm,0.9s						
COLD				LR	LR		
	comp=Z,17µm,20.0s						
RC01	**Rabbit Creek A**	**32.15**	**48**	*e*P	**P**	**06 16 50.8**	**-0.1**
	comp=Z,174nm,1.7s						
RC01				LR	LR		
	comp=Z,16µm,20.0s						
HHC	**Hu-ho-hao-te**	**32.17**	**272**	*e*P	**P**	**06 16 50.1**	**-1.3**
HHC				sP	pP	06 17 01.9	-0.2
HHC				PP	**PnPn**	**06 17 55.8**	**-2.1**
HHC				S	**S**	**06 21 58.6**	**-3.0**
HHC				pmax	pmax		
	comp=Z,74nm,1.0s						
HHC				pmax	pmax		
	comp=Z,1µm,7.1s						
HHC				LR	LR		
	comp=Z,19µm,12.1s						
HHC				LR	LR		
	comp=Z,34µm,13.0s						
HHC				LR	LR		
	comp=Z,36µm,13.8s						
BWN	**Browne**	**32.22**	**42**	*e*P	**P**	**06 16 52.7**	**+1.3**
	comp=Z,647nm,1.2s						
BWN				LR	LR		
	comp=Z,16µm,18.0s						
IRK	**Irkutsk**	**32.37**	**295**	*e*P	**P**	**06 16 51.1**	**-1.8**
IRK				*e*		06 18 00.9	
IRK				pmax	pmax		
	comp=Z,189nm,1.0s						
PMR	**Palmer**	**32.41**	**47**	*e*P	**P**	**06 16 53.3**	**+0.2**
	comp=Z,18nm,0.9s						
PMR	**Palmer**	**32.41**	**47**	*e*P	**P**	**06 16 53.3**	**+0.2**
PMR				pmax	pmax		
	comp=Z,18nm,0.9s						
MCK	**McKinley**	**32.45**	**43**	*e*P	**P**	**06 16 53.5**	**0.0**
	comp=Z,153nm,1.1s						
MCK				LR	LR		
	comp=Z,12µm,20.0s						
MCK	**McKinley**	**32.45**	**43**	*e*P	**P**	**06 16 53.5**	**0.0**
MCK				pmax	pmax		
	comp=Z,153nm,1.1s						
MCK				MLR	MLR		
	comp=Z,12µm,20.0s						
SONA1	**Songino Array**	**32.46**	**287**	*e*P	**P**	**06 16 52.4**	**-1.5**
SONM	**Songino Array**	**32.47**	**287**	P	**P**	**06 16 51.9**	**-2.1**
	comp=Z,10nm,0.7s,baz=66,slow=8.0,SNR=38						
SONM				PcP	**PcP**	**06 19 41.2**	**+0.9**
	comp=Z,19nm,1.0s,baz=50,slow=2.3,SNR=6.1						
SONM				ScP	**ScP**	**06 23 24.3**	**+3.5**
	comp=Z,4.2nm,1.0s,baz=33,slow=8.6,SNR=5.1						
SONM				LR	LR	06 31 25.3	
	comp=Z,28µm,19.7s,baz=73,slow=39						
SONM	**Songino Array**	**32.47**	**287**	P	**P**	**06 16 51.9**	**-2.1**
SONM						06 19 41.2	
SONM				pmax	pmax		
	comp=Z,9.0nm,0.7s						
SONM				MLR	MLR		
	comp=Z,28µm,19.7s						
GHO	**Glory Hole Cre**	**32.50**	**46**	*e*P	**P**	**06 16 54.8**	**+0.7**
	comp=Z,111nm,1.3s						
GHO				LR	LR		
	comp=Z,13µm,22.0s						
TOLK	**Toolik Lake Re**	**32.55**	**34**	P	**P**	**06 16 53.5**	**-0.9**
	baz=262						
TOLK	**Toolik Lake Re**	**32.55**	**34**	*e*P	**P**	**06 16 53.9**	**-0.5**
	comp=Z,99nm,0.9s						
TOLK				LR	LR		
	comp=Z,12µm,21.0s						
NJ2	**Nanjing**	**32.66**	**252**	*e*P	**P**	**06 16 55.8**	**+0.1**
NJ2				pP	**pP**	**06 17 01.3**	**-5.0**
NJ2				S	**S**	**06 22 13.8**	**+4.7**
NJ2				sS	**sS**	**06 22 20.8**	**-6.0**
NJ2				SS	**SnSn**	**06 24 11.0**	**+5.0**
NJ2				pmax	pmax		
	comp=Z,74nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,3µm,4.0s						
NJ2				LR	LR		
	comp=Z,23µm,13.3s						
NJ2				LR	LR		
	comp=Z,18µm,15.2s						
NJ2				LR	LR		
	comp=Z,35µm,13.6s						
MDM	**Murphy Dome**	**32.77**	**40**	*e*P	**P**	**06 16 56.8**	**+0.5**
	comp=Z,78nm,1.0s						
MDM				LR	LR		
	comp=Z,9µm,19.0s						
SML	**Sawmill**	**32.78**	**46**	*e*P	**P**	**06 16 56.3**	**-0.1**
	comp=Z,332nm,1.0s						
SML				LR	LR		
	comp=Z,13µm,22.0s						
SML	**Sawmill**	**32.78**	**46**	*e*P	**P**	**06 16 56.3**	**-0.1**
SML				pmax	pmax		
	comp=Z,332nm,1.0s						
SML				MLR	MLR		
	comp=Z,13µm,22.0s						
WRH	**Wood River Hil**	**32.82**	**41**	*e*P	**P**	**06 16 56.2**	**-0.6**
	comp=Z,105nm,1.0s						
WRH				LR	LR		
	comp=Z,20µm,18.0s						
TLY	**Talaya**	**32.90**	**295**	*e*P	**P**	**06 16 56.4**	**-1.2**
TLY	**Talaya**	**32.90**	**295**	*e*P	**P**	**06 16 56.7**	**-0.8**
	comp=Z,194nm,1.0s						
TLY				LR	LR		
	comp=Z,26µm,18.0s						
TLY	**Talaya**	**32.90**	**295**	P	**P**	**06 16 56.7**	**-0.8**
	SNR=103						
TLY	**Talaya**	**32.90**	**295**	*e*P	**P**	**06 16 56.1**	**-1.5**
TLY				*e*		06 18 13.4	
TLY				*e*PPP	PPP	06 18 24.8	
TLY				pmax	pmax		
	comp=Z,222nm,1.1s						
TLY				MLR	MLR		
	comp=Z,23µm,14.0s						
COLA	**College**	**32.93**	**41**	*e*P	**P**	**06 16 58.4**	**+0.8**
	comp=Z,147nm,0.8s						
COLA				LR	LR		
	comp=Z,11µm,20.0s						
COLA	**College**	**32.93**	**41**	*e*P	**P**	**06 16 58.4**	**+0.8**
COLA				pmax	pmax		
	comp=Z,147nm,0.8s						
COLA				MLR	MLR		
	comp=Z,11µm,20.0s						
CCB	**Clear Creek Bu**	**32.95**	**41**	*e*P	**P**	**06 16 57.9**	**+0.1**
	comp=Z,106nm,1.2s						
CCB				LR	LR		
	comp=Z,18µm,19.0s						
DHY	**Denali Highway**	**33.16**	**44**	*e*P	**P**	**06 16 59.6**	**-0.3**
	comp=Z,145nm,1.0s						
DHY				LR	LR		
	comp=Z,12µm,19.0s						
SCM	**Sheep Creek Mo**	**33.25**	**46**	*e*P	**P**	**06 17 01.5**	**+0.9**
	comp=Z,136nm,1.0s						
SCM				LR	LR		
	comp=Z,12µm,20.0s						
TIY	**Taiyuan**	**33.28**	**266**	*e*P	**P**	**06 17 01.8**	**+0.7**
TIY				PP	**PP**	**06 18 17.9**	**+1.3**
TIY				S	**S**	**06 22 15.0**	**-3.8**
TIY				pmax	pmax		
	comp=Z,410nm,1.1s						
TIY				pmax	pmax		
	comp=Z,1µm,4.8s						
TIY				LR	LR		
	comp=Z,9µm,13.8s						
TIY				LR	LR		
	comp=Z,9µm,11.9s						
TIY				LR	LR		
	comp=Z,10µm,12.7s						
HDA	**Harding Lake**	**33.32**	**42**	*e*P	**P**	**06 17 00.7**	**-0.3**
	comp=Z,225nm,1.7s						
HDA				LR	LR		
	comp=Z,13µm,19.0s						
IL1	**Eielson Array**	**33.34**	**41**	*e*P	**P**	**06 17 01.0**	**-0.3**
ILAR	**Eielson Array**	**33.34**	**41**	P	**P**	**06 16 59.1**	**-2.2**
	comp=Z,21nm,0.8s,baz=254,slow=7.9,SNR=195						
ILAR				LR	LR	06 33 25.3	
	comp=Z,13µm,18.4s,baz=282,slow=42						
ILB	**Eielson Array**	**33.34**	**41**	*e*P	**P**	**06 17 00.9**	**-0.4**
GLI	**Glacier Island**	**33.45**	**48**	*e*P	**P**	**06 17 01.8**	**-0.5**
	comp=Z,220nm,1.8s						
GLI				LR	LR		
	comp=Z,14µm,19.0s						
ZAK	**Zakamensk**	**33.51**	**292**	*e*P	**P**	**06 17 02.1**	**-1.0**
ZAK				*e*		06 19 40.5	
ZAK				pmax	pmax		
	comp=Z,104nm,1.0s						
KLU	**Klutina**	**33.95**	**47**	*e*P	**P**	**06 17 07.0**	**+0.2**
	comp=Z,108nm,1.2s						
KLU				LR	LR		
	comp=Z,14µm,21.0s						
PAX	**Paxson**	**34.03**	**44**	*e*P	**P**	**06 17 08.3**	**+0.9**
	comp=Z,57nm,1.1s						
PAX				LR	LR		
	comp=Z,10µm,20.0s						
PAX	**Paxson**	**34.03**	**44**	*e*P	**P**	**06 17 08.3**	**+0.9**
PAX				pmax	pmax		
	comp=Z,57nm,1.1s						
PAX				MLR	MLR		
	comp=Z,10µm,20.0s						
FYU	**Fort Yukon**	**34.04**	**38**	*e*P	**P**	**06 17 07.5**	**+0.2**
	comp=Z,445nm,1.3s						
FYU				LR	LR		
	comp=Z,8µm,18.0s						
DIV	**Divide**	**34.06**	**47**	*e*P	**P**	**06 17 07.2**	**-0.4**
	comp=Z,148nm,1.3s						
DIV				LR	LR		
	comp=Z,17µm,20.0s						
HARP	**HAARP**	**34.23**	**45**	*e*P	**P**	**06 17 09.0**	**+0.1**
	comp=Z,193nm,1.3s						
HARP				LR	LR		
	comp=Z,11µm,20.0s						
RIDG	**Independ’e Rid**	**34.27**	**43**	*e*P	**P**	**06 17 08.8**	**-0.6**
	comp=Z,150nm,1.2s						
RIDG				LR	LR		
	comp=Z,22µm,19.0s						
MOY	**Mondy**	**34.47**	**295**	*e*P	**P**	**06 17 10.7**	**-0.7**
MOY				pmax	pmax		
	comp=Z,117nm,1.6s						
SCRK	**Sand Creek**	**34.63**	**42**	*e*P	**P**	**06 17 12.2**	**-0.4**
	comp=Z,79nm,1.0s						
SCRK				LR	LR		
	comp=Z,18µm,18.0s						
BMRM	**Bremner River**	**34.65**	**48**	*e*P	**P**	**06 17 12.7**	**0.0**
	comp=Z,165nm,1.2s						
BMRM				LR	LR		
	comp=Z,14µm,20.0s						
RAGM	**Ragged Mountai**	**34.70**	**49**	*e*P	**P**	**06 17 12.9**	**-0.2**
	comp=Z,134nm,1.2s						
RAGM				LR	LR		
	comp=Z,18µm,20.0s						
TGL	**Tana Glacier**	**35.54**	**48**	*e*P	**P**	**06 17 21.8**	**+1.3**
	comp=Z,95nm,1.0s						
TGL				LR	LR		
	comp=Z,24µm,22.0s						
BALM	**Baldy**	**35.73**	**47**	PFAKE		06 17 30.0	+8.0
BALM				LR	LR		
	comp=Z,8µm,22.0s						
YOJ	**Yonaguni jima**	**35.78**	**238**	PFAKE		06 17 30.0	+7.3
YOJ				LR	LR		
	comp=Z,14µm,19.0s						
EGAK	**Eagle**	**35.79**	**41**	*e*P	**P**	**06 17 22.3**	**-0.1**
	comp=Z,124nm,0.8s						
EGAK				LR	LR		
	comp=Z,8µm,19.0s						
TATO	**Taipei**	**36.23**	**241**	PFAKE		06 17 40.0	+13
TATO				LR	LR		
	comp=Z,14µm,20.0s						
WHN	**Wuhan**	**36.52**	**255**	⇑P	**P**	**06 17 28.4**	**-0.6**
WHN				pmax	pmax		
	comp=Z,1µm,0.8s						
WHN				LR	LR		
	comp=Z,36µm,15.7s						
WHN				LR	LR		
	comp=Z,17µm,14.9s						
WHN				LR	LR		
	comp=Z,29µm,14.7s						
YHNB	**Yeheng**	**36.54**	**241**	*e*P	**P**	**06 17 29.0**	**-0.3**
	comp=Z,56nm,1.0s						
YHNB				LR	LR		
	comp=Z,14µm,19.0s						
DAWY	**Dawson**	**36.63**	**42**	*e*P	**P**	**06 17 30.7**	**+1.0**
	comp=Z,41nm,0.8s						
DAWY				LR	LR		
	comp=Z,14µm,19.0s						
GUMO	**Guam**	**36.74**	**198**	LR	LR	06 35 30.1	
	comp=Z,3µm,18.0s,baz=16,slow=41						
NACB	**Ninganchiao**	**36.80**	**240**	*e*P	**P**	**06 17 31.6**	**+0.2**
	comp=Z,30nm,0.9s						
NACB				LR	LR		
	comp=Z,13µm,19.0s						
SSLB	**Suanglung**	**37.46**	**240**	*e*P	**P**	**06 17 37.3**	**+0.2**
	comp=Z,49nm,1.0s						
SSLB				LR	LR		
	comp=Z,16µm,18.0s						
YULB	**Yu-li**	**37.58**	**239**	*e*P	**P**	**06 17 38.1**	**+0.1**
	comp=Z,41nm,0.8s						
YULB				LR	LR		
	comp=Z,10µm,19.0s						
KRAR	**Krasnoyarsk**	**37.75**	**305**	⇑*e*P	**P**	**06 17 37.0**	**-2.1**
XAN	**Xi’an**	**37.75**	**264**	P	**P**	**06 17 38.6**	**-0.9**
XAN				pP	pP	06 17 46.0	-4.3
XAN				PP	**PnPn**	**06 19 11.8**	**+4.5**
XAN				S	**S**	**06 23 27.3**	**-0.1**
XAN				ScS	**ScS**	**06 27 50.5**	**+1.6**
XAN				pmax	pmax		
	comp=Z,67nm,1.8s						
XAN				pmax	pmax		
	comp=Z,2µm,4.1s						
XAN				LR	LR		
	comp=Z,18µm,17.7s						
XAN				LR	LR		
	comp=Z,19µm,16.7s						
XAN				LR	LR		
	comp=Z,25µm,15.7s						
QZH	**Quanzhou**	**37.94**	**244**	⇑*i*P	**P**	**06 17 41.8**	**+0.7**
QZH				PP	**PP**	**06 19 08.3**	**+0.2**
QZH				S	**S**	**06 23 31.9**	**+1.7**
QZH				pmax	pmax		
	comp=Z,120nm,0.9s						
QZH				pmax	pmax		
	comp=Z,3µm,4.8s						
QZH				LR	LR		
	comp=Z,6µm,17.3s						
QZH				LR	LR		
	comp=Z,9µm,14.9s						
QZH				LR	LR		
	comp=Z,8µm,17.8s						
TPUB	**Ta-pu**	**38.03**	**240**	*e*P	**P**	**06 17 42.2**	**+0.4**
	comp=Z,124nm,0.9s						
TPUB				LR	LR		
	comp=Z,12µm,21.0s						
TWG	**Pinlang**	**38.16**	**239**	*e*P	**P**	**06 17 43.5**	**+0.6**
	comp=Z,602nm,1.2s						
TWG				LR	LR		
	comp=Z,45µm,18.0s						
INK	**Inuvik**	**38.46**	**34**	S	**S**	**06 23 39.8**	**+2.6**
	comp=Z,6.0nm,1.2s,baz=113,slow=31,SNR=6.9						
INK				ScS	**ScS**	**06 27 53.0**	**+1.2**
	comp=Z,2.5nm,1.1s,baz=9.4,slow=32,SNR=12						
INK				LR	LR	06 35 39.8	
	comp=Z,6µm,20.2s,baz=271,slow=40						
INK	**Inuvik**	**38.46**	**34**	*e*P	**P**	**06 17 44.3**	**-0.6**
	comp=Z,245nm,1.1s						
INK				S	**S**	**06 23 39.8**	**+2.6**
INK				ScS	**ScS**	**06 27 53.0**	**+1.2**
INK	**Inuvik**	**38.46**	**34**	*e*P	**P**	**06 17 44.3**	**-0.6**
INK				S	**S**	**06 23 39.8**	**+2.6**
INK						06 27 53.0	
INK				pmax	pmax		
	comp=Z,245nm,1.1s						
WHY	**Whitehorse**	**39.38**	**46**	*e*P	**P**	**06 17 54.1**	**+1.3**
	comp=Z,143nm,1.3s						
WHY				LR	LR		
	comp=Z,9µm,20.0s						
SKAG	**Skagway**	**39.49**	**48**	*e*P	**P**	**06 17 55.8**	**+2.1**
	comp=Z,226nm,1.4s						
SKAG				LR	LR		
	comp=Z,13µm,20.0s						
ENH	**Enshi**	**39.80**	**259**	*e*P	**P**	**06 17 56.1**	**-0.7**
	comp=Z,165nm,0.9s						
ENH				LR	LR		
	comp=Z,10µm,20.0s						
LZH	**Lanzhou**	**39.84**	**271**	⇑P	**P**	**06 17 56.8**	**-0.3**
LZH				pP	pP	06 18 04.1	-3.9
LZH				sP	sP	06 18 07.4	-5.1
LZH				S	**S**	**06 24 07.4**	**+8.3**
LZH				SS	**SS**	**06 26 51.9**	**-4.0**
LZH				ScS	**ScS**	**06 28 04.1**	**+2.8**
LZH				pmax	pmax		
	comp=Z,480nm,1.3s						
LZH				pmax	pmax		
	comp=Z,2µm,5.4s						
LZH				LR	LR		
	comp=Z,41µm,14.8s						
LZH				LR	LR		
	comp=Z,40µm,14.0s						
LZH				LR	LR		
	comp=Z,42µm,14.6s						
BESE	**Bessie Mountai**	**39.98**	**50**	*e*P	**P**	**06 17 58.9**	**+1.0**
	comp=Z,151nm,1.6s						
BESE				LR	LR		
	comp=Z,8µm,19.0s						
JIS	**Juneau Island**	**40.31**	**50**	*e*P	**P**	**06 18 00.7**	**+0.2**
	comp=Z,68nm,1.0s						
JIS				LR	LR		
	comp=Z,8µm,19.0s						
GTA	**Gaotai**	**40.59**	**278**	⇑P	**P**	**06 18 02.4**	**-0.9**
GTA				pP	pP	06 18 10.4	-3.7
GTA				sP	sP	06 18 13.5	-5.2
GTA				PP	**PnPn**	**06 19 40.8**	**-0.3**
GTA				ScP	**ScP**	**06 23 55.0**	**+4.0**
GTA				PcS	**PcS**	**06 23 58.8**	**+3.2**
GTA				S	**S**	**06 24 11.8**	**+1.6**
GTA				SS	**SS**	**06 27 04.4**	**-6.3**
GTA				ScS	**ScS**	**06 28 09.3**	**+3.7**
GTA				pmax	pmax		
	comp=Z,33nm,1.3s						
GTA				pmax	pmax		
	comp=Z,1µm,6.8s						
GTA				LR	LR		
	comp=Z,23µm,15.2s						
GTA				LR	LR		
	comp=Z,43µm,16.8s						
WRAK	**Wrangell Islan**	**41.99**	**52**	*e*P	**P**	**06 18 15.4**	**+1.1**
	comp=Z,142nm,1.4s						
WRAK				LR	LR		
	comp=Z,7µm,20.0s						
PATS	**Pohnpei**	**42.31**	**177**	PFAKE		06 18 30.0	+13
PATS				LR	LR		
	comp=Z,10µm,21.0s						
DLBC	**Dease Lake**	**42.42**	**49**	LR	LR	06 36 42.2	
	comp=Z,8µm,21.4s,baz=312,slow=37						
DLBC	**Dease Lake**	**42.42**	**49**	*e*P	**P**	**06 18 20.0**	**+2.1**
	comp=Z,74nm,1.1s						
HKC	**Hong Kong Obse**	**42.57**	**246**	⇑P	**P**	**06 18 22.0**	**+2.6**
JOHN	**Johnston Islan**	**42.74**	**127**	PFAKE		06 18 30.0	+9.2
JOHN				LR	LR		

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      comp=Z,7µm,20.0s
ZAA0  Zalesovo Array   42.82 305  eP     P       06 18 19.4  -1.7
      comp=Z,42nm,0.8s
ZAA0                               LR     LR
      comp=Z,13µm,18.0s
ZALV  Zalesovo Beam    42.82 305   P      P       06 18 18.6  -2.5
      comp=Z,33nm,0.5s,baz=63,slow=6.7,SNR=74
ZALV                               PcP    PcP     06 20 11.1  -0.6
      comp=Z,79nm,0.9s,baz=64,slow=3.4,SNR=12
ZALV                               ScS    ScS     06 28 20.3  +1.9
      comp=Z,6.4nm,1.1s,baz=207,slow=6.2,SNR=4.8
ZALV                               LR     LR      06 37 20.5
      comp=Z,11µm,18.2s,baz=42,slow=38
ZALV  Zalesovo Beam    42.82 305  eP     P       06 18 19.2  -1.9
ZALV                               PcP    PcP     06 20 11.1  -0.6
ZALV                               ScS    ScS     06 28 20.3  +1.9
MCO   Taipa Grande     43.08 247   P      P       06 18 26.0  +2.5
CD2   Chengdu          43.10 265⇓iP      P       06 18 23.3  -0.5
CD2                                pP     pP      06 18 30.3  -4.4
CD2                                sP     sP      06 18 33.3  -5.9
CD2                                PP     PP      06 20 03.1  -1.0
CD2                                S      S       06 24 47.5  +0.3
CD2                                sS     sS      06 24 59.5  -5.8
CD2                                pmax   pmax
      comp=Z,240nm,0.7s
CD2                                pmax   pmax
      comp=Z,3µm,6.2s
CD2                                LR     LR
      comp=Z,12µm,15.4s
CD2                                LR     LR
      comp=Z,18µm,16.4s
CD2                                LR     LR
      comp=Z,27µm,17.4s
DIB   Dawson Inlet,    43.19  56  eP     P       06 18 25.2  +1.1
      comp=Z,108nm,1.4s
DIB                                LR     LR
      comp=Z,4µm,19.0s
NVS   Novosibirsk      43.30 306⇑iP      P       06 18 24.6  -0.4
NVS                               i                06 20 13.6
NVS                               i S     S       06 24 49.2  -0.2
NVS                                pmax   pmax
      comp=Z,372nm,1.7s
NVS                                pmax   pmax
      comp=N,98nm,1.5s
NVS                                pmax   pmax
      comp=E,243nm,1.5s
NVS                                smax   smax
      comp=N,103nm,2.2s
NVS                                smax   smax
      comp=E,115nm,2.5s
KEKH  Kekaha           44.17 112   PFAKE          06 18 50.0  +18
KEKH                               LR     LR
      comp=Z,12µm,19.0s
GYA   Guiyang          44.22 258⇑iP      P       06 18 34.3  +1.4
GYA                                pP     pP      06 18 40.4  -3.4
GYA                                PP     PcP     06 20 18.6  +1.6
GYA                                PcP    PP      06 20 19.8  +3.6
GYA                                S      S       06 25 04.6  +0.8
GYA                                sS     sS      06 25 16.0  -5.8
GYA                                SS     SS      06 28 14.4  -8.0
GYA                                pmax   pmax
      comp=Z,60nm,1.0s
GYA                                pmax   pmax
      comp=Z,340nm,6.0s
GYA                                LR     LR
      comp=Z,11µm,17.3s
GYA                                LR     LR
      comp=Z,11µm,17.0s
GYA                                LR     LR
      comp=Z,11µm,17.5s
TGY   Tagaytay City    45.36 232   LR     LR      06 38 18.9
      comp=Z,4µm,20.8s,baz=5.5,slow=37
OPA   Opana            45.43 110   PFAKE          06 19 00.0  +18
OPA                                LR     LR
      comp=Z,10µm,21.0s
KIP   Kipapa           45.62 111   PFAKE          06 19 00.0  +16
KIP                                LR     LR
      comp=Z,8µm,20.0s
HON   Honolulu         45.70 111   PFAKE          06 19 00.0  +15
HON                                LR     LR
      comp=Z,9µm,22.0s
ZSN   Zaisan           45.75 296⇑iP      P       06 18 44.5  -0.2
      comp=Z,6.8nm,1.1s
ZSN                               eS     S       06 25 23.0  -2.3
ZSN                                LR     LR      06 39 28.1
      comp=Z,4µm,13.9s
PLP   Palo             45.91 225⇓eP      P       06 18 46.7  +0.5
WMQ   Urumqi           45.92 290   P      P       06 18 46.3  +0.2
WMQ                                pP     pP      06 18 52.6  -4.5
WMQ                                PcP    PcP     06 20 24.9  +2.3
WMQ                                ScP    ScP     06 24 17.8  +5.4
WMQ                                S      S       06 25 35.3  +7.4
WMQ                                ScS    ScS     06 28 41.3  +2.7
WMQ                                pmax   pmax
      comp=Z,180nm,1.3s
WMQ                                pmax   pmax
      comp=Z,3µm,3.8s
WMQ                                LR     LR
      comp=Z,43µm,11.7s
WMQ                                LR     LR
      comp=Z,40µm,12.7s
WMQ                                LR     LR
      comp=Z,26µm,18.5s
BBB   Bella Bella      46.02  56   LR     LR      06 38 39.3
      comp=Z,4µm,18.7s,baz=301,slow=37
BBB   Bella Bella      46.02  56  eP     P       06 18 48.1  +1.4
      comp=Z,75nm,1.1s
RCP   Roxas            46.63 228⇑eP      P       06 18 51.2  -0.6
SEM   Semipalatinsk    46.93 302  eP     P       06 18 51.7  -2.5
      comp=Z,71nm,1.1s
SEM                               eS     S       06 25 38.1  -4.4
SEM                                LR     LR      06 40 08.8
      comp=Z,5µm,14.4s
KHLH  Kahului Airpor   46.99 110   PFAKE          06 19 10.0  +15
KHLH                               LR     LR
      comp=Z,9µm,20.0s
HLK   Haleakala        47.21 110   PFAKE          06 19 10.0  +13
HLK                                LR     LR
      comp=Z,10µm,21.0s
MK31  Makanchi Array   47.60 297  eP     P       06 18 57.5  -1.6
MK31  Makanchi Array   47.60 297  i P     P       06 18 57.2  -2.0
MK31                               pmax   pmax
      comp=Z,122nm,1.0s
MKAR  Makanchi Array   47.60 297   P      P       06 18 56.8  -2.4
      comp=Z,78nm,0.9s,baz=63,slow=7.4,SNR=244
MKAR                               PcP    PcP     06 20 28.9  +0.5
      comp=Z,37nm,1.0s,baz=34,slow=4.7,SNR=5.2
MKAR                               ScP    ScP     06 24 22.1  +2.7
      comp=Z,10nm,1.0s,baz=64,slow=5.5,SNR=5.1
MKAR                               ScS    ScS     06 28 48.9  -0.5
      comp=Z,1.5nm,0.9s,baz=64,slow=3.4,SNR=3.1
MKAR                               LR     LR      06 40 31.1
      comp=Z,45µm,18.5s,baz=40,slow=38
MKAR  Makanchi Array   47.60 297  eP     P       06 18 57.5  -1.7
MKAR  Makanchi Array   47.60 297  eP     P       06 18 57.4  -1.7
      comp=Z,445nm,0.8s
MKAR                               PcP    PcP     06 20 28.9  +0.5
MKAR                               ScP    ScP     06 24 22.1  +2.7
MKAR                               ScS    ScS     06 28 48.9  -0.5
MKAR  Makanchi Array   47.60 297  i P     P       06 18 57.5  -1.7
MKAR                               pmax   pmax
      comp=Z,79nm,0.9s
MK01  Makanchi Array   47.61 297  eP     P       06 18 57.4  -1.8
QIZ   Qiongzhong       47.67 248   P      P       06 19 01.1  +1.1
QIZ                                S      S       06 25 58.3  +5.1
QIZ                                pmax   pmax
      comp=Z,2µm,6.1s
QIZ                                LR     LR
      comp=Z,6µm,13.7s
QIZ                                LR     LR
      comp=Z,13µm,16.7s
QIZ                                LR     LR
      comp=Z,10µm,14.7s
QIZ   Qiongzhong       47.67 248  eP     P       06 19 01.1  +1.1
      comp=Z,617nm,2.0s
QIZ                                LR     LR
      comp=Z,10µm,20.0s
KMI   Kunming          47.67 260   P      P       06 19 00.0  -0.2
KMI                                pP     pP      06 19 05.6  -5.7
KMI                                sP     sP      06 19 09.5  -6.2
KMI                                PP     PP      06 20 49.0  -3.0
KMI                                S      S       06 25 50.1  -3.5
KMI                                SS     SS      06 29 14.9  -7.0
KMI                                pmax   pmax
      comp=Z,350nm,1.2s
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KMI                                pmax   pmax
      comp=Z,3µm,4.9s
KMI                                LR     LR
      comp=Z,9µm,17.5s
KMI                                LR     LR
      comp=Z,11µm,18.1s
KMI                                LR     LR
      comp=Z,7µm,19.3s
KURK  Kurchatov        47.68 303  eP     P       06 18 58.1  -1.5
KURK  Kurchatov        47.68 303  eP     P       06 18 57.9  -1.8
      comp=Z,310nm,0.9s
KURK                               LR     LR
      comp=Z,15µm,19.0s
KURK  Kurchatov        47.68 303   P      P       06 18 57.9  -1.8
      SNR=147
KURK  Kurchatov        47.68 303c iP     P       06 18 58.1  -1.5
KURK                               pmax   pmax
      comp=Z,364nm,1.0s
KURK                               MLR    MLR
      comp=Z,18µm,15.0s
YKW3  Yellowknife Ar   47.68  39  eP     P       06 19 00.1  +0.6
YKW3                               LR     LR
      comp=Z,8µm,20.0s
YKA   Yellowknife Ar   47.72  39   P      P       06 18 58.9  -0.9
      comp=Z,29nm,0.9s,baz=297,slow=7.6,SNR=90
YKA                                PKPPKP P'P'df  06 50 16.9  -1.8
      comp=Z,0.6nm,0.8s,baz=159,slow=2.8,SNR=3.9
YKA   Yellowknife Ar   47.72  39  eP     P       06 19 01.0  +1.2
KURBB Kurchatov Arra   47.77 303   P      P       06 18 58.5  -1.9
      comp=Z,212nm,0.9s,baz=63,slow=7.6,SNR=284
MAKZ  Makanchi         47.77 297  eP     P       06 18 58.1  -2.4
      comp=Z,114nm,1.3s
MAKZ                               LR     LR
      comp=Z,51µm,19.0s
MAKZ  Makanchi         47.77 297  eP     P       06 18 58.1  -2.4
MAKZ                               pmax   pmax
      comp=Z,114nm,1.3s
MAKZ                               MLR    MLR
      comp=Z,51µm,19.0s
RES   Resolute Bay     47.81  20   LR     LR      06 40 23.6
      comp=Z,5µm,20.7s,baz=312,slow=38
RES   Resolute Bay     47.81  20  eP     P       06 19 00.3   0.0
      comp=Z,118nm,1.0s
RES   Resolute Bay     47.81  20  eP     P       06 19 00.4   0.0
RES                                pmax   pmax
      comp=Z,118nm,1.0s
HPAH  Hawaii Prepara   48.09 110   PFAKE          06 19 20.0  +17
HPAH                               LR     LR
      comp=Z,9µm,21.0s
HUH   Hualalai         48.27 110   PFAKE          06 19 20.0  +15
HUH                                LR     LR
      comp=Z,9µm,20.0s
KHLU  Kahalu‘u         48.30 110   PFAKE          06 19 20.0  +15
KHLU                               LR     LR
      comp=Z,9µm,22.0s
POHA  Pohakuloa        48.40 110   PFAKE          06 19 20.0  +14
POHA                               LR     LR
      comp=Z,9µm,21.0s
MLOA  Mauna Loa Obse   48.54 110   PFAKE          06 19 20.0  +13
MLOA                               LR     LR
      comp=Z,10µm,20.0s
HMH   Humu‘ula Sheep   48.55 110   PFAKE          06 19 20.0  +13
HMH                                LR     LR
      comp=Z,11µm,22.0s
MWH   Moku‘aweowe      48.56 110   PFAKE          06 19 20.0  +13
MWH                                LR     LR
      comp=Z,10µm,20.0s
MLH   Mauna Loa        48.69 110   PFAKE          06 19 20.0  +12
MLH                                LR     LR
      comp=Z,10µm,20.0s
KHU   Kahuku           48.73 110   PFAKE          06 19 20.0  +12
KHU                                LR     LR
      comp=Z,9µm,21.0s
AIN   Ainahou          48.73 110   PFAKE          06 19 20.0  +12
AIN                                LR     LR
      comp=Z,10µm,19.0s
UWE   Uwekahuna        48.80 110   PFAKE          06 19 20.0  +11
UWE                                LR     LR
      comp=Z,10µm,20.0s
UWB   Uwekahuna B      48.81 110   PFAKE          06 19 20.0  +11
UWB                                LR     LR
      comp=Z,11µm,20.0s
WRMHI West Rim         48.81 110   PFAKE          06 19 20.0  +11
WRMHI                              LR     LR
      comp=Z,10µm,20.0s
OBL   Observatory Le   48.81 110   PFAKE          06 19 20.0  +11
OBL                                LR     LR
      comp=Z,11µm,21.0s
NPH   North Pit        48.81 110   PFAKE          06 19 20.0  +11
NPH                                LR     LR
      comp=Z,11µm,22.0s
SDHHI Sand Hill        48.82 110   PFAKE          06 19 20.0  +11
SDHHI                              LR     LR
      comp=Z,10µm,20.0s
RIM   Rim              48.83 110   PFAKE          06 19 20.0  +11
RIM                                LR     LR
      comp=Z,9µm,20.0s
KKO   Keanakako‘i      48.83 110   PFAKE          06 19 20.0  +11
KKO                                LR     LR
      comp=Z,9µm,19.0s
PUH   Pauahi           48.88 110   PFAKE          06 19 20.0  +11
PUH                                LR     LR
      comp=Z,9µm,20.0s
HLP   Hilina Pali      48.88 110   PFAKE          06 19 20.0  +11
HLP                                LR     LR
      comp=Z,10µm,20.0s
STCH  Steam Cracks     48.93 110   PFAKE          06 19 20.0  +10
STCH                               LR     LR
      comp=Z,10µm,21.0s
JCUZ  Jacuzzi          48.95 110   PFAKE          06 19 20.0  +10
JCUZ                               LR     LR
      comp=Z,9µm,20.0s
DAV   Davao City (W)   49.26 222   LR     LR      06 39 43.4
      comp=Z,3µm,21.0s,baz=22,slow=36
DAV   Davao City (W)   49.26 222⇑eP      P       06 19 10.1  -2.1
TARA  Tarawa           49.84 158   PFAKE          06 19 30.0  +13
TARA                               LR     LR
      comp=Z,13µm,22.0s
LLLB  Lillooet         50.19  55  eP     P       06 19 19.4  +0.4
      comp=Z,95nm,1.5s
LLLB                               LR     LR
      comp=Z,6µm,19.0s
KBS   Kingsbay         50.33 352  eP     P       06 19 17.5  -2.1
      comp=Z,46nm,1.0s
KBS   Kingsbay         50.33 352  eP     P       06 19 17.5  -2.1
KBS                                pmax   pmax
      comp=Z,46nm,1.0s
KBS   Kingsbay         50.33 352  eP     P       06 19 19.7  +0.1
SPA0  Spitsbergen Ar   50.51 350  eP     P       06 19 18.1  -2.9
SPA0  Spitsbergen Ar   50.51 350  eP     P       06 19 18.9  -2.1
SPITS Spitsbergen Ar   50.51 350   P      P       06 19 18.7  -2.3
      comp=Z,18nm,0.5s,baz=34,slow=11,SNR=54
SPITS                              LR     LR      06 42 08.7
      comp=Z,10µm,19.6s,baz=25,slow=38
LKP   Lekhapani        50.64 267  eP     P       06 19 22.9  +0.3
HOPEN Hopen            50.72 347  eP     P       06 19 22.1  -0.4
A04D  Lummi Island     50.77  58   P      P       06 19 22.4  -0.9
      baz=304
BVA0  Borovoye Array   50.84 309  i P     P       06 19 22.0  -1.8
BVA0                               pmax   pmax
      comp=Z,282nm,1.3s
BVAR  Borovoye Array   50.84 309   P      P       06 19 21.9  -1.9
      comp=Z,156nm,1.0s,baz=56,slow=7.1,SNR=173
BVAR                               LR     LR      06 42 51.1
      comp=Z,11µm,18.6s,baz=70,slow=38
NLWA  Neilton Lookou   50.85  60  eP     P       06 19 24.6  +0.7
      comp=Z,52nm,0.8s
NLWA                               LR     LR
      comp=Z,4µm,22.0s
TDK   Taldyqorghan     50.85 297  eP     P       06 19 22.6  -1.4
      comp=Z,153nm,0.8s
TDK                               eS     S       06 26 34.1  -3.3
TDK                                LR     LR      06 42 25.4
      comp=Z,44µm,15.3s
BRVK  Borovoye         50.87 309  eP     P       06 19 22.4  -1.6
BRVK  Borovoye         50.87 309  eP     P       06 19 22.4  -1.6
      comp=Z,273nm,1.0s
BRVK                               LR     LR
      comp=Z,12µm,20.0s
BRVK  Borovoye         50.87 309   P      P       06 19 22.3  -1.8
      SNR=166
BRVK  Borovoye         50.87 309  eP     P       06 19 22.4  -1.6
BRVK                               pmax   pmax
      comp=Z,273nm,1.0s
BRVK                               MLR    MLR
      comp=Z,12µm,20.0s
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PDGK  Podgornoye       51.16 294   P      P       06 19 24.9  -1.6
PDGK                               pmax   pmax
      comp=Z,117nm,1.2s
DIBR  DIBRUGARH        51.16 268  eP     P       06 19 26.2  -0.4
TULEG Thule            51.27  12  eP     P       06 19 27.5  +0.8
      comp=Z,184nm,1.3s
TULEG                              LR     LR
      comp=Z,10µm,20.0s
SHLS  Shalkode         51.28 294  eP     P       06 19 24.0  -3.4
      comp=Z,25nm,1.1s
SHLS                               LR     LR      06 42 41.4
      comp=Z,5µm,14.5s
BRZS  Berezniki        51.30 305⇑iP      P       06 19 25.5  -1.8
      comp=Z,170nm,1.1s
BRZS                              eS     S       06 26 39.9  -3.5
BRZS                               LR     LR      06 42 18.9
      comp=Z,8µm,13.6s
B05A  Bryant           51.36  58   P      P       06 19 28.4  +0.7
      baz=304,SNR=9.3
B05A                               S      S       06 26 43.4  -0.8
      baz=304
E03A  Lebam            51.49  60  eP     P       06 19 29.4  +0.6
      comp=Z,54nm,1.0s
E03A                               LR     LR
      comp=Z,6µm,22.0s
UZB   Uzynbulak        51.55 294⇑eP      P       06 19 28.0  -1.4
      comp=Z,31nm,1.2s
UZB                               eS     S       06 26 44.0  -3.2
UZB                                LR     LR      06 42 25.4
      comp=Z,2µm,14.7s
B06A  Marblemount      51.55  57  eP     P       06 19 30.1  +0.9
      comp=Z,64nm,1.2s
B06A                               LR     LR
      comp=Z,3µm,19.0s
KPKS  Kokpek           51.56 295  eP     P       06 19 28.0  -1.4
      comp=Z,49nm,1.0s
KPKS                               LR     LR      06 42 07.2
      comp=Z,8µm,14.6s
HSPB  Hornsund (broa   51.60 349  eP     P       06 19 29.1   0.0
HSPB                               MLR    MLR
      comp=Z,11µm,19.5s
HSPB  Hornsund (broa   51.60 349  eP     P       06 19 25.0  -4.1
MANU  Manus Island     51.65 191  eP     P       06 19 31.8  +1.6
      comp=Z,113nm,1.1s
MANU                               LR     LR
      comp=Z,5µm,19.0s
ZIRO  ZIRO             51.82 269  eP     P       06 19 30.7  -1.0
ZHN   Zhinishke        51.88 295  eP     P       06 19 30.4  -1.5
      comp=Z,25nm,1.1s
ZHN                                LR     LR      06 44 02.2
      comp=Z,2µm,12.3s
D05A  Enumclaw         52.02  59  eP     P       06 19 33.4  +0.7
      comp=Z,83nm,1.1s
D05A                               LR     LR
      comp=Z,4µm,19.0s
F04D  Rainier, OR      52.07  61   P      P       06 19 34.2  +1.1
      baz=305
JORH  JORHAT           52.09 268  eP     P       06 19 34.3  +0.8
LSA   Lhasa            52.14 273   P      P       06 19 34.9  +0.5
LSA                                S      S       06 27 00.8  +4.4
LSA                                LR     LR
      comp=Z,5µm,16.8s
LSA                                LR     LR
      comp=Z,5µm,16.8s
LSA                                LR     LR
      comp=Z,17µm,16.0s
LSA   Lhasa            52.14 273  eP     P       06 19 35.3  +0.9
      comp=Z,57nm,0.8s
LSA                                LR     LR
      comp=Z,17µm,19.0s
LSA   Lhasa            52.14 273   P      P       06 19 35.5  +1.1
LSA   Lhasa            52.14 273  eP     P       06 19 35.3  +0.9
LSA                                pmax   pmax
      comp=Z,57nm,0.8s
LSA                                MLR    MLR
      comp=Z,17µm,19.0s
ITAN  ITANAGAR         52.16 269  eP     P       06 19 34.8  +0.8
MOKO  MOKOCHONG        52.20 268  eP     P       06 19 35.8  +1.3
C06D  Leavenworth      52.21  58   P      P       06 19 33.8  -0.3
      baz=305
PRZ   Przheval’sk      52.30 294   PFAKE          06 19 50.0  +15
PRZ                                LR     LR
      comp=Z,18µm,18.0s
PANO  Nakornpanom      52.31 251   P      P       06 19 36.7  +1.5
      comp=Z,5.4nm,1.0s,comp=Z,149nm
LON   Longmire         52.37  59  eP     P       06 19 36.1  +0.8
      comp=Z,18nm,0.9s
LON                                LR     LR
      comp=Z,4µm,20.0s
LON   Longmire         52.37  59  eP     P       06 19 36.2  +0.8
LON                                pmax   pmax
      comp=Z,18nm,0.9s
LON                                MLR    MLR
      comp=Z,4µm,20.0s
G03D  McMinnville, O   52.43  62   P      P       06 19 35.9  +0.1
      baz=306
KUU   Kurty            52.70 297  eP     P       06 19 36.0  -1.8
      comp=Z,58nm,1.4s
KUU                                LR     LR      06 43 10.5
      comp=Z,22µm,14.7s
MDOK  Medeo            52.71 295  i P     P       06 19 37.0  -1.1
      comp=Z,498nm,1.1s
MDOK                               LR     LR      06 43 17.8
      comp=Z,26µm,16.4s
LTY   Liberty          52.72  58  eP     P       06 19 37.6  -0.4
      comp=Z,49nm,1.3s
LTY                                LR     LR
      comp=Z,3µm,19.0s
AAA   Alma-Ata         52.76 296  eP     P       06 19 38.8  +0.4
AAA                               eS     S       06 26 54.9  -8.9
AAA                                pmax   pmax
      comp=Z,700nm,7.3s
AAA                                smax   smax
      comp=E,900nm,5.0s
COR   Corvallis        52.77  62  eP     P       06 19 38.9  +0.6
      comp=E,56nm,1.0s
COR                                LR     LR
      comp=Z,6µm,22.0s
COR   Corvallis        52.77  62  eP     P       06 19 38.9  +0.6
COR                                pmax   pmax
      comp=Z,56nm,1.0s
COR                                MLR    MLR
      comp=Z,6µm,22.0s
B08A  Colville Reser   52.82  56  eP     P       06 19 38.9  +0.2
      comp=Z,64nm,1.2s
B08A                               LR     LR
      comp=Z,4µm,20.0s
SKNT  Sakolnakorn      52.83 251   P      P       06 19 40.0  +0.9
      comp=Z,164nm,1.0s,comp=Z,3µmcomp=Z,2µm
KOHI  KOHIMA           52.88 267  eP     P       06 19 37.1  -2.4
TEZP  TEZPUR           53.12 269  eP     P       06 19 41.2  +0.1
KEBM  Edson Butte      53.17  65  eP     P       06 19 41.5  +0.1
      comp=Z,98nm,1.4s
KEBM                               LR     LR
      comp=Z,5µm,21.0s
BJO   Bjornoya         53.21 347  eP     P       06 19 39.5  -1.6
KDJ   Kajisay          53.24 294  eP     P       06 19 40.8  -1.3
      comp=Z,115nm,1.2s
KDJ                                LR     LR
      comp=Z,19µm,19.0s
I03D  Drain, OR        53.27  63   P      P       06 19 43.2  +1.2
      baz=307,SNR=6.9
RABL  Rabaul           53.33 185   PFAKE          06 20 00.0  +17
RABL                               LR     LR
      comp=Z,6µm,21.0s
BTLS  Baital           53.35 299  eP     P       06 19 40.8  -1.9
      comp=Z,16nm,1.1s
BTLS                               LR     LR      06 43 43.6
      comp=Z,5µm,15.1s
H04A  Detroit Lake     53.36  62  eP     P       06 19 43.2  +0.6
      comp=Z,48nm,1.0s
H04A                               LR     LR
      comp=Z,3µm,21.0s
SVE   Sverdlovsk       53.37 317deP      P       06 19 41.2  -1.3
SVE                                pmax   pmax
      comp=Z,395nm,1.1s
SVE                                pmax   pmax
      comp=Z,1µm,18.8s
SVE                                MLR    MLR
      comp=Z,8µm,20.0s
G05D  Wamic, OR        53.53  61   P      P       06 19 43.6  -0.3
      baz=306
IMP   Imphal           53.59 267  eP     P       06 19 43.2  -1.5
KBO   Bosley Butte     53.63  65  eP     P       06 19 46.6  +1.9
      comp=Z,132nm,1.3s
KBO                                LR     LR
      comp=Z,5µm,20.0s
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TKM2	**Tokmak 2**	**53.71**	**296**	P	**P**	**06 19 44.9**	**-0.6**
	SNR=45						
TKM2	**Tokmak 2**	**53.71**	**296**	P	**P**	**06 19 44.5**	**-1.0**
TKM2				pmax	pmax		
	comp=Z,76nm,1.5s						
C09A	**Chrisman Ranch**	**53.73**	**56**	*e*P	**P**	**06 19 45.5**	**+0.1**
	comp=Z,72nm,1.4s						
C09A				LR	LR		
	comp=Z,4µm,21.0s						
ULHL	**Ulahol**	**53.73**	**295**	P	**P**	**06 19 45.1**	**-0.5**
	SNR=91						
I04A	**Tendick Farm,**	**53.76**	**63**	P	**P**	**06 19 46.9**	**+1.3**
	baz=307,SNR=15						
D08A	**Wollman Farm,**	**53.81**	**58**	*e*P	**P**	**06 19 46.6**	**+0.7**
	comp=Z,21nm,0.9s						
D08A				LR	LR		
	comp=Z,4µm,20.0s						
HAWA	**Hanford**	**53.86**	**59**	*e*P	**P**	**06 19 47.0**	**+0.7**
	comp=Z,35nm,1.0s						
G06A	**Carlson Farm,**	**53.92**	**60**	*e*P	**P**	**06 19 47.9**	**+1.0**
	comp=Z,30nm,1.2s						
G06A				LR	LR		
	comp=Z,4µm,22.0s						
F07A	**Phinny Hill Vi**	**53.93**	**59**	*e*P	**P**	**06 19 48.0**	**+1.2**
	comp=Z,55nm,0.7s						
F07A				LR	LR		
	comp=Z,4µm,21.0s						
KHON	**Khomkaen**	**54.03**	**252**	P	**P**	**06 19 49.2**	**+1.3**
	comp=Z,151nm,1.0s,comp=Z,2µm						
L02D	**Cave Junction,**	**54.03**	**65**	P	**P**	**06 19 49.2**	**+1.5**
	baz=307,SNR=10						
I05D	**Terrebonne, OR**	**54.05**	**62**	P	**P**	**06 19 48.9**	**+1.2**
	baz=307,SNR=12						
E08A	**Dider Farm, El**	**54.06**	**58**	*e*P	**P**	**06 19 49.1**	**+1.3**
	comp=Z,19nm,0.7s						
E08A				LR	LR		
	comp=Z,3µm,19.0s						
GUWA	**GUWAHATI**	**54.14**	**270**	*e*P	**P**	**06 19 49.1**	**+0.6**
GUWA				IAmb	IAmb	06 19 53.6	
	comp=Z,173nm,1.0s						
GUWA				IAMs_20	IAMs_20	06 45 55.9	
	comp=Z,20µm,5.0s						
HUMO	**Hull Mountain**	**54.15**	**64**	*e*P	**P**	**06 19 50.1**	**+1.6**
	comp=Z,39nm,1.0s						
HUMO				LR	LR		
	comp=Z,6µm,21.0s						
USP	**Ospenovka**	**54.15**	**297**	P	**P**	**06 19 48.1**	**-0.4**
	SNR=63						
CHMS	**Chumysh**	**54.16**	**297**	P	**P**	**06 19 47.5**	**-1.1**
	SNR=28						
MYLDM	**Lahad Datu**	**54.21**	**229**	*e*P	**P**	**06 19 50.9**	**+1.8**
	comp=Z,332nm,1.4s						
DAG	**Danmarks Havn**	**54.21**	**359**	*i* P	**P**	**06 19 46.9**	**-1.5**
	comp=Z,99nm,1.1s						
TNTI	**Ternate**	**54.22**	**216**	*e*P	**P**	**06 19 50.5**	**+1.2**
	comp=Z,162nm,1.6s						
TNTI				LR	LR		
	comp=Z,1µm,19.0s						
KBK	**Karagaybulak**	**54.25**	**296**	P	**P**	**06 19 46.3**	**-3.1**
	SNR=9.2						
J04D	**Umpqua Nationa**	**54.26**	**63**	P	**P**	**06 19 50.8**	**+1.3**
	baz=307,SNR=16						
FRU	**Bishkek**	**54.34**	**296**	*e*P	**P**	**06 19 49.0**	**-0.9**
FRU				*e*		06 19 58.0	
FRU				*e*S	S	06 27 12.0	-13
FRU				*e*		06 27 41.0	
FRU				pmax	pmax		
	comp=Z,260nm,1.8s						
SILR	**SILCHAR**	**54.38**	**268**	*e*P	**P**	**06 19 49.7**	**-0.6**
LAMP	**Lampang**	**54.41**	**257**	P	**P**	**06 19 52.4**	**+1.8**
	comp=Z,124nm,0.9s,comp=Z,1µm						
KZA	**Kyzart**	**54.42**	**295**	P	**P**	**06 19 51.0**	**+0.1**
	SNR=35						
SHL	**Shillong**	**54.44**	**269**	*e*P	**P**	**06 19 50.9**	**-0.1**
	comp=Z,403nm,1.1s						
SHL				LR	LR		
	comp=Z,8µm,21.0s						
SHL	**Shillong**	**54.44**	**269**	*e*P	**P**	**06 19 50.1**	**-0.9**
SHL				⇑*i*P	**P**	**06 19 51.0**	**0.0**
SHL				IAMs_20	IAMs_20	06 46 05.7	
	comp=Z,13µm,18.0s						
KULLO	**Kullorsuaq**	**54.46**	**10**	*i* P	**P**	**06 19 49.1**	**-1.1**
	comp=Z,200nm,0.9s						
AAK	**Ala-Archa**	**54.53**	**296**	P	**P**	**06 19 50.9**	**-0.5**
	SNR=28						
AAK	**Ala-Archa**	**54.53**	**296**	*e*P	**P**	**06 19 50.1**	**-1.3**
AAK	**Ala-Archa**	**54.53**	**296**	*e*P	**P**	**06 19 50.4**	**-1.0**
	comp=Z,56nm,0.9s						
AAK				LR	LR		
	comp=Z,36µm,18.0s						
AAK	**Ala-Archa**	**54.53**	**296**	P	**P**	**06 19 50.4**	**-1.0**
AAK	**Ala-Archa**	**54.53**	**296**	P	**P**	**06 19 50.1**	**-1.3**
AAK				pmax	pmax		
	comp=Z,68nm,1.0s						
ARU	**Arti**	**54.53**	**317**	*e*P	**P**	**06 19 48.9**	**-2.1**
ARU	**Arti**	**54.53**	**317**	*e*P	**P**	**06 19 48.3**	**-2.7**
	comp=Z,436nm,1.0s						
ARU				LR	LR		
	comp=Z,11µm,19.0s						
ARU	**Arti**	**54.53**	**317**	*c* *i*P	**P**	**06 19 49.1**	**-1.9**
ARU				*e**PP	**pP**	**06 20 03.0**	**+0.8**
ARU						06 20 52.9	
ARU						06 21 51.9	
ARU				PPP	PPP	06 23 04.8	
ARU				S	**S**	**06 27 24.4**	**-2.8**
ARU				*SS	**sS**	**06 27 49.6**	**+3.9**
ARU						06 29 38.5	
ARU				pmax	pmax		
	comp=Z,501nm,1.0s						
ARU				MLR	MLR		
	comp=Z,10µm,15.0s						
E09A	**Wood Farm, Sta**	**54.56**	**58**	*e*P	**P**	**06 19 51.6**	**+0.3**
	comp=Z,47nm,0.8s						
E09A				LR	LR		
	comp=Z,4µm,20.0s						
JCC	**Jacoby Creek,**	**54.59**	**66**	*e*P	**P**	**06 19 52.7**	**+1.0**
	comp=Z,143nm,1.6s						
JCC				LR	LR		
	comp=Z,3µm,20.0s						
PINE	**Pine Mountain**	**54.61**	**62**	*e*P	**P**	**06 19 52.9**	**+0.9**
	comp=Z,61nm,1.0s						
PINE				LR	LR		
	comp=Z,4µm,19.0s						
KKM	**Kota Kinabalu**	**54.62**	**231**	*e*P	**P**	**06 19 53.0**	**+0.8**
	comp=Z,101nm,1.3s						
KKM				LR	LR		
	comp=Z,4µm,21.0s						
CHTO	**Chiang Mai**	**54.64**	**257**	*e*P	**P**	**06 19 52.8**	**+0.5**
	comp=Z,535nm,1.1s						
CHTO				LR	LR		
	comp=Z,9µm,19.0s						
CHTO	**Chiang Mai**	**54.64**	**257**	P	**P**	**06 19 53.3**	**+1.0**
	SNR=112						
CHTO	**Chiang Mai**	**54.64**	**257**	*e*P	**P**	**06 19 52.8**	**+0.5**
CHTO				pmax	pmax		
	comp=Z,535nm,1.1s						
CHTO				MLR	MLR		
	comp=Z,9µm,19.0s						
CHTO	**Chiang Mai**	**54.64**	**257**	P	**P**	**06 19 53.3**	**+1.0**
	comp=Z,3µm,1.4s,comp=Z,34µm						
KHMM	**Horse Mountain**	**54.74**	**66**	*e*P	**P**	**06 19 54.3**	**+1.4**
	comp=Z,63nm,1.0s						
KHMM				LR	LR		
	comp=Z,6µm,20.0s						
J05D	**Fort Rock, OR**	**54.74**	**62**	P	**P**	**06 19 54.6**	**+1.6**
	baz=308,SNR=56						
YBH	**Yreka Blue Hor**	**54.82**	**65**	P	**P**	**06 19 54.0**	**+0.6**
	comp=Z,23nm,0.9s,baz=340,slow=4.7,SNR=32						
YBH				LR	LR	06 39 31.0	
	comp=Z,6µm,21.2s,baz=307,slow=32						
YBH	**Yreka Blue Hor**	**54.82**	**65**	*e*P	**P**	**06 19 54.5**	**+1.0**
	comp=Z,39nm,0.9s						
G08A	**Pilot Rock**	**54.84**	**59**	*e*P	**P**	**06 19 54.1**	**+0.5**
	comp=Z,17nm,1.1s						
G08A				LR	LR		
	comp=Z,4µm,21.0s						
K04D	**Chiloquin, OR**	**54.84**	**63**	P	**P**	**06 19 54.7**	**+1.1**
	baz=308						
CM31	**Chiang Mai Arr**	**54.90**	**257**	*e*P	**P**	**06 19 55.5**	**+1.3**
CM31	**Chiang Mai Arr**	**54.90**	**257**	P	**P**	**06 19 55.8**	**+1.6**
CMAR	**Chiang Mai Arr**	**54.90**	**257**	P	**P**	**06 19 54.9**	**+0.7**
	comp=Z,133nm,1.0s,baz=27,slow=5.0,SNR=70						
CMAR				LR	LR	06 45 19.8	
	comp=Z,8µm,18.3s,baz=54,slow=38						
CMAR	**Chiang Mai Arr**	**54.90**	**257**	P	**P**	**06 19 54.9**	**+0.7**
CMAR				pmax	pmax		
	comp=Z,146nm,1.1s						
CMAR				MLR	MLR		
	comp=Z,8µm,18.3s						
PHIT	**Phitsanulok**	**54.91**	**255**	P	**P**	**06 19 56.2**	**+2.0**
	comp=Z,251nm,0.9s,comp=Z,2µm						
CM01	**Chiang Mai Arr**	**54.92**	**257**	*e*P	**P**	**06 19 55.1**	**+0.8**
EKS2	**Erkin-Say**	**54.93**	**297**	P	**P**	**06 19 53.8**	**-0.5**
	SNR=57						
M02C	**Callahan**	**54.94**	**65**	P	**P**	**06 19 55.9**	**+1.6**
	baz=308,SNR=21						
PBKT	**Sadao Pong**	**55.02**	**254**	*e*P	**P**	**06 19 55.4**	**+0.3**
PBKT	**Sadao Pong**	**55.02**	**254**	P	**P**	**06 19 56.2**	**+1.2**
	comp=Z,127nm,1.3s,comp=Z,3µm						
KMRM	**Mail Ridge**	**55.15**	**67**	*e*P	**P**	**06 19 56.5**	**+0.7**
	comp=Z,46nm,1.1s						
KMRM				LR	LR		
	comp=Z,4µm,20.0s						
I07A	**Izee**	**55.26**	**61**	*e*P	**P**	**06 19 58.3**	**+1.7**
	comp=Z,20nm,1.1s						
I07A				LR	LR		
	comp=Z,3µm,21.0s						
K05A	**Summer Lake**	**55.28**	**63**	*e*P	**P**	**06 19 58.8**	**+1.9**
	comp=Z,139nm,1.1s						
K05A				LR	LR		
	comp=Z,5µm,21.0s						
N02D	**Trinity Center**	**55.29**	**66**	P	**P**	**06 19 57.9**	**+1.0**
	baz=308,SNR=28						
M04C	**Macdoel**	**55.31**	**64**	P	**P**	**06 19 58.3**	**+1.3**
	baz=308,SNR=46						
AML	**Almayashu**	**55.31**	**296**	P	**P**	**06 19 57.1**	**-0.2**
	SNR=38						
WALA	**Waterton Lakes**	**55.31**	**53**	*e*P	**P**	**06 19 56.3**	**-0.7**
	comp=Z,42nm,0.7s						
WALA				LR	LR		
	comp=Z,8µm,19.0s						
DHUB	**DHUBRI**	**55.37**	**271**	*e*P	**P**	**06 19 56.3**	**-1.1**
F10A	**Beach Ranch, E**	**55.39**	**58**	*e*P	**P**	**06 19 58.9**	**+1.4**
	comp=Z,29nm,1.1s						
F10A				LR	LR		
	comp=Z,4µm,20.0s						
GTK	**Tadong**	**55.40**	**273**	*e*P	**P**	**06 19 56.5**	**-1.3**
TURI	**Tura**	**55.47**	**270**	*e*P	**P**	**06 19 57.2**	**-1.0**
KCPM	**Cahto Peak**	**55.56**	**67**	*e*P	**P**	**06 20 00.0**	**+1.2**
	comp=Z,107nm,1.2s						
KCPM				LR	LR		
	comp=Z,5µm,20.0s						
KSH	**Kashi**	**55.56**	**292**	P	**P**	**06 20 01.8**	**+2.9**
KSH				*e*pP	pP	06 20 09.8	-0.3
KSH				*e*PcP	**PcP**	**06 21 01.8**	**+3.5**
KSH				PP	**PP**	**06 22 09.3**	**+6.5**
KSH				PcS	**PcS**	**06 24 58.1**	**-0.5**
KSH				S	**S**	**06 27 43.4**	**+1.7**
KSH				ScS	**ScS**	**06 29 44.8**	**-0.1**
KSH				pmax	pmax		
	comp=Z,84nm,1.1s						
KSH				pmax	pmax		
	comp=Z,1µm,6.4s						
KSH				LR	LR		
	comp=Z,10µm,15.7s						
KSH				LR	LR		
	comp=Z,12µm,13.8s						
KSH				LR	LR		
	comp=Z,21µm,17.1s						
HAMF	**Hammerfest**	**55.62**	**343**	*e*P	**P**	**06 19 55.6**	**-3.0**
WDC	**Whiskeytown Da**	**55.63**	**66**	*e*P	**P**	**06 20 00.3**	**+1.2**
	comp=Z,87nm,1.3s						
WDC				LR	LR		
	comp=Z,3µm,19.0s						
KEV	**Kevo**	**55.65**	**341**	PFAKE		06 20 10.0	+11
KEV				LR	LR		
	comp=Z,12µm,21.0s						
MNAS	**Manas**	**55.78**	**297**	P	**P**	**06 19 59.5**	**-1.0**
MNAS				pmax	pmax		
	comp=Z,64nm,1.1s						
APA	**Apatity**	**55.83**	**337**	⇓*i*P	**P**	**06 19 57.2**	**-3.0**
APA				*i*		06 22 05.0	
APA				*i* S	S	06 27 35.0	-9.2
APA				*i* PS	**PnS**	**06 27 51.0**	**-6.8**
APA				pmax	pmax		
	comp=Z,28nm,1.1s						
SAIH	**SAIHA**	**55.86**	**265**	*e*P	**P**	**06 20 00.2**	**-1.0**
JTMT	**Jette**	**55.91**	**55**	*e*P	**P**	**06 20 02.1**	**+0.8**
	comp=Z,68nm,1.3s						
JTMT				LR	LR		
	comp=Z,4µm,20.0s						
FAKI	**Fak Fak**	**55.92**	**209**	P	**P**	**06 20 00.5**	**-1.0**
	comp=Z,160nm,1.4s,comp=Z,3µm						
AGT	**Agartala**	**56.02**	**268**	*e*P	**P**	**06 20 03.5**	**+1.4**
AGT				IAMs_20	IAMs_20	06 47 56.6	
	comp=Z,24µm,6.2s						
BMO	**Blue Mountains**	**56.03**	**59**	*e*P	**P**	**06 20 02.5**	**+0.3**
	comp=Z,48nm,1.3s						
BMO				LR	LR		
	comp=Z,4µm,21.0s						
BMO	**Blue Mountains**	**56.03**	**59**	*e*P	**P**	**06 20 02.5**	**+0.3**
BMO				pmax	pmax		
	comp=Z,48nm,1.3s						
BMO				MLR	MLR		
	comp=Z,4µm,21.0s						
MOD	**Modoc Plateau**	**56.13**	**63**	*e*P	**P**	**06 20 04.3**	**+1.3**
	comp=Z,58nm,0.9s						
MOD				LR	LR		
	comp=Z,6µm,20.0s						
ARCES	**ARCESS Array B**	**56.14**	**341**	P	**P**	**06 20 00.2**	**-2.3**
	comp=Z,4.2nm,0.5s,baz=47,slow=7.8,SNR=28						
O03D	**Paynes Creek**	**56.25**	**66**	P	**P**	**06 20 04.7**	**+0.9**
	baz=309,SNR=34						
O03D	**Paynes Creek**	**56.25**	**66**	*e*P	**P**	**06 20 04.8**	**+1.1**
SRAK	**Srakaew**	**56.29**	**251**	P	**P**	**06 20 03.2**	**-0.9**
	comp=Z,622nm,0.9s,comp=Z,5µm						
J08A	**Circle Bar Ran**	**56.29**	**61**	*e*P	**P**	**06 20 04.8**	**+0.8**
	comp=Z,75nm,1.2s						
J08A				LR	LR		
	comp=Z,6µm,22.0s						
HOPS	**Hopland Field**	**56.30**	**68**	*e*P	**P**	**06 20 05.5**	**+1.5**
	comp=Z,54nm,1.2s						
HOPS				LR	LR		
	comp=Z,7µm,21.0s						
BELO	**BELONIA**	**56.33**	**267**	*e*P	**P**	**06 20 06.2**	**+1.8**
PRGR	**Permogore**	**56.35**	**327**	⇑*i*P	**P**	**06 20 03.0**	**-0.9**
PRGR				*e*S	**S**	**06 27 51.9**	**+0.7**
PRGR				pmax	pmax		
	comp=Z,162nm,1.1s						
ODAN	**Odare**	**56.50**	**273**	*e*P	**P**	**06 20 07.0**	**+1.1**
	comp=Z,135nm,0.9s						
NAYO	**Nakonayok**	**56.51**	**252**	P	**P**	**06 20 07.3**	**+1.6**
	comp=Z,3.5nm,1.5s,comp=Z,67nm						
KK31	**Karatay Array**	**56.55**	**299**	*e*P	**P**	**06 20 04.5**	**-1.2**
KK31	**Karatay Array**	**56.55**	**299**	*i* P	**P**	**06 20 04.2**	**-1.6**
KK31				pmax	pmax		
	comp=Z,77nm,1.5s						
KKAR	**Karatay Array**	**56.55**	**299**	*e*P	**P**	**06 20 04.7**	**-1.1**
KKAR	**Karatay Array**	**56.55**	**299**	*e*P	**P**	**06 20 04.7**	**-1.1**
GDXM	**Geysers**	**56.58**	**68**	*e*P	**P**	**06 20 07.7**	**+1.6**
	comp=Z,60nm,1.3s						
GDXM				LR	LR		
	comp=Z,8µm,20.0s						
BRDH	**Bariadhala**	**56.60**	**267**	LR	LR	06 47 50.5	
	comp=Z,10µm,18.1s,baz=44,slow=40						
UMPA	**Umpang Tak**	**56.62**	**255**	P	**P**	**06 20 10.0**	**+3.4**
	comp=Z,166nm,1.0s,comp=Z,1µm						
MSO	**Missoula**	**56.66**	**55**	P	**P**	**06 20 07.1**	**+0.5**
	baz=309,SNR=47						
MSO	**Missoula**	**56.66**	**55**	*e*P	**P**	**06 20 06.3**	**-0.3**
	comp=Z,69nm,1.2s						
MSO				LR	LR		
	comp=Z,4µm,19.0s						
SFK	**Sufi-Kurgan**	**56.73**	**294**	P	**P**	**06 20 06.0**	**-1.4**
SFK				pmax	pmax		
	comp=Z,69nm,1.1s						
MRSI	**Marisa**	**56.74**	**222**	P	**P**	**06 20 07.4**	**+0.1**
	comp=Z,74nm,2.3s,comp=Z,3µm						
JIRN	**Jiri**	**56.74**	**275**	*e*P	**P**	**06 20 08.2**	**+0.4**
	comp=Z,677nm,1.1s						
WVOR	**Wild Horse Val**	**56.77**	**62**	*e*P	**P**	**06 20 08.7**	**+1.2**
	comp=Z,58nm,1.0s						
WVOR				LR	LR		
	comp=Z,6µm,22.0s						
GUN	**Gumba**	**56.78**	**275**	*e*P	**P**	**06 20 07.8**	**-0.2**
	comp=Z,116nm,0.5s						
ORV	**Oroville**	**56.89**	**66**	*e*P	**P**	**06 20 08.7**	**+0.5**
	comp=Z,31nm,1.0s						
ORV				LR	LR		
	comp=Z,4µm,20.0s						
ORV	**Oroville**	**56.89**	**66**	*e*P	**P**	**06 20 08.7**	**+0.5**
ORV				pmax	pmax		
	comp=Z,31nm,1.0s						
ORV				MLR	MLR		
	comp=Z,4µm,20.0s						
MCCM	**Marconi Confer**	**56.95**	**68**	PFAKE		06 20 20.0	+11
MCCM				LR	LR		
	comp=Z,6µm,21.0s						
RAMN	**Ramite**	**56.96**	**274**	*e*P	**P**	**06 20 09.2**	**+0.1**
	comp=Z,440nm,0.8s						
KTK1	**Kautokeino**	**57.04**	**342**	*e*P	**P**	**06 20 06.9**	**-1.9**
KKN	**Kakani**	**57.25**	**276**	*e*P	**P**	**06 20 11.7**	**+0.6**
	comp=Z,287nm,0.9s						
PKIN	**Phulchoki**	**57.32**	**275**	*e*P	**P**	**06 20 12.5**	**+0.8**
	comp=Z,203nm,0.8s						
TRO	**Tromso**	**57.37**	**344**	*e*P	**P**	**06 20 10.2**	**-0.8**
BEKR	**Beckworth**	**57.38**	**65**	*e*P	**P**	**06 20 12.6**	**+0.7**
	comp=Z,43nm,1.1s						
BEKR				LR	LR		
	comp=Z,4µm,22.0s						
IUG	**Iuzhnay**	**57.43**	**298**	*e*P	**P**	**06 20 11.2**	**-0.9**
	comp=Z,51nm,1.2s						
IUG				LR	LR	06 46 12.5	
	comp=Z,4µm,14.0s						
DMN	**Daman**	**57.49**	**276**	*e*P	**P**	**06 20 13.4**	**+0.5**
	comp=Z,703nm,1.2s						
GKN	**Gorkha**	**57.53**	**276**	*e*P	**P**	**06 20 13.4**	**+0.4**
	comp=Z,625nm,1.1s						
AFDM	**Forest Hills D**	**57.59**	**66**	*e*P	**P**	**06 20 14.2**	**+1.0**
	comp=Z,30nm,1.1s						
AFDM				LR	LR		
	comp=Z,4µm,20.0s						
MFID	**Camas Ranch**	**57.76**	**59**	*e*P	**P**	**06 20 15.2**	**+0.7**
	comp=Z,35nm,1.0s						
MFID				LR	LR		
	comp=Z,4µm,22.0s						
MPSI	**Mapaga**	**57.78**	**224**	P	**P**	**06 20 14.8**	**+0.1**
	comp=Z,33nm,1.9s,comp=Z,1µm						
SRDT	**SRDT**	**57.86**	**254**	P	**P**	**06 20 18.6**	**+3.4**
	comp=Z,128nm,1.9s						
DANN	**Dangsing**	**57.86**	**277**	*e*P	**P**	**06 20 16.1**	**+0.6**
	comp=Z,239nm,0.8s						
HRY	**Holter Researc**	**57.87**	**54**	*e*P	**P**	**06 20 15.5**	**+0.4**
RUBR	**Rubicon Trail**	**58.02**	**66**	PFAKE		06 20 30.0	+14
RUBR				LR	LR		
	comp=Z,4µm,22.0s						
SUMG	**Summit**	**58.05**	**5**	*e*P	**P**	**06 20 15.6**	**-0.7**
	comp=Z,753nm,1.0s						
SUMG				LR	LR		
	comp=Z,17µm,20.0s						
SUMG	**Summit**	**58.05**	**5**	*i* P	**P**	**06 20 16.0**	**-0.3**
	comp=Z,605nm,0.9s						
SUMG	**Summit**	**58.05**	**5**	*e*P	**P**	**06 20 15.6**	**-0.7**
SUMG				pmax	pmax		
	comp=Z,753nm,1.0s						
SUMG				MLR	MLR		
	comp=Z,17µm,20.0s						
PAHR	**Pah Rah Range**	**58.06**	**65**	*e*P	**P**	**06 20 16.3**	**-0.3**
	comp=Z,44nm,1.1s						
LRM	**Limekiln Ridge**	**58.10**	**55**	*e*P	**P**	**06 20 16.8**	**-0.1**
APSI	**Ampana**	**58.11**	**222**	P	**P**	**06 20 15.6**	**-1.3**
	comp=Z,76nm,1.2s,comp=Z,2µm						
EGMT	**Eagleton**	**58.12**	**52**	P	**P**	**06 20 17.7**	**+0.9**
	baz=310,SNR=7.1						
EGMT	**Eagleton**	**58.12**	**52**	*e*P	**P**	**06 20 17.6**	**+0.8**
	comp=Z,56nm,0.9s						
EGMT				LR	LR		
	comp=Z,6µm,18.0s						
VCNR	**Virginia City**	**58.16**	**65**	*e*P	**P**	**06 20 17.7**	**+0.3**
	comp=Z,27nm,0.8s						
DLMT	**Dillon**	**58.31**	**56**	*e*P	**P**	**06 20 18.8**	**+0.5**
	comp=Z,138nm,1.6s						
PNTR	**Pine Nut**	**58.33**	**65**	*e*P	**P**	**06 20 19.2**	**+0.7**
	comp=Z,55nm,0.7s						
PNTR				LR	LR		
	comp=Z,4µm,21.0s						
KOLN	**Koldanda**	**58.36**	**277**	*e*P	**P**	**06 20 19.1**	**+0.2**
	comp=Z,243nm,0.9s						
AB31	**Akbulak array**	**58.36**	**310**	*i* P	**P**	**06 20 16.8**	**-1.6**
AB31				pmax	pmax		
	comp=Z,308nm,1.2s						
ABKAR	**Akbulak array**	**58.36**	**310**	*e*P	**P**	**06 20 17.0**	**-1.3**
HLID	**Hailey**	**58.46**	**59**	P	**P**	**06 20 20.8**	**+1.4**
	baz=310,SNR=59						
HLID	**Hailey**	**58.46**	**59**	*e*P	**P**	**06 20 20.3**	**+0.9**
	comp=Z,57nm,1.3s						
HLID				LR	LR		
	comp=Z,4µm,21.0s						
MCMT	**McKenzie Canyo**	**58.52**	**57**	*e*P	**P**	**06 20 19.9**	**0.0**
HNR	**Honiara**	**58.52**	**176**	LR	LR	06 41 41.2	
	comp=Z,7µm,21.9s,baz=356,slow=32						
PYUN	**Piuthan**	**58.53**	**278**	*e*P	**P**	**06 20 20.4**	**+0.3**
	comp=Z,810nm,1.0s						
CMB	**Columbia Colle**	**58.53**	**67**	*e*P	**P**	**06 20 20.2**	**+0.4**
	comp=Z,95nm,1.4s						
CMB				LR	LR		
	comp=Z,7µm,22.0s						
CMB	**Columbia Colle**	**58.53**	**67**	*e*P	**P**	**06 20 20.2**	**+0.4**
CMB				pmax	pmax		
	comp=Z,95nm,1.4s						
CMB				MLR	MLR		
	comp=Z,7µm,22.0s						
AKTO	**Aktyubinsk**	**58.55**	**312**	P	**P**	**06 20 18.1**	**-1.6**
	comp=Z,81nm,0.7s,baz=58,slow=9.0,SNR=88						
AKTO				LR	LR	06 47 15.9	
	comp=Z,5µm,21.8s,baz=41,slow=38						
AKTO	**Aktyubinsk**	**58.55**	**312**	P	**P**	**06 20 18.0**	**-1.7**
AKTO				pmax	pmax		
	comp=Z,289nm,1.4s						
YERR	**Yerington**	**58.61**	**65**	*e*P	**P**	**06 20 20.9**	**+0.4**
	comp=Z,79nm,1.2s						
PHET	**Kaeng Krachan**	**58.63**	**252**	P	**P**	**06 20 22.9**	**+2.3**
	comp=Z,97nm,0.9s,comp=Z,744nm						
BOZ	**Bozeman (W)**	**58.69**	**55**	P	**P**	**06 20 20.9**	**0.0**
	baz=310,SNR=62						
BOZ	**Bozeman (W)**	**58.69**	**55**	*e*P	**P**	**06 20 20.4**	**-0.4**
	comp=Z,206nm,1.8s						
BOZ				LR	LR		
	comp=Z,5µm,19.0s						
BOZ	**Bozeman (W)**	**58.69**	**55**	*e*P	**P**	**06 20 20.5**	**-0.4**
BOZ				pmax	pmax		
	comp=Z,206nm,1.8s						
BOZ				MLR	MLR		
	comp=Z,5µm,19.0s						
SAO	**San Andreas Ge**	**58.71**	**69**	*e*P	**P**	**06 20 22.2**	**+1.2**
	comp=Z,64nm,1.4s						
SAO				LR	LR		
	comp=Z,4µm,18.0s						
SAO	**San Andreas Ge**	**58.71**	**69**	*e*P	**P**	**06 20 22.2**	**+1.2**
SAO				pmax	pmax		
	comp=Z,64nm,1.4s						
SAO				MLR	MLR		
	comp=Z,4µm,18.0s						
WAKR	**Walker**	**58.80**	**66**	*e*P	**P**	**06 20 22.9**	**+1.0**
	comp=Z,73nm,1.1s						
WAKR				LR	LR		
	comp=Z,7µm,22.0s						
KNTN	**Kanton**	**58.82**	**142**	PFAKE		06 20 40.0	+18
KNTN				LR	LR		
	comp=Z,6µm,20.0s						
BMN	**Battle Mountai**	**58.87**	**63**	*e*P	**P**	**06 20 23.4**	**+1.2**
	comp=Z,49nm,1.1s						
BMN				LR	LR		
	comp=Z,6µm,22.0s						
BMN	**Battle Mountai**	**58.87**	**63**	*e*P	**P**	**06 20 23.4**	**+1.2**
BMN				pmax	pmax		
	comp=Z,49nm,1.1s						
BMN				MLR	MLR		
	comp=Z,6µm,22.0s						
PMG	**Port Moresby**	**58.93**	**190**	LR	LR	06 42 34.0	
	comp=Z,3µm,21.7s,baz=358,slow=33						
KLMR	**Klimovskoe**	**59.00**	**329**	*e*P	**P**	**06 20 19.7**	**-2.9**
KLMR				*e*S	**S**	**06 28 22.6**	**-3.4**
KLMR				*e*SS	**SS**	**06 32 17.0**	**-2.2**
KLMR				pmax	pmax		
	comp=Z,239nm,1.3s						
KLMR				MLR	MLR		
	comp=Z,13µm,15.0s						
KLMR	**Klimovskoe**	**59.00**	**329**	*e*P	**P**	**06 20 19.7**	**-2.9**
KLMR				AMP		06 20 23.9	
	comp=Z,239nm,1.3s						
KLMR				*e*S	**S**	**06 28 22.6**	**-3.4**
KLMR				*e*S	**S**	**06 28 22.6**	**-3.4**
KLMR				*e*SS	**SS**	**06 32 17.1**	**-2.2**
KLMR				*e*SS	**SS**	**06 32 17.1**	**-2.2**
KLMR				LQ	LQ	06 41 43.4	
KLMR				LQ	LQ	06 41 43.4	
KLMR				LR	LR	06 44 29.3	
KLMR				AMP		06 50 57.4	
	comp=Z,13µm,15.1s						
KVN	**Kaiserville**	**59.24**	**65**	*e*P	**P**	**06 20 25.6**	**+0.7**

	comp=Z,55nm,1.1s						
KVN				LR	LR		
	comp=Z,5µm,21.0s						
KVN	**Kaiserville**	59.24	65	*e*P	P	06 20 25.6	+0.7
KVN				pmax	pmax		
	comp=Z,55nm,1.1s						
KVN				MLR	MLR		
	comp=Z,5µm,21.0s						
RYN	**Ryan**	59.27	65	*e*P	P	06 20 26.2	+1.2
	comp=Z,41nm,1.0s						
RYN				LR	LR		
	comp=Z,4µm,20.0s						
QLMT	**Earthquake Lak**	59.29	56	*e*P	P	06 20 25.9	+0.7
PMPB	**Monarch Peak**	59.46	69	PFAKE		06 20 40.0	+14
PMPB				LR	LR		
	comp=Z,3µm,18.0s						
YHB	**Horse Butte**	59.47	56	*e*P	P	06 20 27.0	+0.6
	comp=Z,154nm,1.3s						
YHB				LR	LR		
	comp=Z,3µm,20.0s						
STEI	**Steigen**	59.52	344	*e*P	P	06 20 25.7	-0.3
NV01	**Mina Array Sit**	59.52	65	*e*P	P	06 20 27.0	+0.1
NVAR	**Mina Array Bea**	59.52	65	P	P	06 20 26.6	-0.3
	comp=Z,18nm,1.0s,baz=289,slow=7.1,SNR=44						
NVAR				LR	LR	06 42 33.5	
	comp=Z,4µm,21.7s,baz=58,slow=32						
JMIC	**Jan Mayen**	59.56	354	*e*P	P	06 20 21.0	-5.4
MDPB	**Devils Postpil**	59.58	66	*e*P	P	06 20 27.6	+0.2
	comp=Z,46nm,1.3s						
MDPB				LR	LR		
	comp=Z,6µm,21.0s						
BOK	**Bokaro**	59.59	272	*e*P	P	06 20 27.0	-0.3
GCMT	**Greycliff**	59.61	54	*e*P	P	06 20 28.6	+1.3
NV11	**Mina Array Sit**	59.61	65	*e*P	P	06 20 28.4	+1.0
	comp=Z,3.2nm,1.0s						
NV11				LR	LR		
	comp=Z,300nm,21.0s						
OMMB	**Old Mammoth Mi**	59.64	66	*e*P	P	06 20 28.9	+1.1
	comp=Z,69nm,1.8s						
OMMB				LR	LR		
	comp=Z,6µm,21.0s						
LOF	**Lofoten**	59.64	345	*e*P	P	06 20 25.4	-1.6
YMR	**Madison River**	59.65	56	*e*P	P	06 20 29.3	+1.7
	comp=Z,316nm,2.0s						
YMR				LR	LR		
	comp=Z,4µm,19.0s						
MLAC	**Mammoth, Mammo**	59.73	66	P	P	06 20 30.2	+1.8
	baz=311						
SBUM	**Sibu**	59.74	233	*e*P	P	06 20 29.4	+1.1
	comp=Z,120nm,1.4s						
SBUM				LR	LR		
	comp=Z,4µm,20.0s						
SBUM	**Sibu**	59.74	233	P	P	06 20 33.0	+4.7
YFT	**Old Faithful**	59.86	56	*e*P	P	06 20 31.4	+2.2
	comp=Z,70nm,1.0s						
YFT				LR	LR		
	comp=Z,7µm,18.0s						
YPP	**Pitchstone Pla**	59.99	56	*e*P	P	06 20 32.0	+1.9
	comp=Z,113nm,1.5s						
YPP				LR	LR		
	comp=Z,6µm,18.0s						
H17A	**Grant Village**	60.03	56	P	P	06 20 31.3	+0.9
	baz=311,SNR=34						
H17A	**Grant Village**	60.03	56	*e*P	P	06 20 31.9	+1.5
	comp=Z,112nm,1.2s						
H17A				LR	LR		
	comp=Z,6µm,22.0s						
DHRM	**DHARAMSHALA**	60.04	286	*e*P	P	06 20 28.3	-2.2
DHRM				IAmb	IAmb	06 20 32.1	
PAGB	**Antelope Grade**	60.12	69	*e*P	P	06 20 31.2	+0.5
	comp=Z,136nm,1.7s						
PAGB				LR	LR		
	comp=Z,3µm,20.0s						
ILULI	**Ilulissat**	60.16	11	*e*P	P	06 20 29.7	-0.8
	comp=Z,138nm,0.9s						
ILULI				LR	LR		
	comp=Z,12µm,19.0s						
ILULI	**Ilulissat**	60.16	11	*i* P	P	06 20 29.4	-1.1
	comp=Z,153nm,1.0s						
	comp=Z,12µm,18.0s						
ILULI	**Ilulissat**	60.16	11	*e*P	P	06 20 29.7	-0.8
ILULI				pmax	pmax		
	comp=Z,139nm,0.9s						
ILULI				MLR	MLR		
	comp=Z,12µm,19.0s						
IMW	**Indian Meadow**	60.16	56	*e*P	P	06 20 32.0	+0.7
	comp=Z,106nm,1.5s						
FLWY	**Flagg Ranch**	60.17	56	*e*P	P	06 20 31.9	+0.7
	comp=Z,124nm,1.4s						
DDI	**Dehra Dun**	60.22	283	*e*P	P	06 20 29.6	-2.0
DDI				IAMs_20	IAMs_20	06 48 39.6	
	comp=Z,14µm,13.7s						
SMLA	**Simla**	60.24	284	*e*P	P	06 20 29.7	-1.9
SMLA				IAMs_20	IAMs_20	06 51 27.9	
	comp=Z,10µm,12.8s						
RLMT	**Red Lodge**	60.26	54	P	P	06 20 31.9	+0.1
	baz=312,SNR=47						
RLMT	**Red Lodge**	60.26	54	*e*P	P	06 20 32.5	+0.6
	comp=Z,129nm,1.3s						
RLMT				LR	LR		
	comp=Z,4µm,20.0s						
FXWY	**Fox Creek**	60.29	57	*e*P	P	06 20 33.4	+1.3
	comp=Z,23nm,0.9s						
MOOW	**Moose Ponds**	60.37	56	*e*P	P	06 20 33.4	+0.8
	comp=Z,152nm,1.9s						
TPAW	**Teton Pass**	60.42	57	*e*P	P	06 20 34.7	+1.6
	comp=Z,120nm,1.3s						
TPAW				LR	LR		
	comp=Z,3µm,18.0s						
TIN	**Tinemaha, Big**	60.47	66	P	P	06 20 33.7	+0.4
	baz=312,SNR=7.4						
LOHW	**Long Hollow**	60.53	56	*e*P	P	06 20 34.6	+0.8
	comp=Z,74nm,1.3s						
LOHW				LR	LR		
	comp=Z,2µm,20.0s						
HVU	**Hansel Valley**	60.54	59	*e*P	P	06 20 34.2	+0.5
	comp=Z,29nm,1.0s						
HVU				LR	LR		
	comp=Z,4µm,21.0s						
HVU	**Hansel Valley**	60.54	59	*e*P	P	06 20 34.2	+0.5
HVU				pmax	pmax		
	comp=Z,29nm,1.0s						
HVU				MLR	MLR		
	comp=Z,4µm,21.0s						
SMMC	**Simmler**	60.55	69	P	P	06 20 34.7	+1.0
	baz=312						
SNOW	**Snow King Moun**	60.55	57	*e*P	P	06 20 34.6	+0.7
	comp=Z,56nm,1.1s						
SNOW				LR	LR		
	comp=Z,3µm,19.0s						
REDW	**Red Top Meadow**	60.56	57	*e*P	P	06 20 34.5	+0.6
	comp=Z,118nm,1.3s						
REDW				LR	LR		
	comp=Z,3µm,18.0s						
SCO	**Scoresbysund**	60.57	359	PFAKE		06 20 40.0	+6.7
SCO				LR	LR		
	comp=Z,2µm,22.0s						
DGMT	**Dagmar**	60.64	49	P	P	06 20 33.8	-0.3
	baz=312,SNR=26						
DGMT	**Dagmar**	60.64	49	*e*P	P	06 20 34.7	+0.6
	comp=Z,162nm,1.0s						
DGMT				LR	LR		
	comp=Z,10µm,22.0s						
VES	**Vestal, Richgr**	60.76	68	P	P	06 20 35.3	+0.2
	baz=312						
LAO	**LASA Array**	60.81	51	P	P	06 20 34.9	-0.5
	baz=312,SNR=36						
LAO	**LASA Array**	60.81	51	*e*P	P	06 20 36.6	+1.2
	comp=Z,125nm,0.8s						
LAO				LR	LR		
	comp=Z,7µm,20.0s						
AHID	**Auburn Hatcher**	60.82	57	*e*P	P	06 20 35.9	+0.2
	comp=Z,45nm,1.1s						
AHID				LR	LR		
	comp=Z,3µm,18.0s						
PKM	**Mcpherson Peak**	60.94	69	P	P	06 20 37.1	+0.5
	baz=312						
BGU	**Big Grassy Mou**	60.96	60	*e*P	P	06 20 37.2	+0.6
	comp=Z,84nm,2.0s						
BGU				LR	LR		
	comp=Z,4µm,21.0s						
CWC	**Cottonwood Cre**	60.97	67	P	P	06 20 36.6	-0.1
	baz=312						
NIL	**Nilore**	61.02	289	*e*P	P	06 20 36.5	-0.4
	comp=Z,251nm,0.9s						
NIL				LR	LR		
	comp=Z,19µm,19.0s						
NIL	**Nilore**	61.02	289	*e*P	P	06 20 36.5	-0.4
NIL				pmax	pmax		
	comp=Z,251nm,0.9s						
NIL				MLR	MLR		
	comp=Z,19µm,19.0s						
GRAC	**Grapevine Rang**	61.03	66	P	P	06 20 38.0	+1.1
	baz=312,SNR=8.4						
SPUT	**South Promonto**	61.03	59	*e*P	P	06 20 38.9	+1.8
	comp=Z,51nm,1.1s						
SPUT				LR	LR		
	comp=Z,3µm,20.0s						
KONS	**Konsvik**	61.18	344	*e*P	P	06 20 37.2	-0.2
R11A	**Troy Canyon, C**	61.19	64	P	P	06 20 37.2	-1.0
	baz=312,SNR=60						
R11A	**Troy Canyon, C**	61.19	64	*e*P	P	06 20 39.0	+0.8
	comp=Z,35nm,1.0s						
R11A				LR	LR		
	comp=Z,4µm,21.0s						
MOR8	**Moi Rana**	61.23	343	*e*P	P	06 20 34.6	-3.2
ISA	**Isabella, Lake**	61.24	68	P	P	06 20 37.8	-0.7
	baz=312,SNR=11						
ISA	**Isabella, Lake**	61.24	68	*e*P	P	06 20 38.5	0.0
	comp=Z,19nm,1.0s						
ISA				LR	LR		
	comp=Z,3µm,20.0s						
ISA	**Isabella, Lake**	61.24	68	*e*P	P	06 20 38.5	0.0
ISA				pmax	pmax		
	comp=Z,19nm,1.0s						
ISA				MLR	MLR		
	comp=Z,3µm,20.0s						
SBC	**Santa Barbara**	61.30	70	P	P	06 20 39.3	+0.5
	baz=312						
HWUT	**Hardware Ranch**	61.33	59	*e*P	P	06 20 39.8	+0.7
	comp=Z,57nm,1.3s						
HWUT				LR	LR		
	comp=Z,3µm,20.0s						
DAC	**Darwin (Calif)**	61.37	67	*e*P	P	06 20 39.5	0.0
	comp=Z,49nm,1.5s						
DAC				LR	LR		
	comp=Z,5µm,22.0s						
DAC	**Darwin (Calif)**	61.37	67	*e*P	P	06 20 39.5	0.0
DAC				pmax	pmax		
	comp=Z,49nm,1.5s						
DAC				MLR	MLR		
	comp=Z,5µm,22.0s						
ARVC	**Arvin**	61.38	68	P	P	06 20 39.8	+0.4
	baz=312						
XMAS	**Kiritimati**	61.44	124	PFAKE		06 20 50.0	+10
XMAS				LR	LR		
	comp=Z,6µm,19.0s						
DUG	**Dugway, Tooele**	61.56	61	P	P	06 20 41.0	+0.3
	baz=312,SNR=58						
DUG	**Dugway, Tooele**	61.56	61	*e*P	P	06 20 41.9	+1.2
	comp=Z,62nm,1.1s						
DUG				LR	LR		
	comp=Z,4µm,22.0s						
DUG	**Dugway, Tooele**	61.56	61	*e*P	P	06 20 41.9	+1.2
DUG				pmax	pmax		
	comp=Z,62nm,1.1s						
DUG				MLR	MLR		
	comp=Z,4µm,22.0s						
KSM	**Kuching**	61.58	235	*e*P	P	06 20 41.6	+0.8
	comp=Z,152nm,1.2s						
KSM				LR	LR		
	comp=Z,3µm,21.0s						
KSM	**Kuching**	61.58	235	P	P	06 20 44.0	+3.2
MPMC	**Manual Prospec**	61.58	67	P	P	06 20 40.8	-0.1
	baz=312,SNR=38						
SCZ2	**Santa Cruz Isl**	61.65	70	P	P	06 20 42.2	+1.0
	baz=313						
SPSI	**Sidrap Palu**	61.66	222	P	P	06 20 41.1	-0.2
	comp=Z,58nm,1.6s,comp=Z,2µm						
BW06	**Boulder Array**	61.67	57	P	P	06 20 42.2	+0.7
	baz=312,SNR=72						
BW06	**Boulder Array**	61.67	57	*e*P	P	06 20 41.6	+0.1
	comp=Z,43nm,0.9s						
BW06				LR	LR		
	comp=Z,4µm,18.0s						
PD31	**Pinedale Array**	61.67	57	*e*P	P	06 20 41.7	+0.2
PDAR	**Pinedale Array**	61.67	57	P	P	06 20 40.7	-0.8
	comp=Z,23nm,0.9s,baz=280,slow=2.7,SNR=84						
PDAR				PKPPKP	P’P’df	06 49 54.4	-3.0
	comp=Z,1.1nm,0.9s,baz=161,slow=3.3,SNR=3.6						
PDAR	**Pinedale Array**	61.67	57	*e*P	P	06 20 41.0	-0.4
PDAR				P’P’		06 49 54.4	
FURC	**Furnace Creek,**	61.68	66	P	P	06 20 41.9	+0.6
	baz=312,SNR=31						
TPNV	**Topopah Spring**	61.73	65	P	P	06 20 42.2	+0.3
	baz=312,SNR=52						
TPNV	**Topopah Spring**	61.73	65	*e*P	P	06 20 42.8	+1.0
	comp=Z,130nm,1.5s						
TPNV				LR	LR		
	comp=Z,5µm,20.0s						
TPNV	**Topopah Spring**	61.73	65	*e*P	P	06 20 42.8	+1.0
TPNV				pmax	pmax		
	comp=Z,131nm,1.5s						
TPNV				MLR	MLR		
	comp=Z,5µm,20.0s						
TCUT	**Toone Canyon**	61.74	59	*e*P	P	06 20 43.3	+1.3
	comp=Z,226nm,1.8s						
TCUT				LR	LR		
	comp=Z,5µm,22.0s						
OSI	**Osito Audit: C**	61.79	69	P	P	06 20 42.4	+0.2
	baz=312						
OSI	**Osito Audit: C**	61.79	69	*e*P	P	06 20 43.0	+0.8
	comp=Z,61nm,0.9s						
OSI				LR	LR		
	comp=Z,5µm,22.0s						
CTU	**Camp Tracy**	61.84	60	*e*P	P	06 20 42.9	+0.4
	comp=Z,34nm,1.0s						
CTU				LR	LR		
	comp=Z,3µm,20.0s						
LRMC	**Laurel Mtn Rad**	61.85	67	P	P	06 20 42.7	+0.1
	baz=312						
NDI	**New Delhi**	61.86	282	*e*P	P	06 20 42.0	-0.7
BLG	**Laguna Peak, P**	61.92	69	P	P	06 20 43.1	+0.1
	baz=313						
EDW2	**Edwards Air Fo**	62.06	68	P	P	06 20 43.7	-0.2
	baz=313,SNR=18						
JLU	**Jordanelle**	62.07	59	*e*P	P	06 20 44.4	+0.2
	comp=Z,150nm,2.0s						
JLU				LR	LR		
	comp=Z,5µm,20.0s						
PSUT	**Pine Spring**	62.08	63	*e*P	P	06 20 44.6	+0.3
	comp=Z,57nm,1.4s						
PSUT				LR	LR		
	comp=Z,5µm,22.0s						
BWNR	**Bhubaneshwar**	62.11	269	*e*P	P	06 20 42.1	-2.3
NLU	**North Lily Min**	62.15	60	*e*P	P	06 20 45.9	+1.2
	comp=Z,43nm,1.0s						
NLU				LR	LR		
	comp=Z,4µm,22.0s						
SNCC	**San Nicolas Is**	62.22	70	P	P	06 20 45.0	0.0
	baz=313						
SNCC	**San Nicolas Is**	62.22	70	PFAKE		06 21 00.0	+15
SNCC				LR	LR		
	comp=Z,5µm,22.0s						
DECC	**Green Verdugo**	62.27	69	P	P	06 20 45.1	-0.2
	baz=313						
SFJD	**Kangerlussuaq**	62.32	12	LR	LR	06 51 28.9	
	comp=Z,12µm,18.4s,baz=344,slow=40						
SFJD	**Kangerlussuaq**	62.32	12	*e*P	P	06 20 44.6	-0.4
	comp=Z,136nm,0.9s						
SFJD	**Kangerlussuaq**	62.32	12	*i* P	P	06 20 44.7	-0.4
	comp=Z,120nm,0.9s						
	comp=Z,11µm,18.0s						
MPU	**Maple Canyon**	62.36	60	*e*P	P	06 20 47.3	+1.3
	comp=Z,32nm,0.9s						
MPU				LR	LR		
	comp=Z,4µm,22.0s						
SHOC	**Shoshone, Teco**	62.41	66	P	P	06 20 46.8	+0.5
	baz=313						
PASC	**Pasadena Art C**	62.42	69	*e*P	P	06 20 46.5	+0.2
	comp=Z,110nm,1.5s						
PASC				LR	LR		
	comp=Z,6µm,22.0s						
MWC	**Mount Wilson**	62.46	69	*e*P	P	06 20 46.9	0.0
	comp=Z,100nm,1.3s						
MWC				LR	LR		
	comp=Z,6µm,22.0s						
SKLT	**Songkhla**	62.48	247	P	P	06 20 49.1	+2.2
	comp=Z,217nm,1.0s,comp=Z,4µm						
GSC	**Goldstone, Bar**	62.49	67	P	P	06 20 47.2	+0.2
	baz=313,SNR=18						
GSC	**Goldstone, Bar**	62.49	67	*e*P	P	06 20 46.6	-0.3
	comp=Z,29nm,0.9s						
GSC				LR	LR		
	comp=Z,3µm,20.0s						
GSC	**Goldstone, Bar**	62.49	67	*e*P	P	06 20 46.7	-0.3
GSC				pmax	pmax		
	comp=Z,29nm,0.9s						
GSC				MLR	MLR		
	comp=Z,3µm,20.0s						
TRTT	**Trang**	62.52	248	P	P	06 20 49.1	+1.9
	comp=Z,48nm,1.1s,comp=Z,1µm						
KRAB	**Krabi**	62.52	249	P	P	06 20 50.5	+3.3
	comp=Z,228nm,0.8s,comp=Z,16µm						
FIA1	**FINESS Array S**	62.62	336	*e*P	P	06 20 45.8	-1.4
	comp=Z,114nm,1.1s						
FINES	**FINESS Array B**	62.62	336	P	P	06 20 44.4	-2.8
	comp=Z,36nm,0.7s,baz=35,slow=6.0,SNR=70						
FINES				LR	LR	06 51 17.3	
	comp=Z,12µm,18.7s,baz=24,slow=39						
FINES	**FINESS Array B**	62.62	336	*e*P	P	06 20 45.2	-2.0
FINES	**FINESS Array B**	62.62	336	*i* P	P	06 20 45.2	-2.0
FINES				pmax	pmax		
	comp=Z,36nm,0.7s						
FMP	**Fort Macarthur**	62.66	69	P	P	06 20 48.5	+0.6
	baz=313						
RRX	**Edison Barstow**	62.67	68	P	P	06 20 48.3	+0.4
	baz=313						
SHPR	**Sheep Range**	62.67	65	*e*P	P	06 20 49.1	+1.0
	comp=Z,76nm,1.4s						
SHPR				LR	LR		
	comp=Z,5µm,21.0s						
BFSC	**Mount Baldy Ra**	62.70	68	P	P	06 20 48.2	-0.1
	baz=313,SNR=9.0						
BKSI	**Bulukumba**	62.72	221	P	P	06 20 47.2	-1.2
	comp=Z,37nm,0.8s,comp=Z,831nm						
CIS	**Catalina Islan**	62.80	70	P	P	06 20 49.4	+0.5
	baz=313						
TCRU	**Three Creeks R**	62.84	62	*e*P	P	06 20 51.0	+1.6
	comp=Z,54nm,1.2s						
TCRU				LR	LR		
	comp=Z,7µm,22.0s						
TUQ	**Turquoise Moun**	62.94	66	P	P	06 20 50.1	+0.2
	baz=313,SNR=23						
KBL	**Kabul**	63.00	292	*e*P	P	06 20 48.9	-1.5
	comp=Z,170nm,1.2s						
KBL				LR	LR		
	comp=Z,19µm,22.0s						
KBL	**Kabul**	63.00	292	*e*P	P	06 20 48.9	-1.5
KBL				pmax	pmax		
	comp=Z,170nm,1.2s						
KBL				MLR	MLR		
	comp=Z,19µm,22.0s						
SCI2	**San Clemente I**	63.00	70	P	P	06 20 50.0	-0.2
	baz=313						
CCUT	**Cedar City**	63.02	63	*e*P	P	06 20 51.8	+1.2
	comp=Z,43nm,1.1s						
CCUT				LR	LR		
	comp=Z,4µm,20.0s						
MSU	**Marysvale**	63.06	62	*e*P	P	06 20 52.5	+1.7
TMUT	**Trail Mountain**	63.09	60	*e*P	P	06 20 51.8	+0.8
	comp=Z,46nm,1.0s						
TMUT				LR	LR		
	comp=Z,3µm,22.0s						
HEC	**Hector,Ludlow**	63.10	67	P	P	06 20 51.0	+0.1
	baz=313,SNR=21						
BBRC	**Big Bear Solar**	63.13	68	P	P	06 20 51.0	-0.3
	baz=313						
SZCU	**Shurtz Canyon**	63.15	63	*e*P	P	06 20 52.3	+0.8
	comp=Z,38nm,1.2s						
SZCU				LR	LR		
	comp=Z,3µm,21.0s						
NSS	**Namsos**	63.16	344	*e*P	P	06 20 50.9	+0.1
P17A	**Butcher Ranch,**	63.23	60	*e*P	P	06 20 52.8	+0.9
	comp=Z,40nm,0.9s						
P17A				LR	LR		
	comp=Z,4µm,22.0s						
MDND	**Maddock**	63.30	47	P	P	06 20 51.3	-0.6
	baz=315,SNR=6.5						
MDND	**Maddock**	63.30	47	*e*P	P	06 20 52.6	+0.6
	comp=Z,172nm,0.9s						
MDND				LR	LR		
	comp=Z,8µm,22.0s						
ULM	**Lac du Bonnet**	63.32	43	PKP2bc	P’P’bc	06 49 55.4	-6.5
	comp=Z,2.9nm,0.7s,baz=150,slow=6.1,SNR=3.5						
ULM				LR	LR	06 50 23.4	
	comp=Z,5µm,18.8s,baz=322,slow=38						
ULM	**Lac du Bonnet**	63.32	43	*e*P	P	06 20 52.0	0.0
	comp=Z,179nm,1.8s						
ULM				⇑*e*		06 49 55.4	
ULM	**Lac du Bonnet**	63.32	43	*e*P	P	06 20 52.0	0.0
ULM				pmax	pmax		
	comp=Z,179nm,1.8s						
MTPU	**Mount Pierson**	63.38	62	*e*P	P	06 20 53.8	+0.7
	comp=Z,36nm,1.0s						
MTPU				LR	LR		
	comp=Z,5µm,22.0s						
K22A	**Casper**	63.39	55	P	P	06 20 52.3	-0.5
	baz=314,SNR=11						
K22A	**Casper**	63.39	55	*e*P	P	06 20 53.0	+0.1
	comp=Z,51nm,1.1s						
K22A				LR	LR		
	comp=Z,3µm,20.0s						
P18A	**Preston Nutter**	63.41	60	*e*P	P	06 20 54.5	+1.4
	comp=Z,33nm,0.9s						
P18A				LR	LR		
	comp=Z,4µm,22.0s						
MURC	**Murrieta**	63.41	69	P	P	06 20 53.3	+0.3
	baz=313,SNR=9.8						
LCMT	**Little Creek M**	63.46	63	*e*P	P	06 20 54.6	+1.3
	comp=Z,47nm,0.9s						
LCMT				LR	LR		
	comp=Z,5µm,21.0s						
MOS	**Moscow**	63.50	326	*e*P	P	06 20 53.0	-0.1
MOS	**Moscow**	63.50	326	*e*P	P	06 20 53.0	-0.1
MOS				*e*		06 21 30.5	
MOS				*e*		06 23 08.3	
MOS				*e*PPP	PPP	06 24 45.5	
MOS				*e*S	S	06 29 24.0	+0.7
MOS				pmax	pmax		
	comp=Z,400nm,1.6s						
MOS				pmax	pmax		
	comp=Z,182nm,1.3s						
MOS				MLR	MLR		
	comp=N,11µm,18.0s						
MOS				MLR	MLR		
	comp=Z,13µm,18.0s						
MOS				MLR	MLR		
	comp=E,6µm,20.0s						
GMRC	**Granite Mounta**	63.54	67	P	P	06 20 53.6	-0.3
	baz=313,SNR=23						
SRU	**San Rafael Swe**	63.60	60	*e*P	P	06 20 55.0	+0.6
	comp=E,77nm,0.8s						
SRU				LR	LR		
	comp=Z,4µm,21.0s						
LDFC	**Landfair**	63.67	66	*e*P	P	06 20 55.5	+0.8
	comp=Z,106nm,1.0s						
LDFC				LR	LR		
	comp=Z,3µm,20.0s						
RWWY	**Rawlins**	63.68	56	*e*P	P	06 20 54.3	-0.6
	comp=Z,120nm,1.6s						
RWWY				LR	LR		
	comp=Z,6µm,20.0s						
RSSD	**Black Hills**	63.69	52	P	P	06 20 53.6	-1.2
	baz=314						
RSSD	**Black Hills**	63.69	52	*e*P	P	06 20 54.7	-0.2
	comp=Z,95nm,0.8s						
RSSD				LR	LR		
	comp=Z,6µm,20.0s						
RSSD	**Black Hills**	63.69	52	*e*P	P	06 20 54.7	-0.2
RSSD				pmax	pmax		
	comp=Z,95nm,0.8s						
RSSD				MLR	MLR		
	comp=Z,6µm,20.0s						
KNB	**Kanab**	63.70	63	*e*P	P	06 20 56.2	+1.2
	comp=Z,128nm,1.2s						
KNB				LR	LR		
	comp=Z,4µm,21.0s						
PKCU	**Pink Cliffs**	63.71	63	*e*P	P	06 20 56.6	+1.4
	comp=Z,138nm,1.5s						
PKCU				LR	LR		
	comp=Z,4µm,22.0s						
FRD	**Ford Ranch, An**	63.84	68	P	P	06 20 56.0	+0.1
	baz=314,SNR=12						
PFO	**Pinyon Flats O**	63.85	68	P	P	06 20 55.8	-0.1
	baz=314						
PFO	**Pinyon Flats O**	63.85	68	*e*P	P	06 20 55.9	-0.1
	comp=Z,32nm,1.3s						
PFO				LR	LR		
	comp=Z,6µm,21.0s						
PFO	**Pinyon Flats O**	63.85	68	*e*P	P	06 20 55.9	-0.1
PFO				pmax	pmax		
	comp=Z,32nm,1.3s						
PFO				MLR	MLR		

	comp=Z,6µm,21.0s						
XPFO	**Piæon Flat**	**63.85**	**68**	*e*P	**P**	**06 20 55.9**	**-0.1**
	comp=Z,29nm,1.2s						
XPFO				LR	LR		
	comp=Z,6µm,21.0s						
BELC	**Belle Mtn. Jos**	**63.87**	**68**	P	**P**	**06 20 55.9**	**-0.2**
	baz=314,SNR=14						
PBA	**Port Blair**	**63.93**	**257**	PFAKE		06 21 10.0	+13
PBA				LR	LR		
	comp=Z,9µm,19.0s						
KULM	**Kulim**	**63.95**	**246**	*e*P	**P**	**06 20 57.3**	**+0.7**
	comp=Z,250nm,1.1s						
KULM				LR	LR		
	comp=Z,4µm,20.0s						
KULM	**Kulim**	**63.95**	**246**	P	**P**	**06 21 01.0**	**+4.4**
109C	**Camp Elliot, M**	**63.95**	**69**	P	**P**	**06 20 56.3**	**-0.1**
	baz=314						
CPE	**Camp Elliot**	**63.95**	**69**	*e*P	**P**	**06 20 58.1**	**+1.7**
	comp=Z,95nm,1.6s						
CPE				LR	LR		
	comp=Z,3µm,22.0s						
COEN	**Coen**	**63.96**	**194**	*e*P	**P**	**06 20 57.5**	**+1.0**
	comp=Z,42nm,0.8s						
NEE2	**Needles Airpor**	**64.17**	**66**	P	**P**	**06 20 57.7**	**-0.2**
	baz=314						
O20A	**White River Ci**	**64.18**	**58**	P	**P**	**06 20 57.3**	**-0.9**
	baz=314,SNR=21						
O20A	**White River Ci**	**64.18**	**58**	*e*P	**P**	**06 20 58.1**	**0.0**
	comp=Z,82nm,1.4s						
O20A				LR	LR		
	comp=Z,3µm,20.0s						
IRM	**Iron Mountain**	**64.27**	**67**	P	**P**	**06 20 58.5**	**-0.1**
	baz=314,SNR=28						
BAR	**Barrett**	**64.36**	**69**	*e*P	**P**	**06 20 59.7**	**+0.5**
	comp=Z,85nm,1.8s						
BAR				LR	LR		
	comp=Z,3µm,21.0s						
MONP2	**Monument Peak**	**64.37**	**69**	P	**P**	**06 20 58.8**	**-0.7**
	baz=314						
OBN	**Obninsk**	**64.37**	**326**	*e*P	**P**	**06 20 56.8**	**-2.0**
OBN	**Obninsk**	**64.37**	**326**	*e*P	**P**	**06 20 56.9**	**-2.0**
	comp=Z,146nm,1.0s						
OBN				LR	LR		
	comp=Z,13µm,18.0s						
OBN	**Obninsk**	**64.37**	**326**⇓	*i*P	**P**	**06 20 57.1**	**-1.7**
OBN				*i* *PP	**pP**	**06 21 08.0**	**-2.2**
OBN				*SP	**sP**	**06 21 20.0**	**+5.4**
OBN						06 21 31.0	
OBN						06 23 15.0	
OBN				*i* S	**S**	**06 29 26.8**	**-7.2**
OBN				*i* PS	**PnS**	**06 29 56.8**	**+1.8**
OBN				*e*PPS	PPS	06 30 14.4	
OBN				pmax	pmax		
	comp=Z,149nm,1.0s						
OBN				MLR	MLR		
	comp=Z,12µm,17.0s						
IPM	**Ipoh**	**64.37**	**245**	*e*P	**P**	**06 20 59.7**	**+0.2**
	comp=Z,144nm,1.1s						
IPM				LR	LR		
	comp=Z,5µm,20.0s						
BC3	**Big Chuckawall**	**64.43**	**68**	P	**P**	**06 20 59.6**	**-0.2**
	baz=314,SNR=11						
A33A	**Warroad**	**64.48**	**44**	P	**P**	**06 20 58.9**	**-0.8**
	baz=317,SNR=15						
CHLP	**Challavanipeta**	**64.54**	**269**	*e*P	**P**	**06 21 01.2**	**+0.7**
CHLP				IAmb	IAmb	06 21 04.0	
	comp=Z,316nm,1.2s						
CHLP				*e*S	**S**	**06 29 36.2**	**-0.9**
CHLP				IVMs_BB	IVMs_BB	06 52 04.7	
	comp=Z,2µm,13.0s						
TBLU	**Trondheim**	**64.64**	**344**	*e*P	**P**	**06 20 59.7**	**-0.8**
SWSC	**Sam W. Stewart**	**64.71**	**68**	P	**P**	**06 21 01.7**	**+0.3**
	baz=314						
IKP	**In-Ko-Pah, Jac**	**64.72**	**69**	P	**P**	**06 21 00.8**	**-0.8**
	baz=314						
AGMN	**Agassiz Nation**	**64.73**	**45**	P	**P**	**06 21 01.0**	**-0.4**
	baz=317,SNR=21						
AGMN	**Agassiz Nation**	**64.73**	**45**	*e*P	**P**	**06 21 01.6**	**+0.2**
	comp=Z,89nm,1.1s						
AGMN				LR	LR		
	comp=Z,5µm,20.0s						
PDMCI	**Parker Dam,Lak**	**64.78**	**66**	P	**P**	**06 21 01.7**	**-0.1**
	baz=314,SNR=12						
PV09	**Paradox Valley**	**64.81**	**60**	*e*P	**P**	**06 21 04.2**	**+1.8**
MMRI	**Maumere**	**64.83**	**218**	*e*P	**P**	**06 21 03.2**	**+1.0**
	comp=Z,657nm,1.7s						
PV21	**Cone Mtn., Par**	**64.86**	**60**	*e*P	**P**	**06 21 03.1**	**+0.5**
	comp=Z,71nm,1.1s						
PV21				LR	LR		
	comp=Z,3µm,22.0s						
MYKOM	**Kota Tinggi**	**64.89**	**241**	*e*P	**P**	**06 21 04.4**	**+1.6**
	comp=Z,131nm,1.0s						
MYKOM				LR	LR		
	comp=Z,3µm,21.0s						
MYKOM	**Kota Tinggi**	**64.89**	**241**	P	**P**	**06 21 06.0**	**+3.2**
PHWY	**Pilot Hill**	**64.90**	**55**	*e*P	**P**	**06 21 04.3**	**+1.4**
	comp=Z,36nm,1.3s						
PHWY				LR	LR		
	comp=Z,2µm,20.0s						
VSU	**Vasula**	**64.91**	**333**⇑	*e*P	**P**	**06 21 01.7**	**-0.6**
VSU				pmax	pmax		
	comp=Z,297nm,1.4s						
VSU				MLR	MLR		
	comp=Z,39µm,18.0s						
PV23	**Carpenter Ridg**	**64.91**	**60**	*e*P	**P**	**06 21 03.5**	**+0.5**
	comp=Z,52nm,0.8s						
N23A	**Red Feather La**	**64.92**	**56**	P	**P**	**06 21 02.5**	**-0.6**
	baz=315,SNR=20						
N23A	**Red Feather La**	**64.92**	**56**	*e*P	**P**	**06 21 03.3**	**+0.2**
	comp=Z,74nm,1.2s						
N23A				LR	LR		
	comp=Z,4µm,20.0s						
Y12C	**Blythe**	**64.93**	**67**	P	**P**	**06 21 02.9**	**0.0**
	baz=314						
Y12C	**Blythe**	**64.93**	**67**	*e*P	**P**	**06 21 03.2**	**+0.3**
	comp=Z,122nm,1.6s						
Y12C				LR	LR		
	comp=Z,3µm,20.0s						
PV10	**Paradox Valley**	**64.95**	**60**	*e*P	**P**	**06 21 04.3**	**+1.0**
PV14	**Lion Creek, Pa**	**64.96**	**60**	*e*P	**P**	**06 21 03.2**	**-0.1**
	comp=Z,104nm,1.3s						
PV14				LR	LR		
	comp=Z,4µm,22.0s						
ANGG	**Ammassalik, Gr**	**64.98**	**6**	*e*P	**P**	**06 21 01.7**	**-0.9**
	comp=Z,154nm,1.4s						
ANGG				LR	LR		
	comp=Z,12µm,19.0s						
PV22	**Blue Mesa, Par**	**64.98**	**60**	*e*P	**P**	**06 21 03.0**	**-0.4**
	comp=Z,66nm,0.9s						
PV22				LR	LR		
	comp=Z,4µm,22.0s						
PV20	**West Nyswonger**	**65.01**	**60**	*e*P	**P**	**06 21 04.0**	**+0.4**
	comp=Z,69nm,0.9s						
PV20				LR	LR		
	comp=Z,3µm,19.0s						
PV19	**Morning Glory**	**65.03**	**60**	*e*P	**P**	**06 21 04.0**	**+0.3**
	comp=Z,90nm,1.0s						
PV19				LR	LR		
	comp=Z,4µm,22.0s						
PV17	**East Wray Mesa**	**65.06**	**60**	*e*P	**P**	**06 21 04.3**	**+0.4**
	comp=Z,118nm,0.8s						
PV17				LR	LR		
	comp=Z,4µm,20.0s						
PV16	**Nyswonger Mesa**	**65.06**	**60**	*e*P	**P**	**06 21 04.2**	**+0.3**
	comp=Z,81nm,1.0s						
PV16				LR	LR		
	comp=Z,3µm,20.0s						
SOEI	**Soe**	**65.06**	**215**	*e*P	**P**	**06 21 04.8**	**+0.9**
	comp=Z,512nm,1.6s						
PV11	**David Mesa, Pa**	**65.09**	**60**	*e*P	**P**	**06 21 04.5**	**+0.3**
	comp=Z,218nm,1.3s						
PV11				LR	LR		
	comp=Z,4µm,21.0s						
PV18	**Skein Mesa, Pa**	**65.11**	**60**	*e*P	**P**	**06 21 04.6**	**+0.3**
	comp=Z,87nm,0.9s						
PV18				LR	LR		
	comp=Z,3µm,22.0s						
PV05	**Paradox Valley**	**65.12**	**60**	*e*P	**P**	**06 21 05.2**	**+0.9**
PV12	**Saucer Basin,**	**65.12**	**60**	*e*P	**P**	**06 21 05.3**	**+1.0**
	comp=Z,94nm,1.0s						
PV12				LR	LR		
	comp=Z,4µm,20.0s						
PV03	**Paradox Valley**	**65.14**	**60**	*e*P	**P**	**06 21 04.9**	**+0.4**
B34A	**Aery, Baudette**	**65.15**	**44**	P	**P**	**06 21 03.1**	**-0.9**
	baz=317,SNR=16						
C33A	**Trail**	**65.17**	**45**	P	**P**	**06 21 03.0**	**-1.2**
	baz=317,SNR=8.7						
PV13	**Radium Mtn., P**	**65.22**	**60**	*e*P	**P**	**06 21 05.4**	**+0.4**
	comp=Z,109nm,1.0s						
PV13				LR	LR		
	comp=Z,4µm,22.0s						
GLA	**Glamis**	**65.23**	**68**	P	**P**	**06 21 04.8**	**-0.1**
	baz=314,SNR=7.8						
GLA	**Glamis**	**65.23**	**68**	*e*P	**P**	**06 21 05.9**	**+1.1**
	comp=Z,125nm,1.6s						
GLA				LR	LR		
	comp=Z,4µm,22.0s						
GLA	**Glamis**	**65.23**	**68**	*e*P	**P**	**06 21 05.9**	**+1.1**
GLA				pmax	pmax		
	comp=Z,125nm,1.6s						
GLA				MLR	MLR		
	comp=Z,4µm,22.0s						
PV02	**Paradox Valley**	**65.24**	**60**	*e*P	**P**	**06 21 05.6**	**+0.5**
	comp=Z,52nm,0.9s						
VRH	**Novokhopyorsk**	**65.36**	**321**	*e*P	**P**	**06 21 03.4**	**-1.9**
VRH				pmax	pmax		
	comp=Z,210nm,0.7s						
VRH				pmax	pmax		
	comp=Z,230nm,0.7s						
VRH				MLR	MLR		
	comp=Z,11µm,19.0s						
PV01	**Paradox Valley**	**65.38**	**60**	*e*P	**P**	**06 21 06.3**	**+0.2**
BHPL	**Bhopal**	**65.50**	**278**	*e*P	**P**	**06 21 06.7**	**0.0**
BHPL				IAMs_20	IAMs_20	06 46 37.0	
	comp=Z,3µm,19.1s						
SMCO	**Snowmass**	**65.55**	**58**	*e*P	**P**	**06 21 07.4**	**+0.1**
	comp=Z,44nm,0.9s						
SMCO				LR	LR		
	comp=Z,3µm,21.0s						
WUAZ	**Wupatki**	**65.58**	**64**	P	**P**	**06 21 07.4**	**+0.1**
	baz=314,SNR=26						
WUAZ	**Wupatki**	**65.58**	**64**	*e*P	**P**	**06 21 08.8**	**+1.5**
	comp=Z,75nm,1.3s						
WUAZ				LR	LR		
	comp=Z,6µm,21.0s						
MTN	**Manton Dam**	**65.64**	**207**	*e*P	**P**	**06 21 08.5**	**+1.0**
	comp=Z,74nm,1.0s						
C34A	**RKJ Ranch, Bem**	**65.64**	**45**	P	**P**	**06 21 06.2**	**-1.1**
	baz=317,SNR=9.4						
B35A	**Bob, Littlefor**	**65.66**	**43**	P	**P**	**06 21 06.9**	**-0.5**
	baz=318,SNR=15						
B35A	**Bob, Littlefor**	**65.66**	**43**	*e*P	**P**	**06 21 07.3**	**-0.1**
	comp=Z,72nm,1.0s						
B35A				LR	LR		
	comp=Z,6µm,21.0s						
MOL	**Molde**	**65.76**	**345**	*e*P	**P**	**06 21 06.8**	**-0.9**
ISCO	**Idaho Springs**	**65.86**	**57**	P	**P**	**06 21 08.5**	**-0.7**
	baz=315,SNR=52						
ISCO	**Idaho Springs**	**65.86**	**57**	*e*P	**P**	**06 21 09.8**	**+0.6**
	comp=Z,40nm,0.8s						
ISCO				LR	LR		
	comp=Z,5µm,20.0s						
ISCO	**Idaho Springs**	**65.86**	**57**	*e*P	**P**	**06 21 09.8**	**+0.6**
ISCO				pmax	pmax		
	comp=Z,40nm,0.8s						
ISCO				MLR	MLR		
	comp=Z,5µm,20.0s						
F32A	**Veblen**	**65.90**	**47**	P	**P**	**06 21 08.4**	**-0.6**
	baz=317						
NGP	**Nagpur**	**65.92**	**275**⇓	*e*P	**P**	**06 21 09.9**	**+0.5**
NGP				*e*x	x	06 30 10.3	
DOMB	**Dombas**	**65.98**	**344**	*e*P	**P**	**06 21 08.0**	**-1.2**
C35A	**Jirik Farms, M**	**66.03**	**44**	P	**P**	**06 21 08.8**	**-1.0**
	baz=318,SNR=16						
SUSD	**Miller**	**66.04**	**49**	P	**P**	**06 21 08.9**	**-1.0**
	baz=316						
MVCO	**Mesa Verde**	**66.07**	**60**	P	**P**	**06 21 10.1**	**-0.4**
	baz=315,SNR=30						
MVCO	**Mesa Verde**	**66.07**	**60**	*e*P	**P**	**06 21 11.0**	**+0.5**
	comp=Z,54nm,0.9s						
MVCO				LR	LR		
	comp=Z,4µm,21.0s						
G32A	**Webster**	**66.17**	**48**	P	**P**	**06 21 10.0**	**-0.7**
	baz=317						
G32A	**Webster**	**66.17**	**48**	*e*P	**P**	**06 21 11.7**	**+1.0**
	comp=Z,144nm,0.9s						
G32A				LR	LR		
	comp=Z,7µm,18.0s						
AKN	**Aaknes**	**66.22**	**345**	*e*P	**P**	**06 21 11.1**	**+0.3**
LHMI	**Lhok Sumawe**	**66.24**	**249**	*e*P	**P**	**06 21 11.6**	**+0.1**
	comp=Z,486nm,1.3s						
LHMI				LR	LR		
	comp=Z,7µm,18.0s						
NC303	**NORSAR Array S**	**66.29**	**342**	*e*P	**P**	**06 21 09.7**	**-1.5**
NC405	**NORSAR Array S**	**66.32**	**342**	*e*P	**P**	**06 21 10.3**	**-1.1**
BORG	**Borgarnes**	**66.33**	**359**	*e*P	**P**	**06 21 12.4**	**+1.0**
	comp=Z,222nm,1.0s						
BORG				LR	LR		
	comp=Z,3µm,19.0s						
E34A	**Wadena**	**66.36**	**46**	P	**P**	**06 21 11.2**	**-0.7**
	baz=318						
NC204	**NORSAR Array S**	**66.36**	**343**	*e*P	**P**	**06 21 10.7**	**-1.1**
VSR	**Storozhevoye**	**66.39**	**322**	*e*P	**P**	**06 21 09.9**	**-2.1**
VSR				pmax	pmax		
	comp=Z,150nm,0.9s						
VSR				pmax	pmax		
	comp=Z,290nm,1.2s						
VSR				MLR	MLR		
	comp=Z,14µm,16.0s						
D35A	**Remer**	**66.46**	**45**	P	**P**	**06 21 12.0**	**-0.5**
	baz=318,SNR=13						
NB201	**NORSAR Array S**	**66.46**	**342**	*e*P	**P**	**06 21 11.7**	**-0.7**
NB2	**NORSAR Subarra**	**66.49**	**342**	P	**P**	**06 21 11.1**	**-1.5**
	comp=Z,193nm,1.4s,baz=30,slow=6.5						
NB2	**NORSAR Subarra**	**66.49**	**342**	P	**P**	**06 21 11.1**	**-1.5**
	baz=30,slow=6.5						
NOA	**NORSAR Array B**	**66.49**	**342**	P	**P**	**06 21 11.0**	**-1.5**
	comp=Z,81nm,1.2s,baz=27,slow=6.3,SNR=44						
NOA				LR	LR	06 54 52.5	
	comp=Z,12µm,19.2s,baz=20,slow=40						
C36A	**Pine Crest Far**	**66.50**	**43**	P	**P**	**06 21 12.1**	**-0.7**
	baz=318,SNR=14						
VORD	**Divnogorie**	**66.53**	**322**	*e*P	**P**	**06 21 11.3**	**-1.6**
VORD				pmax	pmax		
	comp=Z,110nm,1.0s						
NBO00	**NORSAR Array S**	**66.58**	**342**	*e*P	**P**	**06 21 12.0**	**-1.1**
S22A	**4UR Ranch, Cre**	**66.63**	**59**	P	**P**	**06 21 13.9**	**-0.3**
	baz=315,SNR=52						
S22A	**4UR Ranch, Cre**	**66.63**	**59**	*e*P	**P**	**06 21 15.0**	**+0.8**
	comp=Z,54nm,1.1s						
S22A				LR	LR		
	comp=Z,4µm,20.0s						
E35A	**Pequot Lakes**	**66.68**	**45**	P	**P**	**06 21 13.2**	**-0.7**
	baz=318,SNR=11						
NC602	**NORSAR Array S**	**66.70**	**342**	*e*P	**P**	**06 21 12.8**	**-1.0**
NC602	**NORSAR Array S**	**66.70**	**342**	*e*P	**P**	**06 21 13.5**	**-0.3**
Q24A	**Divide**	**66.71**	**57**	P	**P**	**06 21 14.2**	**-0.4**
	baz=316						
Q24A	**Divide**	**66.71**	**57**	*e*P	**P**	**06 21 15.0**	**+0.4**
	comp=Z,61nm,1.5s						
Q24A				LR	LR		
	comp=Z,5µm,20.0s						
G33A	**Ortonville**	**66.72**	**47**	P	**P**	**06 21 13.5**	**-0.7**
	baz=317,SNR=24						
CMBY	**CAMPBELL BAY**	**66.73**	**253**	*e*P	**P**	**06 21 15.5**	**+0.9**
NAO01	**NORSAR Array S**	**66.73**	**342**	*e*P	**P**	**06 21 12.9**	**-1.1**
H32A	**Carlson Farm,**	**66.74**	**48**	P	**P**	**06 21 13.5**	**-0.9**
	baz=317,SNR=11						
D36A	**Goodland**	**66.79**	**44**	P	**P**	**06 21 14.1**	**-0.6**
	baz=318,SNR=9.4						
D36A	**Goodland**	**66.79**	**44**	*e*P	**P**	**06 21 15.0**	**+0.3**
	comp=Z,47nm,0.9s						
D36A				LR	LR		
	comp=Z,5µm,21.0s						
HFS	**Hagfors**	**66.79**	**341**	P	**P**	**06 21 12.8**	**-1.6**
	comp=Z,74nm,1.1s,baz=49,slow=4.4,SNR=52						
HFS				LR	LR	06 55 27.7	
	comp=Z,9µm,18.2s,baz=17,slow=41						
W18A	**Petrified Fore**	**66.82**	**63**	P	**P**	**06 21 14.9**	**-0.4**
	baz=315						
W18A	**Petrified Fore**	**66.82**	**63**	*e*P	**P**	**06 21 16.7**	**+1.5**
	comp=Z,48nm,1.0s						
W18A				LR	LR		
	comp=Z,6µm,21.0s						
C37A	**Embarrass**	**66.82**	**43**	P	**P**	**06 21 13.8**	**-1.0**
	baz=319,SNR=8.4						
F34A	**Alexandria**	**66.84**	**46**	P	**P**	**06 21 14.2**	**-0.8**
	baz=318,SNR=13						
PSI	**Prapat**	**66.96**	**246**	*e*P	**P**	**06 21 16.7**	**+0.5**
	comp=Z,122nm,1.0s						
PSI				LR	LR		
	comp=Z,5µm,19.0s						
PSI	**Prapat**	**66.96**	**246**	*e*P	**P**	**06 21 16.7**	**+0.5**
PSI				pmax	pmax		
	comp=Z,122nm,1.0s						
PSI				MLR	MLR		
	comp=Z,5µm,19.0s						
EYMN	**Ely**	**66.96**	**42**	P	**P**	**06 21 15.3**	**-0.4**
	baz=319,SNR=15						
EYMN	**Ely**	**66.96**	**42**	*e*P	**P**	**06 21 15.6**	**-0.1**
	comp=Z,114nm,1.2s						
EYMN				LR	LR		
	comp=Z,6µm,20.0s						
OGNE	**Ogallala**	**66.98**	**54**	P	**P**	**06 21 15.6**	**-0.4**
	baz=316,SNR=25						
OGNE	**Ogallala**	**66.98**	**54**	*e*P	**P**	**06 21 16.8**	**+0.7**
	comp=Z,170nm,0.8s						
OGNE				LR	LR		
	comp=Z,6µm,18.0s						
GEYT	**Alibeck**	**67.03**	**302**	P	**P**	**06 21 15.5**	**-0.8**
	comp=Z,21nm,0.5s,baz=52,slow=9.8,SNR=14						
GEYT				LR	LR	06 52 42.8	
	comp=Z,11µm,19.7s,baz=290,slow=38						
GYA0B	**ALIBECK ARRAY**	**67.03**	**302**	*e*P	**P**	**06 21 15.9**	**-0.5**
	comp=Z,202nm,1.5s						
GYA0B				LR	LR		
	comp=Z,11µm,20.0s						
PVM	**Polavaram**	**67.04**	**270**	*e*P	**P**	**06 21 16.3**	**-0.2**
PVM				IAmb	IAmb	06 21 19.8	
	comp=Z,262nm,1.2s						
PVM				*e*S	**S**	**06 30 08.1**	**+0.5**
PVM				IVMs_BB	IVMs_BB	06 53 13.3	
	comp=Z,2µm,14.9s						
G34A	**Benson**	**67.07**	**47**	P	**P**	**06 21 15.6**	**-0.8**
	baz=318,SNR=14						
F35A	**Swanville**	**67.12**	**46**	P	**P**	**06 21 15.9**	**-0.9**
	baz=318,SNR=17						
D37A	**Cotton**	**67.14**	**44**	P	**P**	**06 21 16.3**	**-0.5**
	baz=319,SNR=8.8						
214A	**Organ Pipe Nat**	**67.21**	**67**	P	**P**	**06 21 17.3**	**-0.3**
	baz=315,SNR=18						
C38A	**Sawbill Land.**	**67.23**	**43**	P	**P**	**06 21 16.4**	**-1.1**
	baz=319,SNR=9.5						
E36A	**McGregor**	**67.24**	**44**	P	**P**	**06 21 16.3**	**-1.2**
	baz=319,SNR=19						
HYA	**Hoyanger**	**67.31**	**345**	*e*P	**P**	**06 21 17.5**	**-0.1**
SDCO	**Great Sand Dun**	**67.38**	**58**	P	**P**	**06 21 18.2**	**-0.7**
	baz=316,SNR=40						
SDCO	**Great Sand Dun**	**67.38**	**58**	*e*P	**P**	**06 21 19.5**	**+0.6**
	comp=Z,38nm,1.3s						
SDCO				LR	LR		
	comp=Z,4µm,20.0s						
RPR	**Rampur**	**67.40**	**273**	*e*P	**P**	**06 21 19.5**	**+0.6**
RPR				IAmb	IAmb	06 21 21.9	
	comp=Z,248nm,1.0s						
RPR				*e*S	**S**	**06 30 14.1**	**+2.1**
RPR				IVMs_BB	IVMs_BB	06 53 45.0	
	comp=Z,4µm,14.8s						
ISAL	**Salakas**	**67.51**	**332**	*e*P	**P**	**06 21 18.0**	**-1.0**
ISAL				IAmb	IAmb	06 21 22.5	
	comp=Z,24nm,0.6s						
IDID	**Didziasalis**	**67.53**	**331**	*e*P	**P**	**06 21 18.1**	**-1.0**
IDID				IAmb	IAmb	06 21 22.7	
	comp=Z,42nm,1.1s						
E37A	**Wrenshall**	**67.60**	**44**	P	**P**	**06 21 18.4**	**-1.3**
	baz=319						
F36A	**Milaca**	**67.61**	**45**	P	**P**	**06 21 18.8**	**-1.1**
	baz=319,SNR=11						
F36A	**Milaca**	**67.61**	**45**	*e*P	**P**	**06 21 20.1**	**+0.3**
	comp=Z,30nm,0.9s						
F36A				LR	LR		
	comp=Z,6µm,19.0s						
G35A	**Watkins**	**67.64**	**46**	P	**P**	**06 21 19.2**	**-0.9**
	baz=318,SNR=14						
G35A	**Watkins**	**67.64**	**46**	*e*P	**P**	**06 21 20.4**	**+0.4**
	comp=Z,96nm,0.9s						
G35A				LR	LR		
	comp=Z,7µm,20.0s						
SUE	**Sulen**	**67.65**	**345**	*e*P	**P**	**06 21 19.1**	**-0.7**
IIGN	**Ignalina**	**67.67**	**332**	*e*P	**P**	**06 21 19.1**	**-0.9**
IIGN				IAmb	IAmb	06 21 22.6	
	comp=Z,50nm,0.5s						
BKNI	**Bangkinang**	**67.70**	**242**	*e*P	**P**	**06 21 21.9**	**+1.1**
	comp=Z,550nm,1.1s						
BKNI				LR	LR		
	comp=Z,4µm,18.0s						
ECSD	**EROS Data Cent**	**67.71**	**48**	P	**P**	**06 21 19.7**	**-0.9**
	baz=318,SNR=52						
ECSD	**EROS Data Cent**	**67.71**	**48**	*e*P	**P**	**06 21 20.9**	**+0.4**
	comp=Z,95nm,0.9s						
ECSD				LR	LR		
	comp=Z,8µm,21.0s						
MICGM	**Minsk**	**67.85**	**330**	*e*P	**P**	**06 21 20.0**	**-1.2**
MICGM				*e*pP	**sP**	**06 21 36.0**	**-1.0**
MICGM				*e*sP	**PcP**	**06 21 48.0**	**+0.5**
MICGM				*e*PP	PP	06 23 42.0	-8.4
MICGM				*e*PPP	PPP	06 25 30.0	
MICGM				*e*S	**S**	**06 30 14.0**	**-2.4**
MICGM				*e*sS	**pS**	**06 30 32.0**	**+1.6**
MICGM				*e*PS	**PnS**	**06 30 52.0**	**+10**
MICGM				*e*SS	SS	06 35 00.0	+23
MICGM				*e*SSS	SSS	06 37 33.0	
MICGM				*e*LQ	LQ	06 45 20.0	
MICGM				LQM		06 47 30.0	
	comp=E,7.6nm,24.0s						
MICGM				*e*LR	LR	06 48 50.0	
MICGM				LRM	MLR	06 52 44.0	
	comp=Z,13nm,20.0s						
MNK	**Minsk**	**67.85**	**330**	*e*P	**P**	**06 21 20.0**	**-1.2**
MNK				*e*S	**S**	**06 30 14.0**	**-2.4**
H35A	**Sunnyside Ranc**	**67.86**	**47**	P	**P**	**06 21 21.3**	**-0.2**
	baz=318,SNR=35						
NACGM	**Naroch**	**67.86**	**331**	*e*P	**P**	**06 21 20.0**	**-1.3**
NACGM				PM		06 21 23.0	
	comp=Z,0.2nm,1.0s						
NACGM				*e*PP	PP	06 24 03.0	+12
NACGM				*e*S	**S**	**06 30 20.0**	**+3.4**
NACGM				*e*ScS	**ScS**	**06 31 18.0**	**+1.3**
NACGM				*e*SS	SS	06 34 52.0	+14
NACGM				*e*SSS	SSS	06 38 16.0	
NACGM				*e*LQ	LQ	06 44 52.0	
NACGM				*e*LR	LR	06 48 40.0	
NACGM				LRM	MLR	06 54 49.0	
	comp=Z,4.2nm,17.0s						
E38A	**The Farm, Brul**	**67.95**	**43**	P	**P**	**06 21 21.3**	**-0.7**
	baz=320,SNR=14						
E38A	**The Farm, Brul**	**67.95**	**43**	*e*P	**P**	**06 21 22.2**	**+0.2**
	comp=Z,89nm,0.9s						
E38A				LR	LR		
	comp=Z,6µm,20.0s						
G36A	**St. Michael**	**67.97**	**46**	P	**P**	**06 21 21.0**	**-1.1**
	baz=319						
SRSP	**Sriramsagar**	**67.98**	**274**	*e*P	**P**	**06 21 21.6**	**-0.9**
SRSP				IAmb	IAmb	06 21 25.2	
	comp=Z,550nm,1.0s						
SRSP				*e*S	**S**	**06 30 15.2**	**-3.7**
SRSP				IVMs_BB	IVMs_BB	06 54 03.8	
	comp=Z,5µm,15.0s						
C40A	**Isle Royale Na**	**68.01**	**41**	P	**P**	**06 21 21.5**	**-0.8**
	baz=320						
C40A	**Isle Royale Na**	**68.01**	**41**	*e*P	**P**	**06 21 22.6**	**+0.2**
	comp=Z,41nm,1.2s						
C40A				LR	LR		
	comp=Z,6µm,18.0s						
KSCO	**Kaye Shedlock’**	**68.05**	**55**	P	**P**	**06 21 22.2**	**-0.7**
	baz=316,SNR=5.6						
KSCO	**Kaye Shedlock’**	**68.05**	**55**	*e*P	**P**	**06 21 23.2**	**+0.3**
	comp=Z,235nm,1.9s						
KSCO				LR	LR		
	comp=Z,3µm,20.0s						
KONO	**Kongsberg**	**68.09**	**342**	*e*P	**P**	**06 21 22.0**	**-0.6**
	comp=Z,95nm,1.3s						
KONO				LR	LR		
	comp=Z,13µm,19.0s						
KONO	**Kongsberg**	**68.09**	**342**	*i* P	**P**	**06 21 20.9**	**-1.7**
KONO				pmax	pmax		
	comp=Z,45nm,1.2s						
KONO	**Kongsberg**	**68.09**	**342**	*e*P	**P**	**06 21 21.8**	**-0.8**
ASK	**Askoy**	**68.12**	**345**	*e*P	**P**	**06 21 22.0**	**-0.7**
F37A	**Hinrichs Farm,**	**68.13**	**45**	P	**P**	**06 21 21.8**	**-1.3**
	baz=319,SNR=8.0						
TUC	**Tucson**	**68.18**	**66**	P	**P**	**06 21 24.0**	**+0.3**
	baz=316						
TUC	**Tucson**	**68.18**	**66**	*e*P	**P**	**06 21 24.6**	**+0.9**
	comp=Z,32nm,1.1s						
TUC				LR	LR		
	comp=Z,2µm,19.0s						
TUC	**Tucson**	**68.18**	**66**	*e*P	**P**	**06 21 24.6**	**+0.9**
TUC				pmax	pmax		
	comp=Z,32nm,1.1s						

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TUC                                  MLR       MLR
       comp=Z,2µm,19.0s
IVI    Ivigtut           68.18  12  eP         P          06 21 23.0  -0.1
       comp=Z,338nm,1.1s
IVI                                  LR        LR
       comp=Z,6µm,20.0s
BER    Bergen            68.19 345  eP         P          06 21 21.5  -1.7
F38A   Pierce - Schro    68.29  44   P         P          06 21 23.0  -1.1
       baz=320,SNR=35
H36A   Jessenland, He    68.38  46   P         P          06 21 23.4  -1.3
       baz=319,SNR=28
ODD1   Odda              68.41 344  eP         P          06 21 24.3  -0.4
T25A   Trinidad          68.42  58   P         P          06 21 24.7  -0.6
       baz=316,SNR=20
T25A   Trinidad          68.42  58  eP         P          06 21 25.7  +0.4
       comp=Z,113nm,1.4s
T25A                                 LR        LR
       comp=Z,3µm,20.0s
SPMN   Marine on St.     68.42  45   P         P          06 21 24.4  -0.6
       baz=319,SNR=14
SPMN   Marine on St.     68.42  45  eP         P          06 21 25.3  +0.4
       comp=Z,77nm,0.9s
SPMN                                 LR        LR
       comp=Z,5µm,20.0s
E39A   Mellen            68.57  43   P         P          06 21 24.3  -1.6
       baz=320,SNR=15
NRS    Narsarsuaq        68.59  11  eP         P          06 21 25.6  -0.1
       comp=Z,194nm,1.2s
NRS                                  LR        LR
       comp=Z,12µm,20.0s
NRS    Narsarsuaq        68.59  11  i P        P          06 21 24.2  -1.5
       comp=Z,147nm,1.1s
       comp=Z,11µm,20.0s
NRS    Narsarsuaq        68.59  11  eP         P          06 21 25.6  -0.1
NRS                                  pmax      pmax
       comp=Z,194nm,1.2s
NRS                                  MLR       MLR
       comp=Z,12µm,20.0s
BGNE   Belgrade          68.65  51   P         P          06 21 24.9  -1.6
       baz=318,SNR=5.9
BGNE   Belgrade          68.65  51  eP         P          06 21 26.7  +0.2
       comp=Z,137nm,0.8s
BGNE                                 LR        LR
       comp=Z,9µm,18.0s
SMRI   Semarang          68.75 230  eP         P          06 21 29.6  +2.2
       comp=Z,294nm,1.2s
I36A   Fitzsimmons Fa    68.76  47   P         P          06 21 26.1  -1.0
       baz=319,SNR=12
F39A   Loretta           68.76  44   P         P          06 21 25.8  -1.3
       baz=320,SNR=17
E40A   Wakefield         68.81  43   P         P          06 21 26.3  -1.1
       baz=320,SNR=25
TASM   ASL Pad, Albuq    68.83  61   P         P          06 21 26.8  -1.2
       baz=316,SNR=18
ANMO   Albuquerque       68.83  61   LR        LR         06 48 29.9
       comp=Z,2µm,21.6s,baz=329,slow=33
ANMO   Albuquerque       68.83  61   P         P          06 21 27.7  -0.2
       baz=316
ANMO   Albuquerque       68.83  61  eP         P          06 21 28.6  +0.6
       comp=Z,35nm,1.1s
ANMO   Albuquerque       68.83  61⇑iP         P          06 21 29.6  +1.7
ANMO                                 pmax      pmax
       comp=Z,21nm,1.1s
TASL   Snake Pit, Alb    68.83  61   P         P          06 21 27.6  -0.4
       baz=316,SNR=17
H37A   Dierke Farm, C    68.85  46   P         P          06 21 26.5  -1.1
       baz=319,SNR=14
BLS5   Blasjo            68.89 344  eP         P          06 21 27.9  +0.2
G38A   Ridgeland         68.90  45   P         P          06 21 26.4  -1.5
       baz=320,SNR=23
D41A   Chassel           68.92  41   P         P          06 21 26.8  -1.3
       baz=321,SNR=16
D41A   Chassel           68.92  41  eP         P          06 21 27.6  -0.5
       comp=Z,190nm,1.4s
D41A                                 LR        LR
       comp=Z,6µm,18.0s
HYBB   Hyderabad (bro    68.93 272  eP         P          06 21 28.3  -0.2
HYBB                                 IAmb      IAmb       06 21 31.3
       comp=Z,375nm,1.0s
HYBB                                eS         S          06 30 30.8  +0.5
HYBB                                 IVMs_BB   IVMs_BB    06 54 02.9
       comp=Z,3µm,15.0s
HYB    Hyderabad         68.93 272  i P        P          06 21 29.0  +0.5
       comp=Z,200nm,1.0s
HYB                                 eS         S          06 30 34.0  +3.7
MAK    Makhachkala       68.93 312  eP         P          06 21 25.3  -2.8
MAK                                 eS         S          06 30 25.0  -4.6
MAK                                  pmax      pmax
       comp=Z,263nm,1.0s
MAK                                  MLR       MLR
       comp=Z,9µm,14.0s
GSI    Gunungsitoli      68.96 246  eP         P          06 21 28.3  -0.3
       comp=Z,1µm,2.0s
GSI                                  LR        LR
       comp=Z,6µm,18.0s
AFI    Afiamalu          68.99 146   LR        LR         06 49 30.2
       comp=Z,3µm,19.0s,baz=353,slow=34
I37A   Lemond, Waseca    69.05  46   P         P          06 21 27.9  -1.0
       baz=319,SNR=48
I37A   Lemond, Waseca    69.05  46  eP         P          06 21 28.4  -0.5
       comp=Z,233nm,0.9s
I37A                                 LR        LR
       comp=Z,8µm,20.0s
NJS    Nagarjunasagar    69.06 271  eP         P          06 21 29.1  -0.2
NJS                                  IAmb      IAmb       06 21 32.1
       comp=Z,309nm,1.1s
NJS                                  IVMs_BB   IVMs_BB    06 54 30.8
       comp=Z,3µm,19.1s
H38A   Maiden Rock       69.08  45   P         P          06 21 27.9  -1.2
       baz=320,SNR=9.3
F40A   Park Falls        69.12  43   P         P          06 21 28.2  -1.1
       baz=320,SNR=12
J36A   Seneca 1, Swea    69.12  47   P         P          06 21 28.4  -1.0
       baz=319,SNR=12
J36A   Seneca 1, Swea    69.12  47  eP         P          06 21 29.1  -0.2
       comp=Z,72nm,0.9s
J36A                                 LR        LR
       comp=Z,6µm,21.0s
G39A   Holcombe          69.13  44   P         P          06 21 27.7  -1.6
       baz=320,SNR=10
Y22D   IRIS PASSCAL I    69.19  62   P         P          06 21 29.5  -0.6
       baz=316
Y22E   IRIS PASSCAL I    69.19  62   P         P          06 21 29.5  -0.6
       baz=316
E41A   Kenton            69.21  42   P         P          06 21 28.1  -1.7
       baz=321,SNR=17
COWI   Conover           69.42  42  eP         P          06 21 31.2  +0.1
       comp=Z,42nm,1.0s
COWI                                 LR        LR
       comp=Z,7µm,20.0s
GOF    Gofitskoye        69.46 316⇓iP         P          06 21 31.4   0.0
GOF                                 eS         S          06 30 33.5  -2.3
GOF                                  pmax      pmax
       comp=Z,390nm,0.8s
GOF                                  smax      smax
       comp=N,80nm,1.0s
STAV   Stavanger         69.49 344  eP         P          06 21 31.4  +0.2
J37A   Redenius Farm,    69.51  47   P         P          06 21 30.7  -1.1
       baz=319,SNR=14
H39A   Augusta           69.54  45   P         P          06 21 31.4  -0.5
       baz=320,SNR=7.5
I38A   Scanlan Farm,     69.54  46   P         P          06 21 31.0  -0.9
       baz=320,SNR=9.3
CTA    Charters Tower    69.58 190   P         P          06 21 31.8  -0.4
       comp=N,14nm,0.9s,baz=352,slow=8.5,SNR=7.1
CTA                                  LR        LR         06 47 18.6
       comp=N,2µm,21.9s,baz=358,slow=32
CTAO   Charters Tower    69.58 190  eP         P          06 21 32.3   0.0
       comp=N,45nm,1.2s
CTAO                                 LR        LR
       comp=Z,3µm,19.0s
CTAO   Charters Tower    69.58 190  eP         P          06 21 32.3   0.0
CTAO                                 pmax      pmax
       comp=Z,45nm,1.2s
CTAO                                 MLR       MLR
       comp=Z,3µm,19.0s
G40A   Rib Lake          69.58  44   P         P          06 21 31.2  -0.9
       baz=320,SNR=11
G40A   Rib Lake          69.58  44  eP         P          06 21 32.4  +0.2
       comp=Z,54nm,1.0s
G40A                                 LR        LR
       comp=Z,6µm,20.0s
GROC   Groznyy           69.58 313  eP         P          06 21 29.6  -2.6
GROC                                e                     06 21 52.8
GROC                                e                     06 24 01.9
GROC                                eS         S          06 30 33.3  -4.0
GROC                                 pmax      pmax
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       comp=Z,185nm,1.3s
HOMB   Homborsund        69.58 342  eP         P          06 21 32.2  +0.3
K36A   Gilmore City      69.58  48   P         P          06 21 31.4  -0.9
       baz=319,SNR=6.3
SRLM   Srisailam         69.66 271  eP         P          06 21 32.9  -0.2
SRLM                                 IAmb      IAmb       06 21 35.8
       comp=Z,385nm,1.2s
SRLM                                 IVMs_BB   IVMs_BB    06 54 33.6
       comp=Z,3µm,15.9s
E42A   Champion          69.70  42   P         P          06 21 31.5  -1.4
       baz=321,SNR=28
F41A   Three Lakes       69.71  43   P         P          06 21 31.8  -1.2
       baz=321,SNR=15
F41A   Three Lakes       69.71  43  eP         P          06 21 32.8  -0.2
       comp=Z,73nm,0.9s
F41A                                 LR        LR
       comp=Z,7µm,21.0s
SUW    Suwalki           69.73 333  eP         P          06 21 32.4  -0.5
SUW    Suwalki           69.73 333  eP         P          06 21 32.0  -0.9
       comp=Z,124nm,1.0s
SUW                                  LR        LR
       comp=Z,14µm,20.0s
SUW    Suwalki           69.73 333  eP         P          06 21 32.4  -0.5
CBKS   Cedar Bluff       69.74  54   P         P          06 21 32.4  -0.9
       baz=318,SNR=12
CBKS   Cedar Bluff       69.74  54  eP         P          06 21 32.9  -0.4
       comp=Z,64nm,0.9s
CBKS   Cedar Bluff       69.74  54  eP         P          06 21 32.9  -0.4
CBKS                                 pmax      pmax
       comp=Z,64nm,0.9s
SNART  Snartemo          69.77 343  eP         P          06 21 31.3  -1.7
121A   Cookes Peak, D    69.79  64   P         P          06 21 33.6  -0.3
       baz=316,SNR=15
K37A   Belmond           69.88  47   P         P          06 21 32.6  -1.4
       baz=319,SNR=12
L36A   Harm Buss Farm    69.88  48   P         P          06 21 32.4  -1.7
       baz=319
AKT    Akhty             69.93 311⇓iP         P          06 21 34.6  +0.1
AKT                                 e                     06 21 56.7
AKT                                 e                     06 24 06.7
AKT                                  pmax      pmax
       comp=Z,266nm,1.0s
H40A   Chili             69.99  44   P         P          06 21 33.5  -1.2
       baz=321,SNR=8.1
J38A   Wedel Dairy, R    70.02  46   P         P          06 21 33.6  -1.3
       baz=320,SNR=8.4
I39A   Houston           70.06  45   P         P          06 21 33.1  -2.0
       baz=320,SNR=20
I39A   Houston           70.06  45  eP         P          06 21 35.1   0.0
       comp=Z,91nm,0.9s
I39A                                 LR        LR
       comp=Z,7µm,21.0s
G41A   Antigo            70.08  43   P         P          06 21 34.0  -1.2
       baz=321
F42A   Maple Grove Fa    70.12  42   P         P          06 21 34.6  -0.9
       baz=321
E43A   Lone Tree Farm    70.14  41   P         P          06 21 34.4  -1.2
       baz=322,SNR=11
E43A   Lone Tree Farm    70.14  41  eP         P          06 21 35.9  +0.4
       comp=Z,96nm,1.3s
E43A                                 LR        LR
       comp=Z,4µm,20.0s
SCHQ   Schefferville     70.21  25   P         P          06 21 35.8  -0.1
       comp=Z,42nm,0.8s,baz=346,slow=7.0,SNR=11
SCHQ                                 LR        LR         06 57 33.5
       comp=Z,9µm,18.6s,baz=339,slow=40
SCHQ   Schefferville     70.21  25  eP         P          06 21 36.8  +0.9
       comp=Z,178nm,1.3s
M36A   Felix, Anita      70.30  49   P         P          06 21 35.8  -0.8
       baz=319,SNR=5.9
L37A   Phoenix Point,    70.31  48   P         P          06 21 35.8  -0.8
       baz=320,SNR=18
H41A   Junction City     70.33  44   P         P          06 21 35.4  -1.4
       baz=321,SNR=7.2
H41A   Junction City     70.33  44  eP         P          06 21 36.0  -0.7
       comp=Z,66nm,0.9s
H41A                                 LR        LR
       comp=Z,6µm,22.0s
J39A   Decorah           70.37  46   P         P          06 21 36.4  -0.6
       baz=320,SNR=13
K38A   Parkersburg       70.39  47   P         P          06 21 35.2  -1.9
       baz=320,SNR=7.6
K38A   Parkersburg       70.39  47  eP         P          06 21 37.4  +0.3
       comp=Z,63nm,0.9s
K38A                                 LR        LR
       comp=Z,5µm,20.0s
G42A   Mountain          70.39  43   P         P          06 21 36.7  -0.5
       baz=321,SNR=6.3
G42A   Mountain          70.39  43  eP         P          06 21 37.3  +0.1
       comp=Z,251nm,1.9s
G42A                                 LR        LR
       comp=Z,8µm,20.0s
NCK    Nalchik           70.40 314⇓iP         P          06 21 37.5  +0.3
NCK                                  pmax      pmax
       comp=Z,178nm,0.7s
NCK                                  MLR       MLR
       comp=Z,8µm,18.0s
E44A   Grand Marais A    70.40  40   P         P          06 21 35.8  -1.4
       baz=322,SNR=11
E44A   Grand Marais A    70.40  40  eP         P          06 21 37.2   0.0
       comp=Z,444nm,1.6s
E44A                                 LR        LR
       comp=Z,9µm,19.0s
HSIG                     70.42  68  eP         P          06 21 38.0  +0.5
       comp=Z,62nm,1.4s
HSIG                                 LR        LR
       comp=Z,3µm,22.0s
I40A   Norwalk           70.45  45   P         P          06 21 36.2  -1.3
       baz=321,SNR=8.2
KIV    Kislovodsk        70.47 315  eP         P          06 21 37.1  -0.6
KIV    Kislovodsk        70.47 315  eP         P          06 21 37.5  -0.3
       comp=Z,326nm,1.3s
KIV                                  LR        LR
       comp=Z,6µm,19.0s
KIV    Kislovodsk        70.47 315   P         P          06 21 37.6  -0.1
       SNR=66
KIV    Kislovodsk        70.47 315  i P        P          06 21 37.2  -0.6
       SNR=28
KIV    Kislovodsk        70.47 315c iP         P          06 21 37.0  -0.6
KIV                                 i *PP      pP         06 21 50.2  +1.0
KIV                                 e                     06 21 58.1
KIV                                 i                     06 24 13.5
KIV                                 ePPP       PPP        06 25 58.9
KIV                                 eS         S          06 30 47.9   0.0
KIV                                 i                     06 31 14.9
KIV                                  pmax      pmax
       comp=Z,195nm,1.0s
F43A   Flat Rock, Esc    70.49  41   P         P          06 21 36.4  -1.3
       baz=322,SNR=13
BHJ    Bhuj              70.50 283  eP         P          06 21 38.6  +0.5
BHJ                                  IAMs_20   IAMs_20    06 44 32.1
       comp=Z,2µm,4.5s
KBZ    Khabaz            70.55 315   P         P          06 21 37.5  -0.5
       comp=Z,151nm,1.0s,baz=73,slow=3.9,SNR=134
KBZ                                  LR        LR         06 57 08.9
       comp=Z,9µm,18.6s,baz=22,slow=40
AKASG  Malin Array Be    70.56 327   P         P          06 21 35.7  -2.3
       comp=Z,23nm,0.4s,baz=32,slow=6.4,SNR=63
AKASG                                LR        LR         06 55 02.7
       comp=Z,7µm,19.6s,baz=20,slow=38
AKASG  Malin Array Be    70.56 327  i P        P          06 21 36.4  -1.6
AKASG                                pmax      pmax
       comp=Z,30nm,0.4s
AKBB   Malin Array Si    70.56 327  eP         P          06 21 35.8  -2.2
       comp=Z,395nm,2.0s
AKBB                                 LR        LR
       comp=Z,9µm,22.0s
KIEV   Kiev              70.57 327  eP         P          06 21 36.4  -1.7
KIEV   Kiev              70.57 327  eP         P          06 21 35.8  -2.3
       comp=Z,387nm,2.0s
KIEV                                 LR        LR
       comp=Z,9µm,22.0s
KIEV   Kiev              70.57 327  i P        P          06 21 36.6  -1.4
       SNR=11
KIEV   Kiev              70.57 327d iP         P          06 21 36.4  -1.7
KIEV                                 pmax      pmax
       comp=Z,148nm,1.9s
KIEV                                 MLR       MLR
       comp=Z,8µm,16.0s
AK11   Malin Array Si    70.60 327  eP         P          06 21 36.0  -2.3
I41A   Arkdale           70.66  44   P         P          06 21 37.3  -1.5
       baz=321,SNR=5.6
I41A   Arkdale           70.66  44  eP         P          06 21 39.0  +0.2
       comp=Z,52nm,0.9s
I41A                                 LR        LR
       comp=Z,5µm,22.0s
L38A   Oak Wood Farm,    70.68  47   P         P          06 21 38.2  -0.8
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       baz=320,SNR=10
F44A   Big Bay de Noc    70.70  41   P         P          06 21 37.3  -1.7
       baz=322,SNR=11
N36A   Muff Farm, Cla    70.70  50   P         P          06 21 38.0  -1.1
       baz=319
M37A   Trindle Farm,     70.71  49   P         P          06 21 38.3  -0.8
       baz=320,SNR=6.2
G43A   Wallace           70.71  42   P         P          06 21 37.5  -1.6
       baz=322,SNR=11
G43A   Wallace           70.71  42  eP         P          06 21 39.0   0.0
       comp=Z,98nm,0.9s
G43A                                 LR        LR
       comp=Z,7µm,18.0s
SCIA   State Center      70.73  48   P         P          06 21 38.4  -0.8
       baz=320,SNR=24
SCIA   State Center      70.73  48  eP         P          06 21 38.8  -0.5
       comp=Z,228nm,0.8s
SCIA                                 LR        LR
       comp=Z,6µm,19.0s
K39A   Oelwein           70.76  46   P         P          06 21 38.1  -1.4
       baz=320,SNR=12
J40A   Soldiers Grove    70.77  45   P         P          06 21 38.3  -1.2
       baz=321
ZEI    Tsey              70.80 314  eP         P          06 21 38.7  -1.2
ZEI                                  pmax      pmax
       comp=Z,104nm,1.1s
SRIG   Santa Rosalia     70.85  70  eP         P          06 21 40.6  +0.5
       comp=Z,55nm,1.1s
SRIG                                 LR        LR
       comp=Z,4µm,21.0s
SKHT   Srikalahasti      70.85 269  eP         P          06 21 41.1  +0.8
SKHT                                 IAmb      IAmb       06 21 44.9
       comp=Z,242nm,1.0s
SKHT                                eS         S          06 30 56.2  +3.4
SKHT                                 IVMs_BB   IVMs_BB    06 57 27.7
       comp=Z,1µm,14.5s
H42A   Shiocton          70.92  43   P         P          06 21 38.2  -2.1
       baz=322
H42A   Shiocton          70.92  43  eP         P          06 21 39.8  -0.6
       comp=Z,54nm,1.0s
H42A                                 LR        LR
       comp=Z,8µm,21.0s
E45A   Wooded Hills,     70.92  40   P         P          06 21 38.5  -1.8
       baz=323,SNR=13
NEY    Neytrino          71.00 315⇓eP         P          06 21 41.7  +0.6
NEY                                  pmax      pmax
       comp=Z,10.0nm,0.6s
NEY                                  MLR       MLR
       comp=Z,3µm,16.0s
BSD    Bornholm Skovb    71.04 338  i P        P          06 21 40.7  -0.2
       comp=Z,62nm,1.0s
       comp=Z,18µm,17.0s
M38A   Pleasantville     71.12  48   P         P          06 21 40.4  -1.2
       baz=320,SNR=12
N37A   Lee Faris, Mou    71.12  49   P         P          06 21 40.2  -1.4
       baz=320,SNR=17
N37A   Lee Faris, Mou    71.12  49  eP         P          06 21 41.6   0.0
       comp=Z,195nm,1.0s
N37A                                 LR        LR
       comp=Z,5µm,20.0s
K40A   Colesburg         71.12  46   P         P          06 21 39.5  -2.1
       baz=321,SNR=8.0
COP    Copenhagen        71.12 339⇑iP         P          06 21 41.6  +0.3
       comp=Z,8µm,16.0s
J41A   Loganville        71.13  45   P         P          06 21 40.5  -1.1
       baz=321,SNR=8.9
MUD    Monsted U'grnd    71.13 341  i P        P          06 21 41.2  -0.2
       comp=Z,10µm,15.0s
L39A   Vinton            71.16  47   P         P          06 21 40.2  -1.6
       baz=320,SNR=13
KSU1   Kansas State U    71.16  52   P         P          06 21 40.7  -1.2
       baz=319,SNR=7.0
KSU1   Kansas State U    71.16  52  eP         P          06 21 41.0  -0.8
       comp=Z,46nm,0.8s
KSU1                                 LR        LR
       comp=Z,7µm,20.0s
POO    Poona             71.20 277  eP         P          06 21 43.5  +1.0
TBLG   Delisi            71.21 313  eP         P          06 21 41.6  -0.6
TBLG   Delisi            71.21 313  eP         P          06 21 41.9  -0.3
       comp=Z,384nm,1.2s
TBLG   Delisi            71.21 313  eP         P          06 21 41.9  -0.3
TBLG                                 pmax      pmax
       comp=Z,385nm,1.2s
I42A   Draeger Farm,     71.23  44   P         P          06 21 40.1  -2.2
       baz=322
I42A   Draeger Farm,     71.23  44  eP         P          06 21 42.4  +0.1
       comp=Z,51nm,0.8s
I42A                                 LR        LR
       comp=Z,6µm,22.0s
H43A   Windswept, Lux    71.29  43   P         P          06 21 40.9  -1.6
       baz=322
H43A   Windswept, Lux    71.29  43  eP         P          06 21 42.3  -0.2
       comp=Z,81nm,0.9s
H43A                                 LR        LR
       comp=Z,7µm,18.0s
F45A   CMU Biological    71.31  41   P         P          06 21 40.6  -2.1
       baz=323,SNR=8.1
JFWS   Jewell Farm       71.37  45   P         P          06 21 39.7  -3.4
       baz=321
JFWS   Jewell Farm       71.37  45  eP         P          06 21 43.1   0.0
       comp=Z,42nm,1.0s
JFWS                                 LR        LR
       comp=Z,6µm,20.0s
BIGH   Upper Bighouse    71.37 349   IAMs_20   IAMs_20    06 59 50.0
       comp=Z,11µm,17.7s
LLD    Lille Linde       71.50 339  i P        P          06 21 44.7  +1.1
       comp=Z,264nm,1.2s
WRAB   Tennant Creek     71.54 202  eP         P          06 21 45.2  +0.9
       comp=Z,68nm,1.1s
WRAB   Tennant Creek     71.54 202  i P        P          06 21 44.2   0.0
WRAB                                 pmax      pmax
       comp=Z,40nm,0.9s
WB2    Warramunga Arr    71.55 202  eP         P          06 21 44.5  +0.2
       comp=Z,64nm,1.0s
WRA    Warramunga Arr    71.55 202   P         P          06 21 43.1  -1.2
       comp=Z,33nm,0.8s,baz=19,slow=6.6,SNR=78
WRA                                  LR        LR         06 50 46.7
       comp=Z,2µm,21.5s,baz=35,slow=34
WRA    Warramunga Arr    71.55 202  eP         P          06 21 43.2  -1.1
WRA    Warramunga Arr    71.55 202  i P        P          06 21 43.2  -1.1
WRA                                  pmax      pmax
       comp=Z,33nm,0.8s
WC3    Warramunga Arr    71.56 202  eP         P          06 21 45.4  +1.0
       comp=Z,51nm,0.9s
F46A   Macinaw City C    71.56  40   P         P          06 21 42.3  -1.9
       baz=323,SNR=32
M39A   Webster           71.57  47   P         P          06 21 42.6  -1.7
       baz=320,SNR=21
AMTX   Amarillo          71.57  58   P         P          06 21 44.0  -0.6
       baz=318
AMTX   Amarillo          71.57  58  eP         P          06 21 45.2  +0.7
       comp=Z,110nm,1.5s
AMTX                                 LR        LR
       comp=Z,3µm,22.0s
L40A   Anamosa           71.57  46   P         P          06 21 42.6  -1.7
       baz=321,SNR=10
L40A   Anamosa           71.57  46  eP         P          06 21 44.2  -0.1
       comp=Z,112nm,1.0s
L40A                                 LR        LR
       comp=Z,5µm,20.0s
N38A   Joes South For    71.57  48   P         P          06 21 42.8  -1.5
       baz=320,SNR=14
URV    Uravakonda        71.57 272  eP         P          06 21 44.9  +0.2
URV                                  IAmb      IAmb       06 21 47.5
       comp=Z,701nm,1.9s
URV                                 eS         S          06 31 02.1  +0.8
URV                                  IVMs_BB   IVMs_BB    06 56 12.7
       comp=Z,3µm,16.2s
J42A   Columbus          71.58  44   P         P          06 21 42.2  -2.1
       baz=322
I43A   Langenfeld Bro    71.58  43   P         P          06 21 41.7  -2.7
       baz=322
K41A   Shullsburg        71.58  45   P         P          06 21 42.4  -2.0
       baz=321,SNR=5.8
DZM    Mont Dzumac       71.59 170   LR        LR         06 48 02.4
       comp=Z,3µm,21.0s,baz=4.0,slow=32
DZM    Mont Dzumac       71.59 170  eP         P          06 21 47.6  +3.0
       comp=Z,104nm,1.2s
DZM                                 eS         S          06 30 58.0  -3.0
       comp=Z,7µm,27.4s
DZM                                 eLQ        LQ         06 40 07.1
       comp=Z,7µm,30.2s
DZM                                 eLR        LR         06 43 06.7
       comp=Z,10µm,26.2s
DZM    Mont Dzumac       71.59 170  eP         P          06 21 46.2  +1.6
       comp=Z,54nm,1.2s
O37A   Wolven Farm, M    71.60  49   P         P          06 21 42.7  -1.9
       baz=320,SNR=7.2
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MSTX  Muleshoe          71.63  59  P       P          06 21 43.8  -1.2
      baz=318,SNR=26
MSTX  Muleshoe          71.63  59 eP       P          06 21 45.6  +0.6
      comp=Z,52nm,1.1s
MSTX                                LR      LR
      comp=Z,4µm,19.0s
MNTX  Cornudas Mount    71.80  63  P       P          06 21 46.6  +0.7
      baz=317,SNR=47
MNTX  Cornudas Mount    71.80  63 eP       P          06 21 46.7  +0.8
      comp=Z,85nm,1.5s
MNTX                                LR      LR
      comp=Z,2µm,20.0s
J43A  Natural Harves    71.85  44  P       P          06 21 44.6  -1.4
      baz=322
N39A  Derby Farms, D    71.87  48  P       P          06 21 44.3  -1.8
      baz=320,SNR=8.5
N39A  Derby Farms, D    71.87  48 eP       P          06 21 46.9  +0.7
      comp=Z,72nm,0.9s
N39A                                LR      LR
      comp=Z,8µm,18.0s
K42A  Prairie Point,    71.90  45  P       P          06 21 45.2  -1.1
      baz=322,SNR=5.2
L41A  Preston           71.91  46  P       P          06 21 45.1  -1.2
      baz=321,SNR=9.9
P37A  Lathrop           71.94  50  P       P          06 21 45.3  -1.3
      baz=320,SNR=15
M40A  Post Highland     71.94  47  P       P          06 21 45.2  -1.3
      baz=321,SNR=22
O38A  Galt              71.97  49  P       P          06 21 45.3  -1.4
      baz=320,SNR=11
AKH   Akhalkalaki       72.05 313 eP       P          06 21 47.2  -0.2
AKH   Akhalkalaki       72.05 313⇓iP       P          06 21 48.5  +1.1
AKH   Akhalkalaki       72.05 313 eP       P          06 21 47.6  +0.1
      comp=Z,247nm,1.1s
AKH                                 LR      LR
      comp=Z,6µm,18.0s
AKH   Akhalkalaki       72.05 313 eP       P          06 21 47.6  +0.1
AKH                                 pmax    pmax
      comp=Z,247nm,1.1s
AKH                                 MLR     MLR
      comp=Z,6µm,18.0s
GKP   Gorka Klasztor    72.09 335 eP       P          06 21 47.8  +0.6
GKP   Gorka Klasztor    72.09 335 eP       P          06 21 47.8  +0.6
SOC   Sochi             72.11 317c iP      P          06 21 46.2  -1.3
SOC                               e*PP     sP         06 22 02.3  -1.1
SOC                               e*SP     PcP        06 22 08.4  +2.7
SOC                               e                   06 24 25.7
SOC                               ePPP     PPP        06 26 11.6
SOC                               eS       S          06 31 06.2  -0.4
SOC                               eSS      SS         06 35 45.1  +1.9
SOC                                 pmax    pmax
      comp=Z,73nm,0.7s
SOC                                 MLR     MLR
      comp=Z,8µm,16.0s
ANN   Anapa             72.15 319 eP       P          06 21 46.4  -1.3
ANN   Anapa             72.15 319 eP       P          06 21 46.4  -1.3
ANN                               e*PP     sP         06 22 03.9  +0.3
ANN                               e                   06 24 27.1
ANN                               ePPP     PPP        06 26 14.1
ANN                               eS       S          06 31 06.3  -0.7
ANN                                 pmax    pmax
      comp=Z,190nm,1.6s
MCD   Coleburn Disti    72.18 348 eP       P          06 21 47.5  -0.2
FITZ  Fitzroy Crossi    72.30 210 eP       P          06 21 49.9  +1.1
      comp=Z,68nm,1.0s
N40A  Mertquake, Sal    72.31  47  P       P          06 21 48.2  -0.5
      baz=321,SNR=17
P38A  Dawn              72.32  49  P       P          06 21 47.6  -1.2
      baz=320,SNR=17
P38A  Dawn              72.32  49 eP       P          06 21 48.8   0.0
      comp=Z,107nm,0.8s
P38A                                LR      LR
      comp=Z,6µm,18.0s
O39A  Kirksville        72.32  48  P       P          06 21 47.7  -1.2
      baz=320,SNR=8.5
EPOS  Posof             72.34 314⇑iP       P          06 21 48.5  -0.6
BEL   Belsk             72.35 333 eP       P          06 21 49.8  +0.9
BEL   Belsk             72.35 333 eP       P          06 21 49.7  +0.9
L42A  Oliver, Polo      72.35  46  P       P          06 21 47.1  -1.9
      baz=322,SNR=5.5
L42A  Oliver, Polo      72.35  46 eP       P          06 21 48.6  -0.3
      comp=Z,73nm,1.0s
L42A                                LR      LR
      comp=Z,7µm,20.0s
GNI   Garni             72.42 312   LR      LR        06 59 32.8
      comp=Z,8µm,18.1s,baz=36,slow=41
GNI   Garni             72.42 312 eP       P          06 21 50.3  +0.7
GNI   Garni             72.42 312 eP       P          06 21 49.0  -0.6
      comp=Z,341nm,1.2s
GNI   Garni             72.42 312  P       P          06 21 49.8  +0.1
      SNR=69
GNI   Garni             72.42 312 i P      P          06 21 50.4  +0.7
      SNR=62
GNI   Garni             72.42 312 i P      P          06 21 50.6  +1.0
GNI                                 pmax    pmax
      comp=Z,694nm,1.2s
K43A  Burlington        72.42  44  P       P          06 21 48.0  -1.4
      baz=322
K43A  Burlington        72.42  44   PFAKE             06 22 00.0  +11
K43A                                LR      LR
      comp=Z,6µm,22.0s
M41A  Milan             72.43  46  P       P          06 21 47.9  -1.6
      baz=321,SNR=11
Q37A  Longview Farm,    72.43  51  P       P          06 21 48.2  -1.3
      baz=320
MDO   Dochfour          72.46 349 eP       P          06 21 47.7  -1.7
EAK   Akyaka            72.55 313⇑iP       P          06 21 50.6  +0.2
L43A  Garden Prairie    72.64  45  P       P          06 21 49.7  -1.0
      baz=322
KPL   Plockton          72.71 350 eP       P          06 21 49.7  -1.1
KPL                                 IAmb    IAmb      06 21 52.8
      comp=Z,226nm,1.3s
M42A  Sheffield         72.73  46  P       P          06 21 50.4  -0.9
      baz=322
O40A  La Belle          72.75  48  P       P          06 21 50.0  -1.4
      baz=321,SNR=29
Q38A  Cooks Store, C    72.78  50  P       P          06 21 50.4  -1.2
      baz=320,SNR=32
TASB  TASBURUN-IGDIR    72.79 312 eP       P          06 21 52.3  +0.6
N41A  Harden Midland    72.79  47  P       P          06 21 50.1  -1.6
      baz=321,SNR=30
N41A  Harden Midland    72.79  47 eP       P          06 21 51.7   0.0
      comp=Z,235nm,0.9s
N41A                                LR      LR
      comp=Z,5µm,20.0s
P39B  Salisbury         72.81  49  P       P          06 21 51.7  -0.1
      baz=321,SNR=10
KARS  Kars              72.85 313 eP       P          06 21 52.6  +0.4
DIGO  Kars              72.88 313⇑iP       P          06 21 52.8  +0.3
BCA   Borcka            72.91 314 eP       P          06 21 52.0  -0.4
IGDI  IGDIR             72.96 312⇑iP       P          06 21 52.8   0.0
DBOC  Borcka            72.97 314⇑iP       P          06 21 52.1  -0.7
ARTV  Artvin            72.97 314⇑iP       P          06 21 52.5  -0.5
SORM  Soroca            73.02 326⇑iP       P          06 21 51.5  -1.3
L44A  Lake County Fo    73.03  44  P       P          06 21 51.7  -1.3
      baz=322
Q39A  Willow Grove F    73.04  50  P       P          06 21 52.0  -1.1
      baz=320,SNR=22
DAGI  Agillar           73.06 314⇑iP       P          06 21 53.0  -0.4
LVV   L'vov             73.08 330 eP       P          06 21 51.9  -1.3
LVV                               e                   06 22 10.2
LVV                               e                   06 24 37.5
LVV                               eS       S          06 31 14.7  -2.8
N42A  Yates City        73.09  46  P       P          06 21 51.6  -1.8
      baz=322,SNR=13
M43A  Waltham Townsh    73.12  45  P       P          06 21 52.2  -1.4
      baz=322
P40A  Paris             73.12  49  P       P          06 21 53.1  -0.6
      baz=321,SNR=25
P40A  Paris             73.12  49 eP       P          06 21 54.0  +0.4
      comp=Z,147nm,0.9s
P40A                                LR      LR
      comp=Z,7µm,20.0s
DBAD  Bademkaya         73.21 314⇑iP       P          06 21 54.0  -0.2
R38A  Fenwick Farm,     73.23  51  P       P          06 21 53.1  -1.1
      baz=320,SNR=16
O41A  Passleys Farm,    73.24  47  P       P          06 21 53.4  -0.9
      baz=321,SNR=27
WMOK  Wichita Mounta    73.27  56  P       P          06 21 54.7   0.0
      baz=319,SNR=42
WMOK  Wichita Mounta    73.27  56 eP       P          06 21 54.5   0.0
      comp=Z,37nm,1.0s
WMOK                                LR      LR
      comp=Z,4µm,19.0s
WMOK  Wichita Mounta    73.27  56 eP       P          06 21 54.6   0.0
WMOK                                pmax    pmax
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      comp=Z,37nm,1.0s
WMOK                                MLR     MLR
      comp=Z,4µm,19.0s
DDEM  Demirkent         73.28 314⇑iP       P          06 21 54.4  -0.3
TOBO  Tobermory, Bru    73.35  39  P       P          06 21 54.0  -0.9
      baz=325
DYDN  Diyadin           73.40 312⇑iP       P          06 21 56.2  +0.7
INVG  Invergeldie, C    73.41 349 eP       P          06 21 53.6  -1.4
INVG                                IAmb    IAmb      06 21 56.6
      comp=Z,311nm,1.7s
INVG                                IAMs_20 IAMs_20   07 01 27.8
      comp=Z,4µm,15.6s
N43A  Stutzman Famil    73.41  46  P       P          06 21 54.5  -0.8
      baz=322,SNR=5.7
SIM   Simferopol'       73.42 321 eP       P          06 21 55.5  +0.2
SIM   Simferopol'       73.42 321c iP      P          06 21 54.8  -0.5
SIM                               eS       S          06 31 20.0  -1.6
SIM                                 pmax    pmax
      comp=Z,78nm,1.0s
SIM                                 MLR     MLR
      comp=Z,15µm,15.0s
P41A  Barry, Barry      73.50  48  P       P          06 21 55.2  -0.6
      baz=321,SNR=24
Q40A  Laux Farm, Aux    73.52  49  P       P          06 21 54.7  -1.3
      baz=321,SNR=14
O42A  Bath              73.56  47  P       P          06 21 55.0  -1.2
      baz=322,SNR=5.8
R39A  Chumby, Stover    73.57  50  P       P          06 21 54.5  -1.8
      baz=321,SNR=26
CHOM  Cayeli-Rize       73.58 315 eP       P          06 21 55.1  -1.2
M44A  Midewin, Midew    73.59  45  P       P          06 21 55.3  -1.1
      baz=322
M44A  Midewin, Midew    73.59  45 eP       P          06 21 56.8  +0.5
      comp=Z,220nm,1.4s
M44A                                LR      LR
      comp=Z,6µm,20.0s
CLDR  Caldiran          73.60 311 eP       P          06 21 54.3  -2.4
CLDR  Caldiran          73.60 311⇑iP       P          06 21 57.2  +0.5
S38A  Stockton          73.65  51  P       P          06 21 55.4  -1.4
      baz=320,SNR=22
HDIL  Hopedale          73.66  46  P       P          06 21 55.6  -1.1
      baz=322,SNR=16
HDIL  Hopedale          73.66  46 eP       P          06 21 57.1  +0.3
      comp=Z,147nm,0.8s
HDIL                                LR      LR
      comp=Z,5µm,19.0s
KWP   Kalwaria Pacla    73.67 331 eP       P          06 21 56.2  -0.5
KWP   Kalwaria Pacla    73.67 331 eP       P          06 21 56.3  -0.5
      comp=Z,8µm,1.4s
KWP                                 LR      LR
      comp=Z,75µm,18.0s
KWP   Kalwaria Pacla    73.67 331 eP       P          06 21 56.3  -0.5
EAB   Aberfoyle         73.68 349 eP       P          06 21 55.7  -0.9
ESY   Stoneypath        73.71 348 eP       P          06 21 56.4  -0.3
AGRB  Hanur-Agry        73.71 312 eP       P          06 21 58.4  +1.1
EATA  Eleskirt          73.73 313⇑iP       P          06 21 58.3  +0.7
KLBO  Killbear Provi    73.77  38  P       P          06 21 55.6  -1.7
      baz=326
EDI   Edinburgh         73.78 348 eP       P          06 21 57.2   0.0
EDI                                 IAMs_20 IAMs_20   07 02 28.0
      comp=Z,6µm,16.3s
KIS   Kishinev          73.80 325 eP       P          06 21 56.0  -1.5
      comp=Z,1µm,4.0s
KIS   Kishinev          73.80 325 ePcP     PcP        06 22 07.0  -5.9
KIS   Kishinev          73.80 325 ePP      PP         06 24 52.0  +10
KIS   Kishinev          73.80 325 eP       P          06 21 56.0  -1.5
KIS                               e                   06 22 07.0
KIS                               e                   06 22 18.0
KIS                               eS       SKiKP      06 31 23.0  -0.1
KIS                               e                   06 31 49.0
KIS                               ePS      PnS        06 32 02.0  +0.2
KIS                               eSS      SS         06 36 09.0  +0.1
KIS                                 pmax    pmax
      comp=Z,1µm,4.0s
KIS                                 pmax    pmax
      comp=Z,2µm,18.0s
KIS                                 MLR     MLR
      comp=Z,11µm,15.0s
KIS                                 MLR     MLR
      comp=N,8µm,15.0s
KIS                                 MLR     MLR
      comp=E,6µm,15.0s
O43A  Sugar Creek Fa    73.86  46  P       P          06 21 56.7  -1.2
      baz=322,SNR=5.6
HOMI  Horasan           73.87 313⇑iP       P          06 21 58.2  -0.1
VMUR  Van-Muradiye      73.88 311⇑iP       P          06 21 58.8  +0.4
S39A  Bolivar           73.90  51  P       P          06 21 56.6  -1.6
      baz=321,SNR=18
S39A  Bolivar           73.90  51 eP       P          06 21 57.5  -0.7
      comp=E,69nm,1.1s
S39A                                LR      LR
      comp=Z,8µm,21.0s
T38A  Diamond           73.91  52  P       P          06 21 56.7  -1.6
      baz=320,SNR=40
P42A  Winchester        73.91  48  P       P          06 21 56.8  -1.4
      baz=322,SNR=13
P42A  Winchester        73.91  48 eP       P          06 21 57.1  -1.1
      comp=Z,102nm,0.9s
P42A                                LR      LR
      comp=Z,5µm,20.0s
TUTA  Tutak             73.93 312⇑iP       P          06 21 59.0  +0.3
M45A  Boilermakers S    73.95  44  P       P          06 21 57.0  -1.4
      baz=323
Q41A  Truxton           73.97  48  P       P          06 21 57.5  -1.1
      baz=321,SNR=35
R40A  Maddies Statio    73.97  50  P       P          06 21 57.5  -1.1
      baz=321,SNR=26
R40A  Maddies Statio    73.97  50 eP       P          06 21 58.3  -0.3
      comp=Z,108nm,0.8s
R40A                                LR      LR
      comp=Z,6µm,19.0s
TUL1  Leonard           73.99  53  P       P          06 21 58.4  -0.4
      baz=320,SNR=13
TUL1  Leonard           73.99  53 eP       P          06 21 59.1  +0.3
      comp=Z,191nm,1.5s
TUL1                                LR      LR
      comp=Z,4µm,20.0s
BMRO  Meriville Lake    73.99  39  P       P          06 21 58.1  -0.5
      baz=325
N44A  Piper City        74.01  45  P       P          06 21 57.6  -1.2
      baz=322
BUKO  Buck Lake         74.03  37  P       P          06 21 59.2  +0.4
      baz=326
PGBU  Glenifferbraes    74.06 349 eP       P          06 21 58.1  -0.7
PGBU                                IAmb    IAmb      06 22 01.1
      comp=Z,760nm,1.4s
PGBU                                IAMs_20 IAMs_20   07 02 57.1
      comp=Z,4µm,16.2s
OJC   Ojcow             74.07 333 eP       P          06 21 58.2  -0.8
OJC   Ojcow             74.07 333 eP       P          06 21 58.3  -0.7
      comp=Z,322nm,1.3s
OJC   Ojcow             74.07 333 eP       P          06 21 58.3  -0.7
OJC                                 pmax    pmax
      comp=Z,322nm,1.3s
KTUT  Trabzon           74.13 315 eP       P          06 21 58.2  -1.3
ERZM  Erzurum           74.24 313 i P      P          06 22 00.9  +0.4
N45A  Kentland          74.26  45  P       P          06 21 58.8  -1.4
      baz=323
P43A  Skaggs, Pawnee    74.27  47  P       P          06 21 58.5  -1.8
      baz=322,SNR=7.1
VANB  Van               74.28 311 eP       P          06 22 00.7  +0.1
BASO  Ashfield          74.28  39  P       P          06 21 59.4  -0.9
      baz=325
TVAN  Van               74.32 311⇑iP       P          06 22 02.0  +1.1
Q42A  Golden Eagle      74.34  48  P       P          06 21 59.5  -1.3
      baz=322,SNR=22
M46A  Old House Fiel    74.35  44  P       P          06 21 58.7  -2.0
      baz=323
M46A  Old House Fiel    74.35  44 eP       P          06 22 00.9  +0.1
      comp=Z,67nm,0.9s
M46A                                LR      LR
      comp=Z,6µm,22.0s
EKA   Eskdalemuir Ar    74.35 348  P       P          06 21 59.3  -1.3
      comp=Z,7.1nm,0.3s,baz=21,slow=5.3,SNR=109
EKA                                 LR      LR        06 57 34.9
      comp=Z,2µm,18.1s,baz=15,slow=38
O44A  Mansfield         74.36  46  P       P          06 21 58.9  -1.9
      baz=322
ESK   Eskdalemuir       74.38 348 eP       P          06 21 60.0  -0.7
      comp=Z,266nm,1.4s
ESK                                 LR      LR
      comp=Z,4µm,20.0s
ESK   Eskdalemuir       74.38 348 eP       P          06 21 59.7  -0.9
ESK                                 IAmb    IAmb      06 22 02.8
      comp=Z,289nm,1.4s
ESK                                 IAMs_20 IAMs_20   07 02 53.4
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      comp=Z,8µm,15.3s
ESK   Eskdalemuir       74.38 348 eP       P          06 22 00.0  -0.7
ESK                                 pmax    pmax
      comp=Z,266nm,1.4s
ESK                                 MLR     MLR
      comp=Z,4µm,20.0s
LPIG  La Paz            74.38  71   LR      LR        06 50 08.3
      comp=Z,1µm,19.7s,baz=302,slow=32
ABTX  Abilene, Hawle    74.38  58  P       P          06 22 00.4  -0.8
      baz=319,SNR=12
ABTX  Abilene, Hawle    74.38  58 eP       P          06 22 01.7  +0.6
      comp=Z,44nm,1.0s
ABTX                                LR      LR
      comp=Z,3µm,20.0s
S40A  Lebanon           74.39  50  P       P          06 21 59.6  -1.5
      baz=321,SNR=21
T39A  Clever            74.39  51  P       P          06 21 59.7  -1.4
      baz=321,SNR=9.6
R41A  Rosebud           74.41  49  P       P          06 22 00.4  -0.8
      baz=321,SNR=21
EKAR  Karacoban         74.41 313⇑iP       P          06 22 02.4  +1.0
EIDS  Eidsvold          74.41 185 eP       P          06 22 02.4  +1.3
      comp=Z,249nm,1.8s
BWLO  Walkerton         74.42  39  P       P          06 22 01.3  +0.2
      baz=325
PRAR  RASCA             74.44 327⇑iP       P          06 22 01.1  -0.1
ADCV  BITLIS_Adilcev    74.44 312⇑iP       P          06 22 02.0  +0.4
CLWO  Collingwood       74.48  38  P       P          06 22 00.7  -0.9
      baz=326
KSP   Ksiaz             74.53 335 eP       P          06 22 01.6   0.0
KSP   Ksiaz             74.53 335 eP       P          06 22 01.6   0.0
TX31  Lajitas Ar. Si    74.54  63 eP       P          06 22 03.3  +1.1
TXAR  Lajitas Array     74.54  63  P       P          06 22 01.2  -1.0
      comp=Z,20nm,0.7s,baz=297,slow=4.6,SNR=131
TXAR                                LR      LR        06 51 49.0
      comp=Z,3µm,21.1s,baz=0.0,slow=33
BUR08 Bucovina Ar. S    74.56 328 eP       P          06 22 01.0  -1.0
KOPT  Kop Dagi          74.56 314⇑iP       P          06 22 02.8  +0.5
BUR04 Bucovina Ar. S    74.57 328 eP       P          06 22 00.8  -1.3
BURAR Bucovina Array    74.58 328⇑iP       P          06 22 01.8  -0.3
N46A  Monticello        74.58  44  P       P          06 22 00.1  -2.0
      baz=323
BHH   Howats Hill       74.59 348 eP       P          06 22 01.5  -0.5
YOVA  Hakkari_Yˆ…kse    74.61 310⇑iP       P          06 22 02.2  -0.4
NIE   Niedzica          74.62 332 eP       P          06 22 02.2  -0.1
NIE   Niedzica          74.62 332 eP       P          06 22 02.2  -0.1
O45A  Potomac           74.64  45  P       P          06 22 01.1  -1.4
      baz=323,SNR=13
ECAT  Cat-ERZURUM       74.66 314⇑iP       P          06 22 02.9   0.0
CCM   Cathedral Cave    74.66  49  P       P          06 22 00.6  -2.0
      baz=322
CCM   Cathedral Cave    74.66  49 eP       P          06 22 03.4  +0.7
      comp=Z,77nm,0.9s
CCM                                 LR      LR
      comp=Z,5µm,20.0s
GEVA  Gevas             74.66 311⇑iP       P          06 22 04.3  +1.4
ESPY  Espiye-Giresun    74.67 316 eP       P          06 22 00.7  -2.0
RAC   Raciborz          74.67 333 eP       P          06 22 02.2  -0.2
RAC                                 MLR     MLR
      comp=Z,16µm,19.3s
PEMO  Pembroke          74.67  36  P       P          06 22 01.8  -0.7
      baz=327
EDMD  Edmundbyers       74.67 347 eP       P          06 22 02.3  -0.1
EDMD                                IAMs_20 IAMs_20   06 59 40.9
      comp=Z,5µm,18.6s
HHAR  Hobbs             74.67  52 eP       P          06 22 02.3  -0.4
      comp=Z,235nm,1.9s
UZH   Uzhgorod          74.68 330 eP       P          06 21 59.1  -3.4
UZH                               e                   06 22 09.9
UZH                               eS       SKiKP      06 31 29.1  +4.7
SADO  Sadowa            74.69  37 eP       P          06 22 02.7  +0.1
      comp=Z,63nm,1.3s
SADO                                LR      LR
      comp=Z,4µm,19.0s
SLM   Saint Louis       74.71  48 eP       P          06 22 03.2  +0.3
      comp=Z,112nm,0.9s
SLM                                 LR      LR
      comp=Z,6µm,20.0s
SLM   Saint Louis       74.71  48 eP       P          06 22 03.2  +0.3
SLM                                 pmax    pmax
      comp=Z,112nm,0.9s
SLM                                 MLR     MLR
      comp=Z,6µm,20.0s
CRVS  Cervenica-Dubn    74.71 331 eP       P          06 22 02.1  -0.7
CRVS                                pmax    pmax
      comp=Z,176nm,1.5s
CRVS  Cervenica-Dubn    74.71 331 eP       P          06 22 02.1  -0.7
CRVS                              eS       S          06 31 52.5  +17
CRVS                              eSS      SS         06 36 38.1  +16
CRVS                              eL       L          07 00 51.4
R42A  Luebbering        74.71  49  P       P          06 22 02.1  -0.8
      baz=322,SNR=14
Q43A  New Douglas       74.73  48  P       P          06 22 02.0  -1.0
      baz=322,SNR=7.7
T40A  Mansfield         74.73  50  P       P          06 22 01.5  -1.5
      baz=321
S41A  Jillco Farms,     74.78  50  P       P          06 22 01.6  -1.7
      baz=321,SNR=19
VRTB  Varto-Mus         74.78 313 eP       P          06 22 07.3  +3.8
VRTB  Varto-Mus         74.78 313 i P      P          06 22 02.9  -0.6
SFIN  Lafayette         74.82  45  P       P          06 22 01.9  -1.7
      baz=323
SFIN  Lafayette         74.82  45 eP       P          06 22 03.6  +0.1
      comp=Z,44nm,0.8s
SFIN                                LR      LR
      comp=Z,7µm,20.0s
AAM   Ann Arbor         74.83  42  P       P          06 22 02.0  -1.5
      baz=324,SNR=8.0
AAM   Ann Arbor         74.83  42 eP       P          06 22 04.2  +0.7
      comp=Z,115nm,1.0s
AAM                                 LR      LR
      comp=Z,7µm,20.0s
AAM   Ann Arbor         74.83  42 eP       P          06 22 04.2  +0.7
AAM                                 pmax    pmax
      comp=Z,115nm,1.0s
AAM                                 MLR     MLR
      comp=Z,7µm,20.0s
P44A  Sand Creek, Wi    74.83  46  P       P          06 22 02.6  -1.0
      baz=322,SNR=17
U39A  Green Forest      74.83  52  P       P          06 22 02.2  -1.5
      baz=321,SNR=70
BIZ   Bicaz             74.84 327⇓iP       P          06 22 03.1  -0.5
GRSN  GIRESUNGRSN       74.87 316 i P      P          06 22 02.4  -1.4
OKC   Ostrava-Krasne    74.90 333 eP       P          06 22 04.0  +0.2
OKC                               eS       S          06 31 39.0  +1.0
OKC                                 AMS     AMS       07 00 50.0
      comp=Z,14µm,17.3s
OKC   Ostrava-Krasne    74.90 333 eP       P          06 22 04.0  +0.2
OKC                               eS       S          06 31 39.0  +1.0
OKC                                 MLR     MLR
      comp=Z,14µm,17.3s
SLBS  Sierra La Lagu    74.91  71 eP       P          06 22 05.6  +1.2
      comp=Z,89nm,1.5s
SLBS                                LR      LR
      comp=Z,2µm,20.0s
UPC   Upice             74.91 335 eP       P          06 22 04.1  +0.2
UPC                               eS       S          06 31 36.9  -1.2
UPC                                 AMS     AMS       06 58 50.0
      comp=Z,14µm,17.1s
UPC   Upice             74.91 335 eP       P          06 22 04.1  +0.2
UPC                               eS       S          06 31 36.9  -1.2
UPC                                 MLR     MLR
      comp=Z,14µm,17.1s
HAKT  HAKKARI           74.93 310⇑iP       P          06 22 04.0  -0.5
BBO1  Bothel            74.94 348 eP       P          06 22 03.4  -0.6
BANO  Bancroft          74.95  36  P       P          06 22 03.8  -0.4
      baz=327
DPC   Dobruska-Polom    74.97 335 eP       P          06 22 04.2  -0.1
DPC                               ePCP     pP         06 22 16.9  +1.1
DPC                               eS       S          06 31 36.9  -1.9
DPC                                 AMS     AMS       07 02 00.0
      comp=Z,16µm,16.2s
DPC   Dobruska-Polom    74.97 335 eP       P          06 22 04.2  -0.1
DPC                               e                   06 22 16.9
DPC                               eS       S          06 31 36.9  -1.9
DPC                                 MLR     MLR
      comp=Z,16µm,16.2s
CLGH  Cloghs, Cushen    74.98 350 eP       P          06 22 03.4  -0.8
CLGH                                IAmb    IAmb      06 22 06.3
      comp=Z,364nm,1.1s
CLGH                                IAMs_20 IAMs_20   07 01 46.6
      comp=Z,4µm,17.6s
CLL   Collm             74.99 337⇓iP       P          06 22 03.8  -0.5
      comp=Z,50nm,1.0s
CLL                               ePmax               06 22 04.0
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CLL                             ⇓i                         06 22 05.8
      comp=Z,442nm,1.4s
CLL                              ePlp                      06 22 07.0
      comp=Z,1µm,21.2s
CLL                              ePP       PP              06 24 54.0 +2.4
CLL                              ePPP      PPP             06 26 42.0
CLL                              eS        S               06 31 38.0 -0.9
CLL                              ePS       PnS             06 32 18.0 +1.0
CLL                              eSS       SS              06 36 42.0  +15
CLL                              e                         06 37 15.0
CLL                              e                         06 40 27.0
CLL                               LmH                      06 56 00.0
      comp=N,8µm,19.8s
CLL                               LmH                      06 56 00.0
      comp=E,9µm,19.6s
CLL                               LmH                      06 56 00.0
      comp=Z,7µm,21.9s
CLL                               Lmax                     07 00 00.0
CLL                               LmV                      07 01 00.0
      comp=Z,12µm,18.0s
CLL   Collm            74.99 337  eP       P               06 22 03.3 -0.9
      comp=Z,213nm,1.0s
CLL                               LR       LR
      comp=Z,13µm,18.0s
CLL   Collm            74.99 337⇓iP        P               06 22 03.8 -0.5
CLL                              eS        S               06 31 38.0 -0.9
CLL                               pmax     pmax
      comp=Z,442nm,1.4s
CLL                               MLR      MLR
      comp=Z,12µm,18.0s
YEDI  Yedisu-Bingol    74.99 314  eP       P               06 22 04.4 -0.4
PALK  Pallekele        75.00 264  LR       LR              06 59 53.2
      comp=Z,3µm,18.4s,baz=205,slow=40
PALK  Pallekele        75.00 264  eP       P               06 22 05.6 +0.6
      comp=Z,307nm,1.2s
PALK  Pallekele        75.00 264  P        P               06 22 05.2 +0.3
      SNR=9.2
PALK  Pallekele        75.00 264 i P       P               06 22 06.3 +1.4
      SNR=17
PALK  Pallekele        75.00 264 i P       P               06 22 06.1 +1.1
ORDU  Ordu-Boztepe     75.00 316⇑iP        P               06 22 04.2 -0.4
TESR  Tescani          75.01 326⇓iP        P               06 22 04.2 -0.3
GAL1  Galloway         75.02 349  eP       P               06 22 03.1 -1.2
GAL1                              IAmb     IAmb            06 22 06.3
      comp=Z,240nm,1.5s
GAL1                              IAMs_20  IAMs_20         07 03 26.3
      comp=Z,3µm,15.3s
KELT  Kelkit           75.03 315⇑iP        P               06 22 05.0  0.0
TRPA  Tarpa            75.04 330⇓iP        P               06 22 05.0 +0.4
TRPA  Tarpa            75.04 330⇑eP        P               06 22 04.8 +0.2
KESW  Keswick, Cumbr   75.07 348  eP       P               06 22 03.6 -1.1
KESW                              IAmb     IAmb            06 22 07.0
      comp=Z,593nm,1.3s
KESW                              IAMs_20  IAMs_20         07 03 14.1
      comp=Z,5µm,15.9s
KRLC  Kraliky          75.08 334  eP       P               06 22 05.7 +0.8
KRLC                              AMS      AMS             06 58 40.0
      comp=Z,4µm,18.5s
KRLC  Kraliky          75.08 334  eP       P               06 22 05.7 +0.8
KRLC                              MLR      MLR
      comp=Z,4µm,18.5s
Q44A  Meyer Farm, Va   75.09  47  P        P               06 22 03.6 -1.5
      baz=322,SNR=10.0
BNGL  BINGOL           75.09 313⇑iP        P               06 22 06.0 +0.6
ELFO  Elginfield       75.10  40  P        P               06 22 06.0 +0.9
      baz=326
S42A  Caledonia        75.11  49  P        P               06 22 04.8 -0.4
      baz=322,SNR=27
BMR   Baia Mare        75.11 329⇑iP        P               06 22 05.6 +0.5
FVM   French Village   75.12  49  eP       P               06 22 05.7 +0.3
      comp=Z,73nm,0.7s
FVM                               LR       LR
      comp=Z,7µm,20.0s
HPIG                   75.13  66  eP       P               06 22 06.0 +0.3
      comp=Z,39nm,1.0s
HPIG                              LR       LR
      comp=Z,3µm,18.0s
MORC  Moravsky Berou   75.13 334⇑iP        P               06 22 05.3 +0.1
MORC  Moravsky Berou   75.13 334  eP       P               06 22 04.7 -0.5
      comp=Z,372nm,1.3s
MORC                              LR       LR
      comp=Z,14µm,19.0s
MORC  Moravsky Berou   75.13 334  eP       P               06 22 04.7 -0.5
MORC                              pmax     pmax
      comp=Z,372nm,1.3s
MORC                              MLR      MLR
      comp=Z,14µm,19.0s
MORC  Moravsky Berou   75.13 334⇑iP        P               06 22 04.7 -0.5
MORC                             eS        S               06 31 43.6 +2.9
R43A  Red Bud          75.14  48  P        P               06 22 04.5 -0.8
      baz=322,SNR=9.0
BRG   Berggiesshubel   75.14 336⇓iP        P               06 22 04.8 -0.4
      comp=Z,29nm,1.2s
BRG                              i                         06 22 06.6
      comp=Z,234nm,1.4s
BRG                              i PP      PP              06 24 49.6 -3.3
      comp=Z,24nm,1.2s
BRG                               S        S               06 31 38.0 -2.6
BRG                               SS       SS              06 36 25.0 -3.9
BRG                              ePKPPKP                   07 11 59.7
      comp=Z,2.6nm,0.7s
      comp=N,14µm,17.4s
      comp=E,6µm,14.3s
      comp=Z,16µm,16.4s
BRG   Berggiesshubel   75.14 336⇓iP        P               06 22 04.8 -0.4
BRG                              i                         06 24 49.6
BRG                               S        S               06 31 38.0 -2.6
BRG                               SS       SS              06 36 25.0 -3.9
BRG                               pmax     pmax
      comp=Z,29nm,1.2s
BRG                               pmax     pmax
      comp=Z,24nm,1.2s
BRG                               MLR      MLR
      comp=N,14µm,17.4s
BRG                               MLR      MLR
      comp=E,6µm,14.3s
BRG                               MLR      MLR
      comp=Z,16µm,16.4s
IDGL  Inch Island, C   75.15 350  eP       P               06 22 04.4 -0.7
IDGL                              IAmb     IAmb            06 22 07.1
      comp=Z,473nm,1.1s
V39A  Pettigrew        75.16  52  P        P               06 22 04.2 -1.4
      baz=321
U40A  Yellville        75.17  51  P        P               06 22 04.0 -1.7
      baz=321,SNR=45
EUZM  Uzumlu           75.18 314⇑iP        P               06 22 06.2 +0.4
T41A  Mountain View    75.19  50  P        P               06 22 04.6 -1.2
      baz=321,SNR=16
P45A  Graceland, Par   75.20  46  P        P               06 22 04.8 -0.9
      baz=323,SNR=5.3
P45A  Graceland, Par   75.20  46  eP       P               06 22 06.3 +0.6
      comp=Z,72nm,1.0s
P45A                              LR       LR
      comp=Z,6µm,21.0s
TRQ   Mont Tremblant   75.21  34  eP       P               06 22 06.0 +0.2
CUKT  Cukurca          75.22 310  eP       P               06 22 05.3 -0.8
CUKT  Cukurca          75.22 310⇑iP        P               06 22 05.9 -0.1
AS01  Alice Springs    75.23 201  eP       P               06 22 07.0 +1.0
AS31  Alice Springs    75.24 201  eP       P               06 22 06.3 +0.4
      comp=Z,6.6nm,0.8s
ASAR  Alice Springs    75.24 201  P        P               06 22 05.5 -0.5
      comp=Z,9.6nm,0.7s,baz=15,slow=5.2,SNR=61
ASAR                              LR       LR              06 52 41.3
      comp=Z,3µm,21.8s,baz=21,slow=34
ERZN  Erzincan         75.26 314  eP       P               06 22 07.8 +1.5
PLVO  Plevna           75.27  36  P        P               06 22 05.8 -0.2
      baz=327
PLVO  Plevna           75.27  36  eP       P               06 22 06.4 +0.4
      comp=Z,74nm,1.0s
PLVO                              LR       LR
      comp=Z,5µm,19.0s
ACTO  Acton            75.28  39  P        P               06 22 06.8 +0.7
      baz=326
BNGB  Bingˆ¶l          75.28 313  eP       P               06 22 07.0 +0.6
PVCC  Panska Ves       75.29 336  eP       P               06 22 07.1 +1.1
PVCC                              AMS      AMS             06 59 00.0
      comp=Z,15µm,18.2s
PVCC  Panska Ves       75.29 336  eP       P               06 22 07.1 +1.1
PVCC                              MLR      MLR
      comp=Z,15µm,18.2s
BGOL  Bingol           75.29 313⇑iP        P               06 22 06.7 +0.3
GIUM  Giurgiulesti     75.31 325⇓iP        P               06 22 06.6 +0.4
TLCR                   75.33 324⇓iP        P               06 22 07.1 +0.8
ARCR  ARCALIA          75.33 328⇑iP        P               06 22 07.0 +0.6
SNOP  Sinop            75.35 319  eP       P               06 22 05.6 -0.9
SINO  SINOP_Merkez     75.35 319⇑iP        P               06 22 05.9 -0.7
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M49A  Liberty Center   75.36  42  P        P               06 22 05.0 -1.6
      baz=324
O47A  Sheridan         75.36  44  P        P               06 22 05.8 -0.9
      baz=324
P46A  Rosedale         75.38  46  P        P               06 22 05.6 -1.2
      baz=323
PKRO  Pickering        75.38  38  P        P               06 22 07.3 +0.6
      baz=326
KECS  Kecovo           75.39 331  eP       P               06 22 07.0 +0.3
KECS  Kecovo           75.39 331  eP       P               06 22 07.0 +0.3
SAMS  Samsun-Alacam    75.45 318⇑iP        P               06 22 06.5 -0.6
HPK   Haverah Park     75.47 347  eP       P               06 22 06.8 -0.1
HPK                               IAmb     IAmb            06 22 09.4
      comp=Z,436nm,1.1s
HPK                               IAMs_20  IAMs_20         07 01 57.5
      comp=Z,8µm,17.7s
PETR  Petresti         75.47 326⇓iP        P               06 22 08.4 +1.3
SRTM  Siirt_Merkez     75.47 312⇑iP        P               06 22 07.7 +0.2
SUSE  Susehri          75.47 316⇑iP        P               06 22 06.7 -0.9
DELO  Deloro Mine      75.50  37  P        P               06 22 06.4 -1.0
      baz=327
Q45A  Warren Harvey,   75.50  47  P        P               06 22 07.3 -0.1
      baz=323,SNR=18
VRI   Vrincioaia       75.53 326⇑iP        P               06 22 08.0 +0.4
T42A  Van Buren        75.54  50  P        P               06 22 06.2 -1.5
      baz=322,SNR=11
T42A  Van Buren        75.54  50  eP       P               06 22 07.5 -0.2
      comp=Z,34nm,0.9s
T42A                              LR       LR
      comp=Z,4µm,20.0s
R44A  Waltonville      75.57  48  P        P               06 22 07.5 -0.4
      baz=322,SNR=13
PLOR  Plostina         75.57 326⇑iP        P               06 22 08.2 +0.4
W39A  Magazine         75.59  53  P        P               06 22 07.2 -0.8
      baz=321,SNR=20
W39A  Magazine         75.59  53  eP       P               06 22 08.3 +0.3
      comp=Z,141nm,1.5s
W39A                              LR       LR
      comp=Z,7µm,18.0s
CFR   Carcaliu         75.59 325⇓iP        P               06 22 07.5 -0.3
DRWO  Darlington Wes   75.60  38  P        P               06 22 08.9 +1.0
      baz=327
ALFO  Alfred           75.60  34  P        P               06 22 06.6 -1.2
      baz=329
SIRT  Sirnak           75.60 311  eP       P               06 22 08.1 -0.1
V40A  Witts Springs    75.61  52  P        P               06 22 06.6 -1.6
      baz=321,SNR=27
V40A  Witts Springs    75.61  52  eP       P               06 22 06.7 -1.6
      comp=Z,119nm,1.3s
V40A                              LR       LR
      comp=Z,8µm,19.0s
S43A  Fulton Ridge,    75.62  49  P        P               06 22 06.7 -1.5
      baz=322,SNR=20
SIRN  S˜–rnak          75.62 311⇑iP        P               06 22 08.2  0.0
DIKM  Dikmen           75.63 318  eP       P               06 22 07.8 -0.3
U41A  Viola            75.66  51  P        P               06 22 06.6 -1.8
      baz=322,SNR=13
OLIL  Olney            75.66  47  eP       P               06 22 09.1 +0.7
      comp=Z,97nm,0.9s
OLIL                              LR       LR
      comp=Z,6µm,19.0s
WLVO  Wesleyville      75.69  37  P        P               06 22 08.2 -0.2
      baz=327
SVAN  Silvan-Diyarba   75.70 312  eP       P               06 22 08.4 -0.3
SVAN  Silvan-Diyarba   75.70 312⇑iP        P               06 22 09.0 +0.3
WIM   Isle of Man      75.71 348  eP       P               06 22 07.7 -0.7
TNCL  Tunceli-Merkez   75.72 314⇑iP        P               06 22 09.1 +0.2
PRA   Prague           75.74 336  eP       P               06 22 08.8 +0.2
PRA                               AMS      AMS             07 00 50.0
      comp=Z,16µm,16.2s
PRA   Prague           75.74 336  eP       P               06 22 08.8 +0.2
PRA                               MLR      MLR
      comp=Z,16µm,16.2s
KVT   Kavak            75.74 318  eP       P               06 22 09.4 +0.5
ERBA  Erbaa            75.75 317⇑iP        P               06 22 09.0 +0.1
TYNO  Tyneside         75.78  39  P        P               06 22 09.7 +0.8
      baz=326
Q46A  CEJHS Indians,   75.78  46  P        P               06 22 07.1 -2.0
      baz=323
GMM   Mts of Mourne    75.78 349  eP       P               06 22 07.5 -1.2
GOPC  GO Pecny, Ondr   75.78 335  eP       P               06 22 08.7 -0.2
GOPC                             eS        S               06 31 46.7 -1.2
GOPC                              AMS      AMS             06 59 20.0
      comp=Z,16µm,17.8s
GOPC  GO Pecny, Ondr   75.78 335  eP       P               06 22 08.7 -0.2
GOPC                             eS        S               06 31 46.7 -1.2
GOPC                              MLR      MLR
      comp=Z,16µm,17.8s
PRU   Pruhonice        75.78 336  eP       P               06 22 09.0 +0.1
PRU                              epP       pP              06 22 18.5 -2.0
PRU                              eS        S               06 31 48.1 +0.3
PRU                               AMS      AMS             07 00 50.0
      comp=Z,16µm,15.9s
PRU   Pruhonice        75.78 336  eP       P               06 22 09.0 +0.1
PRU                              e                         06 22 18.5
PRU                              eS        S               06 31 48.1 +0.3
PRU                               MLR      MLR
      comp=Z,16µm,15.9s
O48A  Farmland         75.81  44  P        P               06 22 08.2 -1.1
      baz=324,SNR=16
M50A  Fremont          75.82  42  P        P               06 22 07.2 -2.0
      baz=325
VRAC  Vranov           75.83 334⇓iP        P               06 22 09.8 +0.6
VRAC  Vranov           75.83 334⇑iP        P               06 22 08.9 -0.3
VRAC                             eS        S               06 31 51.0 +2.7
WTSB  Winterswijk      75.83 341  eP       P               06 22 09.2 +0.2
      comp=Z,616nm,1.3s
GRER                   75.86 326⇑iP        P               06 22 11.2 +1.8
REFA  Refahiye_ERZ˜    75.86 315⇑iP        P               06 22 07.2 -2.6
BTMN  Batman           75.87 312⇑iP        P               06 22 10.1 +0.4
HANI  Diyarbakir_Han   75.87 313⇑iP        P               06 22 09.8 +0.1
VYHS  Vyhne            75.89 332  eP       P               06 22 09.2 -0.3
VYHS                              pmax     pmax
      comp=Z,200nm,1.5s
VYHS  Vyhne            75.89 332  eP       P               06 22 09.2 -0.3
VYHS                             eS        S               06 31 47.1 -1.9
VYHS                             eSS       SS              06 36 47.3 +6.8
HAVZ  Havza            75.89 318⇑iP        P               06 22 09.9 +0.2
T43A  Greenville       75.90  49  P        P               06 22 08.1 -1.6
      baz=322,SNR=12
LTVH  Lˆ'tavˆ'rtes,    75.90 330  eP       P               06 22 12.2 +2.6
JCT   Junction City    75.91  60  P        P               06 22 09.4 -0.6
      baz=319,SNR=12
JCT   Junction City    75.91  60  eP       P               06 22 09.8 -0.2
      comp=Z,49nm,1.0s
JCT                               LR       LR
      comp=Z,4µm,20.0s
JCT   Junction City    75.91  60  eP       P               06 22 09.8 -0.2
JCT                               pmax     pmax
      comp=Z,49nm,1.0s
JCT                               MLR      MLR
      comp=Z,4µm,20.0s
CJR   Cluj-Napoca      75.91 328⇑iP        P               06 22 10.5 +0.7
JAVC  Velka Javorina   75.91 333⇑iP        P               06 22 10.4 +0.7
JAVC                             eS        S               06 31 50.9 +1.5
P47A  Martinsville     75.92  45  P        P               06 22 08.9 -0.9
      baz=324,SNR=9.0
R45A  Skylar, Fairfi   75.92  47  P        P               06 22 08.7 -1.2
      baz=323,SNR=6.6
S44A  Carbondale       75.92  48  P        P               06 22 08.0 -1.9
      baz=322,SNR=18
SIUC  Southern Illin   75.92  48  eP       P               06 22 09.3 -0.6
      comp=Z,100nm,0.8s
SIUC                              LR       LR
      comp=Z,6µm,21.0s
CUZAR Zara_SIVAS       75.93 316⇑iP        P               06 22 10.1  0.0
DOPR  Dopca            75.93 327⇓iP        P               06 22 10.8 +1.0
X39A  Fountain Ranch   75.94  53  P        P               06 22 09.2 -0.8
      baz=321,SNR=29
W40A  Ferguson Farm,   75.96  52  P        P               06 22 08.9 -1.2
      baz=321,SNR=25
W40A  Ferguson Farm,   75.96  52  eP       P               06 22 10.6 +0.5
      comp=Z,160nm,1.0s
W40A                              LR       LR
      comp=Z,8µm,20.0s
BOYT  Boyabat          75.97 318⇑iP        P               06 22 10.8 +0.7
STCO  Saint Catharin   75.97  38  P        P               06 22 11.2 +1.1
      baz=327
V41A  Mountainview     75.97  51  P        P               06 22 09.4 -0.8
      baz=322,SNR=19
PTK   Pertek           75.97 314  eP       P               06 22 11.2 +0.8
U42A  Revenden         75.99  50  P        P               06 22 08.3 -2.0
      baz=322
LBWR  Ladybower, Pea   76.02 347  eP       P               06 22 09.3 -0.8
LBWR                              IAmb     IAmb            06 22 12.5
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      comp=Z,643nm,1.3s
LBWR                              IAMs_20  IAMs_20         07 04 08.4
      comp=Z,8µm,15.2s
BLO   Bloomington      76.05  45  eP       P               06 22 10.9 +0.3
      comp=Z,56nm,1.0s
BLO                               LR       LR
      comp=Z,8µm,20.0s
PBMO  Poplar Bluff     76.06  49  eP       P               06 22 10.9 +0.2
      comp=Z,166nm,1.4s
PBMO                              LR       LR
      comp=Z,4µm,20.0s
WHTX  Lake Whitney,    76.07  57  P        P               06 22 11.0 +0.2
      baz=320,SNR=9.2
WHTX  Lake Whitney,    76.07  57  eP       P               06 22 11.5 +0.6
      comp=Z,43nm,1.0s
WHTX                              LR       LR
      comp=Z,5µm,19.0s
PSZ   Piszkesteto      76.07 331⇑iP        P               06 22 11.6 +0.9
PSZ   Piszkesteto      76.07 331⇑eP        P               06 22 12.1 +1.4
PSZ   Piszkesteto      76.07 331  eP       P               06 22 09.9 -0.7
      comp=Z,404nm,1.4s
PSZ                               LR       LR
      comp=Z,10µm,19.0s
HARR  Harsova          76.08 325⇑iP        P               06 22 10.9 +0.2
KEMA  Kemaliye         76.09 315⇑iP        P               06 22 11.0 +0.1
TIRR  Tirgusor         76.10 324⇑iP        P               06 22 10.4 -0.3
TIRR  Tirgusor         76.10 324  eP       P               06 22 09.8 -0.9
      comp=Z,254nm,1.2s
TIRR                              LR       LR
      comp=Z,10µm,20.0s
KRUC  Moravsky         76.10 334⇑iP        P               06 22 10.4 -0.3
KRUC                             eS        S               06 31 53.1 +1.8
NKC   Novy Kostel      76.11 337  eP       P               06 22 10.8  0.0
NKC                               AMS      AMS             07 01 30.0
      comp=Z,13µm,16.4s
NKC   Novy Kostel      76.11 337  eP       P               06 22 10.8  0.0
NKC                               MLR      MLR
      comp=Z,13µm,16.4s
TLB   Topalu           76.13 325⇓iP        P               06 22 10.8 -0.1
TOKT  Tokat            76.14 317  eP       P               06 22 11.6 +0.5
MLR   Muntele Rosu     76.14 326  LR       LR              06 59 13.0
      comp=Z,7µm,19.8s,baz=36,slow=39
MLR   Muntele Rosu     76.14 326⇑iP        P               06 22 11.7 +0.5
MLR   Muntele Rosu     76.14 326  eP       P               06 22 10.3 -0.8
      comp=Z,322nm,1.2s
DRGR                   76.14 329⇑iP        P               06 22 10.6 -0.5
TOKA  Tokat            76.16 317 i P       P               06 22 10.7 -0.6
MIAR  Mount Ida        76.20  53  P        P               06 22 10.5 -1.1
      baz=321,SNR=30
MIAR  Mount Ida        76.20  53  eP       P               06 22 10.4 -1.1
      comp=Z,65nm,0.9s
MIAR                              LR       LR
      comp=Z,6µm,18.0s
MIAR  Mount Ida        76.20  53  eP       P               06 22 10.4 -1.1
MIAR                              pmax     pmax
      comp=Z,65nm,0.9s
MIAR                              MLR      MLR
      comp=Z,6µm,18.0s
O49A  Covington        76.24  43  P        P               06 22 10.9 -0.8
      baz=324,SNR=8.1
ISR   Istrita          76.24 326⇑iP        P               06 22 12.0 +0.4
T44A  Benton           76.24  49  P        P               06 22 10.5 -1.1
      baz=322,SNR=16
SCER  sogukcermik      76.24 316⇑iP        P               06 22 11.8 -0.1
PGOR  Pogoanele        76.25 325⇓iP        P               06 22 12.2 +0.6
SVSK  Karacayir        76.26 316  eP       P               06 22 11.2 -0.5
S45A  Carrier Mills    76.26  48  P        P               06 22 10.4 -1.5
      baz=323
Q47A  Bedord North L   76.29  45  P        P               06 22 11.0 -0.9
      baz=324,SNR=16
WHAR  Wooly Hollow     76.29  52  eP       P               06 22 11.2 -0.8
      comp=Z,210nm,1.5s
N50A  Nevada           76.29  42  P        P               06 22 10.1 -1.9
      baz=325,SNR=7.2
WACR  West Acre        76.29 345  eP       P               06 22 12.1 +0.4
WACR                              IAmb     IAmb            06 22 14.0
      comp=Z,417nm,1.1s
WACR                              IAMs_20  IAMs_20         07 01 40.1
      comp=Z,6µm,17.3s
SMOL  Smolenice        76.30 333  eP       P               06 22 13.0 +1.2
SMOL  Smolenice        76.30 333  eP       P               06 22 13.0 +1.2
MEDO  Medina           76.30  38  P        P               06 22 12.2 +0.3
      baz=327
P48A  Milroy           76.33  44  P        P               06 22 11.1 -1.1
      baz=324,SNR=16
KAST  KASTAMONU        76.33 319⇑iP        P               06 22 12.7 +0.5
EFOR  EFORIE           76.33 324⇓iP        P               06 22 13.1 +1.0
V42A  Cord             76.34  51  P        P               06 22 11.0 -1.3
      baz=322,SNR=12
R46A  Gibon Southern   76.35  47  P        P               06 22 11.7 -0.6
      baz=323,SNR=6.4
DYBB  Diyarbakir       76.36 313  eP       P               06 22 15.1 +2.6
AMRR  Amara            76.38 325⇓iP        P               06 22 12.9 +0.6
STNC  Stoke            76.39 347  eP       P               06 22 11.8 -0.5
STNC                              IAmb     IAmb            06 22 14.8
      comp=Z,192nm,1.2s
STNC                              IAMs_20  IAMs_20         07 02 35.5
      comp=Z,7µm,17.2s
WME   Myndd Eilian     76.40 348  eP       P               06 22 11.1 -1.1
U43A  Rector           76.40  50  P        P               06 22 10.7 -1.9
      baz=322
W41B  Gary Mavity, V   76.40  52  P        P               06 22 11.7 -0.9
      baz=322,SNR=26
W41B  Gary Mavity, V   76.40  52  eP       P               06 22 12.2 -0.4
      comp=Z,118nm,1.0s
W41B                              LR       LR
      comp=Z,8µm,20.0s
WPS   Cemaes, Angles   76.42 348  eP       P               06 22 11.5 -0.9
WPS                               IAmb     IAmb            06 22 14.2
      comp=Z,275nm,1.4s
WPS                               IAMs_20  IAMs_20         07 03 38.4
      comp=Z,5µm,17.6s
SVRC  Sivrice-ELAZID   76.42 314  eP       P               06 22 15.7 +2.7
MODS  Modra-Piesok     76.47 333  eP       P               06 22 13.3 +0.5
MODS                              pmax     pmax
      comp=Z,369nm,1.3s
MODS  Modra-Piesok     76.47 333  eP       P               06 22 13.3 +0.5
MODS                             eS        S               06 31 50.4 -5.0
MODS                             eSS       SS              06 36 48.6 -0.6
MODS                             eL        L               07 02 17.6
USIN  University of    76.47  47  eP       P               06 22 13.8 +0.8
      comp=Z,175nm,0.9s
USIN                              LR       LR
      comp=Z,6µm,21.0s
WPM1  Penmaenmawr      76.48 348  eP       P               06 22 12.2 -0.5
ELZG  Elazig           76.48 314⇑iP        P               06 22 13.9 +0.7
PARMO Parma            76.49  49  eP       P               06 22 14.5 +1.4
      comp=Z,355nm,0.8s
VOIR                   76.51 327⇓iP        P               06 22 13.6 +0.4
WLF1  Llynfaes         76.51 348  eP       P               06 22 11.5 -1.4
WLF1                              IAmb     IAmb            06 22 14.8
      comp=Z,446nm,1.4s
WLF1                              IAMs_20  IAMs_20         07 03 32.6
      comp=Z,11µm,17.3s
TRD   Trivandrum       76.53 267⇓ex        P               06 22 24.2  +11
CUKAN kangal_SIVAS     76.53 316⇑iP        P               06 22 13.7 +0.2
ERPA  Erie             76.54  39  P        P               06 22 12.8 -0.5
      baz=326,SNR=5.6
ERPA  Erie             76.54  39  eP       P               06 22 13.9 +0.6
      comp=Z,432nm,1.6s
ERPA                              LR       LR
      comp=Z,5µm,20.0s
MARD  Mardin           76.56 312⇑iP        P               06 22 13.9 +0.2
LONY  Lake Ozonia      76.57  35  P        P               06 22 12.0 -1.5
      baz=329,SNR=15
LONY  Lake Ozonia      76.57  35  eP       P               06 22 13.3 -0.1
      comp=Z,42nm,1.0s
LONY                              LR       LR
      comp=Z,4µm,19.0s
YRC   Rhoscolyn        76.58 348  eP       P               06 22 12.5 -0.8
O50A  Cable            76.59  43  P        P               06 22 12.7 -1.0
      baz=325,SNR=9.7
P49A  Miami Univ. Ec   76.59  44  P        P               06 22 12.6 -1.0
      baz=324,SNR=11
CWF   Charnwood Fore   76.60 346  IAMs_20  IAMs_20         07 04 24.4
      comp=Z,8µm,15.7s
Q48A  North Vernon     76.61  45  P        P               06 22 12.6 -1.2
      baz=324,SNR=7.1
ICOR  Ion Corvin       76.62 324⇓iP        P               06 22 13.5 -0.2
X40A  Basin Creek Fa   76.63  52  P        P               06 22 12.8 -1.1
      baz=321,SNR=11
X40A  Basin Creek Fa   76.63  52  eP       P               06 22 13.8 -0.2
      comp=Z,57nm,1.3s
X40A                              LR       LR
      comp=Z,8µm,20.0s
YLL   Llanberis        76.63 348  eP       P               06 22 13.6  0.0
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CTAK  Corum_Osmancik 76.65 318⇑iP       P        06 22 14.2  0.0
U44A  Portageville   76.65  49  P       P        06 22 12.8 -1.2
      baz=322
HEKM  Malatya_Hekimh 76.65 315⇑iP       P        06 22 15.2 +0.9
UALR  University of  76.66  52 eP       P        06 22 14.3 +0.2
      comp=Z,26nm,0.9s
UALR                            LR      LR
      comp=Z,9µm,19.0s
S46A  Don Dixon Farm 76.67  47  P       P        06 22 13.3 -0.8
      baz=323,SNR=6.0
MTUR  Matau          76.68 327⇑iP       P        06 22 15.2 +1.0
W42A  Bald Knob      76.69  51  P       P        06 22 12.7 -1.6
      baz=322
PVMO  Portageville   76.71  49  PFAKE            06 22 30.0  +16
PVMO                            LR      LR
      comp=Z,6µm,20.0s
ARR   Arges          76.72 327⇓iP       P        06 22 15.6 +1.2
SULR                 76.72 326⇑iP       P        06 22 14.8 +0.5
BUD   Budapest       76.73 332⇑eP       P        06 22 14.3  0.0
FOEL  Foel Wylfa     76.74 347 eP       P        06 22 13.6 -0.6
FOEL                            IAmb    IAmb     06 22 16.6
      comp=Z,281nm,1.0s
FOEL                            IAMs_20 IAMs_20  07 02 49.3
      comp=Z,4µm,18.0s
FRNY  Flat Rock      76.75  34 eP       P        06 22 14.5 +0.1
      comp=Z,31nm,1.0s
FRNY                            LR      LR
      comp=Z,5µm,18.0s
R47A  Wooly Knot Far 76.75  46  P       P        06 22 13.4 -1.1
      baz=324,SNR=14
T45A  Paducah        76.75  48  P       P        06 22 13.6 -1.0
      baz=323
T45A  Paducah        76.75  48 eP       P        06 22 15.3 +0.7
      comp=Z,127nm,0.8s
T45A                            LR      LR
      comp=Z,6µm,20.0s
Y40A  Okolona        76.76  53  P       P        06 22 12.7 -2.0
      baz=321
ILGA  Ilgaz          76.78 319⇑iP       P        06 22 15.3 +0.3
ILGA  Ilgaz          76.78 319 eP       P        06 22 15.5 +0.5
      comp=Z,675nm,1.1s
ILGA                            LR      LR
      comp=Z,4µm,19.0s
V43A  Jonesboro      76.78  50  P       P        06 22 12.7 -2.1
      baz=322
X41A  Kaden, Bauxite 76.79  52  P       P        06 22 13.7 -1.1
      baz=322,SNR=12
ACSO  Alum Creek Sta 76.81  42  P       P        06 22 14.0 -0.8
      baz=325,SNR=8.5
ACSO  Alum Creek Sta 76.81  42 eP       P        06 22 15.9 +1.0
      comp=Z,64nm,0.9s
ACSO                            LR      LR
      comp=Z,6µm,19.0s
DSB   Dublin         76.81 349 eP       P        06 22 13.7 -0.9
      comp=Z,279nm,1.1s
DSB                             LR      LR
      comp=Z,2µm,19.0s
KHC   Kasperske Hory 76.83 336 eP       P        06 22 15.0 +0.1
KHC                            ePCP     sP       06 22 28.6 -2.2
KHC                            eS       S        06 31 59.3  0.0
KHC                             AMS     AMS      06 59 50.0
      comp=Z,18µm,17.6s
KHC   Kasperske Hory 76.83 336 eP       P        06 22 14.7 -0.2
      comp=Z,164nm,1.3s
KHC                             LR      LR
      comp=Z,8µm,18.0s
KHC   Kasperske Hory 76.83 336 eP       P        06 22 15.0 +0.1
KHC                            e                 06 22 28.6
KHC                            eS       S        06 31 59.3  0.0
KHC                             MLR     MLR
      comp=Z,18µm,17.6s
BANOM Banah          76.83 294  P       P        06 22 14.1 -1.2
      SNR=60
BANOM Banah          76.83 294 i P      P        06 22 14.7 -0.5
      SNR=154
SHME  Shamm          76.83 295 i P      P        06 22 14.7 -0.6
      SNR=56
LLW   Llanuwychllyn  76.84 348 eP       P        06 22 13.9 -0.9
ALLY  Alegheny Colle 76.86  40 eP       P        06 22 16.1 +0.9
ALLY                            LR      LR
      comp=Z,5µm,20.0s
DEV   Deva           76.87 328⇑iP       P        06 22 16.5 +1.4
MMNY  Mt. Morris Dam 76.88  38 eP       P        06 22 15.8 +0.6
      comp=Z,134nm,1.0s
MMNY                            LR      LR
      comp=Z,5µm,19.0s
COAL  Corum-Alaca    76.88 318⇑iP       P        06 22 15.3 -0.1
CUALT Altinyayla-SIV 76.89 316⇑iP       P        06 22 16.1 +0.6
GNAR  Gosnell        76.91  50 eP       P        06 22 17.3 +1.8
      comp=Z,203nm,0.9s
HBAR  Harrisburg     76.91  50 eP       P        06 22 16.5 +1.0
      comp=Z,201nm,1.1s
WCI   Wyandotte Cave 76.91  46  P       P        06 22 14.1 -1.4
      baz=324
WCI   Wyandotte Cave 76.91  46 eP       P        06 22 16.2 +0.8
      comp=Z,155nm,0.9s
WCI                             LR      LR
      comp=Z,8µm,20.0s
WCI   Wyandotte Cave 76.91  46 eP       P        06 22 16.3 +0.8
WCI                             pmax    pmax
      comp=Z,155nm,0.9s
WCI                             MLR     MLR
      comp=Z,8µm,20.0s
435B  Jarrell        76.92  58  P       P        06 22 14.7 -1.0
      baz=320
435B  Jarrell        76.92  58 eP       P        06 22 15.5 -0.1
      comp=Z,18nm,0.8s
435B                            LR      LR
      comp=Z,4µm,18.0s
BTIN  Bart˜–n        76.92 320⇑iP       P        06 22 14.1 -1.4
GRFO  Grafenberg     76.92 337 eP       P        06 22 15.3  0.0
      comp=Z,495nm,1.2s
GRFO                            LR      LR
      comp=Z,11µm,18.0s
Q49A  Aurora         76.94  44  P       P        06 22 14.1 -1.6
      baz=324,SNR=5.3
U44B  Burton Farm, H 76.94  49  P       P        06 22 14.0 -1.7
      baz=323
P50A  Jamestown      76.95  43  P       P        06 22 14.6 -1.1
      baz=325,SNR=12
LOT   Lotru          76.95 328⇓iP       P        06 22 15.1 -0.6
IGLA  Glengowla, Co  76.97 351 eP       P        06 22 15.1 -0.4
IGLA                            IAmb    IAmb     06 22 17.3
      comp=Z,323nm,1.0s
R48A  Northridge Ran 76.97  45  P       P        06 22 15.0 -0.9
      baz=324,SNR=10
CUSAR Sarkisla-SIVAS 77.00 316⇑iP       P        06 22 15.8 -0.4
GLAT  Glass          77.03  49 eP       P        06 22 17.4 +1.2
      comp=Z,260nm,1.1s
HLM1  Long Mynd      77.05 347 eP       P        06 22 15.4 -0.7
HLM1                            IAmb    IAmb     06 22 18.3
      comp=Z,498nm,1.8s
HLM1                            IAMs_20 IAMs_20  07 03 06.2
      comp=Z,6µm,16.6s
GEC2  GERESS Array S 77.05 336 eP       P        06 22 15.6 -0.6
      comp=Z,385nm,1.6s
GEC2                            LR      LR
      comp=Z,19µm,20.0s
GEC2  GERESS Array S 77.05 336 eP       P        06 22 15.6 -0.6
GEC2                            pmax    pmax
      comp=Z,385nm,1.6s
GEC2                            MLR     MLR
      comp=Z,19µm,20.0s
GERES GERESS Array B 77.05 336  P       P        06 22 15.3 -0.9
      comp=Z,23nm,0.6s,baz=34,slow=5.3,SNR=134
GERES                           LR      LR       07 00 38.2
      comp=Z,21µm,18.6s,baz=20,slow=39
GOLR                 77.05 327⇑iP       P        06 22 17.8 +1.6
GEA0  GERESS Array S 77.06 336 eP       P        06 22 15.5 -0.7
PQI   Presque Isle   77.07  29 eP       P        06 22 16.1 -0.1
      comp=Z,53nm,1.0s
CSKK  Csˆ‡kako       77.07 332⇑eP       P        06 22 17.2 +1.0
V44A  Blytheville    77.08  50  P       P        06 22 15.3 -1.2
      baz=322
CUGUR Gurin_S˜VAS    77.09 315⇑iP       P        06 22 17.3 +0.6
T46A  Princeton      77.10  48  P       P        06 22 16.3 -0.2
      baz=323,SNR=35
CORM  Corum          77.10 318 eP       P        06 22 15.5 -1.2
WLAR  White Oak Lake 77.10  53 eP       P        06 22 17.1 +0.5
      comp=Z,80nm,0.8s
DARE  Darende-Malaty 77.12 315 eP       P        06 22 16.5 -0.3
S47A  Hartford       77.15  47  P       P        06 22 15.6 -1.2
      baz=324,SNR=9.4
HGN   Heimansgroeve  77.15 341 eP       P        06 22 16.7 +0.1
      comp=Z,969nm,1.3s
HGN                            ePP      PP       06 25 16.7 +6.9
HGN                            ePPP     PPP      06 27 00.8
HGN                            eS       S        06 32 05.7 +3.1
HGN                            eSS      SS       06 37 17.3  +18
BEBN  Eben Emael     77.17 341 ⇓P       P        06 22 16.9 +0.2
M54A  Oil Creek Stat 77.18  40  P       P        06 22 16.2 -0.7
      baz=327,SNR=16
M54A  Oil Creek Stat 77.18  40 eP       P        06 22 18.0 +1.0
      comp=Z,109nm,1.1s
M54A                            LR      LR
      comp=Z,6µm,19.0s
UTMT  University of  77.18  49 eP       P        06 22 17.9 +0.9
      comp=Z,178nm,0.9s
CANT  Cankiri        77.19 319 eP       P        06 22 16.5 -0.6
X42A  Stuttgart      77.20  52  P       P        06 22 16.2 -0.9
      baz=322
MBWA  Marble Bar     77.21 215 eP       P        06 22 18.3 +1.2
      comp=Z,110nm,1.4s
SGRR  Singureni      77.21 326⇑iP       P        06 22 16.5 -0.6
Y41A  Eaglette Beard 77.22  53  P       P        06 22 16.7 -0.5
      baz=322
U45A  Rockin P Farm, 77.23  49  P       P        06 22 16.1 -1.2
      baz=323,SNR=5.8
YOZ   Yozgat         77.23 317 eP       P        06 22 17.1 -0.4
W43A  Forest City    77.25  51  P       P        06 22 16.7 -0.8
      baz=322
NCB   Newcomb        77.26  35 eP       P        06 22 17.8 +0.5
      comp=Z,56nm,1.0s
NCB                             LR      LR
      comp=Z,4µm,21.0s
MEM   Membach        77.28 341 ⇑P       P        06 22 16.6 -0.7
      comp=Z,323nm,1.3s
CONA  Conrad Observa 77.28 334 i P      P        06 22 17.6 +0.1
      comp=Z,358nm,1.3s,SNR=169
Z40A  Long Farm, Mag 77.28  54  P       P        06 22 17.3 -0.4
      baz=321,SNR=12
HALT  Halls          77.29  49 eP       P        06 22 18.4 +0.8
      comp=Z,103nm,1.0s
HALT                            LR      LR
      comp=Z,4µm,20.0s
MDH   Madha          77.29 294 i P      P        06 22 17.6 -0.2
      SNR=57
SOP   Sopron         77.30 333⇑eP       P        06 22 18.5 +1.0
HUMR  Humele         77.31 326⇓iP       P        06 22 17.9 +0.3
MSFE  Esma-Masafi    77.33 294 i P      P        06 22 17.7 -0.4
      SNR=62
ELDT  Eldivan        77.37 319⇑iP       P        06 22 18.3 +0.1
R49A  Shelbyville    77.39  45  P       P        06 22 17.5 -0.6
      baz=324,SNR=6.1
URFA  Urfa           77.40 314 eP       P        06 22 19.5 +1.1
WSAR  Wadi Sarin     77.42 291  LR      LR       07 01 10.3
      comp=Z,13µm,19.5s,baz=69,slow=39
UCC   Uccle          77.44 342 ⇑P       P        06 22 16.9 -1.3
UCC   Uccle          77.44 342 eP       P        06 22 18.3 +0.1
      comp=Z,268nm,1.4s
UCC                             LR      LR
      comp=Z,10µm,18.0s
UCC   Uccle          77.44 342 eP       P        06 22 18.3 +0.1
UCC                             pmax    pmax
      comp=Z,268nm,1.4s
UCC                             MLR     MLR
      comp=Z,10µm,18.0s
ELBS  KAHRAMANMARAS77.48 315⇑iP         P        06 22 19.4 +0.6
S48A  Wiedeman Farm, 77.48  46  P       P        06 22 17.7 -1.1
      baz=324,SNR=16
VT1   Waterbury      77.49  34 eP       P        06 22 19.5 +0.9
      comp=Z,73nm,1.0s
Q50A  Georgetown     77.49  44  P       P        06 22 18.4 -0.3
      baz=325,SNR=8.3
N54A  Moraine State  77.50  40  P       P        06 22 17.7 -1.1
      baz=326,SNR=18
N54A  Moraine State  77.50  40 eP       P        06 22 19.2 +0.5
      comp=Z,340nm,1.7s
N54A                            LR      LR
      comp=Z,7µm,19.0s
U46A  Springville    77.50  48  P       P        06 22 18.1 -0.8
      baz=323
UMQ   Umm Al-Quwin   77.50 294 i P      P        06 22 19.0 +0.1
      SNR=23
BIDO  Bidbid         77.51 291  P       P        06 22 20.0 +0.9
      SNR=19
T47A  Sharon Grove   77.52  47  P       P        06 22 17.7 -1.2
      baz=324,SNR=20
T47A  Sharon Grove   77.52  47 eP       P        06 22 19.6 +0.7
      comp=Z,111nm,0.9s
T47A                            LR      LR
      comp=Z,6µm,21.0s
SANL  SANLIURFA_Merk 77.54 313⇑iP       P        06 22 19.8 +0.8
BZS   Buzias         77.54 329⇓iP       P        06 22 18.7 -0.2
PRD   Provadia       77.55 324 i P      P        06 22 18.3 -0.7
TIM   Timisoara      77.57 329⇑iP       P        06 22 19.1 +0.1
MCH1  Michaelchurch  77.57 347 eP       P        06 22 18.1 -0.9
MCH1                            IAmb    IAmb     06 22 21.2
      comp=Z,734nm,1.8s
MCH1                            IAMs_20 IAMs_20  07 03 21.9
      comp=Z,7µm,16.6s
Z41A  Richland Creek 77.60  53  P       P        06 22 18.2 -1.2
      baz=322
Z41A  Richland Creek 77.60  53 eP       P        06 22 19.9 +0.5
      comp=Z,52nm,1.1s
Z41A                            LR      LR
      comp=Z,7µm,18.0s
BCLA  Clavier        77.61 341 ⇑P       P        06 22 18.5 -0.7
      comp=Z,222nm,1.4s
X43A  Marvell        77.61  51  P       P        06 22 18.7 -0.7
      baz=322,SNR=5.9
X43A  Marvell        77.61  51 eP       P        06 22 20.3 +0.9
      comp=Z,119nm,1.0s
X43A                            LR      LR
      comp=Z,6µm,21.0s
V45A  Humboldt       77.61  49  P       P        06 22 18.4 -1.0
      baz=323,SNR=5.5
MET   Memphis--Engin 77.61  50 eP       P        06 22 21.3 +1.8
      comp=Z,887nm,1.8s
MET                             LR      LR
      comp=Z,4µm,18.0s
UOSS  Minazif        77.61 294 eP       P        06 22 18.9 -0.7
      comp=Z,604nm,1.0s
UOSS                            LR      LR
      comp=Z,4µm,20.0s
UOSS  Minazif        77.61 294 i P      P        06 22 19.1 -0.6
      SNR=10
CCAR  Cane Creek     77.62  52 eP       P        06 22 21.2 +1.7
      comp=Z,116nm,1.0s
Q51A  Peebles        77.63  43  P       P        06 22 18.3 -1.2
      baz=325,SNR=9.2
ATAB  Bozova         77.63 314⇑iP       P        06 22 20.2 +0.7
BNN   Bunyan         77.64 316 eP       P        06 22 19.9 +0.1
W44A  Shelby Farms P 77.66  50  P       P        06 22 18.6 -1.1
      baz=323
STRD  Stroud         77.66 346 eP       P        06 22 18.9 -0.6
STRD                            IAmb    IAmb     06 22 21.8
      comp=Z,1µm,1.4s
STRD                            IAMs_20 IAMs_20  07 04 59.9
      comp=Z,7µm,15.0s
CDAG  Cicekdag       77.67 318⇑iP       P        06 22 19.5 -0.3
140A  Cam and Jess,  77.67  54  P       P        06 22 19.3 -0.5
      baz=321,SNR=7.2
140A  Cam and Jess,  77.67  54 eP       P        06 22 21.2 +1.4
      comp=Z,104nm,1.2s
140A                            LR      LR
      comp=Z,4µm,18.0s
WBK   Wadi Bani Khal 77.67 290  P       P        06 22 21.6 +1.6
      SNR=5.7
Y42A  Garnett, Star  77.68  52  P       P        06 22 18.6 -1.2
      baz=322,SNR=5.8
MONM  Monmouth       77.70 347 eP       P        06 22 19.1 -0.5
MONM                            IAmb    IAmb     06 22 22.1
      comp=Z,332nm,1.1s
MONM                            IAMs_20 IAMs_20  07 03 24.6
      comp=Z,8µm,17.0s
IWEX  Carrickbyrne,  77.71 349 eP       P        06 22 19.1 -0.6
IWEX                            IAmb    IAmb     06 22 21.9
      comp=Z,359nm,1.2s
ELSH  Elham, Standar 77.72 344 eP       P        06 22 19.7 -0.1
ELSH                            IAmb    IAmb     06 22 22.4
      comp=Z,760nm,1.0s
ELSH                            IAMs_20 IAMs_20  07 02 19.8
      comp=Z,7µm,17.1s
SNF   Seneffe        77.73 342 ⇓P       P        06 22 17.9 -1.9
      comp=Z,171nm,1.5s
SARI  SarD1z-Kayseri 77.74 316 eP       P        06 22 20.2 -0.2
S49A  Springfield    77.74  45  P       P        06 22 19.1 -1.1
      baz=324,SNR=18
HATD  Hatta, Dubai   77.75 294  P       P        06 22 20.1 -0.3
      SNR=132
HATD  Hatta, Dubai   77.75 294 i P      P        06 22 19.9 -0.5
      SNR=195
T48A  Bowling Green  77.77  47  P       P        06 22 18.8 -1.5
      baz=324,SNR=9.9
833A  Chaparral WMA, 77.77  61  P       P        06 22 19.9 -0.5
      baz=320,SNR=8.2
833A  Chaparral WMA, 77.77  61 eP       P        06 22 21.3 +0.9
      comp=Z,41nm,1.1s
833A                            LR      LR
      comp=Z,3µm,21.0s
NATX  Nacogdoches    77.77  55  P       P        06 22 19.5 -0.9
      baz=321,SNR=5.8
NATX  Nacogdoches    77.77  55 eP       P        06 22 21.6 +1.2
      comp=Z,95nm,0.9s
NATX                            LR      LR
      comp=Z,3µm,21.0s
CMDR  Camlidere-ANKA 77.77 319⇑iP       P        06 22 19.6 -0.8
R50A  Paris          77.78  44  P       P        06 22 19.7 -0.7
      baz=325,SNR=8.8
MOA   Molln          77.81 335 i P      P        06 22 20.0 -0.4
      comp=Z,154nm,1.2s,SNR=72
SRE   Strehaia       77.83 328⇑iP       P        06 22 20.6 +0.1
OLDB  Oldbury-Upon-S 77.83 347 eP       P        06 22 19.5 -0.9
OLDB                            IAmb    IAmb     06 22 22.6
      comp=Z,725nm,1.9s
OLDB                            IAMs_20 IAMs_20  07 05 14.0
      comp=Z,9µm,15.5s
WVT   Waverly        77.86  48  P       P        06 22 19.0 -1.8
      baz=323
WVT   Waverly        77.86  48 eP       P        06 22 21.2 +0.4
      comp=Z,52nm,0.9s
WVT                             LR      LR
      comp=Z,6µm,20.0s
WVT   Waverly        77.86  48 eP       P        06 22 21.2 +0.4
WVT                             pmax    pmax
      comp=Z,52nm,0.9s
WVT                             MLR     MLR
      comp=Z,6µm,20.0s
LBNH  Lisbon         77.86  33  P       P        06 22 19.7 -1.0
      baz=330,SNR=10.0
LBNH  Lisbon         77.86  33 eP       P        06 22 21.5 +0.8
      comp=Z,50nm,1.1s
LBNH                            LR      LR
      comp=Z,5µm,18.0s
U47A  Clarksville    77.87  48  P       P        06 22 20.8  0.0
      baz=324,SNR=6.3
PKME  Peaks-Kenny Pk 77.89  31  P       P        06 22 19.9 -0.9
      baz=332,SNR=12
PKME  Peaks-Kenny Pk 77.89  31 eP       P        06 22 21.2 +0.4
      comp=Z,76nm,1.0s
PKME                            LR      LR
      comp=Z,6µm,18.0s
HGH   Gray Hill      77.89 347 eP       P        06 22 20.1 -0.6
ASHO  Ashiyiah       77.90 294  P       P        06 22 21.0 -0.3
      SNR=97
ASHO  Ashiyiah       77.90 294 i P      P        06 22 20.9 -0.3
      SNR=245
SMDO  Samad          77.90 291  P       P        06 22 22.3 +0.9
      SNR=14
BR131 Keskin Array S 77.91 318 eP       P        06 22 21.0 -0.2
BR131 Keskin Array S 77.91 318  P       P        06 22 21.5 +0.3
BRTR  Keskin Array B 77.91 318  P       P        06 22 20.7 -0.6
      comp=Z,162nm,0.9s,baz=56,slow=3.1,SNR=166
NAZ   Nazwa, Dubai   77.91 294  P       P        06 22 21.0 -0.3
      SNR=42
NAZ   Nazwa, Dubai   77.91 294 i P      P        06 22 20.8 -0.4
      SNR=75
CRAR  CRAIOVA        77.91 327⇑iP       P        06 22 22.5 +1.5
HERR  Herculane      77.91 328⇑iP       P        06 22 20.8 -0.2
ZIMR                 77.92 326⇑iP       P        06 22 20.8 -0.2
SURC  SANLIURFA_SURC77.95 313⇑iP        P        06 22 21.8 +0.4
W45A  Hickory Valley 77.96  50  P       P        06 22 20.3 -1.1
      baz=323,SNR=7.7
HOQ   Hoqain         77.96 292  P       P        06 22 22.3 +0.7
      SNR=18
ACCN  Adirondack Com 77.97  35 eP       P        06 22 22.0 +0.7
      comp=Z,82nm,1.1s
ACCN                            LR      LR
      comp=Z,5µm,20.0s
V46A  Holladay       77.98  48  P       P        06 22 21.5  0.0
      baz=323,SNR=15
MORH  Mˆ‡rˆ¡gy, Hung 77.98 331 eP       P        06 22 21.1 -0.2
ARSA  Arzberg        77.99 334 i P      P        06 22 21.3 -0.1
      comp=Z,300nm,1.4s,SNR=96
X44A  Crenshaw       78.00  51  P       P        06 22 20.7 -0.9
      baz=322
Z42A  Norrel Spur, H 78.03  53  P       P        06 22 20.4 -1.4
      baz=322,SNR=6.2
240A  Hunter Patters 78.04  55  P       P        06 22 21.3 -0.5
      baz=321
240A  Hunter Patters 78.04  55 eP       P        06 22 23.6 +1.7
      comp=Z,275nm,1.7s
240A                            LR      LR
      comp=Z,4µm,18.0s
SZH   Strazhica      78.05 325 i P      P        06 22 20.6 -1.2
141A  Papa Simpson,  78.05  54  P       P        06 22 20.8 -1.2
      baz=322
DOU   Dourbes        78.06 342 ⇑P       P        06 22 20.7 -1.0
      comp=Z,136nm,1.6s
Y43A  Makayla and Ka 78.06  52  P       P        06 22 21.4 -0.5
      baz=322
BINY  Binghamton     78.09  37  P       P        06 22 21.2 -0.8
      baz=328,SNR=5.2
BINY  Binghamton     78.09  37 eP       P        06 22 22.5 +0.4
      comp=Z,52nm,1.3s
BINY                            LR      LR
      comp=Z,4µm,21.0s
R51A  Hillsboro      78.11  44  P       P        06 22 21.8 -0.4
      baz=325,SNR=16
AVNS  Nevsehir-Avano 78.13 317⇑iP       P        06 22 22.0 -0.4
HMNX  Herstmonceux   78.13 345 eP       P        06 22 22.6 +0.5
HMNX                            IAmb    IAmb     06 22 25.1
      comp=Z,685nm,1.1s
HMNX                            IAMs_20 IAMs_20  07 02 45.0
      comp=Z,8µm,18.8s
WLF   Walferdange    78.14 341 ⇑P       P        06 22 22.5 +0.4
WLF   Walferdange    78.14 341 eP       P        06 22 22.3 +0.2
      comp=Z,266nm,1.3s
WLF                             LR      LR
      comp=Z,12µm,18.0s
WLF   Walferdange    78.14 341 eP       P        06 22 22.3 +0.2
WLF                             pmax    pmax
      comp=Z,266nm,1.3s
WLF                             MLR     MLR
      comp=Z,12µm,18.0s
LOD   Lodumlu        78.15 319 eP       P        06 22 22.0 -0.5
ANTO  Ankara         78.15 319 eP       P        06 22 23.3 +0.8
ANTO  Ankara         78.15 319⇑iP       P        06 22 22.9 +0.4
ANTO  Ankara         78.15 319 eP       P        06 22 22.6 +0.1
      comp=Z,454nm,1.2s
ANTO  Ankara         78.15 319  P       P        06 22 22.9 +0.4
      SNR=73
SAHE  Sakarya_HENDEK 78.16 321⇑iP       P        06 22 21.1 -1.3
T49A  Edmonton       78.18  46  P       P        06 22 22.3 -0.3
      baz=324,SNR=11
T49A  Edmonton       78.18  46 eP       P        06 22 23.2 +0.6
      comp=Z,280nm,1.9s
T49A                            LR      LR
      comp=Z,8µm,21.0s
U48A  Cassie Pea, Po 78.18  47  P       P        06 22 22.1 -0.5
      baz=324,SNR=8.8
BR231 Keskin MP Arra 78.18 319 eP       P        06 22 22.8  0.0
HNH   Hanover        78.20  34 eP       P        06 22 23.7 +1.2
      comp=Z,105nm,1.5s
KAND  Kocaeli-Kandir 78.23 321 i P      P        06 22 20.1 -2.6
S50A  Richmond       78.24  45  P       P        06 22 23.2 +0.3
      baz=325,SNR=9.5
MDVR  Moldovita      78.24 329⇑iP       P        06 22 22.6 -0.3
SAIM  ADANA          78.25 316⇑iP       P        06 22 23.3 +0.2
V47A  Nunnelly       78.25  48  P       P        06 22 22.4 -0.6
      baz=324,SNR=13
KMRS  Kahramanmaras  78.25 315 eP       P        06 22 23.7 +0.7
STU   Stuttgart      78.28 338 eP       P        06 22 22.4 -0.5
      comp=Z,305nm,1.1s
STU                             LR      LR
      comp=Z,8µm,18.0s
STU   Stuttgart      78.28 338 eP       P        06 22 22.4 -0.5
STU                             pmax    pmax
      comp=Z,305nm,1.1s
STU                             MLR     MLR
      comp=Z,8µm,18.0s
BBAL  Bala           78.28 319⇑iP       P        06 22 22.9 -0.4
BEHE  Becsehely      78.33 333⇑eP       P        06 22 23.6 +0.4
BTAS  Taskesti       78.33 320⇑iP       P        06 22 22.4 -1.0
MDUB  Mudurnu        78.33 320 eP       P        06 22 22.9 -0.6
OXF   Oxford         78.36  50  P       P        06 22 23.2 -0.4
      baz=323,SNR=8.1
OXF   Oxford         78.36  50 eP       P        06 22 24.8 +1.2
      comp=Z,273nm,1.4s
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OXF                                    LR        LR
       comp=Z,4µm,18.0s
OXF    Oxford             78.36  50    eP        P         06 22 24.8 +1.2
OXF                                    pmax      pmax
       comp=Z,273nm,1.4s
OXF                                    MLR       MLR
       comp=Z,4µm,18.0s
GAZ    Gaziantep          78.38 314    eP        P         06 22 23.6  -0.2
WVL    Waterville         78.38  32    eP        P         06 22 23.9 +0.4
       comp=Z,91nm,1.0s
ASUD   Al Ashush, Dub     78.38 294    P         P         06 22 24.2 +0.3
       SNR=39
ASUD   Al Ashush, Dub     78.38 294    i P       P         06 22 23.7  -0.2
       SNR=26
W46A   Michie             78.38  49    P         P         06 22 22.9  -0.8
       baz=323
AFSR   Af¯ar-Bala (A      78.38 318    eP        P         06 22 22.9  -0.9
JMDO   Jabal Madar        78.38 291    P         P         06 22 24.5 +0.5
       SNR=6.7
Y44A   Strider, Charl     78.39  51    P         P         06 22 23.9 +0.1
       baz=323,SNR=8.4
X45A   UM Field Stati     78.44  50    P         P         06 22 23.0  -1.1
       baz=323,SNR=5.8
ANDN   Andirin            78.45 315⇑iP           P         06 22 24.4 +0.1
Z43A   Armstrong Fami     78.45  52    P         P         06 22 23.8  -0.3
       baz=322
YAHY   KAYSERI_Yahyal     78.48 316⇑iP           P         06 22 24.5 +0.1
JMB    Yambol             78.49 324    i P       P         06 22 23.5  -0.7
241A   Mo Tay, Goldon     78.50  54    P         P         06 22 24.2  -0.2
       baz=322,SNR=9.8
241A   Mo Tay, Goldon     78.50  54    eP        P         06 22 26.6 +2.2
       comp=Z,108nm,0.9s
241A                                   LR        LR
       comp=Z,5µm,20.0s
KOGS   Kog                78.50 333    i P       P         06 22 23.4  -0.8
R52A   Catlettsburg       78.50  43    P         P         06 22 23.4  -0.9
       baz=325,SNR=8.1
VAL    Valentia           78.52 351⇓iP           P         06 22 25.1 +0.9
VAL                                    i S       S         06 32 17.8 +0.4
HKT    Hockley            78.53  57    eP        P         06 22 25.6 +1.1
       comp=Z,68nm,1.8s
HKT                                    LR        LR
       comp=Z,6µm,18.0s
HKT    Hockley            78.53  57    eP        P         06 22 25.6 +1.1
HKT                                    pmax      pmax
       comp=Z,68nm,1.8s
HKT                                    MLR       MLR
       comp=Z,6µm,18.0s
TRY    Troy               78.53  35    eP        P         06 22 25.4 +1.0
       comp=Z,30nm,1.0s
U49A   Red Boiling Sp     78.54  46    P         P         06 22 22.9  -1.7
       baz=324,SNR=14
ALNE   Al Ain             78.55 293    i P       P         06 22 24.6  -0.3
       SNR=73
T50A   Nancy              78.57  46    P         P         06 22 23.7  -1.1
       baz=325,SNR=25
142A   Monroe             78.60  53    P         P         06 22 24.5  -0.5
       baz=322
ARQ    Araqi              78.63 292    P         P         06 22 26.2 +0.9
       SNR=27
AJN    Ajban              78.63 294    i P       P         06 22 24.6  -0.6
       SNR=49
FFD    Franklin Falls     78.63  33    eP        P         06 22 26.3 +1.4
       comp=Z,57nm,1.1s
MCWV   Mont Chateau       78.64  41    P         P         06 22 25.3 +0.2
       baz=327,SNR=11
MCWV   Mont Chateau       78.64  41    eP        P         06 22 26.0 +0.9
       comp=Z,56nm,0.9s
MCWV                                   LR        LR
       comp=Z,5µm,19.0s
S51A   Beattyville        78.64  44    P         P         06 22 24.2  -0.9
       baz=325,SNR=8.6
S51A   Beattyville        78.64  44    eP        P         06 22 25.6 +0.4
       comp=Z,48nm,0.8s
S51A                                   LR        LR
       comp=Z,7µm,22.0s
SSPA   Standing Stone     78.65  39    P         P         06 22 23.2  -1.9
       baz=328
SSPA   Standing Stone     78.65  39    eP        P         06 22 26.0 +0.9
       comp=Z,53nm,1.0s
SSPA                                   LR        LR
       comp=Z,5µm,19.0s
GULT   Gulveren           78.65 321    eP        P         06 22 25.3 +0.1
PLAL   Pickwick Lake      78.65  49    eP        P         06 22 25.4 +0.2
       comp=Z,54nm,0.8s
PLAL                                   LR        LR
       comp=Z,5µm,20.0s
SOKA   Soboth             78.65 334    eP        P         06 22 24.7  -0.4
       comp=Z,222nm,0.9s,SNR=297
BSY    Bisya              78.66 292    P         P         06 22 26.5 +1.1
       SNR=26
V48A   Smith Brothers     78.66  48    P         P         06 22 24.4  -0.9
       baz=324,SNR=12
V48A   Smith Brothers     78.66  48    eP        P         06 22 25.7 +0.5
       comp=Z,56nm,0.9s
V48A                                   LR        LR
       comp=Z,5µm,20.0s
O56A   Blue Knob Stat     78.67  40    P         P         06 22 24.9  -0.5
       baz=327,SNR=10.0
O56A   Blue Knob Stat     78.67  40    eP        P         06 22 25.5 +0.2
       comp=Z,90nm,1.3s
O56A                                   LR        LR
       comp=Z,5µm,19.0s
W47A   Westpoint          78.67  48    P         P         06 22 24.0  -1.3
       baz=324,SNR=9.5
KKUL   Konya-Kulu         78.68 318⇑iP           P         06 22 25.3  -0.2
GEYV   SAKARYA_Geyve      78.69 321⇑iP           P         06 22 24.7  -0.6
GROS   Grobnik            78.71 333    i P       P         06 22 24.9  -0.6
GROS                                   eS        S         06 32 22.5 +2.6
AUMIH  MIHALICIK          78.72 320    eP        P         06 22 26.1 +0.4
AUMIH  MIHALICIK          78.72 320⇑iP           P         06 22 25.1  -0.6
KSPA   Keystone Colle     78.72  37    eP        P         06 22 26.0 +0.5
       comp=Z,43nm,1.0s
KSPA                                   LR        LR
       comp=Z,6µm,20.0s
X46A   Booneville         78.74  50    P         P         06 22 23.9  -1.8
       baz=323,SNR=6.0
AKSY   AKSARAY - Alti     78.74 318⇑iP           P         06 22 25.0  -0.8
KUZU   Kuzuini            78.76 314⇑iP           P         06 22 26.0 +0.2
143A   Socs Landing,      78.76  53    P         P         06 22 24.6  -1.2
       baz=322
143A   Socs Landing,      78.76  53    eP        P         06 22 26.3 +0.4
       comp=Z,107nm,1.2s
143A                                   LR        LR
       comp=Z,7µm,20.0s
KBA    Koelnbreinsper     78.77 335    i P       P         06 22 26.0 +0.2
       comp=Z,1µm,1.4s,SNR=769
HTL    Hartland           78.77 348    eP        P         06 22 25.2  -0.4
HTL                                    IAmb      IAmb      06 22 27.9
       comp=Z,104nm,1.0s
HTL                                    IAMs_20   IAMs_20   07 04 02.6
       comp=Z,3µm,17.8s
Y45A   Yeager Farm, C     78.80  51    P         P         06 22 26.2 +0.2
       baz=323,SNR=12
SLMH   Al Salmeh          78.81 313    eP        P         06 22 24.9  -1.2
Z44A   Pea Ridge, Bel     78.81  52    P         P         06 22 25.0  -1.1
       baz=323
S52A   Salyersville       78.85  44    P         P         06 22 25.3  -0.9
       baz=325,SNR=18
242A   Grayson            78.87  53    P         P         06 22 27.0 +0.5
       baz=322,SNR=11
ELBA   Catalca            78.89 322⇑iP           P         06 22 25.6  -0.9
BFO    Black Forest       78.89 339    eP        P         06 22 25.7  -0.7
       comp=Z,266nm,1.2s
BFO                                    LR        LR
       comp=Z,8µm,20.0s
BFO    Black Forest       78.89 339    i P       P         06 22 26.0  -0.4
341A   Kurthwood          78.90  55    P         P         06 22 27.0 +0.3
       baz=322,SNR=11
341A   Kurthwood          78.90  55    eP        P         06 22 27.5 +0.8
       comp=Z,61nm,1.1s
341A                                   LR        LR
       comp=Z,4µm,21.0s
OBKA   Obir               78.94 334    i P       P         06 22 26.3  -0.5
       comp=Z,176nm,1.0s,SNR=79
EMMW   East Machias       78.99  30    eP        P         06 22 27.2 +0.4
       comp=Z,84nm,1.0s
WATA   Walderalm          79.01 336    epP       P         06 22 28.1 +1.0
       comp=Z,652nm,1.4s,SNR=67
T51A   Gray               79.03  45    P         P         06 22 26.1  -1.2
       baz=325,SNR=7.0
AUSIV  SIVRIHISAR         79.05 319    eP        P         06 22 26.9  -0.6
AUSIV  SIVRIHISAR         79.05 319⇑iP           P         06 22 26.5  -1.0
WTTA   Wattenberg         79.06 336    i P       P         06 22 27.6 +0.1
       comp=Z,711nm,1.5s,SNR=142
U50A   Jamestown          79.06  46    P         P         06 22 26.3  -1.2
       baz=325,SNR=18
RETA   Reutte             79.08 337    eP        P         06 22 27.1  -0.4
       comp=Z,166nm,1.1s,SNR=72
V49A   McMinnville        79.08  47    P         P         06 22 26.5  -1.1
       baz=324,SNR=6.9
W48A   Pulaski            79.09  48    P         P         06 22 27.1  -0.5
       baz=324,SNR=25
MYKA   Terra Mystica      79.09 335    i P       P         06 22 26.9  -0.7
       comp=Z,279nm,1.3s,SNR=76
Z45A   Winona             79.12  51    P         P         06 22 28.6 +0.8
       baz=323
Z45A   Winona             79.12  51    eP        P         06 22 28.7 +0.9
       comp=Z,176nm,0.9s
Z45A                                   LR        LR
       comp=Z,5µm,21.0s
X47A   Russelville        79.13  49    P         P         06 22 27.5  -0.4
       baz=324,SNR=9.7
Y46A   Houston            79.14  50    P         P         06 22 28.0 +0.1
       baz=323,SNR=17
BORA   Eskisehir          79.14 320    eP        P         06 22 24.5  -3.4
BORA   Eskisehir          79.14 320⇑iP           P         06 22 27.0  -0.9
BSTP   Nigde              79.16 317    i P       P         06 22 28.9 +0.8
KVTX   Kingsville         79.22  60    PFAKE               06 22 40.0  +12
KVTX                                   LR        LR
       comp=Z,4µm,20.0s
SULT   Sultanhani-AKS     79.22 317    eP        P         06 22 27.6  -0.8
MNCI   Minicoy            79.25 270    eP        P         06 22 29.1 +0.3
       comp=Z,810nm,1.3s
AUKUT  KUTAHYA            79.25 321⇑iP           P         06 22 30.8 +2.2
N59A   State Game Lan     79.27  37    P         P         06 22 28.7 +0.1
       baz=329,SNR=12
N59A   State Game Lan     79.27  37    eP        P         06 22 29.3 +0.8
       comp=Z,43nm,0.9s
N59A                                   LR        LR
       comp=Z,6µm,20.0s
ESKT   Eskisehir          79.27 320    i P       P         06 22 27.9  -0.8
ECH    Echery             79.28 339    eP        P         06 22 28.0  -0.5
       comp=Z,375nm,1.2s
ECH                                    LR        LR
       comp=Z,5µm,20.0s
ECH    Echery             79.28 339    eP        P         06 22 28.0  -0.5
ECH                                    pmax      pmax
       comp=Z,375nm,1.2s
ECH                                    MLR       MLR
       comp=Z,5µm,20.0s
ABTA   Abfaltersbach      79.30 335    eP        P         06 22 28.0  -0.7
       comp=Z,351nm,1.2s,SNR=142
KARA   Karaisali          79.30 316    eP        P         06 22 29.1 +0.3
342A   Flagon Creek P     79.32  54    P         P         06 22 29.5 +0.6
       baz=322
342A   Flagon Creek P     79.32  54    eP        P         06 22 30.2 +1.2
       comp=Z,40nm,0.8s
342A                                   LR        LR
       comp=Z,6µm,20.0s
144A   Alexander Plac     79.33  52    P         P         06 22 28.7  -0.2
       baz=323
IGD    Bursa              79.33 321⇑iP           P         06 22 27.8  -1.0
441A   DeRidder           79.35  55    P         P         06 22 29.2 +0.2
       baz=322
T52A   Hallie             79.36  44    P         P         06 22 28.4  -0.7
       baz=325,SNR=7.3
243A   Waterproof         79.37  53    P         P         06 22 28.5  -0.6
       baz=322
KIZT   Kizilcal           79.37 319    eP        P         06 22 28.8  -0.5
LJU    Ljubljana          79.38 334    i P       P         06 22 28.0  -1.0
YURE   YUREGIR            79.39 315    eP        P         06 22 30.7 +1.4
YURE   YUREGIR            79.39 315⇑iP           P         06 22 29.7 +0.4
ARMA   Armidale           79.41 184    eP        P         06 22 30.8 +1.6
       comp=Z,279nm,1.9s
ARMA                                   LR        LR
       comp=Z,5µm,20.0s
GULE   Gulek              79.41 316⇑iP           P         06 22 29.6   0.0
QUA2   Belchertown        79.41  34    eP        P         06 22 29.9 +0.7
       comp=Z,68nm,1.6s
DIVS   Divibare           79.42 329    eP        P         06 22 28.4  -1.0
       comp=Z,372nm,1.0s
DIVS                                   LR        LR
       comp=Z,8µm,20.0s
W49A   Belvidere          79.43  48    P         P         06 22 28.5  -1.0
       baz=324,SNR=8.3
CADS   Cadrg              79.43 334    i P       P         06 22 27.8  -1.6
PAGS   Pennsylvania G     79.47  38    eP        P         06 22 30.2 +0.6
       comp=Z,58nm,1.0s
PAGS                                   LR        LR
       comp=Z,4µm,19.0s
U51A   La Follette        79.48  45    P         P         06 22 29.3  -0.4
       baz=325,SNR=5.6
DAVA   Damuels            79.49 337    eP        P         06 22 29.3  -0.5
       comp=Z,338nm,1.1s,SNR=123
OZLJ   Ozalj              79.49 333    P         P         06 22 29.3  -0.3
TAHT   Tahtakopru-Hat     79.50 315    eP        P         06 22 30.6 +0.7
HRV    Adam Dziewonsk     79.50  34    P         P         06 22 29.1  -0.6
       baz=331
HRV    Adam Dziewonsk     79.50  34    eP        P         06 22 29.7   0.0
       comp=Z,48nm,1.0s
HRV                                    LR        LR
       comp=Z,5µm,21.0s
HRV    Adam Dziewonsk     79.50  34    eP        P         06 22 29.7   0.0
HRV                                    pmax      pmax
       comp=Z,48nm,1.0s
HRV                                    MLR       MLR
       comp=Z,5µm,21.0s
SWET   Sewanee            79.51  47    eP        P         06 22 29.6  -0.4
       comp=Z,86nm,0.8s
FETA   Feichten           79.52 337    i P       P         06 22 29.9   0.0
       comp=Z,331nm,1.4s,SNR=144
V50A   Pikevile           79.54  47    P         P         06 22 30.0  -0.1
       baz=325,SNR=12
TZTN   Tazewell           79.56  45    P         P         06 22 29.8  -0.4
       baz=325,SNR=6.5
TZTN   Tazewell           79.56  45    eP        P         06 22 31.0 +0.8
       comp=Z,38nm,0.9s
TZTN                                   LR        LR
       comp=Z,3µm,20.0s
KDHN   Kadinhani          79.57 319⇑iP           P         06 22 28.9  -1.5
ODNJ   Ogdensburg         79.58  37    eP        P         06 22 30.3 +0.1
       comp=Z,134nm,1.9s
ODNJ                                   LR        LR
       comp=Z,4µm,20.0s
X48A   Hartselle          79.58  49    P         P         06 22 28.8  -1.5
       baz=324,SNR=7.5
X48A   Hartselle          79.58  49    eP        P         06 22 30.2  -0.1
       comp=Z,31nm,0.8s
X48A                                   LR        LR
       comp=Z,6µm,20.0s
KERG   Konya-Eregli       79.59 317⇑iP           P         06 22 29.6  -1.0
145A   Houston Renfro     79.61  52    P         P         06 22 28.8  -1.6
       baz=323
VBMS   Vicksburg          79.61  52    P         P         06 22 29.7  -0.8
       baz=323
VBMS   Vicksburg          79.61  52    eP        P         06 22 31.6 +1.1
       comp=Z,67nm,0.8s
VBMS                                   LR        LR
       comp=Z,6µm,20.0s
Y47A   UCPARC, Winfie     79.62  49    P         P         06 22 30.4  -0.1
       baz=324,SNR=11
KDZ    Kurdzhali          79.64 325    i P       P         06 22 29.8  -0.7
Z46A   Louisville         79.64  51    P         P         06 22 30.8 +0.2
       baz=323,SNR=5.6
BOJS   Bojanci            79.65 333    i P       P         06 22 29.7  -0.8
BOJS                                   eS        S         06 32 24.2  -5.5
244A   Avery, Jackson     79.66  53    P         P         06 22 30.6  -0.1
       baz=323,SNR=12
CCA1   Carnmenellis       79.66 348    eP        P         06 22 29.8  -0.7
CCA1                                   IAmb      IAmb      06 22 32.8
       comp=Z,292nm,1.1s
CCA1                                   IAMs_20   IAMs_20   07 04 22.1
       comp=Z,5µm,18.3s
LUPA   Lehigh Univers     79.69  37    eP        P         06 22 31.6 +0.8
       comp=Z,5.6nm,1.2s
WES    Weston             79.69  34    eP        P         06 22 31.3 +0.5
       comp=Z,59nm,1.0s
WES    Weston             79.69  34    eP        P         06 22 31.3 +0.5
WES                                    pmax      pmax
       comp=Z,59nm,1.0s
KRTS   Karatas            79.72 315    eP        P         06 22 30.7  -0.3
LADK   Ladik-KONYA        79.72 318    eP        P         06 22 30.6  -0.6
BLY    Banja Luka         79.75 332⇑iP           P         06 22 31.0  -0.1
BLY    Banja Luka         79.75 332    eP        P         06 22 30.5  -0.6
       comp=Z,78nm,1.0s
BLY                                    LR        LR
       comp=Z,8µm,19.0s
343A   Vidalia            79.77  54    P         P         06 22 31.2  -0.1
       baz=322
U52A   Thorn Hill         79.77  45    P         P         06 22 31.5 +0.2
       baz=325,SNR=10
442A   Mamou              79.78  55    P         P         06 22 31.6 +0.2
       baz=322
V51A   Loudon             79.79  46    P         P         06 22 31.5 +0.1
       baz=325,SNR=9.6
V51A   Loudon             79.79  46    eP        P         06 22 31.6 +0.2
       comp=Z,56nm,0.9s
V51A                                   LR        LR
       comp=Z,9µm,20.0s
MVL    Millersville       79.81  38    eP        P         06 22 32.6 +1.2
       comp=Z,37nm,1.0s
MVL                                    LR        LR
       comp=Z,4µm,21.0s
YAYL   Yayladag           79.82 315    eP        P         06 22 31.9 +0.2
YAYL   Yayladag           79.82 315⇑iP           P         06 22 31.8   0.0
W50A   Signal Mountai     79.82  47    P         P         06 22 30.4  -1.2
       baz=325,SNR=9.4
W50A   Signal Mountai     79.82  47    eP        P         06 22 32.1 +0.4
       comp=Z,68nm,0.9s
W50A                                   LR        LR
       comp=Z,6µm,20.0s
KESN   Edirne-Kesan       79.86 323⇑iP           P         06 22 30.9  -1.2
MERS   Mersin             79.86 316    eP        P         06 22 31.8  -0.1
X49A   Woodville          79.89  48    P         P         06 22 31.4  -0.6
       baz=324,SNR=14
541A   Lake Charles       79.89  55    P         P         06 22 32.3 +0.3
       baz=322
541A   Lake Charles       79.89  55    PFAKE               06 22 40.0 +8.0
541A                                   LR        LR
       comp=Z,4µm,18.0s
BOLV   Bolvadin           79.90 319⇑iP           P         06 22 31.7  -0.5
PAL    Palisades          79.92  36    P         P         06 22 31.5  -0.5
       baz=330,SNR=7.5
PAL    Palisades          79.92  36    eP        P         06 22 33.1 +1.1
       comp=Z,80nm,1.0s
PAL                                    LR        LR
       comp=Z,5µm,19.0s
PAL    Palisades          79.92  36    eP        P         06 22 33.1 +1.1
PAL                                    pmax      pmax
       comp=Z,80nm,1.0s
PAL                                    MLR       MLR
       comp=Z,5µm,19.0s
KONT   Konya--Tatoy       79.94 318    eP        P         06 22 32.1  -0.2
KONT   Konya--Tatoy       79.94 318⇑iP           P         06 22 31.7  -0.6
BRNJ   Basking Ridge      79.94  37    eP        P         06 22 31.9  -0.2
       comp=Z,36nm,0.9s
BRNJ                                   LR        LR
       comp=Z,5µm,20.0s
Y48A   Jasper             79.95  49    P         P         06 22 31.3  -1.1
       baz=324,SNR=6.0
DAVOX  Davos/Dischmat     79.96 337    LR        LR        07 02 42.8
       comp=Z,10µm,18.4s,baz=18,slow=39
CPCT   Cooper Cave        79.99  46    eP        P         06 22 32.2  -0.3
       comp=Z,41nm,0.9s
KNL    Bal˜–kesir         80.00 323⇑iP           P         06 22 32.1  -0.4
FUORN  Ofenpass-Fuorn     80.01 337    eP        P         06 22 33.1 +0.3
       comp=Z,362nm,0.9s
FUORN                                  LR        LR
       comp=Z,11µm,18.0s
BRYW   Bryant College     80.02  34    eP        P         06 22 33.3 +0.7
       comp=Z,56nm,1.0s
YLE    Yale               80.02  35    PFAKE               06 22 40.0 +7.4
YLE                                    LR        LR
       comp=Z,5µm,20.0s
146A   Union              80.03  51    P         P         06 22 32.9 +0.1
       baz=323,SNR=8.1
146A   Union              80.03  51    PFAKE               06 22 40.0 +7.3
146A                                   LR        LR
       comp=Z,5µm,21.0s
ALN    Alexandroupoli     80.04 324    eP        P         06 22 32.5  -0.2
       comp=Z,280nm,1.1s
ALN                                    LR        LR
       comp=Z,5µm,18.0s
ALN    Alexandroupoli     80.04 324    eP        P         06 22 32.5  -0.2
ALN                                    pmax      pmax
       comp=Z,280nm,1.1s
ALN                                    MLR       MLR
       comp=Z,5µm,18.0s
245A   Little AP, Sta     80.07  52    P         P         06 22 32.8  -0.2
       baz=323
Z47A   Carrollton         80.08  50    P         P         06 22 32.5  -0.5
       baz=324,SNR=13
KMER   Konya-Meram        80.08 318⇑iP           P         06 22 32.6  -0.5
CPNY   Central Park       80.08  36    eP        P         06 22 32.5  -0.4
       comp=Z,134nm,1.4s
CPNY                                   LR        LR
       comp=Z,5µm,21.0s
443A   Delano Plantat     80.09  54    P         P         06 22 33.0  -0.1
       baz=322
344A   Westbrook Farm     80.10  53    P         P         06 22 33.9 +0.7
       baz=323,SNR=7.1
344A   Westbrook Farm     80.10  53    eP        P         06 22 34.9 +1.7
       comp=Z,87nm,0.8s
344A                                   LR        LR
       comp=Z,8µm,20.0s
ZAIG   Zacatecas          80.10  67    eP        P         06 22 34.7 +1.1
       comp=Z,41nm,1.3s
ZAIG                                   LR        LR
       comp=Z,4µm,22.0s
DOGA   KONYA_Doganhis     80.11 319⇑iP           P         06 22 33.0  -0.3
SDMD   Soldier's Deli     80.11  39    eP        P         06 22 32.9  -0.2
       comp=Z,33nm,1.1s
SDMD                                   LR        LR
       comp=Z,2µm,21.0s
V52A   Sevierville        80.11  45    P         P         06 22 32.1  -1.0
       baz=325,SNR=6.3
V52A   Sevierville        80.11  45    eP        P         06 22 33.3 +0.1
       comp=Z,52nm,1.0s
V52A                                   LR        LR
       comp=Z,6µm,20.0s
W51A   Cleveland          80.12  47    P         P         06 22 32.9  -0.3
       baz=325,SNR=5.9
JQE    Queens East        80.14 346    eP        P         06 22 32.5  -0.6
U53A   Fall Branch        80.15  44    P         P         06 22 33.5 +0.1
       baz=326,SNR=12
TAOE   Nuku Hiva Isla     80.15 116    eS        S         06 32 35.2  -0.6
       comp=Z,5µm,31.8s
TAOE   Nuku Hiva Isla     80.15 116    eLR       LR        06 47 18.9
       comp=Z,19µm,22.4s,baz=326
TAOE   Nuku Hiva Isla     80.15 116    PFAKE               06 22 50.0  +16
TAOE                                   LR        LR
       comp=Z,11µm,21.0s
JRS    Jersey             80.16 346    eP        P         06 22 33.0  -0.1
JSA    Saint Aubin        80.17 346    eP        P         06 22 32.2  -1.1
JSA                                    IAmb      IAmb      06 22 35.7
       comp=Z,636nm,1.2s
JSA                                    IAMs_20   IAMs_20   07 04 23.4
       comp=Z,5µm,17.4s
TKL    Tuckaleechee C     80.18  46    LR        LR        07 01 43.9
       comp=Z,6µm,18.7s,baz=332,slow=38
TKL    Tuckaleechee C     80.18  46    eP        P         06 22 34.2 +0.6
       comp=Z,86nm,1.5s
TKL    Tuckaleechee C     80.18  46    eP        P         06 22 34.2 +0.6
TKL                                    pmax      pmax
       comp=Z,86nm,1.5s
542A   Morse              80.18  55    P         P         06 22 33.4  -0.2
       baz=322
DURS   Dursunbey          80.19 322⇑iP           P         06 22 32.9  -0.8
Z48A   Northport          80.19  50    P         P         06 22 33.4  -0.2
       baz=324,SNR=6.2
GDZ    Gediz              80.21 321⇑iP           P         06 22 32.8  -1.1
PSUB   Penn St. - Bra     80.23  38    eP        P         06 22 34.1 +0.4
       comp=Z,25nm,0.8s
PSUB                                   LR        LR
       comp=Z,6µm,20.0s
X50B   Fort Payne         80.25  48    P         P         06 22 33.5  -0.5
       baz=324,SNR=10
COCO   West Island        80.28 239    i P       P         06 22 38.4 +4.3
PLE    Pljevlja           80.31 330⇑iP           P         06 22 32.4  -1.9
KKB    Krupnik            80.31 326    i P       P         06 22 34.0  -0.2
MMB    Musomiste          80.32 326    i P       P         06 22 33.6  -0.6
LNIG   Linares            80.33  63    eP        P         06 22 34.2  -0.3
       comp=Z,19nm,1.1s
LNIG                                   LR        LR
       comp=Z,2µm,20.0s
KIZK   Mersin             80.36 316    eP        P         06 22 33.9  -0.6
KIZK   Mersin             80.36 316⇑iP           P         06 22 33.7  -0.8
Y49A   Blount Mountai     80.37  48    P         P         06 22 34.1  -0.6
       baz=324
Y49A   Blount Mountai     80.37  48    eP        P         06 22 34.8 +0.1
       comp=Z,47nm,0.9s
Y49A                                   LR        LR
       comp=Z,5µm,20.0s
RAR    Rarotonga          80.37 139    LR        LR        06 51 36.2
       comp=Z,4µm,21.2s,baz=320,slow=31
TUE    Stuetta            80.38 337    eP        P         06 22 34.7   0.0
       comp=Z,458nm,1.1s
TUE                                    LR        LR
       comp=Z,9µm,18.0s
UDBI   Udbina             80.39 332    P         P         06 22 33.6  -1.0
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147A  Livingston         80.39  50    P      P      06 22 33.7 -1.0
      baz=324,SNR=11
147A  Livingston         80.39  50   eP      P      06 22 35.6 +0.9
      comp=Z,139nm,0.9s
147A                                  LR     LR
      comp=Z,4µm,19.0s
BALY  Balya              80.42 322 ⇑iP      P      06 22 34.1 -0.7
BLA   Blacksburg         80.42  42    P      P      06 22 33.9 -1.0
      baz=327,SNR=10
BLA   Blacksburg         80.42  42   eP      P      06 22 35.1 +0.2
      comp=Z,89nm,1.1s
BLA                                   LR     LR
      comp=Z,4µm,19.0s
BLA   Blacksburg         80.42  42   eP      P      06 22 35.1 +0.2
BLA                                   pmax   pmax
      comp=Z,89nm,1.1s
BLA                                   MLR    MLR
      comp=Z,4µm,19.0s
246A  Jackson Lee, B     80.48  51    P      P      06 22 34.1 -1.1
      baz=323
IVA   Berane             80.55 329   eP      P      06 22 34.6 -0.9
X51A  Calhoun            80.55  47    P      P      06 22 34.2 -1.3
      baz=325
X51A  Calhoun            80.55  47   eP      P      06 22 36.2 +0.6
      comp=Z,67nm,1.1s
X51A                                  LR     LR
      comp=Z,5µm,20.0s
DEMI  Demirci            80.56 321 ⇑iP      P      06 22 34.6 -1.1
W52A  Murphy             80.56  46    P      P      06 22 35.0 -0.7
      baz=325
W52A  Murphy             80.56  46   eP      P      06 22 36.6 +1.0
      comp=Z,56nm,1.3s
W52A                                  LR     LR
      comp=Z,8µm,20.0s
345A  Thompson Farm,     80.58  53    P      P      06 22 36.2 +0.4
      baz=323
KEBE  Keben-Mersin       80.58 316   eP      P      06 22 35.4 -0.4
543A  St. Martinvill     80.58  55    P      P      06 22 36.3 +0.5
      baz=322
BAGO  Egridir - ISPA     80.58 319 ⇑iP      P      06 22 34.9 -0.9
UPM   Unac-Piva          80.58 330 ⇑iP      P      06 22 34.2 -1.6
VWCC  Virginia Weste     80.59  42   eP      P      06 22 36.8 +1.1
V53A  Saluda             80.61  45    P      P      06 22 35.2 -0.7
      baz=326,SNR=5.7
V53A  Saluda             80.61  45   eP      P      06 22 36.8 +0.9
      comp=Z,25nm,0.9s
V53A                                  LR     LR
      comp=Z,6µm,20.0s
NVLJ  Novalja            80.62 333    P      P      06 22 34.1 -1.6
KZIL  AFYON_Kizioren     80.63 320 ⇑iP      P      06 22 35.2 -0.9
M65A  Busby, Falmout     80.66  34    P      P      06 22 34.6 -1.4
      baz=331
444A  Pine Grove         80.67  53    P      P      06 22 37.5 +1.2
      baz=323
Y50A  Piedmont           80.67  48    P      P      06 22 35.8 -0.5
      baz=324,SNR=8.0
STEP  BALIKESIR_Sava     80.69 322 ⇑iP      P      06 22 34.9 -1.4
KOME  Kolasin            80.69 329 ⇑iP      P      06 22 35.2 -1.1
IP04  Greensprings       80.70  40   eP      P      06 22 37.6 +1.3
      comp=Z,84nm,1.0s
IP04                                  LR     LR
      comp=Z,7µm,19.0s
MZR   Muzera             80.71 294  i P      P      06 22 36.3 -0.2
      SNR=104
247A  Quitman            80.72  51    P      P      06 22 36.3 -0.2
      baz=323,SNR=5.2
LRAL  Lakeview Retre     80.74  49    P      P      06 22 36.5 -0.1
      baz=324,SNR=7.2
LRAL  Lakeview Retre     80.74  49   eP      P      06 22 36.8 +0.2
      comp=Z,31nm,0.9s
LRAL                                  LR     LR
      comp=Z,5µm,21.0s
IKL   Isikli             80.76 316   eP      P      06 22 35.7 -0.9
148A  Greensboro         80.77  50    P      P      06 22 35.7 -1.0
      baz=324
PVY   Plav               80.77 329 ⇑iP      P      06 22 35.6 -1.2
ERMK  Ermenek            80.78 317 ⇑iP      P      06 22 35.7 -1.3
STIP  Stip               80.79 327  i P      P      06 22 35.0 -1.7
IP03  Louisa             80.79  40   eP      P      06 22 38.2 +1.4
      comp=Z,85nm,1.1s
IP03                                  LR     LR
      comp=Z,7µm,19.0s
PMOR  Pomariorio Ree     80.80 126   eT      T      07 51 57.3
      comp=Z,7.0nm,0.2s
346A  Big Creek Wild     80.81  52    P      P      06 22 37.2 +0.3
      baz=323
346A  Big Creek Wild     80.81  52   eP      P      06 22 38.5 +1.6
      comp=Z,119nm,0.8s
346A                                  LR     LR
      comp=Z,6µm,19.0s
SKO   Skopje             80.81 328  i P      P      06 22 36.2 -0.6
KHAL  Karahalli          80.81 320 ⇑iP      P      06 22 35.9 -1.2
ISP   Isparta            80.84 319   eP      P      06 22 37.9 +0.7
ISP   Isparta            80.84 319 ⇑iP      P      06 22 37.1 -0.1
ISP   Isparta            80.84 319   eP      P      06 22 36.8 -0.4
      comp=Z,284nm,1.3s
ISP                                   LR     LR
      comp=Z,4µm,18.0s
ISP   Isparta            80.84 319   eP      P      06 22 36.8 -0.4
ISP                                   pmax   pmax
      comp=Z,284nm,1.3s
ISP                                   MLR    MLR
      comp=Z,4µm,18.0s
CVRD  Centerville Ro     80.84  40   eP      P      06 22 38.1 +1.1
      comp=Z,93nm,1.0s
CVRD                                  LR     LR
      comp=Z,6µm,19.0s
BAYC  CANAKKALE_Bayr     80.84 323 ⇑iP      P      06 22 35.9 -1.2
Z49A  Columbiana         80.85  49    P      P      06 22 37.1  0.0
      baz=324,SNR=9.9
W53A  Cullowhee          80.86  46    P      P      06 22 36.5 -0.9
      baz=326,SNR=7.0
IP07  Quail              80.87  40   eP      P      06 22 38.0 +0.8
      comp=Z,59nm,0.9s
IP07                                  LR     LR
      comp=Z,7µm,19.0s
GULN  MERSIN_Gulnar      80.87 316 ⇑iP      P      06 22 35.9 -1.3
445A  Amite              80.88  53    P      P      06 22 37.2 -0.2
      baz=323
IP06  Yanceyville        80.88  40   eP      P      06 22 37.7 +0.4
      comp=Z,54nm,1.0s
IP06                                  LR     LR
      comp=Z,7µm,20.0s
IP01  Cuckoo             80.89  40   eP      P      06 22 38.5 +1.2
      comp=Z,58nm,1.1s
IP01                                  LR     LR
      comp=Z,7µm,20.0s
NKY   Niksic             80.90 330 ⇑iP      P      06 22 35.8 -1.6
CBN   Corbin Frederi     80.91  40    P      P      06 22 36.0 -1.4
      baz=328
CBN   Corbin Frederi     80.91  40   eP      P      06 22 38.5 +1.1
      comp=Z,89nm,1.0s
CBN                                   LR     LR
      comp=Z,5µm,19.0s
SUTC  Sutluce-Ispart     80.92 319   eP      P      06 22 35.7 -2.0
544A  White Castle       80.93  54    P      P      06 22 37.0 -0.6
      baz=323
BOZC  Bozcaada           80.95 323  i P      P      06 22 36.8 -0.8
NKME  Niksic             80.95 330 ⇑iP      P      06 22 36.0 -1.6
BRY   Bratogost          80.97 330 ⇑iP      P      06 22 36.1 -1.7
VAY   Valandovo          80.98 326  i P      P      06 22 37.2 -0.5
X52A  Dahlonega          80.98  46    P      P      06 22 37.3 -0.6
      baz=325,SNR=8.4
SENIN Lac Senin/Sane     80.98 339   eP      P      06 22 38.0 +0.1
      comp=Z,272nm,1.4s
SENIN                                 LR     LR
      comp=Z,8µm,21.0s
Y51A  Rockmart           80.99  48    P      P      06 22 37.0 -1.0
      baz=325,SNR=12
IP05  Hopewell Churc     81.06  40   eP      P      06 22 39.2 +1.0
      comp=Z,65nm,1.1s
IP05                                  LR     LR
      comp=Z,7µm,19.0s
MANT  Manisa             81.10 321 ⇑iP      P      06 22 37.7 -1.0
MANT  Manisa             81.10 321   eP      P      06 22 38.3 -0.4
      comp=Z,2µm,1.0s
MANT                                  LR     LR
      comp=Z,16µm,19.0s
Z50A  Ashland            81.10  49    P      P      06 22 37.9 -0.7
      baz=324,SNR=27
Z50A  Ashland            81.10  49   eP      P      06 22 38.8 +0.3
      comp=Z,118nm,0.9s
Z50A                                  LR     LR
      comp=Z,5µm,20.0s
TEKE  Tekeli-Mersin      81.10 317   eP      P      06 22 38.1 -0.4
BG3   Lake Jocassee      81.11  45   eP      P      06 22 39.6 +1.0
      comp=Z,70nm,0.9s
248A  Dixon Mills        81.13  50    P      P      06 22 38.7  0.0
      baz=324,SNR=6.9
EREN  Erenkoy            81.13 316   eP      P      06 22 37.8 -0.8
BRDR  BURDUR-Merkez      81.14 320 ⇑iP      P      06 22 37.6 -1.1
KEPZ  Antalya-Kepez      81.14 318 ⇑iP      P      06 22 37.3 -1.4
PDG   Podgorica          81.15 329 ⇓iP      P      06 22 38.5 -0.1
TTG   Podgorica          81.15 329 ⇑iP      P      06 22 37.4 -1.2
TTG   Podgorica          81.15 329   eP      P      06 22 37.3 -1.2
      comp=Z,657nm,1.1s
TTG                                   LR     LR
      comp=Z,10µm,22.0s
TTG   Podgorica          81.15 329   eP      P      06 22 37.3 -1.3
TTG                                   pmax   pmax
      comp=Z,657nm,1.1s
TTG                                   MLR    MLR
      comp=Z,10µm,22.0s
AYVA  Ayvalik            81.16 323 ⇑iP      P      06 22 37.4 -1.3
CEME  Cevo               81.16 329 ⇑iP      P      06 22 36.9 -1.9
149A  Jones              81.20  49    P      P      06 22 39.0  0.0
      baz=324,SNR=17
347A  Saraland           81.27  51    P      P      06 22 38.4 -1.1
      baz=324,SNR=5.1
STON  Ston               81.27 330    P      P      06 22 37.2 -2.0
HWQ   Hawqa              81.33 314   eP      P      06 22 39.4 -0.4
446A  Poplarville        81.33  52    P      P      06 22 38.8 -0.9
      baz=323
545A  Edgard             81.34  54    P      P      06 22 39.8 +0.1
      baz=323
545A  Edgard             81.34  54    PFAKE         06 22 50.0 +10
545A                                  LR     LR
      comp=Z,13µm,19.0s
X53A  Estanollee         81.34  46    P      P      06 22 39.3 -0.4
      baz=326,SNR=14
URVA  University of      81.38  40   eP      P      06 22 40.7 +0.8
GAZI  Gazipasa           81.38 317   eP      P      06 22 36.3 -3.7
GAZI  Gazipasa           81.38 317 ⇑iP      P      06 22 37.6 -2.4
BUM   Brajici-Budva      81.39 329 ⇑iP      P      06 22 38.3 -1.7
HCY   Herceg Novi        81.39 330 ⇑iP      P      06 22 38.0 -1.9
DRME  Dracevica, Mon     81.39 329 ⇑iP      P      06 22 38.9 -1.0
KRUS  Krusevo            81.41 327  i P      P      06 22 40.1  0.0
Z51A  Franklin           81.41  48    P      P      06 22 40.1 -0.1
      baz=325
Y52A  Lilburn            81.50  47    P      P      06 22 40.6  0.0
      baz=325,SNR=8.6
Y52A  Lilburn            81.50  47   eP      P      06 22 41.1 +0.4
      comp=Z,46nm,0.9s
Y52A                                  LR     LR
      comp=Z,6µm,20.0s
RAO   Raoul Island       81.51 157    PFAKE         06 22 50.0 +10
RAO                                   LR     LR
      comp=Z,5µm,21.0s
249A  Camden             81.53  50    P      P      06 22 41.4 +0.6
      baz=324,SNR=16
150A  Eclectic           81.57  49    P      P      06 22 40.3 -0.7
      baz=324,SNR=12
DNZL  Cakiroluk          81.57 320 ⇑iP      P      06 22 40.2 -0.9
ULC   Ulcinj             81.57 329 ⇑iP      P      06 22 39.1 -1.8
348A  Jackson            81.59  51    P      P      06 22 41.2  0.0
      baz=324
348A  Jackson            81.59  51    PFAKE         06 22 50.0 +8.9
348A                                  LR     LR
      comp=Z,4µm,18.0s
546A  Slidell            81.59  53    P      P      06 22 41.2  0.0
      baz=323
KORT  Korkueli           81.60 319 ⇑iP      P      06 22 40.0 -1.2
NCAT  North Carolina     81.66  43   eP      P      06 22 42.2 +0.8
      comp=Z,49nm,0.9s
NCAT                                  LR     LR
      comp=Z,5µm,21.0s
447A  Lucedale           81.70  52    P      P      06 22 41.8 +0.1
      baz=324
447A  Lucedale           81.70  52    PFAKE         06 22 50.0 +8.3
447A                                  LR     LR
      comp=Z,6µm,22.0s
KMSC  Kings Mountain     81.73  44    P      P      06 22 41.3 -0.5
      baz=326
KMSC  Kings Mountain     81.73  44   eP      P      06 22 41.3 -0.5
      comp=Z,38nm,1.0s
KMSC                                  LR     LR
      comp=Z,8µm,22.0s
GOLH  Golhisar           81.74 320 ⇑iP      P      06 22 40.6 -1.4
Y53A  Monroe             81.74  47    P      P      06 22 41.0 -0.9
      baz=326,SNR=8.0
645A  Chauvin            81.75  54    P      P      06 22 41.7 -0.3
      baz=323
BHL   Bhannes            81.77 314   eP      P      06 22 41.6 -0.6
PAULI Pauline            81.78  45   eP      P      06 22 42.9 +0.9
      comp=Z,18nm,0.9s
QASN  Qassioun           81.78 313   eP      P      06 22 41.6 -0.6
OHR   Ohrid              81.79 328  i P      P      06 22 41.4 -0.7
STKA  Stephens Creek     81.79 192    P      P      06 22 41.7 -0.1
      comp=Z,13nm,1.0s,baz=336,slow=6.1,SNR=12
STKA                                  LR     LR     06 58 30.7
      comp=Z,3µm,20.2s,baz=6.7,slow=35
STKA  Stephens Creek     81.79 192   eP      P      06 22 43.2 +1.4
      comp=Z,15nm,1.5s
TAVA  DENIZLI_Tavas      81.82 320 ⇑iP      P      06 22 41.3 -1.0
TOTH  TOTAH              81.84 313   eP      P      06 22 40.5 -2.0
FNA   Florina            81.88 327   eP      P      06 22 41.3 -1.3
      comp=Z,239nm,1.0s
FNA                                   LR     LR
      comp=Z,8µm,20.0s
FNA   Florina            81.88 327   eP      P      06 22 41.3 -1.3
FNA                                   pmax   pmax
      comp=Z,239nm,1.0s
FNA                                   MLR    MLR
      comp=Z,8µm,20.0s
Z52A  Williamson         81.88  48    P      P      06 22 41.4 -1.2
      baz=325,SNR=9.1
250A  Grady              81.96  50    P      P      06 22 42.6 -0.5
      baz=324,SNR=8.2
250A  Grady              81.96  50   eP      P      06 22 43.9 +0.8
      comp=Z,106nm,0.9s
250A                                  LR     LR
      comp=Z,3µm,22.0s
DQRL  Deir Qamar         81.97 314   eP      P      06 22 43.2  0.0
151A  Opelika            81.98  49    P      P      06 22 42.9 -0.2
      baz=325,SNR=6.7
CSS   Mathiatis          81.98 316   eP      P      06 22 43.1 -0.1
CSS   Mathiatis          81.98 316   eP      P      06 22 42.9 -0.3
      comp=Z,496nm,1.2s
CSS   Mathiatis          81.98 316    P      P      06 22 42.3 -0.9
448A  Bay Minette        82.00  51    P      P      06 22 42.7 -0.6
      baz=324
349A  Repton             82.00  51    P      P      06 22 42.8 -0.4
      baz=324,SNR=6.5
URLA  Izmir              82.01 322 ⇑iP      P      06 22 42.0 -1.3
RCY   Rachaya            82.02 313   eP      P      06 22 43.4 -0.1
BRBR  Barbar             82.03 313   eP      P      06 22 42.2 -1.5
QRWL  Qaraoun            82.05 313   eP      P      06 22 43.6  0.0
LEF   Lefka              82.05 316   eP      P      06 22 40.6 -2.9
646A  Port Sulphur       82.05  53    P      P      06 22 43.9 +0.3
      baz=323
HODGE Hodges             82.06  45   eP      P      06 22 43.8 +0.3
      comp=Z,36nm,0.9s
PPT   Papeete            82.06 129    LR     LR     06 57 00.5
      comp=Z,2µm,18.1s,baz=315,slow=34
LIT   Litokhoron         82.08 326   eP      P      06 22 42.5 -1.1
      comp=Z,139nm,1.0s
LIT                                   LR     LR
      comp=Z,11µm,19.0s
LIT   Litokhoron         82.08 326   eP      P      06 22 42.5 -1.1
LIT                                   pmax   pmax
      comp=Z,139nm,1.0s
LIT                                   MLR    MLR
      comp=Z,11µm,19.0s
AYDN  Tasoluk            82.08 321 ⇑iP      P      06 22 43.3 -0.4
PPT2  Papeete2           82.08 129   eS      S      06 32 51.5 -4.1
PPT2  Papeete2           82.08 129   eLR     LR     06 48 00.9
      comp=Z,3µm,22.8s
PPT2  Papeete2           82.08 129   eT      T      07 53 33.4
      comp=Z,3.8nm,0.3s
PAE   Paea               82.14 129   eT      T      07 53 37.1
      comp=Z,1.6nm,0.3s
ALFC  Alefka             82.15 316    P      P      06 22 43.0 -1.1
DGB   ˜zmir              82.16 322  i P      P      06 22 42.9 -1.1
Y54A  Tignall            82.16  46    P      P      06 22 43.2 -0.9
      baz=326,SNR=29
GOGA  Godfrey            82.16  47    P      P      06 22 43.4 -0.7
      baz=326,SNR=5.5
GOGA  Godfrey            82.16  47   eP      P      06 22 44.9 +0.8
      comp=Z,22nm,0.9s
GOGA                                  LR     LR
      comp=Z,5µm,18.0s
GOGA  Godfrey            82.16  47   eP      P      06 22 44.9 +0.8
GOGA                                  pmax   pmax
      comp=Z,22nm,0.9s
GOGA                                  MLR    MLR
      comp=Z,5µm,18.0s
152A  Waverly Hall       82.16  48    P      P      06 22 42.0 -2.2
      baz=325,SNR=7.0
152A  Waverly Hall       82.16  48   eP      P      06 22 44.7 +0.6
      comp=Z,41nm,1.0s
152A                                  LR     LR
      comp=Z,7µm,21.0s
TIAR  Tiarei             82.17 128   eT      T      07 53 39.6
      comp=Z,3.1nm,0.2s
SHBL  Chebaa             82.18 313   eP      P      06 22 44.1 -0.3
Z53A  Monticello         82.22  47    P      P      06 22 44.5 +0.1
      baz=326,SNR=11
BRAL  Brewton            82.22  51    P      P      06 22 44.5 +0.1
      baz=324
BRAL  Brewton            82.22  51   eP      P      06 22 45.8 +1.3
      comp=Z,109nm,0.8s
BRAL                                  LR     LR
      comp=Z,5µm,19.0s
VLC   Villacollemand     82.26 336   eP      P      06 22 44.7 +0.2
      comp=Z,654nm,1.2s
VLC                                   LR     LR
      comp=Z,16µm,19.0s
251A  Midway             82.29  49    P      P      06 22 44.6 -0.2
      baz=325,SNR=13
SZAC  Souni              82.36 316    P      P      06 22 43.1 -2.1
BNI   Bardonecchia       82.36 339   eP      P      06 22 45.4 +0.2
      comp=Z,381nm,1.5s
BNI                                   LR     LR
      comp=Z,10µm,18.0s
BNI   Bardonecchia       82.36 339   eP      P      06 22 45.4 +0.2
BNI                                   pmax   pmax
      comp=Z,381nm,1.5s
BNI                                   MLR    MLR
      comp=Z,10µm,18.0s
350A  Dozier             82.38  50    P      P      06 22 43.8 -1.4
      baz=324,SNR=5.5
AKMC  Akamas             82.38 317    P      P      06 22 44.7 -0.6
449A  Pace               82.46  51    P      P      06 22 44.5 -1.2
      baz=324
JSC   Jenkinsville       82.48  45   eP      P      06 22 46.5 +0.8
      comp=Z,30nm,1.0s
JSC   Jenkinsville       82.48  45   eP      P      06 22 46.5 +0.8
JSC                                   pmax   pmax
      comp=Z,30nm,1.0s
DALY  Dalyan (Mu˜la      82.48 320 ⇑iP      P      06 22 45.0 -0.7
PPCY  Paphos             82.49 316    P      P      06 22 43.1 -2.7
AKAS  Kas                82.57 319 ⇑iP      P      06 22 44.1 -2.2
ASF   Jabal al Asfar     82.59 312    P      P      06 22 46.3 -0.1
      comp=Z,188nm,1.0s,baz=339,slow=3.0,SNR=90
ASF                                   LR     LR     07 02 13.7
      comp=Z,5µm,18.3s,baz=318,slow=38
Z54A  Sparta             82.60  46    P      P      06 22 46.1 -0.3
      baz=326,SNR=11
153A  Fort Valley        82.61  47    P      P      06 22 44.9 -1.6
      baz=325
MMAI  Mount Meron Ar     82.62 313    P      P      06 22 46.6  0.0
      comp=Z,1µm,1.3s,baz=30,slow=6.7,SNR=56
MMAI                                  LR     LR     07 05 27.3
      comp=Z,5µm,18.3s,baz=0.0,slow=40
252A  Lumpkin            82.70  48    P      P      06 22 44.8 -2.1
      baz=325,SNR=5.9
450A  Crestview          82.75  50    P      P      06 22 47.4 +0.2
      baz=324
351A  Pinckard           82.86  49    P      P      06 22 46.7 -1.0
      baz=325,SNR=7.2
MS1   Monte Sant'Ang     82.89 331   eP      P      06 22 47.2 -0.6
253A  Americus           82.94  48    P      P      06 22 47.4 -0.8
      baz=325
253A  Americus           82.94  48   eP      P      06 22 48.2  0.0
      comp=Z,328nm,1.8s
253A                                  LR     LR
      comp=Z,6µm,20.0s
Z55A  Blythe             82.95  46    P      P      06 22 46.7 -1.5
      baz=326
154A  Montrose           82.99  47    P      P      06 22 47.5 -0.9
      baz=326,SNR=8.4
154A  Montrose           82.99  47   eP      P      06 22 48.4  0.0
      comp=Z,125nm,0.9s
154A                                  LR     LR
      comp=Z,5µm,20.0s
DAT   Datca              83.00 321 ⇑iP      P      06 22 47.0 -1.6
352A  Blakely            83.03  49    P      P      06 22 48.7 +0.1
      baz=325
352A  Blakely            83.03  49    PFAKE         06 23 00.0 +11
352A                                  LR     LR
      comp=Z,5µm,20.0s
AQU   L'Aquila           83.07 333   eP      P      06 22 49.2 +0.5
      comp=Z,387nm,1.1s
AQU                                   LR     LR
      comp=Z,10µm,22.0s
AGG   Agios Georgios     83.08 325   eP      P      06 22 47.0 -1.9
      comp=Z,317nm,1.0s
AGG                                   LR     LR
      comp=Z,16µm,19.0s
AGG   Agios Georgios     83.08 325   eP      P      06 22 47.0 -1.9
AGG                                   pmax   pmax
      comp=Z,317nm,1.0s
AGG                                   MLR    MLR
      comp=Z,16µm,19.0s
BAI   Bari               83.13 330   eP      P      06 22 48.9 -0.1
CNNC  Cliffs of the      83.19  42    P      P      06 22 48.8 -0.6
      baz=328
CNNC  Cliffs of the      83.19  42   eP      P      06 22 50.5 +1.1
      comp=Z,52nm,0.9s
CNNC                                  LR     LR
      comp=Z,7µm,19.0s
FASA  Fasano             83.23 330   eP      P      06 22 48.8 -0.7
MOIG  Morelia            83.28  68    PFAKE         06 23 00.0 +10
MOIG                                  LR     LR
      comp=Z,3µm,20.0s
155A  Kite               83.28  46    P      P      06 22 49.1 -0.8
      baz=326,SNR=5.5
451A  Vernon             83.32  50    P      P      06 22 49.8 -0.3
      baz=325
451A  Vernon             83.32  50    PFAKE         06 23 00.0 +10
451A                                  LR     LR
      comp=Z,4µm,20.0s
CGL1  Ceglie Messapi     83.34 330   eP      P      06 22 50.1  0.0
452A  Marianna           83.41  49    P      P      06 22 50.3 -0.4
      baz=325
SG1   Sgolgore (BA)      83.43 330   eP      P      06 22 50.2 -0.4
254A  Abbeville          83.44  47    P      P      06 22 50.1 -0.7
      baz=326,SNR=8.1
MASS  Massafra           83.47 330   eP      P      06 22 49.6 -1.2
353A  Camilla            83.48  48    P      P      06 22 50.8 -0.2
      baz=325,SNR=6.7
FORT  Forrest            83.50 204   eP      P      06 22 50.9 +0.1
      comp=Z,140nm,0.9s
TAR1  Taranto            83.52 330   eP      P      06 22 49.9 -1.1
MATE  Matera             83.59 330 ⇑iP      P      06 22 51.0 -0.4
BBOO  Buckleboo          83.62 197   eP      P      06 22 52.0 +0.6
      comp=Z,86nm,1.4s
156A  Sylvania           83.72  46    P      P      06 22 52.4 +0.3
      baz=326
TIGA  Tifton             83.72  48    P      P      06 22 52.0 -0.1
      baz=326,SNR=9.2
TIGA  Tifton             83.72  48    PFAKE         06 23 00.0 +7.8
TIGA                                  LR     LR
      comp=Z,6µm,21.0s
453A  Whigham            83.84  49    P      P      06 22 52.8  0.0
      baz=325
453A  Whigham            83.84  49    PFAKE         06 23 00.0 +7.2
453A                                  LR     LR
      comp=Z,5µm,20.0s
255A  Hazlehurst         83.85  47    P      P      06 22 53.0 +0.1
      baz=326,SNR=6.1
255A  Hazlehurst         83.85  47   eP      P      06 22 54.1 +1.2
      comp=Z,194nm,1.5s
255A                                  LR     LR
      comp=Z,5µm,21.0s
552A  Lynn Haven         83.94  50    P      P      06 22 53.6 +0.2
      baz=325
NHSC  New Hope           83.95  45    P      P      06 22 53.5 +0.1
      baz=327
NHSC  New Hope           83.95  45    PFAKE         06 23 00.0 +6.7
NHSC                                  LR     LR
      comp=Z,9µm,21.0s
256A  Glennville         84.09  46    P      P      06 22 54.1  0.0
      baz=326
355A  Pearson            84.15  47    P      P      06 22 54.1 -0.3
      baz=326,SNR=5.4
SANT  Santorini          84.18 322    PFAKE         06 23 10.0 +15
SANT                                  LR     LR
      comp=Z,5µm,20.0s
KARP  Karpathos          84.19 320   eP      P      06 22 54.3 -0.3
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	comp=Z,251nm,0.8s						
454A	Quitman	84.29	48	P	P	06 22 55.2	+0.1
	baz=326						
553A	Crawfordville	84.33	49	P	P	06 22 54.8	-0.4
	baz=325						
CUC	Castrocucco	84.48	330	*e*P	P	06 22 54.8	-1.2
	comp=Z,135nm,1.0s						
CUC				LR	LR		
	comp=Z,9µm,19.0s						
257A	Skidaway Islan	84.50	46	P	P	06 22 56.0	-0.2
	baz=327						
257A	Skidaway Islan	84.50	46	PFAKE		06 23 10.0	+14
257A				LR	LR		
	comp=Z,8µm,20.0s						
356A	Blackshear	84.52	47	P	P	06 22 56.4	+0.1
	baz=326						
455A	Stateville	84.56	48	P	P	06 22 56.6	+0.1
	baz=326						
357A	Townsend	84.74	46	P	P	06 22 56.8	-0.5
	baz=327						
554A	Perry	84.78	49	P	P	06 22 57.1	-0.4
	baz=326						
ITM	Ithomi	84.85	325	*e*P	P	06 22 56.6	-1.3
	comp=Z,755nm,1.5s						
ITM				LR	LR		
	comp=Z,5µm,21.0s						
TIP	Timpagrande	84.91	329⇓	*i*P	P	06 22 58.7	+0.5
TIP	Timpagrande	84.91	329	*e*P	P	06 22 57.6	-0.6
	comp=Z,441nm,1.2s						
TIP				LR	LR		
	comp=Z,8µm,22.0s						
RAYN	Ar Rayn	84.95	300	*e*P	P	06 22 58.1	-0.5
	comp=Z,257nm,1.1s						
RAYN				LR	LR		
	comp=Z,6µm,20.0s						
RAYN	Ar Rayn	84.95	300	*i* P	P	06 22 58.3	-0.3
	SNR=58						
RAYN	Ar Rayn	84.95	300	*e*P	P	06 22 58.1	-0.5
RAYN				pmax	pmax		
	comp=Z,257nm,1.1s						
RAYN				MLR	MLR		
	comp=Z,6µm,20.0s						
456A	Hilliard	85.06	47	P	P	06 22 58.8	-0.2
	baz=326						
456A	Hilliard	85.06	47	PFAKE		06 23 10.0	+11
456A				LR	LR		
	comp=Z,5µm,20.0s						
555A	McAlpin	85.10	48	P	P	06 22 58.3	-0.9
	baz=326						
555A	McAlpin	85.10	48	PFAKE		06 23 10.0	+11
555A				LR	LR		
	comp=Z,6µm,22.0s						
457A	Yulee	85.37	47	P	P	06 23 00.1	-0.4
	baz=327						
655A	Horseshoe Beac	85.46	49	P	P	06 23 00.8	-0.3
	baz=326						
556A	Lake Butler	85.47	48	P	P	06 23 01.3	+0.3
	baz=326,SNR=5.6						
OUZ	Omahuta	85.52	166	PFAKE		06 23 10.0	+9.2
OUZ				LR	LR		
	comp=Z,3µm,19.0s						
557A	Orange Park	85.79	47	P	P	06 23 01.9	-0.8
	baz=326						
656A	Willston	85.93	48	P	P	06 23 02.9	-0.5
	baz=326,SNR=5.0						
656A	Willston	85.93	48	*e*P	P	06 23 04.8	+1.5
	comp=Z,120nm,1.0s						
656A				LR	LR		
	comp=Z,6µm,21.0s						
CEL	Celeste	86.02	330	*e*P	P	06 23 03.5	-0.2
	comp=Z,127nm,1.1s						
657A	Interlachen	86.08	48	P	P	06 23 03.5	-0.6
	baz=326						
LVIG	Laguna Verde	86.10	64	PFAKE		06 23 20.0	+16
LVIG				LR	LR		
	comp=Z,2µm,21.0s						
TLIG	Tlapa	86.48	67	PFAKE		06 23 20.0	+14
TLIG				LR	LR		
	comp=Z,2µm,22.0s						
658A	Bunnell	86.51	47	P	P	06 23 05.7	-0.5
	baz=327						
658A	Bunnell	86.51	47	PFAKE		06 23 20.0	+14
658A				LR	LR		
	comp=Z,5µm,20.0s						
757A	Oxford	86.51	48	P	P	06 23 06.0	-0.3
	baz=326						
758A	Lake Helen	86.92	48	P	P	06 23 08.1	-0.1
	baz=327						
TBI	Tubuai	86.98	132	*e*S	S	06 33 41.3	-2.7
	comp=Z,3µm,29.0s						
TBI				*e*SS	SS	06 39 22.3	-5.8
	comp=Z,1µm,26.5s						
TBI	Tubuai	86.98	132	*e*LR	LR	06 50 20.3	
	comp=Z,10µm,30.8s,baz=328						
TBI	Tubuai	86.98	132	*e*T	T	07 59 40.0	
	comp=Z,4.6nm,0.3s						
VAE	Valguarnera	87.22	330	LR	LR	07 07 36.7	
	comp=Z,4µm,18.2s,baz=21,slow=39						
858A	St. Cloud	87.46	48	P	P	06 23 10.8	-0.1
	baz=327						
957A	Wimauma	87.48	49	P	P	06 23 10.4	-0.6
	baz=326						
957A	Wimauma	87.48	49	PFAKE		06 23 20.0	+9.1
957A				LR	LR		
	comp=Z,5µm,20.0s						
CLTB	Caltabellotta	87.51	331	*e*P	P	06 23 10.2	-0.9
	comp=Z,182nm,1.3s						
CLTB				LR	LR		
	comp=Z,9µm,19.0s						
DWPF	Disney Wildern	87.51	48	P	P	06 23 10.5	-0.6
	baz=327						
DWPF	Disney Wildern	87.51	48	*e*P	P	06 23 10.3	-0.7
	comp=Z,66nm,0.9s						
DWPF				LR	LR		
	comp=Z,5µm,20.0s						
958A	Wauchula	87.79	49	P	P	06 23 12.0	-0.4
	baz=327						
859A	Kempfer Cattle	87.82	48	P	P	06 23 12.6	0.0
	baz=327,SNR=5.6						
PBRG	Braganca	88.08	347	*e*P	P	06 23 13.8	+0.1
	comp=Z,42nm,1.6s						
PGAV	Gavieira, Arco	88.14	348	*e*P	P	06 23 14.2	+0.2
	comp=Z,48nm,1.5s						
PGAV	Gavieira, Arco	88.14	348	*e*S	S	06 33 47.5	-7.7
PGAV	Gavieira, Arco	88.14	348	*e*LR	LR	06 55 34.1	
	comp=Z,5µm,18.0s						
058A	Arcadia	88.20	49	P	P	06 23 13.7	-0.7
	baz=327						
959A	Okeechobee	88.27	48	P	P	06 23 14.0	-0.7
	baz=327						
PCAB	Cabril	88.35	348	*e*P	P	06 23 15.2	+0.3
	comp=Z,48nm,1.5s						
059A	Moore Haven	88.61	49	P	P	06 23 15.6	-0.7
	baz=327						
059A	Moore Haven	88.61	49	PFAKE		06 23 30.0	+14
059A				LR	LR		
	comp=Z,5µm,20.0s						
MXZ	Matakaoa Point	88.65	163	PFAKE		06 23 30.0	+14
MXZ				LR	LR		
	comp=Z,8µm,21.0s						
POLO	Lamas de Olo	88.65	348	*e*P	P	06 23 16.1	-0.3
	comp=Z,36nm,1.2s						
POLO	Lamas de Olo	88.65	348	*e*S	SKSac	06 33 49.2	+6.5
WDD	Wied Dalam	88.68	330	*e*P	P	06 23 16.3	-0.2
	comp=Z,494nm,1.1s						
WDD				LR	LR		
	comp=Z,5µm,19.0s						
PVRL	Vila Real	88.74	348	*e*P	P	06 23 16.5	-0.3
	comp=Z,96nm,1.7s						
MVO	Moncorvo	88.75	347	*e*P	P	06 23 17.1	+0.2
	comp=Z,69nm,1.4s						
MVO	Moncorvo	88.75	347	*e*S	SKSac	06 33 51.0	+7.8
MVO	Moncorvo	88.75	347	*e*LR	LR	06 57 32.3	
	comp=Z,4µm,18.0s						
NWAO	Narrogin (SRO)	88.83	212	LR	LR	07 06 32.2	
	comp=Z,1µm,18.6s,baz=282,slow=38						
NWAO	Narrogin (SRO)	88.83	212	*e*P	P	06 23 17.4	+0.5
	comp=Z,66nm,0.9s						
NWAO	Narrogin (SRO)	88.83	212	*e*P	P	06 23 17.4	+0.5
NWAO				pmax	pmax		
	comp=Z,66nm,0.9s						
060A	Indiantown	88.93	48	P	P	06 23 17.2	-0.6
	baz=327						
060A	Indiantown	88.93	48	PFAKE		06 23 30.0	+12
060A				LR	LR		
	comp=Z,6µm,20.0s						
HIZ	Hauiti	88.95	165	PFAKE		06 23 30.0	+13
HIZ				LR	LR		
	comp=Z,7µm,22.0s						
MYIG	MØrida	88.97	59	PFAKE		06 23 30.0	+12
MYIG				LR	LR		
	comp=Z,1µm,20.0s						
059Z	Ave Maria	88.98	49	P	P	06 23 17.8	-0.3
	baz=327						
URZ	Urewera	89.09	164	PFAKE		06 23 30.0	+12
URZ				LR	LR		
	comp=Z,5µm,21.0s						
PVIS	Viseu	89.31	348	*e*P	P	06 23 19.1	-0.4
	comp=Z,60nm,1.3s						
060Z	West Palm Beac	89.36	49	P	P	06 23 19.5	-0.3
	baz=327						
MTE	Manteigas	89.57	348	*e*P	P	06 23 21.0	+0.3
	comp=Z,68nm,1.9s						
MTE	Manteigas	89.57	348	*e*S	SKSac	06 33 55.0	+6.9
MTE	Manteigas	89.57	348	*e*LR	LR	07 02 18.0	
	comp=Z,5µm,18.0s						
MTE	Manteigas	89.57	348	*e*P	P	06 23 20.3	-0.5
	comp=Z,38nm,1.0s						
MTE				LR	LR		
	comp=Z,5µm,18.0s						
061Z	Ochoppi	89.64	49	P	P	06 23 20.7	-0.5
	baz=327						
061Z	Ochoppi	89.64	49	PFAKE		06 23 30.0	+8.9
061Z				LR	LR		
	comp=Z,5µm,21.0s						
ES19	SONSECA Array	89.69	345	*e*P	P	06 23 19.8	-1.5
ESDC	Sonseca Array	89.72	345	P	P	06 23 20.0	-1.5
	comp=Z,16nm,0.8s,baz=8.2,slow=4.1,SNR=49						
ESDC				LR	LR	07 11 51.4	
	comp=Z,4µm,18.0s,baz=20,slow=41						
ESLA	Sonseca Array	89.72	345	*e*P	P	06 23 20.4	-1.0
	comp=Z,70nm,1.3s						
ESLA				LR	LR		
	comp=Z,5µm,18.0s						
BKZ	Black Stump Fm	89.86	164	*e*P	P	06 23 23.2	+1.6
	comp=Z,73nm,1.5s						
BKZ				LR	LR		
	comp=Z,4µm,20.0s						
COI	Coimbra	89.88	348	*e*P	P	06 23 22.7	+0.6
	comp=Z,90nm,1.1s						
PAB	San Pablo	89.91	345	*e*P	P	06 23 21.3	-1.0
	comp=Z,56nm,1.3s						
PAB				LR	LR		
	comp=Z,9µm,18.0s						
PAB	San Pablo	89.91	345	*e*P	P	06 23 21.3	-1.0
PAB				pmax	pmax		
	comp=Z,56nm,1.3s						
PAB				MLR	MLR		
	comp=Z,9µm,18.0s						
PCAS	Casmilo, Conde	90.05	348	*e*P	P	06 23 23.1	+0.2
	comp=Z,66nm,2.0s						
CMAH	Djebel Manchou	90.10	335	P	P	06 23 21.4	-1.9
CAEH	’Ain El Ouahch	90.11	336	P	P	06 23 22.0	-1.2
PCBR	Castelo Branco	90.11	347	*e*P	P	06 23 23.3	+0.1
	comp=Z,45nm,1.7s						
KEST	Kesra	90.39	334	P	P	06 23 24.6	-0.1
	comp=Z,81nm,0.9s,baz=320,slow=3.4,SNR=52						
KEST				LR	LR	07 08 04.5	
	comp=Z,11µm,21.3s,baz=318,slow=38						
KEST	Kesra	90.39	334	*e*P	P	06 23 24.1	-0.6
	comp=Z,115nm,1.0s						
PTOM	Tomar	90.46	348	*e*P	P	06 23 25.2	+0.4
	comp=Z,62nm,1.7s						
CKFL	Kef-Lekhel	90.50	336	P	P	06 23 23.4	-1.8
PMRV	Marv??o	90.51	347	*e*P	P	06 23 25.2	+0.2
	comp=Z,54nm,1.6s						
PMRV	Marv??o	90.51	347	*e*S	SKSac	06 33 57.3	+3.9
PMRV	Marv??o	90.51	347	*e*LR	LR	06 58 09.6	
	comp=Z,9µm,16.0s						
DFRA	Djebel Bou Aff	90.59	336	P	P	06 23 26.5	+0.9
CASM	Ain Smara	90.69	336	P	P	06 23 24.2	-1.8
THTN	Thala	90.74	334	*e*P	P	06 23 26.2	-0.1
	comp=Z,140nm,1.3s						
THTN				LR	LR		
	comp=Z,7µm,18.0s						
CTEI	Djebel Teioual	90.90	336	P	P	06 23 25.2	-1.9
ALMR	Almeirim	90.94	348	*e*P	P	06 23 27.1	+0.1
ALMR				AMb	AMB	06 23 28.2	
	comp=Z,69nm,1.4s						
ALMR	Almeirim	90.94	348	*e*P	P	06 23 27.6	+0.6
ALMR	Almeirim	90.94	348	*e*P	P	06 23 27.1	+0.1
PMTG	Montargil	90.98	348	*e*P	P	06 23 27.3	+0.1
	comp=Z,40nm,1.4s						
PMTG	Montargil	90.98	348	*e*S	SKSac	06 34 03.4	+7.3
BBSR	BB Station	90.99	34	PFAKE		06 23 40.0	+13
BBSR				LR	LR		
	comp=Z,4µm,20.0s						
SET	Setif	91.04	337	P	P	06 23 31.0	+3.3
PESTR	Estremoz	91.08	347	*e*P	P	06 23 27.7	0.0
	comp=Z,42nm,1.4s						
PESTR	Estremoz	91.08	347	*e*S	SKSac	06 34 01.4	+4.6
PESTR	Estremoz	91.08	347	*e*P	P	06 23 27.0	-0.7
	comp=Z,17nm,1.2s						
PESTR				LR	LR		
	comp=Z,6µm,18.0s						
CKHR	Kef el Ahmar	91.18	337	P	P	06 23 28.1	-0.3
PMAFR	Mafra	91.23	349	*e*P	P	06 23 29.2	+0.8
	comp=Z,114nm,1.9s						
PMAFR	Mafra	91.23	349	*e*S	SKSac	06 34 07.5	+10
BFZ	Birch Farm	91.29	165	PFAKE		06 23 40.0	+12
BFZ				LR	LR		
	comp=Z,7µm,22.0s						
CCIG	Comitan	91.31	63	PFAKE		06 23 40.0	+11
CCIG				LR	LR		
	comp=Z,2µm,20.0s						
LIS	Lisbon	91.45	349	*e*P	P	06 23 29.6	+0.2
LIS				AMb	AMB	06 23 30.9	
	comp=Z,70nm,1.5s						
LIS	Lisbon	91.45	349	*e*P	P	06 23 29.5	+0.2
EVO	Evora	91.47	348	*e*P	P	06 23 27.3	-2.2
	comp=Z,65nm,1.6s						
EMHD	Djebel Mahouad	91.65	339	P	P	06 23 31.0	+0.5
SNZO	South Karori	91.65	166	PFAKE		06 23 40.0	+10
SNZO				LR	LR		
	comp=Z,6µm,21.0s						
THZ	Tophouse	91.83	168	PFAKE		06 23 40.0	+9.3
THZ				LR	LR		
	comp=Z,5µm,22.0s						
PBEJ	Beja	91.95	347	*e*P	P	06 23 32.5	+0.8
	comp=Z,44nm,2.0s						
PNCL	Nicolau / Gran	91.96	348	*e*P	P	06 23 31.9	+0.2
	comp=Z,46nm,1.5s						
PNCL	Nicolau / Gran	91.96	348	*e*S	SKSac	06 34 06.1	+4.4
MESJ	Messejana	92.18	348	*e*P	P	06 23 32.9	0.0
MESJ				AMb	AMB	06 23 36.3	
	comp=Z,37nm,1.6s						
MESJ				*e*SKS	SKSac	06 34 04.3	+1.4
MESJ	Messejana	92.18	348	*e*P	P	06 23 33.3	+0.5
	comp=Z,44nm,1.3s						
MESJ	Messejana	92.18	348	*e*P	P	06 23 32.8	0.0
MESJ				*e*		06 34 04.2	
EANR	’Ain N’Sour	92.32	340	P	P	06 23 34.0	+0.5
PCVE	Castro Verde	92.36	347	*e*P	P	06 23 33.2	-0.4
	comp=Z,61nm,1.7s						
PCVE	Castro Verde	92.36	347	*e*S	SKSac	06 34 12.5	+8.5
PVAQ	Vaqueiros	92.54	347	*e*P	P	06 23 34.0	-0.5
	comp=Z,50nm,1.6s						
PVAQ	Vaqueiros	92.54	347	*e*S	SKSac	06 34 11.9	+7.0
PVAQ	Vaqueiros	92.54	347	*e*LR	LR	06 56 45.7	
PTEO	Sao Teotonio	92.54	348	*e*P	P	06 23 34.6	+0.1
	comp=Z,75nm,1.6s						
DAMY	Dhamar	92.63	296	*e*P	P	06 23 34.9	-0.7
	comp=Z,88nm,1.2s						
DAMY				LR	LR		
	comp=Z,16µm,18.0s						
PBDV	Barranco-do-Ve	92.73	347	*e*P	P	06 23 36.8	+1.4
	comp=Z,90nm,1.7s						
PBDV	Barranco-do-Ve	92.73	347	*e*S	SKSac	06 34 13.0	+6.9
MORF	Marmelete	92.77	348	*e*P	P	06 23 35.5	-0.1
MORF				AMb	AMB	06 23 38.5	
	comp=Z,76nm,1.6s						
MORF				*e*SKS	SKSac	06 34 07.7	+1.4
MORF	Marmelete	92.77	348	*e*P	P	06 23 36.0	+0.4
	comp=Z,84nm,1.7s						
MORF	Marmelete	92.77	348	*e*S	SKSac	06 34 15.9	+10
MORF	Marmelete	92.77	348	*e*P	P	06 23 35.4	-0.1
MORF				*e*		06 34 07.7	
PFVI	Vila Bisbo	92.96	348	*e*S	SKSac	06 34 16.5	+9.2
PFVI	Vila Bisbo	92.96	348	PFAKE		06 23 50.0	+14
PFVI				LR	LR		
	comp=Z,7µm,18.0s						
OXZ	Oxford	93.24	168	PFAKE		06 23 50.0	+13
OXZ				LR	LR		
	comp=Z,6µm,19.0s						
CMLA	Cha da Macela	93.35	1	*e*P	P	06 23 37.6	-0.6
	comp=Z,44nm,1.0s						
CMLA				LR	LR		
	comp=Z,3µm,21.0s						
CMLA	Cha da Macela	93.35	1	*i* P	P	06 23 40.9	+2.7
RPZ	Rata Peaks	93.50	169	PFAKE		06 23 50.0	+12
RPZ				LR	LR		
	comp=Z,10µm,21.0s						
RKT	Rikitea	94.47	121	*e*SKSac	SKSac	06 34 18.7	+3.3
	comp=Z,2µm,26.5s						
RKT	Rikitea	94.47	121	*e*PS	PS	06 36 12.8	-0.2
	comp=Z,2µm,30.2s						
RKT				*e*SS	SS	06 41 13.0	-3.2
	comp=Z,1µm,25.0s						
RKT	Rikitea	94.47	121	*e*LR	LR	06 53 42.4	
	comp=Z,4µm,34.8s,baz=320						
ATD	Arta Tunnel	95.95	295	LR	LR	07 12 59.3	
	comp=Z,9µm,18.6s,baz=45,slow=39						
ATD	Arta Tunnel	95.95	295	*e*P	P	06 23 51.2	+0.7
	comp=Z,34nm,1.0s						
MDT	Midelt	96.51	344	LR	LR	07 13 24.4	
	comp=Z,3µm,20.3s,baz=39,slow=39						
ESTN	Estel	97.17	61	PFAKE		06 24 10.0	+14
ESTN				LR	LR		
	comp=Z,2µm,22.0s						
GTBY	Guantanamo Bay	97.48	48	PFAKE		06 24 10.0	+13
GTBY				LR	LR		
	comp=Z,4µm,20.0s						
MTDJ	Mount Denham	97.72	51	PFAKE		06 24 10.0	+11
MTDJ				LR	LR		
	comp=Z,4µm,20.0s						
GRTK	Grand Turk	97.98	44	PFAKE		06 24 10.0	+10
GRTK				LR	LR		
	comp=Z,4µm,19.0s						
PMOZ	Porto Moniz, M	98.08	354	*e*S	SKSac	06 34 51.0	+16
PMOZ	Porto Moniz, M	98.08	354	*e*LR	LR	06 57 59.3	
	comp=Z,2µm,18.0s						
MSEY	Mahe Island	100.47	275	PFAKE		06 24 20.0	+9.3
MSEY				LR	LR		
	comp=Z,7µm,20.0s						
HDC	Heredia	100.97	61	PFAKE		06 24 30.0	+17
HDC				LR	LR		
	comp=Z,1µm,21.0s						
SDD	Santo Domingo	101.20	44	PFAKE		06 24 30.0	+16
SDD				LR	LR		
	comp=Z,5µm,22.0s						
EMPR	Esperanza - Ma	102.68	41	PFAKE		06 24 30.0	+10
EMPR				LR	LR		
	comp=Z,3µm,22.0s						
CRPR	Cabo Rojo, PR	102.85	42	PFAKE		06 24 30.0	+8.8
CRPR				LR	LR		
	comp=Z,7µm,22.0s						
SJG	San Juan	103.17	41	PFAKE		06 24 30.0	+7.3
SJG				LR	LR		
	comp=Z,2µm,20.0s						
HUMP	Col San Antoni	103.27	41	PFAKE		06 24 30.0	+6.9
HUMP				LR	LR		
	comp=Z,3µm,22.0s						
ABVI	Anegada Island	103.39	39	PFAKE		06 24 40.0	+16
ABVI				LR	LR		
	comp=Z,3µm,20.0s						
TAM	Tamanrasset	103.64	332	PFAKE		06 24 40.0	+15
TAM				LR	LR		
	comp=Z,4µm,20.0s						
BCIP	Isla Barro Col	104.05	57	PFAKE		06 24 40.0	+13
BCIP				LR	LR		
	comp=Z,1µm,21.0s						
ANWB	Willy Bob	105.38	37	PFAKE		06 29 00.0	
ANWB				LR	LR		
	comp=Z,2µm,22.0s						
PAYG	Puerto Ayora	105.74	72	PFAKE		06 29 00.0	
PAYG				LR	LR		
	comp=Z,2µm,20.0s						
FDF	Fort de France	108.28	38	PFAKE		06 29 00.0	
FDF				LR	LR		
	comp=Z,2µm,22.0s						
HELC	Santa Helena	108.87	55	PFAKE		06 29 10.0	
HELC				LR	LR		
	comp=Z,4µm,22.0s						
SDV	Santo Domingo	109.14	50	PFAKE		06 29 10.0	
SDV				LR	LR		
	comp=Z,2µm,19.0s						
SVB	Belmont	109.56	39	PFAKE		06 29 10.0	
SVB				LR	LR		
	comp=Z,2µm,21.0s						
BBGH	Gun Hill	110.36	37	PFAKE		06 29 10.0	
BBGH				LR	LR		
	comp=Z,3µm,20.0s						
GRGR	Grenville	110.42	40	PFAKE		06 29 10.0	
GRGR				LR	LR		
	comp=Z,2µm,19.0s						
RUSC	La Rusia	110.43	53	PFAKE		06 29 10.0	
RUSC				LR	LR		
	comp=Z,800nm,21.0s						
ROSC	El Rosal	110.65	55	PFAKE		06 29 10.0	
ROSC				LR	LR		
	comp=Z,300nm,20.0s						
OTAV	Otavalo	112.14	62	PFAKE		06 29 10.0	
OTAV				LR	LR		
	comp=Z,1µm,21.0s						
TOC1	Torodi Ar. Sit	113.87	333	PFAKE		06 29 10.0	
TOC1				LR	LR		
	comp=Z,5µm,21.0s						
TOC2	Torodi Ar. Sit	113.88	333	PFAKE		06 29 10.0	
TOC2				LR	LR		
	comp=Z,5µm,22.0s						
TOC7	Torodi Ar. Sit	113.88	333	PFAKE		06 29 10.0	
TOC7				LR	LR		
	comp=Z,4µm,21.0s						
TOB2	Torodi Ar. Sit	113.88	333	PFAKE		06 29 10.0	
TOB2				LR	LR		
	comp=Z,5µm,22.0s						
TOA1	Torodi Ar. Sit	113.89	333	PFAKE		06 29 10.0	
TOA1				LR	LR		
	comp=Z,4µm,20.0s						
TOA2	Torodi Ar. Sit	113.89	333	PFAKE		06 29 10.0	
TOA2				LR	LR		
	comp=Z,4µm,20.0s						
TOB5	Torodi Ar. Sit	113.89	333	PFAKE		06 29 10.0	
TOB5				LR	LR		
	comp=Z,4µm,21.0s						
TOA0	Torodi Ar. Sit	113.89	333	PFAKE		06 29 10.0	
TOA0				LR	LR		
	comp=Z,4µm,21.0s						
TOC3	Torodi Ar. Sit	113.90	333	PFAKE		06 29 10.0	
TOC3				LR	LR		
	comp=Z,4µm,21.0s						
TOA3	Torodi Ar. Sit	113.90	333	PFAKE		06 29 10.0	
TOA3				LR	LR		
	comp=Z,4µm,21.0s						
TOB3	Torodi Ar. Sit	113.90	333	PFAKE		06 29 10.0	
TOB3				LR	LR		
	comp=Z,4µm,21.0s						
TOB4	Torodi Ar. Sit	113.91	333	PFAKE		06 29 10.0	
TOB4				LR	LR		
	comp=Z,4µm,20.0s						
TOC4	Torodi Ar. Sit	113.92	333	PFAKE		06 29 10.0	
TOC4				LR	LR		
	comp=Z,4µm,20.0s						
TOC5	Torodi Ar. Sit	113.92	333	PFAKE		06 29 10.0	
TOC5				LR	LR		
	comp=Z,5µm,20.0s						
KOWA	Kowa	114.14	339	PFAKE		06 29 10.0	+7.3
KOWA				LR	LR		
	comp=Z,4µm,19.0s						
CASY	Casey	120.35	200	*e*PKPdf	PKPdf	06 29 13.1	+0.1
DBIC	Dimbokro	121.88	338	PKP	PKPdf	06 29 17.2	-0.4
	comp=Z,15nm,0.9s,baz=56,slow=1.7,SNR=7.8						
DBIC	Dimbokro	121.88	338	*e*PKPdf	PKPdf	06 29 17.5	-0.2
TIC	Toumodi	121.95	338	*e*P	PKPdf	06 29 17.7	-0.1
KIC	Kosan Boka	122.15	337	*e*P	PKPdf	06 29 18.2	0.0
	comp=Z,84nm,1.2s						
LIC	Lamto	122.35	338	*e*P	PKPdf	06 29 19.4	+0.8
	comp=Z,61nm,1.1s						
PTGA	Pitinga	122.63	44	*e*PKPdf	PKPdf	06 29 19.8	+0.7
PTGA				LR	LR		
	comp=Z,2µm,22.0s						
NNA	Nana	122.83	68	PFAKE		06 29 30.0	+11
NNA				LR	LR		
	comp=Z,2µm,21.0s						
LSZ	Lusaka	125.91	290	*e*PKPdf	PKPdf	06 29 25.7	+0.3
LSZ				LR	LR		
	comp=Z,4µm,18.0s						
VNDA	Vanda	126.54	178	PKP	PKPdf	06 29 24.2	-0.4
	comp=Z,7.1nm,1.1s,baz=298,slow=4.3,SNR=13						

VNDA	Vanda	126.54	178	ePKPdf	PKPdf	06 29 24.1	-0.5
VNDA	Vanda	126.54	178	ePKIKP	PKPdf	06 29 24.1	-0.5
SBA	Scott Base	127.00	177	ePKPdf	PKPdf	06 29 26.9	+1.5
SBA	Scott Base	127.00	177	ePKIKP	PKPdf	06 29 26.9	+1.5
SAML	Samuel	128.16	53	ePKPdf	PKPdf	06 29 30.4	+0.9
SAML				LR	LR		
	comp=Z,2µm,22.0s						
SAML	Samuel	128.16	53	ePKIKP	PKPdf	06 29 30.5	+0.9
SAML				MLR	MLR		
	comp=Z,2µm,22.0s						
LPAZ	La Paz	131.41	63	PKP	PKPdf	06 29 37.2	+0.8
	comp=Z,6.1nm,1.1s,baz=9.6,slow=6.0,SNR=16						
LPAZ	La Paz	131.41	63	PKIKP	PKPdf	06 29 37.2	+0.8
LPAZ				pmax	pmax		
	comp=Z,8.0nm,1.2s						
MNMC	Minye Minye	132.75	67	ePKPdf	PKPdf	06 29 39.2	+0.7
MNMC				LR	LR		
	comp=Z,2µm,20.0s						
PB11	IPOC Station P	133.19	68	ePKPdf	PKPdf	06 29 40.6	+1.5
PB11				LR	LR		
	comp=Z,2µm,20.0s						
PB01	IPOC Station P	134.26	69	ePKPdf	PKPdf	06 29 42.7	+1.6
PB04	IPOC Station P	134.82	71	PFAKE		06 29 50.0	+7.8
PB04				LR	LR		
	comp=Z,2µm,19.0s						
TSUM	Tsumeb	135.31	297	ePKPpre	PKPpre	06 29 36.5	
TSUM				LR	LR		
	comp=Z,5µm,22.0s						
MAW	Mawson	135.39	213	ePKPdf	PKPdf	06 29 43.3	+1.8
MAW	Mawson	135.39	213	ePKIKP	PKPdf	06 29 43.3	+1.8
RCBR	Riachuelo	135.55	17	ePKPdf	PKPdf	06 29 46.2	+2.6
RCBR				LR	LR		
	comp=Z,2µm,20.0s						
GO02	Mina Guanaco	137.24	73	ePKPdf	PKPdf	06 29 47.3	+0.5
GO02				LR	LR		
	comp=Z,3µm,20.0s						
BOSA	Boshof	137.46	280	PP	PP	06 32 35.4	+2.2
	comp=Z,12nm,1.0s,baz=51,slow=8.2,SNR=4.4						
GO03	Copiap	138.55	76	PFAKE		06 30 00.0	+11
GO03				LR	LR		
	comp=Z,2µm,20.0s						
QSPA	South Pole Qui	138.99	180	PFAKE		06 30 00.0	+12
QSPA				LR	LR		
	comp=Z,1µm,19.0s						
LCO	Las Campanas	139.23	78	ePKPdf	PKPdf	06 29 51.4	+1.2
LCO				LR	LR		
	comp=Z,3µm,22.0s						
LCO	Las Campanas	139.23	78	ePKIKP	PKPdf	06 29 51.4	+1.2
LCO				MLR	MLR		
	comp=Z,3µm,22.0s						
BDFB	Brasilia	141.13	39	ePKPdf	PKPdf	06 29 54.0	+0.2
BDFB	Brasilia	141.13	39	ePKIKP	PKPdf	06 29 54.0	+0.2
SYO	Syowa Base	144.10	213	⇓iX	PKPbc	06 29 54.0	-1.5
SYO	Syowa Base	144.10	213	⇓iPKiKP	PKiKP	06 30 04.8	+3.9
SYO	Syowa Base	144.10	213	⇓ipPKiKP	PKPdf	06 30 11.0	+14
CPUP	Villa Florida	145.49	61	PKPbc	PKPdf	06 30 00.0	-1.1
	comp=Z,46nm,1.0s,baz=332,slow=3.9,SNR=59						
CPUP	Villa Florida	145.49	61	ePKPdf	PKPdf	06 30 00.3	-0.8
PLCA	Paso Flores	146.38	93	PKPbc	PKPdf	06 30 03.1	+0.9
	comp=Z,19nm,0.7s,baz=306,slow=3.1,SNR=35						
TRQA	Tornquist	150.56	82	ePKPbc	PKPbc	06 30 13.6	-0.9
TRQA	Tornquist	150.56	82	ePKIKP	PKPbc	06 30 13.6	-0.9
GO10	Punta Arenas	150.62	116	ePKPbc	PKPbc	06 30 14.9	+0.7
NVL	N'lazarevskaya	152.75	205	⇓iPKIKP	PKPbc	06 30 20.3	+1.8
PMSA	Palmer Station	153.78	141	ePKPbc	PKPbc	06 30 21.8	+0.9
SNAA	Sanae	155.51	196	PKP	PKPdf	06 30 15.8	+0.5
SNAA	Sanae	155.51	196	ePKPdf	PKPdf	06 30 14.8	-0.5
SNAA	Sanae	155.51	196	ePKIKP	PKPdf	06 30 14.8	-0.5
VNA3	Neumayer Olymp	156.96	192	PKP	PKPdf	06 30 17.7	+0.5
VNA1	Neumayer--Stat	157.30	193	PKP	PKPdf	06 30 19.1	+1.5

BJI ***20*** *06:27:33.4, 49°.27N×156°.84E, h6^{km}, mb4.8/23, mB5.2/6*

IDC ***20*** *06:27:38.5±0.6, 49°.36N×156°.14E, h0^{km}, mb4.2/22, mb1 4.4/24, mb1mx4.1/69, mbtmp4.2/24, ML5.1/2, Error ellipse: s-maj=15.2km s-min=13.0km az=130.0*

NEIC ***20*** *06:27:40.1±0.3, 49°.22N×156°.12E, h10^{km}, mb4.8/26, Error ellipse: s-maj=8.6km s-min=5.3km az=154.0*

KRSC ***20*** *06:27:41.1±2.0, 49°.15N×156°.75E, h61^{km}±32^{km}, ML4.9*

SKHL ***20*** *06:27:41.2±0.8, 49°.02N×156°.91E, h74^{km}±1^{km}, mb5.4/4*

ISCJB ***20*** *06:27:42.9±0.6, 49°.28N±0°.04×156°.18E±0°.06, h42^{km}±4^{km}, mb4.5/63, Error ellipse: s-maj=9.1km s-min=3.5km az=43.7*

MOS ***20*** *06:27:45.1±1.2, 49°.39N×156°.21E, h68^{km}, mb4.5/25, Error ellipse: s-maj=10.5km s-min=3.5km az=77.8*

ISC 20 06:27:44.2±0.9**, 49°.23N**±0°.06×**156°.33E**±0°.05**, h40**^{km}±8^{km}**, n233,** σ1^{s}**31**/249**, mb4.5**/73**, 2C-1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.46	355	eP	Pn	06 28 07.0	-1.0
SKR				AMB	AMB	06 28 08.0	
	2µm,0.8s						
SKR				AMB	AMB	06 28 10.0	
	2µm,0.5s						
SKR				eS	Sn	06 28 27.0	+1.1
SKR				A	A	06 28 30.0	
	7µm,0.4s						
SKR				A	A	06 28 30.0	
	5µm,0.4s						
SKR	Severo-Kuril's	1.46	355	eP	Pn	06 28 07.8	-0.3
SKR				eS	Sn	06 28 28.0	+2.1
SKR	Severo-Kuril's	1.46	355	ePN	Pn	06 28 07.7	-0.3
SKR				eS	Sn	06 28 27.5	+1.6
SKR				pmax	pmax		
	comp=Z,2µm,0.8s						
SKR				pmax	pmax		
	comp=Z,2µm,0.5s						
SKR				smax	smax		
	comp=E,5µm,0.3s						
SKR				smax	smax		
	comp=N,7µm,0.4s						
PAU	Pauzhetka	2.26	8	eP	Pn	06 28 19.6	+0.6
PAU				AMB	AMB	06 28 20.9	
	comp=N,530nm,0.4s						
PAU				eS	Sn	06 28 47.3	+1.7
PAU				A	A	06 28 51.0	
	comp=N,3µm,0.3s						
PAU	Pauzhetka	2.26	8	eP	Pn	06 28 19.2	+0.2
PAU				eS	Sn	06 28 47.4	+1.8
PAU	Pauzhetka	2.26	8	PN	Pn	06 28 19.2	+0.2
PAU				S	Sn	06 28 47.4	+1.8
KDTR	Khodutka, Kamc	2.81	23	eP	Pn	06 28 25.6	-0.9
KDTR				eS	Sn	06 28 58.7	-0.4
MIPR	Malaya Ipel'ka	3.06	5	eP	Pn	06 28 30.9	+0.9
MIPR	Malaya Ipel'ka	3.06	5	PN	Pn	06 28 30.9	+0.9
ASAK	Asacha	3.31	17	eP	Pn	06 28 33.5	0.0
ASAK	Asacha	3.31	17	PN	Pn	06 28 33.5	0.0
MTVR	Mutnovka	3.46	19	eP	Pn	06 28 35.6	0.0
MTVR				eS	Sn	06 29 15.6	+0.2
MTVR	Mutnovka	3.46	19	PN	Pn	06 28 35.6	0.0
MTVR				S	Sn	06 29 15.6	+0.2
RUS	Russkaya	3.49	22	eP	Pn	06 28 34.8	-1.1
RUS				eS	Sn	06 29 15.1	-0.8
RUS	Russkaya	3.49	22	PN	Pn	06 28 34.8	-1.1
RUS				S	Sn	06 29 15.1	-0.8
GRL	Gorelyy	3.50	18	eP	Pn	06 28 36.9	+0.7
GRL				eS	Sn	06 29 16.9	+0.5
GRL	Gorelyy	3.50	18	PN	Pn	06 28 36.9	+0.7
GRL				S	Sn	06 29 16.9	+0.5
APC	Apacha	3.73	8	eP	Pn	06 28 40.6	+1.4
APC	Apacha	3.73	8	PN	Pn	06 28 40.6	+1.4
KRMR	Karymshinskiy	3.78	17	eP	Pn	06 28 40.6	+0.8
KRMR				eS	Sn	06 29 26.6	+3.6
KRMR	Karymshinskiy	3.78	17	PN	Pn	06 28 40.6	+0.8
KRMR				S	Sn	06 29 26.6	+3.6
PEA0B	Petropavlovsk-	3.98	12	ePn	Pn	06 28 43.6	+1.0
PETK	Petropavlovsk-	3.98	12	Pn	Pn	06 28 43.4	+0.8
	baz=182,slow=13						
PETK	Petropavlovsk-	3.98	12	ePn	Pn	06 28 43.5	+1.0
PET	Petropavlovsk	4.07	20	eP	Pn	06 28 43.7	-0.1
PET				eS	Sn	06 29 30.5	+0.3
PET	Petropavlovsk	4.07	20	ePn	Pn	06 28 43.6	-0.3
PET	Petropavlovsk	4.07	20	eP	Pn	06 28 43.6	-0.3
PET				eS	Sn	06 29 30.4	+0.3
PET	Petropavlovsk	4.07	20	ePN	Pn	06 28 43.5	-0.3
PET				eS	Sn	06 29 31.9	+1.8
PET				pmax	pmax		
	comp=Z,128nm,0.5s						
PET				smax	smax		
	comp=N,786nm,0.6s						
PET				smax	smax		
	comp=E,678nm,0.6s						
DALK	Dalny	4.10	21	eP	Pn	06 28 44.0	-0.2
DALK				eS	Sn	06 29 30.9	+0.1
DALK	Dalny	4.10	21	PN	Pn	06 28 44.0	-0.2
DALK				S	Sn	06 29 30.9	+0.1
UGLR	Uglovaya	4.28	21	eP	Pn	06 28 47.3	+0.5
UGLR	Uglovaya	4.28	21	PN	Pn	06 28 47.3	+0.5
AVH	Avacha	4.31	20	eP	Pn	06 28 47.9	+0.7
AVH	Avacha	4.31	20	PN	Pn	06 28 47.9	+0.7
SMAR	Somma	4.32	20	eP	Pn	06 28 48.3	+0.8
SMAR	Somma	4.32	20	PN	Pn	06 28 48.3	+0.8
SDLR	Sedlovina	4.36	21	eP	Pn	06 28 47.8	-0.1
SDLR	Sedlovina	4.36	21	PN	Pn	06 28 47.8	-0.1
NLC	Nalytchevo	4.37	24	eP	Pn	06 28 46.8	-1.2
NLC	Nalytchevo	4.37	24	PN	Pn	06 28 46.8	-1.2
SPN	Mys Shipunski	4.51	30	eP	Pn	06 28 50.1	+0.2
SPN				eS	Sn	06 29 39.7	-1.4
SPN	Mys Shipunski	4.51	30	PN	Pn	06 28 50.1	+0.2
SPN				S	Sn	06 29 39.7	-1.4
GNL	Ganaly	4.58	12	eP	Pn	06 28 52.4	+1.4
GNL	Ganaly	4.58	12	PN	Pn	06 28 52.4	+1.4
KII	Karymskiy	5.19	21	eP	Pn	06 29 00.6	+1.3
KII	Karymskiy	5.19	21	PN	Pn	06 29 00.6	+1.3
MKZ	Mys Kozlova	6.29	30	eP	Pn	06 29 12.6	-1.7
MKZ				eS	Sn	06 30 20.4	-4.4
MKZ	Mys Kozlova	6.29	30	PN	Pn	06 29 12.6	-1.7
TUMD	Tumrok D	6.48	21	eP	Pn	06 29 16.7	-0.2
TUMR	Tumrok	6.50	20	eP	Pn	06 29 18.2	+1.0
TUMR	Tumrok	6.50	20	PN	Pn	06 29 16.7	-0.5
ESO	Esso	6.86	11	P	Pn	06 29 25.2	+3.1
ESO	Esso	6.86	11	PN	Pn	06 29 25.2	+3.1
KUR	Kuril'sk	7.01	238	eP	Pn	06 29 25.4	+1.1
KUR				AMB	AMB	06 29 31.5	
	comp=E,19nm,0.2s						
KUR				AMB	AMB	06 29 31.5	
	comp=E,14nm,0.2s						
KUR				AMB	AMB	06 29 31.5	
	comp=E,58nm,0.2s						
KUR				iS	Sn	06 30 43.0	+0.3
KUR	Kuril'sk	7.01	238	ePN	Pn	06 29 25.4	+1.1
KUR				pmax	pmax		
	comp=N,17nm,0.5s						
KUR				pmax	pmax		
	comp=Z,67nm,0.5s						
KUR				pmax	pmax		
	comp=E,16nm,0.3s						
KPT	Kopyto	7.15	18	P	Pn	06 29 28.4	+2.2
KPT	Kopyto	7.15	18	PN	Pn	06 29 28.4	+2.2
KOZ	Kozyrevsk	7.17	16	P	Pn	06 29 27.7	+1.3
KOZ	Kozyrevsk	7.17	16	PN	Pn	06 29 27.7	+1.3
BZMR	Bezymyannaya	7.17	19	P	Pn	06 29 26.9	+0.3
BZWR	Bezymyannyi-We	7.20	19	P	Pn	06 29 28.8	+1.8
BZWR	Bezymyannyi-We	7.20	19	PN	Pn	06 29 28.8	+1.8
BZGR	Bezymyannyi-Gr	7.22	20	P	Pn	06 29 28.5	+1.3
BZGR	Bezymyannyi-Gr	7.22	20	PN	Pn	06 29 28.5	+1.3
ZLN	Zelenaya	7.32	20	P	Pn	06 29 29.8	+1.3
ZLN	Zelenaya	7.32	20	PN	Pn	06 29 29.8	+1.3
LGNR	Loginova	7.35	19	P	Pn	06 29 31.2	+2.0
LGNR	Loginova	7.35	19	PN	Pn	06 29 31.2	+2.0
BDR	Baidarnaya	7.92	20	P	Pn	06 29 37.5	+0.8
BDR	Baidarnaya	7.92	20	PN	Pn	06 29 37.5	+0.8
KBTR	Krutoberegovo	8.02	27	eP	Pn	06 29 37.0	-1.0
KBTR	Krutoberegovo	8.02	27	PN	Pn	06 29 37.0	-1.0
BKI	Bering	8.41	41	P	Pn	06 29 44.2	+0.9
BKI	Bering	8.41	41	PN	Pn	06 29 44.2	+0.9
SHO	Shikotan	8.46	234	ePN	Pn	06 29 45.1	+1.0
SHO				pmax	pmax		
	comp=Z,29nm,0.6s						
SHO				pmax	pmax		
	comp=N,26nm,0.5s						
SHO				pmax	pmax		
	comp=E,26nm,0.5s						
YUK	Yuzh-Kuril'sk	8.88	238	eP	Pn	06 29 50.8	+0.9
YUK				AMB	AMB	06 29 53.7	
	comp=E,350nm,0.3s						
YUK				AMB	AMB	06 29 53.7	
	comp=E,50nm,0.3s						
YUK				AMB	AMB	06 29 53.7	
	comp=E,90nm,0.3s						
YSS	Yuzh-Sakhalins	9.37	261	ePN	Pn	06 29 50.6	-6.0
YSS				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ASAJ	Asahikawa	10.73	247	Pn	Pn	06 30 16.5	+1.3
	comp=Z,4.9nm,0.3s,baz=63,slow=14,SNR=12						
ASAJ	Asahikawa	10.73	247	ePn	Pn	06 30 16.1	+0.9
MA2	Magadan	10.85	345	Pn	Pn	06 30 17.6	+0.8
	comp=Z,3.2nm,0.3s,baz=145,slow=11,SNR=13						
ERM	Erimo	11.70	237	eP	Pn	06 30 28.0	-0.5
ERM	Erimo	11.70	237	ePn	Pn	06 30 28.9	+0.5
ERM	Erimo	11.70	237	iPN	Pn	06 30 28.0	-0.5
SMY	Shemya	11.73	66	ePn	Pn	06 30 26.7	-2.0
SMY	Shemya	11.73	66	ePN	Pn	06 30 26.7	-2.0
SEY	Seymchan	13.90	352	Pn	Pn	06 31 01.0	+2.6
	comp=Z,0.4nm,0.3s,baz=166,slow=12,SNR=5.3						
SEY	Seymchan	13.90	352	eP	Pn	06 30 58.3	-0.1
SEY	Seymchan	13.90	352	iP	Pn	06 30 58.3	-0.1
KLR	Kul'dur	16.05	279	Pn	Pn	06 31 27.9	+1.2
	comp=Z,0.0nm,0.3s,baz=81,slow=11,SNR=10						
KLR	Kul'dur	16.05	279	eP	Pn	06 31 27.7	+1.0
KLR	Kul'dur	16.05	279	iP	Pn	06 31 27.7	+1.0
MAJO	Matsushiro	18.30	233	eP	P	06 31 53.8	-0.9
MAJO	Matsushiro	18.30	233	iP	P	06 31 53.8	-0.9
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MAT	Matsushiro	18.30	233	P	P	06 31 53.9	-0.8
MJAR	Matsushiro Arr	18.30	233	P	P	06 31 54.1	-0.6
	comp=Z,0.7nm,0.3s,baz=30,slow=6.9,SNR=6.1						
YAK	Yakutsk	19.58	321	eP	P	06 32 06.6	-1.8
CN2	Changchun	21.84	267	eP	P	06 32 31.5	-1.5
KSRS	Korea Array	23.63	251	P	P	06 32 50.8	-0.7
	comp=Z,4.6nm,0.8s,baz=50,slow=9.7,SNR=18						
KSRS	Korea Array	23.63	251	P	P	06 32 50.8	-0.7
KSRS				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KS01	Wonju Array Si	23.64	251	eP	P	06 32 50.0	-1.5
KSAR	Wonju Array Be	23.66	251	P	P	06 32 50.8	-1.0
KSAR	Wonju Array Be	23.66	251	P	P	06 32 50.8	-1.0
HIA	Hailar	23.74	284	eP	P	06 32 51.4	-1.1
HIA	Hailar	23.74	284	iP	P	06 32 51.4	-1.1
HIA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
JNU	Nakatsue	24.85	239	P	P	06 33 02.7	-0.1
	comp=Z,9.9nm,1.0s,baz=44,slow=11,SNR=3.9						
FALS	False Pass	25.12	62	eP	P	06 33 05.7	+0.8
	comp=Z,101nm,0.9s						
TIXI	Tiksi	25.77	340	P	P	06 33 09.3	-1.4
	comp=Z,7.2nm,0.6s,baz=113,slow=11,SNR=5.8						
TIXI	Tiksi	25.77	340	eP	P	06 33 07.4	-3.3
TIXI	Tiksi	25.77	340	eP	P	06 33 09.6	-1.1
	comp=Z,15nm,0.7s						
TIXI	Tiksi	25.77	340	iP	P	06 33 07.4	-3.3
TIXI				pmax	pmax		
	comp=Z,12nm,0.6s						
SVW2	Sparrevohn	29.21	48	eP	P	06 33 44.4	+2.7
	comp=Z,5.8nm,1.2s						
H11S1	WAKE ISLAND Hy	31.77	161	T	T	07 07 54.6	
	baz=346,slow=76,SNR=16						
H11S3	WAKE ISLAND Hy	31.78	161	T	T	07 08 22.7	
	baz=346,slow=76,SNR=25						
H11S2	WAKE ISLAND Hy	31.79	161	T	T	07 07 56.0	
	baz=346,slow=76,SNR=13						
HHC	Hu-ho-hao-te	32.32	272	eP	P	06 34 08.8	-0.6
HHC				pmax	pmax		
	comp=Z,17nm,0.9s						
SONA1	Songino Array	32.61	287	eP	P	06 34 11.4	-0.5
SML	Sawmill	32.68	46	eP	P	06 34 14.5	+2.3
	comp=Z,8.5nm,0.9s						
SML	Sawmill	32.68	46	eP	P	06 34 14.5	+2.3
SML				pmax	pmax		
	comp=Z,9.0nm,0.9s						
WRH	Wood River Hil	32.73	41	eP	P	06 34 14.7	+2.1
	comp=Z,4.2nm,1.1s						
NJ2	Nanjing	32.80	253	eP	P	06 34 12.0	-1.5
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
TLY	Talaya	33.03	295	eP	P	06 34 12.5	-2.9
ILAR	Eielson Array	33.26	41	P	P	06 34 16.8	-0.3
	comp=Z,0.8nm,0.8s,baz=258,slow=6.9,SNR=6.8						
ZAK	Zakamensk	33.66	293	eP	P	06 34 19.2	-1.7
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
FYU	Fort Yukon	33.96	38	eP	P	06 34 24.6	+1.4
	comp=Z,6.8nm,0.8s						
EGAK	Eagle	35.71	41	eP	P	06 34 38.4	+0.1
	comp=Z,4.0nm,0.8s						
INK	Inuvik	38.39	34	eP	P	06 35 01.9	+0.9
	comp=Z,4.1nm,0.7s						
INK	Inuvik	38.39	34	eP	P	06 35 01.9	+0.9
INK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
LZH	Lanzhou	39.99	271	eP	P	06 35 15.3	+0.3
LZH				pP	pP	06 35 19.4	-6.9
LZH				sP	sP	06 35 22.3	-8.8
LZH				pmax	pmax		
	comp=Z,22nm,1.2s						
GTA	Gaotai	40.74	278	eP	P	06 35 20.8	-0.3
GTA				pP	pP	06 35 25.1	-7.3
GTA				sP	sP	06 35 27.9	-9.3
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ZALV	Zalesovo Beam	42.95	305	P	P	06 35 36.4	-2.4
	comp=Z,1.4nm,0.4s,baz=47,slow=5.4,SNR=4.4						
ZALV	Zalesovo Beam	42.95	305	eP	P	06 35 37.8	-0.9
CD2	Chengdu	43.25	265	P	P	06 35 39.5	-2.1
GYA	Guiyang	44.36	258	eP	P	06 35 50.1	-0.5
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
WMQ	Urumqi	46.06	291	P	P	06 36 04.5	+0.6
WMQ				pP	pP	06 36 09.4	-5.9
WMQ				sP	sP	06 36 13.5	-6.6
WMQ				pmax	pmax		
	comp=Z,13nm,0.7s						
YKA	Yellowknife Ar	47.63	39	P	P	06 36 16.2	+0.5
	comp=Z,1.6nm,0.9s,baz=296,slow=7.3,SNR=6.4						
MK31	Makanchi Array	47.74	297	eP	P	06 36 15.2	-1.7
MK31	Makanchi Array	47.74	297	eP	P	06 36 15.2	-1.7
MKAR	Makanchi Array	47.74	297	P	P	06 36 15.4	-1.4
	comp=Z,2.2nm,0.8s,baz=60,slow=7.3,SNR=20						
MKAR	Makanchi Array	47.74	297	eP	P	06 36 15.3	-1.6
MKAR	Makanchi Array	47.74	297	eP	P	06 36 15.2	-1.6
	comp=Z,13nm,0.7s						
MKAR	Makanchi Array	47.74	297	iP	P	06 36 15.3	-1.6
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MK01	Makanchi Array	47.74	297	eP	P	06 36 15.4	-1.5
KURK	Kurchatov	47.81	303	eP	P	06 36 15.4	-1.9
KURK	Kurchatov	47.81	303	eP	P	06 36 15.9	-1.4
	comp=Z,7.3nm,0.8s						
KURK	Kurchatov	47.81	303	iP	P	06 36 15.4	-1.9
KURK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KMI	Kunming	47.81	260	P	P	06 36 17.3	-0.6
KMI				pP	pP	06 36 21.6	-7.8
KMI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KURBB	Kurchatov Arra	47.90	303	P	P	06 36 16.6	-1.5
	comp=Z,6.7nm,0.8s,baz=63,slow=7.9,SNR=33						
BVAR	Borovoye Array	50.96	309	P	P	06 36 39.9	-1.4
	comp=Z,2.0nm,0.3s,baz=64,slow=7.2,SNR=14						
BRVK	Borovoye	51.00	309	eP	P	06 36 40.0	-1.6
BRVK	Borovoye	51.00	309	eP	P	06 36 40.4	-1.2
	comp=Z,6.1nm,0.9s						
BRVK	Borovoye	51.00	309	iP	P	06 36 40.0	-1.6
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
SKNT	Sakolnakorn	52.97	252	P	P	06 36 59.6	+2.9
	comp=Z,1.4nm,0.6s						
KEBM	Edson Butte	53.05	65	eP	P	06 36 57.2	+0.1
	comp=Z,23nm,1.1s						
ARU	Arti	54.64	318	eP	P	06 37 06.4	-2.0
ARU	Arti	54.64	318	eP	P	06 37 07.3	-1.1
	comp=Z,10nm,0.8s						
ARU	Arti	54.64	318	c iP	P	06 37 06.8	-1.6
ARU				S	S	06 44 46.8	+1.7
ARU				SS	SS	06 48 27.9	+0.4
ARU				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CMMT	Chiang Mai	54.78	258	P	P	06 37 11.7	+1.8
	comp=Z,12nm,0.9s						
CHTO	Chiang Mai	54.78	258	P	P	06 37 11.8	+1.9
	comp=Z,54nm,1.1s						
CMAR	Chiang Mai Arr	55.04	257	P	P	06 37 12.7	+0.9
	comp=Z,1.7nm,0.5s,baz=38,slow=6.0,SNR=7.7						
KKAR	Karatay Array	56.69	299	eP	P	06 37 23.6	+0.2
KKAR	Karatay Array	56.69	299	eP	P	06 37 23.6	+0.2
SUMG	Summit	58.05	5	eP	P	06 37 33.8	+0.9
	comp=Z,19nm,0.9s						
SUMG	Summit	58.05	5	eP	P	06 37 33.8	+0.9
SUMG				pmax	pmax		
	comp=Z,19nm,0.9s						
ABKAR	Akbulak array	58.49	310	eP	P	06 37 34.8	-1.0
NVAR	Mina Array Bea	59.40	65	P	P	06 37 44.4	+1.8
	comp=Z,0.4nm,0.6s,baz=280,slow=4.4,SNR=3.6						
PDAR	Pinedale Array	61.55	57	P	P	06 37 57.7	+0.4
	comp=Z,1.1nm,0.9s,baz=298,slow=3.2,SNR=9.9						
PDAR	Pinedale Array	61.55	57	eP	P	06 37 58.4	+1.1
FIA1	FINESS Array S	62.69	336	eP	P	06 38 02.5	-1.8
FINES	FINESS Array B	62.69	336	P	P	06 38 01.3	-3.0
	comp=Z,0.7nm,0.3s,baz=36,slow=7.4,SNR=7.7						
FINES	FINESS Array B	62.69	336	eP	P	06 38 01.0	-3.2
FINES	FINESS Array B	62.69	336	iP	P	06 38 01.1	-3.2
FINES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
RSSD	Black Hills	63.58	52	eP	P	06 38 11.8	+1.0
	comp=Z,3.0nm,0.9s						
RSSD	Black Hills	63.58	52	eP	P	06 38 11.8	+1.0
RSSD				pmax	pmax		
	comp=Z,3.0nm,0.9s						
PV17	East Wray Mesa	64.94	60	eP	P	06 38 21.7	+1.9
	comp=Z,4.7nm,0.8s						
NC204	NORSAR Array S	66.42	343	eP	P	06 38 28.0	-0.7
NB201	NORSAR Array S	66.52	342	eP	P	06 38 28.4	-0.9
NB2	NORSAR Subarra	66.55	342	P	P	06 38 28.4	-1.1
	comp=Z,3.0nm,1.0s,baz=27,slow=6.5						
NOA	NORSAR Array B	66.55	342	P	P	06 38 27.9	-1.6
	comp=Z,1.3nm,0.8s,baz=27,slow=6.5,SNR=4.5						
HFS	Hagfors	66.86	341	P	P	06 38 30.5	-0.9
	comp=Z,0.7nm,0.3s,baz=56,slow=3.6,SNR=13						
AKASG	Malin Array Be	70.65	327	P	P	06 38 53.9	-1.3
	comp=Z,1.2nm,0.4s,baz=32,slow=6.5,SNR=5.0						
KBZ	Khabaz	70.66	315	P	P	06 38 55.1	-0.2
	comp=Z,4.0nm,0.7s,baz=70,slow=6.3,SNR=10.0						
WRA	Warramunga Arr	71.59	202	P	P	06 39 00.9	-0.3
	comp=Z,0.9nm,0.8s,baz=19,slow=6.2,SNR=3.3						
EKA	Eskdalemuir Ar	74.40	348	P	P	06 39 16.9	-0.5
	comp=Z,1.7nm,0.4s,baz=19,slow=4.9,SNR=18						
TX31	Lajitas Ar. Si	74.41	63	eP	P	06 39 18.9	+0.8
TXAR	Lajitas Array	74.41	63	P	P	06 39 18.5	+0.4
	comp=Z,1.1nm,0.7s,baz=299,slow=4.5,SNR=14						
BUR08	Bucovina Ar. S	74.65	328	eP	P	06 39 18.9	-0.2
BUR04	Bucovina Ar. S	74.66	328	eP	P	06 39 18.3	-0.9
DPC	Dobruska-Polom	75.04	335	eP	P	06 39 23.4	+2.1
DPC	Dobruska-Polom	75.04	335	eP	P	06 39 23.4	+2.1
CLL	Collm	75.06	337	iP	P	06 39 15.4	-5.9
CLL				pmax	pmax		
	comp=Z,5.0nm,0.4s						
BRG	Berggiesshubel	75.21	336	eP	P	06 39 13.1	-9.1
	comp=Z,5.6nm,1.2s						
ASAR	Alice Springs	75.28	201	P	P	06 39 23.6	+0.8
	comp=Z,0.3nm,0.5s,baz=17,slow=5.5,SNR=3.6						
GOPC	GO Pecny, Ondr	75.86	336	eP	P	06 39 26.6	+0.7
GOPC	GO Pecny, Ondr	75.86	336	eP	P	06 39 26.6	+0.7
MLR	Muntele Rosu	76.23	327	eP	P	06 39 28.1	-0.2
	comp=Z,4.3nm,0.8s						
MLR	Muntele Rosu	76.23	327	eP	P	06 39 28.1	-0.2
MLR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
DSB	Dublin	76.85	349	eP	P	06 39 31.8	+0.3
	comp=Z,8.9nm,0.8s						
ILGA	Ilgaz	76.89	319	eP	P	06 39 33.3	+1.1
	comp=Z,12nm,0.8s						
KHC	Kasperske Hory	76.90	336	eP	P	06 39 32.7	+0.8
KHC	Kasperske Hory	76.90	336	eP	P	06 39 32.2	+0.3
	comp=Z,1.9nm,0.7s						
KHC	Kasperske Hory	76.90	336	eP	P	06 39 32.2	+0.3
KHC				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GERES	GERESS Array B	77.13	336	P	P	06 39 33.3	0.0
	comp=Z,1.5nm,0.6s,baz=32,slow=5.5,SNR=12						
GEA0	GERESS Array S	77.13	336	eP	P	06 39 33.6	+0.4
MEM	Membach	77.34	341	⇑P	P	06 39 33.8	-0.5
	comp=Z,9.9nm,0.7s						
CONA	Conrad Observa	77.36	334	epP	P	06 39 35.3	+0.7
	comp=Z,5.1nm,0.7s						
BCLA	Clavier	77.67	342	⇓P	P	06 39 35.2	-0.9
UOSS	Minazif	77.75	294	eP	P	06 39 36.6	-0.5
	comp=Z,13nm,0.9s						
BR131	Keskin Array S	78.02	318	eP	P	06 39 38.6	+0.2
BRTR	Keskin Array B	78.02	318	P	P	06 39 38.0	-0.4

	comp=Z,4.1nm,0.8s,baz=57,slow=4.6,SNR=16						
ARSA	Arzberg	78.07	334	*i* pP	P	06 39 38.9	+0.5
	comp=Z,3.0nm,0.5s						
SOKA	Soboth	78.73	334	*e*pP	P	06 39 42.5	+0.4
	comp=Z,7.5nm,0.8s						
KBA	Koelnbreinsper	78.84	335	*i* pP	P	06 39 43.8	+0.9
	comp=Z,22nm,0.9s						
OBKA	Obir	79.02	334	*e*pP	P	06 39 44.0	+0.2
	comp=Z,3.4nm,0.6s						
WTTA	Wattenberg	79.13	336	*e*pP	P	06 39 45.3	+0.8
	comp=Z,7.3nm,0.8s						
RETA	Reutte	79.15	337	*e*pP	P	06 39 44.7	+0.2
	comp=Z,4.0nm,0.7s						
MYKA	Terra Mystica	79.17	335	*e*pP	P	06 39 44.8	+0.2
	comp=Z,1.6nm,0.4s						
ECH	Echery	79.34	340	*e*P	P	06 39 45.3	-0.1
	comp=Z,6.9nm,1.0s						
ECH	Echery	79.34	340	*e*P	P	06 39 45.3	-0.1
ECH				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ABTA	Abfaltersbach	79.37	336	*e*pP	P	06 39 45.9	+0.2
	comp=Z,3.3nm,0.5s						
DIVS	Divibare	79.51	330	*e*P	P	06 39 46.0	-0.5
	comp=Z,7.9nm,0.8s						
DAVA	Damuels	79.56	338	*e*P	P	06 39 46.7	0.0
	comp=Z,8.0nm,1.0s						
FETA	Feichten	79.59	337	*e*pP	P	06 39 47.1	+0.2
	comp=Z,4.6nm,0.8s						
VTS	Vitosha	79.73	327	*e*P	P	06 39 47.6	-0.2
	comp=Z,9.5nm,0.8s						
VTS	Vitosha	79.73	327	*e*P	P	06 39 47.6	-0.2
VTS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
541A	Lake Charles	79.77	56	*e*P	P	06 39 50.0	+2.0
	comp=Z,134nm,0.7s						
TUE	Stuetta	80.45	338	*e*P	P	06 39 52.0	+0.3
	comp=Z,11nm,0.8s						
TTG	Podgorica	81.24	329	*e*P	P	06 39 55.2	-0.4
	comp=Z,12nm,0.9s						
TTG	Podgorica	81.24	329	*e*P	P	06 39 55.2	-0.4
TTG				pmax	pmax		
	comp=Z,12nm,0.9s						
CPUP	Villa Florida	145.36	61	PKPbc	PKPab	06 47 17.3	-0.3
	comp=Z,1.0nm,0.7s,baz=300,slow=11,SNR=2.9						
PLCA	Paso Flores	146.24	93	PKPbc	PKPab	06 47 20.2	-0.4
	comp=Z,3.2nm,0.9s,baz=263,slow=6.3,SNR=5.5						
PLCA	Paso Flores	146.24	93	*e*PKPdf	PKPab	06 47 21.4	+0.8
TRQA	Tornquist	150.41	82	*e*PKPbc	PKPbc	06 47 31.1	+0.4
TRQA	Tornquist	150.41	82	*e*PKIKP	PKPbc	06 47 31.1	+0.4

CASC 20 06:32:51.1±2.1**, 12°.34N×87°.90W, h36**^{km}±20^{km}**, MD3.5, ML2.5, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CNCH	Conchagua	0.93	4	*e*P	Pn	06 33 09.5	+1.7
CNCH				*e*S	Sn	06 33 22.0	+2.0
LCND	La Caˆ–ada	0.96	1	*e*P	Pn	06 33 08.4	+0.3
LCND				IAML		06 33 24.0	
	comp=Z,193nm,0.5s						
LCY	Lacayo	1.14	341	*e*P	Pn	06 33 11.2	+0.5
LCY				*e*S	Sn	06 33 25.0	-0.2
CNGN	Cerro Negro	1.19	82	*e*P	Pn	06 33 11.1	-0.1
CNGN				*e*S	Sn	06 33 27.2	+1.0
CNGN				IAML		06 33 31.5	
	comp=N,41nm,0.2s						
PACA	Pacayal	1.20	340	*e*P	Pn	06 33 12.2	+0.8
PACA				*e*S	Sn	06 33 26.4	-0.1
TECA	Tecapa	1.29	333	*e*P	Pn	06 33 13.7	+1.0
TECA				*e*S	Sn	06 33 28.4	-0.5
COPN	Copaltepe	1.29	97	*e*P	Pn	06 33 12.5	-0.1
COPN				*e*S	Sn	06 33 28.9	+0.3
MOMN	Momotombo	1.33	87	*e*P	Pn	06 33 13.2	0.0
MOMN				*e*S	Sn	06 33 30.1	+0.3
ESTN	Estel	1.68	63	*e*P	Pn	06 33 18.4	+0.4
LBRS	Las Brisas	1.78	322	*e*P	Pn	06 33 19.6	+0.2

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*BJI **20** 06:32:53.9, 49°.27N×156°.14E, h11^{km}, mb5.7/83, mB6.1/32, Ms6.0/76, Ms7 5.9/71*

*IDC **20** 06:32:54.5±0.4, 49°.35N×156°.11E, h0^{km}, mb5.5/46, mb1 5.5/49, mb1mx5.4/68, mbtmp5.5/49, ML4.5/2, MS5.5/54, Ms1 5.5/54, ms1mx5.4/73, Error ellipse: s-maj=10.6km s-min=8.6km az=134.0*

*GCMT **20** 06:32:56.1±0.1, 49°.24N×156°.54E, h27^{km}, MW5.8/139, Moment Tensor Solution. s115,c236; s139,c413; Duration: 2^{s}0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$5.55±.08; M$_{\theta\theta}$-1.59±.05; M$_{\phi\phi}$-3.97±.06; M$_{r\theta}$2.52±.11; M$_{\theta\phi}$-2.51±.03; M$_{\phi r}$4.03±.11; Best double couple: M$_0$7.31000×10^{17} NP1:φ$_s$32.00000°, δ65.00000°, λ90.00000°. NP2:φ$_s$213.00000°, δ25.00000°, λ90.00000°. Principal axes: T 7.3060, Plg70.0000°, Azm302.0000°; N -0.0020, Plg0.0000°, Azm32.0000°; P -7.3140, Plg20.0000°, Azm122.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*NEIC **20** 06:32:56.0±0.0, 49°.25N×156°.32E, h21^{km}, Moment Tensor Solution. s23 Moment tensor: Scale 10^{17}Nm; M$_{rr}$4.15; M$_{\theta\theta}$-1.38; M$_{\phi\phi}$-2.77; M$_{r\theta}$3.68; M$_{\theta\phi}$-0.91; M$_{\phi r}$3.70; Best double couple: M$_0$6.40000×10^{17} NP1:φ$_s$41.00000°, δ73.00000°, λ96.00000°. NP2:φ$_s$202.00000°, δ18.00000°, λ72.00000°. Principal axes: T 6.9200, Plg61.0000°, Azm319.0000°; N -1.0900, Plg5.0000°, Azm219.0000°; P -5.8200, Plg27.0000°, Azm126.0000°;*

*NEIC **20** 06:32:56.1±0.1, 49°.35N×156°.13E, h10^{km}, mb5.8/298, MS5.5/147, MW5.8 Error ellipse: s-maj=2.8km s-min=1.4km az=156.0*

*KRSC **20** 06:32:57.3±2.0, 49°.15N×156°.81E, h70^{km}±31^{km}, ML6.0*

*ISCJB **20** 06:32:58.1±0.3, 49°.26N±0°.02×156°.26E±0°.02, h37^{km}±2^{km}, mb5.7/676, MS5.6/232, Error ellipse: s-maj=3.1km s-min=1.6km az=160.8*

*SKHL **20** 06:32:59.7±0.2, 49°.17N×156°.44E, h58^{km}±2^{km}, mb6.6/3, mbh6.5/2, Ms5.9/8*

SKHL Felt (III-IV) at Severo-Kurilsk.

*MOS **20** 06:33:01.6±1.1, 49°.47N×156°.14E, h64^{km}, mb6.0/131, MS5.7/62, Error ellipse: s-maj=5.7km s-min=2.6km az=82.2*

MOS Felt (III-IV) at Severo-Kuril'sk.

ISC 20 06:33:00.7±0.4**, 49°.26N**±0°.04×**156°.27E**±0°.03**, h44**^{km}±3^{km}**, h44**^{km}**:pP-P, n2144,** σ1^s**13**/2167**, mb5.8**/728**, MS5.6**/232**, 126C-30D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	1.43	356	*i* P	Pn	06 33 24.0	-0.1
SKR				AMB	AMB	06 33 24.0	
	41µm,1.3s						
SKR				AMB	AMB	06 33 25.0	
	27µm,0.7s						
SKR				*e*S	Sn	06 33 42.0	+0.4
SKR				A	A	06 33 47.0	
	92µm,0.6s						
SKR				A	A	06 33 47.0	
	114µm,0.6s						
SKR				AMS	AMS	06 34 04.0	
	367µm,14.0s						
SKR				AMS	AMS	06 34 04.0	
	363µm,14.0s						
SKR				AMS	AMS	06 34 04.0	
	356µm,14.0s						
SKR	Severo-Kuril's	1.43	356	*e*P	Pn	06 33 23.8	-0.3
SKR				*e*S	Sn	06 33 43.3	+1.7
SKR	Severo-Kuril's	1.43	356	⇓*i*PN	Pn	06 33 23.7	-0.3
SKR				*e*S	Sn	06 33 43.0	+1.4
SKR				pmax	pmax		
	comp=Z,41µm,1.3s						
SKR				pmax	pmax		
	comp=Z,27µm,0.7s						
SKR				smax	smax		
	comp=N,92µm,0.6s						
SKR				smax	smax		
	comp=E,114µm,0.7s						
PAU	Pauzhetka	2.23	9	*e*P	Pn	06 33 35.3	+0.2
PAU				AMB	AMB	06 33 37.4	
	comp=E,4µm,0.3s						
PAU				*e*S	Sn	06 34 02.0	+0.5
PAU				A	A	06 34 07.1	
	comp=E,41µm,0.5s						
PAU				AMS	AMS	06 34 44.2	
	comp=E,16µm,11.0s						
PAU	Pauzhetka	2.23	9	*e*P	Pn	06 33 35.4	+0.3
PAU				*e*S	Sn	06 34 03.5	+2.0
PAU	Pauzhetka	2.23	9	PN	Pn	06 33 35.4	+0.3
PAU				S	Sn	06 34 03.5	+2.0
KDTR	Khodutka, Kamc	2.80	24	*e*P	Pn	06 33 41.8	-1.1
MIPR	Malaya Ipel'ka	3.03	6	*e*P	Pn	06 33 47.2	+1.1
MIPR	Malaya Ipel'ka	3.03	6	PN	Pn	06 33 47.2	+1.1
ASAK	Asacha	3.29	18	*e*P	Pn	06 33 49.6	-0.1
ASAK	Asacha	3.29	18	PN	Pn	06 33 49.6	-0.1
MTVR	Mutnovka	3.44	20	*e*P	Pn	06 33 51.5	-0.4
MTVR	Mutnovka	3.44	20	PN	Pn	06 33 51.5	-0.4
RUS	Russkaya	3.48	23	*e*P	Pn	06 33 50.9	-1.3
RUS	Russkaya	3.48	23	PN	Pn	06 33 50.9	-1.3
GRL	Gorelyy	3.48	18	*e*P	Pn	06 33 52.9	+0.5
GRL	Gorelyy	3.48	18	PN	Pn	06 33 52.9	+0.5
APC	Apacha	3.71	8	*e*P	Pn	06 33 55.8	+0.4
APC	Apacha	3.71	8	PN	Pn	06 33 55.8	+0.4
KRMR	Karymshinskiy	3.76	17	*e*P	Pn	06 33 56.6	+0.5
KRMR	Karymshinskiy	3.76	17	PN	Pn	06 33 56.6	+0.5
I44RU	PETROPAVLOVSK-	3.95	13	Pn	Pn	06 34 03.0	+4.2
	baz=173,slow=19,SNR=1.2						
I44RU				Sn	Sn	06 34 51.9	+8.0
	baz=164,slow=33						
PEA0B	Petropavlovsk-	3.95	13	*e*Pn	Pn	06 33 59.8	+1.0
PETK	Petropavlovsk-	3.95	13	Pn	Pn	06 33 59.8	+1.0
	baz=175,slow=12						
PETK				LR	LR	06 35 43.1	
	comp=E,78µm,20.7s,baz=195,slow=43						
PETK	Petropavlovsk-	3.95	13	*e*Pn	Pn	06 33 59.4	+0.6
PETK	Petropavlovsk-	3.95	13	*e*PN	Pn	06 33 59.4	+0.6
PET	Petropavlovsk	4.05	21	*e*P	Pn	06 33 59.8	-0.3
PET				*e*S	Sn	06 34 45.0	-1.2
PET				AMS	AMS	06 35 39.8	
	comp=E,78µm,16.0s						
PET				AMS	AMS	06 35 39.8	
	comp=E,63µm,16.0s						
PET	Petropavlovsk	4.05	21	*e*Pn	Pn	06 33 59.4	-0.7
PET	Petropavlovsk	4.05	21	*e*P	Pn	06 33 59.7	-0.3
PET				*e*S	Sn	06 34 46.3	+0.1
PET	Petropavlovsk	4.05	21	⇑*i*PN	Pn	06 33 58.8	-1.3
PET				*i* S	Sn	06 34 47.1	+0.9
PET				pmax	pmax		
	comp=Z,9µm,5.3s						
PET				pmax	pmax		
	comp=Z,6µm,14.5s						
PET				pmax	pmax		
	comp=Z,2µm,1.2s						
PET				smax	smax		
	comp=N,14µm,0.7s						
PET				smax	smax		
	comp=E,13µm,0.6s						
PET				MLR	MLR		
	comp=Z,57µm,17.0s						
INSR	Institute	4.08	20	*e*P	Pn	06 34 00.4	-0.1
INSR				*e*S	Sn	06 34 46.7	-0.2
INSR	Institute	4.08	20	PN	Pn	06 34 00.4	-0.1
INSR				S	Sn	06 34 46.7	-0.2
DALK	Dalny	4.08	22	*e*P	Pn	06 34 00.1	-0.4
DALK				*e*S	Sn	06 34 46.6	-0.4
DALK	Dalny	4.08	22	PN	Pn	06 34 00.1	-0.4
DALK				S	Sn	06 34 46.6	-0.4
UGLR	Uglovaya	4.26	21	*e*P	Pn	06 34 03.5	+0.4
UGLR	Uglovaya	4.26	21	PN	Pn	06 34 03.5	+0.4
AVH	Avacha	4.30	20	*e*P	Pn	06 34 04.4	+0.9
AVH	Avacha	4.30	20	PN	Pn	06 34 04.4	+0.9
KOK	Koryaka	4.30	19	*e*P	Pn	06 34 04.9	+1.3
KOK	Koryaka	4.30	19	PN	Pn	06 34 04.9	+1.3
SMAR	Somma	4.31	21	*e*P	Pn	06 34 04.5	+0.7
SMAR	Somma	4.31	21	PN	Pn	06 34 04.5	+0.7
SDLR	Sedlovina	4.34	21	*e*P	Pn	06 34 03.7	-0.5
SDLR	Sedlovina	4.34	21	PN	Pn	06 34 03.7	-0.5
KRX	Arik	4.36	19	*e*P	Pn	06 34 05.5	+1.0
KRX	Arik	4.36	19	PN	Pn	06 34 05.5	+1.0
NLC	Nalytchevo	4.36	25	*e*P	Pn	06 34 02.9	-1.4
NLC	Nalytchevo	4.36	25	PN	Pn	06 34 02.9	-1.4
SPN	Mys Shipunski	4.51	30	*e*P	Pn	06 34 05.1	-1.2
SPN				*e*S	Sn	06 34 56.1	-1.3
SPN	Mys Shipunski	4.51	30	PN	Pn	06 34 05.1	-1.2
SPN				S	Sn	06 34 56.1	-1.3
GNL	Ganaly	4.56	13	*e*P	Pn	06 34 08.3	+1.1
GNL	Ganaly	4.56	13	PN	Pn	06 34 08.3	+1.1
KII	Karymskiy	5.17	21	*e*P	Pn	06 34 16.6	+1.1
KII	Karymskiy	5.17	21	PN	Pn	06 34 16.6	+1.1
MKZ	Mys Kozlova	6.28	30	*e*P	Pn	06 34 28.6	-2.1
MKZ				*e*S	Sn	06 35 36.5	-4.5
MKZ	Mys Kozlova	6.28	30	PN	Pn	06 34 28.6	-2.1
TUMD	Tumrok D	6.47	21	*e*P	Pn	06 34 33.0	-0.2
TUMR	Tumrok	6.48	20	*e*P	Pn	06 34 34.3	+0.8
TUMR	Tumrok	6.48	20	PN	Pn	06 34 33.0	-0.5
ESO	Esso	6.83	12	*e*P	Pn	06 34 39.7	+1.4
ESO	Esso	6.83	12	PN	Pn	06 34 39.7	+1.4
KMNR	Kamenistaya	6.94	19	*e*P	Pn	06 34 40.8	+1.0
KMNR	Kamenistaya	6.94	19	PN	Pn	06 34 40.8	+1.0
KUR	Kuril'sk	7.00	238	*i* P	Pn	06 34 41.0	+0.5
KUR				AMB	AMB	06 34 48.0	
	comp=Z,89nm,0.6s						
KUR				AMB	AMB	06 34 48.0	
	comp=Z,248nm,0.6s						
KUR				AMB	AMB	06 34 48.0	
	comp=Z,1µm,0.6s						
KUR				*i* S	Sn	06 35 58.4	-0.3
KUR				AMS	AMS	06 37 28.6	
	comp=Z,54µm,14.0s						
KUR				AMS	AMS	06 37 28.6	
	comp=Z,89µm,14.0s						
KUR				AMS	AMS	06 37 28.6	
	comp=Z,48µm,14.0s						
KUR	Kuril'sk	7.00	238*c*	*i*PN	Pn	06 34 41.2	+0.7
KUR				*i* S	Sn	06 36 03.0	+4.3
KUR				pmax	pmax		
	comp=Z,1µm,0.6s						
KUR				pmax	pmax		
	comp=N,80nm,0.3s						
KUR				pmax	pmax		
	comp=E,281nm,0.5s						
KUR				smax	smax		
	comp=N,40µm,4.8s						
KUR				smax	smax		
	comp=E,23µm,4.6s						
KUR				smax	smax		
	comp=N,2µm,0.8s						
KUR				smax	smax		
	comp=E,416nm,0.8s						
KUR				MLR	MLR		
	comp=Z,57µm,15.0s						
KUR				MLR	MLR		
	comp=N,75µm,12.0s						
KUR				MLR	MLR		
	comp=E,15µm,15.0s						
KPT	Kopyto	7.13	18	*e*P	Pn	06 34 42.4	0.0
KPT	Kopyto	7.13	18	PN	Pn	06 34 42.4	0.0
KIRR	Kirishev	7.14	19	*e*P	Pn	06 34 42.6	0.0
KIRR	Kirishev	7.14	19	PN	Pn	06 34 42.6	0.0
KOZ	Kozyrevsk	7.15	16	*e*P	Pn	06 34 43.3	+0.7
KOZ	Kozyrevsk	7.15	16	PN	Pn	06 34 43.3	+0.7
BZMR	Bezymyannaya	7.16	19	*e*P	Pn	06 34 43.0	+0.2
BZMR	Bezymyannaya	7.16	19	PN	Pn	06 34 43.0	+0.2
BZWR	Bezymyannyi-We	7.19	19	*e*P	Pn	06 34 44.0	+0.8
BZWR	Bezymyannyi-We	7.19	19	PN	Pn	06 34 44.0	+0.8
BZGR	Bezymyannyi-Gr	7.21	20	*e*P	Pn	06 34 44.3	+0.8
BZGR	Bezymyannyi-Gr	7.21	20	PN	Pn	06 34 44.3	+0.8
ZLN	Zelenaya	7.30	20	*e*P	Pn	06 34 45.8	+1.0
ZLN	Zelenaya	7.30	20	PN	Pn	06 34 45.8	+1.0
LGNR	Loginova	7.34	20	*e*P	Pn	06 34 46.1	+0.7
LGNR	Loginova	7.34	20	PN	Pn	06 34 46.1	+0.7
CIRR	Tsirk	7.38	20	*e*P	Pn	06 34 46.7	+0.8
CIRR	Tsirk	7.38	20	PN	Pn	06 34 46.7	+0.8
KRSR	Krestovskiy	7.43	19	*e*P	Pn	06 34 46.5	-0.1
KRSR	Krestovskiy	7.43	19	PN	Pn	06 34 46.5	-0.1
KLY	Klyuchi	7.54	19	*e*P	Pn	06 34 49.1	+1.2
KLY	Klyuchi	7.54	19	PN	Pn	06 34 49.1	+1.2
BDR	Baidarnaya	7.90	20	*e*P	Pn	06 34 52.9	0.0
BDR	Baidarnaya	7.90	20	PN	Pn	06 34 52.9	0.0
SRKR	Sorokina	7.97	20	*e*P	Pn	06 34 53.8	-0.1
SRKR	Sorokina	7.97	20	PN	Pn	06 34 53.8	-0.1
SMKR	Semkarok	7.97	21	*e*P	Pn	06 34 53.8	-0.1
SMKR	Semkarok	7.97	21	PN	Pn	06 34 53.8	-0.1
KBTR	Krutoberegovo	8.01	27	*e*P	Pn	06 34 52.8	-1.5
KBTR	Krutoberegovo	8.01	27	PN	Pn	06 34 52.8	-1.5
BKI	Bering	8.41	41	*e*P	Pn	06 34 57.9	-1.9
BKI				S	Sn	06 36 25.5	-7.8
BKI	Bering	8.41	41	PN	Pn	06 34 57.9	-1.9
SHO	Shikotan	8.45	234	*i* P	Pn	06 34 57.0	-3.4
SHO				AMB	AMB	06 35 22.0	
	comp=E,45nm,0.5s						
SHO				AMB	AMB	06 35 22.0	
	comp=E,132nm,0.5s						
SHO				AMB	AMB	06 35 22.0	
	comp=E,331nm,0.5s						
SHO				*i* S	Sn	06 36 30.0	-4.3
SHO				AMS	AMS	06 38 56.9	
	comp=E,53µm,15.0s						
SHO				AMS	AMS	06 38 56.9	
	comp=E,26µm,15.0s						
SHO				AMS	AMS	06 38 56.9	
	comp=E,21µm,15.0s						
SHO	Shikotan	8.45	234*c*	*i*PN	Pn	06 34 57.6	-2.8
SHO				pmax	pmax		
	comp=Z,331nm,0.5s						
SHO				pmax	pmax		
	comp=E,132nm,0.3s						
SHO				pmax	pmax		
	comp=N,45nm,0.7s						
SHO				MLR	MLR		
	comp=Z,21µm,15.0s						
SHO				MLR	MLR		
	comp=E,26µm,14.0s						
SHO				MLR	MLR		
	comp=N,53µm,15.0s						
YUK	Yuzh-Kuril'sk	8.86	238	*i* P	Pn	06 35 05.0	-1.1
YUK				AMB	AMB	06 35 13.0	
	comp=N,657nm,0.5s						
YUK				AMB	AMB	06 35 13.0	
	comp=N,897nm,0.5s						
YUK				AMB	AMB	06 35 13.0	
	comp=N,2µm,0.5s						
YUK				*i* S	Sn	06 36 45.0	+0.5
YUK				AMS	AMS	06 38 36.1	
	comp=N,12µm,16.0s						
YUK				AMS	AMS	06 38 36.1	
	comp=N,28µm,16.0s						
YUK				AMS	AMS	06 38 36.1	
	comp=N,63µm,16.0s						
YUK	Yuzh-Kuril'sk	8.86	238*d*	*i*PN	Pn	06 35 05.4	-0.7
YUK				pmax	pmax		
	comp=Z,2µm,0.5s						
YUK				pmax	pmax		
	comp=N,657nm,0.3s						
YUK				pmax	pmax		
	comp=E,897nm,0.4s						
YUK				MLR	MLR		
	comp=Z,63µm,16.0s						
YUK				MLR	MLR		
	comp=N,12µm,14.0s						
YUK				MLR	MLR		
	comp=E,28µm,16.0s						
TYV	Tymovskoe	8.91	286	*e*P	Pn	06 35 08.6	+2.0
TYV				AMB	AMB	06 35 12.3	
	comp=E,6µm,3.0s						
TYV				AMB	AMB	06 35 12.4	
	comp=E,587nm,1.0s						
TYV				AMS	AMS	06 39 22.7	
	comp=E,80µm,14.0s						
TYV				AMS	AMS	06 39 22.7	
	comp=E,101µm,14.0s						
TYV	Tymovskoe	8.91	286	*e*PN	Pn	06 35 11.4	+4.8
TYV				*e*S	Sn	06 36 51.6	+6.1
TYV				pmax	pmax		
	comp=Z,6µm,2.9s						
TYV				pmax	pmax		
	comp=Z,588nm,1.4s						
TYV				smax	smax		
	comp=N,700nm,2.0s						
TYV				smax	smax		
	comp=E,101nm,1.0s						
TYV				MLR	MLR		
	comp=E,80µm,14.0s						
TYV				MLR	MLR		
	comp=Z,101µm,14.0s						
UGL	Uglegorsk	9.31	274	*i* P	Pn	06 35 15.5	+3.3
UGL				AMB	AMB	06 35 18.5	
	comp=Z,10µm,2.5s						
UGL				AMB	AMB	06 35 18.5	
	comp=Z,10µm,2.5s						
UGL				AMB	AMB	06 35 18.5	
	comp=Z,800nm,1.0s						
UGL				AMB	AMB	06 35 18.5	
	comp=Z,2µm,1.0s						
UGL				AMS	AMS	06 40 17.0	
	comp=Z,50µm,12.0s						
UGL				AMS	AMS	06 40 17.0	
	comp=Z,35µm,12.0s						
YSS	Yuzh-Sakhalins	9.34	261	*e*P	Pn	06 35 14.6	+2.1
YSS				AMB	AMB	06 35 19.1	
	comp=Z,4µm,6.0s						
YSS				AMB	AMB	06 35 19.1	
	comp=Z,6µm,6.0s						
YSS				AMB	AMB	06 35 19.1	
	comp=Z,6µm,6.0s						
YSS				AMB	AMB	06 35 19.4	
	comp=Z,410nm,1.0s						
YSS				AMB	AMB	06 35 19.4	
	comp=Z,840nm,1.0s						
YSS				AMB	AMB	06 35 19.4	
	comp=Z,610nm,1.0s						
YSS				*e*S	Sn	06 36 55.5	-0.6
YSS				AMS	AMS	06 38 56.0	
	comp=Z,10µm,16.0s						
YSS				AMS	AMS	06 38 56.0	
	comp=Z,35µm,16.0s						
YSS				AMS	AMS	06 38 56.0	
	comp=Z,40µm,16.0s						
YSS	Yuzh-Sakhalins	9.34	261	*e*Pn	Pn	06 35 15.3	+2.8
YSS	Yuzh-Sakhalins	9.34	261α	*e*PN	Pn	06 35 15.8	+3.3
YSS				*e*S	Sn	06 37 03.6	+7.5
YSS				pmax	pmax		
	comp=Z,6µm,6.0s						
YSS				pmax	pmax		
	comp=N,4µm,5.0s						
YSS				pmax	pmax		
	comp=E,6µm,5.5s						
YSS				pmax	pmax		
	comp=N,410nm,1.1s						
YSS				pmax	pmax		
	comp=Z,610nm,1.1s						
YSS				pmax	pmax		
	comp=E,840nm,1.3s						
YSS				smax	smax		
	comp=N,180nm,0.6s						
YSS				smax	smax		
	comp=E,170nm,0.7s						
YSS				MLR	MLR		
	comp=N,10µm,16.0s						
YSS				MLR	MLR		
	comp=E,35µm,16.0s						
YSS				MLR	MLR		
	comp=Z,40µm,16.0s						
OKH	Okha	9.37	302	*e*PN	Pn	06 35 15.9	+2.9
OKH				pmax	pmax		
	comp=Z,8µm,4.0s						
NKL	Nikolayevsk	10.53	298	*e*PN	Pn	06 35 31.0	+2.2
NKL				pmax	pmax		
	comp=N,220nm,1.0s						
NKL				pmax	pmax		
	comp=Z,67nm,1.0s						
NKL				MLR	MLR		
	comp=E,26µm,15.0s						
NKL				MLR	MLR		
	comp=Z,54µm,15.0s						
ASAJ	Asahikawa	10.71	246	Pn	Pn	06 35 32.6	+1.3
	comp=Z,40nm,0.3s,baz=68,slow=12,SNR=73						
ASAJ				LR	LR	06 39 19.8	
	comp=Z,43µm,19.2s,baz=66,slow=36						
ASAJ	Asahikawa	10.71	246	*e*Pn	Pn	06 35 32.3	+1.0
MA2	Magadan	10.81	345	Pn	Pn	06 35 33.6	+0.9
	comp=Z,26nm,0.3s,baz=153,slow=9.4,SNR=90						
MA2				LR	LR	06 40 16.1	
	comp=Z,31µm,19.2s,baz=168,slow=41						
MA2	Magadan	10.81	345	*e*P	Pn	06 35 33.2	+0.5
MA2	Magadan	10.81	345	*e*Pn	Pn	06 35 33.4	+0.7
ERM	Erimo	11.69	237	*e*Pn	Pn	06 35 43.5	-1.2
ERM	Erimo	11.69	237	*i* PN	Pn	06 35 43.9	-0.8
SMY	Shemya	11.75	66	*e*Pn	Pn	06 35 41.4	-4.1
SMY	Shemya	11.75	66	*e*PN	Pn	06 35 41.4	-4.1
GRNR	Gornyy	12.86	284	*e*PN	P	06 36 06.8	-3.6
GRNR				pmax	pmax		
	comp=Z,170nm,1.0s						
SEY	Seymchan	13.87	353	LR	LR	06 42 33.5	

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       comp=Z,38µm,18.2s,baz=157,slow=42
SEY    Seymchan          13.87 353 eP       Pn        06 36 14.9 +0.6
SEY    Seymchan          13.87 353c iP      Pn        06 36 14.9 +0.6
TEY    Ternei            14.03 260 eP       Pn        06 36 15.2 -1.4
TEY                                 pmax    pmax
       comp=Z,320nm,1.3s
KLR    Kul'dur           16.00 279  Pn      P         06 36 44.3 -1.0
       comp=Z,0.3nm,0.3s,baz=79,slow=12,SNR=155
KLR                                 LR      LR        06 43 21.8
       comp=Z,5µm,19.0s,baz=82,slow=40
KLR    Kul'dur           16.00 279 eP       Pn        06 36 43.1 +0.7
KLR    Kul'dur           16.00 279c iP      Pn        06 36 43.1 +0.7
USRK   Ussuriysk Ar.     17.37 262  P       Pn        06 36 58.0 -1.6
       baz=68,slow=11
USRK                                LR      LR        06 43 30.1
       comp=Z,12µm,18.3s,baz=54,slow=37
MAJO   Matsushiro        18.29 233 eP       P         06 37 09.0 -1.7
MAJO   Matsushiro        18.29 233 ePn      P         06 37 08.5 -2.2
       comp=Z,243nm,0.8s
MAJO   Matsushiro        18.29 233d iP      P         06 37 09.0 -1.7
MAJO                                pmax    pmax
       comp=Z,251nm,0.9s
MAJO                                MLR     MLR
       comp=Z,21µm,19.0s
MAT    Matsushiro        18.29 233  P       P         06 37 08.4 -2.3
MAT                                 S       Sn        06 40 35.6 +1.4
MJAR   Matsushiro Arr    18.29 233  P       P         06 37 07.2 -3.6
       comp=Z,2.6nm,0.3s,baz=29,slow=8.0,SNR=54
MJAR                                LR      LR        06 45 07.6
       comp=Z,20µm,19.3s,baz=40,slow=40
MJB9   Matsu-Tunnel      18.29 233 ePn      P         06 37 08.6 -2.2
       comp=Z,248nm,0.8s
ZEA    Zeya              18.55 295 eP       P         06 37 13.0 -0.4
ZEA                                 pmax    pmax
       comp=N,52nm,0.8s
ZEA                                 pmax    pmax
       comp=E,160nm,1.2s
ZEA                                 pmax    pmax
       comp=Z,25nm,1.2s
ZEA                                 pmax    pmax
       comp=Z,13µm,10.0s
ZEA                                 pmax    pmax
       comp=E,11µm,12.0s
ZEA                                 MLR     MLR
       comp=E,32µm,14.0s
ZEA                                 MLR     MLR
       comp=Z,45µm,14.0s
MDJ    Mudanjiang        18.76 266  P       P         06 37 11.5 -4.3
MDJ                                 pP      Pn        06 37 17.8 +1.2
MDJ                                 sP      pP        06 37 21.5 -4.8
MDJ                                 S       Sn        06 40 41.3 -4.0
MDJ                                 sS      S         06 40 48.6 +1.8
MDJ                                 pmax    pmax
       comp=Z,220nm,1.1s
MDJ                                 pmax    pmax
       comp=Z,3µm,4.1s
MDJ                                 LR      LR
       comp=Z,26µm,17.5s
MDJ                                 LR      LR
       comp=Z,17µm,17.7s
MDJ                                 LR      LR
       comp=Z,39µm,14.8s
MDJ    Mudanjiang        18.76 266 eP       P         06 37 14.3 -1.5
       comp=Z,512nm,1.1s
YAK    Yakutsk           19.53 321  P       P         06 37 22.5 -1.5
       comp=Z,0.0nm,0.3s,baz=242,slow=23,SNR=67
YAK                                 LR      LR        06 45 22.5
       comp=Z,17µm,18.1s,baz=90,slow=39
YAK    Yakutsk           19.53 321 eP       P         06 37 22.6 -1.5
       comp=Z,650nm,1.0s
YAK    Yakutsk           19.53 321c iP      P         06 37 22.7 -1.3
YAK                                eS       S         06 41 00.3 -1.6
YAK                                 pmax    pmax
       comp=Z,587nm,0.9s
YAK                                 pmax    pmax
       comp=N,238nm,1.5s
YAK                                 pmax    pmax
       comp=Z,2µm,3.2s
YAK                                 pmax    pmax
       comp=N,1µm,3.4s
YAK                                 pmax    pmax
       comp=E,1µm,2.3s
YAK                                 smax    smax
       comp=N,1µm,3.5s
YAK                                 smax    smax
       comp=E,555nm,2.8s
YAK                                 MLR     MLR
       comp=Z,19µm,13.0s
YAK                                 MLR     MLR
       comp=N,11µm,14.0s
YAK                                 MLR     MLR
       comp=E,11µm,14.0s
INU    Inuyama           19.82 233 eP       P         06 37 27.2 -0.3
       comp=E,285nm,0.8s
JHJ2   Mitsune           20.27 223 eP       P         06 37 32.2 -0.1
       comp=E,939nm,1.0s
JHJ    Hachijo jima 2    20.28 223  P       P         06 37 32.3 -0.1
       comp=E,691nm,0.9s,baz=234,slow=9.7,SNR=4.4
JHJ                                 LR      LR        06 47 13.6
       comp=E,2µm,19.1s,baz=48,slow=42
CN2    Changchun         21.80 267⇓iP       P         06 37 45.3 -3.5
CN2                                esP      pP        06 37 55.6 -3.9
CN2                                ePP      PnPn      06 38 10.3 -0.7
CN2                                 pmax    pmax
       comp=E,100nm,0.7s
CN2                                 LR      LR
       comp=E,22µm,15.0s
CN2                                 LR      LR
       comp=E,14µm,15.0s
CN2                                 LR      LR
       comp=E,16µm,16.0s
NIKH   Nikolski High     22.07  67  PFAKE             06 38 00.0 +8.5
NIKH                                LR      LR
       comp=Z,11µm,20.0s
GAMB   Gambell           22.54  38 eP       P         06 37 56.4 -0.1
       comp=Z,258nm,1.3s
UNV    Unalaska Valle    23.41  64  PFAKE             06 38 20.0  +15
UNV                                 LR      LR
       comp=Z,10µm,20.0s
KSRS   Korea Array       23.61 251  P       P         06 38 06.7 -0.7
       comp=Z,260nm,1.1s,baz=50,slow=8.9,SNR=201
KSRS                                PcP     PcP       06 41 51.7 +0.6
       comp=Z,10nm,0.9s,baz=55,slow=0.6,SNR=5.9
KSRS                                LR      LR        06 46 31.4
       comp=Z,13µm,18.9s,baz=62,slow=35
KS01   Wonju Array Si    23.61 251 eP       P         06 38 06.2 -1.2
KS15   Wonju Array Si    23.64 251 eP       P         06 38 07.1 -0.6
KSAR   Wonju Array Be    23.64 251  P       P         06 38 06.7 -1.0
KSAR                                PcP     PcP       06 41 51.6 +0.5
HIA    Hailar            23.70 284 eP       P         06 38 06.2 -2.0
       comp=Z,182nm,1.3s
HIA                                 LR      LR
       comp=Z,30µm,18.0s
HIA    Hailar            23.70 284 eP       P         06 38 06.2 -2.0
HIA                                 pmax    pmax
       comp=Z,182nm,1.3s
HIA                                 MLR     MLR
       comp=Z,30µm,18.0s
AKUT   Akutan            23.82  64  PFAKE             06 38 20.0  +11
AKUT                                LR      LR
       comp=Z,9µm,20.0s
SNY    Shenyang          23.93 264 ⇑P       P         06 38 08.6 -1.8
SNY                                 pmax    pmax
       comp=Z,210nm,1.2s
SNY                                 LR      LR
       comp=Z,23µm,16.5s
SNY                                 LR      LR
       comp=Z,18µm,14.5s
SNY                                 LR      LR
       comp=Z,23µm,13.9s
INCN   Inchon            24.39 252 eP       P         06 38 14.2 -0.4
       comp=Z,424nm,1.2s
INCN                                LR      LR
       comp=Z,13µm,19.0s
INCN   Inchon            24.39 252  P       P         06 38 14.4 -0.2
       SNR=28
INCN   Inchon            24.39 252 eP       P         06 38 14.3 -0.4
INCN                                pmax    pmax
       comp=Z,424nm,1.2s
INCN                                MLR     MLR
       comp=Z,13µm,19.0s
TJN    Taejon            24.64 249c iP      P         06 38 17.4 +0.5
CBIJ   Chichi jima       24.67 211 eP       P         06 38 16.8 -0.4
       comp=Z,478nm,1.4s
JNU    Nakatsue          24.83 239  P       P         06 38 18.9 +0.2
       comp=Z,244nm,1.0s,baz=36,slow=8.2,SNR=74
JNU                                 LR      LR        06 49 14.6
       comp=Z,6µm,19.3s,baz=50,slow=40
JNU    Nakatsue          24.83 239 eP       P         06 38 18.4 -0.4
       comp=Z,457nm,1.1s
FALS   False Pass        25.14  62  PFAKE             06 38 30.0 +8.8
FALS                                LR      LR
       comp=Z,14µm,21.0s
ANM    Nome              25.40  39 eP       P         06 38 23.6  0.0
       comp=Z,598nm,1.3s
ANM    Nome              25.40  39 eP       P         06 38 23.6  0.0
ANM                                 pmax    pmax
       comp=Z,598nm,1.3s
TIXI   Tiksi             25.73 340  P       P         06 38 24.0 -2.4
       comp=Z,173nm,0.8s,baz=127,slow=10,SNR=45
TIXI   Tiksi             25.73 340 eP       P         06 38 24.4 -2.0
TIXI   Tiksi             25.73 340 eP       P         06 38 23.8 -2.6
       comp=Z,173nm,0.8s
TIXI                                LR      LR
       comp=Z,17µm,18.0s
TIXI   Tiksi             25.73 340⇓iP       P         06 38 24.4 -2.0
TIXI                                pmax    pmax
       comp=Z,189nm,0.8s
TIXI                                MLR     MLR
       comp=Z,21µm,15.0s
BOD    Bodaibo           26.15 305⇑iP       P         06 38 29.7 -0.7
BOD                                e                  06 49 21.2
BOD                                 pmax    pmax
       comp=Z,131nm,1.5s
DL2    Dalian            26.74 260⇑iP       P         06 38 34.5 -1.3
DL2                                 S       S         06 43 09.6 +1.3
DL2                                 pmax    pmax
       comp=Z,180nm,1.3s
DL2                                 pmax    pmax
       comp=Z,2µm,6.6s
DL2                                 LR      LR
       comp=Z,11µm,16.3s
DL2                                 LR      LR
       comp=Z,10µm,16.9s
DL2                                 LR      LR
       comp=Z,11µm,17.7s
SDPT   Sand Point        26.79  60  PFAKE             06 38 50.0  +14
SDPT                                LR      LR
       comp=Z,9µm,22.0s
CIT    Chita             26.95 292 eP       P         06 38 35.4 -2.3
CIT                                e                  06 38 48.8
CIT                                e                  06 38 57.6
CIT                                e                  06 39 24.2
CIT                                 pmax    pmax
       comp=Z,204nm,1.0s
RDOG   Red Dog Mine      27.57  32 eP       P         06 38 43.2 +0.1
       comp=Z,264nm,1.1s
RDOG                                LR      LR
       comp=Z,10µm,20.0s
CHGN   Chignik           27.86  58 eP       P         06 38 45.8 +0.1
       comp=Z,68nm,1.2s
CHGN                                LR      LR
       comp=Z,11µm,18.0s
MIDW   Midway            29.15 126  PFAKE             06 39 10.0  +13
MIDW                                LR      LR
       comp=Z,7µm,19.0s
SVW2   Sparrevohn        29.22  48 eP       P         06 38 58.8 +1.0
       comp=Z,72nm,1.1s
SVW2                                LR      LR
       comp=Z,7µm,20.0s
BJI    Beijing           29.67 267  P       P         06 39 00.1 -1.9
BJI                                 pmax    pmax
       comp=Z,46nm,1.6s
BJT    Baijiatuau        29.69 267 eP       P         06 39 01.2 -1.0
       comp=Z,101nm,1.0s
BJT    Baijiatuau        29.69 267 eP       P         06 39 01.2 -1.0
BJT                                 pmax    pmax
       comp=Z,101nm,1.0s
SII    Sitkinak Islan    30.17  57  PFAKE             06 39 20.0  +14
SII                                 LR      LR
       comp=Z,16µm,21.0s
OHAK   Old Harbor        30.58  56 eP       P         06 39 07.9 -2.0
       comp=Z,204nm,1.4s
RSO    Redoubt South     30.61  49 eP       P         06 39 07.7 -2.6
H11N2  WAKE ISLAND Hy    30.67 160  T       T         07 11 50.4
       baz=345
H11N1  WAKE ISLAND Hy    30.69 160  T       T         07 12 13.1
       baz=345,slow=74,SNR=37
H11N3  WAKE ISLAND Hy    30.69 160  T       T         07 12 07.3
       baz=345,slow=74,SNR=45
PPLA   Purkeypile        30.88  44 eP       P         06 39 13.3 +0.7
       comp=Z,532nm,1.6s
PPLA                                LR      LR
       comp=Z,9µm,20.0s
KDAK   Kodiak Island     30.89  54 eP       P         06 39 11.2 -1.4
       comp=Z,131nm,1.2s
KDAK                                LR      LR
       comp=Z,12µm,20.0s
KDAK   Kodiak Island     30.89  54 i P      P         06 39 11.3 -1.3
CAST   Castle Rocks      30.95  43 eP       P         06 39 13.2 +0.2
       comp=Z,294nm,1.9s
CAST                                LR      LR
       comp=Z,8µm,20.0s
WAKE   Wake Island       31.05 161  PFAKE             06 39 30.0  +16
WAKE                                LR      LR
       comp=Z,15µm,20.0s
JOW    Kunigami          31.12 234  P       P         06 39 14.4 -0.5
       comp=Z,100nm,1.0s,baz=46,slow=9.2,SNR=15
JOW                                 LR      LR        06 52 12.4
       comp=Z,5µm,21.2s,baz=42,slow=37
JOW    Kunigami          31.12 234 eP       P         06 39 14.6 -0.3
       comp=Z,226nm,1.2s
SKT    Skwentna          31.17  46 eP       P         06 39 15.2 +0.1
       comp=Z,98nm,1.4s
SKT                                 LR      LR
       comp=Z,9µm,20.0s
HOM    Homer             31.21  51  PFAKE             06 39 30.0  +15
HOM                                 LR      LR
       comp=Z,6µm,19.0s
TIA    Tai'an            31.21 260  P       P         06 39 14.8 -0.9
TIA                                 S       S         06 44 22.4 +3.6
TIA                                 pmax    pmax
       comp=Z,38nm,0.9s
TIA                                 LR      LR
       comp=Z,5µm,13.7s
TIA                                 LR      LR
       comp=Z,9µm,15.7s
TIA                                 LR      LR
       comp=Z,9µm,15.5s
CNPM   China Poot        31.42  51 eP       P         06 39 17.3  0.0
       comp=Z,239nm,1.7s
CNPM                                LR      LR
       comp=Z,6µm,21.0s
BPAW   Bear Paw Mtn.     31.46  42 eP       P         06 39 17.5 -0.1
       comp=Z,105nm,1.2s
BPAW                                LR      LR
       comp=Z,6µm,19.0s
KTH    Kantishna Hill    31.47  43  PFAKE             06 39 30.0  +12
KTH                                 LR      LR
       comp=Z,8µm,20.0s
SUA    Susitna One       31.56  47 eP       P         06 39 18.5  0.0
       comp=Z,223nm,1.8s
SUA                                 LR      LR
       comp=Z,7µm,21.0s
BRLK   Bradley Lake      31.58  50 eP       P         06 39 18.5 -0.2
       comp=Z,277nm,2.0s
BRLK                                LR      LR
       comp=Z,7µm,20.0s
MLY    Manley            31.63  40 eP       P         06 39 19.5 +0.5
       comp=Z,312nm,1.9s
TRF    Thorofare Moun    31.75  43 eP       P         06 39 20.1 -0.2
       comp=Z,78nm,1.0s
TRF                                 LR      LR
       comp=Z,9µm,19.0s
H11S1  WAKE ISLAND Hy    31.81 161  T       T         07 13 15.5
       baz=346,slow=76,SNR=393
H11S3  WAKE ISLAND Hy    31.82 161  T       T         07 13 18.1
       baz=346,slow=76,SNR=395
H11S2  WAKE ISLAND Hy    31.83 161  T       T         07 13 16.9
       baz=346,slow=76,SNR=250
COLD   Coldfoot          32.05  36 eP       P         06 39 22.9 +0.1
       comp=Z,90nm,1.2s
COLD                                LR      LR
       comp=Z,10µm,19.0s
RC01   Rabbit Creek A    32.06  48 eP       P         06 39 22.8  0.0
       comp=Z,86nm,1.2s
RC01                                LR      LR
       comp=Z,9µm,20.0s
BWN    Browne            32.13  42 eP       P         06 39 25.0 +1.6
       comp=Z,1µm,1.4s
BWN                                 LR      LR
       comp=Z,9µm,18.0s
ULN    Ulaanbaatar       32.15 287 eP       P         06 39 22.5 -1.4
ULN    Ulaanbaatar       32.15 287 eP       P         06 39 22.5 -1.4
       comp=Z,49nm,1.6s
ULN                                 LR      LR
       comp=Z,16µm,18.0s
ULN    Ulaanbaatar       32.15 287 eP       P         06 39 22.5 -1.4
ULN                                 pmax    pmax
       comp=Z,49nm,1.6s
ULN                                 MLR     MLR
       comp=Z,16µm,18.0s
HHC    Hu-ho-hao-te      32.28 272 eP       P         06 39 23.8 -1.3
HHC                                 sP      pP        06 39 32.8 -4.1
HHC                                 S       S         06 44 35.8 +0.3
HHC                                 sS      sS        06 44 48.3 -7.0
HHC                                 pmax    pmax
       comp=Z,160nm,1.2s
HHC                                 pmax    pmax
       comp=Z,860nm,5.3s
HHC                                 LR      LR
       comp=Z,12µm,12.9s
HHC                                 LR      LR
       comp=Z,19µm,14.3s
HHC                                 LR      LR
       comp=Z,21µm,15.0s
PMR    Palmer            32.32  47 eP       P         06 39 25.0 -0.1
       comp=Z,33nm,1.0s
PMR                                 LR      LR
       comp=Z,7µm,21.0s
MCK    McKinley          32.36  43 eP       P         06 39 25.2 -0.3
       comp=Z,124nm,1.1s
MCK                                 LR      LR
       comp=Z,6µm,19.0s
GHO    Glory Hole Cre    32.41  46 eP       P         06 39 26.2 +0.1
       comp=Z,152nm,1.4s
GHO                                 LR      LR
       comp=Z,8µm,21.0s
TOLK   Toolik Lake Re    32.48  34  P       P         06 39 26.5 -0.1
       baz=262
TOLK   Toolik Lake Re    32.48  34 eP       P         06 39 26.5 -0.1
       comp=Z,533nm,1.9s
TOLK                                LR      LR
       comp=Z,7µm,21.0s
SONM   Songino Array     32.57 287  P       P         06 39 24.9 -2.7
       comp=Z,5.3nm,0.5s,baz=69,slow=7.7,SNR=27
SONM                                ScP     ScP       06 45 56.9 +3.8
       comp=Z,4.3nm,1.2s,baz=169,slow=0.8,SNR=3.8
SONM                                LR      LR        06 53 59.2
       comp=Z,16µm,19.1s,baz=72,slow=39
MDM    Murphy Dome       32.69  41 eP       P         06 39 28.2 -0.1
       comp=Z,76nm,1.1s
SML    Sawmill           32.69  46 eP       P         06 39 28.2 -0.2
       comp=Z,666nm,1.5s
SML                                 LR      LR
       comp=Z,9µm,22.0s
SML    Sawmill           32.69  46 eP       P         06 39 28.2 -0.2
SML                                 pmax    pmax
       comp=Z,667nm,1.5s
SML                                 MLR     MLR
       comp=Z,9µm,22.0s
WRH    Wood River Hil    32.74  41 eP       P         06 39 28.7  0.0
       comp=Z,189nm,1.2s
WRH                                 LR      LR
       comp=Z,12µm,18.0s
NJ2    Nanjing           32.77 252 eP       P         06 39 29.0 -0.3
NJ2                                 pP      pP        06 39 34.5 -6.7
NJ2                                 sP      sP        06 39 37.8 -8.6
NJ2                                 S       S         06 44 51.8 +8.7
NJ2                                 pmax    pmax
       comp=Z,160nm,1.0s
NJ2                                 LR      LR
       comp=Z,16µm,13.0s
NJ2                                 LR      LR
       comp=Z,11µm,15.7s
NJ2                                 LR      LR
       comp=Z,22µm,14.9s
COLA   College           32.85  41 eP       P         06 39 30.1 +0.4
       comp=Z,159nm,1.0s
COLA                                LR      LR
       comp=Z,7µm,18.0s
COLA   College           32.85  41 eP       P         06 39 30.1 +0.4
COLA                                pmax    pmax
       comp=Z,159nm,1.0s
COLA                                MLR     MLR
       comp=Z,7µm,18.0s
CCB    Clear Creek Bu    32.86  41 eP       P         06 39 29.7 -0.1
       comp=Z,324nm,1.7s
CCB                                 LR      LR
       comp=Z,11µm,19.0s
TLY    Talaya            32.99 295 eP       P         06 39 30.1 -1.0
TLY    Talaya            32.99 295 eP       P         06 39 30.4 -0.7
       comp=Z,136nm,0.9s
TLY                                 LR      LR
       comp=Z,14µm,18.0s
TLY    Talaya            32.99 295  P       P         06 39 30.3 -0.7
       SNR=60
TLY    Talaya            32.99 295c iP      P         06 39 30.1 -1.0
TLY                                 pmax    pmax
       comp=Z,167nm,1.0s
TLY                                 MLR     MLR
       comp=Z,14µm,16.0s
DHY    Denali Highway    33.08  44 eP       P         06 39 31.0 -0.9
       comp=Z,321nm,1.4s
DHY                                 LR      LR
       comp=Z,8µm,20.0s
SCM    Sheep Creek Mo    33.17  46 eP       P         06 39 32.6  0.0
       comp=Z,151nm,1.0s
SCM                                 LR      LR
       comp=Z,8µm,21.0s
SCM    Sheep Creek Mo    33.17  46 eP       P         06 39 32.6  0.0
SCM                                 pmax    pmax
       comp=Z,151nm,1.0s
SCM                                 MLR     MLR
       comp=Z,8µm,21.0s
HDA    Harding Lake      33.23  42 eP       P         06 39 32.1 -1.0
       comp=Z,60nm,0.9s
HDA                                 LR      LR
       comp=Z,9µm,18.0s
IL1    Eielson Array     33.26  41 eP       P         06 39 32.0 -1.3
ILAR   Eielson Array     33.26  41  P       P         06 39 32.8 -0.5
       comp=Z,15nm,0.9s,baz=259,slow=8.3,SNR=129
ILAR                                LR      LR        06 55 56.4
       comp=Z,9µm,18.2s,baz=280,slow=42
ILB    Eielson Array     33.26  41 eP       P         06 39 32.5 -0.8
GLI    Glacier Island    33.36  48 eP       P         06 39 33.5 -0.8
       comp=Z,111nm,1.0s
GLI                                 LR      LR
       comp=Z,8µm,19.0s
TIY    Taiyuan           33.39 267 eP       P         06 39 36.9 +2.1
TIY                                 S       S         06 44 44.3 -8.4
TIY                                 SS      SnSn      06 46 52.4 -4.3
TIY                                 pmax    pmax
       comp=Z,250nm,0.9s
TIY                                 pmax    pmax
       comp=Z,2µm,11.9s
TIY                                 LR      LR
       comp=Z,8µm,14.1s
TIY                                 LR      LR
       comp=Z,6µm,12.1s
TIY                                 LR      LR
       comp=Z,6µm,12.4s
ZAK    Zakamensk         33.61 293 eP       P         06 39 35.3 -1.3
ZAK                                e                  06 42 15.6
ZAK                                 pmax    pmax
       comp=Z,92nm,1.1s
KLU    Klutina           33.87  47 eP       P         06 39 38.4 -0.3
       comp=Z,153nm,1.2s
KLU                                 LR      LR
       comp=Z,8µm,21.0s
MID    Middleton Isla    33.92  51  PFAKE             06 39 50.0  +11
MID                                 LR      LR
       comp=Z,6µm,22.0s
PAX    Paxson            33.95  44 eP       P         06 39 39.7 +0.3
       comp=Z,75nm,1.2s
PAX                                 LR      LR
       comp=Z,7µm,20.0s
PAX    Paxson            33.95  44 eP       P         06 39 39.7 +0.3
PAX                                 pmax    pmax
       comp=Z,75nm,1.2s
PAX                                 MLR     MLR
       comp=Z,7µm,20.0s
FYU    Fort Yukon        33.96  38 eP       P         06 39 40.4 +1.0
       comp=Z,591nm,1.3s
DIV    Divide            33.98  47 eP       P         06 39 39.5 -0.1
       comp=Z,79nm,1.0s
DIV                                 LR      LR
       comp=Z,10µm,20.0s
HARP   HAARP             34.14  45 eP       P         06 39 41.1 +0.1
       comp=Z,611nm,1.9s
RIDG   Independ'e Rid    34.18  43 eP       P         06 39 40.5 -0.9
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	comp=Z,247nm,1.3s						
RIDG				LR	LR		
	comp=Z,13µm,19.0s						
SCRK	**Sand Creek**	34.55	42	*e*P	P	06 39 43.7	-0.9
	comp=Z,210nm,1.4s						
SCRK				LR	LR		
	comp=Z,12µm,19.0s						
BMRM	**Bremner River**	34.56	48	*e*P	P	06 39 44.7	0.0
	comp=Z,233nm,1.3s						
BMRM				LR	LR		
	comp=Z,10µm,19.0s						
MOY	**Mondy**	34.56	296	*e*P	P	06 39 43.9	-1.0
MOY				pmax	pmax		
	comp=Z,99nm,1.3s						
RAGM	**Ragged Mountai**	34.60	49	*e*P	P	06 39 45.4	+0.3
	comp=Z,427nm,1.8s						
RAGM				LR	LR		
	comp=Z,10µm,20.0s						
TGL	**Tana Glacier**	35.45	48	*e*P	P	06 39 52.7	+0.3
	comp=Z,150nm,1.1s						
TGL				LR	LR		
	comp=Z,14µm,22.0s						
BALM	**Baldy**	35.64	47	PFAKE		06 40 10.0	+16
BALM				LR	LR		
	comp=Z,8µm,22.0s						
EGAK	**Eagle**	35.71	41	*e*P	P	06 39 53.9	-0.6
	comp=Z,110nm,0.9s						
YOJ	**Yonaguni jima**	35.88	239	PFAKE		06 40 10.0	+14
YOJ				LR	LR		
	comp=Z,8µm,18.0s						
TATO	**Taipei**	36.34	241	PFAKE		06 40 10.0	+10
TATO				LR	LR		
	comp=Z,7µm,20.0s						
DAWY	**Dawson**	36.55	42	*e*P	P	06 40 01.7	0.0
	comp=Z,70nm,1.1s						
WHN	**Wuhan**	36.62	255	⇓P	P	06 40 02.0	-0.6
WHN				pmax	pmax		
	comp=Z,860nm,0.8s						
YHNB	**Yeheng**	36.64	241	*e*P	P	06 40 02.1	-0.8
	comp=Z,331nm,2.0s						
YHNB				LR	LR		
	comp=Z,9µm,18.0s						
GUMO	**Guam**	36.79	199	LR	LR	06 53 54.6	
	comp=Z,2µm,19.1s,baz=9.5,slow=34						
NACB	**Ninganchiao**	36.90	240	*e*P	P	06 40 05.0	+0.1
	comp=Z,58nm,1.3s						
NACB				*e*S	S	06 45 49.3	+2.6
NACB				LR	LR		
	comp=Z,8µm,19.0s						
SSLB	**Suanglung**	37.56	240	*e*P	P	06 40 10.9	+0.2
	comp=Z,75nm,1.3s						
SSLB				LR	LR		
	comp=Z,10µm,18.0s						
YULB	**Yu-li**	37.68	240	*e*P	P	06 40 12.0	+0.4
	comp=Z,56nm,1.1s						
YULB				LR	LR		
	comp=Z,5µm,19.0s						
KRAR	**Krasnoyarsk**	37.83	305	⇑*i*P	P	06 40 10.6	-1.9
XAN	**Xi’an**	37.86	264	P	P	06 40 12.3	-0.8
XAN				pP	pP	06 40 19.4	-5.7
XAN				pmax	pmax		
	comp=Z,39nm,1.0s						
XAN				LR	LR		
	comp=Z,10µm,16.7s						
XAN				LR	LR		
	comp=Z,11µm,15.2s						
XAN				LR	LR		
	comp=Z,14µm,15.3s						
QZH	**Quanzhou**	38.04	244	⇑*i*P	P	06 40 15.0	+0.3
QZH				*e*S	S	06 46 09.8	+5.7
QZH				pmax	pmax		
	comp=Z,110nm,1.1s						
QZH				pmax	pmax		
	comp=Z,2µm,3.3s						
QZH				LR	LR		
	comp=Z,4µm,18.6s						
QZH				LR	LR		
	comp=Z,3µm,14.6s						
QZH				LR	LR		
	comp=Z,5µm,16.5s						
TPUB	**Ta-pu**	38.13	240	*e*P	P	06 40 15.0	-0.4
	comp=Z,173nm,1.2s						
TPUB				LR	LR		
	comp=Z,8µm,20.0s						
TWG	**Pinlang**	38.26	239	*e*P	P	06 40 17.6	+1.2
	comp=Z,314nm,0.9s						
TWG				LR	LR		
	comp=Z,30µm,18.0s						
INK	**Inuvik**	38.38	34	P	P	06 40 18.1	+1.0
	comp=Z,71nm,0.9s,baz=271,slow=7.4,SNR=136						
INK	**Inuvik**	38.38	34	*e*P	P	06 40 17.6	+0.6
	comp=Z,122nm,1.0s						
INK				LR	LR		
	comp=Z,6µm,21.0s						
INK	**Inuvik**	38.38	34	*e*P	P	06 40 17.6	+0.6
INK				pmax	pmax		
	comp=Z,122nm,1.0s						
INK				MLR	MLR		
	comp=Z,6µm,21.0s						
WHY	**Whitehorse**	39.29	47	*e*P	P	06 40 26.3	+1.4
	comp=Z,172nm,1.4s						
WHY				LR	LR		
	comp=Z,6µm,18.0s						
SKAG	**Skagway**	39.40	48	*e*P	P	06 40 26.5	+0.9
	comp=Z,294nm,1.4s						
SKAG				LR	LR		
	comp=Z,8µm,20.0s						
BESE	**Bessie Mountai**	39.89	50	*e*P	P	06 40 30.6	+0.8
	comp=Z,224nm,1.5s						
BESE				LR	LR		
	comp=Z,5µm,18.0s						
ENH	**Enshi**	39.91	259	*e*P	P	06 40 29.4	-0.9
	comp=Z,86nm,0.9s						
LZH	**Lanzhou**	39.95	271	⇑P	P	06 40 30.6	-0.1
LZH				pP	pP	06 40 36.4	-6.4
LZH				sP	sP	06 40 39.8	-8.2
LZH				PP	PnPn	06 42 08.8	+2.2
LZH				S	S	06 46 29.0	-3.9
LZH				pmax	pmax		
	comp=Z,340nm,1.3s						
LZH				pmax	pmax		
	comp=Z,2µm,4.2s						
LZH				LR	LR		
	comp=Z,22µm,12.3s						
LZH				LR	LR		
	comp=Z,21µm,12.3s						
LZH				LR	LR		
	comp=Z,27µm,13.8s						
JIS	**Juneau Island**	40.22	50	*e*P	P	06 40 33.8	+1.3
	comp=Z,84nm,1.1s						
GTA	**Gaotai**	40.70	278	⇑P	P	06 40 36.1	-0.8
GTA				pP	pP	06 40 43.4	-5.5
GTA				sP	sP	06 40 47.3	-6.8
GTA				PP	PP	06 42 11.3	+0.3
GTA				ScP	ScP	06 46 26.3	+2.9
GTA				PcS	PcS	06 46 31.9	+3.3
GTA				S	S	06 46 43.6	-0.4
GTA				sS	sS	06 46 53.1	-11
GTA				ScS	ScS	06 50 40.4	+2.2
GTA				pmax	pmax		
	comp=Z,67nm,1.2s						
GTA				LR	LR		
	comp=Z,15µm,14.6s						
GTA				LR	LR		
	comp=Z,24µm,16.8s						
GTA				LR	LR		
	comp=Z,40µm,15.9s						
CRAG	**Craig**	41.84	54	PFAKE		06 41 00.0	+14
CRAG				LR	LR		
	comp=Z,7µm,21.0s						
WRAK	**Wrangell Islan**	41.89	52	*e*P	P	06 40 47.4	+1.2
	comp=Z,74nm,1.1s						
DLBC	**Dease Lake**	42.33	49	*e*P	P	06 40 51.8	+1.9
	comp=Z,98nm,1.1s						
DLBC				LR	LR		
	comp=Z,6µm,21.0s						
GZH	**Guangzhou**	42.58	248	P	P	06 40 47.8	-4.4
GZH				S	S	06 47 04.8	-7.0
GZH				LR	LR		
	comp=Z,5µm,16.5s						
GZH				LR	LR		
	comp=Z,7µm,16.3s						
CAUP	**Cauayan**	42.62	233	*e*P	P	06 40 53.0	+0.5
JOHN	**Johnston Islan**	42.66	127	PFAKE		06 41 10.0	+17
JOHN				LR	LR		
	comp=Z,7µm,21.0s						
HKC	**Hong Kong Obse**	42.67	246	⇑P	P	06 40 54.0	+1.0
ZAA0	**Zalesovo Array**	42.90	305	*e*P	P	06 40 52.4	-2.1
	comp=Z,34nm,0.8s						
ZAA0				LR	LR		
	comp=Z,9µm,18.0s						
ZALV	**Zalesovo Beam**	42.90	305	P	P	06 40 52.5	-2.0
	comp=Z,30nm,0.5s,baz=63,slow=6.9,SNR=56						
ZALV				PcP	PcP	06 42 44.7	+0.2
	comp=Z,49nm,1.0s,baz=63,slow=3.6,SNR=9.2						
ZALV				LR	LR	07 00 11.7	
	comp=Z,7µm,18.6s,baz=62,slow=38						
ZALV	**Zalesovo Beam**	42.90	305	P	P	06 40 52.5	-2.0
ZALV						06 42 44.7	
ZALV				pmax	pmax		
	comp=Z,29nm,0.5s						
ZALV				MLR	MLR		
	comp=Z,7µm,18.6s						
MCO	**Taipa Grande**	43.18	247	P	P	06 40 58.0	+0.9
CD2	**Chengdu**	43.21	265	⇑P	P	06 40 56.8	-0.6
CD2				pP	pP	06 40 59.9	-10
CD2				sP	sP	06 41 01.3	-13
CD2				PP	PP	06 42 36.8	-1.4
CD2				S	S	06 47 23.3	+2.2
CD2				pmax	pmax		
	comp=Z,150nm,0.6s						
CD2				pmax	pmax		
	comp=Z,520nm,5.0s						
CD2				LR	LR		
	comp=Z,8µm,21.4s						
CD2				LR	LR		
	comp=Z,10µm,18.4s						
CD2				LR	LR		
	comp=Z,10µm,20.9s						
NVS	**Novosibirsk**	43.38	306	⇑*i*P	P	06 40 58.2	-0.1
NVS				*i*		06 42 45.4	
NVS				*e*S	S	06 47 16.5	-6.3
NVS				pmax	pmax		
	comp=N,109nm,1.6s						
NVS				pmax	pmax		
	comp=Z,612nm,1.6s						
NVS				pmax	pmax		
	comp=E,208nm,1.4s						
NVS				smax	smax		
	comp=N,72nm,2.4s						
KEKH	**Kekaha**	44.07	112	PFAKE		06 41 20.0	+16
KEKH				LR	LR		
	comp=Z,8µm,21.0s						
GYA	**Guiyang**	44.33	258	⇑*i*P	P	06 41 06.4	0.0
GYA				pP	pP	06 41 14.6	-4.0
GYA				PcP	PP	06 42 50.8	+0.6
GYA				S	S	06 47 38.3	+0.8
GYA				sS	sS	06 47 50.0	-7.9
GYA				SS	SS	06 50 48.4	-8.7
GYA				pmax	pmax		
	comp=Z,40nm,1.0s						
GYA				pmax	pmax		
	comp=Z,240nm,5.8s						
GYA				LR	LR		
	comp=Z,8µm,17.6s						
GYA				LR	LR		
	comp=Z,8µm,17.5s						
GYA				LR	LR		
	comp=Z,6µm,17.8s						
TGY	**Tagaytay City**	45.46	232	LR	LR	07 00 41.4	
	comp=Z,2µm,21.2s,baz=6.5,slow=37						
HON	**Honolulu**	45.61	111	PFAKE		06 41 30.0	+14
HON				LR	LR		
	comp=Z,7µm,20.0s						
ZSN	**Zaisan**	45.84	296	*e*P	P	06 41 17.1	-1.0
	comp=Z,6.6nm,1.2s						
ZSN				*e*S	S	06 47 56.4	-2.4
ZSN				LR	LR	07 02 08.8	
	comp=Z,2µm,13.8s						
BBB	**Bella Bella**	45.93	56	*e*P	P	06 41 19.3	+0.7
	comp=Z,250nm,1.7s						
WMQ	**Urumqi**	46.01	291	P	P	06 41 19.6	0.0
WMQ				pP	pP	06 41 25.1	-6.7
WMQ				PcP	PcP	06 42 58.1	+2.6
WMQ				PP	PP	06 43 08.9	+1.1
WMQ				pmax	pmax		
	comp=Z,170nm,1.3s						
WMQ				LR	LR		
	comp=Z,25µm,13.1s						
WMQ				LR	LR		
	comp=Z,24µm,14.7s						
WMQ				LR	LR		
	comp=Z,17µm,18.1s						
OTRP	**Odiongan**	46.38	229	*e*P	P	06 41 23.2	+0.6
RCP	**Roxas**	46.72	228	⇑*e*P	P	06 41 25.5	+0.3
SEM	**Semipalatinsk**	47.01	302	*e*P	P	06 41 25.3	-2.2
	comp=Z,59nm,1.0s						
SEM				LR	LR	07 02 40.3	
	comp=Z,3µm,14.7s						
HLK	**Haleakala**	47.11	110	PFAKE		06 41 40.0	+11
HLK				LR	LR		
	comp=Z,6µm,20.0s						
YKW3	**Yellowknife Ar**	47.60	39	*e*P	P	06 41 31.9	+0.3
	comp=Z,120nm,1.3s						
YKA	**Yellowknife Ar**	47.64	39	P	P	06 41 32.3	+0.4
	comp=Z,44nm,0.9s,baz=297,slow=7.6,SNR=106						
YKA				PcP	PcP	06 43 01.3	+0.6
	comp=Z,10nm,0.9s,baz=302,slow=5.5,SNR=4.0						
MK31	**Makanchi Array**	47.69	297	*e*P	P	06 41 30.9	-1.6
MK31	**Makanchi Array**	47.69	297	*i* P	P	06 41 30.7	-1.9
MK31				pmax	pmax		
	comp=Z,100nm,0.9s						
MKAR	**Makanchi Array**	47.69	297	P	P	06 41 30.9	-1.7
	comp=Z,66nm,0.9s,baz=60,slow=4.8,SNR=272						
MKAR				PcP	PcP	06 43 01.6	+0.2
	comp=Z,19nm,1.0s,baz=75,slow=4.8,SNR=2.9						
MKAR				ScP	ScP	06 46 55.3	+3.6
	comp=Z,4.0nm,0.9s,baz=52,slow=4.8,SNR=4.0						
MKAR				LR	LR	07 03 04.3	
	comp=Z,24µm,18.5s,baz=43,slow=38						
MKAR	**Makanchi Array**	47.69	297	*e*P	P	06 41 30.9	-1.7
	comp=Z,428nm,0.9s						
MKAR				PcP	PcP	06 43 01.6	+0.2
MKAR				ScP	ScP	06 46 55.3	+3.6
MKAR	**Makanchi Array**	47.69	297	*i* P	P	06 41 30.8	-1.7
MKAR				pmax	pmax		
	comp=Z,65nm,0.9s						
MK01	**Makanchi Array**	47.70	297	*e*P	P	06 41 30.3	-2.3
KURK	**Kurchatov**	47.76	303	*e*P	P	06 41 31.6	-1.4
KURK	**Kurchatov**	47.76	303	*e*P	P	06 41 31.5	-1.4
	comp=Z,248nm,0.9s						
KURK	**Kurchatov**	47.76	303	P	P	06 41 31.9	-1.1
	SNR=93						
KURK	**Kurchatov**	47.76	303	P	P	06 41 31.4	-1.6
KURK				pmax	pmax		
	comp=Z,299nm,1.0s						
RES	**Resolute Bay**	47.76	20	P	P	06 41 33.3	+0.6
	comp=Z,58nm,1.0s,baz=309,slow=8.8,SNR=24						
RES	**Resolute Bay**	47.76	20	*e*P	P	06 41 32.9	+0.2
	comp=Z,96nm,1.1s						
QIZ	**Qiongzhong**	47.78	248	*e*P	P	06 41 34.3	+0.8
	comp=Z,113nm,1.1s						
KMI	**Kunming**	47.78	260	P	P	06 41 33.8	0.0
KMI				pP	pP	06 41 42.5	-3.5
KMI				PP	PP	06 43 25.8	+0.1
KMI				pmax	pmax		
	comp=Z,250nm,1.1s						
KMI				LR	LR		
	comp=Z,5µm,15.8s						
KMI				LR	LR		
	comp=Z,7µm,17.8s						
KMI				LR	LR		
	comp=Z,5µm,18.2s						
KURBB	**Kurchatov Arra**	47.85	303	P	P	06 41 32.4	-1.4
	comp=Z,211nm,0.9s,baz=63,slow=7.7,SNR=373						
MAKZ	**Makanchi**	47.86	297	*e*P	P	06 41 32.4	-1.6
	comp=Z,72nm,1.0s						
MAKZ				LR	LR		
	comp=Z,30µm,19.0s						
MAKZ	**Makanchi**	47.86	297	P	P	06 41 31.6	-2.3
MAKZ				pmax	pmax		
	comp=Z,82nm,1.2s						
POHA	**Pohakuloa**	48.30	110	PFAKE		06 41 50.0	+12
POHA				LR	LR		
	comp=Z,7µm,20.0s						
HMH	**Humu‘ula Sheep**	48.45	110	PFAKE		06 41 50.0	+11
HMH				LR	LR		
	comp=Z,7µm,20.0s						
WRMHI	**West Rim**	48.71	110	PFAKE		06 41 50.0	+9.1
WRMHI				LR	LR		
	comp=Z,8µm,19.0s						
NPOC	**North of Pu‘u**	48.84	110	PFAKE		06 41 50.0	+8.2
NPOC				LR	LR		
	comp=Z,9µm,22.0s						
JCUZ	**Jacuzzi**	48.85	110	PFAKE		06 41 50.0	+8.1
JCUZ				LR	LR		
	comp=Z,8µm,20.0s						
BUKP	**Musuan**	48.86	223	*e*P	P	06 41 40.8	-1.1
DAV	**Davao City (W)**	49.35	222	LR	LR	07 02 05.5	
	comp=Z,2µm,21.1s,baz=12,slow=36						
PAGZ	**Pagadian**	49.65	225	*e*P	P	06 41 46.1	-1.7
LLLB	**Lillooet**	50.09	55	*e*P	P	06 41 51.8	+0.8
	comp=Z,61nm,1.0s						
KBS	**Kingsbay**	50.33	352	*e*P	P	06 41 51.0	-1.3
KBS	**Kingsbay**	50.33	352	*e*P	P	06 41 51.5	-0.7
	comp=Z,28nm,0.8s						
KBS	**Kingsbay**	50.33	352	*e*P	P	06 41 51.6	-0.7
KBS				pmax	pmax		
	comp=Z,28nm,0.8s						
KBS	**Kingsbay**	50.33	352	*e*P	P	06 41 51.0	-1.3
SPA0	**Spitsbergen Ar**	50.51	350	*e*P	P	06 41 52.2	-1.5
SPA0	**Spitsbergen Ar**	50.51	350	*e*P	P	06 41 51.4	-2.3
SPITS	**Spitsbergen Ar**	50.51	350	P	P	06 41 52.0	-1.7
	comp=Z,16nm,0.6s,baz=31,slow=8.9,SNR=29						
SPITS				PcP	PcP	06 43 12.2	+1.2
	comp=Z,30nm,0.9s,baz=65,slow=8.1,SNR=2.4						
SPITS				LR	LR	07 05 10.1	
	comp=Z,6µm,19.1s,baz=5.0,slow=38						
A04D	**Lummi Island**	50.67	58	P	P	06 41 55.3	+0.1
	baz=304						
A04D				S	S	06 49 10.6	+3.8
	baz=304						
NLWA	**Neilton Lookou**	50.75	60	*e*P	P	06 41 56.4	+0.5
	comp=Z,128nm,1.1s						
NLWA				LR	LR		
	comp=Z,4µm,22.0s						
LKP	**Lekhapani**	50.75	268	*e*P	P	06 41 56.7	+0.5
BVA0	**Borovoye Array**	50.91	309	*e*P	P	06 41 55.4	-1.6
BVA0				pmax	pmax		
	comp=Z,262nm,1.1s						
BVAR	**Borovoye Array**	50.91	309	P	P	06 41 55.5	-1.5
	comp=Z,107nm,0.9s,baz=58,slow=6.6,SNR=318						
BVAR				PcP	PcP	06 43 13.9	+1.0
	comp=Z,14nm,0.6s,baz=70,slow=8.3,SNR=4.3						
BVAR				LR	LR	07 05 24.6	
	comp=Z,7µm,18.4s,baz=69,slow=38						
TDK	**Taldyqorghan**	50.94	297	*e*P	P	06 41 56.9	-0.5
	comp=Z,200nm,1.1s						
TDK				LR	LR	07 04 59.4	
	comp=Z,24µm,15.2s						
BRVK	**Borovoye**	50.95	309	*e*P	P	06 41 56.0	-1.3
BRVK	**Borovoye**	50.95	309	*e*P	P	06 41 56.1	-1.2
	comp=Z,309nm,1.1s						
BRVK	**Borovoye**	50.95	309	P	P	06 41 56.4	-0.9
	SNR=134						
BRVK	**Borovoye**	50.95	309*c*	*i*P	P	06 41 56.0	-1.3
BRVK				pmax	pmax		
	comp=Z,383nm,1.3s						
BRVK				MLR	MLR		
	comp=Z,6µm,16.0s						
TULEG	**Thule**	51.23	12	*e*P	P	06 42 01.9	+2.8
	comp=Z,196nm,1.6s						
TULEG				LR	LR		
	comp=Z,6µm,22.0s						
PDGK	**Podgornoye**	51.25	294	P	P	06 41 58.2	-1.7
PDGK				pmax	pmax		
	comp=Z,106nm,1.3s						
B05A	**Bryant**	51.26	58	P	P	06 41 59.7	0.0
	baz=304,SNR=6.1						
DIBR	**DIBRUGARH**	51.27	268	*e*P	P	06 42 01.3	+1.2
SHLS	**Shalkode**	51.37	294	*i* P	P	06 41 57.7	-3.1
	comp=Z,35nm,1.4s						
SHLS				LR	LR	07 05 14.6	
	comp=Z,3µm,15.2s						
BRZS	**Berezniki**	51.38	305	⇑*i*P	P	06 41 59.2	-1.4
	comp=Z,180nm,1.1s						
BRZS				LR	LR	07 05 22.0	
	comp=Z,4µm,13.9s						
E03A	**Lebam**	51.39	60	*e*P	P	06 42 01.5	+0.8
	comp=Z,149nm,1.1s						
E03A				LR	LR		
	comp=Z,4µm,21.0s						
B06A	**Marblemount**	51.45	57	*e*P	P	06 42 01.1	0.0
	comp=Z,109nm,1.3s						
UZB	**Uzynbulak**	51.64	294	⇑*i*P	P	06 42 01.6	-1.3
	comp=Z,31nm,1.2s						
UZB				LR	LR	07 05 22.5	
	comp=Z,1µm,13.9s						
KPKS	**Kokpek**	51.65	295	⇑*i*P	P	06 42 01.6	-1.2
	comp=Z,34nm,1.0s						
KPKS				LR	LR	07 05 01.4	
	comp=Z,5µm,15.0s						
MANU	**Manus Island**	51.68	191	PFAKE		06 42 20.0	+17
MANU				LR	LR		
	comp=Z,4µm,19.0s						
D05A	**Enumclaw**	51.92	59	*e*P	P	06 42 05.4	+0.8
	comp=Z,134nm,1.3s						
ZIRO	**ZIRO**	51.93	269	*e*P	P	06 42 05.9	+0.7
F04D	**Rainier, OR**	51.97	61	P	P	06 42 04.9	-0.1
	baz=305						
ZHN	**Zhinishke**	51.97	295	*e*P	P	06 42 04.2	-1.0
	comp=Z,28nm,1.2s						
ZHN				*e*S	S	06 49 22.8	-2.5
ZHN				LR	LR	07 05 07.2	
	comp=Z,2µm,14.4s						
C06D	**Leavenworth**	52.12	58	P	P	06 42 05.5	-0.7
	baz=305						
JORH	**JORHAT**	52.19	268	*e*P	P	06 42 07.5	+0.6
LSA	**Lhasa**	52.25	273	P	P	06 42 08.4	+0.5
LSA	**Lhasa**	52.25	273	*e*P	P	06 42 09.1	+1.2
	comp=Z,39nm,0.7s						
LSA				LR	LR		
	comp=Z,11µm,19.0s						
LSA	**Lhasa**	52.25	273	P	P	06 42 09.3	+1.4
ITAN	**ITANAGAR**	52.27	269	*e*P	P	06 42 07.3	-0.2
LON	**Longmire**	52.27	59	*e*P	P	06 42 07.7	+0.3
	comp=Z,34nm,1.0s						
LON	**Longmire**	52.27	59	*e*P	P	06 42 07.7	+0.3
LON				pmax	pmax		
	comp=Z,34nm,1.0s						
MOKO	**MOKOCHONG**	52.31	268	*e*P	P	06 42 09.4	+1.4
G03D	**McMinnville, O**	52.33	62	P	P	06 42 06.9	-0.8
	baz=306						
SEPW	**September Lobe**	52.37	60	*e*P	P	06 42 08.3	0.0
PRZ	**Przheval’sk**	52.40	294	*e*P	P	06 42 09.1	+0.6
	comp=Z,88nm,0.9s						
PRZ				LR	LR		
	comp=Z,14µm,18.0s						
PANO	**Nakornpanom**	52.42	251	P	P	06 42 09.8	+1.1
	comp=Z,5.0nm,1.3s						
LTY	**Liberty**	52.62	58	*e*P	P	06 42 09.8	-0.1
	comp=Z,50nm,1.1s						
LTY				LR	LR		
	comp=Z,2µm,19.0s						
NONG	**Nongkai**	52.64	253	P	P	06 42 11.1	+0.8
	comp=Z,10nm,0.9s,comp=Z,168nm						
COR	**Corvallis**	52.67	62	*e*P	P	06 42 10.0	-0.2
	comp=Z,200nm,1.3s						
COR				LR	LR		
	comp=Z,4µm,21.0s						
COR	**Corvallis**	52.67	62	*e*P	P	06 42 10.0	-0.2
COR				pmax	pmax		
	comp=Z,200nm,1.3s						
COR				MLR	MLR		
	comp=Z,4µm,21.0s						
B08A	**Colville Reser**	52.73	57	*e*P	P	06 42 10.6	-0.1
	comp=Z,57nm,1.0s						
KUU	**Kurty**	52.79	297	*e*P	P	06 42 09.3	-1.8
	comp=Z,49nm,1.1s						
KUU				LR	LR	07 05 54.9	
	comp=Z,13µm,14.7s						
MDOK	**Medeo**	52.80	296	*e*P	P	06 42 10.7	-0.8
	comp=Z,447nm,1.2s						
MDOK				LR	LR	07 05 53.0	
	comp=Z,16µm,15.6s						
SKNT	**Sakolnakorn**	52.94	252	P	P	06 42 13.3	+0.8
	comp=Z,139nm,1.3s						
KOHI	**KOHIMA**	52.98	267	*e*P	P	06 42 13.0	+0.1
KEBM	**Edson Butte**	53.07	65	*e*P	P	06 42 13.1	-0.3
	comp=Z,116nm,1.3s						
I03D	**Drain, OR**	53.16	63	P	P	06 42 14.7	+0.8
	baz=306						
TEZP	**TEZPUR**	53.23	269	*e*P	P	06 42 14.3	-0.3
H04A	**Detroit Lake**	53.26	62	*e*P	P	06 42 14.5	-0.1
	comp=Z,153nm,1.3s						
H04A				LR	LR		
	comp=Z,3µm,20.0s						
KDJ	**Kajisay**	53.33	294	*e*P	P	06 42 14.1	-1.4
	comp=Z,97nm,1.1s						
G05D	**Wamic, OR**	53.43	61	P	P	06 42 16.3	+0.5

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       baz=306,SNR=14
SVE    Sverdlovsk         53.43 317 d iP   P        06 42 14.8  -0.9
SVE                                 pmax   pmax
       comp=Z,280nm,1.0s
BTLS   Baital             53.44 299  eP    P        06 42 14.5  -1.4
       comp=Z,16nm,1.1s
BTLS                                LR     LR       07 05 48.1
       comp=Z,3µm,14.8s
KBO    Bosley Butte       53.53  65  PFAKE          06 42 30.0  +13
KBO                                 LR     LR
       comp=Z,3µm,19.0s
C09A   Chrisman Ranch     53.63  57  eP    P        06 42 17.6  +0.3
       comp=Z,53nm,1.0s
I04A   Tendick Farm,      53.65  63  P     P        06 42 17.0  -0.6
       baz=307,SNR=23
IMP    Imphal             53.70 267  eP    P        06 42 17.4  -0.8
D08A   Wollman Farm,      53.71  58  eP    P        06 42 17.8   0.0
       comp=Z,67nm,1.4s
HAWA   Hanford            53.76  59  eP    P        06 42 18.2   0.0
       comp=Z,60nm,1.1s
TKM2   Tokmak 2           53.80 296  P     P        06 42 18.7  -0.1
       SNR=35
G06A   Carlson Farm,      53.82  60  eP    P        06 42 19.7  +0.9
       comp=Z,93nm,1.5s
G06A                                LR     LR
       comp=Z,3µm,22.0s
ULHL   Ulahol             53.82 295  P     P        06 42 19.7  +0.7
       SNR=5.3
F07A   Phinny Hill Vi     53.83  59  eP    P        06 42 18.9  +0.1
       comp=Z,125nm,1.3s
L02D   Cave Junction,     53.93  65  P     P        06 42 18.9  -0.7
       baz=307,SNR=16
I05D   Terrebonne, OR     53.95  62  P     P        06 42 19.3  -0.4
       baz=307,SNR=11
E08A   Dider Farm, El     53.97  58  eP    P        06 42 19.9  +0.2
       comp=Z,67nm,1.4s
HUMO   Hull Mountain      54.04  64  eP    P        06 42 21.9  +1.5
       comp=Z,76nm,1.3s
HUMO                                LR     LR
       comp=Z,4µm,20.0s
KHON   Khomkaen           54.14 252  P     P        06 42 22.5  +1.2
       comp=Z,118nm,0.9s,comp=Z,1µm
J04D   Umpqua Nationa     54.16  63  P     P        06 42 20.3  -1.2
       baz=307,SNR=10.0
DAG    Danmarks Havn      54.20 359⇑iP     P        06 42 19.7  -1.3
       comp=Z,106nm,1.1s
USP    Ospenovka          54.23 297  P     P        06 42 21.2  -0.6
       SNR=53
GUWA   GUWAHATI           54.24 270  eP    P        06 42 21.5  -0.5
CHMS   Chumysh            54.25 297  P     P        06 42 21.1  -0.8
       SNR=23
MYLDM  Lahad Datu         54.30 229  eP    P        06 42 23.8  +1.3
       comp=Z,286nm,1.5s
KBK    Karagaybulak       54.34 296  P     P        06 42 22.2  -0.5
       SNR=22
KULLO  Kullorsuaq         54.42  10⇑iP     P        06 42 22.2  -0.4
       comp=Z,235nm,1.1s
FRU    Bishkek            54.43 297⇑eP     P        06 42 23.0  -0.2
FRU                                 pmax   pmax
       comp=Z,200nm,1.9s
FRU                                 MLR    MLR
       comp=Z,27µm,14.0s
E09A   Wood Farm, Sta     54.46  58  eP    P        06 42 23.5  +0.2
       comp=Z,84nm,1.0s
SILR   SILCHAR            54.48 268  eP    P        06 42 25.6  +1.8
JCC    Jacoby Creek,      54.49  67  eP    P        06 42 24.2  +0.6
       comp=Z,187nm,1.4s
PINE   Pine Mountain      54.51  62  eP    P        06 42 25.0  +1.0
       comp=Z,167nm,1.4s
PINE                                LR     LR
       comp=Z,4µm,22.0s
KZA    Kyzart             54.51 295  P     P        06 42 23.9  -0.4
       SNR=41
LAMP   Lampang            54.52 257  P     P        06 42 25.4  +1.3
       comp=Z,102nm,1.0s,comp=Z,843nm
SHL    Shillong           54.55 269  eP    P        06 42 24.3  -0.1
       comp=Z,404nm,1.2s
SHL    Shillong           54.55 269  eP    P        06 42 24.4  -0.1
ARU    Arti               54.59 318  LR    LR       07 08 03.7
       comp=Z,8µm,18.4s,baz=39,slow=39
ARU    Arti               54.59 318  eP    P        06 42 22.5  -1.6
ARU    Arti               54.59 318  eP    P        06 42 22.5  -1.6
       comp=Z,374nm,1.0s
ARU    Arti               54.59 318  eP    P        06 42 22.5  -1.6
ARU                                 pmax   pmax
       comp=Z,374nm,1.0s
AAK    Ala-Archa          54.62 296  LR    LR       07 07 25.0
       comp=Z,22µm,18.2s,baz=38,slow=38
AAK    Ala-Archa          54.62 296  P     P        06 42 24.1  -0.7
       SNR=22
AAK    Ala-Archa          54.62 296  eP    P        06 42 23.3  -1.4
AAK    Ala-Archa          54.62 296  eP    P        06 42 23.8  -1.0
       comp=Z,60nm,1.0s
AAK    Ala-Archa          54.62 296  P     P        06 42 23.3  -1.4
AAK                                 pmax   pmax
       comp=Z,87nm,1.5s
KHMM   Horse Mountain     54.63  66  eP    P        06 42 26.6  +1.8
       comp=Z,214nm,1.4s
J05D   Fort Rock, OR      54.64  63  P     P        06 42 24.2  -0.7
       baz=308,SNR=50
KKM    Kota Kinabalu      54.71 232  eP    P        06 42 26.5  +0.9
       comp=Z,150nm,1.6s
YBH    Yreka Blue Hor     54.72  65  P     P        06 42 26.7  +1.3
       comp=Z,20nm,1.1s,baz=269,slow=1.4,SNR=33
YBH                                 LR     LR       07 02 01.7
       comp=Z,4µm,21.2s,baz=310,slow=32
YBH    Yreka Blue Hor     54.72  65  eP    P        06 42 26.9  +1.5
       comp=Z,117nm,1.3s
G08A   Pilot Rock         54.74  59  eP    P        06 42 25.7  +0.2
       comp=Z,24nm,1.1s
K04D   Chiloquin, OR      54.74  64  P     P        06 42 26.2  +0.7
       baz=308
CMMT   Chiang Mai         54.75 258  P     P        06 42 26.5  +0.7
       comp=Z,505nm,1.3s,comp=Z,6µm
CHTO   Chiang Mai         54.75 258  eP    P        06 42 26.5  +0.7
       comp=Z,815nm,1.4s
CHTO   Chiang Mai         54.75 258  P     P        06 42 26.9  +1.1
       SNR=80
CHTO   Chiang Mai         54.75 258  eP    P        06 42 26.5  +0.7
CHTO                                pmax   pmax
       comp=Z,815nm,1.4s
CHTO   Chiang Mai         54.75 258  P     P        06 42 26.6  +0.8
       comp=Z,2µm,1.4s,comp=Z,27µm
M02C   Callahan           54.84  65  P     P        06 42 26.4  +0.1
       baz=308,SNR=20
CM31   Chiang Mai Arr     55.01 257  eP    P        06 42 28.6  +1.0
CM31   Chiang Mai Arr     55.01 257  P     P        06 42 29.0  +1.4
CMAR   Chiang Mai Arr     55.01 257  P     P        06 42 28.9  +1.2
       comp=Z,76nm,0.9s,baz=29,slow=6.2,SNR=160
CMAR                                LR     LR       07 06 51.8
       comp=Z,4µm,20.0s,baz=35,slow=37
CMAR   Chiang Mai Arr     55.01 257 ceP    P        06 42 28.8  +1.2
CMAR                                pmax   pmax
       comp=Z,79nm,0.9s
PHIT   Phitsanulok        55.01 255  P     P        06 42 29.3  +1.6
       comp=Z,211nm,0.9s,comp=Z,2µm
EKS2   Erkin-Say          55.02 297  P     P        06 42 27.0  -0.6
       SNR=45
CM01   Chiang Mai Arr     55.03 257  eP    P        06 42 28.7  +0.9
KMRM   Mail Ridge         55.05  67  eP    P        06 42 29.5  +1.7
       comp=Z,187nm,1.5s
PBKT   Sadao Pong         55.13 254  eP    P        06 42 28.8  +0.4
PBKT   Sadao Pong         55.13 254  P     P        06 42 29.4  +0.9
       comp=Z,136nm,0.8s,comp=Z,4µm
I07A   Izee               55.16  61  eP    P        06 42 29.1  +0.6
       comp=Z,38nm,1.1s
K05A   Summer Lake        55.18  63  eP    P        06 42 30.1  +1.3
       comp=Z,218nm,1.3s
N02D   Trinity Center     55.19  66  P     P        06 42 27.7  -1.1
       baz=308,SNR=24
M04C   Macdoel            55.20  64  P     P        06 42 29.4  +0.5
       baz=308,SNR=26
WALA   Waterton Lakes     55.22  53  eP    P        06 42 29.0   0.0
       comp=Z,89nm,1.1s
F10A   Beach Ranch, E     55.29  58  eP    P        06 42 29.5   0.0
       comp=Z,36nm,1.1s
F10A                                LR     LR
       comp=Z,4µm,22.0s
AML    Almayashu          55.40 296  P     P        06 42 30.3  -0.4
       SNR=28
KCPM   Cahto Peak         55.45  67  eP    P        06 42 32.1  +1.4
       comp=Z,272nm,1.5s
DHUB   DHUBRI             55.47 271  eP    P        06 42 30.8  -0.1
GTK    Tadong             55.50 273  eP    P        06 42 29.9  -1.4
WDC    Whiskeytown Da     55.53  66  eP    P        06 42 32.3  +1.2
       comp=Z,123nm,1.4s
WDC    Whiskeytown Da     55.53  66  eP    P        06 42 32.3  +1.2
WDC                                 pmax   pmax
       comp=Z,123nm,1.4s
TURI   Tura               55.57 270  eP    P        06 42 32.0  +0.4
KSH    Kashi              55.65 293  P     P        06 42 35.5  +3.3
KSH                                 sP     pP       06 42 46.3  +1.6
KSH                                 ePcP   PcP      06 43 34.6  +3.3
KSH                                 PP     PP       06 44 41.4  +5.0
KSH                                 pmax   pmax
       comp=Z,85nm,1.2s
KSH                                 pmax   pmax
       comp=Z,3µm,7.0s
KSH                                 LR     LR
       comp=Z,30µm,15.2s
KSH                                 LR     LR
       comp=Z,24µm,15.3s
KSH                                 LR     LR
       comp=Z,13µm,15.8s
KEV    Kevo               55.67 341  PFAKE          06 42 40.0  +8.3
KEV                                 LR     LR
       comp=Z,8µm,19.0s
JTMT   Jette              55.82  55  eP    P        06 42 33.7  +0.4
       comp=Z,63nm,1.3s
JTMT                                LR     LR
       comp=Z,3µm,19.0s
APA    Apatity            55.86 337⇓iP     P        06 42 31.7  -1.4
APA                                 pmax   pmax
       comp=Z,17nm,1.1s
MNAS   Manas              55.87 297  P     P        06 42 32.7  -1.1
MNAS                                pmax   pmax
       comp=Z,47nm,1.1s
BMO    Blue Mountains     55.93  59  eP    P        06 42 34.5  +0.4
       comp=Z,76nm,1.4s
SAIH   SAIHA              55.96 266  eP    P        06 42 35.3  +0.7
FAKI   Fak Fak            55.99 209  eP    P        06 42 33.9  -0.7
       comp=Z,156nm,1.2s
MOD    Modoc Plateau      56.03  63  eP    P        06 42 35.8  +0.9
       comp=Z,184nm,1.1s
AGT    Agartala           56.12 268  eP    P        06 42 37.2  +1.6
O03D   Paynes Creek       56.15  66  P     P        06 42 36.0  +0.3
       baz=309,SNR=32
O03D   Paynes Creek       56.15  66  eP    P        06 42 36.7  +1.1
ARCES  ARCESS Array B     56.16 341  P     P        06 42 33.8  -1.5
       comp=Z,12nm,0.9s,baz=37,slow=6.2,SNR=17
ARCES                               PcP    PcP      06 43 33.2  +0.6
       comp=Z,19nm,0.9s,baz=23,slow=6.6,SNR=4.7
J08A   Circle Bar Ran     56.19  61  eP    P        06 42 36.8  +0.8
       comp=Z,106nm,1.1s
HOPS   Hopland Field      56.19  68  eP    P        06 42 36.8  +0.8
       comp=Z,175nm,1.4s
PRGR   Permogore          56.39 328  eP    P        06 42 34.5  -2.4
PRGR                                e*PP   pP       06 42 50.8  +1.3
PRGR                                eS     S        06 50 24.2  +0.2
PRGR                                pmax   pmax
       comp=Z,136nm,1.1s
SRAK   Srakaew            56.40 251  P     P        06 42 36.0  -1.6
       comp=Z,436nm,0.8s,comp=Z,5µm
BELO   BELONIA            56.44 267  eP    P        06 42 39.3  +1.5
GDXM   Geysers            56.48  68  eP    P        06 42 39.3  +1.2
       comp=Z,142nm,1.5s
GDXM                                LR     LR
       comp=Z,6µm,20.0s
MSO    Missoula           56.57  55  P     P        06 42 38.5  -0.2
       baz=308,SNR=39
MSO    Missoula           56.57  55  eP    P        06 42 39.0  +0.4
       comp=Z,90nm,1.1s
ODAN   Odare              56.61 274  eP    P        06 42 40.2  +0.9
       comp=Z,108nm,0.9s
NAYO   Nakonayok          56.61 252  P     P        06 42 40.5  +1.4
       comp=Z,3.0nm,1.8s
KK31   Karatay Array      56.64 299  eP    P        06 42 37.8  -1.3
KK31   Karatay Array      56.64 299  i P   P        06 42 37.6  -1.5
KK31                                pmax   pmax
       comp=Z,42nm,1.1s
KKAR   Karatay Array      56.64 299  eP    P        06 42 37.8  -1.3
KKAR   Karatay Array      56.64 299  eP    P        06 42 37.8  -1.3
WVOR   Wild Horse Val     56.67  62  eP    P        06 42 40.5  +1.1
       comp=Z,198nm,1.2s
WVOR   Wild Horse Val     56.67  62  eP    P        06 42 40.5  +1.1
WVOR                                pmax   pmax
       comp=Z,198nm,1.2s
BRDH   Bariadhala         56.71 267  P     P        06 42 40.9  +1.2
       comp=Z,429nm,0.8s,baz=62,slow=13,SNR=13
BRDH                                LR     LR       07 10 24.3
       comp=Z,5µm,18.1s,baz=50,slow=40
UMPA   Umpang Tak         56.73 256  P     P        06 42 42.9  +2.9
       comp=Z,105nm,1.0s,comp=Z,777nm
ORV    Oroville           56.79  66  eP    P        06 42 40.8  +0.6
       comp=Z,105nm,1.4s
ORV    Oroville           56.79  66  eP    P        06 42 40.8  +0.6
ORV                                 pmax   pmax
       comp=Z,105nm,1.4s
MCCM   Marconi Confer     56.85  68  PFAKE          06 42 50.0  +9.5
MCCM                                LR     LR
       comp=Z,4µm,20.0s
JIRN   Jiri               56.85 275  eP    P        06 42 41.2   0.0
       comp=Z,517nm,1.1s
GUN    Gumba              56.88 276  eP    P        06 42 41.5  +0.1
       comp=Z,114nm,0.6s
KTK1   Kautokeino         57.06 342  eP    P        06 42 40.8  -0.9
RAMN   Ramite             57.06 274  eP    P        06 42 42.6  +0.1
       comp=Z,304nm,0.8s
BEKR   Beckworth          57.27  65  eP    P        06 42 44.4  +0.6
       comp=Z,86nm,1.2s
KKN    Kakani             57.35 276  eP    P        06 42 44.6   0.0
       comp=Z,166nm,0.7s
TRO    Tromso             57.38 344  eP    P        06 42 43.2  -0.7
PKIN   Phulchoki          57.42 276  eP    P        06 42 45.9  +0.8
       comp=Z,115nm,0.7s
AFDM   Forest Hills D     57.49  67  eP    P        06 42 46.0  +0.8
       comp=Z,123nm,1.5s
IUG    Iuzhnay            57.52 298⇑iP     P        06 42 45.1  -0.3
       comp=Z,51nm,1.0s
IUG                                 LR     LR       07 08 44.1
       comp=Z,2µm,13.7s
DMN    Daman              57.59 276  eP    P        06 42 46.7  +0.4
       comp=Z,552nm,1.1s
GKN    Gorkha             57.63 276  eP    P        06 42 46.5  +0.1
       comp=Z,686nm,1.1s
MFID   Camas Ranch        57.66  60  eP    P        06 42 47.1  +0.7
       comp=Z,73nm,1.3s
HRY    Holter Researc     57.77  54  eP    P        06 42 47.9  +0.8
PAHR   Pah Rah Range      57.96  65  eP    P        06 42 49.2  +0.6
       comp=Z,123nm,1.3s
SRDT   SRDT               57.96 254  P     P        06 42 50.3  +1.6
       comp=Z,142nm,0.8s
DANN   Dangsing           57.97 277  eP    P        06 42 49.3  +0.3
       comp=Z,199nm,0.7s
LRM    Limekiln Ridge     58.00  56  eP    P        06 42 49.9  +0.9
SUMG   Summit             58.02   5  eP    P        06 42 49.2  +0.3
       comp=Z,580nm,1.0s
SUMG   Summit             58.02   5⇑iP     P        06 42 49.0  +0.2
       comp=Z,541nm,1.0s
SUMG   Summit             58.02   5  eP    P        06 42 49.2  +0.3
SUMG                                pmax   pmax
       comp=Z,580nm,1.0s
EGMT   Eagleton           58.03  52  P     P        06 42 46.9  -2.0
       baz=310,SNR=10
EGMT   Eagleton           58.03  52  eP    P        06 42 48.9  +0.1
       comp=Z,104nm,1.3s
VCNR   Virginia City      58.06  65  eP    P        06 42 50.3  +0.9
       comp=Z,124nm,1.5s
DLMT   Dillon             58.22  56  eP    P        06 42 50.8  +0.5
       comp=Z,94nm,1.6s
PNTR   Pine Nut           58.22  66  eP    P        06 42 51.4  +0.8
       comp=Z,187nm,1.4s
HLID   Hailey             58.36  59  P     P        06 42 51.9  +0.5
       baz=310,SNR=80
HLID   Hailey             58.36  59  eP    P        06 42 52.3  +1.0
       comp=Z,91nm,1.1s
MCMT   McKenzie Canyo     58.42  57  eP    P        06 42 52.2  +0.4
CMB    Columbia Colle     58.43  67  eP    P        06 42 52.5  +0.8
       comp=Z,125nm,1.4s
CMB                                 LR     LR
       comp=Z,4µm,21.0s
AB31   Akbulak array      58.44 310  i P   P        06 42 50.2  -1.4
AB31                                pmax   pmax
       comp=Z,453nm,1.4s
ABKAR  Akbulak array      58.44 310  eP    P        06 42 50.6  -1.0
KOLN   Koldanda           58.46 277  eP    P        06 42 52.5  +0.2
       comp=Z,168nm,0.9s
YERR   Yerington          58.50  65  eP    P        06 42 53.0  +0.6
       comp=Z,219nm,1.5s
HNR    Honiara            58.53 176  LR    LR       07 04 13.4
       comp=Z,4µm,21.9s,baz=1.0,slow=32
BOZ    Bozeman (W)        58.59  55  P     P        06 42 53.6  +0.7
       baz=310,SNR=59
BOZ    Bozeman (W)        58.59  55  eP    P        06 42 53.1  +0.2
       comp=Z,71nm,1.1s
BOZ    Bozeman (W)        58.59  55  eP    P        06 42 53.1  +0.2
BOZ                                 pmax   pmax
       comp=Z,71nm,1.1s
SAO    San Andreas Ge     58.61  69  eP    P        06 42 53.5  +0.6
       comp=Z,53nm,1.1s
SAO    San Andreas Ge     58.61  69  eP    P        06 42 53.5  +0.6
SAO                                 pmax   pmax
       comp=Z,53nm,1.1s
AKTO   Aktyubinsk         58.62 312  P     P        06 42 51.7  -1.2
       comp=Z,83nm,1.0s,baz=48,slow=9.9,SNR=103
AKTO                                LR     LR       07 09 25.9
       comp=Z,4µm,20.4s,baz=44,slow=38
AKTO   Aktyubinsk         58.62 312  P     P        06 42 50.6  -2.3
AKTO                                pmax   pmax
       comp=Z,143nm,1.0s
PYUN   Piuthan            58.63 278  eP    P        06 42 53.4  -0.1
       comp=Z,687nm,1.1s
WAKR   Walker             58.70  66  eP    P        06 42 54.9  +1.1
       comp=Z,89nm,1.3s
WAKR                                LR     LR
       comp=Z,4µm,20.0s
PHET   Kaeng Krachan      58.74 252  P     P        06 42 56.0  +1.9
       comp=Z,86nm,0.9s,comp=Z,691nm
BMN    Battle Mountai     58.76  63  eP    P        06 42 55.1  +0.9
       comp=Z,78nm,1.1s
BMN    Battle Mountai     58.76  63  eP    P        06 42 55.1  +0.9
BMN                                 pmax   pmax
       comp=Z,78nm,1.1s
PMG    Port Moresby       58.96 191  LR    LR       07 03 46.8
       comp=Z,2µm,21.9s,baz=351,slow=31
KLMR   Klimovskoe         59.04 329  eP    P        06 42 52.4  -3.1
KLMR                                e               06 43 42.5
KLMR                                pmax   pmax
       comp=Z,157nm,1.1s
KLMR   Klimovskoe         59.04 329  eP    P        06 42 52.5  -3.1
KLMR                                AMP             06 42 55.6
       comp=Z,157nm,1.1s
KLMR                                ePcP   PcP      06 43 42.6  -1.4
KVN    Kaiserville        59.14  65  eP    P        06 42 57.6  +0.8
       comp=Z,185nm,1.4s
KVN    Kaiserville        59.14  65  eP    P        06 42 57.7  +0.8
KVN                                 pmax   pmax
       comp=Z,185nm,1.4s
RYN    Ryan               59.16  65  eP    P        06 42 57.8  +0.8
       comp=Z,87nm,1.2s
QLMT   Earthquake Lak     59.19  56  eP    P        06 42 58.2  +1.0
YHB    Horse Butte        59.37  56  eP    P        06 42 59.5  +1.1
       comp=Z,112nm,1.0s
NV01   Mina Array Sit     59.42  65  eP    P        06 42 59.2  +0.4
NVAR   Mina Array Bea     59.42  65  P     P        06 42 59.4  +0.5
       comp=Z,11nm,0.9s,baz=291,slow=7.1,SNR=56
NVAR                                LR     LR       07 06 53.7
       comp=Z,2µm,20.0s,baz=48,slow=34
NVAR                                PKPPKP P'P'df   07 12 24.4  -8.3
       comp=Z,1.3nm,0.9s,baz=165,slow=5.2,SNR=5.3
MDPB   Devils Postpil     59.48  67  eP    P        06 43 00.3  +1.0
       comp=Z,94nm,1.3s
MDPB                                LR     LR
       comp=Z,4µm,20.0s
NV11   Mina Array Sit     59.51  65  eP    P        06 43 00.1  +0.8
       comp=Z,7.9nm,1.3s
GCMT   Greycliff          59.51  54  eP    P        06 43 00.4  +1.1
STEI   Steigen            59.53 344  eP    P        06 42 57.9  -1.0
OMMB   Old Mammoth Mi     59.54  67  eP    P        06 42 59.6  -0.2
       comp=Z,123nm,1.8s
YMR    Madison River      59.55  56  eP    P        06 43 00.8  +1.2
       comp=Z,89nm,1.2s
JMIC   Jan Mayen          59.56 354  LR    LR       07 09 26.4
       comp=Z,1µm,18.9s,baz=20,slow=37
MLAC   Mammoth, Mammo     59.62  66  P     P        06 43 01.0  +0.7
       baz=311,SNR=10
LOF    Lofoten            59.66 345  eP    P        06 42 57.8  -1.9
BOK    Bokaro             59.70 272  eP    P        06 43 00.2  -0.5
BOK                                 IAmb   IAmb     06 43 03.4
       comp=Z,67nm,1.0s
YFT    Old Faithful       59.76  56  eP    P        06 43 03.6  +2.5
       comp=Z,98nm,1.0s
SBUM   Sibu               59.84 233  eP    P        06 43 02.7  +1.0
       comp=Z,155nm,1.4s
SBUM   Sibu               59.84 233  P     P        06 43 05.0  +3.4
YPP    Pitchstone Pla     59.90  56  eP    P        06 43 03.9  +1.8
       comp=Z,126nm,1.6s
H17A   Grant Village      59.94  56  P     P        06 43 03.6  +1.2
       baz=311,SNR=33
H17A   Grant Village      59.94  56  eP    P        06 43 05.0  +2.6
       comp=Z,113nm,1.1s
PAGB   Antelope Grade     60.01  69  eP    P        06 43 04.0  +1.3
       comp=Z,196nm,1.4s
IMW    Indian Meadow      60.07  56  eP    P        06 43 04.7  +1.4
       comp=Z,69nm,1.2s
FLWY   Flagg Ranch        60.08  56  eP    P        06 43 05.0  +1.8
       comp=Z,82nm,1.0s
ILULI  Ilulissat          60.13  11  eP    P        06 43 01.7  -1.2
       comp=Z,190nm,1.1s
ILULI  Ilulissat          60.13  11⇑iP     P        06 43 02.3  -0.6
       comp=Z,181nm,1.1s
ILULI  Ilulissat          60.13  11  eP    P        06 43 01.7  -1.2
ILULI                               pmax   pmax
       comp=Z,190nm,1.1s
DHRM   DHARAMSHALA        60.14 286  eP    P        06 43 01.9  -2.0
RLMT   Red Lodge          60.16  54  P     P        06 43 04.7  +0.8
       baz=311,SNR=51
RLMT   Red Lodge          60.16  54  eP    P        06 43 05.1  +1.3
       comp=Z,107nm,1.1s
RLMT                                LR     LR
       comp=Z,3µm,20.0s
FXWY   Fox Creek          60.19  57  eP    P        06 43 04.8  +0.8
       comp=Z,30nm,1.0s
MOOW   Moose Ponds        60.27  56  eP    P        06 43 06.0  +1.4
       comp=Z,26nm,0.9s
DDI    Dehra Dun          60.32 283  eP    P        06 43 04.0  -0.9
DDI                                 IAmb   IAmb     06 43 06.1
       comp=Z,123nm,0.9s
TPAW   Teton Pass         60.33  57  eP    P        06 43 06.7  +1.6
       comp=Z,80nm,1.0s
SMLA   Simla              60.34 284  eP    P        06 43 03.7  -1.2
SMLA                                IAmb   IAmb     06 43 06.3
TIN    Tinemaha, Big      60.37  67  P     P        06 43 04.1  -1.1
       baz=312
LOHW   Long Hollow        60.44  56  eP    P        06 43 06.9  +1.1
       comp=Z,95nm,1.4s
HVU    Hansel Valley      60.44  59  eP    P        06 43 07.1  +1.4
       comp=Z,60nm,1.2s
HVU    Hansel Valley      60.44  59  eP    P        06 43 07.1  +1.4
HVU                                 pmax   pmax
       comp=Z,60nm,1.2s
SMMC   Simmler            60.44  69  P     P        06 43 05.8  +0.1
       baz=312
SNOW   Snow King Moun     60.45  57  eP    P        06 43 07.4  +1.5
       comp=Z,89nm,1.0s
REDW   Red Top Meadow     60.47  57  eP    P        06 43 07.3  +1.4
       comp=Z,108nm,1.1s
DGMT   Dagmar             60.55  49  P     P        06 43 06.5  +0.3
       baz=312,SNR=24
DGMT   Dagmar             60.55  49  eP    P        06 43 06.9  +0.7
       comp=Z,116nm,1.0s
DGMT                                LR     LR
       comp=Z,6µm,21.0s
VES    Vestal, Richgr     60.65  68  P     P        06 43 06.5  -0.5
       baz=312,SNR=7.9
LAO    LASA Array         60.72  51  P     P        06 43 08.4  +1.0
       baz=312,SNR=65
LAO    LASA Array         60.72  51  eP    P        06 43 08.5  +1.1
       comp=Z,91nm,0.9s
LAO                                 LR     LR
       comp=Z,5µm,19.0s
AHID   Auburn Hatcher     60.72  57  eP    P        06 43 08.7  +1.0
       comp=Z,53nm,1.0s
PKM    Mcpherson Peak     60.84  69  P     P        06 43 06.3  -2.2
       baz=312,SNR=6.1
BGU    Big Grassy Mou     60.86  60  eP    P        06 43 09.6  +1.0
       comp=Z,29nm,1.1s
CWC    Cottonwood Cre     60.86  67  P     P        06 43 08.8  +0.1
       baz=312
TTSI   Tana Toraja        60.90 223  P     P        06 43 23.2  +14
GRAC   Grapevine Rang     60.92  66  P     P        06 43 07.4  -1.5
       baz=312,SNR=11
SPUT   South Promonto     60.93  60  eP    P        06 43 10.2  +1.1
       comp=Z,84nm,1.1s
R11A   Troy Canyon, C     61.08  64  P     P        06 43 09.6  -0.5
       baz=312,SNR=48
R11A   Troy Canyon, C     61.08  64  eP    P        06 43 10.6  +0.5
       comp=Z,68nm,1.2s
NIL    Nilore             61.11 289  PFAKE          06 43 20.0  +10
NIL                                 LR     LR
       comp=Z,13µm,18.0s
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ISA   Isabella, Lake    61.14  68  P       P        06 43 08.3  -2.1
        baz=312,SNR=8.8
ISA   Isabella, Lake    61.14  68 eP       P        06 43 10.2  -0.3
        comp=Z,101nm,1.5s
ISA   Isabella, Lake    61.14  68 eP       P        06 43 10.2  -0.3
ISA                                pmax    pmax
        comp=Z,101nm,1.5s
SBC   Santa Barbara     61.20  70  P       P        06 43 11.4 +0.7
        baz=312
HWUT  Hardware Ranch    61.23  59 eP       P        06 43 12.0 +0.9
        comp=Z,123nm,1.5s
HWUT                               LR      LR
        comp=Z,3µm,20.0s
MOR8  Moi Rana          61.24 343 eP       P        06 43 07.7  -2.9
DAC   Darwin (Calif)    61.26  67 eP       P        06 43 11.8 +0.4
        comp=Z,92nm,1.5s
DAC   Darwin (Calif)    61.26  67 eP       P        06 43 11.8 +0.4
DAC                                pmax    pmax
        comp=Z,92nm,1.5s
ARVC  Arvin             61.28  69  P       P        06 43 09.9  -1.4
        baz=312,SNR=5.8
MTKI  Muara Teweh, K    61.37 229  P       P        06 43 13.7 +1.6
DUG   Dugway, Tooele    61.46  61  P       P        06 43 11.8  -0.9
        baz=312,SNR=47
DUG   Dugway, Tooele    61.46  61 eP       P        06 43 13.4 +0.7
        comp=Z,109nm,1.1s
DUG                                LR      LR
        comp=Z,3µm,21.0s
DUG   Dugway, Tooele    61.46  61 eP       P        06 43 13.4 +0.7
DUG                                pmax    pmax
        comp=Z,109nm,1.1s
DUG                                MLR     MLR
        comp=Z,3µm,21.0s
MPMC  Manual Prospec    61.47  67  P       P        06 43 11.8  -1.1
        baz=312,SNR=17
BW06  Boulder Array     61.57  57  P       P        06 43 12.4  -1.1
        baz=312,SNR=44
BW06  Boulder Array     61.57  57 eP       P        06 43 14.1 +0.6
        comp=Z,79nm,1.0s
PD31  Pinedale Array    61.57  57 eP       P        06 43 14.0 +0.6
PDAR  Pinedale Array    61.57  57  P       P        06 43 14.1 +0.6
        comp=Z,20nm,0.9s,baz=302,slow=2.8,SNR=106
PDAR                               LR      LR       07 10 45.1
        comp=Z,1µm,19.0s,baz=334,slow=37
PDAR                               PKPPKP  P'P'df   07 12 19.4   -11
        comp=Z,0.7nm,1.0s,baz=132,slow=2.2,SNR=4.9
FURC  Furnace Creek,    61.58  66  P       P        06 43 12.8  -0.5
        baz=312,SNR=39
TPNV  Topopah Spring    61.62  65  P       P        06 43 12.1  -1.7
        baz=312,SNR=38
TPNV  Topopah Spring    61.62  65 eP       P        06 43 14.4 +0.7
        comp=Z,188nm,1.3s
TPNV                               LR      LR
        comp=Z,3µm,20.0s
TPNV  Topopah Spring    61.62  65 eP       P        06 43 14.5 +0.7
TPNV                               pmax    pmax
        comp=Z,188nm,1.3s
TPNV                               MLR     MLR
        comp=Z,3µm,20.0s
TCUT  Toone Canyon      61.65  59 eP       P        06 43 14.9 +0.9
        comp=Z,148nm,1.3s
KSM   Kuching           61.67 235 eP       P        06 43 15.1 +1.0
        comp=Z,109nm,1.1s
KSM   Kuching           61.67 235  P       P        06 43 16.0 +1.9
OSI   Osito Audit: C    61.69  69  P       P        06 43 14.3 +0.1
        baz=312
OSI   Osito Audit: C    61.69  69 eP       P        06 43 15.2 +1.1
        comp=Z,98nm,1.0s
CTU   Camp Tracy        61.74  60 eP       P        06 43 15.3 +0.8
        comp=Z,48nm,1.1s
LRMC  Laurel Mtn Rad    61.74  68  P       P        06 43 14.6   0.0
        baz=312
SPSI  Sidrap Palu       61.74 222  P       P        06 43 13.2  -1.3
BLG   Laguna Peak, P    61.82  70  P       P        06 43 14.7  -0.2
        baz=312
EDW2  Edwards Air Fo    61.95  68  P       P        06 43 13.7  -2.3
        baz=312,SNR=14
JLU   Jordanelle        61.97  60 eP       P        06 43 16.8 +0.6
        comp=Z,54nm,1.2s
PSUT  Pine Spring       61.97  63 eP       P        06 43 17.1 +0.9
        comp=Z,79nm,1.4s
PSUT                               LR      LR
        comp=Z,3µm,20.0s
NLU   North Lily Min    62.05  60 eP       P        06 43 17.6 +0.9
        comp=Z,64nm,1.0s
NLU                                LR      LR
        comp=Z,2µm,18.0s
DECC  Green Verdugo     62.17  69  P       P        06 43 17.3   0.0
        baz=313
BWNR  Bhubaneshwar      62.22 269 eP       P        06 43 16.6  -1.1
STKI  Sintang           62.24 233  P       P        06 43 19.3 +1.4
MPU   Maple Canyon      62.26  60 eP       P        06 43 19.1 +1.0
        comp=Z,84nm,1.1s
SFJD  Kangerlussuaq     62.28  12  P       P        06 43 17.2  -0.3
        comp=Z,105nm,1.0s,baz=342,slow=8.4,SNR=28
SFJD                               LR      LR       07 14 09.3
        comp=Z,7µm,18.3s,baz=343,slow=40
SFJD  Kangerlussuaq     62.28  12 eP       P        06 43 16.9  -0.6
        comp=Z,193nm,1.2s
SFJD  Kangerlussuaq     62.28  12⇑iP       P        06 43 17.3  -0.2
        comp=Z,131nm,1.1s
SHOC  Shoshone, Teco    62.31  66  P       P        06 43 17.7  -0.5
        baz=313
PASC  Pasadena Art C    62.31  69 eP       P        06 43 18.7 +0.4
        comp=Z,154nm,1.4s
MWC   Mount Wilson      62.36  69 eP       P        06 43 18.6  -0.2
        comp=Z,174nm,1.3s
GSC   Goldstone, Bar    62.39  67  P       P        06 43 17.7  -1.2
        baz=313,SNR=13
GSC   Goldstone, Bar    62.39  67 eP       P        06 43 18.5  -0.4
        comp=Z,98nm,1.3s
GSC                                LR      LR
        comp=Z,3µm,19.0s
FMP   Fort Macarthur    62.56  69  P       P        06 43 19.3  -0.6
        baz=313
RRX   Edison Barstow    62.56  68  P       P        06 43 18.8  -1.1
        baz=313
SHPR  Sheep Range       62.57  65 eP       P        06 43 20.7 +0.5
        comp=Z,204nm,1.8s
SHPR                               LR      LR
        comp=Z,4µm,21.0s
SKLT  Songkhla          62.58 247  P       P        06 43 21.9 +1.6
        comp=Z,174nm,1.6s,comp=Z,3µm
BFSC  Mount Baldy Ra    62.59  69  P       P        06 43 19.4  -0.9
        baz=313,SNR=8.0
TRTT  Trang             62.62 249  P       P        06 43 22.0 +1.5
        comp=Z,51nm,1.9s,comp=Z,1µm
FIA1  FINESS Array S    62.65 336 eP       P        06 43 19.1  -0.9
        comp=Z,73nm,1.1s
FINES FINESS Array B    62.65 336  P       P        06 43 17.9  -2.1
        comp=Z,36nm,0.9s,baz=26,slow=8.5,SNR=54
FINES                              PcP     PcP      06 43 59.2 +0.7
        comp=Z,20nm,0.8s,baz=21,slow=8.1,SNR=5.7
FINES                              LR      LR       07 13 51.0
        comp=Z,7µm,18.4s,baz=28,slow=39
FINES FINESS Array B    62.65 336 eP       P        06 43 18.7  -1.3
FINES FINESS Array B    62.65 336 i P      P        06 43 18.7  -1.3
FINES                              pmax    pmax
        comp=Z,37nm,0.9s
CIS   Catalina Islan    62.69  70  P       P        06 43 21.1 +0.2
        baz=313
TCRU  Three Creeks R    62.74  62 eP       P        06 43 22.5 +1.1
        comp=Z,149nm,1.5s
BKSI  Bulukumba         62.80 221  P       P        06 43 21.4  -0.2
KBKI  Kotabaru          62.80 226  P       P        06 43 34.6   +13
TUQ   Turquoise Moun    62.83  67  P       P        06 43 21.5  -0.4
        baz=313,SNR=20
SCI2  San Clemente I    62.90  70  P       P        06 43 21.8  -0.4
        baz=313
CCUT  Cedar City        62.92  63 eP       P        06 43 23.4 +0.8
        comp=Z,132nm,1.5s
CCUT                               LR      LR
        comp=Z,3µm,18.0s
MSU   Marysvale         62.96  62 eP       P        06 43 24.0 +1.2
MSU   Marysvale         62.96  62 eP       P        06 43 24.0 +1.2
TMUT  Trail Mountain    62.98  60 eP       P        06 43 23.9 +0.9
        comp=Z,84nm,1.1s
HEC   Hector,Ludlow     62.99  67  P       P        06 43 21.7  -1.2
        baz=313,SNR=7.8
BBRC  Big Bear Solar    63.02  68  P       P        06 43 22.9  -0.4
        baz=313,SNR=5.2
SZCU  Shurtz Canyon     63.05  63 eP       P        06 43 24.1 +0.7
        comp=Z,111nm,1.4s
SZCU                               LR      LR
        comp=Z,2µm,19.0s
KBL   Kabul             63.09 292 eP       P        06 43 22.0  -1.7
        comp=Z,143nm,1.3s
KBL                                LR      LR
        comp=Z,10µm,22.0s
KBL   Kabul             63.09 292 eP       P        06 43 22.0  -1.7
KBL                                pmax    pmax
        comp=Z,143nm,1.3s
KBL                                MLR     MLR
        comp=Z,10µm,22.0s
P17A  Butcher Ranch,    63.13  60 eP       P        06 43 24.5 +0.6
        comp=Z,126nm,1.3s
NSS   Namsos            63.18 344 eP       P        06 43 21.1  -2.4
MDND  Maddock           63.21  47  P       P        06 43 24.6 +0.5
        baz=315
MDND  Maddock           63.21  47 eP       P        06 43 25.1 +1.0
        comp=Z,207nm,1.1s
ULM   Lac du Bonnet     63.23  43  P       P        06 43 24.2 +0.1
        comp=Z,17nm,0.9s,baz=309,slow=6.7,SNR=20
ULM                                PKP2bc           07 12 30.4
        comp=Z,3.3nm,0.9s,baz=120,slow=5.2,SNR=3.7
ULM   Lac du Bonnet     63.23  43 eP       P        06 43 24.3 +0.1
        comp=Z,85nm,1.3s
ULM                               ⇑e                07 12 30.4
MTPU  Mount Pierson     63.27  62 eP       P        06 43 26.1 +1.0
        comp=Z,69nm,1.2s
K22A  Casper            63.29  55  P       P        06 43 23.9  -1.0
        baz=314,SNR=13
K22A  Casper            63.29  55 eP       P        06 43 25.5 +0.6
        comp=Z,62nm,1.2s
K22A                               LR      LR
        comp=Z,2µm,20.0s
MURC  Murrieta          63.30  69  P       P        06 43 24.5  -0.5
        baz=313,SNR=9.4
P18A  Preston Nutter    63.30  60 eP       P        06 43 26.0 +0.8
        comp=Z,80nm,1.2s
LCMT  Little Creek M    63.36  64 eP       P        06 43 26.2 +0.8
        comp=Z,180nm,1.4s
GMRC  Granite Mounta    63.43  67  P       P        06 43 24.3  -1.6
        baz=313,SNR=22
SRU   San Rafael Swe    63.50  60 eP       P        06 43 27.1 +0.7
        comp=Z,104nm,1.0s
SRU   San Rafael Swe    63.50  60 eP       P        06 43 27.1 +0.7
SRU                                pmax    pmax
        comp=Z,104nm,1.0s
MOS   Moscow            63.55 326 eP       P        06 43 24.1  -2.0
MOS   Moscow            63.55 326 eP       P        06 43 23.8  -2.3
MOS                               e                 06 44 01.4
MOS                               eS       S        06 51 55.1  -0.9
MOS                                pmax    pmax
        comp=Z,121nm,1.2s
MOS                                pmax    pmax
        comp=Z,900nm,3.8s
MOS                                MLR     MLR
        comp=N,7µm,18.0s
MOS                                MLR     MLR
        comp=Z,8µm,18.0s
MOS                                MLR     MLR
        comp=E,3µm,20.0s
LDFC  Landfair          63.56  66 eP       P        06 43 26.8 +0.1
        comp=E,286nm,1.3s
RWWY  Rawlins           63.58  56 eP       P        06 43 26.5  -0.4
        comp=E,96nm,1.4s
RSSD  Black Hills       63.59  52  P       P        06 43 27.1 +0.2
        baz=314
RSSD  Black Hills       63.59  52 eP       P        06 43 27.1 +0.2
        comp=E,205nm,1.4s
RSSD  Black Hills       63.59  52 eP       P        06 43 27.2 +0.3
RSSD                               pmax    pmax
        comp=Z,205nm,1.4s
KNB   Kanab             63.60  63 eP       P        06 43 27.9 +0.9
        comp=Z,198nm,1.3s
KNB                                LR      LR
        comp=Z,2µm,20.0s
KNB   Kanab             63.60  63 eP       P        06 43 27.9 +0.9
KNB                                pmax    pmax
        comp=Z,198nm,1.3s
KNB                                MLR     MLR
        comp=Z,2µm,20.0s
PKCU  Pink Cliffs       63.61  63 eP       P        06 43 28.1 +0.8
        comp=Z,134nm,1.5s
FRD   Ford Ranch, An    63.74  69  P       P        06 43 27.0  -0.8
        baz=313,SNR=8.6
PFO   Pinyon Flats O    63.75  68  P       P        06 43 27.4  -0.6
        baz=313,SNR=6.9
PFO   Pinyon Flats O    63.75  68 eP       P        06 43 27.9  -0.1
        comp=Z,111nm,1.5s
PFO                                LR      LR
        comp=Z,4µm,20.0s
PFO   Pinyon Flats O    63.75  68 eP       P        06 43 27.9  -0.1
PFO                                pmax    pmax
        comp=Z,111nm,1.5s
PFO                                MLR     MLR
        comp=Z,4µm,20.0s
XPFO  Piæon Flat        63.75  68 eP       P        06 43 28.0   0.0
        comp=Z,111nm,1.5s
XPFO                               LR      LR
        comp=Z,4µm,20.0s
BELC  Belle Mtn. Jos    63.76  68  P       P        06 43 26.5  -1.5
        baz=313,SNR=10
109C  Camp Elliot, M    63.84  69  P       P        06 43 27.9  -0.6
        baz=314
CPE   Camp Elliot       63.84  69 eP       P        06 43 29.0 +0.5
        comp=Z,121nm,1.3s
COEN  Coen              64.00 194 eP       P        06 43 30.0 +0.6
        comp=Z,139nm,1.4s
PBA   Port Blair        64.04 257 eP       P        06 43 31.2 +1.3
        comp=Z,1µm,1.5s
KULM  Kulim             64.05 246 eP       P        06 43 30.4 +0.4
        comp=Z,222nm,1.1s
KULM  Kulim             64.05 246  P       P        06 43 32.0 +2.0
NEE2  Needles Airpor    64.07  66  P       P        06 43 29.6  -0.3
        baz=314
O20A  White River Ci    64.08  58  P       P        06 43 29.2  -1.0
        baz=314,SNR=20
O20A  White River Ci    64.08  58 eP       P        06 43 30.6 +0.4
        comp=Z,59nm,1.1s
IRM   Iron Mountain     64.17  67  P       P        06 43 30.1  -0.5
        baz=314,SNR=26
BAR   Barrett           64.25  69 eP       P        06 43 31.6 +0.4
        comp=Z,147nm,1.6s
MONP2 Monument Peak     64.26  69  P       P        06 43 30.8  -0.6
        baz=314,SNR=7.3
BC3   Big Chuckawall    64.33  68  P       P        06 43 31.8 +0.1
        baz=314,SNR=10
A33A  Warroad           64.40  44  P       P        06 43 31.4  -0.4
        baz=317,SNR=14
OBN   Obninsk           64.41 326 eP       P        06 43 29.9  -1.9
OBN   Obninsk           64.41 326 eP       P        06 43 30.1  -1.7
        comp=Z,129nm,1.2s
OBN   Obninsk           64.41 326c iP      P        06 43 29.9  -1.9
OBN                                *SP     sP       06 43 53.0 +3.4
OBN                                                 06 44 04.0
OBN                                pmax    pmax
        comp=Z,164nm,1.5s
OBN                                MLR     MLR
        comp=Z,8µm,18.0s
IPM   Ipoh              64.47 245 eP       P        06 43 33.2 +0.4
        comp=Z,140nm,1.1s
PBKI  Pangkalan Bun     64.50 231  P       P        06 43 35.3 +2.4
SWSC  Sam W. Stewart    64.60  68  P       P        06 43 34.3 +0.9
        baz=314
IKP   In-Ko-Pah, Jac    64.62  69  P       P        06 43 32.8  -0.8
        baz=314,SNR=5.7
CHLP  Challavanipeta    64.64 269 eP       P        06 43 34.6 +0.8
CHLP                               IAmb    IAmb     06 43 36.1
        comp=Z,249nm,1.2s
AGMN  Agassiz Nation    64.65  45  P       P        06 43 32.2  -1.3
        baz=317,SNR=19
AGMN  Agassiz Nation    64.65  45 eP       P        06 43 33.4  -0.1
        comp=Z,138nm,1.3s
AGMN                               LR      LR
        comp=Z,3µm,19.0s
TBLU  Trondheim         64.66 344 eP       P        06 43 32.0  -1.3
PDMCI Parker Dam,Lak    64.67  66  P       P        06 43 33.4  -0.4
        baz=314,SNR=9.8
PV09  Paradox Valley    64.71  60 eP       P        06 43 35.4 +1.0
PV21  Cone Mtn., Par    64.76  60 eP       P        06 43 35.0 +0.4
        comp=Z,102nm,1.2s
PHWY  Pilot Hill        64.80  55 eP       P        06 43 35.1 +0.1
        comp=Z,46nm,1.5s
PV23  Carpenter Ridg    64.81  60 eP       P        06 43 35.7 +0.7
        comp=Z,188nm,1.2s
N23A  Red Feather La    64.82  56  P       P        06 43 35.2 +0.2
        baz=314,SNR=18
N23A  Red Feather La    64.82  56 eP       P        06 43 36.0 +0.9
        comp=Z,59nm,1.0s
Y12C  Blythe            64.82  67  P       P        06 43 35.3 +0.4
        baz=314
Y12C  Blythe            64.82  67 eP       P        06 43 35.6 +0.7
        comp=Z,159nm,1.4s
PV10  Paradox Valley    64.85  60 eP       P        06 43 36.3 +1.1
PV14  Lion Creek, Pa    64.86  60 eP       P        06 43 36.0 +0.7
        comp=Z,180nm,1.5s
PV22  Blue Mesa, Par    64.88  60 eP       P        06 43 36.0 +0.6
        comp=Z,112nm,1.1s
MMRI  Maumere           64.91 218  P       P        06 43 48.0   +13
MMRI  Maumere           64.91 218 eP       P        06 43 35.6 +0.1
        comp=Z,356nm,1.3s
PV20  West Nyswonger    64.91  60 eP       P        06 43 36.2 +0.6
        comp=Z,172nm,1.1s
PV19  Morning Glory     64.92  60 eP       P        06 43 36.2 +0.5
        comp=Z,192nm,1.1s
VSU   Vasula            64.94 333⇓eP       P        06 43 34.7  -0.5
VSU                                pmax    pmax
        comp=Z,263nm,1.3s
VSU                                MLR     MLR
        comp=Z,24µm,18.0s
ANGG  Ammassalik, Gr    64.95   6 eP       P        06 43 34.7  -0.4
        comp=Z,103nm,1.2s
PV17  East Wray Mesa    64.96  60 eP       P        06 43 36.6 +0.7
        comp=Z,210nm,1.1s
PV16  Nyswonger Mesa    64.96  60 eP       P        06 43 36.0 +0.1
        comp=Z,151nm,1.2s
MYKOM Kota Tinggi       64.99 241 eP       P        06 43 37.5 +1.5
        comp=Z,91nm,1.0s
MYKOM Kota Tinggi       64.99 241  P       P        06 43 38.0 +1.9
PV11  David Mesa, Pa    65.00  60 eP       P        06 43 36.9 +0.7
        comp=Z,291nm,1.2s
PV18  Skein Mesa, Pa    65.01  60 eP       P        06 43 37.0 +0.7
        comp=Z,173nm,1.1s
PV05  Paradox Valley    65.02  60 eP       P        06 43 37.1 +0.8
PV12  Saucer Basin,     65.02  60 eP       P        06 43 36.3   0.0
        comp=Z,155nm,1.2s
PV03  Paradox Valley    65.04  60 eP       P        06 43 37.0 +0.6
B34A  Aery, Baudette    65.06  44  P       P        06 43 34.9  -1.3
        baz=317,SNR=22
C33A  Trail             65.08  45  P       P        06 43 35.5  -0.8
        baz=317,SNR=7.7
GLA   Glamis            65.12  68  P       P        06 43 35.8  -1.1
        baz=314,SNR=6.6
GLA   Glamis            65.12  68 eP       P        06 43 37.4 +0.5
        comp=Z,182nm,1.4s
GLA                                LR      LR
        comp=Z,3µm,20.0s
GLA   Glamis            65.12  68 eP       P        06 43 37.4 +0.5
GLA                                pmax    pmax
        comp=Z,182nm,1.4s
GLA                                MLR     MLR
        comp=Z,3µm,20.0s
PV13  Radium Mtn., P    65.12  60 eP       P        06 43 37.7 +0.7
        comp=Z,199nm,1.1s
PV02  Paradox Valley    65.14  60 eP       P        06 43 37.7 +0.6
        comp=Z,115nm,1.3s
SOEI  Soe               65.14 215  P       P        06 43 36.3  -0.8
SOEI  Soe               65.14 215 eP       P        06 43 36.6  -0.5
        comp=Z,180nm,1.2s
EDFI  Ende, Flores      65.23 218  P       P        06 43 35.3  -2.4
PV01  Paradox Valley    65.28  60 eP       P        06 43 38.5 +0.5
VRH   Novokhopyorsk     65.42 321 eP       P        06 43 36.6  -1.8
VRH                                pmax    pmax
        comp=Z,190nm,0.7s
VRH                                pmax    pmax
        comp=Z,200nm,0.7s
VRH                                MLR     MLR
        comp=Z,6µm,16.0s
SMCO  Snowmass          65.45  58 eP       P        06 43 40.0 +0.6
        comp=Z,68nm,1.1s
WUAZ  Wupatki           65.48  64  P       P        06 43 39.5 +0.2
        baz=314,SNR=19
WUAZ  Wupatki           65.48  64 eP       P        06 43 40.3 +1.0
        comp=Z,169nm,1.4s
C34A  RKJ Ranch, Bem    65.56  45  P       P        06 43 38.6  -0.8
        baz=317
B35A  Bob, Littlefor    65.57  43  P       P        06 43 38.8  -0.7
        baz=318,SNR=25
B35A  Bob, Littlefor    65.57  43 eP       P        06 43 39.2  -0.2
        comp=Z,120nm,1.3s
BHPL  Bhopal            65.61 278 eP       P        06 43 39.9  -0.2
MTN   Manton Dam        65.70 207 eP       P        06 43 40.9 +0.3
        comp=Z,92nm,1.1s
ISCO  Idaho Springs     65.77  57  P       P        06 43 41.7 +0.5
        baz=315,SNR=44
ISCO  Idaho Springs     65.77  57 eP       P        06 43 42.3 +1.1
        comp=Z,81nm,1.2s
ISCO  Idaho Springs     65.77  57 eP       P        06 43 42.3 +1.1
ISCO                               pmax    pmax
        comp=Z,81nm,1.2s
F32A  Veblen            65.81  47  P       P        06 43 40.6  -0.5
        baz=317
C35A  Jirik Farms, M    65.95  44  P       P        06 43 41.2  -0.7
        baz=318,SNR=16
SUSD  Miller            65.95  49  P       P        06 43 38.9  -3.1
        baz=316
MVCO  Mesa Verde        65.97  61  P       P        06 43 42.8 +0.3
        baz=315,SNR=25
MVCO  Mesa Verde        65.97  61 eP       P        06 43 43.0 +0.6
        comp=Z,97nm,1.1s
DOMB  Dombas            65.99 344 eP       P        06 43 41.3  -0.7
G32A  Webster           66.08  48  P       P        06 43 42.3  -0.5
        baz=317
G32A  Webster           66.08  48 eP       P        06 43 42.6  -0.1
        comp=Z,102nm,1.0s
AKN   Aaknes            66.23 345 eP       P        06 43 44.2 +0.7
E34A  Wadena            66.27  46  P       P        06 43 43.7  -0.3
        baz=318,SNR=13
NC303 NORSAR Array S    66.31 342 eP       P        06 43 43.5  -0.5
BORG  Borgarnes         66.31 359 eP       P        06 43 45.5 +1.6
        comp=Z,252nm,1.1s
NC405 NORSAR Array S    66.34 342 eP       P        06 43 43.5  -0.7
LHMI  Lhok Sumawe       66.34 249 eP       P        06 43 46.0 +1.2
        comp=Z,262nm,0.9s
D35A  Remer             66.37  45  P       P        06 43 43.6  -1.0
        baz=318,SNR=16
NC204 NORSAR Array S    66.38 343 eP       P        06 43 43.9  -0.6
C36A  Pine Crest Far    66.42  43  P       P        06 43 43.9  -1.0
        baz=318,SNR=15
VSR   Storozhevoye      66.44 322 eP       P        06 43 43.3  -1.7
VSR                                pmax    pmax
        comp=Z,130nm,1.0s
VSR                                pmax    pmax
        comp=Z,90nm,0.7s
VSR                                MLR     MLR
        comp=Z,7µm,15.0s
NB201 NORSAR Array S    66.48 342 eP       P        06 43 44.6  -0.5
NB2   NORSAR Subarra    66.51 342  P       P        06 43 44.2  -1.1
        comp=Z,148nm,1.4s,baz=23,slow=6.5
NB2   NORSAR Subarra    66.51 342  P       P        06 43 44.2  -1.1
        baz=23,slow=6.5
NOA   NORSAR Array B    66.51 342  P       P        06 43 43.5  -1.8
        comp=Z,33nm,0.9s,baz=24,slow=6.4,SNR=43
NOA                                LR      LR       07 17 25.2
        comp=Z,7µm,19.2s,baz=25,slow=40
NOA   NORSAR Array B    66.51 342  P       P        06 43 43.5  -1.8
NOA                                pmax    pmax
        comp=Z,21nm,0.9s
NOA                                MLR     MLR
        comp=Z,7µm,19.2s
S22A  4UR Ranch, Cre    66.53  59  P       P        06 43 44.9  -1.3
        baz=315,SNR=50
S22A  4UR Ranch, Cre    66.53  59 eP       P        06 43 47.4 +1.2
        comp=Z,100nm,1.3s
VORD  Divnogorie        66.58 322 eP       P        06 43 44.6  -1.3
VORD                               pmax    pmax
        comp=Z,110nm,0.8s
E35A  Pequot Lakes      66.59  45  P       P        06 43 45.1  -1.0
        baz=318,SNR=17
NBO00 NORSAR Array S    66.60 343 eP       P        06 43 45.3  -0.6
Q24A  Divide            66.61  57  P       P        06 43 46.5  -0.1
        baz=315,SNR=5.1
Q24A  Divide            66.61  57 eP       P        06 43 47.4 +0.7
        comp=Z,24nm,1.0s
G33A  Ortonville        66.63  47  P       P        06 43 45.1  -1.2
        baz=317,SNR=10.0
H32A  Carlson Farm,     66.65  48  P       P        06 43 45.6  -0.9
        baz=317,SNR=14
D36A  Goodland          66.70  44  P       P        06 43 45.2  -1.6
        baz=318,SNR=10
D36A  Goodland          66.70  44 eP       P        06 43 46.6  -0.2
        comp=Z,128nm,1.4s
W18A  Petrified Fore    66.72  63  P       P        06 43 45.8  -1.4
        baz=315
W18A  Petrified Fore    66.72  63 eP       P        06 43 48.7 +1.4
        comp=Z,68nm,1.1s
NC602 NORSAR Array S    66.72 342 eP       P        06 43 45.9  -0.7
NC602 NORSAR Array S    66.72 342 eP       P        06 43 46.2  -0.4
TSI   Tuntungan         66.72 247  P       P        06 43 50.3 +3.1
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C37A	Embarrass	66.74	43	P	P	06 43 45.0	-1.9
	baz=319,SNR=9.6						
NAO01	NORSAR Array S	66.75	342	eP	P	06 43 46.0	-0.8
F34A	Alexandria	66.76	46	P	P	06 43 46.5	-0.6
	baz=318,SNR=11						
HFS	Hagfors	66.81	341	P	P	06 43 46.1	-1.1
	comp=Z,25nm,0.7s,baz=55,slow=7.6,SNR=67						
HFS				LR	LR	07 15 31.0	
	comp=Z,6µm,19.6s,baz=22,slow=38						
CMBY	CAMPBELL BAY	66.83	253	eP	P	06 43 46.3	-1.7
EYMN	Ely	66.88	43	P	P	06 43 47.2	-0.7
	baz=319,SNR=18						
EYMN	Ely	66.88	43	eP	P	06 43 47.7	-0.1
	comp=Z,145nm,1.4s						
OGNE	Ogallala	66.88	54	P	P	06 43 48.1	+0.1
	baz=316,SNR=16						
OGNE	Ogallala	66.88	54	eP	P	06 43 48.8	+0.8
	comp=Z,162nm,0.9s						
PLAI	Plampang	66.95	222	P	P	06 43 46.7	-1.9
G34A	Benson	66.98	47	P	P	06 43 48.6	0.0
	baz=318,SNR=27						
F35A	Swanville	67.03	46	P	P	06 43 48.5	-0.3
	baz=318,SNR=16						
D37A	Cotton	67.05	44	P	P	06 43 48.3	-0.7
	baz=319,SNR=6.9						
PSI	Prapat	67.06	246	eP	P	06 43 49.6	0.0
	comp=Z,82nm,1.0s						
PSI	Prapat	67.06	246	eP	P	06 43 49.6	0.0
PSI				pmax	pmax		
	comp=Z,82nm,1.0s						
214A	Organ Pipe Nat	67.11	67	P	P	06 43 49.8	+0.2
	baz=315,SNR=16						
GEYT	Alibeck	67.11	302	P	P	06 43 48.7	-0.8
	comp=Z,19nm,0.5s,baz=61,slow=7.0,SNR=17						
GEYT				PcP	PcP	06 44 16.8	-0.6
	comp=Z,8.3nm,0.3s,baz=7.8,slow=3.3,SNR=5.1						
GEYT				LR	LR	07 15 16.5	
	comp=Z,7µm,18.8s,baz=285,slow=38						
GYA0B	ALIBECK ARRAY	67.11	302	eP	P	06 43 49.6	+0.1
	comp=Z,78nm,1.1s						
PVM	Polavaram	67.14	270	eP	P	06 43 50.4	+0.5
PVM				IAmb	IAmb	06 43 51.9	
	comp=Z,190nm,1.2s						
C38A	Sawbill Land.	67.15	43	P	P	06 43 48.9	-0.7
	baz=319,SNR=14						
E36A	McGregor	67.16	45	P	P	06 43 48.4	-1.3
	baz=318,SNR=17						
KCSI	Kotacane, Aceh	67.19	247	P	P	06 43 48.8	-1.4
SDCO	Great Sand Dun	67.28	58	P	P	06 43 50.5	-0.4
	baz=316,SNR=33						
SDCO	Great Sand Dun	67.28	58	eP	P	06 43 51.2	+0.3
	comp=Z,42nm,1.1s						
HYA	Hoyanger	67.32	345	eP	P	06 43 50.8	+0.4
IZAR	Zarasai	67.36	332	eP	P	06 43 49.9	-0.8
IZAR				IAmb	IAmb	06 43 59.5	
	comp=Z,18nm,0.5s						
MLSI	Meulaboh, Aceh	67.43	249	P	P	06 43 51.0	-0.7
RPR	Rampur	67.51	273	eP	P	06 43 51.9	-0.3
RPR				IAmb	IAmb	06 43 53.4	
	comp=Z,271nm,1.2s						
F36A	Milaca	67.52	45	P	P	06 43 51.3	-0.6
	baz=318,SNR=15						
F36A	Milaca	67.52	45	eP	P	06 43 51.5	-0.5
	comp=Z,82nm,1.4s						
ISAL	Salakas	67.55	332	eP	P	06 43 51.0	-0.9
ISAL				IAmb	IAmb	06 43 58.9	
	comp=Z,13nm,0.8s						
G35A	Watkins	67.55	46	P	P	06 43 51.8	-0.3
	baz=318,SNR=16						
G35A	Watkins	67.55	46	eP	P	06 43 52.5	+0.4
	comp=Z,178nm,1.4s						
IDID	Didziasalis	67.57	332	eP	P	06 43 51.4	-0.7
IDID				IAmb	IAmb	06 44 01.2	
	comp=Z,19nm,1.0s						
ECSD	EROS Data Cent	67.62	49	P	P	06 43 51.4	-1.2
	baz=318,SNR=53						
ECSD	EROS Data Cent	67.62	49	eP	P	06 43 52.3	-0.3
	comp=Z,64nm,1.1s						
ECSD				LR	LR		
	comp=Z,5µm,21.0s						
IIGN	Ignalina	67.70	332	eP	P	06 43 52.4	-0.5
IIGN				IAmb	IAmb	06 43 54.8	
	comp=Z,27nm,0.5s						
H35A	Sunnyside Ranc	67.77	47	P	P	06 43 52.9	-0.6
	baz=318,SNR=54						
BKNI	Bangkinang	67.80	243	P	P	06 43 55.3	+1.2
BKNI	Bangkinang	67.80	243	eP	P	06 43 55.4	+1.4
	comp=Z,617nm,1.2s						
E38A	The Farm, Brul	67.86	44	P	P	06 43 53.4	-0.7
	baz=319,SNR=18						
E38A	The Farm, Brul	67.86	44	eP	P	06 43 53.7	-0.4
	comp=Z,108nm,1.1s						
G36A	St. Michael	67.88	46	P	P	06 43 53.9	-0.3
	baz=319,SNR=5.6						
MICGM	Minsk	67.89	330	eP	P	06 43 52.0	-2.1
MICGM				eLR	LR	07 14 20.0	
MNK	Minsk	67.89	330	eP	P	06 43 52.0	-2.1
NACGM	Naroch	67.90	331	eP	P	06 43 52.0	-2.2
NACGM				eLQ	LQ	07 08 40.0	
NACGM				eLR	LR	07 14 24.0	
C40A	Isle Royale Na	67.93	41	P	P	06 43 53.9	-0.6
	baz=320						
C40A	Isle Royale Na	67.93	41	eP	P	06 43 53.6	-0.8
	comp=Z,56nm,1.4s						
KSCO	Kaye Shedlock’	67.95	56	P	P	06 43 54.5	-0.4
	baz=316						
KSCO	Kaye Shedlock’	67.95	56	eP	P	06 43 55.2	+0.3
	comp=Z,71nm,1.0s						
KSCO				LR	LR		
	comp=Z,3µm,21.0s						
F37A	Hinrichs Farm,	68.04	45	P	P	06 43 54.6	-0.6
	baz=319,SNR=10						
TUC	Tucson	68.07	66	P	P	06 43 56.1	+0.4
	baz=315						
TUC	Tucson	68.07	66	eP	P	06 43 56.3	+0.6
	comp=Z,68nm,1.3s						
TUC	Tucson	68.07	66	eP	P	06 43 56.3	+0.6
TUC				pmax	pmax		
	comp=Z,68nm,1.3s						
SRSP	Sriramsagar	68.08	274	eP	P	06 43 55.0	-0.8
SRSP				IAmb	IAmb	06 43 57.3	
	comp=Z,409nm,1.0s						
SRSP				IVMs_BB	IVMs_BB	06 54 04.4	
	comp=Z,5µm,14.9s						
KONO	Kongsberg	68.11	343	eP	P	06 43 55.4	+0.1
	comp=Z,70nm,1.2s						
KONO				LR	LR		
	comp=Z,9µm,18.0s						
KONO	Kongsberg	68.11	343	ceP	P	06 43 56.0	+0.6
KONO				pmax	pmax		
	comp=Z,89nm,1.7s						
KONO				MLR	MLR		
	comp=Z,8µm,18.0s						
KONO	Kongsberg	68.11	343	eP	P	06 43 55.2	-0.1
ASK	Askoy	68.13	345	eP	P	06 43 56.4	+1.0
IVI	Ivigtut	68.14	12	eP	P	06 43 56.1	+0.6
	comp=Z,220nm,1.0s						
BER	Bergen	68.20	345	eP	P	06 43 56.7	+0.8
F38A	Pierce - Schro	68.21	44	P	P	06 43 56.2	0.0
	baz=319,SNR=57						
H36A	Jessenland, He	68.29	46	P	P	06 43 57.5	+0.7
	baz=319,SNR=40						
T25A	Trinidad	68.32	58	P	P	06 43 58.0	+0.5
	baz=316,SNR=31						
T25A	Trinidad	68.32	58	eP	P	06 43 57.9	+0.5
	comp=Z,99nm,1.3s						
SPMN	Marine on St.	68.33	45	P	P	06 43 56.9	-0.2
	baz=319,SNR=12						
SPMN	Marine on St.	68.33	45	eP	P	06 43 57.1	+0.1
	comp=Z,142nm,1.2s						
ODD1	Odda	68.42	344	eP	P	06 43 57.6	+0.3
E39A	Mellen	68.49	43	P	P	06 43 57.4	-0.6
	baz=320,SNR=18						
NRS	Narsarsuaq	68.55	11	eP	P	06 43 57.7	-0.4
	comp=Z,120nm,1.1s						
NRS	Narsarsuaq	68.55	11	i P	P	06 43 56.9	-1.2
BGNE	Belgrade	68.56	51	P	P	06 43 58.3	-0.3
	baz=318,SNR=5.5						
BGNE	Belgrade	68.56	51	eP	P	06 43 58.5	-0.1
	comp=Z,94nm,0.9s						
BGNE				LR	LR		
	comp=Z,5µm,21.0s						
I36A	Fitzsimmons Fa	68.67	47	P	P	06 43 59.3	+0.1
	baz=319,SNR=15						
F39A	Loretta	68.67	44	P	P	06 43 59.0	-0.2
	baz=320,SNR=20						
E40A	Wakefield	68.73	43	P	P	06 43 59.5	0.0
	baz=320,SNR=25						
TASM	ASL Pad, Albuq	68.73	61	P	P	06 44 00.4	+0.4
	baz=316,SNR=24						
ANMO	Albuquerque	68.73	61	P	P	06 44 00.5	+0.5
	baz=316						
ANMO	Albuquerque	68.73	61	eP	P	06 43 59.5	-0.4
	comp=Z,48nm,1.1s						
ANMO	Albuquerque	68.73	61	ceP	P	06 44 01.0	+1.0
ANMO				pmax	pmax		
	comp=Z,33nm,1.7s						
TASL	Snake Pit, Alb	68.73	61	P	P	06 44 00.5	+0.6
	baz=316,SNR=24						
H37A	Dierke Farm, C	68.76	46	P	P	06 43 60.0	+0.2
	baz=319,SNR=16						
G38A	Ridgeland	68.81	45	P	P	06 43 59.6	-0.4
	baz=320,SNR=25						
D41A	Chassel	68.84	42	P	P	06 44 00.1	-0.1
	baz=321,SNR=10						
D41A	Chassel	68.84	42	eP	P	06 43 59.7	-0.5
	comp=Z,280nm,1.4s						
SMRI	Semarang	68.84	230	P	P	06 44 01.7	+1.2
SMRI	Semarang	68.84	230	eP	P	06 44 00.7	+0.1
	comp=Z,158nm,1.1s						
BLS5	Blasjo	68.91	344	eP	P	06 44 00.9	+0.4
AFI	Afiamalu	68.94	147	LR	LR	07 11 52.6	
	comp=Z,2µm,18.8s,baz=328,slow=34						
I37A	Lemond, Waseca	68.96	46	P	P	06 44 01.1	+0.1
	baz=319,SNR=36						
I37A	Lemond, Waseca	68.96	46	eP	P	06 44 01.4	+0.4
	comp=Z,314nm,1.3s						
H38A	Maiden Rock	68.99	45	P	P	06 44 00.9	-0.3
	baz=319,SNR=13						
J36A	Seneca 1, Swea	69.03	47	P	P	06 44 01.1	-0.4
	baz=319,SNR=16						
J36A	Seneca 1, Swea	69.03	47	eP	P	06 44 01.1	-0.4
	comp=Z,80nm,1.1s						
F40A	Park Falls	69.03	43	P	P	06 44 00.7	-0.7
	baz=320,SNR=18						
HYBB	Hyderabad (bro	69.03	273	eP	P	06 44 01.7	-0.1
HYBB				IAmb	IAmb	06 44 03.3	
	comp=Z,279nm,1.1s						
HYBB				eS	S	06 53 06.6	+2.9
HYBB				IVMs_BB	IVMs_BB	06 54 43.9	
	comp=Z,3µm,15.9s						
HYB	Hyderabad	69.03	273	i P	P	06 44 02.5	+0.7
	comp=Z,180nm,1.0s						
G39A	Holcombe	69.04	44	P	P	06 44 00.9	-0.6
	baz=320,SNR=14						
GSI	Gunungsitoli	69.06	246	P	P	06 44 02.2	+0.2
GSI	Gunungsitoli	69.06	246	eP	P	06 44 02.9	+0.9
	comp=Z,637nm,1.6s						
Y22E	IRIS PASSCAL I	69.09	62	P	P	06 44 02.8	+0.6
	baz=316						
Y22D	IRIS PASSCAL I	69.09	62	P	P	06 44 02.5	+0.4
	baz=316						
Y22D	IRIS PASSCAL I	69.09	62	PFAKE		06 44 10.0	+7.9
Y22D				LR	LR		
	comp=Z,5µm,20.0s						
E41A	Kenton	69.13	42	P	P	06 44 01.5	-0.5
	baz=321,SNR=16						
NJS	Nagarjunasagar	69.17	271	eP	P	06 44 01.9	-0.7
NJS				IAmb	IAmb	06 44 03.6	
	comp=Z,227nm,1.2s						
COWI	Conover	69.33	43	eP	P	06 44 03.3	0.0
	comp=Z,123nm,1.4s						
J37A	Redenius Farm,	69.42	47	P	P	06 44 03.7	-0.1
	baz=319,SNR=15						
I38A	Scanlan Farm,	69.45	46	P	P	06 44 03.7	-0.3
	baz=320,SNR=11						
H39A	Augusta	69.45	45	P	P	06 44 03.5	-0.5
	baz=320						
K36A	Gilmore City	69.49	48	P	P	06 44 03.8	-0.5
	baz=319,SNR=10						
G40A	Rib Lake	69.50	44	P	P	06 44 03.8	-0.5
	baz=320,SNR=12						
G40A	Rib Lake	69.50	44	eP	P	06 44 04.0	-0.3
	comp=Z,118nm,1.4s						
GOF	Gofitskoye	69.52	316	⇑iP	P	06 44 04.3	-0.1
GOF				eS	S	06 53 06.8	-1.9
GOF				pmax	pmax		
	comp=Z,270nm,0.7s						
UGM	Wanagama	69.54	229	eP	P	06 44 04.2	-0.7
	comp=Z,548nm,1.6s						
HOMB	Homborsund	69.60	342	eP	P	06 44 04.5	-0.1
CTA	Charters Tower	69.61	190	LR	LR	07 10 02.1	
	comp=Z,1µm,21.9s,baz=351,slow=32						
CTAO	Charters Tower	69.61	190	eP	P	06 44 04.8	-0.3
	comp=Z,108nm,1.6s						
CTAO	Charters Tower	69.61	190	eP	P	06 44 04.8	-0.3
CTAO				pmax	pmax		
	comp=Z,107nm,1.6s						
E42A	Champion	69.61	42	P	P	06 44 04.6	-0.4
	baz=321,SNR=19						
F41A	Three Lakes	69.62	43	P	P	06 44 04.6	-0.5
	baz=321,SNR=16						
F41A	Three Lakes	69.62	43	eP	P	06 44 05.1	0.0
	comp=Z,170nm,1.4s						
CBKS	Cedar Bluff	69.64	54	P	P	06 44 04.6	-0.8
	baz=318,SNR=7.0						
CBKS	Cedar Bluff	69.64	54	eP	P	06 44 04.8	-0.5
	comp=Z,103nm,1.3s						
GROC	Groznyy	69.65	313	eP	P	06 44 02.6	-2.6
GROC				e		06 44 26.5	
GROC				eS	S	06 53 04.8	-5.4
GROC				pmax	pmax		
	comp=Z,167nm,1.4s						
121A	Cookes Peak, D	69.69	64	P	P	06 44 06.9	+0.9
	baz=316,SNR=12						
SRLM	Srisailam	69.77	271	eP	P	06 44 06.7	+0.3
SRLM				IAmb	IAmb	06 44 07.8	
	comp=Z,531nm,1.6s						
SRLM				IVMs_BB	IVMs_BB	06 54 59.0	
	comp=Z,3µm,13.0s						
SUW	Suwalki	69.77	333	eP	P	06 44 04.5	-1.3
SUW	Suwalki	69.77	333	eP	P	06 44 05.1	-0.7
	comp=Z,185nm,1.2s						
SUW	Suwalki	69.77	333	eP	P	06 44 04.5	-1.3
SNART	Snartemo	69.79	343	eP	P	06 44 06.0	+0.2
K37A	Belmond	69.79	47	P	P	06 44 05.4	-0.7
	baz=319,SNR=13						
L36A	Harm Buss Farm	69.79	49	P	P	06 44 05.6	-0.6
	baz=319,SNR=7.8						
H40A	Chili	69.91	44	P	P	06 44 06.4	-0.4
	baz=320,SNR=13						
J38A	Wedel Dairy, R	69.93	46	P	P	06 44 06.5	-0.5
	baz=320,SNR=7.1						
I39A	Houston	69.97	45	P	P	06 44 06.6	-0.6
	baz=320,SNR=15						
I39A	Houston	69.97	45	eP	P	06 44 06.3	-0.9
	comp=Z,112nm,1.1s						
G41A	Antigo	70.00	43	P	P	06 44 06.7	-0.7
	baz=321,SNR=6.7						
AKT	Akhty	70.00	311	⇑iP	P	06 44 07.4	-0.2
AKT				e		06 44 31.2	
AKT				e		06 46 45.7	
AKT				eS	S	06 53 18.8	+4.1
AKT				pmax	pmax		
	comp=Z,237nm,1.0s						
F42A	Maple Grove Fa	70.04	42	P	P	06 44 07.7	+0.1
	baz=321						
E43A	Lone Tree Farm	70.05	41	P	P	06 44 07.1	-0.6
	baz=322,SNR=8.7						
E43A	Lone Tree Farm	70.05	41	eP	P	06 44 07.4	-0.3
	comp=Z,146nm,1.4s						
SCHQ	Schefferville	70.15	25	P	P	06 44 08.4	+0.3
	comp=Z,31nm,1.0s,baz=353,slow=5.9,SNR=9.2						
SCHQ				LR	LR	07 20 14.6	
	comp=Z,5µm,18.2s,baz=339,slow=40						
SCHQ	Schefferville	70.15	25	eP	P	06 44 07.6	-0.6
	comp=Z,215nm,1.6s						
M36A	Felix, Anita	70.21	49	P	P	06 44 08.3	-0.4
	baz=319,SNR=7.6						
L37A	Phoenix Point,	70.22	48	P	P	06 44 08.4	-0.3
	baz=319,SNR=36						
H41A	Junction City	70.25	44	P	P	06 44 08.5	-0.4
	baz=321,SNR=10						
H41A	Junction City	70.25	44	eP	P	06 44 08.6	-0.3
	comp=Z,97nm,1.3s						
J39A	Decorah	70.28	46	P	P	06 44 08.1	-1.0
	baz=320,SNR=13						
K38A	Parkersburg	70.30	47	P	P	06 44 08.6	-0.6
	baz=320,SNR=10						
K38A	Parkersburg	70.30	47	eP	P	06 44 08.8	-0.4
	comp=Z,47nm,1.0s						
G42A	Mountain	70.31	43	P	P	06 44 09.0	-0.3
	baz=321,SNR=6.7						
G42A	Mountain	70.31	43	eP	P	06 44 08.9	-0.3
	comp=Z,188nm,1.6s						
HSIG		70.32	68	eP	P	06 44 09.7	+0.1
	comp=Z,138nm,1.4s						
E44A	Grand Marais A	70.32	40	P	P	06 44 09.3	0.0
	baz=322,SNR=10						
E44A	Grand Marais A	70.32	40	eP	P	06 44 09.4	+0.1
	comp=Z,195nm,1.2s						
I40A	Norwalk	70.36	45	P	P	06 44 09.1	-0.5
	baz=320,SNR=15						
F43A	Flat Rock, Esc	70.40	42	P	P	06 44 09.5	-0.3
	baz=322,SNR=15						
KVAR	Kislovodsk Arr	70.53	315	LR	LR	07 18 46.6	
	comp=Z,3µm,19.5s,slow=39						
KIV	Kislovodsk	70.53	315	eP	P	06 44 11.2	+0.4
KIV	Kislovodsk	70.53	315	eP	P	06 44 10.6	-0.2
	comp=Z,74nm,0.7s						
KIV	Kislovodsk	70.53	315	P	P	06 44 10.9	+0.1
	SNR=37						
KIV	Kislovodsk	70.53	315	i P	P	06 44 11.0	+0.2
	SNR=44						
KIV	Kislovodsk	70.53	315	c iP	P	06 44 10.8	+0.1
KIV				e*PP	sP	06 44 27.6	-1.1
KIV				e		06 44 30.4	
KIV				i *SP	PcP	06 44 33.2	+1.4
KIV						06 46 45.0	
KIV				eS	S	06 53 08.5	-12
KIV				eSS	SS	06 57 51.8	+0.2
KIV				pmax	pmax		
	comp=Z,185nm,1.7s						
I41A	Arkdale	70.58	44	P	P	06 44 10.3	-0.6
	baz=321,SNR=7.4						
I41A	Arkdale	70.58	44	eP	P	06 44 10.6	-0.3
	comp=Z,89nm,1.3s						
L38A	Oak Wood Farm,	70.59	48	P	P	06 44 10.6	-0.5
	baz=320,SNR=11						
BHJ	Bhuj	70.60	283	eP	P	06 44 11.2	-0.2
AKASG	Malin Array Be	70.60	327	P	P	06 44 09.3	-1.7
	comp=Z,16nm,0.5s,baz=33,slow=6.6,SNR=35						
AKASG				LR	LR	07 17 35.5	
	comp=Z,5µm,18.6s,baz=20,slow=38						
AKBB	Malin Array Si	70.60	327	eP	P	06 44 09.5	-1.4
	comp=Z,99nm,1.4s						
KBZ	Khabaz	70.61	315	P	P	06 44 11.0	0.0
	comp=Z,72nm,0.8s,baz=46,slow=4.4,SNR=127						
KBZ				PKP2ab		07 12 06.0	
	comp=Z,4.5nm,1.2s,baz=246,slow=6.5,SNR=3.6						
KBZ				LR	LR	07 19 42.3	
	comp=Z,5µm,19.1s,baz=22,slow=40						
N36A	Muff Farm, Cla	70.61	50	P	P	06 44 10.8	-0.4
	baz=319						
F44A	Big Bay de Noc	70.61	41	P	P	06 44 10.5	-0.6
	baz=322,SNR=9.8						
KIEV	Kiev	70.61	327	eP	P	06 44 09.5	-1.5
	comp=Z,88nm,1.4s						
KIEV	Kiev	70.61	327	i P	P	06 44 09.8	-1.2
	SNR=23						
KIEV	Kiev	70.61	327	eP	P	06 44 09.5	-1.5
KIEV				pmax	pmax		
	comp=Z,88nm,1.4s						
M37A	Trindle Farm,	70.62	49	P	P	06 44 10.9	-0.3
	baz=319,SNR=5.4						
G43A	Wallace	70.63	42	P	P	06 44 10.8	-0.4
	baz=322,SNR=12						
G43A	Wallace	70.63	42	eP	P	06 44 10.9	-0.3
	comp=Z,140nm,1.2s						
AK11	Malin Array Si	70.64	327	eP	P	06 44 08.9	-2.3
SCIA	State Center	70.64	48	P	P	06 44 11.4	+0.1
	baz=320,SNR=24						
SCIA	State Center	70.64	48	eP	P	06 44 11.5	+0.1
	comp=Z,148nm,1.0s						
K39A	Oelwein	70.67	46	P	P	06 44 10.7	-0.9
	baz=320,SNR=13						
J40A	Soldiers Grove	70.69	45	P	P	06 44 10.3	-1.3
	baz=320						
SRIG	Santa Rosalia	70.74	70	eP	P	06 44 12.6	+0.5
	comp=Z,155nm,1.3s						
H42A	Shiocton	70.83	43	P	P	06 44 11.8	-0.7
	baz=321						
H42A	Shiocton	70.83	43	eP	P	06 44 12.2	-0.3
	comp=Z,78nm,1.3s						
E45A	Wooded Hills,	70.84	40	P	P	06 44 11.9	-0.6
	baz=323,SNR=8.1						
ZEI	Tsey	70.86	314	eP	P	06 44 10.0	-3.0
ZEI				pmax	pmax		
	comp=Z,112nm,1.7s						
SKHT	Srikalahasti	70.96	269	eP	P	06 44 13.9	+0.4
SKHT				IAmb	IAmb	06 44 16.9	
	comp=Z,222nm,1.0s						
SKHT				IVMs_BB	IVMs_BB	06 57 28.5	
	comp=Z,1µm,14.6s						
M38A	Pleasantville	71.03	48	P	P	06 44 13.3	-0.4
	baz=320,SNR=12						
N37A	Lee Faris, Mou	71.03	49	P	P	06 44 13.6	-0.2
	baz=320,SNR=12						
N37A	Lee Faris, Mou	71.03	49	eP	P	06 44 13.7	-0.1
	comp=Z,125nm,1.0s						
N37A				LR	LR		
	comp=Z,3µm,19.0s						
K40A	Colesburg	71.03	46	P	P	06 44 13.0	-0.7
	baz=320,SNR=8.3						
J41A	Loganville	71.05	45	P	P	06 44 13.2	-0.6
	baz=321,SNR=8.2						
KSU1	Kansas State U	71.06	52	P	P	06 44 12.7	-1.2
	baz=319,SNR=10.0						
KSU1	Kansas State U	71.06	52	eP	P	06 44 13.0	-1.0
	comp=Z,30nm,0.8s						
L39A	Vinton	71.07	47	P	P	06 44 13.6	-0.3
	baz=320,SNR=13						
BSD	Bornholm Skovb	71.07	338	i P	P	06 44 12.9	-0.8
	comp=Z,90nm,1.2s						
I42A	Draeger Farm,	71.14	44	P	P	06 44 13.7	-0.7
	baz=321						
I42A	Draeger Farm,	71.14	44	eP	P	06 44 14.2	-0.2
	comp=Z,80nm,1.2s						
COP	Copenhagen	71.14	339	i P	P	06 44 14.8	+0.7
MUD	Monsted U’grnd	71.15	341	⇑iP	P	06 44 13.9	-0.2
	comp=Z,60nm,1.0s						
H43A	Windswept, Lux	71.21	43	P	P	06 44 14.4	-0.3
	baz=322,SNR=5.6						
H43A	Windswept, Lux	71.21	43	eP	P	06 44 14.3	-0.4
	comp=Z,67nm,0.9s						
H43A				LR	LR		
	comp=Z,4µm,18.0s						
F45A	CMU Biological	71.23	41	P	P	06 44 14.4	-0.4
	baz=323,SNR=6.6						
TBLG	Delisi	71.27	313	i P	P	06 44 15.3	+0.1
TBLG	Delisi	71.27	313	eP	P	06 44 15.4	+0.2
	comp=Z,291nm,1.2s						
JFWS	Jewell Farm	71.29	45	P	P	06 44 14.4	-0.9
	baz=321						
JFWS	Jewell Farm	71.29	45	eP	P	06 44 14.5	-0.7
	comp=Z,73nm,1.4s						
JFWS	Jewell Farm	71.29	45	eP	P	06 44 14.5	-0.7
JFWS				pmax	pmax		
	comp=Z,73nm,1.4s						
POO	Poona	71.30	277	eP	P	06 44 17.0	+1.3
BIGH	Upper Bighouse	71.38	349	eP	P	06 44 15.9	+0.4
BIGH				IAmb	IAmb	06 44 16.3	
	comp=Z,306nm,1.4s						
AMTX	Amarillo	71.47	58	P	P	06 44 16.8	+0.2
	baz=318						
AMTX	Amarillo	71.47	58	eP	P	06 44 16.9	+0.2
	comp=Z,178nm,1.7s						
M39A	Webster	71.48	47	P	P	06 44 16.2	-0.2
	baz=320,SNR=26						
N38A	Joes South For	71.48	49	P	P	06 44 15.9	-0.5
	baz=320,SNR=18						
F46A	Macinaw City C	71.48	40	P	P	06 44 16.2	-0.2
	baz=323,SNR=21						
L40A	Anamosa	71.48	47	P	P	06 44 15.5	-0.9
	baz=321,SNR=9.2						
L40A	Anamosa	71.48	47	eP	P	06 44 15.5	-0.9
	comp=Z,106nm,1.1s						
J42A	Columbus	71.49	44	P	P	06 44 16.0	-0.5
	baz=321,SNR=7.9						
I43A	Langenfeld Bro	71.50	43	P	P	06 44 15.4	-1.1
	baz=322						
K41A	Shullsburg	71.50	46	P	P	06 44 15.8	-0.7
	baz=321,SNR=7.7						
O37A	Wolven Farm, M	71.51	50	P	P	06 44 16.2	-0.4
	baz=320,SNR=7.1						
LLD	Lille Linde	71.52	339	i P	P	06 44 17.4	+1.0
	comp=Z,174nm,1.1s						
MSTX	Muleshoe	71.53	59	P	P	06 44 17.2	+0.2
	baz=318,SNR=17						
MSTX	Muleshoe	71.53	59	eP	P	06 44 17.4	+0.3
	comp=Z,143nm,1.3s						

DZM	**Mont Dzumac**	**71.59**	**170**	LR	LR	07 13 15.9	
	comp=Z,2µm,18.5s,baz=6.5,slow=34						
DZM	**Mont Dzumac**	**71.59**	**170**	eLQ	LQ	07 02 58.4	
	comp=Z,4µm,29.4s						
DZM				eLR	LR	07 06 10.8	
	comp=Z,5µm,25.1s						
DZM	**Mont Dzumac**	**71.59**	**170**	eP	**P**	**06 44 18.0**	**+0.8**
	comp=Z,86nm,1.1s						
WRAB	**Tennant Creek**	**71.60**	**202**	eP	**P**	**06 44 16.6**	**-0.6**
	comp=Z,54nm,0.9s						
WRAB	**Tennant Creek**	**71.60**	**202**	ceP	**P**	**06 44 16.9**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,64nm,1.0s						
WB2	**Warramunga Arr**	**71.61**	**202**	eP	**P**	**06 44 16.2**	**-1.1**
	comp=Z,57nm,0.9s						
WRA	**Warramunga Arr**	**71.61**	**202**	P	**P**	**06 44 16.8**	**-0.5**
	comp=Z,39nm,0.9s,baz=18,slow=6.5,SNR=86						
WRA				LR	LR	07 13 19.4	
	comp=Z,2µm,21.7s,baz=25,slow=34						
WRA	**Warramunga Arr**	**71.61**	**202**	i P	**P**	**06 44 16.7**	**-0.5**
WRA				pmax	pmax		
	comp=Z,40nm,0.9s						
WC3	**Warramunga Arr**	**71.62**	**202**	eP	**P**	**06 44 17.2**	**-0.1**
	comp=Z,60nm,0.9s						
URV	**Uravakonda**	**71.68**	**272**	eP	**P**	**06 44 18.4**	**+0.4**
URV				IAmb	IAmb	06 44 19.8	
	comp=Z,302nm,1.5s						
MNTX	**Cornudas Mount**	**71.70**	**63**	P	**P**	**06 44 18.2**	**+0.3**
	baz=317,SNR=44						
MNTX	**Cornudas Mount**	**71.70**	**63**	eP	**P**	**06 44 18.5**	**+0.5**
	comp=Z,102nm,1.4s						
J43A	**Natural Harves**	**71.77**	**44**	P	**P**	**06 44 17.2**	**-0.9**
	baz=322						
N39A	**Derby Farms, D**	**71.78**	**48**	P	**P**	**06 44 17.7**	**-0.5**
	baz=320,SNR=10						
N39A	**Derby Farms, D**	**71.78**	**48**	eP	**P**	**06 44 18.1**	**-0.1**
	comp=Z,107nm,1.4s						
K42A	**Prairie Point,**	**71.81**	**45**	P	**P**	**06 44 17.5**	**-0.9**
	baz=321						
L41A	**Preston**	**71.82**	**46**	P	**P**	**06 44 17.5**	**-1.0**
	baz=321,SNR=16						
P37A	**Lathrop**	**71.84**	**50**	P	**P**	**06 44 18.0**	**-0.6**
	baz=320,SNR=17						
M40A	**Post Highland**	**71.85**	**47**	P	**P**	**06 44 18.0**	**-0.7**
	baz=321,SNR=21						
O38A	**Galt**	**71.88**	**49**	P	**P**	**06 44 18.2**	**-0.6**
	baz=320,SNR=16						
AKH	**Akhalkalaki**	**72.12**	**313**	i P	**P**	**06 44 22.2**	**+1.7**
AKH	**Akhalkalaki**	**72.12**	**313**	⇓iP	**P**	**06 44 21.1**	**+0.5**
AKH	**Akhalkalaki**	**72.12**	**313**	eP	**P**	**06 44 21.0**	**+0.5**
	comp=Z,104nm,1.0s						
AKH	**Akhalkalaki**	**72.12**	**313**	eP	**P**	**06 44 21.0**	**+0.5**
AKH				pmax	pmax		
	comp=Z,105nm,1.0s						
GKP	**Gorka Klasztor**	**72.12**	**336**	eP	**P**	**06 44 19.3**	**-0.8**
GKP	**Gorka Klasztor**	**72.12**	**336**	eP	**P**	**06 44 19.3**	**-0.8**
SOC	**Sochi**	**72.17**	**317**	c iP	**P**	**06 44 20.0**	**-0.5**
SOC				e*PP	**pP**	**06 44 35.0**	**+1.6**
SOC				e*SP	**sP**	**06 44 41.9**	**+3.5**
SOC				e		06 46 59.5	
SOC				ePPP	PPP	06 48 46.5	
SOC				eS	**S**	**06 53 40.0**	**+0.6**
SOC				pmax	pmax		
	comp=Z,90nm,0.8s						
SOC				MLR	MLR		
	comp=Z,4µm,16.0s						
MCD	**Coleburn Disti**	**72.18**	**349**	eP	**P**	**06 44 20.1**	**-0.3**
ANN	**Anapa**	**72.20**	**319**	eP	**P**	**06 44 19.6**	**-1.1**
ANN	**Anapa**	**72.20**	**319**	eP	**P**	**06 44 19.4**	**-1.3**
ANN				e*PP	**pP**	**06 44 35.5**	**+1.9**
ANN				e		06 46 59.0	
ANN				ePPP	PPP	06 48 42.8	
ANN				eS	**S**	**06 53 36.5**	**-3.3**
ANN				pmax	pmax		
	comp=Z,116nm,1.6s						
N40A	**Mertquake, Sal**	**72.22**	**48**	P	**P**	**06 44 20.6**	**-0.3**
	baz=321,SNR=16						
P38A	**Dawn**	**72.23**	**50**	P	**P**	**06 44 20.6**	**-0.4**
	baz=320,SNR=16						
P38A	**Dawn**	**72.23**	**50**	eP	**P**	**06 44 20.7**	**-0.2**
	comp=Z,64nm,0.9s						
O39A	**Kirksville**	**72.23**	**49**	P	**P**	**06 44 20.4**	**-0.5**
	baz=320,SNR=7.3						
L42A	**Oliver, Polo**	**72.26**	**46**	P	**P**	**06 44 20.3**	**-0.8**
	baz=321						
L42A	**Oliver, Polo**	**72.26**	**46**	eP	**P**	**06 44 20.0**	**-1.1**
	comp=Z,95nm,1.1s						
Q37A	**Longview Farm,**	**72.33**	**51**	P	**P**	**06 44 20.4**	**-1.2**
	baz=320						
K43A	**Burlington**	**72.33**	**44**	P	**P**	**06 44 20.7**	**-0.9**
	baz=322						
M41A	**Milan**	**72.34**	**47**	P	**P**	**06 44 20.9**	**-0.7**
	baz=321,SNR=18						
FITZ	**Fitzroy Crossi**	**72.37**	**211**	eP	**P**	**06 44 21.9**	**+0.1**
	comp=Z,59nm,1.1s						
BEL	**Belsk**	**72.38**	**333**	eP	**P**	**06 44 21.4**	**-0.2**
BEL	**Belsk**	**72.38**	**333**	eP	**P**	**06 44 21.4**	**-0.2**
MDO	**Dochfour**	**72.46**	**349**	eP	**P**	**06 44 21.7**	**-0.3**
GNI	**Garni**	**72.48**	**312**	P	**P**	**06 44 23.7**	**+1.0**
	comp=Z,274nm,1.3s,baz=23,slow=2.8,SNR=57						
GNI				LR	LR	07 18 39.9	
	comp=Z,5µm,20.9s,baz=30,slow=38						
GNI	**Garni**	**72.48**	**312**	i P	**P**	**06 44 24.2**	**+1.5**
GNI	**Garni**	**72.48**	**312**	eP	**P**	**06 44 23.7**	**+1.0**
	comp=Z,404nm,1.4s						
GNI	**Garni**	**72.48**	**312**	P	**P**	**06 44 24.1**	**+1.5**
	SNR=62						
GNI	**Garni**	**72.48**	**312**	i P	**P**	**06 44 24.0**	**+1.3**
	SNR=52						
GNI	**Garni**	**72.48**	**312**	ceP	**P**	**06 44 24.3**	**+1.5**
GNI				pmax	pmax		
	comp=Z,1µm,1.7s						
GNI				MLR	MLR		
	comp=Z,13µm,20.0s						
L43A	**Garden Prairie**	**72.55**	**45**	P	**P**	**06 44 22.4**	**-0.4**
	baz=322						
M42A	**Sheffield**	**72.65**	**46**	P	**P**	**06 44 22.5**	**-0.9**
	baz=321,SNR=5.4						
O40A	**La Belle**	**72.66**	**48**	P	**P**	**06 44 23.3**	**-0.3**
	baz=321,SNR=26						
Q38A	**Cooks Store, C**	**72.69**	**50**	P	**P**	**06 44 22.9**	**-0.8**
	baz=320,SNR=35						
N41A	**Harden Midland**	**72.70**	**47**	P	**P**	**06 44 23.3**	**-0.4**
	baz=321,SNR=35						
N41A	**Harden Midland**	**72.70**	**47**	eP	**P**	**06 44 23.6**	**-0.1**
	comp=Z,144nm,0.9s						
KPL	**Plockton**	**72.72**	**350**	eP	**P**	**06 44 22.9**	**-0.6**
KPL				IAmb	IAmb	06 44 24.5	
	comp=Z,138nm,1.1s						
P39B	**Salisbury**	**72.72**	**49**	P	**P**	**06 44 23.4**	**-0.5**
	baz=320,SNR=14						
DRUM	**Mains of Drumt**	**72.73**	**348**	eP	**P**	**06 44 22.8**	**-0.9**
DRUM				IAmb	IAmb	06 44 24.3	
	comp=Z,257nm,1.3s						
TASB	**TASBURUN-IGDIR**	**72.86**	**312**	i P	**P**	**06 44 25.6**	**+0.8**
KARS	**Kars**	**72.92**	**313**	i P	**P**	**06 44 25.7**	**+0.4**
L44A	**Lake County Fo**	**72.94**	**44**	P	**P**	**06 44 24.3**	**-0.8**
	baz=322						
Q39A	**Willow Grove F**	**72.95**	**50**	P	**P**	**06 44 24.7**	**-0.5**
	baz=320,SNR=36						
BCA	**Borcka**	**72.97**	**314**	i P	**P**	**06 44 24.9**	**-0.5**
N42A	**Yates City**	**73.00**	**47**	P	**P**	**06 44 24.9**	**-0.7**
	baz=321,SNR=15						
P40A	**Paris**	**73.03**	**49**	P	**P**	**06 44 25.4**	**-0.4**
	baz=321,SNR=34						
P40A	**Paris**	**73.03**	**49**	eP	**P**	**06 44 25.5**	**-0.3**
	comp=Z,151nm,1.3s						
M43A	**Waltham Townsh**	**73.04**	**46**	P	**P**	**06 44 25.2**	**-0.5**
	baz=322						
SORM	**Soroca**	**73.06**	**326**	⇑iP	**P**	**06 44 24.3**	**-1.4**
LVV	**L'vov**	**73.12**	**330**	eP	**P**	**06 44 24.8**	**-1.3**
LVV				eS	**S**	**06 53 48.5**	**-1.6**
R38A	**Fenwick Farm,**	**73.14**	**51**	P	**P**	**06 44 25.0**	**-1.3**
	baz=320,SNR=17						
O41A	**Passleys Farm,**	**73.15**	**48**	P	**P**	**06 44 26.0**	**-0.4**
	baz=321,SNR=35						
WMOK	**Wichita Mounta**	**73.18**	**56**	P	**P**	**06 44 26.6**	**-0.1**
	baz=319,SNR=27						
WMOK	**Wichita Mounta**	**73.18**	**56**	eP	**P**	**06 44 26.8**	**+0.1**
	comp=Z,38nm,0.9s						
WMOK	**Wichita Mounta**	**73.18**	**56**	eP	**P**	**06 44 26.8**	**+0.1**
WMOK				pmax	pmax		
	comp=Z,38nm,0.9s						
TOBO	**Tobermory, Bru**	**73.27**	**39**	P	**P**	**06 44 26.2**	**-0.8**
	baz=325						
N43A	**Stutzman Famil**	**73.33**	**46**	P	**P**	**06 44 27.1**	**-0.3**
	baz=322						
P41A	**Barry, Barry**	**73.41**	**48**	P	**P**	**06 44 27.8**	**-0.1**
	baz=321,SNR=31						
INVG	**Invergeldie, C**	**73.41**	**349**	eP	**P**	**06 44 27.0**	**-0.7**
Q40A	**Laux Farm, Aux**	**73.43**	**49**	P	**P**	**06 44 27.7**	**-0.4**
	baz=321,SNR=18						
O42A	**Bath**	**73.47**	**47**	P	**P**	**06 44 27.9**	**-0.4**
	baz=322,SNR=6.1						
R39A	**Chumby, Stover**	**73.48**	**50**	P	**P**	**06 44 27.4**	**-1.0**
	baz=320,SNR=30						
SIM	**Simferopol'**	**73.48**	**321**	eP	**P**	**06 44 27.1**	**-1.2**
SIM	**Simferopol'**	**73.48**	**321**	d iP	**P**	**06 44 27.5**	**-0.8**
SIM				pmax	pmax		
	comp=Z,51nm,1.0s						
M44A	**Midewin, Midew**	**73.50**	**45**	P	**P**	**06 44 28.0**	**-0.5**
	baz=322						
M44A	**Midewin, Midew**	**73.50**	**45**	eP	**P**	**06 44 28.3**	**-0.1**
	comp=Z,159nm,1.3s						
M44A				LR	LR		
	comp=Z,5µm,19.0s						
S38A	**Stockton**	**73.56**	**51**	P	**P**	**06 44 27.7**	**-1.2**
	baz=320,SNR=37						
HDIL	**Hopedale**	**73.57**	**46**	P	**P**	**06 44 28.7**	**-0.2**
	baz=322,SNR=18						
HDIL	**Hopedale**	**73.57**	**46**	eP	**P**	**06 44 28.6**	**-0.3**
	comp=Z,250nm,1.3s						
CLDR	**Caldiran**	**73.67**	**311**	i P	**P**	**06 44 30.5**	**+0.7**
EAB	**Aberfoyle**	**73.68**	**349**	eP	**P**	**06 44 29.2**	**-0.1**
KLBO	**Killbear Provi**	**73.69**	**38**	P	**P**	**06 44 27.3**	**-2.2**
	baz=326						
KWP	**Kalwaria Pacla**	**73.71**	**331**	eP	**P**	**06 44 29.7**	**+0.1**
KWP	**Kalwaria Pacla**	**73.71**	**331**	eP	**P**	**06 44 29.6**	**0.0**
	comp=Z,4µm,1.3s						
KWP	**Kalwaria Pacla**	**73.71**	**331**	eP	**P**	**06 44 29.6**	**0.0**
O43A	**Sugar Creek Fa**	**73.77**	**47**	P	**P**	**06 44 29.6**	**-0.4**
	baz=322,SNR=6.3						
AGRB	**Hanur-Agry**	**73.78**	**312**	i P	**P**	**06 44 31.4**	**+1.0**
S39A	**Bolivar**	**73.81**	**51**	P	**P**	**06 44 29.0**	**-1.3**
	baz=320,SNR=20						
S39A	**Bolivar**	**73.81**	**51**	eP	**P**	**06 44 29.1**	**-1.2**
	comp=Z,71nm,1.3s						
T38A	**Diamond**	**73.82**	**52**	P	**P**	**06 44 29.9**	**-0.6**
	baz=320,SNR=56						
P42A	**Winchester**	**73.82**	**48**	P	**P**	**06 44 30.1**	**-0.3**
	baz=322,SNR=14						
P42A	**Winchester**	**73.82**	**48**	eP	**P**	**06 44 29.5**	**-0.9**
	comp=Z,136nm,1.4s						
KIS	**Kishinev**	**73.85**	**326**	eP	**P**	**06 44 29.5**	**-0.9**
	comp=Z,500nm,2.0s						
KIS	**Kishinev**	**73.85**	**326**	i PcP	**P**	**06 44 34.0**	**+3.6**
KIS				eL	L	07 12 12.0	
KIS				LRM	MLR	07 20 52.0	
	comp=Z,6µm,15.0s						
KIS	**Kishinev**	**73.85**	**326**	eP	**P**	**06 44 29.5**	**-0.9**
KIS				i		06 44 50.0	
KIS				pmax	pmax		
	comp=Z,500nm,2.0s						
KIS				pmax	pmax		
	comp=Z,700nm,4.0s						
KIS				MLR	MLR		
	comp=Z,6µm,15.0s						
KIS				MLR	MLR		
	comp=N,5µm,15.0s						
KIS				MLR	MLR		
	comp=E,4µm,15.0s						
M45A	**Boilermakers S**	**73.87**	**45**	P	**P**	**06 44 30.2**	**-0.4**
	baz=323						
R40A	**Maddies Statio**	**73.88**	**50**	P	**P**	**06 44 30.0**	**-0.7**
	baz=321,SNR=44						
R40A	**Maddies Statio**	**73.88**	**50**	eP	**P**	**06 44 29.8**	**-1.0**
	comp=E,55nm,0.8s						
Q41A	**Truxton**	**73.88**	**49**	P	**P**	**06 44 30.4**	**-0.4**
	baz=321,SNR=30						
TUL1	**Leonard**	**73.89**	**54**	P	**P**	**06 44 30.6**	**-0.2**
	baz=320,SNR=15						
TUL1	**Leonard**	**73.89**	**54**	eP	**P**	**06 44 30.7**	**-0.2**
	comp=E,173nm,1.5s						
BMRO	**Meriville Lake**	**73.91**	**39**	P	**P**	**06 44 28.8**	**-2.0**
	baz=325						
N44A	**Piper City**	**73.93**	**45**	P	**P**	**06 44 29.9**	**-1.1**
	baz=322						
BUKO	**Buck Lake**	**73.95**	**37**	P	**P**	**06 44 30.0**	**-1.1**
	baz=326						
PGBU	**Glenifferbraes**	**74.07**	**349**	eP	**P**	**06 44 31.4**	**-0.1**
PGBU				IAmb	IAmb	06 44 32.8	
	comp=Z,503nm,1.2s						
OJC	**Ojcow**	**74.10**	**333**	eP	**P**	**06 44 31.7**	**-0.2**
OJC	**Ojcow**	**74.10**	**333**	eP	**P**	**06 44 31.4**	**-0.4**
	comp=Z,269nm,1.4s						
OJC	**Ojcow**	**74.10**	**333**	eP	**P**	**06 44 31.4**	**-0.4**
OJC				pmax	pmax		
	comp=Z,269nm,1.4s						
BRCO	**Bruce Peninsul**	**74.11**	**39**	P	**P**	**06 44 32.0**	**+0.1**
	baz=325						
N45A	**Kentland**	**74.17**	**45**	P	**P**	**06 44 31.9**	**-0.5**
	baz=323						
P43A	**Skaggs, Pawnee**	**74.18**	**47**	P	**P**	**06 44 32.0**	**-0.4**
	baz=322,SNR=5.8						
KTUT	**Trabzon**	**74.20**	**315**	i P	**P**	**06 44 31.9**	**-0.6**
BASO	**Ashfield**	**74.20**	**39**	P	**P**	**06 44 32.9**	**+0.4**
	baz=325						
Q42A	**Golden Eagle**	**74.25**	**48**	P	**P**	**06 44 32.9**	**0.0**
	baz=322,SNR=21						
M46A	**Old House Fiel**	**74.26**	**44**	P	**P**	**06 44 32.5**	**-0.4**
	baz=323						
M46A	**Old House Fiel**	**74.26**	**44**	eP	**P**	**06 44 32.7**	**-0.2**
	comp=Z,80nm,1.4s						
M46A				LR	LR		
	comp=Z,5µm,20.0s						
LPIG	**La Paz**	**74.27**	**71**	LR	LR	07 14 57.0	
	comp=Z,779nm,18.5s,baz=301,slow=34						
O44A	**Mansfield**	**74.28**	**46**	P	**P**	**06 44 32.3**	**-0.7**
	baz=322,SNR=5.0						
ABTX	**Abilene, Hawle**	**74.28**	**58**	P	**P**	**06 44 33.2**	**0.0**
	baz=319,SNR=13						
ABTX	**Abilene, Hawle**	**74.28**	**58**	eP	**P**	**06 44 33.4**	**+0.2**
	comp=Z,113nm,1.2s						
T39A	**Clever**	**74.30**	**51**	P	**P**	**06 44 32.3**	**-0.9**
	baz=321,SNR=9.9						
S40A	**Lebanon**	**74.30**	**50**	P	**P**	**06 44 32.2**	**-1.0**
	baz=321,SNR=26						
R41A	**Rosebud**	**74.32**	**49**	P	**P**	**06 44 32.8**	**-0.5**
	baz=321,SNR=23						
BWLO	**Walkerton**	**74.34**	**39**	P	**P**	**06 44 33.1**	**-0.1**
	baz=325						
VANB	**Van**	**74.35**	**311**	i P	**P**	**06 44 34.8**	**+1.2**
EKA	**Eskdalemuir Ar**	**74.36**	**348**	P	**P**	**06 44 33.0**	**-0.2**
	comp=Z,22nm,0.5s,baz=20,slow=5.0,SNR=128						
ESK	**Eskdalemuir**	**74.38**	**348**	eP	**P**	**06 44 33.1**	**-0.2**
	comp=Z,159nm,1.2s						
ESK	**Eskdalemuir**	**74.38**	**348**	eP	**P**	**06 44 33.0**	**-0.3**
ESK				IAmb	IAmb	06 44 34.4	
	comp=Z,151nm,1.2s						
ESK	**Eskdalemuir**	**74.38**	**348**	eP	**P**	**06 44 33.1**	**-0.2**
ESK				pmax	pmax		
	comp=Z,159nm,1.2s						
CLWO	**Collingwood**	**74.41**	**38**	P	**P**	**06 44 32.7**	**-1.1**
	baz=326						
TX31	**Lajitas Ar. Si**	**74.43**	**63**	eP	**P**	**06 44 34.7**	**+0.5**
TXAR	**Lajitas Array**	**74.44**	**63**	P	**P**	**06 44 34.6**	**+0.4**
	comp=Z,28nm,0.9s,baz=296,slow=4.0,SNR=159						
TXAR				PKPPKP	P'P'df	07 11 53.1	-14
	comp=Z,0.3nm,0.9s,baz=174,slow=2.5,SNR=3.7						
EIDS	**Eidsvold**	**74.44**	**185**	eP	**P**	**06 44 34.6**	**+0.7**
	comp=Z,172nm,1.8s						
PRAR	**RASCA**	**74.48**	**327**	⇑iP	**P**	**06 44 33.8**	**-0.3**
N46A	**Monticello**	**74.49**	**45**	P	**P**	**06 44 33.7**	**-0.6**
	baz=323						
LEOM	**Leova**	**74.50**	**326**	⇓iP	**P**	**06 44 34.0**	**-0.2**
O45A	**Potomac**	**74.55**	**46**	P	**P**	**06 44 34.3**	**-0.3**
	baz=323,SNR=7.1						
KSP	**Ksiaz**	**74.56**	**335**	eP	**P**	**06 44 34.0**	**-0.5**
KSP	**Ksiaz**	**74.56**	**335**	eP	**P**	**06 44 34.0**	**-0.5**
CCM	**Cathedral Cave**	**74.57**	**49**	P	**P**	**06 44 34.7**	**-0.1**
	baz=321						
CCM	**Cathedral Cave**	**74.57**	**49**	eP	**P**	**06 44 34.5**	**-0.3**
	comp=Z,55nm,1.0s						
CCM	**Cathedral Cave**	**74.57**	**49**	eP	**P**	**06 44 34.5**	**-0.3**
CCM				pmax	pmax		
	comp=Z,55nm,1.0s						
HHAR	**Hobbs**	**74.58**	**52**	eP	**P**	**06 44 34.1**	**-0.8**
	comp=Z,108nm,1.5s						
PEMO	**Pembroke**	**74.59**	**36**	P	**P**	**06 44 33.0**	**-1.7**
	baz=327						
BUR08	**Bucovina Ar. S**	**74.60**	**328**	eP	**P**	**06 44 34.3**	**-0.6**
BHH	**Howats Hill**	**74.60**	**348**	eP	**P**	**06 44 34.6**	**0.0**
SADO	**Sadowa**	**74.61**	**37**	eP	**P**	**06 44 33.8**	**-1.1**
	comp=Z,123nm,1.6s						
SLM	**Saint Louis**	**74.61**	**48**	eP	**P**	**06 44 34.7**	**-0.3**
	comp=Z,231nm,1.6s						
SLM	**Saint Louis**	**74.61**	**48**	eP	**P**	**06 44 34.7**	**-0.3**
SLM				pmax	pmax		
	comp=Z,231nm,1.6s						
BUR04	**Bucovina Ar. S**	**74.62**	**328**	eP	**P**	**06 44 33.8**	**-1.2**
BURAR	**Bucovina Array**	**74.62**	**328**	⇑iP	**P**	**06 44 34.2**	**-0.8**
R42A	**Luebbering**	**74.62**	**49**	P	**P**	**06 44 34.7**	**-0.3**
	baz=322,SNR=17						
T40A	**Mansfield**	**74.63**	**51**	P	**P**	**06 44 34.3**	**-0.8**
	baz=321						
Q43A	**New Douglas**	**74.64**	**48**	P	**P**	**06 44 35.0**	**-0.1**
	baz=322						
NIE	**Niedzica**	**74.66**	**332**	eP	**P**	**06 44 35.1**	**0.0**
NIE	**Niedzica**	**74.66**	**332**	eP	**P**	**06 44 35.1**	**0.0**
EDMD	**Edmundbyers**	**74.68**	**347**	eP	**P**	**06 44 34.6**	**-0.5**
S41A	**Jillco Farms,**	**74.69**	**50**	P	**P**	**06 44 34.6**	**-0.8**
	baz=321,SNR=19						
RAC	**Raciborz**	**74.70**	**333**	eP	**P**	**06 44 35.4**	**+0.1**
RAC				MLR	MLR		
	comp=Z,9µm,18.8s						
UZH	**Uzhgorod**	**74.72**	**330**	eP	**P**	**06 44 34.5**	**-0.9**
UZH				e		06 44 45.7	
ESPY	**Espiye-Giresun**	**74.73**	**316**	i P	**P**	**06 44 35.1**	**-0.6**
U39A	**Green Forest**	**74.74**	**52**	P	**P**	**06 44 35.1**	**-0.7**
	baz=321,SNR=59						
SFIN	**Lafayette**	**74.74**	**45**	P	**P**	**06 44 35.1**	**-0.5**
	baz=323						
SFIN	**Lafayette**	**74.74**	**45**	eP	**P**	**06 44 35.4**	**-0.3**
	comp=Z,53nm,1.1s						
P44A	**Sand Creek, Wi**	**74.74**	**47**	P	**P**	**06 44 35.6**	**-0.1**
	baz=322,SNR=20						
AAM	**Ann Arbor**	**74.75**	**42**	P	**P**	**06 44 35.7**	**0.0**
	baz=324						
AAM	**Ann Arbor**	**74.75**	**42**	eP	**P**	**06 44 34.7**	**-1.0**
	comp=Z,124nm,1.1s						
CRVS	**Cervenica-Dubn**	**74.75**	**331**	eP	**P**	**06 44 35.4**	**-0.2**
CRVS				pmax	pmax		
	comp=Z,411nm,2.3s						
CRVS	**Cervenica-Dubn**	**74.75**	**331**	eP	**P**	**06 44 35.4**	**-0.2**
SLBS	**Sierra La Lagu**	**74.80**	**71**	eP	**P**	**06 44 36.8**	**+0.3**
	comp=Z,122nm,1.4s						
VRTB	**Varto-Mus**	**74.85**	**313**	i P	**P**	**06 44 37.8**	**+1.3**
BANO	**Bancroft**	**74.88**	**37**	P	**P**	**06 44 35.6**	**-0.9**
	baz=327						
BIZ	**Bicaz**	**74.89**	**327**	⇓iP	**P**	**06 44 36.3**	**-0.2**
GDLE	**Glaisdale, N Y**	**74.90**	**346**	eP	**P**	**06 44 35.9**	**-0.4**
OKC	**Ostrava-Krasne**	**74.93**	**333**	⇑eP	**P**	**06 44 37.6**	**+1.0**
OKC				AMS	AMS	07 23 30.0	
	comp=Z,8µm,18.1s						
OKC	**Ostrava-Krasne**	**74.93**	**333**	eP	**P**	**06 44 37.6**	**+1.0**
OKC				MLR	MLR		
	comp=Z,8µm,18.1s						
UPC	**Upice**	**74.94**	**335**	⇑eP	**P**	**06 44 37.3**	**+0.6**
UPC				AMS	AMS	07 21 20.0	
	comp=Z,8µm,16.9s						
UPC	**Upice**	**74.94**	**335**	eP	**P**	**06 44 37.3**	**+0.6**
UPC				MLR	MLR		
	comp=Z,8µm,16.9s						
BBO1	**Bothel**	**74.95**	**348**	eP	**P**	**06 44 36.6**	**0.0**
CLGH	**Cloghs, Cushen**	**74.98**	**350**	eP	**P**	**06 44 36.8**	**0.0**
CLGH				IAmb	IAmb	06 44 38.0	
	comp=Z,264nm,1.0s						
DPC	**Dobruska-Polom**	**75.00**	**335**	eP	**P**	**06 44 37.9**	**+0.8**
DPC				AMS	AMS	07 24 30.0	
	comp=Z,10µm,15.9s						
DPC	**Dobruska-Polom**	**75.00**	**335**	eP	**P**	**06 44 37.9**	**+0.8**
DPC				MLR	MLR		
	comp=Z,10µm,15.9s						
Q44A	**Meyer Farm, Va**	**75.00**	**47**	P	**P**	**06 44 36.8**	**-0.4**
	baz=322,SNR=15						
CLL	**Collm**	**75.01**	**337**	⇑iP	**P**	**06 44 36.4**	**-0.7**
	comp=Z,275nm,1.3s						
CLL				ePmax		06 44 37.0	
CLL				Lm	MLR	07 19 00.0	
	comp=N,5µm,19.1s						
CLL				Lm	MLR	07 19 00.0	
	comp=E,5µm,19.3s						
CLL				Lm	MLR	07 19 00.0	
	comp=Z,6µm,20.1s						
CLL				Lmax		07 23 00.0	
CLL	**Collm**	**75.01**	**337**	eP	**P**	**06 44 36.4**	**-0.7**
	comp=Z,229nm,1.2s						
CLL	**Collm**	**75.01**	**337**	⇑iP	**P**	**06 44 36.4**	**-0.7**
CLL				pmax	pmax		
	comp=Z,275nm,1.3s						
CLL				MLR	MLR		
	comp=Z,6µm,20.1s						
S42A	**Caledonia**	**75.02**	**49**	P	**P**	**06 44 36.9**	**-0.5**
	baz=322,SNR=32						
ELFO	**Elginfield**	**75.02**	**40**	P	**P**	**06 44 35.9**	**-1.3**
	baz=325						
GAL1	**Galloway**	**75.02**	**349**	eP	**P**	**06 44 36.5**	**-0.5**
GAL1				IAmb	IAmb	06 44 38.0	
	comp=Z,151nm,1.3s						
HPIG		**75.03**	**66**	eP	**P**	**06 44 38.0**	**+0.2**
	comp=Z,114nm,1.3s						
FVM	**French Village**	**75.03**	**49**	eP	**P**	**06 44 38.0**	**+0.6**
	comp=Z,105nm,1.4s						
FVM	**French Village**	**75.03**	**49**	eP	**P**	**06 44 38.0**	**+0.6**
FVM				pmax	pmax		
	comp=Z,105nm,1.4s						
R43A	**Red Bud**	**75.05**	**48**	P	**P**	**06 44 36.9**	**-0.6**
	baz=322,SNR=10						
TESR	**Tescani**	**75.06**	**327**	⇓iP	**P**	**06 44 36.7**	**-0.7**
V39A	**Pettigrew**	**75.07**	**52**	P	**P**	**06 44 37.2**	**-0.6**
	baz=321						
TRPA	**Tarpa**	**75.08**	**330**	⇑iP	**P**	**06 44 37.7**	**+0.2**
TRPA	**Tarpa**	**75.08**	**330**	⇑eP	**P**	**06 44 37.7**	**+0.2**
KESW	**Keswick, Cumbr**	**75.08**	**348**	eP	**P**	**06 44 37.5**	**+0.1**
KESW				IAmb	IAmb	06 44 38.7	
	comp=Z,389nm,1.1s						
U40A	**Yellville**	**75.08**	**51**	P	**P**	**06 44 37.1**	**-0.7**
	baz=321,SNR=45						
T41A	**Mountain View**	**75.10**	**50**	P	**P**	**06 44 36.9**	**-0.9**
	baz=321,SNR=17						
P45A	**Graceland, Par**	**75.11**	**46**	P	**P**	**06 44 37.6**	**-0.2**
	baz=323,SNR=7.3						
P45A	**Graceland, Par**	**75.11**	**46**	eP	**P**	**06 44 37.6**	**-0.2**
	comp=Z,83nm,1.1s						
P45A				LR	LR		
	comp=Z,4µm,19.0s						
PALK	**Pallekele**	**75.11**	**264**	eP	**P**	**06 44 38.2**	**0.0**
	comp=Z,266nm,1.2s						
PALK	**Pallekele**	**75.11**	**264**	P	**P**	**06 44 39.1**	**+0.9**
	SNR=7.8						
PALK	**Pallekele**	**75.11**	**264**	i P	**P**	**06 44 39.1**	**+0.9**
	SNR=12						
PALK	**Pallekele**	**75.11**	**264**	i P	**P**	**06 44 39.4**	**+1.2**
KRLC	**Kraliky**	**75.11**	**334**	eP	**P**	**06 44 38.7**	**+0.9**
KRLC				AMS	AMS	07 21 10.0	
	comp=Z,3µm,18.6s						
KRLC	**Kraliky**	**75.11**	**334**	eP	**P**	**06 44 38.7**	**+0.9**
KRLC				MLR	MLR		
	comp=Z,3µm,18.6s						
TRQ	**Mont Tremblant**	**75.14**	**34**	eP	**P**	**06 44 36.6**	**-1.4**
IDGL	**Inch Island, C**	**75.15**	**350**	eP	**P**	**06 44 37.8**	**+0.1**
IDGL				IAmb	IAmb	06 44 39.3	
	comp=Z,386nm,1.0s						
BMR	**Baia Mare**	**75.16**	**329**	⇑iP	**P**	**06 44 38.0**	**0.0**
MORC	**Moravsky Berou**	**75.16**	**334**	⇑iP	**P**	**06 44 37.8**	**-0.3**
MORC	**Moravsky Berou**	**75.16**	**334**	eP	**P**	**06 44 37.9**	**-0.1**
	comp=Z,200nm,1.1s						
MORC	**Moravsky Berou**	**75.16**	**334**	eP	**P**	**06 44 37.9**	**-0.1**
MORC				pmax	pmax		
	comp=Z,200nm,1.1s						
MORC	**Moravsky Berou**	**75.16**	**334**	⇑iP	**P**	**06 44 38.0**	**-0.1**
BRG	**Berggiesshubel**	**75.17**	**336**	i P	**P**	**06 44 37.5**	**-0.5**
	comp=Z,157nm,1.4s						
BRG				i PP	**PP**	**06 47 20.1**	**-5.7**
	comp=Z,34nm,1.6s						
	comp=N,8µm,16.9s						
	comp=E,5µm,14.6s						
	comp=Z,11µm,16.3s						
BRG	**Berggiesshubel**	**75.17**	**336**	i P	**P**	**06 44 37.5**	**-0.5**
BRG				pmax	pmax		
	comp=Z,157nm,1.4s						
BRG				MLR	MLR		
	comp=N,8µm,16.9s						
BRG				MLR	MLR		
	comp=E,5µm,14.6s						
BRG				MLR	MLR		
	comp=Z,11µm,16.3s						
PLVO	**Plevna**	**75.19**	**36**	P	**P**	**06 44 37.5**	**-0.7**
	baz=327						

PLVO	Plevna	75.19	36	eP	P	06 44 37.7	-0.5
	comp=Z,215nm,1.7s						
ACTO	Acton	75.20	39	P	P	06 44 38.4	+0.1
	baz=326						
M49A	Liberty Center	75.27	42	P	P	06 44 38.2	-0.5
	baz=324						
O47A	Sheridan	75.28	45	P	P	06 44 37.9	-0.9
	baz=323						
AS01	Alice Springs	75.28	201	eP	P	06 44 39.0	+0.2
AS31	Alice Springs	75.29	201	eP	P	06 44 39.2	+0.3
	comp=Z,6.7nm,0.9s						
CUKT	Cukurca	75.29	310	i P	P	06 44 39.5	+0.4
P46A	Rosedale	75.29	46	P	P	06 44 38.6	-0.3
	baz=323,SNR=14						
ASAR	Alice Springs	75.29	201	P	P	06 44 39.4	+0.4
	comp=Z,13nm,0.9s,baz=13,slow=5.3,SNR=54						
ASAR				LR	LR	07 15 14.8	
	comp=Z,1µm,22.0s,baz=32,slow=34						
PKRO	Pickering	75.31	38	P	P	06 44 38.5	-0.4
	baz=326						
PVCC	Panska Ves	75.31	336	⇑eP	P	06 44 40.3	+1.5
PVCC				AMS	AMS	07 21 40.0	
	comp=Z,9µm,18.2s						
PVCC	Panska Ves	75.31	336	eP	P	06 44 40.3	+1.5
PVCC				MLR	MLR		
	comp=Z,9µm,18.2s						
ERZN	Erzincan	75.33	314	i P	P	06 44 39.9	+0.6
BNGB	Bingˆ¶l	75.35	313	i P	P	06 44 40.3	+0.9
GIUM	Giurgiulesti	75.36	325	⇑iP	P	06 44 39.8	+0.7
ARCR	ARCALIA	75.37	328	⇑iP	P	06 44 39.8	+0.6
SNOP	Sinop	75.41	319	i P	P	06 44 39.1	-0.4
Q45A	Warren Harvey,	75.42	47	P	P	06 44 39.5	-0.1
	baz=323,SNR=16						
DELO	Deloro Mine	75.42	37	P	P	06 44 38.2	-1.4
	baz=327						
KECS	Kecovo	75.42	331	eP	P	06 44 40.6	+1.1
KECS	Kecovo	75.42	331	eP	P	06 44 40.6	+1.1
T42A	Van Buren	75.44	50	P	P	06 44 39.1	-0.7
	baz=322,SNR=13						
T42A	Van Buren	75.44	50	eP	P	06 44 39.1	-0.7
	comp=Z,137nm,1.8s						
HPK	Haverah Park	75.47	347	eP	P	06 44 39.7	+0.1
HPK				IAmb	IAmb	06 44 41.1	
	comp=Z,483nm,1.2s						
R44A	Waltonville	75.48	48	P	P	06 44 39.5	-0.5
	baz=322,SNR=17						
W39A	Magazine	75.49	53	P	P	06 44 40.0	-0.1
	baz=321,SNR=13						
W39A	Magazine	75.49	53	eP	P	06 44 39.3	-0.8
	comp=Z,155nm,1.6s						
PETR	Petresti	75.52	326	⇓iP	P	06 44 40.6	+0.6
DRWO	Darlington Wes	75.52	38	P	P	06 44 40.3	+0.2
	baz=327						
V40A	Witts Springs	75.52	52	P	P	06 44 39.8	-0.6
	baz=321,SNR=24						
V40A	Witts Springs	75.52	52	eP	P	06 44 39.5	-0.9
	comp=Z,103nm,1.3s						
V40A				LR	LR		
	comp=Z,4µm,18.0s						
ALFO	Alfred	75.52	34	P	P	06 44 38.8	-1.3
	baz=328						
S43A	Fulton Ridge,	75.53	49	P	P	06 44 39.8	-0.5
	baz=322,SNR=13						
U41A	Viola	75.56	51	P	P	06 44 39.7	-0.8
	baz=321,SNR=15						
OLIL	Olney	75.57	47	eP	P	06 44 40.4	-0.1
	comp=Z,216nm,1.4s						
VRI	Vrincioaia	75.58	326	⇓iP	P	06 44 40.3	-0.2
IOMK	Kirk Michael	75.59	349	eP	P	06 44 40.1	-0.2
IOMK				IAmb	IAmb	06 44 41.4	
	comp=Z,269nm,1.1s						
WLVO	Wesleyville	75.61	37	P	P	06 44 40.0	-0.6
	baz=327						
PLOR	Plostina	75.62	326	⇑iP	P	06 44 40.7	0.0
CFR	Carcaliu	75.64	325	⇑iP	P	06 44 40.2	-0.6
SIRT	Sirnak	75.67	311	i P	P	06 44 41.7	+0.5
DIKM	Dikmen	75.69	318	i P	P	06 44 41.4	+0.3
Q46A	CEJHS Indians,	75.69	46	P	P	06 44 40.5	-0.7
	baz=323						
TYNO	Tyneside	75.70	39	P	P	06 44 40.6	-0.6
	baz=326						
WIM	Isle of Man	75.72	349	eP	P	06 44 40.9	-0.2
O48A	Farmland	75.73	44	P	P	06 44 40.8	-0.6
	baz=324,SNR=12						
M50A	Fremont	75.74	42	P	P	06 44 41.0	-0.4
	baz=325						
SVAN	Silvan-Diyarba	75.77	313	i P	P	06 44 42.5	+0.8
PRA	Prague	75.77	336	⇑eP	P	06 44 42.7	+1.3
PRA				AMS	AMS	07 21 50.0	
	comp=Z,10µm,17.3s						
PRA	Prague	75.77	336	eP	P	06 44 42.7	+1.3
PRA				MLR	MLR		
	comp=Z,10µm,17.3s						
GMM	Mts of Mourne	75.79	349	eP	P	06 44 41.1	-0.3
KVT	Kavak	75.80	318	i P	P	06 44 42.7	+0.8
T43A	Greenville	75.80	49	P	P	06 44 41.7	-0.2
	baz=322,SNR=16						
JCT	Junction City	75.81	60	P	P	06 44 42.1	0.0
	baz=319,SNR=20						
JCT	Junction City	75.81	60	eP	P	06 44 42.1	0.0
	comp=Z,181nm,1.4s						
JCT	Junction City	75.81	60	eP	P	06 44 42.1	0.0
JCT				pmax	pmax		
	comp=Z,181nm,1.4s						
PRU	Pruhonice	75.81	336	⇑eP	P	06 44 42.4	+0.7
PRU				AMS	AMS	07 21 40.0	
	comp=Z,10µm,18.1s						
PRU	Pruhonice	75.81	336	eP	P	06 44 42.4	+0.7
PRU				MLR	MLR		
	comp=Z,10µm,18.1s						
GOPC	GO Pecny, Ondr	75.81	335	eP	P	06 44 42.7	+1.0
GOPC				AMS	AMS	07 21 40.0	
	comp=Z,8µm,20.0s						
GOPC	GO Pecny, Ondr	75.81	335	eP	P	06 44 42.7	+1.0
GOPC				MLR	MLR		
	comp=Z,8µm,20.0s						
P47A	Martinsville	75.83	45	P	P	06 44 41.5	-0.5
	baz=323,SNR=9.2						
R45A	Skylar, Fairfi	75.83	47	P	P	06 44 41.6	-0.4
	baz=323						
S44A	Carbondale	75.83	48	P	P	06 44 41.8	-0.2
	baz=322,SNR=16						
SIUC	Southern Illin	75.83	48	eP	P	06 44 41.5	-0.5
	comp=Z,152nm,1.4s						
X39A	Fountain Ranch	75.85	53	P	P	06 44 42.3	+0.1
	baz=321,SNR=26						
WTSB	Winterswijk	75.85	341	eP	P	06 44 41.6	-0.2
	comp=Z,368nm,1.2s						
VRAC	Vranov	75.86	334	⇑iP	P	06 44 42.3	+0.3
VRAC	Vranov	75.86	334	⇑iP	P	06 44 42.4	+0.4
W40A	Ferguson Farm,	75.87	52	P	P	06 44 42.1	-0.1
	baz=321,SNR=18						
W40A	Ferguson Farm,	75.87	52	eP	P	06 44 42.1	-0.1
	comp=Z,150nm,1.1s						
W40A				LR	LR		
	comp=Z,5µm,20.0s						
V41A	Mountainview	75.88	51	P	P	06 44 41.7	-0.7
	baz=321,SNR=20						
U42A	Revenden	75.90	50	P	P	06 44 41.8	-0.6
	baz=322,SNR=6.3						
GRER		75.90	326	⇓iP	P	06 44 43.7	+1.4
VYHS	Vyhne	75.93	332	eP	P	06 44 42.5	+0.1
VYHS				pmax	pmax		
	comp=Z,180nm,1.7s						
VYHS	Vyhne	75.93	332	eP	P	06 44 42.5	+0.1
LTVH	Lˆ'tavˆ'rtes,	75.94	330	⇑eP	P	06 44 43.5	+1.1
JAVC	Velka Javorina	75.95	333	⇑iP	P	06 44 43.9	+1.3
CJR	Cluj-Napoca	75.95	329	⇓iP	P	06 44 43.0	+0.4
BLO	Bloomington	75.97	45	eP	P	06 44 42.2	-0.6
	comp=Z,48nm,1.0s						
BLO	Bloomington	75.97	45	eP	P	06 44 42.2	-0.6
BLO				pmax	pmax		
	comp=Z,48nm,1.0s						
PBMO	Poplar Bluff	75.97	49	eP	P	06 44 42.6	-0.2
	comp=Z,203nm,1.5s						
WHTX	Lake Whitney,	75.97	57	P	P	06 44 42.8	-0.1
	baz=320,SNR=9.5						
WHTX	Lake Whitney,	75.97	57	eP	P	06 44 43.2	+0.3
	comp=Z,220nm,1.6s						
DOPR	Dopca	75.97	327	⇑iP	P	06 44 43.1	+0.4
LBWR	Ladybower, Pea	76.03	347	eP	P	06 44 42.8	0.0
LBWR				IAmb	IAmb	06 44 44.2	
	comp=Z,461nm,1.2s						
PTK	Pertek	76.04	314	i P	P	06 44 44.4	+1.0
MIAR	Mount Ida	76.10	53	P	P	06 44 43.4	-0.2
	baz=321,SNR=34						
MIAR	Mount Ida	76.10	53	eP	P	06 44 43.5	-0.2
	comp=Z,85nm,1.1s						
MIAR				LR	LR		
	comp=Z,4µm,18.0s						
MIAR	Mount Ida	76.10	53	eP	P	06 44 43.5	-0.1
MIAR				pmax	pmax		
	comp=Z,85nm,1.1s						
MIAR				MLR	MLR		
	comp=Z,4µm,18.0s						
PSZ	Piszkesteto	76.11	331	⇑iP	P	06 44 43.7	+0.2
PSZ	Piszkesteto	76.11	331	⇑eP	P	06 44 44.0	+0.5
PSZ	Piszkesteto	76.11	331	eP	P	06 44 43.4	-0.2
	comp=Z,221nm,1.3s						
KRUC	Moravsky	76.14	334	⇑iP	P	06 44 43.7	+0.1
NKC	Novy Kostel	76.14	337	⇑eP	P	06 44 44.3	+0.7
NKC				AMS	AMS	07 24 10.0	
	comp=Z,9µm,15.9s						
NKC	Novy Kostel	76.14	337	eP	P	06 44 44.3	+0.7
NKC				MLR	MLR		
	comp=Z,9µm,15.9s						
T44A	Benton	76.15	49	P	P	06 44 43.8	-0.1
	baz=322,SNR=19						
TIRR	Tirgusor	76.15	324	⇑iP	P	06 44 43.3	-0.4
TIRR	Tirgusor	76.15	324	eP	P	06 44 43.2	-0.4
	comp=Z,148nm,1.0s						
TIRR	Tirgusor	76.15	324	eP	P	06 44 43.2	-0.4
TIRR				pmax	pmax		
	comp=Z,148nm,1.0s						
O49A	Covington	76.15	43	P	P	06 44 43.1	-0.7
	baz=324,SNR=5.5						
S45A	Carrier Mills	76.17	48	P	P	06 44 43.6	-0.3
	baz=323,SNR=6.0						
MDB	Medias	76.18	328	⇑iP	P	06 44 45.0	+1.1
TLB	Topalu	76.18	325	⇑iP	P	06 44 43.5	-0.3
MLR	Muntele Rosu	76.18	326	LR	LR	07 20 39.1	
	comp=Z,5µm,19.8s,baz=37,slow=38						
MLR	Muntele Rosu	76.18	326	⇓iP	P	06 44 44.0	-0.1
MLR	Muntele Rosu	76.18	326	eP	P	06 44 43.7	-0.4
	comp=Z,442nm,1.5s						
DRGR		76.19	329	⇑iP	P	06 44 43.6	-0.4
WHAR	Wooly Hollow	76.19	52	eP	P	06 44 43.3	-0.8
	comp=Z,224nm,1.5s						
TOKT	Tokat	76.20	317	i P	P	06 44 44.8	+0.7
Q47A	Bedord North L	76.20	46	P	P	06 44 43.7	-0.4
	baz=323,SNR=9.5						
N50A	Nevada	76.21	42	P	P	06 44 44.1	0.0
	baz=325,SNR=5.4						
MEDO	Medina	76.22	38	P	P	06 44 43.8	-0.3
	baz=327						
P48A	Milroy	76.24	45	P	P	06 44 43.5	-0.8
	baz=324,SNR=17						
V42A	Cord	76.25	51	P	P	06 44 43.8	-0.6
	baz=322,SNR=16						
R46A	Gibon Southern	76.26	47	P	P	06 44 44.6	+0.1
	baz=323,SNR=6.4						
ISR	Istrita	76.28	326	⇑iP	P	06 44 44.5	0.0
PGOR	Pogoanele	76.30	326	⇓iP	P	06 44 45.9	+1.4
W41B	Gary Mavity, V	76.30	52	P	P	06 44 44.4	-0.3
	baz=321,SNR=31						
W41B	Gary Mavity, V	76.30	52	eP	P	06 44 44.4	-0.3
	comp=Z,124nm,1.2s						
W41B				LR	LR		
	comp=Z,5µm,19.0s						
U43A	Rector	76.31	50	P	P	06 44 44.6	-0.1
	baz=322						
WACR	West Acre	76.31	345	eP	P	06 44 44.1	-0.3
WACR				IAmb	IAmb	06 44 45.7	
	comp=Z,342nm,1.0s						
SVSK	Karacayir	76.32	316	i P	P	06 44 45.8	+1.1
USIN	University of	76.39	47	eP	P	06 44 45.3	+0.2
	comp=Z,129nm,1.0s						
CVDA	Cernavoda	76.39	325	⇑iP	P	06 44 46.0	+0.9
PARMO	Parma	76.40	49	eP	P	06 44 45.4	+0.1
STNC	Stoke	76.40	347	eP	P	06 44 45.1	+0.1
WME	Myndd Eilian	76.40	348	eP	P	06 44 44.6	-0.4
AMRR	Amara	76.42	325	⇓iP	P	06 44 45.5	+0.3
WPS	Cemaes, Angles	76.42	348	eP	P	06 44 44.4	-0.6
WPS				IAmb	IAmb	06 44 45.8	
	comp=Z,95nm,1.0s						
DYBB	Diyarbakir	76.43	313	i P	P	06 44 46.6	+1.1
ERPA	Erie	76.46	40	P	P	06 44 45.4	-0.2
	baz=326						
ERPA	Erie	76.46	40	eP	P	06 44 45.9	+0.4
	comp=Z,270nm,1.4s						
WPM1	Penmaenmawr	76.48	348	eP	P	06 44 45.2	-0.2
SVRC	Sivrice-ELAZID	76.49	314	i P	P	06 44 47.1	+1.1
LONY	Lake Ozonia	76.49	35	P	P	06 44 44.7	-1.0
	baz=329,SNR=8.6						
LONY	Lake Ozonia	76.49	35	eP	P	06 44 45.0	-0.7
	comp=Z,277nm,2.0s						
MODS	Modra-Piesok	76.50	333	eP	P	06 44 46.3	+0.6
MODS				pmax	pmax		
	comp=Z,206nm,1.2s						
MODS	Modra-Piesok	76.50	333	eP	P	06 44 46.3	+0.6
O50A	Cable	76.51	43	P	P	06 44 45.5	-0.3
	baz=325,SNR=10						
P49A	Miami Univ. Ec	76.51	44	P	P	06 44 45.2	-0.7
	baz=324,SNR=11						
WLF1	Llynfaes	76.52	348	eP	P	06 44 45.2	-0.4
WLF1				IAmb	IAmb	06 44 45.9	
	comp=Z,235nm,1.2s						
Q48A	North Vernon	76.53	45	P	P	06 44 45.8	-0.1
	baz=324,SNR=6.9						
SECR		76.53	326	⇓iP	P	06 44 46.7	+0.8
X40A	Basin Creek Fa	76.53	53	P	P	06 44 45.6	-0.4
	baz=321,SNR=12						
X40A	Basin Creek Fa	76.53	53	eP	P	06 44 45.7	-0.4
	comp=Z,72nm,1.3s						
VOIR		76.55	327	⇑iP	P	06 44 46.3	+0.2
U44A	Portageville	76.56	49	P	P	06 44 46.2	+0.1
	baz=322						
UALR	University of	76.56	52	eP	P	06 44 45.9	-0.3
	comp=Z,78nm,1.5s						
UALR				LR	LR		
	comp=Z,5µm,20.0s						
YRC	Rhoscolyn	76.58	348	eP	P	06 44 45.5	-0.5
S46A	Don Dixon Farm	76.58	47	P	P	06 44 46.0	-0.3
	baz=323,SNR=8.1						
W42A	Bald Knob	76.60	51	P	P	06 44 45.9	-0.5
	baz=322						
CWF	Charnwood Fore	76.61	346	eP	P	06 44 45.9	-0.2
CWF				IAmb	IAmb	06 44 47.3	
	comp=Z,433nm,1.4s						
PVMO	Portageville	76.62	49	eP	P	06 44 47.0	+0.5
	comp=Z,138nm,0.4s						
YLL	Llanberis	76.64	348	eP	P	06 44 45.8	-0.5
T45A	Paducah	76.66	48	P	P	06 44 46.6	-0.1
	baz=323						
T45A	Paducah	76.66	48	eP	P	06 44 46.9	+0.2
	comp=Z,166nm,1.3s						
R47A	Wooly Knot Far	76.66	46	P	P	06 44 46.5	-0.2
	baz=324,SNR=20						
ICOR	Ion Corvin	76.67	325	⇑iP	P	06 44 46.9	+0.3
Y40A	Okolona	76.67	53	P	P	06 44 46.5	-0.3
	baz=321,SNR=5.3						
V43A	Jonesboro	76.69	50	P	P	06 44 47.0	+0.1
	baz=322						
X41A	Kaden, Bauxite	76.69	52	P	P	06 44 46.6	-0.3
	baz=321,SNR=12						
ACSO	Alum Creek Sta	76.72	43	P	P	06 44 46.3	-0.7
	baz=325,SNR=7.0						
ACSO	Alum Creek Sta	76.72	43	eP	P	06 44 46.5	-0.5
	comp=Z,88nm,1.2s						
MTUR	Matau	76.73	327	⇑iP	P	06 44 47.4	+0.3
FOEL	Foel Wylfa	76.74	347	eP	P	06 44 47.0	+0.1
FOEL				IAmb	IAmb	06 44 48.3	
	comp=Z,244nm,1.1s						
ARR	Arges	76.76	327	⇓iP	P	06 44 47.9	+0.7
BUD	Budapest	76.77	332	⇑eSKKPdf	P	06 44 47.8	+0.7
SULR		76.77	326	⇑iP	P	06 44 47.0	-0.2
ALLY	Alegheny Colle	76.78	40	eP	P	06 44 47.5	+0.1
	comp=Z,180nm,1.1s						
MMNY	Mt. Morris Dam	76.80	38	eP	P	06 44 47.1	-0.3
	comp=Z,131nm,1.0s						
DSB	Dublin	76.81	349	eP	P	06 44 47.6	+0.3
	comp=Z,209nm,0.9s						
GNAR	Gosnell	76.82	50	eP	P	06 44 48.5	+0.9
	comp=Z,172nm,1.0s						
HBAR	Harrisburg	76.82	50	eP	P	06 44 48.0	+0.4
	comp=Z,291nm,1.4s						
435B	Jarrell	76.82	58	P	P	06 44 47.8	+0.1
	baz=320						
435B	Jarrell	76.82	58	eP	P	06 44 47.9	+0.1
	comp=Z,119nm,1.8s						
WCI	Wyandotte Cave	76.83	46	P	P	06 44 47.7	+0.1
	baz=324						
WCI	Wyandotte Cave	76.83	46	eP	P	06 44 47.8	+0.1
	comp=Z,112nm,1.0s						
WCI	Wyandotte Cave	76.83	46	eP	P	06 44 47.8	+0.1
WCI				pmax	pmax		
	comp=Z,112nm,1.0s						
ILGA	Ilgaz	76.84	319	eP	P	06 44 48.9	+0.9
	comp=Z,379nm,0.9s						
LLW	Llanuwychllyn	76.85	348	eP	P	06 44 47.4	-0.1
Q49A	Aurora	76.85	45	P	P	06 44 47.7	-0.1
	baz=324						
U44B	Burton Farm, H	76.85	49	P	P	06 44 48.0	+0.2
	baz=322						
KHC	Kasperske Hory	76.85	336	eP	P	06 44 48.4	+0.7
KHC				AMS	AMS	07 22 30.0	
	comp=Z,11µm,18.0s						
KHC	Kasperske Hory	76.85	336	eP	P	06 44 47.8	+0.1
	comp=Z,80nm,1.0s						
KHC	Kasperske Hory	76.85	336	eP	P	06 44 48.4	+0.7
KHC				MLR	MLR		
	comp=Z,11µm,18.0s						
P50A	Jamestown	76.86	43	P	P	06 44 47.5	-0.3
	baz=325,SNR=9.3						
R48A	Northridge Ran	76.89	46	P	P	06 44 48.1	+0.1
	baz=324,SNR=12						
DEV	Deva	76.91	329	⇓iP	P	06 44 48.3	+0.3
BANOM	Banah	76.92	294	P	P	06 44 48.8	+0.3
	SNR=58						
BANOM	Banah	76.92	294	i P	P	06 44 48.7	+0.3
	SNR=191						
SHME	Shamm	76.92	295	i P	P	06 44 48.3	-0.1
	SNR=61						
GRFO	Grafenberg	76.95	338	eP	P	06 44 48.4	+0.2
	comp=Z,373nm,1.1s						
GRFO	Grafenberg	76.95	338	eP	P	06 44 48.4	+0.2
GRFO				pmax	pmax		
	comp=Z,373nm,1.1s						
V44A	Blytheville	76.98	50	P	P	06 44 48.5	-0.1
	baz=322						
T46A	Princeton	77.01	48	P	P	06 44 48.9	+0.2
	baz=323,SNR=38						
S47A	Hartford	77.06	47	P	P	06 44 48.7	-0.2
	baz=323,SNR=8.6						
HLM1	Long Mynd	77.06	347	eP	P	06 44 48.7	0.0
HLM1				IAmb	IAmb	06 44 49.4	
	comp=Z,122nm,1.2s						
GEC2	GERESS Array S	77.08	336	eP	P	06 44 49.1	0.0
	comp=Z,424nm,1.8s						
GEC2	GERESS Array S	77.08	336	eP	P	06 44 49.1	0.0
GEC2				pmax	pmax		
	comp=Z,424nm,1.8s						
GERES	GERESS Array B	77.08	336	P	P	06 44 49.0	0.0
	comp=Z,23nm,0.7s,baz=36,slow=5.0,SNR=159						
GEA0	GERESS Array S	77.09	336	eP	P	06 44 48.3	-0.8
UTMT	University of	77.09	49	eP	P	06 44 49.6	+0.5
	comp=Z,155nm,1.0s						
GOLR		77.10	327	⇓iP	P	06 44 49.6	+0.5
M54A	Oil Creek Stat	77.10	40	P	P	06 44 49.0	-0.2
	baz=326,SNR=7.7						
M54A	Oil Creek Stat	77.10	40	eP	P	06 44 48.2	-0.9
	comp=Z,160nm,1.3s						
X42A	Stuttgart	77.11	52	P	P	06 44 49.1	-0.2
	baz=322						
CSKK	Csˆ‡kako	77.11	332	⇑eSKKPdf	P	06 44 49.7	+0.6
Y41A	Eaglette Beard	77.12	53	P	P	06 44 49.1	-0.3
	baz=321,SNR=6.5						
U45A	Rockin P Farm,	77.14	49	P	P	06 44 49.4	0.0
	baz=323						
W43A	Forest City	77.16	51	P	P	06 44 49.3	-0.3
	baz=322						
CORM	Corum	77.16	318	i P	P	06 44 50.7	+1.0
HGN	Heimansgroeve	77.17	341	eP	P	06 44 49.4	+0.1
	comp=Z,631nm,1.2s						
NCB	Newcomb	77.18	35	eP	P	06 44 49.3	-0.3
	comp=Z,63nm,1.0s						
DARE	Darende-Malaty	77.18	315	i P	P	06 44 50.9	+1.1
BEBN	Eben Emael	77.19	341	⇑P	P	06 44 49.3	-0.1
Z40A	Long Farm, Mag	77.19	54	P	P	06 44 49.8	+0.1
	baz=321,SNR=7.5						
HALT	Halls	77.20	49	eP	P	06 44 50.3	+0.6
	comp=Z,196nm,1.4s						
CANT	Cankiri	77.25	319	i P	P	06 44 50.9	+0.8
SGRR	Singureni	77.26	326	⇓iP	P	06 44 49.3	-0.7
MBWA	Marble Bar	77.28	215	eP	P	06 44 49.9	-0.3
	comp=Z,86nm,1.1s						
YOZ	Yozgat	77.30	317	i P	P	06 44 49.5	-1.0
MEM	Membach	77.30	341	⇑P	P	06 44 50.1	+0.1
	comp=Z,282nm,1.2s						
R49A	Shelbyville	77.30	45	P	P	06 44 50.5	+0.2
	baz=324,SNR=7.9						
CONA	Conrad Observa	77.31	334	epP	P	06 44 50.8	+0.5
	comp=Z,170nm,1.0s,SNR=106						
SOP	Sopron	77.33	333	⇑eSKKPdf	P	06 44 51.2	+0.9
HUMR	Humele	77.36	327	⇓iP	P	06 44 49.5	-1.0
MDH	Madha	77.39	294	i P	P	06 44 51.0	0.0
	SNR=46						
S48A	Wiedeman Farm,	77.40	46	P	P	06 44 50.6	-0.2
	baz=324,SNR=16						
Q50A	Georgetown	77.40	44	P	P	06 44 50.7	-0.2
	baz=325,SNR=11						
U46A	Springville	77.42	48	P	P	06 44 50.9	-0.1
	baz=323						
VT1	Waterbury	77.42	34	eP	P	06 44 50.9	+0.1
	comp=Z,180nm,1.4s						
N54A	Moraine State	77.42	40	P	P	06 44 50.8	-0.1
	baz=326,SNR=11						
N54A	Moraine State	77.42	40	eP	P	06 44 51.1	+0.2
	comp=Z,159nm,1.3s						
MSFE	Esma-Masafi	77.42	294	i P	P	06 44 51.5	+0.2
	SNR=60						
T47A	Sharon Grove	77.43	47	P	P	06 44 51.2	+0.2
	baz=323,SNR=20						
T47A	Sharon Grove	77.43	47	eP	P	06 44 51.4	+0.3
	comp=Z,189nm,1.4s						
T47A				LR	LR		
	comp=Z,4µm,18.0s						
UCC	Uccle	77.46	342	⇑P	P	06 44 50.9	-0.1
UCC	Uccle	77.46	342	eP	P	06 44 50.8	-0.1
	comp=Z,101nm,0.8s						
UCC	Uccle	77.46	342	eP	P	06 44 50.8	-0.1
UCC				pmax	pmax		
	comp=Z,101nm,0.8s						
URFA	Urfa	77.47	314	i P	P	06 44 52.7	+1.3
Z41A	Richland Creek	77.50	53	P	P	06 44 51.7	+0.2
	baz=321						
Z41A	Richland Creek	77.50	53	eP	P	06 44 51.6	+0.1
	comp=Z,132nm,1.5s						
X43A	Marvell	77.52	51	P	P	06 44 51.6	0.0
	baz=322,SNR=5.3						
X43A	Marvell	77.52	51	eP	P	06 44 51.8	+0.2
	comp=Z,137nm,1.1s						
V45A	Humboldt	77.52	49	P	P	06 44 51.3	-0.3
	baz=323,SNR=6.4						
MET	Memphis--Engin	77.52	50	eP	P	06 44 52.3	+0.7
	comp=Z,771nm,1.7s						
CCAR	Cane Creek	77.53	52	eP	P	06 44 51.5	-0.2
Q51A	Peebles	77.54	43	P	P	06 44 51.4	-0.3
	baz=325,SNR=8.3						
W44A	Shelby Farms P	77.57	50	P	P	06 44 52.0	+0.2
	baz=322						
140A	Cam and Jess,	77.58	54	P	P	06 44 52.5	+0.6
	baz=321,SNR=5.4						
140A	Cam and Jess,	77.58	54	eP	P	06 44 52.3	+0.4
	comp=Z,146nm,1.2s						
BZS	Buzias	77.58	329	⇑iP	P	06 44 51.1	-0.7
MCH1	Michaelchurch	77.58	347	eP	P	06 44 51.6	0.0
Y42A	Garnett, Star	77.58	52	P	P	06 44 52.4	+0.4
	baz=322						
UMQ	Umm Al-Quwin	77.60	295	i P	P	06 44 53.0	+0.8
	SNR=13						
PRD	Provadia	77.60	324	i P	P	06 44 52.1	+0.2
BIDO	Bidbid	77.61	292	P	P	06 44 54.0	+1.7
	SNR=18						
BCLA	Clavier	77.62	341	⇑P	P	06 44 52.0	+0.1
	comp=Z,194nm,1.3s						
S49A	Springfield	77.66	45	P	P	06 44 52.2	-0.1
	baz=324,SNR=25						
833A	Chaparral WMA,	77.67	61	P	P	06 44 53.0	+0.6
	baz=320,SNR=15						
833A	Chaparral WMA,	77.67	61	eP	P	06 44 53.1	+0.6
	comp=Z,97nm,1.4s						
STRD	Stroud	77.67	346	eP	P	06 44 51.9	-0.2
STRD				IAmb	IAmb	06 44 53.5	
	comp=Z,534nm,1.1s						
NATX	Nacogdoches	77.67	55	P	P	06 44 53.1	+0.6
	baz=321,SNR=10						
NATX	Nacogdoches	77.67	55	eP	P	06 44 52.8	+0.3
	comp=Z,432nm,1.6s						

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T48A  Bowling Green     77.68  47   P        P      06 44 52.3  -0.1
      baz=324,SNR=11
R50A  Paris             77.70  45   P        P      06 44 52.4  -0.1
      baz=324,SNR=10
BNN   Bunyan            77.70 316  i P       P      06 44 53.1  +0.4
UOSS  Minazif           77.71 294  eP        P      06 44 52.6  -0.2
      comp=Z,599nm,1.0s
UOSS  Minazif           77.71 294  i P       P      06 44 52.8  +0.1
      SNR=59
MONM  Monmouth          77.71 347  eP        P      06 44 52.4  +0.1
MONM                                IAmb     IAmb   06 44 53.7
      comp=Z,243nm,1.0s
ELSH  Elham, Standar    77.73 344  eP        P      06 44 52.9  +0.4
ELSH                                IAmb     IAmb   06 44 54.1
      comp=Z,704nm,1.0s
SNF   Seneffe           77.75 342 ⇑P         P      06 44 52.9  +0.3
WVT   Waverly           77.77  48   P        P      06 44 53.0  +0.1
      baz=323
WVT   Waverly           77.77  48  eP        P      06 44 53.0  +0.1
      comp=Z,39nm,1.0s
WVT   Waverly           77.77  48  eP        P      06 44 53.0  +0.1
WVT                                 pmax     pmax
      comp=Z,39nm,1.0s
U47A  Clarksville       77.78  48   P        P      06 44 53.2  +0.2
      baz=323,SNR=12
LBNH  Lisbon            77.79  33   P        P      06 44 53.2  +0.2
      baz=330,SNR=6.1
LBNH  Lisbon            77.79  33  eP        P      06 44 53.1  +0.1
      comp=Z,85nm,1.2s
SARI  SarD1z-Kayseri    77.81 316  i P       P      06 44 54.2  +0.8
PKME  Peaks-Kenny Pk    77.82  31   P        P      06 44 53.4  +0.4
      baz=332,SNR=10.0
PKME  Peaks-Kenny Pk    77.82  31  eP        P      06 44 53.3  +0.2
      comp=Z,178nm,1.6s
MOA   Molln             77.84 335  epP       P      06 44 53.5  +0.3
      comp=Z,92nm,1.0s,SNR=50
HATD  Hatta, Dubai      77.84 294   P        P      06 44 54.0  +0.4
      SNR=111
HATD  Hatta, Dubai      77.84 294  i P       P      06 44 54.0  +0.4
      SNR=211
OLDB  Oldbury-Upon-S    77.84 347  eP        P      06 44 52.8  -0.3
OLDB                                IAmb     IAmb   06 44 53.6
      comp=Z,190nm,1.2s
W45A  Hickory Valley    77.87  50   P        P      06 44 53.5   0.0
      baz=323,SNR=7.5
SRE   Strehaia          77.88 328⇑iP         P      06 44 53.2  -0.2
BUW   Bucklebury Wes    77.88 346  eP        P      06 44 53.1  -0.1
V46A  Holladay          77.89  49   P        P      06 44 53.5  -0.2
      baz=323,SNR=19
ACCN  Adirondack Com    77.89  35  eP        P      06 44 52.6  -0.9
      comp=Z,118nm,1.2s
HGH   Gray Hill         77.90 347  eP        P      06 44 53.3  -0.1
X44A  Crenshaw          77.90  51   P        P      06 44 53.9  +0.1
      baz=322
Z42A  Norrel Spur, H    77.94  53   P        P      06 44 54.0  +0.1
      baz=322,SNR=5.4
240A  Hunter Patters    77.94  55   P        P      06 44 54.4  +0.5
      baz=321
240A  Hunter Patters    77.94  55  eP        P      06 44 54.9  +0.9
      comp=Z,161nm,1.3s
HERR  Herculane         77.96 328⇑iP         P      06 44 53.2  -0.6
141A  Papa Simpson,     77.96  54   P        P      06 44 54.4  +0.4
      baz=322,SNR=6.5
BR131 Keskin Array S    77.97 318  eP        P      06 44 54.0  -0.2
BR131 Keskin Array S    77.97 318   P        P      06 44 54.7  +0.5
BRTR  Keskin Array B    77.97 318   P        P      06 44 54.2  +0.1
      comp=Z,128nm,0.9s,baz=60,slow=3.0,SNR=307
Y43A  Makayla and Ka    77.97  52   P        P      06 44 54.3  +0.2
      baz=322
ZIMR                    77.97 326⇑iP         P      06 44 54.1  +0.2
ASHO  Ashiyiah          77.99 294   P        P      06 44 54.8  +0.4
      SNR=90
ASHO  Ashiyiah          77.99 294  i P       P      06 44 54.8  +0.4
      SNR=134
NAZ   Nazwa, Dubai      78.00 294   P        P      06 44 54.7  +0.3
      SNR=32
NAZ   Nazwa, Dubai      78.00 294  i P       P      06 44 54.7  +0.3
      SNR=83
SMDO  Samad             78.00 291   P        P      06 44 56.0  +1.5
      SNR=13
BINY  Binghamton        78.01  37   P        P      06 44 53.9  -0.4
      baz=328
BINY  Binghamton        78.01  37  eP        P      06 44 53.8  -0.4
      comp=Z,165nm,1.5s
MORH  Mˆ‡rˆ¡gy, Hung    78.02 331⇑eSKKPdf    P      06 44 53.7  -0.4
R51A  Hillsboro         78.02  44   P        P      06 44 54.3   0.0
      baz=325,SNR=15
ARSA  Arzberg           78.03 334  epP       P      06 44 54.6  +0.4
      comp=Z,208nm,1.3s,SNR=82
HOQ   Hoqain            78.06 292   P        P      06 44 56.0  +1.2
      SNR=17
DOU   Dourbes           78.08 342 ⇑P         P      06 44 54.4   0.0
      comp=Z,108nm,1.3s
U48A  Cassie Pea, Po    78.09  47   P        P      06 44 54.6  -0.1
      baz=324,SNR=12
T49A  Edmonton          78.09  46   P        P      06 44 54.4  -0.4
      baz=324,SNR=12
T49A  Edmonton          78.09  46  eP        P      06 44 55.0  +0.2
      comp=Z,166nm,1.6s
SZH   Strazhica         78.10 325  i P       P      06 44 54.1  -0.6
HNH   Hanover           78.13  34  eP        P      06 44 54.6  -0.2
      comp=Z,49nm,1.0s
HMNX  Herstmonceux      78.14 345  eP        P      06 44 55.5  +0.8
HMNX                                IAmb     IAmb   06 44 56.7
      comp=Z,434nm,1.0s
S50A  Richmond          78.15  45   P        P      06 44 55.1   0.0
      baz=324,SNR=8.4
V47A  Nunnelly          78.16  48   P        P      06 44 55.0  -0.2
      baz=323,SNR=12
WLF   Walferdange       78.16 341 ⇓P         P      06 44 55.3  +0.4
WLF   Walferdange       78.16 341  eP        P      06 44 55.4  +0.5
      comp=Z,200nm,1.3s
WLF   Walferdange       78.16 341  eP        P      06 44 55.4  +0.5
WLF                                 pmax     pmax
      comp=Z,200nm,1.3s
LOD   Lodumlu           78.21 319  i P       P      06 44 55.8  +0.4
ANTO  Ankara            78.21 319  i P       P      06 44 56.8  +1.3
ANTO  Ankara            78.21 319⇑iP         P      06 44 55.9  +0.4
ANTO  Ankara            78.21 319  eP        P      06 44 55.7  +0.2
      comp=Z,674nm,1.4s
ANTO  Ankara            78.21 319   P        P      06 44 56.2  +0.8
      SNR=58
BR231 Keskin MP Arra    78.24 319  eP        P      06 44 56.2  +0.6
OXF   Oxford            78.27  50   P        P      06 44 55.6  -0.1
      baz=323,SNR=8.5
OXF   Oxford            78.27  50  eP        P      06 44 55.7  -0.1
      comp=Z,106nm,0.9s
OXF   Oxford            78.27  50  eP        P      06 44 55.7  -0.1
OXF                                 pmax     pmax
      comp=Z,106nm,0.9s
MDVR  Moldovita         78.28 329⇑iP         P      06 44 55.2  -0.5
W46A  Michie            78.29  49   P        P      06 44 55.4  -0.5
      baz=323
Y44A  Strider, Charl    78.30  51   P        P      06 44 56.1  +0.2
      baz=322,SNR=10
STU   Stuttgart         78.30 338  eP        P      06 44 55.6  -0.1
      comp=Z,188nm,1.0s
STU   Stuttgart         78.30 338  eP        P      06 44 55.6  -0.1
STU                                 pmax     pmax
      comp=Z,188nm,1.0s
WVL   Waterville        78.31  32  eP        P      06 44 56.0  +0.2
      comp=Z,146nm,1.3s
KMRS  Kahramanmaras     78.32 315  i P       P      06 44 56.9  +0.9
X45A  UM Field Stati    78.34  50   P        P      06 44 55.6  -0.6
      baz=323,SNR=6.0
Z43A  Armstrong Fami    78.36  52   P        P      06 44 56.7  +0.4
      baz=322
BEHE  Becsehely         78.36 333⇑eSKKPdf    P      06 44 56.8  +0.7
MDUB  Mudurnu           78.39 320  i P       P      06 44 56.8  +0.3
241A  Mo Tay, Goldon    78.40  54   P        P      06 44 57.3  +0.8
      baz=322,SNR=9.5
241A  Mo Tay, Goldon    78.40  54  eP        P      06 44 57.3  +0.8
      comp=Z,153nm,1.0s
241A                                LR       LR
      comp=Z,4µm,19.0s
R52A  Catlettsburg      78.42  43   P        P      06 44 56.3  -0.3
      baz=325,SNR=7.9
HKT   Hockley           78.43  57  eP        P      06 44 56.7  +0.1
      comp=Z,105nm,1.6s
HKT   Hockley           78.43  57  eP        P      06 44 56.7  +0.1
HKT                                 pmax     pmax
      comp=Z,105nm,1.6s
GAZ   Gaziantep         78.44 315  i P       P      06 44 57.5  +0.7
AFSR  Af¯ar-Bala (A     78.44 319  i P       P      06 44 56.9  +0.1
U49A  Red Boiling Sp    78.45  47   P        P      06 44 56.5  -0.2
      baz=324,SNR=14
ASUD  Al Ashush, Dub    78.47 294   P        P      06 44 57.5  +0.5
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      SNR=31
ASUD  Al Ashush, Dub    78.47 294  i P       P      06 44 57.8  +0.8
      SNR=22
JMDO  Jabal Madar       78.48 291   P        P      06 44 58.6  +1.5
      SNR=7.9
T50A  Nancy             78.48  46   P        P      06 44 56.7  -0.2
      baz=324,SNR=27
142A  Monroe            78.51  53   P        P      06 44 57.6  +0.5
      baz=322
VAL   Valentia          78.52 352  eP        P      06 44 57.0  +0.2
SAUV  Serdivan-Sakar    78.52 321  i P       P      06 44 57.3  +0.3
KOGS  Kog               78.54 333  i P       P      06 44 56.9  -0.1
JMB   Yambol            78.54 324  i P       P      06 44 56.7  -0.4
S51A  Beattyville       78.56  44   P        P      06 44 57.2  -0.1
      baz=325,SNR=8.3
S51A  Beattyville       78.56  44  eP        P      06 44 57.2  -0.1
      comp=Z,65nm,1.1s
FFD   Franklin Falls    78.56  33  eP        P      06 44 57.6  +0.4
      comp=Z,199nm,1.6s
MCWV  Mont Chateau      78.56  41   P        P      06 44 57.4  +0.2
      baz=326,SNR=12
MCWV  Mont Chateau      78.56  41  eP        P      06 44 57.8  +0.5
      comp=Z,151nm,1.3s
PLAL  Pickwick Lake     78.56  49  eP        P      06 44 57.0  -0.4
      comp=Z,50nm,1.0s
SSPA  Standing Stone    78.57  39   P        P      06 44 57.2  -0.1
      baz=327
SSPA  Standing Stone    78.57  39  eP        P      06 44 56.9  -0.4
      comp=Z,160nm,1.5s
V48A  Smith Brothers    78.57  48   P        P      06 44 57.2  -0.1
      baz=324,SNR=16
V48A  Smith Brothers    78.57  48  eP        P      06 44 57.3  -0.1
      comp=Z,156nm,1.8s
SPNC  Sapanca-Adapaz    78.58 321  i P       P      06 44 57.7  +0.4
W47A  Westpoint         78.58  49   P        P      06 44 57.2  -0.3
      baz=323,SNR=14
O56A  Blue Knob Stat    78.59  40   P        P      06 44 57.0  -0.5
      baz=327,SNR=8.0
O56A  Blue Knob Stat    78.59  40  eP        P      06 44 57.2  -0.3
      comp=Z,169nm,1.4s
HEX   Exmoor            78.61 347  eP        P      06 44 57.2  -0.1
ALNE  Al Ain            78.64 294  i P       P      06 44 58.3  +0.3
      SNR=76
KSPA  Keystone Colle    78.64  37  eP        P      06 44 56.9  -0.8
      comp=Z,185nm,1.8s
X46A  Booneville        78.64  50   P        P      06 44 57.3  -0.5
      baz=323,SNR=7.5
143A  Socs Landing,     78.67  53   P        P      06 44 58.6  +0.5
      baz=322,SNR=5.7
143A  Socs Landing,     78.67  53  eP        P      06 44 58.5  +0.5
      comp=Z,160nm,1.3s
SOKA  Soboth            78.69 334  epP       P      06 44 58.3  +0.3
      comp=Z,253nm,1.0s,SNR=173
GULT  Gulveren          78.70 321  i P       P      06 44 58.3  +0.1
Y45A  Yeager Farm, C    78.71  51   P        P      06 44 58.4  +0.2
      baz=323,SNR=12
ARQ   Araqi             78.72 293   P        P      06 44 60.0  +1.5
      SNR=23
AJN   Ajban             78.72 294  i P       P      06 44 58.4   0.0
      SNR=64
Z44A  Pea Ridge, Bel    78.72  52   P        P      06 44 58.4  +0.2
      baz=322
GROS  Grobnik           78.75 334  i P       P      06 44 58.2  -0.1
BSY   Bisya             78.75 292   P        P      06 45 00.2  +1.5
      SNR=20
S52A  Salyersville      78.76  44   P        P      06 44 58.3  -0.2
      baz=325,SNR=18
AUMIH MIHALICIK         78.77 320  i P       P      06 44 58.9  +0.3
HTL   Hartland          78.77 348  eP        P      06 44 58.6  +0.4
HTL                                 IAmb     IAmb   06 44 59.7
      comp=Z,101nm,0.9s
242A  Grayson           78.78  54   P        P      06 44 59.0  +0.4
      baz=322,SNR=6.3
KBA   Koelnbreinsper    78.80 335  i pP      P      06 44 59.2  +0.6
      comp=Z,479nm,1.0s,SNR=318
341A  Kurthwood         78.81  55   P        P      06 44 59.1  +0.4
      baz=322,SNR=9.9
341A  Kurthwood         78.81  55  eP        P      06 44 58.0  -0.7
      comp=Z,178nm,1.4s
SLMH  Al Salmeh         78.88 314  eP        P      06 44 59.9  +0.7
BFO   Black Forest      78.92 339  eP        P      06 44 59.0  -0.2
      comp=Z,161nm,1.0s
BFO   Black Forest      78.92 339  i P       P      06 44 59.2  +0.1
EMMW  East Machias      78.92  30  eP        P      06 44 59.3  +0.2
      comp=Z,77nm,1.0s
T51A  Gray              78.94  45   P        P      06 44 59.2  -0.2
      baz=325,SNR=7.7
U50A  Jamestown         78.97  46   P        P      06 44 59.5  -0.1
      baz=324,SNR=21
OBKA  Obir              78.98 334  epP       P      06 44 59.9  +0.3
      comp=Z,194nm,1.1s,SNR=67
V49A  McMinnville       78.99  47   P        P      06 44 59.5  -0.2
      baz=324
W48A  Pulaski           79.00  48   P        P      06 44 59.6  -0.2
      baz=324,SNR=24
ADVT  Abdulvahap        79.02 321  i P       P      06 44 59.5  -0.3
Z45A  Winona            79.03  51   P        P      06 45 00.2  +0.3
      baz=323,SNR=5.9
Z45A  Winona            79.03  51  eP        P      06 45 00.3  +0.3
      comp=Z,169nm,1.1s
WATA  Walderalm         79.03 336  epP       P      06 45 01.5  +1.5
      comp=Z,308nm,1.2s,SNR=49
X47A  Russelville       79.04  49   P        P      06 44 59.1  -0.9
      baz=323,SNR=10
Y46A  Houston           79.04  50   P        P      06 44 59.8  -0.2
      baz=323,SNR=16
WTTA  Wattenberg        79.08 336  epP       P      06 45 00.9  +0.6
      comp=Z,402nm,1.1s,SNR=118
AUSIV SIVRIHISAR        79.11 320  i P       P      06 44 59.7  -0.7
RETA  Reutte            79.11 337  i pP      P      06 45 00.5  +0.3
      comp=Z,134nm,1.0s,SNR=70
KVTX  Kingsville        79.11  60  eP        P      06 45 02.1  +1.6
      comp=Z,148nm,1.2s
MYKA  Terra Mystica     79.12 335  epP       P      06 45 00.3   0.0
      comp=Z,142nm,1.1s,SNR=57
CAVI  Cavuskoy          79.17 321  i P       P      06 45 00.9  +0.2
N59A  State Game Lan    79.19  37   P        P      06 45 00.4  -0.3
      baz=328,SNR=6.7
N59A  State Game Lan    79.19  37  eP        P      06 45 00.7  -0.1
      comp=Z,63nm,1.1s
BORA  Eskisehir         79.19 321  i P       P      06 45 00.6  -0.3
342A  Flagon Creek P    79.22  54   P        P      06 45 01.8  +0.8
      baz=322,SNR=6.1
342A  Flagon Creek P    79.22  54  eP        P      06 45 02.0  +1.0
      comp=Z,154nm,1.4s
144A  Alexander Plac    79.24  52   P        P      06 45 01.7  +0.6
      baz=322
441A  DeRidder          79.25  55   P        P      06 45 02.0  +0.8
      baz=322
T52A  Hallie            79.27  44   P        P      06 45 01.5  +0.2
      baz=325,SNR=5.6
243A  Waterproof        79.27  53   P        P      06 45 02.1  +0.8
      baz=322
SULT  Sultanhani-AKS    79.28 318  i P       P      06 45 01.5  +0.1
ECH   Echery            79.30 340  eP        P      06 45 01.4  +0.2
      comp=Z,206nm,1.0s
ECH   Echery            79.30 340  eP        P      06 45 01.4  +0.2
ECH                                 pmax     pmax
      comp=Z,206nm,1.0s
ABTA  Abfaltersbach     79.33 336  epP       P      06 45 01.6  +0.1
      comp=Z,164nm,0.9s,SNR=96
QUA2  Belchertown       79.33  35  eP        P      06 45 01.1  -0.3
      comp=Z,57nm,1.2s
W49A  Belvidere         79.34  48   P        P      06 45 01.3  -0.3
      baz=324,SNR=6.9
KARA  Karaisali         79.36 316  i P       P      06 45 02.5  +0.8
PAGS  Pennsylvania G    79.39  38  eP        P      06 45 01.6  -0.2
      comp=Z,95nm,1.3s
U51A  La Follette       79.39  45   P        P      06 45 01.5  -0.4
      baz=325,SNR=5.7
LJU   Ljubljana         79.41 334  eP        P      06 45 01.6  -0.2
SWET  Sewanee           79.42  47  eP        P      06 45 01.8  -0.3
KIZT  Kizilcal          79.43 319  i P       P      06 45 02.4  +0.2
HRV   Adam Dziewonsk    79.43  34   P        P      06 45 02.1  +0.1
      baz=331
HRV   Adam Dziewonsk    79.43  34  eP        P      06 45 02.1  +0.1
      comp=Z,286nm,1.9s
HRV   Adam Dziewonsk    79.43  34  eP        P      06 45 02.1  +0.1
HRV                                 pmax     pmax
      comp=Z,286nm,1.9s
V50A  Pikevile          79.45  47   P        P      06 45 01.7  -0.6
      baz=324,SNR=12
YURE  YUREGIR           79.45 315  i P       P      06 45 03.6  +1.3
DIVS  Divibare          79.47 330  eP        P      06 45 01.8  -0.4
      comp=Z,270nm,1.0s
TZTN  Tazewell          79.47  45   P        P      06 45 02.2  -0.1
      baz=325,SNR=6.3
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TZTN  Tazewell          79.47  45  eP        P      06 45 01.8  -0.6
      comp=Z,41nm,1.1s
X48A  Hartselle         79.49  49   P        P      06 45 01.7  -0.7
      baz=324,SNR=9.3
X48A  Hartselle         79.49  49  eP        P      06 45 01.9  -0.6
      comp=Z,125nm,1.7s
ODNJ  Ogdensburg        79.51  37  eP        P      06 45 02.2  -0.2
      comp=Z,125nm,1.7s
145A  Houston Renfro    79.51  52   P        P      06 45 02.9  +0.3
      baz=323
VBMS  Vicksburg         79.51  52   P        P      06 45 03.1  +0.5
      baz=322
VBMS  Vicksburg         79.51  52  eP        P      06 45 03.3  +0.7
      comp=Z,185nm,1.3s
DAVA  Damuels           79.52 337  i pP      P      06 45 03.0  +0.4
      comp=Z,224nm,1.0s,SNR=89
Y47A  UCPARC, Winfie    79.53  50   P        P      06 45 02.0  -0.7
      baz=323,SNR=18
FETA  Feichten          79.55 337  i pP      P      06 45 03.3  +0.5
      comp=Z,190nm,1.0s,SNR=110
Z46A  Louisville        79.55  51   P        P      06 45 03.2  +0.4
      baz=323,SNR=5.5
244A  Avery, Jackson    79.56  53   P        P      06 45 03.1  +0.2
      baz=322,SNR=10
TAHT  Tahtakopru-Hat    79.57 315  i P       P      06 45 03.6  +0.8
WES   Weston            79.62  34  eP        P      06 45 02.8  -0.2
      comp=Z,104nm,1.1s
WES   Weston            79.62  34  eP        P      06 45 02.8  -0.2
WES                                 pmax     pmax
      comp=Z,105nm,1.1s
CCA1  Carnmenellis      79.67 348  eP        P      06 45 03.2  +0.1
CCA1                                IAmb     IAmb   06 45 04.5
      comp=Z,231nm,1.0s
343A  Vidalia           79.67  54   P        P      06 45 03.9  +0.5
      baz=322
U52A  Thorn Hill        79.68  45   P        P      06 45 03.7  +0.2
      baz=325,SNR=7.7
VTS   Vitosha           79.68 327  eP        P      06 45 03.4  -0.2
      comp=Z,340nm,1.0s
KDZ   Kurdzhali         79.69 325  i P       P      06 45 03.9  +0.5
442A  Mamou             79.69  55   P        P      06 45 05.1  +1.5
      baz=322
BOJS  Bojanci           79.69 333  i P       P      06 45 03.2  -0.1
V51A  Loudon            79.70  46   P        P      06 45 03.0  -0.6
      baz=325,SNR=7.3
V51A  Loudon            79.70  46  eP        P      06 45 03.6   0.0
      comp=Z,168nm,1.8s
BCX   Boston College    79.72  34  eP        P      06 45 03.2  -0.4
      comp=Z,129nm,1.5s
W50A  Signal Mountai    79.73  47   P        P      06 45 03.5  -0.4
      baz=324,SNR=13
W50A  Signal Mountai    79.73  47  eP        P      06 45 03.0  -0.8
      comp=Z,43nm,0.9s
MVL   Millersville      79.73  38  eP        P      06 45 03.2  -0.4
      comp=Z,100nm,1.5s
KUTH  Kutahya           79.78 321  i P       P      06 45 03.7  -0.4
LADK  Ladik-KONYA       79.78 318  i P       P      06 45 03.9  -0.2
BLY   Banja Luka        79.79 332⇑iP         P      06 45 03.4  -0.5
BLY   Banja Luka        79.79 332  eP        P      06 45 03.2  -0.7
      comp=Z,50nm,0.9s
X49A  Woodville         79.80  48   P        P      06 45 04.0  -0.1
      baz=324,SNR=22
PAL   Palisades         79.84  36   P        P      06 45 03.9  -0.4
      baz=330,SNR=5.4
PAL   Palisades         79.84  36  eP        P      06 45 03.8  -0.4
      comp=Z,92nm,1.1s
PAL   Palisades         79.84  36  eP        P      06 45 03.8  -0.4
PAL                                 pmax     pmax
      comp=Z,92nm,1.1s
Y48A  Jasper            79.86  49   P        P      06 45 03.6  -0.9
      baz=324,SNR=9.3
BRNJ  Basking Ridge     79.86  37  eP        P      06 45 04.4   0.0
      comp=Z,125nm,1.5s
YAYL  Yayladag          79.88 315  i P       P      06 45 05.3  +0.6
CPCT  Cooper Cave       79.91  46  eP        P      06 45 04.4  -0.3
      comp=Z,52nm,1.2s
RZN   Rozhen            79.92 325  i P       P      06 45 04.8  -0.1
MERS  Mersin            79.93 316  i P       P      06 45 05.1  +0.2
146A  Union             79.93  51   P        P      06 45 05.5  +0.7
      baz=323,SNR=13
146A  Union             79.93  51  eP        P      06 45 05.8  +1.0
      comp=Z,248nm,1.0s
BRYW  Bryant College    79.95  34  eP        P      06 45 04.6  -0.3
      comp=Z,90nm,1.1s
245A  Little AP, Sta    79.98  52   P        P      06 45 05.6  +0.5
      baz=323,SNR=8.7
Z47A  Carrollton        79.98  50   P        P      06 45 04.8  -0.3
      baz=323,SNR=17
DAVOX Davos/Dischmat    79.99 337   P        P      06 45 05.8  +0.6
      comp=Z,145nm,0.9s,baz=26,slow=4.9,SNR=144
443A  Delano Plantat    79.99  54   P        P      06 45 06.6  +1.4
      baz=322
ZAIG  Zacatecas         80.00  67  eP        P      06 45 06.0  +0.3
      comp=Z,59nm,1.1s
KONT  Konya--Tatoy      80.00 318  i P       P      06 45 04.8  -0.4
344A  Westbrook Farm    80.00  53   P        P      06 45 06.4  +1.1
      baz=322,SNR=8.0
344A  Westbrook Farm    80.00  53  eP        P      06 45 06.2  +0.9
      comp=Z,68nm,0.8s
V52A  Sevierville       80.02  46   P        P      06 45 05.1  -0.2
      baz=325,SNR=8.4
V52A  Sevierville       80.02  46  eP        P      06 45 05.1  -0.2
      comp=Z,103nm,1.4s
W51A  Cleveland         80.03  47   P        P      06 45 04.4  -0.9
      baz=325,SNR=6.2
SDMD  Soldier's Deli    80.03  39  eP        P      06 45 05.2  -0.1
      comp=Z,90nm,1.6s
FUORN Ofenpass-Fuorn    80.04 337  eP        P      06 45 06.3  +0.7
      comp=Z,308nm,1.0s
TAOE  Nuku Hiva Isla    80.06 116  eLR       LR     07 10 04.0
      comp=Z,11µm,22.6s,baz=328
U53A  Fall Branch       80.07  45   P        P      06 45 05.6   0.0
      baz=326,SNR=13
542A  Morse             80.08  55   P        P      06 45 07.1  +1.4
      baz=322
TKL   Tuckaleechee C    80.09  46   P        P      06 45 05.6  -0.1
      comp=Z,12nm,1.0s,baz=300,slow=4.1,SNR=8.6
TKL                                 LR       LR     07 23 56.2
      comp=Z,3µm,18.7s,baz=334,slow=38
TKL   Tuckaleechee C    80.09  46  eP        P      06 45 05.2  -0.5
      comp=Z,89nm,1.4s
ALN   Alexandroupoli    80.09 324  eP        P      06 45 05.6   0.0
      comp=Z,229nm,1.1s
Z48A  Northport         80.10  50   P        P      06 45 05.2  -0.6
      baz=324,SNR=7.7
X50B  Fort Payne        80.17  48   P        P      06 45 05.7  -0.4
      baz=324,SNR=11
LNIG  Linares           80.22  63  eP        P      06 45 06.2  -0.4
      comp=Z,79nm,1.4s
Y49A  Blount Mountai    80.28  49   P        P      06 45 06.2  -0.5
      baz=324,SNR=8.8
Y49A  Blount Mountai    80.28  49  eP        P      06 45 06.5  -0.3
      comp=Z,58nm,1.1s
147A  Livingston        80.30  51   P        P      06 45 06.9  +0.1
      baz=323,SNR=11
147A  Livingston        80.30  51  eP        P      06 45 07.2  +0.3
      comp=Z,249nm,1.3s
147A                                LR       LR
      comp=Z,3µm,20.0s
RAR   Rarotonga         80.31 139   LR       LR     07 13 45.8
      comp=Z,2µm,21.3s,baz=321,slow=30
BLA   Blacksburg        80.34  43   P        P      06 45 07.0  -0.1
      baz=326,SNR=8.0
BLA   Blacksburg        80.34  43  eP        P      06 45 06.9  -0.2
      comp=Z,127nm,1.3s
BLA   Blacksburg        80.34  43  eP        P      06 45 06.9  -0.2
BLA                                 pmax     pmax
      comp=Z,127nm,1.3s
PLE   Pljevlja          80.35 330⇑iP         P      06 45 06.5  -0.6
KKB   Krupnik           80.36 326  i P       P      06 45 07.3  +0.2
MMB   Musomiste         80.37 326  i P       P      06 45 07.3  +0.2
COCO  West Island       80.38 239  i P       P      06 45 09.9  +2.6
246A  Jackson Lee, B    80.39  52   P        P      06 45 08.1  +0.7
      baz=323
TUE   Stuetta           80.41 338  eP        P      06 45 08.2  +0.7
      comp=Z,295nm,0.9s
KIZK  Mersin            80.42 316  i P       P      06 45 07.2  -0.2
X51A  Calhoun           80.46  47   P        P      06 45 07.5  -0.2
      baz=325
X51A  Calhoun           80.46  47  eP        P      06 45 07.1  -0.6
      comp=Z,68nm,1.2s
W52A  Murphy            80.48  46   P        P      06 45 07.7  -0.1
      baz=325,SNR=5.8
W52A  Murphy            80.48  46  eP        P      06 45 07.4  -0.5
      comp=Z,74nm,1.4s
543A  St. Martinvill    80.48  55   P        P      06 45 09.3  +1.4
      baz=322
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V53A	Saluda	80.53	45	P	P	06 45 08.1	0.0
	baz=326,SNR=5.9						
V53A	Saluda	80.53	45	eP	P	06 45 08.2	+0.1
	comp=Z,49nm,1.2s						
444A	Pine Grove	80.58	53	P	P	06 45 09.6	+1.3
	baz=323						
Y50A	Piedmont	80.58	48	P	P	06 45 08.0	-0.4
	baz=324,SNR=8.1						
M65A	Busby, Falmout	80.59	34	P	P	06 45 08.2	0.0
	baz=331						
IVA	Berane	80.59	329	⇑iP	P	06 45 08.2	-0.2
IP04	Greensprings	80.62	41	eP	P	06 45 08.8	+0.3
	comp=Z,182nm,1.3s						
UPM	Unac-Piva	80.62	330	⇑iP	P	06 45 07.6	-1.1
247A	Quitman	80.62	51	P	P	06 45 09.5	+0.9
	baz=323,SNR=7.2						
KEBE	Keben-Mersin	80.64	316	iP	P	06 45 08.6	-0.1
LRAL	Lakeview Retre	80.65	49	P	P	06 45 08.0	-0.7
	baz=324,SNR=7.4						
LRAL	Lakeview Retre	80.65	49	eP	P	06 45 08.3	-0.4
	comp=Z,25nm,0.8s						
148A	Greensboro	80.68	50	P	P	06 45 08.4	-0.5
	baz=324						
IP03	Louisa	80.71	41	eP	P	06 45 09.1	+0.1
	comp=Z,125nm,1.2s						
346A	Big Creek Wild	80.71	52	P	P	06 45 09.9	+0.8
	baz=323						
346A	Big Creek Wild	80.71	52	eP	P	06 45 09.6	+0.5
	comp=Z,100nm,0.8s						
346A				LR	LR		
	comp=Z,4µm,19.0s						
PMOR	Pomariorio Ree	80.72	126	eT	T	08 14 20.4	
	comp=Z,4.1nm,0.2s						
KOME	Kolasin	80.73	329	⇑iP	P	06 45 08.5	-0.6
Z49A	Columbiana	80.76	49	P	P	06 45 08.9	-0.3
	baz=324,SNR=12						
CVRD	Centerville Ro	80.76	40	eP	P	06 45 09.4	+0.1
	comp=Z,90nm,0.9s						
W53A	Cullowhee	80.77	46	P	P	06 45 09.5	0.0
	baz=325,SNR=7.7						
445A	Amite	80.78	53	P	P	06 45 10.3	+0.9
	baz=323						
IP07	Quail	80.79	41	eP	P	06 45 09.4	0.0
	comp=Z,115nm,1.2s						
IP06	Yanceyville	80.80	41	eP	P	06 45 09.7	+0.3
	comp=Z,110nm,1.3s						
MZR	Muzera	80.80	294	iP	P	06 45 10.1	+0.4
	SNR=91						
IP01	Cuckoo	80.81	40	eP	P	06 45 08.8	-0.7
	comp=Z,106nm,1.3s						
PVY	Plav	80.81	329	⇑iP	P	06 45 09.0	-0.6
IKL	Isikli	80.83	316	iP	P	06 45 08.9	-0.7
CBN	Corbin Frederi	80.83	40	P	P	06 45 09.8	+0.2
	baz=328						
CBN	Corbin Frederi	80.83	40	eP	P	06 45 09.7	+0.2
	comp=Z,200nm,1.4s						
STIP	Stip	80.83	327	⇑iP	P	06 45 08.1	-1.5
544A	White Castle	80.83	54	P	P	06 45 11.1	+1.4
	baz=322						
SKO	Skopje	80.85	328	⇑iP	P	06 45 09.7	0.0
X52A	Dahlonega	80.89	46	P	P	06 45 10.0	-0.1
	baz=325,SNR=7.6						
ISP	Isparta	80.89	319	iP	P	06 45 10.1	0.0
ISP	Isparta	80.89	319	⇑iP	P	06 45 09.4	-0.7
ISP	Isparta	80.89	319	eP	P	06 45 09.3	-0.7
	comp=Z,137nm,1.1s						
ISP	Isparta	80.89	319	eP	P	06 45 09.4	-0.7
ISP				pmax	pmax		
	comp=Z,137nm,1.1s						
Y51A	Rockmart	80.90	48	P	P	06 45 09.7	-0.4
	baz=325,SNR=12						
NKY	Niksic	80.94	330	⇑iP	P	06 45 09.5	-0.8
SUTC	Sutluce-Ispart	80.98	319	iP	P	06 45 10.4	-0.2
IP05	Hopewell Churc	80.98	40	eP	P	06 45 10.1	-0.3
	comp=Z,67nm,1.1s						
NKME	Niksic	81.00	330	⇑iP	P	06 45 09.6	-0.9
SENIN	Lac Senin/Sane	81.01	339	eP	P	06 45 11.1	+0.4
	comp=Z,118nm,1.1s						
Z50A	Ashland	81.01	49	P	P	06 45 10.4	-0.3
	baz=324,SNR=21						
Z50A	Ashland	81.01	49	eP	P	06 45 10.4	-0.3
	comp=Z,74nm,0.9s						
BRY	Bratogost	81.01	330	⇑iP	P	06 45 09.7	-1.0
VAY	Valandovo	81.02	327	⇑iP	P	06 45 10.8	+0.2
BG3	Lake Jocassee	81.03	46	eP	P	06 45 11.2	+0.5
248A	Dixon Mills	81.03	51	P	P	06 45 11.0	+0.2
	baz=324,SNR=5.2						
149A	Jones	81.11	50	P	P	06 45 11.2	0.0
	baz=324,SNR=11						
MANT	Manisa	81.15	321	eP	P	06 45 11.6	0.0
	comp=Z,1µm,1.1s						
TEKE	Tekeli-Mersin	81.16	317	iP	P	06 45 10.8	-0.6
347A	Saraland	81.18	52	P	P	06 45 12.4	+0.8
	baz=323,SNR=11						
EREN	Erenkoy	81.19	316	iP	P	06 45 11.7	+0.1
PDG	Podgorica	81.19	329	⇑iP	P	06 45 10.9	-0.5
TTG	Podgorica	81.19	329	⇑iP	P	06 45 10.9	-0.5
TTG	Podgorica	81.19	329	eP	P	06 45 10.9	-0.5
	comp=Z,345nm,0.9s						
TTG	Podgorica	81.19	329	eP	P	06 45 10.9	-0.5
TTG				pmax	pmax		
	comp=Z,345nm,0.9s						
CEME	Cevo	81.20	330	⇑iP	P	06 45 10.5	-1.1
446A	Poplarville	81.24	52	P	P	06 45 12.6	+0.7
	baz=323						
X53A	Estanollee	81.25	46	P	P	06 45 12.3	+0.3
	baz=325,SNR=13						
URVA	University of	81.29	40	eP	P	06 45 12.3	+0.3
Z51A	Franklin	81.32	48	P	P	06 45 12.1	-0.2
	baz=325						
HWQ	Hawqa	81.39	314	eP	P	06 45 12.3	-0.6
Y52A	Lilburn	81.42	47	P	P	06 45 12.8	-0.1
	baz=325,SNR=6.3						
Y52A	Lilburn	81.42	47	eP	P	06 45 12.7	-0.1
	comp=Z,58nm,1.1s						
BUM	Brajici-Budva	81.43	329	⇑iP	P	06 45 12.2	-0.6
HCY	Herceg Novi	81.43	330	⇑iP	P	06 45 11.4	-1.4
DRME	Dracevica, Mon	81.44	329	⇑iP	P	06 45 12.4	-0.4
249A	Camden	81.44	50	P	P	06 45 13.5	+0.6
	baz=324,SNR=23						
GAZI	Gazipasa	81.44	317	iP	P	06 45 11.9	-1.0
KRUS	Krusevo	81.45	327	⇑iP	P	06 45 12.6	-0.4
150A	Eclectic	81.48	49	P	P	06 45 12.9	-0.2
	baz=324,SNR=10						
348A	Jackson	81.50	51	P	P	06 45 13.9	+0.7
	baz=324						
348A	Jackson	81.50	51	eP	P	06 45 14.2	+1.0
	comp=Z,288nm,1.4s						
546A	Slidell	81.50	53	P	P	06 45 14.2	+1.0
	baz=323						
NCAT	North Carolina	81.57	43	eP	P	06 45 13.6	0.0
	comp=Z,73nm,1.2s						
447A	Lucedale	81.60	52	P	P	06 45 14.6	+0.8
	baz=323						
ULC	Ulcinj	81.61	329	⇑iP	P	06 45 12.8	-1.0
KMSC	Kings Mountain	81.64	44	P	P	06 45 13.8	-0.2
	baz=326,SNR=5.9						
KMSC	Kings Mountain	81.64	44	eP	P	06 45 13.3	-0.7
	comp=Z,77nm,1.3s						
645A	Chauvin	81.65	54	P	P	06 45 15.3	+1.2
	baz=323						
Y53A	Monroe	81.65	47	P	P	06 45 14.0	0.0
	baz=325,SNR=6.1						
KORT	Korkueli	81.66	319	iP	P	06 45 12.9	-1.3
Z52A	Williamson	81.79	48	P	P	06 45 14.8	0.0
	baz=325,SNR=7.6						
STKA	Stephens Creek	81.83	193	P	P	06 45 14.5	-0.2
	comp=Z,22nm,1.0s,baz=347,slow=7.6,SNR=26						
STKA				LR	LR	07 20 53.0	
	comp=Z,2µm,20.0s,baz=15,slow=35						
STKA	Stephens Creek	81.83	193	eP	P	06 45 15.0	+0.3
	comp=Z,28nm,1.6s						
BHL	Bhannes	81.84	314	eP	P	06 45 15.1	0.0
OHR	Ohrid	81.84	328	⇑iP	P	06 45 14.4	-0.5
QASN	Qassioun	81.84	313	eP	P	06 45 16.8	+1.6
250A	Grady	81.87	50	P	P	06 45 15.4	+0.2
	baz=324,SNR=7.6						
250A	Grady	81.87	50	eP	P	06 45 15.6	+0.4
	comp=Z,208nm,1.3s						
151A	Opelika	81.89	49	P	P	06 45 14.8	-0.5
	baz=325,SNR=8.4						
448A	Bay Minette	81.90	51	P	P	06 45 16.4	+1.0
	baz=324						
349A	Repton	81.91	51	P	P	06 45 16.2	+0.7
	baz=324						
TOTH	TOTAH	81.91	313	eP	P	06 45 16.0	+0.5
MAMC	Mammari	81.92	316	P	P	06 45 15.2	-0.3
FNA	Florina	81.92	327	eP	P	06 45 14.7	-0.7
	comp=Z,195nm,1.1s						
FNA	Florina	81.92	327	eP	P	06 45 14.7	-0.7
FNA				pmax	pmax		
	comp=Z,195nm,1.1s						
646A	Port Sulphur	81.96	54	P	P	06 45 17.8	+2.1
	baz=323						
HODGE	Hodges	81.97	46	eP	P	06 45 15.4	-0.2
PPT	Papeete	81.99	129	LR	LR	07 15 20.3	
	comp=Z,1µm,20.0s,baz=312,slow=31						
PPT2	Papeete2	82.01	129	eLR	LR	07 10 50.1	
	comp=Z,2µm,22.5s						
PPT2	Papeete2	82.01	129	eT	T	08 15 56.8	
	comp=Z,1.7nm,0.3s						
CSS	Mathiatis	82.04	316	iP	P	06 45 16.6	+0.5
CSS	Mathiatis	82.04	316	eP	P	06 45 16.1	0.0
	comp=Z,1µm,1.9s						
CSS	Mathiatis	82.04	316	P	P	06 45 14.7	-1.4
GOGA	Godfrey	82.07	47	P	P	06 45 16.0	-0.2
	baz=325						
GOGA	Godfrey	82.07	47	eP	P	06 45 15.7	-0.6
	comp=Z,70nm,1.6s						
GOGA	Godfrey	82.07	47	eP	P	06 45 15.7	-0.6
GOGA				pmax	pmax		
	comp=Z,70nm,1.6s						
Y54A	Tignall	82.07	46	P	P	06 45 16.1	-0.2
	baz=326,SNR=32						
152A	Waverly Hall	82.07	48	P	P	06 45 16.0	-0.2
	baz=325,SNR=8.7						
152A	Waverly Hall	82.07	48	eP	P	06 45 16.1	-0.2
	comp=Z,126nm,1.6s						
RCY	Rachaya	82.08	313	eP	P	06 45 16.6	+0.1
BRBR	Barbar	82.10	313	eP	P	06 45 17.3	+0.6
LEF	Lefka	82.11	316	iP	P	06 45 15.6	-0.8
QRWL	Qaraoun	82.12	313	eP	P	06 45 16.9	+0.3
LIT	Litokhoron	82.12	326	eP	P	06 45 15.3	-1.2
	comp=Z,130nm,1.1s						
LIT	Litokhoron	82.12	326	eP	P	06 45 15.3	-1.2
LIT				pmax	pmax		
	comp=Z,130nm,1.1s						
BRAL	Brewton	82.12	51	P	P	06 45 17.5	+1.0
	baz=324						
BRAL	Brewton	82.12	51	eP	P	06 45 16.6	+0.1
	comp=Z,100nm,0.9s						
Z53A	Monticello	82.13	47	P	P	06 45 16.4	-0.1
	baz=325,SNR=8.9						
251A	Midway	82.20	49	P	P	06 45 16.7	-0.2
	baz=325,SNR=12						
ALFC	Alefka	82.22	317	P	P	06 45 16.1	-0.9
SHBL	Chebaa	82.25	313	eP	P	06 45 17.6	+0.2
350A	Dozier	82.28	50	P	P	06 45 18.1	+0.7
	baz=324,SNR=8.7						
VLC	Villacollemand	82.29	336	eP	P	06 45 17.6	+0.3
	comp=Z,375nm,1.1s						
449A	Pace	82.37	51	P	P	06 45 19.0	+1.2
	baz=324						
BNI	Bardonecchia	82.39	339	eP	P	06 45 18.3	+0.4
	comp=Z,149nm,1.2s						
JSC	Jenkinsville	82.39	45	eP	P	06 45 17.4	-0.5
	comp=Z,51nm,1.2s						
JSC	Jenkinsville	82.39	45	eP	P	06 45 17.4	-0.5
JSC				pmax	pmax		
	comp=Z,51nm,1.2s						
SZAC	Souni	82.42	316	P	P	06 45 16.3	-1.8
AKMC	Akamas	82.44	317	P	P	06 45 17.6	-0.6
Z54A	Sparta	82.51	47	P	P	06 45 18.8	+0.2
	baz=326,SNR=12						
153A	Fort Valley	82.52	48	P	P	06 45 18.6	0.0
	baz=325						
PPCY	Paphos	82.56	317	P	P	06 45 17.0	-1.7
252A	Lumpkin	82.61	49	P	P	06 45 19.0	-0.1
	baz=325						
450A	Crestview	82.65	51	P	P	06 45 20.5	+1.1
	baz=324						
ASF	Jabal al Asfar	82.66	312	P	P	06 45 20.1	+0.6
	comp=Z,127nm,1.1s,baz=321,slow=1.6,SNR=133						
MMAI	Mount Meron Ar	82.69	313	P	P	06 45 20.2	+0.6
	comp=Z,78nm,0.5s,baz=38,slow=7.3,SNR=84						
351A	Pinckard	82.77	50	P	P	06 45 20.6	+0.7
	baz=325,SNR=8.0						
253A	Americus	82.85	48	P	P	06 45 20.5	+0.1
	baz=325						
253A	Americus	82.85	48	eP	P	06 45 19.4	-1.0
	comp=Z,195nm,1.4s						
Z55A	Blythe	82.86	46	P	P	06 45 20.8	+0.5
	baz=326						
154A	Montrose	82.90	47	P	P	06 45 20.7	+0.1
	baz=326,SNR=6.8						
154A	Montrose	82.90	47	eP	P	06 45 20.4	-0.2
	comp=Z,183nm,1.3s						
MS1	Monte Sant'Ang	82.92	331	eP	P	06 45 20.0	-0.7
352A	Blakely	82.94	49	P	P	06 45 21.1	+0.3
	baz=325,SNR=8.4						
352A	Blakely	82.94	49	eP	P	06 45 21.1	+0.3
	comp=Z,304nm,1.7s						
CNNC	Cliffs of the	83.11	42	P	P	06 45 21.7	+0.1
	baz=328						
CNNC	Cliffs of the	83.11	42	eP	P	06 45 22.1	+0.5
	comp=Z,115nm,1.1s						
AQU	L'Aquila	83.11	333	eP	P	06 45 22.0	+0.4
	comp=Z,290nm,1.2s						
AGG	Agios Georgios	83.13	326	eP	P	06 45 19.9	-1.8
	comp=Z,218nm,1.1s						
AGG	Agios Georgios	83.13	326	eP	P	06 45 19.9	-1.8
AGG				pmax	pmax		
	comp=Z,218nm,1.1s						
MMLI	Mount Malkishu	83.15	313	iP	P	06 45 22.9	+1.0
BAI	Bari	83.17	330	eP	P	06 45 21.9	+0.1
155A	Kite	83.19	47	P	P	06 45 22.4	+0.3
	baz=326						
451A	Vernon	83.23	50	P	P	06 45 22.9	+0.6
	baz=325						
FASA	Fasano	83.27	330	eP	P	06 45 21.8	-0.6
452A	Marianna	83.32	50	P	P	06 45 23.2	+0.4
	baz=325						
254A	Abbeville	83.36	48	P	P	06 45 23.2	+0.3
	baz=326,SNR=9.0						
CGL1	Ceglie Messapi	83.38	330	eP	P	06 45 23.2	+0.3
353A	Camilla	83.39	49	P	P	06 45 23.4	+0.3
	baz=325,SNR=6.9						
SG1	Sgolgore (BA)	83.47	330	eP	P	06 45 23.1	-0.3
MASS	Massafra	83.50	330	eP	P	06 45 23.1	-0.5
TAR1	Taranto	83.56	330	eP	P	06 45 23.4	-0.4
FORT	Forrest	83.56	204	eP	P	06 45 24.1	+0.4
	comp=Z,149nm,0.9s						
APE	Apeiranthos	83.60	322	⇑iP	P	06 45 22.2	-2.0
TIGA	Tifton	83.63	48	P	P	06 45 24.9	+0.5
	baz=326,SNR=13						
TIGA	Tifton	83.63	48	eP	P	06 45 25.1	+0.8
	comp=Z,175nm,1.1s						
156A	Sylvania	83.63	46	P	P	06 45 25.3	+1.0
	baz=326						
MATE	Matera	83.64	330	⇑iP	P	06 45 24.1	-0.1
BBOO	Buckleboo	83.67	197	eP	P	06 45 24.8	+0.6
	comp=Z,103nm,1.1s						
453A	Whigham	83.75	49	P	P	06 45 25.8	+0.8
	baz=325						
453A	Whigham	83.75	49	eP	P	06 45 25.4	+0.4
	comp=Z,262nm,1.7s						
453A				LR	LR		
	comp=Z,4µm,20.0s						
255A	Hazlehurst	83.76	47	P	P	06 45 25.7	+0.7
	baz=326						
255A	Hazlehurst	83.76	47	eP	P	06 45 26.0	+1.0
	comp=Z,271nm,1.5s						
552A	Lynn Haven	83.85	50	P	P	06 45 26.4	+0.9
	baz=325						
NHSC	New Hope	83.87	45	P	P	06 45 26.1	+0.6
	baz=327						
NHSC	New Hope	83.87	45	eP	P	06 45 25.3	-0.2
	comp=Z,204nm,1.1s						
256A	Glennville	84.00	47	P	P	06 45 27.0	+0.8
	baz=326						
355A	Pearson	84.06	48	P	P	06 45 27.3	+0.7
	baz=326						
454A	Quitman	84.20	48	P	P	06 45 27.8	+0.6
	baz=326						
SANT	Santorini	84.23	322	⇑iP	P	06 45 24.9	-2.5
553A	Crawfordville	84.23	49	P	P	06 45 28.4	+1.0
	baz=325						
KARP	Karpathos	84.24	321	eP	P	06 45 27.1	-0.4
	comp=Z,335nm,1.2s						
257A	Skidaway Islan	84.41	46	P	P	06 45 29.3	+1.0
	baz=327						
356A	Blackshear	84.43	47	P	P	06 45 29.1	+0.7
	baz=326						
455A	Stateville	84.47	48	P	P	06 45 29.1	+0.4
	baz=326						
CUC	Castrocucco	84.52	331	eP	P	06 45 27.9	-0.9
	comp=Z,125nm,1.2s						
357A	Townsend	84.65	47	P	P	06 45 30.5	+1.0
	baz=326						
554A	Perry	84.69	49	P	P	06 45 30.6	+0.8
	baz=326						
ITM	Ithomi	84.90	325	eP	P	06 45 29.7	-1.1
	comp=Z,418nm,1.4s						
TIP	Timpagrande	84.94	330	⇑iP	P	06 45 31.0	0.0
TIP	Timpagrande	84.94	330	eP	P	06 45 31.1	0.0
	comp=Z,500nm,1.4s						
456A	Hilliard	84.97	47	P	P	06 45 31.1	-0.1
	baz=326						
555A	McAlpin	85.01	48	P	P	06 45 32.3	+1.0
	baz=326						
RAYN	Ar Rayn	85.03	301	eP	P	06 45 31.9	+0.2
	comp=Z,287nm,1.1s						
RAYN	Ar Rayn	85.03	301	iP	P	06 45 32.0	+0.4
	SNR=198						
RAYN	Ar Rayn	85.03	301	eP	P	06 45 31.9	+0.2
RAYN				pmax	pmax		
	comp=Z,287nm,1.1s						
457A	Yulee	85.28	47	P	P	06 45 33.8	+1.0
	baz=326						
655A	Horseshoe Beac	85.37	49	P	P	06 45 33.7	+0.5
	baz=326						
556A	Lake Butler	85.38	48	P	P	06 45 34.4	+1.2
	baz=326,SNR=5.1						
557A	Orange Park	85.70	48	P	P	06 45 35.9	+1.1
	baz=326						
656A	Willston	85.84	48	P	P	06 45 36.4	+0.9
	baz=326						
656A	Willston	85.84	48	PFAKE		06 45 50.0	+14
656A				LR	LR		
	comp=Z,4µm,21.0s						
657A	Interlachen	85.99	48	P	P	06 45 37.4	+1.1
	baz=326						
CEL	Celeste	86.06	330	eP	P	06 45 35.9	-0.6
	comp=Z,191nm,1.5s						
TLIG	Tlapa	86.38	67	eP	P	06 45 39.1	+0.6
	comp=Z,66nm,1.5s						
658A	Bunnell	86.42	48	P	P	06 45 39.5	+1.1
	baz=327						
757A	Oxford	86.42	48	P	P	06 45 39.4	+1.0
	baz=326						
758A	Lake Helen	86.83	48	P	P	06 45 41.5	+1.1
	baz=327						
TBI	Tubuai	86.91	132	eLR	LR	07 13 05.8	
	comp=Z,6µm,31.2s,baz=329						
TBI	Tubuai	86.91	132	eT	T	08 22 03.5	
	comp=Z,2.4nm,0.3s						
858A	St. Cloud	87.37	48	P	P	06 45 43.8	+0.8
	baz=327						
957A	Wimauma	87.39	49	P	P	06 45 43.7	+0.6
	baz=326						
DWPF	Disney Wildern	87.42	48	P	P	06 45 44.1	+0.9
	baz=327						
DWPF	Disney Wildern	87.42	48	eP	P	06 45 43.3	0.0
	comp=Z,122nm,1.3s						
CLTB	Caltabellotta	87.55	331	eP	P	06 45 42.9	-1.0
	comp=Z,117nm,1.2s						
958A	Wauchula	87.70	49	P	P	06 45 45.5	+0.9
	baz=326						
859A	Kempfer Cattle	87.73	48	P	P	06 45 46.1	+1.4
	baz=327,SNR=5.2						
PBRG	Braganca	88.09	347	eP	P	06 45 45.8	-0.5
	comp=Z,39nm,1.4s						
058A	Arcadia	88.11	49	P	P	06 45 47.5	+0.9
	baz=326						
PGAV	Gavieira, Arco	88.14	349	eP	P	06 45 46.1	-0.5
	comp=Z,43nm,2.2s						
959A	Okeechobee	88.18	48	P	P	06 45 48.0	+1.1
	baz=327						
PCAB	Cabril	88.36	348	eP	P	06 45 46.9	-0.7
	comp=Z,66nm,1.6s						
059A	Moore Haven	88.51	49	P	P	06 45 49.0	+0.5
	baz=327						
POLO	Lamas de Olo	88.66	348	eP	P	06 45 48.5	-0.6
	comp=Z,34nm,1.1s						
WDD	Wied Dalam	88.72	330	eP	P	06 45 48.8	-0.5
	comp=Z,358nm,1.2s						
PVRL	Vila Real	88.75	348	eP	P	06 45 48.6	-0.8
	comp=Z,88nm,1.1s						
MVO	Moncorvo	88.76	347	eP	P	06 45 48.9	-0.6
	comp=Z,64nm,1.2s						
060A	Indiantown	88.84	48	P	P	06 45 50.8	+0.8
	baz=327						
059Z	Ave Maria	88.89	49	P	P	06 45 50.9	+0.7
	baz=327						
NWAO	Narrogin (SRO)	88.90	212	P	P	06 45 49.9	+0.1
	comp=Z,41nm,1.0s,baz=264,slow=6.1,SNR=10						
NWAO				LR	LR	07 28 55.3	
	comp=Z,1µm,18.5s,baz=292,slow=38						
NWAO	Narrogin (SRO)	88.90	212	eP	P	06 45 50.0	+0.1
	comp=Z,135nm,1.3s						
HIZ	Hauiti	88.93	166	PFAKE		06 46 00.0	+10
HIZ				LR	LR		
	comp=Z,4µm,21.0s						
URZ	Urewera	89.08	164	PFAKE		06 46 00.0	+9.5
URZ				LR	LR		
	comp=Z,4µm,20.0s						
060Z	West Palm Beac	89.27	49	P	P	06 45 53.1	+1.0
	baz=327						
PVIS	Viseu	89.32	348	eP	P	06 45 51.3	-0.8
	comp=Z,48nm,1.2s						
061Z	Ochoppi	89.55	49	P	P	06 45 54.1	+0.7
	baz=327						
MTE	Manteigas	89.58	348	eP	P	06 45 52.7	-0.7
	comp=Z,52nm,1.1s						
MTE	Manteigas	89.58	348	eP	P	06 45 52.7	-0.7
	comp=Z,32nm,1.0s						
ES19	SONSECA Array	89.70	345	eP	P	06 45 52.5	-1.4
ESDC	Sonseca Array	89.74	345	P	P	06 45 53.4	-0.7
	comp=Z,21nm,0.9s,baz=6.9,slow=4.3,SNR=81						
ESLA	Sonseca Array	89.74	345	eP	P	06 45 53.2	-0.9
	comp=Z,50nm,1.1s						
BKZ	Black Stump Fm	89.85	164	eP	P	06 45 53.9	-0.3
	comp=Z,43nm,1.1s						
BKZ				LR	LR		
	comp=Z,4µm,21.0s						
COI	Coimbra	89.89	348	eP	P	06 45 55.4	+0.7
	comp=Z,64nm,1.1s						
PAB	San Pablo	89.93	345	eP	P	06 45 54.3	-0.7
	comp=Z,38nm,1.1s						
PAB	San Pablo	89.93	345	eP	P	06 45 54.3	-0.7
PAB				pmax	pmax		
	comp=Z,38nm,1.1s						
PCAS	Casmilo, Conde	90.05	348	eP	P	06 45 54.9	-0.6
	comp=Z,56nm,1.2s						
PCBR	Castelo Branco	90.12	348	eP	P	06 45 55.0	-0.8
	comp=Z,33nm,1.2s						
KEST	Kesra	90.42	334	P	P	06 45 56.9	-0.5
	comp=Z,50nm,1.0s,baz=289,slow=1.0,SNR=27						
KEST	Kesra	90.42	334	eP	P	06 45 57.4	0.0
	comp=Z,79nm,1.1s						
PTOM	Tomar	90.47	348	eP	P	06 45 56.9	-0.5
	comp=Z,40nm,1.1s						
PMRV	Marv??o	90.51	347	eP	P	06 45 56.6	-1.1
	comp=Z,32nm,1.5s						
THTN	Thala	90.77	334	eP	P	06 45 58.6	-0.4
	comp=Z,95nm,1.1s						
BBSR	BB Station	90.92	34	eP	P	06 45 59.6	0.0
	comp=Z,169nm,1.6s						
ALMR	Almeirim	90.95	348	eP	P	06 45 59.4	-0.3
ALMR				AMb	AMB	06 45 60.0	
	comp=Z,84nm,1.0s						
ALMR	Almeirim	90.95	348	eP	P	06 45 58.6	-1.1
	comp=Z,85nm,1.1s						
ALMR	Almeirim	90.95	348	eP	P	06 45 59.3	-0.3
PMTG	Montargil	90.98	348	eP	P	06 45 58.8	-1.0
	comp=Z,32nm,1.8s						
PESTR	Estremoz	91.09	347	eP	P	06 45 59.5	-0.9
	comp=Z,29nm,1.4s						
CCIG	Comitan	91.20	63	PFAKE		06 46 10.0	+8.6
CCIG				LR	LR		
	comp=Z,2µm,19.0s						
PMAFR	Mafra	91.23	349	eP	P	06 46 02.4	+1.4
	comp=Z,154nm,2.0s						
EVO	Evora	91.48	348	eP	P	06 46 01.4	-0.8
	comp=Z,40nm,1.9s						
PBAR	Barrancos	91.69	347	eP	P	06 46 02.3	-0.8
	comp=Z,102nm,1.4s						
PBEJ	Beja	91.96	348	eP	P	06 46 04.6	+0.2
	comp=Z,41nm,2.0s						
PNCL	Nicolau / Gran	91.97	348	eP	P	06 46 03.6	-0.8
MESJ	Messejana	92.19	348	eP	P	06 46 05.1	-0.4

MESJ				AMb	AMB	06 46 08.2	
	comp=Z,33nm,1.6s						
MESJ	Messejana	92.19	348	eP	P	06 46 05.0	-0.4
	comp=Z,34nm,1.3s						
MESJ	Messejana	92.19	348	eP	P	06 46 05.0	-0.4
ROSA	Rosais	92.30	4	eP	P	06 46 06.2	+0.2
	comp=Z,274nm,1.5s						
PCVE	Castro Verde	92.37	348	eP	P	06 46 05.6	-0.7
	comp=Z,64nm,1.6s						
PVAQ	Vaqueiros	92.55	347	eP	P	06 46 06.5	-0.6
	comp=Z,62nm,1.7s						
DAMY	Dhamar	92.72	296	eP	P	06 46 09.2	+0.6
	comp=Z,101nm,1.3s						
MORF	Marmelete	92.78	348	eP	P	06 46 07.6	-0.6
	comp=Z,70nm,1.4s						
OXZ	Oxford	93.24	169	PFAKE		06 46 20.0	+10
OXZ				LR	LR		
	comp=Z,5µm,20.0s						
CMLA	Cha da Macela	93.33	1	eP	P	06 46 12.5	+1.7
	comp=Z,181nm,1.3s						
CMLA	Cha da Macela	93.33	1	eP	P	06 46 12.5	+1.7
CMLA				pmax	pmax		
	comp=Z,181nm,1.3s						
RKT	Rikitea	94.38	121	eLR	LR	07 16 21.7	
	comp=Z,2µm,36.0s						
ESPN	Las Esperanzas	98.98	60	PFAKE		06 46 50.0	+13
ESPN				LR	LR		
	comp=Z,1µm,19.0s						
MTP	Monte Pirata	103.36	41	PFAKE		06 47 10.0	+14
MTP				LR	LR		
	comp=Z,1µm,19.0s						
OTAV	Otavalo	112.04	62	PFAKE		06 51 40.0	
OTAV				LR	LR		
	comp=Z,1µm,21.0s						
CASY	Casey	120.40	200	ePKPdf	PKPdf	06 51 47.3	+1.7
DBIC	Dimbokro	121.91	338	PKP	PKPdf	06 51 50.2	-0.1
	comp=Z,13nm,0.9s,baz=15,slow=1.4,SNR=6.7						
DBIC	Dimbokro	121.91	338	ePKPdf	PKPdf	06 51 51.1	+0.9
TIC	Toumodi	121.97	338	eP	PKPdf	06 51 49.0	-1.4
KIC	Kosan Boka	122.18	338	eP	PKPdf	06 51 50.8	0.0
	comp=Z,147nm,1.7s						
LIC	Lamto	122.38	338	eP	PKPdf	06 51 50.9	-0.3
	comp=Z,86nm,1.3s						
LSZ	Lusaka	126.00	290	ePKPdf	PKPdf	06 51 58.2	+0.1
VNDA	Vanda	126.56	178	PKP	PKPdf	06 51 56.9	-0.3
	comp=Z,5.5nm,1.0s,baz=308,slow=3.9,SNR=14						
VNDA	Vanda	126.56	178	ePKPdf	PKPdf	06 51 57.4	+0.2
SAML	Samuel	128.06	53	ePKPdf	PKPdf	06 52 02.4	+0.4
SAML	Samuel	128.06	53	ePKIKP	PKPdf	06 52 02.4	+0.4
CRZF	Crozet Islands	131.18	243	ePKPdf	PKPdf	06 52 09.7	+2.8
LPAZ	La Paz	131.31	63	PKP	PKPdf	06 52 09.0	+0.2
	comp=Z,5.1nm,1.0s,baz=6.5,slow=4.8,SNR=21						
LPAZ	La Paz	131.31	63	ePKPdf	PKPdf	06 52 09.7	+0.9
LPAZ	La Paz	131.31	63	PKIKP	PKPdf	06 52 09.0	+0.2
LPAZ				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MNMC	Minye Minye	132.64	67	ePKPdf	PKPdf	06 52 11.8	+1.0
PB11	IPOC Station P	133.09	68	ePKPdf	PKPdf	06 52 12.4	+0.9
TSUM	Tsumeb	135.40	297	ePKPdf	PKPdf	06 52 17.1	+1.2
MAW	Mawson	135.46	213	PKP	PKPdf	06 52 15.0	+0.8
	comp=Z,7.7nm,0.9s,baz=283,slow=3.7,SNR=10.0						
MAW	Mawson	135.46	213	ePKPdf	PKPdf	06 52 15.2	+1.0
GO02	Mina Guanaco	137.13	73	ePKPdf	PKPdf	06 52 20.4	+1.3
BOSA	Boshof	137.56	281	ePKPdf	PKPdf	06 52 19.8	+0.2
BOSA	Boshof	137.56	281	ePKIKP	PKPdf	06 52 19.8	+0.2
GO03	Copiap	138.44	76	ePKPdf	PKPdf	06 52 21.2	+0.1
QSPA	South Pole Qui	139.00	180	ePKPpre	PKPpre	06 52 12.1	
LCO	Las Campanas	139.12	78	ePKPdf	PKPdf	06 52 22.6	0.0
LCO	Las Campanas	139.12	78	ePKIKP	PKPdf	06 52 22.6	0.0
ROC1	El Roble	141.52	83	ePKPdf	PKPdf	06 52 27.5	+0.6
SYO	Syowa Base	144.17	213	⇓iX	PKPbc	06 52 27.6	-0.7
SYO	Syowa Base	144.17	213	⇓ipPKPdf	PKPdf	06 52 34.4	+4.4
CPUP	Villa Florida	145.38	61	PKPbc	PKPbc	06 52 33.4	-0.1
	comp=Z,38nm,0.9s,baz=323,slow=2.7,SNR=73						
CPUP	Villa Florida	145.38	61	ePKPbc	PKPab	06 52 33.7	0.0
PLCA	Paso Flores	146.28	93	PKPbc	PKPbc	06 52 35.7	-0.2
	comp=Z,35nm,0.9s,baz=307,slow=4.0,SNR=47						
PLCA	Paso Flores	146.28	93	PKPbc	PKPbc	06 52 35.7	-0.2
PLCA				ePKPdf	PKPab	06 52 36.2	-0.5
SPB	Sao Paulo	148.32	45	ePKPbc	PKPbc	06 52 42.7	+0.8
TRQA	Tornquist	150.45	82	ePKPdf	PKPdf	06 52 41.1	-0.4
TRQA				ePKPbc	PKPbc	06 52 47.1	+0.3
TRQA	Tornquist	150.45	82	ePKIKP	PKPdf	06 52 41.1	-0.4
GO10	Punta Arenas	150.53	116	ePKPbc	PKPbc	06 52 47.3	+0.8
GO10				epPKPab	pPKPbc	06 53 01.6	+1.4
NVL	N'lazarevskaya	152.81	205	ePKIKP	PKPbc	06 52 51.5	+0.3
SNAA	Sanae	155.56	196	PKP	PKPdf	06 52 47.3	-0.6
SNAA	Sanae	155.56	196	PKP	PKPdf	06 52 46.8	-1.1
	comp=Z,1.4nm,0.8s,baz=233,slow=1.1,SNR=8.3						
SNAA				PKPbc	PKPbc	06 52 57.0	
	comp=Z,8.2nm,0.9s,baz=80,slow=2.7,SNR=7.8						
SNAA				PKPab	PKPab	06 53 14.6	+0.4
	comp=Z,22nm,1.0s,baz=100,slow=5.6,SNR=13						
SNAA	Sanae	155.56	196	ePKPdf	PKPdf	06 52 47.3	-0.6
SNAA				PKPbc	PKPbc	06 52 57.0	
SNAA				PKPab	PKPab	06 53 14.6	+0.4
VNA3	Neumayer Olymp	157.00	192	PKP	PKPdf	06 52 51.4	+1.6
VNA1	Neumayer--Stat	157.34	193	PKP	PKPdf	06 52 51.3	+1.1

ISCJB ***20*** *06:46:06.9±0.7, 43.°33N±0.°03×74.°01E±0.°03, h6^{km}±3^{km},*
Error ellipse: s-maj=4.6km s-min=3.0km az=159.3
SOME ***20*** *06:46:06.8, 43.°35N×74.°07E, h10^{km}*
KRNET ***20*** *06:46:07.0±0.1, 43.°34N×74.°04E, h26^{km}, mb3.2*
NNC ***20*** *06:46:07.1±0.8, 43.°30N×74.°07E, h15^{km}±5^{km}, mb3.4,*
mpv2.8, Error ellipse: s-maj=5.4km s-min=2.3km az=174.0
ISC 20 06:46:06.9±1.1**, 43.°34N**±0.°03×**74.°07E**±0.°02**, h11**^{km}±9^{km}**,**
n50, σ0^{s}**62**/87**, 39C-18D, Central Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
USP	Ospenovka	0.32	103	⇑P	Pb	06 46 14.8	+0.1
	13nm,0.1s,SNR=75						
USP	Ospenovka	0.32	103	⇑iP	Pb	06 46 14.8	+0.1
	baz=3.0						
USP				⇑iS	Sb	06 46 20.1	+0.2
	baz=3.0						
CHMS	Chumysh	0.60	124	⇓P	Pg	06 46 19.1	+0.5
	16nm,0.1s,SNR=136						
CHMS	Chumysh	0.60	124	⇑iP	Pg	06 46 19.1	+0.5
	baz=23						
CHMS				⇑iS	Sb	06 46 27.7	-0.3
	baz=23						
FRU1	Bishkek	0.67	142	⇑iP	Pb	06 46 20.5	-0.1
	baz=41						
FRU1				⇑iS	Sb	06 46 30.0	+0.1
	baz=41						
EKS2	Erkin-Say	0.71	198	⇓P	Pg	06 46 21.0	+0.3
	10.0nm,0.1s,SNR=84						
EKS2	Erkin-Say	0.71	198	⇓iP	Pg	06 46 21.0	+0.3
	baz=96						
EKS2				⇓iS	Sb	06 46 30.9	-0.3
	baz=96						
AAK	Ala-Archa	0.77	156	P	Pg	06 46 22.0	+0.1
	15nm,0.3s						
AAK				S	Sb	06 46 32.9	+0.1
	14nm,0.2s						
AAK	Ala-Archa	0.77	156	⇓P	Pg	06 46 22.1	+0.3
	39nm,0.2s,SNR=11						
AAK	Ala-Archa	0.77	156	⇓iP	Pg	06 46 21.9	+0.1
	baz=55						
AAK				⇓iS	Sb	06 46 32.9	+0.1
	baz=55						
MRKS	Merke	0.86	226	eP	Pg	06 46 23.1	-0.5
	baz=25						
MRKS				eS	Sg	06 46 34.5	-0.3
	baz=25						
MRKS	Merke	0.86	226	eP	Pg	06 46 23.1	-0.5
	29nm,0.1s						
MRKS				eS	Sg	06 46 34.5	-0.3
	99nm,0.1s						
KBK	Karagaybulak	0.94	137	⇓P	Pb	06 46 25.2	-0.1
	88nm,0.1s,SNR=100						
KBK	Karagaybulak	0.94	137	⇑iP	Pb	06 46 25.0	-0.3
	baz=36						
KBK				⇑iS	Sg	06 46 38.1	+0.8
	baz=36						
UCH	Uchtor	1.16	164	⇑P	Pb	06 46 28.9	-0.3
	7.3nm,0.1s,SNR=15						
UCH	Uchtor	1.16	164	⇑iP	Pb	06 46 28.5	-0.7
	baz=62						
UCH				⇑iS	Sg	06 46 44.5	+0.1
	baz=62						
TKM2	Tokmak 2	1.19	110	⇑P	Pn	06 46 29.4	-0.4
	1.2nm,0.1s						
TKM2				⇑S	Sb	06 46 45.0	-0.1
	62nm,0.4s						
TKM2	Tokmak 2	1.19	110	⇓P	Pn	06 46 29.2	-0.4
	12nm,0.1s,SNR=23						
TKM2	Tokmak 2	1.19	110	⇑iP	Pn	06 46 29.3	-0.4
	baz=10.0						
TKM2				⇑iS	Sn	06 46 45.4	-0.6
	baz=10.0						
AML	Almayashu	1.24	193	⇓P	Pn	06 46 30.1	-0.4
	10nm,0.1s,SNR=31						
AML	Almayashu	1.24	193	⇑iP	Pn	06 46 29.8	-0.7
	baz=92						
AML				⇑iS	Sb	06 46 46.6	-0.1
	baz=92						
DGS	Degeres	1.24	94	eP	Pn	06 46 30.2	-0.1
	baz=94						
DGS				eS	Sg	06 46 47.1	0.0
	baz=94						
DGS	Degeres	1.24	94	eP	Pn	06 46 30.2	-0.1
	15nm,0.1s						
DGS				eS	Sg	06 46 47.0	0.0
	95nm,0.2s						
KST	Kastek	1.41	102	⇑iP	Pb	06 46 33.1	-0.3
	baz=1.0						
KST				⇑eS	Sg	06 46 52.4	0.0
	baz=1.0						
KST	Kastek	1.41	102	⇑iP	Pb	06 46 33.1	-0.3
	17nm,0.3s						
KST				eS	Sg	06 46 52.4	0.0
	86nm,0.9s						
MNAS	Manas	1.44	234	⇑P	Pn	06 46 32.5	-0.5
	4.9nm,0.5s						
MNAS				⇑S	Sn	06 46 51.1	-0.8
	14nm,0.4s						
MNAS	Manas	1.44	234	⇑iP	Pn	06 46 32.3	-0.7
	baz=33						
MNAS				⇑iS	Sn	06 46 51.1	-0.8
	baz=33						
KZA	Kyzart	1.53	145	⇓P	Pb	06 46 35.6	0.0
	28nm,0.2s,SNR=77						
KZA	Kyzart	1.53	145	⇑iP	Pb	06 46 35.0	-0.5
	baz=44						
KZA				⇑iS	Sg	06 46 56.2	-0.1
	baz=44						
BOOM	Boomskoye usch	1.61	121	⇑iP	Pb	06 46 36.5	-0.3
	baz=21						
BOOM				⇑iS	Sb	06 46 57.8	+0.6
	baz=21						
BTLS	Baital	1.70	359	eP	Pb	06 46 37.7	-0.5
	baz=0.0						
BTLS				eS	Sb	06 47 00.2	+0.7
	baz=0.0						
BTLS	Baital	1.70	359	eP	Pb	06 46 37.7	-0.5
	4.7nm,0.2s						
BTLS				eS	Sb	06 47 00.2	+0.7
	17nm,0.1s						
MTBS	Maitube	1.73	96	⇑iP	Pb	06 46 38.4	-0.4
	baz=96						
MTBS				⇑eS	Sb	06 47 01.3	+0.7
	baz=96						
MTBS	Maitube	1.73	96	⇑iP	Pb	06 46 38.4	-0.4
	18nm,0.5s						
MTBS				eS	Sb	06 47 01.3	+0.7
	75nm,0.2s						
KUU	Kurty	1.73	71	eP	Pb	06 46 38.4	-0.4
	baz=71						
KUU				⇓iS	Sb	06 47 01.4	+0.8
	baz=71						
KUU	Kurty	1.73	71	eP	Pb	06 46 38.4	-0.4
	34nm,0.1s						
KUU				⇓iS	Sb	06 47 01.4	+0.8
	31nm,0.3s						
IZV	Izvestkoviy	1.88	98	eP	Pb	06 46 40.9	-0.5
	baz=98						
IZV				eS	Sb	06 47 05.0	0.0
	baz=98						
IZV	Izvestkoviy	1.88	98	eP	Pb	06 46 40.9	-0.5
	13nm,0.1s						
IZV				eS	Sb	06 47 06.0	+1.0
	115nm,0.3s						
KTBS	Karatobe	1.93	78	eP	Pb	06 46 41.4	-0.8
	12nm,0.1s						
KTBS				eS	Sb	06 47 06.2	-0.1
	41nm,0.3s						
ULHL	Ulahol	1.94	124	⇑P	Pb	06 46 41.8	-0.6
	5.1nm,0.1s,SNR=37						
ULHL	Ulahol	1.94	124	⇓iP	Pb	06 46 41.1	-1.2
	baz=23						
ULHL				⇓iS	Sb	06 47 05.9	-0.6
	baz=23						
TNSS	Tian-Shan	2.12	97	eP	Pb	06 46 45.2	-0.4
	4.3nm,0.1s						
TNSS				eS	Sb	06 47 13.6	+1.5
	80nm,0.4s						
ARSB	Arslanbob	2.17	202	⇓iP	Pn	06 46 43.6	+0.5
	baz=2.0						
ARSB				⇓iS	Sn	06 47 10.7	+0.6
	baz=2.0						
MDOK	Medeo	2.18	94	eP	Pb	06 46 46.1	-0.4
	5.1nm,0.7s						
MDOK				eS	Sb	06 47 14.6	+1.1
	22nm,0.3s						
ARK	Arkit	2.19	226	⇑iP	Pn	06 46 44.0	+0.6
	baz=25						
ARK				⇑iS	Sn	06 47 11.3	+0.8
	baz=25						
KOTS	Kotyrbulak	2.22	92	eP	Pb	06 46 47.2	+0.1
	11nm,0.1s						
KOTS				eS	Sb	06 47 16.5	+1.8
	29nm,0.4s						
KDJ	Kajisay	2.59	117	⇑iP	Pn	06 46 50.0	+1.1
	baz=17						
KDJ				⇑iS	Sn	06 47 21.3	+0.9
	baz=17						
KK31	Karatay Array	2.61	266	⇑Pg	Pb	06 46 55.2	+1.5
	2.2nm,0.6s,baz=85,slow=16,SNR=9.6						
KK31				⇑Lg	Lg	06 47 28.1	
	3.8nm,0.3s,baz=80,slow=28,SNR=17						
KURS	Kuram	2.99	86	eP	Pg	06 47 02.3	-1.8
	6.4nm,0.7s						
KURS				eS	Sg	06 47 42.9	0.0
	7.0nm,0.6s						
PDGK	Podgornoye	3.95	88	⇓Lg	Lg	06 48 10.9	
	11nm,1.1s						

MEX 20 06:46:11.2±0.3**, 16.°20N**×**98.°13W, h3**^{km}±4^{km}**, MD3.5, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.19	2	i P	Pg	06 46 14.8	-0.1
PNIG				i S	Sg	06 46 17.5	+0.1
TLIG	Tlapa	1.42	343	eP	Pn	06 46 34.4	-3.6
TLIG				i S	Sg	06 46 52.3	-4.5
VHO	Vista Hermosa	1.60	57	eP	Pn	06 46 36.9	-3.7
VHO				i S	Sn	06 46 57.5	-4.4

BJI ***20*** *06:50:13.6, 24.°55N×142.°05E, h128^{km}, mb4.9/49,*
mB5.3/12
IDC ***20*** *06:50:15.8±0.6, 24.°65N×141.°41E, h107^{km}±5^{km}, mb4.6/30,*
mb1 4.7/34, mb1mx4.5/66, mbtmp4.9/34, Error ellipse:
s-maj=12.7km s-min=8.1km az=91.0
JMA ***20*** *06:50:16.2, 24.°98N×140.°92E, h96^{km}, M5.1*
JMA Felt I J1.
ISCJB ***20*** *06:50:16.1±0.6, 24.°68N±0.°03×141.°55E±0.°02,*
h113^{km}±4^{km}, mb4.9/274, Error ellipse: s-maj=5.2km
s-min=3.1km az=162.0
NEIC ***20*** *06:50:18.5±0.7, 24.°65N×141.°52E, h124^{km}±6^{km},*
mb4.9/228, Error ellipse: s-maj=4.2km s-min=3.5km
az=136.0
NEIC Recorded [1 JMA] in the Hahajima-retto.
MOS ***20*** *06:50:19.0±1.2, 24.°66N×141.°36E, h146^{km}, mb4.9/52,*
Error ellipse: s-maj=9.0km s-min=5.3km az=102.6
ISC 20 06:50:16.9±0.5**, 24.°65N**±0.°04×**141.°65E**±0.°05**, h115**^{km}±4^{km}**,**
n628, σ1^{s}**28**/657**, mb4.9**/275**, 5C-5D, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHHJ	Haha-jima-NKT	2.03	13	P	Pn	06 50 49.0	-1.6
JHHJ				S	Sn	06 51 14.4	-1.9
CBIJ	Chichi jima	2.49	11	ePn	Pn	06 50 56.0	-0.4
CBIJ				eSn	Sn	06 51 28.0	+1.4
CBIJ	Chichi jima	2.49	11	P	Pn	06 50 54.3	-2.1
JCJ	Chichijima	2.49	11	P	Pn	06 50 55.4	-1.0
JCJ				S	Sn	06 51 26.5	-0.1
	647nm,0.3s,baz=273,slow=23,SNR=8.6						
JHJ2	Mitsune	8.59	350	ePn	Pn	06 52 19.2	+0.9
JHJ2				eSn	Sn	06 53 57.1	+3.7
JHJ	Hachijo jima 2	8.60	349	P	Pn	06 52 17.3	-1.2
	19nm,0.3s,baz=38,slow=21,SNR=13						
BSO3	Boso 3	10.17	355	P	Pn	06 52 36.1	-3.4
BSO4	Boso 4	10.37	354	P	Pn	06 52 39.3	-3.1
JAO	Obara	11.25	341	P	Pn	06 52 54.5	+0.2
JHU	Hanno	11.36	350	P	Pn	06 52 51.9	-3.8
INU	Inuyama	11.39	340	ePn	Pn	06 52 56.9	+0.7
GUMO	Guam	11.41	164	P	Pn	06 52 56.3	-0.2
	3.5nm,0.3s,baz=237,slow=3.5,SNR=7.1						
GUMO	Guam	11.41	164	ePn	Pn	06 52 58.8	+2.3
GUMO	Guam	11.41	164	eP	Pn	06 52 58.8	+2.3
JAG	Ashikaga	11.89	351	P	Pn	06 52 58.4	-4.4
MJAR	Matsushiro Arr	12.22	347	P	Pn	06 53 05.4	-1.7
	2.1nm,0.3s,baz=161,slow=11,SNR=24						
MAJO	Matsushiro	12.22	347	ePn	Pn	06 53 06.3	-0.8
MAJO	Matsushiro	12.22	347	i P	Pn	06 53 06.9	-0.2
MAT	Matsushiro	12.22	347	P	Pn	06 53 05.4	-1.7
MAT				eS	Sn	06 55 12.0	-10
MJB9	Matsu-Tunnel	12.23	347	ePn	Pn	06 53 06.1	-1.1
JOW	Kunigami	12.25	283	ePn	Pn	06 53 10.9	+3.3
JNU	Nakatsue	12.66	314	ePn	Pn	06 53 14.7	+1.8
JFK	Kawauchi	12.70	357	eS	Sn	06 55 22.4	-11
TJN	Taejon	16.95	317	i P	Pn	06 54 07.6	+0.5
YOJ	Yonaguni jima	16.96	273	eP	Pn	06 54 10.2	+3.0
	84nm,0.8s						
YOJ	Yonaguni jima	16.96	273	eP	Pn	06 54 10.2	+3.0
YOJ				pmax	pmax		
	comp=Z,84nm,0.8s						
KSRS	Korea Array	17.33	321	P	Pn	06 54 12.1	+0.4
	comp=Z,1.2nm,0.3s,baz=135,slow=11,SNR=40						
KSRS				PcP	PcP	06 58 47.5	+0.2
	comp=Z,0.2nm,0.3s,baz=149,slow=1.8,SNR=4.6						
KSRS				ScP	ScP	07 02 10.9	-0.8
	comp=Z,0.4nm,0.3s,baz=96,slow=2.5,SNR=4.5						
KS15	Wonju Array Si	17.35	321	eP	P	06 54 12.0	+0.5
KSAR	Wonju Array Be	17.35	321	P	P	06 54 12.1	+0.6
KSAR				PcP	PcP	06 58 47.5	+0.1
KSAR				ScP	ScP	07 02 10.9	-0.9
KSAR	Wonju Array Be	17.35	321	P	P	06 54 12.1	+0.6
KS01	Wonju Array Si	17.36	321	eP	P	06 54 11.6	-0.1
KS01				ePcP	PcP	06 58 47.5	+0.2
ERM	Erimo	17.37	4	eP	Pn	06 54 14.7	+2.7
	comp=Z,78nm,0.9s						
ERM	Erimo	17.37	4	⇑eP	Pn	06 54 14.2	+2.2
NACB	Ninganchiao	18.27	273	eP	Pn	06 54 23.2	+0.2
	comp=Z,94nm,0.8s						
TATO	Taipei	18.31	275	eP	Pn	06 54 24.6	+1.2
	comp=Z,120nm,0.9s						
YHNB	Yeheng	18.43	274	eP	Pn	06 54 25.3	+0.3
	comp=Z,89nm,0.8s						
YULB	Yu-li	18.64	270	eP	Pn	06 54 28.0	+0.6
	comp=Z,154nm,0.9s						
SSLB	Suanglung	18.90	272	eP	Pn	06 54 30.8	+0.3
	comp=Z,83nm,0.9s						
TWG	Pinlang	18.93	269	eP	Pn	06 54 31.4	+0.6
	comp=Z,580nm,0.9s						
TPUB	Ta-pu	19.25	270	eP	Pn	06 54 34.6	-0.1
	comp=Z,137nm,0.8s						
ASAJ	Asahikawa	19.44	2	P	Pn	06 54 36.5	-0.1
	comp=Z,2.3nm,0.3s,baz=224,slow=14,SNR=11						
ASAJ	Asahikawa	19.44	2	eP	Pn	06 54 36.3	-0.3
	comp=Z,46nm,1.0s						
USRK	Ussuriysk Ar.	21.04	340	P	P	06 54 49.2	-2.3
	comp=Z,4.7nm,0.7s,baz=139,slow=13						
KUR	Kuril'sk	21.15	12	i P	P	06 54 54.8	+2.1
NJ2	Nanjing	21.35	295	eP	P	06 54 56.9	+1.9
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
YSS	Yuzh-Sakhalins	22.28	2	eP	P	06 55 04.8	+0.2
	comp=Z,35nm,0.6s						
YSS	Yuzh-Sakhalins	22.28	2	eP	P	06 55 06.8	+2.2
YSS				pmax	pmax		
	comp=Z,30nm,0.4s						
YSS				MLR	MLR		
	comp=Z,5µm,13.0s						
H11S3	WAKE ISLAND Hy	24.06	100	T	T	07 20 50.2	
	baz=289,slow=75,SNR=11						
H11S1	WAKE ISLAND Hy	24.06	100	T	T	07 20 49.0	
	baz=289,slow=75,SNR=9.3						
H11S2	WAKE ISLAND Hy	24.07	100	T	T	07 20 49.7	
	baz=289,slow=75,SNR=10						
WHN	Wuhan	24.86	290	⇓P	P	06 55 30.3	+1.4
KLR	Kul'dur	25.74	345	P	P	06 55 35.3	-1.2
	comp=Z,0.4nm,0.5s,baz=163,slow=5.2,SNR=23						
KLR				ScP	ScP	07 02 31.7	-0.8
	comp=Z,0.3nm,0.9s,baz=6.1,slow=2.3,SNR=8.6						
GZH	Guangzhou	25.91	272	P	P	06 55 36.8	-1.6
BJT	Baijiatuau	26.30	312	eP	P	06 55 43.5	+1.8
	comp=Z,15nm,0.8s						
BJT	Baijiatuau	26.30	312	eP	P	06 55 43.6	+1.8
BJT				pmax	pmax		
	comp=Z,15nm,0.8s						
MYLDM	Lahad Datu	29.48	233	eP	P	06 56 12.2	+1.9
	comp=Z,35nm,1.1s						
HHC	Hu-ho-hao-te	29.83	310	eP	P	06 56 15.0	+1.7
HHC				pmax	pmax		
	comp=Z,29nm,1.0s						
XAN	Xi'an	29.92	296	P	P	06 56 14.6	+0.5
XAN				pP	pP	06 56 43.4	+4.1
XAN				pmax	pmax		
	comp=Z,35nm,0.8s						
QIZ	Qiongzhong	30.00	266	eP	P	06 56 16.7	+1.8
	comp=Z,17nm,1.1s						
GYA	Guiyang	31.56	281	P	P	06 56 30.0	+1.3
GYA				pP	pP	06 56 57.8	+3.8
GYA				sP	sP	06 57 14.0	+6.7
GYA				PP	PnPn	06 57 38.9	+2.1
GYA				PcP	PcP	06 59 20.3	+1.6
GYA				S	S	07 01 27.3	-1.8
GYA				sS	sS	07 02 17.8	+4.6
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,5.4s						
CD2	Chengdu	33.98	289	eP	P	06 56 49.0	-0.7
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
LZH	Lanzhou	34.36	298	eP	P	06 56 53.6	+0.6
LZH				pP	pP	06 57 24.6	+6.1
LZH				sP	sP	06 57 39.3	+7.5
LZH				pmax	pmax		
	comp=Z,46nm,1.2s						
LZH				pmax	pmax		
	comp=Z,130nm,4.7s						
KMI	Kunming	35.22	279	P	P	06 57 01.9	+1.3
KMI				pP	pP	06 57 31.8	+5.6
KMI				sP	sP	06 57 45.6	+6.2
KMI				PP	PP	06 58 25.0	+2.3
KMI				pmax	pmax		
	comp=Z,51nm,1.0s						
PANO	Nakornpanom	35.31	265	P	P	06 57 03.4	+2.2
	comp=Z,0.6nm,1.4s						
MA2	Magadan	35.49	8	P	P	06 57 03.1	+0.9
	comp=Z,11nm,0.6s,baz=194,slow=12,SNR=5.5						
ULN	Ulaanbaatar	35.81	319	⇓eP	P	06 57 04.7	-0.6
SKNT	Sakolnakorn	35.94	265	P	P	06 57 08.3	+1.7
	comp=Z,9.9nm,1.3s						
SONA1	Songino Array	36.19	319	eP	P	06 57 04.0	-4.6
SONM	Songino Array	36.19	319	PcP	PcP	06 59 31.4	-0.2
	comp=Z,1.4nm,0.5s,baz=122,slow=1.9,SNR=5.3						
KHON	Khomkaen	37.20	265	P	P	06 57 19.4	+2.2
	comp=Z,15nm,0.7s						
GTA	Gaotai	38.05	303	⇑P	P	06 57 25.8	+1.4
GTA				pP	pP	06 57 51.3	+1.1
GTA				sP	sP	06 58 04.9	+1.5
GTA				PcP	PcP	06 59 38.4	+1.0
GTA				ScS	ScS	07 07 21.5	-2.9
GTA				pmax	pmax		
	comp=Z,12nm,1.1s						
YAK	Yakutsk	38.24	351	eP	P	06 57 23.1	-2.4
YAK				pmax	pmax		
	comp=Z,19nm,0.9s						
COEN	Coen	38.40	178	eP	P	06 57 27.0	-0.2
	comp=Z,14nm,0.8s						
EDFI	Ende, Flores	38.48	213	P	P	06 57 27.1	-1.0
BOD	Bodaibo	38.58	337	eP	P	06 57 25.9	-2.5
BOD				pmax	pmax		
	comp=Z,9.0nm,1.7s						
SRAK	Srakaew	38.72	262	P	P	06 57 27.7	-2.3

	comp=Z,145nm,0.8s,comp=Z,2µm						
PBKT	Sadao Pong	38.80	266	P	P	06 57 32.5	+1.8
	comp=Z,29nm,0.8s						
SEY	Seymchan	38.95	8	P	P	06 57 32.1	+0.8
	comp=Z,13nm,0.5s,baz=186,slow=8.6,SNR=53						
PHIT	Phitsanulok	39.11	267	P	P	06 57 35.2	+1.9
	comp=Z,86nm,0.9s,comp=Z,772nm						
NAYO	Nakonayok	39.26	262	P	P	06 57 36.5	+2.0
	comp=Z,0.9nm,1.2s						
CMMT	Chiang Mai	39.97	270	P	P	06 57 41.7	+1.2
	comp=Z,19nm,0.9s						
CHTO	Chiang Mai	39.97	270	*e*P	P	06 57 40.8	+0.3
	comp=Z,17nm,0.9s						
CHTO	Chiang Mai	39.97	270	*e*P	P	06 57 40.8	+0.3
CHTO				pmax	pmax		
	comp=Z,17nm,0.9s						
CHTO	Chiang Mai	39.97	270	P	P	06 57 41.7	+1.2
	comp=Z,88nm,0.9s						
CM01	Chiang Mai Arr	40.07	270	*e*P	P	06 57 41.9	+0.6
CMAR	Chiang Mai Arr	40.07	270	P	P	06 57 41.8	+0.5
	comp=Z,6.1nm,0.6s,baz=64,slow=7.7,SNR=20						
UMPA	Umpang Tak	40.83	266	P	P	06 57 50.9	+3.3
	comp=Z,13nm,1.2s,comp=Z,843nm						
PHET	Kaeng Krachan	41.30	261	P	P	06 57 53.8	+2.4
	comp=Z,13nm,0.9s						
MOKO	MOKOCHONG	42.40	283	*e*P	P	06 58 01.6	+1.2
MOKO				IAmb	IAmb	06 58 02.5	
	comp=Z,48nm,1.2s						
ZIRO	ZIRO	42.82	285	*e*P	P	06 58 05.4	+1.6
IMP	Imphal	43.15	281	*e*P	P	06 58 06.5	+0.1
TRTT	Trang	43.40	255	P	P	06 58 10.9	+2.5
	comp=Z,11nm,1.0s						
TEZP	TEZPUR	43.88	283	*e*P	P	06 58 13.4	+1.3
SAIH	SAIHA	44.47	278	*e*P	P	06 58 18.0	+0.9
SHL	Shillong	44.86	282	*e*P	P	06 58 20.5	+0.3
	comp=Z,81nm,0.6s						
SHL	Shillong	44.86	282	*e*P	P	06 58 21.1	+0.9
WRAB	Tennant Creek	44.88	190	*e*P	P	06 58 19.2	-0.8
	comp=Z,31nm,0.8s						
WB2	Warramunga Arr	44.88	190	*e*P	P	06 58 19.4	-0.7
	comp=Z,30nm,0.8s						
WRA	Warramunga Arr	44.89	190	P	P	06 58 19.2	-0.9
	comp=Z,21nm,0.8s,baz=8.3,slow=8.6,SNR=92						
WRA				PcP	PcP	07 00 00.3	+0.5
	comp=Z,8.7nm,0.7s,baz=0.8,slow=3.3,SNR=6.8						
WRA				ScP	ScP	07 03 40.9	-0.8
	comp=Z,3.1nm,0.9s,baz=13,slow=4.4,SNR=6.1						
WRA				S	S	07 04 46.4	-3.1
	comp=Z,3.0nm,1.0s,baz=4.5,slow=13,SNR=7.0						
GUWA	GUWAHATI	44.92	283	*e*P	P	06 58 20.4	0.0
LSA	Lhasa	44.92	288	*e*P	P	06 58 21.6	+0.6
	comp=Z,13nm,0.9s						
TURI	Tura	46.24	282	*e*P	P	06 58 32.8	+1.9
PSI	Prapat	46.54	249	*e*P	P	06 58 34.3	+0.8
	comp=Z,30nm,0.9s						
PSI	Prapat	46.54	249	*e*P	P	06 58 34.3	+0.8
PSI				pmax	pmax		
	comp=Z,30nm,0.9s						
KCSI	Kotacane, Aceh	47.16	251	P	P	06 58 37.0	-1.1
GTK	Tadong	47.47	285	*e*P	P	06 58 41.0	+0.4
WMQ	Urumqi	47.65	308	P	P	06 58 42.1	+0.5
WMQ				pP	pP	06 59 13.6	+5.2
WMQ				sP	sP	06 59 29.5	+8.2
WMQ				pmax	pmax		
	comp=Z,27nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,250nm,7.7s						
WMQ				LR	LR		
	comp=Z,4µm,15.5s						
WMQ				LR	LR		
	comp=Z,4µm,13.9s						
WMQ				LR	LR		
	comp=Z,4µm,16.9s						
AS01	Alice Springs	48.60	189	*e*P	P	06 58 47.4	-1.6
AS31	Alice Springs	48.61	189	*e*P	P	06 58 47.5	-1.6
	comp=Z,2.1nm,0.7s						
ASAR	Alice Springs	48.61	189	P	P	06 58 47.5	-1.6
	comp=Z,2.0nm,0.4s,baz=3.4,slow=5.1,SNR=61						
ASAR				PcP	PcP	07 00 13.3	+0.4
	comp=Z,6.1nm,0.8s,baz=14,slow=4.0,SNR=16						
ASAR				ScP	ScP	07 03 56.6	-0.6
	comp=Z,2.0nm,0.8s,baz=11,slow=4.0,SNR=7.5						
ASAR				S	S	07 05 39.5	-3.0
	comp=Z,4.0nm,0.9s,baz=19,slow=20,SNR=17						
ODAN	Odare	48.61	285	*e*P	P	06 58 50.6	+1.1
	comp=Z,106nm,0.7s						
DGZ	Jazzator, Alta	48.63	315	*i* P	P	06 58 47.9	-1.3
RAMN	Ramite	49.29	285	*e*P	P	06 58 55.7	+1.0
	comp=Z,58nm,0.7s						
JIRN	Jiri	49.52	286	*e*P	P	06 58 58.2	+1.6
	comp=Z,278nm,0.6s						
GUN	Gumba	49.75	287	*e*P	P	06 58 59.8	+1.5
	comp=Z,96nm,0.4s						
PKIN	Phulchoki	50.23	286	*e*P	P	06 59 03.1	+1.3
	comp=Z,48nm,0.5s						
KKN	Kakani	50.30	287	*e*P	P	06 59 03.3	+1.0
	comp=Z,51nm,0.7s						
DMN	Daman	50.48	286	*e*P	P	06 59 04.6	+0.9
	comp=Z,121nm,1.1s						
EIDS	Eidsvold	50.55	169	*e*P	P	06 59 03.9	+0.1
	comp=Z,7.5nm,0.9s						
BOK	Bokaro	50.56	281	*e*P	P	06 59 05.9	+1.9
GKN	Gorkha	50.82	287	*e*P	P	06 59 07.1	+1.0
	comp=Z,44nm,0.5s						
ZAA0	Zalesovo Array	51.04	320	*e*P	P	06 59 05.3	-1.8
	comp=Z,11nm,0.8s						
ZALV	Zalesovo Beam	51.04	320	P	P	06 59 05.6	-1.6
	comp=Z,9.1nm,0.4s,baz=104,slow=6.8,SNR=31						
ZALV	Zalesovo Beam	51.04	320	*e*P	P	06 59 05.2	-1.9
ZALV	Zalesovo Beam	51.04	320	*e*P	P	06 59 05.2	-1.9
DANN	Dangsing	51.52	288	*e*P	P	06 59 12.8	+1.3
	comp=Z,371nm,0.6s						
MK01	Makanchi Array	51.68	311	*e*P	P	06 59 11.1	-1.0
MK31	Makanchi Array	51.69	311	*e*P	P	06 59 11.2	-0.9
MK31	Makanchi Array	51.69	311	*e*P	P	06 59 11.3	-0.9
MKAR	Makanchi Array	51.69	311	P	P	06 59 11.1	-1.0
	comp=Z,9.2nm,0.5s,baz=92,slow=9.0,SNR=106						
MKAR				ScP	ScP	07 04 10.1	-0.2
	comp=Z,1.2nm,0.8s,baz=76,slow=6.4,SNR=4.0						
MKAR	Makanchi Array	51.69	311	*e*P	P	06 59 11.2	-0.9
	comp=Z,74nm,0.6s						
MKAR				ScP	ScP	07 04 10.1	-0.2
MKAR	Makanchi Array	51.69	311	*i* P	P	06 59 11.3	-0.9
MKAR				pmax	pmax		
	comp=Z,9.0nm,0.5s						
KOLN	Koldanda	51.76	287	*e*P	P	06 59 14.3	+1.1
	comp=Z,72nm,0.6s						
MAKZ	Makanchi	51.90	311	*e*P	P	06 59 13.6	-0.2
	comp=Z,12nm,0.9s						
MAKZ	Makanchi	51.90	311	*e*P	P	06 59 13.6	-0.2
MAKZ				pmax	pmax		
	comp=Z,12nm,0.9s						
SDPT	Sand Point	51.92	38	*e*P	P	06 59 13.9	+0.3
	comp=Z,37nm,0.7s						
PYUN	Piuthan	52.23	287	*e*P	P	06 59 18.0	+1.3
	comp=Z,188nm,0.6s						
DZM	Mont Dzumac	52.31	151	*e*P	P	06 59 17.4	+0.3
	comp=Z,5.5nm,0.6s						
CHGN	Chignik	53.25	37	*e*P	P	06 59 23.4	0.0
	comp=Z,17nm,1.2s						
KURK	Kurchatov	54.38	316	*e*P	P	06 59 30.8	-1.0
	comp=Z,18nm,0.7s						
KURK	Kurchatov	54.38	316*c*	*e*P	P	06 59 30.9	-0.8
KURK				pmax	pmax		
	comp=Z,17nm,0.7s						
PRZ	Przheval'sk	54.41	306	*e*P	P	06 59 32.5	+0.1
	comp=Z,34nm,0.8s						
PRZ	Przheval'sk	54.41	306	*e*P	P	06 59 32.5	+0.1
PRZ				pmax	pmax		
	comp=Z,34nm,0.8s						
KURBB	Kurchatov Arra	54.43	316	P	P	06 59 30.8	-1.3
	comp=Z,23nm,0.6s,baz=93,slow=7.8,SNR=225						
RDOG	Red Dog Mine	54.67	22	*e*P	P	06 59 33.8	+0.1
	comp=Z,20nm,0.9s						
JOSI	Joshimath	54.75	291	*e*P	P	06 59 36.4	+1.4
KDJ	Kajisay	55.33	305	*e*P	P	06 59 39.1	+0.1
	comp=Z,8.1nm,0.8s						
KDJ	Kajisay	55.33	305	*e*P	P	06 59 39.1	+0.1
KDJ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ARMA	Armidale	55.58	170	*e*P	P	06 59 41.2	+0.5
	comp=Z,16nm,1.1s						
SII	Sitkinak Islan	55.61	37	*e*P	P	06 59 42.0	+1.4
	comp=Z,32nm,0.9s						
SVW2	Sparrevohn	55.62	32	*e*P	P	06 59 41.4	+0.9
	comp=Z,6.0nm,0.8s						
ULHL	Ulahol	56.02	305	P	P	06 59 44.1	+0.2
	SNR=21						
OHAK	Old Harbor	56.17	36	*e*P	P	06 59 44.4	-0.2
	comp=Z,38nm,1.2s						
STKA	Stephens Creek	56.20	180	P	P	06 59 44.4	-0.6
	comp=Z,4.4nm,0.4s,baz=352,slow=7.5,SNR=12						
STKA	Stephens Creek	56.20	180	*e*P	P	06 59 44.4	-0.6
	comp=Z,2.1nm,1.0s						
STKA	Stephens Creek	56.20	180	*e*P	P	06 59 44.4	-0.6
STKA				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KSH	Kashi	56.45	302	P	P	06 59 50.6	+3.7
KSH				sP	sP	07 00 35.1	+7.9
KSH				*e*PcP	PcP	07 00 46.0	+3.4
KSH				pmax	pmax		
	comp=Z,25nm,0.8s						
KSH				pmax	pmax		
	comp=Z,1µm,10.1s						
KSH				LR	LR		
	comp=Z,2µm,13.6s						
KSH				LR	LR		
	comp=Z,4µm,15.0s						
KSH				LR	LR		
	comp=Z,2µm,13.4s						
TKM2	Tokmak 2	56.45	306	P	P	06 59 47.6	+0.5
	SNR=21						
KDAK	Kodiak Island	56.62	36	P	P	06 59 48.5	+0.9
	comp=Z,11nm,0.8s,baz=250,slow=4.4,SNR=11						
KDAK	Kodiak Island	56.62	36	*e*P	P	06 59 48.4	+0.8
	comp=Z,18nm,0.8s						
KDAK	Kodiak Island	56.62	36	*e*P	P	06 59 48.4	+0.8
KDAK				pmax	pmax		
	comp=Z,19nm,0.8s						
FORT	Forrest	56.63	194	*e*P	P	06 59 47.3	-0.7
	comp=Z,24nm,0.6s						
SMLA	Simla	56.67	292	*e*P	P	06 59 48.7	+0.2
KZA	Kyzart	56.76	305	P	P	06 59 50.6	+1.1
	SNR=15						
KBK	Karagaybulak	56.94	306	P	P	06 59 51.0	+0.5
	SNR=9.8						
FRU	Bishkek	57.17	306	*e*P	P	06 59 52.0	+0.1
KKR	Kurukshetra	57.18	291	*e*P	P	06 59 52.6	+0.4
DHRM	DHARAMSHALA	57.19	294	*e*P	P	06 59 52.6	+0.1
USP	Ospenovka	57.23	307	P	P	06 59 50.1	-2.2
	SNR=8.0						
AAK	Ala-Archa	57.28	306	P	P	06 59 52.1	-0.8
	comp=Z,9.5nm,0.5s,baz=124,slow=7.2,SNR=14						
AAK	Ala-Archa	57.28	306	P	P	06 59 52.5	-0.3
	SNR=8.3						
AAK	Ala-Archa	57.28	306	*e*P	P	06 59 52.0	-0.8
	comp=Z,11nm,0.6s						
UCH	Uchtor	57.30	306	P	P	06 59 54.0	+0.7
	SNR=5.9						
BHGR	Bahadurgarh	57.34	289	*e*P	P	06 59 54.1	+0.8
BBOO	Buckleboo	57.38	186	*e*P	P	06 59 53.0	-0.3
	comp=Z,5.7nm,0.8s						
CNPM	China Poot	57.51	34	*e*P	P	06 59 54.5	+0.5
	comp=Z,26nm,1.2s						
EKS2	Erkin-Say	57.80	306	P	P	06 59 56.8	+0.3
	SNR=10						
KUDL	Kundal	57.85	289	*e*P	P	06 59 57.0	+0.2
AML	Almayashu	57.91	306	P	P	06 59 58.6	+1.0
	SNR=22						
POHA	Pohakuloa	57.94	81	*e*P	P	06 59 59.8	+2.0
	comp=Z,96nm,1.1s						
MLOA	Mauna Loa Obse	57.96	82	*e*P	P	06 59 58.4	+0.1
	comp=Z,69nm,1.0s						
SUA	Susitna One	57.98	32	*e*P	P	07 00 00.2	+2.9
	comp=Z,16nm,0.6s						
HMH	Humu'ula Sheep	58.03	82	*e*P	P	06 59 56.8	-1.8
	comp=Z,37nm,1.0s						
BHPL	Bhopal	58.22	283	*e*P	P	06 59 59.8	+0.3
BPAW	Bear Paw Mtn.	58.24	28	*e*P	P	06 59 59.9	+0.9
	comp=Z,24nm,1.1s						
LHI	Lord Howe Isla	58.28	163	*e*P	P	07 00 00.5	+0.9
	comp=Z,92nm,0.9s						
RC01	Rabbit Creek A	58.42	32	*e*P	P	07 00 01.1	+0.8
	comp=Z,24nm,1.2s						
KHET	Khetri	58.45	289	*e*P	P	07 00 01.5	+0.5
TRF	Thorofare Moun	58.45	29	*e*P	P	07 00 01.8	+1.2
	comp=Z,29nm,1.0s						
MLY	Manley	58.49	27	*e*P	P	07 00 02.0	+1.2
	comp=Z,13nm,0.9s						
PMR	Palmer	58.76	32	*e*P	P	07 00 03.1	+0.5
	comp=Z,21nm,1.0s						
PMR	Palmer	58.76	32	*e*P	P	07 00 03.1	+0.5
PMR				pmax	pmax		
	comp=Z,21nm,1.0s						
GHO	Glory Hole Cre	58.88	31	*e*P	P	07 00 04.2	+0.7
	comp=Z,13nm,0.9s						
BWN	Browne	58.91	29	*e*P	P	07 00 04.7	+1.1
	comp=Z,41nm,1.1s						
COLD	Coldfoot	59.08	25	*e*P	P	07 00 05.6	+0.8
	comp=Z,12nm,0.9s						
MCK	McKinley	59.09	29	*e*P	P	07 00 05.8	+0.9
	comp=Z,37nm,1.0s						
MCK	McKinley	59.09	29	*e*P	P	07 00 05.8	+0.9
MCK				pmax	pmax		
	comp=Z,37nm,1.0s						
SML	Sawmill	59.16	31	*e*P	P	07 00 06.3	+0.9
	comp=Z,31nm,0.9s						
SML	Sawmill	59.16	31	*e*P	P	07 00 06.3	+0.9
SML				pmax	pmax		
	comp=Z,31nm,0.9s						
NIL	Nilore	59.46	296	*e*P	P	07 00 09.4	+1.4
	comp=Z,58nm,0.7s						
BVAR	Borovoye Array	59.53	318	P	P	07 00 07.3	-0.7
	comp=Z,29nm,0.5s,baz=92,slow=8.8,SNR=68						
MDM	Murphy Dome	59.54	28	*e*P	P	07 00 08.2	+0.3
	comp=Z,12nm,0.8s						
WRH	Wood River Hil	59.54	28	*e*P	P	07 00 08.6	+0.6
	comp=Z,11nm,1.0s						
TOLK	Toolik Lake Re	59.57	23	P	P	07 00 09.6	+1.5
	baz=260						
TOLK	Toolik Lake Re	59.57	23	*e*P	P	07 00 09.7	+1.6
	comp=Z,17nm,1.0s						
BRVK	Borovoye	59.59	318	*e*P	P	07 00 07.9	-0.6
	comp=Z,23nm,0.6s						
BRVK	Borovoye	59.59	318	⇑*i*P	P	07 00 07.3	-1.2
BRVK				pmax	pmax		
	comp=Z,22nm,0.7s						
SCM	Sheep Creek Mo	59.64	31	*e*P	P	07 00 09.8	+1.0
	comp=Z,42nm,1.0s						
SCM	Sheep Creek Mo	59.64	31	*e*P	P	07 00 09.8	+1.0
SCM				pmax	pmax		
	comp=Z,42nm,1.0s						
CCB	Clear Creek Bu	59.68	28	*e*P	P	07 00 09.4	+0.5
	comp=Z,11nm,1.1s						
GLI	Glacier Island	59.69	32	*e*P	P	07 00 09.3	+0.3
	comp=Z,31nm,1.2s						
COLA	College	59.69	28	*e*P	P	07 00 10.2	+1.3
	comp=Z,11nm,0.7s						
COLA	College	59.69	28	*e*P	P	07 00 10.2	+1.3
COLA				pmax	pmax		
	comp=Z,11nm,0.7s						
HDA	Harding Lake	60.03	28	*e*P	P	07 00 11.3	0.0
	comp=Z,19nm,0.9s						
CAN	Canberra	60.04	173	*e*P	P	07 00 12.2	+0.4
	comp=Z,4.9nm,0.5s						
IL1	Eielson Array	60.09	28	*e*P	P	07 00 12.0	+0.3
ILAR	Eielson Array	60.09	28	P	P	07 00 11.3	-0.4
	comp=Z,17nm,0.8s,baz=259,slow=5.5,SNR=148						
ILAR				pP	pP	07 00 38.0	-1.6
	comp=Z,6.3nm,0.8s,baz=258,slow=5.7,SNR=4.3						
ILB	Eielson Array	60.09	28	*e*P	P	07 00 11.8	+0.1
KK31	Karatay Array	60.14	307	*e*P	P	07 00 12.4	-0.1
KKAR	Karatay Array	60.14	307	*e*P	P	07 00 12.6	+0.1
KLU	Klutina	60.29	32	*e*P	P	07 00 13.9	+0.7
	comp=Z,14nm,0.8s						
PAX	Paxson	60.58	30	*e*P	P	07 00 16.4	+1.2
	comp=Z,8.3nm,0.9s						
PAX	Paxson	60.58	30	*e*P	P	07 00 16.4	+1.2
PAX				pmax	pmax		
	comp=Z,8.0nm,0.9s						
PALK	Pallekele	60.62	264	*e*P	P	07 00 17.8	+1.6
	comp=Z,13nm,1.0s						
HARP	HAARP	60.69	31	*e*P	P	07 00 17.3	+1.4
	comp=Z,29nm,0.8s						
RIDG	Independ'e Rid	60.90	29	*e*P	P	07 00 18.1	+0.8
	comp=Z,27nm,1.0s						
BMRM	Bremner River	60.91	32	*e*P	P	07 00 18.8	+1.4
	comp=Z,17nm,0.8s						
FYU	Fort Yukon	60.94	26	*e*P	P	07 00 19.3	+1.9
	comp=Z,34nm,1.1s						
SCRK	Sand Creek	61.29	29	*e*P	P	07 00 21.1	+1.0
	comp=Z,32nm,0.8s						
TGL	Tana Glacier	61.77	33	*e*P	P	07 00 24.1	+0.8
	comp=Z,17nm,1.0s						
EGAK	Eagle	62.54	28	*e*P	P	07 00 29.0	+0.8
	comp=Z,6.7nm,0.8s						
KBL	Kabul	62.70	298	*e*P	P	07 00 30.8	+0.7
	comp=Z,41nm,0.6s						
KBL	Kabul	62.70	298	*e*P	P	07 00 30.8	+0.7
KBL				pmax	pmax		
	comp=Z,41nm,0.6s						
JASL	Jaisalmer	62.95	289	*e*P	P	07 00 32.0	+0.4
DAWY	Dawson	63.32	29	*e*P	P	07 00 34.9	+1.5
	comp=Z,13nm,1.0s						
INK	Inuvik	65.45	24	P	P	07 00 47.5	+0.3
	comp=Z,10nm,0.6s,baz=285,slow=5.7,SNR=32						
INK	Inuvik	65.45	24	*e*P	P	07 00 47.9	+0.8
	comp=Z,10nm,0.7s						
INK	Inuvik	65.45	24	*e*P	P	07 00 47.9	+0.8
INK				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SKAG	Skagway	65.61	34	*e*P	P	07 00 50.2	+1.9
	comp=Z,6.6nm,0.8s						
WHY	Whitehorse	65.68	32	*e*P	P	07 00 50.8	+1.9
	comp=Z,14nm,1.0s						
SIT	Sitka	65.94	36	*e*P	P	07 00 52.0	+1.5
	comp=Z,12nm,1.0s						
SIT	Sitka	65.94	36	*e*P	P	07 00 52.0	+1.5
SIT				pmax	pmax		
	comp=Z,12nm,1.0s						
BESE	Bessie Mountai	65.97	35	*e*P	P	07 00 52.6	+1.9
	comp=Z,7.7nm,0.8s						
ARU	Arti	66.07	323	P	P	07 00 50.2	-1.1
	comp=Z,11nm,0.4s,baz=90,slow=4.4,SNR=21						
ARU	Arti	66.07	323	*e*P	P	07 00 50.1	-1.3
	comp=Z,15nm,0.6s						
ARU	Arti	66.07	323*c*	*i*P	P	07 00 49.8	-1.5
ARU				*PP	PcP	07 01 20.1	-0.8
ARU						07 03 16.2	
ARU				S	S	07 09 30.5	+0.3
ARU				pmax	pmax		
	comp=Z,11nm,0.6s						
JIS	Juneau Island	66.26	35	*e*P	P	07 00 54.4	+1.9
	comp=Z,26nm,1.1s						
ABKAR	Akbulak array	66.47	315	*e*P	P	07 00 53.0	-1.0
AKTO	Aktyubinsk	67.46	317	P	P	07 00 58.6	-1.7
	comp=Z,7.4nm,0.7s,baz=75,slow=14,SNR=17						
DIB	Dawson Inlet,	68.25	40	*e*P	P	07 01 06.2	+1.1
	comp=Z,21nm,1.0s						
DLBC	Dease Lake	68.49	34	*e*P	P	07 01 08.3	+1.6
	comp=Z,12nm,1.0s						
BKZ	Black Stump Fm	71.35	152	*e*P	P	07 01 24.1	-0.2
	comp=Z,22nm,1.2s						
PRGR	Permogore	71.41	330	*e*P	P	07 01 22.4	-1.9
PRGR				pmax	pmax		
	comp=Z,29nm,0.9s						
SNZO	South Karori	72.43	154	*e*P	P	07 01 31.5	+0.9
	comp=Z,26nm,1.0s						
BFZ	Birch Farm	72.52	153	*e*P	P	07 01 31.1	-0.1
	comp=Z,11nm,0.9s						
SPA0	Spitsbergen Ar	72.70	350	*e*P	P	07 01 32.2	+0.4
SPITS	Spitsbergen Ar	72.70	350	P	P	07 01 31.6	-0.2
	comp=Z,3.1nm,0.4s,baz=44,slow=6.5,SNR=24						
LTZ	Lake Taylor	72.79	157	*e*P	P	07 01 34.2	+1.5
	comp=Z,26nm,1.2s						
KBS	Kingsbay	72.87	351	*e*P	P	07 01 33.0	+0.2
	comp=Z,12nm,0.6s						
KBS	Kingsbay	72.87	351	*e*P	P	07 01 33.0	+0.2
KBS				pmax	pmax		
	comp=Z,12nm,0.6s						
KHZ	Kahutara	72.94	156	*e*P	P	07 01 32.7	-0.8
	comp=Z,37nm,1.1s						
LBZ	Lake Benmore	73.49	159	*e*P	P	07 01 37.4	+0.6
	comp=Z,16nm,1.2s						
KLMR	Klimovskoe	74.45	330	*e*P	P	07 01 39.5	-2.8
KLMR				pmax	pmax		
	comp=Z,11nm,1.0s						
KLMR	Klimovskoe	74.45	330	*e*P	P	07 01 39.6	-2.8
KLMR				AMP		07 01 41.3	
	comp=Z,11nm,1.0s						
YKW3	Yellowknife Ar	74.49	28	*e*P	P	07 01 42.9	+0.4
	comp=Z,7.1nm,0.7s						
DGAR	Diego Garcia	74.49	254	*i* P	P	07 01 39.9	-3.4
YKA	Yellowknife Ar	74.52	28	P	P	07 01 42.6	0.0
	comp=Z,12nm,0.8s,baz=294,slow=5.9,SNR=61						
YKA				pP	pP	07 02 10.0	-1.6
	comp=Z,3.8nm,0.6s,baz=292,slow=5.9,SNR=4.1						
YKA	Yellowknife Ar	74.52	28	*i* P	P	07 01 43.0	+0.3
YKA				pmax	pmax		
	comp=Z,12nm,0.8s						
RES	Resolute Bay	74.55	13	*e*P	P	07 01 43.6	+1.0
	comp=Z,9.9nm,0.6s						
KEV	Kevo	75.13	341	*e*P	P	07 01 45.1	-0.9
	comp=Z,19nm,0.8s						
KEV	Kevo	75.13	341	*e*P	P	07 01 45.1	-0.9
KEV				pmax	pmax		
	comp=Z,19nm,0.8s						
NLWA	Neilton Lookou	75.17	44	*e*P	P	07 01 49.0	+2.2
	comp=Z,19nm,0.8s						
LLLB	Lillooet	75.27	41	*e*P	P	07 01 49.1	+1.8
	comp=Z,17nm,1.0s						
A04D	Lummi Island	75.44	43	P	P	07 01 50.0	+1.9
	baz=291						
E03A	Lebam	75.66	45	*e*P	P	07 01 51.6	+2.1
	comp=Z,29nm,0.8s						
ARCES	ARCESS Array B	75.69	341	P	P	07 01 48.4	-0.9
	comp=Z,15nm,0.7s,baz=66,slow=7.2,SNR=24						
ARCES	ARCESS Array B	75.69	341	*e*P	P	07 01 48.9	-0.4
ARCES	ARCESS Array B	75.69	341	*e*P	P	07 01 48.9	-0.4
BANOM	Banah	75.72	292	P	P	07 01 50.8	+0.5
SHME	Shamm	75.80	292	P	P	07 01 51.7	+1.0
B05A	Bryant	75.98	43	P	P	07 01 52.9	+1.6
	baz=291						
MSFE	Esma-Masafi	76.03	292	P	P	07 01 52.5	+0.4
UOSS	Minazif	76.14	291	*e*P	P	07 01 52.7	0.0
	comp=Z,5.3nm,0.6s						
UOSS	Minazif	76.14	291	P	P	07 01 52.7	0.0
F04D	Rainier, OR	76.18	46	P	P	07 01 53.9	+1.3
	baz=291						
HATD	Hatta, Dubai	76.24	291	P	P	07 01 53.7	+0.4
G03D	McMinnville, O	76.33	46	P	P	07 01 54.9	+1.5
	baz=291						
ASHO	Ashiyiah	76.36	291	P	P	07 01 54.2	+0.2
D05A	Enumclaw	76.44	44	*e*P	P	07 01 56.2	+2.3
	comp=Z,25nm,1.0s						
KEBM	Edson Butte	76.45	49	*e*P	P	07 01 56.4	+2.2
	comp=Z,52nm,1.0s						
LON	Longmire	76.71	45	*e*P	P	07 01 57.0	+1.4
	comp=Z,6.0nm,0.9s						
LON	Longmire	76.71	45	*e*P	P	07 01 57.0	+1.4
LON				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KBO	Bosley Butte	76.76	50	*e*P	P	07 01 58.3	+2.3
	comp=Z,29nm,1.1s						
I03D	Drain, OR	76.83	48	P	P	07 01 57.7	+1.5
	baz=292,SNR=6.7						
ALNE	Al Ain	76.84	291	*i* P	P	07 01 56.9	+0.3
	SNR=8.1						
L02D	Cave Junction,	77.22	49	P	P	07 01 59.9	+1.4
	baz=292,SNR=6.6						
H04A	Detroit Lake	77.24	47	*e*P	P	07 01 58.8	+0.3
	comp=Z,29nm,1.0s						
LTY	Liberty	77.25	44	*e*P	P	07 01 59.4	+0.8
	comp=Z,7.2nm,0.6s						
AJN	Ajban	77.31	291	P	P	07 01 59.4	+0.2
TULEG	Thule	77.33	7	*e*P	P	07 01 59.1	+0.7
	comp=Z,66nm,0.7s						
JCC	Jacoby Creek,	77.41	51	*e*P	P	07 02 01.8	+2.3
	comp=Z,15nm,1.1s						
I04A	Tendick Farm,	77.42	48	P	P	07 02 00.8	+1.2
	baz=292,SNR=14						
HUMO	Hull Mountain	77.49	49	*e*P	P	07 02 01.7	+1.7
	comp=Z,6.9nm,1.0s						
G05D	Wamic, OR	77.60	46	P	P	07 02 01.8	+1.3
	baz=292						
KHMM	Horse Mountain	77.60	51	*e*P	P	07 02 02.6	+1.9
	comp=Z,21nm,1.0s						
B08A	Colville Reser	77.65	42	*e*P	P	07 02 02.2	+1.4
	comp=Z,18nm,0.9s						
J04D	Umpqua Nationa	77.83	48	P	P	07 02 03.4	+1.3
	baz=292,SNR=7.3						
I05D	Terrebonne, OR	77.93	47	P	P	07 02 03.7	+1.3
	baz=293						
YBH	Yreka Blue Hor	77.99	50	*e*P	P	07 02 04.7	+1.8
	comp=Z,12nm,0.8s						
YBH	Yreka Blue Hor	77.99	50	*e*P	P	07 02 04.7	+1.8
YBH				pmax	pmax		
	comp=Z,12nm,0.8s						
M02C	Callahan	78.02	50	P	P	07 02 04.7	+1.7
	baz=292,SNR=6.8						
G06A	Carlson Farm,	78.05	46	*e*P	P	07 02 04.6	+1.6

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           comp=Z,14nm,1.0s
KCPM  Cahto Peak        78.15  52 eP    P      07 02 05.4 +1.6
           comp=Z,32nm,0.9s
OBN   Obninsk           78.26 325⇓eP    P      07 02 02.9 -1.0
OBN                               i            07 02 05.9
OBN                               e            07 11 36.5
OBN                                pmax  pmax
           comp=Z,13nm,1.1s
N02D  Trinity Center    78.28  50  P    P      07 02 06.0 +1.5
           baz=292,SNR=8.9
HAWA  Hanford           78.30  44 eP    P      07 02 06.3 +1.9
           comp=Z,13nm,1.0s
K04D  Chiloquin, OR     78.31  48  P    P      07 02 05.9 +1.2
           baz=293,SNR=5.1
J05D  Fort Rock, OR     78.41  48  P    P      07 02 06.7 +1.5
           baz=293,SNR=25
PINE  Pine Mountain     78.41  47 eP    P      07 02 07.3 +2.1
           comp=Z,33nm,0.8s
C09A  Chrisman Ranch    78.53  43 eP    P      07 02 07.0 +1.4
           comp=Z,12nm,0.6s
WDC   Whiskeytown Da    78.55  51 eP    P      07 02 07.1 +1.3
           comp=Z,12nm,1.0s
WDC   Whiskeytown Da    78.55  51 eP    P      07 02 07.1 +1.3
WDC                                pmax  pmax
           comp=Z,12nm,1.0s
M04C  Macdoel           78.58  49  P    P      07 02 07.4 +1.3
           baz=293,SNR=18
K05A  Summer Lake       78.85  48 eP    P      07 02 09.4 +1.7
           comp=Z,48nm,1.1s
ZEI   Tsey              79.03 312 eP    P      07 02 06.9 -1.8
ZEI                                pmax  pmax
           comp=Z,9.0nm,0.4s
G08A  Pilot Rock        79.11  45 eP    P      07 02 10.1 +1.1
           comp=Z,11nm,1.1s
E09A  Wood Farm, Sta    79.13  44 eP    P      07 02 09.8 +0.9
           comp=Z,21nm,0.8s
MZR   Muzera            79.17 290  P    P      07 02 09.6  0.0
O03D  Paynes Creek      79.18  51  P    P      07 02 10.2 +0.8
           baz=293,SNR=11
KBZ   Khabaz            79.32 313  P    P      07 02 09.5 -0.5
           comp=Z,21nm,0.8s,baz=104,slow=4.0,SNR=50
KVAR  Kislovodsk Arr    79.36 313  P    P      07 02 10.5 +0.2
           comp=Z,8.0nm,0.7s,baz=177,slow=6.5,SNR=5.3
KIV   Kislovodsk        79.37 313⇓eP    P      07 02 10.1 -0.3
KIV                                            07 02 16.0
KIV                                S    S      07 11 58.0 -3.9
KIV                               eSS   SS     07 17 10.3 -0.4
KIV                               i SSS SSS    07 20 30.0
KIV                                pmax  pmax
           comp=Z,14nm,0.9s
MOD   Modoc Plateau     79.58  49 eP    P      07 02 13.0 +1.4
           comp=Z,17nm,1.0s
ORV   Oroville          79.68  51 eP    P      07 02 13.1 +1.1
           comp=Z,32nm,1.4s
FIA1  FINESS Array S    79.92 334 eP    P      07 02 11.6 -1.3
           comp=Z,16nm,1.0s
FINES FINESS Array B    79.92 334  P    P      07 02 11.2 -1.6
           comp=Z,6.9nm,0.4s,baz=66,slow=5.2,SNR=45
FINES FINESS Array B    79.92 334 i P   P      07 02 11.5 -1.4
FINES                              pmax  pmax
           comp=Z,7.0nm,0.4s
F10A  Beach Ranch, E    79.94  44 eP    P      07 02 14.8 +1.4
           comp=Z,7.7nm,0.6s
J08A  Circle Bar Ran    80.22  47 eP    P      07 02 16.7 +1.7
           comp=Z,23nm,0.9s
AFDM  Forest Hills D    80.30  52 eP    P      07 02 16.6 +1.2
           comp=Z,4.1nm,0.9s
BMO   Blue Mountains    80.36  45 eP    P      07 02 17.2 +1.5
           comp=Z,22nm,0.9s
BMO   Blue Mountains    80.36  45 eP    P      07 02 17.2 +1.5
BMO                                pmax  pmax
           comp=Z,22nm,0.9s
BEKR  Beckworth         80.36  51 eP    P      07 02 17.1 +1.2
           comp=Z,22nm,0.8s
WVOR  Wild Horse Val    80.50  48 eP    P      07 02 17.6 +1.1
           comp=Z,17nm,1.0s
WVOR  Wild Horse Val    80.50  48 eP    P      07 02 17.6 +1.1
WVOR                               pmax  pmax
           comp=Z,17nm,1.0s
WALA  Waterton Lakes    80.61  40 eP    P      07 02 19.2 +2.2
           comp=Z,16nm,0.7s
JTMT  Jette             80.98  42 eP    P      07 02 20.7 +1.7
           comp=Z,24nm,0.9s
CMB   Columbia Colle    81.09  52 eP    P      07 02 21.0 +1.3
           comp=Z,15nm,0.8s
CMB   Columbia Colle    81.09  52 eP    P      07 02 21.0 +1.3
CMB                                pmax  pmax
           comp=Z,15nm,0.8s
VCNR  Virginia City     81.10  51 eP    P      07 02 21.4 +1.5
           comp=Z,8.7nm,1.0s
PAHR  Pah Rah Range     81.11  50 eP    P      07 02 20.8 +0.9
           comp=Z,14nm,1.0s
PNTR  Pine Nut          81.22  51 eP    P      07 02 22.2 +1.7
           comp=Z,16nm,0.9s
YERR  Yerington         81.52  51 eP    P      07 02 23.5 +1.4
           comp=Z,11nm,0.9s
WAKR  Walker            81.58  52 eP    P      07 02 24.1 +1.7
           comp=Z,10nm,1.0s
MSO   Missoula          81.61  42  P    P      07 02 22.7 +0.4
           baz=297
MSO   Missoula          81.61  42 eP    P      07 02 23.1 +0.8
           comp=Z,5.5nm,0.9s
MFID  Camas Ranch       81.94  46 eP    P      07 02 25.6 +1.5
           comp=Z,23nm,0.9s
PAGB  Antelope Grade    82.14  54 eP    P      07 02 26.9 +1.7
           comp=Z,22nm,0.9s
RYN   Ryan              82.17  51 eP    P      07 02 26.6 +1.1
           comp=Z,13nm,1.0s
MDPB  Devils Postpil    82.20  52 eP    P      07 02 26.2 +0.5
           comp=Z,8.6nm,1.1s
OMMB  Old Mammoth Mi    82.26  52 eP    P      07 02 27.7 +1.5
           comp=Z,10nm,1.1s
KVN   Kaiserville       82.29  51 eP    P      07 02 27.5 +1.4
           comp=Z,18nm,1.1s
KVN   Kaiserville       82.29  51 eP    P      07 02 27.5 +1.4
KVN                                pmax  pmax
           comp=Z,18nm,1.1s
MLAC  Mammoth, Mammo82.38  52  P    P      07 02 27.6 +0.9
           baz=295
NV01  Mina Array Sit    82.42  51 eP    P      07 02 28.2 +1.4
NVAR  Mina Array Bea    82.42  51  P    P      07 02 27.7 +0.9
           comp=Z,9.7nm,0.8s,baz=272,slow=5.8,SNR=62
NVAR                               pP   pP     07 02 55.2 -1.0
           comp=Z,2.1nm,0.7s,baz=282,slow=5.2,SNR=2.5
SMMC  Simmler           82.50  55  P    P      07 02 28.1 +1.0
           baz=295
NV11  Mina Array Sit    82.52  51 eP    P      07 02 28.4 +1.1
           comp=Z,0.8nm,1.0s
HLID  Hailey            82.79  45  P    P      07 02 29.7 +1.1
           baz=297
HLID  Hailey            82.79  45 eP    P      07 02 30.1 +1.4
           comp=Z,8.3nm,0.9s
PKM   Mcpherson Peak    82.82  55  P    P      07 02 30.0 +1.1
           baz=295
HRY   Holter Researc    82.94  42 eP    P      07 02 31.0 +1.7
VES   Vestal, Richgr    82.95  54  P    P      07 02 29.9 +0.5
           baz=295
LRM   Limekiln Ridge    82.99  43 eP    P      07 02 31.2 +1.5
SUMG  Summit            83.03   0 eP    P      07 02 30.4 +0.8
           comp=Z,44nm,1.1s
SUMG  Summit            83.03   0 eP    P      07 02 30.4 +0.8
SUMG                               pmax  pmax
           comp=Z,44nm,1.1s
TIN   Tinemaha, Big     83.06  53  P    P      07 02 30.9 +0.8
           baz=296
SBC   Santa Barbara     83.08  55  P    P      07 02 31.2 +1.1
           baz=295
DLMT  Dillon            83.11  43 eP    P      07 02 31.4 +1.2
           comp=Z,8.8nm,0.9s
MCMT  McKenzie Canyo    83.21  44 eP    P      07 02 32.4 +1.6
SCZ2  Santa Cruz Isl    83.33  56  P    P      07 02 32.5 +1.1
           baz=295
CWC   Cottonwood Cre    83.43  53  P    P      07 02 32.8 +0.8
           baz=296
ARVC  Arvin             83.44  54  P    P      07 02 32.6 +0.7
           baz=296
ISA   Isabella, Lake    83.48  54  P    P      07 02 32.5 +0.3
           baz=296
ISA   Isabella, Lake    83.48  54 eP    P      07 02 32.3 +0.1
           comp=Z,6.1nm,1.0s
ISA   Isabella, Lake    83.48  54 eP    P      07 02 32.3 +0.1
ISA                                pmax  pmax
           comp=Z,6.0nm,1.0s
EGMT  Eagleton          83.54  40  P    P      07 02 32.9 +0.7
           baz=300
EGMT  Eagleton          83.54  40 eP    P      07 02 33.3 +1.0
           comp=Z,16nm,0.9s
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BOZ   Bozeman (W)       83.60  43  P    P      07 02 33.6 +0.9
           baz=299
BOZ   Bozeman (W)       83.60  43 eP    P      07 02 34.0 +1.3
           comp=Z,8.7nm,0.8s
BOZ   Bozeman (W)       83.60  43 eP    P      07 02 34.0 +1.3
BOZ                                pmax  pmax
           comp=Z,9.0nm,0.8s
GRAC  Grapevine Rang    83.70  52  P    P      07 02 34.3 +1.0
           baz=296,SNR=9.2
OSI   Osito Audit: C    83.74  55  P    P      07 02 34.5 +0.9
           baz=296
DAC   Darwin (Calif)    83.86  53 eP    P      07 02 35.3 +1.1
           comp=Z,4.6nm,0.8s
MPMC  Manual Prospec    84.03  53  P    P      07 02 36.0 +0.8
           baz=296,SNR=14
FFC   Flin Flon         84.07  32 eP    P      07 02 34.8 +0.1
           comp=Z,22nm,1.2s
QLMT  Earthquake Lak    84.09  43 eP    P      07 02 37.7 +2.4
LRMC  Laurel Mtn Rad    84.14  54  P    P      07 02 36.5 +0.9
           baz=296,SNR=7.3
EDW2  Edwards Air Fo    84.17  54  P    P      07 02 36.5 +0.8
           baz=296,SNR=6.8
YHB   Horse Butte       84.28  43 eP    P      07 02 38.8 +2.5
           comp=Z,32nm,0.8s
AKASG Malin Array Be    84.30 324  P    P      07 02 34.3 -1.6
           comp=Z,4.5nm,0.6s,baz=52,slow=5.2,SNR=25
AKASG                              pP   pP     07 03 03.0 -2.4
           comp=Z,2.5nm,0.7s,baz=52,slow=5.2,SNR=2.3
AKBB  Malin Array Si    84.30 324 eP    P      07 02 34.5 -1.5
           comp=Z,8.2nm,0.6s
FURC  Furnace Creek,    84.30  53  P    P      07 02 37.1 +1.0
           baz=296,SNR=20
KIEV  Kiev              84.31 324 eP    P      07 02 34.1 -1.8
KIEV  Kiev              84.31 324 i P   P      07 02 34.2 -1.8
           SNR=7.0
KIEV  Kiev              84.31 324⇓iP    P      07 02 34.4 -1.6
KIEV                               pmax  pmax
           comp=Z,7.0nm,0.9s
AK11  Malin Array Si    84.34 324 eP    P      07 02 34.9 -1.2
R11A  Troy Canyon, C    84.37  50  P    P      07 02 37.7 +0.9
           baz=297,SNR=29
R11A  Troy Canyon, C    84.37  50 eP    P      07 02 37.8 +1.0
           comp=Z,14nm,0.9s
FMP   Fort Macarthur    84.45  56  P    P      07 02 37.9 +0.8
           baz=296
YMR   Madison River     84.46  43 eP    P      07 02 39.3 +2.1
           comp=Z,42nm,0.9s
TPNV  Topopah Spring    84.53  52  P    P      07 02 38.4 +0.8
           baz=297,SNR=26
TPNV  Topopah Spring    84.53  52 eP    P      07 02 39.0 +1.4
           comp=Z,27nm,1.1s
YFT   Old Faithful      84.65  43 eP    P      07 02 41.7 +3.5
           comp=Z,36nm,0.9s
HVU   Hansel Valley     84.69  46 eP    P      07 02 40.1 +1.8
           comp=Z,12nm,0.7s
GCMT  Greycliff         84.70  42 eP    P      07 02 39.9 +1.6
H17A  Grant Village     84.84  43  P    P      07 02 42.3 +3.2
           baz=300
GSC   Goldstone, Bar    84.86  54  P    P      07 02 40.0 +0.8
           baz=297,SNR=16
GSC   Goldstone, Bar    84.86  54 eP    P      07 02 40.5 +1.3
           comp=Z,21nm,0.9s
RRX   Edison Barstow    84.91  54  P    P      07 02 40.4 +1.0
           baz=297
FXWY  Fox Creek         84.93  44 eP    P      07 02 41.2 +1.7
           comp=Z,16nm,1.0s
BGU   Big Grassy Mou    84.93  47 eP    P      07 02 40.9 +1.3
           comp=Z,7.1nm,0.9s
SHOC  Shoshone, Teco    84.98  53  P    P      07 02 40.4 +0.7
           baz=297,SNR=5.8
SNOW  Snow King Moun    85.19  44 eP    P      07 02 42.8 +1.9
           comp=Z,11nm,0.8s
LOHW  Long Hollow       85.21  44 eP    P      07 02 42.5 +1.6
           comp=Z,12nm,0.8s
BBRC  Big Bear Solar    85.24  55  P    P      07 02 41.8 +0.6
           baz=297
RLMT  Red Lodge         85.28  42  P    P      07 02 42.7 +1.5
           baz=300
RLMT  Red Lodge         85.28  42 eP    P      07 02 43.3 +2.0
           comp=Z,31nm,0.6s
AHID  Auburn Hatcher    85.31  45 eP    P      07 02 42.9 +1.4
           comp=Z,18nm,1.0s
MURC  Murrieta          85.33  55  P    P      07 02 42.2 +0.7
           baz=297
HEC   Hector,Ludlow     85.42  54  P    P      07 02 42.9 +1.0
           baz=297,SNR=6.6
DUG   Dugway, Tooele    85.42  48  P    P      07 02 42.9 +0.9
           baz=299
DUG   Dugway, Tooele    85.42  48 eP    P      07 02 43.4 +1.4
           comp=Z,24nm,0.8s
TUQ   Turquoise Moun    85.44  53  P    P      07 02 43.2 +1.0
           baz=297,SNR=28
HFS   Hagfors           85.47 337  P    P      07 02 38.9 -2.7
           comp=Z,6.6nm,0.7s,baz=64,slow=3.4,SNR=31
NC405 NORSAR Array S    85.47 338 eP    P      07 02 40.0 -1.6
PSUT  Pine Spring       85.49  50 eP    P      07 02 43.6 +1.2
           comp=Z,16nm,0.9s
SHPR  Sheep Range       85.51  52 eP    P      07 02 43.9 +1.4
           comp=Z,20nm,0.9s
NC303 NORSAR Array S    85.51 338 eP    P      07 02 41.1 -0.7
HWUT  Hardware Ranch    85.57  46 eP    P      07 02 44.1 +1.4
           comp=Z,22nm,0.8s
NB201 NORSAR Array S    85.66 338 eP    P      07 02 40.8 -1.8
NC204 NORSAR Array S    85.68 339 eP    P      07 02 41.3 -1.4
RAYN  Ar Rayn           85.69 294 eP    P      07 02 43.7 +0.2
           comp=Z,11nm,0.6s
RAYN  Ar Rayn           85.69 294 i P   P      07 02 43.4 -0.1
           SNR=16
NB2   NORSAR Subarra    85.70 338  P    P      07 02 40.5 -2.3
           comp=Z,3.6nm,0.7s,baz=48,slow=4.6
NB2   NORSAR Subarra    85.70 338  P    P      07 02 40.5 -2.3
           baz=48,slow=4.6
NOA   NORSAR Array B    85.70 338  P    P      07 02 40.4 -2.3
           comp=Z,5.1nm,0.7s,baz=46,slow=4.7,SNR=23
109C  Camp Elliot, M    85.71  56  P    P      07 02 44.0 +0.7
           baz=297
CPE   Camp Elliot       85.71  56 eP    P      07 02 44.5 +1.1
           comp=Z,41nm,1.4s
FRD   Ford Ranch, An    85.82  55  P    P      07 02 44.5 +0.5
           baz=297,SNR=7.1
PFO   Pinyon Flats O    85.87  55  P    P      07 02 45.0 +0.7
           baz=297,SNR=14
PFO   Pinyon Flats O    85.87  55 eP    P      07 02 45.0 +0.7
           comp=Z,18nm,1.0s
PFO   Pinyon Flats O    85.87  55 eP    P      07 02 45.0 +0.7
PFO                                pmax  pmax
           comp=Z,18nm,1.0s
XPFO  Piæon Flat        85.87  55 eP    P      07 02 45.0 +0.7
           comp=Z,19nm,1.0s
CTU   Camp Tracy        85.89  47 eP    P      07 02 44.6 +0.3
           comp=Z,14nm,0.8s
TCUT  Toone Canyon      85.91  46 eP    P      07 02 45.8 +1.3
           comp=Z,23nm,0.7s
GMRC  Granite Mounta    85.93  54  P    P      07 02 45.5 +0.9
           baz=297,SNR=22
ILULI Ilulissat         85.96   5 eP    P      07 02 44.1 +0.3
           comp=Z,20nm,0.7s
ILULI Ilulissat         85.96   5 eP    P      07 02 44.1 +0.3
ILULI                              pmax  pmax
           comp=Z,20nm,0.7s
NLU   North Lily Min    86.03  48 eP    P      07 02 46.4 +1.3
           comp=Z,12nm,0.8s
BELC  Belle Mtn. Jos    86.04  54  P    P      07 02 45.7 +0.5
           baz=297,SNR=11
BAR   Barrett           86.13  56 eP    P      07 02 46.4 +0.9
           comp=Z,14nm,1.0s
JLU   Jordanelle        86.14  47 eP    P      07 02 47.1 +1.5
           comp=Z,14nm,0.8s
LDFC  Landfair          86.20  53 eP    P      07 02 47.1 +1.2
           comp=Z,41nm,0.8s
MONP2 Monument Peak     86.22  56  P    P      07 02 46.6 +0.5
           baz=297,SNR=14
LAO   LASA Array        86.28  40  P    P      07 02 46.9 +0.9
           baz=302
LAO   LASA Array        86.28  40 eP    P      07 02 47.5 +1.5
           comp=Z,21nm,1.0s
BW06  Boulder Array     86.29  44  P    P      07 02 46.8 +0.4
           baz=300
BW06  Boulder Array     86.29  44 eP    P      07 02 47.7 +1.3
           comp=Z,8.0nm,1.0s
PD31  Pinedale Array    86.29  44 eP    P      07 02 47.3 +0.9
PDAR  Pinedale Array    86.29  44  P    P      07 02 46.4 +0.1
           comp=Z,5.8nm,0.9s,baz=272,slow=2.1,SNR=38
PDAR                               pP   pP     07 03 14.7 -1.3
           comp=Z,3.8nm,0.9s,baz=230,slow=3.7,SNR=5.2
PDAR  Pinedale Array    86.29  44 eP    P      07 02 47.1 +0.7
PDAR                               pP   pP     07 03 14.7 -1.3
CCUT  Cedar City        86.30  50 eP    P      07 02 47.5 +1.1
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           comp=Z,14nm,1.2s
MPU   Maple Canyon      86.30  47 eP    P      07 02 47.7 +1.3
           comp=Z,12nm,0.9s
DGMT  Dagmar            86.46  37  P    P      07 02 47.1 +0.3
           baz=304
DGMT  Dagmar            86.46  37 eP    P      07 02 47.5 +0.7
SZCU  Shurtz Canyon     86.47  50 eP    P      07 02 48.4 +1.1
           comp=Z,8.7nm,1.1s
IKP   In-Ko-Pah, Jac    86.57  56  P    P      07 02 48.3 +0.6
           baz=297,SNR=8.8
IRM   Iron Mountain     86.60  54  P    P      07 02 48.6 +0.8
           baz=298,SNR=7.8
BC3   Big Chuckawall    86.60  55  P    P      07 02 48.8 +0.9
           baz=298,SNR=14
LCMT  Little Creek M    86.63  51 eP    P      07 02 49.3 +1.3
           comp=Z,20nm,0.8s
MSU   Marysvale         86.66  49 eP    P      07 02 50.1 +1.9
SWSC  Sam W. Stewart    86.67  55  P    P      07 02 48.6 +0.6
           baz=297
NEE2  Needles Airpor    86.70  53  P    P      07 02 48.9 +0.8
           baz=298
MTPU  Mount Pierson     86.88  49 eP    P      07 02 50.8 +1.3
           comp=Z,11nm,0.9s
KNB   Kanab             86.93  51 eP    P      07 02 51.3 +1.8
           comp=Z,44nm,0.8s
TMUT  Trail Mountain    86.94  48 eP    P      07 02 51.3 +1.7
           comp=Z,8.2nm,1.1s
PKCU  Pink Cliffs       87.08  50 eP    P      07 02 52.9 +2.5
           comp=Z,20nm,1.4s
P17A  Butcher Ranch,    87.17  48 eP    P      07 02 51.9 +1.3
           comp=Z,17nm,1.1s
Y12C  Blythe            87.24  54  P    P      07 02 51.8 +1.0
           baz=298,SNR=8.3
Y12C  Blythe            87.24  54 eP    P      07 02 52.4 +1.6
           comp=Z,16nm,0.9s
PDMCI Parker Dam,Lak    87.27  53  P    P      07 02 51.4 +0.5
           baz=298,SNR=6.9
BR131 Keskin Array S    87.31 313 eP    P      07 02 50.2 -1.0
BRTR  Keskin Array B    87.31 313  P    P      07 02 49.3 -1.9
           comp=Z,3.3nm,0.7s,baz=81,slow=3.6,SNR=12
BRTR  Keskin Array B    87.31 313 i P   P      07 02 49.7 -1.5
BRTR                               pmax  pmax
           comp=Z,3.0nm,0.7s
GLA   Glamis            87.34  55  P    P      07 02 52.2 +0.9
           baz=298,SNR=5.7
GLA   Glamis            87.34  55 eP    P      07 02 53.0 +1.6
           comp=Z,25nm,0.9s
GLA   Glamis            87.34  55 eP    P      07 02 53.0 +1.6
GLA                                pmax  pmax
           comp=Z,25nm,0.9s
P18A  Preston Nutter    87.42  47 eP    P      07 02 53.0 +1.0
           comp=Z,3.0nm,0.7s
SRU   San Rafael Swe    87.49  48 eP    P      07 02 53.0 +0.8
           comp=Z,14nm,0.8s
SRU   San Rafael Swe    87.49  48 eP    P      07 02 53.0 +0.8
SRU                                pmax  pmax
           comp=Z,14nm,0.8s
BUR08 Bucovina Ar. S    88.20 323 eP    P      07 02 54.5 -0.8
BUR04 Bucovina Ar. S    88.21 323 eP    P      07 02 53.6 -1.6
K22A  Casper            88.26  43  P    P      07 02 56.1 +0.4
           baz=302
O20A  White River Ci    88.49  46  P    P      07 02 57.2 +0.3
           baz=301
O20A  White River Ci    88.49  46 eP    P      07 02 57.7 +0.8
           comp=Z,4.9nm,0.8s
WUAZ  Wupatki           88.68  51  P    P      07 02 59.0 +1.2
           baz=300
WUAZ  Wupatki           88.68  51 eP    P      07 02 58.1 +0.3
           comp=Z,16nm,0.8s
PV09  Paradox Valley    88.74  48 eP    P      07 02 59.4 +1.2
PV21  Cone Mtn., Par    88.81  48 eP    P      07 02 59.6 +1.1
           comp=Z,14nm,1.2s
PV23  Carpenter Ridg    88.84  48 eP    P      07 02 59.7 +1.0
           comp=Z,10nm,0.7s
PV10  Paradox Valley    88.86  48 eP    P      07 02 59.9 +1.2
PV14  Lion Creek, Pa    88.88  48 eP    P      07 02 59.8 +1.0
           comp=Z,13nm,1.1s
PV20  West Nyswonger    88.93  48 eP    P      07 03 00.2 +1.3
           comp=Z,6.4nm,0.8s
PV19  Morning Glory     88.93  48 eP    P      07 03 00.1 +1.1
           comp=Z,7.1nm,0.7s
PV22  Blue Mesa, Par    88.95  48 eP    P      07 03 00.8 +1.8
           comp=Z,3.7nm,0.9s
PV17  East Wray Mesa    88.97  48 eP    P      07 02 59.0 -0.1
           comp=Z,10nm,1.1s
RSSD  Black Hills       88.98  41  P    P      07 02 59.6 +0.5
           baz=304
RSSD  Black Hills       88.98  41 eP    P      07 03 00.2 +1.1
           comp=Z,8.7nm,1.0s
RSSD  Black Hills       88.98  41 eP    P      07 03 00.2 +1.1
RSSD                               pmax  pmax
           comp=Z,9.0nm,1.0s
PV16  Nyswonger Mesa    88.98  48 eP    P      07 03 00.3 +1.1
           comp=Z,9.7nm,1.0s
PV11  David Mesa, Pa    89.02  48 eP    P      07 03 00.6 +1.2
           comp=Z,14nm,1.1s
PV18  Skein Mesa, Pa    89.02  48 eP    P      07 02 59.1 -0.3
           comp=Z,4.7nm,0.8s
PV03  Paradox Valley    89.05  48 eP    P      07 02 59.5 -0.1
PV13  Radium Mtn., P    89.12  48 eP    P      07 03 00.1 +0.2
           comp=Z,4.2nm,0.6s
PV02  Paradox Valley    89.15  48 eP    P      07 03 01.2 +1.1
           comp=Z,4.0nm,0.9s
PV01  Paradox Valley    89.30  48 eP    P      07 03 01.7 +0.9
214A  Organ Pipe Nat    89.36  55  P    P      07 03 02.3 +1.4
           baz=299,SNR=14
N23A  Red Feather La    89.57  44  P    P      07 03 03.3 +1.3
           baz=303
N23A  Red Feather La    89.57  44 eP    P      07 03 03.4 +1.4
           comp=Z,10nm,0.8s
ULM   Lac du Bonnet     89.75  33  P    P      07 03 02.3  0.0
           comp=Z,2.2nm,0.5s,baz=327,slow=6.5,SNR=3.4
SMCO  Snowmass          89.82  46 eP    P      07 03 04.8 +1.3
           comp=Z,5.5nm,0.8s
MVCO  Mesa Verde        89.83  49  P    P      07 03 04.1 +0.8
           baz=301
MVCO  Mesa Verde        89.83  49 eP    P      07 03 04.5 +1.2
           comp=Z,3.4nm,0.8s
W18A  Petrified Fore    90.04  51  P    P      07 03 05.4 +1.1
           baz=301
ISCO  Idaho Springs     90.38  45  P    P      07 03 06.6 +0.8
           baz=303
ISCO  Idaho Springs     90.38  45 eP    P      07 03 07.5 +1.6
           comp=Z,3.1nm,0.8s
ISCO  Idaho Springs     90.38  45 eP    P      07 03 07.5 +1.6
ISCO                               pmax  pmax
           comp=Z,3.0nm,0.8s
S22A  4UR Ranch, Cre    90.68  48  P    P      07 03 08.1 +0.8
           baz=302
S22A  4UR Ranch, Cre    90.68  48 eP    P      07 03 08.4 +1.1
           comp=Z,3.7nm,0.9s
TUC   Tucson            90.69  54  P    P      07 03 08.3 +1.1
           baz=300
TUC   Tucson            90.69  54 eP    P      07 03 07.9 +0.8
           comp=Z,6.9nm,1.1s
TUC   Tucson            90.69  54 eP    P      07 03 07.9 +0.8
TUC                                pmax  pmax
           comp=Z,7.0nm,1.1s
A33A  Warroad           90.84  34  P    P      07 03 07.0 -0.4
           baz=310
AGMN  Agassiz Nation    91.01  34  P    P      07 03 08.3 +0.1
           baz=310
AGMN  Agassiz Nation    91.01  34 eP    P      07 03 09.0 +0.7
           comp=Z,9.2nm,0.8s
Q24A  Divide            91.13  46  P    P      07 03 09.7 +0.3
           baz=303
C33A  Trail             91.41  35  P    P      07 03 10.1 +0.1
           baz=310
B34A  Aery, Baudette    91.51  34  P    P      07 03 10.4 -0.1
           baz=311
SDCO  Great Sand Dun    91.57  47  P    P      07 03 12.3 +0.9
           baz=303
SDCO  Great Sand Dun    91.57  47 eP    P      07 03 12.4 +1.0
           comp=Z,7.4nm,0.9s
C34A  RKJ Ranch, Bem    91.92  34  P    P      07 03 12.4  0.0
           baz=311
OGNE  Ogallala          92.00  43  P    P      07 03 13.6 +0.5
           baz=306
B35A  Bob, Littlefor    92.05  33  P    P      07 03 13.3 +0.2
           baz=312
G32A  Webster           92.07  37  P    P      07 03 13.5 +0.3
           baz=309
HSIG                    92.19  57 eP    P      07 03 15.3 +1.2
           comp=Z,11nm,0.9s
C35A  Jirik Farms, M    92.36  34  P    P      07 03 14.4 -0.1
           baz=311
TASM  ASL Pad, Albuq    92.42  50  P    P      07 03 16.3 +1.0
           baz=302
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ANMO	Albuquerque	92.42	50	P	P	07 03 16.3	+1.0
	baz=302						
ANMO	Albuquerque	92.42	50	*e*P	P	07 03 16.5	+1.2
	comp=Z,14nm,1.0s						
ANMO	Albuquerque	92.42	50	*e*P	P	07 03 16.5	+1.2
ANMO				pmax	pmax		
	comp=Z,15nm,1.0s						
TASL	Snake Pit, Alb	92.42	50	P	P	07 03 16.5	+1.2
	baz=302						
E34A	Wadena	92.52	35	P	P	07 03 16.3	+1.1
	baz=310						
T25A	Trinidad	92.62	47	P	P	07 03 16.8	+0.6
	baz=304						
T25A	Trinidad	92.62	47	*e*P	P	07 03 17.7	+1.5
	comp=Z,18nm,1.1s						
D35A	Remer	92.73	34	P	P	07 03 16.5	+0.3
	baz=311						
KSCO	Kaye Shedlock'	92.74	45	P	P	07 03 16.9	+0.3
	baz=305						
121A	Cookes Peak, D	92.76	52	P	P	07 03 17.8	+1.0
	baz=302						
E35A	Pequot Lakes	92.90	35	P	P	07 03 17.3	+0.3
	baz=311						
C36A	Pine Crest Far	92.90	33	P	P	07 03 17.1	+0.1
	baz=312						
G34A	Benson	93.09	37	P	P	07 03 18.3	+0.4
	baz=310						
D36A	Goodland	93.12	34	P	P	07 03 17.6	-0.4
	baz=312						
C37A	Embarrass	93.25	33	P	P	07 03 18.8	+0.2
	baz=313						
F35A	Swanville	93.27	36	P	P	07 03 19.1	+0.5
	baz=311						
GERES	GERESS Array B	93.34	329	P	P	07 03 17.1	-2.1
	comp=Z,1.5nm,0.8s,baz=52,slow=5.2,SNR=4.9						
EYMN	Ely	93.44	33	P	P	07 03 19.8	+0.3
	baz=313						
E36A	McGregor	93.52	34	P	P	07 03 19.2	-0.7
	baz=312						
C38A	Sawbill Land.	93.70	33	P	P	07 03 20.7	0.0
	baz=314						
E38A	The Farm, Brul	94.33	34	P	P	07 03 23.7	+0.1
	baz=313						
C40A	Isle Royale Na	94.59	32	P	P	07 03 23.8	-0.9
	baz=315						
F38A	Pierce - Schro	94.60	34	P	P	07 03 25.0	+0.2
	baz=313						
SPMN	Marine on St.	94.62	35	P	P	07 03 25.0	+0.2
	baz=312						
MNTX	Cornudas Mount	94.92	52	P	P	07 03 27.4	+0.8
	baz=303						
MNTX	Cornudas Mount	94.92	52	*e*P	P	07 03 27.8	+1.2
	comp=Z,5.5nm,0.8s						
E39A	Mellen	94.98	33	P	P	07 03 26.5	-0.1
	baz=314						
J36A	Seneca 1, Swea	95.04	37	P	P	07 03 27.0	+0.2
	baz=311						
I37A	Lemond, Waseca	95.10	36	P	P	07 03 26.4	-0.7
	baz=312						
F39A	Loretta	95.12	34	P	P	07 03 26.2	-1.0
	baz=314						
G38A	Ridgeland	95.15	35	P	P	07 03 26.7	-0.6
	baz=313						
H38A	Maiden Rock	95.26	35	P	P	07 03 27.7	-0.2
	baz=313						
E40A	Wakefield	95.26	33	P	P	07 03 27.7	-0.1
	baz=314						
G39A	Holcombe	95.42	34	P	P	07 03 28.5	-0.1
	baz=314						
K36A	Gilmore City	95.43	38	P	P	07 03 28.5	-0.2
	baz=311						
D41A	Chassel	95.48	32	P	P	07 03 29.1	+0.3
	baz=316						
F40A	Park Falls	95.52	33	P	P	07 03 29.2	+0.2
	baz=314						
I38A	Scanlan Farm,	95.66	36	P	P	07 03 30.0	+0.3
	baz=312						
K37A	Belmond	95.80	37	P	P	07 03 30.1	-0.3
	baz=311						
G40A	Rib Lake	95.93	34	P	P	07 03 30.5	-0.4
	baz=314						
F41A	Three Lakes	96.15	33	P	P	07 03 31.3	-0.6
	baz=315						
I39A	Houston	96.22	36	P	P	07 03 31.6	-0.6
	baz=313						
N36A	Muff Farm, Cla	96.32	40	P	P	07 03 32.3	-0.5
	baz=310						
KSU1	Kansas State U	96.43	42	P	P	07 03 33.1	-0.2
	baz=309						
J39A	Decorah	96.47	36	P	P	07 03 32.8	-0.6
	baz=313						
E43A	Lone Tree Farm	96.72	32	P	P	07 03 34.2	-0.3
	baz=317						
I41A	Arkdale	96.94	35	P	P	07 03 33.9	-1.6
	baz=314						
J40A	Soldiers Grove	96.94	36	P	P	07 03 34.7	-0.8
	baz=314						
L39A	Vinton	97.13	37	P	Pdif	07 03 36.5	+0.1
	baz=313						
TXAR	Lajitas Array	97.45	53	P	Pdif	07 03 39.5	+1.2
	comp=Z,1.5nm,0.7s,baz=273,slow=2.9,SNR=13						
TXAR				PKKP	PKKPbc	07 20 15.1	+0.2
	comp=Z,0.3nm,0.7s,baz=123,slow=4.6,SNR=5.4						
WMOK	Wichita Mounta	97.74	46	P	P	07 03 39.0	-0.3
	baz=307						
BOSA	Boshof	123.59	251	PKP	PKPdf	07 09 01.6	+0.2
	comp=Z,1.8nm,0.7s,baz=105,slow=6.1,SNR=5.0						
TORD	Torodi Ar. Bea	125.79	309	PKP	PKPdf	07 09 04.8	-1.2
	comp=Z,5.1nm,0.8s						
KOWA	Kowa	128.66	316	PKP	PKPdf	07 09 11.5	+0.1
	comp=Z,9.3nm,0.5s,baz=51,slow=3.1,SNR=24						
DBIC	Dimbokro	134.91	309	PKP	PKPdf	07 09 23.1	-0.1
	comp=Z,5.6nm,0.7s,baz=38,slow=1.7,SNR=7.1						
PTGA	Pitinga	148.34	45	PKPbc	PKPbc	07 09 50.8	+0.1
	comp=Z,10nm,0.7s,baz=305,slow=5.0,SNR=16						
PTGA	Pitinga	148.34	45	*e*PKPdf	PKPdf	07 09 47.4	+0.3
PLCA	Paso Flores	148.73	129	PKPbc	PKPbc	07 09 51.6	+0.7
	comp=Z,11nm,0.9s,baz=252,slow=3.8,SNR=22						
PLCA	Paso Flores	148.73	129	*e*PKPbc	PKPbc	07 09 51.8	+0.8
GO05	HualaæØ	149.22	117	*e*PKPbc	PKPbc	07 09 52.3	0.0
ROC1	El Roble	150.29	114	*e*PKPbc	PKPbc	07 09 55.2	-0.1
MNMC	Minye Minye	150.53	85	*e*PKPbc	PKPbc	07 09 56.9	+0.6
PEL	Peldehue	150.54	114	*e*PKPbc	PKPbc	07 09 55.6	0.0
PB11	IPOC Station P	150.65	87	*e*PKPbc	PKPbc	07 09 56.8	+0.4
LPAZ	La Paz	150.94	79	PKPbc	PKPbc	07 09 57.9	+0.2
	comp=Z,4.2nm,0.5s,baz=337,slow=1.5,SNR=19						
LPAZ	La Paz	150.94	79	*e*PKPbc	PKPbc	07 09 58.2	+0.5
PB01	IPOC Station P	151.12	89	*e*PKPbc	PKPbc	07 09 57.8	+0.4
SAML	Samuel	151.64	61	*e*PKPdf	PKPdf	07 09 51.4	-0.9
SAML				*e*PKPbc	PKPbc	07 09 58.0	-0.6
SAML	Samuel	151.64	61	*e*PKIKP	PKPdf	07 09 51.4	-0.9
GO02	Mina Guanaco	151.69	98	*e*PKPbc	PKPbc	07 09 59.2	+0.4

IDC 20 06:51:02.3±2.2**, 54°.02S**×**29°.65W, h0**^{km}**, mb4.2**/1**, mb1 4.2**/1**, mb1mx3.6**/37**, mbtmp4.2**/1**, Error ellipse: s-maj=114.1km s-min=75.5km az=139.0, South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TORD	Torodi Ar. Bea	72.03	32	P	P	07 02 28.0	0.0
	2.7nm,1.1s,baz=197,slow=4.5						
ILAR	Eielson Array	147.70	315	PKPbc	PKPbc	07 10 46.6	-0.7
	0.8nm,0.9s,baz=112,slow=2.5,SNR=5.4						
SONM	Songino Array	151.98	85	PKPbc	PKPbc	07 10 58.4	-0.1
	0.5nm,0.8s,baz=234,slow=5.0,SNR=4.4						

MOS ***20*** *06:52:46.0±1.0, 8°.16N×38°.19W, h10*^{km}*, mb4.9/25, Error ellipse: s-maj=11.8km s-min=8.8km az=61.3*

IDC ***20*** *06:52:46.2±0.5, 8°.23N×38°.18W, h0*^{km}*, mb4.4/23, mb1 4.5/24, mb1mx4.3/65, mbtmp4.4/24, ML4.8/1, MS4.8/3, Ms1 4.8/3, ms1mx4.2/54, Error ellipse: s-maj=16.7km s-min=12.2km az=148.0*

ISCJB ***20*** *06:52:47.0±0.3, 8°.17N±0°.05×38°.19W±0°.04, h16*^{km}*, mb4.7/106, MS4.8/5, Error ellipse: s-maj=7.2km s-min=4.8km az=162.8*

NEIC ***20*** *06:52:47.8±0.2, 8°.16N×38°.13W, h10*^{km}*, mb4.8/68, Error ellipse: s-maj=5.3km s-min=4.2km az=176.0*

BJI ***20*** *06:52:47.7, 8°.10N×38°.10W, h15*^{km}*, Ms4.6/1, Ms7 4.5/1*

CSEM ***20*** *06:52:48.0±0.1, 8°.13N×38°.15W, h10*^{km}*, mb4.8/73, Error ellipse: s-maj=5.8km s-min=3.7km az=162.0*

ISC 20 06:52:48.6±0.4**, 8°.17N**±0°.07×**38°.15W**±0°.07**, h16**^{km}**, n189, σ1**^{s}**.11**/177**, mb4.8**/106**, MS4.9**/5**, 4C-1D, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RCBR	Riachuelo	14.08	171	Pn	Pn	06 56 07.6	0.0
	4.3nm,0.3s,baz=2.2,slow=0.8,SNR=8.4						
RCBR	Riachuelo	14.08	171	*e*Pn	Pn	06 56 07.0	-0.6
RCBR	Riachuelo	14.08	171	*e*P	Pn	06 56 07.0	-0.6
SACV	Santiago Islan	15.76	63	*e*Pn	Pn	06 56 22.2	-7.9
	67nm,0.8s						
PTGA	Pitinga	23.48	249	P	P	06 57 57.4	-0.5
	3.8nm,0.4s,baz=70,slow=12,SNR=9.5						
PTGA				LR	LR	07 06 01.0	
	comp=Z,536nm,20.5s,baz=339,slow=34						
PTGA	Pitinga	23.48	249	*e*P	P	06 57 57.5	-0.4
	15nm,0.9s						
BDFB	Brasilia	25.59	202	*e*P	P	06 58 18.1	+0.6
	62nm,1.0s						
BDFB	Brasilia	25.59	202	*e*P	P	06 58 18.1	+0.6
BDFB				pmax	pmax		
	comp=Z,62nm,1.0s						
H10N3	ASCENSION HYDR	28.43	123	T	T	07 28 22.5	
	baz=304,slow=75,SNR=27						
H10N2	ASCENSION HYDR	28.44	123	T	T	07 28 25.5	
	baz=304,slow=75,SNR=32						
H10N1	ASCENSION HYDR	28.45	123	T	T	07 28 25.9	
	baz=304,slow=75,SNR=57						
H10S3	ASCENSION HYDR	28.93	126	T	T	07 29 12.0	
	baz=305,slow=75,SNR=23						
H10S1	ASCENSION HYDR	28.93	125	T	T	07 29 12.4	
	baz=305,slow=75,SNR=27						
H10S2	ASCENSION HYDR	28.94	125	T	T	07 29 13.3	
	baz=305,slow=75,SNR=30						
SAML	Samuel	30.19	236	*e*P	P	06 58 58.8	+0.3
	comp=Z,8.2nm,0.8s						
SAML	Samuel	30.19	236	*e*P	P	06 58 58.8	+0.3
SAML				pmax	pmax		
	comp=Z,8.0nm,0.8s						
PMOZ	Porto Moniz, M	31.29	35	*e*T	T	07 31 31.8	
FUL	Funchal	31.33	36	*e*T	T	07 31 26.5	
PMAR	Madeira	31.38	36	*e*P	P	06 59 09.1	+0.1
	comp=Z,250nm,1.7s						
PMAR	Madeira	31.38	36	*e*T	T	07 31 29.7	
PMPS	Porto Santo	31.95	36	*e*P	P	06 59 14.0	+0.1
	comp=Z,222nm,1.5s						
SIV	San Ignacio	33.04	223	P	P	06 59 24.4	+0.8
	comp=Z,5.4nm,0.8s,baz=77,slow=10,SNR=21						
DBIC	Dimbokro	33.04	90	P	P	06 59 22.8	-0.9
	comp=Z,5.6nm,0.6s,baz=269,slow=9.8,SNR=6.0						
DBIC	Dimbokro	33.04	90	*e*P	P	06 59 23.3	-0.4
	comp=Z,16nm,1.0s						
DBIC	Dimbokro	33.04	90	*e*P	P	06 59 23.3	-0.4
DBIC				pmax	pmax		
	comp=Z,16nm,1.0s						
KOWA	Kowa	34.02	76	P	P	06 59 31.5	-0.7
	comp=Z,9.7nm,0.6s,baz=256,slow=8.3,SNR=16						
KOWA	Kowa	34.02	76	*e*P	P	06 59 31.5	-0.7
	comp=Z,29nm,1.4s						
LPAZ	La Paz	38.35	231	P	P	07 00 10.3	+0.4
	comp=Z,4.6nm,0.8s,baz=41,slow=7.0,SNR=18						
LPAZ	La Paz	38.35	231	*e*P	P	07 00 09.5	-0.5
	comp=Z,7.6nm,0.9s						
LPAZ	La Paz	38.35	231	*e*P	P	07 00 09.4	-0.5
TOA0	Torodi Ar. Sit	39.44	79	*e*P	P	07 00 17.5	-0.9
	comp=Z,20nm,0.8s						
TORD	Torodi Ar. Bea	39.44	79	P	P	07 00 16.5	-1.9
	comp=Z,18nm,0.8s,baz=272,slow=8.1						
MDT	Midelt	39.56	47	P	P	07 00 19.8	+0.5
	comp=Z,5.0nm,0.9s,baz=236,slow=9.3,SNR=8.0						
PBDV	Barranco-do-Ve	39.85	39	*e*P	P	07 00 21.6	0.0
	comp=Z,49nm,1.5s						
PNCL	Nicolau / Gran	40.04	37	*e*P	P	07 00 23.8	+0.7
	comp=Z,53nm,1.4s						
MESJ	Messejana	40.05	38	*e*P	P	07 00 24.0	+0.8
PVAQ	Vaqueiros	40.08	39	*e*P	P	07 00 24.3	+0.9
	comp=Z,48nm,1.6s						
PBEJ	Beja	40.38	38	*e*P	P	07 00 27.8	+1.9
	comp=Z,31nm,1.3s						
EVO	Evora	40.62	37	*e*P	P	07 00 28.3	+0.4
	comp=Z,29nm,1.2s						
PMTG	Montargil	40.84	36	*e*P	P	07 00 30.3	+0.6
	comp=Z,20nm,1.2s						
PBAR	Barrancos	40.98	38	*e*P	P	07 00 31.1	+0.2
	comp=Z,40nm,1.1s						
PESTR	Estremoz	41.09	37	*e*P	P	07 00 33.6	+1.8
	comp=Z,23nm,1.9s						
MNMC	Minye Minye	41.19	229	*e*P	P	07 00 33.1	0.0
	comp=Z,13nm,1.4s						
PCAS	Casmilo, Conde	41.34	35	*e*P	P	07 00 35.4	+1.6
	comp=Z,35nm,1.8s						
PMRV	Marv??o	41.57	37	*e*P	P	07 00 36.6	+0.9
	comp=Z,34nm,1.3s						
MTE	Manteigas	42.11	35	*e*P	P	07 00 41.4	+1.2
	comp=Z,32nm,1.8s						
MTE	Manteigas	42.11	35	*e*PP	PP	07 02 19.1	+1.3
PVIS	Viseu	42.12	35	*e*P	P	07 00 40.9	+0.6
	comp=Z,27nm,1.3s						
PVRL	Vila Real	42.60	34	*e*P	P	07 00 44.7	+0.6
	comp=Z,29nm,1.6s						
POLO	Lamas de Olo	42.62	34	*e*P	P	07 00 44.7	+0.3
	comp=Z,9.9nm,1.8s						
PGAV	Gavieira, Arco	42.76	33	*e*P	P	07 00 46.2	+0.7
	comp=Z,33nm,1.3s						
MVO	Moncorvo	42.91	35	*e*P	P	07 00 47.0	+0.3
	comp=Z,19nm,1.4s						
PBRG	Braganca	43.49	34	*e*P	P	07 00 52.0	+0.6
	comp=Z,20nm,1.5s						
PBRG	Braganca	43.49	34	*e*PP	PP	07 02 35.0	+2.3
ESDC	Sonseca Array	43.80	39	P	P	07 00 54.1	+0.2
	comp=Z,3.5nm,0.9s,baz=237,slow=8.6,SNR=10.0						
ES19	SONSECA Array	43.85	39	*e*P	P	07 00 54.4	+0.1
TAM	Tamanrasset	44.34	66	*e*P	P	07 00 58.5	-0.1
TAM	Tamanrasset	44.34	66	*e*P	P	07 00 58.5	-0.1
GO02	Mina Guanaco	45.11	222	*e*P	P	07 01 04.2	-0.7
	comp=Z,7.8nm,0.8s						
PQI	Presque Isle	46.09	332	*e*P	P	07 01 12.4	+0.5
	comp=Z,26nm,1.5s						
BG3	Lake Jocassee	48.89	310	*e*P	P	07 01 33.8	-0.2
	comp=Z,12nm,1.0s						
M54A	Oil Creek Stat	49.47	319	*e*P	P	07 01 39.3	+1.0
	comp=Z,23nm,1.3s						
THTN	Thala	50.66	50	*e*P	P	07 01 47.7	+0.2
	comp=Z,8.4nm,0.8s						
W50A	Signal Mountai	50.79	309	*e*P	P	07 01 49.6	+1.2
	comp=Z,15nm,1.3s						
H09W1	TRISTAN DA CUN	51.11	153	T	T	07 56 53.4	
	SNR=4.7						
KEST	Kesra	51.22	50	P	P	07 01 52.2	+0.5
	comp=Z,17nm,0.9s,baz=204,slow=3.9,SNR=14						
KEST	Kesra	51.22	50	*e*P	P	07 01 52.0	+0.2
	comp=Z,15nm,0.8s						
LRAL	Lakeview Retre	51.41	306	*e*P	P	07 01 53.7	+0.6
	comp=Z,5.3nm,0.8s						
X48A	Hartselle	51.88	308	*e*P	P	07 01 57.4	+0.8
	comp=Z,3.9nm,0.8s						
V48A	Smith Brothers	52.13	309	*e*P	P	07 01 59.5	+1.1
	comp=Z,7.1nm,0.9s						
T47A	Sharon Grove	52.77	311	*e*P	P	07 02 04.0	+0.9
	comp=Z,13nm,1.0s						
WVT	Waverly	53.03	309	*e*P	P	07 02 05.5	+0.4
	comp=Z,6.7nm,0.6s						
WVT	Waverly	53.03	309	*e*P	P	07 02 05.5	+0.4
WVT				pmax	pmax		
	comp=Z,7.0nm,0.6s						
BNI	Bardonecchia	53.33	39	*e*P	P	07 02 07.7	+0.4
	comp=Z,7.4nm,1.0s						
BNI	Bardonecchia	53.33	39	*e*P	P	07 02 07.7	+0.4
BNI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SIUC	Southern Illin	54.60	311	*e*P	P	07 02 16.6	+0.1
	comp=Z,13nm,0.9s						
DOU	Dourbes	54.81	32	⇓P	P	07 02 17.9	0.0
ECH	Echery	55.21	35	*e*P	P	07 02 20.7	-0.1
	comp=Z,8.1nm,1.0s						
ECH	Echery	55.21	35	*e*P	P	07 02 20.7	-0.1
ECH				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MEM	Membach	55.85	32	⇑P	P	07 02 25.1	-0.2
HGN	Heimansgroeve	55.90	32	*e*L	L	07 01 14.5	
	comp=Z,10μm,18.6s						
BFO	Black Forest	55.94	36	*i* P	P	07 02 26.8	+0.7
CCM	Cathedral Cave	56.23	311	*e*P	P	07 02 28.9	+0.6
	comp=Z,4.4nm,0.8s						
CCM	Cathedral Cave	56.23	311	*e*P	P	07 02 28.9	+0.6
CCM				pmax	pmax		
	comp=Z,4.0nm,0.8s						
WHAR	Wooly Hollow	56.25	307	*e*P	P	07 02 29.4	+0.9
	comp=Z,12nm,1.4s						
N41A	Harden Midland	56.79	314	*e*P	P	07 02 31.8	-0.4
	comp=Z,16nm,0.9s						
V40A	Witts Springs	56.80	308	*e*P	P	07 02 32.2	-0.3
	comp=Z,14nm,1.4s						
W40A	Ferguson Farm,	56.84	307	*e*P	P	07 02 33.6	+0.9
	comp=Z,26nm,1.3s						
G42A	Mountain	56.85	320	*e*P	P	07 02 33.0	+0.4
	comp=Z,8.3nm,0.7s						
R40A	Maddies Statio	57.07	311	*e*P	P	07 02 34.2	0.0
	comp=Z,4.7nm,0.9s						
PLCA	Paso Flores	57.08	209	P	P	07 02 33.8	-0.5
	comp=Z,2.3nm,0.9s,baz=88,slow=3.8,SNR=3.4						
PLCA	Paso Flores	57.08	209	*e*P	P	07 02 34.0	-0.3
	comp=Z,19nm,1.5s						
PLCA	Paso Flores	57.08	209	*e*P	P	07 02 34.0	-0.3
PLCA				pmax	pmax		
	comp=Z,19nm,1.5s						
JFWS	Jewell Farm	57.15	316	*e*P	P	07 02 34.9	+0.2
	comp=Z,12nm,0.7s						
JFWS	Jewell Farm	57.15	316	*e*P	P	07 02 34.9	+0.2
JFWS				pmax	pmax		
	comp=Z,12nm,0.7s						
P40A	Paris	57.28	312	*e*P	P	07 02 35.2	-0.5
	comp=Z,10nm,0.8s						
W39A	Magazine	57.41	307	*e*P	P	07 02 36.7	0.0
	comp=Z,18nm,1.4s						
F41A	Three Lakes	57.49	320	*e*P	P	07 02 37.0	-0.1
	comp=Z,24nm,1.4s						
L40A	Anamosa	57.51	315	*e*P	P	07 02 38.3	+0.9
	comp=Z,16nm,0.9s						
COWI	Conover	57.66	320	*e*P	P	07 02 39.1	+0.8
	comp=Z,6.0nm,1.0s						
S39A	Bolivar	57.70	310	*e*P	P	07 02 38.4	-0.3
	comp=Z,5.7nm,0.6s						
TIP	Timpagrande	57.91	49	*e*P	P	07 02 38.6	-1.7
	comp=Z,7.1nm,1.1s						
G40A	Rib Lake	58.01	319	*e*P	P	07 02 41.4	+0.7
	comp=Z,6.9nm,0.9s						
N39A	Derby Farms, D	58.03	313	*e*P	P	07 02 39.8	-1.2
	comp=Z,15nm,0.9s						
P38A	Dawn	58.40	312	*e*P	P	07 02 44.0	+0.4
	comp=Z,8.5nm,0.8s						
N37A	Lee Faris, Mou	59.23	313	*e*P	P	07 02 49.0	-0.3
	comp=Z,18nm,0.7s						
GEA0	GERESS Array S	59.34	37	*e*P	P	07 02 48.9	-1.2
GERES	GERESS Array B	59.34	37	P	P	07 02 49.1	-1.0
	comp=Z,1.4nm,0.8s,baz=264,slow=5.4,SNR=7.6						
KHC	Kasperske Hory	59.39	37	*e*P	P	07 02 50.0	-0.3
KHC	Kasperske Hory	59.39	37	*e*P	P	07 02 49.8	-0.6
	comp=Z,2.3nm,1.0s						
KHC	Kasperske Hory	59.39	37	*e*P	P	07 02 49.8	-0.6
KHC				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SPMN	Marine on St.	59.70	318	*e*P	P	07 02 51.9	-0.6
	comp=Z,13nm,0.6s						
CLL	Collm	60.02	34	*e*(P)	P	07 02 57.0	+2.4
CLL	Collm	60.02	34	*e*P	P	07 02 57.0	+2.4
CLL	Collm	60.02	34	*e*P	P	07 02 57.0	+2.4
F36A	Milaca	60.40	319	*e*P	P	07 02 57.2	-0.1
	comp=Z,4.1nm,0.9s						
KSU1	Kansas State U	60.56	310	*e*P	P	07 02 58.1	-0.4
	comp=Z,7.4nm,0.6s						
D36A	Goodland	60.63	320	*e*P	P	07 02 58.6	-0.3
	comp=Z,9.1nm,0.6s						
TTG	Podgorica	60.68	46	*e*P	P	07 02 59.9	+0.7
	comp=Z,16nm,0.9s						
TTG	Podgorica	60.68	46	*e*P	P	07 02 59.9	+0.7
TTG				pmax	pmax		
	comp=Z,16nm,0.9s						
G35A	Watkins	60.81	318	*e*P	P	07 02 59.9	-0.2
	comp=Z,22nm,0.7s						
TSUM	Tsumeb	61.27	117	P	P	07 03 06.2	+2.4
	comp=Z,4.6nm,0.8s,baz=287,slow=5.5,SNR=9.2						
WMOK	Wichita Mounta	61.32	305	*e*P	P	07 03 03.9	0.0
	comp=Z,4.7nm,1.3s						
WMOK	Wichita Mounta	61.32	305	*e*P	P	07 03 03.9	0.0
WMOK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
ECSD	EROS Data Cent	61.80	315	*e*P	P	07 03 06.3	-0.6
	comp=Z,4.8nm,0.9s						
BGNE	Belgrade	62.27	313	*e*P	P	07 03 09.5	-0.6
	comp=Z,36nm,0.8s						
VYHS	Vyhne	62.34	39	*e*P	P	07 03 07.3	-3.1
VYHS				pmax	pmax		
	comp=Z,2.0nm,0.8s						
VYHS	Vyhne	62.34	39	*e*P	P	07 03 07.3	-3.1
ULM	Lac du Bonnet	63.41	323	P	P	07 03 16.4	-1.1
	comp=Z,6.8nm,0.8s,baz=119,slow=6.9,SNR=6.4						
ULM	Lac du Bonnet	63.41	323	*e*P	P	07 03 18.1	+0.7
	comp=Z,11nm,0.9s						
NC602	NORSAR Array S	64.05	25	*e*P	P	07 03 22.1	+0.7
NC602	NORSAR Array S	64.05	25	*e*P	P	07 03 22.1	+0.7
NB2	NORSAR Subarra	64.08	24	P	P	07 03 22.1	+0.3
	comp=Z,23nm,1.4s,baz=236,slow=6.9						
NB2	NORSAR Subarra	64.08	24	P	P	07 03 22.1	+0.3
	comp=Z,23nm,1.4s,baz=236,slow=6.7,SNR=4.1						
NOA	NORSAR Array B	64.08	24	P	P	07 03 21.8	+0.1
	comp=Z,5.0nm,1.0s,baz=236,slow=6.7,SNR=4.0						
TX31	Lajitas Ar. Si	64.72	298	*e*P	P	07 03 26.4	-0.2
TXAR	Lajitas Array	64.72	298	P	P	07 03 26.3	-0.3
	comp=Z,0.7nm,0.5s,baz=103,slow=5.4,SNR=15						
MLR	Muntele Rosu	66.14	44	*e*P	P	07 03 36.0	+0.5
	comp=Z,18nm,0.9s						
MLR	Muntele Rosu	66.14	44	*e*P	P	07 03 36.0	+0.5
MLR				pmax	pmax		
	comp=Z,18nm,0.9s						
BUR08	Bucovina Ar. S	66.16	41	*e*P	P	07 03 36.1	+0.5
BUR04	Bucovina Ar. S	66.16	41	*e*P	P	07 03 36.3	+0.7
SDCO	Great Sand Dun	67.16	307	*e*P	P	07 03 41.0	-1.4
	comp=Z,4.7nm,1.0s						
ANMO	Albuquerque	67.60	304	*e*P	P	07 03 45.3	+0.2
	comp=Z,8.3nm,0.9s						
ANMO	Albuquerque	67.60	304	*i* P	P	07 03 44.0	-1.2
ANMO				pmax	pmax		
	comp=Z,11nm,1.0s						
KIEV	Kiev	69.43	39	*i* P	P	07 03 56.8	+0.8
KIEV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
AKASG	Malin Array Be	69.44	39	P	P	07 03 55.7	-0.4
	comp=Z,1.9nm,0.6s,baz=260,slow=6.0,SNR=7.9						
BRTR	Keskin Array B	70.82	51	P	P	07 04 05.5	+0.5
	comp=Z,3.2nm,0.7s,baz=263,slow=4.5,SNR=8.5						
BRTR	Keskin Array B	70.82	51	*i* P	P	07 04 07.3	+2.3
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BOSA	Boshof	71.19	124	P	P	07 04 08.2	+0.9
	comp=Z,4.9nm,1.0s,baz=317,slow=10.0,SNR=5.1						
BOSA	Boshof	71.19	124	*e*P	P	07 04 08.3	+0.9
	comp=Z,15nm,1.3s						
BOSA	Boshof	71.19	124	*e*P	P	07 04 08.3	+0.9
BOSA				pmax	pmax		
	comp=Z,15nm,1.3s						
YMR	Madison River	72.09	314	*e*P	P	07 04 13.9	+1.3
	comp=Z,18nm,1.0s						
HWUT	Hardware Ranch	72.23	311	*e*P	P	07 04 14.0	+0.6
	comp=Z,9.0nm,0.9s						
BGU	Big Grassy Mou	73.28	310	*e*P	P	07 04 20.8	+1.1
	comp=Z,10nm,1.2s						
DLMT	Dillon	73.31	315	*e*P	P	07 04 21.2	+1.4
	comp=Z,18nm,1.2s						
OBN	Obninsk	74.61	35	⇑*e*P	P	07 04 28.5	+1.6
OBN				pmax	pmax		
	comp=Z,10.0nm,0.6s						
OBN	Obninsk	74.61	35	*e*P	P	07 04 28.5	+1.6
	comp=Z,10.0nm,0.6s						
YKA	Yellowknife Ar	76.55	332	P	P	07 04 36.8	-1.1
	comp=Z,0.7nm,0.6s,baz=98,slow=5.9,SNR=8.4						
KLMR	Klimovskoe	76.90	29	*e*P	P	07 04 39.9	-0.1
KLMR				pmax	pmax		
	comp=Z,17nm,1.4s						
KLMR	Klimovskoe	76.90	29	*e*P	P	07 04 39.9	-0.1
KLMR				AMP		07 04 48.8	
	comp=Z,17nm,1.4s						
KVN	Kaiserville	77.11	308	*e*P	P	07 04 42.9	+1.0
	comp=Z,2.7nm,0.9s						
KVN	Kaiserville	77.11	308	*e*P	P	07 04 42.9	+1.0
KVN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NVAR	Mina Array Bea	77.27	308	LR	LR	07 38 14.9	
	comp=Z,500nm,18.1s,baz=22,slow=35						
KIV	Kislovodsk	77.79	47	⇑*e*P	P	07 04 46.6	+1.2
KIV				*e**PP	pP	07 04 48.7	-2.0
KIV				*e**SP	sP	07 04 51.5	-1.1
KIV				*e*		07 04 55.9	
KIV				S	S	07 14 39.0	+1.3
KIV				*e*		07 15 16.0	

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KIV				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KIV				MLR	MLR		
	comp=Z,706nm,16.0s						
K05A	Summer Lake	79.19	312	eP	P	07 04 54.4	+1.0
	comp=Z,6.5nm,0.9s						
PRGR	Permogore	79.91	29	eP	P	07 04 57.0	+0.5
PRGR				e		07 05 04.2	
PRGR				pmax	pmax		
	comp=Z,16nm,0.9s						
YBH	Yreka Blue Hor	80.57	311	eP	P	07 05 01.7	+1.0
	comp=Z,3.0nm,1.1s						
YBH	Yreka Blue Hor	80.57	311	eP	P	07 05 01.7	+1.0
YBH				pmax	pmax		
	comp=Z,3.0nm,1.1s						
SNAA	Sanae	83.01	169	P	P	07 05 12.6	-0.2
	comp=Z,1.8nm,0.9s,baz=309,slow=7.7,SNR=10						
SNAA	Sanae	83.01	169	eP	P	07 05 12.6	-0.2
	comp=Z,6.0nm,1.1s						
SNAA	Sanae	83.01	169	iP	P	07 05 13.1	+0.3
SNAA	Sanae	83.01	169	iP	P	07 05 13.1	+0.3
INK	Inuvik	84.46	338	P	P	07 05 20.7	+0.4
	comp=Z,2.1nm,0.7s,baz=62,slow=3.5,SNR=7.7						
INK	Inuvik	84.46	338	eP	P	07 05 20.2	0.0
	comp=Z,11nm,1.4s						
ARU	Arti	86.96	34c	iP	P	07 05 33.3	+0.4
ARU						07 08 52.3	
ARU				S	S	07 15 59.6	-11
ARU				SS	SS	07 21 50.6	-2.5
ARU				pmax	pmax		
	comp=Z,23nm,2.5s						
AKTK	Aktyubinsk	87.68	40	P	P	07 05 38.0	+1.4
AKTO	Aktyubinsk	87.68	40	P	P	07 05 38.0	+1.4
	comp=Z,3.3nm,0.8s,baz=295,slow=3.5,SNR=5.5						
AKTO	Aktyubinsk	87.68	40	P	P	07 05 38.0	+1.4
AKTO	Aktyubinsk	87.68	40	P	P	07 05 38.0	+1.4
OPO	Ambohidratompo	88.18	109	LR	LR	07 41 41.1	
	comp=Z,2µm,19.3s,baz=29,slow=33						
ABKAR	Akbulak array	89.12	40	eP	P	07 05 44.2	+0.8
ABKAR	Akbulak array	89.12	40	eP	P	07 05 44.2	+0.8
IL1	Eielson Array	90.50	336	eP	P	07 05 51.7	+2.2
ILAR	Eielson Array	90.50	336	P	P	07 05 50.7	+1.1
	comp=Z,0.6nm,0.7s,baz=63,slow=4.6,SNR=7.1						
GTA	Gaotai	118.71	36	ePKP	PKPdf	07 11 35.0	-1.7
GTA				sPKP		07 11 41.9	
LZH	Lanzhou	123.30	37	ePKP	PKPdf	07 11 41.0	-4.7
LZH				sPKP		07 11 55.4	
LZH				LR	LR		
	comp=Z,49nm,18.0s						
LZH				LR	LR		
	comp=Z,45nm,16.2s						
LZH				LR	LR		
	comp=Z,90nm,19.2s						
HHC	Hu-ho-hao-te	123.82	27	ePKP	PKPdf	07 11 40.8	-5.6
CD2	Chengdu	126.69	41	PKP	PKPdf	07 11 51.0	-1.1
NJ2	Nanjing	134.37	28	ePKP	PKPdf	07 12 05.4	-1.2

IDC 20 07:07:01.0±3.8, 14°.44N×124°.17E, h0km, mb3.3/3, mb1 3.5/3, mb1mx3.2/62, mbtmp3.3/3, Error ellipse: s-maj=307.9km s-min=26.5km az=63.0, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	35.60	163	P	P	07 14 01.0	+0.4
	0.3nm,0.6s,baz=345,slow=9.3,SNR=5.9						
ASAR	Alice Springs	39.05	166	P	P	07 14 29.2	-0.6
	0.3nm,0.4s,baz=339,slow=6.6,SNR=5.4						
MKAR	Makanchi Array	47.49	322	P	P	07 15 37.8	-0.1
	0.1nm,0.5s,baz=128,slow=6.3,SNR=2.6						

DDA 20 07:18:56.4, 39°.06N×41°.93E, h11km, Ml2.7
CSEM 20 07:18:58.9±0.3, 39°.24N×42°.13E, h5km, ML2.7, Error ellipse: s-maj=10.7km s-min=7.0km az=158.0
ISK 20 07:19:02.8, 38°.91N×41°.70E, h5km, ML2.7/9

ISC 20 07:18:56.6±1.2, 39°.10N±0°.02×42°.06E±0°.02, h1km±11km, n38, σ2.s38/53, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EKAR	Karacoban	0.15	2	iP	Pg	07 19 00.6	+1.0
EKAR				iS	Sg	07 19 10.4	+8.7
EKAR	Karacoban	0.15	2	P	Pg	07 19 00.6	+1.0
EKAR				S	Sg	07 19 10.4	+8.7
VRTB	Varto-Mus	0.47	277	PG	Pn	07 19 10.3	-0.4
VRTB				SG	Sb	07 19 15.8	+0.4
VRTB	Varto-Mus	0.47	277	eP	Pg	07 19 04.3	-1.4
VRTB				iS	Sb	07 19 17.0	+1.6
VRTB	Varto-Mus	0.47	277	P	Pg	07 19 04.3	-1.4
VRTB	Varto-Mus	0.47	277	ePg	Pn	07 19 10.3	-0.4
VRTB				eSg	Sb	07 19 15.8	+0.4
VRTB				S	Sb	07 19 17.0	+1.6
GURO	Guroymak-BITLI	0.55	182	PG	Pn	07 19 12.2	+0.4
GURO	Guroymak-BITLI	0.55	182	ePg	Pn	07 19 12.2	+0.4
ADCV	BITLIS_Adilcev	0.60	119	iP	Pg	07 19 07.3	-0.8
ADCV				iS	Sg	07 19 17.0	+1.1
ADCV	BITLIS_Adilcev	0.60	119	P	Pg	07 19 07.3	-0.8
ADCV				S	Sg	07 19 17.0	+1.1
TUTA	Tutak	0.66	63	iP	Pb	07 19 09.6	-1.5
TUTA				iS	Sb	07 19 20.1	-0.8
TUTA	Tutak	0.66	63	P	Pb	07 19 09.6	-1.5
TUTA				S	Sb	07 19 20.1	-0.8
BNGL	BINGOL	0.72	258	iP	Pg	07 19 06.7	-3.8
BNGL				iS	Sg	07 19 21.5	+1.7
EATA	Eleskirt	0.83	24	iP	Pg	07 19 12.1	-0.5
EATA				iS	Sn	07 19 26.3	-2.6
EATA	Eleskirt	0.83	24	P	Pg	07 19 12.1	-0.5
EATA				S	Sn	07 19 26.3	-2.6
HOMI	Horasan	0.95	353	iP	Pg	07 19 13.6	-1.3
HOMI				iS	Sn	07 19 36.8	+5.1
BNGB	Bingˆ¶l	1.08	265	PG	Pn	07 19 19.5	+0.5
BNGB				SG	Sg	07 19 31.7	+0.4
BGOL	Bingol	1.08	264	iP	Pg	07 19 12.1	-5.3
BGOL				iS	Sg	07 19 31.9	+0.3
SRTM	Siirt_Merkez	1.11	185	iP	Pg	07 19 15.8	-2.2
SRTM				iS	Sg	07 19 26.0	-6.5
VANB	Van	1.16	116	PN	Pn	07 19 30.8	+11
VANB	Van	1.16	116	ePn	Pn	07 19 30.8	+11
SVAN	Silvan-Diyarba	1.16	216	PG	Pn	07 19 20.3	+0.2
SVAN				SG	Sb	07 19 33.4	-1.8
SVAN	Silvan-Diyarba	1.16	216	ePg	Pn	07 19 20.3	+0.2
SVAN				eSg	Sb	07 19 33.4	-1.8
BINT	Bingol	1.24	260	ePg	Pn	07 19 19.5	-1.8
BINT				eSg	Sb	07 19 31.7	-5.9
SIRT	Sirnak	1.63	169	PN	Pg	07 19 32.4	+4.6
SIRT	Sirnak	1.63	169	ePn	Pg	07 19 32.4	+4.6
DIY	Diyarbakir	1.88	231	ePn	Pb	07 19 32.9	+1.2
DYBB	Diyarbakir	1.89	233	PN	Pb	07 19 32.9	+0.9
BAYT	Ayd˜–ntepe-Bay	1.96	312	PN	Pg	07 19 38.5	+4.3
BAYT	Ayd˜–ntepe-Bay	1.96	312	ePn	Pg	07 19 38.5	+4.3
MAZI	Mazidag	2.07	218	PN	Pb	07 19 35.3	+0.2
MAZI	Mazidag	2.07	218	ePn	Pb	07 19 35.3	+0.2
PTK	Pertek	2.09	265	PN	Pb	07 19 35.9	+0.5
PTK	Pertek	2.09	265	ePn	Pb	07 19 35.9	+0.5
CUKT	Cukurca	2.22	146	PN	Pg	07 19 42.7	+3.5
CUKT	Cukurca	2.22	146	ePn	Pg	07 19 42.7	+3.5
SVRC	Sivrice-ELAZID	2.27	252	PN	Pb	07 19 38.5	0.0
SVRC	Sivrice-ELAZID	2.27	252	ePn	Pb	07 19 38.5	0.0

IDC 20 07:27:40.6±2.3, 7°.70S×127°.66E, h0km, mb3.6/1, mb1 3.6/3, mb1mx3.4/50, mbtmp3.5/3, ML3.5/2, Error ellipse: s-maj=295.6km s-min=32.2km az=64.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.79	153	Pn	Pn	07 30 56.4	-1.0
	0.3nm,0.3s,baz=331,slow=13,SNR=18						
WRA				Sn	Sn	07 33 17.2	-14
	0.6nm,0.3s,baz=331,slow=23,SNR=9.2						
ASAR	Alice Springs	16.97	160	Pn	Pn	07 31 40.5	+0.9
	0.1nm,0.3s,baz=335,slow=9.4,SNR=7.6						
MKAR	Makanchi Array	67.56	328	P	P	07 38 38.9	0.0
	0.4nm,0.7s,baz=134,slow=7.8,SNR=5.6						

MEX 20 07:39:54.3±0.6, 16°.99N×100°.73W, h14km±7km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.45	83	iP	Pg	07 40 02.0	-1.3
CAIG				eS	Sg	07 40 08.3	-1.0
ZIIG	Zihuatanejo	0.93	311	eP	Pb	07 40 09.1	-3.1
ZIIG				eS	Sb	07 40 20.7	-3.7
ARIG	Puente Sto Nin	1.33	16	eP	Pn	07 40 14.7	-3.9
ARIG				eS	Sb	07 40 30.2	-5.9
MEIG	Mezcala	1.41	49	eP	Pn	07 40 16.1	-3.6
MEIG				iS	Sn	07 40 33.8	-4.4
PLIG	Platanillo	1.82	40	eP	Pn	07 40 22.7	-2.7
PLIG				eS	Sn	07 40 43.4	-4.9
TLIG	Tlapa	2.15	74	iP	Pn	07 40 27.5	-2.4
TLIG				iS	Sn	07 40 52.2	-4.2

IDC 20 07:50:01.1±2.2, 7°.66S×148°.14E, h0km, mb3.6/3, mb1 3.8/4, mb1mx3.5/46, mbtmp3.7/4, ML3.7/1, Error ellipse: s-maj=64.5km s-min=23.5km az=103.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	1.99	209	Pn	Pb	07 50 37.8	-0.3
	21nm,0.3s,baz=44,slow=8.9,SNR=23						
PMG				Sn	Sn	07 51 01.0	-0.5
	76nm,0.3s,baz=43,slow=19,SNR=27						
WRA	Warramunga Arr	18.11	226	P	Pn	07 54 14.1	-0.2
	0.2nm,0.3s,baz=52,slow=12,SNR=8.4						
ASAR	Alice Springs	20.97	219	P	P	07 54 45.1	-0.9
	0.9nm,0.6s,baz=51,slow=9.4,SNR=12						
STKA	Stephens Creek	24.85	193	P	P	07 55 25.1	-0.3
	2.6nm,0.5s,baz=351,slow=10.0,SNR=11						
MKAR	Makanchi Array	79.50	320	P	P	08 02 09.8	+0.2
	0.3nm,0.8s,baz=114,slow=6.8,SNR=3.7						

SJA 20 07:57:44.3±0.4, 27°.98S×66°.60W, h194km±2km, ML3.2, MW3.6
ISCJB 20 07:57:46.6±0.7, 27°.93S±0°.06×66°.80W±0°.05, h164km, Error ellipse: s-maj=9.0km s-min=6.1km az=8.6
GUC 20 07:57:46.3±0.8, 27°.79S×66°.83W, h174km±8km, ML4.2

ISC 20 07:57:46.9±1.3, 27°.92S±0°.06×66°.76W±0°.05, h164km, n16, σ1.s17/25, 5C, Catamarca Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CYA	Choya	0.99	122	iP	Pn	07 58 13.0	0.0
CYA				IAML		07 58 14.0	
	comp=Z,82nm,0.4s						
CYA				iS	Sn	07 58 33.7	+0.7
VCA	Vinchina	1.52	237	iP	Pn	07 58 19.1	+1.2
VCA				iS	Sn	07 58 44.9	+3.2
VCA				IAML		07 58 48.3	
	comp=Z,688nm,0.5s						
VCA	Vinchina	1.52	237	⇑iP	Pn	07 58 19.1	+1.2
VCA				iS	Sn	07 58 43.5	+1.7
VCA				IAML		07 58 46.0	
	comp=E,1µm,0.5s						
AHML	Horco Molle	1.69	49	iP	Pn	07 58 19.2	-0.4
AHML				IAML		07 58 44.7	
	comp=Z,48nm,0.4s						
AHML	Horco Molle	1.69	49	⇑iP	Pn	07 58 19.9	+0.2
AGUA	GUANDACOL	2.18	224	iP	Pn	07 58 25.7	+0.6
AGUA				iS	Sn	07 58 56.1	+1.4
ACDV	Cuesta del Vie	3.05	222	iP	Pn	07 58 35.6	0.0
GO03	Copiap	3.10	275	⇑iP	Pn	07 58 36.5	+0.3
GO03				iS	Sn	07 59 13.3	-1.0
GO03				IAML		07 59 13.6	
	comp=N,478nm,0.6s						
CPCH	Copiapo	3.24	279	⇑iP	Pn	07 58 38.3	+0.4
CPCH				iS	Sn	07 59 16.2	-1.3
AROD	Rodeo	3.27	226	iP	Pn	07 58 39.0	+0.5
AMOG	MOGNA	3.37	206	iP	Pn	07 58 38.8	-0.7
VACH	Vallenar	3.59	259	eP	Pn	07 58 41.7	-0.6
VACH				iS	Sn	07 59 24.1	-1.3
LCO	Las Campanas	3.64	252	⇑iP	Pn	07 58 43.1	-0.1
LCO				iS	Sn	07 59 26.2	-0.7
LCO				IAML		07 59 27.9	
	comp=E,238nm,0.2s						
RTLL	Cerro Villicun	3.71	203	iP	Pn	07 58 43.2	-0.7
RTLL				iS	Sn	07 59 26.5	-1.8
RTCV	Cerro Valdivia	4.22	201	iP	Pn	07 58 49.5	-0.9
RTLS	Leoncito	4.45	209	iP	Pn	07 58 53.3	-0.4

SJA 20 08:14:37.7±0.4, 32°.67S×71°.57W, h10km, ML2.4, MW3.2
GUC 20 08:14:38.1±0.7, 32°.61S×71°.48W, h37km±10km, ML2.8

ISC 20 08:14:38.5±4.0, 32°.67S±0°.09×71°.5W±0°.2, h29km±18km, n13, σ0.s62/20, 2C-2D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROC1	El Roble	0.53	126	iP	Pb	08 14 49.0	-0.5
ROC1				iS	Sb	08 14 57.7	+0.6
ROCH	El Roble	0.53	126	⇓iP	Pb	08 14 49.2	-0.3
ROCH				iS	Sb	08 14 57.4	+0.4
PEL	Peldehue	0.85	124	⇑iP	Pn	08 14 54.1	-0.4
PEL				iS	Sb	08 15 06.0	+0.2
CLCH	Cerro Calan	1.10	132	eP	Pn	08 14 58.0	0.0
CLCH				eS	Sb	08 15 13.1	+0.1
CLCH				IAML		08 15 13.8	
	comp=N,442nm,0.6s						
ANTU	Antumapu	1.17	141	eP	Pn	08 14 58.9	0.0
ANTU				iS	Sb	08 15 14.6	-0.4
ANTU				IAML		08 15 18.4	
	comp=E,252nm,0.9s						
FCH	Farellones	1.23	123	⇓iP	Pn	08 15 00.3	+0.3
FCH				iS	Sb	08 15 17.3	+0.4
LMEL	Las Melosas	1.61	137	⇑iP	Pn	08 15 06.2	+1.0
LMEL				iS	Sb	08 15 28.1	+0.3
LMEL				IAML		08 15 30.6	
	comp=N,202nm,0.2s						
AUSP	Uspallata	1.86	77	iP	Pb	08 15 12.6	+0.7
RTLS	Leoncito	2.07	66	iP	Pb	08 15 15.9	+0.2
RTLS				IAML		08 15 26.7	
	comp=Z,32nm,0.5s						
ARCO	CERRO ARCO	2.19	95	iP	Pb	08 15 17.2	-0.3
ARCO				IAML		08 15 29.4	
	comp=Z,20nm,0.5s						
ASAL	Salagasta	2.27	89	iP	Pb	08 15 18.3	-0.5
AAGR	Agrelo	2.30	101	iP	Pb	08 15 19.0	-0.5
RTCV	Cerro Valdivia	2.65	73	iP	Pb	08 15 23.7	-1.6

ISCJB 20 08:17:38.6±0.3, 13°.65N±0°.04×144°.57E±0°.06, h129km, mb4.3/49, Error ellipse: s-maj=7.8km s-min=6.2km az=4.2
IDC 20 08:17:40.3±0.4, 13°.68N×144°.61E, h133km±4km, mb3.8/14, mb1 3.9/14, mb1mx3.7/57, mbtmp4.2/14, MS3.4/1, Ms1 3.6/1, ms1mx3.0/59, Error ellipse: s-maj=20.4km s-min=12.0km az=73.0
NEIC 20 08:17:41.7±0.7, 13°.68N×144°.66E, h145km±6km, mb4.4/37, Error ellipse: s-maj=7.0km s-min=5.4km az=100.0

ISC 20 08:17:40.1±0.4, 13°.72N±0°.08×144°.63E±0°.09, h129km, n81, σ0.s95/79, mb4.3/49, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	0.26	119	P	Pn	08 18 00.2	+2.2
	2µm,0.3s,baz=323,slow=0.4,SNR=1018						
GUMO				S	Sn	08 18 13.9	+2.5
	2µm,0.3s,baz=67,slow=17,SNR=59						
CBIJ	Chichi jima	13.51	351	ePn	P	08 20 49.8	-1.3
PATS	Pohnpei	15.09	116	ePn	P	08 21 08.4	-0.4
	104nm,1.4s						
JOW	Kunigami	20.11	313	eP	Pn	08 22 06.6	-0.2
	13nm,0.7s						
FAKI	Fak Fak	20.59	218	eP	Pn	08 22 12.1	-0.6
	53nm,1.2s						
H11N1	WAKE ISLAND Hy	22.12	71	T	T	08 45 35.2	
	baz=257,slow=75,SNR=6.4						
H11N2	WAKE ISLAND Hy	22.13	71	T	T	08 45 38.4	
	baz=257,slow=75,SNR=6.3						
H11N3	WAKE ISLAND Hy	22.14	71	T	T	08 45 40.0	
	baz=257,slow=75,SNR=9.3						
JNU	Nakatsue	23.03	329	P	P	08 22 34.5	+0.5
	7.8nm,1.0s,baz=151,slow=4.0,SNR=4.7						
JNU	Nakatsue	23.03	329	eP	P	08 22 34.5	+0.5
	13nm,1.1s						
MJAR	Matsushiro Arr	23.45	347	P	P	08 22 37.7	-0.1
	2.5nm,0.5s,baz=180,slow=8.2,SNR=9.7						
MAJO	Matsushiro	23.45	347	eP	P	08 22 38.9	+1.1
	8.1nm,0.5s						
MJB9	Matsu-Tunnel	23.45	347	eP	P	08 22 39.0	+1.2
	8.2nm,0.5s						
YULB	Yu-li	24.09	297	eP	P	08 22 44.2	+0.4
	9.2nm,0.8s						
SSLB	Suanglung	24.52	298	eP	P	08 22 48.7	+0.9
	18nm,1.0s						
SAUI	Saumlaki	25.30	212	eP	P	08 22 54.5	-0.3
	626nm,1.1s						
KSRS	Korea Array	27.94	331	P	P	08 23 18.4	+0.2
	1.3nm,0.5s,baz=145,slow=10,SNR=6.6						
KSAR	Wonju Array Be	27.95	331	P	P	08 23 18.4	+0.1
MTN	Manton Dam	29.59	207	eP	P	08 23 32.2	-0.9
	24nm,1.4s						
SBUM	Sibu	33.93	254	eP	P	08 24 11.6	+0.4
	7.1nm,0.9s						
WRAB	Tennant Creek	34.94	197	eP	P	08 24 19.1	-0.7
	7.6nm,1.1s						
WB2	Warramunga Arr	34.95	197	eP	P	08 24 22.4	+2.5
WR1	Warramunga Arr	34.95	197	eP	P	08 24 18.8	-1.1
	5.3nm,1.0s						
WRA	Warramunga Arr	34.95	197	P	P	08 24 18.8	-1.1
	1.2nm,0.4s,baz=16,slow=9.1,SNR=22						
FITZ	Fitzroy Crossi	36.75	211	eP	P	08 24 34.7	-0.4
	5.8nm,0.8s						
AS01	Alice Springs	38.59	196	eP	P	08 24 49.6	-1.1
AS31	Alice Springs	38.61	196	eP	P	08 24 50.3	-0.5
	1.0nm,0.5s						
ASAR	Alice Springs	38.61	196	P	P	08 24 49.5	-1.3
	0.9nm,0.7s,baz=19,slow=12,SNR=23						
ASAR				PcP	PcP	08 27 00.3	-0.4
	0.3nm,0.8s,baz=9.5,slow=3.8,SNR=4.5						
DZM	Mont Dzumac	41.51	149	P	P	08 25 15.4	+0.6
	7.3nm,0.8s,baz=261,slow=5.0,SNR=8.0						
DZM	Mont Dzumac	41.51	149	eP	P	08 25 15.3	+0.6
	31nm,1.4s						
PBKT	Sadao Pong	42.18	280	eP	P	08 25 21.3	+1.0
MBWA	Marble Bar	42.42	216	eP	P	08 25 21.2	-0.9
	23nm,1.4s						
CMAR	Chiang Mai Arr	44.06	282	P	P	08 25 35.9	+0.3
	3.7nm,0.7s,baz=91,slow=6.4,SNR=9.6						
CMAR				LR	LR	08 41 54.4	
	comp=Z,45nm,21.6s,baz=270,slow=33						
SONA0	Songino Array	46.49	325	eP	P	08 25 55.2	+0.7
SONM	Songino Array	46.49	325	P	P	08 25 55.2	+0.7
	1.2nm,0.6s,baz=138,slow=7.8,SNR=6.5						
SONA1	Songino Array	46.50	325	eP	P	08 25 55.1	+0.6
FORT	Forrest	47.02	200	eP	P	08 25 58.0	-0.5
	9.8nm,0.8s						
UNV	Unalaska Valle	55.34	33	eP	P	08 27 00.5	+0.2
	47nm,1.4s						
MK01	Makanchi Array	61.23	316	eP	P	08 27 41.5	0.0
MK31	Makanchi Array	61.24	316	eP	P	08 27 41.7	+0.2
MK32	Makanchi Array	61.24	316	eP	P	08 27 41.7	+0.1
MKAR	Makanchi Array	61.24	316	P	P	08 27 41.7	+0.1
	2.3nm,0.5s,baz=92,slow=8.5,SNR=35						
MKAR	Makanchi Array	61.24	316	eP	P	08 27 41.6	+0.1
	25nm,0.4s						
MAKZ	Makanchi	61.45	316	eP	P	08 27 43.3	+0.3
	3.5nm,0.6s						
KDJ	Kajisay	64.23	310	eP	P	08 28 01.3	-0.3
	1.9nm,0.6s						
KURK	Kurchatov	64.34	320	eP	P	08 28 01.5	-0.4
KURBB	Kurchatov Arra	64.38	320	P	P	08 28 01.5	-0.6
	2.8nm,0.5s,baz=103,slow=6.8,SNR=32						
SKT	Skwentna	65.79	28	eP	P	08 28 09.8	-1.4
	4.7nm,1.2s						
MDM	Murphy Dome	68.04	25	eP	P	08 28 26.2	+0.9
	3.0nm,1.2s						
ILAR	Eielson Array	68.55	25	P	P	08 28 25.7	-2.7
	0.6nm,0.4s,baz=248,slow=5.7,SNR=17						
ILB	Eielson Array	68.55	25	eP	P	08 28 26.8	-1.7
IL1	Eielson Array	68.55	25	eP	P	08 28 26.2	-2.3
TOLK	Toolik Lake Re	68.58	21	ePcP	PcP	08 28 54.9	+2.1
PAX	Paxson	68.76	27	eP	P	08 28 29.7	-0.2
	2.1nm,1.0s						
BVAR	Borovoye Array	69.68	322	P	P	08 28 35.2	-0.5
	1.6nm,0.6s,baz=78,slow=7.5,SNR=7.2						
YKU2	Yakutat	71.03	31	eP	P	08 28 42.8	-0.9
	227nm,0.9s						
DIB	Dawson Inlet,	74.89	38	eP	P	08 29 06.1	-0.5
	18nm,1.3s						
DLBC	Dease Lake	76.00	33	eP	P	08 29 13.4	+0.5
	4.4nm,1.4s						
NLWA	Neilton Lookou	81.05	43	eP	P	08 29 41.7	+0.9
	5.4nm,1.3s						
D05A	Enumclaw	82.34	43	eP	P	08 29 48.2	+0.6
	12nm,0.4s						
H04A	Detroit Lake	82.72	46	eP	P	08 29 49.5	-0.2
	2.9nm,0.6s						
YKA	Yellowknife Ar	82.85	27	P	P	08 29 49.0	-0.9
	0.8nm,0.5s,baz=285,slow=5.1,SNR=16						
YBH	Yreka Blue Hor	82.96	49	eP	P	08 29 51.6	+0.6
	2.5nm,0.8s						
PINE	Pine Mountain	83.79	47	eP	P	08 29 56.0	+0.6
	6.6nm,0.7s						
K05A	Summer Lake	84.06	48	eP	P	08 29 56.8	0.0
	4.8nm,0.8s						
MOD	Modoc Plateau	84.68	48	eP	P	08 30 00.0	+0.2
	1.6nm,0.8s						
BMO	Blue Mountains	86.06	45	eP	P	08 30 06.5	0.0
	4.8nm,1.0s						
NV01	Mina Array Sit	87.02	51	eP	P	08 30 11.8	+0.3
NVAR	Mina Array Bea	87.02	51	P	P	08 30 11.6	+0.1
	1.2nm,0.7s,baz=260,slow=6.0,SNR=13						
MFID	Camas Ranch	87.48	46	eP	P	08 30 13.8	+0.3
	5.8nm,1.0s						
HLID	Hailey	88.42	46	eP	P	08 30 18.5	+0.5
	2.3nm,0.9s						
TPNV	Topopah Spring	88.99	52	eP	P	08 30 21.0	+0.2
	4.4nm,1.4s						
HRY	Holter Researc	89.17	42	eP	P	08 30 21.8	+0.4
FIA0	FINESS Array S	90.95	335	eP	P	08 30 28.6	-0.6
FINES	FINESS Array B	90.95	335	P	P	08 30 28.6	-0.6
	0.7nm,0.6s,baz=29,slow=6.3,SNR=3.3						
LAO	LASA Array	92.78	41	eP	P	08 30 38.3	+0.2
	4.7nm,0.8s						
SNAA	Sanae	118.87	191	ePKPdf	PKPdf	08 36 11.4	-1.3
TOA0	Torodi Ar. Sit	134.60	304	ePKPdf	PKPdf	08 36 44.7	+0.5
MNMC	Minye Minye	146.77	104	ePKPbc	PKPab	08 37 08.7	-1.0
LPAZ	La Paz	148.27	99	PKPbc	PKPbc	08 37 13.0	+0.2
	1.7nm,0.6s,baz=258,slow=1.6,SNR=11						
LPAZ	La Paz	148.27	99	ePKPdf	PKPbc	08 37 13.0	+0.2
LPAZ				ePKPbc	PKiKP	08 37 13.3	-1.1

NNC 20 08:20:27.8±3.5, 36°.44N×70°.36E, h0km, mb3.6, mpv3.2, 2C-4D, Error ellipse: s-maj=28.6km s-min=25.4km az=129.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	4.34	34	⇓Pn	Pn	08 21 35.0	-0.3
	1.3nm,0.3s						
SFK				⇑Sn	Sn	08 22 28.6	+1.8
	2.1nm,0.2s						
MNAS	Manas	6.26	15	⇓Pn	Pn	08 22 01.4	-0.2
	0.9nm,0.4s						
MNAS				⇓Sn	Sn	08 23 13.7	-0.3
	1.5nm,0.3s						
KK31	Karatay Array	6.66	1	⇓Pn	Pn	08 22 07.7	+0.8
	0.5nm,0.2s,baz=186,slow=13,SNR=13						
KK31				⇑Sn	Sn	08 23 25.4	+2.0
	0.7nm,0.3s,baz=180,slow=22,SNR=3.9						

GUC 20 08:43:14.7±0.8, 20°.82S×70°.55W, h45km±2km, ML3.6, 3C-7D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB02	IPOC Station P	0.79	129	⇓iP	Pn	08 43 30.1	+0.6
PB02				iS	Sn	08 43 41.2	+0.9
PB02				IAML		08 43 43.8	
	comp=E,8µm,0.4s						
PB01	IPOC Station P	1.02	103	⇓iP	Pn	08 43 33.8	+1.1
PB01				iS	Sn	08 43 47.3	+1.4
PB01				IAML		08 43 47.7	
	comp=N,4µm,0.7s						
PB07	IPOC Station P	1.09	145	⇓iP	Pn	08 43 35.1	+1.3
PB07				iS	Sn	08 43 50.0	+2.1
PB07				IAML		08 43 52.1	
	comp=E,2µm,0.6s						
PSGC	Pisagua	1.28	18	⇓iP	Pn	08 43 37.3	+0.9
PSGC				iS	Sn	08 43 54.1	+1.6
PB11	IPOC Station P	1.35	39	⇓iP	Pn	08 43 38.5	+1.2
PB11				iS	Sn	08 43 56.3	+2.2
PB03	IPOC Station P	1.43	149	⇑iP	Pn	08 43 40.2	+1.9
PB03				iS	Sn	08 43 59.5	+3.5
PB08	IPOC Station P	1.48	63	⇓iP	Pn	08 43 40.8	+1.5

PB08				i S	Sn	08 44 00.4	+2.9
PB08				IAML		08 44 03.1	
	comp=N,2μm,0.6s						
PB04	IPOC Station P	1.55	166⇑	iP	Pn	08 43 41.4	+1.3
PB04				eS	Sn	08 44 01.0	+2.0
PB04				IAML		08 44 08.8	
	comp=E,1μm,0.4s						
MNMC	Minye Minye	1.91	28⇑	iP	Pn	08 43 46.5	+1.4
PB05	IPOC Station P	2.04	171⇓	iP	Pn	08 43 47.7	+0.9
PB05				IAML		08 44 26.2	
	comp=E,331nm,0.5s						

WEL 20 08:48:54.5±1.0**, 35°S**±11°×**17°9W**±1°5**, h33^{km}, ML4.5**/25**,**
South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	3.62	218	P	Pn	08 49 49.2	+0.9
WMGZ				S	Sn	08 50 31.4	+1.5
PKGZ	Pakihiroa	3.85	220	P	Pn	08 49 51.4	0.0
PKGZ				S	Sn	08 50 36.1	+0.6
PUZ	Puketiti	3.90	217	P	Pn	08 49 52.2	+0.1
PUZ				S	Sn	08 50 36.7	0.0
HAZ	Te Kaha	3.91	224	P	Pn	08 49 52.9	+0.6
HAZ				S	Sn	08 50 39.0	+1.9
TWGZ	Tauwhareparae	4.12	218	P	Pn	08 49 55.3	+0.2
TWGZ				S	Sn	08 50 43.0	+0.9
RUGZ	Raukumara Rang	4.12	223	P	Pn	08 49 55.9	+0.6
CNGZ	Carnagh Statio	4.25	214	P	Pn	08 49 57.7	+0.8
TKGZ	Te Karaka	4.38	217	P	Pn	08 49 58.7	0.0
TKGZ				S	Sn	08 50 49.1	+0.5
MWZ	Matawai	4.47	220	P	Pn	08 49 59.5	-0.4
MWZ				S	Sn	08 50 50.9	+0.1
RIGZ	Rimuhau	4.63	216	P	Pn	08 50 01.5	-0.7
URZ	Urewera	4.64	224	P	Pn	08 50 02.0	-0.3
RAGZ	Rawiri	4.65	220	P	Pn	08 50 01.9	-0.6
RAGZ				S	Sn	08 50 55.1	-0.1
OPRZ	Ohinepanea	4.72	231	P	Pn	08 50 03.8	+0.5
MARZ	Manawahe	4.73	229	P	Pn	08 50 03.6	+0.1
KUZ	Kuaotunu	4.79	247	P	Pn	08 50 04.3	0.0
SNGZ	Shannon Statio	4.90	218	P	Pn	08 50 06.8	+0.9
RTZ	Ruatahuna	4.97	222	P	Pn	08 50 07.0	+0.2
MUGZ	Murupara	4.99	224	P	Pn	08 50 06.8	-0.2
KARZ	Kaharoa	5.02	231	P	Pn	08 50 07.2	-0.3
RAHZ	Arahi	5.13	219	P	Pn	08 50 10.8	+1.8
MTHZ	Maungataniwha	5.21	221	P	Pn	08 50 10.8	+0.6
ALRZ	Allen Road	5.29	226	P	Pn	08 50 11.3	+0.1
MKAZ	Moumakai	5.34	245	P	Pn	08 50 11.7	-0.1
NMHZ	Naumai	5.41	219	P	Pn	08 50 13.3	+0.3
MRHZ	Matea Rd	5.43	223	P	Pn	08 50 12.4	-0.8
BKZ	Black Stump Fm	5.63	221	P	Pn	08 50 15.4	-0.5
MCHZ	McNeill Hill	5.73	218	P	Pn	08 50 17.6	+0.4
RATZ	Rangitukua	5.83	227	P	Pn	08 50 18.3	-0.3
RITZ	Rihia Road	5.85	225	P	Pn	08 50 19.5	+0.5
KWHZ	Kaweka Forest	5.85	219	P	Pn	08 50 18.7	-0.3
KAHZ	Kahuranaki	5.92	214	P	Pn	08 50 19.7	-0.2
KRHZ	Kereru	6.04	218	P	Pn	08 50 21.1	-0.5
BHHZ	Black Hill Sta	6.09	221	P	Pn	08 50 21.3	-1.0
HIZ	Hauiti	6.20	233	P	Pn	08 50 23.8	+0.1

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*ISCJB **20** 09:11:30.5±0.5, 38°.23S±0°.07×146°.0E±0°.1, h8^{km}, mb4.7/6, MS4.0/4, Error ellipse: s-maj=14.3km s-min=7.6km az=146.6*

*IDC **20** 09:11:30.5±1.5, 38°.18S×146°.17E, h0^{km}, mb4.2/3, mb1 4.4/5, mb1mx4.0/37, mbtmp4.2/5, ML4.5/2, MS3.8/6, Ms1 3.8/6, ms1mx3.4/37, Error ellipse: s-maj=87.6km s-min=17.9km az=67.0*

*NEIC **20** 09:11:31.0±0.0, 38°.28S×146°.16E, h13^{km}, mb4.6/4, ML4.3(AUST), After AUST.*

NEIC Felt [IV] at Moe and Morwell; [III] at Craigieburn, Cranbourne, Healesville, Pakenham, Traralgon, Warragul and Wonthaggi; [II] at Hastings, Melbourne and Somerville. Also felt at Ararat, Bendigo, Canberra, Crib Point, Dandenong, Echuca Village, Frankston, Ringwood, Sunbury, Wallan and Wodonga.

*BJI **20** 09:11:31.0, 38°.32S×146°.47E, h12^{km}, mb4.9/9, mB5.1/4, Ms4.7/1, Ms7 4.4/1*

ISC 20 09:11:32.2±0.6**, 38°.27S**±0°.08×**146°.0E**±0°.1**, h8^{km}, n27,**
σ1^{s}77/25**, mb4.8**/6**, MS4.0**/4**, 1C, Near southeast coast of Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAN	Canberra	3.82	41	ePn	Pn	09 12 29.6	-1.9
TAU	Tasmania Unive	4.75	168	ePn	Pn	09 12 43.6	-0.4
STKA	Stephens Creek	7.32	329	Pn	Pn	09 13 19.6	+0.2
	9.7nm,0.3s,baz=144,slow=16,SNR=169						
STKA				Sn	Sn	09 14 38.9	-3.8
	30nm,0.3s,baz=59,slow=23,SNR=8.6						
STKA				Lg	Lg	09 15 22.8	
	7.2nm,0.3s,baz=236,slow=19,SNR=4.6						
STKA				LR	LR	09 16 22.8	
	comp=Z,529nm,20.5s,baz=187,slow=40						
BBOO	Buckleboo	9.73	301	ePn	Pn	09 13 52.8	+0.2
FORT	Forrest	16.52	292	ePn	P	09 15 26.1	-0.9
	26nm,0.8s						
DCZ	Deep Cove	17.31	121	eP	Pn	09 15 33.9	-0.3
	104nm,1.5s						
AS01	Alice Springs	17.81	321	ePn	Pn	09 15 40.8	+0.3
ASAR	Alice Springs	17.83	321	P	Pn	09 15 38.8	-2.0
	0.3nm,0.3s,baz=148,slow=10,SNR=26						
ASAR				LR	LR	09 23 07.2	
	comp=Z,228nm,21.0s,baz=196,slow=39						
AS31	Alice Springs	17.83	321	ePn	Pn	09 15 40.1	-0.7
	2.2nm,0.7s						
RPZ	Rata Peaks	19.67	114	LR	LR	09 21 22.0	
	comp=Z,324nm,21.3s,baz=264,slow=30						
WB2	Warramunga Arr	20.86	328	eP	P	09 16 14.8	+0.1
	31nm,1.0s						
WRA	Warramunga Arr	20.86	328	P	P	09 16 15.0	+0.3
	10nm,0.8s,baz=147,slow=11,SNR=25						
WRAB	Tennant Creek	20.87	328	eP	P	09 16 13.5	-1.3
	25nm,1.0s						
URZ	Urewera	24.40	100	LR	LR	09 25 04.4	
	comp=Z,228nm,18.4s,baz=232,slow=34						
VNDA	Vanda	39.94	175	P	P	09 19 06.4	0.0
	1.4nm,0.9s,baz=340,slow=6.6,SNR=4.9						
VNDA				LR	LR	09 32 48.5	
	comp=Z,147nm,19.7s,baz=329,slow=32						
QSPA	South Pole Qui	51.84	180	P	P	09 20 41.0	+0.4
	6.6nm,0.8s,baz=348,slow=2.7,SNR=16						
QSPA	South Pole Qui	51.84	180	eP	P	09 20 40.7	0.0
	31nm,1.0s						
SYO	Syowa Base	60.30	203⇑	eP	P	09 21 38.4	-2.4
JOW	Kunigami	66.85	343	LR	LR	09 52 01.9	
	comp=Z,119nm,19.6s,baz=114,slow=36						
GYA	Guiyang	74.18	324	eP	P	09 23 12.0	+2.5
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
NJ2	Nanjing	74.39	336	eP	P	09 23 12.0	+1.6
NJ2				pmax	pmax		
	comp=Z,7.0nm,0.5s						
KMI	Kunming	74.96	320	P	P	09 23 17.8	+3.6
KMI				pmax	pmax		
	comp=Z,2.0nm,0.5s						
HHC	Hu-ho-hao-te	84.79	335	eP	P	09 24 09.0	+2.0
HHC				S	S	09 34 37.8	+2.7
HHC				sS	ScS	09 34 45.0	-1.1
HHC				pmax	pmax		
	comp=Z,53nm,1.0s						
HHC				pmax	pmax		
	comp=Z,120nm,5.0s						
HHC				LR	LR		
	comp=E,160nm,15.7s						
HHC				LR	LR		
	comp=Z,140nm,17.1s						
WMQ	Urumqi	97.24	322	P	Pdif	09 25 06.6	+1.2
YKA	Yellowknife Ar	127.32	35	PKP	PKPdf	09 30 35.3	-1.1
	0.6nm,0.7s,baz=257,slow=1.3,SNR=6.3						
GERES	GERESS Array B	144.37	303	PKP	PKPbc	09 31 07.0	0.0
	1.5nm,0.7s,baz=66,slow=3.2,SNR=11						
BFO	Black Forest	147.94	302	ePKPdf	PKPdf	09 31 12.8	-1.8
BFO				ePKPbc	pPKPdf	09 31 17.3	0.0

JMA 20 09:11:56.4±0.1**, 36°.25N**×**141°.06E, h45^{km}**±2^{km}**, M3.6,**
Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHYU	Hitachinakayam	0.39	283	P	Pn	09 12 06.3	+0.2
JHYU				S	Sn	09 12 12.8	-0.1
JIHU	Itakohorinouch	0.52	237	P	Pn	09 12 08.3	+0.7
JIHU				S	Sn	09 12 16.8	+1.3
JHO	Hitachi	0.54	312	P	Pn	09 12 07.1	-0.7
JHO				S	Sn	09 12 15.3	-0.7
CHOJ	Chosi	0.57	197	P	Pn	09 12 08.1	-0.2
CHOJ				S	Sn	09 12 16.1	-0.6
JYT	Yasato	0.70	268	P	Pn	09 12 10.1	+0.2
JYT				S	Sn	09 12 19.3	-0.4
ONAJ	Iwakimizuishiy	0.88	346	P	Pn	09 12 12.4	0.0
JFK	Kawauchi	1.12	352	P	Pn	09 12 15.6	-0.2
JAG	Ashikaga	1.31	278	P	Pn	09 12 19.0	+0.8
JAG				S	Sn	09 12 35.1	+0.6
JFT	Otama	1.39	336	P	Pn	09 12 21.0	+1.6
JFT				S	Sn	09 12 37.7	+1.1
MAT	Matsushiro	2.32	278	P	Pn	09 12 33.5	+1.4
MAT				S	Sn	09 13 01.4	+2.0

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*BJI **20** 09:12:52.6, 49°.38N×156°.69E, h22^{km}, mb4.7/25, mB5.0/15, Ms4.3/8, Ms7 4.2/8*

*ISCJB **20** 09:12:52.9±0.4, 49°.16N±0°.04×156°.47E±0°.07, h10^{km}, mb4.5/46, Error ellipse: s-maj=8.3km s-min=2.7km az=40.6*

*IDC **20** 09:12:53.7±0.9, 49°.43N×156°.27E, h0^{km}, mb4.1/18, mb1 4.2/21, mb1mx4.0/73, mbtmp4.1/21, ML5.4/1, Error ellipse: s-maj=22.1km s-min=14.2km az=147.0*

*SKHL **20** 09:12:54.5±0.5, 48°.94N×157°.03E, h62^{km}±3^{km}, mb4.8/7, Ms3.5/1*

*NEIC **20** 09:12:55.3±0.5, 49°.40N×156°.33E, h10^{km}, mb4.6/19, Error ellipse: s-maj=12.3km s-min=5.4km az=141.0*

*KRSC **20** 09:12:57.5±2.2, 49°.26N×157°.32E, h44^{km}±40^{km}, ML4.8*

*MOS **20** 09:12:57.2±1.2, 49°.23N×156°.38E, h47^{km}, mb4.5/18, Error ellipse: s-maj=10.1km s-min=3.7km az=79.5*

ISC 20 09:12:54.9±0.8**, 49°.28N**±0°.05×**156°.57E**±0°.05**, h14^{km}**±3^{km}**,**
n206, σ2^{s}28/228**, mb4.6**/55**, 7C-17D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.43	348	eP	Pg	09 13 22.0	-0.4
SKR				AMB	AMB	09 13 23.0	
	1μm,1.1s						
SKR				AMB	AMB	09 13 23.0	
	1μm,0.6s						
SKR				eS	Sg	09 13 43.0	+2.0
SKR				A	A	09 13 46.0	
	4μm,0.5s						
SKR				A	A	09 13 46.0	
	4μm,0.5s						
SKR				AMS	AMS	09 14 00.0	
	2μm,13.0s						
SKR				AMS	AMS	09 14 00.0	
	1μm,13.0s						
SKR				AMS	AMS	09 14 00.0	
	1μm,13.0s						
SKR	Severo-Kuril's	1.43	348	eP	Pg	09 13 22.7	+0.3
SKR				eS	Sg	09 13 42.6	+1.6
SKR	Severo-Kuril's	1.43	348	ePN	Pg	09 13 22.7	+0.3
SKR				eS	Sg	09 13 43.0	+2.0
SKR				pmax	pmax		
	comp=Z,1μm,1.1s						
SKR				pmax	pmax		
	comp=Z,1μm,0.6s						
SKR				smax	smax		
	comp=N,4μm,0.5s						
SKR				smax	smax		
	comp=E,4μm,0.4s						
PAU	Pauzhetka	2.19	4	eP	Pb	09 13 34.0	-0.3
PAU				AMB	AMB	09 13 35.5	
	comp=E,530nm,0.3s						
PAU				eS	Sg	09 14 03.3	-2.0
PAU				A	A	09 14 08.0	
	comp=E,3μm,0.7s						
PAU	Pauzhetka	2.19	4	eP	Pb	09 13 34.0	-0.3
PAU				eS	Sg	09 14 01.4	-3.9
PAU	Pauzhetka	2.19	4	PN	Pb	09 13 34.0	-0.3
PAU				S	Sg	09 14 01.4	-3.9
KDTR	Khodutka, Kamc	2.71	20	eP	Pn	09 13 39.9	+2.0
KDTR				eS	Sn	09 14 12.6	+2.3
MIPR	Malaya Ipel'ka	3.00	2	eP	Pb	09 13 45.4	-2.6
MIPR	Malaya Ipel'ka	3.00	2	PN	Pb	09 13 45.4	-2.6
ASAK	Asacha	3.22	15	eP	Pb	09 13 48.7	-3.1
ASAK	Asacha	3.22	15	PN	Pb	09 13 48.7	-3.1
MTVR	Mutnovka	3.36	17	eP	Pn	09 13 50.0	+2.9
MTVR				eS	Sn	09 14 29.4	+2.6
MTVR	Mutnovka	3.36	17	PN	Pn	09 13 50.0	+2.9
MTVR				S	Sn	09 14 29.4	+2.6
RUS	Russkaya	3.38	21	eP	Pn	09 13 49.1	+1.9
RUS				eS	Sn	09 14 28.0	+0.9
RUS	Russkaya	3.38	21	PN	Pn	09 13 49.1	+1.9
RUS				S	Sn	09 14 28.0	+0.9
APC	Apacha	3.67	6	eP	Pb	09 13 55.2	-4.2
APC	Apacha	3.67	6	PN	Pb	09 13 55.2	-4.2
KRMR	Karymshinskiy	3.69	15	eP	Pn	09 13 55.2	+3.9
KRMR	Karymshinskiy	3.69	15	PN	Pn	09 13 55.2	+3.9
PEA0B	Petropavlovsk-	3.90	10	ePn	Pn	09 13 58.0	+3.7
PETK	Petropavlovsk-	3.90	10	Pn	Pn	09 13 58.1	+3.8
	baz=178,slow=12						
PETK	Petropavlovsk-	3.90	10	ePn	Pn	09 13 54.9	+0.6
PETK				eSn	Sn	09 14 39.7	0.0
PETK	Petropavlovsk-	3.90	10	ePN	Pn	09 13 54.9	+0.6
PET	Petropavlovsk	3.97	18	eP	Pn	09 13 57.7	+2.5
PET				AMB	AMB	09 13 59.6	
	comp=E,20nm,0.3s						
PET				eS	Sn	09 14 41.7	+0.2
PET	Petropavlovsk	3.97	18	ePn	Pn	09 13 57.9	+2.7
PET				eSn	Sn	09 14 43.8	+2.3
PET	Petropavlovsk	3.97	18	eP	Pn	09 13 58.2	+3.0
PET				eS	Sn	09 14 43.2	+1.7
PET	Petropavlovsk	3.97	18	ePN	Pn	09 13 57.9	+2.7
PET				eS	Sn	09 14 44.2	+2.7
PET				pmax	pmax		
	comp=Z,62nm,0.4s						
PET				smax	smax		
	comp=E,576nm,0.6s						
PET				smax	smax		
	comp=N,461nm,0.6s						
PET				MLR	MLR		
	comp=Z,500nm,9.0s						
PET				MLR	MLR		
	comp=Z,300nm,15.0s						
DALK	Dalny	4.00	19	eP	Pn	09 13 58.2	+2.6
DALK				eS	Sn	09 14 44.8	+2.6
DALK	Dalny	4.00	19	PN	Pn	09 13 58.2	+2.6
DALK				S	Sn	09 14 44.8	+2.6
UGLR	Uglovaya	4.18	19	eP	Pn	09 14 01.5	+3.3
UGLR	Uglovaya	4.18	19	PN	Pn	09 14 01.5	+3.3
AVH	Avacha	4.21	18	eP	Pn	09 14 02.6	+3.9
AVH	Avacha	4.21	18	PN	Pn	09 14 02.6	+3.9
KOK	Koryaka	4.22	17	eP	Pn	09 14 02.8	+4.0
KOK	Koryaka	4.22	17	PN	Pn	09 14 02.8	+4.0
SMAR	Somma	4.22	18	eP	Pn	09 14 03.1	+4.1
SMAR	Somma	4.22	18	PN	Pn	09 14 03.1	+4.1
SDLR	Sedlovina	4.25	19	eP	Pn	09 14 01.9	+2.6
SDLR	Sedlovina	4.25	19	PN	Pn	09 14 01.9	+2.6
NLC	Nalytchevo	4.26	23	eS	Sn	09 14 48.4	-0.4
KRX	Arik	4.28	17	eP	Pn	09 14 04.5	+4.8
KRX	Arik	4.28	17	PN	Pn	09 14 04.5	+4.8
SPN	Mys Shipunski	4.39	28	eP	Pn	09 14 03.3	+2.2
SPN				eS	Sn	09 14 53.3	+1.3
SPN	Mys Shipunski	4.39	28	PN	Pn	09 14 03.3	+2.2
GNL	Ganaly	4.50	10	eP	Pn	09 14 06.7	+4.0
GNL	Ganaly	4.50	10	PN	Pn	09 14 06.7	+4.0
KII	Karymskiy	5.08	20	eP	Pn	09 14 15.1	+4.5
KII	Karymskiy	5.08	20	PN	Pn	09 14 15.1	+4.5
MKZ	Mys Kozlova	6.17	29	eP	Pn	09 14 27.2	+1.8
MKZ				eS	Sn	09 15 35.0	-0.6
MKZ	Mys Kozlova	6.17	29	PN	Pn	09 14 27.2	+1.8
TUMD	Tumrok D	6.38	20	eP	Pn	09 14 30.9	+2.6
TUMR	Tumrok	6.40	19	eP	Pn	09 14 32.5	+3.8
TUMR	Tumrok	6.40	19	PN	Pn	09 14 30.9	+2.2
ESO	Esso	6.78	10	eP	Pn	09 14 38.1	+4.3
ESO	Esso	6.78	10	PN	Pn	09 14 38.1	+4.3
BZMR	Bezymyannaya	7.08	18	eP	Pn	09 14 41.8	+3.8
BZMR	Bezymyannaya	7.08	18	PN	Pn	09 14 41.8	+3.8
BZWR	Bezymyannyi-We	7.10	18	eP	Pn	09 14 43.0	+4.6
BZWR	Bezymyannyi-We	7.10	18	PN	Pn	09 14 43.0	+4.6
KUR	Kuril'sk	7.17	239	i P	Pn	09 14 39.0	-0.3
KUR				AMB	AMB	09 14 48.0	
	comp=Z,18nm,0.4s						
KUR				AMB	AMB	09 14 48.0	
	comp=Z,48nm,0.4s						
KUR				i S	Sn	09 15 58.0	-2.5
KUR				AMS	AMS	09 18 10.0	
	comp=Z,4μm,13.0s						
KUR	Kuril'sk	7.17	239⇑	iPN	Pn	09 14 39.7	+0.4
KUR				pmax	pmax		
	comp=Z,48nm,0.4s						
KUR				pmax	pmax		
	comp=N,18nm,0.3s						
KUR				pmax	pmax		
	comp=E,18nm,0.3s						
KUR				MLR	MLR		
	comp=Z,394nm,13.0s						
ZLN	Zelenaya	7.22	19	eP	Pn	09 14 44.2	+4.3
ZLN	Zelenaya	7.22	19	PN	Pn	09 14 44.2	+4.3
KBTR	Krutoberegovo	7.90	26	eP	Pn	09 14 50.8	+1.6
KBTR				eS	Sn	09 16 16.8	-1.5
KBTR	Krutoberegovo	7.90	26	PN	Pn	09 14 50.8	+1.6
BKI	Bering	8.27	41	eS	Sn	09 16 21.0	-6.3
SHO	Shikotan	8.62	235	i P	Pn	09 14 56.0	-3.1
SHO				AMB	AMB	09 15 02.0	
	comp=Z,4.0nm,0.9s						
SHO				AMB	AMB	09 15 02.0	
	comp=Z,9.0nm,0.9s						
SHO				AMB	AMB	09 15 02.0	
	comp=Z,26nm,0.9s						
SHO	Shikotan	8.62	235⇑	iPN	Pn	09 14 56.5	-2.6
SHO				pmax	pmax		
	comp=Z,26nm,0.9s						
SHO				pmax	pmax		
	comp=N,4.0nm,0.4s						
SHO				pmax	pmax		
	comp=E,9.0nm,0.8s						
YUK	Yuzh-Kuril'sk	9.04	239	i PN	Pn	09 15 03.0	-1.8
UGL	Uglegorsk	9.51	274	eP	Pn	09 15 14.0	+2.8
UGL				AMB	AMB	09 15 23.5	
	comp=E,69nm,1.0s						
OKH	Okha	9.53	302	ePN	Pn	09 14 59.8	-12
YSS	Yuzh-Sakhalins	9.53	261	eP	Pn	09 15 13.0	+1.4
YSS				AMB	AMB	09 15 16.1	
	comp=E,10.0nm,0.7s						
YSS				AMS	AMS	09 20 35.0	
	comp=E,2μm,12.0s						
YSS	Yuzh-Sakhalins	9.53	261	ePn	Pn	09 15 13.5	+1.9
YSS				eSn	Sn	09 16 58.4	0.0
YSS	Yuzh-Sakhalins	9.53	261⇑	ePN	Pn	09 15 15.0	+3.4
YSS				pmax	pmax		
	comp=Z,10.0nm,0.7s						
YSS				MLR	MLR		
	comp=Z,200nm,12.0s						
MA2	Magadan	10.85	344	Pn	Pn	09 15 32.7	+3.2
	comp=Z,2.7nm,0.3s,baz=154,slow=13,SNR=9.0						
ASAJ	Asahikawa	10.90	247	Pn	Pn	09 15 31.6	+1.3
	comp=Z,3.3nm,0.3s,baz=58,slow=14,SNR=16						
ASAJ	Asahikawa	10.90	247	ePn	Pn	09 15 31.8	+1.5
SMY	Shemya	11.56	66	ePn	Pn	09 15 40.3	+0.9
SMY	Shemya	11.56	66	ePN	Pn	09 15 40.3	+0.9
ERM	Erimo	11.86	237	eP	Pn	09 15 42.2	-1.3
ERM	Erimo	11.86	237	ePn	Pn	09 15 42.0	-1.5
ERM				eSn	Sn	09 17 44.4	-11
ERM	Erimo	11.86	237	i PN	Pn	09 15 42.2	-1.3
KLR	Kul'dur	16.19	279	Pn	P	09 16 44.4	-0.5
	comp=Z,0.0nm,0.3s,baz=78,slow=11,SNR=12						
KLR	Kul'dur	16.19	279	eP	Pn	09 16 41.8	+0.1
KLR	Kul'dur	16.19	279	i P	Pn	09 16 41.8	+0.1
USRK	Ussuriysk Ar.	17.57	263	P	Pn	09 16 58.6	-0.5
	baz=66,slow=15						
MJB9	Matsu-Tunnel	18.46	233	ePn	Pn	09 17 12.4	+2.2
	comp=Z,6.8nm,0.7s						
MAJO	Matsushiro	18.46	233	eP	P	09 17 07.4	-2.7
MAJO	Matsushiro	18.46	233	eP	Pn	09 17 10.4	+0.3
	comp=Z,6.6nm,0.7s						
MAJO	Matsushiro	18.46	233	i P	P	09 17 07.4	-2.7
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MAT	Matsushiro	18.46	233	P	Pn	09 17 11.6	+1.4
MJAR	Matsushiro Arr	18.46	233	P	P	09 17 10.4	+0.3
	comp=Z,0.3nm,0.3s,baz=28,slow=6.4,SNR=4.4						
YAK	Yakutsk	19.64	321	eP	Pn	09 17 22.4	-1.7
	comp=Z,28nm,0.5s						
YAK	Yakutsk	19.64	321	eP	Pn	09 17 22.4	-1.7
YAK				pmax	pmax		
	comp=Z,28nm,0.5s						
KSRS	Korea Array	23.80	251	P	P	09 18 06.8	-0.1
	comp=Z,2.2nm,0.5s,baz=47,slow=9.7,SNR=10						
KS01	Wonju Array Si	23.80	251	eP	P	09 18 06.1	-0.9
KSAR	Wonju Array Be	23.83	251	P	P	09 18 06.8	-0.4
KSAR	Wonju Array Be	23.83	251	P	P	09 18 06.9	-0.4
JNU	Nakatsue	25.01	239	P	P	09 18 19.0	+0.7
	comp=Z,9.7nm,1.0s,baz=91,slow=5.2,SNR=3.8						
TIXI	Tiksi	25.78	340	eP	P	09 18 23.9	-0.8
	comp=Z,8.1nm,0.8s						
TIXI	Tiksi	25.78	340	eP	P	09 18 24.0	-0.8
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
H11S1	WAKE ISLAND Hy	31.77	162	T	T	09 53 44.4	
	baz=347,slow=76,SNR=48						
H11S3	WAKE ISLAND Hy	31.78	162	T	T	09 53 17.3	
	baz=347,slow=76,SNR=100						
H11S2	WAKE ISLAND Hy	31.79	162	T	T	09 53 35.2	
	baz=347,slow=76,SNR=52						
COLD	Coldfoot	31.92	36	eP	P	09 19 21.2	+1.6
	comp=Z,14nm,1.9s						
HHC	Hu-ho-hao-te	32.47	272	eP	P	09 19 25.3	+0.5
HHC				sP	sP	09 19 37.8	+6.9
HHC				S	S	09 24 42.0	+2.9
HHC				pmax	pmax		
	comp=Z,11nm,1.1s						
HHC				pmax	pmax		
	comp=Z,230nm,5.2s						
HHC				LR	LR		
	comp=Z,250nm,15.7s						
HHC				LR	LR		
	comp=Z,260nm,13.2s						
HHC				LR	LR		
	comp=Z,250nm,14.3s						
MDM	Murphy Dome	32.55	41	eP	P	09 19 27.1	+2.1
	comp=Z,3.0nm,0.6s						
NJ2	Nanjing	32.97	253	eP	P	09 19 28.3	-0.7
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.5s						
ILAR	Eielson Array	33.12	41	P	P	09 19 30.4	+0.4
	comp=Z,0.2nm,0.5s,baz=278,slow=5.3,SNR=4.3						
EGAK	Eagle	35.57	41	eP	P	09 19 52.2	+1.0
	comp=Z,3.0nm,0.8s						
EGAK				epP	sP	09 20 00.0	+2.7
INK	Inuvik	38.26	34	P	P	09 20 16.5	+2.5
	comp=Z,1.0nm,0.4s,baz=329,slow=7.3,SNR=5.9						
LZH	Lanzhou	40.14	271	eP	P	09 20 33.5	+3.1
LZH				pP	sP	09 20 38.5	+1.9
LZH				sP	pP	09 20 41.1	+6.3
LZH				pmax	pmax		
	comp=Z,18nm,1.4s						
DGZ	Jazzator, Alta	43.43	298	i P	P	09 20 54.9	-2.2
GYA	Guiyang	44.52	258	eP	P	09 21 06.0	-0.1
GYA				pmax	pmax		
	comp=Z,10.0nm,0.9s						
WMQ	Urumqi	46.19	291	P	P	09 21 20.3	+1.2
WMQ				pP	sP	09 21 26.0	+0.7
WMQ				pmax	pmax		
	comp=Z,20nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,370nm,4.5s						
YKA	Yellowknife Ar	47.50	39	P	P	09 21 30.2	+1.3
	comp=Z,0.7nm,0.8s,baz=296,slow=6.5,SNR=5.0						
MK31	Makanchi Array	47.85	297	eP	P	09 21 30.5	-1.4
MK31	Makanchi Array	47.85	297	eP	P	09 21 30.5	-1.4
MKAR	Makanchi Array	47.85	297	P	P	09 21 30.4	-1.6
	comp=Z,2.1nm,0.8s,baz=59,slow=7.1,SNR=16						
MKAR	Makanchi Array	47.85	297	eP	P	09 21 30.3	-1.7
MKAR	Makanchi Array	47.85	297	eP	P	09 21 30.4	-1.6
	comp=Z,14nm,0.8s						
MKAR	Makanchi Array	47.85	297	i P	P	09 21 30.3	-1.7
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MK01	Makanchi Array	47.86	297	eP	P	09 21 30.6	-1.4
KURK	Kurchatov	47.91	303	eP	P	09 21 29.9	-2.4
KURK	Kurchatov	47.91	303	eP	P	09 21 31.2	-1.1
	comp=Z,7.4nm,0.9s						
KURK	Kurchatov	47.91	303	i P	P	09 21 29.9	-2.4
KURK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KMI	Kunming	47.98	260	P	P	09 21 34.1	+0.7

KMI				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KURBB	Kurchatov Arra	48.01	303	P	P	09 21 31.6	-1.4
	comp=Z,5.7nm,0.9s,baz=64,slow=8.1,SNR=23						
BVAR	Borovoye Array	51.05	309	P	P	09 21 55.0	-1.2
	comp=Z,2.0nm,0.3s,baz=55,slow=8.6,SNR=15						
BVAR	Borovoye Array	51.05	309	P	P	09 21 55.0	-1.2
BVAR				pmax	pmax		
	comp=Z,2.0nm,0.3s						
BRVK	Borovoye	51.09	309	eP	P	09 21 54.2	-2.3
BRVK	Borovoye	51.09	309	eP	P	09 21 55.3	-1.2
	comp=Z,12nm,1.3s						
BRVK				epP	pP	09 21 59.4	-1.6
BRVK	Borovoye	51.09	309	i P	P	09 21 54.2	-2.3
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ARU	Arti	54.71	318	eP	P	09 22 19.6	-3.6
ARU	Arti	54.71	318	eP	P	09 22 21.7	-1.5
	comp=Z,4.6nm,0.4s						
ARU				epP	sP	09 22 27.0	-2.5
ARU	Arti	54.71	318	d iP	P	09 22 19.7	-3.5
ARU						09 23 21.7	
ARU				S	S	09 29 56.5	-6.1
ARU				SS	SS	09 33 38.2	-6.7
ARU				pmax	pmax		
	comp=Z,8.0nm,1.0s						
CMAR	Chiang Mai Arr	55.21	257	P	P	09 22 27.8	+0.5
	comp=Z,1.6nm,0.5s,baz=31,slow=7.3,SNR=6.6						
KSH	Kashi	55.83	293	eP	P	09 22 35.1	+3.5
SUMG	Summit	57.99	5	i P	P	09 22 47.9	+1.1
	comp=Z,16nm,1.1s						
ABKAR	Akbulak array	58.57	310	eP	P	09 22 49.7	-1.1
PDAR	Pinedale Array	61.40	57	P	P	09 23 12.2	+1.7
	comp=Z,0.7nm,0.9s,baz=338,slow=3.2,SNR=5.4						
FINES	FINESS Array B	62.71	336	P	P	09 23 18.3	-0.4
	comp=Z,1.0nm,0.5s,baz=45,slow=8.4,SNR=4.2						
FINES	FINESS Array B	62.71	336	eP	P	09 23 18.2	-0.5
FINES	FINESS Array B	62.71	336	i P	P	09 23 18.2	-0.5
FINES				pmax	pmax		
	comp=Z,1.0nm,0.5s						
NOA	NORSAR Array B	66.55	342	P	P	09 23 42.8	-1.1
	comp=Z,1.0nm,0.8s,baz=23,slow=8.2,SNR=3.6						
HFS	Hagfors	66.86	341	P	P	09 23 44.9	-0.9
	comp=Z,3.5nm,1.0s,baz=29,slow=3.3,SNR=8.1						
KBZ	Khabaz	70.73	315	P	P	09 24 10.4	+0.3
	comp=Z,1.9nm,0.5s,baz=124,slow=3.9,SNR=5.2						
KWP	Kalwaria Pacla	73.79	331	eP	P	09 24 30.6	+2.2
	comp=Z,372nm,0.4s						
KWP	Kalwaria Pacla	73.79	331	eP	P	09 24 30.6	+2.2
TXAR	Lajitas Array	74.25	63	P	P	09 24 33.0	+1.5
	comp=Z,0.2nm,0.4s,baz=296,slow=5.2,SNR=7.7						
TXAR	Lajitas Array	74.25	63	P	P	09 24 33.0	+1.5
TXAR	Lajitas Array	74.25	63	P	P	09 24 33.0	+1.5
EKA	Eskdalemuir Ar	74.38	348	P	P	09 24 31.9	+0.2
	comp=Z,1.0nm,0.3s,baz=18,slow=4.8,SNR=12						
BURAR	Bucovina Array	74.70	328	⇓iP	P	09 24 32.9	-1.0
BURAR	Bucovina Array	74.70	328	⇓P	P	09 24 32.9	-1.0
CLL	Collm	75.07	337	eP	P	09 24 36.0	+0.2
	comp=Z,8.0nm,1.1s						
CLL	Collm	75.07	337	eP	P	09 24 36.0	+0.2
TRPA	Tarpa	75.16	330	⇓iP	P	09 24 37.0	+0.7
GOPC	GO Pecny, Ondr	75.88	336	eP	P	09 24 41.7	+1.2
GOPC	GO Pecny, Ondr	75.88	336	eP	P	09 24 41.7	+1.2
DRGR		76.27	329	⇓iP	P	09 24 41.6	-1.2
DRGR		76.27	329	⇓P	P	09 24 41.6	-1.2
MLR	Muntele Rosu	76.28	327	⇓iP	P	09 24 43.6	+0.6
MLR	Muntele Rosu	76.28	327	eP	P	09 24 42.4	-0.5
	comp=Z,5.0nm,0.7s						
MLR	Muntele Rosu	76.28	327	⇓P	P	09 24 43.6	+0.6
TLB	Topalu	76.28	325	⇓iP	P	09 24 42.6	-0.2
TLB	Topalu	76.28	325	⇓P	P	09 24 42.6	-0.2
VOIR		76.64	327	⇓iP	P	09 24 45.7	+0.7
VOIR		76.64	327	⇓P	P	09 24 45.7	+0.7
KHC	Kasperske Hory	76.92	336	eP	P	09 24 47.5	+1.1
KHC	Kasperske Hory	76.92	336	eP	P	09 24 47.1	+0.7
	comp=Z,1.9nm,0.9s						
KHC	Kasperske Hory	76.92	336	eP	P	09 24 47.1	+0.7
KHC				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ILGA	Ilgaz	76.95	319	eP	P	09 24 47.9	+1.0
	comp=Z,9.2nm,0.8s						
GERES	GERESS Array B	77.14	336	P	P	09 24 47.9	+0.1
	comp=Z,1.5nm,0.7s,baz=35,slow=4.9,SNR=10						
GEA0	GERESS Array S	77.15	336	eP	P	09 24 48.0	+0.2
MEM	Membach	77.34	341	⇑P	P	09 24 48.4	-0.3
	comp=Z,8.6nm,0.8s						
CONA	Conrad Observa	77.38	334	epP	P	09 24 50.1	+1.0
	comp=Z,4.9nm,0.9s						
BZS	Buzias	77.67	329	⇓iP	P	09 24 50.1	-0.5
BZS	Buzias	77.67	329	⇓P	P	09 24 50.1	-0.5
UOSS	Minazif	77.88	294	eP	P	09 24 51.4	-0.7
	comp=Z,13nm,1.0s						
BR131	Keskin Array S	78.08	319	eP	P	09 24 53.3	+0.1
BRTR	Keskin Array B	78.08	319	P	P	09 24 53.0	-0.2
	comp=Z,2.7nm,0.8s,baz=72,slow=4.0,SNR=12						
MDVR	Moldovita	78.37	329	⇓iP	P	09 24 47.7	-6.9
SOKA	Soboth	78.75	334	epP	P	09 24 57.4	+0.7
	comp=Z,7.9nm,0.9s						
KBA	Koelnbreinsper	78.86	335	epP	P	09 24 58.8	+1.4
	comp=Z,25nm,1.0s						
OBKA	Obir	79.05	334	epP	P	09 24 59.4	+1.1
	comp=Z,3.9nm,0.5s						
WATA	Walderalm	79.09	337	eP	P	09 25 01.1	+2.4
	comp=Z,10nm,1.0s						
WTTA	Wattenberg	79.14	337	epP	P	09 25 00.1	+1.2
	comp=Z,6.8nm,0.7s						
RETA	Reutte	79.16	337	epP	P	09 25 00.3	+1.3
	comp=Z,4.4nm,0.7s						
ECH	Echery	79.35	340	eP	P	09 25 00.0	+0.1
	comp=Z,5.0nm,0.9s						
ECH	Echery	79.35	340	eP	P	09 25 00.0	+0.1
ECH				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ABTA	Abfaltersbach	79.39	336	epP	P	09 25 01.2	+1.0
	comp=Z,4.2nm,0.6s						
DIVS	Divibare	79.55	330	eP	P	09 25 00.6	-0.5
	comp=Z,5.5nm,0.8s						
DAVA	Damuels	79.57	338	epP	P	09 25 01.7	+0.4
	comp=Z,8.8nm,1.0s						
FETA	Feichten	79.60	337	epP	P	09 25 02.1	+0.6
	comp=Z,1.5nm,0.5s						
VTS	Vitosha	79.77	327	⇓iP	P	09 25 02.7	+0.3
VTS	Vitosha	79.77	327	eP	P	09 25 01.9	-0.6
	comp=Z,6.4nm,0.8s						
VTS	Vitosha	79.77	327	⇓P	P	09 25 02.7	+0.3
TUE	Stuetta	80.46	338	eP	P	09 25 06.6	+0.4
	comp=Z,8.0nm,0.7s						
ISP	Isparta	81.01	320	⇑iP	P	09 24 58.2	-11
ISP	Isparta	81.01	320	⇑P	P	09 24 58.2	-11
PDG	Podgorica	81.28	329	⇑iP	P	09 25 09.6	-0.7
TTG	Podgorica	81.28	329	eP	P	09 25 09.8	-0.5
	comp=Z,9.7nm,0.9s						
TTG	Podgorica	81.28	329	eP	P	09 25 09.8	-0.5
TTG				pmax	pmax		
	comp=Z,10.0nm,0.9s						
RAYN	Ar Rayn	85.19	301	eP	P	09 25 30.7	-0.2
	comp=Z,5.7nm,0.8s						
RAYN	Ar Rayn	85.19	301	eP	P	09 25 30.7	-0.2
RAYN				pmax	pmax		
	comp=Z,6.0nm,0.8s						

IDC 20 09:42:22.6±29.0**, 29°.46N×138°.03E, h380**^{km}±336^{km}**, mb2.5**/5**, mb1 2.8**/5**, mb1mx2.6**/55**, mbtmp3.3**/5**, Error ellipse: s-maj=52.6km s-min=17.8km az=83.0, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	46.14	308	P	P	09 50 10.7	0.0
	0.1nm,0.3s,baz=88,slow=12,SNR=3.5						
WRA	Warramunga Arr	49.25	185	P	P	09 50 34.4	-0.1
	0.3nm,0.4s,baz=0.5,slow=7.7,SNR=7.5						
ASAR	Alice Springs	52.97	185	P	P	09 51 01.6	-0.2
	0.2nm,0.7s,baz=7.0,slow=8.4,SNR=3.6						
ILAR	Eielson Array	57.43	29	P	P	09 51 32.7	0.0
	0.2nm,0.6s,baz=248,slow=5.9,SNR=6.6						
YKA	Yellowknife Ar	71.79	28	P	P	09 53 04.2	-0.3
	0.2nm,0.5s,baz=302,slow=6.2,SNR=4.5						

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*MOS **20** 09:59:23.2±1.1, 49°.09N×156°.49E, h10^{km}, mb4.1/11, Error ellipse: s-maj=15.2km s-min=4.0km az=78.9*

*IDC **20** 09:59:23.9±0.9, 49°.44N×156°.09E, h0^{km}, mb3.8/13, mb1 4.1/14, mb1mx3.8/67, mbtmp3.9/14, ML5.0/1, MS3.3/6, Ms1 3.3/6, ms1mx2.9/68, Error ellipse: s-maj=21.3km s-min=16.5km az=139.0*

*NEIC **20** 09:59:25.1±0.8, 49°.27N×156°.20E, h10^{km}, mb4.7/2, Error ellipse: s-maj=21.4km s-min=11.2km az=138.0*

*KRSC **20** 09:59:26.4±2.9, 49°.32N×157°.38E, h10^{km}±56^{km}, ML4.6*

*SKHL **20** 09:59:27.6±0.6, 49°.17N×156°.75E, h57^{km}±3^{km}, mb4.5/5*

ISC 20 09:59:25.9±1.2**, 49°.20N**±0°.08×**156°.50E**±0°.08**, h18**^{km}±5^{km}**, n92, σ1^{s}87**/100**, mb4.0**/16**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	1.50	351	eP	Pn	09 59 51.0	-0.9
SKR				AMB	AMB	09 59 52.0	
	388nm,0.6s						
SKR				AMB	AMB	09 59 52.0	
	500nm,1.1s						
SKR				eS	Sn	10 00 09.0	-2.0
SKR				A	A	10 00 15.0	
	3μm,0.7s						
SKR				A	A	10 00 15.0	
	2μm,0.7s						
SKR	Severo-Kuril's	1.50	351	eP	Pn	09 59 51.8	-0.2
SKR				eS	Sn	10 00 11.3	+0.3
SKR	Severo-Kuril's	1.50	351	ePN	Pn	09 59 51.7	-0.2
SKR				eS	Sn	10 00 09.5	-1.5
SKR				pmax	pmax		
	comp=Z,388nm,0.6s						
SKR				pmax	pmax		
	comp=Z,500nm,1.1s						
SKR				smax	smax		
	comp=N,3μm,0.7s						
SKR				smax	smax		
	comp=E,2μm,0.6s						
PAU	Pauzhetka	2.28	5	eP	Pn	10 00 04.1	+1.5
PAU				AMB	AMB	10 00 06.6	
	comp=E,400nm,0.6s						
PAU				eS	Sn	10 00 31.0	+0.9
PAU				A	A	10 00 33.7	
	comp=E,1μm,0.3s						
PAU	Pauzhetka	2.28	5	eP	Pn	10 00 04.0	+1.5
PAU				eS	Sn	10 00 31.4	+1.3
PAU	Pauzhetka	2.28	5	PN	Pn	10 00 04.0	+1.5
PAU				S	Sn	10 00 31.4	+1.3
KDTR	Khodutka, Kamc	2.80	20	eP	Pn	10 00 10.2	+0.5
KDTR				eS	Sn	10 00 42.7	-0.3
MIPR	Malaya Ipel'ka	3.08	3	eP	Pn	10 00 15.1	+1.4
MIPR	Malaya Ipel'ka	3.08	3	PN	Pn	10 00 15.1	+1.4
ASAK	Asacha	3.31	15	eP	Pn	10 00 18.3	+1.5
ASAK	Asacha	3.31	15	PN	Pn	10 00 18.3	+1.5
MTVR	Mutnovka	3.45	17	eP	Pn	10 00 20.1	+1.2
MTVR				eS	Sn	10 00 58.7	-0.7
MTVR	Mutnovka	3.45	17	PN	Pn	10 00 20.1	+1.2
RUS	Russkaya	3.48	21	eP	Pn	10 00 19.4	+0.3
RUS				eS	Sn	10 00 59.4	-0.3
RUS	Russkaya	3.48	21	PN	Pn	10 00 19.4	+0.3
APC	Apacha	3.75	6	eP	Pn	10 00 25.8	+3.0
APC	Apacha	3.75	6	PN	Pn	10 00 25.8	+3.0
KRMR	Karymshinskiy	3.77	15	eP	Pn	10 00 25.2	+2.0
KRMR				eS	Sn	10 01 08.9	+1.8
KRMR	Karymshinskiy	3.77	15	PN	Pn	10 00 25.2	+2.0
PETK	Petropavlovsk-	3.98	10	Pn	Pn	10 00 28.2	+2.1
	baz=176,slow=12						
PETK				LR	LR	10 02 11.3	
	comp=E,286nm,21.9s,baz=195,slow=44						
PET	Petropavlovsk	4.06	19	eP	Pn	10 00 28.1	+1.0
PET				AMB	AMB	10 00 32.1	
	comp=E,30nm,1.0s						
PET				eS	Sn	10 01 12.4	-1.7
PET	Petropavlovsk	4.06	19	ePn	Pn	10 00 28.6	+1.5
PET				eSn	Sn	10 01 16.9	+2.8
PET	Petropavlovsk	4.06	19	eP	Pn	10 00 28.6	+1.5
PET				eS	Sn	10 01 15.4	+1.3
PET	Petropavlovsk	4.06	19	ePN	Pn	10 00 27.3	+0.2
PET				pmax	pmax		
	comp=Z,48nm,0.6s						
PET				MLR	MLR		
	comp=Z,400nm,10.0s						
PET				MLR	MLR		
	comp=Z,200nm,8.0s						
DALK	Dalny	4.09	19	eP	Pn	10 00 28.6	+1.1
DALK				eS	Sn	10 01 15.1	+0.3
DALK	Dalny	4.09	19	PN	Pn	10 00 28.6	+1.1
UGLR	Uglovaya	4.27	19	eP	Pn	10 00 32.5	+2.4
UGLR	Uglovaya	4.27	19	PN	Pn	10 00 32.5	+2.4
AVH	Avacha	4.30	18	eP	Pn	10 00 33.0	+2.5
AVH	Avacha	4.30	18	PN	Pn	10 00 33.0	+2.5
KOK	Koryaka	4.31	17	eP	Pn	10 00 33.8	+3.2
KOK	Koryaka	4.31	17	PN	Pn	10 00 33.8	+3.2
SMAR	Somma	4.32	19	eP	Pn	10 00 33.2	+2.4
SMAR	Somma	4.32	19	PN	Pn	10 00 33.2	+2.4
SDLR	Sedlovina	4.35	19	eP	Pn	10 00 32.4	+1.3
SDLR	Sedlovina	4.35	19	PN	Pn	10 00 32.4	+1.3
NLC	Nalytchevo	4.36	23	eS	Sn	10 01 18.8	-2.6
KRX	Arik	4.38	17	eP	Pn	10 00 35.1	+3.5
KRX	Arik	4.38	17	PN	Pn	10 00 35.1	+3.5
SPN	Mys Shipunski	4.49	28	eP	Pn	10 00 33.6	+0.7
SPN				eS	Sn	10 01 23.6	-1.0
SPN	Mys Shipunski	4.49	28	PN	Pn	10 00 33.6	+0.7
GNL	Ganaly	4.59	11	eP	Pn	10 00 36.9	+2.4
GNL	Ganaly	4.59	11	PN	Pn	10 00 36.9	+2.4
KII	Karymskiy	5.18	20	eP	Pn	10 00 45.9	+3.4
KII	Karymskiy	5.18	20	PN	Pn	10 00 45.9	+3.4
MKZ	Mys Kozlova	6.26	29	eP	Pn	10 00 57.1	-0.2
MKZ	Mys Kozlova	6.26	29	PN	Pn	10 00 57.1	-0.2
TUMD	Tumrok D	6.47	20	eP	Pn	10 01 02.5	+2.3
TUMR	Tumrok	6.49	19	eP	Pn	10 01 03.2	+2.7
TUMR	Tumrok	6.49	19	PN	Pn	10 01 03.2	+2.7
ESO	Esso	6.87	10	eP	Pn	10 01 11.1	+5.5
ESO	Esso	6.87	10	PN	Pn	10 01 11.1	+5.5
KUR	Kuril'sk	7.09	239	eP	Pn	10 01 14.0	+5.3
KUR				AMB	AMB	10 01 16.0	
	comp=Z,13nm,0.7s						
KUR				AMB	AMB	10 01 16.0	
	comp=Z,25nm,0.7s						
KUR				eS	Sn	10 02 29.0	+0.2
KUR	Kuril'sk	7.09	239	ePN	Pn	10 01 14.0	+5.3
KUR				pmax	pmax		
	comp=Z,25nm,0.7s						
KUR				pmax	pmax		
	comp=E,13nm,0.5s						
BZMR	Bezymyannaya	7.17	18	eP	Pn	10 01 13.2	+3.3
BZMR	Bezymyannaya	7.17	18	PN	Pn	10 01 13.2	+3.3
KBTR	Krutoberegovo	7.99	26	eP	Pn	10 01 21.5	+0.4
KBTR	Krutoberegovo	7.99	26	PN	Pn	10 01 21.5	+0.4
SHO	Shikotan	8.53	235	eP	Pn	10 01 30.0	+1.6
SHO				AMB	AMB	10 01 35.0	
	comp=E,8.0nm,0.5s						
SHO				AMB	AMB	10 01 35.0	
	comp=E,9.0nm,0.5s						
SHO				AMB	AMB	10 01 35.0	
	comp=E,11nm,0.5s						
SHO	Shikotan	8.53	235	ePN	Pn	10 01 30.1	+1.6
SHO				pmax	pmax		
	comp=Z,11nm,0.5s						
SHO				pmax	pmax		
	comp=E,9.0nm,0.2s						
SHO				pmax	pmax		
	comp=N,8.0nm,0.5s						
ASAJ	Asahikawa	10.82	247	Pn	Pn	10 02 00.7	+0.9
	comp=N,1.6nm,0.3s,baz=86,slow=17,SNR=16						
MA2	Magadan	10.91	344	Pn	Pn	10 02 01.9	+0.9
	comp=N,1.1nm,0.3s,baz=163,slow=8.7,SNR=7.3						
MA2				LR	LR	10 06 10.5	
	comp=N,122nm,19.0s,baz=144,slow=38						
KLR	Kul'dur	16.16	280	Pn	Pn	10 03 13.8	+2.0
	comp=N,0.0nm,0.3s,baz=75,slow=12,SNR=7.8						
KLR				LR	LR	10 09 40.2	
	comp=N,18nm,19.1s,baz=40,slow=39						
YAK	Yakutsk	19.67	321	LR	LR	10 11 58.6	
	comp=N,86nm,18.6s,baz=90,slow=39						
KSRS	Korea Array	23.73	251	P	P	10 04 36.4	-0.3
	comp=N,2.6nm,0.8s,baz=50,slow=9.6,SNR=13						
KSAR	Wonju Array Be	23.76	251	P	P	10 04 36.4	-0.7
KSAR	Wonju Array Be	23.76	251	P	P	10 04 36.4	-0.7
H11S1	WAKE ISLAND Hy	31.71	161	T	T	10 40 12.7	
	baz=349,slow=76,SNR=18						
H11S3	WAKE ISLAND Hy	31.72	161	T	T	10 39 38.2	
	baz=349,SNR=45						
H11S2	WAKE ISLAND Hy	31.73	161	T	T	10 40 17.0	
	baz=349,slow=76,SNR=30						
ILAR	Eielson Array	33.21	41	P	P	10 06 01.4	+0.2
	comp=N,0.4nm,0.8s,baz=273,slow=8.6,SNR=5.3						
EGAK	Eagle	35.66	41	eP	P	10 06 22.8	+0.3
INK	Inuvik	38.35	34	P	P	10 06 46.9	+1.6
	comp=N,2.4nm,0.8s,baz=287,slow=6.5,SNR=7.8						
YKA	Yellowknife Ar	47.59	39	P	P	10 08 00.8	+0.8
	comp=N,0.7nm,0.8s,baz=301,slow=7.2,SNR=5.1						
MKAR	Makanchi Array	47.85	297	P	P	10 07 59.7	-2.6
	comp=N,0.8nm,0.8s,baz=61,slow=7.5,SNR=6.5						
MKAR				LR	LR	10 29 31.3	
	comp=N,112nm,18.7s,baz=38,slow=38						
KURK	Kurchatov	47.91	303	P	P	10 08 01.1	-1.7
KURK	Kurchatov	47.91	303	P	P	10 08 01.1	-1.7
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KURBB	Kurchatov Arra	48.01	303	P	P	10 08 01.1	-2.4
	comp=Z,2.7nm,0.8s,baz=64,slow=7.9,SNR=11						
BVAR	Borovoye Array	51.06	309	P	P	10 08 24.2	-2.6
	comp=Z,0.6nm,0.4s,baz=92,slow=7.5,SNR=5.8						
BRVK	Borovoye	51.10	309	eP	P	10 08 24.1	-2.9
	comp=Z,11nm,1.0s						
BRVK	Borovoye	51.10	309	eP	P	10 08 24.1	-2.9
BRVK				pmax	pmax		
	comp=Z,11nm,1.0s						
ARU	Arti	54.74	318	eP	P	10 08 51.1	-2.7
ARU				epP	sP	10 09 01.4	-0.4
ARU	Arti	54.74	318	eP	P	10 08 51.1	-2.7
CMAR	Chiang Mai Arr	55.14	257	P	P	10 08 57.5	+0.2
	comp=Z,0.7nm,0.3s,baz=28,slow=6.3,SNR=5.7						
KBZ	Khabaz	70.76	315	P	P	10 10 39.9	-0.9
	comp=Z,1.9nm,0.7s,baz=63,slow=7.5,SNR=6.0						
GNI	Garni	72.64	312	LR	LR	10 48 23.1	
	comp=Z,47nm,18.2s,baz=60,slow=41						
TXAR	Lajitas Array	74.33	63	P	P	10 11 03.5	+1.1
	comp=Z,0.6nm,0.7s,baz=292,slow=3.9,SNR=9.7						
ASAR	Alice Springs	75.29	201	P	P	10 11 09.2	+1.5
	comp=Z,0.3nm,0.8s,baz=12,slow=5.7,SNR=3.5						
GERES	GERESS Array B	77.20	336	P	P	10 11 17.3	-1.2
	comp=Z,0.7nm,0.6s,baz=356,slow=5.4,SNR=5.6						
BRTR	Keskin Array B	78.11	319	P	P	10 11 22.2	-1.6
	comp=Z,1.6nm,0.8s,baz=46,slow=5.3,SNR=4.4						
RAYN	Ar Rayn	85.19	301	eP	P	10 12 01.1	-0.2
	comp=Z,3.5nm,0.8s						
RAYN	Ar Rayn	85.19	301	eP	P	10 12 01.1	-0.2
RAYN				pmax	pmax		
	comp=Z,4.0nm,0.8s						

MEX 20 10:34:18.2±0.6**, 18°.43N×101°.23W, h62**^{km}±10^{km}**, MD3.7, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARIG	Puente Sto Nin	0.85	100	eP	Pn	10 34 32.6	-1.9
ARIG				i S	Sn	10 34 44.6	-1.8
ZIIG	Zihuatanejo	0.85	196	eP	Pn	10 34 32.6	-1.8
ZIIG				i S	Sn	10 34 44.8	-1.5
MOIG	Morelia	1.24	2	i P	Pn	10 34 38.9	-0.9
MOIG				i S	Sn	10 34 54.3	-1.6
MEIG	Mezcala	1.61	108	i P	Pn	10 34 43.2	-1.3
MEIG				i S	Sn	10 35 03.2	-1.2
PLIG	Platanillo	1.64	91	i P	Pn	10 34 43.6	-1.3
PLIG				i S	Sn	10 35 03.9	-1.2
CAIG	El Cayaco	1.65	146	eP	Pn	10 34 44.1	-0.9
CAIG				i S	Sn	10 35 03.7	-1.5
MMIG	Aquila	2.02	266	eP	Pn	10 34 49.0	-1.0
MMIG				i S	Sn	10 35 12.5	-1.6
YAIG	Yautepec	2.09	78	eP	Pn	10 34 50.6	-0.5
YAIG				eS	Sn	10 35 14.7	-1.5

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*SOME **20** 10:34:26.4, 44°.78N×81°.98E, h0^{km}*

*NNC **20** 10:34:26.7±1.2, 44°.65N×82°.08E, h0^{km}, mb3.7, mpv3.3, Error ellipse: s-maj=17.0km s-min=4.0km az=117.0*

ISC 20 10:34:28.5±2.1**, 44°.65N**±0°.04×**81°.92E**±0°.09**, h17**^{km}±16^{km}**, n19, σ1^{s}72**/37**, 5C-6D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DJR	Jarkent	1.56	259	⇓iP	Pg	10 34 58.6	+0.2
	23nm,0.2s						
DJR				⇓iS	Sg	10 35 21.5	+2.8
	21nm,0.5s						
KTMS	Ketmen	1.65	224	eP	Pg	10 34 59.9	-0.3
	12nm,0.1s						
KTMS				eS	Sg	10 35 23.8	+2.1
	107nm,0.3s						
KAPS	Kapalarasan	1.93	290	eP	Pg	10 35 04.7	-0.8
	13nm,0.2s						
KAPS				⇑iS	Sg	10 35 31.8	+1.3
	28nm,0.4s						
MAKZ	Makanchi	2.16	1	⇓Pn	Pn	10 35 04.1	+0.4
	10nm,0.6s						
MAKZ				⇓Sn	Sb	10 35 32.3	-1.2
	24nm,0.6s						
MK31	Makanchi Array	2.16	7	⇑Pn	Pn	10 35 04.0	+0.3
	15nm,0.3s,baz=182,slow=14,SNR=666						
MK31				⇓Sn	Sb	10 35 32.5	-1.1
	28nm,0.5s,baz=183,slow=27,SNR=25						
PDGK	Podgornoye	2.20	234	⇑Pg	Pb	10 35 07.9	+0.1
	2.7nm,0.3s						
PDGK				⇑Lg	Lg	10 35 40.5	
	50nm,0.7s						
SHLS	Shalkode	2.32	231	eP	Pn	10 35 07.3	+1.3
	23nm,0.2s						
SHLS				eS	Sb	10 35 37.0	-1.3
	71nm,0.3s						
TDK	Taldyqorghan	2.52	279	eP	Pb	10 35 15.0	+1.7
	32nm,0.2s						
TDK				eS	Sg	10 35 50.1	+0.5
	65nm,0.5s						
UZB	Uzynbulak	2.58	235	eP	Pb	10 35 15.3	+1.0
	8.5nm,0.3s						
UZB				eS	Sg	10 35 51.1	-0.3
	13nm,0.2s						
KPKS	Kokpek	2.62	244	eP	Pg	10 35 16.4	-2.2
	20nm,0.2s						
KPKS				eS	Sg	10 35 52.7	+0.1
	94nm,0.3s						
ZHN	Zhinishke	2.92	241	eP	Pg	10 35 22.0	-2.4
	6.0nm,0.4s						
ZHN				eS	Sg	10 36 01.3	-1.0
	31nm,0.3s						
KURS	Kuram	2.94	248	eP	Pb	10 35 22.0	+1.5
	4.5nm,0.5s						
KURS				eS	Sg	10 36 01.9	-1.1
	7.3nm,0.3s						
ARXS	Arharly	2.96	263	eP	Pb	10 35 22.9	+2.0
	5.3nm,0.2s						
ARXS				eS	Sg	10 36 03.1	-0.6
	28nm,0.4s						
SATY	Saty	3.00	239	eP	Pb	10 35 22.9	+1.5
	8.5nm,0.2s						
SATY				eS	Sg	10 36 03.9	-0.9
	28nm,0.2s						
CHKK	Chushkaly	3.63	259	eP	Pb	10 35 34.1	+2.0
	5.0nm,0.4s						
CHKK				eS	Sg	10 36 22.6	-2.5
	15nm,0.4s						
KOTS	Kotyrbulak	3.75	249	eP	Pg	10 35 38.4	-1.9
	6.8nm,0.2s						
KOTS				eS	Sg	10 36 29.9	+1.0
	21nm,0.3s						
KTBS	Karatobe	3.88	258	eP	Pb	10 35 38.1	+1.7
	4.0nm,0.1s						
KTBS				eS	Sg	10 36 29.7	-3.4
	13nm,0.5s						
TNSS	Tian-Shan	3.94	248	⇑iP	Pg	10 35 43.2	-0.8
	3.2nm,0.5s						
TNSS				⇓iS	Sg	10 36 38.2	+3.1
	8.5nm,0.5s						
DGS	Degeres	4.66	255	eP	Pg	10 35 54.3	-3.3
	3.6nm,0.4s						
DGS				eS	Sg	10 36 57.3	-0.6
	8.4nm,0.3s						

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*ISCJB **20** 10:47:07.7±0.3, 39°.09N±0°.03×29°.07E±0°.03, h7^{km}±3^{km}, Error ellipse: s-maj=4.6km s-min=3.7km az=7.9*

*CSEM **20** 10:47:07.7±0.1, 39°.10N×29°.06E, h5^{km}, ML2.4, Error ellipse: s-maj=1.8km s-min=1.6km az=147.0*

*DDA **20** 10:47:07.2, 39°.10N×29°.08E, h5^{km}, Ml2.8*

*ISK **20** 10:47:07.5, 39°.11N×29°.07E, h5^{km}, ML2.4/10*

ISC 20 10:47:07.8±0.8**, 39°.11N**±0°.02×**29°.06E**±0°.02**, h9**^{km}±5^{km}**, n50, σ0^{s}28**/66**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMAA	Simav-Kutahya	0.06	266	PG	Pg	10 47 09.6	-0.2

SMAA				SG	Sg	10 47 11.2	-0.1
SMAA	Simav-Kutahya	0.06	266	ePg	Pg	10 47 09.6	-0.2
SMAA				eSg	Sg	10 47 11.2	-0.1
SIMA	Simav-Kutahya	0.07	251	PG	Pg	10 47 09.7	-0.2
SIMA				SG	Sg	10 47 11.3	-0.1
SIMA	Simav-Kutahya	0.07	251	ePg	Pg	10 47 09.7	-0.2
SIMA				eSg	Sg	10 47 11.3	-0.1
SHAP	Saphane-Kutahy	0.15	123	PG	Pg	10 47 11.3	+0.2
SHAP				SG	Sg	10 47 13.6	+0.2
SHAP	Saphane-Kutahy	0.15	123	ePg	Pg	10 47 11.3	+0.2
SHAP				eSg	Sg	10 47 13.6	+0.2
DEMI	Demirci	0.28	257	i P	Pg	10 47 13.2	-0.2
DEMI				i S	Sg	10 47 17.5	+0.4
DEMI	Demirci	0.28	257	P	Pg	10 47 13.1	-0.2
DEMI				S	Sg	10 47 17.5	+0.4
GDZ	Gediz	0.33	93	i P	Pg	10 47 14.0	-0.3
GDZ				i S	Sg	10 47 18.5	-0.2
GDZ	Gediz	0.33	93	P	Pg	10 47 14.0	-0.3
GDZ				S	Sg	10 47 18.5	-0.2
TVSB	Tavsanli	0.46	42	PG	Pg	10 47 16.5	-0.4
TVSB	Tavsanli	0.46	42	ePg	Pg	10 47 16.5	-0.4
KULA	Kula-Manisa	0.67	208	PG	Pg	10 47 20.6	-0.1
KULA	Kula-Manisa	0.67	208	ePg	Pg	10 47 20.6	-0.1
DURS	Dursunbey	0.67	318	i P	Pg	10 47 20.3	-0.5
DURS				i S	Sb	10 47 31.2	-0.1
DURS	Dursunbey	0.67	318	P	Pg	10 47 20.3	-0.5
DURS				S	Sb	10 47 31.2	-0.1
MANT	Manisa	0.73	213	i P	Pg	10 47 21.4	-0.4
MANT				i S	Sg	10 47 31.1	-0.3
MANT	Manisa	0.73	213	P	Pg	10 47 21.4	-0.4
MANT				S	Sg	10 47 31.0	-0.3
KUTH	Kutahya	0.80	68	PG	Pg	10 47 23.1	-0.1
KUTH	Kutahya	0.80	68	ePg	Pg	10 47 23.1	-0.1
KHAL	Karahalli	0.81	155	i P	Pb	10 47 23.6	-0.5
KHAL				i S	Sg	10 47 34.0	+0.2
KHAL	Karahalli	0.81	155	P	Pb	10 47 23.6	-0.5
KHAL				S	Sg	10 47 34.0	+0.2
AKHS	Akhisar	1.00	257	i P	Pg	10 47 26.9	-0.1
AKHS	Akhisar	1.00	257	P	Pg	10 47 26.9	-0.1
AKS	Akhisar	1.00	257	PG	Pg	10 47 26.9	-0.1
AKS	Akhisar	1.00	257	ePg	Pg	10 47 26.9	-0.1
BALB	Balikesir	1.06	301	PN	Pn	10 47 28.9	+0.1
BALB	Balikesir	1.06	301	ePn	Pn	10 47 28.9	+0.1
STEP	BALIKESIR_Sava	1.08	285	i P	Pb	10 47 28.7	+0.1
STEP	BALIKESIR_Sava	1.08	285	P	Pb	10 47 28.7	+0.1
CAVI	Cavuskoy	1.25	29	PN	Pg	10 47 31.4	-0.4
CAVI	Cavuskoy	1.25	29	ePn	Pg	10 47 31.4	-0.4
MDNY	Mudanya-Bursa	1.27	354	PN	Pb	10 47 32.3	+0.4
MDNY	Mudanya-Bursa	1.27	354	ePn	Pb	10 47 32.3	+0.4
KCTX	Karacabey (Bur	1.28	335	PN	Pb	10 47 32.3	+0.2
KCTX	Karacabey (Bur	1.28	335	ePn	Pb	10 47 32.3	+0.2
BORA	Eskisehir	1.33	54	PN	Pb	10 47 33.1	+0.2
BORA	Eskisehir	1.33	54	ePn	Pb	10 47 33.1	+0.2
GEMT	Gemlik	1.33	4	PN	Pg	10 47 33.1	-0.3
GEMT	Gemlik	1.33	4	ePn	Pg	10 47 33.1	-0.3
ADVT	Abdulvahap	1.43	21	PN	Pb	10 47 34.4	-0.2
ADVT	Abdulvahap	1.43	21	ePn	Pb	10 47 34.4	-0.2
ARMT	Armutlu	1.47	354	PN	Pb	10 47 35.4	+0.1
ARMT	Armutlu	1.47	354	ePn	Pb	10 47 35.4	+0.1
AYDB	Zeytinkoy-Aydi	1.48	219	PN	Pb	10 47 35.6	+0.1
AYDB	Zeytinkoy-Aydi	1.48	219	ePn	Pb	10 47 35.6	+0.1
YLV	Yalova	1.48	9	PN	Pn	10 47 35.2	+0.5
YLV	Yalova	1.48	9	ePn	Pn	10 47 35.2	+0.5
SBT5	Esenkoy-Cinarc	1.53	355	PN	Pb	10 47 36.3	0.0
SBT5	Esenkoy-Cinarc	1.53	355	ePn	Pb	10 47 36.3	0.0

WEL 20 10:51:20.3±1.1**,38˚S**±9˚×**18˚0W**±˚**,h33**^{km}**,ML3.9**/25**,East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.30	262	P	Pn	10 51 42.5	+0.3
WMGZ				S	Sn	10 51 59.5	+1.1
MXZ	Matakaoa Point	1.39	273	P	Pn	10 51 42.9	-0.4
MXZ				S	Sn	10 51 59.9	-0.5
PUZ	Puketiti	1.48	253	P	Pn	10 51 44.5	-0.1
PUZ				S	Sn	10 52 03.8	+1.1
PKGZ	Pakihiroa	1.58	261	P	Pn	10 51 45.5	-0.5
TWGZ	Tauwhareparae	1.72	252	P	Pn	10 51 48.1	+0.2
HAZ	Te Kaha	1.80	266	P	Pn	10 51 48.9	0.0
RUGZ	Raukumara Rang	1.90	260	P	Pn	10 51 51.3	+0.8
TKGZ	Te Karaka	1.90	245	P	Pn	10 51 50.3	-0.1
RIGZ	Rimuhau	2.08	239	P	Pn	10 51 53.0	0.0
RIGZ				S	Sn	10 52 18.8	+1.0
MWZ	Matawai	2.10	250	P	Pn	10 51 52.9	-0.3
MWZ				S	Sn	10 52 17.8	-0.5
RAGZ	Rawiri	2.24	247	P	Pn	10 51 55.9	+0.8
MHGZ	Mahia Peninsul	2.25	228	P	Pn	10 51 55.2	0.0
KNZ	Kokohu	2.31	233	P	Pn	10 51 55.8	-0.3
URZ	Urewera	2.40	254	P	Pn	10 51 58.0	+0.8
RTZ	Ruatahuna	2.60	247	P	Pn	10 52 00.8	+0.7
WHHZ	Waihua	2.63	236	P	Pn	10 52 00.8	+0.4
MUGZ	Murupara	2.71	251	P	Pn	10 52 02.1	+0.5
MTHZ	Maungataniwha	2.79	244	P	Pn	10 52 02.9	+0.2
TARZ	Mount Tarawera	2.86	257	P	Pn	10 52 05.0	+1.4
ARHZ	Aropaoanui	2.88	235	P	Pn	10 52 04.7	+0.8
ARHZ				S	Sn	10 52 38.7	+1.3
NMHZ	Naumai	2.93	239	P	Pn	10 52 04.8	+0.2
MRHZ	Matea Rd	3.09	246	P	Pn	10 52 06.8	0.0
BKZ	Black Stump Fm	3.17	240	P	Pn	10 52 08.0	0.0
MCHZ	McNeill Hill	3.18	235	P	Pn	10 52 08.5	+0.5
KWHZ	Kaweka Forest	3.35	237	P	Pn	10 52 10.3	-0.1
KRHZ	Kereru	3.50	234	P	Pn	10 52 11.6	-0.8
BHHZ	Black Hill Sta	3.62	238	P	Pn	10 52 14.0	-0.1
WPHZ	Waipukurau	3.70	228	P	Pn	10 52 13.8	-1.3
PNHZ	Pukenui	3.76	232	P	Pn	10 52 15.0	-0.9
MKAZ	Moumakai	3.93	277	P	Pn	10 52 18.1	-0.2
TSZ	Takapari Road	3.99	232	P	Pn	10 52 17.9	-1.3
BFZ	Birch Farm	4.23	223	P	Pn	10 52 19.6	-2.7
POWZ	Post Office Ro	4.31	229	P	Pn	10 52 22.7	-0.8

IDC ***20*** *10:51:23.1±2.2, 35˚.15S×179˚.23W, h0^{km}, mb4.5/3, mb1 4.6/4, mb1mx3.9/41, mbtmp4.4/4, ML4.1/1, MS3.6/6, Ms1 3.6/6, ms1mx3.1/37, Error ellipse: s-maj=60.0km s-min=42.6km az=152.0*

ISCJB ***20*** *10:51:27.0±1.3, 35˚.06S±0˚.07×179˚.2W±0˚.2, h42^{km}, mb4.4/3, MS3.6/5, Error ellipse: s-maj=21.7km s-min=7.7km az=16.4*

WEL ***20*** *10:51:28.9±1.3, 35˚S±9˚×17˚9W±1˚5, h33^{km}, ML4.6/14*

ISC 20 10:51:28.6±1.6**,35˚.10S**±0˚.09×**179˚.1W**±0˚.2**,h42**^{km}**,n31,**σ**1**^{s}**08**/32**,mb4.5**/3**,MS3.6**/5**,East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	3.24	220	P	Pn	10 52 16.3	-0.5
MXZ				S	Sn	10 52 53.6	-0.6
WMGZ	Waiomatatini S	3.38	216	P	Pn	10 52 19.9	+1.1
WMGZ				S	Sn	10 52 59.3	+1.6
PKGZ	Pakihiroa	3.60	219	P	Pn	10 52 22.0	0.0
PKGZ				S	Sn	10 53 04.3	+1.0
PUZ	Puketiti	3.66	215	P	Pn	10 52 22.3	-0.3
PUZ				S	Sn	10 53 03.5	-1.0
HAZ	Te Kaha	3.66	223	P	Pn	10 52 23.5	+0.8
CNGZ	Carnagh Statio	4.02	212	P	Pn	10 52 28.0	+0.4
CNGZ				S	Sn	10 53 15.5	+2.2
TKGZ	Te Karaka	4.14	215	P	Pn	10 52 29.3	0.0
MWZ	Matawai	4.22	219	P	Pn	10 52 29.4	-1.0
URZ	Urewera	4.39	223	Pn	Pn	10 52 32.6	0.0
	7.0nm,0.3s,baz=43,slow=8.7,SNR=12						
URZ				Sn	Sn	10 53 22.7	+0.1
	13nm,0.3s,baz=331,slow=22,SNR=8.4						
URZ	Urewera	4.39	223	P	Pn	10 52 32.7	0.0
RIGZ	Rimuhau	4.40	214	P	Pn	10 52 31.8	-1.0
RIGZ				S	Sn	10 53 22.6	-0.3
RAGZ	Rawiri	4.40	219	P	Pn	10 52 33.7	+0.7
KUZ	Kuaotunu	4.52	247	P	Pn	10 52 34.4	-0.1
GRZ	Great Barrier	4.59	254	P	Pn	10 52 34.9	-0.4
MHGZ	Mahia Peninsul	4.71	210	P	Pn	10 52 36.4	-0.7
MTHZ	Maungataniwha	4.97	220	P	Pn	10 52 41.7	+1.0
MKAZ	Moumakai	5.07	245	P	Pn	10 52 42.4	+0.4
BKZ	Black Stump Fm	5.38	220	P	Pn	10 52 46.3	-0.1
BHHZ	Black Hill Sta	5.84	220	P	Pn	10 52 54.2	+1.5
RPZ	Rata Peaks	11.49	219	Pn	Pn	10 54 06.6	-3.3
	1.4nm,0.3s,baz=55,slow=5.6,SNR=6.8						
RPZ				Sn	Sn	10 56 05.2	-12
	0.8nm,0.3s,baz=194,slow=23,SNR=5.0						
DZM	Mont Dzumac	18.13	312	LR	LR	11 01 13.8	
	comp=Z,357nm,19.0s,baz=120,slow=33						
PPT	Papeete	31.52	64	LR	LR	11 10 35.2	
	comp=Z,47nm,18.0s,baz=292,slow=36						
CTA	Charters Tower	33.96	287	P	P	10 58 08.9	+0.7
	5.1nm,0.8s,baz=98,slow=10,SNR=4.9						
ASAR	Alice Springs	42.17	273	P	P	10 59 16.4	-0.8
	4.5nm,0.8s,baz=112,slow=7.3,SNR=28						
WRA	Warramunga Arr	43.58	278	P	P	10 59 27.5	-1.3
	6.7nm,0.7s,baz=120,slow=7.6,SNR=29						
RPN	Rapa Nui	59.17	103	LR	LR	11 19 58.9	
	comp=Z,35nm,20.7s,baz=206,slow=29						
JOW	Kunigami	79.18	314	LR	LR	11 35 11.3	
	comp=Z,41nm,18.9s,baz=156,slow=33						
LPIG	La Paz	87.78	58	LR	LR	11 34 19.1	
	comp=Z,27nm,21.9s,baz=207,slow=29						
CPUP	Villa Florida	97.75	130	LR	LR	11 41 56.2	
	comp=Z,36nm,19.0s,baz=222,slow=31						
FINES	FINESS Array B	149.16	337	PKPbc	PKPbc	11 11 12.5	+1.0
	3.1nm,0.7s,baz=54,slow=4.9,SNR=12						
BRTR	Keskin Array B	153.68	290	PKPbc	PKPbc	11 11 23.3	+0.4
	0.6nm,0.5s,baz=157,slow=6.7,SNR=3.8						

IDC 20 10:53:14.6±7.6**,7˚.28S**×**150˚.45E,h54**^{km}±69^{km}**,mb3.6**/3**, mb1 4.0**/4**,mb1mx3.4**/45**,mbtmp4.0**/4**,ML1.8**/1**,Error ellipse: s-maj=90.5km s-min=37.9km az=126.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.88	237	P	Pn	10 54 12.4	+0.6
	5.4nm,0.3s,baz=61,slow=7.4,SNR=10						
PMG				S	Sn	10 54 56.5	+0.3
	11nm,0.3s,baz=169,slow=22,SNR=9.1						
WRA	Warramunga Arr	20.07	230	P	P	10 57 43.8	+0.1
	4.9nm,0.5s,baz=56,slow=12,SNR=61						
ASAR	Alice Springs	22.76	222	P	P	10 58 12.8	+0.2
	1.3nm,0.4s,baz=56,slow=9.2,SNR=31						
ILAR	Eielson Array	85.32	22	P	P	11 05 45.5	-0.1
	0.8nm,0.8s,baz=251,slow=4.7,SNR=9.3						

IDC 20 10:58:11.1±7.2**,15˚.66S**×**178˚.11W,h0**^{km}**,mb3.8**/3**, mb1 4.1**/3**,mb1mx3.6**/45**,mbtmp3.8**/3**,MS3.4**/5**,Ms1 3.4**/5**, ms1mx3.0**/43**,Error ellipse: s-maj=336.4km s-min=36.2km az=142.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	22.28	284	LR	LR	11 10 45.2	
	comp=Z,276nm,19.9s,baz=132,slow=34						
URZ	Urewera	22.90	190	LR	LR	11 09 56.6	
	comp=Z,178nm,18.2s,baz=68,slow=31						
STKA	Stephens Creek	39.99	239	LR	LR	11 20 49.8	
	comp=Z,125nm,18.7s,baz=202,slow=34						
WRA	Warramunga Arr	45.36	257	P	P	11 06 31.3	-0.3
	1.0nm,1.0s,baz=79,slow=6.3,SNR=3.0						
ASAR	Alice Springs	45.71	252	P	P	11 06 34.3	0.0
	2.2nm,0.8s,baz=84,slow=8.1,SNR=17						
MJAR	Matsushiro Arr	66.30	323	LR	LR	11 39 28.7	
	comp=Z,5.8nm,18.0s,baz=65,slow=37						
JNU	Nakatsue	68.73	316	LR	LR	11 38 33.6	
	comp=Z,12nm,18.1s,baz=116,slow=35						
ILAR	Eielson Array	83.65	13	P	P	11 10 41.3	+0.1
	0.7nm,0.9s,baz=228,slow=6.0,SNR=4.8						
BRTR	Keskin Array B	143.37	317	PKP	PKPdf	11 17 46.8	-1.2
	0.9nm,0.7s,baz=79,slow=0.7,SNR=4.4						

SJA ***20*** *11:35:52.6±0.8, 24˚.25S×66˚.97W, h224^{km}±13^{km}, ML4.1, MW4.0*

ISCJB ***20*** *11:35:52.9±0.2, 24˚.25S±0˚.02×67˚.16W±0˚.03, h185^{km}±2^{km}, mb4.4/34, Error ellipse: s-maj=4.5km s-min=2.6km az=167.4*

NEIC ***20*** *11:35:52.7±0.5, 24˚.28S×66˚.96W, h162^{km}±4^{km}, mb4.6/27, MD4.1(SJA), Error ellipse: s-maj=7.3km s-min=5.1km az=81.0*

BJI ***20*** *11:35:52.4, 24˚.30S×67˚.00W, h160^{km}, mB4.8/1*

GUC ***20*** *11:35:55.4±0.6, 24˚.17S×67˚.59W, h208^{km}±13^{km}, ML4.9*

IDC ***20*** *11:35:55.3±1.8, 24˚.12S×66˚.86W, h185^{km}±15^{km}, mb4.0/13, mb1 4.1/17, mb1mx3.9/43, mbtmp4.4/17, Error ellipse: s-maj=20.1km s-min=10.4km az=72.0*

ISC 20 11:35:53.6±0.7**,24˚.27S**±0˚.04×**67˚.20W**±0˚.04**,h173**^{km}±6^{km}**, n413,**σ**1**^{s}**23**/453**,mb4.5**/34**,11C-1D,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.61	107	i P	Pn	11 36 28.6	+2.4
SLA				IAML		11 36 29.7	
	comp=Z,816nm,0.7s						
SLA				eS	Sn	11 36 54.2	+2.8
HJA	Humahuaca	1.95	58	i P	Pn	11 36 32.0	+1.9
HJA				IAML		11 36 34.0	
	comp=Z,436nm,0.5s						
HJA				eS	Sn	11 37 00.7	+2.5
GO02	Mina Guanaco	2.35	247	ePn	Pn	11 36 36.7	+2.2
GO02				eSn	Sn	11 37 08.9	+2.7
GO02	Mina Guanaco	2.35	247	⇑iP	Pn	11 36 37.0	+2.5
GO02				i S	Sn	11 37 09.1	+2.9
GO02				IAML		11 37 10.3	
	comp=N,4µm,0.2s						
YJA	Yavi	2.59	37	i P	Pn	11 36 39.2	+1.7
YJA				eS	Sn	11 37 14.2	+2.7
PB06	IPOC Station P	2.68	305	⇑iP	Pn	11 36 40.4	+2.2
PB06				i S	Sn	11 37 13.8	+1.0
PB06				IAML		11 37 16.5	
	comp=N,5µm,0.3s						
PB14	IPOC Station P	2.94	262	i P	Pn	11 36 43.2	+1.6
PB14				eS	Sn	11 37 19.6	+0.8
PB14	IPOC Station P	2.94	262	⇑iP	Pn	11 36 43.2	+1.6
PB14				i S	Sn	11 37 19.0	+0.2
PB14				IAML		11 37 24.0	
	comp=E,2µm,0.3s						
ANCH	Antofagasta	3.00	281	⇑iP	Pn	11 37 28.0	+46
ANCH				i S	Sn	11 38 04.3	+45
AHML	Horco Molle	3.02	147	i P	Pn	11 36 43.7	+1.5
AHML				IAML		11 36 44.2	
	comp=Z,115nm,0.6s						
AHML				i S	Sn	11 37 21.0	+0.9
PB05	IPOC Station P	3.10	296	⇑iP	Pn	11 36 44.8	+1.6
PB05				i S	Sn	11 37 21.5	-0.3
PB05				IAML		11 37 25.6	
	comp=N,1µm,0.4s						
PB09	IPOC Station P	3.10	322	⇑iP	Pn	11 36 45.5	+2.1
PB09				i S	Sn	11 37 23.1	+1.0
PB09				IAML		11 37 25.0	
	comp=N,3µm,0.6s						
PB10	IPOC Station P	3.16	283	i P	Pn	11 36 45.9	+1.9
PB10				eS	Sn	11 37 23.9	+0.8
PB10	IPOC Station P	3.16	283	⇑iP	Pn	11 36 45.8	+1.9
PB10				i S	Sn	11 37 23.7	+0.6
PB10				IAML		11 37 27.4	
	comp=N,1µm,0.5s						
PB03	IPOC Station P	3.23	313	⇑iP	Pn	11 36 46.4	+1.5
PB03				i S	Sn	11 37 24.8	-0.1
PB03				IAML		11 37 28.2	
	comp=N,3µm,0.4s						
PB04	IPOC Station P	3.33	305	ePn	Pn	11 36 47.6	+1.5
PB04				eSn	Sn	11 37 27.2	+0.1
PB04	IPOC Station P	3.33	305	⇑iP	Pn	11 36 47.5	+1.3
PB04				i S	Sn	11 37 26.4	-0.7
PB04				IAML		11 37 36.6	
	comp=N,3µm,0.6s						
PB07	IPOC Station P	3.54	315	⇑iP	Pn	11 36 50.1	+1.3
PB07				i S	Sn	11 37 31.0	-0.9
PB01	IPOC Station P	3.84	326	ePn	Pn	11 36 53.4	+0.7
PB01				eSn	Sn	11 37 38.4	-0.3
PB01	IPOC Station P	3.84	326	i P	Pn	11 36 53.3	+0.7
PB01				i S	Sn	11 37 37.9	-0.8
CPCH	Copiapo	4.19	222	⇓iP	Pn	11 36 56.6	-0.3
CPCH				i S	Sn	11 37 45.4	-1.1
GO03	Copiap	4.29	219	ePn	Pn	11 36 58.6	+0.3
GO03				eSn	Sn	11 37 48.4	-0.6
CYA	Choya	4.34	164	eP	Pn	11 37 00.4	+1.5
CYA				eS	Sn	11 37 49.2	-0.9
VCA	Vinchina	4.54	191	eP	Pn	11 37 04.3	+2.7
VCA				IAML		11 37 05.2	
	comp=Z,62nm,0.7s						
VCA				eS	Sn	11 37 57.4	+2.5
PB11	IPOC Station P	5.03	333	ePn	Pn	11 37 07.6	-0.4
PB11				eSn	Sn	11 38 03.3	-3.1
AGUA	GUANDACOL	5.33	192	eP	Pn	11 37 13.1	+1.4
AGUA				eS	Sn	11 38 13.9	+0.7
MNMC	Minye Minye	5.58	336	ePn	Pn	11 37 15.7	+0.4
MNMC				eSn	Sn	11 38 17.6	-1.8
LCO	Las Campanas	5.67	213	ePn	Pn	11 37 16.1	-0.4
LCO				eSn	Sn	11 38 11.3	-10
LCO	Las Campanas	5.67	213	i P	Pn	11 37 15.9	-0.5
LCO				eS	Sn	11 38 11.2	-10
ACDV	Cuesta del Vie	6.12	196	i P	Pn	11 37 23.6	+1.4
ACDV				eS	Sn	11 38 32.2	+0.1
AROD	Rodeo	6.22	199	eP	Pn	11 37 24.8	+1.1
AROD				eS	Sn	11 38 34.5	0.0
GO04	Tololo Observa	6.70	208	ePn	Pn	11 37 29.4	-0.5
GO04				eSn	Sn	11 38 43.1	-2.7
AMOG	MOGNA	6.74	190	eP	Pn	11 37 30.5	+0.1
AMOG				eS	Sn	11 38 43.7	-2.9
RTLL	Cerro Villicun	7.12	189	eP	Pn	11 37 35.4	0.0
RTLL				eS	Sn	11 38 53.5	-2.2
RTLL				IAML		11 38 56.4	
	comp=Z,48nm,0.5s						
TCA	Tanti	7.41	162	i P	Pn	11 37 38.5	-0.6
TCA				IAML		11 37 40.6	
	comp=Z,35nm,0.4s						
TCA				eS	Sn	11 38 58.1	-4.4
RTCV	Cerro Valdivia	7.66	189	eP	Pn	11 37 42.3	-0.1
RTCV				eS	Sn	11 39 04.8	-3.6
RTLS	Leoncito	7.73	193	eP	Pn	11 37 44.0	+0.4
RTLS				eS	Sn	11 39 08.1	-2.3
RTLS				IAML		11 39 11.9	
	comp=Z,27nm,0.4s						
ACAN	Cantantal	7.98	180	i P	Pn	11 37 45.7	-0.9
ACAN				eS	Sn	11 39 10.5	-5.5
LPAZ	La Paz	7.99	354	P	Pn	11 37 48.1	+0.7
	comp=Z,8.8nm,0.3s,baz=159,slow=9.3,SNR=141						
LPAZ				S	Sn	11 39 13.6	-3.6
	comp=Z,1.3nm,0.3s,baz=52,slow=17,SNR=3.7						
LPAZ	La Paz	7.99	354	ePn	Pn	11 37 47.8	+0.3
LPAZ				eSn	Sn	11 39 15.0	-2.3
LPAZ	La Paz	7.99	354	i P	Pn	11 37 48.2	+0.8
AUSP	Uspallata	8.16	193	eP	Pn	11 37 49.8	+0.6
MRA	San Martin	8.22	171	eP	Pn	11 37 48.5	-1.5
MRA				IAML		11 39 34.9	
	comp=Z,17nm,0.4s						
ASAL	Salagasta	8.42	189	i P	Pn	11 37 52.5	0.0
ARCO	CERRO ARCO	8.68	190	eP	Pn	11 37 55.5	-0.4
ARCO				eS	Sn	11 39 29.7	-3.2
AAGR	Agrelo	8.90	189	i P	Pn	11 37 59.2	+0.4
CPUP	Villa Florida	9.16	105	P	Pn	11 38 00.7	-1.6
	comp=Z,0.7nm,0.3s,baz=288,slow=12,SNR=20						
CPUP	Villa Florida	9.16	105	ePn	Pn	11 38 00.6	-1.7
ROC1	El Roble	9.30	200	ePn	Pn	11 38 02.8	-1.5
SIV	San Ignacio	10.04	36	P	Pn	11 38 11.8	-2.1
	comp=Z,3.6nm,0.3s,baz=227,slow=12,SNR=79						
SIV				S	Sn	11 39 49.7	-16
	comp=Z,0.4nm,0.3s,baz=243,slow=18,SNR=2.4						
TRQA	Tornquist	14.45	163	ePn	Pn	11 39 09.0	-1.1
SAML	Samuel	15.71	15	ePn	Pn	11 39 24.3	-1.5
	comp=Z,9.2nm,1.2s						
PLCA	Paso Flores	16.66	189	P	Pn	11 39 37.7	+0.6
	comp=Z,0.6nm,0.3s,baz=34,slow=12,SNR=10						
PLCA	Paso Flores	16.66	189	eP	P	11 39 36.2	-0.3
	comp=Z,20nm,0.6s						
SPB	Sao Paulo	18.08	92	eP	P	11 39 50.1	-2.1
	comp=Z,27nm,1.0s						
BDFB	Brasilia	19.95	68	eP	P	11 40 10.9	-1.7
	comp=Z,144nm,1.1s						
PTGA	Pitinga	24.42	18	P	P	11 40 55.1	-1.3
	comp=Z,2.0nm,0.4s,baz=213,slow=17,SNR=6.2						
PTGA	Pitinga	24.42	18	eP	P	11 40 54.9	-1.4
	comp=Z,18nm,1.8s						
RUSC	La Rusia	30.52	348	eP	P	11 41 50.9	-0.4
	comp=Z,2.3nm,0.8s						
HELC	Santa Helena	31.34	344	eP	P	11 41 56.9	-1.4
	comp=Z,11nm,0.6s						
SDV	Santo Domingo	33.12	354	eP	P	11 42 10.3	-3.3
	comp=Z,11nm,0.6s						
VNA3	Neumayer Olymp	56.96	161	P	P	11 45 21.2	+0.7
VNA1	Neumayer--Stat	57.16	160	P	P	11 45 22.1	+0.2
ZAIG	Zacatecas	58.02	321	eP	P	11 45 28.2	-0.6
	comp=Z,9.3nm,1.3s						
152A	Waverly Hall	59.03	343	P	P	11 45 34.7	-0.6
	baz=161						
Z54A	Sparta	59.09	345	P	P	11 45 35.4	-0.3
	baz=163						
SNAA	Sanae	59.16	161	P	P	11 45 36.4	+0.6
SNAA	Sanae	59.16	161	P	P	11 45 36.3	+0.6
	comp=Z,4.0nm,0.6s,baz=279,slow=6.8,SNR=13						
SNAA	Sanae	59.16	161	eP	P	11 45 34.1	-1.7
	comp=Z,25nm,1.6s						
150A	Eclectic	59.34	342	P	P	11 45 37.2	-0.2
	baz=160						
GOGA	Godfrey	59.41	344	P	P	11 45 37.3	-0.6
	baz=163						
Z52A	Williamson	59.45	343	P	P	11 45 37.7	-0.5
	baz=162						
149A	Jones	59.56	341	P	P	11 45 38.1	-0.8
	baz=159						
Y54A	Tignall	59.66	345	P	P	11 45 39.2	-0.4
	baz=163						
Y53A	Monroe	59.87	344	P	P	11 45 40.5	-0.5
	baz=162						
Z50A	Ashland	59.92	342	P	P	11 45 40.7	-0.6
	baz=160						
Y52A	Lilburn	60.00	344	P	P	11 45 41.4	-0.5
	baz=162						
LRAL	Lakeview Retre	60.03	341	P	P	11 45 41.5	-0.5
	baz=159						
Z49A	Columbiana	60.04	341	P	P	11 45 41.5	-0.7
	baz=159						
245A	Little AP, Sta	60.04	338	P	P	11 45 41.9	-0.3
	baz=156						
147A	Livingston	60.09	340	P	P	11 45 42.0	-0.4
	baz=158						
Y51A	Rockmart	60.29	343	P	P	11 45 43.6	-0.3
	baz=161						
X53A	Estanollee	60.42	345	P	P	11 45 44.3	-0.4
	baz=163						
Z48A	Northport	60.52	340	P	P	11 45 44.9	-0.4
	baz=158						
Y49A	Blount Mountai	60.63	342	P	P	11 45 45.7	-0.5
	baz=160						
X52A	Dahlonega	60.66	344	P	P	11 45 46.1	-0.3
	baz=162						
833A	Chaparral WMA,	60.79	327	P	P	11 45 46.8	-0.5
	baz=146						
833A	Chaparral WMA,	60.79	327	eP	P	11 45 48.0	+0.6
	comp=Z,18nm,0.9s						
X51A	Calhoun	60.87	343	P	P	11 45 47.3	-0.4
	baz=161						
X51A	Calhoun	60.87	343	eP	P	11 45 47.0	-0.7
	comp=Z,13nm,0.8s						
X50B	Fort Payne	60.98	343	P	P	11 45 47.9	-0.7
	baz=161						
W53A	Cullowhee	61.02	345	P	P	11 45 48.5	-0.5
	baz=163						
Y47A	UCPARC, Winfie	61.09	340	P	P	11 45 48.8	-0.4
	baz=158						
W52A	Murphy	61.13	344	P	P	11 45 49.2	-0.3
	baz=162						
X49A	Woodville	61.22	342	P	P	11 45 49.5	-0.6
	baz=160						
X48A	Hartselle	61.36	341	P	P	11 45 50.8	-0.3
	baz=159						
X48A	Hartselle	61.36	341	eP	P	11 45 50.6	-0.5
	comp=Z,11nm,1.0s						
W51A	Cleveland	61.40	344	P	P	11 45 51.0	-0.3
	baz=162						
V53A	Saluda	61.42	346	P	P	11 45 51.1	-0.4
	baz=164						
W50A	Signal Mountai	61.59	343	P	P	11 45 52.3	-0.3
	baz=161						
TKL	Tuckaleechee C	61.63	345	P	P	11 45 52.5	-0.4
	comp=Z,4.5nm,0.5s,baz=144,slow=7.8,SNR=9.2						
X47A	Russelville	61.67	341	P	P	11 45 52.7	-0.4
	baz=158						
V52A	Sevierville	61.76	345	P	P	11 45 53.3	-0.5
	baz=163						
W49A	Belvidere	61.77	342	P	P	11 45 53.4	-0.4
	baz=160						
W48A	Pulaski	61.97	342	P	P	11 45 54.8	-0.3
	baz=159						
V50A	Pikevile	61.98	344	P	P	11 45 54.9	-0.3
	baz=161,SNR=6.1						
U53A	Fall Branch	62.03	346	P	P	11 45 55.2	-0.4
	baz=164						
OXF	Oxford	62.15	339	P	P	11 45 55.9	-0.4
	baz=157						
U52A	Thorn Hill	62.24	345	P	P	11 45 56.4	-0.6

	baz=163						
W47A	Westpoint	62.27	341	P	P	11 45 56.3	-0.8
	baz=159						
V49A	McMinnville	62.28	343	P	P	11 45 56.3	-0.9
	baz=160						
U51A	La Follette	62.38	345	P	P	11 45 57.8	-0.1
	baz=162						
TZTN	Tazewell	62.42	345	P	P	11 45 57.3	-0.8
	baz=163						
V48A	Smith Brothers	62.51	342	P	P	11 45 58.2	-0.5
	baz=160						
U50A	Jamestown	62.61	344	P	P	11 45 59.3	-0.1
	baz=162						
IP06	Yanceyville	62.70	350	*e*P	P	11 46 02.3	+2.4
	comp=Z,103nm,0.3s						
JCT	Junction City	62.78	328	P	P	11 46 00.6	0.0
	baz=146						
JCT	Junction City	62.78	328	*e*P	P	11 46 01.5	+0.8
	comp=Z,7.3nm,0.7s						
V47A	Nunnelly	62.79	341	P	P	11 45 59.7	-0.8
	baz=159						
T51A	Gray	62.92	345	P	P	11 46 01.0	-0.4
	baz=163						
V46A	Holladay	62.94	341	P	P	11 46 00.7	-0.8
	baz=158						
U49A	Red Boiling Sp	62.95	343	P	P	11 46 01.1	-0.5
	baz=161						
WHTX	Lake Whitney,	62.98	331	P	P	11 46 02.0	+0.2
	baz=149						
U48A	Cassie Pea, Po	63.15	343	P	P	11 46 02.5	-0.5
	baz=160						
WVT	Waverly	63.16	341	P	P	11 46 02.0	-1.0
	baz=159						
WVT	Waverly	63.16	341	*e*P	P	11 46 02.4	-0.6
	comp=Z,6.9nm,0.7s						
T50A	Nancy	63.19	344	P	P	11 46 02.2	-1.0
	baz=162						
U47A	Clarksville	63.29	342	P	P	11 46 03.0	-0.9
	baz=159						
T49A	Edmonton	63.44	344	P	P	11 46 03.9	-0.9
	baz=161						
MIAR	Mount Ida	63.63	336	P	P	11 46 05.7	-0.4
	baz=153						
U45A	Rockin P Farm,	63.64	341	P	P	11 46 06.2	+0.1
	baz=158						
T48A	Bowling Green	63.67	343	P	P	11 46 05.9	-0.4
	baz=160						
S50A	Richmond	63.71	345	P	P	11 46 05.9	-0.7
	baz=162						
W41B	Gary Mavity, V	63.71	337	P	P	11 46 05.8	-0.8
	baz=154						
T47A	Sharon Grove	63.75	342	P	P	11 46 06.3	-0.6
	baz=160						
T47A	Sharon Grove	63.75	342	*e*P	P	11 46 06.5	-0.3
	comp=Z,8.8nm,0.8s						
TXAR	Lajitas Array	63.79	325	P	P	11 46 08.3	+0.9
	comp=Z,1.0nm,0.7s,baz=153,slow=8.3,SNR=13						
TX31	Lajitas Ar. Si	63.79	325	*e*P	P	11 46 08.1	+0.7
X39A	Fountain Ranch	63.80	335	P	P	11 46 07.9	+0.7
	baz=152						
V42A	Cord	63.98	338	P	P	11 46 07.1	-1.3
	baz=155						
S49A	Springfield	64.02	344	P	P	11 46 07.5	-1.1
	baz=162						
T46A	Princeton	64.03	342	P	P	11 46 07.6	-1.0
	baz=159						
S48A	Wiedeman Farm,	64.10	343	P	P	11 46 08.3	-0.8
	baz=161						
R51A	Hillsboro	64.11	346	P	P	11 46 08.6	-0.6
	baz=163						
V41A	Mountainview	64.22	338	P	P	11 46 09.4	-0.6
	baz=155						
S47A	Hartford	64.26	343	P	P	11 46 09.0	-1.2
	baz=160						
R50A	Paris	64.26	345	P	P	11 46 09.5	-0.7
	baz=162						
W39A	Magazine	64.28	336	P	P	11 46 10.5	+0.1
	baz=153						
W39A	Magazine	64.28	336	*e*P	P	11 46 11.8	+1.4
	comp=Z,8.6nm,0.8s						
U42A	Revenden	64.43	339	P	P	11 46 11.1	-0.2
	baz=156						
V40A	Witts Springs	64.48	337	P	P	11 46 10.9	-0.8
	baz=154						
U41A	Viola	64.65	338	P	P	11 46 12.5	-0.2
	baz=155						
WCI	Wyandotte Cave	64.70	343	P	P	11 46 12.1	-0.9
	baz=161						
Q50A	Georgetown	64.72	346	P	P	11 46 12.3	-0.8
	baz=163						
Q51A	Peebles	64.75	346	P	P	11 46 12.9	-0.4
	baz=164						
R48A	Northridge Ran	64.75	344	P	P	11 46 12.6	-0.8
	baz=161						
T43A	Greenville	64.79	340	P	P	11 46 12.9	-0.7
	baz=157,SNR=7.7						
V39A	Pettigrew	64.81	336	P	P	11 46 13.7	-0.1
	baz=153,SNR=5.3						
S45A	Carrier Mills	64.81	341	P	P	11 46 12.8	-1.0
	baz=158						
R47A	Wooly Knot Far	64.82	343	P	P	11 46 12.8	-1.0
	baz=160						
U40A	Yellville	64.98	337	P	P	11 46 14.4	-0.5
	baz=154						
T42A	Van Buren	65.00	339	P	P	11 46 14.3	-0.6
	baz=156						
Q49A	Aurora	65.09	345	P	P	11 46 14.6	-0.9
	baz=162						
S43A	Fulton Ridge,	65.17	340	P	P	11 46 15.4	-0.6
	baz=157						
Q48A	North Vernon	65.22	344	P	P	11 46 15.6	-0.7
	baz=161						
T41A	Mountain View	65.23	339	P	P	11 46 15.8	-0.7
	baz=155						
U39A	Green Forest	65.23	337	P	P	11 46 16.4	-0.1
	baz=154						
R45A	Skylar, Fairfi	65.30	342	P	P	11 46 16.5	-0.4
	baz=159						
P50A	Jamestown	65.41	346	P	P	11 46 17.0	-0.6
	baz=163						
R44A	Waltonville	65.49	341	P	P	11 46 17.2	-0.9
	baz=158						
P49A	Miami Univ. Ec	65.55	345	P	P	11 46 17.3	-1.2
	baz=162						
S42A	Caledonia	65.58	340	P	P	11 46 17.9	-0.8
	baz=156						
P48A	Milroy	65.65	345	P	P	11 46 17.8	-1.3
	baz=162						
S41A	Jillco Farms,	65.72	339	P	P	11 46 19.2	-0.4
	baz=155,SNR=7.0						
T39A	Clever	65.77	337	P	P	11 46 19.8	-0.1
	baz=154						
ACSO	Alum Creek Sta	65.83	347	P	P	11 46 19.7	-0.6
	baz=164						
P47A	Martinsville	65.88	344	P	P	11 46 20.0	-0.6
	baz=161						
O50A	Cable	65.89	346	P	P	11 46 20.2	-0.4
	baz=163						
WMOK	Wichita Mounta	65.89	332	P	P	11 46 20.7	-0.1
	baz=148						
QSPA	South Pole Qui	65.94	180	P	P	11 46 22.3	+1.4
	comp=Z,8.4nm,0.5s,baz=173,slow=3.0,SNR=57						
QSPA	South Pole Qui	65.94	180	*e*P	P	11 46 21.9	+1.1
	comp=Z,8.8nm,0.7s						
N54A	Moraine State	65.98	349	P	P	11 46 21.6	+0.5
	baz=167						
CCM	Cathedral Cave	65.98	339	P	P	11 46 21.8	+0.5
	baz=156						
CCM	Cathedral Cave	65.98	339	*e*P	P	11 46 21.8	+0.5
	comp=Z,13nm,1.3s						
S40A	Lebanon	65.98	338	P	P	11 46 21.1	-0.1
	baz=155						
R42A	Luebbering	66.04	340	P	P	11 46 21.5	-0.1
	baz=156						
Q44A	Meyer Farm, Va	66.08	342	P	P	11 46 21.7	-0.2
	baz=158						
T38A	Diamond	66.11	337	P	P	11 46 22.2	+0.1
	baz=153,SNR=5.8						
R41A	Rosebud	66.24	339	P	P	11 46 22.7	-0.3
	baz=156						
P45A	Graceland, Par	66.30	343	P	P	11 46 22.6	-0.7
	baz=159						
O48A	Farmland	66.34	345	P	P	11 46 22.7	-0.8
	baz=162						
S39A	Bolivar	66.35	338	P	P	11 46 23.7	+0.1
	baz=154,SNR=8.6						
S39A	Bolivar	66.35	338	*e*P	P	11 46 23.8	+0.2
N50A	Nevada	66.39	347	P	P	11 46 22.9	-0.9
	baz=164						
P44A	Sand Creek, Wi	66.49	342	P	P	11 46 24.2	-0.3
	baz=158						
S38A	Stockton	66.50	337	P	P	11 46 24.4	-0.2
	baz=153,SNR=5.7						
R40A	Maddies Statio	66.53	339	P	P	11 46 24.5	-0.2
	baz=155						
Q42A	Golden Eagle	66.54	340	P	P	11 46 24.4	-0.4
	baz=157						
MNTX	Cornudas Mount	66.56	325	P	P	11 46 25.0	-0.1
	baz=142,SNR=5.6						
MNTX	Cornudas Mount	66.56	325	*e*P	P	11 46 25.4	+0.2
	comp=Z,2.6nm,0.8s						
BINY	Binghamton	66.63	353	P	P	11 46 25.6	+0.3
	baz=171						
Q41A	Truxton	66.80	340	P	P	11 46 25.9	-0.5
	baz=156						
R39A	Chumby, Stover	66.81	338	P	P	11 46 26.2	-0.3
	baz=154						
R38A	Fenwick Farm,	66.99	337	P	P	11 46 27.6	-0.1
	baz=153,SNR=7.2						
MSTX	Muleshoe	67.07	328	P	P	11 46 28.8	+0.4
	baz=145,SNR=5.3						
MSTX	Muleshoe	67.07	328	*e*P	P	11 46 29.2	+0.8
	comp=Z,17nm,1.1s						
P42A	Winchester	67.10	341	P	P	11 46 27.5	-0.8
	baz=157						
Q40A	Laux Farm, Aux	67.10	339	P	P	11 46 28.0	-0.3
	baz=155						
M49A	Liberty Center	67.23	346	P	P	11 46 28.6	-0.5
	baz=163						
AMTX	Amarillo	67.31	330	P	P	11 46 29.2	-0.7
	baz=146						
P41A	Barry, Barry	67.40	340	P	P	11 46 29.6	-0.6
	baz=156						
Q39A	Willow Grove F	67.45	338	P	P	11 46 30.4	-0.1
	baz=154,SNR=9.5						
N45A	Kentland	67.48	343	P	P	11 46 30.2	-0.5
	baz=160						
P40A	Paris	67.58	339	P	P	11 46 31.2	-0.1
	baz=155						
Q38A	Cooks Store, C	67.59	338	P	P	11 46 31.5	+0.1
	baz=154						
P39B	Salisbury	67.77	339	P	P	11 46 32.2	-0.3
	baz=155						
Q37A	Longview Farm,	67.80	337	P	P	11 46 32.2	-0.6
	baz=153						
N43A	Stutzman Famil	68.01	342	P	P	11 46 33.4	-0.6
	baz=158						
O40A	La Belle	68.06	340	P	P	11 46 33.8	-0.5
	baz=156						
M44A	Midewin, Midew	68.12	343	P	P	11 46 34.7	0.0
	baz=159						
P38A	Dawn	68.15	338	P	P	11 46 34.8	-0.2
	baz=154						
O39A	Kirksville	68.40	339	P	P	11 46 35.2	-1.2
	baz=155						
M43A	Waltham Townsh	68.42	343	P	P	11 46 36.0	-0.5
	baz=158						
121A	Cookes Peak, D	68.49	324	P	P	11 46 39.0	+1.6
	baz=140						
O38A	Galt	68.58	339	P	P	11 46 37.2	-0.4
	baz=154						
M42A	Sheffield	68.66	342	P	P	11 46 37.1	-0.9
	baz=158						
N40A	Mertquake, Sal	68.67	340	P	P	11 46 37.2	-0.9
	baz=156						
M41A	Milan	68.81	341	P	P	11 46 38.1	-0.8
	baz=157						
N39A	Derby Farms, D	68.95	340	P	P	11 46 39.3	-0.5
	baz=155						
L43A	Garden Prairie	69.05	343	P	P	11 46 39.9	-0.6
	baz=159						
M40A	Post Highland	69.12	341	P	P	11 46 40.2	-0.7
	baz=156						
L42A	Oliver, Polo	69.14	342	P	P	11 46 40.4	-0.6
	baz=158						
L41A	Preston	69.44	342	P	P	11 46 42.2	-0.6
	baz=157						
L40A	Anamosa	69.64	341	P	P	11 46 43.5	-0.6
	baz=156						
TASL	Snake Pit, Alb	69.67	326	P	P	11 46 46.1	+1.5
	baz=142,SNR=7.3						
ANMO	Albuquerque	69.67	326	P	P	11 46 45.8	+1.2
	baz=142						
ANMO	Albuquerque	69.67	326	*e*P	P	11 46 46.2	+1.6
	comp=Z,5.1nm,0.9s						
TASM	ASL Pad, Albuq	69.67	326	P	P	11 46 46.1	+1.5
	baz=142,SNR=7.1						
CBKS	Cedar Bluff	69.76	333	P	P	11 46 45.6	+0.7
	baz=148						
K42A	Prairie Point,	69.77	343	P	P	11 46 44.6	-0.2
	baz=158						
K41A	Shullsburg	69.88	342	P	P	11 46 45.2	-0.2
	baz=157						
M37A	Trindle Farm,	69.93	339	P	P	11 46 45.9	+0.1
	baz=154						
L39A	Vinton	69.93	341	P	P	11 46 45.2	-0.6
	baz=156						
TUC	Tucson	69.98	322	P	P	11 46 48.2	+1.7
	baz=138						
TUC	Tucson	69.98	322	*e*P	P	11 46 48.4	+2.0
	comp=Z,6.1nm,1.2s						
JFWS	Jewell Farm	70.14	342	P	P	11 46 46.9	-0.2
	baz=158						
K40A	Colesburg	70.20	341	P	P	11 46 46.9	-0.5
	baz=157						
J42A	Columbus	70.21	343	P	P	11 46 47.3	-0.2
	baz=159						
L38A	Oak Wood Farm,	70.24	340	P	P	11 46 47.4	-0.3
	baz=155						
T25A	Trinidad	70.42	329	P	P	11 46 50.9	+1.7
	baz=144						
T25A	Trinidad	70.42	329	*e*P	P	11 46 51.1	+1.9
K39A	Oelwein	70.42	341	P	P	11 46 48.0	-0.8
	baz=156						
L37A	Phoenix Point,	70.48	339	P	P	11 46 48.4	-0.7
	baz=154						
I43A	Langenfeld Bro	70.49	344	P	P	11 46 48.5	-0.7
	baz=160						
J41A	Loganville	70.50	343	P	P	11 46 48.7	-0.5
	baz=158						
K38A	Parkersburg	70.64	340	P	P	11 46 49.2	-0.9
	baz=155						
I42A	Draeger Farm,	70.69	344	P	P	11 46 50.0	-0.4
	baz=159						
J40A	Soldiers Grove	70.73	342	P	P	11 46 49.9	-0.7
	baz=157						
L36A	Harm Buss Farm	70.75	339	P	P	11 46 50.5	-0.3
	baz=153						
H43A	Windswept, Lux	70.95	345	P	P	11 46 51.3	-0.6
	baz=160						
J39A	Decorah	70.95	341	P	P	11 46 51.5	-0.5
	baz=156						
K37A	Belmond	71.02	340	P	P	11 46 51.8	-0.6
	baz=154						
I41A	Arkdale	71.10	343	P	P	11 46 52.6	-0.3
	baz=158						
I40A	Norwalk	71.15	342	P	P	11 46 52.6	-0.5
	baz=157						
J38A	Wedel Dairy, R	71.16	341	P	P	11 46 52.7	-0.5
	baz=156						
K36A	Gilmore City	71.16	339	P	P	11 46 53.2	-0.1
	baz=154						
H42A	Shiocton	71.17	344	P	P	11 46 52.9	-0.3
	baz=159						
I39A	Houston	71.37	342	P	P	11 46 54.6	+0.1
	baz=156						
BGNE	Belgrade	71.37	336	P	P	11 46 55.1	+0.5
	baz=150						
SDCO	Great Sand Dun	71.42	329	P	P	11 46 56.8	+1.5
	baz=143,SNR=7.5						
SDCO	Great Sand Dun	71.42	329	*e*P	P	11 46 56.5	+1.2
J37A	Redenius Farm,	71.48	340	P	P	11 46 54.6	-0.6
	baz=155						
H41A	Junction City	71.56	343	P	P	11 46 55.0	-0.6
	baz=158						
F45A	CMU Biological	71.58	347	P	P	11 46 55.1	-0.5
	baz=162						
G43A	Wallace	71.67	345	P	P	11 46 55.8	-0.5
	baz=160						
J36A	Seneca 1, Swea	71.75	339	P	P	11 46 56.3	-0.5
	baz=154						
H40A	Chili	71.76	343	P	P	11 46 56.5	-0.3
	baz=158						
I38A	Scanlan Farm,	71.78	341	P	P	11 46 56.5	-0.4
	baz=156						
G42A	Mountain	71.83	344	P	P	11 46 57.1	-0.1
	baz=160						
S22A	4UR Ranch, Cre	72.06	328	P	P	11 47 00.2	+1.1
	baz=142						
S22A	4UR Ranch, Cre	72.06	328	*e*P	P	11 47 00.6	+1.4
H39A	Augusta	72.06	342	P	P	11 46 58.8	+0.2
	baz=157						
I37A	Lemond, Waseca	72.07	340	P	P	11 46 58.5	-0.2
	baz=155						
F43A	Flat Rock, Esc	72.09	345	P	P	11 46 58.2	-0.5
	baz=161						
E45A	Wooded Hills,	72.16	347	P	P	11 46 59.1	+0.1
	baz=163						
G40A	Rib Lake	72.31	343	P	P	11 47 00.1	0.0
	baz=158						
H38A	Maiden Rock	72.34	341	P	P	11 46 60.0	-0.3
	baz=156						
H37A	Dierke Farm, C	72.44	341	P	P	11 47 01.0	+0.1
	baz=155						
MVCO	Mesa Verde	72.47	326	P	P	11 47 03.0	+1.5
	baz=141						
MVCO	Mesa Verde	72.47	326	*e*P	P	11 47 03.5	+2.0
F41A	Three Lakes	72.47	344	P	P	11 47 01.0	0.0
	baz=159						
E43A	Lone Tree Farm	72.56	346	P	P	11 47 01.4	-0.1
	baz=161						
G39A	Holcombe	72.59	343	P	P	11 47 01.0	-0.7
	baz=157						
WUAZ	Wupatki	72.69	323	P	P	11 47 04.9	+2.2
	baz=138						
WUAZ	Wupatki	72.69	323	*e*P	P	11 47 05.2	+2.4
E42A	Champion	72.83	345	P	P	11 47 03.4	+0.3
	baz=160						
ECSD	EROS Data Cent	72.86	338	P	P	11 47 03.4	0.0
	baz=152						
GLA	Glamis	72.86	320	P	P	11 47 04.7	+1.1
	baz=135						
F40A	Park Falls	72.89	343	P	P	11 47 03.7	+0.2
	baz=158						
SPMN	Marine on St.	72.99	341	P	P	11 47 03.5	-0.5
	baz=156						
F39A	Loretta	73.10	343	P	P	11 47 04.6	-0.1
	baz=157						
E41A	Kenton	73.11	344	P	P	11 47 04.9	+0.1
	baz=159						
ISCO	Idaho Springs	73.12	330	P	P	11 47 05.9	+0.5
	baz=144						
ISCO	Idaho Springs	73.12	330	*e*P	P	11 47 07.2	+1.8
H35A	Sunnyside Ranc	73.13	340	P	P	11 47 04.8	-0.1
	baz=154						
Y12C	Blythe	73.18	320	P	P	11 47 07.2	+1.8
	baz=136						
Y12C	Blythe	73.18	320	*e*P	P	11 47 07.8	+2.4
PV01	Paradox Valley	73.22	327	*e*P	P	11 47 08.0	+2.1
SMCO	Snowmass	73.26	329	*e*P	P	11 47 08.3	+2.0
E40A	Wakefield	73.33	344	P	P	11 47 06.4	+0.4
	baz=158						
SYO	Syowa Base	73.37	159⇑	*e*P	P	11 47 06.0	0.0
F37A	Hinrichs Farm,	73.40	342	P	P	11 47 06.6	+0.1
	baz=156						
F38A	Pierce - Schro	73.40	342	P	P	11 47 06.6	+0.1
	baz=156						
E39A	Mellen	73.43	343	P	P	11 47 06.7	+0.1
	baz=158						
D41A	Chassel	73.57	345	P	P	11 47 07.7	+0.3
	baz=160						
PV22	Blue Mesa, Par	73.64	327	*e*P	P	11 47 10.3	+2.1
BC3	Big Chuckawall	73.66	320	P	P	11 47 10.1	+1.7
	baz=135						
MONP2	Monument Peak	73.70	318	P	P	11 47 10.7	+1.9
	baz=134						
F36A	Milaca	73.78	341	P	P	11 47 08.8	+0.1
	baz=155						
F36A	Milaca	73.78	341	*e*P	P	11 47 08.7	0.0
H32A	Carlson Farm,	73.82	338	P	P	11 47 09.0	+0.1
	baz=151						
IRM	Iron Mountain	73.83	320	P	P	11 47 11.2	+1.9
	baz=135						
F35A	Swanville	74.09	340	P	P	11 47 10.3	-0.2
	baz=154						
N23A	Red Feather La	74.15	330	P	P	11 47 12.9	+1.6
	baz=144						
BELC	Belle Mtn. Jos	74.22	319	P	P	11 47 13.4	+1.7
	baz=134						
PFO	Pinyon Flats O	74.23	319	P	P	11 47 13.5	+1.8
	baz=134						
FRD	Ford Ranch, An	74.23	319	P	P	11 47 13.3	+1.6
	baz=134						
E36A	McGregor	74.30	342	P	P	11 47 11.6	-0.1
	baz=155						
VNDA	Vanda	74.41	190	P	P	11 47 14.3	+2.4
	comp=Z,2.3nm,0.9s,baz=124,slow=3.1,SNR=9.3						
VNDA	Vanda	74.41	190	*e*P	P	11 47 14.5	+2.5
LDFC	Landfair	74.46	321	*e*P	P	11 47 15.8	+2.8
C40A	Isle Royale Na	74.51	345	P	P	11 47 13.7	+0.8
	baz=159						
GMRC	Granite Mounta	74.57	320	P	P	11 47 15.7	+2.0
	baz=135						
O20A	White River Ci	74.61	329	P	P	11 47 15.5	+1.6
	baz=142						
O20A	White River Ci	74.61	329	*e*P	P	11 47 15.9	+2.0
D37A	Cotton	74.65	342	P	P	11 47 13.8	+0.1
	baz=156						
LCMT	Little Creek M	74.81	323	*e*P	P	11 47 17.3	+2.3
C38A	Sawbill Land.	74.86	343	P	P	11 47 14.5	-0.4
	baz=157						
D36A	Goodland	74.88	342	P	P	11 47 15.2	+0.2
	baz=155						
MTPU	Mount Pierson	75.00	325	*e*P	P	11 47 18.4	+2.1
HEC	Hector,Ludlow	75.00	320	P	P	11 47 18.0	+1.9
	baz=134						
D35A	Remer	75.04	341	P	P	11 47 16.0	+0.1
	baz=155						
C37A	Embarrass	75.11	343	P	P	11 47 16.1	-0.2
	baz=156						
EYMN	Ely	75.13	343	P	P	11 47 16.4	0.0
	baz=157						
TUQ	Turquoise Moun	75.18	321	P	P	11 47 18.9	+1.7
	baz=135						
CCUT	Cedar City	75.27	324	*e*P	P	11 47 20.4	+2.7
C36A	Pine Crest Far	75.31	342	P	P	11 47 17.2	-0.3
	baz=156						
MSU	Marysvale	75.34	325	*e*P	P	11 47 20.2	+2.0
FMP	Fort Macarthur	75.41	318	P	P	11 47 17.0	-1.3
	baz=133						
SHPR	Sheep Range	75.50	322	*e*P	P	11 47 21.4	+2.4
C35A	Jirik Farms, M	75.58	342	P	P	11 47 18.6	-0.4
	baz=155						
GSC	Goldstone, Bar	75.60	320	P	P	11 47 21.0	+1.5
	baz=134						
K22A	Casper	75.82	331	P	P	11 47 22.1	+1.4
	baz=143						
RSSD	Black Hills	75.97	334	P	P	11 47 22.5	+1.0
	baz=146						
RSSD	Black Hills	75.97	334	*e*P	P	11 47 23.4	+1.9
EDW2	Edwards Air Fo	76.02	319	P	P	11 47 22.8	+1.0
	baz=133						
B35A	Bob, Littlefor	76.11	342	P	P	11 47 21.9	0.0
	baz=155						
LRMC	Laurel Mtn Rad	76.24	320	P	P	11 47 25.1	+1.9
	baz=134						
PSUT	Pine Spring	76.25	324	*e*P	P	11 47 25.5	+2.2
TPNV	Topopah Spring	76.44	322	P	P	11 47 26.3	+2.0
	baz=135						
TPNV	Topopah Spring	76.44	322	*e*P	P	11 47 26.6	+2.3
FURC	Furnace Creek,	76.45	321	P	P	11 47 26.5	+2.3
	baz=134						
MPMC	Manual Prospec	76.53	320	P	P	11 47 26.5	+1.6
	baz=134						
AGMN	Agassiz Nation	76.67	341	*e*P	P	11 47 25.4	+0.2
	comp=Z,2.9nm,0.6s						
SBC	Santa Barbara	76.77	318	P	P	11 47 28.3	+2.3
	baz=132						
TORD	Torodi Ar. Bea	76.83	69	P	P	11 47 25.0	-1.7
	comp=Z,2.1nm,0.5s,baz=254,slow=5.2						
ISA	Isabella, Lake	76.84	319	P	P	11 47 28.2	+1.8
	baz=133						
DUG	Dugway, Tooele	76.92	326	P	P	11 47 28.7	+1.8
	baz=138						
DUG	Dugway, Tooele	76.92	326	*e*P	P	11 47 29.0	+2.0
R11A	Troy Canyon, C	77.06	323	P	P	11 47 29.5	+1.8
	baz=136						
A33A	Warroad	77.11	341	P	P	11 47 28.1	+0.6
	baz=154						
GRAC	Grapevine Rang	77.11	321	P	P	11 47 29.7	+1.8
	baz=134						
PKM	Mcpherson Peak	77.13	318	P	P	11 47 30.1	+1.9
	baz=132						

CWC	**Cottonwood Cre**	**77.14**	**320**	P	**P**	**11 47 30.1**	**+1.9**
	baz=133						
BW06	**Boulder Array**	**77.28**	**329**	P	**P**	**11 47 30.2**	**+1.2**
	baz=141						
PDAR	**Pinedale Array**	**77.28**	**329**	P	**P**	**11 47 29.7**	**+0.7**
	comp=Z,0.9nm,0.6s,baz=138,slow=7.0,SNR=10						
VES	**Vestal, Richgr**	**77.32**	**319**	P	**P**	**11 47 31.1**	**+2.1**
	baz=133						
HWUT	**Hardware Ranch**	**77.36**	**327**	*e*P	**P**	**11 47 30.7**	**+1.4**
	comp=Z,3.1nm,0.6s						
MDND	**Maddock**	**77.47**	**338**	P	**P**	**11 47 30.2**	**+0.5**
	baz=150						
SMMC	**Simmler**	**77.52**	**318**	P	**P**	**11 47 32.2**	**+2.0**
	baz=132						
AHID	**Auburn Hatcher**	**78.01**	**329**	*e*P	**P**	**11 47 34.3**	**+1.4**
	comp=Z,12nm,1.0s						
ULM	**Lac du Bonnet**	**78.42**	**342**	P	**P**	**11 47 35.0**	**+0.2**
	comp=Z,4.1nm,0.6s,baz=145,slow=9.1,SNR=5.2						
NVAR	**Mina Array Bea**	**78.63**	**321**	P	**P**	**11 47 37.8**	**+1.3**
	comp=Z,1.2nm,0.7s,baz=147,slow=5.6,SNR=13						
LAO	**LASA Array**	**78.95**	**334**	P	**P**	**11 47 38.8**	**+1.0**
	baz=144						
RLMT	**Red Lodge**	**78.99**	**331**	P	**P**	**11 47 39.6**	**+1.3**
	baz=141						
DGMT	**Dagmar**	**79.63**	**336**	P	**P**	**11 47 42.7**	**+1.3**
	baz=146						
HLID	**Hailey**	**80.21**	**327**	P	**P**	**11 47 46.6**	**+1.7**
	baz=137						
HLID	**Hailey**	**80.21**	**327**	*e*P	**P**	**11 47 46.8**	**+1.9**
	comp=Z,12nm,1.0s						
BOZ	**Bozeman (W)**	**80.41**	**330**	P	**P**	**11 47 47.2**	**+1.3**
	baz=140						
BOSA	**Boshof**	**80.77**	**117**	P	**P**	**11 47 48.2**	**-0.1**
	comp=Z,2.8nm,0.5s,baz=236,slow=2.6,SNR=6.0						
MAW	**Mawson**	**81.23**	**163**	P	**P**	**11 47 50.6**	**+0.9**
	comp=Z,4.3nm,0.5s,baz=223,slow=6.8,SNR=21						
EGMT	**Eagleton**	**81.47**	**333**	P	**P**	**11 47 52.5**	**+1.2**
	baz=141						
O03D	**Paynes Creek**	**81.89**	**321**	P	**P**	**11 47 54.4**	**+0.7**
	baz=131						
MSO	**Missoula**	**82.40**	**330**	P	**P**	**11 47 57.5**	**+1.2**
	baz=138						
N02D	**Trinity Center**	**82.86**	**321**	P	**P**	**11 47 59.2**	**+0.5**
	baz=131						
M04C	**Macdoel**	**82.89**	**322**	P	**P**	**11 47 60.0**	**+1.0**
	baz=131						
J05D	**Fort Rock, OR**	**83.56**	**324**	P	**P**	**11 48 03.7**	**+1.3**
	baz=132						
L02D	**Cave Junction,**	**84.14**	**321**	P	**P**	**11 48 06.4**	**+1.3**
	baz=130						
I05D	**Terrebonne, OR**	**84.32**	**324**	P	**P**	**11 48 07.4**	**+1.3**
	baz=132						
I04A	**Tendick Farm,**	**84.54**	**323**	P	**P**	**11 48 08.4**	**+1.3**
	baz=131						
G05D	**Wamic, OR**	**84.91**	**325**	P	**P**	**11 48 10.3**	**+1.4**
	baz=132						
YKA	**Yellowknife Ar**	**94.31**	**340**	P	**P**	**11 48 53.0**	**+0.2**
	comp=Z,1.6nm,0.5s,baz=130,slow=4.6,SNR=31						
YKA	**Yellowknife Ar**	**94.31**	**340**	P	**P**	**11 48 53.0**	**+0.2**
TOLK	**Toolik Lake Re**	**109.63**	**337**	P	**PKiKP**	**11 54 01.5**	**-1.5**
	baz=106						
ASAR	**Alice Springs**	**128.14**	**205**	PKP	**PKPdf**	**11 54 39.9**	**0.0**
	comp=Z,3.0nm,0.7s,baz=135,slow=1.8,SNR=36						
WRA	**Warramunga Arr**	**131.31**	**207**	PKP	**PKPdf**	**11 54 46.1**	**+0.2**
	comp=Z,2.3nm,0.5s,baz=158,slow=1.7,SNR=61						
WRA				SKPbc	**SKPbc**	**11 57 54.0**	**-0.8**
	comp=Z,0.8nm,0.7s,baz=152,slow=3.4,SNR=12						
ZALV	**Zalesovo Beam**	**143.71**	**28**	PKP	PKPbc	11 55 06.0	+0.4
	comp=Z,3.7nm,0.5s,baz=301,slow=4.7,SNR=8.9						
KSH	**Kashi**	**145.50**	**55**	*e*PKPbc	**PKPbc**	**11 55 11.8**	**0.0**
KSH				pPKP	pPKPab	11 55 52.8	-3.6
KSH				PP	**PP**	**11 58 37.3**	**+3.7**
KSH				PKS	**PKSdf**	**11 58 45.8**	**-1.1**
MKAR	**Makanchi Array**	**146.84**	**40**	PKPbc	**PKPdf**	**11 55 13.9**	**+0.7**
	comp=Z,5.7nm,0.5s,baz=330,slow=1.9,SNR=54						
MKAR				PKPab	**PKPbc**	**11 55 15.6**	**+0.3**
	comp=Z,5.7nm,0.5s,baz=299,slow=3.3,SNR=54						
WMQ	**Urumqi**	**151.67**	**40**	*e*PKPbc	**PKPdf**	**11 55 20.9**	**-0.2**
MJAR	**Matsushiro Arr**	**154.99**	**305**	PKPab	**PKPab**	**11 55 52.1**	**+0.9**
	comp=Z,3.6nm,0.9s,baz=109,slow=1.4,SNR=7.7						
HHC	**Hu-ho-hao-te**	**163.43**	**3**	*e*PKP	**PKPdf**	**11 55 35.6**	**-0.2**
NJ2	**Nanjing**	**170.59**	**327**	*e*PKP	**PKPdf**	**11 55 41.5**	**+0.3**

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*IDC **20** 11:36:44.4±1.4, 56°.48N×162°.71E, h0^{km}, mb3.6/5, mb1 3.9/6, mb1mx3.5/69, mbtmp3.6/6, MS3.1/3, Ms1 3.1/3, ms1mx2.6/60, Error ellipse: s-maj=55.0km s-min=24.2km az=156.0*

*ISCJB **20** 11:36:46.8±0.6, 56°.14N±0°.04×163°.19E±0°.05, h22^{km}±5^{km}, mb3.6/5, MS3.7/1, Error ellipse: s-maj=5.9km s-min=4.1km az=11.5*

*MOS **20** 11:36:46.4±0.5, 56°.19N×163°.20E, h21^{km}, mb4.1/2, Error ellipse: s-maj=9.1km s-min=5.3km az=52.1*

*KRSC **20** 11:36:46.3±1.2, 56°.02N×163°.14E, h19^{km}±11^{km}, ML4.2*

ISC 20 11:36:47.7±0.9**, 56°.21N**±0°.04×**163°.10E**±0°.03**, h25**^{km}±6^{km}**, n91, σ1^{s}19**/127**, mb3.6**/5**, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBTR	**Krutoberegovo**	**0.16**	**270**	*e*P	**Pb**	**11 36 52.7**	**-0.2**
KBTR	**Krutoberegovo**	**0.16**	**270**	PN	**Pb**	**11 36 52.7**	**-0.2**
KBG	**Krutoberegovo**	**0.23**	**282**	*e*P	**Pb**	**11 36 53.4**	**-0.3**
KBG				*e*S	**Sb**	**11 36 57.8**	**+0.1**
KBG	**Krutoberegovo**	**0.23**	**282**	PN	**Pb**	**11 36 53.4**	**-0.3**
KBG				S	**Sb**	**11 36 57.8**	**+0.1**
SMKR	**Semkarok**	**0.98**	**293**	*e*P	**Pn**	**11 37 05.3**	**-0.7**
SMKR				*e*S	**Sb**	**11 37 19.0**	**+0.3**
SMKR	**Semkarok**	**0.98**	**293**	PN	**Pn**	**11 37 05.3**	**-0.7**
SMKR				S	**Sb**	**11 37 19.0**	**+0.3**
BDR	**Baidarnaya**	**1.11**	**290**	*e*P	**Pn**	**11 37 07.6**	**-0.2**
BDR				*e*S	**Sb**	**11 37 23.3**	**+0.9**
BDR	**Baidarnaya**	**1.11**	**290**	PN	**Pn**	**11 37 07.6**	**-0.2**
BDR				S	**Sb**	**11 37 23.3**	**+0.9**
SRKR	**Sorokina**	**1.16**	**293**	*e*P	**Pn**	**11 37 08.3**	**-0.2**
SRKR	**Sorokina**	**1.16**	**293**	PN	**Pn**	**11 37 08.3**	**-0.2**
ZLN	**Zelenaya**	**1.30**	**262**	*e*P	**Pn**	**11 37 10.7**	**+0.3**
ZLN				*e*S	**Sb**	**11 37 28.7**	**+0.8**
ZLN	**Zelenaya**	**1.30**	**262**	PN	**Pn**	**11 37 10.7**	**+0.3**
ZLN				S	**Sb**	**11 37 28.7**	**+0.8**
CIRR	**Tsirk**	**1.32**	**267**	*e*P	**Pn**	**11 37 11.2**	**+0.5**
CIRR				*e*S	**Sn**	**11 37 27.9**	**+0.3**
CIRR	**Tsirk**	**1.32**	**267**	PN	**Pn**	**11 37 11.2**	**+0.5**
CIRR				S	**Sn**	**11 37 27.9**	**+0.3**
LGNR	**Loginova**	**1.36**	**266**	*e*P	**Pn**	**11 37 11.6**	**+0.3**
LGNR				*e*S	**Sb**	**11 37 29.4**	**-0.2**
LGNR	**Loginova**	**1.36**	**266**	PN	**Pn**	**11 37 11.6**	**+0.3**
LGNR				S	**Sb**	**11 37 29.4**	**-0.2**
KLY	**Klyuchi**	**1.37**	**275**	*e*P	**Pn**	**11 37 09.6**	**-1.7**
KLY				*e*S	**Sn**	**11 37 26.7**	**-1.9**
KLY	**Klyuchi**	**1.37**	**275**	PN	**Pn**	**11 37 09.6**	**-1.7**
KLY				S	**Sn**	**11 37 26.7**	**-1.9**
BZGR	**Bezymyannyi-Gr**	**1.38**	**260**	*e*P	**Pn**	**11 37 11.5**	**0.0**
BZGR				*e*S	**Sb**	**11 37 30.5**	**+0.5**
BZGR	**Bezymyannyi-Gr**	**1.38**	**260**	PN	**Pn**	**11 37 11.5**	**0.0**
BZGR				S	**Sb**	**11 37 30.5**	**+0.5**
KRSR	**Krestovskiy**	**1.42**	**271**	*e*P	**Pn**	**11 37 11.8**	**-0.2**
KRSR				*e*S	**Sb**	**11 37 31.0**	**-0.2**
KRSR	**Krestovskiy**	**1.42**	**271**	PN	**Pn**	**11 37 11.8**	**-0.2**
KRSR				S	**Sb**	**11 37 31.0**	**-0.2**
BZWR	**Bezymyannyi-We**	**1.48**	**262**	*e*P	**Pn**	**11 37 13.3**	**+0.3**
BZWR				*e*S	**Sb**	**11 37 33.6**	**+0.5**
BZWR	**Bezymyannyi-We**	**1.48**	**262**	PN	**Pn**	**11 37 13.3**	**+0.3**
BZWR				S	**Sb**	**11 37 33.6**	**+0.5**
BZMR	**Bezymyannaya**	**1.49**	**260**	*e*P	**Pn**	**11 37 13.2**	**+0.1**
BZMR				*e*S	**Sn**	**11 37 31.7**	**-0.1**
BZMR	**Bezymyannaya**	**1.49**	**260**	PN	**Pn**	**11 37 13.2**	**+0.1**
BZMR				S	**Sn**	**11 37 31.7**	**-0.1**
KIRR	**Kirishev**	**1.57**	**262**	*e*P	**Pn**	**11 37 14.5**	**+0.4**
KIRR				*e*S	**Sb**	**11 37 35.2**	**-0.4**
KIRR	**Kirishev**	**1.57**	**262**	PN	**Pn**	**11 37 14.5**	**+0.4**
KIRR				S	**Sb**	**11 37 35.2**	**-0.4**
KPT	**Kopyto**	**1.63**	**263**	*e*P	**Pn**	**11 37 15.5**	**+0.5**
KPT				*e*S	**Sb**	**11 37 38.1**	**+0.7**
KPT	**Kopyto**	**1.63**	**263**	PN	**Pn**	**11 37 15.5**	**+0.5**
KPT				S	**Sb**	**11 37 38.1**	**+0.7**
KMNR	**Kamenistaya**	**1.67**	**255**	*e*P	**Pn**	**11 37 16.3**	**+0.8**
KMNR				*e*S	**Sb**	**11 37 38.4**	**-0.1**
KMNR	**Kamenistaya**	**1.67**	**255**	PN	**Pn**	**11 37 16.3**	**+0.8**
KMNR				S	**Sb**	**11 37 38.4**	**-0.1**
KOZ	**Kozyrevsk**	**1.81**	**267**	*e*P	**Pn**	**11 37 18.8**	**+1.4**
KOZ				*e*S	**Sb**	**11 37 43.4**	**+0.9**
KOZ	**Kozyrevsk**	**1.81**	**267**	PN	**Pn**	**11 37 18.8**	**+1.4**
KOZ				S	**Sb**	**11 37 43.4**	**+0.9**
MKZ	**Mys Kozlova**	**1.83**	**206**	*e*P	**Pn**	**11 37 16.3**	**-1.3**
MKZ				S	**Sn**	**11 37 38.7**	**-1.2**
MKZ	**Mys Kozlova**	**1.83**	**206**	PN	**Pn**	**11 37 16.3**	**-1.3**
MKZ				S	**Sn**	**11 37 38.7**	**-1.2**
TUMD	**Tumrok D**	**1.83**	**238**	*e*P	**Pn**	**11 37 17.3**	**-0.3**
TUMD				*e*S	**Sn**	**11 37 38.1**	**-1.9**
BKI	**Bering**	**1.91**	**121**	*e*P	**Pn**	**11 37 18.9**	**+0.2**
BKI				*e*S	**Sn**	**11 37 41.6**	**-0.3**
BKI	**Bering**	**1.91**	**121**	PN	**Pn**	**11 37 18.9**	**+0.2**
BKI				S	**Sn**	**11 37 41.6**	**-0.3**
TUMR	**Tumrok**	**1.91**	**242**	*e*P	**Pn**	**11 37 19.4**	**+0.6**
TUMR				S	**Sn**	**11 37 41.8**	**-0.3**
TUMR	**Tumrok**	**1.91**	**242**	PN	**Pn**	**11 37 17.3**	**-1.5**
ESO	**Esso**	**2.48**	**265**	*e*P	**Pn**	**11 37 28.2**	**+1.6**
ESO	**Esso**	**2.48**	**265**	PN	**Pn**	**11 37 28.2**	**+1.6**
KII	**Karymskiy**	**3.02**	**225**	*e*P	**Pn**	**11 37 34.6**	**+0.5**
KII	**Karymskiy**	**3.02**	**225**	PN	**Pn**	**11 37 34.6**	**+0.5**
SPN	**Mys Shipunski**	**3.59**	**211**	*e*P	**Pn**	**11 37 41.3**	**-0.5**
SPN				*e*S	**Sn**	**11 38 19.9**	**-3.5**
SPN	**Mys Shipunski**	**3.59**	**211**	PN	**Pn**	**11 37 41.3**	**-0.5**
NLC	**Nalytchevo**	**3.74**	**217**	*e*P	**Pn**	**11 37 44.2**	**+0.3**
NLC				*e*S	**Sn**	**11 38 25.6**	**-1.5**
NLC	**Nalytchevo**	**3.74**	**217**	PN	**Pn**	**11 37 44.2**	**+0.3**
SDLR	**Sedlovina**	**3.82**	**222**	*e*P	**Pn**	**11 37 46.1**	**+1.0**
SDLR	**Sedlovina**	**3.82**	**222**	PN	**Pn**	**11 37 46.1**	**+1.0**
KRX	**Arik**	**3.85**	**224**	*e*P	**Pn**	**11 37 47.6**	**+2.2**
KRX	**Arik**	**3.85**	**224**	PN	**Pn**	**11 37 47.6**	**+2.2**
SMAR	**Somma**	**3.86**	**222**	*e*P	**Pn**	**11 37 46.2**	**+0.5**
SMAR	**Somma**	**3.86**	**222**	PN	**Pn**	**11 37 46.2**	**+0.5**
AVH	**Avacha**	**3.88**	**222**	*e*P	**Pn**	**11 37 47.1**	**+1.2**
AVH	**Avacha**	**3.88**	**222**	PN	**Pn**	**11 37 47.1**	**+1.2**
UGLR	**Uglovaya**	**3.90**	**221**	*e*P	**Pn**	**11 37 47.0**	**+0.9**
UGLR	**Uglovaya**	**3.90**	**221**	PN	**Pn**	**11 37 47.0**	**+0.9**
GNL	**Ganaly**	**3.90**	**232**	*e*P	**Pn**	**11 37 46.8**	**+0.7**
GNL	**Ganaly**	**3.90**	**232**	PN	**Pn**	**11 37 46.8**	**+0.7**
KOK	**Koryaka**	**3.90**	**223**	*e*P	**Pn**	**11 37 48.8**	**+2.6**
KOK	**Koryaka**	**3.90**	**223**	PN	**Pn**	**11 37 48.8**	**+2.6**
DALK	**Dalny**	**4.07**	**220**	*e*P	**Pn**	**11 37 48.8**	**+0.5**
DALK				*e*S	**Sn**	**11 38 33.8**	**-1.2**
DALK	**Dalny**	**4.07**	**220**	PN	**Pn**	**11 37 48.8**	**+0.5**
PET	**Petropavlovsk**	**4.11**	**221**	*e*P	**Pn**	**11 37 49.6**	**+0.7**
PET				*e*S	**Sn**	**11 38 35.6**	**-0.4**
PET	**Petropavlovsk**	**4.11**	**221**	*e*PN	**Pn**	**11 37 49.8**	**+0.9**
PET				pmax	pmax		
	comp=Z,60nm,0.5s						
PET				MLR	MLR		
	comp=Z,200nm,13.0s						
PET				MLR	MLR		
	comp=Z,400nm,13.0s						
PETK	**Petropavlovsk-**	**4.42**	**228**	Pn	**Pn**	**11 37 53.8**	**+0.7**
	baz=59,slow=17						
KRMR	**Karymshinskiy**	**4.46**	**223**	*e*P	**Pn**	**11 37 56.1**	**+2.5**
KRMR				*e*S	**Sn**	**11 38 47.4**	**+2.8**
KRMR	**Karymshinskiy**	**4.46**	**223**	PN	**Pn**	**11 37 56.1**	**+2.5**
KRMR				S	**Sn**	**11 38 47.4**	**+2.8**
RUS	**Russkaya**	**4.64**	**217**	*e*P	**Pn**	**11 37 56.4**	**+0.2**
RUS	**Russkaya**	**4.64**	**217**	PN	**Pn**	**11 37 56.4**	**+0.2**
MTVR	**Mutnovka**	**4.71**	**220**	*e*P	**Pn**	**11 37 59.0**	**+1.7**
MTVR	**Mutnovka**	**4.71**	**220**	PN	**Pn**	**11 37 59.0**	**+1.7**
APC	**Apacha**	**4.77**	**229**	*e*P	**Pn**	**11 38 00.9**	**+2.9**
APC	**Apacha**	**4.77**	**229**	PN	**Pn**	**11 38 00.9**	**+2.9**
ASAK	**Asacha**	**4.90**	**221**	*e*P	**Pn**	**11 38 02.2**	**+2.4**
ASAK	**Asacha**	**4.90**	**221**	PN	**Pn**	**11 38 02.2**	**+2.4**
KDTR	**Khodutka, Kamc**	**5.31**	**216**	*e*P	**Pn**	**11 38 05.5**	**+0.1**
MA2	**Magadan**	**7.39**	**302**	LR	LR	11 41 42.0	
	comp=Z,71nm,18.9s,baz=70,slow=42						
ASAJ	**Asahikawa**	**17.77**	**236**	LR	LR	11 47 29.2	
	comp=Z,33nm,19.3s,baz=356,slow=36						
ILAR	**Eielson Array**	**25.42**	**50**	P	**P**	**11 42 13.1**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=258,slow=6.7,SNR=9.9						
H11N2	**WAKE ISLAND Hy**	**36.53**	**174**	T	T	12 22 42.3	
	baz=357,slow=76,SNR=887						
H11N3	**WAKE ISLAND Hy**	**36.55**	**174**	T	T	12 22 47.3	
	baz=357,slow=76,SNR=647						
H11N1	**WAKE ISLAND Hy**	**36.55**	**174**	T	T	12 22 46.5	
	baz=357,slow=76,SNR=642						
YKA	**Yellowknife Ar**	**39.71**	**46**	P	**P**	**11 44 18.3**	**+0.8**
	comp=Z,0.6nm,0.5s,baz=298,slow=8.0,SNR=8.1						
MKAR	**Makanchi Array**	**48.40**	**295**	P	**P**	**11 45 25.0**	**-2.4**
	comp=Z,0.4nm,0.7s,baz=55,slow=10,SNR=3.8						
MKAR	**Makanchi Array**	**48.40**	**295**	P	**P**	**11 45 25.0**	**-2.4**
PDAR	**Pinedale Array**	**54.54**	**65**	P	**P**	**11 46 14.4**	**+0.8**
	comp=Z,0.2nm,0.5s,baz=0.0,slow=3.0,SNR=4.2						
TXAR	**Lajitas Array**	**67.87**	**70**	P	**P**	**11 47 44.7**	**+0.8**
	comp=Z,1.1nm,0.7s,baz=295,slow=4.1,SNR=12						
AFI	**Afiamalu**	**72.95**	**154**	LR	LR	12 13 35.0	
	comp=Z,39nm,20.7s,baz=106,slow=30						

IDC 20 11:58:58.5±1.7**, 7°.49S**×**127°.11E, h0**^{km}**, mb3.5**/2**, mb1 4.2**/4**, mb1mx3.7**/47**, mbtmp3.9**/4**, ML4.3**/2**, Error ellipse: s-maj=216.3km s-min=29.3km az=63.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.23**	**151**	Pn	Pn	12 02 20.6	-0.9
	1.6nm,0.3s,baz=324,slow=13,SNR=61						
WRA				Sn	Sn	12 04 43.0	-17
	2.2nm,0.3s,baz=332,slow=22,SNR=12						
ASAR	**Alice Springs**	**17.36**	**159**	P	Pn	12 03 03.0	+0.6
	0.8nm,0.3s,baz=338,slow=11,SNR=98						
ASAR				S	Sn	12 06 06.3	-10
	0.5nm,0.3s,baz=334,slow=23,SNR=8.7						
MKAR	**Makanchi Array**	**67.09**	**328**	P	P	12 09 54.2	+0.4
	0.2nm,0.6s,baz=135,slow=7.3,SNR=2.4						
KURBB	**Kurchatov Arra**	**71.45**	**330**	P	P	12 10 20.4	-0.3
	0.3nm,0.5s,baz=122,slow=4.5,SNR=3.7						

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*IDC **20** 12:11:50.0±0.6, 33°.00N×119°.64E, h0^{km}, mb4.6/27, mb1 4.8/29, mb1mx4.5/62, mbtmp4.6/29, ML3.6/3, MS4.4/57, Ms1 4.4/57, ms1mx4.4/67, Error ellipse: s-maj=15.9km s-min=13.3km az=51.0*

*ISCJB **20** 12:11:50.8±0.1, 33°.00N±0°.02×119°.63E±0°.02, h13^{km}, mb4.8/179, MS4.5/65, Error ellipse: s-maj=2.7km s-min=2.3km az=27.9*

*BJI **20** 12:11:51.1, 33°.04N×119°.57E, h15^{km}, mb4.8/51, mB5.0/29, ML5.3/23, Ms4.9/49, Ms7 4.9/58*

*MOS **20** 12:11:51.9±1.1, 33°.03N×119°.64E, h21^{km}, mb5.0/77, MS4.8/25, Error ellipse: s-maj=6.4km s-min=4.5km az=111.4*

*NEIC **20** 12:11:52.0±0.1, 32°.98N×119°.59E, h10^{km}, mb4.9/105, Error ellipse: s-maj=2.9km s-min=2.6km az=109.0*

NEIC One person killed and two injured at Yangzhou. Thirteen rooms collapsed and 506 damaged at Taizhou and Yangzhou. Felt [III] at Changzhou, Nanjing, Xiaolingwei and Yangzhou. Also felt at Chuzhou, Gaoyou, Hefei, Huaiyin, Yancheng and Zhenjiang.

*GCMT **20** 12:11:52.0±0.2, 33°.08N×119°.49E, h14^{km}±1^{km}, MW5.0/101, Moment Tensor Solution. s47,c61; s101,c180; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.16±.08; M$_{\theta\theta}$2.58±.08; M$_{\phi\phi}$-2.42±.09; M$_{r\theta}$1.16±.21; M$_{\theta\phi}$2.53±.08; M$_{\phi r}$-0.12±.17; Best double couple: M$_0$3.73500×10^{16} NP1:φ$_s$113.00000°, δ87.00000°, λ17.00000°. NP2:φ$_s$22.00000°, δ73.00000°, λ177.00000°. Principal axes: T 3.8990, Plg14.0000°, Azm338.0000°; N -0.3250, Plg73.0000°, Azm123.0000°; P -3.5710, Plg10.0000°, Azm246.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 20 12:11:53.5±0.5**, 33°.02N**±0°.03×**119°.70E**±0°.03**, h18**^{km}±1^{km}**, h18**^{km}**:pP-P, n417, σ1^{s}75**/438**, mb4.9**/180**, MS4.5**/65**, 24C-9D, Southeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NJ2	**Nanjing**	**1.20**	**217**	*e*Pg	**Pn**	**12 12 11.8**	**-3.5**
NJ2				Sg	**Sb**	**12 12 28.8**	**-2.0**
NJ2				smax	smax		
	comp=N,41µm,0.3s						
NJ2				smax	smax		
	comp=E,53µm,0.3s						
SSE	**Sheshan**	**2.30**	**146**	Pn	**Pn**	**12 12 29.6**	**-0.8**
SSE				Sg	**Sg**	**12 13 06.9**	**-0.5**
SSE				smax	smax		
	comp=N,3µm,0.9s						
SSE				smax	smax		
	comp=E,4µm,0.8s						
TIA	**Tai'an**	**3.83**	**327**	Pn	**Pn**	**12 12 48.8**	**-2.6**
TIA				Sn	**Sn**	**12 13 35.8**	**-0.1**
TIA				Sg	**Sb**	**12 13 50.8**	**+4.4**
TIA				smax	smax		
	comp=N,5µm,0.7s						
TIA				smax	smax		
	comp=E,6µm,0.9s						
WHN	**Wuhan**	**5.18**	**243**	Pn	**Pn**	**12 13 08.3**	**-1.7**
WHN				Pg	**Pb**	**12 13 22.3**	**-1.2**
WHN				Sn	**Sn**	**12 14 09.9**	**+0.6**
WHN				Sg	**Sb**	**12 14 26.8**	**+1.4**
WHN				smax	smax		
	comp=N,10µm,0.9s						
WHN				smax	smax		
	comp=E,11µm,1.0s						
DL2	**Dalian**	**6.08**	**14**	Pn	**Pn**	**12 13 21.4**	**-0.9**
DL2				Sn	**Sn**	**12 14 37.4**	**+6.1**
DL2				Sg	**Sg**	**12 15 01.9**	**-6.5**
DL2				smax	smax		
	comp=N,2µm,0.9s						
DL2				smax	smax		
	comp=E,2µm,0.9s						
TJN	**Taejon**	**7.14**	**60**	*ce*P	**Pn**	**12 13 38.4**	**+1.4**
INCN	**Inchon**	**7.21**	**50**	*e*Pn	**Pn**	**12 13 37.6**	**-0.3**
INCN	**Inchon**	**7.21**	**50**	*e*P	**Pn**	**12 13 37.6**	**-0.3**
BJT	**Baijiatuau**	**7.54**	**339**	*e*Pn	**Pn**	**12 13 40.4**	**-2.0**
	97nm,0.6s						
BJT				*e*Sn	**Sn**	**12 15 06.6**	**-0.7**
BJT	**Baijiatuau**	**7.54**	**339**	*e*P	**Pn**	**12 13 40.4**	**-2.0**
BJT				*e*		12 15 06.6	
BJT				pmax	pmax		
	comp=Z,97nm,0.6s						
BJI	**Beijing**	**7.56**	**339**	Pn	**Pn**	**12 13 40.1**	**-2.5**
BJI				Sg	Sb	12 15 45.3	+12
BJI				smax	smax		
	comp=Z,2µm,0.8s						
BJI				smax	smax		
	comp=Z,1µm,0.9s						
TIY	**Taiyuan**	**7.56**	**310**	*e*Pn	**Pn**	**12 13 40.1**	**-2.6**
TIY				smax	smax		
	comp=Z,660nm,0.7s						
TIY				smax	smax		
	comp=Z,960nm,1.0s						
KS15	**Wonju Array Si**	**8.02**	**54**	*e*Pn	**Pn**	**12 13 49.6**	**+0.7**
KSAR	**Wonju Array Be**	**8.02**	**54**	Pn	**Pn**	**12 13 48.1**	**-0.8**
KSAR				Lg	Lg	12 16 05.2	
KSAR	**Wonju Array Be**	**8.02**	**54**	P	**Pn**	**12 13 48.1**	**-0.8**
KS01	**Wonju Array Si**	**8.04**	**54**	*e*Pn	**Pn**	**12 13 50.0**	**+0.7**
KSRS	**Korea Array**	**8.05**	**54**	Pn	**Pn**	**12 13 48.1**	**-1.3**
	comp=Z,2.9nm,0.3s,baz=239,slow=15,SNR=31						
KSRS				Lg	Lg	12 16 05.2	
	comp=Z,3.9nm,0.3s,baz=238,slow=25,SNR=4.1						
QZH	**Quanzhou**	**8.11**	**187**	*e*P	**Pn**	**12 13 50.8**	**+0.6**
QZH				S	**Sn**	**12 15 22.5**	**+1.1**
QZH				LR	LR		
	comp=Z,10µm,8.5s						
TATO	**Taipei**	**8.17**	**169**	*e*Pn	**Pn**	**12 13 50.1**	**-0.9**
TATO				*e*Lg	Lg	12 16 11.7	
YHNB	**Yeheng**	**8.45**	**170**	*e*Pn	**Pn**	**12 13 53.3**	**-1.8**
NACB	**Ninganchiao**	**8.97**	**169**	*e*Pn	**Pn**	**12 14 00.4**	**-1.7**
NACB				*e*Sn	**Sn**	**12 15 41.5**	**-1.1**
YOJ	**Yonaguni jima**	**9.01**	**160**	*e*Pn	**Pn**	**12 13 59.0**	**-3.6**
YOJ	**Yonaguni jima**	**9.01**	**160**	*e*P	**Pn**	**12 13 59.0**	**-3.6**
XAN	**Xi'an**	**9.06**	**279**	P	**Pn**	**12 14 00.8**	**-2.5**
XAN				LR	LR		
	comp=Z,10µm,10.6s						
XAN				LR	LR		
	comp=Z,7µm,12.7s						
ENH	**Enshi**	**9.13**	**255**	*e*Pn	**Pn**	**12 14 02.3**	**-1.9**
	comp=Z,135nm,1.0s						
ENH				*e*Sn	**Sn**	**12 15 50.4**	**+3.9**
SSLB	**Suanglung**	**9.27**	**173**	*e*Pn	**Pn**	**12 14 04.1**	**-2.1**
SNY	**Shenyang**	**9.31**	**18**	⇑P	**Pn**	**12 14 08.9**	**+2.2**
SNY				S	**Sn**	**12 15 59.8**	**+8.8**
SNY				pmax	pmax		
	comp=Z,17nm,1.3s						
SNY				LR	LR		
	comp=Z,11µm,10.4s						
SNY				LR	LR		
	comp=Z,8µm,12.4s						
JNU	**Nakatsue**	**9.38**	**86**	LR	LR	12 17 41.7	
	comp=Z,2µm,21.2s,baz=268,slow=37						
JNU	**Nakatsue**	**9.38**	**86**	*e*Pn	**Pn**	**12 14 08.4**	**+0.6**
JOW	**Kunigami**	**9.66**	**127**	LR	LR	12 18 25.1	
	comp=Z,2µm,18.4s,baz=344,slow=41						
JOW	**Kunigami**	**9.66**	**127**	*e*Pn	**Pn**	**12 14 11.3**	**-0.3**
YULB	**Yu-li**	**9.70**	**171**	*e*Pn	**Pn**	**12 14 11.4**	**-0.6**
TPUB	**Ta-pu**	**9.72**	**175**	*e*Pn	**Pn**	**12 14 10.9**	**-1.5**
HHC	**Hu-ho-hao-te**	**10.16**	**323**	*e*P	**Pn**	**12 14 20.8**	**+2.3**
HHC				S	**Sn**	**12 16 15.9**	**+3.8**
HHC				SS	**SnSn**	**12 16 29.0**	**+5.0**
HHC				pmax	pmax		
	comp=Z,20nm,0.8s						
HHC				pmax	pmax		
	comp=Z,120nm,4.6s						
HHC				LR	LR		
	comp=Z,4µm,9.9s						
HHC				LR	LR		
	comp=Z,3µm,8.2s						
HHC				LR	LR		
	comp=Z,5µm,10.4s						
TWG	**Pinlang**	**10.23**	**173**	*e*Pn	**Pn**	**12 14 18.1**	**-1.3**
CN2	**Changchun**	**11.66**	**21**	*e*P	Pn	12 14 44.9	+6.0
CN2				*e*S	**Sn**	**12 16 57.0**	**+8.4**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=N,10µm,11.0s						
CN2				LR	LR		
	comp=E,14µm,11.0s						
CN2				LR	LR		
	comp=Z,4µm,10.0s						
GYA	**Guiyang**	**13.07**	**243**	⇑*i*P	**Pn**	**12 15 00.1**	**+1.7**
GYA				pP	P	12 15 04.3	-4.3
GYA				PP	**PnPn**	**12 15 10.0**	**+3.8**
GYA				S	**Sn**	**12 17 26.0**	**+2.6**
GYA				SS	**SnSn**	**12 17 41.4**	**+5.8**
GYA				pmax	pmax		
	comp=Z,20nm,0.7s						
GYA				pmax	pmax		
	comp=Z,120nm,4.3s						
GYA				LR	LR		
	comp=Z,2µm,10.6s						
GYA				LR	LR		
	comp=Z,2µm,10.5s						
GYA				LR	LR		
	comp=Z,1µm,11.8s						
LZH	**Lanzhou**	**13.42**	**288**	*e*P	**Pn**	**12 15 02.6**	**-0.5**
LZH				pP	P	12 15 06.8	-5.7
LZH				sP		12 15 10.4	
LZH				PP	**PnPn**	**12 15 14.4**	**+3.4**
LZH				S	**Sn**	**12 17 29.0**	**-2.9**
LZH				sS	sS	12 17 35.3	
LZH				SS	**SnSn**	**12 17 46.8**	**+2.7**
LZH				pmax	pmax		
	comp=Z,83nm,1.1s						
LZH				pmax	pmax		
	comp=Z,340nm,5.2s						
LZH				LR	LR		
	comp=Z,13µm,10.8s						
CD2	**Chengdu**	**13.70**	**265**	P	**Pn**	**12 15 04.1**	**-2.7**
CD2				S	**Sn**	**12 17 36.4**	**-2.1**
CD2				pmax	pmax		
	comp=Z,30nm,0.6s						
CD2				pmax	pmax		
	comp=Z,120nm,4.4s						
CD2				LR	LR		
	comp=Z,12µm,8.7s						
MDJ	**Mudanjiang**	**13.90**	**31**	P	**Pn**	**12 15 10.8**	**+1.4**
MDJ				pP	P	12 15 14.5	-3.0
MDJ				sP		12 15 16.8	
MDJ				S	**Sn**	**12 17 46.9**	**+3.8**
MDJ				SS	**S**	**12 18 01.3**	**-3.6**
MDJ				pmax	pmax		
	comp=Z,24nm,1.1s						
MDJ				LR	LR		
	comp=Z,4µm,11.5s						
MDJ	**Mudanjiang**	**13.90**	**31**	*e*Pn	**Pn**	**12 15 10.0**	**+0.6**
	comp=Z,91nm,1.6s						
USRK	**Ussuriysk Ar.**	**14.71**	**37**	Pn	**Pn**	**12 15 23.0**	**+2.6**
	baz=223,slow=9.9						
USRK				Lg	Lg	12 19 33.9	
	baz=227,slow=25						

USRK				LR	LR	12 20 54.2	
	comp=Z,673nm,18.8s,baz=210,slow=37						
MJB9	**Matsu-Tunnel**	**15.61**	**72**	*e*Pn	**P**	**12 15 40.0**	**+3.4**
	comp=Z,84nm,1.2s						
MAJO	**Matsushiro**	**15.61**	**72**	*e*Pn	**P**	**12 15 39.3**	**+2.7**
	comp=Z,78nm,1.2s						
MAJO	**Matsushiro**	**15.61**	**72**	*i* P	**Pn**	**12 15 34.0**	**+1.5**
MAT	**Matsushiro**	**15.61**	**72**	P	**P**	**12 15 36.2**	**-0.4**
MAT				S	**S**	**12 18 37.8**	**-2.3**
MJAR	**Matsushiro Arr**	**15.61**	**72**	Pn	**P**	**12 15 36.1**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=262,slow=9.6,SNR=3.4						
MJAR				LR	LR	12 21 50.1	
	comp=Z,1µm,21.1s,baz=260,slow=38						
HIA	**Hailar**	**16.23**	**0**	*e*Pn	**Pn**	**12 15 40.3**	**-0.1**
	comp=Z,41nm,0.9s						
HIA	**Hailar**	**16.23**	**0**	*e*P	**Pn**	**12 15 40.3**	**-0.1**
HIA				pmax	pmax		
	comp=Z,41nm,0.9s						
QIZ	**Qiongzhong**	**16.50**	**215**	P	**P**	**12 15 47.8**	**+1.3**
QIZ				S	**Sn**	**12 18 51.3**	**+4.6**
QIZ				LR	LR		
	comp=Z,3µm,12.3s						
QIZ	**Qiongzhong**	**16.50**	**215**	*e*Pn	**Pn**	**12 15 43.7**	**-0.2**
	comp=Z,20nm,1.1s						
KMI	**Kunming**	**16.77**	**246**	P	**Pn**	**12 15 45.0**	**-2.6**
KMI				PP	**sP**	**12 16 02.3**	**+4.9**
KMI				S	**Sn**	**12 18 51.8**	**-1.8**
KMI				sS	S	12 19 04.3	-0.1
KMI				pmax	pmax		
	comp=Z,93nm,1.3s						
KMI				pmax	pmax		
	comp=Z,410nm,3.1s						
KMI				LR	LR		
	comp=Z,3µm,7.4s						
KMI				LR	LR		
	comp=Z,2µm,10.7s						
KMI				LR	LR		
	comp=Z,6µm,13.9s						
JHJ	**Hachijo jima 2**	**16.84**	**84**	LR	LR	12 22 01.2	
	comp=Z,977nm,20.0s,baz=280,slow=36						
GTA	**Gaotai**	**17.25**	**297**	⇑P	**Pn**	**12 15 49.4**	**-4.1**
GTA				pP	P	12 15 53.6	-1.3
GTA				sP	pP	12 15 56.1	-4.0
GTA				S	**Sn**	**12 18 58.6**	**-6.4**
GTA				LR	LR		
	comp=Z,6µm,13.9s						
GTA				LR	LR		
	comp=Z,5µm,12.7s						
ULN	**Ulaanbaatar**	**17.64**	**331**	*e*Pn	**Pn**	**12 15 58.0**	**-0.3**
	comp=Z,47nm,1.1s						
ULN	**Ulaanbaatar**	**17.64**	**331**	P	**Pn**	**12 15 58.3**	**0.0**
	SNR=59						
ULN	**Ulaanbaatar**	**17.64**	**331**	*c i*P	**Pn**	**12 15 57.8**	**-0.5**
ULN				pmax	pmax		
	comp=Z,61nm,1.3s						
TEY	**Ternei**	**17.75**	**43**	*e*P	**P**	**12 16 04.0**	**+3.8**
SONM	**Songino Array**	**17.89**	**330**	P	**Pn**	**12 16 00.8**	**-0.6**
	comp=Z,0.4nm,0.3s,baz=152,slow=13,SNR=57						
SONM				Lg	Lg	12 21 10.1	
	comp=Z,0.1nm,0.3s,baz=153,slow=26,SNR=3.8						
SONA1	**Songino Array**	**17.90**	**330**	*e*Pn	**Pn**	**12 16 00.9**	**-0.6**
KLR	**Kul'dur**	**18.52**	**26**	P	**Pn**	**12 16 09.7**	**+0.8**
	comp=Z,0.0nm,0.3s,baz=221,slow=12,SNR=11						
KLR				LR	LR	12 23 22.5	
	comp=Z,87nm,21.3s,baz=215,slow=37						
KLR	**Kul'dur**	**18.52**	**26**	⇓*i*P	**Pn**	**12 16 10.1**	**+1.2**
TGY	**Tagaytay City**	**18.87**	**176**	LR	LR	12 24 08.7	
	comp=Z,2µm,18.2s,baz=351,slow=39						
CBIJ	**Chichi jima**	**20.32**	**101**	*e*P	**P**	**12 16 29.1**	**+0.6**
	comp=Z,36nm,1.0s						
PANO	**Nakornpanom**	**20.85**	**224**	P	Pn	12 16 35.9	-1.0
	comp=Z,1.7nm,1.1s						
ASAJ	**Asahikawa**	**20.98**	**51**	P	**P**	**12 16 36.1**	**+0.5**
	comp=Z,26nm,0.8s,baz=220,slow=15,SNR=13						
ASAJ				LR	LR	12 24 16.0	
	comp=Z,335nm,20.3s,baz=258,slow=36						
ASAJ	**Asahikawa**	**20.98**	**51**	*e*P	**P**	**12 16 35.9**	**+0.3**
	comp=Z,76nm,1.1s						
NONG	**Nongkai**	**21.05**	**229**	P	**P**	**12 16 37.5**	**+1.0**
	comp=Z,43nmcomp=Z,0.9nm,1.7s						
ZAK	**Zakamensk**	**21.16**	**330**	*e*P	**P**	**12 16 37.5**	**0.0**
ZAK				pmax	pmax		
	comp=Z,77nm,1.7s						
SKNT	**Sakolnakorn**	**21.36**	**225**	P	**P**	**12 16 40.7**	**+0.9**
	comp=Z,36nm,1.3s						
ZEA	**Zeya**	**21.40**	**12**	*e*P	P	12 16 50.4	+10
ZEA				*e*S	Sn	12 20 41.0	-3.6
ZEA				pmax	pmax		
	comp=N,86nm,1.2s						
ZEA				pmax	pmax		
	comp=E,47nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,110nm,1.0s						
ZEA				smax	smax		
	comp=E,1µm,14.0s						
ZEA				MLR	MLR		
	comp=Z,5µm,15.0s						
ZEA				MLR	MLR		
	comp=E,2µm,10.0s						
ZEA				MLR	MLR		
	comp=N,4µm,13.0s						
GRNR	**Gornyy**	**21.58**	**30**	*e*P	**P**	**12 16 46.0**	**+4.1**
GRNR				pmax	pmax		
	comp=Z,26nm,1.0s						
TLY	**Talaya**	**22.01**	**333**	LR	LR	12 25 29.8	
	comp=Z,674nm,21.4s,baz=150,slow=37						
TLY	**Talaya**	**22.01**	**333**	*e*P	**P**	**12 16 46.9**	**+0.4**
	comp=Z,41nm,1.0s						
TLY	**Talaya**	**22.01**	**333**	P	**P**	**12 16 47.4**	**+0.8**
	SNR=35						
TLY	**Talaya**	**22.01**	**333**	*c i*P	**P**	**12 16 47.0**	**+0.4**
TLY				*e*S	**S**	**12 20 50.3**	**+1.6**
TLY				pmax	pmax		
	comp=Z,30nm,1.1s						
TLY				MLR	MLR		
	comp=Z,2µm,13.0s						
IRK	**Irkutsk**	**22.23**	**334**	*e*P	**P**	**12 16 49.9**	**+1.0**
IRK				pmax	pmax		
	comp=Z,149nm,2.2s						
YSS	**Yuzh-Sakhalins**	**22.38**	**45**	*e*P	**P**	**12 16 50.1**	**-0.5**
	comp=Z,25nm,1.0s						
YSS	**Yuzh-Sakhalins**	**22.38**	**45**	*e*P	**P**	**12 16 51.7**	**+1.2**
YSS				*e*		12 17 01.1	
YSS				*e*		12 17 30.5	
YSS				*e*S	**S**	**12 20 56.2**	**+0.6**
YSS				pmax	pmax		
	comp=Z,20nm,0.4s						
YSS				pmax	pmax		
	comp=N,30nm,0.2s						
YSS				pmax	pmax		
	comp=E,30nm,0.2s						
YSS				pmax	pmax		
	comp=Z,100nm,3.6s						
YSS				pmax	pmax		
	comp=N,100nm,2.7s						
YSS				pmax	pmax		
	comp=E,100nm,2.9s						
YSS				MLR	MLR		
	comp=Z,1µm,14.0s						
YSS				MLR	MLR		
	comp=N,800nm,15.0s						
KHON	**Khomkaen**	**22.55**	**227**	P	**P**	**12 16 53.7**	**+1.1**
	comp=N,22nm,0.9s						
UTTA	**Uttaradit**	**22.98**	**233**	P	**P**	**12 16 56.7**	**-0.4**
	comp=N,7.7nm,0.9s,comp=N,76nm						
LAMP	**Lampang**	**23.07**	**236**	P	**P**	**12 16 58.3**	**+0.2**
	comp=N,18nm,1.1s,comp=N,173nm						
MOY	**Mondy**	**23.08**	**329**	*e*P	**P**	**12 16 59.0**	**+1.0**
MOY				pmax	pmax		
	comp=Z,137nm,1.6s						
YUK	**Yuzh-Kuril'sk**	**23.14**	**54**	*d i*P	**P**	**12 17 00.2**	**+1.7**
YUK				*e*		12 17 25.5	
YUK				PPP	PPP	12 17 33.2	
YUK				*i*		12 20 44.4	
YUK				pmax	pmax		
	comp=Z,344nm,1.1s						
YUK				pmax	pmax		
	comp=N,140nm,0.9s						
YUK				pmax	pmax		
	comp=E,108nm,1.1s						
YUK				MLR	MLR		
	comp=Z,632nm,13.0s						
CMMT	**Chiang Mai**	**23.36**	**238**	P	**P**	**12 17 00.6**	**-0.4**
	comp=Z,42nm,1.5s						
CHTO	**Chiang Mai**	**23.36**	**238**	*e*P	**P**	**12 16 59.9**	**-1.1**
CHTO	**Chiang Mai**	**23.36**	**238**	P	**P**	**12 17 01.0**	**0.0**
	SNR=11						
CHTO	**Chiang Mai**	**23.36**	**238**	*e*P	**P**	**12 16 59.9**	**-1.1**
CHTO	**Chiang Mai**	**23.36**	**238**	P	**P**	**12 17 00.6**	**-0.4**
	comp=Z,187nm,1.5s,comp=Z,3µm						
CHAI	**Chaiyaphum**	**23.40**	**227**	P	**P**	**12 17 00.7**	**-0.7**
	comp=Z,8.2nm,1.0s,comp=Z,228nm						
PHIT	**Phitsanulok**	**23.46**	**232**	P	**P**	**12 17 02.3**	**+0.3**
	comp=Z,58nm,0.9s,comp=Z,596nm						
PBKT	**Sadao Pong**	**23.55**	**230**	*e*P	**P**	**12 17 01.5**	**-1.3**
	comp=Z,15nm,0.8s						
PBKT	**Sadao Pong**	**23.55**	**230**	P	**P**	**12 17 02.0**	**-0.8**
	comp=Z,24nm,0.9s						
CM31	**Chiang Mai Arr**	**23.60**	**237**	*e*P	**P**	**12 17 02.4**	**-0.9**
CMAR	**Chiang Mai Arr**	**23.60**	**237**	P	**P**	**12 17 02.2**	**-1.1**
	comp=Z,20nm,1.0s,baz=36,slow=8.0,SNR=73						
CMAR				LR	LR	12 27 38.0	
	comp=Z,1µm,19.9s,baz=51,slow=40						
CMAR	**Chiang Mai Arr**	**23.60**	**237**	*ce*P	**P**	**12 17 02.4**	**-0.9**
CMAR				pmax	pmax		
	comp=Z,22nm,1.0s						
CM01	**Chiang Mai Arr**	**23.61**	**237**	*e*P	**P**	**12 17 02.3**	**-1.2**
TYV	**Tymovskoe**	**24.52**	**37**	*e*P	**P**	**12 17 10.1**	**-1.6**
TYV				*e*S	**S**	**12 21 31.3**	**+0.1**
TYV				pmax	pmax		
	comp=Z,200nm,2.7s						
TYV				pmax	pmax		
	comp=Z,14nm,2.0s						
TYV				smax	smax		
	comp=E,15nm,2.1s						
TYV				MLR	MLR		
	comp=E,3µm,12.0s						
TYV				MLR	MLR		
	comp=Z,4µm,12.0s						
LSA	**Lhasa**	**24.57**	**270**	P	**P**	**12 17 13.3**	**+0.4**
LSA				S	**S**	**12 21 31.6**	**-1.7**
LSA				pmax	pmax		
	comp=Z,34nm,1.3s						
LSA				LR	LR		
	comp=Z,1µm,13.0s						
LSA				LR	LR		
	comp=Z,690nm,13.8s						
LSA				LR	LR		
	comp=Z,2µm,14.6s						
LSA	**Lhasa**	**24.57**	**270**	*e*P	**P**	**12 17 13.1**	**+0.2**
	comp=Z,101nm,1.3s						
LSA				*e*S	**S**	**12 21 38.6**	**+5.3**
LSA	**Lhasa**	**24.57**	**270**	*e*P	**P**	**12 17 13.1**	**+0.2**
LSA				pmax	pmax		
	comp=Z,101nm,1.3s						
SRAK	**Srakaew**	**24.83**	**225**	P	**P**	**12 17 12.1**	**-2.7**
	comp=Z,94nm,1.0s,comp=Z,892nm						
KUR	**Kuril'sk**	**24.89**	**52**	P	**P**	**12 17 19.4**	**+4.4**
KUR				MLR	MLR		
	comp=N,948nm,13.0s						
KUR				MLR	MLR		
	comp=E,560nm,13.0s						
KUR				MLR	MLR		
	comp=Z,1µm,13.0s						
NAYO	**Nakonayok**	**25.03**	**226**	P	**P**	**12 17 16.7**	**+0.2**
	comp=Z,0.4nm,1.1s						
BOD	**Bodaibo**	**25.10**	**353**	*e*P	**P**	**12 17 16.3**	**-0.5**
BOD				pmax	pmax		
	comp=Z,19nm,1.0s						
UMPA	**Umpang Tak**	**25.20**	**233**	P	**P**	**12 17 19.7**	**+1.5**
	comp=Z,15nm,1.2s,comp=Z,242nm						
SHL	**Shillong**	**25.32**	**260**	*e*P	**P**	**12 17 18.3**	**-1.1**
	comp=Z,43nm,0.9s						
SHL	**Shillong**	**25.32**	**260**	*e*P	**P**	**12 17 19.0**	**-0.4**
SHL	**Shillong**	**25.32**	**260**	*e*P	**P**	**12 17 18.3**	**-1.1**
SHL				pmax	pmax		
	comp=Z,43nm,0.9s						
SRDT	**SRDT**	**26.38**	**230**	P	**P**	**12 17 29.3**	**+0.5**
	comp=Z,38nm,1.8s						
DAV	**Davao City (W)**	**26.39**	**167**	LR	LR	12 29 32.8	
	comp=Z,949nm,18.2s,baz=329,slow=40						
BRDH	**Bariadhala**	**26.79**	**255**	LR	LR	12 29 14.4	
	comp=Z,876nm,18.1s,baz=103,slow=39						
WMQ	**Urumqi**	**27.14**	**303**	P	**P**	**12 17 35.8**	**+0.3**
WMQ				pP	pP	12 17 38.8	-2.3
WMQ				sP	sP	12 17 43.0	-0.4
WMQ				S	**S**	**12 22 13.5**	**+0.4**
WMQ				sS	pS	12 22 18.4	-0.7
WMQ				pmax	pmax		
	comp=Z,26nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,200nm,3.7s						
WMQ				LR	LR		
	comp=Z,3µm,16.9s						
MYLDM	**Lahad Datu**	**27.72**	**183**	*e*P	**P**	**12 17 43.9**	**+3.1**
	comp=Z,43nm,1.1s						
DGZ	**Jazzator, Alta**	**29.10**	**315**	*i* P	**P**	**12 17 52.6**	**-0.5**
RAMN	**Ramite**	**29.22**	**267**	*e*P	**P**	**12 17 52.6**	**-1.9**
GUN	**Gumba**	**29.51**	**269**	*e*P	**P**	**12 17 57.4**	**+0.2**
	comp=Z,70nm,0.9s						
YAK	**Yakutsk**	**29.73**	**9**	LR	LR	12 31 09.4	
	comp=Z,587nm,18.6s,baz=204,slow=39						
YAK	**Yakutsk**	**29.73**	**9**	*e*P	**P**	**12 17 57.8**	**-0.4**
	comp=Z,12nm,0.8s						
YAK	**Yakutsk**	**29.73**	**9**	*e*P	**P**	**12 17 55.8**	**-2.4**
YAK				*e*PPP	PPP	12 19 00.2	
YAK				*e*		12 20 56.7	
YAK				*e*S	**S**	**12 22 53.6**	**+0.4**
YAK				*e**SS	**sS**	**12 23 05.5**	**+3.0**
YAK				*e*SS	**SnSn**	**12 24 22.6**	**-0.3**
YAK				*e*SSS	SSS	12 24 43.1	
YAK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
YAK				pmax	pmax		
	comp=N,3.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,27nm,1.6s						
YAK				pmax	pmax		
	comp=N,23nm,1.9s						
YAK				pmax	pmax		
	comp=E,20nm,1.9s						
YAK				smax	smax		
	comp=N,43nm,2.8s						
YAK				smax	smax		
	comp=E,29nm,3.0s						
YAK				MLR	MLR		
	comp=Z,897nm,17.0s						
YAK				MLR	MLR		
	comp=N,737nm,15.0s						
YAK				MLR	MLR		
	comp=E,485nm,15.0s						
GUMO	**Guam**	**30.00**	**124**	LR	LR	12 29 46.2	
	comp=E,357nm,19.6s,baz=306,slow=36						
PKIN	**Phulchoki**	**30.02**	**269**	*e*P	**P**	**12 18 01.3**	**-0.3**
	comp=E,24nm,0.9s						
KKN	**Kakani**	**30.05**	**269**	*e*P	**P**	**12 18 01.7**	**-0.1**
	comp=E,36nm,0.8s						
DMN	**Daman**	**30.26**	**269**	*e*P	**P**	**12 18 03.6**	**-0.1**
	comp=E,28nm,0.9s						
GKN	**Gorkha**	**30.53**	**270**	*e*P	**P**	**12 18 05.5**	**-0.4**
	comp=E,33nm,0.9s						
DANN	**Dangsing**	**31.16**	**271**	*e*P	**P**	**12 18 11.8**	**+0.1**
SBUM	**Sibu**	**31.21**	**195**	*e*P	**P**	**12 18 11.1**	**-0.7**
	comp=E,45nm,1.7s						
KOLN	**Koldanda**	**31.47**	**270**	*e*P	**P**	**12 18 14.1**	**-0.2**
	comp=E,12nm,0.6s						
MK01	**Makanchi Array**	**31.49**	**307**	*e*P	**P**	**12 18 13.8**	**-0.3**
MK31	**Makanchi Array**	**31.50**	**307**	*e*P	**P**	**12 18 14.2**	**0.0**
MK31	**Makanchi Array**	**31.50**	**307**	*i* P	**P**	**12 18 13.7**	**-0.5**
MK31				pmax	pmax		
	comp=Z,15nm,0.7s						
MKAR	**Makanchi Array**	**31.50**	**307**	P	**P**	**12 18 14.2**	**-0.1**
	comp=Z,16nm,0.6s,baz=98,slow=11,SNR=143						
MKAR				LR	LR	12 30 17.5	
	comp=Z,594nm,21.6s,baz=110,slow=35						
MKAR	**Makanchi Array**	**31.50**	**307**	*e*P	**P**	**12 18 14.2**	**-0.1**
	comp=Z,116nm,0.6s						
MAKZ	**Makanchi**	**31.72**	**307**	*e*P	**P**	**12 18 16.1**	**0.0**
	comp=Z,20nm,0.7s						
MAKZ	**Makanchi**	**31.72**	**307**	P	**P**	**12 18 15.6**	**-0.5**
MAKZ				pmax	pmax		
	comp=Z,20nm,0.7s						
ZAA0	**Zalesovo Array**	**32.34**	**321**	*e*P	**P**	**12 18 21.1**	**-0.3**
	comp=Z,16nm,0.8s						
ZALV	**Zalesovo Beam**	**32.34**	**321**	P	**P**	**12 18 21.3**	**-0.1**
	comp=Z,7.5nm,0.3s,baz=115,slow=7.0,SNR=7.0						
ZALV				LR	LR	12 32 22.9	
	comp=Z,1µm,18.3s,baz=91,slow=38						
ZALV	**Zalesovo Beam**	**32.34**	**321**	P	**P**	**12 18 21.3**	**-0.1**
ZALV				pmax	pmax		
	comp=Z,9.0nm,0.3s						
ZALV				MLR	MLR		
	comp=Z,1µm,18.3s						
MRSI	**Marisa**	**32.44**	**176**	P	**P**	**12 18 25.3**	**+2.7**
	comp=Z,48nm,1.2s,comp=Z,602nm						
PBA	**Port Blair**	**32.60**	**236**	*e*P	P	12 18 24.2	+0.2
	comp=Z,116nm,1.1s						
KSM	**Kuching**	**32.60**	**198**	*e*P	**P**	**12 18 24.2**	**+0.2**
	comp=Z,9.3nm,1.0s						
KULM	**Kulim**	**32.81**	**217**	*e*P	**P**	**12 18 25.9**	**+0.1**
	comp=Z,30nm,1.3s						
PDGK	**Podgornoye**	**32.96**	**300**	P	**P**	**12 18 26.3**	**-0.9**
IPM	**Ipoh**	**33.32**	**216**	*e*P	**P**	**12 18 29.7**	**-0.7**
	comp=Z,24nm,1.3s						
NVS	**Novosibirsk**	**33.56**	**322**	⇑*i*P	**P**	**12 18 32.8**	**+0.7**
NVS				pmax	pmax		
	comp=Z,41nm,2.1s						
NVS				pmax	pmax		
	comp=N,9.0nm,1.7s						
NVS				pmax	pmax		
	comp=E,17nm,1.7s						
PETK	**Petropavlovsk-**	**33.71**	**42**	LR	LR	12 31 44.7	
	comp=E,348nm,21.8s,baz=253,slow=35						
APSI	**Ampana**	**33.80**	**176**	P	**P**	**12 18 38.0**	**+3.5**
	comp=E,77nm,1.4s,comp=E,795nm						
KDJ	**Kajisay**	**34.60**	**298**	*e*P	**P**	**12 18 40.9**	**-0.6**
	comp=E,14nm,1.1s						
KURK	**Kurchatov**	**34.79**	**313**	*e*P	**P**	**12 18 42.6**	**-0.1**
	comp=E,46nm,0.9s						
KURK	**Kurchatov**	**34.79**	**313**	P	**P**	**12 18 42.9**	**+0.1**
	SNR=17						
KURK	**Kurchatov**	**34.79**	**313**	*c i*P	**P**	**12 18 42.5**	**-0.2**
KURK				pmax	pmax		
	comp=Z,58nm,1.0s						
KURBB	**Kurchatov Arra**	**34.82**	**313**	P	**P**	**12 18 42.8**	**-0.2**
	comp=Z,29nm,1.0s,baz=106,slow=9.0,SNR=64						
KSH	**Kashi**	**35.57**	**293**	P	**P**	**12 18 53.4**	**+3.6**
KSH				sP	sP	12 19 00.8	+3.0
KSH				PP	**PP**	**12 20 14.3**	**+3.7**
KSH				PcP	**PcP**	**12 21 20.4**	**+1.8**
KSH				S	**S**	**12 24 29.4**	**+4.5**
KSH				PcS	**PcS**	**12 25 07.5**	**+1.7**
KSH				SS	**SnSn**	**12 26 50.3**	**+4.6**
KSH				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KSH				pmax	pmax		
	comp=Z,80nm,5.2s						
KSH				LR	LR		
	comp=Z,2µm,14.5s						
KSH				LR	LR		
	comp=Z,2µm,15.5s						
PSI	**Prapat**	**35.81**	**217**	*e*P	**P**	**12 18 51.0**	**-1.1**
	comp=Z,12nm,1.0s						
PSI	**Prapat**	**35.81**	**217**	*e*P	**P**	**12 18 51.0**	**-1.1**
PSI				pmax	pmax		
	comp=Z,12nm,1.0s						
FRU	**Bishkek**	**36.51**	**299**	*e*P	P	12 19 06.0	+8.3
AAK	**Ala-Archa**	**36.60**	**299**	LR	LR	12 34 32.7	
	comp=Z,1µm,18.7s,baz=82,slow=37						
AAK	**Ala-Archa**	**36.60**	**299**	*e*P	**P**	**12 18 58.5**	**0.0**
	comp=Z,6.9nm,1.0s						
AAK	**Ala-Archa**	**36.60**	**299**	*e*P	**P**	**12 18 58.6**	**0.0**
AAK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MNSI	**Mandailing Nat**	**37.23**	**215**	P	**P**	**12 19 04.9**	**+1.0**
	comp=Z,10nm,0.9s,comp=Z,1µm						
SFK	**Sufi-Kurgan**	**37.44**	**294**	P	**P**	**12 19 05.2**	**-0.7**
MNAS	**Manas**	**38.07**	**298**	P	**P**	**12 19 11.5**	**+0.4**
NIL	**Nilore**	**38.56**	**284**	*e*P	P	12 19 07.5	-7.7
	comp=Z,45nm,0.8s						
NIL	**Nilore**	**38.56**	**284**	*e*P	P	12 19 07.5	-7.6
NIL				pmax	pmax		
	comp=Z,45nm,0.8s						
TIXI	**Tiksi**	**39.00**	**5**	LR	LR	12 37 07.1	
	comp=Z,546nm,21.0s,baz=206,slow=39						
TIXI	**Tiksi**	**39.00**	**5**	*e*P	**P**	**12 19 17.7**	**-0.6**
	comp=Z,18nm,1.1s						
TIXI	**Tiksi**	**39.00**	**5**	⇑*i*P	**P**	**12 19 17.0**	**-1.3**
TIXI				pmax	pmax		
	comp=Z,13nm,0.8s						
KK31	**Karatay Array**	**39.52**	**299**	*e*P	**P**	**12 19 22.7**	**-0.3**
KK31	**Karatay Array**	**39.52**	**299**	*e*P	**P**	**12 19 22.7**	**-0.3**
KKAR	**Karatay Array**	**39.52**	**299**	*e*P	**P**	**12 19 22.7**	**-0.3**
KKAR	**Karatay Array**	**39.52**	**299**	*e*P	**P**	**12 19 22.7**	**-0.3**
MDSI	**Maura Dua**	**40.10**	**204**	P	**P**	**12 19 29.8**	**+1.7**
BVA0	**Borovoye Array**	**40.26**	**315**	*i* P	**P**	**12 19 28.5**	**-0.6**
BVA0				pmax	pmax		
	comp=Z,15nm,1.4s						
BVAR	**Borovoye Array**	**40.26**	**315**	P	**P**	**12 19 28.6**	**-0.5**
	comp=Z,3.6nm,0.6s,baz=99,slow=9.6,SNR=28						
BVAR				LR	LR	12 37 08.2	
	comp=Z,2µm,18.9s,baz=100,slow=38						
BRVK	**Borovoye**	**40.33**	**315**	*e*P	**P**	**12 19 29.3**	**-0.3**
	comp=Z,17nm,0.8s						
BRVK	**Borovoye**	**40.33**	**315**	P	**P**	**12 19 29.8**	**+0.1**
	SNR=10						
BRVK	**Borovoye**	**40.33**	**315**	*e*P	**P**	**12 19 29.3**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,17nm,0.8s						
PALK	**Pallekele**	**44.28**	**243**	LR	LR	12 39 34.9	
	comp=Z,324nm,20.3s,baz=75,slow=38						
SVE	**Sverdlovsk**	**46.33**	**319**	⇓*i*P	**P**	**12 20 17.9**	**-0.1**
SVE				pmax	pmax		
	comp=Z,30nm,1.1s						
SVE				MLR	MLR		
	comp=Z,2µm,17.0s						
AB31	**Akbulak array**	**46.61**	**309**	*i* P	**P**	**12 20 19.4**	**-0.9**
AB31				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ABKAR	**Akbulak array**	**46.61**	**309**	*e*P	**P**	**12 20 19.9**	**-0.3**
ARU	**Arti**	**47.45**	**319**	LR	LR	12 42 02.5	
	comp=Z,2µm,19.9s,baz=90,slow=38						
ARU	**Arti**	**47.45**	**319**	*e*P	**P**	**12 20 25.8**	**-0.9**
	comp=Z,22nm,1.1s						
ARU	**Arti**	**47.45**	**319**	*c i*P	**P**	**12 20 25.5**	**-1.2**
ARU						12 21 53.5	
ARU						12 22 15.9	
ARU				S	**S**	**12 27 21.8**	**+1.7**
ARU				SS	**SS**	**12 30 45.5**	**-2.0**
ARU				pmax	pmax		
	comp=Z,31nm,1.7s						
ARU				MLR	MLR		
	comp=Z,2µm,20.0s						
AKTO	**Aktyubinsk**	**47.79**	**311**	P	**P**	**12 20 29.0**	**-0.5**
AKTO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
GEYT	**Alibeck**	**49.60**	**294**	P	**P**	**12 20 42.9**	**-0.8**
	comp=Z,1.3nm,0.4s,baz=56,slow=5.4,SNR=3.9						
GEYT				LR	LR	12 42 46.3	
	comp=Z,729nm,20.5s,baz=245,slow=38						
PMG	**Port Moresby**	**49.65**	**143**	LR	LR	12 41 16.4	
	comp=Z,215nm,19.5s,baz=320,slow=36						
PRGR	**Permogore**	**54.08**	**325**	*e*P	**P**	**12 21 15.4**	**-1.2**
PRGR				pmax	pmax		
	comp=Z,24nm,0.7s						
WSAR	**Wadi Sarin**	**54.08**	**276**	LR	LR	12 45 55.7	
	comp=Z,410nm,19.1s,baz=79,slow=38						
WRAB	**Tennant Creek**	**54.49**	**163**	*e*P	**P**	**12 21 19.0**	**-1.1**
	comp=Z,33nm,1.4s						
WRAB	**Tennant Creek**	**54.49**	**163**	*ce*P	**P**	**12 21 19.7**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,29nm,1.7s						
WRA	**Warramunga Arr**	**54.49**	**163**	P	**P**	**12 21 19.3**	**-0.8**
	comp=Z,12nm,1.1s,baz=349,slow=8.0,SNR=24						
WB2	**Warramunga Arr**	**54.50**	**163**	*e*P	**P**	**12 21 19.7**	**-0.4**
	comp=Z,18nm,1.0s						
HNR	**Honiara**	**57.02**	**131**	LR	LR	12 47 22.0	
	comp=Z,65nm,18.4s,baz=332,slow=37						
KLMR	**Klimovskoe**	**57.11**	**325**	*e*P	**P**	**12 21 36.4**	**-2.0**
KLMR				pmax	pmax		
	comp=Z,17nm,0.9s						
KLMR	**Klimovskoe**	**57.11**	**325**	*e*P	**P**	**12 21 36.4**	**-2.0**
KLMR				AMP		12 21 37.4	
	comp=Z,17nm,0.9s						
KLMR				LQ	LQ	12 42 15.9	
KLMR				LQ	LQ	12 42 15.9	
KLMR				LR	LR	12 46 24.8	
GROC	**Groznyy**	**57.30**	**303**	*e*P	**P**	**12 21 40.6**	**+0.6**
GROC				*e*		12 22 37.0	
GROC				*e*S	**S**	**12 29 37.5**	**+2.2**
GROC				pmax	pmax		
	comp=Z,51nm,1.2s						
VRH	**Novokhopyorsk**	**57.88**	**313**	*e*P	**P**	**12 21 42.3**	**-1.7**
VRH				pmax	pmax		
	comp=Z,20nm,0.8s						
AS31	**Alice Springs**	**57.98**	**165**	*e*P	**P**	**12 21 43.9**	**-1.1**
	comp=Z,2.6nm,1.0s						
ASAR	**Alice Springs**	**57.98**	**165**	P	**P**	**12 21 44.6**	**-0.3**
	comp=Z,7.1nm,0.9s,baz=330,slow=5.2,SNR=28						

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ASAR                                LR     LR      12 46 51.4
       comp=Z,131nm,20.7s,baz=348,slow=36
AS01   Alice Springs    57.99 165  eP     P       12 21 44.2 -0.8
ZEI    Tsey             58.75 303  eP     P       12 21 49.1 -1.4
GNI    Garni            58.97 300  LR     LR      12 50 43.1
       comp=Z,374nm,18.8s,baz=96,slow=40
KBZ    Khabaz           59.16 305  P      P       12 21 52.3 -0.7
       comp=Z,3.3nm,0.8s,baz=64,slow=7.7,SNR=4.4
KBZ                                LR     LR      12 49 48.8
       comp=Z,866nm,18.8s,baz=66,slow=38
KIV    Kislovodsk       59.24 305  eP     P       12 21 54.1 +0.4
       comp=Z,21nm,0.9s
KIV    Kislovodsk       59.24 305  P      P       12 21 54.4 +0.7
       SNR=7.0
KIV    Kislovodsk       59.24 305c iP     P       12 21 53.8 +0.1
KIV                                i *SP  pP      12 22 00.0 +0.4
KIV                                eS     S       12 30 04.0 +3.2
KIV                                pmax   pmax
       comp=Z,28nm,1.2s
KIV                                MLR    MLR
       comp=Z,482nm,18.0s
NEY    Neytrino         59.43 304  i P    P       12 21 55.3 +0.1
NEY                                pmax   pmax
       comp=Z,1.0nm,0.8s
VSR    Storozhevoye     59.43 314  eP     P       12 21 53.0 -1.8
VSR                                pmax   pmax
       comp=Z,10.0nm,0.6s
OBN    Obninsk          59.89 319⇓ eP     P       12 21 56.8 -1.1
OBN                                *PP    pP      12 22 01.0 -2.8
OBN                                *SP    sP      12 22 07.0 +1.0
OBN                                               12 22 45.0
OBN                                e              12 24 09.5
OBN                                eS     S       12 30 06.2 -2.4
OBN                                SSS    SSS     12 36 31.0
OBN                                pmax   pmax
       comp=Z,45nm,1.8s
OBN                                MLR    MLR
       comp=Z,973nm,18.0s
COLD   Coldfoot         60.06  27  eP     P       12 21 59.4 +0.5
       comp=Z,8.1nm,1.0s
CAST   Castle Rocks     60.25  31  eP     P       12 22 01.1 +0.8
       comp=Z,3.9nm,0.8s
MLY    Manley           60.41  29  eP     P       12 22 02.1 +0.7
       comp=Z,7.0nm,1.0s
BPAW   Bear Paw Mtn.    60.55  30  eP     P       12 22 03.0 +0.7
       comp=Z,6.4nm,1.0s
SPITS  Spitsbergen Ar   60.61 347  LR     LR      12 52 23.7
       comp=Z,598nm,18.1s,baz=30,slow=40
ARCES  ARCESS Array B   60.91 336  P      P       12 22 04.2 -0.5
       comp=Z,9.3nm,0.8s,baz=67,slow=9.3,SNR=12
ARCES  ARCESS Array B   60.91 336  P      P       12 22 04.2 -0.5
ARCES                              pmax   pmax
       comp=Z,10.0nm,0.8s
TRF    Thorofare Moun   61.02  31  eP     P       12 22 02.6 -3.1
       comp=Z,9.1nm,0.8s
BWN    Browne           61.17  30  eP     P       12 22 08.1 +1.6
       comp=Z,22nm,1.0s
SUA    Susitna One      61.39  33  eP     P       12 22 08.8 +0.7
       comp=Z,14nm,0.8s
MDM    Murphy Dome      61.45  29  eP     P       12 22 08.8 +0.4
       comp=Z,9.2nm,1.0s
KDAK   Kodiak Island    61.58  37  i P    P       12 22 09.2 -0.1
COLA   College          61.63  29  eP     P       12 22 10.1 +0.5
       comp=Z,24nm,0.9s
COLA   College          61.63  29  eP     P       12 22 10.1 +0.5
COLA                               pmax   pmax
       comp=Z,24nm,0.9s
WRH    Wood River Hil   61.66  29  eP     P       12 22 10.3 +0.5
       comp=Z,7.7nm,1.2s
CCB    Clear Creek Bu   61.72  29  eP     P       12 22 10.1  0.0
       comp=Z,4.7nm,0.8s
IL1    Eielson Array    62.06  29  eP     P       12 22 10.5 -1.9
ILAR   Eielson Array    62.06  29  P      P       12 22 11.5 -0.9
       comp=Z,3.2nm,0.8s,baz=277,slow=5.7,SNR=31
ILAR                               LR     LR      12 51 26.6
       comp=Z,268nm,20.3s,baz=327,slow=38
ILB    Eielson Array    62.06  29  eP     P       12 22 12.0 -0.5
PMR    Palmer           62.09  33  eP     P       12 22 12.5 -0.2
       comp=Z,5.9nm,0.9s
PMR    Palmer           62.09  33  eP     P       12 22 12.5 -0.2
PMR                                pmax   pmax
       comp=Z,6.0nm,0.9s
FYU    Fort Yukon       62.13  27  eP     P       12 22 14.2 +1.3
       comp=Z,19nm,1.0s
HDA    Harding Lake     62.15  29  eP     P       12 22 12.6 -0.5
       comp=Z,10nm,0.9s
SML    Sawmill          62.38  32  eP     P       12 22 15.1 +0.4
       comp=Z,14nm,0.9s
SML    Sawmill          62.38  32  eP     P       12 22 15.1 +0.4
SML                                pmax   pmax
       comp=Z,14nm,0.9s
DHY    Denali Highway   62.39  31  eP     P       12 22 14.7 -0.3
       comp=Z,5.6nm,0.8s
ANN    Anapa            62.52 307  eP     P       12 22 15.0 -0.9
ANN                                eS     S       12 30 39.8 -2.7
ANN                                pmax   pmax
       comp=Z,57nm,1.4s
ANN                                MLR    MLR
       comp=Z,694nm,19.0s
SCM    Sheep Creek Mo   62.82  32  eP     P       12 22 18.4 +0.7
       comp=Z,18nm,0.9s
SCM    Sheep Creek Mo   62.82  32  eP     P       12 22 18.4 +0.7
SCM                                pmax   pmax
       comp=Z,18nm,0.9s
FIA1   FINESS Array S   63.24 328  eP     P       12 22 19.9 -0.5
FINES  FINESS Array B   63.25 328  P      P       12 22 19.4 -1.0
       comp=Z,9.3nm,0.7s,baz=82,slow=5.4,SNR=23
FINES                              LR     LR      12 52 28.7
       comp=Z,547nm,20.6s,baz=71,slow=39
PAX    Paxson           63.25  31  eP     P       12 22 21.2 +0.6
       comp=Z,6.3nm,1.0s
PAX    Paxson           63.25  31  eP     P       12 22 21.2 +0.6
PAX                                pmax   pmax
       comp=Z,6.0nm,1.0s
SCRK   Sand Creek       63.51  29  eP     P       12 22 20.4 -1.9
       comp=Z,23nm,1.0s
KLU    Klutina          63.57  32  eP     P       12 22 23.3 +0.6
       comp=Z,12nm,1.2s
FORT   Forrest          63.95 172  eP     P       12 22 25.3  0.0
       comp=Z,42nm,1.0s
VSU    Vasula           63.99 324  eP     P       12 22 24.8 -0.5
VSU                                pmax   pmax
       comp=Z,25nm,0.9s
EGAK   Eagle            64.35  28  eP     P       12 22 27.9 +0.3
       comp=Z,13nm,0.9s
SIM    Simferopol’      64.67 308  eP     P       12 22 33.1 +3.0
SIM                                pmax   pmax
       comp=Z,16nm,1.3s
RAYN   Ar Rayn          64.83 283  eP     P       12 22 32.7 +1.1
       comp=Z,5.5nm,1.0s
RAYN   Ar Rayn          64.83 283  eP     P       12 22 32.7 +1.1
RAYN                               pmax   pmax
       comp=Z,5.0nm,1.0s
DAWY   Dawson           65.34  28  eP     P       12 22 34.5 +0.2
       comp=Z,9.5nm,0.8s
AKASG  Malin Array Be   65.53 316  P      P       12 22 33.9 -1.7
       comp=Z,2.2nm,0.6s,baz=56,slow=6.7,SNR=13
AKASG                              LR     LR      12 52 21.3
       comp=Z,931nm,21.5s,baz=65,slow=37
AKBB   Malin Array Si   65.53 316  eP     P       12 22 34.4 -1.2
       comp=Z,6.8nm,0.9s
AKBB   Malin Array Si   65.53 316  eP     P       12 22 34.4 -1.2
AKBB                               pmax   pmax
       comp=Z,7.0nm,0.9s
KIEV   Kiev             65.55 316  eP     P       12 22 34.4 -1.3
       comp=Z,6.5nm,0.9s
KIEV   Kiev             65.55 316  i P    P       12 22 34.1 -1.6
INK    Inuvik           65.59  23  eP     P       12 22 35.6  0.0
       comp=Z,20nm,1.0s
INK    Inuvik           65.59  23  eP     P       12 22 35.6  0.0
INK                                pmax   pmax
       comp=Z,20nm,1.0s
NWAO   Narrogin (SRO)   65.64 182  LR     LR      12 55 27.0
       comp=Z,149nm,18.0s,baz=149,slow=40
BR131  Keskin Array S   67.06 303  eP     P       12 22 45.4 -0.4
BRTR   Keskin Array B   67.06 303  P      P       12 22 44.9 -0.9
       comp=Z,8.5nm,0.9s,baz=90,slow=5.4,SNR=24
DAG    Danmarks Havn    67.47 350  i P    P       12 22 45.9 -1.6
       comp=Z,6.3nm,0.7s
STKA   Stephens Creek   67.78 160  P      P       12 22 49.5 -0.5
       comp=Z,4.1nm,0.8s,baz=343,slow=11,SNR=4.7
STKA                               LR     LR      12 53 49.3
       comp=Z,64nm,21.4s,baz=242,slow=37
STKA   Stephens Creek   67.78 160  P      P       12 22 49.5 -0.5
STKA                               pmax   pmax
       comp=Z,5.0nm,1.0s
STKA                               MLR    MLR
       comp=Z,64nm,21.4s
ASF    Jabal al Asfar   67.87 295  LR     LR      12 55 44.0
       comp=Z,356nm,20.0s,baz=98,slow=39
MMAI   Mount Meron Ar   68.64 296  LR     LR      12 55 28.0
       comp=Z,233nm,19.1s,baz=100,slow=38
TLB    Topalu           68.77 310⇓ iP     P       12 22 55.0 -1.2
BIZ    Bicaz            68.97 313⇑ iP     P       12 22 56.4 -1.1
VRI    Vrincioaia       69.05 312⇑ iP     P       12 22 57.5 -0.5
PLOR   Plostina         69.11 312⇑ iP     P       12 22 56.6 -1.8
SKAG   Skagway          69.18  32  eP     P       12 23 00.3 +1.8
       comp=Z,16nm,1.0s
BUR08  Bucovina Ar. S   69.21 314  eP     P       12 22 58.5 -0.6
BURAR  Bucovina Array   69.21 314⇓ iP     P       12 22 58.5 -0.6
BUR04  Bucovina Ar. S   69.21 314  eP     P       12 22 57.8 -1.3
HFS    Hagfors          69.29 329  P      P       12 22 58.1 -1.1
       comp=Z,8.9nm,0.8s,baz=79,slow=7.7,SNR=16
HFS                                LR     LR      12 56 16.2
       comp=Z,829nm,18.3s,baz=61,slow=38
NC405  NORSAR Array S   69.62 330  eP     P       12 23 00.5 -0.8
MLR    Muntele Rosu     69.71 312  P      P       12 23 02.2  0.0
       comp=Z,6.2nm,0.8s,baz=130,slow=7.6,SNR=6.5
MLR                                LR     LR      12 56 41.2
       comp=Z,359nm,18.3s,baz=54,slow=39
MLR    Muntele Rosu     69.71 312⇓ iP     P       12 23 01.2 -1.0
MLR    Muntele Rosu     69.71 312  eP     P       12 23 02.3  0.0
       comp=Z,7.0nm,0.9s
KWP    Kalwaria Pacla   69.78 317  eP     P       12 23 02.4 -0.1
KWP    Kalwaria Pacla   69.78 317  eP     P       12 23 02.4 -0.1
       comp=Z,286nm,0.9s
KWP    Kalwaria Pacla   69.78 317  eP     P       12 23 02.4 -0.1
NB201  NORSAR Array S   69.83 331  eP     P       12 23 01.6 -1.0
DOPR   Dopca            69.84 312⇓ iP     P       12 23 02.6 -0.3
NB2    NORSAR Subarra   69.87 331  P      P       12 23 01.1 -1.7
       comp=Z,2.9nm,0.8s,baz=57,slow=6.2
NOA    NORSAR Array B   69.87 331  P      P       12 23 01.6 -1.3
       comp=Z,6.8nm,0.9s,baz=57,slow=6.1,SNR=12
NOA                                LR     LR      12 56 11.5
       comp=Z,491nm,18.8s,baz=70,slow=38
RES    Resolute Bay     70.18   9  eP     P       12 23 03.9 -0.5
       comp=Z,14nm,0.9s
RES    Resolute Bay     70.18   9  eP     P       12 23 03.9 -0.5
RES                                pmax   pmax
       comp=Z,14nm,0.9s
EIL    Elat             70.49 293  LR     LR      12 58 04.4
       comp=Z,287nm,18.2s,baz=64,slow=39
UZH    Uzhgorod         70.49 316  eP     P       12 23 08.7 +1.9
UZH                                e              12 23 22.9
DZM    Mont Dzumac      70.65 134  LR     LR      12 52 19.2
       comp=Z,84nm,20.1s,baz=317,slow=34
CRVS   Cervenica-Dubn   70.85 316  eP     P       12 23 07.7 -1.3
CRVS                               pmax   pmax
       comp=Z,19nm,2.1s
CRVS   Cervenica-Dubn   70.85 316  eP     P       12 23 07.7 -1.3
DRGR                    71.11 314⇑ iP     P       12 23 10.2 -0.5
OJC    Ojcow            71.16 318  eP     P       12 23 10.7 -0.2
OJC    Ojcow            71.16 318  eP     P       12 23 10.7 -0.2
       comp=Z,21nm,0.9s
OJC    Ojcow            71.16 318  eP     P       12 23 10.7 -0.2
NIE    Niedzica         71.27 317  eP     P       12 23 11.4 -0.2
NIE    Niedzica         71.27 317  eP     P       12 23 11.4 -0.2
DLBC   Dease Lake       72.05  31  eP     P       12 23 17.5 +1.4
       comp=Z,4.9nm,0.7s
VYHS   Vyhne            72.56 317  eP     P       12 23 19.0 -0.3
VYHS                               pmax   pmax
       comp=Z,10.0nm,1.3s
VYHS   Vyhne            72.56 317  eP     P       12 23 19.0 -0.3
MORC   Moravsky Berou   72.65 318⇓ iP     P       12 23 19.7 -0.1
MORC   Moravsky Berou   72.65 318  eP     P       12 23 19.7 -0.1
       comp=Z,11nm,1.0s
MORC   Moravsky Berou   72.65 318  eP     P       12 23 19.7 -0.1
MORC                               pmax   pmax
       comp=Z,11nm,1.0s
MORC   Moravsky Berou   72.65 318  eP     P       12 23 19.1 -0.7
KULLO  Kullorsuaq       72.65 359  i P    P       12 23 18.6 -0.8
       comp=Z,27nm,1.0s
MDVR   Moldovita        72.69 312⇑ iP     P       12 23 18.7 -1.5
KSP    Ksiaz            72.79 320  eP     P       12 23 19.8 -0.8
KSP    Ksiaz            72.79 320  eP     P       12 23 19.8 -0.8
VTS    Vitosha          72.81 310⇑ iP     P       12 23 18.8 -2.3
VTS    Vitosha          72.81 310  eP     P       12 23 20.9 -0.1
       comp=Z,9.4nm,1.1s
VTS    Vitosha          72.81 310  eP     P       12 23 20.9 -0.1
VTS                                pmax   pmax
       comp=Z,9.0nm,1.1s
ATD    Arta Tunnel      72.84 273  LR     LR      12 57 31.4
       comp=Z,211nm,18.5s,baz=44,slow=38
DPC    Dobruska-Polom   73.03 319  eP     P       12 23 22.8 +0.7
DPC                                epP    pP      12 23 25.8 -2.3
DPC                                ex     x       12 23 28.6
DPC    Dobruska-Polom   73.03 319  eP     P       12 23 22.8 +0.7
DPC                                e              12 23 28.6
JAVC   Velka Javorina   73.04 318  eP     P       12 23 22.8 +0.6
VRAC   Vranov           73.42 318  P      P       12 23 24.3 -0.1
       comp=Z,3.7nm,0.4s,baz=64,slow=6.9,SNR=9.2
VRAC                               LR     LR      12 58 03.7
       comp=Z,984nm,20.1s,baz=62,slow=38
VRAC   Vranov           73.42 318⇑ iP     P       12 23 24.4  0.0
VRAC   Vranov           73.42 318  P      P       12 23 24.3 -0.1
VRAC                               pmax   pmax
       comp=Z,11nm,1.0s
VRAC                               MLR    MLR
       comp=Z,984nm,20.1s
VRAC   Vranov           73.42 318  eP     P       12 23 24.2 -0.1
MODS   Modra-Piesok     73.52 317  eP     P       12 23 24.8 -0.2
MODS                               pmax   pmax
       comp=Z,26nm,1.4s
MODS   Modra-Piesok     73.52 317  eP     P       12 23 24.8 -0.2
SUMG   Summit           73.61 353  eP     P       12 23 25.1 -0.4
       comp=Z,33nm,0.7s
SUMG   Summit           73.61 353⇑ iP     P       12 23 25.2 -0.3
       comp=Z,35nm,0.7s
SUMG   Summit           73.61 353  eP     P       12 23 25.1 -0.4
SUMG                               pmax   pmax
       comp=Z,33nm,0.7s
KRUC   Moravsky         73.66 318  eP     P       12 23 25.2 -0.6
BRG    Berggiesshubel   74.03 321  eP     P       12 23 27.0 -0.9
       comp=Z,2.5nm,0.7s
BRG                                i              12 23 31.3
       comp=Z,6.2nm,0.9s
BRG                                S      SKiKP   12 32 52.0 -3.2
BRG                                SS     SS      12 37 38.0 -5.5
       comp=N,401nm,15.3s
       comp=E,532nm,19.5s
       comp=Z,835nm,16.6s
BRG    Berggiesshubel   74.03 321  eP     P       12 23 27.0 -0.9
BRG                                i              12 23 31.3
BRG                                S      SKiKP   12 32 52.0 -3.2
BRG                                SS     SS      12 37 38.0 -5.5
BRG                                pmax   pmax
       comp=Z,3.0nm,0.7s
BRG                                pmax   pmax
       comp=Z,6.0nm,0.9s
BRG                                MLR    MLR
       comp=N,401nm,15.3s
BRG                                MLR    MLR
       comp=E,532nm,19.5s
BRG                                MLR    MLR
       comp=Z,835nm,16.6s
DIVS   Divibare         74.09 312  eP     P       12 23 27.3 -1.2
CLL    Collm            74.29 321⇑ iP     P       12 23 28.7 -0.7
       comp=Z,8.0nm,0.9s
CLL                                epP    pP      12 23 33.0 -2.5
       comp=Z,13nm,1.1s
CLL                                eSS    SS      12 37 54.0 +6.6
CLL                                eSSS   SSS     12 41 18.0
CLL                                LmV            12 58 00.0
       comp=N,400nm,21.3s
CLL                                LmV            12 58 00.0
       comp=E,700nm,21.2s
CLL                                LmV            12 58 00.0
       comp=Z,900nm,21.8s
CLL    Collm            74.29 321  eP     P       12 23 29.0 -0.4
       comp=Z,9.1nm,0.8s
CLL    Collm            74.29 321⇑ iP     P       12 23 28.7 -0.7
CLL                                e              12 23 33.0
CLL                                pmax   pmax
       comp=Z,8.0nm,0.9s
CLL                                MLR    MLR
       comp=Z,900nm,21.8s
CONA   Conrad Observa   74.56 317  eP     P       12 23 28.2 -2.9
       comp=Z,16nm,1.2s
KHC    Kasperske Hory   75.18 319  eP     P       12 23 34.8 +0.1
KHC                                epP    pP      12 23 38.7 -2.1
KHC                                ex     x       12 23 43.1
KHC    Kasperske Hory   75.18 319  eP     P       12 23 34.7  0.0
       comp=Z,2.7nm,1.1s
KHC    Kasperske Hory   75.18 319  eP     P       12 23 34.8 +0.1
KHC                                e              12 23 38.7
KHC                                e              12 23 43.1
GEC2   GERESS Array S   75.27 319  eP     P       12 23 35.2 -0.1
       comp=Z,9.4nm,1.0s
GERES  GERESS Array B   75.27 319  P      P       12 23 34.8 -0.5
       comp=Z,5.1nm,0.9s,baz=55,slow=5.6,SNR=14
GERES                              LR     LR      12 59 20.6
       comp=Z,916nm,19.2s,baz=72,slow=38
GEA0   GERESS Array S   75.28 319  eP     P       12 23 34.6 -0.7
YKW3   Yellowknife Ar   75.31  23  eP     P       12 23 34.6 -0.4
       comp=Z,16nm,1.0s
YKA    Yellowknife Ar   75.36  23  P      P       12 23 34.8 -0.6
       comp=Z,8.0nm,0.7s,baz=318,slow=5.3,SNR=64
YKA                                LR     LR      13 00 40.1
       comp=Z,35nm,19.1s,baz=310,slow=39
PDG    Podgorica        75.41 311⇑ iP     P       12 23 35.5 -0.6
TTG    Podgorica        75.41 311  eP     P       12 23 35.6 -0.4
       comp=Z,18nm,1.0s
MOA    Molln            75.50 318  P      P       12 23 36.5 -0.1
       comp=Z,6.4nm,1.2s
SOKA   Soboth           75.71 317  i P    P       12 23 37.4 -0.4
       comp=Z,4.8nm,1.2s
GRFO   Grafenberg       76.14 321  eP     P       12 23 40.7 +0.6
       comp=Z,21nm,0.9s
GRFO   Grafenberg       76.14 321  eP     P       12 23 40.7 +0.6
GRFO                               pmax   pmax
       comp=Z,21nm,0.9s
KBA    Koelnbreinsper   76.45 318  P      P       12 23 41.5 -0.6
       comp=Z,7.5nm,1.1s
MYKA   Terra Mystica    76.53 317  pP     P       12 23 43.2 +0.7
       comp=Z,5.6nm,1.4s
ABTA   Abfaltersbach    77.11 318  P      P       12 23 42.7 -3.1
       comp=Z,2.7nm,0.6s
WTTA   Wattenberg       77.31 318  P      P       12 23 45.2 -1.8
       comp=Z,17nm,1.6s
FETA   Feichten         77.95 319  P      P       12 23 49.1 -1.5
       comp=Z,8.5nm,1.1s
DAVA   Damuels          78.27 319  eP     P       12 23 51.9 -0.4
       comp=Z,9.2nm,1.1s
FUORN  Ofenpass-Fuorn   78.45 318  eP     P       12 23 53.4  0.0
BFO    Black Forest     78.48 321  eP     P       12 23 53.0 -0.3
       comp=Z,7.7nm,0.9s
BFO    Black Forest     78.48 321  i P    P       12 23 53.3  0.0
DAVOX  Davos/Dischmat   78.57 319  P      P       12 23 53.6 -0.4
       comp=Z,5.0nm,0.7s,baz=76,slow=8.3,SNR=5.5
DAVOX                              LR     LR      13 01 27.2
       comp=Z,981nm,19.4s,baz=81,slow=38
TUE    Stuetta          79.04 319  eP     P       12 23 56.6  0.0
       comp=Z,9.9nm,1.0s
EKA    Eskdalemuir Ar   79.36 331  P      P       12 23 57.6 -0.2
       comp=Z,1.7nm,0.8s,baz=70,slow=7.2,SNR=3.7
EKA                                LR     LR      13 02 10.4
       comp=Z,369nm,18.9s,baz=45,slow=38
EKA    Eskdalemuir Ar   79.36 331  P      P       12 23 57.7 -0.2
EKA                                pmax   pmax
       comp=Z,1.0nm,0.5s
EKA                                MLR    MLR
       comp=Z,369nm,18.9s
SFJD   Kangerlussuaq    80.02 356  LR     LR      13 02 07.1
       comp=Z,188nm,18.5s,baz=3.0,slow=38
AFI    Afiamalu         80.26 114  LR     LR      12 55 52.3
       comp=Z,89nm,19.1s,baz=314,slow=33
BNI    Bardonecchia     81.39 319  eP     P       12 24 09.2 -0.1
       comp=Z,10nm,1.1s
BNI    Bardonecchia     81.39 319  eP     P       12 24 09.2 -0.1
BNI                                pmax   pmax
       comp=Z,11nm,1.1s
B08A   Colville Reser   83.35  35  eP     P       12 24 20.1 +0.7
       comp=Z,9.9nm,1.0s
WALA   Waterton Lakes   85.37  32  eP     P       12 24 30.0 +0.3
       comp=Z,3.4nm,1.0s
YBH    Yreka Blue Hor   86.08  42  LR     LR      13 02 52.7
       comp=Z,93nm,18.9s,baz=338,slow=36
YBH    Yreka Blue Hor   86.08  42  eP     P       12 24 34.6 +1.3
       comp=Z,4.4nm,1.1s
YBH    Yreka Blue Hor   86.08  42  eP     P       12 24 34.6 +1.3
YBH                                pmax   pmax
       comp=Z,4.0nm,1.1s
OPO    Ambohidratompo   86.11 245  LR     LR      13 01 12.1
       comp=Z,201nm,18.8s,baz=3.5,slow=34
K05A   Summer Lake      86.41  40  eP     P       12 24 36.5 +1.5
BMO    Blue Mountains   86.80  37  eP     P       12 24 37.5 +0.7
       comp=Z,4.6nm,1.0s
BMO    Blue Mountains   86.80  37  eP     P       12 24 37.5 +0.7
BMO                                pmax   pmax
       comp=Z,5.0nm,1.0s
WDC    Whiskeytown Da   86.94  42  eP     P       12 24 38.5 +1.1
       comp=Z,6.1nm,1.0s
WDC    Whiskeytown Da   86.94  42  eP     P       12 24 38.5 +1.1
WDC                                pmax   pmax
       comp=Z,6.0nm,1.0s
MSO    Missoula         87.00  34  eP     P       12 24 38.1 +0.4
       comp=Z,8.3nm,1.1s
J08A   Circle Bar Ran   87.25  38  eP     P       12 24 40.6 +1.6
MOD    Modoc Plateau    87.29  40  eP     P       12 24 40.6 +1.3
       comp=Z,7.4nm,0.9s
EGMT   Eagleton         87.97  31  eP     P       12 24 42.9 +0.5
       comp=Z,7.8nm,0.9s
HRY    Holter Researc   88.06  33  eP     P       12 24 43.6 +0.8
LRM    Limekiln Ridge   88.44  34  eP     P       12 24 45.9 +1.1
MFID   Camas Ranch      88.57  37  eP     P       12 24 46.6 +1.3
       comp=Z,5.6nm,1.0s
BEKR   Beckworth        88.65  42  eP     P       12 24 46.9 +1.0
       comp=Z,6.5nm,0.9s
DLMT   Dillon           88.72  34  eP     P       12 24 47.1 +1.1
       comp=Z,6.0nm,1.0s
BOZ    Bozeman (W)      88.99  33  eP     P       12 24 48.0 +0.7
       comp=Z,3.5nm,1.0s
BOZ    Bozeman (W)      88.99  33  eP     P       12 24 48.0 +0.7
BOZ                                pmax   pmax
       comp=Z,3.0nm,1.0s
MCMT   McKenzie Canyo   89.00  34  eP     P       12 24 48.5 +1.1
HLID   Hailey           89.17  36  eP     P       12 24 49.6 +1.4
       comp=Z,8.2nm,0.9s
PAHR   Pah Rah Range    89.30  41  eP     P       12 24 50.2 +1.3
       comp=Z,8.9nm,1.2s
VCNR   Virginia City    89.44  42  eP     P       12 24 51.5 +1.9
       comp=Z,4.3nm,0.8s
PNTR   Pine Nut         89.61  42  eP     P       12 24 52.5 +2.1
       comp=Z,5.1nm,0.8s
YHB    Horse Butte      89.83  34  eP     P       12 24 52.8 +1.5
       comp=Z,10nm,1.1s
YERR   Yerington        89.88  42  eP     P       12 24 53.6 +1.9
       comp=Z,7.2nm,1.1s
CMB    Columbia Colle   89.89  43  eP     P       12 24 52.5 +1.1
       comp=Z,32nm,1.0s
CMB    Columbia Colle   89.89  43  eP     P       12 24 52.6 +1.1
CMB                                pmax   pmax
       comp=Z,32nm,1.0s
DGMT   Dagmar           89.89  27  eP     P       12 24 51.6 +0.4
       comp=Z,20nm,0.9s
YMR    Madison River    90.00  33  eP     P       12 24 55.3 +3.2
       comp=Z,7.9nm,1.0s
YPP    Pitchstone Pla   90.38  34  eP     P       12 24 56.5 +2.5
       comp=Z,6.0nm,1.1s
RLMT   Red Lodge        90.43  32  eP     P       12 24 55.2 +1.1
       comp=Z,9.1nm,1.1s
KVN    Kaiserville      90.47  41  eP     P       12 24 56.0 +1.6
       comp=Z,6.1nm,1.2s
KVN    Kaiserville      90.47  41  eP     P       12 24 56.0 +1.6
KVN                                pmax   pmax
       comp=Z,6.0nm,1.2s
NVAR   Mina Array Bea   90.80  42  P      P       12 24 57.0 +1.0
       comp=Z,2.1nm,0.6s,baz=288,slow=5.2,SNR=24
ESDC   Sonseca Array    90.83 320  LR     LR      13 08 35.3
       comp=Z,201nm,19.2s,baz=5.0,slow=38
ULM    Lac du Bonnet    91.31  22  P      P       12 24 57.0 -0.8
       comp=Z,4.3nm,0.8s,baz=351,slow=6.8,SNR=4.7
ULM                                LR     LR      13 10 17.9
       comp=Z,236nm,18.6s,baz=354,slow=38
ULM    Lac du Bonnet    91.31  22  P      P       12 24 57.0 -0.8
ULM                                pmax   pmax
       comp=Z,4.0nm,0.8s
HWUT   Hardware Ranch   92.03  36  eP     P       12 25 02.5 +0.9
       comp=Z,9.7nm,1.0s
BW06   Boulder Array    92.11  34  eP     P       12 25 01.9 -0.1
       comp=Z,5.6nm,1.3s
PDAR   Pinedale Array   92.11  34  P      P       12 25 02.1 +0.1
       comp=Z,1.4nm,0.8s,baz=32,slow=1.5,SNR=12
PDAR                               LR     LR      13 09 30.9
       comp=Z,107nm,18.4s,baz=338,slow=38
SCHQ   Schefferville    92.32   4  LR     LR      13 08 36.6
       comp=Z,244nm,21.1s,baz=340,slow=37
DUG    Dugway, Tooele   92.46  37  eP     P       12 25 04.7 +1.1
```

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	comp=Z,8.9nm,1.3s						
DUG	Dugway, Tooele	92.46	37	eP	P	12 25 04.7	+1.1
DUG				pmax	pmax		
	comp=Z,9.0nm,1.3s						
RSSD	Black Hills	93.49	30	eP	P	12 25 09.0	+0.7
	comp=Z,6.4nm,0.8s						
RSSD	Black Hills	93.49	30	eP	P	12 25 09.0	+0.7
RSSD				pmax	pmax		
	comp=Z,6.0nm,0.8s						
RAR	Rarotonga	93.79	113	LR	LR	13 07 17.4	
	comp=Z,68nm,18.6s,baz=296,slow=36						
MDT	Midelt	96.10	316	LR	LR	13 12 42.5	
	comp=Z,148nm,18.9s,baz=354,slow=38						

NEIC 20 12:15:06.0±0.0**,9°.96S×75°.38W,h20km,ML4.0**(ARE), **After ARE.,Central Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	Nana	2.47	215	ePn	Pb	12 15 51.3	+1.5
NNA				eSn	Sb	12 16 22.4	+2.5
SAML	Samuel	12.07	86	ePn	Pn	12 17 58.0	+0.9
SAML				eSn	Sn	12 20 11.8	+0.5
BANI	BANI	28.61	10	eP	P	12 21 06.2	+4.9
P18A	Preston Nutter	59.00	329	eP	P	12 25 12.1	+7.3
	7.2nm,1.1s						
MSU	Marysvale	59.18	327	eP	P	12 25 12.9	+6.9
G06A	Carlson Farm,	68.38	327	eP	P	12 26 16.1	+10

NNC 20 12:18:44.2±5.5**,37°.36N×71°.02E,h0km,mb4.0,mpv3.7, 3C-2D,Error ellipse: s-maj=40.0km s-min=34.0km az=0.0,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.29	35	⇓P	Pn	12 19 36.9	-0.3
	15nm,0.4s						
SFK				⇑S	Sn	12 20 18.9	+1.8
	15nm,0.3s						
KSH	Kashi	4.45	59	Pn	Pn	12 19 44.0	-9.0
KSH				Sn	Sn	12 20 28.0	-17
KSH				smax	smax		
	comp=N,130nm,0.4s						
KSH				smax	smax		
	comp=E,98nm,0.3s						
MNAS	Manas	5.25	12	⇓S	Sn	12 21 05.7	+0.4
	comp=E,9.7nm,0.9s						
KK31	Karatay Array	5.75	356	P	Pn	12 20 11.2	+0.4
	comp=E,1.1nm,0.2s,baz=108,slow=14,SNR=13						
KK31				⇑S	Sn	12 21 19.6	+2.0
	comp=E,6.5nm,0.7s,baz=183,slow=24,SNR=9.3						
AAK	Ala-Archa	5.91	26	⇑S	Sn	12 21 20.7	-0.9
	comp=E,8.3nm,0.8s						

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*CSEM **20** 12:21:53.8,47°.51N×7°.79E,h15km,ML1.1*

STR 20 12:21:53.8±0.5**,48°N**±3°×°±°**,h15km,MLv1.1**/6, **Switzerland**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KIZ	Kirchzarten	0.46	11	Pg	Pb	12 22 03.7	+0.1
KIZ	Kirchzarten	0.46	11	Pg	Pb	12 22 03.7	+0.1
KIZ				Sg	Sb	12 22 09.9	-0.4
MOF	Molkenrain	0.56	308	Pg	Pb	12 22 05.3	-0.1
MOF	Molkenrain	0.56	308	Pg	Pb	12 22 05.3	-0.1
MOF				Sg	Sb	12 22 13.4	+0.1
CHMF	Charmoille	0.81	252	Pg	Pg	12 22 09.6	-0.1
CHMF	Charmoille	0.81	252	Pg	Pg	12 22 09.6	-0.1
CHMF				Sg	Sg	12 22 19.0	-1.4
ECH	Echery	0.83	329	Pg	Pg	12 22 09.7	-0.2
ECH	Echery	0.83	329	Pg	Pg	12 22 09.7	-0.2
ECH				Sg	Sg	12 22 20.2	-0.6
OPP	Oppenau	1.03	15	Pg	Pb	12 22 12.3	-1.0
OPP	Oppenau	1.03	15	Pg	Pb	12 22 12.3	-1.0
OPP				Sg	Sb	12 22 26.6	0.0
GUT	Gutenstein	1.06	57	Pg	Pb	12 22 13.1	-0.8
GUT				Sg	Sn	12 22 28.8	+0.2

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*ISCJB **20** 12:24:39.9±0.7,33°.12N±0°.04×119°.55E±0°.09,h10km, mb3.6/6,Error ellipse: s-maj=10.6km s-min=5.7km az=180.0*

*IDC **20** 12:24:41.2±0.9,32°.96N×119°.67E,h0km,mb3.6/5, mb1 3.8/6,mb1mx3.5/61,mbtmp3.6/6,ML3.1/1,Error ellipse: s-maj=22.5km s-min=20.8km az=112.0*

*BJI **20** 12:24:43.1,33°.05N×119°.57E,h10km,mb4.0/2,ML4.3/14*

ISC 20 12:24:42.5±0.9**,33°.04N**±0°.05×**119°.70E**±0°.07**,h10km,n11,** σ**2s.09**/15**,mb3.6**/6**,Southeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NJ2	Nanjing	1.22	216	ePg	Pb	12 25 04.4	-1.2
NJ2				Sg	Sb	12 25 19.3	-2.0
NJ2				smax	smax		
	comp=N,8μm,0.3s						
NJ2				smax	smax		
	comp=E,7μm,0.8s						
TIA	Tai’an	3.81	327	Pn	Pn	12 25 39.3	-2.0
TIA				Pg	Pb	12 25 51.6	+1.7
TIA				Sg	Sg	12 26 40.6	-4.3
TIA				smax	smax		
	comp=N,750nm,0.7s						
TIA				smax	smax		
	comp=E,870nm,0.7s						
WHN	Wuhan	5.19	243	Pg	Pb	12 26 15.3	+2.0
WHN				Sg	Sb	12 27 19.1	+3.4
WHN				smax	smax		
	comp=N,1μm,0.7s						
WHN				smax	smax		
	comp=E,2μm,0.9s						
KSRS	Korea Array	8.04	54	Pn	Pn	12 26 38.8	-0.5
	0.2nm,0.3s,baz=236,slow=14,SNR=4.4						
KSRS				Lg	Lg	12 28 58.6	
	1.3nm,0.3s,baz=229,slow=30,SNR=6.2						
CMAR	Chiang Mai Arr	23.61	237	P	P	12 29 54.0	+0.3
	1.5nm,0.8s,baz=38,slow=8.3,SNR=6.8						
WMQ	Urumqi	27.13	303	eP	P	12 30 27.4	+1.6
MKAR	Makanchi Array	31.50	307	P	P	12 31 04.8	+0.4
	0.8nm,0.4s,baz=92,slow=10,SNR=16						
KURBB	Kurchatov Arra	34.81	313	P	P	12 31 33.1	-0.1
	0.3nm,0.3s,baz=104,slow=8.9,SNR=3.8						
WRA	Warramunga Arr	54.51	163	P	P	12 34 09.8	-0.7
	0.4nm,0.7s,baz=346,slow=8.1,SNR=3.2						
ASAR	Alice Springs	57.99	165	P	P	12 34 35.2	-0.2
	0.5nm,0.9s,baz=341,slow=5.1,SNR=4.4						
YKA	Yellowknife Ar	75.34	23	P	P	12 36 27.2	+1.5
	0.6nm,0.6s,baz=316,slow=5.3,SNR=7.7						

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*ISCJB **20** 12:31:38.8±1.1,33°.12N±0°.04×119°.3E±0°.2,h10km, mb3.5/4,Error ellipse: s-maj=19.3km s-min=5.0km az=171.5*

*BJI **20** 12:31:38.2,33°.05N×119°.57E,h9km,mb3.8/1,ML3.9/13*

*IDC **20** 12:31:39.3±1.4,33°.13N×119°.53E,h0km,mb3.4/4, mb1 3.6/5,mb1mx3.4/60,mbtmp3.4/5,ML3.2/1,Error ellipse: s-maj=32.7km s-min=29.1km az=38.0*

ISC 20 12:31:39.7±0.9**,33°.10N**±0°.05×**119°.44E**±0°.08**,h10km,n10,** σ**2s.32**/15**,mb3.5**/4**,Southeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NJ2	Nanjing	1.16	206	ePg	Pb	12 31 59.6	-2.2
NJ2				Sg	Sg	12 32 15.8	-1.2
NJ2				smax	smax		
	comp=N,3μm,0.3s						
NJ2				smax	smax		
	comp=E,4μm,0.4s						
TIA	Tai’an	3.65	329	Pn	Pn	12 32 35.8	-0.4
TIA				Pg	Pg	12 32 47.8	-1.8
TIA				Sn	Sn	12 33 18.9	-0.4
TIA				Sg	Sg	12 33 34.8	-2.0
TIA				smax	smax		
	comp=N,340nm,0.7s						
TIA				smax	smax		
	comp=E,290nm,0.6s						
WHN	Wuhan	5.03	241	Pg	Pb	12 33 11.4	+3.6
WHN				Sg	Sg	12 34 16.6	-4.5
WHN				smax	smax		
	comp=N,510nm,0.7s						
WHN				smax	smax		
	comp=E,460nm,0.7s						
KSRS	Korea Array	8.18	56	Pn	Pn	12 33 37.0	-1.5
	0.3nm,0.3s,baz=239,slow=14,SNR=4.4						
HHC	Hu-ho-hao-te	9.97	323	eP	Pn	12 34 03.8	+0.6
CMAR	Chiang Mai Arr	23.46	237	P	P	12 36 50.3	+0.8
	1.2nm,0.7s,baz=29,slow=8.7,SNR=6.5						
WMQ	Urumqi	26.91	303	eP	P	12 37 23.5	+2.4
MKAR	Makanchi Array	31.29	307	P	P	12 38 01.8	+1.9
	0.3nm,0.5s,baz=107,slow=9.1,SNR=4.3						
WRA	Warramunga Arr	54.63	163	P	P	12 41 10.4	+1.7
	0.4nm,0.7s,baz=347,slow=8.1,SNR=3.2						
ASAR	Alice Springs	58.11	164	P	P	12 41 34.6	+1.1
	0.3nm,0.7s,baz=0.4,slow=15,SNR=4.7						

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*DDA **20** 12:34:39.9,39°.80N×30°.08E,h7km,Ml2.7*

*CSEM **20** 12:34:39.5±0.2,39°.87N×30°.03E,h8km,ML2.7,Error ellipse: s-maj=4.0km s-min=3.3km az=14.0*

*ISK **20** 12:34:39.0,39°.88N×30°.05E,h5km,ML2.0/3*

ISC 20 12:34:39.7±1.2**,39°.87N**±0°.03×**30°.05E**±0°.03**,h4km**±10km**,** **n19,**σ**0s.72**/29**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BORA	Eskisehir	0.31	88	PG	Pg	12 34 45.6	0.0
BORA				SG	Sg	12 34 50.4	+0.7
BORA	Eskisehir	0.31	88	i P	Pg	12 34 45.5	-0.2
BORA				i S	Sb	12 34 51.4	-1.9
BORA	Eskisehir	0.31	88	ePg	Pg	12 34 45.6	0.0
BORA				eSg	Sg	12 34 50.4	+0.7
BORA				S	Sb	12 34 51.4	-1.9
CAVI	Cavuskoy	0.37	334	PG	Pg	12 34 46.5	-0.3
CAVI				SG	Sg	12 34 52.0	+0.4
CAVI	Cavuskoy	0.37	334	ePg	Pg	12 34 46.5	-0.3
CAVI				eSg	Sg	12 34 52.0	+0.4
TVSB	Tavsanli	0.62	228	PG	Pg	12 34 51.6	0.0
TVSB	Tavsanli	0.62	228	ePg	Pg	12 34 51.6	0.0
GEYV	SAKARYA_Geyve	0.64	17	i P	Pg	12 34 52.1	+0.1
GEYV	SAKARYA_Geyve	0.64	17	P	Pg	12 34 52.1	+0.1
GULT	Gulveren	0.66	32	PG	Pg	12 34 52.0	-0.4
GULT	Gulveren	0.66	32	ePg	Pg	12 34 52.0	-0.4
ESKT	Eskisehir	0.71	119	i P	Pg	12 34 53.0	-0.2
ESKT				i S	Sb	12 35 04.3	-0.5
SEYT	Eskypehyr	0.71	119	P	Pg	12 34 53.0	-0.2
SEYT				S	Sb	12 35 04.3	-0.4
YLV	Yalova	0.87	323	PG	Pg	12 34 56.1	-0.2
YLV	Yalova	0.87	323	ePg	Pg	12 34 56.1	-0.2
SAHE	Sakarya_HENDEK	1.16	32	i P	Pn	12 35 02.8	+0.1
SAHE				i S	Sn	12 35 20.2	+1.2
SAHE	Sakarya_HENDEK	1.16	32	P	Pn	12 35 02.8	+0.1
DURS	Dursunbey	1.25	258	i P	Pg	12 35 02.9	-0.7
DURS				i S	Sn	12 35 22.3	+1.0
DURS	Dursunbey	1.25	258	P	Pg	12 35 02.9	-0.7

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*ISCJB **20** 12:38:03.4±0.8,33°.11N±0°.04×119°.33E±0°.10,h10km, mb3.9/3,Error ellipse: s-maj=12.0km s-min=5.6km az=177.6*

*BJI **20** 12:38:03.5,33°.00N×119°.56E,h10km,ML4.0/11*

*IDC **20** 12:38:04.3±1.3,32°.83N×119°.54E,h0km,mb3.9/3, mb1 3.8/5,mb1mx3.4/65,mbtmp3.7/5,ML3.6/2,Error ellipse: s-maj=28.4km s-min=24.0km az=43.0*

ISC 20 12:38:05.6±1.0**,33°.08N**±0°.06×**119°.51E**±0°.09**,h10km,n11,** σ**2s.78**/15**,mb3.9**/3**,Southeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NJ2	Nanjing	1.16	209	ePg	Pn	12 38 26.0	-1.9
NJ2				Sg	Sn	12 38 41.0	-2.8
NJ2				smax	smax		
	comp=N,8μm,0.3s						
NJ2				smax	smax		
	comp=E,4μm,0.3s						
TIA	Tai’an	3.70	328	Pn	Pn	12 39 02.5	-0.2
TIA				Pg	Pg	12 39 13.6	-2.8
TIA				Sg	Sg	12 40 00.8	-3.5
TIA				smax	smax		
	comp=N,380nm,0.7s						
TIA				smax	smax		
	comp=E,400nm,0.8s						
WHN	Wuhan	5.07	242	Pg	Pb	12 39 36.3	+2.0
WHN				Sg	Sb	12 40 39.3	+4.0
WHN				smax	smax		
	comp=N,540nm,0.9s						
WHN				smax	smax		
	comp=E,370nm,0.5s						
KSRS	Korea Array	8.15	55	Pn	Pn	12 40 05.5	+1.7
	0.4nm,0.3s,baz=241,slow=13,SNR=5.2						
KSRS				Lg	Lg	12 42 24.6	
	0.6nm,0.3s,baz=236,slow=33,SNR=6.3						
HHC	Hu-ho-hao-te	10.03	323	eP	Pn	12 40 30.8	+1.1
LZH	Lanzhou	13.26	287	eP	Pn	12 41 10.8	-3.2
LZH				pP	P	12 41 16.5	-7.4
LZH				sP		12 41 20.5	
SONM	Songino Array	17.77	330	P	P	12 42 17.5	+3.7
	0.4nm,0.3s,baz=144,slow=11,SNR=3.4						
WMQ	Urumqi	26.98	303	eP	P	12 43 50.3	+2.9
MKAR	Makanchi Array	31.35	307	P	P	12 44 27.8	+1.5
	1.4nm,0.5s,baz=97,slow=10,SNR=19						
KURBB	Kurchatov Arra	34.67	313	P	P	12 44 56.4	+1.2
	1.4nm,0.8s,baz=105,slow=9.1,SNR=7.3						
WRA	Warramunga Arr	54.59	163	P	P	12 47 32.9	-1.3
	0.6nm,0.8s,baz=348,slow=7.6,SNR=2.9						

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*SJA **20** 12:45:49.6±0.3,33°.68S×70°.09W,h116km±2km,ML2.3, MW2.7*

*ISCJB **20** 12:45:50.5±1.3,33°.64S±0°.08×70°.08W±0°.07,h122km±8km, Error ellipse: s-maj=14.4km s-min=7.9km az=155.6*

*GUC **20** 12:45:51.5±0.4,33°.44S×70°.01W,h124km±3km,ML2.8*

ISC 20 12:45:50.2±3.6**,33°.7S**±0°.1×**70°.09W**±0°.07**,h122km**±20km**,** **n13,**σ**0s.37**/24**,2C,Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LMEL	Las Melosas	0.19	211	eP	Pn	12 46 07.4	+0.1
LMEL				IAML		12 46 21.2	
	comp=E,150nm,0.3s						
FCH	Farellones	0.40	335	eP	Pn	12 46 08.5	+0.2
FCH				i S	Sn	12 46 21.6	-0.2
FCH				IAML		12 46 22.0	
	comp=N,368nm,0.2s						
CLCH	Cerro Calan	0.47	308	eP	Pn	12 46 09.1	+0.8
CLCH				i S	Sn	12 46 22.3	+0.4
CLCH				IAML		12 46 23.6	
	comp=E,476nm,0.3s						
PEL	Peldehue	0.74	317	⇑iP	Pn	12 46 10.4	+0.3
PEL				i S	Sn	12 46 24.5	-0.6
ROC1	El Roble	1.05	312	eP	Pn	12 46 13.0	-0.3
ROC1				eS	Sn	12 46 30.1	-0.5
ROCH	El Roble	1.05	312	⇑iP	Pn	12 46 13.3	+0.1
ROCH				i S	Sn	12 46 30.1	-0.4
ROCH				IAML		12 46 30.7	
	comp=N,424nm,0.1s						
AAGR	Agrelo	1.21	61	eP	Pn	12 46 14.6	-0.1
AAGR				eS	Sn	12 46 33.0	-0.2
ASAL	Salagasta	1.52	44	eP	Pn	12 46 18.0	-0.1
ASAL				eS	Sn	12 46 39.0	-0.2
AUSP	Uspallata	1.57	22	eP	Pn	12 46 19.1	+0.1
RTLS	Leoncito	2.00	20	eP	Pn	12 46 24.4	+0.3
RTLS				IAML		12 46 25.7	
	comp=Z,17nm,0.2s						
RTLS				eS	Sn	12 46 50.4	+0.5
RTCV	Cerro Valdivia	2.24	36	eP	Pn	12 46 27.0	+0.2
RTCV				eS	Sn	12 46 54.7	-0.2
RTLL	Cerro Villicun	2.72	31	eP	Pn	12 46 33.1	+0.2
RTLL				eS	Sn	12 47 05.6	-0.2
AMOG	MOGNA	3.06	27	eP	Pn	12 46 37.8	+0.4
AMOG				eS	Sn	12 47 13.2	-0.5

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*ISCJB **20** 13:12:44.0±1.1,36°.99N±0°.07×39°.89E±0°.04,h1km±6km, Error ellipse: s-maj=11.4km s-min=4.5km az=167.7*

*ISK **20** 13:12:43.1,36°.96N×39°.92E,h6km,ML2.5/3*

*CSEM **20** 13:12:44.2±0.3,36°.99N×39°.90E,h2km,ML2.5,Error ellipse: s-maj=8.2km s-min=3.0km az=164.0*

*DDA **20** 13:12:44.5,37°.06N×39°.87E,h7km,Ml2.7*

ISC 20 13:12:44.5±1.4**,37°.00N**±0°.06×**39°.90E**±0°.03**,h7km**±13km**,** **n17,**σ**0s.41**/32**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MAZI	Mazidag	0.63	44	PG	Pg	13 12 56.1	-0.7
MAZI				SG	Sg	13 13 05.7	+0.7
MAZI	Mazidag	0.63	44	ePg	Pg	13 12 56.1	-0.7
MAZI				eSg	Sg	13 13 05.7	+0.7
MARD	Mardin	0.77	66	i P	Pg	13 12 59.4	0.0
MARD				i S	Sb	13 13 11.5	+0.3
URFA	Urfa	0.96	297	PG	Pg	13 13 02.8	-0.2
URFA				SG	Sb	13 13 16.9	+0.3
URFA	Urfa	0.96	297	ePg	Pg	13 13 02.8	-0.2
URFA				eSg	Sb	13 13 16.9	+0.3
SURC	SANLIURFA_SURC	1.03	263	i P	Pg	13 13 04.1	-0.3
SURC				i S	Sb	13 13 18.8	+0.1
SURC	SANLIURFA_SURC	1.03	263	P	Pg	13 13 04.1	-0.3
SURC				S	Sb	13 13 18.8	+0.1
BTMN	Batman	1.41	51	i P	Pb	13 13 10.8	-0.4
BTMN				i S	Sg	13 13 30.3	+0.5
BTMN	Batman	1.41	51	P	Pb	13 13 10.8	-0.4
BTMN				S	Sg	13 13 30.3	+0.5
SVRC	Sivrice-ELAZID	1.45	341	PN	Pn	13 13 11.1	-0.3
SVRC				SN	Sg	13 13 31.7	+0.5
SVRC	Sivrice-ELAZID	1.45	341	ePn	Pn	13 13 11.1	-0.3
SVRC				eSn	Sg	13 13 31.7	+0.5
HANI	Diyarbakir_Han	1.46	16	i P	Pn	13 13 11.3	-0.2
HANI				i S	Sb	13 13 31.3	+0.2
HANI	Diyarbakir_Han	1.46	16	P	Pn	13 13 11.3	-0.2
HANI				S	Sb	13 13 31.3	+0.2
SRTM	Siirt_Merkez	1.89	58	i P	Pn	13 13 17.8	+0.4
SRTM				i S	Sb	13 13 43.2	-0.1
SRTM	Siirt_Merkez	1.89	58	P	Pn	13 13 17.8	+0.4
SRTM				S	Sb	13 13 43.2	-0.1
PTK	Pertek	1.93	348	PN	Pn	13 13 18.4	+0.4
PTK	Pertek	1.93	348	ePn	Pn	13 13 18.4	+0.4

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*MOS **20** 13:51:09.7±0.0,42°.50N×44°.04E,h2km,MPVA5.0*

*IDC **20** 13:51:10.4±0.5,42°.46N×43°.93E,h0km,mb3.9/13, mb1 4.1/18,mb1mx3.9/59,mbtmp4.0/18,ML3.5/5,MS3.4/18, Ms1 3.5/18,ms1mx3.2/62,Error ellipse: s-maj=10.3km s-min=7.8km az=55.0*

*AZER **20** 13:51:10.0±1.8,42°.15N×43°.85E,h3km,ml4.5/25,Error ellipse: s-maj=3.1km s-min=2.5km az=268.0*

*ISK **20** 13:51:10.5,42°.60N×44°.29E,h18km,ML4.2/5*

*ISCJB **20** 13:51:11.6±0.3,42°.52N±0°.01×44°.05E±0°.01,h2km±2km, mb4.1/32,MS3.5/16,Error ellipse: s-maj=2.2km s-min=1.7km az=28.4*

*BJI **20** 13:51:11.9,42°.50N×44°.10E,h8km,mb4.7/13,mB4.7/8, Ms4.3/5,Ms7 3.9/5*

*NORS **20** 13:51:11.5±0.0,42°.54N×44°.06E,h16km*

*TIF **20** 13:51:11.3,42°.52N×44°.10E,h13km±1km*

*CSEM **20** 13:51:12.9±0.1,42°.53N×44°.07E,h10km,mb4.3/16,Error ellipse: s-maj=2.9km s-min=2.4km az=40.0*

*MOS **20** 13:51:12.1±1.5,42°.50N×44°.02E,h16km,mb4.6/6,Error ellipse: s-maj=4.9km s-min=3.9km az=112.3*

*NEIC **20** 13:51:12.6±0.3,42°.53N×44°.14E,h10km,mb4.3/8, ML4.2(TIF),Error ellipse: s-maj=5.9km s-min=4.6km az=193.0*

*NNC **20** 13:51:15.8±3.1,42°.80N×44°.37E,h12km±27km,mb4.1, Error ellipse: s-maj=27.7km s-min=14.1km az=106.0*

*DRS **20** 13:51:15.0±0.0,42°.21N×44°.53E,h13km*

ISC 20 13:51:12.1±0.9**,42°.48N**±0°.01×**44°.08E**±0°.01**,h9km**±6km**,** **n348,**σ**1s.61**/482**,mb4.1**/33**,MS3.4**/16**,66C-70D,Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZEI	Tsey	0.33	337	i Pg	Pg	13 51 18.4	-0.4
ZEI				eSg	Sg	13 51 24.4	+1.1
ONI	Oni	0.48	283	P	Pg	13 51 21.5	+0.1
ONI				S	Sb	13 51 29.0	-0.8
ONI	Oni	0.48	283	⇓iPG	Pg	13 51 21.4	+0.1
ONI				eS	Sb	13 51 29.0	-0.8
ONI	Oni	0.48	283	i Pg	Pg	13 51 21.4	+0.1
ONI				S	Sb	13 51 29.0	-0.8
ONI	Oni	0.48	283	i Pg	Pg	13 51 21.5	+0.1
ONI				eSg	Sb	13 51 29.0	-0.8
KORR	Kora	0.60	359	⇓iPG	Pg	13 51 23.7	-0.1
KORR				eS	Sg	13 51 32.0	+0.3
KORR	Kora	0.60	359	i Pg	Pg	13 51 23.7	-0.1
KORR				eSg	Sg	13 51 32.0	+0.3
KORR	Kora	0.60	359	i Pg	Pg	13 51 23.6	-0.2
KORR				eSg	Sb	13 51 32.7	-0.8
DUS	Dusheti	0.60	130	P	Pg	13 51 24.2	+0.4
DUS				S	Sb	13 51 33.1	-0.4
DUS	Dusheti	0.60	130	⇓iPG	Pg	13 51 24.1	+0.4
DUS				eS	Sb	13 51 33.1	-0.4
DUS	Dusheti	0.60	130	P	Pg	13 51 24.2	+0.4
DUS				S	Sb	13 51 33.1	-0.4
DUS	Dusheti	0.60	130	i Pg	Pg	13 51 24.2	+0.4
DUS				eSg	Sb	13 51 33.1	-0.4
ARNR	Ardon	0.71	12	⇑iPG	Pb	13 51 26.4	-0.3
ARNR				eS	Sb	13 51 36.4	-0.3
ARNR	Ardon	0.71	12	i Pg	Pb	13 51 26.4	-0.3
ARNR				eSg	Sb	13 51 36.4	-0.3
ARNR	Ardon	0.71	12	i Pg	Pb	13 51 26.3	-0.3
ARNR				eSg	Sb	13 51 36.3	-0.3
VLKR	Vladikavkaz	0.72	38	⇑iPG	Pg	13 51 26.0	+0.1
VLKR				eS	Sb	13 51 36.3	-0.4
VLKR	Vladikavkaz	0.72	38	i Pg	Pg	13 51 26.0	+0.1
VLKR				eSg	Sb	13 51 36.3	-0.4
VLKR	Vladikavkaz	0.72	38	i Pg	Pg	13 51 26.0	+0.1
VLKR				eSg	Sb	13 51 36.3	-0.4
KMGR	Komgaron	0.82	45	⇓ePG	Pb	13 51 28.3	-0.2
KMGR				eS	Sb	13 51 39.5	-0.1
KMGR	Komgaron	0.82	45	ePg	Pb	13 51 28.3	-0.2
KMGR				eSg	Sb	13 51 39.5	-0.1
KMGR	Komgaron	0.82	45	ePg	Pb	13 51 28.3	-0.2
KMGR				eSg	Sb	13 51 39.5	-0.1
LSNR	Lesken	0.82	347	⇓iPG	Pg	13 51 27.8	0.0
LSNR				eS	Sb	13 51 39.5	-0.2
LSNR	Lesken	0.82	347	i Pg	Pg	13 51 27.8	0.0
LSNR				eSg	Sb	13 51 39.5	-0.2
LSNR	Lesken	0.82	347	i Pg	Pg	13 51 27.6	-0.2
LSNR				i Sg	Sb	13 51 39.4	-0.2
STDR	Stavd-Durt	0.89	359	⇓iPG	Pn	13 51 30.2	-0.6
STDR				eS	Sn	13 51 42.5	-1.3
STDR	Stavd-Durt	0.89	359	i Pg	Pn	13 51 30.2	-0.6
STDR				eSg	Sn	13 51 42.5	-1.3
STDR	Stavd-Durt	0.89	359	ePg	Pb	13 51 29.4	-0.2
STDR				eSg	Sn	13 51 43.1	-0.7
SEAG	Tbilisi Sea	0.90	143	P	Pb	13 51 30.3	+0.5
SEAG				S	Sn	13 51 43.9	-0.1
SEAG	Tbilisi Sea	0.90	143	P	Pb	13 51 30.3	+0.5
SEAG				S	Sn	13 51 43.9	-0.1
TBLG	Delisi	0.90	147	PG	Pg	13 51 28.8	-0.5
TBLG				SG	Sb	13 51 42.5	+0.7
TBLG	Delisi	0.90	147	P	Pg	13 51 29.1	-0.1
TBLG				S	Sb	13 51 42.5	+0.7
TBLG	Delisi	0.90	147	ePg	Pg	13 51 29.2	-0.1
TBLG				eSg	Sg	13 51 39.2	-1.7
TBLG	Delisi	0.90	147	⇓iPG	Pg	13 51 29.1	-0.1
TBLG				eS	Sb	13 51 42.5	+0.7
TBLG	Delisi	0.90	147	ePg	Pg	13 51 29.2	-0.1
TBLG				S	Sb	13 51 42.5	+0.7
TBLG	Delisi	0.90	147	i Pg	Pg	13 51 29.1	-0.1
TBLG				eSg	Sb	13 51 42.5	+0.7
BTKR	Batakoyurt	0.95	21	ePG	Pb	13 51 31.0	+0.2
BTKR				eS	Sn	13 51 45.0	-0.4
BTKR	Batakoyurt	0.95	21	ePg	Pb	13 51 31.0	+0.2
BTKR				eSg	Sn	13 51 45.0	-0.4
BTKR	Batakoyurt	0.95	21	ePg	Pb	13 51 31.1	+0.2
BTKR				eSg	Sn	13 51 46.9	+1.4
NCK	Nalchik	1.07	341	d iPG	Pg	13 51 29.8	-2.9
NCK	Nalchik	1.07	341	ePg	Pg	13 51 29.8	-2.9
KZR	Kazreti	1.13	167	P	Pg	13 51 32.1	-1.6
KZR				S	Sg	13 51 48.1	-0.2
KZR	Kazreti	1.13	167	P	Pg	13 51 32.1	-1.6
KZR				S	Sg	13 51 48.1	-0.2
AKH	Akhalkalaki	1.16	202	PN	Pn	13 51 34.8	+0.2
AKH				SN	Sn	13 51 52.3	+1.7
AKH	Akhalkalaki	1.16	202	P	Pg	13 51 33.9	-0.4
AKH				S	Sb	13 51 50.4	+0.9
AKH	Akhalkalaki	1.16	202	ePg	Pg	13 51 34.0	-0.3
AKH	Akhalkalaki	1.16	202	⇓iPG	Pg	13 51 33.8	-0.4
AKH				eS	Sb	13 51 50.4	+0.9
AKH	Akhalkalaki	1.16	202	ePg	Pg	13 51 34.0	-0.3
AKH	Akhalkalaki	1.16	202	ePn	Pn	13 51 34.8	+0.2
AKH				S	Sb	13 51 50.4	+0.9

AKH				eSn	Sn	13 51 52.3	+1.7
AKH	Akhalkalaki	1.16	202	i Pg	Pg	13 51 33.9	-0.4
AKH				eSg	Sb	13 51 50.4	+0.9
NEY	Neytrino	1.26	308	d iPG	Pn	13 51 35.0	-1.0
NEY	Neytrino	1.26	308	i Pg	Pn	13 51 35.0	-1.0
NEY	Neytrino	1.26	308	ePg	Pn	13 51 35.1	-1.0
BGD	Bogdanovka	1.27	197	P	Pn	13 51 35.8	-0.4
BGD				S	Sn	13 51 53.9	+0.4
BGD	Bogdanovka	1.27	197	P	Pn	13 51 35.8	-0.4
BGD				S	Sn	13 51 53.8	+0.4
PRTR	Priterechnaya	1.28	7	ePG	Pg	13 51 36.6	0.0
PRTR				eS	Sn	13 51 55.5	+2.1
PRTR	Priterechnaya	1.28	7	ePg	Pg	13 51 36.6	0.0
PRTR				eSg	Sn	13 51 55.5	+2.1
PRTR	Priterechnaya	1.28	7	ePg	Pg	13 51 36.4	-0.2
PRTR				eSg	Sn	13 51 55.3	+1.9
TRKR	Terskaya	1.33	21	⇑iPG	Pg	13 51 37.5	-0.1
TRKR				eS	Sg	13 51 56.5	+1.7
TRKR	Terskaya	1.33	21	i Pg	Pg	13 51 37.5	-0.1
TRKR				eSg	Sg	13 51 56.5	+1.7
TRKR	Terskaya	1.33	21	i Pg	Pg	13 51 37.3	-0.3
TRKR				i Sg	Sg	13 51 57.0	+2.2
EPOS	Posof	1.40	226	i P	Pn	13 51 38.3	+0.3
EPOS				i S	Sg	13 51 58.2	+1.0
EPOS	Posof	1.40	226	P	Pn	13 51 38.3	+0.3
EPOS				S	Sg	13 51 58.2	+1.0
DGRG	David-gareji	1.41	136	P	Pg	13 51 39.0	-0.1
DGRG				S	Sg	13 52 03.9	+6.5
DGRG	David-gareji	1.41	136	⇓iPG	Pg	13 51 39.0	-0.1
DGRG				eS	Sg	13 52 03.9	+6.5
DGRG	David-gareji	1.41	136	P	Pg	13 51 39.0	-0.1
DGRG				S	Sg	13 52 00.6	+3.2
DGRG	David-gareji	1.41	136	i Pg	Pg	13 51 39.0	-0.1
DGRG				eSg	Sg	13 52 03.9	+6.5
GROC	Groznyy	1.45	60	ePG	Pn	13 51 38.4	-0.1
GROC				e		13 51 59.5	
GROC				pmax	pmax		
	comp=Z,603nm,0.6s						
GROC				smax	smax		
	comp=N,3µm,0.7s						
GROC				smax	smax		
	comp=N,4µm,1.0s						
GROC	Groznyy	1.45	60	ePg	Pn	13 51 38.4	-0.1
	comp=N,603nm,0.6s						
GROC				eSg	Sg	13 51 59.5	+0.7
	comp=N,4µm,1.0s						
GROC	Groznyy	1.45	60	ePg	Pb	13 51 39.2	-0.1
GROC				eSg	Sg	13 51 59.9	+1.1
KBZ	Khabaz	1.52	326	Pg	Pn	13 51 39.7	+0.3
	baz=154,slow=12						
KBZ				Lg	Lg	13 51 59.4	
	comp=N,592nm,0.3s,baz=85,slow=22,SNR=17						
DVE	Vedeno	1.58	72	ePN	Pb	13 51 41.7	+0.2
DVE				eS	Sg	13 52 03.7	+0.8
DVE	Vedeno	1.58	72	ePn	Pb	13 51 41.7	+0.2
DVE				eSg	Sg	13 52 03.7	+0.8
DVE	Vedeno	1.58	72	ePg	Pb	13 51 41.7	+0.2
BTLR	Botlikh	1.59	83	⇓ePN	Pn	13 51 40.9	+0.4
BTLR				e		13 52 02.3	
BTLR				pmax	pmax		
	comp=Z,405nm,0.8s						
BTLR				smax	smax		
	comp=N,1µm,0.9s						
BTLR	Botlikh	1.59	83	ePn	Pn	13 51 40.9	+0.4
	comp=N,405nm,0.8s						
BTLR				eSg	Sb	13 52 02.3	+0.3
	comp=N,1µm,0.9s						
BTLR	Botlikh	1.59	83	ePg	Pb	13 51 41.3	-0.4
SHA1	Shidzhatmaz	1.63	321	⇓iPG	Pb	13 51 41.9	-0.6
SHA1				eS	Sb	13 52 03.1	-0.2
SHA1	Shidzhatmaz	1.63	321	i Pg	Pb	13 51 41.9	-0.6
SHA1				eSg	Sb	13 52 03.1	-0.2
SHA1	Shidzhatmaz	1.63	321	ePg	Pn	13 51 41.8	+0.6
QZX	Qazax, Azerbai	1.72	145	⇑P	Pn	13 51 42.6	+0.4
	SNR=369						
QZX				⇓S	Sg	13 52 06.7	-0.6
QZX	Qazax, Azerbai	1.72	145	⇑P	Pn	13 51 42.6	+0.4
	SNR=369						
QZX				⇓S	Sg	13 52 06.7	-0.6
KVAR	Kislovodsk Arr	1.79	326	Pn	Pn	13 51 43.4	+0.2
	baz=138,slow=13,SNR=198						
KIV	Kislovodsk	1.79	326	ePn	Pb	13 51 44.2	-0.9
KIV				eSn	Sn	13 52 06.7	+0.5
KIV	Kislovodsk	1.79	326	d iPN	Pn	13 51 44.0	+0.7
KIV				e		13 51 47.6	
KIV				e		13 52 11.7	
KIV				pmax	pmax		
	comp=Z,1µm,1.0s						
KIV	Kislovodsk	1.79	326	i Pn	Pn	13 51 44.0	+0.7
	comp=Z,1µm,1.0s						
KIV	Kislovodsk	1.79	326	ePg	Pg	13 51 47.6	+1.2
KIV				eSn	Sn	13 52 06.7	+0.5
KIV				eSg	Sg	13 52 11.7	+2.1
KIV	Kislovodsk	1.79	326	i Pg	Pn	13 51 44.0	+0.7
EAK	Akyaka	1.83	191	i P	Pb	13 51 45.5	-0.3
EAK				i S	Sg	13 52 10.7	-0.2
EAK	Akyaka	1.83	191	P	Pb	13 51 45.5	-0.3
EAK				S	Sg	13 52 10.6	-0.2
DDFL	Dedoflistskaro	1.84	124	P	Pg	13 51 47.7	+0.4
DDFL				S	Sg	13 52 13.1	+1.9
DDFL	Dedoflistskaro	1.84	124	P	Pg	13 51 47.7	+0.4
XNZR	Khunzakh	1.94	87	⇑iPN	Pg	13 51 48.9	-0.4
XNZR				e		13 52 14.0	
XNZR	Khunzakh	1.94	87	ePg	Pb	13 51 47.5	-0.3
XNZR				eSg	Sg	13 52 14.1	-0.4
DLMR	Dylym	1.97	72	ePN	Pg	13 51 49.5	-0.3
DLMR				eS	Sg	13 52 16.5	+1.2
DLMR	Dylym	1.97	72	ePg	Pg	13 51 49.5	-0.3
DLMR				eSg	Sg	13 52 16.5	+1.2
DOMR	Dombai	1.98	295	ePN	Pb	13 51 48.8	+0.4
DOMR				pmax	pmax		
	comp=Z,538nm,1.7s						
DOMR	Dombai	1.98	295	ePn	Pb	13 51 48.8	+0.4
	comp=Z,538nm,1.7s						
DOMR	Dombai	1.98	295	ePg	Pb	13 51 48.8	+0.4
DOMR				eSg	Sg	13 52 17.2	+1.6
KARS	Kars	2.00	202	PN	Pn	13 51 46.9	+0.7
KARS	Kars	2.00	202	ePn	Pn	13 51 46.9	+0.7
UNCR	Uncukul	2.02	82	i PN	Pb	13 51 49.0	+0.1
UNCR	Uncukul	2.02	82	i Pn	Pb	13 51 49.0	+0.1
UNCR	Uncukul	2.02	82	i Pg	Pb	13 51 49.0	+0.1
UNCR				eSg	Sg	13 52 16.0	-0.9
ARTV	Artvin	2.06	232	i P	Pb	13 51 49.3	-0.5
ARTV				i S	Sg	13 52 18.3	-0.1
ARTV	Artvin	2.06	232	P	Pb	13 51 49.3	-0.5
ARTV				S	Sg	13 52 18.3	-0.1
ZKTA	Zakatala	2.07	113	⇑P	Pb	13 51 49.3	-0.6
	SNR=118						
ZKTA				⇑S	Sb	13 52 16.7	+0.9
DBC	Dubki	2.10	74	⇑ePN	Pg	13 51 51.4	-0.8
DBC				e		13 52 17.1	
DBC	Dubki	2.10	74	i Pg	Pb	13 51 51.0	+0.7
DBC				i Sg	Sg	13 52 19.0	-0.4
BCA	Borcka	2.10	241	PN	Pn	13 51 48.4	+0.9
BCA	Borcka	2.10	241	ePn	Pn	13 51 48.4	+0.9
DBOC	Borcka	2.13	239	i P	Pb	13 51 50.2	-0.6
DBOC				i S	Sb	13 52 19.0	+1.6
DBOC	Borcka	2.13	239	P	Pb	13 51 50.2	-0.6
DBOC				S	Sb	13 52 19.0	+1.6
DIGO	Kars	2.13	195	i P	Pb	13 51 50.9	-0.1
DIGO				i S	Sg	13 52 20.0	-0.6
DIGO	Kars	2.13	195	P	Pb	13 51 50.9	-0.1
DIGO				S	Sg	13 52 20.0	-0.6
DAGI	Agillar	2.14	230	i P	Pb	13 51 50.4	-0.7
DAGI				i S	Sg	13 52 21.7	+0.8
ARKR	Arakani	2.16	86	ePN	Pb	13 51 50.7	-0.6
ARKR				eS	Sb	13 52 18.7	+0.5
ARKR				pmax	pmax		
	comp=Z,421nm,0.8s						
ARKR	Arakani	2.16	86	ePn	Pb	13 51 50.7	-0.6
	comp=Z,421nm,0.8s						
ARKR	Arakani	2.16	86	ePg	Pb	13 51 50.7	-0.6
ARKR				eSg	Sb	13 52 18.7	+0.5
GDB	GEDABAY	2.16	144	⇑P	Pn	13 51 49.5	+1.1
	SNR=518						
GDB				⇑S	Sb	13 52 18.6	+0.2
GDB	GEDABAY	2.16	144	⇑P	Pn	13 51 49.5	+1.1
	SNR=518						
GDB				⇑S	Sb	13 52 18.6	+0.2
BUJR	Buynaksk	2.26	80	i PN	Pg	13 51 55.0	-0.4
BUJR				eS	Sg	13 52 26.0	+1.3
BUJR				pmax	pmax		
	comp=Z,274nm,0.3s						
BUJR	Buynaksk	2.26	80	eSb	Sg	13 52 26.0	+1.3
BUJR	Buynaksk	2.26	80	i Pn	Pg	13 51 55.0	-0.4
BUJR				eSn	Sg	13 52 26.0	+1.3
DBAD	Bademkaya	2.31	231	i P	Pb	13 51 52.9	-1.0
DBAD				i S	Sg	13 52 25.4	-0.7
DBAD	Bademkaya	2.31	231	P	Pb	13 51 52.9	-1.0
ARXR	Arkhyz	2.32	299	ePn	Pb	13 51 54.3	+0.1
DDEM	Demirkent	2.36	228	i P	Pb	13 51 53.7	-1.1
DDEM				i S	Sg	13 52 28.5	+0.7
DDEM	Demirkent	2.36	228	P	Pb	13 51 53.7	-1.1
GNI	Garni	2.38	168	Pn	Pb	13 51 53.6	-1.6
	comp=Z,132nm,0.3s,baz=358,slow=3.3,SNR=97						
GNI				Lg	Lg	13 52 27.8	
	comp=Z,137nm,0.3s,baz=233,slow=11,SNR=12						
GNI	Garni	2.38	168	ePn	Pb	13 51 54.2	-1.1
GNI				eSn	Sg	13 52 27.1	-1.5
GNI	Garni	2.38	168	c ePN	Pn	13 51 53.2	+1.7
GNI				pmax	pmax		
	comp=Z,5µm,1.0s						
GNI	Garni	2.38	168	ePn	Pn	13 51 53.2	+1.7
	comp=Z,5µm,1.0s						
GANJ	Ganja	2.49	137	⇑P	Pn	13 51 53.7	+0.9
	SNR=53						
GANJ				⇓S	Sb	13 52 27.3	-0.4
GANJ	Ganja	2.49	137	⇑P	Pn	13 51 53.7	+0.9
	SNR=53						
GANJ				⇓S	Sb	13 52 27.3	-0.4
TASB	TASBURUN-IGDIR	2.50	177	PN	Pn	13 51 53.2	+0.2
TASB	TASBURUN-IGDIR	2.50	177	ePn	Pn	13 51 53.2	+0.2
MAK	Makhachkala	2.57	78	ePN	Pg	13 52 00.6	-0.7
MAK				eS	Sg	13 52 38.2	+3.6
MAK				pmax	pmax		
	comp=Z,283nm,0.3s						
MAK				smax	smax		
	comp=N,908nm,0.4s						
MAK				smax	smax		
	comp=N,1µm,1.1s						
MAK				MLR	MLR		
	comp=Z,713nm,12.0s						
MAK	Makhachkala	2.57	78	eSn	Sb	13 52 29.2	-0.7
IGDI	IGDIR	2.61	180	i P	Pb	13 51 58.2	-0.8
IGDI				i S	Sb	13 52 33.8	+2.6
NVNR	Nevinnomyssk	2.63	325	ePn	Pb	13 51 57.6	-1.7
SEKA	Sheki	2.65	118	⇑P	Pb	13 51 58.2	-1.6
	SNR=29						
SEKA				⇓S	Sb	13 52 31.6	-0.9
SEKA	Sheki	2.65	118	⇑P	Pb	13 51 58.2	-1.6
	SNR=29						
SEKA				⇓S	Sb	13 52 31.6	-0.9
URKR	Urkarakh	2.65	96	⇑ePN	Pg	13 52 03.8	+0.9
URKR				e		13 52 38.4	
URKR	Urkarakh	2.65	96	eSb	Sg	13 52 38.4	+1.1
GOF	Gofitskoye	2.68	344	ePN	Pb	13 52 01.0	+0.7
GOF				eS	Sg	13 52 38.8	+0.6
GOF				pmax	pmax		
	comp=Z,1µm,0.8s						
GOF				smax	smax		
	comp=E,2µm,1.0s						
GOF	Gofitskoye	2.68	344	eSb	Sg	13 52 38.8	+0.6
HYR	Heyderabad	2.82	168	⇑P	Pn	13 51 56.0	-1.4
HYR				⇓S	Sn	13 52 29.4	-2.1
HYR	Heyderabad	2.82	168	⇑P	Pn	13 51 56.0	-1.4
HYR				⇓S	Sn	13 52 29.4	-2.1
MNGR	Mingechevir, A	2.83	126	⇑P	Pn	13 51 59.5	+2.1
	SNR=8.5						
MNGR				⇑S	Sb	13 52 36.1	-1.3
MNGR	Mingechevir, A	2.83	126	⇑P	Pn	13 51 59.5	+2.1
	SNR=8.5						
MNGR				⇑S	Sb	13 52 36.1	-1.3
CHOM	Cayeli-Rize	2.84	242	PN	Pn	13 51 59.1	+1.5
CHOM	Cayeli-Rize	2.84	242	ePn	Pn	13 51 59.1	+1.5
EATA	Eleskirt	2.88	205	i P	Pn	13 52 00.8	+2.4
EATA	Eleskirt	2.88	205	P	Pn	13 52 00.8	+2.4
AKT	Akhty	2.90	109	⇑ePN	Pb	13 52 05.7	+1.7
AKT				e		13 52 43.9	
AKT				pmax	pmax		
	comp=Z,147nm,0.9s						
AKT				smax	smax		
	comp=N,546nm,1.2s						
AKT	Akhty	2.90	109	eSb	Sg	13 52 43.9	-1.3
	comp=N,546nm,1.2s						
AKT	Akhty	2.90	109	ePn	Pb	13 52 01.5	-2.5
AKT				eSn	Sb	13 52 38.1	-1.5
RPOR	Krasnaya Polya	3.05	295	ePn	Pn	13 52 02.8	+2.4
DRN	Derbent	3.19	97	⇑ePN	Pg	13 52 13.5	+0.4
DRN				e		13 52 55.7	
DRN				pmax	pmax		
	comp=Z,155nm,1.0s						
DRN				smax	smax		
	comp=N,466nm,1.4s						
DRN	Derbent	3.19	97	eSb	Sg	13 52 55.7	+1.3
	comp=N,466nm,1.4s						
DRN	Derbent	3.19	97	eSn	Sb	13 52 45.2	-2.5
QBL	Gabala	3.20	117	P	Pn	13 52 05.2	+2.6
	SNR=27						
QBL				⇑S	Sn	13 52 44.4	+3.5
QBL	Gabala	3.20	117	P	Pn	13 52 05.2	+2.6
	SNR=27						
QBL				⇑S	Sn	13 52 44.4	+3.5
BRDA	Brd	3.22	133	⇑P	Pn	13 52 04.1	+1.4
	SNR=21						
BRDA				⇓S	Sb	13 52 45.1	-3.5
BRDA	Brd	3.22	133	⇑P	Pn	13 52 04.1	+1.4
	SNR=21						
BRDA				⇓S	Sb	13 52 45.1	-3.5
QSAR	Qusar	3.26	106	⇑P	Pn	13 52 06.5	+3.0
	SNR=9.3						
QSAR	Qusar	3.26	106	⇑P	Pn	13 52 06.5	+3.0
	SNR=9.3						
QSAR				⇑S	Sb	13 52 51.2	+1.1
SBZ	Shahbuz	3.28	160	⇑P	Pn	13 52 02.8	-0.9
SBZ				⇓S	Sn	13 52 43.2	+0.3
SBZ	Shahbuz	3.28	160	⇑P	Pn	13 52 02.8	-0.9
SBZ				⇓S	Sn	13 52 43.2	+0.3
XNQ	Khinaliq	3.30	112	⇓P	Pn	13 52 06.7	+2.5
	SNR=7.5						
XNQ	Khinaliq	3.30	112	⇓P	Pn	13 52 06.7	+2.5
	SNR=7.5						
XNQ				⇓S	Sb	13 52 51.1	-0.2
SOC	Sochi	3.38	290	i PN	Pn	13 52 05.9	+0.9
SOC	Sochi	3.38	290	i Pn	Pn	13 52 05.9	+0.9
NAX	Nakhchivan	3.47	162	⇓P	Pn	13 52 05.3	-1.1
NAX				⇓S	Sn	13 52 47.8	+0.1
NAX	Nakhchivan	3.47	162	⇓P	Pn	13 52 05.3	-1.1
NAX				⇓S	Sn	13 52 47.8	+0.1
QUBA	Quba, Azerbaij	3.48	107	⇑P	Pn	13 52 09.4	+3.0
	SNR=6.9						
QUBA	Quba, Azerbaij	3.48	107	⇑P	Pn	13 52 09.4	+3.0
	SNR=6.9						
QUBA				⇓S	Sb	13 52 54.8	-1.5
ZRD	Zardab	3.49	128	⇓P	Pn	13 52 08.3	+1.8
	SNR=6.2						
ZRD				⇑S	Sb	13 52 52.7	-3.8
ZRD	Zardab	3.49	128	⇓P	Pn	13 52 08.3	+1.8
	SNR=6.2						
ZRD				⇑S	Sb	13 52 52.7	-3.8
IML	Ismayilli	3.51	117	⇓P	Pn	13 52 09.3	+2.5
	SNR=6.0						
IML	Ismayilli	3.51	117	⇓P	Pn	13 52 09.3	+2.5
	SNR=6.0						
IML				⇓S	Sb	13 52 54.2	-2.8
BAYT	Ayd˜–ntepe-Bay	3.62	236	PN	Pn	13 52 10.2	+1.7
BAYT	Ayd˜–ntepe-Bay	3.62	236	ePn	Pn	13 52 10.2	+1.7
PQL	Pirkuli	3.78	115	⇓P	Pn	13 52 13.2	+2.5
PQL	Pirkuli	3.78	115	⇓P	Pn	13 52 13.2	+2.5
PQL				⇑S	Sb	13 53 01.6	-3.4
ORD	Ordubad	3.84	157	⇓P	Pn	13 52 10.7	-0.7
ORD				⇑S	Sn	13 52 55.9	-0.7
ORD	Ordubad	3.84	157	⇓P	Pn	13 52 10.7	-0.7
ORD				⇑S	Sn	13 52 55.9	-0.7
SIZA	Siyzn	3.87	110	⇑P	Pn	13 52 14.7	+2.9
SIZA	Siyzn	3.87	110	⇑P	Pn	13 52 14.7	+2.9
SIZA				⇑S	Sb	13 53 04.8	-2.7
ATGJ	Altiaghaj	3.98	112	⇑P	Pn	13 52 16.0	+2.6
	SNR=16						
ATGJ	Altiaghaj	3.98	112	⇑P	Pn	13 52 16.0	+2.6
	SNR=16						
ATGJ				⇑S	Sb	13 53 07.4	-3.4
GBS	Qobustan	4.14	116	⇑P	Pn	13 52 17.9	+2.4
GBS	Qobustan	4.14	116	⇑P	Pn	13 52 17.9	+2.4
GBS				⇑S	Sb	13 53 11.6	-3.6
ESPY	Espiye-Giresun	4.30	250	PN	Pn	13 52 19.7	+2.0
ESPY	Espiye-Giresun	4.30	250	ePn	Pn	13 52 19.7	+2.0
ALIB	Äli-Bayra	4.49	123	⇓P	Pn	13 52 22.2	+1.9
ALIB	Äli-Bayra	4.49	123	⇓P	Pn	13 52 22.2	+1.9
ALIB				⇑S	Sb	13 53 19.4	-5.8
GOBA	Gobu	4.73	114	⇑P	Pn	13 52 26.2	+2.7
GOBA	Gobu	4.73	114	⇑P	Pn	13 52 26.2	+2.7
LRK	Lerik	5.02	138	⇓P	Pn	13 52 28.6	+0.8
LRK	Lerik	5.02	138	⇓P	Pn	13 52 28.6	+0.8
PTK	Pertek	5.05	226	PN	Pn	13 52 31.1	+2.9
PTK	Pertek	5.05	226	ePn	Pn	13 52 31.1	+2.9
ASTR	Astara	5.31	136	⇑P	Pn	13 52 32.7	+1.1
ASTR	Astara	5.31	136	⇑P	Pn	13 52 32.7	+1.1
ANN	Anapa	5.35	298	eP	Pn	13 52 32.8	+0.7
ANN				eS	Sn	13 53 35.6	+1.8
ANN				pmax	pmax		
	comp=Z,39nm,1.0s						
ANN				MLR	MLR		
	comp=Z,369nm,8.0s						
ANN	Anapa	5.35	298	eP	Pn	13 52 32.8	+0.7
	comp=Z,39nm,1.0s						
ANN				eS	Sn	13 53 35.6	+1.8
	comp=Z,369nm,8.0s						
KERU	Kerch	6.19	300	eP	Pb	13 52 54.2	-5.7
SUDU	Sudak	7.01	293	eP	Pn	13 52 55.6	+0.8
SUDU				eS	Sn	13 54 16.9	+2.3
SUDU				pmax	pmax		
	comp=Z,3.0nm,0.2s						
SUDU				smax	smax		
	comp=N,17nm,0.7s						
SUDU				smax	smax		
	comp=E,25nm,0.8s						
SUDU	Sudak	7.01	293	eP	Pn	13 52 55.6	+0.8
	comp=E,3.0nm,0.2s						
SUDU				eS	Sn	13 54 16.9	+2.3
	comp=E,17nm,0.7s						
YAL	Yalta	7.49	289	⇓eP	Pn	13 53 03.0	+1.6
YAL				eS	Sn	13 54 29.2	+2.7
YAL				pmax	pmax		
	comp=Z,24nm,0.3s						
YAL				smax	smax		
	comp=N,24nm,0.2s						
YAL				smax	smax		
	comp=E,18nm,0.2s						
YAL	Yalta	7.49	289	eP	Pn	13 53 03.0	+1.6
	comp=E,24nm,0.3s						
YAL				eS	Sn	13 54 29.2	+2.7
	comp=E,24nm,0.2s						
SIM	Simferopol’	7.63	292	eP	Pn	13 53 04.1	+0.8
SIM				S	Sn	13 54 34.0	+4.1
SIM				pmax	pmax		
	comp=Z,11nm,1.6s						
SIM	Simferopol’	7.63	292	eP	Pn	13 53 04.1	+0.8
	comp=Z,11nm,1.6s						
SEV	Sevastopol’	7.84	289	⇓eP	Pn	13 53 05.5	-0.8
SEV				eS	Sn	13 54 33.6	-1.6
SEV				pmax	pmax		
	comp=Z,6.0nm,0.3s						
SEV				smax	smax		
	comp=E,5.0nm,0.3s						
SEV				smax	smax		
	comp=N,22nm,0.7s						
SEV	Sevastopol’	7.84	289	eP	Pn	13 53 05.5	-0.8
	comp=N,6.0nm,0.3s						
SEV				eS	Sn	13 54 33.6	-1.6
	comp=N,22nm,0.7s						
BR131	Keskin Array S	8.35	254	ePn	Pn	13 53 15.5	+2.1
BRTR	Keskin Array B	8.35	254	Pn	Pn	13 53 14.6	+1.2
	comp=N,0.3nm,0.3s,baz=42,slow=11,SNR=11						
BRTR	Keskin Array B	8.35	254	i P	Pn	13 53 16.5	+3.1
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BRTR	Keskin Array B	8.35	254	i P	Pn	13 53 16.5	+3.1
	comp=Z,3.0nm,0.7s						
VSR	Storozhevoye	9.36	341	eP	Pn	13 53 28.6	+1.5
VSR				pmax	pmax		
	comp=Z,5.0nm,0.4s						
VSR	Storozhevoye	9.36	341	eP	Pn	13 53 28.6	+1.5
	comp=Z,5.0nm,0.4s						
VORR	Voronezh	9.77	342	P	Pn	13 53 40.0	+7.3
VORR				pmax	pmax		
	comp=Z,250nm,1.0s						
TIRR	Tirgusor	11.56	285	⇑iP	Pn	13 53 55.0	-2.1
TIRR	Tirgusor	11.56	285	ePn	Pn	13 53 55.0	-2.1
TIRR	Tirgusor	11.56	285	eP	Pn	13 53 55.0	-2.1
GEYT	Alibeck	11.65	108	Pn	Pn	13 53 56.3	-2.3
	comp=Z,0.3nm,0.3s,baz=304,slow=16,SNR=3.7						
MMAI	Mount Meron Ar	11.67	219	LR	LR	13 58 34.9	
	comp=Z,111nm,18.0s,baz=350,slow=38						
TLB	Topalu	11.83	286	⇓iP	Pn	13 53 59.8	-1.1
TLB	Topalu	11.83	286	⇓P	Pn	13 53 59.8	-1.1
TLB	Topalu	11.83	286	P	Pn	13 53 59.8	-1.1
AKTO	Aktyubinsk	12.46	46	Pn	Pn	13 54 08.8	-0.7
	comp=Z,0.7nm,0.3s,baz=236,slow=14,SNR=7.1						
AKTO				LR	LR	14 00 40.9	
	comp=Z,199nm,19.2s,baz=231,slow=45						
AKTO	Aktyubinsk	12.46	46	⇓Pn	Pn	13 54 08.6	-0.9
	comp=Z,9.4nm,1.0s						
AKTO				⇓Sn	Sn	13 56 24.7	-3.6
	comp=Z,16nm,1.1s						
VRI	Vrincioaia	12.91	291	⇑iP	Pn	13 54 31.4	+16
VRI	Vrincioaia	12.91	291	⇑P	Pn	13 54 31.4	+16
AB31	Akbulak array	12.95	53	Pn	Pn	13 54 14.4	-1.8
	comp=Z,11nm,1.0s,baz=242,slow=10,SNR=59						
AB31				⇓Sn	Sn	13 56 35.1	-5.3
	comp=Z,17nm,1.1s,baz=240,slow=17,SNR=4.2						
AB31	Akbulak array	12.95	53	Pn	Pn	13 54 14.4	-1.8
	comp=Z,11nm,1.0s,SNR=59						
ABKAR	Akbulak array	12.95	53	ePn	Pn	13 54 14.7	-1.6
ABKAR	Akbulak array	12.95	53	ePn	Pn	13 54 14.6	-1.6
PLOR	Plostina	12.96	291	⇓iP	Pn	13 54 23.0	+6.6
PLOR	Plostina	12.96	291	⇓P	Pn	13 54 23.0	+6.6
AKASG	Malin Array Be	13.10	314	Pn	Pn	13 54 17.7	-0.4
	comp=Z,0.4nm,0.3s,baz=128,slow=8.9,SNR=5.0						
AKASG	Malin Array Be	13.10	314	i P	Pn	13 54 18.2	+0.1
KIEV	Kiev	13.10	314	c eP	Pn	13 54 18.7	+0.5
KIEV				pmax	pmax		
	comp=Z,7.0nm,1.3s						
KIEV	Kiev	13.10	314	eP	Pn	13 54 18.7	+0.5
	comp=Z,7.0nm,1.3s						
MLR	Muntele Rosu	13.40	289	Pn	Pn	13 54 21.6	-0.8
	comp=Z,0.2nm,0.3s,baz=295,slow=7.1,SNR=4.0						
MLR				LR	LR	14 01 10.6	
	comp=Z,301nm,19.4s,baz=88,slow=45						
MLR	Muntele Rosu	13.40	289	⇓iP	Pn	13 54 21.9	-0.6
MLR	Muntele Rosu	13.40	289	⇓P	Pn	13 54 21.9	-0.6
MLR	Muntele Rosu	13.40	289	P	Pn	13 54 21.9	-0.6
OBN	Obninsk	13.56	341	⇓eP	Pn	13 54 23.3	-1.2
OBN				S	Sn	13 56 54.0	-1.2
OBN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
OBN				MLR	MLR		
	comp=Z,125nm,15.0s						
DOPR	Dopca	13.85	291	⇓iP	Pn	13 54 28.9	+0.4
DOPR	Dopca	13.85	291	⇓iP	Pn	13 54 28.9	+0.4
VOIR		14.02	289	⇓iP	Pn	13 54 30.2	-0.7
VOIR		14.02	289	⇓P	Pn	13 54 30.2	-0.7
VOIR		14.02	289	P	Pn	13 54 30.2	-0.7
VTS	Vitosha	15.39	277	ePn	P	13 54 55.0	+0.9
	comp=Z,26nm,1.0s						
VTS	Vitosha	15.39	277	eP	P	13 54 55.0	+0.9
VTS				pmax	pmax		
	comp=Z,26nm,1.0s						
VTS	Vitosha	15.39	277	eP	P	13 54 55.0	+0.9
	comp=Z,26nm,1.0s						
MDVR	Moldovita	16.35	286	⇓iP	Pn	13 54 54.2	-7.6
BZS	Buzias	16.44	289	⇓iP	Pn	13 55 01.0	-1.9
BZS	Buzias	16.44	289	⇓P	Pn	13 55 01.0	-1.9
ARU	Arti	16.78	29	Pn	Pn	13 55 03.1	-4.1
	comp=Z,0.0nm,0.3s,baz=212,slow=10,SNR=4.5						
ARU				LR	LR	14 03 19.2	
	comp=Z,63nm,19.2s,baz=214,slow=43						
ARU	Arti	16.78	29	ePn	Pn	13 55 03.0	-4.2
	comp=Z,9.8nm,0.9s						
ARU	Arti	16.78	29	P	Pn	13 55 03.8	-3.4
ARU				S	Sn	13 58 09.0	-4.5
ARU				MLR	MLR		
	comp=Z,239nm,17.0s						
CRVS	Cervenica-Dubn	17.02	300	eP	P	13 55 12.4	+0.3
CRVS	Cervenica-Dubn	17.02	300	eP	P	13 55 12.4	+0.3
CRVS	Cervenica-Dubn	17.02	300	eP	P	13 55 12.4	+0.3
SVE	Sverdlovsk	17.84	31	⇓eP	Pn	13 55 19.5	-0.9
SVE				eS	Sn	13 58 39.9	+0.7
SVE				pmax	pmax		
	comp=Z,27nm,0.9s						
LANS	Liptovska Anna	18.36	300	eP	P	13 55 28.1	+1.2

LANS	Liptovska Anna	18.36	300	eP	P	13 55 28.1	+1.2
KLMR	Klimovskoe	18.61	353	eP	P	13 55 26.4	-3.0
KLMR				pmax	pmax		
	comp=Z,19nm,1.5s						
KLMR	Klimovskoe	18.61	353	ePn	P	13 55 26.5	-3.0
KLMR				AMP		13 55 27.7	
	comp=Z,19nm,1.5s						
KK31	Karatay Array	19.39	79	⇑P	P	13 55 38.4	+0.3
	comp=Z,8.7nm,0.9s,baz=270,slow=14,SNR=47						
KK31	Karatay Array	19.39	79	eP	P	13 55 37.2	-0.9
KK31	Karatay Array	19.39	79	eP	P	13 55 37.3	-0.9
KKAR	Karatay Array	19.39	79	eP	P	13 55 38.3	+0.1
KKAR	Karatay Array	19.39	79	eP	P	13 55 38.3	+0.1
VRAC	Vranov	20.24	299	LR	LR	14 04 35.7	
	comp=Z,107nm,19.2s,baz=92,slow=40						
BRVK	Borovoye	20.43	50	⇑P	P	13 55 48.6	-0.9
	comp=Z,13nm,1.2s						
BRVK	Borovoye	20.43	50	eP	P	13 55 48.9	-0.6
	comp=Z,12nm,1.1s						
BRVK	Borovoye	20.43	50	ceP	P	13 55 48.7	-0.7
BRVK				pmax	pmax		
	comp=Z,5.0nm,0.9s						
BVA0	Borovoye Array	20.48	50	⇑P	P	13 55 48.8	-1.1
	comp=Z,6.7nm,0.8s,baz=308,slow=1.9,SNR=27						
BVAR	Borovoye Array	20.48	50	P	P	13 55 49.5	-0.5
	comp=Z,3.6nm,0.8s,baz=248,slow=7.8,SNR=14						
BVAR				LR	LR	14 05 13.7	
	comp=Z,134nm,18.7s,baz=258,slow=41						
CONA	Conrad Observa	20.55	295	iP	Pn	13 55 55.7	+2.6
	comp=Z,12nm,1.6s						
ARSA	Arzberg	20.73	293	iP	Pn	13 55 58.6	+3.5
	comp=Z,2.6nm,0.5s						
MNAS	Manas	20.93	80	⇓P	P	13 55 55.6	+0.5
	comp=Z,7.2nm,1.0s						
MNAS	Manas	20.93	80	P	P	13 55 55.6	+0.5
	comp=Z,7.2nm,1.0s						
SOKA	Soboth	21.05	291	iPn	P	13 55 58.8	+2.5
	comp=Z,12nm,1.1s						
MOA	Molln	21.62	295	P	P	13 56 06.2	+3.9
	comp=Z,2.5nm,0.7s						
FINES	FINESS Array B	21.85	336	P	P	13 56 05.0	+0.3
	comp=Z,1.8nm,0.5s,baz=141,slow=12,SNR=7.8						
FINES				LR	LR	14 04 49.6	
	comp=Z,80nm,18.6s,baz=162,slow=38						
FINES	FINESS Array B	21.85	336	P	P	13 56 05.0	+0.3
MYKA	Terra Mystica	22.01	291	iP	P	13 56 08.7	+2.1
	comp=Z,5.0nm,1.4s						
MYKA	Terra Mystica	22.01	291	P	P	13 56 08.7	+2.1
	comp=Z,5.0nm,1.4s						
GEA0	GERESS Array S	22.07	297	eP	P	13 56 08.1	+0.9
GEC2	GERESS Array S	22.07	297	eP	P	13 56 08.4	+1.2
	comp=Z,32nm,1.9s						
GEC2	GERESS Array S	22.07	297	eP	P	13 56 08.4	+1.2
GEC2				pmax	pmax		
	comp=Z,32nm,1.9s						
GERES	GERESS Array B	22.07	297	P	P	13 56 08.6	+1.4
	comp=Z,1.5nm,0.8s,baz=106,slow=9.8,SNR=12						
GERES				LR	LR	14 05 35.8	
	comp=Z,67nm,19.6s,baz=92,slow=39						
KHC	Kasperske Hory	22.18	298	eP	P	13 56 10.5	+2.2
KHC	Kasperske Hory	22.18	298	eP	P	13 56 10.8	+2.4
	comp=Z,6.8nm,1.6s						
KHC	Kasperske Hory	22.18	298	eP	P	13 56 10.5	+2.2
BRG	Berggiesshubel	22.19	303	eP	P	13 56 07.3	-1.1
	comp=Z,21nm,1.7s						
BRG	Berggiesshubel	22.19	303	eP	P	13 56 07.3	-1.1
BRG				pmax	pmax		
	comp=Z,21nm,1.7s						
KBA	Koelnbreinsper	22.21	293	pP	P	13 56 11.9	+3.0
	comp=Z,9.5nm,0.8s						
AAK	Ala-Archa	22.35	79	P	P	13 56 11.1	+0.7
	comp=Z,1.7nm,0.3s,baz=222,slow=3.0,SNR=6.4						
ABTA	Abfaltersbach	22.79	292	iP	P	13 56 14.0	-0.9
	comp=Z,5.3nm,0.8s						
CLL	Collm	22.85	303	⇓iP	P	13 56 17.0	+1.6
	comp=Z,18nm,1.1s						
CLL				eS	S	14 00 26.0	+1.1
CLL	Collm	22.85	303	eP	P	13 56 17.1	+1.6
	comp=Z,17nm,1.1s						
CLL	Collm	22.85	303	⇓iP	P	13 56 17.0	+1.6
CLL				eS	S	14 00 26.0	+1.1
CLL				pmax	pmax		
	comp=Z,18nm,1.1s						
WTTA	Wattenberg	23.38	293	iP	P	13 56 22.5	+1.4
	comp=Z,15nm,1.0s						
RETA	Reutte	23.98	294	iP	P	13 56 27.3	+0.5
	comp=Z,10nm,1.5s						
FETA	Feichten	24.00	292	iP	P	13 56 27.8	+0.7
	comp=Z,13nm,1.1s						
KSH	Kashi	24.18	86	eP	P	13 56 32.3	+3.5
KSH				ePP	PnPn	13 57 05.6	+7.6
DAVA	Damuels	24.58	293	iP	P	13 56 33.7	+1.2
	comp=Z,18nm,1.4s						
DAVOX	Davos/Dischmat	24.59	292	LR	LR	14 07 35.3	
	comp=Z,70nm,18.2s,baz=84,slow=40						
KURBB	Kurchatov Arra	24.87	59	P	P	13 56 34.7	-0.1
	comp=Z,2.9nm,0.9s,baz=268,slow=9.1,SNR=21						
KURBB				PcP	PcP	14 00 09.7	-0.8
	comp=Z,0.5nm,0.7s,baz=277,slow=2.4,SNR=4.4						
KURK	Kurchatov	24.93	59	eP	P	13 56 35.6	+0.2
	comp=Z,6.2nm,1.0s						
KURK				PcP	PcP	14 00 09.7	-0.9
KURK	Kurchatov	24.93	59	P	P	13 56 34.7	-0.7
KURK						14 00 09.7	
KURK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
HFS	Hagfors	25.59	324	P	P	13 56 41.7	+0.5
	comp=Z,6.9nm,0.8s,baz=123,slow=11,SNR=9.3						
HFS				LR	LR	14 07 23.0	
	comp=Z,136nm,20.6s,baz=110,slow=38						
NB2	NORSAR Subarra	27.10	325	P	P	13 56 54.0	-0.9
	comp=Z,18nm,2.0s,baz=118,slow=9.3						
NOA	NORSAR Array B	27.10	325	P	P	13 56 54.8	-0.1
	comp=Z,2.0nm,0.9s,baz=120,slow=8.5,SNR=4.4						
NOA				LR	LR	14 08 19.5	
	comp=Z,118nm,19.8s,baz=125,slow=38						
MEM	Membach	27.17	301	⇑P	P	13 56 57.2	+1.6
MK31	Makanchi Array	27.34	68	P	P	13 56 57.9	+0.6
	comp=Z,1.0nm,0.9s,baz=272,slow=7.1,SNR=21						
MKAR	Makanchi Array	27.34	68	P	P	13 56 57.5	+0.2
	comp=Z,2.0nm,0.8s,baz=268,slow=6.1,SNR=13						
MKAR				PcP	PcP	14 00 16.2	-0.1
	comp=Z,0.8nm,0.9s,baz=294,slow=3.9,SNR=3.7						
MKAR				LR	LR	14 09 10.2	
	comp=Z,36nm,19.0s,baz=260,slow=39						
MK01	Makanchi Array	27.35	68	eP	P	13 56 57.4	0.0
ZALV	Zalesovo Beam	29.07	53	P	P	13 57 12.3	-0.2
	comp=Z,0.6nm,0.3s,baz=267,slow=10,SNR=5.3						
ZALV				LR	LR	14 10 27.3	
	comp=Z,48nm,19.6s,baz=253,slow=40						
WMQ	Urumqi	31.58	72	P	P	13 57 41.1	+6.2
WMQ				sP	sP	13 57 45.3	+6.6
WMQ				pmax	pmax		
	comp=Z,20nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,120nm,3.6s						
WMQ				LR	LR		
	comp=Z,300nm,22.9s						
WMQ				LR	LR		
	comp=Z,140nm,21.1s						
WMQ				LR	LR		
	comp=Z,190nm,21.1s						
GTA	Gaotai	41.57	75	eP	P	13 59 04.3	+4.1
GTA				pP	sP	13 59 13.5	+9.5
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SONM	Songino Array	43.21	61	P	P	13 59 13.9	+0.4
	comp=Z,0.8nm,0.4s,baz=275,slow=6.8,SNR=3.3						
ULN	Ulaanbaatar	43.63	60	eP	P	13 59 16.8	0.0
	comp=Z,6.6nm,0.8s						
ULN	Ulaanbaatar	43.63	60	eP	P	13 59 16.8	0.0
ULN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BOD	Bodaibo	45.23	45	eP	P	13 59 26.1	-3.2
BOD				pmax	pmax		
	comp=Z,7.0nm,1.0s						
TORD	Torodi Ar. Bea	46.82	244	LR	LR	14 21 30.5	
	comp=Z,43nm,18.8s,baz=270,slow=39						
TIXI	Tiksi	48.74	25	LR	LR	14 23 44.6	
	comp=Z,39nm,18.1s,baz=357,slow=40						
HHC	Hu-ho-hao-te	49.21	68	eP	P	14 00 01.1	+0.4
HHC				S	S	14 07 10.6	+4.1
HHC				pmax	pmax		
	comp=Z,19nm,0.9s						
HHC				pmax	pmax		
	comp=Z,43nm,7.4s						
HHC				LR	LR		
	comp=Z,130nm,15.7s						
HHC				LR	LR		
	comp=Z,130nm,15.7s						
HHC				LR	LR		
	comp=Z,140nm,16.7s						
KMI	Kunming	50.74	90	P	P	14 00 12.8	+0.2
KMI				pmax	pmax		
	comp=Z,13nm,0.5s						
CMAR	Chiang Mai Arr	51.98	100	P	P	14 00 22.8	+1.0
	comp=Z,0.5nm,0.4s,baz=294,slow=6.5,SNR=3.2						
GYA	Guiyang	52.88	86	eP	P	14 00 30.0	+1.5
KLR	Kul'dur	58.14	50	iP	P	14 01 05.5	-0.4
MA2	Magadan	61.89	34	LR	LR	14 32 37.9	
	comp=Z,54nm,18.8s,baz=298,slow=40						
KS01	Wonju Array Si	61.90	64	eP	P	14 01 29.6	-2.3
KSAR	Wonju Array Be	61.91	64	P	P	14 01 31.9	0.0
KSAR	Wonju Array Be	61.91	64	P	P	14 01 31.9	0.0
KSRS	Korea Array	61.93	64	P	P	14 01 31.9	-0.1
	comp=Z,2.7nm,0.9s,baz=301,slow=5.9,SNR=7.4						
KSRS	Korea Array	61.93	64	P	P	14 01 31.9	-0.1
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.7s						
JNU	Nakatsue	66.38	66	LR	LR	14 32 08.0	
	comp=Z,78nm,21.7s,baz=311,slow=37						
MJAR	Matsushiro Arr	69.14	59	LR	LR	14 33 37.3	
	comp=Z,81nm,21.5s,baz=200,slow=37						
ILAR	Eielson Array	72.74	5	P	P	14 02 40.3	+0.2
	comp=Z,1.2nm,1.2s,baz=350,slow=9.2,SNR=7.1						
YKA	Yellowknife Ar	73.98	350	P	P	14 02 47.4	0.0
	comp=Z,0.5nm,0.8s,baz=16,slow=6.4,SNR=5.6						

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*CSEM **20** 13:53:06.1, 38°.14N×23°.61E, h18^{km}, ML1.3/8*

ATH 20 13:53:06.1, 38°.14N×23°.61E, h18^{km}±5^{km}, ML1.3/8, Error ellipse: s-maj=5.4km s-min=0.9km az=117.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATH	Athens Observa	0.19	153	P	Pg	13 53 11.3	+0.3
ATH				S	Sg	13 53 14.3	0.0
ATH				AML	AML	13 53 14.9	
	comp=E,444µm,0.4s						
ATH				AML	AML	13 53 16.2	
	comp=N,315µm,0.4s						
ATH	Athens Observa	0.19	153	P	Pg	13 53 11.1	+0.1
ATH				S	Sg	13 53 14.4	+0.2
PTL	Penteli	0.22	115	P	Pb	13 53 10.7	-0.6
PTL				S	Sg	13 53 15.8	+0.6
PTL				AML	AML	13 53 16.5	
	comp=N,155µm,0.4s						
PTL				AML	AML	13 53 18.8	
	comp=E,166µm,0.5s						
PTL	Penteli	0.22	115	P	Pb	13 53 11.1	-0.2
PTL				S	Sg	13 53 15.5	+0.4
ATHU	Athens Univers	0.22	142	P	Pb	13 53 11.4	0.0
ATHU				S	Sb	13 53 14.3	-0.5
ATHU				AML	AML	13 53 15.3	
	comp=E,70µm,0.5s						
ATHU				AML	AML	13 53 20.0	
	comp=N,105µm,0.4s						
ATHU	Athens Univers	0.22	142	P	Pb	13 53 11.4	+0.1
ATHU				S	Sb	13 53 14.8	0.0
DION	Dionisos Attik	0.26	104	P	Pb	13 53 12.2	0.0
DION				AML	AML	13 53 17.0	
	comp=E,127µm,0.2s						
DION				S	Sb	13 53 17.0	+0.7
DION				AML	AML	13 53 18.9	
	comp=N,137µm,0.4s						
DION	Dionisos Attik	0.26	104	P	Pg	13 53 12.1	0.0
DION				S	Sb	13 53 16.7	+0.4
VLY	Voula,Athens	0.33	153	P	Pg	13 53 13.2	+0.1
VLY				S	Sg	13 53 17.7	-0.2
VLY				AML	AML	13 53 18.7	
	comp=E,217µm,0.3s						
VLY				AML	AML	13 53 22.1	
	comp=N,117µm,0.4s						
VLY	Voula,Athens	0.33	153	P	Pg	13 53 13.1	0.0
VLY				S	Sg	13 53 17.9	0.0
LTK	Loutraki	0.52	257	P	Pg	13 53 16.4	-0.2
LTK				S	Sn	13 53 25.5	-1.6
LTK				AML	AML	13 53 29.8	
	comp=E,97µm,0.3s						
LTK				AML	AML	13 53 31.5	
	comp=N,89µm,0.3s						
LTK	Loutraki	0.52	257	P	Pg	13 53 16.4	-0.2
LTK				S	Sb	13 53 24.7	+0.8
LKR	Lokris	0.70	317	P	Pb	13 53 19.4	-0.3
LKR	Lokris	0.70	317	P	Pb	13 53 19.5	-0.2
DID	Didima	0.70	205	P	Pg	13 53 20.1	+0.1
DID				S	Sb	13 53 28.8	-0.3
DID				AML	AML	13 53 34.0	
	comp=E,112µm,0.3s						
DID				AML	AML	13 53 34.7	
	comp=N,60µm,0.2s						
DID	Didima	0.70	205	P	Pg	13 53 19.9	0.0
DID				S	Sg	13 53 29.2	-0.1
DSF	Desfina	0.89	288	P	Pb	13 53 22.2	-0.9
DSF				AML	AML	13 53 41.7	
	comp=E,63µm,0.2s						
DSF				AML	AML	13 53 42.4	
	comp=N,75µm,0.3s						
DSF	Desfina	0.89	288	P	Pb	13 53 22.7	-0.4
SKIA	Skiathos	1.03	354	P	Pg	13 53 26.0	-0.1
SKIA				S	Sg	13 53 41.1	+1.5
SKIA	Skiathos	1.03	354	P	Pg	13 53 25.9	-0.2
SKIA				S	Sg	13 53 40.6	+1.0

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*ATH **20** 13:54:09.3, 41°.11N×20°.42E, h19^{km}±2^{km}, ML2.9/7, Error ellipse: s-maj=3.7km s-min=1.6km az=156.0*
*BEO **20** 13:54:10.2±0.9, 40°.82N×20°.67E, h9^{km}±6^{km}, ML3.0/4*
*TIR **20** 13:54:10.1, 40°.96N×20°.38E, h5^{km}, Md3.2/7*
*PDG **20** 13:54:11.4±0.5, 40°.97N×20°.47E, h12^{km}, ML3.1/10, Error ellipse: s-maj=0.5km s-min=0.9km az=0.0*
*SKO **20** 13:54:11.8, 40°.98N×20°.55E, h20^{km}, M2.6, ML2.9*
*CSEM **20** 13:54:11.4±0.1, 40°.99N×20°.51E, h2^{km}, ML3.2, Error ellipse: s-maj=3.1km s-min=1.6km az=73.0*
*THE **20** 13:54:11.3, 41°.00N×20°.49E, h2^{km}, ML3.0/8, Error ellipse: s-maj=0.8km s-min=0.4km az=83.0*

ISC 20 13:54:11.5±1.0, **40°.98N**±0°.01×**20°.49E**±0°.02, **h6**^{km}±9^{km}, **n161**, σ0^{s}96/238, **15C-12D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHR	Ohrid	0.27	61	iPg	Pb	13 54 17.7	-1.1
OHR				iSg	Sb	13 54 23.6	-0.1
OHR				eLg	Lg	13 54 23.7	
	comp=N,2µm,0.3s						
OHR				eLg	Lg	13 54 23.8	
	comp=E,4µm,0.5s						
KBN	Korca	0.42	147	P	Pg	13 54 19.8	0.0
KBN				S	Sg	13 54 26.1	+0.8
KBN	Korca	0.42	147	P	Pg	13 54 19.8	0.0
KBN				S	Sg	13 54 26.1	+0.8
KBN	Korca	0.42	147	iPG	Pg	13 54 19.7	0.0
KBN				iSG	Sg	13 54 26.3	+1.0
KRUS	Krusevo	0.69	56	iPg	Pg	13 54 24.9	0.0
KRUS				iSg	Sb	13 54 35.8	-0.2
FNA	Florina	0.70	106	P	Pg	13 54 25.0	0.0
FNA				S	Sb	13 54 35.1	-1.0
FNA	Florina	0.70	106	P	Pg	13 54 25.0	0.0
FNA				S	Sb	13 54 35.1	-1.0
PHP	Peshkopia	0.70	357	P	Pg	13 54 24.1	-1.0
PHP	Peshkopia	0.70	357	P	Pg	13 54 24.1	-1.0
PHP	Peshkopia	0.70	357	iPg	Pg	13 54 24.4	-0.7
PHP				iSg	Sb	13 54 35.2	-1.0
PHP	Peshkopia	0.70	357	iPG	Pg	13 54 24.4	-0.6
PHP				iSG	Sb	13 54 35.2	-1.0
NEST	Nestorio	0.71	143	P	Pg	13 54 24.7	-0.5
NEST				S	Sn	13 54 38.2	-1.2
NEST				AML	AML	13 54 41.6	
	comp=N,1189µm,0.4s						
NEST				AML	AML	13 54 43.2	
	comp=E,1102µm,0.5s						
NEST	Nestorio	0.71	143	P	Pg	13 54 24.7	-0.5
NEST				S	Sb	13 54 35.4	-1.0
NEST	Nestorio	0.71	143	P	Pg	13 54 24.7	-0.5
NEST				S	Sb	13 54 35.4	-1.0
PENT	Pentalofos	0.93	147	P	Pg	13 54 29.3	-0.1
PENT				S	Sb	13 54 43.3	+0.6
PENT				AML	AML	13 54 47.9	
	comp=E,950µm,0.5s						
PENT				AML	AML	13 54 51.6	
	comp=N,978µm,0.5s						
PENT	Pentalofos	0.93	147	P	Pg	13 54 29.4	+0.1
PENT				S	Sn	13 54 43.8	-1.1
PUK	Puka	1.15	337	iSg	Sg	13 54 48.2	-0.3
PUK	Puka	1.15	337	iSG	Pg	13 54 32.2	-1.4
PUK				iSG	Sg	13 54 48.2	-0.3
SRN	Sarande	1.16	199	P	Pb	13 54 33.2	-0.8
SRN				S	Sn	13 54 51.1	+0.7
SRN	Sarande	1.16	199	iPg	Pb	13 54 32.2	-1.8
SRN	Sarande	1.16	199	P	Pb	13 54 33.2	-0.8
SRN				iSg	Sg	13 54 47.2	-1.6
SRN				S	Sn	13 54 51.1	+0.7
SRN	Sarande	1.16	199	iPG	Pb	13 54 32.2	-1.8
SRN				iSG	Sg	13 54 47.2	-1.6
KZN	Kozani	1.19	124	P	Pg	13 54 33.5	-0.8
KZN				S	Sn	13 54 54.0	+2.8
KZN	Kozani	1.19	124	P	Pg	13 54 33.7	-0.6
KZN				S	Sn	13 54 51.8	+0.6
KZN	Kozani	1.19	124	P	Pg	13 54 33.7	-0.6
KZN				S	Sn	13 54 51.8	+0.6
SKO	Skopje	1.22	36	ePg	Pg	13 54 34.9	0.0
SKO				eSg	Sb	13 54 50.3	-0.8
SKO	Skopje	1.22	36	P	Pb	13 54 34.6	-0.4
SKO	Skopje	1.22	36	⇑iPg	Pg	13 54 35.0	0.0
SKO				eSg	Sn	13 54 52.6	+0.6
SKO	Skopje	1.22	36	P	Pb	13 54 34.6	-0.4
SKO	Skopje	1.22	36	ePg	Pg	13 54 34.9	0.0
SKO				eSg	Sb	13 54 50.3	-0.8
KPRO	Kipourio	1.22	147	P	Pb	13 54 34.2	-0.8
KPRO				S	Sn	13 54 53.2	+1.1
KPRO				AML	AML	13 55 01.4	
	comp=N,1325µm,0.9s						
KPRO				AML	AML	13 55 02.9	
	comp=E,1161µm,0.5s						
KPRO	Kipourio	1.22	147	P	Pb	13 54 34.3	-0.8
KPRO	Kipourio	1.22	147	P	Pb	13 54 34.3	-0.8
KPRO				S	Sn	13 54 53.4	+1.3
PRZK	Prizren	1.25	9	P	Pn	13 54 35.2	-0.3
PRZK				S	Sb	13 54 38.9	-13
KASA	Kassiopi	1.30	199	P	Pg	13 54 38.6	+2.1
KASA				S	Sb	13 54 53.5	+0.2
KASA	Kassiopi	1.30	199	P	Pg	13 54 37.3	+0.8
KASA				S	Sn	13 54 54.4	+0.5
JAN	Janina	1.35	168	P	Pn	13 54 35.9	-1.1
JAN	Janina	1.35	168	P	Pn	13 54 36.3	-0.7
JAN				S	Sg	13 54 56.5	+1.5
JAN	Janina	1.35	168	P	Pn	13 54 36.3	-0.7
JAN				S	Sg	13 54 56.5	+1.5
ULC	Ulcinj	1.35	317	⇑iPg	Pn	13 54 36.0	-1.0
ULC				eSg	Sg	13 54 57.5	+2.4
ULC	Ulcinj	1.35	317	⇑iPg	Pn	13 54 36.0	-1.0
ULC	Ulcinj	1.35	317	P	Pn	13 54 36.7	-0.3
ULC				eSg	Sg	13 54 57.5	+2.4
KEK	Kerkira	1.37	203	P	Pn	13 54 37.0	-0.2
KEK				S	Sg	13 54 58.1	+2.5
KEK				AML	AML	13 55 00.8	
	comp=N,953µm,0.6s						
KEK				AML	AML	13 55 04.1	
	comp=E,1050µm,0.9s						
KEK	Kerkira	1.37	203	P	Pn	13 54 36.7	-0.5
KEK				S	Sg	13 54 56.6	+1.0
KEK	Kerkira	1.37	203	P	Pn	13 54 37.0	-0.2
KEK				S	Sg	13 54 56.6	+1.0
SGD	Sagiada	1.38	188	P	Pn	13 54 36.1	-1.2
SGD	Sagiada	1.38	188	P	Pn	13 54 36.8	-0.5
SGD	Sagiada	1.38	188	P	Pn	13 54 36.8	-0.5
BCI	Bajram Curri	1.42	347	iPn	Pn	13 54 37.9	0.0
BCI				iSn	Sg	13 55 00.7	+3.5
BCI	Bajram Curri	1.42	347	iPN	Pn	13 54 37.9	0.0
BCI				iSN	Sg	13 55 00.7	+3.5
GRG	Griva	1.45	90	P	Pg	13 54 38.9	-0.4
GRG				S	Sg	13 54 57.9	-0.2
GRG				AML	AML	13 55 05.8	
	comp=E,441µm,0.4s						
GRG				AML	AML	13 55 09.1	
	comp=N,328µm,0.8s						
GRG	Griva	1.45	90	P	Pn	13 54 37.9	-0.4
GRG	Griva	1.45	90	P	Pn	13 54 37.9	-0.4
GRG				S	Sg	13 54 57.9	-0.2
IGT	Igoumenitsa	1.45	185	P	Pb	13 54 39.1	+0.1
IGT				S	Sg	13 55 00.7	+2.5
IGT				AML	AML	13 55 03.4	
	comp=N,643µm,0.5s						
IGT				AML	AML	13 55 05.4	
	comp=E,946µm,0.4s						
IGT	Igoumenitsa	1.45	185	P	Pn	13 54 38.4	+0.1
IGT				S	Sg	13 54 58.6	+0.4
IGT	Igoumenitsa	1.45	185	P	Pb	13 54 38.7	-0.2
IGT				S	Sg	13 54 58.6	+0.4
STIP	Stip	1.47	60	ePn	Pg	13 54 40.4	+0.8
ZATK	Zatriq	1.47	4	P	Pn	13 54 38.4	-0.2
ZATK				S	Sn	13 54 42.6	-16
DRME	Dracevica, Mon	1.55	321	⇓iPg	Pn	13 54 39.8	+0.1
DRME				eSg	Sg	13 55 02.5	+1.1
DRME	Dracevica, Mon	1.55	321	⇓iPg	Pn	13 54 39.8	+0.1
DRME				eSg	Sg	13 55 02.5	+1.1
VAY	Valandovo	1.61	77	P	Pn	13 54 39.9	-0.6
VAY	Valandovo	1.61	77	iPn	Pn	13 54 40.4	-0.1
VAY				eSg	Sg	13 55 05.1	+1.9
VAY				eLg	Lg	13 55 08.9	
	comp=N,221nm,1.0s						
VAY				eLg	Lg	13 55 09.6	
	comp=E,97nm,0.8s						
VAY	Valandovo	1.61	77	P	Pn	13 54 39.9	-0.6
PVY	Plav	1.66	346	⇑iPn	Pn	13 54 41.5	+0.2
PVY				eSn	Sg	13 55 05.0	+0.1
PVY	Plav	1.66	346	⇑iPn	Pn	13 54 41.5	+0.2
PVY				eSn	Sg	13 55 05.0	+0.1
PEJK	Peje	1.67	355	P	Pb	13 54 41.9	-0.8
PEJK				S	Sn	13 54 47.5	-16
PDG	Podgorica	1.72	328	ePn	Pn	13 54 42.2	+0.3
PDG				eSn	Sg	13 55 07.4	+0.7
PDG	Podgorica	1.72	328	⇑iP	Pb	13 54 43.2	-0.2
PDG	Podgorica	1.72	328	ePn	Pn	13 54 42.2	+0.3
PDG				eSn	Sg	13 55 06.4	-0.3
TTG	Podgorica	1.72	328	⇓iPn	Pn	13 54 42.5	+0.6
TTG				eSn	Sg	13 55 06.4	-0.3
LIT	Litokhoron	1.76	119	P	Pn	13 54 42.8	+0.2
LIT	Litokhoron	1.76	119	P	Pn	13 54 42.1	-0.5
LIT	Litokhoron	1.76	119	P	Pn	13 54 42.1	-0.5
BUM	Brajici-Budva	1.78	318	⇑iPn	Pn	13 54 42.9	0.0
BUM				eSn	Sg	13 55 08.0	-0.7
BUM	Brajici-Budva	1.78	318	⇑iPn	Pn	13 54 42.9	0.0
BUM				eSn	Sg	13 55 08.0	-0.7
THL	Klokotos Trika	1.83	140	P	Pb	13 54 44.9	-0.5
THL				S	Sb	13 55 08.0	-0.7
THL				AML	AML	13 55 16.0	
	comp=E,220µm,0.4s						
THL				AML	AML	13 55 18.5	
	comp=N,372µm,0.7s						
THL	Klokotos Trika	1.83	140	P	Pn	13 54 43.5	0.0
THL	Klokotos Trika	1.83	140	P	Pn	13 54 43.5	0.0
THL				S	Sb	13 55 08.6	-0.1
DSL	Palaion Diasel	1.90	166	P	Pn	13 54 45.0	+0.5
DSL	Palaion Diasel	1.90	166	P	Pn	13 54 45.0	+0.5
BEY	Berane	1.94	347	⇓iPn	Pn	13 54 45.8	+0.7
BEY	Berane	1.94	347	P	Pg	13 54 49.3	+0.6
BEY				eSn	Sb	13 55 12.1	+0.3
IVA	Berane	1.94	347	⇓iPn	Pn	13 54 45.8	+0.7
IVA				eSn	Sb	13 55 12.1	+0.3
CEME	Cevo	1.96	324	⇑iPn	Pn	13 54 45.4	+0.1
CEME				eSn	Sb	13 55 12.3	+0.1
CEME	Cevo	1.96	324	⇑iPn	Pn	13 54 45.4	+0.1
CEME				eSn	Sb	13 55 12.3	+0.1
KOME	Kolasin	2.00	339	ePn	Pb	13 54 47.0	-1.4
KOME				eSn	Sb	13 55 13.5	-0.1
KOME	Kolasin	2.00	339	ePn	Pb	13 54 47.0	-1.4
KOME				eSn	Sb	13 55 13.5	-0.1
HORT	Hortiatis	2.02	100	P	Pn	13 54 44.7	-1.5
HORT	Hortiatis	2.02	100	P	Pn	13 54 45.2	-1.0
BARS	Barje	2.08	28	ePn	Pn	13 54 46.7	-0.3
BARS				eSn	Sn	13 55 13.9	+0.6
BARS	Barje	2.08	28	ePn	Pn	13 54 46.7	-0.3
BARS				eSn	Sn	13 55 13.9	+0.6
HCY	Herceg Novi	2.09	315	⇓iPn	Pn	13 54 46.6	-0.5
HCY				eSn	Sb	13 55 15.5	-0.6
HCY	Herceg Novi	2.09	315	⇓iPn	Pn	13 54 46.6	-0.5
HCY				eSn	Sb	13 55 15.5	-0.6
NKME	Niksic	2.12	328	⇓iPn	Pn	13 54 48.0	+0.5
NKME				eSn	Sb	13 55 16.4	-0.6
NKME	Niksic	2.12	328	⇓iPn	Pn	13 54 48.0	+0.5

NKME				eSn	Sb	13 55 16.4	-0.6
LKD2	Lefkada island	2.19	177	P	Pn	13 54 49.2	+0.7
LKD2	Lefkada island	2.19	177	P	Pn	13 54 49.0	+0.5
LKD2	Lefkada island	2.19	177	P	Pn	13 54 49.1	+0.5
SELS	Selova	2.29	12	ePn	Pn	13 54 49.9	+0.1
CGL1	Ceglie Messapi	2.31	263	ePn	Pb	13 54 52.5	-1.0
CGL1				Sn	Sb	13 55 21.6	-0.7
SJES	Sjenica	2.31	351	ePn	Pb	13 54 52.3	-1.4
SJES				eSn	Sb	13 55 22.6	+0.1
EVGI	Lefkada island	2.36	177	P	Pn	13 54 50.9	+0.1
EVGI	Lefkada island	2.36	177	P	Pn	13 54 50.9	+0.1
FASA	Fasano	2.38	267	ePn	Pb	13 54 52.9	-1.9
FASA				Sn	Sb	13 55 23.4	-1.0
BRY	Bratogost	2.41	324	⇑iPn	Pn	13 54 52.0	+0.4
BRY				eSn	Sn	13 55 22.9	+1.5
BRY	Bratogost	2.41	324	⇑iPn	Pn	13 54 52.0	+0.4
BRY				eSn	Sn	13 55 22.9	+1.5
AGG	Agios Georgios	2.42	144	P	Pn	13 54 51.8	+0.2
AGG	Agios Georgios	2.42	144	P	Pn	13 54 51.8	+0.2
PDO	Prodromos	2.44	167	P	Pn	13 54 52.5	+0.6
PDO	Prodromos	2.44	167	P	Pn	13 54 52.5	+0.6
PLE	Pljevlja	2.48	341	⇑iPn	Pn	13 54 52.9	+0.3
PLE				eSn	Sn	13 55 24.8	+1.5
PLE	Pljevlja	2.48	341	⇑iPn	Pn	13 54 52.9	+0.3
PLE				eSn	Sn	13 55 24.8	+1.5
PVO	Paravola	2.49	161	P	Pn	13 54 53.2	+0.6
PVO	Paravola	2.49	161	P	Pn	13 54 53.2	+0.6
UPM	Unac-Piva	2.51	333	⇓iPn	Pn	13 54 53.3	+0.2
UPM				eSn	Sn	13 55 25.8	+1.7
UPM	Unac-Piva	2.51	333	⇓iPn	Pn	13 54 53.3	+0.2
UPM				eSn	Sn	13 55 25.8	+1.7
FSK	Fiskardo	2.52	179	P	Pn	13 54 52.5	-0.5
MASS	Massafra	2.56	263	ePn	Pn	13 54 53.2	-0.3
VTS	Vitosha	2.59	51	P	Pn	13 54 53.1	-1.1
VTS	Vitosha	2.59	51	P	Pn	13 54 53.1	-1.1
IVAS	Ivanjica	2.60	355	ePn	Pn	13 54 55.5	+1.3
IVAS	Ivanjica	2.60	355	ePn	Pn	13 54 55.5	+1.3
ANX	Ano Chora	2.63	155	P	Pn	13 54 55.2	+0.6
ANX	Ano Chora	2.63	155	P	Pn	13 54 55.2	+0.6
BAI	Bari	2.73	274	ePn	Pn	13 54 53.7	-2.2
EFP	Efpalio	2.78	156	P	Pn	13 54 56.7	+0.2
EFP	Efpalio	2.78	156	P	Pn	13 54 56.7	+0.2
ZAPS	Zavoj	2.79	34	ePn	Pn	13 54 56.8	0.0
BOVS	Bovan	2.80	18	ePn	Pn	13 54 56.4	-0.5
BOVS	Bovan	2.80	18	ePn	Pn	13 54 56.4	-0.5
STON	Ston	2.81	313	ePn	Pn	13 54 55.9	-1.0
STON				Sn	Sn	13 55 30.8	-0.3
SERG	Sergoula	2.84	154	P	Pn	13 54 57.8	+0.4
SERG	Sergoula	2.84	154	P	Pn	13 54 57.8	+0.4
KFL	Anninata	2.88	175	P	Pn	13 54 57.7	-0.2
KFL	Anninata	2.88	175	P	Pn	13 54 57.7	-0.2
KALE	Kalithea	2.88	153	P	Pn	13 54 58.1	+0.1
KALE	Kalithea	2.88	153	P	Pn	13 54 58.1	+0.1
TRIZ	Trizonia	2.88	154	P	Pn	13 54 58.1	+0.1
TRIZ	Trizonia	2.88	154	P	Pn	13 54 58.1	+0.1
MATE	Matera	2.89	265	⇓iP	Pb	13 55 04.7	+1.3
SG1	Sgolgore (BA)	2.89	268	ePn	Pn	13 54 55.4	-2.7
GRUS	Gruza	2.91	3	ePn	Pn	13 54 57.9	-0.5
GRUS	Gruza	2.91	3	ePn	Pn	13 54 57.9	-0.5
BBLS	Lazići	2.99	345	ePn	Pn	13 55 00.9	+1.4
BBLS	Lazići	2.99	345	ePn	Pn	13 55 00.9	+1.4
ZAGS	Zajecar	3.11	24	ePn	Pn	13 55 01.3	+0.2
ZAGS	Zajecar	3.11	24	ePn	Pn	13 55 01.3	+0.2
DIVS	Divibare	3.14	353	ePn	Pn	13 55 03.0	+1.5
DIVS	Divibare	3.14	353	ePn	Pn	13 55 03.0	+1.5
TRUS	Trudelj	3.24	359	ePn	Pn	13 55 03.1	+0.2
TRUS	Trudelj	3.24	359	ePn	Pn	13 55 03.1	+0.2
TIP	Timpagrande	3.38	239	⇑iP	Pg	13 55 16.1	-0.2
MS1	Monte Sant'Ang	3.50	283	ePn	Pn	13 55 04.1	-2.4
KUBS	Kucevo	3.54	14	ePn	Pn	13 55 05.1	-1.9
KUBS	Kucevo	3.54	14	ePn	Pn	13 55 05.1	-1.9
TEKS	Tekeris	3.63	349	ePn	Pn	13 55 09.7	+1.4
TEKS	Tekeris	3.63	349	ePn	Pn	13 55 09.7	+1.4
FGSL	Fruska Gora	4.20	353	ePn	Pn	13 55 16.9	+0.8
FRGS	Fruska Gora	4.20	353	ePn	Pn	13 55 16.9	+0.8
UDBI	Udbina	4.96	317	ePn	Pn	13 55 26.7	+0.1
NVLJ	Novalja	5.47	313	ePn	Pn	13 55 32.4	-1.0

ISCJB **20** *14:03:11.2±0.4, 21°.24S±0°.03×179°.28W±0°.02, h607^{km}±6^{km}, mb5.3/169, Error ellipse: s-maj=4.6km s-min=2.9km az=165.2*

MOS **20** *14:03:11.6±0.8, 21°.16S×179°.26W, h611^{km}, mb5.4/19, MS4.1/6, Error ellipse: s-maj=8.8km s-min=8.0km az=76.0*

BJI **20** *14:03:12.7, 20°.69S×179°.07W, h615^{km}, mb5.2/60, mB5.1/38*

WEL **20** *14:03:13.0, 21°.22S×179°.29W, h625^{km}*

GCMT **20** *14:03:13.8±0.2, 21°.26S×179°.30W, h639^{km}±1^{km}, MW5.5/97, Moment Tensor Solution. s97,c150; s18,c18; Duration: 1^{s}4 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.08±.03; $M_{\theta\theta}$-0.02±.05; $M_{\phi\phi}$0.09±.05; $M_{r\theta}$-0.64±.05; $M_{\theta\phi}$0.11±.05; $M_{\phi r}$-2.17±.04; Best double couple: $M_0$2.26600×10^{17} NP1:ϕ_s16.00000°, δ89.00000°, λ-92.00000°. NP2:ϕ_s245.00000°, δ2.00000°, λ-42.00000°. Principal axes: T 2.3000, Plg44.0000°, Azm108.0000°; N -0.0690, Plg2.0000°, Azm16.0000°; P -2.2310, Plg46.0000°, Azm285.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to mantle waves, cutoff=125s.*

NEIC **20** *14:03:13.8±0.5, 21°.22S×179°.29W, h625^{km}±6^{km}, mb5.6/65, MW5.6 Error ellipse: s-maj=4.5km s-min=3.3km az=163.0, Moment Tensor Solution. s19 Moment tensor: Scale 10^{17}Nm; M_{rr}0.17; $M_{\theta\theta}$-0.10; $M_{\phi\phi}$-0.07; $M_{r\theta}$-0.77; $M_{\theta\phi}$0.17; $M_{\phi r}$-2.59; Best double couple: $M_0$2.70000×10^{17} NP1: ϕ_s196.00000°, δ89.00000°, λ93.00000°. NP2: ϕ_s301.00000°, δ3.00000°, λ15.00000°. Principal axes: T 2.8000, Plg46.0000°, Azm109.0000°; N -0.2000, Plg3.0000°, Azm16.0000°; P -2.6000, Plg44.0000°, Azm283.0000°;*

IDC **20** *14:03:14.1±0.4, 21°.22S×179°.21W, h629^{km}±4^{km}, mb4.7/39, mb1 4.7/42, mb1mx4.6/52, mbtmp5.6/42 Error ellipse: s-maj=7.5km s-min=7.1km az=33.0*

ISC 20 14:03:13.1±0.3**, 21°.24S**±0°.04×**179°.14W**±0°.04**, h625**^{km}±3^{km}**, h627**^{km}**:pP-P, n975,** σ**1**^{s}**49**/1106**, mb5.4**/169**, 59C-53D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RIZ	Raoul Island	8.05	172	P	P	14 05 13.2	-0.4
RIZ				S	S	14 06 51.5	-1.0
RAO	Raoul Island	8.06	172	P	P	14 05 13.2	-0.6
	115nm,0.3s,baz=322,slow=20,SNR=6.4						
RAO				S	S	14 06 47.4	-5.3
	119nm,0.3s,baz=281,slow=23,SNR=3.6						
GLKZ	Green Lake	8.07	172	P	P	14 05 13.4	-0.5
GLKZ				S	S	14 06 50.8	-2.0
NIUE	Niue	8.92	78	P	P	14 05 22.3	+0.2
	baz=8.9,SNR=26						
AFI	Afiamalu	10.12	45	P	P	14 05 31.7	-2.0
	50nm,0.3s,baz=103,slow=1.0,SNR=62						
AFI				S	S	14 07 23.0	-6.1
	8.6nm,0.3s,baz=17,slow=23,SNR=8.4						
FUNA	Funafuti	12.74	353	eP	P	14 05 58.7	-0.3
DZM	Mont Dzumac	13.43	264	P	P	14 06 06.1	+0.4
	20nm,0.3s,baz=109,slow=6.4,SNR=125						
DZM				S	S	14 08 27.0	0.0
	baz=19,slow=21,SNR=7.9						
DZM				ScP	ScP	14 13 19.6	+2.4
	0.5nm,0.3s,baz=213,slow=20,SNR=9.1						
DZM	Mont Dzumac	13.43	264	eP	P	14 06 06.2	+0.4
	354nm,1.1s						
NFK	Norfolk Island	14.04	234	P	P	14 06 13.7	+2.3
	baz=14,SNR=13						
OUZ	Omahuta	15.32	203	eP	P	14 06 26.5	+3.5
	113nm,0.7s						
OUZ	Omahuta	15.32	203	P	P	14 06 26.0	+3.0
WCZ	Waipu Caves	15.72	200	P	P	14 06 29.7	+3.1
KUZ	Kuaotunu	16.09	195	P	P	14 06 32.0	+2.1
MXZ	Matakaoa Point	16.42	187	P	P	14 06 31.6	-1.4
WMGZ	Waiomatatini S	16.66	187	P	S	14 09 15.8	-3.7
HAZ	Te Kaha	16.68	189	P	S	14 09 16.0	-3.8
RUGZ	Raukumara Rang	16.90	189	P	S	14 09 21.1	-2.5
PUZ	Puketiti	16.93	187	P	S	14 09 20.4	-3.5
TWGZ	Tauwhareparae	17.07	188	P	S	14 09 23.7	-2.5
URZ	Urewera	17.27	190	P	P	14 06 39.1	-1.7
	17nm,0.3s,baz=274,slow=3.6,SNR=93						
URZ				S	S	14 09 22.4	-7.0
	3.8nm,0.3s,baz=226,slow=18,SNR=13						
URZ				ScP	ScP	14 13 24.1	+0.2
	2.2nm,0.3s,baz=254,slow=4.8,SNR=5.7						
URZ	Urewera	17.27	190	eP	P	14 06 39.2	-1.6
	61nm,0.4s						
URZ				S	S	14 09 22.4	-7.0
URZ				ScP	ScP	14 13 24.1	+0.2
MWZ	Matawai	17.28	189	P	S	14 09 24.1	-5.6
TKGZ	Te Karaka	17.34	188	P	S	14 09 26.3	-4.2
RAGZ	Rawiri	17.46	189	P	S	14 09 32.5	-0.1
RIGZ	Rimuhau	17.61	188	P	S	14 09 30.4	-4.6
RTZ	Ruatahuna	17.64	190	P	S	14 09 31.1	-4.4
RAHZ	Arahi	17.92	190	P	S	14 09 37.2	-2.7
KNZ	Kokohu	17.94	188	P	S	14 09 36.0	-4.1
HIZ	Hauiti	17.98	195	P	P	14 06 49.9	+2.7
WHHZ	Waihua	18.05	189	P	S	14 09 38.9	-3.1
RAR	Rarotonga	18.06	93	P	P	14 06 49.1	+0.9
	2.9nm,0.3s,baz=249,slow=6.3,SNR=16						
RAR	Rarotonga	18.06	93	eP	P	14 06 49.2	+1.0
	288nm,1.2s						
BKZ	Black Stump Fm	18.26	191	eP	P	14 06 48.4	-1.4
	68nm,1.7s						
BKZ	Black Stump Fm	18.26	191	P	S	14 09 44.2	-1.2
NGZ	Ngauruhoe	18.44	193	P	P	14 06 51.8	+0.2
KWHZ	Kaweka Forest	18.52	191	P	P	14 06 50.2	-2.0
KWHZ				S	S	14 09 45.6	-4.1
WHVZ	Whangaehu Hut	18.55	193	P	P	14 06 51.8	-0.9
VRZ	Vera Road	18.58	195	P	P	14 06 55.2	+2.5
PKVZ	Pokaka	18.61	194	P	P	14 06 52.5	-0.5
MOVZ	Moawhango	18.63	192	P	P	14 06 52.4	-0.8
BHHZ	Black Hill Sta	18.65	192	P	P	14 06 51.8	-1.5
BHHZ				S	S	14 09 46.1	-5.6
MTVZ	Mangateitei	18.67	193	P	P	14 06 53.2	-0.3
KRHZ	Kereru	18.75	191	P	P	14 06 52.8	-1.4
KAHZ	Kahuranaki	18.81	190	P	P	14 06 54.5	-0.3
LREZ	Lake Rotokare	18.99	196	P	P	14 06 58.7	+2.4
PNHZ	Pukenui	19.04	191	P	P	14 06 55.5	-1.4
NMEZ	Namu Road	19.08	197	P	P	14 07 00.4	+3.2
WAZ	Wanganui	19.13	194	P	P	14 06 57.7	0.0
WPHZ	Waipukurau	19.14	190	P	P	14 06 58.0	+0.3
TSZ	Takapari Road	19.22	191	P	P	14 06 57.6	-0.9
PRHZ	Porangahau	19.31	190	P	P	14 06 59.2	0.0
DVHZ	Dannevirke	19.42	191	P	P	14 06 59.6	-0.6
ANWZ	Angora Road	19.52	190	P	P	14 07 01.1	-0.1
PRWZ	Pori Road	19.70	191	P	P	14 07 02.3	-0.5
BFZ	Birch Farm	19.78	190	P	P	14 07 02.5	-1.0
MRZ	Mangatainoka R	19.88	192	P	P	14 07 02.5	-1.9
TIWZ	Tintock	19.93	191	P	P	14 07 04.6	-0.3
OGWZ	Otaki Gorge	20.11	193	P	P	14 07 05.2	-1.3
HOWZ	Holdsworth Sta	20.12	192	P	P	14 07 05.3	-1.2
KIW	Kapiti Island	20.20	193	P	P	14 07 06.1	-1.2
DUWZ	D'Urville Isla	20.38	195	P	P	14 07 08.1	-0.7
CAW	Cannon Point	20.41	193	P	P	14 07 08.0	-1.1
TRWZ	Traveller	20.57	191	P	P	14 07 09.7	-0.9
PAWZ	Paruwai Farm	20.60	192	P	P	14 07 10.2	-0.7
MSWZ	Moikau Station	20.67	192	P	P	14 07 10.5	-1.0
BHW	Baring Head	20.74	193	P	P	14 07 11.4	-0.7
PLWZ	Palliser	20.82	192	P	P	14 07 11.7	-1.2
NNZ	Nelson	20.90	196	P	P	14 07 12.6	-0.9
THZ	Tophouse	21.54	196	eP	P	14 07 19.5	+0.2
	32nm,1.0s						
KHZ	Kahutara	22.00	195	eP	P	14 07 22.6	-0.6
	28nm,0.8s						
LHI	Lord Howe Isla	22.01	238	eP	P	14 07 25.8	+2.2
	263nm,0.9s						
LTZ	Lake Taylor	22.66	197	eP	P	14 07 28.5	-0.7
	25nm,0.7s						
OXZ	Oxford	23.23	196	eP	P	14 07 33.8	-0.4
	37nm,0.7s						
HNR	Honiara	23.30	297	P	P	14 07 34.7	-0.5
	297nm,0.5s,baz=151,slow=5.2,SNR=49						
HNR	Honiara	23.30	297	eP	P	14 07 35.2	0.0
	341nm,0.6s						
HNR				eS	S	14 11 08.9	+3.3
HNR				LR	LR		
	comp=Z,701nm,22.0s						
HNR	Honiara	23.30	297	eP	P	14 07 35.2	0.0
HNR				eS	S	14 11 08.9	+3.3
HNR				pmax	pmax		
	comp=Z,341nm,0.6s						
HNR				MLR	MLR		
	comp=Z,701nm,22.0s						
TARA	Tarawa	23.76	340	eP	P	14 07 39.9	+0.7
	comp=Z,869nm,1.4s						
RPZ	Rata Peaks	23.86	198	P	P	14 07 39.6	-0.2
	comp=Z,8.9nm,0.3s,baz=227,slow=4.9,SNR=19						
RPZ				ScP	ScP	14 13 39.6	-0.5
	comp=Z,6.8nm,0.4s,baz=344,slow=2.2,SNR=8.5						
LBZ	Lake Benmore	24.72	199	eP	P	14 07 47.7	+0.3
	comp=Z,104nm,1.8s						
WKZ	Wanaka	25.48	200	eS	S	14 11 38.1	-1.0
MLZ	Mavora Lakes	26.25	201	eP	P	14 08 02.5	+1.7
	comp=Z,96nm,0.8s						
DCZ	Deep Cove	26.66	202	eP	P	14 08 05.3	+1.0
	comp=Z,59nm,1.0s						
WHZ	Wether Hill Ro	26.77	200	eP	P	14 08 06.1	+0.8
	comp=Z,149nm,0.9s						
TBI	Tubuai	27.52	100	eP	P	14 08 13.7	+1.5
	comp=Z,272nm,0.9s						
TBI				epP	pP	14 09 44.3	-4.4
	comp=Z,246nm,1.2s						
TBI				eScP	ScP	14 13 49.4	-1.8
	comp=Z,73nm,0.9s						
EIDS	Eidsvold	27.62	256	P	P	14 08 13.5	+0.4
	baz=28,SNR=152						
EIDS	Eidsvold	27.62	256	eP	P	14 08 13.6	+0.4
	comp=Z,234nm,1.0s						
ARMA	Armidale	27.79	245	P	P	14 08 16.0	+1.5
	baz=28,SNR=65						
ARMA	Armidale	27.79	245	eP	P	14 08 16.1	+1.5
	comp=Z,122nm,0.7s						
PAE	Paea	28.08	88	eP	P	14 08 18.0	+0.9
	comp=Z,25nm,1.1s						
PAE				epP	pP	14 09 48.8	-5.1
	comp=Z,31nm,1.3s						
PAE				eScP	ScP	14 13 51.0	-2.1
	comp=Z,20nm,1.3s						
PPT2	Papeete2	28.10	88	eP	P	14 08 18.4	+1.0
	comp=Z,165nm,1.2s						
PPT2				epP	pP	14 09 49.2	-4.9
PPT2				eScP	ScP	14 13 51.2	-2.0
	comp=Z,51nm,1.2s						
PPT	Papeete	28.11	88	P	P	14 08 18.4	+1.0
	comp=Z,120nm,0.6s,baz=55,slow=3.9,SNR=41						
PPT	Papeete	28.11	88	eP	P	14 08 18.6	+1.2
PPTF	Pamatai, Papee	28.11	88	eP	P	14 08 18.4	+1.0
	comp=Z,140nm,0.8s						
TIAR	Tiarei	28.32	88	eP	P	14 08 20.3	+1.1
	comp=Z,44nm,0.8s						
TIAR				epP	pP	14 09 51.1	-5.0
	comp=Z,94nm,1.4s						
TIAR				eScP	ScP	14 13 51.8	-2.1
	comp=Z,27nm,1.0s						
TVO	Taravao	28.36	88	eP	P	14 08 20.5	+0.9
	comp=Z,33nm,0.7s						
TVO				epP	pP	14 09 51.6	-5.0
	comp=Z,99nm,1.4s						
MGCD	Mangrove Creek	28.91	239	P	P	14 08 25.7	+1.6
	baz=29,SNR=9.9						
RMQ	Roma	29.77	254	P	P	14 08 33.0	+1.3
	baz=30,SNR=121						
PMOR	Pomariorio Ree	30.30	83	eP	P	14 08 37.0	+0.8
	comp=Z,384nm,1.1s						
PMOR				eScP	ScP	14 13 58.0	-2.3
	comp=Z,100nm,0.9s						
VAH	Vaihoa	30.49	84	eP	P	14 08 38.3	+0.5
	comp=Z,424nm,1.2s						
VAH				eScP	ScP	14 13 58.7	-2.2
	comp=Z,109nm,1.1s						
CNB	Canberra Magne	30.93	236	P	P	14 08 42.6	+1.1
	baz=31,SNR=110						
CAN	Canberra	31.21	236	eP	P	14 08 43.8	0.0
	comp=Z,195nm,1.1s						
CAN	Canberra	31.21	236	eP	P	14 08 43.8	0.0
CAN				pmax	pmax		
	comp=Z,195nm,1.1s						
YNG	Young	31.39	239	P	P	14 08 46.2	+0.9
	baz=32,SNR=10						
MILA	Mila	31.68	233	P	P	14 08 48.6	+0.9
	baz=32,SNR=11						
CTA	Charters Tower	32.36	266	P	P	14 08 54.3	+0.6
	comp=Z,287nm,0.4s,baz=90,slow=10,SNR=987						
CTA				ScP	ScP	14 14 09.5	+2.2
	comp=Z,20nm,0.8s,baz=128,slow=1.7,SNR=6.2						
CTAO	Charters Tower	32.36	266	eP	P	14 08 54.2	+0.6
	comp=Z,352nm,0.5s						
CTAO	Charters Tower	32.36	266	eP	P	14 08 54.2	+0.5
CTAO				pmax	pmax		
	comp=Z,352nm,0.5s						
CMSA	Cobar Meteorol	33.00	245	P	P	14 08 59.6	+0.7
	baz=33,SNR=295						
QLP	Quilpie	33.82	254	P	P	14 09 06.3	+0.5
	baz=34,SNR=274						
PMG	Port Moresby	34.48	285	P	P	14 09 11.8	+0.4
	comp=Z,417nm,0.8s,baz=77,slow=6.2,SNR=80						
PMG				ScP	ScP	14 14 16.7	+1.7
	comp=Z,20nm,1.0s,baz=322,slow=5.8,SNR=4.1						
MTSU	Mount Surprise	34.49	269	P	P	14 09 12.1	+0.6
	baz=34,SNR=514						
TOO	Toolangi	34.60	234	P	P	14 09 13.0	+0.8
	baz=35,SNR=81						
MOO	Moorlands	35.23	225	P	P	14 09 18.1	+0.9
	baz=35,SNR=7.5						
PATS	Pohnpei	35.61	319	P	P	14 09 22.0	+1.2
	baz=36,SNR=6.1						
PATS	Pohnpei	35.61	319	eP	P	14 09 17.2	-3.5
	comp=Z,472nm,1.6s						
STKA	Stephens Creek	36.51	245	P	P	14 09 28.8	+0.9
	comp=Z,120nm,0.6s,baz=92,slow=10,SNR=353						
STKA				ScP	ScP	14 14 24.5	+2.3
	comp=Z,7.7nm,0.7s,baz=81,slow=6.5,SNR=3.8						
STKA	Stephens Creek	36.51	245	P	P	14 09 28.8	+0.9
	baz=37,SNR=334						
STKA	Stephens Creek	36.51	245	eP	P	14 09 28.8	+0.9
	comp=Z,45nm,0.9s						
STKA				eS	S	14 14 24.7	-2.8
STKA	Stephens Creek	36.51	245	eP	P	14 09 28.8	+0.9
STKA				eS	S	14 14 24.7	-2.8
STKA				pmax	pmax		
	comp=Z,45nm,0.9s						
COEN	Coen	36.57	275	P	P	14 09 29.5	+0.9
	baz=37,SNR=219						
COEN	Coen	36.57	275	eP	P	14 09 29.6	+0.9
	comp=Z,285nm,0.8s						
ARPS	Mount Arapiles	37.19	237	P	P	14 09 33.8	+0.4
	baz=37,SNR=27						
MANU	Manus Island	37.79	296	eP	P	14 09 39.2	+0.7
	comp=Z,221nm,0.8s						
QIS	Mount Isa	38.47	263	P	P	14 09 43.7	-0.2
	baz=38,SNR=108						
HTT	Hallett	38.94	243	P	P	14 09 48.1	+0.5
	baz=39,SNR=84						
TAOE	Nuku Hiva Isla	39.50	78	eP	P	14 09 50.5	-1.9
	comp=Z,400nm,1.1s						
RKT	Rikitea	40.83	101	eP	P	14 10 03.9	+1.2
	comp=Z,105nm,0.8s						
BBOO	Buckleboo	41.26	244	P	P	14 10 06.2	+0.2
	baz=41,SNR=214						
BBOO	Buckleboo	41.26	244	eP	P	14 10 05.9	-0.1
	comp=Z,250nm,0.6s						
WAKE	Wake Island	42.60	340	eP	P	14 10 14.8	-1.7
	comp=Z,435nm,1.3s						
AS01	Alice Springs	43.27	258	eP	P	14 10 20.5	-1.3
JAY	Jayapura	43.27	290	P	P	14 10 21.4	-0.6
AS31	Alice Springs	43.31	258	eP	P	14 10 22.3	+0.2
	comp=Z,156nm,0.3s						
ASAR	Alice Springs	43.31	258	P	P	14 10 22.3	+0.2
	comp=Z,357nm,0.7s,baz=91,slow=7.7,SNR=4749						
ASAR				PcP	PcP	14 11 56.6	+0.2
	comp=Z,27nm,0.6s,baz=105,slow=3.9,SNR=5.4						
ASAR				ScP	ScP	14 14 51.1	+1.9
	comp=Z,25nm,0.7s,baz=106,slow=4.2,SNR=14						
ASAR				S	S	14 16 03.5	-2.8
	comp=Z,31nm,0.9s,baz=95,slow=15,SNR=23						
ASAR				ScS	ScS	14 19 08.4	-4.4
	comp=Z,7.2nm,1.0s,baz=64,slow=4.9,SNR=4.5						
WB2	Warramunga Arr	43.43	263	eP	P	14 10 21.4	-1.6
WRAB	Tennant Creek	43.44	263	eP	P	14 10 22.7	-0.4
	comp=Z,469nm,1.0s						
WRAB	Tennant Creek	43.44	263	eP	P	14 10 22.7	-0.4
WRAB				pmax	pmax		
	comp=Z,469nm,1.0s						
WRA	Warramunga Arr	43.45	263	P	P	14 10 22.7	-0.4
	comp=Z,172nm,0.3s,baz=97,slow=7.7,SNR=763						
WRA				PcP	PcP	14 11 57.6	+0.8
	comp=Z,9.2nm,0.5s,baz=91,slow=4.2,SNR=4.5						
WRA				ScP	ScP	14 14 51.5	+1.7
	comp=Z,15nm,1.0s,baz=98,slow=4.2,SNR=9.5						
WRA				S	S	14 16 04.1	-4.0
	comp=Z,13nm,0.9s,baz=102,slow=18,SNR=7.3						
WRA				ScS	ScS	14 19 09.2	-4.5
	comp=Z,1.4nm,1.0s,baz=101,slow=11,SNR=4.7						
GENI	Genyem	43.71	290	P	P	14 10 25.0	-0.2
KDU	Kakadu	46.90	272	P	P	14 10 49.2	-0.2
	baz=47,SNR=141						
SRPI	Serui, Papua	47.52	288	P	P	14 10 53.6	-0.4
BAKI	Biak	47.95	289	P	P	14 10 55.7	-1.5
FORT	Forrest	48.02	247	P	P	14 10 57.3	-0.3
	baz=48,SNR=283						
FORT	Forrest	48.02	247	eP	P	14 10 57.3	-0.3
	comp=Z,548nm,1.0s						
MTN	Manton Dam	48.11	272	P	P	14 10 57.8	-0.6
	baz=48,SNR=174						
MTN	Manton Dam	48.11	272	eP	P	14 10 57.5	-0.9
	comp=Z,356nm,0.6s						
WRKA	Warakurna	48.24	255	P	P	14 10 59.3	-0.1
	baz=48,SNR=1000						
GUMO	Guam	49.46	311	P	P	14 11 08.8	+0.4
	comp=Z,211nm,0.5s,baz=154,slow=8.6,SNR=30						
GUMO	Guam	49.46	311	eP	P	14 11 08.7	+0.4
	comp=Z,2µm,1.8s						
GUMO	Guam	49.46	311	eP	P	14 11 08.7	+0.4
GUMO				pmax	pmax		
	comp=Z,2µm,1.8s						
RKPI	Ransiki, Papua	49.51	287	P	P	14 11 07.6	-1.2
SAUI	Saumlaki	49.53	278	P	P	14 11 08.6	-0.3
SAUI	Saumlaki	49.53	278	eP	P	14 11 07.2	-1.7
	comp=Z,2µm,1.3s						
KNRA	Kununurra	49.55	267	P	P	14 11 08.9	-0.1
	baz=50,SNR=73						
FAKI	Fak Fak	50.63	284	P	P	14 11 16.9	0.0
	comp=Z,317nm,1.3s,comp=Z,4µm						
FAKI	Fak Fak	50.63	284	eP	P	14 11 14.6	-2.4
	comp=Z,444nm,1.2s						
FITZ	Fitzroy Crossi	51.87	263	P	P	14 11 26.0	+0.3
	baz=52,SNR=369						
FITZ	Fitzroy Crossi	51.87	263	eP	P	14 11 25.9	+0.1
BNDI	Bandanaira	52.11	281	P	P	14 11 28.4	+0.9
	comp=Z,636nm,0.7s,comp=Z,11µm						
SWI	Sorong	52.41	286	P	P	14 11 29.7	+0.1
	comp=Z,1µm,0.7s,comp=Z,10µm						
KMBL	Kambalda	53.28	246	P	P	14 11 35.2	-0.4
	baz=53,SNR=22						
MSAI	Masohi	53.47	282	P	P	14 11 41.5	+4.3
PALU	Palau	53.66	297	P	P	14 11 38.9	+0.5
	baz=54,SNR=8.9						
AAI	Ambon	54.01	281	P	P	14 11 40.9	0.0
	comp=Z,371nm,0.7s,comp=Z,4µm						
NLAI	Namlea	55.19	281	P	P	14 11 49.0	-0.1
	comp=Z,441nm,1.2s,comp=Z,5µm						
SOEI	Soe	55.46	273	eP	P	14 11 52.6	+1.4
	comp=Z,884nm,0.8s						
BATI	Baumata	55.88	272	P	P	14 11 55.2	+1.3
	comp=Z,248nm,0.8s,comp=Z,2µm						
LBMI	Labuha	55.89	284	P	P	14 11 54.4	+0.4
	comp=Z,466nm,1.1s,comp=Z,4µm						
TNTI	Ternate	56.62	286	P	P	14 11 59.0	0.0
	comp=Z,444nm,1.0s,comp=Z,4µm						
TNTI	Ternate	56.62	286	eP	P	14 11 59.1	+0.2
	comp=Z,446nm,1.0s						
MBWA	Marble Bar	56.65	258	eP	P	14 11 58.9	-0.2
	comp=Z,427nm,1.0s						
MBWA	Marble Bar	56.65	258	P	P	14 11 59.1	0.0
	SNR=17						
MEEK	Meekatharra	56.67	251	P	P	14 11 58.4	-0.7
	baz=57,SNR=110						
SANI	Sanana	56.68	282	P	P	14 11 58.8	-0.6
	comp=Z,323nm,0.9s,comp=Z,4µm						
KLBR	Kellerberrin	56.78	245	P	P	14 11 59.6	-0.2
	baz=57,SNR=259						
SBA	Scott Base	57.07	184	eP	P	14 12 03.7	+2.7
	comp=Z,57nm,1.0s						
NWAO	Narrogin (SRO)	57.09	244	P	P	14 12 01.9	+0.1
	comp=Z,146nm,0.9s,baz=353,slow=6.5,SNR=47						
NWAO	Narrogin (SRO)	57.09	244	P	P	14 12 01.9	+0.1
	baz=57,SNR=41						
NWAO	Narrogin (SRO)	57.09	244	eP	P	14 12 02.0	+0.1
	comp=Z,269nm,1.2s						
NWAO	Narrogin (SRO)	57.09	244	P	P	14 12 02.4	+0.5
	SNR=8.4						
VNDA	Vanda	57.09	185	P	P	14 12 03.0	+1.9
	comp=Z,5.9nm,0.5s,baz=357,slow=7.6,SNR=79						
VNDA				ScP	ScP	14 15 48.9	+1.6
	comp=Z,5.2nm,0.9s,baz=354,slow=3.5,SNR=4.8						

VNDA	Vanda	57.09	185	eP	P	14 12 03.0	+1.9
	comp=Z,67nm,1.7s						
VNDA				ScP	ScP	14 15 48.9	+1.6
VNDA	Vanda	57.09	185	eP	P	14 12 03.0	+1.9
VNDA				pmax	pmax		
	comp=Z,67nm,1.7s						
RKGY	Rocky Gully	57.16	242	P	P	14 12 02.8	+0.5
	baz=57,SNR=19						
MMRI	Maumere	57.72	273	P	P	14 12 05.9	-0.6
	comp=Z,447nm,0.8s,comp=Z,5µm						
MMRI	Maumere	57.72	273	eP	P	14 12 05.8	-0.6
	comp=Z,526nm,1.1s						
BLDU	Ballidu	57.78	246	P	P	14 12 06.4	-0.2
	baz=58,SNR=145						
MUN	Mundaring	58.05	245	P	P	14 12 08.5	+0.1
	baz=58,SNR=66						
EDFI	Ende, Flores	58.19	273	P	P	14 12 09.0	-0.7
	comp=Z,379nm,1.1s,comp=Z,3µm						
MORW	Morawa	58.56	248	P	P	14 12 11.7	-0.2
	baz=59,SNR=52						
BASI	Baing, Sumba	58.75	271	P	P	14 12 14.9	+1.6
	comp=Z,645nm,1.1s,comp=Z,8µm						
KDI	Kendari	59.03	278	P	P	14 12 14.7	-0.5
	comp=Z,143nm,1.1s,comp=Z,2µm						
H01W1	Cape Leeuwin H	59.45	241	P	P	14 12 19.4	+2.0
	baz=120,slow=6.0,SNR=20						
H01W2	Cape Leeuwin H	59.46	241	P	P	14 12 19.4	+2.0
	baz=120,slow=6.0,SNR=24						
H01W3	Cape Leeuwin H	59.46	241	P	P	14 12 19.5	+2.0
	baz=120,slow=6.0,SNR=19						
KMSI	Cibinong	59.59	284	P	P	14 12 18.9	0.0
	comp=Z,288nm,0.9s,comp=Z,5µm						
LUWI	Luwuk	60.02	282	P	P	14 12 22.1	+0.3
	comp=Z,452nm,1.2s,comp=Z,5µm						
LUWI	Luwuk	60.02	282	eP	P	14 12 22.1	+0.3
	comp=Z,776nm,1.3s						
WBSI	Waikabubak, Su	60.04	271	P	P	14 12 22.0	0.0
	comp=Z,155nm,0.8s,comp=Z,3µm						
MATI	Mati	60.45	292	eP	P	14 12 22.3	-2.3
DDMP	Don Marcelino,	60.52	290	eP	P	14 12 23.6	-1.4
BKSI	Bulukumba	60.84	276	P	P	14 12 26.3	-0.8
	comp=Z,65nm,1.1s,comp=Z,856nm						
CBIJ	Chichi jima	60.91	320	eP	P	14 12 27.1	-0.1
	comp=Z,255nm,0.5s						
DAV	Davao City (W)	61.09	291	P	P	14 12 29.2	+0.4
	comp=Z,229nm,0.5s,baz=105,slow=2.2,SNR=8.1						
APSI	Ampana	61.10	281	P	P	14 12 29.5	+0.7
	comp=Z,252nm,1.1s,comp=Z,2µm						
KAPI	Kappang	61.29	276	PFAKE		14 12 40.0	+10
KAPI				LR	LR		
	comp=Z,128nm,19.0s						
GIRL	Giralia	61.33	255	P	P	14 12 31.2	+1.1
	baz=61,SNR=113						
MRSI	Marisa	61.40	283	P	P	14 12 29.8	-1.0
	comp=Z,100nm,0.7s,comp=Z,837nm						
SPSI	Sidrap Palu	61.66	277	P	P	14 12 31.2	-1.3
	comp=Z,84nm,1.1s,comp=Z,930nm						
SKMP	Bagumbayan, Su	61.74	290	eP	P	14 12 32.1	-0.8
PLAI	Plampang	61.81	271	P	P	14 12 33.0	-0.5
	comp=Z,564nm,1.0s,comp=Z,6µm						
BUKP	Musuan	61.93	292	eP	P	14 12 34.2	-0.1
TTSI	Tana Toraja	61.96	278	P	P	14 12 34.2	-0.2
	comp=Z,62nm,1.1s,comp=Z,906nm						
TWSI	Taliwang, Sumb	62.68	271	P	P	14 12 38.6	-0.4
	comp=Z,367nm,1.1s,comp=Z,4µm						
PCI	Palu	62.77	280	P	P	14 12 40.8	+1.2
	comp=Z,551nm,1.1s,comp=Z,4µm						
CASY	Casey	62.84	205	eP	P	14 12 39.8	+0.6
	comp=Z,38nm,0.9s						
MPSI	Mapaga	63.21	282	P	P	14 12 41.9	-0.5
	comp=Z,151nm,1.1s,comp=Z,1µm						
MSLP	Maasin	63.21	294	eP	P	14 12 41.7	-0.6
BESP	Borongan	63.46	296	eP	P	14 12 43.1	-0.8
IGBI	Denpasar	64.27	270	P	P	14 12 49.2	+0.1
	comp=Z,482nm,1.0s,comp=Z,5µm						
SRBI	Singaraja	64.45	271	P	P	14 12 50.0	-0.3
	comp=Z,148nm,0.9s,comp=Z,2µm						
CNP	Catarman	64.57	296	eP	P	14 12 50.3	-0.6
JAGI	Jajag, Banyuwa	65.31	270	P	P	14 12 54.6	-1.1
	comp=Z,270nm,0.9s,comp=Z,3µm						
JAGI	Jajag, Banyuwa	65.31	270	eP	P	14 12 54.3	-1.4
	comp=Z,256nm,1.0s						
SMKI	Samarinda	65.36	280	P	P	14 12 59.5	+3.5
RCP	Roxas	65.72	294	⇓eP	P	14 12 57.8	-0.3
MYLDM	Lahad Datu	66.50	286	eP	P	14 13 05.1	+2.1
	comp=Z,212nm,1.4s						
JHJ	Hachijo jima 2	66.77	323	P	P	14 13 04.6	+0.4
	comp=Z,240nm,0.5s,baz=176,slow=9.9,SNR=16						
BUSP	Coron	68.11	293	eP	P	14 13 12.0	-0.7
TGY	Tagaytay City	68.50	296	P	P	14 13 16.0	+0.8
	comp=Z,185nm,0.5s,baz=342,slow=3.3,SNR=8.6						
TGY	Tagaytay City	68.50	296	P	P	14 13 16.0	+0.8
BATP	Bataraza	68.71	289	eP	P	14 13 16.3	-0.1
BALP	Baler	68.79	297	eP	P	14 13 15.7	-1.1
QSPA	South Pole Qui	68.83	180	P	P	14 13 17.6	+1.2
	comp=Z,63nm,0.9s,baz=24,slow=1.1,SNR=128						
QSPA				pP	pP	14 15 25.4	+4.4
	comp=Z,24nm,1.1s,baz=36,slow=5.0,SNR=5.6						
QSPA	South Pole Qui	68.83	180	eP	P	14 13 17.6	+1.2
	comp=Z,93nm,1.0s						
QSPA				pP	pP	14 15 25.4	+4.4
UGM	Wanagama	68.88	270	eP	P	14 13 17.3	-0.2
	comp=Z,244nm,0.5s						
KKM	Kota Kinabalu	68.92	286	eP	P	14 13 17.5	-0.3
	comp=Z,468nm,1.6s						
CAUP	Cauayan	69.20	299	eP	P	14 13 19.0	-0.2
SMRI	Semarang	69.25	270	eP	P	14 13 19.2	-0.5
	comp=Z,181nm,0.5s						
JOW	Kunigami	69.83	311	P	P	14 13 23.7	+0.9
	comp=Z,81nm,0.7s,baz=140,slow=9.7,SNR=20						
JOW	Kunigami	69.83	311	eP	P	14 13 23.6	+0.9
	comp=Z,109nm,0.9s						
INU	Inuyama	69.96	323	eP	P	14 13 23.7	+0.3
	comp=Z,51nm,1.0s						
APYP	Conner	70.14	299	eP	P	14 13 23.7	-1.1
MJAR	Matsushiro Arr	70.18	325	P	P	14 13 24.5	-0.1
	comp=Z,45nm,0.6s,baz=164,slow=5.9,SNR=144						
MAJO	Matsushiro	70.18	325	eP	P	14 13 24.8	+0.1
	comp=Z,59nm,0.6s						
MAJO	Matsushiro	70.18	325	d iP	P	14 13 24.7	+0.1
MAJO				pmax	pmax		
	comp=Z,62nm,0.7s						
MAT	Matsushiro	70.18	325	P	P	14 13 24.6	-0.1
MAT				eS	S	14 21 50.4	+2.6
MJB9	Matsu-Tunnel	70.18	325	eP	P	14 13 24.8	+0.1
	comp=Z,60nm,0.6s						
SBUM	Sibu	71.08	280	eP	P	14 13 31.2	+0.7
	comp=Z,108nm,1.3s						
JNU	Nakatsue	72.08	318	P	P	14 13 36.0	+0.1
	comp=Z,58nm,0.9s,baz=100,slow=3.3,SNR=31						
YOJ	Yonaguni jima	72.29	306	eP	P	14 13 37.5	+0.4
	comp=Z,347nm,1.3s						
YOJ	Yonaguni jima	72.29	306	eP	P	14 13 37.5	+0.4
YOJ				pmax	pmax		
	comp=Z,347nm,1.3s						
YUK	Yuzh-Kuril'sk	72.44	334	eP	P	14 13 36.0	-1.5
YUK				i *PP	pP	14 15 43.0	-1.1
YUK				eS	S	14 22 12.7	+0.1
YUK				i		14 22 55.8	
YUK				pmax	pmax		
	comp=Z,144nm,1.3s						
YUK				pmax	pmax		
	comp=N,235nm,0.7s						
YUK				pmax	pmax		
	comp=E,134nm,0.7s						
KSM	Kuching	72.46	279	eP	P	14 13 37.6	-0.8
	comp=E,164nm,0.7s						
TWG	Pinlang	72.88	303	eP	P	14 13 38.6	-2.0
	comp=E,425nm,0.6s						
YULB	Yu-li	73.02	304	eP	P	14 13 39.8	-1.6
NACB	Ninganchiao	73.21	305	eP	P	14 13 42.1	-0.4
	comp=E,280nm,1.2s						
TPUB	Ta-pu	73.48	304	eP	P	14 13 42.1	-1.9
SSLB	Suanglung	73.49	304	eP	P	14 13 43.0	-1.1
	comp=E,120nm,0.6s						
YHNB	Yeheng	73.65	305	eP	P	14 13 44.4	-0.6
	comp=E,112nm,0.9s						
ASAJ	Asahikawa	73.87	332	P	P	14 13 47.6	+1.9
	comp=E,62nm,0.8s,baz=212,slow=5.9,SNR=60						
ASAJ	Asahikawa	73.87	332	eP	P	14 13 47.4	+1.7
	comp=E,86nm,1.0s						
SMY	Shemya	73.89	356	eP	P	14 13 45.3	-0.2
	comp=E,109nm,0.9s						
SMY	Shemya	73.89	356	eP	P	14 13 45.3	-0.2
SMY				pmax	pmax		
	comp=Z,109nm,0.9s						
NIKH	Nikolski High	74.44	6	eP	P	14 13 48.9	+0.3
SKR	Severo-Kuril's	74.86	344	eP	P	14 13 50.7	-0.3
SKR				e		14 14 08.7	
SKR				eS	S	14 22 40.5	+1.8
SKR				e		14 23 19.0	
QZH	Quanzhou	75.93	304	⇓iP	P	14 13 58.4	+0.8
QZH				S	S	14 22 53.0	+1.7
QZH				pmax	pmax		
	comp=Z,87nm,0.6s						
YSS	Yuzh-Sakhalins	76.08	334	eP	P	14 13 57.8	-0.1
	comp=Z,208nm,1.6s						
YSS	Yuzh-Sakhalins	76.08	334	κ iP	P	14 13 59.2	+1.3
YSS				eS	S	14 22 55.6	+3.6
YSS				e		14 23 14.6	
YSS				eSS	SS	14 28 04.3	-0.1
YSS				pmax	pmax		
	comp=Z,50nm,0.6s						
YSS				pmax	pmax		
	comp=E,30nm,0.5s						
TJN	Taejon	76.39	318	ceP	P	14 14 00.6	+0.7
PET	Petropavlovsk	76.42	346	eP	P	14 13 59.1	-0.5
PET	Petropavlovsk	76.42	346	eP	P	14 13 59.1	-0.5
PET				eS	PcP	14 14 09.8	+1.8
PET				pmax	pmax		
	comp=Z,37nm,0.7s						
PEA0B	Petropavlovsk-	76.71	346	eP	P	14 14 01.6	+0.4
PETK	Petropavlovsk-	76.71	346	P	P	14 14 01.6	+0.3
	comp=Z,58nm,0.8s,baz=125,slow=6.8						
PETK	Petropavlovsk-	76.71	346	eP	P	14 14 01.4	+0.2
PETK	Petropavlovsk-	76.71	346	eP	P	14 14 01.4	+0.2
KSRS	Korea Array	76.74	319	P	P	14 14 02.6	+1.0
	comp=Z,14nm,0.9s,baz=141,slow=6.3,SNR=57						
KS15	Wonju Array Si	76.75	319	eP	P	14 14 03.0	+1.2
KSAR	Wonju Array Be	76.75	319	P	P	14 14 02.6	+0.9
KS01	Wonju Array Si	76.77	319	eP	P	14 14 01.8	-0.1
INCN	Inchon	77.55	319	eP	P	14 14 07.4	+1.3
	comp=Z,128nm,1.5s						
INCN				LR	LR		
	comp=Z,140nm,22.0s						
INCN	Inchon	77.55	319	P	P	14 14 07.3	+1.1
	SNR=8.3						
INCN	Inchon	77.55	319	eP	P	14 14 07.4	+1.3
INCN				pmax	pmax		
	comp=Z,128nm,1.5s						
INCN				MLR	MLR		
	comp=Z,140nm,22.0s						
SDPT	Sand Point	77.92	11	eP	P	14 14 07.5	-0.2
HKC	Hong Kong Obse	78.11	300	⇑P	P	14 14 11.0	+1.6
MSHR	Mys Shultsa	78.29	325	ceP	P	14 14 10.8	+0.9
SNCC	San Nicolas Is	78.53	48	P	P	14 14 12.8	+1.4
	baz=235						
MYKOM	Kota Tinggi	78.55	276	eP	P	14 14 12.6	+0.6
SCZ2	Santa Cruz Isl	78.88	47	P	P	14 14 14.9	+1.5
	baz=235						
USRK	Ussuriysk Ar.	78.98	327	P	P	14 14 14.5	+1.0
	comp=Z,48nm,0.8s,baz=133,slow=2.8						
GZH	Guangzhou	79.15	300	P	P	14 14 16.3	+1.4
GZH				S	S	14 23 28.1	+3.0
GZH				pmax	pmax		
	comp=Z,290nm,7.0s						
CHGN	Chignik	79.20	12	eP	P	14 14 14.7	+0.3
PKM	Mcpherson Peak	79.27	46	P	P	14 14 17.0	+1.4
	baz=235						
TYV	Tymovskoe	79.28	336	eP	P	14 14 15.9	+1.0
TYV				pmax	pmax		
	comp=Z,300nm,2.0s						
TYV				pmax	pmax		
	comp=Z,79nm,1.7s						
SAO	San Andreas Ge	79.30	44	eP	P	14 14 17.5	+2.1
SAO	San Andreas Ge	79.30	44	eP	P	14 14 17.5	+2.1
BLG	Laguna Peak, P	79.33	47	P	P	14 14 16.8	+1.1
	baz=235						
CIS	Catalina Islan	79.38	48	P	P	14 14 17.1	+1.1
	baz=236						
SMMC	Simmler	79.39	46	P	P	14 14 17.7	+1.6
	baz=235						
PAGB	Antelope Grade	79.47	45	eP	P	14 14 19.5	+3.1
NJ2	Nanjing	79.53	310	eP	P	14 14 17.8	+1.1
NJ2				pmax	pmax		
	comp=Z,67nm,1.0s						
HOPS	Hopland Field	79.62	41	eP	P	14 14 19.3	+2.2
KCPM	Cahto Peak	79.74	40	eP	P	14 14 20.2	+2.4
OSI	Osito Audit: C	79.85	47	P	P	14 14 19.9	+1.5
	baz=236						
KMRM	Mail Ridge	80.00	40	eP	P	14 14 21.5	+2.4
109C	Camp Elliot, M	80.01	49	P	P	14 14 20.2	+0.9
	baz=237						
ARVC	Arvin	80.07	46	P	P	14 14 20.5	+1.0
	baz=235						
MWC	Mount Wilson	80.09	47	eP	P	14 14 21.0	+1.1
MWC	Mount Wilson	80.09	47	eP	P	14 14 21.0	+1.1
QIZ	Qiongzhong	80.19	295	PFAKE		14 14 30.0	+10
QIZ				LR	LR		
	comp=Z,152nm,19.0s						
BAR	Barrett	80.20	49	eP	P	14 14 21.9	+1.6
VES	Vestal, Richgr	80.31	46	P	P	14 14 21.6	+0.9
	baz=235,SNR=7.5						
MURC	Murrieta	80.34	48	P	P	14 14 22.1	+1.1
	baz=237						
BFSC	Mount Baldy Ra	80.37	48	P	P	14 14 22.1	+0.9
	baz=236,SNR=8.7						
KHMM	Horse Mountain	80.40	39	eP	P	14 14 23.5	+2.3
MONP2	Monument Peak	80.50	49	P	P	14 14 23.4	+1.4
	baz=237,SNR=26						
EDW2	Edwards Air Fo	80.50	47	P	P	14 14 23.0	+1.2
	baz=236,SNR=17						
MAW	Mawson	80.51	200	P	P	14 14 21.6	+0.4
	comp=Z,5.5nm,1.0s,baz=157,slow=7.8,SNR=8.0						
MAW				pP	pP	14 16 34.2	+2.8
	comp=Z,6.8nm,1.0s,baz=110,slow=4.8,SNR=4.2						
MAW	Mawson	80.51	200	P	P	14 14 21.8	+0.6
	baz=80,SNR=5.1						
MAW	Mawson	80.51	200	eP	P	14 14 22.2	+1.0
MAW				pP	pP	14 16 34.2	+2.8
MDJ	Mudanjiang	80.51	326	P	P	14 14 20.0	-1.5
MDJ				sP	sP	14 17 29.5	-5.4
MDJ				S	S	14 23 44.1	+6.1
MDJ				pmax	pmax		
	comp=Z,75nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,650nm,4.8s						
IKP	In-Ko-Pah, Jac	80.59	50	P	P	14 14 23.9	+1.6
	baz=237,SNR=12						
ISA	Isabella, Lake	80.61	46	P	P	14 14 23.8	+1.5
	baz=236,SNR=24						
ISA	Isabella, Lake	80.61	46	eP	P	14 14 24.0	+1.6
ISA	Isabella, Lake	80.61	46	eP	P	14 14 24.0	+1.6
BKNI	Bangkinang	80.62	274	eP	P	14 14 22.9	0.0
FRD	Ford Ranch, An	80.70	49	P	P	14 14 24.1	+1.2
	baz=237,SNR=18						
SRIG	Santa Rosalia	80.72	56	eP	P	14 14 23.9	+0.9
CMB	Columbia Colle	80.73	43	eP	P	14 14 24.2	+1.3
CMB	Columbia Colle	80.73	43	eP	P	14 14 24.2	+1.3
SLBS	Sierra La Lagu	80.80	60	eP	P	14 14 25.5	+1.8
PFO	Pinyon Flats O	80.86	49	P	P	14 14 25.0	+1.2
	baz=237,SNR=6.7						
PFO	Pinyon Flats O	80.86	49	eP	P	14 14 25.5	+1.7
XPFO	Piæon Flat	80.86	49	eP	P	14 14 25.5	+1.7
BBRC	Big Bear Solar	80.89	48	P	P	14 14 25.3	+1.2
	baz=237						
AFDM	Forest Hills D	80.90	42	eP	P	14 14 25.0	+1.3
WDC	Whiskeytown Da	80.92	40	eP	P	14 14 25.0	+1.2
WDC	Whiskeytown Da	80.92	40	eP	P	14 14 25.0	+1.2
ORV	Oroville	80.93	41	eP	P	14 14 25.4	+1.5
ORV	Oroville	80.93	41	eP	P	14 14 25.4	+1.5
SWSC	Sam W. Stewart	80.97	50	P	P	14 14 25.5	+1.3
	baz=238,SNR=5.1						
PMSA	Palmer Station	81.04	157	P	P	14 14 25.1	+1.2
	comp=Z,49nm,0.7s,baz=205,slow=4.4,SNR=8.1						
LRMC	Laurel Mtn Rad	81.04	47	P	P	14 14 25.9	+1.3
	baz=236,SNR=15						
N02D	Trinity Center	81.07	40	P	P	14 14 26.7	+2.1
	baz=232,SNR=23						
O03D	Paynes Creek	81.19	41	P	P	14 14 26.5	+1.3
	baz=233,SNR=27						
M02C	Callahan	81.24	39	P	P	14 14 27.7	+2.3
	baz=232,SNR=69						
L02D	Cave Junction,	81.28	38	P	P	14 14 27.6	+2.0
	baz=231,SNR=13						
CWC	Cottonwood Cre	81.31	46	P	P	14 14 27.3	+1.2
	baz=236						
MDPB	Devils Postpil	81.33	44	eP	P	14 14 27.8	+1.5
OMMB	Old Mammoth Mi	81.38	44	eP	P	14 14 28.1	+1.5
BELC	Belle Mtn. Jos	81.39	49	P	P	14 14 28.0	+1.5
	baz=237,SNR=30						
MLAC	Mammoth, Mammo	81.49	44	P	P	14 14 28.1	+1.1
	baz=235						
MPMC	Manual Prospec	81.50	46	P	P	14 14 28.4	+1.3
	baz=236,SNR=33						
YBH	Yreka Blue Hor	81.53	39	P	P	14 14 28.9	+1.9
	comp=Z,16nm,0.6s,baz=207,slow=1.0,SNR=95						
YBH				pP	pP	14 16 40.3	+2.5
	comp=Z,3.9nm,1.1s,baz=184,slow=6.6,SNR=4.2						
DL2	Dalian	81.54	317	P	P	14 14 27.5	+0.6
DL2				S	S	14 23 48.6	+0.1
DL2				esS	sS	14 27 37.1	-4.5
DL2				pmax	pmax		
	comp=Z,44nm,1.0s						
GSC	Goldstone, Bar	81.54	47	P	P	14 14 28.4	+1.2
	baz=237,SNR=17						
GSC	Goldstone, Bar	81.54	47	eP	P	14 14 28.6	+1.4
DAC	Darwin (Calif)	81.55	46	eP	P	14 14 28.5	+1.1
TIN	Tinemaha, Big	81.56	45	P	P	14 14 28.7	+1.4
	baz=236,SNR=7.1						
BC3	Big Chuckawall	81.59	49	P	P	14 14 29.2	+1.7
	baz=238,SNR=9.3						
HEC	Hector,Ludlow	81.61	48	P	P	14 14 28.7	+1.2
	baz=237,SNR=22						
WAKR	Walker	81.61	43	eP	P	14 14 29.4	+1.8
GRNR	Gornyy	81.67	333	⇓iP	P	14 14 31.0	+3.6
GRNR				pmax	pmax		
	comp=N,46nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,140nm,1.0s						
GLA	Glamis	81.72	50	P	P	14 14 30.0	+1.9
	baz=238						
KDAK	Kodiak Island	81.78	14	P	P	14 14 28.2	+0.6
	comp=Z,11nm,0.9s,baz=226,slow=2.1,SNR=7.8						
KDAK	Kodiak Island	81.78	14	i P	P	14 14 28.1	+0.4
BEKR	Beckworth	81.82	42	eP	P	14 14 30.0	+1.4
PNTR	Pine Nut	81.84	43	eP	P	14 14 30.4	+1.6
HUMO	Hull Mountain	81.93	38	eP	P	14 14 31.0	+2.1
VCNR	Virginia City	81.93	42	eP	P	14 14 31.1	+1.9
YERR	Yerington	82.01	43	eP	P	14 14 31.0	+1.4
WHN	Wuhan	82.02	307	⇓P	P	14 14 30.1	+0.5
GMRC	Granite Mounta	82.05	48	P	P	14 14 31.1	+1.2
	baz=237,SNR=16						
IRM	Iron Mountain	82.07	49	P	P	14 14 31.5	+1.7
	baz=238,SNR=23						
M04C	Macdoel	82.08	39	P	P	14 14 31.4	+1.6
	baz=232,SNR=10						
GRAC	Grapevine Rang	82.10	45	P	P	14 14 31.5	+1.6
	baz=236,SNR=50						
FURC	Furnace Creek,	82.14	46	P	P	14 14 31.2	+1.1
	baz=236,SNR=10						
IPM	Ipoh	82.17	278	eP	P	14 14 31.5	+0.7
TUQ	Turquoise Moun	82.22	47	P	P	14 14 32.0	+1.3
	baz=237,SNR=20						
SHOC	Shoshone, Teco	82.23	47	P	P	14 14 31.4	+0.9
	baz=237						
CN2	Changchun	82.23	323	⇓iP	P	14 14 31.0	+0.7
CN2				eS	S	14 23 57.4	+2.1
CN2				pmax	pmax		
	comp=Z,80nm,1.2s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
RYN	Ryan	82.26	44	eP	P	14 14 32.1	+1.3
NV01	Mina Array Sit	82.29	44	eP	P	14 14 31.5	+0.4
NVAR	Mina Array Bea	82.29	44	P	P	14 14 32.3	+1.3
	comp=Z,13nm,0.6s,baz=226,slow=8.0,SNR=146						
NVAR				pP	pP	14 16 44.0	+1.8
	comp=Z,1.9nm,1.0s,baz=224,slow=5.0,SNR=3.3						
NVAR				PKKPbc	PKKPbc	14 32 54.9	+0.5
	comp=Z,0.8nm,0.8s,baz=76,slow=3.8,SNR=5.7						
Y12C	Blythe	82.30	49	P	P	14 14 32.6	+1.8
	baz=238,SNR=7.4						
Y12C	Blythe	82.30	49	eP	P	14 14 32.7	+1.8
PAHR	Pah Rah Range	82.34	42	eP	P	14 14 32.5	+1.4
I03D	Drain, OR	82.39	37	P	P	14 14 32.8	+1.7
	baz=231,SNR=5.6						
NV11	Mina Array Sit	82.39	44	eP	P	14 14 32.7	+1.3
HSIG		82.55	55	eP	P	14 14 33.6	+1.4
LDFC	Landfair	82.59	48	eP	P	14 14 34.3	+1.8
214A	Organ Pipe Nat	82.61	52	P	P	14 14 34.3	+1.7
	baz=240						
KLR	Kul'dur	82.62	330	P	P	14 14 33.2	+1.1
	comp=Z,2.0nm,0.8s,baz=110,slow=4.3,SNR=69						
KLR	Kul'dur	82.62	330	d iP	P	14 14 33.0	+0.9
K04D	Chiloquin, OR	82.64	39	P	P	14 14 34.0	+1.4
	baz=232						
NEE2	Needles Airpor	82.77	49	P	P	14 14 34.6	+1.3
	baz=238						
KVN	Kaiserville	82.78	43	eP	P	14 14 34.6	+1.2
KVN	Kaiserville	82.78	43	eP	P	14 14 34.6	+1.2
J04D	Umpqua Nationa	82.81	38	P	P	14 14 35.2	+1.7
	baz=232,SNR=25						
KULM	Kulim	82.82	278	eP	P	14 14 34.9	+0.9
TPNV	Topopah Spring	82.82	46	P	P	14 14 34.9	+1.3
	baz=237,SNR=27						
TPNV	Topopah Spring	82.82	46	eP	P	14 14 35.0	+1.3
TPNV	Topopah Spring	82.82	46	eP	P	14 14 35.0	+1.3
PDMCI	Parker Dam,Lak	82.86	49	P	P	14 14 35.2	+1.6
	baz=238,SNR=11						
I04A	Tendick Farm,	82.98	38	P	P	14 14 35.3	+1.2
	baz=232,SNR=11						
TIA	Tai'an	82.99	313	P	P	14 14 35.0	+0.7
TIA				pmax	pmax		
	comp=Z,82nm,1.2s						
MOD	Modoc Plateau	83.06	40	eP	P	14 14 36.1	+1.4
K05A	Summer Lake	83.21	39	eP	P	14 14 37.3	+1.8
SHPR	Sheep Range	83.31	47	eP	P	14 14 37.7	+1.5
J05D	Fort Rock, OR	83.34	39	P	P	14 14 38.1	+2.0
	baz=233,SNR=39						
G03D	McMinnville, O	83.39	36	P	P	14 14 38.2	+2.2
	baz=231						
GO10	Punta Arenas	83.51	145	eP	P	14 14 39.2	+2.5
SKLT	Songkhla	83.55	280	P	P	14 14 39.0	+1.4
	comp=Z,253nm,1.2s,comp=Z,3µm						
H04A	Detroit Lake	83.66	37	eP	P	14 14 38.7	+1.2
CNPM	China Poot	83.66	14	eP	P	14 14 37.8	+0.7
PINE	Pine Mountain	83.82	38	eP	P	14 14 40.4	+1.9
PANO	Nakornpanom	83.88	291	P	P	14 14 40.0	+0.9
	comp=Z,3.2nm,1.1s						
I05D	Terrebonne, OR	83.92	38	P	P	14 14 40.1	+1.3
	baz=233,SNR=8.4						
BRLK	Bradley Lake	83.96	14	eP	P	14 14 39.1	+0.6
R11A	Troy Canyon, C	84.02	45	P	P	14 14 40.3	+0.7
	baz=237,SNR=8.3						
R11A	Troy Canyon, C	84.02	45	eP	P	14 14 39.6	0.0
F04D	Rainier, OR	84.07	36	P	P	14 14 41.2	+1.8
	baz=231						
TSI	Tuntungan	84.08	276	P	P	14 14 40.4	+0.2
	comp=Z,188nm,0.9s,comp=Z,3µm						
USHA	Ushuaia	84.10	147	P	P	14 14 40.8	+1.4
	comp=Z,40nm,1.1s,baz=283,slow=1.9,SNR=7.0						
BMN	Battle Mountai	84.11	43	eP	P	14 14 41.2	+1.2
BMN	Battle Mountai	84.11	43	eP	P	14 14 41.2	+1.2
RSO	Redoubt South	84.19	13	eP	P	14 14 40.1	+0.3
GSI	Gunungsitoli	84.20	274	eP	P	14 14 41.9	+1.0
MA2	Magadan	84.21	345	P	P	14 14 39.9	+0.1
	comp=Z,22nm,0.7s,baz=131,slow=6.9,SNR=14						
MA2	Magadan	84.21	345	eP	P	14 14 39.5	-0.2
MA2	Magadan	84.21	345	eP	P	14 14 39.6	-0.2
SVW2	Sparrevohn	84.22	11	eP	P	14 14 38.6	-1.2
TUC	Tucson	84.27	52	P	P	14 14 42.7	+1.9
	baz=241						
TUC	Tucson	84.27	52	eP	P	14 14 42.9	+2.0
TUC				LR	LR		
	comp=Z,105nm,20.0s						
SKNT	Sakolnakorn	84.36	291	P	P	14 14 42.2	+0.7
	comp=Z,124nm,1.0s						
WVOR	Wild Horse Val	84.38	40	eP	P	14 14 42.6	+1.4
WVOR				LR	LR		
	comp=Z,87nm,19.0s						
WVOR	Wild Horse Val	84.38	40	eP	P	14 14 42.6	+1.4
WVOR				MLR	MLR		
	comp=Z,87nm,19.0s						
H02S1	DAWSON INLET T	84.41	26	P	P	14 14 42.5	+1.7
	SNR=7.0						
NLWA	Neilton Lookou	84.44	34	eP	P	14 14 43.0	+1.7
G05D	Wamic, OR	84.48	37	P	P	14 14 42.6	+1.1
	baz=232						
TRTT	Trang	84.65	280	P	P	14 14 44.4	+1.4
	comp=Z,96nm,1.4s,comp=Z,1µm						
I07A	Izee	84.83	39	eP	P	14 14 45.0	+1.7
G06A	Carlson Farm,	84.86	37	eP	P	14 14 44.9	+1.5
LCMT	Little Creek M	84.89	47	eP	P	14 14 45.2	+1.4
SRAK	Srakaew	84.89	287	P	P	14 14 43.2	-0.9
	comp=Z,105nm,1.4s,comp=Z,1µm						
J08A	Circle Bar Ran	85.01	40	eP	P	14 14 45.6	+1.4
CCUT	Cedar City	85.09	47	eP	P	14 14 46.6	+1.7

KHON	Khomkaen	85.12	289	P	P	14 14 46.4	+1.2
	comp=Z,77nm,0.7s,comp=Z,818nm						
LON	Longmire	85.14	36	eP	P	14 14 45.5	+0.9
LON	Longmire	85.14	36	eP	P	14 14 45.6	+0.9
KNB	Kanab	85.18	47	eP	P	14 14 46.9	+1.6
KNB	Kanab	85.18	47	eP	P	14 14 46.9	+1.6
KRAB	Krabi	85.25	281	P	P	14 14 47.7	+1.8
	comp=Z,885nm,0.7s,comp=Z,33µm						
PSUT	Pine Spring	85.27	46	eP	P	14 14 46.8	+1.1
SZCU	Shurtz Canyon	85.30	47	eP	P	14 14 47.7	+1.9
D05A	Enumclaw	85.31	35	eP	P	14 14 47.7	+2.3
WUAZ	Wupatki	85.43	49	P	P	14 14 47.7	+1.3
	baz=240						
WUAZ	Wupatki	85.43	49	eP	P	14 14 48.3	+1.8
WUAZ				LR	LR		
	comp=Z,58nm,21.0s						
SUA	Susitna One	85.52	13	eP	P	14 14 46.4	+0.2
ENH	Enshi	85.57	305	PFAKE		14 15 00.0	+13
ENH				LR	LR		
	comp=Z,51nm,20.0s						
NAYO	Nakonayok	85.66	287	P	P	14 14 49.3	+1.6
	comp=Z,1.1nm,1.3s,comp=Z,34nm						
BJT	Baijiatuau	85.66	316	PFAKE		14 15 00.0	+13
BJT				LR	LR		
	comp=Z,81nm,21.0s						
BJI	Beijing	85.67	316	P	P	14 14 47.8	+0.6
BJI				pmax	pmax		
	comp=Z,79nm,1.0s						
CHAI	Chaiyaphum	85.69	289	P	P	14 14 48.6	+0.7
	comp=Z,21nm,0.9s,comp=Z,213nm						
HPIG		85.72	59	eP	P	14 14 49.4	+1.3
PKCU	Pink Cliffs	85.75	47	eP	P	14 14 50.7	+2.6
SYO	Syowa Base	85.77	193	⇑eP	P	14 14 44.0	-3.3
SYO	Syowa Base	85.77	193	⇓ePcP	P	14 14 46.7	-0.6
SKT	Skwentna	85.82	13	eP	P	14 14 46.8	-0.7
GLI	Glacier Island	85.83	15	eP	P	14 14 47.9	+0.4
G08A	Pilot Rock	85.85	38	eP	P	14 14 49.5	+1.3
A04D	Lummi Island	85.89	34	P	P	14 14 49.5	+1.5
	baz=231						
B05A	Bryant	85.92	34	P	P	14 14 49.4	+1.2
	baz=232,SNR=6.3						
PMR	Palmer	85.98	14	eP	P	14 14 48.3	+0.1
PMR	Palmer	85.98	14	eP	P	14 14 48.3	+0.1
GYA	Guiyang	86.09	300	⇑iP	P	14 14 50.4	+0.7
GYA				pP	pP	14 17 01.0	-1.5
GYA				sP	sP	14 18 01.3	-3.6
GYA				PP	PP	14 18 25.5	+3.0
GYA				SKS	SKSac	14 24 17.8	+0.4
GYA				S	S	14 24 34.0	+0.5
GYA				sS	sS	14 28 25.0	-5.1
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,150nm,6.3s						
MTPU	Mount Pierson	86.14	47	eP	P	14 14 52.2	+2.2
HAWA	Hanford	86.17	37	eP	P	14 14 51.1	+1.6
LHMI	Lhok Sumawe	86.22	277	P	P	14 14 52.9	+2.5
	comp=Z,367nm,1.2s						
LHMI	Lhok Sumawe	86.22	277	eP	P	14 14 51.7	+1.3
C06D	Leavenworth	86.35	35	P	P	14 14 51.2	+0.9
	baz=233						
DIV	Divide	86.37	16	eP	P	14 14 50.7	+0.6
MSU	Marysvale	86.39	46	eP	P	14 14 52.7	+1.7
W18A	Petrified Fore	86.40	50	P	P	14 14 52.1	+1.1
	baz=241						
W18A	Petrified Fore	86.40	50	eP	P	14 14 52.3	+1.2
ZAIG	Zacatecas	86.48	64	eP	P	14 14 53.9	+2.0
E08A	Dider Farm, El	86.50	37	eP	P	14 14 52.8	+1.8
PPLA	Purkeypile	86.52	12	eP	P	14 14 50.2	-0.7
BMRM	Bremner River	86.53	16	eP	P	14 14 51.7	+0.8
BMO	Blue Mountains	86.56	39	eP	P	14 14 52.5	+1.0
BMO				LR	LR		
	comp=Z,97nm,20.0s						
BMO	Blue Mountains	86.56	39	eP	P	14 14 52.5	+1.0
BMO				MLR	MLR		
	comp=Z,97nm,20.0s						
SCM	Sheep Creek Mo	86.61	15	eP	P	14 14 51.6	+0.4
SCM	Sheep Creek Mo	86.61	15	eP	P	14 14 51.6	+0.4
121A	Cookes Peak, D	86.61	53	P	P	14 14 53.5	+1.4
	baz=242						
PHET	Kaeng Krachan	86.63	285	P	P	14 14 54.4	+2.1
	comp=Z,52nm,1.0s,comp=Z,534nm						
MFID	Camas Ranch	86.64	41	eP	P	14 14 53.1	+1.2
KLU	Klutina	86.65	15	eP	P	14 14 52.1	+0.7
DUG	Dugway, Tooele	86.83	45	P	P	14 14 53.8	+0.9
	baz=239						
DUG	Dugway, Tooele	86.83	45	eP	P	14 14 54.7	+1.8
PBKT	Sadao Pong	86.84	289	eP	P	14 14 55.0	+1.7
PBKT	Sadao Pong	86.84	289	P	P	14 14 54.8	+1.5
	comp=Z,72nm,1.2s,comp=Z,1µm						
SEY	Seymchan	86.85	347	P	P	14 14 52.6	+0.4
	comp=Z,41nm,0.9s,baz=151,slow=5.1,SNR=87						
D08A	Wollman Farm,	86.91	36	eP	P	14 14 54.5	+1.6
TIY	Taiyuan	86.98	312	eP	P	14 14 54.8	+1.2
TIY				SKS	SKSac	14 24 18.6	-3.5
TIY				S	ScS	14 24 48.1	+2.3
TIY				pmax	pmax		
	comp=Z,69nm,0.8s						
CAST	Castle Rocks	87.01	12	eP	P	14 14 52.0	-1.1
E09A	Wood Farm, Sta	87.02	37	eP	P	14 14 54.9	+1.4
BGU	Big Grassy Mou	87.06	44	eP	P	14 14 54.9	+0.9
F10A	Beach Ranch, E	87.24	38	eP	P	14 14 55.4	+0.8
SNAA	Sanae	87.30	179	P	P	14 14 53.9	-0.7
SNAA	Sanae	87.30	179	pP	pP	14 17 10.4	+2.6
SNAA	Sanae	87.30	179	eP	P	14 14 53.9	-0.7
SNAA	Sanae	87.30	179	i P	P	14 14 53.7	-0.9
TMUT	Trail Mountain	87.43	46	eP	P	14 14 57.7	+1.8
B08A	Colville Reser	87.44	35	eP	P	14 14 56.1	+0.6
VNA3	Neumayer Olymp	87.48	177	P	P	14 14 54.8	-0.5
VNA3	Neumayer Olymp	87.48	177	pP	pP	14 17 10.4	+1.8
LLLB	Lillooet	87.48	32	eP	P	14 14 57.0	+1.4
MPU	Maple Canyon	87.51	45	eP	P	14 14 57.9	+1.7
BESE	Bessie Mountai	87.53	21	eP	P	14 14 57.6	+2.0
PHIT	Phitsanulok	87.57	289	P	P	14 14 58.4	+1.7
	comp=Z,65nm,1.0s,comp=Z,798nm						
HLID	Hailey	87.58	41	P	P	14 14 58.1	+1.6
	baz=238						
HLID	Hailey	87.58	41	eP	P	14 14 58.0	+1.6
HLID				LR	LR		
	comp=Z,82nm,19.0s						
HARP	HAARP	87.62	15	eP	P	14 14 57.2	+1.2
SRDT	SRDT	87.63	286	P	P	14 14 59.2	+2.2
	comp=Z,74nm,1.4s						
SPUT	South Promonto	87.64	44	eP	P	14 14 58.3	+1.6
HVU	Hansel Valley	87.67	43	eP	P	14 14 58.1	+1.3
UTTA	Uttaradit	87.67	290	P	P	14 14 58.6	+1.5
	comp=Z,14nm,0.9s,comp=Z,132nm						
DHY	Denali Highway	87.68	14	eP	P	14 14 56.4	0.0
C09A	Chrisman Ranch	87.69	36	eP	P	14 14 57.8	+1.2
XAN	Xi’an	87.73	308	P	P	14 14 58.1	+0.9
XAN				pP	pP	14 17 06.6	-4.0
XAN				SKS	SKSac	14 24 21.3	-5.4
XAN				S	S	14 24 50.0	+1.6
XAN				pmax	pmax		
	comp=Z,69nm,0.8s						
ZEA	Zeya	87.76	331	eP	P	14 14 57.8	+1.1
ZEA				pmax	pmax		
	comp=Z,58nm,1.0s						
CTU	Camp Tracy	87.78	45	eP	P	14 14 59.1	+1.7
SRU	San Rafael Swe	87.80	46	eP	P	14 14 58.8	+1.3
P17A	Butcher Ranch,	87.83	46	eP	P	14 14 59.5	+1.8
BPAW	Bear Paw Mtn.	87.84	12	eP	P	14 14 56.0	-0.9
TLIG	Tlapa	87.84	70	eP	P	14 15 00.0	+1.9
BSI	Banda Aceh	87.84	277	P	P	14 14 58.5	+0.4
	comp=Z,245nm,1.1s,comp=Z,3µm						
MCK	McKinley	87.92	13	eP	P	14 14 57.3	0.0
MCK	McKinley	87.92	13	eP	P	14 14 57.3	0.0
JLU	Jordanelle	87.93	45	eP	P	14 14 59.4	+1.3
NANT	Nan	87.95	291	P	P	14 14 59.5	+1.0
	comp=Z,20nm,1.1s,comp=Z,178nm						
Y22E	IRIS PASSCAL I	87.96	52	P	P	14 14 59.8	+1.4
	baz=243						
PAX	Paxson	88.03	15	eP	P	14 14 58.0	+0.1
PAX	Paxson	88.03	15	eP	P	14 14 58.0	+0.1
SKAG	Skagway	88.04	21	eP	P	14 14 59.9	+2.0
MNTX	Cornudas Mount	88.05	55	P	P	14 15 00.1	+1.5
	baz=244,SNR=35						
MNTX	Cornudas Mount	88.05	55	eP	P	14 15 00.1	+1.5
MNTX				LR	LR		
	comp=Z,66nm,20.0s						
VNA1	Neumayer--Stat	88.14	177	P	P	14 14 58.4	0.0
VNA1	Neumayer--Stat	88.14	177	pP	pP	14 17 14.1	+2.2
BWN	Browne	88.20	13	eP	P	14 14 58.6	+0.1
TCUT	Toone Canyon	88.21	44	eP	P	14 15 01.0	+1.5
P18A	Preston Nutter	88.24	46	eP	P	14 15 01.0	+1.2
MVCO	Mesa Verde	88.28	49	P	P	14 15 00.6	+0.7
	baz=242						
MVCO	Mesa Verde	88.28	49	eP	P	14 15 00.3	+0.4
MVCO				LR	LR		
	comp=Z,137nm,20.0s						
TX31	Lajitas Ar. Si	88.35	58	eP	P	14 15 01.1	+0.9
TXAR	Lajitas Array	88.35	58	P	P	14 15 01.9	+1.6
	comp=Z,18nm,0.8s,baz=218,slow=6.1,SNR=162						
TXAR				pP	pP	14 17 16.1	+2.2
	comp=Z,2.3nm,1.1s,baz=208,slow=5.1,SNR=4.9						
TXAR				PKKPbc	PKKPbc	14 32 39.9	+0.4
	comp=Z,1.1nm,0.6s,baz=120,slow=2.1,SNR=14						
HWUT	Hardware Ranch	88.36	44	eP	P	14 15 00.9	+0.9
HWUT				LR	LR		
	comp=Z,74nm,21.0s						
PV09	Paradox Valley	88.45	48	eP	P	14 15 01.9	+1.1
PV19	Morning Glory	88.47	48	eP	P	14 15 02.1	+1.4
PV14	Lion Creek, Pa	88.47	48	eP	P	14 15 02.0	+1.2
PV17	East Wray Mesa	88.47	48	eP	P	14 15 01.8	+1.1
PV18	Skein Mesa, Pa	88.49	48	eP	P	14 15 01.9	+1.1
PV20	West Nyswonger	88.49	48	eP	P	14 15 01.9	+1.1
PV13	Radium Mtn., P	88.51	48	eP	P	14 15 02.0	+1.0
PV16	Nyswonger Mesa	88.51	48	eP	P	14 15 02.0	+1.1
PV23	Carpenter Ridg	88.51	48	eP	P	14 15 02.4	+1.3
PV03	Paradox Valley	88.53	48	eP	P	14 15 02.0	+1.0
PV11	David Mesa, Pa	88.54	48	eP	P	14 15 02.2	+1.2
UMPA	Umpang Tak	88.57	288	P	P	14 15 03.5	+2.1
	comp=Z,17nm,1.0s,comp=Z,167nm						
PV02	Paradox Valley	88.59	48	eP	P	14 15 02.4	+1.1
PV21	Cone Mtn., Par	88.59	48	eP	P	14 15 02.7	+1.4
PV12	Saucer Basin,	88.59	48	eP	P	14 15 02.6	+1.3
HIA	Hailar	88.68	325	PFAKE		14 15 10.0	+8.8
HIA				LR	LR		
	comp=Z,81nm,19.0s						
ANMO	Albuquerque	88.70	52	P	P	14 15 02.9	+1.0
	comp=Z,6.7nm,0.6s,baz=240,slow=5.6,SNR=22						
ANMO	Albuquerque	88.70	52	P	P	14 15 02.7	+0.9
	baz=243						
ANMO	Albuquerque	88.70	52	ceP	P	14 15 02.4	+0.6
ANMO				pmax	pmax		
	comp=Z,30nm,1.5s						
TASL	Snake Pit, Alb	88.70	52	P	P	14 15 02.8	+1.0
	baz=243,SNR=20						
PV22	Blue Mesa, Par	88.71	48	eP	P	14 15 03.1	+1.3
MLY	Manley	88.72	12	eP	P	14 15 00.3	-0.7
KMI	Kunming	88.73	297	P	P	14 15 03.8	+1.5
KMI				SKS	SKSac	14 24 32.3	-1.0
KMI				S	S	14 24 57.8	-0.5
KMI				sS	sS	14 28 53.1	-3.7
KMI				pmax	pmax		
	comp=Z,53nm,1.0s						
KMI				pmax	pmax		
	comp=Z,230nm,3.1s						
WRH	Wood River Hil	88.75	13	eP	P	14 15 00.8	-0.3
LAMP	Lampang	88.78	290	P	P	14 15 03.9	+1.6
	comp=Z,37nm,0.9s,comp=Z,350nm						
HDA	Harding Lake	88.94	13	eP	P	14 15 01.9	-0.1
CCB	Clear Creek Bu	88.97	13	eP	P	14 15 01.5	-0.6
WHY	Whitehorse	89.10	20	eP	P	14 15 04.7	+1.7
HHC	Hu-ho-hao-te	89.11	315	eP	P	14 15 04.4	+0.9
HHC				pP	pP	14 17 15.8	-1.6
HHC				SKS	SKSac	14 24 34.4	-0.1
HHC				S	S	14 24 58.8	-1.9
HHC				pmax	pmax		
	comp=Z,64nm,1.2s						
HHC				pmax	pmax		
	comp=Z,95nm,5.1s						
MDM	Murphy Dome	89.15	13	eP	P	14 15 02.3	-0.7
COLA	College	89.16	13	PFAKE		14 15 10.0	+7.1
COLA				LR	LR		
	comp=Z,1.0nm,21.0s						
MCMT	McKenzie Canyo	89.20	41	eP	P	14 15 05.4	+1.4
SCRK	Sand Creek	89.24	15	eP	P	14 15 04.1	+0.6
AHID	Auburn Hatcher	89.24	43	eP	P	14 15 05.3	+1.2
AHID				LR	LR		
	comp=Z,109nm,19.0s						
IL1	Eielson Array	89.27	13	eP	P	14 15 02.1	-1.4
ILAR	Eielson Array	89.27	13	P	P	14 15 03.0	-0.5
	comp=Z,6.6nm,0.8s,baz=226,slow=5.2,SNR=60						
ILAR	Eielson Array	89.27	13	P	P	14 15 03.0	-0.5
ILB	Eielson Array	89.27	13	eP	P	14 15 03.2	-0.3
CMAR	Chiang Mai Arr	89.36	290	P	P	14 15 06.8	+1.8
	comp=Z,51nm,0.9s,baz=127,slow=3.1,SNR=189						
CMAR				PP	PP	14 18 43.6	-4.6
	comp=Z,2.8nm,1.0s,baz=126,slow=5.8,SNR=3.9						
CMAR				SKKPbc	SKKPbc	14 35 16.4	-0.7
	comp=Z,1.1nm,0.6s,baz=279,slow=4.2,SNR=4.3						
CMAR	Chiang Mai Arr	89.36	290	P	P	14 15 06.8	+1.8
CMAR						14 18 43.6	
CMAR				pmax	pmax		
	comp=Z,48nm,0.9s						
CMAR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
CMAR				pmax	pmax		
	comp=N,1.0nm,0.6s						
CMMT	Chiang Mai	89.49	290	P	P	14 15 06.7	+1.1
	comp=N,106nm,1.1s,comp=N,1µm						
CHTO	Chiang Mai	89.49	290	eP	P	14 15 07.0	+1.4
CHTO				LR	LR		
	comp=Z,81nm,19.0s						
CHTO	Chiang Mai	89.49	290	P	P	14 15 07.4	+1.8
	SNR=15						
CHTO	Chiang Mai	89.49	290	P	P	14 15 06.7	+1.1
	comp=Z,460nm,1.2s,comp=Z,5µm						
PLCA	Paso Flores	89.54	134	P	P	14 15 06.9	+1.4
	comp=Z,23nm,0.8s,baz=256,slow=5.1,SNR=29						
PLCA	Paso Flores	89.54	134	eP	P	14 15 07.0	+1.4
MSO	Missoula	89.61	39	P	P	14 15 06.1	+0.4
	baz=238						
MSO	Missoula	89.61	39	eP	P	14 15 07.1	+1.5
DLMT	Dillon	89.63	40	eP	P	14 15 07.1	+1.2
REDW	Red Top Meadow	89.70	43	eP	P	14 15 07.5	+1.2
TPAW	Teton Pass	89.70	43	eP	P	14 15 08.0	+1.7
S22A	4UR Ranch, Cre	89.70	49	P	P	14 15 07.7	+1.1
	baz=243,SNR=9.0						
FXWY	Fox Creek	89.72	42	eP	P	14 15 08.0	+1.5
SNOW	Snow King Moun	89.81	43	eP	P	14 15 05.5	-1.4
O20A	White River Ci	89.84	46	P	P	14 15 07.8	+0.8
	baz=242,SNR=8.4						
O20A	White River Ci	89.84	46	eP	P	14 15 08.2	+1.2
IMW	Indian Meadow	89.91	42	eP	P	14 15 08.5	+1.1
LNIG	Linares	89.94	63	eP	P	14 15 07.0	-0.6
MOOW	Moose Ponds	89.96	42	eP	P	14 15 08.9	+1.4
LOHW	Long Hollow	89.98	43	eP	P	14 15 08.7	+1.1
QLMT	Earthquake Lak	90.07	41	eP	P	14 15 10.1	+2.1
FLWY	Flagg Ranch	90.15	42	eP	P	14 15 10.0	+1.6
YHB	Horse Butte	90.18	41	eP	P	14 15 10.6	+2.1
YPP	Pitchstone Pla	90.18	42	eP	P	14 15 10.1	+1.5
BW06	Boulder Array	90.23	44	P	P	14 15 09.2	+0.5
	baz=241,SNR=22						
BW06	Boulder Array	90.23	44	eP	P	14 15 08.7	-0.1
BW06				LR	LR		
	comp=Z,91nm,20.0s						
PD31	Pinedale Array	90.23	44	eP	P	14 15 08.8	0.0
PDAR	Pinedale Array	90.23	44	P	P	14 15 09.2	+0.4
	comp=Z,6.0nm,0.5s,baz=189,slow=2.3,SNR=57						
PDAR				pP	pP	14 17 25.2	+2.1
	comp=Z,1.8nm,0.9s,baz=242,slow=3.2,SNR=5.1						
PDAR				PKKPbc	PKKPbc	14 32 34.9	-0.7
	comp=Z,0.3nm,0.5s,baz=76,slow=6.3,SNR=4.1						
PDAR	Pinedale Array	90.23	44	eP	P	14 15 08.3	-0.5
PDAR				pP	pP	14 17 25.1	+2.1
PDAR				PKKPbc	PKKPbc	14 32 34.9	-0.7
SMCO	Snowmass	90.26	48	eP	P	14 15 09.8	+0.6
CD2	Chengdu	90.29	303	eP	P	14 15 09.0	-0.1
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.0s						
BOZ	Bozeman (W)	90.34	40	P	P	14 15 10.2	+1.1
	baz=240,SNR=11						
BOZ	Bozeman (W)	90.34	40	eP	P	14 15 10.6	+1.5
BOZ	Bozeman (W)	90.34	40	eP	P	14 15 10.6	+1.5
H17A	Grant Village	90.38	42	P	P	14 15 11.7	+2.2
	baz=240,SNR=5.2						
H17A	Grant Village	90.38	42	eP	P	14 15 12.2	+2.8
DAWY	Dawson	90.46	16	eP	P	14 15 09.7	+0.6
LKWY	Lake	90.58	42	PFAKE		14 15 20.0	+10
LKWY				LR	LR		
	comp=Z,1µm,20.0s						
SDCO	Great Sand Dun	90.64	50	P	P	14 15 11.6	+0.7
	baz=244,SNR=13						
SDCO	Great Sand Dun	90.64	50	eP	P	14 15 12.0	+1.1
SDCO				LR	LR		
	comp=Z,62nm,21.0s						
COLD	Coldfoot	90.80	11	eP	P	14 15 11.5	+1.0
WALA	Waterton Lakes	90.81	37	eP	P	14 15 12.2	+1.0
CMIG	Matias Romero	90.91	72	P	P	14 15 13.3	+1.1
	comp=Z,6.3nm,0.5s,baz=271,slow=4.9,SNR=7.8						
MSTX	Muleshoe	91.01	54	P	P	14 15 12.8	+0.4
	baz=245						
MSTX	Muleshoe	91.01	54	eP	P	14 15 13.4	+1.0
T25A	Trinidad	91.16	50	P	P	14 15 13.6	+0.5
	baz=244,SNR=6.8						
T25A	Trinidad	91.16	50	eP	P	14 15 14.1	+0.9
GO05	HualaæØ	91.20	128	eP	P	14 15 13.8	+0.5
RWWY	Rawlins	91.25	45	eP	P	14 15 13.3	-0.3
833A	Chaparral WMA,	91.35	60	P	P	14 15 14.7	+0.7
	baz=247						
Q24A	Divide	91.43	49	P	P	14 15 15.3	+0.8
	baz=244						
ISCO	Idaho Springs	91.48	48	P	P	14 15 15.4	+0.7
	baz=244,SNR=6.9						
ISCO	Idaho Springs	91.48	48	eP	P	14 15 15.9	+1.2
ISCO	Idaho Springs	91.48	48	eP	P	14 15 15.9	+1.2
RLMT	Red Lodge	91.55	42	P	P	14 15 15.7	+0.9
	baz=241						
RLMT	Red Lodge	91.55	42	eP	P	14 15 16.3	+1.5
RLMT				LR	LR		
	comp=Z,117nm,21.0s						
N23A	Red Feather La	91.74	47	P	P	14 15 16.7	+0.8
	baz=243,SNR=6.9						
N23A	Red Feather La	91.74	47	eP	P	14 15 17.2	+1.3
JCT	Junction City	91.88	58	P	P	14 15 16.7	+0.3
	baz=246						
JCT	Junction City	91.88	58	eP	P	14 15 16.9	+0.5
JCT				LR	LR		
	comp=Z,74nm,21.0s						
JCT	Junction City	91.88	58	eP	P	14 15 16.9	+0.5
JCT				MLR	MLR		
	comp=Z,74nm,21.0s						
K22A	Casper	92.15	45	P	P	14 15 18.2	+0.6
	baz=243						
K22A	Casper	92.15	45	eP	P	14 15 18.4	+0.9
TOLK	Toolik Lake Re	92.17	10	P	P	14 15 17.5	+0.6
	baz=208						
LZH	Lanzhou	92.37	308	eP	P	14 15 20.1	+1.4
LZH				pP	pP	14 17 36.8	+3.6
LZH				sP	sP	14 18 32.3	-2.6
LZH				SKS	SKSac	14 24 51.3	-1.9
LZH				S	ScS	14 25 33.6	+2.6
LZH				pmax	pmax		
	comp=Z,100nm,1.3s						
LZH				pmax	pmax		
	comp=Z,390nm,4.2s						
YAK	Yakutsk	92.40	338	PFAKE		14 15 30.0	+12
YAK				LR	LR		
	comp=Z,57nm,20.0s						
YAK	Yakutsk	92.40	338	eP	P	14 15 16.7	-1.2
YAK				e*PP	pP	14 17 33.5	+1.1
YAK				e		14 19 08.7	
YAK				ePPP	PPP	14 21 18.8	
YAK				eS	SKSac	14 24 48.4	-3.3
YAK				e		14 25 27.4	
YAK				eSS	SS	14 31 59.0	-1.5
YAK				eSSS	SSS	14 35 51.0	
YAK				pmax	pmax		
	comp=Z,36nm,0.8s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,6.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,58nm,3.3s						
YAK				pmax	pmax		
	comp=N,49nm,3.3s						
YAK				pmax	pmax		
	comp=E,68nm,3.8s						
YAK				smax	smax		
	comp=N,57nm,1.5s						
YAK				smax	smax		
	comp=E,16nm,1.5s						
EGMT	Eagleton	92.66	39	PFAKE		14 15 30.0	+10
EGMT				LR	LR		
	comp=Z,132nm,20.0s						
ABTX	Abilene, Hawle	92.85	56	P	P	14 15 21.2	+0.4
	baz=247						
ABTX	Abilene, Hawle	92.85	56	eP	P	14 15 21.5	+0.6
KSCO	Kaye Shedlock’	93.23	49	P	P	14 15 23.5	+1.0
	baz=245						
KSCO	Kaye Shedlock’	93.23	49	eP	P	14 15 23.8	+1.3
435B	Jarrell	93.76	59	P	P	14 15 25.7	+0.8
	baz=248						
LAO	LASA Array	94.16	41	P	P	14 15 27.8	+1.3
	baz=243						
LAO	LASA Array	94.16	41	eP	P	14 15 28.2	+1.8
RSSD	Black Hills	94.42	44	P	P	14 15 28.1	+0.2
	baz=245						
RSSD	Black Hills	94.42	44	eP	P	14 15 28.5	+0.6
RSSD	Black Hills	94.42	44	eP	P	14 15 28.5	+0.6
OGNE	Ogallala	94.44	48	PFAKE		14 15 40.0	+12
OGNE				LR	LR		
	comp=Z,142nm,20.0s						
ULN	Ulaanbaatar	95.22	320	eP	P	14 15 31.4	0.0
ULN				LR	LR		
	comp=Z,61nm,19.0s						
ULN	Ulaanbaatar	95.22	320	P	P	14 15 31.1	-0.2
	SNR=5.1						
ULN	Ulaanbaatar	95.22	320	d iP	P	14 15 31.0	-0.4
ULN				pmax	pmax		
	comp=Z,8.0nm,1.1s						
INK	Inuvik	95.26	15	P	P	14 15 31.0	+0.2
	comp=Z,2.7nm,0.9s,baz=214,slow=9.8,SNR=4.6						
SONM	Songino Array	95.61	319	P	P	14 15 32.9	-0.2
	comp=Z,2.6nm,0.7s,baz=117,slow=3.9,SNR=11						
SONM				PP	PP	14 19 31.5	-4.4
	comp=Z,1.8nm,0.8s,baz=128,slow=6.9,SNR=6.4						
SONM				PKKPbc	PKKPbc	14 32 21.4	-0.4
	comp=Z,0.6nm,0.8s,baz=306,slow=1.9,SNR=3.5						
SONA1	Songino Array	95.61	319	eP	P	14 15 32.4	-0.7
NATX	Nacogdoches	96.44	59	PFAKE		14 15 50.0	+13
NATX				LR	LR		
	comp=Z,167nm,19.0s						
GTA	Gaotai	96.61	310	⇓P	P	14 15 38.3	+0.5
GTA				pP	pP	14 17 56.3	+3.6
GTA				PP	PP	14 19 42.1	-1.6
GTA				SKS	SKSac	14 25 14.6	-0.7
GTA				S	S	14 25 58.8	-7.3
GTA				SS	SS	14 33 01.0	+0.2
GTA				pmax	pmax		
	comp=Z,10.0nm,1.7s						
GTA				pmax	pmax		
	comp=Z,84nm,5.6s						
YKA	Yellowknife Ar	97.63	25	P	P	14 15 41.9	+0.3
	comp=Z,0.9nm,0.7s,baz=243,slow=4.0,SNR=6.9						
YKA				pP	pP	14 18 00.8	+4.2
	comp=Z,0.9nm,0.9s,baz=242,slow=4.6,SNR=3.7						
ZAK	Zakamensk	98.52	321	eP	Pdif	14 15 45.2	-0.8
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
TLY	Talaya	98.81	322	PFAKE		14 16 00.0	+13
TLY				LR	LR		
	comp=Z,53nm,20.0s						
TIXI	Tiksi	99.18	345	PFAKE		14 16 00.0	+12
TIXI				LR	LR		
	comp=Z,76nm,21.0s						
LSA	Lhasa	99.98	298	PFAKE		14 16 00.0	+6.5
LSA				LR	LR		
	comp=Z,93nm,21.0s						
BCIP	Isla Barro Col	101.89	85	PFAKE		14 16 10.0	+8.4
BCIP				LR	LR		
	comp=Z,211nm,20.0s						
LPAZ	La Paz	102.76	113	P	Pdif	14 16 09.1	+2.8
	comp=Z,2.9nm,0.8s,baz=266,slow=2.8,SNR=8.3						
LPAZ				PP	PP	14 20 26.8	-3.2
	comp=Z,2.5nm,0.9s,baz=245,slow=8.5,SNR=4.4						
DGAR	Diego Garcia	104.24	256	PFAKE		14 16 20.0	+7.9
DGAR				LR	LR		
	comp=Z,313nm,22.0s						
ACSO	Alum Creek Sta	107.96	53	PFAKE		14 20 40.0	
ACSO				LR	LR		
	comp=Z,312nm,22.0s						
SAML	Samuel	110.35	109	PFAKE		14 20 50.0	
SAML				LR	LR		
	comp=Z,152nm,19.0s						
SDV	Santo Domingo	110.36	88	PFAKE		14 20 50.0	
SDV				LR	LR		

	comp=Z,57nm,19.0s						
ZALV	**Zalesovo Beam**	**110.39**	**321**	PKiKP	**PKiKP**	**14 20 33.9**	**-1.3**
	comp=Z,4.1nm,0.6s,baz=140,slow=0.8,SNR=18						
ZALV				PP	**PP**	**14 21 18.7**	**-5.0**
	comp=Z,2.0nm,0.8s,baz=100,slow=4.5,SNR=3.5						
ZALV				SKP		14 23 11.4	
	comp=Z,1.9nm,0.7s,baz=155,slow=2.2,SNR=3.9						
CNNC	**Cliffs of the**	**110.85**	**59**	PFAKE		14 20 50.0	
CNNC				LR	LR		
	comp=Z,723nm,21.0s						
MKAR	**Makanchi Array**	**110.92**	**313**	Pdiff	**Pdif**	**14 16 41.3**	**+0.1**
	comp=Z,1.4nm,0.8s,baz=88,slow=6.6,SNR=11						
MKAR				PKiKP	**PKiKP**	**14 20 35.3**	**-1.2**
	comp=Z,2.3nm,0.5s,baz=202,slow=0.8,SNR=18						
MKAR				PP	PP	14 21 15.9	-12
	comp=Z,3.3nm,1.0s,baz=98,slow=10,SNR=4.4						
MKAR				PKKPbc	**PKKPbc**	**14 31 35.9**	**-0.8**
	comp=Z,1.9nm,0.6s,baz=270,slow=4.3,SNR=18						
MKAR				PKKPab	**PKKPab**	**14 31 48.2**	**+0.7**
	comp=Z,1.5nm,0.8s,baz=251,slow=3.1,SNR=4.0						
MKAR				SKKPbc	SKKPbc	14 34 19.0	-4.2
	comp=Z,0.6nm,0.6s,baz=270,slow=2.4,SNR=4.4						
NVS	**Novosibirsk**	**111.43**	**322**	*e*PKIKP	**PKiKP**	**14 20 36.2**	**-0.9**
NVS				*i*		14 26 21.2	
NVS				pmax	pmax		
	comp=N,5.0nm,1.0s						
NVS				pmax	pmax		
	comp=E,7.0nm,1.0s						
NVS				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KURK	**Kurchatov**	**113.81**	**317**	PKiKP	**PKiKP**	**14 20 40.7**	**-1.1**
KURK				PP	PP	14 21 35.7	-12
KURK				SKP		14 23 18.3	
KURK				PKKPbc	**PKKPbc**	**14 31 26.2**	**-1.1**
KURK				PKKPab	**PKKPab**	**14 31 35.4**	**+0.9**
KURK				LR	LR		
	comp=Z,101nm,20.0s						
KURK	**Kurchatov**	**113.81**	**317**	PKIKP	**PKiKP**	**14 20 40.7**	**-1.1**
KURK						14 31 35.4	
KURK				MLR	MLR		
	comp=Z,101nm,20.0s						
KURBB	**Kurchatov Arra**	**113.86**	**317**	PKiKP	**PKiKP**	**14 20 40.7**	**-1.2**
	comp=Z,4.6nm,0.6s,baz=108,slow=1.8,SNR=47						
KURBB				PP	PP	14 21 35.7	-12
	comp=Z,2.0nm,0.8s,baz=97,slow=5.8,SNR=5.2						
KURBB				SKP		14 23 18.3	
	comp=Z,2.9nm,0.8s,baz=97,slow=1.9,SNR=8.5						
KURBB				PKKPbc	**PKKPbc**	**14 31 26.2**	**-1.0**
	comp=Z,1.5nm,0.7s,baz=280,slow=3.9,SNR=12						
KURBB				PKKPab	**PKKPab**	**14 31 35.4**	**+1.1**
	comp=Z,2.9nm,0.9s,baz=277,slow=5.2,SNR=13						
KSH	**Kashi**	**114.43**	**305**	*e*PKP	PKPdf	14 20 43.8	+0.2
KSH				PP	**PP**	**14 21 59.3**	**+6.7**
KSH				PKS	**PKSdf**	**14 24 18.8**	**-1.6**
NIL	**Nilore**	**115.72**	**298**	PFAKE		14 21 00.0	+14
NIL				LR	LR		
	comp=Z,66nm,20.0s						
AAK	**Ala-Archa**	**115.91**	**308**	PKP	**PKPdf**	**14 20 45.9**	**-0.5**
	comp=Z,1.6nm,0.3s,baz=150,slow=2.6,SNR=4.1						
AAK				PKKPbc	**PKKPbc**	**14 31 19.8**	**-0.5**
	comp=Z,1.6nm,0.3s,baz=290,slow=2.3,SNR=3.9						
AAK				PKKPab	**PKKPab**	**14 31 26.7**	**+1.0**
	comp=Z,2.3nm,0.4s,baz=217,slow=2.4,SNR=6.9						
PTGA	**Pitinga**	**116.76**	**102**	PFAKE		14 21 00.0	+11
PTGA				LR	LR		
	comp=Z,15µm,22.0s						
M65A	**Busby, Falmout**	**117.39**	**53**	PKiKP	**PKPdf**	**14 20 48.9**	**-0.2**
	baz=265						
PKME	**Peaks-Kenny Pk**	**118.60**	**49**	PKiKP	**PKPdf**	**14 20 51.1**	**-0.1**
	baz=268						
BVAR	**Borovoye Array**	**118.95**	**320**	PKP	**PKPdf**	**14 20 50.9**	**-0.8**
	comp=Z,12nm,0.5s,baz=132,slow=1.4,SNR=82						
BVAR				PP	PP	14 22 13.5	-9.4
	comp=Z,0.7nm,0.4s,baz=109,slow=6.6,SNR=2.7						
BVAR				SKP		14 23 28.6	
	comp=Z,4.8nm,0.8s,baz=94,slow=1.9,SNR=6.6						
BVAR				PKKPbc	**PKKPbc**	**14 31 08.8**	**-0.9**
	comp=Z,1.2nm,0.6s,baz=262,slow=3.5,SNR=5.0						
BRVK	**Borovoye**	**119.01**	**320**	*d i*PKIKP	**PKPdf**	**14 20 50.8**	**-1.0**
ANWB	**Willy Bob**	**121.16**	**82**	PFAKE		14 21 10.0	+13
ANWB				LR	LR		
	comp=Z,300nm,20.0s						
SPITS	**Spitsbergen Ar**	**122.53**	**356**	PKP	**PKPdf**	**14 20 57.6**	**-0.3**
	comp=Z,20nm,0.7s,baz=356,slow=5.8,SNR=15						
DAG	**Danmarks Havn**	**123.57**	**5**	*i* P	**PKPdf**	**14 20 58.6**	**-1.3**
	comp=Z,7.8nm,0.8s						
SVE	**Sverdlovsk**	**123.98**	**325**	*e*PKIKP	**PKPdf**	**14 21 01.1**	**-0.1**
SVE				pmax	pmax		
	comp=Z,26nm,0.9s						
SUMG	**Summit**	**124.11**	**13**	⇑*i*P	**PKPdf**	**14 21 01.8**	**+0.2**
	comp=Z,22nm,1.0s						
BOSA	**Boshof**	**125.13**	**206**	PKP	**PKPdf**	**14 21 04.8**	**+0.2**
	comp=Z,3.4nm,0.9s,baz=208,slow=2.5,SNR=4.2						
ARU	**Arti**	**125.19**	**325**	PKP	**PKPdf**	**14 21 03.4**	**-0.1**
	comp=Z,21nm,0.5s,baz=109,slow=1.1,SNR=30						
ARU				PP	**PP**	**14 22 59.0**	**-5.1**
	comp=Z,1.9nm,0.4s,baz=32,slow=3.5,SNR=6.7						
ARU				PKKPbc	**PKKPbc**	**14 30 46.1**	**-0.3**
	comp=Z,3.2nm,0.5s,baz=350,slow=3.1,SNR=3.5						
AKTO	**Aktyubinsk**	**126.90**	**318**	PKP	**PKPdf**	**14 21 06.8**	**-0.3**
	comp=Z,7.5nm,0.6s,baz=88,slow=5.4,SNR=26						
AKTO				PKKPbc	**PKKPbc**	**14 30 39.2**	**-0.4**
	comp=Z,0.6nm,0.4s,baz=306,slow=2.8,SNR=6.3						
GEYT	**Alibeck**	**128.27**	**302**	PKP	**PKPdf**	**14 21 09.5**	**-0.6**
	comp=Z,5.1nm,0.7s,baz=116,slow=3.4,SNR=13						
MDH	**Madha**	**129.20**	**286**	PKPdf	**PKPdf**	**14 21 11.0**	**-1.1**
UOSS	**Minazif**	**129.24**	**285**	PKPdf	**PKPdf**	**14 21 11.1**	**-1.2**
PRGR	**Permogore**	**129.25**	**334**	*e*PKIKP	**PKPdf**	**14 21 10.8**	**-0.3**
PRGR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
HATD	**Hatta, Dubai**	**129.29**	**285**	*i* PKiKP	**PKiKP**	**14 21 13.0**	**-0.2**
	SNR=8.6						
MSFE	**Esma-Masafi**	**129.34**	**286**	*i* PKPdf	**PKPdf**	**14 21 12.0**	**-0.4**
	SNR=6.2						
ASHO	**Ashiyiah**	**129.34**	**285**	PKPdf	**PKPdf**	**14 21 12.0**	**-0.5**
SHME	**Shamm**	**129.44**	**287**	PKPdf	**PKPdf**	**14 21 12.4**	**-0.2**
ARCES	**ARCESS Array B**	**129.44**	**349**	PKP	**PKPdf**	**14 21 10.9**	**-0.3**
	comp=Z,11nm,0.6s,baz=35,slow=1.3,SNR=27						
ARCES				pPKP	**pPKPdf**	**14 23 36.0**	**+1.0**
	comp=Z,28nm,0.8s,baz=29,slow=5.0,SNR=11						
ARCES	**ARCESS Array B**	**129.44**	**349**	PKIKP	**PKPdf**	**14 21 11.0**	**-0.3**
ARCES						14 23 36.0	
ALNE	**Al Ain**	**129.53**	**284**	PKPdf	**PKPdf**	**14 21 12.4**	**-0.5**
NAZ	**Nazwa, Dubai**	**129.73**	**285**	PKPdf	**PKPdf**	**14 21 13.0**	**-0.2**
ASUD	**Al Ashush, Dub**	**129.99**	**285**	PKPdf	**PKPdf**	**14 21 13.6**	**-0.1**
AJN	**Ajban**	**130.29**	**285**	PKPdf	**PKPdf**	**14 21 14.2**	**0.0**
MZR	**Muzera**	**131.43**	**282**	*i* PKiKP	**PKPdf**	**14 21 16.8**	**+0.3**
	SNR=11						
KLMR	**Klimovskoe**	**132.11**	**336**	*e*PKIKP	**PKPdf**	**14 21 15.7**	**-0.9**
KLMR				*e*		14 23 44.4	
KLMR				pmax	pmax		
	comp=Z,21nm,1.3s						
KLMR	**Klimovskoe**	**132.11**	**336**	*e*PKPdf	**PKPdf**	**14 21 15.7**	**-0.9**
KLMR				AMP		14 21 17.5	
	comp=Z,21nm,1.3s						
KLMR				*e*PP	**PP**	**14 23 44.5**	**-3.7**
AKT	**Akhty**	**135.79**	**308**	*i* PKIKP	**PKPdf**	**14 21 24.7**	**+0.5**
AKT				*e*		14 24 10.5	
AKT				pmax	pmax		
	comp=Z,14nm,0.8s						
FINES	**FINESS Array B**	**136.17**	**343**	PKhKP	PKPpre	14 21 11.1	
	comp=Z,1.4nm,0.5s,baz=36,slow=4.2,SNR=12						
FINES				PKP	**PKPdf**	**14 21 23.0**	**-1.1**
	comp=Z,7.9nm,0.7s,baz=97,slow=3.2,SNR=14						
FINES				SKPbc	**SKPbc**	**14 23 58.7**	**+0.2**
	comp=Z,19nm,0.9s,baz=35,slow=7.0,SNR=14						
OBN	**Obninsk**	**136.88**	**331**	⇑*i*PKIKP	**PKPdf**	**14 21 25.1**	**-0.5**
OBN				*e*SS	SS	14 41 39.7	+5.5
OBN				pmax	pmax		
	comp=Z,29nm,1.4s						
OBN				pmax	pmax		
	comp=Z,15nm,0.6s						
KBZ	**Khabaz**	**138.62**	**313**	PKhKP	PKPpre	14 21 23.4	
	comp=Z,1.6nm,0.6s,baz=176,slow=2.9,SNR=4.5						
KBZ				SKPbc	**SKPbc**	**14 24 06.3**	**+0.2**
	comp=Z,4.6nm,0.8s,baz=337,slow=2.3,SNR=8.5						
KIV	**Kislovodsk**	**138.69**	**313**	PFAKE		14 21 40.0	+11
KIV				LR	LR		
	comp=Z,60nm,21.0s						
KIV	**Kislovodsk**	**138.69**	**313**	⇓*e*PKIKP	**PKPdf**	**14 21 28.8**	**-0.6**
KIV				*e*		14 24 30.4	
KIV				pmax	pmax		
	comp=Z,4.0nm,0.5s						
RAYN	**Ar Rayn**	**138.78**	**282**	PFAKE		14 21 40.0	+10
RAYN				LR	LR		
	comp=Z,80nm,19.0s						
RAYN	**Ar Rayn**	**138.78**	**282**	PKPdf	**PKPdf**	**14 21 30.1**	**-0.1**
NB2	**NORSAR Subarra**	**139.57**	**352**	PKP	PKPpre	14 21 23.0	
	comp=Z,4.8nm,0.7s,baz=10,slow=3.2						
NOA	**NORSAR Array B**	**139.57**	**352**	PKhKP	PKPpre	14 21 22.8	
	comp=Z,4.5nm,0.7s,baz=15,slow=5.0,SNR=17						
NOA				SKPbc	**SKPbc**	**14 24 08.4**	**+0.2**
	comp=Z,3.8nm,0.7s,baz=15,slow=4.3,SNR=12						
HFS	**Hagfors**	**140.09**	**350**	PKhKP	PKPpre	14 21 24.4	
	comp=Z,10nm,0.6s,baz=83,slow=4.6,SNR=62						
HFS				SKPbc	**SKPbc**	**14 24 09.4**	**-0.1**
	comp=Z,9.1nm,0.7s,baz=129,slow=2.1,SNR=8.0						
ANN	**Anapa**	**141.84**	**317**	*i* PKHKP	PKPpre	14 21 30.3	
ANN				pmax	pmax		
	comp=Z,55nm,1.3s						
LODK	**Lodwar**	**142.07**	**247**	*i* P	**PKPdf**	**14 21 33.6**	**-2.8**
LODK				*i* P	**PKPdf**	**14 21 33.6**	**-2.8**
LODK				*i* P	**PKPdf**	**14 21 34.1**	**-2.3**
LODK				*e*		14 21 36.2	
	baz=134,slow=6.2						
LODK	**Lodwar**	**142.07**	**247**	*i* P	**PKPdf**	**14 21 33.5**	**-2.9**
LODK				*i* P	**PKPdf**	**14 21 33.6**	**-2.8**
LODK				*i* P	**PKPdf**	**14 21 33.8**	**-2.6**
SHEL	**Horse Pasture**	**142.47**	**170**	*i* PKIKP	**PKPdf**	**14 21 36.1**	**-0.9**
AKASG	**Malin Array Be**	**143.12**	**330**	PKhKP	PKPpre	14 21 34.5	
	comp=Z,117nm,0.6s,baz=44,slow=4.3,SNR=414						
AKASG				SKPbc	**SKPbc**	**14 24 17.3**	**-0.1**
	comp=Z,6.9nm,0.7s,baz=48,slow=2.5,SNR=12						
SUW	**Suwalki**	**143.13**	**338**	*e*PKP	PKPab	14 21 35.0	-0.1
SUW	**Suwalki**	**143.13**	**338**	*e*PKIKP	PKPab	14 21 35.0	-0.1
KIEV	**Kiev**	**143.13**	**330**	*i* PKPbc	PKPab	14 21 34.6	-0.6
	SNR=107						
MBAR	**Mbarara**	**143.62**	**237**	PFAKE		14 21 50.0	+11
MBAR				LR	LR		
	comp=Z,828nm,20.0s						
SIM	**Simferopol’**	**143.85**	**319**	*e*PKIKP	PKPbc	14 21 38.0	0.0
SIM				pmax	pmax		
	comp=Z,154nm,0.9s						
COP	**Copenhagen**	**144.53**	**349**	*i* P	PKPbc	14 21 39.8	+0.2
BSD	**Bornholm Skovb**	**144.56**	**346**	*i* P	PKPbc	14 21 39.7	0.0
	comp=Z,98nm,1.0s						
LLD	**Lille Linde**	**144.90**	**349**	*i* P	PKPbc	14 21 41.0	+0.3
	comp=Z,59nm,0.7s						
SORM	**Soroca**	**145.26**	**327**	⇑*i*P	**PKPbc**	**14 21 42.0**	**0.0**
SORM	**Soroca**	**145.26**	**327**	⇑PKIKP	**PKPbc**	**14 21 42.1**	**0.0**
GKP	**Gorka Klasztor**	**145.64**	**343**	*e*PKP	**PKPbc**	**14 21 43.0**	**0.0**
GKP	**Gorka Klasztor**	**145.64**	**343**	*e*PKIKP	**PKPbc**	**14 21 43.0**	**0.0**
CORM	**Corum**	**145.65**	**311**	*e*P	**PKPbc**	**14 21 44.4**	**+0.8**
KIS	**Kishinev**	**145.75**	**325**	*i* P	**PKPbc**	**14 21 43.0**	**-0.5**
KIS				XM		14 21 44.0	
	comp=Z,200nm,1.5s						
KIS	**Kishinev**	**145.75**	**325**	⇓*i*PKIKP	**PKPbc**	**14 21 43.0**	**-0.5**
KIS				pmax	pmax		
	comp=Z,220nm,1.5s						
BEL	**Belsk**	**145.75**	**338**	*e*PKP	**PKPbc**	**14 21 43.9**	**+0.5**
BEL	**Belsk**	**145.75**	**338**	*e*PKP2	**PKPbc**	**14 21 43.9**	**+0.5**
EKA	**Eskdalemuir Ar**	**145.82**	**4**	PKPbc	**PKPbc**	**14 21 43.1**	**-0.4**
	comp=Z,23nm,0.7s,baz=351,slow=2.6,SNR=50						
ESK	**Eskdalemuir**	**145.83**	**4**	PFAKE		14 21 50.0	+4.5
ESK				LR	LR		
	comp=Z,264nm,20.0s						
LVV	**L’vov**	**146.09**	**333**	*e*PKIKP	**PKPbc**	**14 21 44.1**	**-0.3**
ASF	**Jabal al Asfar**	**146.16**	**296**	PKPbc	**PKPbc**	**14 21 45.7**	**+0.5**
	comp=Z,32nm,0.8s,baz=64,slow=1.8,SNR=58						
LEOM	**Leova**	**146.38**	**325**	⇓*i*P	**PKPbc**	**14 21 45.6**	**+0.4**
LEOM	**Leova**	**146.38**	**325**	⇓PKP2	**PKPbc**	**14 21 45.6**	**+0.4**
BRTR	**Keskin Array B**	**146.53**	**311**	PKP	**PKPdf**	**14 21 42.4**	**-1.0**
	comp=Z,32nm,0.7s,baz=136,slow=0.7,SNR=115						
BRTR				PKPbc	**PKPbc**	**14 21 45.6**	**-0.5**
	comp=Z,32nm,0.7s,baz=138,slow=2.6,SNR=118						
BRTR				pPKPbc	**pPKPdf**	**14 24 08.3**	**+0.9**
	comp=Z,19nm,1.2s,baz=101,slow=2.5,SNR=9.0						
BRTR				SKKPbc	SKKPbc	14 32 16.1	-2.0
	comp=Z,1.3nm,0.8s,baz=243,slow=5.4,SNR=5.6						
KWP	**Kalwaria Pacla**	**146.78**	**334**	*e*PKP	**PKPbc**	**14 21 46.5**	**+0.2**
KWP	**Kalwaria Pacla**	**146.78**	**334**	*e*PKP2	**PKPbc**	**14 21 46.5**	**+0.2**
BHL	**Bhannes**	**146.83**	**300**	*e*P	**PKPbc**	**14 21 47.2**	**+0.1**
PRAR	**RASCA**	**146.84**	**328**	⇑*i*P	**PKPbc**	**14 21 46.0**	**-0.5**
TLCR		**146.86**	**323**	⇓*i*P	**PKPbc**	**14 21 46.7**	**+0.1**
TLCR		**146.86**	**323**	⇓PKP2	**PKPbc**	**14 21 46.7**	**+0.1**
SHBL	**Chebaa**	**146.88**	**299**	*e*P	**PKPbc**	**14 21 47.7**	**+0.5**
AFSR	**Af¯ar-Bala (A**	**147.04**	**311**	*e*P	**PKPbc**	**14 21 47.5**	**+0.1**
ANTO	**Ankara**	**147.06**	**312**	*e*P	**PKPbc**	**14 21 47.6**	**+0.2**
ANTO	**Ankara**	**147.06**	**312**	⇑*i*P	**PKPbc**	**14 21 47.9**	**+0.5**
ANTO	**Ankara**	**147.06**	**312**	PFAKE		14 22 00.0	+8.8
ANTO				LR	LR		
	comp=Z,50nm,19.0s						
ANTO	**Ankara**	**147.06**	**312**	P	**PKPbc**	**14 21 47.9**	**+0.5**
	SNR=16						
ANTO	**Ankara**	**147.06**	**312**	⇑PKP2	**PKPbc**	**14 21 47.9**	**+0.5**
LOD	**Lodumlu**	**147.07**	**312**	*e*P	**PKPbc**	**14 21 47.6**	**+0.2**
BURAR	**Bucovina Array**	**147.16**	**329**	⇑*i*P	**PKPbc**	**14 21 48.3**	**+0.9**
BURAR	**Bucovina Array**	**147.16**	**329**	⇑PKP2	**PKPbc**	**14 21 48.3**	**+0.9**
BIZ	**Bicaz**	**147.19**	**327**	⇑*i*P	**PKPbc**	**14 21 48.1**	**+0.7**
TESR	**Tescani**	**147.20**	**326**	⇓*i*P	**PKPbc**	**14 21 47.5**	**0.0**
MMAI	**Mount Meron Ar**	**147.23**	**298**	PKPbc	**PKPbc**	**14 21 48.5**	**+0.4**
	comp=Z,65nm,0.6s,baz=72,slow=5.4,SNR=57						
MMAI				PKPab	**PKPab**	**14 21 53.0**	**+0.9**
	comp=Z,45nm,0.6s,baz=81,slow=4.5,SNR=20						
CFR	**Carcaliu**	**147.25**	**323**	⇓*i*P	**PKPbc**	**14 21 47.4**	**-0.2**
CFR	**Carcaliu**	**147.25**	**323**	⇓PKIKP	**PKPbc**	**14 21 47.4**	**-0.2**
ASCN	**Ascension**	**147.39**	**151**	PFAKE		14 22 00.0	+7.1
ASCN				LR	LR		
	comp=Z,1µm,20.0s						
OJC	**Ojcow**	**147.44**	**337**	*e*PKP	**PKPbc**	**14 21 48.0**	**0.0**
OJC	**Ojcow**	**147.44**	**337**	*e*PKP2	**PKPbc**	**14 21 48.0**	**0.0**
TIRR	**Tirgusor**	**147.53**	**322**	⇑*i*P	**PKPbc**	**14 21 48.7**	**+0.4**
TIRR	**Tirgusor**	**147.53**	**322**	⇑PKP2	**PKPbc**	**14 21 48.7**	**+0.4**
VRI	**Vrincioaia**	**147.58**	**325**	⇓*i*P	**PKPbc**	**14 21 48.7**	**+0.2**
VRI	**Vrincioaia**	**147.58**	**325**	⇓PKP2	**PKPbc**	**14 21 48.7**	**+0.2**
PLOR	**Plostina**	**147.63**	**325**	⇓*i*P	**PKPbc**	**14 21 48.6**	**0.0**
PLOR	**Plostina**	**147.63**	**325**	⇓PKP2	**PKPbc**	**14 21 48.6**	**0.0**
HARR	**Harsova**	**147.66**	**323**	⇑*i*P	**PKPbc**	**14 21 49.1**	**+0.4**
HARR	**Harsova**	**147.66**	**323**	⇑PKP2	**PKPbc**	**14 21 49.1**	**+0.4**
TLB	**Topalu**	**147.66**	**322**	⇑*i*P	**PKPbc**	**14 21 49.2**	**+0.5**
TLB	**Topalu**	**147.66**	**322**	⇑PKP2	**PKPbc**	**14 21 49.2**	**+0.5**
UZH	**Uzhgorod**	**147.73**	**333**	*e*PKIKP	**PKPbc**	**14 21 47.6**	**-1.1**
CVDA	**Cernavoda**	**147.82**	**322**	⇓*i*P	**PKPbc**	**14 21 49.7**	**+0.7**
CRVS	**Cervenica-Dubn**	**147.86**	**334**	*e*PKP2	**PKPbc**	**14 21 49.5**	**+0.4**
CRVS	**Cervenica-Dubn**	**147.86**	**334**	*e*PKP	**PKPbc**	**14 21 49.5**	**+0.4**
CRVS				*e*		14 24 18.6	
MDUB	**Mudurnu**	**147.89**	**314**	*e*P	**PKPbc**	**14 21 49.1**	**-0.5**
NIE	**Niedzica**	**147.91**	**336**	*e*PKP	**PKPbc**	**14 21 50.0**	**+0.8**
NIE	**Niedzica**	**147.91**	**336**	*e*PKP2	**PKPbc**	**14 21 50.0**	**+0.8**
ARCR	**ARCALIA**	**147.95**	**329**	⇑*i*P	**PKPbc**	**14 21 50.1**	**+0.8**
AUMIH	**MIHALICIK**	**147.97**	**312**	*e*P	**PKPbc**	**14 21 48.4**	**-1.4**
TRPA	**Tarpa**	**148.01**	**332**	⇑*i*P	**PKPbc**	**14 21 49.8**	**+0.4**
TRPA	**Tarpa**	**148.01**	**332**	⇓*e*x	**PKPbc**	**14 21 49.8**	**+0.4**
LADK	**Ladik-KONYA**	**148.04**	**309**	*e*P	**PKPbc**	**14 21 49.5**	**-0.5**
KSP	**Ksiaz**	**148.06**	**341**	*e*PKP	**PKPbc**	**14 21 50.1**	**+0.6**
KSP	**Ksiaz**	**148.06**	**341**	*e*PKP2	**PKPbc**	**14 21 50.1**	**+0.6**
KIZT	**Kizilcal**	**148.12**	**310**	*e*P	**PKPbc**	**14 21 49.9**	**-0.3**
KONT	**Konya--Tatoy**	**148.14**	**308**	*e*P	**PKPbc**	**14 21 49.5**	**-0.7**
ISR	**Istrita**	**148.16**	**324**	⇑*i*P	**PKPbc**	**14 21 50.5**	**+0.5**
ISR	**Istrita**	**148.16**	**324**	⇑PKP2	**PKPbc**	**14 21 50.5**	**+0.5**
DOPR	**Dopca**	**148.21**	**327**	⇑*i*P	**PKPbc**	**14 21 51.0**	**+0.9**
MLR	**Muntele Rosu**	**148.24**	**325**	PKPbc	**PKPbc**	**14 21 50.0**	**-0.3**
	comp=Z,36nm,0.8s,baz=13,slow=3.9,SNR=37						
MLR	**Muntele Rosu**	**148.24**	**325**	⇓*i*P	**PKPbc**	**14 21 50.3**	**0.0**
OKC	**Ostrava-Krasne**	**148.34**	**338**	⇑*e*PKP	**PKPbc**	**14 21 50.8**	**+0.6**
OKC				*e*PKPAB	**PKPab**	**14 21 56.7**	**+0.8**
OKC	**Ostrava-Krasne**	**148.34**	**338**	*e*PKP2	**PKPbc**	**14 21 50.8**	**+0.6**
SAUV	**Serdivan-Sakar**	**148.35**	**315**	*e*P	**PKPbc**	**14 21 49.0**	**-1.5**
GULT	**Gulveren**	**148.37**	**314**	*e*P	**PKPbc**	**14 21 52.0**	**+1.3**
CSS	**Mathiatis**	**148.41**	**303**	P	**PKPbc**	**14 21 50.4**	**-0.5**
CSS	**Mathiatis**	**148.41**	**303**	P	**PKPbc**	**14 21 50.7**	**-0.2**
MAMC	**Mammari**	**148.44**	**303**	P	**PKPbc**	**14 21 51.0**	**+0.1**
UPC	**Upice**	**148.44**	**341**	⇑*e*PKP	**PKPbc**	**14 21 51.1**	**+0.6**
UPC				*e*PKPAB	**PKPab**	**14 21 57.2**	**+0.9**
UPC	**Upice**	**148.44**	**341**	*e*PKP2	**PKPbc**	**14 21 51.1**	**+0.6**
LANS	**Liptovska Anna**	**148.44**	**336**	*e*PKP2	**PKPbc**	**14 21 51.7**	**+1.1**
LANS	**Liptovska Anna**	**148.44**	**336**	*e*PKP	**PKPbc**	**14 21 51.7**	**+1.1**
LANS				*e*		14 21 57.0	
LANS				*e*		14 24 18.3	
DPC	**Dobruska-Polom**	**148.49**	**341**	⇑*e*PKP	**PKPbc**	**14 21 51.3**	**+0.7**
DPC				*e*PKPAB	**PKPab**	**14 21 57.7**	**+1.1**
DPC	**Dobruska-Polom**	**148.49**	**341**	*e*PKP2	**PKPbc**	**14 21 51.3**	**+0.7**
CLL	**Collm**	**148.52**	**345**	⇓*i*PKPbc	**PKPbc**	**14 21 50.8**	**+0.2**
	comp=Z,106nm,1.2s						
CLL				*i* PKPab	**PKPab**	**14 21 56.5**	**-0.1**
	comp=Z,34nm,0.8s						
CLL				*e*pPKPbc	**pPKPbc**	**14 24 12.0**	**-0.7**
CLL				*e*pPKiKP	**pPKiKP**	**14 24 15.0**	**+0.1**
CLL				*e*SKPdf	**SKPdf**	**14 24 19.0**	**-2.7**
	comp=Z,44nm,1.2s						
CLL				*e*		14 24 25.0	
CLL				*e*sPKPbc	**sPKPab**	**14 25 14.0**	**-0.8**
CJR	**Cluj-Napoca**	**148.57**	**329**	⇑*i*P	**PKPbc**	**14 21 51.6**	**+0.6**
CJR	**Cluj-Napoca**	**148.57**	**329**	⇑PKP2	**PKPbc**	**14 21 51.6**	**+0.6**
KRLC	**Kraliky**	**148.59**	**340**	⇑*e*PKP	**PKPbc**	**14 21 51.1**	**+0.2**
KRLC				*e*PKPAB	**PKPab**	**14 21 57.6**	**+0.6**
KECS	**Kecovo**	**148.59**	**335**	*e*PKP2	**PKPbc**	**14 21 51.7**	**+0.8**
KECS	**Kecovo**	**148.59**	**335**	*e*PKP	**PKPbc**	**14 21 51.7**	**+0.8**
MORC	**Moravsky Berou**	**148.60**	**339**	⇓*i*PKP	**PKPbc**	**14 21 51.2**	**+0.3**
MORC				*e*		14 21 57.5	
BORA	**Eskisehir**	**148.67**	**313**	*e*P	**PKPbc**	**14 21 50.8**	**-0.7**
BRG	**Berggiesshubel**	**148.69**	**344**	*e*PKP	**PKPdf**	**14 21 46.4**	**0.0**
	comp=Z,22nm,1.6s						
BRG	**Berggiesshubel**	**148.69**	**344**	*i* PKP	**PKPbc**	**14 21 51.4**	**+0.4**
	comp=Z,96nm,1.4s						
BRG	**Berggiesshubel**	**148.69**	**344**	*i* PKP	**PKPab**	**14 21 57.5**	**+0.2**
	comp=Z,34nm,1.1s						
BRG				*e*pPKP	**pPKPdf**	**14 24 08.1**	**-2.4**
	comp=Z,5.1nm,1.1s						
BRG				*i*		14 24 21.8	
	comp=Z,21nm,1.2s						
BRG				*i*		14 24 48.3	
	comp=Z,19nm,1.1s						
BRG	**Berggiesshubel**	**148.69**	**344**	*e*PKIKP	**PKPdf**	**14 21 46.4**	**0.0**
BRG				*i*		14 21 57.5	
BRG				*e*		14 24 08.1	
BRG				pmax	pmax		
	comp=Z,22nm,1.6s						
BRG				pmax	pmax		
	comp=Z,96nm,1.4s						
BRG				pmax	pmax		
	comp=Z,35nm,1.1s						
BRG				pmax	pmax		
	comp=Z,5.0nm,1.1s						
BRG				pmax	pmax		
	comp=Z,21nm,1.2s						
BRG				pmax	pmax		
	comp=Z,19nm,1.1s						
VOIR		**148.75**	**326**	⇓*i*P	**PKPbc**	**14 21 51.0**	**-0.5**
GAZI	**Gazipasa**	**148.79**	**305**	*e*P	**PKPbc**	**14 21 50.7**	**-1.1**
SZAC	**Souni**	**148.83**	**302**	P	**PKPbc**	**14 21 52.0**	**+0.1**
PVCC	**Panska Ves**	**148.83**	**343**	⇑*e*PKP	**PKPbc**	**14 21 52.1**	**+0.7**
LTVH	**L˜'tav˜'rtes,**	**148.85**	**332**	⇑*e*x	**PKPbc**	**14 21 54.1**	**+2.6**
PRD	**Provadia**	**148.86**	**321**	*i* P	**PKPbc**	**14 21 52.0**	**+0.3**
ADVT	**Abdulvahap**	**148.89**	**314**	*e*P	**PKPbc**	**14 21 51.0**	**-0.9**
ALFC	**Alefka**	**148.93**	**303**	P	**PKPbc**	**14 21 51.8**	**-0.4**
CAVI	**Cavuskoy**	**148.93**	**314**	*e*P	**PKPbc**	**14 21 51.0**	**-1.0**
DRGR		**148.93**	**330**	⇑*i*P	**PKPbc**	**14 21 52.1**	**+0.2**
WTSB	**Winterswijk**	**148.98**	**353**	*e*PKP	**PKPbc**	**14 21 51.7**	**0.0**
ARR	**Arges**	**149.01**	**326**	⇑*i*P	**PKPbc**	**14 21 53.5**	**+1.4**
AKMC	**Akamas**	**149.18**	**303**	P	**PKPbc**	**14 21 52.0**	**-0.8**
PPCY	**Paphos**	**149.21**	**303**	P	**PKPbc**	**14 21 52.2**	**-0.6**
VYHS	**Vyhne**	**149.22**	**336**	*e*PKP	**PKPbc**	**14 21 52.8**	**+0.4**
VYHS				*e*		14 22 00.5	
VYHS				*e*		14 24 17.1	
PSZ	**Piszkesteto**	**149.28**	**335**	⇓*i*P	**PKPbc**	**14 21 53.0**	**+0.3**
PSZ	**Piszkesteto**	**149.28**	**335**	⇓*e*x	**PKPbc**	**14 21 53.0**	**+0.3**
PRA	**Prague**	**149.29**	**343**	⇑*e*PKP	**PKPbc**	**14 21 53.2**	**+0.7**
VRAC	**Vranov**	**149.31**	**340**	PKP	**PKPdf**	**14 21 46.8**	**-0.6**
	comp=Z,1.9nm,0.4s,baz=52,slow=1.3,SNR=3.1						
VRAC				PKPbc	**PKPbc**	**14 21 52.9**	**+0.3**
	comp=Z,24nm,0.9s,baz=52,slow=1.7,SNR=26						
VRAC				PKPab	**PKPab**	**14 22 00.8**	**+0.8**
	comp=Z,27nm,0.6s,baz=37,slow=3.5,SNR=18						
VRAC	**Vranov**	**149.31**	**340**	⇑*i*P	**PKPbc**	**14 21 53.3**	**+0.7**
VRAC	**Vranov**	**149.31**	**340**	⇓*i*PKP	**PKPbc**	**14 21 52.9**	**+0.3**
VRAC				*e*		14 22 00.7	
SUTC	**Sutluce-Ispart**	**149.32**	**308**	*e*P	**PKPbc**	**14 21 51.5**	**-1.7**
GOPC	**GO Pecny, Ondr**	**149.33**	**342**	⇑*e*PKP	**PKPbc**	**14 21 53.0**	**+0.4**
GOPC				*e*PKPAB	**PKPab**	**14 22 00.9**	**+0.9**
PRU	**Pruhonice**	**149.33**	**343**	⇑*e*PKP	**PKPbc**	**14 21 53.0**	**+0.4**
PRU				*e*PKPAB	**PKPab**	**14 22 00.9**	**+0.9**
JAVC	**Velka Javorina**	**149.34**	**338**	⇓*i*PKP	**PKPbc**	**14 21 54.2**	**+1.5**
JAVC				*e*		14 22 01.8	
HUMR	**Humele**	**149.39**	**325**	⇑*i*P	**PKPbc**	**14 21 52.5**	**-0.4**
LOT	**Lotru**	**149.39**	**327**	⇑*i*P	**PKPbc**	**14 21 52.7**	**-0.4**
ISP	**Isparta**	**149.52**	**309**	⇑*i*P	**PKPbc**	**14 21 53.0**	**-0.6**
TVSB	**Tavsanli**	**149.55**	**313**	*e*P	**PKPbc**	**14 21 53.0**	**-0.6**
KRUC	**Moravsky**	**149.59**	**340**	⇓*i*PKP	**PKPbc**	**14 21 53.4**	**+0.1**
KRUC				*e*		14 22 01.6	
NKC	**Novy Kostel**	**149.65**	**345**	⇑*e*PKP	**PKPbc**	**14 21 53.7**	**+0.3**
NKC				*e*PKPAB	**PKPab**	**14 22 02.1**	**+0.7**
SZH	**Strazhica**	**149.67**	**322**	*i* P	**PKPbc**	**14 21 53.5**	**-0.1**
JMB	**Yambol**	**149.78**	**320**	*i* P	**PKPbc**	**14 21 53.9**	**0.0**
MODS	**Modra-Piesok**	**149.89**	**338**	*e*PKP	**PKPbc**	**14 21 54.7**	**+0.7**
MODS				*e*		14 22 03.5	
MODS				*e*		14 24 19.4	
BUD	**Budapest**	**149.98**	**335**	⇓*e*x	**PKPbc**	**14 21 54.5**	**+0.3**
KORT	**Korkueli**	**149.98**	**308**	*e*P	**PKPbc**	**14 21 54.2**	**-0.5**
SRE	**Strehaia**	**150.23**	**327**	⇓*i*P	**PKPbc**	**14 21 55.4**	**+0.5**
SRE	**Strehaia**	**150.23**	**327**	⇓PKIKP	**PKPbc**	**14 21 55.4**	**+0.5**
BEBN	**Eben Emael**	**150.26**	**354**	⇑PKPbc	**PKPbc**	**14 21 55.1**	**+0.4**
BEBN				⇑PKPab	**PKPab**	**14 22 04.0**	**+0.2**
HGN	**Heimansgroeve**	**150.26**	**353**	*i* PKPdf	**PKPbc**	**14 21 54.8**	**0.0**
HGN				*e*PKPbc	**PKiKP**	**14 21 59.2**	**+3.9**
HGN				*i* PKPab	**PKPab**	**14 22 03.7**	**-0.1**
BZS	**Buzias**	**150.31**	**330**	⇓*i*P	**PKPbc**	**14 21 55.0**	**-0.1**
BZS	**Buzias**	**150.31**	**330**	⇓PKIKP	**PKPbc**	**14 21 55.0**	**-0.1**
UCC	**Uccle**	**150.37**	**356**	⇓PKPbc	**PKPbc**	**14 21 55.1**	**+0.1**
UCC				⇓PKPab	**PKPab**	**14 22 03.8**	**-0.5**
CSKK	**Csˆ‡kako**	**150.37**	**336**	⇓*e*x	**PKPbc**	**14 21 55.1**	**0.0**
KHC	**Kasperske Hory**	**150.37**	**343**	*e*PKPDF	**PKPdf**	**14 21 48.0**	**-1.1**
KHC				⇑*e*PKP	**PKiKP**	**14 21 55.5**	**-0.1**
KHC				*e*PKPAB	**PKPab**	**14 22 04.9**	**+0.4**
KHC				*e*SKP		14 24 23.6	
KHC	**Kasperske Hory**	**150.37**	**343**	*e*PKIKP	**PKPdf**	**14 21 48.0**	**-1.1**
KHC				*e*		14 22 04.9	
ELL	**Elmali**	**150.41**	**308**	*e*P	**PKPbc**	**14 21 55.2**	**-0.5**
MEM	**Membach**	**150.41**	**353**	⇓PKPbc	**PKPbc**	**14 21 55.1**	**+0.1**
MEM				⇓PKPab	**PKPab**	**14 22 03.7**	**-0.8**
HERR	**Herculane**	**150.47**	**328**	⇓*i*P	**PKPbc**	**14 21 55.3**	**-0.1**
KULA	**Kula-Manisa**	**150.54**	**312**	*e*P	**PKPbc**	**14 21 55.4**	**-0.5**
GERES	**GERESS Array B**	**150.60**	**343**	PKP	**PKPdf**	**14 21 49.2**	**-0.3**
	comp=Z,1.3nm,0.8s,baz=48,slow=2.0,SNR=9.2						
GERES				PKPbc	**PKPbc**	**14 21 55.7**	**-0.1**
	comp=Z,22nm,0.7s,baz=33,slow=2.3,SNR=116						
GERES				PKPab	**PKPab**	**14 22 05.8**	**+0.4**
	comp=Z,4.5nm,0.7s,baz=46,slow=7.6,SNR=7.6						
GERES				SKP		14 24 24.7	
	comp=Z,5.6nm,0.9s,baz=33,slow=3.2,SNR=7.8						
SNF	**Seneffe**	**150.66**	**356**	⇑PKPbc	**PKPbc**	**14 21 56.1**	**+0.4**
SNF				⇑PKPab	**PKPab**	**14 22 05.6**	**+0.1**
BCLA	**Clavier**	**150.66**	**354**	⇑PKPbc	**PKPbc**	**14 21 55.4**	**-0.3**
BCLA				⇑PKPab	**PKPab**	**14 22 05.3**	**-0.2**
SOP	**Sopron**	**150.73**	**338**	⇓*e*x	**PKPbc**	**14 21 56.5**	**+0.6**
CONA	**Conrad Observa**	**150.75**	**339**	*i* PKPdf	**PKPdf**	**14 21 50.6**	**+0.8**
	comp=Z,3.4nm,1.0s						
CONA				*i* PKPbc	**PKiKP**	**14 21 56.5**	**0.0**
	comp=Z,45nm,0.7s,SNR=32						
CONA				*i* PKPab	**PKPab**	**14 22 07.1**	**+1.0**
	comp=Z,31nm,0.7s						
MDVR	**Moldovita**	**150.89**	**329**	⇓*i*P	**PKPbc**	**14 21 56.3**	**-0.2**
KDZ	**Kurdzhali**	**150.96**	**320**	*i* P	**PKPbc**	**14 21 56.4**	**-0.3**
DOU	**Dourbes**	**151.05**	**355**	⇑PKPbc	**PKPbc**	**14 21 56.4**	**-0.1**
DOU				⇑PKPab	**PKPab**	**14 22 07.0**	**-0.2**
FETY	**Fethiye**	**151.06**	**308**	P	**PKPbc**	**14 21 56.5**	**-0.6**
MORH	**Mˆ‡rˆ¡gy, Hung**	**151.16**	**334**	⇓*e*x	**PKPbc**	**14 21 57.1**	**+0.2**
RDO	**Rodhopi**	**151.19**	**319**	P	**PKPbc**	**14 21 56.5**	**-0.7**
WLF	**Walferdange**	**151.32**	**353**	⇑PKPbc	**PKPbc**	**14 21 57.7**	**+0.5**
WLF				⇑PKPab	**PKPab**	**14 22 08.5**	**+0.2**
MOA	**Molln**	**151.33**	**341**	*i* PKPbc	**PKPbc**	**14 21 57.2**	**-0.2**
	comp=Z,13nm,0.6s,SNR=7.2						
MOA				*i* PKPab	**PKPab**	**14 22 09.5**	**+0.9**
	comp=Z,22nm,1.1s						
RZN	**Rozhen**	**151.36**	**321**	*i* P	**PKPbc**	**14 21 57.1**	**-0.7**
ARSA	**Arzberg**	**151.46**	**339**	*i* PKPdf	**PKPdf**	**14 21 50.1**	**-0.7**
	comp=Z,4.1nm,1.1s						
ARSA				*i* PKPbc	**PKPbc**	**14 21 57.6**	**0.0**
	comp=Z,8.6nm,0.7s						
VTS	**Vitosha**	**151.64**	**324**	*i* P	**PKPbc**	**14 21 58.1**	**-0.3**
VTS	**Vitosha**	**151.64**	**324**	P	**PKPbc**	**14 21 57.4**	**-1.0**
BEHE	**Becsehely**	**151.68**	**336**	⇑*e*x	**PKPbc**	**14 21 58.9**	**+0.8**
PRK	**Paraskevi**	**151.79**	**315**	P	**PKPab**	**14 22 10.9**	**+0.2**
MMB	**Musomiste**	**152.00**	**322**	*i* P	**PKPbc**	**14 21 58.5**	**-0.5**
NVR	**Nevrokopi**	**152.07**	**321**	P	**PKPbc**	**14 21 58.5**	**-0.7**
SIGR	**SIGRI**	**152.08**	**315**	P	**PKPab**	**14 22 12.3**	**+0.3**
SOKA	**Soboth**	**152.12**	**339**	*i* PKPdf	**PKPdf**	**14 21 51.7**	**-0.2**
	comp=Z,5.0nm,1.2s						
SOKA				*i* PKPbc	**PKPbc**	**14 21 58.7**	**-0.5**
	comp=Z,22nm,0.9s,SNR=8.5						
SOKA				*i* PKPab	**PKPab**	**14 22 12.3**	**+0.3**

	comp=Z,16nm,0.7s						
SOKA				*i* pPKPbc	**pPKPbc**	**14 24 21.1**	**-1.0**
	comp=Z,12nm,1.6s						
KKB	**Krupnik**	**152.19**	**323**	*i* P	**PKPbc**	**14 21 59.0**	**-0.4**
KBA	**Koelnbreinsper**	**152.30**	**341**	*i* PKPdf	**PKPdf**	**14 21 52.5**	**+0.2**
	comp=Z,5.3nm,1.3s						
KBA				*i* PKPbc	**PKPbc**	**14 21 58.9**	**-0.8**
	comp=Z,18nm,1.0s,SNR=8.3						
SRS	**Serrai**	**152.37**	**321**	P	**PKPab**	**14 22 13.1**	**-0.1**
OBKA	**Obir**	**152.43**	**339**	*i* PKPbc	**PKPbc**	**14 21 59.1**	**-0.8**
	comp=Z,8.6nm,0.6s						
OBKA				*i* PKPab	**PKPab**	**14 22 13.6**	**+0.3**
	comp=Z,19nm,0.8s						
WATA	**Walderalm**	**152.55**	**344**	*i* PKPab	**PKPab**	**14 22 15.7**	**+1.8**
	comp=Z,11nm,0.6s						
WTTA	**Wattenberg**	**152.60**	**344**	*i* PKPbc	**PKPbc**	**14 22 00.3**	**-0.1**
	comp=Z,22nm,0.8s,SNR=5.2						
WTTA				*i* PKPab	**PKPab**	**14 22 14.8**	**+0.7**
	comp=Z,20nm,0.6s						
WTTA				*i* pPKPab	**pPKPab**	**14 24 29.4**	**-1.2**
	comp=Z,9.4nm,0.9s						
MYKA	**Terra Mystica**	**152.61**	**341**	*i* PKPbc	**PKPbc**	**14 21 59.4**	**-0.8**
	comp=Z,16nm,0.7s,SNR=8.9						
MYKA				*i* PKPab	**PKPab**	**14 22 13.9**	**-0.1**
	comp=Z,15nm,0.6s						
RETA	**Reutte**	**152.61**	**345**	*i* PKPbc	**PKPbc**	**14 21 60.0**	**-0.2**
	comp=Z,9.4nm,0.8s						
RETA				*i* PKPab	**PKPab**	**14 22 14.6**	**+0.6**
	comp=Z,13nm,0.7s						
KNT	**Kendrikon**	**152.75**	**322**	P	**PKPab**	**14 22 14.9**	**+0.1**
STIP	**Stip**	**152.80**	**323**	*i* PKP	**PKPbc**	**14 21 59.1**	**-1.6**
STIP				*i* PKP	**PKPab**	**14 22 13.9**	**-1.0**
VAY	**Valandovo**	**152.84**	**322**	*i* PKP	**PKPbc**	**14 21 60.0**	**-0.8**
VAY				*i* PKP	**PKPab**	**14 22 15.6**	**+0.5**
ABTA	**Abfaltersbach**	**152.84**	**342**	*i* PKPdf	**PKPdf**	**14 21 52.2**	**-0.8**
	comp=Z,7.5nm,0.9s						
ABTA				*i* PKPbc	**PKPbc**	**14 22 00.1**	**-0.7**
	comp=Z,26nm,0.7s,SNR=10						
ABTA				*i* PKPab	**PKPab**	**14 22 15.2**	**+0.2**
	comp=Z,18nm,0.6s						
ABTA				*i* pPKPbc	**pPKPbc**	**14 24 22.9**	**-0.9**
	comp=Z,11nm,1.0s						
PLG	**Polygyros**	**152.92**	**320**	P	**PKPab**	**14 22 15.5**	**-0.1**
BLY	**Banja Luka**	**152.95**	**334**	⇑*i*P	**PKPbc**	**14 22 01.2**	**+0.3**
DAVA	**Damuels**	**153.00**	**346**	*i* PKPbc	**PKPbc**	**14 22 01.1**	**-0.1**
	comp=Z,21nm,1.1s,SNR=5.9						
DAVA				*i* PKPab	**PKPab**	**14 22 16.2**	**+0.4**
	comp=Z,14nm,0.7s						
DAVA				*i* P	**pPKPab**	**14 24 28.5**	**-3.7**
	comp=Z,15nm,1.4s						
SKO	**Skopje**	**153.02**	**325**	*i* PKP	**PKPbc**	**14 22 00.7**	**-0.5**
SKO				*i* PKP	**PKPab**	**14 22 16.8**	**+0.9**
FETA	**Feichten**	**153.06**	**345**	*i* PKPdf	**PKPdf**	**14 21 53.1**	**-0.2**
	comp=Z,7.7nm,0.9s						
FETA				*i* PKPbc	**PKPbc**	**14 22 01.3**	**0.0**
	comp=Z,16nm,0.8s						
FETA				*i* P	**pPKPbc**	**14 24 26.4**	**+2.1**
	comp=Z,18nm,1.0s						
DAVOX	**Davos/Dischmat**	**153.48**	**346**	PKP	**PKPdf**	**14 21 53.6**	**-0.4**
	comp=Z,4.6nm,0.7s,baz=161,slow=1.9,SNR=5.6						
DAVOX				PKPbc	**PKiKP**	**14 22 02.4**	**+0.1**
	comp=Z,19nm,0.7s,baz=140,slow=1.8,SNR=20						
DAVOX				PKPab	**PKPab**	**14 22 18.5**	**+0.6**
	comp=Z,18nm,0.6s,baz=351,slow=2.3,SNR=12						
KRUS	**Krusevo**	**153.54**	**324**	*i* PKP	**PKPbc**	**14 22 01.6**	**-0.8**
KRUS				*i* PKP	**PKPab**	**14 22 18.6**	**+0.3**
LIT	**Litokhoron**	**153.66**	**320**	P	**PKPab**	**14 22 18.4**	**-0.4**
PDG	**Podgorica**	**153.82**	**328**	⇓*i*P	**PKPbc**	**14 22 02.6**	**-0.2**
FNA	**Florina**	**153.87**	**323**	P	**PKPbc**	**14 22 02.3**	**-0.8**
OHR	**Ohrid**	**153.97**	**324**	*i* PKP	**PKPbc**	**14 22 03.3**	**0.0**
OHR				*i* PKP	**PKPab**	**14 22 19.9**	**-0.2**
LAST	**Lasithi**	**154.33**	**308**	P	**PKPab**	**14 22 21.9**	**0.0**
DID	**Didima**	**154.74**	**315**	P	**PKPab**	**14 22 21.1**	**-2.4**
ANX	**Ano Chora**	**154.95**	**318**	P	**PKPbc**	**14 22 05.5**	**0.0**
GUR	**Goura**	**155.07**	**317**	P	**PKPab**	**14 22 23.5**	**-1.5**
SRN	**Sarande**	**155.25**	**323**	P	**PKPab**	**14 22 25.2**	**-0.3**
IMMV	**Iera Moni Meta**	**155.28**	**310**	P	**PKPab**	**14 22 25.6**	**-0.3**
IGT	**Igoumenitsa**	**155.30**	**322**	P	**PKPab**	**14 22 25.6**	**-0.2**
SGD	**Sagiada**	**155.30**	**322**	P	**PKPab**	**14 22 25.4**	**-0.3**
KEK	**Kerkira**	**155.48**	**323**	P	**PKPab**	**14 22 26.3**	**-0.2**
LKD2	**Lefkada island**	**155.59**	**320**	P	**PKPab**	**14 22 26.6**	**-0.5**
DYR	**Agios Nikonas**	**155.75**	**314**	P	**PKPab**	**14 22 27.2**	**-0.6**
ITM	**Ithomi**	**155.78**	**316**	P	**PKPab**	**14 22 27.2**	**-0.8**
FSK	**Fiskardo**	**155.86**	**320**	P	**PKPab**	**14 22 27.3**	**-0.9**
SACV	**Santiago Islan**	**155.94**	**101**	PFAKE		14 22 10.0	+12
SACV				LR	LR		
	comp=Z,200nm,22.0s						
MATE	**Matera**	**156.42**	**329**	⇓*i*P	**PKPab**	**14 22 28.5**	**-2.0**
TIP	**Timpagrande**	**157.51**	**326**	⇑*i*P	**PKPab**	**14 22 35.8**	**+0.4**
ESDC	**Sonseca Array**	**161.16**	**12**	PKPab	**PKPab**	**14 22 51.3**	**0.0**
	comp=Z,5.6nm,1.0s,baz=348,slow=4.1,SNR=18						
KEST	**Kesra**	**163.76**	**335**	PKPab	**PKPab**	**14 23 03.3**	**+0.5**
	comp=Z,31nm,0.9s,baz=330,slow=1.0,SNR=31						
LIC	**Lamto**	**164.03**	**158**	*e*P	**PKPab**	**14 23 04.7**	**+0.3**
	comp=Z,89nm,1.0s						
KIC	**Kosan Boka**	**164.25**	**159**	*e*P	**PKPab**	**14 23 06.0**	**+0.6**
	comp=Z,152nm,1.3s						
TIC	**Toumodi**	**164.42**	**158**	*e*P	**PKPab**	**14 23 06.6**	**+0.5**
DBIC	**Dimbokro**	**164.50**	**158**	PKP	**PKPdf**	**14 22 07.1**	**-0.2**
	comp=Z,2.9nm,0.6s,baz=191,slow=1.6,SNR=6.2						
DBIC				PKPab	**PKPab**	**14 23 07.5**	**+1.0**
	comp=Z,7.9nm,0.6s,baz=187,slow=5.7,SNR=10.0						
KOWA	**Kowa**	**171.85**	**145**	PKPab	**PKPab**	**14 23 39.4**	**+0.4**
	comp=Z,5.1nm,0.5s,baz=239,slow=6.8,SNR=11						
TORD	**Torodi Ar. Bea**	**171.92**	**186**	PKP	**PKPdf**	**14 22 11.1**	**-1.0**
	comp=Z,2.1nm,0.9s,baz=338,slow=1.5						
TORD				PKPab	**PKPab**	**14 23 39.0**	**-0.1**
	baz=174,slow=2.9						

IDC 20 14:08:38.7±3.6**, 14°.48N×93°.08W, h0km, mb4.0**/2**, mb1 4.1**/4**, mb1mx3.7**/53**, mbtmp3.6**/4**, ML3.3**/2**, Error ellipse: s-maj=180.4km s-min=43.0km az=52.0, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**3.12**	**326**	Pn	Pn	14 09 28.0	-1.2
	1.7nm,0.3s,baz=161,slow=13,SNR=16						
CMIG				Sn	Sn	14 10 07.2	-0.1
	6.4nm,0.3s,baz=92,slow=14,SNR=6.5						
TXAR	**Lajitas Array**	**17.73**	**328**	P	P	14 12 48.2	0.0
	0.0nm,0.3s,baz=146,slow=12,SNR=5.2						
PDAR	**Pinedale Array**	**31.55**	**336**	P	P	14 15 04.2	+1.1
	1.6nm,1.0s,baz=143,slow=11,SNR=3.0						
YKA	**Yellowknife Ar**	**50.32**	**347**	P	P	14 17 36.6	-0.4
	1.6nm,0.7s,baz=153,slow=7.4,SNR=11						
CMAR	**Chiang Mai Arr**	**145.19**	**340**	PKPbc	PKPbc	14 28 17.5	-1.3
	1.3nm,0.7s,baz=340,slow=3.7,SNR=6.9						

MEX 20 14:23:21.5±0.6**, 16°.29N×98°.46W, h5km, MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.33**	**72**	*i* P	Pg	14 23 27.5	-0.5
PNIG				*e*S	Sg	14 23 32.3	0.0
TLIG	**Tlapa**	**1.27**	**355**	*i* P	Pg	14 23 41.8	-4.1
TLIG				*i* S	Sg	14 23 57.9	-4.4
VHO	**Vista Hermosa**	**1.82**	**65**	*e*P	Pn	14 23 50.4	-3.4
VHO				*i* S	Sn	14 24 12.6	-4.8
CAIG	**El Cayaco**	**1.89**	**294**	*i* P	Pn	14 23 51.6	-2.9
CAIG				*i* S	Sn	14 24 14.1	-4.6
MEIG	**Mezcala**	**1.97**	**326**	*e*P	Pn	14 23 53.0	-2.7
MEIG				*i* S	Sn	14 24 16.1	-4.6
HUIG	**Huatulco**	**2.32**	**103**	*i* P	Pn	14 23 57.9	-2.5
HUIG				*e*S	Sn	14 24 25.3	-3.9

IDC 20 14:31:48.0±1.7**, 0°.32N×122°.81E, h0km, mb3.5**/3**, mb1 3.7**/3**, mb1mx3.3**/56**, mbtmp3.5**/3**, Error ellipse: s-maj=217.2km s-min=25.5km az=61.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.09**	**151**	P	P	14 36 55.5	-0.1
	0.6nm,0.3s,baz=328,slow=10,SNR=37						
ASAR	**Alice Springs**	**26.17**	**156**	P	P	14 37 24.2	-0.1
	0.2nm,0.4s,baz=332,slow=8.5,SNR=9.3						
MKAR	**Makanchi Array**	**58.24**	**328**	P	P	14 41 44.5	+0.2
	0.4nm,0.5s,baz=130,slow=8.8,SNR=5.0						

*DDA **20** 14:57:51.5, 39°.41N×38°.55E, h7km, Ml3.0*
*ISCJB **20** 14:57:52.4±0.5, 39°.27N±0°.04×38°.58E±0°.03, h8km±4km, Error ellipse: s-maj=7.0km s-min=4.3km az=179.5*
*CSEM **20** 14:57:52.2±0.2, 39°.29N×38°.57E, h5km, ML3.0, Error ellipse: s-maj=7.3km s-min=5.0km az=14.0*
*ISK **20** 14:57:52.7, 39°.22N×38°.64E, h18km, ML2.3/6*
ISC 20 14:57:52.3±0.9**, 39°.28N**±0°.03×**38°.58E**±0°.02**, h8km**±6km**, n27, σ0ˢ58**/37**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KEMA	**Kemaliye**	**0.07**	**259**	*i* P	**Pg**	**14 57 54.3**	**+0.1**
KEMA				*i* S	**Sg**	**14 57 55.7**	**0.0**
KEMA	**Kemaliye**	**0.07**	**259**	P	**Pg**	**14 57 54.3**	**+0.1**
KEMA				S	**Sg**	**14 57 55.7**	**0.0**
REFA	**Refahiye_ERZ˜**	**0.19**	**52**	*i* P	Pg	14 58 04.8	+8.6
REFA				*i* S	Sg	14 58 12.7	+14
HEKM	**Malatya_Hekimh**	**0.63**	**230**	*i* P	**Pg**	**14 58 04.8**	**+0.4**
HEKM				*i* S	**Sb**	**14 58 15.8**	**+1.2**
HEKM	**Malatya_Hekimh**	**0.63**	**230**	P	**Pg**	**14 58 04.8**	**+0.4**
PTK	**Pertek**	**0.74**	**121**	PG	**Pg**	**14 58 07.2**	**+0.6**
PTK	**Pertek**	**0.74**	**121**	*e*Pg	**Pg**	**14 58 07.2**	**+0.6**
EZC	**Erzincan**	**0.76**	**52**	*e*Pg	**Pn**	**14 58 10.7**	**+1.2**
TNCL	**Tunceli-Merkez**	**0.77**	**102**	*i* P	**Pg**	**14 58 07.1**	**0.0**
TNCL				*i* S	**Sb**	**14 58 19.5**	**+0.8**
TNCL	**Tunceli-Merkez**	**0.77**	**102**	P	**Pg**	**14 58 07.1**	**0.0**
TNCL				S	**Sb**	**14 58 19.5**	**+0.8**
ELZG	**Elazig**	**0.84**	**158**	*i* P	**Pn**	**14 58 10.5**	**-0.2**
ELZG				*i* S	**Sn**	**14 58 24.0**	**+0.7**
ELZG	**Elazig**	**0.84**	**158**	P	**Pn**	**14 58 10.5**	**-0.2**
CUKAN	**kangal_SIVAS**	**0.86**	**273**	*i* P	**Pg**	**14 58 08.2**	**-0.7**
CUKAN				*i* S	**Sg**	**14 58 19.9**	**-0.2**
CUKAN	**kangal_SIVAS**	**0.86**	**273**	P	**Pg**	**14 58 08.2**	**-0.7**
CUKAN				S	**Sg**	**14 58 19.9**	**-0.2**
ERZN	**Erzincan**	**0.94**	**71**	PG	**Pb**	**14 58 10.7**	**-0.2**
ERZN				SG	**Sb**	**14 58 23.9**	**+0.3**
SVRC	**Sivrice-ELAZID**	**1.07**	**147**	PG	**Pg**	**14 58 11.9**	**-0.9**
SVRC				SG	**Sg**	**14 58 26.3**	**-0.3**
SVRC	**Sivrice-ELAZID**	**1.07**	**147**	*e*Pg	**Pg**	**14 58 11.9**	**-0.9**
SVRC				*e*Sg	**Sg**	**14 58 26.3**	**-0.3**
DARE	**Darende-Malaty**	**1.11**	**231**	PN	**Pn**	**14 58 14.1**	**-0.1**
DARE	**Darende-Malaty**	**1.11**	**231**	*e*Pn	**Pn**	**14 58 14.1**	**-0.1**
SVSK	**Karacayir**	**1.38**	**298**	PN	**Pg**	**14 58 18.8**	**+0.1**
SVSK	**Karacayir**	**1.38**	**298**	*e*Pn	**Pg**	**14 58 18.8**	**+0.1**
YEDI	**Yedisu-Bingol**	**1.53**	**84**	PN	**Pn**	**14 58 19.2**	**-0.9**
YEDI	**Yedisu-Bingol**	**1.53**	**84**	*e*Pn	**Pn**	**14 58 19.2**	**-0.9**
ESPY	**Espiye-Giresun**	**1.64**	**4**	PN	**Pb**	**14 58 22.1**	**-0.7**
ESPY	**Espiye-Giresun**	**1.64**	**4**	*e*Pn	**Pb**	**14 58 22.1**	**-0.7**
BAYT	**Ayd˜–ntepe-Bay**	**1.64**	**47**	PN	**Pn**	**14 58 21.5**	**-0.1**
BAYT	**Ayd˜–ntepe-Bay**	**1.64**	**47**	*e*Pn	**Pn**	**14 58 21.5**	**-0.1**

*ISCJB **20** 15:01:23.5±0.9, 1°.3N±0°.1×91°.5E±0°.1, h10km, mb3.9/8, MS3.2/3, Error ellipse: s-maj=22.7km s-min=14.6km az=38.3*
*IDC **20** 15:01:24.0±1.2, 1°.31N×91°.55E, h0km, mb3.9/8, mb1 4.0/10, mb1mx3.7/67, mbtmp3.9/10, ML4.1/1, MS3.2/3, Ms1 3.2/3, ms1mx2.7/64, Error ellipse: s-maj=38.9km s-min=19.4km az=55.0*
ISC 20 15:01:25.4±1.1**, 1°.3N**±0°.2×**91°.5E**±0°.2**, h10km, n19, σ0ˢ53**/12**, mb3.9**/8**, MS3.2**/3**, North Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	**Pallekele**	**12.31**	**299**	Pn	**Pn**	**15 04 20.5**	**-0.4**
	1.2nm,0.3s,baz=116,slow=10,SNR=4.9						
PALK				Sn	Sn	15 06 25.4	-13
	4.5nm,0.3s,baz=295,slow=0.6,SNR=6.8						
CMAR	**Chiang Mai Arr**	**18.52**	**23**	P	**P**	**15 05 41.4**	**-0.8**
	baz=217,slow=14,SNR=4.2						
H08S2	**Diego Garcia H**	**20.98**	**245**	T	T	15 27 57.7	
	baz=64,slow=74,SNR=5.2						
H08S3	**Diego Garcia H**	**20.98**	**245**	T	T	15 27 57.8	
	baz=64,slow=74,SNR=23						
H08S1	**Diego Carcia H**	**20.99**	**245**	T	T	15 27 54.8	
	baz=64,slow=74,SNR=12						
H01W3	**Cape Leeuwin H**	**41.78**	**152**	T	T	15 53 32.9	
	baz=327,slow=74,SNR=18						
H01W2	**Cape Leeuwin H**	**41.79**	**152**	T	T	15 53 36.3	
	baz=327,slow=74,SNR=29						
H01W1	**Cape Leeuwin H**	**41.79**	**152**	T	T	15 53 35.2	
	baz=327,slow=74,SNR=23						
MKAR	**Makanchi Array**	**46.00**	**351**	P	**P**	**15 09 48.4**	**-0.7**
	0.8nm,0.5s,baz=171,slow=8.6,SNR=10						
WRA	**Warramunga Arr**	**46.98**	**119**	P	**P**	**15 09 56.8**	**-0.3**
	0.7nm,0.8s,baz=296,slow=8.7,SNR=6.6						
ASAR	**Alice Springs**	**48.08**	**124**	P	**P**	**15 10 05.4**	**-0.2**
	0.7nm,1.2s,baz=303,slow=7.9,SNR=6.3						
ASAR				PcP	**PcP**	**15 11 33.4**	**-0.1**
	0.3nm,0.6s,baz=311,slow=3.7,SNR=4.8						
SONM	**Songino Array**	**48.09**	**13**	P	**P**	**15 10 05.6**	**+0.2**
	1.1nm,0.4s,baz=197,slow=8.4,SNR=8.6						
JNU	**Nakatsue**	**48.60**	**45**	LR	LR	15 33 23.3	
	comp=Z,25nm,18.0s,baz=298,slow=40						
KSRS	**Korea Array**	**49.13**	**39**	P	**P**	**15 10 13.9**	**+0.4**
	0.5nm,0.6s,baz=230,slow=7.9,SNR=3.1						
KSRS				LR	LR	15 32 43.2	
	comp=Z,23nm,18.2s,baz=235,slow=38						
KURBB	**Kurchatov Arra**	**50.35**	**349**	P	**P**	**15 10 23.0**	**+0.5**
	2.5nm,0.2s,baz=168,slow=6.9,SNR=10.0						
ZALV	**Zalesovo Beam**	**52.74**	**355**	P	**P**	**15 10 40.6**	**+0.3**
	0.6nm,0.4s,baz=184,slow=8.7,SNR=3.8						
MJAR	**Matsushiro Arr**	**55.53**	**45**	LR	LR	15 36 37.3	
	comp=Z,14nm,18.8s,baz=170,slow=38						
GERES	**GERESS Array B**	**81.00**	**319**	P	**P**	**15 13 41.4**	**+0.8**
	0.7nm,0.7s,baz=86,slow=5.0,SNR=5.3						
TXAR	**Lajitas Array**	**146.23**	**24**	PKPbc	**PKPbc**	**15 21 07.0**	**-0.1**
	0.3nm,0.6s,baz=8.8,slow=2.5,SNR=5.1						

IDC 20 15:04:43.9±464.0**, 46°.96N×45°.87E, h0km, Error ellipse: s-maj=197.7km s-min=144.2km az=178.0, Ukraine-Moldova-Southwestern Russia region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I31KZ	**AKTYUBINSK INF**	**8.76**	**62**	*i*		16 02 05.0	
	baz=250,slow=311,SNR=5.9						
I43RU	**DUBNA INFRASON**	**11.13**	**335**	*i*		16 16 20.0	
	baz=145,slow=314,SNR=0.6						
I26DE	**FREYUNG INFRAS**	**21.56**	**287**	*i*		17 14 50.0	
	baz=80,slow=298,SNR=2.1						

IDC 20 15:12:12.1±6.3**, 15°.06N×92°.88W, h0km, mb3.5**/2**, mb1 3.6**/4**, mb1mx3.4**/45**, mbtmp3.2**/4**, ML3.2**/2**, MS3.5**/1**, Ms1 3.5**/1**, ms1mx2.5**/28**, Error ellipse: s-maj=173.0km s-min=53.8km az=31.0, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	**2.79**	**317**	Pn	Pn	15 12 57.7	-0.3
	0.8nm,0.3s,baz=157,slow=12,SNR=8.4						
CMIG				Sn	Sn	15 13 32.5	+0.1
	2.2nm,0.3s,baz=98,slow=15,SNR=5.5						
TXAR	**Lajitas Array**	**17.35**	**327**	P	P	15 16 17.3	0.0
	0.1nm,0.3s,baz=147,slow=12,SNR=3.2						
NVAR	**Mina Array Bea**	**32.31**	**321**	P	P	15 18 43.2	0.0
	0.3nm,0.7s,baz=133,slow=9.1,SNR=2.2						
YKA	**Yellowknife Ar**	**49.80**	**347**	P	P	15 21 06.0	-0.4
	0.8nm,0.7s,baz=152,slow=6.9,SNR=4.6						
SFJD	**Kangerlussuaq**	**58.77**	**18**	LR	LR	15 48 06.1	
	comp=Z,37nm,19.0s,baz=68,slow=37						

*ISK **20** 15:22:11.7, 38°.77N×43°.33E, h14km±1km, ML2.4/4*
*CSEM **20** 15:22:12.6±0.2, 38°.78N×43°.33E, h12km, ML2.4, Error ellipse: s-maj=5.7km s-min=3.9km az=100.0*
*DDA **20** 15:22:12.8, 38°.76N×43°.26E, h7km, Ml2.9*
*ISCJB **20** 15:22:13.1±0.5, 38°.78N±0°.02×43°.31E±0°.05, h11km±6km, Error ellipse: s-maj=6.7km s-min=3.7km az=6.8*
ISC 20 15:22:13.1±0.8**, 38°.77N**±0°.02×**43°.33E**±0°.04**, h17km**±7km**, n20, σ0ˢ73**/38**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	**Van**	**0.18**	**165**	PG	**Pg**	**15 22 17.7**	**-0.1**
VANB				SG	**Sg**	**15 22 21.9**	**+0.9**
VANB	**Van**	**0.18**	**165**	*e*Pg	**Pg**	**15 22 17.7**	**-0.1**
VANB				*e*Sg	**Sg**	**15 22 21.9**	**+0.9**
TVAN	**Van**	**0.25**	**166**	*i* P	**Pg**	**15 22 17.7**	**-1.2**
TVAN				*i* S	**Sg**	**15 22 22.4**	**-0.5**
TVAN	**Van**	**0.25**	**166**	P	**Pg**	**15 22 17.7**	**-1.2**
TVAN				S	**Sg**	**15 22 22.4**	**-0.5**
VMUR	**Van-Muradiye**	**0.29**	**41**	*i* P	**Pg**	**15 22 19.6**	**0.0**
VMUR				*i* S	**Sb**	**15 22 25.4**	**+0.8**
VMUR	**Van-Muradiye**	**0.29**	**41**	P	**Pg**	**15 22 19.6**	**0.0**
VMUR				S	**Sb**	**15 22 25.4**	**+0.8**
GEVA	**Gevas**	**0.51**	**205**	*i* P	**Pg**	**15 22 22.5**	**-0.8**
GEVA				*i* S	**Sb**	**15 22 31.2**	**+0.4**
GEVA	**Gevas**	**0.51**	**205**	P	**Pg**	**15 22 22.5**	**-0.8**
GEVA				S	**Sb**	**15 22 31.2**	**+0.4**
CLDR	**Caldiran**	**0.59**	**51**	PG	**Pg**	**15 22 23.6**	**-1.3**
CLDR				SG	**Sg**	**15 22 32.5**	**-0.4**
CLDR	**Caldiran**	**0.59**	**51**	*e*Pg	**Pg**	**15 22 23.6**	**-1.3**
CLDR				*e*Sg	**Sg**	**15 22 32.5**	**-0.4**
AGRB	**Hanur-Agry**	**0.84**	**342**	PG	**Pg**	**15 22 28.6**	**-1.0**
AGRB				SG	**Sg**	**15 22 40.8**	**0.0**
AGRB	**Hanur-Agry**	**0.84**	**342**	*e*Pg	**Pg**	**15 22 28.6**	**-1.0**
AGRB				*e*Sg	**Sg**	**15 22 40.8**	**0.0**
GURO	**Guroymak-BITLI**	**1.04**	**258**	PG	**Pb**	**15 22 32.1**	**-0.6**
GURO	**Guroymak-BITLI**	**1.04**	**258**	*e*Pg	**Pb**	**15 22 32.1**	**-0.6**
HAKT	**HAKKARI**	**1.25**	**166**	*i* P	**Pn**	**15 22 36.2**	**+0.2**
HAKT				*i* S	**Sb**	**15 22 52.0**	**-0.2**
HAKT	**HAKKARI**	**1.25**	**166**	P	**Pn**	**15 22 36.2**	**+0.2**
HAKT				S	**Sb**	**15 22 52.0**	**-0.2**
EATA	**Eleskirt**	**1.27**	**330**	*i* P	**Pn**	**15 22 36.2**	**-0.1**
EATA				*i* S	**Sn**	**15 22 54.3**	**+1.2**
EATA	**Eleskirt**	**1.27**	**330**	P	**Pn**	**15 22 36.2**	**-0.1**
EATA				S	**Sn**	**15 22 54.3**	**+1.2**
SRTM	**Siirt_Merkez**	**1.35**	**235**	*i* P	**Pb**	**15 22 38.5**	**+0.4**
SRTM				*i* S	**Sb**	**15 22 55.4**	**+0.3**
SRTM	**Siirt_Merkez**	**1.35**	**235**	P	**Pb**	**15 22 38.5**	**+0.4**
SRTM				S	**Sb**	**15 22 55.4**	**+0.3**

IDC 20 16:04:59.8±2.2**, 6°.27S×145°.88E, h0km, mb3.1**/2**, mb1 3.4**/4**, mb1mx3.2**/41**, mbtmp3.2**/4**, ML3.3**/1**, Error ellipse: s-maj=56.1km s-min=26.8km az=75.0, New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.37**	**158**	Pn	Pn	16 05 54.7	+1.0
	2.3nm,0.3s,baz=336,slow=7.0,SNR=10						
PMG				Sn	Sn	16 06 34.8	+0.4
	1.5nm,0.3s,baz=293,slow=20,SNR=6.8						
WRA	**Warramunga Arr**	**17.62**	**218**	P	Pn	16 09 07.4	+0.5
	0.1nm,0.3s,baz=40,slow=12,SNR=11						
ASAR	**Alice Springs**	**20.78**	**212**	P	P	16 09 41.5	-1.2
	0.3nm,0.6s,baz=49,slow=9.1,SNR=6.8						
MKAR	**Makanchi Array**	**77.00**	**321**	P	P	16 16 54.9	+0.2
	0.2nm,0.6s,baz=108,slow=4.7,SNR=4.7						

*IDC **20** 16:15:45.0±2.4, 20°.39S×177°.56W, h473km±29km, mb3.4/7, mb1 3.6/9, mb1mx3.2/44, mbtmp4.2/9, Error ellipse: s-maj=34.5km s-min=16.1km az=151.0*
ISC 20 16:15:46.3±0.9**, 20°.2S**±0°.2×**177°.5W**±0°.2**, h500km, n11, σ2ˢ07**/12**, mb3.8**/7**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**8.32**	**42**	P	**P**	**16 17 46.2**	**-0.1**
	2.0nm,0.3s,baz=39,slow=10,SNR=5.1						
AFI				S	**S**	**16 19 20.7**	**-4.0**
	7.3nm,0.3s,baz=351,slow=23,SNR=10						
URZ	**Urewera**	**18.57**	**193**	P	**P**	**16 19 29.8**	**-1.9**
	0.7nm,0.3s,baz=248,slow=4.7,SNR=6.4						
URZ				S	S	16 22 55.1	+20
	0.5nm,0.3s,baz=63,slow=23,SNR=5.7						
CTA	**Charters Tower**	**33.99**	**264**	P	**P**	**16 21 47.8**	**-0.2**
	3.5nm,0.3s,baz=90,slow=12,SNR=21						
STKA	**Stephens Creek**	**38.34**	**244**	P	**P**	**16 22 23.6**	**-0.2**
	1.4nm,0.5s,baz=88,slow=14,SNR=9.6						
ASAR	**Alice Springs**	**45.04**	**256**	P	**P**	**16 23 16.9**	**-0.3**
	11nm,0.5s,baz=91,slow=7.8,SNR=299						
ASAR				PcP	**pP**	**16 24 47.9**	**-2.3**
	0.4nm,0.5s,baz=101,slow=3.4,SNR=3.7						
WRA	**Warramunga Arr**	**45.11**	**262**	P	**P**	**16 23 16.9**	**-0.8**
	4.0nm,0.6s,baz=97,slow=7.7,SNR=140						
TXAR	**Lajitas Array**	**86.51**	**57**	P	**P**	**16 27 38.9**	**+2.8**
	0.3nm,0.7s,baz=220,slow=7.6,SNR=5.6						
PDAR	**Pinedale Array**	**88.44**	**43**	P	**P**	**16 27 45.8**	**+0.7**
	0.2nm,0.6s,baz=216,slow=4.5,SNR=2.6						
CMAR	**Chiang Mai Arr**	**90.47**	**289**	P	**P**	**16 27 56.8**	**+2.0**
	1.1nm,1.0s,baz=126,slow=2.8,SNR=5.4						
AKASG	**Malin Array Be**	**143.00**	**332**	PKhKP	PKPpre	16 34 20.4	
	0.4nm,0.5s,baz=42,slow=4.3,SNR=4.3						
GERES	**GERESS Array B**	**150.06**	**345**	PKPbc	**PKPbc**	**16 34 41.2**	**+1.0**
	0.5nm,0.7s,baz=70,slow=3.4,SNR=3.8						

*ISN **20** 16:20:14.7±0.9, 38°.63N×43°.47E, h0km±59km, ML4.3*
*DDA **20** 16:20:16.6, 38°.65N×43°.38E, h20km, Ml4.3*
*ISK **20** 16:20:16.8, 38°.68N×43°.34E, h6km, ML4.1/14*
*ISCJB **20** 16:20:16.9±0.4, 38°.63N±0°.02×43°.43E±0°.02, h2km±3km, mb3.9/18, MS2.9/8, Error ellipse: s-maj=3.1km s-min=2.2km az=148.0*
*CSEM **20** 16:20:17.4±0.1, 38°.64N×43°.36E, h2km, ML4.1, Error ellipse: s-maj=3.3km s-min=2.7km az=137.0*
*IDC **20** 16:20:21.8±1.9, 38°.64N×43°.35E, h44km±20km, mb3.8/17, mb1 3.9/21, mb1mx3.7/58, mbtmp4.0/21, ML3.7/4, MS3.1/12, Ms1 3.1/12, ms1mx2.9/55, Error ellipse: s-maj=18.6km s-min=11.9km az=160.0*
*AZER **20** 16:20:22.0±0.9, 38°.70N×43°.38E, h34km±34km, ml3.9/19, Error ellipse: s-maj=27.8km s-min=6.9km az=60.0*
ISC 20 16:20:18.4±0.7**, 38°.67N**±0°.01×**43°.38E**±0°.02**, h10km**±4km**, n175, σ1ˢ72**/238**, mb4.0**/18**, MS2.9**/8**, 30C-50D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	**Van**	**0.07**	**175**	PG	**Pg**	**16 20 20.9**	**+0.1**
VANB	**Van**	**0.07**	**175**	*e*Pg	**Pg**	**16 20 20.9**	**+0.1**
TVAN	**Van**	**0.14**	**172**	⇓*i*P	**Pg**	**16 20 20.8**	**-0.9**
TVAN				*i* S	**Sg**	**16 20 24.2**	**+0.1**
TVAN	**Van**	**0.14**	**172**	P	**Pg**	**16 20 20.8**	**-0.9**
TVAN				S	**Sg**	**16 20 24.2**	**+0.1**
ERCV	**ERCIS-VAN**	**0.36**	**355**	PG	**Pg**	**16 20 24.2**	**-1.4**
ERCV				SG	**Sg**	**16 20 29.3**	**-1.1**
ERCV	**ERCIS-VAN**	**0.36**	**355**	*e*Pg	**Pg**	**16 20 24.2**	**-1.4**
ERCV				*e*Sg	**Sg**	**16 20 29.3**	**-1.1**
VMUR	**Van-Muradiye**	**0.36**	**25**	⇓*i*P	**Pg**	**16 20 24.4**	**-1.2**
VMUR				*i* S	**Sg**	**16 20 30.7**	**+0.3**
VMUR	**Van-Muradiye**	**0.36**	**25**	P	**Pg**	**16 20 24.4**	**-1.2**
VMUR				S	**Sg**	**16 20 30.7**	**+0.3**
GEVA	**Gevas**	**0.43**	**216**	⇓*i*P	**Pg**	**16 20 25.4**	**-1.6**
GEVA				*i* S	**Sb**	**16 20 33.5**	**-1.5**
GEVA	**Gevas**	**0.43**	**216**	P	**Pg**	**16 20 25.4**	**-1.6**
GEVA				S	**Sb**	**16 20 33.5**	**-1.5**
ADCV	**BITLIS_Adilcev**	**0.53**	**286**	⇑*i*P	**Pg**	**16 20 27.5**	**-1.4**
ADCV				*i* S	**Sg**	**16 20 35.8**	**-0.1**
ADCV	**BITLIS_Adilcev**	**0.53**	**286**	P	**Pg**	**16 20 27.5**	**-1.4**
ADCV				S	**Sg**	**16 20 35.8**	**-0.1**
CLDR	**Caldiran**	**0.64**	**41**	PG	**Pg**	**16 20 29.3**	**-1.5**
CLDR				SG	**Sg**	**16 20 39.3**	**+0.1**
CLDR	**Caldiran**	**0.64**	**41**	⇓*i*P	**Pg**	**16 20 29.3**	**-1.5**
CLDR				*i* S	**Sg**	**16 20 39.8**	**+0.6**
CLDR	**Caldiran**	**0.64**	**41**	P	**Pg**	**16 20 29.3**	**-1.5**
CLDR				*e*Sg	**Sg**	**16 20 39.3**	**+0.1**
TUTA	**Tutak**	**0.86**	**329**	⇓*i*P	**Pg**	**16 20 32.8**	**-2.2**
TUTA				*i* S	**Sg**	**16 20 45.0**	**-1.2**
TUTA	**Tutak**	**0.86**	**329**	P	**Pg**	**16 20 32.8**	**-2.2**
TUTA				S	**Sg**	**16 20 45.0**	**-1.2**
AGRB	**Hanur-Agry**	**0.96**	**342**	PG	**Pg**	**16 20 34.5**	**-2.4**
AGRB				SG	**Sg**	**16 20 48.6**	**-0.8**
AGRB	**Hanur-Agry**	**0.96**	**342**	*e*Pg	**Pg**	**16 20 34.5**	**-2.4**
AGRB				*e*Sg	**Sg**	**16 20 48.6**	**-0.8**
GURO	**Guroymak-BITLI**	**1.06**	**264**	PG	**Pg**	**16 20 36.7**	**-2.2**
GURO	**Guroymak-BITLI**	**1.06**	**264**	*e*Pg	**Pg**	**16 20 36.7**	**-2.2**
HAKT	**HAKKARI**	**1.14**	**167**	⇓*i*P	**Pb**	**16 20 37.8**	**-2.5**
HAKT				*i* S	**Sn**	**16 20 59.7**	**+3.3**
HAKT	**HAKKARI**	**1.14**	**167**	P	**Pb**	**16 20 37.8**	**-2.5**
EKAR	**Karacoban**	**1.18**	**300**	⇓*i*P	**Pb**	**16 20 39.4**	**-1.8**
EKAR				*i* S	**Sn**	**16 20 59.6**	**+2.0**
EKAR	**Karacoban**	**1.18**	**300**	P	**Pb**	**16 20 39.4**	**-1.8**
EKAR				S	**Sn**	**16 20 59.6**	**+2.0**
YOVA	**Hakkari_Yˆ…kse**	**1.29**	**146**	⇓*i*P	**Pn**	**16 20 41.0**	**-1.8**
YOVA				*i* S	**Sn**	**16 21 02.2**	**+2.0**
YOVA	**Hakkari_Yˆ…kse**	**1.29**	**146**	P	**Pn**	**16 20 41.0**	**-1.8**
YOVA				S	**Sn**	**16 21 02.2**	**+2.0**
IGDI	**IGDIR**	**1.32**	**24**	⇓*i*P	**Pn**	**16 20 41.5**	**-1.4**
IGDI				*i* S	**Sg**	**16 21 02.5**	**+1.6**

SRTM	Siirt_Merkez	1.33	240	⇓iP	Pn	16 20 41.2	-2.0
SRTM				i S	Sg	16 21 03.6	+2.3
SRTM	Siirt_Merkez	1.33	240	P	Pn	16 20 41.2	-2.0
SRTM				S	Sg	16 21 03.6	+2.3
SIRT	Sirnak	1.38	213	PN	Pn	16 20 42.5	-1.4
SIRT	Sirnak	1.38	213	ePn	Pn	16 20 42.5	-1.4
EATA	Eleskirt	1.38	330	⇓iP	Pn	16 20 42.5	-1.6
EATA				i S	Sb	16 21 02.0	-0.4
EATA	Eleskirt	1.38	330	P	Pn	16 20 42.5	-1.6
EATA				S	Sb	16 21 02.0	-0.4
SIRN	S˜–rnak	1.40	214	⇓iP	Pn	16 20 42.2	-1.9
SIRN				i S	Sg	16 21 04.4	+1.1
SIRN	S˜–rnak	1.40	214	P	Pn	16 20 42.2	-1.9
SIRN				S	Sg	16 21 04.4	+1.1
CUKT	Cukurca	1.43	173	PN	Pn	16 20 44.1	-0.4
CUKT	Cukurca	1.43	173	⇓iP	Pn	16 20 43.2	-1.3
CUKT				i S	Sg	16 21 08.0	+3.6
CUKT	Cukurca	1.43	173	P	Pn	16 20 43.2	-1.3
CUKT	Cukurca	1.43	173	ePn	Pn	16 20 44.1	-0.4
TASB	TASBURUN-IGDIR	1.48	27	PN	Pn	16 20 44.7	-0.5
TASB	TASBURUN-IGDIR	1.48	27	ePn	Pn	16 20 44.7	-0.5
HYR	Heyderabad	1.55	47	⇓P	Pn	16 20 46.3	+0.1
HYR				⇑S	Sn	16 21 06.3	-0.2
HYR	Heyderabad	1.55	47	⇓P	Pn	16 20 46.4	+0.1
HYR				⇑S	Sn	16 21 06.3	-0.2
VRTB	Varto-Mus	1.58	289	PN	Pn	16 20 46.0	-0.7
VRTB	Varto-Mus	1.58	289	i P	Pn	16 20 46.0	-0.7
VRTB				i S	Sg	16 21 09.4	+0.1
VRTB	Varto-Mus	1.58	289	P	Pn	16 20 46.0	-0.7
VRTB				S	Sg	16 21 09.4	+0.1
NAX	Nakhchivan	1.73	72	⇓P	Pn	16 20 48.9	+0.3
NAX				⇓S	Sn	16 21 11.0	+0.3
NAX	Nakhchivan	1.73	72	⇓P	Pn	16 20 48.9	+0.3
NAX				⇓S	Sn	16 21 11.0	+0.3
DIGO	Kars	1.75	360	i P	Pb	16 20 50.4	-0.5
DIGO				i S	Sg	16 21 17.5	+2.8
DIGO	Kars	1.75	360	P	Pb	16 20 50.3	-0.5
BNGL	BINGOL	1.77	280	⇓iP	Pn	16 20 49.2	-0.1
BNGL				i S	Sb	16 21 14.0	+0.7
SVAN	Silvan-Diyarba	1.79	254	PN	Pn	16 20 49.1	-0.4
SVAN	Silvan-Diyarba	1.79	254	⇓iP	Pn	16 20 49.2	-0.3
SVAN				i S	Sb	16 21 14.1	+0.2
SVAN	Silvan-Diyarba	1.79	254	P	Pn	16 20 49.2	-0.3
SVAN				S	Sb	16 21 14.1	+0.2
HOMI	Horasan	1.79	321	i P	Pn	16 20 50.0	+0.3
HOMI				i S	Sg	16 21 17.7	+1.6
GNI	Garni	1.82	35	P	Pn	16 20 50.2	+0.2
	47nm,0.3s,baz=228,slow=3.7,SNR=62						
GNI				S	Sg	16 21 18.4	+1.5
	34nm,0.3s,baz=263,slow=18,SNR=7.7						
GNI	Garni	1.82	35	PN	Pn	16 20 49.4	-0.6
GNI	Garni	1.82	35	ePn	Pn	16 20 49.4	-0.6
BTMN	Batman	1.83	246	⇓iP	Pn	16 20 49.9	-0.2
BTMN				i S	Sb	16 21 15.1	0.0
BTMN	Batman	1.83	246	P	Pn	16 20 49.9	-0.2
BTMN				S	Sb	16 21 15.1	0.0
SBZ	Shahbuz	1.84	66	⇓P	Pn	16 20 50.6	+0.3
SBZ				⇑S	Sn	16 21 13.7	0.0
SBZ	Shahbuz	1.84	66	⇓P	Pn	16 20 50.6	+0.3
SBZ				⇑S	Sn	16 21 13.7	0.0
KARS	Kars	1.97	353	PN	Pn	16 20 50.6	-1.5
KARS	Kars	1.97	353	ePn	Pn	16 20 50.6	-1.5
ERZM	Erzurum	2.00	309	i P	Pn	16 20 53.0	+0.5
ERZM				i S	Sb	16 21 21.5	+1.5
ERZM	Erzurum	2.00	309	P	Pn	16 20 53.0	+0.5
ERZM				S	Sb	16 21 21.5	+1.5
EAK	Akyaka	2.03	5	i P	Pn	16 20 54.0	+1.2
EAK				i S	Sg	16 21 27.1	+3.5
EAK	Akyaka	2.03	5	P	Pn	16 20 54.0	+1.2
ORD	Ordubad	2.06	82	⇑P	Pn	16 20 53.6	+0.4
ORD				⇑S	Sn	16 21 19.4	+0.5
ORD	Ordubad	2.06	82	⇑P	Pn	16 20 53.6	+0.4
ORD				⇑S	Sn	16 21 19.4	+0.5
ECAT	Cat-ERZURUM	2.10	297	i P	Pn	16 20 53.6	-0.2
ECAT				i S	Sg	16 21 26.9	+1.1
ECAT	Cat-ERZURUM	2.10	297	P	Pn	16 20 53.6	-0.2
BGOL	Bingol	2.14	280	i P	Pn	16 20 54.6	+0.3
BGOL				i S	Sb	16 21 23.5	-0.6
BGOL	Bingol	2.14	280	P	Pn	16 20 54.6	+0.3
BGOL				S	Sb	16 21 23.5	-0.6
HANI	Diyarbakir_Han	2.35	265	i P	Pn	16 20 57.9	+0.7
HANI				i S	Sb	16 21 29.5	-0.6
HANI	Diyarbakir_Han	2.35	265	P	Pn	16 20 57.9	+0.7
HANI				S	Sb	16 21 29.5	-0.6
MARD	Mardin	2.46	238	⇓iP	Pn	16 20 58.0	-0.7
MARD				i S	Sb	16 21 33.6	+0.4
DDEM	Demirkent	2.56	331	i P	Pn	16 21 02.4	+2.3
DDEM				i S	Sg	16 21 39.6	-1.0
DDEM	Demirkent	2.56	331	P	Pn	16 21 02.4	+2.3
BGD	Bogdanovka	2.60	4	P	Pb	16 21 03.8	-1.6
BGD				S	Sg	16 21 45.5	+3.5
MAZI	Mazidag	2.61	243	PN	Pn	16 21 00.2	-0.6
MAZI	Mazidag	2.61	243	ePn	Pn	16 21 00.2	-0.6
DAGI	Agillar	2.66	335	i P	Pn	16 21 03.9	+2.4
DAGI				i S	Sg	16 21 43.4	-0.6
DIYA	Diyarbakir	2.67	255	i P	Pn	16 21 01.3	-0.3
DIYA				i S	Sb	16 21 39.0	-0.3
DIYA	Diyarbakir	2.67	255	P	Pn	16 21 01.3	-0.3
AKH	Akhalkalaki	2.74	2	P	Pb	16 21 05.8	-1.9
GDB	GEDABAY	2.75	41	⇓P	Pn	16 21 03.2	+0.4
GDB				⇓S	Sn	16 21 36.3	+0.1
GDB	GEDABAY	2.75	41	⇓P	Pn	16 21 03.2	+0.4
GDB				⇓S	Sn	16 21 36.3	+0.1
QZX	Qazax, Azerbai	2.84	32	⇑P	Pn	16 21 04.6	+0.7
QZX				⇑S	Sn	16 21 38.0	-0.1
QZX	Qazax, Azerbai	2.84	32	⇑P	Pn	16 21 04.6	+0.7
QZX				⇑S	Sn	16 21 38.0	-0.1
GANJ	Ganja	3.01	48	⇑P	Pn	16 21 07.0	+0.8
GANJ	Ganja	3.01	48	⇑P	Pn	16 21 07.0	+0.8
PTK	Pertek	3.13	275	PN	Pn	16 21 07.9	-0.1
PTK	Pertek	3.13	275	ePn	Pn	16 21 07.9	-0.1
DGRG	David-gareji	3.17	28	P	Pb	16 21 13.4	-1.6
TBLG	Delisi	3.23	18	P	Pb	16 21 15.5	-0.5
TBLG				S	Sg	16 22 01.6	-0.7
BRDA	Brd	3.34	60	⇓P	Pn	16 21 11.6	+0.8
BRDA	Brd	3.34	60	⇓P	Pn	16 21 11.6	+0.8
DDFL	Dedoflistskaro	3.48	36	P	Pb	16 21 22.4	+2.1
MNGR	Mingechevir, A	3.55	52	⇑P	Pn	16 21 14.4	+0.8
MNGR	Mingechevir, A	3.55	52	⇑P	Pn	16 21 14.4	+0.8
DUS	Dusheti	3.57	16	P	Pb	16 21 20.5	-1.2
ZRD	Zardab	3.70	63	⇑P	Pn	16 21 16.5	+0.9
ZRD	Zardab	3.70	63	⇑P	Pn	16 21 16.5	+0.9
URFA	Urfa	3.80	253	PN	Pn	16 21 17.7	+0.6
URFA	Urfa	3.80	253	ePn	Pn	16 21 17.7	+0.6
ZKTA	Zakatala	3.87	39	⇑P	Pn	16 21 19.0	+1.0
SEKA	Sheki	3.88	48	⇓P	Pn	16 21 19.9	+1.7
SEKA	Sheki	3.88	48	⇓P	Pn	16 21 19.9	+1.7
LRK	Lerik	3.88	89	⇓P	Pn	16 21 19.3	+1.0
LRK	Lerik	3.88	89	⇓P	Pn	16 21 19.3	+1.0
ONI	Oni	3.92	1	P	Pb	16 21 26.0	-1.7
ONI				S	Sg	16 22 26.2	+1.9
QBL	Gabala	4.12	55	⇓P	Pn	16 21 22.7	+1.2
QBL	Gabala	4.12	55	⇓P	Pn	16 21 22.7	+1.2
ASTR	Astara	4.24	90	⇑P	Pn	16 21 23.9	+0.8
ASTR	Astara	4.24	90	⇑P	Pn	16 21 23.9	+0.8
IML	Ismayilli	4.27	59	⇑P	Pn	16 21 25.0	+1.5
IML	Ismayilli	4.27	59	⇑P	Pn	16 21 25.0	+1.5
XNQ	Khinaliq	4.43	54	⇓P	Pn	16 21 26.3	+0.4
XNQ	Khinaliq	4.43	54	⇓P	Pn	16 21 26.3	+0.4
QSAR	Qusar	4.70	51	⇑P	Pn	16 21 29.7	+0.2
QSAR	Qusar	4.70	51	⇑P	Pn	16 21 29.7	+0.2
QUBA	Quba, Azerbaij	4.76	54	⇓P	Pn	16 21 31.7	+1.5
QUBA	Quba, Azerbaij	4.76	54	⇓P	Pn	16 21 31.7	+1.5
KBZ	Khabaz	5.07	356	P	Pb	16 21 41.2	-6.0
	0.2nm,0.3s,baz=194,slow=11,SNR=7.8						
KBZ				LR	LR	16 24 06.8	
	comp=Z,291nm,19.8s,baz=156,slow=44						
KVAR	Kislovodsk Arr	5.31	355	P	Pn	16 21 43.2	+5.3
	baz=148,slow=8.4,SNR=5.5						
KVAR				LR	LR	16 24 01.4	
	comp=Z,326nm,19.0s,baz=131,slow=41						
BHD	Baghdad	5.44	171	ePn	Pn	16 21 39.0	-0.6
	SNR=4.0						
BHD				eSn	Sn	16 22 40.0	-2.3
	SNR=4.0						
RTB	Rutbah	6.15	205	ePn	Pn	16 21 49.0	-0.4
	SNR=4.0						
RTB				eSn	Sn	16 22 58.0	-1.9
	SNR=4.0						
BRTR	Keskin Array B	7.64	281	P	Pn	16 22 15.2	+5.3
	0.1nm,0.3s,baz=105,slow=15,SNR=6.4						
ASF	Jabal al Asfar	8.36	221	P	Pn	16 22 19.7	-0.1
	0.3nm,0.3s,baz=354,slow=9.1,SNR=6.4						
ASF				Lg	Lg	16 24 48.1	
	0.4nm,0.3s,baz=140,slow=17,SNR=3.6						
MMAI	Mount Meron Ar	8.59	231	P	Pn	16 22 25.0	+2.1
	1.5nm,0.3s,baz=62,slow=15,SNR=4.7						
EIL	Elat	11.36	220	Lg	Lg	16 26 30.2	
	0.2nm,0.3s,baz=329,slow=19,SNR=3.1						
EIL				LR	LR	16 27 48.5	
	comp=Z,118nm,20.5s,baz=59,slow=39						
MLR	Muntele Rosu	14.62	303	P	P	16 23 49.4	-2.5
	0.1nm,0.3s,baz=112,slow=11,SNR=2.8						
BIZ	Bicaz	15.12	309	⇑iP	P	16 24 01.7	+4.5
BIZ	Bicaz	15.12	309	⇑iP	P	16 24 01.7	+4.5
DOPR	Dopca	15.16	305	⇑iP	P	16 23 59.6	+1.9
DOPR	Dopca	15.16	305	⇑iP	P	16 23 59.6	+1.9
VOIR		15.19	302	⇓iP	P	16 24 00.2	+2.1
VOIR		15.19	302	⇓iP	P	16 24 00.2	+2.1
AKASG	Malin Array Be	15.66	325	P	Pn	16 23 59.1	+0.1
	0.8nm,0.3s,baz=130,slow=12,SNR=5.0						
AKTO	Aktyubinsk	15.69	37	P	Pn	16 24 00.8	+1.3
	0.3nm,0.3s,baz=231,slow=12,SNR=6.8						
AKTO				LR	LR	16 31 33.6	
	comp=Z,75nm,19.2s,baz=215,slow=43						
VTS	Vitosha	15.80	291	⇓iP	P	16 24 08.4	+3.4
VTS	Vitosha	15.80	291	⇓iP	P	16 24 08.4	+3.4
BURAR	Bucovina Array	15.96	310	⇓iP	P	16 24 07.8	+1.1
LOT	Lotru	16.05	301	⇓iP	P	16 24 13.5	+5.8
LOT	Lotru	16.05	301	⇓iP	P	16 24 13.5	+5.8
PDG	Podgorica	18.70	289	⇓iP	Pn	16 24 43.3	+6.1
PDG	Podgorica	18.70	289	⇓iP	Pn	16 24 43.3	+6.1
VYHS	Vyhne	20.24	307	eP	Pn	16 24 54.8	-0.8
ARU	Arti	20.43	25	P	P	16 24 54.9	-0.7
	12nm,0.8s,baz=245,slow=9.7,SNR=18						
MODS	Modra-Piesok	21.18	306	eP	P	16 25 08.8	+4.9
VRAC	Vranov	21.90	308	LR	LR	16 35 48.5	
	comp=Z,19nm,18.8s,baz=104,slow=42						
KLMR	Klimovskoe	22.34	355	eP	P	16 25 14.9	-1.3
KLMR				AMP		16 25 20.4	
	comp=Z,46nm,1.2s						
BVAR	Borovoye Array	23.48	44	P	P	16 25 28.1	0.0
	comp=Z,0.3nm,0.5s,baz=246,slow=11,SNR=3.6						
BVAR				LR	LR	16 35 18.1	
	comp=Z,36nm,18.5s,baz=298,slow=38						
GERES	GERESS Array B	23.59	305	P	P	16 25 29.3	0.0
	comp=Z,1.0nm,0.8s,baz=96,slow=8.2,SNR=5.6						
GERES				LR	LR	16 36 46.5	
	comp=Z,17nm,19.9s,baz=108,slow=42						
AAK	Ala-Archa	23.86	70	LR	LR	16 35 12.1	
	comp=Z,32nm,19.8s,baz=268,slow=37						
BRG	Berggiesshubel	24.03	310	eP	P	16 25 37.1	+3.7
	comp=Z,6.0nm,1.3s						
CLL	Collm	24.73	311	eP	P	16 25 40.0	+0.2
	comp=Z,4.0nm,0.9s						
CLL				i sP	pP	16 25 43.5	+0.7
	comp=Z,12nm,1.4s						
CLL				e		16 26 03.0	
CLL				e(S)	S	16 30 10.0	+8.4
FINES	FINESS Array B	25.20	340	P	P	16 25 42.8	-1.2
	comp=Z,6.8nm,0.9s,baz=151,slow=12,SNR=6.2						
FINES				LR	LR	16 36 43.6	
	comp=Z,62nm,18.9s,baz=140,slow=39						
DAVOX	Davos/Dischmat	25.76	299	P	P	16 25 48.3	-1.2
	comp=Z,3.1nm,0.9s,baz=83,slow=6.8,SNR=3.9						
KURBB	Kurchatov Arra	27.45	53	P	P	16 26 04.5	+0.1
	comp=Z,1.6nm,0.6s,baz=263,slow=9.0,SNR=13						
HFS	Hagfors	28.47	329	P	P	16 26 12.4	-1.0
	comp=Z,8.8nm,0.9s,baz=149,slow=6.7,SNR=8.4						
HFS				LR	LR	16 38 59.1	
	comp=Z,42nm,18.2s,baz=122,slow=39						
MKAR	Makanchi Array	29.47	61	P	P	16 26 22.1	-0.3
	comp=Z,0.7nm,0.7s,baz=269,slow=9.9,SNR=3.8						
NB2	NORSAR Subarra	30.00	329	P	P	16 26 25.6	-1.4
	comp=Z,3.1nm,1.0s,baz=124,slow=9.3						
NOA	NORSAR Array B	30.00	329	P	P	16 26 25.7	-1.2
	comp=Z,1.4nm,0.8s,baz=130,slow=7.6,SNR=4.8						
NOA				LR	LR	16 39 19.4	
	comp=Z,31nm,19.2s,baz=115,slow=38						
ZALV	Zalesovo Beam	31.92	48	LR	LR	16 40 12.8	
	comp=Z,34nm,20.3s,baz=244,slow=37						
ARCES	ARCESS Array B	32.38	348	P	P	16 26 46.8	-1.0
	comp=Z,3.5nm,0.9s,baz=165,slow=7.5,SNR=4.3						
EKA	Eskdalemuir Ar	35.08	314	P	P	16 27 10.5	-1.0
	comp=Z,12nm,0.9s,baz=104,slow=9.2,SNR=7.9						
ESDC	Sonseca Array	36.38	287	P	P	16 27 21.4	-1.5
	comp=Z,0.4nm,0.4s,baz=72,slow=8.6,SNR=4.2						
TORD	Torodi Ar. Bea	44.75	247	P	P	16 28 29.8	-2.5
	comp=Z,1.2nm,0.9s,baz=58,slow=8.5						
KOWA	Kowa	48.08	253	P	P	16 28 57.2	-1.2
	comp=Z,4.3nm,0.8s,baz=40,slow=11,SNR=5.6						
CMAR	Chiang Mai Arr	51.97	96	P	P	16 29 26.4	-1.5
	comp=Z,1.2nm,0.8s,baz=299,slow=8.5,SNR=7.7						
KSRS	Korea Array	64.15	62	P	P	16 30 51.2	-1.8
	comp=Z,1.2nm,1.1s,baz=291,slow=6.5,SNR=3.6						
YKA	Yellowknife Ar	77.64	350	P	P	16 32 13.6	-1.0
	comp=Z,0.6nm,0.8s,baz=19,slow=6.5,SNR=4.6						

SOME ***20*** *16:20:28.9, 39°.65N×73°.53E, h15km*

NNC ***20*** *16:20:28.8±0.6, 39°.65N×73°.87E, h0km, mb3.5, mpv3.2,*
Error ellipse: s-maj=7.6km s-min=3.0km az=42.0

KRNET ***20*** *16:20:29.6±0.1, 39°.73N×73°.90E, mb3.3*

ISCJB ***20*** *16:20:32.2±1.0, 39°.73N±0°.06×73°.90E±0°.04, h10km, Error*
ellipse: s-maj=8.2km s-min=4.5km az=164.5

ISC 20 16:20:29.8±1.6**, 39°.73N**±0°.08×**73°.83E**±0°.03**, h10**km**, n35,**
σ**2s.14**/60**, 25C-16D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	0.38	318	⇑P	Pb	16 20 37.8	-0.9
	50nm,0.3s						
SFK				⇑S	Sb	16 20 44.4	-0.3
	80nm,0.2s						
SFK	Sufi-Kurgan	0.38	318	⇓iP	Pb	16 20 37.9	-0.9
	baz=13						
SFK				⇓iS	Sb	16 20 44.0	-0.7
	baz=13						
BTK	Batken	2.34	279	⇓iP	Pb	16 21 12.1	0.0
	baz=79						
BTK				⇓iS	Sg	16 21 43.3	-1.6
	baz=79						
AML	Almayashu	2.40	358	P	Pg	16 21 15.2	-0.6
	SNR=29						
AML	Almayashu	2.40	358	⇑iP	Pb	16 21 12.2	-1.1
	baz=56						
AML				⇑iS	Sb	16 21 43.5	+0.4
	baz=56						
ARK	Arkit	2.50	326	⇓iP	Pb	16 21 13.8	-1.1
	baz=25						
ARK				⇓iS	Sb	16 21 45.3	-0.5
	baz=25						
UCH	Uchtor	2.55	12	P	Pg	16 21 17.1	-1.5
	SNR=7.7						
UCH	Uchtor	2.55	12	⇑iP	Pb	16 21 14.1	-1.8
	baz=10.0						
UCH				⇑iS	Sb	16 21 46.7	-0.7
	baz=10.0						
KZA	Kyzart	2.58	24	P	Pb	16 21 14.0	-2.4
	SNR=27						
KZA	Kyzart	2.58	24	⇑iP	Pb	16 21 14.4	-2.0
	baz=23						
KZA				⇑iS	Sb	16 21 47.2	-1.1
	baz=23						
EKS2	Erkin-Say	2.93	359	⇑iP	Pb	16 21 19.2	-3.0
	baz=58						
EKS2				⇑iS	Sb	16 21 55.6	-2.4
	baz=58						
MNAS	Manas	2.93	340	⇓Pn	Pb	16 21 19.4	-2.8
	4.6nm,0.4s						
MNAS				⇑Lg	Lg	16 22 04.8	
	22nm,0.7s						
MNAS	Manas	2.93	340	⇑iP	Pb	16 21 19.8	-2.4
	baz=40						
MNAS				⇑iS	Sb	16 21 56.1	-2.0
	baz=40						
AAK	Ala-Archa	2.94	10	⇓Pg	Pb	16 21 23.2	+0.6
	7.3nm,0.5s						
AAK				⇓Lg	Lg	16 22 04.7	
	32nm,0.8s						
AAK	Ala-Archa	2.94	10	P	Pb	16 21 22.3	-0.2
	SNR=12						
AAK	Ala-Archa	2.94	10	⇑iP	Pb	16 21 19.4	-3.1
	baz=9.0						
AAK				⇑iS	Sb	16 21 55.7	-2.9
	baz=9.0						
KBK	Karagaybulak	3.04	16	P	Pb	16 21 25.1	+1.0
	SNR=11						
KBK	Karagaybulak	3.04	16	⇑iP	Pn	16 21 20.6	+2.4
	baz=15						
KBK				⇑iS	Sn	16 21 57.9	+3.2
	baz=15						
MRKS	Merke	3.04	352	eP	Pg	16 21 27.2	-1.0
	19nm,0.4s						
MRKS				eS	Sg	16 22 08.3	+0.7
	25nm,0.5s						
ULHL	Ulahol	3.10	35	P	Pg	16 21 28.2	-1.2
	SNR=6.9						
ULHL	Ulahol	3.10	35	⇑iP	Pb	16 21 21.7	-3.6
	baz=34						
ULHL				⇑iS	Sn	16 21 59.1	+2.7
	baz=34						
BOOM	Boomskoye usch	3.18	29	⇓iP	Pn	16 21 22.2	+2.1
	baz=29						
BOOM				⇓iS	Sn	16 22 01.1	+2.9
	baz=29						
CHMS	Chumysh	3.34	12	P	Pb	16 21 28.3	-0.8
	SNR=6.6						
CHMS	Chumysh	3.34	12	⇑iP	Pn	16 21 24.6	+2.5
	baz=11						
CHMS				⇑iS	Sn	16 22 05.0	+3.2
	baz=11						
TKM2	Tokmak 2	3.45	22	⇓Pg	Pb	16 21 33.1	+1.9
	3.6nm,0.5s						
TKM2				⇑Lg	Lg	16 22 20.6	
	14nm,0.9s						
KDJ	Kajisay	3.49	46	⇓iP	Pn	16 21 26.7	+2.3
	baz=45						
KDJ				⇓iS	Sn	16 22 08.5	+2.7
	baz=45						
USP	Ospenovka	3.57	8	P	Pg	16 21 36.7	-1.5
	SNR=7.8						
USP	Ospenovka	3.57	8	⇑iP	Pn	16 21 28.1	+2.8
	baz=7.0						
USP				⇑iS	Sn	16 22 10.7	+3.2
	baz=7.0						
KST	Kastek	3.68	25	eP	Pg	16 21 38.3	-2.0
	9.3nm,0.8s						
KST				eS	Sg	16 22 27.9	0.0
	14nm,0.8s						
IUG	Iuzhnay	3.75	311	eP	Pb	16 21 33.6	-2.6
	10nm,0.3s						
IUG				eS	Sb	16 22 19.2	-2.6
	23nm,0.6s						
TNSS	Tian-Shan	4.05	34	eP	Pg	16 21 45.0	-2.4
	11nm,0.5s						
TNSS				eS	Sg	16 22 39.4	-0.5
	9.2nm,0.6s						
KK31	Karatay Array	4.19	325	⇓Pn	Pn	16 21 36.2	+2.4
	0.5nm,0.2s,baz=137,slow=14,SNR=6.7						
KK31				Pg	Pg	16 21 47.2	-2.8
	1.5nm,0.3s,baz=145,slow=16,SNR=8.2						
KK31				⇓Sn	Sn	16 22 27.3	+4.5
	2.7nm,0.4s						
KK31				⇑Lg	Lg	16 22 44.2	
	2.9nm,0.3s						
MDOK	Medeo	4.20	34	eP	Pg	16 21 47.9	-2.3
	3.2nm,0.4s						
MDOK				eS	Sg	16 22 44.3	-0.2
	10.0nm,0.6s						
KUU	Kurty	4.56	23	eP	Pg	16 21 54.5	-2.7
	2.9nm,0.8s						
KUU				eS	Sg	16 22 55.3	-0.9
	11nm,0.6s						
CHKK	Chushkaly	4.75	29	eP	Pg	16 21 58.0	-2.7
	4.1nm,0.6s						
CHKK				eS	Sg	16 23 01.3	-0.9
	6.2nm,0.7s						

ISCJB ***20*** *16:22:56.7±0.3, 23°.97N±0°.01×121°.67E±0°.02, h1km±2km,*
Error ellipse: s-maj=2.5km s-min=1.5km az=26.8

JMA ***20*** *16:22:56.1±0.2, 23°.97N×121°.64E, h0km, M2.8*

TAP ***20*** *16:22:57.1, 23°.98N×121°.61E, h9km, ML3.5, B*

ISC 20 16:22:57.0±0.8**, 23°.97N**±0°.01×**121°.65E**±0°.02**, h11**km±5km**,**
n102, σ**0s.65**/160**, 7C-19D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HWA	Hwalien	0.04	277	P	Pg	16 22 59.3	+0.3
	baz=156						
ENLB	Shoufeng	0.08	215	⇑P	Pg	16 22 59.7	+0.2
	baz=188						
ENLB				S	Sg	16 23 02.0	+0.8
	baz=188						
TWD	Chiawan	0.12	334	⇓iP	Pg	16 23 00.1	+0.1
	baz=356						
TWD				i S	Sg	16 23 01.9	-0.2
	baz=356						
NACB	Ninganchiao	0.21	345	⇓P	Pg	16 23 01.5	+0.1
	baz=1.0						
NACB				S	Sg	16 23 04.1	-0.3
	baz=1.0						
ESL	Shilin	0.26	232	⇑iP	Pg	16 23 02.1	-0.1
	baz=231						
ESL				i S	Sg	16 23 05.5	-0.3
	baz=231						
EGFH	Guangfu	0.36	215	eP	Pg	16 23 04.5	+0.3
	baz=219						
EGFH				eS	Sb	16 23 10.5	-0.7
	baz=219						
WHF	Hehuan Shan	0.40	296	⇓P	Pg	16 23 04.7	-0.2
	baz=299						
WHF				S	Sg	16 23 09.6	-0.6
	baz=299						
CHGB	Renai	0.45	282	⇑P	Pg	16 23 05.9	+0.1
	baz=283						
CHGB				S	Sg	16 23 11.3	-0.5
	baz=283						
ENA	Nanau	0.46	10	⇓iP	Pb	16 23 06.4	-0.7
	baz=15						
ENA				eS	Sb	16 23 12.7	-1.3
	baz=15						
NANB	Nanao	0.46	11	⇓P	Pb	16 23 06.5	-0.7
	baz=15						
NANB				S	Sb	16 23 12.8	-1.2
	baz=15						
NNSB	Datong	0.52	332	⇓P	Pb	16 23 07.3	-0.8
	baz=335						
NNSB				S	Sg	16 23 13.7	-0.3
	baz=335						
TWT	Tachien	0.52	303	P	Pb	16 23 07.5	-0.7
	baz=312						
TWT				S	Sg	16 23 14.3	+0.3
	baz=312						
HGSD	Ruisui	0.52	204	⇓P	Pb	16 23 08.0	-0.1
	baz=220						
NNS	Nan Shan	0.53	331	⇓iP	Pb	16 23 07.6	-0.8
	baz=335						
NNS				i S	Sg	16 23 14.4	-0.1
	baz=335						
TDCB	Techi	0.53	302	P	Pb	16 23 07.6	-0.8
	baz=312						
TDCB				S	Sg	16 23 14.3	-0.2
	baz=312						
EHY	Hungye	0.55	213	⇓P	Pg	16 23 07.8	0.0
	baz=220						
EHY				S	Sg	16 23 15.4	+0.3
	baz=220						
TWC	Suao	0.66	16	⇓P	Pb	16 23 10.2	-0.3
	baz=10.0						
TWC				S	Sb	16 23 19.0	-0.7
	baz=10.0						
YULB	Yu-li	0.66	210	⇓eP	Pg	16 23 09.4	-0.4
	baz=218						
YULB				eS	Sg	16 23 19.1	+0.6
	baz=218						
SSLB	Suanglung	0.67	254	⇑P	Pg	16 23 09.9	+0.1
	baz=266						
SSLB				S	Sg	16 23 17.7	-0.9
	baz=266						
ENTT	Nioudou	0.67	353	⇓iP	Pb	16 23 10.4	-0.3
	baz=357						
ENTT				eS	Sb	16 23 19.6	-0.4
	baz=357						
SMLT	Sun Moon Lake	0.69	263	⇑P	Pb	16 23 10.6	-0.6
	baz=263						
SMLT				S	Sg	16 23 19.3	-0.3
	baz=263						
TWF1	Yuli	0.70	208	eP	Pg	16 23 10.0	-0.5
	baz=220						
EOS1	EOS1	0.72	37	eP	Pn	16 23 13.0	0.0
	baz=27						
TYC	Yuchr	0.73	265	⇑P	Pb	16 23 11.2	-0.5
	baz=265						

TYC	baz=265			S	Sg	16 23 19.9	-0.8
YHNB	Yeheng baz=343	0.74	340	⇓P	Pb	16 23 11.7	-0.2
YHNB	baz=343			S	Sg	16 23 20.6	-0.5
TWE	Neicheng baz=4.0	0.75	1	⇓P	Pb	16 23 12.0	0.0
TWE	baz=4.0			*e*S	Sb	16 23 21.4	-0.8
NSK	Sanguang baz=342	0.75	339	⇓P	Pb	16 23 11.9	-0.3
NSK	baz=342			S	Sg	16 23 21.3	-0.1
YUS	Yu-Shan baz=233	0.80	233	*e*P	Pb	16 23 12.8	-0.4
YUS	baz=233			*e*S	Sg	16 23 23.1	0.0
NWLT	Wulai baz=352	0.81	350	⇓P	Pb	16 23 13.1	-0.1
NWLT	baz=352			*e*S	Sg	16 23 23.0	-0.4
FULB	Fuli baz=218	0.84	203	*e*P	Pb	16 23 13.8	+0.3
WJS	Zhushan baz=261	0.86	260	*e*P	Pn	16 23 14.7	-0.3
WJS	baz=261			*e*S	Sn	16 23 26.8	-0.8
NSTT	Nanjuang baz=320	0.89	318	P	Pn	16 23 14.6	-0.8
NSTT	baz=320			*e*S	Sg	16 23 25.0	-0.6
LIOB	Emei baz=321	0.89	319	⇓P	Pn	16 23 15.0	-0.5
LIOB	baz=321			*e*S	Sb	16 23 25.9	-0.4
WNT	Mingjian baz=265	0.89	264	*e*P	Pn	16 23 15.7	+0.2
WNT	baz=265			*e*S	Sb	16 23 26.8	+0.4
NTC	Toucheng	0.89	10	*e*P	Pb	16 23 14.2	-0.3
ALS	Alishan baz=249	0.90	240	*e*P	Pb	16 23 14.7	-0.1
CHKT	Chengkung baz=184	0.91	197	P	Pb	16 23 14.7	-0.1
CHKT	baz=184			*e*S	Sn	16 23 28.5	-0.3
TCU	Taichung baz=277	0.91	281	*e*P	Pn	16 23 15.9	+0.2
NSY	Sanyi baz=312	0.93	299	*e*P	Pn	16 23 16.0	+0.1
NSY	baz=312			*e*S	Sn	16 23 29.1	-0.2
WLTB	Daxi baz=338	0.95	337	*e*P	Pn	16 23 16.1	-0.1
CHN5	Tsauling baz=238	0.97	248	P	Pn	16 23 16.5	-0.1
CHN5	baz=238			*e*S	Sn	16 23 29.9	-0.5
NMLH	Miaoli baz=306	0.97	306	*e*P	Pn	16 23 16.9	+0.4
ELDTW	Lidau baz=205	0.97	217	*e*P	Pg	16 23 14.5	-1.2
PTSB	Yuanli baz=311	0.99	299	*e*P	Pn	16 23 17.1	+0.4
PTSB	baz=311			*e*S	Sn	16 23 30.5	-0.3
TWA	Mucha baz=348	1.01	356	P	Pn	16 23 17.0	0.0
TWA	baz=348			*e*S	Sb	16 23 30.0	+0.2
WCHH	Zhanghua baz=278	1.01	276	*e*P	Pn	16 23 18.1	+1.0
TIPB	Shuangxi baz=1.0	1.01	9	⇓P	Pn	16 23 16.6	-0.6
TIPB	baz=1.0			*e*S	Sb	16 23 29.6	-0.1
TATO	Taipei baz=353	1.01	351	⇓P	Pn	16 23 17.1	0.0
TATO	baz=353			S	Sb	16 23 29.4	-0.4
SBCB	Hsinchu baz=324	1.02	323	*e*P	Pn	16 23 17.5	+0.3
HSN	Hsinchu baz=326	1.04	323	*e*P	Pn	16 23 18.8	+1.4
WGK	Gukeng baz=256	1.04	254	*e*P	Pn	16 23 17.6	+0.1
WDLH	Douliu baz=257	1.06	255	*e*P	Pn	16 23 18.2	+0.5
TAP1	Taipei baz=355	1.07	354	P	Pn	16 23 18.3	+0.4
TAP1	baz=355			*e*S	Sb	16 23 31.6	+0.1
TWB1	Santiao Chiao baz=9.0	1.08	16	*e*P	Pn	16 23 18.2	+0.2
NCUH	Zhongli baz=337	1.08	337	*e*P	Pn	16 23 18.6	+0.6
NCU	National Centr baz=349	1.08	337	*e*P	Pn	16 23 18.6	+0.6
NCU	baz=349			*e*S	Sn	16 23 34.3	+1.2
NWF	Wu-fen Shan baz=5.0	1.10	6	*e*P	Pn	16 23 18.4	0.0
WFSB	Wu-fen Shan baz=5.0	1.10	6	*e*P	Pn	16 23 18.3	0.0
TWS1	Kuangyinshan baz=359	1.15	349	*e*P	Pn	16 23 20.1	+1.2
TWS1	baz=359			*e*S	Sn	16 23 35.6	+1.0
STYT	Tauyuan baz=227	1.15	226	*e*P	Pn	16 23 19.0	-0.1
STYT	baz=227			*e*S	Sn	16 23 34.5	-0.4
TPUB	Ta-pu baz=237	1.15	235	⇑P	Pg	16 23 19.5	+0.4
TPUB	baz=237			*e*S	Sn	16 23 35.4	+0.6
CHN2	Minshiung baz=251	1.17	248	*e*P	Pg	16 23 20.4	+1.1
YM04	YM04 baz=354	1.18	355	*e*P	Pg	16 23 20.2	+0.5
YM10	YM10 baz=354	1.18	356	*e*P	Pg	16 23 20.4	+0.7
RLNB	Erlin baz=268	1.19	266	*e*P	Pg	16 23 19.4	-0.4
RLNB	baz=268			*e*S	Sn	16 23 36.7	+1.0
YM11	YM11 baz=6.0	1.19	357	*e*P	Pg	16 23 21.4	+1.5
WTP	Ta-pu baz=235	1.20	233	*e*P	Pg	16 23 20.3	+0.3
WTP	baz=235			*e*S	Sn	16 23 36.7	+0.7
YM07	YM07 baz=9.0	1.20	359	P	Pg	16 23 20.7	+0.6
NTST	Danshui baz=350	1.20	351	*e*P	Pg	16 23 20.6	+0.5
YM03	YM03 baz=354	1.21	355	*e*P	Pg	16 23 20.7	+0.5
YM08	YM08 baz=6.0	1.21	357	*e*P	Pg	16 23 20.6	+0.4
CHY	Chiayi baz=263	1.22	248	*e*P	Pg	16 23 20.4	0.0
CHY	baz=263			*e*S	Sn	16 23 37.4	+0.9
WTCT	Ta-ch’eng baz=267	1.26	265	*e*P	Pb	16 23 20.6	-0.2
WTCT	baz=267			*e*S	Sg	16 23 38.6	+1.1
TWGBT	Beinan baz=208	1.26	205	*e*P	Pn	16 23 20.1	-0.5
TWG	Pinlang baz=208	1.26	205	*e*P	Pb	16 23 20.7	-0.1
TWH	Lutao baz=171	1.27	187	*e*P	Pn	16 23 18.9	-1.6
TWH	baz=171			*e*S	Sb	16 23 36.1	-1.1
JYNG	Yonagunijimaku	1.27	68	P	Pb	16 23 21.0	+0.1
TWK	Hsinying baz=228	1.28	237	*e*P	Pg	16 23 21.6	+0.1
TWK	baz=228			*e*S	Sg	16 23 39.7	+1.6
CHN1	Nanshi baz=236	1.30	233	*e*P	Pg	16 23 21.6	-0.2
CHN1	baz=236			*e*S	Sg	16 23 39.3	+0.6
TWY	Chenhua baz=345	1.30	358	*e*P	Pg	16 23 22.4	+0.5
SGST	Jiashian baz=231	1.32	228	*e*P	Pg	16 23 22.6	+0.3
SGST	baz=231			*e*S	Sg	16 23 41.1	+1.6
YOJ	Yonaguni jima baz=69	1.33	68	*e*P	Pn	16 23 21.5	0.0
YOJ	Yonaguni jima	1.33	68	P	Pb	16 23 21.8	-0.2
WLGB	Puzi baz=264	1.33	249	*e*P	Pn	16 23 21.5	0.0
WLGB	baz=264			*e*S	Sg	16 23 42.0	+2.1
SLGT	Liugui baz=212	1.34	224	*e*P	Pb	16 23 22.2	+0.1
WSF	Szhu baz=258	1.35	256	*e*P	Pb	16 23 22.0	-0.3
CHN8	Yiju baz=248	1.46	245	*e*P	Pb	16 23 24.4	+0.2
CHN8	baz=248			*e*S	Sg	16 23 44.5	+0.5
ECL	Taimali baz=186	1.51	205	*e*P	Pn	16 23 23.4	-0.5
TWM1	Shoushan baz=227	1.61	225	*e*P	Pg	16 23 28.0	+0.2
MASBT	Mashibuluo baz=220	1.65	215	*e*P	Pn	16 23 25.9	+0.1
MASBT	baz=220			*e*S	Sg	16 23 50.1	+0.1
PCYT	Pengchaiyu baz=10.0	1.69	13	*e*P	Pn	16 23 27.0	+0.5
SCZT	Fangliau baz=201	1.85	211	*e*P	Pb	16 23 29.9	-1.0
IRIF	Iriomote-Funau	1.93	79	P	Pn	16 23 30.5	+0.8
IRIF				S	Sb	16 23 56.5	+0.2
PHUB	P’eng-hu baz=260	1.96	257	*e*P	Pb	16 23 31.2	-1.4
PHUB	baz=260			*e*S	Sb	16 23 56.7	-0.5
WDGT	Dungji baz=251	1.96	249	*e*P	Pn	16 23 31.1	+1.0
PNG	Penghu baz=261	1.96	259	*e*P	Pn	16 23 30.8	+0.6
PNG	baz=261			*e*S	Sb	16 23 56.9	-0.3
TWKBT	Hengchun baz=206	2.17	201	*e*P	Pn	16 23 34.1	+1.1
JKRS	Kuro-shima	2.17	83	P	Pn	16 23 34.1	+1.1
JKRS				*e*S	Sb	16 24 02.1	-1.0
VCHM	Qimei baz=252	2.18	250	*e*P	Pn	16 23 34.2	+1.1
VWUC	VWUC baz=297	2.25	297	*e*P	Pn	16 23 34.1	0.0
JIJ	Ishigaki jima	2.31	80	P	Pn	16 23 34.9	0.0
JIJ				*e*S	Sb	16 24 05.3	-1.8
JISG	Ishigakijimahi	2.50	75	P	Pn	16 23 37.8	+0.2
JISG				S	Sn	16 24 08.5	+0.4

IDC ***20*** *16:40:17.5±1.3, 32°.97N×85°.94E, h0^{km}, mb3.5/7, mb1 3.8/9, mb1mx3.5/62, mbtmp3.6/9, ML3.1/2, Error ellipse: s-maj=45.7km s-min=21.9km az=66.0*

ISCJB ***20*** *16:40:21.6±0.5, 33°.18N±0°.05×86°.1E±0°.2, h33^{km}, mb3.5/6, Error ellipse: s-maj=21.0km s-min=7.2km az=2.2*

ISC 20 16:40:23.7±0.8**, 33°.17N**±0°.08×**86°.0E**±0°.2**, h35**^{km}**, n17, σ1^{s}22**/16**, mb3.5**/6**, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DANN	Dangsing	5.19	203	*e*P	Pn	16 41 38.4	-0.7
GKN	Gorkha 18nm,0.5s	5.29	193	*e*P	Pn	16 41 41.1	+0.7
KKN	Kakani 8.2nm,0.4s	5.41	187	*e*P	Pn	16 41 44.9	+2.9
DMN	Daman 11nm,0.4s	5.60	188	*e*P	Pn	16 41 44.7	-0.1
PKIN	Phulchoki	5.61	186	*e*P	Pn	16 41 45.3	+0.5
PKIN	Phulchoki 15nm,0.4s	5.61	186	*e*P	Pn	16 41 46.3	+1.5
KOLN	Koldanda	5.78	202	*e*P	Pn	16 41 35.2	-12
ODAN	Odare 16nm,0.5s	6.40	169	*e*P	Pn	16 41 55.0	-0.7
MKAR	Makanchi Array 0.1nm,0.3s,baz=156,slow=14,SNR=6.6	13.90	349	Pn	Pn	16 43 37.4	-0.7
KURBB	Kurchatov Arra 0.1nm,0.3s,baz=162,slow=11,SNR=13	18.29	345	P	Pn	16 44 34.4	-0.1
ZALV	Zalesovo Beam 2.2nm,0.8s,baz=184,slow=11,SNR=6.7	20.79	358	P	P	16 45 01.8	+0.3
SONM	Songino Array 1.2nm,0.6s,baz=240,slow=11,SNR=4.2	21.22	40	P	P	16 45 08.3	+1.8
GERES	GERESS Array B 0.2nm,0.3s,baz=47,slow=8.6,SNR=3.2	54.76	310	P	P	16 49 50.0	+0.2
WRA	Warramunga Arr 0.4nm,0.9s,baz=326,slow=6.5,SNR=5.4	70.12	132	P	P	16 51 31.2	-1.5
ASAR	Alice Springs 0.4nm,0.8s,baz=327,slow=6.6,SNR=3.9	72.64	135	P	P	16 51 46.9	-0.9
ILAR	Eielson Array 0.2nm,0.5s,baz=339,slow=4.8,SNR=3.6	74.02	21	P	P	16 51 55.6	+0.2
YKA	Yellowknife Ar 0.7nm,0.7s,baz=340,slow=4.6,SNR=4.9	83.23	9	P	P	16 52 45.8	-0.2

ISK ***20*** *17:12:15.9, 38°.69N×43°.30E, h16^{km}, ML2.3/4*

ISCJB ***20*** *17:12:16.6±1.0, 38°.66N±0°.04×43°.32E±0°.08, h25^{km}±8^{km}, Error ellipse: s-maj=11.2km s-min=6.4km az=18.0*

CSEM ***20*** *17:12:16.8±0.2, 38°.71N×43°.27E, h10^{km}, ML2.3, Error ellipse: s-maj=5.8km s-min=4.4km az=106.0*

DDA ***20*** *17:12:17.0, 38°.71N×43°.32E, h7^{km}, Ml2.8*

ISC 20 17:12:17.0±0.9**, 38°.70N**±0°.02×**43°.30E**±0°.03**, h14**^{km}±8^{km}**, n20, σ0^{s}60**/34**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VANB	Van	0.12	147	PG	Pb	17 12 21.0	-0.2
VANB				SG	Sb	17 12 24.7	+0.7
VANB	Van	0.12	147	*e*Pg	Pb	17 12 21.0	-0.2
VANB				*e*Sg	Sb	17 12 24.7	+0.7
TVAN	Van	0.19	155	*i* P	Pg	17 12 21.0	-0.5
TVAN				*i* S	Sg	17 12 25.0	+0.4
TVAN	Van	0.19	155	P	Pg	17 12 21.0	-0.5
TVAN				S	Sg	17 12 25.0	+0.4
ERCV	ERCIS-VAN	0.32	5	PG	Pg	17 12 23.2	-0.5
ERCV				SG	Sg	17 12 28.6	+0.4
ERCV	ERCIS-VAN	0.32	5	*e*Pg	Pg	17 12 23.2	-0.5
ERCV				*e*Sg	Sg	17 12 28.6	+0.4
VMUR	Van-Muradiye	0.36	36	*i* P	Pg	17 12 24.8	+0.5
VMUR				*i* S	Sb	17 12 31.7	+0.9
VMUR	Van-Muradiye	0.36	36	P	Pg	17 12 24.8	+0.5
VMUR				S	Sb	17 12 31.7	+0.9
GEVA	Gevas	0.43	206	*i* P	Pg	17 12 25.5	-0.1
GEVA	Gevas	0.43	206	P	Pg	17 12 25.5	-0.1
CLDR	Caldiran	0.65	47	PG	Pg	17 12 29.3	-0.5
CLDR				SG	Sb	17 12 39.1	-0.3
CLDR	Caldiran	0.65	47	*i* P	Pg	17 12 28.7	-1.1
CLDR				*i* S	Sg	17 12 38.9	+0.4
CLDR	Caldiran	0.65	47	P	Pg	17 12 28.7	-1.1
CLDR	Caldiran	0.65	47	*e*Pg	Pg	17 12 29.3	-0.5
CLDR				S	Sg	17 12 38.8	+0.4
CLDR				*e*Sg	Sb	17 12 39.1	-0.3
TUTA	Tutak	0.80	332	*i* P	Pg	17 12 32.1	-0.4
TUTA				*i* S	Sb	17 12 44.5	+0.9
TUTA	Tutak	0.80	332	P	Pg	17 12 32.1	-0.4
TUTA				S	Sb	17 12 44.5	+0.9
AGRB	Hanur-Agry	0.91	345	PG	Pg	17 12 34.2	-0.4
AGRB	Hanur-Agry	0.91	345	*e*Pg	Pg	17 12 34.2	-0.4
GURO	Guroymak-BITLI	1.01	262	PG	Pb	17 12 35.7	-0.6
GURO	Guroymak-BITLI	1.01	262	*e*Pg	Pb	17 12 35.7	-0.6

IDC ***20*** *17:23:38.4±1.6, 14°.57N×92°.94W, h0^{km}, mb3.9/9, mb1 4.2/11, mb1mx3.9/49, mbtmp3.9/11, ML3.7/2, MS3.2/5, Ms1 3.2/5, ms1mx2.8/43, Error ellipse: s-maj=59.4km s-min=20.1km az=43.0*

ISCJB ***20*** *17:23:41.9±0.4, 14°.44N±0°.04×93°.28W±0°.04, h36^{km}, mb4.2/45, MS3.4/4, Error ellipse: s-maj=7.3km s-min=4.4km az=40.2*

NEIC ***20*** *17:23:43.3±2.2, 14°.44N×93°.32W, h32^{km}±16^{km}, mb4.2/55, MD4.1(MEX), Error ellipse: s-maj=11.9km s-min=5.7km az=214.0*

MEX ***20*** *17:23:46.7±0.7, 14°.65N×93°.57W, h10^{km}, MD4.1*

ISC 20 17:23:42.6±0.7**, 14°.37N**±0°.07×**93°.44W**±0°.07**, h36**^{km}**, n98, σ1^{s}57**/99**, mb4.2**/48**, MS3.3**/4**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		1.35	9	*e*P	Pn	17 24 03.6	-1.2
PCIG				*e*S	Sn	17 24 18.3	-3.2
CCIG	Comitan	2.28	33	*e*P	Pn	17 24 19.7	+1.8
CCIG				*e*S	Sn	17 24 45.0	+0.1
CCIG	Comitan	2.28	33	*e*Sn	Sn	17 24 49.7	+4.8
TGIG		2.42	7	*e*P	Pn	17 24 20.6	+0.9
TGIG				*i* S	Sn	17 24 46.0	-2.1
TGBT	Tuxtla Gutierr	2.42	8	*e*P	Pn	17 24 19.5	-0.1
CMIG	Matias Romero 5.8nm,0.3s,baz=175,slow=13,SNR=99	3.04	333	Pn	Pn	17 24 27.3	-0.9
CMIG	24nm,0.3s,baz=114,slow=12,SNR=6.2			Sn	Sn	17 25 02.8	-0.6
CMIG	comp=Z,87nm,18.4s,baz=258,slow=29			LR	LR	17 25 09.1	
TLIG	Tlapa	5.87	303	*e*Pn	Pn	17 25 08.7	+1.5
CSGN	Cosiguina Volc	5.88	103	*e*Pn	Pn	17 25 09.1	+1.7
TGUH	Tegucigalpa,Un	5.99	92	*e*Pn	Pn	17 25 06.9	-1.8
LVIG	Laguna Verde	6.04	332	*e*Pn	Pn	17 25 06.5	-2.9
ESTN	Estel	6.98	100	*e*Pn	Pn	17 25 23.6	+1.1
MYIG	MØrida	7.44	28	*e*Pn	Pn	17 25 28.7	0.0
BOAB	BOACO BROADBAN	7.80	103	*e*Pn	Pn	17 25 35.4	+1.8
ESPN	Las Esperanzas	9.15	103	*e*Pn	Pn	17 25 52.8	+0.6
JTS	JuntasAbangare 0.9nm,0.3s,baz=5.4,slow=14,SNR=2.3	9.23	115	Pn	Pn	17 25 52.8	-0.4
JTS	1.6nm,0.3s,baz=164,slow=20,SNR=3.4			Lg	Lg	17 28 21.3	
WBCY	West Bay, Gran	12.55	65	*e*Pn	Pn	17 26 35.6	-3.2
833A	Chaparral WMA,	14.95	339	*e*Pn	Pn	17 27 10.5	-0.8
HKT	Hockley 5.7nm,0.6s	15.66	352	*e*Pn	Pn	17 27 21.9	+1.3
341A	Kurthwood 72nm,1.6s	16.89	1	*e*Pn	Pn	17 27 34.6	-1.7
447A	Lucedale 153nm,1.5s	16.93	14	*e*Pn	Pn	17 27 35.5	-1.3
HPIG	11nm,1.5s	16.93	320	*e*Pn	Pn	17 27 37.5	+0.5
JCT	Junction City 5.8nm,0.9s	17.07	341	*e*Pn	Pn	17 27 39.4	+0.8
344A	Westbrook Farm 76nm,1.8s	17.19	8	*e*Pn	Pn	17 27 38.2	-1.7
LTX	Lajitas	17.65	329	*e*Pn	P	17 27 48.8	+2.3
TX31	Lajitas Ar. Si	17.65	329	*e*Pn	P	17 27 48.0	+1.5
TXAR	Lajitas Array 0.1nm,0.3s,baz=155,slow=12,SNR=14	17.65	329	P	P	17 27 48.8	+2.3
WHTX	Lake Whitney, 6.5nm,0.6s	17.92	349	*e*Pn	P	17 27 51.5	+2.1
LRAL	Lakeview Retre 23nm,1.7s	19.49	16	*e*P	Pn	17 28 08.8	+0.9
152A	Waverly Hall 6.1nm,0.6s	19.88	22	*e*P	Pn	17 28 13.4	+0.8
Z50A	Ashland 16nm,1.4s	20.01	19	*e*P	Pn	17 28 15.0	+0.9
X40A	Basin Creek Fa 3.8nm,0.8s	20.04	1	*e*P	Pn	17 28 15.6	+1.1
MIAR	Mount Ida 8.9nm,1.1s	20.09	360	*e*P	P	17 28 13.6	+0.4
LGNH	LØogne 315nm,1.5s	20.40	76	*e*P	P	17 28 15.4	-1.1
MNTX	Cornudas Mount 4.9nm,0.8s	20.43	330	*e*P	P	17 28 18.1	+1.3
154A	Montrose 32nm,0.7s	20.46	26	*e*P	P	17 28 15.3	-1.8
W39A	Magazine 6.8nm,0.9s	20.74	359	*e*P	Pn	17 28 22.5	-0.2
W41B	Gary Mavity, V 34nm,2.0s	20.75	3	*e*P	P	17 28 20.3	+0.1
X48A	Hartselle 7.8nm,1.0s	20.82	15	*e*P	P	17 28 21.6	+0.7
GOGA	Godfrey 8.7nm,1.0s	21.01	24	*e*P	P	17 28 24.2	+1.1
ROSC	El Rosal 6.0nm,0.9s	21.07	115	*e*P	P	17 28 24.5	+0.2
PLAL	Pickwick Lake 5.2nm,0.8s	21.09	12	*e*P	P	17 28 26.0	+2.1
Y52A	Lilburn 14nm,1.0s	21.19	22	*e*P	P	17 28 25.3	+0.3
MSTX	Muleshoe 11nm,0.9s	21.27	338	*e*P	P	17 28 25.9	-0.1
V40A	Witts Springs 26nm,1.7s	21.35	1	*e*P	P	17 28 26.8	0.0
AMTX	Amarillo 8.7nm,0.6s	21.74	341	*e*P	P	17 28 30.8	-0.3
SRIG	Santa Rosalia 19nm,0.3s	21.75	309	*e*P	P	17 28 30.3	-0.8
HSIG	4.9nm,0.5s	21.80	315	*e*P	P	17 28 33.5	+1.8
HHAR	Hobbs 6.8nm,0.8s	21.83	359	*e*P	P	17 28 31.1	-0.8
SWET	Sewanee 4.9nm,0.8s	21.83	17	*e*P	P	17 28 31.7	-0.2
W50A	Signal Mountai 31nm,1.8s	22.00	18	*e*P	P	17 28 32.8	-0.9
WVT	Waverly 17nm,1.8s	22.25	12	*e*P	P	17 28 35.1	-1.2
CPCT	Cooper Cave 17nm,1.5s	22.47	19	*e*P	P	17 28 40.3	+1.5
T42A	Van Buren 12nm,1.3s	22.67	5	*e*P	P	17 28 40.3	-0.5
TKL	Tuckaleechee C comp=Z,61nm,18.1s,baz=212,slow=43	22.91	21	LR	LR	17 39 39.7	
S39A	Bolivar 14nm,1.4s	23.23	0	*e*P	P	17 28 45.9	-0.7
ANMO	Albuquerque 0.6nm,0.4s,baz=122,slow=8.9,SNR=3.8	23.61	332	P	P	17 28 51.4	+0.8
ANMO	Albuquerque 1.9nm,0.8s	23.61	332	*e*P	P	17 28 51.2	+0.6
R40A	Maddies Statio 3.9nm,0.8s	23.85	2	*e*P	P	17 28 53.3	+0.7
TUC	Tucson 4.6nm,0.9s	23.87	321	*e*P	P	17 28 55.2	+2.4
WCI	Wyandotte Cave 9.2nm,0.6s	24.60	14	*e*P	P	17 28 57.6	-1.8
T25A	Trinidad 8.3nm,0.8s	24.70	339	*e*P	P	17 29 03.2	+2.6
SDCO	Great Sand Dun 5.7nm,1.0s	25.63	337	*e*P	P	17 29 10.9	+1.7
MVCO	Mesa Verde 2.6nm,0.8s	26.41	332	*e*P	P	17 29 18.9	+2.7
PV03	Paradox Valley	27.43	333	*e*P	P	17 29 23.2	-2.0
PV22	Blue Mesa, Par 2.6nm,0.8s	27.64	333	*e*P	P	17 29 28.4	+1.2
PV23	Carpenter Ridg 6.2nm,0.9s	27.66	333	*e*P	P	17 29 28.9	+1.4
PSUT	Pine Spring 2.3nm,1.0s	30.08	327	*e*P	P	17 29 51.2	+2.3
DAC	Darwin (Calif) 4.0nm,1.0s	30.71	320	*e*P	P	17 29 53.3	-1.1
TCUT	Toone Canyon 6.6nm,0.8s	30.90	333	*e*P	P	17 29 57.2	+1.0
RSSD	Black Hills 3.6nm,0.8s	31.00	345	*e*P	P	17 29 58.1	+1.2
PD31	Pinedale Array	31.52	337	*e*P	P	17 30 02.7	+1.1
PDAR	Pinedale Array 1.1nm,0.9s,baz=131,slow=8.4,SNR=8.4	31.52	337	P	P	17 30 03.2	+1.6
HVU	Hansel Valley 2.6nm,0.7s	32.05	332	*e*P	P	17 30 07.4	+1.3
NV11	Mina Array Sit 0.2nm,0.8s	32.43	322	*e*P	P	17 30 11.7	+2.2
NV01	Mina Array Sit	32.52	322	*e*P	P	17 30 12.8	+2.5
NVAR	Mina Array Bea 2.5nm,0.7s,baz=137,slow=8.2,SNR=20	32.52	322	P	P	17 30 12.8	+2.4
REDW	Red Top Meadow 7.2nm,1.1s	32.53	336	*e*P	P	17 30 12.0	+1.6
LOHW	Long Hollow 3.0nm,0.8s	32.65	337	*e*P	P	17 30 13.5	+2.1
BCX	Boston College 243nm,1.4s	33.86	30	*e*P	P	17 30 20.3	-1.3
HLID	Hailey 3.3nm,1.0s	34.20	332	*e*P	P	17 30 26.1	+1.3
MCMT	McKenzie Canyo	34.55	335	*e*P	P	17 30 30.5	+2.5
DLMT	Dillon 4.3nm,0.9s	34.89	336	*e*P	P	17 30 32.2	+1.4
LRM	Limekiln Ridge	35.22	337	*e*P	P	17 30 35.9	+2.2
J08A	Circle Bar Ran 5.1nm,0.7s	35.99	328	*e*P	P	17 30 41.9	+1.7
YBH	Yreka Blue Hor comp=Z,39nm,18.3s,baz=159,slow=39	37.23	323	LR	LR	17 47 51.2	
F10A	Beach Ranch, E 6.3nm,0.8s	37.33	332	*e*P	P	17 30 52.7	+1.1
LON	Longmire 3.3nm,0.8s	40.06	329	*e*P	P	17 31 16.5	+2.0
SIV	San Ignacio 0.4nm,0.4s,baz=328,slow=12,SNR=4.6	43.96	132	P	P	17 31 46.0	-0.6
SCHQ	Schefferville comp=Z,91nm,19.7s,baz=200,slow=38	45.38	21	LR	LR	17 52 08.2	

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YKA   Yellowknife Ar   50.36 347  P      P        17 32 36.3 +0.6
           4.7nm,0.7s,baz=153,slow=7.3,SNR=36
YKA                               PcP    PcP      17 33 54.3 +0.3
           0.3nm,0.4s,baz=154,slow=4.0,SNR=3.9
YKW3  Yellowknife Ar   50.42 347  eP     P        17 32 36.4 +0.1
           5.6nm,0.8s
IL1   Eielson Array    61.96 337  eP     P        17 33 58.8 +0.2
ILAR  Eielson Array    61.96 337  P      P        17 33 59.5 +0.9
           1.1nm,0.8s,baz=148,slow=4.9,SNR=9.2
ILB   Eielson Array    61.96 337  eP     P        17 33 59.8 +1.2
EKA   Eskdalemuir Ar   78.48  36  P      P        17 35 38.2 -1.7
           0.8nm,0.6s,baz=277,slow=5.6,SNR=5.0
ESDC  Sonseca Array    80.58  51  P      P        17 35 50.5 -1.2
           0.5nm,0.6s,baz=290,slow=5.8,SNR=5.1
NOA   NORSAR Array B   84.49  28  P      P        17 36 11.9 +0.3
           1.1nm,0.9s,baz=292,slow=4.8,SNR=3.4
NOA                               LR     LR       18 12 31.2
           comp=Z,15nm,20.4s,baz=280,slow=35
CMAR  Chiang Mai Arr  145.18 339  PKPbc  PKPbc    17 43 17.2 +0.4
           3.1nm,0.8s,baz=338,slow=3.4,SNR=16
```

IDC 20 17:25:29.9±4.4**,6°.31S**×**128°.44E,h360**km±47km**,mb3.2**/5**, mb1 3.4**/7**,mb1mx3.0**/45**,mbtmp4.0**/7**,Error ellipse: s-maj=72.2km s-min=11.0km az=68.0,Banda Sea**

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Code  Station Name         Δ°  AZ°   Phase ID           Time     Res
                                  Op     ISC        h  m  s    ISC
WRA   Warramunga Arr   14.71 158  P      P        17 28 40.3 -0.7
           0.4nm,0.3s,baz=340,slow=11,SNR=49
WRA                               S      S        17 31 17.4 -2.1
           0.4nm,0.3s,baz=336,slow=20,SNR=5.6
ASAR  Alice Springs    18.04 164  P      P        17 29 17.1 +0.2
           1.0nm,0.3s,baz=346,slow=11,SNR=135
ASAR                              S      S        17 32 26.1 +1.1
           0.3nm,0.3s,baz=343,slow=19,SNR=31
CMAR  Chiang Mai Arr   38.11 311  P      P        17 32 15.6 -0.3
           1.0nm,0.8s,baz=138,slow=6.3,SNR=6.7
SONM  Songino Array    57.31 343  P      P        17 34 41.6 +0.2
           0.2nm,0.4s,baz=145,slow=5.3,SNR=2.4
MKAR  Makanchi Array   66.81 327  P      P        17 35 44.0 +0.1
           0.8nm,0.7s,baz=132,slow=7.7,SNR=9.9
ZALV  Zalesovo Beam    70.29 334  P      P        17 36 04.4 -0.5
           0.6nm,0.5s,baz=116,slow=6.6,SNR=2.6
KURBB Kurchatov Arra   71.12 329  P      P        17 36 10.2 +0.2
           2.1nm,0.2s,baz=130,slow=4.7,SNR=5.5
```

IDC ***20*** *17:44:54.0±0.5,7°.99S×123°.53E,h0km,mb4.4/17, mb1 4.4/17,mb1mx4.2/48,mbtmp4.4/17,MS3.2/8, Ms1 3.3/8,ms1mx3.0/46,Error ellipse: s-maj=23.9km s-min=12.7km az=72.0*

BJI ***20*** *17:44:55.6,8°.10S×123°.60E,h15km,mb4.6/32,mB4.9/25, Ms4.7/14,Ms7 4.4/13*

MOS ***20*** *17:44:57.2±0.8,8°.01S×123°.54E,h33km,mb4.8/22,Error ellipse: s-maj=14.5km s-min=7.4km az=115.7*

ISCJB ***20*** *17:44:57.1±0.2,8°.05S±0°.02×123°.66E±0°.03,h33km, mb4.8/73,MS3.6/11,Error ellipse: s-maj=4.7km s-min=3.0km az=151.5*

DJA ***20*** *17:44:57.1±0.2,8°S±2°×12°4E±°,h10km,M4.7/18, mb5.0/18,mB5.0/6,MLv4.7/14,Mw(mB)4.3/6*

NEIC ***20*** *17:44:59.1±0.2,8°.10S×123°.59E,h35km,mb4.9/52,Error ellipse: s-maj=6.0km s-min=3.7km az=57.0*

ISC 20 17:44:59.3±0.3**,8°.12S**±0°.04×**123°.65E**±0°.05**,h35**km**,n220,** σ**1s.71**/225**,mb4.7**/73**,MS3.9**/12**,4C-2D,Flores region**

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Code  Station Name         Δ°  AZ°   Phase ID           Time     Res
                                  Op     ISC        h  m  s    ISC
MMRI  Maumere           1.49 250  P      Pn       17 45 23.2 -0.3
MMRI  Maumere           1.49 250  ePn    Pn       17 45 23.3 -0.3
SOEI  Soe               1.73 159  P      Pn       17 45 29.1 +2.0
SOEI  Soe               1.73 159  ePn    Pn       17 45 28.4 +1.3
EDFI  Ende, Flores      2.04 252  P      Pn       17 45 30.8 -0.4
BATI  Baumata           2.07 180  P      Pn       17 45 35.2 +3.5
WSI   Waingapu          3.65 245  P      Pn       17 46 02.2 +8.8
BASI  Baing, Sumba      3.68 235  P      Pn       17 45 53.2 -0.6
KDI   Kendari           4.26 346  P      Pn       17 45 58.3 -3.5
WBSI  Waikabubak, Su    4.47 250  P      Pn       17 46 04.5 -0.2
BKSI  Bulukumba         4.47 308  P      Pn       17 46 02.1 -2.6
BKSI                              S      Sn       17 46 51.3 -4.2
SPSI  Sidrap Palu       5.65 317  P      Pn       17 46 19.1 -1.8
           53nm,0.7s,625nm
PLAI  Plampang          5.85 263  P      Pn       17 46 30.9 +7.3
NLAI  Namlea            5.94  35  P      Pn       17 46 32.4 +7.5
TTSI  Tana Toraja       6.32 323  P      Pn       17 46 31.1 +1.0
           94nm,0.8s,1μm0.4nm
TWSI  Taliwang, Sumb    6.72 264  P      Pn       17 46 49.2  +14
LUWI  Luwuk             7.09 353  P      Pn       17 46 51.9  +11
LUWI  Luwuk             7.09 353  ePn    Pn       17 46 39.4 -1.2
APSI  Ampana            7.44 344  P      Pn       17 46 44.4 -1.0
           89nm,0.8s,814nm0.3nm
SAUI  Saumlaki          7.58  89  ePn    Pn       17 46 47.6 +0.2
PCI   Palu              8.11 332  P      Pn       17 46 55.9 +1.2
           111nm,0.8s,872nm0.3nm
MRSI  Marisa            8.71 349  P      Pn       17 47 01.8 -1.1
           15nm,0.7s,0.1nm
MTN   Manton Dam        8.73 123  P      Pn       17 47 02.1 -1.0
           baz=8.3,SNR=123
MTN   Manton Dam        8.73 123  ePn    Pn       17 47 02.2 -0.9
MTN                               eSn    Sn       17 48 38.5 -1.9
KNRA  Kununurra         9.02 147  P      Pn       17 47 06.0 -1.1
           baz=8.6,SNR=14
MPSI  Mapaga            9.20 336  P      Pn       17 47 08.7 -0.9
           27nm,0.8s,279nm
TNTI  Ternate           9.58  23  ePn    Pn       17 47 16.8 +1.9
KDU   Kakadu            9.79 118  P      Pn       17 47 16.5 -1.3
           baz=9.4,SNR=28
FAKI  Fak Fak          10.00  59  ePn    Pn       17 47 21.6 +1.1
FITZ  Fitzroy Crossi   10.10 169  P      Pn       17 47 20.9 -1.1
           baz=9.7,SNR=51
FITZ  Fitzroy Crossi   10.10 169  ePn    Pn       17 47 20.3 -1.7
RKPI  Ransiki, Papua   12.37  58  P      Pn       17 47 56.5 +3.4
           118nm,0.8s,1μm
SMRI  Semarang         13.14 274  P      P        17 48 13.9 +0.7
SMRI  Semarang         13.14 274  ePn    Pn       17 48 04.8 +1.3
MBWA  Marble Bar       13.50 196  ePn    Pn       17 48 06.5 -2.0
MYLDM Lahad Datu       14.18 339  eP     P        17 48 25.0 +0.3
BAKI  Biak             14.19  62  P      Pn       17 48 21.0 +3.0
           425nm,1.0s,4μm
DAV   Davao City (W)   15.21   7  LR     LR       17 54 09.4
           comp=Z,202nm,21.7s,baz=146,slow=37
SBUM  Sibu             15.50 312  ePn    Pn       17 48 32.4 -3.0
           62nm,2.0s
WR1   Warramunga Arr   15.66 140  ePn    Pn       17 48 33.3 -4.2
           68nm,0.8s
WR1                               eSn    Sn       17 51 25.3 -4.8
WRA   Warramunga Arr   15.66 140  Pn     Pn       17 48 33.3 -4.3
           2.3nm,0.3s,baz=315,slow=14,SNR=96
WRA                               Sn     Sn       17 51 25.3 -4.8
           0.7nm,0.3s,baz=304,slow=23,SNR=8.2
WRA   Warramunga Arr   15.66 140  i P    Pn       17 48 33.2 -4.3
WRA                               pmax   pmax
           comp=Z,54nm,0.8s
WRAB  Tennant Creek    15.66 140  ePn    Pn       17 48 33.5 -4.0
           comp=Z,62nm,0.8s
WRAB  Tennant Creek    15.66 140  i P    Pn       17 48 33.8 -3.7
WRAB                              pmax   pmax
           comp=Z,60nm,0.9s
WB2   Warramunga Arr   15.67 140  ePn    Pn       17 48 32.2 -5.4
WB2                               eSn    Sn       17 51 24.0 -6.2
KSM   Kuching          16.36 305  ePn    Pn       17 48 45.3 -1.3
           comp=Z,9.2nm,0.9s
DBJI  Dramaga          16.83 274  P      P        17 49 00.6 +6.3
GIRL  Giralia          17.04 211  P      P        17 48 57.0 +0.5
           baz=17,SNR=4.7
WRKA  Warakurna        17.40 166  P      Pn       17 48 57.5 -2.0
           baz=17,SNR=20
JAY   Jayapura         17.87  73  P      P        17 49 06.9 +1.1
           comp=Z,202nm,0.9s
AS31  Alice Springs    18.32 149  ePn    P        17 49 08.7 -2.0
           comp=Z,12nm,0.6s
ASAR  Alice Springs    18.32 149  P      P        17 49 07.9 -2.8
           comp=Z,2.5nm,0.3s,baz=323,slow=11,SNR=76
ASAR                              S      Sn       17 52 36.5 +2.0
           comp=Z,0.2nm,0.3s,baz=315,slow=20,SNR=4.8
ASAR                              LR     LR       17 57 15.1
           comp=Z,110nm,19.0s,baz=322,slow=40
AS01  Alice Springs    18.34 149  eP     P        17 49 11.1 +0.2
MEEK  Meekatharra      19.03 194  P      Pn       17 49 19.8 +0.5
           baz=19,SNR=6.5
QIS   Mount Isa        19.77 130  P      P        17 49 27.7 +1.2
           baz=19,SNR=24
COEN  Coen             20.02 109  P      P        17 49 29.7 +0.4
           baz=20,SNR=6.6
COEN  Coen             20.02 109  eP     P        17 49 28.9 -0.4
           comp=Z,44nm,0.9s
DSRI  Dabo             20.46 291  P      Pn       17 49 43.1 +6.6
MORW  Morawa           22.03 198  P      P        17 49 51.4 +0.5
           baz=22,SNR=12
MTSU  Mount Surprise   22.43 118  P      P        17 49 55.9 +0.6
           baz=22,SNR=11
FORT  Forrest          22.92 170  P      P        17 50 00.5 +0.2
           baz=22,SNR=15
FORT  Forrest          22.92 170  eP     P        17 49 59.5 -0.8
           comp=Z,47nm,0.8s
KMBL  Kambalda         23.19 184  P      P        17 50 03.2 +0.1
           baz=23,SNR=10
PMG   Port Moresby     23.27  95  P      P        17 50 04.2 +0.2
           comp=Z,22nm,0.9s,baz=286,slow=13,SNR=3.9
BLDU  Ballidu          23.30 195  P      P        17 50 04.7 +0.6
           baz=23,SNR=9.0
KLBR  Kellerberrin     23.99 192  P      P        17 50 11.4 +0.6
           baz=24,SNR=17
MANU  Manus Island     24.37  77  eP     P        17 50 14.9 +0.4
           comp=Z,38nm,1.5s
MUN   Mundaring        24.73 195  P      P        17 50 19.0 +1.5
           baz=24,SNR=5.0
CTA   Charters Tower   24.90 121  P      P        17 50 21.3 +2.0
           comp=Z,37nm,0.8s,baz=292,slow=12,SNR=29
CTAO  Charters Tower   24.90 121  eP     P        17 50 20.7 +1.5
           comp=Z,42nm,0.8s
CTAO  Charters Tower   24.90 121  eP     P        17 50 20.7 +1.5
CTAO                              pmax   pmax
           comp=Z,42nm,0.8s
NWAO  Narrogin (SRO)   25.39 193  P      P        17 50 24.3 +0.8
           comp=Z,25nm,0.8s,baz=253,slow=11,SNR=9.5
NWAO  Narrogin (SRO)   25.39 193  P      P        17 50 24.1 +0.6
           baz=25,SNR=6.7
NWAO  Narrogin (SRO)   25.39 193  eP     P        17 50 23.6 +0.1
           comp=Z,32nm,0.8s
NWAO  Narrogin (SRO)   25.39 193  eP     P        17 50 23.6 +0.1
NWAO                              pmax   pmax
           comp=Z,32nm,0.8s
IPM   Ipoh             25.81 298  eP     P        17 50 26.8 -0.7
           comp=Z,32nm,1.5s
KULM  Kulim            26.53 299  eP     P        17 50 35.2 +1.3
           comp=Z,28nm,1.5s
QLP   Quilpie          26.81 136  P      P        17 50 37.8 +1.4
           baz=26,SNR=13
BBOO  Buckleboo        27.13 157  P      P        17 50 39.9 +0.7
           baz=27,SNR=9.5
BBOO  Buckleboo        27.13 157  eP     P        17 50 38.9 -0.3
           comp=Z,30nm,1.2s
HTT   Hallett          28.87 153  P      P        17 50 56.2 +1.4
           baz=28,SNR=7.8
STKA  Stephens Creek   28.94 147  P      P        17 50 56.3 +0.9
           comp=Z,3.9nm,0.7s,baz=318,slow=10,SNR=11
STKA  Stephens Creek   28.94 147  P      P        17 50 56.3 +0.9
           baz=28,SNR=9.0
STKA  Stephens Creek   28.94 147  eP     P        17 50 56.2 +0.8
           comp=Z,1.9nm,0.8s
STKA  Stephens Creek   28.94 147  eP     P        17 50 56.2 +0.8
STKA                              pmax   pmax
           comp=Z,2.0nm,0.8s
RMQ   Roma             30.03 131  P      P        17 51 06.9 +1.7
           baz=30,SNR=12
GUMO  Guam             30.15  44  LR     LR       18 04 59.1
           comp=Z,17nm,18.1s,baz=228,slow=40
GUMO  Guam             30.15  44  eP     P        17 51 07.0 +0.7
           comp=Z,51nm,1.0s
GUMO  Guam             30.15  44  eP     P        17 51 07.0 +0.7
GUMO                              pmax   pmax
           comp=Z,51nm,1.0s
CMSA  Cobar Meteorol   31.06 142  P      P        17 51 15.8 +1.7
           baz=31,SNR=21
PANO  Nakornpanom      31.38 323  P      P        17 51 27.6  +11
NACB  Ninganchiao      32.16 356  eP     P        17 51 22.1 -1.8
           comp=Z,19nm,0.9s
ARPS  Mount Arapiles   32.97 153  P      P        17 51 32.6 +1.7
           baz=33,SNR=5.7
JOW   Kunigami         35.03   7  LR     LR       18 05 20.2
           comp=Z,24nm,20.9s,baz=112,slow=35
CM01  Chiang Mai Arr   35.91 317  eP     P        17 51 56.8 +0.3
CMAR  Chiang Mai Arr   35.94 317  P      P        17 51 57.9 +1.1
           comp=Z,1.4nm,0.5s,baz=149,slow=6.9,SNR=5.5
CMAR                              LR     LR       18 10 00.1
           comp=Z,45nm,19.0s,baz=173,slow=42
GYA   Guiyang          38.13 335  P      P        17 52 17.0 +1.6
GYA                               pmax   pmax
           comp=Z,10.0nm,1.0s
KMI   Kunming          38.82 329  P      P        17 52 24.1 +2.8
KMI                               pmax   pmax
           comp=Z,6.0nm,0.6s
NJ2   Nanjing          40.21 354  eP     P        17 52 33.3 +0.8
NJ2                               pmax   pmax
           comp=Z,13nm,0.6s
ENH   Enshi            40.53 341  eP     P        17 52 32.3 -3.0
           comp=Z,32nm,1.4s
JNU   Nakatsue         41.59   9  eP     P        17 52 44.3 +0.4
           comp=Z,45nm,2.0s
CD2   Chengdu          43.24 335  eP     P        17 52 58.3 +0.8
DZM   Mont Dzumac      43.42 114  LR     LR       18 11 23.2
           comp=Z,44nm,18.2s,baz=250,slow=36
XAN   Xi'an            44.20 342  P      P        17 53 06.6 +1.5
XAN                               pP     pP       17 53 12.5 -3.0
XAN                               pmax   pmax
           comp=Z,7.0nm,0.8s
KSRS  Korea Array      45.51   5  LR     LR       18 14 02.6
           comp=Z,7.4nm,20.6s,baz=45,slow=38
MAJO  Matsushiro       46.48  16  eP     P        17 53 22.5 -0.7
           comp=Z,18nm,1.4s
MAJO  Matsushiro       46.48  16  i P    P        17 53 23.0 -0.2
MAJO                              pmax   pmax
           comp=Z,6.0nm,1.3s
MJAR  Matsushiro Arr   46.48  16  P      P        17 53 22.0 -1.2
           comp=Z,1.1nm,0.7s,baz=180,slow=6.9,SNR=3.7
MJAR  Matsushiro Arr   46.48  16  P      P        17 53 22.0 -1.2
MJB9  Matsu-Tunnel     46.49  16  eP     P        17 53 22.5 -0.7
           comp=Z,20nm,1.5s
LZH   Lanzhou          47.76 338  eP     P        17 53 35.8 +2.5
LZH                               pP     pP       17 53 41.5 -2.2
LZH                               sP     sP       17 53 46.4 -1.5
LZH                               PP     PP       17 55 24.3 -1.1
LZH                               S      S        18 00 29.0 +1.4
LZH                               sS     sS       18 00 37.3 -7.5
LZH                               pmax   pmax
           comp=Z,14nm,1.2s
LZH                               pmax   pmax
           comp=Z,110nm,4.3s
LZH                               LR     LR
           comp=Z,470nm,14.1s
LZH                               LR     LR
           comp=Z,470nm,14.6s
LZH                               LR     LR
           comp=Z,510nm,15.6s
BJT   Baijiatuau       48.40 352  eP     P        17 53 38.1 +0.2
           comp=Z,8.5nm,1.0s
BJT   Baijiatuau       48.40 352  eP     P        17 53 38.1 +0.2
BJT                               pmax   pmax
           comp=Z,9.0nm,1.0s
LSA   Lhasa            48.90 322  eP     P        17 53 43.1 +0.6
           comp=Z,13nm,1.3s
LSA   Lhasa            48.90 322  eP     P        17 53 43.2 +0.6
LSA                               pmax   pmax
           comp=Z,13nm,1.3s
HHC   Hu-ho-hao-te     49.98 348  eP     P        17 53 52.5 +2.3
HHC                               pP     pP       17 53 58.8 -1.9
HHC                               S      S        18 01 04.5 +5.8
HHC                               sS     sS       18 01 13.3 -2.6
HHC                               pmax   pmax
           comp=Z,8.0nm,1.0s
HHC                               pmax   pmax
           comp=Z,69nm,5.6s
HHC                               LR     LR
           comp=Z,65nm,14.4s
HHC                               LR     LR
           comp=Z,130nm,14.4s
HHC                               LR     LR
           comp=Z,120nm,13.7s
GTA   Gaotai           52.20 337  ⇓P     P        17 54 07.1 +0.1
GTA                               pP     pP       17 54 14.0 -3.5
GTA                               sP     sP       17 54 16.4 -5.2
GTA                               PcP    PcP      17 55 19.3 +1.0
GTA                               S      S        18 01 31.6 +2.1
GTA                               sS     pS       18 01 41.5 -0.5
GTA                               pmax   pmax
           comp=Z,4.0nm,1.3s
GTA                               pmax   pmax
           comp=Z,27nm,6.2s
GTA                               LR     LR
           comp=Z,120nm,18.1s
GTA                               LR     LR
           comp=Z,120nm,18.4s
GTA                               LR     LR
           comp=Z,81nm,19.4s
WHZ   Wether Hill Ro   53.46 143  eP     P        17 54 16.6 +0.5
           comp=Z,223nm,2.0s
FOZ   Fox Glacier      53.48 139  eP     P        17 54 16.0 -0.2
           comp=Z,84nm,1.4s
LBZ   Lake Benmore     54.11 140  eP     P        17 54 20.7 -0.2
           comp=Z,109nm,1.7s
RPZ   Rata Peaks       54.37 139  LR     LR       18 16 27.4
           comp=Z,79nm,18.9s,baz=278,slow=35
RPZ   Rata Peaks       54.37 139  eP     P        17 54 23.9 +1.1
           comp=Z,29nm,0.8s
ODZ   Otahua Downs     54.71 141  eP     P        17 54 25.4 +0.3
           comp=Z,86nm,1.7s
THZ   Tophouse         54.79 136  eP     P        17 54 25.8 -0.1
           comp=Z,100nm,1.8s
OXZ   Oxford           54.85 138  eP     P        17 54 27.0 +0.8
           comp=Z,85nm,1.7s
HIZ   Hauiti           54.99 132  eP     P        17 54 27.6 +0.2
           comp=Z,206nm,1.8s
KHZ   Kahutara         55.48 137  eP     P        17 54 30.7  0.0
           comp=Z,42nm,1.1s
SNZO  South Karori     55.87 135  eP     P        17 54 33.7 +0.2
           comp=Z,123nm,1.4s
BKZ   Black Stump Fm   56.41 132  eP     P        17 54 37.0 -0.6
           comp=Z,25nm,1.1s
URZ   Urewera          56.59 131  eP     P        17 54 38.5 -0.3
           comp=Z,52nm,1.5s
BFZ   Birch Farm       56.73 134  eP     P        17 54 40.0 +0.2
           comp=Z,66nm,1.4s
HIA   Hailar           57.25 357  i P    P        17 54 42.6 -0.6
HIA                               pmax   pmax
           comp=Z,4.0nm,1.2s
ULN   Ulaanbaatar      57.65 347  eP     P        17 54 46.3 +0.1
           comp=Z,3.7nm,0.5s
ULN   Ulaanbaatar      57.65 347  i P    P        17 54 45.6 -0.6
ULN                               pmax   pmax
           comp=Z,4.0nm,1.1s
SONA0 Songino Array    57.77 346  eP     P        17 54 46.8 -0.2
SONM  Songino Array    57.77 346  P      P        17 54 46.8 -0.2
           comp=Z,2.0nm,0.7s,baz=168,slow=7.6,SNR=11
SONA1 Songino Array    57.78 346  eP     P        17 54 46.4 -0.7
RAO   Raoul Island     58.59 119  eP     P        17 54 53.9 +0.8
           comp=Z,407nm,1.1s
RAO   Raoul Island     58.59 119  eP     P        17 54 53.9 +0.8
RAO                               pmax   pmax
           comp=Z,407nm,1.1s
CASY  Casey            58.77 186  eP     P        17 54 54.5 +0.9
           comp=Z,7.2nm,1.0s
WMQ   Urumqi           61.10 331  P      P        17 55 10.9 +0.9
WMQ                               pP     pP       17 55 18.0 -2.7
WMQ                               sP     sP       17 55 21.0 -3.8
WMQ                               pmax   pmax
           comp=Z,26nm,0.6s
WMQ                               pmax   pmax
           comp=Z,210nm,4.7s
WMQ                               LR     LR
           comp=Z,150nm,29.3s
WMQ                               LR     LR
           comp=Z,170nm,18.7s
WMQ                               LR     LR
           comp=Z,130nm,23.9s
TLY   Talaya           62.00 346  eP     P        17 55 15.5 -0.4
           comp=Z,3.2nm,1.1s
TLY   Talaya           62.00 346  eP     P        17 55 15.5 -0.4
TLY                               pmax   pmax
           comp=Z,3.0nm,1.1s
NIL   Nilore           63.32 314  eP     P        17 55 23.9 -1.2
           comp=Z,6.3nm,0.7s
NIL   Nilore           63.32 314  eP     P        17 55 23.9 -1.2
NIL                               pmax   pmax
           comp=Z,6.0nm,0.7s
KSH   Kashi            64.74 321  P      P        17 55 32.1 -2.3
KSH                               sP     pP       17 55 41.1 -4.1
KSH                               ePcP   PcP      17 56 07.1 -0.7
KSH                               PcS             18 00 12.1
KSH                               S      S        18 04 13.9 +1.1
KSH                               sS     pS       18 04 25.1 -0.8
KSH                               ScS    SKSac    18 05 26.1 -0.5
KSH                               SS     SS       18 08 28.1 +3.5
KSH                               pmax   pmax
           comp=Z,130nm,5.1s
PRZ   Przheval'sk      65.09 325  eP     P        17 55 36.3 -0.4
           comp=Z,36nm,1.5s
PRZ   Przheval'sk      65.09 325  eP     P        17 55 36.3 -0.4
PRZ                               pmax   pmax
           comp=Z,36nm,1.5s
DGZ   Jazzator, Alta   65.67 335  i P    P        17 55 39.3 -1.0
DGZ                               pmax   pmax
           comp=Z,2.0nm,1.0s
MK01  Makanchi Array   65.86 330  eP     P        17 55 40.4 -1.1
MK31  Makanchi Array   65.88 330  eP     P        17 55 40.9 -0.6
MK31  Makanchi Array   65.88 330  eP     P        17 55 40.9 -0.6
MK32  Makanchi Array   65.88 330  eP     P        17 55 40.8 -0.8
MKAR  Makanchi Array   65.88 330  P      P        17 55 40.8 -0.8
           comp=Z,2.7nm,0.7s,baz=131,slow=7.6,SNR=18
MKAR  Makanchi Array   65.88 330  eP     P        17 55 40.9 -0.6
           comp=Z,34nm,0.9s
MKAR  Makanchi Array   65.88 330  i P    P        17 55 41.0 -0.6
MKAR                              pmax   pmax
           comp=Z,3.0nm,0.7s
MAKZ  Makanchi         66.05 330  eP     P        17 55 41.8 -0.8
           comp=Z,11nm,1.5s
MAKZ  Makanchi         66.05 330  eP     P        17 55 41.8 -0.8
MAKZ                              pmax   pmax
           comp=Z,11nm,1.5s
BOD   Bodaibo          66.18 354  eP     P        17 55 43.1 -0.1
BOD                               pmax   pmax
           comp=Z,5.0nm,1.5s
KBL   Kabul            66.79 313  eP     P        17 55 47.2 -0.6
           comp=Z,13nm,0.8s
KBL   Kabul            66.79 313  eP     P        17 55 47.2 -0.6
KBL                               pmax   pmax
           comp=Z,13nm,0.8s
MIDW  Midway           67.40  55  eP     P        17 55 50.8 -0.7
           comp=Z,92nm,0.8s
AAK   Ala-Archa        67.47 323  eP     P        17 55 50.1 -1.8
           comp=Z,6.1nm,1.0s
AAK   Ala-Archa        67.47 323  eP     P        17 55 50.2 -1.8
AAK                               pmax   pmax
           comp=Z,6.0nm,1.0s
PETK  Petropavlovsk-   67.50  21  P      P        17 55 51.7  0.0
           comp=Z,3.4nm,0.9s,baz=126,slow=7.3
PETK  Petropavlovsk-   67.50  21  eP     P        17 55 51.9 +0.2
PETK  Petropavlovsk-   67.50  21  eP     P        17 55 51.9 +0.2
PEA1  Petropavlovsk-   67.51  21  eP     P        17 55 51.7  0.0
ZAA0  Zalesovo Array   69.96 337  eP     P        17 56 05.2 -1.8
           comp=Z,7.7nm,1.0s
ZALV  Zalesovo Beam    69.96 337  P      P        17 56 05.6 -1.4
           comp=Z,2.5nm,0.8s,baz=123,slow=5.5,SNR=7.6
ZALV  Zalesovo Beam    69.96 337  eP     P        17 56 04.9 -2.1
ZALV  Zalesovo Beam    69.96 337  eP     P        17 56 04.9 -2.1
ZAA1  Zalesovo Array   69.96 337  eP     P        17 56 05.6 -1.4
YAK   Yakutsk          70.10   3  eP     P        17 56 07.8 +0.1
           comp=Z,18nm,1.0s
YAK   Yakutsk          70.10   3  eP     P        17 56 07.7 +0.1
YAK                               pmax   pmax
           comp=Z,14nm,1.3s
YAK                               pmax   pmax
           comp=N,4.0nm,1.1s
YAK                               pmax   pmax
           comp=E,3.0nm,1.3s
KK31  Karatay Array    70.16 321  eP     P        17 56 06.9 -1.6
KK31  Karatay Array    70.16 321  eP     P        17 56 06.9 -1.6
KKAR  Karatay Array    70.16 321  eP     P        17 56 07.0 -1.5
KKAR  Karatay Array    70.16 321  eP     P        17 56 07.0 -1.5
KURBB Kurchatov Arra   70.32 331  P      P        17 56 08.7 -0.6
           comp=E,1.0nm,0.2s,baz=135,slow=6.7,SNR=9.6
KURK  Kurchatov        70.34 331  eP     P        17 56 08.3 -1.1
           comp=E,11nm,1.1s
KURK  Kurchatov        70.34 331  i P    P        17 56 08.2 -1.1
KURK                              pmax   pmax
           comp=Z,7.0nm,1.1s
NVS   Novosibirsk      71.24 337  eP     P        17 56 14.4 -0.4
NVS                               pmax   pmax
           comp=Z,15nm,1.7s
NVS                               pmax   pmax
           comp=N,6.0nm,1.4s
NVS                               pmax   pmax
           comp=E,8.0nm,1.6s
MAW   Mawson           71.65 201  P      P        17 56 18.1 +1.0
           comp=E,2.7nm,0.7s,baz=63,slow=6.0,SNR=7.1
MAW   Mawson           71.65 201  eP     P        17 56 18.1 +1.0
           comp=E,1.2nm,0.8s
```

MAW	Mawson	71.65	201	eP	P	17 56 18.1	+1.0
MAW				pmax	pmax		
	comp=Z,1.0nm,0.8s						
VNDA	Vanda	72.17	172	P	P	17 56 20.9	+0.8
	comp=Z,1.3nm,0.6s,baz=310,slow=8.6,SNR=17						
VNDA	Vanda	72.17	172	eP	P	17 56 20.5	+0.4
	comp=Z,7.0nm,1.3s						
VNDA	Vanda	72.17	172	eP	P	17 56 20.5	+0.4
VNDA				pmax	pmax		
	comp=Z,7.0nm,1.3s						
SBA	Scott Base	73.12	171	eP	P	17 56 27.0	+1.3
	comp=Z,26nm,1.9s						
SBA	Scott Base	73.12	171	eP	P	17 56 27.0	+1.3
SBA				pmax	pmax		
	comp=Z,26nm,1.9s						
SEY	Seymchan	74.19	13	i P	P	17 56 31.3	-0.8
BVAR	Borovoye Array	75.77	330	P	P	17 56 40.6	-0.8
	comp=Z,0.6nm,0.7s,baz=132,slow=6.4,SNR=7.2						
BRVK	Borovoye	75.84	330	eP	P	17 56 41.1	-0.7
	comp=Z,24nm,2.0s						
BRVK	Borovoye	75.84	330	i P	P	17 56 40.7	-1.1
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
ABKAR	Akbulak array	79.55	323	eP	P	17 57 01.7	-0.9
SYO	Syowa Base	80.34	201⇑	eP	P	17 57 07.0	+0.5
SYO	Syowa Base	80.34	201⇑	ePcP	PcP	17 57 14.0	+0.4
AKTO	Aktyubinsk	81.18	324	P	P	17 57 10.4	-1.0
	comp=Z,1.5nm,0.8s,baz=96,slow=9.2,SNR=4.0						
QSPA	South Pole Qui	81.86	180	P	P	17 57 15.6	+0.7
	comp=Z,3.0nm,0.7s,baz=300,slow=1.8,SNR=18						
QSPA	South Pole Qui	81.86	180	eP	P	17 57 15.2	+0.3
	comp=Z,7.6nm,0.9s						
RAYN	Ar Rayn	82.47	295	eP	P	17 57 18.8	-0.1
	comp=Z,4.7nm,0.9s						
RAYN	Ar Rayn	82.47	295	eP	P	17 57 18.8	-0.1
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ARU	Arti	83.40	330d	iP	P	17 57 20.5	-2.3
ARU				S	S	18 07 39.3	-2.1
ARU				SS	SS	18 13 04.7	-2.8
ARU				pmax	pmax		
	comp=Z,5.0nm,1.2s						
KBZ	Khabaz	88.93	314	P	P	17 57 50.7	+0.3
	comp=Z,1.7nm,0.7s,baz=82,slow=1.8,SNR=4.4						
KIV	Kislovodsk	89.13	314⇑	eP	P	17 57 50.5	-0.9
KIV				e*SP	pP	17 57 58.1	-4.5
KIV				MLR	MLR		
	comp=Z,45nm,19.0s						
OBN	Obninsk	94.93	325⇑	eP	P	17 58 15.8	-2.0
OBN				e		17 58 25.2	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.5s						
OBN				MLR	MLR		
	comp=Z,51nm,18.0s						
BR101	Keskin Array S	95.13	309	eP	P	17 58 17.5	-1.9
BRTR	Keskin Array B	95.13	309	P	P	17 58 17.5	-1.9
	comp=Z,0.4nm,0.8s,baz=87,slow=6.1,SNR=2.3						
PDAR	Pinedale Array	122.12	44	PKP	PKPdf	18 03 49.6	-1.3
	comp=Z,0.2nm,0.6s,baz=287,slow=4.3,SNR=3.1						
PV23	Carpenter Ridg	123.95	49	ePKPdf	PKPdf	18 03 55.5	+0.9
PV14	Lion Creek, Pa	123.96	49	eSdif	Sdif	18 13 38.5	+4.4
SCHQ	Schefferville	132.67	8	ePKPdf	PKPdf	18 04 12.0	+1.6
GO02	Mina Guanaco	144.49	159	ePKPdf	PKPab	18 04 32.4	+0.8
CPUP	Villa Florida	145.74	178	PKPbc	PKPbc	18 04 36.0	+0.6
	comp=Z,5.3nm,0.7s,baz=179,slow=1.5,SNR=13						
CPUP	Villa Florida	145.74	178	ePKPdf	PKPbc	18 04 36.0	+0.6
PB04	IPOC Station P	146.85	156	ePKPdf	PKPbc	18 04 39.6	+0.6
MNMC	Minye Minye	149.94	154	ePKPbc	PKPbc	18 04 47.9	+0.6
LPAZ	La Paz	153.09	154	PKPbc	PKPbc	18 04 56.6	+1.5
	comp=Z,1.5nm,0.7s,baz=292,slow=2.4,SNR=4.6						
LPAZ	La Paz	153.09	154	ePKPbc	PKPbc	18 04 56.3	+1.3

*MOS **20** 17:49:16.8±2.3, 49°.53N×157°.16E, h49^{km}, mb4.3/1, Error ellipse: s-maj=36.5km s-min=5.0km az=82.8*

KRSC 20 17:49:16.8±3.0**, 49°.53N×157°.16E, h49^{km}**±25^{km}**, ML4.2, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.34	330	eP	Pn	17 49 38.5	-0.5
SKR				eS	Sn	17 49 53.6	-2.0
SKR	Severo-Kuril's	1.34	330	ePN	Pn	17 49 38.5	-0.5
SKR				eS	Sn	17 49 53.7	-1.9
SKR				pmax	pmax		
	comp=Z,300nm,0.2s						
SKR				pmax	pmax		
	comp=Z,161nm,0.3s						
SKR				smax	smax		
	comp=N,329nm,0.2s						
SKR				smax	smax		
	comp=E,623nm,0.3s						
PAU	Pauzhetka	1.96	354	eP	Pn	17 49 49.6	+2.1
PAU				eS	Sn	17 50 13.0	+2.2
PAU	Pauzhetka	1.96	354	PN	Pn	17 49 49.6	+2.1
PAU				S	Sn	17 50 13.0	+2.2
KDTR	Khodutka, Kamc	2.36	14	eP	Pn	17 49 56.6	+3.6
KDTR				eS	Sn	17 50 25.2	+4.5
MIPR	Malaya Ipel'ka	2.76	355	eP	Pn	17 50 00.5	+1.9
MIPR				eS	Sn	17 50 32.4	+1.7
MIPR	Malaya Ipel'ka	2.76	355	PN	Pn	17 50 00.5	+1.9
MIPR				S	Sn	17 50 32.4	+1.7
ASAK	Asacha	2.90	9	eP	Pn	17 50 04.1	+3.6
ASAK				eS	Sn	17 50 39.1	+5.0
ASAK	Asacha	2.90	9	PN	Pn	17 50 04.1	+3.6
ASAK				S	Sn	17 50 39.1	+5.0
MTVR	Mutnovka	3.03	12	eP	Pn	17 50 06.3	+3.9
MTVR				eS	Sn	17 50 42.1	+4.7
MTVR	Mutnovka	3.03	12	PN	Pn	17 50 06.3	+3.9
MTVR				S	Sn	17 50 42.1	+4.7
RUS	Russkaya	3.03	16	eP	Pn	17 50 05.7	+3.4
RUS				eS	Sn	17 50 40.8	+3.5
RUS	Russkaya	3.03	16	PN	Pn	17 50 05.7	+3.4
RUS				S	Sn	17 50 40.8	+3.5
GRL	Gorelyy	3.08	10	eP	Pn	17 50 07.3	+4.2
GRL				eS	Sn	17 50 44.9	+6.2
GRL	Gorelyy	3.08	10	PN	Pn	17 50 07.3	+4.2
GRL				S	Sn	17 50 44.9	+6.2
KRMR	Karymshinskiy	3.36	10	eP	Pn	17 50 10.8	+4.0
KRMR				eS	Sn	17 50 51.6	+6.2
KRMR	Karymshinskiy	3.36	10	PN	Pn	17 50 10.8	+4.0
KRMR				S	Sn	17 50 51.6	+6.2
APC	Apacha	3.40	0	eP	Pn	17 50 10.4	+3.1
APC				eS	Sn	17 50 49.1	+2.7
APC	Apacha	3.40	0	PN	Pn	17 50 10.4	+3.1
APC				S	Sn	17 50 49.1	+2.7
PET	Petropavlovsk	3.63	14	eP	Pn	17 50 14.3	+3.9
PET				eS	Sn	17 50 56.8	+5.0
PET	Petropavlovsk	3.63	14	ePN	Pn	17 50 14.2	+3.8
PET				eS	Sn	17 50 56.9	+5.1
PET				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PET				smax	smax		
	comp=N,33nm,0.4s						
PET				smax	smax		
	comp=E,36nm,0.4s						
DALK	Dalny	3.65	15	eP	Pn	17 50 14.6	+3.9
DALK				eS	Sn	17 50 57.3	+4.9
DALK	Dalny	3.65	15	PN	Pn	17 50 14.6	+3.9
DALK				S	Sn	17 50 57.3	+4.9
UGLR	Uglovaya	3.83	15	eP	Pn	17 50 17.9	+4.6
UGLR				eS	Sn	17 51 02.9	+5.8
UGLR	Uglovaya	3.83	15	PN	Pn	17 50 17.9	+4.6
UGLR				S	Sn	17 51 02.9	+5.8
AVH	Avacha	3.87	14	eP	Pn	17 50 18.8	+5.0
AVH				eS	Sn	17 51 04.5	+6.4
AVH	Avacha	3.87	14	PN	Pn	17 50 18.8	+5.0
AVH				S	Sn	17 51 04.5	+6.4
SMAR	Somma	3.88	15	eP	Pn	17 50 18.6	+4.5
SMAR	Somma	3.88	15	PN	Pn	17 50 18.6	+4.5
KOK	Koryaka	3.88	13	eP	Pn	17 50 18.9	+4.9
KOK				eS	Sn	17 51 05.0	+6.7
KOK	Koryaka	3.88	13	PN	Pn	17 50 18.9	+4.9
KOK				S	Sn	17 51 05.0	+6.7
NLC	Nalytchevo	3.90	20	eP	Pn	17 50 16.5	+2.4
NLC				eS	Sn	17 51 00.3	+1.8
NLC	Nalytchevo	3.90	20	PN	Pn	17 50 16.5	+2.4
NLC				S	Sn	17 51 00.3	+1.8
SDLR	Sedlovina	3.91	15	eP	Pn	17 50 18.2	+3.8
SDLR				eS	Sn	17 51 03.6	+4.6
SDLR	Sedlovina	3.91	15	PN	Pn	17 50 18.2	+3.8
SDLR				S	Sn	17 51 03.6	+4.6
KRX	Arik	3.95	13	eP	Pn	17 50 19.5	+4.5
KRX				eS	Sn	17 51 05.8	+5.8
KRX	Arik	3.95	13	PN	Pn	17 50 19.5	+4.5
KRX				S	Sn	17 51 05.8	+5.8
SPN	Mys Shipunski	4.00	26	eP	Pn	17 50 19.9	+4.4
SPN				eS	Sn	17 51 05.9	+4.8
SPN	Mys Shipunski	4.00	26	PN	Pn	17 50 19.9	+4.4
SPN				S	Sn	17 51 05.9	+4.8
GNL	Ganaly	4.20	6	eP	Pn	17 50 22.1	+3.7
GNL	Ganaly	4.20	6	PN	Pn	17 50 22.1	+3.7
MKZ	Mys Kozlova	5.77	28	eP	Pn	17 50 42.9	+3.1
MKZ				eS	Sn	17 51 46.0	+1.4
MKZ	Mys Kozlova	5.77	28	PN	Pn	17 50 42.9	+3.1
TUMD	Tumrok D	6.02	18	eS	Sn	17 51 53.9	+3.1
KBTR	Krutoberegovo	7.52	25	eP	Pn	17 51 07.0	+3.3
KBTR	Krutoberegovo	7.52	25	PN	Pn	17 51 07.0	+3.3
BKI	Bering	7.83	40	eS	Sn	17 52 37.0	+1.8

IDC 20 18:01:10.9±3.1**, 30°.59S×177°.64W, h0^{km}, mb3.5**/2**, mb1 3.8**/2**, mb1mx3.5**/40**, mbtmp3.5**/2**, Error ellipse: s-maj=66.5km s-min=25.6km az=106.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.36	349	Pn	Pb	18 01 38.0	+0.9
	50nm,0.3s,baz=73,slow=19,SNR=3.6						
RAO				Sn	Sb	18 01 54.8	-0.2
	243nm,0.3s,baz=48,slow=22,SNR=6.7						
ASAR	Alice Springs	43.41	267	P	P	18 09 14.9	-0.7
	0.4nm,0.7s,baz=106,slow=7.4,SNR=8.6						
WRA	Warramunga Arr	44.42	272	P	P	18 09 24.1	+0.4
	0.3nm,0.2s,baz=111,slow=8.1,SNR=25						
FINES	FINESS Array B	145.43	340	PKPbc	PKPbc	18 20 48.9	-1.2
	0.9nm,0.6s,baz=37,slow=5.6,SNR=7.5						

DJA 20 18:09:17.4±1.5**, 7°S**±9°×**12°4E**±°**, h27^{km}**±20^{km}**, M3.6**/6**, MLv3.6**/6**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMRI	Maumere	2.14	235	P	Pn	18 09 51.0	-0.4
MMRI				S	Sn	18 10 18.0	+0.9
SOEI	Soe	2.37	174	P	Pn	18 09 54.8	+0.2
SOEI				S	Sn	18 10 23.0	+0.2
EDFI	Ende, Flores	2.66	239	P	Pn	18 09 57.9	-0.7
EDFI				S	Sn	18 10 30.8	+0.8
BATI	Baumata	2.82	187	P	Pn	18 10 00.9	+0.2
BATI				S	Sn	18 10 34.2	+0.3
BSSI	Bau Bau, Buton	3.70	289	P	Pn	18 10 12.8	0.0

*IDC **20** 18:14:47.5±0.4, 7°.97S×123°.54E, h0^{km}, mb4.7/29, mb1 4.7/29, mb1mx4.5/46, mbtmp4.7/29, MS4.2/38, Ms1 4.2/38, ms1mx4.1/51, Error ellipse: s-maj=15.3km s-min=10.8km az=73.0*

*ISCJB **20** 18:14:48.8±0.7, 8°.00S±0°.02×123°.72E±0°.02, h19^{km}±5^{km}, mb5.1/154, MS4.3/55, Error ellipse: s-maj=4.2km s-min=3.0km az=148.4*

*MOS **20** 18:14:50.9±0.9, 7°.94S×123°.63E, h33^{km}, mb5.4/44, MS4.3/9, Error ellipse: s-maj=10.1km s-min=5.7km az=113.9*

*BJI **20** 18:14:51.1, 8°.10S×123°.70E, h34^{km}, mb4.9/62, mB5.2/54, Ms4.6/58, Ms7 4.4/54*

*DJA **20** 18:14:51.1±0.1, 8°S±2°×12°4E±°, h10^{km}, M5.0/47, mb5.2/47, mB5.5/32, MLv5.2/19, Mw(mB)5.0/32*

*GCMT **20** 18:14:53.3±0.1, 7°.97S×123°.77E, h12^{km}, MW5.2/106, Moment Tensor Solution. s74,c113; s106,c187; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}5.24±.10; $M_{\theta\theta}$-5.62±.07; $M_{\phi\phi}$0.37±.11; $M_{r\theta}$-3.51±.23; $M_{\theta\phi}$-1.13±.09; $M_{\phi r}$-2.13±.31; Best double couple: $M_0$6.90400×10^{16} NP1:ϕ_s247.00000°, δ64.00000°, λ77.00000°. NP2: ϕ_s93.00000°, δ29.00000°, λ114.00000°. Principal axes: T 6.7570, Plg69.0000°, Azm132.0000°; N 0.2910, Plg11.0000°, Azm253.0000°; P -7.0500, Plg18.0000°, Azm346.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **20** 18:14:53.3±0.5, 8°.01S×123°.68E, h42^{km}±4^{km}, mb5.4/97 Error ellipse: s-maj=4.5km s-min=3.1km az=51.0*

*KLM **20** 18:14:55.0, 8°.29S×123°.65E, h36^{km}, mb5.2*

ISC 20 18:14:52.1±0.4**, 8°.10S**±0°.03×**123°.71E**±0°.04**, h32^{km}**±2^{km}**, h32^{km}:pP-P, n473, σ1^{s}96**/486**, mb5.2**/153**, MS4.3**/56**, 14C-6D, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMRI	Maumere	1.55	250	P	Pn	18 15 17.1	-0.5
MMRI	Maumere	1.55	250	ePn	Pn	18 15 17.3	-0.3
SOEI	Soe	1.74	162	P	Pb	18 15 22.4	-1.1
SOEI	Soe	1.74	162	ePn	Pb	18 15 23.4	0.0
BATI	Baumata	2.10	181	P	Pb	18 15 29.3	-0.2
EDFI	Ende, Flores	2.10	252	P	Pn	18 15 24.5	-0.7
WSI	Waingapu	3.72	245	P	Pn	18 15 49.1	+1.8
BASI	Baing, Sumba	3.74	236	P	Pn	18 15 46.9	-0.8
KDI	Kendari	4.25	345	P	Pn	18 15 52.6	-2.1
BKSI	Bulukumba	4.51	308	P	Pn	18 15 55.8	-2.4
WBSI	Waikabubak, Su	4.54	250	P	Pn	18 15 59.4	+0.7
SPSI	Sidrap Palu	5.68	316	P	Pn	18 16 14.3	0.0
	189nm,0.7s,2μm0.7nm						
NLAI	Namlea	5.89	35	P	Pn	18 16 22.2	+5.0
	123nm,0.6s,2μm0.7nm						
PLAI	Plampang	5.92	263	P	Pn	18 16 17.0	-0.6
	856nm,0.8s,8μm2.8nm						
TTSI	Tana Toraja	6.34	322	P	Pn	18 16 23.3	-0.1
	487nm,1.1s,4μm1.3nm						
SANI	Sanana	6.42	21	P	Pn	18 16 23.6	-0.9
	104nm,0.7s,2μm0.5nm						
TWSI	Taliwang, Sumb	6.79	264	P	Pn	18 16 28.7	-0.9
	359nm,1.0s,4μm1.0nm						
LUWI	Luwuk	7.07	352	P	Pn	18 16 32.2	-1.3
	396nm,0.9s,7μm						
LUWI	Luwuk	7.07	352	ePn	Pn	18 16 32.4	-1.1
APSI	Ampana	7.43	344	P	Pn	18 16 37.1	-1.3
	274nm,1.2s,3μm						
SAUI	Saumlaki	7.51	90	ePn	Pn	18 16 39.2	-0.4
PCI	Palu	8.12	331	P	Pn	18 16 48.1	+0.2
	288nm,1.0s,3μm						
LBMI	Labuha	8.32	27	P	Pn	18 16 49.6	-1.0
	206nm,1.2s,2μm						
IGBI	Denpasar	8.50	265	P	Pn	18 17 07.8	+15
MTN	Manton Dam	8.69	123	P	Pn	18 16 56.6	+0.9
	baz=8.6,SNR=100						
MTN	Manton Dam	8.69	123	ePn	Pn	18 16 56.5	+0.9
MTN				eSn	Sn	18 18 31.4	-1.2
MRSI	Marisa	8.70	348	P	Pn	18 16 55.4	-0.4
	90nm,1.2s,984nm0.3nm						
KNRA	Kununurra	9.01	147	P	Pn	18 17 00.0	0.0
	baz=8.9,SNR=58						
MPSI	Mapaga	9.20	335	P	Pn	18 17 02.3	-0.4
	111nm,1.3s,1μm						
JAGI	Jajag, Banyuwa	9.47	267	P	Pn	18 17 05.5	-0.9
	81nm,0.6s						
JAGI	Jajag, Banyuwa	9.47	267	ePn	Pn	18 17 07.7	+1.3
TNTI	Ternate	9.54	23	P	Pn	18 17 09.5	+2.2
	122nm,2.0s,2μm						
TNTI	Ternate	9.54	23	ePn	Pn	18 17 09.5	+2.2
KDU	Kakadu	9.75	119	P	Pn	18 17 10.0	-0.2
	baz=9.7,SNR=37						
FAKI	Fak Fak	9.93	59	P	Pn	18 17 21.5	+8.8
FAKI	Fak Fak	9.93	59	ePn	Pn	18 17 11.4	-1.4
BLJI	Banyuglugur	10.03	271	P	Pn	18 17 28.0	+14
FITZ	Fitzroy Crossi	10.12	170	P	Pn	18 17 14.7	-0.5
	baz=10.0,SNR=192						
FITZ	Fitzroy Crossi	10.12	170	ePn	Pn	18 17 14.9	-0.4
FITZ				eSn	Sn	18 19 02.2	-5.5
SWI	Sorong	10.40	47	P	Pn	18 17 23.4	+4.2
	121nm,1.4s,3μm						
MTKI	Muara Teweh, K	11.30	309	P	Pn	18 17 32.4	+0.9
	64nm,1.0s,2μm						
PWJI	Pagerwojo	11.79	270	P	Pn	18 17 47.8	+10
NGJI	Ngawi	12.16	273	P	P	18 17 56.9	+1.4
RKPI	Ransiki, Papua	12.31	58	P	Pn	18 17 46.4	+1.1
	244nm,1.5s,3μm						
PCJI	Pacitan	12.41	269	P	Pn	18 17 46.6	-0.1
	171nm,1.1s						
WOJI	Wonogiri, Jawa	12.67	270	P	P	18 18 02.1	+1.0
UGM	Wanagama	13.06	270	ePn	Pn	18 17 55.2	-0.4
PBKI	Pangkalan Bun	13.13	293	P	P	18 18 07.7	+1.5
SMRI	Semarang	13.20	274	P	Pn	18 17 59.9	+2.4
	309nm,0.8s						
SMRI	Semarang	13.20	274	ePn	Pn	18 17 59.1	+1.6
MBWA	Marble Bar	13.54	196	ePn	Pn	18 18 03.1	+1.0
SRPI	Serui, Papua	13.93	64	P	P	18 18 13.0	-2.1
BAKI	Biak	14.13	62	P	Pn	18 18 13.0	+2.9
	1μm,1.4s,12μm						
MYLDM	Lahad Datu	14.18	338	ePn	Pn	18 18 12.4	+1.5
STKI	Sintang	14.64	303	P	P	18 18 25.4	+2.3
KPJI	Karang Pucung	14.67	272	P	P	18 18 23.3	0.0
DAV	Davao City (W)	15.18	7	LR	LR	18 24 25.3	
	comp=Z,2μm,21.5s,baz=180,slow=38						
WAMI	Wamena	15.49	75	P	P	18 18 37.2	+4.7
	175nm,1.0s,3μm						
SBUM	Sibu	15.53	312	ePn	Pn	18 18 28.7	-0.2
	70nm,1.3s						
WR1	Warramunga Arr	15.64	140	ePn	Pn	18 18 26.8	-3.6
	229nm,1.1s						
WR1				eSn	Sn	18 21 13.3	-9.5
WRA	Warramunga Arr	15.64	140	Pn	Pn	18 18 26.8	-3.6
	5.0nm,0.3s,baz=315,slow=13,SNR=107						
WRA				Sn	Sn	18 21 13.3	-9.4
	0.9nm,0.3s,baz=312,slow=21,SNR=4.8						
WRA				LR	LR	18 24 54.3	
	comp=Z,3μm,21.4s,baz=310,slow=38						
WRA	Warramunga Arr	15.64	140	i P	Pn	18 18 26.5	-3.8
WRA				pmax	pmax		
	comp=Z,150nm,1.0s						
WRAB	Tennant Creek	15.64	140	ePn	Pn	18 18 27.2	-3.1
	comp=Z,219nm,1.0s						
WRAB	Tennant Creek	15.64	140c	eP	Pn	18 18 26.7	-3.6
WRAB				pmax	pmax		
	comp=Z,168nm,1.0s						
WB2	Warramunga Arr	15.65	140	ePn	Pn	18 18 26.0	-4.4
PAGZ	Pagadian	15.84	359	eP	Pn	18 18 32.7	-0.3
KKM	Kota Kinabalu	15.91	332	ePn	Pn	18 18 32.5	-1.5
	comp=Z,128nm,1.3s						
KSM	Kuching	16.40	305	ePn	Pn	18 18 38.1	-2.1
	comp=Z,54nm,1.1s						
DBJI	Dramaga	16.89	274	P	Pn	18 18 46.7	+0.4
	comp=Z,137nm,1.3s,comp=Z,3μm						
SKJI	Sukabumi	17.04	272	P	P	18 18 56.2	+6.5
GIRL	Giralia	17.09	211	P	P	18 18 50.0	-0.2
	baz=17,SNR=17						
GENI	Genyem	17.27	72	P	P	18 18 54.1	+1.9
	comp=Z,116nm,0.9s,comp=Z,3μm						
JAY	Jayapura	17.80	73	P	P	18 19 00.8	+2.6
	comp=Z,265nm,0.8s,comp=Z,9μm						
CGJI	Cibinong	17.93	274	P	P	18 19 09.9	+10
AS31	Alice Springs	18.30	149	eP	Pn	18 19 04.0	+0.2
	comp=Z,34nm,0.8s						
AS31				eSn	Sn	18 22 19.6	-7.8
ASAR	Alice Springs	18.31	149	P	P	18 19 02.1	-1.6
	comp=Z,2.6nm,0.3s,baz=321,slow=12,SNR=127						
ASAR				S	Sn	18 22 18.5	-8.9
	comp=Z,0.3nm,0.3s,baz=312,slow=19,SNR=3.4						
ASAR				LR	LR	18 26 05.5	
	comp=Z,2μm,20.7s,baz=326,slow=37						
AS01	Alice Springs	18.33	149	eP	P	18 19 02.1	-1.9
GUIM	Jordan	18.64	357	eP	P	18 19 07.2	-0.1
PALU	Palau	18.72	35	P	Pn	18 19 12.4	+3.6
	baz=19,SNR=3.2						
KLI	Kotabumi	19.01	279	P	Pn	18 19 23.6	+11
MEEK	Meekatharra	19.06	194	P	Pn	18 19 13.6	+0.7
	baz=19,SNR=19						
PLP	Palo	19.18	4⇓	eP	P	18 19 11.7	-1.6
QIS	Mount Isa	19.74	131	P	Pn	18 19 21.6	+0.6
	baz=20,SNR=61						
MDSI	Maura Dua	19.74	279	P	Pn	18 19 29.1	+8.0
COEN	Coen	19.96	109	P	Pn	18 19 23.3	-0.4
	baz=20,SNR=24						
COEN	Coen	19.96	109	eP	Pn	18 19 23.1	-0.6
	comp=Z,249nm,1.2s						
MORW	Morawa	22.07	198	P	P	18 19 45.2	+0.6
	baz=22,SNR=34						
MYKOM	Kota Tinggi	22.11	296	eP	P	18 19 46.0	+1.0
	comp=Z,61nm,1.1s						
MYKOM	Kota Tinggi	22.11	296	P	P	18 19 48.0	+3.0
MTSU	Mount Surprise	22.39	119	P	P	18 19 49.8	+1.8
	baz=22,SNR=14						
FORT	Forrest	22.93	170	P	P	18 19 54.0	+0.4
	baz=23,SNR=46						
FORT	Forrest	22.93	170	eP	P	18 19 53.9	+0.3
	comp=Z,200nm,1.0s						
KRJI	Kerinci	22.94	284	P	P	18 19 55.8	+1.8
	comp=Z,80nm,1.3s,comp=Z,2μm						
PMG	Port Moresby	23.21	95	P	P	18 19 57.6	+1.0
	comp=Z,23nm,0.7s,baz=314,slow=6.5,SNR=9.8						
PMG				LR	LR	18 31 54.1	
	comp=Z,1μm,19.1s,baz=252,slow=44						
KMBL	Kambalda	23.21	184	P	P	18 19 56.9	+0.4
	baz=23,SNR=20						
BLDU	Ballidu	23.34	195	P	P	18 19 58.1	+0.3
	baz=23,SNR=49						
KLBR	Kellerberrin	24.03	193	P	P	18 20 05.0	+0.7
	baz=24,SNR=49						
BKNI	Bangkinang	24.10	289	P	P	18 20 15.4	+10
BKNI	Bangkinang	24.10	289	eP	P	18 20 05.2	0.0
	comp=Z,193nm,1.3s						
MANU	Manus Island	24.31	77	eP	P	18 20 07.8	+0.7
	comp=Z,207nm,1.8s						
MUN	Mundaring	24.77	195	P	P	18 20 11.7	+0.6
	baz=25,SNR=10						
CTA	Charters Tower	24.86	121	P	P	18 20 14.8	+2.8
	comp=Z,91nm,1.1s,baz=300,slow=12,SNR=40						
CTAO	Charters Tower	24.86	121	eP	P	18 20 13.7	+1.6
	comp=Z,166nm,1.0s						
CTAO	Charters Tower	24.86	121	eP	P	18 20 13.7	+1.6
CTAO				pmax	pmax		
	comp=Z,166nm,1.0s						
CAUP	Cauayan	24.95	356	eP	P	18 20 11.3	-1.5
NWAO	Narrogin (SRO)	25.43	193	P	P	18 20 17.5	+0.4
	comp=Z,46nm,0.7s,baz=256,slow=7.5,SNR=22						
NWAO				LR	LR	18 31 24.3	
	comp=Z,593nm,20.1s,baz=284,slow=39						
NWAO	Narrogin (SRO)	25.43	193	P	P	18 20 17.7	+0.7
	baz=25,SNR=14						
NWAO	Narrogin (SRO)	25.43	193	eP	P	18 20 17.4	+0.4
	comp=Z,210nm,1.3s						
NWAO	Narrogin (SRO)	25.43	193	eP	P	18 20 17.4	+0.4
NWAO				pmax	pmax		
	comp=Z,210nm,1.3s						
MNSI	Mandailing Nat	25.63	289	P	P	18 20 20.5	+1.5
	comp=Z,18nm,1.0s						
IPM	Ipoh	25.85	298	eP	P	18 20 20.9	-0.2
	comp=Z,92nm,1.4s						
KULM	Kulim	26.57	299	eP	P	18 20 27.2	-0.4
	comp=Z,32nm,1.1s						
KULM	Kulim	26.57	299	P	P	18 20 30.0	+2.4
COCO	West Island	26.76	259	eP	P	18 20 31.0	+1.8
	comp=Z,882nm,1.8s						
QLP	Quilpie	26.79	136	P	P	18 20 31.8	+2.4
	baz=27,SNR=13						
PSI	Prapat	26.99	293	eP	P	18 20 30.7	-0.8
	comp=Z,36nm,1.1s						
PSI	Prapat	26.99	293	eP	P	18 20 30.7	-0.8
PSI				pmax	pmax		
	comp=Z,36nm,1.1s						
RKGY	Rocky Gully	27.10	192	P	P	18 20 34.4	+2.3
	baz=27,SNR=16						
BBOO	Buckleboo	27.12	157	P	P	18 20 33.7	+1.3
	baz=27,SNR=28						
BBOO	Buckleboo	27.12	157	eP	P	18 20 32.9	+0.6
	comp=Z,121nm,1.4s						
SKLT	Songkhla	27.57	303	P	P	18 20 46.1	+10
GSI	Gunungsitoli	27.68	289	eP	P	18 20 34.6	-3.0
	comp=Z,83nm,1.7s						
KCSI	Kotacane, Aceh	28.33	293	P	P	18 20 53.2	+10
RABL	Rabaul	28.55	84	eP	P	18 20 44.2	-1.2
	comp=Z,61nm,1.3s						
TRTT	Trang	28.70	303	P	P	18 20 49.1	+2.4
	comp=Z,12nm,1.2s						
HTT	Hallett	28.87	153	P	P	18 20 50.0	+2.0
	baz=29,SNR=25						
STKA	Stephens Creek	28.93	147	P	P	18 20 50.2	+1.8
	comp=Z,5.1nm,0.4s,baz=322,slow=10.0,SNR=37						
STKA				LR	LR	18 33 27.5	
	comp=Z,1μm,21.7s,baz=315,slow=38						
STKA	Stephens Creek	28.93	147	P	P	18 20 50.1	+1.6
	baz=29,SNR=5.1						
STKA	Stephens Creek	28.93	147	eP	P	18 20 49.7	+1.2
	comp=Z,12nm,1.2s						
STKA	Stephens Creek	28.93	147	eP	P	18 20 49.7	+1.2
STKA				pmax	pmax		
	comp=Z,12nm,1.2s						
MLSI	Meulaboh, Aceh	29.88	293	P	P	18 21 08.1	+11
RMQ	Roma	30.00	131	P	P	18 21 00.8	+2.7
	baz=30,SNR=11						

GUMO	Guam	30.09	44	P	P	18 20 59.0	+0.1
	comp=Z,36nm,0.8s,baz=173,slow=6.6,SNR=3.8						
GUMO				LR	LR	18 34 01.7	
	comp=Z,125nm,20.4s,baz=226,slow=38						
GUMO	Guam	30.09	44	*e*P	P	18 20 58.2	-0.8
	comp=Z,164nm,1.1s						
GUMO	Guam	30.09	44	*e*P	P	18 20 58.2	-0.8
GUMO				pmax	pmax		
	comp=Z,164nm,1.1s						
QIZ	Qiongzhong	30.23	333	P	P	18 21 00.4	+0.3
QIZ				S	S	18 25 49.9	-7.8
QIZ				pmax	pmax		
	comp=Z,8.0nm,1.4s						
QIZ				LR	LR		
	comp=Z,450nm,28.4s						
QIZ				LR	LR		
	comp=Z,400nm,21.1s						
QIZ				LR	LR		
	comp=Z,910nm,21.6s						
QIZ	Qiongzhong	30.23	333	*e*P	P	18 21 00.1	0.0
	comp=Z,34nm,1.3s						
TWG	Pinlang	30.84	355	*e*P	P	18 21 05.9	+0.5
	comp=Z,346nm,1.7s						
CMSA	Cobar Meteorol	31.04	142	P	P	18 21 09.6	+2.4
	baz=31,SNR=91						
PANO	Nakornpanom	31.40	323	P	P	18 21 13.6	+3.2
	comp=Z,0.8nm,1.2s						
SKNT	Sakolnakorn	31.64	322	P	P	18 21 15.3	+2.7
	comp=Z,9.5nm,1.3s						
CHAI	Chaiyaphum	32.12	318	P	P	18 21 20.0	+3.2
	comp=Z,5.8nm,0.9s,comp=Z,81nm						
ARPS	Mount Arapiles	32.96	153	P	P	18 21 26.6	+2.6
	baz=33,SNR=17						
PBKT	Sadao Pong	33.27	317	*e*P	P	18 21 28.1	+1.2
ARMA	Armidale	34.28	134	P	P	18 21 39.4	+3.7
	baz=34,SNR=3.9						
ARMA	Armidale	34.28	134	*e*P	P	18 21 38.7	+3.0
	comp=Z,118nm,1.7s						
UTTA	Uttaradit	34.39	318	P	P	18 21 46.5	+10
YNG	Young	34.58	142	P	P	18 21 41.2	+3.0
	baz=34,SNR=6.6						
JOW	Kunigami	35.00	7	LR	LR	18 35 00.3	
	comp=Z,217nm,21.9s,baz=110,slow=35						
TOO	Toolangi	35.36	149	P	P	18 21 46.7	+1.9
	baz=35,SNR=5.2						
CAN	Canberra	35.64	143	*e*P	P	18 21 48.7	+1.4
	comp=Z,57nm,1.3s						
CAN	Canberra	35.64	143	*e*P	P	18 21 48.7	+1.4
CAN				pmax	pmax		
	comp=Z,57nm,1.3s						
HNR	Honiara	35.83	95	P	P	18 21 50.2	+1.0
	comp=Z,36nm,0.8s,baz=112,slow=22,SNR=3.6						
HNR				LR	LR	18 39 44.1	
	comp=Z,278nm,18.5s,baz=246,slow=42						
HNR	Honiara	35.83	95	*e*P	P	18 21 50.1	+1.0
	comp=Z,67nm,0.9s						
HNR	Honiara	35.83	95	*e*P	P	18 21 50.1	+1.0
HNR				pmax	pmax		
	comp=Z,67nm,0.9s						
CNB	Canberra Magne	35.86	143	P	P	18 21 52.3	+3.2
	baz=36,SNR=6.2						
CM01	Chiang Mai Arr	35.93	317	*e*P	P	18 21 48.2	-1.7
CM31	Chiang Mai Arr	35.97	317	*e*P	P	18 21 49.8	-0.5
CMAR	Chiang Mai Arr	35.97	317	P	P	18 21 50.6	+0.4
	comp=Z,5.1nm,0.7s,baz=145,slow=7.1,SNR=36						
CMAR				LR	LR	18 37 49.1	
	comp=Z,464nm,19.2s,baz=150,slow=39						
CMAR	Chiang Mai Arr	35.97	317	*ce*P	P	18 21 50.9	+0.7
CMAR				pmax	pmax		
	comp=Z,6.0nm,0.7s						
CMMT	Chiang Mai	36.22	318	P	P	18 21 54.4	+2.1
	comp=Z,16nm,1.4s						
CHTO	Chiang Mai	36.22	318	*e*P	P	18 21 53.2	+0.9
	comp=Z,32nm,1.4s						
CHTO	Chiang Mai	36.22	318	*e*P	P	18 21 53.2	+0.9
CHTO				pmax	pmax		
	comp=Z,32nm,1.4s						
CHTO	Chiang Mai	36.22	318	P	P	18 21 54.5	+2.1
	comp=Z,72nm,1.4s						
GYA	Guiyang	38.13	335	P	P	18 22 11.8	+3.2
GYA				pP	sP	18 22 21.0	-0.9
GYA				PP	PnPn	18 23 42.6	+4.7
GYA				S	S	18 28 03.0	+3.1
GYA				sS	sS	18 28 19.4	+4.0
GYA				SS	SnSn	18 30 42.8	-2.2
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,5.3s						
GYA				LR	LR		
	comp=Z,560nm,17.6s						
GYA				LR	LR		
	comp=Z,530nm,18.0s						
GYA				LR	LR		
	comp=Z,520nm,17.8s						
KMI	Kunming	38.83	329	P	P	18 22 16.6	+2.0
KMI				pP	sP	18 22 26.4	-1.5
KMI				sP	pP	18 22 30.0	+5.9
KMI				S	S	18 28 12.5	+1.8
KMI				sS	sS	18 28 28.8	+2.6
KMI				pmax	pmax		
	comp=Z,24nm,1.1s						
KMI				pmax	pmax		
	comp=Z,210nm,4.4s						
KMI				LR	LR		
	comp=Z,270nm,16.2s						
KMI				LR	LR		
	comp=Z,410nm,17.5s						
KMI				LR	LR		
	comp=Z,570nm,25.0s						
CBIJ	Chichi jima	39.30	26	*e*P	P	18 22 16.6	-1.7
	comp=Z,141nm,1.1s						
WHN	Wuhan	39.46	347	P	P	18 22 24.8	+5.3
WHN				LR	LR		
	comp=Z,1µm,27.1s						
NJ2	Nanjing	40.19	354	*e*P	P	18 22 29.0	+3.4
NJ2				S	S	18 28 35.1	+4.6
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
NJ2				LR	LR		
	comp=Z,260nm,16.3s						
NJ2				LR	LR		
	comp=Z,290nm,17.3s						
NJ2				LR	LR		
	comp=Z,460nm,24.9s						
TAU	Tasmania Unive	40.40	153	*e*P	P	18 22 28.4	+1.1
	comp=Z,161nm,1.7s						
TAU	Tasmania Unive	40.40	153	*e*P	P	18 22 28.4	+1.1
TAU				pmax	pmax		
	comp=Z,161nm,1.7s						
ENH	Enshi	40.52	341	*e*P	P	18 22 29.1	+0.7
	comp=Z,51nm,1.3s						
JNU	Nakatsue	41.55	9	LR	LR	18 38 31.4	
	comp=Z,208nm,21.6s,baz=124,slow=34						
JNU	Nakatsue	41.55	9	*e*P	P	18 22 35.9	-1.0
	comp=Z,30nm,1.6s						
CD2	Chengdu	43.25	335	⇓P	P	18 22 51.3	+0.6
CD2				pP	pP	18 23 01.0	+0.8
CD2				sP	sP	18 23 05.3	+1.2
CD2				PP	PP	18 24 32.5	+0.8
CD2				S	S	18 29 17.5	+1.6
CD2				sS	sS	18 29 34.3	+2.7
CD2				pmax	pmax		
	comp=Z,50nm,0.5s						
CD2				pmax	pmax		
	comp=Z,290nm,4.8s						
CD2				LR	LR		
	comp=Z,650nm,18.4s						
CD2				LR	LR		
	comp=Z,570nm,14.9s						
CD2				LR	LR		
	comp=Z,680nm,16.9s						
DZM	Mont Dzumac	43.37	114	P	P	18 22 53.9	+1.9
	comp=Z,7.4nm,1.0s,baz=275,slow=10,SNR=7.0						
DZM				LR	LR	18 40 28.0	
	comp=Z,432nm,20.9s,baz=291,slow=35						
DZM	Mont Dzumac	43.37	114	*e*S	S	18 29 18.6	+0.4
	comp=Z,162nm,28.1s						
DZM				*e*LQ	LQ	18 32 55.9	
	comp=Z,584nm,27.1s						
DZM				*e*LR	LR	18 35 03.9	
	comp=Z,626nm,21.9s						
DZM	Mont Dzumac	43.37	114	*e*P	P	18 22 53.1	+1.2
	comp=Z,50nm,1.3s						
JHJ	Hachijo jima 2	43.75	20	LR	LR	18 38 55.4	
	comp=Z,157nm,21.9s,baz=298,slow=33						
BRDH	Bariadhala	43.84	315	LR	LR	18 44 05.2	
	comp=Z,544nm,19.4s,baz=128,slow=40						
XAN	Xi’an	44.19	342	P	P	18 23 00.0	+1.7
XAN				pP	pP	18 23 07.6	-0.2
XAN				PP	PcP	18 24 48.6	+5.8
XAN				S	S	18 29 26.6	-3.0
XAN				ScS	ScS	18 32 54.9	+0.2
XAN				pmax	pmax		
	comp=Z,25nm,1.3s						
XAN				pmax	pmax		
	comp=Z,270nm,6.1s						
XAN				LR	LR		
	comp=Z,130nm,16.7s						
XAN				LR	LR		
	comp=Z,260nm,19.6s						
XAN				LR	LR		
	comp=Z,390nm,20.6s						
KS15	Wonju Array Si	45.47	5	*e*P	P	18 23 08.3	0.0
KSRS	Korea Array	45.48	5	LR	LR	18 46 13.9	
	comp=Z,96nm,18.0s,baz=205,slow=42						
KS01	Wonju Array Si	45.50	5	*e*P	P	18 23 09.6	+1.0
PALK	Pallekele	45.52	288	LR	LR	18 42 15.9	
	comp=Z,633nm,20.6s,baz=96,slow=36						
SHL	Shillong	45.59	318	*e*P	P	18 23 09.3	-0.4
	comp=Z,24nm,1.0s						
SHL	Shillong	45.59	318	*e*P	P	18 23 09.3	-0.4
SHL				pmax	pmax		
	comp=Z,24nm,1.0s						
MAJO	Matsushiro	46.45	16	*e*P	P	18 23 15.2	-0.9
	comp=Z,22nm,1.2s						
MAJO	Matsushiro	46.45	16	*e*P	P	18 23 15.2	-0.9
MAJO				pmax	pmax		
	comp=Z,22nm,1.2s						
MAT	Matsushiro	46.45	16	P	P	18 23 15.2	-0.9
MAT				S	S	18 30 03.8	+1.8
MJAR	Matsushiro Arr	46.45	16	P	P	18 23 14.9	-1.2
	comp=Z,2.4nm,0.7s,baz=199,slow=9.8,SNR=7.3						
MJB9	Matsu-Tunnel	46.45	16	*e*P	P	18 23 15.6	-0.5
	comp=Z,24nm,1.2s						
LZH	Lanzhou	47.76	338	*e*P	P	18 23 27.6	+1.1
LZH				pP	pP	18 23 36.0	-0.1
LZH				sP	sP	18 23 41.5	+1.6
LZH				PP	PP	18 25 19.9	+1.3
LZH				S	S	18 30 23.8	+2.7
LZH				sS	sS	18 30 41.0	+4.1
LZH				pmax	pmax		
	comp=Z,37nm,1.1s						
LZH				pmax	pmax		
	comp=Z,450nm,5.4s						
LZH				LR	LR		
	comp=Z,560nm,15.2s						
LZH				LR	LR		
	comp=Z,650nm,15.6s						
LZH				LR	LR		
	comp=Z,800nm,15.6s						
BJT	Baijiatuau	48.38	352	*e*P	P	18 23 30.9	-0.1
	comp=Z,16nm,1.0s						
BJT	Baijiatuau	48.38	352	*e*P	P	18 23 30.9	-0.1
BJT				pmax	pmax		
	comp=Z,16nm,1.0s						
LSA	Lhasa	48.92	322	P	P	18 23 35.3	-0.7
LSA	Lhasa	48.92	322	*e*P	P	18 23 35.5	-0.5
	comp=Z,36nm,1.0s						
LSA	Lhasa	48.92	322	*e*P	P	18 23 35.5	-0.5
LSA				pmax	pmax		
	comp=Z,36nm,1.0s						
ODAN	Odare	49.48	316	*e*P	P	18 23 40.1	+0.1
	comp=Z,43nm,0.9s						
HHC	Hu-ho-hao-te	49.97	348	*e*P	P	18 23 46.3	+2.9
HHC				pP	sP	18 23 55.1	-1.7
HHC				PP	PP	18 25 36.4	-2.2
HHC				S	S	18 30 58.5	+6.5
HHC				pmax	pmax		
	comp=Z,14nm,1.0s						
HHC				pmax	pmax		
	comp=Z,180nm,7.0s						
HHC				LR	LR		
	comp=Z,180nm,14.7s						
HHC				LR	LR		
	comp=Z,250nm,16.3s						
HHC				LR	LR		
	comp=Z,210nm,16.1s						
RAMN	Ramite	50.08	315	*e*P	P	18 23 44.8	+0.2
	comp=Z,182nm,1.1s						
JIRN	Jiri	50.81	316	*e*P	P	18 23 50.6	+0.4
	comp=Z,139nm,1.2s						
GUN	Gumba	51.18	316	*e*P	P	18 23 53.2	+0.2
	comp=Z,105nm,1.1s						
PKIN	Phulchoki	51.30	315	*e*P	P	18 23 54.0	+0.1
	comp=Z,27nm,0.7s						
HYB	Hyderabad	51.32	300	*i* P	P	18 24 00.0	+6.2
KKN	Kakani	51.52	315	*e*P	P	18 23 55.4	0.0
	comp=Z,31nm,0.9s						
DMN	Daman	51.53	315	*e*P	P	18 23 55.5	0.0
	comp=Z,148nm,1.3s						
CN2	Changchun	51.68	2	*e*P	P	18 23 56.9	+0.9
CN2				*e*S	S	18 31 15.5	+0.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,230nm,19.0s						
CN2				LR	LR		
	comp=Z,240nm,19.0s						
CN2				LR	LR		
	comp=Z,290nm,20.0s						
GKN	Gorkha	52.10	315	*e*P	P	18 23 59.6	0.0
	comp=Z,130nm,1.4s						
GTA	Gaotai	52.21	337	⇑P	P	18 24 00.6	+0.4
GTA				pP	pP	18 24 09.0	-0.9
GTA				sP	sP	18 24 13.0	-0.7
GTA				S	S	18 31 20.8	-2.2
GTA				SS	SS	18 34 55.1	-5.9
GTA				pmax	pmax		
	comp=Z,13nm,1.4s						
GTA				pmax	pmax		
	comp=Z,110nm,5.2s						
GTA				LR	LR		
	comp=Z,200nm,20.3s						
GTA				LR	LR		
	comp=Z,260nm,17.1s						
GTA				LR	LR		
	comp=Z,310nm,19.7s						
USA0B	Ussuriysk Arra	52.59	7	*e*P	P	18 24 01.2	-1.6
	comp=Z,73nm,1.8s						
USRK	Ussuriysk Ar.	52.59	7	LR	LR	18 46 56.0	
	comp=Z,114nm,21.5s,baz=144,slow=37						
KOLN	Koldanda	52.69	314	*e*P	P	18 24 04.2	+0.1
	comp=Z,58nm,1.0s						
MDJ	Mudanjiang	52.74	5	P	P	18 24 06.9	+3.1
MDJ				pP	sP	18 24 17.4	+0.1
MDJ				sP	pP	18 24 21.9	+8.4
MDJ				pmax	pmax		
	comp=Z,13nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,420nm,4.4s						
MDJ	Mudanjiang	52.74	5	*e*P	P	18 24 03.8	-0.1
	comp=Z,66nm,1.4s						
DANN	Dangsing	52.92	315	*e*P	P	18 24 05.9	0.0
	comp=Z,94nm,0.8s						
OUZ	Omahuta	52.94	128	*e*P	P	18 24 09.1	+3.5
	comp=Z,128nm,1.5s						
MLZ	Mavora Lakes	53.28	142	*e*P	P	18 24 10.3	+2.3
	comp=Z,122nm,1.6s						
WHZ	Wether Hill Ro	53.44	143	*e*P	P	18 24 09.6	+0.5
	comp=Z,282nm,2.0s						
FOZ	Fox Glacier	53.46	139	*e*P	P	18 24 10.5	+1.2
	comp=Z,86nm,1.3s						
WKZ	Wanaka	53.57	141	*e*P	P	18 24 11.3	+1.2
	comp=Z,116nm,1.6s						
LBZ	Lake Benmore	54.09	140	*e*P	P	18 24 15.4	+1.5
	comp=Z,117nm,1.6s						
RPZ	Rata Peaks	54.35	139	*e*P	P	18 24 16.6	+0.8
	comp=Z,70nm,0.9s						
ODZ	Otahua Downs	54.69	141	*e*P	P	18 24 19.9	+1.6
	comp=Z,61nm,1.6s						
ASAJ	Asahikawa	54.71	17	P	P	18 24 19.1	+0.8
	comp=Z,9.2nm,0.7s,baz=230,slow=4.2,SNR=10						
ASAJ				LR	LR	18 45 56.8	
	comp=Z,120nm,21.9s,baz=202,slow=34						
ASAJ	Asahikawa	54.71	17	*e*P	P	18 24 18.0	-0.4
	comp=Z,81nm,1.6s						
LTZ	Lake Taylor	54.75	137	*e*P	P	18 24 19.7	+0.9
	comp=Z,83nm,1.5s						
THZ	Tophouse	54.76	136	*e*P	P	18 24 20.1	+1.1
	comp=Z,44nm,0.9s						
OXZ	Oxford	54.82	138	*e*P	P	18 24 19.9	+0.7
	comp=Z,26nm,0.7s						
MQZ	McQueen’s Vall	55.39	138	*e*P	P	18 24 25.7	+2.4
	comp=Z,103nm,1.5s						
KHZ	Kahutara	55.45	137	*e*P	P	18 24 25.7	+1.9
	comp=Z,58nm,1.2s						
YUK	Yuzh-Kuril’sk	55.63	19	*e*P	P	18 24 24.1	-0.8
YUK				*e*		18 25 25.1	
YUK				*e*S	S	18 32 09.1	+0.3
YUK				*e*		18 34 14.7	
SNZO	South Karori	55.84	135	*e*P	P	18 24 27.0	+0.5
	comp=Z,96nm,1.0s						
BKZ	Black Stump Fm	56.38	132	*e*P	P	18 24 31.3	+0.7
	comp=Z,49nm,1.2s						
URZ	Urewera	56.56	131	*e*P	P	18 24 32.3	+0.5
	comp=Z,55nm,1.2s						
BFZ	Birch Farm	56.71	134	*e*P	P	18 24 34.7	+1.9
	comp=Z,62nm,1.3s						
HIA	Hailar	57.23	357	*e*P	P	18 24 35.0	-1.3
	comp=Z,18nm,1.1s						
HIA	Hailar	57.23	357	⇓*e*P	P	18 24 35.8	-0.5
HIA				pmax	pmax		
	comp=Z,13nm,1.7s						
YSS	Yuzh-Sakhalins	57.37	15	*e*P	P	18 24 37.9	+0.6
	comp=Z,27nm,1.1s						
YSS	Yuzh-Sakhalins	57.37	15	*e*P	P	18 24 39.2	+2.0
YSS				*e*		18 24 50.4	
YSS				*e*		18 25 30.1	
YSS				*e*		18 26 45.3	
YSS				*e*S	S	18 32 33.0	+1.3
YSS				*e*SS	SS	18 36 18.3	-3.6
KLR	Kul’dur	57.52	6	P	P	18 24 37.2	-1.1
	comp=Z,0.1nm,0.8s,baz=191,slow=10,SNR=3.4						
KLR	Kul’dur	57.52	6	*i* P	P	18 24 36.8	-1.5
ULN	Ulaanbaatar	57.64	347	*e*P	P	18 24 38.5	-0.9
	comp=Z,12nm,1.0s						
ULN	Ulaanbaatar	57.64	347	*c i*P	P	18 24 39.0	-0.4
ULN				pmax	pmax		
	comp=Z,15nm,1.1s						
SONA0	Songino Array	57.76	346	*e*P	P	18 24 40.2	0.0
SONA0				⇑*e*		18 54 37.5	
SONM	Songino Array	57.76	346	P	P	18 24 40.2	0.0
	comp=Z,6.0nm,0.8s,baz=164,slow=7.5,SNR=28						
SONM				LR	LR	18 50 46.6	
	comp=Z,185nm,21.1s,baz=168,slow=38						
SONM				PKP2bc		18 54 37.5	
	comp=Z,0.9nm,0.9s,baz=151,slow=3.4,SNR=4.7						
SONA1	Songino Array	57.77	346	*e*P	P	18 24 39.3	-1.0
RAO	Raoul Island	58.55	119	*e*P	P	18 24 45.3	-0.7
	comp=Z,561nm,1.2s						
RAO	Raoul Island	58.55	119	*e*P	P	18 24 45.3	-0.7
RAO				pmax	pmax		
	comp=Z,561nm,1.2s						
CASY	Casey	58.80	186	*e*P	P	18 24 47.9	+0.9
	comp=Z,31nm,1.1s						
PAF	Port-aux-Franc	60.59	217	*e*P	P	18 25 00.1	+0.4
	comp=Z,942nm,1.7s						
PAF	Port-aux-Franc	60.59	217	*e*P	P	18 25 00.1	+0.4
PAF				pmax	pmax		
	comp=Z,942nm,1.7s						
ZAK	Zakamensk	60.89	345	*e*P	P	18 24 59.4	-2.3
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.4s						
WMQ	Urumqi	61.11	331	P	P	18 25 04.5	+1.2
WMQ				pP	pP	18 25 11.3	-1.9
WMQ				ScP	ScP	18 29 41.4	-4.1
WMQ				S	S	18 33 22.3	+1.8
WMQ				ScS	SKKSac	18 34 43.9	-8.3
WMQ				pmax	pmax		
	comp=Z,61nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,560nm,4.7s						
WMQ				LR	LR		
	comp=Z,630nm,24.9s						
WMQ				LR	LR		
	comp=Z,560nm,27.9s						
WMQ				LR	LR		
	comp=Z,560nm,25.7s						
TLY	Talaya	62.00	346	*e*P	P	18 25 07.9	-1.2
	comp=Z,39nm,1.8s						
TLY	Talaya	62.00	346	*e*P	P	18 25 09.8	+0.7
TLY				*e*S	S	18 33 29.5	-1.8
TLY				pmax	pmax		
	comp=Z,23nm,1.9s						
TLY				MLR	MLR		
	comp=Z,113nm,17.0s						
MIR	Mirnyy	62.03	193	⇓*i*P	P	18 25 12.5	+3.4
MIR				*i*		18 25 20.0	
MIR				pmax	pmax		
	comp=Z,81nm,1.5s						
IRK	Irkutsk	62.37	347	*e*P	P	18 25 14.4	+2.8
IRK				pmax	pmax		
	comp=Z,31nm,2.5s						
MOY	Mondy	62.66	344	*e*P	P	18 25 14.0	+0.4
MOY				pmax	pmax		
	comp=Z,42nm,2.3s						
NKL	Nikolayevsk	62.70	11	*e*P	P	18 25 14.0	+0.3
NIL	Nilore	63.34	314	*e*P	P	18 25 17.3	-1.2
	comp=Z,51nm,1.3s						
NIL	Nilore	63.34	314	*e*P	P	18 25 17.3	-1.2
NIL				pmax	pmax		
	comp=Z,51nm,1.3s						
AFI	Afiamalu	63.44	101	LR	LR	18 50 19.3	
	comp=Z,84nm,22.0s,baz=294,slow=34						
HVS	Khovu-Aksy	64.44	340	*i* P	P	18 25 25.4	0.0
HVS				pmax	pmax		
	comp=Z,11nm,0.9s						
KNTN	Kanton	64.44	89	*e*P	P	18 25 25.9	-0.2
	comp=Z,515nm,1.9s						
KSH	Kashi	64.76	321	P	P	18 25 28.1	+0.3
KSH				sP	sP	18 25 41.4	0.0
KSH				*e*PcP	PcP	18 26 01.8	+0.6
KSH				PP	PP	18 27 52.0	+1.4
KSH				PcS		18 30 00.6	
KSH				S	S	18 34 01.6	-4.9
KSH				SS	SS	18 38 15.3	-3.0
KSH				pmax	pmax		
	comp=Z,37nm,1.0s						
KSH				pmax	pmax		
	comp=Z,300nm,4.2s						
PDGK	Podgornoye	65.03	326	P	P	18 25 28.9	-0.6
PDGK				pmax	pmax		
	comp=Z,35nm,1.2s						
PRZ	Przheval’sk	65.11	325	*e*P	P	18 25 30.0	-0.1
	comp=Z,271nm,2.0s						
PRZ	Przheval’sk	65.11	325	*e*P	P	18 25 30.0	-0.1
PRZ				pmax	pmax		
	comp=Z,271nm,2.0s						
KDJ	Kajisay	65.60	324	*e*P	P	18 25 32.5	-0.7
	comp=Z,26nm,1.0s						
DGZ	Jazzator, Alta	65.68	335	*i* P	P	18 25 33.7	+0.1
DGZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MK01	Makanchi Array	65.87	330	*e*P	P	18 25 33.9	-0.8
MK31	Makanchi Array	65.89	330	*e*P	P	18 25 34.2	-0.7
MK31	Makanchi Array	65.89	330	*e*P	P	18 25 34.2	-0.7
MK32	Makanchi Array	65.89	330	*e*P	P	18 25 34.7	-0.1
MK32				⇑*e*		18 54 18.4	
MK32				*e*		18 58 33.5	
MKAR	Makanchi Array	65.89	330	P	P	18 25 34.7	-0.1
	comp=Z,9.5nm,0.8s,baz=133,slow=7.7,SNR=73						
MKAR				PKP2bc		18 54 18.4	
	comp=Z,0.6nm,0.9s,baz=294,slow=4.6,SNR=2.7						
MKAR				LR	LR	18 58 33.5	
	comp=Z,111nm,18.4s,baz=132,slow=40						
MKAR	Makanchi Array	65.89	330	*e*P	P	18 25 34.3	-0.5
	comp=Z,228nm,1.2s						
MAKZ	Makanchi	66.06	330	*e*P	P	18 25 35.1	-0.8
	comp=Z,66nm,1.5s						
MAKZ	Makanchi	66.06	330	P	P	18 25 34.8	-1.1
MAKZ				pmax	pmax		
	comp=Z,43nm,1.4s						
BOD	Bodaibo	66.17	354	*e*P	P	18 25 35.9	-0.4
BOD				pmax	pmax		
	comp=Z,19nm,1.5s						
AAA	Alma-Ata	66.41	324	*e*P	P	18 25 43.7	+5.4
AAA				*e*S	S	18 34 31.9	+5.4
AAA				pmax	pmax		
	comp=Z,200nm,4.1s						
AAA				smax	smax		
	comp=E,600nm,5.8s						
AAA				MLR	MLR		
	comp=Z,100nm,5.0s						
SFK	Sufi-Kurgan	66.61	320	P	P	18 25 38.7	-1.1
SFK				pmax	pmax		

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             comp=Z,32nm,1.2s
KZA   Kyzart              66.71 323   P       P          18 25 41.2 +0.6
             SNR=6.9
KBL   Kabul               66.81 313  eP       P          18 25 40.7 -0.5
             comp=Z,92nm,1.1s
KBL   Kabul               66.81 313  eP       P          18 25 40.7 -0.5
KBL                                   pmax    pmax
             comp=Z,92nm,1.1s
TKM2  Tokmak 2            67.01 324   P       P          18 25 42.4 +0.1
             SNR=13
KBK   Karagaybulak        67.23 323   P       P          18 25 44.2 +0.5
             SNR=8.8
MIDW  Midway              67.34  55  eP       P          18 25 43.0 -1.4
             comp=Z,81nm,0.8s
PEA0B Petropavlovsk-      67.46  21  eP       P          18 25 44.4 -0.3
             comp=Z,44nm,1.3s
PETK  Petropavlovsk-      67.46  21   P       P          18 25 46.0 +1.4
             comp=Z,8.2nm,0.9s,baz=179,slow=2.1
PETK  Petropavlovsk-      67.46  21  eP       P          18 25 45.3 +0.6
PETK  Petropavlovsk-      67.46  21  eP       P          18 25 45.3 +0.6
PEA1  Petropavlovsk-      67.47  21  eP       P          18 25 46.0 +1.3
AAK   Ala-Archa           67.49 323   P       P          18 25 45.8 +0.5
             SNR=7.0
AAK   Ala-Archa           67.49 323  eP       P          18 25 45.3  0.0
             comp=Z,78nm,1.6s
AAK   Ala-Archa           67.49 323  eP       P          18 25 45.3  0.0
AAK                                   pmax    pmax
             comp=Z,78nm,1.6s
FRU1  Bishkek             67.51 323  eP       P          18 25 44.6 -0.8
             comp=Z,40nm,1.5s
FRU   Bishkek             67.53 323  eP       P          18 25 46.0 +0.6
FRU                                  e                   18 26 06.0
FRU                                  eS       S          18 34 41.0 +1.1
FRU                                   pmax    pmax
             comp=Z,80nm,1.9s
AML   Almayashu           67.68 322   P       P          18 25 47.1 +0.2
             SNR=18
PET   Petropavlovsk       67.74  22  eP       P          18 25 45.9 -0.5
             comp=Z,80nm,1.4s
PET   Petropavlovsk       67.74  22  eP       P          18 25 45.9 -0.5
PET                                   pmax    pmax
             comp=Z,80nm,1.4s
USP   Ospenovka           67.86 323   P       P          18 25 47.5  0.0
             SNR=18
EKS2  Erkin-Say           67.94 322   P       P          18 25 48.1  0.0
             SNR=17
MNAS  Manas               68.61 322   P       P          18 25 52.2 -0.1
MNAS                                  pmax    pmax
             comp=Z,56nm,1.5s
ZAA0  Zalesovo Array      69.96 337  eP       P          18 25 58.4 -1.8
             comp=Z,46nm,1.2s
ZALV  Zalesovo Beam       69.96 337   P       P          18 25 58.9 -1.3
             comp=Z,8.6nm,0.9s,baz=134,slow=4.3,SNR=22
ZALV                                  PKPPKP  P'P'df     18 54 05.6 +2.9
             comp=Z,0.4nm,0.5s,baz=70,slow=1.7,SNR=3.3
ZALV                                  LR      LR         19 00 08.3
             comp=Z,121nm,18.4s,baz=106,slow=39
ZALV  Zalesovo Beam       69.96 337  eP       P          18 25 58.2 -2.0
ZALV  Zalesovo Beam       69.96 337  eP       P          18 25 58.2 -2.0
ZAA1  Zalesovo Array      69.96 337  eP       P          18 25 58.9 -1.3
ZAA1                                 e                   18 54 05.6
YAK   Yakutsk             70.07   3  eP       P          18 26 00.2 -0.5
             comp=Z,101nm,1.3s
YAK   Yakutsk             70.07   3  eP       P          18 26 00.8 +0.1
YAK                                  e*PP     pP         18 26 08.3 -2.4
YAK                                  e                   18 26 21.7
YAK                                  e                   18 28 34.3
YAK                                  eS       S          18 35 09.7 +0.6
YAK                                  e*SS     SKiKP      18 35 36.3 -8.3
YAK                                  e                   18 36 01.7
YAK                                  eSS      SS         18 39 38.2 -1.2
YAK                                   pmax    pmax
             comp=Z,11nm,1.0s
YAK                                   pmax    pmax
             comp=N,4.0nm,1.1s
YAK                                   pmax    pmax
             comp=E,3.0nm,1.4s
YAK                                   pmax    pmax
             comp=Z,66nm,3.3s
YAK                                   pmax    pmax
             comp=N,39nm,3.7s
YAK                                   pmax    pmax
             comp=E,40nm,3.8s
YAK                                   smax    smax
             comp=N,29nm,2.1s
YAK                                   smax    smax
             comp=E,75nm,3.5s
KK31  Karatay Array       70.18 321  eP       P          18 26 01.8 -0.1
KK31  Karatay Array       70.18 321  i P      P          18 26 01.6 -0.2
KK31                                  pmax    pmax
             comp=Z,24nm,1.5s
KKAR  Karatay Array       70.18 321  eP       P          18 26 01.5 -0.3
KKAR  Karatay Array       70.18 321  eP       P          18 26 01.5 -0.3
KURBB Kurchatov Arra      70.33 331   P       P          18 26 01.7 -0.8
             comp=Z,9.2nm,0.9s,baz=137,slow=5.1,SNR=58
KURK  Kurchatov           70.34 331  eP       P          18 26 01.7 -0.9
             comp=Z,49nm,1.1s
KURK  Kurchatov           70.34 331ceP        P          18 26 02.5 -0.1
KURK                                  pmax    pmax
             comp=Z,29nm,1.0s
WSAR  Wadi Sarin          70.80 298   LR      LR         18 56 15.8
             comp=Z,220nm,21.8s,baz=132,slow=35
MA2   Magadan             70.83  14   P       P          18 26 06.6 +1.2
             comp=Z,12nm,0.9s,baz=226,slow=8.8,SNR=4.0
MA2   Magadan             70.83  14  eP       P          18 26 06.7 +1.3
             comp=Z,43nm,1.1s
NVS   Novosibirsk         71.25 337⇑iP        P          18 26 07.4 -0.6
NVS                                  e                   18 28 51.7
NVS                                   pmax    pmax
             comp=N,26nm,1.4s
NVS                                   pmax    pmax
             comp=E,27nm,1.4s
NVS                                   pmax    pmax
             comp=Z,48nm,1.4s
MAW   Mawson              71.69 201   P       P          18 26 12.3 +1.8
             comp=Z,6.7nm,0.7s,baz=76,slow=6.4,SNR=15
MAW                                   LR      LR         18 55 27.7
             comp=Z,241nm,18.9s,baz=58,slow=34
MAW   Mawson              71.69 201   P       P          18 26 12.3 +1.8
             baz=72,SNR=7.6
MAW   Mawson              71.69 201  eP       P          18 26 11.7 +1.1
             comp=Z,6.6nm,1.0s
MAW   Mawson              71.69 201  eP       P          18 26 11.7 +1.1
MAW                                   pmax    pmax
             comp=Z,7.0nm,1.0s
VNDA  Vanda               72.18 172   P       P          18 26 15.0 +1.6
             comp=Z,4.2nm,0.5s,baz=321,slow=7.3,SNR=55
VNDA                                  LR      LR         18 57 00.1
             comp=Z,586nm,20.0s,baz=335,slow=35
VNDA  Vanda               72.18 172  eP       P          18 26 14.4 +1.0
VNDA  Vanda               72.18 172  eP       P          18 26 14.4 +1.0
SBA   Scott Base          73.14 171  eP       P          18 26 21.5 +2.4
             comp=Z,54nm,1.6s
SBA   Scott Base          73.14 171  eP       P          18 26 21.5 +2.4
SBA                                   pmax    pmax
             comp=Z,54nm,1.6s
UOSS  Minazif             73.43 299  eP       P          18 26 22.0 +0.3
             comp=Z,16nm,1.2s
RAR   Rarotonga           74.59 110   LR      LR         19 00 27.1
             comp=Z,65nm,18.0s,baz=284,slow=37
ABPO  Ambohimpanom        74.68 253  eP       P          18 26 29.4  0.0
             comp=Z,34nm,1.4s
ABPO  Ambohimpanom        74.68 253  eP       P          18 26 29.4  0.0
ABPO                                  pmax    pmax
             comp=Z,34nm,1.4s
OPO   Ambohidratompo      74.74 253   P       P          18 26 29.6 -0.1
             comp=Z,7.0nm,0.9s,baz=111,slow=7.5,SNR=5.5
BVA0  Borovoye Array      75.78 330  i P      P          18 26 33.7 -1.1
BVA0                                  pmax    pmax
             comp=Z,25nm,1.5s
BVAR  Borovoye Array      75.78 330   P       P          18 26 33.9 -0.9
             comp=Z,2.4nm,0.8s,baz=121,slow=6.9,SNR=22
BVAR                                  LR      LR         19 03 12.0
             comp=Z,165nm,21.9s,baz=134,slow=38
BVAR  Borovoye Array      75.78 330   P       P          18 26 33.9 -0.9
BVAR                                  pmax    pmax
             comp=Z,3.0nm,0.8s
BVAR                                  MLR     MLR
             comp=Z,165nm,21.9s
BRVK  Borovoye            75.85 330  eP       P          18 26 34.4 -0.7
             comp=Z,52nm,1.6s
BRVK  Borovoye            75.85 330c iP       P          18 26 34.1 -1.0
BRVK                                  pmax    pmax
             comp=Z,20nm,1.7s
GEYT  Alibeck             76.24 312   P       P          18 26 38.4 +0.6
             comp=Z,3.2nm,0.9s,baz=204,slow=6.5,SNR=7.4
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GEYT                                  LR      LR         19 06 20.0
             comp=Z,85nm,20.0s,baz=235,slow=41
GYA0B ALIBECK ARRAY       76.24 312  eP       P          18 26 37.2 -0.6
XMAS  Kiritimati          79.25  86  eP       P          18 26 52.6 -2.4
             comp=Z,167nm,1.3s
AB31  Akbulak array       79.57 323  i P      P          18 26 54.7 -1.3
AB31                                  pmax    pmax
             comp=Z,12nm,1.2s
ABKAR Akbulak array       79.57 323  eP       P          18 26 54.4 -1.6
TIXI  Tiksi               79.65   2  eP       P          18 26 55.3 -0.7
             comp=Z,44nm,1.3s
TIXI  Tiksi               79.65   2  eP       P          18 26 55.3 -0.7
TIXI                                  pmax    pmax
             comp=Z,44nm,1.3s
SYO   Syowa Base          80.38 201⇑eP        P          18 27 01.2 +1.2
SYO   Syowa Base          80.38 201⇑ePcP      PcP        18 27 08.0 +1.0
AKTO  Aktyubinsk          81.20 324   P       P          18 27 04.2 -0.5
             comp=Z,2.2nm,0.6s,baz=113,slow=7.3,SNR=7.5
AKTO                                  LR      LR         19 06 18.3
             comp=Z,138nm,21.5s,baz=125,slow=38
AKTO  Aktyubinsk          81.20 324   P       P          18 27 03.5 -1.2
AKTO                                  pmax    pmax
             comp=Z,17nm,1.2s
DAMY  Dhamar              81.80 286  eP       P          18 27 09.1  0.0
             comp=Z,123nm,1.9s
QSPA  South Pole Qui      81.89 180   P       P          18 27 09.6 +1.3
             comp=Z,5.6nm,0.6s,baz=279,slow=1.5,SNR=42
QSPA                                  LR      LR         19 04 20.8
             comp=Z,337nm,18.0s,baz=340,slow=36
QSPA  South Pole Qui      81.89 180  eP       P          18 27 08.9 +0.6
             comp=Z,38nm,1.1s
RAYN  Ar Rayn             82.52 295  eP       P          18 27 11.4 -0.9
             comp=Z,45nm,1.4s
RAYN  Ar Rayn             82.52 295  eP       P          18 27 11.4 -0.9
RAYN                                  pmax    pmax
             comp=Z,45nm,1.4s
SVE   Sverdlovsk          82.55 330  eP       P          18 27 21.8 +10
SVE                                   pmax    pmax
             comp=Z,39nm,1.3s
ATD   Arta Tunnel         82.75 283   LR      LR         19 03 20.8
             comp=Z,58nm,18.0s,baz=354,slow=35
ATD   Arta Tunnel         82.75 283  eP       P          18 27 12.0 -1.7
             comp=Z,16nm,1.2s
ARU   Arti                83.41 330  eP       P          18 27 14.5 -1.6
             comp=Z,19nm,1.1s
ARU   Arti                83.41 330c iP       P          18 27 16.0 -0.1
ARU                                                      18 30 26.7
ARU                                   S       S          18 37 34.7 -0.4
ARU                                   SS      SS         18 42 58.2 -3.0
ARU                                   pmax    pmax
             comp=Z,16nm,1.7s
TBI   Tubuai              83.94 113  eLR      LR         18 53 39.6
             comp=Z,247nm,29.8s
PPT2  Papeete2            84.48 107  eLR      LR         18 54 08.0
             comp=Z,366nm,35.5s
GROC  Groznyy             86.78 314  eP       P          18 27 30.1 -3.3
GROC                                 e                   18 30 57.6
GROC                                 eS       SKSac      18 37 55.1 -3.0
GROC                                  pmax    pmax
             comp=Z,75nm,1.2s
GNI   Garni               86.83 311   LR      LR         19 13 46.9
             comp=Z,37nm,18.1s,baz=108,slow=41
TBLG  Delisi              87.19 313  eP       P          18 27 35.9 +0.5
             comp=Z,122nm,1.4s
TBLG  Delisi              87.19 313  eP       P          18 27 35.9 +0.5
TBLG                                  pmax    pmax
             comp=Z,122nm,1.4s
AKH   Akhalkalaki         88.03 312  eP       P          18 27 39.8 +0.1
             comp=Z,76nm,1.4s
AKH   Akhalkalaki         88.03 312  eP       P          18 27 39.8 +0.1
AKH                                   pmax    pmax
             comp=Z,76nm,1.4s
ZEI   Tsey                88.04 314  eP       P          18 27 41.6 +1.9
ZEI                                   pmax    pmax
             comp=Z,45nm,1.4s
SDPT  Sand Point          88.64  34  eP       P          18 27 42.5 +0.6
KBZ   Khabaz              88.96 314   P       P          18 27 43.0 -0.7
             comp=Z,2.2nm,0.7s,baz=191,slow=3.0,SNR=5.5
KBZ                                   LR      LR         19 15 51.7
             comp=Z,78nm,19.2s,baz=86,slow=41
KBZ   Khabaz              88.96 314  eP       P          18 27 43.0 -0.7
NEY   Neytrino            88.98 314  i P      P          18 27 41.6 -2.5
NEY                                   pmax    pmax
             comp=Z,1.0nm,1.2s
GOF   Gofitskoye          89.14 316  eP       P          18 27 48.4 +3.8
GOF                                   pmax    pmax
             comp=Z,80nm,1.4s
KIV   Kislovodsk          89.16 314⇓eP        P          18 27 45.2 +0.4
KIV                                  e*PP     pP         18 27 52.1 -3.0
KIV                                  e*SP     sP         18 28 00.2 +1.5
KIV                                  eS       SKSac      18 38 10.7 -1.9
KIV                                  e                   18 39 58.2
KIV                                   pmax    pmax
             comp=Z,10.0nm,2.2s
KIV                                   MLR     MLR
             comp=Z,169nm,24.0s
ASF   Jabal al Asfar      91.58 302   P       P          18 27 54.8 -1.6
             comp=Z,0.6nm,0.3s,baz=120,slow=5.6,SNR=2.5
VSR   Storozhevoye        92.84 321  eP       P          18 28 00.5 -1.1
VSR                                   pmax    pmax
             comp=Z,8.0nm,1.0s
MMAI  Mount Meron Ar      92.94 303   LR      LR         19 13 39.6
             comp=Z,157nm,19.5s,baz=145,slow=38
SNAA  Sanae               93.08 195   P       P          18 28 01.9 -0.6
             comp=Z,2.2nm,0.6s,baz=166,slow=8.3,SNR=4.4
SNAA                                  LR      LR         19 09 21.6
             comp=Z,203nm,18.0s,baz=165,slow=35
SNAA  Sanae               93.08 195  eP       P          18 28 02.7 +0.2
             comp=Z,11nm,1.1s
LSZ   Lusaka              93.17 254  eP       P          18 28 03.1 -1.0
             comp=Z,29nm,1.3s
LSZ   Lusaka              93.17 254  eP       P          18 28 03.2 -1.0
LSZ                                   pmax    pmax
             comp=Z,29nm,1.3s
KDAK  Kodiak Island       93.44  32  i P      P          18 28 03.5 -0.7
BOSA  Boshof              93.52 241   P       P          18 28 06.5 +0.9
             comp=Z,2.5nm,0.9s,baz=49,slow=9.3,SNR=2.5
BOSA                                  LR      LR         19 07 58.6
             comp=Z,98nm,18.3s,baz=86,slow=34
KLMR  Klimovskoe          94.19 331  eP       P          18 28 14.5 +6.9
KLMR                                  pmax    pmax
             comp=Z,12nm,1.2s
KLMR  Klimovskoe          94.19 331  eP       P          18 28 14.5 +6.9
KLMR                                  AMP                18 28 18.2
             comp=Z,12nm,1.2s
OBN   Obninsk             94.94 325⇓eP        P          18 28 09.5 -1.7
OBN                                  i *PP    pP         18 28 19.1 -2.3
OBN                                  e*SP     sP         18 28 23.7 -1.4
OBN                                                      18 32 05.0
OBN                                   PPP     PPP        18 34 03.0
OBN                                  i                   18 38 49.0
OBN                                  eSS      SS         18 45 47.6 -1.0
OBN                                   pmax    pmax
             comp=Z,9.0nm,1.0s
OBN                                   MLR     MLR
             comp=Z,141nm,25.0s
BR101 Keskin Array S      95.17 309  eP       P          18 28 11.2 -1.6
BR131 Keskin Array S      95.17 309  eP       P          18 28 11.6 -1.2
BRTR  Keskin Array B      95.17 309   P       P          18 28 11.2 -1.6
             comp=Z,0.6nm,0.7s,baz=174,slow=1.2,SNR=5.0
BRTR                                  LR      LR         19 18 20.5
             comp=Z,42nm,19.5s,baz=102,slow=40
BRTR  Keskin Array B      95.17 309ceP        P          18 28 11.8 -1.0
BRTR                                  pmax    pmax
             comp=Z,1.0nm,0.7s
WRH   Wood River Hil      96.47  26  eP       P          18 28 16.7 -1.3
             comp=Z,23nm,1.9s
IL1   Eielson Array       97.01  26  eP       P          18 28 18.0 -2.4
ILAR  Eielson Array       97.01  26   P       P          18 28 18.7 -1.7
             comp=Z,0.4nm,0.8s,baz=256,slow=3.6,SNR=5.0
ILAR                                  PP      PP         18 32 21.2 +5.0
             comp=Z,0.8nm,1.1s,baz=268,slow=6.4,SNR=5.3
ILB   Eielson Array       97.01  26  eP       P          18 28 19.6 -0.8
AKASG Malin Array Be      99.05 320   P       Pdif       18 28 27.8 -2.1
             comp=Z,1.1nm,0.6s,baz=72,slow=5.7,SNR=4.8
AKASG                                 LR      LR         19 20 08.3
             comp=Z,70nm,18.1s,baz=25,slow=40
AKASG Malin Array Be      99.05 320ceP        Pdif       18 28 28.3 -1.6
AKASG                                 pmax    pmax
             comp=Z,1.0nm,0.6s
AKBB  Malin Array Si      99.05 320  eP       Pdif       18 28 27.4 -2.5
             comp=Z,13nm,1.5s
AKBB  Malin Array Si      99.05 320  eP       Pdif       18 28 27.4 -2.5
AKBB                                  pmax    pmax
             comp=Z,13nm,1.5s
KIEV  Kiev                99.06 320  i P      Pdif       18 28 32.4 +2.5
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KIEV                                  pmax    pmax
             comp=Z,5.0nm,1.3s
DPC   Dobruska-Polom     107.28 320   AMS     AMS        19 20 30.0
             comp=Z,200nm,20.1s
UPC   Upice              107.45 320   AMS     AMS        19 21 00.0
             comp=Z,300nm,23.7s
GOPC  GO Pecny, Ondr     108.32 320   AMS     AMS        19 21 40.0
             comp=Z,200nm,17.7s
PVCC  Panska Ves         108.36 321   AMS     AMS        19 20 50.0
             comp=Z,200nm,23.0s
PRU   Pruhonice          108.47 320   AMS     AMS        19 21 20.0
             comp=Z,200nm,19.2s
CLL   Collm              109.19 322  ePS      PS         18 43 17.0 +2.0
CLL                                  ePPS     PPS        18 44 19.0
CLL                                  eSSS     SSS        18 53 48.0
CLL                                  e                   18 54 36.0
GERES GERESS Array B     109.20 319   PKKP    PKKPdf     18 44 46.5 +3.8
             comp=Z,0.2nm,0.5s,baz=208,slow=3.3,SNR=4.0
KHC   Kasperske Hory     109.23 319   AMS     AMS        19 22 50.0
             comp=Z,300nm,23.4s
YKA   Yellowknife Ar     111.43  25   PKiKP   PKiKP      18 33 19.4 -3.3
             comp=Z,0.5nm,0.8s,baz=303,slow=2.8,SNR=3.8
YKA                                   PKKPbc  PKKPbc     18 44 23.7 +3.6
             comp=Z,1.1nm,0.9s,baz=94,slow=3.6,SNR=8.1
NV01  Mina Array Sit     116.84  51  ePKPdf   PKPdf      18 33 32.6 -1.6
NVAR  Mina Array Bea     116.84  51   PKP     PKPdf      18 33 34.8 +0.6
             comp=Z,0.5nm,0.8s,baz=191,slow=4.2,SNR=3.2
NVAR                                  PKKPbc  PKKPbc     18 44 00.5 -0.8
             comp=Z,0.1nm,0.3s,baz=46,slow=5.3,SNR=2.8
HLID  Hailey             118.44  45  ePKPdf   PKPdf      18 33 36.4 -0.7
HVU   Hansel Valley      120.12  46  ePKPdf   PKPdf      18 33 39.7 -0.6
HVU   Hansel Valley      120.12  46  ePKIKP   PKPdf      18 33 39.7 -0.6
FXWY  Fox Creek          120.75  44  ePKPdf   PKPdf      18 33 40.4 -1.1
REDW  Red Top Meadow     120.96  44  ePKPdf   PKPdf      18 33 41.6 -0.3
LOHW  Long Hollow        121.05  44  ePKPdf   PKPdf      18 33 42.1  0.0
SFJD  Kangerlussuaq      121.06 357   PKP     PKPdf      18 33 41.5 +0.4
             comp=Z,11nm,0.7s,baz=203,slow=13,SNR=2.2
LCMT  Little Creek M     121.07  52  ePKPdf   PKPdf      18 33 41.9 -0.4
PD31  Pinedale Array     122.06  44  ePKPdf   PKPdf      18 33 41.0 -3.1
PDAR  Pinedale Array     122.06  44   PKP     PKPdf      18 33 43.0 -1.0
             comp=Z,0.4nm,0.7s,baz=212,slow=3.2,SNR=3.8
PDAR  Pinedale Array     122.06  44  ePKPdf   PKPdf      18 33 42.6 -1.4
SRU   San Rafael Swe     122.56  49  ePKPdf   PKPdf      18 33 44.2 -0.9
SRU   San Rafael Swe     122.56  49  ePKIKP   PKPdf      18 33 44.2 -0.9
TOA0  Torodi Ar. Sit     122.89 280  ePKPdf   PKPdf      18 33 44.2 -1.9
TORD  Torodi Ar. Bea     122.89 280   PKP     PKPdf      18 33 45.4 -0.7
             comp=Z,1.0nm,0.8s,baz=36,slow=2.7
TOA1  Torodi Ar. Sit     122.89 280  ePKPdf   PKPdf      18 33 45.4 -0.7
ESDC  Sonseca Array      123.78 313   PKP     PKPdf      18 33 46.6 -0.7
             comp=Z,0.1nm,0.3s,baz=43,slow=3.8,SNR=2.8
PV14  Lion Creek, Pa     123.90  49  ePKPdf   PKPdf      18 33 48.0 +0.3
PV03  Paradox Valley     124.07  49  ePKPdf   PKPdf      18 33 47.7 -0.4
PV13  Radium Mtn., P     124.12  49  ePKPdf   PKPdf      18 33 47.2 -0.9
PV02  Paradox Valley     124.17  49  ePKPdf   PKPdf      18 33 48.0 -0.3
PV01  Paradox Valley     124.31  49  ePKPdf   PKPdf      18 33 48.8 +0.3
S22A  4UR Ranch, Cre     125.74  49  ePKPdf   PKPdf      18 33 52.4 +1.0
SDCO  Great Sand Dun     126.73  48  ePKPdf   PKPdf      18 33 53.2 -0.1
ANMO  Albuquerque        126.93  52   PKP     PKPdf      18 33 54.0 +0.4
             comp=Z,0.7nm,0.4s,baz=45,slow=1.4,SNR=2.9
ANMO  Albuquerque        126.93  52  ePKPdf   PKPdf      18 33 53.6  0.0
MNTX  Cornudas Mount     128.75  56  ePKPdf   PKPdf      18 33 57.2 +0.3
LTX   Lajitas            130.82  58  ePKPdf   PKPdf      18 34 00.7 -0.4
LTX   Lajitas            130.82  58  ePKIKP   PKPdf      18 34 00.7 -0.4
TXAR  Lajitas Array      130.82  58   PKP     PKPdf      18 34 00.7 -0.4
             comp=Z,0.6nm,1.0s,baz=222,slow=1.7,SNR=5.2
S39A  Bolivar            135.42  43  ePKPdf   PKPdf      18 34 07.8 -1.5
V40A  Witts Springs      136.74  45  ePKPdf   PKPdf      18 34 10.8 -1.0
MIAR  Mount Ida          136.82  47  ePKPdf   PKPdf      18 34 11.8 -0.2
MIAR  Mount Ida          136.82  47  ePKIKP   PKPdf      18 34 11.8 -0.2
SADO  Sadowa             138.43  25   PKP     PKPdf      18 34 13.7 -0.9
             comp=Z,6.1nm,1.0s,baz=323,slow=10,SNR=2.7
SADO  Sadowa             138.43  25  ePKPdf   PKPdf      18 34 13.3 -1.4
TKL   Tuckaleechee C     142.80  38   PKP     PKPdf      18 34 22.6 -0.3
             comp=Z,5.1nm,0.8s,baz=321,slow=14,SNR=3.6
TKL   Tuckaleechee C     142.80  38  ePKPdf   PKPdf      18 34 22.0 -0.9
TKL   Tuckaleechee C     142.80  38  ePKIKP   PKPdf      18 34 22.0 -0.9
Z50A  Ashland            142.90  43  ePKPdf   PKPdf      18 34 24.3 +1.2
GOGA  Godfrey            144.44  41  ePKPdf   PKPab      18 34 23.9 -0.1
GOGA  Godfrey            144.44  41  ePKIKP   PKPab      18 34 23.9 -0.1
GO02  Mina Guanaco       144.49 159  ePKPdf   PKPbc      18 34 25.6 +0.5
KMSC  Kings Mountain     144.62  37  ePKPdf   PKPab      18 34 24.2 -0.4
PB10  IPOC Station P     145.62 156  ePKPdf   PKPab      18 34 29.7 +1.1
CPUP  Villa Florida      145.76 178   PKPbc   PKPab      18 34 29.9 +0.9
             comp=Z,13nm,0.8s,baz=182,slow=2.3,SNR=28
CPUP  Villa Florida      145.76 178  ePKPdf   PKPab      18 34 29.4 +0.4
CPUP  Villa Florida      145.76 178  ePKP2    PKPab      18 34 29.4 +0.4
PB01  IPOC Station P     148.27 156  ePKPbc   PKPbc      18 34 37.1 +1.0
PB11  IPOC Station P     149.35 155  ePKPbc   PKPbc      18 34 39.1 +0.2
MNMC  Minye Minye        149.93 154  ePKPbc   PKPbc      18 34 40.2 -0.4
NNA   Nana               151.44 134  ePKPbc   PKPbc      18 34 42.6 -1.4
NNA                                  ePKPab   sPKPdf     18 34 51.0 -1.0
NNA   Nana               151.44 134  ePKIKP   PKPbc      18 34 42.6 -1.4
NNA                                  e                   18 34 51.0
LPAZ  La Paz             153.08 154   PKPbc   PKPbc      18 34 49.5 +1.2
             comp=Z,3.1nm,0.9s,baz=319,slow=0.7,SNR=11
LPAZ  La Paz             153.08 154  ePKPbc   PKPbc      18 34 48.8 +0.5
LPAZ  La Paz             153.08 154  ePKIKP   PKPbc      18 34 48.8 +0.5
ATAH  Atahualpa          153.26 124   PKPbc   PKPbc      18 34 48.7 +0.2
             comp=Z,6.6nm,0.6s,baz=233,slow=8.8,SNR=5.2
SIV   San Ignacio        155.60 169   PKP     PKPdf      18 34 43.7  0.0
             comp=Z,0.4nm,0.5s,baz=235,slow=15,SNR=2.3
SIV                                   PKPab   PKPab      18 35 11.1 +1.5
             comp=Z,3.2nm,0.7s,baz=181,slow=3.7,SNR=8.5
SAML  Samuel             161.72 158  ePKPab   PKPab      18 35 36.5 +0.4
SAML  Samuel             161.72 158  ePKP2    PKPab      18 35 36.5 +0.4
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*ISCJB **20** 18:23:35.4±0.4, 24°.42N±0°.02×122°.48E±0°.02, h74^{km}±4^{km},*
Error ellipse: s-maj=3.3km s-min=2.3km az=168.0
*JMA **20** 18:23:35.3±0.1, 24°.35N×122°.46E, h75^{km}±2^{km}, M2.3*
*TAP **20** 18:23:35.1, 24°.40N×122°.49E, h80^{km}, ML3.0, B*
ISC 20 18:23:35.7±1.3**, 24°.42N**±0°.03×**122°.48E**±0°.02**, h75**^{km}±7^{km},
n81, σ**0^{s}.56**/153**, Taiwan region**

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Code  Station Name         Δ°   AZ°     Phase ID              Time      Res
                                      Op       ISC          h  m  s    ISC
EOS1  EOS1                 0.34 293   P        Pn         18 23 48.0 +0.3
             baz=301
EOS1                                  S        Sn         18 23 57.2 +0.8
             baz=301
JYNG  Yonagunijimaku       0.43  85   P        Pn         18 23 48.3  0.0
JYNG                                  S        Sn         18 23 57.6  0.0
YOJ   Yonaguni jima        0.49  85   P        Pn         18 23 48.8  0.0
             baz=76
YOJ                                   S        Sn         18 23 58.6 +0.1
             baz=76
YOJ   Yonaguni jima        0.49  85   P        Pn         18 23 48.8  0.0
YOJ                                  eS        Sn         18 23 58.5  0.0
TWC   Suao                 0.60 289   P        Pn         18 23 49.6 -0.3
             baz=294
TWC                                   S        Sn         18 24 00.0 -0.4
             baz=294
EGS                        0.66 311  eS        Sn         18 24 01.5 +0.1
             baz=302
NANB  Nanao                0.66 271  eP        Pn         18 23 50.5 -0.1
             baz=268
NANB                                 eS        Sn         18 24 02.1 +0.6
             baz=268
ENA   Nanau                0.67 271  eP        Pn         18 23 50.8 +0.1
             baz=268
ENA                                  eS        Sn         18 24 02.0 +0.3
             baz=268
NTC   Toucheng             0.73 307  eP        Pn         18 23 51.2 -0.2
             baz=307
NTC                                  eS        Sn         18 24 03.1 +0.3
             baz=307
TWB1  Santiao Chiao        0.74 323  eS        Sn         18 24 03.1 +0.1
             baz=330
TWE   Neicheng             0.80 292  eP        Pn         18 23 52.0  0.0
             baz=297
TWE                                  eS        Sn         18 24 04.2  0.0
             baz=297
TIPB  Shuangxi             0.81 313  eP        Pn         18 23 52.1 -0.2
             baz=308
TIPB                                 eS        Sn         18 24 04.5 -0.1
             baz=308
NACB  Ninganchiao          0.84 253  eP        Pn         18 23 52.2 -0.4
             baz=249
NACB                                 eS        Sn         18 24 04.2 -0.9
             baz=249
ENTT  Nioudou              0.86 285  eP        Pn         18 23 53.2 +0.4
             baz=291
ENTT                                 eS        Sn         18 24 05.7 +0.2
             baz=291
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TWD	Chiawan	0.87	248	P	Pn	18 23 52.5	-0.5
	baz=243						
TWD				S	Sn	18 24 04.8	-0.9
	baz=243						
NWF	Wu-fen Shan	0.91	316	eP	Pn	18 23 53.5	0.0
	baz=309						
NWF				eS	Sn	18 24 06.3	-0.3
	baz=309						
WFSB	Wu-fen Shan	0.91	316	eS	Sn	18 24 06.8	+0.3
	baz=309						
ENLB	Shoufeng	0.95	238	eP	Pn	18 23 53.2	-0.6
	baz=235						
ENLB				eS	Sn	18 24 06.9	-0.4
	baz=235						
TWA	Mucha	0.99	305	eP	Pn	18 23 54.2	-0.1
	baz=305						
TWA				eS	Sn	18 24 07.6	-0.7
	baz=305						
NNSB	Datong	1.00	271	P	Pn	18 23 54.5	-0.1
	baz=272						
NNSB				eS	Sn	18 24 08.1	-0.5
	baz=272						
NNS	Nan Shan	1.01	272	eP	Pn	18 23 54.6	-0.1
	baz=273						
NNS				eS	Sn	18 24 09.0	+0.2
	baz=273						
YHNB	Yeheng	1.03	284	eP	Pn	18 23 55.1	+0.1
	baz=285						
YHNB				eS	Sn	18 24 09.8	+0.5
	baz=285						
NSK	Sanguang	1.05	284	eP	Pn	18 23 55.3	+0.2
	baz=285						
NSK				eS	Sn	18 24 09.8	+0.1
	baz=285						
YM07	YM07	1.08	314	eP	Pn	18 23 55.6	0.0
	baz=306						
YM07				eS	Sn	18 24 09.8	-0.6
	baz=306						
YM11	YM11	1.11	312	eP	Pn	18 23 56.0	+0.1
	baz=305						
YM11				eS	Sn	18 24 11.1	+0.1
	baz=305						
YM10	YM10	1.11	312	eP	Pn	18 23 56.1	+0.2
	baz=304						
YM10				eS	Sn	18 24 10.1	-0.9
	baz=304						
YM08	YM08	1.11	314	eP	Pn	18 23 56.0	+0.1
	baz=307						
YM08				eS	Sn	18 24 09.7	-1.3
	baz=307						
YM04	YM04	1.13	311	eP	Pn	18 23 56.0	-0.1
	baz=303						
YM04				eS	Sn	18 24 10.5	-0.8
	baz=303						
ESL	Shilin	1.13	238	eP	Pn	18 23 55.3	-0.8
	baz=239						
ESL				eS	Sn	18 24 10.1	-1.1
	baz=239						
WHF	Hehuan Shan	1.14	257	eP	Pn	18 23 56.4	-0.3
	baz=251						
WHF				eS	Sn	18 24 12.1	-0.1
	baz=251						
YM03	YM03	1.14	312	eP	Pn	18 23 56.6	+0.3
	baz=304						
YM03				eS	Sn	18 24 11.7	0.0
	baz=304						
IRIF	Iriomote-Funau	1.15	94	P	Pn	18 23 56.2	0.0
IRIF				S	Sn	18 24 11.3	-0.3
TWY	Chenhua	1.17	317	eP	Pn	18 23 57.9	+1.4
	baz=309						
TWY				eS	Sn	18 24 12.1	-0.1
	baz=309						
TWS1	Kuangyinshan	1.18	305	eP	Pn	18 23 56.7	0.0
	baz=306						
TWS1				eS	Sn	18 24 12.5	+0.1
	baz=306						
TWT	Tachien	1.20	262	eP	Pn	18 23 57.8	+0.7
	baz=264						
TWT				eS	Sn	18 24 13.5	+0.4
	baz=264						
EGFH	Guangfu	1.22	232	eP	Pn	18 23 56.9	-0.3
	baz=234						
EGFH				eS	Sn	18 24 13.7	+0.5
	baz=234						
TDCB	Techi	1.22	263	eP	Pn	18 23 57.8	+0.5
	baz=264						
TDCB				eS	Sn	18 24 12.9	-0.5
	baz=264						
CHGB	Renai	1.24	254	P	Pn	18 23 57.8	+0.1
	baz=248						
CHGB				S	Sn	18 24 14.2	0.0
	baz=248						
HATJ	Hateruma jima	1.26	106	eS	Sn	18 24 15.1	+0.8
LIOB	Emei	1.35	280	eP	Pn	18 23 59.6	+0.7
	baz=281						
LIOB				eS	Sn	18 24 16.9	+0.5
	baz=281						
NSTT	Nanjuang	1.36	279	eP	Pn	18 23 59.2	+0.2
	baz=280						
NSTT				eS	Sn	18 24 16.9	+0.3
	baz=280						
EHY	Hungye	1.39	230	eP	Pn	18 23 59.5	+0.1
	baz=231						
EHY				eS	Sn	18 24 17.7	+0.4
	baz=231						
JKRS	Kuro-shima	1.41	97	P	Pn	18 24 00.2	+0.6
JKRS				S	Sn	18 24 18.2	+0.6
HSN	Hsinchu	1.43	286	eS	Sn	18 24 17.5	-0.5
	baz=288						
YULB	Yu-li	1.49	227	eP	Pn	18 24 00.1	-0.5
	baz=236						
YULB				eS	Sn	18 24 20.0	+0.5
	baz=236						
TWF1	Yuli	1.51	226	eP	Pn	18 24 01.5	+0.4
	baz=236						
TWF1				eS	Sn	18 24 20.7	+0.5
	baz=236						
JIJ	Ishigaki jima	1.52	92	P	Pn	18 24 01.1	0.0
JIJ				S	Sn	18 24 19.3	-0.9
SSLB	Suanglung	1.53	246	eP	Pn	18 24 01.2	-0.1
	baz=247						
SSLB				eS	Sn	18 24 20.8	+0.3
	baz=247						
SMLT	Sun Moon Lake	1.54	250	eP	Pn	18 24 01.6	+0.2
	baz=247						
SMLT				eS	Sn	18 24 21.2	+0.4
	baz=247						
NMLH	Miaoli	1.54	275	eP	Pn	18 24 02.0	+0.6
	baz=276						
NMLH				eS	Sn	18 24 21.1	+0.3
	baz=276						
TYC	Yuchr	1.57	251	eP	Pn	18 24 02.3	+0.6
	baz=248						
TYC				eS	Sn	18 24 21.6	+0.3
	baz=248						
PTSB	Yuanli	1.62	271	eP	Pn	18 24 02.6	+0.2
	baz=272						
FULB	Fuli	1.63	222	eP	Pn	18 24 02.0	-0.5
	baz=217						
FULB				eS	Sn	18 24 23.3	+0.5
	baz=217						
CHKT	Chengkung	1.66	218	eP	Pn	18 24 03.3	+0.4
	baz=214						
CHKT				eS	Sn	18 24 24.1	+0.5
	baz=214						
TCU	Taichung	1.67	261	eP	Pn	18 24 03.4	+0.3
	baz=274						
TCU				eS	Sn	18 24 23.5	-0.2
	baz=274						
JISG	Ishigakijimahi	1.68	84	P	Pn	18 24 03.3	+0.1
JISG				eS	Sn	18 24 23.1	-0.9
WJS	Zhushan	1.71	250	eP	Pn	18 24 03.6	+0.1
	baz=245						
WJS				eS	Sn	18 24 25.2	+0.6
	baz=245						
WNT	Mingjian	1.72	252	eP	Pn	18 24 04.2	+0.4
	baz=253						
WNT				eS	Sn	18 24 25.2	+0.1
	baz=253						
ALS	Alishan	1.78	240	eP	Pn	18 24 05.2	+0.4
	baz=235						
ALS				eS	Sn	18 24 26.8	0.0
	baz=235						
ELDTW	Lidau	1.81	228	eP	Pn	18 24 05.5	+0.4
	baz=229						
ELDTW				eS	Sn	18 24 27.7	+0.3
	baz=229						
CHN5	Tsauling	1.84	244	eP	Pn	18 24 05.9	+0.5
	baz=238						
CHN5				eS	Sn	18 24 28.0	+0.1
	baz=238						
WGK	Gukeng	1.90	248	eP	Pn	18 24 06.5	+0.4
	baz=263						
WGK				eS	Sn	18 24 28.8	-0.4
	baz=263						
WDLH	Douliu	1.92	248	eP	Pn	18 24 07.1	+0.8
	baz=263						
WDLH				eS	Sn	18 24 30.1	+0.4
	baz=263						
TWH	Lutao	1.93	209	eP	Pn	18 24 05.8	-0.8
	baz=205						
TWH				eS	Sn	18 24 28.1	-1.9
	baz=205						
RLNB	Erlin	2.00	255	eP	Pn	18 24 07.8	+0.3
	baz=257						
RLNB				eS	Sn	18 24 32.0	+0.3
	baz=257						
STYT	Tauyuan	2.01	232	eP	Pn	18 24 08.1	+0.4
	baz=229						
STYT				eS	Sn	18 24 32.1	+0.1
	baz=229						
TPUB	Ta-pu	2.02	237	eP	Pn	18 24 08.5	+0.6
	baz=231						
TPUB				eS	Sn	18 24 32.6	+0.3
	baz=231						
JTJ	Tarama	2.04	83	S	Sn	18 24 32.6	0.0
TWGBT	Beinan	2.04	219	eP	Pn	18 24 07.6	-0.5
	baz=220						
TWGBT				eS	Sn	18 24 31.6	-1.1
	baz=220						
TWG	Pinlang	2.05	219	eP	Pn	18 24 07.7	-0.5
	baz=220						
TWG				eS	Sn	18 24 31.5	-1.3
	baz=220						
WTP	Ta-pu	2.07	236	eP	Pn	18 24 08.9	+0.5
	baz=237						
WTP				eS	Sn	18 24 33.8	+0.4
	baz=237						
TWK	Hsinying	2.15	238	eP	Pn	18 24 10.2	+0.6
	baz=239						
TWK				eS	Sn	18 24 35.3	-0.1
	baz=239						
CHN1	Nanshi	2.17	236	eP	Pn	18 24 10.6	+0.9
	baz=237						
CHN1				eS	Sn	18 24 36.5	+0.8
	baz=237						
SGST	Jiashian	2.19	233	eP	Pn	18 24 10.5	+0.5
	baz=245						
SGST				eS	Sn	18 24 36.3	+0.2
	baz=245						
WSF	Szhu	2.20	250	eS	Sn	18 24 37.1	+0.5
	baz=261						
ECL	Taimali	2.29	218	eP	Pn	18 24 11.2	-0.2
	baz=219						
ECL				eS	Sn	18 24 38.8	+0.1
	baz=219						
SSD	Sandimen	2.37	226	eP	Pn	18 24 13.2	+0.7
	baz=227						
SSD				eS	Sn	18 24 40.7	0.0
	baz=227						
MASBT	Mashibuluo	2.47	224	eP	Pn	18 24 14.4	+0.6
	baz=225						
MASBT				eS	Sn	18 24 43.5	+0.5
	baz=225						
JIRB	Irabujima	2.49	80	eS	Sn	18 24 43.6	+0.2
PHUB	P’eng-hu	2.81	252	eP	Pn	18 24 18.7	+0.4
	baz=253						
PHUB				eS	Sn	18 24 50.6	-0.6
	baz=253						
VWUC	VWUC	2.81	282	eP	Pn	18 24 18.1	-0.4
	baz=283						
VWUC				eS	Sn	18 24 48.2	-3.1
	baz=283						

MEX 20 18:40:10.1±0.4,18°.37N×102°.86W,h17^{km}±10^{km},MD3.7, Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MMIG	Aquila	0.47	260	eP	Pg	18 40 18.1	-1.4
	baz=80,slow=3.4						
MMIG				eS	Sg	18 40 24.1	-1.8
ZIIG	Zihuatanejo	1.53	120	eP	Pn	18 40 33.2	-3.5
ZIIG				i S	Sn	18 40 52.3	-3.9
ARIG	Puente Sto Nin	2.39	92	eP	Pn	18 40 44.8	-3.7
ARIG				eS	Sn	18 41 12.5	-5.0

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*BJI **20** 18:52:11.2, 1°.59N×93°.55E, h29^{km}, mb4.7/40, mB4.9/20, Ms4.1/11, Ms7 3.8/10*

*IDC **20** 18:52:11.1±0.8, 1°.95N×93°.63E, h0^{km}, mb4.3/20, mb1 4.5/22, mb1mx4.2/70, mbtmp4.4/22, ML4.4/2, MS3.6/4, Ms1 3.6/4, ms1mx3.0/60, Error ellipse: s-maj=30.8km s-min=14.9km az=47.0*

*MOS **20** 18:52:14.3±1.1, 2°.02N×93°.63E, h33^{km}, mb4.9/18, Error ellipse: s-maj=11.2km s-min=5.8km az=110.8*

*ISCJB **20** 18:52:14.5±0.3, 1°.97N±0°.04×93°.61E±0°.03, h33^{km}, mb4.6/65, MS3.8/8, Error ellipse: s-maj=6.0km s-min=3.2km az=29.6*

*DJA **20** 18:52:14.6±0.7, 2°N±4°×9°4E±°, h10^{km}, M5.0/15, mb5.0/15, mB5.4/8, MLv5.2/14, Mw(mB)4.8/8*

*NEIC **20** 18:52:16.8±0.7, 2°.01N×93°.65E, h38^{km}±6^{km}, mb4.8/21, Error ellipse: s-maj=8.1km s-min=4.3km az=224.0*

ISC 20 18:52:17.0±0.5,2°.05N±0°.06×93°.74E±0°.05,h35^{km},n212, σ1^{s}.56/209,mb4.7/66,MS3.8/8,5C-5D,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNSI	Sinabang, Aceh	2.61	82	P	Pn	18 52 57.6	+1.0
MLSI	Meulaboh, Aceh	3.45	50	P	Pn	18 53 08.9	+0.6
TPTI		3.64	71	P	Pn	18 53 11.4	+0.6
BSI	Banda Aceh	3.76	24	P	Pn	18 53 12.2	-0.3
GSI	Gunungsitoli	3.91	101	P	Pn	18 53 15.5	+1.0
GSI	Gunungsitoli	3.91	101	ePn	Pn	18 53 15.7	+1.2
GSI				eSn	Sn	18 53 52.3	-6.8
KCSI	Kotacane, Aceh	4.28	70	P	Pn	18 53 21.7	+2.0
LHMI	Lhok Sumawe	4.50	45	P	Pn	18 53 23.8	+1.2
LHMI	Lhok Sumawe	4.50	45	ePn	Pn	18 53 24.1	+1.4
CMBY	CAMPBELL BAY	4.93	2	eP	Pn	18 53 28.1	-0.5
PBSI	Pulau Batu	5.00	115	P	Pn	18 53 31.4	+1.9
	386nm,0.6s,4µm1.4nm						
TSI	Tuntungan	5.03	73	P	Pn	18 53 32.4	+2.4
	635nm,0.8s,6µm1.8nm						
PSI	Prapat	5.23	82	ePn	Pn	18 53 34.1	+1.2
PSI	Prapat	5.23	82	eP	Pn	18 53 34.1	+1.2
MNSI	Mandailing Nat	5.97	102	P	Pn	18 53 44.2	+1.3
	249nm,0.7s,9µm3.3nm						
SISI	Saibi	6.31	122	P	Pn	18 53 49.4	+1.8
	91nm,0.9s,0.6nm						
BKNI	Bangkinang	7.50	103	P	Pn	18 54 06.2	+2.3
	141nm,0.8s,0.9nm						
BKNI	Bangkinang	7.50	103	ePn	Pn	18 54 04.6	+0.7
KULM	Kulim	7.61	65	ePn	Pn	18 54 06.0	+0.6
KULM				eSn	Sn	18 55 27.7	-2.8
IPM	Ipoh	7.66	71	ePn	Pn	18 54 06.7	+0.5
IPM				eSn	Sn	18 55 24.1	-7.8
TRTT	Trang	8.26	46	P	Pn	18 54 14.8	+0.5
	42nm,0.8s,397nm0.2nm						
SKLT	Songkhla	8.54	53	P	Pn	18 54 18.9	+0.8
	121nm,0.8s,0.4nm						
KRJI	Kerinci	8.75	118	P	Pn	18 54 24.3	+3.1
	241nm,0.8s,3µm1.1nm						
PBA	Port Blair	9.59	354	ePn	Pn	18 54 33.4	+0.7
MASI	Maura Aman, Be	9.94	121	P	Pn	18 54 49.9	+12
MYKOM	Kota Tinggi	10.11	91	ePn	Pn	18 54 40.5	+0.8
MNAI	Manna	11.20	125	ePn	Pn	18 54 55.5	+0.8
MDSI	Maura Dua	12.29	122	P	Pn	18 55 13.1	+3.6
	27nm,1.2s,1µm						
LWLI	Liwa	12.47	124	P	P	18 55 28.8	+5.3
PALK	Pallekele	13.99	292	Pn	Pn	18 55 31.3	-1.5
	1.1nm,0.3s,baz=117,slow=13,SNR=10						
PALK				Sn	Sn	18 57 50.6	-16
	9.1nm,0.3s,baz=116,slow=0.7,SNR=12						
PALK				LR	LR	18 59 47.1	
	comp=Z,276nm,21.2s,baz=114,slow=33						
PALK	Pallekele	13.99	292	ePn	Pn	18 55 31.6	-1.3
PALK				eSn	Sn	18 57 52.2	-15
PALK	Pallekele	13.99	292	eP	Pn	18 55 31.6	-1.3
NAYO	Nakonayok	14.30	31	P	P	18 55 46.6	+2.8
SRAK	Srakaew	14.44	34	P	P	18 55 45.4	+0.1
	41nm,0.4s,555nm						
UMPA	Umpang Tak	14.94	19	P	P	18 55 50.4	-0.5
	13nm,0.8s,101nm						
DBJI	Dramaga	15.55	123	P	P	18 56 09.8	+12
CHAI	Chaiyaphum	15.98	30	P	P	18 56 06.7	+4.2
PBKT	Sadao Pong	16.09	26	ePn	P	18 56 02.4	-1.2
	11nm,0.8s						
PBKT	Sadao Pong	16.09	26	P	P	18 56 05.2	+1.6
	17nm,0.7s,2µm						
SUKH	Sukhothai	16.39	20	P	P	18 56 08.5	+1.5
	21nm,0.8s						
KSM	Kuching	16.57	92	ePn	P	18 56 08.9	-0.1
	43nm,1.2s						
KHON	Khomkaen	16.78	32	P	P	18 56 17.5	+6.2
CM01	Chiang Mai Arr	17.05	17	ePn	Pn	18 56 12.7	-0.1
CM31	Chiang Mai Arr	17.09	17	ePn	Pn	18 56 12.4	-0.8
CMAR	Chiang Mai Arr	17.09	17	P	Pn	18 56 12.8	-0.4
	0.6nm,0.3s,baz=212,slow=12,SNR=28						
CMAR				LR	LR	19 02 31.3	
	comp=Z,81nm,18.4s,baz=205,slow=36						
CHTO	Chiang Mai	17.42	17	ePn	Pn	18 56 15.5	-1.9
	14nm,0.8s						
CHTO	Chiang Mai	17.42	17	eP	Pn	18 56 15.5	-1.9
CHTO				pmax	pmax		
	comp=Z,14nm,0.8s						
CHTO	Chiang Mai	17.42	17	P	P	18 56 18.3	-0.1
	comp=Z,90nm,1.1s						
CMMT	Chiang Mai	17.42	17	P	P	18 56 18.2	-0.2
	comp=Z,20nm,1.1s,comp=Z,524nm						
STKI	Sintang	17.84	96	P	P	18 56 26.5	+3.4
	comp=Z,25nm,0.9s						
SKNT	Sakolnakorn	17.93	34	P	P	18 56 26.9	+2.9
	comp=Z,5.0nm,0.8s						
NONG	Nongkai	18.40	30	P	Pn	18 56 30.3	+0.9
	comp=Z,0.3nm,1.8s						
PANO	Nakornpanom	18.42	35	P	Pn	18 56 31.1	+1.4
	comp=Z,0.8nm,0.8s						
SBUM	Sibu	18.47	88	eP	Pn	18 56 30.6	+0.3
	comp=Z,29nm,1.2s						
BWNR	Bhubaneshwar	19.72	337	eP	P	18 56 43.5	-0.1
SAIH	SAIHA	20.33	358	eP	P	18 56 51.2	+0.8
SAIH				IAmb	IAmb	18 56 56.0	
	comp=Z,38nm,0.9s						
BRDH	Bariadhala	20.61	354	LR	LR	19 05 27.8	
	comp=Z,147nm,18.1s,baz=164,slow=38						
HYB	Hyderabad	21.35	317	i P	P	18 57 02.5	+1.1
HYB				eS	S	19 01 00.0	+3.2
MTKI	Muara Teweh, K	21.36	98	P	P	18 57 04.5	+3.0
	comp=Z,35nm,1.4s						
BBKI	Banjar Baru	21.79	105	P	P	18 57 04.3	-1.8
SILR	SILCHAR	22.62	358	eP	P	18 57 15.3	+0.5
KKM	Kota Kinabalu	22.76	79	eP	P	18 57 16.2	-0.4
	comp=Z,32nm,0.9s						
BOK	Bokaro	22.91	341	eP	P	18 57 19.1	+1.1
H08S2	Diego Garcia H	23.28	245	T	T	19 22 56.0	
	baz=62,slow=74,SNR=29						
H08S3	Diego Garcia H	23.28	245	T	T	19 22 54.2	
	baz=62,slow=74,SNR=37						
H08S1	Diego Carcia H	23.30	245	T	T	19 22 58.5	
	baz=62,slow=74,SNR=38						
SHL	Shillong	23.45	356	eP	P	18 57 23.3	-0.2
	comp=Z,64nm,0.8s						
SHL	Shillong	23.45	356	eP	P	18 57 23.8	+0.3
SHL	Shillong	23.45	356	eP	P	18 57 23.3	-0.2
SHL				pmax	pmax		
	comp=Z,64nm,0.8s						
TURI	Tura	23.59	352	eP	P	18 57 22.4	-2.4
GUWA	GUWAHATI	24.09	355	eP	P	18 57 30.5	+1.2
MOKO	MOKOCHONG	24.14	2	eP	P	18 57 30.1	0.0
TEZP	TEZPUR	24.44	358	eP	P	18 57 32.4	-0.2
KMI	Kunming	24.53	20	P	P	18 57 36.3	+2.7
KMI				pP	pP	18 57 44.4	+0.7
KMI				sP	sP	18 57 48.4	+0.5
KMI				S	S	19 01 53.0	+0.8
KMI				sS	sS	19 02 07.6	-1.1
KMI				pmax	pmax		
	comp=Z,26nm,0.9s						
KMI				pmax	pmax		
	comp=Z,88nm,3.1s						
KMI				LR	LR		
	comp=Z,150nm,14.8s						
KMI				LR	LR		
	comp=Z,150nm,11.0s						
KMI				LR	LR		
	comp=Z,160nm,11.8s						
MYLDM	Lahad Datu	24.90	82	eP	P	18 57 39.4	+2.5
	comp=Z,44nm,1.0s						
ITAN	ITANAGAR	24.95	360	eP	P	18 57 38.1	+0.9
LKP	Lekhapani	25.22	4	eP	P	18 57 39.6	0.0
ZIRO	ZIRO	25.33	0	eP	P	18 57 41.5	+0.6
ODAN	Odare	25.41	347	eP	P	18 57 42.4	+0.8
	comp=Z,64nm,0.9s						
RAMN	Ramite	25.69	345	eP	P	18 57 45.4	+1.2
	comp=Z,53nm,0.6s						
JIRN	Jiri	26.47	345	eP	P	18 57 52.3	+0.9
	comp=Z,129nm,1.1s						
PKIN	Phulchoki	26.61	343	eP	P	18 57 53.0	+0.5
DMN	Daman	26.73	343	eP	P	18 57 54.0	+0.4
GUN	Gumba	26.79	344	eP	P	18 57 55.0	+0.7
	comp=Z,60nm,0.8s						
KKN	Kakani	26.84	343	eP	P	18 57 55.0	+0.4
GKN	Gorkha	27.23	342	eP	P	18 57 58.7	+0.7
	comp=Z,70nm,0.8s						
GYA	Guiyang	27.26	26	eP	P	18 58 01.0	+2.8
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KOLN	Koldanda	27.35	340	eP	P	18 57 59.9	+0.8
LSA	Lhasa	27.61	355	P	P	18 58 03.8	+2.1
LSA				pmax	pmax		
	comp=Z,32nm,0.7s						
LSA	Lhasa	27.61	355	eP	P	18 58 03.4	+1.7
	comp=Z,21nm,0.6s						
LSA	Lhasa	27.61	355	eP	P	18 58 03.4	+1.7
LSA				pmax	pmax		
	comp=Z,21nm,0.6s						
DANN	Dangsing	27.84	341	eP	P	18 58 04.0	+0.4
	comp=Z,50nm,0.8s						
PYUN	Piuthan	27.87	339	eP	P	18 58 04.1	+0.4
	comp=Z,121nm,1.0s						
CD2	Chengdu	30.23	17	eP	P	18 58 26.0	+1.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,160nm,5.0s						
DDI	Dehra Dun	31.81	334	eP	P	18 58 37.4	-1.1
SMLA	Simla	32.89	333	eP	P	18 58 47.7	-0.2
SMLA				IAmb	IAmb	18 58 48.8	
	comp=Z,16nm,0.5s						
DHRM	DHARAMSHALA	34.23	333	eP	P	18 58 59.4	-0.4
XAN	Xi’an	34.84	22	P	P	18 59 05.3	+0.4
XAN				pP	sP	18 59 18.8	-0.4
XAN				pmax	pmax		
	comp=Z,19nm,1.0s						
XAN				LR	LR		
	comp=Z,190nm,17.8s						
XAN				LR	LR		
	comp=Z,230nm,20.6s						
XAN				LR	LR		
	comp=Z,180nm,17.7s						
LZH	Lanzhou	35.14	14	eP	P	18 59 07.8	+0.3
LZH				pP	pP	18 59 15.9	-1.8
LZH				sP	sP	18 59 20.4	-1.5
LZH				pmax	pmax		
	comp=Z,17nm,1.3s						
NIL	Nilore	36.82	331	eP	P	18 59 20.3	-1.5
	comp=Z,20nm,0.8s						
NIL	Nilore	36.82	331	eP	P	18 59 20.3	-1.5
NIL				pmax	pmax		
	comp=Z,20nm,0.8s						
GTA	Gaotai	37.59	8	⇓P	P	18 59 29.0	+0.6
GTA				pP	pP	18 59 38.8	+0.2
GTA				sP	sP	18 59 42.8	0.0
GTA				S	S	19 05 17.8	+2.1
GTA				sS	sS	19 05 34.3	+1.7
GTA				pmax	pmax		
	comp=Z,8.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,100nm,5.4s						
GTA				LR	LR		
	comp=Z,130nm,16.8s						
GTA				LR	LR		
	comp=Z,130nm,15.2s						
GTA				LR	LR		
	comp=Z,95nm,17.3s						
NJ2	Nanjing	38.08	36	eP	P	18 59 34.8	+2.4
NJ2				pmax	pmax		

	comp=Z,9.0nm,0.5s						
KSH	Kashi	40.65	339	P	P	18 59 52.1	-1.9
KSH				PP	PnPn	19 01 30.3	-1.9
KSH				pmax	pmax		
	comp=Z,5.0nm,0.7s						
NWAO	Narrogin (SRO)	41.27	149	LR	LR	19 12 28.3	
	comp=Z,128nm,21.6s,baz=152,slow=30						
H01W3	Cape Leeuwin H	41.42	154	T	T	19 45 25.9	
	baz=330,slow=76,SNR=6.7						
H01W2	Cape Leeuwin H	41.43	154	T	T	19 45 15.2	
	baz=330,slow=76,SNR=7.0						
H01W1	Cape Leeuwin H	41.44	154	T	T	19 45 29.1	
	baz=330,slow=76,SNR=9.0						
HHC	Hu-ho-hao-te	41.85	20	eP	P	19 00 06.3	+2.5
HHC				S	S	19 06 21.5	+2.0
HHC				sS	sS	19 06 35.3	-1.1
HHC				pmax	pmax		
	comp=Z,14nm,0.9s						
HHC				pmax	pmax		
	comp=Z,73nm,4.8s						
HHC				LR	LR		
	comp=Z,160nm,14.5s						
HHC				LR	LR		
	comp=Z,200nm,13.1s						
HHC				LR	LR		
	comp=Z,120nm,13.7s						
WMQ	Urumqi	41.94	353	P	P	19 00 06.1	+1.7
WMQ				sP	sP	19 00 19.5	+0.6
WMQ				pmax	pmax		
	comp=Z,26nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,210nm,4.1s						
WMQ				LR	LR		
	comp=Z,160nm,24.3s						
WMQ				LR	LR		
	comp=Z,110nm,24.3s						
WMQ				LR	LR		
	comp=Z,100nm,22.1s						
SFK	Sufi-Kurgan	42.02	337	P	P	19 00 05.1	-0.2
SFK				pmax	pmax		
	comp=Z,4.0nm,0.5s						
PRZ	Przheval'sk	42.54	343	eP	P	19 00 10.7	+1.2
	comp=Z,23nm,0.9s						
PRZ	Przheval'sk	42.54	343	eP	P	19 00 10.7	+1.2
PRZ				pmax	pmax		
	comp=Z,23nm,0.9s						
ULHL	Ulahol	42.99	341	P	P	19 00 13.6	+0.5
	SNR=5.6						
PDGK	Podgornoye	43.02	345	P	P	19 00 13.5	+0.2
PDGK				pmax	pmax		
	comp=Z,19nm,1.0s						
AML	Almayashu	43.77	338	P	P	19 00 20.2	+0.5
	SNR=13						
TKM2	Tokmak 2	43.80	341	P	P	19 00 20.0	+0.3
	SNR=6.8						
TKM2	Tokmak 2	43.80	341	P	P	19 00 19.2	-0.5
TKM2				pmax	pmax		
	comp=Z,7.0nm,1.0s						
AAK	Ala-Archa	43.93	339	P	P	19 00 20.9	+0.2
	comp=Z,1.0nm,0.3s,baz=176,slow=6.9,SNR=6.1						
EKS2	Erkin-Say	44.20	339	P	P	19 00 23.3	+0.5
	SNR=6.2						
USP	Ospenovka	44.48	340	P	P	19 00 25.0	+0.1
	SNR=6.2						
MNAS	Manas	44.52	338	P	P	19 00 25.5	+0.1
MNAS				pmax	pmax		
	comp=Z,9.0nm,1.4s						
WR1	Warramunga Arr	45.43	121	eP	P	19 00 32.5	-0.3
	comp=Z,9.1nm,0.9s						
WRA	Warramunga Arr	45.43	121	P	P	19 00 32.5	-0.3
	comp=Z,3.5nm,0.9s,baz=297,slow=9.0,SNR=8.6						
WRAB	Tennant Creek	45.43	121	ceP	P	19 00 32.1	-0.7
WRAB				pmax	pmax		
	comp=Z,13nm,1.3s						
MK01	Makanchi Array	45.65	349	eP	P	19 00 34.2	+0.1
MK31	Makanchi Array	45.67	349	eP	P	19 00 34.4	0.0
MK31	Makanchi Array	45.67	349	iP	P	19 00 34.3	0.0
MK31				pmax	pmax		
	comp=Z,17nm,0.8s						
MK32	Makanchi Array	45.67	349	eP	P	19 00 34.7	+0.4
MKAR	Makanchi Array	45.67	349	P	P	19 00 34.7	+0.4
	comp=Z,15nm,0.7s,baz=166,slow=8.7,SNR=149						
MKAR	Makanchi Array	45.67	349	eP	P	19 00 34.4	+0.1
	comp=Z,81nm,0.7s						
MAKZ	Makanchi	45.74	349	eP	P	19 00 34.7	-0.2
	comp=Z,9.2nm,0.8s						
MAKZ	Makanchi	45.74	349	P	P	19 00 34.5	-0.4
MAKZ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KK31	Karatay Array	45.83	336	eP	P	19 00 35.2	-0.4
KK31	Karatay Array	45.83	336	iP	P	19 00 34.7	-0.9
KK31				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KKAR	Karatay Array	45.83	336	eP	P	19 00 35.1	-0.5
KKAR	Karatay Array	45.83	336	eP	P	19 00 35.1	-0.5
ASAR	Alice Springs	46.68	126	P	P	19 00 42.9	+0.2
	comp=Z,0.7nm,0.8s,baz=316,slow=9.0,SNR=5.0						
ASAR				PcP	PcP	19 02 20.3	+4.3
	comp=Z,0.6nm,0.8s,baz=308,slow=4.6,SNR=2.6						
AS31	Alice Springs	46.68	126	eP	P	19 00 42.4	-0.3
	comp=Z,0.9nm,0.8s						
SONA0	Songino Array	46.90	12	eP	P	19 00 44.9	+0.8
SONM	Songino Array	46.90	12	P	P	19 00 44.9	+0.8
	comp=Z,7.6nm,0.7s,baz=192,slow=9.0,SNR=45						
SONA1	Songino Array	46.92	12	eP	P	19 00 44.5	+0.3
ULN	Ulaanbaatar	47.07	12	ceP	P	19 00 45.6	+0.2
ULN				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GEYT	Alibeck	48.38	322	P	P	19 00 55.2	-0.5
	comp=Z,5.1nm,0.6s,baz=133,slow=10,SNR=19						
GYA0B	ALIBECK ARRAY	48.38	322	eP	P	19 00 55.4	-0.3
	comp=Z,13nm,0.7s						
ZAK	Zakamensk	48.83	8	eP	P	19 00 58.1	-0.9
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KURBB	Kurchatov Arra	50.08	347	P	P	19 01 08.6	+0.2
	comp=Z,8.7nm,0.9s,baz=170,slow=7.2,SNR=89						
KURK	Kurchatov	50.15	348	eP	P	19 01 08.6	-0.3
KURK	Kurchatov	50.15	348	d iP	P	19 01 08.7	-0.2
KURK				pmax	pmax		
	comp=Z,13nm,1.1s						
RAYN	Ar Rayn	51.31	299	eP	P	19 01 18.2	+0.1
	comp=Z,3.4nm,0.8s						
RAYN	Ar Rayn	51.31	299	eP	P	19 01 18.3	+0.1
RAYN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HIA	Hailar	52.03	21	iP	P	19 01 23.3	+0.2
HIA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ZAA0	Zalesovo Array	52.25	353	eP	P	19 01 24.4	-0.1
	comp=Z,7.7nm,0.8s						
ZALV	Zalesovo Beam	52.25	353	P	P	19 01 24.8	+0.2
	comp=Z,6.6nm,0.7s,baz=187,slow=7.8,SNR=33						
ZALV	Zalesovo Beam	52.25	353	eP	P	19 01 24.3	-0.2
ZALV	Zalesovo Beam	52.25	353	eP	P	19 01 24.3	-0.2
ZAA1	Zalesovo Array	52.25	353	eP	P	19 01 24.8	+0.2
NVS	Novosibirsk	53.32	352	eP	P	19 01 30.7	-1.7
NVS				pmax	pmax		
	comp=Z,9.0nm,1.2s						
NVS				pmax	pmax		
	comp=N,6.0nm,1.3s						
NVS				pmax	pmax		
	comp=E,4.0nm,1.3s						
BVA0	Borovoye Array	54.37	343	iP	P	19 01 38.8	-1.4
BVA0				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BVAR	Borovoye Array	54.37	343	P	P	19 01 39.5	-0.7
	comp=Z,3.7nm,0.7s,baz=147,slow=9.2,SNR=22						
BRVK	Borovoye	54.43	343	ceP	P	19 01 39.2	-1.4
BRVK				pmax	pmax		
	comp=Z,14nm,1.7s						
AB31	Akbulak array	55.18	334	iP	P	19 01 44.7	-1.4
AB31				pmax	pmax		
	comp=Z,8.0nm,1.0s						
ABKAR	Akbulak array	55.18	334	eP	P	19 01 44.9	-1.2
STKA	Stephens Creek	56.51	131	P	P	19 01 54.9	-1.1
	comp=Z,1.0nm,0.7s,baz=0.0,slow=15,SNR=2.3						
STKA	Stephens Creek	56.51	131	eP	P	19 01 55.5	-0.4
	comp=Z,6.0nm,1.9s						
STKA	Stephens Creek	56.51	131	eP	P	19 01 55.5	-0.4
STKA				pmax	pmax		
	comp=Z,6.0nm,1.9s						
AKTO	Aktyubinsk	56.90	334	P	P	19 01 57.1	-1.2
	comp=Z,0.9nm,0.4s,baz=127,slow=10.0,SNR=5.5						
KLR	Kul'dur	57.11	29	ceP	P	19 02 00.9	+1.0
BOD	Bodaibo	57.88	13	⇓eP	P	19 02 05.5	+0.4
BOD				pmax	pmax		
	comp=Z,72nm,1.3s						
GNI	Garni	58.31	317	iP	P	19 02 06.4	-2.3
GNI				pmax	pmax		
	comp=Z,40nm,1.0s						
NCK	Nalchik	60.63	320	iP	P	19 02 23.1	-1.4
NCK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
SVE	Sverdlovsk	60.66	340	eP	P	19 02 22.8	-1.6
SVE				pmax	pmax		
	comp=Z,10.0nm,1.1s						
NEY	Neytrino	61.08	320	iP	P	19 02 26.3	-1.5
NEY				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ARU	Arti	61.10	339	c iP	P	19 02 25.6	-1.8
ARU						19 03 04.2	
ARU						19 04 38.6	
ARU				S	S	19 10 43.7	-0.2
ARU				SS	SS	19 14 42.9	-1.3
ARU				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KBZ	Khabaz	61.19	320	P	P	19 02 28.4	+0.2
	comp=Z,4.9nm,0.9s,baz=134,slow=5.9,SNR=9.2						
KIV	Kislovodsk	61.43	320	eP	P	19 02 28.5	-1.5
	comp=Z,12nm,1.1s						
KIV	Kislovodsk	61.43	320	d iP	P	19 02 29.6	-0.4
KIV				*PP	pP	19 02 39.0	-1.7
KIV				e*SP	sP	19 02 48.0	+3.2
KIV				pmax	pmax		
	comp=Z,12nm,1.0s						
BR101	Keskin Array S	66.00	313	eP	P	19 02 59.0	-1.3
BRTR	Keskin Array B	66.00	313	P	P	19 02 59.0	-1.3
	comp=Z,0.6nm,0.7s,baz=124,slow=7.3,SNR=4.0						
BRTR	Keskin Array B	66.00	313	iP	P	19 02 59.5	-0.8
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
OBN	Obninsk	70.10	329	⇓eP	P	19 03 23.2	-2.3
OBN				*PP	pP	19 03 36.0	-0.4
OBN						19 03 47.0	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,115nm,18.0s						
AKASG	Malin Array Be	72.49	323	P	P	19 03 39.0	-1.1
	comp=Z,0.4nm,0.4s,baz=90,slow=5.7,SNR=4.5						
AKASG	Malin Array Be	72.49	323	iP	P	19 03 39.2	-0.9
AKBB	Malin Array Si	72.49	323	eP	P	19 03 38.5	-1.6
	comp=Z,34nm,0.8s						
AKBB	Malin Array Si	72.49	323	eP	P	19 03 38.5	-1.6
AKBB				pmax	pmax		
	comp=Z,34nm,0.8s						
TIXI	Tiksi	72.99	11	P	P	19 03 42.5	-0.1
	comp=Z,8.5nm,0.8s,baz=286,slow=3.4,SNR=4.8						
TIXI	Tiksi	72.99	11	iP	P	19 03 41.4	-1.2
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MLR	Muntele Rosu	73.09	317	P	P	19 03 43.8	-0.1
	comp=Z,3.2nm,0.8s,baz=117,slow=9.0,SNR=6.5						
MLR	Muntele Rosu	73.09	317	eP	P	19 03 43.8	-0.1
	comp=Z,45nm,1.6s						
MLR	Muntele Rosu	73.09	317	eP	P	19 03 43.8	-0.1
MLR				pmax	pmax		
	comp=Z,45nm,1.6s						
BUR04	Bucovina Ar. S	74.12	319	eP	P	19 03 49.5	-0.4
SEY	Seymchan	74.36	24	iP	P	19 03 52.1	+1.2
FIA0	FINESS Array S	77.66	333	eP	P	19 04 08.2	-1.5
FIA0	FINESS Array S	77.66	333	eP	P	19 04 08.2	-1.5
FINES	FINESS Array B	77.66	333	P	P	19 04 08.2	-1.5
	comp=Z,1.2nm,0.6s,baz=126,slow=7.1,SNR=6.5						
FINES	FINESS Array B	77.66	333	iP	P	19 04 08.1	-1.6
FINES				pmax	pmax		
	comp=Z,1.0nm,0.6s						
VYHS	Vyhne	78.48	319	eP	P	19 04 14.5	-0.1
VYHS	Vyhne	78.48	319	eP	P	19 04 14.5	-0.1
GEA0	GERESS Array S	81.90	319	eP	P	19 04 32.6	-0.4
GEC2	GERESS Array S	81.90	319	eP	P	19 04 32.6	-0.5
	comp=Z,18nm,0.7s						
GEC2	GERESS Array S	81.90	319	eP	P	19 04 32.6	-0.5
GEC2				pmax	pmax		
	comp=Z,18nm,0.7s						
GERES	GERESS Array B	81.90	319	P	P	19 04 33.0	-0.1
	comp=Z,2.9nm,0.7s,baz=100,slow=5.5,SNR=26						
KEST	Kesra	84.25	306	P	P	19 04 46.4	+0.8
	comp=Z,2.6nm,0.9s,baz=74,slow=7.4,SNR=4.1						
KEST	Kesra	84.25	306	eP	P	19 04 45.1	-0.4
	comp=Z,11nm,0.8s						
DAVOX	Davos/Dischmat	84.30	317	P	P	19 04 45.6	-0.1
	comp=Z,4.6nm,0.6s,baz=135,slow=8.6,SNR=9.1						
NAC	Naches	122.70	28	ePKPdf	PKPdf	19 11 07.6	-1.8
CSR	Chase Ranch	129.19	37	ePKPpre	PKPpre	19 11 10.4	
LTX	Lajitas	144.62	27	ePKPdf	PKPbc	19 11 50.0	+0.4
LTX	Lajitas	144.62	27	ePKIKP	PKPbc	19 11 50.0	+0.5
TX31	Lajitas Ar. Si	144.62	27	ePKPdf	PKPab	19 11 49.0	-0.3
TX31				ePKPdf	PKPbc	19 11 49.1	-0.4
TXAR	Lajitas Array	144.62	27	PKP	PKPbc	19 11 50.0	+0.4
	comp=Z,0.9nm,0.5s,baz=65,slow=1.3,SNR=17						
TXAR	Lajitas Array	144.62	27	PKIKP	PKPbc	19 11 50.0	+0.5

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*BJI **20** 18:54:06.0, 56°.50N×153°.40W, h10^{km}, mb5.3/51, mB5.2/45, Ms5.0/41, Ms7 4.9/40*

*MOS **20** 18:54:08.5±0.8, 56°.57N×153°.66W, h10^{km}, mb5.5/87, MS4.3/13, Error ellipse: s-maj=7.8km s-min=4.0km az=95.5*

*IDC **20** 18:54:08.4±0.4, 56°.51N×153°.63W, h0^{km}, mb5.1/51, mb1 5.1/53, mb1mx5.0/76, mbtmp5.1/53, ML3.9/3, MS4.2/44, Ms1 4.3/44, ms1mx4.1/66, Error ellipse: s-maj=10.3km s-min=8.4km az=174.0*

*ISCJB **20** 18:54:08.8±0.1, 56°.62N±0°.01×153°.48W±0°.02, h10^{km}, mb5.1/409, MS4.4/65, Error ellipse: s-maj=2.0km s-min=1.4km az=21.3*

*NEIC **20** 18:54:11.9±0.3, 56°.60N×153°.54W, h21^{km}±2^{km}, mb5.1/285, ML5.0(AEIC), Error ellipse: s-maj=1.9km s-min=1.4km az=191.0*

*GCMT **20** 18:54:11.9±0.3, 56°.16N×153°.18W, h31^{km}±1^{km}, MW5.0/74, Moment Tensor Solution. s46,c61; s74,c101; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.57±.16; $M_{\theta\theta}$-1.77±.12; $M_{\phi\phi}$-0.80±.10; $M_{r\theta}$1.98±.18; $M_{\theta\phi}$-1.16±.07; $M_{\phi r}$1.51±.14; Best double couple: $M_0$3.56900×10^{16} NP1:ϕ_s54.00000°, δ67.00000°, λ88.00000°. NP2: ϕ_s239.00000°, δ23.00000°, λ95.00000°. Principal axes: T 3.5850, Plg68.0000°, Azm320.0000°; N -0.0330, Plg2.0000°, Azm55.0000°; P -3.5520, Plg22.0000°, Azm145.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 20 18:54:11.6±0.4, **56°.55N**±0°.04×**153°.42W**±0°.03, **h20**^{km}±3^{km}, **h21**^{km}**:pP-P, n1397, σ1^{s}13**/1401, **mb5.2**/413, **MS4.3**/66, **68C-29D, Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SII	Sitkinak Islan	0.42	272	ePg	Pb	18 54 20.5	+0.2
SII				eSg	Sb	18 54 26.7	+0.6
OHAK	Old Harbor	0.68	6	ePg	Pn	18 54 26.4	+0.4
OHAK				eSn	Sn	18 54 38.1	+2.2
KDAK	Kodiak Island	1.32	20	Pg	Pb	18 54 35.3	-0.3
	950nm,0.3s,baz=205,slow=5.9						
KDAK				Lg	Lg	18 54 52.3	
	350nm,0.3s,baz=52,slow=15,SNR=6.9						
KDAK	Kodiak Island	1.32	20	ePn	Pn	18 54 34.8	+0.1
KDAK				ePg	Pb	18 54 35.1	-0.4
KDAK				eSn	Sn	18 54 50.8	-0.9
KDAK	Kodiak Island	1.32	20	iP	Pn	18 54 34.4	-0.4
CAHL	Cahill	1.82	327	P	Pn	18 54 42.3	+0.6
MGLS	Mageik Landsli	1.85	330	P	Pn	18 54 42.7	+0.6
KJL	Kejulik	1.91	323	P	Pn	18 54 43.6	+0.7
PLK3	Peulik 3	1.93	308	P	Pn	18 54 43.9	+0.7
KAKN	Katmai Knife C	1.96	334	P	Pn	18 54 44.4	+0.6
KABU	Katmai Buttres	2.00	330	P	Pn	18 54 45.1	+0.9
ANCK	Angle Creek	2.00	327	P	Pn	18 54 44.8	+0.6
KAPH	Katmai Pasha	2.11	347	P	Pn	18 54 47.0	+1.3
PLK1	Peulik 1	2.14	307	P	Pn	18 54 46.8	+0.8
PLBL	Peulik Blue Cr	2.18	303	P	Pn	18 54 47.6	+0.9
KELA	Mount Kelaz	2.27	328	P	Pn	18 54 48.6	+0.7
PLK5	Peulik 5	2.38	309	P	Pn	18 54 50.4	+1.2
CDD	Cape Douglas	2.39	357	P	Pn	18 54 51.0	+1.5
ANNE	Aniakchak Nort	2.58	280	P	Pn	18 54 52.0	-0.2
ANNW	Aniakchak Nort	2.67	281	P	Pn	18 54 53.7	+0.2
AZAC	Aniakchak	2.67	279	P	Pn	18 54 53.3	-0.2
CHGN	Chignik	2.79	267	ePn	Pn	18 54 53.1	-1.8
AUI	Augustine Isla	2.79	360	P	Pn	18 54 56.8	+1.8
AUW	Augustine West	2.83	359	P	Pn	18 54 57.4	+1.9
AUNW	Augustine NWes	2.84	359	P	Pn	18 54 57.5	+1.9
CNPM	China Poot	3.20	20	ePn	Pn	18 55 01.1	+0.4
CNPM				eSn	Sn	18 55 39.0	+0.8
VNHG	Veniaminof 1	3.21	267	P	Pn	18 55 01.2	+0.4
HOM	Homer	3.26	16	ePn	Pn	18 55 02.5	+1.1
VNFG	Veniaminof 2	3.42	268	P	Pn	18 55 04.0	+0.3
VNWF	Veniaminof 8	3.44	266	P	Pn	18 55 03.4	-0.7
BRLK	Bradley Lake	3.49	22	ePn	Pn	18 55 04.4	-0.3
BRLK				eSn	Sn	18 55 44.3	-1.0
ILIM	Iliamna	3.55	4	ePn	Pn	18 55 07.1	+1.6
RSO	Redoubt South	3.94	5	ePn	Pn	18 55 11.8	+0.8
RDWB	Redoubt West	3.96	4	P	Pn	18 55 12.3	+1.1
RDJH	Redoubt Jeurge	4.07	4	P	Pn	18 55 13.7	+1.1
DFR	Drift River	4.07	5	P	Pn	18 55 13.7	+1.0
SDPT	Sand Point	4.15	256	ePn	Pn	18 55 11.9	-1.7
SLKM	Skilak Lake	4.31	22	ePn	Pn	18 55 15.9	0.0
SLKM	Skilak Lake	4.31	22	eP	Pn	18 55 15.9	0.0
SVW2	Sparrevohn	4.70	347	ePn	Pn	18 55 21.9	+0.7
SPU	Mount Spurr	4.70	8	ePn	Pn	18 55 21.7	+0.5
SPCR	Spurr Chakacha	4.71	7	P	Pn	18 55 22.6	+1.2
MID	Middleton Isla	4.75	50	ePn	Pn	18 55 21.6	-0.2
MID	Middleton Isla	4.75	50	eP	Pn	18 55 21.6	-0.2
SPCP	Crater Peak Br	4.78	7	ePn	Pn	18 55 23.6	+1.2
SPCG	Spurr Capps Gl	4.81	8	P	Pn	18 55 24.0	+1.1
PVV	Pavlof Volcano	4.85	259	P	Pn	18 55 22.2	-1.0
PS4A	Pavlof South-4	4.89	259	P	Pn	18 55 22.7	-1.2
FIB	Fire Island	4.93	19	ePn	Pn	18 55 25.7	+1.4
FIB	Fire Island	4.93	19	eP	Pn	18 55 25.7	+1.4
RC01	Rabbit Creek A	4.94	21	ePn	Pn	18 55 24.2	-0.2
SUA	Susitna One	5.12	15	ePn	Pn	18 55 27.1	0.0
DT1	Dutton Round H	5.20	258	ePn	Pn	18 55 26.3	-1.8
HIN	Hinchinbrook I	5.30	40	ePn	Pn	18 55 29.1	-0.4
HIN				eSn	Sn	18 56 27.8	-1.9
GLI	Glacier Island	5.45	35	ePn	Pn	18 55 30.1	-1.5
KNK	Knik Glacier	5.51	26	P	Pn	18 55 31.7	-0.6
PMR	Palmer	5.52	22	ePn	Pn	18 55 31.0	-1.4
PMR	Palmer	5.52	22	eP	Pn	18 55 31.0	-1.4
SKT	Skwentna	5.53	9	ePn	Pn	18 55 33.1	+0.4
FID	Port Fidalgo	5.55	38	ePn	Pn	18 55 31.1	-1.9
EYAK	Cordova Ski Ar	5.67	42	ePn	Pn	18 55 33.5	-1.1
GHO	Glory Hole Cre	5.73	22	ePn	Pn	18 55 34.5	-0.9
JPK	Jack Peak	5.74	35	ePn	Pn	18 55 34.6	-0.9
KAIM	Kayak Island	5.84	51	ePn	Pn	18 55 35.9	-0.9
KAIM				eSn	Sn	18 56 41.8	-1.2
SML	Sawmill	5.89	24	ePn	Pn	18 55 36.7	-0.8
SML	Sawmill	5.89	24	eP	Pn	18 55 36.7	-0.8
FALS	False Pass	5.90	257	ePn	Pn	18 55 35.8	-1.9
RAGM	Ragged Mountai	5.99	46	ePn	Pn	18 55 37.6	-1.3
RAGM				eSn	Sn	18 56 45.0	-1.8
DIV	Divide	6.07	38	ePn	Pn	18 55 39.1	-1.0
GOAT	Goat Mountain	6.08	45	P	Pn	18 55 39.9	-0.4
SCM	Sheep Creek Mo	6.15	28	ePn	Pn	18 55 40.5	-0.7
SUCK	Suckling Hills	6.19	51	P	Pn	18 55 41.0	-0.7
NICHA	Nichawak Mount	6.19	49	P	Pn	18 55 41.3	-0.4
KLU	Klutina	6.29	35	ePn	Pn	18 55 42.0	-1.1
SSLW	Shishaldin Wes	6.31	258	P	Pn	18 55 42.6	-0.8
SSBA	Shishaldin	6.32	258	P	Pn	18 55 41.8	-1.6
BMRM	Bremner River	6.38	42	ePn	Pn	18 55 43.1	-1.1
BMRM				eSn	Sn	18 56 53.4	-3.0
BERG	Berg Lake	6.39	49	ePn	Pn	18 55 43.5	-0.8
PPLA	Purkeypile	6.40	5	ePn	Pn	18 55 44.6	-0.1
GRIN	Grindle Hills	6.49	51	P	Pn	18 55 45.3	-0.5
KHIT	Khitrov Hills	6.61	50	P	Pn	18 55 46.5	-1.0
WESE	West Dahl East	6.67	257	ePn	Pn	18 55 47.4	-1.0
WESP	Westdahl Peak	6.74	257	ePn	Pn	18 55 48.6	-0.7
WAX	Waxell Ridge	6.78	50	ePn	Pn	18 55 49.6	-0.2
CRQM	Cirque	6.82	48	ePn	Pn	18 55 49.8	-0.7
BARK	Barkley Ridge	6.91	51	ePn	Pn	18 55 50.6	-1.0
CAST	Castle Rocks	6.93	5	ePn	Pn	18 55 52.4	+0.6
TGL	Tana Glacier	6.95	48	ePn	Pn	18 55 51.1	-1.0
GLB	Gilahina Butte	6.97	41	ePn	Pn	18 55 52.0	-0.5
TRF	Thorofare Moun	7.10	11	ePn	Pn	18 55 53.4	-0.9
KTH	Kantishna Hill	7.14	9	ePn	Pn	18 55 54.4	-0.3
YAH	Yahtse	7.22	53	ePn	Pn	18 55 55.5	-0.4
DHY	Denali Highway	7.22	22	ePn	Pn	18 55 55.5	-0.4
HARP	HAARP	7.22	32	ePn	Pn	18 55 55.9	0.0
KIAG	Kiagna River	7.23	48	P	Pn	18 55 55.5	-0.6
MCARA	McCarthy VSAT	7.23	44	P	Pn	18 55 56.0	0.0
BALM	Baldy	7.30	47	ePn	Pn	18 55 56.1	-0.9
BALM				eSn	Sn	18 57 14.5	-4.7
BALM	Baldy	7.30	47	eP	Pn	18 55 56.1	-0.9
BALM				e		18 57 14.5	
PTPK	Patty Peak	7.34	46	P	Pn	18 55 56.8	-0.8
CHUM	Lake Minchumin	7.38	4	ePn	Pn	18 55 58.6	+0.7
AKSA	Akutan Strait	7.41	256	ePn	Pn	18 55 56.8	-1.6
AKUT	Akutan	7.45	256	ePn	Pn	18 55 56.5	-2.4
AHB	Akutan Harbor	7.48	256	P	Pn	18 55 58.2	-1.2
AKLV	Akutan Long Va	7.54	257	ePn	Pn	18 55 58.3	-1.8
MCK	McKinley	7.54	15	ePn	Pn	18 56 00.3	+0.1
SAMH	Samovar Hills	7.55	56	P	Pn	18 56 00.1	-0.4
PAX	Paxson	7.58	29	ePn	Pn	18 56 00.2	-0.7
PAX	Paxson	7.58	29	eP	Pn	18 56 00.2	-0.7
BARN	Barnard Glacie	7.59	49	ePn	Pn	18 56 00.5	-0.6
BPAW	Bear Paw Mtn.	7.67	8	ePn	Pn	18 56 01.6	-0.4
CTGM	Chitina Glacie	7.68	50	ePn	Pn	18 56 02.5	+0.2
YKU2	Yakutat	7.88	62	ePn	Pn	18 56 06.4	+1.7
BWN	Browne	7.89	13	ePn	Pn	18 56 04.4	-0.6
UNV	Unalaska Valle	7.96	256	ePn	Pn	18 56 02.5	-3.4
PNL	Peninsula	8.05	61	ePn	Pn	18 56 07.0	-0.3
MCIR	Makushin Cirqu	8.13	257	ePn	Pn	18 56 07.1	-1.2
YUK2	White River	8.32	46	P	Pn	18 56 11.2	+0.3
NEA	Nenana	8.33	13	ePn	Pn	18 56 10.5	-0.5
WRH	Wood River Hil	8.37	16	ePn	Pn	18 56 10.4	-1.1
RIDG	Independ'e Rid	8.38	27	ePn	Pn	18 56 11.7	0.0
HDA	Harding Lake	8.50	19	ePn	Pn	18 56 13.0	-0.3
CCB	Clear Creek Bu	8.58	16	ePn	Pn	18 56 12.5	-1.9
MLY	Manley	8.61	8	ePn	Pn	18 56 13.8	-1.1
YUK1	Sand Pete Hill	8.65	44	P	Pn	18 56 15.4	0.0
BCA3	Beaver Creek A	8.77	37	ePn	Pn	18 56 17.0	-0.1
COLA	College	8.78	16	ePn	Pn	18 56 16.4	-0.8
COLA	College	8.78	16	eP	Pn	18 56 16.4	-0.8
SCRK	Sand Creek	8.79	28	ePn	Pn	18 56 17.5	+0.1
MDM	Murphy Dome	8.81	15	ePn	Pn	18 56 16.1	-1.4
ILAR	Eielson Array	8.85	18	Pn	Pn	18 56 17.8	-0.3
	7.6nm,0.3s,baz=201,slow=14,SNR=145						
ILAR				Sn	Sn	18 57 52.1	-4.8
	baz=213,slow=23,SNR=2.9						
ILAR				LR	LR	19 00 16.9	
	comp=Z,4μm,18.1s,baz=210,slow=41						
ILB	Eielson Array	8.85	18	ePn	Pn	18 56 16.8	-1.3
ILB				eSn	Sn	18 57 52.1	-4.8
IL1	Eielson Array	8.85	18	ePn	Pn	18 56 17.0	-1.0
YUK7	Dusty Glacier	8.93	57	ePn	Pn	18 56 19.7	+0.4
OKER	Okmok East Rim	8.96	256	ePn	Pn	18 56 18.9	-0.9
OKTU	Okmok Mt. Tuli	8.99	255	ePn	Pn	18 56 18.3	-1.8
YUK4	Talbot Arm	9.01	52	ePn	Pn	18 56 20.9	+0.4
SPIA	Saint Paul Isl	9.24	281	ePn	Pn	18 56 24.2	+0.8
HYT	Haines Junctio	9.32	56	ePn	Pn	18 56 24.1	-0.5
PLBC	Pleasant Camp	9.51	65	ePn	Pn	18 56 26.9	-0.2
NIKH	Nikolski High	9.61	255	ePn	Pn	18 56 26.9	-1.6
PRP	Porcupine Dome	9.77	20	ePn	Pn	18 56 30.5	-0.3
SIT	Sitka	9.94	80	ePn	Pn	18 56 31.8	-1.2
SIT	Sitka	9.94	80	eP	Pn	18 56 31.8	-1.2
ANM	Nome	9.95	329	ePn	Pn	18 56 33.7	+0.7
SKAG	Skagway	10.03	66	ePn	Pn	18 56 34.5	+0.3
BESE	Bessie Mountai	10.18	71	ePn	Pn	18 56 37.1	+0.8
EGAK	Eagle	10.19	31	ePn	Pn	18 56 35.7	-0.7
DAWY	Dawson	10.24	37	ePn	Pn	18 56 36.9	-0.2
JIS	Juneau Island	10.41	73	ePn	Pn	18 56 38.6	-0.8
JIS				eSn	Sn	18 58 29.1	-6.2
WHY	Whitehorse	10.50	59	ePn	Pn	18 56 40.4	-0.4
FYU	Fort Yukon	10.77	18	ePn	Pn	18 56 43.1	-1.2
COLD	Coldfoot	10.82	7	ePn	Pn	18 56 41.9	-3.2
CRAG	Craig	11.41	87	ePn	Pn	18 56 47.5	-5.6
GAMB	Gambell	11.60	316	ePn	Pn	18 56 55.0	-0.6
WRAK	Wrangell Islan	11.64	82	ePn	Pn	18 56 58.7	+2.4
TOLK	Toolik Lake Re	12.26	7	P	Pn	18 57 04.4	-0.4
	baz=190						
TOLK	Toolik Lake Re	12.26	7	ePn	Pn	18 57 04.2	-0.6
RDOG	Red Dog Mine	12.34	343	ePn	Pn	18 57 05.4	-0.4
H02N1	VAN INLET T-PH	12.45	97	Pn	Pn	18 57 07.4	0.0
H02N1				T	T	19 09 51.9	
	SNR=33						
DIB	Dawson Inlet,	12.50	97	ePn	Pn	18 57 07.7	-0.4
H02S1	DAWSON INLET T	12.50	97	Pn	Pn	18 57 09.8	+1.8
H02S1				T	T	19 09 44.8	
	SNR=57						
DLBC	Dease Lake	12.71	72	Pn	Pn	18 57 13.2	+2.3

	0.4nm,0.3s,baz=255,slow=12,SNR=3.9						
DLBC				Sn	Sn	18 59 28.2	-3.4
	0.3nm,0.3s,baz=112,slow=19,SNR=2.5						
DLBC				LR	LR	19 01 50.1	
	comp=Z,2µm,18.4s,baz=282,slow=36						
DLBC	Dease Lake	12.71	72	ePn	Pn	18 57 12.2	+1.3
DLBC				eSn	Sn	18 59 28.2	-3.4
ATKA	Atka Island	12.85	259	ePn	Pn	18 57 09.6	-3.3
INK	Inuvik	14.86	30	Pn	Pn	18 57 40.6	+0.6
	0.3nm,0.3s,baz=236,slow=16,SNR=21						
INK				Sn	S	19 00 38.5	-3.2
	0.2nm,0.3s,baz=15,slow=20,SNR=2.6						
INK				Lg	Lg	19 02 00.8	
	baz=54,slow=1.3,SNR=3.6						
INK	Inuvik	14.86	30	ePn	Pn	18 57 40.0	-0.1
INK				eSn	S	19 00 38.5	-3.2
INK				Lg	Lg	19 02 00.8	
INK	Inuvik	14.86	30	eP	Pn	18 57 40.0	-0.1
BBB	Bella Bella	15.34	96	Pn	Pn	18 57 46.0	-0.6
	0.2nm,0.3s,baz=285,slow=11,SNR=6.6						
BBB				LR	LR	19 02 33.0	
	comp=Z,1µm,18.8s,baz=294,slow=33						
BBB	Bella Bella	15.34	96	ePn	Pn	18 57 46.0	-0.6
	44nm,1.3s						
SMY	Shemya	19.08	272	eP	P	18 58 30.5	-1.9
	90nm,0.9s						
SMY	Shemya	19.08	272	eP	P	18 58 30.5	-1.9
SMY				pmax	pmax		
	comp=Z,91nm,0.9s						
LLLB	Lillooet	19.53	94	eP	Pn	18 58 39.4	+0.7
	comp=Z,50nm,1.4s						
A04D	Lummi Island	20.08	100	P	P	18 58 43.8	+0.4
	baz=305						
NLWA	Neilton Lookou	20.24	104	eP	Pn	18 58 46.8	-0.3
	comp=Z,40nm,1.0s						
YKW3	Yellowknife Ar	20.31	57	eP	P	18 58 46.5	+0.7
YKA	Yellowknife Ar	20.31	57	P	P	18 58 46.7	+0.9
	comp=Z,36nm,0.8s,baz=270,slow=11,SNR=176						
YKA				PcP	PcP	19 02 57.9	-0.3
	comp=Z,1.8nm,0.8s,baz=254,slow=1.8,SNR=4.6						
YKA				LR	LR	19 07 11.7	
	comp=Z,108nm,18.8s,baz=268,slow=38						
B05A	Bryant	20.68	100	P	Pn	18 58 51.5	-0.7
	baz=306,SNR=7.7						
B06A	Marblemount	20.86	99	eP	P	18 58 52.6	+0.8
	comp=Z,31nm,0.9s						
E03A	Lebam	20.93	106	eP	P	18 58 49.2	-3.4
	comp=Z,54nm,1.1s						
D05A	Enumclaw	21.37	103	eP	P	18 58 59.2	+1.8
	comp=Z,72nm,1.1s						
PNT	Penticton	21.45	95	eP	P	18 59 00.3	+2.1
PNT	Penticton	21.45	95	eP	P	18 59 00.3	+2.1
F04D	Rainier, OR	21.52	106	P	P	18 59 00.4	+1.5
	baz=310						
C06D	Leavenworth	21.53	100	P	P	18 59 00.7	+1.6
	baz=306						
LON	Longmire	21.74	103	eP	P	18 59 03.0	+1.6
	comp=Z,30nm,1.0s						
LON	Longmire	21.74	103	eP	P	18 59 03.0	+1.6
LON				pmax	pmax		
	comp=Z,30nm,1.0s						
G03D	McMinnville, O	21.96	108	P	P	18 59 05.6	+1.9
	baz=312						
LTY	Liberty	22.05	101	eP	P	18 59 05.7	+0.9
	comp=Z,45nm,1.0s						
B08A	Colville Reser	22.13	97	eP	P	18 59 06.8	+1.2
	comp=Z,71nm,1.0s						
COR	Corvallis	22.36	110	eP	P	18 59 10.1	+2.1
	comp=Z,91nm,1.1s						
COR	Corvallis	22.36	110	eP	P	18 59 10.1	+2.1
COR				pmax	pmax		
	comp=Z,91nm,1.1s						
H04A	Detroit Lake	22.88	108	eP	P	18 59 15.0	+1.5
	comp=Z,82nm,1.1s						
E07A	Sunnyside	22.92	102	eP	P	18 59 15.5	+1.6
I03D	Drain, OR	22.95	111	P	P	18 59 15.3	+1.0
	baz=315						
G05D	Wamic, OR	22.97	106	P	P	18 59 16.0	+1.5
	baz=311						
C09A	Chrisman Ranch	23.04	97	eP	P	18 59 16.5	+1.3
	comp=Z,24nm,0.8s						
KEBM	Edson Butte	23.04	114	eP	P	18 59 17.0	+1.8
	comp=Z,59nm,0.9s						
D08A	Wollman Farm,	23.12	100	eP	P	18 59 16.9	+0.9
	comp=Z,58nm,0.9s						
OT3	Othello 3	23.19	101	eSn	Sn	19 03 43.4	-1.5
HAWA	Hanford	23.19	102	eP	P	18 59 17.6	+0.9
	comp=Z,37nm,1.0s						
F07A	Phinny Hill Vi	23.29	103	eP	P	18 59 19.5	+1.8
	comp=Z,40nm,0.8s						
G06A	Carlson Farm,	23.34	105	eP	P	18 59 20.4	+2.2
	comp=Z,21nm,1.1s						
I04A	Tendick Farm,	23.37	110	P	P	18 59 19.8	+1.2
	baz=314,SNR=6.8						
E08A	Dider Farm, El	23.39	101	eP	P	18 59 20.2	+1.6
	comp=Z,42nm,1.0s						
I05D	Terrebonne, OR	23.56	108	P	P	18 59 21.8	+1.4
	baz=313						
KBO	Bosley Butte	23.57	115	eP	P	18 59 23.1	+2.4
	comp=Z,38nm,1.1s						
E09A	Wood Farm, Sta	23.87	100	eP	P	18 59 24.3	+0.9
	comp=Z,55nm,0.9s						
J04D	Umpqua Nationa	23.91	110	P	P	18 59 26.0	+2.0
	baz=315,SNR=6.5						
L02D	Cave Junction,	23.93	114	P	P	18 59 25.7	+1.8
	baz=317						
HUMO	Hull Mountain	23.93	113	eP	P	18 59 25.6	+1.7
	comp=Z,48nm,0.8s						
PINE	Pine Mountain	24.14	108	eP	P	18 59 27.9	+1.7
	comp=Z,58nm,0.9s						
G08A	Pilot Rock	24.20	103	eP	P	18 59 27.6	+1.0
	comp=Z,22nm,0.8s						
J05D	Fort Rock, OR	24.34	109	P	P	18 59 30.2	+2.3
	baz=314,SNR=40						
K04D	Chiloquin, OR	24.54	111	P	P	18 59 31.8	+2.2
	baz=316						
YBH	Yreka Blue Hor	24.69	114	P	P	18 59 33.3	+2.2
	comp=Z,12nm,0.8s,baz=328,slow=3.7,SNR=7.7						
YBH				LR	LR	19 07 04.8	
	comp=Z,614nm,19.2s,baz=302,slow=31						
YBH	Yreka Blue Hor	24.69	114	eP	P	18 59 33.0	+2.0
	comp=Z,27nm,0.9s						
YBH	Yreka Blue Hor	24.69	114	eP	P	18 59 33.0	+2.0
YBH				pmax	pmax		
	comp=Z,27nm,0.9s						
I07A	Izee	24.71	106	eP	P	18 59 31.8	+0.6
	comp=Z,11nm,0.8s						
F10A	Beach Ranch, E	24.71	100	eP	P	18 59 32.5	+1.3
	comp=Z,31nm,0.8s						
JCC	Jacoby Creek,	24.72	117	eP	P	18 59 31.6	+0.4
	comp=Z,131nm,1.8s						
WALA	Waterton Lakes	24.74	91	eP	P	18 59 32.3	+0.8
	comp=Z,27nm,1.0s						
KHMM	Horse Mountain	24.82	117	eP	P	18 59 34.4	+2.1
	comp=Z,20nm,0.8s						
M02C	Callahan	24.87	115	P	P	18 59 35.0	+2.4
	baz=318,SNR=7.3						
K05A	Summer Lake	24.91	110	eP	P	18 59 35.3	+2.2
	comp=Z,58nm,0.8s						
M04C	Macdoel	25.10	113	P	P	18 59 36.7	+1.9
	baz=317,SNR=18						
N02D	Trinity Center	25.26	115	P	P	18 59 38.6	+2.5
	baz=319,SNR=10						
JTMT	Jette	25.27	94	eP	P	18 59 37.6	+1.4
	comp=Z,62nm,0.9s						
KMRM	Mail Ridge	25.33	117	eP	P	18 59 39.0	+2.2
	comp=Z,34nm,1.0s						
BMO	Blue Mountains	25.38	102	eP	P	18 59 38.8	+1.6
	comp=Z,25nm,0.9s						
BMO	Blue Mountains	25.38	102	eP	P	18 59 38.8	+1.6
BMO				pmax	pmax		
	comp=Z,25nm,0.9s						
WDC	Whiskeytown Da	25.64	115	eP	P	18 59 41.2	+1.8
	comp=Z,22nm,1.0s						
WDC	Whiskeytown Da	25.64	115	eP	P	18 59 41.3	+1.8
WDC				pmax	pmax		
	comp=Z,22nm,1.0s						
J08A	Circle Bar Ran	25.75	106	eP	P	18 59 41.3	+0.7
	comp=Z,29nm,0.8s						
KCPM	Cahto Peak	25.80	118	eP	P	18 59 42.5	+1.4
	comp=Z,32nm,0.9s						
MOD	Modoc Plateau	25.80	110	eP	P	18 59 42.7	+1.5
	comp=Z,37nm,1.0s						
MSO	Missoula	25.99	95	P	P	18 59 44.7	+1.9
	baz=307						
MSO	Missoula	25.99	95	eP	P	18 59 44.0	+1.2
	comp=Z,17nm,0.9s						
O03D	Paynes Creek	26.22	115	P	P	18 59 46.0	+1.1
	baz=319,SNR=17						
WVOR	Wild Horse Val	26.30	108	eP	P	18 59 47.2	+1.6
	comp=Z,51nm,0.9s						
WVOR	Wild Horse Val	26.30	108	eP	P	18 59 47.2	+1.6
WVOR				pmax	pmax		
	comp=Z,51nm,0.9s						
HOPS	Hopland Field	26.59	118	eP	P	18 59 51.5	+3.4
	comp=Z,56nm,1.3s						
GDXM	Geysers	26.87	118	eP	P	18 59 49.0	-1.7
	comp=Z,24nm,1.2s						
ORV	Oroville	26.93	116	eP	P	18 59 50.5	-0.7
	comp=Z,12nm,0.9s						
ORV	Oroville	26.93	116	eP	P	18 59 50.5	-0.7
ORV				pmax	pmax		
	comp=Z,12nm,0.9s						
MFID	Camas Ranch	27.13	103	eP	P	18 59 54.4	+1.3
	comp=Z,20nm,1.0s						
SEY	Seymchan	27.30	306	P	P	18 59 52.9	-1.4
	comp=Z,21nm,0.9s,baz=102,slow=8.0,SNR=41						
SEY	Seymchan	27.30	306	i P	P	18 59 52.8	-1.5
PET	Petropavlovsk	27.41	283	eP	P	18 59 54.4	-1.0
	comp=Z,48nm,1.0s						
PET	Petropavlovsk	27.41	283	eP	P	18 59 54.9	-0.4
PET				eS	S	19 04 31.3	-2.9
PET				pmax	pmax		
	comp=Z,55nm,1.0s						
PET				pmax	pmax		
	comp=Z,200nm,17.6s						
PET				MLR	MLR		
	comp=Z,500nm,20.0s						
LRM	Limekiln Ridge	27.42	95	eP	P	18 59 57.0	+1.2
EGMT	Eagleton	27.61	89	P	P	18 59 58.3	+1.0
	baz=305,SNR=10.0						
EGMT	Eagleton	27.61	89	eP	P	18 59 58.2	+0.8
	comp=Z,28nm,0.8s						
DLMT	Dillon	27.63	96	eP	P	18 59 59.3	+1.7
	comp=Z,22nm,1.3s						
AFDM	Forest Hills D	27.66	116	eP	P	19 00 00.9	+3.1
	comp=Z,15nm,0.6s						
HLID	Hailey	27.79	101	P	P	19 00 00.5	+1.4
	baz=312,SNR=8.5						
HLID	Hailey	27.79	101	eP	P	19 00 00.3	+1.2
	comp=Z,22nm,1.4s						
MCMT	McKenzie Canyo	27.83	98	eP	P	19 00 00.8	+1.3
PEA1	Petropavlovsk-	27.89	284	eP	P	18 59 58.6	-1.0
PEA0B	Petropavlovsk-	27.89	284	eP	P	18 59 58.4	-1.3
	comp=Z,28nm,0.8s						
PETK	Petropavlovsk-	27.89	284	P	P	18 59 58.6	-1.0
	comp=Z,14nm,0.6s,baz=74,slow=13						
PETK	Petropavlovsk-	27.89	284	eP	P	18 59 58.5	-1.1
PETK	Petropavlovsk-	27.89	284	eP	P	18 59 58.5	-1.1
PAHR	Pah Rah Range	27.89	113	eP	P	19 00 01.2	+1.3
	comp=Z,11nm,0.8s						
AASM	Arroyo Seco	27.99	117	eP	P	19 00 00.9	+0.2
BOZ	Bozeman (W)	28.02	95	P	P	19 00 02.2	+1.1
	baz=308,SNR=6.0						
BOZ	Bozeman (W)	28.02	95	eP	P	19 00 02.2	+1.1
	comp=Z,23nm,1.6s						
BOZ	Bozeman (W)	28.02	95	eP	P	19 00 02.2	+1.1
BOZ				pmax	pmax		
	comp=Z,23nm,1.6s						
VCNR	Virginia City	28.06	114	eP	P	19 00 03.6	+2.1
	comp=Z,20nm,0.9s						
PNTR	Pine Nut	28.24	114	eP	P	19 00 05.2	+2.0
	comp=Z,32nm,0.8s						
RES	Resolute Bay	28.41	28	P	P	19 00 05.2	+1.1
	comp=Z,6.3nm,0.8s,baz=251,slow=9.0,SNR=4.8						
RES				LR	LR	19 13 24.3	
	comp=Z,495nm,21.6s,baz=222,slow=40						
RES	Resolute Bay	28.41	28	eP	P	19 00 04.8	+0.8
	comp=Z,16nm,0.8s						
RES	Resolute Bay	28.41	28	eP	P	19 00 04.8	+0.8
RES				pmax	pmax		
	comp=Z,16nm,0.8s						
YERR	Yerington	28.50	113	eP	P	19 00 06.9	+1.4
	comp=Z,17nm,0.9s						
QLMT	Earthquake Lak	28.61	96	epP	pP	19 00 15.1	+2.5
CMB	Columbia Colle	28.66	116	epP	pP	19 00 15.6	+2.7
WAKR	Walker	28.77	114	eP	P	19 00 09.7	+1.8
	comp=Z,12nm,0.9s						
MA2	Magadan	28.94	300	P	P	19 00 08.6	-0.3
	comp=Z,9.7nm,0.6s,baz=82,slow=9.7,SNR=8.2						
MA2				LR	LR	19 12 59.7	
	comp=Z,1µm,19.1s,baz=79,slow=39						
MA2	Magadan	28.94	300	eP	P	19 00 07.1	-1.8
	comp=Z,25nm,0.8s						
MA2	Magadan	28.94	300	eP	P	19 00 07.1	-1.8
MA2				pmax	pmax		
	comp=Z,25nm,0.8s						
YMR	Madison River	28.96	96	eP	P	19 00 11.7	+2.1
	comp=Z,33nm,0.8s						
GCMT	Greycliff	28.98	93	eP	P	19 00 15.0	+5.4
KVN	Kaiserville	29.04	112	eP	P	19 00 11.8	+1.6
	comp=Z,60nm,1.9s						
KVN	Kaiserville	29.04	112	eP	P	19 00 11.8	+1.6
KVN				pmax	pmax		
	comp=Z,60nm,1.9s						
RYN	Ryan	29.14	113	eP	P	19 00 12.3	+1.2
	comp=Z,10nm,0.8s						
YFT	Old Faithful	29.17	96	eP	P	19 00 14.0	+2.5
	comp=Z,28nm,0.8s						
YPP	Pitchstone Pla	29.31	96	eP	P	19 00 15.0	+2.3
	comp=Z,10nm,0.8s						
H17A	Grant Village	29.35	96	P	P	19 00 15.8	+2.8
	baz=310,SNR=6.0						
H17A	Grant Village	29.35	96	eP	P	19 00 13.9	+0.9
	comp=Z,30nm,0.9s						
NV01	Mina Array Sit	29.40	113	eP	P	19 00 14.9	+1.4
NV01				ePcP	PcP	19 03 18.1	-0.9
NV01				eScP	ScP	19 06 59.0	-0.2
NVAR	Mina Array Bea	29.40	113	P	P	19 00 15.2	+1.7
	comp=Z,4.8nm,0.7s,baz=298,slow=8.9,SNR=30						
NVAR				PcP	PcP	19 03 18.3	-0.7
	comp=Z,1.5nm,0.7s,baz=277,slow=3.0,SNR=5.5						
NVAR				ScP	ScP	19 06 59.1	-0.1
	comp=Z,0.7nm,0.7s,baz=265,slow=1.7,SNR=4.3						
NVAR				LR	LR	19 10 12.2	
	comp=Z,834nm,19.2s,baz=49,slow=33						
IMW	Indian Meadow	29.48	97	eP	P	19 00 16.0	+1.8
	comp=Z,13nm,0.8s						
NV11	Mina Array Sit	29.48	113	eP	P	19 00 15.2	+1.2
	comp=Z,0.9nm,0.8s						
FLWY	Flagg Ranch	29.49	97	eP	P	19 00 16.6	+2.4
	comp=Z,39nm,0.9s						
FXWY	Fox Creek	29.59	98	epP	pP	19 00 24.2	+2.8
RLMT	Red Lodge	29.61	94	P	P	19 00 17.0	+1.6
	baz=309,SNR=5.8						
RLMT	Red Lodge	29.61	94	eP	P	19 00 17.2	+1.9
	comp=Z,14nm,1.0s						
MDPB	Devils Postpil	29.62	115	eP	P	19 00 17.5	+2.0
	comp=Z,16nm,0.9s						
MMSM	Mammoth Summit	29.65	115	eP	P	19 00 18.7	+2.8
OMMB	Old Mammoth Mi	29.68	115	eP	P	19 00 18.1	+2.0
	comp=Z,21nm,0.9s						
MLHM	Little Hot Cre	29.72	115	epP	pP	19 00 22.2	-0.4
TPAW	Teton Pass	29.73	98	epP	pP	19 00 24.4	+1.7
MLAC	Mammoth, Mammo	29.75	115	P	P	19 00 18.7	+2.1
	baz=321						
LOHW	Long Hollow	29.84	97	eP	P	19 00 19.1	+1.7
	comp=Z,14nm,1.1s						
REDW	Red Top Meadow	29.87	98	eP	P	19 00 20.3	+2.7
	comp=Z,13nm,1.1s						
HVU	Hansel Valley	29.89	102	eP	P	19 00 19.9	+2.2
	comp=Z,14nm,1.0s						
HVU	Hansel Valley	29.89	102	eP	P	19 00 19.9	+2.2
HVU				pmax	pmax		
	comp=Z,14nm,1.0s						
SKR	Severo-Kuril's	29.92	280	eP	P	19 00 16.2	-1.5
SKR				e		19 01 15.3	
SKR				eS	S	19 05 12.0	-1.7
SKR				pmax	pmax		
	comp=Z,51nm,0.7s						
SKR				MLR	MLR		
	comp=Z,600nm,17.0s						
SKR				MLR	MLR		
	comp=Z,500nm,17.0s						
LAO	LASA Array	30.35	89	P	P	19 00 23.5	+1.9
	baz=307,SNR=8.1						
BGU	Big Grassy Mou	30.35	104	eP	P	19 00 23.4	+1.6
	comp=Z,7.1nm,0.9s						
SPUT	South Promonto	30.39	102	eP	P	19 00 24.1	+1.9
	comp=Z,13nm,1.0s						
DGMT	Dagmar	30.44	84	P	P	19 00 24.0	+1.7
	baz=304						
TIN	Tinemaha, Big	30.50	115	P	P	19 00 25.6	+2.6
	baz=321						
PAGB	Antelope Grade	30.54	119	eP	P	19 00 24.9	+1.5
	comp=Z,22nm,1.0s						
HWUT	Hardware Ranch	30.67	101	eP	P	19 00 26.1	+1.5
	comp=Z,10nm,0.8s						
R11A	Troy Canyon, C	30.86	110	P	P	19 00 27.8	+1.4
	baz=319,SNR=14						
R11A	Troy Canyon, C	30.86	110	eP	P	19 00 27.5	+1.1
	comp=Z,17nm,0.8s						
R11A				ePcP	PcP	19 03 22.7	-0.1
BW06	Boulder Array	30.98	98	P	P	19 00 28.4	+1.0
	baz=312,SNR=7.8						
BW06	Boulder Array	30.98	98	eP	P	19 00 28.1	+0.7
	comp=Z,14nm,0.6s						
GRAC	Grapevine Rang	30.98	114	P	P	19 00 29.1	+1.8
	baz=321						
PD31	Pinedale Array	30.98	98	eP	P	19 00 28.6	+1.2
PDAR	Pinedale Array	30.98	98	P	P	19 00 28.6	+1.2
	comp=Z,3.6nm,0.6s,baz=307,slow=4.6,SNR=51						
PDAR	Pinedale Array	30.98	98	eP	P	19 00 27.9	+0.5
DUG	Dugway, Tooele	30.98	104	P	P	19 00 28.8	+1.4
	baz=316						
DUG	Dugway, Tooele	30.98	104	eP	P	19 00 28.6	+1.2
	comp=Z,7.1nm,0.9s						
DUG	Dugway, Tooele	30.98	104	eP	P	19 00 28.6	+1.2
DUG				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SMMC	Simmler	31.00	119	P	P	19 00 29.4	+1.9
	baz=324						
VES	Vestal, Richgr	31.02	117	P	P	19 00 29.0	+1.5
	baz=323						
CWC	Cottonwood Cre	31.05	115	P	P	19 00 29.8	+1.8
	baz=322						
TCUT	Toone Canyon	31.09	102	eP	P	19 00 28.5	0.0
	comp=Z,66nm,1.9s						
DAC	Darwin (Calif)	31.42	115	eP	P	19 00 33.1	+1.8
	comp=Z,9.7nm,0.8s						
PKM	Mcpherson Peak	31.43	119	P	P	19 00 33.2	+1.8
	baz=324						
ISA	Isabella, Lake	31.47	117	P	P	19 00 32.5	+0.9
	baz=323,SNR=11						
ISA	Isabella, Lake	31.47	117	eP	P	19 00 32.8	+1.2
	comp=Z,9.5nm,0.8s						
ISA	Isabella, Lake	31.47	117	eP	P	19 00 32.8	+1.2
ISA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TPNV	Topopah Spring	31.58	112	P	P	19 00 34.4	+1.7
	baz=320,SNR=9.5						
TPNV	Topopah Spring	31.58	112	eP	P	19 00 33.8	+1.1
	comp=Z,24nm,0.9s						
TPNV	Topopah Spring	31.58	112	eP	P	19 00 33.8	+1.1
TPNV				pmax	pmax		
	comp=Z,24nm,0.9s						
PSUT	Pine Spring	31.63	108	eP	P	19 00 34.9	+1.7
	comp=Z,6.9nm,0.9s						
FURC	Furnace Creek,	31.64	114	P	P	19 00 34.8	+1.9
	baz=321,SNR=6.2						
MPMC	Manual Prospec	31.64	115	P	P	19 00 34.8	+1.5
	baz=322,SNR=8.2						
SBC	Santa Barbara	31.84	120	P	P	19 00 36.7	+1.9
	baz=324						
LRMC	Laurel Mtn Rad	32.00	116	P	P	19 00 37.6	+1.2
	baz=322,SNR=5.5						
SCZ2	Santa Cruz Isl	32.24	120	P	P	19 00 40.2	+1.9
	baz=325						
EDW2	Edwards Air Fo	32.33	117	P	P	19 00 39.5	+0.4
	baz=323						
SHOC	Shoshone, Teco	32.38	114	P	P	19 00 41.2	+1.7
	baz=322						
BLG	Laguna Peak, P	32.42	119	P	P	19 00 41.7	+1.8
	baz=324						
SHPR	Sheep Range	32.48	112	eP	P	19 00 41.9	+1.3
	comp=Z,4.9nm,1.0s						
MSU	Marysvale	32.54	106	eP	P	19 00 43.2	+2.1
GSC	Goldstone, Bar	32.58	115	P	P	19 00 42.7	+1.3
	baz=322						
GSC	Goldstone, Bar	32.58	115	eP	P	19 00 43.1	+1.7
	comp=Z,35nm,1.5s						
GSC	Goldstone, Bar	32.58	115	eP	P	19 00 43.1	+1.7
GSC				pmax	pmax		
	comp=Z,35nm,1.5s						
P17A	Butcher Ranch,	32.61	103	eP	P	19 00 43.6	+1.9
	comp=Z,9.0nm,1.0s						
CCUT	Cedar City	32.62	108	eP	P	19 00 43.7	+1.8
	comp=Z,7.8nm,0.9s						
K22A	Casper	32.72	95	P	P	19 00 43.8	+1.1
	baz=312,SNR=6.4						
SZCU	Shurtz Canyon	32.73	108	eP	P	19 00 44.1	+1.2
	comp=Z,11nm,0.8s						
P18A	Preston Nutter	32.77	103	eP	P	19 00 45.2	+2.0
	comp=Z,12nm,1.0s						
RRX	Edison Barstow	32.82	116	P	P	19 00 45.2	+1.8
	baz=323						
MTPU	Mount Pierson	32.88	107	eP	P	19 00 45.9	+1.6
	comp=Z,10nm,0.4s						
TUQ	Turquoise Moun	32.92	114	P	P	19 00 45.9	+1.5
	baz=322						
SRU	San Rafael Swe	32.99	103	eP	P	19 00 46.6	+1.6
	comp=Z,46nm,0.8s						
SRU	San Rafael Swe	32.99	103	eP	P	19 00 46.6	+1.6
SRU				pmax	pmax		
	comp=Z,46nm,0.8s						
RWWY	Rawlins	32.99	97	eP	P	19 00 45.1	0.0
	comp=Z,70nm,0.8s						
BFSC	Mount Baldy Ra	33.00	117	P	P	19 00 46.6	+1.5
	baz=324						
RSSD	Black Hills	33.14	91	P	P	19 00 47.6	+1.2
	baz=310						
RSSD	Black Hills	33.14	91	eP	P	19 00 47.8	+1.4
	comp=Z,34nm,0.6s						
RSSD	Black Hills	33.14	91	eP	P	19 00 47.8	+1.4
RSSD				pmax	pmax		
	comp=Z,34nm,0.6s						
HEC	Hector,Ludlow	33.19	115	P	P	19 00 48.2	+1.5
	baz=323,SNR=5.6						
PKCU	Pink Cliffs	33.26	107	eP	P	19 00 48.7	+1.1
	comp=Z,16nm,0.8s						
MDND	Maddock	33.32	82	P	P	19 00 49.6	+2.0
	baz=306,SNR=12						
MDND	Maddock	33.32	82	eP	P	19 00 49.6	+2.0
	comp=Z,216nm,0.9s						
O20A	White River Ci	33.50	100	P	P	19 00 50.8	+1.3
	baz=315,SNR=10						
O20A	White River Ci	33.50	100	eP	P	19 00 50.4	+0.9
	comp=Z,62nm,0.9s						
GMRC	Granite Mounta	33.57	114	P	P	19 00 51.6	+1.5
	baz=322,SNR=5.7						
SCI2	San Clemente I	33.59	120	P	P	19 00 51.2	+1.1
	baz=325						
LDFC	Landfair	33.62	113	eP	P	19 00 51.1	+0.6
	comp=Z,37nm,0.8s						
MURC	Murrieta	33.74	117	P	P	19 00 52.6	+1.1
	baz=324						
ULM	Lac du Bonnet	33.98	76	P	P	19 00 54.1	+0.7
	comp=Z,8.0nm,0.9s,baz=305,slow=13,SNR=3.9						
ULM				LR	LR	19 14 47.5	
	comp=Z,1µm,18.0s,baz=286,slow=36						
ULM	Lac du Bonnet	33.98	76	eP	P	19 00 54.3	+0.9
	comp=Z,59nm,1.2s						
ULM	Lac du Bonnet	33.98	76	eP	P	19 00 54.3	+0.9
ULM				pmax	pmax		
	comp=Z,59nm,1.2s						
BELC	Belle Mtn. Jos	34.02	116	P	P	19 00 55.3	+1.4
	baz=323						
PFO	Pinyon Flats O	34.10	116	P	P	19 00 55.5	+0.8
	baz=324						
PFO	Pinyon Flats O	34.10	116	eP	P	19 00 55.8	+1.1
	comp=Z,24nm,1.4s						
PFO	Pinyon Flats O	34.10	116	eP	P	19 00 55.8	+1.1
PFO				pmax	pmax		
	comp=Z,24nm,1.4s						
XPFO	Piæon Flat	34.10	116	eP	P	19 00 55.8	+1.1
	comp=Z,26nm,1.4s						
NEE2	Needles Airpor	34.11	113	P	P	19 00 55.8	+1.2
	baz=322						
FRD	Ford Ranch, An	34.12	117	P	P	19 00 56.3	+1.5
	baz=324						
PV09	Paradox Valley	34.18	103	eP	P	19 00 56.6	+1.0
TIXI	Tiksi	34.20	327	P	P	19 00 54.8	-0.2
	comp=Z,31nm,0.7s,baz=83,slow=9.8,SNR=28						
TIXI				PcP	PcP	19 03 30.7	-0.4
	comp=Z,9.2nm,0.8s,baz=71,slow=0.9,SNR=4.0						
TIXI	Tiksi	34.20	327	eP	P	19 00 54.3	-0.6
	comp=Z,34nm,0.8s						
TIXI				ePcP	PcP	19 03 30.5	-0.7
TIXI				ePcP	PcP	19 03 30.7	-0.4
TIXI	Tiksi	34.20	327c	iP	P	19 00 54.1	-0.9
TIXI				pmax	pmax		
	comp=Z,29nm,0.7s						

PV21	Cone Mtn., Par	34.22	103	*e*P	P	19 00 57.1	+1.2
	comp=Z,14nm,0.8s						
N23A	Red Feather La	34.23	97	P	P	19 00 57.0	+1.0
	baz=314,SNR=8.5						
N23A	Red Feather La	34.23	97	*e*P	P	19 00 57.3	+1.4
	comp=Z,15nm,0.9s						
PV23	Carpenter Ridg	34.28	103	*e*P	P	19 00 58.0	+1.6
	comp=Z,25nm,0.8s						
IRM	Iron Mountain	34.32	114	P	P	19 00 58.1	+1.6
	baz=323,SNR=9.2						
PV22	Blue Mesa, Par	34.34	102	*e*P	P	19 00 57.6	+0.7
	comp=Z,25nm,1.2s						
109C	Camp Elliot, M	34.37	118	P	P	19 00 58.4	+1.6
	baz=325						
PV20	West Nyswonger	34.38	103	*e*P	P	19 00 58.3	+1.1
	comp=Z,10nm,0.9s						
PV17	East Wray Mesa	34.43	103	*e*P	P	19 00 58.8	+1.1
	comp=Z,14nm,0.9s						
PV16	Nyswonger Mesa	34.44	103	*e*P	P	19 00 58.6	+1.0
	comp=Z,12nm,0.8s						
PV11	David Mesa, Pa	34.47	103	*e*P	P	19 00 59.3	+1.4
	comp=Z,20nm,0.8s						
PV18	Skein Mesa, Pa	34.49	103	*e*P	P	19 00 59.2	+1.1
	comp=Z,12nm,0.8s						
PV12	Saucer Basin,	34.49	103	*e*P	P	19 00 59.5	+1.4
	comp=Z,24nm,1.1s						
PV03	Paradox Valley	34.51	103	*e*P	P	19 00 59.5	+1.1
BC3	Big Chuckawall	34.57	115	P	P	19 00 59.6	+0.9
	baz=323						
PV13	Radium Mtn., P	34.60	103	*e*P	P	19 00 59.5	+0.4
	comp=Z,43nm,1.5s						
PV02	Paradox Valley	34.61	103	*e*P	P	19 01 00.1	+1.0
	comp=Z,26nm,0.9s						
MONP2	Monument Peak	34.70	117	P	P	19 01 01.3	+1.4
	baz=324,SNR=5.3						
PDMCI	Parker Dam,Lak	34.72	113	P	P	19 01 01.4	+1.5
	baz=322						
BAR	Barrett	34.75	118	*e*P	P	19 01 01.2	+1.1
	comp=Z,12nm,1.0s						
PV01	Paradox Valley	34.75	103	*e*P	P	19 01 01.5	+1.1
SMCO	Snowmass	34.87	100	*e*P	P	19 01 02.6	+1.0
	comp=Z,8.4nm,0.8s						
Y12C	Blythe	34.96	114	P	P	19 01 03.6	+1.6
	baz=323,SNR=5.3						
Y12C	Blythe	34.96	114	*e*P	P	19 01 02.4	+0.5
	comp=Z,36nm,0.8s						
SWSC	Sam W. Stewart	34.96	116	P	P	19 01 03.3	+1.4
	baz=324						
A33A	Warroad	34.98	77	P	P	19 01 04.4	+2.4
	baz=305						
IKP	In-Ko-Pah, Jac	35.05	117	P	P	19 01 04.3	+1.4
	baz=324						
AGMN	Agassiz Nation	35.10	79	P	P	19 01 04.2	+1.2
	baz=306,SNR=7.0						
AGMN	Agassiz Nation	35.10	79	*e*P	P	19 01 03.8	+0.8
	comp=Z,48nm,0.8s						
ISCO	Idaho Springs	35.17	98	P	P	19 01 05.0	+0.9
	baz=315,SNR=5.8						
ISCO	Idaho Springs	35.17	98	*e*P	P	19 01 06.0	+1.8
	comp=Z,8.2nm,1.0s						
WUAZ	Wupatki	35.21	109	P	P	19 01 05.9	+1.6
	baz=320						
GLA	Glamis	35.36	115	P	P	19 01 06.6	+1.1
	baz=324						
GLA	Glamis	35.36	115	*e*P	P	19 01 05.0	-0.4
	comp=Z,13nm,0.7s						
GLA	Glamis	35.36	115	*e*P	P	19 01 05.1	-0.4
GLA				pmax	pmax		
	comp=Z,13nm,0.7s						
C33A	Trail	35.46	79	P	P	19 01 07.2	+1.1
	baz=306						
MVCO	Mesa Verde	35.47	104	P	P	19 01 07.5	+0.9
	baz=318						
MVCO	Mesa Verde	35.47	104	*e*P	P	19 01 07.5	+0.9
B34A	Aery, Baudette	35.64	77	P	P	19 01 08.7	+1.0
	baz=306						
SUSD	Miller	35.75	86	P	P	19 01 10.0	+1.3
	baz=310,SNR=9.6						
S22A	4UR Ranch, Cre	35.98	101	P	P	19 01 12.7	+1.7
	baz=317,SNR=6.7						
S22A	4UR Ranch, Cre	35.98	101	*e*P	P	19 01 11.5	+0.5
	comp=Z,9.3nm,0.9s						
C34A	RKJ Ranch, Bem	35.99	79	P	P	19 01 11.9	+1.1
	baz=307						
Q24A	Divide	36.02	98	P	P	19 01 12.9	+1.5
	baz=316,SNR=5.9						
B35A	Bob, Littlefor	36.22	77	P	P	19 01 13.4	+0.8
	baz=306,SNR=5.3						
B35A	Bob, Littlefor	36.22	77	*e*P	P	19 01 12.9	+0.3
	comp=Z,19nm,0.9s						
C35A	Jirik Farms, M	36.47	78	P	P	19 01 15.9	+1.1
	baz=307						
H32A	Carlson Farm,	36.55	85	P	P	19 01 16.8	+1.2
	baz=310,SNR=11						
SDCO	Great Sand Dun	36.70	100	P	P	19 01 18.6	+1.3
	baz=317,SNR=9.4						
SDCO	Great Sand Dun	36.70	100	*e*P	P	19 01 18.5	+1.3
	comp=Z,8.7nm,0.9s						
NKL	Nikolayevsk	36.79	293	*e*P	P	19 01 12.0	-5.4
NKL				pmax	pmax		
	comp=Z,43nm,1.0s						
NKL				MLR	MLR		
	comp=N,500nm,16.0s						
NKL				MLR	MLR		
	comp=E,450nm,16.0s						
NKL				MLR	MLR		
	comp=Z,600nm,16.0s						
D35A	Remer	36.80	79	P	P	19 01 18.9	+1.2
	baz=308,SNR=5.7						
E35A	Pequot Lakes	36.93	80	P	P	19 01 19.9	+1.2
	baz=308						
F34A	Alexandria	36.93	82	P	P	19 01 20.0	+1.2
	baz=309						
TYV	Tymovskoe	37.03	289	*e*P	P	19 01 15.1	-4.4
TYV				*e*		19 06 56.1	
TYV				pmax	pmax		
	comp=Z,200nm,5.5s						
TYV				pmax	pmax		
	comp=Z,37nm,0.8s						
TYV				MLR	MLR		
	comp=Z,900nm,19.0s						
TYV				MLR	MLR		
	comp=E,2µm,19.0s						
C36A	Pine Crest Far	37.05	77	P	P	19 01 21.0	+1.2
	baz=307						
D36A	Goodland	37.23	78	P	P	19 01 22.8	+1.6
	baz=308						
D36A	Goodland	37.23	78	*e*P	P	19 01 22.6	+1.3
	comp=E,37nm,0.9s						
214A	Organ Pipe Nat	37.25	114	P	P	19 01 22.9	+1.2
	baz=324						
KSCO	Kaye Shedlock’	37.37	96	P	P	19 01 24.6	+1.9
	baz=315,SNR=12						
KSCO	Kaye Shedlock’	37.37	96	*e*P	P	19 01 24.1	+1.4
	comp=E,121nm,0.8s						
C37A	Embarrass	37.42	77	P	P	19 01 24.0	+1.1
	baz=307,SNR=6.2						
YAK	Yakutsk	37.49	311	*e*P	P	19 01 21.6	-1.7
	comp=E,130nm,0.8s						
YAK	Yakutsk	37.49	311	c *i*P	P	19 01 22.0	-1.2
YAK				*e**PP	pP	19 01 28.9	-0.6
YAK				*e*		19 02 48.0	
YAK				*e*PPP	PPP	19 03 04.6	
YAK				*e*		19 03 39.6	
YAK				*e*S	S	19 07 08.2	-2.3
YAK				*e*SS	SnSn	19 09 46.3	-1.8
YAK				*e*		19 11 30.3	
YAK				pmax	pmax		
	comp=Z,95nm,0.8s						
YAK				pmax	pmax		
	comp=N,13nm,1.3s						
YAK				pmax	pmax		
	comp=E,35nm,1.1s						
YAK				pmax	pmax		
	comp=Z,18nm,1.3s						
YAK				pmax	pmax		
	comp=N,26nm,1.5s						
YAK				pmax	pmax		
	comp=E,15nm,1.4s						
YAK				smax	smax		
	comp=N,17nm,2.0s						
YAK				smax	smax		
	comp=E,17nm,2.2s						
YAK				MLR	MLR		
	comp=Z,990nm,19.0s						
YAK				MLR	MLR		
	comp=N,394nm,20.0s						
YAK				MLR	MLR		
	comp=E,525nm,18.0s						
ECSD	EROS Data Cent	37.50	85	P	P	19 01 24.1	+0.5
	baz=311,SNR=12						
ECSD	EROS Data Cent	37.50	85	*e*P	P	19 01 23.9	+0.3
	comp=E,21nm,0.8s						
E36A	McGregor	37.58	79	P	P	19 01 25.0	+0.8
	baz=308						
KUR	Kuril’sk	37.59	278	*e*P	P	19 01 23.0	-1.3
KUR				S	S	19 07 15.4	+3.1
KUR				pmax	pmax		
	comp=Z,115nm,1.5s						
KUR				MLR	MLR		
	comp=Z,351nm,13.0s						
D37A	Cotton	37.64	78	P	P	19 01 25.6	+0.9
	baz=308						
EYMN	Ely	37.66	76	P	P	19 01 25.7	+0.8
	baz=307,SNR=7.3						
EYMN	Ely	37.66	76	*e*P	P	19 01 25.2	+0.3
	comp=Z,49nm,0.8s						
T25A	Trinidad	37.73	100	P	P	19 01 27.8	+1.9
	baz=317,SNR=14						
T25A	Trinidad	37.73	100	*e*P	P	19 01 27.5	+1.6
	comp=Z,24nm,0.9s						
F36A	Milaca	37.84	80	P	P	19 01 28.6	+2.2
	baz=309,SNR=7.6						
F36A	Milaca	37.84	80	*e*P	P	19 01 27.5	+1.1
	comp=Z,49nm,1.3s						
H35A	Sunnyside Ranc	37.86	83	P	P	19 01 27.9	+1.3
	baz=310,SNR=8.6						
C38A	Sawbill Land.	37.92	76	P	P	19 01 27.5	+0.4
	baz=307,SNR=5.6						
TUC	Tucson	38.01	111	P	P	19 01 29.5	+1.4
	baz=323						
G36A	St. Michael	38.11	81	P	P	19 01 30.2	+1.5
	baz=309						
BGNE	Belgrade	38.19	89	P	P	19 01 30.7	+1.3
	baz=313,SNR=8.9						
TASM	ASL Pad, Albuq	38.25	104	P	P	19 01 31.4	+1.2
	baz=319						
ANMO	Albuquerque	38.25	104	P	P	19 01 31.6	+1.3
	comp=Z,1.4nm,0.6s,baz=344,slow=9.3,SNR=4.4						
ANMO				PcP	PcP	19 03 44.9	+0.8
	comp=Z,1.8nm,0.7s,baz=311,slow=3.7,SNR=4.0						
ANMO				LR	LR	19 16 59.4	
	comp=Z,198nm,18.6s,baz=306,slow=36						
ANMO	Albuquerque	38.25	104	P	P	19 01 30.6	+0.3
	baz=319						
ANMO	Albuquerque	38.25	104	*e*P	P	19 01 31.2	+0.9
	comp=Z,45nm,2.0s						
ANMO				PcP	PcP	19 03 45.0	+0.8
ANMO	Albuquerque	38.25	104	⇓*e*P	P	19 01 31.6	+1.3
ANMO				pmax	pmax		
	comp=Z,7.0nm,1.8s						
TASL	Snake Pit, Alb	38.25	104	P	P	19 01 30.6	+0.3
	baz=319						
F37A	Hinrichs Farm,	38.42	80	P	P	19 01 32.0	+0.8
	baz=309						
E38A	The Farm, Brul	38.45	78	P	P	19 01 32.6	+1.1
	baz=308,SNR=5.4						
E38A	The Farm, Brul	38.45	78	*e*P	P	19 01 32.4	+0.8
	comp=Z,50nm,0.9s						
SPMN	Marine on St.	38.63	80	P	P	19 01 34.1	+1.0
	baz=310						
SPMN	Marine on St.	38.63	80	*e*P	P	19 01 34.1	+1.0
	comp=Z,36nm,0.9s						
Y22D	IRIS PASSCAL I	38.67	105	P	P	19 01 34.5	+0.8
	baz=320						
Y22E	IRIS PASSCAL I	38.67	105	P	P	19 01 35.0	+1.3
	baz=320						
F38A	Pierce - Schro	38.68	79	P	P	19 01 34.4	+0.9
	baz=309,SNR=13						
I36A	Fitzsimmons Fa	38.74	83	P	P	19 01 35.5	+1.4
	baz=311						
C40A	Isle Royale Na	38.94	75	P	P	19 01 37.0	+1.3
	baz=308						
C40A	Isle Royale Na	38.94	75	*e*P	P	19 01 35.5	-0.1
	comp=Z,48nm,1.1s						
J36A	Seneca 1, Swea	39.02	84	P	P	19 01 37.1	+0.7
	baz=311,SNR=6.1						
SHO	Shikotan	39.03	277	⇑*i*P	P	19 01 34.8	-1.6
SHO				pmax	pmax		
	comp=Z,83nm,1.1s						
SHO				MLR	MLR		
	comp=Z,650nm,21.0s						
I37A	Lemond, Waseca	39.09	82	P	P	19 01 38.2	+1.2
	baz=311,SNR=8.3						
I37A	Lemond, Waseca	39.09	82	*e*P	P	19 01 37.8	+0.9
	comp=Z,100nm,1.1s						
CBKS	Cedar Bluff	39.10	94	P	P	19 01 38.5	+1.3
	baz=315,SNR=8.8						
E39A	Mellen	39.13	77	P	P	19 01 38.1	+0.8
	baz=309						
G38A	Ridgeland	39.19	80	P	P	19 01 38.6	+0.9
	baz=310,SNR=5.8						
F39A	Loretta	39.22	78	P	P	19 01 39.2	+1.1
	baz=309						
H38A	Maiden Rock	39.27	81	P	P	19 01 39.9	+1.5
	baz=310,SNR=10.0						
YSS	Yuzh-Sakhalins	39.29	284	*e*P	P	19 01 37.4	-1.1
	comp=Z,18nm,0.9s						
YSS	Yuzh-Sakhalins	39.29	284	⇓*i*P	P	19 01 38.2	-0.4
YSS				*e*		19 03 08.8	
YSS				*e*		19 03 46.7	
YSS				*e*S	S	19 07 39.5	+1.5
YSS				pmax	pmax		
	comp=Z,20nm,1.1s						
YSS				pmax	pmax		
	comp=Z,100nm,3.4s						
YSS				pmax	pmax		
	comp=N,100nm,2.9s						
YSS				MLR	MLR		
	comp=Z,400nm,19.0s						
YSS				MLR	MLR		
	comp=N,300nm,16.0s						
YSS				MLR	MLR		
	comp=E,500nm,16.0s						
121A	Cookes Peak, D	39.40	108	P	P	19 01 41.5	+1.7
	baz=322						
K36A	Gilmore City	39.41	85	P	P	19 01 40.5	+0.9
	baz=312,SNR=6.5						
E40A	Wakefield	39.44	77	P	P	19 01 41.5	+1.6
	baz=309						
J37A	Redenius Farm,	39.46	83	P	P	19 01 41.1	+1.0
	baz=311,SNR=10.0						
G39A	Holcombe	39.49	79	P	P	19 01 41.2	+1.0
	baz=310,SNR=8.7						
L36A	Harm Buss Farm	39.65	86	P	P	19 01 42.9	+1.3
	baz=312						
F40A	Park Falls	39.65	78	P	P	19 01 42.5	+0.8
	baz=309,SNR=6.5						
I38A	Scanlan Farm,	39.66	82	P	P	19 01 42.9	+1.2
	baz=311,SNR=8.1						
K37A	Belmond	39.77	84	P	P	19 01 43.3	+0.6
	baz=312,SNR=10.0						
D41A	Chassel	39.78	75	P	P	19 01 44.0	+1.4
	baz=309						
D41A	Chassel	39.78	75	*e*P	P	19 01 43.2	+0.5
	comp=E,22nm,0.8s						
H39A	Augusta	39.81	80	P	P	19 01 43.4	+0.5
	baz=310,SNR=6.2						
FRB	Frobisher Bay	39.84	44	P	P	19 01 43.5	+0.6
	comp=E,15nm,0.9s,baz=307,slow=9.4,SNR=7.0						
E41A	Kenton	39.94	76	P	P	19 01 43.9	0.0
	baz=309						
M36A	Felix, Anita	40.01	86	P	P	19 01 45.0	+0.3
	baz=313						
G40A	Rib Lake	40.02	79	P	P	19 01 45.9	+1.2
	baz=310,SNR=6.1						
G40A	Rib Lake	40.02	79	*e*P	P	19 01 45.4	+0.6
	comp=E,27nm,1.0s						
J38A	Wedel Dairy, R	40.05	83	P	P	19 01 45.0	+0.1
	baz=311,SNR=6.8						
COWI	Conover	40.07	77	*e*P	P	19 01 45.5	+0.4
	comp=E,18nm,0.8s						
L37A	Phoenix Point,	40.14	85	P	P	19 01 46.7	+1.0
	baz=312,SNR=11						
I39A	Houston	40.22	81	P	P	19 01 47.3	+0.9
	baz=311,SNR=6.0						
I39A	Houston	40.22	81	*e*P	P	19 01 46.2	-0.2
	comp=E,71nm,0.8s						
GRNR	Gornyy	40.31	293	*e*P	P	19 01 48.1	+1.1
GRNR				*e*		19 03 52.9	
GRNR				pmax	pmax		
	comp=Z,78nm,1.0s						
F41A	Three Lakes	40.32	77	P	P	19 01 48.0	+0.8
	baz=310						
F41A	Three Lakes	40.32	77	*e*P	P	19 01 47.9	+0.8
	comp=Z,72nm,0.1s						
K38A	Parkersburg	40.33	84	P	P	19 01 48.4	+1.1
	baz=312,SNR=6.6						
H40A	Chili	40.34	79	P	P	19 01 49.1	+1.8
	baz=310,SNR=6.3						
N36A	Muff Farm, Cla	40.36	87	P	P	19 01 48.7	+1.2
	baz=313,SNR=6.7						
M37A	Trindle Farm,	40.46	86	P	P	19 01 49.5	+1.1
	baz=313,SNR=5.2						
J39A	Decorah	40.46	82	P	P	19 01 49.1	+0.7
	baz=312,SNR=6.0						
E42A	Champion	40.52	76	P	P	19 01 49.3	+0.5
	baz=309,SNR=5.3						
L38A	Oak Wood Farm,	40.56	84	P	P	19 01 50.2	+0.9
	baz=312,SNR=9.1						
SCIA	State Center	40.58	85	P	P	19 01 50.8	+1.4
	baz=313						
G41A	Antigo	40.61	78	P	P	19 01 50.9	+1.3
	baz=310						
KSU1	Kansas State U	40.63	91	P	P	19 01 50.3	+0.5
	baz=315,SNR=5.5						
KSU1	Kansas State U	40.63	91	*e*P	P	19 01 51.1	+1.2
	comp=Z,56nm,0.9s						
I40A	Norwalk	40.69	81	P	P	19 01 51.3	+1.1
	baz=311,SNR=5.8						
K39A	Oelwein	40.78	83	P	P	19 01 51.2	+0.2
	baz=312,SNR=7.6						
N37A	Lee Faris, Mou	40.81	87	P	P	19 01 52.5	+1.3
	baz=314,SNR=15						
N37A	Lee Faris, Mou	40.81	87	*e*P	P	19 01 52.1	+0.9
	comp=Z,185nm,1.0s						
F42A	Maple Grove Fa	40.83	77	P	P	19 01 52.6	+1.2
	baz=310						
AMTX	Amarillo	40.89	100	P	P	19 01 53.4	+1.3
	baz=319						
AMTX	Amarillo	40.89	100	*e*P	P	19 01 52.3	+0.2
	comp=Z,30nm,0.7s						
M38A	Pleasantville	40.92	85	P	P	19 01 53.2	+1.0
	baz=313,SNR=10.0						
J40A	Soldiers Grove	40.95	81	P	P	19 01 53.2	+0.8
	baz=312,SNR=5.4						
MSTX	Muleshoe	40.98	102	P	P	19 01 54.0	+1.2
	baz=319,SNR=9.8						
MSTX	Muleshoe	40.98	102	*e*P	P	19 01 53.4	+0.5
	comp=Z,32nm,0.8s						
I41A	Arkdale	40.99	80	P	P	19 01 53.9	+1.2
	baz=311,SNR=5.2						
I41A	Arkdale	40.99	80	*e*P	P	19 01 53.8	+1.2
	comp=Z,68nm,1.0s						
G42A	Mountain	41.00	77	P	P	19 01 53.8	+1.0
	baz=310,SNR=5.9						
G42A	Mountain	41.00	77	*e*P	P	19 01 53.6	+0.8
	comp=Z,33nm,1.0s						
E43A	Lone Tree Farm	41.05	75	P	P	19 01 54.2	+1.0
	baz=310,SNR=8.2						
E43A	Lone Tree Farm	41.05	75	*e*P	P	19 01 53.4	+0.2
	comp=Z,48nm,0.8s						
L39A	Vinton	41.10	84	P	P	19 01 54.2	+0.5
	baz=312,SNR=6.4						
ASAJ	Asahikawa	41.19	281	P	P	19 01 53.5	-0.8
	comp=Z,41nm,0.8s,baz=65,slow=2.7,SNR=36						
ASAJ				PcP	PcP	19 03 53.0	-0.1
	comp=Z,6.8nm,0.7s,baz=338,slow=5.4,SNR=4.0						
ASAJ				LR	LR	19 18 24.8	
	comp=Z,369nm,22.0s,baz=83,slow=36						
ASAJ	Asahikawa	41.19	281	*e*P	P	19 01 53.2	-1.1
	comp=Z,45nm,0.8s						
ASAJ				PcP	PcP	19 03 53.0	-0.1
O37A	Wolven Farm, M	41.25	87	P	P	19 01 56.1	+1.1
	baz=314,SNR=5.5						
F43A	Flat Rock, Esc	41.30	76	P	P	19 01 56.5	+1.2
	baz=310,SNR=5.3						
MNTX	Cornudas Mount	41.32	106	P	P	19 01 57.0	+1.4
	baz=322,SNR=8.8						
MNTX	Cornudas Mount	41.32	106	*e*P	P	19 01 56.3	+0.7
	comp=Z,29nm,1.0s						
N38A	Joes South For	41.33	86	P	P	19 01 56.4	+0.9
	baz=314,SNR=6.8						
J41A	Loganville	41.37	81	P	P	19 01 56.1	+0.3
	baz=312,SNR=5.7						
G43A	Wallace	41.39	77	P	P	19 01 56.2	+0.2
	baz=310,SNR=5.1						
G43A	Wallace	41.39	77	*e*P	P	19 01 56.6	+0.7
	comp=Z,26nm,0.9s						
H42A	Shiocton	41.42	78	P	P	19 01 57.3	+1.0
	baz=311						
H42A	Shiocton	41.42	78	*e*P	P	19 01 56.6	+0.4
	comp=Z,28nm,0.8s						
E44A	Grand Marais A	41.47	74	P	P	19 01 58.3	+1.7
	baz=310						
JFWS	Jewell Farm	41.54	81	P	P	19 01 57.6	+0.4
	baz=312,SNR=5.7						
JFWS	Jewell Farm	41.54	81	*e*P	P	19 01 57.1	-0.1
	comp=Z,36nm,0.9s						
JFWS	Jewell Farm	41.54	81	*e*P	P	19 01 57.1	-0.1
JFWS				pmax	pmax		
	comp=Z,36nm,0.9s						
P37A	Lathrop	41.54	88	P	P	19 01 58.2	+0.9
	baz=314,SNR=11						
L40A	Anamosa	41.57	83	P	P	19 01 57.0	-0.5
	baz=313,SNR=6.3						
L40A	Anamosa	41.57	83	*e*P	P	19 01 57.7	+0.2
	comp=Z,52nm,0.8s						
I42A	Draeger Farm,	41.62	79	P	P	19 01 58.4	+0.6
	baz=311,SNR=6.0						
I42A	Draeger Farm,	41.62	79	*e*P	P	19 01 58.9	+1.0
	comp=Z,38nm,0.9s						
O38A	Galt	41.66	87	P	P	19 01 59.1	+0.9
	baz=314,SNR=5.3						
N39A	Derby Farms, D	41.67	85	P	P	19 01 58.9	+0.5
	baz=314,SNR=7.5						
N39A	Derby Farms, D	41.67	85	*e*P	P	19 01 58.8	+0.5
	comp=Z,56nm,0.8s						
K41A	Shullsburg	41.71	82	P	P	19 01 59.0	+0.4
	baz=312,SNR=6.5						
M40A	Post Highland	41.86	84	P	P	19 02 01.0	+1.1
	baz=313						
H43A	Windswept, Lux	41.86	78	P	P	19 02 00.2	+0.4
	baz=311						
J42A	Columbus	41.88	80	P	P	19 02 00.2	+0.2
	baz=312						
L41A	Preston	41.96	82	P	P	19 02 00.7	0.0
	baz=313,SNR=5.9						
P38A	Dawn	41.97	88	P	P	19 02 01.6	+0.8
	baz=314,SNR=7.5						
P38A	Dawn	41.97	88	*e*P	P	19 02 01.2	+0.4
	comp=Z,107nm,0.8s						
Q37A	Longview Farm,	41.98	89	P	P	19 02 01.1	+0.2
	baz=315						
E45A	Wooded Hills,	42.03	74	P	P	19 02 01.4	+0.2
	baz=310						
I43A	Langenfeld Bro	42.04	79	P	P	19 02 02.5	+1.2
	baz=312,SNR=5.5						
O39A	Kirksville	42.08	86	P	P	19 02 02.5	+0.8
	baz=314,SNR=6.9						
K42A	Prairie Point,	42.12	81	P	P	19 02 02.4	+0.4
	baz=312						
N40A	Mertquake, Sal	42.17	85	P	P	19 02 03.0	+0.6
	baz=314,SNR=5.8						
J43A	Natural Harves	42.23	80	P	P	19 02 03.9	+1.1
	baz=312						
ERM	Erimo	42.28	278	*e*P	P	19 02 01.7	-1.5
	comp=Z,57nm,1.1s						
ERM	Erimo	42.28	278	c*e*P	P	19 02 02.1	-1.2
ERM				pmax	pmax		
	comp=Z,60nm,1.3s						
F45A	CMU Biological	42.28	75	P	P	19 02 04.2	+0.9
	baz=310,SNR=5.2						
Q38A	Cooks Store, C	42.39	88	P	P	19 02 04.7	+0.5
	baz=315,SNR=9.8						
M41A	Milan	42.41	83	P	P	19 02 05.6	+1.2
	baz=313						
L42A	Oliver, Polo	42.47	82	P	P	19 02 06.0	+1.2
	baz=313						
P39B	Salisbury	42.50	87	P	P	19 02 05.7	+0.6
	baz=315,SNR=11						
O40A	La Belle	42.54	86	P	P	19 02 06.0	+0.6
	baz=314,SNR=11						
WMOK	Wichita Mounta	42.59	97	P	P	19 02 07.3	+1.4
	baz=318,SNR=20						
WMOK	Wichita Mounta	42.59	97	*e*P	P	19 02 07.3	+1.4
	comp=Z,28nm,0.8s						
WMOK	Wichita Mounta	42.59	97	*e*P	P	19 02 07.3	+1.4
WMOK				pmax	pmax		
	comp=Z,28nm,0.8s						
F46A	Macinaw City C	42.63	74	P	P	19 02 07.2	+1.1
	baz=311						
Q39A	Willow Grove F	42.68	88	P	P	19 02 07.1	+0.5
	baz=315,SNR=8.0						

N41A	Harden Midland	42.70	84	P	P	19 02 07.0	+0.2
	baz=314,SNR=8.9						
N41A	Harden Midland	42.70	84	*e*P	P	19 02 06.9	+0.2
	comp=Z,80nm,0.8s						
K43A	Burlington	42.73	80	P	P	19 02 07.3	+0.5
	baz=312						
R38A	Fenwick Farm,	42.77	89	P	P	19 02 08.4	+1.1
	baz=316,SNR=9.2						
L43A	Garden Prairie	42.85	81	P	P	19 02 08.2	+0.3
	baz=313						
P40A	Paris	42.86	86	P	P	19 02 08.1	+0.1
	baz=315,SNR=5.8						
P40A	Paris	42.86	86	*e*P	P	19 02 08.2	+0.1
	comp=Z,67nm,0.8s						
ZEA	Zeya	43.05	301	*e*P	P	19 02 08.4	-1.0
ZEA				pmax	pmax		
	comp=E,29nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,41nm,1.0s						
ZEA				MLR	MLR		
	comp=E,800nm,15.0s						
ZEA				MLR	MLR		
	comp=Z,1µm,15.0s						
ZEA				MLR	MLR		
	comp=N,500nm,13.0s						
N42A	Yates City	43.07	83	P	P	19 02 10.6	+0.9
	baz=314						
O41A	Passleys Farm,	43.09	85	P	P	19 02 10.2	+0.3
	baz=314,SNR=6.6						
R39A	Chumby, Stover	43.16	88	P	P	19 02 10.7	+0.2
	baz=316,SNR=7.2						
S38A	Stockton	43.17	90	P	P	19 02 10.2	-0.4
	baz=316,SNR=11						
Q40A	Laux Farm, Aux	43.22	87	P	P	19 02 11.1	+0.2
	baz=315,SNR=6.6						
M43A	Waltham Townsh	43.24	82	P	P	19 02 11.3	+0.2
	baz=313						
P41A	Barry, Barry	43.30	85	P	P	19 02 11.9	+0.4
	baz=314,SNR=8.7						
L44A	Lake County Fo	43.31	80	P	P	19 02 11.3	-0.3
	baz=313						
TUL1	Leonard	43.37	93	P	P	19 02 12.9	+0.7
	baz=317,SNR=7.3						
T38A	Diamond	43.38	91	P	P	19 02 12.5	+0.2
	baz=316,SNR=5.5						
S39A	Bolivar	43.45	89	P	P	19 02 12.2	-0.7
	baz=316,SNR=13						
S39A	Bolivar	43.45	89	*e*P	P	19 02 12.2	-0.7
	comp=N,45nm,0.8s						
N43A	Stutzman Famil	43.46	83	P	P	19 02 13.2	+0.4
	baz=314						
O42A	Bath	43.48	84	P	P	19 02 12.8	-0.2
	baz=314						
R40A	Maddies Statio	43.61	88	P	P	19 02 14.0	-0.1
	baz=316,SNR=8.0						
R40A	Maddies Statio	43.61	88	*e*P	P	19 02 13.8	-0.3
	comp=N,72nm,0.7s						
KLR	Kul'dur	43.63	294	*c i*P	P	19 02 13.1	-1.1
SUMG	Summit	43.65	23	*e*P	P	19 02 15.0	+0.5
	comp=N,100nm,0.7s						
SUMG	Summit	43.65	23	*i* P	P	19 02 15.7	+1.2
	comp=N,79nm,0.8s						
SUMG	Summit	43.65	23	*e*P	P	19 02 15.0	+0.5
SUMG				pmax	pmax		
	comp=Z,100nm,0.7s						
ABTX	Abilene, Hawle	43.70	100	P	P	19 02 15.4	+0.4
	baz=320,SNR=8.8						
ABTX	Abilene, Hawle	43.70	100	*e*P	P	19 02 15.5	+0.6
	comp=Z,32nm,0.8s						
Q41A	Truxton	43.71	86	P	P	19 02 15.1	+0.2
	baz=315,SNR=10						
P42A	Winchester	43.76	85	P	P	19 02 15.3	0.0
	baz=315,SNR=6.0						
M44A	Midewin, Midew	43.78	81	P	P	19 02 16.2	+0.8
	baz=314						
T39A	Clever	43.90	90	P	P	19 02 16.3	-0.2
	baz=316,SNR=6.2						
DAG	Danmarks Havn	43.91	14	⇑*i*P	P	19 02 16.3	+0.3
	comp=Z,54nm,0.8s						
S40A	Lebanon	43.97	89	P	P	19 02 17.3	+0.2
	baz=316,SNR=5.4						
TX31	Lajitas Ar. Si	44.09	107	*e*P	P	19 02 19.4	+1.2
LTX	Lajitas	44.09	107	*e*P	P	19 02 19.9	+1.7
LTX	Lajitas	44.09	107	*e*P	P	19 02 19.9	+1.7
TXAR	Lajitas Array	44.09	107	P	P	19 02 19.9	+1.8
	comp=Z,4.1nm,0.7s,baz=316,slow=5.9,SNR=49						
TXAR				PcP	PcP	19 04 02.9	-0.2
	comp=Z,1.0nm,0.5s,baz=110,slow=0.9,SNR=6.7						
TXAR				LR	LR	19 19 44.4	
	comp=Z,326nm,18.7s,baz=0.0,slow=35						
R41A	Rosebud	44.09	87	P	P	19 02 17.9	-0.1
	baz=316,SNR=9.9						
Q42A	Golden Eagle	44.13	86	P	P	19 02 18.2	0.0
	baz=315,SNR=5.9						
N44A	Piper City	44.13	82	P	P	19 02 18.6	+0.4
	baz=314						
SFJD	Kangerlussuaq	44.16	33	P	P	19 02 19.7	+1.6
	comp=Z,28nm,0.8s,baz=315,slow=10,SNR=6.5						
SFJD				LR	LR	19 22 12.5	
	comp=Z,588nm,19.4s,baz=315,slow=38						
SFJD	Kangerlussuaq	44.16	33	⇑*i*P	P	19 02 19.5	+1.4
	comp=Z,34nm,0.8s						
P43A	Skaggs, Pawnee	44.17	84	P	P	19 02 19.2	+0.6
	baz=315						
M45A	Boilermakers S	44.21	81	P	P	19 02 19.7	+0.8
	baz=314						
U39A	Green Forest	44.31	91	P	P	19 02 19.7	-0.1
	baz=317,SNR=9.5						
CCM	Cathedral Cave	44.34	87	P	P	19 02 19.9	0.0
	baz=316						
CCM	Cathedral Cave	44.34	87	*e*P	P	19 02 20.8	+0.8
	comp=Z,31nm,0.8s						
CCM	Cathedral Cave	44.34	87	*e*P	P	19 02 20.8	+0.8
CCM				pmax	pmax		
	comp=Z,31nm,0.8s						
O44A	Mansfield	44.40	83	P	P	19 02 20.6	+0.2
	baz=314						
S41A	Jillco Farms,	44.40	88	P	P	19 02 20.3	-0.2
	baz=316,SNR=11						
N45A	Kentland	44.44	82	P	P	19 02 19.8	-0.9
	baz=314						
KBS	Kingsbay	44.49	4	*e*P	P	19 02 22.3	+1.6
	comp=Z,27nm,0.8s						
KBS	Kingsbay	44.49	4	*e*P	P	19 02 22.3	+1.6
KBS				pmax	pmax		
	comp=Z,27nm,0.8s						
Q43A	New Douglas	44.57	85	P	P	19 02 21.8	0.0
	baz=315,SNR=8.0						
V39A	Pettigrew	44.61	91	P	P	19 02 21.6	-0.6
	baz=317						
U40A	Yellville	44.67	90	P	P	19 02 21.6	-1.1
	baz=317,SNR=7.1						
M46A	Old House Fiel	44.69	80	P	P	19 02 23.1	+0.5
	baz=314						
TOBO	Tobermory, Bru	44.71	73	P	P	19 02 23.2	+0.4
	baz=312						
O45A	Potomac	44.74	82	P	P	19 02 23.9	+0.8
	baz=314						
T41A	Mountain View	44.78	89	P	P	19 02 23.9	+0.4
	baz=316,SNR=9.3						
P44A	Sand Creek, Wi	44.79	84	P	P	19 02 22.9	-0.6
	baz=315,SNR=5.7						
S42A	Caledonia	44.79	87	P	P	19 02 22.3	-1.3
	baz=316						
LPIG	La Paz	44.96	118	LR	LR	19 19 30.5	
	comp=Z,147nm,19.6s,baz=352,slow=34						
Q44A	Meyer Farm, Va	44.97	85	P	P	19 02 24.2	-0.8
	baz=315						
SFIN	Lafayette	44.99	82	P	P	19 02 24.0	-1.1
	baz=314						
SFIN	Lafayette	44.99	82	*e*P	P	19 02 25.3	+0.2
	comp=Z,80nm,1.4s						
W39A	Magazine	45.01	92	P	P	19 02 25.7	+0.4
	baz=318,SNR=7.9						
V40A	Witts Springs	45.09	91	P	P	19 02 25.8	-0.2
	baz=317,SNR=12						
V40A	Witts Springs	45.09	91	*e*P	P	19 02 25.5	-0.5
	comp=Z,57nm,0.8s						
T42A	Van Buren	45.16	88	P	P	19 02 24.8	-1.7
	baz=316,SNR=8.2						
T42A	Van Buren	45.16	88	*e*P	P	19 02 25.4	-1.1
	comp=Z,25nm,0.8s						
U41A	Viola	45.20	90	P	P	19 02 25.6	-1.3
	baz=317						
P45A	Graceland, Par	45.23	83	P	P	19 02 26.3	-0.8
	baz=315,SNR=6.9						
P45A	Graceland, Par	45.23	83	*e*P	P	19 02 26.6	-0.4
	comp=Z,73nm,1.0s						
JCT	Junction City	45.26	102	P	P	19 02 27.0	-0.5
	baz=321						
BMRO	Meriville Lake	45.29	73	P	P	19 02 28.3	+0.9
	baz=312						
KLBO	Killbear Provi	45.31	72	P	P	19 02 27.1	-0.4
	baz=312						
X39A	Fountain Ranch	45.33	93	P	P	19 02 28.6	+0.7
	baz=318,SNR=9.0						
WHTX	Lake Whitney,	45.38	98	P	P	19 02 28.3	0.0
	baz=320,SNR=5.3						
SPA0	Spitsbergen Ar	45.38	3	*e*P	P	19 02 27.9	+0.1
SPITS	Spitsbergen Ar	45.38	3	P	P	19 02 28.5	+0.7
	comp=Z,28nm,0.6s,baz=1.4,slow=12,SNR=29						
SPITS				LR	LR	19 22 07.1	
	comp=Z,268nm,18.5s,baz=70,slow=37						
BASO	Ashfield	45.44	74	P	P	19 02 29.8	+1.1
	baz=313						
Q45A	Warren Harvey,	45.45	84	P	P	19 02 28.8	0.0
	baz=315,SNR=8.3						
P46A	Rosedale	45.46	83	P	P	19 02 29.2	+0.3
	baz=315,SNR=5.4						
V41A	Mountainview	45.48	90	P	P	19 02 28.7	-0.4
	baz=317,SNR=11						
T43A	Greenville	45.57	87	P	P	19 02 30.0	+0.3
	baz=316,SNR=7.6						
U42A	Revenden	45.57	89	P	P	19 02 29.3	-0.4
	baz=317,SNR=6.8						
O47A	Sheridan	45.60	81	P	P	19 02 29.7	-0.3
	baz=315						
OLIL	Olney	45.60	84	*e*P	P	19 02 30.2	+0.3
	comp=Z,65nm,0.8s						
MIAR	Mount Ida	45.60	93	P	P	19 02 30.7	+0.7
	baz=318,SNR=14						
MIAR	Mount Ida	45.60	93	*e*P	P	19 02 30.9	+0.9
	comp=Z,64nm,0.9s						
MIAR	Mount Ida	45.60	93	*e*P	P	19 02 30.9	+0.9
MIAR				pmax	pmax		
	comp=Z,64nm,0.9s						
BUKO	Buck Lake	45.68	71	P	P	19 02 29.8	-0.8
	baz=312						
S44A	Carbondale	45.70	86	P	P	19 02 31.1	+0.4
	baz=316						
SIUC	Southern Illin	45.70	86	*e*P	P	19 02 31.3	+0.5
	comp=Z,63nm,0.9s						
SCHQ	Schefferville	45.72	54	P	P	19 02 31.4	+0.6
	comp=Z,19nm,0.8s,baz=314,slow=8.3,SNR=11						
SCHQ				LR	LR	19 22 15.3	
	comp=Z,494nm,18.4s,baz=308,slow=37						
SCHQ	Schefferville	45.72	54	*e*P	P	19 02 31.1	+0.4
	comp=Z,30nm,0.9s						
R45A	Skylar, Fairfi	45.81	85	P	P	19 02 32.0	+0.4
	baz=316,SNR=8.5						
CLWO	Collingwood	45.87	73	P	P	19 02 32.8	+0.7
	baz=313						
W41B	Gary Mavity, V	45.87	91	P	P	19 02 32.6	+0.5
	baz=318						
V42A	Cord	45.88	90	P	P	19 02 33.1	+0.9
	baz=317,SNR=6.1						
M49A	Liberty Center	45.93	78	P	P	19 02 32.7	+0.1
	baz=314						
T44A	Benton	45.95	87	P	P	19 02 32.7	0.0
	baz=316,SNR=5.7						
P47A	Martinsville	46.07	82	P	P	19 02 33.4	-0.3
	baz=315,SNR=6.7						
O48A	Farmland	46.14	80	P	P	19 02 33.6	-0.6
	baz=315,SNR=6.5						
BLO	Bloomington	46.15	82	*e*P	P	19 02 34.6	+0.3
	comp=Z,60nm,0.8s						
BLO	Bloomington	46.15	82	*e*P	P	19 02 34.6	+0.3
BLO				pmax	pmax		
	comp=Z,60nm,0.8s						
ELFO	Elginfield	46.18	75	P	P	19 02 34.7	+0.2
	baz=313						
435B	Jarrell	46.24	100	P	P	19 02 35.4	+0.3
	baz=321						
R46A	Gibon Southern	46.29	84	P	P	19 02 35.9	+0.5
	baz=316						
V43A	Jonesboro	46.37	89	P	P	19 02 36.1	+0.1
	baz=317						
Q47A	Bedord North L	46.37	83	P	P	19 02 36.1	0.0
	baz=315,SNR=7.6						
USIN	University of	46.38	85	*e*P	P	19 02 36.3	+0.1
	comp=Z,71nm,0.8s						
P48A	Milroy	46.55	81	P	P	19 02 37.5	0.0
	baz=315						
S46A	Don Dixon Farm	46.56	85	P	P	19 02 37.7	+0.2
	baz=316,SNR=6.9						
ACTO	Acton	46.57	73	P	P	19 02 38.4	+0.9
	baz=313						
Y41A	Eaglette Beard	46.63	92	P	P	19 02 39.0	+0.9
	baz=318,SNR=5.7						
PEMO	Pembroke	46.64	69	P	P	19 02 37.9	-0.2
	baz=312						
Z40A	Long Farm, Mag	46.66	94	P	P	19 02 38.7	+0.4
	baz=319,SNR=7.6						
BANO	Bancroft	46.73	71	P	P	19 02 39.0	+0.2
	baz=313						
Q48A	North Vernon	46.76	82	P	P	19 02 40.4	+1.3
	baz=316						
R47A	Wooly Knot Far	46.77	83	P	P	19 02 40.1	+0.9
	baz=316						
USRK	Ussuriysk Ar.	46.82	288	P	P	19 02 37.6	-1.9
	comp=Z,4.8nm,0.7s,baz=65,slow=7.2						
USRK				LR	LR	19 22 58.0	
	comp=Z,575nm,20.6s,baz=48,slow=37						
N50A	Nevada	46.87	78	P	P	19 02 39.5	-0.4
	baz=315						
P49A	Miami Univ. Ec	46.89	81	P	P	19 02 39.9	-0.2
	baz=315						
T46A	Princeton	46.92	86	P	P	19 02 40.9	+0.6
	baz=317,SNR=9.8						
WCI	Wyandotte Cave	46.95	83	P	P	19 02 40.9	+0.4
	baz=316						
Z41A	Richland Creek	46.99	93	P	P	19 02 41.0	+0.1
	baz=319						
O50A	Cable	47.05	79	P	P	19 02 40.4	-1.0
	baz=315,SNR=7.7						
R48A	Northridge Ran	47.06	83	P	P	19 02 40.4	-1.1
	baz=316						
S47A	Hartford	47.08	84	P	P	19 02 41.3	-0.3
	baz=316						
H11N2	WAKE ISLAND Hy	47.09	235	T	T	19 53 05.8	
	baz=29,slow=75,SNR=46						
H11N3	WAKE ISLAND Hy	47.09	235	T	T	19 53 06.1	
	baz=29,slow=75,SNR=49						
H11N1	WAKE ISLAND Hy	47.10	235	T	T	19 53 07.0	
	baz=29,slow=75,SNR=25						
PLVO	Plevna	47.16	70	P	P	19 02 43.0	+0.8
	baz=313						
PLVO	Plevna	47.16	70	*e*P	P	19 02 42.6	+0.5
	comp=Z,19nm,1.0s						
833A	Chaparral WMA,	47.17	103	P	P	19 02 42.1	-0.3
	baz=322						
WLVO	Wesleyville	47.23	72	P	P	19 02 43.4	+0.7
	baz=313						
DELO	Deloro Mine	47.24	71	P	P	19 02 42.9	+0.2
	baz=313						
P50A	Jamestown	47.34	80	P	P	19 02 43.5	-0.1
	baz=315,SNR=5.3						
ACSO	Alum Creek Sta	47.34	79	P	P	19 02 43.7	+0.1
	baz=315						
ACSO	Alum Creek Sta	47.34	79	*e*P	P	19 02 43.9	+0.3
	comp=Z,66nm,1.2s						
T47A	Sharon Grove	47.39	85	P	P	19 02 44.6	+0.5
	baz=317						
T47A	Sharon Grove	47.39	85	*e*P	P	19 02 44.7	+0.7
	comp=Z,35nm,0.8s						
S48A	Wiedeman Farm,	47.49	84	P	P	19 02 45.3	+0.5
	baz=316						
R49A	Shelbyville	47.52	82	P	P	19 02 45.5	+0.5
	baz=316						
X44A	Crenshaw	47.53	90	P	P	19 02 45.8	+0.6
	baz=318						
WVT	Waverly	47.62	86	P	P	19 02 46.6	+0.8
	baz=317						
WVT	Waverly	47.62	86	*e*P	P	19 02 46.0	+0.2
	comp=Z,35nm,0.8s						
WVT	Waverly	47.62	86	*e*P	P	19 02 46.0	+0.2
WVT				pmax	pmax		
	comp=Z,35nm,0.8s						
ERPA	Erie	47.63	75	P	P	19 02 46.4	+0.6
	baz=314						
TRQ	Mont Tremblant	47.66	67	*e*P	P	19 02 46.3	+0.1
U47A	Clarksville	47.69	86	P	P	19 02 47.1	+0.7
	baz=317,SNR=6.1						
T48A	Bowling Green	47.70	84	P	P	19 02 46.9	+0.5
	baz=317						
V46A	Holladay	47.70	87	P	P	19 02 47.4	+0.9
	baz=317,SNR=12						
MEDO	Medina	47.73	73	P	P	19 02 47.3	+0.7
	baz=314						
Q50A	Georgetown	47.78	81	P	P	19 02 46.9	-0.2
	baz=316,SNR=5.1						
MDJ	Mudanjiang	47.79	290	P	P	19 02 42.8	-4.2
MDJ				pmax	pmax		
	comp=Z,19nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,560nm,4.6s						
MDJ	Mudanjiang	47.79	290	*e*P	P	19 02 46.1	-0.9
	comp=Z,16nm,0.8s						
S49A	Springfield	47.82	83	P	P	19 02 46.9	-0.5
	baz=316						
Y44A	Strider, Charl	47.90	90	P	P	19 02 48.4	+0.4
	baz=318						
OXF	Oxford	47.93	89	P	P	19 02 48.6	+0.3
	baz=318						
OXF	Oxford	47.93	89	*e*P	P	19 02 48.5	+0.3
	comp=Z,130nm,0.8s						
OXF	Oxford	47.93	89	*e*P	P	19 02 48.5	+0.3
OXF				pmax	pmax		
	comp=Z,130nm,0.8s						
R50A	Paris	47.99	82	P	P	19 02 48.8	+0.1
	baz=316,SNR=7.0						
Q51A	Peebles	48.00	80	P	P	19 02 49.1	+0.3
	baz=316,SNR=6.2						
X45A	UM Field Stati	48.01	89	P	P	19 02 49.2	+0.4
	baz=318						
V47A	Nunnelly	48.01	86	P	P	19 02 49.1	+0.2
	baz=317,SNR=7.8						
U48A	Cassie Pea, Po	48.05	85	P	P	19 02 49.5	+0.3
	baz=317,SNR=10.0						
T49A	Edmonton	48.18	84	P	P	19 02 50.2	+0.1
	baz=317,SNR=5.8						
143A	Socs Landing,	48.18	92	P	P	19 02 50.4	+0.2
	baz=319						
M54A	Oil Creek Stat	48.23	75	P	P	19 02 50.4	-0.1
	baz=315,SNR=5.1						
M54A	Oil Creek Stat	48.23	75	*e*P	P	19 02 50.6	0.0
	comp=Z,53nm,1.1s						
341A	Kurthwood	48.24	95	P	P	19 02 51.6	+0.9
	baz=320						
H11S1	WAKE ISLAND Hy	48.24	235	T	T	19 54 35.6	
	baz=29,slow=76,SNR=65						
242A	Grayson	48.25	94	P	P	19 02 52.0	+1.3
	baz=320						
H11S2	WAKE ISLAND Hy	48.25	235	T	T	19 54 32.3	
	baz=29,slow=76,SNR=33						
H11S3	WAKE ISLAND Hy	48.26	235	T	T	19 54 36.3	
	baz=29,slow=76,SNR=37						
Y45A	Yeager Farm, C	48.34	90	P	P	19 02 51.5	+0.1
	baz=318						
X46A	Booneville	48.36	88	P	P	19 02 51.1	-0.5
	baz=318,SNR=8.5						
MSHR	Mys Shultsa	48.37	287	*ce*P	P	19 02 51.2	-0.4
S50A	Richmond	48.38	82	P	P	19 02 52.0	+0.2
	baz=316,SNR=5.6						
R51A	Hillsboro	48.38	81	P	P	19 02 52.4	+0.6
	baz=316,SNR=25						
W47A	Westpoint	48.39	87	P	P	19 02 52.3	+0.5
	baz=318,SNR=6.4						
N54A	Moraine State	48.44	76	P	P	19 02 52.2	0.0
	baz=315						
V48A	Smith Brothers	48.46	86	P	P	19 02 51.9	-0.4
	baz=317						
V48A	Smith Brothers	48.46	86	*e*P	P	19 02 53.0	+0.6
	comp=Z,33nm,0.9s						
U49A	Red Boiling Sp	48.47	84	P	P	19 02 52.6	+0.2
	baz=317,SNR=7.0						
T50A	Nancy	48.62	83	P	P	19 02 53.5	0.0
	baz=317,SNR=5.3						
Z45A	Winona	48.62	90	P	P	19 02 54.2	+0.6
	baz=319						
342A	Flagon Creek P	48.67	94	P	P	19 02 55.0	+1.0
	baz=320						
441A	DeRidder	48.67	96	P	P	19 02 54.4	+0.4
	baz=320						
Y46A	Houston	48.70	89	P	P	19 02 54.2	0.0
	baz=318,SNR=8.2						
LONY	Lake Ozonia	48.74	69	P	P	19 02 54.0	-0.4
	baz=314						
144A	Alexander Plac	48.77	92	P	P	19 02 55.8	+1.0
	baz=319						
X47A	Russelville	48.79	88	P	P	19 02 55.2	+0.3
	baz=318,SNR=6.1						
W48A	Pulaski	48.84	87	P	P	19 02 55.4	+0.2
	baz=318,SNR=7.1						
MJAR	Matsushiro Arr	48.85	276	P	P	19 02 54.8	-0.6
	comp=Z,8.9nm,0.7s,baz=34,slow=5.5,SNR=30						
MJAR				PcP	PcP	19 04 19.6	-0.1
	comp=Z,2.7nm,0.7s,baz=48,slow=2.7,SNR=3.8						
MJAR				LR	LR	19 22 08.4	
	comp=Z,260nm,21.9s,baz=50,slow=34						
MJB9	Matsu-Tunnel	48.85	276	*e*P	P	19 02 54.7	-0.7
	comp=Z,38nm,0.8s						
MAJO	Matsushiro	48.85	276	*e*P	P	19 02 54.3	-1.1
	comp=Z,38nm,0.8s						
MAJO				*e*PcP	PcP	19 04 19.1	-0.5
MAJO	Matsushiro	48.85	276	*e*P	P	19 02 54.3	-1.1
MAJO				*e*		19 04 19.1	
MAJO				pmax	pmax		
	comp=Z,38nm,0.8s						
MAT	Matsushiro	48.85	276	P	P	19 02 54.3	-1.1
MAT				S	S	19 10 01.8	+4.3
S51A	Beattyville	48.85	82	P	P	19 02 55.2	-0.2
	baz=316,SNR=5.6						
S51A	Beattyville	48.85	82	*e*P	P	19 02 55.9	+0.6
	comp=Z,53nm,0.8s						
R52A	Catlettsburg	48.87	80	P	P	19 02 55.1	-0.4
	baz=316						
ANGG	Ammassalik, Gr	48.89	30	*e*P	P	19 02 54.9	-0.3
	comp=Z,43nm,0.7s						
V49A	McMinnville	48.95	85	P	P	19 02 54.8	-1.3
	baz=318,SNR=9.8						
U50A	Jamestown	49.06	84	P	P	19 02 57.0	0.0
	baz=317,SNR=5.2						
145A	Houston Renfro	49.07	91	P	P	19 02 56.9	-0.1
	baz=319						
244A	Avery, Jackson	49.07	92	P	P	19 02 58.4	+1.4
	baz=320,SNR=7.8						
H06N1	SOCORRO T-PHAS	49.11	122	T	T	19 55 42.8	
	SNR=130						
S52A	Salyersville	49.11	81	P	P	19 02 57.3	0.0
	baz=317,SNR=6.1						
T51A	Gray	49.15	83	P	P	19 02 57.5	-0.2
	baz=317,SNR=6.0						
541A	Lake Charles	49.20	96	P	P	19 02 56.8	-1.2
	baz=321						
W49A	Belvidere	49.22	86	P	P	19 02 58.0	-0.2
	baz=318,SNR=9.2						
NCB	Newcomb	49.38	69	*e*P	P	19 02 59.9	+0.6
	comp=Z,18nm,1.1s						
MCWV	Mont Chateau	49.45	77	P	P	19 02 59.6	-0.2
	baz=316						
MCWV	Mont Chateau	49.45	77	*e*P	P	19 02 59.5	-0.4
	comp=Z,37nm,1.0s						
V50A	Pikevile	49.46	85	P	P	19 02 59.1	-0.9
	baz=318						
344A	Westbrook Farm	49.49	93	P	P	19 03 01.9	+1.6
	baz=320,SNR=5.5						
542A	Morse	49.51	96	P	P	19 03 00.6	+0.3
	baz=321						
245A	Little AP, Sta	49.52	92	P	P	19 03 01.6	+1.1
	baz=320						
HIA	Hailar	49.52	301	*e*P	P	19 02 59.4	-1.0
	comp=Z,26nm,1.1s						
HIA	Hailar	49.52	301	*e*P	P	19 02 59.4	-1.0
HIA				pmax	pmax		
	comp=Z,27nm,1.1s						
146A	Union	49.53	91	P	P	19 03 00.8	+0.2
	baz=319						
U51A	La Follette	49.54	83	P	P	19 03 00.9	+0.3
	baz=317						
T52A	Hallie	49.57	82	P	P	19 03 00.8	-0.1
	baz=317						
X49A	Woodville	49.64	87	P	P	19 03 01.6	+0.2
	baz=318						
Z47A	Carrollton	49.65	89	P	P	19 03 02.3	+0.9
	baz=319,SNR=5.5						
TZTN	Tazewell	49.67	83	P	P	19 03 02.4	+0.7
	baz=317						
W50A	Signal Mountai	49.69	85	P	P	19 03 01.8	0.0
	baz=318,SNR=5.5						
O56A	Blue Knob Stat	49.70	76	P	P	19 03 01.7	-0.1
	baz=316						
BINY	Binghamton	49.70	72	P	P	19 03 01.6	-0.2
	baz=315						

BINY	Binghamton	49.70	72	eP	P	19 03 02.1	+0.3
	comp=Z,42nm,1.0s						
V51A	Loudon	49.78	84	P	P	19 03 02.9	+0.5
	baz=318						
SSPA	Standing Stone	49.80	75	P	P	19 03 03.0	+0.5
	baz=316						
SSPA	Standing Stone	49.80	75	eP	P	19 03 02.5	-0.1
	comp=Z,32nm,0.8s						
Z48A	Northport	49.80	89	P	P	19 03 03.2	+0.6
	baz=319						
LNIG	Linares	49.87	106	eP	P	19 03 02.8	-0.4
	comp=Z,32nm,1.0s						
U52A	Thorn Hill	49.88	83	P	P	19 03 03.8	+0.5
	baz=317						
VT1	Waterbury	49.88	68	eP	P	19 03 03.3	+0.2
	comp=Z,16nm,0.9s						
147A	Livingston	49.93	90	P	P	19 03 03.2	-0.5
	baz=319,SNR=5.4						
147A	Livingston	49.93	90	eP	P	19 03 03.4	-0.2
	comp=Z,103nm,1.0s						
W51A	Cleveland	50.02	85	P	P	19 03 03.9	-0.4
	baz=318,SNR=5.2						
X50B	Fort Payne	50.05	86	P	P	19 03 04.6	+0.1
	baz=318						
V52A	Sevierville	50.16	83	P	P	19 03 05.7	+0.4
	baz=318						
247A	Quitman	50.21	91	P	P	19 03 06.5	+0.7
	baz=320						
U53A	Fall Branch	50.34	82	P	P	19 03 07.1	+0.3
	baz=317						
LBNH	Lisbon	50.37	67	P	P	19 03 06.9	+0.1
	baz=315						
INU	Inuyama	50.38	276	eP	P	19 03 05.2	-1.8
	comp=Z,18nm,0.9s						
CIT	Chita	50.46	307	eP	P	19 03 08.0	+0.5
CIT				e		19 03 13.6	
CIT				pmax	pmax		
	comp=Z,179nm,1.0s						
CN2	Changchun	50.50	292	⇑P	P	19 03 06.9	-0.9
CN2				esP	pP	19 03 14.0	-0.2
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,380nm,14.0s						
CN2				LR	LR		
	comp=Z,490nm,14.0s						
CN2				LR	LR		
	comp=Z,570nm,15.0s						
Z49A	Columbiana	50.51	88	P	P	19 03 08.2	+0.2
	baz=319,SNR=6.8						
W52A	Murphy	50.53	84	P	P	19 03 08.6	+0.4
	baz=318						
PAGS	Pennsylvania G	50.71	74	eP	P	19 03 09.4	-0.1
	comp=Z,48nm,0.9s						
V53A	Saluda	50.72	83	P	P	19 03 09.9	+0.3
	baz=318,SNR=8.7						
V53A	Saluda	50.72	83	eP	P	19 03 09.9	+0.3
	comp=Z,51nm,0.8s						
N59A	State Game Lan	50.73	73	P	P	19 03 09.7	+0.1
	baz=316						
347A	Saraland	50.75	91	P	P	19 03 10.1	+0.3
	baz=320,SNR=6.6						
W53A	Cullowhee	50.90	84	P	P	19 03 10.5	-0.5
	baz=318						
BLA	Blacksburg	50.90	80	P	P	19 03 10.9	0.0
	baz=317						
X52A	Dahlonega	50.91	85	P	P	19 03 10.2	-0.9
	baz=318,SNR=7.8						
PKME	Peaks-Kenny Pk	50.98	65	P	P	19 03 11.3	-0.1
	baz=315						
PKME	Peaks-Kenny Pk	50.98	65	eP	P	19 03 11.2	-0.2
	comp=Z,21nm,0.9s						
249A	Camden	51.10	89	P	P	19 03 12.1	-0.3
	baz=320,SNR=6.9						
645A	Chauvin	51.10	94	P	P	19 03 12.0	-0.4
	baz=321						
BG3	Lake Jocassee	51.16	84	eP	P	19 03 13.3	+0.5
	comp=Z,40nm,0.9s						
LUPA	Lehigh Univers	51.16	73	eP	P	19 03 13.0	+0.2
	comp=Z,2.8nm,0.8s						
X53A	Estanollee	51.31	84	P	P	19 03 14.4	+0.3
	baz=318						
250A	Grady	51.57	89	P	P	19 03 14.8	-1.2
	baz=320,SNR=6.7						
250A	Grady	51.57	89	eP	P	19 03 13.9	-2.1
	comp=Z,94nm,1.0s						
IP03	Louisa	51.62	77	eP	P	19 03 16.1	-0.1
	comp=Z,37nm,1.1s						
IP07	Quail	51.68	77	eP	P	19 03 16.8	0.0
	comp=Z,31nm,0.9s						
KMSC	Kings Mountain	51.92	82	P	P	19 03 18.9	+0.3
	baz=318						
KMSC	Kings Mountain	51.92	82	eP	P	19 03 18.7	+0.1
	comp=Z,31nm,0.8s						
251A	Midway	51.96	88	P	P	19 03 17.9	-1.0
	baz=320						
GOGA	Godfrey	52.04	85	P	P	19 03 19.3	-0.1
	baz=319						
Z53A	Monticello	52.08	85	P	P	19 03 18.9	-0.8
	baz=319						
NCAT	North Carolina	52.08	80	eP	P	19 03 19.5	-0.3
	comp=Z,28nm,0.9s						
HODGE	Hodges	52.09	84	eP	P	19 03 19.8	0.0
	comp=Z,21nm,0.8s						
HODGE				eS	S	19 10 43.2	+0.7
Y54A	Tignall	52.13	84	P	P	19 03 19.0	-1.2
	baz=319,SNR=5.2						
351A	Pinckard	52.47	89	P	P	19 03 22.6	-0.1
	baz=320,SNR=5.9						
Z54A	Sparta	52.51	85	P	P	19 03 22.5	-0.4
	baz=319,SNR=7.0						
154A	Montrose	52.84	86	P	P	19 03 25.2	-0.2
	baz=319						
451A	Vernon	52.89	89	P	P	19 03 25.9	+0.1
	baz=320						
BORG	Borgarnes	53.64	23	eP	P	19 03 32.0	+1.3
	comp=Z,35nm,1.0s						
BORG	Borgarnes	53.64	23	eP	P	19 03 32.1	+1.3
BORG				pmax	pmax		
	comp=Z,35nm,1.0s						
KS01	Wonju Array Si	53.78	285	eP	P	19 03 31.6	-0.7
KS01				ePcP	PcP	19 04 36.9	-1.0
KSRS	Korea Array	53.78	285	P	P	19 03 32.2	0.0
	comp=Z,21nm,0.8s,baz=46,slow=6.9,SNR=98						
KSRS				LR	LR	19 26 57.2	
	comp=Z,160nm,20.3s,baz=53,slow=37						
CBIJ	Chichi jima	53.80	265	eP	P	19 03 31.4	-1.2
	comp=Z,174nm,0.7s						
JCJ	Chichijima	53.80	265	P	P	19 03 32.0	-0.5
	comp=Z,170nm,0.8s,baz=323,slow=5.1,SNR=30						
KS15	Wonju Array Si	53.81	285	eP	P	19 03 32.4	-0.1
KS15				ePcP	PcP	19 04 37.3	-0.7
KSAR	Wonju Array Be	53.81	285	P	P	19 03 32.2	-0.2
KSAR	Wonju Array Be	53.81	285	P	P	19 03 32.3	-0.2
ARA0	ARCESS Array S	54.22	0	eP	P	19 03 35.2	+0.2
ARA0				ePcP	PcP	19 04 39.3	+0.2
ARCES	ARCESS Array B	54.22	0	P	P	19 03 35.2	+0.2
	comp=Z,16nm,0.7s,baz=9.6,slow=7.3,SNR=42						
ARCES				PcP	PcP	19 04 39.3	+0.2
	comp=Z,11nm,0.8s,baz=4.4,slow=5.9,SNR=4.7						
IRK	Irkutsk	54.27	312	eP	P	19 03 35.1	-0.5
IRK				pmax	pmax		
	comp=Z,505nm,0.9s						
INCN	Inchon	54.45	286	eP	P	19 03 36.7	-0.5
	comp=Z,25nm,0.8s						
INCN	Inchon	54.45	286	eP	P	19 03 36.7	-0.5
INCN				pmax	pmax		
	comp=Z,25nm,0.8s						
TJN	Taejon	54.88	284	ceP	P	19 03 40.0	-0.2
TLY	Talaya	54.94	312	eP	P	19 03 40.7	+0.1
	comp=Z,33nm,1.0s						
TLY	Talaya	54.94	312	eP	P	19 03 40.7	+0.1
TLY				pmax	pmax		
	comp=Z,33nm,1.0s						
JNU	Nakatsue	55.42	279	P	P	19 03 43.5	-0.8
	comp=Z,19nm,0.9s,baz=17,slow=4.1,SNR=9.3						
JNU				LR	LR	19 29 48.3	
	comp=Z,155nm,19.4s,baz=122,slow=39						
JNU	Nakatsue	55.42	279	eP	P	19 03 43.4	-0.8
	comp=Z,26nm,1.0s						
KRAR	Krasnoyarsk	55.67	321	d iP	P	19 03 44.4	-1.3
MOY	Mondy	56.03	314	eP	P	19 03 49.3	+0.8
MOY				pmax	pmax		
	comp=Z,39nm,2.2s						
ZAK	Zakamensk	56.08	311	eP	P	19 03 48.3	-0.5
ZAK				pmax	pmax		
	comp=Z,13nm,1.1s						
ULN	Ulaanbaatar	56.37	307	eP	P	19 03 50.5	-0.5
	comp=Z,34nm,0.9s						
ULN	Ulaanbaatar	56.37	307	c iP	P	19 03 50.9	-0.1
ULN				pmax	pmax		
	comp=Z,34nm,0.8s						
SONA1	Songino Array	56.67	307	eP	P	19 03 53.3	+0.2
SONA0	Songino Array	56.68	307	eP	P	19 03 53.7	+0.5
SONM	Songino Array	56.68	307	P	P	19 03 53.7	+0.5
	comp=Z,77nm,0.7s,baz=46,slow=6.8,SNR=318						
SONM				LR	LR	19 30 04.5	
	comp=Z,1µm,18.2s,baz=38,slow=38						
BJI	Beijing	57.96	295	P	P	19 04 01.8	-0.3
BJI				pmax	pmax		
	comp=Z,47nm,0.7s						
BJT	Baijiatuau	57.98	295	eP	P	19 04 01.5	-0.8
	comp=Z,28nm,0.6s						
BJT	Baijiatuau	57.98	295	eP	P	19 04 01.5	-0.8
BJT				pmax	pmax		
	comp=Z,28nm,0.6s						
HVS	Khovu-Aksy	59.27	318	c iP	P	19 04 11.3	0.0
HVS				pmax	pmax		
	comp=Z,56nm,0.9s						
HHC	Hu-ho-hao-te	59.62	299	eP	P	19 04 14.0	+0.2
HHC				sP	sP	19 04 21.8	-1.1
HHC				S	S	19 12 19.8	-3.0
HHC				sS	pS	19 12 30.4	-0.4
HHC				SS	SS	19 16 20.4	+2.7
HHC				pmax	pmax		
	comp=Z,87nm,1.2s						
HHC				pmax	pmax		
	comp=Z,430nm,6.0s						
HHC				LR	LR		
	comp=Z,400nm,14.7s						
HHC				LR	LR		
	comp=Z,620nm,16.4s						
HHC				LR	LR		
	comp=Z,800nm,16.4s						
NVS	Novosibirsk	59.79	326	⇓iP	P	19 04 14.8	+0.2
NVS				e		19 04 57.8	
NVS				eS	S	19 12 29.6	+5.2
NVS				pmax	pmax		
	comp=N,15nm,1.1s						
NVS				pmax	pmax		
	comp=E,13nm,1.1s						
NVS				pmax	pmax		
	comp=Z,37nm,1.1s						
NVS				smax	smax		
	comp=N,19nm,2.0s						
NVS				smax	smax		
	comp=E,28nm,2.2s						
ZAA1	Zalesovo Array	60.04	325	eP	P	19 04 16.6	+0.3
ZAA0	Zalesovo Array	60.05	325	eP	P	19 04 16.0	-0.4
	comp=E,41nm,0.8s						
ZALV	Zalesovo Beam	60.05	325	P	P	19 04 16.6	+0.2
	comp=E,38nm,0.8s,baz=33,slow=6.7,SNR=85						
ZALV				LR	LR	19 32 06.0	
	comp=E,195nm,20.2s,baz=66,slow=38						
ZALV	Zalesovo Beam	60.05	325	eP	P	19 04 16.1	-0.3
ZALV				ePcP	PcP	19 05 01.5	-0.7
ZALV	Zalesovo Beam	60.05	325	eP	P	19 04 16.1	-0.3
ZALV				e		19 05 01.5	
PRGR	Permogore	61.21	350	eP	P	19 04 22.7	-1.5
PRGR				pmax	pmax		
	comp=Z,68nm,0.9s						
TIY	Taiyuan	61.61	296	eP	P	19 04 27.8	+0.4
TIY				LR	LR		
	comp=Z,280nm,11.1s						
TIY				LR	LR		
	comp=Z,400nm,15.5s						
TIY				LR	LR		
	comp=Z,730nm,18.8s						
JOW	Kunigami	61.70	276	P	P	19 04 24.7	-3.4
	comp=Z,21nm,1.0s,baz=67,slow=10,SNR=2.7						
JOW	Kunigami	61.70	276	eP	P	19 04 24.9	-3.1
	comp=Z,40nm,1.1s						
NC204	NORSAR Array S	61.86	9	eP	P	19 04 28.9	+0.1
NC303	NORSAR Array S	61.96	8	eP	P	19 04 29.6	+0.3
NC405	NORSAR Array S	62.10	8	eP	P	19 04 30.4	+0.2
NBO00	NORSAR Array S	62.10	9	eP	P	19 04 30.5	+0.2
NB201	NORSAR Array S	62.13	8	eP	P	19 04 30.9	+0.4
NB2	NORSAR Subarra	62.13	8	P	P	19 04 30.7	+0.2
	comp=Z,32nm,0.7s,baz=351,slow=6.9						
NB2	NORSAR Subarra	62.13	8	P	P	19 04 30.7	+0.2
	baz=351,slow=6.9						
NOA	NORSAR Array B	62.13	8	P	P	19 04 30.9	+0.4
	comp=Z,27nm,0.7s,baz=351,slow=6.8,SNR=123						
NOA				LR	LR	19 33 03.1	
	comp=Z,111nm,18.9s,baz=40,slow=38						
NAO01	NORSAR Array S	62.30	9	eP	P	19 04 31.8	+0.2
FIA0	FINESS Array S	62.35	0	eP	P	19 04 32.4	+0.5
FIA0	FINESS Array S	62.35	0	eP	P	19 04 32.4	+0.5
FIA1	FINESS Array S	62.35	0	eP	P	19 04 31.5	-0.3
	comp=Z,58nm,1.1s						
FINES	FINESS Array B	62.35	0	P	P	19 04 32.4	+0.5
	comp=Z,25nm,0.8s,baz=10,slow=12,SNR=40						
FINES				LR	LR	19 32 40.0	
	comp=Z,150nm,21.0s,baz=51,slow=37						
NC602	NORSAR Array S	62.46	8	eP	P	19 04 32.7	+0.1
KLMR	Klimovskoe	62.49	353	eP	P	19 04 30.7	-2.2
KLMR				pmax	pmax		
	comp=Z,61nm,0.9s						
KLMR	Klimovskoe	62.49	353	eP	P	19 04 30.7	-2.2
KLMR				AMP		19 04 33.7	
	comp=Z,61nm,0.9s						
NJ2	Nanjing	62.72	287	eP	P	19 04 35.8	+1.0
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
HFS	Hagfors	63.22	7	P	P	19 04 38.2	+0.5
	comp=Z,34nm,0.8s,baz=1.7,slow=5.2,SNR=88						
GUMO	Guam	63.28	253	LR	LR	19 26 36.9	
	comp=Z,71nm,21.4s,baz=62,slow=31						
KONO	Kongsberg	63.36	10	eP	P	19 04 39.4	+0.8
	comp=Z,50nm,0.9s						
KONO	Kongsberg	63.36	10	c iP	P	19 04 39.0	+0.3
KONO				pmax	pmax		
	comp=Z,99nm,2.5s						
SVE	Sverdlovsk	63.69	340	d iP	P	19 04 41.1	+0.3
SVE				pmax	pmax		
	comp=Z,75nm,0.9s						
SVE				MLR	MLR		
	comp=Z,369nm,21.0s						
ARU	Arti	64.45	341	LR	LR	19 37 42.8	
	comp=Z,292nm,19.0s,baz=21,slow=41						
ARU	Arti	64.45	341	eP	P	19 04 45.5	-0.3
	comp=Z,56nm,0.7s						
ARU	Arti	64.45	341	eP	P	19 04 45.5	-0.3
ARU				pmax	pmax		
	comp=Z,57nm,0.7s						
KURK	Kurchatov	64.78	326	eP	P	19 04 47.6	-0.5
	comp=Z,22nm,0.8s						
KURK				ePP	PP	19 07 09.3	-0.7
KURK	Kurchatov	64.78	326	c iP	P	19 04 48.0	-0.1
KURK				pmax	pmax		
	comp=Z,20nm,0.6s						
KURBB	Kurchatov Arra	64.88	326	P	P	19 04 48.8	0.0
	comp=Z,17nm,0.6s,baz=33,slow=6.8,SNR=88						
KURBB				PP	PP	19 07 09.3	-1.6
	comp=Z,3.3nm,0.8s,baz=39,slow=10.0,SNR=4.9						
BRVK	Borovoye	65.03	333	eP	P	19 04 49.5	-0.2
	comp=Z,55nm,0.8s						
BRVK	Borovoye	65.03	333	c iP	P	19 04 49.7	0.0
BRVK				pmax	pmax		
	comp=Z,42nm,0.6s						
BVA0	Borovoye Array	65.03	333	i P	P	19 04 49.3	-0.4
BVA0				pmax	pmax		
	comp=Z,55nm,0.7s						
BVAR	Borovoye Array	65.03	333	P	P	19 04 49.9	+0.1
	comp=Z,56nm,0.7s,baz=36,slow=7.5,SNR=227						
BVAR				LR	LR	19 38 16.1	
	comp=Z,302nm,18.2s,baz=31,slow=41						
VSU	Vasula	65.34	360	c iP	P	19 04 51.6	0.0
VSU				pmax	pmax		
	comp=Z,166nm,1.0s						
EKA	Eskdalemuir Ar	65.89	18	P	P	19 04 55.8	+0.6
	comp=Z,24nm,0.8s,baz=340,slow=5.0,SNR=48						
TAOE	Nuku Hiva Isla	66.09	166	eT	T	20 16 35.2	
	comp=Z,102nm,0.3s						
GTA	Gaotai	66.25	306	⇑P	P	19 04 57.6	-0.4
GTA				pP	pP	19 05 04.8	+0.2
GTA				sP	sP	19 05 08.6	+1.5
GTA				S	S	19 13 41.8	-4.1
GTA				sS	sS	19 13 55.9	-0.9
GTA				pmax	pmax		
	comp=Z,32nm,1.0s						
GTA				pmax	pmax		
	comp=Z,150nm,6.3s						
GTA				LR	LR		
	comp=Z,710nm,17.1s						
GTA				LR	LR		
	comp=Z,750nm,16.5s						
GTA				LR	LR		
	comp=Z,1µm,16.5s						
XAN	Xi’an	66.26	296	P	P	19 04 57.4	-0.6
XAN				pP	pP	19 05 02.3	-2.3
XAN				pmax	pmax		
	comp=Z,29nm,0.9s						
XAN				LR	LR		
	comp=Z,500nm,14.5s						
XAN				LR	LR		
	comp=Z,320nm,15.5s						
XAN				LR	LR		
	comp=Z,440nm,15.9s						
MK31	Makanchi Array	67.01	322	eP	P	19 05 01.9	-0.6
MK31	Makanchi Array	67.01	322	i P	P	19 05 02.0	-0.6
MK31				pmax	pmax		
	comp=Z,25nm,0.8s						
MK32	Makanchi Array	67.01	322	eP	P	19 05 02.3	-0.2
MK32				ePP	PP	19 07 28.2	-1.5
MKAR	Makanchi Array	67.01	322	P	P	19 05 02.3	-0.2
	comp=Z,22nm,0.7s,baz=45,slow=6.8,SNR=119						
MKAR				PP	PP	19 07 28.2	-1.5
	comp=Z,4.6nm,0.8s,baz=40,slow=8.3,SNR=3.6						
MKAR				LR	LR	19 36 50.5	
	comp=Z,382nm,19.3s,baz=30,slow=38						
MKAR	Makanchi Array	67.01	322	eP	P	19 05 01.8	-0.8
	comp=Z,125nm,0.7s						
MKAR				PP	PP	19 07 28.2	-1.5
MKAR	Makanchi Array	67.01	322	eP	P	19 05 01.8	-0.8
MKAR						19 07 28.2	
MKAR				pmax	pmax		
	comp=Z,125nm,0.7s						
MK01	Makanchi Array	67.02	322	eP	P	19 05 01.9	-0.8
LZH	Lanzhou	67.08	301	eP	P	19 05 03.3	-0.1
LZH				pP	pP	19 05 06.8	-3.2
LZH				sP	sP	19 05 09.6	-2.9
LZH				S	S	19 13 54.3	-1.9
LZH				sS	sS	19 14 06.8	-0.3
LZH				pmax	pmax		
	comp=Z,49nm,1.2s						
LZH				pmax	pmax		
	comp=Z,180nm,4.2s						
LZH				LR	LR		
	comp=Z,1µm,11.4s						
LZH				LR	LR		
	comp=Z,770nm,13.6s						
LZH				LR	LR		
	comp=Z,1µm,13.0s						
MAKZ	Makanchi	67.10	322	eP	P	19 05 02.7	-0.5
	comp=Z,28nm,0.9s						
MAKZ	Makanchi	67.10	322	P	P	19 05 02.5	-0.7
MAKZ				pmax	pmax		
	comp=Z,29nm,0.9s						
WMQ	Urumqi	67.61	317	P	P	19 05 07.6	+1.1
WMQ				pP	sP	19 05 14.6	-1.0
WMQ				sP	pP	19 05 17.1	+4.0
WMQ				pmax	pmax		
	comp=Z,260nm,4.5s						
WMQ				LR	LR		
	comp=Z,720nm,16.5s						
WMQ				LR	LR		
	comp=Z,750nm,16.5s						
WMQ				LR	LR		
	comp=Z,630nm,17.7s						
MOS	Moscow	67.71	353	eP	P	19 05 07.0	+0.2
MOS				pmax	pmax		
	comp=Z,62nm,0.9s						
SSLB	Suanglung	68.12	280	eP	P	19 05 08.9	-1.0
	comp=Z,38nm,1.2s						
ISAL	Salakas	68.24	0	eP	P	19 05 10.4	+0.3
ISAL				IAmb	IAmb	19 05 12.2	
	comp=Z,12nm,0.9s						
OBN	Obninsk	68.40	354	eP	P	19 05 10.6	-0.5
	comp=Z,47nm,0.9s						
OBN	Obninsk	68.40	354	c iP	P	19 05 10.8	-0.3
OBN				e		19 05 13.1	
OBN				e*PP	pP	19 05 18.1	+0.4
OBN				e		19 05 35.4	
OBN						19 07 38.0	
OBN				eS	S	19 14 18.8	+7.9
OBN				pmax	pmax		
	comp=Z,41nm,0.9s						
IIGN	Ignalina	68.46	0	eP	P	19 05 11.8	+0.3
IIGN				IAmb	IAmb	19 05 13.4	
	comp=Z,12nm,0.8s						
IDID	Didziasalis	68.49	360	eP	P	19 05 12.0	+0.3
IDID				IAmb	IAmb	19 05 13.6	
	comp=Z,16nm,0.8s						
NACGM	Naroch	68.91	360	e	P	19 05 08.0	-6.3
ENH	Enshi	68.99	293	eP	P	19 05 14.4	-0.9
	comp=Z,22nm,0.8s						
KLNR	Kaliningrad	69.08	4	i P	P	19 05 15.7	+0.3
KLNR				pmax	pmax		
	comp=Z,159nm,0.9s						
SUW	Suwalki	69.76	2	eP	P	19 05 19.6	0.0
SUW	Suwalki	69.76	2	eP	P	19 05 19.7	+0.1
	comp=Z,70nm,0.8s						
SUW	Suwalki	69.76	2	eP	P	19 05 19.6	0.0
AKTO	Aktyubinsk	70.25	339	P	P	19 05 22.5	-0.1
	comp=Z,41nm,0.8s,baz=11,slow=6.0,SNR=111						
AKTO				LR	LR	19 38 13.0	
	comp=Z,124nm,21.7s,baz=29,slow=38						
AKTO	Aktyubinsk	70.25	339	P	P	19 05 22.3	-0.4
AKTO				pmax	pmax		
	comp=Z,58nm,0.9s						
GKP	Gorka Klasztor	70.28	6	eP	P	19 05 23.7	+1.0
GKP	Gorka Klasztor	70.28	6	eP	P	19 05 23.7	+1.0
WTSB	Winterswijk	70.63	13	eP	P	19 05 25.9	+1.0
	comp=Z,50nm,0.8s						
ABKAR	Akbulak array	70.98	338	eP	P	19 05 26.6	-0.5
PDGK	Podgornoye	71.00	322	P	P	19 05 27.7	+0.2
PDGK				pmax	pmax		
	comp=Z,45nm,1.0s						
CD2	Chengdu	71.34	298	eP	P	19 05 30.0	+0.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,140nm,5.0s						
PMOR	Pomariorio Ree	71.43	174	eT	T	20 23 15.3	
	comp=Z,280nm,0.3s						
UCC	Uccle	71.45	15	⇑P	P	19 05 30.6	+0.7
BEBN	Eben Emael	71.63	14	⇑P	P	19 05 31.8	+0.8
VAH	Vaihoa	71.67	174	eT	T	20 23 33.8	
	comp=Z,16nm,0.4s						
HGN	Heimansgroeve	71.69	14	eP	P	19 05 32.2	+0.8
	comp=Z,68nm,1.3s						
SNF	Seneffe	71.72	15	⇓P	P	19 05 32.7	+1.1
AFI	Afiamalu	71.85	199	LR	LR	19 28 57.6	
	comp=Z,198nm,21.8s,baz=37,slow=29						
MEM	Membach	71.86	14	⇑P	P	19 05 33.2	+0.8
	comp=Z,20nm,1.0s						
VRH	Novokhopyorsk	71.89	350	eP	P	19 05 31.7	-0.8
VRH				pmax	pmax		
	comp=Z,30nm,0.7s						
CLL	Collm	71.92	9	⇑iP	P	19 05 33.3	+0.5
	comp=Z,22nm,0.9s						
CLL				Lm	MLR	19 42 00.0	
	comp=N,100nm,18.3s						
CLL				Lm	MLR	19 42 00.0	
	comp=E,100nm,18.6s						
CLL				Lm	MLR	19 42 00.0	
	comp=Z,100nm,18.5s						
CLL	Collm	71.92	9	eP	P	19 05 32.9	+0.1
	comp=Z,21nm,0.9s						
CLL	Collm	71.92	9	⇑iP	P	19 05 33.3	+0.5
CLL				pmax	pmax		
	comp=Z,22nm,0.9s						
BCLA	Clavier	71.95	14	⇑P	P	19 05 33.6	+0.7
	comp=Z,19nm,1.1s						
VSR	Storozhevoye	72.10	352	eP	P	19 05 33.1	-0.7
VSR				pmax	pmax		
	comp=Z,50nm,0.8s						
PRZ	Przheval’sk	72.12	322	eP	P	19 05 35.5	+1.1
	comp=Z,50nm,1.0s						
PRZ	Przheval’sk	72.12	322	eP	P	19 05 35.5	+1.1
PRZ				pmax	pmax		
	comp=Z,50nm,1.0s						
DOU	Dourbes	72.17	15	⇑P	P	19 05 35.1	+0.8
	comp=Z,19nm,1.1s						
VORD	Divnogorie	72.34	352	eP	P	19 05 34.2	-1.0
VORD				pmax	pmax		
	comp=Z,40nm,0.8s						
BRG	Berggiesshubel	72.43	8	i P	P	19 05 36.6	+0.8

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       comp=Z,24nm,0.9s
BRG                               ePCP   PcP     19 05 54.1 +0.5
       comp=Z,27nm,1.7s
       comp=N,133nm,23.6s
       comp=E,99nm,23.5s
       comp=Z,197nm,21.7s
BRG    Berggiesshubel     72.43   8 i P    P       19 05 36.6 +0.8
BRG                               e                19 05 54.1
BRG                                 pmax   pmax
       comp=Z,24nm,1.0s
BRG                                 pmax   pmax
       comp=Z,27nm,1.7s
BRG                                 MLR    MLR
       comp=N,133nm,23.6s
BRG                                 MLR    MLR
       comp=E,99nm,23.5s
BRG                                 MLR    MLR
       comp=Z,197nm,21.7s
KSP    Ksiaz              72.64   7 eP     P       19 05 38.1 +1.0
KSP    Ksiaz              72.64   7 eP     P       19 05 38.1 +1.0
TKM2   Tokmak 2           72.65 324   P    P       19 05 38.4 +0.8
       SNR=57
TKM2   Tokmak 2           72.65 324   P    P       19 05 37.9 +0.3
TKM2                                pmax   pmax
       comp=Z,45nm,0.8s
USP    Ospenovka          72.69 325   P    P       19 05 38.3 +0.7
       SNR=50
WLF    Walferdange        72.80  14 ⇓P     P       19 05 39.3 +1.2
WLF    Walferdange        72.80  14 eP     P       19 05 38.9 +0.8
       comp=Z,66nm,1.7s
WLF    Walferdange        72.80  14 eP     P       19 05 38.9 +0.8
WLF                                 pmax   pmax
       comp=Z,66nm,1.7s
PVCC   Panska Ves         72.83   8⇓iP     P       19 05 39.5 +1.3
PVCC   Panska Ves         72.83   8 i P    P       19 05 39.5 +1.3
KDJ    Kajisay            72.84 323 eP     P       19 05 38.4  -0.3
       comp=Z,36nm,0.9s
CHMS   Chumysh            72.85 325   P    P       19 05 39.4 +0.9
       SNR=46
NKC    Novy Kostel        72.94   9⇓iP     P       19 05 40.3 +1.4
NKC                               epP      sP      19 05 48.8 +0.7
NKC    Novy Kostel        72.94   9 i P    P       19 05 40.3 +1.4
NKC                               e                19 05 48.8
UPC    Upice              72.95   7⇓iP     P       19 05 40.1 +1.1
UPC    Upice              72.95   7 i P    P       19 05 40.1 +1.1
FRU    Bishkek            73.04 325⇑eP     P       19 05 41.0 +1.3
FRU                               i                19 05 49.0
FRU                                 pmax   pmax
       comp=Z,150nm,1.0s
ULHL   Ulahol             73.05 324   P    P       19 05 40.8 +0.9
       SNR=16
FRU1   Bishkek            73.06 325 eP     P       19 05 40.8 +0.9
       comp=Z,87nm,0.9s
AKASG  Malin Array Be     73.09 358   P    P       19 05 39.2  -0.5
       comp=Z,25nm,0.7s,baz=6.0,slow=6.1,SNR=84
AKASG  Malin Array Be     73.09 358 i P    P       19 05 39.4  -0.4
AKASG                               pmax   pmax
       comp=Z,26nm,0.7s
AKBB   Malin Array Si     73.09 358 eP     P       19 05 39.3  -0.4
       comp=Z,34nm,0.8s
AKBB   Malin Array Si     73.09 358 eP     P       19 05 39.3  -0.4
AKBB                                pmax   pmax
       comp=Z,34nm,0.8s
KBK    Karagaybulak       73.10 325   P    P       19 05 41.2 +1.0
       SNR=42
KIEV   Kiev               73.10 358 eP     P       19 05 39.0  -0.8
       comp=Z,35nm,0.8s
KIEV   Kiev               73.10 358 i P    P       19 05 39.6  -0.2
       SNR=24
KIEV   Kiev               73.10 358c iP    P       19 05 39.5  -0.3
KIEV                                pmax   pmax
       comp=Z,32nm,0.9s
AK11   Malin Array Si     73.12 358 eP     P       19 05 38.6  -1.2
DPC    Dobruska-Polom     73.13   7⇓iP     P       19 05 41.5 +1.4
AAK    Ala-Archa          73.26 325   P    P       19 05 42.0 +0.9
       comp=Z,39nm,0.8s,baz=102,slow=1.7,SNR=63
AAK    Ala-Archa          73.26 325   P    P       19 05 39.0  -2.1
       SNR=21
AAK    Ala-Archa          73.26 325 eP     P       19 05 41.4 +0.3
       comp=Z,43nm,0.8s
AAK    Ala-Archa          73.26 325 eP     P       19 05 41.4 +0.3
AAK                                 pmax   pmax
       comp=Z,43nm,0.8s
PRA    Prague             73.27   8⇓iP     P       19 05 42.2 +1.4
PRA    Prague             73.27   8 i P    P       19 05 42.2 +1.4
GRFO   Grafenberg         73.36  10 eP     P       19 05 42.5 +1.1
       comp=Z,26nm,0.8s
PRU    Pruhonice          73.36   8⇓iP     P       19 05 42.4 +1.0
PRU                               epP      pP      19 05 48.9 +0.8
PRU                                 AMS    AMS     19 49 10.0
       comp=Z,100nm,13.2s
PRU    Pruhonice          73.36   8 i P    P       19 05 42.4 +1.0
PRU                               e                19 05 48.9
PRU                                 MLR    MLR
       comp=Z,100nm,13.2s
KRLC   Kraliky            73.43   7⇓iP     P       19 05 43.1 +1.2
KRLC   Kraliky            73.43   7 i P    P       19 05 43.1 +1.2
OJC    Ojcow              73.45   5 eP     P       19 05 42.8 +0.9
OJC    Ojcow              73.45   5 eP     P       19 05 42.3 +0.4
       comp=Z,14nm,0.8s
OJC    Ojcow              73.45   5 eP     P       19 05 42.3 +0.4
OJC                                 pmax   pmax
       comp=Z,14nm,0.8s
GOPC   GO Pecny, Ondr     73.45   8⇓iP     P       19 05 43.0 +1.0
GOPC   GO Pecny, Ondr     73.45   8 i P    P       19 05 43.0 +1.0
EKS2   Erkin-Say          73.46 326   P    P       19 05 43.2 +0.9
       SNR=53
KZA    Kyzart             73.52 324   P    P       19 05 43.9 +0.9
       SNR=28
GYA    Guiyang            73.53 293 eP     P       19 05 44.8 +1.9
GYA                                 pmax   pmax
       comp=Z,10.0nm,1.0s
OKC    Ostrava-Krasne     73.75   6⇓iP     P       19 05 44.5 +0.8
OKC                                 AMS    AMS     19 46 50.0
       comp=Z,200nm,15.0s
OKC    Ostrava-Krasne     73.75   6 i P    P       19 05 44.5 +0.8
OKC                                 MLR    MLR
       comp=Z,200nm,15.0s
MORC   Moravsky Berou     73.78   6⇑iP     P       19 05 44.8 +0.9
MORC   Moravsky Berou     73.78   6 eP     P       19 05 44.1 +0.2
       comp=Z,10nm,0.8s
MORC   Moravsky Berou     73.78   6 eP     P       19 05 44.1 +0.2
MORC                                pmax   pmax
       comp=Z,10.0nm,0.8s
MORC   Moravsky Berou     73.78   6⇑iP     P       19 05 44.4 +0.5
TIAR   Tiarei             73.90 176 eT     T       20 26 21.0
       comp=Z,20nm,0.3s
PPT    Papeete            73.90 176 LR     LR      19 31 56.9
       comp=Z,217nm,19.8s,baz=356,slow=31
PPT2   Papeete2           73.92 176 eLR    LR      19 28 19.6
       comp=Z,254nm,21.2s
PPT2   Papeete2           73.92 176 eT     T       20 26 22.3
       comp=Z,12nm,0.3s
AML    Almayashu          73.97 325   P    P       19 05 38.0  -7.6
       SNR=5.0
LVV    L'vov              73.98   2 eP     P       19 05 45.3 +0.3
PAE    Paea               73.99 176 eT     T       20 26 27.5
       comp=Z,7.2nm,0.3s
MNAS   Manas              74.02 326   P    P       19 05 45.7 +0.2
MNAS                                pmax   pmax
       comp=Z,58nm,0.9s
KK31   Karatay Array      74.05 328 eP     P       19 05 45.2  -0.4
KK31   Karatay Array      74.05 328 eP     P       19 05 45.2  -0.4
KKAR   Karatay Array      74.05 328 eP     P       19 05 45.2  -0.4
KKAR   Karatay Array      74.05 328 eP     P       19 05 45.2  -0.4
TVO    Taravao            74.12 176 eT     T       20 26 36.7
       comp=Z,4.1nm,0.3s
KHC    Kasperske Hory     74.13   9⇓iP     P       19 05 47.2 +1.2
KHC                               epP      sP      19 05 56.3 +1.2
KHC                                 AMS    AMS     19 43 00.0
       comp=Z,100nm,18.2s
KHC    Kasperske Hory     74.13   9 eP     P       19 05 46.9 +0.9
       comp=Z,11nm,0.8s
KHC    Kasperske Hory     74.13   9 eP     P       19 05 46.9 +0.9
KHC                                 pmax   pmax
       comp=Z,11nm,0.8s
VRAC   Vranov             74.18   7⇓iP     P       19 05 46.8 +0.6
VRAC   Vranov             74.18   7⇑iP     P       19 05 47.0 +0.8
NIE    Niedzica           74.27   4 eP     P       19 05 47.8 +1.0
NIE    Niedzica           74.27   4 eP     P       19 05 47.8 +1.0
ECH    Echery             74.35  13 eP     P       19 05 47.2  0.0
       comp=Z,24nm,0.8s
ECH    Echery             74.35  13 eP     P       19 05 47.2  0.0
ECH                                 pmax   pmax
       comp=Z,24nm,0.8s
BFO    Black Forest       74.39  13 eP     P       19 05 47.5 +0.1
       comp=Z,14nm,0.9s
BFO    Black Forest       74.39  13 i P    P       19 05 48.4 +0.9
KRUC   Moravsky           74.42   7⇑iP     P       19 05 48.2 +0.6
GEC2   GERESS Array S     74.43   9 eP     P       19 05 48.0 +0.3
       comp=Z,18nm,0.7s
GEC2   GERESS Array S     74.43   9 eP     P       19 05 48.0 +0.3
GEC2                                pmax   pmax
       comp=Z,18nm,0.7s
GERES  GERESS Array B     74.43   9   P    P       19 05 48.5 +0.8
       comp=Z,14nm,0.7s,baz=354,slow=4.7,SNR=71
GEA0   GERESS Array S     74.44   9 eP     P       19 05 48.1 +0.3
LANS   Liptovska Anna     74.50   5 eP     P       19 05 49.6 +1.5
LANS   Liptovska Anna     74.50   5 eP     P       19 05 49.6 +1.5
JAVC   Velka Javorina     74.70   6⇑iP     P       19 05 51.0 +1.7
CRVS   Cervenica-Dubn     74.83   3 eP     P       19 05 50.7 +0.7
CRVS                                pmax   pmax
       comp=Z,10.0nm,1.0s
CRVS   Cervenica-Dubn     74.83   3 eP     P       19 05 50.7 +0.7
VYHS   Vyhne              75.13   5 eP     P       19 05 52.2 +0.5
VYHS                                pmax   pmax
       comp=Z,12nm,1.0s
VYHS   Vyhne              75.13   5 eP     P       19 05 52.2 +0.5
UZH    Uzhgorod           75.13   3 eP     P       19 05 51.5  -0.2
UZH                               e                19 05 56.1
UZH                               e                19 06 06.3
MODS   Modra-Piesok       75.16   6 eP     P       19 05 52.9 +1.0
MODS                                pmax   pmax
       comp=Z,26nm,1.0s
MODS   Modra-Piesok       75.16   6 eP     P       19 05 52.9 +1.0
MOA    Molln              75.46   9 i P    P       19 05 54.2 +0.5
       comp=Z,6.1nm,0.8s
RETA   Reutte             75.49  11 i P    P       19 05 54.6 +0.7
       comp=Z,12nm,1.2s
CONA   Conrad Observa     75.51   7 i P    P       19 05 55.1 +1.1
       comp=Z,19nm,0.8s,SNR=12
KSH    Kashi              75.59 323   P    P       19 05 57.9 +3.2
KSH                                 pP     pP      19 06 02.1 +0.7
KSH                                 sP     sP      19 06 04.8 +1.0
KSH                               ePcP     PcP     19 06 10.4 +2.9
KSH                                 PP     PP      19 08 47.5 +4.0
KSH                                 S      S       19 15 37.3 +3.0
KSH                                 SKS    SKSac   19 16 01.6  -1.8
KSH                                 pmax   pmax
       comp=Z,120nm,4.7s
KSH                                 LR     LR
       comp=Z,320nm,11.2s
KSH                                 LR     LR
       comp=Z,380nm,14.3s
KSH                                 LR     LR
       comp=Z,780nm,13.4s
DAVA   Damuels            75.59  12 i P    P       19 05 55.6 +1.0
       comp=Z,7.6nm,0.8s
TRPA   Tarpa              75.64   3⇑iP     P       19 05 55.3 +0.7
SORM   Soroca             75.67 359⇓iP     P       19 05 54.4  -0.4
WATA   Walderalm          75.73  10 i pP   P       19 05 57.5 +2.2
       comp=Z,28nm,0.8s,SNR=11
PSZ    Piszkesteto        75.75   5⇑iP     P       19 05 56.7 +1.3
PSZ    Piszkesteto        75.75   5 eP     P       19 05 56.3 +0.9
       comp=Z,23nm,0.9s
PSZ    Piszkesteto        75.75   5 eP     P       19 05 56.3 +0.9
PSZ                                 pmax   pmax
       comp=Z,23nm,0.9s
WTTA   Wattenberg         75.80  10 i P    P       19 05 57.0 +1.2
       comp=Z,28nm,0.8s,SNR=8.1
FETA   Feichten           75.95  11 i P    P       19 05 57.9 +1.2
       comp=Z,23nm,0.8s,SNR=18
SFK    Sufi-Kurgan        75.95 325   P    P       19 05 56.9  0.0
SFK                                 pmax   pmax
       comp=Z,44nm,0.8s
DAVOX  Davos/Dischmat     76.09  12   P    P       19 05 58.8 +1.3
       comp=Z,16nm,0.8s,baz=351,slow=9.3,SNR=13
BMR    Baia Mare          76.11   2⇓iP     P       19 05 58.3 +0.9
KBA    Koelnbreinsper     76.15   9 i P    P       19 05 59.1 +1.3
       comp=Z,32nm,0.8s,SNR=18
ARSA   Arzberg            76.16   8 i P    P       19 05 58.8 +1.2
       comp=Z,13nm,0.8s,SNR=8.3
BUR08  Bucovina Ar. S     76.17   1 eP     P       19 05 58.1 +0.3
SENIN  Lac Senin/Sane     76.19  14 eP     P       19 05 58.7 +0.6
       comp=Z,6.9nm,0.8s
BUR04  Bucovina Ar. S     76.20   1 eP     P       19 05 58.0  0.0
BURAR  Bucovina Array     76.20   1⇑iP     P       19 05 58.4 +0.4
CSKK   Csˆ‡kako           76.22   6⇓eP     P       19 05 59.7 +1.7
FUORN  Ofenpass-Fuorn     76.30  11 eP     P       19 05 59.6 +0.9
       comp=Z,36nm,1.1s
TUE    Stuetta            76.34  12 eP     P       19 05 59.8 +0.9
       comp=Z,14nm,0.8s
ABTA   Abfaltersbach      76.40  10 i P    P       19 05 59.7 +0.6
       comp=Z,16nm,1.1s,SNR=7.8
PRAR   RASCA              76.46   0⇑iP     P       19 05 59.6 +0.3
KMI    Kunming            76.62 295   P    P       19 06 00.3  -0.5
KMI                                 pP     pP      19 06 05.9  -1.7
KMI                                 sP     sP      19 06 08.0  -2.0
KMI                                 S      S       19 15 44.5  -1.7
KMI                                 SKS    SKSac   19 16 01.8   -10
KMI                                 pmax   pmax
       comp=Z,13nm,0.9s
KMI                                 pmax   pmax
       comp=Z,100nm,5.6s
KMI                                 LR     LR
       comp=Z,210nm,16.7s
KMI                                 LR     LR
       comp=Z,220nm,16.0s
KMI                                 LR     LR
       comp=Z,210nm,19.6s
MYKA   Terra Mystica      76.62   9 i P    P       19 06 00.7 +0.3
       comp=Z,9.9nm,0.9s
SOKA   Soboth             76.69   8 i P    P       19 06 01.6 +0.9
       comp=Z,34nm,1.2s,SNR=19
ARCR   ARCALIA            76.72   2⇑iP     P       19 06 02.2 +1.4
OBKA   Obir               76.82   9 i P    P       19 06 02.3 +0.8
       comp=Z,65nm,0.7s,SNR=30
BIZ    Bicaz              76.88   0⇓iP     P       19 06 02.3 +0.6
GROS   Grobnik            76.94   8 i P    P       19 06 02.6 +0.4
DRGR                      76.98   3⇑iP     P       19 06 02.8 +0.4
KOGS   Kog                77.01   7 i P    P       19 06 03.0 +0.6
CADS   Cadrg              77.03   9 i P    P       19 06 02.4  -0.2
CJR    Cluj-Napoca        77.08   2⇑iP     P       19 06 03.6 +0.7
TESR   Tescani            77.31 360⇓iP     P       19 06 03.9  -0.2
MORH   Mˆ‡rˆ¡gy, Hung     77.39   6⇓eP     P       19 06 06.1 +1.6
BNI    Bardonecchia       77.40  14 eP     P       19 06 05.9 +1.1
       comp=Z,21nm,1.0s
BNI    Bardonecchia       77.40  14 eP     P       19 06 05.9 +1.1
BNI                                 pmax   pmax
       comp=Z,21nm,1.0s
PGAV   Gavieira, Arco     77.54  26 eP     P       19 06 06.7 +1.1
       comp=Z,34nm,1.0s
PGAV   Gavieira, Arco     77.54  26 eLR    LR      19 39 07.8
       comp=Z,290nm,20.0s
RAR    Rarotonga          77.64 186 LR     LR      19 35 00.5
       comp=Z,160nm,18.1s,baz=326,slow=32
GOF    Gofitskoye         77.82 348⇑iP     P       19 06 07.6 +0.6
GOF                                 pmax   pmax
       comp=Z,160nm,0.9s
PCAB   Cabril             77.84  26 eP     P       19 06 08.7 +1.5
       comp=Z,35nm,1.2s
DOPR   Dopca              77.85   1⇑iP     P       19 06 08.1 +0.9
BOJS   Bojanci            77.87   8 i P    P       19 06 07.6 +0.3
VRI    Vrincioaia         77.95 360⇓iP     P       19 06 07.1  -0.7
PLOR   Plostina           77.97 360⇑iP     P       19 06 08.2 +0.3
QIZ    Qiongzhong         77.97 286 eP     P       19 06 08.2  0.0
       comp=Z,14nm,0.9s
PBRG   Braganca           78.05  25 eP     P       19 06 09.5 +1.1
       comp=Z,21nm,1.2s
BZS    Buzias             78.12   4⇑iP     P       19 06 08.6  0.0
POLO   Lamas de Olo       78.21  26 eP     P       19 06 10.5 +1.1
       comp=Z,18nm,1.0s
PTO    Porto              78.24  26 eP     P       19 06 11.0 +1.6
       comp=Z,51nm,1.8s
LSA    Lhasa              78.26 307   P    P       19 06 10.8 +0.5
LSA                                 pmax   pmax
       comp=Z,26nm,0.9s
LSA    Lhasa              78.26 307 eP     P       19 06 10.7 +0.4
       comp=Z,26nm,0.9s
LSA    Lhasa              78.26 307 i P    P       19 06 11.1 +0.8
       SNR=14
PVRL   Vila Real          78.33  26 eP     P       19 06 11.5 +1.6
       comp=Z,35nm,1.1s
MLR    Muntele Rosu       78.33   0   P    P       19 06 10.8 +0.9
       comp=Z,5.8nm,0.5s,baz=348,slow=5.2,SNR=23
MLR                                 LR     LR      19 45 23.1
       comp=Z,116nm,18.6s,baz=6.5,slow=39
MLR    Muntele Rosu       78.33   0⇑iP     P       19 06 11.0 +1.0
MLR    Muntele Rosu       78.33   0 eP     P       19 06 10.5 +0.5
       comp=Z,45nm,1.6s
MLR    Muntele Rosu       78.33   0 eP     P       19 06 10.5 +0.5
MLR                                 pmax   pmax
       comp=Z,45nm,1.6s
LOT    Lotru              78.35   2⇑iP     P       19 06 10.1  0.0
VOIR                      78.38   1⇑iP     P       19 06 10.8 +0.6
ARR    Arges              78.44   1⇑iP     P       19 06 11.6 +1.1
MVO    Moncorvo           78.59  25 eP     P       19 06 12.5 +1.0
       comp=Z,27nm,1.0s
MVO    Moncorvo           78.59  25 eLR    LR      19 36 39.9
       comp=Z,222nm,20.0s
TLCR                      78.62 358⇑iP     P       19 06 12.2 +0.8
CFR    Carcaliu           78.64 359⇑iP     P       19 06 11.5  0.0
SIM    Simferopol'        78.67 355 eP     P       19 06 12.3 +0.6
SIM                                 pmax   pmax
       comp=Z,12nm,1.0s
ISR    Istrita            78.70   0⇑iP     P       19 06 12.4 +0.4
VLC    Villacollemand     78.74  12 eP     P       19 06 12.2  0.0
       comp=Z,21nm,0.8s
BLY    Banja Luka         78.76   7⇑iP     P       19 06 12.3 +0.1
SECR                      78.78   0⇓iP     P       19 06 03.7  -8.7
PVIS   Viseu              78.81  26 eP     P       19 06 14.0 +1.4
       comp=Z,30nm,1.0s
HERR   Herculane          78.88   3⇑iP     P       19 06 13.2 +0.4
KIV    Kislovodsk         78.95 348 eP     P       19 06 13.8 +0.5
       comp=Z,58nm,0.9s
KIV    Kislovodsk         78.95 348c iP    P       19 06 13.9 +0.5
KIV                               e*PP     pP      19 06 19.4  -0.7
KIV                               e                19 06 21.7
KIV                               eS       S       19 16 00.6   -10
KIV                               eSS      SS      19 21 11.6  -2.8
KIV                                 pmax   pmax
       comp=Z,65nm,0.9s
KIV                                 MLR    MLR
       comp=Z,88nm,20.0s
MDVR   Moldovita          78.96   4⇓iP     P       19 06 13.2  -0.2
SRE    Strehaia           79.12   2⇑iP     P       19 06 13.5  -0.7
HARR   Harsova            79.12 359⇑iP     P       19 06 14.4 +0.2
KBZ    Khabaz             79.15 348   P    P       19 06 15.3 +1.0
       comp=Z,40nm,0.9s,baz=324,slow=3.9,SNR=62
KBZ                                 LR     LR      19 44 05.6
       comp=Z,79nm,20.0s,baz=12,slow=38
DAV    Davao City (W)     79.18 266 LR     LR      19 37 07.7
       comp=Z,141nm,22.0s,baz=46,slow=33
MTE    Manteigas          79.20  26 eP     P       19 06 15.8 +1.0
       comp=Z,40nm,1.1s
MTE    Manteigas          79.20  26 eLR    LR      19 37 37.1
       comp=Z,226nm,20.0s
MTE    Manteigas          79.20  26 eP     P       19 06 14.9 +0.1
       comp=Z,28nm,0.9s
TLB    Topalu             79.23 359⇓iP     P       19 06 15.1 +0.4
PCAS   Casmilo, Conde     79.29  27 eP     P       19 06 16.2 +1.0
       comp=Z,32nm,1.1s
NCK    Nalchik            79.30 347c iP    P       19 06 16.3 +1.1
NCK                                 pmax   pmax
       comp=Z,91nm,0.9s
MAK    Makhachkala        79.30 345 eP     P       19 06 14.0  -1.2
MAK                               e                19 09 11.3
MAK                               eS       S       19 16 15.7 +1.6
MAK                                 pmax   pmax
       comp=Z,205nm,1.2s
GROC   Groznyy            79.31 346 eP     P       19 06 13.9  -1.3
GROC                              e                19 06 22.2
GROC                                pmax   pmax
       comp=Z,12nm,0.6s
TIRR   Tirgusor           79.35 359⇑iP     P       19 06 15.7 +0.3
TIRR   Tirgusor           79.35 359 eP     P       19 06 15.4  0.0
       comp=Z,19nm,0.8s
TIRR   Tirgusor           79.35 359 eP     P       19 06 15.4  0.0
TIRR                                pmax   pmax
       comp=Z,19nm,0.8s
DIVS   Divibare           79.57   5 eP     P       19 06 16.6  -0.1
       comp=Z,13nm,1.0s
SGRR   Singureni          79.60   0⇑iP     P       19 06 16.1  -0.7
NEY    Neytrino           79.64 348⇑iP     P       19 06 19.3 +2.0
NEY                                 pmax   pmax
       comp=Z,4.0nm,0.9s
TBI    Tubuai             79.65 176 eLR    LR      19 31 06.1
       comp=Z,273nm,25.5s
TBI    Tubuai             79.65 176 eT     T       20 33 31.6
       comp=Z,39nm,0.3s
ICOR   Ion Corvin         79.70 359⇑iP     P       19 06 17.9 +0.6
PCBR   Castelo Branco     79.74  26 eP     P       19 06 18.4 +0.8
       comp=Z,21nm,0.8s
ZEI    Tsey               79.96 347 eP     P       19 06 18.6  -0.4
ZEI                                 pmax   pmax
       comp=Z,22nm,0.9s
ALMR   Almeirim           80.12  27 eP     P       19 06 20.2 +0.5
       comp=Z,81nm,1.0s
PMAFR  Mafra              80.13  28 eP     P       19 06 20.5 +0.7
       comp=Z,81nm,0.8s
PMRV   Marv??o            80.16  26 eP     P       19 06 20.7 +0.8
       comp=Z,20nm,1.6s
PMRV   Marv??o            80.16  26 eLR    LR      19 38 56.0
       comp=Z,179nm,20.0s
PMTG   Montargil          80.29  27 eP     P       19 06 20.9 +0.3
       comp=Z,15nm,1.6s
MPEP   Malo Peshtene      80.44   2 eP     P       19 06 21.0  -0.3
PRD    Provadia           80.62 359 eP     P       19 06 23.1 +0.8
PESTR  Estremoz           80.64  26 eP     P       19 06 23.6 +1.1
       comp=Z,19nm,1.9s
ES19   SONSECA Array      80.70  23 eP     P       19 06 23.7 +0.8
ESDC   Sonseca Array      80.72  23   P    P       19 06 24.1 +1.1
       comp=Z,18nm,0.8s,baz=342,slow=5.0,SNR=96
ESDC                                LR     LR      19 43 49.3
       comp=Z,126nm,18.4s,baz=30,slow=37
ESLA   Sonseca Array      80.72  23 eP     P       19 06 23.7 +0.8
       comp=Z,21nm,0.8s
AKT    Akhty              80.72 344⇑iP     P       19 06 23.5 +0.5
AKT                               e                19 06 28.9
AKT                               e                19 09 29.0
AKT                               eS       S       19 16 29.2  -0.1
AKT                                 pmax   pmax
       comp=Z,44nm,0.9s
PAB    San Pablo          80.75  24 eP     P       19 06 23.5 +0.3
       comp=Z,11nm,0.9s
PAB    San Pablo          80.75  24 eP     P       19 06 23.5 +0.3
PAB                                 pmax   pmax
       comp=Z,11nm,0.9s
AQU    L'Aquila           80.84  10 eP     P       19 06 24.5 +0.9
       comp=Z,13nm,0.8s
EVO    Evora              80.85  27 eP     P       19 06 24.3 +0.7
       comp=Z,20nm,2.3s
RKT    Rikitea            80.88 163 eT     T       20 35 03.2
       comp=Z,36nm,0.3s
TBLG   Delisi             80.89 346 eP     P       19 06 24.6 +0.7
PNCL   Nicolau / Gran     81.12  27 eP     P       19 06 25.8 +0.7
       comp=Z,54nm,1.1s
VTS    Vitosha            81.19   3⇑iP     P       19 06 25.5  -0.1
VTS    Vitosha            81.19   3 eP     P       19 06 24.4  -1.2
       comp=Z,14nm,1.0s
VTS    Vitosha            81.19   3 eP     P       19 06 25.0  -0.6
VTS    Vitosha            81.19   3 eP     P       19 06 24.4  -1.2
VTS                                 pmax   pmax
       comp=Z,14nm,1.0s
PDG    Podgorica          81.20   5⇑iP     P       19 06 25.5 +0.1
TTG    Podgorica          81.20   5 eP     P       19 06 25.1  -0.3
       comp=Z,28nm,0.7s
TTG    Podgorica          81.20   5 eP     P       19 06 25.1  -0.3
TTG                                 pmax   pmax
       comp=Z,28nm,0.7s
EPOS   Posof              81.37 348 i P    P       19 06 27.8 +1.3
AKH    Akhalkalaki        81.37 347⇓iP     P       19 06 27.6 +1.0
AKH    Akhalkalaki        81.37 347 eP     P       19 06 27.4 +0.8
       comp=Z,12nm,0.8s
AKH    Akhalkalaki        81.37 347 eP     P       19 06 27.4 +0.8
AKH                                 pmax   pmax
       comp=Z,12nm,0.8s
PTEO   Sao Teotonio       81.60  28 eP     P       19 06 27.4  -0.2
       comp=Z,68nm,2.1s
SKO    Skopje             81.75   4 eP     P       19 06 29.1 +0.8
SKO    Skopje             81.75   4   P    P       19 06 29.1 +0.8
SKO    Skopje             81.75   4 i P    P       19 06 29.2 +0.8
DIM    Dimitrovgrad       81.77   1 eP     P       19 06 29.1 +0.7
ARTV   Artvin             81.77 348 i P    P       19 06 29.4 +0.6
NIL    Nilore             81.82 322 eP     P       19 06 29.0 +0.1
       comp=Z,78nm,0.8s
NIL    Nilore             81.82 322 eP     P       19 06 29.0 +0.1
NIL                                 pmax   pmax
       comp=Z,77nm,0.8s
MORF   Marmelete          81.85  28 eP     P       19 06 29.8 +0.8
       comp=Z,47nm,1.4s
DAGI   Agillar            81.88 348 i P    P       19 06 30.2 +1.0
KKB    Krupnik            81.91   3 eP     P       19 06 29.0  -0.2
DBAD   Bademkaya          81.96 349 i P    P       19 06 30.6 +0.9
PVAQ   Vaqueiros          81.99  27 eP     P       19 06 30.9 +1.2
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PVAQ	Vaqueiros	81.99	27	eLR	LR	19 36 44.1	
	comp=Z,272nm,18.0s						
DDEM	Demirkent	82.08	348	i P	P	19 06 31.1	+0.8
PBDV	Barranco-do-Ve	82.09	27	eP	P	19 06 31.6	+1.3
GUN	Gumba	82.10	310	eP	P	19 06 31.1	+0.2
	comp=Z,101nm,0.9s						
GEYT	Alibeck	82.16	335	P	P	19 06 30.3	-0.4
	comp=Z,14nm,0.8s,baz=281,slow=8.9,SNR=34						
GEYT				PP	PP	19 09 39.2	+1.2
	comp=Z,1.0nm,0.5s,baz=335,slow=5.5,SNR=3.6						
GEYT				LR	LR	19 49 26.0	
	comp=Z,235nm,18.1s,baz=315,slow=40						
GYA0B	ALIBECK ARRAY	82.16	335	eP	P	19 06 31.1	+0.4
	comp=Z,31nm,0.8s						
JIRN	Jiri	82.18	309	eP	P	19 06 31.8	+0.5
	comp=Z,301nm,1.0s						
MMB	Musomiste	82.20	2	eP	P	19 06 31.6	+0.8
KRUS	Krusevo	82.35	4	i P	P	19 06 31.7	+0.1
ODAN	Odare	82.36	308	eP	P	19 06 32.0	-0.1
	comp=Z,47nm,0.9s						
KBL	Kabul	82.38	326	eP	P	19 06 30.6	-1.4
	comp=Z,24nm,0.8s						
KBL	Kabul	82.38	326	eP	P	19 06 30.6	-1.4
KBL				pmax	pmax		
	comp=Z,25nm,0.8s						
VAY	Valandovo	82.44	3	i P	P	19 06 32.4	+0.4
NVR	Nevrokopi	82.44	2	P	P	19 06 32.5	+0.5
NVR	Nevrokopi	82.44	2	P	P	19 06 32.5	+0.5
GNI	Garni	82.45	346	LR	LR	19 48 57.9	
	comp=Z,119nm,18.3s,baz=22,slow=40						
GNI	Garni	82.45	346	ceP	P	19 06 34.0	+1.7
GNI				pmax	pmax		
	comp=Z,36nm,0.7s						
KKN	Kakani	82.46	310	eP	P	19 06 32.7	+0.1
	comp=Z,45nm,0.8s						
GKN	Gorkha	82.54	311	eP	P	19 06 32.8	-0.1
	comp=Z,104nm,1.0s						
ILGA	Ilgaz	82.58	355	eP	P	19 06 33.7	+0.6
	comp=Z,18nm,0.9s						
OHR	Ohrid	82.58	4	i P	P	19 06 33.3	+0.4
PKIN	Phulchoki	82.59	310	eP	P	19 06 33.7	+0.3
	comp=Z,44nm,0.7s						
DANN	Dangsing	82.60	312	eP	P	19 06 34.0	+0.6
	comp=Z,294nm,0.8s						
KNT	Kendrikon	82.61	3	P	P	19 06 33.8	+0.9
KNT	Kendrikon	82.61	3	P	P	19 06 33.8	+0.9
KNT	Kendrikon	82.61	3	P	P	19 06 33.8	+0.9
RAMN	Ramite	82.63	309	eP	P	19 06 33.2	-0.3
	comp=Z,124nm,0.8s						
RDO	Rodhopi	82.67	1	P	P	19 06 33.9	+0.7
SRS	Serrai	82.67	2	P	P	19 06 33.5	+0.3
DMN	Daman	82.69	310	eP	P	19 06 34.1	+0.3
	comp=Z,77nm,0.8s						
GRG	Griva	82.80	3	eP	P	19 06 34.8	+0.9
GRG	Griva	82.80	3	P	P	19 06 34.8	+0.9
MATE	Matera	82.81	8	⇑iP	P	19 06 34.5	+0.6
ALN	Alexandroupoli	82.92	0	eP	P	19 06 35.2	+0.7
	comp=Z,17nm,0.9s						
FNA	Florina	82.94	4	eP	P	19 06 34.1	-0.6
	comp=Z,38nm,1.2s						
FNA	Florina	82.94	4	eP	P	19 06 34.1	-0.6
FNA				pmax	pmax		
	comp=Z,38nm,1.2s						
SOH	Sokhos	82.96	2	eP	P	19 06 35.1	+0.3
SOH	Sokhos	82.96	2	P	P	19 06 35.1	+0.3
SOH	Sokhos	82.96	2	eP	P	19 06 35.1	+0.3
ERZM	Erzurum	83.10	349	i P	P	19 06 37.9	+2.1
PYUN	Piuthan	83.14	312	eP	P	19 06 36.2	+0.1
	comp=Z,179nm,0.9s						
KOLN	Koldanda	83.18	312	eP	P	19 06 36.3	0.0
	comp=Z,67nm,0.7s						
THAS	Thassos island	83.20	1	P	P	19 06 36.1	+0.2
CUC	Castrocucco	83.39	8	eP	P	19 06 36.2	-0.8
	comp=Z,22nm,1.2s						
PMOZ	Porto Moniz, M	83.54	36	eLR	LR	19 38 32.0	
	comp=Z,172nm,18.0s						
LIT	Litokhoron	83.66	3	eP	P	19 06 38.3	0.0
	comp=Z,33nm,0.8s						
LIT	Litokhoron	83.66	3	P	P	19 06 38.5	+0.2
KPRO	Kipourio	83.76	4	P	P	19 06 39.0	+0.1
CMMT	Chiang Mai	83.80	295	P	P	19 06 38.9	-0.5
	comp=Z,12nm,1.4s						
CHTO	Chiang Mai	83.80	295	eP	P	19 06 38.2	-1.2
	comp=Z,25nm,1.4s						
CHTO	Chiang Mai	83.80	295	eP	P	19 06 38.2	-1.2
CHTO				pmax	pmax		
	comp=Z,25nm,1.4s						
CHTO	Chiang Mai	83.80	295	P	P	19 06 38.9	-0.5
	comp=Z,54nm,1.5s						
ANTO	Ankara	83.81	355	⇑iP	P	19 06 39.8	+0.6
ANTO	Ankara	83.81	355	eP	P	19 06 39.6	+0.4
	comp=Z,30nm,0.8s						
ANTO	Ankara	83.81	355	eP	P	19 06 39.6	+0.4
ANTO				pmax	pmax		
	comp=Z,30nm,0.8s						
UTTA	Uttaradit	83.89	293	P	P	19 06 39.2	-0.6
	comp=Z,9.0nm,0.9s,comp=Z,61nm						
BR101	Keskin Array S	83.91	355	eP	P	19 06 40.1	+0.4
BR101				ePP	PP	19 09 53.2	+0.9
BR131	Keskin Array S	83.91	355	eP	P	19 06 40.1	+0.3
BRTR	Keskin Array B	83.91	355	P	P	19 06 40.1	+0.3
	comp=Z,14nm,0.8s,baz=20,slow=2.7,SNR=66						
BRTR				PP	PP	19 09 53.2	+0.9
	comp=Z,1.6nm,1.0s,baz=10,slow=7.5,SNR=4.5						
BRTR				LR	LR	19 50 07.7	
	comp=Z,43nm,20.0s,baz=10,slow=40						
KEK	Kerkira	83.93	5	P	P	19 06 40.0	+0.3
KEK	Kerkira	83.93	5	P	P	19 06 40.0	+0.3
BRDH	Bariadhala	84.06	303	LR	LR	19 46 31.2	
	comp=Z,355nm,18.1s,baz=358,slow=37						
CM31	Chiang Mai Arr	84.10	295	eP	P	19 06 40.2	-0.6
CMAR	Chiang Mai Arr	84.10	295	P	P	19 06 40.4	-0.5
	comp=Z,15nm,0.8s,baz=9.1,slow=5.7,SNR=82						
CMAR				LR	LR	19 47 11.7	
	comp=Z,110nm,18.7s,baz=39,slow=38						
CM01	Chiang Mai Arr	84.13	295	eP	P	19 06 40.0	-1.1
IGT	Igoumenitsa	84.14	5	P	P	19 06 41.2	+0.4
THL	Klokotos Trika	84.17	4	P	P	19 06 40.6	-0.3
TIP	Timpagrande	84.28	8	⇑iP	P	19 06 41.8	+0.2
TIP	Timpagrande	84.28	8	eP	P	19 06 41.6	0.0
TIP	Timpagrande	84.28	8	P	P	19 06 41.6	0.0
XOR	Xorichti	84.41	3	P	P	19 06 41.8	-0.4
XOR	Xorichti	84.41	3	P	P	19 06 41.8	-0.4
PHIT	Phitsanulok	84.42	293	P	P	19 06 43.1	+0.6
	comp=Z,20nm,0.9s						
MYLDM	Lahad Datu	84.66	271	eP	P	19 06 44.6	+0.9
	comp=Z,50nm,1.0s						
PBKT	Sadao Pong	84.66	292	eP	P	19 06 42.6	-1.0
	comp=Z,15nm,0.8s						
PBKT	Sadao Pong	84.66	292	P	P	19 06 43.2	-0.5
	comp=Z,20nm,0.8s						
CHAI	Chaiyaphum	84.70	291	P	P	19 06 43.7	-0.2
	comp=Z,3.7nm,0.9s						
AGG	Agios Georgios	84.73	3	eP	P	19 06 43.4	-0.4
	comp=Z,32nm,0.8s						
AGG	Agios Georgios	84.73	3	eP	P	19 06 43.4	-0.4
AGG				pmax	pmax		
	comp=Z,32nm,0.8s						
EVR	Evrytania	84.81	4	P	P	19 06 44.7	+0.4
EVR	Evrytania	84.81	4	P	P	19 06 44.7	+0.4
EFP	Efpalio	85.31	4	P	P	19 06 47.5	+0.8
DZM	Mont Dzumac	85.32	217	P	P	19 06 46.8	0.0
	comp=Z,7.4nm,0.9s,baz=91,slow=9.5,SNR=5.3						
DZM	Mont Dzumac	85.32	217	eLR	LR	19 33 43.7	
	comp=Z,200nm,23.6s						
DZM	Mont Dzumac	85.32	217	eP	P	19 06 46.4	-0.4
	comp=Z,38nm,1.4s						
DSF	Desfina	85.34	3	P	P	19 06 46.2	-0.7
CLTB	Caltabellotta	85.55	11	eP	P	19 06 47.7	-0.4
	comp=Z,25nm,0.9s						
TAMR	Tamra	85.59	14	eP	P	19 06 48.3	+0.2
	comp=Z,25nm,0.7s						
KLV	Kalavryta, Ach	85.70	4	P	P	19 06 48.7	0.0
GUR	Goura	85.81	3	eP	P	19 06 49.3	0.0
GUR	Goura	85.81	3	P	P	19 06 49.3	0.0
DID	Didima	86.27	3	P	P	19 06 49.9	-1.6
ITM	Ithomi	86.55	4	eP	P	19 06 52.6	-0.3
	comp=Z,36nm,0.8s						
KEST	Kesra	86.92	14	P	P	19 06 55.6	+0.8
	comp=Z,12nm,0.9s,baz=264,slow=1.6,SNR=14						
KEST	Kesra	86.92	14	eP	P	19 06 55.8	+1.0
	comp=Z,11nm,0.8s						
MDT	Midelt	87.12	26	P	P	19 06 57.0	+1.1
	comp=Z,12nm,0.7s,baz=355,slow=6.9,SNR=25						
MDT				LR	LR	19 46 47.8	
	comp=Z,83nm,18.3s,baz=29,slow=36						
LUWI	Luwuk	87.44	264	eP	P	19 06 55.2	-2.2
	comp=Z,94nm,0.9s						
CSS	Mathiatis	88.67	354	eP	P	19 07 02.6	-0.4
	comp=Z,65nm,1.4s						
CSS	Mathiatis	88.67	354	P	P	19 07 03.2	+0.1
SBUM	Sibu	90.39	275	eP	P	19 07 11.0	-0.3
	comp=Z,8.2nm,0.9s						
MMAI	Mount Meron Ar	90.47	353	P	P	19 07 12.7	+1.1
	comp=Z,9.3nm,1.0s,baz=357,slow=5.8,SNR=7.8						
MMAI				LR	LR	19 56 12.6	
	comp=Z,43nm,18.5s,baz=345,slow=41						
ASF	Jabal al Asfar	91.19	351	P	P	19 07 15.7	+0.7
	comp=Z,3.6nm,0.9s,baz=315,slow=7.1,SNR=5.0						
RPN	Rapa Nui	91.32	142	LR	LR	19 40 39.5	
	comp=Z,86nm,18.2s,baz=222,slow=30						
CTA	Charters Tower	91.53	235	P	P	19 07 16.1	-0.3
	comp=Z,4.9nm,0.8s,baz=22,slow=10,SNR=4.8						
KSM	Kuching	92.25	276	eP	P	19 07 19.4	-0.6
	comp=Z,15nm,0.9s						
PTGA	Pitinga	92.52	88	P	P	19 07 20.5	-0.7
	comp=Z,1.9nm,0.3s,baz=357,slow=17,SNR=4.8						
PTGA	Pitinga	92.52	88	eP	P	19 07 20.2	-1.0
	comp=Z,8.7nm,0.8s						
SHME	Shamm	94.00	334	P	P	19 07 27.1	-0.9
HATD	Hatta, Dubai	95.17	333	P	P	19 07 32.6	-0.7
ASUD	Al Ashush, Dub	95.56	334	P	P	19 07 34.6	-0.5
ALNE	Al Ain	96.00	333	P	P	19 07 36.4	-0.8
WSAR	Wadi Sarin	96.03	331	P	P	19 07 37.0	-0.3
	comp=Z,7.1nm,0.8s,baz=3.5,slow=3.5,SNR=4.3						
WR1	Warramunga Arr	97.09	245	eP	P	19 07 40.4	-1.6
	comp=Z,22nm,1.5s						
WRA	Warramunga Arr	97.09	245	P	P	19 07 40.4	-1.6
	comp=Z,1.5nm,0.9s,baz=38,slow=5.0,SNR=6.9						
MZR	Muzera	97.56	335	P	P	19 07 44.0	-0.3
RAYN	Ar Rayn	98.65	342	eP	P	19 07 48.7	-0.5
	comp=Z,7.1nm,0.9s						
RAYN	Ar Rayn	98.65	342	i Pdiff	Pdif	19 07 49.4	+0.2
	SNR=7.7						
RAYN	Ar Rayn	98.65	342	eP	P	19 07 48.7	-0.5
RAYN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ASAR	Alice Springs	100.44	243	P	Pdif	19 07 55.8	-1.1
	comp=Z,0.5nm,0.9s,baz=42,slow=4.3,SNR=3.2						
TSUM	Tsumeb	142.11	14	PKhKP	PKPpre	19 13 36.0	
	comp=Z,1.9nm,0.7s,baz=22,slow=3.3,SNR=4.7						
TSUM	Tsumeb	142.11	14	ePKPpre	PKPpre	19 13 36.0	
TSUM				ePKPpre	PKPpre	19 13 38.1	
QSPA	South Pole Qui	146.34	180	PKPbc	PKPbc	19 13 48.7	-0.5
	comp=Z,28nm,0.9s,baz=74,slow=1.0,SNR=4.7						
QSPA	South Pole Qui	146.34	180	ePKPdf	PKPdf	19 13 47.5	-0.4
QSPA				ePKPdf	PKPbc	19 13 48.7	-0.5
LBTB	Lobatse	148.49	2	ePKPbc	PKPbc	19 13 56.1	-0.4
LBTB	Lobatse	148.49	2	ePKP2	PKPbc	19 13 56.1	-0.4
BOSA	Boshof	152.06	2	PKPbc	PKPbc	19 14 04.2	-0.8
	comp=Z,15nm,0.8s,baz=356,slow=2.3,SNR=25						
BOSA	Boshof	152.06	2	ePKPbc	PKPbc	19 14 03.9	-1.1
BOSA	Boshof	152.06	2	ePKIKP	PKPbc	19 14 03.9	-1.1
MAW	Mawson	160.07	222	PKP	PKPdf	19 14 08.1	+0.6
	comp=Z,1.4nm,0.6s,baz=58,slow=5.9,SNR=3.1						
MAW				PKPab	PKPab	19 14 46.1	-1.6
	comp=Z,3.6nm,0.8s,baz=92,slow=6.2,SNR=4.6						
MAW	Mawson	160.07	222	ePKPdf	PKPdf	19 14 07.9	+0.4
MAW				ePKPab	PKPab	19 14 45.5	-2.2
MAW	Mawson	160.07	222	ePKIKP	PKPdf	19 14 07.9	+0.4
MAW				e		19 14 45.5	
SNAA	Sanae	160.47	152	PKPab	PKPab	19 14 47.2	-2.2
	comp=Z,4.1nm,0.9s,baz=225,slow=5.7,SNR=6.8						
SNAA	Sanae	160.47	152	ePKPdf	PKPdf	19 14 08.6	+0.7
SNAA				ePKPab	PKPab	19 14 47.0	-2.4
SNAA	Sanae	160.47	152	ePKIKP	PKPdf	19 14 08.6	+0.7
SNAA				e		19 14 47.0	
SYO	Syowa Base	166.20	200	⇑ePKPdf	PKPdf	19 14 17.6	+4.3

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*IDC **20** 19:06:16.7±1.1, 12°.00N×143°.78E, h0^{km}, mb3.8/9, mb1 4.0/9, mb1mx3.7/60, mbtmp3.8/9, Error ellipse: s-maj=32.3km s-min=22.0km az=127.0*

*ISCJB **20** 19:06:19.0±0.9, 12°.0N±0°.1×143°.7E±0°.2, h26^{km}, mb3.8/9, Error ellipse: s-maj=26.6km s-min=10.7km az=40.0*

ISC 20 19:06:20.8±1.0**, 12°.0N**±0°.1×**143°.8E**±0°.2**, h26^{km}, n10, σ1^{s}07**/11**, mb3.8**/9**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	1.92	33	Pn	Pn	19 06 51.1	-0.8
	31nm,0.3s,baz=184,slow=5.5,SNR=21						
GUMO				Sn	Sn	19 07 15.8	+0.6
	74nm,0.3s,baz=191,slow=23,SNR=16						
GUMO				LR	LR	19 07 47.7	
	comp=Z,212nm,20.5s,baz=115,slow=48						
WRA	Warramunga Arr	33.05	196	P	P	19 12 54.0	-0.4
	0.8nm,0.9s,baz=18,slow=9.9,SNR=5.1						
SONM	Songino Array	47.46	326	P	P	19 14 53.9	+0.4
	0.4nm,0.4s,baz=142,slow=7.3,SNR=4.0						
MKAR	Makanchi Array	61.93	317	P	P	19 16 38.5	+0.1
	0.3nm,0.7s,baz=86,slow=8.1,SNR=4.3						
KURBB	Kurchatov Arra	65.18	320	P	P	19 16 59.6	-0.1
	1.6nm,0.8s,baz=103,slow=6.6,SNR=16						
ILAR	Eielson Array	70.47	25	P	P	19 17 31.2	-1.6
	0.2nm,0.5s,baz=267,slow=3.6,SNR=3.3						
BVAR	Borovoye Array	70.54	322	P	P	19 17 32.7	-0.8
	1.0nm,0.6s,baz=96,slow=11,SNR=5.2						
YKA	Yellowknife Ar	84.77	27	P	P	19 18 52.2	-0.3
	0.3nm,0.5s,baz=285,slow=5.0,SNR=2.9						
NVAR	Mina Array Bea	88.75	51	P	P	19 19 14.9	+2.0
	0.6nm,0.7s,baz=272,slow=5.2,SNR=4.6						
FINES	FINESS Array B	92.17	335	P	P	19 19 28.7	+0.8
	1.6nm,0.9s,baz=112,slow=6.2,SNR=3.1						

SJA 20 19:16:20.0±0.8**, 31°.86S**×**68°.38W, h112^{km}**±2^{km}**, ML3.5, MW3.6, San Juan Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTCV	Cerro Valdivia	0.13	269	i P	Pn	19 16 36.5	+0.9
RTCV				i S	Sn	19 16 48.2	+0.9
SJA	San Juan	0.36	335	i P	Pn	19 16 37.3	+0.9
SJA				IAML		19 16 37.4	
	comp=Z,2μm,0.3s						
SJA				eS	Sn	19 16 50.4	+1.6
ZON	Zonda	0.40	321	i P	Pn	19 16 37.2	+0.6
ZON				i S	Sn	19 16 49.9	+0.8
ZON				IAML		19 16 50.0	
	comp=Z,1μm,0.2s						
RTLL	Cerro Villicun	0.53	352	i P	Pn	19 16 38.0	+0.6
RTLL				IAML		19 16 38.4	
	comp=Z,2μm,0.6s						
RTLL				i S	Sn	19 16 51.2	+0.7
RTLS	Leoncito	0.78	274	eP	Pn	19 16 40.8	+1.2
RTLS				i S	Sn	19 16 56.1	+1.7
RTLS				IAML		19 16 57.5	
	comp=Z,512nm,0.3s						
ASAL	Salagasta	0.82	208	i P	Pn	19 16 41.0	+1.2
ASAL				eS	Sn	19 16 55.6	+0.8
AMOG	MOGNA	0.92	354	i P	Pn	19 16 41.6	+0.9
AMOG				eS	Sn	19 16 56.8	+0.5
AUSP	Uspallata	0.93	247	eP	Pn	19 16 42.1	+1.2
AUSP				i S	Sn	19 16 58.3	+1.5
ARCO	CERRO ARCO	1.08	205	i P	Pn	19 16 43.6	+1.1
ARCO				eS	Sn	19 16 59.0	-0.4
ARCO				IAML		19 17 01.6	
	comp=Z,660nm,0.4s						
ACAN	Cantantal	1.09	113	i P	Pn	19 16 43.6	+1.1
ACAN				i S	Sn	19 16 60.0	+0.6
AAGR	Agrelo	1.28	197	i P	Pn	19 16 45.7	+1.1
AAGR				eS	Sn	19 17 04.0	+0.9
ACDV	Cuesta del Vie	1.80	339	eP	Pn	19 16 52.0	+1.3
ACDV				eS	Sn	19 17 15.7	+1.5
ACDV				IAML		19 17 16.4	
	comp=Z,533nm,0.4s						
AROD	Rodeo	1.93	331	i P	Pn	19 16 54.1	+1.5
AROD				i S	Sn	19 17 19.1	+1.7
MRA	San Martin	2.33	105	i P	Pn	19 16 58.0	+0.6
MRA				eS	Sn	19 17 25.2	-0.9
MRA				IAML		19 17 27.2	
	comp=Z,206nm,0.3s						
AGUA	GUANDACOL	2.37	358	eP	Pn	19 16 59.1	+1.1
AGUA				eS	Sn	19 17 27.8	+0.8
ROC1	El Roble	2.49	243	eP	Pn	19 17 00.6	+1.0
ROC1				i S	Sn	19 17 31.2	+1.3
VCA	Vinchina	3.12	3	eP	Pn	19 17 09.0	+1.2
VCA				eS	Sn	19 17 45.4	+0.8
VCA				IAML		19 17 54.0	
	comp=Z,188nm,0.2s						
TCA	Tanti	3.27	82	eP	Pn	19 17 09.6	-0.1
TCA				i S	Sn	19 17 45.7	-2.5
TCA				IAML		19 17 48.5	
	comp=Z,73nm,0.7s						
LCO	Las Campanas	3.47	324	i P	Pn	19 17 13.3	+0.7
LCO				eS	Sn	19 17 52.9	-0.4
CYA	Choya	4.07	34	i P	Pn	19 17 19.8	-0.6
CYA				IAML		19 18 05.7	
	comp=Z,72nm,0.6s						

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*NEIC **20** 19:18:48.6±0.0, 56°.36N×153°.33W, h6^{km}, ML3.2(AEIC), After AEIC.*

*IDC **20** 19:18:55.5±7.5, 56°.50N×151°.34W, h0^{km}, mb3.3/1, mb1 3.6/3, mb1mx3.2/72, mbtmp3.2/3, ML3.0/2, Error ellipse: s-maj=124.2km s-min=30.7km az=75.0*

ISC 20 19:18:46.8±1.1**, 56°.57N**±0°.06×**153°.40W**±0°.05**, h20^{km}, n64, σ1^{s}92**/77**, Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SII	Sitkinak Islan	0.43	269	P	Pb	19 18 56.6	+0.8
SII				S	Sn	19 19 03.8	-1.5
OHAK	Old Harbor	0.66	5	ePn	Pn	19 19 01.1	+0.1
OHAK				eSn	Sn	19 19 14.1	+3.4
KDAK	Kodiak Island	1.29	20	ePn	Pb	19 19 11.1	+0.6
KDAK				eSn	Sb	19 19 28.0	+1.4
CAHL	Cahill	1.81	326	P	Pb	19 19 18.2	-1.1
PLK3	Peulik 3	1.92	307	P	Pb	19 19 19.7	-1.5
KAKN	Katmai Knife C	1.95	333	P	Pb	19 19 20.5	-1.2
KABU	Katmai Buttres	1.98	330	P	Pb	19 19 21.2	-1.1
ANCK	Angle Creek	1.99	326	P	Pb	19 19 20.8	-1.5
PLK2	Peulik 2	1.99	308	P	Pb	19 19 21.0	-1.3
KAPH	Katmai Pasha	2.09	346	P	Pb	19 19 23.0	-1.1
PLK1	Peulik 1	2.14	307	P	Pn	19 19 22.8	+1.5
CDD	Cape Douglas	2.37	357	P	Pb	19 19 26.7	-2.1
ANNE	Aniakchak Nort	2.59	280	P	Pn	19 19 28.0	+0.4
ANNW	Aniakchak Nort	2.68	280	P	Pn	19 19 29.6	+0.7
CHGN	Chignik	2.80	267	ePn	Pn	19 19 24.8	-5.6
AUW	Augustine West	2.81	359	P	Pn	19 19 32.8	+2.3
CNPM	China Poot	3.18	20	ePn	Pn	19 19 37.3	+1.6
CNPM				eSn	Sn	19 20 14.4	+1.5
CNPM				e		19 20 36.6	
VNHG	Veniaminof 1	3.22	266	P	Pn	19 19 36.7	+0.4
HOM	Homer	3.23	16	ePn	Pn	19 19 34.8	-1.6
VNFG	Veniaminof 2	3.43	268	P	Pn	19 19 39.0	-0.1
VNWF	Veniaminof 8	3.45	266	P	Pn	19 19 38.9	-0.6
BRLK	Bradley Lake	3.47	22	ePn	Pn	19 19 40.4	+0.7
BRLK				eSn	Sn	19 20 19.8	-0.3
RSO	Redoubt South	3.92	5	ePn	Pn	19 19 48.3	+2.3
RSO				eSn	Sb	19 20 55.3	+13
RDWB	Redoubt West	3.94	4	P	Pn	19 19 48.3	+2.1
SDPT	Sand Point	4.16	256	ePn	Pn	19 19 44.8	-4.3
SLKM	Skilak Lake	4.29	22	ePn	Pn	19 19 51.3	+0.4
SPU	Mount Spurr	4.68	8	ePn	Pn	19 19 58.5	+2.3
SVW2	Sparrevohn	4.68	347	ePn	Pn	19 19 58.1	+1.8
SPCG	Spurr Capps Gl	4.79	8	P	Pn	19 20 00.2	+2.3
SPCG				S	Sn	19 20 56.0	+3.2
RC01	Rabbit Creek A	4.91	21	ePn	Pn	19 20 00.5	+1.1
RC01				eSn	Sn	19 20 55.2	-0.5
SUA	Susitna One	5.09	15	ePn	Pn	19 20 04.8	+2.7
HIN	Hinchinbrook I	5.27	40	ePn	Pn	19 20 04.6	+0.2
GLI	Glacier Island	5.43	35	ePn	Pn	19 20 06.4	-0.1
GLI				eSn	Sn	19 21 04.1	-4.2
SKT	Skwentna	5.51	9	ePn	Pn	19 20 08.6	+1.0
FID	Port Fidalgo	5.53	38	ePn	Pn	19 20 06.3	-1.6
GHO	Glory Hole Cre	5.70	22	ePn	Pn	19 20 10.3	0.0
KAIM	Kayak Island	5.81	51	ePn	Pn	19 20 12.2	+0.4
SML	Sawmill	5.86	24	ePn	Pn	19 20 15.1	+2.6
FALS	False Pass	5.92	257	ePn	Pn	19 20 04.3	-8.9
RAGM	Ragged Mountai	5.96	46	ePn	Pn	19 20 13.3	-0.6
DIV	Divide	6.04	38	ePn	Pn	19 20 14.4	-0.7
DIV				eSn	Sn	19 21 20.4	-3.2
SCM	Sheep Creek Mo	6.13	28	ePn	Pn	19 20 16.9	+0.7
SCM				eSn	Sn	19 21 25.5	-0.2
KLU	Klutina	6.26	35	ePn	Pn	19 20 16.6	-1.5
KLU				eSn	Sn	19 21 26.6	-2.4
BMRM	Bremner River	6.35	42	ePn	Pn	19 20 16.8	-2.4
BMRM				eSn	Sn	19 21 28.2	-2.9
PPLA	Purkeypile	6.38	5	ePn	Pn	19 20 24.1	+4.4
CAST	Castle Rocks	6.90	5	ePn	Pn	19 20 26.8	0.0
TRF	Thorofare Moun	7.08	11	ePn	Pn	19 20 28.2	-1.1
KTH	Kantishna Hill	7.11	9	ePn	Pn	19 20 29.9	+0.3
DHY	Denali Highway	7.19	22	ePn	Pn	19 20 29.5	-1.4
DHY				eSn	Sn	19 21 51.0	-1.0
HARP	HAARP	7.20	32	ePn	Pn	19 20 31.3	+0.4
BALM	Baldy	7.28	47	ePn	Pn	19 20 32.8	+0.8
AKUT	Akutan	7.46	256	ePn	Pn	19 20 29.6	-4.9
PAX	Paxson	7.56	29	ePn	Pn	19 20 38.2	+2.4
BPAW	Bear Paw Mtn.	7.65	8	ePn	Pn	19 20 35.5	-1.5
WRH	Wood River Hil	8.34	16	ePn	Pn	19 20 45.5	-1.0
WRH				eSn	Sn	19 22 20.0	0.0
RIDG	Independ'e Rid	8.36	27	ePn	Pn	19 20 46.2	-0.5
HDA	Harding Lake	8.48	19	ePn	Pn	19 20 47.4	-1.0
HDA				eSn	Sn	19 22 23.4	0.0
MDM	Murphy Dome	8.78	15	ePn	Pn	19 20 51.5	-1.1
ILAR	Eielson Array	8.82	18	Pn	Pn	19 20 55.1	+2.1
	0.1nm,0.3s,baz=201,slow=13,SNR=3.6						
ILAR				Sn	Sn	19 22 28.6	-3.1
	0.2nm,0.3s,baz=201,slow=14,SNR=1.5						
ILB	Eielson Array	8.82	18	ePn	Pn	19 20 54.5	+1.5
ILB				eSn	Sn	19 22 29.5	-2.2
SPIA	Saint Paul Isl	9.24	281	ePn	Pn	19 20 54.5	-4.3
YKA	Yellowknife Ar	20.29	57	P	Pn	19 23 22.2	-0.8
	0.1nm,0.3s,baz=271,slow=12,SNR=5.3						
G08A	Pilot Rock	24.20	103	eP	P	19 24 06.4	+4.5
PDAR	Pinedale Array	30.97	98	P	P	19 25 04.5	+1.8
	0.2nm,0.6s,baz=280,slow=5.3,SNR=2.6						

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*DJA **20** 19:18:00.2±0.9, 6°S±3°×9°8E±°, h16^{km}±9^{km}, M5.3/18, mb5.2/18, mB5.8/7, MLv5.2/14, Mw(mB)5.4/7*

*ISCJB **20** 19:18:54.5±0.5, 3°.72S±0°.07×103°.00E±0°.09, h10^{km}, mb4.4/14, MS3.9/1, Error ellipse: s-maj=14.6km s-min=6.1km az=146.2*

*IDC **20** 19:18:54.5±2.9, 3°.86S×102°.94E, h0^{km}, mb3.9/7, mb1 4.0/7, mb1mx3.6/61, mbtmp3.9/7, MS3.9/1, Ms1 3.8/1, ms1mx2.8/57, Error ellipse: s-maj=147.2km s-min=17.8km az=55.0*

*NEIC **20** 19:19:00.3±0.8, 4°.04S×102°.70E, h52^{km}±7^{km}, mb4.9/8, Error ellipse: s-maj=22.9km s-min=6.2km az=49.0*

ISC 20 19:18:56.2±0.6**, 3°.65S**±0°.05×**102°.95E**±0°.06**, h10^{km}, n54, σ1^{s}99**/38**, mb4.3**/14**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNAI	Manna	0.71	179	P	Sn	19 19 24.3	+1.0
MNAI	Manna	0.71	179	ePn	Pg	19 19 10.6	+0.6
MASI	Maura Aman, Be	0.87	305	P	Pn	19 19 22.1	+7.6
MDSI	Maura Dua	1.48	124	P	Sn	19 19 38.4	-4.0
LWLI	Liwa	1.75	141	P	Pg	19 19 32.6	+2.7
PMBI	Palembang	1.96	69	P	Sn	19 19 53.6	-0.5
KRJI	Kerinci	2.14	316	P	Pn	19 19 23.6	-8.6
KLI	Kotabumi	2.25	122	P	Pg	19 19 47.1	+7.6
KASI	Kota Agung	2.42	140	P	Pb	19 19 40.2	+0.3
BLSI	Bandar Lampung	2.86	127	P	Pg	19 19 51.8	+0.8
PPSI	Pulau Pagai	3.06	287	S	Pn	19 19 52.5	+7.8
RGRI	Rengat	3.33	349	P	Pn	19 19 48.9	+0.4
CGJI	Cibinong	4.02	137	P	Pn	19 19 57.2	-0.7
TNG	Tangerang	4.46	124	P	Pn	19 20 10.2	+6.3
SISI	Saibi	4.49	301	S	Pn	19 20 15.6	+11
SKJI	Sukabumi	4.90	133	P	Pn	19 20 09.1	-1.0
GSI	Gunungsitoli	7.28	312	ePn	Pn	19 20 44.7	+2.0
GSI				eSn	Sn	19 22 00.7	-4.9
UGM	Wanagama	8.64	120	ePn	Pn	19 21 04.8	+3.3
LHMI	Lhok Sumawe	10.66	326	ePn	Pn	19 21 38.7	+10
SBUM	Sibu	11.07	57	ePn	Pn	19 21 35.1	+0.4
JAGI	Jajag, Banyuwa	12.13	114	ePn	Pn	19 21 51.1	+1.9
JAGI				eSn	Sn	19 23 36.2	-28
EDFI	Ende, Flores	19.30	106	P	P	19 23 17.4	-4.3
MMRI	Maumere	19.80	105	P	P	19 23 20.1	-7.0
MMRI	Maumere	19.80	105	eP	P	19 23 20.9	-6.2
	708nm,0.9s						
SOEI	Soe	22.02	107	eP	P	19 23 53.5	+2.4
	89nm,1.3s						
CM01	Chiang Mai Arr	22.28	350	eP	P	19 24 05.9	+12
FITZ	Fitzroy Crossi	26.46	125	eP	P	19 24 32.3	-1.4
	26nm,1.5s						
H08S2	Diego Garcia H	30.56	261	T	T	19 56 24.7	

	baz=86,slow=75,SNR=3.4						
H08S3	Diego Garcia H	30.57	261	T	T	19 56 22.1	
	baz=86,slow=75,SNR=7.7						
H08S1	Diego Carcia H	30.58	261	T	T	19 56 27.4	
	baz=86,slow=75,SNR=5.9						
H01W3	Cape Leeuwin H	32.77	163	T	T	19 59 12.8	
	baz=338,slow=76,SNR=24						
H01W2	Cape Leeuwin H	32.78	163	T	T	19 59 11.8	
	baz=338,slow=76,SNR=30						
H01W1	Cape Leeuwin H	32.78	163	T	T	19 59 12.4	
	baz=338,slow=76,SNR=26						
WRA	Warramunga Arr	34.62	120	P	P	19 25 45.0	-0.9
	1.3nm,0.3s,baz=308,slow=9.4,SNR=34						
WR1	Warramunga Arr	34.63	120	*e*P	P	19 25 45.0	-0.9
	21nm,1.5s						
WB2	Warramunga Arr	34.64	120	*e*P	P	19 25 44.7	-1.4
ASAR	Alice Springs	35.91	126	P	P	19 25 55.6	-1.4
	1.3nm,0.5s,baz=296,slow=8.0,SNR=24						
AS31	Alice Springs	35.91	126	*e*P	P	19 25 54.8	-2.2
	1.4nm,1.0s						
AS01	Alice Springs	35.95	126	*e*P	P	19 25 55.2	-2.1
JOW	Kunigami	38.95	37	*e*P	P	19 26 23.0	+0.3
	117nm,1.9s						
BBOO	Buckleboo	42.44	137	*e*P	P	19 26 48.4	-3.1
	69nm,1.7s						
STKA	Stephens Creek	45.87	132	P	P	19 27 17.7	-1.3
	2.7nm,0.6s,baz=311,slow=10.0,SNR=11						
STKA				LR	LR	19 48 18.6	
	comp=Z,137nm,19.1s,baz=21,slow=39						
STKA	Stephens Creek	45.87	132	*e*P	P	19 27 17.5	-1.5
	4.3nm,1.8s						
SONA0	Songino Array	51.35	3	*e*P	P	19 28 02.4	+1.4
SONM	Songino Array	51.35	3	P	P	19 28 02.4	+1.4
	0.5nm,0.7s,baz=188,slow=7.3,SNR=3.3						
MK31	Makanchi Array	53.44	342	*e*P	P	19 28 18.0	+1.5
MK32	Makanchi Array	53.44	342	*e*P	P	19 28 17.1	+0.7
MKAR	Makanchi Array	53.44	342	P	P	19 28 17.1	+0.7
	0.5nm,0.4s,baz=151,slow=8.5,SNR=13						
MKAR	Makanchi Array	53.44	342	*e*P	P	19 28 18.0	+1.6
	5.5nm,0.5s						
KURBB	Kurchatov Arra	57.99	342	P	P	19 28 51.0	+2.0
	0.2nm,0.6s,baz=162,slow=6.4,SNR=2.2						
KURK	Kurchatov	58.04	342	*e*P	P	19 28 51.0	+1.7
ZALV	Zalesovo Beam	59.36	348	P	P	19 28 59.7	+1.3
	0.5nm,0.3s,baz=174,slow=4.4,SNR=2.5						
ZAA1	Zalesovo Array	59.36	348	*e*P	P	19 28 59.7	+1.2
BKZ	Black Stump Fm	74.96	129	*e*P	P	19 30 36.1	-1.9
	40nm,1.6s						

IDC ***20*** *19:56:52.0±0.9, 2°.50N×125°.53E, h0km, mb4.1/8, mb1 4.3/8, mb1mx3.8/57, mbtmp4.1/8, MS1.9/1, Ms1 1.9/1, ms1mx1.9/49, Error ellipse: s-maj=143.4km s-min=12.6km az=67.0*

ISCJB ***20*** *19:57:00.6±0.7, 2°.81N±0°.03×126°.17E±0°.06, h90km±7km, mb4.5/23, Error ellipse: s-maj=9.7km s-min=4.7km az=172.6*

NEIC ***20*** *19:57:02.4±1.1, 2°.77N×126°.17E, h89km±10km, mb4.6/21, Error ellipse: s-maj=12.3km s-min=5.6km az=57.0*

DJA ***20*** *19:57:12.2±1.4, 3°N±6°×12°5E±°, h24km±14km, M4.4/10, mB4.8/2, mb4.5/5, MLv4.4/10, Mw(mB)4.0/2*

ISC 20 19:57:00.6±1.2**, 2°.77N**±0°.04×**126°.15E**±0°.08**, h67**km±11km**, n66, σ1s65**/71**, mb4.4**/23**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	2.32	149	P	Pn	19 57 54.0	+17
TNTI				S	Sn	19 58 27.3	+23
TNTI	Ternate	2.32	149	*e*Pn	Pn	19 57 38.7	+2.1
KMSI	Cibinong	3.08	225	P	Pn	19 57 49.3	+2.5
KMSI				S	Sn	19 58 19.0	-3.5
DDMP	Don Marcelino,	3.34	352	*e*P	Pn	19 57 50.5	0.0
DDMP				*e*S	Sn	19 58 28.9	-0.1
LBMI	Labuha	3.64	158	P	Pn	19 58 09.6	+15
LBMI				S	Sn	19 58 54.2	+18
SKMP	Bagumbayan, Su	4.06	337	*e*P	Pn	19 58 02.0	+1.7
SKMP				*e*S	Sn	19 58 46.3	-0.2
DAV	Davao City (W)	4.31	352	LR	LR	19 59 21.4	
	comp=Z,14nm,19.3s,baz=160,slow=33						
MRSI	Marisa	4.79	242	P	Pn	19 58 11.6	+1.4
CTBH	Cotabato--PC H	4.82	337	*e*P	Pn	19 58 14.5	+3.9
CTBH				*i* S	Sn	19 59 07.1	+2.0
LUWI	Luwuk	5.07	222	P	Pn	19 58 17.9	+3.7
LUWI	Luwuk	5.07	222	*e*Pn	Pn	19 58 16.5	+2.4
PAGZ	Pagadian	5.75	331	*e*P	Pn	19 58 24.1	+0.7
PAGZ				*e*S	Sn	19 59 25.2	-3.0
APSI	Ampana	5.80	231	P	Pn	19 58 26.8	+2.7
MPSI	Mapaga	6.70	249	P	Pn	19 58 37.9	+1.5
PCI	Palu	7.29	240	P	Pn	19 58 46.2	+1.6
MYLDM	Lahad Datu	8.00	288	*e*Pn	Pn	19 58 57.7	+3.4
TTSI	Tana Toraja	8.57	228	P	Pn	19 59 04.5	+2.5
KKM	Kota Kinabalu	10.43	289	*e*Pn	Pn	19 59 30.9	+3.3
SOEI	Soe	12.58	189	*e*Pn	Pn	19 59 54.8	-2.1
WSI	Waingapu	13.66	205	P	Pn	20 00 11.1	-0.3
SBUM	Sibu	13.92	269	*e*Pn	Pn	20 00 16.8	+1.9
KSM	Kuching	15.89	266	*e*Pn	Pn	20 00 40.1	-0.1
	13nm,1.1s						
MTN	Manton Dam	16.28	162	*e*Pn	Pn	20 00 43.3	-1.8
	40nm,1.3s						
JAGI	Jajag, Banyuwa	16.36	227	*e*Pn	Pn	20 00 47.0	+0.8
	65nm,1.3s						
SMRI	Semarang	18.47	238	*e*P	P	20 01 09.2	-2.0
	201nm,1.7s						
TWG	Pinlang	20.54	347	*e*P	P	20 01 31.2	-2.5
	124nm,1.2s						
FITZ	Fitzroy Crossi	20.74	181	*e*P	P	20 01 35.5	-0.4
	21nm,1.5s						
COEN	Coen	23.68	135	*e*P	P	20 02 05.7	-0.8
	53nm,1.5s						
WRAB	Tennant Creek	23.95	161	*e*P	P	20 02 08.6	-0.2
	13nm,1.0s						
WR1	Warramunga Arr	23.96	161	*e*P	P	20 02 08.8	-0.1
	12nm,0.6s						
WR1				*e*S	S	20 06 23.8	+2.8
WRA	Warramunga Arr	23.96	161	P	P	20 02 08.8	-0.2
	6.9nm,0.4s,baz=337,slow=10,SNR=113						
WRA				S	S	20 06 23.8	+2.8
	1.4nm,1.0s,baz=328,slow=18,SNR=4.4						
WB2	Warramunga Arr	23.96	161	*e*P	P	20 02 07.2	-1.8
AS31	Alice Springs	27.34	164	*e*P	P	20 02 39.9	+0.4
	1.6nm,1.0s						
ASAR	Alice Springs	27.34	164	P	P	20 02 39.1	-0.4
	2.3nm,0.8s,baz=346,slow=12,SNR=16						
ASAR				PcP	PcP	20 05 58.3	+0.7
	0.9nm,0.7s,baz=358,slow=2.5,SNR=8.0						
AS01	Alice Springs	27.35	164	*e*P	P	20 02 39.3	-0.3
PBKT	Sadao Pong	28.30	301	*e*P	P	20 02 47.2	-1.0
	13nm,1.7s						
FORT	Forrest	33.41	177	*e*P	P	20 03 31.7	-1.2
	59nm,1.6s						
PBA	Port Blair	34.27	287	*e*P	P	20 03 39.8	-0.8
	220nm,1.3s						
BBOO	Buckleboo	36.61	166	*e*P	P	20 04 00.5	0.0
	89nm,1.8s						
EIDS	Eidsvold	36.96	141	*e*P	P	20 04 01.4	-2.3
	37nm,1.5s						
STKA	Stephens Creek	37.45	158	P	P	20 04 08.3	+0.7
	6.0nm,0.7s,baz=327,slow=8.4,SNR=16						
STKA	Stephens Creek	37.45	158	*e*P	P	20 04 08.2	+0.5
	1.5nm,0.8s						
ARMA	Armidale	40.99	145	*e*P	P	20 04 38.2	+0.9
	157nm,2.0s						
USA0B	Ussuriysk Arra	41.58	6	*e*P	P	20 04 42.4	+0.5
	27nm,1.5s						
H11S3	WAKE ISLAND Hy	42.65	66	T	T	20 51 40.7	
	baz=253,slow=75,SNR=6.1						
H11S2	WAKE ISLAND Hy	42.66	66	T	T	20 51 41.3	
	baz=253,slow=75,SNR=7.3						
H11S1	WAKE ISLAND Hy	42.66	66	T	T	20 51 29.0	
	baz=253,slow=75,SNR=5.1						
SONA0	Songino Array	48.03	342	*e*P	P	20 05 33.6	+0.4
SONA0				*e*PcP	PcP	20 07 01.0	+0.7
SONM	Songino Array	48.03	342	P	P	20 05 33.6	+0.4
	0.3nm,0.4s,baz=152,slow=9.5,SNR=3.3						
SONM				PcP	PcP	20 07 01.0	+0.7
	0.5nm,0.5s,baz=169,slow=5.0,SNR=4.9						
MK01	Makanchi Array	58.00	326	*e*P	P	20 06 45.4	-1.1
MK31	Makanchi Array	58.02	326	*e*P	P	20 06 45.8	-0.8
MK32	Makanchi Array	58.02	326	*e*P	P	20 06 45.5	-1.2
MK32				*e*PcP	PcP	20 07 38.1	+0.1
MKAR	Makanchi Array	58.02	326	P	P	20 06 45.5	-1.1
	0.5nm,0.5s,baz=126,slow=8.3,SNR=7.7						
MKAR				PcP	PcP	20 07 38.1	+0.1
	0.8nm,0.7s,baz=110,slow=3.5,SNR=5.7						
MKAR	Makanchi Array	58.02	326	*e*P	P	20 06 45.5	-1.1
	5.0nm,0.8s						
MKAR				PcP	PcP	20 07 38.1	+0.1
MAKZ	Makanchi	58.20	326	*e*P	P	20 06 47.0	-1.0
	6.3nm,1.8s						
LBZ	Lake Benmore	61.22	145	*e*P	P	20 07 10.2	+1.5
KURBB	Kurchatov Arra	62.24	328	P	P	20 07 14.4	-0.9
	0.6nm,0.2s,baz=130,slow=6.0,SNR=12						
KURK	Kurchatov	62.24	328	*e*P	P	20 07 14.0	-1.4
	1.9nm,0.6s						
TIXI	Tiksi	68.81	1	*e*P	P	20 07 57.4	0.0
	6.8nm,1.1s						
CASY	Casey	69.80	187	*e*P	P	20 08 04.6	+1.1
	29nm,2.0s						
VNDA	Vanda	82.55	173	P	P	20 09 16.9	+1.1
	1.4nm,0.7s,baz=314,slow=6.6,SNR=6.5						
VNDA	Vanda	82.55	173	*e*P	P	20 09 16.7	+0.9
FIA0	FINESS Array S	92.40	332	*e*P	P	20 10 02.8	-1.0
FINES	FINESS Array B	92.40	332	P	P	20 10 02.8	-1.0
	1.2nm,0.7s,baz=64,slow=6.3,SNR=4.2						
TORD	Torodi Ar. Bea	122.66	287	PKP	PKPdf	20 15 49.6	-0.3
	0.3nm,0.6s,baz=145,slow=5.3						
TOA1	Torodi Ar. Sit	122.67	287	*e*PKPdf	PKPdf	20 15 49.6	-0.3

DJA 20 20:17:39.6±1.2**, 7°S**±13°×**12°4E**±°**, h122**km±25km**, M3.8**/5**, MLv3.8**/5**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMRI	Maumere	2.22	233	P	Pn	20 18 15.6	-0.3
MMRI				S	Sn	20 18 44.4	+0.7
SOEI	Soe	2.44	175	P	Pn	20 18 18.9	0.0
SOEI				S	Sn	20 18 49.1	+0.1
EDFI	Ende, Flores	2.73	238	P	Pn	20 18 23.0	+0.4
BATI	Baumata	2.90	187	P	Pn	20 18 25.0	+0.3

BJI ***20*** *20:24:18.0, 3°.40N×125°.80E, h91km, mb4.7/47, mB4.9/32*

ISCJB ***20*** *20:24:20.0±0.3, 3°.43N±0°.02×125°.91E±0°.03, h110km±2km, mb4.9/147, Error ellipse: s-maj=4.3km s-min=2.5km az=160.9*

IDC ***20*** *20:24:20.7±0.7, 3°.39N×125°.72E, h102km±6km, mb4.4/37, mb1 4.5/38, mb1mx4.4/55, mbtmp4.8/38, MS3.5/25, Ms1 3.5/25, ms1mx3.4/53, Error ellipse: s-maj=13.1km s-min=6.6km az=77.0*

NEIC ***20*** *20:24:20.5±0.1, 3°.40N×125°.81E, mb5.0/100, Error ellipse: s-maj=5.2km s-min=3.6km az=77.0*

GCMT ***20*** *20:24:20.5±0.3, 3°.39N×125°.97E, h83km±2km, MW4.8/58, Moment Tensor Solution. s38,c43; s58,c89; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.66±.09; $M_{\theta\theta}$1.02±.08; $M_{\phi\phi}$0.64±.11; $M_{r\theta}$-0.58±.05; $M_{\theta\phi}$1.23±.07; $M_{\phi r}$-0.22±.08; Best double couple: $M_0$1.97300×10^{16} NP1:ϕ_s58.00000°, δ54.00000°, λ-79.00000°. NP2: ϕ_s220.00000°, δ37.00000°, λ-104.00000°. Principal axes: T 2.1650, Plg9.0000°, Azm140.0000°; N -0.3810, Plg9.0000°, Azm231.0000°; P -1.7810, Plg78.0000°, Azm5.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

MOS ***20*** *20:24:21.0±1.4, 3°.45N×125°.70E, h117km, mb5.0/35 Error ellipse: s-maj=10.1km s-min=5.3km az=110.4*

DJA ***20*** *20:24:22.4±0.2, 3°N±2°×12°6E±°, h78km±4km, M4.8/34, mb5.0/34, mB5.3/17, MLv5.2/16, Mw(mB)4.7/17*

ISC 20 20:24:21.0±0.4**, 3°.45N**±0°.03×**125°.94E**±0°.04**, h104**km±3km**, h104km:pP-P, n396, σ1s67**/471**, mb4.9**/147**, 25C-11D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSPH	General Santos	2.79	339⇑	*i*P	Pn	20 25 04.1	-0.2
GSPH				*i* S	Sn	20 25 38.9	+1.3
TNTI	Ternate	3.02	152	P	Pn	20 25 04.4	-2.8
TNTI				S	Sn	20 25 41.3	-1.5
TNTI	Ternate	3.02	152	*e*Pn	Pn	20 25 04.0	-3.2
SKMP	Bagumbayan, Su	3.35	336	*e*P	Pn	20 25 10.2	-1.3
SKMP				*e*S	Sn	20 25 50.2	-0.3
KMSI	Cibinong	3.46	214	P	Pn	20 25 12.3	-0.8
KMSI				S	Sn	20 25 54.8	+1.5
MATI	Mati	3.48	5	*e*P	Pn	20 25 12.1	-1.3
MATI				*e*S	Sn	20 26 12.6	+19
DAV	Davao City (W)	3.61	354	P	Pn	20 25 15.5	+0.5
	177nm,0.3s,baz=215,slow=4.2,SNR=8.5						
DAV				S	Sn	20 26 00.3	+3.5
	171nm,0.3s,baz=254,slow=20,SNR=4.3						
DAV				LR	LR	20 27 02.9	
	comp=Z,818nm,20.5s,baz=160,slow=44						
CTBH	Cotabato--PC H	4.10	336⇑	*e*P	Pn	20 25 22.4	+0.8
CTBH				*i* S	Sn	20 26 10.0	+1.3
LBMI	Labuha	4.36	159	P	Pn	20 25 24.2	-0.9
LBMI				S	Sn	20 26 14.6	-0.2
MRSI	Marisa	4.97	234	P	Pn	20 25 34.4	+1.1
PAGZ	Pagadian	5.05	330	*e*P	Pn	20 25 32.8	-1.7
PAGZ				*e*S	Sn	20 26 29.8	-1.9
CGP	Cagayan de Oro	5.12	346⇓	*e*P	Pn	20 25 38.9	+3.5
ZCP	Zamboanga City	5.17	312⇑	*i*P	Pn	20 25 35.8	-0.2
ZCP				*i* S	Sn	20 26 34.7	+0.2
SANI	Sanana	5.47	179	P	Pn	20 25 39.8	-0.3
SANI				S	Sn	20 26 42.0	+0.2
LUWI	Luwuk	5.47	215	P	Pn	20 25 41.8	+1.6
LUWI	Luwuk	5.47	215	*e*Pn	Pn	20 25 39.6	-0.6
LUWI				*e*Sn	Sn	20 26 47.5	+5.6
DCPH	Dipolog City	5.71	333⇑	*e*P	Pn	20 25 48.1	+4.8
APSI	Ampana	6.09	225	P	Pn	20 25 50.1	+1.5
MSLP	Maasin	6.72	351	*e*P	Pn	20 25 57.1	0.0
MSLP				*e*S	Sn	20 27 14.2	+1.9
NLAI	Namlea	6.75	170	P	Pn	20 25 56.0	-1.5
MPSI	Mapaga	6.78	243	P	Pn	20 26 01.1	+3.1
SWI	Sorong	6.83	129	P	Pn	20 25 57.9	-0.8
LLP	Lapu-Lapu	7.09	344	*e*P	Pn	20 26 03.1	+0.9
LLP				*e*S	Sn	20 27 26.5	+5.2
MSAI	Masohi	7.39	156	P	Pn	20 26 05.8	-0.4
AAI	Ambon	7.44	162	P	Pn	20 26 07.5	+0.5
PCI	Palu	7.48	235	P	Pn	20 26 10.2	+2.8
MYLDM	Lahad Datu	7.61	283	*e*Pn	Pn	20 26 11.3	+2.1
PLP	Palo	7.72	353⇓	*e*P	Pn	20 26 12.3	+1.6
KDI	Kendari	8.07	204	P	Pn	20 26 16.8	+1.3
RCP	Roxas	8.65	339⇓	*e*P	Pn	20 26 25.5	+2.1
TTSI	Tana Toraja	8.89	224	P	Pn	20 26 28.3	+1.7
FAKI	Fak Fak	8.94	135	P	Pn	20 26 27.6	+0.3
FAKI	Fak Fak	8.94	135	*e*Pn	Pn	20 26 25.4	-2.0
FAKI				*e*Sn	Sn	20 28 07.9	+1.6
RKPI	Ransiki, Papua	9.60	121	P	Pn	20 26 36.1	-0.2
SPSI	Sidrap Palu	9.61	220	P	Pn	20 26 38.3	+1.9
KKM	Kota Kinabalu	10.02	285	*e*Pn	Pn	20 26 44.8	+2.6
BAKI	Biak	11.16	114	P	Pn	20 26 57.7	+0.2
SRPI	Serui, Papua	11.58	117	P	Pn	20 27 03.5	+0.4
TGY	Tagaytay City	11.67	335	LR	LR	20 32 00.9	
	comp=Z,507nm,20.5s,baz=227,slow=40						
MTKI	Muara Teweh, K	11.87	249	P	Pn	20 27 10.1	+3.2
BBKI	Banjar Baru	13.04	238	P	P	20 27 26.3	-2.5
SOEI	Soe	13.23	187	*e*Pn	Pn	20 27 22.1	-2.8
SBUM	Sibu	13.73	266	*e*Pn	Pn	20 27 33.5	+2.1
BATI	Baumata	13.76	189	P	Pn	20 27 33.9	+2.1
WBSI	Waikabubak, Su	14.55	207	P	P	20 27 46.7	+1.1
	66nm,0.9s						
PLAI	Plampang	14.66	214	P	P	20 27 50.8	+4.0
STKI	Sintang	14.84	257	P	P	20 27 50.7	+1.9
	91nm,0.9s,4μm						
TWSI	Taliwang, Sumb	15.11	217	P	P	20 27 53.7	+2.0
	58nm,1.0s						
GENI	Genyem	15.44	113	P	P	20 27 56.0	+0.5
	123nm,0.9s,2μm						
PBKI	Pangkalan Bun	15.52	247	P	P	20 28 00.3	+4.0
	106nm,1.1s						
KSM	Kuching	15.73	263	*e*Pn	Pn	20 27 56.5	-0.4
	24nm,0.6s						
JAGI	Jajag, Banyuwa	16.68	225	*e*Pn	Pn	20 28 06.3	-2.4
MTN	Manton Dam	17.00	162	*e*Pn	Pn	20 28 08.3	-4.1
	99nm,1.3s						
GMJI	Gumukmas	17.06	227	P	P	20 28 19.3	+6.0
	73nm,1.1s						
TWG	Pinlang	19.82	347	*e*P	P	20 28 40.7	-2.8
	109nm,0.6s						
KPJI	Karang Pucung	20.07	238	P	Pn	20 28 48.3	-0.7
	49nm,0.7s						
YULB	Yu-li	20.32	348	*e*P	P	20 28 45.6	-3.3
	15nm,0.7s						
TPUB	Ta-pu	20.39	346	*e*P	P	20 28 47.0	-2.7
	32nm,0.9s						
SSLB	Suanglung	20.78	347	*e*P	P	20 28 51.5	-2.4
	25nm,0.7s						
NACB	Ninganchiao	21.02	349	*e*P	P	20 28 56.2	-0.2
	29nm,1.1s						
YOJ	Yonaguni jima	21.08	353	*e*P	P	20 28 55.8	-1.2
	155nm,1.2s						
YOJ	Yonaguni jima	21.08	353	*e*P	P	20 28 55.8	-1.2
YOJ				pmax	pmax		
	comp=Z,155nm,1.2s						
GUMO	Guam	21.24	61	P	P	20 29 00.4	+1.5
	comp=Z,25nm,0.4s,baz=132,slow=3.3,SNR=5.9						
GUMO				LR	LR	20 35 55.1	
	comp=Z,74nm,20.0s,baz=237,slow=32						
FITZ	Fitzroy Crossi	21.42	181	*e*P	P	20 28 58.8	-1.9
	comp=Z,18nm,0.8s						
YHNB	Yeheng	21.55	349	*e*P	P	20 29 00.1	-2.0
	comp=Z,25nm,0.9s						
QIZ	Qiongzhong	22.07	316	*e*P	P	20 29 06.5	-1.1
	comp=Z,19nm,1.0s						
MYKOM	Kota Tinggi	22.12	266	*e*P	P	20 29 09.2	+0.9
	comp=Z,15nm,0.9s						
MDSI	Maura Dua	23.12	250	P	P	20 29 21.6	+3.3
	comp=Z,32nm,0.7s						
JOW	Kunigami	23.35	5	P	P	20 29 21.1	+0.8
	comp=Z,53nm,0.7s,baz=198,slow=8.5,SNR=14						
JOW				LR	LR	20 37 06.4	
	comp=Z,49nm,21.8s,baz=152,slow=33						
JOW	Kunigami	23.35	5	*e*P	P	20 29 21.8	+1.5
	comp=Z,250nm,1.4s						
MNAI	Manna	24.24	251	*e*P	P	20 29 28.6	+0.1
	comp=Z,251nm,0.9s						
COEN	Coen	24.32	136	*e*P	P	20 29 28.2	-1.0
	comp=Z,28nm,0.9s						
WRAB	Tennant Creek	24.67	161	*e*P	P	20 29 30.9	-1.4
	comp=Z,40nm,0.8s						
WRAB	Tennant Creek	24.67	161	*ce*P	P	20 29 31.1	-1.2
WRAB				pmax	pmax		
	comp=Z,96nm,1.7s						
WR1	Warramunga Arr	24.67	161	*e*P	P	20 29 30.8	-1.6
	comp=Z,51nm,0.6s						
WR1				*e*S	S	20 33 49.4	+2.8
WRA	Warramunga Arr	24.67	161	P	P	20 29 30.8	-1.6
	comp=Z,22nm,0.6s,baz=338,slow=10,SNR=126						
WRA				S	S	20 33 49.4	+2.8
	comp=Z,25nm,1.0s,baz=346,slow=18,SNR=12						
WRA	Warramunga Arr	24.67	161	*i* P	P	20 29 30.7	-1.6
WRA				pmax	pmax		
	comp=Z,31nm,0.8s						
WB2	Warramunga Arr	24.68	161	*e*P	P	20 29 29.8	-2.5
PMG	Port Moresby	24.71	121	P	P	20 29 33.9	+1.2
	comp=Z,13nm,0.7s,baz=290,slow=12,SNR=3.5						
PMG				LR	LR	20 39 48.4	
	comp=Z,127nm,21.8s,baz=25,slow=37						
IPM	Ipoh	24.87	273	*e*P	P	20 29 35.8	+1.6
	comp=Z,65nm,1.5s						
KULM	Kulim	25.28	275	*e*P	P	20 29 38.5	+0.6
	comp=Z,18nm,0.9s						
SKLT	Songkhla	25.47	279	P	P	20 29 44.4	+4.7
MNSI	Mandailing Nat	26.47	265	P	P	20 29 53.0	+4.3
	comp=Z,34nm,1.1s						
NONG	Nongkai	26.63	305	P	P	20 29 56.6	+6.5
	comp=Z,0.3nm,1.1s						
PSI	Prapat	26.98	269	*e*P	P	20 29 51.0	-2.4
	comp=Z,52nm,1.7s						
PSI	Prapat	26.98	269	*e*P	P	20 29 51.0	-2.4
PSI				pmax	pmax		
	comp=Z,52nm,1.7s						
PBKT	Sadao Pong	27.77	300	*e*P	P	20 30 01.1	+0.8
	comp=Z,7.8nm,0.8s						
PBKT	Sadao Pong	27.77	300	P	P	20 30 03.3	+3.0
AS31	Alice Springs	28.05	164	*e*P	P	20 30 01.8	-1.0
	comp=Z,5.0nm,0.6s						
AS31				*e*PcP	PcP	20 33 13.6	-1.6
ASAR	Alice Springs	28.05	164	P	P	20 30 02.0	-0.7
	comp=Z,7.6nm,0.5s,baz=343,slow=7.8,SNR=172						
ASAR				PcP	PcP	20 33 15.6	+0.4
	comp=Z,4.8nm,0.5s,baz=348,slow=2.3,SNR=8.8						
ASAR				S	S	20 34 39.7	-0.2
	comp=Z,3.9nm,0.9s,baz=346,slow=22,SNR=7.2						
AS01	Alice Springs	28.06	164	*e*P	P	20 30 01.6	-1.3
CBIJ	Chichi jima	28.18	32	*e*P	P	20 30 03.1	-0.7
	comp=Z,372nm,2.0s						
JCJ	Chichijima	28.18	32	P	P	20 30 03.2	-0.6
	comp=Z,35nm,0.6s,baz=286,slow=14,SNR=8.2						
GSI	Gunungsitoli	28.41	266	*e*P	P	20 30 05.8	-0.2
	comp=Z,18nm,0.8s						
NANT	Nan	29.01	304	P	P	20 30 17.3	+6.0
NJ2	Nanjing	29.22	348	*e*P	P	20 30 14.3	+1.4
NJ2				pmax	pmax		
	comp=Z,12nm,0.6s						
GYA	Guiyang	29.40	323	P	P	20 30 16.3	+1.5
GYA				pP	pP	20 30 37.4	-0.5
GYA				PP	PnPn	20 31 15.3	+1.5
GYA				S	S	20 35 03.0	+1.7
GYA				sS	sS	20 35 38.9	-2.7
GYA				SS	SnSn	20 36 42.6	+3.0
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,5.2s						
GYA				LR	LR		
	comp=Z,560nm,16.6s						
GYA				LR	LR		
	comp=Z,510nm,17.0s						
GYA				LR	LR		
	comp=Z,540nm,16.8s						
JNU	Nakatsue	29.88	8	P	P	20 30 18.8	0.0
	comp=Z,17nm,0.8s,baz=180,slow=7.1,SNR=6.1						
JNU				LR	LR	20 41 34.6	
	comp=Z,30nm,21.2s,baz=123,slow=34						
JNU	Nakatsue	29.88	8	*e*P	P	20 30 18.5	-0.3
	comp=Z,30nm,1.1s						
CMAR	Chiang Mai Arr	30.33	301	P	P	20 30 22.6	-0.4
	comp=Z,1.5nm,0.8s,baz=127,slow=7.3,SNR=7.4						
CMAR				pP	pP	20 30 44.8	-1.4
	comp=Z,2.8nm,0.8s,baz=109,slow=6.8,SNR=6.3						
CMAR				PcP	PcP	20 33 21.7	+0.7
	comp=Z,1.2nm,0.6s,baz=71,slow=0.5,SNR=6.4						
CMAR				LR	LR	20 42 17.1	
	comp=Z,40nm,20.6s,baz=118,slow=36						
CMAR	Chiang Mai Arr	30.33	301	*ce*P	P	20 30 23.8	+0.8
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CHTO	Chiang Mai	30.49	302	*e*P	P	20 30 24.1	-0.2
	comp=Z,16nm,1.5s						
CHTO	Chiang Mai	30.49	302	*e*P	P	20 30 24.2	-0.2
CHTO				pmax	pmax		
	comp=Z,16nm,1.5s						
CTAO	Charters Tower	30.75	140	*e*P	P	20 30 24.4	-2.2
	comp=Z,50nm,1.7s						
CTAO	Charters Tower	30.75	140	*e*P	P	20 30 24.4	-2.2
CTAO				pmax	pmax		
	comp=Z,50nm,1.7s						
KMI	Kunming	31.02	316	P	P	20 30 31.3	+2.1
KMI				pmax	pmax		
	comp=Z,7.0nm,0.5s						
PATS	Pohnpei	32.41	83	*e*P	P	20 30 41.1	-0.3
	comp=Z,213nm,1.5s						
TJN	Taejon	32.79	2	*ce*P	P	20 30 46.6	+2.3
INU	Inuyama	33.36	17	*e*P	P	20 30 49.6	+0.4
	comp=Z,40nm,1.4s						
INCN	Inchon	33.87	1	*e*P	P	20 30 53.5	-0.3
	comp=Z,69nm,1.5s						
INCN	Inchon	33.87	1	*e*P	P	20 30 53.5	-0.3
INCN				pmax	pmax		
	comp=Z,69nm,1.5s						
KS15	Wonju Array Si	33.87	3	*e*P	P	20 30 54.1	+0.4
KSAR	Wonju Array Be	33.87	3	P	P	20 30 54.9	+1.2
KSAR				PcP	PcP	20 33 31.8	+1.6
KSAR	Wonju Array Be	33.87	3	P	P	20 30 54.9	+1.2
KSAR						20 33 31.8	
KSRS	Korea Array	33.89	3	P	P	20 30 54.9	+1.0
	comp=Z,12nm,0.7s,baz=179,slow=9.8,SNR=54						
KSRS				PcP	PcP	20 33 31.8	+1.5
	comp=Z,2.4nm,0.6s,baz=188,slow=2.6,SNR=8.1						
KS01	Wonju Array Si	33.91	3	*e*P	P	20 30 54.6	+0.6
KS01				*e*PcP	PcP	20 33 31.8	+1.4
FORT	Forrest	34.10	177	*e*P	P	20 30 55.2	-0.5
	comp=Z,26nm,0.7s						
XAN	Xi’an	34.31	334	P	P	20 30 56.3	-1.4
XAN				pP	pP	20 31 18.8	-2.3
XAN				S	S	20 36 17.6	+0.1
XAN				pmax	pmax		
	comp=Z,15nm,1.1s						
XAN				pmax	pmax		
	comp=Z,87nm,5.7s						
CD2	Chengdu	34.41	325	*e*P	P	20 30 58.5	0.0

CD2				S	**S**	**20 36 21.3**	**+2.3**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.2s						
CD2				LR	LR		
	comp=Z,320nm,16.4s						
CD2				LR	LR		
	comp=Z,230nm,13.9s						
MAJO	**Matsushiro**	**34.82**	**17**	*e*P	**P**	**20 31 01.3**	**-0.7**
	comp=Z,60nm,1.9s						
MAJO				*e*PcP	**PcP**	**20 33 34.0**	**+0.9**
MAJO				*e*		20 42 56.4	
MAJO	**Matsushiro**	**34.82**	**17**	*i* P	**P**	**20 31 01.2**	**-0.7**
MAJO				pmax	pmax		
	comp=Z,12nm,1.8s						
MAT	**Matsushiro**	**34.82**	**17**	P	**P**	**20 31 01.4**	**-0.5**
MAT				*e*S	**S**	**20 36 29.8**	**+4.7**
MJAR	**Matsushiro Arr**	**34.82**	**17**	P	**P**	**20 31 01.4**	**-0.5**
	comp=Z,3.2nm,0.6s,baz=197,slow=9.3,SNR=10.0						
MJAR				PcP	**PcP**	**20 33 34.0**	**+0.9**
	comp=Z,1.1nm,0.7s,baz=186,slow=4.2,SNR=4.7						
MJAR				LR	LR	20 42 56.4	
	comp=Z,55nm,21.6s,baz=200,slow=32						
MJB9	**Matsu-Tunnel**	**34.82**	**17**	*e*P	**P**	**20 31 01.3**	**-0.7**
	comp=Z,62nm,1.9s						
DL2	**Dalian**	**35.51**	**354**	P	**P**	**20 31 09.6**	**+1.9**
DL2				pmax	pmax		
	comp=Z,33nm,0.6s						
HNR	**Honiara**	**36.23**	**111**	*e*P	**P**	**20 31 11.7**	**-2.6**
	comp=Z,58nm,0.9s						
HNR	**Honiara**	**36.23**	**111**	*e*P	**P**	**20 31 11.7**	**-2.6**
HNR				pmax	pmax		
	comp=Z,58nm,0.9s						
NWAO	**Narrogin (SRO)**	**37.11**	**192**	P	**P**	**20 31 20.9**	**-0.6**
	comp=Z,7.0nm,0.5s,baz=264,slow=7.0,SNR=12						
NWAO	**Narrogin (SRO)**	**37.11**	**192**	*e*P	**P**	**20 31 20.9**	**-0.6**
	comp=Z,30nm,1.2s						
NWAO	**Narrogin (SRO)**	**37.11**	**192**	*e*P	**P**	**20 31 20.9**	**-0.6**
NWAO				pmax	pmax		
	comp=Z,30nm,1.2s						
BBOO	**Buckleboo**	**37.32**	**166**	*e*P	**P**	**20 31 22.4**	**-0.8**
	comp=Z,19nm,0.8s						
BJT	**Baijiatuau**	**37.46**	**348**	*e*P	**P**	**20 31 24.7**	**+0.3**
	comp=Z,17nm,1.0s						
BJT	**Baijiatuau**	**37.46**	**348**	*e*P	**P**	**20 31 24.7**	**+0.3**
BJT				pmax	pmax		
	comp=Z,17nm,1.0s						
STKA	**Stephens Creek**	**38.16**	**158**	P	**P**	**20 31 29.7**	**-0.7**
	comp=Z,9.2nm,0.6s,baz=330,slow=9.6,SNR=25						
STKA	**Stephens Creek**	**38.16**	**158**	*e*P	**P**	**20 31 29.2**	**-1.2**
	comp=Z,2.7nm,0.8s						
STKA	**Stephens Creek**	**38.16**	**158**	*e*P	**P**	**20 31 29.2**	**-1.2**
STKA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
LZH	**Lanzhou**	**38.34**	**331**	*e*P	**P**	**20 31 32.3**	**+0.2**
LZH				pP	pP	20 31 54.3	-1.6
LZH				sP	sP	20 32 04.1	-3.7
LZH				PP	**PP**	**20 32 58.4**	**-3.5**
LZH				S	**S**	**20 37 17.3**	**-1.9**
LZH				sS	sS	20 37 53.6	-6.7
LZH				pmax	pmax		
	comp=Z,26nm,1.1s						
LZH				pmax	pmax		
	comp=Z,130nm,4.9s						
LZH				LR	LR		
	comp=Z,430nm,11.4s						
LZH				LR	LR		
	comp=Z,570nm,11.4s						
LZH				LR	LR		
	comp=Z,760nm,12.8s						
SHL	**Shillong**	**39.41**	**307**	*e*P	**P**	**20 31 40.6**	**-0.5**
SHL	**Shillong**	**39.41**	**307**	*e*P	**P**	**20 31 40.6**	**-0.5**
HHC	**Hu-ho-hao-te**	**39.42**	**343**	*e*P	**P**	**20 31 42.5**	**+1.6**
HHC				pP	pP	20 32 03.9	-0.9
HHC				sP	sP	20 32 14.0	-2.6
HHC				S	**S**	**20 37 40.8**	**+5.8**
HHC				sS	sS	20 38 15.4	-0.9
HHC				pmax	pmax		
	comp=Z,11nm,0.9s						
HHC				pmax	pmax		
	comp=Z,74nm,6.3s						
HHC				LR	LR		
	comp=Z,120nm,14.5s						
HHC				LR	LR		
	comp=Z,120nm,14.7s						
HHC				LR	LR		
	comp=Z,150nm,14.5s						
CN2	**Changchun**	**40.18**	**359**	*e*P	**P**	**20 31 47.3**	**+0.3**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
USA0B	**Ussuriysk Arra**	**40.93**	**7**	*e*P	**P**	**20 31 53.9**	**+0.8**
	comp=Z,51nm,1.4s						
USRK	**Ussuriysk Ar.**	**40.93**	**7**	P	**P**	**20 31 54.2**	**+1.1**
	comp=Z,11nm,0.8s,baz=188,slow=5.8						
USRK				PcP	**PcP**	**20 33 52.3**	**+0.6**
	baz=153,slow=2.6						
MDJ	**Mudanjiang**	**41.12**	**4**	P	**P**	**20 31 53.3**	**-1.4**
MDJ				pP	pP	20 32 14.4	-4.3
MDJ				sP	sP	20 32 25.0	-5.6
MDJ				pmax	pmax		
	comp=Z,37nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,310nm,4.4s						
MDJ	**Mudanjiang**	**41.12**	**4**	*e*P	**P**	**20 31 55.5**	**+0.8**
	comp=Z,91nm,1.5s						
ERM	**Erimo**	**41.37**	**20**	*e*P	**P**	**20 31 58.3**	**+1.5**
	comp=Z,78nm,1.3s						
ERM	**Erimo**	**41.37**	**20**	*e*P	**P**	**20 31 58.3**	**+1.5**
ERM				pmax	pmax		
	comp=Z,78nm,1.3s						
ARMA	**Armidale**	**41.68**	**146**	*e*P	**P**	**20 31 59.9**	**+0.2**
	comp=Z,133nm,1.8s						
LSA	**Lhasa**	**42.03**	**312**	*e*P	**P**	**20 32 03.6**	**+0.7**
	comp=Z,6.3nm,0.7s						
LSA	**Lhasa**	**42.03**	**312**	*e*P	**P**	**20 32 03.7**	**+0.7**
LSA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GTA	**Gaotai**	**42.93**	**330**	⇑P	**P**	**20 32 09.3**	**-0.4**
GTA				PcP	**PcP**	**20 34 00.8**	**+2.1**
GTA				PcS	**PcS**	**20 37 49.8**	**-1.4**
GTA				S	**S**	**20 38 30.0**	**+2.8**
GTA				SS	**SS**	**20 41 37.5**	**-5.3**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.3s						
GTA				pmax	pmax		
	comp=Z,27nm,5.7s						
GTA				LR	LR		
	comp=Z,130nm,17.8s						
GTA				LR	LR		
	comp=Z,110nm,17.5s						
GTA				LR	LR		
	comp=Z,80nm,18.1s						
ASAJ	**Asahikawa**	**43.09**	**18**	P	**P**	**20 32 11.7**	**+0.9**
	comp=Z,13nm,0.7s,baz=213,slow=6.5,SNR=15						
ASAJ				LR	LR	20 48 09.1	
	comp=Z,45nm,22.0s,baz=194,slow=33						
ASAJ	**Asahikawa**	**43.09**	**18**	*e*P	**P**	**20 32 12.3**	**+1.6**
	comp=Z,17nm,0.8s						
ODAN	**Odare**	**43.59**	**306**	*e*P	**P**	**20 32 14.7**	**-0.6**
	comp=Z,16nm,0.7s						
CAN	**Canberra**	**44.23**	**153**	*e*P	**P**	**20 32 21.6**	**+1.5**
	comp=Z,63nm,1.7s						
CAN	**Canberra**	**44.23**	**153**	*e*P	**P**	**20 32 21.6**	**+1.5**
CAN				pmax	pmax		
	comp=Z,63nm,1.7s						
RAMN	**Ramite**	**44.26**	**306**	*e*P	**P**	**20 32 19.3**	**-1.5**
	comp=Z,25nm,0.5s						
JIRN	**Jiri**	**44.89**	**307**	*e*P	**P**	**20 32 25.2**	**-0.7**
	comp=Z,18nm,0.4s						
PALK	**Pallekele**	**45.18**	**277**	PcP	**PcP**	**20 34 07.5**	**+0.8**
	comp=Z,8.9nm,0.6s,baz=114,slow=2.8,SNR=6.7						
PALK				LR	LR	20 51 12.3	
	comp=Z,83nm,21.3s,baz=128,slow=36						
PALK	**Pallekele**	**45.18**	**277**	*i* P	**P**	**20 32 32.2**	**+4.2**
GUN	**Gumba**	**45.25**	**307**	*e*P	**P**	**20 32 28.0**	**-0.7**
	comp=Z,30nm,0.6s						
KKN	**Kakani**	**45.68**	**306**	*e*P	**P**	**20 32 30.9**	**-1.0**
	comp=Z,8.8nm,0.5s						
YSS	**Yuzh-Sakhalins**	**45.72**	**16**	*e*P	**P**	**20 32 32.4**	**+0.8**
	comp=Z,30nm,1.1s						
YSS	**Yuzh-Sakhalins**	**45.72**	**16**	*e*P	**P**	**20 32 32.6**	**+1.0**
YSS				pmax	pmax		
	comp=Z,20nm,1.3s						
YSS				pmax	pmax		
	comp=Z,100nm,3.2s						
DMN	**Daman**	**45.74**	**306**	*e*P	**P**	**20 32 32.7**	**+0.2**
	comp=Z,8.5nm,0.8s						
KLR	**Kul'dur**	**45.88**	**5**	*i* P	**P**	**20 32 33.0**	**+0.1**
GKN	**Gorkha**	**46.29**	**306**	*e*P	**P**	**20 32 36.4**	**-0.2**
DZM	**Mont Dzumac**	**47.03**	**125**	P	**P**	**20 32 43.2**	**+0.8**
	comp=Z,4.2nm,0.8s,baz=292,slow=19,SNR=4.5						
DZM	**Mont Dzumac**	**47.03**	**125**	*e*P	**P**	**20 32 43.0**	**+0.6**
	comp=Z,58nm,1.8s						
KOLN	**Koldanda**	**47.03**	**305**	*e*P	**P**	**20 32 41.9**	**-0.6**
	comp=Z,42nm,0.6s						
DANN	**Dangsing**	**47.13**	**306**	*e*P	**P**	**20 32 42.7**	**-0.7**
	comp=Z,39nm,0.5s						
ULN	**Ulaanbaatar**	**47.14**	**343**	*ce*P	**P**	**20 32 42.3**	**-0.6**
ULN				pmax	pmax		
	comp=Z,8.0nm,1.3s						
SONA0	**Songino Array**	**47.31**	**342**	*e*P	**P**	**20 32 42.5**	**-1.7**
SONA0				*e*PcP	**PcP**	**20 34 14.3**	**+0.6**
SONA0				*e*		20 53 23.5	
SONM	**Songino Array**	**47.31**	**342**	P	**P**	**20 32 42.5**	**-1.7**
	comp=Z,1.7nm,0.7s,baz=160,slow=8.1,SNR=11						
SONM				PcP	**PcP**	**20 34 14.3**	**+0.6**
	comp=Z,4.6nm,0.8s,baz=169,slow=3.9,SNR=8.1						
SONM				LR	LR	20 53 23.5	
	comp=Z,92nm,20.6s,baz=160,slow=37						
SONA1	**Songino Array**	**47.32**	**342**	*e*P	**P**	**20 32 43.4**	**-1.0**
SONA1				*e*PcP	**PcP**	**20 34 14.2**	**+0.5**
PYUN	**Piuthan**	**47.66**	**305**	*e*P	**P**	**20 32 46.9**	**-0.5**
	comp=Z,32nm,0.7s						
ZEA	**Zeya**	**50.13**	**1**	*e*P	**P**	**20 33 06.0**	**+0.4**
ZEA				pmax	pmax		
	comp=Z,28nm,1.2s						
WMQ	**Urumqi**	**52.50**	**326**	P	**P**	**20 33 24.8**	**+1.3**
WMQ				sP	sP	20 33 56.8	-3.3
WMQ				PcP	**PcP**	**20 34 33.3**	**+0.6**
WMQ				pmax	pmax		
	comp=Z,21nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,180nm,4.7s						
WMQ				LR	LR		
	comp=Z,220nm,18.1s						
WMQ				LR	LR		
	comp=Z,140nm,25.1s						
WMQ				LR	LR		
	comp=Z,140nm,21.7s						
BOD	**Bodaibo**	**55.02**	**352**	*e*P	**P**	**20 33 41.3**	**-0.2**
BOD				pmax	pmax		
	comp=Z,12nm,1.7s						
PEA0B	**Petropavlovsk-**	**55.98**	**23**	*e*P	**P**	**20 33 50.2**	**+1.7**
	comp=Z,26nm,1.1s						
PETK	**Petropavlovsk-**	**55.98**	**23**	P	**P**	**20 33 49.9**	**+1.4**
	comp=Z,11nm,0.7s,baz=189,slow=4.4						
PETK				PcP	**PcP**	**20 34 46.3**	**+0.5**
	baz=176,slow=4.2						
PETK	**Petropavlovsk-**	**55.98**	**23**	*e*P	**P**	**20 33 50.1**	**+1.6**
PETK				*e*PcP	**PcP**	**20 34 46.4**	**+0.7**
PETK	**Petropavlovsk-**	**55.98**	**23**	*e*P	**P**	**20 33 50.1**	**+1.6**
PETK				*e*		20 34 46.4	
PEA1	**Petropavlovsk-**	**55.99**	**23**	*e*P	**P**	**20 33 49.9**	**+1.4**
PEA1				*e*PcP	**PcP**	**20 34 46.3**	**+0.5**
DGZ	**Jazzator, Alta**	**56.45**	**331**	*i* P	**P**	**20 33 52.1**	**0.0**
DGZ				pmax	pmax		
	comp=Z,3.0nm,1.3s						
MK01	**Makanchi Array**	**57.31**	**326**	*e*P	**P**	**20 33 57.1**	**-1.0**
MK01				*e*PcP	**PcP**	**20 34 50.3**	**-0.9**
MK31	**Makanchi Array**	**57.33**	**326**	*e*P	**P**	**20 33 57.2**	**-1.0**
MK31				*e*PcP	**PcP**	**20 34 51.2**	**0.0**
MK31	**Makanchi Array**	**57.33**	**326**	*e*P	**P**	**20 33 57.3**	**-1.0**
MK31				*e*		20 34 51.2	
MK32	**Makanchi Array**	**57.33**	**326**	*e*P	**P**	**20 33 57.5**	**-0.8**
MK32				*e*pP	**pP**	**20 34 22.6**	**-0.9**
MK32				*e*PcP	**PcP**	**20 34 49.9**	**-1.3**
MK32				*e*ScP	**ScP**	**20 38 41.5**	**-0.2**
MK32				*e*		21 01 48.4	
MKAR	**Makanchi Array**	**57.33**	**326**	P	**P**	**20 33 57.5**	**-0.7**
	comp=Z,2.1nm,0.4s,baz=117,slow=7.5,SNR=57						
MKAR				pP	**pP**	**20 34 22.6**	**-0.9**
	comp=Z,1.8nm,0.4s,baz=126,slow=9.6,SNR=3.9						
MKAR				PcP	**PcP**	**20 34 49.9**	**-1.3**
	comp=Z,16nm,0.6s,baz=122,slow=3.9,SNR=21						
MKAR				ScP	**ScP**	**20 38 41.5**	**-0.2**
	comp=Z,0.6nm,0.8s,baz=133,slow=3.4,SNR=4.0						
MKAR				LR	LR	21 01 48.4	
	comp=Z,26nm,18.4s,baz=88,slow=39						
MKAR	**Makanchi Array**	**57.33**	**326**	*e*P	**P**	**20 33 57.5**	**-0.7**
MKAR				pP	**pP**	**20 34 22.6**	**-0.9**
MKAR				*e*PcP	**PcP**	**20 34 51.6**	**+0.4**
MKAR				ScP	**ScP**	**20 38 41.5**	**-0.2**
MKAR	**Makanchi Array**	**57.33**	**326**	*e*P	**P**	**20 33 57.5**	**-0.7**
MKAR				*PP	**pP**	**20 34 22.7**	**-0.9**
MKAR				*e*		20 34 51.6	
MAKZ	**Makanchi**	**57.52**	**326**	*e*P	**P**	**20 33 58.4**	**-1.1**
MAKZ				*e*PcP	**PcP**	**20 34 51.5**	**-0.4**
MAKZ	**Makanchi**	**57.52**	**326**	*e*P	**P**	**20 33 58.4**	**-1.1**
MAKZ				*e*		20 34 51.5	
KSH	**Kashi**	**57.68**	**316**	P	**P**	**20 34 01.6**	**+0.6**
KSH				pP	pP	20 34 25.5	-0.8
KSH				sP	sP	20 34 37.4	-0.4
KSH				*e*PcP	**PcP**	**20 34 53.6**	**+0.7**
KSH				S	**S**	**20 41 48.9**	**-2.8**
KSH				ScS	**ScS**	**20 43 36.3**	**-4.5**
KSH				SS	**SS**	**20 45 43.3**	**-0.4**
KSH				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KSH				pmax	pmax		
	comp=Z,120nm,4.4s						
YAK	**Yakutsk**	**58.51**	**2**	*e*P	**P**	**20 34 07.2**	**+1.1**
	comp=Z,56nm,0.7s						
YAK	**Yakutsk**	**58.51**	**2**	*e*P	**P**	**20 34 06.0**	**-0.1**
YAK				*e*		20 34 53.4	
YAK				*e*		20 36 17.2	
YAK				*e*S	**S**	**20 42 03.6**	**+2.2**
YAK				*e*		20 43 48.6	
YAK				pmax	pmax		
	comp=Z,29nm,0.9s						
YAK				pmax	pmax		
	comp=N,10.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,8.0nm,1.1s						
YAK				pmax	pmax		
	comp=Z,57nm,3.4s						
YAK				pmax	pmax		
	comp=N,14nm,2.9s						
YAK				pmax	pmax		
	comp=E,23nm,2.8s						
YAK				smax	smax		
	comp=N,45nm,2.5s						
YAK				smax	smax		
	comp=E,25nm,2.3s						
AAK	**Ala-Archa**	**60.03**	**318**	*e*P	**P**	**20 34 16.8**	**-0.4**
AAK				*e*PcP	**PcP**	**20 35 02.4**	**+0.2**
AAK	**Ala-Archa**	**60.03**	**318**	*e*P	**P**	**20 34 16.8**	**-0.4**
AAK				*e*		20 35 02.4	
ZAA0	**Zalesovo Array**	**60.48**	**333**	*e*P	**P**	**20 34 18.7**	**-1.1**
ZAA0				*e*PcP	**PcP**	**20 35 01.8**	**-1.7**
ZALV	**Zalesovo Beam**	**60.48**	**333**	P	**P**	**20 34 18.1**	**-1.7**
	comp=E,1.4nm,0.3s,baz=137,slow=7.5,SNR=8.9						
ZALV				PcP	**PcP**	**20 35 02.5**	**-1.0**
	comp=E,2.9nm,0.7s,baz=132,slow=2.2,SNR=5.9						
ZALV				LR	LR	21 04 12.0	
	comp=E,26nm,18.7s,baz=321,slow=40						
ZALV	**Zalesovo Beam**	**60.48**	**333**	*e*P	**P**	**20 34 18.3**	**-1.5**
ZALV				*e*PcP	**PcP**	**20 35 02.3**	**-1.2**
ZALV	**Zalesovo Beam**	**60.48**	**333**	*e*P	**P**	**20 34 18.3**	**-1.5**
ZALV				*e*		20 35 02.3	
ZAA1	**Zalesovo Array**	**60.48**	**333**	*e*P	**P**	**20 34 18.1**	**-1.7**
ZAA1				*e*PcP	**PcP**	**20 35 02.5**	**-1.0**
ZAA1				*e*		21 04 12.0	
KBL	**Kabul**	**61.06**	**308**	*e*P	**P**	**20 34 22.8**	**-1.6**
	comp=E,4.2nm,0.8s						
KBL	**Kabul**	**61.06**	**308**	*e*P	**P**	**20 34 22.8**	**-1.6**
KBL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KURBB	**Kurchatov Arra**	**61.55**	**328**	P	**P**	**20 34 26.1**	**-0.9**
	comp=Z,5.9nm,0.4s,baz=129,slow=6.3,SNR=19						
KURBB				PcP	**PcP**	**20 35 07.8**	**-0.1**
	comp=Z,4.0nm,0.5s,baz=126,slow=5.8,SNR=6.2						
KURK	**Kurchatov**	**61.55**	**328**	*e*P	**P**	**20 34 26.1**	**-1.0**
KURK				*e*PcP	**PcP**	**20 35 07.2**	**-0.7**
KURK	**Kurchatov**	**61.55**	**328**	*ce*P	**P**	**20 34 25.8**	**-1.3**
KURK				pmax	pmax		
	comp=Z,23nm,1.3s						
NVS	**Novosibirsk**	**61.76**	**334**	*e*P	**P**	**20 34 27.7**	**-0.7**
NVS				*i*		20 35 07.8	
NVS				pmax	pmax		
	comp=N,5.0nm,0.7s						
NVS				pmax	pmax		
	comp=N,4.0nm,0.8s						
NVS				pmax	pmax		
	comp=E,3.0nm,0.8s						
LBZ	**Lake Benmore**	**61.90**	**145**	*e*P	**P**	**20 34 30.1**	**+0.5**
	comp=E,73nm,1.5s						
THZ	**Tophouse**	**61.97**	**142**	*e*P	**P**	**20 34 30.3**	**+0.2**
	comp=E,54nm,1.5s						
SEY	**Seymchan**	**62.48**	**13**	P	**P**	**20 34 34.7**	**+1.6**
	comp=E,8.5nm,1.0s,baz=207,slow=8.4,SNR=14						
KHZ	**Kahutara**	**62.73**	**142**	*e*P	**P**	**20 34 34.7**	**-0.4**
	comp=E,88nm,1.5s						
KK31	**Karatay Array**	**62.89**	**317**	*e*P	**P**	**20 34 35.1**	**-1.2**
KK31	**Karatay Array**	**62.89**	**317**	*e*P	**P**	**20 34 35.1**	**-1.2**
KKAR	**Karatay Array**	**62.89**	**317**	*e*P	**P**	**20 34 35.1**	**-1.2**
KKAR	**Karatay Array**	**62.89**	**317**	*e*P	**P**	**20 34 35.1**	**-1.2**
MQZ	**McQueen's Vall**	**62.93**	**144**	*e*P	**P**	**20 34 36.5**	**+0.1**
	comp=E,124nm,1.4s						
SMY	**Shemya**	**63.10**	**31**	*e*P	**P**	**20 34 37.5**	**+0.1**
	comp=E,84nm,1.1s						
SMY	**Shemya**	**63.10**	**31**	*e*P	**P**	**20 34 37.5**	**+0.1**
SMY				pmax	pmax		
	comp=Z,84nm,1.1s						
MXZ	**Matakaoa Point**	**63.39**	**135**	*e*P	**P**	**20 34 39.6**	**0.0**
	comp=Z,106nm,0.9s						
BVAR	**Borovoye Array**	**67.12**	**327**	P	**P**	**20 35 02.4**	**-1.0**
	comp=Z,2.5nm,0.6s,baz=134,slow=10,SNR=18						
BVAR				PcP	**pP**	**20 35 29.7**	**+0.2**
	comp=Z,6.6nm,0.8s,baz=138,slow=5.4,SNR=11						
BVAR				LR	LR	21 07 51.3	
	comp=Z,33nm,18.4s,baz=116,slow=39						
BRVK	**Borovoye**	**67.19**	**327**	*e*P	**P**	**20 35 03.2**	**-0.7**
	comp=Z,9.3nm,0.8s						
BRVK	**Borovoye**	**67.19**	**327**	*ce*P	**P**	**20 35 02.3**	**-1.6**
BRVK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
TIXI	**Tiksi**	**68.13**	**1**	*e*P	**P**	**20 35 09.1**	**-0.3**
	comp=Z,18nm,0.6s						
TIXI	**Tiksi**	**68.13**	**1**	*ce*P	**P**	**20 35 09.6**	**+0.2**
TIXI				pmax	pmax		
	comp=Z,11nm,0.6s						
ATKA	**Atka Island**	**69.17**	**35**	*e*P	**P**	**20 35 16.1**	**-0.1**
	comp=Z,81nm,1.1s						
GEYT	**Alibeck**	**70.45**	**309**	PcP	**PcP**	**20 35 44.6**	**-0.7**
	comp=Z,0.6nm,0.4s,baz=90,slow=2.9,SNR=2.9						
CASY	**Casey**	**70.45**	**187**	*e*P	**P**	**20 35 24.0**	**+0.3**
	comp=Z,5.8nm,0.8s						
ABKAR	**Akbulak array**	**71.86**	**321**	*e*P	**P**	**20 35 31.1**	**-1.6**
NIKH	**Nikolski High**	**72.50**	**35**	*e*P	**P**	**20 35 37.6**	**+1.3**
	comp=Z,236nm,1.6s						
AKTO	**Aktyubinsk**	**73.38**	**322**	P	**P**	**20 35 40.7**	**-1.0**
	comp=Z,6.1nm,0.7s,baz=107,slow=8.1,SNR=18						
AKTO				LR	LR	21 09 32.0	
	comp=Z,45nm,21.5s,baz=120,slow=37						
UNV	**Unalaska Valle**	**74.10**	**35**	*e*P	**P**	**20 35 47.6**	**+1.9**
	comp=Z,78nm,1.5s						
AKUT	**Akutan**	**74.59**	**35**	*e*P	**P**	**20 35 50.2**	**+1.6**
	comp=Z,209nm,1.4s						
ARU	**Arti**	**74.75**	**328**	*e*P	**P**	**20 35 48.5**	**-0.9**
	comp=Z,8.2nm,0.5s						
ARU	**Arti**	**74.75**	**328**	*d i*P	**P**	**20 35 47.0**	**-2.5**
ARU				*PP	**pP**	**20 36 13.9**	**-2.1**
ARU				S	**S**	**20 45 14.9**	**-2.5**
ARU				*SS	**ScS**	**20 45 55.8**	**+4.1**
ARU				SS	**SS**	**20 49 59.3**	**-7.8**
ARU				pmax	pmax		
	comp=Z,6.0nm,0.6s						
GAMB	**Gambell**	**74.97**	**24**	*e*P	**P**	**20 35 52.4**	**+1.8**
	comp=Z,58nm,1.7s						
ANM	**Nome**	**77.84**	**24**	*e*P	**P**	**20 36 08.6**	**+1.8**
	comp=Z,22nm,1.2s						
ANM	**Nome**	**77.84**	**24**	*e*P	**P**	**20 36 08.6**	**+1.8**
ANM				pmax	pmax		
	comp=Z,22nm,1.2s						
SDPT	**Sand Point**	**77.86**	**34**	*e*P	**P**	**20 36 08.2**	**+1.1**
	comp=Z,37nm,0.6s						
MLOA	**Mauna Loa Obse**	**78.01**	**71**	*e*P	**P**	**20 36 10.6**	**+1.4**
	comp=Z,182nm,1.4s						
MLH	**Mauna Loa**	**78.19**	**71**	*e*P	**P**	**20 36 11.0**	**+1.1**
	comp=Z,393nm,1.9s						
MLH	**Mauna Loa**	**78.19**	**71**	*e*P	**P**	**20 36 11.0**	**+1.1**
MLH				pmax	pmax		
	comp=Z,393nm,1.9s						
RDOG	**Red Dog Mine**	**79.83**	**21**	*e*P	**P**	**20 36 19.1**	**+1.4**
	comp=Z,39nm,1.5s						
RAYN	**Ar Rayn**	**79.86**	**293**	*e*P	**P**	**20 36 17.6**	**-1.2**
	comp=Z,6.8nm,1.1s						
RAYN	**Ar Rayn**	**79.86**	**293**	*e*P	**P**	**20 36 17.6**	**-1.2**
RAYN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
SVW2	**Sparrevohn**	**81.42**	**29**	*e*P	**P**	**20 36 28.5**	**+2.2**
	comp=Z,9.7nm,1.0s						
PRGR	**Permogore**	**82.37**	**332**	*e*P	**P**	**20 36 30.2**	**-1.0**
PRGR				pmax	pmax		
	comp=Z,13nm,0.8s						
KDAK	**Kodiak Island**	**82.55**	**32**	LR	LR	21 08 47.0	
	comp=Z,27nm,20.2s,baz=281,slow=32						
KDAK	**Kodiak Island**	**82.55**	**32**	*e*P	**P**	**20 36 33.6**	**+1.5**
	comp=Z,124nm,2.0s						
KDAK	**Kodiak Island**	**82.55**	**32**	*i* P	**P**	**20 36 33.8**	**+1.6**
ATD	**Arta Tunnel**	**82.55**	**281**	LR	LR	21 11 07.0	
	comp=Z,26nm,20.0s,baz=344,slow=34						
KBZ	**Khabaz**	**82.59**	**313**	LR	LR	21 18 32.7	
	comp=Z,20nm,18.1s,baz=94,slow=39						
MAW	**Mawson**	**83.22**	**200**	P	**P**	**20 36 35.4**	**0.0**
	comp=Z,1.7nm,0.6s,baz=51,slow=7.7,SNR=3.6						
MAW	**Mawson**	**83.22**	**200**	*e*P	**P**	**20 36 35.1**	**-0.3**
	comp=Z,3.0nm,1.4s						
MAW	**Mawson**	**83.22**	**200**	*e*P	**P**	**20 36 35.1**	**-0.3**
MAW				pmax	pmax		
	comp=Z,3.0nm,1.4s						
PPLA	**Purkeypile**	**83.23**	**27**	*e*P	**P**	**20 36 37.7**	**+1.9**
	comp=Z,13nm,1.0s						
VNDA	**Vanda**	**83.25**	**173**	P	**P**	**20 36 35.5**	**0.0**
	comp=Z,2.8nm,0.4s,baz=318,slow=6.8,SNR=28						
VNDA	**Vanda**	**83.25**	**173**	*e*P	**P**	**20 36 35.6**	**+0.1**
	comp=Z,3.0nm,0.6s						
VNDA	**Vanda**	**83.25**	**173**	*e*P	**P**	**20 36 35.6**	**+0.1**
VNDA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
CAST	**Castle Rocks**	**83.33**	**27**	*e*P	**P**	**20 36 38.0**	**+1.7**
	comp=Z,55nm,2.0s						
SKT	**Skwentna**	**83.45**	**28**	*e*P	**P**	**20 36 37.8**	**+0.9**
	comp=Z,14nm,0.8s						
SUA	**Susitna One**	**83.79**	**29**	*e*P	**P**	**20 36 39.9**	**+1.2**
	comp=Z,40nm,1.0s						
BPAW	**Bear Paw Mtn.**	**83.88**	**26**	*e*P	**P**	**20 36 40.6**	**+1.6**
	comp=Z,48nm,1.7s						
MLY	**Manley**	**84.06**	**25**	*e*P	**P**	**20 36 41.5**	**+1.6**
	comp=Z,14nm,0.8s						
TRF	**Thorofare Moun**	**84.14**	**27**	*e*P	**P**	**20 36 41.7**	**+1.2**
	comp=Z,21nm,1.3s						
COLD	**Coldfoot**	**84.45**	**23**	*e*P	**P**	**20 36 43.6**	**+1.9**
	comp=Z,20nm,0.8s						
GHO	**Glory Hole Cre**	**84.67**	**28**	*e*P	**P**	**20 36 44.2**	**+1.1**
	comp=Z,55nm,1.9s						
MCK	**McKinley**	**84.76**	**26**	*e*P	**P**	**20 36 44.9**	**+1.5**
	comp=Z,89nm,1.9s						
MCK	**McKinley**	**84.76**	**26**	*e*P	**P**	**20 36 44.9**	**+1.5**
MCK				pmax	pmax		
	comp=Z,89nm,1.9s						
TOLK	**Toolik Lake Re**	**84.79**	**21**	*e*P	**P**	**20 36 45.6**	**+2.1**
	comp=Z,23nm,0.9s						
SML	**Sawmill**	**84.95**	**28**	*e*P	**P**	**20 36 45.8**	**+1.3**
	comp=Z,16nm,0.7s						
SML	**Sawmill**	**84.95**	**28**	*e*P	**P**	**20 36 45.8**	**+1.3**
SML				pmax	pmax		
	comp=Z,16nm,0.7s						
WRH	**Wood River Hil**	**85.16**	**26**	*e*P	**P**	**20 36 46.1**	**+0.7**
	comp=Z,30nm,1.9s						
KLMR	**Klimovskoe**	**85.25**	**331**	*e*P	**P**	**20 36 43.3**	**-2.6**
KLMR				pmax	pmax		
	comp=Z,21nm,1.1s						
KLMR	**Klimovskoe**	**85.25**	**331**	*e*P	**P**	**20 36 43.3**	**-2.6**
KLMR				AMP		20 36 45.9	
	comp=Z,21nm,1.1s						
CCB	**Clear Creek Bu**	**85.29**	**26**	*e*P	**P**	**20 36 45.8**	**-0.2**
	comp=Z,13nm,1.4s						
VSR	**Storozhevoye**	**85.30**	**321**	*e*P	**P**	**20 36 45.1**	**-1.2**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SCM	**Sheep Creek Mo**	**85.43**	**28**	*e*P	**P**	**20 36 48.3**	**+1.4**
	comp=Z,19nm,1.2s						
GLI	**Glacier Island**	**85.53**	**29**	*e*P	**P**	**20 36 48.8**	**+1.5**
	comp=Z,17nm,0.6s						
HDA	**Harding Lake**	**85.66**	**26**	*e*P	**P**	**20 36 47.6**	**-0.2**

	comp=Z,3.6nm,0.8s						
IL1	Eielson Array	85.69	25	eP	P	20 36 47.4	-0.6
ILAR	Eielson Array	85.69	25	P	P	20 36 47.1	-0.9
	comp=Z,1.4nm,0.4s,baz=246,slow=4.9,SNR=20						
ILAR				PP	PP	20 40 06.0	-2.2
	comp=Z,0.5nm,0.9s,baz=248,slow=5.9,SNR=4.3						
ILB	Eielson Array	85.69	25	eP	P	20 36 48.0	0.0
ILB				ePP	PP	20 40 03.9	-4.3
FYU	Fort Yukon	86.39	24	eP	P	20 36 52.9	+1.5
	comp=Z,15nm,1.2s						
RIDG	Independ'e Rid	86.58	26	eP	P	20 36 53.0	+0.5
	comp=Z,41nm,2.0s						
OBN	Obninsk	86.83	325	eP	P	20 36 53.3	-0.4
	comp=Z,19nm,0.8s						
OBN	Obninsk	86.83	325	deP	P	20 36 53.5	-0.2
OBN				e*PP	pP	20 37 20.9	0.0
OBN				eS	S	20 47 16.2	-6.8
OBN				eSS	SS	20 53 09.5	+2.5
OBN				pmax	pmax		
	comp=Z,18nm,0.7s						
OBN				MLR	MLR		
	comp=Z,32nm,18.0s						
SCRK	Sand Creek	86.96	26	eP	P	20 36 55.0	+0.5
	comp=Z,11nm,1.8s						
ASF	Jabal al Asfar	87.37	302	P	P	20 36 56.4	-0.7
	comp=Z,2.7nm,0.7s,baz=86,slow=7.7,SNR=7.3						
MMAI	Mount Meron Ar	88.59	303	P	P	20 37 02.0	-0.8
	comp=Z,0.8nm,0.6s,baz=104,slow=6.1,SNR=2.8						
DAWY	Dawson	88.97	26	eP	P	20 37 04.3	+0.4
	comp=Z,14nm,1.8s						
BR101	Keskin Array S	89.58	310	eP	P	20 37 05.8	-1.7
BR101				e		21 22 57.4	
BR131	Keskin Array S	89.58	310	eP	P	20 37 06.0	-1.4
BRTR	Keskin Array B	89.58	310	P	P	20 37 05.8	-1.7
	comp=Z,2.0nm,0.8s,baz=111,slow=5.7,SNR=9.1						
BRTR				LR	LR	21 22 57.4	
	comp=Z,16nm,19.3s,baz=110,slow=39						
BRTR	Keskin Array B	89.58	310	i P	P	20 37 06.1	-1.3
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARA0	ARCESS Array S	90.43	340	eP	P	20 37 09.1	-1.4
ARCES	ARCESS Array B	90.43	340	P	P	20 37 09.1	-1.4
	comp=Z,14nm,0.7s,baz=69,slow=6.9,SNR=17						
SPA0	Spitsbergen Ar	90.59	349	eP	P	20 37 11.0	-0.1
SPITS	Spitsbergen Ar	90.59	349	P	P	20 37 11.2	0.0
	comp=Z,6.0nm,0.6s,baz=57,slow=8.8,SNR=7.3						
SPITS				LR	LR	21 21 57.9	
	comp=Z,37nm,20.3s,baz=30,slow=38						
INK	Inuvik	90.71	21	eP	P	20 37 11.7	-0.1
	comp=Z,12nm,1.3s						
INK	Inuvik	90.71	21	eP	P	20 37 11.7	-0.1
INK				pmax	pmax		
	comp=Z,12nm,1.3s						
AKASG	Malin Array Be	91.60	321	P	P	20 37 15.3	-1.1
	comp=Z,2.2nm,0.5s,baz=68,slow=5.0,SNR=8.9						
AKBB	Malin Array Si	91.60	321	eP	P	20 37 14.7	-1.6
	comp=Z,4.5nm,0.9s						
AKBB	Malin Array Si	91.60	321	eP	P	20 37 14.7	-1.6
AKBB				pmax	pmax		
	comp=Z,5.0nm,0.9s						
FIA1	FINESS Array S	91.70	332	eP	P	20 37 15.1	-1.4
FIA0	FINESS Array S	91.70	332	eP	P	20 37 15.3	-1.2
FIA0				e		21 22 24.1	
FIA0	FINESS Array S	91.70	332	eP	P	20 37 15.3	-1.2
FINES	FINESS Array B	91.70	332	P	P	20 37 15.3	-1.2
	comp=Z,4.9nm,0.7s,baz=68,slow=4.1,SNR=16						
FINES				LR	LR	21 22 24.1	
	comp=Z,30nm,18.5s,baz=68,slow=38						
FINES	FINESS Array B	91.70	332	i P	P	20 37 15.6	-0.9
FINES				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SYO	Syowa Base	91.89	201	⇓eP	P	20 37 17.2	0.0
SYO	Syowa Base	91.89	201	⇓ePcP	PcP	20 37 19.0	+1.1
SYO	Syowa Base	91.89	201	⇓epP	pP	20 37 42.3	-2.2
TESR	Tescani	93.90	317	⇑iP	P	20 37 26.3	-0.7
VRI	Vrincioaia	93.94	316	⇑iP	P	20 37 27.3	0.0
VRI	Vrincioaia	93.94	316	⇑P	P	20 37 27.3	0.0
PLOR	Plostina	94.00	316	⇑iP	P	20 37 23.7	-3.9
PLOR	Plostina	94.00	316	⇑P	P	20 37 23.7	-3.9
BIZ	Bicaz	94.20	317	⇓iP	P	20 37 26.9	-1.5
DLBC	Dease Lake	94.39	31	P	P	20 37 30.7	+1.6
	comp=Z,3.0nm,0.7s,baz=262,slow=4.2,SNR=8.2						
DLBC	Dease Lake	94.39	31	eP	P	20 37 30.3	+1.2
	comp=Z,29nm,1.9s						
MLR	Muntele Rosu	94.55	316	LR	LR	21 27 00.4	
	comp=Z,45nm,19.0s,baz=81,slow=40						
MLR	Muntele Rosu	94.55	316	⇑iP	P	20 37 29.1	-1.1
MLR	Muntele Rosu	94.55	316	⇑P	P	20 37 29.1	-1.1
BURAR	Bucovina Array	94.68	318	⇑iP	P	20 37 30.0	-0.7
BURAR	Bucovina Array	94.68	318	⇑P	P	20 37 30.0	-0.7
BUR04	Bucovina Ar. S	94.68	318	eP	P	20 37 29.7	-1.0
BUR08	Bucovina Ar. S	94.68	318	eP	P	20 37 29.7	-1.0
SUW	Suwalki	94.69	325	eP	P	20 37 29.5	-0.9
	comp=Z,31nm,0.9s						
SUW	Suwalki	94.69	325	eP	P	20 37 29.5	-0.9
SUW				pmax	pmax		
	comp=Z,31nm,0.9s						
TRPA	Tarpa	96.34	319	⇑iP	P	20 37 37.1	-1.0
DRGR		96.51	318	⇑iP	P	20 37 38.9	-0.2
DRGR		96.51	318	⇑P	P	20 37 38.9	-0.2
CRVS	Cervenica-Dubn	96.87	320	eP	P	20 37 40.9	+0.3
CRVS				pmax	pmax		
	comp=Z,8.0nm,1.3s						
CRVS	Cervenica-Dubn	96.87	320	eP	P	20 37 40.9	+0.3
BBB	Bella Bella	96.99	37	LR	LR	21 12 47.7	
	comp=Z,160nm,21.8s,baz=148,slow=30						
BZS	Buzias	97.51	317	⇓iP	P	20 37 42.7	-0.8
BZS	Buzias	97.51	317	⇓P	P	20 37 42.7	-0.8
MDVR	Moldovita	97.62	316	⇑iP	P	20 37 43.5	-0.6
HFS	Hagfors	97.89	332	P	P	20 37 43.8	-1.1
	comp=Z,7.2nm,0.9s,baz=104,slow=4.6,SNR=12						
HFS				LR	LR	21 25 19.5	
	comp=Z,27nm,18.7s,baz=70,slow=37						
LSZ	Lusaka	98.37	255	P	P	20 37 47.2	-0.9
	comp=Z,1.8nm,0.4s,baz=138,slow=1.0,SNR=4.6						
NC405	NORSAR Array S	98.43	333	eP	P	20 37 46.0	-1.2
NB2	NORSAR Subarra	98.68	333	P	P	20 37 46.4	-2.0
	comp=Z,11nm,1.0s,baz=67,slow=4.6						
NB2	NORSAR Subarra	98.68	333	P	P	20 37 46.4	-2.0
	baz=67,slow=4.6						
NOA	NORSAR Array B	98.68	333	P	P	20 37 46.6	-1.8
	comp=Z,5.0nm,0.7s,baz=67,slow=4.5,SNR=16						
NOA				LR	LR	21 25 52.1	
	comp=Z,16nm,20.0s,baz=235,slow=37						
YKA	Yellowknife Ar	100.08	24	P	Pdif	20 37 55.5	+1.0
	comp=Z,0.7nm,0.7s,baz=294,slow=4.6,SNR=5.1						
YKA				pP	pPdif	20 38 20.6	-1.3
	comp=Z,0.5nm,0.8s,baz=301,slow=6.4,SNR=2.3						
YKA	Yellowknife Ar	100.08	24	i P	Pdif	20 37 54.7	+0.2
YKA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
BRG	Berggiesshubel	100.98	323	eP	Pdif	20 37 59.1	+0.2
BRG				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CLL	Collm	101.39	324	ePdif	Pdif	20 37 59.0	-1.7
CLL	Collm	101.39	324	eP	Pdif	20 37 59.0	-1.7
GERES	GERESS Array B	101.81	321	P	Pdif	20 38 02.1	-0.6
	comp=Z,0.5nm,0.7s,baz=46,slow=4.5,SNR=5.4						
PDAR	Pinedale Array	112.08	41	PKKPbc	PKKPbc	20 53 44.8	+6.8
	comp=Z,0.3nm,0.4s,baz=120,slow=5.3,SNR=3.9						
ANMO	Albuquerque	117.79	47	PKP	PKPdf	20 42 56.5	+0.5
	comp=Z,2.1nm,0.7s,baz=147,slow=1.7,SNR=5.9						
ANMO	Albuquerque	117.79	47	ePKPdf	PKPdf	20 42 56.9	+0.9
ANMO	Albuquerque	117.79	47	ePKIKP	PKPdf	20 42 56.9	+0.9
ECSD	EROS Data Cent	119.46	34	ePKPdf	PKPdf	20 42 59.0	+0.3
MNTX	Cornudas Mount	120.03	50	ePKPdf	PKPdf	20 43 01.4	+1.2
J36A	Seneca 1, Swea	120.99	33	ePKPdf	PKPdf	20 43 01.6	-0.1
TOA0	Torodi Ar. Sit	122.25	288	ePKPdf	PKPdf	20 43 03.6	-1.2
TORD	Torodi Ar. Bea	122.25	288	PKP	PKPdf	20 43 02.9	-1.9
	comp=Z,1.8nm,0.8s,baz=78,slow=2.7						
TOA1	Torodi Ar. Sit	122.25	288	ePKPdf	PKPdf	20 43 02.9	-1.9
KSU1	Kansas State U	122.32	39	ePKPdf	PKPdf	20 43 04.8	+0.5
LTX	Lajitas	122.39	52	ePKPdf	PKPdf	20 43 06.1	+1.2
LTX	Lajitas	122.39	52	ePKIKP	PKPdf	20 43 06.1	+1.2
TX31	Lajitas Ar. Si	122.39	52	ePKPdf	PKPdf	20 43 05.3	+0.5
TX31				ePKPdf	PKiKP	20 43 05.7	+0.6
TXAR	Lajitas Array	122.39	52	PKP	PKPdf	20 43 06.1	+1.2
	comp=Z,2.0nm,0.6s,baz=212,slow=0.7,SNR=34						
TXAR				pPKP	pPKPdf	20 43 32.7	-0.7
	comp=Z,0.5nm,0.8s,baz=207,slow=1.4,SNR=2.2						
JCT	Junction City	124.84	49	ePKPdf	PKPdf	20 43 10.5	+1.0
JCT	Junction City	124.84	49	ePKIKP	PKPdf	20 43 10.5	+1.0
S39A	Bolivar	125.22	38	ePKPdf	PKPdf	20 43 10.4	+0.4
R40A	Maddies Statio	125.47	37	ePKPdf	PKPdf	20 43 10.7	+0.3
CCM	Cathedral Cave	126.23	36	ePKPdf	PKPdf	20 43 13.3	+1.4
CCM	Cathedral Cave	126.23	36	ePKIKP	PKPdf	20 43 13.3	+1.4
V40A	Witts Springs	126.72	39	ePKPdf	PKPdf	20 43 13.5	+0.6
T42A	Van Buren	127.00	37	ePKPdf	PKPdf	20 43 13.8	+0.4
MIAR	Mount Ida	127.01	41	ePKPdf	PKPdf	20 43 14.6	+1.1
MIAR	Mount Ida	127.01	41	ePKIKP	PKPdf	20 43 14.6	+1.1
USHA	Ushuaia	127.47	170	PKP	PKPdf	20 43 14.9	+1.3
	comp=Z,5.0nm,0.7s,baz=90,slow=6.1,SNR=3.5						
PLAL	Pickwick Lake	130.19	37	ePKPdf	PKPdf	20 43 19.6	+0.1
X48A	Hartselle	131.17	37	ePKPdf	PKPdf	20 43 21.4	+0.1
Z50A	Ashland	132.67	37	ePKPdf	PKPdf	20 43 25.2	+0.9
PLCA	Paso Flores	140.02	160	PKP	PKPdf	20 43 39.0	+1.2
	comp=Z,2.7nm,0.7s,baz=349,slow=1.5,SNR=5.8						
TRQA	Tornquist	144.81	169	ePKPdf	PKPbc	20 43 45.3	-0.1
TRQA	Tornquist	144.81	169	ePKIKP	PKPab	20 43 45.3	-0.1
BOAB	BOACO BROADBA144.85		63	ePKPbc	PKPdf	20 43 47.3	+0.4
JTS	JuntasAbangare	146.35	66	PKPbc	PKPbc	20 43 51.2	+0.3
	comp=Z,10nm,0.6s,baz=285,slow=12,SNR=5.2						
ROC1	El Roble	146.62	154	ePKPbc	PKPab	20 43 52.6	-0.1
PEL	Peldehue	146.62	154	ePKPbc	PKPab	20 43 52.0	-0.4
PEL	Peldehue	146.62	154	ePKP2	PKPab	20 43 52.0	-0.4
ROSC	El Rosal	158.15	68	PKP	PKPdf	20 44 08.0	+0.5
	comp=Z,3.5nm,0.4s,baz=253,slow=23,SNR=4.1						
MNMC	Minye Minye	158.25	137	ePKPdf	PKPdf	20 44 08.7	+1.5
LPAZ	La Paz	161.19	134	PKP	PKPdf	20 44 12.0	+0.9
	comp=Z,1.4nm,0.6s,baz=288,slow=3.2,SNR=9.0						
LPAZ				PKPab	PKPab	20 44 56.3	+1.4
	comp=Z,1.6nm,0.8s,baz=112,slow=2.7,SNR=4.5						
LPAZ	La Paz	161.19	134	ePKPdf	PKPdf	20 44 12.6	+1.5
LPAZ				ePKPab	PKPab	20 44 56.3	+1.4
LPAZ	La Paz	161.19	134	ePKIKP	PKPdf	20 44 12.6	+1.5
LPAZ				e		20 44 56.3	
SAML	Samuel	169.42	121	ePKPdf	PKPdf	20 44 17.6	+0.3
SAML	Samuel	169.42	121	ePKIKP	PKPdf	20 44 17.6	+0.3

IDC 20 20:34:33.2±1.9, 20°.01S×134°.51E, h0km, mb1 3.8/3, mb1mx3.4/44, mbtmp3.8/3, ML3.6/3, Error ellipse: s-maj=14.4km s-min=2.3km az=111.0, Northern Territory

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	0.17	292	Pg	Pg	20 34 36.5	0.0
	36nm,0.3s,baz=112,slow=26,SNR=503						
WRA				Lg	Lg	20 34 41.4	
	190nm,0.3s,baz=280,slow=38,SNR=165						
ASAR	Alice Springs	3.69	189	Pn	Pn	20 35 31.6	0.0
	4.6nm,0.3s,baz=14,slow=8.5,SNR=67						
ASAR				Sn	Sn	20 36 16.2	+0.5
	15nm,0.3s,baz=1.5,slow=28,SNR=19						
ASAR				Lg	Lg	20 36 27.3	
	19nm,0.3s,baz=1.8,slow=30,SNR=9.8						
CTA	Charters Tower	11.04	92	Pn	Pn	20 37 13.9	+1.4
	0.1nm,0.3s,baz=270,slow=11,SNR=2.2						
CTA				Lg	Lg	20 40 20.2	
	0.2nm,0.3s,baz=351,slow=19,SNR=2.7						
STKA	Stephens Creek	13.42	153	Pn	Pn	20 37 43.5	-1.6
	0.2nm,0.3s,baz=334,slow=15,SNR=5.6						
STKA				Sn	Sn	20 40 10.4	-4.6
	0.6nm,0.3s,baz=288,slow=22,SNR=3.1						
STKA				Lg	Lg	20 41 35.5	
	baz=255,slow=19,SNR=1.5						

IDC 20 20:37:42.3±1.4, 26°.87N×141°.43E, h0km, mb3.4/3, mb1 3.6/4, mb1mx3.3/64, mbtmp3.4/4, ML3.4/1, MS2.5/1, Ms1 2.5/1, ms1mx2.2/33, Error ellipse: s-maj=31.7km s-min=23.9km az=180.0, Bonin Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	0.71	71	Pn	Pn	20 37 59.6	+0.1
	3.6nm,0.3s,baz=308,slow=18,SNR=4.0						
JCJ				Sn	Sn	20 38 20.5	+9.3
	22nm,0.3s,baz=270,slow=20,SNR=7.1						
MJAR	Matsushiro Arr	10.03	345	Pn	Pn	20 40 05.8	-1.8
	0.3nm,0.3s,baz=165,slow=12,SNR=3.5						
PETK	Petropavlovsk-	28.88	20	LR	LR	20 54 47.5	
	comp=Z,11nm,21.9s,baz=40,slow=36						
WRA	Warramunga Arr	47.04	189	P	P	20 46 15.2	-0.5
	0.2nm,0.6s,baz=7.6,slow=8.3,SNR=1.1						
MKAR	Makanchi Array	50.10	310	P	P	20 46 40.0	+0.8
	0.4nm,0.8s,baz=90,slow=8.2,SNR=3.6						
KURBB	Kurchatov Arra	52.72	315	P	P	20 46 58.3	-0.3
	0.4nm,0.6s,baz=90,slow=7.9,SNR=3.5						

KRSC 20 20:47:42.7±2.1, 49°.21N×157°.26E, h30km±28km, ML3.8, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.66	334	eP	Pn	20 48 09.1	-0.6
SKR				eS	Sn	20 48 28.5	-1.3
PAU	Pauzhetka	2.28	353	eP	Pb	20 48 21.3	-1.9
PAU				eS	Sn	20 48 47.7	+2.3
KDTR	Khodutka, Kamc	2.66	11	eP	Pb	20 48 26.7	-2.9
KDTR				eS	Sb	20 48 59.1	-2.7
MIPR	Malaya Ipel'ka	3.09	354	eP	Pn	20 48 31.9	+2.5
ASAK	Asacha	3.21	7	eP	Pn	20 48 34.6	+3.5
ASAK				eS	Sn	20 49 12.2	+3.9
RUS	Russkaya	3.33	13	eP	Pn	20 48 35.8	+3.2
RUS				eS	Sn	20 49 15.4	+4.3
MTVR	Mutnovka	3.33	10	eP	Pn	20 48 36.6	+3.7
MTVR				eS	Sn	20 49 16.2	+4.7
KRMR	Karymshinskiy	3.67	8	eP	Pn	20 48 41.7	+4.3
KRMR				eS	Sb	20 49 25.6	-5.3
APC	Apacha	3.73	359	eP	Pn	20 48 42.7	+4.6
DALK	Dalny	3.94	13	eP	Pn	20 48 45.2	+4.1
DALK				eS	Sn	20 49 31.0	+4.7
UGLR	Uglovaya	4.13	13	eP	Pn	20 48 49.0	+5.2
AVH	Avacha	4.17	12	eP	Pn	20 48 49.3	+5.0
SMAR	Somma	4.18	13	eP	Pn	20 48 49.6	+5.1
KOK	Koryaka	4.18	11	eP	Pn	20 48 49.8	+5.3
SDLR	Sedlovina	4.20	13	eP	Pn	20 48 48.7	+3.9
KRX	Arik	4.25	11	eP	Pn	20 48 50.9	+5.4
KRX				eS	Sb	20 49 41.7	-5.9
SPN	Mys Shipunski	4.27	23	eP	Pn	20 48 50.5	+4.9
SPN				eS	Sn	20 49 40.3	+6.0
GNL	Ganaly	4.52	5	eP	Pn	20 48 53.1	+4.0
MKZ	Mys Kozlova	6.03	26	eP	Pn	20 49 13.3	+3.6
TUMD	Tumrok D	6.31	17	eP	Pn	20 49 19.0	+5.4
TUMR	Tumrok	6.34	15	eP	Pn	20 49 20.1	+6.0
KBTR	Krutoberegovo	7.78	24	eP	Pn	20 49 38.0	+4.2

IDC 20 20:48:08.4±7.2, 5°.56S×147°.60E, h182km±80km, mb2.7/1, mb1 3.0/3, mb1mx2.7/49, mbtmp3.4/3, Error ellipse: s-maj=153.6km s-min=51.4km az=122.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.85	186	P	Pn	20 49 09.0	+1.3
	2.4nm,0.3s,baz=345,slow=16,SNR=2.0						
PMG				S	Sn	20 49 54.1	-0.1
	5.6nm,0.3s,baz=219,slow=22,SNR=9.6						
WRA	Warramunga Arr	19.26	221	P	P	20 52 19.2	0.0
	0.3nm,0.3s,baz=38,slow=11,SNR=12						
ASAR	Alice Springs	22.32	215	P	P	20 52 51.7	+0.4
	0.4nm,0.6s,baz=51,slow=8.8,SNR=8.3						
TORD	Torodi Ar. Bea	145.56	285	PKPbc	PKPdf	21 07 25.2	-0.7
	baz=79,slow=3.6						

BEO 20 20:51:33.2±1.7, 44°.32N×15°.21E, h0km±1km, ML3.4/2

ISCJB 20 20:51:33.6±0.5, 44°.24N±0°.02×15°.31E±0°.02, h5km±3km, Error ellipse: s-maj=3.5km s-min=2.0km az=140.5

PRU 20 20:51:34.2, 44°.21N×15°.45E, h0km

LDG 20 20:51:35.1±0.1, 44°.30N×15°.45E, h2km, Ml3.1/8, Error ellipse: s-maj=3.3km s-min=2.2km az=4.0

CSEM 20 20:51:35.4±0.1, 44°.24N×15°.29E, h10km, ML3.3/13, Error ellipse: s-maj=2.9km s-min=1.9km az=43.0

PDG 20 20:51:35.5±0.4, 44°.28N×15°.39E, h12km±1km, ML3.4/10, Error ellipse: s-maj=0.8km s-min=1.2km az=0.0

ISC 20 20:51:34.9±1.1, 44°.28N±0°.02×15°.34E±0°.02, h9km±9km, n157, σ1s.30/272, 9C-16D, Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UDBI	Udbina	0.39	51	i Pg	Pg	20 51 42.0	-0.7
UDBI				Sg	Sg	20 51 48.5	+0.6
NVLJ	Novalja	0.44	311	i Pg	Pg	20 51 43.0	-0.5
NVLJ				Sg	Sb	20 51 51.1	-0.4
RIY	Rijeka	1.21	330	⇑iPg	Pn	20 51 58.1	+0.1
RIY				eSg	Sn	20 52 15.4	+0.8
OZLJ	Ozalj	1.34	4	ePn	Pb	20 52 00.3	+0.1
OZLJ				Sn	Sg	20 52 21.6	+3.6
BLY	Banja Luka	1.40	70	ePg	Pn	20 51 59.6	-1.1
BLY				eSg	Sg	20 52 20.4	+0.4
BLY	Banja Luka	1.40	70	ePg	Pn	20 51 59.6	-1.1
BLY				eSg	Sg	20 52 20.4	+0.4
BLY	Banja Luka	1.40	70	⇓iPg	Pn	20 51 59.5	-1.1
BLY				eSg	Sg	20 52 20.1	+0.1
CRES	Cresnjev	1.55	3	ePn	Pb	20 52 03.6	-0.2
CRES				eSn	Sg	20 52 24.8	0.0
CRES	Cresnjev	1.55	3	ePn	Pb	20 52 03.6	-0.2
CRES				eSn	Sg	20 52 24.8	0.0
VISS	Visnje	1.57	347	i Pn	Pb	20 52 04.5	+0.4
VISS				eSn	Sg	20 52 26.9	+1.6
	comp=Z,117nm,0.4s						
VISS	Visnje	1.57	347	Pn	Pb	20 52 04.5	+0.4
VISS				eSn	Sg	20 52 26.9	+1.6
	comp=Z,117nm,0.4s						
CEY	Cerknica	1.60	336	ePn	Pb	20 52 04.6	0.0
CEY	Cerknica	1.60	336	ePn	Pb	20 52 04.6	0.0
CEY				eSn	Sg	20 52 26.6	+0.3
ZAG	Zagreb	1.62	16	ePn	Pb	20 52 04.5	-0.4
ZAG				eSn	Sg	20 52 26.8	-0.1
ZAG	Zagreb	1.62	16	ePn	Pb	20 52 04.5	-0.4
ZAG				eSn	Sg	20 52 26.8	-0.1
GOLS	Golise	1.74	7	i Pn	Pb	20 52 06.6	-0.5
GOLS				eSn	Sg	20 52 31.0	0.0
GOLS	Golise	1.74	7	i Pn	Pb	20 52 06.6	-0.5
GOLS				eSn	Sg	20 52 31.0	0.0
PDKS	Podkum	1.80	352	i Pn	Pb	20 52 07.8	-0.3
PDKS				eSn	Sg	20 52 32.8	+0.1
	comp=Z,135nm,0.7s						
PDKS	Podkum	1.80	352	i Pn	Pb	20 52 07.8	-0.3
PDKS				eSn	Sg	20 52 32.8	+0.1
	comp=Z,135nm,0.7s						
LJU	Ljubljana	1.86	342	ePn	Pb	20 52 08.2	-0.8
LJU				eSn	Sb	20 52 32.5	+0.1
LJU	Ljubljana	1.86	342	ePn	Pb	20 52 08.2	-0.8
LJU				eSn	Sb	20 52 32.5	+0.1
VNDS	Vrh nad Dolski	1.88	346	i Pn	Pb	20 52 08.9	-0.5
VNDS				eSn	Sg	20 52 34.9	-0.4
	comp=Z,120nm,0.6s						
VNDS	Vrh nad Dolski	1.88	346	i Pn	Pb	20 52 08.9	-0.5
VNDS				eSn	Sg	20 52 34.9	-0.4
	comp=Z,120nm,0.6s						
STON	Ston	2.22	129	ePn	Pn	20 52 11.6	-0.2
STON				eSn	Sb	20 52 41.4	-1.3
STON	Ston	2.22	129	ePn	Pn	20 52 11.9	+0.1
STON	Ston	2.22	129	⇓iPn	Pn	20 52 11.6	-0.2
STON				eSn	Sn	20 52 39.4	0.0
STON	Ston	2.22	129	⇓iPn	Pn	20 52 11.6	-0.2
STON				eSn	Sn	20 52 39.4	0.0
OBKA	Obir	2.30	346	ePn	Pb	20 52 15.2	-1.4
	comp=Z,2.0nm,0.1s						
OBKA				eSn	Sb	20 52 44.9	-0.3
	comp=Z,33nm,0.3s						
OBKA	Obir	2.30	346	Pn	Pb	20 52 15.2	-1.4
	comp=Z,2.0nm,0.1s						
OBKA				Sn	Sb	20 52 44.9	-0.3
	comp=Z,33nm,0.3s						
SOKA	Soboth	2.41	355	ePn	Pn	20 52 16.0	+1.4
	comp=Z,3.3nm,0.4s						
SOKA				Sn	Sb	20 52 47.3	-1.1
	comp=Z,9.7nm,0.5s						
SOKA	Soboth	2.41	355	Pn	Pn	20 52 16.0	+1.4
	comp=Z,3.3nm,0.4s						
SOKA				Sn	Sb	20 52 47.3	-1.1
	comp=Z,9.7nm,0.5s						
BEHE	Becsehely	2.42	24	ePn	Pn	20 52 15.8	+1.2
BEHE				eSn	Sn	20 52 46.2	+1.9
BEHE	Becsehely	2.42	24	ePn	Pn	20 52 15.8	+1.2
BEHE				eSn	Sn	20 52 46.2	+1.9
HAPS	Han Pijesak,BI	2.60	93	ePn	Pn	20 52 17.2	-0.1
HAPS	Han Pijesak,BI	2.60	93	ePn	Pn	20 52 17.2	-0.1
HAPS				eSn	Sn	20 52 49.0	-0.1
HAPS	Han Pijesak,BI	2.60	93	⇑iPn	Pn	20 52 17.1	-0.2
HAPS				eSn	Sn	20 52 49.0	-0.1
MS1	Monte Sant'Ang	2.61	170	ePn	Pn	20 52 18.1	+0.8
MS1				Sn	Sn	20 52 51.2	+2.0
MS1	Monte Sant'Ang	2.61	170	ePn	Pn	20 52 18.1	+0.8
MS1				Sn	Sn	20 52 51.2	+2.0
MYKA	Terra Mystica	2.64	334	Pn	Pb	20 52 23.4	+1.0
	comp=Z,2.5nm,0.3s						
MYKA				Sg	Sg	20 53 00.7	+1.1
	comp=Z,14nm,0.5s						
TREB	Trebinje	2.69	124	ePn	Pn	20 52 18.5	+0.1
TREB				eSn	Sn	20 52 50.8	-0.2
TREB	Trebinje	2.69	124	ePn	Pn	20 52 18.5	+0.1
TREB				eSn	Sn	20 52 50.8	-0.2
BRY	Bratogost	2.70	120	⇑iPn	Pn	20 52 19.4	+0.7
BRY				eSn	Sn	20 52 53.5	+2.0
BRY	Bratogost	2.70	120	⇑iPn	Pn	20 52 19.4	+0.7
BRY				eSn	Sn	20 52 51.8	+0.3
BRY	Bratogost	2.70	120	ePn	Pn	20 52 18.9	+0.2
BRY				eSn	Sn	20 52 51.8	+0.3
UPM	Unac-Piva	2.80	111	⇑iPn	Pn	20 52 21.2	+1.2
UPM				eSn	Sn	20 52 55.8	+1.8
UPM	Unac-Piva	2.80	111	⇑iPn	Pn	20 52 21.2	+1.2
UPM				eSn	Sn	20 52 55.8	+1.8
UPM	Unac-Piva	2.80	111	ePn	Pn	20 52 20.7	+0.7
UPM				eSn	Sn	20 52 53.4	-0.6
HCY	Herceg Novi	2.94	127	⇓iPn	Pn	20 52 22.6	+0.8
HCY				eSn	Sn	20 52 59.4	+2.2
HCY	Herceg Novi	2.94	127	⇓iPn	Pn	20 52 22.6	+0.8
HCY				eSn	Sn	20 52 59.4	+2.2
HCY	Herceg Novi	2.94	127	ePn	Pn	20 52 21.1	-0.7
BBLS	Lazići	2.96	97	ePn	Pn	20 52 22.9	+0.8
BBLS	Lazići	2.96	97	ePn	Pn	20 52 22.9	+0.8
BBLS				eSn	Sn	20 52 58.1	+0.3
BBLS	Lazići	2.96	97	⇑iPn	Pn	20 52 22.6	+0.5
BBLS				eSn	Sn	20 52 58.1	+0.3
ARSA	Arzberg	2.98	2	Pn	Pn	20 52 23.4	+1.1
	comp=Z,2.2nm,0.3s,SNR=6.9						
ARSA				i Sn	Sn	20 52 59.6	+1.5
	comp=Z,8.1nm,0.6s						
ARSA	Arzberg	2.98	2	Pn	Pn	20 52 23.4	+1.1
	comp=Z,2.2nm,0.3s,SNR=6.9						
ARSA				Sn	Sn	20 52 59.6	+1.5
	comp=Z,8.1nm,0.6s						
TEKS	Tekeris	3.01	83	ePn	Pn	20 52 23.0	+0.1
TEKS	Tekeris	3.01	83	ePn	Pn	20 52 23.2	+0.3
TEKS				eSn	Sn	20 52 58.8	-0.3
TEKS	Tekeris	3.01	83	ePn	Pn	20 52 23.2	+0.3
TEKS				eSn	Sn	20 52 58.8	-0.3
NKME	Niksic	3.03	119	⇓iPn	Pn	20 52 24.4	+1.3
NKME				eSn	Sn	20 53 01.3	+1.7
NKME	Niksic	3.03	119	⇓iPn	Pn	20 52 24.4	+1.3
NKME				eSn	Sn	20 53 01.3	+1.7
MORH	M˘‡r˘¡gy, Hung	3.03	49	ePn	Pn	20 52 23.1	0.0
MORH				ePg	Pb	20 52 30.6	+1.6
MORH	M˘‡r˘¡gy, Hung	3.03	49	ePn	Pn	20 52 24.0	+0.9
MORH				eSn	Sn	20 53 00.3	+0.8
MORH	M˘‡r˘¡gy, Hung	3.03	49	ePn	Pn	20 52 24.0	+0.9
MORH				eSn	Sn	20 53 00.3	+0.8
NKY	Niksic	3.03	118	⇓iPn	Pn	20 52 24.3	+1.1
NKY				eSn	Sn	20 53 01.2	+1.5
NKY	Niksic	3.03	118	⇓iPn	Pn	20 52 24.3	+1.1
NKY				eSn	Sn	20 53 01.2	+1.5
PLE	Pljevlja	3.08	107	⇑iPn	Pn	20 52 24.8	+0.9
PLE				eSn	Sn	20 53 02.7	+1.8
PLE	Pljevlja	3.08	107	⇑iPn	Pn	20 52 24.8	+0.9
PLE				eSn	Sn	20 53 02.7	+1.8
CEME	Cevo	3.13	122	⇓iPn	Pn	20 52 25.8	+1.3
CEME				eSn	Sn	20 53 04.1	+2.1
CEME	Cevo	3.13	122	⇓iPn	Pn	20 52 25.8	+1.3
CEME				eSn	Sn	20 53 04.1	+2.1
ABTA	Abfaltersbach	3.17	322	ePn	Pg	20 52 34.5	-1.2
	comp=Z,7.5nm,0.5s						
ABTA				Sg	Sg	20 53 20.1	+3.4
	comp=Z,31nm,0.6s						
BUM	Brajici-Budva	3.26	126	ePn	Pn	20 52 26.9	+0.6
BUM				eSn	Sn	20 53 07.0	+1.7
BUM	Brajici-Budva	3.26	126	ePn	Pn	20 52 26.9	+0.6
BUM				eSn	Sn	20 53 07.0	+1.7
FGSL	Fruska Gora	3.31	73	ePn	Pn	20 52 26.9	0.0
FRGS	Fruska Gora	3.31	73	ePn	Pn	20 52 26.9	0.0
FRGS	Fruska Gora	3.31	73	ePn	Pn	20 52 27.3	+0.4
FRGS				eSn	Sn	20 53 06.5	+0.2

DIVS	**Divibare**	3.35	91	ePn	Pn	20 52 27.7	+0.2
DIVS	**Divibare**	3.35	91	ePn	Pn	20 52 27.7	+0.2
DIVS				eSn	Sn	20 53 07.1	-0.4
DIVS	**Divibare**	3.35	91	ePn	Pn	20 52 27.4	-0.1
DIVS				eSn	Sn	20 53 07.1	-0.4
KOME	**Kolasin**	3.35	114	ePn	Pn	20 52 29.7	+2.1
KOME				eSn	Sn	20 53 09.6	+2.0
KOME	**Kolasin**	3.35	114	ePn	Pn	20 52 29.7	+2.1
KOME				eSn	Sn	20 53 09.6	+2.0
PDG	**Podgorica**	3.40	122	ePn	Pn	20 52 29.1	+1.0
PDG	**Podgorica**	3.40	122	ePn	Pn	20 52 28.9	+0.8
PDG				eSn	Sn	20 53 10.3	+1.7
PDG	**Podgorica**	3.40	122	ePn	Pn	20 52 28.9	+0.8
PDG				eSn	Sn	20 53 08.0	-0.6
TTG	**Podgorica**	3.40	122	⇓iPn	Pn	20 52 29.2	+1.1
TTG				eSn	Sn	20 53 10.3	+1.7
DRME	**Dracevica, Mon**	3.50	125	⇓iPn	Pn	20 52 30.1	+0.6
DRME				eSn	Sn	20 53 13.1	+2.0
DRME	**Dracevica, Mon**	3.50	125	⇓iPn	Pn	20 52 30.1	+0.6
DRME				eSn	Sn	20 53 13.1	+2.0
DRME	**Dracevica, Mon**	3.50	125	ePn	Pn	20 52 29.1	-0.4
DRME				eSn	Sn	20 53 09.6	-1.5
SJES	**Sjenica**	3.51	105	ePn	Pn	20 52 30.7	+1.0
IVAS	**Ivanjica**	3.55	100	ePn	Pn	20 52 31.0	+0.8
IVAS	**Ivanjica**	3.55	100	ePn	Pn	20 52 31.0	+0.8
SG1	**Sgolgore (BA)**	3.58	163	ePn	Pn	20 52 28.9	-1.7
SG1				Sn	Sn	20 53 11.2	-1.7
SG1	**Sgolgore (BA)**	3.58	163	ePn	Pn	20 52 28.9	-1.7
SG1				Sn	Sn	20 53 11.2	-1.7
BEY	**Berane**	3.59	111	ePn	Pn	20 52 32.4	+1.5
BEY				eSn	Sn	20 53 15.2	+1.7
IVA	**Berane**	3.59	111	ePn	Pn	20 52 32.4	+1.5
IVA				eSn	Sn	20 53 15.2	+1.7
TRUS	**Trudelj**	3.64	89	ePn	Pn	20 52 31.8	+0.4
TRUS	**Trudelj**	3.64	89	ePn	Pn	20 52 31.8	+0.4
MOA	**Molln**	3.65	349	ePn	Pn	20 52 33.8	+2.2
	comp=Z,1.3nm,0.2s						
MOA				i Sn	Sn	20 53 17.7	+2.9
	comp=Z,10.0nm,0.4s						
MOA	**Molln**	3.65	349	Pn	Pn	20 52 33.8	+2.2
	comp=Z,1.3nm,0.2s						
MOA				Sn	Sn	20 53 17.7	+2.9
	comp=Z,10.0nm,0.4s						
CONA	**Conrad Observa**	3.67	6	i Pn	Pn	20 52 33.2	+1.3
	comp=Z,3.6nm,0.3s,SNR=14						
CONA				i Sn	Sn	20 53 16.6	+1.3
	comp=Z,7.0nm,0.4s						
CONA	**Conrad Observa**	3.67	6	Pn	Pn	20 52 33.2	+1.3
	comp=Z,3.6nm,0.3s,SNR=14						
CONA				Sn	Sn	20 53 16.6	+1.3
	comp=Z,7.0nm,0.4s						
ULC	**Ulcinj**	3.68	128	⇓iPn	Pn	20 52 32.6	+0.6
ULC				eSn	Sn	20 53 17.0	+1.5
ULC	**Ulcinj**	3.68	128	⇓iPn	Pn	20 52 32.6	+0.6
ULC				eSn	Sn	20 53 17.0	+1.5
PVY	**Plav**	3.76	115	ePn	Pn	20 52 34.7	+1.5
PVY				eSn	Sn	20 53 19.1	+1.4
GRUS	**Gruza**	3.89	94	ePn	Pn	20 52 35.4	+0.5
GRUS	**Gruza**	3.89	94	ePn	Pn	20 52 35.4	+0.5
FETA	**Feichten**	4.24	312	eSn	Sn	20 53 33.0	+3.5
	comp=Z,7.3nm,0.6s						
FETA	**Feichten**	4.24	312	Sn	Sn	20 53 33.0	+3.5
	comp=Z,7.3nm,0.6s						
MODS	**Modra-Piesok**	4.31	17	ePN	Pn	20 52 41.2	+0.5
MODS				eSN	Sn	20 53 30.0	-1.1
MODS				eLG	Lg	20 53 30.9	
MODS	**Modra-Piesok**	4.31	17	ePn	Pn	20 52 41.2	+0.5
MODS				eSn	Sn	20 53 30.0	-1.1
SELS	**Selova**	4.32	102	ePn	Pn	20 52 41.3	+0.5
SELS	**Selova**	4.32	102	ePn	Pn	20 52 41.3	+0.5
KUBS	**Kucevo**	4.55	86	ePn	Pn	20 52 42.7	-1.2
KUBS	**Kucevo**	4.55	86	ePn	Pn	20 52 42.7	-1.2
BOVS	**Bovan**	4.64	96	ePn	Pn	20 52 45.6	+0.4
BOVS	**Bovan**	4.64	96	ePn	Pn	20 52 45.6	+0.4
PSZ	**Piszkesteto**	4.83	39	ex	Pn	20 53 43.3	+56
KRUC	**Moravsky**	4.84	8	ePn	Pn	20 52 48.8	+0.9
KRUC				eSn	Sn	20 53 43.5	-0.6
KRUC	**Moravsky**	4.84	8	ePN	Pn	20 52 48.8	+0.9
KRUC				eSN	Sn	20 53 43.5	-0.6
JAVC	**Velka Javorina**	4.86	19	ePn	Pn	20 52 49.5	+1.3
JAVC				eSn	Sn	20 53 45.6	+1.1
JAVC	**Velka Javorina**	4.86	19	ePN	Pn	20 52 49.5	+1.3
JAVC				eSN	Sn	20 53 45.6	+1.1
VYHS	**Vyhne**	4.86	29	ePN	Pn	20 52 48.4	+0.2
VYHS				eSN	Sn	20 53 43.5	-1.1
VYHS				eLG	Lg	20 53 45.2	
VYHS	**Vyhne**	4.86	29	ePn	Pn	20 52 48.4	+0.2
VYHS				eSn	Sn	20 53 43.5	-1.1
PGF	**Pioggiola**	4.93	252	ePn	Pn	20 52 49.2	-0.1
PGF	**Pioggiola**	4.93	252	ePn	Pn	20 52 49.2	-0.1
ZAGS	**Zajecar**	4.99	93	ePn	Pn	20 52 50.5	+0.5
ZAGS	**Zajecar**	4.99	93	ePn	Pn	20 52 50.5	+0.5
KHC	**Kasperske Hory**	5.00	347	ePN	Pn	20 52 50.9	+0.7
KHC				eSN	Sn	20 53 48.4	+0.3
KHC	**Kasperske Hory**	5.00	347	Pn	Pn	20 52 50.9	+0.7
KHC				Sn	Sn	20 53 48.4	+0.3
VRAC	**Vranov**	5.11	9	ePn	Pn	20 52 52.5	+0.9
VRAC				eSn	Sn	20 53 48.8	-1.8
VRAC	**Vranov**	5.11	9	ePN	Pn	20 52 52.5	+0.9
VRAC				eSN	Sn	20 53 48.8	-1.8
ZAPS	**Zavoj**	5.38	98	ePn	Pn	20 52 55.8	+0.5
LANS	**Liptovska Anna**	5.64	29	ePN	Pn	20 52 58.1	-0.8
LANS				eSN	Sn	20 54 03.3	-0.5
LANS	**Liptovska Anna**	5.64	29	ePn	Pn	20 52 58.1	-0.8
LANS				eSn	Sn	20 54 03.3	-0.5
GOPC	**GO Pecny, Ondr**	5.65	356	eSN	Sn	20 54 04.2	+0.1
GOPC	**GO Pecny, Ondr**	5.65	356	Sn	Sn	20 54 04.2	+0.1
MORC	**Moravsky Berou**	5.70	15	ePn	Pn	20 53 01.1	+1.3
MORC				eSn	Sn	20 54 05.9	+0.5
MORC	**Moravsky Berou**	5.70	15	ePN	Pn	20 53 01.1	+1.3
MORC				eSN	Sn	20 54 05.9	+0.5
SBF	**Sospel**	5.71	269	ePn	Pn	20 52 59.7	-0.2
SBF				eSn	Sn	20 54 02.6	-3.0
	comp=Z,10nm,0.6s						
SBF	**Sospel**	5.71	269	ePn	Pn	20 52 59.7	-0.2
SBF				eSn	Sn	20 54 02.6	-3.0
	comp=Z,5.1nm,0.6s						
PRU	**Pruhonice**	5.74	355	eSN	Sn	20 54 06.3	+0.1
PRU	**Pruhonice**	5.74	355	Sn	Sn	20 54 06.3	+0.1
MBDF	**Montbardon**	6.14	277	ePn	Pn	20 53 05.4	-0.6
MBDF				eSn	Sn	20 54 12.9	-3.5
	comp=Z,7.3nm,0.7s						
MBDF	**Montbardon**	6.14	277	ePn	Pn	20 53 05.4	-0.6
LPG	**La Plagne**	6.22	284	ePn	Pn	20 53 07.5	+0.3
LPG				eSn	Sn	20 54 15.3	-3.2
	comp=Z,16nm,0.9s						
LPG	**La Plagne**	6.22	284	ePn	Pn	20 53 07.5	+0.3
LPL	**La Plagne**	6.24	284	ePn	Pn	20 53 07.7	+0.4
LPL				eSn	Sn	20 54 16.2	-2.6
	comp=Z,4.6nm,0.5s						
LPL	**La Plagne**	6.24	284	ePn	Pn	20 53 07.7	+0.4
LPL				eSn	Sn	20 54 16.2	-2.6
	comp=Z,2.3nm,0.5s						
FRF	**La Foret Royal**	6.32	267	ePn	Pn	20 53 07.6	-0.6
FRF				eSn	Sn	20 54 17.8	-2.7
FRF	**La Foret Royal**	6.32	267	ePn	Pn	20 53 07.6	-0.6
FRF				eSn	Sn	20 54 17.8	-2.7
LMR	**La Mourre**	6.46	265	ePn	Pn	20 53 09.5	-0.6
LMR				eSn	Sn	20 54 20.9	-3.0
	comp=Z,1.2nm,0.3s						
LMR	**La Mourre**	6.46	265	ePn	Pn	20 53 09.5	-0.6
LMR				eSn	Sn	20 54 20.9	-3.0
	comp=Z,0.6nm,0.3s						
ORIF	**Oris-en-Rattie**	6.78	279	ePn	Pn	20 53 14.9	+0.2
ORIF				eSn	Sn	20 54 28.3	-3.8
	comp=Z,2.0nm,0.4s						
ORIF	**Oris-en-Rattie**	6.78	279	ePn	Pn	20 53 14.9	+0.2
SMRF	**Simiane la Rot**	7.03	271	ePn	Pn	20 53 18.1	0.0
SMRF	**Simiane la Rot**	7.03	271	ePn	Pn	20 53 18.1	0.0
VIVF	**Saint-Julien-l**	7.64	278	ePn	Pn	20 53 25.8	-0.6
VIVF				eSn	Sn	20 54 48.6	-4.5
	comp=Z,0.7nm,0.3s						
VIVF	**Saint-Julien-l**	7.64	278	ePn	Pn	20 53 25.8	-0.6

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*DDA **20** 20:51:48.4, 37°.85N×26°.82E, h7km, Ml2.6*
*CSEM **20** 20:51:49.9±0.1, 37°.91N×26°.90E, h2km, ML1.8, Error ellipse: s-maj=2.7km s-min=1.9km az=56.0*
*ISK **20** 20:51:49.3, 37°.96N×26°.89E, h25km, ML2.2/4*
*ATH **20** 20:51:49.6, 37°.90N×26°.90E, h10km±4km, ML1.8/2, Error ellipse: s-maj=4.9km s-min=0.9km az=116.0*
ISC 20 20:51:49.9±0.9**, 37°.91N**±0°.02×**26°.90E**±0°.03**, h8**km±9km**, n30, σ0s.43**/49**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGB	**˜zmir**	0.14	356	i P	Pg	20 51 53.0	0.0
SMG	**Samos**	0.20	193	P	Pg	20 51 53.5	-0.6
SMG				S	Sg	20 51 57.2	+0.3
SMG				AML	AML	20 51 57.3	
	comp=E,706µm,0.3s						
SMG				AML	AML	20 51 57.8	
	comp=N,669µm,0.3s						
SMG	**Samos**	0.20	193	P	Pg	20 51 53.7	-0.4
SMG				S	Sg	20 51 57.1	+0.2
BLCB	**Balcova**	0.49	14	PG	Pg	20 51 59.2	-0.3
BLCB				SG	Sg	20 52 06.3	+0.4
BLCB	**Balcova**	0.49	14	ePg	Pg	20 51 59.2	-0.3
BLCB				eSg	Sg	20 52 06.3	+0.4
URLA	**Izmir**	0.51	332	PG	Pg	20 51 59.3	-0.6
URLA				SG	Sg	20 52 06.7	+0.2
URLA	**Izmir**	0.51	332	i P	Pg	20 51 59.2	-0.6
URLA				i S	Sg	20 52 07.3	+0.8
URLA	**Izmir**	0.51	332	ePg	Pg	20 51 59.3	-0.6
URLA				eSg	Sg	20 52 06.7	+0.2
URLA				S	Sg	20 52 07.3	+0.8
AYDB	**Zeytinkoy-Aydi**	0.79	87	PG	Pg	20 52 05.0	-0.1
AYDB	**Zeytinkoy-Aydi**	0.79	87	ePg	Pg	20 52 05.0	-0.1
CHOS	**Chios island**	0.82	306	PG	Pg	20 52 05.2	-0.5
CHOS				SG	Sg	20 52 16.5	+0.2
CHOS	**Chios island**	0.82	306	P	Pb	20 52 06.8	+0.3
CHOS				S	Sg	20 52 16.4	+0.2
CHOS				AML	AML	20 52 17.3	
	comp=N,132µm,0.3s						
CHOS				AML	AML	20 52 20.1	
	comp=E,180µm,0.3s						
CHOS	**Chios island**	0.82	306	ePg	Pg	20 52 05.2	-0.5
CHOS	**Chios island**	0.82	306	P	Pb	20 52 06.0	-0.4
CHOS				S	Sg	20 52 16.6	+0.2
AYDN	**Tasoluk**	0.82	107	i P	Pg	20 52 05.4	-0.3
AYDN				i S	Sb	20 52 17.0	-0.6
AYDN	**Tasoluk**	0.82	107	P	Pg	20 52 05.4	-0.3
AYDN				S	Sb	20 52 17.0	-0.6
BODT	**Bodrum**	0.91	159	PG	Pg	20 52 07.5	+0.2
BODT	**Bodrum**	0.91	159	ePg	Pg	20 52 07.5	+0.2
MLSB	**Milas**	0.93	131	PG	Pg	20 52 07.8	0.0
MLSB	**Milas**	0.93	131	ePg	Pg	20 52 07.8	0.0
AMGA	**Amorgos Island**	1.34	217	P	Pg	20 52 16.4	+0.8
AMGA	**Amorgos Island**	1.34	217	P	Pg	20 52 15.6	0.0
APE	**Apeiranthos**	1.37	233	P	Pn	20 52 14.7	-0.7
APE				S	Sb	20 52 33.3	-0.2
APE	**Apeiranthos**	1.37	233	P	Pn	20 52 15.0	-0.4
APE				S	Sb	20 52 33.7	+0.2
PRK	**Paraskevi**	1.42	340	P	Pn	20 52 16.4	+0.4
PRK				S	Sg	20 52 35.6	-0.1
PRK	**Paraskevi**	1.42	340	P	Pn	20 52 16.5	+0.4
PRK				S	Sg	20 52 35.9	+0.2
SIGR	**SIGRI**	1.54	328	P	Pn	20 52 17.6	+0.1
SIGR				S	Sg	20 52 40.2	+0.9
SIGR	**SIGRI**	1.54	328	P	Pn	20 52 18.1	+0.5
SIGR				S	Sg	20 52 40.0	+0.7
IOSP	**Ios island**	1.74	228	P	Pb	20 52 22.2	+0.1
IOSP	**Ios island**	1.74	228	P	Pb	20 52 22.1	0.0

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*GCMT **20** 21:02:40.0±0.4, 19°.17S×173°.91E, h12km, MW4.8/69, Moment Tensor Solution. s14,c18; s69,c98; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.19±.08; $M_{\theta\theta}$-1.48±.07; $M_{\phi\phi}$1.29±.07; $M_{r\theta}$0.42±.23; $M_{\theta\phi}$-1.26±.06; $M_{\phi r}$0.06±.21; Best double couple: $M_0$1.91400×10^{16} NP1:ϕ_s294.00000°,δ85.00000°,λ-170.00000°. NP2: ϕ_s203.00000°,δ80.00000°,λ-5.00000°. Principal axes: T 1.7830, Plg4.0000°, Azm68.0000°; N 0.2620, Plg79.0000°, Azm320.0000°; P -2.0460, Plg11.0000°, Azm159.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
IDC 20 21:02:41.7±2.0**, 20°.23S×169°.36E, h0**km**, mb4.0**/3**, mb1 4.2**/4**, mb1mx3.7**/48**, mbtmp4.1**/4**, ML3.9**/1**, MS4.0**/6**, Ms1 4.0**/6**, ms1mx3.5**/24 **Error ellipse: s-maj=54.6km s-min=31.2km az=40.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	19.19	161	P	P	21 07 07.3	+0.3
	0.4nm,0.3s,baz=331,slow=10,SNR=3.8						
URZ				LR	LR	21 12 38.0	
	comp=Z,849nm,20.6s,baz=5.0,slow=31						
WRA	**Warramunga Arr**	32.86	264	P	P	21 09 17.0	-0.5
	0.7nm,0.8s,baz=98,slow=9.3,SNR=4.8						
ASAR	**Alice Springs**	33.02	257	P	P	21 09 19.2	+0.4
	1.7nm,0.7s,baz=88,slow=9.3,SNR=29						
JHJ	**Hachijo jima 2**	60.10	331	LR	LR	21 35 41.2	
	comp=Z,90nm,21.5s,baz=300,slow=33						
QSPA	**South Pole Qui**	69.83	180	P	P	21 13 54.0	0.0
	3.6nm,1.0s,baz=299,slow=1.1,SNR=3.9						
RPN	**Rapa Nui**	73.60	113	LR	LR	21 39 44.4	
	comp=Z,70nm,18.4s,baz=201,slow=30						
ANMO	**Albuquerque**	96.76	55	LR	LR	21 49 13.9	
	comp=Z,50nm,21.8s,baz=235,slow=29						
TXAR	**Lajitas Array**	97.13	61	LR	LR	21 49 00.8	
	comp=Z,183nm,21.8s,baz=0.0,slow=29						
PDAR	**Pinedale Array**	97.20	47	LR	LR	21 52 42.6	
	comp=Z,37nm,20.1s,baz=256,slow=31						
GERES	**GERESS Array B**	145.41	331	PKPbc	PKPbc	21 22 20.7	-0.9
	0.8nm,1.0s,baz=19,slow=6.2,SNR=3.4						

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*IDC **20** 21:03:23.0±8.2, 20°.61S×168°.07E, h0km, mb4.3/3, mb1 4.5/3, mb1mx3.7/48, mbtmp4.3/3, ML1.6/1, Error ellipse: s-maj=155.6km s-min=45.7km az=109.0*
*ISCJB **20** 21:03:26.5±0.6, 20°.6S±0°.1×167°.9E±0°.1, h32km, mb4.3/12, Error ellipse: s-maj=15.8km s-min=11.9km az=142.9*
*NEIC **20** 21:03:28.7±0.5, 20°.69S×167°.93E, h35km, mb4.4/10, Error ellipse: s-maj=13.5km s-min=10.5km az=144.0*
ISC 20 21:03:28.1±0.8**, 20°.67S**±0°.10×**168°.0E**±0°.1**, h32**km**, n21, σ0s.99**/18**, mb4.3**/10**, Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	1.99	225	Pn	Pn	21 03 58.2	-1.5
	0.2nm,0.3s,baz=100,slow=17,SNR=6.0						
DZM				Sn	Sb	21 04 28.7	+0.4
	0.7nm,0.3s,baz=54,slow=18,SNR=10						
DZM	**Mont Dzumac**	1.99	225	eP	Sb	21 04 29.2	+1.0
	42nm,1.1s						
DZM				eLR	LR	21 06 03.9	
	4µm,25.9s						
HNR	**Honiara**	13.59	324	Pn	Pn	21 06 38.0	-0.7
CTAO	**Charters Tower**	20.36	268	P	P	21 08 02.2	0.0
	12nm,0.9s						
STKA	**Stephens Creek**	26.08	239	P	P	21 09 00.6	+1.6
	2.3nm,0.9s,baz=74,slow=7.4,SNR=3.8						
RAR	**Rarotonga**	30.11	97	P	P	21 09 35.5	+0.5
	2.9nm,0.5s						
WRAB	**Tennant Creek**	31.50	265	P	P	21 09 47.5	+0.1
	3.4nm,1.1s						
WRA	**Warramunga Arr**	31.51	265	P	P	21 09 47.5	0.0
	3.3nm,0.8s,baz=98,slow=9.2,SNR=12						
ASAR	**Alice Springs**	31.64	258	P	P	21 09 49.1	+0.5
	10nm,0.8s,baz=83,slow=9.3,SNR=35						
TBI	**Tubuai**	39.46	102	eLQ	LQ	21 16 58.6	
	547nm,30.8s						
TBI				eLR	LR	21 18 41.1	
	422nm,28.8s,baz=258						
PPT2	**Papeete2**	40.15	93	eLR	LR	21 18 49.8	
	731nm,28.2s						
NWAO	**Narrogin (SRO)**	46.50	244	P	P	21 11 51.9	-0.8
	7.2nm,0.5s						
CASY	**Casey**	58.34	204	P	P	21 13 18.6	-1.3
	1.0nm,1.0s						
TATO	**Taipei**	64.03	313	P	P	21 13 59.9	+1.0
	4.5nm,0.4s						
COCO	**West Island**	68.30	265	P	P	21 14 27.4	+0.7
MDJ	**Mudanjiang**	73.82	333	P	P	21 14 58.4	-1.0
ENH	**Enshi**	75.67	310	P	P	21 15 11.4	+0.9
	2.8nm,0.7s						
MA2	**Magadan**	81.18	351	P	P	21 15 39.5	-0.7
	12nm,0.6s						
WALA	**Waterton Lakes**	97.90	41	P	Pdif	21 17 01.3	+0.5
	1.2nm,0.8s						
ANMO	**Albuquerque**	98.09	56	P	Pdif	21 17 03.1	+1.0
	0.2nm,0.6s						
CLL	**Collm**	143.68	333	ePKPdf	PKPdf	21 23 01.0	+1.3

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*ISK **20** 21:27:19.9, 39°.07N×41°.67E, h13km±4km, ML1.9/3*
*ISCJB **20** 21:27:20.8±0.7, 39°.05N±0°.05×41°.66E±0°.04, h13km±8km, Error ellipse: s-maj=8.1km s-min=5.1km az=9.0*
*CSEM **20** 21:27:20.4±0.2, 39°.06N×41°.64E, h15km, ML2.5, Error ellipse: s-maj=6.2km s-min=3.9km az=16.0*
*DDA **20** 21:27:21.5, 39°.19N×41°.59E, h7km, Ml2.5*
ISC 20 21:27:20.7±0.9**, 39°.05N**±0°.04×**41°.62E**±0°.03**, h14**km±7km**, n14, σ1s.14**/27**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VRTB	**Varto-Mus**	0.17	309	PG	Pg	21 27 24.9	0.0
VRTB				SG	Sg	21 27 27.8	0.0
VRTB	**Varto-Mus**	0.17	309	i P	Pg	21 27 24.8	-0.1
VRTB				i S	Sb	21 27 29.4	+0.4
VRTB	**Varto-Mus**	0.17	309	ePg	Pg	21 27 24.9	0.0
VRTB				eSg	Sg	21 27 27.8	0.0
VRTB				S	Sb	21 27 29.5	+0.4
BNGL	**BINGOL**	0.38	255	i P	Pn	21 27 33.1	+1.0
BNGL				i S	Sb	21 27 36.5	+1.3
EKAR	**Karacoban**	0.40	59	i P	Pg	21 27 28.2	-0.6
EKAR				i S	Sb	21 27 35.4	-0.3
EKAR	**Karacoban**	0.40	59	P	Pg	21 27 28.2	-0.6
EKAR				S	Sb	21 27 35.4	-0.3
GURO	**Guroymak-BITLI**	0.60	147	PG	Pg	21 27 32.1	-0.3
GURO				SG	Sg	21 27 40.5	+0.1
GURO	**Guroymak-BITLI**	0.60	147	ePg	Pg	21 27 32.1	-0.3
GURO				eSg	Sg	21 27 40.5	+0.1
BNGB	**Bingˆ¶l**	0.74	265	PG	Pg	21 27 35.2	+0.1
BNGB				SG	Sb	21 27 46.7	+1.3
BGOL	**Bingol**	0.74	265	i P	Pb	21 27 35.4	-0.1
BGOL				i S	Sb	21 27 46.9	+1.3
BGOL	**Bingol**	0.74	265	P	Pb	21 27 35.4	-0.1
BGOL				S	Sb	21 27 46.9	+1.3
BINT	**Bingol**	0.90	259	ePg	Pg	21 27 35.2	-3.0
BINT				eSg	Sg	21 27 46.7	-3.3
YEDI	**Yedisu-Bingol**	0.92	295	PG	Pg	21 27 38.1	-0.5
YEDI	**Yedisu-Bingol**	0.92	295	ePg	Pg	21 27 38.1	-0.5

IDC 20 21:46:23.3±2.4**, 6°.56S×129°.79E, h0**km**, mb3.3**/1**, mb1 3.4**/3**, mb1mx3.2**/46**, mbtmp3.3**/3**, ML3.4**/2**, Error ellipse: s-maj=145.2km s-min=32.8km az=69.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	14.02	162	Pn	Pn	21 49 43.1	-0.3
	0.3nm,0.3s,baz=344,slow=12,SNR=18						
WRA				Sn	Sn	21 52 09.8	-10
	0.1nm,0.3s,baz=334,slow=22,SNR=4.6						
ASAR	**Alice Springs**	17.47	167	P	Pn	21 50 28.6	+0.1
	0.1nm,0.3s,baz=345,slow=11,SNR=4.6						
MKAR	**Makanchi Array**	67.74	327	P	P	21 57 22.8	0.0
	0.2nm,0.4s,baz=114,slow=7.1,SNR=4.1						

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*KRNET **20** 21:50:39.5±0.1, 42°.22N×75°.29E, h16km, mb2.6*
*SOME **20** 21:50:40.1, 42°.20N×75°.27E, h10km*
*NNC **20** 21:50:40.0±1.8, 42°.27N×75°.27E, h0km, mb2.4, mpv2.0, Error ellipse: s-maj=12.2km s-min=4.6km az=158.0*
ISC 20 21:50:39.2±0.9**, 42°.23N**±0°.03×**75°.25E**±0°.02**, h10**km±8km**, n53, σ0s.72**/93**, 39C-9D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KZA	**Kyzart**	0.16	180	⇓P	Pg	21 50 43.2	+0.2
	68nm,0.1s,SNR=410						
KZA	**Kyzart**	0.16	180	⇑iP	Pg	21 50 43.0	0.0
	baz=93						
KZA				⇑iS	Sg	21 50 45.4	-0.2
	baz=93						
KBK	**Karagaybulak**	0.48	332	⇓P	Pb	21 50 50.0	+0.1
	51nm,0.1s,SNR=28						
KBK	**Karagaybulak**	0.48	332	⇑iP	Pb	21 50 49.5	-0.4
	baz=30						
KBK				⇑iS	Sb	21 50 56.7	-0.3
	baz=30						
UCH	**Uchtor**	0.55	270	⇑P	Pg	21 50 50.6	+0.6
	5.8nm,0.1s,SNR=9.9						
UCH	**Uchtor**	0.55	270	⇑iP	Pg	21 50 50.5	+0.5
	baz=71						
UCH				⇑iS	Sb	21 50 58.8	-0.4
	baz=71						
BOOM	**Boomskoye usch**	0.57	63	⇑iP	Pg	21 50 50.3	-0.1
	baz=60						
BOOM				⇑iS	Sg	21 50 58.1	+0.1
	baz=60						
AAK	**Ala-Archa**	0.69	306	⇑P	Pb	21 50 53.3	-0.2
	2.6nm,0.3s						
AAK				⇑S	Sb	21 51 02.9	-0.2
	14nm,0.3s						
AAK	**Ala-Archa**	0.69	306	⇑P	Pb	21 50 53.6	+0.1
	5.2nm,0.2s,SNR=10.0						
AAK	**Ala-Archa**	0.69	306	⇑iP	Pb	21 50 53.4	-0.1
	baz=5.0						
AAK				⇑iS	Sb	21 51 03.1	0.0
	baz=5.0						
TKM2	**Tokmak 2**	0.73	20	⇑P	Pg	21 50 53.5	0.0
	0.9nm,0.2s						
TKM2				⇑S	Sb	21 51 03.6	-0.8
	3.5nm,0.1s						
TKM2	**Tokmak 2**	0.73	20	⇑P	Pg	21 50 53.7	+0.2
	2.3nm,0.1s,SNR=49						
TKM2	**Tokmak 2**	0.73	20	⇑iP	Pg	21 50 53.4	-0.1
	baz=18						
TKM2				⇑iS	Sg	21 51 03.2	+0.1
	baz=18						
FRU1	**Bishkek**	0.73	322	⇑iP	Pb	21 50 54.4	+0.2
	baz=21						
FRU1				⇑iS	Sb	21 51 05.3	+1.0
	baz=21						
ULHL	**Ulahol**	0.74	89	P	Pg	21 50 52.8	-0.7
	11nm,0.1s,SNR=107						
ULHL	**Ulahol**	0.74	89	⇑iP	Pg	21 50 52.6	-0.9
	baz=87						
ULHL				⇑iS	Sg	21 51 02.1	-1.1
	baz=87						
CHMS	**Chumysh**	0.85	335	P	Pb	21 50 56.3	+0.2
	19nm,0.1s,SNR=80						
CHMS	**Chumysh**	0.85	335	⇓iP	Pb	21 50 56.1	0.0
	baz=33						
CHMS				⇓iS	Sb	21 51 07.7	+0.2
	baz=33						
KST	**Kastek**	0.97	33	eP	Pg	21 50 57.9	0.0
	baz=31						
KST				eS	Sb	21 51 10.7	-0.3
	baz=31						
KST	**Kastek**	0.97	33	eP	Pg	21 50 57.9	0.0
	2.3nm,0.2s						
KST				eS	Sb	21 51 10.7	-0.3
	26nm,0.4s						
DGS	**Degeres**	1.08	21	eP	Pb	21 51 00.1	0.0
	baz=19						
DGS				eS	Sb	21 51 14.4	+0.1
	baz=19						
DGS	**Degeres**	1.08	21	eP	Pb	21 51 00.1	0.0
	2.0nm,0.1s						
DGS				eS	Sb	21 51 14.4	+0.1
	14nm,0.2s						
AML	**Almayashu**	1.16	265	⇑P	Pb	21 51 01.8	+0.2
	2.9nm,0.1s,SNR=18						
AML	**Almayashu**	1.16	265	⇑iP	Pb	21 51 01.8	+0.2
	baz=66						
AML				⇑iS	Sb	21 51 17.6	+0.7
	baz=66						
EKS2	**Erkin-Say**	1.17	292	P	Pn	21 51 02.7	+0.9
	1.0nm,0.1s,SNR=9.9						
EKS2	**Erkin-Say**	1.17	292	⇑iP	Pn	21 51 02.2	+0.4
	baz=92						
EKS2				⇑iS	Sn	21 51 18.7	+0.8
	baz=92						
USP	**Ospenovka**	1.17	332	⇑P	Pn	21 51 02.0	+0.2
	4.3nm,0.1s,SNR=28						
USP	**Ospenovka**	1.17	332	⇑iP	Pn	21 51 01.8	+0.1
	baz=31						
USP				⇑iS	Sn	21 51 17.6	-0.2
	baz=31						
MTBS	**Maitube**	1.25	44	eP	Pg	21 51 03.3	0.0
	baz=42						
MTBS				eS	Sb	21 51 19.2	+0.1
	baz=42						
MTBS	**Maitube**	1.25	44	eP	Pg	21 51 03.3	0.0
	2.6nm,0.1s						

MTBS				*e*S	Sb	21 51 19.2	+0.1
	18nm,0.2s						
IZV	**Izvestkoviy**	1.29	51	*e*P	Pg	21 51 04.0	0.0
	baz=50						
IZV				*e*S	Sn	21 51 20.9	+0.1
	baz=50						
IZV	**Izvestkoviy**	1.29	51	*e*P	Pg	21 51 04.0	0.0
	8.8nm,0.6s						
IZV				*e*S	Sn	21 51 20.9	+0.1
	12nm,0.3s						
KDJ	**Kajisay**	1.44	93	⇑*i*P	Pn	21 51 05.1	-0.4
	baz=93						
KDJ				⇑*i*S	Sn	21 51 24.0	-0.6
	baz=93						
TNSS	**Tian-Shan**	1.49	57	*e*P	Pb	21 51 07.4	+0.2
	baz=56						
TNSS				*e*S	Sg	21 51 26.8	-0.4
	baz=56						
TNSS	**Tian-Shan**	1.49	57	*e*P	Pb	21 51 07.4	+0.2
	4.9nm,0.2s						
TNSS				*e*S	Sg	21 51 26.8	-0.4
	8.2nm,0.2s						
MRKS	**Merke**	1.58	290	*e*P	Pg	21 51 09.8	+0.2
MRKS				*e*S	Sg	21 51 31.1	+1.0
KOTS	**Kotyrbulak**	1.70	53	*e*P	Pb	21 51 11.2	+0.5
	2.9nm,0.4s						
KOTS				*e*S	Sg	21 51 33.3	-0.5
	25nm,0.4s						
KTBS	**Karatobe**	1.81	35	*e*P	Pg	21 51 13.3	-0.7
	baz=30						
KTBS				*e*S	Sg	21 51 36.8	-0.7
	baz=30						
KTBS	**Karatobe**	1.81	35	*e*P	Pg	21 51 13.3	-0.7
	3.1nm,0.1s						
KTBS				*e*S	Sg	21 51 36.8	-0.7
	20nm,0.4s						
KUU	**Kurty**	1.84	25	*e*P	Pg	21 51 13.8	-0.8
	baz=24						
KUU				*e*S	Sg	21 51 37.5	-1.0
	baz=24						
KUU	**Kurty**	1.84	25	*e*P	Pg	21 51 13.8	-0.8
	1.6nm,0.1s						
KUU				*e*S	Sg	21 51 37.5	-1.0
	20nm,0.3s						
ARSB	**Arslanbob**	1.92	243	⇑*i*P	Pb	21 51 13.6	-0.9
	baz=43						
ARSB				⇑*i*S	Sb	21 51 39.2	+0.6
	baz=43						
MNAS	**Manas**	2.05	278	⇓Pn	Pg	21 51 18.0	-0.6
	0.6nm,0.5s						
MNAS				⇓Sn	Sg	21 51 44.4	-0.7
	2.5nm,0.5s						
MNAS	**Manas**	2.05	278	⇑*i*P	Pb	21 51 16.1	-0.5
	baz=78						
MNAS				⇑*i*S	Sb	21 51 42.5	+0.3
	baz=78						
CHKK	**Chushkaly**	2.06	38	*e*P	Pb	21 51 17.6	+0.8
	baz=37						
CHKK				*e*S	Sg	21 51 44.5	-1.0
	baz=37						
CHKK	**Chushkaly**	2.06	38	*e*P	Pb	21 51 17.6	+0.8
	4.2nm,0.3s						
CHKK				*e*S	Sg	21 51 44.4	-1.0
	31nm,0.2s						
SATY	**Saty**	2.47	69	*e*P	Pg	21 51 25.4	-1.2
	4.7nm,0.1s						
SATY				*e*S	Sg	21 51 57.4	-1.3
	12nm,0.1s						
KURS	**Kuram**	2.49	59	*e*P	Pb	21 51 24.7	+0.6
	baz=58						
KURS				*e*S	Sb	21 51 56.7	+1.9
	baz=58						
KURS	**Kuram**	2.49	59	*e*P	Pb	21 51 24.7	+0.6
	3.3nm,0.4s						
KURS				*e*S	Sb	21 51 56.6	+1.9
	4.5nm,0.7s						
SFK	**Sufi-Kurgan**	2.58	211	⇓Lg	Lg	21 52 02.4	
	1.2nm,0.3s						
ARXS	**Arharly**	2.73	43	*e*P	Pb	21 51 29.2	+1.0
	2.0nm,0.3s						
ARXS				*e*S	Sb	21 52 04.3	+2.5
	14nm,0.4s						
PDGK	**Podgornoye**	3.31	69	⇓*i*P	Pn	21 51 32.2	+1.0
	baz=69						
PDGK				⇓*i*S	Sn	21 52 10.8	+0.2
	baz=69						
KK31	**Karatay Array**	3.60	286	⇑Pg	Pg	21 51 46.0	-2.2
	0.1nm,0.2s,baz=134,slow=17						
KK31				⇑Lg	Lg	21 52 34.4	
	0.6nm,0.4s,baz=109,slow=27						

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*IDC **20** 22:01:09.8±2.5, 15°.08N×94°.08W, h34^{km}±6^{km}, mb3.5/7, mb1 3.7/9, mb1mx3.5/46, mbtmp3.6/9, ML3.4/2, MS3.3/3, Ms1 3.3/3, ms1mx2.7/29, Error ellipse: s-maj=69.1km s-min=20.0km az=39.0*

ISC 20 22:01:09.3±1.8**, 15°.0N**±0°.2×**94°.1W**±0°.3**, h33^{km}, n11, σ0^{s}.67**/14**, mb3.8**/7**, Off coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CMIG	**Matias Romero**	2.22	340	Pn	Pn	22 01 43.2	-0.6
	9.8nm,0.3s,baz=158,slow=11,SNR=99						
CMIG				Sn	Sn	22 02 10.8	+0.7
	31nm,0.3s,baz=45,slow=23,SNR=17						
CMIG				LR	LR	22 02 44.8	
	comp=Z,150nm,19.2s,baz=158,slow=44						
TXAR	**Lajitas Array**	16.78	330	Pn	Pn	22 05 02.6	+0.6
	0.0nm,0.3s,baz=149,slow=11,SNR=8.4						
ANMO	**Albuquerque**	22.77	333	P	P	22 06 08.2	-1.0
	0.6nm,0.6s,baz=112,slow=11,SNR=2.2						
ANMO				pP	pP	22 06 18.6	+0.6
	1.3nm,0.8s,baz=149,slow=13,SNR=3.1						
PFO	**Pinyon Flats O**	27.44	316	LR	LR	22 16 36.3	
	comp=Z,588nm,21.2s,baz=36,slow=34						
PDAR	**Pinedale Array**	30.70	337	P	P	22 07 21.1	-0.3
	0.2nm,0.7s,baz=102,slow=8.4,SNR=2.4						
PDAR				pP	pP	22 07 30.6	-0.3
	0.5nm,0.8s,baz=156,slow=7.8,SNR=3.2						
NVAR	**Mina Array Bea**	31.63	322	P	P	22 07 30.2	+0.6
	1.1nm,0.9s,baz=137,slow=8.2,SNR=4.8						
YKA	**Yellowknife Ar**	49.62	348	P	P	22 09 56.0	-1.2
	0.2nm,0.5s,baz=150,slow=7.3,SNR=3.1						
YKA				pP	pP	22 10 07.4	+0.3
	0.9nm,0.7s,baz=154,slow=7.1,SNR=5.4						
EKA	**Eskdalemuir Ar**	78.36	36	P	P	22 13 06.3	0.0
	2.1nm,0.9s,baz=291,slow=5.9,SNR=4.4						
ESDC	**Sonseca Array**	80.70	51	P	P	22 13 20.1	+0.6
	0.1nm,0.3s,baz=293,slow=4.0,SNR=5.0						
ESDC				pP	pP	22 13 29.9	0.0
	0.8nm,0.7s,baz=300,slow=5.3,SNR=4.5						
NOA	**NORSAR Array B**	84.25	28	LR	LR	22 50 52.5	
	comp=Z,6.1nm,18.7s,baz=220,slow=35						
KOWA	**Kowa**	86.42	76	P	P	22 13 49.3	+0.2
	2.0nm,0.8s,baz=304,slow=11,SNR=4.5						

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*CSEM **20** 22:51:13.0, 39°.39N×29°.89W, h15^{km}, ML2.6*

PDA 20 22:51:13.0±0.4**, 39°.39N×29°.89W, h15^{km}, MD3.6, ML2.6, 6C, Error ellipse: s-maj=5.9km s-min=1.3km az=24.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
H07S1	**FLORES T-PHASE**	1.02	270	*e*S	Sb	22 51 40.1	-5.6
H07S1	**FLORES T-PHASE**	1.02	270	*e*S	Sb	22 51 40.1	-5.6
PCED	**Cedros**	1.19	129	⇑*i*P	Pn	22 51 30.7	-4.4
PCED				*e*S	Sb	22 51 44.2	-6.3
PCED				A	A	22 51 46.3	
	38nm,0.3s						
PCED	**Cedros**	1.19	129	⇑*i*P	Pn	22 51 30.7	-4.4
PCED				*e*S	Sb	22 51 44.2	-6.3
CALA	**Caldeira**	1.22	131	*e*P	Pn	22 51 31.6	-4.0
CALA				*e*S	Sb	22 51 45.1	-6.4
CALA	**Caldeira**	1.22	131	*e*P	Pn	22 51 31.6	-4.0
CALA				*e*S	Sb	22 51 45.1	-6.4
PCAN	**Candelaria**	1.43	130	⇑*i*P	Pn	22 51 34.1	-4.3
PCAN				*e*S	Sn	22 51 50.0	-6.9
PCAN				A	A	22 51 55.3	
	44nm,0.3s						
PCAN	**Candelaria**	1.43	130	⇑*i*P	Pn	22 51 34.1	-4.3
PCAN				*e*S	Sn	22 51 50.0	-6.9
PICO	**Pico**	1.44	127	⇑*i*P	Pn	22 51 34.5	-4.1
PICO				*e*S	Sn	22 51 50.4	-6.9
PICO				A	A	22 51 52.9	
	119nm,0.2s						
PICO	**Pico**	1.44	127	⇑*i*P	Pn	22 51 34.5	-4.1
PICO				*e*S	Sn	22 51 50.4	-6.9
ROSA	**Rosais**	1.44	117	*e*P	Pn	22 51 34.3	-4.3
ROSA				*e*S	Sn	22 51 50.0	-7.3
ROSA				A	A	22 51 52.0	
	9.0nm,0.1s						
ROSA	**Rosais**	1.44	117	*e*P	Pn	22 51 34.3	-4.3
ROSA				*e*S	Sn	22 51 50.0	-7.3

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*IDC **20** 23:16:12.7±1.1, 54°.47N×158°.03W, h0^{km}, mb3.7/10, mb1 3.9/12, mb1mx3.6/72, mbtmp3.7/12, ML3.9/2, MS3.3/4, Ms1 3.3/4, ms1mx2.6/68, Error ellipse: s-maj=34.2km s-min=16.9km az=9.0*

*ISCJB **20** 23:16:14.5±0.6, 54°.46N±0°.06×157°.95W±0°.05, h33^{km}, mb3.6/10, MS3.7/2, Error ellipse: s-maj=9.2km s-min=3.8km az=163.3*

*NEIC **20** 23:16:14.6±0.0, 54°.21N×157°.83W, h3^{km}, ML3.4(AEIC), After AEIC.*

ISC 20 23:16:17.3±0.8**, 54°.5N**±0°.1×**157°.94W**±0°.05**, h35^{km}, n47, σ1^{s}.60**/45**, mb3.7**/10**, South of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SDPT	**Sand Point**	1.69	301	P	Pn	23 16 42.5	-1.8
SDPT				S	Sn	23 17 04.3	-0.2
CHGN	**Chignik**	1.81	352	P	Pn	23 16 45.5	-0.5
VNHG	**Veniaminof 1**	1.85	338	P	Pn	23 16 47.3	+0.7
VNFG	**Veniaminof 2**	2.00	333	P	Pn	23 16 49.4	+0.8
DOL	**Dolgoi Island**	2.36	287	P	Pn	23 16 51.7	-1.8
ANNE	**Aniakchak Nort**	2.41	358	P	Pn	23 16 54.6	+0.4
PS4A	**Pavlof South-4**	2.41	292	P	Pn	23 16 53.2	-1.0
ANNW	**Aniakchak Nort**	2.46	357	P	Pn	23 16 55.3	+0.3
DRIA	**Deer Island**	2.54	282	P	Pn	23 16 54.2	-1.8
DT1	**Dutton Round H**	2.58	285	P	Pn	23 16 54.9	-1.6
SII	**Sitkinak Islan**	2.96	45	P	Pn	23 17 00.2	-1.7
SII				S	Sn	23 17 35.8	-0.3
FALS	**False Pass**	3.19	278	P	Pn	23 17 03.4	-1.6
FALS				S	Sn	23 17 41.2	-0.6
SSLW	**Shishaldin Wes**	3.60	277	P	Pn	23 17 09.1	-1.5
SSBA	**Shishaldin**	3.60	277	P	Pn	23 17 08.6	-2.0
OHAK	**Old Harbor**	3.77	42	P	Pn	23 17 10.4	-2.6
CAHL	**Cahill**	3.84	21	P	Pn	23 17 13.4	-0.6
KDAK	**Kodiak Island**	4.44	40	Pn	Pn	23 17 20.1	-2.0
	2.9nm,0.3s,baz=176,slow=5.9,SNR=29						
KDAK				Sn	Sn	23 18 08.1	-4.3
	1.7nm,0.3s,baz=58,slow=22,SNR=6.9						
AKSA	**Akutan Strait**	4.55	268	P	Pn	23 17 21.9	-1.7
AKSA				S	Sn	23 18 13.2	-2.1
AHB	**Akutan Harbor**	4.63	268	P	Pn	23 17 23.0	-1.7
AKLV	**Akutan Long Va**	4.70	269	P	Pn	23 17 24.0	-1.7
MTBL	**Makushin Table**	5.15	267	P	Pn	23 17 30.3	-1.7
MSW	**Makushin Switc**	5.22	267	P	Pn	23 17 30.8	-2.1
MSW				S	Sn	23 18 28.2	-3.6
CNPM	**China Poot**	6.22	33	P	Pn	23 17 45.3	-1.2
RC01	**Rabbit Creek A**	7.91	30	P	Pn	23 18 09.0	-0.7
HIN	**Hinchinbrook I**	8.53	42	P	Pn	23 18 16.4	-1.7
FID	**Port Fidalgo**	8.76	40	P	Pn	23 18 19.7	-1.7
RAGM	**Ragged Mountai**	9.25	45	P	Pn	23 18 27.3	-0.8
ILAR	**Eielson Array**	11.69	24	Pn	Pn	23 18 59.4	-1.9
	0.1nm,0.3s,baz=212,slow=14,SNR=3.8						
ILAR				LR	LR	23 23 34.2	
	comp=Z,46nm,20.8s,baz=150,slow=38						
INK	**Inuvik**	17.91	30	P	P	23 20 23.4	-0.1
	0.4nm,0.3s,baz=212,slow=12,SNR=4.1						
INK				LR	LR	23 28 08.6	
	comp=Z,57nm,18.3s,baz=196,slow=40						
YKA	**Yellowknife Ar**	23.59	53	P	P	23 21 25.2	+0.7
	0.6nm,0.8s,baz=265,slow=9.9,SNR=4.7						
PETK	**Petropavlovsk-**	25.91	285	P	P	23 21 45.7	-0.1
	5.1nm,0.7s,baz=80,slow=14						
SEY	**Seymchan**	26.49	309	LR	LR	23 32 57.6	
	comp=Z,394nm,21.5s,baz=150,slow=38						
NVAR	**Mina Array Bea**	31.18	105	P	P	23 22 34.1	+1.0
	0.7nm,0.7s,baz=305,slow=9.1,SNR=4.6						
PDAR	**Pinedale Array**	33.41	90	P	P	23 22 53.5	+0.9
	0.2nm,0.6s,baz=266,slow=4.4,SNR=4.5						
H11N2	**WAKE ISLAND Hy**	43.80	232	T	T	00 11 12.3	
	baz=28,slow=76,SNR=20						
H11N3	**WAKE ISLAND Hy**	43.81	232	T	T	00 11 12.7	
	baz=28,slow=76,SNR=22						
H11N1	**WAKE ISLAND Hy**	43.82	232	T	T	00 11 16.5	
	baz=28,slow=76,SNR=15						
H11S1	**WAKE ISLAND Hy**	44.96	231	T	T	00 12 46.4	
	baz=28,slow=76,SNR=31						
H11S2	**WAKE ISLAND Hy**	44.97	231	T	T	00 12 42.3	
	baz=28,slow=76,SNR=25						
H11S3	**WAKE ISLAND Hy**	44.98	231	T	T	00 12 43.2	
	baz=28,slow=76,SNR=35						
TXAR	**Lajitas Array**	46.11	100	P	P	23 24 38.7	+0.7
	0.2nm,0.7s,baz=305,slow=4.4,SNR=3.4						
SONM	**Songino Array**	55.84	306	P	P	23 25 51.5	+0.6
	0.6nm,0.6s,baz=48,slow=7.2,SNR=3.8						
FINES	**FINESS Array B**	64.34	358	P	P	23 26 50.0	+1.2
	2.1nm,0.9s,baz=5.7,slow=7.7,SNR=3.6						
BVAR	**Borovoye Array**	65.59	330	P	P	23 26 58.3	+1.2
	0.8nm,0.6s,baz=27,slow=9.7,SNR=4.8						
MKAR	**Makanchi Array**	66.96	320	P	P	23 27 06.5	+0.6
	0.4nm,0.7s,baz=30,slow=2.9,SNR=4.8						
DAV	**Davao City (W)**	76.43	263	LR	LR	00 04 59.3	
	comp=Z,17nm,18.3s,baz=169,slow=38						
CMAR	**Chiang Mai Arr**	82.53	291	P	P	23 28 36.7	+0.3
	0.4nm,0.3s,baz=12,slow=4.6,SNR=3.0						

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*CSEM **20** 23:19:15.6±0.1, 67°.84N×20°.23E, h0^{km}±1^{km}, ML1.4, Error ellipse: s-maj=3.2km s-min=2.0km az=154.0, Mining explosion.*

*HEL **20** 23:19:15.4, 67°.79N×20°.17E, h0^{km}, ML1.4, Explosion*

*HEL **20** 23:19:16.4±0.1, 67°.86N×20°.19E, h0^{km}, ML1.4, ML2.1(UPP), Explosion*

UPP 20 23:19:15.7±0.1**, 67°.85N×20°.20E, h0^{km}, ML2.1, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	0.12	26	P	Pg	23 19 18.2	+0.2
KUA				S	Sg	23 19 19.9	+0.4
KUA	**Kurravaara**	0.12	26	*i* P	Pg	23 19 18.2	+0.2
KUA				*i* S	Sg	23 19 19.9	+0.4
KUA	**Kurravaara**	0.12	26	*i* P	Pg	23 19 18.2	+0.2
KUA				*i* S	Sg	23 19 19.9	+0.4
RATU	**Laukkuluspa**	0.23	264	P	Pg	23 19 20.3	+0.2
RATU				S	Sg	23 19 23.4	+0.3
RATU	**Laukkuluspa**	0.23	264	*i* P	Pg	23 19 20.3	+0.2
RATU				*i* S	Sg	23 19 23.4	+0.3
RATU	**Laukkuluspa**	0.23	264	*i* P	Pg	23 19 20.3	+0.2
RATU				*i* S	Sg	23 19 23.5	+0.4
NIKU	**Nikkaluokta**	0.44	273	P	Pg	23 19 24.2	+0.1
NIKU				S	Sg	23 19 30.3	+0.4
NIKU	**Nikkaluokta**	0.44	273	*i* P	Pg	23 19 24.2	+0.1
NIKU				*i* S	Sg	23 19 30.3	+0.4
NIKU	**Nikkaluokta**	0.44	273	*i* P	Pg	23 19 24.2	+0.1
NIKU				*i* S	Sg	23 19 30.3	+0.4
LANU	**Lannavaara**	0.70	72	P	Pg	23 19 29.0	-0.1
LANU				S	Sg	23 19 38.3	0.0
LANU	**Lannavaara**	0.70	72	*e*P	Pg	23 19 28.9	-0.3
LANU				*e*S	Sg	23 19 38.4	+0.1
LANU	**Lannavaara**	0.70	72	P	Pg	23 19 29.0	-0.2
LANU				S	Sg	23 19 38.3	0.0
DUNU	**Dundret**	0.74	169	S	Sg	23 19 39.7	+0.2
DUNU	**Dundret**	0.74	169	*i* S	Sg	23 19 39.7	+0.2
DUNU	**Dundret**	0.74	169	*i* S	Sg	23 19 39.7	+0.2
SALU	**Saltoluokta**	0.80	235	P	Pg	23 19 30.8	-0.2
SALU	**Saltoluokta**	0.80	235	*i* P	Pg	23 19 30.8	-0.2
SALU	**Saltoluokta**	0.80	235	*i* P	Pg	23 19 30.8	-0.2
KIF	**Kilpisjarvi**	1.18	11	*e*P	Pg	23 19 38.5	+0.1
KIF				*e*S	Sb	23 19 54.3	-0.5
KIF				MSG		23 19 57.0	
	comp=Z,2.8nm,0.2s						
KIF	**Kilpisjarvi**	1.18	11	*e*P	Pg	23 19 38.5	+0.1
KIF				*e*S	Sb	23 19 54.3	-0.5
PAJU	**Pajala**	1.40	125	P	Pn	23 19 41.2	-1.2
PAJU				S	Sg	23 19 59.9	-0.6
PAJU	**Pajala**	1.40	125	*e*P	Pn	23 19 41.2	-1.2
PAJU				*e*S	Sg	23 19 59.9	-0.6
PAJU	**Pajala**	1.40	125	*e*P	Pn	23 19 41.2	-1.2
PAJU				*e*S	Sg	23 19 59.8	-0.6
HEF	**Hetta**	1.41	65	*e*P	Pn	23 19 41.6	-1.1
HEF				*e*S	Sg	23 19 59.9	-1.1
HEF	**Hetta**	1.41	65	*e*P	Pn	23 19 41.6	-1.0
HEF				*e*S	Sg	23 19 59.9	-1.1
ERTU	**Ertsjaerv**	1.51	148	P	Pn	23 19 43.5	-0.5
ERTU	**Ertsjaerv**	1.51	148	*e*P	Pn	23 19 43.6	-0.4
ERTU				*e*SB	Sg	23 20 03.7	-0.5
ERTU	**Ertsjaerv**	1.51	148	P	Pn	23 19 43.5	-0.5
ERTU				*e*Sb	Sg	23 20 03.7	-0.5
HARU	**Harads**	1.72	169	P	Pn	23 19 46.9	+0.2
HARU	**Harads**	1.72	169	*e*P	Pn	23 19 46.9	+0.2
HARU	**Harads**	1.72	169	*e*P	Pn	23 19 46.9	+0.1
KALU	**Kalix**	2.35	147	*e*P	Pn	23 19 56.5	+1.0
KALU	**Kalix**	2.35	147	*e*P	Pn	23 19 56.5	+1.0
SGF	**Sodankyl**	2.45	97	*e*PB	Pn	23 19 58.7	+1.8
RNF	**Rovaniemi**	2.58	116	*e*PB	Pn	23 20 00.4	+1.8

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*CSEM **20** 23:19:37.6, 67°.84N×20°.23E, h0^{km}, ML2.3, Mining explosion.*

*BER **20** 23:19:42.5±1.5, 67°.88N×20°.30E, h0^{km}, ML1.7, Suspected explosion*

UPP 20 23:19:37.6±0.2**, 67°.84N×20°.23E, h0^{km}, ML2.3, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	**Kurravaara**	0.12	21	P	Pg	23 19 40.1	+0.2
KUA				S	Sg	23 19 41.9	+0.5
KUA	**Kurravaara**	0.12	21	P	Pg	23 19 40.1	+0.2
KUA				S	Sg	23 19 41.9	+0.5
RATU	**Laukkuluspa**	0.24	265	P	Pg	23 19 42.3	+0.1
RATU				S	Sg	23 19 45.5	+0.2
RATU	**Laukkuluspa**	0.24	265	P	Pg	23 19 42.3	+0.1
RATU				S	Sg	23 19 45.5	+0.2
NIKU	**Nikkaluokta**	0.45	274	P	Pg	23 19 46.4	+0.2
NIKU				S	Sg	23 19 52.2	+0.1
NIKU	**Nikkaluokta**	0.45	274	P	Pg	23 19 46.4	+0.2
NIKU				S	Sg	23 19 52.2	+0.1
LANU	**Lannavaara**	0.70	72	S	Sg	23 20 00.5	+0.6
LANU	**Lannavaara**	0.70	72	S	Sg	23 20 00.5	+0.6
KTK1	**Kautokeino**	1.62	42	*e*P	Pg	23 20 08.8	+0.3
KTK1				*e*S	Sg	23 20 30.9	+1.4
TRO	**Tromso**	1.86	346	*e*P	Pb	23 20 12.1	-0.2
TRO				*e*S	Sb	23 20 35.8	-0.3
TRO				IAML		23 20 38.7	
	comp=Z,11nm,0.4s						
LOF	**Lofoten**	2.54	280	*e*P	Pb	23 20 23.4	-0.5
LOF				*e*S	Sb	23 20 53.8	-1.7
LOF				IAML		23 21 00.7	
	comp=Z,7.5nm,0.4s						
HAMF	**Hammerfest**	3.07	22	*e*P	Pn	23 20 29.3	+2.1
HAMF				*e*S	Sn	23 21 04.6	0.0
HAMF				IAML		23 21 12.6	
	comp=Z,9.2nm,0.3s						

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*ISCJB **20** 23:22:49.5±0.4, 23°.09S±0°.08×176°.84W±0°.06, h100^{km}, mb4.5/15, Error ellipse: s-maj=12.4km s-min=7.1km az=158.1*

*NEIC **20** 23:22:52.0±1.3, 22°.99S×176°.91W, h109^{km}±11^{km}, mb4.1/3, Error ellipse: s-maj=12.9km s-min=8.6km az=125.0*

*IDC **20** 23:22:53.3±3.6, 22°.94S×176°.95W, h116^{km}±30^{km}, mb4.3/10, mb1 4.5/11, mb1mx4.0/44, mbtmp4.7/11, MS3.2/3, Ms1 3.2/3, ms1mx2.8/46, Error ellipse: s-maj=18.5km s-min=14.9km az=127.0*

ISC 20 23:22:51.1±0.4**, 23°.13S**±0°.09×**176°.76W**±0°.08**, h100^{km}, n89, σ1^{s}.48**/90**, mb4.7**/15**, 8C-1D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	**Niue**	7.54	59	P	Pn	23 24 41.1	+2.6
	baz=7.5,SNR=20						
AFI	**Afiamalu**	10.31	28	P	Pn	23 25 16.3	+0.1
	2.7nm,0.3s,baz=75,slow=20,SNR=3.8						
AFI				S	Sn	23 26 59.4	-11
	8.5nm,0.3s,baz=60,slow=20,SNR=4.4						
DZM	**Mont Dzumac**	15.55	271	P	P	23 26 30.1	+2.9
	1.3nm,0.3s,baz=86,slow=17,SNR=25						
DZM	**Mont Dzumac**	15.55	271	*e*P	P	23 26 31.9	+4.8
	106nm,1.4s						
DZM				*e*LR	LR	23 29 25.6	
	156nm,27.8s						
RAR	**Rarotonga**	15.85	86	S	Sn	23 29 19.4	-4.7
	6.2nm,0.3s,baz=91,slow=18,SNR=5.9						
URZ	**Urewera**	15.97	198	P	Pn	23 26 30.1	+0.1
	2.9nm,0.3s,baz=296,slow=2.3,SNR=14						
URZ				S	Sn	23 29 15.8	-11
	1.3nm,0.3s,baz=227,slow=23,SNR=6.4						
URZ				LR	LR	23 32 13.5	
	comp=Z,95nm,18.5s,baz=164,slow=35						
RPZ	**Rata Peaks**	22.87	203	P	P	23 27 41.0	-5.1
	5.8nm,0.4s,baz=32,slow=13,SNR=3.3						
TBI	**Tubuai**	25.07	96	*e*T	T	23 53 01.3	
	8.0nm,0.4s						
PAE	**Paea**	26.03	83	*e*T	T	23 53 45.0	
	8.0nm,0.3s						
PPT2	**Papeete2**	26.05	83	*e*LR	LR	23 34 55.8	
	166nm,36.2s						
PPT	**Papeete**	26.06	83	LR	LR	23 37 09.8	
	comp=Z,50nm,19.3s,baz=169,slow=33						
MGCD	**Mangrove Creek**	29.95	243	P	P	23 28 50.8	+0.8
	baz=30,SNR=7.9						
RMQ	**Roma**	31.43	257	P	P	23 29 04.4	+1.3
	baz=31,SNR=11						
CNB	**Canberra Magne**	31.81	240	P	P	23 29 08.2	+1.8
	baz=32,SNR=6.3						
CMSA	**Cobar Meteorol**	34.26	248	P	P	23 29 27.3	-0.4
	baz=34,SNR=22						
CTA	**Charters Tower**	34.46	268	P	P	23 29 29.6	0.0
	99nm,0.4s,baz=93,slow=12,SNR=211						
CTAO	**Charters Tower**	34.46	268	*e*P	P	23 29 29.5	0.0
	39nm,0.5s						
TOO	**Toolangi**	35.37	237	P	P	23 29 37.8	+0.6
	baz=35,SNR=11						
QLP	**Quilpie**	35.47	256	P	P	23 29 38.1	-0.1
	baz=35,SNR=12						
MTSU	**Mount Surprise**	36.69	270	P	P	23 29 48.8	+0.2
	baz=37,SNR=40						
PMG	**Port Moresby**	37.10	286	P	P	23 29 51.7	-0.5
	83nm,0.8s,baz=112,slow=6.5,SNR=16						
STKA	**Stephens Creek**	37.77	247	P	P	23 29 57.0	-0.6
	4.5nm,0.3s,baz=94,slow=8.7,SNR=22						
STKA				PcP	PcP	23 32 11.5	-1.1
	2.0nm,0.5s,baz=94,slow=3.1,SNR=3.1						
STKA	**Stephens Creek**	37.77	247	P	P	23 29 57.1	-0.5
	baz=38,SNR=15						
ARPS	**Mount Arapiles**	38.07	239	P	P	23 30 01.0	+0.9
	baz=38,SNR=8.1						
RKT	**Rikitea**	38.33	98	*e*T	T	00 09 37.9	
	1.7nm,0.2s						
COEN	**Coen**	38.96	276	P	P	23 30 08.1	+0.3
	baz=39,SNR=12						
HTT	**Hallett**	40.10	245	P	P	23 30 16.0	-1.1
	baz=40,SNR=15						
QIS	**Mount Isa**	40.48	265	P	P	23 30 19.3	-1.0
	baz=40,SNR=7.3						
BBOO	**Buckleboo**	42.48	246	P	P	23 30 36.0	-0.6
	baz=42,SNR=11						
ASAR	**Alice Springs**	45.10	259	P	P	23 30 56.6	-1.1
	20nm,0.8s,baz=92,slow=8.2,SNR=95						
ASAR				PcP	PcP	23 32 36.0	-0.8
	2.4nm,0.5s,baz=114,slow=4.0,SNR=7.1						
WRAB	**Tennant Creek**	45.43	264	*e*P	P	23 30 58.3	-2.0
	1.9nm,0.6s						
WRA	**Warramunga Arr**	45.44	264	P	P	23 30 58.6	-1.7
	20nm,0.5s,baz=100,slow=8.7,SNR=163						
KDU	**Kakadu**	49.20	273	P	P	23 31 27.9	-1.7
	baz=49,SNR=12						
FORT	**Forrest**	49.37	249	P	P	23 31 29.7	-1.0
	baz=49,SNR=6.6						
WRKA	**Warakurna**	49.91	256	P	P	23 31 33.1	-1.9
	baz=50,SNR=96						
KNRA	**Kununurra**	51.68	268	P	P	23 31 46.9	-1.3
	baz=52,SNR=20						
FITZ	**Fitzroy Crossi**	53.86	264	P	P	23 32 03.2	-1.1
	baz=54,SNR=28						
VNDA	**Vanda**	55.41	186	P	P	23 32 16.2	+1.6
	0.8nm,0.7s,baz=339,slow=7.0,SNR=5.4						
KLBR	**Kellerberrin**	58.03	246	P	P	23 32 32.2	-1.6
	baz=58,SNR=6.8						
MEEK	**Meekatharra**	58.18	252	P	P	23 32 34.6	-0.4
	baz=58,SNR=3.8						
BLDU	**Ballidu**	59.07	247	P	P	23 32 39.3	-1.8
	baz=59,SNR=5.9						
MORW	**Morawa**	59.93	249	P	P	23 32 45.6	-1.5
	baz=60,SNR=3.3						
CASY	**Casey**	62.10	206	*e*P	P	23 33 01.4	+0.3
	1.0nm,0.6s						
GIRL	**Giralia**	62.99	255	P	P	23 33 07.7	0.0
	baz=63,SNR=3.9						
QSPA	**South Pole Qui**	66.96	180	P	P	23 33 34.3	+1.5

	6.8nm,0.9s,baz=34,slow=2.0,SNR=17						
QSPA	**South Pole Qui**	**66.96**	**180**	P	**P**	**23 33 34.4**	**+1.5**
	20nm,1.0s						
MAW	**Mawson**	**79.49**	**200**	P	**P**	**23 34 47.8**	**+1.5**
	7.9nm,0.6s,baz=138,slow=7.2,SNR=18						
MAW	**Mawson**	**79.49**	**200**	P	**P**	**23 34 47.8**	**+1.5**
	baz=80,SNR=17						
KSRS	**Korea Array**	**79.61**	**318**	LR	LR	00 08 02.4	
	comp=Z,8.7nm,18.8s,baz=150,slow=34						
TXAR	**Lajitas Array**	**87.51**	**57**	P	**P**	**23 35 29.4**	**+1.3**
	0.5nm,0.8s,baz=232,slow=6.1,SNR=6.2						
ILAR	**Eielson Array**	**90.61**	**12**	P	**P**	**23 35 41.1**	**-0.6**
	1.2nm,0.7s,baz=221,slow=5.6,SNR=9.2						
CMAR	**Chiang Mai Arr**	**92.07**	**289**	P	**P**	**23 35 49.5**	**0.0**
	3.4nm,0.7s,baz=132,slow=3.4,SNR=18						
CHTO	**Chiang Mai**	**92.21**	**289**	*e*P	**P**	**23 35 49.5**	**-0.7**
	0.9nm,0.6s						
ZALV	**Zalesovo Beam**	**113.25**	**320**	PKiKP	**PKiKP**	**23 41 14.3**	**-2.4**
	1.0nm,0.6s,baz=132,slow=2.2,SNR=4.2						
MKAR	**Makanchi Array**	**113.82**	**312**	PKiKP	**PKiKP**	**23 41 16.1**	**-2.0**
	0.9nm,0.8s,baz=67,slow=4.1,SNR=7.8						
BVAR	**Borovoye Array**	**121.82**	**319**	PKP	**PKPdf**	**23 41 31.9**	**-1.3**
	1.5nm,0.5s,baz=113,slow=1.3,SNR=13						
ARCES	**ARCESS Array B**	**131.70**	**350**	PKP	**PKPdf**	**23 41 51.0**	**-0.7**
	2.9nm,0.5s,baz=15,slow=1.4,SNR=18						
FINES	**FINESS Array B**	**138.60**	**344**	PKhKP	PKPpre	23 41 53.9	
	0.7nm,0.6s,baz=88,slow=4.4,SNR=5.5						
FINES				PKP	**PKPdf**	**23 42 03.9**	**-0.8**
	2.2nm,0.7s,baz=116,slow=4.4,SNR=6.2						
NB2	**NORSAR Subarra**	**141.71**	**354**	PKP	PKPpre	23 42 04.1	
	comp=Z,2.0nm,1.0s,baz=10,slow=3.2						
NOA	**NORSAR Array B**	**141.71**	**354**	PKhKP	PKPpre	23 42 03.8	
	comp=Z,0.4nm,0.5s,baz=21,slow=3.8,SNR=3.1						
NOA				PKP	**PKPdf**	**23 42 09.8**	**-0.6**
	comp=Z,0.4nm,0.5s,baz=39,slow=1.6,SNR=4.1						
HFS	**Hagfors**	**142.30**	**351**	PKhKP	PKPpre	23 42 06.6	
	comp=Z,1.6nm,0.3s,baz=96,slow=4.3,SNR=19						
HFS				PKP	**PKPdf**	**23 42 11.4**	**0.0**
	comp=Z,1.5nm,0.3s,baz=85,slow=3.2,SNR=16						
AKASG	**Malin Array Be**	**145.86**	**330**	PKPbc	**PKPdf**	**23 42 17.1**	**-0.8**
	comp=Z,6.4nm,0.4s,baz=42,slow=4.3,SNR=35						
KIEV	**Kiev**	**145.87**	**330**	*e*PKPdf	**PKPdf**	**23 42 17.1**	**-0.8**
EKA	**Eskdalemuir Ar**	**147.48**	**7**	PKPbc	**PKPdf**	**23 42 22.5**	**+2.0**
	comp=Z,3.7nm,0.7s,baz=351,slow=2.4,SNR=13						
BRTR	**Keskin Array B**	**149.43**	**310**	PKPbc	**PKPbc**	**23 42 27.8**	**-1.2**
	comp=Z,6.7nm,0.8s,baz=141,slow=4.5,SNR=36						
ANTO	**Ankara**	**149.96**	**311**	*e*PKPbc	**PKPbc**	**23 42 28.5**	**-1.6**
MMAI	**Mount Meron Ar**	**150.06**	**296**	PKPbc	**PKPbc**	**23 42 30.1**	**-0.5**
	comp=Z,15nm,0.7s,baz=71,slow=5.6,SNR=29						
CRVS	**Cervenica-Dubn**	**150.51**	**335**	*e*PKP	**PKPbc**	**23 42 31.3**	**+0.2**
CLL	**Collm**	**150.87**	**347**	*e*PKPdf	**PKPdf**	**23 42 27.0**	**+1.0**
CLL				⇓*i*PKPbc	**PKPbc**	**23 42 31.4**	**-0.4**
	comp=Z,22nm,1.0s						
CLL				*i* PKPab	**PKPab**	**23 42 38.5**	**-0.8**
	comp=Z,9.0nm,0.9s						
CLL				*e*pPKPdf	**pPKPdf**	**23 42 56.0**	**+2.4**
CLL				*e*sPKPab	**sPKPab**	**23 43 17.0**	**+0.5**
OKC	**Ostrava-Krasne**	**150.88**	**340**	⇑*e*PKP	**PKPbc**	**23 42 31.0**	**-0.9**
UPC	**Upice**	**150.91**	**343**	⇑*e*PKP	**PKPbc**	**23 42 31.8**	**-0.1**
DPC	**Dobruska-Polom**	**150.96**	**343**	⇑*e*PKP	**PKPbc**	**23 42 32.3**	**+0.2**
LANS	**Liptovska Anna**	**151.04**	**338**	*e*PKP	**PKPbc**	**23 42 33.2**	**+0.9**
BRG	**Berggiesshubel**	**151.08**	**346**	*i* PKP	**PKPbc**	**23 42 32.3**	**0.0**
	comp=Z,15nm,0.7s						
KRLC	**Kraliky**	**151.08**	**342**	⇑*e*PKP	**PKPbc**	**23 42 32.6**	**+0.2**
MORC	**Moravsky Berou**	**151.12**	**341**	*e*PKP	**PKPbc**	**23 42 32.6**	**+0.1**
PVCC	**Panska Ves**	**151.25**	**345**	⇑*e*PKP	**PKPbc**	**23 42 32.9**	**+0.2**
PRU	**Pruhonice**	**151.76**	**344**	⇑*e*PKP	**PKPbc**	**23 42 33.8**	**-0.1**
PRU				*e*PKPAB	**PKiKP**	**23 42 38.2**	**+3.9**
GOPC	**GO Pecny, Ondr**	**151.77**	**344**	⇑*e*PKP	**PKPbc**	**23 42 33.5**	**-0.5**
GOPC				*e*x	x	23 42 38.9	
VYHS	**Vyhne**	**151.81**	**338**	*e*PKP	**PKPbc**	**23 42 33.8**	**-0.3**
VYHS				*e*		23 42 43.2	
VRAC	**Vranov**	**151.82**	**341**	*e*PKP	**PKPbc**	**23 42 34.2**	**+0.1**
JAVC	**Velka Javorina**	**151.89**	**340**	*e*PKP	**PKPbc**	**23 42 35.5**	**+1.2**
KRUC	**Moravsky**	**152.10**	**341**	*e*PKP	**PKPbc**	**23 42 34.6**	**-0.1**
KHC	**Kasperske Hory**	**152.79**	**345**	⇑*e*PKP	**PKPbc**	**23 42 35.6**	**-0.7**
KHC				*e*x	x	23 42 41.3	
GERES	**GERESS Array B**	**153.03**	**345**	PKPbc	**PKPbc**	**23 42 36.0**	**-1.0**
	comp=Z,1.0nm,0.5s,baz=29,slow=3.0,SNR=14						
GERES				PKPab	**PKPab**	**23 42 47.7**	**-0.9**
	comp=Z,0.4nm,0.4s,baz=46,slow=4.2,SNR=4.4						
CONA	**Conrad Observa**	**153.28**	**341**	*i* PKiKP	**PKPbc**	**23 42 37.3**	**-0.1**
	comp=Z,3.1nm,0.7s						
MOA	**Molln**	**153.80**	**343**	PKPab	**PKPab**	**23 42 52.0**	**+0.2**
	comp=Z,4.9nm,1.1s						
ESDC	**Sonseca Array**	**162.41**	**19**	PKPab	**PKPab**	**23 43 29.7**	**+0.5**
	comp=Z,0.0nm,0.3s,baz=322,slow=3.4,SNR=6.3						
TORD	**Torodi Ar. Bea**	**169.97**	**171**	PKPab	**PKPab**	**23 44 04.0**	**+1.0**
	baz=181,slow=4.7						

*IDC **20** 23:49:55.8±1.1, 15°.70S×175°.07W, h287km±11km, mb3.4/9, mb1 3.6/11, mb1mx3.4/47, mbtmp4.1/11, Error ellipse: s-maj=20.9km s-min=11.5km az=140.0*

ISC 20 23:49:52.6±0.6**, 15°.6S**±0°.2×**175°.4W**±0°.1**, h250km, n16, σ1ˢ.79**/17**, mb3.8**/10**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.91**	**64**	P	**Pn**	**23 50 58.5**	**+3.1**
	30nm,0.3s,baz=40,slow=1.3,SNR=34						
AFI				S	**S**	**23 51 47.1**	**+1.8**
	13nm,0.3s,baz=0.0,slow=20,SNR=3.7						
DZM	**Mont Dzumac**	**18.32**	**247**	P	**Pn**	**23 53 52.9**	**+0.8**
	0.3nm,0.3s,baz=45,slow=20,SNR=4.4						
URZ	**Urewera**	**23.49**	**195**	P	**P**	**23 54 39.4**	**-0.7**
	7.2nm,0.7s,baz=292,slow=5.4,SNR=4.1						
STKA	**Stephens Creek**	**42.24**	**240**	P	**P**	**23 57 22.9**	**+1.2**
	1.7nm,0.5s,baz=78,slow=9.7,SNR=5.6						
WRA	**Warramunga Arr**	**47.90**	**257**	P	**P**	**23 58 08.2**	**+2.0**
	2.3nm,0.5s,baz=93,slow=7.5,SNR=27						
ASAR	**Alice Springs**	**48.20**	**252**	P	**P**	**23 58 10.3**	**+1.9**
	28nm,0.5s,baz=88,slow=8.0,SNR=452						
VNDA	**Vanda**	**62.96**	**185**	P	**P**	**23 59 52.0**	**-0.3**
	1.7nm,0.8s,baz=20,slow=4.3,SNR=9.7						
QSPA	**South Pole Qui**	**74.41**	**180**	P	**P**	**00 01 02.6**	**-0.5**
	2.7nm,0.8s,baz=298,slow=0.7,SNR=11						
NVAR	**Mina Array Bea**	**75.81**	**43**	P	**P**	**00 01 09.8**	**-1.8**
	0.4nm,0.5s,baz=227,slow=9.9,SNR=4.0						
TXAR	**Lajitas Array**	**82.36**	**57**	P	**P**	**00 01 45.4**	**-1.7**
	0.3nm,0.9s,baz=187,slow=6.4,SNR=2.7						
PDAR	**Pinedale Array**	**83.74**	**43**	P	**P**	**00 01 50.3**	**-3.7**
	0.3nm,0.6s,baz=245,slow=1.9,SNR=3.4						
MAW	**Mawson**	**86.95**	**199**	P	**P**	**00 02 08.8**	**-0.3**
	3.1nm,0.8s,baz=162,slow=3.2,SNR=5.4						
ARCES	**ARCESS Array B**	**124.56**	**351**	PKP	**PKPdf**	**00 08 20.0**	**-1.5**
	3.8nm,1.0s,baz=318,slow=1.2,SNR=4.6						
BRTR	**Keskin Array B**	**145.09**	**319**	PKPbc	**PKPdf**	**00 09 00.1**	**-0.6**
	0.9nm,0.7s,baz=90,slow=2.5,SNR=6.3						
GERES	**GERESS Array B**	**146.04**	**349**	PKPbc	**PKPdf**	**00 09 01.8**	**-0.1**
	0.3nm,0.6s,baz=20,slow=4.3,SNR=4.2						
MMAI	**Mount Meron Ar**	**147.19**	**307**	PKPbc	**PKPbc**	**00 09 06.9**	**0.0**
	1.4nm,0.6s,baz=96,slow=5.8,SNR=3.4						

*ISCJB **21** 00:15:52.0±0.4, 50°.26N±0°.03×87°.93E±0°.05, h11km, mb3.7/11, MS4.1/3, Error ellipse: s-maj=4.8km s-min=3.6km az=138.5*

*IDC **21** 00:15:51.1±1.1, 50°.22N×88°.08E, h0km, mb3.7/9, mb1 3.8/15, mb1mx3.6/74, mbtmp3.8/15, ML3.4/6, MS4.0/3, Ms1 4.0/3, ms1mx2.6/69, Error ellipse: s-maj=14.4km s-min=12.7km az=100.0*

*MOS **21** 00:15:52.8±1.7, 50°.09N×87°.80E, h13km, mb4.0/7, Error ellipse: s-maj=9.2km s-min=7.0km az=97.6*

*NNC **21** 00:15:55.0±4.0, 50°.09N×87°.63E, h0km, mb4.2, mpv3.9, Error ellipse: s-maj=31.0km s-min=19.1km az=68.0*

*ASRS **21** 00:15:55.7±1.0, 50°.21N×87°.84E, h15km, Ms3.5/3*

ISC 21 00:15:53.2±0.6**, 50°.19N**±0°.04×**87°.90E**±0°.03**, h11km, n58, σ2ˢ.13**/80**, mb3.6**/11**, MS4.2**/3**, 15C-8D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKAR	**Aktash**	**0.22**	**305**	*e*Pg	**Pg**	**00 15 58.3**	**+0.4**
AKAR				*e*Sg	**Sg**	**00 16 02.3**	**+1.2**
AKAR	**Aktash**	**0.22**	**305**	*e*PG	**Pg**	**00 15 58.3**	**+0.4**
AKAR				*e*		00 16 02.3	
DGZ	**Jazzator, Alta**	**0.58**	**212**	*i* PG	**Pn**	**00 16 06.6**	**-0.9**
UKR	**Ust'-Kan**	**2.13**	**292**	*e*Pg	**Pg**	**00 16 33.1**	**-0.9**
UKR				*e*Sg	**Sg**	**00 17 02.1**	**+0.5**
UKR	**Ust'-Kan**	**2.13**	**292**	*e*PN	**Pg**	**00 16 33.1**	**-0.9**
UKR				*e*		00 17 02.1	
TASR	**Tashtagol**	**2.57**	**360**	*e*Pg	**Pg**	**00 16 41.5**	**-0.9**
TASR				*e*Sg	**Sg**	**00 17 15.7**	**0.0**
TASR	**Tashtagol**	**2.57**	**360**	*e*PN	**Pg**	**00 16 41.5**	**-0.9**
TASR				*e*		00 17 15.7	
ELT	**Eltsovka**	**3.24**	**342**	*e*Pn	**Pb**	**00 16 48.7**	**-2.0**
ELT				*e*Pg	**Pg**	**00 16 56.1**	**+0.8**
ELT				*e*Sg	**Sb**	**00 17 33.8**	**+3.6**
ELT	**Eltsovka**	**3.24**	**342**	*e*PN	**Pb**	**00 16 48.7**	**-2.0**
ELT				*e*		00 16 56.1	
ELT				*e*		00 17 33.8	
CERR	**Cheremushki**	**3.45**	**38**	*e*Pn	**Pb**	**00 16 51.6**	**-2.7**
CERR				*e*Pg	**Pg**	**00 16 58.2**	**-1.1**
CERR				*e*Sg	**Sg**	**00 17 44.5**	**+0.6**
CERR	**Cheremushki**	**3.45**	**38**	*e*PN	**Pb**	**00 16 51.6**	**-2.7**
CERR				*e*		00 16 58.2	
CERR				*e*		00 17 44.5	
HVS	**Khovu-Aksy**	**3.81**	**73**	⇑*e*PN	**Pn**	**00 16 53.5**	**+1.7**
ZALV	**Zalesovo Beam**	**4.21**	**334**	Pn	**Pn**	**00 16 58.8**	**+1.5**
	4.8nm,0.3s,baz=156,slow=14,SNR=45						
ZALV				Sn	**Sn**	**00 17 49.6**	**+3.2**
	8.1nm,0.3s,baz=154,slow=27,SNR=5.1						
ZALV				Lg	Lg	00 18 05.7	
	10nm,0.3s,baz=160,slow=26,SNR=4.4						
MK31	**Makanchi Array**	**5.05**	**230**	⇑Pn	**Pn**	**00 17 11.5**	**+2.7**
	6.1nm,0.3s,baz=53,slow=13,SNR=644						
MK31				⇑Sn	**Sn**	**00 18 10.2**	**+3.1**
	14nm,0.3s,baz=51,slow=26,SNR=9.4						
MK31				⇑Lg	Lg	00 18 32.7	
	40nm,0.5s,baz=50,slow=28,SNR=4.8						
MK31	**Makanchi Array**	**5.05**	**230**	PN	**Pn**	**00 17 11.5**	**+2.7**
MK31				S	**Sn**	**00 18 10.2**	**+3.1**
MK31				pmax	pmax		
	comp=Z,6.0nm,0.4s						
MK31				smax	smax		
	comp=N,40nm,0.5s						
MKAR	**Makanchi Array**	**5.05**	**230**	Pn	**Pn**	**00 17 11.0**	**+2.2**
	comp=N,7.1nm,0.3s,baz=53,slow=13,SNR=484						
MKAR				Sn	**Sn**	**00 18 10.1**	**+2.9**
	comp=N,22nm,0.3s,baz=56,slow=24,SNR=14						
MKAR				Lg	Lg	00 18 29.7	
	comp=N,14nm,0.3s,baz=51,slow=31,SNR=9.1						
MKAR				LR	LR	00 18 31.9	
	comp=N,16nm,18.6s,baz=46,slow=31						
NVS	**Novosibirsk**	**5.46**	**330**	*e*Pn	**Pn**	**00 17 18.5**	**+4.1**
NVS				*e*Pg	**Pg**	**00 17 34.4**	**-3.2**
NVS				*e*Sn	**Sn**	**00 18 20.5**	**+3.5**
NVS				*e*Sg	**Sg**	**00 18 46.2**	**-2.0**
NVS	**Novosibirsk**	**5.46**	**330**	*e*PN	**Pn**	**00 17 18.4**	**+4.1**
NVS				*e*		00 17 34.1	
NVS				*e*		00 18 19.5	
KURK	**Kurchatov**	**5.95**	**279**	⇑Pn	**Pn**	**00 17 22.7**	**+1.6**
	comp=N,4.0nm,0.3s						
KURK				⇓Sn	**Sn**	**00 18 30.9**	**+1.6**
	comp=N,24nm,0.5s						
KURK				⇑Lg	Lg	00 18 58.5	
	comp=N,64nm,0.7s						
KURK	**Kurchatov**	**5.95**	**279**	⇑*i*PN	**Pn**	**00 17 23.0**	**+1.8**
KURBB	**Kurchatov Arra**	**6.01**	**278**	Pn	**Pn**	**00 17 23.3**	**+1.4**
	comp=N,1.2nm,0.3s,baz=89,slow=14,SNR=80						
KURBB				Sn	**Sn**	**00 18 32.1**	**+1.4**
	comp=N,1.5nm,0.3s,baz=89,slow=28,SNR=11						
KURBB				Lg	Lg	00 19 00.4	
	comp=N,1.6nm,0.3s,baz=92,slow=32,SNR=5.1						
KURBB	**Kurchatov Arra**	**6.01**	**278**	⇑Pn	**Pn**	**00 17 23.4**	**+1.4**
	comp=N,13nm,0.6s						
KURBB				⇓Sn	**Sn**	**00 18 33.4**	**+2.7**
	comp=N,66nm,0.5s						
KURBB				⇑Lg	Lg	00 19 00.2	
	comp=N,77nm,0.6s						
PDGK	**Podgornoye**	**8.97**	**223**	⇓Pn	**Pn**	**00 18 03.0**	**+0.3**
	comp=N,1.5nm,0.4s						
PDGK				⇓Sn	**Sn**	**00 19 41.2**	**-2.5**
	comp=N,7.8nm,0.6s						
PDGK				⇓Lg	Lg	00 20 30.1	
	comp=N,14nm,0.7s						
PDGK	**Podgornoye**	**8.97**	**223**	P	**Pn**	**00 18 03.3**	**+0.6**
PDGK				S	**Sn**	**00 19 41.2**	**-2.5**
PDGK				pmax	pmax		
	comp=Z,2.0nm,0.4s						
PDGK				smax	smax		
	comp=N,8.0nm,0.6s						
TKM2	**Tokmak 2**	**11.16**	**234**	⇑Pn	**Pn**	**00 18 34.3**	**+1.6**
	comp=N,1.9nm,0.6s						
TKM2				⇓Sn	**Sn**	**00 20 35.6**	**-1.9**
	comp=N,4.9nm,0.7s						
TKM2	**Tokmak 2**	**11.16**	**234**	P	**Pn**	**00 18 34.3**	**+1.6**
TKM2				S	**Sn**	**00 20 35.6**	**-1.9**
TKM2				pmax	pmax		
	comp=Z,2.0nm,0.6s						
TKM2				smax	smax		
	comp=N,5.0nm,0.7s						
BVA0	**Borovoye Array**	**11.25**	**291**	Pn	**Pn**	**00 18 33.4**	**-0.4**
	comp=N,1.6nm,0.5s,baz=102,slow=14,SNR=15						
BVA0				⇑Sn	**Sn**	**00 20 35.4**	**-4.0**
	comp=N,5.0nm,0.6s,baz=106,slow=23,SNR=4.2						
BVA0	**Borovoye Array**	**11.25**	**291**	P	**Pn**	**00 18 33.4**	**-0.4**
BVA0				S	**Sn**	**00 20 35.4**	**-4.0**
BVA0				pmax	pmax		
	comp=Z,2.0nm,0.5s						
BVA0				smax	smax		
	comp=N,5.0nm,0.6s						
BVAR	**Borovoye Array**	**11.25**	**291**	Pn	**Pn**	**00 18 33.2**	**-0.6**
	comp=N,0.9nm,0.3s,baz=107,slow=15,SNR=18						
BVAR				Sn	**Sn**	**00 20 35.5**	**-4.0**
	comp=N,1.2nm,0.3s,baz=100,slow=22,SNR=9.1						
BRVK	**Borovoye**	**11.32**	**291**	⇑*i*P	**Pn**	**00 18 35.0**	**+0.3**
AAK	**Ala-Archa**	**11.94**	**236**	Pn	**Pn**	**00 18 41.3**	**-2.1**
	comp=N,0.7nm,0.3s,baz=11,slow=6.2,SNR=2.7						
AAK				Sn	**Sn**	**00 20 54.0**	**-2.5**
	comp=N,0.5nm,0.3s,baz=252,slow=20,SNR=3.6						
AAK				Lg	Lg	00 22 10.0	
	comp=N,0.5nm,0.3s,baz=204,slow=20,SNR=5.3						
SONM	**Songino Array**	**12.37**	**94**	Lg	Lg	00 22 22.4	
	comp=N,0.1nm,0.3s,baz=284,slow=30,SNR=4.5						
ULN	**Ulaanbaatar**	**12.78**	**93**	⇑*i*P	**Pn**	**00 18 56.1**	**+1.2**
KK31	**Karatay Array**	**13.87**	**246**	⇑Pn	Pn	00 19 04.2	-5.4
	comp=N,0.8nm,0.5s,baz=52,slow=13,SNR=19						
KK31				⇓Sn	**Sn**	**00 21 38.0**	**-5.6**
	comp=N,1.6nm,0.6s,baz=48,slow=25,SNR=3.8						
KK31	**Karatay Array**	**13.87**	**246**	P	Pn	00 19 04.2	-5.5
KK31				S	**Sn**	**00 21 38.0**	**-5.6**
KK31				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KK31				smax	smax		
	comp=N,2.0nm,0.6s						
ARU	**Arti**	**18.51**	**301**	P	**P**	**00 20 08.8**	**-0.4**
	comp=N,0.0nm,0.3s,baz=96,slow=11,SNR=3.6						
ARU	**Arti**	**18.51**	**301**	*d i*P	**Pn**	**00 20 09.9**	**+0.5**
ARU				S	**S**	**00 23 40.2**	**+0.1**
ARU				pmax	pmax		
	comp=Z,5.0nm,1.7s						
AKTO	**Aktyubinsk**	**19.03**	**282**	P	**Pn**	**00 20 15.9**	**+0.1**
	comp=Z,0.2nm,0.3s,baz=86,slow=12,SNR=6.2						
HIA	**Hailar**	**20.53**	**80**	⇑*i*P	**P**	**00 20 32.5**	**+1.2**
HIA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GEYT	**Alibeck**	**24.49**	**251**	P	**P**	**00 21 13.2**	**+0.9**
	comp=Z,0.8nm,0.6s,baz=40,slow=2.5,SNR=2.9						
OBN	**Obninsk**	**30.93**	**299**	*e*P	**P**	**00 22 10.0**	**+0.3**
OBN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KIV	**Kislovodsk**	**31.03**	**276**	*e*P	**P**	**00 22 13.3**	**+2.5**
KIV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
FINES	**FINESS Array B**	**35.15**	**313**	P	**P**	**00 22 46.6**	**+0.2**
	comp=Z,1.6nm,0.9s,baz=81,slow=8.9,SNR=6.4						
FINES	**FINESS Array B**	**35.15**	**313**	*e*P	**P**	**00 22 47.7**	**+1.3**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BRTR	**Keskin Array B**	**39.00**	**276**	P	**P**	**00 23 20.2**	**+0.6**
	comp=Z,1.1nm,0.8s,baz=73,slow=7.0,SNR=7.4						
BRTR	**Keskin Array B**	**39.00**	**276**	*e*P	**P**	**00 23 20.7**	**+1.1**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
HFS	**Hagfors**	**41.34**	**313**	P	**P**	**00 23 38.5**	**-0.1**
	comp=Z,2.1nm,0.9s,baz=89,slow=12,SNR=3.1						
HFS	**Hagfors**	**41.34**	**313**	P	**P**	**00 23 38.5**	**-0.1**
HFS				pmax	pmax		
	comp=Z,1.0nm,0.7s						
NB2	**NORSAR Subarra**	**42.16**	**315**	P	**P**	**00 23 45.4**	**+0.1**
	comp=Z,0.4nm,0.5s,baz=66,slow=7.9						
NOA	**NORSAR Array B**	**42.16**	**315**	P	**P**	**00 23 45.0**	**-0.3**
	comp=Z,0.3nm,0.6s,baz=74,slow=9.3,SNR=3.7						
EKA	**Eskdalemuir Ar**	**51.54**	**313**	P	**P**	**00 24 58.9**	**+0.2**
	comp=Z,0.4nm,0.5s,baz=57,slow=7.7,SNR=4.1						
ESDC	**Sonseca Array**	**61.90**	**299**	P	**P**	**00 26 12.9**	**+0.3**
	comp=Z,0.3nm,0.6s,baz=48,slow=6.7,SNR=6.9						
OPO	**Ambohidratompo**	**77.31**	**219**	LR	LR	01 00 40.5	
	comp=Z,104nm,19.7s,baz=147,slow=35						
TORD	**Torodi Ar. Bea**	**77.61**	**276**	P	**P**	**00 27 49.0**	**-0.5**
	comp=Z,0.4nm,1.0s,baz=32,slow=8.5						
WRA	**Warramunga Arr**	**80.97**	**136**	LR	LR	01 04 36.5	
	comp=Z,68nm,21.6s,baz=245,slow=36						
ASAR	**Alice Springs**	**84.06**	**138**	P	**P**	**00 28 22.8**	**-0.9**
	comp=Z,0.5nm,0.8s,baz=326,slow=5.3,SNR=4.1						
ASAR	**Alice Springs**	**84.06**	**138**	*e*P	**P**	**00 28 24.1**	**+0.4**
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
DZM	**Mont Dzumac**	**99.66**	**113**	LR	LR	01 13 50.3	
	comp=Z,69nm,18.6s,baz=104,slow=35						

IDC 21 00:20:17.9±2.2**, 2°.54N×127°.02E, h0km, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.2**/60**, mbtmp3.4**/3**, Error ellipse: s-maj=180.0km s-min=25.1km az=66.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.46**	**162**	P	P	00 25 29.8	+0.4
	1.0nm,0.6s,baz=342,slow=11,SNR=5.2						
ASAR	**Alice Springs**	**26.89**	**166**	P	P	00 26 00.7	-0.2
	0.3nm,0.5s,baz=348,slow=7.3,SNR=2.9						
MKAR	**Makanchi Array**	**58.70**	**326**	P	P	00 30 17.3	-0.2
	0.1nm,0.5s,baz=117,slow=8.7,SNR=3.1						

IDC 21 00:22:40.1±2.2**, 13°.63N×92°.62E, h0km, mb3.8**/6**, mb1 3.9**/6**, mb1mx3.4**/67**, mbtmp3.8**/6**, Error ellipse: s-maj=132.4km s-min=20.1km az=58.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**34.18**	**347**	P	P	00 29 27.4	+0.1
	0.9nm,0.8s,baz=156,slow=8.9,SNR=8.3						
KURBB	**Kurchatov Arra**	**38.64**	**346**	P	P	00 30 05.4	+0.2
	0.7nm,0.6s,baz=161,slow=8.2,SNR=6.7						
ZALV	**Zalesovo Beam**	**40.70**	**353**	P	P	00 30 22.1	-0.2
	0.8nm,0.5s,baz=178,slow=7.2,SNR=4.1						
WRA	**Warramunga Arr**	**52.89**	**128**	P	P	00 31 56.8	-1.5
	0.6nm,0.7s,baz=305,slow=7.2,SNR=2.7						
ASAR	**Alice Springs**	**54.80**	**132**	P	P	00 32 13.7	+1.5
	0.3nm,0.3s,baz=312,slow=6.8,SNR=5.4						
FINES	**FINESS Array B**	**66.97**	**331**	P	P	00 33 34.1	-0.3
	2.9nm,1.0s,baz=66,slow=4.7,SNR=3.1						

IDC 21 00:24:34.8±1.7**, 13°.55N×92°.35E, h0km, mb3.8**/7**, mb1 3.9**/7**, mb1mx3.5**/67**, mbtmp3.8**/7**, Error ellipse: s-maj=81.2km s-min=21.1km az=60.0, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**34.20**	**348**	P	P	00 31 22.4	+0.4
	0.9nm,0.7s,baz=152,slow=8.9,SNR=7.5						
SONM	**Songino Array**	**36.13**	**16**	P	P	00 31 38.6	-0.2
	0.3nm,0.5s,baz=216,slow=7.1,SNR=2.9						
KURBB	**Kurchatov Arra**	**38.64**	**346**	P	P	00 32 00.1	+0.2
	0.8nm,0.7s,baz=164,slow=8.1,SNR=6.4						
ZALV	**Zalesovo Beam**	**40.73**	**353**	P	P	00 32 16.6	-0.7
	0.8nm,0.4s,baz=170,slow=9.6,SNR=3.9						
WRA	**Warramunga Arr**	**53.05**	**128**	P	P	00 33 54.1	-0.1
	1.0nm,0.8s,baz=306,slow=7.4,SNR=2.6						
ASAR	**Alice Springs**	**54.95**	**132**	P	P	00 34 08.1	0.0
	0.4nm,0.4s,baz=309,slow=7.2,SNR=6.0						
FINES	**FINESS Array B**	**66.90**	**331**	P	P	00 35 28.5	-0.2
	2.7nm,1.1s,baz=152,slow=9.1,SNR=2.6						

*IDC **21** 00:34:19.3±1.7, 44°.19N×128°.72W, h0km, mb3.4/5, mb1 3.7/8, mb1mx3.5/63, mbtmp3.4/8, ML3.3/3, MS3.2/10, Ms1 3.2/10, ms1mx2.9/28, Error ellipse: s-maj=47.5km s-min=17.3km az=46.0*

*NEIC **21** 00:34:22.0±1.1, 44°.12N×128°.90W, h10km, mb4.0/12, Error ellipse: s-maj=12.9km s-min=6.5km az=80.0*

*ISCJB **21** 00:34:23.1±0.7, 44°.12N±0°.04×128°.57W±0°.07, h15km, mb3.8/8, MS3.2/6, Error ellipse: s-maj=6.9km s-min=4.9km az=163.2*

ISC 21 00:34:24.6±1.0**, 44°.06N**±0°.07×**128°.63W**±0°.09**, h15km, n99, σ1ˢ.53**/92**, mb4.0**/8**, MS3.1**/6**, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEBM	**Edson Butte**	**3.34**	**109**	*e*Pn	Pn	00 35 11.8	-4.5
KEBM				*e*Sn	**Sn**	**00 35 54.6**	**-1.2**
KBO	**Bosley Butte**	**3.71**	**118**	*e*Pn	**Pn**	**00 35 23.0**	**+1.5**
I03D	**Drain, OR**	**3.83**	**94**	P	Pn	00 35 19.5	-3.5
	baz=278,SNR=128						
I03D				S	**Sn**	**00 36 07.2**	**-0.6**
	baz=278						
COR	**Corvallis**	**3.85**	**80**	*e*Pn	**Pn**	**00 35 22.2**	**-1.1**
G03D	**McMinnville, O**	**4.00**	**71**	P	**Pn**	**00 35 23.5**	**-1.8**
	baz=257,SNR=11						
G03D				S	**Sn**	**00 36 12.2**	**+0.5**
	baz=257						
DBO	**Dodson Butte**	**4.02**	**102**	*e*Pn	Pn	00 35 22.7	-3.0
L02D	**Cave Junction,**	**4.14**	**116**	P	**Pn**	**00 35 27.3**	**0.0**
	baz=299,SNR=5.8						
L02D				S	**Sn**	**00 36 13.9**	**-1.5**
	baz=299						
E03A	**Lebam**	**4.35**	**53**	*e*Pn	**Pn**	**00 35 28.4**	**-1.7**
HUMO	**Hull Mountain**	**4.38**	**107**	*e*Pn	**Pn**	**00 35 29.1**	**-1.5**
F04D	**Rainier, OR**	**4.46**	**61**	P	**Pn**	**00 35 30.0**	**-1.6**
	baz=247						
I04A	**Tendick Farm,**	**4.50**	**91**	P	**Pn**	**00 35 30.8**	**-1.4**
	baz=276,SNR=24						
I04A				S	**Sn**	**00 36 24.1**	**-0.1**
	baz=276						
H04A	**Detroit Lake**	**4.66**	**80**	*e*Pn	**Pn**	**00 35 33.2**	**-1.2**
NLWA	**Neilton Lookou**	**4.71**	**43**	*e*Pn	**Pn**	**00 35 35.1**	**+0.1**
J04D	**Umpqua Nationa**	**4.80**	**98**	P	**Pn**	**00 35 35.6**	**-0.9**
	baz=282,SNR=13						
YBH	**Yreka Blue Hor**	**4.93**	**116**	Pn	Pn	00 35 35.3	-2.9
	0.4nm,0.3s,baz=292,slow=12,SNR=4.4						
YBH				Sn	**Sn**	**00 36 33.1**	**-1.9**
	0.1nm,0.3s,baz=155,slow=19,SNR=3.4						
YBH				LR	LR	00 36 42.3	
	comp=Z,20nm,20.5s,baz=296,slow=28						
YBH	**Yreka Blue Hor**	**4.93**	**116**	*e*Pn	**Pn**	**00 35 40.6**	**+2.4**
YBH				Sn	**Sn**	**00 36 33.1**	**-1.9**
M02C	**Callahan**	**5.02**	**120**	P	**Pn**	**00 35 40.6**	**+1.2**
	baz=304						
M02C				S	**Sn**	**00 36 38.5**	**+1.3**
	baz=304						
B201	**Coldwater, Mou**	**5.02**	**61**	*e*Pn	**Pn**	**00 35 38.5**	**-0.9**
TDH	**Tom, Dick, Har**	**5.03**	**74**	*e*Pn	**Pn**	**00 35 38.3**	**-1.3**
TDH				*e*Sn	**Sn**	**00 36 39.5**	**+2.1**
I05D	**Terrebonne, OR**	**5.25**	**84**	P	**Pn**	**00 35 42.3**	**-0.2**
	baz=270						
I05D				S	**Sn**	**00 36 40.7**	**-2.0**
	baz=270						
G05D	**Wamic, OR**	**5.35**	**75**	P	**Pn**	**00 35 43.0**	**-0.8**
	baz=261,SNR=7.6						
J05D	**Fort Rock, OR**	**5.42**	**96**	P	**Pn**	**00 35 44.9**	**0.0**
	baz=281						
J05D				S	**Sn**	**00 36 45.7**	**-1.4**
	baz=281						
LON	**Longmire**	**5.50**	**58**	*e*Pn	**Pn**	**00 35 44.8**	**-1.2**
PINE	**Pine Mountain**	**5.56**	**90**	*e*Pn	**Pn**	**00 35 46.1**	**-0.8**
D05A	**Enumclaw**	**5.61**	**54**	*e*Pn	**Pn**	**00 35 47.4**	**+0.1**
K05A	**Summer Lake**	**5.79**	**101**	*e*Pn	**Pn**	**00 35 50.4**	**+0.2**
G06A	**Carlson Farm,**	**5.82**	**76**	*e*Pn	**Pn**	**00 35 48.7**	**-1.7**
JCW	**Jim Creek**	**6.22**	**46**	*e*Pn	**Pn**	**00 35 56.5**	**+0.7**
LTY	**Liberty**	**6.42**	**57**	*e*Pn	**Pn**	**00 35 58.0**	**-0.6**
MOD	**Modoc Plateau**	**6.47**	**107**	*e*Pn	**Pn**	**00 36 00.1**	**+0.6**
I07A	**Izee**	**6.57**	**87**	*e*Pn	**Pn**	**00 36 00.8**	**+0.1**
HAWA	**Hanford**	**6.83**	**67**	*e*Pn	**Pn**	**00 36 04.5**	**+0.3**
J08A	**Circle Bar Ran**	**7.39**	**92**	*e*Pn	**Pn**	**00 36 14.8**	**+2.8**
WVOR	**Wild Horse Val**	**7.47**	**99**	*e*Pn	**Pn**	**00 36 13.5**	**+0.3**
AFDM	**Forest Hills D**	**7.69**	**129**	*e*Pn	**Pn**	**00 36 16.6**	**+0.6**
B08A	**Colville Reser**	**7.74**	**53**	*e*Pn	**Pn**	**00 36 16.7**	**0.0**
LLLB	**Lillooet**	**7.99**	**33**	*e*Pn	**Pn**	**00 36 20.3**	**+0.2**
PNT	**Penticton**	**8.12**	**47**	*e*Sn	**Sn**	**00 37 56.4**	**+3.1**
BBB	**Bella Bella**	**8.13**	**2**	Pn	**Pn**	**00 36 19.6**	**-2.4**
	0.3nm,0.3s,baz=224,slow=4.5,SNR=6.4						
BBB				LR	LR	00 38 31.0	
	comp=Z,59nm,18.7s,baz=198,slow=31						
PAHR	**Pah Rah Range**	**8.15**	**119**	*e*Pn	**Pn**	**00 36 24.7**	**+2.2**
F10A	**Beach Ranch, E**	**8.30**	**73**	*e*Pn	**Pn**	**00 36 26.2**	**+1.8**
PNTR	**Pine Nut**	**8.39**	**123**	*e*Pn	**Pn**	**00 36 27.9**	**+2.1**
CMB	**Columbia Colle**	**8.66**	**131**	*e*Pn	**Pn**	**00 36 29.8**	**+0.5**

YERR	Yerington	8.68	123	ePn	Pn	00 36 30.5	+0.8
WAKR	Walker	8.87	126	ePn	Pn	00 36 34.3	+1.9
MFID	Camas Ranch	9.29	90	ePn	Pn	00 36 38.9	+0.9
	2.0nm,0.8s						
NV01	Mina Array Sit	9.59	122	ePn	Pn	00 36 43.1	+0.8
NVAR	Mina Array Bea	9.59	122	Pn	Pn	00 36 42.3	0.0
	0.1nm,0.3s,baz=294,slow=14,SNR=8.7						
NVAR				LR	LR	00 40 22.6	
	comp=Z,113nm,18.8s,baz=66,slow=37						
NV11	Mina Array Sit	9.68	122	ePn	Pn	00 36 43.8	+0.3
MSO	Missoula	10.68	70	ePn	Pn	00 36 56.4	-0.7
BOZ	Bozeman (W)	12.17	77	ePn	Pn	00 37 17.9	+0.4
	2.3nm,1.0s						
FXWY	Fox Creek	12.71	86	ePn	Pn	00 37 24.9	-0.2
SHPR	Sheep Range	12.74	122	ePn	Pn	00 37 26.8	+1.4
IMW	Indian Meadow	12.74	85	ePn	Pn	00 37 26.4	+0.9
HWUT	Hardware Ranch	12.76	95	ePn	Pn	00 37 26.8	+1.2
TPAW	Teton Pass	12.79	86	ePn	Pn	00 37 26.8	+0.8
YPP	Pitchstone Pla	12.80	83	ePn	Pn	00 37 28.6	+2.3
REDW	Red Top Meadow	12.88	87	ePn	Pn	00 37 29.1	+1.8
FLWY	Flagg Ranch	12.90	84	ePn	Pn	00 37 29.2	+1.8
MOOW	Moose Ponds	12.90	85	ePn	Pn	00 37 28.2	+0.6
GCMT	Greycliff	13.54	76	ePn	Pn	00 37 36.4	+0.2
MSU	Marysvale	13.55	109	ePn	Pn	00 37 38.7	+2.3
EGMT	Eagleton	13.69	67	ePn	Pn	00 37 39.4	+1.2
KNB	Kanab	13.92	115	ePn	Pn	00 37 42.9	+1.6
PDAR	Pinedale Array	13.92	89	Pn	Pn	00 37 42.8	+1.3
	0.0nm,0.3s,baz=275,slow=15,SNR=5.3						
PDAR				LR	LR	00 43 15.4	
	comp=Z,107nm,20.2s,baz=280,slow=38						
PDAR	Pinedale Array	13.92	89	ePn	Pn	00 37 41.1	-0.4
DLBC	Dease Lake	14.42	357	LR	LR	00 42 37.2	
	comp=Z,114nm,18.9s,baz=162,slow=35						
O20A	White River Ci	15.62	98	ePn	Pn	00 38 08.4	+4.0
	6.6nm,0.9s						
PV09	Paradox Valley	15.66	104	ePn	Pn	00 38 05.9	+0.9
PV23	Carpenter Ridg	15.77	104	ePn	Pn	00 38 09.1	+2.8
	15nm,1.3s						
PV22	Blue Mesa, Par	15.89	104	ePn	Pn	00 38 08.9	+1.1
	37nm,2.0s						
PV12	Saucer Basin,	15.97	104	ePn	Pn	00 38 09.7	+0.7
	24nm,1.9s						
ISCO	Idaho Springs	17.63	96	ePn	Pn	00 38 31.5	+1.6
	2.0nm,0.8s						
SDCO	Great Sand Dun	18.55	102	ePn	P	00 38 41.4	+0.4
	3.1nm,0.9s						
ANMO	Albuquerque	19.33	111	P	P	00 38 50.7	+1.3
	0.1nm,0.3s,baz=302,slow=11,SNR=7.0						
ANMO	Albuquerque	19.33	111	eP	P	00 38 51.6	+2.1
	3.0nm,1.0s						
T25A	Trinidad	19.60	102	eP	P	00 38 54.6	+2.1
	16nm,1.6s						
YKA	Yellowknife Ar	20.19	19	P	P	00 38 55.6	-2.8
	0.6nm,0.7s,baz=208,slow=11,SNR=3.0						
FFC	Flin Flon	20.23	49	eP	P	00 38 57.8	-1.1
	20nm,1.1s						
KDAK	Kodiak Island	20.26	321	LR	LR	00 44 15.9	
	comp=Z,88nm,18.6s,baz=122,slow=30						
ULM	Lac du Bonnet	22.99	63	LR	LR	00 48 42.1	
	comp=Z,59nm,19.0s,baz=5.0,slow=38						
ULM	Lac du Bonnet	22.99	63	eP	P	00 39 27.7	-0.8
	24nm,1.8s						
ECSD	EROS Data Cent	23.00	80	eP	P	00 39 29.1	+0.4
	6.1nm,1.0s						
ILAR	Eielson Array	23.14	340	P	P	00 39 26.3	-3.7
	0.5nm,0.8s,baz=153,slow=8.1,SNR=4.2						
ILAR				LR	LR	00 46 55.6	
	comp=Z,65nm,21.9s,baz=142,slow=33						
INK	Inuvik	24.44	356	LR	LR	00 48 48.9	
	comp=Z,78nm,18.2s,baz=132,slow=36						
TXAR	Lajitas Array	24.70	118	P	P	00 39 44.9	-0.3
	0.6nm,0.8s,baz=296,slow=8.6,SNR=6.9						
WMOK	Wichita Mounta	24.76	102	eP	P	00 39 46.4	+0.8
	5.8nm,1.0s						
TKL	Tuckaleechee C	35.07	88	LR	LR	00 56 12.8	
	comp=Z,92nm,19.4s,baz=326,slow=37						
JTS	JuntasAbangare	50.49	118	LR	LR	01 05 26.4	
	comp=Z,18nm,19.7s,baz=347,slow=37						
H11N3	WAKE ISLAND Hy	58.32	267	T	T	01 46 54.0	
	baz=49,slow=75,SNR=1206						
H11N2	WAKE ISLAND Hy	58.32	267	T	T	01 47 05.1	
	baz=49,slow=75,SNR=298						
H11N1	WAKE ISLAND Hy	58.34	267	T	T	01 46 55.2	
	baz=49,slow=75,SNR=669						
H11S1	WAKE ISLAND Hy	59.25	266	T	T	01 48 09.3	
	baz=49,slow=75,SNR=57						
H11S2	WAKE ISLAND Hy	59.26	266	T	T	01 48 21.9	
	baz=49,slow=75,SNR=29						
H11S3	WAKE ISLAND Hy	59.27	266	T	T	01 48 10.8	
	baz=49,slow=75,SNR=42						
HHC	Hu-ho-hao-te	79.65	318	eP	P	00 46 35.1	+3.7
HHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,88nm,5.2s						
LPAZ	La Paz	81.50	122	P	P	00 46 40.8	-1.4
	comp=Z,1.1nm,0.8s,baz=273,slow=4.0,SNR=4.8						
KURBB	Kurchatov Arra	82.78	343	P	P	00 46 42.7	-5.1
	comp=Z,0.2nm,0.3s,baz=20,slow=4.6,SNR=2.6						
WMQ	Urumqi	86.69	335	eP	P	00 47 13.3	+5.6

ISCJB ***21*** *01:05:17.0±0.2, 43°.37N±0°.03×82°.83E±0°.03, h10^{km}, mb4.3/57, MS3.2/11, Error ellipse: s-maj=3.7km s-min=2.8km az=0.2*

SOME ***21*** *01:05:16.9, 43°.25N×82°.77E, h10^{km}, MS3.3*

IDC ***21*** *01:05:16.3±0.6, 43°.28N×82°.76E, h0^{km}, mb4.0/20, mb1 4.2/28, mb1mx4.0/74, mbtmp4.0/28, ML3.8/8, MS3.2/17, Ms1 3.2/17, ms1mx3.0/67, Error ellipse: s-maj=14.2km s-min=10.8km az=35.0*

MOS ***21*** *01:05:17.6±1.0, 43°.37N×82°.81E, h17^{km}, mb4.6/20, Error ellipse: s-maj=6.6km s-min=5.1km az=110.4*

BJI ***21*** *01:05:17.8, 43°.36N×82°.72E, h9^{km}, mb4.5/31, mB4.5/17, ML4.4/10, Ms4.0/14, Ms7 3.7/13*

NEIC ***21*** *01:05:18.5±0.3, 43°.33N×82°.84E, h10^{km}, mb4.5/22, Error ellipse: s-maj=5.6km s-min=4.7km az=165.0*

NNC ***21*** *01:05:26.2±2.6, 43°.56N×82°.33E, h30^{km}±15^{km}, mb4.6, mpv4.2, Error ellipse: s-maj=24.0km s-min=8.4km az=128.0*

ISC 21 01:05:18.1±0.3**, 43°.32N**±0°.03×**82°.71E**±0°.02**, h10^{km}, n231,** σ**2^{s}.27**/261**, mb4.3**/58**, MS3.2**/11**, 40C-17D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	Ketmen	1.72	275	eP	Pg	01 05 50.6	-0.5
	584nm,0.3s						
KTMS				eS	Sg	01 06 13.6	+0.2
	3µm,0.4s						
DJR	Jarkent	2.34	297	eP	Pg	01 06 01.5	-1.4
	314nm,0.4s						
DJR				eS	Sg	01 06 32.1	-1.2
	815nm,0.4s						
PDGK	Podgornoye	2.35	271	⇑Pn	Pb	01 05 59.5	-1.1
	1µm,0.7s						
PDGK				⇑Lg	Lg	01 06 32.7	
	3µm,0.6s						
PDGK	Podgornoye	2.35	271	i PN	Pb	01 05 59.4	-1.1
PDGK				pmax	pmax		
	comp=Z,1µm,0.7s						
SHLS	Shalkode	2.38	267	eP	Pn	01 05 57.7	+0.5
	comp=Z,769nm,0.5s						
SHLS				eS	Sn	01 06 24.8	-1.6
	comp=Z,6µm,0.7s						
UZB	Uzynbulak	2.70	268	eP	Pb	01 06 07.0	+0.5
	comp=Z,317nm,0.4s						
UZB				eS	Sb	01 06 42.2	+2.5
	comp=Z,2µm,0.7s						
KPKS	Kokpek	2.94	274	eP	Pb	01 06 11.4	+0.9
	comp=Z,214nm,0.3s						
KPKS				eS	Sb	01 06 49.3	+2.8
	comp=Z,3µm,0.5s						
KAPS	Kapalarasan	3.11	310	eP	Pb	01 06 14.6	+1.2
	comp=Z,69nm,0.6s						
KAPS				eS	Sg	01 06 54.7	-3.1
	comp=Z,1µm,0.7s						
ZHN	Zhinishke	3.12	269	eP	Pb	01 06 14.3	+0.6
	comp=Z,75nm,0.3s						
ZHN				eS	Sg	01 06 55.7	-2.7
	comp=Z,1µm,0.4s						
SATY	Saty	3.15	267	eP	Pb	01 06 14.8	+0.5
	comp=Z,225nm,0.4s						
SATY				⇑iS	Sg	01 06 57.1	-2.3
	comp=Z,1µm,0.6s						
PRZ	Przheval'sk	3.27	257	ePn	Pb	01 06 13.8	-2.4
PRZ	Przheval'sk	3.27	257	ePN	Pb	01 06 13.9	-2.4
KURS	Kuram	3.31	275	eP	Pb	01 06 18.5	+1.7
	comp=Z,36nm,0.7s						
KURS				eS	Sg	01 07 02.7	-1.6
	comp=Z,346nm,0.6s						
MK01	Makanchi Array	3.47	355	ePn	Pn	01 06 13.9	+1.9
MK31	Makanchi Array	3.49	355	⇑Pn	Pn	01 06 14.4	+2.0
	comp=Z,5.0nm,0.6s						
MK31				⇑Pg	Pb	01 06 21.0	+1.1
	comp=Z,138nm,0.5s						
MK31				⇑Lg	Lg	01 07 14.8	
	comp=Z,465nm,0.5s,baz=176,slow=24,SNR=10						
MK31	Makanchi Array	3.49	355	ePn	Pn	01 06 14.8	+2.4
MK31	Makanchi Array	3.49	355	PN	Pn	01 06 14.4	+2.0
MK31						01 06 20.6	
MK31				pmax	pmax		
	comp=Z,138nm,0.5s						
MKAR	Makanchi Array	3.49	355	Pn	Pn	01 06 14.9	+2.5
	comp=Z,6.4nm,0.3s,baz=177,slow=15,SNR=143						
MKAR				Sn	Sn	01 06 47.9	-5.9
	comp=Z,96nm,0.3s,baz=168,slow=16,SNR=7.7						
MKAR				Lg	Lg	01 07 06.7	
	comp=Z,236nm,0.3s,baz=174,slow=29,SNR=13						
MKAR				LR	LR	01 07 51.5	
	comp=Z,427nm,21.7s,baz=316,slow=44						
MKAR	Makanchi Array	3.49	355	i PN	Pn	01 06 14.3	+1.9
MKAR				pmax	pmax		
	comp=Z,11nm,0.3s						
TDK	Taldyqorghan	3.52	300	eP	Pb	01 06 21.9	+1.4
	comp=Z,330nm,0.4s						
TDK				eS	Sg	01 07 07.1	-4.0
	comp=Z,1µm,0.5s						
MAKZ	Makanchi	3.53	352	⇓Pn	Pn	01 06 15.0	+2.1
	comp=Z,11nm,0.5s						
MAKZ				⇓Pg	Pg	01 06 30.2	+4.6
	comp=Z,143nm,0.5s						
MAKZ				⇓Lg	Lg	01 07 08.5	
	comp=Z,172nm,0.6s						
MAKZ	Makanchi	3.53	352	ePn	Pn	01 06 15.3	+2.4
MAKZ	Makanchi	3.53	352	PN	Pn	01 06 15.0	+2.1
MAKZ						01 06 29.5	
MAKZ				pmax	pmax		
	comp=Z,75nm,0.5s						
ARXS	Arharly	3.65	286	eP	Pb	01 06 22.8	+0.2
	comp=Z,72nm,0.7s						
ARXS				eS	Sb	01 07 09.9	+3.0
	comp=Z,563nm,0.5s						
WMQ	Urumqi	3.66	80	Pn	Pn	01 06 17.5	+2.7
WMQ				Sn	Sn	01 06 57.6	-0.5
WMQ				Sg	Sb	01 07 09.3	+2.0
WMQ				smax	smax		
	comp=Z,1µm,0.5s						
WMQ				smax	smax		
	comp=Z,2µm,0.5s						
WMQ				LR	LR		
	comp=Z,440nm,15.3s						
WMQ				LR	LR		
	comp=Z,280nm,14.3s						
KOTS	Kotyrbulak	4.08	271	eP	Pb	01 06 32.2	+2.1
	comp=Z,113nm,0.4s						
KOTS				eS	Sg	01 07 24.7	-4.5
	comp=Z,1µm,0.5s						
MDOK	Medeo	4.14	270	eP	Pg	01 06 34.6	-2.7
	comp=Z,51nm,0.4s						
MDOK				eS	Sg	01 07 28.7	-2.2
	comp=Z,431nm,0.8s						
CHKK	Chushkaly	4.19	279	eP	Pg	01 06 35.2	-3.1
	comp=Z,35nm,0.6s						
CHKK				eS	Sg	01 07 32.0	-0.5
	comp=Z,485nm,0.5s						
KNDC	Almaty	4.19	271	⇑Pn	Pn	01 06 25.0	+2.9
	comp=Z,27nm,0.3s						
KNDC				⇑Pg	Pb	01 06 34.7	+2.8
	comp=Z,153nm,0.6s						
KNDC				⇓Lg	Lg	01 07 29.5	
	comp=Z,946nm,0.8s						
TNSS	Tian-Shan	4.22	268	eP	Pb	01 06 35.6	+2.9
	comp=Z,50nm,0.3s						
TNSS				eS	Sg	01 07 31.0	-2.6
	comp=Z,177nm,0.7s						
AAA	Alma-Ata	4.23	271	eP	Pg	01 06 36.0	-3.0
	comp=Z,84nm,0.4s						
AAA				eS	Sg	01 07 32.8	-1.0
	comp=Z,293nm,0.3s						
KTBS	Karatobe	4.40	277	eP	Pg	01 06 40.0	-2.3
	comp=Z,4.8nm,0.1s						
KTBS				eS	Sg	01 07 37.9	-1.4
	comp=Z,997nm,0.7s						
ZSN	Zaisan	4.41	19	eP	Pb	01 06 37.8	+2.3
	comp=Z,60nm,0.4s						
ZSN				eS	Sg	01 07 34.3	-5.1
	comp=Z,864nm,0.6s						
IZV	Izvestkoviy	4.46	268	eP	Pb	01 06 39.8	+3.1
	comp=Z,125nm,0.6s						
IZV				eS	Sg	01 07 37.9	-3.5
	comp=Z,770nm,0.5s						
MTBS	Maitube	4.59	270	⇓iP	Pb	01 06 42.0	+3.2
	comp=Z,92nm,0.4s						
MTBS				⇑iS	Sg	01 07 43.4	-2.0
	comp=Z,354nm,0.3s						
KUU	Kurty	4.66	279	eP	Pb	01 06 41.6	+1.8
	comp=Z,27nm,0.7s						
KUU				eS	Sg	01 07 42.9	-4.7
	comp=Z,432nm,0.6s						
ULHL	Ulahol	4.88	260	P	Pn	01 06 35.1	+3.5
	SNR=11						
KST	Kastek	4.94	269	eP	Pg	01 06 49.6	-3.0
	comp=Z,61nm,0.4s						
KST				eS	Sg	01 07 55.0	-1.5
	comp=Z,336nm,1.1s						
DGS	Degeres	5.06	272	eP	Pb	01 06 50.8	+4.0
	comp=Z,46nm,0.4s						
DGS				eS	Sg	01 07 56.3	-4.2
	comp=Z,565nm,0.7s						
TKM2	Tokmak 2	5.22	268	⇓Pn	Pn	01 06 38.3	+1.9
	comp=Z,6.2nm,0.5s						
TKM2				⇑Pg	Pg	01 07 02.1	+4.1
	comp=Z,23nm,0.5s						
TKM2				⇑Lg	Lg	01 08 03.9	
	comp=Z,258nm,0.6s						
TKM2	Tokmak 2	5.22	268	P	Pn	01 06 39.4	+3.0
	SNR=21						
TKM2	Tokmak 2	5.22	268	PN	Pn	01 06 38.2	+1.9
TKM2						01 07 01.2	
TKM2				pmax	pmax		
	comp=Z,35nm,0.7s						
KZA	Kyzart	5.63	260	P	Pn	01 06 45.9	+3.7
	SNR=15						
KBK	Karagaybulak	5.73	266	P	Pn	01 06 47.0	+3.7
	SNR=7.2						
CHMS	Chumysh	5.83	270	P	Pn	01 06 47.9	+3.3
	SNR=11						
FRU	Bishkek	5.94	268	ePN	Pn	01 06 50.0	+3.9
FRU				eS	Sg	01 08 24.0	-4.8
FRU				smax	smax		
	comp=N,630nm,2.0s						
USP	Ospenovka	5.99	272	P	Pn	01 06 49.9	+3.1
	SNR=14						
AAK	Ala-Archa	6.06	266	Pn	Pn	01 06 50.0	+2.1
	comp=N,0.7nm,0.3s,baz=98,slow=7.1,SNR=5.0						
AAK				Lg	Lg	01 08 23.5	
	baz=90,slow=3.0,SNR=2.5						
AAK				LR	LR	01 09 38.5	
	comp=N,91nm,20.4s,baz=66,slow=43						
AAK	Ala-Archa	6.06	266	⇓Pg	Pg	01 07 13.1	-1.0
	comp=N,30nm,0.6s						
AAK				⇑Lg	Lg	01 08 25.4	
	comp=N,148nm,0.8s						
AAK	Ala-Archa	6.06	266	ePn	Pn	01 06 50.9	+3.1
AAK				Lg	Lg	01 08 23.5	
AAK	Ala-Archa	6.06	266	PN	Pn	01 06 50.0	+2.1
AAK				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSH	Kashi	6.33	235	Pn	Pb	01 07 02.8	-5.5
KSH				Sn	Sb	01 08 19.3	-4.7
KSH				smax	smax		
	comp=Z,700nm,1.5s						
KSH				smax	smax		
	comp=Z,280nm,0.7s						
BTLS	Baital	6.46	288	eP	Pg	01 07 17.1	-4.6
	comp=Z,28nm,0.5s						
BTLS				eS	Sg	01 08 43.2	-2.2
	comp=Z,56nm,0.6s						
EKS2	Erkin-Say	6.58	267	P	Pn	01 06 57.7	+2.7
	SNR=8.0						
MRKS	Merke	6.97	269	eP	Pg	01 07 26.5	-5.0
	comp=Z,34nm,0.6s						
MRKS				⇓iS	Sg	01 08 57.8	-3.9
	comp=Z,50nm,0.6s						
DGZ	Jazzator, Alta	7.17	25	i PN	Pn	01 07 04.8	+1.8
MNAS	Manas	7.54	267	⇑Pn	Pn	01 07 10.5	+2.4
	comp=Z,1.5nm,0.5s						
MNAS				⇑Pg	Pg	01 07 40.6	-1.8
	comp=Z,9.0nm,0.9s						
MNAS				⇑Lg	Lg	01 09 15.6	
	comp=Z,35nm,0.6s						
MNAS	Manas	7.54	267	P	Pn	01 07 10.5	+2.4
MNAS				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MNAS				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SFK	Sufi-Kurgan	7.64	248	⇑Pg	Pg	01 07 43.2	-1.1
	comp=Z,8.6nm,0.7s						
SFK				⇓Lg	Lg	01 09 27.5	
	comp=Z,56nm,1.0s						
KURBB	Kurchatov Arra	7.85	340	Pn	Pn	01 07 12.6	+0.5
	comp=Z,2.4nm,0.3s,baz=164,slow=13,SNR=173						
KURBB				Sn	Sn	01 08 39.9	-1.0
	comp=Z,2.5nm,0.3s,baz=148,slow=19,SNR=7.9						
KURBB				Lg	Lg	01 09 26.4	
	comp=Z,4.8nm,0.3s,baz=167,slow=30,SNR=6.7						
KURBB	Kurchatov Arra	7.85	340	⇑Pn	Pn	01 07 13.3	+1.2
	comp=Z,73nm,0.5s						
KURBB				⇑Sn	Sn	01 08 40.6	-0.4
	comp=Z,175nm,0.7s						
KURBB				⇑Lg	Lg	01 09 27.0	
	comp=Z,202nm,0.7s						
KURK	Kurchatov	7.91	341	⇓Pn	Pn	01 07 13.3	+0.3
	comp=Z,20nm,0.4s						
KURK				⇓Sn	Sn	01 08 40.9	-1.7
	comp=Z,104nm,0.7s						
KURK				⇑Lg	Lg	01 09 26.7	
	comp=Z,186nm,0.7s						
KURK	Kurchatov	7.91	341	ePn	Pn	01 07 13.5	+0.5
KURK				eSn	Sn	01 08 40.9	-1.7
KURK				Lg	Lg	01 09 26.4	
KURK	Kurchatov	7.91	341	i P	Pn	01 07 13.2	+0.2
KK31	Karatay Array	8.91	273	⇓Pn	Pn	01 07 29.6	+2.8
	comp=Z,0.4nm,0.5s,baz=78,slow=10,SNR=18						
KK31				⇑Lg	Lg	01 10 03.8	
	comp=Z,26nm,0.7s,baz=80,slow=27,SNR=5.1						
KK31	Karatay Array	8.91	273	ePn	Pn	01 07 30.3	+3.5
KK31	Karatay Array	8.91	273	i P	Pn	01 07 29.6	+2.8
KK31				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KKAR	Karatay Array	8.91	273	ePn	Pn	01 07 30.3	+3.5
KKAR	Karatay Array	8.91	273	eP	Pn	01 07 30.3	+3.5
ZAA0	Zalesovo Array	10.73	7	ePn	Pn	01 07 51.4	-0.2
ZALV	Zalesovo Beam	10.73	7	Pn	Pn	01 07 51.1	-0.5
	comp=Z,3.7nm,0.3s,baz=186,slow=14,SNR=65						
ZALV				Sn	Sn	01 09 45.6	-6.2
	comp=Z,3.5nm,0.3s,baz=196,slow=21,SNR=4.9						
ZALV				Lg	Lg	01 10 54.9	
	comp=Z,2.3nm,0.3s,baz=198,slow=26,SNR=5.4						
ZALV				LR	LR	01 12 10.9	
	comp=Z,147nm,20.3s,baz=291,slow=38						
ZALV	Zalesovo Beam	10.73	7	ePn	Pn	01 07 52.1	+0.5
ZALV				Sn	Sn	01 09 45.6	-6.2
ZALV				Lg	Lg	01 10 54.9	
HVS	Khovu-Aksy	10.81	40	i P	Pn	01 07 54.4	+1.5
HVS				pmax	pmax		
	comp=Z,11nm,0.6s						
NVS	Novosibirsk	11.54	2	eP	Pn	01 08 04.3	+1.6
NVS				e		01 10 11.2	
CHCP	Chirah Chowk	12.14	221	P	Pn	01 08 12.6	+1.5
CHCP				S	Sn	01 10 25.0	-1.6
NIL	Nilore	12.16	221	ePn	Pn	01 08 12.4	+1.1
NIL				eSn	Sn	01 10 22.2	-4.7
NIL	Nilore	12.16	221	eP	Pn	01 08 12.4	+1.1
NIL				e		01 10 22.2	
CEP	Cherat	12.69	225	P	Pn	01 08 20.4	+1.8
BVA0	Borovoye Array	12.71	324	⇑Pn	Pn	01 08 18.4	-0.3
	comp=Z,5.5nm,0.8s,baz=136,slow=17,SNR=34						
BVA0				⇓Sn	Sn	01 10 35.2	-4.9
	comp=Z,5.4nm,0.7s,baz=125,slow=22,SNR=5.9						
BVA0				⇓Lg	Lg	01 11 57.9	
	comp=Z,108nm,1.0s						
BVA0	Borovoye Array	12.71	324	i P	Pn	01 08 18.3	-0.4
BVA0				i		01 10 35.2	
BVA0				pmax	pmax		
	comp=Z,7.0nm,0.7s						
BVA0				smax	smax		
	comp=N,14nm,1.0s						
BVAR	Borovoye Array	12.71	324	Pn	Pn	01 08 18.7	0.0
	comp=N,0.6nm,0.3s,baz=138,slow=14,SNR=19						
BVAR				Sn	Sn	01 10 36.0	-4.1
	comp=N,1.0nm,0.3s,baz=129,slow=25,SNR=5.4						
BVAR				Lg	Lg	01 11 57.7	
	comp=N,1.1nm,0.3s,baz=119,slow=27,SNR=4.1						
BRVK	Borovoye	12.78	324	ePn	Pn	01 08 18.7	-0.9
BRVK				eSn	Sn	01 10 36.6	-5.2
BRVK	Borovoye	12.78	324	ceP	Pn	01 08 19.9	+0.3
BRVK				pmax	pmax		
	comp=Z,19nm,0.8s						
GTA	Gaotai	13.43	101	eP	Pn	01 08 27.8	-0.9
GTA				pP	P	01 08 35.6	-2.6
GTA				sP		01 08 39.4	
GTA				S	Sn	01 10 54.0	-4.1
GTA				sS	S	01 11 06.1	-16
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,49nm,5.6s						
GTA				LR	LR		
	comp=Z,220nm,11.7s						
GTA				LR	LR		
	comp=Z,160nm,12.1s						
GTA				LR	LR		
	comp=Z,150nm,11.7s						
KBL	Kabul	13.77	235	ePn	Pn	01 08 37.0	+3.6
KBL	Kabul	13.77	235	eP	Pn	01 08 37.0	+3.6
SARP	Sargodha	13.87	218	P	Pn	01 08 32.2	-2.4
KRAR	Krasnoyarsk	14.29	24	i P	Pn	01 08 40.6	+0.4
MOY	Mondy	14.89	50	eP	P	01 08 56.0	+1.7
MOY				pmax	pmax		
	comp=Z,17nm,3.4s						
DANN	Dangsing	14.96	176	eP	P	01 08 59.0	+3.6
	comp=Z,33nm,0.7s						
LSA	Lhasa	15.18	151	ePn	Pn	01 08 53.0	+0.1
	comp=Z,17nm,0.9s						
LSA	Lhasa	15.18	151	eP	Pn	01 08 53.0	+0.1
LSA				pmax	pmax		
	comp=Z,17nm,0.9s						
GKN	Gorkha	15.36	174	eP	P	01 09 00.7	+0.9
	comp=Z,53nm,0.5s						
GUN	Gumba	15.59	169	eP	Pn	01 08 58.0	-0.1
	comp=Z,34nm,0.5s						
KKN	Kakani	15.63	172	eP	Pn	01 09 00.9	+2.3
	comp=Z,39nm,0.6s						
ZAK	Zakamensk	15.72	56	eP	Pn	01 08 58.7	-0.8
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.1s						
DMN	Daman	15.79	172	eP	P	01 09 04.3	-0.4
	comp=Z,23nm,0.6s						
PKIN	Phulchoki	15.86	171	eP	Pn	01 09 03.2	+1.6
PKIN	Phulchoki	15.86	171	eP	P	01 09 04.7	-0.7
	comp=Z,38nm,0.6s						
JIRN	Jiri	15.88	169	eP	Pn	01 09 01.8	-0.1
	comp=Z,34nm,0.6s						
TLY	Talaya	16.39	52	Lg	Lg	01 13 55.9	
	comp=Z,0.0nm,0.3s,baz=242,slow=18,SNR=2.1						
TLY				LR	LR	01 15 50.1	
	comp=Z,132nm,18.6s,baz=240,slow=39						
TLY	Talaya	16.39	52	ePn	Pn	01 09 08.4	+0.3
	comp=Z,2.3nm,0.7s						
TLY				Lg	Lg	01 13 55.9	
TLY	Talaya	16.39	52	eP	P	01 09 15.4	+4.5
TLY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TLY				MLR	MLR		
	comp=Z,95nm,15.0s						
RAMN	Ramite	16.63	168	eP	Pn	01 09 11.3	-0.2
AB31	Akbulak array	16.79	299	⇑P	Pn	01 09 11.2	-1.9
	comp=Z,4.8nm,0.7s,baz=102,slow=12,SNR=41						
AB31	Akbulak array	16.79	299	P	Pn	01 09 11.2	-1.9
AB31				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ODAN	Odare	16.86	165	eP	Pn	01 09 13.4	-0.9
	comp=Z,42nm,0.7s						
SONM	Songino Array	17.17	67	P	Pn	01 09 17.4	-0.6
	comp=Z,1.0nm,0.3s,baz=267,slow=12,SNR=35						
SONM				Lg	Lg	01 14 16.4	

	comp=Z,0.1nm,0.3s,baz=265,slow=27,SNR=3.3						
SONM				LR	LR	01 15 41.4	
	comp=Z,48nm,19.1s,baz=269,slow=36						
SONA1	**Songino Array**	**17.17**	**66**	*e*Pn	**P**	**01 09 18.8**	**-0.9**
ULN	**Ulaanbaatar**	**17.61**	**67**	*e*Pn	**P**	**01 09 24.0**	**-0.6**
	comp=Z,10nm,0.7s						
ULN	**Ulaanbaatar**	**17.61**	**67**	c*e*P	**Pn**	**01 09 23.4**	**-0.2**
ULN				pmax	pmax		
	comp=Z,10.0nm,0.7s						
LZH	**Lanzhou**	**17.77**	**107**	*e*P	**P**	**01 09 27.3**	**+0.9**
LZH				pP	sP	01 09 31.3	+0.8
LZH				sP	pP	01 09 34.5	+5.3
LZH				pmax	pmax		
	comp=Z,21nm,1.1s						
AKTO	**Aktyubinsk**	**18.27**	**302**	P	**P**	**01 09 31.8**	**+0.2**
	comp=Z,0.4nm,0.3s,baz=108,slow=13,SNR=6.1						
AKTO				Lg	Lg	01 14 59.0	
	comp=Z,0.1nm,0.3s,baz=96,slow=19,SNR=2.1						
AKTO				LR	LR	01 17 07.9	
	comp=Z,82nm,18.7s,baz=118,slow=39						
AKTO	**Aktyubinsk**	**18.27**	**302**	⇑P	**Pn**	**01 09 30.9**	**-0.6**
	comp=Z,6.3nm,0.7s						
GEYT	**Alibeck**	**19.39**	**262**	P	**Pn**	**01 09 45.5**	**+0.3**
	comp=Z,0.1nm,0.3s,baz=90,slow=8.6,SNR=3.2						
GEYT				LR	LR	01 18 07.7	
	comp=Z,76nm,18.1s,baz=225,slow=40						
GYA0B	**ALIBECK ARRAY**	**19.39**	**262**	*e*P	**Pn**	**01 09 47.3**	**+2.0**
	comp=Z,4.6nm,0.7s						
SVE	**Sverdlovsk**	**19.46**	**322**	*e*P	**Pn**	**01 09 46.3**	**+0.4**
SVE				pmax	pmax		
	comp=Z,15nm,1.0s						
ARU	**Arti**	**20.22**	**319**	P	Pn	01 09 54.0	-0.8
	comp=Z,7.4nm,0.7s,baz=132,slow=6.1,SNR=16						
ARU				LR	LR	01 18 10.3	
	comp=Z,73nm,19.1s,baz=105,slow=38						
ARU	**Arti**	**20.22**	**319**	*e*P	Pn	01 09 53.9	-1.0
	comp=Z,13nm,0.6s						
ARU	**Arti**	**20.22**	**319**	c *i*P	Pn	01 09 53.8	-1.0
ARU				*PP	sP	01 10 04.3	+7.3
ARU						01 10 11.0	
ARU				S	**S**	**01 13 39.6**	**+0.1**
ARU				SS	**SnSn**	**01 13 59.1**	**+2.5**
ARU				pmax	pmax		
	comp=Z,37nm,2.5s						
CD2	**Chengdu**	**20.79**	**120**	*e*P	**P**	**01 10 00.1**	**+0.7**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC	**Hu-ho-hao-te**	**21.52**	**87**	*e*P	**P**	**01 10 07.4**	**+0.2**
HHC				PP	**PnPn**	**01 10 35.3**	**+8.0**
HHC				S	**S**	**01 13 58.3**	**-7.4**
HHC				SS	**SnSn**	**01 14 37.1**	**+8.3**
HHC				pmax	pmax		
	comp=Z,27nm,1.0s						
HHC				pmax	pmax		
	comp=Z,87nm,5.4s						
XAN	**Xi’an**	**22.39**	**106**	P	**P**	**01 10 17.5**	**+0.9**
XAN				pP	sP	01 10 22.5	+1.8
XAN				sP	pP	01 10 26.0	+6.6
XAN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,90nm,4.9s						
BOD	**Bodaibo**	**24.33**	**42**	*e*P	**P**	**01 10 35.9**	**+0.3**
BOD				pmax	pmax		
	comp=Z,10.0nm,1.8s						
KMI	**Kunming**	**24.46**	**131**	P	**P**	**01 10 39.0**	**+1.6**
KMI				pP	sP	01 10 49.9	+8.2
KMI				pmax	pmax		
	comp=Z,9.0nm,0.5s						
KMI				pmax	pmax		
	comp=Z,97nm,4.1s						
GYA	**Guiyang**	**25.73**	**123**	*e*P	**P**	**01 10 50.3**	**+1.5**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CMAR	**Chiang Mai Arr**	**28.32**	**146**	P	**P**	**01 11 12.4**	**+0.4**
	comp=Z,2.4nm,0.6s,baz=322,slow=10.0,SNR=9.9						
CMAR				LR	LR	01 24 13.0	
	comp=Z,24nm,19.9s,baz=225,slow=40						
VRH	**Novokhopyorsk**	**28.60**	**300**	*e*P	**P**	**01 11 13.7**	**-0.5**
VRH				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KBZ	**Khabaz**	**28.68**	**285**	LR	LR	01 23 53.4	
	comp=Z,29nm,19.5s,baz=98,slow=39						
KVAR	**Kislovodsk Arr**	**28.77**	**285**	LR	LR	01 24 19.4	
	comp=Z,24nm,20.2s,baz=270,slow=40						
KIV	**Kislovodsk**	**28.78**	**285**	*e*P	**P**	**01 11 16.4**	**+0.4**
KIV				*e*		01 12 11.1	
KIV				pmax	pmax		
	comp=Z,3.0nm,0.9s						
VORD	**Divnogorie**	**30.14**	**300**	*e*P	**P**	**01 11 29.9**	**+2.1**
VORD				pmax	pmax		
	comp=Z,2.0nm,0.5s						
VSR	**Storozhevoye**	**30.21**	**301**	*e*P	**P**	**01 11 28.1**	**-0.3**
VSR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
LPSR	**Galich’ya Gora**	**30.33**	**303**	*e*P	**P**	**01 11 29.7**	**+0.2**
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
NJ2	**Nanjing**	**30.52**	**99**	*e*P	**P**	**01 11 30.8**	**-0.5**
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
CN2	**Changchun**	**30.73**	**74**	*e*P	**P**	**01 11 33.8**	**+0.7**
CN2				*e*sP	sP	01 11 40.8	+3.4
CN2				*e*S	**S**	**01 16 34.1**	**-1.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,220nm,10.0s						
CN2				LR	LR		
	comp=Z,180nm,10.0s						
CN2				LR	LR		
	comp=Z,120nm,10.0s						
KLMR	**Klimovskoe**	**31.06**	**320**	*e*P	**P**	**01 11 34.8**	**-1.1**
KLMR				pmax	pmax		
	comp=Z,13nm,1.0s						
KLMR	**Klimovskoe**	**31.06**	**320**	*e*P	**P**	**01 11 34.9**	**-1.0**
KLMR				AMP		01 11 42.2	
	comp=Z,13nm,1.0s						
KLMR				AMP		02 04 20.3	
	comp=Z,25nm,1.3s						
OBN	**Obninsk**	**31.78**	**308**	*e*P	**P**	**01 11 42.5**	**+0.3**
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ANN	**Anapa**	**32.25**	**289**	*e*P	P	01 11 39.3	-7.2
ANN				pmax	pmax		
	comp=Z,23nm,1.3s						
KLR	**Kul’dur**	**33.92**	**63**	P	**P**	**01 12 00.9**	**-0.1**
	comp=Z,1.0nm,0.8s,baz=278,slow=8.9,SNR=43						
KLR	**Kul’dur**	**33.92**	**63**	c*e*P	**P**	**01 11 59.8**	**-1.2**
KSRS	**Korea Array**	**34.60**	**84**	LR	LR	01 27 57.3	
	comp=Z,20nm,19.6s,baz=240,slow=39						
USRK	**Ussuriysk Ar.**	**35.18**	**71**	P	**P**	**01 12 12.4**	**+0.4**
	comp=Z,3.6nm,0.8s,baz=282,slow=11						
USRK				LR	LR	01 27 17.1	
	comp=Z,38nm,19.7s,baz=236,slow=38						
RAYN	**Ar Rayn**	**36.40**	**249**	*e*P	**P**	**01 12 23.3**	**+0.5**
	comp=Z,11nm,1.5s						
RAYN	**Ar Rayn**	**36.40**	**249**	P	**P**	**01 12 23.2**	**+0.5**
RAYN				pmax	pmax		
	comp=Z,11nm,1.5s						
BRTR	**Keskin Array B**	**36.49**	**282**	P	**P**	**01 12 24.6**	**+1.2**
	comp=Z,0.8nm,1.0s,baz=50,slow=2.5,SNR=4.9						
BRTR	**Keskin Array B**	**36.49**	**282**	c*e*P	**P**	**01 12 24.8**	**+1.3**
AKASG	**Malin Array Be**	**36.51**	**301**	P	**P**	**01 12 23.2**	**-0.1**
	comp=Z,1.9nm,0.6s,baz=72,slow=7.5,SNR=3.7						
KIEV	**Kiev**	**36.52**	**301**	c*e*P	**P**	**01 12 22.6**	**-0.8**
KIEV				pmax	pmax		
	comp=Z,3.0nm,0.8s						
NACB	**Ninganchiao**	**37.13**	**108**	*e*P	**P**	**01 12 29.4**	**+0.5**
	comp=Z,20nm,0.8s						
FIA1	**FINESS Array S**	**37.59**	**319**	*e*P	**P**	**01 12 33.2**	**+0.9**
FINES	**FINESS Array B**	**37.59**	**319**	P	**P**	**01 12 32.4**	**+0.1**
	comp=Z,1.0nm,0.6s,baz=96,slow=9.9,SNR=8.4						
FINES				LR	LR	01 28 41.5	
	comp=Z,45nm,19.8s,baz=88,slow=37						
CSS	**Mathiatis**	**38.72**	**275**	*e*P	**P**	**01 12 42.7**	**+0.5**
	comp=Z,6.0nm,0.9s						
HARR	**Harsova**	**38.80**	**292**	⇑*i*P	**P**	**01 12 45.2**	**+2.5**
HARR	**Harsova**	**38.80**	**292**	⇑P	**P**	**01 12 45.2**	**+2.5**
ARCES	**ARCESS Array B**	**38.83**	**332**	P	**P**	**01 12 43.5**	**+0.7**
	comp=Z,4.2nm,0.8s,baz=85,slow=10.0,SNR=7.2						
TESR	**Tescani**	**39.12**	**295**	⇓*i*P	P	01 12 52.1	+6.7
PLOR	**Plostina**	**39.31**	**294**	⇓*i*P	P	01 12 54.4	+7.3
PLOR	**Plostina**	**39.31**	**294**	⇓P	P	01 12 54.4	+7.3
BIZ	**Bicaz**	**39.36**	**296**	⇑*i*P	**P**	**01 12 47.3**	**-0.2**
BURAR	**Bucovina Array**	**39.76**	**297**	⇑*i*P	**P**	**01 12 51.1**	**+0.2**
BURAR	**Bucovina Array**	**39.76**	**297**	⇑P	**P**	**01 12 51.1**	**+0.2**
BUR04	**Bucovina Ar. S**	**39.76**	**297**	*e*P	**P**	**01 12 51.2**	**+0.3**
MLR	**Muntele Rosu**	**39.89**	**293**	⇑*i*P	P	01 12 58.3	+6.3
MLR	**Muntele Rosu**	**39.89**	**293**	⇑P	P	01 12 58.3	+6.3
KWP	**Kalwaria Pacla**	**40.83**	**301**	P	**P**	**01 13 00.8**	**+1.2**
KWP				pmax	pmax		
	comp=Z,150nm,1.2s						
TRPA	**Tarpa**	**41.34**	**298**	⇑*i*P	**P**	**01 13 04.7**	**+0.9**
LOT	**Lotru**	**41.35**	**294**	⇑*i*P	**P**	**01 13 04.7**	**+0.6**
OJC	**Ojcow**	**42.49**	**302**	*e*P	**P**	**01 13 13.6**	**+0.4**
	comp=Z,12nm,1.2s						
OJC	**Ojcow**	**42.49**	**302**	*e*P	**P**	**01 13 13.6**	**+0.4**
OJC				pmax	pmax		
	comp=Z,12nm,1.2s						
VTS	**Vitosha**	**42.73**	**290**	*e*P	**P**	**01 13 17.0**	**+1.6**
	comp=Z,5.0nm,1.4s						
VTS	**Vitosha**	**42.73**	**290**	*e*P	**P**	**01 13 17.0**	**+1.6**
VTS				pmax	pmax		
	comp=Z,5.0nm,1.4s						
MDVR	**Moldovita**	**42.95**	**294**	⇑*i*P	P	01 13 11.0	-6.1
SPITS	**Spitsbergen Ar**	**43.17**	**344**	LR	LR	01 35 41.2	
	comp=Z,32nm,19.9s,baz=20,slow=42						
HFS	**Hagfors**	**43.73**	**317**	P	**P**	**01 13 23.6**	**+0.5**
	comp=Z,1.6nm,0.5s,baz=99,slow=9.5,SNR=10						
MORC	**Moravsky Berou**	**44.01**	**302**	*e*P	**P**	**01 13 26.8**	**+1.2**
	comp=Z,21nm,2.0s						
MORC	**Moravsky Berou**	**44.01**	**302**	*e*P	**P**	**01 13 26.8**	**+1.2**
MORC				pmax	pmax		
	comp=Z,21nm,2.0s						
KRLC	**Kraliky**	**44.39**	**303**	*e*P	P	01 13 36.3	+7.7
KRLC	**Kraliky**	**44.39**	**303**	*e*P	P	01 13 36.3	+7.7
NC405	**NORSAR Array S**	**44.52**	**319**	*e*P	**P**	**01 13 29.9**	**+0.5**
DPC	**Dobruska-Polom**	**44.59**	**303**	*e*P	**P**	**01 13 31.6**	**+1.5**
DPC				*e*pP	**sP**	**01 13 36.7**	**+2.2**
DPC	**Dobruska-Polom**	**44.59**	**303**	*e*P	**P**	**01 13 31.6**	**+1.5**
DPC				*e*		01 13 36.7	
NC303	**NORSAR Array S**	**44.66**	**319**	*e*P	**P**	**01 13 31.1**	**+0.6**
NC602	**NORSAR Array S**	**44.67**	**319**	*e*P	**P**	**01 13 31.2**	**+0.6**
NB2	**NORSAR Subarra**	**44.77**	**319**	P	**P**	**01 13 31.4**	**-0.1**
	comp=Z,2.9nm,0.6s,baz=79,slow=8.6						
NOA	**NORSAR Array B**	**44.77**	**319**	P	**P**	**01 13 31.6**	**+0.2**
	comp=Z,2.1nm,0.5s,baz=80,slow=8.0,SNR=11						
NOA				LR	LR	01 32 55.4	
	comp=Z,44nm,19.8s,baz=85,slow=37						
NC204	**NORSAR Array S**	**44.94**	**319**	*e*P	**P**	**01 13 33.2**	**+0.3**
NAO01	**NORSAR Array S**	**44.97**	**319**	*e*P	**P**	**01 13 33.7**	**+0.7**
NBO00	**NORSAR Array S**	**44.98**	**319**	*e*P	**P**	**01 13 34.1**	**+1.0**
PRU	**Pruhonice**	**45.79**	**303**	*e*P	P	01 13 44.8	+5.2
PRU	**Pruhonice**	**45.79**	**303**	*e*P	P	01 13 44.8	+5.2
BRG	**Berggiesshubel**	**45.86**	**305**	*e*P	P	01 13 47.3	+7.1
	comp=Z,2.7nm,0.9s						
BRG	**Berggiesshubel**	**45.86**	**305**	*e*P	P	01 13 47.3	+7.1
BRG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CLL	**Collm**	**46.29**	**305**	*i* P	**P**	**01 13 44.0**	**+0.5**
	comp=Z,3.0nm,0.7s						
CLL				*i* sP	**sP**	**01 13 49.7**	**+1.8**
CLL				*i*		01 13 53.2	
CLL				*e*PP	**PP**	**01 15 30.0**	**-1.9**
CLL	**Collm**	**46.29**	**305**	*i* P	**P**	**01 13 44.0**	**+0.5**
CLL				*i*		01 13 49.7	
CLL				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SOKA	**Soboth**	**46.63**	**299**	*i* P	P	01 13 51.5	+5.0
	comp=Z,2.4nm,0.8s						
KHC	**Kasperske Hory**	**46.67**	**302**	*e*P	**P**	**01 13 49.9**	**+3.3**
KHC				*e*pP	**sP**	**01 13 53.5**	**+2.5**
KHC	**Kasperske Hory**	**46.67**	**302**	*e*P	**P**	**01 13 49.9**	**+3.3**
KHC				*e*		01 13 53.5	
GERES	**GERESS Array B**	**46.69**	**302**	P	**P**	**01 13 48.1**	**+1.2**
	comp=Z,0.4nm,0.8s,baz=65,slow=7.8,SNR=3.7						
GEA0	**GERESS Array S**	**46.69**	**302**	*e*P	**P**	**01 13 48.3**	**+1.4**
PETK	**Petropavlovsk-**	**48.75**	**51**	LR	LR	01 35 06.7	
	comp=Z,36nm,20.4s,baz=80,slow=37						
CUC	**Castrocucco**	**48.88**	**290**	*e*P	**P**	**01 14 05.4**	**+1.6**
	comp=Z,3.8nm,0.8s						
RETA	**Reutte**	**49.02**	**301**	*i* pP	pP	01 14 06.7	-1.3
	comp=Z,0.9nm,0.3s						
FETA	**Feichten**	**49.23**	**301**	*e*P	**P**	**01 14 10.8**	**+4.2**
	comp=Z,1.5nm,0.6s						
BNI	**Bardonecchia**	**52.62**	**300**	*e*P	**P**	**01 14 32.1**	**-0.1**
	comp=Z,6.5nm,1.0s						
BNI	**Bardonecchia**	**52.62**	**300**	*e*P	**P**	**01 14 32.1**	**-0.1**
BNI				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ES19	**SONSECA Array**	**62.08**	**299**	*e*P	**P**	**01 15 39.3**	**+0.4**
ESDC	**Sonseca Array**	**62.13**	**299**	P	**P**	**01 15 39.6**	**+0.3**
	comp=Z,0.3nm,0.4s,baz=52,slow=6.7,SNR=8.5						
ESLA	**Sonseca Array**	**62.13**	**299**	*e*P	**P**	**01 15 40.1**	**+0.8**
	comp=Z,17nm,1.8s						
COLD	**Coldfoot**	**62.72**	**20**	*e*P	**P**	**01 15 43.3**	**+0.6**
	comp=Z,6.7nm,0.9s						
MLY	**Manley**	**64.25**	**22**	*e*P	**P**	**01 15 53.3**	**+0.4**
	comp=Z,4.7nm,1.1s						
BPAW	**Bear Paw Mtn.**	**64.89**	**23**	*e*P	**P**	**01 15 56.9**	**-0.2**
	comp=Z,3.8nm,0.7s						
CAST	**Castle Rocks**	**65.09**	**24**	*e*P	**P**	**01 15 58.7**	**+0.3**
	comp=Z,5.2nm,1.0s						
INK	**Inuvik**	**65.44**	**14**	P	**P**	**01 16 00.3**	**-0.1**
	comp=Z,1.8nm,0.8s,baz=336,slow=5.9,SNR=3.6						
INK	**Inuvik**	**65.44**	**14**	*e*P	**P**	**01 15 59.9**	**-0.6**
	comp=Z,2.5nm,0.6s						
INK	**Inuvik**	**65.44**	**14**	P	**P**	**01 16 00.3**	**-0.1**
INK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
IL1	**Eielson Array**	**65.49**	**21**	*e*P	**P**	**01 15 59.4**	**-1.5**
ILAR	**Eielson Array**	**65.49**	**21**	P	**P**	**01 16 00.1**	**-0.9**
	comp=Z,1.6nm,0.8s,baz=314,slow=4.8,SNR=13						
ILB	**Eielson Array**	**65.49**	**21**	*e*P	**P**	**01 16 00.5**	**-0.4**
DHY	**Denali Highway**	**66.71**	**22**	*e*P	**P**	**01 16 08.7**	**-0.2**
	comp=Z,5.8nm,0.7s						
SCRK	**Sand Creek**	**66.88**	**20**	*e*P	**P**	**01 16 09.5**	**-0.5**
	comp=Z,3.8nm,0.6s						
YKA	**Yellowknife Ar**	**73.63**	**8**	P	**P**	**01 16 50.4**	**-0.8**
	comp=Z,0.6nm,0.8s,baz=342,slow=6.0,SNR=3.3						
TORD	**Torodi Ar. Bea**	**74.60**	**274**	P	**P**	**01 16 56.1**	**-1.5**
	comp=Z,1.8nm,0.6s,baz=38,slow=5.2						
KOWA	**Kowa**	**77.85**	**278**	P	**P**	**01 17 15.7**	**-0.3**
	comp=Z,1.5nm,0.6s,baz=37,slow=5.1,SNR=5.7						
WRAB	**Tennant Creek**	**78.79**	**131**	*e*P	**P**	**01 17 20.6**	**-0.4**
	comp=Z,2.0nm,0.6s						
WRAB	**Tennant Creek**	**78.79**	**131**	*e*P	**P**	**01 17 20.6**	**-0.4**
WRAB				pmax	pmax		
	comp=Z,2.0nm,0.6s						
WRA	**Warramunga Arr**	**78.79**	**131**	P	**P**	**01 17 20.4**	**-0.6**
	comp=Z,1.7nm,0.6s,baz=333,slow=5.3,SNR=11						
ASAR	**Alice Springs**	**81.58**	**134**	P	**P**	**01 17 35.4**	**-0.6**
	comp=Z,1.4nm,0.6s,baz=325,slow=5.2,SNR=16						
HWUT	**Hardware Ranch**	**94.49**	**11**	*e*P	**P**	**01 18 38.7**	**0.0**
	comp=Z,1.0nm,0.5s						
NVAR	**Mina Array Bea**	**96.43**	**16**	P	**P**	**01 18 47.7**	**0.0**
	comp=Z,0.3nm,0.7s,baz=348,slow=3.6,SNR=3.0						

CNRM ***21*** *01:06:00.9, 35°.69N×4°.50W, h5^{km}, ML2.1*
ISCJB ***21*** *01:06:01.1±0.4, 35°.97N±0°.02×4°.77W±0°.02, h79^{km}±4^{km},*
Error ellipse: s-maj=3.9km s-min=3.0km az=174.9
IGIL ***21*** *01:06:01.6, 35°.97N×4°.66W, h18^{km}, ML2.5*
MDD ***21*** *01:06:02.8±0.4, 35°.89N×4°.67W, h66^{km}±6^{km}, mb3.3/11,*
Error ellipse: s-maj=3.8km s-min=3.2km az=27.0, PRXIMO
CSEM ***21*** *01:06:02.4±0.2, 35°.92N×4°.74W, h60^{km}, mb3.3, Error*
ellipse: s-maj=3.5km s-min=3.4km az=15.0
SFS ***21*** *01:06:03.0, 35°.93N×4°.66W, h0^{km}, ML3.5*
INMG ***21*** *01:06:03.1±1.3, 35°.91N×4°.76W, h50^{km}±6^{km}, ML2.3, Error*
ellipse: s-maj=3.8km s-min=2.5km az=8.0
ISC 21 01:06:00.6±1.2**, 35°.89N**±0°.03×**4°.70W**±0°.02**, h81**^{km}±7^{km}**,**
n142, σ1^{s}65/254**, 5C-2D, Strait of Gibraltar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEUT	**Ceuta**	**0.51**	**270**	P	**Pn**	**01 06 15.9**	**+1.4**
CEUT				S	**Sn**	**01 06 25.4**	**+0.6**
CEUT	**Ceuta**	**0.51**	**270**	P	**Pn**	**01 06 15.9**	**+1.4**
CEUT				S	**Sn**	**01 06 25.4**	**+0.6**
CEU	**Ceuta**	**0.55**	**271**	P	**Pn**	**01 06 14.9**	**+0.1**
CEU				S	**Sn**	**01 06 24.8**	**-0.6**
CEU	**Ceuta**	**0.55**	**271**	P	**Pn**	**01 06 14.9**	**+0.1**
CEU				S	**Sn**	**01 06 24.8**	**-0.6**
ECEU	**Ceuta**	**0.55**	**271**	P	**Pn**	**01 06 17.6**	**+2.7**
	22nm,0.1s,SNR=7.9						
ECEU				S	**Sn**	**01 06 25.4**	**-0.1**
	8.5nm,0.1s,SNR=7.9						
ECEU	**Ceuta**	**0.55**	**271**	P	**Pn**	**01 06 17.6**	**+2.7**
	22nm,0.1s,SNR=7.9						
ECEU				S	**Sn**	**01 06 25.4**	**-0.1**
	8.5nm,0.1s,SNR=7.9						
EMIJ	**Mijas**	**0.68**	**355**	⇑P	**Pn**	**01 06 14.8**	**-1.4**
	2.8nm,0.1s,SNR=18						
EMIJ				S	**Sn**	**01 06 25.1**	**-2.5**
	35nm,0.1s,SNR=7.9						
EMIJ	**Mijas**	**0.68**	**355**	P	**Pn**	**01 06 14.8**	**-1.4**
	2.8nm,0.1s,SNR=18						
EMIJ				S	**Sn**	**01 06 25.1**	**-2.5**
	35nm,0.1s,SNR=7.9						
PVLZ	**Peæn de**	**0.78**	**156**	*e*P	**Pn**	**01 06 16.9**	**-0.3**
PVLZ				*e*S	**Sn**	**01 06 28.1**	**-1.4**
EMAL	**Malaga-Limoner**	**0.90**	**14**	*i* P	**Pn**	**01 06 19.8**	**+1.3**
EMAL				*e*S	**Sn**	**01 06 32.3**	**+0.5**
CHEFC	**Chefchaouen**	**0.94**	**214**	P	**Pn**	**01 06 20.8**	**+1.7**
CHEFC				S	**Sn**	**01 06 31.8**	**-1.0**
ELGU	**Los Guajares,**	**1.30**	**41**	P	**Pn**	**01 06 23.9**	**+0.4**
	5.8nm,0.1s,SNR=7.9						
ELGU				S	**Sn**	**01 06 39.5**	**-1.2**
	21nm,0.2s,SNR=7.9						
ELGU	**Los Guajares,**	**1.30**	**41**	P	**Pn**	**01 06 23.9**	**+0.4**
	5.8nm,0.1s,SNR=7.9						
ELGU				S	**Sn**	**01 06 39.5**	**-1.2**
	21nm,0.2s,SNR=7.9						
EGOR	**Sierra Gorda,**	**1.31**	**21**	P	**Pn**	**01 06 25.7**	**+2.1**
	0.1nm,0.1s,SNR=7.9						
EGOR				S	**Sn**	**01 06 40.4**	**-0.5**
	2.4nm,0.2s,SNR=7.9						
EGOR	**Sierra Gorda,**	**1.31**	**21**	P	**Pn**	**01 06 25.7**	**+2.1**
	0.1nm,0.1s,SNR=7.9						
EGOR				S	**Sn**	**01 06 40.4**	**-0.5**
	2.4nm,0.2s,SNR=7.9						
EALB	**Alboran**	**1.35**	**87**	P	**Pn**	**01 06 24.5**	**+0.5**
	2.6nm,0.1s,SNR=7.9						
EALB				S	**Sn**	**01 06 40.8**	**-0.8**
	1.4nm,0.1s,SNR=7.9						
EALB	**Alboran**	**1.35**	**87**	P	**Pn**	**01 06 24.5**	**+0.5**
	2.6nm,0.1s,SNR=7.9						
EALB				S	**Sn**	**01 06 40.8**	**-0.8**
	1.4nm,0.1s,SNR=7.9						
RSA	**Sarsar**	**1.37**	**223**	P	**Pn**	**01 06 26.0**	**+1.7**
RSA	**Sarsar**	**1.37**	**223**	P	**Pn**	**01 06 26.0**	**+1.7**
EMEL	**Melilla**	**1.53**	**112**	S	**Sn**	**01 06 44.0**	**-1.8**
	18nm,0.1s,SNR=7.9						
EMLI	**Melilla**	**1.54**	**112**	S	**Sn**	**01 06 44.0**	**-1.9**
	18nm,0.1s,SNR=7.9						
EQUE	**Quentar**	**1.66**	**37**	P	**Pn**	**01 06 29.4**	**+1.3**
	0.2nm,0.1s,SNR=7.9						
EQUE				S	**Sn**	**01 06 49.0**	**+0.1**
	0.7nm,0.1s,SNR=7.9						
EQUE	**Quentar**	**1.66**	**37**	P	**Pn**	**01 06 29.4**	**+1.3**
	0.2nm,0.1s,SNR=7.9						
EQUE				S	**Sn**	**01 06 49.0**	**+0.1**
	0.7nm,0.1s,SNR=7.9						
EBER	**Berja**	**1.77**	**55**	P	**Pn**	**01 06 30.8**	**+1.1**
	1.5nm,0.1s,SNR=7.9						
EBER				S	**Sn**	**01 06 51.7**	**0.0**
	2.6nm,0.2s,SNR=7.9						
EBER	**Berja**	**1.77**	**55**	P	**Pn**	**01 06 30.8**	**+1.1**
	1.5nm,0.1s,SNR=7.9						
EBER				S	**Sn**	**01 06 51.7**	**0.0**
	2.6nm,0.2s,SNR=7.9						
SICH	**Sidi Chahed**	**1.85**	**196**	P	**Pn**	**01 06 30.6**	**0.0**
SICH				S	**Sn**	**01 06 52.3**	**-1.1**
HORN	**Hornachuelos**	**2.01**	**347**	P	**Pn**	**01 06 36.6**	**+4.0**
ECAB	**El Cabril**	**2.26**	**345**	P	**Pn**	**01 06 37.5**	**+1.5**
	0.1nm,0.0s,SNR=7.9						
ECAB				S	**Sn**	**01 07 03.0**	**0.0**
	11nm,0.1s,SNR=7.9						
ECAB	**El Cabril**	**2.26**	**345**	P	**Pn**	**01 06 37.5**	**+1.5**
	0.1nm,0.0s,SNR=7.9						
ECAB				S	**Sn**	**01 07 03.0**	**0.0**
	11nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**2.28**	**2**	⇓P	**Pn**	**01 06 38.2**	**+2.0**
	0.6nm,0.1s,SNR=18						
EADA				S	**Sn**	**01 07 03.6**	**+0.1**
	7.6nm,0.1s,SNR=7.9						
EADA	**Adamuz**	**2.28**	**2**	P	**Pn**	**01 06 38.2**	**+2.0**
	0.6nm,0.1s,SNR=18						
EADA				S	**Sn**	**01 07 03.6**	**+0.1**
	7.6nm,0.1s,SNR=7.9						
ENIJ	**Nijar**	**2.28**	**61**	P	**Pn**	**01 06 37.8**	**+1.5**
	0.1nm,0.1s,SNR=7.9						
ENIJ				S	**Sn**	**01 07 02.7**	**-0.8**
	4.1nm,0.4s,SNR=7.9						
ENIJ	**Nijar**	**2.28**	**61**	P	**Pn**	**01 06 37.8**	**+1.5**
	0.1nm,0.1s,SNR=7.9						
ENIJ				S	**Sn**	**01 07 02.7**	**-0.8**
	4.1nm,0.4s,SNR=7.9						
EQES	**Quesada**	**2.31**	**34**	P	**Pn**	**01 06 39.4**	**+2.6**
	1.1nm,0.2s,SNR=7.9						
EQES				S	**Sn**	**01 07 05.9**	**+1.5**
	0.3nm,0.1s,SNR=7.9						
EQES	**Quesada**	**2.31**	**34**	P	**Pn**	**01 06 39.4**	**+2.6**
	1.1nm,0.2s,SNR=7.9						
EQES				S	**Sn**	**01 07 05.9**	**+1.5**
	0.3nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**2.46**	**320**	⇑P	**Pn**	**01 06 39.8**	**+1.2**
	1.8nm,0.1s,SNR=18						
EMIN				S	**Sn**	**01 07 07.1**	**-0.7**
	3.4nm,0.1s,SNR=7.9						
EMIN	**Mina Concepcio**	**2.46**	**320**	P	**Pn**	**01 06 39.8**	**+1.2**
	1.8nm,0.1s,SNR=18						
EMIN				S	**Sn**	**01 07 07.1**	**-0.7**
	3.4nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**2.78**	**307**	⇑P	**Pn**	**01 06 43.9**	**+1.0**
	2.9nm,0.1s,SNR=18						
EGRO				S	**Sn**	**01 07 14.3**	**-1.2**
	5.3nm,0.1s,SNR=7.9						
EGRO	**El Granado**	**2.78**	**307**	P	**Pn**	**01 06 43.9**	**+1.0**
	2.9nm,0.1s,SNR=18						
EGRO				S	**Sn**	**01 07 14.3**	**-1.2**
	5.3nm,0.1s,SNR=7.9						
SESP	**Santiago Espad**	**2.81**	**37**	P	**Pn**	**01 06 45.8**	**+2.2**
	1.0nm,0.1s,SNR=7.9						
SESP	**Santiago Espad**	**2.81**	**37**	P	**Pn**	**01 06 45.8**	**+2.2**
	1.0nm,0.1s,SNR=7.9						
CZD	**Col de Zad**	**2.86**	**186**	P	**Pn**	**01 06 44.0**	**-0.4**
CZD	**Col de Zad**	**2.86**	**186**	P	**Pn**	**01 06 44.0**	**-0.4**
PVAQ	**Vaqueiros**	**2.86**	**303**	*e*P	**Pn**	**01 06 44.7**	**+0.6**
PVAQ				*e*S	**Sn**	**01 07 16.8**	**-0.7**
PVAQ				A	A	01 07 17.7	
	10nm,0.2s						
PVAQ	**Vaqueiros**	**2.86**	**303**	P	**Pn**	**01 06 44.7**	**+0.6**
PVAQ				S	**Sn**	**01 07 16.8**	**-0.7**
	10nm,0.2s						
PVAQ	**Vaqueiros**	**2.86**	**303**	P	**Pn**	**01 06 44.7**	**+0.6**
PVAQ				*e*S	**Sn**	**01 07 16.8**	**-0.7**
PBDV	**Barranco-do-Ve**	**2.94**	**298**	⇑*e*P	**Pn**	**01 06 45.8**	**+0.7**
PBDV				*e*S	**Sn**	**01 07 18.2**	**-1.2**
PBDV				A	A	01 07 21.6	
	3.7nm,0.5s						
PBDV	**Barranco-do-Ve**	**2.94**	**298**	P	**Pn**	**01 06 45.8**	**+0.7**
PBDV				S	**Sn**	**01 07 18.2**	**-1.2**
	3.7nm,0.5s						
PBDV	**Barranco-do-Ve**	**2.94**	**298**	P	**Pn**	**01 06 45.8**	**+0.7**
PBDV				*e*S	**Sn**	**01 07 18.2**	**-1.2**
PBAR	**Barrancos**	**2.95**	**321**	*e*P	**Pn**	**01 06 46.5**	**+1.2**
PBAR				*e*S	**Sn**	**01 07 19.9**	**+0.1**
PBAR				A	A	01 07 22.0	
	21nm,0.1s						
PBAR	**Barrancos**	**2.95**	**321**	P	**Pn**	**01 06 46.5**	**+1.2**
PBAR				S	**Sn**	**01 07 19.9**	**+0.1**
	21nm,0.1s						
PBAR	**Barrancos**	**2.95**	**321**	P	**Pn**	**01 06 46.5**	**+1.2**
PBAR				*e*S	**Sn**	**01 07 19.9**	**+0.1**
PCVE	**Castro Verde**	**3.20**	**304**	*e*P	**Pn**	**01 06 49.3**	**+0.6**
PCVE				*e*S	**Sn**	**01 07 25.5**	**-0.2**
PCVE				A	A	01 07 26.1	
	3.4nm,0.5s						
PCVE	**Castro Verde**	**3.20**	**304**	P	**Pn**	**01 06 49.3**	**+0.6**
PCVE				S	**Sn**	**01 07 25.5**	**-0.2**
	3.4nm,0.5s						
PCVE	**Castro Verde**	**3.20**	**304**	P	**Pn**	**01 06 49.3**	**+0.6**
PCVE				*e*S	**Sn**	**01 07 25.5**	**-0.2**
PBEJ	**Beja**	**3.32**	**311**	*e*P	**Pn**	**01 06 52.3**	**+2.1**
PBEJ				*e*S	**Sn**	**01 07 28.4**	**-0.2**
PBEJ				A	A	01 07 30.5	
	5.4nm,0.5s						
PBEJ	**Beja**	**3.32**	**311**	P	**Pn**	**01 06 52.3**	**+2.1**
PBEJ				S	**Sn**	**01 07 28.4**	**-0.2**
	2.7nm,0.5s						
PBEJ	**Beja**	**3.32**	**311**	P	**Pn**	**01 06 52.3**	**+2.1**
PBEJ				*e*S	**Sn**	**01 07 28.4**	**-0.2**

EBAD	Badajoz	3.41	328	⇑P	Pn	01 06 53.0	+1.5
	2.0nm,0.1s,SNR=18						
EBAD				S	Sn	01 07 30.3	-0.5
	2.8nm,0.2s,SNR=7.9						
EBAD	Badajoz	3.41	328	P	Pn	01 06 53.0	+1.5
	2.0nm,0.1s,SNR=18						
EBAD				S	Sn	01 07 30.3	-0.5
	2.8nm,0.2s,SNR=7.9						
MESJ	Messejana	3.43	306	*e*P	Pn	01 06 52.5	+0.8
MESJ				*e*S	Sn	01 07 29.4	-1.9
MESJ				AML	AML	01 07 31.4	
	comp=N,12nm,0.1s						
MESJ	Messejana	3.43	306	*e*P	Pn	01 06 52.7	+0.9
MESJ				*e*S	Sn	01 07 30.2	-1.2
MESJ				A	A	01 07 32.0	
	comp=N,5.9nm,0.5s						
MESJ	Messejana	3.43	306	P	Pn	01 06 52.5	+0.8
MESJ				S	Sn	01 07 29.4	-1.9
	comp=N,12nm,0.1s						
MESJ	Messejana	3.43	306	*e*P	Pn	01 06 52.7	+0.9
MESJ				S	Sn	01 07 29.5	-1.9
	comp=N,12nm,0.1s						
MORF	Marmelete	3.48	295	*e*P	Pn	01 06 53.2	+0.7
MORF				*e*S	Sn	01 07 31.1	-1.6
MORF				AML	AML	01 07 32.9	
	comp=E,15nm,0.1s						
MORF	Marmelete	3.48	295	*e*P	Pn	01 06 53.5	+0.9
MORF				*e*S	Sn	01 07 32.5	-0.2
MORF				A	A	01 07 33.4	
	comp=E,5.4nm,0.1s						
MORF	Marmelete	3.48	295	P	Pn	01 06 53.2	+0.7
MORF				S	Sn	01 07 31.1	-1.6
	comp=E,15nm,0.1s						
MORF	Marmelete	3.48	295	*e*P	Pn	01 06 53.5	+0.9
MORF				S	Sn	01 07 31.1	-1.6
	comp=E,15nm,0.1s						
PFVI	Vila Bisbo	3.55	292	*e*P	Pn	01 06 54.6	+1.2
PFVI				*e*S	Sn	01 07 33.3	-1.0
PFVI	Vila Bisbo	3.55	292	P	Pn	01 06 54.6	+1.2
	comp=E,2.5nm,0.1s,SNR=7.9						
PFVI				S	Sn	01 07 32.0	-2.3
	comp=E,1.9nm,0.1s,SNR=7.9						
PFVI	Vila Bisbo	3.55	292	P	Pn	01 06 54.6	+1.2
	comp=E,2.5nm,0.1s,SNR=7.9						
PFVI				S	Sn	01 07 32.0	-2.3
	comp=E,1.9nm,0.1s,SNR=7.9						
PTEO	Sao Teotonio	3.63	298	*e*P	Pn	01 06 55.4	+0.9
PTEO				*e*S	Sn	01 07 35.6	-0.7
PTEO				A	A	01 07 36.7	
	comp=E,3.9nm,0.3s						
PTEO	Sao Teotonio	3.63	298	P	Pn	01 06 55.4	+0.9
PTEO				S	Sn	01 07 35.6	-0.7
	comp=E,1.9nm,0.3s						
PTEO	Sao Teotonio	3.63	298	P	Pn	01 06 55.4	+0.9
PTEO				*e*S	Sn	01 07 35.6	-0.7
PAB	San Pablo	3.66	4	P	Pn	01 06 56.4	+1.4
	comp=E,0.1nm,0.0s,SNR=7.9						
PAB				S	Sn	01 07 35.4	-1.7
	comp=E,1.8nm,0.1s,SNR=7.9						
PAB	San Pablo	3.66	4	P	Pn	01 06 56.4	+1.4
	comp=E,0.1nm,0.0s,SNR=7.9						
PAB				S	Sn	01 07 35.4	-1.7
	comp=E,1.8nm,0.1s,SNR=7.9						
ETOB	Tobarra	3.72	41	⇓P	Pn	01 06 57.9	+2.1
	comp=E,0.9nm,0.1s,SNR=18						
ETOB				Sn	Sn	01 07 39.0	+0.4
	comp=E,0.3nm,0.2s,SNR=7.9						
ETOB	Tobarra	3.72	41	P	Pn	01 06 57.9	+2.1
	comp=E,0.9nm,0.1s,SNR=18						
ETOB				Sn	Sn	01 07 39.0	+0.4
	comp=E,0.3nm,0.2s,SNR=7.9						
EVO	Evora	3.74	316	*e*P	Pn	01 06 57.5	+1.5
EVO				*e*S	Sn	01 07 37.9	-0.9
EVO				A	A	01 07 39.2	
	comp=E,22nm,0.1s						
EVO	Evora	3.74	316	P	Pn	01 06 57.5	+1.5
EVO				S	Sn	01 07 37.9	-0.9
	comp=E,22nm,0.1s						
EVO	Evora	3.74	316	P	Pn	01 06 57.5	+1.5
EVO				*e*S	Sn	01 07 37.9	-0.9
PESTR	Estremoz	3.76	323	*e*P	Pn	01 06 58.0	+1.7
PESTR				*e*S	Sn	01 07 38.6	-0.8
PESTR				A	A	01 07 39.0	
	comp=E,6.5nm,0.4s						
PESTR	Estremoz	3.76	323	*e*P	Pn	01 06 58.0	+1.7
PESTR				*e*S	Sn	01 07 38.6	-0.8
PNCL	Nicolau / Gran	3.79	307	*e*P	Pn	01 06 57.6	+1.0
PNCL				*e*S	Sn	01 07 38.6	-1.4
PNCL				A	A	01 07 41.0	
	comp=E,3.7nm,0.3s						
PNCL	Nicolau / Gran	3.79	307	*e*P	Pn	01 06 57.6	+1.0
PNCL				*e*S	Sn	01 07 38.6	-1.4
ESDC	Sonseca Array	3.82	8	P	Pn	01 06 58.9	+1.7
	SNR=7.9						
ESDC				S	Sn	01 07 38.4	-2.6
	SNR=7.9						
ESDC	Sonseca Array	3.82	8	P	Pn	01 06 58.9	+1.7
	SNR=7.9						
ESDC				S	Sn	01 07 38.4	-2.6
	SNR=7.9						
PMRV	Marv??o	4.13	330	*e*P	Pn	01 07 03.1	+1.8
PMRV				*e*S	Sn	01 07 47.2	-1.2
PMRV				A	A	01 07 48.0	
	comp=E,5.1nm,0.2s						
PMRV	Marv??o	4.13	330	P	Pn	01 07 03.1	+1.8
PMRV				S	Sn	01 07 47.2	-1.2
	comp=E,5.1nm,0.2s						
PMRV	Marv??o	4.13	330	P	Pn	01 07 03.1	+1.8
PMRV				*e*S	Sn	01 07 47.2	-1.2
PMTG	Montargil	4.24	320	*e*P	Pn	01 07 04.2	+1.4
PMTG				*e*S	Sn	01 07 49.2	-1.8
PMTG				A	A	01 07 51.6	
	comp=E,2.4nm,0.1s						
PMTG	Montargil	4.24	320	*e*P	Pn	01 07 04.2	+1.4
PMTG				*e*S	Sn	01 07 49.2	-1.8
ALMR	Almeirim	4.49	318	*e*P	Pn	01 07 07.8	+1.6
ALMR				*e*S	Sn	01 07 55.9	-1.2
ALMR	Almeirim	4.49	318	P	Pn	01 07 07.8	+1.6
ALMR				S	Sn	01 07 55.9	-1.2
ALMR	Almeirim	4.49	318	P	Pn	01 07 07.8	+1.6
ALMR				*e*S	Sn	01 07 55.9	-1.2
PCBR	Castelo Branco	4.52	332	*e*P	Pn	01 07 08.5	+1.9
PCBR				*e*S	Sn	01 07 56.3	-1.5
PCBR				A	A	01 07 56.8	
	comp=E,5.8nm,0.2s						
PCBR	Castelo Branco	4.52	332	P	Pn	01 07 08.5	+1.9
PCBR				S	Sn	01 07 56.3	-1.5
	comp=E,2.9nm,0.2s						
PCBR	Castelo Branco	4.52	332	P	Pn	01 07 08.5	+1.9
PCBR				*e*S	Sn	01 07 56.3	-1.5
PTOM	Tomar	4.75	323	*e*P	Pn	01 07 11.6	+1.9
PTOM				*e*S	Sn	01 08 01.6	-1.8
PTOM				A	A	01 08 03.8	
	comp=E,5.2nm,0.3s						
PTOM	Tomar	4.75	323	P	Pn	01 07 11.6	+1.9
PTOM				S	Sn	01 08 01.6	-1.8
	comp=E,2.6nm,0.3s						
PTOM	Tomar	4.75	323	P	Pn	01 07 11.6	+1.9
PTOM				S	Sn	01 08 01.6	-1.8
	comp=E,2.6nm,0.3s						
PMAFR	Mafra	4.76	311	*e*S	Sn	01 08 02.4	-1.5
PMAFR				A	A	01 08 03.4	
	comp=E,9.2nm,0.4s						
PMAFR	Mafra	4.76	311	S	Sn	01 08 02.0	-1.9
	comp=E,3.3nm,0.2s,SNR=7.9						
PMAFR	Mafra	4.76	311	S	Sn	01 08 02.0	-1.9
	comp=E,3.3nm,0.2s,SNR=7.9						
GUD	Guadarrama	4.77	5	P	Pn	01 07 11.9	+1.8
	comp=E,0.2nm,0.1s,SNR=7.9						
GUD				S	Sn	01 08 01.3	-2.8
	comp=E,0.5nm,0.2s,SNR=7.9						
GUD	Guadarrama	4.77	5	P	Pn	01 07 11.9	+1.8
	comp=E,0.2nm,0.1s,SNR=7.9						
GUD				S	Sn	01 08 01.3	-2.8
	comp=E,0.5nm,0.2s,SNR=7.9						
MTE	Manteigas	5.03	334	*e*S	Sn	01 08 09.4	-1.1
MTE	Manteigas	5.03	334	S	Sn	01 08 09.4	-1.1
MTE	Manteigas	5.03	334	S	Sn	01 08 09.4	-1.1
PCAS	Casmilo, Conde	5.13	325	*e*P	Pn	01 07 17.1	+2.2
PCAS				*e*S	Sn	01 08 10.7	-2.1
PCAS				A	A	01 08 13.3	
	comp=E,3.6nm,0.5s						
PCAS	Casmilo, Conde	5.13	325	*e*P	Pn	01 07 17.1	+2.2
PCAS				*e*S	Sn	01 08 10.7	-2.1
ETOR	Torete	5.34	22	P	Pn	01 07 19.4	+1.5
	comp=E,0.5nm,0.1s,SNR=7.9						
ETOR				S	Sn	01 08 15.4	-2.7
	comp=E,0.1nm,0.2s,SNR=7.9						
ETOR	Torete	5.34	22	P	Pn	01 07 19.4	+1.5
	comp=E,0.5nm,0.1s,SNR=7.9						
ETOR				S	Sn	01 08 15.4	-2.7
	comp=E,0.1nm,0.2s,SNR=7.9						
PVIS	Viseu	5.44	333	*e*P	Pn	01 07 21.4	+2.3
PVIS				*e*S	Sn	01 08 19.7	-0.6
PVIS				A	A	01 08 21.2	
	comp=E,3.4nm,0.1s						
PVIS	Viseu	5.44	333	P	Pn	01 07 21.4	+2.3
PVIS				S	Sn	01 08 19.7	-0.6
	comp=E,1.7nm,0.1s						
PVIS	Viseu	5.44	333	*e*P	Pn	01 07 21.4	+2.3
PVIS				S	Sn	01 08 19.7	-0.6
	comp=E,1.7nm,0.1s						
MVO	Moncorvo	5.58	342	*e*P	Pn	01 07 23.1	+2.0
MVO				*e*S	Sn	01 08 22.4	-1.4
MVO				A	A	01 08 24.0	
	comp=E,2.4nm,0.3s						
MVO	Moncorvo	5.58	342	P	Pn	01 07 22.3	+1.2
	comp=E,0.1nm,0.0s,SNR=7.9						
MVO				S	Sn	01 08 21.0	-2.7
	comp=E,2.3nm,0.1s,SNR=7.9						
MVO	Moncorvo	5.58	342	P	Pn	01 07 22.3	+1.2
	comp=E,0.1nm,0.0s,SNR=7.9						
MVO				S	Sn	01 08 21.0	-2.7
	comp=E,2.3nm,0.1s,SNR=7.9						
PVRL	Vila Real	5.88	337	*e*S	Sn	01 08 29.3	-1.8
PVRL	Vila Real	5.88	337	S	Sn	01 08 29.3	-1.8
PVRL	Vila Real	5.88	337	S	Sn	01 08 29.3	-1.8
POLO	Lamas de Olo	5.99	337	*e*P	Pn	01 07 29.0	+2.3
POLO				*e*S	Sn	01 08 31.9	-2.0
POLO				A	A	01 08 33.8	
	comp=E,1.1nm,0.6s						
PBRG	Braganca	6.12	345	*e*S	Sn	01 08 35.6	-1.4
PBRG				A	A	01 08 36.7	
	comp=E,1.9nm,0.3s						
PBRG	Braganca	6.12	345	S	Sn	01 08 35.6	-1.4
	comp=E,0.9nm,0.3s						
PBRG	Braganca	6.12	345	S	Sn	01 08 35.6	-1.4
	comp=E,0.9nm,0.3s						
PCAB	Cabril	6.37	337	*e*S	Sn	01 08 40.9	-2.2
PCAB				A	A	01 08 46.2	
	comp=E,3.7nm,0.5s						
PCAB	Cabril	6.37	337	S	Sn	01 08 40.9	-2.2
	comp=E,1.9nm,0.5s						
PCAB	Cabril	6.37	337	S	Sn	01 08 40.9	-2.2
	comp=E,1.9nm,0.5s						
ELOB	Lobios	6.52	337	P	Pn	01 07 35.9	+2.0
	comp=E,0.2nm,0.1s,SNR=7.9						
ELOB				S	Sn	01 08 44.4	-2.5
	comp=E,1.7nm,0.2s,SNR=7.9						
ELOB	Lobios	6.52	337	P	Pn	01 07 35.9	+2.0
	comp=E,0.2nm,0.1s,SNR=7.9						
ELOB				S	Sn	01 08 44.4	-2.5
	comp=E,1.7nm,0.2s,SNR=7.9						
PGAV	Gavieira, Arco	6.68	336	*e*P	Pn	01 07 37.9	+1.8
PGAV				*e*S	Sn	01 08 48.0	-2.7
PGAV				A	A	01 08 51.5	
	comp=E,2.8nm,0.4s						
EAGO	Agolada(Pontev	7.39	340	S	Sn	01 09 04.3	-3.7
	comp=E,0.1nm,0.2s,SNR=7.9						
EAGO	Agolada(Pontev	7.39	340	S	Sn	01 09 04.3	-3.7
	comp=E,0.1nm,0.2s,SNR=7.9						
ELAN	Lanestosa	7.40	7	P	Pn	01 07 48.2	+2.3
	comp=E,0.1nm,0.1s,SNR=7.9						
ELAN				S	Sn	01 09 04.1	-4.1
	comp=E,0.0nm,0.1s,SNR=7.9						
ELAN	Lanestosa	7.40	7	P	Pn	01 07 48.2	+2.3
	comp=E,0.1nm,0.1s,SNR=7.9						
ELAN				S	Sn	01 09 04.1	-4.1
	SNR=7.9						
EARI	Arriondas	7.41	357	P	Pn	01 07 48.2	+2.1
	comp=E,0.1nm,0.1s,SNR=7.9						
EARI				S	Sn	01 09 05.2	-3.4
	comp=E,0.0nm,0.2s,SNR=7.9						
EARI	Arriondas	7.41	357	P	Pn	01 07 48.2	+2.1
	comp=E,0.1nm,0.1s,SNR=7.9						
EARI				S	Sn	01 09 05.2	-3.4
	SNR=7.9						
EPON	Pontenova	7.67	346	S	Sn	01 09 11.0	-3.7
	comp=E,0.3nm,0.2s,SNR=7.9						
EPON	Pontenova	7.67	346	S	Sn	01 09 11.0	-3.7
	comp=E,0.3nm,0.2s,SNR=7.9						
EALK	Alkurruntz	7.72	18	P	Pn	01 07 52.1	+1.7
	comp=E,0.1nm,0.1s,SNR=7.9						
EALK	Alkurruntz	7.72	18	P	Pn	01 07 52.1	+1.7
	comp=E,0.1nm,0.1s,SNR=7.9						

IDC 21 01:39:51.7±27.0**, 3°.25N**×**90°.73E, h0**km**, mb3.8**/4**, mb1 3.8**/5**, mb1mx3.4**/60**, mbtmp3.8**/5**, ML3.7**/1**, Error ellipse: s-maj=529.3km s-min=51.2km az=171.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	Pallekele	10.76	292	Pn	Pn	01 42 27.4	+0.2
	0.5nm,0.3s,baz=117,slow=6.0,SNR=3.6						
MKAR	Makanchi Array	43.99	352	P	P	01 48 01.0	+0.1
	0.3nm,0.5s,baz=163,slow=9.1,SNR=4.4						
SONM	Songino Array	46.42	15	P	P	01 48 20.5	+0.1
	1.9nm,0.6s,baz=191,slow=9.7,SNR=9.3						
KURBB	Kurchatov Arra	48.32	350	P	P	01 48 34.6	-0.3
	0.3nm,0.6s,baz=163,slow=6.8,SNR=3.1						
ZALV	Zalesovo Beam	50.77	355	P	P	01 48 53.0	-0.5
	1.0nm,0.4s,baz=166,slow=7.6,SNR=4.8						

*BJI **21** 01:51:58.7, 40°.40N×125°.50W, h10km, mb5.1/28, mB5.5/23, Ms5.0/11, Ms7 4.7/11*

*ISCJB **21** 01:52:00.0±0.5, 40°.41N±0°.01×125°.30W±0°.02, h1km±3km, mb5.0/271, MS4.4/129, Error ellipse: s-maj=2.9km s-min=1.7km az=151.9*

*NEIC **21** 01:52:01.7±0.0, 40°.39N×125°.53W, h25km, mb5.0/207, MW5.1(BRK), After NCEDC.*

NEIC Felt [II] at Arcata, Eureka, McKinleyville and Whitethorn. Also felt at Bayside, Ferndale, Fort Bragg, Petrolia, Samoa and Salyer.

*GCMT **21** 01:52:01.7±0.2, 40°.39N×125°.45W, h17km, MW5.2/124, Moment Tensor Solution. s76,c106; s124,c236; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.04±.13; $M_{\theta\theta}$-1.50±.12; $M_{\phi\phi}$2.54±.12; $M_{r\theta}$0.68±.30; $M_{\theta\phi}$-6.89±.11; $M_{\phi r}$0.31±.31; Best double couple: $M_0$7.22800×10^{16} NP1:ϕ_s278.00000°,δ86.00000°,λ-174.00000°. NP2: ϕ_s188.00000°,δ84.00000°,λ-4.00000°. Principal axes: T 7.7030, Plg1.0000°, Azm53.0000°; N -0.9490, Plg83.0000°, Azm315.0000°; P -6.7540, Plg7.0000°, Azm143.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*IDC **21** 01:52:01.5±0.5, 40°.53N×125°.23W, h0km, mb4.6/35, mb1 4.7/40, mb1mx4.6/71, mbtmp4.6/40, ML4.1/5, MS4.3/52, Ms1 4.3/52, ms1mx4.2/68 Error ellipse: s-maj=12.6km s-min=8.4km az=17.0*

*MOS **21** 01:52:02.8±1.1, 40°.36N×125°.23W, h22km, mb5.1/75, MS4.5/13, Error ellipse: s-maj=5.0km s-min=4.2km az=99.0*

ISC 21 01:52:02.9±0.7**, 40°.44N**±0°.03×**125°.28W**±0°.04**, h11**km±3km**, n916, σ1ˢ71**/863**, mb5.0**/283**, MS4.4**/130**, 13C-3D, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCTM	Capetown	0.72	87	*e*Pg	Pb	01 52 17.5	-0.1
KJJM	Johnny Jack Ri	0.77	104	*e*Pg	Pg	01 52 17.4	-0.4
KSMM	Slide Mountain	0.88	106	*e*Pg	Pg	01 52 18.8	-1.2
JCC	Jacoby Creek,	1.03	68	*e*Pg	Pg	01 52 21.2	-1.5
JCC				*e*Sg	Sg	01 52 35.0	-1.1
KCRM	Chalk Rock	1.12	90	*e*Pg	Pg	01 52 23.0	-1.4
KMRM	Mail Ridge	1.22	100	*e*Pn	Pb	01 52 24.5	-1.6
KMRM				*e*Sg	Sb	01 52 41.2	-0.6
KHMM	Horse Mountain	1.26	69	*e*Pn	Pn	01 52 25.0	-1.6
KCSM	Cold Springs	1.35	85	*e*Pn	Pn	01 52 26.6	-1.3
KCPM	Cahto Peak	1.51	119	*e*Pn	Pn	01 52 27.7	-2.2
KIPM	Iron Peak	1.52	114	*e*Pn	Pn	01 52 28.4	-1.7
KKPM	Kettenpom Peak	1.52	100	*e*Pn	Pn	01 52 27.7	-2.4
KOMM	Orleans Mounta	1.62	58	*e*Pn	Pn	01 52 29.6	-1.9
KFPM	Farley Peak	1.64	119	*e*Pn	Pn	01 52 29.7	-2.0
GTC	Three Chop Rid	1.69	127	*e*Pn	Pn	01 52 29.3	-3.0
KBNM	Bluenose Ridge	1.69	108	*e*Pn	Pn	01 52 31.1	-1.4
GNAM	Navarro Ridge	1.78	134	*e*Pn	Pn	01 52 30.1	-3.5
KRKM	Rackout Spring	1.83	118	*e*Pn	Pn	01 52 32.8	-1.7
GHOM	Hamilton Openi	1.94	135	*e*Pn	Pn	01 52 32.2	-3.6
KBO	Bosley Butte	1.94	24	*e*Pn	Pn	01 52 33.7	-2.2
N02D	Trinity Center	2.03	74	P	Pn	01 52 35.6	-1.5
	baz=256,SNR=1000						
N02D				S	Sn	01 53 01.6	-0.9
	baz=256						
GHMM	Hull Mountain	2.04	117	*e*Pn	Pn	01 52 35.6	-1.7
KTRM	Thompson Ridge	2.06	44	*e*Pn	Pn	01 52 35.4	-2.1
M02C	Callahan	2.07	62	P	Pn	01 52 35.7	-2.0
	baz=245,SNR=1000						
M02C				S	Sn	01 53 02.2	-1.3
	baz=245						
WDC	Whiskeytown Da	2.10	85	*e*Pn	Pn	01 52 36.6	-1.3
WDC	Whiskeytown Da	2.10	85	*e*P	Pn	01 52 36.6	-1.3
GGUM	Gualala	2.10	138	*e*Pn	Pn	01 52 34.1	-3.9
GASB	Alder Springs	2.12	111	*e*Pn	Pn	01 52 37.0	-1.4
L02D	Cave Junction,	2.13	36	P	Pn	01 52 36.3	-2.2
	baz=220,SNR=767						
L02D				S	Sn	01 53 02.6	-2.3
	baz=220						
GSNM	Snow Mountain	2.20	132	*e*Pn	Pn	01 52 36.3	-3.1
HOPS	Hopland Field	2.23	130	*e*Pn	Pn	01 52 36.8	-3.0
GHLM	Highland Sprin	2.23	128	*e*Pn	Pn	01 52 36.9	-3.0
GHGM	Hogback Ridge	2.30	124	*e*Pn	Pn	01 52 38.8	-2.0
YBH	Yreka Blue Hor	2.33	56	Pn	Pn	01 52 39.8	-1.5
	76nm,0.3s,baz=243,slow=13,SNR=412						
YBH				Sn	Sn	01 53 09.6	-0.4
	99nm,0.3s,baz=256,slow=4.2,SNR=8.3						
YBH				LR	LR	01 53 28.0	
	comp=Z,4µm,18.6s,baz=144,slow=38						
YBH	Yreka Blue Hor	2.33	56	*e*Pn	Pn	01 52 39.5	-1.8
YBH				Sn	Sn	01 53 09.6	-0.4
YBH	Yreka Blue Hor	2.33	56	*e*P	Pn	01 52 39.5	-1.8
YBH						01 53 09.6	
GPMM	Pine Mountain	2.40	131	*e*Pn	Pn	01 52 39.5	-2.7
GMKM	Mount Konoctai	2.42	127	*e*Pn	Pn	01 52 40.5	-2.0
SKG	Skaggs Springs	2.47	134	*e*Pn	Pn	01 52 39.6	-3.4
LGBM	Gray Butte	2.51	68	*e*Pn	Pn	01 52 43.2	-0.6
GDXM	Geysers	2.52	129	*e*Pn	Pn	01 52 42.0	-1.9
FTR	Fort Ross	2.52	139	*e*Pn	Pn	01 52 40.2	-3.6
KEBM	Edson Butte	2.53	16	*e*Pn	Pn	01 52 42.0	-2.0
GBGM	Boggs Mountain	2.58	128	*e*Pn	Pn	01 52 44.7	-0.1
LMPM	Military Pass	2.59	65	*e*Pn	Pn	01 52 44.7	-0.2
NMCNC	Mill Creek, So	2.60	134	*e*Pn	Pn	01 52 41.7	-3.2
LHEM	Herd Peak	2.60	62	*e*Pn	Pn	01 52 44.4	-0.7
O03D	Paynes Creek	2.66	92	P	Pn	01 52 44.7	-1.1
	baz=273,SNR=1000						
O03D				S	Sn	01 53 17.5	-0.7
	baz=273						
O03D	Paynes Creek	2.66	92	*e*Pn	Pn	01 52 44.3	-1.5
NHSM	Mount Saint He	2.72	130	*e*Pn	Pn	01 52 45.7	-1.0
LBFM	Black Fox Moun	2.73	69	*e*Pn	Pn	01 52 46.5	-0.3
LBFM	Black Fox Moun	2.73	69	*e*P	Pn	01 52 46.5	-0.3
MAC	Mark West Spri	2.73	133	*e*Pn	Pn	01 52 45.8	-0.9
HUMO	Hull Mountain	2.78	38	*e*Pn	Pn	01 52 45.7	-1.7
HUMO				*e*Sn	Sn	01 53 19.8	-1.2
LGMM	Garner Mountai	2.85	65	*e*Pn	Pn	01 52 48.0	-0.5
OSUM	Sutter Buttes	2.89	113	*e*Pn	Pn	01 52 47.0	-1.7
LRDM	Redding Peak	2.92	88	*e*Pn	Pn	01 52 48.7	-0.6
OGOM	Van Goodin Ran	2.92	104	*e*Pn	Pn	01 52 47.7	-1.6
M04C	Macdoel	2.93	62	P	Pn	01 52 48.9	-0.6
	baz=245,SNR=616						
MCCM	Marconi Confer	2.95	140	*e*Pn	Pn	01 52 46.1	-3.6
MCCM				*e*Sn	Sn	01 53 23.0	-2.1
LTIM	Timbered Crate	2.97	74	*e*Pn	Pn	01 52 49.2	-0.9
LBCM	Butte Creek Ri	3.02	81	*e*Pn	Pn	01 52 49.9	-0.9
OSTM	Stimpson Lane	3.03	109	*e*Pn	Pn	01 52 49.3	-1.5
NBRB	Beebe Ranch Br	3.04	135	*e*Pn	Pn	01 52 49.4	-1.4
ORV	Oroville	3.04	106	*e*Pn	Pn	01 52 49.0	-1.9
ORV	Oroville	3.04	106	*e*P	Pn	01 52 49.0	-1.9
NAPC	Atlas Peak	3.08	129	*e*Pn	Pn	01 52 50.7	-0.8
DBO	Dodson Butte	3.08	29	*e*Pn	Pn	01 52 50.4	-1.2
NDHM	Dunnigan Hills	3.09	122	*e*Pn	Pn	01 52 51.4	-0.3
SNT	Sears Point	3.15	135	*e*Pn	Pn	01 52 50.0	-2.3
VSP	Spence Mountai	3.15	52	*e*Pn	Pn	01 52 53.4	+0.9
NADM	Allendale	3.24	127	*e*Pn	Pn	01 52 54.4	+0.8
CPMM	Point Molate	3.34	137	*e*Pn	Pn	01 52 53.0	-2.0
CPIM	Pinole Ridge	3.42	135	*e*Pn	Pn	01 52 54.9	-1.2
JPRM	Presidio of Sa	3.43	139	*e*Pn	Pn	01 52 54.7	-1.5
K04D	Chiloquin, OR	3.43	49	P	Pn	01 52 55.8	-0.6
	baz=233,SNR=257						
CVPM	Vollmer Peak	3.49	136	*e*Pn	Pn	01 52 55.2	-1.9
HSO	Harness Mounta	3.49	27	*e*Pn	Pn	01 52 56.4	-0.8
HSO	Harness Mounta	3.49	27	*e*P	Pn	01 52 56.4	-0.8
CTAM	Taylor	3.50	132	*e*Pn	Pn	01 52 57.5	+0.3
JSBM	San Bruno Moun	3.56	140	*e*Pn	Pn	01 52 54.4	-3.6
I03D	Drain, OR	3.56	23	P	Pn	01 52 56.9	-1.2
	baz=207,SNR=510						
I03D				S	Sn	01 53 38.8	-1.3
	baz=207						
CRPB	Russellman Par	3.64	133	*e*Pn	Pn	01 52 57.5	-1.7
AFDM	Forest Hills D	3.64	113	*e*Pn	Pn	01 52 57.9	-1.3
J04D	Umpqua Nationa	3.67	39	P	Pn	01 52 59.5	-0.2
	baz=223,SNR=734						
CLCB	Lake Chabot	3.68	136	*e*Pn	Pn	01 52 57.6	-2.1
AASM	Arroyo Seco	3.80	120	*e*Pn	Pn	01 53 00.8	-0.6
BEKR	Beckworth	3.82	97	*e*Pn	Pn	01 53 01.1	-0.6
JSFB	Stanford Teles	3.88	140	*e*Pn	Pn	01 53 00.6	-1.8
CVLM	Vallecito	3.88	135	*e*Pn	Pn	01 53 01.1	-1.4
JFP	Foothills Park	3.91	141	*e*Pn	Pn	01 53 00.3	-2.5
IND	Independence	3.97	103	*e*Pn	Pn	01 53 04.9	+1.0
I04A	Tendick Farm,	3.98	32	P	Pn	01 53 03.2	-0.6
	baz=216,SNR=173						
I04A				S	Sn	01 53 49.0	-1.4
	baz=216						
KBF	Kyburz Flat	4.01	102	*e*Pn	Pn	01 53 05.1	+0.7
K05A	Summer Lake	4.01	54	*e*Pn	Pn	01 53 03.7	-0.7
JHUM	Huhtala Lane,	4.03	142	*e*Pn	Pn	01 53 01.1	-3.4
MOD	Modoc Plateau	4.03	67	*e*Pn	Pn	01 53 03.2	-1.5
MOD				*e*Pg	Pg	01 53 18.0	-2.2
CVR	Calaveras Rese	4.03	137	*e*Pn	Pn	01 53 02.6	-2.0
CMLM	Mount Lewis	4.09	135	*e*Pn	Pn	01 53 04.0	-1.5
JBNB	Ben Lomond Mou	4.11	143	*e*Pn	Pn	01 53 02.1	-3.7
VPK	Verdi Peak	4.14	102	*e*Pn	Pn	01 53 06.8	+0.4
J05D	Fort Rock, OR	4.15	45	P	Pn	01 53 05.6	-0.8
	baz=229,SNR=415						
MNHB	New Hogan Dam	4.16	122	*e*Pn	Pn	01 53 06.4	+0.2
RUBR	Rubicon Trail	4.19	108	*e*Pn	Pn	01 53 08.1	+1.2
CMMM	Mount Mocho	4.19	134	*e*Pn	Pn	01 53 06.1	-0.8
IRO	Indian Ridge	4.21	31	*e*Pn	Pn	01 53 07.5	+0.3
ARN	Arnold Ranch	4.25	135	*e*Pn	Pn	01 53 06.2	-1.4
ARN	Arnold Ranch	4.25	135	*e*P	Pn	01 53 06.2	-1.4
EMB	Emerald Bay	4.25	108	*e*Pn	Pn	01 53 08.5	+0.7
JUCM	University of	4.26	143	*e*Pn	Pn	01 53 04.0	-3.7
MCUB	Copperopolis B	4.38	123	*e*Pn	Pn	01 53 09.2	-0.1
COR	Corvallis	4.39	19	*e*Pn	Pn	01 53 09.4	-0.1
COR				*e*Pg	Pb	01 53 21.4	+1.4
COR				*e*Sn	Sn	01 54 01.4	+0.8
COR	Corvallis	4.39	19	*e*P	Pn	01 53 09.4	-0.1
COR				*e*		01 54 01.4	
HSPM	Sheep	4.43	137	*e*Pn	Pn	01 53 08.5	-1.7
VCNR	Virginia City	4.48	103	*e*Pn	Pn	01 53 11.3	+0.3
CMB	Columbia Colle	4.50	121	*e*Pn	Pn	01 53 10.5	-0.5
CMB				*e*Sn	Sn	01 54 04.5	+1.3
CMB	Columbia Colle	4.50	121	*e*P	Pn	01 53 10.5	-0.5
CMB				*e*		01 54 04.6	
MOON	Moon Mountain	4.50	35	*e*Pn	Pn	01 53 12.1	+1.1
PRLK	Prince Lake	4.50	32	*e*Pn	Pn	01 53 11.2	+0.1
HCOM	Corn Cob Canyo	4.52	141	*e*Pn	Pn	01 53 08.5	-2.7
CSR	Chase Ranch	4.52	139	*e*Pn	Pn	01 53 09.3	-1.9
PNTR	Pine Nut	4.58	105	*e*Pn	Pn	01 53 13.1	+0.8
PAHR	Pah Rah Range	4.58	97	*e*Pn	Pn	01 53 11.3	-0.9
HPCM	Pacheco Lake	4.60	136	*e*Pn	Pn	01 53 10.6	-1.8
BFC	Buffalo Canyon	4.64	108	*e*Pn	Pn	01 53 13.9	+0.8
HJGM	San Juan Grade	4.65	140	*e*Pn	Pn	01 53 09.6	-3.5
PINE	Pine Mountain	4.65	43	*e*Pn	Pn	01 53 13.3	0.0
SFJWR	San Luis Fatjo	4.67	135	*e*Pn	Pn	01 53 11.8	-1.5
SAO	San Andreas Ge	4.74	139	*e*Pn	Pn	01 53 11.2	-3.1
SAO	San Andreas Ge	4.74	139	*e*P	Pn	01 53 11.2	-3.1
BPCNC	Pine Canyon	4.81	142	*e*Pn	Pn	01 53 12.6	-2.6
H04A	Detroit Lake	4.82	27	*e*Pn	Pn	01 53 15.4	0.0
MYLM	Yosemite Lake	4.87	127	*e*Pn	Pn	01 53 16.2	+0.2
I05D	Terrebonne, OR	4.87	36	P	Pn	01 53 15.9	-0.2
	baz=220,SNR=144						
YERR	Yerington	4.88	105	*e*Pn	Pn	01 53 17.0	+0.6
WAKR	Walker	4.92	111	*e*Pn	Pn	01 53 17.6	+0.7
JHC	Johnson Canyon	4.94	141	*e*Pn	Pn	01 53 12.9	-4.1
JHC	Johnson Canyon	4.94	141	*e*P	Pn	01 53 12.9	-4.1
G03D	McMinnville, O	5.00	17	P	Pn	01 53 17.1	-0.7

	baz=200,SNR=50						
G03D				S	Sn	01 54 13.3	-2.1
	baz=200						
EMT	Emmet	5.00	138	ePn	Pn	01 53 15.5	-2.4
BRMM	Rolling Bench	5.01	134	ePn	Pn	01 53 16.9	-1.2
BPIM	Pinnacles	5.09	139	ePn	Pn	01 53 17.3	-1.9
BPIM				eSg	Sb	01 54 28.7	-4.5
MMIM	Miami Mountain	5.27	123	ePn	Pn	01 53 22.4	+0.8
MHDM	Hidden Dam	5.36	127	ePn	Pn	01 53 22.7	-0.1
WVOR	Wild Horse Val	5.38	66	ePn	Pn	01 53 21.0	-2.1
WVOR				eSn	Sn	01 54 25.8	+0.7
WVOR	Wild Horse Val	5.38	66	eP	Pn	01 53 21.0	-2.1
WVOR				e		01 54 25.8	
PCCM	Crazy Canyon	5.42	142	ePn	Pn	01 53 20.4	-3.3
TDH	Tom, Dick, Har	5.49	27	ePn	Pn	01 53 25.0	+0.4
PMPB	Monarch Peak	5.49	139	ePn	Pn	01 53 23.1	-1.6
RYN	Ryan	5.53	107	ePn	Pn	01 53 25.7	+0.4
MDCM	Deadman Creek	5.57	117	ePn	Pn	01 53 27.4	+1.4
MDPB	Devils Postpil	5.58	118	ePn	Pn	01 53 27.2	+1.1
MINS	Minaret Summit	5.58	118	ePn	Pn	01 53 27.4	+1.2
MDYM	Dry Creek	5.62	118	ePn	Pn	01 53 28.7	+2.1
MRDM	Red Cones	5.62	118	ePn	Pn	01 53 28.2	+1.6
G05D	Wamic, OR	5.62	30	P	Pn	01 53 26.9	+0.6
	baz=214,SNR=63						
MMSM	Mammoth Summit	5.62	118	ePn	Pn	01 53 28.9	+2.2
PTV	Peach Tree Val	5.62	139	ePn	Pn	01 53 24.7	-1.7
LMCR	Lookout Mounta	5.62	117	ePn	Pn	01 53 28.6	+1.9
I07A	Izee	5.62	48	ePn	Pn	01 53 27.3	+0.8
MMPM	Mammoth Pass	5.63	118	ePn	Pn	01 53 28.6	+1.8
MMLB	Mammoth Lakes	5.64	117	ePn	Pn	01 53 29.4	+2.5
OMMB	Old Mammoth Mi	5.65	118	ePn	Pn	01 53 28.3	+1.3
MSLM	Sherwin Lakes	5.67	118	ePn	Pn	01 53 29.8	+2.4
MCBM	Casa Benchmark	5.70	117	ePn	Pn	01 53 30.6	+2.8
MLCM	Laurel Creek C	5.70	118	ePn	Pn	01 53 30.3	+2.5
KVN	Kaiserville	5.71	102	ePn	Pn	01 53 27.5	-0.3
KVN	Kaiserville	5.71	102	eP	Pn	01 53 27.5	-0.3
MCMM	Convict Lake	5.73	117	ePn	Pn	01 53 30.4	+2.3
MLAC	Mammoth, Mammo	5.75	117	P	Pn	01 53 30.1	+1.8
	baz=300						
NV01	Mina Array Sit	5.76	108	ePn	Pn	01 53 27.5	-1.0
NVAR	Mina Array Bea	5.76	108	Pn	Pn	01 53 28.9	+0.4
	16nm,0.3s,baz=284,slow=14,SNR=318						
NVAR				LR	LR	01 55 59.4	
	comp=Z,3μm,21.6s,baz=70,slow=41						
J08A	Circle Bar Ran	5.86	58	ePn	Pn	01 53 29.4	-0.3
NV11	Mina Array Sit	5.87	108	ePn	Pn	01 53 29.9	0.0
F04D	Rainier, OR	5.88	16	P	Pn	01 53 30.3	+0.4
	baz=199,SNR=8.3						
F04D				S	Sn	01 54 35.8	-1.5
	baz=199						
BENR	Benton	5.89	115	ePn	Pn	01 53 31.7	+1.4
G06A	Carlson Farm,	5.89	34	ePn	Pn	01 53 31.0	+0.9
B023	Clatskanie	5.89	15	ePn	Pn	01 53 30.6	+0.6
RCCR	Rock Creek Can	5.90	118	ePn	Pn	01 53 33.2	+2.7
MEGW	Megler CREST B	5.92	10	ePn	Pn	01 53 30.8	+0.4
SCHCA	Scheelite	5.99	119	ePn	Pn	01 53 34.1	+2.4
LVP	Lakeview Peak	6.01	19	ePn	Pn	01 53 31.4	-0.3
MTMW	Mount Mitchell	6.02	21	ePn	Pn	01 53 31.9	0.0
VGB	Gordon Butte	6.05	32	ePn	Pn	01 53 33.8	+1.4
BMN	Battle Mountai	6.15	87	ePn	Pn	01 53 33.0	-0.8
BMN				ePg	Pb	01 53 54.1	+4.0
BMN	Battle Mountai	6.15	87	eP	Pn	01 53 33.0	-0.8
PAGB	Antelope Grade	6.15	138	ePn	Pn	01 53 31.3	-2.4
SHW	Mount Saint He	6.17	20	ePn	Pn	01 53 35.1	+1.2
ESD	East Dome	6.19	21	ePn	Pn	01 53 35.6	+1.2
BMW	Boistfort Moun	6.22	13	ePn	Pn	01 53 34.7	+0.1
E03A	Lebam	6.23	11	ePn	Pn	01 53 35.0	+0.3
SOSW	Source of Smit	6.24	21	ePn	Pn	01 53 34.7	-0.3
B202	Windy Ridge, M	6.24	21	ePn	Pn	01 53 34.9	-0.1
B201	Coldwater, Mou	6.26	20	ePn	Pn	01 53 35.6	+0.4
GLK	Glacier Lake	6.68	22	ePn	Pn	01 53 41.6	+0.6
VES	Vestal, Richgr	6.70	131	P	Pn	01 53 40.9	-0.3
	baz=314						
VES				S	Sn	01 54 58.2	+0.7
	baz=314						
F07A	Phinny Hill Vi	6.71	34	ePn	Pn	01 53 42.7	+1.4
LON	Longmire	6.79	21	ePn	Pn	01 53 42.7	+0.2
LON	Longmire	6.79	21	eP	Pn	01 53 42.7	+0.2
WPW	White Pass	6.82	22	ePn	Pn	01 53 43.5	+0.5
B941	Kapowsin	6.91	18	ePn	Pn	01 53 45.5	+1.4
CWC	Cottonwood Cre	6.92	123	P	Pn	01 53 45.9	+1.5
	baz=306						
NLWA	Neilton Lookou	7.03	8	ePn	Pn	01 53 46.1	+0.4
NLWA				eSn	Sn	01 54 59.3	-6.2
PKM	Mcpherson Peak	7.04	140	P	Pn	01 53 44.2	-1.7
	baz=322						
PKM				S	Sn	01 55 05.4	-0.6
	baz=322						
GRAC	Grapevine Rang	7.08	117	P	Pn	01 53 48.6	+2.2
	baz=300						
D05A	Enumclaw	7.16	18	ePn	Pn	01 53 49.3	+1.9
ISA	Isabella, Lake	7.18	129	P	Pn	01 53 47.8	-0.1
	baz=312						
ISA	Isabella, Lake	7.18	129	ePn	Pn	01 53 47.8	-0.1
ISA	Isabella, Lake	7.18	129	eP	Pn	01 53 47.8	-0.1
YPT	Yellepit	7.26	37	ePn	Pn	01 53 50.1	+1.3
HAWA	Hanford	7.27	33	ePn	Pn	01 53 50.0	+1.0
E07A	Sunnyside	7.28	31	ePn	Pn	01 53 50.7	+1.6
EBG	Ellensburg	7.32	26	ePn	Pn	01 53 51.2	+1.5
DAC	Darwin (Calif)	7.33	122	ePn	Pn	01 53 50.8	+0.8
DAC	Darwin (Calif)	7.33	122	eP	Pn	01 53 50.8	+0.8
GNW	Green Mountain	7.34	13	ePn	Pn	01 53 50.4	+0.5
BMO	Blue Mountains	7.35	50	ePn	Pn	01 53 51.3	+1.1
BMO	Blue Mountains	7.35	50	eP	Pn	01 53 51.3	+1.1
ARVC	Arvin	7.36	134	P	Pn	01 53 49.9	-0.3
	baz=317						
HDW	Hoodsport	7.38	12	ePn	Pn	01 53 50.9	+0.2
LNOR	Lincton Mounta	7.46	41	ePn	Pn	01 53 53.5	+1.9
LNOR	Lincton Mounta	7.46	41	eP	Pn	01 53 53.6	+1.9
RYS	Reyes Peak	7.46	139	ePn	Pn	01 53 46.1	-5.7
MPMC	Manual Prospec	7.53	123	P	Pn	01 53 53.5	+0.7
	baz=307						
E08A	Dider Farm, El	7.55	35	ePn	Pn	01 53 53.8	+0.9
LTY	Liberty	7.59	25	ePn	Pn	01 53 54.4	+1.0
OT3	Othello 3	7.62	33	ePn	Pn	01 53 55.1	+1.3
MFID	Camas Ranch	7.65	64	ePn	Pn	01 53 54.8	+0.4
C05A	Tolt Reservoir	7.70	18	ePn	Pn	01 53 56.1	+1.1
FURC	Furnace Creek,	7.70	118	P	Pn	01 53 58.5	+3.5
	baz=302						
LRMC	Laurel Mtn Rad	7.78	127	P	Pn	01 53 57.3	+1.2
	baz=311						
R11A	Troy Canyon, C	7.79	102	P	Pn	01 53 56.6	+0.2
	baz=288						
R11A	Troy Canyon, C	7.79	102	ePn	Pn	01 53 57.0	+0.6
OSI	Osito Audit: C	7.80	136	ePn	Pn	01 53 59.8	+3.4
TPNV	Topopah Spring	7.88	113	P	Pn	01 54 00.3	+2.8
	baz=298						
TPNV	Topopah Spring	7.88	113	ePn	Pn	01 54 00.1	+2.6
TPNV	Topopah Spring	7.88	113	eP	Pn	01 54 00.1	+2.6
E09A	Wood Farm, Sta	7.99	38	ePn	Pn	01 53 59.2	+0.4
EDW2	Edwards Air Fo	8.01	132	P	Pn	01 53 59.2	-0.1
	baz=315						
D08A	Wollman Farm,	8.06	33	ePn	Pn	01 54 00.4	+0.6
F10A	Beach Ranch, E	8.07	44	ePn	Pn	01 54 02.1	+2.0
JCW	Jim Creek	8.12	16	ePn	Pn	01 54 01.2	+0.6
B05A	Bryant	8.15	15	P	Pn	01 54 01.4	+0.4
	baz=199,SNR=22						
B05A				S	Sn	01 55 28.5	-4.5
	baz=199						
MCW	Mount Constitu	8.42	11	ePn	Pn	01 54 05.5	+0.7
GSC	Goldstone, Bar	8.44	125	P	Pn	01 54 05.4	+0.3
	baz=309						
GSC	Goldstone, Bar	8.44	125	ePn	Pn	01 54 04.7	-0.5
GSC	Goldstone, Bar	8.44	125	eP	Pn	01 54 04.7	-0.5
MWC	Mount Wilson	8.46	135	ePn	Pn	01 54 09.8	+4.3
MWC	Mount Wilson	8.46	135	eP	Pn	01 54 09.8	+4.3
A04D	Lummi Island	8.48	12	P	Pn	01 54 08.2	+2.6
	baz=195						
B06A	Marblemount	8.52	17	ePn	Pn	01 54 07.4	+1.3
RRX	Edison Barstow	8.60	128	P	Pn	01 54 08.3	+1.0
	baz=312						
MBW	Mount Baker	8.69	15	ePn	Pn	01 54 09.4	+0.9
SHPR	Sheep Range	8.86	113	ePn	Pn	01 54 14.3	+3.3
C09A	Chrisman Ranch	8.92	32	ePn	Pn	01 54 11.5	-0.1
TUQ	Turquoise Moun	8.92	121	P	Pn	01 54 13.2	+1.4
	baz=306						
B08A	Colville Reser	8.99	26	ePn	Pn	01 54 13.3	+0.7
HEC	Hector,Ludlow	9.04	125	P	Pn	01 54 12.6	-0.8
	baz=310						
PSUT	Pine Spring	9.04	98	ePn	Pn	01 54 15.4	+1.9
BGU	Big Grassy Mou	9.32	83	ePn	Pn	01 54 18.8	+1.5
GMRC	Granite Mounta	9.49	123	P	Pn	01 54 20.6	+1.0
	baz=308						
DUG	Dugway, Tooele	9.53	87	P	Pn	01 54 21.8	+1.7
	baz=275						
DUG	Dugway, Tooele	9.53	87	ePn	Pn	01 54 21.6	+1.4
DUG	Dugway, Tooele	9.53	87	eP	Pn	01 54 21.6	+1.4
HVU	Hansel Valley	9.54	78	ePn	Pn	01 54 22.9	+2.6
HVU	Hansel Valley	9.54	78	eP	Pn	01 54 22.9	+2.6
LDFC	Landfair	9.67	120	ePn	Pn	01 54 24.4	+2.4
CCUT	Cedar City	9.72	103	ePn	Pn	01 54 26.0	+3.2
PNT	Penticton	9.74	22	ePn	Pn	01 54 24.3	+1.4
SPUT	South Promonto	9.76	81	ePn	Pn	01 54 26.2	+2.9
BELC	Belle Mtn. Jos	9.80	128	P	Pn	01 54 23.9	0.0
	baz=313						
PFO	Pinyon Flats O	9.80	131	P	Pn	01 54 24.7	+0.8
	baz=316						
PFO	Pinyon Flats O	9.80	131	ePn	Pn	01 54 24.2	+0.3
PFO	Pinyon Flats O	9.80	131	eP	Pn	01 54 24.2	+0.3
XPFO	Piæon Flat	9.81	131	ePn	Pn	01 54 25.4	+1.5
FRD	Ford Ranch, An	9.81	132	P	Pn	01 54 23.7	-0.2
	baz=316						
SZCU	Shurtz Canyon	9.91	103	ePn	Pn	01 54 28.6	+3.2
LCMT	Little Creek M	10.01	106	ePn	Pn	01 54 30.6	+3.9
NLU	North Lily Min	10.12	88	ePn	Pn	01 54 30.4	+2.2
MCMT	McKenzie Canyo	10.16	60	ePn	Pn	01 54 29.9	+1.1
IRM	Iron Mountain	10.22	125	P	Pn	01 54 28.7	-0.8
	baz=310						
CTU	Camp Tracy	10.30	84	ePn	Pn	01 54 33.5	+2.8
MSU	Marysvale	10.31	97	ePn	Pn	01 54 33.2	+2.2
MSU	Marysvale	10.31	97	eP	Pn	01 54 33.2	+2.2
KNB	Kanab	10.32	105	ePn	Pn	01 54 34.2	+3.2
MONP2	Monument Peak	10.36	134	P	Pn	01 54 29.8	-1.7
	baz=318						
BC3	Big Chuckawall	10.37	128	P	Pn	01 54 30.4	-1.2
	baz=313						
MSO	Missoula	10.40	48	P	Pn	01 54 34.2	+2.1
	baz=237						
MSO	Missoula	10.40	48	ePn	Pn	01 54 33.8	+1.7
HWUT	Hardware Ranch	10.43	79	ePn	Pn	01 54 34.5	+2.0
MTPU	Mount Pierson	10.44	99	ePn	Pn	01 54 36.0	+3.2
LLLB	Lillooet	10.45	12	ePn	Pn	01 54 33.4	+0.8
MPU	Maple Canyon	10.45	88	ePn	Pn	01 54 36.3	+3.5
DLMT	Dillon	10.53	58	ePn	Pn	01 54 34.7	+0.9
JLU	Jordanelle	10.54	85	ePn	Pn	01 54 37.0	+2.9
PKCU	Pink Cliffs	10.54	102	ePn	Pn	01 54 37.9	+3.8
TCUT	Toone Canyon	10.55	82	ePn	Pn	01 54 37.5	+3.3
BSMT	Bassoo Peak	10.57	42	ePn	Pn	01 54 36.0	+1.6
JTMT	Jette	10.76	44	ePn	Pn	01 54 38.2	+1.2
LRM	Limekiln Ridge	10.81	56	ePn	Pn	01 54 38.4	+0.7
AHID	Auburn Hatcher	10.87	73	ePn	Pn	01 54 40.9	+2.3
Y12C	Blythe	10.88	124	ePn	Pn	01 54 39.8	+1.4
TMUT	Trail Mountain	10.88	91	ePn	Pn	01 54 42.8	+4.0
FXWY	Fox Creek	11.07	69	ePn	Pn	01 54 43.4	+2.0
TPAW	Teton Pass	11.10	69	ePn	Pn	01 54 42.7	+0.9
QLMT	Earthquake Lak	11.11	62	ePn	Pn	01 54 43.9	+2.1
REDW	Red Top Meadow	11.15	70	ePn	Pn	01 54 44.8	+2.5
GLA	Glamis	11.16	128	ePn	Pn	01 54 42.1	-0.3
GLA	Glamis	11.16	128	eP	Pn	01 54 42.1	-0.3
IMW	Indian Meadow	11.19	67	ePn	Pn	01 54 45.4	+2.4
P17A	Butcher Ranch,	11.21	90	ePn	Pn	01 54 47.0	+3.8
SNOW	Snow King Moun	11.23	70	ePn	Pn	01 54 46.3	+2.7
YHB	Horse Butte	11.24	63	ePn	Pn	01 54 46.1	+2.4
BOZ	Bozeman (W)	11.24	58	ePn	Pn	01 54 44.0	+0.4
BOZ	Bozeman (W)	11.24	58	eP	Pn	01 54 44.0	+0.4
MOOW	Moose Ponds	11.30	68	ePn	Pn	01 54 46.3	+1.9
LOHW	Long Hollow	11.37	69	ePn	Pn	01 54 47.9	+2.5
YMR	Madison River	11.37	63	ePn	Pn	01 54 48.0	+2.6
YPP	Pitchstone Pla	11.38	66	ePn	Pn	01 54 48.4	+2.8
YFT	Old Faithful	11.40	65	ePn	Pn	01 54 49.5	+3.6
FLWY	Flagg Ranch	11.40	67	ePn	Pn	01 54 48.0	+2.1
SRU	San Rafael Swe	11.44	92	ePn	Pn	01 54 50.2	+3.9
SRU	San Rafael Swe	11.44	92	eP	Pn	01 54 50.2	+3.9
P18A	Preston Nutter	11.56	89	ePn	Pn	01 54 52.2	+4.1
H17A	Grant Village	11.57	65	ePn	Pn	01 54 52.1	+4.0
HRY	Holter Researc	11.59	53	ePn	Pn	01 54 48.7	+0.4
WALA	Waterton Lakes	11.80	39	ePn	Pn	01 54 52.5	+1.3
BBB	Bella Bella	11.91	352	Pn	Pn	01 54 53.7	+1.2
	0.6nm,0.3s,baz=190,slow=13,SNR=15						
BBB				LR	LR	01 58 19.1	
	comp=Z,1μm,20.0s,baz=178,slow=32						
BBB	Bella Bella	11.91	352	ePn	Pn	01 54 55.6	+3.2
BW06	Boulder Array	12.00	74	ePn	Pn	01 54 54.2	+0.1
PD31	Pinedale Array	12.00	74	ePn	Pn	01 54 55.8	+1.8
PDAR	Pinedale Array	12.00	74	Pn	Pn	01 54 55.3	+1.2
	0.2nm,0.3s,baz=239,slow=14,SNR=50						
PDAR	Pinedale Array	12.00	74	ePn	Pn	01 54 54.4	+0.4
WUAZ	Wupatki	12.02	110	ePn	Pn	01 54 53.7	-0.6
GCMT	Greycliff	12.60	60	ePn	Pn	01 55 02.5	+0.5
PV09	Paradox Valley	12.63	94	ePn	Pn	01 55 06.1	+3.4
RLMT	Red Lodge	12.66	63	ePn	Pn	01 55 05.1	+2.0
PV23	Carpenter Ridg	12.74	94	ePn	Pn	01 55 07.4	+3.2
PV21	Cone Mtn., Par	12.74	93	ePn	Pn	01 55 07.4	+3.3
PV14	Lion Creek, Pa	12.75	94	ePn	Pn	01 55 04.3	0.0
PV19	Morning Glory	12.79	94	ePn	Pn	01 55 08.5	+3.7
PV20	West Nyswonger	12.80	94	ePn	Pn	01 55 08.5	+3.6
PV20				eSn	Sn	01 57 32.1	+4.7
PV17	East Wray Mesa	12.82	94	ePn	Pn	01 55 08.8	+3.6
PV16	Nyswonger Mesa	12.84	94	ePn	Pn	01 55 09.2	+3.7
PV18	Skein Mesa, Pa	12.87	95	ePn	Pn	01 55 09.0	+3.1
PV22	Blue Mesa, Par	12.89	93	ePn	Pn	01 55 09.3	+3.1
PV03	Paradox Valley	12.91	94	ePn	Pn	01 55 09.1	+2.6
PV12	Saucer Basin,	12.93	94	ePn	Pn	01 55 10.5	+3.7
PV13	Radium Mtn., P	12.96	95	ePn	Pn	01 55 10.1	+3.0
PV02	Paradox Valley	13.01	95	ePn	Pn	01 55 10.7	+2.9
O20A	White River Ci	13.02	86	ePn	Pn	01 55 09.4	+1.4
EGMT	Eagleton	13.46	51	ePn	Pn	01 55 13.2	-0.5
MVCO	Mesa Verde	13.48	98	ePn	Pn	01 55 15.7	+1.4
DIB	Dawson Inlet,	13.68	341	ePn	Pn	01 55 19.8	+3.2
RWWY	Rawlins	13.70	79	ePn	Pn	01 55 16.1	-1.1
SMCO	Snowmass	14.13	89	ePn	Pn	01 55 24.9	+1.5
TUC	Tucson	14.21	120	ePn	Pn	01 55 26.8	+2.7
TUC	Tucson	14.21	120	eP	Pn	01 55 26.8	+2.7
K22A	Casper	14.22	75	ePn	Pn	01 55 24.0	-0.4
S22A	4UR Ranch, Cre	14.58	95	ePn	Pn	01 55 31.6	+2.2
N23A	Red Feather La	14.69	82	ePn	Pn	01 55 30.2	-0.6
PHWY	Pilot Hill	15.03	80	ePn	Pn	01 55 34.6	-0.8
	54nm,1.0s						
ISCO	Idaho Springs	15.07	86	ePn	Pn	01 55 36.6	+0.6
	29nm,1.1s						
ISCO	Idaho Springs	15.07	86	eP	Pn	01 55 36.6	+0.6
ISCO				pmax	pmax		
	comp=Z,29nm,1.1s						
LAO	LASA Array	15.15	59	ePn	Pn	01 55 35.8	-0.9
	comp=Z,150nm,1.1s						
SDCO	Great Sand Dun	15.59	94	ePn	P	01 55 45.0	-2.1
	comp=Z,116nm,1.1s						
ANMO	Albuquerque	15.87	104	Pn	Pn	01 55 47.2	+0.8
	comp=Z,0.1nm,0.3s,baz=305,slow=12,SNR=30						
ANMO				LR	LR	02 01 33.3	
	comp=Z,710nm,20.5s,baz=292,slow=36						
ANMO	Albuquerque	15.87	104	ePn	Pn	01 55 47.7	+1.4
	comp=Z,19nm,1.2s						
ANMO	Albuquerque	15.87	104	ceP	Pn	01 55 47.9	+1.5
ANMO				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CRAG	Craig	15.91	344	ePn	P	01 55 49.3	-1.0
	comp=Z,106nm,1.4s						
RSSD	Black Hills	16.14	70	ePn	Pn	01 55 46.8	-3.1
	comp=Z,92nm,1.4s						
RSSD	Black Hills	16.14	70	eP	Pn	01 55 46.8	-3.1
RSSD				pmax	pmax		
	comp=Z,92nm,1.4s						
HSIG		16.36	130	ePn	P	01 55 54.8	-0.6
	comp=Z,63nm,1.1s						
T25A	Trinidad	16.60	95	ePn	P	01 55 57.4	-0.9
	comp=Z,67nm,1.1s						
WRAK	Wrangell Islan	16.65	346	ePn	Pn	01 55 56.7	+0.7
	comp=Z,80nm,1.3s						
DGMT	Dagmar	17.02	55	ePn	Pn	01 55 59.3	-1.5
	comp=Z,263nm,1.5s						
KSCO	Kaye Shedlock’	17.48	87	ePn	P	01 56 07.6	-0.3
	comp=Z,228nm,1.3s						
OGNE	Ogallala	17.63	81	ePn	Pn	01 56 07.3	-1.3
SIT	Sitka	17.87	342	ePn	P	01 56 14.9	+3.1
	comp=Z,28nm,0.9s						
SIT	Sitka	17.87	342	eP	P	01 56 14.9	+3.1
SIT				pmax	pmax		
	comp=Z,28nm,0.9s						
DLBC	Dease Lake	18.27	352	P	Pn	01 56 16.2	0.0
	comp=Z,0.2nm,0.3s,baz=196,slow=9.6,SNR=14						
DLBC	Dease Lake	18.27	352	ePn	P	01 56 19.1	+2.7
	comp=Z,42nm,1.0s						
MNTX	Cornudas Mount	18.27	112	ePn	P	01 56 18.3	+1.8
	comp=Z,92nm,1.8s						
JIS	Juneau Island	18.78	345	eP	Pn	01 56 24.5	+2.2
	comp=Z,45nm,0.9s						
MSTX	Muleshoe	19.03	103	eP	Pn	01 56 26.7	+0.9
	comp=Z,19nm,0.8s						
BESE	Bessie Mountai	19.16	345	eP	Pn	01 56 28.5	+1.6
	comp=Z,137nm,1.2s						
BESE				eSn	Sn	02 00 01.6	+0.2
AMTX	Amarillo	19.47	99	eP	Pn	01 56 32.4	+1.5
	comp=Z,43nm,1.1s						
CBKS	Cedar Bluff	19.73	86	eP	P	01 56 32.3	-0.2
CBKS	Cedar Bluff	19.73	86	eP	P	01 56 32.3	-0.2
MDND	Maddock	19.80	60	eP	P	01 56 33.7	+0.5
	comp=Z,282nm,1.4s						
SKAG	Skagway	20.07	345	eP	Pn	01 56 37.9	+0.2
	comp=Z,56nm,1.1s						
BGNE	Belgrade	20.50	78	eP	P	01 56 41.8	+0.9
	comp=Z,161nm,1.1s						
LPIG	La Paz	20.58	138	P	Pn	01 56 43.7	-0.3
	comp=Z,49nm,1.0s,baz=344,slow=2.6,SNR=6.8						
LPIG				LR	LR	02 04 03.7	
	comp=Z,1μm,19.8s,baz=325,slow=35						
TX31	Lajitas Ar. Si	20.85	115	eP	Pn	01 56 47.2	-0.1
TXAR	Lajitas Array	20.85	115	P	Pn	01 56 46.7	-0.6
	comp=Z,21nm,0.9s,baz=298,slow=8.2,SNR=174						
G32A	Webster	20.88	67	eP	P	01 56 44.4	-0.6
	comp=Z,134nm,1.0s						
HPIG		21.10	124	eP	P	01 56 48.7	+1.1
	comp=Z,32nm,1.1s						
WHY	Whitehorse	21.10	347	eP	P	01 56 48.8	+1.5
	comp=Z,37nm,1.0s						
SLBS	Sierra La Lagu	21.11	138	eP	P	01 56 49.1	+1.5
	comp=Z,178nm,1.5s						
ECSD	EROS Data Cent	21.48	72	eP	P	01 56 49.0	-2.4
	comp=Z,44nm,0.9s						
ECSD				LR	LR		
	comp=Z,591nm,19.0s						
WMOK	Wichita Mounta	21.72	97	eP	P	01 56 54.5	+0.5
	comp=Z,15nm,1.0s						
WMOK				LR	LR		
	comp=Z,966nm,20.0s						
WMOK	Wichita Mounta	21.72	97	eP	P	01 56 54.5	+0.5
WMOK				pmax	pmax		
	comp=Z,15nm,1.0s						
WMOK				MLR	MLR		
	comp=Z,966nm,20.0s						
ABTX	Abilene, Hawle	21.98	103	eP	P	01 56 57.5	+0.7
	comp=Z,87nm,1.3s						
KSU1	Kansas State U	22.04	84	eP	P	01 56 58.2	+0.8
KSU1				LR	LR		
	comp=Z,579nm,20.0s						
AGMN	Agassiz Nation	22.35	60	eP	P	01 57 00.1	-0.6
	comp=Z,75nm,0.9s						
AGMN				LR	LR		
	comp=Z,3μm,20.0s						
ULM	Lac du Bonnet	22.75	55	P	P	01 57 04.6	-0.2
	comp=Z,115nm,0.9s,baz=259,slow=9.9,SNR=76						
ULM				LR	LR	02 06 27.5	
	comp=Z,1μm,21.6s,baz=258,slow=38						
ULM	Lac du Bonnet	22.75	55	eP	P	01 57 04.3	-0.6
	comp=Z,145nm,0.9s						
ULM	Lac du Bonnet	22.75	55	eP	P	01 57 04.3	-0.6
ULM				pmax	pmax		
	comp=Z,145nm,0.9s						
JCT	Junction City	22.94	108	eP	P	01 57 07.0	-0.1
	comp=Z,42nm,1.0s						
JCT				LR	LR		
	comp=Z,2μm,19.0s						
JCT	Junction City	22.94	108	eP	P	01 57 07.0	-0.1
JCT				pmax	pmax		
	comp=Z,42nm,1.0s						
JCT				MLR	MLR		
	comp=Z,2μm,19.0s						
YKA	Yellowknife Ar	23.00	13	P	P	01 57 07.1	-0.3
	comp=Z,20nm,0.9s,baz=198,slow=9.8,SNR=66						
YKA				LR	LR	02 05 46.8	
	comp=Z,27nm,19.0s,baz=204,slow=36						
G35A	Watkins	23.01	68	eP	P	01 57 06.1	-1.6
	comp=Z,115nm,1.5s						
YKW3	Yellowknife Ar	23.07	13	eP	P	01 57 07.3	-0.8
	comp=Z,52nm,1.2s						
J36A	Seneca 1, Swea	23.15	73	eP	P	01 57 06.7	-2.5
	comp=Z,140nm,1.0s						
RAGM	Ragged Mountai	23.31	335	eP	P	01 57 13.4	+2.7
	comp=Z,33nm,1.1s						
N37A	Lee Faris, Mou	23.54	79	eP	P	01 57 13.9	+0.9
	comp=Z,89nm,1.1s						
TUL1	Leonard	23.57	92	eP	P	01 57 13.8	+0.5
	comp=Z,35nm,0.9s						
F36A	Milaca	23.70	66	eP	P	01 57 13.5	-1.1
	comp=Z,48nm,1.1s						
BMRM	Bremner River	23.74	336	eP	P	01 57 17.6	+2.6
	comp=Z,76nm,1.6s						
B35A	Bob, Littlefor	23.77	60	eP	P	01 57 14.7	-0.5
	comp=Z,147nm,1.2s						
I37A	Lemond, Waseca	23.80	71	eP	P	01 57 13.2	-2.3
	comp=Z,270nm,1.3s						
WHTX	Lake Whitney,	23.91	102	eP	P	01 57 17.9	+1.2
	comp=Z,83nm,1.1s						
D36A	Goodland	24.02	63	eP	P	01 57 18.2	+0.5
	comp=Z,184nm,1.4s						
SCIA	State Center	24.11	76	eP	P	01 57 18.1	-0.4
	comp=Z,105nm,1.5s						
SPMN	Marine on St.	24.20	68	eP	P	01 57 18.4	-0.8
	comp=Z,168nm,1.3s						
DIV	Divide	24.23	336	eP	P	01 57 21.4	+1.9
	comp=Z,17nm,0.8s						
P38A	Dawn	24.26	82	eP	P	01 57 20.2	+0.3
	comp=Z,39nm,1.1s						
K38A	Parkersburg	24.36	74	eP	P	01 57 19.3	-1.5
	comp=Z,233nm,1.4s						
435B	Jarrell	24.41	105	eP	P	01 57 22.4	+1.1
	comp=Z,112nm,1.4s						
833A	Chaparral WMA,	24.45	112	eP	P	01 57 24.1	+2.4
	comp=Z,24nm,0.9s						
GLI	Glacier Island	24.48	334	eP	P	01 57 23.0	+1.4
	comp=Z,30nm,0.8s						
KLU	Klutina	24.55	336	eP	P	01 57 24.5	+2.0
	comp=Z,31nm,1.0s						
KDAK	Kodiak Island	24.65	324	P	P	01 57 24.8	+1.6
	comp=Z,15nm,0.8s,baz=109,slow=5.6,SNR=9.1						
KDAK				LR	LR	02 04 33.5	
	comp=Z,1μm,21.6s,baz=129,slow=31						
SII	Sitkinak Islan	24.77	320	eP	P	01 57 26.1	+1.7
	comp=Z,74nm,1.0s						
N39A	Derby Farms, D	24.80	78	eP	P	01 57 24.7	-0.1
	comp=Z,91nm,1.1s						
HHAR	Hobbs	24.85	89	eP	P	01 57 25.2	-0.2
	comp=Z,75nm,1.1s						
S39A	Bolivar	24.90	86	eP	P	01 57 25.9	+0.1
	comp=Z,44nm,1.2s						
HARP	HAARP	25.04	338	eP	P	01 57 29.6	+2.9
	comp=Z,60nm,1.2s						
DAWY	Dawson	25.07	345	eP	P	01 57 28.4	+1.3
CNPM	China Poot	25.09	328	eP	P	01 57 29.1	+1.9
	comp=Z,60nm,1.2s						
E38A	The Farm, Brul	25.09	65	eP	P	01 57 26.3	-1.1
	comp=Z,123nm,1.1s						
BRLK	Bradley Lake	25.10	329	eP	P	01 57 29.5	+2.2
	comp=Z,44nm,1.0s						
I39A	Houston	25.16	71	eP	P	01 57 27.9	-0.2
	comp=Z,222nm,1.0s						
EYMN	Ely	25.21	61	eP	P	01 57 29.0	+0.5
EYMN				LR	LR		
	comp=Z,2μm,22.0s						
SCM	Sheep Creek Mo	25.25	335	eP	P	01 57 30.5	+1.7
	comp=Z,52nm,0.8s						
SCM	Sheep Creek Mo	25.25	335	eP	P	01 57 30.5	+1.7
SCM				pmax	pmax		
	comp=Z,52nm,0.8s						
W39A	Magazine	25.35	92	eP	P	01 57 31.1	+1.3
	comp=Z,52nm,1.2s						
P40A	Paris	25.40	81	eP	P	01 57 30.6	+0.4
	comp=Z,45nm,1.0s						
R40A	Maddies Statio	25.54	84	eP	P	01 57 32.0	+0.5
	comp=Z,16nm,0.9s						
RC01	Rabbit Creek A	25.54	332	eP	P	01 57 33.2	+2.0
	comp=Z,19nm,0.8s						
SML	Sawmill	25.56	334	eP	P	01 57 33.1	+1.6
	comp=Z,48nm,1.0s						
SML	Sawmill	25.56	334	eP	P	01 57 33.1	+1.6
SML				pmax	pmax		
	comp=Z,48nm,1.0s						
L40A	Anamosa	25.57	75	eP	P	01 57 31.9	+0.1
	comp=Z,56nm,1.1s						
PAX	Paxson	25.57	339	eP	P	01 57 33.1	+1.4
	comp=Z,12nm,1.1s						
PAX	Paxson	25.57	339	eP	P	01 57 33.1	+1.4
PAX				pmax	pmax		

	comp=Z,12nm,1.1s						
PMR	**Palmer**	**25.67**	**333**	*e*P	**P**	**01 57 33.9**	**+1.4**
	comp=Z,39nm,1.0s						
PMR	**Palmer**	**25.67**	**333**	*e*P	**P**	**01 57 33.9**	**+1.4**
PMR				pmax	pmax		
	comp=Z,39nm,1.0s						
MIAR	**Mount Ida**	**25.75**	**93**	*e*P	**P**	**01 57 36.1**	**+2.7**
	comp=Z,44nm,1.3s						
MIAR				LR	LR		
	comp=Z,1µm,21.0s						
MIAR	**Mount Ida**	**25.75**	**93**	*e*P	**P**	**01 57 36.1**	**+2.7**
MIAR				pmax	pmax		
	comp=Z,44nm,1.3s						
MIAR				MLR	MLR		
	comp=Z,1µm,21.0s						
V40A	**Witts Springs**	**25.87**	**90**	*e*P	**P**	**01 57 35.3**	**+0.8**
	comp=Z,82nm,1.1s						
W40A	**Ferguson Farm,**	**25.89**	**91**	*e*P	**P**	**01 57 36.3**	**+1.6**
	comp=Z,98nm,1.1s						
KVTX	**Kingsville**	**25.98**	**111**	PFAKE		01 57 50.0	+14
KVTX				LR	LR		
	comp=Z,2µm,19.0s						
SCRK	**Sand Creek**	**26.01**	**341**	*e*P	**P**	**01 57 37.0**	**+1.3**
	comp=Z,13nm,1.0s						
RIDG	**Independ'e Rid**	**26.03**	**340**	*e*P	**P**	**01 57 39.7**	**+3.9**
	comp=Z,21nm,1.0s						
G40A	**Rib Lake**	**26.03**	**68**	*e*P	**P**	**01 57 36.5**	**+0.5**
	comp=Z,51nm,1.3s						
N41A	**Harden Midland**	**26.06**	**78**	*e*P	**P**	**01 57 37.2**	**+1.1**
	comp=Z,39nm,0.9s						
EGAK	**Eagle**	**26.06**	**345**	*e*P	**P**	**01 57 37.2**	**+1.3**
	comp=Z,16nm,1.2s						
EGAK				LR	LR		
	comp=Z,471nm,19.0s						
NATX	**Nacogdoches**	**26.11**	**100**	*e*P	**P**	**01 57 37.8**	**+1.0**
	comp=Z,40nm,1.0s						
NATX				LR	LR		
	comp=Z,2µm,19.0s						
HKT	**Hockley**	**26.13**	**104**	*e*P	**P**	**01 57 37.6**	**+0.7**
	comp=Z,84nm,1.4s						
SUA	**Susitna One**	**26.15**	**332**	*e*P	**P**	**01 57 39.2**	**+2.2**
	comp=Z,44nm,0.8s						
JFWS	**Jewell Farm**	**26.17**	**73**	*e*P	**P**	**01 57 37.3**	**+0.1**
	comp=Z,45nm,0.9s						
JFWS				LR	LR		
	comp=Z,476nm,20.0s						
JFWS	**Jewell Farm**	**26.17**	**73**	*e*P	**P**	**01 57 37.3**	**+0.1**
JFWS				pmax	pmax		
	comp=Z,45nm,0.9s						
JFWS				MLR	MLR		
	comp=Z,476nm,20.0s						
DHY	**Denali Highway**	**26.20**	**337**	*e*P	**P**	**01 57 38.9**	**+1.4**
	comp=Z,65nm,1.0s						
RSO	**Redoubt South**	**26.27**	**329**	*e*P	**P**	**01 57 41.6**	**+3.5**
I41A	**Arkdale**	**26.34**	**70**	*e*P	**P**	**01 57 39.9**	**+1.2**
	comp=Z,94nm,1.0s						
CCM	**Cathedral Cave**	**26.38**	**84**	*e*P	**P**	**01 57 39.0**	**-0.1**
	comp=Z,91nm,1.4s						
CCM	**Cathedral Cave**	**26.38**	**84**	*e*P	**P**	**01 57 39.0**	**-0.1**
CCM				pmax	pmax		
	comp=Z,91nm,1.4s						
H41A	**Junction City**	**26.45**	**69**	*e*P	**P**	**01 57 41.1**	**+1.4**
	comp=Z,71nm,1.0s						
WHAR	**Wooly Hollow**	**26.45**	**91**	*e*P	**P**	**01 57 41.2**	**+1.3**
	comp=Z,94nm,1.2s						
W41B	**Gary Mavity, V**	**26.53**	**91**	*e*P	**P**	**01 57 42.3**	**+1.8**
	comp=Z,57nm,1.3s						
LNIG	**Linares**	**26.56**	**118**	*e*P	**P**	**01 57 41.1**	**+0.3**
	comp=Z,40nm,1.7s						
240A	**Hunter Patters**	**26.66**	**98**	*e*P	**P**	**01 57 44.5**	**+2.8**
	comp=Z,43nm,0.9s						
P42A	**Winchester**	**26.67**	**80**	*e*P	**P**	**01 57 41.9**	**+0.1**
	comp=Z,60nm,0.9s						
L42A	**Oliver, Polo**	**26.72**	**75**	*e*P	**P**	**01 57 42.9**	**+0.7**
	comp=Z,102nm,1.0s						
COWI	**Conover**	**26.76**	**66**	*e*P	**P**	**01 57 43.4**	**+0.9**
	comp=Z,26nm,1.1s						
COWI				LR	LR		
	comp=Z,562nm,22.0s						
SKT	**Skwentna**	**26.77**	**332**	*e*P	**P**	**01 57 46.3**	**+3.8**
	comp=Z,14nm,0.8s						
C40A	**Isle Royale Na**	**26.78**	**62**	*e*P	**P**	**01 57 43.0**	**+0.4**
	comp=Z,41nm,0.9s						
CHGN	**Chignik**	**26.79**	**317**	*e*P	**P**	**01 57 43.8**	**+1.2**
	comp=Z,64nm,0.8s						
T42A	**Van Buren**	**26.79**	**86**	*e*P	**P**	**01 57 43.1**	**+0.3**
	comp=Z,24nm,1.2s						
F41A	**Three Lakes**	**26.79**	**67**	*e*P	**P**	**01 57 44.0**	**+1.2**
	comp=Z,133nm,1.4s						
SLM	**Saint Louis**	**26.98**	**82**	*e*P	**P**	**01 57 45.1**	**+0.6**
	comp=Z,87nm,1.3s						
SLM	**Saint Louis**	**26.98**	**82**	*e*P	**P**	**01 57 45.2**	**+0.6**
SLM				pmax	pmax		
	comp=Z,87nm,1.3s						
FVM	**French Village**	**27.02**	**84**	*e*P	**P**	**01 57 46.2**	**+1.3**
	comp=Z,15nm,1.0s						
FVM	**French Village**	**27.02**	**84**	*e*P	**P**	**01 57 46.2**	**+1.3**
FVM				pmax	pmax		
	comp=Z,15nm,1.0s						
I42A	**Draeger Farm,**	**27.04**	**71**	*e*P	**P**	**01 57 46.0**	**+1.0**
	comp=Z,134nm,1.1s						
D41A	**Chassel**	**27.15**	**64**	*e*P	**P**	**01 57 47.6**	**+1.6**
	comp=Z,221nm,1.5s						
MCK	**McKinley**	**27.16**	**337**	*e*P	**P**	**01 57 47.3**	**+1.3**
	comp=Z,23nm,1.0s						
H42A	**Shiocton**	**27.26**	**69**	*e*P	**P**	**01 57 48.4**	**+1.4**
	comp=Z,131nm,1.1s						
PBMO	**Poplar Bluff**	**27.37**	**86**	*e*P	**P**	**01 57 48.6**	**+0.6**
	comp=Z,35nm,1.3s						
TRF	**Thorofare Moun**	**27.37**	**336**	*e*P	**P**	**01 57 49.0**	**+1.0**
	comp=Z,28nm,1.3s						
IL1	**Eielson Array**	**27.39**	**340**	*e*P	**P**	**01 57 48.3**	**+0.4**
IL1				*e*PcP	**PcP**	**02 01 06.8**	**+0.3**
ILAR	**Eielson Array**	**27.39**	**340**	P	**P**	**01 57 48.6**	**+0.6**
	comp=Z,3.4nm,0.8s,baz=156,slow=7.9,SNR=35						
ILAR				PcP	**PcP**	**02 01 07.0**	**+0.5**
	comp=Z,0.8nm,0.7s,baz=168,slow=1.7,SNR=4.4						
ILAR				LR	LR	02 06 47.1	
	comp=Z,832nm,21.5s,baz=148,slow=32						
ILB	**Eielson Array**	**27.39**	**340**	*e*P	**P**	**01 57 48.9**	**+0.9**
WRH	**Wood River Hil**	**27.48**	**339**	*e*P	**P**	**01 57 49.6**	**+0.8**
	comp=Z,21nm,1.3s						
CCB	**Clear Creek Bu**	**27.54**	**339**	*e*P	**P**	**01 57 49.7**	**+0.5**
	comp=Z,12nm,1.0s						
K43A	**Burlington**	**27.60**	**73**	*e*P	**P**	**01 57 52.4**	**+2.4**
	comp=Z,75nm,1.4s						
PPLA	**Purkeypile**	**27.61**	**333**	*e*P	**P**	**01 57 51.6**	**+1.5**
	comp=Z,48nm,1.0s						
SVW2	**Sparrevohn**	**27.76**	**328**	*e*P	**P**	**01 57 51.8**	**+0.5**
	comp=Z,19nm,1.1s						
H43A	**Windswept, Lux**	**27.81**	**69**	*e*P	**P**	**01 57 54.0**	**+2.1**
	comp=Z,38nm,0.9s						
G43A	**Wallace**	**27.81**	**67**	*e*P	**P**	**01 57 53.4**	**+1.5**
	comp=Z,112nm,1.3s						
MDM	**Murphy Dome**	**27.90**	**339**	*e*P	**P**	**01 57 53.3**	**+0.8**
	comp=Z,11nm,1.1s						
CAST	**Castle Rocks**	**27.93**	**334**	*e*P	**P**	**01 57 53.5**	**+0.6**
	comp=Z,28nm,1.7s						
SIUC	**Southern Illin**	**28.01**	**84**	*e*P	**P**	**01 57 54.9**	**+1.1**
	comp=Z,29nm,1.0s						
M44A	**Midewin, Midew**	**28.02**	**76**	*e*P	**P**	**01 57 55.2**	**+1.3**
	comp=Z,95nm,1.3s						
BPAW	**Bear Paw Mtn.**	**28.05**	**336**	*e*P	**P**	**01 57 54.1**	**+0.2**
	comp=Z,11nm,0.8s						
E43A	**Lone Tree Farm**	**28.24**	**65**	*e*P	**P**	**01 57 56.9**	**+1.1**
	comp=Z,31nm,1.1s						
INK	**Inuvik**	**28.28**	**354**	P	**P**	**01 57 55.6**	**-0.2**
	comp=Z,5.6nm,0.9s,baz=154,slow=6.4,SNR=5.8						
INK				LR	LR	02 08 35.9	
	comp=Z,621nm,18.1s,baz=154,slow=35						
INK	**Inuvik**	**28.28**	**354**	*e*P	**P**	**01 57 56.6**	**+0.7**
	comp=Z,15nm,0.9s						
INK	**Inuvik**	**28.28**	**354**	*e*P	**P**	**01 57 56.6**	**+0.7**
INK				pmax	pmax		
	comp=Z,15nm,0.9s						
FYU	**Fort Yukon**	**28.46**	**343**	*e*P	**P**	**01 57 59.4**	**+1.9**
	comp=Z,26nm,0.9s						
P45A	**Graceland, Par**	**28.64**	**79**	*e*P	**P**	**01 58 00.5**	**+1.1**
	comp=Z,60nm,1.5s						
MLY	**Manley**	**28.65**	**338**	*e*P	**P**	**01 58 00.2**	**+0.9**
	comp=Z,24nm,1.0s						
SFIN	**Lafayette**	**28.93**	**78**	*e*P	**P**	**01 58 02.7**	**+0.8**
	comp=Z,99nm,1.8s						
M46A	**Old House Fiel**	**29.27**	**75**	*e*P	**P**	**01 58 07.1**	**+2.2**
	comp=Z,65nm,1.2s						
WVT	**Waverly**	**29.56**	**86**	*e*P	**P**	**01 58 08.4**	**+0.8**
	comp=Z,17nm,1.1s						
WVT	**Waverly**	**29.56**	**86**	*e*P	**P**	**01 58 08.4**	**+0.8**
WVT				pmax	pmax		
	comp=Z,17nm,1.1s						
BLO	**Bloomington**	**29.65**	**80**	*e*P	**P**	**01 58 09.0**	**+0.7**
	comp=Z,19nm,0.9s						
BLO	**Bloomington**	**29.65**	**80**	*e*P	**P**	**01 58 09.0**	**+0.7**
BLO				pmax	pmax		
	comp=Z,19nm,0.9s						
PLAL	**Pickwick Lake**	**29.78**	**88**	*e*P	**P**	**01 58 10.5**	**+0.9**
	comp=Z,30nm,1.1s						
T47A	**Sharon Grove**	**29.83**	**84**	*e*P	**P**	**01 58 11.3**	**+1.4**
	comp=Z,9.8nm,0.9s						
WCI	**Wyandotte Cave**	**30.07**	**81**	*e*P	**P**	**01 58 12.2**	**+0.1**
	comp=Z,38nm,1.4s						
WCI	**Wyandotte Cave**	**30.07**	**81**	*e*P	**P**	**01 58 12.2**	**+0.1**
WCI				pmax	pmax		
	comp=Z,38nm,1.4s						
COLD	**Coldfoot**	**30.16**	**341**	*e*P	**P**	**01 58 15.7**	**+3.1**
	comp=Z,7.4nm,1.1s						
UNV	**Unalaska Valle**	**30.61**	**310**	*e*P	**P**	**01 58 17.7**	**+1.0**
	comp=Z,105nm,1.2s						
X48A	**Hartselle**	**30.77**	**89**	*e*P	**P**	**01 58 18.8**	**+0.5**
	comp=Z,14nm,1.0s						
T49A	**Edmonton**	**30.99**	**83**	*e*P	**P**	**01 58 21.2**	**+1.0**
	comp=Z,46nm,1.3s						
AAM	**Ann Arbor**	**31.07**	**73**	PFAKE		01 58 30.0	+9.1
AAM				LR	LR		
	comp=Z,274nm,19.0s						
TOLK	**Toolik Lake Re**	**31.12**	**343**	*e*P	**P**	**01 58 23.4**	**+2.2**
	comp=Z,21nm,0.9s						
LRAL	**Lakeview Retre**	**31.37**	**91**	*e*P	**P**	**01 58 24.7**	**+1.1**
	comp=Z,17nm,1.0s						
W50A	**Signal Mountai**	**31.81**	**86**	*e*P	**P**	**01 58 28.2**	**+0.7**
	comp=Z,23nm,1.0s						
ACSO	**Alum Creek Sta**	**32.02**	**76**	*e*P	**P**	**01 58 30.2**	**+1.0**
	comp=Z,23nm,0.9s						
ACSO				LR	LR		
	comp=Z,425nm,21.0s						
Z50A	**Ashland**	**32.10**	**90**	*e*P	**P**	**01 58 30.9**	**+0.9**
	comp=Z,9.5nm,0.8s						
BRAL	**Brewton**	**32.15**	**95**	PFAKE		01 58 40.0	+10
BRAL				LR	LR		
	comp=Z,1µm,19.0s						
CPCT	**Cooper Cave**	**32.32**	**86**	*e*P	**P**	**01 58 33.1**	**+1.1**
	comp=Z,30nm,1.1s						
V51A	**Loudon**	**32.32**	**85**	*e*P	**P**	**01 58 33.0**	**+1.1**
	comp=Z,21nm,1.1s						
X51A	**Calhoun**	**32.39**	**87**	*e*P	**P**	**01 58 33.9**	**+1.3**
	comp=Z,28nm,1.0s						
TKL	**Tuckaleechee C**	**32.81**	**85**	P	**P**	**01 58 35.0**	**-1.3**
	comp=Z,8.5nm,1.0s,baz=273,slow=5.1,SNR=4.7						
TKL				LR	LR	02 12 17.6	
	comp=Z,568nm,20.6s,baz=290,slow=37						
TKL	**Tuckaleechee C**	**32.81**	**85**	*e*P	**P**	**01 58 37.0**	**+0.7**
	comp=Z,24nm,1.1s						
TKL	**Tuckaleechee C**	**32.81**	**85**	*e*P	**P**	**01 58 37.0**	**+0.7**
TKL				pmax	pmax		
	comp=Z,25nm,1.1s						
V52A	**Sevierville**	**32.88**	**84**	*e*P	**P**	**01 58 37.4**	**+0.5**
	comp=Z,35nm,1.5s						
W52A	**Murphy**	**32.90**	**86**	*e*P	**P**	**01 58 38.0**	**+0.9**
	comp=Z,40nm,1.2s						
152A	**Waverly Hall**	**33.27**	**90**	*e*P	**P**	**01 58 40.3**	**+0.1**
	comp=Z,12nm,0.9s						
Y52A	**Lilburn**	**33.27**	**88**	*e*P	**P**	**01 58 41.2**	**+0.9**
	comp=Z,22nm,1.1s						
V53A	**Saluda**	**33.54**	**84**	*e*P	**P**	**01 58 43.7**	**+1.0**
	comp=Z,26nm,1.0s						
BG3	**Lake Jocassee**	**33.70**	**85**	*e*P	**P**	**01 58 45.6**	**+1.6**
	comp=Z,35nm,1.4s						
ALLY	**Alegheny Colle**	**33.77**	**73**	*e*P	**P**	**01 58 45.6**	**+1.1**
	comp=Z,42nm,1.2s						
SADO	**Sadowa**	**33.88**	**67**	LR	LR	02 12 52.5	
	comp=Z,415nm,18.7s,baz=296,slow=37						
SADO	**Sadowa**	**33.88**	**67**	*e*P	**P**	**01 58 46.2**	**+0.7**
	comp=Z,61nm,1.1s						
GOGA	**Godfrey**	**33.91**	**88**	PFAKE		01 59 00.0	+14
GOGA				LR	LR		
	comp=Z,528nm,22.0s						
GOGA	**Godfrey**	**33.91**	**88**	P	**P**	**01 58 47.9**	**+2.1**
GOGA				pmax	pmax		
	comp=Z,16nm,1.9s						
253A	**Americus**	**33.98**	**91**	*e*P	**P**	**01 58 47.5**	**+1.1**
	comp=Z,73nm,1.3s						
N54A	**Moraine State**	**34.05**	**74**	*e*P	**P**	**01 58 48.1**	**+1.1**
	comp=Z,32nm,1.1s						
M54A	**Oil Creek Stat**	**34.15**	**73**	*e*P	**P**	**01 58 48.0**	**+0.1**
	comp=Z,113nm,1.9s						
RDOG	**Red Dog Mine**	**34.31**	**336**	*e*P	**P**	**01 58 50.5**	**+1.6**
	comp=Z,41nm,1.4s						
MCWV	**Mont Chateau**	**34.50**	**76**	*e*P	**P**	**01 58 51.4**	**+0.5**
	comp=Z,88nm,1.7s						
PAULI	**Pauline**	**34.61**	**85**	*e*P	**P**	**01 58 53.6**	**+1.6**
	comp=Z,24nm,1.2s						
BLA	**Blacksburg**	**34.82**	**81**	PFAKE		01 59 00.0	+6.3
BLA				LR	LR		
	comp=Z,896nm,20.0s						
KMSC	**Kings Mountain**	**34.86**	**84**	*e*P	**P**	**01 58 54.5**	**+0.5**
	comp=Z,38nm,1.0s						
CMIG	**Matias Romero**	**35.08**	**123**	P	**P**	**01 58 56.4**	**+0.3**
	comp=Z,8.3nm,0.9s,baz=317,slow=9.1,SNR=6.6						
MMNY	**Mt. Morris Dam**	**35.15**	**70**	*e*P	**P**	**01 58 57.9**	**+1.5**
	comp=Z,56nm,1.1s						
JSC	**Jenkinsville**	**35.24**	**86**	*e*P	**P**	**01 58 57.7**	**+0.4**
	comp=Z,30nm,1.2s						
O56A	**Blue Knob Stat**	**35.27**	**75**	*e*P	**P**	**01 58 58.7**	**+1.1**
	comp=Z,92nm,1.7s						
PLVO	**Plevna**	**35.29**	**66**	*e*P	**P**	**01 58 58.8**	**+1.2**
	comp=Z,62nm,1.1s						
SSPA	**Standing Stone**	**35.67**	**74**	*e*P	**P**	**01 59 01.2**	**+0.2**
	comp=Z,147nm,1.9s						
NCAT	**North Carolina**	**35.70**	**82**	*e*P	**P**	**01 59 01.9**	**+0.6**
	comp=Z,42nm,1.5s						
NHSC	**New Hope**	**36.55**	**87**	PFAKE		01 59 20.0	+11
NHSC				LR	LR		
	comp=Z,587nm,20.0s						
IP05	**Hopewell Churc**	**36.61**	**78**	*e*P	**P**	**01 59 09.9**	**+0.9**
	comp=Z,19nm,1.1s						
BINY	**Binghamton**	**36.66**	**71**	*e*P	**P**	**01 59 10.1**	**+0.6**
	comp=Z,54nm,1.1s						
BINY				LR	LR		
	comp=Z,1µm,21.0s						
CBN	**Corbin Frederi**	**36.77**	**78**	*e*P	**P**	**01 59 12.2**	**+1.7**
	comp=Z,85nm,1.3s						
CBN				LR	LR		
	comp=Z,652nm,20.0s						
TRQ	**Mont Tremblant**	**36.83**	**64**	*e*P	**P**	**01 59 11.5**	**+0.6**
URVA	**University of**	**36.86**	**79**	*e*P	**P**	**01 59 13.1**	**+1.9**
RES	**Resolute Bay**	**37.08**	**13**	P	**P**	**01 59 12.2**	**-0.3**
	comp=Z,23nm,0.9s,baz=219,slow=8.4,SNR=10						
RES	**Resolute Bay**	**37.08**	**13**	*e*P	**P**	**01 59 11.2**	**-1.3**
	comp=Z,29nm,0.9s						
LONY	**Lake Ozonia**	**37.11**	**66**	*e*P	**P**	**01 59 12.9**	**-0.3**
	comp=Z,30nm,1.3s						
LONY				LR	LR		
	comp=Z,501nm,22.0s						
CNNC	**Cliffs of the**	**37.43**	**82**	PFAKE		01 59 30.0	+14
CNNC				LR	LR		
	comp=Z,1µm,19.0s						
NCB	**Newcomb**	**37.50**	**67**	*e*P	**P**	**01 59 17.9**	**+1.4**
	comp=Z,67nm,1.8s						
LUPA	**Lehigh Univers**	**37.52**	**73**	*e*P	**P**	**01 59 18.9**	**+2.2**
ODNJ	**Ogdensburg**	**37.95**	**72**	*e*P	**P**	**01 59 21.7**	**+1.4**
	comp=Z,83nm,1.4s						
ACCN	**Adirondack Com**	**38.02**	**68**	*e*P	**P**	**01 59 21.7**	**+0.7**
	comp=Z,75nm,1.6s						
TRY	**Troy**	**38.19**	**69**	*e*P	**P**	**01 59 24.3**	**+2.0**
	comp=Z,46nm,1.1s						
VT1	**Waterbury**	**38.45**	**66**	*e*P	**P**	**01 59 25.6**	**+1.1**
	comp=Z,37nm,1.0s						
HNH	**Hanover**	**38.92**	**67**	*e*P	**P**	**01 59 30.4**	**+1.9**
	comp=Z,32nm,1.0s						
LBNH	**Lisbon**	**39.05**	**66**	*e*P	**P**	**01 59 31.6**	**+2.0**
	comp=Z,36nm,1.0s						
FFD	**Franklin Falls**	**39.43**	**67**	*e*P	**P**	**01 59 34.5**	**+1.8**
	comp=Z,48nm,1.3s						
FRB	**Frobisher Bay**	**40.10**	**35**	LR	LR	02 16 02.2	
	comp=Z,556nm,21.2s,baz=264,slow=36						
FRB	**Frobisher Bay**	**40.10**	**35**	P	**P**	**01 59 39.2**	**+1.1**
FRB				pmax	pmax		
	comp=Z,38nm,1.1s						
WVL	**Waterville**	**40.55**	**65**	*e*P	**P**	**01 59 43.8**	**+1.8**
	comp=Z,23nm,1.1s						
PKME	**Peaks-Kenny Pk**	**40.63**	**64**	*e*P	**P**	**01 59 43.5**	**+0.8**
	comp=Z,19nm,1.0s						
PKME				LR	LR		
	comp=Z,760nm,21.0s						
SCHQ	**Schefferville**	**40.71**	**49**	P	**P**	**01 59 43.0**	**-0.3**
	comp=Z,21nm,1.0s,baz=275,slow=7.6,SNR=6.1						
SCHQ				LR	LR	02 18 25.9	
	comp=Z,187nm,19.5s,baz=278,slow=39						
SCHQ	**Schefferville**	**40.71**	**49**	*e*P	**P**	**01 59 43.5**	**+0.3**
	comp=Z,33nm,1.0s						
KULLO	**Kullorsuaq**	**45.67**	**20**	*i* P	**P**	**02 00 19.4**	**-3.6**
	comp=Z,36nm,1.0s						
JTS	**JuntasAbangare**	**46.59**	**119**	LR	LR	02 21 11.8	
	comp=Z,249nm,18.4s,baz=28,slow=38						
GTBY	**Guantanamo Bay**	**47.25**	**100**	PFAKE		02 00 50.0	+14
GTBY				LR	LR		
	comp=Z,518nm,19.0s						
ILULI	**Ilulissat**	**47.33**	**28**	*e*P	**P**	**02 00 36.4**	**+0.3**
	comp=Z,35nm,1.2s						
ILULI	**Ilulissat**	**47.33**	**28**	*e*P	**P**	**02 00 36.4**	**+0.3**
ILULI				pmax	pmax		
	comp=Z,35nm,1.2s						
SFJD	**Kangerlussuaq**	**47.66**	**31**	LR	LR	02 19 40.3	
	comp=Z,639nm,18.6s,baz=277,slow=35						
BBSR	**BB Station**	**48.59**	**79**	PFAKE		02 01 00.0	+14
BBSR				LR	LR		
	comp=Z,531nm,19.0s						
GRTK	**Grand Turk**	**49.32**	**96**	PFAKE		02 01 00.0	+7.9
GRTK				LR	LR		
	comp=Z,717nm,20.0s						
BCIP	**Isla Barro Col**	**50.88**	**115**	PFAKE		02 01 10.0	+6.0
BCIP				LR	LR		
	comp=Z,341nm,19.0s						
TAOE	**Nuku Hiva Isla**	**50.93**	**199**	*e*S	**S**	**02 08 23.4**	**+2.3**
	comp=Z,212nm,38.6s						
TAOE				*e*LR	LR	02 15 27.8	
	comp=Z,511nm,24.7s						
TAOE	**Nuku Hiva Isla**	**50.93**	**199**	*e*T	T	02 55 31.7	
	comp=Z,224nm,0.2s						
SUMG	**Summit**	**51.04**	**23**	*e*P	**P**	**02 01 05.2**	**+0.2**
	comp=Z,60nm,0.9s						
SUMG	**Summit**	**51.04**	**23**	⇑*i*P	**P**	**02 01 05.3**	**+0.3**
	comp=Z,68nm,1.0s						
SUMG	**Summit**	**51.04**	**23**	*e*P	**P**	**02 01 05.2**	**+0.2**
SUMG				pmax	pmax		
	comp=Z,60nm,0.9s						
PET	**Petropavlovsk**	**51.25**	**311**	PFAKE		02 01 10.0	+3.7
PET				LR	LR		
	comp=Z,152nm,19.0s						
SEY	**Seymchan**	**51.60**	**325**	P	**P**	**02 01 08.1**	**-0.8**
	comp=Z,18nm,0.9s,baz=87,slow=7.6,SNR=27						
SEY	**Seymchan**	**51.60**	**325**	*ce*P	**P**	**02 01 08.4**	**-0.4**
PEA0B	**Petropavlovsk-**	**51.77**	**312**	*e*P	**P**	**02 01 10.5**	**+0.3**
	comp=Z,39nm,0.9s						
PETK	**Petropavlovsk-**	**51.77**	**312**	P	**P**	**02 01 10.1**	**-0.1**
	comp=Z,11nm,0.7s,baz=76,slow=13						
PETK				LR	LR	02 19 51.4	
	comp=Z,129nm,21.6s,baz=95,slow=32						
PETK	**Petropavlovsk-**	**51.77**	**312**	*e*P	**P**	**02 01 10.0**	**-0.2**
PETK	**Petropavlovsk-**	**51.77**	**312**	*e*P	**P**	**02 01 10.0**	**-0.2**
MA2	**Magadan**	**53.34**	**321**	P	**P**	**02 01 21.8**	**0.0**
	comp=Z,15nm,0.7s,baz=64,slow=7.9,SNR=6.3						
MA2				LR	LR	02 22 07.6	
	comp=Z,120nm,19.5s,baz=72,slow=34						
MA2	**Magadan**	**53.34**	**321**	⇑*e*P	**P**	**02 01 21.6**	**-0.1**
MA2				pmax	pmax		
	comp=Z,37nm,1.7s						
SKR	**Severo-Kuril's**	**53.52**	**309**	*e*P	P	02 01 15.0	-8.2
DAG	**Danmarks Havn**	**54.66**	**16**	*i* P	P	02 01 23.2	-7.9
	comp=Z,480nm,13.0s						
DAG	**Danmarks Havn**	**54.66**	**16**	P	**P**	**02 01 32.7**	**+1.6**
SJG	**San Juan**	**55.11**	**96**	PFAKE		02 01 50.0	+15
SJG				LR	LR		
	comp=Z,317nm,19.0s						
PTBC	**PUERTO BERRIO,**	**56.49**	**113**	*e*P	**P**	**02 01 43.7**	**-1.5**
TIXI	**Tiksi**	**56.85**	**339**	PFAKE		02 02 00.0	+13
TIXI				LR	LR		
	comp=Z,273nm,21.0s						
TIXI	**Tiksi**	**56.85**	**339**	*i* P	**P**	**02 01 45.7**	**-1.2**
TIXI				pmax	pmax		
	comp=Z,17nm,1.2s						
YOTC	**Yotoco, Valle**	**56.99**	**116**	*e*P	**P**	**02 01 46.3**	**-2.5**
BARC	**Barichara**	**57.35**	**111**	*e*P	**P**	**02 01 48.1**	**-3.4**
SDV	**Santo Domingo**	**57.62**	**107**	PFAKE		02 02 00.0	+6.6
SDV				LR	LR		
	comp=Z,241nm,20.0s						
ROSC	**El Rosal**	**57.78**	**114**	P	**P**	**02 01 56.1**	**+1.4**
	comp=Z,1.5nm,0.3s,baz=221,slow=5.0,SNR=3.6						
ROSC				LR	LR	02 30 41.7	
	comp=Z,106nm,18.4s,baz=12,slow=40						
RUSC	**La Rusia**	**57.91**	**112**	*e*P	**P**	**02 01 55.1**	**-0.6**
	comp=Z,6.0nm,1.0s						
RUSC	**La Rusia**	**57.91**	**112**	*e*P	**P**	**02 01 53.6**	**-2.1**
KBS	**Kingsbay**	**58.29**	**9**	PFAKE		02 02 10.0	+13
KBS				LR	LR		
	comp=Z,321nm,20.0s						
CHIC	**Chingaza**	**58.34**	**113**	*e*P	**P**	**02 01 57.0**	**-1.6**
OTAV	**Otavalo**	**58.34**	**121**	*e*P	**P**	**02 02 00.3**	**+1.5**
	comp=Z,20nm,1.1s						
OTAV				LR	LR		
	comp=Z,278nm,22.0s						
OTAV	**Otavalo**	**58.34**	**121**	*e*P	**P**	**02 02 00.3**	**+1.5**
OTAV	**Otavalo**	**58.34**	**121**	*e*P	**P**	**02 02 00.3**	**+1.5**
OTAV				pmax	pmax		
	comp=Z,20nm,1.1s						
OTAV				MLR	MLR		
	comp=Z,278nm,22.0s						
PMOR	**Pomariorio Ree**	**59.02**	**206**	*e*T	T	03 05 37.4	
	comp=Z,69nm,0.3s						
VAH	**Vaihoa**	**59.16**	**205**	*e*T	T	03 05 47.2	
	comp=Z,41nm,0.4s						
BORG	**Borgarnes**	**59.69**	**29**	PFAKE		02 02 20.0	+13
BORG				LR	LR		
	comp=Z,249nm,20.0s						
H11N3	**WAKE ISLAND Hy**	**60.77**	**272**	T	T	03 08 08.2	
	baz=53,slow=75						
H11N2	**WAKE ISLAND Hy**	**60.77**	**272**	T	T	03 08 04.0	
	baz=53,slow=75						
H11N1	**WAKE ISLAND Hy**	**60.79**	**272**	T	T	03 08 04.6	
	baz=53,slow=75						
TYV	**Tymovskoe**	**61.16**	**314**	*e*P	**P**	**02 02 16.1**	**-1.0**
TYV				pmax	pmax		
	comp=Z,400nm,6.3s						
TYV				pmax	pmax		
	comp=Z,38nm,1.3s						
WAKE	**Wake Island**	**61.22**	**271**	PFAKE		02 02 30.0	+12
WAKE				LR	LR		
	comp=Z,791nm,20.0s						
YAK	**Yakutsk**	**61.55**	**329**	LR	LR	02 27 15.9	
	comp=Z,375nm,21.7s,baz=90,slow=34						
YAK	**Yakutsk**	**61.55**	**329**	*e*P	**P**	**02 02 18.2**	**-1.3**
YAK				pmax	pmax		
	comp=E,10.0nm,1.2s						
YAK				pmax	pmax		
	comp=Z,34nm,0.9s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.0s						
H11S1	**WAKE ISLAND Hy**	**61.64**	**271**	T	T	03 09 19.0	
	baz=54,slow=75,SNR=56						
H11S2	**WAKE ISLAND Hy**	**61.65**	**271**	T	T	03 09 19.0	
	baz=54,slow=75,SNR=13						
H11S3	**WAKE ISLAND Hy**	**61.66**	**271**	T	T	03 09 19.0	
	baz=54,slow=75,SNR=26						
TIAR	**Tiarei**	**61.89**	**206**	*e*T	T	03 09 12.3	
	comp=N,19nm,0.3s						
PPT	**Papeete**	**61.98**	**206**	LR	LR	02 22 11.3	
	comp=N,273nm,18.1s,baz=9.0,slow=29						
PPT2	**Papeete2**	**62.00**	**206**	*e*S	**S**	**02 10 49.4**	**+1.8**
	comp=N,173nm,27.5s						
PPT2				*e*LR	LR	02 20 42.6	
	comp=N,643nm,26.5s						
PPT2	**Papeete2**	**62.00**	**206**	*e*T	T	03 09 20.0	
	comp=N,15nm,0.4s						
PAE	**Paea**	**62.07**	**206**	*e*T	T	03 09 25.4	
	comp=N,3.6nm,0.3s						
TVO	**Taravao**	**62.07**	**206**	*e*T	T	03 09 25.6	
	comp=N,4.3nm,0.3s						
GRGR	**Grenville**	**62.19**	**98**	PFAKE		02 02 30.0	+5.4
GRGR				LR	LR		
	comp=Z,421nm,20.0s						
YSS	**Yuzh-Sakhalins**	**63.08**	**310**	PFAKE		02 02 40.0	+10
YSS				LR	LR		
	comp=Z,70nm,20.0s						
YSS	**Yuzh-Sakhalins**	**63.08**	**310**	⇑*e*P	**P**	**02 02 29.9**	**-0.2**
YSS				*e*		02 02 34.0	
YSS				*e*		02 02 38.2	
YSS				pmax	pmax		
	comp=Z,10.0nm,1.7s						
RKT	**Rikitea**	**63.87**	**190**	*e*LQ	LQ	02 18 28.7	
	comp=Z,1µm,33.0s						
RKT				*e*LR	LR	02 21 36.9	
	comp=Z,922nm,37.2s						

RKT	**Rikitea**	**63.87**	**190**	*e*T	T	03 11 43.0	
	comp=Z,23nm,0.3s						
GRNR	**Gornyy**	**64.58**	**316**	*e*P	**P**	**02 02 42.7**	**+2.7**
PTCN	**Pitcairn Islan**	**65.33**	**185**	PFAKE		02 02 50.0	+5.1
PTCN				LR	LR		
	comp=Z,4.0nm,19.0s						
ERM	**Erimo**	**65.46**	**305**	PFAKE		02 02 50.0	+4.3
ERM				LR	LR		
	comp=Z,303nm,20.0s						
TBI	**Tubuai**	**67.34**	**204**	*e*S	**S**	**02 11 53.8**	**+0.8**
	comp=Z,324nm,28.2s						
TBI				*e*LQ	LQ	02 20 00.8	
	comp=Z,432nm,31.8s						
TBI				*e*LR	LR	02 23 10.9	
	comp=Z,456nm,26.2s,baz=21						
TBI	**Tubuai**	**67.34**	**204**	*e*T	T	03 16 00.7	
	comp=Z,11nm,0.4s						
ZEA	**Zeya**	**67.44**	**322**	*e*P	**P**	**02 02 58.1**	**-0.2**
ZEA				pmax	pmax		
	comp=Z,29nm,1.0s						
KLR	**Kul'dur**	**67.94**	**316**	*i* P	**P**	**02 03 00.5**	**-1.0**
ARCES	**ARCESS Array B**	**68.25**	**11**	P	**P**	**02 03 02.8**	**-0.4**
	comp=Z,7.1nm,1.0s,baz=321,slow=7.0,SNR=4.3						
KEV	**Kevo**	**68.25**	**10**	PFAKE		02 03 10.0	+6.9
KEV				LR	LR		
	comp=Z,457nm,19.0s						
NNA	**Nana**	**68.77**	**128**	LR	LR	02 31 41.7	
	comp=Z,66nm,18.6s,baz=334,slow=35						
AFI	**Afiamalu**	**69.15**	**229**	LR	LR	02 26 48.3	
	comp=Z,253nm,18.9s,baz=40,slow=30						
RAR	**Rarotonga**	**69.23**	**214**	LR	LR	02 27 15.0	
	comp=Z,216nm,18.2s,baz=42,slow=30						
BOD	**Bodaibo**	**70.30**	**331**	*e*P	**P**	**02 03 14.9**	**-1.0**
BOD				pmax	pmax		
	comp=Z,15nm,1.3s						
FUNA	**Funafuti**	**70.60**	**240**	PFAKE		02 03 30.0	+12
FUNA				LR	LR		
	comp=Z,6µm,20.0s						
USRK	**Ussuriysk Ar.**	**70.86**	**312**	P	**P**	**02 03 19.4**	**-0.2**
	comp=Z,10nm,0.9s,baz=57,slow=5.3						
USRK				LR	LR	02 29 43.5	
	comp=Z,57nm,20.7s,baz=50,slow=32						
MJAR	**Matsushiro Arr**	**71.74**	**303**	P	**P**	**02 03 24.9**	**-0.2**
	comp=Z,3.0nm,0.6s,baz=33,slow=5.7,SNR=4.3						
MJAR				LR	LR	02 29 07.1	
	comp=Z,92nm,21.0s,baz=80,slow=31						
MAJO	**Matsushiro**	**71.74**	**303**	*e*P	**P**	**02 03 24.1**	**-1.1**
	comp=Z,18nm,0.8s						
MAJO				LR	LR		
	comp=Z,122nm,20.0s						
MAJO	**Matsushiro**	**71.74**	**303**	*i* P	**P**	**02 03 25.0**	**-0.1**
MAJO				pmax	pmax		
	comp=Z,14nm,1.0s						
MAT	**Matsushiro**	**71.74**	**303**	P	**P**	**02 03 28.8**	**+3.7**
MAT				*e*S	S	02 12 35.8	-9.3
PTGA	**Pitinga**	**71.91**	**107**	*e*P	**P**	**02 03 26.8**	**+0.5**
	comp=Z,24nm,1.8s						
PTGA				LR	LR		
	comp=Z,12µm,20.0s						
MDJ	**Mudanjiang**	**71.94**	**314**	PFAKE		02 03 30.0	+3.8
MDJ				LR	LR		
	comp=Z,172nm,20.0s						
ESK	**Eskdalemuir**	**72.64**	**30**	*e*P	**P**	**02 03 29.7**	**-0.4**
	comp=Z,10nm,0.9s						
ESK				LR	LR		
	comp=Z,454nm,19.0s						
ESK	**Eskdalemuir**	**72.64**	**30**	*e*P	**P**	**02 03 29.7**	**-0.4**
ESK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ESK				MLR	MLR		
	comp=Z,454nm,19.0s						
EKA	**Eskdalemuir Ar**	**72.64**	**30**	P	**P**	**02 03 29.9**	**-0.3**
	comp=Z,3.4nm,0.9s,baz=302,slow=8.3,SNR=6.9						
EKA				LR	LR	02 35 15.5	
	comp=Z,365nm,18.1s,baz=325,slow=36						
NBO00	**NORSAR Array S**	**72.73**	**21**	*e*P	**P**	**02 03 31.5**	**+0.8**
NB2	**NORSAR Subarra**	**72.84**	**21**	P	**P**	**02 03 30.7**	**-0.6**
	comp=Z,2.1nm,1.0s,baz=326,slow=6.2						
NOA	**NORSAR Array B**	**72.84**	**21**	P	**P**	**02 03 30.9**	**-0.3**
	comp=Z,4.9nm,1.0s,baz=328,slow=5.9,SNR=7.4						
NOA				LR	LR	02 35 05.7	
	comp=Z,251nm,20.3s,baz=320,slow=36						
NOA	**NORSAR Array B**	**72.84**	**21**	P	**P**	**02 03 31.0**	**-0.3**
NAO01	**NORSAR Array S**	**72.92**	**21**	*e*P	**P**	**02 03 32.0**	**+0.3**
CMLA	**Cha da Macela**	**73.05**	**55**	PFAKE		02 03 40.0	+7.1
CMLA				LR	LR		
	comp=Z,443nm,20.0s						
HIA	**Hailar**	**73.91**	**322**	PFAKE		02 03 50.0	+12
HIA				LR	LR		
	comp=Z,187nm,22.0s						
HIA	**Hailar**	**73.91**	**322**	*i* P	**P**	**02 03 36.4**	**-1.4**
HIA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HFS	**Hagfors**	**74.27**	**20**	P	**P**	**02 03 40.2**	**+0.5**
	comp=Z,9.0nm,0.9s,baz=335,slow=6.4,SNR=8.3						
HFS				LR	LR	02 35 39.4	
	comp=Z,530nm,19.7s,baz=330,slow=35						
CN2	**Changchun**	**74.74**	**315**	*e*P	P	02 03 49.8	+7.1
CN2				pmax	pmax		
	comp=Z,10.0nm,1.3s						
SAML	**Samuel**	**75.34**	**116**	*e*P	**P**	**02 03 43.9**	**-2.6**
	comp=Z,4.9nm,1.2s						
SAML				LR	LR		
	comp=Z,229nm,21.0s						
SAML	**Samuel**	**75.34**	**116**	*e*P	**P**	**02 03 43.9**	**-2.6**
SAML				pmax	pmax		
	comp=Z,5.0nm,1.2s						
SAML				MLR	MLR		
	comp=Z,229nm,21.0s						
FIA1	**FINESS Array S**	**75.83**	**14**	*e*P	**P**	**02 03 48.6**	**0.0**
FINES	**FINESS Array B**	**75.83**	**14**	P	**P**	**02 03 48.3**	**-0.3**
	comp=Z,2.5nm,0.8s,baz=19,slow=6.5,SNR=6.9						
FINES				LR	LR	02 36 10.0	
	comp=Z,206nm,20.2s,baz=342,slow=35						
FINES	**FINESS Array B**	**75.83**	**14**	*i* P	**P**	**02 03 47.7**	**-0.9**
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
LPAZ	**La Paz**	**77.44**	**124**	P	**P**	**02 03 58.7**	**-0.4**
	comp=Z,2.8nm,0.7s,baz=345,slow=4.6,SNR=18						
LPAZ	**La Paz**	**77.44**	**124**	*e*P	**P**	**02 03 58.8**	**-0.2**
	comp=Z,5.4nm,0.7s						
LPAZ	**La Paz**	**77.44**	**124**	*e*P	**P**	**02 03 58.8**	**-0.2**
LPAZ				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KSRS	**Korea Array**	**77.54**	**309**	P	**P**	**02 03 58.4**	**-0.4**
	comp=Z,2.7nm,0.9s,baz=52,slow=5.6,SNR=7.7						
KSRS				LR	LR	02 33 37.2	
	comp=Z,79nm,20.0s,baz=63,slow=32						
KS01	**Wonju Array Si**	**77.54**	**309**	*e*P	**P**	**02 03 58.5**	**-0.2**
KSAR	**Wonju Array Be**	**77.57**	**309**	P	**P**	**02 03 58.4**	**-0.5**
KSAR	**Wonju Array Be**	**77.57**	**309**	P	**P**	**02 03 58.4**	**-0.5**
PRGR	**Permogore**	**78.01**	**4**	*e*P	**P**	**02 04 00.9**	**0.0**
PRGR				*e*		02 04 09.6	
PRGR				pmax	pmax		
	comp=Z,22nm,0.8s						
KLMR	**Klimovskoe**	**78.30**	**8**	*e*P	**P**	**02 04 00.8**	**-1.7**
KLMR				pmax	pmax		
	comp=Z,25nm,1.3s						
KLMR	**Klimovskoe**	**78.30**	**8**	*e*P	**P**	**02 04 00.9**	**-1.6**
VSU	**Vasula**	**78.73**	**15**	*i* P	**P**	**02 04 04.5**	**-0.4**
VSU				pmax	pmax		
	comp=Z,25nm,1.0s						
GRR	**Gorron**	**78.81**	**34**	*e*P	**P**	**02 04 05.6**	**0.0**
GRR				pmax	pmax		
	comp=Z,16nm,1.2s						
TLY	**Talaya**	**78.85**	**331**	*e*P	**P**	**02 04 06.5**	**+0.7**
TLY				LR	LR		
	comp=Z,213nm,20.0s						
TLY	**Talaya**	**78.85**	**331**	*e*P	**P**	**02 04 06.4**	**+0.7**
TLY				*e*S	**S**	**02 13 59.2**	**-4.3**
TLY				*e*SS	**SS**	**02 19 11.6**	**+4.6**
TLY				pmax	pmax		
	comp=Z,26nm,1.6s						
TLY				MLR	MLR		
	comp=Z,227nm,22.0s						
PB11	**IPOC Station P**	**79.12**	**128**	*e*P	**P**	**02 04 08.3**	**+0.5**
	comp=Z,13nm,0.9s						
BAIF	**Baives**	**79.56**	**30**	*e*P	**P**	**02 04 12.1**	**+2.4**
BAIF				pmax	pmax		
	comp=Z,12nm,1.3s						
DOU	**Dourbes**	**79.68**	**30**	⇓P	**P**	**02 04 11.0**	**+0.7**
	comp=Z,5.7nm,1.3s						
BCLA	**Clavier**	**79.69**	**30**	⇑P	**P**	**02 04 10.3**	**0.0**
	comp=Z,14nm,1.4s						
GIVF	**Givet**	**79.77**	**30**	*e*P	**P**	**02 04 10.7**	**-0.1**
GIVF				pmax	pmax		
	comp=Z,13nm,1.0s						
ZAK	**Zakamensk**	**80.04**	**331**	*e*P	**P**	**02 04 12.0**	**-0.4**
ZAK				pmax	pmax		
	comp=Z,10.0nm,1.3s						
PGAV	**Gavieira, Arco**	**80.10**	**42**	*e*LR	LR	02 32 20.4	
	comp=Z,194nm,20.0s						
ULN	**Ulaanbaatar**	**80.58**	**327**	*e*P	**P**	**02 04 13.9**	**-1.6**
	comp=Z,24nm,1.4s						
ULN				LR	LR		
	comp=Z,242nm,20.0s						
ULN	**Ulaanbaatar**	**80.58**	**327**	*ce*P	**P**	**02 04 15.8**	**+0.4**
ULN				pmax	pmax		
	comp=Z,13nm,1.7s						
POLO	**Lamas de Olo**	**80.78**	**43**	*e*P	**P**	**02 04 16.4**	**-0.1**
	comp=Z,13nm,1.7s						
SONA1	**Songino Array**	**80.86**	**328**	*e*P	**P**	**02 04 17.0**	**+0.1**
SONM	**Songino Array**	**80.88**	**328**	P	**P**	**02 04 17.3**	**+0.3**
	comp=Z,2.7nm,1.0s,baz=0.0,slow=2.4,SNR=12						
SONM				LR	LR	02 39 23.4	
	comp=Z,272nm,21.4s,baz=22,slow=35						
PVIS	**Viseu**	**81.20**	**43**	*e*P	**P**	**02 04 19.0**	**+0.3**
	comp=Z,17nm,1.4s						
GKP	**Gorka Klasztor**	**81.21**	**22**	*e*P	**P**	**02 04 18.2**	**-0.2**
GKP	**Gorka Klasztor**	**81.21**	**22**	*e*P	**P**	**02 04 18.2**	**-0.2**
MVO	**Moncorvo**	**81.32**	**42**	*e*P	**P**	**02 04 20.1**	**+0.7**
	comp=Z,19nm,1.4s						
MVO	**Moncorvo**	**81.32**	**42**	*e*LR	LR	02 30 42.2	
	comp=Z,203nm,20.0s						
MTE	**Manteigas**	**81.61**	**43**	*e*LR	LR	02 30 58.3	
	comp=Z,262nm,20.0s						
CLL	**Collm**	**81.64**	**25**	⇓*i*P	**P**	**02 04 21.2**	**+0.4**
	comp=Z,20nm,1.3s						
CLL				*e*		02 04 45.0	
CLL				*e*S	**S**	**02 14 34.0**	**+1.2**
CLL				*e*PS	**PnS**	**02 15 19.0**	**-0.9**
CLL				*e*SS	**SS**	**02 19 54.0**	**+5.4**
CLL				*e*SSS	SSS	02 23 18.0	
CLL				*e*SSSS		02 25 54.0	
CLL				LmH		02 42 00.0	
	comp=N,300nm,18.4s						
CLL				LmH		02 42 00.0	
	comp=E,200nm,19.7s						
CLL				LmH		02 42 00.0	
	comp=Z,300nm,19.1s						
CLL	**Collm**	**81.64**	**25**	*e*P	**P**	**02 04 20.4**	**-0.4**
	comp=Z,16nm,1.2s						
CLL	**Collm**	**81.64**	**25**	⇓*i*P	**P**	**02 04 21.2**	**+0.4**
CLL				*e*S	**S**	**02 14 34.0**	**+1.2**
CLL				pmax	pmax		
	comp=Z,20nm,1.3s						
CLL				MLR	MLR		
	comp=Z,300nm,19.1s						
SSF	**Saint Saulge**	**81.68**	**33**	*e*P	**P**	**02 04 20.8**	**-0.3**
SSF				pmax	pmax		
	comp=Z,17nm,1.2s						
MOX	**Moxa**	**81.75**	**26**	P	**P**	**02 04 23.3**	**+1.9**
MOX				pmax	pmax		
	comp=Z,7.0nm,1.7s						
TCF	**Toulx Ste Croi**	**81.76**	**34**	*e*P	**P**	**02 04 20.9**	**-0.6**
TCF				pmax	pmax		
	comp=Z,12nm,1.1s						
SIV	**San Ignacio**	**81.81**	**119**	LR	LR	02 42 48.4	
	comp=Z,114nm,21.7s,baz=309,slow=37						
BGF	**Bois d'Agland**	**81.81**	**33**	*e*P	**P**	**02 04 21.3**	**-0.5**
BGF				pmax	pmax		
	comp=Z,9.0nm,1.0s						
AVF	**Avril sur Loir**	**81.84**	**33**	*e*P	**P**	**02 04 21.3**	**-0.6**
AVF				pmax	pmax		
	comp=Z,9.0nm,1.2s						
NVS	**Novosibirsk**	**82.00**	**344**	*e*P	**P**	**02 04 22.9**	**+0.3**
NVS				pmax	pmax		
	comp=N,12nm,1.4s						
NVS				pmax	pmax		
	comp=E,19nm,1.4s						
NVS				pmax	pmax		
	comp=Z,42nm,1.4s						
PCBR	**Castelo Branco**	**82.06**	**43**	*e*P	**P**	**02 04 23.6**	**+0.4**
	comp=Z,15nm,1.2s						
CDF	**Champ du Feu**	**82.08**	**30**	*e*P	**P**	**02 04 23.1**	**-0.2**
CDF				pmax	pmax		
	comp=Z,9.0nm,1.1s						
SUW	**Suwalki**	**82.09**	**18**	*e*P	**P**	**02 04 23.1**	**0.0**
SUW	**Suwalki**	**82.09**	**18**	*e*P	**P**	**02 04 23.1**	**0.0**
RJF	**Les Rejaudoux**	**82.24**	**35**	*e*P	**P**	**02 04 23.3**	**-0.7**
RJF				pmax	pmax		
	comp=Z,9.0nm,1.1s						
BJT	**Baijiatuau**	**82.32**	**317**	PFAKE		02 04 30.0	+5.5
BJT				LR	LR		
	comp=Z,177nm,21.0s						
BRG	**Berggiesshubel**	**82.32**	**25**	*i* P	**P**	**02 04 24.6**	**+0.3**
	comp=Z,12nm,1.1s						
BRG				*e*		02 04 33.1	
	comp=Z,6.4nm,0.8s						
BRG	**Berggiesshubel**	**82.32**	**25**	S	S	02 14 49.0	+9.2
	comp=N,284nm,16.1s						
	comp=E,161nm,20.2s						
	comp=Z,433nm,20.5s						
BRG	**Berggiesshubel**	**82.32**	**25**	*i* P	**P**	**02 04 24.6**	**+0.3**
BRG				*e*		02 04 33.1	
BRG				pmax	pmax		
	comp=Z,12nm,1.1s						
BRG				MLR	MLR		
	comp=N,284nm,16.1s						
BRG				MLR	MLR		
	comp=E,161nm,20.2s						
BRG				MLR	MLR		
	comp=Z,433nm,20.5s						
HINF	**Hinteralfeld**	**82.40**	**30**	*e*P	**P**	**02 04 24.5**	**-0.4**
HINF				pmax	pmax		
	comp=Z,6.0nm,1.1s						
PMRV	**Marv??o**	**82.41**	**44**	*e*P	**P**	**02 04 24.9**	**-0.2**
	comp=Z,13nm,1.3s						
PMRV	**Marv??o**	**82.41**	**44**	*e*LR	LR	02 31 27.6	
	comp=Z,168nm,20.0s						
GRFO	**Grafenberg**	**82.43**	**27**	*e*P	**P**	**02 04 24.5**	**-0.5**
	comp=Z,4.6nm,0.7s						
GRFO	**Grafenberg**	**82.43**	**27**	*e*P	**P**	**02 04 24.5**	**-0.5**
GRFO				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ZALV	**Zalesovo Beam**	**82.48**	**343**	P	**P**	**02 04 25.0**	**-0.1**
	comp=Z,0.8nm,0.4s,baz=28,slow=6.7,SNR=6.3						
ZALV				LR	LR	02 43 03.5	
	comp=Z,115nm,18.9s,baz=52,slow=37						
ZALV	**Zalesovo Beam**	**82.48**	**343**	P	**P**	**02 04 25.0**	**-0.1**
BFO	**Black Forest**	**82.54**	**29**	*e*P	**P**	**02 04 26.3**	**+0.7**
	comp=Z,13nm,1.3s						
BFO				LR	LR		
	comp=Z,14nm,19.0s						
BFO	**Black Forest**	**82.54**	**29**	*e*P	**P**	**02 04 26.3**	**+0.7**
BFO				pmax	pmax		
	comp=Z,13nm,1.3s						
BFO				MLR	MLR		
	comp=Z,14nm,19.0s						
HVS	**Khovu-Aksy**	**82.65**	**336**	*i* P	**P**	**02 04 26.8**	**+0.6**
HVS				pmax	pmax		
	comp=Z,11nm,1.0s						
PVCC	**Panska Ves**	**82.82**	**25**	AMS	AMS	02 39 20.0	
	comp=Z,300nm,20.7s						
KSP	**Ksiaz**	**83.08**	**23**	*e*P	**P**	**02 04 29.3**	**+1.0**
KSP	**Ksiaz**	**83.08**	**23**	*e*P	**P**	**02 04 29.3**	**+1.0**
CABF	**La Chapelle**	**83.09**	**31**	*e*P	**P**	**02 04 28.7**	**+0.1**
CABF				pmax	pmax		
	comp=Z,30nm,1.4s						
PRA	**Prague**	**83.17**	**25**	AMS	AMS	02 39 40.0	
	comp=Z,400nm,18.5s						
PRU	**Pruhonice**	**83.28**	**25**	*e*P	**P**	**02 04 30.0**	**+0.6**
PRU				AMS	AMS	02 39 50.0	
	comp=Z,400nm,18.5s						
PRU	**Pruhonice**	**83.28**	**25**	*e*P	**P**	**02 04 30.0**	**+0.6**
PRU				MLR	MLR		
	comp=Z,400nm,18.5s						
UPC	**Upice**	**83.28**	**24**	AMS	AMS	02 40 30.0	
	comp=Z,500nm,20.1s						
PCVE	**Castro Verde**	**83.37**	**45**	*e*P	**P**	**02 04 28.7**	**-1.4**
	comp=Z,28nm,1.6s						
GOPC	**GO Pecny, Ondr**	**83.42**	**25**	AMS	AMS	02 41 40.0	
	comp=Z,400nm,22.8s						
ARU	**Arti**	**83.44**	**358**	*e*P	**P**	**02 04 28.7**	**-1.4**
	comp=Z,3.7nm,0.7s						
ARU				LR	LR		
	comp=Z,178nm,22.0s						
ARU	**Arti**	**83.44**	**358**	*c i*P	**P**	**02 04 29.4**	**-0.7**
ARU						02 07 39.5	
ARU				S	**S**	**02 14 50.7**	**-0.4**
ARU				SS	**SS**	**02 20 16.5**	**+1.6**
ARU				pmax	pmax		
	comp=Z,7.0nm,1.2s						
PBAR	**Barrancos**	**83.51**	**44**	*e*P	**P**	**02 04 31.7**	**+0.9**
	comp=Z,69nm,1.5s						
DPC	**Dobruska-Polom**	**83.52**	**24**	*e*P	**P**	**02 04 31.6**	**+0.9**
DPC				AMS	AMS	02 40 50.0	
	comp=Z,500nm,21.4s						
DPC	**Dobruska-Polom**	**83.52**	**24**	*e*P	**P**	**02 04 31.6**	**+0.9**
DPC				MLR	MLR		
	comp=Z,500nm,21.4s						
OBN	**Obninsk**	**83.56**	**10**	PFAKE		02 04 40.0	+9.3
OBN				LR	LR		
	comp=Z,183nm,22.0s						
OBN	**Obninsk**	**83.56**	**10**	*ce*P	**P**	**02 04 29.4**	**-1.3**
OBN				*e*		02 07 42.8	
OBN				*e*PPP	PPP	02 09 33.8	
OBN				pmax	pmax		
	comp=Z,12nm,1.3s						
KHC	**Kasperske Hory**	**83.71**	**26**	*e*P	**P**	**02 04 31.8**	**+0.2**
KHC				AMS	AMS	02 42 00.0	
	comp=Z,400nm,18.8s						
KHC	**Kasperske Hory**	**83.71**	**26**	*e*P	**P**	**02 04 32.1**	**+0.4**
	comp=Z,6.0nm,1.4s						
KHC	**Kasperske Hory**	**83.71**	**26**	*e*P	**P**	**02 04 31.8**	**+0.2**
KHC				MLR	MLR		
	comp=Z,400nm,18.8s						
PVAQ	**Vaqueiros**	**83.71**	**45**	*e*LR	LR	02 32 44.3	
	comp=Z,144nm,18.0s						
PAB	**San Pablo**	**83.89**	**42**	*e*P	**P**	**02 04 32.0**	**-0.9**
	comp=Z,13nm,1.3s						
PAB				LR	LR		
	comp=Z,238nm,20.0s						
PAB	**San Pablo**	**83.89**	**42**	*e*P	**P**	**02 04 32.0**	**-0.9**
PAB				pmax	pmax		
	comp=Z,13nm,1.3s						
PAB				MLR	MLR		
	comp=Z,238nm,20.0s						
KRLC	**Kraliky**	**83.90**	**23**	*e*P	**P**	**02 04 32.7**	**+0.1**
DAVA	**Damuels**	**83.98**	**29**	*i* PcP	**P**	**02 04 34.5**	**+1.2**
	comp=Z,17nm,1.1s,SNR=6.0						
ESDC	**Sonseca Array**	**83.99**	**42**	P	**P**	**02 04 33.0**	**-0.3**
	comp=Z,5.3nm,1.0s,baz=312,slow=4.8,SNR=24						
ESDC				LR	LR	02 39 06.5	
	comp=Z,112nm,19.8s,baz=220,slow=34						
ESLA	**Sonseca Array**	**83.99**	**42**	*e*P	**P**	**02 04 33.8**	**+0.5**
	comp=Z,16nm,1.3s						
GEC2	**GERESS Array S**	**84.00**	**26**	*e*P	**P**	**02 04 34.2**	**+1.0**
	comp=Z,12nm,1.3s						
GEC2	**GERESS Array S**	**84.00**	**26**	*e*P	**P**	**02 04 34.2**	**+1.0**
GEC2				pmax	pmax		
	comp=Z,12nm,1.3s						
GERES	**GERESS Array B**	**84.00**	**26**	P	**P**	**02 04 33.0**	**-0.2**
	comp=Z,2.1nm,0.9s,baz=337,slow=4.8,SNR=17						
GERES				LR	LR	02 42 46.1	
	comp=Z,290nm,19.0s,baz=330,slow=36						
GEA0	**GERESS Array S**	**84.00**	**26**	*e*P	**P**	**02 04 33.1**	**-0.1**
ES19	**SONSECA Array**	**84.01**	**41**	*e*P	**P**	**02 04 33.6**	**+0.3**
HHC	**Hu-ho-hao-te**	**84.01**	**320**	*e*P	**P**	**02 04 29.1**	**-4.3**
HHC				sP	pP	02 04 36.3	-0.9
HHC				S	**S**	**02 14 55.8**	**-1.8**
HHC				sS	sS	02 15 04.3	+0.6
HHC				SS	**SS**	**02 20 21.8**	**-2.8**
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,99nm,5.5s						
HHC				LR	LR		
	comp=Z,140nm,17.4s						
HHC				LR	LR		
	comp=Z,150nm,17.0s						
MTLF	**Montolieu**	**84.09**	**36**	*e*P	**P**	**02 04 33.4**	**-0.3**
MTLF				pmax	pmax		
	comp=Z,6.0nm,1.0s						
RETA	**Reutte**	**84.14**	**28**	*i* PcP	**P**	**02 04 34.9**	**+1.0**
	comp=Z,7.4nm,1.1s						
LPL	**La Plagne**	**84.25**	**32**	*e*P	**P**	**02 04 35.1**	**+0.4**
LPL				pmax	pmax		
	comp=Z,9.0nm,1.1s						
LPG	**La Plagne**	**84.27**	**32**	*e*P	**P**	**02 04 35.6**	**+0.7**
LPG				pmax	pmax		
	comp=Z,26nm,1.4s						
ORIF	**Oris-en-Rattie**	**84.39**	**33**	*e*P	**P**	**02 04 35.2**	**-0.1**
ORIF				pmax	pmax		
	comp=Z,13nm,1.2s						
MORC	**Moravsky Berou**	**84.39**	**23**	*e*P	**P**	**02 04 35.5**	**+0.4**
DAVOX	**Davos/Dischmat**	**84.41**	**29**	P	**P**	**02 04 35.1**	**-0.4**
	comp=Z,4.9nm,0.8s,baz=323,slow=5.1,SNR=9.1						
DAVOX				LR	LR	02 43 09.4	
	comp=Z,456nm,18.0s,baz=322,slow=36						
TUE	**Stuetta**	**84.47**	**30**	*e*P	**P**	**02 04 37.6**	**+1.8**
	comp=Z,66nm,2.0s						
FETA	**Feichten**	**84.52**	**29**	*i* pP	**P**	**02 04 37.5**	**+1.5**
	comp=Z,13nm,1.2s,SNR=6.1						
VRAC	**Vranov**	**84.52**	**24**	*e*P	**P**	**02 04 36.3**	**+0.6**
VRAC	**Vranov**	**84.52**	**24**	*e*P	**P**	**02 04 36.3**	**+0.6**
OKC	**Ostrava-Krasne**	**84.52**	**23**	AMS	AMS	02 41 50.0	
	comp=Z,300nm,17.2s						
SQTA	**Sankt Quirin**	**84.52**	**28**	*i* pP	**P**	**02 04 38.2**	**+2.2**
	comp=Z,0.3nm,0.9s						
BNI	**Bardonecchia**	**84.61**	**32**	*e*P	**P**	**02 04 37.4**	**+0.9**
	comp=Z,21nm,1.4s						
WTTA	**Wattenberg**	**84.64**	**28**	*i* PcP	**P**	**02 04 37.6**	**+0.9**
	comp=Z,14nm,1.1s						
OJC	**Ojcow**	**84.66**	**22**	*e*P	**P**	**02 04 36.6**	**+0.2**
OJC	**Ojcow**	**84.66**	**22**	*e*P	**P**	**02 04 36.7**	**+0.2**
	comp=Z,19nm,1.2s						
OJC	**Ojcow**	**84.66**	**22**	*e*P	**P**	**02 04 36.6**	**+0.2**
OJC	**Ojcow**	**84.66**	**22**	*e*P	**P**	**02 04 36.6**	**+0.2**
KRUC	**Moravsky**	**84.67**	**24**	*e*P	**P**	**02 04 36.6**	**+0.1**
KRUC	**Moravsky**	**84.67**	**24**	*e*P	**P**	**02 04 36.6**	**+0.1**
HNR	**Honiara**	**84.69**	**253**	LR	LR	02 37 04.3	
	comp=Z,82nm,18.8s,baz=24,slow=32						
FUORN	**Ofenpass-Fuorn**	**84.69**	**29**	*e*P	**P**	**02 04 38.4**	**+1.4**
MBDF	**Montbardon**	**84.91**	**32**	*e*P	**P**	**02 04 38.2**	**+0.2**
MBDF				pmax	pmax		
	comp=Z,16nm,1.1s						
MOA	**Molln**	**85.05**	**26**	*i* pP	**P**	**02 04 39.8**	**+1.4**
	comp=Z,14nm,1.6s						
JAVC	**Velka Javorina**	**85.25**	**24**	*e*P	**P**	**02 04 40.9**	**+1.4**
ABTA	**Abfaltersbach**	**85.39**	**28**	*i* PcP	**P**	**02 04 41.2**	**+0.9**
	comp=Z,11nm,1.1s,SNR=6.5						
SMOL	**Smolenice**	**85.48**	**24**	*e*P	**P**	**02 04 41.6**	**+1.0**
SMOL	**Smolenice**	**85.48**	**24**	*e*P	**P**	**02 04 41.6**	**+1.0**
SMOL	**Smolenice**	**85.48**	**24**	*e*P	**P**	**02 04 41.6**	**+1.0**
CONA	**Conrad Observa**	**85.50**	**25**	*i* pP	**P**	**02 04 41.9**	**+1.1**
	comp=Z,16nm,1.3s,SNR=9.0						
NIE	**Niedzica**	**85.52**	**22**	*e*P	**P**	**02 04 41.0**	**+0.2**
NIE	**Niedzica**	**85.52**	**22**	*e*P	**P**	**02 04 41.0**	**+0.2**
NIE	**Niedzica**	**85.52**	**22**	*e*P	**P**	**02 04 41.0**	**+0.2**
LANS	**Liptovska Anna**	**85.52**	**22**	*e*P	**P**	**02 04 41.8**	**+1.0**
LANS	**Liptovska Anna**	**85.52**	**22**	*e*P	**P**	**02 04 41.8**	**+1.0**
MODS	**Modra-Piesok**	**85.56**	**24**	*e*P	**P**	**02 04 41.8**	**+0.8**
MODS				pmax	pmax		
	comp=Z,29nm,1.2s						
MODS	**Modra-Piesok**	**85.56**	**24**	*e*P	**P**	**02 04 41.8**	**+0.8**
MODS	**Modra-Piesok**	**85.56**	**24**	*e*P	**P**	**02 04 41.8**	**+0.8**
	comp=Z,29nm,1.2s						
LCO	**Las Campanas**	**85.66**	**134**	*e*P	**P**	**02 04 41.9**	**0.0**
	comp=Z,8.8nm,1.0s						
LCO	**Las Campanas**	**85.66**	**134**	*e*P	**P**	**02 04 41.9**	**0.0**
LCO				pmax	pmax		
	comp=Z,9.0nm,1.0s						
DGZ	**Jazzator, Alta**	**85.73**	**339**	*i* P	**P**	**02 04 42.6**	**+0.6**
DGZ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
MYKA	**Terra Mystica**	**85.89**	**27**	*i* PcP	**P**	**02 04 42.8**	**+0.1**
	comp=Z,8.8nm,1.2s						
BRVK	**Borovoye**	**85.91**	**351**	*e*P	**P**	**02 04 43.3**	**+0.7**
BRVK				LR	LR		
	comp=Z,112nm,19.0s						
BRVK	**Borovoye**	**85.91**	**351**	*ce*P	**P**	**02 04 43.3**	**+0.7**
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
VYHS	**Vyhne**	**85.92**	**23**	*e*P	**P**	**02 04 43.0**	**+0.2**
VYHS				pmax	pmax		
	comp=Z,9.0nm,1.7s						
VYHS	**Vyhne**	**85.92**	**23**	*e*P	**P**	**02 04 43.0**	**+0.2**
VYHS	**Vyhne**	**85.92**	**23**	*e*P	**P**	**02 04 43.0**	**+0.2**
	comp=Z,9.1nm,1.7s						
BVAR	**Borovoye Array**	**85.93**	**351**	P	**P**	**02 04 43.1**	**+0.4**
	comp=Z,2.8nm,0.9s,baz=20,slow=4.6,SNR=14						
BVAR				LR	LR	02 44 44.3	
	comp=Z,124nm,21.9s,baz=14,slow=37						
ARSA	**Arzberg**	**85.99**	**26**	*i* pP	**P**	**02 04 44.1**	**+1.0**
	comp=Z,8.7nm,1.2s						
OBKA	**Obir**	**86.31**	**27**	*i* PcP	**P**	**02 04 44.6**	**-0.2**
	comp=Z,16nm,1.4s						

CRVS	**Cervenica-Dubn**	**86.31**	**21**	*e*P	**P**	**02 04 44.1**	**-0.6**
CRVS				pmax	pmax		
	comp=Z,15nm,1.8s						
CRVS	**Cervenica-Dubn**	**86.31**	**21**	*e*P	**P**	**02 04 44.1**	**-0.6**
SOKA	**Soboth**	**86.32**	**26**	*i* PcP	**P**	**02 04 44.1**	**-0.8**
	comp=Z,14nm,1.3s,SNR=5.5						
LPSR	**Galich'ya Gora**	**86.33**	**10**	*e*P	**P**	**02 04 43.1**	**-1.5**
LPSR				pmax	pmax		
	comp=Z,20nm,1.3s						
AKASG	**Malin Array Be**	**86.53**	**16**	P	**P**	**02 04 45.0**	**-0.7**
	comp=Z,1.1nm,0.6s,baz=337,slow=4.2,SNR=12						
AKASG				LR	LR	02 44 36.2	
	comp=Z,208nm,19.2s,baz=330,slow=36						
AKASG	**Malin Array Be**	**86.53**	**16**	*i* P	**P**	**02 04 45.2**	**-0.5**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKBB	**Malin Array Si**	**86.53**	**16**	*e*P	**P**	**02 04 45.3**	**-0.4**
KIEV	**Kiev**	**86.53**	**16**	*e*P	**P**	**02 04 45.2**	**-0.4**
	comp=Z,30nm,1.8s						
KIEV				LR	LR		
	comp=Z,244nm,20.0s						
KIEV	**Kiev**	**86.53**	**16**	*i* P	**P**	**02 04 44.6**	**-1.1**
KIEV				pmax	pmax		
	comp=Z,6.0nm,1.3s						
NJ2	**Nanjing**	**86.65**	**310**	*e*P	**P**	**02 04 42.5**	**-4.1**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KURK	**Kurchatov**	**86.84**	**345**	*e*P	**P**	**02 04 47.6**	**+0.4**
KURK				LR	LR		
	comp=Z,284nm,21.0s						
KURK	**Kurchatov**	**86.84**	**345**	*ce*P	**P**	**02 04 47.2**	**0.0**
KURK				pmax	pmax		
	comp=Z,12nm,1.7s						
KURBB	**Kurchatov Arra**	**86.94**	**345**	P	**P**	**02 04 47.9**	**+0.2**
	comp=Z,3.4nm,0.9s,baz=17,slow=4.5,SNR=25						
VSR	**Storozhevoye**	**87.72**	**10**	*e*P	**P**	**02 04 50.8**	**-0.6**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
VORD	**Divnogorie**	**87.98**	**10**	*e*P	**P**	**02 04 51.1**	**-1.6**
VORD				pmax	pmax		
	comp=Z,10.0nm,1.3s						
VRH	**Novokhopyorsk**	**88.03**	**8**	*e*P	**P**	**02 04 51.9**	**-1.0**
VRH				pmax	pmax		
	comp=Z,10.0nm,1.3s						
BUR04	**Bucovina Ar. S**	**88.49**	**19**	*e*P	**P**	**02 04 56.5**	**+1.2**
DZM	**Mont Dzumac**	**88.81**	**240**	P	**P**	**02 04 57.4**	**+0.4**
	comp=Z,6.7nm,0.9s,baz=98,slow=14,SNR=4.0						
DZM				LR	LR	02 36 04.0	
	comp=Z,338nm,21.7s,baz=46,slow=30						
DZM	**Mont Dzumac**	**88.81**	**240**	*e*LR	LR	02 32 57.4	
	comp=Z,723nm,24.5s						
MDT	**Midelt**	**88.82**	**46**	LR	LR	02 40 59.2	
	comp=Z,105nm,19.7s,baz=346,slow=33						
AKTO	**Aktyubinsk**	**89.46**	**358**	P	**P**	**02 04 58.9**	**-0.8**
	comp=Z,3.2nm,1.0s,baz=333,slow=9.0,SNR=8.5						
AKTO				LR	LR	02 46 58.7	
	comp=Z,163nm,20.5s,baz=4.2,slow=37						
MK31	**Makanchi Array**	**89.74**	**341**	*e*P	**P**	**02 05 01.1**	**0.0**
MK31	**Makanchi Array**	**89.74**	**341**	*e*P	**P**	**02 05 01.1**	**0.0**
MKAR	**Makanchi Array**	**89.74**	**341**	P	**P**	**02 05 00.9**	**-0.2**
	comp=Z,1.4nm,0.9s,baz=27,slow=5.6,SNR=11						
MKAR				LR	LR	02 47 00.2	
	comp=Z,100nm,19.9s,baz=5.0,slow=37						
MKAR	**Makanchi Array**	**89.74**	**341**	*e*P	**P**	**02 05 01.1**	**0.0**
MKAR	**Makanchi Array**	**89.74**	**341**	*i* P	**P**	**02 05 01.7**	**+0.6**
MKAR				pmax	pmax		
	comp=Z,3.0nm,1.1s						
MK01	**Makanchi Array**	**89.75**	**341**	*e*P	**P**	**02 05 01.1**	**-0.1**
MAKZ	**Makanchi**	**89.80**	**342**	*e*P	**P**	**02 05 01.2**	**-0.2**
	comp=Z,13nm,1.0s						
MAKZ	**Makanchi**	**89.80**	**342**	*e*P	**P**	**02 05 01.2**	**-0.2**
MAKZ				pmax	pmax		
	comp=Z,13nm,1.0s						
WHN	**Wuhan**	**90.35**	**312**	P	**P**	**02 05 04.0**	**-0.2**
WHN				pP	**sP**	**02 05 08.6**	**-0.7**
WHN				sP	**pP**	**02 05 12.5**	**+4.6**
WHN				LR	LR		
	comp=Z,320nm,20.1s						
GTA	**Gaotai**	**90.51**	**327**	*e*P	P	02 05 10.0	+5.0
GTA				pP	sP	02 05 14.9	+4.9
GTA				sP	pP	02 05 17.0	+8.3
GTA	**Gaotai**	**90.51**	**327**	S	S	02 16 11.3	+11
GTA				pmax	pmax		
	comp=Z,4.0nm,1.4s						
GTA				pmax	pmax		
	comp=Z,94nm,5.2s						
GTA				LR	LR		
	comp=N,220nm,20.0s						
GTA				LR	LR		
	comp=E,170nm,21.3s						
GTA				LR	LR		
	comp=Z,280nm,20.3s						
ABKAR	**Akbulak array**	**90.57**	**357**	*e*P	**P**	**02 05 06.0**	**+1.1**
XAN	**Xi'an**	**90.61**	**318**	P	**P**	**02 05 09.0**	**+3.5**
XAN				pmax	pmax		
	comp=Z,11nm,1.4s						
XAN				pmax	pmax		
	comp=Z,110nm,3.6s						
MLR	**Muntele Rosu**	**90.65**	**20**	LR	LR	02 46 16.7	
	comp=Z,606nm,20.6s,baz=334,slow=36						
WMQ	**Urumqi**	**91.01**	**337**	*e*P	**P**	**02 05 06.4**	**-0.8**
WMQ				pP	sP	02 05 12.8	+0.6
WMQ				sP	pP	02 05 16.8	+5.9
WMQ				pmax	pmax		
	comp=Z,18nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,210nm,3.7s						
WMQ				LR	LR		
	comp=Z,270nm,21.3s						
WMQ				LR	LR		
	comp=Z,340nm,30.3s						
WMQ				LR	LR		
	comp=Z,300nm,28.5s						
SSLB	**Suanglung**	**91.30**	**303**	*e*P	**P**	**02 05 10.5**	**+1.7**
CPUP	**Villa Florida**	**91.60**	**124**	LR	LR	02 47 45.4	
	comp=Z,65nm,18.0s,baz=342,slow=36						
ENH	**Enshi**	**93.26**	**315**	PFAKE		02 05 30.0	+12
ENH				LR	LR		
	comp=Z,135nm,19.0s						
KEST	**Kesra**	**93.47**	**35**	LR	LR	02 45 17.7	
	comp=Z,181nm,20.5s,baz=260,slow=34						
VAE	**Valguarnera**	**94.11**	**31**	LR	LR	02 47 39.5	
	comp=Z,266nm,18.1s,baz=354,slow=36						
PMG	**Port Moresby**	**94.18**	**261**	LR	LR	02 40 06.5	
	comp=Z,171nm,21.7s,baz=70,slow=31						
PLCA	**Paso Flores**	**94.88**	**141**	LR	LR	02 41 35.1	
	comp=Z,107nm,18.6s,baz=348,slow=31						
KIV	**Kislovodsk**	**95.29**	**9**	*e*P	**P**	**02 05 26.2**	**-0.7**
KIV				*e*		02 09 15.1	
KIV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KBZ	**Khabaz**	**95.54**	**9**	LR	LR	02 50 17.5	
	comp=Z,94nm,19.5s,baz=341,slow=37						
CD2	**Chengdu**	**95.73**	**319**	*e*P	**P**	**02 05 24.6**	**-4.5**
ANTO	**Ankara**	**97.61**	**17**	PFAKE		02 05 50.0	+12
ANTO				LR	LR		
	comp=Z,243nm,21.0s						
GYA	**Guiyang**	**97.78**	**315**	*e*P	**P**	**02 05 34.0**	**-4.6**
GYA				pP	sP	02 05 42.6	-1.0
GYA				PP	**PP**	**02 09 34.8**	**-1.1**
GYA				SKS	**SKSac**	**02 16 09.0**	**-7.4**
GYA				S	**SKKSac**	**02 16 54.3**	**+10**
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,5.8s						
BRTR	**Keskin Array B**	**97.93**	**16**	LR	LR	02 50 25.1	
	comp=Z,140nm,21.7s,baz=334,slow=36						
KSH	**Kashi**	**98.09**	**344**	P	**P**	**02 05 35.3**	**-4.4**
GNI	**Garni**	**99.28**	**8**	LR	LR	02 53 39.6	
	comp=Z,100nm,18.2s,baz=345,slow=37						
KMI	**Kunming**	**100.95**	**317**	P	**Pdif**	**02 05 49.0**	**-3.8**
KMI				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KMI				pmax	pmax		
	comp=Z,43nm,3.9s						
QIZ	**Qiongzhong**	**101.74**	**308**	PFAKE		02 06 00.0	+3.9
QIZ				LR	LR		
	comp=Z,125nm,20.0s						
LSA	**Lhasa**	**102.46**	**328**	PFAKE		02 06 10.0	+10
LSA				LR	LR		
	comp=Z,274nm,21.0s						
NIL	**Nilore**	**104.32**	**344**	PFAKE		02 06 20.0	+13
NIL				LR	LR		
	comp=Z,160nm,21.0s						
CHTO	**Chiang Mai**	**108.12**	**316**	PFAKE		02 10 40.0	
CHTO				LR	LR		
	comp=Z,105nm,19.0s						
ASCN	**Ascension**	**111.01**	**82**	PFAKE		02 10 50.0	
ASCN				LR	LR		
	comp=Z,713nm,20.0s						
KAPI	**Kappang**	**112.15**	**283**	PFAKE		02 10 50.0	
KAPI				LR	LR		
	comp=Z,130nm,19.0s						
RAYN	**Ar Rayn**	**115.79**	**9**	PFAKE		02 10 50.0	+4.2
RAYN				LR	LR		
	comp=Z,103nm,20.0s						
QSPA	**South Pole Qui**	**130.25**	**180**	PKP	**PKPdf**	**02 11 12.9**	**+0.9**
	comp=Z,2.9nm,0.7s,baz=341,slow=1.1,SNR=6.6						
QSPA	**South Pole Qui**	**130.25**	**180**	*e*PKPdf	**PKPdf**	**02 11 12.2**	**+0.2**
LSZ	**Lusaka**	**145.92**	**50**	*e*PKPbc	**PKPbc**	**02 11 42.9**	**0.0**
LSZ	**Lusaka**	**145.92**	**50**	*e*PKP2	**PKPbc**	**02 11 42.9**	**0.0**
MIR	**Mirnyy**	**146.29**	**207**	*e*PKP2	**PKPab**	**02 11 44.0**	**+0.8**
MIR				pmax	pmax		
	comp=Z,44nm,1.2s						
SYO	**Syowa Base**	**150.25**	**169⇑**	*e*PKPab	**PKPab**	**02 11 57.1**	**-1.9**
SYO	**Syowa Base**	**150.25**	**169⇑**	*e*pPKiKP	**PKPab**	**02 12 00.4**	**+1.4**
MAW	**Mawson**	**152.41**	**187**	PKPbc	**PKPbc**	**02 11 58.3**	**+0.5**
	comp=Z,3.7nm,0.9s,baz=292,slow=0.6,SNR=4.4						
BOSA	**Boshof**	**153.14**	**73**	PKPbc	**PKPbc**	**02 12 03.6**	**+2.7**
	comp=Z,2.0nm,0.8s,baz=339,slow=7.6,SNR=3.1						

CSEM ***21*** *02:04:13.3±0.7, 49°.89N×18°.04E, h2^{km}, Error ellipse: s-maj=20.1km s-min=11.0km az=5.0*

PRU 21 02:04:08.2, 49°.84N×18°.44E, h0^{km}, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.19**	**269**	*e*PG	Pg	02 04 11.9	+0.1
OKC				*e*SG	Sg	02 04 14.6	+0.3
	comp=Z,4.9nm,0.2s						
MORC	**Moravsky Berou**	**0.58**	**264**	*e*Pg	Pg	02 04 18.8	-0.6
MORC	**Moravsky Berou**	**0.58**	**264**	*e*PG	Pg	02 04 18.8	-0.6
MORC				*e*SG	Sg	02 04 28.0	+1.0
LANS	**Liptovska Anna**	**0.96**	**135**	*e*PG	Pg	02 04 25.9	-0.7
LANS				*e*SG	Sg	02 04 39.4	+0.3
KRLC	**Kraliky**	**1.10**	**283**	*e*PG	Pg	02 04 28.0	-1.2
KRLC				*e*SG	Sg	02 04 43.0	-0.4
KRLC	**Kraliky**	**1.10**	**283**	*e*P	Pg	02 04 28.0	-1.2
KRLC	**Kraliky**	**1.10**	**283**	Pg	Pg	02 04 28.0	-1.2
KRLC				Sg	Sg	02 04 43.0	-0.4
DPC	**Dobruska-Polom**	**1.46**	**291**	*e*SG	Sg	02 04 54.5	-0.5
DPC	**Dobruska-Polom**	**1.46**	**291**	Sg	Sg	02 04 54.5	-0.5

ISK ***21*** *02:43:44.5, 38°.70N×43°.28E, h5^{km}, ML2.5/8*

CSEM ***21*** *02:43:45.9±0.2, 38°.73N×43°.29E, h12^{km}, ML2.5, Error ellipse: s-maj=5.4km s-min=4.1km az=100.0*

ISCJB ***21*** *02:43:46.3±0.4, 38°.72N±0°.03×43°.28E±0°.04, h12^{km}±4^{km}, Error ellipse: s-maj=5.4km s-min=4.1km az=23.2*

DDA ***21*** *02:43:46.0, 38°.70N×43°.29E, h7^{km}, Ml3.1*

ISC 21 02:43:46.3±0.8**, 38°.72N**±0°.02×**43°.35E**±0°.03**, h17**^{km}±6^{km}**, n30, σ1^{s}43**/50**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	**Van**	**0.13**	**165**	PG	**Pg**	**02 43 49.9**	**-0.4**
VANB				SG	**Sg**	**02 43 53.6**	**+0.7**
VANB	**Van**	**0.13**	**165**	*e*Pg	**Pg**	**02 43 49.9**	**-0.4**
VANB				*e*Sg	**Sg**	**02 43 53.6**	**+0.7**
TVAN	**Van**	**0.20**	**166**	*i* P	**Pg**	**02 43 50.0**	**-1.3**
TVAN				*i* S	**Sg**	**02 43 54.3**	**-0.3**
TVAN	**Van**	**0.20**	**166**	P	**Pg**	**02 43 50.0**	**-1.3**
TVAN				S	**Sg**	**02 43 54.3**	**-0.3**
ERCV	**ERCIS-VAN**	**0.30**	**359**	PG	**Pg**	**02 43 51.7**	**-1.1**
ERCV				SG	**Sg**	**02 43 57.5**	**+0.3**
ERCV	**ERCIS-VAN**	**0.30**	**359**	*e*Pg	**Pg**	**02 43 51.7**	**-1.1**
ERCV				*e*Sg	**Sg**	**02 43 57.5**	**+0.3**
VMUR	**Van-Muradiye**	**0.32**	**33**	*i* P	**Pg**	**02 43 52.7**	**-0.4**
VMUR				*i* S	**Sb**	**02 43 59.6**	**+0.9**
VMUR	**Van-Muradiye**	**0.32**	**33**	P	**Pg**	**02 43 52.7**	**-0.4**
VMUR				S	**Sb**	**02 43 59.6**	**+0.9**
GEVA	**Gevas**	**0.47**	**209**	*i* P	**Pg**	**02 43 54.5**	**-1.3**
GEVA				*i* S	**Sb**	**02 44 03.2**	**+0.2**
GEVA	**Gevas**	**0.47**	**209**	P	**Pg**	**02 43 54.5**	**-1.3**
GEVA				S	**Sb**	**02 44 03.2**	**+0.2**
ADCV	**BITLIS_Adilcev**	**0.49**	**280**	*i* P	**Pb**	**02 43 55.8**	**-0.9**
ADCV				*i* S	**Sb**	**02 44 04.8**	**+1.1**
ADCV	**BITLIS_Adilcev**	**0.49**	**280**	P	**Pb**	**02 43 55.8**	**-0.9**
ADCV				S	**Sb**	**02 44 04.8**	**+1.1**
CLDR	**Caldiran**	**0.61**	**47**	*i* P	**Pg**	**02 43 53.9**	**-4.6**
CLDR				*i* S	**Sg**	**02 44 08.1**	**+1.5**
CLDR	**Caldiran**	**0.61**	**47**	P	**Pg**	**02 43 53.9**	**-4.6**
CLDR				S	**Sg**	**02 44 08.1**	**+1.5**
TUTA	**Tutak**	**0.79**	**329**	*i* P	**Pg**	**02 44 00.8**	**-1.0**
TUTA				*i* S	**Sb**	**02 44 12.5**	**+0.1**
TUTA	**Tutak**	**0.79**	**329**	P	**Pg**	**02 44 00.8**	**-1.0**
TUTA				S	**Sb**	**02 44 12.5**	**+0.1**
GURO	**Guroymak-BITLI**	**1.04**	**261**	PG	**Pg**	**02 44 04.6**	**-1.9**
GURO				SG	**Sb**	**02 44 19.0**	**-0.5**
GURO	**Guroymak-BITLI**	**1.04**	**261**	*e*Pg	**Pg**	**02 44 04.6**	**-1.9**
GURO				*e*Sg	**Sb**	**02 44 19.0**	**-0.5**
EATA	**Eleskirt**	**1.32**	**330**	*i* P	**Pn**	**02 44 09.4**	**-0.9**
EATA				*i* S	**Sn**	**02 44 30.2**	**+2.6**
EATA	**Eleskirt**	**1.32**	**330**	P	**Pn**	**02 44 09.4**	**-0.9**
EATA				S	**Sn**	**02 44 30.2**	**+2.6**
SIRT	**Sirnak**	**1.42**	**211**	PN	**Pb**	**02 44 12.0**	**-0.3**
SIRT	**Sirnak**	**1.42**	**211**	*e*Pn	**Pb**	**02 44 12.0**	**-0.3**
CUKT	**Cukurca**	**1.49**	**172**	PN	**Pn**	**02 44 13.2**	**+0.8**
CUKT	**Cukurca**	**1.49**	**172**	*e*Pn	**Pn**	**02 44 13.2**	**+0.8**
SVAN	**Silvan-Diyarba**	**1.78**	**252**	PN	**Pn**	**02 44 16.7**	**+0.3**
SVAN	**Silvan-Diyarba**	**1.78**	**252**	*e*Pn	**Pn**	**02 44 16.7**	**+0.3**
KARS	**Kars**	**1.91**	**354**	PN	**Pn**	**02 44 19.5**	**+1.2**
KARS	**Kars**	**1.91**	**354**	*e*Pn	**Pn**	**02 44 19.5**	**+1.2**
BNGB	**Bingˆ¶l**	**2.10**	**278**	PN	**Pn**	**02 44 21.4**	**+0.6**
BINT	**Bingol**	**2.24**	**275**	*e*Pn	**Pn**	**02 44 21.4**	**-1.4**

WEL 21 02:54:57.8±1.2**, 35°S**±10°×**17°9W**±1°5**, h5**^{km}**, ML4.4**/18**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**3.73**	**213**	P	Pn	02 55 57.2	+1.2
PKGZ	**Pakihiroa**	**3.94**	**216**	P	Pn	02 55 59.4	+0.4
HAZ	**Te Kaha**	**3.99**	**219**	P	Pn	02 55 59.9	+0.4
HAZ				S	Sn	02 56 49.1	+2.5
PUZ	**Puketiti**	**4.01**	**212**	P	Pn	02 55 60.0	+0.1
PUZ				S	Sn	02 56 47.5	+0.3
RUGZ	**Raukumara Rang**	**4.20**	**218**	P	Pn	02 56 02.3	-0.3
TWGZ	**Tauwhareparae**	**4.22**	**214**	P	Pn	02 56 02.9	+0.1
TWGZ				S	Sn	02 56 54.0	+1.5
TKGZ	**Te Karaka**	**4.49**	**213**	P	Pn	02 56 08.2	+1.7
MWZ	**Matawai**	**4.56**	**216**	P	Pn	02 56 07.6	+0.1
MWZ				S	Sn	02 57 01.4	+0.5
URZ	**Urewera**	**4.71**	**220**	P	Pn	02 56 08.9	-0.6
URZ				S	Sn	02 57 04.9	+0.2
RAGZ	**Rawiri**	**4.74**	**216**	P	Pn	02 56 09.9	-0.1
OPRZ	**Ohinepanea**	**4.75**	**227**	P	Pn	02 56 10.7	+0.7
RIGZ	**Rimuhau**	**4.75**	**212**	P	Pn	02 56 09.7	-0.4
SNGZ	**Shannon Statio**	**5.00**	**215**	P	Pn	02 56 13.7	+0.2
KNZ	**Kokohu**	**5.05**	**211**	P	Pn	02 56 13.3	-0.9
MUGZ	**Murupara**	**5.06**	**221**	P	Pn	02 56 12.7	-1.5
MHGZ	**Mahia Peninsul**	**5.07**	**208**	P	Pn	02 56 15.0	+0.5
MTHZ	**Maungataniwha**	**5.30**	**218**	P	Pn	02 56 17.0	-0.7
TOZ	**Tahuroa Road**	**5.35**	**234**	P	Pn	02 56 18.8	+0.5
MRHZ	**Matea Rd**	**5.51**	**220**	P	Pn	02 56 18.7	-1.8
NMHZ	**Naumai**	**5.51**	**216**	P	Pn	02 56 20.7	+0.2
BKZ	**Black Stump Fm**	**5.71**	**218**	P	Pn	02 56 22.2	-1.2
OUZ	**Omahuta**	**6.08**	**263**	P	Pn	02 56 28.4	+0.1

IDC ***21*** *02:56:47.6±1.9, 33°.24S×178°.48W, h0^{km}, mb4.1/2, mb1 4.3/3, mb1mx3.7/45, mbtmp4.0/3, ML3.7/1, Error ellipse: s-maj=45.2km s-min=42.6km az=31.0*

WEL ***21*** *02:56:51.8±1.3, 33°S±32°×17°8W±5°1, h33^{km}, ML4.8/12*

ISC 21 02:56:53.5±1.8**, 33°.3S**±0°.1×**178°.6W**±0°.3**, h41**^{km}**, n21, σ1^{s}37**/28**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	**Matakaoa Point**	**4.97**	**210**	P	**Pn**	**02 58 05.0**	**-0.6**
WMGZ	**Waiomatatini S**	**5.15**	**207**	P	**Pn**	**02 58 07.7**	**-0.3**
WMGZ				S	**Sn**	**02 59 06.3**	**+0.2**
PKGZ	**Pakihiroa**	**5.34**	**210**	P	**Pn**	**02 58 09.7**	**-1.1**
HAZ	**Te Kaha**	**5.36**	**212**	P	**Pn**	**02 58 10.4**	**-0.5**
HAZ				S	**Sn**	**02 59 14.4**	**+3.1**
PUZ	**Puketiti**	**5.43**	**207**	P	**Pn**	**02 58 12.0**	**+0.1**
RUGZ	**Raukumara Rang**	**5.58**	**212**	P	**Pn**	**02 58 13.4**	**-0.6**
RUGZ				S	**Sn**	**02 59 18.0**	**+1.1**
TWGZ	**Tauwhareparae**	**5.63**	**209**	P	**Pn**	**02 58 14.8**	**+0.1**
TWGZ				S	**Sn**	**02 59 18.2**	**+0.2**
MWZ	**Matawai**	**5.95**	**211**	P	**Pn**	**02 58 16.9**	**-2.1**
MWZ				S	**Sn**	**02 59 26.4**	**+0.4**
URZ	**Urewera**	**6.07**	**214**	Pn	**Pn**	**02 58 17.7**	**-3.0**
	1.7nm,0.3s,baz=266,slow=3.0,SNR=5.2						
URZ				Sn	**Sn**	**02 59 27.1**	**-1.8**
	5.9nm,0.3s,baz=168,slow=8.9,SNR=3.2						
URZ	**Urewera**	**6.07**	**214**	P	**Pn**	**02 58 19.4**	**-1.4**
URZ				S	**Sn**	**02 59 28.5**	**-0.4**
RAGZ	**Rawiri**	**6.13**	**211**	P	**Pn**	**02 58 20.2**	**-1.4**
RIGZ	**Rimuhau**	**6.17**	**208**	P	**Pn**	**02 58 20.5**	**-1.6**
SNGZ	**Shannon Statio**	**6.40**	**210**	P	**Pn**	**02 58 24.3**	**-1.1**
MUGZ	**Murupara**	**6.41**	**215**	P	**Pn**	**02 58 24.5**	**-0.8**
MTHZ	**Maungataniwha**	**6.68**	**212**	P	**Pn**	**02 58 30.2**	**+1.1**
NMHZ	**Naumai**	**6.89**	**211**	P	**Pn**	**02 58 32.1**	**0.0**
BKZ	**Black Stump Fm**	**7.09**	**213**	P	**Pn**	**02 58 32.7**	**-2.1**
ASAR	**Alice Springs**	**42.53**	**270**	P	**P**	**03 04 46.2**	**+0.9**
	2.5nm,0.7s,baz=110,slow=7.8,SNR=20						
WRA	**Warramunga Arr**	**43.78**	**275**	P	**P**	**03 04 56.0**	**+0.6**
	1.3nm,0.5s,baz=116,slow=7.6,SNR=14						
FINES	**FINESS Array B**	**147.64**	**338**	PKPbc	**PKPbc**	**03 16 31.8**	**-0.9**
	1.7nm,0.7s,baz=49,slow=4.2,SNR=4.4						
TORD	**Torodi Ar. Bea**	**159.96**	**181**	PKPab	**PKPab**	**03 17 28.9**	**+0.8**
	baz=163,slow=2.6						

NIED ***21*** *02:58:00, 29°.10N×142°.20E, h5^{km}, Mw4.9 Best double couple: M$_0$2.45000×10^{16} NP1:φ$_s$182.00000°, δ29.00000°, λ122.00000°. NP2:φ$_s$326.00000°, δ66.00000°, λ73.00000°.*

BJI ***21*** *02:58:38.6, 28°.98N×142°.59E, h10^{km}, mb4.6/43, mB4.9/33, Ms4.5/34, Ms7 4.3/32*

IDC ***21*** *02:58:39.2±0.4, 29°.07N×142°.59E, h0^{km}, mb4.4/32, mb1 4.5/36, mb1mx4.4/61, mbtmp4.4/36, ML4.1/2, MS4.1/6, Ms1 4.2/6, ms1mx3.7/29, Error ellipse: s-maj=14.4km s-min=10.0km az=82.0*

MOS ***21*** *02:58:39.7±1.0, 29°.05N×142°.52E, h14^{km}, mb4.9/36, Error ellipse: s-maj=9.5km s-min=5.3km az=106.3*

ISCJB ***21*** *02:58:42.3±0.2, 29°.05N±0°.03×142°.50E±0°.03, h27^{km}, mb4.6/155, MS4.3/16, Error ellipse: s-maj=3.8km s-min=3.7km az=162.0*

GCMT ***21*** *02:58:44.8±0.4, 28°.85N×142°.67E, h19^{km}±1^{km}, MW4.9/83, Moment Tensor Solution. s22,c23; s83,c110; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$2.68±.20; M$_{\theta\theta}$-0.16±.11; M$_{\phi\phi}$-2.52±.13; M$_{r\theta}$1.61±.31; M$_{\theta\phi}$0.14±.07; M$_{\phi r}$0.60±.22; Best double couple: M$_0$3.02900×10^{16} NP1:φ$_s$21.00000°, δ56.00000°, λ119.00000°. NP2: φ$_s$157.00000°, δ43.00000°, λ54.00000°. Principal axes: T 3.4690, Plg65.0000°, Azm346.0000°; N -0.8790, Plg24.0000°, Azm184.0000°; P -2.5900, Plg7.0000°, Azm91.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***21*** *02:58:44.8±0.1, 29°.05N×142°.46E, h35^{km}, mb4.8/95 Error ellipse: s-maj=3.8km s-min=3.8km az=105.0*

ISC 21 02:58:43.4±0.3**, 29°.09N**±0°.04×**142°.69E**±0°.05**, h27**^{km}**, n264, σ1^{s}58**/277**, mb4.7**/155**, MS4.3**/16**, 11C-1D, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**2.03**	**193**	*e*Pn	**Pn**	**02 59 13.9**	**-1.9**
CBIJ				Sn	**Sn**	**02 59 37.9**	**-2.5**
JCJ	**Chichijima**	**2.03**	**193**	Pn	**Pn**	**02 59 14.6**	**-1.2**
	17nm,0.3s,baz=15,slow=10.0,SNR=54						
JCJ				Sn	**Sn**	**02 59 37.9**	**-2.5**
JHJ	**Hachijo jima 2**	**4.73**	**329**	Pn	**Pn**	**02 59 52.5**	**-0.4**
	18nm,0.3s,baz=233,slow=23,SNR=3.6						
JHJ				Sn	**Sn**	**03 00 45.5**	**-1.4**
	23nm,0.3s,baz=67,slow=22,SNR=3.7						
MJAR	**Matsushiro Arr**	**8.34**	**334**	Pn	**Pn**	**03 00 40.4**	**-2.0**
	2.6nm,0.3s,baz=159,slow=10,SNR=29						
MAJO	**Matsushiro**	**8.34**	**334**	*e*Pn	**Pn**	**03 00 40.9**	**-1.6**
MAJO	**Matsushiro**	**8.34**	**334**	*e*P	**Pn**	**03 00 40.9**	**-1.6**
MAT	**Matsushiro**	**8.34**	**334**	P	**Pn**	**03 00 40.6**	**-1.9**
MJB9	**Matsu-Tunnel**	**8.34**	**334**	*e*Pn	**Pn**	**03 00 40.9**	**-1.6**
JOW	**Kunigami**	**12.94**	**263**	Sn	**Sn**	**03 04 10.7**	**+2.0**
	1.9nm,0.3s,baz=120,slow=20,SNR=4.8						
JOW				LR	LR	03 06 17.8	
	comp=Z,840nm,20.3s,baz=106,slow=36						
TJN	**Taejon**	**14.80**	**303**	*ce*P	**Pn**	**03 02 12.5**	**+1.7**
KSRS	**Korea Array**	**14.89**	**308**	Pn	**Pn**	**03 02 12.4**	**+0.4**
	baz=114,slow=13,SNR=12						
KSAR	**Wonju Array Be**	**14.91**	**308**	Pn	**Pn**	**03 02 12.4**	**+0.1**
KSAR	**Wonju Array Be**	**14.91**	**308**	P	**Pn**	**03 02 12.4**	**+0.1**
GUMO	**Guam**	**15.55**	**172**	Pn	**Pn**	**03 02 20.0**	**-0.9**
	baz=310,slow=8.9,SNR=2.0						
KUR	**Kuril'sk**	**16.63**	**13**	*i* P	**Pn**	**03 02 33.4**	**-1.1**
YSS	**Yuzh-Sakhalins**	**17.84**	**0**	*e*Pn	**P**	**03 02 50.0**	**-0.1**
	114nm,0.9s						
YSS	**Yuzh-Sakhalins**	**17.84**	**0⇑**	*e*P	**P**	**03 02 49.9**	**-0.1**
YSS				pmax	pmax		
	comp=Z,40nm,1.3s						
SSE	**Sheshan**	**18.71**	**281**	P	**P**	**03 02 55.4**	**-4.4**
SSE				S	**Sn**	**03 06 24.9**	**-4.0**
SSE				pmax	pmax		
	comp=Z,11nm,0.6s						
SSE				pmax	pmax		
	comp=Z,100nm,3.6s						
SSE				LR	LR		
	comp=Z,280nm,17.2s						
SSE				LR	LR		
	comp=Z,260nm,13.1s						
YULB	**Yu-li**	**20.00**	**258**	*e*P	**Pn**	**03 03 18.8**	**+3.0**
	comp=Z,92nm,1.6s						
CN2	**Changchun**	**20.14**	**321**	*e*P	Pn	03 03 17.3	0.0
CN2				*e*sP	sP	03 03 26.0	-0.1
CN2				*e*S	**S**	**03 06 56.3**	**-3.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,860nm,16.0s						
CN2				LR	LR		
	comp=Z,490nm,16.0s						
CN2				LR	LR		
	comp=Z,570nm,18.0s						
SSLB	**Suanglung**	**20.16**	**260**	*e*P	**P**	**03 03 16.4**	**+0.7**
	comp=Z,37nm,0.9s						
TPUB	**Ta-pu**	**20.60**	**259**	*e*P	Pn	03 03 25.6	+2.7
	comp=Z,53nm,1.2s						
NJ2	**Nanjing**	**20.73**	**284**	*e*P	**P**	**03 03 20.6**	**-1.2**
NJ2				pP	Pn	03 03 24.3	+0.1
NJ2				S	**S**	**03 07 13.3**	**+1.4**
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,150nm,3.5s						
NJ2				LR	LR		
	comp=Z,640nm,13.6s						
NJ2				LR	LR		
	comp=Z,510nm,16.8s						
NJ2				LR	LR		
	comp=Z,760nm,14.6s						
TYV	**Tymovskoe**	**21.75**	**360**	*e*P	**P**	**03 03 25.9**	**-6.7**
TYV				*e*S	**S**	**03 07 23.4**	**-8.4**
TYV				pmax	pmax		
	comp=Z,200nm,4.7s						
TYV				pmax	pmax		
	comp=Z,21nm,1.3s						
TYV				smax	smax		
	comp=E,14nm,1.3s						
KLR	**Kul'dur**	**21.79**	**340**	P	**P**	**03 03 32.7**	**-0.4**
	comp=E,1.3nm,1.0s,baz=144,slow=8.4,SNR=22						
KLR	**Kul'dur**	**21.79**	**340**	*i* P	**P**	**03 03 31.9**	**-1.1**
GRNR	**Gornyy**	**22.17**	**349**	*e*P	**P**	**03 03 40.1**	**+3.0**
GRNR				pmax	pmax		
	comp=Z,42nm,1.0s						
SKR	**Severo-Kuril's**	**23.83**	**21**	*e*P	**P**	**03 03 48.0**	**-6.0**
SKR				pmax	pmax		
	comp=Z,135nm,1.2s						
SKR				pmax	pmax		
	comp=Z,200nm,2.4s						
NKL	**Nikolayevsk**	**24.09**	**357**	*e*P	**P**	**03 03 56.0**	**-0.4**
NKL				pmax	pmax		
	comp=N,50nm,1.2s						

NKL				pmax	pmax		
	comp=Z,70nm,1.2s						
WHN	**Wuhan**	**24.61**	**280**	P	**P**	**03 04 00.8**	**-0.6**
WHN				S	**S**	**03 08 21.6**	**+0.6**
WHN				LR	LR		
	comp=Z,1µm,10.4s						
WHN				LR	LR		
	comp=Z,1µm,16.1s						
WHN				LR	LR		
	comp=Z,950nm,13.5s						
TGY	**Tagaytay City**	**25.06**	**238**	LR	LR	03 13 56.5	
	comp=Z,395nm,19.2s,baz=43,slow=37						
PETK	**Petropavlovsk-**	**26.42**	**21**	P	**P**	**03 04 18.7**	**+1.1**
	comp=Z,1.0nm,0.4s						
ZEA	**Zeya**	**27.10**	**340**	*e*P	**P**	**03 04 23.9**	**+0.2**
ZEA				pmax	pmax		
	comp=N,35nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,46nm,1.4s						
HHC	**Hu-ho-hao-te**	**27.93**	**303**	*e*P	**P**	**03 04 32.9**	**+1.4**
HHC				sP	pP	03 04 41.0	+1.6
HHC				PP	**PnPn**	**03 05 21.3**	**+2.6**
HHC				S	**S**	**03 09 15.3**	**+1.5**
HHC				sS	sS	03 09 27.3	+0.4
HHC				pmax	pmax		
	comp=Z,17nm,0.9s						
HHC				pmax	pmax		
	comp=Z,67nm,6.7s						
HHC				LR	LR		
	comp=Z,350nm,14.7s						
HHC				LR	LR		
	comp=Z,830nm,15.9s						
HHC				LR	LR		
	comp=Z,1µm,17.3s						
XAN	**Xi'an**	**29.11**	**288**	P	**P**	**03 04 41.3**	**-0.7**
XAN				pmax	pmax		
	comp=Z,6.0nm,0.6s						
XAN				pmax	pmax		
	comp=Z,88nm,4.3s						
GYA	**Guiyang**	**31.91**	**274**	P	**P**	**03 05 05.8**	**-1.0**
GYA				PP	**PnPn**	**03 06 12.4**	**+0.4**
GYA				S	**S**	**03 10 15.3**	**-1.1**
GYA				SS	**SnSn**	**03 12 05.5**	**-0.2**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,110nm,5.0s						
GYA				LR	LR		
	comp=Z,510nm,16.8s						
GYA				LR	LR		
	comp=Z,530nm,17.0s						
GYA				LR	LR		
	comp=Z,500nm,17.4s						
ULN	**Ulaanbaatar**	**33.22**	**314**	*e*P	**P**	**03 05 18.0**	**-0.2**
	comp=Z,8.4nm,1.0s						
ULN	**Ulaanbaatar**	**33.22**	**314**	*ce*P	**P**	**03 05 18.1**	**-0.1**
ULN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
LZH	**Lanzhou**	**33.30**	**292**	*e*P	**P**	**03 05 19.8**	**+0.8**
LZH				pP	pP	03 05 25.0	-2.0
LZH				sP	sP	03 05 28.1	-2.2
LZH				PP	**PP**	**03 06 32.4**	**-2.1**
LZH				pmax	pmax		
	comp=Z,17nm,1.2s						
LZH				pmax	pmax		
	comp=Z,110nm,4.8s						
LZH				LR	LR		
	comp=Z,570nm,13.0s						
LZH				LR	LR		
	comp=Z,740nm,13.2s						
LZH				LR	LR		
	comp=Z,840nm,13.6s						
SONA1	**Songino Array**	**33.62**	**314**	*e*P	**P**	**03 05 21.7**	**+0.1**
SONM	**Songino Array**	**33.62**	**314**	P	**P**	**03 05 21.4**	**-0.3**
	comp=Z,5.7nm,0.8s,baz=116,slow=8.2,SNR=29						
CD2	**Chengdu**	**33.65**	**283**	P	**P**	**03 05 20.6**	**-1.4**
CD2				pP	pP	03 05 26.4	-3.6
CD2				sP	sP	03 05 29.0	-4.3
CD2				PP	**PP**	**03 06 36.4**	**-1.9**
CD2				S	**S**	**03 10 42.0**	**-1.4**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.0s						
CD2				LR	LR		
	comp=Z,910nm,14.3s						
CD2				LR	LR		
	comp=Z,910nm,15.1s						
CD2				LR	LR		
	comp=Z,740nm,15.1s						
SEY	**Seymchan**	**34.44**	**8**	P	**P**	**03 05 28.4**	**0.0**
	comp=Z,8.4nm,0.9s,baz=187,slow=7.2,SNR=14						
SEY	**Seymchan**	**34.44**	**8**	*ce*P	**P**	**03 05 27.3**	**-1.0**
BOD	**Bodaibo**	**34.97**	**333**	*e*P	**P**	**03 05 32.4**	**-0.6**
BOD				pmax	pmax		
	comp=Z,10.0nm,1.4s						
KMI	**Kunming**	**35.66**	**273**	P	**P**	**03 05 40.3**	**+0.7**
KMI				pP	pP	03 05 45.8	-1.9
KMI				sP	sP	03 05 47.8	-3.2
KMI				PP	**PP**	**03 07 00.3**	**-0.5**
KMI				S	**S**	**03 11 14.3**	**-0.5**
KMI				sS	pS	03 11 24.5	+0.6
KMI				pmax	pmax		
	comp=Z,11nm,0.6s						
KMI				pmax	pmax		
	comp=Z,79nm,4.5s						
KMI				LR	LR		
	comp=Z,210nm,15.3s						
KMI				LR	LR		
	comp=Z,300nm,18.5s						
KMI				LR	LR		
	comp=Z,340nm,17.2s						
ZAK	**Zakamensk**	**36.44**	**317**	*e*P	**P**	**03 05 45.3**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.4s						
GTA	**Gaotai**	**36.61**	**298**	⇓P	**P**	**03 05 51.9**	**+4.4**
GTA				sP	sP	03 06 01.5	+2.7
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,83nm,5.1s						
GTA				LR	LR		
	comp=Z,280nm,19.0s						
GTA				LR	LR		
	comp=Z,240nm,20.0s						
GTA				LR	LR		
	comp=Z,360nm,18.1s						
TLY	**Talaya**	**36.71**	**319**	*e*P	**P**	**03 05 47.5**	**-0.5**
	comp=Z,14nm,1.2s						
TLY	**Talaya**	**36.71**	**319**	*e*P	**P**	**03 05 48.2**	**+0.2**
TLY				*e*S	**S**	**03 11 32.1**	**+2.3**
TLY				pmax	pmax		
	comp=Z,12nm,1.1s						
TLY				MLR	MLR		
	comp=Z,532nm,19.0s						
SKNT	**Sakolnakorn**	**37.44**	**260**	P	**P**	**03 05 55.3**	**+0.7**
	comp=Z,6.2nm,1.1s						
MOY	**Mondy**	**38.24**	**318**	*e*P	**P**	**03 06 03.1**	**+2.0**
MOY				pmax	pmax		
	comp=Z,18nm,1.6s						
PMG	**Port Moresby**	**38.51**	**173**	P	**P**	**03 06 02.3**	**-1.2**
	comp=Z,7.3nm,0.5s,baz=135,slow=19,SNR=2.0						
CHAI	**Chaiyaphum**	**39.63**	**260**	P	**P**	**03 06 12.4**	**-0.6**
	comp=Z,8.9nm,0.9s,comp=Z,172nm						
SRAK	**Srakaew**	**40.45**	**257**	P	**P**	**03 06 15.4**	**-4.4**
	comp=Z,36nm,0.8s						
CMMT	**Chiang Mai**	**41.06**	**266**	P	**P**	**03 06 24.8**	**-0.1**
CHTO	**Chiang Mai**	**41.06**	**266**	*e*P	**P**	**03 06 24.0**	**-0.9**
CHTO	**Chiang Mai**	**41.06**	**266**	*e*P	**P**	**03 06 24.0**	**-0.9**
CMAR	**Chiang Mai Arr**	**41.20**	**265**	P	**P**	**03 06 24.5**	**-1.5**
	comp=Z,1.6nm,0.3s,baz=52,slow=9.3,SNR=6.5						
CMAR				LR	LR	03 23 31.0	
	comp=Z,212nm,21.3s,baz=57,slow=36						
WMQ	**Urumqi**	**45.80**	**304**	P	**P**	**03 07 04.3**	**+1.4**
WMQ				pP	pP	03 07 10.8	-0.3
WMQ				sP	sP	03 07 15.8	+1.5
WMQ				pmax	pmax		
	comp=Z,19nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,180nm,4.3s						
WMQ				LR	LR		
	comp=Z,920nm,21.7s						
WMQ				LR	LR		
	comp=Z,450nm,22.7s						
WMQ				LR	LR		
	comp=Z,500nm,19.5s						
BRDH	**Bariadhala**	**46.08**	**274**	LR	LR	03 28 23.9	
	comp=Z,288nm,18.1s,baz=127,slow=39						
DGZ	**Jazzator, Alta**	**46.24**	**312**	*i* P	**P**	**03 07 06.6**	**+0.3**
DGZ				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ZALV	**Zalesovo Beam**	**48.30**	**318**	P	**P**	**03 07 22.3**	**+0.2**
	comp=Z,1.7nm,0.4s,baz=96,slow=7.7,SNR=1.6						
CTA	**Charters Tower**	**49.01**	**176**	P	**P**	**03 07 28.3**	**+0.4**
	comp=Z,4.6nm,0.9s,baz=136,slow=23,SNR=2.6						
NVS	**Novosibirsk**	**49.32**	**319**	*e*P	**P**	**03 07 30.1**	**+0.2**
NVS				pmax	pmax		
	comp=N,7.0nm,1.5s						
NVS				pmax	pmax		
	comp=E,17nm,1.5s						
NVS				pmax	pmax		
	comp=Z,18nm,1.5s						
WRAB	**Tennant Creek**	**49.39**	**190**	*e*P	**P**	**03 07 30.3**	**-0.5**
WRAB	**Tennant Creek**	**49.39**	**190**	*ce*P	**P**	**03 07 28.6**	**-2.2**
WRAB				pmax	pmax		
	comp=Z,17nm,0.8s						
WB2	**Warramunga Arr**	**49.40**	**190**	*e*P	**P**	**03 07 29.8**	**-1.1**
WRA	**Warramunga Arr**	**49.40**	**190**	P	**P**	**03 07 30.5**	**-0.4**
	comp=Z,14nm,0.9s,baz=10,slow=8.2,SNR=36						
MK01	**Makanchi Array**	**49.57**	**308**	*e*P	**P**	**03 07 31.1**	**-1.0**
MK31	**Makanchi Array**	**49.58**	**308**	*e*P	**P**	**03 07 31.2**	**-0.8**
MK31	**Makanchi Array**	**49.58**	**308**	*e*P	**P**	**03 07 31.3**	**-0.8**
MKAR	**Makanchi Array**	**49.58**	**308**	P	**P**	**03 07 31.1**	**-0.9**
	comp=Z,1.4nm,0.5s,baz=91,slow=9.0,SNR=16						
MAKZ	**Makanchi**	**49.79**	**308**	*e*P	**P**	**03 07 33.2**	**-0.5**
	comp=Z,9.5nm,0.6s						
MAKZ	**Makanchi**	**49.79**	**308**	*e*P	**P**	**03 07 33.2**	**-0.5**
MAKZ				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SVW2	**Sparrevohn**	**51.38**	**33**	*e*P	**P**	**03 07 46.8**	**+1.3**
	comp=Z,24nm,1.2s						
KURK	**Kurchatov**	**51.93**	**313**	*e*P	**P**	**03 07 49.4**	**-0.3**
KURK	**Kurchatov**	**51.93**	**313**	*ce*P	**P**	**03 07 48.9**	**-0.8**
KURK				pmax	pmax		
	comp=Z,23nm,1.0s						
KURBB	**Kurchatov Arra**	**51.99**	**313**	P	**P**	**03 07 49.7**	**-0.4**
	comp=Z,15nm,1.0s,baz=91,slow=6.7,SNR=76						
AS01	**Alice Springs**	**53.12**	**190**	*e*P	**P**	**03 07 58.6**	**-0.1**
ASAR	**Alice Springs**	**53.12**	**190**	P	**P**	**03 07 57.2**	**-1.6**
	comp=Z,4.0nm,1.1s,baz=5.9,slow=6.6,SNR=9.7						
CAST	**Castle Rocks**	**53.35**	**31**	*e*P	**P**	**03 08 01.3**	**+1.2**
	comp=Z,16nm,1.1s						
SKT	**Skwentna**	**53.42**	**32**	*e*P	**P**	**03 08 00.8**	**+0.2**
	comp=Z,9.5nm,1.2s						
BPAW	**Bear Paw Mtn.**	**53.92**	**30**	*e*P	**P**	**03 08 05.2**	**+1.0**
	comp=Z,5.8nm,1.0s						
TRF	**Thorofare Moun**	**54.16**	**31**	*e*P	**P**	**03 08 06.6**	**+0.5**
	comp=Z,11nm,0.8s						
MBWA	**Marble Bar**	**54.64**	**207**	*e*P	**P**	**03 08 09.3**	**-0.5**
COLD	**Coldfoot**	**54.69**	**26**	*e*P	**P**	**03 08 11.0**	**+1.3**
	comp=Z,6.7nm,0.8s						
MCK	**McKinley**	**54.79**	**30**	*e*P	**P**	**03 08 10.8**	**+0.3**
	comp=Z,14nm,1.0s						
MCK	**McKinley**	**54.79**	**30**	*e*P	**P**	**03 08 10.8**	**+0.3**
MCK				pmax	pmax		
	comp=Z,14nm,1.0s						
KSH	**Kashi**	**54.96**	**300**	P	**P**	**03 08 13.4**	**+1.1**
KSH				pmax	pmax		
	comp=Z,14nm,0.7s						
IL1	**Eielson Array**	**55.76**	**29**	*e*P	**P**	**03 08 16.6**	**-0.9**
ILAR	**Eielson Array**	**55.76**	**29**	P	**P**	**03 08 17.4**	**-0.1**
	comp=Z,2.7nm,0.9s,baz=257,slow=6.4,SNR=30						
ILB	**Eielson Array**	**55.76**	**29**	*e*P	**P**	**03 08 17.1**	**-0.4**
DZM	**Mont Dzumac**	**55.78**	**153**	*e*LR	LR	03 24 41.2	
	comp=Z,292nm,24.4s						
PAX	**Paxson**	**56.30**	**31**	*e*P	**P**	**03 08 22.0**	**+0.5**
	comp=Z,4.7nm,0.8s						
PAX	**Paxson**	**56.30**	**31**	*e*P	**P**	**03 08 22.0**	**+0.5**
PAX				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BVAR	**Borovoye Array**	**56.90**	**317**	P	**P**	**03 08 25.6**	**-0.2**
	comp=Z,10nm,0.9s,baz=89,slow=7.9,SNR=32						
BRVK	**Borovoye**	**56.96**	**317**	*e*P	**P**	**03 08 26.2**	**0.0**
BRVK	**Borovoye**	**56.96**	**317**	*ce*P	**P**	**03 08 25.6**	**-0.6**
BRVK				pmax	pmax		
	comp=Z,13nm,1.0s						
MNAS	**Manas**	**56.98**	**304**	P	P	03 08 18.6	-8.1
MNAS				pmax	pmax		
	comp=Z,3.0nm,0.5s						
EGAK	**Eagle**	**58.21**	**29**	*e*P	**P**	**03 08 35.2**	**+0.4**
	comp=Z,1.5nm,0.6s						
KK31	**Karatay Array**	**58.30**	**305**	*e*P	**P**	**03 08 35.1**	**-0.7**
KK31	**Karatay Array**	**58.30**	**305**	*e*P	**P**	**03 08 35.2**	**-0.7**
KKAR	**Karatay Array**	**58.30**	**305**	*e*P	**P**	**03 08 35.1**	**-0.7**
KKAR	**Karatay Array**	**58.30**	**305**	*e*P	**P**	**03 08 35.2**	**-0.7**
DAWY	**Dawson**	**59.01**	**30**	*e*P	**P**	**03 08 40.7**	**+0.2**
	comp=Z,12nm,1.2s						
STKA	**Stephens Creek**	**60.64**	**181**	P	**P**	**03 08 52.3**	**+0.4**
	comp=Z,1.1nm,0.7s,baz=342,slow=19,SNR=2.8						
INK	**Inuvik**	**61.04**	**25**	*e*P	**P**	**03 08 54.9**	**+0.7**
	comp=Z,7.9nm,0.9s						
INK	**Inuvik**	**61.04**	**25**	*e*P	**P**	**03 08 54.9**	**+0.7**
INK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
WHY	**Whitehorse**	**61.47**	**34**	*e*P	**P**	**03 08 58.8**	**+1.4**
	comp=Z,15nm,1.2s						
JIS	**Juneau Island**	**62.12**	**36**	*e*P	**P**	**03 09 03.8**	**+2.2**
	comp=Z,16nm,1.2s						
ARU	**Arti**	**63.14**	**322**	*e*P	**P**	**03 09 07.5**	**-1.0**
ARU	**Arti**	**63.14**	**322**	*c i*P	**P**	**03 09 07.7**	**-0.8**
ARU						03 09 42.3	
ARU						03 11 24.8	
ARU				S	**S**	**03 17 41.8**	**+4.0**
ARU				SS	**SS**	**03 21 48.1**	**+4.7**
ARU				pmax	pmax		
	comp=Z,9.0nm,1.2s						
ABKAR	**Akbulak array**	**64.04**	**314**	*e*P	**P**	**03 09 13.9**	**-0.7**
DLBC	**Dease Lake**	**64.33**	**36**	*e*P	**P**	**03 09 18.8**	**+2.3**
	comp=Z,10nm,0.9s						
AKTO	**Aktyubinsk**	**64.93**	**315**	P	**P**	**03 09 20.0**	**-0.4**
	comp=Z,2.8nm,0.7s,baz=70,slow=4.8,SNR=7.6						
AKTO	**Aktyubinsk**	**64.93**	**315**	P	**P**	**03 09 20.0**	**-0.4**
NWAO	**Narrogin (SRO)**	**66.23**	**203**	P	**P**	**03 09 29.2**	**+0.3**
	comp=Z,9.3nm,0.9s,baz=265,slow=7.6,SNR=4.0						
YKW3	**Yellowknife Ar**	**70.15**	**29**	*e*P	**P**	**03 09 53.5**	**+0.3**
YKA	**Yellowknife Ar**	**70.19**	**29**	P	**P**	**03 09 53.3**	**0.0**
	comp=Z,4.5nm,1.0s,baz=293,slow=5.9,SNR=18						
NLWA	**Neilton Lookou**	**71.39**	**46**	*e*P	**P**	**03 10 02.6**	**+1.5**
KEBM	**Edson Butte**	**72.88**	**50**	*e*P	**P**	**03 10 12.9**	**+2.9**
	comp=Z,22nm,1.1s						
H04A	**Detroit Lake**	**73.55**	**48**	*e*P	**P**	**03 10 15.4**	**+1.4**
	comp=Z,20nm,1.1s						
B08A	**Colville Reser**	**73.78**	**43**	*e*P	**P**	**03 10 16.7**	**+1.5**
	comp=Z,7.7nm,1.0s						
HUMO	**Hull Mountain**	**73.91**	**50**	*e*P	**P**	**03 10 18.2**	**+2.1**
	comp=Z,6.3nm,1.3s						
VRH	**Novokhopyorsk**	**74.27**	**320**	*e*P	**P**	**03 10 17.5**	**-0.4**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
YBH	**Yreka Blue Hor**	**74.44**	**51**	P	**P**	**03 10 20.7**	**+1.3**
	comp=Z,4.2nm,1.0s,baz=355,slow=8.6,SNR=9.0						
YBH	**Yreka Blue Hor**	**74.44**	**51**	*e*P	**P**	**03 10 21.0**	**+1.7**
	comp=Z,4.8nm,0.9s						
YBH	**Yreka Blue Hor**	**74.44**	**51**	*e*P	**P**	**03 10 21.0**	**+1.7**
YBH				pmax	pmax		
	comp=Z,5.0nm,0.9s						
RAR	**Rarotonga**	**74.67**	**125**	LR	LR	03 37 18.3	
	comp=Z,244nm,19.5s,baz=287,slow=31						
PINE	**Pine Mountain**	**74.74**	**48**	*e*P	**P**	**03 10 23.0**	**+1.9**
	comp=Z,21nm,0.9s						
WDC	**Whiskeytown Da**	**75.05**	**52**	*e*P	**P**	**03 10 24.2**	**+1.5**
	comp=Z,6.3nm,1.1s						
WDC	**Whiskeytown Da**	**75.05**	**52**	*e*P	**P**	**03 10 24.2**	**+1.5**
WDC				pmax	pmax		
	comp=Z,6.0nm,1.1s						
OBN	**Obninsk**	**75.16**	**325**	*e*P	**P**	**03 10 20.8**	**-2.2**
OBN				*e*		03 10 35.9	
OBN				*e*		03 13 12.2	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
K05A	**Summer Lake**	**75.23**	**49**	*e*P	**P**	**03 10 25.7**	**+1.7**
	comp=Z,24nm,1.0s						
E09A	**Wood Farm, Sta**	**75.32**	**45**	*e*P	**P**	**03 10 25.6**	**+1.5**
	comp=Z,8.9nm,1.0s						
VSR	**Storozhevoye**	**75.68**	**321**	*e*P	**P**	**03 10 24.7**	**-1.4**
VSR				pmax	pmax		
	comp=Z,8.0nm,1.1s						
MOD	**Modoc Plateau**	**75.99**	**50**	*e*P	**P**	**03 10 29.5**	**+1.2**
	comp=Z,5.5nm,0.8s						
FINES	**FINESS Array B**	**76.36**	**334**	P	**P**	**03 10 29.4**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=67,slow=5.6,SNR=5.3						
J08A	**Circle Bar Ran**	**76.54**	**48**	*e*P	**P**	**03 10 32.9**	**+1.6**
	comp=Z,12nm,1.0s						
BMO	**Blue Mountains**	**76.60**	**46**	*e*P	**P**	**03 10 32.6**	**+1.0**
	comp=Z,8.3nm,1.1s						
BMO	**Blue Mountains**	**76.60**	**46**	*e*P	**P**	**03 10 32.6**	**+1.0**
BMO				pmax	pmax		
	comp=Z,8.0nm,1.1s						
WALA	**Waterton Lakes**	**76.65**	**41**	*e*P	**P**	**03 10 33.4**	**+1.5**
	comp=Z,9.2nm,0.7s						
BEKR	**Beckworth**	**76.86**	**52**	*e*P	**P**	**03 10 34.3**	**+1.0**
	comp=Z,11nm,1.0s						
KBZ	**Khabaz**	**76.98**	**313**	P	**P**	**03 10 33.9**	**+0.3**
	comp=Z,3.7nm,0.8s,baz=84,slow=1.5,SNR=8.7						
KIV	**Kislovodsk**	**77.01**	**313**	*e*P	**P**	**03 10 34.2**	**+0.2**
KIV				*e*		03 10 45.0	
KIV				*e*		03 13 22.0	
KIV				*e*PPP	PPP	03 15 14.7	
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
JTMT	**Jette**	**77.07**	**42**	*e*P	**P**	**03 10 35.8**	**+1.5**
	comp=Z,12nm,0.8s						
PAHR	**Pah Rah Range**	**77.61**	**51**	*e*P	**P**	**03 10 38.6**	**+1.2**
	comp=Z,10nm,1.1s						
CMB	**Columbia Colle**	**77.68**	**53**	*e*P	**P**	**03 10 38.4**	**+0.6**
CMB	**Columbia Colle**	**77.68**	**53**	*e*P	**P**	**03 10 38.4**	**+0.6**
MSO	**Missoula**	**77.72**	**43**	*e*P	**P**	**03 10 39.1**	**+1.2**
	comp=Z,4.4nm,0.9s						
PNTR	**Pine Nut**	**77.74**	**52**	*e*P	**P**	**03 10 40.2**	**+1.9**
	comp=Z,6.9nm,0.9s						
YERR	**Yerington**	**78.04**	**52**	*e*P	**P**	**03 10 41.2**	**+1.3**
	comp=Z,10nm,1.0s						
WAKR	**Walker**	**78.12**	**53**	*e*P	**P**	**03 10 42.4**	**+1.9**
	comp=Z,4.8nm,0.9s						
MFID	**Camas Ranch**	**78.22**	**47**	*e*P	**P**	**03 10 42.1**	**+1.3**
	comp=Z,11nm,1.0s						
SUMG	**Summit**	**78.61**	**0**	P	**P**	**03 10 44.0**	**+1.3**
SUMG				pmax	pmax		
	comp=Z,28nm,0.9s						
RYN	**Ryan**	**78.70**	**52**	*e*P	**P**	**03 10 45.0**	**+1.4**
	comp=Z,6.6nm,1.0s						
BMN	**Battle Mountai**	**78.73**	**50**	*e*P	**P**	**03 10 43.9**	**+0.2**
	comp=Z,4.1nm,0.9s						
BMN	**Battle Mountai**	**78.73**	**50**	*e*P	**P**	**03 10 43.9**	**+0.2**
BMN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KVN	**Kaiserville**	**78.79**	**52**	*e*P	**P**	**03 10 45.3**	**+1.2**
	comp=Z,13nm,1.0s						
KVN	**Kaiserville**	**78.79**	**52**	*e*P	**P**	**03 10 45.3**	**+1.2**
KVN				pmax	pmax		
	comp=Z,13nm,1.0s						
OMMB	**Old Mammoth Mi**	**78.84**	**53**	*e*P	**P**	**03 10 46.4**	**+1.8**
	comp=Z,4.4nm,1.2s						
NV01	**Mina Array Sit**	**78.95**	**52**	*e*P	**P**	**03 10 45.7**	**+0.7**
NVAR	**Mina Array Bea**	**78.95**	**52**	P	**P**	**03 10 46.0**	**+1.0**
	comp=Z,3.5nm,0.8s,baz=276,slow=5.9,SNR=27						
HRY	**Holter Researc**	**79.04**	**42**	*e*P	**P**	**03 10 46.5**	**+1.3**
NV11	**Mina Array Sit**	**79.05**	**52**	*e*P	**P**	**03 10 45.9**	**+0.4**
	comp=Z,0.5nm,1.1s						
LRM	**Limekiln Ridge**	**79.12**	**43**	*e*P	**P**	**03 10 46.8**	**+1.0**
DLMT	**Dillon**	**79.27**	**44**	*e*P	**P**	**03 10 47.9**	**+1.4**
	comp=Z,11nm,0.9s						
BOZ	**Bozeman (W)**	**79.73**	**43**	*e*P	**P**	**03 10 48.9**	**-0.2**
	comp=Z,2.1nm,0.8s						
BOZ	**Bozeman (W)**	**79.73**	**43**	*e*P	**P**	**03 10 48.9**	**-0.2**
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
FFC	**Flin Flon**	**79.82**	**32**	*e*P	**P**	**03 10 49.5**	**+0.3**
	comp=Z,15nm,1.3s						
FFC	**Flin Flon**	**79.82**	**32**	*e*P	**P**	**03 10 49.5**	**+0.3**
FFC				pmax	pmax		
	comp=Z,15nm,1.3s						
PPT	**Papeete**	**80.14**	**116**	LR	LR	03 44 21.1	
	comp=Z,64nm,18.4s,baz=316,slow=34						
PPT2	**Papeete2**	**80.15**	**116**	*e*LR	LR	03 35 51.3	
	comp=Z,175nm,22.5s						
QLMT	**Earthquake Lak**	**80.25**	**44**	*e*P	**P**	**03 10 53.6**	**+1.7**
YHB	**Horse Butte**	**80.43**	**44**	*e*P	**P**	**03 10 55.3**	**+2.3**
	comp=Z,11nm,0.9s						
YMR	**Madison River**	**80.61**	**44**	*e*P	**P**	**03 10 56.2**	**+2.2**
	comp=Z,9.3nm,0.8s						
R11A	**Troy Canyon, C**	**80.85**	**51**	*e*P	**P**	**03 10 55.9**	**+0.7**
	comp=Z,9.5nm,1.1s						
YPP	**Pitchstone Pla**	**80.92**	**44**	*e*P	**P**	**03 10 58.9**	**+3.2**
	comp=Z,5.1nm,0.7s						
HVU	**Hansel Valley**	**80.98**	**47**	*e*P	**P**	**03 10 57.6**	**+1.7**
	comp=Z,13nm,1.2s						
H17A	**Grant Village**	**81.00**	**44**	*e*P	**P**	**03 10 59.1**	**+3.1**
	comp=Z,17nm,0.8s						
IMW	**Indian Meadow**	**81.04**	**45**	*e*P	**P**	**03 10 58.2**	**+2.0**
	comp=Z,13nm,0.9s						
FLWY	**Flagg Ranch**	**81.08**	**44**	*e*P	**P**	**03 10 58.9**	**+2.4**
	comp=Z,8.2nm,1.0s						
TPNV	**Topopah Spring**	**81.09**	**53**	*e*P	**P**	**03 10 57.5**	**+1.0**
	comp=Z,14nm,1.0s						
TPNV	**Topopah Spring**	**81.09**	**53**	*e*P	**P**	**03 10 57.5**	**+1.0**
TPNV				pmax	pmax		
	comp=Z,14nm,1.0s						
FXWY	**Fox Creek**	**81.12**	**45**	*e*P	**P**	**03 10 58.5**	**+1.8**
	comp=Z,8.9nm,0.9s						
MOOW	**Moose Ponds**	**81.23**	**45**	*e*P	**P**	**03 10 58.9**	**+1.7**
	comp=Z,7.8nm,1.0s						
TPAW	**Teton Pass**	**81.24**	**45**	*e*P	**P**	**03 10 58.2**	**+0.8**
	comp=Z,7.2nm,0.8s						
BGU	**Big Grassy Mou**	**81.26**	**48**	*e*P	**P**	**03 10 59.1**	**+1.8**
	comp=Z,3.3nm,0.9s						
AKASG	**Malin Array Be**	**81.28**	**324**	P	**P**	**03 10 56.8**	**-0.2**
	comp=Z,0.1nm,0.2s,baz=47,slow=5.8,SNR=4.2						
AKASG	**Malin Array Be**	**81.28**	**324**	*ce*P	**P**	**03 10 57.0**	**0.0**
REDW	**Red Top Meadow**	**81.37**	**45**	*e*P	**P**	**03 11 00.7**	**+2.7**
	comp=Z,8.8nm,1.0s						
LOHW	**Long Hollow**	**81.39**	**45**	*e*P	**P**	**03 10 59.7**	**+1.6**
	comp=Z,3.7nm,0.8s						
RLMT	**Red Lodge**	**81.39**	**43**	*e*P	**P**	**03 10 58.7**	**+0.7**
	comp=Z,9.2nm,1.1s						
SPUT	**South Promonto**	**81.44**	**47**	*e*P	**P**	**03 10 60.0**	**+1.7**
	comp=Z,5.0nm,1.1s						
GSC	**Goldstone, Bar**	**81.51**	**54**	*e*P	**P**	**03 10 59.7**	**+1.0**
	comp=Z,9.9nm,1.3s						
DUG	**Dugway, Tooele**	**81.77**	**49**	*e*P	**P**	**03 11 01.4**	**+1.3**
	comp=Z,8.6nm,1.1s						
DUG	**Dugway, Tooele**	**81.77**	**49**	*e*P	**P**	**03 11 01.4**	**+1.3**
DUG				pmax	pmax		
	comp=Z,9.0nm,1.1s						
HWUT	**Hardware Ranch**	**81.85**	**47**	*e*P	**P**	**03 11 00.8**	**+0.3**
	comp=Z,5.2nm,0.9s						
NB2	**NORSAR Subarra**	**81.93**	**338**	P	**P**	**03 10 59.6**	**-0.7**
	comp=Z,0.8nm,0.8s,baz=40,slow=5.3						
NOA	**NORSAR Array B**	**81.93**	**338**	P	**P**	**03 10 59.6**	**-0.7**
	comp=Z,2.2nm,1.0s,baz=41,slow=5.2,SNR=4.5						
PSUT	**Pine Spring**	**81.93**	**50**	*e*P	**P**	**03 11 02.1**	**+1.1**
	comp=Z,6.9nm,0.9s						
SHPR	**Sheep Range**	**82.07**	**53**	*e*P	**P**	**03 11 03.1**	**+1.4**
	comp=Z,8.9nm,1.0s						
JLU	**Jordanelle**	**82.45**	**48**	*e*P	**P**	**03 11 04.7**	**+1.0**
	comp=Z,6.6nm,1.0s						
BW06	**Boulder Array**	**82.49**	**45**	*e*P	**P**	**03 11 04.5**	**+0.6**
	comp=Z,9.9nm,1.1s						
PD31	**Pinedale Array**	**82.49**	**45**	*e*P	**P**	**03 11 04.6**	**+0.7**
PDAR	**Pinedale Array**	**82.49**	**45**	P	**P**	**03 11 04.5**	**+0.7**
	comp=Z,1.4nm,0.7s,baz=279,slow=2.9,SNR=12						
PDAR	**Pinedale Array**	**82.49**	**45**	*e*P	**P**	**03 11 03.5**	**-0.4**
PFO	**Pinyon Flats O**	**82.59**	**56**	*e*P	**P**	**03 11 05.1**	**+0.7**
	comp=Z,7.7nm,1.1s						
PFO	**Pinyon Flats O**	**82.59**	**56**	*e*P	**P**	**03 11 05.1**	**+0.7**
PFO				pmax	pmax		
	comp=Z,8.0nm,1.1s						
XPFO	**Piæon Flat**	**82.59**	**56**	*e*P	**P**	**03 11 05.2**	**+0.7**
	comp=Z,7.7nm,1.1s						
MPU	**Maple Canyon**	**82.64**	**48**	*e*P	**P**	**03 11 05.9**	**+1.2**
	comp=Z,10nm,1.0s						
CCUT	**Cedar City**	**82.77**	**51**	*e*P	**P**	**03 11 06.7**	**+1.3**
	comp=Z,6.8nm,1.0s						
MSU	**Marysvale**	**83.07**	**50**	*e*P	**P**	**03 11 08.5**	**+1.5**
MSU	**Marysvale**	**83.07**	**50**	*e*P	**P**	**03 11 08.5**	**+1.5**
LCMT	**Little Creek M**	**83.13**	**51**	*e*P	**P**	**03 11 08.5**	**+1.3**
	comp=Z,9.1nm,0.9s						
TMUT	**Trail Mountain**	**83.30**	**49**	*e*P	**P**	**03 11 09.9**	**+1.6**
	comp=Z,12nm,1.5s						
MTPU	**Mount Pierson**	**83.31**	**50**	*e*P	**P**	**03 11 09.8**	**+1.4**
	comp=Z,9.8nm,0.9s						
KNB	**Kanab**	**83.42**	**51**	*e*P	**P**	**03 11 10.3**	**+1.6**
	comp=Z,14nm,1.0s						
KNB	**Kanab**	**83.42**	**51**	*e*P	**P**	**03 11 10.3**	**+1.6**
KNB				pmax	pmax		
	comp=Z,14nm,1.0s						
K22A	**Casper**	**84.42**	**44**	*e*P	**P**	**03 11 14.8**	**+1.1**
	comp=Z,15nm,1.3s						
RWWY	**Rawlins**	**84.54**	**45**	*e*P	**P**	**03 11 15.0**	**+0.5**

	comp=Z,13nm,1.0s						
RAYN	**Ar Rayn**	**84.75**	**294**	*e*P	**P**	**03 11 16.2**	**+0.6**
RAYN	**Ar Rayn**	**84.75**	**294**	*e*P	**P**	**03 11 16.2**	**+0.6**
O20A	**White River Ci**	**84.76**	**47**	*e*P	**P**	**03 11 16.6**	**+1.1**
	comp=Z,9.4nm,0.7s						
BR131	**Keskin Array S**	**84.98**	**313**	*e*P	**P**	**03 11 17.0**	**+0.4**
BRTR	**Keskin Array B**	**84.98**	**313**	P	**P**	**03 11 16.9**	**+0.3**
	comp=Z,2.8nm,0.8s,baz=103,slow=4.5,SNR=16						
BRTR	**Keskin Array B**	**84.98**	**313**	*i* P	**P**	**03 11 16.6**	**0.0**
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
WUAZ	**Wupatki**	**85.20**	**52**	*e*P	**P**	**03 11 19.0**	**+1.2**
	comp=Z,7.9nm,1.0s						
PV22	**Blue Mesa, Par**	**85.30**	**48**	*e*P	**P**	**03 11 19.9**	**+1.6**
	comp=Z,12nm,1.0s						
PV03	**Paradox Valley**	**85.41**	**49**	*e*P	**P**	**03 11 19.8**	**+0.9**
ULM	**Lac du Bonnet**	**85.54**	**33**	P	**P**	**03 11 18.6**	**-0.4**
	comp=Z,0.7nm,0.3s,baz=292,slow=5.4,SNR=3.9						
PV01	**Paradox Valley**	**85.66**	**48**	*e*P	**P**	**03 11 21.0**	**+0.8**
N23A	**Red Feather La**	**85.78**	**45**	*e*P	**P**	**03 11 22.4**	**+1.7**
	comp=Z,15nm,1.1s						
SMCO	**Snowmass**	**86.11**	**47**	*e*P	**P**	**03 11 23.8**	**+1.2**
	comp=Z,6.2nm,1.1s						
MLR	**Muntele Rosu**	**86.18**	**321**	P	**P**	**03 11 21.1**	**-1.3**
	comp=Z,0.8nm,0.7s,baz=211,slow=18,SNR=2.8						
MVCO	**Mesa Verde**	**86.22**	**49**	*e*P	**P**	**03 11 23.8**	**+0.9**
	comp=Z,6.1nm,1.1s						
ISCO	**Idaho Springs**	**86.61**	**46**	*e*P	**P**	**03 11 26.4**	**+1.5**
	comp=Z,24nm,1.9s						
ISCO	**Idaho Springs**	**86.61**	**46**	*e*P	**P**	**03 11 26.4**	**+1.5**
ISCO				pmax	pmax		
	comp=Z,24nm,1.9s						
AGMN	**Agassiz Nation**	**86.84**	**35**	*e*P	**P**	**03 11 26.4**	**+0.9**
	comp=Z,7.4nm,0.8s						
ASF	**Jabal al Asfar**	**86.89**	**305**	P	**P**	**03 11 26.5**	**+0.4**
	comp=Z,2.3nm,0.8s,baz=187,slow=3.0,SNR=4.4						
S22A	**4UR Ranch, Cre**	**87.02**	**48**	*e*P	**P**	**03 11 28.8**	**+1.9**
	comp=Z,6.5nm,1.0s						
MMAI	**Mount Meron Ar**	**87.49**	**307**	P	**P**	**03 11 29.7**	**+0.7**
	comp=Z,6.1nm,0.8s,baz=38,slow=7.3,SNR=5.6						
SDCO	**Great Sand Dun**	**87.88**	**47**	*e*P	**P**	**03 11 32.7**	**+1.7**
	comp=Z,4.4nm,1.1s						
CLL	**Collm**	**88.53**	**331**⇑	*i*P	**P**	**03 11 34.3**	**+0.9**
CLL	**Collm**	**88.53**	**331**⇑	*i*P	**P**	**03 11 34.3**	**+0.9**
CLL				*e*S	**S**	**03 22 20.0**	**+2.3**
ANMO	**Albuquerque**	**88.86**	**50**	P	**P**	**03 11 35.8**	**+0.2**
	comp=Z,0.3nm,0.3s,baz=294,slow=7.7,SNR=3.6						
GERES	**GERESS Array B**	**90.04**	**329**	P	**P**	**03 11 40.6**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=42,slow=4.5,SNR=2.8						
MNTX	**Cornudas Mount**	**91.47**	**52**	*e*P	**P**	**03 11 49.3**	**+1.6**
	comp=Z,3.0nm,0.9s						
BFO	**Black Forest**	**92.76**	**331**	*i* P	**P**	**03 11 53.0**	**-0.3**
N37A	**Lee Faris, Mou**	**92.78**	**40**	*e*P	**P**	**03 11 54.6**	**+1.1**
WMOK	**Wichita Mounta**	**94.01**	**46**	*e*P	**P**	**03 11 58.8**	**-0.5**
	comp=Z,3.5nm,0.9s						
WMOK	**Wichita Mounta**	**94.01**	**46**	*e*P	**P**	**03 11 58.8**	**-0.5**
WMOK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
TX31	**Lajitas Ar. Si**	**94.06**	**53**	*e*P	**P**	**03 12 01.6**	**+1.8**
TXAR	**Lajitas Array**	**94.06**	**53**	P	**P**	**03 12 01.0**	**+1.3**
	comp=Z,3.3nm,1.0s,baz=298,slow=2.7,SNR=24						
TXAR	**Lajitas Array**	**94.06**	**53**	P	**P**	**03 12 01.0**	**+1.3**
ABTX	**Abilene, Hawle**	**94.79**	**49**	*e*P	**P**	**03 12 04.1**	**+1.2**
TSUM	**Tsumeb**	**129.33**	**268**	*e*PKPdf	**PKPdf**	**03 17 51.7**	**+1.6**
SAML	**Samuel**	**148.52**	**56**	*e*PKPbc	**PKPbc**	**03 18 28.3**	**-0.1**
SAML	**Samuel**	**148.52**	**56**	*e*PKP2	**PKPbc**	**03 18 28.3**	**-0.1**
LPAZ	**La Paz**	**148.95**	**73**	PKPbc	**PKPbc**	**03 18 30.7**	**+0.5**
	comp=Z,6.8nm,0.9s,baz=327,slow=3.2,SNR=23						
PLCA	**Paso Flores**	**150.54**	**122**	PKPbc	**PKPbc**	**03 18 33.3**	**+0.6**
	comp=Z,3.0nm,1.0s,baz=296,slow=2.6,SNR=4.0						
LCO	**Las Campanas**	**150.86**	**98**	*e*PKPbc	**PKPbc**	**03 18 34.9**	**+0.8**
LCO	**Las Campanas**	**150.86**	**98**	*e*PKIKP	**PKPbc**	**03 18 34.9**	**+0.8**

NIED **21** *03:01:00, 37°.70N×142°.00E, h38^{km}, Mw4.8 Best double couple: M$_0$1.55000×10^{16} NP1:φ$_s$272.00000°, δ7.00000°, λ-99.00000°. NP2:φ$_s$101.00000°, δ83.00000°, λ-89.00000°.*

MOS **21** *03:01:17.1±1.0, 37°.85N×142°.08E, h38^{km}, mb5.1/109, Error ellipse: s-maj=7.5km s-min=4.9km az=91.2*

BJI **21** *03:01:18.2, 37°.59N×142°.05E, h50^{km}, mb5.0/54, mB4.9/37, Ms4.4/45, Ms7 4.2/44*

JMA **21** *03:01:18.9±0.1, 37°.76N×141°.93E, h37^{km}±2^{km}, M4.9*

JMA Felt III J1.

ISCJB **21** *03:01:19.4±0.3, 37°.76N±0°.02×141°.87E±0°.02, h51^{km}±2^{km}, mb4.9/326, MS4.3/27, Error ellipse: s-maj=3.6km s-min=2.6km az=152.9*

NEIC **21** *03:01:20.9±0.4, 37°.79N×141°.83E, h48^{km}±3^{km}, mb4.9/227, Error ellipse: s-maj=3.1km s-min=2.2km az=138.0*

NEIC Felt at Fukushima, Ishinomaki, Iwaki, Mito, Sendai, Sukagawa and Tsukuba. Recorded [3 JMA] in Fukushima and Miyagi.

IDC **21** *03:01:21.4±1.4, 37°.79N×141°.88E, h56^{km}±12^{km}, mb4.6/43, mb1 4.7/48, mb1mx4.6/64, mbtmp4.8/48, MS4.0/12, Ms1 4.0/12, ms1mx3.7/33, Error ellipse: s-maj=10.0km s-min=8.9km az=72.0*

ISC 21 03:01:19.7±0.4**, 37°.77N**±0°.03×**142°.02E**±0°.03**, h44**^{km}±3^{km}**, h44**^{km}**:pP-P, n888,** σ1^s**30**/957**, mb4.9**/331**, MS4.4**/28**, 30C-41D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIO	**Ouri**	**0.86**	**322**	P	**Pn**	**03 01 34.3**	**-1.1**
JIO				S	**Sn**	**03 01 45.1**	**-1.7**
JMM	**Marumori**	**0.98**	**276**	P	**Pn**	**03 01 35.5**	**-1.4**
JMM				S	**Sn**	**03 01 46.9**	**-2.7**
JFK	**Kawauchi**	**1.00**	**246**	P	**Pn**	**03 01 35.5**	**-1.8**
JFK				S	**Sn**	**03 01 47.4**	**-2.8**
ONAJ	**Iwakimizuishiy**	**1.18**	**236**	P	**Pn**	**03 01 38.1**	**-1.7**
ONAJ				S	**Sn**	**03 01 52.4**	**-2.3**
JOU	**Okura**	**1.22**	**299**	P	**Pn**	**03 01 39.6**	**-0.7**
JOU				S	**Sn**	**03 01 54.6**	**-1.1**
JMK	**Ichinoseki**	**1.33**	**332**	P	**Pn**	**03 01 41.3**	**-0.5**
JMK				*e*S	**Sn**	**03 01 58.4**	**0.0**
JFT	**Otama**	**1.36**	**260**	P	**Pn**	**03 01 41.7**	**-0.5**
JFT				S	**Sn**	**03 01 57.9**	**-1.2**
JYS	**Shirataka**	**1.61**	**287**	P	**Pn**	**03 01 45.1**	**-0.5**
JYK	**Kaneyama**	**1.74**	**312**	P	**Pn**	**03 01 46.9**	**-0.4**
JOM	**Ohasama**	**1.79**	**342**	P	**Pn**	**03 01 48.1**	**0.0**
JOM				S	**Sn**	**03 02 10.8**	**+1.2**
JFY	**Yanaizu**	**1.88**	**259**	P	**Pn**	**03 01 48.8**	**-0.5**
JRG	**Rokugo**	**1.95**	**327**	P	**Pn**	**03 01 50.6**	**+0.3**
JYA	**Atsumi**	**1.99**	**295**	P	**Pn**	**03 01 50.6**	**-0.3**
MJAR	**Matsushiro Arr**	**3.28**	**249**	P	**Pn**	**03 02 09.5**	**+0.9**
	71nm,0.3s,baz=77,slow=18,SNR=98						
MJAR				S	**Sn**	**03 02 51.6**	**+5.2**
	88nm,0.3s,baz=58,slow=22,SNR=7.2						
MJAR				LR	LR	03 03 41.7	
	comp=Z,2µm,20.6s,baz=70,slow=44						
MAJO	**Matsushiro**	**3.28**	**249**	*e*Pn	**Pn**	**03 02 09.0**	**+0.4**
MAJO	**Matsushiro**	**3.28**	**249**	*e*P	**Pn**	**03 02 09.0**	**+0.4**
MAT	**Matsushiro**	**3.28**	**249**	P	**Pn**	**03 02 09.2**	**+0.6**
MAT				S	**Sn**	**03 02 50.4**	**+4.0**
MJB9	**Matsu-Tunnel**	**3.29**	**249**	*e*Pn	**Pn**	**03 02 08.9**	**+0.2**
ERM	**Erimo**	**4.33**	**11**	*e*Pn	**Pn**	**03 02 22.0**	**-0.9**
ERM				*e*Sn	**Sn**	**03 03 11.6**	**-0.4**
ERM	**Erimo**	**4.33**	**11**	*e*P	**Pn**	**03 02 22.0**	**-0.9**
ERM				*e*		03 03 11.6	
INU	**Inuyama**	**4.70**	**241**	*e*Pn	**Pn**	**03 02 27.9**	**-0.1**
JHJ2	**Mitsune**	**4.99**	**202**	*e*Pn	**Pn**	**03 02 30.5**	**-1.5**
JHJ	**Hachijo jima 2**	**4.99**	**202**	P	**Pn**	**03 02 30.5**	**-1.5**
	298nm,0.3s,baz=310,slow=12,SNR=35						
JHJ				S	**Sn**	**03 03 25.8**	**-2.6**
	526nm,0.3s,baz=74,slow=22,SNR=7.8						
ASAJ	**Asahikawa**	**6.35**	**4**	P	**Pn**	**03 02 49.9**	**-0.7**
	3.5nm,0.3s,baz=284,slow=11,SNR=3.8						
ASAJ				S	**Sn**	**03 04 00.8**	**-1.0**
	9.5nm,0.3s,baz=337,slow=28,SNR=2.1						
GLVR	**Golovnino**	**6.52**	**23**	*e*P	**Pn**	**03 02 51.1**	**-1.9**
GLVR				*i* S	**Sn**	**03 04 01.4**	**-4.7**
GLVR				pmax	pmax		
	comp=Z,729nm,0.7s						
GLVR				pmax	pmax		
	comp=N,365nm,0.3s						
GLVR				pmax	pmax		
	comp=E,582nm,0.3s						
GRPR	**Tuman**	**6.83**	**23***d*	*i*P	**Pn**	**03 02 54.6**	**-2.6**
GRPR				*e*S	**Sn**	**03 04 07.6**	**-6.1**
GRPR				pmax	pmax		
	comp=Z,494nm,0.3s						
GRPR				pmax	pmax		
	comp=N,234nm,0.4s						
GRPR				pmax	pmax		
	comp=E,247nm,0.2s						
LAGR	**Lagunnoye**	**6.89**	**23**	*e*P	**Pn**	**03 02 56.2**	**-1.9**
LAGR				*e*S	**Sn**	**03 04 10.5**	**-4.6**
LAGR				pmax	pmax		
	comp=N,611nm,0.4s						
LAGR				pmax	pmax		
	comp=E,850nm,0.4s						
LAGR				pmax	pmax		
	comp=Z,852nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**6.90**	**24***d*	*i*P	**Pn**	**03 02 56.3**	**-1.8**
YUK				*i* S	**Sn**	**03 04 10.7**	**-4.6**
YUK				pmax	pmax		
	comp=Z,506nm,0.4s						
YUK				pmax	pmax		
	comp=N,218nm,0.3s						
YUK				pmax	pmax		
	comp=E,189nm,0.5s						
YUK				MLR	MLR		
	comp=Z,605nm,16.0s						
YUK				MLR	MLR		
	comp=E,355nm,16.0s						
SHO	**Shikotan**	**7.10**	**29***c*	*i*P	**Pn**	**03 02 58.0**	**-2.9**
SHO				*e*S	**Sn**	**03 04 13.8**	**-6.4**
SHO				pmax	pmax		
	comp=Z,117nm,0.5s						
SHO				pmax	pmax		
	comp=N,58nm,0.2s						
SHO				pmax	pmax		
	comp=E,83nm,0.4s						
SHO				MLR	MLR		
	comp=Z,782nm,13.0s						
SHO				MLR	MLR		
	comp=N,868nm,14.0s						
TEY	**Ternei**	**8.32**	**332**⇓	*e*P	Pn	03 03 23.1	+5.5
TEY				pmax	pmax		
	comp=Z,360nm,1.0s						
KUR	**Kuril'sk**	**8.65**	**29***d*	*i*P	**Pn**	**03 03 20.7**	**-1.4**
KUR				*i* S	**Sn**	**03 04 52.7**	**-5.5**
KUR				pmax	pmax		
	comp=Z,167nm,0.6s						
KUR				pmax	pmax		
	comp=N,74nm,0.5s						
KUR				pmax	pmax		
	comp=E,57nm,0.5s						
KUR				smax	smax		
	comp=E,441nm,0.4s						
KUR				smax	smax		
	comp=N,230nm,0.3s						
YSS	**Yuzh-Sakhalins**	**9.19**	**3**	*e*Pn	**Pn**	**03 03 28.9**	**-0.6**
YSS	**Yuzh-Sakhalins**	**9.19**	**3**⇑	*e*P	**Pn**	**03 03 29.6**	**+0.1**
YSS				*e*S	**Sn**	**03 05 10.2**	**-1.3**
YSS				pmax	pmax		
	comp=Z,100nm,0.5s						
YSS				pmax	pmax		
	comp=N,130nm,0.3s						
USRK	**Ussuriysk Ar.**	**9.93**	**313**	P	**Pn**	**03 03 41.0**	**+1.3**
USRK				LR	LR	03 07 16.2	
	comp=N,694nm,19.2s,baz=136,slow=36						
JNU	**Nakatsue**	**10.20**	**246**	P	**Pn**	**03 03 44.5**	**+0.9**
	comp=N,3.7nm,0.3s,baz=56,slow=3.5,SNR=29						
JNU	**Nakatsue**	**10.20**	**246**	*e*Pn	**Pn**	**03 03 44.9**	**+1.4**
CBIJ	**Chichi jima**	**10.65**	**179**	*e*Pn	**Pn**	**03 03 50.9**	**+1.3**
CBIJ				*e*Sn	**Sn**	**03 05 40.8**	**-6.6**
JCJ	**Chichijima**	**10.65**	**179**	P	**Pn**	**03 03 45.6**	**-4.0**
	comp=N,38nm,0.3s,baz=88,slow=21,SNR=11						
JCJ				S	Sn	03 05 38.2	-9.3
	comp=N,33nm,0.3s,baz=285,slow=21,SNR=5.8						
KSRS	**Korea Array**	**11.19**	**273**	P	**Pn**	**03 04 00.2**	**+3.3**
	comp=N,0.7nm,0.3s,baz=84,slow=14,SNR=8.1						
KS15	**Wonju Array Si**	**11.22**	**273**	*e*Pn	**Pn**	**03 03 56.7**	**-0.6**
KSAR	**Wonju Array Be**	**11.22**	**273**	P	**Pn**	**03 04 00.2**	**+2.8**
KSAR	**Wonju Array Be**	**11.22**	**273**	P	**Pn**	**03 04 00.2**	**+2.8**
MDJ	**Mudanjiang**	**11.59**	**310**	P	**Pn**	**03 04 05.4**	**+3.1**
MDJ				pmax	pmax		
	comp=N,170nm,0.9s						
MDJ				LR	LR		
	comp=N,510nm,16.5s						
MDJ				LR	LR		
	comp=N,1µm,18.8s						
MDJ				LR	LR		
	comp=N,980nm,18.2s						
MDJ	**Mudanjiang**	**11.59**	**310**	*e*Pn	**Pn**	**03 04 02.8**	**+0.5**
	comp=N,99nm,0.8s						
TYV	**Tymovskoe**	**13.10**	**2**	*e*P	**Pn**	**03 04 25.6**	**+2.7**
TYV				*e*S	**Sn**	**03 06 45.5**	**-1.5**
TYV				pmax	pmax		
	comp=Z,200nm,3.6s						
TYV				pmax	pmax		
	comp=Z,51nm,0.8s						
TYV				smax	smax		
	comp=E,11nm,1.4s						
KLR	**Kul'dur**	**13.65**	**330**	P	**Pn**	**03 04 29.4**	**-1.1**
	comp=E,0.1nm,0.3s,baz=152,slow=9.1,SNR=5.6						
KLR				LR	LR	03 09 47.3	
	comp=E,77nm,19.3s,baz=142,slow=37						
KLR	**Kul'dur**	**13.65**	**330**	*i* P	**Pn**	**03 04 29.7**	**-0.7**
CN2	**Changchun**	**13.92**	**301**	*e*P	**Pn**	**03 04 36.3**	**+2.2**
CN2				*e*sP	P	03 04 55.0	+14
CN2				*e*S	**Sn**	**03 07 08.4**	**+1.3**
CN2				pmax	pmax		
	comp=E,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=E,200nm,3.0s						
CN2				LR	LR		
	comp=E,860nm,16.0s						
CN2				LR	LR		
	comp=E,490nm,16.0s						
CN2				LR	LR		
	comp=E,570nm,18.0s						
JOW	**Kunigami**	**15.92**	**231**	P	**P**	**03 05 02.4**	**-1.2**
	comp=E,3.7nm,0.3s,baz=22,slow=14,SNR=6.4						
DL2	**Dalian**	**16.04**	**280**	P	**P**	**03 05 05.1**	**+0.2**
DL2				*e*S	**Sn**	**03 08 01.4**	**+2.6**
DL2				*e*sS	**S**	**03 08 13.3**	**+2.5**
DL2				pmax	pmax		
	comp=E,36nm,0.8s						
DL2				pmax	pmax		
	comp=E,200nm,3.7s						
DL2				LR	LR		
	comp=E,490nm,14.3s						
DL2				LR	LR		
	comp=E,540nm,20.6s						
DL2				LR	LR		
	comp=E,760nm,15.3s						
SKR	**Severo-Kuril's**	**16.35**	**33**	*i* P	**P**	**03 05 08.4**	**+0.2**
PEA0B	**Petropavlovsk-**	**18.81**	**30**	*e*P	**Pn**	**03 05 37.8**	**+1.6**
	comp=E,42nm,1.0s						
PETK	**Petropavlovsk-**	**18.81**	**30**	P	**Pn**	**03 05 35.9**	**-0.2**
PETK				LR	LR	03 12 29.5	
	comp=E,354nm,20.7s,baz=205,slow=35						
PETK	**Petropavlovsk-**	**18.81**	**30**	*e*P	**P**	**03 05 35.8**	**+0.5**
ZEA	**Zeya**	**18.94**	**332**	*e*P	**P**	**03 05 35.6**	**-1.1**
ZEA				pmax	pmax		
	comp=N,60nm,0.9s						
ZEA				pmax	pmax		
	comp=E,44nm,0.9s						
ZEA				pmax	pmax		
	comp=Z,72nm,0.8s						
ZEA				MLR	MLR		
	comp=E,500nm,16.0s						
PET	**Petropavlovsk**	**19.14**	**32**	*e*P	**Pn**	**03 05 41.6**	**+1.6**
PET				*e*S	**S**	**03 09 11.5**	**-1.8**
PET				pmax	pmax		
	comp=Z,200nm,11.5s						
PET				MLR	MLR		
	comp=Z,500nm,19.0s						
NJ2	**Nanjing**	**19.82**	**260**	*e*P	**P**	**03 05 46.3**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
NJ2				LR	LR		
	comp=Z,480nm,11.9s						
NJ2				LR	LR		
	comp=Z,550nm,13.0s						
NJ2				LR	LR		
	comp=Z,730nm,15.2s						
TIA	**Tai'an**	**19.93**	**273**	P	**P**	**03 05 46.4**	**-1.4**
TIA				LR	LR		
	comp=Z,520nm,12.8s						
TIA				LR	LR		
	comp=Z,590nm,14.0s						
TIA				LR	LR		
	comp=Z,590nm,13.6s						
BJI	**Beijing**	**20.22**	**284**	P	**P**	**03 05 49.1**	**-1.7**
BJI				pmax	pmax		
	comp=Z,11nm,0.6s						
BJI				LR	LR		
	comp=Z,910nm,15.6s						
BJI				LR	LR		
	comp=Z,1µm,18.5s						
BJI				LR	LR		
	comp=Z,890nm,20.8s						
YHNB	**Yeheng**	**21.90**	**239**	*e*P	**P**	**03 06 08.2**	**-0.9**
	comp=Z,22nm,0.7s						
MA2	**Magadan**	**22.53**	**12**	P	**P**	**03 06 14.8**	**-0.7**
	comp=Z,31nm,0.7s,baz=205,slow=8.7,SNR=12						
MA2				LR	LR	03 15 51.1	
	comp=Z,340nm,19.1s,baz=209,slow=39						
MA2	**Magadan**	**22.53**	**12**	*e*P	**P**	**03 06 15.4**	**-0.1**
	comp=Z,37nm,0.8s						
MA2	**Magadan**	**22.53**	**12**	*e*P	**P**	**03 06 15.8**	**+0.3**
MA2				pmax	pmax		
	comp=Z,39nm,0.9s						
YULB	**Yu-li**	**22.82**	**237**	*e*P	**P**	**03 06 18.7**	**-0.1**
	comp=Z,49nm,1.4s						
TPUB	**Ta-pu**	**23.32**	**238**	*e*P	**P**	**03 06 22.5**	**-1.4**
	comp=Z,47nm,0.6s						
TIY	**Taiyuan**	**23.36**	**279**	*e*P	**P**	**03 06 30.0**	**+5.8**
TIY				PP	PnPn	03 07 02.8	+11
TIY				S	**S**	**03 10 32.6**	**-1.3**
TIY				pmax	pmax		
	comp=Z,28nm,0.5s						
TIY				pmax	pmax		
	comp=Z,97nm,4.3s						
TIY				LR	LR		
	comp=N,140nm,8.1s						
TIY				LR	LR		
	comp=E,430nm,13.8s						
TIY				LR	LR		
	comp=Z,500nm,13.0s						
TWG	**Pinlang**	**23.36**	**236**	*e*P	**P**	**03 06 24.8**	**+0.5**
	comp=Z,326nm,1.4s						
HHC	**Hu-ho-hao-te**	**23.71**	**287**	*e*P	**P**	**03 06 27.8**	**+0.3**
HHC				pP	pP	03 06 40.1	+1.1
HHC				PP	**PnPn**	**03 07 01.3**	**+5.0**
HHC				S	**S**	**03 10 38.3**	**-1.2**
HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC				pmax	pmax		
	comp=Z,82nm,5.0s						
HHC				LR	LR		
	comp=Z,430nm,14.1s						
HHC				LR	LR		
	comp=Z,520nm,14.9s						
HHC				LR	LR		
	comp=Z,520nm,14.6s						
WHN	**Wuhan**	**23.95**	**261**	P	**P**	**03 06 28.0**	**-1.7**
WHN				S	**S**	**03 10 33.4**	**-10**
WHN				LR	LR		
	comp=Z,510nm,4.5s						
WHN				LR	LR		
	comp=Z,700nm,10.7s						
WHN				LR	LR		
	comp=Z,810nm,12.1s						
GUMO	**Guam**	**24.22**	**173**	P	**P**	**03 06 33.1**	**+0.9**
	comp=Z,12nm,0.5s,baz=189,slow=14,SNR=1.9						
GUMO	**Guam**	**24.22**	**173**	*e*P	**P**	**03 06 33.4**	**+1.1**
	comp=Z,126nm,1.1s						
GUMO	**Guam**	**24.22**	**173**	*e*P	**P**	**03 06 33.4**	**+1.1**
GUMO				pmax	pmax		
	comp=Z,126nm,1.1s						
CIT	**Chita**	**24.49**	**315**	*e*P	**P**	**03 06 34.2**	**-0.4**
CIT				*e*		03 06 43.8	
CIT				*e*		03 06 50.2	
CIT				*e*		03 07 04.8	
CIT				pmax	pmax		
	comp=Z,225nm,1.0s						
YAK	**Yakutsk**	**25.46**	**346**	P	**P**	**03 06 43.0**	**-0.1**
	comp=Z,14nm,0.4s,baz=210,slow=19,SNR=13						
YAK				LR	LR	03 17 00.6	
	comp=Z,656nm,19.1s,baz=100,slow=37						
YAK	**Yakutsk**	**25.46**	**346**	*e*P	**P**	**03 06 42.8**	**-0.3**
	comp=Z,180nm,0.6s						
YAK	**Yakutsk**	**25.46**	**346***d*	*i*P	**P**	**03 06 42.1**	**-1.0**
YAK				*e*		03 07 24.5	
YAK				*e*S	**S**	**03 11 08.0**	**+1.1**
YAK				pmax	pmax		
	comp=Z,144nm,0.9s						
YAK				pmax	pmax		
	comp=E,19nm,0.8s						
YAK				pmax	pmax		
	comp=N,20nm,0.6s						
YAK				pmax	pmax		
	comp=Z,34nm,0.8s						
YAK				pmax	pmax		
	comp=E,6.0nm,0.6s						
YAK				pmax	pmax		
	comp=N,10.0nm,0.6s						
YAK				smax	smax		
	comp=N,38nm,1.4s						
YAK				MLR	MLR		
	comp=N,998nm,18.0s						
YAK				MLR	MLR		
	comp=Z,672nm,17.0s						
SEY	**Seymchan**	**25.97**	**11**	P	**P**	**03 06 48.8**	**+1.0**
	comp=Z,42nm,0.9s,baz=196,slow=6.4,SNR=33						
XAN	**Xi'an**	**26.99**	**272**	P	**P**	**03 06 58.5**	**+1.2**
XAN				pP	pP	03 07 10.3	+1.2
XAN				sP	sP	03 07 15.8	+1.4
XAN				PP	**PnPn**	**03 07 46.4**	**+5.3**
XAN				S	**S**	**03 11 28.0**	**-3.7**
XAN				sS	sS	03 11 47.8	-3.7
XAN				SS	**SnSn**	**03 12 41.6**	**+1.3**
XAN				pmax	pmax		
	comp=Z,9.0nm,0.5s						
XAN				pmax	pmax		
	comp=Z,59nm,3.8s						
XAN				LR	LR		
	comp=Z,330nm,14.2s						
XAN				LR	LR		
	comp=Z,370nm,16.2s						
XAN				LR	LR		
	comp=Z,400nm,16.5s						
BOD	**Bodaibo**	**27.17**	**327**	*e*P	**P**	**03 06 58.0**	**-0.6**
BOD				pmax	pmax		
	comp=Z,37nm,0.8s						
ULN	**Ulaanbaatar**	**27.35**	**303**	*e*P	**P**	**03 07 00.4**	**-0.1**
	comp=Z,12nm,0.7s						
ULN	**Ulaanbaatar**	**27.35**	**303***d*	*i*P	**P**	**03 07 00.3**	**-0.3**
ULN				pmax	pmax		
	comp=Z,14nm,0.8s						
SONA1	**Songino Array**	**27.78**	**303**	*e*P	**P**	**03 07 04.0**	**-0.4**
SONM	**Songino Array**	**27.78**	**303**	P	**P**	**03 07 04.6**	**+0.1**
	comp=Z,29nm,0.7s,baz=100,slow=8.7,SNR=48						
SONM				PcP	**PcP**	**03 10 20.5**	**+0.6**
	comp=Z,1.5nm,0.7s,baz=120,slow=3.6,SNR=3.5						
ENH	**Enshi**	**27.88**	**264**	*e*P	**P**	**03 07 04.3**	**-1.0**
	comp=Z,29nm,0.6s						
H11N2	**WAKE ISLAND Hy**	**28.13**	**123**	T	T	03 36 32.1	
	baz=317						
H11N1	**WAKE ISLAND Hy**	**28.13**	**123**	T	T	03 36 43.7	
	baz=317						
H11N3	**WAKE ISLAND Hy**	**28.14**	**123**	T	T	03 36 33.5	
	baz=317						
H11S1	**WAKE ISLAND Hy**	**28.87**	**125**	T	T	03 37 33.4	
	baz=315						
H11S3	**WAKE ISLAND Hy**	**28.87**	**125**	T	T	03 37 33.4	
	baz=315						
H11S2	**WAKE ISLAND Hy**	**28.89**	**125**	T	T	03 37 33.4	
	baz=315						
ZAK	**Zakamensk**	**30.20**	**307**	*e*P	**P**	**03 07 25.1**	**-0.7**
ZAK				pmax	pmax		
	comp=Z,15nm,0.9s						
TLY	**Talaya**	**30.22**	**310**	*e*P	**P**	**03 07 25.7**	**-0.2**
	comp=Z,12nm,0.7s						
TLY	**Talaya**	**30.22**	**310**	*e*P	**P**	**03 07 26.0**	**+0.1**
TLY				pmax	pmax		
	comp=Z,13nm,0.9s						
LZH	**Lanzhou**	**30.43**	**279**	*e*P	**P**	**03 07 30.9**	**+2.9**
LZH				pP	sP	03 07 45.0	-0.1
LZH				pmax	pmax		
	comp=Z,20nm,1.2s						
GYA	**Guiyang**	**31.82**	**260**⇑	*i*P	**P**	**03 07 38.8**	**-1.6**
GYA				pP	sP	03 07 55.8	-1.7
GYA				PP	**PnPn**	**03 08 48.3**	**+2.4**
GYA				S	**S**	**03 12 46.0**	**-1.9**
GYA				sS	sS	03 13 11.3	+3.5
GYA				SS	**SnSn**	**03 14 39.8**	**+1.5**
GYA				pmax	pmax		
	comp=Z,30nm,0.7s						
GYA				pmax	pmax		

	comp=Z,120nm,5.2s						
GYA				LR	LR		
	comp=Z,510nm,17.0s						
GYA				LR	LR		
	comp=Z,530nm,17.2s						
GYA				LR	LR		
	comp=Z,500nm,17.4s						
CD2	**Chengdu**	**32.16**	**269**	P	**P**	**03 07 41.8**	**-1.4**
CD2				pP	pP	03 07 54.1	-1.0
CD2				sP	sP	03 07 59.8	-0.5
CD2				PP	**PP**	**03 08 54.6**	**-1.7**
CD2				S	**S**	**03 12 50.6**	**-2.4**
CD2				pmax	pmax		
	comp=Z,20nm,0.4s						
CD2				pmax	pmax		
	comp=Z,120nm,5.0s						
CD2				LR	LR		
	comp=Z,910nm,14.3s						
CD2				LR	LR		
	comp=Z,910nm,15.1s						
CD2				LR	LR		
	comp=Z,740nm,15.1s						
GTA	**Gaotai**	**32.81**	**286**	⇑P	**P**	**03 07 49.3**	**+0.3**
GTA				pP	sP	03 08 05.1	-1.0
GTA				sP	pP	03 08 11.8	+11
GTA				S	**S**	**03 12 59.0**	**-4.1**
GTA				ScP	**ScP**	**03 14 14.3**	**+0.8**
GTA				pmax	pmax		
	comp=Z,11nm,1.2s						
GTA				pmax	pmax		
	comp=Z,68nm,5.7s						
GTA				LR	LR		
	comp=Z,280nm,17.5s						
GTA				LR	LR		
	comp=Z,240nm,16.8s						
GTA				LR	LR		
	comp=Z,360nm,17.8s						
DAV	**Davao City (W)**	**34.01**	**210**	LR	LR	03 19 38.3	
	comp=Z,342nm,21.3s,baz=351,slow=32						
TIXI	**Tiksi**	**34.62**	**353**	P	**P**	**03 08 03.3**	**-0.7**
	comp=Z,13nm,0.6s,baz=141,slow=8.7,SNR=6.6						
TIXI	**Tiksi**	**34.62**	**353**	*e*P	**P**	**03 08 03.0**	**-1.0**
	comp=Z,14nm,0.6s						
KMI	**Kunming**	**35.55**	**261**	P	**P**	**03 08 13.5**	**+0.6**
KMI				pP	sP	03 08 28.8	-1.3
KMI				sP	pP	03 08 34.8	+10
KMI				PP	**PnPn**	**03 09 33.5**	**+0.6**
KMI				S	**S**	**03 13 43.0**	**-2.9**
KMI				sS	sS	03 14 07.8	+2.0
KMI				SS	**SnSn**	**03 16 02.0**	**-6.9**
KMI				pmax	pmax		
	comp=Z,13nm,0.5s						
KMI				pmax	pmax		
	comp=Z,100nm,4.6s						
KMI				LR	LR		
	comp=Z,210nm,14.0s						
KMI				LR	LR		
	comp=Z,300nm,14.1s						
KMI				LR	LR		
	comp=Z,340nm,17.3s						
MYLDM	**Lahad Datu**	**38.89**	**219**	*e*P	**P**	**03 08 40.4**	**-0.5**
	comp=Z,46nm,0.9s						
MANU	**Manus Island**	**39.92**	**172**	*e*P	**P**	**03 08 49.5**	**-0.1**
	comp=Z,202nm,1.9s						
DGZ	**Jazzator, Alta**	**40.36**	**305**	*i* P	**P**	**03 08 53.9**	**+0.8**
DGZ				pmax	pmax		
	comp=Z,50nm,0.9s						
WMQ	**Urumqi**	**40.94**	**296**	P	**P**	**03 08 58.6**	**+0.7**
WMQ				pP	pP	03 09 10.9	+0.9
WMQ				sP	sP	03 09 21.0	+5.8
WMQ				pmax	pmax		
	comp=Z,68nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,280nm,5.3s						
WMQ				LR	LR		
	comp=Z,900nm,26.1s						
WMQ				LR	LR		
	comp=Z,550nm,20.5s						
WMQ				LR	LR		
	comp=Z,710nm,20.5s						
MRSI	**Marisa**	**41.47**	**211**	P	**P**	**03 09 01.9**	**-0.4**
ZAA0	**Zalesovo Array**	**41.78**	**312**	*e*P	**P**	**03 09 04.4**	**-0.1**
	comp=Z,29nm,0.7s						
ZALV	**Zalesovo Beam**	**41.78**	**312**	P	**P**	**03 09 04.4**	**-0.1**
	comp=Z,24nm,0.5s,baz=90,slow=7.1,SNR=24						
ZALV				PcP	**PcP**	**03 11 00.2**	**+0.3**
	comp=Z,2.5nm,0.4s,baz=66,slow=2.6,SNR=3.0						
ZALV				ScP	**ScP**	**03 14 45.0**	**-1.6**
	comp=Z,0.5nm,0.3s,baz=76,slow=6.1,SNR=2.3						
ZALV	**Zalesovo Beam**	**41.78**	**312**	*e*P	**P**	**03 09 03.9**	**-0.6**
ZALV				PcP	**PcP**	**03 11 00.2**	**+0.3**
ZALV				ScP	**ScP**	**03 14 45.0**	**-1.6**
CHTO	**Chiang Mai**	**41.94**	**255**	*e*P	**P**	**03 09 06.3**	**+0.1**
	comp=Z,4.2nm,0.6s						
CHTO	**Chiang Mai**	**41.94**	**255**	*e*P	**P**	**03 09 06.3**	**+0.1**
CHTO				pmax	pmax		
	comp=Z,4.0nm,0.6s						
CMAR	**Chiang Mai Arr**	**42.15**	**255**	P	**P**	**03 09 07.5**	**-0.5**
	comp=Z,2.1nm,0.3s,baz=49,slow=6.6,SNR=5.0						
SANI	**Sanana**	**42.31**	**204**	P	**P**	**03 09 12.1**	**+2.9**
SRAK	**Srakaew**	**42.59**	**247**	P	P	03 09 17.3	+5.7
	comp=Z,53nm,0.7s						
LSA	**Lhasa**	**42.63**	**275**	*e*P	**P**	**03 09 12.2**	**0.0**
	comp=Z,8.2nm,0.5s						
LSA	**Lhasa**	**42.63**	**275**	*e*P	**P**	**03 09 12.3**	**0.0**
LSA				pmax	pmax		
	comp=Z,8.0nm,0.5s						
RDOG	**Red Dog Mine**	**42.63**	**27**	*e*P	**P**	**03 09 13.1**	**+1.8**
	comp=Z,23nm,0.9s						
NVS	**Novosibirsk**	**42.68**	**313**	*e*P	**P**	**03 09 11.8**	**0.0**
NVS				pmax	pmax		
	comp=N,2.0nm,0.5s						
NVS				pmax	pmax		
	comp=E,14nm,0.5s						
NVS				pmax	pmax		
	comp=Z,19nm,0.5s						
APSI	**Ampana**	**42.85**	**211**	P	**P**	**03 09 15.2**	**+1.6**
SHL	**Shillong**	**43.90**	**269**	*e*P	**P**	**03 09 18.5**	**-3.8**
MK01	**Makanchi Array**	**44.14**	**302**	*e*P	**P**	**03 09 24.9**	**+1.2**
MK31	**Makanchi Array**	**44.14**	**302**	*e*P	**P**	**03 09 23.4**	**-0.3**
MK31	**Makanchi Array**	**44.14**	**302**	*e*P	**P**	**03 09 23.5**	**-0.3**
MKAR	**Makanchi Array**	**44.14**	**302**	P	**P**	**03 09 23.4**	**-0.3**
	comp=Z,9.4nm,0.7s,baz=86,slow=10,SNR=22						
MKAR				ScP	**ScP**	**03 14 55.6**	**-0.7**
	comp=Z,0.6nm,0.8s,baz=72,slow=4.7,SNR=2.9						
MKAR				S	**S**	**03 15 51.6**	**-1.9**
	comp=Z,0.4nm,0.8s,baz=57,slow=4.5,SNR=3.0						
MKAR	**Makanchi Array**	**44.14**	**302**	*i* P	**P**	**03 09 23.3**	**-0.5**
MKAR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MAKZ	**Makanchi**	**44.35**	**302**	*e*P	**P**	**03 09 25.3**	**-0.1**
	comp=Z,9.5nm,0.6s						
MAKZ	**Makanchi**	**44.35**	**302**	*e*P	**P**	**03 09 25.3**	**-0.1**
MAKZ				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SBUM	**Sibu**	**44.53**	**225**	*e*P	**P**	**03 09 27.1**	**0.0**
	comp=Z,6.8nm,0.7s						
SVW2	**Sparrevohn**	**44.64**	**38**	*e*P	**P**	**03 09 29.5**	**+2.0**
	comp=Z,24nm,1.2s						
PHET	**Kaeng Krachan**	**45.08**	**248**	P	P	03 09 39.9	+8.4
KURK	**Kurchatov**	**45.86**	**308**	*e*P	**P**	**03 09 36.9**	**-0.4**
KURK				S	**S**	**03 16 16.6**	**-1.6**
KURK	**Kurchatov**	**45.86**	**308**	*d i*P	**P**	**03 09 36.7**	**-0.6**
KURK				pmax	pmax		
	comp=Z,51nm,0.7s						
OHAK	**Old Harbor**	**45.89**	**43**	*e*P	**P**	**03 09 36.9**	**-0.5**
KURBB	**Kurchatov Arra**	**45.93**	**308**	P	**P**	**03 09 37.5**	**-0.4**
	comp=Z,34nm,0.4s,baz=82,slow=8.2,SNR=134						
KURBB				S	**S**	**03 16 16.6**	**-2.6**
	comp=Z,0.8nm,1.0s,baz=86,slow=12,SNR=4.3						
RSO	**Redoubt South**	**46.02**	**39**	*e*P	**P**	**03 09 40.6**	**+1.9**
KDAK	**Kodiak Island**	**46.23**	**42**	*e*P	**P**	**03 09 41.0**	**+0.9**
	comp=Z,33nm,0.8s						
KDAK	**Kodiak Island**	**46.23**	**42**	*i* P	**P**	**03 09 40.4**	**+0.3**
PPLA	**Purkeypile**	**46.29**	**35**	*e*P	**P**	**03 09 43.1**	**+2.4**
	comp=Z,18nm,1.2s						
CAST	**Castle Rocks**	**46.34**	**35**	*e*P	**P**	**03 09 43.1**	**+2.2**
	comp=Z,16nm,1.1s						
KSM	**Kuching**	**46.41**	**227**	*e*P	**P**	**03 09 42.9**	**+0.9**
	comp=Z,17nm,0.8s						
SKT	**Skwentna**	**46.59**	**37**	*e*P	**P**	**03 09 44.2**	**+1.3**
	comp=Z,9.5nm,1.2s						
BPAW	**Bear Paw Mtn.**	**46.84**	**34**	*e*P	**P**	**03 09 46.7**	**+1.8**
	comp=Z,5.8nm,1.0s						
ODAN	**Odare**	**46.85**	**273**	*e*P	**P**	**03 09 46.9**	**+1.2**
	comp=Z,26nm,0.4s						
PDGK	**Podgornoye**	**46.86**	**297**	P	**P**	**03 09 45.0**	**-0.4**
PDGK				pmax	pmax		
	comp=Z,35nm,0.8s						
MLY	**Manley**	**46.97**	**32**	*e*P	**P**	**03 09 47.6**	**+1.8**
	comp=Z,21nm,1.0s						
SUA	**Susitna One**	**46.98**	**37**	*e*P	**P**	**03 09 48.6**	**+2.5**
	comp=Z,26nm,1.1s						
TRF	**Thorofare Moun**	**47.15**	**35**	*e*P	**P**	**03 09 48.7**	**+1.3**
	comp=Z,11nm,0.8s						
COLD	**Coldfoot**	**47.27**	**29**	*e*P	**P**	**03 09 49.9**	**+1.7**
	comp=Z,7.1nm,0.8s						
JIRN	**Jiri**	**47.43**	**275**	*e*P	**P**	**03 09 51.4**	**+1.0**
	comp=Z,27nm,0.4s						
RAMN	**Ramite**	**47.44**	**274**	*e*P	**P**	**03 09 50.1**	**-0.2**
	comp=Z,26nm,0.5s						
RC01	**Rabbit Creek A**	**47.48**	**38**	*e*P	**P**	**03 09 50.9**	**+1.0**
	comp=Z,16nm,1.0s						
GUN	**Gumba**	**47.57**	**275**	*e*P	**P**	**03 09 51.5**	**+0.1**
	comp=Z,45nm,0.4s						
TOLK	**Toolik Lake Re**	**47.59**	**27**	P	**P**	**03 09 51.7**	**+1.1**
	baz=266,SNR=8.2						
TOLK	**Toolik Lake Re**	**47.59**	**27**	*e*P	**P**	**03 09 52.6**	**+1.9**
	comp=Z,16nm,0.8s						
PMR	**Palmer**	**47.74**	**37**	*e*P	**P**	**03 09 51.7**	**-0.1**
	comp=Z,14nm,0.7s						
PMR	**Palmer**	**47.74**	**37**	*e*P	**P**	**03 09 51.7**	**-0.1**
PMR				pmax	pmax		
	comp=Z,14nm,0.7s						
MCK	**McKinley**	**47.75**	**34**	*e*P	**P**	**03 09 53.2**	**+1.2**
MCK	**McKinley**	**47.75**	**34**	*e*P	**P**	**03 09 53.2**	**+1.2**
PRZ	**Przheval'sk**	**47.86**	**297**	*e*P	**P**	**03 09 54.5**	**+1.2**
	comp=Z,25nm,0.9s						
MDM	**Murphy Dome**	**48.03**	**32**	*e*P	**P**	**03 09 55.6**	**+1.4**
	comp=Z,26nm,1.0s						
KKN	**Kakani**	**48.09**	**275**	*e*P	**P**	**03 09 55.4**	**+0.1**
	comp=Z,62nm,0.8s						
PKIN	**Phulchoki**	**48.10**	**275**	*e*P	**P**	**03 09 55.0**	**-0.4**
PKIN	**Phulchoki**	**48.10**	**275**	*e*P	**P**	**03 09 55.5**	**+0.1**
	comp=Z,40nm,0.7s						
WRH	**Wood River Hil**	**48.10**	**33**	*e*P	**P**	**03 09 55.8**	**+1.2**
	comp=Z,7.9nm,0.8s						
SML	**Sawmill**	**48.11**	**37**	*e*P	**P**	**03 09 55.7**	**+0.9**
	comp=Z,21nm,0.8s						
SML	**Sawmill**	**48.11**	**37**	*e*P	**P**	**03 09 55.7**	**+0.9**
SML				pmax	pmax		
	comp=Z,21nm,0.8s						
CCB	**Clear Creek Bu**	**48.22**	**33**	*e*P	**P**	**03 09 56.6**	**+1.1**
	comp=Z,10nm,1.4s						
DMN	**Daman**	**48.31**	**275**	*e*P	**P**	**03 09 57.0**	**-0.1**
	comp=Z,18nm,0.8s						
DHY	**Denali Highway**	**48.48**	**35**	*e*P	**P**	**03 09 58.8**	**+1.1**
	comp=Z,6.0nm,0.7s						
GKN	**Gorkha**	**48.50**	**276**	*e*P	**P**	**03 09 58.2**	**-0.2**
	comp=Z,41nm,0.8s						
SCM	**Sheep Creek Mo**	**48.59**	**37**	*e*P	**P**	**03 09 59.7**	**+1.2**
	comp=Z,22nm,0.8s						
ILAR	**Eielson Array**	**48.61**	**33**	P	**P**	**03 09 59.0**	**+0.5**
	comp=Z,9.7nm,0.8s,baz=260,slow=5.5,SNR=56						
ILB	**Eielson Array**	**48.61**	**33**	*e*P	**P**	**03 09 59.4**	**+0.8**
IL1	**Eielson Array**	**48.61**	**33**	*e*P	**P**	**03 09 58.7**	**+0.2**
GLI	**Glacier Island**	**48.78**	**38**	*e*P	**P**	**03 10 01.0**	**+1.1**
	comp=Z,21nm,1.2s						
DANN	**Dangsing**	**49.04**	**277**	*e*P	**P**	**03 10 03.0**	**+0.3**
	comp=Z,72nm,0.5s						
FYU	**Fort Yukon**	**49.23**	**30**	*e*P	**P**	**03 10 05.7**	**+2.6**
	comp=Z,31nm,1.2s						
KLU	**Klutina**	**49.29**	**37**	*e*P	**P**	**03 10 05.2**	**+1.3**
	comp=Z,16nm,0.8s						
PAX	**Paxson**	**49.35**	**35**	*e*P	**P**	**03 10 06.4**	**+2.1**
	comp=Z,5.1nm,0.8s						
PAX	**Paxson**	**49.35**	**35**	*e*P	**P**	**03 10 06.4**	**+2.1**
PAX				pmax	pmax		
	comp=Z,5.0nm,0.8s						
DIV	**Divide**	**49.40**	**37**	*e*P	**P**	**03 10 06.4**	**+1.8**
	comp=Z,29nm,1.0s						
KOLN	**Koldanda**	**49.43**	**276**	*e*P	**P**	**03 10 04.9**	**-0.6**
	comp=Z,13nm,0.5s						
EYAK	**Cordova Ski Ar**	**49.48**	**38**	*e*P	**P**	**03 10 07.1**	**+1.9**
	comp=Z,19nm,0.8s						
HARP	**HAARP**	**49.55**	**36**	*e*P	**P**	**03 10 07.9**	**+2.1**
	comp=Z,18nm,0.7s						
RIDG	**Independ'e Rid**	**49.57**	**34**	*e*P	**P**	**03 10 06.3**	**+0.3**
	comp=Z,6.3nm,0.7s						
TKM2	**Tokmak 2**	**49.71**	**298**	P	**P**	**03 10 08.1**	**+0.6**
	SNR=23						
PYUN	**Piuthan**	**49.76**	**277**	*e*P	**P**	**03 10 08.1**	**+0.1**
	comp=Z,46nm,0.7s						
SCRK	**Sand Creek**	**49.92**	**34**	*e*P	**P**	**03 10 09.2**	**+0.5**
	comp=Z,24nm,1.2s						
BMRM	**Bremner River**	**49.98**	**38**	*e*P	**P**	**03 10 10.9**	**+1.8**
	comp=Z,19nm,0.9s						
RAGM	**Ragged Mountai**	**50.02**	**38**	*e*P	**P**	**03 10 11.5**	**+2.1**
	comp=Z,20nm,0.9s						
KZA	**Kyzart**	**50.21**	**297**	P	**P**	**03 10 12.4**	**+0.9**
	SNR=8.9						
KBK	**Karagaybulak**	**50.24**	**298**	P	**P**	**03 10 11.8**	**+0.3**
	SNR=13						
USP	**Ospenovka**	**50.37**	**299**	P	**P**	**03 10 12.4**	**+0.1**
	SNR=6.4						
BVAR	**Borovoye Array**	**50.44**	**312**	P	**P**	**03 10 12.3**	**-0.3**
	comp=Z,9.5nm,0.5s,baz=71,slow=7.7,SNR=35						
BVAR				PcP	**PcP**	**03 11 31.0**	**+0.7**
	comp=Z,4.1nm,0.7s,baz=64,slow=6.7,SNR=2.9						
BRVK	**Borovoye**	**50.49**	**312**	*e*P	**P**	**03 10 12.9**	**-0.1**
	comp=Z,15nm,1.0s						
BRVK	**Borovoye**	**50.49**	**312**	*e*P	**P**	**03 10 13.0**	**0.0**
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KSH	**Kashi**	**50.55**	**294**	P	**P**	**03 10 17.8**	**+4.0**
KSH				sP	sP	03 10 40.4	+9.1
KSH				*e*PcP	**PcP**	**03 11 34.9**	**+3.7**
KSH				PcS	**PcS**	**03 15 29.6**	**+1.0**
KSH				S	**S**	**03 17 26.6**	**+1.6**
KSH				SS	**SS**	**03 20 59.4**	**+0.3**
KSH				pmax	pmax		
	comp=Z,12nm,0.9s						
KSH				pmax	pmax		
	comp=Z,88nm,4.3s						
AAK	**Ala-Archa**	**50.57**	**298**	*e*P	**P**	**03 10 14.1**	**+0.2**
	comp=Z,8.3nm,0.8s						
AAK	**Ala-Archa**	**50.57**	**298**	*e*P	**P**	**03 10 14.1**	**+0.2**
AAK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
EGAK	**Eagle**	**51.06**	**32**	*e*P	**P**	**03 10 17.0**	**-0.1**
	comp=Z,8.1nm,0.8s						
EKS2	**Erkin-Say**	**51.06**	**298**	P	**P**	**03 10 17.1**	**-0.5**
	SNR=9.1						
AML	**Almayashu**	**51.29**	**298**	P	**P**	**03 10 20.2**	**+0.5**
	SNR=15						
MTN	**Manton Dam**	**51.38**	**194**	*e*P	**P**	**03 10 20.4**	**+0.4**
	comp=Z,36nm,0.8s						
COEN	**Coen**	**51.47**	**179**	*e*P	**P**	**03 10 21.7**	**+1.0**
	comp=Z,32nm,0.9s						
MNAS	**Manas**	**52.01**	**298**	P	**P**	**03 10 25.2**	**+0.5**
MNAS				pmax	pmax		
	comp=Z,20nm,1.1s						
SFK	**Sufi-Kurgan**	**52.16**	**295**	P	**P**	**03 10 26.6**	**+0.6**
SFK				pmax	pmax		
	comp=Z,18nm,1.0s						
KK31	**Karatay Array**	**53.17**	**300**	*e*P	**P**	**03 10 33.1**	**-0.1**
KK31	**Karatay Array**	**53.17**	**300**	*e*P	**P**	**03 10 33.1**	**-0.1**
INK	**Inuvik**	**53.51**	**27**	*e*P	**P**	**03 10 36.5**	**+1.3**
	comp=Z,20nm,1.2s						
INK	**Inuvik**	**53.51**	**27**	*e*P	**P**	**03 10 36.5**	**+1.3**
INK				pmax	pmax		
	comp=Z,21nm,1.2s						
PWJI	**Pagerwojo**	**53.59**	**218**	P	**P**	**03 10 37.2**	**+0.8**
WHY	**Whitehorse**	**54.71**	**37**	*e*P	**P**	**03 10 46.5**	**+2.3**
	comp=Z,15nm,1.2s						
NIL	**Nilore**	**54.84**	**288**	*e*P	**P**	**03 10 45.6**	**+0.1**
	comp=Z,27nm,0.6s						
NIL	**Nilore**	**54.84**	**288**	*e*P	**P**	**03 10 45.6**	**+0.1**
NIL				pmax	pmax		
	comp=Z,27nm,0.6s						
SVE	**Sverdlovsk**	**54.91**	**318**	*c i*P	**P**	**03 10 45.8**	**+0.2**
SVE				pmax	pmax		
	comp=Z,61nm,0.8s						
SVE				MLR	MLR		
	comp=Z,292nm,17.0s						
BESE	**Bessie Mountai**	**55.30**	**39**	*e*P	**P**	**03 10 50.7**	**+2.3**
	comp=Z,19nm,1.2s						
JIS	**Juneau Island**	**55.63**	**40**	*e*P	**P**	**03 10 53.2**	**+2.5**
	comp=Z,16nm,1.2s						
DZET	**Dzherino**	**55.96**	**296**	P	**P**	**03 10 53.8**	**+0.2**
DZET				pmax	pmax		
	comp=Z,16nm,0.6s						
ARU	**Arti**	**56.13**	**318**	*e*P	**P**	**03 10 54.2**	**-0.1**
ARU	**Arti**	**56.13**	**318**	*d i*P	**P**	**03 10 54.0**	**-0.3**
ARU				*PP	**pP**	**03 11 06.3**	**-0.6**
ARU						03 11 51.0	
ARU						03 12 55.2	
ARU				PPP	PPP	03 14 21.9	
ARU				S	**S**	**03 18 41.9**	**+1.9**
ARU				SS	**SS**	**03 22 22.2**	**-4.0**
ARU				pmax	pmax		
	comp=Z,46nm,0.7s						
ARU				MLR	MLR		
	comp=Z,313nm,21.0s						
KBL	**Kabul**	**57.60**	**291**	*e*P	**P**	**03 11 05.5**	**+0.1**
	comp=Z,16nm,1.0s						
KBL	**Kabul**	**57.60**	**291**	*e*P	**P**	**03 11 05.5**	**+0.1**
KBL				pmax	pmax		
	comp=Z,17nm,1.0s						
FITZ	**Fitzroy Crossi**	**57.67**	**199**	*e*P	**P**	**03 11 06.5**	**+0.9**
	comp=Z,45nm,1.3s						
CTA	**Charters Tower**	**57.69**	**175**	P	**P**	**03 11 05.7**	**0.0**
	comp=Z,3.1nm,0.5s,baz=345,slow=8.3,SNR=5.9						
CTAO	**Charters Tower**	**57.69**	**175**	*e*P	**P**	**03 11 06.4**	**+0.7**
CTAO	**Charters Tower**	**57.69**	**175**	*e*P	**P**	**03 11 06.4**	**+0.7**
DLBC	**Dease Lake**	**57.75**	**38**	*e*P	**P**	**03 11 08.3**	**+2.4**
	comp=Z,10nm,0.9s						
AB31	**Akbulak array**	**57.83**	**310**	P	**P**	**03 11 05.6**	**-0.9**
AB31				pmax	pmax		
	comp=Z,17nm,0.6s						
ABKAR	**Akbulak array**	**57.83**	**310**	*e*P	**P**	**03 11 05.9**	**-0.6**
WRAB	**Tennant Creek**	**57.85**	**189**	*e*P	**P**	**03 11 06.5**	**-0.3**
	comp=Z,33nm,0.6s						
WB2	**Warramunga Arr**	**57.86**	**189**	*e*P	**P**	**03 11 06.6**	**-0.3**
	comp=Z,46nm,0.6s						
WRA	**Warramunga Arr**	**57.86**	**189**	P	**P**	**03 11 06.5**	**-0.4**
	comp=Z,48nm,0.5s,baz=5.8,slow=7.1,SNR=177						
AKTO	**Aktyubinsk**	**58.54**	**312**	P	**P**	**03 11 11.4**	**-0.1**
	comp=Z,15nm,0.8s,baz=69,slow=8.1,SNR=17						
SPITS	**Spitsbergen Ar**	**59.89**	**349**	P	**P**	**03 11 20.6**	**+0.2**
	comp=Z,3.9nm,0.5s,baz=19,slow=8.8,SNR=9.9						
PRGR	**Permogore**	**60.41**	**327**	*e*P	**P**	**03 11 23.4**	**-0.7**
PRGR				*e**PP	**pP**	**03 11 35.3**	**-1.5**
PRGR				pmax	pmax		
	comp=Z,19nm,0.9s						
AS01	**Alice Springs**	**61.58**	**188**	*e*P	**P**	**03 11 32.2**	**-0.2**
AS31	**Alice Springs**	**61.59**	**188**	*e*P	**P**	**03 11 32.4**	**-0.1**
	comp=Z,5.8nm,0.9s						
ASAR	**Alice Springs**	**61.59**	**188**	P	**P**	**03 11 32.4**	**-0.1**
	comp=Z,17nm,0.7s,baz=10,slow=6.4,SNR=80						
RES	**Resolute Bay**	**61.77**	**15**	*e*P	**P**	**03 11 32.9**	**-0.2**
	comp=Z,16nm,0.5s						
RES	**Resolute Bay**	**61.77**	**15**	*e*P	**P**	**03 11 32.9**	**-0.2**
RES				pmax	pmax		
	comp=Z,16nm,0.5s						
MBWA	**Marble Bar**	**62.26**	**204**	*e*P	**P**	**03 11 36.4**	**-0.6**
YKW3	**Yellowknife Ar**	**62.89**	**30**	*e*P	**P**	**03 11 41.1**	**+0.3**
	comp=Z,6.4nm,0.7s						
YKA	**Yellowknife Ar**	**62.93**	**30**	P	**P**	**03 11 41.5**	**+0.5**
	comp=Z,5.8nm,0.7s,baz=302,slow=6.4,SNR=39						
KLMR	**Klimovskoe**	**63.39**	**328**	*e*P	**P**	**03 11 42.2**	**-1.9**
KLMR				*e*		03 14 01.0	
KLMR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KLMR	**Klimovskoe**	**63.39**	**328**	*e*P	**P**	**03 11 42.3**	**-1.9**
KLMR				AMP		03 11 43.8	
	comp=Z,10.0nm,0.8s						
KLMR				*e*PP	**PP**	**03 14 01.1**	**-2.3**
ARCES	**ARCESS Array B**	**63.48**	**339**	P	**P**	**03 11 44.8**	**+0.1**
	comp=Z,6.8nm,0.7s,baz=54,slow=7.4,SNR=18						
DZM	**Mont Dzumac**	**63.81**	**155**	P	**P**	**03 11 48.3**	**+0.9**
	comp=Z,14nm,1.1s,baz=82,slow=8.9,SNR=4.4						
DZM				LR	LR	03 37 10.7	
	comp=Z,192nm,20.9s,baz=22,slow=34						
GEYT	**Alibeck**	**63.90**	**299**	P	**P**	**03 11 47.5**	**-0.5**
	comp=Z,3.0nm,0.3s,baz=223,slow=55,SNR=3.8						
DAG	**Danmarks Havn**	**65.08**	**355**	⇓*i*P	**P**	**03 11 54.7**	**-0.3**
	comp=Z,21nm,1.0s						
DAG	**Danmarks Havn**	**65.08**	**355**	P	**P**	**03 11 54.9**	**-0.1**
DAG				pmax	pmax		
	comp=Z,27nm,0.8s						
LLLB	**Lillooet**	**65.39**	**44**	*e*P	**P**	**03 11 58.9**	**+1.4**
	comp=Z,14nm,1.1s						
B05A	**Bryant**	**66.45**	**46**	P	**P**	**03 12 04.8**	**+0.6**
	baz=301						
MOS	**Moscow**	**66.94**	**323**	*e*P	**P**	**03 12 06.4**	**-0.9**
MOS				pmax	pmax		
	comp=Z,46nm,0.9s						
VRH	**Novokhopyorsk**	**67.36**	**318**	*e*P	**P**	**03 12 08.6**	**-1.3**
VRH				pmax	pmax		
	comp=Z,20nm,0.9s						
OBN	**Obninsk**	**67.79**	**323**	*e*P	**P**	**03 12 11.0**	**-1.6**
OBN				*e*		03 12 40.1	
OBN				*e*		03 14 43.1	
OBN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
LPSR	**Galich'ya Gora**	**68.04**	**320**	*e*P	**P**	**03 12 13.2**	**-1.1**
LPSR				pmax	pmax		
	comp=Z,20nm,1.1s						
I03D	**Drain, OR**	**68.07**	**51**	P	**P**	**03 12 15.6**	**+1.0**
	baz=302						
H04A	**Detroit Lake**	**68.26**	**50**	*e*P	**P**	**03 12 17.7**	**+1.9**
	comp=Z,20nm,1.1s						
FIA1	**FINESS Array S**	**68.38**	**332**	*e*P	**P**	**03 12 16.0**	**-0.3**
FINES	**FINESS Array B**	**68.39**	**332**	P	**P**	**03 12 16.0**	**-0.2**
	comp=Z,15nm,0.7s,baz=47,slow=6.9,SNR=39						
FINES	**FINESS Array B**	**68.39**	**332**	P	**P**	**03 12 16.0**	**-0.2**
FINES				pmax	pmax		
	comp=Z,15nm,0.7s						
I04A	**Tendick Farm,**	**68.59**	**51**	P	**P**	**03 12 18.9**	**+0.9**
	baz=302						
VSR	**Storozhevoye**	**68.69**	**319**	*e*P	**P**	**03 12 17.2**	**-1.2**
VSR				pmax	pmax		
	comp=Z,20nm,0.9s						
L02D	**Cave Junction,**	**68.72**	**53**	P	**P**	**03 12 19.6**	**+0.9**
	baz=302						
VORD	**Divnogorie**	**68.77**	**319**	*e*P	**P**	**03 12 17.1**	**-1.7**
VORD				pmax	pmax		
	comp=Z,10.0nm,0.5s						
I05D	**Terrebonne, OR**	**68.96**	**50**	P	**P**	**03 12 20.7**	**+0.5**
	baz=303						
AKT	**Akhty**	**69.03**	**307**	⇓*e*P	**P**	**03 12 20.1**	**-0.7**
AKT				*e*		03 12 44.3	
AKT				pmax	pmax		
	comp=Z,14nm,0.6s						
J04D	**Umpqua Nationa**	**69.08**	**51**	P	**P**	**03 12 21.7**	**+0.6**
	baz=303						
STKA	**Stephens Creek**	**69.29**	**180**	P	**P**	**03 12 22.3**	**+0.2**
	comp=Z,4.9nm,0.7s,baz=4.6,slow=7.1,SNR=11						
STKA	**Stephens Creek**	**69.29**	**180**	*e*P	**P**	**03 12 22.7**	**+0.6**
	comp=Z,1.8nm,0.8s						
STKA	**Stephens Creek**	**69.29**	**180**	*e*P	**P**	**03 12 22.7**	**+0.6**
STKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
FORT	**Forrest**	**69.44**	**193**	*e*P	**P**	**03 12 23.5**	**+0.5**
	comp=Z,45nm,0.7s						
PINE	**Pine Mountain**	**69.49**	**50**	*e*P	**P**	**03 12 25.8**	**+2.1**
	comp=Z,21nm,0.9s						
YBH	**Yreka Blue Hor**	**69.51**	**53**	P	**P**	**03 12 25.1**	**+1.4**
	comp=Z,3.1nm,0.8s,baz=308,slow=5.8,SNR=9.6						
YBH	**Yreka Blue Hor**	**69.51**	**53**	*e*P	**P**	**03 12 25.6**	**+1.9**
	comp=Z,4.8nm,0.9s						
YBH	**Yreka Blue Hor**	**69.51**	**53**	*e*P	**P**	**03 12 25.6**	**+1.9**
YBH				pmax	pmax		
	comp=Z,5.0nm,0.9s						
J05D	**Fort Rock, OR**	**69.59**	**51**	P	**P**	**03 12 24.7**	**+0.5**
	baz=303						
M02C	**Callahan**	**69.60**	**53**	P	**P**	**03 12 25.3**	**+1.0**
	baz=303						
N02D	**Trinity Center**	**69.92**	**53**	P	**P**	**03 12 27.4**	**+1.1**
	baz=303						
SUMG	**Summit**	**69.95**	**0**	*e*P	**P**	**03 12 27.0**	**+0.8**
	comp=Z,28nm,0.9s						
SUMG	**Summit**	**69.95**	**0**	*i* P	**P**	**03 12 26.8**	**+0.5**
	comp=Z,27nm,0.9s						
SUMG				*e*		03 12 40.2	
SUMG	**Summit**	**69.95**	**0**	*e*P	**P**	**03 12 27.0**	**+0.8**
SUMG				pmax	pmax		
	comp=Z,28nm,0.9s						
M04C	**Macdoel**	**70.03**	**52**	P	**P**	**03 12 28.0**	**+1.1**
	baz=303						
K05A	**Summer Lake**	**70.10**	**51**	*e*P	**P**	**03 12 29.6**	**+2.1**
	comp=Z,24nm,1.0s						
WDC	**Whiskeytown Da**	**70.24**	**54**	*e*P	**P**	**03 12 29.9**	**+1.8**
	comp=Z,6.3nm,1.1s						
WDC	**Whiskeytown Da**	**70.24**	**54**	*e*P	**P**	**03 12 29.9**	**+1.8**
WDC				pmax	pmax		
	comp=Z,6.0nm,1.1s						
WALA	**Waterton Lakes**	**70.57**	**43**	*e*P	**P**	**03 12 31.3**	**+1.2**

	comp=Z,9.2nm,0.7s						
KBZ	Khabaz	70.79	311	P	P	03 12 31.8	+0.5
	comp=Z,10nm,0.8s,baz=44,slow=5.4,SNR=9.8						
KIV	Kislovodsk	70.79	311	eP	P	03 12 31.8	+0.3
	comp=Z,21nm,0.8s						
KIV	Kislovodsk	70.79	311	eP	P	03 12 31.4	-0.1
KIV				e		03 12 52.5	
KIV				e		03 15 07.0	
KIV				pmax	pmax		
	comp=Z,24nm,1.0s						
O03D	Paynes Creek	70.87	54	P	P	03 12 32.9	+0.8
	baz=304						
MOD	Modoc Plateau	70.92	52	eP	P	03 12 33.8	+1.4
	comp=Z,5.5nm,0.8s						
BMO	Blue Mountains	71.07	48	eP	P	03 12 34.6	+1.4
	comp=Z,8.3nm,1.1s						
BMO	Blue Mountains	71.07	48	eP	P	03 12 34.6	+1.4
BMO				pmax	pmax		
	comp=Z,8.0nm,1.1s						
JTMT	Jette	71.13	44	eP	P	03 12 35.3	+1.7
	comp=Z,12nm,0.8s						
J08A	Circle Bar Ran	71.23	49	eP	P	03 12 36.0	+1.8
	comp=Z,12nm,1.0s						
AKH	Akhalkalaki	71.73	308	⇓iP	P	03 12 35.8	-1.5
AKH	Akhalkalaki	71.73	308	eP	P	03 12 38.3	+1.0
	comp=Z,5.8nm,0.8s						
AKH	Akhalkalaki	71.73	308	eP	P	03 12 38.3	+1.0
AKH				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MSO	Missoula	71.85	45	P	P	03 12 38.6	+0.7
	baz=306						
MSO	Missoula	71.85	45	eP	P	03 12 39.1	+1.1
	comp=Z,4.4nm,0.9s						
BEKR	Beckworth	72.03	53	eP	P	03 12 40.6	+1.5
	comp=Z,8.7nm,0.9s						
IZAR	Zarasai	72.04	328	eP	P	03 12 39.0	+0.3
IZAR				IAmb	IAmb	03 12 39.6	
	comp=Z,8.0nm,0.6s						
IDID	Didziasalis	72.12	327	eP	P	03 12 39.5	+0.3
IDID				IAmb	IAmb	03 12 40.2	
	comp=Z,8.5nm,0.8s						
ISAL	Salakas	72.21	328	eP	P	03 12 40.1	+0.4
ISAL				IAmb	IAmb	03 12 40.8	
	comp=Z,10nm,0.6s						
IIGN	Ignalina	72.32	327	eP	P	03 12 40.7	+0.3
IIGN				IAmb	IAmb	03 12 41.4	
	comp=Z,9.5nm,0.6s						
NACGM	Naroch	72.37	327	e	P	03 12 40.0	-0.7
PAHR	Pah Rah Range	72.74	53	eP	P	03 12 45.0	+1.7
	comp=Z,10nm,1.1s						
MFID	Camas Ranch	72.77	48	eP	P	03 12 43.9	+0.4
	comp=Z,12nm,1.1s						
FFC	Flin Flon	72.82	33	eP	P	03 12 43.5	+0.1
	comp=Z,15nm,1.0s						
FFC	Flin Flon	72.82	33	eP	P	03 12 43.5	+0.1
FFC				pmax	pmax		
	comp=Z,15nm,1.0s						
CMB	Columbia Colle	73.05	55	eP	P	03 12 46.8	+1.7
	comp=Z,12nm,1.1s						
CMB	Columbia Colle	73.05	55	eP	P	03 12 46.8	+1.7
CMB				pmax	pmax		
	comp=Z,12nm,1.1s						
HRY	Holter Researc	73.09	44	eP	P	03 12 46.6	+1.3
YERR	Yerington	73.24	54	eP	P	03 12 48.2	+1.8
	comp=Z,10nm,1.0s						
LRM	Limekiln Ridge	73.28	45	eP	P	03 12 47.8	+1.2
ANN	Anapa	73.37	314	eP	P	03 12 44.2	-2.6
ANN				e*PP	pP	03 12 58.4	-1.3
ANN				eS	S	03 22 09.2	-3.1
ANN				pmax	pmax		
	comp=Z,33nm,1.2s						
EGMT	Eagleton	73.40	42	P	P	03 12 47.9	+0.9
	baz=308						
EGMT	Eagleton	73.40	42	eP	P	03 12 48.5	+1.4
DLMT	Dillon	73.48	45	eP	P	03 12 49.4	+1.8
	comp=Z,11nm,0.9s						
NC405	NORSAR Array S	73.48	337	eP	P	03 12 47.3	+0.1
NC303	NORSAR Array S	73.50	337	eP	P	03 12 47.6	+0.3
HFS	Hagfors	73.61	336	P	P	03 12 47.7	-0.3
	comp=Z,18nm,0.7s,baz=52,slow=5.8,SNR=54						
NC204	NORSAR Array S	73.64	338	eP	P	03 12 48.4	+0.2
NB201	NORSAR Array S	73.66	337	eP	P	03 12 48.4	+0.1
BMN	Battle Mountai	73.67	51	eP	P	03 12 50.9	+2.0
	comp=Z,7.5nm,0.9s						
NB2	NORSAR Subarra	73.69	337	P	P	03 12 48.1	-0.4
	comp=Z,10nm,0.6s,baz=37,slow=6.2						
NB2	NORSAR Subarra	73.69	337	P	P	03 12 48.1	-0.4
	baz=37,slow=6.2						
NOA	NORSAR Array B	73.69	337	P	P	03 12 48.4	-0.1
	comp=Z,12nm,0.7s,baz=38,slow=5.9,SNR=54						
NBO00	NORSAR Array S	73.83	338	eP	P	03 12 49.5	+0.3
NBO00				ePcP	pP	03 13 02.7	+0.4
BOZ	Bozeman (W)	73.88	45	P	P	03 12 50.7	+0.8
	baz=308						
BOZ	Bozeman (W)	73.88	45	eP	P	03 12 51.3	+1.3
	comp=Z,12nm,1.0s						
RYN	Ryan	73.91	54	eP	P	03 12 52.1	+1.8
	comp=Z,6.6nm,1.0s						
KVN	Kaiserville	73.93	53	eP	P	03 12 52.3	+1.8
	comp=Z,13nm,1.0s						
KVN	Kaiserville	73.93	53	eP	P	03 12 52.3	+1.8
KVN				pmax	pmax		
	comp=Z,13nm,1.0s						
NAO01	NORSAR Array S	73.94	337	eP	P	03 12 49.9	0.0
AKASG	Malin Array Be	74.01	322	P	P	03 12 50.0	-0.4
	comp=Z,11nm,0.5s,baz=46,slow=6.1,SNR=48						
AKASG	Malin Array Be	74.01	322	P	P	03 12 50.0	-0.4
AKASG				pmax	pmax		
	comp=Z,11nm,0.5s						
AKBB	Malin Array Si	74.01	322	eP	P	03 12 50.0	-0.4
	comp=Z,15nm,0.6s						
KIEV	Kiev	74.02	322	eP	P	03 12 49.3	-1.2
	comp=Z,15nm,0.7s						
KIEV	Kiev	74.02	322	i P	P	03 12 49.9	-0.6
KIEV				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NWAO	Narrogin (SRO)	74.03	202	P	P	03 12 50.4	-0.2
	comp=Z,4.6nm,0.7s,baz=272,slow=6.6,SNR=2.7						
AK11	Malin Array Si	74.05	322	eP	P	03 12 50.4	-0.3
MDPB	Devils Postpil	74.13	55	eP	P	03 12 53.5	+1.8
	comp=Z,5.0nm,0.9s						
NV01	Mina Array Sit	74.16	54	eP	P	03 12 53.1	+1.3
NVAR	Mina Array Bea	74.16	54	P	P	03 12 53.4	+1.5
	comp=Z,6.6nm,0.9s,baz=282,slow=5.8,SNR=20						
QLMT	Earthquake Lak	74.46	45	eP	P	03 12 55.3	+1.8
PAGB	Antelope Grade	74.46	57	eP	P	03 12 55.5	+2.1
	comp=Z,21nm,1.2s						
YHB	Horse Butte	74.64	45	eP	P	03 12 56.5	+1.9
	comp=Z,11nm,0.9s						
YMR	Madison River	74.82	45	eP	P	03 12 57.7	+2.2
	comp=Z,9.3nm,0.8s						
GCMT	Greycliff	74.84	43	eP	P	03 12 57.3	+1.7
YFT	Old Faithful	75.03	45	eP	P	03 13 00.5	+3.7
	comp=Z,12nm,0.9s						
SIM	Simferopol’	75.14	316	eP	P	03 12 56.5	-0.6
SIM				e		03 13 10.0	
SIM				pmax	pmax		
	comp=Z,14nm,0.8s						
YPP	Pitchstone Pla	75.16	45	eP	P	03 13 00.5	+2.9
	comp=Z,5.1nm,0.7s						
VES	Vestal, Richgr	75.17	56	P	P	03 12 58.1	+0.7
	baz=306						
H17A	Grant Village	75.21	45	eP	P	03 13 01.0	+3.1
	comp=Z,17nm,0.8s						
IMW	Indian Meadow	75.31	46	eP	P	03 13 00.5	+2.0
	comp=Z,13nm,0.9s						
FLWY	Flagg Ranch	75.33	45	eP	P	03 13 01.2	+2.6
	comp=Z,8.2nm,1.0s						
FXWY	Fox Creek	75.42	46	eP	P	03 13 01.1	+2.0
	comp=Z,8.9nm,0.9s						
CWC	Cottonwood Cre	75.47	55	P	P	03 12 60.0	+0.6
	baz=306						
RLMT	Red Lodge	75.48	44	P	P	03 13 00.2	+0.9
	baz=309						
RLMT	Red Lodge	75.48	44	eP	P	03 13 01.2	+1.8
	comp=Z,5.0nm,0.8s						
MOOW	Moose Ponds	75.51	46	eP	P	03 13 01.5	+1.9
	comp=Z,7.8nm,1.0s						
HVU	Hansel Valley	75.56	48	eP	P	03 13 01.8	+2.0
	comp=Z,13nm,1.2s						
TPAW	Teton Pass	75.56	46	eP	P	03 13 00.8	+0.9
	comp=Z,7.2nm,0.8s						
GRAC	Grapevine Rang	75.60	54	P	P	03 13 01.4	+1.4
	baz=307,SNR=10						
ISA	Isabella, Lake	75.67	56	P	P	03 13 00.9	+0.4
	baz=306						
ISA	Isabella, Lake	75.67	56	eP	P	03 13 01.1	+0.7
	comp=Z,9.6nm,1.3s						
ISA	Isabella, Lake	75.67	56	eP	P	03 13 01.1	+0.7
ISA				pmax	pmax		
	comp=Z,10.0nm,1.3s						
LOHW	Long Hollow	75.68	46	eP	P	03 13 02.6	+2.0
	comp=Z,3.7nm,0.8s						
SNOW	Snow King Moun	75.69	46	eP	P	03 13 02.8	+2.2
	comp=Z,9.9nm,0.9s						
REDW	Red Top Meadow	75.69	46	eP	P	03 13 02.6	+2.0
	comp=Z,8.8nm,1.0s						
R11A	Troy Canyon, C	75.93	52	P	P	03 13 03.1	+1.1
	baz=307,SNR=14						
R11A	Troy Canyon, C	75.93	52	eP	P	03 13 03.3	+1.3
	comp=Z,9.5nm,1.1s						
BGU	Big Grassy Mou	75.93	49	eP	P	03 13 03.5	+1.6
	comp=Z,3.3nm,0.9s						
SPUT	South Promonto	76.04	48	eP	P	03 13 04.4	+1.8
	comp=Z,5.2nm,1.1s						
MPMC	Manual Prospec	76.08	55	P	P	03 13 03.7	+0.8
	baz=307,SNR=9.3						
LAO	LASA Array	76.10	41	P	P	03 13 03.4	+0.7
	baz=311						
LAO	LASA Array	76.10	41	eP	P	03 13 04.1	+1.4
	comp=Z,21nm,1.0s						
SORM	Soroca	76.13	321	⇑iP	P	03 13 01.7	-1.0
SORM	Soroca	76.13	321	⇑P	P	03 13 01.7	-1.0
FURC	Furnace Creek,	76.24	55	P	P	03 13 04.3	+0.8
	baz=307,SNR=6.5						
LRMC	Laurel Mtn Rad	76.30	56	P	P	03 13 04.8	+0.7
	baz=307						
TPNV	Topopah Spring	76.35	54	P	P	03 13 05.5	+1.1
	baz=307,SNR=15						
TPNV	Topopah Spring	76.35	54	eP	P	03 13 05.7	+1.3
	comp=Z,14nm,1.0s						
TPNV	Topopah Spring	76.35	54	eP	P	03 13 05.7	+1.3
TPNV				pmax	pmax		
	comp=Z,14nm,1.0s						
HWUT	Hardware Ranch	76.38	48	eP	P	03 13 06.4	+1.9
	comp=Z,10nm,1.0s						
EDW2	Edwards Air Fo	76.45	56	P	P	03 13 05.5	+0.6
	baz=307,SNR=6.0						
DUG	Dugway, Tooele	76.51	49	P	P	03 13 06.2	+1.0
	baz=308						
DUG	Dugway, Tooele	76.51	49	eP	P	03 13 06.9	+1.7
	comp=Z,15nm,1.1s						
DUG	Dugway, Tooele	76.51	49	eP	P	03 13 06.9	+1.7
DUG				pmax	pmax		
	comp=Z,15nm,1.1s						
TCUT	Toone Canyon	76.77	48	eP	P	03 13 08.7	+1.9
	comp=Z,18nm,1.0s						
BW06	Boulder Array	76.81	46	P	P	03 13 07.4	+0.5
	baz=310						
BW06	Boulder Array	76.81	46	eP	P	03 13 07.9	+0.9
	comp=Z,10.0nm,1.1s						
PD31	Pinedale Array	76.81	46	eP	P	03 13 07.9	+0.9
PDAR	Pinedale Array	76.81	46	P	P	03 13 07.8	+0.9
	comp=Z,5.5nm,0.7s,baz=274,slow=1.3,SNR=35						
PDAR	Pinedale Array	76.81	46	eP	P	03 13 07.5	+0.6
CTU	Camp Tracy	76.83	49	eP	P	03 13 09.3	+2.2
	comp=Z,7.3nm,1.1s						
PSUT	Pine Spring	76.89	51	eP	P	03 13 09.2	+1.7
	comp=Z,6.9nm,0.9s						
GSC	Goldstone, Bar	76.98	55	P	P	03 13 08.3	+0.4
	baz=307						
GSC	Goldstone, Bar	76.98	55	eP	P	03 13 09.3	+1.4
	comp=Z,9.9nm,1.3s						
GSC	Goldstone, Bar	76.98	55	eP	P	03 13 09.3	+1.4
GSC				pmax	pmax		
	comp=Z,10.0nm,1.3s						
JLU	Jordanelle	77.07	48	eP	P	03 13 10.3	+1.8
	comp=Z,5.2nm,1.0s						
BEL	Belsk	77.09	327	eP	P	03 13 08.6	+0.5
BEL	Belsk	77.09	327	eP	P	03 13 08.6	+0.5
NLU	North Lily Min	77.10	49	eP	P	03 13 10.5	+1.8
	comp=Z,8.3nm,1.0s						
SHPR	Sheep Range	77.31	54	eP	P	03 13 11.8	+2.0
	comp=Z,8.9nm,1.0s						
MPU	Maple Canyon	77.33	49	eP	P	03 13 11.8	+1.9
	comp=Z,10nm,1.0s						
TUQ	Turquoise Moun	77.47	55	P	P	03 13 11.5	+0.8
	baz=308,SNR=8.8						
GKP	Gorka Klasztor	77.52	330	eP	P	03 13 10.6	+0.2
GKP	Gorka Klasztor	77.52	330	eP	P	03 13 10.6	+0.2
HEC	Hector,Ludlow	77.57	56	P	P	03 13 12.0	+0.8
	baz=308						
MURC	Murrieta	77.75	57	P	P	03 13 13.3	+1.1
	baz=307						
CCUT	Cedar City	77.81	52	eP	P	03 13 14.6	+2.0
	comp=Z,6.8nm,1.0s						
KWP	Kalwaria Pacla	77.81	325	eP	P	03 13 12.8	+0.6
KWP	Kalwaria Pacla	77.81	325	eP	P	03 13 12.8	+0.6
ILGA	Ilgaz	77.83	313	eP	P	03 13 14.1	+1.4
	comp=Z,24nm,0.6s						
TLCR		77.85	318	⇑iP	P	03 13 12.5	+0.1
TLCR		77.85	318	⇑P	P	03 13 12.5	+0.1
MSU	Marysvale	77.94	51	eP	P	03 13 15.3	+1.9
MSU	Marysvale	77.94	51	eP	P	03 13 15.3	+1.9
SZCU	Shurtz Canyon	77.95	52	eP	P	03 13 15.2	+1.7
	comp=Z,5.4nm,1.0s						
BUR08	Bucovina Ar. S	78.02	322	eP	P	03 13 13.8	+0.3
BUR04	Bucovina Ar. S	78.03	322	eP	P	03 13 13.1	-0.5
BURAR	Bucovina Array	78.03	322	⇑iP	P	03 13 13.7	+0.2
BURAR	Bucovina Array	78.03	322	⇑P	P	03 13 13.7	+0.2
TMUT	Trail Mountain	78.03	49	eP	P	03 13 15.8	+1.8
	comp=Z,12nm,1.5s						
GMRC	Granite Mounta	78.04	55	P	P	03 13 14.7	+0.8
	baz=308						
BIZ	Bicaz	78.06	321	⇓iP	P	03 13 13.6	0.0
TESR	Tescani	78.08	320	⇑iP	P	03 13 14.1	+0.4
CFR	Carcaliu	78.21	319	⇑iP	P	03 13 14.2	-0.2
CFR	Carcaliu	78.21	319	⇑P	P	03 13 14.2	-0.2
LCMT	Little Creek M	78.21	52	eP	P	03 13 16.6	+1.8
	comp=Z,9.1nm,0.9s						
MTPU	Mount Pierson	78.23	51	eP	P	03 13 17.3	+2.2
	comp=Z,9.8nm,0.9s						
PFO	Pinyon Flats O	78.23	57	P	P	03 13 15.4	+0.5
	baz=308						
BELC	Belle Mtn. Jos	78.30	56	P	P	03 13 15.6	+0.3
	baz=308						
PETR	Petresti	78.31	320	⇑iP	P	03 13 15.9	+0.9
P18A	Preston Nutter	78.40	49	eP	P	03 13 17.8	+1.8
	comp=Z,19nm,1.5s						
VRI	Vrincioaia	78.47	320	⇓iP	P	03 13 16.6	+0.7
VRI	Vrincioaia	78.47	320	⇓P	P	03 13 16.6	+0.7
PLOR	Plostina	78.53	320	⇓iP	P	03 13 16.9	+0.7
PLOR	Plostina	78.53	320	⇓P	P	03 13 16.9	+0.7
TIRR	Tirgusor	78.55	318	⇓iP	P	03 13 16.0	-0.3
TIRR	Tirgusor	78.55	318	⇓P	P	03 13 16.0	-0.3
SRU	San Rafael Swe	78.56	49	eP	P	03 13 18.2	+1.4
	comp=Z,18nm,1.1s						
K22A	Casper	78.58	44	P	P	03 13 17.5	+0.7
	baz=311						
K22A	Casper	78.58	44	eP	P	03 13 17.9	+1.1
	comp=Z,15nm,1.3s						
ULM	Lac du Bonnet	78.62	34	P	P	03 13 16.6	+0.1
	comp=Z,5.3nm,0.7s,baz=306,slow=4.3,SNR=5.8						
ULM	Lac du Bonnet	78.62	34	eP	P	03 13 16.7	+0.1
	comp=Z,6.6nm,0.7s						
ULM	Lac du Bonnet	78.62	34	eP	P	03 13 16.7	+0.1
ULM				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MDND	Maddock	78.63	37	P	P	03 13 17.4	+0.6
	baz=315						
MDND	Maddock	78.63	37	eP	P	03 13 17.7	+0.9
	comp=Z,30nm,1.0s						
HARR	Harsova	78.65	318	⇑iP	P	03 13 17.0	+0.1
HARR	Harsova	78.65	318	⇑P	P	03 13 17.0	+0.1
TLB	Topalu	78.66	318	⇓iP	P	03 13 16.9	0.0
TLB	Topalu	78.66	318	⇓P	P	03 13 16.9	0.0
MONP2	Monument Peak	78.69	57	P	P	03 13 18.1	+0.5
	baz=308						
OJC	Ojcow	78.69	326	eP	P	03 13 17.2	+0.2
OJC	Ojcow	78.69	326	eP	P	03 13 17.2	+0.2
	comp=Z,28nm,1.1s						
OJC	Ojcow	78.69	326	eP	P	03 13 17.2	+0.2
BR131	Keskin Array S	78.72	312	eP	P	03 13 17.8	+0.2
BRTR	Keskin Array B	78.72	312	P	P	03 13 17.5	-0.1
	comp=Z,1.8nm,0.5s,baz=112,slow=3.5,SNR=13						
IRM	Iron Mountain	78.76	56	P	P	03 13 18.8	+1.0
	baz=308,SNR=7.4						
ARCR	ARCALIA	78.82	322	⇑iP	P	03 13 18.6	+0.8
RWWY	Rawlins	78.83	46	eP	P	03 13 18.5	+0.2
	comp=Z,13nm,1.0s						
BC3	Big Chuckawall	78.87	56	P	P	03 13 19.1	+0.7
	baz=308						
CRVS	Cervenica-Dubn	78.90	325	eP	P	03 13 18.8	+0.6
CRVS				pmax	pmax		
	comp=Z,8.0nm,1.2s						
CRVS	Cervenica-Dubn	78.90	325	eP	P	03 13 18.8	+0.6
TRPA	Tarpa	78.95	324	⇓iP	P	03 13 19.1	+0.6
RSSD	Black Hills	78.96	42	P	P	03 13 19.5	+0.6
	baz=313						
RSSD	Black Hills	78.96	42	eP	P	03 13 19.7	+0.8
	comp=Z,7.0nm,0.8s						
RSSD	Black Hills	78.96	42	eP	P	03 13 19.7	+0.8
RSSD				pmax	pmax		
	comp=Z,7.0nm,0.8s						
IKP	In-Ko-Pah, Jac	79.05	57	P	P	03 13 20.0	+0.6
	baz=308						
NIE	Niedzica	79.06	326	eP	P	03 13 19.6	+0.5
NIE	Niedzica	79.06	326	eP	P	03 13 19.6	+0.5
SWSC	Sam W. Stewart	79.07	57	P	P	03 13 20.0	+0.6
	baz=308						
ISR	Istrita	79.08	319	⇓iP	P	03 13 19.0	-0.3
ISR	Istrita	79.08	319	⇓P	P	03 13 19.0	-0.3
DOPR	Dopca	79.08	321	⇓iP	P	03 13 19.9	+0.6
ICOR	Ion Corvin	79.11	318	⇓iP	P	03 13 19.4	0.0
ANTO	Ankara	79.13	312	⇓iP	P	03 13 19.9	+0.2
ANTO	Ankara	79.13	312	eP	P	03 13 20.5	+0.8
	comp=Z,14nm,0.8s						
ANTO	Ankara	79.13	312	⇓P	P	03 13 19.9	+0.2
MLR	Muntele Rosu	79.13	320	P	P	03 13 19.9	+0.2
	comp=Z,2.7nm,0.4s,baz=341,slow=4.2,SNR=16						
MLR	Muntele Rosu	79.13	320	⇑iP	P	03 13 19.6	-0.1
MLR	Muntele Rosu	79.13	320	eP	P	03 13 19.3	-0.4
	comp=Z,12nm,1.3s						
O20A	White River Ci	79.25	47	P	P	03 13 20.8	+0.2
	baz=311						
O20A	White River Ci	79.25	47	eP	P	03 13 21.9	+1.4
	comp=Z,11nm,0.9s						
PDMCI	Parker Dam,Lak	79.32	55	P	P	03 13 21.6	+0.9
	baz=309						
Y12C	Blythe	79.42	56	P	P	03 13 22.1	+0.9
	baz=309						
Y12C	Blythe	79.42	56	eP	P	03 13 22.6	+1.4
	comp=Z,13nm,1.2s						
CJR	Cluj-Napoca	79.45	322	⇓iP	P	03 13 22.1	+0.8
CJR	Cluj-Napoca	79.45	322	⇓P	P	03 13 22.1	+0.8
SULR		79.53	319	⇑iP	P	03 13 22.5	+0.8
LANS	Liptovska Anna	79.62	326	eP	P	03 13 23.0	+0.8
LANS	Liptovska Anna	79.62	326	eP	P	03 13 23.0	+0.8
VOIR		79.62	320	⇑iP	P	03 13 22.2	-0.1
VOIR		79.62	320	⇑P	P	03 13 22.2	-0.1
GLA	Glamis	79.65	56	P	P	03 13 23.8	+1.2
	baz=309						
OKC	Ostrava-Krasne	79.70	327	eP	P	03 13 22.9	+0.4
OKC				AMS	AMS	03 46 40.0	
	comp=Z,300nm,16.7s						
OKC	Ostrava-Krasne	79.70	327	eP	P	03 13 22.9	+0.4
OKC				MLR	MLR		
	comp=Z,300nm,16.7s						
KSP	Ksiaz	79.73	328	eP	P	03 13 23.2	+0.6
KSP	Ksiaz	79.73	328	eP	P	03 13 23.2	+0.6
PV09	Paradox Valley	79.79	49	eP	P	03 13 25.5	+1.8
A33A	Warroad	79.80	34	P	P	03 13 23.3	+0.2
	baz=318,SNR=7.0						
DRGR		79.83	323	⇓iP	P	03 13 23.7	+0.3
DRGR		79.83	323	⇓P	P	03 13 23.7	+0.3
PV21	Cone Mtn., Par	79.84	49	eP	P	03 13 25.6	+1.8
	comp=Z,20nm,1.1s						
ARR	Arges	79.88	321	⇑iP	P	03 13 24.9	+1.2
PV23	Carpenter Ridg	79.89	49	eP	P	03 13 25.9	+1.7
	comp=Z,28nm,1.2s						
PV14	Lion Creek, Pa	79.94	49	eP	P	03 13 25.8	+1.5
	comp=Z,33nm,1.2s						
PV22	Blue Mesa, Par	79.97	49	eP	P	03 13 26.1	+1.7
	comp=Z,12nm,1.0s						
PV20	West Nyswonger	79.99	49	eP	P	03 13 26.4	+1.9
	comp=Z,25nm,1.0s						
PV19	Morning Glory	80.00	49	eP	P	03 13 26.3	+1.7
	comp=Z,20nm,1.0s						
MORC	Moravsky Berou	80.00	327	⇑iP	P	03 13 24.8	+0.6
MORC	Moravsky Berou	80.00	327	eP	P	03 13 24.5	+0.3
	comp=Z,14nm,1.0s						
MORC	Moravsky Berou	80.00	327	⇑P	P	03 13 24.8	+0.6
MORC	Moravsky Berou	80.00	327	eP	P	03 13 24.6	+0.3
PV17	East Wray Mesa	80.03	49	eP	P	03 13 26.6	+1.8
	comp=Z,33nm,1.1s						
PV16	Nyswonger Mesa	80.04	49	eP	P	03 13 26.7	+1.8
	comp=Z,18nm,1.1s						
AGMN	Agassiz Nation	80.05	35	P	P	03 13 25.1	+0.6
	baz=317						
AGMN	Agassiz Nation	80.05	35	eP	P	03 13 24.7	+0.2
	comp=Z,7.4nm,0.8s						
N23A	Red Feather La	80.07	46	P	P	03 13 25.5	+0.4
	baz=312,SNR=5.8						
N23A	Red Feather La	80.07	46	eP	P	03 13 26.9	+1.9
	comp=Z,11nm,1.0s						
PV11	David Mesa, Pa	80.07	49	eP	P	03 13 27.0	+1.9
	comp=Z,40nm,1.4s						
PV18	Skein Mesa, Pa	80.09	49	eP	P	03 13 26.9	+1.8
	comp=Z,20nm,1.1s						
DPC	Dobruska-Polom	80.09	328	eP	P	03 13 25.2	+0.5
DPC				epP	pP	03 13 38.5	+0.7
DPC				AMS	AMS	03 55 20.0	
	comp=Z,200nm,11.6s						
DPC	Dobruska-Polom	80.09	328	eP	P	03 13 25.2	+0.5
DPC				e		03 13 38.5	
DPC				MLR	MLR		
	comp=Z,200nm,11.6s						
UPC	Upice	80.10	328	eP	P	03 13 25.3	+0.6
UPC				epP	pP	03 13 37.8	0.0
UPC				AMS	AMS	04 02 30.0	
	comp=Z,200nm,14.2s						
UPC	Upice	80.10	328	eP	P	03 13 25.3	+0.6
UPC				e		03 13 37.8	
UPC				MLR	MLR		
	comp=Z,200nm,14.2s						
KRLC	Kraliky	80.10	328	eP	P	03 13 25.3	+0.5
KRLC	Kraliky	80.10	328	eP	P	03 13 25.3	+0.5
PV12	Saucer Basin,	80.10	49	eP	P	03 13 29.4	+4.2
	comp=Z,8.0nm,0.9s						
PV03	Paradox Valley	80.12	49	eP	P	03 13 27.0	+1.7
PV13	Radium Mtn., P	80.20	49	eP	P	03 13 27.6	+1.9
	comp=Z,16nm,0.9s						
PV02	Paradox Valley	80.22	49	eP	P	03 13 28.3	+2.4
	comp=Z,5.0nm,0.7s						
LOT	Lotru	80.26	321	⇑iP	P	03 13 25.7	-0.1
WUAZ	Wupatki	80.33	52	P	P	03 13 27.3	+0.9
	baz=310,SNR=10						
WUAZ	Wupatki	80.33	52	eP	P	03 13 27.6	+1.1
	comp=Z,13nm,1.0s						
PSZ	Piszkesteto	80.33	325	⇓iP	P	03 13 26.7	+0.6
PSZ	Piszkesteto	80.33	325	eP	P	03 13 26.3	+0.2
	comp=Z,14nm,1.0s						
PSZ	Piszkesteto	80.33	325	⇓P	P	03 13 26.7	+0.6
VYHS	Vyhne	80.39	326	eP	P	03 13 26.8	+0.5
VYHS				pmax	pmax		
	comp=Z,5.0nm,0.9s						
VYHS	Vyhne	80.39	326	eP	P	03 13 26.8	+0.5
B34A	Aery, Baudette	80.46	34	P	P	03 13 26.5	-0.1
	baz=318						
C33A	Trail	80.49	35	P	P	03 13 26.8	0.0
	baz=317						
SMCO	Snowmass	80.62	47	eP	P	03 13 29.4	+1.1
	comp=Z,7.4nm,1.2s						
JAVC	Velka Javorina	80.63	326	eP	P	03 13 29.1	+1.4
BRG	Berggiesshubel	80.66	330	i P	P	03 13 27.7	0.0
	comp=Z,12nm,0.9s						
BRG				epP	pP	03 13 40.9	+0.1
	comp=Z,7.7nm,0.9s						
BRG	Berggiesshubel	80.66	330	i P	P	03 13 27.7	0.0
BRG				e*PP	pP	03 13 40.9	+0.1
BRG				pmax	pmax		
	comp=Z,12nm,0.9s						
PVCC	Panska Ves	80.67	329	eP	P	03 13 28.4	+0.6
PVCC				ex	x	03 13 41.6	
PVCC				AMS	AMS	03 51 50.0	
	comp=Z,200nm,16.8s						
PVCC	Panska Ves	80.67	329	eP	P	03 13 28.4	+0.6
PVCC				e		03 13 41.6	
PVCC				MLR	MLR		
	comp=Z,200nm,16.8s						
CLL	Collm	80.69	330	⇓iP	P	03 13 27.7	-0.1
	comp=Z,21nm,0.9s						
CLL				ePcP	PcP	03 13 33.0	-1.5
CLL				epP	pP	03 13 41.0	+0.1
CLL				esP	sP	03 13 46.0	+0.1
CLL				eS	S	03 23 36.0	+4.1
CLL	Collm	80.69	330	eP	P	03 13 27.7	-0.1

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      comp=Z,21nm,0.9s
CLL   Collm            80.69 330⇓iP    P     03 13 27.7 -0.1
CLL                              e*PP  pP    03 13 39.0 -1.9
CLL                               pmax pmax
      comp=Z,21nm,0.9s
VRAC  Vranov           80.76 327⇑iP    P     03 13 28.7 +0.4
VRAC  Vranov           80.76 327 ⇑P    P     03 13 28.7 +0.4
VRAC  Vranov           80.76 327 eP    P     03 13 28.9 +0.6
RAYN  Ar Rayn          80.82 293 eP    P     03 13 28.2 -0.9
RAYN  Ar Rayn          80.82 293 eP    P     03 13 28.2 -0.9
B35A  Bob, Littlefor   80.97  34  P    P     03 13 29.2 -0.2
      baz=319,SNR=6.6
B35A  Bob, Littlefor   80.97  34 eP    P     03 13 29.5 +0.2
      comp=Z,14nm,1.1s
ISCO  Idaho Springs    80.99  46  P    P     03 13 31.0 +0.9
      baz=312,SNR=5.5
ISCO  Idaho Springs    80.99  46 eP    P     03 13 31.8 +1.7
      comp=Z,3.0nm,0.8s
ISCO  Idaho Springs    80.99  46 eP    P     03 13 31.8 +1.7
ISCO                              pmax pmax
      comp=Z,3.0nm,0.8s
SMOL  Smolenice        81.00 326  P    P     03 13 30.6 +1.1
SMOL  Smolenice        81.00 326 eP    P     03 13 30.6 +1.1
MVCO  Mesa Verde       81.01  50  P    P     03 13 30.9 +0.8
      baz=311,SNR=6.0
MVCO  Mesa Verde       81.01  50 eP    P     03 13 31.8 +1.6
      comp=Z,9.2nm,1.1s
KRUC  Moravsky         81.03 327 eP    P     03 13 30.1 +0.4
GOPC  GO Pecny, Ondr   81.06 329 eP    P     03 13 30.5 +0.6
GOPC                             epP   pP    03 13 43.7 +0.7
GOPC                              AMS  AMS   03 54 30.0
      comp=Z,300nm,23.3s
GOPC  GO Pecny, Ondr   81.06 329 eP    P     03 13 30.5 +0.6
GOPC                             e           03 13 43.7
GOPC                              MLR  MLR
      comp=Z,300nm,23.3s
PRU   Pruhonice        81.10 329 eP    P     03 13 30.3 +0.3
PRU                              epP   pP    03 13 43.4 +0.2
PRU                               AMS  AMS   03 54 40.0
      comp=Z,200nm,16.6s
PRU   Pruhonice        81.10 329 eP    P     03 13 30.3 +0.3
PRU                              e           03 13 43.4
PRU                               MLR  MLR
      comp=Z,200nm,16.6s
MODS  Modra-Piesok     81.17 326 eP    P     03 13 31.3 +0.8
MODS                              pmax pmax
      comp=Z,9.0nm,0.6s
MODS  Modra-Piesok     81.17 326 eP    P     03 13 31.3 +0.8
BZS   Buzias           81.20 322⇓iP    P     03 13 30.0 -0.6
BZS   Buzias           81.20 322 ⇓P    P     03 13 30.0 -0.6
C35A  Jirik Farms, M   81.35  35  P    P     03 13 31.3 -0.1
      baz=319,SNR=6.0
SUSD  Miller           81.36  39  P    P     03 13 32.1 +0.5
      baz=316
ASF   Jabal al Asfar   81.50 304  P    P     03 13 32.8 +0.2
      comp=Z,4.3nm,0.8s,baz=331,slow=1.7,SNR=8.0
G32A  Webster          81.50  38  P    P     03 13 32.7 +0.4
      baz=317,SNR=7.1
G32A  Webster          81.50  38 eP    P     03 13 33.1 +0.8
      comp=Z,32nm,0.8s
S22A  4UR Ranch, Cre   81.65  48  P    P     03 13 34.7 +1.1
      baz=312,SNR=8.8
S22A  4UR Ranch, Cre   81.65  48 eP    P     03 13 35.3 +1.7
      comp=Z,6.5nm,1.0s
214A  Organ Pipe Nat   81.66  56  P    P     03 13 34.6 +1.2
      baz=310
MDVR  Moldovita        81.75 322⇑iP    P     03 13 33.5 -0.2
NKC   Novy Kostel      81.76 330 eP    P     03 13 32.5 -1.0
NKC                               AMS  AMS   03 56 00.0
      comp=Z,200nm,11.1s
NKC   Novy Kostel      81.76 330 eP    P     03 13 32.5 -1.0
NKC                               MLR  MLR
      comp=Z,200nm,11.1s
D35A  Remer            81.78  35  P    P     03 13 33.3 -0.4
      baz=319
C36A  Pine Crest Far   81.81  34  P    P     03 13 33.9  0.0
      baz=319
MMAI  Mount Meron Ar   81.93 306  P    P     03 13 35.3 +0.5
      comp=Z,9.3nm,0.7s,baz=46,slow=7.1,SNR=12
CSS   Mathiatis        81.99 308 eP    P     03 13 34.4 -0.6
      comp=Z,12nm,0.6s
G33A  Ortonville       82.06  37  P    P     03 13 35.6 +0.4
      baz=317
D36A  Goodland         82.11  34  P    P     03 13 35.0 -0.4
      baz=319
C37A  Embarrass        82.12  34  P    P     03 13 35.3 -0.2
      baz=320
CONA  Conrad Observa   82.13 327 i P   P     03 13 36.5 +0.9
      comp=Z,9.7nm,0.8s,SNR=7.0
KHC   Kasperske Hory   82.17 329 eP    P     03 13 36.0 +0.3
KHC                              epP   pP    03 13 49.0 +0.1
KHC                               AMS  AMS   03 55 10.0
      comp=Z,300nm,16.9s
KHC   Kasperske Hory   82.17 329 eP    P     03 13 36.1 +0.3
      comp=Z,6.9nm,1.0s
KHC   Kasperske Hory   82.17 329 eP    P     03 13 36.1 +0.3
KHC                               pmax pmax
      comp=Z,7.0nm,1.0s
EYMN  Ely              82.25  33  P    P     03 13 35.9 -0.3
      baz=320
GEC2  GERESS Array S   82.34 328 eP    P     03 13 36.6 -0.1
      comp=Z,6.9nm,0.6s
GEC2  GERESS Array S   82.34 328 eP    P     03 13 36.6 -0.1
GEC2                              pmax pmax
      comp=Z,7.0nm,0.6s
GERES GERESS Array B   82.34 328  P    P     03 13 36.6 -0.1
      comp=Z,5.9nm,0.5s,baz=40,slow=6.0,SNR=50
GEA0  GERESS Array S   82.34 328 eP    P     03 13 36.5 -0.3
G34A  Benson           82.40  37  P    P     03 13 36.8 -0.2
      baz=318
SDCO  Great Sand Dun   82.44  48  P    P     03 13 37.9 +0.2
      baz=313,SNR=6.7
SDCO  Great Sand Dun   82.44  48 eP    P     03 13 39.0 +1.3
      comp=Z,4.4nm,1.1s
D37A  Cotton           82.45  34  P    P     03 13 37.1 -0.2
      baz=320
F35A  Swanville        82.45  36  P    P     03 13 37.0 -0.3
      baz=318
C38A  Sawbill Land.    82.53  33  P    P     03 13 37.5 -0.1
      baz=320
E36A  McGregor         82.56  35  P    P     03 13 37.7 -0.2
      baz=319
VTS   Vitosha          82.57 319⇓iP    P     03 13 38.4 +0.3
VTS   Vitosha          82.57 319 eP    P     03 13 38.7 +0.6
      comp=Z,9.3nm,0.7s
VTS   Vitosha          82.57 319 ⇓P    P     03 13 38.4 +0.3
EKA   Eskdalemuir Ar   82.59 341  P    P     03 13 38.3 +0.5
      comp=Z,2.4nm,0.6s,baz=24,slow=5.1,SNR=13
ESK   Eskdalemuir      82.62 341 eP    P     03 13 38.2 +0.3
      comp=Z,5.9nm,0.7s
ESK   Eskdalemuir      82.62 341 eP    P     03 13 38.2 +0.3
ESK                               pmax pmax
      comp=Z,6.0nm,0.7s
GRFO  Grafenberg       82.67 330 eP    P     03 13 39.0 +0.7
      comp=Z,17nm,0.8s
GRFO  Grafenberg       82.67 330 eP    P     03 13 39.0 +0.7
GRFO                              pmax pmax
      comp=Z,17nm,0.8s
TUC   Tucson           82.76  55  P    P     03 13 39.1 -0.1
      baz=310
ARSA  Arzberg          82.79 326 i P   P     03 13 39.4 +0.4
      comp=Z,3.0nm,0.6s
MOA   Molln            82.87 328  P    P     03 13 39.7 +0.3
      comp=Z,3.0nm,0.5s
G35A  Watkins          82.97  36  P    P     03 13 39.7 -0.2
      baz=318
G35A  Watkins          82.97  36 eP    P     03 13 41.0 +1.0
      comp=Z,19nm,1.1s
ECSD  EROS Data Cent   83.04  39  P    P     03 13 40.6 +0.2
      baz=317,SNR=13
ECSD  EROS Data Cent   83.04  39 eP    P     03 13 40.6 +0.2
      comp=Z,8.8nm,0.8s
DIVS  Divibare         83.10 322 eP    P     03 13 40.6 -0.1
      comp=Z,5.8nm,1.0s
H35A  Sunnyside Ranc   83.19  37  P    P     03 13 41.6 +0.5
      baz=318,SNR=11
E38A  The Farm, Brul   83.26  34  P    P     03 13 41.2 -0.2
      baz=320,SNR=6.1
E38A  The Farm, Brul   83.26  34 eP    P     03 13 41.4  0.0
      comp=Z,15nm,0.6s
GROS  Grobnik          83.41 326 eP    P     03 13 42.0 -0.3
SRS   Serrai           83.42 318  P    P     03 13 43.6 +1.2
SOKA  Soboth           83.45 326 i P   P     03 13 42.7 +0.2
      comp=Z,13nm,0.6s,SNR=7.9
T25A  Trinidad         83.48  47  P    P     03 13 43.9 +0.8
      baz=313,SNR=5.5
T25A  Trinidad         83.48  47 eP    P     03 13 44.7 +1.6
      comp=Z,8.9nm,0.8s
F38A  Pierce - Schro   83.61  35  P    P     03 13 43.7 +0.5
      baz=320,SNR=6.1
GOLS  Golise           83.70 326 i P   P     03 13 43.5 -0.2
H36A  Jessenland, He   83.71  37  P    P     03 13 44.3 +0.5
      baz=319
TASM  ASL Pad, Albuq   83.74  50  P    P     03 13 45.2 +0.8
      baz=312,SNR=13
ANMO  Albuquerque      83.74  50  P    P     03 13 45.9 +1.5
      comp=Z,6.3nm,1.0s,baz=305,slow=5.2,SNR=20
ANMO  Albuquerque      83.74  50  P    P     03 13 45.1 +0.8
      baz=312
ANMO  Albuquerque      83.74  50 eP    P     03 13 46.1 +1.7
      comp=Z,8.6nm,1.0s
ANMO  Albuquerque      83.74  50 eP    P     03 13 46.1 +1.7
ANMO                              pmax pmax
      comp=Z,9.0nm,1.0s
TASL  Snake Pit, Alb   83.74  50  P    P     03 13 45.2 +0.8
      baz=312,SNR=14
SPMN  Marine on St.    83.75  36  P    P     03 13 44.3 +0.4
      baz=320
SPMN  Marine on St.    83.75  36 eP    P     03 13 44.5 +0.5
      comp=Z,6.1nm,0.9s
OBKA  Obir             83.79 327 i P   P     03 13 44.3  0.0
      comp=Z,4.2nm,0.7s
E39A  Mellen           83.87  34  P    P     03 13 44.5 -0.1
      baz=321,SNR=6.6
BLY   Banja Luka       83.95 324⇓iP    P     03 13 44.9 -0.1
PLE   Pljevlja         83.96 322  P    P     03 13 46.3 +1.1
F39A  Loretta          84.07  34  P    P     03 13 45.9 +0.3
      baz=321
I36A  Fitzsimmons Fa   84.09  37  P    P     03 13 46.2 +0.5
      baz=319
MYKA  Terra Mystica    84.09 327 i P   P     03 13 45.4 -0.3
      comp=Z,8.2nm,0.5s
E40A  Wakefield        84.11  33  P    P     03 13 46.5 +0.7
      baz=321,SNR=9.3
LJU   Ljubljana        84.16 326 i P   P     03 13 46.1  0.0
H37A  Dierke Farm, C   84.18  36  P    P     03 13 46.8 +0.6
      baz=320
G38A  Ridgeland        84.22  35  P    P     03 13 46.3 -0.1
      baz=320
EIL   Elat             84.38 303  LR   LR    03 54 31.7
      comp=Z,50nm,19.8s,baz=52,slow=38
I37A  Lemond, Waseca   84.38  37  P    P     03 13 48.0 +0.7
      baz=319,SNR=10
I37A  Lemond, Waseca   84.38  37 eP    P     03 13 48.2 +1.0
      comp=Z,29nm,0.8s
F40A  Park Falls       84.42  34  P    P     03 13 47.3 -0.1
      baz=321,SNR=5.1
WTTA  Wattenberg       84.44 329 i PcP P     03 13 48.4 +0.8
      comp=Z,3.5nm,0.5s
G39A  Holcombe         84.44  35  P    P     03 13 47.4 -0.1
      baz=321
J36A  Seneca 1, Swea   84.45  38  P    P     03 13 47.9 +0.3
      baz=319
J36A  Seneca 1, Swea   84.45  38 eP    P     03 13 48.2 +0.6
      comp=Z,11nm,0.9s
ABTA  Abfaltersbach    84.48 328 i P   P     03 13 47.3 -0.5
      comp=Z,4.3nm,0.6s
E41A  Kenton           84.49  33  P    P     03 13 48.2 +0.4
      baz=322,SNR=5.6
SCHQ  Schefferville    84.49  16  P    P     03 13 47.9 +0.3
      comp=Z,11nm,0.6s,baz=285,slow=8.5,SNR=3.8
121A  Cookes Peak, D   84.53  53  P    P     03 13 49.1 +0.7
      baz=312
RETA  Reutte           84.62 329 i P   P     03 13 48.7 +0.3
      comp=Z,15nm,0.6s,SNR=7.1
PDG   Podgorica        84.69 321⇑iP    P     03 13 48.3 -0.5
TTG   Podgorica        84.69 321 eP    P     03 13 48.0 -0.7
      comp=Z,21nm,0.9s
TTG   Podgorica        84.69 321 eP    P     03 13 48.0 -0.7
TTG                               pmax pmax
      comp=Z,21nm,0.9s
COWI  Conover          84.71  33 eP    P     03 13 49.2 +0.4
      comp=Z,7.1nm,0.7s
GIVF  Givet            84.71 334 eP    P     03 13 47.9 -0.8
FNA   Florina          84.83 319 eP    P     03 13 49.2 -0.4
      comp=Z,6.9nm,1.0s
FNA   Florina          84.83 319 eP    P     03 13 49.2 -0.4
FNA                               pmax pmax
      comp=Z,7.0nm,1.0s
J37A  Redenius Farm,   84.84  37  P    P     03 13 50.0 +0.4
      baz=319
H39A  Augusta          84.86  35  P    P     03 13 49.9 +0.3
      baz=321
I38A  Scanlan Farm,    84.87  36  P    P     03 13 49.5 -0.2
      baz=320
G40A  Rib Lake         84.89  34  P    P     03 13 50.0 +0.3
      baz=321,SNR=5.6
G40A  Rib Lake         84.89  34 eP    P     03 13 50.1 +0.3
      comp=Z,11nm,0.8s
BFO   Black Forest     84.89 331 eP    P     03 13 49.6 -0.1
      comp=Z,18nm,0.8s
BFO   Black Forest     84.89 331 i P   P     03 13 49.8 +0.1
K36A  Gilmore City     84.91  38  P    P     03 13 50.6 +0.6
      baz=319
BAIF  Baives           84.95 334 eP    P     03 13 49.2 -0.7
BAIF                              pmax pmax
      comp=Z,5.0nm,0.7s
E42A  Champion         84.97  32  P    P     03 13 50.4 +0.3
      baz=323
F41A  Three Lakes      85.00  33  P    P     03 13 50.7 +0.4
      baz=322,SNR=6.4
F41A  Three Lakes      85.00  33 eP    P     03 13 50.9 +0.5
      comp=Z,25nm,1.3s
FETA  Feichten         85.00 329 i P   P     03 13 50.5  0.0
      comp=Z,7.6nm,0.6s,SNR=6.2
DAVA  Damuels          85.13 330 i P   P     03 13 51.2  0.0
      comp=Z,22nm,0.8s,SNR=9.2
L36A  Harm Buss Farm   85.21  39  P    P     03 13 51.8 +0.4
      baz=319
K37A  Belmond          85.21  38  P    P     03 13 51.6 +0.2
      baz=319,SNR=11
DSB   Dublin           85.30 342 eP    P     03 13 51.8 +0.2
      comp=Z,13nm,0.9s
H40A  Chili            85.31  35  P    P     03 13 51.6 -0.3
      baz=321,SNR=5.9
J38A  Wedel Dairy, R   85.35  37  P    P     03 13 51.8 -0.3
      baz=320
I39A  Houston          85.38  36  P    P     03 13 52.1 -0.1
      baz=320,SNR=8.6
E43A  Lone Tree Farm   85.39  32  P    P     03 13 52.0 -0.2
      baz=323
ECH   Echery           85.43 332 eP    P     03 13 52.2 -0.2
      comp=Z,13nm,0.8s
ECH   Echery           85.43 332 eP    P     03 13 52.2 -0.2
ECH                               pmax pmax
      comp=Z,13nm,0.8s
DAVOX Davos/Dischmat   85.54 329  P    P     03 13 53.3 +0.1
      comp=Z,8.5nm,0.8s,baz=24,slow=0.7,SNR=16
M36A  Felix, Anita     85.62  39  P    P     03 13 54.0 +0.5
      baz=318
L37A  Phoenix Point,   85.64  38  P    P     03 13 53.6 +0.1
      baz=319
H41A  Junction City    85.64  34  P    P     03 13 53.8 +0.3
      baz=322
G42A  Mountain         85.69  33  P    P     03 13 54.0 +0.3
      baz=322
J39A  Decorah          85.70  36  P    P     03 13 53.6 -0.2
      baz=320,SNR=7.5
F43A  Flat Rock, Esc   85.76  32  P    P     03 13 54.3 +0.2
      baz=323
HINF  Hinteralfeld     85.88 332 eP    P     03 13 53.6 -1.1
HINF                              pmax pmax
      comp=Z,4.0nm,0.8s
HAU   Haudompre        85.91 332 eP    P     03 13 53.8 -1.0
HAU                               pmax pmax
      comp=Z,12nm,0.7s
F44A  Big Bay de Noc   85.95  32  P    P     03 13 55.4 +0.4
      baz=324
I41A  Arkdale          85.98  35  P    P     03 13 55.6 +0.4
      baz=322
I41A  Arkdale          85.98  35 eP    P     03 13 55.2  0.0
      comp=Z,22nm,1.3s
G43A  Wallace          86.00  33  P    P     03 13 55.6 +0.4
      baz=323
G43A  Wallace          86.00  33 eP    P     03 13 55.8 +0.6
      comp=Z,15nm,0.9s
TUE   Stuetta          86.01 329 eP    P     03 13 55.7 +0.1
      comp=Z,8.1nm,0.7s
L38A  Oak Wood Farm,   86.01  38  P    P     03 13 55.6 +0.2
      baz=320
M37A  Trindle Farm,    86.03  39  P    P     03 13 55.9 +0.3
      baz=319
SCIA  State Center     86.07  38 eP    P     03 13 57.4 +1.7
      comp=Z,14nm,0.7s
K39A  Oelwein          86.09  37  P    P     03 13 55.7 -0.1
      baz=320,SNR=5.5
J40A  Soldiers Grove   86.10  36  P    P     03 13 55.9 +0.1
      baz=321
H42A  Shiocton         86.22  34  P    P     03 13 56.8 +0.4
      baz=322
H42A  Shiocton         86.22  34 eP    P     03 13 57.0 +0.6
      comp=Z,12nm,0.6s
IGT   Igoumenitsa      86.28 319  P    P     03 13 56.8  0.0
KSU1  Kansas State U   86.44  42  P    P     03 13 57.7 +0.2
      baz=318
KSU1  Kansas State U   86.44  42 eP    P     03 13 57.3 -0.2
      comp=Z,15nm,0.8s
KSU1                             epP   pP    03 14 13.0 +2.3
N37A  Lee Faris, Mou   86.44  39  P    P     03 13 58.0 +0.5
      baz=319
N37A  Lee Faris, Mou   86.44  39 eP    P     03 13 58.5 +1.0
      comp=Z,39nm,1.1s
M38A  Pleasantville    86.45  38  P    P     03 13 57.9 +0.3
      baz=320,SNR=6.4
K40A  Colesburg        86.45  36  P    P     03 13 57.9 +0.3
      baz=321,SNR=5.6
J41A  Loganville       86.46  35  P    P     03 13 57.8 +0.3
      baz=322,SNR=5.7
L39A  Vinton           86.49  37  P    P     03 13 58.1 +0.3
      baz=320,SNR=9.2
I42A  Draeger Farm,    86.54  34  P    P     03 13 57.8 -0.2
      baz=322,SNR=6.5
I42A  Draeger Farm,    86.54  34 eP    P     03 13 58.8 +0.8
      comp=Z,14nm,0.8s
F45A  CMU Biological   86.56  31  P    P     03 13 58.4 +0.4
      baz=324
H43A  Windswept, Lux   86.59  33  P    P     03 13 58.6 +0.4
      baz=323,SNR=5.5
MNTX  Cornudas Mount   86.59  52  P    P     03 13 59.0 +0.5
      baz=313
MSTX  Muleshoe         86.63  49  P    P     03 13 59.1 +0.4
      baz=314
AMTX  Amarillo         86.64  48  P    P     03 13 59.0 +0.2
      baz=315
AMTX  Amarillo         86.64  48 eP    P     03 13 59.9 +1.2
      comp=Z,16nm,0.8s
AMTX                             epP   sP    03 14 16.6 -0.4
JFWS  Jewell Farm      86.70  36  P    P     03 13 58.7 -0.1
      baz=321
JFWS  Jewell Farm      86.70  36 eP    P     03 13 59.0 +0.3
      comp=Z,11nm,1.0s
JFWS  Jewell Farm      86.70  36 eP    P     03 13 59.0 +0.3
JFWS                              pmax pmax
      comp=Z,11nm,1.0s
F46A  Macinaw City C   86.80  31  P    P     03 13 59.4 +0.3
      baz=325
I43A  Langenfeld Bro   86.89  34  P    P     03 13 59.8 +0.1
      baz=323
J42A  Columbus         86.90  35  P    P     03 13 59.7  0.0
      baz=322
M39A  Webster          86.90  38  P    P     03 14 00.1 +0.3
      baz=320,SNR=5.4
N38A  Joes South For   86.90  39  P    P     03 13 59.9 +0.1
      baz=320
L40A  Anamosa          86.90  37  P    P     03 14 00.2 +0.4
      baz=321
L40A  Anamosa          86.90  37 eP    P     03 14 00.2 +0.4
      comp=Z,13nm,0.9s
SENIN Lac Senin/Sane   86.91 330 eP    P     03 14 00.3 +0.3
      comp=Z,4.3nm,0.8s
K41A  Shullsburg       86.91  36  P    P     03 13 59.8  0.0
      baz=321,SNR=5.0
O37A  Wolven Farm, M   86.92  40  P    P     03 14 00.3 +0.4
      baz=319
CABF  La Chapelle      87.17 331 eP    P     03 14 00.3 -0.8
CABF                              pmax pmax
      comp=Z,8.0nm,1.1s
N39A  Derby Farms, D   87.20  38  P    P     03 14 01.7 +0.5
      baz=320,SNR=5.1
N39A  Derby Farms, D   87.20  38 eP    P     03 14 01.9 +0.7
      comp=Z,15nm,0.8s
K42A  Prairie Point,   87.22  35  P    P     03 14 01.1 -0.2
      baz=322
L41A  Preston          87.24  36  P    P     03 14 01.3  0.0
      baz=321,SNR=5.4
P37A  Lathrop          87.25  40  P    P     03 14 01.8 +0.3
      baz=319,SNR=5.5
M40A  Post Highland    87.27  37  P    P     03 14 01.5 -0.1
      baz=321
O38A  Galt             87.29  39  P    P     03 14 02.1 +0.4
      baz=319
FLN   La Foliniere     87.63 336 eP    P     03 14 02.4 -0.7
FLN                               pmax pmax
      comp=Z,8.0nm,0.7s
P38A  Dawn             87.64  40  P    P     03 14 03.6 +0.2
      baz=319
P38A  Dawn             87.64  40 eP    P     03 14 04.2 +0.9
      comp=Z,12nm,0.7s
N40A  Mertquake, Sal   87.64  38  P    P     03 14 03.7 +0.4
      baz=321
LDF   La Druitiere     87.66 336 eP    P     03 14 02.8 -0.5
LDF                               pmax pmax
      comp=Z,6.0nm,0.6s
M41A  Milan            87.76  37  P    P     03 14 04.4 +0.6
      baz=321
LPL   La Plagne        87.83 330 eP    P     03 14 04.9 +0.4
LPL                               pmax pmax
      comp=Z,7.0nm,0.7s
LPG   La Plagne        87.84 330 eP    P     03 14 05.0 +0.4
LPG                               pmax pmax
      comp=Z,11nm,0.7s
AVF   Avril sur Loir   88.03 333 eP    P     03 14 04.6 -0.5
AVF                               pmax pmax
      comp=Z,11nm,0.6s
GRR   Gorron           88.08 336 eP    P     03 14 04.9 -0.4
GRR                               pmax pmax
      comp=Z,41nm,1.5s
O40A  La Belle         88.08  38  P    P     03 14 05.9 +0.4
      baz=320,SNR=5.8
Q38A  Cooks Store, C   88.09  40  P    P     03 14 05.9 +0.3
      baz=319,SNR=5.4
P39B  Salisbury        88.13  39  P    P     03 14 06.0 +0.3
      baz=320
Q39A  Willow Grove F   88.36  40  P    P     03 14 07.4 +0.6
      baz=320,SNR=11
TIP   Timpagrande      88.38 321⇓iP    P     03 14 06.1 -0.9
TIP   Timpagrande      88.38 321 eP    P     03 14 05.9 -1.1
      comp=Z,37nm,2.0s
BGF   Bois d'Agland    88.41 333 eP    P     03 14 06.4 -0.5
BGF                               pmax pmax
      comp=Z,3.0nm,0.6s
WMOK  Wichita Mounta   88.42  46  P    P     03 14 07.7 +0.5
      baz=316,SNR=6.9
WMOK  Wichita Mounta   88.42  46 eP    P     03 14 08.1 +0.9
      comp=Z,9.2nm,1.3s
WMOK  Wichita Mounta   88.42  46 eP    P     03 14 08.1 +0.9
WMOK                              pmax pmax
      comp=Z,9.0nm,1.3s
P40A  Paris            88.45  39  P    P     03 14 07.6 +0.4
      baz=320,SNR=10.0
M43A  Waltham Townsh   88.45  36  P    P     03 14 07.6 +0.5
      baz=322,SNR=6.9
R38A  Fenwick Farm,    88.53  41  P    P     03 14 07.4 -0.2
      baz=319
O41A  Passleys Farm,   88.57  38  P    P     03 14 07.5 -0.3
      baz=321
ORIF  Oris-en-Rattie   88.67 330 eP    P     03 14 08.7 +0.5
ORIF                              pmax pmax
      comp=Z,4.0nm,0.7s
P41A  Barry, Barry     88.83  38  P    P     03 14 09.5 +0.5
      baz=321,SNR=8.1
Q40A  Laux Farm, Aux   88.85  39  P    P     03 14 09.4 +0.3
      baz=320
R39A  Chumby, Stover   88.88  40  P    P     03 14 09.3 +0.1
      baz=320,SNR=5.2
KLBO  Killbear Provi   88.92  28  P    P     03 14 08.7 -0.5
      baz=328
S38A  Stockton         88.95  41  P    P     03 14 09.5 -0.1
      baz=319
BUKO  Buck Lake        89.15  28  P    P     03 14 10.9 +0.6
      baz=329
BMRO  Meriville Lake   89.18  29  P    P     03 14 11.6 +1.1
      baz=327
T38A  Diamond          89.19  42  P    P     03 14 11.2 +0.4
      baz=319,SNR=5.0
S39A  Bolivar          89.20  41  P    P     03 14 10.7 -0.1
      baz=320,SNR=5.5
S39A  Bolivar          89.20  41 eP    P     03 14 10.9 +0.1
      comp=Z,6.6nm,0.9s
QUIF  Quistinic        89.22 337 eP    P     03 14 10.6  0.0
QUIF                              pmax pmax
      comp=Z,6.0nm,0.8s
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TUL1	Leonard	89.23	43	P	P	03 14 11.2	+0.2
	baz=318						
P42A	Winchester	89.24	38	P	P	03 14 11.4	+0.5
	baz=321,SNR=6.5						
P42A	Winchester	89.24	38	*e*P	P	03 14 11.8	+0.9
	comp=Z,29nm,1.3s						
R40A	Maddies Statio	89.29	40	P	P	03 14 11.6	+0.4
	baz=320						
TX31	Lajitas Ar. Si	89.29	53	*e*P	P	03 14 12.4	+0.9
TXAR	Lajitas Array	89.29	53	P	P	03 14 12.5	+1.0
	comp=Z,2.9nm,0.5s,baz=302,slow=2.8,SNR=58						
Q41A	Truxton	89.30	39	P	P	03 14 11.8	+0.6
	baz=321,SNR=5.8						
N44A	Piper City	89.34	36	P	P	03 14 11.6	+0.3
	baz=323						
MFF	Saint Martin d	89.41	335	*e*P	P	03 14 11.4	-0.2
MFF				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ABTX	Abilene, Hawle	89.43	48	P	P	03 14 12.5	+0.5
	baz=316						
ABTX	Abilene, Hawle	89.43	48	*e*P	P	03 14 13.2	+1.2
	comp=Z,10nm,1.0s						
BASO	Ashfield	89.49	30	P	P	03 14 13.5	+1.5
	baz=327						
N45A	Kentland	89.58	35	P	P	03 14 13.0	+0.5
	baz=323						
BWLO	Walkerton	89.61	30	P	P	03 14 13.6	+1.1
	baz=327						
CLWO	Collingwood	89.65	29	P	P	03 14 13.5	+0.7
	baz=328						
M46A	Old House Fiel	89.66	34	P	P	03 14 13.4	+0.5
	baz=324						
Q42A	Golden Eagle	89.67	38	P	P	03 14 13.4	+0.4
	baz=321						
T39A	Clever	89.68	41	P	P	03 14 13.0	-0.1
	baz=320						
S40A	Lebanon	89.70	40	P	P	03 14 13.3	+0.2
	baz=320						
PEMO	Pembroke	89.72	26	P	P	03 14 13.2	+0.1
	baz=330						
R41A	Rosebud	89.73	39	P	P	03 14 13.6	+0.4
	baz=321						
N46A	Monticello	89.90	35	P	P	03 14 14.3	+0.4
	baz=324						
HHAR	Hobbs	89.94	42	*e*P	P	03 14 14.8	+0.5
	comp=Z,6.7nm,1.1s						
O45A	Potomac	89.96	36	P	P	03 14 14.5	+0.2
	baz=323						
RJF	Les Rejaudoux	89.97	333	*e*P	P	03 14 13.8	-0.4
RJF				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CCM	Cathedral Cave	89.98	39	P	P	03 14 15.0	+0.6
	baz=321						
CCM	Cathedral Cave	89.98	39	*e*P	P	03 14 15.7	+1.3
	comp=Z,11nm,0.9s						
CCM				*e*pP	pP	03 14 27.4	-0.3
CCM	Cathedral Cave	89.98	39	*e*P	P	03 14 15.7	+1.3
CCM				*e**PP	pP	03 14 27.4	-0.3
CCM				pmax	pmax		
	comp=Z,11nm,0.9s						
T40A	Mansfield	90.03	41	P	P	03 14 15.1	+0.4
	baz=320						
BANO	Bancroft	90.05	27	P	P	03 14 15.3	+0.7
	baz=330						
S41A	Jillco Farms,	90.09	40	P	P	03 14 15.4	+0.4
	baz=320						
CAF	Calviac	90.09	333	*e*P	P	03 14 14.8	-0.1
CAF				pmax	pmax		
	comp=Z,6.0nm,0.8s						
U39A	Green Forest	90.11	42	P	P	03 14 15.3	+0.2
	baz=320,SNR=8.9						
SFIN	Lafayette	90.15	35	P	P	03 14 15.3	+0.2
	baz=323						
P44A	Sand Creek, Wi	90.16	37	P	P	03 14 15.6	+0.3
	baz=322						
ELFO	Elginfield	90.32	30	P	P	03 14 16.4	+0.6
	baz=327						
PLVO	Plevna	90.34	27	P	P	03 14 15.9	0.0
	baz=330						
Q44A	Meyer Farm, Va	90.42	37	P	P	03 14 16.8	+0.3
	baz=322						
S42A	Caledonia	90.43	39	P	P	03 14 16.8	+0.3
	baz=321						
V39A	Pettigrew	90.44	42	P	P	03 14 16.8	+0.1
	baz=319,SNR=5.6						
U40A	Yellville	90.46	41	P	P	03 14 17.1	+0.3
	baz=320,SNR=13						
R43A	Red Bud	90.47	38	P	P	03 14 17.0	+0.3
	baz=322						
P45A	Graceland, Par	90.53	36	P	P	03 14 17.2	+0.3
	baz=323						
PKRO	Pickering	90.53	28	P	P	03 14 17.4	+0.5
	baz=329						
ALFO	Alfred	90.58	25	P	P	03 14 16.6	-0.4
	baz=332						
DELO	Deloro Mine	90.59	27	P	P	03 14 16.9	-0.2
	baz=330						
Q45A	Warren Harvey,	90.84	37	P	P	03 14 18.3	-0.1
	baz=323						
W39A	Magazine	90.85	43	P	P	03 14 18.9	+0.4
	baz=319						
T42A	Van Buren	90.85	40	P	P	03 14 18.9	+0.4
	baz=321						
JCT	Junction City	90.87	50	P	P	03 14 19.1	+0.4
	baz=316						
JCT	Junction City	90.87	50	*e*P	P	03 14 19.6	+0.9
	comp=Z,5.5nm,0.6s						
JCT	Junction City	90.87	50	*e*P	P	03 14 19.6	+0.9
JCT				pmax	pmax		
	comp=Z,6.0nm,0.6s						
V40A	Witts Springs	90.90	42	P	P	03 14 18.7	-0.1
	baz=320						
V40A	Witts Springs	90.90	42	*e*P	P	03 14 19.1	+0.3
	comp=Z,6.7nm,1.1s						
U41A	Viola	90.96	41	P	P	03 14 19.2	+0.2
	baz=320						
O48A	Farmland	91.12	34	P	P	03 14 20.0	+0.3
	baz=325						
WHTX	Lake Whitney,	91.17	47	P	P	03 14 20.5	+0.4
	baz=317,SNR=8.1						
X39A	Fountain Ranch	91.18	43	P	P	03 14 20.7	+0.6
	baz=319						
W40A	Ferguson Farm,	91.23	42	P	P	03 14 20.7	+0.4
	baz=320						
V41A	Mountainview	91.26	41	P	P	03 14 20.5	+0.1
	baz=320,SNR=8.9						
U42A	Revenden	91.30	40	P	P	03 14 20.9	+0.3
	baz=321						
PBMO	Poplar Bluff	91.38	40	*e*P	P	03 14 21.4	+0.5
	comp=Z,6.5nm,0.9s						
MIAR	Mount Ida	91.45	43	P	P	03 14 21.9	+0.6
	baz=319,SNR=6.6						
MIAR	Mount Ida	91.45	43	*e*P	P	03 14 22.1	+0.8
	comp=Z,7.9nm,0.7s						
MIAR	Mount Ida	91.45	43	*e*P	P	03 14 22.1	+0.8
MIAR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
Q47A	Bedord North L	91.61	36	P	P	03 14 22.3	+0.3
	baz=324						
V42A	Cord	91.64	41	P	P	03 14 22.2	+0.1
	baz=321						
W41B	Gary Mavity, V	91.68	42	P	P	03 14 22.7	+0.3
	baz=320						
W41B	Gary Mavity, V	91.68	42	*e*P	P	03 14 22.5	+0.2
	comp=Z,7.8nm,0.9s						
X40A	Basin Creek Fa	91.89	43	P	P	03 14 23.8	+0.5
	baz=320						
P49A	Miami Univ. Ec	91.91	34	P	P	03 14 23.5	+0.2
	baz=325						
ACSO	Alum Creek Sta	92.09	33	P	P	03 14 24.5	+0.3
	baz=326						
N54A	Moraine State	92.73	30	P	P	03 14 27.3	+0.2
	baz=328						
T47A	Sharon Grove	92.86	37	P	P	03 14 28.0	+0.2
	baz=323						
Q51A	Peebles	92.93	34	P	P	03 14 28.4	+0.3
	baz=326						
S50A	Richmond	93.56	35	P	P	03 14 31.2	+0.2
	baz=325						
V47A	Nunnelly	93.58	38	P	P	03 14 31.2	+0.1
	baz=323						
T50A	Nancy	93.90	36	P	P	03 14 32.9	+0.3
	baz=325						
KEST	Kesra	94.72	323	LR	LR	04 01 56.7	
	comp=Z,117nm,18.9s,baz=290,slow=38						
TKL	Tuckaleechee C	95.51	36	P	P	03 14 40.2	+0.2
	comp=Z,1.8nm,0.5s,baz=266,slow=0.9,SNR=5.3						
TKL				LR	LR	03 58 59.5	
	comp=Z,55nm,21.6s,baz=342,slow=36						
ES19	SONSECA Array	96.79	334	*e*P	P	03 14 45.6	-0.2
ESDC	Sonseca Array	96.84	334	P	P	03 14 45.4	-0.6
	comp=Z,0.6nm,0.6s,baz=22,slow=4.8,SNR=5.8						
ESDC				LR	LR	04 03 43.0	
	comp=Z,130nm,19.8s,baz=345,slow=39						
TORD	Torodi Ar. Bea	117.15	316	PKP	PKPdf	03 19 59.6	-0.9
	comp=Z,0.3nm,0.5s,baz=67,slow=1.0						
TORD				PP	PP	03 21 09.5	-0.5
	baz=34,slow=5.7						
QSPA	South Pole Qui	127.51	180	PKP	PKPdf	03 20 18.9	+0.2
	comp=Z,0.6nm,0.5s,baz=311,slow=23,SNR=2.6						
SAML	Samuel	143.38	45	*e*PKPbc	PKPdf	03 20 49.2	-0.5
SAML	Samuel	143.38	45	*e*PKIKP	PKPdf	03 20 49.2	-0.5
VNA3	Neumayer Olymp	143.40	195	PKP	PKPbc	03 20 46.1	+0.7
VNA1	Neumayer--Stat	143.56	196	PKP	PKPab	03 20 43.8	-1.1
LPAZ	La Paz	145.90	59	PKPbc	PKPbc	03 20 55.8	+0.3
	comp=Z,9.7nm,0.5s,baz=357,slow=2.7,SNR=60						
LCO	Las Campanas	151.43	82	*e*PKPbc	PKPbc	03 21 09.9	+0.8
LCO	Las Campanas	151.43	82	*e*PKIKP	PKPbc	03 21 09.9	+0.8

IDC 21 03:27:16.6±1.8**, 1°.28N**×**127°.03E, h0^{km}, mb3.8**/4**, mb1 4.0**/4**, mb1mx3.5**/59**, mbtmp3.8**/4**, Error ellipse: s-maj=179.9km s-min=20.4km az=67.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.28	162	P	P	03 32 16.1	+0.5
	1.6nm,0.4s,baz=340,slow=11,SNR=26						
ASAR	Alice Springs	25.68	165	P	P	03 32 48.2	-0.4
	0.8nm,0.5s,baz=345,slow=11,SNR=19						
MKAR	Makanchi Array	59.73	326	P	P	03 37 23.5	+0.1
	0.3nm,0.4s,baz=119,slow=7.7,SNR=6.3						
KURBB	Kurchatov Arra	63.95	328	P	P	03 37 51.5	-0.1
	0.9nm,0.6s,baz=127,slow=6.1,SNR=11						

IDC ***21*** *03:30:26.7±1.9, 51°.69N×174°.10W, h0^{km}, mb3.6/3, mb1 4.0/4, mb1mx3.4/77, mbtmp3.6/4, ML3.9/1, Error ellipse: s-maj=80.5km s-min=34.0km az=144.0*

ISCJB ***21*** *03:30:31.8±0.9, 51°.36N±0°.08×173°.83W±0°.08, h35^{km}, mb3.5/3, Error ellipse: s-maj=11.0km s-min=7.3km az=3.3*

NEIC ***21*** *03:30:37.4±0.0, 51°.65N×174°.21W, h26^{km}, ML3.1(AEIC), After AEIC.*

ISC 21 03:30:32.5±1.0**, 51°.44N**±0°.10×**173°.81W**±0°.07**, h35^{km}, n20,** σ1^s.**50**/18**, mb3.4**/3**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ATKA	Atka Island	0.80	343	P	Pn	03 30 47.9	+0.6
ATKA				S	Sn	03 30 57.3	-0.7
KOFP	Korovin Flat P	0.86	348	P	Pn	03 30 50.1	+2.0
KOKL	Mount Kliuchef	0.92	345	P	Pn	03 30 50.9	+1.9
KOWE	Korovin West	0.97	344	P	Pn	03 30 51.7	+2.0
GSCK	Great Sitkin C	1.57	292	P	Pn	03 30 58.3	+0.4
GSCK				S	Sn	03 31 15.3	-1.8
GSTD	Great Sitkin T	1.58	294	P	Pn	03 30 58.5	+0.4
ETKA	Kagalaska Isla	1.67	286	P	Pn	03 30 59.7	+0.5
ETKA				S	Sn	03 31 18.5	-1.0
ADAG	Mount Adagdak	1.82	288	P	Pn	03 31 02.4	+1.1
TAFP	Tanaga Falls P	2.64	282	P	Pn	03 31 15.2	+2.6
TAFP				S	Sn	03 31 44.2	+0.9
ILAR	Eielson Array	19.30	36	P	P	03 34 51.8	-2.3
	0.4nm,0.3s,baz=228,slow=9.0,SNR=23						
EGAK	Eagle	21.49	39	*e*P	P	03 35 16.3	-1.5
H11N2	WAKE ISLAND Hy	35.09	213	T	T	04 15 10.3	
	baz=13,slow=76,SNR=8.9						
H11N3	WAKE ISLAND Hy	35.10	213	T	T	04 15 09.7	
	SNR=5.8						
H11N1	WAKE ISLAND Hy	35.11	213	T	T	04 15 06.6	
	baz=21,slow=76,SNR=8.1						
H11S1	WAKE ISLAND Hy	36.29	212	T	T	04 16 45.7	
	baz=19,slow=76,SNR=22						
H11S2	WAKE ISLAND Hy	36.31	212	T	T	04 16 44.5	
	baz=19,slow=76,SNR=21						
H11S3	WAKE ISLAND Hy	36.31	212	T	T	04 16 43.7	
	baz=19,slow=76,SNR=20						
PDAR	Pinedale Array	43.29	75	P	P	03 38 31.5	+0.6
	0.3nm,0.5s,baz=324,slow=4.5,SNR=5.7						
TXAR	Lajitas Array	55.55	85	P	P	03 40 04.2	-0.2
	0.2nm,0.6s,baz=316,slow=6.9,SNR=3.4						
WRA	Warramunga Arr	84.30	228	P	P	03 43 00.6	0.0
	0.7nm,1.0s,baz=36,slow=6.2,SNR=3.1						

THR ***21*** *03:37:20.4±0.6, 40°.13N×53°.75E, h15^{km}, MD5.3*

ISCJB ***21*** *03:37:22.6±0.4, 39°.82N±0°.05×53°.71E±0°.03, h32^{km}, mb3.6/10, Error ellipse: s-maj=7.0km s-min=3.4km az=177.7*

CSEM ***21*** *03:37:22.0±0.7, 39°.81N×53°.77E, h10^{km}, ML4.0, Error ellipse: s-maj=18.7km s-min=8.7km az=150.0*

IDC ***21*** *03:37:25.8±1.4, 39°.87N×53°.78E, h45^{km}±17^{km}, mb3.4/12, mb1 3.7/18, mb1mx3.4/68, mbtmp3.7/18, ML3.5/5, Error ellipse: s-maj=16.2km s-min=10.3km az=17.0*

AZER ***21*** *03:37:27.3±1.3, 39°.69N×53°.37E, h15^{km}, ml4.0/10, Error ellipse: s-maj=12.7km s-min=11.0km az=144.0*

ISC 21 03:37:24.0±0.7**, 39°.93N**±0°.05×**53°.77E**±0°.05**, h32^{km}, n61,** σ**2^s.19**/94**, mb3.6**/10**, 30C-33D, Turkmenistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRVT	Maraveh tapeh	2.90	141	*i* PA	Pn	03 38 10.0	+2.0
GBS	Qobustan	3.75	281	⇑P	Pn	03 38 21.3	+1.7
GBS				⇑S	Sn	03 39 01.3	-1.4
GBS	Qobustan	3.75	281	⇑P	Pn	03 38 21.3	+1.7
GBS				⇑S	Sn	03 39 01.3	-1.4
ATGJ	Altiaghaj	3.81	286	⇓P	Pn	03 38 22.0	+1.5
ATGJ				⇓S	Sn	03 39 06.6	+2.4
ATGJ	Altiaghaj	3.81	286	⇓P	Pn	03 38 22.0	+1.5
ATGJ				⇓S	Sn	03 39 06.6	+2.4
SIZA	Siyzn	3.89	289	⇓P	Pn	03 38 22.9	+1.3
SIZA				⇑S	Sn	03 39 09.0	+2.8
SIZA	Siyzn	3.89	289	⇓P	Pn	03 38 22.9	+1.3
SIZA				⇑S	Sn	03 39 09.0	+2.8
GEYT	Alibeck	3.93	119	P	Pn	03 38 24.7	+2.5
	4.5nm,0.3s,baz=293,slow=7.6,SNR=6.1						
GEYT				S	Sn	03 39 07.3	0.0
	2.4nm,0.3s,baz=348,slow=12,SNR=3.5						
LKRN	Lenkeran, Azer	4.06	254	⇑S	Sn	03 39 08.2	-2.0
LKRN	Lenkeran, Azer	4.06	254	⇑S	Sn	03 39 08.2	-2.0
ASTR	Astara	4.10	252	⇑P	Pn	03 38 24.2	-0.2
ASTR				⇑S	Sn	03 39 09.1	-2.2
ASTR	Astara	4.10	252	⇑P	Pn	03 38 24.2	-0.2
ASTR				⇑S	Sn	03 39 09.1	-2.2
GLBA	Clilabad	4.21	262	⇓P	Pn	03 38 26.8	+0.9
GLBA				⇓S	Sn	03 39 13.4	-0.6
GLBA	Clilabad	4.21	262	⇓P	Pn	03 38 26.8	+0.9
GLBA				⇓S	Sn	03 39 13.4	-0.6
QUBA	Quba, Azerbaij	4.26	291	⇑P	Pn	03 38 29.4	+2.7
QUBA				⇑S	Sn	03 39 17.8	+2.5
QUBA	Quba, Azerbaij	4.26	291	⇑P	Pn	03 38 29.4	+2.7
QUBA				⇑S	Sn	03 39 17.8	+2.5
SHRO	Shahrood	4.31	155	*i* PA	Pn	03 38 30.1	+2.7
LRK	Lerik	4.41	255	⇓P	Pn	03 38 28.5	-0.3
LRK				⇓S	Sn	03 39 16.2	-2.9
LRK	Lerik	4.41	255	⇓P	Pn	03 38 28.5	-0.3
LRK				⇓S	Sn	03 39 16.2	-2.9
XNQ	Khinaliq	4.47	288	⇑P	Pn	03 38 32.1	+2.4
XNQ				⇓S	Sn	03 39 20.7	+0.1
XNQ	Khinaliq	4.47	288	⇑P	Pn	03 38 32.1	+2.4
XNQ				⇓S	Sn	03 39 20.7	+0.1
DAMV	Damavand	4.52	199	*i* PA	Pn	03 38 33.1	+2.6
CHTH	Charan	4.53	208	*i* PA	Pn	03 38 33.3	+2.8
GRMI	Germi	4.69	258	*i* PA	Pn	03 38 33.5	+0.9
ZNJK	Zanjan	5.16	232	*i* PA	Pn	03 38 40.2	+1.0
SEKA	Sheki	5.17	286	⇑P	Pn	03 38 40.7	+1.6
SEKA				⇓S	Sn	03 39 38.0	+0.3
SEKA	Sheki	5.17	286	⇑P	Pn	03 38 40.7	+1.6
SEKA				⇓S	Sn	03 39 38.0	+0.3
ZKTA	Zakatala	5.69	290	⇓S	Sn	03 39 52.1	+1.6
GANJ	Ganja	5.74	280	⇓P	Pn	03 38 48.3	+1.3
GANJ				⇑S	Sn	03 39 49.5	-2.3
GANJ	Ganja	5.74	280	⇓P	Pn	03 38 48.3	+1.3
GANJ				⇑S	Sn	03 39 49.5	-2.3
ORD	Ordubad	6.10	263	⇓P	Pn	03 38 52.8	+0.7
ORD				⇓S	Sn	03 39 58.0	-2.8
ORD	Ordubad	6.10	263	⇓P	Pn	03 38 52.8	+0.7
ORD				⇓S	Sn	03 39 58.0	-2.8
GDB	GEDABAY	6.18	280	⇓P	Pn	03 38 54.3	+1.2
GDB				⇑S	Sn	03 39 59.8	-2.9
GDB	GEDABAY	6.18	280	⇓P	Pn	03 38 54.3	+1.2
GDB				⇑S	Sn	03 39 59.8	-2.9
SBZ	Shahbuz	6.36	268	⇑P	Pn	03 38 55.6	0.0
SBZ				⇓S	Sn	03 40 05.7	-1.5
SBZ	Shahbuz	6.36	268	⇑P	Pn	03 38 55.6	0.0
SBZ				⇓S	Sn	03 40 05.7	-1.5
NAX	Nakhchivan	6.44	266	⇑S	Sn	03 40 08.5	-0.6
NAX	Nakhchivan	6.44	266	⇑S	Sn	03 40 08.5	-0.6
QZX	Qazax, Azerbai	6.50	283	⇑P	Pn	03 38 58.0	+0.5
QZX				⇓S	Sn	03 40 08.8	-1.7
QZX	Qazax, Azerbai	6.50	283	⇑P	Pn	03 38 58.0	+0.5
QZX				⇓S	Sn	03 40 08.8	-1.7
TABS	Tabas	6.82	156	*i* PA		03 39 05.1	
GNI	Garni	6.93	275	P	Pn	03 39 04.1	+0.6
	1.0nm,0.3s,baz=85,slow=9.0,SNR=2.5						
GNI				S	Sn	03 40 24.3	+3.0
	1.5nm,0.3s,baz=7.6,slow=12,SNR=2.4						
KBZ	Khabaz	8.96	299	P	Pn	03 39 33.7	+2.6
	0.4nm,0.3s,baz=183,slow=3.4,SNR=6.1						
KBZ				S	Sn	03 41 05.9	-5.0
	0.5nm,0.3s,baz=287,slow=15,SNR=3.3						
AB31	Akbulak array	10.31	23	Pn	Pn	03 39 50.4	+0.9
	0.6nm,0.3s,baz=194,slow=11,SNR=12						
AB31				Sn	Sn	03 41 38.2	-5.7
	2.8nm,0.5s,baz=193,slow=23,SNR=11						
AB31	Akbulak array	10.31	23	Pn	Pn	03 39 50.4	+0.9
	0.6nm,0.3s,SNR=12						
AB31				Sn	Sn	03 41 38.2	-5.7
	2.8nm,0.5s,SNR=11						
AKTO	Aktyubinsk	10.92	14	P	Pn	03 40 00.7	+2.7
	0.4nm,0.3s,baz=184,slow=15,SNR=3.6						
AKTO				S	Sn	03 41 52.7	-6.3
	2.9nm,0.3s,baz=81,slow=20,SNR=15						
AKTO	Aktyubinsk	10.92	14	⇓Pn	Pn	03 39 58.2	+0.2
	4.0nm,0.6s						
AKTO				⇓Sn	Sn	03 41 51.9	-7.0
	20nm,0.8s						
ARU	Arti	16.81	9	P	P	03 41 18.7	+0.1
	0.0nm,0.3s,baz=181,slow=5.2,SNR=20						
BVAR	Borovoye Array	17.34	35	P	Pn	03 41 23.3	0.0
	0.2nm,0.3s,baz=219,slow=11,SNR=7.2						
AKASG	Malin Array Be	20.25	310	P	P	03 41 56.4	-0.1
	0.6nm,8.8s,baz=90,slow=8.8,SNR=6.4						
KURBB	Kurchatov Arra	20.35	50	P	Pn	03 41 59.8	+0.2
	0.7nm,0.8s,baz=252,slow=11,SNR=4.7						
MLR	Muntele Rosu	21.13	294	P	P	03 42 07.9	+1.7
	2.6nm,0.8s,baz=195,slow=16,SNR=5.7						
MKAR	Makanchi Array	21.76	62	P	P	03 42 14.4	+1.6
	2.7nm,1.0s,baz=252,slow=11,SNR=13						
ZALV	Zalesovo Beam	25.17	46	P	P	03 42 47.2	+1.0
	0.8nm,0.4s,baz=243,slow=45,SNR=2.7						
FINES	FINESS Array B	27.40	331	P	P	03 43 06.8	+0.5
	0.7nm,0.5s,baz=140,slow=9.9,SNR=7.4						
HFS	Hagfors	32.01	323	P	P	03 43 47.6	+0.5
	1.4nm,0.7s,baz=112,slow=10,SNR=8.4						
NOA	NORSAR Array B	33.47	323	P	P	03 44 00.2	+0.2
	0.5nm,0.7s,baz=114,slow=8.4,SNR=2.6						
EKA	Eskdalemuir Ar	40.15	312	P	P	03 44 57.0	+0.3
	0.3nm,0.3s,baz=95,slow=8.5,SNR=9.0						
ESDC	Sonseca Array	43.67	289	P	P	03 45 26.2	+0.5
	0.2nm,0.6s,baz=77,slow=8.0,SNR=3.5						
TORD	Torodi Ar. Bea	52.78	255	P	P	03 46 36.4	+0.2
	0.5nm,1.0s,baz=62,slow=6.2						
OPO	Ambohidratompo	58.52	187	P	P	03 47 17.6	+0.2
	3.8nm,0.9s,baz=45,slow=7.1,SNR=2.9						

NIED ***21*** *03:40:00, 40°.90N×145°.10E, h5^{km}, Mw3.7 Best double couple: M$_0$4.59000×10^{14} NP1:φ$_s$242.00000°, δ34.00000°, λ-76.00000°. NP2:φ$_s$45.00000°, δ57.00000°, λ-100.00000°.*

IDC ***21*** *03:40:41.6±0.8, 40°.84N×145°.03E, h0^{km}, mb3.8/15, mb1 3.9/17, mb1mx3.7/67, mbtmp3.7/17, ML3.4/2, MS3.0/2, Ms1 3.0/2, ms1mx2.4/64, Error ellipse: s-maj=24.7km s-min=18.2km az=92.0*

JMA ***21*** *03:40:42.8±0.2, 40°.88N×145°.14E, h69^{km}±3^{km}, M4.0*

NEIC ***21*** *03:40:43.1±4.2, 40°.83N×145°.00E, h11^{km}±25^{km}, mb4.2/2, Error ellipse: s-maj=15.1km s-min=7.6km az=94.0*

ISCJB ***21*** *03:40:44.4±0.5, 40°.90N±0°.03×144°.93E±0°.04, h33^{km}, mb3.8/18, Error ellipse: s-maj=4.9km s-min=3.8km az=6.0*

ISC 21 03:40:46.6±0.7**, 40°.89N**±0°.04×**145°.02E**±0°.06**, h35^{km}, n45,** σ**2^s.08**/63**, mb3.8**/18**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ERM	Erimo	1.80	309	*e*Pn	Pn	03 41 14.0	-1.1
ERM				*e*Sn	Sn	03 41 32.6	-4.0
JEM	Erimo	1.80	309	P	Pn	03 41 13.6	-1.5
JEM				*e*S	Sn	03 41 34.4	-2.3
JTHR	Tokachihiroo	1.91	318	P	Pn	03 41 14.6	-2.0
JTHR				*e*S	Sn	03 41 37.2	-2.1
JAK	Akkeshi	2.12	354	P	Pn	03 41 17.0	-2.5
JAK				*e*S	Sn	03 41 41.6	-3.0
JCH	Churui	2.13	325	P	Pn	03 41 17.7	-1.9
JCH				*e*S	Sn	03 41 42.2	-2.5
JNBK	Urakawa-nobuka	2.20	310	*e*S	Sn	03 41 46.0	-0.5
JOB	Onbets	2.20	337	*e*S	Sn	03 41 45.1	-1.5
NEM2	Nemuro 2	2.53	12	P	Pn	03 41 23.1	-2.1
NEM2				*e*S	Sn	03 41 51.7	-3.1
JAR	Ashorobuto	2.58	339	P	Pn	03 41 23.4	-2.5
JAR				*e*S	Sn	03 41 53.0	-3.0
JNK	Nakash	2.71	355	P	Pn	03 41 24.6	-3.0
JNK				*e*S	Sn	03 41 54.3	-4.8
JANG	Nango	2.72	260	P	Pn	03 41 25.2	-2.5
JANG				*e*S	Sn	03 41 56.5	-2.9
JBT2	Biratori 2	2.74	314	P	Pn	03 41 27.1	-0.9
JBT2				*e*S	Sn	03 41 59.9	0.0
JFR	Furan	2.91	322	P	Pn	03 41 28.0	-2.3
JFR				*e*S	Sn	03 42 01.2	-2.8
JOT	Ohata	3.04	281	P	Pn	03 41 30.6	-1.6
JOT				*e*S	Sn	03 42 04.4	-2.9
JRA	Rausu	3.05	1	*e*S	Sn	03 42 03.6	-3.9
JKB	Kayabe	3.16	290	P	Pn	03 41 32.9	-0.9
JKB				*e*S	Sn	03 42 07.4	-2.9
JOM	Ohasama	3.19	245	P	Pn	03 41 32.2	-2.0
JOM				*e*S	Sn	03 42 07.9	-3.0
JTKR	Abashiri--Toko	3.19	345	*e*S	Sn	03 42 08.9	-2.1
JEW	Eniwo	3.31	307	P	Pn	03 41 35.2	-0.6
JEW				*e*S	Sn	03 42 13.1	-0.7
JMK	Ichinoseki	3.50	238	P	Pn	03 41 36.6	-1.9
JMK				*e*S	Sn	03 42 14.2	-4.5
ASAJ	Asahikawa	3.69	332	Pn	Pn	03 41 40.7	-0.4
	2.0nm,0.3s,baz=176,slow=10,SNR=13						
ASAJ				Sn	Sn	03 42 22.2	-1.2
	3.5nm,0.3s,baz=115,slow=31,SNR=6.8						
ASAJ				LR	LR	03 43 25.5	
	comp=Z,162nm,21.8s,baz=176,slow=44						
MJAR	Matsushiro Arr	6.87	233	Pn	Pn	03 42 23.4	-1.4
	0.8nm,0.3s,baz=43,slow=11,SNR=5.5						
MAJO	Matsushiro	6.87	233	*e*Pn	Pn	03 42 23.5	-1.3
JOW	Kunigami	19.70	230	LR	LR	03 53 11.3	
	comp=Z,60nm,20.7s,baz=92,slow=38						
SONM	Songino Array	28.25	297	P	P	03 46 36.5	+0.2
	0.9nm,0.8s,baz=89,slow=6.2,SNR=4.6						
ZALV	Zalesovo Beam	41.53	309	P	P	03 48 33.4	+3.2
	0.4nm,0.3s,baz=97,slow=9.3,SNR=1.9						
MKAR	Makanchi Array	44.56	300	P	P	03 48 55.6	+0.6
	0.5nm,0.7s,baz=83,slow=10,SNR=3.5						
ILAR	Eielson Array	44.73	34	P	P	03 48 56.9	+0.8
	0.6nm,0.8s,baz=244,slow=6.3,SNR=5.2						
KURK	Kurchatov	45.87	306	*e*P	P	03 49 04.6	-0.6
KURK				PcP	PcP	03 50 43.3	+1.4
KURBB	Kurchatov Arra	45.95	306	P	P	03 49 06.2	+0.4
	1.3nm,0.7s,baz=78,slow=8.5,SNR=6.6						
KURBB				PcP	PcP	03 50 43.3	+1.1
	0.4nm,0.7s,baz=87,slow=2.6,SNR=3.6						
BVAR	Borovoye Array	50.13	311	P	P	03 49 39.1	+1.0
	0.5nm,0.4s,baz=80,slow=10,SNR=4.3						
BRVK	Borovoye	50.18	311	*e*P	P	03 49 37.8	-0.7
	1.1nm,0.3s						
YKA	Yellowknife Ar	59.06	32	P	P	03 50 43.5	+0.8
	0.2nm,0.7s,baz=241,slow=40,SNR=2.6						
WRAB	Tennant Creek	61.32	191	*e*P	P	03 50 56.9	-1.7
	0.8nm,0.5s						
WRA	Warramunga Arr	61.33	191	P	P	03 50 58.2	-0.4
	1.6nm,0.8s,baz=11,slow=6.7,SNR=5.9						
ASAR	Alice Springs	65.05	191	P	P	03 51 23.5	+0.2
	0.4nm,0.7s,baz=14,slow=8.2,SNR=3.8						
FINES	FINESS Array B	66.70	333	P	P	03 51 32.8	-0.7
	0.9nm,0.5s,baz=46,slow=9.1,SNR=9.0						
KBZ	Khabaz	70.51	311	P	P	03 51 59.2	+1.7
	1.6nm,0.8s,baz=110,slow=3.2,SNR=3.8						
NB2	NORSAR Subarra	71.69	338	P	P	03 52 04.7	+0.2

	comp=Z,0.5nm,0.6s,baz=36,slow=6.2						
NOA	NORSAR Array B	71.69	338	P	P	03 52 05.1	+0.6
	comp=Z,0.7nm,0.6s,baz=37,slow=6.1,SNR=4.0						
HFS	Hagfors	71.70	337	P	P	03 52 05.2	+0.7
	comp=Z,0.9nm,0.5s,baz=56,slow=2.7,SNR=5.6						
AKASG	Malin Array Be	72.94	323	P	P	03 52 12.6	+0.6
	comp=Z,0.6nm,0.4s,baz=43,slow=6.7,SNR=3.7						
CLL	Collm	79.10	332	*i* P	P	03 52 47.6	+0.5
EKA	Eskdalemuir Ar	80.39	342	P	P	03 52 55.0	+1.0
	comp=Z,0.3nm,0.4s,baz=28,slow=5.3,SNR=4.4						
GERES	GERESS Array B	80.86	330	P	P	03 52 57.3	+0.5
	comp=Z,0.2nm,0.4s,baz=35,slow=7.2,SNR=4.2						

*CSEM **21** 03:42:42.4±0.5, 50°.31N×19°.03E, h1^{km}, Error ellipse: s-maj=9.4km s-min=3.5km az=19.0*

PRU 21 03:42:43.6, 50°.26N×19°.04E, h0^{km}, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHZP	Chorzow	0.04	315	*e*Pg	Pg	03 42 47.0	+2.6
CHZP				*e*Sg	Sg	03 42 49.1	+4.1
OJC	Ojcow	0.49	94	*e*Pg	Pg	03 42 52.8	-0.1
OJC				*e*Sg	Sg	03 42 59.1	-0.2
OJC	Ojcow	0.49	94	*e*Sg	Sg	03 42 59.1	-0.2
OKC	Ostrava-Krasne	0.71	234	*e*SG	Sg	03 43 07.2	+0.7
	6.1nm,0.3s						
OKC	Ostrava-Krasne	0.71	234	Sg	Sg	03 43 07.2	+0.7
	6.1nm,0.3s						
MORC	Moravsky Berou	1.08	244	*e*Sg	Sg	03 43 18.9	+0.6
MORC	Moravsky Berou	1.08	244	*e*PG	Pb	03 43 04.9	-0.3
MORC				*e*SG	Sg	03 43 18.9	+0.6
LANS	Liptovska Anna	1.15	166	*e*PG	Pg	03 43 05.4	-0.1
LANS				*e*SG	Sg	03 43 20.0	-0.3
LANS	Liptovska Anna	1.15	166	*e*Pg	Pg	03 43 05.4	-0.1
LANS				*e*Sg	Sg	03 43 20.0	-0.3
NIE	Niedzica	1.17	135	*e*Pg	Pg	03 43 06.2	+0.2
NIE				*e*Sg	Sg	03 43 21.7	+0.5
NIE	Niedzica	1.17	135	*e*Pg	Pg	03 43 06.2	+0.1
NIE				*e*Sg	Sg	03 43 21.7	+0.5
KRLC	Kraliky	1.46	264	*e*PG	Pn	03 43 09.8	-1.5
KRLC				*e*SG	Sg	03 43 30.5	-0.1
	comp=Z,1.1nm,0.5s						
KRLC	Kraliky	1.46	264	Pg	Pn	03 43 09.8	-1.5
KRLC				Sg	Sg	03 43 30.5	-0.1
	1.1nm,0.5s						
DPC	Dobruska-Polom	1.75	274	*e*PG	Pn	03 43 15.1	-0.1
DPC				*e*SG	Sb	03 43 39.0	0.0
	comp=Z,3.1nm,0.5s						
DPC	Dobruska-Polom	1.75	274	Pg	Pn	03 43 15.1	-0.1
DPC				Sg	Sb	03 43 39.0	0.0
	3.1nm,0.5s						
VYHS	Vyhne	1.77	184	*e*PG	Pn	03 43 14.3	-1.2
VYHS				*e*SG	Sn	03 43 37.0	-1.8
VYHS				*e*LG	Lg	03 43 39.1	
VYHS	Vyhne	1.77	184	*e*Pg	Pn	03 43 14.3	-1.2
VYHS				*e*Sn	Sn	03 43 37.0	-1.8
UPC	Upice	1.95	278	*e*SG	Sg	03 43 47.0	+0.7
UPC	Upice	1.95	278	Sg	Sg	03 43 47.0	+0.7
PRU	Pruhonice	2.91	266	*e*SG	Sg	03 44 15.5	-1.5
PRU	Pruhonice	2.91	266	Sg	Sg	03 44 15.5	-1.5
KHC	Kasperske Hory	3.72	254	*e*SG	Sg	03 44 42.3	-0.8
KHC	Kasperske Hory	3.72	254	Sg	Sg	03 44 42.3	-0.8

IDC 21 03:54:57.6±1.7, 45°.22N×130°.15E, h571^{km}±27^{km}, mb2.7/3, mb1 2.6/5, mb1mx2.4/63, mbtmp3.6/5, Error ellipse: s-maj=57.9km s-min=40.9km az=117.0, Priamurye-Northeastern China border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
USRK	Ussuriysk Ar.	1.66	127	P	P	03 56 08.1	+0.2
	baz=299,slow=3.9						
USRK				S	S	03 57 05.5	+0.3
	baz=1.1,slow=23						
KSRS	Korea Array	7.94	193	P	P	03 56 55.5	+0.1
	0.1nm,0.3s,baz=357,slow=12,SNR=4.1						
SONM	Songino Array	16.54	288	P	P	03 58 21.6	+0.4
	0.1nm,0.3s,baz=78,slow=8.1,SNR=4.0						
MKAR	Makanchi Array	32.88	290	P	P	04 00 45.1	-0.1
	0.3nm,0.6s,baz=86,slow=9.0,SNR=4.4						
KURBB	Kurchatov Arra	34.42	298	P	P	04 00 57.8	-0.2
	0.7nm,0.3s,baz=80,slow=9.2,SNR=5.4						
FINES	FINESS Array B	57.46	326	P	P	04 03 52.0	-0.2
	1.0nm,0.9s,baz=55,slow=7.7,SNR=6.2						

*IDC **21** 03:56:40.2±0.9, 16°.80N×120°.32E, h0^{km}, mb3.7/9, mb1 3.9/9, mb1mx3.7/58, mbtmp3.8/9, MS2.9/4, Ms1 2.9/4, ms1mx2.6/55, Error ellipse: s-maj=37.8km s-min=19.1km az=69.0*

*MAN **21** 03:56:44.3, 16°.95N×119°.79E, h31^{km}, mb4.9, ML3.8, MS3.7*

*ISCJB **21** 03:56:45.8±0.8, 16°.94N±0°.05×119°.90E±0°.07, h39^{km}±11^{km}, mb3.7/8, MS2.7/2, Error ellipse: s-maj=12.3km s-min=5.6km az=31.0*

ISC 21 03:56:45.1±1.9, 16°.86N±0°.05×120°.00E±0°.08, h29^{km}±15^{km}, n20, σ1^{s}39/23, mb3.7/8, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOLP	Bolinao	0.49	190	*e*P	Pn	03 56 56.7	+0.5
BOLP				*e*S	Sn	03 57 05.6	+1.9
ABRA	Dolores	1.04	41	*e*P	Pn	03 57 03.6	-0.1
ABRA				*e*S	Sn	03 57 18.3	+1.0
SCZP	Santa Cruz	1.08	184	*e*P	Pb	03 57 05.0	-0.3
SCZP				*e*S	Sn	03 57 20.1	+1.7
APYP	Conner	1.55	50	*e*P	Pn	03 57 11.2	+0.4
APYP				*e*S	Sn	03 57 30.5	+0.5
PCPH	Palayan	1.67	141	*e*P	Pb	03 57 14.3	-0.9
PCPH				*e*S	Sb	03 57 36.7	+0.9
CAUP	Cauayan	1.75	87	*e*P	Pb	03 57 17.0	+0.4
CAUP				*e*S	Sb	03 57 40.1	+2.0
CVP	Callao Caves	1.93	64	*e*P	Pb	03 57 17.9	-1.8
CVP				*e*S	Sn	03 57 40.6	+1.2
TGY	Tagaytay City	2.89	162	Pg	Pb	03 57 33.8	-2.3
	80nm,0.3s,baz=180,slow=6.1,SNR=3.3						
TGY				Lg	Lg	03 58 11.9	
	70nm,0.3s,baz=242,slow=16,SNR=3.8						
DAV	Davao City (W)	11.16	150	LR	LR	04 04 12.0	
	comp=Z,63nm,21.9s,baz=337,slow=41						
JNU	Nakatsue	18.93	29	LR	LR	04 08 00.2	
	comp=Z,37nm,21.7s,baz=121,slow=36						
CMAR	Chiang Mai Arr	20.13	278	P	Pn	04 01 20.4	+1.5
	1.2nm,0.3s,baz=91,slow=8.5,SNR=3.4						
KSRS	Korea Array	21.67	17	P	P	04 01 32.9	-0.5
	1.5nm,0.8s,baz=199,slow=12,SNR=6.4						
KSRS				LR	LR	04 10 14.2	
	comp=Z,34nm,18.5s,baz=218,slow=38						
MJAR	Matsushiro Arr	25.39	36	LR	LR	04 11 41.5	
	comp=Z,24nm,21.0s,baz=220,slow=36						
SONM	Songino Array	32.85	343	P	P	04 03 17.4	+0.9
	2.1nm,0.7s,baz=165,slow=9.8,SNR=15						
WRA	Warramunga Arr	39.20	158	P	P	04 04 08.8	-2.1
	0.6nm,0.9s,baz=341,slow=9.3,SNR=3.8						
ASAR	Alice Springs	42.51	161	P	P	04 04 36.3	-1.9
	0.5nm,0.5s,baz=340,slow=6.7,SNR=6.2						
MKAR	Makanchi Array	43.12	322	P	P	04 04 44.5	+1.6
	0.3nm,0.5s,baz=113,slow=9.3,SNR=4.1						
KURBB	Kurchatov Arra	47.21	325	P	P	04 05 16.0	+0.7
	1.1nm,0.9s,baz=123,slow=8.7,SNR=7.1						
FINES	FINESS Array B	77.21	331	P	P	04 08 35.9	-0.3
	2.8nm,1.0s,baz=28,slow=6.3,SNR=2.7						
YKA	Yellowknife Ar	90.12	22	P	P	04 09 41.6	-0.7
	0.6nm,0.8s,baz=309,slow=5.1,SNR=5.4						

IDC 21 03:57:14.2±3.8, 6°.23S×148°.35E, h0^{km}, mb3.0/1, mb1 3.4/3, mb1mx3.2/43, mbtmp3.3/3, ML2.7/2, Error ellipse: s-maj=124.9km s-min=34.6km az=105.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	3.37	200	Pn	Pn	03 58 09.4	+1.2
	6.7nm,0.3s,baz=307,slow=7.3,SNR=7.1						
PMG				Sn	Sn	03 58 48.3	-0.6
	14nm,0.3s,baz=317,slow=22,SNR=8.2						
WRA	Warramunga Arr	19.27	224	P	Pn	04 01 42.0	+0.6
	0.1nm,0.3s,baz=50,slow=11,SNR=3.8						
ASAR	Alice Springs	22.22	217	P	P	04 02 11.8	-0.7
	0.4nm,0.6s,baz=52,slow=9.5,SNR=5.2						
TORD	Torodi Ar. Bea	146.45	284	PKPbc	PKPdf	04 16 57.1	0.0

baz=74,slow=2.7

MEX 21 04:00:50.6±0.3, 15°.94N×98°.02W, h8^{km}±2^{km}, MD3.6, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.47	347	*e*P	Pg	04 00 59.4	-0.3
PNIG				*e*S	Sg	04 01 06.0	+0.2
VHO	Vista Hermosa	1.68	47	*i* P	Pn	04 01 16.8	-3.7
VHO				*i* S	Sn	04 01 37.9	-4.4
TLIG	Tlapa	1.70	342	*e*P	Pn	04 01 17.1	-3.6
TLIG				*i* S	Sn	04 01 38.3	-4.5

TRN 21 04:07:24.5, 11°.22N×62°.06W, h134^{km}, MD3.5, 2C, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRN	Trinidad (W)	0.86	131	⇑*i*P	Pn	04 07 46.4	-0.1
TRN				*e*S	Sn	04 08 02.1	-1.1
GRGR	Grenville	0.99	23	*e*P	Pn	04 07 46.8	-0.9
GRGR				*e*S	Sn	04 08 04.3	-1.1
TPP	Pointe-a-Pierr	1.08	146	*e*P	Pn	04 07 49.0	+0.5
TPP				*e*S	Sn	04 08 06.7	0.0
GRHS	Sauteurs	1.08	22	*e*S	Sn	04 08 06.1	-0.7
GRSS	Sisters	1.16	22	*e*S	Sn	04 08 08.1	-0.1
TBH	Brigand Hill	1.22	127	*e*P	Pn	04 07 50.3	+0.4
TBH				*e*S	Sn	04 08 08.9	-0.2
TOSP	Speyside	1.49	87	⇑*i*P	Pn	04 07 51.9	-0.9
TOSP				*e*S	Sn	04 08 13.6	-0.8
FCV	Fort Charlotte	2.08	22	*e*P	Pn	04 08 00.7	+1.0
FCV				*e*S	Sn	04 08 25.8	-0.9
SVB	Belmont	2.19	21	*e*P	Pn	04 08 00.2	-0.8
SVB				*e*S	Sn	04 08 27.9	-1.2
SVCV	St. Vincent, C	2.23	23	*e*P	Pn	04 08 01.0	-0.5
SVCV				*e*S	Sn	04 08 28.5	-1.4
SVV	Soufriere Volc	2.24	21	*e*P	Pn	04 08 01.6	-0.1
SVV				*e*S	Sn	04 08 29.6	-0.6
SSV	Crater Summit	2.26	22	*e*P	Pn	04 08 02.1	+0.1
SLB	Belfond	2.78	21	*e*P	Pn	04 08 09.0	+0.5
SLB				*e*S	Sn	04 08 40.4	-2.0

WEL 21 04:14:14.2, 41°S±4°×17°3E±°, h12^{km}, ML3.7/38, Cook Strait

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUWZ	D'Urville Isla	0.45	115	P	Pg	04 14 23.3	+0.2
DUWZ				S	Sg	04 14 29.3	+0.3
NNZ	Nelson	0.60	180	P	Pb	04 14 26.8	+0.1
NNZ				S	Sb	04 14 36.2	+1.1
QRZ	Quartz Range	0.68	252	P	Pg	04 14 27.6	+0.1
QRZ				S	Sb	04 14 37.4	-0.1
TCW	Tory Channel	0.90	132	P	Pg	04 14 31.1	-0.5
TUWZ	Tuamarina	0.92	153	P	Pg	04 14 31.7	-0.2
TUWZ				S	Sb	04 14 44.9	+0.7
BSWZ	Blackbirch Sta	1.16	162	P	Pg	04 14 36.7	+0.2
BSWZ				S	Sn	04 14 53.0	+1.0
KIW	Kapiti Island	1.18	102	P	Pn	04 14 36.2	-0.3
KIW				S	Sb	04 14 51.6	-0.3
THZ	Tophouse	1.20	197	P	Pb	04 14 37.0	+0.1
THZ				S	Sn	04 14 55.0	+1.8
NMEZ	Namu Road	1.26	18	P	Pn	04 14 36.8	-0.8
NMEZ				S	Sb	04 14 53.8	-0.2
CMWZ	Cape Campbell	1.29	151	P	Pg	04 14 39.8	+0.7
CMWZ				S	Sg	04 14 59.0	+3.1
CAW	Cannon Point	1.37	112	P	Pb	04 14 40.0	+0.3
OGWZ	Otaki Gorge	1.37	99	P	Pb	04 14 39.8	0.0
BHW	Baring Head	1.38	126	P	Pb	04 14 39.9	0.0
LREZ	Lake Rotokare	1.39	34	P	Pn	04 14 39.7	+0.2
PREZ	Palmer Road	1.40	25	P	Pn	04 14 38.9	-0.8
KHEZ	Kahui Hut	1.41	20	P	Pn	04 14 39.0	-0.7
PKE	Pukeiti	1.49	18	P	Pn	04 14 39.9	-1.0
WAZ	Wanganui	1.50	55	P	Pn	04 14 40.7	-0.2
OHWZ	Ohakea	1.53	75	P	Pb	04 14 42.0	-0.4
MSWZ	Moikau Station	1.62	120	P	Pb	04 14 43.8	-0.2
HOWZ	Holdsworth Sta	1.64	101	P	Pb	04 14 43.7	-0.7
DSZ	Denniston Nort	1.64	226	P	Pn	04 14 43.6	+0.7
MRZ	Mangatainoka R	1.67	92	P	Pn	04 14 43.8	+0.5
MTW	Mount Morrison	1.69	109	P	Pn	04 14 44.2	+0.6
PLWZ	Palliser	1.70	125	P	Pn	04 14 44.5	+0.7
PAWZ	Paruwai Farm	1.72	117	P	Pb	04 14 45.6	-0.2
KHZ	Kahutara	1.80	176	P	Pb	04 14 47.1	0.0
VRZ	Vera Road	1.83	36	P	Pn	04 14 45.2	-0.2
POWZ	Post Office Ro	1.83	84	P	Pb	04 14 46.7	-0.9
TIWZ	Tintock	1.91	96	P	Pb	04 14 48.7	-0.2
TRWZ	Traveller	1.91	115	P	Pg	04 14 50.9	+0.1
TMWZ	Te Maipa	1.96	105	P	Pb	04 14 49.1	-0.8
PRWZ	Pori Road	1.97	89	P	Pn	04 14 47.9	+0.5
PKVZ	Pokaka	2.01	49	P	Pn	04 14 47.8	-0.2
MTVZ	Mangateitei	2.02	53	P	Pn	04 14 49.1	+1.0
TSZ	Takapari Road	2.04	75	P	Pn	04 14 49.9	+1.4
DRZ	Dome Shelter	2.14	52	P	Pn	04 14 50.5	+0.5
DVHZ	Dannevirke	2.15	82	P	Pn	04 14 51.4	+1.6
FWVZ	Far West T-bar	2.15	51	P	Pn	04 14 50.0	-0.1
WHVZ	Whangaehu Hut	2.15	53	P	Pn	04 14 50.7	+0.6
BFZ	Birch Farm	2.18	93	P	Pn	04 14 50.0	-0.2
COVZ	Chateau Observ	2.18	50	P	Pn	04 14 51.6	+1.2
MOVZ	Moawhango	2.18	57	P	Pn	04 14 50.8	+0.5
TUVZ	Tukino	2.20	53	P	Pn	04 14 51.1	+0.4
TWVZ	Taurewa	2.21	46	P	Pn	04 14 50.3	-0.4
NGZ	Ngauruhoe	2.23	51	P	Pn	04 14 51.2	+0.1
WTVZ	West Tongariro	2.26	49	P	Pn	04 14 52.3	+0.7
PNHZ	Pukenui	2.26	73	P	Pn	04 14 52.5	+1.0
KRVZ	Karewarewa	2.31	50	P	Pn	04 14 52.7	+0.5
LTZ	Lake Taylor	2.32	201	P	Pb	04 14 54.5	-1.5
BHHZ	Black Hill Sta	2.34	62	P	Pn	04 14 53.9	+1.3
ANWZ	Angora Road	2.36	87	P	Pg	04 14 58.6	-0.8
HIZ	Hauiti	2.39	29	P	Pn	04 14 51.7	-1.5
WPHZ	Waipukurau	2.40	78	P	Pb	04 14 58.6	+1.3
KATZ	Kakaramea	2.42	48	P	Pn	04 14 55.0	+1.3
KRHZ	Kereru	2.48	68	P	Pb	04 14 56.9	-1.9
PRHZ	Porangahau	2.50	83	P	Pb	04 14 59.5	+0.4
RITZ	Rihia Road	2.51	50	P	Pb	04 14 58.6	-0.7
RATZ	Rangitukua	2.54	47	P	Pn	04 14 57.3	+2.1
INZ	Inchbonnie	2.56	214	P	Pb	04 14 58.0	-2.1
KWHZ	Kaweka Forest	2.62	64	P	Pn	04 14 58.2	+1.8
PXZ	Pawanui	2.72	79	P	Pg	04 15 05.3	-1.0
BKZ	Black Stump Fm	2.79	60	P	Pn	04 14 59.9	+1.1
KAHZ	Kahuranaki	2.80	74	P	Pn	04 14 59.0	+0.2
MCHZ	McNeill Hill	2.80	66	P	Pb	04 15 03.1	-1.0
TLZ	Tolley Road	2.83	37	P	Pn	04 14 57.9	-1.3
OXZ	Oxford	2.89	200	P	Pn	04 15 01.0	+1.0
MRHZ	Matea Rd	2.94	54	P	Pb	04 15 03.9	-2.6
NMHZ	Naumai	3.04	61	P	Pn	04 15 04.6	+2.4
OKCZ	Okains Bay	3.12	184	P	Pn	04 15 04.1	+0.9
MQZ	McQueen's Vall	3.14	190	P	Pn	04 15 03.3	-0.1
WVZ	Waitaha Valley	3.15	218	P	Pn	04 15 04.8	+1.1
MTHZ	Maungataniwha	3.19	58	P	Pn	04 15 06.2	+1.9
AKCZ	Akaroa Harbour	3.27	186	P	Pn	04 15 06.0	+0.6
RAGZ	Rawiri	3.77	57	P	Pb	04 15 17.6	-3.1
MKAZ	Moumakai	3.77	22	P	Pn	04 15 10.9	-1.2
MWZ	Matawai	3.93	56	P	Pn	04 15 18.0	+3.6
FOZ	Fox Glacier	3.94	221	P	Pn	04 15 15.0	+0.5
JCZ	Jackson Bay	4.85	223	P	Pn	04 15 27.5	+0.4

KRSC 21 04:29:37.1±1.6, 50°.78N×157°.76E, h43^{km}±21^{km}, ML3.8, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAU	Pauzhetka	0.91	320	*e*P	Pn	04 29 54.8	+1.4
PAU				*e*S	Sn	04 30 06.2	+0.8
SKR	Severo-Kuril's	1.04	266	*e*P	Pn	04 29 55.8	+0.6
SKR				*e*S	Sn	04 30 08.1	-0.5
KDTR	Khodutka, Kamc	1.05	11	*e*P	Pn	04 29 56.8	+1.4
KDTR				*e*S	Sn	04 30 10.0	+1.1
ASAK	Asacha	1.61	3	*e*P	Pn	04 30 05.3	+2.2
ASAK				*e*S	Sn	04 30 24.1	+1.4
RUS	Russkaya	1.73	16	*e*P	Pn	04 30 06.2	+1.6
RUS				*e*S	Sn	04 30 25.9	+0.6
MTVR	Mutnovka	1.73	9	*e*P	Pn	04 30 07.2	+2.4
MTVR				*e*S	Sn	04 30 27.3	+1.6
GRL	Gorelyy	1.79	6	*e*P	Pn	04 30 08.0	+2.4
KRMR	Karymshinskiy	2.07	6	*e*P	Pn	04 30 12.4	+3.1
KRMR				*e*S	Sn	04 30 36.9	+3.1
PET	Petropavlovsk	2.32	14	*e*P	Pn	04 30 15.7	+3.0
PET				*e*S	Sn	04 30 42.0	+2.0
DALK	Dalny	2.34	15	*e*P	Pn	04 30 16.1	+3.1
UGLR	Uglovaya	2.53	15	*i* P	Pn	04 30 19.0	+3.4
AVH	Avacha	2.57	13	*i* P	Pn	04 30 20.4	+4.2
SMAR	Somma	2.57	14	*e*P	Pn	04 30 20.2	+3.8
KOK	Koryaka	2.58	12	*e*S	Sn	04 30 51.7	+5.2
SDLR	Sedlovina	2.60	15	*e*P	Pn	04 30 20.2	+3.5
KRX	Arik	2.65	12	*e*P	Pn	04 30 21.8	+4.5
KRX				*e*S	Sn	04 30 53.5	+5.3
SPN	Mys Shipunski	2.72	30	*e*P	Pn	04 30 21.1	+2.9
SPN				*e*S	Sn	04 30 51.1	+1.4
GNL	Ganaly	2.93	2	*e*P	Pn	04 30 25.0	+3.8
MKZ	Mys Kozlova	4.49	31	*e*P	Pn	04 30 45.3	+2.8

*MOS **21** 04:54:03.2±1.0, 37°.66S×179°.76E, h33^{km}, mb5.8/46, MS5.3/30, Error ellipse: s-maj=9.4km s-min=8.2km az=91.3*

*WEL **21** 04:54:04.3, 38°S±9°×18°0W±°, h33^{km}, ML6.1/64*

*ISCJB **21** 04:54:04.9±0.1, 37°.78S±0°.02×179°.89E±0°.02, h10^{km}, mb5.7/215, MS5.4/224, Error ellipse: s-maj=3.6km s-min=1.6km az=158.6*

*BJI **21** 04:54:04.8, 37°.80S×179°.70E, h10^{km}, mb5.6/32, mB5.9/34, Ms5.4/46, Ms7 5.2/45*

*IDC **21** 04:54:04.3±0.3, 37°.64S×179°.80E, h0^{km}, mb5.4/34, mb1 5.4/37, mb1mx5.4/39, mbtmp5.4/37, ML5.1/3, MS5.1/33, Ms1 5.1/33, ms1mx5.1/42, Error ellipse: s-maj=9.9km s-min=8.9km az=174.0*

*GCMT **21** 04:54:05.5±0.1, 37°.69S×179°.96W, h15^{km}, MW5.7/118, Moment Tensor Solution. s107,c204; s118,c326; Duration: 1^{s}7 Moment tensor: Scale 10^{17}Nm; M_{rr}-2.60±.05; $M_{\theta\theta}$1.58±.05; $M_{\phi\phi}$1.02±.05; $M_{r\theta}$0.19±.09; $M_{\theta\phi}$4.05±.04; $M_{\phi r}$1.35±.10; Best double couple: $M_0$4.55000×10^{17} NP1:ϕ_s193.00000°, δ66.00000°, λ-140.00000°. NP2:ϕ_s85.00000°, δ54.00000°, λ-30.00000°. Principal axes: T 5.5000, Plg8.0000°, Azm316.0000°; N -1.8990, Plg45.0000°, Azm219.0000°; P -3.6010, Plg44.0000°, Azm54.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*NEIC **21** 04:54:05.5±0.0, 37°.71S×179°.97W, h12^{km}, mb5.7/149, MS5.5/177, MW5.6, ML5.8(WEL), Moment Tensor Solution. s41 Moment tensor: Scale 10^{17}Nm; M_{rr}0.52; $M_{\theta\theta}$-2.52; $M_{\phi\phi}$2.00; $M_{r\theta}$1.19; $M_{\theta\phi}$1.72; $M_{\phi r}$1.14; Best double couple: $M_0$3.30000×10^{17} NP1:ϕ_s66.00000°, δ80.00000°, λ30.00000°. NP2:ϕ_s331.00000°, δ61.00000°, λ168.00000°. Principal axes: T 3.3500, Plg28.0000°, Azm292.0000°; N -0.0800, Plg59.0000°, Azm84.0000°; P -3.2700, Plg13.0000°, Azm195.0000°; After WEL.*

NEIC Felt in the Bay of Plenty-Hawke's Bay area.

ISC 21 04:54:07.5±0.2, 37°.84S±0°.03×179°.83E±0°.03, h21^{km}±2^{km}, h21^{km}:pP-P, n1355, σ1^{s}73/1295, mb5.7/202, MS5.4/227, 20C-17D, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	Waiomatatini S	1.12	271	Pn	Pb	04 54 28.6	+0.5
WMGZ	Waiomatatini S	1.12	271	P	Pb	04 54 28.6	+0.5
WMGZ				S	Sn	04 54 44.0	+1.4
MXZ	Matakaoa Point	1.24	283	*e*Pn	Pn	04 54 29.9	+0.4
MXZ	Matakaoa Point	1.24	283	P	Pn	04 54 30.0	+0.4
MXZ				S	Sb	04 54 48.9	+3.4
PUZ	Puketiti	1.26	259	Pn	Pb	04 54 30.6	+0.1
PUZ	Puketiti	1.26	259	P	Pb	04 54 30.6	+0.1
PUZ				S	Sb	04 54 49.4	+3.1
PKGZ	Pakihiroa	1.38	268	P	Pn	04 54 32.2	+0.6
PKGZ				S	Sb	04 54 52.0	+2.1
CNGZ	Carnagh Statio	1.43	243	Pn	Pb	04 54 33.7	+0.3
CNGZ	Carnagh Statio	1.43	243	P	Pb	04 54 33.8	+0.5
CNGZ				S	Sb	04 54 55.4	+4.3
TWGZ	Tauwhareparae	1.50	256	*e*Pn	Pb	04 54 34.0	-0.5
TWGZ	Tauwhareparae	1.50	256	P	Pb	04 54 34.1	-0.5
TWGZ				S	Sb	04 54 56.5	+3.4
HAZ	Te Kaha	1.62	272	P	Pn	04 54 35.4	+0.6
HAZ				S	Sb	04 54 58.5	+1.9
TKGZ	Te Karaka	1.67	248	Pn	Pn	04 54 29.2	-6.3
TKGZ	Te Karaka	1.67	248	P	Pb	04 54 36.7	-0.8
TKGZ				S	Sb	04 55 00.3	+2.2
RUGZ	Raukumara Rang	1.70	265	P	Pn	04 54 36.6	+0.6
RUGZ				S	Sb	04 55 00.2	+1.0
RIGZ	Rimuhau	1.84	241	P	Pn	04 54 38.7	+0.9
RIGZ				S	Sb	04 55 04.4	+1.4
PRGZ	Paritu Road	1.87	234	Pn	Pn	04 54 39.4	+1.1
PRGZ	Paritu Road	1.87	234	P	Pn	04 54 39.4	+1.1
MWZ	Matawai	1.88	254	Pn	Pn	04 54 39.0	+0.6
MWZ	Matawai	1.88	254	P	Pn	04 54 39.1	+0.6
MWZ				S	Sb	04 55 04.5	+0.4
MHGZ	Mahia Peninsul	2.00	228	Pn	Pn	04 54 40.8	+0.8
MHGZ	Mahia Peninsul	2.00	228	P	Pn	04 54 40.8	+0.8
MHGZ				S	Sb	04 55 08.5	+1.1
RAGZ	Rawiri	2.01	250	*e*Pn	Pn	04 54 41.0	+0.8
RAGZ	Rawiri	2.01	250	P	Pn	04 54 41.1	+0.8
KNZ	Kokohu	2.06	234	Pn	Pn	04 54 41.6	+0.7
KNZ	Kokohu	2.06	234	P	Pn	04 54 41.9	+1.1
WIZ	White Island	2.11	278	Pn	Pn	04 54 42.9	+1.3
WIZ	White Island	2.11	278	P	Pn	04 54 43.1	+1.5
SNGZ	Shannon Statio	2.17	244	Pn	Pn	04 54 43.4	+1.0
SNGZ	Shannon Statio	2.17	244	P	Pn	04 54 43.4	+1.0
URZ	Urewera	2.18	258	Pn	Pn	04 54 44.0	+1.5
	599nm,0.3s,baz=83,slow=6.8,SNR=1030						
URZ				Sn	Sb	04 55 12.3	-0.5
	4μm,0.3s,baz=172,slow=23,SNR=19						
URZ				LR	LR	04 55 40.8	
	comp=Z,33μm,20.5s,baz=100,slow=44						
URZ	Urewera	2.18	258	P	Pn	04 54 43.8	+1.3
WHRZ	Whale Island	2.26	269	P	Pn	04 54 45.4	+1.9
RTZ	Ruatahuna	2.37	250	P	Pn	04 54 47.0	+1.8
WHHZ	Waihua	2.38	238	P	Pn	04 54 46.4	+1.2
RAHZ	Arahi	2.41	243	P	Pn	04 54 47.0	+1.3
EDRZ	Edgecumbe	2.45	263	Pn	Pn	04 54 47.5	+1.2
EDRZ	Edgecumbe	2.45	263	P	Pn	04 54 47.5	+1.2
MUGZ	Murupara	2.49	254	P	Pn	04 54 48.0	+1.2
MARZ	Manawahe	2.50	266	Pn	Pn	04 54 47.8	+0.9
MARZ	Manawahe	2.50	266	P	Pn	04 54 48.0	+1.2
MTHZ	Maungataniwha	2.55	246	P	Pn	04 54 48.8	+1.1
OPRZ	Ohinepanea	2.59	269	Pn	Pn	04 54 48.5	+0.4
OPRZ	Ohinepanea	2.59	269	P	Pn	04 54 48.5	+0.4
ARHZ	Aropaoanui	2.63	236	Pn	Pn	04 54 50.0	+1.2
ARHZ	Aropaoanui	2.63	236	P	Pn	04 54 50.0	+1.2
TARZ	Mount Tarawera	2.65	260	Pn	Pn	04 54 50.1	+1.0
TARZ	Mount Tarawera	2.65	260	P	Pn	04 54 50.3	+1.2
RRRZ	Republican Roa	2.66	258	Pn	Pn	04 54 50.3	+1.2
RRRZ	Republican Roa	2.66	258	P	Pn	04 54 50.3	+1.2
MKRZ	Makatiti	2.67	263	Pn	Pn	04 54 50.5	+1.2
MKRZ	Makatiti	2.67	263	P	Pn	04 54 51.0	+1.7
NMHZ	Naumai	2.68	241	Pn	Pn	04 54 50.5	+1.0
NMHZ	Naumai	2.68	241	P	Pn	04 54 50.6	+1.0
LIRZ	Lichensteins R	2.73	266	P	Pn	04 54 51.3	+1.3
OMRZ	Omania	2.74	263	Pn	Pn	04 54 51.0	+0.7
OMRZ	Omania	2.74	263	P	Pn	04 54 51.3	+1.1
HLRZ	Highlands Stat	2.77	260	P	Pn	04 54 52.0	+1.3
PRRZ	Plateau Road	2.78	255	Pn	Pn	04 54 52.1	+1.3
PRRZ	Plateau Road	2.78	255	P	Pn	04 54 52.0	+1.2
CKHZ	Cape Kidnapper	2.81	229	Pn	Pn	04 54 51.9	+0.7
CKHZ	Cape Kidnapper	2.81	229	P	Pn	04 54 51.5	+0.3
TGRZ	Tauranga	2.83	271	*e*Pn	Pn	04 54 51.7	+0.3
TGRZ	Tauranga	2.83	271	P	Pn	04 54 51.8	+0.4
ALRZ	Allen Road	2.84	254	Pn	Pn	04 54 52.8	+1.2
ALRZ	Allen Road	2.84	254	P	Pn	04 54 52.6	+1.0
KARZ	Kaharoa	2.84	265	Pn	Pn	04 54 52.1	+0.6
KARZ	Kaharoa	2.84	265	P	Pn	04 54 52.3	+0.7
HRRZ	Handcock Road	2.85	258	Pn	Pn	04 54 52.7	+1.0
HRRZ	Handcock Road	2.85	258	P	Pn	04 54 52.8	+1.1
MRHZ	Matea Rd	2.86	249	P	Pn	04 54 53.0	+1.1
HSRZ	Hossack Road	2.86	259	P	Pn	04 54 53.3	+1.3
NGRZ	Ngongotaha	2.89	264	P	Pn	04 54 53.6	+1.3
UTU	Utuhina	2.89	262	*e*Pn	Pn	04 54 53.3	+1.1
UTU	Utuhina	2.89	262	P	Pn	04 54 54.0	+1.8
MCHZ	McNeill Hill	2.93	236	Pn	Pn	04 54 53.6	+0.8
MCHZ	McNeill Hill	2.93	236	P	Pn	04 54 53.6	+0.8
BKZ	Black Stump Fm	2.93	242	*e*Pn	Pn	04 54 53.5	+0.6
BKZ	Black Stump Fm	2.93	242	P	Pn	04 54 53.7	+0.8
WPRZ	Whakapapatarin	2.96	256	Pn	Pn	04 54 54.6	+1.2
WPRZ	Whakapapatarin	2.96	256	P	Pn	04 54 55.0	+1.7
GRRZ	Galatos Road	2.98	259	P	Pn	04 54 54.7	+1.3

GRRZ				P	Pn	04 54 54.8	+1.3
KAHZ	Kahuranaki	3.02	229	Pn	Pn	04 54 54.1	+0.1
KAHZ	Kahuranaki	3.02	229	P	Pn	04 54 54.2	+0.1
KMRZ	Kaimai	3.07	269	P	Pn	04 54 55.9	+1.0
KWHZ	Kaweka Forest	3.10	238	P	Pn	04 54 55.7	+0.5
HATZ	Hinemaiaia	3.12	249	Pn	Pn	04 54 56.2	+0.8
HATZ	Hinemaiaia	3.12	249	P	Pn	04 54 56.2	+0.8
WHTZ	Whakaora	3.15	254	P	Pn	04 54 58.8	+2.8
PXZ	Pawanui	3.18	226	Pn	Pn	04 54 55.4	-0.9
PXZ	Pawanui	3.18	226	P	Pn	04 54 55.3	-0.9
KUTZ	Kaahu Road	3.22	257	Pn	Pn	04 54 57.7	+0.9
KUTZ	Kaahu Road	3.22	257	P	Pn	04 54 57.9	+1.0
KRHZ	Kereru	3.25	235	P	Pn	04 54 57.3	+0.1
RITZ	Rihia Road	3.32	249	Pn	Pn	04 54 59.6	+1.4
RITZ	Rihia Road	3.32	249	P	Pn	04 54 59.3	+1.2
RITZ				P	Pb	04 55 01.8	-3.8
WATZ	Wairara	3.33	254	*e*Pn	Pn	04 54 59.2	+0.8
WATZ	Wairara	3.33	254	P	Pn	04 55 00.5	+2.1
RATZ	Rangitukua	3.35	251	Pn	Pn	04 54 59.7	+1.1
RATZ	Rangitukua	3.35	251	P	Pn	04 54 60.0	+1.4
BHHZ	Black Hill Sta	3.37	240	Pn	Pn	04 54 59.5	+0.6
BHHZ	Black Hill Sta	3.37	240	P	Pn	04 54 59.5	+0.6
TLZ	Tolley Road	3.42	260	Pn	Pn	04 54 60.0	+0.4
TLZ	Tolley Road	3.42	260	P	Pn	04 55 00.1	+0.5
KATZ	Kakaramea	3.44	249	*e*Pn	Pn	04 55 00.5	+0.6
KATZ	Kakaramea	3.44	249	P	Pn	04 55 01.3	+1.4
WPHZ	Waipukurau	3.45	229	Pn	Pn	04 54 59.5	-0.5
WPHZ	Waipukurau	3.45	229	P	Pn	04 54 59.7	-0.3
KUZ	Kuaotunu	3.45	287	Pn	Pn	04 54 59.8	-0.2
KUZ	Kuaotunu	3.45	287	P	Pn	04 54 59.8	-0.2
PRHZ	Porangahau	3.47	225	Pn	Pn	04 54 59.1	-1.1
PRHZ	Porangahau	3.47	225	P	Pn	04 54 59.2	-1.1
PNHZ	Pukenui	3.50	233	Pn	Pn	04 55 00.6	-0.2
PNHZ	Pukenui	3.50	233	P	Pn	04 55 00.8	+0.1
KRVZ	Karewarewa	3.51	248	*e*Pn	Pn	04 55 01.0	0.0
KRVZ	Karewarewa	3.51	248	P	Pn	04 55 01.8	+0.8
OTVZ	Oturere	3.52	247	Pn	Pn	04 55 01.8	+0.7
MOVZ	Moawhango	3.55	243	*e*Pn	Pn	04 55 02.0	+0.5
MOVZ	Moawhango	3.55	243	P	Pn	04 55 02.3	+0.9
WTVZ	West Tongariro	3.56	248	*e*Pn	Pn	04 55 02.2	+0.6
WTVZ	West Tongariro	3.56	248	P	Pn	04 55 03.0	+1.4
TUVZ	Tukino	3.57	245	*e*Pn	Pn	04 55 02.9	+1.2
TUVZ	Tukino	3.57	245	P	Pn	04 55 03.3	+1.6
NGZ	Ngauruhoe	3.57	247	*e*Pn	Pn	04 55 02.2	+0.5
NGZ	Ngauruhoe	3.57	247	P	Pn	04 55 02.6	+0.8
WHVZ	Whangaehu Hut	3.62	245	Pn	Pn	04 55 03.2	+0.7
WHVZ	Whangaehu Hut	3.62	245	P	Pn	04 55 03.5	+1.0
COVZ	Chateau Observ	3.62	247	P	Pn	04 55 03.5	+1.0
WNVZ	Wahianoa	3.63	245	Pn	Pn	04 55 03.3	+0.7
DRZ	Dome Shelter	3.63	245	*e*Pn	Pn	04 55 03.0	+0.2
DRZ	Dome Shelter	3.63	245	P	Pn	04 55 02.6	-0.2
FWVZ	Far West T-bar	3.63	246	Pn	Pn	04 55 03.3	+0.6
FWVZ	Far West T-bar	3.63	246	P	Pn	04 55 03.5	+0.8
TRVZ	Turoa	3.66	245	Pn	Pn	04 55 03.6	+0.6
TRVZ	Turoa	3.66	245	P	Pn	04 55 04.0	+0.9
TWVZ	Taurewa	3.66	249	*e*Pn	Pn	04 55 03.1	+0.2
TWVZ	Taurewa	3.66	249	P	Pn	04 55 03.7	+0.8
ANWZ	Angora Road	3.69	224	P	Pn	04 55 01.9	-1.4
TSZ	Takapari Road	3.74	232	Pn	Pn	04 55 03.2	-0.8
TSZ	Takapari Road	3.74	232	P	Pn	04 55 03.3	-0.7
MTVZ	Mangateitei	3.74	244	Pn	Pn	04 55 05.2	+1.1
MTVZ	Mangateitei	3.74	244	P	Pn	04 55 05.2	+1.1
DVHZ	Dannevirke	3.76	228	Pn	Pn	04 55 03.3	-0.9
DVHZ	Dannevirke	3.76	228	P	Pn	04 55 03.5	-0.8
MKAZ	Moumakai	3.78	280	Pn	Pn	04 55 05.0	+0.5
MKAZ	Moumakai	3.78	280	P	Pn	04 55 05.0	+0.5
PKVZ	Pokaka	3.80	246	*e*Pn	Pn	04 55 05.8	+1.0
PKVZ	Pokaka	3.80	246	P	Pn	04 55 06.2	+1.4
GRZ	Great Barrier	3.84	293	P	Pn	04 55 05.5	+0.2
WIAZ	Waiheke Island	3.88	284	P	Pn	04 55 06.7	+0.8
BFZ	Birch Farm	3.97	223	*e*Pn	Pn	04 55 05.0	-2.1
BFZ	Birch Farm	3.97	223	P	Pn	04 55 04.9	-2.3
HIZ	Hauiti	3.97	259	*e*Pn	Pn	04 55 08.6	+1.5
HIZ	Hauiti	3.97	259	P	Pn	04 55 08.7	+1.5
KBAZ	Karaka Road Bo	4.00	279	P	Pn	04 55 08.7	+1.2
ETAZ	East Tamaki Re	4.00	281	Pn	Pn	04 55 08.6	+1.1
ETAZ	East Tamaki Re	4.00	281	P	Pn	04 55 08.5	+1.1
PRWZ	Pori Road	4.04	227	Pn	Pn	04 55 07.1	-0.9
PRWZ	Pori Road	4.04	227	P	Pn	04 55 07.1	-0.9
POWZ	Post Office Ro	4.05	230	Pn	Pn	04 55 08.1	-0.2
POWZ	Post Office Ro	4.05	230	P	Pn	04 55 08.0	-0.2
CPWZ	Castlepoint	4.16	221	Pn	Pn	04 55 08.0	-1.7
CPWZ	Castlepoint	4.16	221	P	Pn	04 55 07.9	-1.7
EPAZ	Eden Park BICE	4.16	282	P	Pn	04 55 11.6	+1.9
ABAZ	Army Bay	4.17	286	P	Pn	04 55 11.1	+1.2
ABAZ				P	Pn	04 55 11.1	+1.2
VRZ	Vera Road	4.18	251	Pn	Pn	04 55 11.0	+1.1
VRZ	Vera Road	4.18	251	P	Pn	04 55 11.7	+1.7
HBAZ	Herne Bay Bore	4.18	282	Pn	Pn	04 55 11.6	+1.7
HBAZ	Herne Bay Bore	4.18	282	P	Pn	04 55 11.7	+1.7
AWAZ	Awhitu Peninsu	4.20	279	P	Pn	04 55 11.7	+1.5
AWAZ				P	Pn	04 55 11.7	+1.5
OHWZ	Ohakea	4.23	235	P	Pn	04 55 12.0	+1.3
TIWZ	Tintock	4.23	225	Pn	Pn	04 55 08.9	-1.9
TIWZ	Tintock	4.23	225	P	Pn	04 55 09.5	-1.3
WAZ	Wanganui	4.24	242	Pn	Pn	04 55 12.5	+1.7
WAZ	Wanganui	4.24	242	P	Pn	04 55 12.2	+1.4
WTAZ	Waiatarua	4.28	281	P	Pn	04 55 13.4	+2.0
RVAZ	Riverhead Bore	4.32	283	Pn	Pn	04 55 13.3	+1.5
RVAZ	Riverhead Bore	4.32	283	P	Pn	04 55 13.6	+1.7
MRZ	Mangatainoka R	4.33	228	Pn	Pn	04 55 10.7	-1.4
MRZ	Mangatainoka R	4.33	228	P	Pn	04 55 10.8	-1.3
TMWZ	Te Maipa	4.46	222	Pn	Pn	04 55 11.0	-2.9
TMWZ	Te Maipa	4.46	222	P	Pn	04 55 11.1	-2.8
MHEZ	Mangahewa	4.49	252	Pn	Pn	04 55 11.3	-3.0
HOWZ	Holdsworth Sta	4.52	226	Pn	Pn	04 55 12.5	-2.3
HOWZ	Holdsworth Sta	4.52	226	P	Pn	04 55 12.6	-2.2
LREZ	Lake Rotokare	4.54	247	P	Pn	04 55 16.6	+1.6
DREZ	Durham Road	4.61	251	P	Pn	04 55 18.6	+2.7
OGWZ	Otaki Gorge	4.67	229	Pn	Pn	04 55 15.6	-1.2
OGWZ	Otaki Gorge	4.67	229	P	Pn	04 55 15.5	-1.3
PREZ	Palmer Road	4.69	250	*e*Pn	Pn	04 55 19.1	+2.2
PREZ	Palmer Road	4.69	250	P	Pn	04 55 19.4	+2.4
MTW	Mount Morrison	4.71	224	Pn	Pn	04 55 14.2	-3.0
MTW	Mount Morrison	4.71	224	P	Pn	04 55 14.2	-3.0
NEZ	North Egmont	4.71	251	Pn	Pn	04 55 19.8	+2.4
PKE	Pukeiti	4.77	252	Pn	Pn	04 55 21.0	+2.8
PKE	Pukeiti	4.77	252	P	Pn	04 55 21.0	+2.8
TRWZ	Traveller	4.78	221	Pn	Pn	04 55 15.2	-3.0
TRWZ	Traveller	4.78	221	P	Pn	04 55 15.2	-3.0
KHEZ	Kahui Hut	4.78	251	Pn	Pn	04 55 20.5	+2.2
KHEZ	Kahui Hut	4.78	251	P	Pn	04 55 20.6	+2.3
KHEZ				P	Pn	04 55 20.6	+2.3
WCZ	Waipu Caves	4.79	292	Pn	Pn	04 55 18.9	+0.5
WCZ	Waipu Caves	4.79	292	P	Pn	04 55 19.0	+0.7
KIW	Kapiti Island	4.86	230	Pn	Pn	04 55 18.3	-1.0
KIW	Kapiti Island	4.86	230	P	Pn	04 55 18.4	-1.0
NWEZ	Newall Road	4.88	251	*e*Pn	Pn	04 55 22.3	+2.7
PAWZ	Paruwai Farm	4.90	222	Pn	Pn	04 55 16.8	-3.2
PAWZ	Paruwai Farm	4.90	222	P	Pn	04 55 16.9	-3.0
NMEZ	Namu Road	4.92	250	*e*Pn	Pn	04 55 22.4	+2.3
NMEZ	Namu Road	4.92	250	P	Pn	04 55 22.8	+2.7
CAW	Cannon Point	4.92	227	Pn	Pn	04 55 18.3	-1.9
CAW	Cannon Point	4.92	227	P	Pn	04 55 18.1	-2.1
MSWZ	Moikau Station	5.02	223	Pn	Pn	04 55 18.0	-3.6
MSWZ	Moikau Station	5.02	223	P	Pn	04 55 18.0	-3.6
PLWZ	Palliser	5.13	222	Pn	Pn	04 55 19.9	-3.2
PLWZ	Palliser	5.13	222	P	Pn	04 55 19.9	-3.2
WEL	Wellington	5.21	227	Pn	Pn	04 55 21.8	-2.3
WEL	Wellington	5.21	227	P	Pn	04 55 21.8	-2.3
BHW	Baring Head	5.23	225	Pn	Pn	04 55 21.3	-3.1
BHW	Baring Head	5.23	225	P	Pn	04 55 21.4	-2.9
SNZO	South Karori	5.26	227	*e*Pn	Pn	04 55 22.6	-2.2
SNZO				*e*Sn	Sn	04 56 22.0	-2.8
DUWZ	D'Urville Isla	5.45	235	Pn	Pn	04 55 26.4	-1.1
DUWZ	D'Urville Isla	5.45	235	P	Pn	04 55 26.2	-1.3
TCW	Tory Channel	5.45	230	Pn	Pn	04 55 25.6	-1.9
TCW	Tory Channel	5.45	230	P	Pn	04 55 25.6	-1.9
OUZ	Omahuta	5.66	296	*e*Pn	Pn	04 55 31.0	+0.7
OUZ	Omahuta	5.66	296	P	Pn	04 55 31.3	+1.0
TUWZ	Tuamarina	5.78	230	Pn	Pn	04 55 29.6	-2.4
TUWZ	Tuamarina	5.78	230	P	Pn	04 55 29.7	-2.4
CMWZ	Cape Campbell	5.82	226	Pn	Pn	04 55 30.2	-2.4
CMWZ	Cape Campbell	5.82	226	P	Pn	04 55 30.3	-2.2
BSWZ	Blackbirch Sta	6.00	228	Pn	Pn	04 55 32.1	-2.8
BSWZ	Blackbirch Sta	6.00	228	P	Pn	04 55 32.3	-2.7
NNZ	Nelson	6.02	234	Pn	Pn	04 55 33.6	-1.6
NNZ	Nelson	6.02	234	P	Pn	04 55 33.7	-1.5
QRZ	Quartz Range	6.39	240	Pn	Pn	04 55 38.4	-2.0
QRZ	Quartz Range	6.39	240	P	Pn	04 55 38.4	-2.0
CTZ	Chatham Island	6.48	157	Pn	Pn	04 55 40.3	-1.2
THZ	Tophouse	6.61	232	*e*Pn	Pn	04 55 41.5	-2.0
THZ	Tophouse	6.61	232	P	Pn	04 55 41.1	-2.4
KHZ	Kahutara	6.64	225	*e*Pn	Pn	04 55 41.5	-2.2
KHZ	Kahutara	6.64	225	P	Pn	04 55 40.2	-3.5
I36NZ	CHATHAM INFRAS	6.68	156	Pn	Pn	04 55 46.4	+2.0
	baz=309,slow=17,SNR=0.4						
I36NZ				Sn	Sn	04 56 53.1	-6.7
DSZ	Denniston Nort	7.30	235	Pn	Pn	04 55 50.3	-2.6
DSZ	Denniston Nort	7.30	235	P	Pn	04 55 50.9	-2.0
LTZ	Lake Taylor	7.59	227	*e*Pn	Pn	04 55 54.8	-2.1
LTZ	Lake Taylor	7.59	227	P	Pn	04 55 53.7	-3.2
OKCZ	Okains Bay	7.80	219	P	Pn	04 55 56.5	-3.3
EYCZ	Eyrewell	7.96	223	P	Pn	04 55 59.2	-2.7
AKCZ	Akaroa Harbour	7.98	219	P	Pn	04 55 59.6	-2.6
MQZ	McQueen's Vall	7.99	221	*e*Pn	Pn	04 55 59.8	-2.6
MQZ	McQueen's Vall	7.99	221	P	Pn	04 55 58.4	-3.9
INZ	Inchbonnie	8.05	230	P	Pn	04 55 59.7	-3.4
OXZ	Oxford	8.07	225	*e*Pn	Pn	04 56 01.1	-2.3
OXZ	Oxford	8.07	225	P	Pn	04 56 00.8	-2.5
WVZ	Waitaha Valley	8.68	230	P	Pn	04 56 09.2	-2.5
RAO	Raoul Island	8.77	13	Pn	Pn	04 56 08.5	-4.6
	41nm,0.3s,baz=217,slow=24,SNR=3.2						
RAO				Sn	Sn	04 57 38.3	-13
	189nm,0.3s,baz=329,slow=24,SNR=7.2						
RPZ	Rata Peaks	8.87	226	Pn	Pn	04 56 11.1	-3.3
	14nm,0.3s,baz=51,slow=3.0,SNR=38						
RPZ				Sn	Sn	04 57 46.1	-7.6
	87nm,0.3s,baz=341,slow=23,SNR=21						
RPZ	Rata Peaks	8.87	226	*e*Pn	Pn	04 56 12.3	-2.0
RPZ				Sn	Sn	04 57 46.1	-7.6
RPZ	Rata Peaks	8.87	226	P	Pn	04 56 11.2	-3.2
FOZ	Fox Glacier	9.49	230	*e*Pn	Pn	04 56 21.2	-1.7
FOZ	Fox Glacier	9.49	230	P	Pn	04 56 19.3	-3.5
LBZ	Lake Benmore	9.78	225	*e*Pn	Pn	04 56 24.3	-2.5
LBZ	Lake Benmore	9.78	225	P	Pn	04 56 23.5	-3.3
ODZ	Otahua Downs	9.96	221	*e*Pn	Pn	04 56 27.6	-1.7
ODZ	Otahua Downs	9.96	221	P	Pn	04 56 26.0	-3.3
JCZ	Jackson Bay	10.41	230	P	Pn	04 56 32.1	-3.4
HHSZ	Highcliff Hill	10.57	218	P	Pn	04 56 34.9	-2.8
WKZ	Wanaka	10.71	226	*e*Pn	Pn	04 56 39.9	+0.4
WKZ	Wanaka	10.71	226	P	Pn	04 56 36.0	-3.6
EAZ	Earnscleugh	10.79	224	P	Pn	04 56 38.0	-2.8
TUZ	Tuapeka	11.10	220	P	Pn	04 56 42.6	-2.3
MSZ	Milford Sound	11.25	229	P	Pn	04 56 45.1	-1.9
MLZ	Mavora Lakes	11.54	226	*e*Pn	Pn	04 56 48.5	-2.4
MLZ	Mavora Lakes	11.54	226	P	Pn	04 56 48.0	-2.9
WHZ	Wether Hill Ro	11.95	224	*e*Pn	Pn	04 56 53.4	-3.2
WHZ	Wether Hill Ro	11.95	224	P	Pn	04 56 52.5	-4.1
DCZ	Deep Cove	12.15	227	*e*Pn	Pn	04 56 57.7	-1.5
DCZ	Deep Cove	12.15	227	P	Pn	04 57 01.3	+2.1
PYZ	Puysegur Point	12.82	225	*e*Pn	Pn	04 57 06.2	-2.3
PYZ	Puysegur Point	12.82	225	P	Pn	04 57 11.4	+2.9
LHI	Lord Howe Isla	18.19	284	P	P	04 58 21.3	+2.5
	baz=18						
DZM	Mont Dzumac	19.49	320	P	P	04 58 33.0	-0.2
	2.9nm,0.3s,baz=149,slow=10,SNR=74						
DZM				S	S	05 02 04.6	-8.1
	0.0nm,0.3s,baz=149,slow=22,SNR=1.5						
DZM				LR	LR	05 04 37.1	
	comp=Z,18µm,20.9s,baz=144,slow=33						
DZM	Mont Dzumac	19.49	320	*e*P	P	04 58 33.1	-0.2
	822nm,1.2s						
DZM				*e*S	S	05 02 05.2	-7.5
	6µm,28.8s						
DZM				*e*LR	LR	05 03 05.0	
	32µm,26.2s						
DZM	Mont Dzumac	19.49	320	*e*P	P	04 58 33.1	-0.2
	424nm,1.1s						
DZM				S	S	05 02 04.6	-8.1
NIUE	Niue	20.73	28	P	P	04 58 47.3	+0.7
	baz=21						
MCQ	Macquarie Isla	21.92	214	P	P	04 58 59.8	+0.7
	baz=22						
RIV	Riverview	23.54	271	P	P	04 59 19.0	+2.7
	baz=24						
MGCD	Mangrove Creek	23.78	272	P	P	04 59 20.8	+2.2
	baz=24						
RAR	Rarotonga	24.20	53	P	P	04 59 20.6	-2.0
	136nm,1.0s,baz=212,slow=6.3,SNR=20						
RAR				S	S	05 03 42.1	+2.2
	13nm,0.9s,baz=139,slow=20,SNR=2.8						
RAR				LR	LR	05 08 02.5	
	comp=Z,6µm,18.4s,baz=224,slow=35						
RAR	Rarotonga	24.20	53	*e*P	P	04 59 20.8	-1.8
	218nm,1.1s						
RAR				S	S	05 03 42.0	+2.2
ARMA	Armidale	24.42	279	P	P	04 59 26.4	+1.7
	baz=25						
ARMA	Armidale	24.42	279	PFAKE		04 59 40.0	+15
ARMA				LR	LR		
	comp=Z,10µm,20.0s						
CAN	Canberra	24.83	266	P	P	04 59 30.3	+2.0
	baz=25						
CAN	Canberra	24.83	266	*e*P	P	04 59 29.9	+1.6
	comp=Z,282nm,1.3s						
CAN				LR	LR		
	comp=Z,13µm,21.0s						
CAN	Canberra	24.83	266	*e*P	P	04 59 29.9	+1.6
CAN				pmax	pmax		
	comp=Z,282nm,1.3s						
CAN				MLR	MLR		
	comp=Z,13µm,21.0s						
AFI	Afiamalu	24.98	20	P	P	04 59 28.4	-1.3
	comp=Z,121nm,0.9s,baz=34,slow=4.0,SNR=9.9						
AFI				S	S	05 03 53.8	+1.2
	comp=Z,10nm,0.4s,baz=22,slow=19,SNR=3.1						
AFI	Afiamalu	24.98	20	*e*P	P	04 59 28.7	-1.0
	comp=Z,458nm,1.0s						
AFI				S	S	05 03 53.8	+1.2
AFI				LR	LR		
	comp=Z,3µm,20.0s						
TAU	Tasmania Unive	25.18	248	*e*P	P	04 59 31.5	+0.2
	comp=Z,738nm,1.8s						
TAU				LR	LR		
	comp=Z,14µm,19.0s						
TAU	Tasmania Unive	25.18	248	*e*P	P	04 59 31.5	+0.2
TAU				pmax	pmax		
	comp=Z,738nm,1.8s						
TAU				MLR	MLR		
	comp=Z,14µm,19.0s						
MOO	Moorlands	25.28	249	P	P	04 59 34.7	+2.5
	baz=25						
TOO	Toolangi	27.08	260	P	P	04 59 49.9	+1.3
	baz=27,SNR=19						
TOO	Toolangi	27.08	260	P	P	04 59 50.2	+1.6
TOO				pmax	pmax		
	comp=Z,97nm,1.4s						
EIDS	Eidsvold	27.34	289	P	P	04 59 51.4	+0.4
	baz=28,SNR=17						
EIDS	Eidsvold	27.34	289	*e*P	P	04 59 51.5	+0.4
	comp=Z,94nm,0.8s						
EIDS				LR	LR		
	comp=Z,14µm,21.0s						
RMQ	Roma	28.51	284	P	P	05 00 02.8	+1.4
	baz=29,SNR=104						
CMSA	Cobar Meteorol	28.65	272	P	P	05 00 03.6	+0.9
	baz=29,SNR=32						
FUNA	Funafuti	29.19	359	PFAKE		05 00 20.0	+12
FUNA				LR	LR		
	comp=Z,8µm,20.0s						
TBI	Tubuai	29.97	70	*e*P	P	05 00 14.3	-0.1
	comp=Z,226nm,1.2s						
TBI				*e*LQ	LQ	05 06 12.5	
	comp=Z,7µm,27.2s						
TBI				*e*LR	LR	05 07 50.2	
	comp=Z,10µm,26.0s,baz=231						
TBI	Tubuai	29.97	70	*e*T	T	05 31 15.4	
	comp=Z,140nm,0.3s						
ARPS	Mount Arapiles	30.10	260	P	P	05 00 16.8	+1.3
	baz=30,SNR=14						
STKA	Stephens Creek	31.77	269	P	P	05 00 31.2	+1.0
	comp=Z,104nm,0.9s,baz=101,slow=10.0,SNR=141						
STKA				S	S	05 05 40.3	+1.1
	comp=Z,2.6nm,0.8s,baz=307,slow=11,SNR=1.9						
STKA	Stephens Creek	31.77	269	P	P	05 00 31.6	+1.3
	baz=32,SNR=67						
STKA	Stephens Creek	31.77	269	*e*P	P	05 00 31.1	+0.8
	comp=Z,30nm,1.0s						
STKA				S	S	05 05 40.3	+1.1
STKA				LR	LR		
	comp=Z,2µm,19.0s						
STKA	Stephens Creek	31.77	269	*e*P	P	05 00 31.1	+0.8
STKA				S	S	05 05 40.3	+1.1
STKA				pmax	pmax		
	comp=Z,30nm,1.0s						
STKA				MLR	MLR		
	comp=Z,2µm,19.0s						
QLP	Quilpie	31.96	280	P	P	05 00 32.3	+0.3
	baz=32,SNR=42						
HTT	Hallett	33.34	265	P	P	05 00 45.4	+1.3
	baz=34,SNR=35						
HNR	Honiara	33.48	323	P	P	05 00 43.8	-1.5
	comp=Z,456nm,0.8s,baz=214,slow=4.1,SNR=12						
HNR				S	S	05 06 03.0	-3.0
	comp=Z,81nm,0.5s,baz=40,slow=15,SNR=5.1						
HNR				LR	LR	05 11 59.5	
	comp=Z,4µm,21.0s,baz=156,slow=32						
HNR	Honiara	33.48	323	*e*P	P	05 00 41.0	-4.3
HNR	Honiara	33.48	323	*e*P	P	05 00 43.8	-1.5
	comp=Z,544nm,0.9s						
HNR				S	S	05 06 03.0	-3.0
PAE	Paea	33.49	62	*e*P	P	05 00 45.7	+0.3
	comp=Z,63nm,1.2s						
PAE	Paea	33.49	62	*e*T	T	05 34 11.1	
	comp=Z,17nm,0.3s						
PPT2	Papeete2	33.54	61	*e*P	P	05 00 45.6	-0.3
	comp=Z,476nm,1.3s						
PPT2				*e*LQ	LQ	05 07 48.7	
	comp=Z,4µm,25.2s						
PPT2				*e*LR	LR	05 09 24.5	
	comp=Z,11µm,25.8s,baz=231						
PPT2	Papeete2	33.54	61	*e*T	T	05 34 21.6	
	comp=Z,19nm,0.3s						
PPTF	Pamatai, Papee	33.55	62	*e*P	P	05 00 45.5	-0.5
	comp=Z,557nm,1.2s						
PPTF				LR	LR		
	comp=Z,6µm,18.0s						
PPT	Papeete	33.56	61	P	P	05 00 45.5	-0.5
	comp=Z,261nm,1.1s,baz=220,slow=5.0,SNR=13						
PPT				LR	LR	05 11 49.7	
	comp=Z,4µm,18.7s,baz=236,slow=32						
TVO	Taravao	33.64	62	*e*P	P	05 00 46.2	-0.6
	comp=Z,115nm,1.5s						
TVO	Taravao	33.64	62	*e*T	T	05 35 00.6	
	comp=Z,11nm,0.4s						
TIAR	Tiarei	33.72	62	*e*P	P	05 00 47.0	-0.5
	comp=Z,123nm,1.1s						
TIAR	Tiarei	33.72	62	*e*T	T	05 34 47.0	
	comp=Z,6.0nm,0.3s						
CTA	Charters Tower	34.05	292	P	P	05 00 50.4	0.0
	comp=Z,101nm,0.9s,baz=119,slow=11,SNR=67						
CTA				LR	LR	05 13 27.6	
	comp=Z,3µm,21.4s,baz=122,slow=34						
CTAO	Charters Tower	34.05	292	*e*P	P	05 00 50.3	0.0
	comp=Z,157nm,1.0s						
CTAO				LR	LR		
	comp=Z,4µm,18.0s						
CTAO	Charters Tower	34.05	292	*e*P	P	05 00 50.3	0.0
CTAO				pmax	pmax		
	comp=Z,157nm,1.0s						
CTAO				MLR	MLR		
	comp=Z,4µm,18.0s						
KNTN	Kanton	35.75	15	*e*P	P	05 01 04.1	-0.8
	comp=Z,174nm,0.9s						
KNTN				LR	LR		
	comp=Z,3µm,19.0s						
BBOO	Buckleboo	35.81	265	P	P	05 01 05.7	+0.3
	baz=36,SNR=11						
BBOO	Buckleboo	35.81	265	*e*P	P	05 01 05.3	-0.2
	comp=Z,111nm,1.2s						
BBOO				LR	LR		
	comp=Z,10µm,20.0s						
PMOR	Pomariorio Ree	36.49	60	*e*P	P	05 01 10.4	-0.9
	comp=Z,268nm,1.3s						
PMOR	Pomariorio Ree	36.49	60	*e*T	T	05 38 52.3	
	comp=Z,20nm,0.3s						
VAH	Vaihoa	36.51	61	*e*T	T	05 39 26.9	
	comp=Z,32nm,0.2s						
MTSU	Mount Surprise	36.69	292	P	P	05 01 13.3	+0.2
	baz=37,SNR=15						
QIS	Mount Isa	38.76	285	P	P	05 01 30.4	-0.2
	baz=39,SNR=86						
TARA	Tarawa	39.52	349	PFAKE		05 01 50.0	+13
TARA				LR	LR		
	comp=Z,2µm,20.0s						
COEN	Coen	40.26	296	*e*P	P	05 01 41.7	-1.3
	comp=Z,360nm,0.8s						
COEN				LR	LR		
	comp=Z,7µm,21.0s						
SBA	Scott Base	40.50	184	*e*P	P	05 01 46.2	+1.8
	comp=Z,132nm,1.9s						
SBA				LR	LR		
	comp=Z,2µm,20.0s						
SBA	Scott Base	40.50	184	P	P	05 01 48.3	+4.0
SBA				pmax	pmax		
	comp=Z,56nm,1.3s						
VNDA	Vanda	40.53	186	P	P	05 01 46.2	+1.7
	comp=Z,1.7nm,0.8s,baz=4.7,slow=7.5,SNR=10.0						
VNDA				LR	LR	05 15 28.4	
	comp=Z,2µm,19.0s,baz=32,slow=32						
VNDA	Vanda	40.53	186	*e*P	P	05 01 45.9	+1.3
	comp=Z,12nm,1.0s						
VNDA	Vanda	40.53	186	*e*P	P	05 01 45.9	+1.3
VNDA				pmax	pmax		
	comp=Z,12nm,1.0s						
PMG	Port Moresby	40.81	305	P	P	05 01 47.2	-0.4
	comp=Z,103nm,0.7s,baz=116,slow=5.7,SNR=20						
PMG				LR	LR	05 16 59.8	
	comp=Z,8µm,19.5s,baz=142,slow=34						
RKT	Rikitea	41.23	82	*e*S	S	05 08 03.7	0.0
	comp=Z,2µm,26.8s						
RKT				*e*LQ	LQ	05 11 13.4	
	comp=Z,8µm,30.5s						
RKT				*e*LR	LR	05 12 54.4	
	comp=Z,5µm,28.8s,baz=246						
RKT	Rikitea	41.23	82	*e*T	T	05 45 33.3	
	comp=Z,5.4nm,0.5s						
AS01	Alice Springs	41.48	276	*e*P	P	05 01 51.2	-1.9
AS31	Alice Springs	41.51	276	*e*P	P	05 01 52.6	-0.8
	comp=Z,50nm,0.6s						
ASAR	Alice Springs	41.51	276	P	P	05 01 53.1	-0.3
	comp=Z,140nm,0.8s,baz=118,slow=7.2,SNR=468						
ASAR				PcP	PcP	05 03 50.5	-0.3
	comp=Z,5.2nm,0.5s,baz=115,slow=4.5,SNR=3.1						
ASAR				ScP	ScP	05 07 42.1	+2.5
	comp=Z,1.7nm,0.8s,baz=112,slow=3.0,SNR=4.2						
ASAR				S	S	05 08 04.7	-3.3
	comp=Z,8.4nm,0.9s,baz=120,slow=13,SNR=8.3						
ASAR				LR	LR	05 19 25.7	
	comp=Z,6µm,19.0s,baz=128,slow=37						
ASAR	Alice Springs	41.51	276	P	P	05 01 53.1	-0.3
ASAR						05 03 50.5	
ASAR				S	S	05 08 04.7	-3.3
ASAR				pmax	pmax		
	comp=Z,138nm,0.8s						
ASAR				smax	smax		
	comp=N,8.0nm,0.9s						
ASAR				MLR	MLR		
	comp=Z,6µm,19.0s						
RABL	Rabaul	41.95	316	*e*P	P	05 01 57.1	+0.1
	comp=Z,567nm,1.0s						
RABL				LR	LR		
	comp=Z,2µm,22.0s						
FORT	Forrest	42.88	263	*e*P	P	05 02 04.2	-0.2
	comp=Z,398nm,1.0s						
FORT				LR	LR		
	comp=Z,12µm,20.0s						
WR0	Warramunga Arr	43.01	281	PFAKE		05 02 20.0	+14
WR0				LR	LR		
	comp=Z,5µm,18.0s						
WR9	Warramunga Arr	43.03	281	PFAKE		05 02 20.0	+14
WR9				LR	LR		
	comp=Z,6µm,18.0s						
WR8	Warramunga Arr	43.04	281	PFAKE		05 02 20.0	+14
WR8				LR	LR		
	comp=Z,6µm,18.0s						
WR7	Warramunga Arr	43.06	281	PFAKE		05 02 20.0	+14
WR7				LR	LR		
	comp=Z,6µm,18.0s						
WR6	Warramunga Arr	43.08	281	PFAKE		05 02 20.0	+14
WR6				LR	LR		
	comp=Z,5µm,18.0s						
WR5	Warramunga Arr	43.09	281	PFAKE		05 02 20.0	+14
WR5				LR	LR		
	comp=Z,5µm,18.0s						
WR4	Warramunga Arr	43.12	281	PFAKE		05 02 20.0	+14
WR4				LR	LR		
	comp=Z,5µm,18.0s						
WR3	Warramunga Arr	43.13	281	PFAKE		05 02 20.0	+13
WR3				LR	LR		

	comp=Z,6µm,18.0s						
WC3	Warramunga Arr	43.14	281	*e*P	P	05 02 05.3	-1.3
	comp=Z,198nm,0.7s						
WC3				LR	LR		
	comp=Z,6µm,18.0s						
WR2	Warramunga Arr	43.15	281	PFAKE		05 02 20.0	+13
WR2				LR	LR		
	comp=Z,5µm,18.0s						
WC4	Warramunga Arr	43.16	281	PFAKE		05 02 20.0	+13
WC4				LR	LR		
	comp=Z,5µm,18.0s						
WC2	Warramunga Arr	43.16	281	PFAKE		05 02 20.0	+13
WC2				LR	LR		
	comp=Z,7µm,18.0s						
WB2	Warramunga Arr	43.16	281	*e*P	P	05 02 05.0	-1.8
WB2				LR	LR		
	comp=Z,6µm,22.0s						
WRAB	Tennant Creek	43.17	281	*e*P	P	05 02 05.3	-1.5
	comp=Z,178nm,0.7s						
WRAB				LR	LR		
	comp=Z,5µm,18.0s						
WRAB	Tennant Creek	43.17	281*c*	*i*P	P	05 02 03.1	-3.8
WRAB				pmax	pmax		
	comp=Z,208nm,1.3s						
WB3	Warramunga Arr	43.17	281	PFAKE		05 02 20.0	+13
WB3				LR	LR		
	comp=Z,6µm,18.0s						
WR1	Warramunga Arr	43.17	281	PFAKE		05 02 20.0	+13
WR1				LR	LR		
	comp=Z,6µm,18.0s						
WRA	Warramunga Arr	43.17	281	P	P	05 02 06.0	-0.9
	comp=Z,118nm,0.6s,baz=121,slow=7.8,SNR=321						
WRA				PcP	PcP	05 03 57.2	+0.9
	comp=Z,12nm,0.9s,baz=139,slow=2.6,SNR=3.5						
WRA				ScP	ScP	05 07 45.0	-1.3
	comp=Z,15nm,1.3s,baz=121,slow=3.7,SNR=8.1						
WRA				S	S	05 08 29.3	-3.3
	comp=Z,16nm,1.1s,baz=125,slow=14,SNR=12						
WRA				LR	LR	05 21 57.7	
	comp=Z,4µm,18.1s,baz=135,slow=39						
WB4	Warramunga Arr	43.18	281	PFAKE		05 02 20.0	+13
WB4				LR	LR		
	comp=Z,5µm,18.0s						
WC1	Warramunga Arr	43.18	281	PFAKE		05 02 20.0	+13
WC1				LR	LR		
	comp=Z,4µm,18.0s						
WB5	Warramunga Arr	43.19	281	PFAKE		05 02 20.0	+13
WB5				LR	LR		
	comp=Z,6µm,18.0s						
WB6	Warramunga Arr	43.20	281	PFAKE		05 02 20.0	+13
WB6				LR	LR		
	comp=Z,5µm,18.0s						
WB8	Warramunga Arr	43.21	282	PFAKE		05 02 20.0	+13
WB8				LR	LR		
	comp=Z,5µm,18.0s						
WB9	Warramunga Arr	43.22	282	PFAKE		05 02 20.0	+13
WB9				LR	LR		
	comp=Z,13µm,18.0s						
WB0	Warramunga Arr	43.23	282	PFAKE		05 02 20.0	+13
WB0				LR	LR		
	comp=Z,6µm,18.0s						
XMAS	Kiritimati	44.92	33	*e*P	P	05 02 21.4	+0.5
	comp=Z,218nm,1.1s						
TAOE	Nuku Hiva Isla	46.17	62	*e*LQ	LQ	05 13 08.7	
	comp=Z,6µm,28.6s						
TAOE				*e*LR	LR	05 15 16.7	
	comp=Z,6µm,26.0s,baz=233						
TAOE	Nuku Hiva Isla	46.17	62	PFAKE		05 02 40.0	+9.1
TAOE				LR	LR		
	comp=Z,5µm,19.0s						
MANU	Manus Island	46.43	312	*e*P	P	05 02 31.2	-1.6
	comp=Z,336nm,1.4s						
MANU				LR	LR		
	comp=Z,2µm,20.0s						
CASY	Casey	47.78	211	*e*P	P	05 02 44.4	+1.6
	comp=Z,64nm,1.0s						
CASY				LR	LR		
	comp=Z,4µm,18.0s						
PATS	Pohnpei	48.77	331	*e*P	P	05 02 50.1	-0.8
	comp=Z,204nm,1.2s						
PATS				LR	LR		
	comp=Z,2µm,18.0s						
MTN	Manton Dam	49.86	287	*e*P	P	05 02 57.8	-1.6
	comp=Z,85nm,0.9s						
MTN				LR	LR		
	comp=Z,6µm,18.0s						
JAY	Jayapura	50.19	305	P	P	05 03 01.2	-0.7
JAY	Jayapura	50.19	305	P	P	05 03 00.6	-1.3
	comp=Z,2µm,1.2s,comp=Z,24µm						
NWAO	Narrogin (SRO)	50.43	256	P	P	05 03 02.6	-1.0
	comp=Z,42nm,0.8s,baz=350,slow=7.1,SNR=19						
NWAO				LR	LR	05 23 06.8	
	comp=Z,4µm,19.6s,baz=343,slow=34						
NWAO	Narrogin (SRO)	50.43	256	*e*P	P	05 03 03.1	-0.5
	comp=Z,95nm,1.3s						
NWAO	Narrogin (SRO)	50.43	256	*e*P	P	05 03 03.1	-0.5
NWAO				pmax	pmax		
	comp=Z,95nm,1.3s						
GENI	Genyem	50.48	304	P	P	05 03 02.0	-2.1
GENI	Genyem	50.48	304	P	P	05 03 03.4	-0.7
	comp=Z,249nm,0.9s,comp=Z,4µm						
FITZ	Fitzroy Crossi	51.00	277	*e*P	P	05 03 07.3	-0.7
	comp=Z,444nm,1.6s						
FITZ				LR	LR		
	comp=Z,6µm,18.0s						
QSPA	South Pole Qui	52.29	180	P	P	05 03 19.8	+2.7
	comp=Z,43nm,1.0s,baz=34,slow=2.4,SNR=69						
QSPA				LR	LR	05 23 15.8	
	comp=Z,2µm,18.2s,baz=39,slow=33						
QSPA	South Pole Qui	52.29	180	*e*P	P	05 03 19.9	+2.7
	comp=Z,289nm,1.5s						
SRPI	Serui, Papua	53.63	301	P	P	05 03 27.7	+0.2
	comp=Z,282nm,1.1s						
MBWA	Marble Bar	54.01	270	*e*P	P	05 03 29.2	-1.1
	comp=Z,183nm,1.5s						
MBWA				LR	LR		
	comp=Z,8µm,20.0s						
BAKI	Biak	54.22	302	P	P	05 03 32.0	+0.2
	comp=Z,318nm,1.9s,comp=Z,4µm						
MIR	Mirnyy	54.73	209⇓	*i*P	P	05 03 36.0	+1.2
MIR				*i*		05 03 39.0	
MIR				*e*		05 05 48.0	
MIR				*e*S	S	05 11 22.0	+8.3
MIR				*e*		05 13 18.0	
RKPI	Ransiki, Papua	55.30	300	P	P	05 03 39.2	-0.5
	comp=Z,152nm,1.7s,comp=Z,2µm						
FAKI	Fak Fak	55.65	297	*e*P	P	05 03 40.0	-2.2
	comp=Z,119nm,1.0s						
FAKI				LR	LR		
	comp=Z,5µm,19.0s						
SOEI	Soe	57.03	284	P	P	05 03 54.6	+2.4
	comp=Z,226nm,1.5s,comp=Z,4µm						
SOEI	Soe	57.03	284	*e*P	P	05 03 53.0	+0.8
	comp=Z,253nm,1.1s						
SOEI				LR	LR		
	comp=Z,13µm,18.0s						
SWI	Sorong	57.79	298	P	P	05 03 56.9	-0.5
	comp=Z,368nm,0.9s,comp=Z,4µm						
WAKE	Wake Island	58.16	345	PFAKE		05 04 10.0	+10
WAKE				LR	LR		
	comp=Z,2µm,19.0s						
MMRI	Maumere	59.29	284	P	P	05 04 08.5	+0.6
	comp=Z,329nm,1.0s						
MMRI	Maumere	59.29	284	*e*P	P	05 04 06.4	-1.5
	comp=Z,222nm,0.9s						
MMRI				LR	LR		
	comp=Z,7µm,20.0s						
RPN	Rapa Nui	59.43	102	P	P	05 04 09.6	+0.8
	comp=Z,97nm,0.9s,baz=217,slow=4.2,SNR=3.0						
RPN				LR	LR	05 23 51.5	
	comp=Z,2µm,18.4s,baz=235,slow=30						
EDFI	Ende, Flores	59.64	283	P	P	05 04 11.1	+0.7
	comp=Z,78nm,1.5s,comp=Z,2µm						
LBMI	Labuha	60.62	295	P	P	05 04 19.5	+2.5
	comp=Z,220nm,0.9s,comp=Z,3µm						
SANI	Sanana	60.75	292	P	P	05 04 17.0	-0.9
	comp=Z,232nm,0.9s,comp=Z,2µm						
GUMO	Guam	60.77	320	P	P	05 04 17.4	-0.5
	comp=Z,28nm,0.9s,baz=341,slow=1.4,SNR=4.4						
GUMO				LR	LR	05 30 36.2	
	comp=Z,585nm,18.1s,baz=158,slow=36						
GUMO	Guam	60.77	320	*e*P	P	05 04 17.5	-0.4
	comp=Z,262nm,1.8s						
GUMO	Guam	60.77	320	*e*P	P	05 04 17.5	-0.4
GUMO				pmax	pmax		
	comp=Z,262nm,1.8s						
KHU	Kahuku	61.30	27	*e*P	P	05 04 20.7	-1.0
	comp=Z,146nm,1.1s						
KHU	Kahuku	61.30	27	*e*P	P	05 04 20.7	-1.0
KHU				pmax	pmax		
	comp=Z,146nm,1.1s						
KHLU	Kahalu‘u	61.52	26	*e*P	P	05 04 23.4	+0.3
	comp=Z,201nm,1.0s						
KHLU				LR	LR		
	comp=Z,2µm,20.0s						
SDHHI	Sand Hill	61.55	27	PFAKE		05 04 30.0	+6.8
SDHHI				LR	LR		
	comp=Z,2µm,21.0s						
RIM	Rim	61.56	27	PFAKE		05 04 30.0	+6.7
RIM				LR	LR		
	comp=Z,2µm,20.0s						
PUH	Pauahi	61.56	27	*e*P	P	05 04 24.2	+0.9
	comp=Z,211nm,1.1s						
PUH				LR	LR		
	comp=Z,2µm,21.0s						
NPH	North Pit	61.58	27	PFAKE		05 04 30.0	+6.6
NPH				LR	LR		
	comp=Z,2µm,21.0s						
OBL	Observatory Le	61.58	27	PFAKE		05 04 30.0	+6.6
OBL				LR	LR		
	comp=Z,2µm,22.0s						
UWE	Uwekahuna	61.58	27	PFAKE		05 04 30.0	+6.5
UWE				LR	LR		
	comp=Z,2µm,19.0s						
MLH	Mauna Loa	61.61	27	*e*P	P	05 04 24.2	+0.4
	comp=Z,198nm,1.2s						
MLH	Mauna Loa	61.61	27	*e*P	P	05 04 24.2	+0.4
MLH				pmax	pmax		
	comp=Z,198nm,1.2s						
HUH	Hualalai	61.63	26	PFAKE		05 04 30.0	+6.0
HUH				LR	LR		
	comp=Z,3µm,22.0s						
HMH	Humu‘ula Sheep	61.68	27	*e*P	P	05 04 24.7	+0.3
	comp=Z,343nm,1.1s						
TNTI	Ternate	61.69	296	P	P	05 04 23.8	-0.5
	comp=Z,77nm,1.6s,comp=Z,2µm						
TNTI	Ternate	61.69	296	*e*P	P	05 04 23.3	-1.0
	comp=Z,61nm,1.0s						
TNTI				LR	LR		
	comp=Z,800nm,19.0s						
POHA	Pohakuloa	61.80	26	*e*P	P	05 04 24.9	-0.1
	comp=Z,122nm,0.9s						
POHA				LR	LR		
	comp=Z,2µm,19.0s						
KIP	Kipapa	62.53	23	*e*P	P	05 04 30.4	+0.8
	comp=Z,169nm,1.3s						
KIP				LR	LR		
	comp=Z,2µm,19.0s						
KIP	Kipapa	62.53	23*c*	*e*P	P	05 04 30.2	+0.6
KIP				pmax	pmax		
	comp=Z,737nm,1.3s						
PLAI	Plampang	62.62	281	P	P	05 04 30.3	-0.2
	comp=Z,139nm,1.0s,comp=Z,2µm						
BKSI	Bulukumba	63.00	285	P	P	05 04 33.3	+0.3
	comp=Z,30nm,1.2s,comp=Z,970nm						
TWSI	Taliwang, Sumb	63.37	280	P	P	05 04 35.3	-0.2
	comp=Z,136nm,1.0s,comp=Z,2µm						
KAPI	Kappang	63.48	285	PFAKE		05 04 50.0	+14
KAPI				LR	LR		
	comp=Z,3µm,20.0s						
LUWI	Luwuk	63.80	291	PFAKE		05 04 50.0	+12
LUWI				LR	LR		
	comp=Z,3µm,19.0s						
KMSI	Cibinong	64.00	293	P	P	05 04 39.7	+0.1
	comp=Z,336nm,0.8s						
SPSI	Sidrap Palu	64.14	286	P	P	05 04 39.6	-1.0
	comp=Z,44nm,0.9s,comp=Z,668nm						
TTSI	Tana Toraja	64.69	287	P	P	05 04 43.7	-0.5
	comp=Z,69nm,1.1s,comp=Z,926nm						
APSI	Ampana	64.72	290	P	P	05 04 44.5	+0.1
	comp=Z,116nm,0.9s,comp=Z,2µm						
MAW	Mawson	64.74	202	P	P	05 04 45.5	+1.8
	comp=Z,35nm,1.2s,baz=117,slow=8.7,SNR=22						
MAW				LR	LR	05 32 10.9	
	comp=Z,3µm,18.1s,baz=118,slow=35						
MAW	Mawson	64.74	202	*e*P	P	05 04 45.7	+2.0
	comp=Z,15nm,1.2s						
MAW	Mawson	64.74	202	*e*P	P	05 04 45.7	+2.0
MAW				pmax	pmax		
	comp=Z,15nm,1.2s						
SRBI	Singaraja	65.07	279	P	P	05 04 46.7	0.0
	comp=Z,135nm,1.1s,comp=Z,2µm						
MRSI	Marisa	65.43	291	P	P	05 04 47.8	-1.2
	comp=Z,24nm,0.8s,comp=Z,554nm						
JAGI	Jajag, Banyuwa	65.67	278	P	P	05 04 53.2	+2.6
	comp=Z,99nm,1.2s						
JAGI	Jajag, Banyuwa	65.67	278	*e*P	P	05 04 49.3	-1.3
	comp=Z,412nm,1.8s						
JAGI				LR	LR		
	comp=Z,6µm,20.0s						
MIDW	Midway	65.76	3	PFAKE		05 05 00.0	+9.3
MIDW				LR	LR		
	comp=Z,2µm,19.0s						
PCI	Palu	66.08	289	P	P	05 04 54.0	+0.8
	comp=Z,103nm,1.0s,comp=Z,2µm						
PMSA	Palmer Station	66.26	155	P	P	05 04 55.0	+1.4
	comp=Z,42nm,1.1s,baz=244,slow=9.3,SNR=3.6						
PMSA				LR	LR	05 29 49.1	
	comp=Z,3µm,18.1s,baz=231,slow=32						
GMJI	Gumukmas	66.34	278	P	P	05 04 54.2	-0.7
	comp=Z,145nm,1.3s						
BLJI	Banyuglugur	66.55	279	P	P	05 04 56.3	+0.1
	comp=Z,137nm,1.3s,comp=Z,2µm						
MPSI	Mapaga	66.85	290	P	P	05 04 57.5	-0.6
	comp=Z,51nm,0.9s,comp=Z,542nm						
KBKI	Kotabaru	67.32	284	P	P	05 05 01.5	+0.4
	comp=Z,64nm,0.8s						
DAV	Davao City (W)	67.39	299	P	P	05 05 01.5	0.0
	comp=Z,228nm,0.5s,baz=8.7,slow=0.3,SNR=11						
DAV				LR	LR	05 36 57.1	
	comp=Z,640nm,18.3s,baz=146,slow=38						
DAV	Davao City (W)	67.39	299⇓	*e*P	P	05 04 54.9	-6.6
PWJI	Pagerwojo	67.78	277	P	P	05 05 03.4	-0.6
	comp=Z,194nm,1.1s						
PCJI	Pacitan	68.17	277	P	P	05 05 06.8	+0.3
	comp=Z,395nm,1.2s,comp=Z,4µm						
NGJI	Ngawi	68.45	278	P	P	05 05 18.2	+10
WOJI	Wonogiri, Jawa	68.58	277	P	P	05 05 09.2	+0.1
	comp=Z,169nm,1.0s						
SYO	Syowa Base	69.48	194⇑	*i*P	P	05 05 14.4	+0.7
SYO	Syowa Base	69.48	194⇓	*i*pP	pP	05 05 18.5	-2.0
SYO	Syowa Base	69.48	194⇓	*i*PcP	PcP	05 05 34.4	-2.5
MTKI	Muara Teweh, K	69.79	285	P	P	05 05 27.7	+11
KPJI	Karang Pucung	70.46	276	P	P	05 05 21.6	+1.0
GO10	Punta Arenas	70.64	143	*e*P	P	05 05 23.6	+2.3
	comp=Z,525nm,1.4s						
SNAA	Sanae	70.77	179	P	P	05 05 22.8	+1.0
SNAA	Sanae	70.77	179	P	P	05 05 22.8	+1.0
	comp=Z,25nm,1.0s,baz=198,slow=6.4,SNR=29						
SNAA				LR	LR	05 34 48.2	
	comp=Z,1µm,18.0s,baz=180,slow=34						
SNAA	Sanae	70.77	179	*e*P	P	05 05 22.7	+0.9
	comp=Z,102nm,1.3s						
USHA	Ushuaia	70.82	145	P	P	05 05 23.3	+1.1
	comp=Z,19nm,1.0s,baz=311,slow=2.9,SNR=4.9						
USHA				LR	LR	05 30 47.8	
	comp=Z,2µm,18.3s,baz=244,slow=31						
VNA3	Neumayer Olymp	71.01	177	P	P	05 05 23.9	+0.8
MYLDM	Lahad Datu	71.12	293	*e*P	P	05 05 26.3	+1.7
	comp=Z,150nm,1.5s						
GO09	Cerro Castillo	71.16	141	*e*P	P	05 05 25.9	+1.5
	comp=Z,195nm,1.2s						
NVL	N’lazarevskaya	71.35	184⇓	*i*P	P	05 05 26.6	+1.4
NVL				*i* S	S	05 14 47.0	+5.5
NVL				MLR	MLR		
	comp=Z,1µm,18.0s						
VNA1	Neumayer--Stat	71.66	177	P	P	05 05 28.0	+1.0
SKJI	Sukabumi	72.53	275	P	P	05 05 46.5	+13
DBJI	Dramaga	72.65	275	P	P	05 05 33.7	-0.2
STKI	Sintang	73.06	284	P	P	05 05 36.3	0.0
KKM	Kota Kinabalu	73.38	292	*e*P	P	05 05 36.8	-1.5
	comp=Z,43nm,0.8s						
CGJI	Cibinong	73.44	275	P	P	05 05 39.2	+0.6
CBIJ	Chichi jima	73.61	325	*e*P	P	05 05 36.1	-3.0
	comp=Z,169nm,1.1s						
JCJ	Chichijima	73.61	325	P	P	05 05 36.6	-2.6
	comp=Z,36nm,0.6s						
SBUM	Sibu	74.01	286	*e*P	P	05 05 40.3	-1.6
	comp=Z,36nm,1.1s						
KSM	Kuching	74.85	284	*e*P	P	05 05 45.0	-1.8
	comp=Z,51nm,0.8s						
TGY	Tagaytay City	75.58	301	P	P	05 05 50.9	-0.1
	comp=Z,369nm,0.5s,baz=201,slow=7.4,SNR=5.5						
TGY				LR	LR	05 37 27.8	
	comp=Z,680nm,21.8s,baz=120,slow=34						
LWLI	Liwa	75.70	275	P	P	05 05 57.7	+5.9
MDSI	Maura Dua	75.93	275	P	P	05 05 51.1	-1.9
COCO	West Island	77.14	265	PFAKE		05 06 10.0	+10
COCO				LR	LR		
	comp=Z,3µm,19.0s						
EFI	East Falkland	77.53	147	*e*P	P	05 06 01.4	0.0
	comp=Z,179nm,1.4s						
EFI				LR	LR		
	comp=Z,2µm,19.0s						
EFI	East Falkland	77.53	147	*i* P	P	05 06 01.8	+0.4
EFI				pmax	pmax		
	comp=Z,102nm,1.3s						
MASI	Maura Aman, Be	78.28	275	P	P	05 06 05.4	-0.8
PLCA	Paso Flores	78.75	133	P	P	05 06 09.8	+1.2
	comp=Z,69nm,1.0s,baz=253,slow=5.8,SNR=68						
PLCA				LR	LR	05 32 07.7	
	comp=Z,1µm,21.6s,baz=255,slow=29						
PLCA	Paso Flores	78.75	133	*e*P	P	05 06 09.7	+1.2
	comp=Z,144nm,1.1s						
PLCA	Paso Flores	78.75	133	*e*P	P	05 06 09.7	+1.2
PLCA				pmax	pmax		
	comp=Z,144nm,1.1s						
KRJI	Kerinci	79.53	276	P	P	05 06 13.8	+0.6
JHJ	Hachijo jima 2	79.84	327	LR	LR	05 39 14.9	
	comp=Z,380nm,19.9s,baz=108,slow=34						
MYKOM	Kota Tinggi	80.05	280	*e*P	P	05 06 16.7	+0.9
	comp=Z,45nm,1.1s						
JOW	Kunigami	80.47	315	P	P	05 06 16.5	-1.2
	comp=Z,27nm,1.0s,baz=131,slow=4.8,SNR=3.8						
JOW				LR	LR	05 39 19.1	
	comp=Z,404nm,19.7s,baz=176,slow=34						
GO05	HualaæØ	81.64	128	*e*P	P	05 06 24.5	+0.4
	comp=Z,306nm,1.5s						
SISI	Saibi	81.87	275	P	P	05 06 36.3	+11
YULB	Yu-li	82.03	308	*e*P	P	05 06 23.5	-2.7
	comp=Z,37nm,0.9s						
TPUB	Ta-pu	82.39	307	*e*P	P	05 06 24.9	-3.2
	comp=Z,52nm,1.0s						
SSLB	Suanglung	82.54	308	*e*P	P	05 06 26.6	-2.2
	comp=Z,73nm,0.9s						
MNSI	Mandailing Nat	82.78	277	P	P	05 06 28.1	-2.2
INU	Inuyama	82.94	326	*e*P	P	05 06 29.3	-1.3
	comp=Z,68nm,1.3s						
HOPE	Hope Point	83.06	160	PFAKE		05 06 40.0	+8.9
HOPE				LR	LR		
	comp=Z,1µm,21.0s						
TATO	Taipei	83.07	309	PFAKE		05 06 40.0	+8.5
TATO				LR	LR		
	comp=Z,2µm,20.0s						
PBSI	Pulau Batu	83.28	275	P	P	05 06 43.6	+11
MJAR	Matsushiro Arr	83.42	327	P	P	05 06 31.7	-1.4
	comp=Z,7.4nm,0.8s,baz=166,slow=5.4,SNR=14						
MJAR				LR	LR	05 41 27.5	
	comp=Z,341nm,20.2s,baz=125,slow=34						
MAJO	Matsushiro	83.43	327	*e*P	P	05 06 32.0	-1.1
	comp=Z,28nm,0.9s						
MAJO				LR	LR		
	comp=Z,594nm,20.0s						
MAJO	Matsushiro	83.43	327	*i* P	P	05 06 30.6	-2.5
MAJO				pmax	pmax		
	comp=Z,15nm,1.0s						
MAT	Matsushiro	83.43	327	P	P	05 06 31.4	-1.7
MAT				S	S	05 16 47.2	-5.9
MJB9	Matsu-Tunnel	83.43	327	*e*P	P	05 06 32.5	-0.6
	comp=Z,28nm,0.9s						
ROC1	El Roble	83.54	127	*e*P	P	05 06 35.2	+0.8
	comp=Z,66nm,1.0s						
PEL	Peldehue	83.64	127	*e*P	P	05 06 35.0	+0.4
	comp=Z,313nm,1.2s						
PEL	Peldehue	83.64	127	*e*P	P	05 06 35.0	+0.4
PEL				pmax	pmax		
	comp=Z,313nm,1.2s						
IPM	Ipoh	83.92	280	*e*P	P	05 06 34.4	-1.8
	comp=Z,28nm,0.9s						
JNU	Nakatsue	84.02	320	P	P	05 06 35.4	-0.9
	comp=Z,23nm,0.9s,baz=85,slow=5.2,SNR=16						
JNU				LR	LR	05 40 45.6	
	comp=Z,404nm,21.1s,baz=124,slow=33						
JNU	Nakatsue	84.02	320	*e*P	P	05 06 35.0	-1.2
	comp=Z,41nm,1.0s						
PSI	Prapat	84.53	278	*e*P	P	05 06 37.2	-2.2
	comp=Z,104nm,1.6s						
PSI	Prapat	84.53	278	*e*P	P	05 06 37.2	-2.2
PSI				pmax	pmax		
	comp=Z,104nm,1.6s						
GSI	Gunungsitoli	84.67	276	P	P	05 06 40.6	+0.6
GSI	Gunungsitoli	84.67	276	*e*P	P	05 06 39.4	-0.7
	comp=Z,161nm,0.9s						
KULM	Kulim	84.72	281	*e*P	P	05 06 39.6	-0.7
	comp=Z,49nm,1.3s						
QZH	Quanzhou	84.86	307⇑	*i*P	P	05 06 39.8	-0.8
QZH				S	S	05 17 03.3	-4.6
QZH				pmax	pmax		
	comp=Z,600nm,4.3s						
QZH				LR	LR		
	comp=Z,590nm,24.6s						
QZH				LR	LR		
	comp=Z,450nm,19.0s						
QZH				LR	LR		
	comp=Z,1µm,30.3s						
TRQA	Tornquist	85.43	136	*e*P	P	05 06 43.9	+0.3
	comp=Z,63nm,1.1s						
TRQA				LR	LR		
	comp=Z,2µm,22.0s						
TRQA	Tornquist	85.43	136	*e*P	P	05 06 43.9	+0.3
TRQA				pmax	pmax		
	comp=Z,63nm,1.1s						
TRQA				MLR	MLR		
	comp=Z,2µm,22.0s						
GO04	Tololo Observa	85.52	125	*e*P	P	05 06 45.1	+0.6
	comp=Z,80nm,1.2s						
KCSI	Kotacane, Aceh	85.87	278	P	P	05 06 51.0	+4.9
SKLT	Songkhla	85.91	282	P	P	05 06 49.6	+3.4
TPTI		86.18	277	P	P	05 06 57.0	+9.5
ERM	Erimo	86.22	334	PFAKE		05 07 00.0	+13
ERM				LR	LR		
	comp=Z,1µm,21.0s						
LCO	Las Campanas	86.36	124	*e*P	P	05 06 48.7	+0.1
	comp=Z,269nm,1.8s						
LCO				LR	LR		
	comp=Z,2µm,19.0s						
LCO	Las Campanas	86.36	124	*e*P	P	05 06 48.7	+0.1
LCO				pmax	pmax		
	comp=Z,269nm,1.8s						
LCO				MLR	MLR		
	comp=Z,2µm,19.0s						
QIZ	Qiongzhong	86.65	297	P	P	05 06 49.4	-0.3
QIZ				LR	LR		
	comp=Z,500nm,18.6s						
QIZ				LR	LR		
	comp=Z,540nm,17.6s						
QIZ				LR	LR		
	comp=Z,1µm,26.5s						
QIZ	Qiongzhong	86.65	297	*e*P	P	05 06 49.4	-0.3
	comp=Z,21nm,1.1s						
QIZ				LR	LR		
	comp=Z,623nm,20.0s						
GZH	Guangzhou	86.98	302	P	P	05 06 53.5	+2.3
GZH				PP	PP	05 10 20.6	+5.8
GZH				S	S	05 17 31.8	+3.1
GZH				LR	LR		
	comp=Z,580nm,14.6s						
GZH				LR	LR		
	comp=Z,380nm,14.4s						
TRTT	Trang	87.04	282	P	P	05 06 51.1	-0.6
YUK	Yuzh-Kuril’sk	87.11	336	*e*P	P	05 06 51.1	-0.2
YUK				*e*		05 10 21.5	
YUK				*e*PPP	PPP	05 12 06.8	
YUK				*i* S	SKSac	05 17 16.9	0.0
YUK				e*SS	SKKSac	05 17 24.5	-1.3
YUK				*e*SS	SS	05 23 15.4	+1.7
YUK				*e*SSS	SSS	05 26 42.8	
YUK				pmax	pmax		
	comp=Z,260nm,1.0s						
YUK				pmax	pmax		
	comp=E,200nm,1.1s						
YUK				pmax	pmax		
	comp=N,142nm,0.4s						
YUK				pmax	pmax		
	comp=Z,342nm,1.4s						
MLSI	Meulaboh, Aceh	87.40	277	P	P	05 06 53.3	-0.2
KUR	Kuril’sk	87.57	338	*e*P	P	05 06 54.0	+0.5
KUR				*i* S	SKSac	05 17 19.5	-0.2
KUR				smax	smax		
	comp=N,533nm,13.0s						

KUR				smax	smax		
	comp=Z,631nm,13.0s						
GO03	**Copiap**	**87.60**	**123**	*e*P	**P**	**05 06 55.5**	**+1.1**
	comp=Z,204nm,1.6s						
KRAB	**Krabi**	**87.66**	**282**	P	P	05 07 04.9	+10
SSE	**Sheshan**	**87.74**	**313**	P	P	05 06 48.4	-6.2
SSE	**Sheshan**	**87.74**	**313**	S	**SKSac**	**05 17 19.8**	**-1.6**
SSE				pmax	pmax		
	comp=Z,16nm,0.7s						
SSE				pmax	pmax		
	comp=Z,53nm,3.3s						
SSE				LR	LR		
	comp=N,280nm,23.5s						
SSE				LR	LR		
	comp=E,270nm,27.9s						
ASAJ	**Asahikawa**	**88.27**	**334**	P	**P**	**05 06 56.6**	**-0.2**
	comp=E,12nm,0.7s,baz=226,slow=11,SNR=6.7						
ASAJ				LR	LR	05 41 02.6	
	comp=E,791nm,20.6s,baz=158,slow=32						
ASAJ	**Asahikawa**	**88.27**	**334**	*e*P	**P**	**05 06 57.7**	**+0.8**
	comp=E,20nm,0.8s						
TJN	**Taejon**	**88.36**	**320**	c*e*P	**P**	**05 06 56.1**	**-1.4**
KSRS	**Korea Array**	**88.92**	**321**	P	**P**	**05 07 00.7**	**+0.6**
	comp=E,19nm,0.9s,baz=142,slow=5.6,SNR=53						
KSRS				PP	**PP**	**05 10 29.5**	**-0.7**
	comp=E,3.3nm,0.9s,baz=153,slow=9.2,SNR=5.4						
KSRS				LR	LR	05 44 53.2	
	comp=E,262nm,19.1s,baz=145,slow=34						
KS15	**Wonju Array Si**	**88.93**	**321**	*e*P	**P**	**05 07 00.8**	**+0.7**
KSAR	**Wonju Array Be**	**88.93**	**321**	P	**P**	**05 07 00.7**	**+0.6**
KSAR				PP	**PP**	**05 10 29.5**	**-0.8**
KSAR	**Wonju Array Be**	**88.93**	**321**	P	**P**	**05 07 00.7**	**+0.6**
KSAR						05 10 29.5	
KS01	**Wonju Array Si**	**88.95**	**321**	*e*P	**P**	**05 06 59.7**	**-0.5**
PANO	**Nakornpanom**	**89.19**	**292**	P	**P**	**05 07 04.9**	**+3.1**
PAYG	**Puerto Ayora**	**89.50**	**90**	*e*P	**P**	**05 07 06.0**	**+2.5**
	comp=E,100nm,1.1s						
PAYG				LR	LR		
	comp=Z,1μm,19.0s						
SKNT	**Sakolnakorn**	**89.54**	**292**	P	**P**	**05 07 03.8**	**+0.3**
INCN	**Inchon**	**89.59**	**320**	PFAKE		05 07 10.0	+6.7
INCN				LR	LR		
	comp=Z,927nm,20.0s						
GO02	**Mina Guanaco**	**89.65**	**122**	*e*P	**P**	**05 07 05.5**	**+1.0**
	comp=Z,105nm,1.1s						
NJ2	**Nanjing**	**89.79**	**312**	*e*P	**P**	**05 07 04.8**	**+0.5**
NJ2				pP	**pP**	**05 07 10.9**	**-0.4**
NJ2				sP	**sP**	**05 07 14.5**	**+0.8**
NJ2				S	**S**	**05 17 56.8**	**+1.7**
NJ2				pmax	pmax		
	comp=Z,20nm,0.8s						
NJ2				pmax	pmax		
	comp=Z,520nm,5.2s						
NJ2				LR	LR		
	comp=Z,700nm,23.9s						
NJ2				LR	LR		
	comp=Z,530nm,22.8s						
NJ2				LR	LR		
	comp=Z,1μm,22.2s						
SLBS	**Sierra La Lagu**	**89.92**	**60**	*e*P	**P**	**05 07 06.7**	**+1.5**
	comp=Z,66nm,1.3s						
LPIG	**La Paz**	**89.94**	**59**	P	**P**	**05 07 06.5**	**+1.2**
	comp=Z,10.0nm,0.5s,baz=161,slow=3.2,SNR=3.2						
CHAI	**Chaiyaphum**	**90.34**	**290**	P	**P**	**05 07 08.3**	**+1.1**
	comp=Z,8.7nm,0.8s,comp=Z,167nm						
SKR	**Severo-Kuril’s**	**90.58**	**345**	*e*P	**P**	**05 07 08.1**	**+0.6**
SKR				*e*S	**S**	**05 17 57.1**	**-4.4**
SKR				*e*PS	PnS	05 19 34.9	+23
SKR				*e*SS	**SS**	**05 24 11.9**	**+7.9**
SKR				pmax	pmax		
	comp=Z,200nm,6.0s						
SKR				pmax	pmax		
	comp=Z,600nm,5.8s						
SKR				MLR	MLR		
	comp=Z,700nm,20.0s						
YSS	**Yuzh-Sakhalins**	**90.70**	**336**	*e*P	**P**	**05 07 08.7**	**+0.5**
	comp=Z,70nm,0.9s						
YSS				LR	LR		
	comp=Z,675nm,21.0s						
YSS	**Yuzh-Sakhalins**	**90.70**	**336**⇓	*e*P	**P**	**05 07 08.7**	**+0.5**
YSS				*i*		05 17 37.1	
YSS				*e*S	**S**	**05 18 00.4**	**-2.4**
YSS				*e*SS	**SS**	**05 24 12.0**	**+6.1**
YSS				pmax	pmax		
	comp=Z,50nm,0.7s						
YSS				pmax	pmax		
	comp=Z,520nm,5.1s						
YSS				smax	smax		
	comp=N,910nm,15.6s						
SRIG	**Santa Rosalia**	**90.82**	**56**	*e*P	**P**	**05 07 10.4**	**+1.2**
	comp=N,89nm,1.3s						
SCZ2	**Santa Cruz Isl**	**90.94**	**46**	P	**P**	**05 07 10.8**	**+1.1**
	baz=223						
PB04	**IPOC Station P**	**91.16**	**120**	*e*P	**P**	**05 07 12.6**	**+1.2**
	comp=N,94nm,1.3s						
CIS	**Catalina Islan**	**91.22**	**47**	P	**P**	**05 07 11.8**	**+0.7**
	baz=224						
TEY	**Ternei**	**91.25**	**331**	*e*P	P	05 07 21.0	+10
BLG	**Laguna Peak, P**	**91.35**	**47**	P	**P**	**05 07 12.5**	**+0.9**
	baz=224						
WHN	**Wuhan**	**91.45**	**308**⇑	*i*P	**P**	**05 07 15.3**	**+3.2**
WHN				pP	**sP**	**05 07 21.5**	**0.0**
WHN				sP	**pP**	**05 07 24.4**	**+5.4**
WHN				PP	**PP**	**05 10 54.1**	**+3.6**
WHN				S	**S**	**05 18 10.6**	**+0.2**
WHN				LR	LR		
	comp=N,820nm,11.1s						
WHN				LR	LR		
	comp=N,2μm,20.2s						
WHN				LR	LR		
	comp=N,2μm,19.2s						
MSHR	**Mys Shultsa**	**91.47**	**326**	*i* P	**P**	**05 07 10.4**	**-1.4**
PKM	**Mcpherson Peak**	**91.49**	**46**	P	**P**	**05 07 13.7**	**+1.3**
	baz=223						
PBKT	**Sadao Pong**	**91.51**	**290**	*e*P	**P**	**05 07 12.9**	**+0.3**
PBKT	**Sadao Pong**	**91.51**	**290**	P	**P**	**05 07 13.1**	**+0.4**
109C	**Camp Elliot, M**	**91.63**	**49**	P	**P**	**05 07 13.8**	**+0.9**
	baz=225						
CPE	**Camp Elliot**	**91.63**	**49**	*e*P	**P**	**05 07 14.1**	**+1.2**
	comp=N,57nm,1.4s						
SMMC	**Simmler**	**91.69**	**45**	P	**P**	**05 07 14.7**	**+1.5**
	baz=223						
BAR	**Barrett**	**91.74**	**49**	*e*P	**P**	**05 07 14.8**	**+1.3**
	comp=N,106nm,1.5s						
PAGB	**Antelope Grade**	**91.86**	**45**	*e*P	**P**	**05 07 15.3**	**+1.4**
	comp=N,134nm,1.7s						
DECC	**Green Verdugo**	**91.88**	**47**	P	**P**	**05 07 14.6**	**+0.5**
	baz=224						
PASC	**Pasadena Art C**	**91.91**	**47**	*e*P	**P**	**05 07 14.6**	**+0.5**
	comp=N,20nm,0.9s						
OSI	**Osito Audit: C**	**91.91**	**46**	P	**P**	**05 07 15.4**	**+1.2**
	baz=224						
OSI	**Osito Audit: C**	**91.91**	**46**	*e*P	**P**	**05 07 15.5**	**+1.3**
	comp=N,28nm,0.8s						
MWC	**Mount Wilson**	**92.02**	**47**	*e*P	**P**	**05 07 15.9**	**+1.0**
	comp=N,38nm,1.0s						
MWC	**Mount Wilson**	**92.02**	**47**	*e*P	**P**	**05 07 15.9**	**+1.0**
MWC				pmax	pmax		
	comp=Z,39nm,1.0s						
MONP2	**Monument Peak**	**92.04**	**49**	P	**P**	**05 07 16.4**	**+1.4**
	baz=225,SNR=14						
IKP	**In-Ko-Pah, Jac**	**92.06**	**49**	P	**P**	**05 07 16.2**	**+1.2**
	baz=225,SNR=11						
MURC	**Murrieta**	**92.08**	**48**	P	**P**	**05 07 16.2**	**+1.2**
	baz=225,SNR=11						
ARVC	**Arvin**	**92.22**	**46**	P	**P**	**05 07 16.3**	**+0.8**
	baz=224						
BFSC	**Mount Baldy Ra**	**92.26**	**47**	P	**P**	**05 07 16.7**	**+0.7**
	baz=224,SNR=25						
PHIT	**Phitsanulok**	**92.31**	**290**	P	**P**	**05 07 17.8**	**+1.4**
PET	**Petropavlovsk**	**92.34**	**347**	PFAKE		05 07 30.0	+14
PET				LR	LR		
	comp=Z,591nm,20.0s						
PET	**Petropavlovsk**	**92.34**	**347**	c *i*P	**P**	**05 07 16.6**	**+1.0**
PET				*e*		05 17 45.5	
PET				*e*S	**S**	**05 18 14.5**	**-2.8**
PET				*e*PS	**PS**	**05 19 28.9**	**-2.2**
PET				pmax	pmax		
	comp=Z,300nm,9.5s						
PET				pmax	pmax		
	comp=Z,300nm,13.6s						
FRD	**Ford Ranch, An**	**92.36**	**48**	P	**P**	**05 07 17.6**	**+1.3**
	baz=225,SNR=18						
USRK	**Ussuriysk Ar.**	**92.42**	**328**	P	**P**	**05 07 16.5**	**+0.3**
	comp=Z,8.4nm,0.9s						
USRK				LR	LR	05 47 18.6	
	comp=Z,492nm,19.3s,baz=145,slow=35						
SWSC	**Sam W. Stewart**	**92.45**	**49**	P	**P**	**05 07 17.9**	**+1.2**
	baz=226,SNR=11						
PB01	**IPOC Station P**	**92.47**	**119**	*e*P	**P**	**05 07 18.6**	**+1.2**
	comp=Z,75nm,1.1s						
EDW2	**Edwards Air Fo**	**92.52**	**47**	P	**P**	**05 07 17.9**	**+0.8**
	baz=224,SNR=19						
PFO	**Pinyon Flats O**	**92.52**	**48**	P	**P**	**05 07 18.4**	**+1.2**
	baz=225,SNR=13						
PFO	**Pinyon Flats O**	**92.52**	**48**	*e*P	**P**	**05 07 18.0**	**+0.9**
	comp=Z,40nm,1.1s						
PFO				LR	LR		
	comp=Z,2μm,19.0s						
XPFO	**Piæon Flat**	**92.53**	**49**	*e*P	**P**	**05 07 18.0**	**+0.9**
	comp=Z,43nm,1.1s						
VES	**Vestal, Richgr**	**92.59**	**45**	P	**P**	**05 07 17.7**	**+0.5**
	baz=224,SNR=12						
PEA0B	**Petropavlovsk-**	**92.59**	**347**	*e*P	**P**	**05 07 17.5**	**+0.7**
	comp=Z,96nm,1.4s						
PETK	**Petropavlovsk-**	**92.59**	**347**	P	**P**	**05 07 16.9**	**+0.1**
	comp=Z,9.4nm,0.7s						
PETK				LR	LR	05 43 50.1	
	comp=Z,402nm,19.8s,baz=156,slow=32						
PETK	**Petropavlovsk-**	**92.59**	**347**	*e*P	**P**	**05 07 16.4**	**-0.4**
PETK	**Petropavlovsk-**	**92.59**	**347**	*e*P	**P**	**05 07 16.4**	**-0.4**
BBRC	**Big Bear Solar**	**92.71**	**48**	P	**P**	**05 07 19.3**	**+1.2**
	baz=225						
HOPS	**Hopland Field**	**92.74**	**41**	*e*P	**P**	**05 07 18.6**	**+0.8**
	comp=Z,89nm,1.4s						
GDXM	**Geysers**	**92.74**	**41**	*e*P	**P**	**05 07 19.1**	**+1.2**
	comp=Z,42nm,1.3s						
HSIG		**92.80**	**55**	*e*P	**P**	**05 07 19.3**	**+0.9**
	comp=Z,43nm,1.3s						
ISA	**Isabella, Lake**	**92.81**	**46**	P	**P**	**05 07 19.2**	**+0.9**
	baz=224,SNR=14						
ISA	**Isabella, Lake**	**92.81**	**46**	*e*P	**P**	**05 07 19.1**	**+0.8**
	comp=Z,49nm,1.4s						
ISA	**Isabella, Lake**	**92.81**	**46**	*e*P	**P**	**05 07 19.1**	**+0.8**
ISA				pmax	pmax		
	comp=Z,49nm,1.4s						
KCPM	**Cahto Peak**	**92.99**	**40**	*e*P	**P**	**05 07 19.5**	**+0.3**
	comp=Z,49nm,1.0s						
NNA	**Nana**	**93.01**	**108**	P	**P**	**05 07 20.7**	**+0.8**
	comp=Z,6.8nm,0.6s,baz=273,slow=2.6,SNR=3.6						
NNA				LR	LR	05 40 45.9	
	comp=Z,2μm,19.1s,baz=249,slow=30						
NNA	**Nana**	**93.01**	**108**	*i* P	**P**	**05 07 21.1**	**+1.2**
BELC	**Belle Mtn. Jos**	**93.07**	**48**	P	**P**	**05 07 20.9**	**+1.2**
	baz=225,SNR=23						
RRX	**Edison Barstow**	**93.10**	**47**	P	**P**	**05 07 20.6**	**+0.9**
	baz=225						
GLA	**Glamis**	**93.11**	**50**	P	**P**	**05 07 21.1**	**+1.3**
	baz=226,SNR=8.9						
LRMC	**Laurel Mtn Rad**	**93.13**	**46**	P	**P**	**05 07 20.9**	**+1.0**
	baz=224,SNR=7.9						
BC3	**Big Chuckawall**	**93.15**	**49**	P	**P**	**05 07 21.6**	**+1.5**
	baz=226,SNR=25						
PB11	**IPOC Station P**	**93.21**	**118**	*e*P	**P**	**05 07 21.5**	**+0.7**
	comp=Z,155nm,0.9s						
DL2	**Dalian**	**93.24**	**318**	P	P	05 07 25.6	+5.5
DL2				S	**S**	**05 18 32.8**	**+6.8**
DL2				pmax	pmax		
	comp=Z,38nm,1.1s						
DL2				pmax	pmax		
	comp=Z,220nm,3.6s						
DL2				LR	LR		
	comp=Z,580nm,19.6s						
DL2				LR	LR		
	comp=Z,350nm,20.3s						
DL2				LR	LR		
	comp=Z,690nm,20.8s						
KMRM	**Mail Ridge**	**93.33**	**40**	*e*P	**P**	**05 07 21.6**	**+1.0**
	comp=Z,38nm,1.1s						
HEC	**Hector,Ludlow**	**93.45**	**48**	P	**P**	**05 07 22.3**	**+0.9**
	baz=225,SNR=9.8						
CMB	**Columbia Colle**	**93.45**	**43**	*e*P	**P**	**05 07 21.2**	**0.0**
	comp=Z,34nm,1.2s						
CMB	**Columbia Colle**	**93.45**	**43**	*e*P	**P**	**05 07 21.2**	**0.0**
CMB				pmax	pmax		
	comp=Z,34nm,1.2s						
GSC	**Goldstone, Bar**	**93.51**	**47**	P	**P**	**05 07 22.6**	**+1.0**
	baz=225,SNR=14						
GSC	**Goldstone, Bar**	**93.51**	**47**	*e*P	**P**	**05 07 22.3**	**+0.7**
	comp=Z,66nm,1.6s						
GSC	**Goldstone, Bar**	**93.51**	**47**	*e*P	**P**	**05 07 22.3**	**+0.7**
GSC				pmax	pmax		
	comp=Z,66nm,1.6s						
CWC	**Cottonwood Cre**	**93.58**	**46**	P	**P**	**05 07 22.5**	**+0.4**
	baz=224						
214A	**Organ Pipe Nat**	**93.60**	**52**	P	**P**	**05 07 23.0**	**+1.0**
	baz=227						
MPMC	**Manual Prospec**	**93.65**	**46**	P	**P**	**05 07 23.0**	**+0.7**
	baz=225,SNR=11						
MNMC	**Minye Minye**	**93.67**	**118**	*e*P	**P**	**05 07 24.1**	**+1.0**
	comp=Z,168nm,0.8s						
IRM	**Iron Mountain**	**93.69**	**49**	P	**P**	**05 07 23.9**	**+1.5**
	baz=226,SNR=27						
LAMP	**Lampang**	**93.72**	**290**	P	**P**	**05 07 25.1**	**+2.2**
GYA	**Guiyang**	**93.73**	**301**	P	**P**	**05 07 24.0**	**+1.1**
GYA				pP	sP	05 07 31.8	-0.5
GYA				PP	**PP**	**05 11 12.0**	**+3.4**
GYA				S	**S**	**05 18 30.3**	**-0.9**
GYA				SS	**SS**	**05 24 53.0**	**+2.6**
GYA				pmax	pmax		
	comp=Z,40nm,1.0s						
GYA				pmax	pmax		
	comp=Z,160nm,6.2s						
GYA				LR	LR		
	comp=Z,710nm,20.0s						
GYA				LR	LR		
	comp=Z,630nm,21.2s						
GYA				LR	LR		
	comp=Z,600nm,20.4s						
DAC	**Darwin (Calif)**	**93.74**	**46**	*e*P	**P**	**05 07 23.6**	**+0.8**
	comp=Z,4.6nm,0.8s						
DAC	**Darwin (Calif)**	**93.74**	**46**	*e*P	**P**	**05 07 23.6**	**+0.8**
DAC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
TIA	**Tai’an**	**93.77**	**314**	P	**P**	**05 07 24.1**	**+1.4**
TIA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
TIA				pmax	pmax		
	comp=Z,250nm,5.1s						
TIA				LR	LR		
	comp=Z,370nm,23.5s						
TIA				LR	LR		
	comp=Z,390nm,29.4s						
TIA				LR	LR		
	comp=Z,480nm,25.3s						
Y12C	**Blythe**	**93.78**	**50**	P	**P**	**05 07 24.1**	**+1.3**
	baz=226,SNR=8.3						
Y12C	**Blythe**	**93.78**	**50**	*e*P	**P**	**05 07 24.0**	**+1.3**
	comp=Z,20nm,1.0s						
MDJ	**Mudanjiang**	**93.78**	**327**	P	P	05 07 28.6	+6.1
MDJ				pmax	pmax		
	comp=Z,30nm,1.4s						
MDJ	**Mudanjiang**	**93.78**	**327**	PFAKE		05 07 30.0	+7.5
MDJ				LR	LR		
	comp=Z,382nm,20.0s						
AFDM	**Forest Hills D**	**93.81**	**42**	*e*P	**P**	**05 07 22.7**	**-0.1**
	comp=Z,24nm,1.1s						
KHMM	**Horse Mountain**	**93.81**	**39**	*e*P	**P**	**05 07 23.9**	**+1.0**
	comp=Z,28nm,1.2s						
GMRC	**Granite Mounta**	**93.82**	**48**	P	**P**	**05 07 24.2**	**+1.0**
	baz=226,SNR=13						
MDPB	**Devils Postpil**	**93.88**	**44**	*e*P	**P**	**05 07 24.1**	**+0.6**
	comp=Z,15nm,1.4s						
OMMB	**Old Mammoth Mi**	**93.91**	**44**	*e*P	**P**	**05 07 24.3**	**+0.6**
	comp=Z,19nm,1.5s						
MLAC	**Mammoth, Mammo**	**94.01**	**44**	P	**P**	**05 07 24.6**	**+0.5**
	baz=224						
TUQ	**Turquoise Moun**	**94.11**	**48**	P	**P**	**05 07 25.4**	**+0.9**
	baz=226,SNR=10						
CM01	**Chiang Mai Arr**	**94.16**	**290**	*e*P	**P**	**05 07 24.6**	**-0.3**
TYV	**Tymovskoe**	**94.17**	**337**	*e*P	**P**	**05 07 28.5**	**+4.4**
TYV				*e*S	**S**	**05 18 41.9**	**+8.3**
TYV				pmax	pmax		
	comp=Z,300nm,5.8s						
TYV				smax	smax		
	comp=N,700nm,8.2s						
TLIG	**Tlapa**	**94.19**	**71**	*e*P	**P**	**05 07 26.9**	**+1.7**
	comp=N,30nm,1.2s						
WDC	**Whiskeytown Da**	**94.19**	**40**	*e*P	**P**	**05 07 24.5**	**0.0**
	comp=N,27nm,1.3s						
WDC	**Whiskeytown Da**	**94.19**	**40**	*e*P	**P**	**05 07 24.5**	**0.0**
WDC				pmax	pmax		
	comp=Z,27nm,1.3s						
CM31	**Chiang Mai Arr**	**94.19**	**290**	*e*P	**P**	**05 07 25.9**	**+0.8**
CMAR	**Chiang Mai Arr**	**94.19**	**290**	P	**P**	**05 07 25.4**	**+0.3**
	comp=Z,7.1nm,0.7s,baz=151,slow=3.4,SNR=33						
CMAR				PP	**PP**	**05 11 07.5**	**-4.7**
	comp=Z,1.3nm,0.3s,baz=139,slow=6.1,SNR=6.9						
CMAR				LR	LR	05 51 28.8	
	comp=Z,746nm,21.7s,baz=160,slow=37						
SHOC	**Shoshone, Teco**	**94.23**	**47**	P	**P**	**05 07 25.5**	**+0.7**
	baz=225						
FURC	**Furnace Creek,**	**94.29**	**46**	P	**P**	**05 07 25.6**	**+0.6**
	baz=225,SNR=5.3						
WAKR	**Walker**	**94.31**	**43**	*e*P	**P**	**05 07 25.6**	**+0.3**
	comp=Z,29nm,1.3s						
LDFC	**Landfair**	**94.34**	**48**	*e*P	**P**	**05 07 27.1**	**+1.6**
	comp=Z,101nm,1.4s						
ENH	**Enshi**	**94.36**	**305**	PFAKE		05 07 40.0	+14
ENH				LR	LR		
	comp=Z,965nm,21.0s						
O03D	**Paynes Creek**	**94.36**	**41**	P	**P**	**05 07 25.3**	**-0.1**
	baz=222,SNR=11						
GRAC	**Grapevine Rang**	**94.38**	**46**	P	**P**	**05 07 26.3**	**+0.7**
	baz=225						
PDMCI	**Parker Dam,Lak**	**94.39**	**49**	P	**P**	**05 07 26.9**	**+1.4**
	baz=226						
N02D	**Trinity Center**	**94.40**	**40**	P	**P**	**05 07 26.1**	**+0.5**
	baz=222,SNR=12						
CMMT	**Chiang Mai**	**94.41**	**290**	P	**P**	**05 07 26.8**	**+0.7**
CHTO	**Chiang Mai**	**94.42**	**290**	*e*P	**P**	**05 07 26.3**	**+0.2**
	comp=Z,22nm,0.9s						
CHTO				LR	LR		
	comp=Z,973nm,22.0s						
CHTO	**Chiang Mai**	**94.42**	**290**	*e*P	**P**	**05 07 26.3**	**+0.2**
CHTO				pmax	pmax		
	comp=Z,22nm,0.9s						
CHTO				MLR	MLR		
	comp=Z,973nm,22.0s						
CHTO	**Chiang Mai**	**94.42**	**290**	P	**P**	**05 07 26.8**	**+0.7**
	comp=Z,125nm,1.2s,comp=Z,2μm						
NEE2	**Needles Airpor**	**94.42**	**49**	P	**P**	**05 07 27.0**	**+1.3**
	baz=226						
ZAIG	**Zacatecas**	**94.49**	**65**	*e*P	**P**	**05 07 28.0**	**+1.3**
	comp=Z,24nm,1.5s						
M02C	**Callahan**	**94.63**	**39**	P	**P**	**05 07 27.4**	**+0.8**
	baz=222,SNR=15						
PNTR	**Pine Nut**	**94.64**	**43**	*e*P	**P**	**05 07 27.2**	**+0.3**
	comp=Z,30nm,1.1s						
YERR	**Yerington**	**94.76**	**43**	*e*P	**P**	**05 07 27.6**	**+0.2**
	comp=Z,19nm,1.2s						
VCNR	**Virginia City**	**94.76**	**43**	*e*P	**P**	**05 07 27.8**	**+0.3**
	comp=Z,18nm,1.1s						
BEKR	**Beckworth**	**94.80**	**42**	*e*P	**P**	**05 07 27.2**	**-0.3**
	comp=Z,12nm,1.1s						
L02D	**Cave Junction,**	**94.83**	**39**	P	**P**	**05 07 28.0**	**+0.6**
	baz=221						
NV01	**Mina Array Sit**	**94.88**	**44**	*e*P	**P**	**05 07 27.1**	**-0.8**
NVAR	**Mina Array Bea**	**94.88**	**44**	P	**P**	**05 07 27.9**	**-0.1**
	comp=Z,5.2nm,1.0s,baz=216,slow=7.9,SNR=26						
NVAR				PP	**PP**	**05 11 13.2**	**-4.3**
	comp=Z,1.0nm,0.9s,baz=226,slow=10.0,SNR=3.6						
RYN	**Ryan**	**94.90**	**44**	*e*P	**P**	**05 07 28.4**	**+0.4**
	comp=Z,12nm,1.2s						
RYN				*e*S	**S**	**05 18 44.2**	**+3.3**
YBH	**Yreka Blue Hor**	**94.96**	**39**	P	**P**	**05 07 28.0**	**-0.1**
	comp=Z,7.7nm,1.1s,baz=193,slow=1.8,SNR=14						
YBH	**Yreka Blue Hor**	**94.96**	**39**	*e*P	**P**	**05 07 28.2**	**+0.1**
	comp=Z,13nm,1.1s						
YBH	**Yreka Blue Hor**	**94.96**	**39**	*e*P	**P**	**05 07 28.2**	**+0.1**
YBH				pmax	pmax		
	comp=Z,13nm,1.1s						
NV11	**Mina Array Sit**	**94.96**	**44**	*e*P	**P**	**05 07 28.1**	**-0.1**
	comp=Z,0.8nm,1.2s						
HPIG		**94.96**	**60**	*e*P	**P**	**05 07 28.5**	**-0.2**
	comp=Z,54nm,1.8s						
TPNV	**Topopah Spring**	**94.98**	**46**	P	**P**	**05 07 29.1**	**+0.7**
	baz=225,SNR=12						
TPNV	**Topopah Spring**	**94.98**	**46**	*e*P	**P**	**05 07 29.5**	**+1.0**
	comp=Z,15nm,1.1s						
TPNV	**Topopah Spring**	**94.98**	**46**	*e*P	**P**	**05 07 29.5**	**+1.0**
TPNV				pmax	pmax		
	comp=Z,15nm,1.1s						
KEBM	**Edson Butte**	**95.01**	**38**	*e*P	**P**	**05 07 29.3**	**+1.0**
	comp=Z,46nm,1.1s						
CN2	**Changchun**	**95.02**	**324**	*e*P	**P**	**05 07 27.5**	**-0.7**
CN2				*e*sP	sP	05 07 36.6	-1.0
CN2				*e*S	**S**	**05 18 38.6**	**-2.7**
CN2				*e*SS	**SS**	**05 25 09.1**	**+1.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,490nm,26.0s						
CN2				LR	LR		
	comp=Z,200nm,26.0s						
CN2				LR	LR		
	comp=Z,630nm,26.0s						
TUC	**Tucson**	**95.10**	**53**	P	**P**	**05 07 30.2**	**+1.1**
	baz=228						
TUC	**Tucson**	**95.10**	**53**	*e*P	**P**	**05 07 30.0**	**+1.0**
	comp=Z,17nm,1.3s						
TUC				LR	LR		
	comp=Z,1μm,19.0s						
TUC	**Tucson**	**95.10**	**53**	*e*P	**P**	**05 07 30.0**	**+1.0**
TUC				pmax	pmax		
	comp=Z,17nm,1.3s						
TUC				MLR	MLR		
	comp=Z,1μm,19.0s						
PAHR	**Pah Rah Range**	**95.20**	**43**	*e*P	**P**	**05 07 29.6**	**+0.2**
	comp=Z,15nm,1.1s						
SHPR	**Sheep Range**	**95.30**	**47**	*e*P	**P**	**05 07 31.2**	**+1.3**
	comp=Z,47nm,2.0s						
KVN	**Kaiserville**	**95.43**	**44**	*e*P	**P**	**05 07 30.6**	**+0.1**
	comp=Z,13nm,1.3s						
KVN	**Kaiserville**	**95.43**	**44**	*e*P	**P**	**05 07 30.6**	**+0.1**
KVN				pmax	pmax		
	comp=Z,13nm,1.3s						
M04C	**Macdoel**	**95.43**	**40**	P	**P**	**05 07 30.7**	**+0.4**
	baz=222,SNR=9.6						
HUMO	**Hull Mountain**	**95.48**	**39**	*e*P	**P**	**05 07 30.7**	**+0.3**
	comp=Z,39nm,1.5s						
KMI	**Kunming**	**95.60**	**297**	P	**P**	**05 07 33.4**	**+1.8**
KMI				pP	pP	05 07 38.9	+0.3
KMI				sP	sP	05 07 41.8	+0.8
KMI				PP	**PP**	**05 11 21.5**	**-1.8**
KMI				S	**S**	**05 18 49.8**	**+2.1**
KMI				sS	sS	05 19 03.0	+3.7
KMI				pmax	pmax		
	comp=Z,11nm,0.8s						
KMI				pmax	pmax		
	comp=Z,180nm,4.2s						
KMI				LR	LR		
	comp=Z,890nm,21.4s						
KMI				LR	LR		
	comp=Z,750nm,19.6s						
KMI				LR	LR		
	comp=Z,1μm,20.2s						
K04D	**Chiloquin, OR**	**96.10**	**39**	P	**P**	**05 07 33.5**	**+0.2**
	baz=223						
I03D	**Drain, OR**	**96.10**	**38**	P	**P**	**05 07 33.5**	**+0.3**
	baz=222,SNR=5.5						
MOD	**Modoc Plateau**	**96.31**	**41**	*e*P	**P**	**05 07 34.4**	**0.0**
	comp=Z,28nm,1.3s						
R11A	**Troy Canyon, C**	**96.33**	**46**	P	**P**	**05 07 34.7**	**+0.1**
	baz=226						
R11A	**Troy Canyon, C**	**96.33**	**46**	*e*P	**P**	**05 07 34.2**	**-0.4**
	comp=Z,7.7nm,1.4s						
J04D	**Umpqua Nationa**	**96.37**	**39**	P	**P**	**05 07 35.0**	**+0.3**
	baz=222,SNR=5.6						
KLR	**Kul’dur**	**96.58**	**331**	LR	LR	05 48 51.7	
	comp=Z,48nm,19.2s,baz=182,slow=34						
KLR	**Kul’dur**	**96.58**	**331**	*i* P	**P**	**05 07 35.0**	**-0.2**
K05A	**Summer Lake**	**96.60**	**40**	*e*P	**P**	**05 07 35.0**	**-0.8**
	comp=Z,47nm,1.3s						
LPAZ	**La Paz**	**96.61**	**116**	P	**P**	**05 07 37.8**	**+0.8**
	comp=Z,12nm,1.0s,baz=232,slow=2.1,SNR=46						
LPAZ				PP	**PP**	**05 11 32.6**	**+1.5**
	comp=Z,16nm,1.3s,baz=226,slow=7.0,SNR=11						
LPAZ				LR	LR	05 45 41.0	
	comp=Z,333nm,18.0s,baz=210,slow=32						
LPAZ	**La Paz**	**96.61**	**116**	*e*P	**P**	**05 07 37.8**	**+0.8**
	comp=Z,54nm,1.3s						
LPAZ				PP	**PP**	**05 11 32.6**	**+1.5**
I04A	**Tendick Farm,**	**96.63**	**38**	P	**P**	**05 07 36.1**	**+0.5**
	baz=222						
CPUP	**Villa Florida**	**96.65**	**131**	P	**P**	**05 07 36.6**	**+0.3**
	comp=Z,8.9nm,1.0s,baz=241,slow=3.2,SNR=13						
CPUP				PKKP	**PKKPdf**	**05 24 19.4**	**+0.9**

	comp=Z,1.7nm,0.8s,baz=34,slow=5.6,SNR=4.2						
CPUP				LR	LR	05 44 29.2	
	comp=Z,3µm,18.8s,baz=228,slow=31						
CPUP	**Villa Florida**	96.65	131	*e*P	P	05 07 36.6	+0.3
	comp=Z,22nm,1.3s						
CPUP				PKKP	PKKPdf	05 24 19.4	+0.9
LCMT	**Little Creek M**	96.77	48	*e*P	P	05 07 37.7	+1.2
	comp=Z,7.1nm,1.0s						
J05D	**Fort Rock, OR**	96.84	39	P	P	05 07 37.2	+0.4
	baz=223						
WUAZ	**Wupatki**	96.88	50	P	P	05 07 37.3	+0.2
	baz=228						
WUAZ	**Wupatki**	96.88	50	*e*P	P	05 07 37.6	+0.5
	comp=Z,9.3nm,1.0s						
WUAZ				LR	LR		
	comp=Z,2µm,19.0s						
BMN	**Battle Mountai**	96.88	43	*e*P	P	05 07 36.6	-0.4
	comp=Z,15nm,1.3s						
BMN	**Battle Mountai**	96.88	43	*e*P	P	05 07 36.6	-0.4
BMN				pmax	pmax		
	comp=Z,15nm,1.3s						
BJT	**Baijiatuau**	96.98	316	PFAKE		05 07 50.0	+13
BJT				LR	LR		
	comp=Z,947nm,22.0s						
CCUT	**Cedar City**	97.06	47	*e*P	Pdif	05 07 38.9	+0.8
	comp=Z,7.2nm,1.1s						
XAN	**Xi'an**	97.20	308	P	P	05 07 37.8	-0.7
XAN				pP	pP	05 07 44.1	-1.3
XAN				sP	sP	05 07 47.1	-0.8
XAN				S	S	05 18 49.3	-11
XAN				pmax	pmax		
	comp=Z,5.0nm,1.3s						
XAN				pmax	pmax		
	comp=Z,140nm,9.4s						
XAN				LR	LR		
	comp=Z,400nm,18.0s						
XAN				LR	LR		
	comp=Z,510nm,18.7s						
XAN				LR	LR		
	comp=Z,550nm,18.0s						
SZCU	**Shurtz Canyon**	97.25	48	*e*P	Pdif	05 07 40.1	+1.2
	comp=Z,35nm,2.0s						
PINE	**Pine Mountain**	97.35	39	*e*P	Pdif	05 07 39.7	+0.5
	comp=Z,31nm,1.3s						
H04A	**Detroit Lake**	97.40	38	*e*P	P	05 07 38.9	-0.2
	comp=Z,29nm,1.5s						
PSUT	**Pine Spring**	97.45	46	*e*P	Pdif	05 07 40.6	+0.8
	comp=Z,5.9nm,1.2s						
TIY	**Taiyuan**	97.51	312	*e*P	Pdif	05 07 46.9	+7.0
TIY				pP	sP	05 07 59.0	+10
TIY				sP	pP	05 08 05.4	+19
TIY				PP	PP	05 11 44.4	+6.7
TIY	**Taiyuan**	97.51	312	SKS	SKSac	05 18 16.8	+0.9
TIY	**Taiyuan**	97.51	312	S	S	05 19 03.3	0.0
TIY	**Taiyuan**	97.51	312	SS	SS	05 25 52.1	+8.5
TIY				pmax	pmax		
	comp=Z,100nm,5.3s						
TIY				LR	LR		
	comp=N,280nm,14.0s						
TIY				LR	LR		
	comp=E,750nm,22.1s						
TIY				LR	LR		
	comp=Z,570nm,20.6s						
WVOR	**Wild Horse Val**	97.55	41	PFAKE		05 07 50.0	+10
WVOR				LR	LR		
	comp=Z,2µm,20.0s						
I05D	**Terrebonne, OR**	97.56	38	P	Pdif	05 07 40.0	+0.1
	baz=223						
PKCU	**Pink Cliffs**	97.61	48	*e*P	Pdif	05 07 42.4	+1.7
	comp=Z,11nm,1.1s						
W18A	**Petrified Fore**	97.62	51	P	Pdif	05 07 40.7	+0.2
	baz=229						
TX31	**Lajitas Ar. Si**	97.84	59	*e*P	Pdif	05 07 42.0	+0.4
TXAR	**Lajitas Array**	97.84	59	P	P	05 07 41.3	-0.3
	comp=Z,1.6nm,0.9s,baz=198,slow=7.9,SNR=19						
TXAR				PP	PP	05 11 41.4	+1.0
	comp=Z,1.8nm,1.1s,baz=214,slow=11,SNR=5.1						
TXAR				PKKP	PKKPdf	05 24 17.8	-1.1
	comp=Z,0.4nm,0.9s,baz=64,slow=2.9,SNR=3.9						
KDAK	**Kodiak Island**	98.05	15	PFAKE		05 07 50.0	+8.4
KDAK				LR	LR		
	comp=Z,543nm,20.0s						
MTPU	**Mount Pierson**	98.08	48	*e*P	Pdif	05 07 44.4	+1.6
	comp=Z,18nm,1.4s						
MNTX	**Cornudas Mount**	98.19	56	P	P	05 07 42.9	-0.1
	baz=230						
MNTX	**Cornudas Mount**	98.19	56	*e*P	P	05 07 42.2	-0.8
	comp=Z,7.3nm,1.1s						
MNTX				LR	LR		
	comp=Z,2µm,19.0s						
G05D	**Wamic, OR**	98.23	38	P	Pdif	05 07 43.3	+0.5
	baz=223						
J08A	**Circle Bar Ran**	98.29	40	*e*P	Pdif	05 07 43.4	+0.1
	comp=Z,19nm,1.2s						
MSU	**Marysvale**	98.40	47	*e*P	Pdif	05 07 45.4	+1.4
MSU	**Marysvale**	98.40	47	*e*P	Pdif	05 07 45.4	+1.4
CD2	**Chengdu**	98.53	302	P	Pdif	05 07 45.3	+0.7
CD2				pP	pP	05 07 48.5	-3.0
CD2				PP	PP	05 11 46.0	+0.3
CD2				S	S	05 19 13.4	+1.1
CD2				SS	SS	05 26 00.6	+2.4
CD2				pmax	pmax		
	comp=Z,10.0nm,0.4s						
CD2				pmax	pmax		
	comp=Z,120nm,5.0s						
CD2				LR	LR		
	comp=Z,630nm,17.4s						
CD2				LR	LR		
	comp=Z,690nm,21.4s						
CD2				LR	LR		
	comp=Z,900nm,21.4s						
G06A	**Carlson Farm,**	98.55	38	*e*P	Pdif	05 07 44.6	+0.3
	comp=Z,43nm,1.8s						
NLWA	**Neilton Lookou**	98.62	35	PFAKE		05 07 50.0	+5.5
NLWA				LR	LR		
	comp=Z,3µm,21.0s						
DGAR	**Diego Garcia**	98.98	253	PFAKE		05 08 00.0	+13
DGAR				LR	LR		
	comp=Z,987nm,19.0s						
DUG	**Dugway, Tooele**	99.17	46	P	Pdif	05 07 48.0	+0.8
	baz=228						
DUG	**Dugway, Tooele**	99.17	46	PFAKE		05 08 00.0	+13
DUG				LR	LR		
	comp=Z,2µm,19.0s						
OTAV	**Otavalo**	99.40	97	*e*P	Pdif	05 07 49.6	+0.2
	comp=Z,8.8nm,1.1s						
OTAV				LR	LR		
	comp=Z,819nm,20.0s						
OTAV	**Otavalo**	99.40	97	P	Pdif	05 07 50.6	+1.2
G08A	**Pilot Rock**	99.42	39	*e*P	Pdif	05 07 48.0	-0.3
	comp=Z,18nm,1.4s						
TMUT	**Trail Mountain**	99.49	47	*e*P	Pdif	05 07 50.2	+1.2
	comp=Z,4.9nm,1.0s						
TASM	**ASL Pad, Albuq**	99.55	53	P	Pdif	05 07 49.1	-0.1
	baz=230						
ANMO	**Albuquerque**	99.56	53	P	Pdif	05 07 49.6	+0.3
	comp=Z,3.1nm,1.1s,baz=220,slow=7.6,SNR=7.6						
ANMO	**Albuquerque**	99.56	53	P	Pdif	05 07 49.2	-0.1
	baz=230						
ANMO	**Albuquerque**	99.56	53	*e*P	Pdif	05 07 49.5	+0.3
	comp=Z,3.8nm,1.0s						
ANMO				LR	LR		
	comp=Z,1µm,20.0s						
ANMO	**Albuquerque**	99.56	53	*ce*P	Pdif	05 07 48.5	-0.7
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.1s						
TASL	**Snake Pit, Alb**	99.56	53	P	Pdif	05 07 49.2	0.0
	baz=230						
MFID	**Camas Ranch**	99.71	42	*e*Pdif	Pdif	05 07 49.8	+0.3
	comp=Z,7.5nm,1.1s						
MVCO	**Mesa Verde**	99.74	50	PFAKE		05 08 00.0	+10
MVCO				LR	LR		
	comp=Z,1µm,19.0s						
HAWA	**Hanford**	99.92	38	PFAKE		05 08 00.0	+10
HAWA				LR	LR		
	comp=Z,10µm,22.0s						
BMO	**Blue Mountains**	99.94	40	*e*Pdif	Pdif	05 07 50.3	-0.2
	comp=Z,12nm,1.6s						
BMO				LR	LR		
	comp=Z,8µm,19.0s						
BMO	**Blue Mountains**	99.94	40	*e*P	Pdif	05 07 50.3	-0.2
BMO				pmax	pmax		
	comp=Z,12nm,1.6s						
BMO				MLR	MLR		
	comp=Z,8µm,19.0s						
MA2	**Magadan**	100.00	345	PFAKE		05 08 00.0	+10
MA2				LR	LR		
	comp=Z,1µm,22.0s						
B05A	**Bryant**	100.07	35	P	Pdif	05 07 51.7	+0.9
	baz=223						
HHC	**Hu-ho-hao-te**	100.11	314	*e*P	Pdif	05 07 54.1	+2.7
HHC				pP	sP	05 08 02.4	+1.5
HHC				PP	PP	05 11 59.9	+2.3
HHC				S	Sdif	05 19 29.1	+3.9
HHC				pmax	pmax		
	comp=Z,22nm,1.1s						
HHC				pmax	pmax		
	comp=Z,75nm,7.2s						
HHC				LR	LR		
	comp=Z,410nm,14.8s						
HHC				LR	LR		
	comp=Z,480nm,16.3s						
HHC				LR	LR		
	comp=Z,600nm,19.4s						
833A	**Chaparral WMA,**	100.17	62	P	Pdif	05 07 52.7	+0.9
	baz=232						
HVU	**Hansel Valley**	100.25	45	*e*Pdif	Pdif	05 07 53.2	+1.1
HVU	**Hansel Valley**	100.25	45	*e*P	Pdif	05 07 53.2	+1.1
JTS	**JuntasAbangare**	100.33	85	PFAKE		05 08 00.0	+7.1
JTS				LR	LR		
	comp=Z,2µm,19.0s						
HLID	**Hailey**	100.56	42	P	Pdif	05 07 53.8	+0.3
	baz=227						
HLID	**Hailey**	100.56	42	*e*Pdif	Pdif	05 07 53.5	+0.1
HLID				LR	LR		
	comp=Z,845nm,20.0s						
KVTX	**Kingsville**	100.76	64	PFAKE		05 08 00.0	+5.6
KVTX				LR	LR		
	comp=Z,2µm,19.0s						
HWUT	**Hardware Ranch**	100.81	45	PFAKE		05 08 00.0	+5.4
HWUT				LR	LR		
	comp=Z,3µm,19.0s						
S22A	**4UR Ranch, Cre**	101.10	51	P	Pdif	05 07 56.8	+0.6
	baz=230						
S22A	**4UR Ranch, Cre**	101.10	51	*e*Pdif	Pdif	05 07 57.0	+0.9
JCT	**Junction City**	101.19	60	P	Pdif	05 07 56.6	+0.3
	baz=233						
JCT	**Junction City**	101.19	60	PFAKE		05 08 10.0	+14
JCT				LR	LR		
	comp=Z,2µm,19.0s						
MSTX	**Muleshoe**	101.32	56	P	Pdif	05 07 56.9	-0.1
	baz=232						
MSTX	**Muleshoe**	101.32	56	*e*Pdif	Pdif	05 07 57.0	0.0
LZH	**Lanzhou**	101.71	307	*e*P	Pdif	05 08 02.8	+4.1
LZH				pP	sPdif	05 08 07.8	-0.3
LZH				sP	pP	05 08 10.9	+5.0
LZH				PP	PP	05 12 07.9	-1.9
LZH				S	Sdif	05 19 43.3	+4.4
LZH				SS	SS	05 26 39.4	-3.1
LZH				pmax	pmax		
	comp=Z,24nm,1.2s						
LZH				pmax	pmax		
	comp=Z,91nm,4.7s						
LZH				LR	LR		
	comp=Z,950nm,13.4s						
LZH				LR	LR		
	comp=Z,830nm,13.4s						
LZH				LR	LR		
	comp=Z,1µm,14.6s						
HIA	**Hailar**	101.71	325	PFAKE		05 08 10.0	+12
HIA				LR	LR		
	comp=Z,639nm,20.0s						
O20A	**White River Ci**	101.77	48	P	Pdif	05 07 59.2	+0.3
	baz=230						
AHID	**Auburn Hatcher**	101.83	45	PFAKE		05 08 10.0	+11
AHID				LR	LR		
	comp=Z,2µm,20.0s						
SDCO	**Great Sand Dun**	101.92	51	P	Pdif	05 07 59.8	0.0
	baz=231						
SDCO	**Great Sand Dun**	101.92	51	PFAKE		05 08 10.0	+10
SDCO				LR	LR		
	comp=Z,714nm,20.0s						
WRAK	**Wrangell Islan**	102.27	25	PFAKE		05 08 10.0	+10
WRAK				LR	LR		
	comp=Z,931nm,20.0s						
REDW	**Red Top Meadow**	102.36	44	*e*Pdif	Pdif	05 08 02.6	+1.1
FXWY	**Fox Creek**	102.44	44	*e*Pdif	Pdif	05 08 03.1	+1.2
LOHW	**Long Hollow**	102.66	44	*e*Pdif	Pdif	05 08 03.4	+0.5
BW06	**Boulder Array**	102.70	45	P	Pdif	05 08 03.3	+0.2
	baz=230						
BW06	**Boulder Array**	102.70	45	PFAKE		05 08 10.0	+7.0
BW06				LR	LR		
	comp=Z,2µm,19.0s						
PDAR	**Pinedale Array**	102.70	45	P	Pdif	05 08 02.4	-0.6
	comp=Z,1.1nm,0.9s,baz=209,slow=4.9,SNR=6.9						
PDAR				PP	PP	05 12 16.6	-0.6
	comp=Z,3.7nm,1.2s,baz=242,slow=3.2,SNR=7.6						
PDAR				PKKP	PKKPdf	05 24 09.9	-0.7
	comp=Z,0.2nm,0.3s,baz=93,slow=9.1,SNR=3.1						
DLMT	**Dillon**	102.73	42	*e*Pdif	Pdif	05 08 04.2	+1.2
ISCO	**Idaho Springs**	103.13	50	PFAKE		05 08 20.0	+15
ISCO				LR	LR		
	comp=Z,2µm,22.0s						
LKWY	**Lake**	103.39	44	PFAKE		05 08 20.0	+14
LKWY				LR	LR		
	comp=Z,1µm,22.0s						
BOZ	**Bozeman (W)**	103.40	42	P	Pdif	05 08 06.5	+0.5
	baz=229						
BOZ	**Bozeman (W)**	103.40	42	PFAKE		05 08 20.0	+14
BOZ				LR	LR		
	comp=Z,6µm,19.0s						
BCIP	**Isla Barro Col**	103.71	89	PFAKE		05 08 20.0	+12
BCIP				LR	LR		
	comp=Z,2µm,19.0s						
K22A	**Casper**	104.36	47	P	Pdif	05 08 11.5	+1.1
	baz=232						
RLMT	**Red Lodge**	104.36	44	PFAKE		05 08 20.0	+10
RLMT				LR	LR		
	comp=Z,3µm,19.0s						
WMOK	**Wichita Mounta**	104.42	57	PFAKE		05 08 20.0	+9.4
WMOK				LR	LR		
	comp=Z,2µm,19.0s						
WRH	**Wood River Hil**	105.06	14	*e*Pdif	Pdif	05 08 14.3	+1.6
SAML	**Samuel**	105.11	114	PFAKE		05 12 40.0	
SAML				LR	LR		
	comp=Z,1µm,20.0s						
NATX	**Nacogdoches**	105.50	62	PFAKE		05 12 40.0	
NATX				LR	LR		
	comp=Z,2µm,20.0s						
IL1	**Eielson Array**	105.56	14	*e*Pdif	Pdif	05 08 16.1	+1.2
ILAR	**Eielson Array**	105.56	14	Pdiff	Pdif	05 08 14.5	-0.4
	comp=Z,1.0nm,1.1s,baz=222,slow=5.8,SNR=5.4						
ILAR				PKiKP	PKiKP	05 12 27.0	-1.0
	comp=Z,1.7nm,0.8s,baz=236,slow=3.2,SNR=8.7						
ILAR				PKKPbc	PKKPbc	05 23 58.5	+4.3
	comp=Z,0.4nm,0.8s,baz=26,slow=3.6,SNR=2.8						
EGMT	**Eagleton**	105.94	41	P	PKiKP	05 12 30.2	+0.8
	baz=231						
EGMT	**Eagleton**	105.94	41	PFAKE		05 12 40.0	
EGMT				LR	LR		
	comp=Z,4µm,20.0s						
OGNE	**Ogallala**	106.00	50	PFAKE		05 12 40.0	
OGNE				LR	LR		
	comp=Z,2µm,20.0s						
CBKS	**Cedar Bluff**	106.18	53	PFAKE		05 12 40.0	
CBKS				LR	LR		
	comp=Z,1µm,20.0s						
DAWY	**Dawson**	106.56	17	*e*PKP	PKiKP	05 12 29.6	-0.3
LSA	**Lhasa**	106.57	295	PFAKE		05 12 40.0	
LSA				LR	LR		
	comp=Z,532nm,20.0s						
RSSD	**Black Hills**	106.69	47	P	PKiKP	05 12 31.1	+0.1
	baz=233						
RSSD	**Black Hills**	106.69	47	*e*PKP	PKiKP	05 12 30.3	-0.7
EGAK	**Eagle**	106.76	16	PFAKE		05 12 40.0	
EGAK				LR	LR		
	comp=Z,1µm,22.0s						
LAO	**LASA Array**	107.00	44	PFAKE		05 12 40.0	
LAO				LR	LR		
	comp=Z,4µm,19.0s						
ULN	**Ulaanbaatar**	107.08	318	PFAKE		05 12 40.0	
ULN				LR	LR		
	comp=Z,640nm,21.0s						
SONM	**Songino Array**	107.42	317	Pdiff	Pdif	05 08 27.2	+3.4
	comp=Z,1.0nm,0.9s,baz=152,slow=5.7,SNR=4.3						
SONM				PKiKP	PKiKP	05 12 31.0	-1.2
	comp=Z,0.3nm,0.3s,baz=116,slow=3.4,SNR=2.9						
SONM				PKKPbc	PKKPbc	05 23 47.6	-0.5
	comp=Z,2.5nm,0.9s,baz=276,slow=2.8,SNR=12						
SONM				PKKP	PKKPdf	05 24 03.3	+1.5
	comp=Z,3.6nm,1.1s,baz=306,slow=4.8,SNR=7.8						
YAK	**Yakutsk**	107.43	338	PFAKE		05 12 40.0	
YAK				LR	LR		
	comp=Z,693nm,22.0s						
SUR	**Sutherland**	107.45	199	PFAKE		05 12 40.0	
SUR				LR	LR		
	comp=Z,2µm,19.0s						
MIAR	**Mount Ida**	107.82	60	PFAKE		05 12 40.0	
MIAR				LR	LR		
	comp=Z,1µm,19.0s						
ABPO	**Ambohimpanom**	108.00	227	PFAKE		05 12 50.0	
ABPO				LR	LR		
	comp=Z,548nm,19.0s						
KSU1	**Kansas State U**	108.34	55	PFAKE		05 12 40.0	
KSU1				LR	LR		
	comp=Z,2µm,21.0s						
DGMT	**Dagmar**	109.17	43	PFAKE		05 12 50.0	
DGMT				LR	LR		
	comp=Z,3µm,21.0s						
U40A	**Yellville**	109.31	59	P	PKiKP	05 12 35.1	-0.8
	baz=237						
V41A	**Mountainview**	109.47	60	P	PKiKP	05 12 36.4	+0.1
	baz=237						
S40A	**Lebanon**	110.22	58	P	PKiKP	05 12 37.3	-0.2
	baz=237						
R39A	**Chumby, Stover**	110.25	57	P	PKiKP	05 12 37.6	0.0
	baz=237						
BRAL	**Brewton**	110.59	66	PFAKE		05 12 50.0	
BRAL				LR	LR		
	comp=Z,1µm,21.0s						
S41A	**Jillco Farms,**	110.72	58	P	PKiKP	05 12 38.0	-0.5
	baz=238						
MTDJ	**Mount Denham**	110.77	83	PFAKE		05 12 50.0	
MTDJ				LR	LR		
	comp=Z,2µm,20.0s						
SDV	**Santo Domingo**	110.82	95	PFAKE		05 12 50.0	
SDV				LR	LR		
	comp=Z,1µm,19.0s						
ECSD	**EROS Data Cent**	110.88	50	P	PKiKP	05 12 37.8	-0.9
	baz=237						
ECSD	**EROS Data Cent**	110.88	50	PFAKE		05 12 50.0	
ECSD				LR	LR		
	comp=Z,2µm,22.0s						
TLY	**Talaya**	111.12	320	PFAKE		05 12 50.0	
TLY				LR	LR		
	comp=Z,500nm,22.0s						
INK	**Inuvik**	111.41	17	PKiKP	PKiKP	05 12 38.2	-0.6
	comp=Z,5.9nm,0.9s,baz=185,slow=5.3,SNR=11						
INK	**Inuvik**	111.41	17	*e*PKP	PKiKP	05 12 37.5	-1.3
Z49A	**Columbiana**	112.03	65	P	PKiKP	05 12 40.7	-0.4
	baz=238						
SCIA	**State Center**	112.03	54	PFAKE		05 12 50.0	
SCIA				LR	LR		
	comp=Z,2µm,19.0s						
YKA	**Yellowknife Ar**	112.89	27	Pdiff	Pdif	05 08 51.8	+4.3
	comp=Z,0.4nm,0.8s,baz=218,slow=3.7,SNR=3.9						
YKA				PKiKP	PKiKP	05 12 40.8	-1.0
	comp=Z,1.9nm,0.8s,baz=241,slow=1.5,SNR=13						
YKA				PP	PP	05 13 28.1	-2.9
	comp=Z,1.3nm,1.0s,baz=224,slow=5.9,SNR=4.7						
YKA				PKKPbc	PKKPbc	05 23 28.6	-1.8
	comp=Z,0.5nm,0.6s,baz=54,slow=3.5,SNR=6.8						
MSEY	**Mahe Island**	113.31	244	PFAKE		05 13 00.0	
MSEY				LR	LR		
	comp=Z,2µm,19.0s						
556A	**Lake Butler**	113.38	69	P	PKiKP	05 12 43.2	-0.6
	baz=239						
GTBY	**Guantanamo Bay**	113.61	83	PFAKE		05 13 00.0	
GTBY				LR	LR		
	comp=Z,723nm,19.0s						
J39A	**Decorah**	113.72	53	P	PKiKP	05 12 44.1	+0.1
	baz=240						
AGMN	**Agassiz Nation**	113.73	47	P	PKiKP	05 12 43.9	0.0
	baz=239						
AGMN	**Agassiz Nation**	113.73	47	PFAKE		05 12 50.0	
AGMN				LR	LR		
	comp=Z,4µm,20.0s						
K40A	**Colesburg**	113.76	54	P	PKiKP	05 12 43.1	-1.1
	baz=240						
P44A	**Sand Creek, Wi**	113.79	58	P	PKiKP	05 12 44.1	-0.2
	baz=240						
F36A	**Milaca**	113.87	50	P	PKiKP	05 12 43.5	-0.7
	baz=240						
GOGA	**Godfrey**	114.34	66	PFAKE		05 13 00.0	+15
GOGA				LR	LR		
	comp=Z,996nm,20.0s						
E36A	**McGregor**	114.36	49	P	PKPdf	05 12 44.1	-1.1
	baz=240						
JFWS	**Jewell Farm**	114.44	54	P	PKPdf	05 12 44.3	-1.1
	baz=240						
JFWS	**Jewell Farm**	114.44	54	PFAKE		05 13 00.0	+15
JFWS				LR	LR		
	comp=Z,2µm,19.0s						
B34A	**Aery, Baudette**	114.52	47	P	PKPdf	05 12 44.6	-0.7
	baz=240						
R47A	**Wooly Knot Far**	114.62	60	P	PKPdf	05 12 44.8	-1.0
	baz=240						
ULM	**Lac du Bonnet**	114.70	45	PKP	PKPdf	05 12 43.6	-2.1
	comp=Z,4.4nm,0.9s,baz=356,slow=4.2,SNR=4.6						
WCI	**Wyandotte Cave**	114.75	60	P	PKPdf	05 12 45.2	-1.0
	baz=240						
WCI	**Wyandotte Cave**	114.75	60	*e*PKP	PKPdf	05 12 45.0	-1.1
WCI	**Wyandotte Cave**	114.75	60	*e*PKIKP	PKPdf	05 12 45.1	-1.0
TIXI	**Tiksi**	114.93	344	PFAKE		05 13 00.0	+15
TIXI				LR	LR		
	comp=Z,654nm,20.0s						
G39A	**Holcombe**	115.02	51	P	PKPdf	05 12 45.5	-0.9
	baz=241						
H40A	**Chili**	115.18	52	P	PKPdf	05 12 45.8	-1.0
	baz=241						
C36A	**Pine Crest Far**	115.22	48	P	PKPdf	05 12 45.8	-1.0
	baz=241						
J42A	**Columbus**	115.35	54	P	PKPdf	05 12 47.5	+0.4
	baz=241						
F39A	**Loretta**	115.48	51	P	PKPdf	05 12 46.5	-0.8
	baz=241						
C37A	**Embarrass**	115.59	48	P	PKPdf	05 12 46.5	-1.0
	baz=241						
G40A	**Rib Lake**	115.61	52	P	PKPdf	05 12 46.6	-1.0
	baz=241						
I42A	**Draeger Farm,**	115.76	53	P	PKPdf	05 12 46.9	-1.0
	baz=241						
O47A	**Sheridan**	115.81	58	P	PKPdf	05 12 47.8	-0.3
	baz=241						
U52A	**Thorn Hill**	115.89	63	P	PKPdf	05 12 48.1	-0.4
	baz=241						
E39A	**Mellen**	115.92	50	P	PKPdf	05 12 47.6	-0.5
	baz=242						
V53A	**Saluda**	115.93	64	P	PKPdf	05 12 48.1	-0.4
	baz=241						
EYMN	**Ely**	116.10	48	P	PKPdf	05 12 47.6	-0.9
	baz=242						
EYMN	**Ely**	116.10	48	*e*PKPdf	PKPdf	05 12 47.0	-1.4
EYMN				LR	LR		
	comp=Z,2µm,19.0s						
R50A	**Paris**	116.13	61	P	PKPdf	05 12 47.7	-1.1
	baz=241						
WMQ	**Urumqi**	116.28	306	*e*PKP	PKPdf	05 12 49.3	+0.3
WMQ				LR	LR		
	comp=Z,910nm,23.9s						
WMQ				LR	LR		
	comp=Z,620nm,28.1s						
WMQ				LR	LR		
	comp=Z,1µm,39.9s						
E40A	**Wakefield**	116.36	51	P	PKPdf	05 12 48.1	-0.9
	baz=242						
P49A	**Miami Univ. Ec**	116.46	59	P	PKPdf	05 12 48.9	-0.5
	baz=242						
O48A	**Farmland**	116.50	58	P	PKPdf	05 12 48.3	-1.2
	baz=242						
F41A	**Three Lakes**	116.52	51	P	PKPdf	05 12 48.3	-1.0
	baz=242						
NHSC	**New Hope**	116.58	68	PFAKE		05 13 00.0	+10
NHSC				LR	LR		
	comp=Z,774nm,19.0s						
COWI	**Conover**	116.66	51	*e*PKPdf	PKPdf	05 12 47.9	-1.7
COWI				LR	LR		
	comp=Z,2µm,19.0s						
G42A	**Mountain**	116.70	52	P	PKPdf	05 12 48.6	-1.1
	baz=242						
E41A	**Kenton**	116.94	51	P	PKPdf	05 12 49.0	-1.1
	baz=242						
P50A	**Jamestown**	117.12	60	P	PKPdf	05 12 50.4	-0.3
	baz=242						
Q51A	**Peebles**	117.16	60	P	PKPdf	05 12 50.5	-0.3
	baz=242						
G43A	**Wallace**	117.18	52	P	PKPdf	05 12 49.7	-0.9
	baz=243						
O50A	**Cable**	117.49	59	P	PKPdf	05 12 50.4	-0.9
	baz=242						

GRTK	Grand Turk	117.60	83	PFAKE		05 13 00.0	+7.9
GRTK				LR	LR		
	comp=Z,977nm,19.0s						
M49A	Liberty Center	117.86	58	P	PKPdf	05 12 50.9	-1.1
	baz=243						
ACSO	Alum Creek Sta	117.96	59	PFAKE		05 13 00.0	+7.7
ACSO				LR	LR		
	comp=Z,2µm,19.0s						
N50A	Nevada	118.10	59	P	PKPdf	05 12 52.3	-0.2
	baz=243						
F44A	Big Bay de Noc	118.29	52	P	PKPdf	05 12 52.2	-0.5
	baz=244						
BLA	Blacksburg	118.36	63	P	PKPdf	05 12 52.8	-0.4
	baz=242						
BLA	Blacksburg	118.36	63	PFAKE		05 13 00.0	+6.8
BLA				LR	LR		
	comp=Z,2µm,20.0s						
AAM	Ann Arbor	118.44	57	PFAKE		05 13 00.0	+6.9
AAM				LR	LR		
	comp=Z,2µm,20.0s						
DGZ	Jazzator, Alta	119.08	312	iPKIKP	PKPdf	05 12 52.7	-1.6
CNNC	Cliffs of the	119.26	66	PFAKE		05 13 10.0	+15
CNNC				LR	LR		
	comp=Z,1µm,20.0s						
SJG	San Juan	119.69	89	ePKPdf	PKPdf	05 12 56.1	-0.1
SJG				LR	LR		
	comp=Z,849nm,20.0s						
SJG	San Juan	119.69	89	ePKIKP	PKPdf	05 12 56.1	-0.1
SJG				MLR	MLR		
	comp=Z,849nm,20.0s						
GRGR	Grenville	119.82	98	PFAKE		05 13 10.0	+13
GRGR				LR	LR		
	comp=Z,679nm,20.0s						
HUMP	Col San Antoni	119.94	90	ePKPdf	PKPdf	05 12 55.3	-1.4
N54A	Moraine State	120.33	60	P	PKPdf	05 12 56.0	-0.8
	baz=244						
LSZ	Lusaka	120.82	212	ePKPdf	PKPdf	05 12 59.2	+0.5
LSZ				LR	LR		
	comp=Z,1µm,20.0s						
TSUM	Tsumeb	120.85	200	PKP	PKPdf	05 12 59.0	+0.3
	comp=Z,3.4nm,0.8s,baz=162,slow=5.8,SNR=6.2						
TSUM	Tsumeb	120.85	200	ePKPdf	PKPdf	05 12 59.1	+0.3
TSUM				LR	LR		
	comp=Z,2µm,19.0s						
CBN	Corbin Frederi	120.96	64	PFAKE		05 13 10.0	+12
CBN				LR	LR		
	comp=Z,2µm,20.0s						
MK01	Makanchi Array	121.00	307	ePKPdf	PKPdf	05 12 56.1	-1.8
MK31	Makanchi Array	121.01	307	ePKPdf	PKPdf	05 12 56.6	-1.4
MK31	Makanchi Array	121.01	307	ePKIKP	PKPdf	05 12 56.6	-1.4
MKAR	Makanchi Array	121.01	307	PKP	PKPdf	05 12 56.5	-1.4
	comp=Z,5.7nm,1.0s,baz=96,slow=2.4,SNR=27						
MKAR				PKKPbc	PKKPbc	05 23 01.7	+0.6
	comp=Z,3.1nm,0.8s,baz=292,slow=3.6,SNR=17						
MKAR				SKKPbc	SKKPbc	05 26 50.4	+0.6
	comp=Z,1.4nm,1.0s,baz=267,slow=2.9,SNR=4.9						
SHLS	Shalkode	121.37	303	ePKP	PKPdf	05 12 57.5	-1.4
SHLS				ePP	PP	05 14 26.1	-4.8
UZB	Uzynbulak	121.66	302	ePKP	PKPdf	05 12 58.3	-1.2
NIL	Nilore	121.69	290	ePKPdf	PKPdf	05 12 59.1	-0.6
NIL				LR	LR		
	comp=Z,735nm,21.0s						
KPKS	Kokpek	122.02	303	ePKP	PKPdf	05 12 59.0	-1.1
KPKS				ePP	PP	05 14 32.0	-3.2
SATY	Saty	122.04	302	ePKP	PKPdf	05 12 59.2	-1.0
BBGH	Gun Hill	122.06	98	PFAKE		05 13 10.0	+9.1
BBGH				LR	LR		
	comp=Z,1µm,19.0s						
ZHN	Zhinishke	122.06	302	ePKP	PKPdf	05 12 59.0	-1.2
ZAA0	Zalesovo Array	122.25	316	ePKPdf	PKPdf	05 12 58.6	-1.4
ZALV	Zalesovo Beam	122.25	316	PKP	PKPdf	05 12 58.3	-1.8
	comp=Z,1.4nm,0.4s,baz=132,slow=2.4,SNR=5.9						
ZALV				SKKPbc	SKKPbc	05 26 44.1	-2.1
	comp=Z,0.9nm,0.7s,baz=289,slow=4.4,SNR=3.6						
KSH	Kashi	122.26	297	ePKP	PKPdf	05 12 58.1	-2.6
WLVO	Wesleyville	122.62	57	P	PKPdf	05 12 59.8	-1.2
	baz=247						
ANWB	Willy Bob	122.90	93	PFAKE		05 13 10.0	+7.6
ANWB				LR	LR		
	comp=Z,944nm,21.0s						
MDOK	Medeo	122.99	302	ePKP	PKPdf	05 13 00.9	-1.2
MDOK				ePP	PP	05 14 38.7	-3.2
MDOK				LR	LR	06 07 43.6	
	comp=Z,217nm,22.0s						
ULHL	Ulahol	123.18	300	P	PKPdf	05 13 02.3	-0.2
	SNR=9.8						
BANO	Bancroft	123.35	56	P	PKPdf	05 13 01.6	-0.8
	baz=248						
DELO	Deloro Mine	123.37	57	P	PKPdf	05 13 00.4	-2.1
	baz=248						
NVS	Novosibirsk	123.43	316	ePKIKP	PKPdf	05 13 00.1	-2.2
NVS				e		05 26 02.7	
NVS				pmax	pmax		
	comp=N,11nm,1.3s						
NVS				pmax	pmax		
	comp=E,14nm,1.3s						
NVS				pmax	pmax		
	comp=Z,26nm,1.3s						
BINY	Binghamton	123.58	60	P	PKPdf	05 13 02.7	-0.4
	baz=247						
BINY	Binghamton	123.58	60	PFAKE		05 13 10.0	+7.0
BINY				LR	LR		
	comp=Z,3µm,20.0s						
KUU	Kurty	123.75	302	ePKP	PKPdf	05 13 01.6	-1.7
KUU				ePP	PP	05 14 43.2	-3.6
KUU				LR	LR	06 08 57.8	
	comp=Z,261nm,18.3s						
KZA	Kyzart	123.79	300	P	PKPdf	05 13 03.9	0.0
	SNR=7.8						
TKM2	Tokmak 2	123.88	301	P	PKPdf	05 13 03.0	-0.8
	SNR=8.4						
PLVO	Plevna	123.92	56	P	PKPdf	05 13 02.3	-1.2
	baz=248						
PLVO	Plevna	123.92	56	ePKPdf	PKPdf	05 13 03.0	-0.5
PEMO	Pembroke	124.04	56	P	PKPdf	05 13 02.8	-0.9
	baz=249						
FRU	Bishkek	124.51	301	ePKIKP	PKPdf	05 13 04.0	-0.8
AAK	Ala-Archa	124.52	300	PKP	PKPdf	05 13 03.7	-1.3
	comp=Z,3.8nm,0.6s						
AAK	Ala-Archa	124.52	300	ePKPdf	PKPdf	05 13 04.6	-0.4
PAL	Palisades	124.55	62	P	PKPdf	05 13 04.1	-0.8
	baz=247						
KURK	Kurchatov	124.71	311	ePKPdf	PKPdf	05 13 03.8	-1.1
KURK				PKKPbc	PKKPbc	05 22 47.1	+0.4
KURK				LR	LR		
	comp=Z,969nm,20.0s						
KURK	Kurchatov	124.71	311	iPKIKP	PKPdf	05 13 03.3	-1.6
KURBB	Kurchatov Arra	124.73	311	PKP	PKPdf	05 13 03.6	-1.3
	comp=Z,9.9nm,1.0s,baz=116,slow=1.9,SNR=34						
KURBB				PKKPbc	PKKPbc	05 22 47.1	+0.5
	comp=Z,0.3nm,0.2s,baz=311,slow=5.8,SNR=4.8						
AML	Almayashu	124.88	299	P	PKPdf	05 13 05.9	-0.1
	SNR=14						
EKS2	Erkin-Say	125.02	300	P	PKPdf	05 13 05.3	-0.7
	SNR=6.9						
KBL	Kabul	125.22	289	ePKPdf	PKPdf	05 13 06.6	-0.1
KBL	Kabul	125.22	289	ePKIKP	PKPdf	05 13 06.6	-0.1
TRY	Troy	125.36	60	ePKPdf	PKPdf	05 13 06.6	+0.2
LONY	Lake Ozonia	125.42	58	P	PKPdf	05 13 05.7	-0.8
	baz=249						
LONY	Lake Ozonia	125.42	58	ePKPdf	PKPdf	05 13 05.1	-1.4
LONY				LR	LR		
	comp=Z,2µm,20.0s						
NCB	Newcomb	125.43	58	ePKPdf	PKPdf	05 13 06.3	-0.2
ALFO	Alfred	125.57	56	P	PKPdf	05 13 06.0	-0.7
	baz=250						
BTLS	Baital	125.69	303	ePKP	PKPdf	05 13 05.7	-1.3
BTLS				LR	LR	06 11 26.2	
	comp=Z,87nm,16.6s						
QUA2	Belchertown	126.11	61	ePKPdf	PKPdf	05 13 07.9	+0.1
SHEL	Horse Pasture	126.23	173	PFAKE		05 13 20.0	+11
SHEL				LR	LR		
	comp=Z,1µm,20.0s						
VT1	Waterbury	126.55	58	ePKPdf	PKPdf	05 13 08.6	-0.1
HNH	Hanover	126.65	59	ePKPdf	PKPdf	05 13 09.1	+0.3
FFD	Franklin Falls	127.01	60	ePKPdf	PKPdf	05 13 09.8	+0.3
LBNH	Lisbon	127.08	59	P	PKPdf	05 13 09.0	-0.7
	baz=250						
LBNH	Lisbon	127.08	59	ePKPdf	PKPdf	05 13 09.3	-0.4
LBNH	Lisbon	127.08	59	ePKIKP	PKPdf	05 13 09.3	-0.4
KK31	Karatay Array	127.42	300	ePKPdf	PKPdf	05 13 10.0	-0.4
KK31	Karatay Array	127.42	300	ePKIKP	PKPdf	05 13 10.0	-0.4
KKAR	Karatay Array	127.42	300	ePKPdf	PKPdf	05 13 10.0	-0.4
KKAR	Karatay Array	127.42	300	ePKIKP	PKPdf	05 13 10.0	-0.4
IUG	Iuzhnay	127.43	298	ePKP	PKPdf	05 13 10.2	-0.3
BBSR	BB Station	127.86	75	PFAKE		05 13 20.0	+8.5
BBSR				LR	LR		
	comp=Z,899nm,20.0s						
BRZS	Berezniki	128.11	308	ePKP	PKPdf	05 13 10.5	-0.9
BRZS				ePP	PP	05 15 13.0	-2.6
BRZS				LR	LR	06 09 54.0	
	comp=Z,194nm,20.3s						
WVL	Waterville	128.72	59	ePKPdf	PKPdf	05 13 12.4	-0.3
PKME	Peaks-Kenny Pk	129.18	58	P	PKPdf	05 13 13.4	-0.2
	baz=253						
PKME	Peaks-Kenny Pk	129.18	58	ePKPdf	PKPdf	05 13 13.3	-0.2
PKME				LR	LR		
	comp=Z,3µm,19.0s						
BVAR	Borovoye Array	130.24	312	PKP	PKPdf	05 13 14.7	-0.6
	comp=Z,2.5nm,0.6s,baz=348,slow=2.1,SNR=4.5						
EMMW	East Machias	130.26	60	ePKPdf	PKPdf	05 13 16.8	+1.1
BRVK	Borovoye	130.31	312	ePKPdf	PKPdf	05 13 14.7	-0.8
BRVK				LR	LR		
	comp=Z,392nm,20.0s						
BRVK	Borovoye	130.31	312	iPKIKP	PKPdf	05 13 14.1	-1.4
PQI	Presque Isle	130.44	57	ePKPdf	PKPdf	05 13 15.9	0.0
ASCN	Ascension	132.58	161	PFAKE		05 13 30.0	+8.9
ASCN				LR	LR		
	comp=Z,665nm,20.0s						
ABKAR	Akbulak array	136.05	305	ePKPdf	PKPdf	05 13 27.0	+0.6
SVE	Sverdlovsk	136.27	316	ePKIKP	PKPdf	05 13 26.0	-0.6
SVE				pmax	pmax		
	comp=Z,20nm,1.1s						
ARU	Arti	137.41	315	PKhKP	PKPpre	05 13 20.2	
	baz=135,slow=1.4						
ARU				PKP	PKPdf	05 13 28.7	0.0
	comp=Z,3.8nm,0.3s,baz=112,slow=3.5						
ARU	Arti	137.41	315	ePKPpre	PKPpre	05 13 24.2	
ARU				ePKPdf	PKPdf	05 13 28.2	-0.5
ARU				LR	LR		
	comp=Z,725nm,20.0s						
ARU	Arti	137.41	315	iPKIKP	PKPdf	05 13 28.8	+0.1
ARU						05 16 15.6	
ARU				PPP	PPP	05 19 21.8	
ARU				SS	SS	05 34 20.9	-0.3
AKTO	Aktyubinsk	137.44	307	PKhKP	PKPpre	05 13 24.4	
	comp=Z,3.9nm,0.8s,baz=329,slow=3.2,SNR=7.3						
AKTO				PKP	PKiKP	05 13 30.1	-0.8
	comp=Z,3.0nm,0.7s,baz=105,slow=5.9,SNR=5.6						
KBS	Kingsbay	138.51	356	PFAKE		05 13 40.0	+10
KBS				LR	LR		
	comp=Z,738nm,19.0s						
RAYN	Ar Rayn	138.60	263	ePKPdf	PKPdf	05 13 31.7	-0.3
RAYN				LR	LR		
	comp=Z,1µm,19.0s						
SPITS	Spitsbergen Ar	138.96	355	PKP	PKPdf	05 13 30.9	-0.1
	comp=Z,8.0nm,0.6s,baz=25,slow=10,SNR=6.0						
SFJD	Kangerlussuaq	139.45	28	PFAKE		05 13 40.0	+7.9
SFJD				LR	LR		
	comp=Z,1µm,21.0s						
DAG	Danmarks Havn	140.12	7	iP	PKPpre	05 13 24.2	
SUMG	Summit	140.33	17	ePKPpre	PKPpre	05 13 27.5	
SUMG	Summit	140.33	17	iP	PKPdf	05 13 36.8	+2.7
SUMG	Summit	140.33	17	ePKHKP	PKPpre	05 13 27.5	
PRGR	Permogore	143.16	325	ePKIKP	PKPbc	05 13 36.7	+0.8
PRGR				pmax	pmax		
	comp=Z,26nm,1.0s						
MAK	Makhachkala	143.72	293	ePKIKP	PKPdf	05 13 40.0	-0.5
MAK				e		05 16 52.7	
MAK				ePPP	PPP	05 20 06.7	
MAK				pmax	pmax		
	comp=Z,137nm,1.2s						
APA	Apatity	144.81	338	⇑iPKIKP	PKPab	05 13 38.4	-2.3
APA				pmax	pmax		
	comp=Z,24nm,1.0s						
KEV	Kevo	144.87	344	PFAKE		05 13 50.0	+8.3
KEV				LR	LR		
	comp=Z,1µm,19.0s						
GNI	Garni	145.29	288	PKPbc	PKPbc	05 13 43.5	+0.1
	comp=Z,48nm,1.0s,baz=196,slow=3.5,SNR=14						
GNI	Garni	145.29	288	ePKPbc	PKPdf	05 13 43.8	+0.1
GNI				LR	LR		
	comp=Z,603nm,19.0s						
GNI	Garni	145.29	288	d iPKP2	PKPbc	05 13 42.1	-1.3
ARCES	ARCESS Array B	145.37	344	PKPbc	PKPbc	05 13 41.9	-0.7
	comp=Z,29nm,0.6s,baz=42,slow=3.3,SNR=111						
CUKT	Cukurca	145.52	283	iP	PKPab	05 13 44.4	-0.1
CUKT	Cukurca	145.52	283	P	PKPab	05 13 44.4	-0.1
TBLG	Delisi	145.56	291	ePKPdf	PKPab	05 13 44.4	0.0
TBLG	Delisi	145.56	291	ePKIKP	PKPab	05 13 44.4	0.0
KLMR	Klimovskoe	146.19	326	ePKHKP	PKPpre	05 13 40.9	
KLMR				pmax	pmax		
	comp=Z,543nm,1.2s						
KLMR	Klimovskoe	146.19	326	ePKPdf	PKPpre	05 13 40.9	
KLMR				AMP		05 13 55.7	
	comp=Z,543nm,1.2s						
KLMR				LQ	LQ	06 08 57.5	
KLMR				LQ	LQ	06 08 57.5	
KLMR				LR	LR	06 17 29.7	
ZEI	Tsey	146.32	293	iPKHKP	PKPpre	05 13 41.7	
ZEI				pmax	pmax		
	comp=Z,137nm,1.1s						
AKH	Akhalkalaki	146.44	290	⇓iP	PKPab	05 13 48.1	+0.2
AKH	Akhalkalaki	146.44	290	ePKPdf	PKPab	05 13 48.2	+0.3
JMIC	Jan Mayen	146.50	5	PKPbc	PKPab	05 13 46.6	-0.4
	comp=Z,152nm,1.2s,baz=124,slow=5.7,SNR=5.4						
NCK	Nalchik	146.62	294	iPKIKP	PKPdf	05 13 44.5	-1.1
HEF	Hetta	146.67	344	eP	PKPbc	05 13 46.2	-0.4
KIF	Kilpisjarvi	146.75	346	eP	PKPbc	05 13 46.6	-0.1
SRTM	Siirt_Merkez	146.99	283	iP	PKPbc	05 13 48.4	-0.2
SRTM	Siirt_Merkez	146.99	283	P	PKPbc	05 13 48.4	-0.2
GOF	Gofitskoye	147.13	297	ePKP2	PKPbc	05 13 47.9	-0.6
GOF				pmax	pmax		
	comp=Z,90nm,0.8s						
KBZ	Khabaz	147.15	294	PKPbc	PKPbc	05 13 48.1	-0.5
	comp=Z,31nm,1.1s,baz=55,slow=2.1,SNR=26						
EKAR	Karacoban	147.15	286	iP	PKPab	05 13 51.1	+0.3
EKAR	Karacoban	147.15	286	P	PKPab	05 13 51.1	+0.3
NEY	Neytrino	147.23	293	iPKP2	PKPbc	05 13 49.5	+0.4
KVAR	Kislovodsk Arr	147.31	295	PKPbc	PKPdf	05 13 47.2	+0.4
	comp=Z,3.3nm,0.5s,baz=117,slow=4.0,SNR=10						
KIV	Kislovodsk	147.32	295	ePKPbc	PKPbc	05 13 49.2	-0.1
KIV				LR	LR		
	comp=Z,797nm,21.0s						
KIV	Kislovodsk	147.32	295	c iPKIKP	PKPdf	05 13 46.1	-0.7
KIV				e		05 17 12.1	
KIV				pmax	pmax		
	comp=Z,28nm,1.2s						
BTMN	Batman	147.47	283	iP	PKPab	05 13 52.6	+0.7
BTMN	Batman	147.47	283	P	PKPab	05 13 52.6	+0.7
MARD	Mardin	147.72	282	iP	PKPbc	05 13 51.7	+1.1
VRH	Novokhopyorsk	147.74	308	ePKP2	PKPbc	05 13 48.8	-1.2
VRH				pmax	pmax		
	comp=Z,170nm,1.0s						
BNGL	BINGOL	147.79	285	iP	PKPab	05 13 52.2	-1.1
BGOL	Bingol	148.16	285	iP	PKPbc	05 13 51.9	+0.2
BGOL	Bingol	148.16	285	P	PKPbc	05 13 51.9	+0.2
LIC	Lamto	148.22	171	ePKIKP	PKPdf	05 13 48.9	-0.2
	comp=Z,525nm,1.5s						
HANI	Diyarbakir_Han	148.26	284	iP	PKPbc	05 13 52.4	+0.5
HANI	Diyarbakir_Han	148.26	284	P	PKPbc	05 13 52.4	+0.5
KIC	Kosan Boka	148.39	171	ePKIKP	PKPdf	05 13 49.1	-0.3
	comp=Z,557nm,1.3s						
TIC	Toumodi	148.64	171	ePKIKP	PKPdf	05 13 49.6	-0.2
DBIC	Dimbokro	148.68	171	PKPbc	PKPbc	05 13 53.7	+0.1
	comp=Z,68nm,0.9s,baz=152,slow=3.1,SNR=11						
DBIC	Dimbokro	148.68	171	ePKPdf	PKPdf	05 13 51.0	+1.1
DBIC	Dimbokro	148.68	171	ePKIKP	PKPdf	05 13 51.0	+1.1
MOS	Moscow	149.05	318	ePKP2	PKPbc	05 13 53.0	-0.2
MOS				pmax	pmax		
	comp=Z,100nm,1.2s						
MOS				pmax	pmax		
	comp=Z,300nm,2.0s						
LPSR	Galich'ya Gora	149.19	311	ePKP2	PKPbc	05 13 52.4	-1.3
LPSR				pmax	pmax		
	comp=Z,60nm,0.7s						
SACV	Santiago Islan	149.19	131	ePKPbc	PKPbc	05 13 53.4	-1.4
SACV				LR	LR		
	comp=Z,326nm,20.0s						
VORR	Voronezh	149.21	309	ePKHKP	PKPpre	05 13 47.0	
VORR				pmax	pmax		
	comp=Z,350nm,1.2s						
ASF	Jabal al Asfar	149.25	271	PKPbc	PKPbc	05 13 55.6	+0.9
	comp=Z,18nm,1.1s,baz=130,slow=0.3,SNR=15						
VORD	Divnogorie	149.29	308	ePKIKP	PKPdf	05 13 51.4	+1.8
VORD				pmax	pmax		
	comp=Z,50nm,1.0s						
VSR	Storozhevoye	149.32	309	ePKHKP	PKPpre	05 13 48.5	
VSR				pmax	pmax		
	comp=Z,80nm,1.2s						
ELZG	Elazig	149.36	284	iP	PKPbc	05 13 55.3	+0.4
ELZG	Elazig	149.36	284	P	PKPbc	05 13 55.3	+0.4
SOC	Sochi	149.44	294	iPKP2	PKPbc	05 13 55.0	+0.4
SOC				e		05 17 23.4	
SOC				ePPP	PPP	05 20 48.0	
SOC				eSS	SS	05 36 36.0	-4.7
SOC				pmax	pmax		
	comp=Z,80nm,1.0s						
SOC				MLR	MLR		
	comp=Z,724nm,21.0s						
OBN	Obninsk	149.83	317	ePKPbc	PKPbc	05 13 54.7	-0.4
OBN				LR	LR		
	comp=Z,431nm,19.0s						
OBN	Obninsk	149.83	317	ePKIKP	PKPdf	05 13 48.6	-1.7
OBN				e		05 17 29.2	
OBN				ePPP	PPP	05 20 47.6	
OBN				pmax	pmax		
	comp=Z,66nm,1.1s						
BORG	Borgarnes	150.29	18	ePKPdf	PKPbc	05 13 56.5	+0.5
BORG				LR	LR		
	comp=Z,538nm,21.0s						
SHBL	Chebaa	150.57	272	eP	PKPbc	05 13 58.5	+0.6
MMAI	Mount Meron Ar	150.73	271	PKPbc	PKPbc	05 13 59.0	+0.8
	comp=Z,26nm,0.9s,baz=98,slow=4.3,SNR=21						
MMAI				PKPab	PKPab	05 14 05.5	+0.2
	comp=Z,68nm,0.8s,baz=64,slow=3.8,SNR=10.0						
BHL	Bhannes	150.81	273	eP	PKPbc	05 13 58.5	+0.1
ANN	Anapa	151.11	296	iPKIKP	PKPbc	05 13 56.8	-1.8
ANN				ePPP	PPP	05 20 54.3	
ANN				pmax	pmax		
	comp=Z,84nm,1.5s						
FIA1	FINESS Array S	151.27	334	ePKPdf	PKPdf	05 13 51.7	-0.7
FIA1				ePKPdf	PKPdf	05 13 52.3	-0.2
FINES	FINESS Array B	151.28	334	PKPbc	PKPbc	05 13 57.9	-0.5
	comp=Z,47nm,0.9s,baz=160,slow=7.3,SNR=37						
FINES				PKPab	PKPab	05 14 06.2	-0.3
	comp=Z,66nm,0.7s,baz=43,slow=6.3,SNR=24						
CSS	Mathiatis	152.96	274	ePKPbc	PKPbc	05 14 03.1	-0.1
SIM	Simferopol'	153.46	296	iPKIKP	PKPdf	05 13 57.7	+1.5
SIM				pmax	pmax		
	comp=Z,21nm,1.0s						
BR131	Keskin Array S	153.66	285	ePKPbc	PKPbc	05 14 04.5	-0.1
BRTR	Keskin Array B	153.66	285	PKP	PKPdf	05 13 55.5	-1.4
	comp=Z,0.8nm,0.8s,baz=77,slow=2.7,SNR=5.6						
BRTR				PKPbc	PKPbc	05 14 04.6	-0.1
	comp=Z,5.0nm,0.9s,baz=123,slow=4.6,SNR=5.0						
BRTR				PKPab	sPKPbc	05 14 15.4	+1.1
	comp=Z,26nm,0.8s,baz=142,slow=3.4,SNR=21						
ILGA	Ilgaz	153.73	288	ePKPbc	PKPbc	05 14 04.8	-0.1
ANTO	Ankara	154.32	285	⇑iP	PKPbc	05 14 06.7	+0.7
ANTO	Ankara	154.32	285	ePKPbc	PKPbc	05 14 05.5	-0.5
ANTO				LR	LR		
	comp=Z,826nm,20.0s						
ANTO	Ankara	154.32	285	PKIKP	PKPbc	05 14 06.7	+0.7
MICGM	Minsk	154.65	320	eP	PKPab	05 14 15.0	-6.0
MICGM				eLR	LR	06 26 20.0	
IZAR	Zarasai	154.79	324	eP	PKPbc	05 14 06.0	-0.4
IZAR				IAmb	IAmb	05 14 32.5	
	comp=Z,31nm,0.8s						
IDID	Didziasalis	154.80	323	eP	PKPbc	05 14 06.5	+0.1
IDID				IAmb	IAmb	05 14 16.3	
	comp=Z,37nm,1.2s						
ISAL	Salakas	154.95	324	eP	PKPbc	05 14 06.0	-0.7
ISAL				IAmb	IAmb	05 14 33.3	
	comp=Z,27nm,0.9s						
NACGM	Naroch	155.00	322	e	PKPbc	05 14 16.0	+9.2
IIGN	Ignalina	155.02	323	eP	PKPdf	05 14 07.0	+8.9
IIGN				IAmb	IAmb	05 14 18.1	
	comp=Z,38nm,1.2s						
TOA0	Torodi Ar. Sit	155.35	184	ePKPdf	PKPdf	05 13 58.1	-1.7
TOA0				ePKPdf	PKPdf	05 13 59.8	0.0
TORD	Torodi Ar. Bea	155.35	184	PKP	PKPdf	05 13 59.6	-0.2
	comp=Z,9.6nm,1.0s						
TORD				PKPab	sPKPbc	05 14 20.6	+2.2
	baz=156,slow=3.4						
NC303	NORSAR Array S	155.50	346	ePKPdf	PKPdf	05 13 58.6	+0.1
AKASG	Malin Array Be	155.52	311	PKP	PKPdf	05 14 00.0	+1.1
	comp=Z,2.0nm,0.8s,baz=60,slow=2.4,SNR=5.7						
AKASG				PKPab	PKPab	05 14 23.8	-1.0
	comp=Z,9.1nm,0.7s,baz=56,slow=3.9,SNR=9.3						
AKBB	Malin Array Si	155.52	311	ePKPdf	PKPdf	05 13 59.1	+0.2
AKBB				ePKPbc	sPKPdf	05 14 08.2	-0.2
KIEV	Kiev	155.53	311	ePKPdf	PKPdf	05 13 58.5	-0.3
KIEV				ePKPbc	sPKPdf	05 14 08.2	-0.2
KIEV				LR	LR		
	comp=Z,767nm,22.0s						
NC204	NORSAR Array S	155.56	347	ePKPbc	PKPbc	05 14 09.0	
NB2	NORSAR Subarra	155.70	346	PKP	PKPdf	05 14 07.5	+8.6
	comp=Z,42nm,1.2s,baz=17,slow=2.6						
NB2	NORSAR Subarra	155.70	346	PKP	PKPdf	05 14 07.5	+8.6
	baz=17,slow=2.6						
NOA	NORSAR Array B	155.70	346	PKP	PKPdf	05 13 57.5	-1.4
	comp=Z,6.4nm,1.2s,baz=24,slow=1.5,SNR=5.8						
NOA				PKPab	sPKPbc	05 14 18.4	+0.7
	comp=Z,7.2nm,0.9s,baz=33,slow=2.1,SNR=9.3						
H07S1	FLORES T-PHASE	155.76	77	ePKP	PKPdf	05 14 01.6	+2.0
NBO00	NORSAR Array S	155.79	347	ePKPdf	PKPdf	05 13 58.5	-0.4
NC602	NORSAR Array S	155.92	346	ePKPdif	PKPdf	05 14 08.3	+9.2
NAO01	NORSAR Array S	155.94	347	ePKPdf	PKPdf	05 13 59.2	+0.1
NAO01				ePKPab	PKPab	05 14 26.0	-0.3
HFS	Hagfors	156.00	343	PKPab	PKPab	05 14 25.8	-0.7
	comp=Z,12nm,0.9s,baz=30,slow=4.1,SNR=8.8						
KOWA	Kowa	156.50	171	PKP	PKPdf	05 14 02.2	+1.0
	comp=Z,21nm,1.2s,baz=107,slow=1.7,SNR=11						
KOWA	Kowa	156.50	171	ePKPdf	PKPdf	05 14 01.9	+0.6
KIS	Kishinev	156.83	303	ePKP	PKPdf	05 14 04.0	+3.3
KIS	Kishinev	156.83	303	ePP	PP	05 18 25.0	+16
KIS				eSKSP		05 28 36.0	
KIS	Kishinev	156.83	303	ePKIKP	PKPdf	05 14 04.0	+3.3
KIS				e		05 14 24.0	
KIS				e		05 21 43.0	
SORM	Soroca	156.86	306	⇓iP	PKPdf	05 14 03.9	+3.2
SORM	Soroca	156.86	306	PKIKP	PKPdf	05 14 03.9	+3.2
SUW	Suwalki	157.24	323	ePKPab	PKPab	05 14 30.2	-1.9
CFR	Carcaliu	157.65	298	⇓iP	PKPab	05 14 28.2	-6.0
CFR	Carcaliu	157.65	298	PKP2	PKPab	05 14 28.2	-6.0
PCAN	Candelaria	157.76	80	ePKP	PKPdf	05 14 04.1	+1.9
TLB	Topalu	157.80	297	⇓iP	PKPab	05 14 27.8	-7.1
TLB	Topalu	157.80	297	PKP2	PKPab	05 14 27.8	-7.1
HARR	Harsova	157.86	297	⇑iP	PKPab	05 14 24.0	-11
HARR	Harsova	157.86	297	PKP2	PKPab	05 14 24.0	-11
ROSA	Rosais	157.98	79	ePKP	PKPdf	05 14 05.6	+3.1
KARP	Karpathos	157.99	272	ePKPab	PKPab	05 14 36.5	+0.4
PGRA	Graciosa	158.22	78	ePKP	PKPdf	05 14 03.2	+0.4
GRER		158.42	299	⇑iP	PKPab	05 14 36.3	-1.2
VRI	Vrincioaia	158.49	300	⇑iP	PKPab	05 14 41.4	+3.5
VRI	Vrincioaia	158.49	300	PKP2	PKPab	05 14 41.4	+3.5
PLOR	Plostina	158.55	300	⇓iP	PKPab	05 14 35.0	-3.1
PLOR	Plostina	158.55	300	PKP2	PKPab	05 14 35.0	-3.1
LVV	L'vov	158.93	312	ePKP2	PKPab	05 14 39.8	+0.2
BURAR	Bucovina Array	159.03	306	⇓iP	PKPab	05 14 37.4	-2.8
BURAR	Bucovina Array	159.03	306	PKP2	PKPab	05 14 37.4	-2.8
BUR08	Bucovina Ar. S	159.03	306	ePKPab	PKPab	05 14 40.2	-0.1
MLR	Muntele Rosu	159.11	300	PKP	PKPdf	05 14 02.4	-1.4
	comp=Z,1.5nm,0.5s,baz=351,slow=13,SNR=4.0						
MLR				PKPab	PKPab	05 14 41.6	+0.8
	comp=Z,9.6nm,0.9s,baz=309,slow=2.3,SNR=8.8						
MLR	Muntele Rosu	159.11	300	⇑iP	PKPab	05 14 41.0	+0.3
MLR	Muntele Rosu	159.11	300	ePKPdf	PKPdf	05 14 02.8	-1.0
MLR				ePKPab	PKPab	05 14 41.5	+0.8
VOIR		159.73	300	⇓iP	PKPab	05 14 36.4	-7.0
VOIR		159.73	300	PKP2	PKPab	05 14 36.4	-7.0
KWP	Kalwaria Pacla	159.78	313	ePKP	PKPab	05 14 43.4	+0.1
KWP	Kalwaria Pacla	159.78	313	ePKPab	PKPab	05 14 44.6	+1.3
KWP	Kalwaria Pacla	159.78	313	ePKP2	PKPab	05 14 43.4	+0.1
PSET	Sete Cidades	159.84	82	ePKP	PKPdf	05 14 06.2	+1.5
GRON	Grota Negra	159.97	82	ePKP	PKPdf	05 14 04.4	-0.5
CMLA	Cha da Macela	159.98	82	ePKP	PKPdf	05 14 07.3	+2.4
CMLA	Cha da Macela	159.98	82	PFAKE		05 14 20.0	+15
CMLA				LR	LR		
	comp=Z,1µm,20.0s						
PSMN	Pico do Norte,	160.22	85	ePKP	PKPdf	05 14 04.0	-1.2
UZH	Uzhgorod	160.47	311	ePKP2	PKPab	05 14 45.7	-0.6
CRVS	Cervenica-Dubn	160.84	312	ePKIKP	PKPdf	05 14 04.6	-0.9
CRVS				e		05 14 47.5	
CRVS	Cervenica-Dubn	160.84	312	ePKP	PKPdf	05 14 04.6	-0.9
CRVS				e		05 14 47.5	
DRGR		160.91	305	⇓iP	PKPab	05 14 49.5	+1.1
DRGR		160.91	305	PKP2	PKPab	05 14 49.5	+1.1
OJC	Ojcow	161.12	317	ePKPdf	PKPdf	05 14 04.8	-0.9
OJC				ePKPab	sPKPab	05 14 58.9	+0.3
OJC	Ojcow	161.12	317	ePKPab	PKPab	05 14 47.9	-1.2

OJC	Ojcow	161.12	317	ePKIKP	PKPdf	05 14 04.8	-0.9
NIE	Niedzica	161.26	315	ePKPdf	PKPdf	05 14 05.3	-0.6
NIE	Niedzica	161.26	315	ePKIKP	PKPdf	05 14 05.3	-0.6
VTS	Vitosha	161.54	292	⇑iP	PKPab	05 14 53.3	+1.8
VTS	Vitosha	161.54	292	ePKPab	PKPab	05 14 51.8	+0.3
VTS	Vitosha	161.54	292	PKP2	PKPab	05 14 53.3	+1.8
LANS	Liptovska Anna	161.87	315	ePKP2	PKPab	05 14 53.5	+1.0
LANS	Liptovska Anna	161.87	315	ePKP	PKPab	05 14 53.5	+1.0
BZS	Buzias	162.01	302	⇑iP	PKPdf	05 14 06.3	-0.5
BZS	Buzias	162.01	302	PKIKP	PKPdf	05 14 06.3	-0.5
OKC	Ostrava-Krasne	162.21	318	ePKPDF	PKPdf	05 14 05.2	-1.6
OKC				AMS	AMS	06 37 10.0	
	comp=Z,600nm,19.2s						
OKC	Ostrava-Krasne	162.21	318	ePKIKP	PKPdf	05 14 05.2	-1.6
OKC				MLR	MLR		
	comp=Z,600nm,19.2s						
LIT	Litokhoron	162.24	284	ePKPab	PKPab	05 14 53.6	-0.8
AGG	Agios Georgios	162.33	281	ePKPdf	PKPdf	05 14 06.2	-1.2
AGG				ePKPab	PKPab	05 14 56.6	+1.7
EKA	Eskdalemuir Ar	162.38	6	PKPab	PKPab	05 14 52.8	-1.6
	comp=Z,22nm,0.9s,baz=330,slow=3.0,SNR=35						
ESK	Eskdalemuir	162.40	6	ePKPab	PKPab	05 14 53.5	-0.9
ESK				LR	LR		
	comp=Z,1μm,20.0s						
KSP	Ksiaz	162.51	323	ePKPab	PKPab	05 14 54.1	-1.1
KSP	Ksiaz	162.51	323	ePKP2	PKPab	05 14 54.1	-1.1
MORC	Moravsky Berou	162.56	319	⇓iP	PKPab	05 14 55.1	-0.4
MORC	Moravsky Berou	162.56	319	ePKPdf	PKPdf	05 14 06.1	-1.2
MORC				ePKPab	PKPab	05 14 55.1	-0.4
MORC	Moravsky Berou	162.56	319	ePKIKP	PKPdf	05 14 06.1	-1.2
MORC				e		05 14 55.1	
MORC	Moravsky Berou	162.56	319	ePKP	PKPdf	05 14 06.3	-1.0
MORC				e		05 14 54.9	
VYHS	Vyhne	162.56	314	ePKIKP	PKPdf	05 14 06.0	-1.3
VYHS				e		05 14 55.5	
VYHS	Vyhne	162.56	314	ePKP	PKPdf	05 14 06.0	-1.3
VYHS				e		05 14 55.5	
KRLC	Kraliky	162.77	321	ePKPAB	PKPab	05 14 52.0	-4.4
KRLC				ex	x	05 15 06.0	
KRLC	Kraliky	162.77	321	ePKP2	PKPab	05 14 52.0	-4.4
DPC	Dobruska-Polom	162.82	322	ePKPDF	PKPpre	05 14 02.1	
DPC				ePKPAB	PKPab	05 14 56.5	-0.1
DPC				AMS	AMS	06 39 10.0	
	comp=Z,1μm,19.3s						
DPC	Dobruska-Polom	162.82	322	ePKIKP	PKPpre	05 14 02.1	
DPC				MLR	MLR		
	comp=Z,1μm,19.3s						
UPC	Upice	162.87	323	ePKPDF	PKPdf	05 14 05.2	-2.3
UPC				ePKPAB	PKPab	05 14 56.3	-0.4
UPC				ex	x	05 15 06.9	
UPC				ex	x	05 26 03.8	
UPC				AMS	AMS	06 32 00.0	
	comp=Z,1μm,20.8s						
UPC	Upice	162.87	323	ePKIKP	PKPdf	05 14 05.2	-2.3
UPC				e		05 14 56.3	
UPC				MLR	MLR		
	comp=Z,1μm,20.8s						
JAVC	Velka Javorina	163.02	316	ePKP	PKPdf	05 14 07.5	-0.3
JAVC				e		05 14 58.3	
FNA	Florina	163.07	287	ePKPdf	PKPdf	05 14 06.7	-1.4
FNA	Florina	163.07	287	ePKIKP	PKPdf	05 14 06.7	-1.4
VRAC	Vranov	163.34	319	PKP	PKPdf	05 14 07.4	-0.6
	comp=Z,1.6nm,0.3s,baz=218,slow=1.6,SNR=9.0						
VRAC				PKPab	PKPab	05 14 58.5	-0.4
	comp=Z,13nm,0.9s,baz=75,slow=4.7,SNR=9.9						
VRAC	Vranov	163.34	319	⇑iP	PKPab	05 14 58.6	-0.3
VRAC	Vranov	163.34	319	ePKP	PKPdf	05 14 07.1	-0.9
VRAC				e		05 14 58.5	
SMOL	Smolenice	163.35	315	ePKP2	PKPab	05 14 59.0	+0.1
SMOL	Smolenice	163.35	315	ePKP	PKPab	05 14 59.0	+0.1
MODS	Modra-Piesok	163.51	315	ePKIKP	PKPdf	05 14 06.6	-1.6
MODS				e		05 14 59.3	
MODS	Modra-Piesok	163.51	315	ePKP	PKPdf	05 14 06.6	-1.6
MODS				e		05 14 59.3	
PVCC	Panska Ves	163.53	325	ePKPDF	PKPpre	05 14 03.5	
PVCC				ePKPAB	PKPab	05 14 59.0	-0.6
PVCC				ex	x	05 15 09.3	
PVCC				ePP	PP	05 18 46.6	+1.6
PVCC				AMS	AMS	06 38 00.0	
	comp=Z,800nm,22.2s						
PVCC	Panska Ves	163.53	325	ePKIKP	PKPpre	05 14 03.5	
PVCC				e		05 14 59.0	
PVCC				e		05 18 46.6	
PVCC				MLR	MLR		
	comp=Z,800nm,22.2s						
DIVS	Divibare	163.55	299	ePKPdf	PKPdf	05 14 06.8	-1.6
BRG	Berggiesshubel	163.56	327	ePKP	PKPdf	05 14 07.0	-1.1
	comp=Z,16nm,1.5s						
BRG	Berggiesshubel	163.56	327	ePKIKP	PKPdf	05 14 07.0	-1.1
BRG				e		05 14 58.5	
BRG						05 18 43.0	
BRG				SS	SS	05 39 08.0	-2.9
BRG				pmax	pmax		
	comp=Z,16nm,1.5s						
KRUC	Moravsky	163.59	318	ePKP	PKPdf	05 14 06.9	-1.3
KRUC				e		05 14 59.3	
CLL	Collm	163.62	330	ePKPdf	PKPdf	05 14 06.0	-2.1
CLL				ePKPab	PKPab	05 14 58.0	-2.0
	comp=Z,24nm,1.2s						
CLL				i pPKPab	pPKPab	05 15 07.8	+0.9
	comp=Z,46nm,1.2s						
CLL				ePP	PP	05 18 47.0	+1.7
CLL				eSKSdf	SKSdf	05 21 17.0	+5.8
CLL				ePPPP		05 25 00.0	
CLL				eSKKSac	SKKSac	05 25 29.0	-2.9
CLL				ePPPrev		05 26 11.0	
CLL				eSKKSacre		05 28 18.0	
CLL				ePSKS		05 29 08.0	
CLL				e		05 29 50.0	
CLL				e		05 35 30.0	
CLL				eSS	SS	05 39 07.0	-4.4
CLL				ePSPS		05 40 48.0	
CLL				eSSS	SSS	05 45 48.0	
CLL				e		05 51 18.0	
CLL				eSSSrev		05 52 36.0	
CLL				LmV		06 39 00.0	
	comp=Z,700nm,20.1s						
CLL	Collm	163.62	330	ePKIKP	PKPdf	05 14 06.0	-2.1
CLL				e		05 14 58.0	
CLL				pmax	pmax		
	comp=Z,24nm,1.2s						
CLL				MLR	MLR		
	comp=Z,700nm,20.1s						
GOPC	GO Pecny, Ondr	163.85	323	ePKPDF	PKPpre	05 14 04.3	
GOPC				ePKPAB	PKPab	05 14 59.4	-1.7
GOPC				ex	x	05 15 08.0	
GOPC				ePP	PP	05 18 42.2	-4.6
GOPC				AMS	AMS	06 38 20.0	
	comp=Z,900nm,19.9s						
GOPC	GO Pecny, Ondr	163.85	323	ePKIKP	PKPpre	05 14 04.3	
GOPC				e		05 14 59.4	
GOPC				e		05 18 42.2	
GOPC				MLR	MLR		
	comp=Z,900nm,19.9s						
PRU	Pruhonice	163.92	324	ePKPDF	PKPdf	05 14 08.7	+0.2
PRU				ePKPAB	PKPab	05 15 01.2	-0.1
PRU				epPKP	pPKPab	05 15 07.7	-0.6
PRU				ePP	PP	05 18 38.8	-8.2
PRU				eSKS	SKSdf	05 21 09.2	-2.3
PRU				AMS	AMS	06 32 50.0	
	comp=Z,1μm,19.5s						
PRU	Pruhonice	163.92	324	ePKIKP	PKPdf	05 14 08.7	+0.2
PRU				e		05 15 01.2	
PRU				e		05 21 09.2	
PRU				MLR	MLR		
	comp=Z,1μm,19.5s						
TAM	Tamanrasset	164.22	200	ePKPdf	PKPdf	05 14 10.9	+1.1
VAL	Valentia	164.22	23	⇑iP	PKPdf	05 14 08.9	+0.3
PDG	Podgorica	164.46	293	⇓iP	PKPab	05 15 03.8	-0.2
TTG	Podgorica	164.46	293	ePKPab	PKPab	05 15 03.8	-0.2
CONA	Conrad Observa	164.54	316	i PKPab	PKPab	05 15 04.6	+0.3
	comp=Z,14nm,0.9s						
NKC	Novy Kostel	164.67	328	ePKPDF	PKPdf	05 14 07.6	-1.6
NKC				ePKPAB	PKPab	05 15 04.4	-0.3
NKC				ex	x	05 15 14.3	
NKC				AMS	AMS	06 37 00.0	
	comp=Z,1μm,19.9s						
NKC	Novy Kostel	164.67	328	ePKIKP	PKPdf	05 14 07.6	-1.6
NKC				e		05 15 04.4	
NKC				MLR	MLR		
	comp=Z,1μm,19.9s						
KHC	Kasperske Hory	164.96	323	ePKPDF	PKPpre	05 14 05.5	
KHC				ePKPAB	PKPab	05 15 05.2	-0.8
KHC				ex	x	05 15 12.7	
KHC				ePP	PP	05 18 49.1	-3.5
KHC				ex	x	05 19 04.0	
KHC				eSKS	SKSdf	05 21 13.8	+1.4
KHC				eSKKS	SKKSac	05 25 37.0	-1.9
KHC				AMS	AMS	06 29 10.0	
	comp=Z,900nm,22.1s						
KHC	Kasperske Hory	164.96	323	ePKPdf	PKPdf	05 14 08.2	-1.3
KHC				ePKPab	PKPab	05 15 05.0	-1.1
KHC	Kasperske Hory	164.96	323	ePKIKP	PKPpre	05 14 05.5	
KHC				e		05 15 05.2	
KHC				e		05 18 49.1	
KHC				e		05 21 13.8	
KHC				MLR	MLR		
	comp=Z,900nm,22.1s						
GEC2	GERESS Array S	165.10	322	ePKPdf	PKPdf	05 14 08.4	-1.3
GEC2				ePKPab	PKPab	05 15 05.9	-0.8
GEC2	GERESS Array S	165.10	322	ePKIKP	PKPdf	05 14 08.4	-1.3
GEC2				e		05 15 05.9	
GERES	GERESS Array B	165.10	322	PKP	PKPdf	05 14 08.1	-1.6
	comp=Z,0.6nm,0.9s,baz=169,slow=1.4,SNR=8.6						
GERES				PKPab	PKPab	05 15 05.8	-0.9
	comp=Z,8.6nm,0.9s,baz=44,slow=4.4,SNR=22						
GEA0	GERESS Array S	165.10	322	ePKPdf	PKPdf	05 14 07.6	-2.1
GEA0				ePKPab	PKPab	05 15 05.4	-1.3
ARSA	Arzberg	165.12	314	i PKPab	PKPab	05 15 06.7	-0.1
	comp=Z,29nm,1.0s,SNR=4.8						
PMOZ	Porto Moniz, M	165.24	105	ePKPdf	PKPdf	05 14 09.6	-0.7
PMOZ	Porto Moniz, M	165.24	105	eLR	LR	06 13 55.8	
	comp=Z,650nm,18.0s						
MOA	Molln	165.46	318	i PKPab	PKPab	05 15 08.1	-0.1
	comp=Z,14nm,1.4s						
GRFO	Grafenberg	165.60	329	ePKPab	PKPab	05 15 08.5	-0.3
SOKA	Soboth	165.71	313	i PKPdf	PKPdf	05 14 10.2	-0.1
	comp=Z,18nm,1.4s,SNR=8.2						
SOKA				PKPab	PKPab	05 15 08.8	-0.7
	comp=Z,3.3nm,0.8s						
OBKA	Obir	166.08	313	i PKPab	PKPab	05 15 10.5	-0.6
	comp=Z,16nm,1.0s						
BOJS	Bojanci	166.17	308	ePKPdf	PKPdf	05 14 09.0	-1.5
BOJS				PKPab	PKPab	05 15 10.8	-0.6
BOJS				e		05 25 43.0	
BOJS				e		05 29 50.1	
LJU	Ljubljana	166.34	312	ePKPdf	PKPdf	05 14 08.7	-2.0
LJU				e		05 14 20.9	
LJU				ePKPab	PKPab	05 15 11.4	-0.8
LJU				ePP	PP	05 19 06.7	+6.7
LJU				e		05 25 41.9	
CRNS	Crni Vrh	166.48	312	ePKPdf	PKPdf	05 14 08.8	-2.0
MEM	Membach	166.50	343	⇑PKP	PKPab	05 15 12.5	-0.1
MYKA	Terra Mystica	166.53	315	i PKPab	PKPab	05 15 13.5	+0.4
	comp=Z,4.8nm,0.7s						
TIP	Timpagrande	166.67	281	ePKPab	PKPab	05 15 15.8	+1.7
ABTA	Abfaltersbach	167.07	318	i PKPdf	PKPdf	05 14 09.8	-1.6
	comp=Z,8.0nm,1.6s						
ABTA				i PKPab	PKPab	05 15 15.4	-0.2
	comp=Z,10nm,1.2s						
STU	Stuttgart	167.13	331	ePKPab	PKPab	05 15 15.1	-0.5
WLF	Walferdange	167.33	341	ePKPab	PKPab	05 15 15.9	-0.4
RETA	Reutte	167.45	324	i PKPdf	PKPdf	05 14 10.3	-1.2
	comp=Z,6.3nm,1.1s						
RETA				i PKPab	PKPab	05 15 16.3	-0.8
	comp=Z,6.4nm,0.9s						
FETA	Feichten	167.80	322	i PKPdf	PKPdf	05 14 11.0	-0.9
	comp=Z,15nm,1.3s,SNR=6.2						
FETA				i PKPab	PKPab	05 15 17.9	-0.9
	comp=Z,12nm,1.1s						
BFO	Black Forest	167.82	332	ePKPab	PKPab	05 15 17.4	-1.2
DAVA	Damuels	168.01	325	i PKPdf	PKPdf	05 14 10.4	-1.7
	comp=Z,14nm,1.3s,SNR=5.5						
DAVA				i PKPab	PKPab	05 15 19.0	-0.7
	comp=Z,25nm,1.1s,SNR=8.9						
FUORN	Ofenpass-Fuorn	168.31	322	ePKPdf	PKPdf	05 14 11.4	-1.0
FUORN				ePKPab	PKPab	05 15 20.3	-0.9
ECH	Echery	168.33	335	ePKPab	PKPab	05 15 19.3	-1.6
DAVOX	Davos/Dischmat	168.38	323	PKP	PKPdf	05 14 11.6	-0.7
	comp=Z,2.5nm,0.9s,baz=340,slow=3.1,SNR=6.8						
DAVOX				PKPab	PKPab	05 15 20.3	-1.1
	comp=Z,9.4nm,0.9s,baz=37,slow=3.2,SNR=8.2						
TUE	Stuetta	168.86	324	ePKPab	PKPab	05 15 23.6	+0.1
SENIN	Lac Senin/Sane	169.84	329	ePKPdf	PKPdf	05 14 12.9	-0.5
SENIN				ePKPab	PKPab	05 15 27.2	-0.6
BNI	Bardonecchia	171.15	327	ePKPdf	PKPdf	05 14 13.6	-0.4
BNI				ePKPab	PKPab	05 15 34.2	+0.6
BNI	Bardonecchia	171.15	327	ePKIKP	PKPdf	05 14 13.6	-0.4
KEST	Kesra	172.08	257	PKP	PKPdf	05 14 15.4	+0.7
	comp=Z,5.6nm,1.1s,baz=168,slow=8.8,SNR=2.8						
KEST				PKPab	PKPab	05 15 39.3	+1.2
	comp=Z,6.9nm,0.9s,baz=182,slow=1.1,SNR=6.2						
KEST	Kesra	172.08	257	PKP	PKPdf	05 14 15.4	+0.7
KEST				ePKPab	PKPab	05 15 39.8	+1.7
PGAV	Gavieira, Arco	172.54	54	ePKPdf	PKPdf	05 14 14.8	+0.1
PGAV	Gavieira, Arco	172.54	54	ePKPab	PKPab	05 15 39.0	-0.9
PGAV	Gavieira, Arco	172.54	54	ePP	PP	05 19 30.0	-1.6
PGAV	Gavieira, Arco	172.54	54	eSS	SS	05 40 54.2	+12
PGAV	Gavieira, Arco	172.54	54	eLR	LR	06 19 17.9	
	comp=Z,2μm,18.0s						
PMAFR	Mafra	172.76	78	ePKPdf	PKPdf	05 14 15.3	+0.5
PMAFR	Mafra	172.76	78	ePKPab	PKPab	05 15 41.6	+0.6
PMAFR	Mafra	172.76	78	ePP	PP	05 19 33.0	-0.1
PMAFR	Mafra	172.76	78	eSS	SS	05 40 47.1	+1.9
PCAB	Cabril	172.82	55	ePKPdf	PKPdf	05 14 15.1	+0.4
PCAB	Cabril	172.82	55	ePKPab	PKPab	05 15 39.8	-1.3
PCAB	Cabril	172.82	55	ePP	PP	05 19 32.7	-0.2
PMST	Lisbon--Monsan	172.86	80	ePKPdf	PKPdf	05 14 16.0	+1.2
PMST	Lisbon--Monsan	172.86	80	ePP	PP	05 19 34.9	+1.3
LIS	Lisbon	172.89	80	ePKP	PKPdf	05 14 16.1	+1.3
LIS				ePP	PP	05 19 34.8	+1.1
LIS				AMS	AMS	06 40 29.2	
	comp=E,1μm,11.2s						
LIS	Lisbon	172.89	80	ePKIKP	PKPdf	05 14 16.0	+1.3
LIS				e		05 19 34.8	
PFVI	Vila Bisbo	173.08	93	ePKPdf	PKPdf	05 14 17.1	+2.2
PFVI	Vila Bisbo	173.08	93	ePP	PP	05 19 33.7	-1.0
POLO	Lamas de Olo	173.14	57	ePKPdf	PKPdf	05 14 15.4	+0.4
POLO	Lamas de Olo	173.14	57	ePKPab	PKPab	05 15 41.4	-1.2
POLO	Lamas de Olo	173.14	57	ePP	PP	05 19 33.8	-0.8
POLO	Lamas de Olo	173.14	57	eSS	SS	05 41 02.5	+14
PCAS	Casmilo, Conde	173.15	69	ePKPdf	PKPdf	05 14 15.5	+0.6
PCAS	Casmilo, Conde	173.15	69	ePKPab	PKPab	05 15 41.9	-0.7
PCAS	Casmilo, Conde	173.15	69	ePP	PP	05 19 34.6	-0.2
PCAS	Casmilo, Conde	173.15	69	eSS	SS	05 40 54.5	+5.8
COI	Coimbra	173.16	67	ePKPdf	PKPdf	05 14 15.2	+0.3
COI	Coimbra	173.16	67	ePKPab	PKPab	05 15 41.3	-1.4
COI	Coimbra	173.16	67	ePP	PP	05 19 34.9	0.0
PTEO	Sao Teotonio	173.21	90	ePKPdf	PKPdf	05 14 15.6	+0.6
PTEO	Sao Teotonio	173.21	90	ePKPab	PKPab	05 15 42.5	-0.5
PVRL	Vila Real	173.24	57	ePKPdf	PKPdf	05 14 15.4	+0.5
PVRL	Vila Real	173.24	57	ePKPab	PKPab	05 15 41.7	-1.3
PVRL	Vila Real	173.24	57	ePP	PP	05 19 35.6	+0.5
MORF	Marmelete	173.25	92	ePKP	PKPdf	05 14 16.2	+1.1
MORF				ePP	PP	05 19 36.9	+1.3
MORF				eSS	SS	05 40 52.0	+1.8
MORF				AMS	AMS	06 33 35.3	
	comp=Z,1μm,23.3s						
MORF	Marmelete	173.25	92	ePKPdf	PKPdf	05 14 16.2	+1.1
MORF	Marmelete	173.25	92	ePKPab	PKPab	05 15 42.7	-0.5
MORF	Marmelete	173.25	92	ePP	PP	05 19 34.4	-1.2
MORF	Marmelete	173.25	92	eSS	SS	05 40 56.0	+5.8
MORF	Marmelete	173.25	92	ePKIKP	PKPdf	05 14 16.2	+1.1
MORF				e		05 19 36.9	
MORF				eSS	SS	05 40 51.9	+1.7
ALMR	Almeirim	173.28	76	ePKP	PKPdf	05 14 16.1	+1.1
ALMR				ePP	PP	05 19 36.9	+1.3
ALMR	Almeirim	173.28	76	ePKPdf	PKPdf	05 14 15.6	+0.7
ALMR	Almeirim	173.28	76	ePKPab	PKPab	05 15 42.2	-1.0
ALMR	Almeirim	173.28	76	ePP	PP	05 19 35.3	-0.3
ALMR	Almeirim	173.28	76	ePKIKP	PKPdf	05 14 16.0	+1.1
ALMR				e		05 19 36.9	
PTOM	Tomar	173.32	72	ePKPdf	PKPdf	05 14 15.4	+0.5
PTOM	Tomar	173.32	72	ePKPab	PKPab	05 15 42.1	-1.3
PTOM	Tomar	173.32	72	ePP	PP	05 19 35.1	-0.6
PVIS	Viseu	173.36	62	ePKPdf	PKPdf	05 14 15.5	+0.5
PVIS	Viseu	173.36	62	ePKPab	PKPab	05 15 42.2	-1.4
PVIS	Viseu	173.36	62	ePP	PP	05 19 34.5	-1.3
PNCL	Nicolau / Gran	173.40	85	ePKPdf	PKPdf	05 14 16.0	+1.0
PNCL	Nicolau / Gran	173.40	85	ePKPab	PKPab	05 15 43.4	-0.4
PNCL	Nicolau / Gran	173.40	85	ePP	PP	05 19 34.0	-2.2
PNCL	Nicolau / Gran	173.40	85	eSS	SS	05 41 01.4	+10
PMTG	Montargil	173.56	77	ePKPdf	PKPdf	05 14 15.4	+0.3
PMTG	Montargil	173.56	77	ePKPab	PKPab	05 15 44.7	+0.2
PMTG	Montargil	173.56	77	ePP	PP	05 19 36.4	-0.6
PMTG	Montargil	173.56	77	eSS	SS	05 41 17.9	+25
PBRG	Braganca	173.58	50	ePKPdf	PKPdf	05 14 15.3	+0.2
PBRG	Braganca	173.58	50	ePKPab	PKPab	05 15 43.5	-1.0
PBRG	Braganca	173.58	50	ePP	PP	05 19 36.1	-0.4
MESJ	Messejana	173.63	88	ePKP	PKPdf	05 14 16.4	+1.2
MESJ				ePP	PP	05 19 38.7	+1.3
MESJ				eSS	SS	05 40 56.0	+2.2
MESJ				AMS	AMS	06 32 18.4	
	comp=Z,980nm,17.9s						
MESJ	Messejana	173.63	88	ePKPdf	PKPdf	05 14 16.3	+1.2
MESJ	Messejana	173.63	88	ePKPab	PKPab	05 15 44.8	-0.1
MESJ	Messejana	173.63	88	ePP	PP	05 19 35.3	-2.1
MESJ	Messejana	173.63	88	ePKIKP	PKPdf	05 14 16.3	+1.2
MESJ				e		05 19 38.6	
MESJ				eSS	SS	05 40 55.9	+2.1
MTE	Manteigas	173.73	64	ePKPdf	PKPdf	05 14 15.6	+0.4
MTE	Manteigas	173.73	64	ePKPab	PKPab	05 15 43.5	-1.8
MTE	Manteigas	173.73	64	ePP	PP	05 19 37.3	-0.3
MTE	Manteigas	173.73	64	eSS	SS	05 41 06.6	+12
MTE	Manteigas	173.73	64	eLR	LR	06 16 26.8	
	comp=Z,976nm,20.0s						
MTE	Manteigas	173.73	64	ePKPdf	PKPdf	05 14 15.8	+0.7
MTE				ePKPab	PKPab	05 15 43.4	-1.8
MVO	Moncorvo	173.75	56	ePKPdf	PKPdf	05 14 15.9	+0.7
MVO	Moncorvo	173.75	56	ePKPab	PKPab	05 15 44.0	-1.3
MVO	Moncorvo	173.75	56	ePP	PP	05 19 37.4	-0.1
MVO	Moncorvo	173.75	56	eSS	SS	05 41 06.7	+13
MVO	Moncorvo	173.75	56	eLR	LR	06 16 51.9	
	comp=Z,2μm,20.0s						
PCVE	Castro Verde	173.76	90	ePKPdf	PKPdf	05 14 16.3	+1.1
PCVE	Castro Verde	173.76	90	ePKPab	PKPab	05 15 45.5	0.0
PCVE	Castro Verde	173.76	90	ePP	PP	05 19 37.2	-0.9
EVO	Evora	173.79	81	ePKPdf	PKPdf	05 14 16.0	+0.8
EVO	Evora	173.79	81	ePKPab	PKPab	05 15 44.6	-0.9
EVO	Evora	173.79	81	ePP	PP	05 19 37.9	-0.2
PBDV	Barranco-do-Ve	173.81	93	ePKPdf	PKPdf	05 14 16.6	+1.3
PBDV	Barranco-do-Ve	173.81	93	ePKPab	PKPab	05 15 46.2	+0.5
PBDV	Barranco-do-Ve	173.81	93	ePP	PP	05 19 37.8	-0.5
PBDV	Barranco-do-Ve	173.81	93	eSS	SS	05 41 01.9	+6.3
MDT	Midelt	173.81	143	PKP	PKPdf	05 14 16.7	+1.1
	comp=Z,9.0nm,1.1s,baz=305,slow=1.0,SNR=10.0						
MDT				PKPab	PKPab	05 15 47.1	+1.4
	comp=Z,13nm,1.2s,baz=247,slow=4.4,SNR=8.4						
PBEJ	Beja	173.92	86	ePKPdf	PKPdf	05 14 16.9	+1.7
PBEJ	Beja	173.92	86	ePKPab	PKPab	05 15 46.7	+0.6
PCBR	Castelo Branco	173.96	68	ePKPdf	PKPdf	05 14 15.9	+0.7
PCBR	Castelo Branco	173.96	68	ePKPab	PKPab	05 15 45.1	-1.1
PCBR	Castelo Branco	173.96	68	ePP	PP	05 19 39.3	+0.5
PVAQ	Vaqueiros	174.00	92	ePKPdf	PKPdf	05 14 16.1	+0.8
PVAQ	Vaqueiros	174.00	92	ePKPab	PKPab	05 15 46.4	-0.1
PVAQ	Vaqueiros	174.00	92	ePP	PP	05 19 37.7	-1.5
PVAQ	Vaqueiros	174.00	92	eSS	SS	05 41 11.0	+14
PVAQ	Vaqueiros	174.00	92	eLR	LR	06 16 36.1	
	comp=Z,1μm,20.0s						
PESTR	Estremoz	174.08	78	ePKPdf	PKPdf	05 14 15.8	+0.5
PESTR	Estremoz	174.08	78	ePKPab	PKPab	05 15 46.7	-0.2
PESTR	Estremoz	174.08	78	ePP	PP	05 19 39.3	-0.3
PESTR	Estremoz	174.08	78	ePKPdf	PKPdf	05 14 16.4	+1.1
PMRV	Marv??o	174.13	72	ePKPdf	PKPdf	05 14 14.1	-1.2
PMRV	Marv??o	174.13	72	ePKPab	PKPab	05 15 45.7	-1.3
PMRV	Marv??o	174.13	72	ePP	PP	05 19 39.2	-0.5
PMRV	Marv??o	174.13	72	eSS	SS	05 41 18.6	+20
PMRV	Marv??o	174.13	72	eLR	LR	06 17 10.4	
	comp=Z,1μm,18.0s						
PBAR	Barrancos	174.57	84	ePKPdf	PKPdf	05 14 16.3	+0.9
PBAR	Barrancos	174.57	84	ePKPab	PKPab	05 15 48.5	-0.5
PBAR	Barrancos	174.57	84	ePP	PP	05 19 41.1	-0.9
PAB	San Pablo	176.32	61	ePKPdf	PKPdf	05 14 16.1	+0.1
PAB				ePKPab	PKPab	05 15 55.1	-1.7
PAB				LR	LR		
	comp=Z,1μm,20.0s						
PAB	San Pablo	176.32	61	ePKIKP	PKPdf	05 14 16.1	+0.1
PAB				e		05 15 55.1	
PAB				MLR	MLR		
	comp=Z,1μm,20.0s						
ESDC	Sonseca Array	176.52	57	PKP	PKPdf	05 14 16.6	+0.6
	comp=Z,10nm,1.2s,baz=342,slow=2.3,SNR=28						
ESDC				PKPab	PKPab	05 15 56.4	-1.3
	comp=Z,3.5nm,0.9s,baz=314,slow=4.7,SNR=9.6						
ESLA	Sonseca Array	176.52	57	ePKPdf	PKPdf	05 14 17.0	+1.0
ES19	SONSECA Array	176.55	56	ePKPdf	PKPdf	05 14 16.4	+0.4
ES19				ePKPab	PKPab	05 15 56.3	-1.5

IDC **21** *04:54:43.7±6.7, 3°.70S×135°.58E, h0^{km}, mb3.6/2, mb1 3.8/3, mb1mx3.6/45, mbtmp3.7/3, ML3.9/1, Error ellipse: s-maj=381.5km s-min=32.1km az=82.0*

ISCJB **21** *04:54:45.9±1.0, 3°.92S±0°.09×135°.12E±0°.08, h23^{km}, mb3.6/2, Error ellipse: s-maj=12.7km s-min=12.0km az=170.8*

DJA **21** *04:54:51.9±1.1, 4°S±7°×13°5E±°, h75^{km}±17^{km}, M4.0/5, MLv4.0/5*

ISC 21 04:54:46.8±1.1**, 3°.91S**±0°.09×**135°.04E**±0°.09**, h23^{km}, n8, σ2^s.17**/10**, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMPI	Kaimana, Papua	1.35	280	P	Pb	04 55 12.7	+1.3
KMPI				S	Sb	04 55 28.7	+0.4
RKPI	Ransiki, Papua	2.53	340	P	Pn	04 55 27.3	+0.8
RKPI				S	Sn	04 55 53.7	-3.0
BAKI	Biak	2.90	22	P	Pn	04 55 32.1	+0.5
WRA	Warramunga Arr	15.95	182	Pn	Pn	04 58 27.5	-2.4
	0.1nm,0.3s,baz=356,slow=13,SNR=5.9						
ASAR	Alice Springs	19.67	183	P	Pn	04 59 17.2	+1.3
	0.4nm,0.3s,baz=7.3,slow=11,SNR=27						
PBKI	Pangkalan Bun	23.36	272	P	P	04 59 50.5	-3.4
SONM	Songino Array	57.32	337	P	P	05 04 33.9	+0.8
	0.3nm,0.6s,baz=156,slow=7.3,SNR=2.7						
MKAR	Makanchi Array	68.55	324	P	P	05 05 49.1	+1.5
	0.4nm,0.5s,baz=117,slow=4.9,SNR=5.1						

ISCJB **21** *05:24:05.3±1.5, 20°.1S±0°.4×177°.9W±0°.2, h569^{km}, mb3.5/8, Error ellipse: s-maj=55.4km s-min=18.3km az=155.0*

IDC **21** *05:24:09.5±5.1, 20°.23S×177°.90W, h613^{km}±56^{km}, mb3.0/8, mb1 3.3/8, mb1mx3.0/42, mbtmp4.0/8, Error ellipse: s-maj=44.0km s-min=24.4km az=142.0*

ISC 21 05:24:05.7±1.3**, 20°.2S**±0°.4×**177°.8W**±0°.2**, h569^{km}, n10, σ1^s.00**/12**, mb3.7**/8**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CTA	Charters Tower	33.70	264	P	P	05 30 01.0	+0.3
	1.2nm,0.3s,baz=72,slow=9.6,SNR=3.6						
ASAR	Alice Springs	44.76	256	P	P	05 31 29.8	+0.3
	1.4nm,0.5s,baz=95,slow=7.6,SNR=25						
ASAR				PcP	PcP	05 32 59.8	+0.4
	0.3nm,0.5s,baz=100,slow=4.6,SNR=3.9						
WRA	Warramunga Arr	44.82	262	P	P	05 31 29.9	-0.1
	0.9nm,0.3s,baz=97,slow=7.8,SNR=25						
WRA				PcP	PcP	05 32 59.2	-0.4
	0.3nm,0.7s,baz=104,slow=2.2,SNR=3.4						
MJAR	Matsushiro Arr	70.10	324	P	P	05 34 21.6	+0.2
	1.0nm,0.3s,baz=157,slow=6.6,SNR=2.8						
USRK	Ussuriysk Ar.	78.85	326	P	P	05 35 10.6	+0.3
	1.8nm,0.7s,baz=103,slow=6.4						
NVAR	Mina Array Bea	80.71	43	P	P	05 35 19.7	-0.8
	0.6nm,0.8s,baz=239,slow=8.3,SNR=3.7						
TXAR	Lajitas Array	86.76	57	P	P	05 35 51.9	+1.5
	0.2nm,0.7s,baz=225,slow=6.4,SNR=4.8						
ILAR	Eielson Array	88.02	13	P	P	05 35 55.4	+0.1
	0.2nm,0.5s,baz=213,slow=4.2,SNR=3.3						
AKASG	Malin Array Be	142.87	331	PKP	PKPdf	05 42 32.4	-2.3
	0.3nm,0.3s,baz=57,slow=3.8,SNR=4.4						
BRTR	Keskin Array B	146.79	313	PKPbc	PKPdf	05 42 41.8	-0.2
	0.4nm,0.6s,baz=57,slow=5.3,SNR=2.3						

IDC **21** *05:43:56.4±1.0, 29°.65N×141°.74E, h0^{km}, mb3.8/11, mb1 3.9/13, mb1mx3.7/62, mbtmp3.8/13, ML3.4/3, Error ellipse: s-maj=36.4km s-min=14.4km az=74.0*

ISCJB **21** *05:43:57.7±0.7, 29°.82N±0°.04×142°.0E±0°.2, h26^{km}, mb3.9/11, Error ellipse: s-maj=23.7km s-min=4.2km az=169.8*

JMA **21** *05:43:58.1±0.1, 29°.83N×142°.16E, h45^{km}, M3.9*

ISC 21 05:43:59.5±0.9**, 29°.80N**±0°.06×**142°.1E**±0°.2**, h26^{km}, n22, σ1^s.73**/28**, mb4.0**/11**, Southeast of Honshu**

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

CBIJ	Chichi jima	2.69	179	*e*S	Sn	05 45 12.4	-0.6
JCJ	Chichijima	2.69	178	Pn	Pn	05 44 41.0	-0.1
	3.5nm,0.3s,baz=54,slow=18,SNR=7.7						
JCJ				Sn	Sn	05 45 13.1	+0.1
	14nm,0.3s,baz=311,slow=20,SNR=6.6						
BSO1	Boso 1	4.93	349	P	Pn	05 45 11.2	-0.2
BSO1				*e*S	Sn	05 46 07.8	+0.4
BSO3	Boso 3	5.17	345	P	Pn	05 45 15.0	+0.1
BSO3				*e*S	Sn	05 46 11.1	-2.4
JHU	Hanno	6.49	339	P	Pn	05 45 33.7	+0.4
JHU				*e*S	Sn	05 46 45.8	-0.6
JRY	Ryogami san	6.76	337	P	Pn	05 45 38.2	+1.2
JAG	Ashikaga	6.97	342	P	Pn	05 45 39.9	0.0
JAG				*e*S	Sn	05 46 56.1	-2.3
MJAR	Matsushiro Arr	7.47	335	Pn	Pn	05 45 47.1	+0.2
	1.2nm,0.3s,baz=160,slow=10,SNR=9.5						
MJAR				Sn	Sn	05 47 13.4	+2.6
	0.3nm,0.3s,baz=140,slow=23,SNR=2.5						
JFK	Kawauchi	7.62	353	*e*S	Sn	05 47 08.0	-6.3
KSRS	Korea Array	14.06	307	Pn	Pn	05 47 16.7	-0.2
	0.1nm,0.3s,baz=118,slow=12,SNR=2.8						
KLR	Kul'dur	20.95	341	P	P	05 48 41.0	+0.8
	0.1nm,0.6s,baz=162,slow=9.6,SNR=5.9						
SONM	Songino Array	32.77	313	P	P	05 50 30.5	+0.1
	0.2nm,0.3s,baz=123,slow=10,SNR=3.2						
ZALV	Zalesovo Beam	47.43	318	P	P	05 52 31.2	-0.5
	0.7nm,0.3s,baz=132,slow=6.2,SNR=3.4						
MKAR	Makanchi Array	48.73	308	P	P	05 52 40.9	-1.0
	0.3nm,0.6s,baz=88,slow=8.8,SNR=3.4						
WRA	Warramunga Arr	50.02	190	P	P	05 52 50.4	-1.4
	0.8nm,0.6s,baz=7.8,slow=7.8,SNR=9.1						
KURBB	Kurchatov Arra	51.13	313	P	P	05 52 59.6	-0.3
	1.1nm,0.3s,baz=89,slow=7.1,SNR=7.0						
ASAR	Alice Springs	53.74	189	P	P	05 53 18.6	-1.0
	0.5nm,0.8s,baz=14,slow=7.8,SNR=5.0						
ILAR	Eielson Array	55.39	29	P	P	05 53 34.0	+2.9
	0.3nm,0.8s,baz=263,slow=6.3,SNR=3.0						
BVAR	Borovoye Array	56.03	316	P	P	05 53 36.0	+0.1
	1.0nm,0.6s,baz=118,slow=8.6,SNR=5.9						
AKTO	Aktyubinsk	64.06	315	P	P	05 54 30.5	-0.5
	0.8nm,0.5s,baz=16,slow=7.4,SNR=2.3						
KBZ	Khabaz	76.13	313	P	P	05 55 46.1	+1.0
	2.0nm,0.8s,baz=70,slow=4.5,SNR=4.8						
BRTR	Keskin Array B	84.12	313	P	P	05 56 29.4	+0.9
	1.6nm,0.8s,baz=100,slow=3.7,SNR=7.0						

ISCJB ***21*** *05:47:05.5±0.3, 23°.42S±0°.03×179°.80W±0°.07, h536^{km}, mb4.0/25, Error ellipse: s-maj=8.8km s-min=4.4km az=178.5*

IDC ***21*** *05:47:06.8±1.0, 23°.50S×179°.86W, h539^{km}±11^{km}, mb3.7/24, mb1 3.8/26, mb1mx3.7/47, mbtmp4.6/26, Error ellipse: s-maj=10.7km s-min=9.8km az=150.0*

WEL ***21*** *05:47:11.4±1.2, 24°S±10°×17°9W±3°5, h600^{km}±15^{km}*

ISC 21 05:47:05.9±0.4**, 23°.46S**±0°.05×**179°.67W**±0°.07**, h536**^{km}**, n81,** σ1^{s}**61**/93**, mb4.0**/25**, 1C-1D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RIZ	Raoul Island	5.97	165	P	P	05 48 45.5	+2.1
RAO	Raoul Island	5.98	165	P	P	05 48 43.6	+0.1
	79nm,0.3s,baz=77,slow=18,SNR=4.6						
RAO				S	S	05 50 03.2	-0.2
	42nm,0.3s,baz=90,slow=20,SNR=2.4						
GLKZ	Green Lake	5.99	165	P	P	05 48 45.0	+1.4
GLKZ				S	S	05 50 03.6	0.0
AFI	Afiamalu	12.09	40	P	P	05 49 44.9	-0.6
	3.1nm,0.3s,baz=225,slow=11,SNR=4.1						
AFI				S	S	05 51 51.8	-5.1
	1.5nm,0.3s,baz=29,slow=19,SNR=2.8						
DZM	Mont Dzumac	12.89	273	P	P	05 49 53.5	-0.3
	0.4nm,0.3s,baz=82,slow=18,SNR=2.4						
OUZ	Omahuta	13.10	205	P	P	05 49 57.7	+2.0
WIAZ	Waiheke Island	14.02	197	P	P	05 50 10.1	+4.8
ETAZ	East Tamaki Re	14.23	198	P	P	05 50 12.1	+4.6
MKAZ	Moumakai	14.31	197	P	P	05 50 12.0	+3.7
WTAZ	Waiatarua	14.31	199	P	P	05 50 12.6	+4.3
HAZ	Te Kaha	14.41	188	P	P	05 50 10.4	+1.1
HAZ				S	S	05 52 36.8	-3.8
RUGZ	Raukumara Rang	14.63	188	P	P	05 50 12.5	+0.7
RUGZ				S	S	05 52 37.2	-7.8
TWGZ	Tauwhareparae	14.81	187	P	P	05 50 14.7	+1.2
TWGZ				S	S	05 52 44.8	-3.4
URZ	Urewera	15.01	190	P	P	05 50 14.4	-1.1
	3.6nm,0.3s,baz=206,slow=0.6,SNR=20						
URZ				S	S	05 52 44.1	-7.6
	0.5nm,0.3s,baz=66,slow=20,SNR=4.0						
URZ	Urewera	15.01	190	P	P	05 50 14.8	-0.7
URZ				S	S	05 52 44.9	-6.8
MWZ	Matawai	15.02	189	P	P	05 50 15.4	-0.3
MWZ				S	S	05 52 47.6	-4.4
RAGZ	Rawiri	15.19	189	P	P	05 50 17.3	-0.3
RAGZ				S	S	05 52 51.9	-3.4
MUGZ	Murupara	15.27	191	P	P	05 50 17.1	-1.2
RIGZ	Rimuhau	15.35	188	P	P	05 50 18.7	-0.5
RIGZ				S	S	05 52 53.3	-4.8
MTHZ	Maungataniwha	15.63	190	P	P	05 50 22.5	+0.5
NMHZ	Naumai	15.87	190	P	P	05 50 23.9	-0.6
BKZ	Black Stump Fm	15.99	191	P	P	05 50 23.9	-1.8
TWVZ	Taurewa	16.11	194	P	P	05 50 27.0	+0.1
KWHZ	Kaweka Forest	16.26	191	P	P	05 50 27.0	-1.2
MOVZ	Moawhango	16.36	193	P	P	05 50 28.8	-0.5
BHHZ	Black Hill Sta	16.38	192	P	P	05 50 27.5	-1.9
RPZ	Rata Peaks	21.60	199	P	P	05 51 16.2	-0.8
	18nm,0.5s,baz=349,slow=2.6,SNR=13						
CTA	Charters Tower	31.78	269	P	P	05 52 46.4	-0.2
	23nm,0.3s,baz=98,slow=11,SNR=9.6						
PMG	Port Moresby	34.64	288	P	P	05 53 10.4	-0.5
	22nm,0.6s,baz=168,slow=6.8,SNR=4.1						
STKA	Stephens Creek	35.17	248	P	P	05 53 14.7	-0.3
	4.6nm,0.4s,baz=95,slow=11,SNR=23						
ASAR	Alice Springs	42.41	260	P	P	05 54 13.6	-0.2
	4.6nm,0.4s,baz=95,slow=7.3,SNR=109						
ASAR				S	S	05 59 53.8	-3.0
	1.4nm,0.7s,baz=98,slow=14,SNR=13						
WRA	Warramunga Arr	42.74	266	P	P	05 54 15.7	-0.7
	12nm,0.6s,baz=91,slow=8.5,SNR=151						
WRA				ScP	ScP	05 58 57.0	+1.2
	1.2nm,0.8s,baz=102,slow=3.6,SNR=4.6						
WRA				S	S	05 59 56.3	-5.2
	1.6nm,0.9s,baz=102,slow=14,SNR=4.6						
VNDA	Vanda	54.84	185	P	P	05 55 45.8	+0.7
	1.8nm,0.5s,baz=13,slow=4.8,SNR=11						
NWAO	Narrogin (SRO)	55.69	245	P	P	05 55 51.2	-0.6
	2.9nm,0.5s,baz=135,slow=5.7,SNR=4.8						
JCJ	Chichijima	62.32	322	P	P	05 56 35.8	-0.4
	17nm,0.6s,baz=299,slow=19,SNR=3.1						
QSPA	South Pole Qui	66.62	180	P	P	05 57 03.9	+0.9
	5.2nm,0.7s,baz=90,slow=5.1,SNR=20						
JOW	Kunigami	70.92	312	P	P	05 57 29.9	+0.5
	16nm,0.8s,baz=151,slow=10,SNR=2.8						
MJAR	Matsushiro Arr	71.71	325	P	P	05 57 33.3	-0.5
	1.7nm,0.4s,baz=168,slow=6.1,SNR=7.6						
ASAJ	Asahikawa	75.61	333	P	P	05 57 56.2	+0.4
	5.1nm,0.5s,baz=319,slow=4.4,SNR=5.6						
KSRS	Korea Array	78.11	320	P	P	05 58 09.7	+0.2
	2.2nm,0.7s,baz=130,slow=5.6,SNR=11						
PETK	Petropavlovsk-	78.75	346	P	P	05 58 13.6	+0.9
	5.6nm,0.6s,baz=119,slow=5.7						
USRK	Ussuriysk Ar.	80.56	327	P	P	05 58 23.1	+0.7
	2.6nm,0.6s,baz=134,slow=4.2						
YBH	Yreka Blue Hor	83.56	39	P	P	05 58 39.3	+1.5
	1.0nm,0.5s,baz=261,slow=13,SNR=4.4						
NVAR	Mina Array Bea	84.23	44	P	P	05 58 42.3	+0.9
	0.8nm,0.7s,baz=228,slow=6.0,SNR=6.1						
KLR	Kul'dur	84.30	330	P	P	05 58 41.4	+0.2
	0.1nm,0.4s,baz=128,slow=9.4,SNR=4.6						
PLCA	Paso Flores	88.35	134	P	P	05 59 01.5	+0.5
	1.8nm,0.8s,baz=226,slow=1.6,SNR=3.0						
CMAR	Chiang Mai Arr	89.66	290	P	P	05 59 08.0	+0.8
	1.8nm,0.7s,baz=131,slow=3.1,SNR=12						
TXAR	Lajitas Array	89.94	58	P	P	05 59 10.6	+2.1
	0.8nm,0.7s,baz=214,slow=6.6,SNR=14						
ILAR	Eielson Array	91.54	13	P	P	05 59 14.6	-0.3
	0.4nm,0.5s,baz=231,slow=6.1,SNR=7.4						
PDAR	Pinedale Array	92.17	44	P	P	05 59 19.1	+0.5
	0.5nm,0.6s,baz=210,slow=3.9,SNR=6.0						
SONM	Songino Array	96.97	319	P	P	05 59 39.2	-1.0
	0.1nm,0.3s,baz=101,slow=2.9,SNR=2.5						
MKAR	Makanchi Array	112.08	313	PKiKP	PKiKP	06 04 38.8	-1.6
	0.5nm,0.6s,baz=132,slow=0.5,SNR=8.0						
KURBB	Kurchatov Arra	115.14	316	PKP	PKPdf	06 04 44.7	-1.4
	0.9nm,0.6s,baz=96,slow=1.6,SNR=7.3						
BVAR	Borovoye Array	120.31	319	PKP	PKPdf	06 04 55.4	-0.5
	1.1nm,0.3s,baz=62,slow=4.1,SNR=4.9						
GEYT	Alibeck	129.01	301	PKP	PKPdf	06 05 12.6	-0.5
	3.4nm,0.4s,baz=66,slow=3.5,SNR=3.1						
ARCES	ARCESS Array B	131.52	348	PKP	PKPdf	06 05 16.5	-0.4
	3.4nm,0.7s,baz=29,slow=2.8,SNR=10.0						
FINES	FINESS Array B	138.13	342	PKhKP	PKPpre	06 05 19.0	
	1.0nm,0.5s,baz=52,slow=2.0,SNR=5.7						
FINES				PKP	PKPdf	06 05 30.1	+0.7
	0.8nm,0.4s,baz=74,slow=2.4,SNR=7.6						
FINES				SKPbc	SKPbc	06 08 12.7	-0.6
	2.1nm,0.8s,baz=20,slow=1.6,SNR=5.1						
NB2	NORSAR Subarra	141.69	351	PKP	PKPpre	06 05 31.4	
	comp=Z,1.2nm,0.5s,baz=13,slow=3.1						
NOA	NORSAR Array B	141.69	351	PKhKP	PKPpre	06 05 31.8	
	comp=Z,1.9nm,0.6s,baz=15,slow=4.6,SNR=10.0						
HFS	Hagfors	142.18	349	PKhKP	PKPpre	06 05 32.9	
	comp=Z,10.0nm,0.3s,baz=68,slow=3.9,SNR=188						
AKASG	Malin Array Be	144.76	328	PKP	PKPdf	06 05 41.4	-0.1
	comp=Z,4.2nm,0.4s,baz=43,slow=4.3,SNR=26						
AKASG				SKPbc	SKPbc	06 08 29.9	-0.4
	comp=Z,0.4nm,0.3s,baz=57,slow=3.6,SNR=5.0						
ASF	Jabal al Asfar	146.64	293	PKPbc	PKPbc	06 05 48.4	+0.4
	comp=Z,3.0nm,0.6s,baz=152,slow=2.3,SNR=6.1						
BRTR	Keskin Array B	147.55	308	PKPbc	PKPbc	06 05 50.0	-0.3
	comp=Z,2.0nm,0.6s,baz=132,slow=2.3,SNR=8.7						
BRTR				PKPab	PKPab	06 05 55.2	+0.8
	comp=Z,4.2nm,0.7s,baz=92,slow=3.7,SNR=13						
MMAI	Mount Meron Ar	147.79	295	PKPbc	PKPbc	06 05 51.5	+0.5
	comp=Z,5.2nm,0.4s,baz=72,slow=5.4,SNR=14						
MMAI				PKPab	PKPab	06 05 57.1	+1.6
	comp=Z,2.2nm,0.5s,baz=20,slow=4.6,SNR=4.1						
EKA	Eskdalemuir Ar	148.06	4	PKPbc	PKPbc	06 05 50.8	-0.1
	comp=Z,1.7nm,0.4s,baz=352,slow=2.9,SNR=31						
MLR	Muntele Rosu	149.75	323	PKPbc	PKPbc	06 05 55.2	-0.3
	comp=Z,2.3nm,0.6s,baz=243,slow=4.5,SNR=4.5						
UPC	Upice	150.37	340	*e*PKP	PKPbc	06 05 57.2	+0.6
DPC	Dobruska-Polom	150.40	339	*e*PKP	PKPbc	06 05 57.3	+0.5
DPC				*e*x	x	06 06 06.7	
KRLC	Kraliky	150.48	338	*e*PKP	PKPbc	06 05 57.6	+0.6
KRLC				*e*x	x	06 06 07.4	
CLL	Collm	150.52	344	⇓*i*PKPbc	PKPbc	06 05 57.3	+0.4
	comp=Z,13nm,0.8s						
CLL				*i*		06 05 59.7	
CLL				⇑*i*PKPab	PKPab	06 06 06.3	+0.3
	comp=Z,6.0nm,0.7s						
BRG	Berggiesshubel	150.66	342	*i* PKP	PKPbc	06 05 57.7	+0.4
	comp=Z,9.6nm,0.6s						
PVCC	Panska Ves	150.79	341	*e*PKP	PKPbc	06 05 58.2	+0.6
PVCC				*e*x	x	06 06 08.3	
PRU	Pruhonice	151.28	341	*e*PKP	PKPbc	06 05 58.9	+0.2
KHC	Kasperske Hory	152.33	341	*e*PKP	PKPbc	06 06 01.5	+0.4
KHC				*e*x	x	06 06 13.9	
GERES	GERESS Array B	152.55	341	PKPbc	PKPbc	06 06 01.7	0.0
	comp=Z,0.6nm,0.4s,baz=48,slow=2.0,SNR=7.1						
GERES				PKPab	PKPab	06 06 14.8	0.0
	comp=Z,0.5nm,0.6s,baz=38,slow=6.6,SNR=3.9						
CONA	Conrad Observa	152.62	337	*i* PKPab	PKPab	06 06 16.5	+1.4
	comp=Z,4.9nm,0.7s						
OBKA	Obir	154.30	337	*i* PKPab	PKPab	06 06 22.7	+0.4
	comp=Z,3.0nm,0.7s						
DAVA	Damuels	155.02	344	*i* PKPab	PKPab	06 06 26.2	+0.8
	comp=Z,3.9nm,0.7s						
DAVOX	Davos/Dischmat	155.50	344	PKPab	PKPab	06 06 27.5	0.0
	comp=Z,4.0nm,0.5s,baz=0.0,slow=8.1,SNR=8.7						
ESDC	Sonseca Array	163.43	12	PKPab	PKPab	06 07 02.1	-0.1
	comp=Z,1.6nm,1.0s,baz=360,slow=4.0,SNR=5.5						
TORD	Torodi Ar. Bea	169.66	187	PKPab	PKPab	06 07 30.0	-0.1
	baz=189,slow=2.6						

IDC 21 05:58:05.8±6.8**, 1°.76S**×**141°.61E, h0**^{km}**, mb3.3**/2**, mb1 3.5**/3**, mb1mx3.2**/54**, mbtmp3.3**/3**, ML3.7**/1**, Error ellipse: s-maj=256.5km s-min=29.2km az=89.0, Ninigo Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	19.42	201	P	P	06 02 34.2	+0.4
	0.2nm,0.3s,baz=23,slow=12,SNR=5.9						
ASAR	Alice Springs	23.02	198	P	P	06 03 12.6	-0.1
	0.5nm,0.6s,baz=27,slow=11,SNR=9.5						
MKAR	Makanchi Array	70.83	321	P	P	06 09 24.4	-0.1
	0.2nm,0.5s,baz=111,slow=7.9,SNR=3.8						

KRSC 21 06:00:12.9±2.5**, 49°.17N**×**157°.16E, h42**^{km}±45^{km}**, ML3.8, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	1.66	336	*e*P	Pn	06 00 40.2	+0.8
SKR				*e*S	Sn	06 00 59.2	-0.2
PAU	Pauzhetka	2.31	355	*e*P	Pn	06 00 51.8	+3.5
PAU				*e*S	Sn	06 01 18.5	+3.0
KDTR	Khodutka, Kamc	2.70	12	*e*P	Pn	06 00 57.8	+4.0
KDTR				*e*S	Sn	06 01 29.9	+4.7
ASAK	Asacha	3.25	8	*e*P	Pn	06 01 05.3	+4.0
RUS	Russkaya	3.38	14	*e*P	Pn	06 01 06.4	+3.4
RUS				*e*S	Sn	06 01 47.2	+5.5
MTVR	Mutnovka	3.38	11	*e*P	Pn	06 01 06.4	+3.2
KRMR	Karymshinskiy	3.71	9	P	Pn	06 01 10.2	+2.6
UGLR	Uglovaya	4.17	14	*e*P	Pn	06 01 19.3	+5.2
SMAR	Somma	4.22	14	P	Pn	06 01 20.3	+5.5
SDLR	Sedlovina	4.25	14	*e*P	Pn	06 01 18.6	+3.5
KRX	Arik	4.29	12	*e*P	Pn	06 01 20.9	+5.2
SPN	Mys Shipunski	4.32	24	*e*P	Pn	06 01 21.2	+5.2
GNL	Ganaly	4.55	6	*e*P	Pn	06 01 24.1	+4.8
MKZ	Mys Kozlova	6.09	26	*e*P	Pn	06 01 43.6	+3.4

IDC ***21*** *06:00:31.5±0.8, 14°.60N×92°.93W, h0^{km}, mb4.2/15, mb1 4.5/17, mb1mx4.2/57, mbtmp4.2/17, ML3.9/2, MS3.7/2, Ms1 3.7/2, ms1mx3.2/46, Error ellipse: s-maj=36.5km s-min=13.9km az=57.0*

ISCJB ***21*** *06:00:34.2±0.3, 14°.30N±0°.03×93°.42W±0°.02, h33^{km}, mb4.5/99, Error ellipse: s-maj=4.2km s-min=3.0km az=31.3*

CASC ***21*** *06:00:35.3±1.2, 13°.71N×93°.35W, h34^{km}±999^{km}, ML3.8, mb4.5(NEIC)*

NEIC ***21*** *06:00:38.4±0.0, 14°.55N×93°.69W, h20^{km}, mb4.5/120, MD4.5(MEX), After MEX.*

MEX ***21*** *06:00:38.3±0.3, 14°.57N×93°.71W, h13^{km}±15^{km}, MD4.4*

ISC 21 06:00:35.2±2.1**, 14°.35N**±0°.05×**93°.53W**±0°.05**, h30**^{km}±15^{km}**, n488,** σ1^{s}**53**/468**, mb4.5**/99**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		1.38	12	*e*P	Pn	06 00 57.2	-1.2
PCIG				*e*S	Sn	06 01 12.3	-3.3
PCIG		1.38	12	*e*P	Pn	06 00 57.1	-1.3
PCIG				*e*S	Sn	06 01 12.5	-3.1
CCIG	Comitan	2.34	35	*e*P	Pn	06 01 12.8	+1.0
CCIG				*i* S	Sn	06 01 39.7	0.0
CCIG	Comitan	2.34	35	*e*Pn	Pn	06 01 13.2	+1.4
CCIG				*e*Sn	Sb	06 01 42.8	-2.6
TGIG		2.44	9	*e*P	Pn	06 01 12.4	-0.7
TGIG				*i* S	Sn	06 01 39.4	-2.6
TGIG		2.44	9	*e*P	Pn	06 01 14.0	+0.9
TGIG				*e*S	Sn	06 01 38.9	-3.1
HUIG	Huatulco	2.86	300	*e*P	Pn	06 01 17.5	-1.4
HUIG				*i* S	Sn	06 01 47.2	-5.1
HUIG	Huatulco	2.86	300	*e*P	Pn	06 01 17.5	-1.4
IXG	Ixpaco	2.98	93	*e*P	Pn	06 01 19.2	-1.5
IXG				*e*S	Sn	06 01 52.5	-3.1
CMIG	Matias Romero	3.02	335	Pn	Pn	06 01 20.9	-0.1
	12nm,0.3s,baz=141,slow=12,SNR=70						
CMIG				Sn	Sb	06 02 01.3	-3.4
	61nm,0.3s,baz=94,slow=22,SNR=7.7						
CMIG				LR	LR	06 02 24.2	
	comp=Z,663nm,18.7s,baz=277,slow=36						
SBLS	San Blas	3.82	97	*e*P	Pn	06 01 30.3	-1.9
SNJE	San Jose	3.83	97	*e*P	Pn	06 01 30.6	-1.8
VHO	Vista Hermosa	4.10	312	*i* P	Pn	06 01 34.6	-1.5
VHO				*i* S	Sn	06 02 18.6	-4.6
COLS	Colinas	4.16	99	*e*P	Pn	06 01 33.7	-3.1
UEES	San Salvador	4.21	98	IAML		06 02 42.8	
	comp=Z,335nm,0.5s						
LFRS	El Faro	4.39	99	*e*P	Pn	06 01 36.5	-3.5
TLIG	Tlapa	5.80	304	*e*Pn	Pn	06 02 02.0	+2.6
LVIG	Laguna Verde	6.01	333	*e*Pn	Pn	06 02 00.8	-1.3
ESTN	Estel	7.07	99	*e*Pn	Pn	06 02 15.9	-0.8
MYIG	MØrida	7.49	28	*e*Pn	Pn	06 02 25.8	+3.3
MOIG	Morelia	9.04	307	*e*Pn	Pn	06 02 48.2	+4.3
ESPN	Las Esperanzas	9.24	102	*e*Pn	Pn	06 02 49.4	+3.0
LNIG	Linares	11.88	333	*e*Pn	Pn	06 03 26.2	+3.5
ZAIG	Zacatecas	11.97	316	*e*Pn	Pn	06 03 29.2	+5.0
833A	Chaparral WMA,	14.93	340	P	Pn	06 04 06.7	+2.5
	baz=158						
833A	Chaparral WMA,	14.93	340	*e*Pn	P	06 04 07.5	-2.0
HKT	Hockley	15.67	353	*e*Pn	P	06 04 16.6	-1.0
	comp=Z,16nm,1.3s						
MTDJ	Mount Denham	15.83	74	*e*Pn	P	06 04 19.4	-0.2
	comp=Z,85nm,1.1s						
435B	Jarrell	16.77	348	P	P	06 04 30.2	+0.2
	baz=167						
435B	Jarrell	16.77	348	*e*Pn	P	06 04 31.7	+1.8
	comp=Z,19nm,0.8s						
446A	Poplarville	16.80	12	P	P	06 04 29.7	-0.5
	baz=195						
HPIG		16.89	320	*e*Pn	P	06 04 33.2	+1.8
	comp=Z,5.4nm,0.9s						
447A	Lucedale	16.97	15	P	P	06 04 32.3	+0.2
	baz=197						
JCT	Junction City	17.06	341	P	P	06 04 34.6	+1.4
	baz=159						
JCT	Junction City	17.06	341	*e*Pn	P	06 04 33.8	+0.6
	comp=Z,17nm,1.0s						
345A	Thompson Farm,	17.18	10	P	P	06 04 35.2	+0.8
	baz=192						
344A	Westbrook Farm	17.21	8	P	P	06 04 35.7	+0.9
	baz=190						
448A	Bay Minette	17.30	17	P	P	06 04 36.5	+0.7
	baz=199						
NATX	Nacogdoches	17.36	357	P	P	06 04 38.9	+2.5
	baz=177						
346A	Big Creek Wild	17.36	12	P	P	06 04 38.0	+1.5
	baz=194						
346A	Big Creek Wild	17.36	12	*e*Pn	P	06 04 37.6	+1.2
	comp=Z,34nm,0.8s						
347A	Saraland	17.57	14	P	P	06 04 40.3	+1.5
	baz=197						
241A	Mo Tay, Goldon	17.60	2	P	P	06 04 40.7	+1.7
	baz=182						
241A	Mo Tay, Goldon	17.60	2	*e*P	P	06 04 40.9	+1.8
	comp=Z,33nm,1.0s						
240A	Hunter Patters	17.61	359	P	P	06 04 40.5	+1.4
	baz=180						
TX31	Lajitas Ar. Si	17.61	329	*e*Pn	P	06 04 41.5	+2.1
TXAR	Lajitas Array	17.61	329	P	P	06 04 41.5	+2.1
	comp=Z,0.1nm,0.3s,baz=153,slow=12,SNR=42						
242A	Grayson	17.67	4	P	P	06 04 39.9	+0.1
	baz=185						
451A	Vernon	17.70	23	P	P	06 04 40.5	+0.3
	baz=206						
DWPF	Disney Wildern	17.71	37	P	P	06 04 41.0	+0.6
	baz=222						
DWPF	Disney Wildern	17.71	37	*e*Pn	P	06 04 41.7	+1.3
	comp=Z,32nm,0.8s						
348A	Jackson	17.75	16	P	P	06 04 41.9	+1.2
	baz=199						
BRAL	Brewton	17.76	18	P	P	06 04 41.9	+1.0
	baz=202						
BRAL	Brewton	17.76	18	*e*Pn	P	06 04 42.0	+1.2
	comp=Z,53nm,0.9s						
244A	Avery, Jackson	17.80	8	P	P	06 04 42.6	+1.3
	baz=190						
553A	Crawfordville	17.85	27	P	P	06 04 42.9	+1.1
	baz=211						
349A	Repton	17.89	18	P	P	06 04 44.5	+2.2
	baz=201						
245A	Little AP, Sta	17.91	10	P	P	06 04 44.2	+1.7
	baz=192						
WHTX	Lake Whitney,	17.92	349	P	P	06 04 43.5	+0.9
	baz=168						
WHTX	Lake Whitney,	17.92	349	*e*Pn	P	06 04 44.2	+1.6
	comp=Z,15nm,0.8s						
757A	Oxford	17.98	34	P	P	06 04 43.4	0.0
	baz=219						
859A	Kempfer Cattle	18.00	39	P	P	06 04 44.0	+0.6
	baz=224						
656A	Willston	18.07	32	P	P	06 04 45.0	+0.7
	baz=217						
554A	Perry	18.10	28	P	P	06 04 45.4	+0.8
	baz=213						
142A	Monroe	18.17	4	P	P	06 04 47.9	+2.6
	baz=185						
141A	Papa Simpson,	18.18	2	P	P	06 04 48.6	+3.2
	baz=182						
247A	Quitman	18.18	13	P	P	06 04 46.8	+1.3
	baz=196						
140A	Cam and Jess,	18.20	360	P	P	06 04 48.8	+3.1
	baz=180						
140A	Cam and Jess,	18.20	360	*e*Pn	P	06 04 46.8	+1.1
	comp=Z,27nm,0.9s						
350A	Dozier	18.22	20	P	P	06 04 48.4	+2.4
	baz=203						
351A	Pinckard	18.34	22	P	Pn	06 04 49.7	+2.3
	baz=206						
248A	Dixon Mills	18.43	16	P	Pn	06 04 50.8	+2.3
	baz=199						
555A	McAlpin	18.47	30	P	Pn	06 04 50.8	+1.9
	baz=215						
453A	Whigham	18.48	26	*e*P	Pn	06 04 49.2	+0.2
	comp=Z,35nm,1.0s						
249A	Camden	18.49	17	P	Pn	06 04 51.8	+2.6
	baz=200						
556A	Lake Butler	18.65	32	P	Pn	06 04 53.6	+2.5
	baz=216,SNR=5.8						
146A	Union	18.65	12	*e*P	Pn	06 04 52.3	+1.1
	comp=Z,24nm,0.9s						
250A	Grady	18.76	20	P	Pn	06 04 56.1	+3.7
	baz=203						
250A	Grady	18.76	20	*e*P	Pn	06 04 52.9	+0.5
	comp=Z,25nm,0.6s						
352A	Blakely	18.78	23	P	Pn	06 04 55.2	+2.5
	baz=207						
352A	Blakely	18.78	23	*e*P	Pn	06 04 54.4	+1.7
	comp=Z,66nm,1.2s						
Z40A	Long Farm, Mag	18.82	0	P	Pn	06 04 54.8	+1.7
	baz=181						
Z41A	Richland Creek	18.83	2	P	Pn	06 04 54.9	+1.6
	baz=183						
Z41A	Richland Creek	18.83	2	*e*P	Pn	06 04 55.2	+1.9
	comp=Z,67nm,1.4s						
147A	Livingston	18.86	14	P	Pn	06 04 56.1	+2.5
	baz=196						
147A	Livingston	18.86	14	*e*P	Pn	06 04 54.5	+0.9
	comp=Z,72nm,1.4s						
353A	Camilla	18.95	25	P	Pn	06 04 55.8	+1.1
	baz=209						
455A	Stateville	18.95	29	P	Pn	06 04 56.1	+1.3
	baz=214						
148A	Greensboro	19.00	16	P	Pn	06 04 56.5	+1.1
	baz=198						
557A	Orange Park	19.01	33	P	Pn	06 04 56.8	+1.3
	baz=218						
ABTX	Abilene, Hawle	19.02	344	P	Pn	06 04 57.5	+1.9
	baz=162						
ABTX	Abilene, Hawle	19.02	344	*e*P	Pn	06 04 56.4	+0.7
	comp=Z,15nm,0.8s						
251A	Midway	19.15	21	P	Pn	06 04 58.3	+1.1
	baz=205,SNR=6.2						
149A	Jones	19.17	18	P	Pn	06 04 59.3	+1.9
	baz=201						
Z46A	Louisville	19.21	12	P	Pn	06 04 59.2	+1.2
	baz=194						
Z45A	Winona	19.25	10	P	Pn	06 04 59.3	+1.0
	baz=192						
Z45A	Winona	19.25	10	*e*P	Pn	06 04 58.4	+0.1
	comp=Z,30nm,0.8s						
TIGA	Tifton	19.29	27	P	Pn	06 04 59.9	+1.0
	baz=211						
252A	Lumpkin	19.31	23	P	Pn	06 05 01.1	+2.0
	baz=207,SNR=9.8						
Z47A	Carrollton	19.41	14	P	Pn	06 05 01.1	+0.8
	baz=197,SNR=14						
150A	Eclectic	19.42	19	P	Pn	06 05 00.4	0.0
	baz=203						
Y41A	Eaglette Beard	19.46	2	P	Pn	06 05 03.5	+2.6
	baz=183,SNR=5.8						
HELC	Santa Helena	19.47	113	*e*P	Pn	06 05 01.4	-0.1
	comp=Z,21nm,1.2s						
LRAL	Lakeview Retre	19.52	17	P	Pn	06 05 01.1	-0.5
	baz=200						
LRAL	Lakeview Retre	19.52	17	*e*P	Pn	06 05 01.8	+0.2
	comp=Z,22nm,1.1s						
ZARC	Zaragoza, Cauc	19.55	108	*e*P	P	06 04 54.4	-6.3
Y40A	Okolona	19.57	1	P	Pn	06 05 02.7	+0.5
	baz=181						
151A	Opelika	19.58	21	P	P	06 05 01.2	+0.4
	baz=205,SNR=5.1						
253A	Americus	19.61	24	P	P	06 05 01.7	+0.5

	baz=209						
Z48A	Northport	19.70	15	P	Pn	06 05 03.6	-0.1
	baz=198						
Y45A	Yeager Farm, C	19.76	10	P	Pn	06 05 04.2	-0.2
	baz=192						
Z49A	Columbiana	19.81	18	P	Pn	06 05 04.8	-0.2
	baz=201,SNR=9.7						
YOTC	Yotoco, Valle	19.83	120	*e*P	Pn	06 05 05.7	+0.2
254A	Abbeville	19.86	26	P	Pn	06 05 04.7	-0.9
	baz=211						
356A	Blackshear	19.87	30	P	P	06 05 04.7	+0.8
	baz=215						
Y46A	Houston	19.90	11	P	Pn	06 05 05.7	-0.4
	baz=194						
152A	Waverly Hall	19.92	22	P	P	06 05 05.4	+0.8
	baz=206,SNR=6.5						
152A	Waverly Hall	19.92	22	*e*P	Pn	06 05 06.9	+0.5
	comp=Z,13nm,0.7s						
Z50A	Ashland	20.05	19	P	Pn	06 05 07.3	-0.6
	baz=202						
Z50A	Ashland	20.05	19	*e*P	Pn	06 05 07.6	-0.3
	comp=Z,18nm,1.1s						
X40A	Basin Creek Fa	20.06	2	P	Pn	06 05 07.8	-0.1
	baz=182						
X39A	Fountain Ranch	20.08	359	P	Pn	06 05 07.5	-0.7
	baz=179						
MIAR	Mount Ida	20.10	360	P	P	06 05 06.6	+0.1
	baz=180						
MIAR	Mount Ida	20.10	360	*e*P	P	06 05 07.0	+0.5
	comp=Z,10nm,0.8s						
Y47A	UCPARC, Winfie	20.13	14	P	Pn	06 05 07.9	-1.0
	baz=197						
X42A	Stuttgart	20.18	5	P	Pn	06 05 09.3	-0.1
	baz=186						
255A	Hazlehurst	20.20	28	P	Pn	06 05 11.6	+2.0
	baz=213						
255A	Hazlehurst	20.20	28	*e*P	Pn	06 05 09.2	-0.5
	comp=Z,57nm,1.1s						
RREF	El Recreo	20.22	116	*e*P	Pn	06 05 17.9	+7.2
X43A	Marvell	20.22	6	P	Pn	06 05 11.2	+1.4
	baz=188						
X43A	Marvell	20.22	6	*e*P	Pn	06 05 10.9	+1.1
	comp=Z,50nm,1.0s						
PTBC	PUERTO BERRIO,	20.29	111	*e*P	P	06 05 08.4	-0.3
Y48A	Jasper	20.31	15	P	Pn	06 05 10.1	-0.8
	baz=198						
Z51A	Franklin	20.35	20	P	Pn	06 05 10.3	-1.1
	baz=204						
UALR	University of	20.36	3	*e*P	Pn	06 05 11.0	-0.5
	comp=Z,15nm,0.9s						
POPC	Popayan, Colom	20.36	124	*e*P	P	06 05 10.3	+0.6
MNTX	Cornudas Mount	20.39	330	P	Pn	06 05 12.2	+0.2
	baz=145						
MNTX	Cornudas Mount	20.39	330	*e*P	Pn	06 05 11.6	-0.3
	comp=Z,14nm,0.8s						
OXF	Oxford	20.41	10	P	Pn	06 05 11.3	-0.8
	baz=192						
Y49A	Blount Mountai	20.46	17	P	P	06 05 10.7	+0.3
	baz=201						
OTAV	Otavalo	20.48	132	*e*P	Pn	06 05 14.2	+0.8
	comp=Z,3.0nm,0.8s						
OTAV	Otavalo	20.48	132	*e*P	Pn	06 05 13.3	-0.2
Z52A	Williamson	20.50	22	P	P	06 05 11.8	+1.0
	baz=206						
154A	Montrose	20.51	26	P	P	06 05 11.4	+0.5
	baz=210						
154A	Montrose	20.51	26	*e*P	P	06 05 10.7	-0.2
	comp=Z,28nm,0.9s						
X46A	Booneville	20.61	12	P	P	06 05 12.9	+1.0
	baz=194						
Y50A	Piedmont	20.69	19	P	P	06 05 13.8	+0.9
	baz=202						
PCON	Cinco Dias	20.71	124	*e*P	P	06 05 15.2	+1.3
OCAC	Ocana	20.72	105	*e*P	P	06 05 11.0	-2.6
X47A	Russelville	20.72	13	P	P	06 05 14.2	+1.0
	baz=196,SNR=7.5						
W40A	Ferguson Farm,	20.75	1	P	Pn	06 05 15.4	-0.6
	baz=182						
W40A	Ferguson Farm,	20.75	1	*e*P	Pn	06 05 16.1	0.0
	comp=Z,19nm,1.0s						
W39A	Magazine	20.75	359	P	Pn	06 05 15.1	-1.0
	baz=180,SNR=11						
W39A	Magazine	20.75	359	*e*P	Pn	06 05 17.1	+1.1
	comp=Z,15nm,0.9s						
W41B	Gary Mavity, V	20.76	3	P	Pn	06 05 15.4	-0.8
	baz=184						
W41B	Gary Mavity, V	20.76	3	*e*P	Pn	06 05 15.3	-0.9
	comp=Z,17nm,1.1s						
155A	Kite	20.80	27	P	P	06 05 14.8	+0.8
	baz=212						
WMOK	Wichita Mounta	20.84	348	P	P	06 05 15.5	+0.9
	baz=166						
WMOK	Wichita Mounta	20.84	348	*e*P	P	06 05 15.2	+0.7
	comp=Z,16nm,1.3s						
X48A	Hartselle	20.85	15	P	P	06 05 15.3	+0.6
	baz=198						
X48A	Hartselle	20.85	15	*e*P	Pn	06 05 17.8	+0.6
	comp=Z,20nm,1.1s						
WHAR	Wooly Hollow	20.88	3	*e*P	P	06 05 16.1	+1.2
	comp=Z,22nm,1.1s						
Z53A	Monticello	20.90	24	P	P	06 05 16.0	+0.8
	baz=208						
Y51A	Rockmart	20.92	20	P	P	06 05 16.3	+1.0
	baz=204						
GOGA	Godfrey	21.06	24	P	P	06 05 17.7	+0.8
	baz=209						
GOGA	Godfrey	21.06	24	*e*P	P	06 05 18.2	+1.4
	comp=Z,19nm,0.8s						
W45A	Hickory Valley	21.08	10	P	P	06 05 21.5	+4.4
	baz=192						
X49A	Woodville	21.10	17	P	P	06 05 18.4	+1.0
	baz=200						
PLAL	Pickwick Lake	21.12	13	*e*P	P	06 05 17.4	-0.1
	comp=Z,14nm,1.0s						
ROSC	El Rosal	21.15	115	P	P	06 05 20.2	+1.8
	comp=Z,7.4nm,0.7s,baz=291,slow=20,SNR=8.6						
ROSC	El Rosal	21.15	115	*e*P	P	06 05 20.9	+2.4
	comp=Z,16nm,1.0s						
ROSC	El Rosal	21.15	115	*e*P	P	06 05 21.5	+3.0
Z54A	Sparta	21.16	26	P	P	06 05 18.9	+0.9
	baz=210						
W46A	Michie	21.20	12	P	P	06 05 19.0	+0.6
	baz=194,SNR=6.1						
Y52A	Lilburn	21.23	22	P	P	06 05 19.7	+0.9
	baz=207						
Y52A	Lilburn	21.23	22	*e*P	P	06 05 20.6	+1.8
	comp=Z,31nm,0.9s						
X50B	Fort Payne	21.25	18	P	P	06 05 19.8	+0.8
	baz=202						
MSTX	Muleshoe	21.25	338	P	P	06 05 20.4	+1.4
	baz=155,SNR=7.1						
MSTX	Muleshoe	21.25	338	*e*P	P	06 05 19.7	+0.7
	comp=Z,25nm,0.9s						
HBAR	Harrisburg	21.27	6	*e*P	P	06 05 20.8	+1.7
	comp=Z,48nm,1.3s						
V40A	Witts Springs	21.37	2	P	P	06 05 21.2	+1.0
	baz=182						
V40A	Witts Springs	21.37	2	*e*P	P	06 05 21.8	+1.6
	comp=Z,14nm,0.8s						
V41A	Mountainview	21.38	3	P	P	06 05 21.8	+1.5
	baz=184,SNR=10						
V39A	Pettigrew	21.39	360	P	P	06 05 21.7	+1.1
	baz=180,SNR=11						
Y53A	Monroe	21.41	23	P	P	06 05 21.7	+1.1
	baz=208						
BARC	Barichara	21.43	109	*e*P	P	06 05 25.7	+4.4
V42A	Cord	21.45	5	P	P	06 05 21.7	+0.7
	baz=186						
Z55A	Blythe	21.45	27	P	P	06 05 22.1	+1.1
	baz=212						
W47A	Westpoint	21.48	13	P	P	06 05 21.9	+0.5
	baz=196						
V43A	Jonesboro	21.51	7	P	P	06 05 22.8	+1.1
	baz=188						
W48A	Pulaski	21.53	15	P	P	06 05 23.0	+1.0
	baz=198						
TUL1	Leonard	21.56	355	P	P	06 05 23.2	+1.0
	baz=174,SNR=5.5						
TUL1	Leonard	21.56	355	*e*P	P	06 05 24.0	+1.8
	comp=Z,34nm,0.9s						
X51A	Calhoun	21.59	20	P	P	06 05 23.9	+1.3
	baz=204						
X51A	Calhoun	21.59	20	*e*P	P	06 05 23.9	+1.3
	comp=Z,20nm,1.1s						
W49A	Belvidere	21.69	16	P	P	06 05 24.1	+0.5
	baz=200						
AMTX	Amarillo	21.72	342	P	P	06 05 25.4	+1.2
	baz=158						
AMTX	Amarillo	21.72	342	*e*P	P	06 05 24.8	+0.7
	comp=Z,24nm,0.6s						
CHIC	Chingaza	21.76	114	*e*P	P	06 05 26.7	+1.7
Y54A	Tignall	21.77	25	P	P	06 05 29.4	+4.9
	baz=210,SNR=7.3						
RUSC	La Rusia	21.79	111	*e*P	P	06 05 26.0	+0.5
	comp=Z,8.7nm,0.9s						
RUSC	La Rusia	21.79	111	*e*P	P	06 05 25.1	-0.4
HHAR	Hobbs	21.84	359	*e*P	P	06 05 26.4	+1.1
	comp=Z,17nm,0.8s						
V46A	Holladay	21.90	12	P	P	06 05 25.7	-0.2
	baz=195,SNR=6.8						
U40A	Yellville	21.92	1	P	P	06 05 26.2	+0.1
	baz=182,SNR=6.1						
U39A	Green Forest	21.94	0	P	P	06 05 27.2	+0.8
	baz=180,SNR=6.5						
U41A	Viola	21.95	3	P	P	06 05 27.4	+1.0
	baz=185,SNR=10						
X52A	Dahlonega	21.96	22	P	P	06 05 27.4	+0.8
	baz=206						
U42A	Revenden	22.00	5	P	P	06 05 27.2	+0.2
	baz=186,SNR=10.0						
W50A	Signal Mountai	22.04	18	P	P	06 05 28.0	+0.6
	baz=202						
VILC	Villavicencio,	22.04	116	*e*P	P	06 05 27.0	-0.8
V47A	Nunnelly	22.05	13	P	P	06 05 27.7	+0.2
	baz=196						
X53A	Estanollee	22.09	23	P	P	06 05 29.6	+1.7
	baz=208						
U43A	Rector	22.10	7	P	P	06 05 29.6	+1.5
	baz=188						
V48A	Smith Brothers	22.13	15	P	P	06 05 29.3	+0.9
	baz=198						
V48A	Smith Brothers	22.13	15	*e*P	P	06 05 28.4	0.0
	comp=Z,7.2nm,0.9s						
GLAT	Glass	22.15	9	*e*P	P	06 05 30.1	+1.5
	comp=Z,112nm,1.5s						
U44B	Burton Farm, H	22.21	9	P	P	06 05 29.9	+0.7
	baz=191						
SJAC	San Juan de Ar	22.23	118	*e*P	P	06 05 34.2	+4.4
NHSC	New Hope	22.27	31	P	P	06 05 30.5	+0.6
	baz=217						
NHSC	New Hope	22.27	31	*e*P	P	06 05 31.4	+1.6
	comp=Z,155nm,1.3s						
WVT	Waverly	22.28	12	P	P	06 05 30.6	+0.7
	baz=195						
WVT	Waverly	22.28	12	*e*P	P	06 05 29.1	-0.8
	comp=Z,7.6nm,0.8s						
121A	Cookes Peak, D	22.28	327	P	P	06 05 33.5	+3.2
	baz=141,SNR=33						
UTMT	University of	22.29	10	*e*P	P	06 05 29.9	-0.1
	comp=Z,25nm,0.8s						
U45A	Rockin P Farm,	22.31	10	P	P	06 05 30.9	+0.6
	baz=193						
U44A	Portageville	22.32	8	P	P	06 05 31.8	+1.3
	baz=190						
W52A	Murphy	22.39	21	P	P	06 05 32.5	+1.3
	baz=206						
V49A	McMinnville	22.39	16	P	P	06 05 32.0	+0.8
	baz=200						
U46A	Springville	22.43	11	P	P	06 05 32.3	+0.7
	baz=194,SNR=5.1						
PBMO	Poplar Bluff	22.50	7	*e*P	P	06 05 32.1	-0.3
	comp=Z,21nm,0.8s						
V50A	Pikevile	22.54	18	P	P	06 05 33.5	+0.8
	baz=202						
T39A	Clever	22.58	0	P	P	06 05 34.3	+1.1
	baz=181,SNR=5.2						
T38A	Diamond	22.60	358	P	P	06 05 34.4	+1.0
	baz=178,SNR=7.4						
T41A	Mountain View	22.65	4	P	P	06 05 34.6	+0.7
	baz=185,SNR=12						
T42A	Van Buren	22.69	5	P	P	06 05 35.2	+0.9
	baz=187,SNR=7.5						
T42A	Van Buren	22.69	5	*e*P	P	06 05 33.7	-0.6
	comp=Z,7.7nm,0.8s						
U47A	Clarksville	22.69	13	P	P	06 05 34.9	+0.6
	baz=196						
T40A	Mansfield	22.72	2	P	P	06 05 36.0	+1.3
	baz=183						
W53A	Cullowhee	22.73	22	P	P	06 05 35.7	+0.7
	baz=207						
TAMC	Tame, Arauca	22.77	108	*e*P	P	06 05 32.9	-2.5
T43A	Greenville	22.82	7	P	P	06 05 35.8	+0.1
	baz=188						
V51A	Loudon	22.89	19	P	P	06 05 36.1	-0.4
	baz=204						
V51A	Loudon	22.89	19	*e*P	P	06 05 39.8	+3.3
	comp=Z,11nm,0.8s						
T44A	Benton	22.91	8	P	P	06 05 36.5	-0.2
	baz=190						
U48A	Cassie Pea, Po	22.93	15	P	P	06 05 36.6	-0.3
	baz=198						
T45A	Paducah	22.99	10	P	P	06 05 37.4	0.0
	baz=193						
Y22D	IRIS PASSCAL I	23.08	331	P	P	06 05 40.7	+2.1
	baz=145						
Y22E	IRIS PASSCAL I	23.08	331	P	P	06 05 40.4	+1.9
	baz=145						
U49A	Red Boiling Sp	23.13	16	P	P	06 05 39.0	+0.1
	baz=200						
T46A	Princeton	23.15	12	P	P	06 05 39.3	+0.3
	baz=194						
S40A	Lebanon	23.17	2	P	P	06 05 39.2	-0.1
	baz=183						
V52A	Sevierville	23.18	21	P	P	06 05 39.8	+0.4
	baz=206						
S38A	Stockton	23.18	359	P	P	06 05 39.5	0.0
	baz=180						
S41A	Jillco Farms,	23.19	4	P	P	06 05 39.2	-0.3
	baz=185						
S39A	Bolivar	23.24	0	P	P	06 05 39.5	-0.6
	baz=181						
S39A	Bolivar	23.24	0	*e*P	P	06 05 40.2	+0.1
	comp=Z,17nm,1.0s						
T47A	Sharon Grove	23.26	13	P	P	06 05 39.4	-0.8
	baz=196						
T47A	Sharon Grove	23.26	13	*e*P	P	06 05 39.6	-0.5
	comp=Z,14nm,0.8s						
U50A	Jamestown	23.30	18	P	P	06 05 40.4	-0.3
	baz=202						
V53A	Saluda	23.31	22	P	P	06 05 39.9	-0.8
	baz=208						
S43A	Fulton Ridge,	23.33	7	P	P	06 05 40.3	-0.5
	baz=189						
KMSC	Kings Mountain	23.43	26	P	P	06 05 40.8	-1.2
	baz=211						
S42A	Caledonia	23.45	5	P	P	06 05 41.4	-0.7
	baz=187						
U51A	La Follette	23.53	20	P	P	06 05 42.9	+0.1
	baz=204						
T48A	Bowling Green	23.54	14	P	P	06 05 42.1	-0.8
	baz=198						
S44A	Carbondale	23.55	9	P	P	06 05 42.7	-0.3
	baz=191						
SIUC	Southern Illin	23.58	9	*e*P	P	06 05 42.8	-0.5
	comp=Z,22nm,1.0s						
ANMO	Albuquerque	23.59	333	P	P	06 05 45.5	+1.8
	comp=Z,1.9nm,0.7s,baz=146,slow=12,SNR=11						
ANMO	Albuquerque	23.59	333	P	P	06 05 44.7	+1.0
	baz=147						
ANMO	Albuquerque	23.59	333	*e*P	P	06 05 45.0	+1.4
	comp=Z,5.5nm,1.0s						
TASL	Snake Pit, Alb	23.59	333	P	P	06 05 44.7	+1.0
	baz=147						
TASM	ASL Pad, Albuq	23.59	333	P	P	06 05 44.9	+1.2
	baz=147						
CCM	Cathedral Cave	23.69	4	P	P	06 05 44.5	+0.1
	baz=186						
CCM	Cathedral Cave	23.69	4	*e*P	P	06 05 44.3	-0.1
	comp=Z,18nm,0.9s						
R38A	Fenwick Farm,	23.74	359	P	P	06 05 45.0	+0.1
	baz=180						
T49A	Edmonton	23.75	16	P	P	06 05 44.4	-0.6
	baz=200						
U52A	Thorn Hill	23.76	21	P	P	06 05 45.3	+0.3
	baz=206						
S46A	Don Dixon Farm	23.80	11	P	P	06 05 45.8	+0.4
	baz=194						
TUC	Tucson	23.82	322	P	P	06 05 48.3	+2.5
	baz=135						
TUC	Tucson	23.82	322	*e*P	P	06 05 48.7	+2.9
	comp=Z,19nm,1.0s						
T50A	Nancy	23.87	17	P	P	06 05 46.4	+0.3
	baz=202						
R40A	Maddies Statio	23.87	2	P	P	06 05 46.0	0.0
	baz=183						
R40A	Maddies Statio	23.87	2	*e*P	P	06 05 46.4	+0.3
	comp=Z,9.2nm,0.8s						
R39A	Chumby, Stover	23.87	1	P	P	06 05 45.6	-0.5
	baz=182						
R41A	Rosebud	23.92	4	P	P	06 05 46.1	-0.4
	baz=186						
R42A	Luebbering	23.95	5	P	P	06 05 46.2	-0.7
	baz=187						
U53A	Fall Branch	24.01	22	P	P	06 05 46.7	-0.8
	baz=207						
R43A	Red Bud	24.04	7	P	P	06 05 47.4	-0.2
	baz=189						
R44A	Waltonville	24.12	9	P	P	06 05 48.1	-0.3
	baz=191						
R45A	Skylar, Fairfi	24.29	10	P	P	06 05 49.7	-0.3
	baz=193						
SLM	Saint Louis	24.36	6	*e*P	P	06 05 50.2	-0.4
	comp=Z,27nm,0.8s						
Q37A	Longview Farm,	24.44	358	P	P	06 05 51.4	+0.1
	baz=178						
S49A	Springfield	24.46	16	P	P	06 05 51.5	0.0
	baz=200						
Q38A	Cooks Store, C	24.51	360	P	P	06 05 51.8	-0.1
	baz=180						
Q40A	Laux Farm, Aux	24.58	3	P	P	06 05 52.7	+0.1
	baz=184						
Q41A	Truxton	24.59	4	P	P	06 05 52.4	-0.3
	baz=186						
Q39A	Willow Grove F	24.60	1	P	P	06 05 52.5	-0.3
	baz=182						
Q42A	Golden Eagle	24.60	6	P	P	06 05 53.0	+0.2
	baz=187						
S50A	Richmond	24.61	18	P	P	06 05 52.5	-0.4
	baz=202						
WCI	Wyandotte Cave	24.63	14	P	P	06 05 52.5	-0.5
	baz=197						
WCI	Wyandotte Cave	24.63	14	*e*P	P	06 05 52.5	-0.5
	comp=Z,18nm,0.8s						
R47A	Wooly Knot Far	24.64	13	P	P	06 05 52.9	-0.3
	baz=197						
T25A	Trinidad	24.68	339	P	P	06 05 56.7	+2.9
	baz=154						
T25A	Trinidad	24.68	339	*e*P	P	06 05 56.2	+2.4
	comp=Z,24nm,0.8s						
Q43A	New Douglas	24.72	7	P	P	06 05 53.7	-0.1
	baz=189						
OLIL	Olney	24.75	10	*e*P	P	06 05 53.9	-0.2
	comp=Z,17nm,0.9s						
Q44A	Meyer Farm, Va	24.77	8	P	P	06 05 53.8	-0.6
	baz=191						
KSU1	Kansas State U	24.80	354	P	P	06 05 54.2	-0.4
	baz=173						
KSU1	Kansas State U	24.80	354	*e*P	P	06 05 53.7	-0.9
	comp=Z,13nm,0.8s						
S51A	Beattyville	24.82	19	P	P	06 05 55.4	+0.7
	baz=204						
214A	Organ Pipe Nat	24.85	318	P	P	06 05 56.6	+1.4
	baz=130						
R48A	Northridge Ran	24.89	14	P	P	06 05 56.0	+0.6
	baz=198						
Q45A	Warren Harvey,	24.90	10	P	P	06 05 55.7	+0.2
	baz=193						
R49A	Shelbyville	24.96	16	P	P	06 05 56.2	+0.1
	baz=200						
CBKS	Cedar Bluff	24.97	348	P	P	06 05 57.0	+0.8
	baz=166						
CBKS	Cedar Bluff	24.97	348	*e*P	P	06 05 56.5	+0.3
	comp=Z,18nm,0.8s						
S52A	Salyersville	25.02	20	P	P	06 05 56.7	+0.1
	baz=205						
P39B	Salisbury	25.05	1	P	P	06 05 56.9	+0.1
	baz=182						
CNNC	Cliffs of the	25.11	31	P	P	06 05 57.0	-0.4
	baz=218						
P40A	Paris	25.11	3	P	P	06 05 57.8	+0.4
	baz=184						
P40A	Paris	25.11	3	*e*P	P	06 05 56.3	-1.1
	comp=Z,11nm,0.8s						
P37A	Lathrop	25.15	359	P	P	06 05 57.6	-0.1
	baz=178						
P38A	Dawn	25.17	360	P	P	06 05 56.7	-1.3
	baz=180						
P38A	Dawn	25.17	360	*e*P	P	06 05 56.8	-1.2
	comp=Z,6.2nm,0.8s						
R50A	Paris	25.19	17	P	P	06 05 57.2	-0.9
	baz=202						
Q47A	Bedord North L	25.28	13	P	P	06 05 59.9	+1.0
	baz=197						
P42A	Winchester	25.29	6	P	P	06 05 58.5	-0.5
	baz=188						
P42A	Winchester	25.29	6	*e*P	P	06 05 57.2	-1.8
	comp=Z,12nm,0.8s						
W18A	Petrified Fore	25.31	328	P	P	06 06 00.7	+1.3
	baz=141						
P41A	Barry, Barry	25.32	4	P	P	06 05 58.9	-0.4
	baz=186						
P44A	Sand Creek, Wi	25.39	9	P	P	06 05 59.8	-0.1
	baz=192						
R51A	Hillsboro	25.43	18	P	P	06 06 00.3	0.0
	baz=203						
Q48A	North Vernon	25.43	14	P	P	06 05 59.9	-0.4
	baz=198						
P43A	Skaggs, Pawnee	25.43	7	P	P	06 06 00.1	-0.3
	baz=189						
SDCO	Great Sand Dun	25.61	338	P	P	06 06 04.3	+2.0
	baz=152						
SDCO	Great Sand Dun	25.61	338	*e*P	P	06 06 04.8	+2.5
	comp=Z,14nm,1.0s						
O37A	Wolven Farm, M	25.72	359	P	P	06 06 03.3	+0.3
	baz=179						
O41A	Passleys Farm,	25.77	5	P	P	06 06 02.7	-0.6
	baz=186						
P46A	Rosedale	25.77	11	P	P	06 06 03.6	+0.2
	baz=195						
P47A	Martinsville	25.84	13	P	P	06 06 05.1	+1.1
	baz=197						
KSCO	Kaye Shedlock’	25.84	344	P	P	06 06 05.5	+1.3
	baz=160						
KSCO	Kaye Shedlock’	25.84	344	*e*P	P	06 06 05.5	+1.3
	comp=Z,17nm,0.9s						
O42A	Bath	25.92	6	P	P	06 06 03.8	-0.9
	baz=188						
P48A	Milroy	26.01	14	P	P	06 06 04.4	-1.1
	baz=198						
O44A	Mansfield	26.08	9	P	P	06 06 05.0	-1.2
	baz=192						
O43A	Sugar Creek Fa	26.10	7	P	P	06 06 05.7	-0.6
	baz=190						
S22A	4UR Ranch, Cre	26.12	336	P	P	06 06 08.4	+1.4
	baz=150						
S22A	4UR Ranch, Cre	26.12	336	*e*P	P	06 06 09.4	+2.4
	comp=Z,6.0nm,1.0s						
Q51A	Peebles	26.17	18	P	P	06 06 06.7	-0.3
	baz=203						
O45A	Potomac	26.29	10	P	P	06 06 07.8	-0.4
	baz=193						
N37A	Lee Faris, Mou	26.31	359	P	P	06 06 08.6	+0.3
	baz=179						
N37A	Lee Faris, Mou	26.31	359	*e*P	P	06 06 07.5	-0.8
	comp=Z,11nm,0.6s						
N38A	Joes South For	26.34	1	P	P	06 06 07.9	-0.6
	baz=181						
MVCO	Mesa Verde	26.38	332	P	P	06 06 11.4	+2.1
	baz=146						
MVCO	Mesa Verde	26.38	332	*e*P	P	06 06 11.8	+2.5
	comp=Z,12nm,0.9s						
WUAZ	Wupatki	26.48	326	P	P	06 06 12.6	+2.5
	baz=138						
WUAZ	Wupatki	26.48	326	*e*P	P	06 06 13.3	+3.2
	comp=Z,8.1nm,1.0s						
N40A	Mertquake, Sal	26.49	3	P	P	06 06 10.5	+0.6
	baz=185						
SJG	San Juan	26.54	78	LR	LR	06 15 19.1	
	comp=Z,265nm,19.7s,baz=253,slow=34						
O47A	Sheridan	26.58	13	P	P	06 06 10.8	+0.2
	baz=196						
N43A	Stutzman Famil	26.76	7	P	P	06 06 11.1	-1.2
	baz=190						
N44A	Piper City	26.76	9	P	P	06 06 11.6	-0.8
	baz=192						
O48A	Farmland	26.83	14	P	P	06 06 11.7	-1.2
	baz=199						
M37A	Trindle Farm,	26.95	359	P	P	06 06 14.2	+0.2
	baz=179						
M38A	Pleasantville	26.97	1	P	P	06 06 14.0	-0.1
	baz=181						
M40A	Post Highland	27.01	3	P	P	06 06 14.9	+0.4
	baz=185						
M36A	Felix, Anita	27.02	358	P	P	06 06 15.0	+0.3
	baz=178						

M41A	**Milan**	**27.05**	**5**	P	**P**	**06 06 14.4**	**-0.5**
	baz=187						
M39A	**Webster**	**27.05**	**2**	P	**P**	**06 06 13.8**	**-1.2**
	baz=183						
PV01	**Paradox Valley**	**27.18**	**333**	*e*P	**P**	**06 06 19.6**	**+3.1**
M43A	**Waltham Townsh**	**27.27**	**8**	P	**P**	**06 06 16.9**	**-0.1**
	baz=190						
PV13	**Radium Mtn., P**	**27.31**	**333**	*e*P	**P**	**06 06 19.5**	**+1.9**
	comp=Z,11nm,1.0s						
PV02	**Paradox Valley**	**27.31**	**333**	*e*P	**P**	**06 06 19.8**	**+2.1**
	comp=Z,11nm,1.1s						
PV05	**Paradox Valley**	**27.37**	**333**	*e*P	**P**	**06 06 21.0**	**+2.9**
PV03	**Paradox Valley**	**27.40**	**333**	*e*P	**P**	**06 06 20.9**	**+2.6**
SMCO	**Snowmass**	**27.42**	**337**	*e*P	**P**	**06 06 21.0**	**+2.3**
	comp=Z,6.3nm,1.0s						
PV18	**Skein Mesa, Pa**	**27.42**	**333**	*e*P	**P**	**06 06 20.6**	**+2.1**
	comp=Z,10.0nm,1.1s						
PV12	**Saucer Basin,**	**27.43**	**333**	*e*P	**P**	**06 06 21.4**	**+2.7**
	comp=Z,21nm,1.0s						
SWSC	**Sam W. Stewart**	**27.44**	**316**	P	**P**	**06 06 18.2**	**-0.3**
	baz=127						
PV11	**David Mesa, Pa**	**27.45**	**333**	*e*P	**P**	**06 06 21.1**	**+2.3**
	comp=Z,11nm,0.8s						
PV17	**East Wray Mesa**	**27.47**	**333**	*e*P	**P**	**06 06 20.6**	**+1.6**
	comp=Z,12nm,1.0s						
PV16	**Nyswonger Mesa**	**27.48**	**333**	*e*P	**P**	**06 06 21.4**	**+2.3**
	comp=Z,7.1nm,0.9s						
ISCO	**Idaho Springs**	**27.48**	**340**	P	**P**	**06 06 20.8**	**+1.6**
	baz=154						
ISCO	**Idaho Springs**	**27.48**	**340**	*e*P	**P**	**06 06 21.3**	**+2.1**
	comp=Z,8.1nm,1.1s						
PV19	**Morning Glory**	**27.51**	**333**	*e*P	**P**	**06 06 21.1**	**+1.8**
	comp=Z,7.6nm,0.9s						
PV20	**West Nyswonger**	**27.53**	**333**	*e*P	**P**	**06 06 21.3**	**+1.8**
	comp=Z,5.5nm,0.9s						
PV14	**Lion Creek, Pa**	**27.58**	**333**	*e*P	**P**	**06 06 22.2**	**+2.2**
	comp=Z,11nm,1.1s						
PV22	**Blue Mesa, Par**	**27.61**	**334**	*e*P	**P**	**06 06 22.5**	**+2.3**
	comp=Z,7.7nm,0.9s						
PV23	**Carpenter Ridg**	**27.64**	**333**	*e*P	**P**	**06 06 23.0**	**+2.5**
	comp=Z,14nm,0.9s						
BC3	**Big Chuckawall**	**27.65**	**318**	P	**P**	**06 06 22.0**	**+1.5**
	baz=129						
L36A	**Harm Buss Farm**	**27.66**	**358**	P	**P**	**06 06 21.5**	**+1.1**
	baz=178						
L40A	**Anamosa**	**27.68**	**4**	P	**P**	**06 06 21.3**	**+0.7**
	baz=185						
L38A	**Oak Wood Farm,**	**27.69**	**1**	P	**P**	**06 06 21.0**	**+0.3**
	baz=182						
PV21	**Cone Mtn., Par**	**27.71**	**333**	*e*P	**P**	**06 06 22.7**	**+1.5**
	comp=Z,4.7nm,0.9s						
PV09	**Paradox Valley**	**27.73**	**333**	*e*P	**P**	**06 06 24.4**	**+2.9**
L41A	**Preston**	**27.75**	**5**	P	**P**	**06 06 20.7**	**-0.4**
	baz=187						
IRM	**Iron Mountain**	**27.77**	**319**	P	**P**	**06 06 22.6**	**+1.1**
	baz=130						
FRD	**Ford Ranch, An**	**28.31**	**316**	P	**P**	**06 06 27.8**	**+1.4**
	baz=127						
K37A	**Belmond**	**28.31**	**360**	P	**P**	**06 06 26.9**	**+0.7**
	baz=180						
K40A	**Colesburg**	**28.32**	**4**	P	**P**	**06 06 26.2**	**-0.1**
	baz=185						
LDFC	**Landfair**	**28.34**	**321**	*e*P	**P**	**06 06 29.7**	**+3.0**
	comp=Z,39nm,0.9s						
PKCU	**Pink Cliffs**	**28.42**	**327**	*e*P	**P**	**06 06 29.4**	**+1.8**
	comp=Z,14nm,1.3s						
GMRC	**Granite Mounta**	**28.50**	**319**	P	**P**	**06 06 30.7**	**+2.6**
	baz=130						
N23A	**Red Feather La**	**28.57**	**340**	P	**P**	**06 06 30.0**	**+1.1**
	baz=154						
LCMT	**Little Creek M**	**28.60**	**326**	*e*P	**P**	**06 06 30.6**	**+1.5**
	comp=Z,4.5nm,1.3s						
O20A	**White River Ci**	**28.74**	**336**	P	**P**	**06 06 32.5**	**+2.3**
	baz=149						
O20A	**White River Ci**	**28.74**	**336**	*e*P	**P**	**06 06 31.8**	**+1.5**
	comp=Z,5.9nm,0.9s						
MTPU	**Mount Pierson**	**28.81**	**328**	*e*P	**P**	**06 06 32.4**	**+1.2**
	comp=Z,3.6nm,1.0s						
SRU	**San Rafael Swe**	**28.85**	**332**	*e*P	**P**	**06 06 32.5**	**+1.2**
	comp=Z,2.7nm,1.0s						
J36A	**Seneca 1, Swea**	**28.88**	**359**	P	**P**	**06 06 32.5**	**+1.2**
	baz=179						
J39A	**Decorah**	**28.92**	**3**	P	**P**	**06 06 32.9**	**+1.3**
	baz=184						
SZCU	**Shurtz Canyon**	**28.95**	**327**	*e*P	**P**	**06 06 34.5**	**+2.3**
	comp=Z,12nm,1.3s						
HEC	**Hector,Ludlow**	**28.95**	**319**	P	**P**	**06 06 34.4**	**+2.3**
	baz=129						
BBRC	**Big Bear Solar**	**28.98**	**317**	P	**P**	**06 06 34.4**	**+1.9**
	baz=128						
CCUT	**Cedar City**	**29.06**	**326**	*e*P	**P**	**06 06 35.7**	**+2.4**
	comp=Z,4.9nm,0.7s						
TUQ	**Turquoise Moun**	**29.08**	**320**	P	**P**	**06 06 34.1**	**+0.8**
	baz=131						
J42A	**Columbus**	**29.11**	**7**	P	**P**	**06 06 33.9**	**+0.6**
	baz=189						
P18A	**Preston Nutter**	**29.15**	**333**	*e*P	**P**	**06 06 36.5**	**+2.5**
	comp=Z,5.1nm,1.3s						
P17A	**Butcher Ranch,**	**29.24**	**332**	*e*P	**P**	**06 06 36.7**	**+1.9**
	comp=Z,5.8nm,0.9s						
TMUT	**Trail Mountain**	**29.32**	**331**	*e*P	**P**	**06 06 37.4**	**+1.9**
	comp=Z,3.7nm,0.9s						
SHPR	**Sheep Range**	**29.33**	**323**	*e*P	**P**	**06 06 33.9**	**-1.6**
	comp=Z,36nm,1.0s						
ECSD	**EROS Data Cent**	**29.40**	**355**	P	**P**	**06 06 35.6**	**-0.3**
	baz=174						
ECSD	**EROS Data Cent**	**29.40**	**355**	*e*P	**P**	**06 06 35.3**	**-0.6**
	comp=Z,5.2nm,0.9s						
I39A	**Houston**	**29.45**	**3**	P	**P**	**06 06 36.1**	**-0.2**
	baz=184						
I42A	**Draeger Farm,**	**29.70**	**7**	P	**P**	**06 06 37.9**	**-0.6**
	baz=189						
RWWY	**Rawlins**	**29.71**	**339**	*e*P	**P**	**06 06 40.1**	**+1.1**
	comp=Z,17nm,1.1s						
MWC	**Mount Wilson**	**29.72**	**316**	*e*P	**P**	**06 06 39.5**	**+0.5**
	comp=Z,30nm,1.1s						
PASC	**Pasadena Art C**	**29.77**	**316**	*e*P	**P**	**06 06 38.8**	**-0.5**
	comp=Z,26nm,0.7s						
H36A	**Jessenland, He**	**30.12**	**359**	P	**P**	**06 06 42.1**	**-0.2**
	baz=180						
H32A	**Carlson Farm,**	**30.23**	**354**	P	**P**	**06 06 43.0**	**-0.3**
	baz=173						
H39A	**Augusta**	**30.29**	**3**	P	**P**	**06 06 43.0**	**-0.7**
	baz=185						
H40A	**Chili**	**30.29**	**4**	P	**P**	**06 06 42.5**	**-1.2**
	baz=186						
K22A	**Casper**	**30.34**	**341**	*e*P	**P**	**06 06 45.9**	**+1.4**
	comp=Z,6.9nm,1.0s						
G38A	**Ridgeland**	**30.75**	**2**	P	**P**	**06 06 46.6**	**-1.2**
	baz=184						
SPMN	**Marine on St.**	**30.78**	**1**	P	**P**	**06 06 47.6**	**-0.4**
	baz=182						
SPMN	**Marine on St.**	**30.78**	**1**	*e*P	**P**	**06 06 49.8**	**+1.7**
	comp=Z,9.1nm,0.6s						
G39A	**Holcombe**	**30.90**	**3**	P	**P**	**06 06 48.4**	**-0.7**
	baz=185						
RSSD	**Black Hills**	**31.00**	**345**	P	**P**	**06 06 51.3**	**+1.1**
	baz=160						
RSSD	**Black Hills**	**31.00**	**345**	*e*P	**P**	**06 06 51.5**	**+1.2**
	comp=Z,7.2nm,0.8s						
BW06	**Boulder Array**	**31.50**	**337**	*e*P	**P**	**06 06 56.3**	**+1.6**
	comp=Z,3.6nm,0.9s						
PDAR	**Pinedale Array**	**31.50**	**337**	P	**P**	**06 06 56.5**	**+1.8**
	comp=Z,2.7nm,0.9s,baz=132,slow=8.9,SNR=20						
PDAR	**Pinedale Array**	**31.50**	**337**	*e*P	**P**	**06 06 56.2**	**+1.5**
E36A	**McGregor**	**32.06**	**0**	P	**P**	**06 06 58.6**	**-0.7**
	baz=181						
AHID	**Auburn Hatcher**	**32.10**	**335**	*e*Pn	**P**	**06 07 00.7**	**+0.7**
E35A	**Pequot Lakes**	**32.11**	**359**	P	**P**	**06 06 59.3**	**-0.4**
	baz=179						
E40A	**Wakefield**	**32.13**	**5**	P	**P**	**06 06 59.3**	**-0.7**
	baz=187						
D37A	**Cotton**	**32.72**	**1**	P	**P**	**06 07 04.0**	**-1.1**
	baz=182						
C35A	**Jirik Farms, M**	**33.25**	**359**	P	**P**	**06 07 08.7**	**-1.0**
	baz=180						
C36A	**Pine Crest Far**	**33.31**	**1**	P	**P**	**06 07 09.7**	**-0.5**
	baz=182						
RLMT	**Red Lodge**	**33.45**	**340**	*e*P	**P**	**06 07 13.7**	**+1.9**
	comp=Z,42nm,1.3s						
AGMN	**Agassiz Nation**	**33.90**	**357**	P	**P**	**06 07 14.4**	**-0.9**
	baz=176						
B35A	**Bob, Littlefor**	**33.91**	**360**	P	**P**	**06 07 14.5**	**-0.9**
	baz=180						
B34A	**Aery, Baudette**	**34.05**	**359**	P	**P**	**06 07 15.5**	**-1.1**
	baz=178						
DGMT	**Dagmar**	**35.14**	**348**	*e*P	**P**	**06 07 27.4**	**+1.2**
	comp=Z,9.9nm,0.8s						
ULM	**Lac du Bonnet**	**35.85**	**357**	P	**P**	**06 07 30.0**	**-2.1**
	comp=Z,1.6nm,0.4s,baz=167,slow=6.9,SNR=3.7						
EGMT	**Eagleton**	**36.17**	**341**	P	**P**	**06 07 34.8**	**-0.2**
	baz=153						
PTGA	**Pitinga**	**36.45**	**111**	*e*P	**P**	**06 07 37.7**	**0.0**
	comp=Z,6.6nm,0.8s						
LPAZ	**La Paz**	**39.45**	**140**	P	**P**	**06 08 02.3**	**-1.4**
	comp=Z,0.5nm,0.6s,baz=318,slow=9.2,SNR=4.6						
LPAZ	**La Paz**	**39.45**	**140**	*e*P	**P**	**06 08 03.5**	**-0.2**
	comp=Z,1.2nm,0.9s						
MNMC	**Minye Minye**	**40.77**	**144**	*e*P	**P**	**06 08 16.3**	**+2.0**
	comp=Z,6.0nm,1.0s						
SIV	**San Ignacio**	**44.02**	**132**	P	**P**	**06 08 39.4**	**-1.0**
	comp=Z,1.9nm,0.9s,baz=317,slow=9.3,SNR=10						
YKA	**Yellowknife Ar**	**50.35**	**347**	P	**P**	**06 09 28.5**	**-0.7**
	comp=Z,13nm,0.7s,baz=153,slow=7.7,SNR=103						
YKW3	**Yellowknife Ar**	**50.41**	**348**	*e*P	**P**	**06 09 30.4**	**+0.8**
	comp=Z,23nm,0.8s						
PLCA	**Paso Flores**	**58.81**	**160**	P	**P**	**06 10 33.4**	**+2.5**
	comp=Z,2.1nm,0.8s,baz=318,slow=7.3,SNR=3.8						
RES	**Resolute Bay**	**60.33**	**360**	P	**P**	**06 10 40.2**	**-0.6**
	comp=Z,8.9nm,0.7s,baz=202,slow=8.9,SNR=7.7						
ILAR	**Eielson Array**	**61.94**	**337**	P	**P**	**06 10 53.0**	**+1.2**
	comp=Z,3.0nm,0.9s,baz=131,slow=5.0,SNR=7.5						
BWN	**Browne**	**62.66**	**336**	*e*P	**P**	**06 10 58.6**	**+1.9**
	comp=Z,34nm,0.8s						
MIDW	**Midway**	**78.02**	**296**	*e*P	**P**	**06 12 30.9**	**-0.4**
	comp=Z,63nm,0.7s						
ESK	**Eskdalemuir**	**78.52**	**36**	*e*P	**P**	**06 12 31.8**	**-1.8**
	comp=Z,18nm,1.3s						
EKA	**Eskdalemuir Ar**	**78.54**	**36**	P	**P**	**06 12 31.3**	**-2.4**
	comp=Z,2.4nm,0.7s,baz=280,slow=5.5,SNR=12						
ESDC	**Sonseca Array**	**80.66**	**51**	P	**P**	**06 12 43.8**	**-1.8**
	comp=Z,1.0nm,0.6s,baz=285,slow=5.9,SNR=11						
ES19	**SONSECA Array**	**80.70**	**51**	*e*P	**P**	**06 12 44.2**	**-1.7**
MDT	**Midelt**	**81.47**	**58**	P	**P**	**06 12 48.1**	**-2.1**
	comp=Z,2.2nm,0.7s,baz=252,slow=3.2,SNR=6.1						
NB2	**NORSAR Subarra**	**84.54**	**28**	P	**P**	**06 13 05.3**	**0.0**
	comp=Z,8.0nm,1.2s,baz=293,slow=4.8						
NOA	**NORSAR Array B**	**84.54**	**28**	P	**P**	**06 13 05.3**	**0.0**
	comp=Z,2.5nm,0.9s,baz=296,slow=5.1,SNR=7.1						
ARCES	**ARCESS Array B**	**86.26**	**18**	P	**P**	**06 13 13.9**	**+0.2**
	comp=Z,4.7nm,0.7s,baz=328,slow=6.3,SNR=6.0						
ARCES	**ARCESS Array B**	**86.26**	**18**	*e*P	**P**	**06 13 14.6**	**+0.8**
GERES	**GERESS Array B**	**90.27**	**39**	P	**P**	**06 13 31.2**	**-2.2**
	comp=Z,0.9nm,0.8s,baz=327,slow=4.7,SNR=5.3						
KURK	**Kurchatov**	**114.85**	**5**	PKP	PKPdf	06 19 13.2	+0.2
KURBB	**Kurchatov Arra**	**114.93**	**6**	PKP	PKPdf	06 19 13.2	0.0
	comp=Z,1.0nm,0.8s,baz=2.7,slow=2.1,SNR=2.9						
SONM	**Songino Array**	**115.58**	**345**	PKP	**PKPdf**	**06 19 14.3**	**-0.4**
	comp=Z,0.3nm,0.4s,baz=321,slow=1.8,SNR=2.3						
MKAR	**Makanchi Array**	**119.02**	**3**	PKP	**PKPdf**	**06 19 19.9**	**-1.3**
	comp=Z,0.4nm,0.7s,baz=0.0,slow=2.9,SNR=1.6						
BOSA	**Boshof**	**121.85**	**115**	PKP	**PKPdf**	**06 19 26.6**	**-0.7**
	comp=Z,3.2nm,0.9s,baz=153,slow=2.3,SNR=2.7						
KSH	**Kashi**	**125.52**	**10**	*e*PKP	**PKPdf**	**06 19 35.8**	**+1.7**
KSH				PKS	**PKSdf**	**06 23 10.3**	**-0.5**
MYLDM	**Lahad Datu**	**142.77**	**299**	*e*PKPdf	**PKPdf**	**06 20 08.6**	**+1.9**
CMAR	**Chiang Mai Arr**	**145.16**	**339**	PKPbc	**PKPdf**	**06 20 10.8**	**0.0**
	comp=Z,6.3nm,0.7s,baz=329,slow=3.2,SNR=27						
CM01	**Chiang Mai Arr**	**145.19**	**339**	*e*PKPbc	**PKPdf**	**06 20 11.5**	**+0.7**

IDC ***21*** *06:01:35.9±1.2, 45°.43N×151°.78E, h0^{km}, mb3.9/11, mb1 3.9/14, mb1mx3.7/73, mbtmp3.8/14, ML3.5/2, Error ellipse: s-maj=30.1km s-min=20.3km az=133.0*

ISCJB ***21*** *06:01:39.0±0.8, 45°.45N±0°.10×151°.8E±0°.1, h30^{km}, mb4.0/16, Error ellipse: s-maj=17.9km s-min=7.2km az=137.2*

NEIC ***21*** *06:01:40.2±1.8, 45°.47N×151°.80E, h23^{km}±13^{km}, mb4.5/6, Error ellipse: s-maj=13.4km s-min=5.6km az=138.0*

ISC 21 06:01:41.2±1.0**, 45°.5N**±0°.1×**151°.8E**±0°.1**, h30**^{km}**, n44, σ0^s.88**/38**, mb4.2**/16**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAJ	**Asahikawa**	**6.67**	**262**	Pn	**Pn**	**06 03 16.1**	**-1.0**
	0.7nm,0.3s,baz=68,slow=15,SNR=2.5						
ERM	**Erimo**	**7.14**	**244**	*e*Pn	**Pn**	**06 03 25.0**	**+1.5**
PETK	**Petropavlovsk-**	**8.56**	**25**	Pn	**Pn**	**06 03 42.2**	**-0.8**
	baz=215,slow=15						
PEA1	**Petropavlovsk-**	**8.57**	**25**	*e*Pn	**Pn**	**06 03 42.2**	**-0.9**
MAJO	**Matsushiro**	**13.57**	**234**	*e*Pn	**Pn**	**06 04 51.3**	**-0.3**
MJB9	**Matsu-Tunnel**	**13.57**	**234**	*e*Pn	**Pn**	**06 04 50.5**	**-1.1**
KSRS	**Korea Array**	**19.54**	**254**	P	**Pn**	**06 06 06.6**	**-1.0**
	0.2nm,0.3s,baz=61,slow=9.9,SNR=3.4						
KSAR	**Wonju Array Be**	**19.57**	**254**	P	**Pn**	**06 06 06.6**	**-1.4**
YAK	**Yakutsk**	**20.94**	**330**	*e*P	**P**	**06 06 21.3**	**+0.1**
	16nm,0.5s						
H11N2	**WAKE ISLAND Hy**	**28.55**	**149**	T	T	06 38 19.1	
	baz=338,slow=75,SNR=21						
H11N1	**WAKE ISLAND Hy**	**28.57**	**149**	T	T	06 38 14.4	
	baz=338,slow=75,SNR=14						
H11N3	**WAKE ISLAND Hy**	**28.57**	**149**	T	T	06 38 18.9	
	baz=338,slow=75,SNR=14						
H11S1	**WAKE ISLAND Hy**	**29.61**	**150**	T	T	06 39 34.8	
	baz=339,slow=76,SNR=12						
H11S3	**WAKE ISLAND Hy**	**29.62**	**150**	T	T	06 39 30.3	
	baz=339,slow=76,SNR=6.7						
H11S2	**WAKE ISLAND Hy**	**29.63**	**150**	T	T	06 39 47.8	
	baz=339,slow=76,SNR=6.7						
SONA0	**Songino Array**	**30.91**	**291**	*e*P	**P**	**06 07 55.0**	**-0.1**
SONM	**Songino Array**	**30.91**	**291**	P	**P**	**06 07 55.0**	**-0.1**
	0.3nm,0.5s,baz=82,slow=10,SNR=3.1						
SML	**Sawmill**	**37.54**	**42**	*e*P	**P**	**06 08 53.8**	**+1.5**
	3.5nm,0.7s						
HDA	**Harding Lake**	**38.10**	**38**	*e*P	**P**	**06 08 57.5**	**+0.5**
	14nm,1.3s						
ILAR	**Eielson Array**	**38.13**	**38**	P	**P**	**06 08 57.4**	**+0.2**
	0.4nm,0.8s,baz=257,slow=8.0,SNR=4.9						
GTA	**Gaotai**	**38.27**	**280**	*e*P	**P**	**06 09 00.1**	**+1.3**
GTA				pP	pP	06 09 03.8	-3.8
GTA				sP	sP	06 09 06.4	-4.9
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MK31	**Makanchi Array**	**46.71**	**298**	*e*P	**P**	**06 10 07.7**	**+0.5**
MK32	**Makanchi Array**	**46.71**	**298**	*e*P	**P**	**06 10 06.3**	**-0.9**
MKAR	**Makanchi Array**	**46.71**	**298**	P	**P**	**06 10 06.3**	**-0.9**
	comp=Z,0.2nm,0.4s,baz=69,slow=7.9,SNR=4.8						
MKAR	**Makanchi Array**	**46.71**	**298**	*e*P	**P**	**06 10 07.7**	**+0.5**
	comp=Z,5.5nm,1.0s						
MK01	**Makanchi Array**	**46.72**	**298**	*e*P	**P**	**06 10 08.1**	**+0.9**
KURK	**Kurchatov**	**47.31**	**304**	*e*P	**P**	**06 10 11.5**	**-0.2**
	comp=Z,2.4nm,1.2s						
KURBB	**Kurchatov Arra**	**47.40**	**304**	P	**P**	**06 10 10.6**	**-1.8**
	comp=Z,0.5nm,0.4s,baz=73,slow=8.7,SNR=5.9						
KK31	**Karatay Array**	**55.81**	**299**	*e*P	**P**	**06 11 16.1**	**+0.7**
KKAR	**Karatay Array**	**55.81**	**299**	*e*P	**P**	**06 11 16.1**	**+0.7**
ABKAR	**Akbulak array**	**58.53**	**310**	*e*P	**P**	**06 11 34.8**	**+0.2**
ARA0	**ARCESS Array S**	**58.76**	**341**	*e*P	**P**	**06 11 35.9**	**+0.1**
ARCES	**ARCESS Array B**	**58.76**	**341**	P	**P**	**06 11 35.9**	**+0.1**
	comp=Z,4.2nm,0.9s,baz=32,slow=6.5,SNR=5.8						
FIA1	**FINESS Array S**	**64.80**	**334**	*e*P	**P**	**06 12 16.6**	**+0.1**
	comp=Z,20nm,1.5s						
FIA0	**FINESS Array S**	**64.80**	**334**	*e*P	**P**	**06 12 16.1**	**-0.4**
FINES	**FINESS Array B**	**64.80**	**334**	P	**P**	**06 12 16.1**	**-0.4**
	comp=Z,1.7nm,0.5s,baz=28,slow=8.3,SNR=12						
NB200	**NORSAR Array S**	**69.14**	**341**	*e*P	**P**	**06 12 43.8**	**-0.4**
NOA	**NORSAR Array B**	**69.14**	**341**	P	**P**	**06 12 43.8**	**-0.4**
	comp=Z,1.0nm,0.7s,baz=28,slow=6.2,SNR=4.6						
HFS	**Hagfors**	**69.33**	**339**	P	**P**	**06 12 43.8**	**-1.5**
	comp=Z,2.0nm,0.6s,baz=63,slow=6.8,SNR=7.5						
ASAR	**Alice Springs**	**70.70**	**197**	P	**P**	**06 12 53.0**	**-1.2**
	comp=Z,0.3nm,0.8s,baz=21,slow=5.4,SNR=2.9						
KBZ	**Khabaz**	**71.08**	**314**	P	**P**	**06 12 56.5**	**+0.3**
	comp=Z,3.4nm,0.8s,baz=29,slow=3.4,SNR=7.0						
AKASG	**Malin Array Be**	**72.09**	**326**	P	**P**	**06 13 01.7**	**-0.5**
	comp=Z,0.6nm,0.3s,baz=39,slow=6.7,SNR=4.0						
BUR04	**Bucovina Ar. S**	**76.14**	**326**	*e*P	**P**	**06 13 27.1**	**+1.0**
CLL	**Collm**	**77.24**	**335**	*e*P	**P**	**06 13 33.0**	**+0.9**

ISCJB ***21*** *06:04:20.6±0.6, 40°.40N±0°.01×125°.21W±0°.02, h1^{km}±3^{km}, mb4.9/191, MS4.8/24, Error ellipse: s-maj=2.9km s-min=1.9km az=152.3*

BJI ***21*** *06:04:20.3, 40°.40N×125°.30W, h6^{km}, mb5.0/26, mB5.4/14, Ms5.3/9, Ms7 5.3/11*

NEIC ***21*** *06:04:21.2±0.0, 40°.41N×125°.33W, h6^{km}, mb4.9/164, MW5.2(BRK), After NCEDC.*

NEIC Felt [IV] at Petrolia; [III] at Bayside, Eureka, Ferndale, Rio Dell, Samoa, Trinidad and Whitethorn; [II] at Arcata, Fortuna, McKinleyville and Scotia. Also felt at Garberville, Hydesville, Kneeland, Mendocino, Redcrest and Willow Creek.

GCMT ***21*** *06:04:21.2±0.2, 40°.41N×125°.38W, h19^{km}, MW5.4/119, Moment Tensor Solution. s59,c87; s119,c220; Duration: 1^s.2 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.35±.04; M$_{\theta\theta}$-0.03±.03; M$_{\phi\phi}$0.38±.03; M$_{r\theta}$0.05±.07; M$_{\theta\phi}$-1.49±.03; M$_{\phi r}$0.03±.07; Best double couple: M$_0$1.50600×10^{17} NP1:φ$_s$274.00000°, δ88.00000°, λ-177.00000°. NP2:φ$_s$184.00000°, δ87.00000°, λ-2.00000°. Principal axes: T 1.6810, Plg0.0000°, Azm49.0000°; N -0.3490, Plg86.0000°, Azm315.0000°; P -1.3310, Plg4.0000°, Azm139.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

IDC ***21*** *06:04:21.5±0.6, 40°.36N×125°.20W, h0^{km}, mb4.4/27, mb1 4.5/33, mb1mx4.4/74, mbtmp4.4/33, ML4.1/6, MS4.7/23, Ms1 4.7/23, ms1mx4.3/69 Error ellipse: s-maj=14.4km s-min=8.0km az=15.0*

MOS ***21*** *06:04:22.4±1.0, 40°.38N×125°.14W, h14^{km}, mb5.0/41, Error ellipse: s-maj=5.4km s-min=4.7km az=116.4*

ISC 21 06:04:24.1±1.2**, 40°.40N**±0°.04×**125°.17W**±0°.05**, h15**^{km}±6^{km}**, n627, σ1^s.54**/633**, mb4.9**/197**, MS4.8**/24**, 3C-11D, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KCTM	**Capetown**	**0.65**	**83**	*e*Pg	**Pb**	**06 04 36.8**	**-0.3**
KJJM	**Johnny Jack Ri**	**0.68**	**102**	*e*Pg	**Pg**	**06 04 36.7**	**-0.7**
KSMM	**Slide Mountain**	**0.79**	**105**	*e*Pg	**Pg**	**06 04 38.1**	**-1.5**
JCC	**Jacoby Creek,**	**0.97**	**64**	*e*Pg	**Pg**	**06 04 40.6**	**-2.3**
JCC				*e*Sn	**Sb**	**06 04 55.9**	**+0.7**
KCRM	**Chalk Rock**	**1.03**	**88**	*e*Pg	**Pg**	**06 04 42.3**	**-1.8**
KMRM	**Mail Ridge**	**1.13**	**98**	*e*Pg	**Pb**	**06 04 44.4**	**-1.1**
KMRM				*e*Sn	**Sn**	**06 05 04.0**	**+3.1**
KHMM	**Horse Mountain**	**1.20**	**66**	*e*Pn	**Pb**	**06 04 44.5**	**-2.2**
KCSM	**Cold Springs**	**1.27**	**83**	*e*Pn	**Pn**	**06 04 46.0**	**-1.6**
KCPM	**Cahto Peak**	**1.41**	**120**	*e*Pn	**Pn**	**06 04 47.5**	**-2.0**
KCPM				*e*Sn	**Sg**	**06 05 10.2**	**+0.4**
KIPM	**Iron Peak**	**1.43**	**114**	*e*Pn	**Pn**	**06 04 47.9**	**-1.7**
KKPM	**Kettenpom Peak**	**1.43**	**99**	*e*Pn	**Pn**	**06 04 47.1**	**-2.5**
KFPM	**Farley Peak**	**1.54**	**119**	*e*Pn	**Pn**	**06 04 49.2**	**-1.9**
KOMM	**Orleans Mounta**	**1.58**	**55**	*e*Pn	**Pn**	**06 04 49.2**	**-2.4**
GTC	**Three Chop Rid**	**1.59**	**128**	*e*Pn	**Pn**	**06 04 49.3**	**-2.5**
KBNM	**Bluenose Ridge**	**1.60**	**108**	*e*Pn	**Pn**	**06 04 50.7**	**-1.3**
GNAM	**Navarro Ridge**	**1.69**	**135**	*e*Pn	**Pn**	**06 04 49.8**	**-3.3**
KRKM	**Rackout Spring**	**1.74**	**118**	*e*Pn	**Pn**	**06 04 52.3**	**-1.6**
GHOM	**Hamilton Openi**	**1.85**	**136**	*e*Pn	**Pn**	**06 04 51.9**	**-3.4**
GHMM	**Hull Mountain**	**1.94**	**117**	*e*Pn	**Pn**	**06 04 55.1**	**-1.7**
KBO	**Bosley Butte**	**1.95**	**21**	*e*Pn	**Pn**	**06 04 53.6**	**-3.2**
N02D	**Trinity Center**	**1.96**	**72**	P	**Pn**	**06 04 55.5**	**-1.5**
	baz=256,SNR=1000						
N02D				S	**Sn**	**06 05 21.2**	**-0.2**
	baz=256						
GGUM	**Gualala**	**2.01**	**139**	*e*Pn	**Pn**	**06 04 54.0**	**-3.5**
WDC	**Whiskeytown Da**	**2.02**	**84**	*e*Pn	**Pn**	**06 04 56.1**	**-1.5**
WDC	**Whiskeytown Da**	**2.02**	**84**	*e*P	**Pn**	**06 04 56.1**	**-1.5**
M02C	**Callahan**	**2.02**	**60**	P	**Pn**	**06 04 55.9**	**-1.8**
	baz=242,SNR=1000						
M02C				S	**Sn**	**06 05 22.4**	**-0.4**
	baz=242						
GASB	**Alder Springs**	**2.03**	**111**	*e*Pn	**Pn**	**06 04 56.5**	**-1.4**
KTRM	**Thompson Ridge**	**2.03**	**41**	*e*Pn	**Pn**	**06 04 55.3**	**-2.6**
GSNM	**Snow Mountain**	**2.11**	**133**	*e*Pn	**Pn**	**06 04 56.3**	**-2.7**
L02D	**Cave Junction,**	**2.12**	**33**	P	**Pn**	**06 04 56.4**	**-2.7**
	baz=213,SNR=414						
L02D				S	**Sn**	**06 05 24.9**	**-0.3**
	baz=213						
HOPS	**Hopland Field**	**2.14**	**130**	*e*Pn	**Pn**	**06 04 57.2**	**-2.1**
GHLM	**Highland Sprin**	**2.14**	**128**	*e*Pn	**Pn**	**06 04 57.0**	**-2.5**
YBH	**Yreka Blue Hor**	**2.29**	**54**	Pn	**Pn**	**06 05 01.2**	**-0.2**
	50nm,0.3s,baz=240,slow=14,SNR=445						
YBH				Sn	**Sn**	**06 05 30.2**	**+0.8**
	188nm,0.3s,baz=146,slow=13,SNR=15						
YBH				LR	LR	06 05 49.1	
	comp=Z,8μm,18.6s,baz=140,slow=38						
YBH	**Yreka Blue Hor**	**2.29**	**54**	*e*Pn	**Pn**	**06 04 59.6**	**-1.9**
YBH				Sn	**Sn**	**06 05 30.2**	**+0.8**
YBH	**Yreka Blue Hor**	**2.29**	**54**	*e*P	**Pn**	**06 04 59.6**	**-1.9**
YBH						06 05 30.2	
GPMM	**Pine Mountain**	**2.31**	**131**	*e*Pn	**Pn**	**06 05 00.4**	**-1.4**
GMKM	**Mount Konoctai**	**2.33**	**127**	*e*Pn	**Pn**	**06 05 01.2**	**-0.7**
GACM	**Adobe Creek**	**2.35**	**130**	*e*Pn	**Pn**	**06 05 01.2**	**-1.1**
SKG	**Skaggs Springs**	**2.38**	**135**	*e*Pn	**Pn**	**06 04 59.6**	**-2.9**
GRTM	**Round Top Moun**	**2.42**	**126**	*e*Pn	**Pn**	**06 05 02.6**	**-0.6**
GDXM	**Geysers**	**2.43**	**130**	*e*Pn	**Pn**	**06 05 02.8**	**-0.5**
LGBM	**Gray Butte**	**2.45**	**66**	*e*Pn	**Pn**	**06 05 02.8**	**-1.0**
GBGM	**Boggs Mountain**	**2.49**	**129**	*e*Pn	**Pn**	**06 05 04.3**	**0.0**
NMCNC	**Mill Creek, So**	**2.51**	**135**	*e*Pn	**Pn**	**06 05 01.3**	**-3.1**
B040	**Montague**	**2.53**	**55**	*e*Pn	**Pn**	**06 05 04.3**	**-0.3**
LMPM	**Military Pass**	**2.53**	**63**	*e*Pn	**Pn**	**06 05 04.3**	**-0.6**
KEBM	**Edson Butte**	**2.55**	**14**	*e*Pn	**Pn**	**06 05 02.8**	**-2.3**
LHEM	**Herd Peak**	**2.55**	**60**	*e*Pn	**Pn**	**06 05 04.2**	**-1.0**
O03D	**Paynes Creek**	**2.58**	**91**	P	**Pn**	**06 05 03.7**	**-1.7**
	baz=276,SNR=1000						
O03D	**Paynes Creek**	**2.58**	**91**	*e*Pn	**Pn**	**06 05 03.8**	**-1.7**
NHSM	**Mount Saint He**	**2.63**	**130**	*e*Pn	**Pn**	**06 05 05.2**	**-1.0**
LBFM	**Black Fox Moun**	**2.67**	**68**	*e*Pn	**Pn**	**06 05 06.8**	**+0.1**
LBFM	**Black Fox Moun**	**2.67**	**68**	*e*P	**Pn**	**06 05 06.8**	**+0.1**
GARM	**Arbuckle**	**2.67**	**122**	*e*Pn	**Pn**	**06 05 06.6**	**-0.1**
HUMO	**Hull Mountain**	**2.77**	**36**	*e*Pn	**Pn**	**06 05 06.1**	**-1.8**
OSUM	**Sutter Buttes**	**2.79**	**113**	*e*Pn	**Pn**	**06 05 06.8**	**-1.5**
LGMM	**Garner Mountai**	**2.80**	**63**	*e*Pn	**Pn**	**06 05 07.6**	**-0.9**
OGOM	**Van Goodin Ran**	**2.83**	**104**	*e*Pn	**Pn**	**06 05 07.3**	**-1.5**
LRDM	**Redding Peak**	**2.83**	**87**	*e*Pn	**Pn**	**06 05 08.5**	**-0.5**
MCCM	**Marconi Confer**	**2.87**	**141**	*e*Pn	**Pn**	**06 05 06.3**	**-3.0**
M04C	**Macdoel**	**2.88**	**60**	P	**Pn**	**06 05 08.5**	**-1.1**
	baz=243,SNR=570						
NBPM	**Berryessa Peak**	**2.88**	**126**	*e*Pn	**Pn**	**06 05 09.6**	**+0.2**
NIMB	**Iron Mountain**	**2.90**	**128**	*e*Pn	**Pn**	**06 05 10.0**	**+0.2**
LTIM	**Timbered Crate**	**2.91**	**73**	*e*Pn	**Pn**	**06 05 09.2**	**-0.7**
OSTM	**Stimpson Lane**	**2.94**	**109**	*e*Pn	**Pn**	**06 05 09.8**	**-0.4**
LBCM	**Butte Creek Ri**	**2.94**	**80**	*e*Pn	**Pn**	**06 05 09.4**	**-1.1**
ORV	**Oroville**	**2.94**	**105**	*e*Pn	**Pn**	**06 05 08.9**	**-1.5**
ORV				*e*Sn	**Sn**	**06 05 47.9**	**+2.5**
ORV	**Oroville**	**2.94**	**105**	*e*P	**Pn**	**06 05 08.9**	**-1.5**
ORV				*e*		06 05 47.9	
NBRB	**Beebe Ranch Br**	**2.95**	**136**	*e*Pn	**Pn**	**06 05 10.3**	**-0.1**
NAPC	**Atlas Peak**	**2.99**	**130**	*e*Pn	**Pn**	**06 05 10.9**	**-0.1**
SNT	**Sears Point**	**3.06**	**135**	*e*Pn	**Pn**	**06 05 10.2**	**-1.7**
DBO	**Dodson Butte**	**3.08**	**27**	*e*Pn	**Pn**	**06 05 10.7**	**-1.6**
VSP	**Spence Mountai**	**3.11**	**50**	*e*Pn	**Pn**	**06 05 13.5**	**+0.7**
NADM	**Allendale**	**3.15**	**127**	*e*Pn	**Pn**	**06 05 14.0**	**+0.9**
CSPM	**San Pablo Ridg**	**3.30**	**137**	*e*Pn	**Pn**	**06 05 14.0**	**-1.2**
CPIM	**Pinole Ridge**	**3.33**	**135**	*e*Pn	**Pn**	**06 05 14.2**	**-1.5**
JPRM	**Presidio of Sa**	**3.34**	**140**	*e*Pn	**Pn**	**06 05 14.7**	**-1.1**
K04D	**Chiloquin, OR**	**3.40**	**48**	P	**Pn**	**06 05 16.8**	**+0.1**
	baz=230,SNR=376						
CVPM	**Vollmer Peak**	**3.40**	**137**	*e*Pn	**Pn**	**06 05 15.2**	**-1.5**
CTAM	**Taylor**	**3.41**	**133**	*e*Pn	**Pn**	**06 05 17.1**	**+0.3**
JSBM	**San Bruno Moun**	**3.47**	**141**	*e*Pn	**Pn**	**06 05 16.8**	**-0.8**
HSO	**Harness Mounta**	**3.49**	**26**	*e*Pn	**Pn**	**06 05 17.3**	**-0.7**
HSO	**Harness Mounta**	**3.49**	**26**	*e*P	**Pn**	**06 05 17.3**	**-0.7**
AFDM	**Forest Hills D**	**3.55**	**113**	*e*Pn	**Pn**	**06 05 18.0**	**-0.7**
I03D	**Drain, OR**	**3.57**	**22**	P	**Pn**	**06 05 17.7**	**-1.2**
	baz=202,SNR=1000						
I03D				S	**Sn**	**06 06 00.8**	**0.0**
	baz=202						
CLCB	**Lake Chabot**	**3.59**	**137**	*e*Pn	**Pn**	**06 05 18.6**	**-0.6**
J04D	**Umpqua Nationa**	**3.65**	**38**	P	**Pn**	**06 05 19.8**	**-0.5**
	baz=219,SNR=1000						
BEKR	**Beckworth**	**3.73**	**97**	*e*Pn	**Pn**	**06 05 21.4**	**+0.1**
BGH	**Bear Gulch**	**3.77**	**143**	*e*Pn	**Pn**	**06 05 21.4**	**-0.3**
CVLM	**Vallecito**	**3.80**	**136**	*e*Pn	**Pn**	**06 05 21.3**	**-0.7**
IND	**Independence**	**3.88**	**103**	*e*Pn	**Pn**	**06 05 25.5**	**+2.1**
CVR	**Calaveras Rese**	**3.95**	**137**	*e*Pn	**Pn**	**06 05 22.6**	**-1.5**
JHUM	**Huhtala Lane,**	**3.95**	**143**	*e*Pn	**Pn**	**06 05 21.7**	**-2.4**
K05A	**Summer Lake**	**3.97**	**53**	*e*Pn	**Pn**	**06 05 24.7**	**+0.1**
I04A	**Tendick Farm,**	**3.97**	**30**	P	**Pn**	**06 05 23.9**	**-0.6**
	baz=211,SNR=989						
I04A				S	**Sn**	**06 06 10.3**	**-0.5**
	baz=211						
MOD	**Modoc Plateau**	**3.97**	**66**	*e*Pn	**Pn**	**06 05 23.6**	**-1.1**
JBNB	**Ben Lomond Mou**	**4.03**	**143**	*e*Pn	**Pn**	**06 05 22.7**	**-2.7**
TAHR	**Tahoe**	**4.06**	**106**	*e*Pn	**Pn**	**06 05 29.0**	**+3.1**
MNHB	**New Hogan Dam**	**4.06**	**122**	*e*Pn	**Pn**	**06 05 26.0**	**+0.3**
RUBR	**Rubicon Trail**	**4.10**	**108**	*e*Pn	**Pn**	**06 05 27.6**	**+1.1**
J05D	**Fort Rock, OR**	**4.12**	**44**	P	**Pn**	**06 05 26.6**	**-0.1**
	baz=227,SNR=731						
ARN	**Arnold Ranch**	**4.16**	**136**	*e*Pn	**Pn**	**06 05 25.8**	**-1.4**
ARN	**Arnold Ranch**	**4.16**	**136**	*e*P	**Pn**	**06 05 25.8**	**-1.4**
JUCM	**University of**	**4.18**	**143**	*e*Pn	**Pn**	**06 05 24.5**	**-2.8**

IRO	**Indian Ridge**	**4.21**	**30**	*e*Pn	**Pn**	**06 05 27.9**	**0.0**
TCBU	**Trout Butte**	**4.27**	**25**	*e*Pn	**Pb**	**06 05 35.5**	**-3.5**
CMPM	**Mikes Peak**	**4.27**	**134**	*e*Pn	**Pn**	**06 05 29.7**	**+1.0**
MCUB	**Copperopolis B**	**4.29**	**123**	*e*Pn	**Pn**	**06 05 28.7**	**-0.1**
VCNR	**Virginia City**	**4.39**	**103**	*e*Pn	**Pn**	**06 05 31.6**	**+1.1**
GHS	**Gilroy Hot Spr**	**4.40**	**137**	*e*Pn	**Pn**	**06 05 28.6**	**-1.9**
CMB	**Columbia Colle**	**4.40**	**121**	*e*Pn	**Pn**	**06 05 30.8**	**+0.3**
CMB	**Columbia Colle**	**4.40**	**121**	*e*P	**Pn**	**06 05 30.8**	**+0.3**
COR	**Corvallis**	**4.41**	**18**	*e*Pn	**Pn**	**06 05 30.0**	**-0.5**
COR				*e*Sn	**Sn**	**06 06 24.5**	**+3.0**
COR	**Corvallis**	**4.41**	**18**	*e*P	**Pn**	**06 05 30.0**	**-0.5**
COR				*e*		06 06 24.5	
WIFE	**Three Sisters-**	**4.43**	**33**	*e*Pn	**Pn**	**06 05 31.6**	**+0.6**
MOON	**Moon Mountain**	**4.48**	**34**	*e*Pn	**Pn**	**06 05 32.7**	**+1.2**
PNTR	**Pine Nut**	**4.49**	**105**	*e*Pn	**Pn**	**06 05 33.2**	**+1.3**
PRLK	**Prince Lake**	**4.49**	**31**	*e*Pn	**Pn**	**06 05 31.7**	**-0.1**
PAHR	**Pah Rah Range**	**4.50**	**97**	*e*Pn	**Pn**	**06 05 31.6**	**-0.2**
HSLM	**San Luis Dam**	**4.60**	**135**	*e*Pn	**Pn**	**06 05 33.0**	**-0.1**
PINE	**Pine Mountain**	**4.63**	**41**	*e*Pn	**Pn**	**06 05 34.4**	**+0.7**
SAO	**San Andreas Ge**	**4.66**	**140**	*e*Pn	**Pn**	**06 05 31.8**	**-2.1**
SAO	**San Andreas Ge**	**4.66**	**140**	*e*P	**Pn**	**06 05 31.8**	**-2.1**
BSRM	**Salinas Radio**	**4.70**	**141**	*e*Pn	**Pn**	**06 05 32.7**	**-1.8**
YERR	**Yerington**	**4.79**	**105**	*e*Pn	**Pn**	**06 05 36.5**	**+0.6**
H04A	**Detroit Lake**	**4.82**	**26**	*e*Pn	**Pn**	**06 05 35.9**	**-0.3**
H04A				*e*Sn	**Sn**	**06 06 30.7**	**-1.0**
WAKR	**Walker**	**4.83**	**111**	*e*Pn	**Pn**	**06 05 37.7**	**+1.3**
JHC	**Johnson Canyon**	**4.86**	**141**	*e*Pn	**Pn**	**06 05 34.1**	**-2.5**
JHC	**Johnson Canyon**	**4.86**	**141**	*e*P	**Pn**	**06 05 34.2**	**-2.5**
I05D	**Terrebonne, OR**	**4.86**	**35**	P	**Pn**	**06 05 36.7**	**0.0**
	baz=217,SNR=290						
BVL	**Bear Valley**	**4.93**	**139**	*e*Pn	**Pn**	**06 05 36.4**	**-1.3**
BAVM	**Antelope Valle**	**4.96**	**138**	*e*Pn	**Pn**	**06 05 36.9**	**-1.2**
BCWM	**Chews Ridge**	**4.97**	**144**	*e*Pn	**Pn**	**06 05 36.1**	**-2.3**
G03D	**McMinnville, O**	**5.01**	**16**	P	**Pn**	**06 05 38.2**	**-0.6**
	baz=196,SNR=81						
G03D				S	**Sn**	**06 06 35.8**	**-0.6**
	baz=196						
MMIM	**Miami Mountain**	**5.17**	**123**	*e*Pn	**Pn**	**06 05 42.0**	**+0.8**
MHDM	**Hidden Dam**	**5.27**	**127**	*e*Pn	**Pn**	**06 05 42.9**	**+0.6**
WVOR	**Wild Horse Val**	**5.32**	**65**	*e*Pn	**Pn**	**06 05 41.8**	**-1.3**
WVOR	**Wild Horse Val**	**5.32**	**65**	*e*P	**Pn**	**06 05 41.8**	**-1.3**
PCCM	**Crazy Canyon**	**5.33**	**142**	*e*Pn	**Pn**	**06 05 41.2**	**-2.0**
PMPB	**Monarch Peak**	**5.41**	**139**	*e*Pn	**Pn**	**06 05 42.3**	**-2.0**
RYN	**Ryan**	**5.44**	**107**	*e*Pn	**Pn**	**06 05 45.6**	**+0.8**
FRI	**Friant**	**5.46**	**127**	*e*Pn	**Pn**	**06 05 46.5**	**+1.5**
FRI	**Friant**	**5.46**	**127**	*e*P	**Pn**	**06 05 46.5**	**+1.5**
TDH	**Tom, Dick, Har**	**5.49**	**26**	*e*Pn	**Pn**	**06 05 45.5**	**+0.1**
MDPB	**Devils Postpil**	**5.49**	**118**	*e*Pn	**Pn**	**06 05 46.8**	**+1.2**
MINS	**Minaret Summit**	**5.49**	**118**	*e*Pn	**Pn**	**06 05 47.0**	**+1.4**
MDYM	**Dry Creek**	**5.52**	**118**	*e*Pn	**Pn**	**06 05 48.9**	**+2.8**
MRDM	**Red Cones**	**5.52**	**118**	*e*Pn	**Pn**	**06 05 48.4**	**+2.3**
MMPM	**Mammoth Pass**	**5.54**	**118**	*e*Pn	**Pn**	**06 05 48.9**	**+2.6**
MLKM	**Mammoth Lakes**	**5.54**	**118**	*e*Pn	**Pn**	**06 05 49.4**	**+3.1**
MMLB	**Mammoth Lakes**	**5.54**	**118**	*e*Pn	**Pn**	**06 05 49.4**	**+3.0**
OMMB	**Old Mammoth Mi**	**5.55**	**118**	*e*Pn	**Pn**	**06 05 47.8**	**+1.3**
I07A	**Izee**	**5.59**	**47**	*e*Pn	**Pn**	**06 05 47.9**	**+1.0**
G05D	**Wamic, OR**	**5.61**	**29**	P	**Pn**	**06 05 47.9**	**+0.9**
	baz=211,SNR=72						
KVN	**Kaiserville**	**5.62**	**102**	*e*Pn	**Pn**	**06 05 47.4**	**+0.1**
KVN	**Kaiserville**	**5.62**	**102**	*e*P	**Pn**	**06 05 47.4**	**+0.1**
MCMM	**Convict Lake**	**5.64**	**118**	*e*Pn	**Pn**	**06 05 51.2**	**+3.6**
MLAC	**Mammoth, Mammo**	**5.66**	**117**	P	**Pn**	**06 05 50.9**	**+3.0**
	baz=303						
NV01	**Mina Array Sit**	**5.67**	**108**	*e*Pn	**Pn**	**06 05 48.3**	**+0.3**
NVAR	**Mina Array Bea**	**5.67**	**108**	Pn	**Pn**	**06 05 47.9**	**-0.2**
	13nm,0.3s,baz=282,slow=14,SNR=83						
NVAR				Sn	**Sn**	**06 06 53.1**	**+0.1**
	baz=281,slow=23,SNR=2.4						
NVAR				LR	LR	06 08 20.0	
	comp=Z,5µm,20.9s,baz=69,slow=41						
NV11	**Mina Array Sit**	**5.78**	**108**	*e*Pn	**Pn**	**06 05 49.9**	**+0.4**
RCCR	**Rock Creek Can**	**5.81**	**118**	*e*Pn	**Pn**	**06 05 53.0**	**+2.9**
J08A	**Circle Bar Ran**	**5.81**	**57**	*e*Pn	**Pn**	**06 05 49.9**	**0.0**
J08A				*e*Sn	**Sn**	**06 06 59.4**	**+3.1**
G06A	**Carlson Farm,**	**5.88**	**33**	*e*Pn	**Pn**	**06 05 51.5**	**+0.8**
F04D	**Rainier, OR**	**5.90**	**15**	P	**Pn**	**06 05 51.4**	**+0.5**
	baz=196,SNR=7.2						
F04D				S	**Sn**	**06 06 56.6**	**-1.7**
	baz=196						
B023	**Clatskanie**	**5.91**	**14**	*e*Pn	**Pn**	**06 05 51.1**	**0.0**
MEGW	**Megler CREST B**	**5.94**	**9**	*e*Pn	**Pn**	**06 05 52.0**	**+0.4**
LVP	**Lakeview Peak**	**6.02**	**19**	*e*Pn	**Pn**	**06 05 52.3**	**-0.4**
MTMW	**Mount Mitchell**	**6.03**	**20**	*e*Pn	**Pn**	**06 05 52.7**	**-0.1**
PAGB	**Antelope Grade**	**6.06**	**139**	*e*Pn	**Pn**	**06 05 50.9**	**-2.4**
BMN	**Battle Mountai**	**6.07**	**87**	*e*Pn	**Pn**	**06 05 54.8**	**+1.3**
BMN	**Battle Mountai**	**6.07**	**87**	*e*P	**Pn**	**06 05 54.8**	**+1.3**
SHW	**Mount Saint He**	**6.18**	**19**	*e*Pn	**Pn**	**06 05 54.8**	**-0.1**
SHW	**Mount Saint He**	**6.18**	**19**	*e*P	**Pn**	**06 05 54.8**	**-0.1**
BMW	**Boistfort Moun**	**6.24**	**12**	*e*Pn	**Pn**	**06 05 55.7**	**0.0**
BMW	**Boistfort Moun**	**6.24**	**12**	*e*P	**Pn**	**06 05 55.7**	**0.0**
SOSW	**Source of Smit**	**6.25**	**20**	*e*Pn	**Pn**	**06 05 55.9**	**0.0**
B202	**Windy Ridge, M**	**6.25**	**20**	*e*Pn	**Pn**	**06 05 55.6**	**-0.2**
E03A	**Lebam**	**6.26**	**10**	*e*Pn	**Pn**	**06 05 55.4**	**-0.5**
E03A				*e*Sn	**Sn**	**06 07 03.8**	**-3.2**
B201	**Coldwater, Mou**	**6.27**	**19**	*e*Pn	**Pn**	**06 05 56.0**	**-0.2**
TDL	**Tradedollar La**	**6.33**	**19**	*e*Pn	**Pn**	**06 05 57.2**	**+0.2**
GLK	**Glacier Lake**	**6.69**	**22**	*e*Pn	**Pn**	**06 06 03.4**	**+1.5**
G08A	**Pilot Rock**	**6.69**	**41**	*e*Pn	**Pn**	**06 06 02.9**	**+0.9**
F07A	**Phinny Hill Vi**	**6.70**	**33**	*e*Pn	**Pn**	**06 06 02.6**	**+0.6**
LON	**Longmire**	**6.80**	**20**	*e*Pn	**Pn**	**06 06 03.7**	**+0.3**
LON	**Longmire**	**6.80**	**20**	*e*P	**Pn**	**06 06 03.7**	**+0.3**
WPW	**White Pass**	**6.83**	**21**	*e*Pn	**Pn**	**06 06 04.5**	**+0.7**
B941	**Kapowsin**	**6.93**	**17**	*e*Pn	**Pn**	**06 06 06.9**	**+1.9**
NLWA	**Neilton Lookou**	**7.06**	**7**	*e*Pn	**Pn**	**06 06 06.4**	**-0.5**
ISA	**Isabella, Lake**	**7.09**	**130**	*e*Pn	**Pn**	**06 06 07.7**	**+0.3**
ISA	**Isabella, Lake**	**7.09**	**130**	*e*P	**Pn**	**06 06 07.7**	**+0.3**
D05A	**Enumclaw**	**7.17**	**18**	*e*Pn	**Pn**	**06 06 09.7**	**+1.4**
DAC	**Darwin (Calif)**	**7.24**	**122**	*e*Pn	**Pn**	**06 06 10.3**	**+0.8**
DAC	**Darwin (Calif)**	**7.24**	**122**	*e*P	**Pn**	**06 06 10.3**	**+0.8**
HAWA	**Hanford**	**7.26**	**33**	*e*Pn	**Pn**	**06 06 10.1**	**+0.4**
E07A	**Sunnyside**	**7.27**	**30**	*e*Pn	**Pn**	**06 06 11.1**	**+1.2**
BMO	**Blue Mountains**	**7.31**	**50**	*e*Pn	**Pn**	**06 06 11.6**	**+1.1**
BMO	**Blue Mountains**	**7.31**	**50**	*e*P	**Pn**	**06 06 11.6**	**+1.1**
GNW	**Green Mountain**	**7.36**	**13**	*e*Pn	**Pn**	**06 06 10.6**	**-0.4**
RYS	**Reyes Peak**	**7.37**	**139**	*e*Sn	**Sn**	**06 07 31.0**	**-3.9**
HDW	**Hoodsport**	**7.41**	**11**	*e*Sn	**Sn**	**06 07 32.0**	**-3.5**
GBL	**Gable Mountain**	**7.46**	**32**	*e*Pn	**Pn**	**06 06 13.6**	**+1.2**
GBL	**Gable Mountain**	**7.46**	**32**	*e*P	**Pn**	**06 06 13.6**	**+1.2**
E08A	**Dider Farm, El**	**7.54**	**34**	*e*Pn	**Pn**	**06 06 13.8**	**+0.3**
WAH2	**Wahluke Slope**	**7.55**	**31**	*e*Pn	**Pn**	**06 06 15.9**	**+2.4**
LTY	**Liberty**	**7.59**	**24**	*e*Pn	**Pn**	**06 06 14.8**	**+0.6**
MFID	**Camas Ranch**	**7.59**	**64**	*e*Pn	**Pn**	**06 06 14.9**	**+0.5**
R11A	**Troy Canyon, C**	**7.70**	**102**	*e*Pn	**Pn**	**06 06 16.9**	**+0.9**
C05A	**Tolt Reservoir**	**7.71**	**18**	*e*Pn	**Pn**	**06 06 17.4**	**+1.5**
OSI	**Osito Audit: C**	**7.72**	**136**	*e*Pn	**Pn**	**06 06 16.6**	**+0.6**
WSHM	**Spangler Hills**	**7.72**	**126**	*e*Sn	**Sn**	**06 07 36.6**	**-6.7**
WSHM				*e*Sg	**Sb**	**06 08 09.1**	**-0.6**
TPNV	**Topopah Spring**	**7.78**	**113**	*e*Pn	**Pn**	**06 06 19.9**	**+2.9**
TPNV	**Topopah Spring**	**7.78**	**113**	*e*P	**Pn**	**06 06 19.9**	**+2.9**
HTW	**Haystack Looko**	**7.80**	**17**	*e*Pn	**Pn**	**06 06 17.2**	**+0.1**
E09A	**Wood Farm, Sta**	**7.97**	**38**	*e*Pn	**Pn**	**06 06 19.9**	**+0.5**
F10A	**Beach Ranch, E**	**8.05**	**44**	*e*Pn	**Pn**	**06 06 22.0**	**+1.5**
D08A	**Wollman Farm,**	**8.05**	**32**	*e*Pn	**Pn**	**06 06 20.6**	**+0.2**
JCW	**Jim Creek**	**8.13**	**16**	*e*Pn	**Pn**	**06 06 21.6**	**0.0**
JCW				*e*Sn	**Sn**	**06 07 50.1**	**-3.1**
B05A	**Bryant**	**8.17**	**15**	P	**Pn**	**06 06 22.2**	**+0.2**
	baz=196,SNR=45						
PASC	**Pasadena Art C**	**8.34**	**136**	*e*Pn	**Pn**	**06 06 23.9**	**-0.6**
GSC	**Goldstone, Bar**	**8.35**	**125**	*e*Pn	**Pn**	**06 06 25.2**	**+0.6**
MWC	**Mount Wilson**	**8.37**	**135**	*e*Pn	**Pn**	**06 06 24.2**	**-0.9**
MWC	**Mount Wilson**	**8.37**	**135**	*e*P	**Pn**	**06 06 24.2**	**-0.9**
B06A	**Marblemount**	**8.54**	**17**	*e*Pn	**Pn**	**06 06 27.9**	**+0.7**
HLID	**Hailey**	**8.62**	**65**	*e*Pn	**Pn**	**06 06 30.0**	**+1.6**
C09A	**Chrisman Ranch**	**8.91**	**32**	*e*Pn	**Pn**	**06 06 33.9**	**+1.6**
PSUT	**Pine Spring**	**8.95**	**98**	*e*Pn	**Pn**	**06 06 34.7**	**+1.6**
B08A	**Colville Reser**	**8.99**	**26**	*e*Pn	**Pn**	**06 06 33.5**	**+0.2**
BGU	**Big Grassy Mou**	**9.25**	**83**	*e*Pn	**Pn**	**06 06 38.5**	**+1.5**
DUG	**Dugway, Tooele**	**9.45**	**87**	*e*Pn	**Pn**	**06 06 41.8**	**+2.0**
DUG	**Dugway, Tooele**	**9.45**	**87**	*e*P	**Pn**	**06 06 41.8**	**+2.0**
HVU	**Hansel Valley**	**9.46**	**78**	*e*Pn	**Pn**	**06 06 42.0**	**+2.0**
HVU	**Hansel Valley**	**9.46**	**78**	*e*P	**Pn**	**06 06 42.0**	**+2.0**
SPUT	**South Promonto**	**9.69**	**80**	*e*Pn	**Pn**	**06 06 42.7**	**-0.4**
PFO	**Pinyon Flats O**	**9.71**	**131**	*e*Pn	**Pn**	**06 06 43.8**	**+0.4**
PFO	**Pinyon Flats O**	**9.71**	**131**	*e*P	**Pn**	**06 06 43.8**	**+0.4**
XPFO	**Piæon Flat**	**9.72**	**131**	*e*Pn	**Pn**	**06 06 43.8**	**+0.4**
PNT	**Penticton**	**9.75**	**22**	*e*Pn	**Pn**	**06 06 45.2**	**+1.5**
LCMT	**Little Creek M**	**9.92**	**106**	*e*Pn	Pn	06 06 51.9	+5.7
TCRU	**Three Creeks R**	**10.00**	**96**	*e*Pn	**Pn**	**06 06 49.7**	**+2.3**
NLU	**North Lily Min**	**10.04**	**88**	*e*Pn	**Pn**	**06 06 50.7**	**+2.8**
MCMT	**McKenzie Canyo**	**10.11**	**60**	*e*Pn	**Pn**	**06 06 49.9**	**+1.0**
CTU	**Camp Tracy**	**10.22**	**84**	*e*Pn	**Pn**	**06 06 50.6**	**+0.1**
KNB	**Kanab**	**10.23**	**105**	*e*Pn	Pn	06 06 57.4	+6.9
KNB	**Kanab**	**10.23**	**105**	*e*P	Pn	06 06 57.4	+6.9
MSU	**Marysvale**	**10.23**	**96**	*e*Pn	**Pn**	**06 06 51.0**	**+0.4**
MSU	**Marysvale**	**10.23**	**96**	*e*P	**Pn**	**06 06 51.0**	**+0.4**
BAR	**Barrett**	**10.29**	**136**	*e*Pn	**Pn**	**06 06 51.2**	**-0.1**
HWUT	**Hardware Ranch**	**10.36**	**79**	*e*Pn	**Pn**	**06 06 54.8**	**+2.5**
MSO	**Missoula**	**10.37**	**48**	*e*Pn	**Pn**	**06 06 53.5**	**+1.1**
PKCU	**Pink Cliffs**	**10.45**	**102**	*e*Pn	**Pn**	**06 06 57.6**	**+3.9**
LLLB	**Lillooet**	**10.47**	**12**	*e*Pn	**Pn**	**06 06 53.4**	**-0.3**
DLMT	**Dillon**	**10.48**	**58**	*e*Pn	**Pn**	**06 06 54.7**	**+0.9**
JTMT	**Jette**	**10.73**	**43**	*e*Pn	**Pn**	**06 06 57.6**	**+0.3**
LRM	**Limekiln Ridge**	**10.76**	**56**	*e*Pn	**Pn**	**06 06 58.5**	**+0.7**
Y12C	**Blythe**	**10.78**	**125**	*e*Pn	**Pn**	**06 06 58.1**	**+0.2**
TMUT	**Trail Mountain**	**10.80**	**91**	*e*Pn	**Pn**	**06 07 02.5**	**+4.1**
FXWY	**Fox Creek**	**11.01**	**68**	*e*Pn	**Pn**	**06 07 02.7**	**+1.4**
TPAW	**Teton Pass**	**11.04**	**69**	*e*Pn	**Pn**	**06 07 02.2**	**+0.6**
QLMT	**Earthquake Lak**	**11.05**	**62**	*e*Pn	**Pn**	**06 07 03.9**	**+2.0**
GLA	**Glamis**	**11.07**	**128**	*e*Pn	**Pn**	**06 07 01.9**	**0.0**
GLA	**Glamis**	**11.07**	**128**	*e*P	**Pn**	**06 07 01.9**	**0.0**
P17A	**Butcher Ranch,**	**11.12**	**90**	*e*Pn	**Pn**	**06 07 04.2**	**+1.4**
IMW	**Indian Meadow**	**11.13**	**67**	*e*Pn	**Pn**	**06 07 05.6**	**+2.6**
SNOW	**Snow King Moun**	**11.17**	**69**	*e*Pn	**Pn**	**06 07 04.8**	**+1.3**
YHB	**Horse Butte**	**11.19**	**63**	*e*Pn	**Pn**	**06 07 04.5**	**+0.9**
BOZ	**Bozeman (W)**	**11.19**	**58**	*e*Pn	**Pn**	**06 07 03.3**	**-0.4**
BOZ	**Bozeman (W)**	**11.19**	**58**	*e*P	**Pn**	**06 07 03.3**	**-0.4**
LOHW	**Long Hollow**	**11.31**	**69**	*e*Pn	**Pn**	**06 07 06.2**	**+0.9**
YMR	**Madison River**	**11.32**	**63**	*e*Pn	**Pn**	**06 07 06.0**	**+0.5**
YPP	**Pitchstone Pla**	**11.32**	**65**	*e*Pn	**Pn**	**06 07 08.1**	**+2.6**
FLWY	**Flagg Ranch**	**11.34**	**66**	*e*Pn	**Pn**	**06 07 08.6**	**+2.8**
YFT	**Old Faithful**	**11.35**	**64**	*e*Pn	**Pn**	**06 07 09.4**	**+3.5**
SRU	**San Rafael Swe**	**11.35**	**92**	*e*Pn	**Pn**	**06 07 09.5**	**+3.6**
SRU	**San Rafael Swe**	**11.35**	**92**	*e*P	**Pn**	**06 07 09.5**	**+3.6**
P18A	**Preston Nutter**	**11.48**	**89**	*e*Pn	**Pn**	**06 07 11.9**	**+4.1**
H17A	**Grant Village**	**11.51**	**65**	*e*Pn	**Pn**	**06 07 11.8**	**+3.7**
HRY	**Holter Researc**	**11.55**	**52**	*e*Pn	**Pn**	**06 07 09.1**	**+0.6**
WALA	**Waterton Lakes**	**11.79**	**39**	*e*Pn	**Pn**	**06 07 12.4**	**+0.7**
WUAZ	**Wupatki**	**11.93**	**110**	*e*Pn	Pn	06 07 22.0	+8.2
BW06	**Boulder Array**	**11.93**	**73**	*e*Pn	**Pn**	**06 07 15.6**	**+1.7**
PD31	**Pinedale Array**	**11.93**	**73**	*e*Pn	**Pn**	**06 07 15.1**	**+1.2**
PDAR	**Pinedale Array**	**11.93**	**73**	Pn	**Pn**	**06 07 16.3**	**+2.4**
	0.9nm,0.3s,baz=246,slow=11,SNR=24						
PDAR				LR	LR	06 12 38.9	
	comp=Z,1µm,19.1s,baz=264,slow=42						
PDAR	**Pinedale Array**	**11.93**	**73**	*e*Pn	**Pn**	**06 07 15.5**	**+1.6**
BBB	**Bella Bella**	**11.96**	**351**	Pn	**Pn**	**06 07 14.8**	**+0.8**
	0.3nm,0.3s,baz=176,slow=13,SNR=6.3						
BBB				LR	LR	06 10 41.5	
	comp=Z,2µm,19.4s,baz=176,slow=32						
GCMT	**Greycliff**	**12.55**	**59**	*e*Pn	**Pn**	**06 07 22.9**	**+0.8**
PV09	**Paradox Valley**	**12.55**	**94**	*e*Pn	**Pn**	**06 07 22.9**	**+0.6**
PV23	**Carpenter Ridg**	**12.65**	**94**	*e*Pn	**Pn**	**06 07 27.5**	**+3.8**
PV21	**Cone Mtn., Par**	**12.65**	**93**	*e*Pn	**Pn**	**06 07 26.2**	**+2.5**
PV14	**Lion Creek, Pa**	**12.66**	**94**	*e*Pn	**Pn**	**06 07 24.2**	**+0.3**
PV19	**Morning Glory**	**12.71**	**94**	*e*Pn	**Pn**	**06 07 23.3**	**-1.2**
PV20	**West Nyswonger**	**12.71**	**94**	*e*Pn	**Pn**	**06 07 25.6**	**+1.1**
PV17	**East Wray Mesa**	**12.73**	**94**	*e*Pn	**Pn**	**06 07 25.4**	**+0.6**
PV16	**Nyswonger Mesa**	**12.76**	**94**	*e*Pn	**Pn**	**06 07 25.8**	**+0.7**
PV11	**David Mesa, Pa**	**12.79**	**94**	*e*Pn	**Pn**	**06 07 29.1**	**+3.5**
PV22	**Blue Mesa, Par**	**12.80**	**93**	*e*Pn	**Pn**	**06 07 28.4**	**+2.6**
PV03	**Paradox Valley**	**12.82**	**94**	*e*Pn	**Pn**	**06 07 28.7**	**+2.6**
PV12	**Saucer Basin,**	**12.84**	**94**	*e*Pn	**Pn**	**06 07 29.4**	**+3.1**
PV13	**Radium Mtn., P**	**12.87**	**95**	*e*Pn	**Pn**	**06 07 29.4**	**+2.7**
PV02	**Paradox Valley**	**12.92**	**94**	*e*Pn	**Pn**	**06 07 30.3**	**+2.9**
O20A	**White River Ci**	**12.94**	**86**	*e*Pn	**Pn**	**06 07 29.9**	**+2.2**
PV01	**Paradox Valley**	**13.07**	**95**	*e*Pn	**Pn**	**06 07 32.4**	**+3.0**
MVCO	**Mesa Verde**	**13.39**	**98**	*e*Pn	**Pn**	**06 07 36.0**	**+2.2**
EGMT	**Eagleton**	**13.42**	**50**	*e*Pn	**Pn**	**06 07 33.5**	**-0.5**
RWWY	**Rawlins**	**13.62**	**79**	*e*Pn	**Pn**	**06 07 36.5**	**-0.5**
SMCO	**Snowmass**	**14.05**	**89**	*e*Pn	**Pn**	**06 07 44.8**	**+1.8**
TUC	**Tucson**	**14.12**	**120**	*e*Pn	**Pn**	**06 07 47.3**	**+3.7**
TUC	**Tucson**	**14.12**	**120**	*e*P	**Pn**	**06 07 47.3**	**+3.7**
K22A	**Casper**	**14.15**	**75**	*e*Pn	**Pn**	**06 07 43.3**	**-0.9**
S22A	**4UR Ranch, Cre**	**14.50**	**95**	*e*Pn	**Pn**	**06 07 50.9**	**+1.9**
N23A	**Red Feather La**	**14.61**	**82**	*e*Pn	**Pn**	**06 07 51.0**	**+0.4**
PHWY	**Pilot Hill**	**14.95**	**80**	*e*Pn	**Pn**	**06 07 54.9**	**-0.3**
	57nm,1.1s						
ISCO	**Idaho Springs**	**14.99**	**86**	*e*Pn	**Pn**	**06 07 57.2**	**+1.5**
	20nm,1.0s						
ISCO	**Idaho Springs**	**14.99**	**86**	*e*P	**Pn**	**06 07 57.2**	**+1.5**
ISCO				pmax	pmax		
	comp=Z,20nm,1.0s						
LAO	**LASA Array**	**15.10**	**59**	*e*Pn	**Pn**	**06 07 58.0**	**+1.2**
	comp=Z,56nm,0.8s						
Q24A	**Divide**	**15.49**	**89**	*e*Pn	**Pn**	**06 08 04.0**	**+1.7**
	comp=Z,28nm,1.0s						
SDCO	**Great Sand Dun**	**15.51**	**93**	*e*Pn	**Pn**	**06 08 04.4**	**+1.8**
	comp=Z,74nm,1.0s						
ANMO	**Albuquerque**	**15.78**	**104**	Pn	**Pn**	**06 08 07.3**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=302,slow=12,SNR=7.1						
ANMO				LR	LR	06 13 54.2	
	comp=Z,1µm,20.8s,baz=293,slow=36						
ANMO	**Albuquerque**	**15.78**	**104**	*e*Pn	**P**	**06 08 10.5**	**+0.7**
	comp=Z,9.4nm,0.9s						
ANMO	**Albuquerque**	**15.78**	**104**	*de*P	**P**	**06 08 11.0**	**+1.2**
ANMO				pmax	pmax		
	comp=Z,8.0nm,1.1s						
RSSD	**Black Hills**	**16.08**	**70**	*e*Pn	**Pn**	**06 08 08.0**	**-1.8**
	comp=Z,36nm,1.2s						
RSSD	**Black Hills**	**16.08**	**70**	*e*P	**Pn**	**06 08 08.0**	**-1.8**
RSSD				pmax	pmax		
	comp=Z,36nm,1.2s						
HSIG		**16.27**	**130**	*e*Pn	**P**	**06 08 15.9**	**+0.8**
	comp=Z,28nm,1.1s						
T25A	**Trinidad**	**16.51**	**95**	*e*Pn	**P**	**06 08 17.6**	**-0.4**
	comp=Z,56nm,1.2s						
WRAK	**Wrangell Islan**	**16.71**	**346**	*e*Pn	**P**	**06 08 19.3**	**-0.4**
	comp=Z,42nm,1.1s						
SRIG	**Santa Rosalia**	**16.87**	**137**	*e*Pn	**P**	**06 08 22.3**	**+0.6**
	comp=Z,45nm,1.1s						
DGMT	**Dagmar**	**16.98**	**55**	*e*Pn	**Pn**	**06 08 19.4**	**-1.7**
	comp=Z,210nm,1.6s						
KSCO	**Kaye Shedlock'**	**17.40**	**87**	*e*Pn	**Pn**	**06 08 26.9**	**+0.5**
	comp=Z,62nm,0.9s						
OGNE	**Ogallala**	**17.56**	**81**	*e*Pn	**Pn**	**06 08 28.2**	**-0.1**
	comp=Z,261nm,1.6s						
MNTX	**Cornudas Mount**	**18.18**	**112**	*e*Pn	**Pn**	**06 08 35.2**	**-0.8**
	comp=Z,14nm,1.0s						
DLBC	**Dease Lake**	**18.32**	**352**	P	**P**	**06 08 38.2**	**+0.6**
	comp=Z,0.1nm,0.3s,baz=182,slow=9.0,SNR=18						
DLBC	**Dease Lake**	**18.32**	**352**	*e*Pn	**P**	**06 08 39.5**	**+1.8**
	comp=Z,30nm,1.3s						
JIS	**Juneau Island**	**18.84**	**345**	*e*P	**Pn**	**06 08 45.1**	**+1.3**
	comp=Z,33nm,0.9s						
MSTX	**Muleshoe**	**18.94**	**103**	*e*P	**Pn**	**06 08 45.7**	**+0.4**
	comp=Z,22nm,1.0s						
BESE	**Bessie Mountai**	**19.22**	**344**	*e*P	**Pn**	**06 08 48.3**	**-0.1**
	comp=Z,60nm,1.2s						
AMTX	**Amarillo**	**19.38**	**99**	*e*P	**Pn**	**06 08 50.7**	**+0.1**
	comp=Z,22nm,0.8s						
CBKS	**Cedar Bluff**	**19.65**	**86**	*e*P	**P**	**06 08 52.8**	**+0.5**
	comp=Z,192nm,1.4s						
CBKS	**Cedar Bluff**	**19.65**	**86**	*e*P	**P**	**06 08 52.8**	**+0.5**
CBKS				pmax	pmax		
	comp=Z,192nm,1.4s						
MDND	**Maddock**	**19.75**	**59**	*e*P	**P**	**06 08 53.6**	**+0.3**
	comp=Z,123nm,1.1s						
SKAG	**Skagway**	**20.13**	**345**	*e*P	**P**	**06 08 57.7**	**+0.5**
	comp=Z,71nm,1.3s						
BGNE	**Belgrade**	**20.43**	**78**	*e*P	**P**	**06 09 00.5**	**-0.3**
	comp=Z,94nm,1.1s						
LPIG	**La Paz**	**20.50**	**138**	P	**P**	**06 09 01.8**	**+0.3**
	comp=Z,8.2nm,0.3s,baz=18,slow=6.4,SNR=2.4						
LPIG				LR	LR	06 16 25.1	
	comp=Z,2µm,19.8s,baz=326,slow=35						
TX31	**Lajitas Ar. Si**	**20.76**	**115**	*e*P	Pn	06 09 07.2	+0.3
TXAR	**Lajitas Array**	**20.76**	**115**	P	Pn	06 09 07.1	+0.1
	comp=Z,29nm,1.0s,baz=297,slow=6.8,SNR=66						
TXAR				LR	LR	06 17 36.2	
	comp=Z,1µm,19.2s,baz=0.0,slow=38						
G32A	**Webster**	**20.82**	**67**	*e*P	**P**	**06 09 04.0**	**-1.0**
	comp=Z,88nm,0.9s						
HPIG		**21.01**	**124**	*e*P	**P**	**06 09 10.2**	**+2.9**
	comp=Z,29nm,1.1s						
SLBS	**Sierra La Lagu**	**21.02**	**138**	*e*P	**P**	**06 09 10.9**	**+3.5**
	comp=Z,38nm,1.1s						
WHY	**Whitehorse**	**21.16**	**347**	*e*P	**P**	**06 09 09.0**	**+0.4**
	comp=Z,18nm,0.9s						
ECSD	**EROS Data Cent**	**21.42**	**72**	*e*P	**P**	**06 09 09.5**	**-1.9**
	comp=Z,33nm,0.9s						
WMOK	**Wichita Mounta**	**21.63**	**97**	*e*P	**P**	**06 09 13.7**	**-0.1**
	comp=Z,12nm,0.9s						
WMOK	**Wichita Mounta**	**21.63**	**97**	*e*P	**P**	**06 09 13.7**	**-0.1**
WMOK				pmax	pmax		
	comp=Z,12nm,0.9s						
ABTX	**Abilene, Hawle**	**21.89**	**103**	*e*P	**P**	**06 09 17.1**	**+0.5**
	comp=Z,39nm,1.1s						
KSU1	**Kansas State U**	**21.96**	**84**	*e*P	**P**	**06 09 17.8**	**+0.5**
	comp=Z,172nm,1.3s						
AGMN	**Agassiz Nation**	**22.30**	**59**	*e*P	**P**	**06 09 20.2**	**-0.6**
	comp=Z,69nm,0.9s						
ULM	**Lac du Bonnet**	**22.70**	**54**	P	**P**	**06 09 24.6**	**-0.5**
	comp=Z,81nm,0.9s,baz=260,slow=10,SNR=31						
ULM	**Lac du Bonnet**	**22.70**	**54**	*e*P	**P**	**06 09 24.4**	**-0.7**
	comp=Z,92nm,0.9s						
ULM	**Lac du Bonnet**	**22.70**	**54**	*e*P	**P**	**06 09 24.4**	**-0.7**
ULM				pmax	pmax		
	comp=Z,92nm,0.9s						
JCT	**Junction City**	**22.85**	**108**	*e*P	**P**	**06 09 27.5**	**+0.6**
	comp=Z,34nm,1.1s						
JCT	**Junction City**	**22.85**	**108**	*e*P	**P**	**06 09 27.5**	**+0.6**
JCT				pmax	pmax		
	comp=Z,34nm,1.1s						
G35A	**Watkins**	**22.95**	**68**	*e*P	**P**	**06 09 26.8**	**-0.9**
	comp=Z,134nm,1.8s						
YKA	**Yellowknife Ar**	**23.03**	**13**	LR	LR	06 18 09.1	
	comp=Z,50nm,18.9s,baz=202,slow=36						
J36A	**Seneca 1, Swea**	**23.09**	**73**	*e*P	**P**	**06 09 27.2**	**-1.9**
	comp=Z,91nm,0.9s						
YKW3	**Yellowknife Ar**	**23.09**	**13**	*e*P	**P**	**06 09 28.6**	**-0.4**
	comp=Z,23nm,0.8s						
RAGM	**Ragged Mountai**	**23.39**	**335**	*e*P	**P**	**06 09 32.5**	**+0.4**
	comp=Z,25nm,1.3s						
N37A	**Lee Faris, Mou**	**23.47**	**79**	*e*P	**P**	**06 09 32.7**	**-0.3**
	comp=Z,39nm,0.9s						
TUL1	**Leonard**	**23.48**	**92**	*e*P	**P**	**06 09 33.3**	**+0.1**
	comp=Z,35nm,1.0s						
F36A	**Milaca**	**23.64**	**66**	*e*P	**P**	**06 09 34.9**	**+0.2**
	comp=Z,36nm,1.3s						
B35A	**Bob, Littlefor**	**23.72**	**60**	*e*P	**P**	**06 09 35.7**	**+0.3**
	comp=Z,68nm,1.1s						
I37A	**Lemond, Waseca**	**23.73**	**71**	*e*P	**P**	**06 09 35.0**	**-0.6**
	comp=Z,87nm,1.0s						
BMRM	**Bremner River**	**23.82**	**336**	*e*P	**P**	**06 09 36.7**	**+0.4**
	comp=Z,27nm,1.3s						
WHTX	**Lake Whitney,**	**23.82**	**102**	*e*P	**P**	**06 09 37.7**	**+1.2**
	comp=Z,40nm,0.9s						
D36A	**Goodland**	**23.96**	**63**	*e*P	**P**	**06 09 38.2**	**+0.4**
	comp=Z,112nm,1.5s						
SCIA	**State Center**	**24.04**	**76**	*e*P	**P**	**06 09 40.4**	**+1.9**
	comp=Z,34nm,1.0s						
SPMN	**Marine on St.**	**24.14**	**68**	*e*P	**P**	**06 09 40.1**	**+0.8**
	comp=Z,43nm,0.9s						
P38A	**Dawn**	**24.19**	**81**	*e*P	**P**	**06 09 40.0**	**+0.2**
	comp=Z,24nm,1.0s						
FID	**Port Fidalgo**	**24.25**	**334**	*e*P	**P**	**06 09 40.9**	**+0.6**
	comp=Z,17nm,1.1s						
K38A	**Parkersburg**	**24.29**	**74**	*e*P	**P**	**06 09 40.0**	**-0.8**
	comp=Z,104nm,1.4s						
DIV	**Divide**	**24.30**	**335**	*e*P	**P**	**06 09 41.9**	**+1.0**
	comp=Z,11nm,0.9s						
435B	**Jarrell**	**24.32**	**105**	*e*P	**P**	**06 09 41.6**	**+0.5**
	comp=Z,33nm,0.9s						
GLI	**Glacier Island**	**24.55**	**334**	*e*P	**P**	**06 09 43.3**	**+0.3**
	comp=Z,16nm,0.8s						
KLU	**Klutina**	**24.63**	**336**	*e*P	**P**	**06 09 44.9**	**+1.1**
	comp=Z,13nm,1.0s						
N39A	**Derby Farms, D**	**24.72**	**78**	*e*P	**P**	**06 09 45.4**	**+0.6**
	comp=Z,64nm,1.4s						
KDAK	**Kodiak Island**	**24.73**	**324**	P	**P**	**06 09 45.4**	**+0.8**
	comp=Z,13nm,0.8s,baz=113,slow=6.4,SNR=7.9						
KDAK				LR	LR	06 16 56.2	
	comp=Z,2µm,21.8s,baz=134,slow=30						
OHAK	**Old Harbor**	**24.76**	**322**	*e*P	**P**	**06 09 45.0**	**+0.2**
HHAR	**Hobbs**	**24.77**	**89**	*e*P	**P**	**06 09 46.4**	**+1.1**
	comp=Z,41nm,0.9s						
SII	**Sitkinak Islan**	**24.86**	**320**	*e*P	**P**	**06 09 46.3**	**+0.5**
	comp=Z,123nm,1.5s						
E38A	**The Farm, Brul**	**25.03**	**64**	*e*P	**P**	**06 09 48.0**	**+0.4**
	comp=Z,41nm,1.0s						
I39A	**Houston**	**25.10**	**71**	*e*P	**P**	**06 09 49.6**	**+1.5**
	comp=Z,129nm,0.9s						
DAWY	**Dawson**	**25.13**	**345**	*e*P	**P**	**06 09 49.8**	**+1.5**
	comp=Z,17nm,0.9s						
EYMN	**Ely**	**25.16**	**61**	*e*P	**P**	**06 09 50.3**	**+1.7**
	comp=Z,84nm,1.4s						
CNPM	**China Poot**	**25.17**	**328**	*e*P	**P**	**06 09 50.0**	**+1.4**
	comp=Z,28nm,1.0s						
BRLK	**Bradley Lake**	**25.18**	**329**	*e*P	**P**	**06 09 49.0**	**+0.4**
	comp=Z,32nm,1.3s						
W39A	**Magazine**	**25.26**	**92**	*e*P	**P**	**06 09 51.1**	**+1.4**
	comp=Z,33nm,1.2s						
P40A	**Paris**	**25.33**	**81**	*e*P	**P**	**06 09 50.1**	**-0.1**
	comp=Z,60nm,1.4s						
SCM	**Sheep Creek Mo**	**25.33**	**335**	*e*P	**P**	**06 09 51.5**	**+1.4**
	comp=Z,27nm,0.8s						
SCM	**Sheep Creek Mo**	**25.33**	**335**	*e*P	**P**	**06 09 51.5**	**+1.4**
SCM				pmax	pmax		
	comp=Z,27nm,0.8s						
R40A	**Maddies Statio**	**25.46**	**84**	*e*P	**P**	**06 09 52.1**	**+0.7**
	comp=Z,12nm,0.9s						
L40A	**Anamosa**	**25.50**	**75**	*e*P	**P**	**06 09 52.1**	**+0.4**
	comp=Z,28nm,0.9s						
SML	**Sawmill**	**25.64**	**334**	*e*P	**P**	**06 09 53.9**	**+1.1**
	comp=Z,16nm,0.8s						
PMR	**Palmer**	**25.75**	**333**	*e*P	**P**	**06 09 53.7**	**-0.1**
	comp=Z,12nm,0.8s						
PMR	**Palmer**	**25.75**	**333**	*e*P	**P**	**06 09 53.7**	**-0.1**
PMR				pmax	pmax		
	comp=Z,12nm,0.8s						
V40A	**Witts Springs**	**25.78**	**90**	*e*P	**P**	**06 09 56.0**	**+1.6**
	comp=Z,61nm,1.1s						
GHO	**Glory Hole Cre**	**25.81**	**334**	*e*P	**P**	**06 09 55.2**	**+0.8**
	comp=Z,25nm,1.1s						
W40A	**Ferguson Farm,**	**25.81**	**91**	*e*P	**P**	**06 09 56.0**	**+1.3**
	comp=Z,60nm,1.1s						
G40A	**Rib Lake**	**25.97**	**68**	*e*P	**P**	**06 09 57.0**	**+1.0**
	comp=Z,26nm,1.0s						
N41A	**Harden Midland**	**25.98**	**78**	*e*P	**P**	**06 09 56.1**	**-0.1**
	comp=Z,29nm,0.9s						
NATX	**Nacogdoches**	**26.02**	**100**	*e*P	**P**	**06 09 56.8**	**+0.2**
	comp=Z,30nm,1.0s						
HKT	**Hockley**	**26.04**	**104**	*e*P	**P**	**06 09 56.9**	**+0.2**
	comp=Z,52nm,1.3s						
HKT	**Hockley**	**26.04**	**104**	*e*P	**P**	**06 09 56.9**	**+0.2**
HKT				pmax	pmax		
	comp=Z,52nm,1.3s						
SCRK	**Sand Creek**	**26.07**	**341**	*e*P	**P**	**06 09 57.8**	**+0.9**
	comp=Z,7.3nm,1.0s						
RIDG	**Independ'e Rid**	**26.09**	**340**	*e*P	**P**	**06 09 57.9**	**+0.8**
	comp=Z,16nm,1.1s						
JFWS	**Jewell Farm**	**26.11**	**73**	*e*P	**P**	**06 09 57.7**	**+0.4**
	comp=Z,30nm,0.8s						
JFWS	**Jewell Farm**	**26.11**	**73**	*e*P	**P**	**06 09 57.7**	**+0.4**
JFWS				pmax	pmax		
	comp=Z,30nm,0.8s						
EGAK	**Eagle**	**26.12**	**344**	*e*P	**P**	**06 09 57.5**	**+0.3**
I41A	**Arkdale**	**26.27**	**70**	*e*P	**P**	**06 09 59.7**	**+1.0**
	comp=Z,61nm,0.9s						
DHY	**Denali Highway**	**26.28**	**337**	*e*P	**P**	**06 09 59.9**	**+1.1**
	comp=Z,44nm,1.2s						
WHAR	**Wooly Hollow**	**26.37**	**91**	*e*P	**P**	**06 10 00.9**	**+1.2**
	comp=Z,58nm,1.3s						
H41A	**Junction City**	**26.39**	**69**	*e*P	**P**	**06 09 59.8**	**-0.1**
	comp=Z,41nm,0.9s						
W41B	**Gary Mavity, V**	**26.45**	**91**	*e*P	**P**	**06 10 01.4**	**+1.1**
	comp=Z,37nm,1.4s						
LNIG	**Linares**	**26.47**	**118**	*e*P	**P**	**06 10 01.7**	**+1.0**
	comp=Z,6.0nm,0.8s						
P42A	**Winchester**	**26.60**	**80**	*e*P	**P**	**06 10 02.1**	**+0.3**
	comp=Z,36nm,0.9s						
L42A	**Oliver, Polo**	**26.65**	**75**	*e*P	**P**	**06 10 02.9**	**+0.7**
	comp=Z,57nm,0.9s						
COWI	**Conover**	**26.70**	**66**	*e*P	**P**	**06 10 03.4**	**+0.7**
	comp=Z,13nm,0.8s						
F41A	**Three Lakes**	**26.73**	**66**	*e*P	**P**	**06 10 04.5**	**+1.6**
	comp=Z,35nm,1.0s						
SKT	**Skwentna**	**26.85**	**332**	*e*P	**P**	**06 10 04.3**	**+0.5**
	comp=Z,9.9nm,0.8s						
CHGN	**Chignik**	**26.87**	**317**	*e*P	**P**	**06 10 04.3**	**+0.3**
	comp=Z,35nm,0.8s						
SLM	**Saint Louis**	**26.91**	**82**	*e*P	**P**	**06 10 05.1**	**+0.6**
	comp=Z,28nm,0.7s						
SLM	**Saint Louis**	**26.91**	**82**	*e*P	**P**	**06 10 05.1**	**+0.6**
SLM				pmax	pmax		
	comp=Z,28nm,0.7s						
I42A	**Draeger Farm,**	**26.98**	**71**	*e*P	**P**	**06 10 06.0**	**+0.9**
	comp=Z,58nm,0.8s						
H42A	**Shiocton**	**27.20**	**69**	*e*P	**P**	**06 10 08.0**	**+0.9**
	comp=Z,49nm,0.9s						
G42A	**Mountain**	**27.23**	**68**	*e*P	**P**	**06 10 09.0**	**+1.7**
	comp=Z,45nm,1.0s						

MCK	**McKinley**	**27.23**	**337**	eP	**P**	**06 10 07.9**	**+0.6**
	comp=Z,9.7nm,0.9s						
MCK	**McKinley**	**27.23**	**337**	eP	**P**	**06 10 07.9**	**+0.6**
MCK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PBMO	**Poplar Bluff**	**27.29**	**86**	eP	**P**	**06 10 08.3**	**+0.3**
	comp=Z,17nm,1.0s						
TRF	**Thorofare Moun**	**27.45**	**336**	eP	**P**	**06 10 09.9**	**+0.6**
	comp=Z,8.4nm,0.9s						
IL1	**Eielson Array**	**27.46**	**340**	eP	**P**	**06 10 09.6**	**+0.4**
ILAR	**Eielson Array**	**27.46**	**340**	P	**P**	**06 10 09.8**	**+0.5**
	comp=Z,2.0nm,0.7s,baz=154,slow=8.6,SNR=30						
ILAR				PcP	**PcP**	**06 13 28.3**	**+1.1**
	comp=Z,1.5nm,0.9s,baz=172,slow=2.3,SNR=6.0						
ILAR				LR	LR	06 19 19.2	
	comp=Z,1µm,19.6s,baz=152,slow=33						
ILB	**Eielson Array**	**27.46**	**340**	eP	**P**	**06 10 10.1**	**+0.8**
WRH	**Wood River Hil**	**27.55**	**339**	eP	**P**	**06 10 10.0**	**-0.1**
	comp=Z,13nm,1.2s						
CCB	**Clear Creek Bu**	**27.61**	**339**	eP	**P**	**06 10 11.0**	**+0.4**
	comp=Z,6.3nm,1.0s						
PPLA	**Purkeypile**	**27.69**	**333**	eP	**P**	**06 10 11.2**	**-0.2**
	comp=Z,18nm,1.0s						
G43A	**Wallace**	**27.75**	**67**	eP	**P**	**06 10 12.3**	**+0.3**
	comp=Z,45nm,1.0s						
SVW2	**Sparrevohn**	**27.84**	**328**	eP	**P**	**06 10 12.8**	**0.0**
	comp=Z,7.5nm,1.0s						
M44A	**Midewin, Midew**	**27.95**	**76**	eP	**P**	**06 10 14.8**	**+1.0**
	comp=Z,36nm,1.1s						
CAST	**Castle Rocks**	**28.00**	**334**	eP	**P**	**06 10 14.3**	**+0.1**
	comp=Z,8.9nm,1.1s						
BPAW	**Bear Paw Mtn.**	**28.13**	**336**	eP	**P**	**06 10 15.2**	**0.0**
	comp=Z,9.4nm,0.9s						
INK	**Inuvik**	**28.33**	**353**	P	**P**	**06 10 17.5**	**+0.5**
	comp=Z,2.9nm,0.7s,baz=171,slow=11,SNR=6.0						
INK				LR	LR	06 20 58.3	
	comp=Z,1µm,18.5s,baz=155,slow=35						
INK	**Inuvik**	**28.33**	**353**	eP	**P**	**06 10 17.6**	**+0.7**
	comp=Z,9.9nm,1.0s						
INK	**Inuvik**	**28.33**	**353**	eP	**P**	**06 10 17.6**	**+0.7**
INK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
FYU	**Fort Yukon**	**28.53**	**343**	eP	**P**	**06 10 18.9**	**+0.2**
	comp=Z,26nm,1.4s						
P45A	**Graceland, Par**	**28.57**	**79**	eP	**P**	**06 10 20.1**	**+0.8**
	comp=Z,17nm,1.0s						
MLY	**Manley**	**28.73**	**338**	eP	**P**	**06 10 21.4**	**+0.8**
	comp=Z,11nm,1.0s						
M46A	**Old House Fiel**	**29.20**	**75**	eP	**P**	**06 10 25.6**	**+0.6**
	comp=Z,63nm,1.5s						
BLO	**Bloomington**	**29.57**	**80**	eP	**P**	**06 10 29.0**	**+0.7**
	comp=Z,16nm,0.8s						
BLO	**Bloomington**	**29.57**	**80**	eP	**P**	**06 10 29.0**	**+0.7**
BLO				pmax	pmax		
	comp=Z,16nm,0.8s						
PLAL	**Pickwick Lake**	**29.70**	**88**	eP	**P**	**06 10 30.6**	**+1.1**
	comp=Z,15nm,0.9s						
WCI	**Wyandotte Cave**	**30.00**	**81**	eP	**P**	**06 10 33.2**	**+1.1**
	comp=Z,10.0nm,0.7s						
WCI	**Wyandotte Cave**	**30.00**	**81**	eP	**P**	**06 10 33.2**	**+1.1**
WCI				pmax	pmax		
	comp=Z,10.0nm,0.7s						
346A	**Big Creek Wild**	**30.13**	**96**	eP	**P**	**06 10 34.2**	**+1.0**
	comp=Z,33nm,1.1s						
COLD	**Coldfoot**	**30.23**	**341**	eP	**P**	**06 10 34.7**	**+0.9**
	comp=Z,9.2nm,1.4s						
X48A	**Hartselle**	**30.69**	**89**	eP	**P**	**06 10 38.4**	**+0.2**
	comp=Z,9.1nm,0.9s						
UNV	**Unalaska Valle**	**30.70**	**310**	eP	**P**	**06 10 38.4**	**+0.4**
	comp=Z,61nm,1.1s						
T49A	**Edmonton**	**30.91**	**83**	eP	**P**	**06 10 39.8**	**-0.3**
	comp=Z,15nm,1.0s						
TOLK	**Toolik Lake Re**	**31.19**	**343**	eP	**P**	**06 10 42.5**	**+0.1**
	comp=Z,9.9nm,0.9s						
SWET	**Sewanee**	**31.25**	**87**	eP	**P**	**06 10 43.4**	**+0.1**
	comp=Z,26nm,1.6s						
LRAL	**Lakeview Retre**	**31.29**	**91**	eP	**P**	**06 10 44.1**	**+0.6**
	comp=Z,25nm,1.4s						
W50A	**Signal Mountai**	**31.73**	**86**	eP	**P**	**06 10 47.6**	**+0.2**
	comp=Z,36nm,1.4s						
ACSO	**Alum Creek Sta**	**31.95**	**76**	eP	**P**	**06 10 49.3**	**0.0**
	comp=Z,20nm,1.0s						
CPCT	**Cooper Cave**	**32.24**	**86**	eP	**P**	**06 10 52.3**	**+0.4**
	comp=Z,21nm,1.1s						
250A	**Grady**	**32.30**	**93**	eP	**P**	**06 10 52.2**	**-0.2**
	comp=Z,66nm,1.6s						
X51A	**Calhoun**	**32.31**	**87**	eP	**P**	**06 10 52.7**	**+0.2**
	comp=Z,32nm,1.4s						
TKL	**Tuckaleechee C**	**32.74**	**85**	LR	LR	06 25 32.4	
	comp=Z,551nm,20.5s,baz=290,slow=39						
W52A	**Murphy**	**32.82**	**86**	eP	**P**	**06 10 57.1**	**0.0**
	comp=Z,41nm,1.4s						
Y52A	**Lilburn**	**33.19**	**88**	eP	**P**	**06 11 01.0**	**+0.7**
	comp=Z,20nm,1.1s						
V53A	**Saluda**	**33.46**	**84**	eP	**P**	**06 11 02.7**	**+0.1**
	comp=Z,17nm,1.0s						
ALLY	**Alegheny Colle**	**33.70**	**73**	eP	**P**	**06 11 04.8**	**+0.1**
	comp=Z,54nm,1.4s						
ERPA	**Erie**	**33.71**	**72**	eP	**P**	**06 11 04.9**	**+0.2**
	comp=Z,22nm,1.0s						
SADO	**Sadowa**	**33.82**	**67**	P	**P**	**06 11 06.7**	**+1.1**
	comp=Z,21nm,0.9s,baz=295,slow=10.0,SNR=6.8						
SADO	**Sadowa**	**33.82**	**67**	eP	**P**	**06 11 05.8**	**+0.2**
	comp=Z,34nm,1.1s						
253A	**Americus**	**33.89**	**91**	eP	**P**	**06 11 06.2**	**-0.1**
	comp=Z,30nm,1.0s						
N54A	**Moraine State**	**33.98**	**74**	eP	**P**	**06 11 07.3**	**+0.2**
	comp=Z,87nm,1.7s						
M54A	**Oil Creek Stat**	**34.09**	**73**	eP	**P**	**06 11 07.4**	**-0.5**
	comp=Z,58nm,1.5s						
MCWV	**Mont Chateau**	**34.43**	**76**	eP	**P**	**06 11 10.9**	**0.0**
	comp=Z,14nm,1.0s						
PAULI	**Pauline**	**34.53**	**85**	eP	**P**	**06 11 12.5**	**+0.6**
	comp=Z,24nm,1.2s						
KMSC	**Kings Mountain**	**34.78**	**84**	eP	**P**	**06 11 14.2**	**+0.2**
	comp=Z,38nm,1.2s						
VWCC	**Virginia Weste**	**35.06**	**80**	eP	**P**	**06 11 17.7**	**+1.3**
MMNY	**Mt. Morris Dam**	**35.09**	**70**	eP	**P**	**06 11 17.3**	**+0.8**
	comp=Z,26nm,0.9s						
JSC	**Jenkinsville**	**35.16**	**86**	eP	**P**	**06 11 17.3**	**0.0**
	comp=Z,20nm,1.1s						
JSC	**Jenkinsville**	**35.16**	**86**	eP	**P**	**06 11 17.3**	**0.0**
JSC				pmax	pmax		
	comp=Z,20nm,1.1s						
PLVO	**Plevna**	**35.23**	**66**	eP	**P**	**06 11 18.2**	**+0.5**
	comp=Z,36nm,1.2s						
BINY	**Binghamton**	**36.59**	**71**	eP	**P**	**06 11 30.6**	**+1.1**
	comp=Z,37nm,1.1s						
TRQ	**Mont Tremblant**	**36.77**	**64**	eP	**P**	**06 11 31.0**	**0.0**
LONY	**Lake Ozonia**	**37.05**	**66**	eP	**P**	**06 11 33.6**	**+0.3**
	comp=Z,41nm,1.5s						
RES	**Resolute Bay**	**37.10**	**13**	P	**P**	**06 11 33.9**	**+0.6**
	comp=Z,12nm,0.9s,baz=229,slow=11,SNR=4.9						
RES				LR	LR	06 26 23.1	
	comp=Z,1µm,18.4s,baz=220,slow=36						
RES	**Resolute Bay**	**37.10**	**13**	eP	**P**	**06 11 34.9**	**+1.5**
	comp=Z,16nm,1.0s						
RES	**Resolute Bay**	**37.10**	**13**	eP	**P**	**06 11 34.9**	**+1.5**
RES				pmax	pmax		
	comp=Z,16nm,1.0s						
TRY	**Troy**	**38.12**	**69**	eP	**P**	**06 11 42.2**	**-0.2**
	comp=Z,46nm,1.3s						
VT1	**Waterbury**	**38.39**	**66**	eP	**P**	**06 11 44.9**	**+0.2**
	comp=Z,37nm,1.1s						
LBNH	**Lisbon**	**38.99**	**66**	eP	**P**	**06 11 50.7**	**+1.0**
	comp=Z,26nm,1.0s						
LBNH	**Lisbon**	**38.99**	**66**	eP	**P**	**06 11 50.7**	**+1.0**
LBNH				pmax	pmax		
	comp=Z,26nm,1.0s						
PKME	**Peaks-Kenny Pk**	**40.57**	**64**	eP	**P**	**06 12 03.9**	**+1.1**
	comp=Z,66nm,1.9s						
SCHQ	**Schefferville**	**40.67**	**49**	P	**P**	**06 12 03.7**	**+0.1**
	comp=Z,9.6nm,0.7s,baz=280,slow=8.8,SNR=3.9						
JTS	**JuntasAbangare**	**46.49**	**119**	LR	LR	06 33 33.0	
	comp=Z,588nm,18.0s,baz=44,slow=38						
SFJD	**Kangerlussuaq**	**47.66**	**31**	LR	LR	06 31 26.0	
	comp=Z,1µm,18.1s,baz=278,slow=34						
SUMG	**Summit**	**51.05**	**23**	eP	**P**	**06 13 25.8**	**+0.2**
	comp=Z,39nm,0.9s						
SUMG	**Summit**	**51.05**	**23**⇓	iP	**P**	**06 13 26.4**	**+0.8**
	comp=Z,45nm,1.0s						
	comp=Z,4µm,17.0s						
SUMG	**Summit**	**51.05**	**23**	eP	**P**	**06 13 25.8**	**+0.2**
SUMG				pmax	pmax		
	comp=Z,39nm,0.9s						
PET	**Petropavlovsk**	**51.34**	**311**	iP	**P**	**06 13 27.3**	**-0.3**
PET				pmax	pmax		
	comp=Z,33nm,1.0s						
SEY	**Seymchan**	**51.69**	**325**	P	**P**	**06 13 29.7**	**-0.4**
	comp=Z,6.7nm,0.7s,baz=89,slow=7.4,SNR=13						
SEY	**Seymchan**	**51.69**	**325**⇑	eP	**P**	**06 13 30.1**	**0.0**
PEA0B	**Petropavlovsk-**	**51.86**	**312**	eP	**P**	**06 13 31.5**	**0.0**
	comp=Z,34nm,1.1s						
PETK	**Petropavlovsk-**	**51.86**	**312**	P	**P**	**06 13 31.3**	**-0.2**
	comp=Z,6.3nm,0.5s,baz=81,slow=10						
PETK	**Petropavlovsk-**	**51.86**	**312**	eP	**P**	**06 13 31.2**	**-0.3**
PETK	**Petropavlovsk-**	**51.86**	**312**	eP	**P**	**06 13 31.2**	**-0.3**
MA2	**Magadan**	**53.42**	**321**	P	**P**	**06 13 41.9**	**-1.0**
	comp=Z,13nm,0.9s,baz=73,slow=11,SNR=4.6						
MA2	**Magadan**	**53.42**	**321**⇓	eP	**P**	**06 13 43.6**	**+0.6**
MA2				pmax	pmax		
	comp=Z,18nm,0.9s						
MTP	**Monte Pirata**	**55.48**	**95**	eP	**P**	**06 13 59.6**	**+1.1**
	comp=Z,56nm,1.3s						
HELC	**Santa Helena**	**55.89**	**114**	eP	**P**	**06 14 00.6**	**-1.3**
PTBC	**PUERTO BERRIO,**	**56.39**	**113**	eP	**P**	**06 14 05.2**	**+0.1**
TIXI	**Tiksi**	**56.92**	**339**	LR	LR	06 38 35.7	
	comp=Z,720nm,18.9s,baz=78,slow=36						
BARC	**Barichara**	**57.26**	**111**	eP	**P**	**06 14 10.5**	**-1.0**
ROSC	**El Rosal**	**57.69**	**114**	LR	LR	06 43 18.2	
	comp=Z,250nm,18.2s,baz=4.5,slow=40						
RUSC	**La Rusia**	**57.82**	**112**	eP	**P**	**06 14 18.5**	**+2.8**
CHIC	**Chingaza**	**58.25**	**114**	eP	**P**	**06 14 15.2**	**-3.5**
OTAV	**Otavalo**	**58.25**	**121**	eP	**P**	**06 14 19.3**	**+0.6**
	comp=Z,28nm,1.6s						
OTAV	**Otavalo**	**58.25**	**121**	eP	**P**	**06 14 18.5**	**-0.2**
OTAV	**Otavalo**	**58.25**	**121**	eP	**P**	**06 14 19.3**	**+0.6**
OTAV				pmax	pmax		
	comp=Z,28nm,1.6s						
JMIC	**Jan Mayen**	**60.16**	**20**	LR	LR	06 40 35.0	
	comp=Z,735nm,20.4s,baz=314,slow=36						
H11N3	**WAKE ISLAND Hy**	**60.86**	**272**	T	T	07 20 31.8	
	baz=53,slow=74						
H11N2	**WAKE ISLAND Hy**	**60.86**	**272**	T	T	07 20 32.6	
	baz=53,slow=74						
H11N1	**WAKE ISLAND Hy**	**60.87**	**272**	T	T	07 20 28.1	
	baz=53						
PCRV	**Puerto La Cruz**	**61.11**	**102**	LR	LR	06 43 10.4	
	comp=Z,423nm,20.6s,baz=308,slow=38						
TYV	**Tymovskoe**	**61.25**	**314**	eP	P	06 14 31.8	-6.5
TYV				pmax	pmax		
	comp=Z,100nm,2.7s						
TYV				pmax	pmax		
	comp=Z,10.0nm,1.7s						
YAK	**Yakutsk**	**61.63**	**329**⇓	iP	**P**	**06 14 41.0**	**+0.3**
YAK				pmax	pmax		
	comp=Z,21nm,0.9s						
H11S1	**WAKE ISLAND Hy**	**61.73**	**271**	T	T	07 21 33.1	
	baz=54						
H11S2	**WAKE ISLAND Hy**	**61.73**	**271**	T	T	07 21 34.2	
	baz=54						
H11S3	**WAKE ISLAND Hy**	**61.74**	**271**	T	T	07 21 35.2	
	baz=54						
YSS	**Yuzh-Sakhalins**	**63.17**	**310**⇓	eP	**P**	**06 14 52.3**	**+1.0**
YSS				pmax	pmax		
	comp=Z,6.0nm,0.6s						
ZEA	**Zeya**	**67.53**	**322**	eP	P	06 15 13.8	-5.6
ZEA				pmax	pmax		
	comp=Z,18nm,1.2s						
KLR	**Kul'dur**	**68.02**	**316**	P	**P**	**06 15 22.0**	**-0.6**
	comp=Z,0.3nm,0.9s,baz=33,slow=8.6,SNR=4.4						
AFI	**Afiamalu**	**69.19**	**229**	LR	LR	06 36 48.0	
	comp=Z,1µm,20.2s,baz=8.5,slow=28						
BOD	**Bodaibo**	**70.37**	**331**	eP	**P**	**06 15 35.7**	**-1.3**
BOD				pmax	pmax		
	comp=Z,6.0nm,1.1s						
USRK	**Ussuriysk Ar.**	**70.95**	**312**	P	**P**	**06 15 40.8**	**+0.1**
	comp=Z,5.5nm,0.7s,baz=49,slow=6.5						
MJAR	**Matsushiro Arr**	**71.83**	**303**	P	**P**	**06 15 45.5**	**-0.7**
	comp=Z,1.0nm,0.3s,baz=56,slow=3.5,SNR=3.0						
MAJO	**Matsushiro**	**71.83**	**303**⇓	eP	**P**	**06 15 46.5**	**+0.2**
MAJO				pmax	pmax		
	comp=Z,17nm,2.6s						
EKA	**Eskdalemuir Ar**	**72.64**	**31**	P	**P**	**06 15 50.7**	**0.0**
	comp=Z,2.9nm,1.0s,baz=299,slow=4.8,SNR=4.4						
NB2	**NORSAR Subarra**	**72.85**	**21**	P	**P**	**06 15 52.2**	**+0.2**
	comp=Z,0.8nm,0.8s,baz=329,slow=5.9						
NOA	**NORSAR Array B**	**72.85**	**21**	P	**P**	**06 15 51.4**	**-0.5**
	comp=Z,3.6nm,1.0s,baz=327,slow=5.9,SNR=5.3						
NOA				LR	LR	06 47 26.8	
	comp=Z,636nm,20.3s,baz=345,slow=36						
HFS	**Hagfors**	**74.28**	**20**	P	**P**	**06 16 00.5**	**+0.2**
	comp=Z,7.3nm,0.9s,baz=298,slow=6.1,SNR=7.4						
HFS				LR	LR	06 48 01.0	
	comp=Z,1µm,20.9s,baz=328,slow=35						
CN2	**Changchun**	**74.83**	**315**	eP	**P**	**06 16 06.1**	**+2.3**
CN2				eS	**S**	**06 25 41.5**	**+1.5**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,560nm,22.0s						
CN2				LR	LR		
	comp=Z,810nm,22.0s						
FIA1	**FINESS Array S**	**75.85**	**14**	eP	**P**	**06 16 08.7**	**-0.6**
FINES	**FINESS Array B**	**75.85**	**14**	P	**P**	**06 16 08.9**	**-0.4**
	comp=Z,5.3nm,1.1s,baz=302,slow=3.1,SNR=5.5						
LPAZ	**La Paz**	**77.35**	**124**	P	**P**	**06 16 18.8**	**-0.3**
	comp=Z,3.5nm,0.8s,baz=334,slow=7.3,SNR=14						
LPAZ	**La Paz**	**77.35**	**124**	eP	**P**	**06 16 19.2**	**+0.1**
	comp=Z,3.7nm,0.8s						
KSRS	**Korea Array**	**77.63**	**309**	P	**P**	**06 16 19.2**	**-0.6**
	comp=Z,2.2nm,0.8s,baz=49,slow=5.4,SNR=12						
KS01	**Wonju Array Si**	**77.63**	**309**	eP	**P**	**06 16 19.6**	**-0.2**
KSAR	**Wonju Array Be**	**77.66**	**309**	P	**P**	**06 16 19.2**	**-0.8**
KSAR	**Wonju Array Be**	**77.66**	**309**	P	**P**	**06 16 19.2**	**-0.8**
PRGR	**Permogore**	**78.04**	**4**	eP	**P**	**06 16 21.8**	**+0.1**
PRGR				pmax	pmax		
	comp=Z,16nm,0.9s						
KLMR	**Klimovskoe**	**78.33**	**8**	eP	**P**	**06 16 19.7**	**-3.6**
KLMR				pmax	pmax		
	comp=Z,17nm,1.4s						
KLMR	**Klimovskoe**	**78.33**	**8**	eP	**P**	**06 16 19.7**	**-3.6**
KLMR				AMP		06 16 32.3	
	comp=Z,17nm,1.4s						
TJN	**Taejon**	**78.68**	**308**⇑	eP	**P**	**06 16 25.3**	**-0.4**
TLY	**Talaya**	**78.93**	**331**	eP	**P**	**06 16 28.7**	**+1.9**
TLY				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BCLA	**Clavier**	**79.69**	**30**	⇑P	**P**	**06 16 31.9**	**+1.0**
	comp=Z,7.2nm,1.3s						
ZAK	**Zakamensk**	**80.12**	**331**	eP	**P**	**06 16 31.5**	**-1.9**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ULN	**Ulaanbaatar**	**80.66**	**327**⇓	eP	**P**	**06 16 38.5**	**+2.1**
ULN				pmax	pmax		
	comp=Z,6.0nm,2.1s						
SONA1	**Songino Array**	**80.94**	**328**	eP	**P**	**06 16 38.3**	**+0.4**
SONM	**Songino Array**	**80.96**	**328**	P	**P**	**06 16 38.1**	**+0.1**
	comp=Z,1.1nm,0.7s,baz=65,slow=3.9,SNR=8.5						
CLL	**Collm**	**81.65**	**25**	eP	**P**	**06 16 43.0**	**+1.6**
	comp=Z,6.0nm,1.0s						
CLL				ePP	**PP**	**06 19 52.0**	**+4.7**
CLL				LmV		06 52 00.0	
	comp=Z,700nm,18.3s						
CLL				LmH		06 53 00.0	
	comp=N,600nm,19.5s						
CLL				LmH		06 53 00.0	
	comp=E,400nm,19.6s						
CLL	**Collm**	**81.65**	**25**	eP	**P**	**06 16 41.6**	**+0.2**
	comp=E,5.4nm,1.0s						
CLL	**Collm**	**81.65**	**25**	eP	**P**	**06 16 41.6**	**+0.2**
CLL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NVS	**Novosibirsk**	**82.07**	**344**	eP	**P**	**06 16 45.1**	**+1.6**
NVS				pmax	pmax		
	comp=N,5.0nm,1.2s						
NVS				pmax	pmax		
	comp=E,6.0nm,1.2s						
NVS				pmax	pmax		
	comp=Z,19nm,1.2s						
BRG	**Berggiesshubel**	**82.32**	**25**	ePKP	**P**	**06 16 45.5**	**+0.5**
	comp=Z,6.1nm,1.0s						
BRG	**Berggiesshubel**	**82.32**	**25**	eP	**P**	**06 16 45.5**	**+0.5**
BRG				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BFO	**Black Forest**	**82.53**	**29**	iP	**P**	**06 16 48.8**	**+2.6**
ZALV	**Zalesovo Beam**	**82.55**	**343**	P	**P**	**06 16 45.8**	**-0.3**
	comp=Z,0.8nm,0.3s,baz=15,slow=6.2,SNR=5.5						
ARU	**Arti**	**83.49**	**358**d	iP	**P**	**06 16 51.6**	**+0.7**
ARU				S	**S**	**06 27 13.2**	**+1.5**
ARU				SS	**SS**	**06 32 37.7**	**+1.9**
ARU				pmax	pmax		
	comp=Z,5.0nm,1.2s						
OBN	**Obninsk**	**83.59**	**10**	eP	**P**	**06 16 53.1**	**+1.7**
OBN				e		06 20 05.6	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ESDC	**Sonseca Array**	**83.97**	**42**	P	**P**	**06 16 54.1**	**+0.4**
	comp=Z,1.6nm,0.7s,baz=307,slow=4.3,SNR=14						
DAVA	**Damuels**	**83.98**	**29**	iPcP	**P**	**06 16 56.3**	**+2.4**
	comp=Z,6.2nm,1.1s						
ES19	**SONSECA Array**	**83.98**	**42**	eP	**P**	**06 16 54.0**	**+0.2**
GERES	**GERESS Array B**	**84.00**	**26**	P	**P**	**06 16 54.1**	**+0.3**
	comp=Z,1.1nm,0.9s,baz=342,slow=3.1,SNR=7.9						
GEA0	**GERESS Array S**	**84.00**	**26**	eP	**P**	**06 16 54.4**	**+0.6**
HHC	**Hu-ho-hao-te**	**84.10**	**320**	eP	**P**	**06 16 54.6**	**+0.1**
HHC				PP	**PP**	**06 20 13.4**	**+5.6**
HHC				S	**S**	**06 27 15.8**	**-2.8**
HHC				pmax	pmax		
	comp=Z,15nm,1.0s						
HHC				pmax	pmax		
	comp=Z,130nm,5.7s						
HHC				LR	LR		
	comp=Z,830nm,18.4s						
HHC				LR	LR		
	comp=Z,3µm,19.9s						
MORC	**Moravsky Berou**	**84.40**	**23**	eP	**P**	**06 16 57.1**	**+1.3**
FETA	**Feichten**	**84.52**	**29**	iPcP	**P**	**06 16 58.5**	**+2.0**
	comp=Z,7.6nm,1.2s						
VRAC	**Vranov**	**84.52**	**24**	eP	**P**	**06 16 57.8**	**+1.4**
WATA	**Walderalm**	**84.56**	**28**	iPcP	**P**	**06 17 00.9**	**+4.2**
	comp=Z,3.9nm,0.5s						
BNI	**Bardonecchia**	**84.60**	**32**	eP	**P**	**06 16 57.9**	**+0.9**
	comp=Z,9.1nm,1.1s						
OJC	**Ojcow**	**84.67**	**22**	eP	**P**	**06 16 57.7**	**+0.7**
	comp=Z,9.9nm,1.2s						
OJC	**Ojcow**	**84.67**	**22**	eP	**P**	**06 16 57.7**	**+0.7**
OJC				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KRUC	**Moravsky**	**84.68**	**24**	eP	**P**	**06 16 58.1**	**+1.0**
FUORN	**Ofenpass-Fuorn**	**84.68**	**29**	eP	**P**	**06 16 58.3**	**+0.8**
	comp=Z,15nm,1.0s						
HNR	**Honiara**	**84.75**	**253**	LR	LR	06 45 01.3	
	comp=Z,473nm,21.7s,baz=338,slow=29						
JAVC	**Velka Javorina**	**85.25**	**24**	eP	**P**	**06 17 02.4**	**+2.3**
ABTA	**Abfaltersbach**	**85.39**	**28**	iPcP	**P**	**06 17 02.3**	**+1.5**
	comp=Z,6.9nm,1.3s						
KBA	**Koelnbreinsper**	**85.40**	**27**	iPcP	**P**	**06 17 05.6**	**+4.6**
	comp=Z,3.3nm,0.5s						
CONA	**Conrad Observa**	**85.50**	**25**	iPcP	**P**	**06 17 03.1**	**+1.7**
	comp=Z,8.3nm,1.4s						
DGZ	**Jazzator, Alta**	**85.80**	**339**	iP	**P**	**06 17 03.9**	**+1.0**
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRVK	**Borovoye**	**85.96**	**351**⇓	eP	**P**	**06 17 03.0**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BVAR	**Borovoye Array**	**85.98**	**351**	P	**P**	**06 17 04.8**	**+1.2**
	comp=Z,0.6nm,0.5s,baz=26,slow=7.0,SNR=5.0						
SOKA	**Soboth**	**86.32**	**26**	iP	**P**	**06 17 06.4**	**+1.0**
	comp=Z,6.4nm,1.1s						
AKASG	**Malin Array Be**	**86.55**	**16**	P	**P**	**06 17 05.7**	**-0.7**
	comp=Z,1.4nm,0.9s,baz=335,slow=4.2,SNR=6.0						
AKASG	**Malin Array Be**	**86.55**	**16**	iP	**P**	**06 17 06.6**	**+0.3**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KIEV	**Kiev**	**86.55**	**16**⇓	eP	**P**	**06 17 06.1**	**-0.3**
KIEV				pmax	pmax		
	comp=Z,5.0nm,1.4s						
NJ2	**Nanjing**	**86.74**	**310**	eP	**P**	**06 17 05.8**	**-1.8**
NJ2				pmax	pmax		
	comp=Z,12nm,0.7s						
KURK	**Kurchatov**	**86.90**	**345**	eP	**P**	**06 17 08.1**	**+0.1**
	comp=Z,9.9nm,1.0s						
KURK	**Kurchatov**	**86.90**	**345**⇓	eP	**P**	**06 17 08.6**	**+0.5**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KURBB	**Kurchatov Arra**	**87.01**	**345**	P	**P**	**06 17 08.5**	**-0.1**
	comp=Z,3.2nm,0.8s,baz=15,slow=4.4,SNR=22						
VSR	**Storozhevoye**	**87.74**	**10**	eP	**P**	**06 17 11.9**	**-0.2**
VSR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
DZM	**Mont Dzumac**	**88.86**	**240**	LR	LR	06 51 23.1	
	comp=Z,773nm,18.4s,baz=18,slow=32						
MK31	**Makanchi Array**	**89.80**	**342**	eP	**P**	**06 17 22.0**	**0.0**
MK31	**Makanchi Array**	**89.80**	**342**	eP	**P**	**06 17 22.0**	**0.0**
MKAR	**Makanchi Array**	**89.80**	**342**	P	**P**	**06 17 21.9**	**-0.1**
	comp=Z,0.6nm,0.8s,baz=349,slow=3.9,SNR=5.3						
MKAR	**Makanchi Array**	**89.80**	**342**	eP	**P**	**06 17 21.9**	**-0.1**
	comp=Z,21nm,1.3s						
MKAR	**Makanchi Array**	**89.80**	**342**	iP	**P**	**06 17 23.8**	**+1.8**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MK01	**Makanchi Array**	**89.82**	**342**	eP	**P**	**06 17 21.9**	**-0.2**
MAKZ	**Makanchi**	**89.86**	**342**	eP	**P**	**06 17 22.3**	**0.0**
	comp=Z,6.2nm,1.0s						
MAKZ	**Makanchi**	**89.86**	**342**	eP	**P**	**06 17 22.3**	**0.0**
MAKZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GTA	**Gaotai**	**90.59**	**327**	eP	**P**	**06 17 26.9**	**+1.0**
GTA				pP	sP	06 17 35.9	+3.1
GTA				sP	pP	06 17 39.3	+8.3
GTA				S	**S**	**06 28 25.3**	**+4.2**
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,66nm,5.6s						
GTA				LR	LR		
	comp=Z,710nm,20.6s						
GTA				LR	LR		
	comp=Z,2µm,22.5s						
ABKAR	**Akbulak array**	**90.61**	**357**	eP	**P**	**06 17 26.1**	**+0.4**
XAN	**Xi'an**	**90.70**	**318**	P	P	06 17 37.0	+11
XAN				pmax	pmax		
	comp=Z,7.0nm,1.4s						
XAN				pmax	pmax		
	comp=Z,120nm,4.9s						
WMQ	**Urumqi**	**91.08**	**337**	P	**P**	**06 17 29.3**	**+1.2**
WMQ				pP	sP	06 17 34.3	-0.6
WMQ				sP	pP	06 17 38.1	+5.0
WMQ				pmax	pmax		
	comp=Z,14nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,230nm,4.7s						
WMQ				LR	LR		
	comp=Z,810nm,25.3s						
ANN	**Anapa**	**93.76**	**12**	eP	P	06 17 35.1	-5.2
ANN				e*PP	**PcP**	**06 17 40.9**	**+0.1**
ANN				eS	**SKSac**	**06 28 08.5**	**-5.8**
ANN				eSSS	SSS	06 38 45.2	
ANN				pmax	pmax		
	comp=Z,63nm,1.3s						
ANN				MLR	MLR		
	comp=E,91nm,19.0s						
ANN				MLR	MLR		
	comp=Z,646nm,19.0s						
ANN				MLR	MLR		
	comp=N,503nm,19.0s						
KIV	**Kislovodsk**	**95.32**	**9**	eP	**P**	**06 17 50.3**	**+2.7**
KIV				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CD2	**Chengdu**	**95.81**	**319**	eP	**P**	**06 17 46.3**	**-3.8**
GYA	**Guiyang**	**97.87**	**315**	eP	**P**	**06 17 57.0**	**-2.5**
GYA				PP	**PP**	**06 21 56.8**	**-0.4**
GYA				SKS	**SKSac**	**06 28 33.0**	**-4.0**
GYA				S	**S**	**06 29 18.4**	**-7.1**
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
KMI	**Kunming**	**101.04**	**317**	P	**Pdif**	**06 18 13.5**	**-0.3**
KMI				pmax	pmax		
	comp=Z,11nm,0.5s						

IDC ***21*** *06:11:55.7±0.4, 19°.38S×173°.90E, h0^{km}, mb5.0/34, mb1 5.1/38, mb1mx5.0/52, mbtmp5.0/38, ML4.8/4, MS5.5/38, Ms1 5.5/38, ms1mx5.4/46, Error ellipse: s-maj=12.8km s-min=11.0km az=119.0*

ISCJB ***21*** *06:11:56.8±0.1, 19°.20S±0°.02×173°.75E±0°.02, h10^{km}, mb5.4/259, MS5.5/177, Error ellipse: s-maj=3.2km s-min=2.5km az=29.9*

GCMT ***21*** *06:11:57.9±0.1, 19°.22S×173°.83E, h15^{km}, MW5.9/144, Moment Tensor Solution. s133,c283; s144,c449; Duration: 2^{s}2 Moment tensor: Scale 10^{18}Nm; M_{rr}0.02±.01; $M_{\theta\theta}$-0.68±.01; $M_{\phi\phi}$0.65±.01; $M_{r\theta}$0.16±.02; $M_{\theta\phi}$-0.52±.01; $M_{\phi r}$0.30±.02; Best double couple:*

M$_0$0.90900×10^{18} NP1:ϕ_s26.00000°,δ90.00000°, λ22.00000°. NP2:ϕ_s296.00000°,δ68.00000°,λ180.00000°. Principal axes: T 0.8960, Plg15.0000°, Azm253.0000°; N 0.0270, Plg68.0000°, Azm26.0000°; P -0.9230, Plg15.0000°, Azm159.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.

*WEL **21** 06:11:57.0, 19°.19S×173°.79E, h10^{km}*

*BJI **21** 06:11:57.8, 19°.31S×173°.33E, h6^{km}, mb5.1/39, mB5.6/48, Ms5.6/63, Ms7 5.5/61*

*NEIC **21** 06:11:57.9±0.1, 19°.19S×173°.79E, h10^{km}, mb5.5/216, MS5.5/112, MW5.8, MW5.9, Error ellipse: s-maj=4.4km s-min=3.0km az=130.0, Moment Tensor Solution. s20 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.09; M$_{\theta\theta}$-5.12; M$_{\phi\phi}$5.21; M$_{r\theta}$-1.07; M$_{\theta\phi}$-3.27; M$_{\phi r}$1.52; Best double couple: M$_0$6.40000×10^{17} NP1:ϕ_s30.00000°,δ75.00000°, λ6.00000°. NP2:ϕ_s298.00000°,δ84.00000°,λ165.00000°. Principal axes: T 6.6300, Plg15.0000°, Azm253.0000°; N -0.4900, Plg74.0000°, Azm96.0000°; P -6.1400, Plg6.0000°, Azm345.0000°;*

*MOS **21** 06:11:58.1±1.1, 19°.30S×173°.81E, h21^{km}, mb5.4/53, MS5.6/22 Error ellipse: s-maj=8.5km s-min=8.1km az=145.9*

*NEIC **21** 06:12:00.0±0.0, 19°.05S×173°.71E, h11^{km}, Moment Tensor Solution. s26 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.03; M$_{\theta\theta}$-4.45; M$_{\phi\phi}$4.47; M$_{r\theta}$-2.56; M$_{\theta\phi}$-5.40; M$_{\phi r}$2.27; Best double couple: M$_0$7.80000×10^{17} NP1:ϕ_s289.00000°, δ83.00000°,λ156.00000°. NP2:ϕ_s22.00000°,δ67.00000°, λ7.00000°. Principal axes: T 8.2400, Plg21.0000°, Azm242.0000°; N -0.9700, Plg65.0000°, Azm94.0000°; P -7.2700, Plg11.0000°, Azm337.0000°;*

ISC 21 06:11:57.9±0.5**, 19°.30S**±0°.05×**173°.89E**±0°.04**, h11**^{km}±2^{km}**, h11**^{km}**:pP-P, n816, σ1^{s}46**/741**, mb5.5**/259**, MS5.5**/177**, 27C-14D, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	7.50	247	Pn	Pn	06 13 47.6	+0.3
	4.8nm,0.3s,baz=72,slow=16,SNR=73						
DZM				LR	LR	06 16 19.4	
	comp=Z,113µm,21.2s,baz=118,slow=35						
DZM	Mont Dzumac	7.50	247	*e*Pn	Pn	06 13 47.0	-0.3
	2µm,1.6s						
DZM				*e*LR	LR	06 15 29.0	
	151µm,25.9s						
DZM	Mont Dzumac	7.50	247	*e*Pn	Pn	06 13 47.7	+0.4
RAO	Raoul Island	12.40	145	LR	LR	06 18 44.6	
	comp=Z,49µm,18.4s,baz=346,slow=33						
AFI	Afiamalu	14.74	71	Pn	Pn	06 15 27.7	+1.2
	1.5nm,0.3s,baz=243,slow=16,SNR=7.6						
AFI				LR	LR	06 20 03.3	
	comp=Z,48µm,20.8s,baz=240,slow=33						
AFI	Afiamalu	14.74	71	*e*Pn	P	06 15 30.7	-2.0
AFI	Afiamalu	14.74	71	*e*P	P	06 15 30.7	-2.0
OUZ	Omahuta	15.86	181	*e*Pn	P	06 15 45.0	+0.1
	308nm,1.3s						
OUZ	Omahuta	15.86	181	P	P	06 15 44.8	-0.1
WCZ	Waipu Caves	16.58	179	P	P	06 15 57.5	+4.6
HNR	Honiara	16.68	304	Pn	P	06 15 53.2	-0.9
	31nm,0.3s,baz=101,slow=16,SNR=4.5						
HNR				LR	LR	06 21 17.5	
	comp=Z,6µm,18.6s,baz=142,slow=34						
KUZ	Kuaotunu	17.45	175	P	P	06 16 08.3	+5.8
MKAZ	Moumakai	17.77	177	P	P	06 16 09.0	+3.0
LHI	Lord Howe Isla	18.07	225	*e*Pn	P	06 16 09.4	0.0
	270nm,1.1s						
MXZ	Matakaoa Point	18.60	169	*e*P	Pn	06 16 18.5	+3.0
	356nm,1.1s						
MXZ	Matakaoa Point	18.60	169	P	Pn	06 16 17.7	+2.2
OPRZ	Ohinepanea	18.62	173	P	P	06 16 15.3	-0.1
HAZ	Te Kaha	18.70	170	P	Pn	06 16 21.6	+4.9
WMGZ	Waiomatatini S	18.87	169	P	Pn	06 16 22.7	+4.0
PKGZ	Pakihiroa	18.88	170	P	Pn	06 16 21.2	+2.3
RUGZ	Raukumara Rang	18.89	171	P	Pn	06 16 22.9	+3.8
TLZ	Tolley Road	19.02	176	P	Pn	06 16 23.1	+2.5
PUZ	Puketiti	19.09	169	P	Pn	06 16 24.4	+3.0
URZ	Urewera	19.10	172	P	P	06 16 20.8	+0.1
	3.0nm,0.3s,baz=346,slow=12,SNR=35						
URZ				LR	LR	06 21 59.6	
	comp=Z,35µm,21.1s,baz=3.5,slow=32						
URZ	Urewera	19.10	172	*e*P	Pn	06 16 23.8	+2.3
	557nm,1.2s						
URZ	Urewera	19.10	172	P	Pn	06 16 24.0	+2.5
TWGZ	Tauwhareparae	19.14	170	P	Pn	06 16 24.0	+2.0
HIZ	Hauiti	19.16	178	*e*P	Pn	06 16 24.9	+2.7
	1µm,1.7s						
HIZ	Hauiti	19.16	178	P	Pn	06 16 25.2	+2.9
MWZ	Matawai	19.23	171	P	Pn	06 16 25.2	+2.1
RAGZ	Rawiri	19.37	172	P	Pn	06 16 27.4	+2.6
CNGZ	Carnagh Statio	19.48	170	P	Pn	06 16 27.9	+1.9
RIGZ	Rimuhau	19.63	171	P	Pn	06 16 29.6	+1.7
SNGZ	Shannon Statio	19.64	172	P	Pn	06 16 29.7	+1.7
MTHZ	Maungataniwha	19.65	173	P	Pn	06 16 29.7	+1.6
RAHZ	Arahi	19.74	173	P	Pn	06 16 30.8	+1.5
VRZ	Vera Road	19.77	178	P	Pn	06 16 31.3	+1.8
WTVZ	West Tongariro	19.80	176	P	Pn	06 16 33.5	+3.5
NGZ	Ngauruhoe	19.86	176	P	Pn	06 16 34.1	+3.3
NMHZ	Naumai	19.89	173	P	Pn	06 16 32.9	+1.9
BKZ	Black Stump Fm	19.92	174	*e*P	Pn	06 16 32.2	+0.8
	145nm,0.9s						
BKZ	Black Stump Fm	19.92	174	P	Pn	06 16 32.2	+0.8
KNZ	Kokohu	19.92	171	P	Pn	06 16 31.5	+0.2
FWVZ	Far West T-bar	19.94	176	P	Pn	06 16 34.9	+3.2
PKVZ	Pokaka	19.96	177	P	Pn	06 16 35.1	+3.3
WHVZ	Whangaehu Hut	19.97	176	P	Pn	06 16 34.7	+2.6
MOVZ	Moawhango	20.10	176	P	Pn	06 16 35.0	+1.5
KWHZ	Kaweka Forest	20.17	174	P	Pn	06 16 35.1	+0.8
BHHZ	Black Hill Sta	20.21	175	P	Pn	06 16 35.8	+1.1
MCHZ	McNeill Hill	20.22	174	P	Pn	06 16 35.5	+0.7
KRHZ	Kereru	20.39	174	P	Pn	06 16 36.8	-0.1
TARA	Tarawa	20.55	357	PFAKE		06 16 50.0	+11
TARA				LR	LR		
	comp=Z,22µm,20.0s						
KAHZ	Kahuranaki	20.59	173	P	Pn	06 16 38.9	-0.3
BFZ	Birch Farm	21.41	175	*e*P	P	06 16 46.9	+1.2
	comp=Z,192nm,0.8s						
BFZ				LR	LR		
	comp=Z,24µm,19.0s						
KNTN	Kanton	21.63	42	PFAKE		06 17 00.0	+12
KNTN				LR	LR		
	comp=Z,10µm,18.0s						
EIDS	Eidsvold	21.93	250	P	P	06 16 52.4	+0.9
	baz=22,SNR=11						
EIDS	Eidsvold	21.93	250	*e*P	P	06 16 51.1	-0.4
	comp=Z,245nm,1.4s						
EIDS				LR	LR		
	comp=Z,23µm,22.0s						
SNZO	South Karori	21.95	178	*e*P	P	06 16 53.3	+1.7
	comp=Z,186nm,0.9s						
SNZO				LR	LR		
	comp=Z,30µm,18.0s						
THZ	Tophouse	22.41	182	*e*P	P	06 16 58.6	+2.1
	comp=Z,262nm,1.2s						
THZ				LR	LR		
	comp=Z,27µm,19.0s						
ARMA	Armidale	22.99	237	P	P	06 17 03.2	+0.3
	baz=23,SNR=21						
ARMA	Armidale	22.99	237	*e*P	P	06 17 03.8	+1.0
	comp=Z,190nm,1.4s						
ARMA				LR	LR		
	comp=Z,26µm,20.0s						
KHZ	Kahutara	23.05	181	*e*P	P	06 17 04.4	+1.2
	comp=Z,479nm,1.7s						
KHZ				LR	LR		
	comp=Z,38µm,20.0s						
LTZ	Lake Taylor	23.45	183	*e*P	P	06 17 08.7	+1.4
	comp=Z,437nm,1.9s						
LTZ				LR	LR		
	comp=Z,23µm,20.0s						
OXZ	Oxford	24.00	183	*e*P	P	06 17 14.4	+1.8
	comp=Z,206nm,1.3s						
OXZ				LR	LR		
	comp=Z,24µm,21.0s						
RMQ	Roma	24.21	248	P	P	06 17 15.8	+1.1
	baz=24,SNR=72						
MQZ	McQueen's Vall	24.36	182	*e*P	P	06 17 17.2	+1.4
	comp=Z,143nm,1.2s						
MQZ				LR	LR		
	comp=Z,24µm,20.0s						
FOZ	Fox Glacier	24.40	187	*e*P	P	06 17 18.3	+2.1
	comp=Z,196nm,1.0s						
FOZ				LR	LR		
	comp=Z,18µm,18.0s						
RPZ	Rata Peaks	24.46	185	P	P	06 17 17.5	+0.7
	comp=Z,24nm,0.7s,baz=8.9,slow=10,SNR=6.4						
RPZ				LR	LR	06 26 11.1	
	comp=Z,39µm,18.4s,baz=1.5,slow=35						
RPZ	Rata Peaks	24.46	185	*e*P	P	06 17 18.4	+1.6
	comp=Z,98nm,1.0s						
MGCD	Mangrove Creek	24.61	231	P	P	06 17 22.2	+3.9
	baz=25						
RAR	Rarotonga	24.77	99	LR	LR	06 27 02.0	
	comp=Z,5µm,18.1s,baz=266,slow=37						
LBZ	Lake Benmore	25.20	186	*e*P	P	06 17 23.5	-0.1
	comp=Z,213nm,1.5s						
LBZ				LR	LR		
	comp=Z,18µm,18.0s						
WKZ	Wanaka	25.78	188	*e*P	P	06 17 30.4	+1.7
	comp=Z,252nm,1.4s						
WKZ				LR	LR		
	comp=Z,21µm,20.0s						
ODZ	Otahua Downs	25.81	185	*e*P	P	06 17 31.1	+2.0
	comp=Z,291nm,1.9s						
ODZ				LR	LR		
	comp=Z,36µm,18.0s						
RABL	Rabaul	25.98	303	PFAKE		06 17 40.0	+9.1
RABL				LR	LR		
	comp=Z,8µm,22.0s						
CTA	Charters Tower	26.02	264	P	P	06 17 31.6	+0.2
	comp=Z,57nm,1.0s,baz=94,slow=12,SNR=31						
CTA				LR	LR	06 26 41.8	
	comp=Z,11µm,20.6s,baz=91,slow=34						
CTAO	Charters Tower	26.02	264	*e*P	P	06 17 31.5	+0.2
	comp=Z,112nm,1.1s						
CTAO				LR	LR		
	comp=Z,14µm,22.0s						
CTAO	Charters Tower	26.02	264	*e*P	P	06 17 31.5	+0.2
CTAO				pmax	pmax		
	comp=Z,112nm,1.1s						
CTAO				MLR	MLR		
	comp=Z,14µm,22.0s						
MLZ	Mavora Lakes	26.43	189	*e*P	P	06 17 36.7	+2.0
	comp=Z,156nm,1.3s						
MLZ				LR	LR		
	comp=Z,14µm,19.0s						
DCZ	Deep Cove	26.68	191	PFAKE		06 17 50.0	+13
DCZ				LR	LR		
	comp=Z,10µm,22.0s						
WHZ	Wether Hill Ro	26.97	189	*e*P	P	06 17 41.0	+1.5
	comp=Z,156nm,1.6s						
WHZ				LR	LR		
	comp=Z,13µm,21.0s						
CAN	Canberra	27.16	229	PFAKE		06 17 50.0	+8.5
CAN				LR	LR		
	comp=Z,12µm,19.0s						
PYZ	Puysegur Point	27.45	191	PFAKE		06 18 00.0	+16
PYZ				LR	LR		
	comp=Z,10µm,18.0s						
PMG	Port Moresby	27.66	287	P	P	06 17 46.0	0.0
	comp=Z,89nm,1.0s,baz=119,slow=9.1,SNR=8.5						
PMG				LR	LR	06 27 02.5	
	comp=Z,7µm,18.9s,baz=77,slow=33						
MTSU	Mount Surprise	28.02	268	P	P	06 17 49.8	+0.6
	baz=28,SNR=17						
CMSA	Cobar Meteorol	28.15	239	P	P	06 17 50.1	-0.1
	baz=28,SNR=14						
QLP	Quilpie	28.21	250	P	P	06 17 50.7	-0.2
	baz=28,SNR=6.7						
COEN	Coen	29.88	276	P	P	06 18 05.3	-0.5
	baz=30,SNR=3.9						
COEN	Coen	29.88	276	*e*P	P	06 18 05.9	+0.1
	comp=Z,55nm,1.3s						
COEN				LR	LR		
	comp=Z,8µm,21.0s						
PATS	Pohnpei	30.17	328	PFAKE		06 18 20.0	+12
PATS				LR	LR		
	comp=Z,10µm,21.0s						
TOO	Toolangi	30.73	228	P	P	06 18 15.0	+1.9
	baz=31,SNR=4.1						
MANU	Manus Island	31.11	300	PFAKE		06 18 30.0	+13
MANU				LR	LR		
	comp=Z,8µm,22.0s						
STKA	Stephens Creek	31.58	240	P	P	06 18 20.7	0.0
	comp=Z,28nm,0.9s,baz=71,slow=8.4,SNR=36						
STKA				PcP	PcP	06 21 10.2	-2.9
	comp=Z,8.4nm,1.1s,baz=104,slow=4.2,SNR=4.1						
STKA				LR	LR	06 30 01.4	
	comp=Z,20µm,19.9s,baz=73,slow=34						
STKA	Stephens Creek	31.58	240	P	P	06 18 20.8	+0.1
	baz=32,SNR=36						
STKA	Stephens Creek	31.58	240	*e*P	P	06 18 20.9	+0.1
	comp=Z,17nm,1.1s						
STKA				PcP	PcP	06 21 10.2	-2.9
STKA	Stephens Creek	31.58	240	*e*P	P	06 18 20.9	+0.2
STKA						06 21 10.3	
STKA				pmax	pmax		
	comp=Z,17nm,1.1s						
QIS	Mount Isa	32.23	262	P	P	06 18 25.8	-0.7
	baz=32,SNR=9.4						
TAU	Tasmania Unive	32.49	218	PFAKE		06 18 40.0	+12
TAU				LR	LR		
	comp=Z,9µm,22.0s						
ARPS	Mount Arapiles	33.01	231	P	P	06 18 33.6	+0.4
	baz=33,SNR=5.1						
HTT	Hallett	34.17	239	P	P	06 18 43.5	+0.1
	baz=34,SNR=23						
TBI	Tubuai	34.32	103	*e*S	S	06 24 11.7	-0.4
	comp=Z,2µm,24.0s						
TBI				*e*LQ	LQ	06 26 22.0	
	comp=Z,23µm,30.8s						
TBI				*e*LR	LR	06 28 03.7	
	comp=Z,18µm,28.2s,baz=270						
PAE	Paea	34.64	93	*e*P	P	06 18 48.9	+1.4
	comp=Z,22nm,1.2s						
PPT2	Papeete2	34.66	93	*e*P	P	06 18 48.8	+1.0
	comp=Z,95nm,1.2s						
PPT2				*e*S	S	06 24 06.8	-11
	comp=Z,2µm,27.0s						
PPT2				*e*LQ	LQ	06 26 11.5	
	comp=Z,19µm,31.5s						
PPT2				*e*LR	LR	06 28 07.0	
	comp=Z,32µm,28.5s,baz=258						
PPT	Papeete	34.66	93	P	P	06 18 47.5	-0.3
	comp=Z,69nm,1.0s,baz=290,slow=10,SNR=3.9						
PPT				LR	LR	06 29 30.3	
	comp=Z,6µm,20.2s,baz=260,slow=30						
PPTF	Pamatai, Papee	34.67	93	PFAKE		06 19 00.0	+12
PPTF				LR	LR		
	comp=Z,6µm,21.0s						
TIAR	Tiarei	34.88	93	*e*P	P	06 18 50.9	+1.3
	comp=Z,26nm,1.0s						
XMAS	Kiritimati	35.26	56	PFAKE		06 19 10.0	+17
XMAS				LR	LR		
	comp=Z,11µm,20.0s						
BBOO	Buckleboo	36.35	241	P	P	06 19 01.8	-0.3
	baz=36,SNR=27						
BBOO	Buckleboo	36.35	241	*e*P	P	06 19 02.3	+0.2
	comp=Z,106nm,1.1s						
BBOO				LR	LR		
	comp=Z,24µm,20.0s						
GENI	Genyem	36.91	293	P	P	06 19 07.1	0.0
WR0	Warramunga Arr	37.01	262	PFAKE		06 19 20.0	+12
WR0				LR	LR		
	comp=Z,10µm,18.0s						
WR9	Warramunga Arr	37.04	262	PFAKE		06 19 20.0	+12
WR9				LR	LR		
	comp=Z,10µm,18.0s						
WR8	Warramunga Arr	37.05	262	PFAKE		06 19 20.0	+12
WR8				LR	LR		
	comp=Z,11µm,18.0s						
WR7	Warramunga Arr	37.07	262	PFAKE		06 19 20.0	+12
WR7				LR	LR		
	comp=Z,11µm,18.0s						
WR6	Warramunga Arr	37.09	262	PFAKE		06 19 20.0	+11
WR6				LR	LR		
	comp=Z,10µm,21.0s						
WR5	Warramunga Arr	37.12	262	PFAKE		06 19 20.0	+11
WR5				LR	LR		
	comp=Z,10µm,21.0s						
WR4	Warramunga Arr	37.14	262	PFAKE		06 19 20.0	+11
WR4				LR	LR		
	comp=Z,9µm,20.0s						
WR3	Warramunga Arr	37.16	262	PFAKE		06 19 20.0	+11
WR3				LR	LR		
	comp=Z,9µm,20.0s						
WB0	Warramunga Arr	37.17	263	PFAKE		06 19 20.0	+11
WB0				LR	LR		
	comp=Z,9µm,20.0s						
WC3	Warramunga Arr	37.17	262	PFAKE		06 19 20.0	+11
WC3				LR	LR		
	comp=Z,10µm,20.0s						
WB8	Warramunga Arr	37.18	262	PFAKE		06 19 20.0	+11
WB8				LR	LR		
	comp=Z,8µm,19.0s						
WB9	Warramunga Arr	37.18	262	PFAKE		06 19 20.0	+11
WB9				LR	LR		
	comp=Z,18µm,20.0s						
WC2	Warramunga Arr	37.18	262	PFAKE		06 19 20.0	+11
WC2				LR	LR		
	comp=Z,11µm,21.0s						
WR2	Warramunga Arr	37.18	262	PFAKE		06 19 20.0	+11
WR2				LR	LR		
	comp=Z,10µm,21.0s						
WB5	Warramunga Arr	37.18	262	PFAKE		06 19 20.0	+11
WB5				LR	LR		
	comp=Z,9µm,18.0s						
WB6	Warramunga Arr	37.19	262	PFAKE		06 19 20.0	+11
WB6				LR	LR		
	comp=Z,10µm,18.0s						
WB4	Warramunga Arr	37.19	262	PFAKE		06 19 20.0	+11
WB4				LR	LR		
	comp=Z,9µm,21.0s						
WB3	Warramunga Arr	37.19	262	PFAKE		06 19 20.0	+11
WB3				LR	LR		
	comp=Z,10µm,21.0s						
WB2	Warramunga Arr	37.19	262	*e*P	P	06 19 07.6	-1.8
	comp=Z,69nm,1.1s						
WB2				LR	LR		
	comp=Z,11µm,20.0s						
WRAB	Tennant Creek	37.19	262	*e*P	P	06 19 07.9	-1.6
	comp=Z,211nm,1.8s						
WRAB				LR	LR		
	comp=Z,10µm,20.0s						
WRAB	Tennant Creek	37.19	262	*i* P	P	06 19 07.6	-1.9
WRAB				*i* *SP	pP	06 19 12.9	0.0
WRAB				pmax	pmax		
	comp=Z,92nm,1.2s						
WC4	Warramunga Arr	37.20	262	PFAKE		06 19 20.0	+10
WC4				LR	LR		
	comp=Z,10µm,20.0s						
WR1	Warramunga Arr	37.20	262	PFAKE		06 19 20.0	+10
WR1				LR	LR		
	comp=Z,10µm,20.0s						
WRA	Warramunga Arr	37.20	262	P	P	06 19 07.6	-1.9
	comp=Z,40nm,1.0s,baz=96,slow=8.3,SNR=88						
WRA				PcP	PcP	06 21 28.2	-1.3
	comp=Z,5.8nm,1.0s,baz=112,slow=2.1,SNR=3.3						
WRA				LR	LR	06 33 21.0	
	comp=Z,11µm,21.0s,baz=90,slow=34						
WC1	Warramunga Arr	37.20	262	PFAKE		06 19 20.0	+10
WC1				LR	LR		
	comp=Z,8µm,20.0s						
AS01	Alice Springs	37.34	256	*e*P	P	06 19 09.1	-1.6
AS31	Alice Springs	37.38	256	*e*P	P	06 19 09.5	-1.5
	comp=Z,54nm,1.3s						
AS31				LR	LR		
	comp=Z,300nm,18.0s						
ASAR	Alice Springs	37.38	256	P	P	06 19 09.2	-1.9
	comp=Z,98nm,1.0s,baz=88,slow=9.1,SNR=358						
ASAR				PcP	PcP	06 21 29.1	-0.9
	comp=Z,5.9nm,1.0s,baz=90,slow=2.8,SNR=4.6						
ASAR				LR	LR	06 34 43.6	
	comp=Z,19µm,18.3s,baz=93,slow=37						
H11S2	WAKE ISLAND Hy	38.21	349	T	T	06 59 51.1	
	baz=171						
H11S3	WAKE ISLAND Hy	38.22	349	T	T	06 59 51.9	
	baz=171						
H11S1	WAKE ISLAND Hy	38.23	349	T	T	06 59 50.4	
	baz=171						
WAKE	Wake Island	39.00	349	PFAKE		06 19 40.0	+16
WAKE				LR	LR		
	comp=Z,11µm,19.0s						
JOHN	Johnston Islan	39.34	26	PFAKE		06 19 40.0	+13
JOHN				LR	LR		
	comp=Z,5µm,21.0s						
H11N1	WAKE ISLAND Hy	39.38	350	T	T	07 01 12.4	
	baz=170,slow=76,SNR=13						
H11N3	WAKE ISLAND Hy	39.38	350	T	T	07 01 12.7	
	baz=170,slow=76,SNR=12						
H11N2	WAKE ISLAND Hy	39.39	350	T	T	07 01 13.7	
	baz=170,slow=76,SNR=8.9						
KDU	Kakadu	40.28	273	P	P	06 19 34.5	-0.9
	baz=40,SNR=3.8						
BAKI	Biak	41.14	291	P	P	06 19 42.5	0.0
MTN	Manton Dam	41.51	272	P	P	06 19 44.6	-0.9
	baz=41,SNR=13						
MTN	Manton Dam	41.51	272	*e*P	P	06 19 44.8	-0.7
	comp=Z,115nm,1.1s						
MTN				LR	LR		
	comp=Z,10µm,22.0s						
WRKA	Warakurna	42.46	254	P	P	06 19 52.5	-0.8
	baz=42,SNR=35						
RKPI	Ransiki, Papua	42.70	290	P	P	06 19 55.6	+0.3
FORT	Forrest	42.80	245	P	P	06 19 55.4	-0.6
	baz=43,SNR=13						
FORT	Forrest	42.80	245	*e*P	P	06 19 55.4	-0.6
	comp=Z,137nm,1.0s						
FORT				LR	LR		
	comp=Z,19µm,21.0s						
KNRA	Kununurra	43.10	267	P	P	06 19 57.7	-0.8
	baz=43,SNR=7.8						
GUMO	Guam	43.42	317	P	P	06 19 59.8	-1.2
	comp=Z,14nm,0.5s,baz=23,slow=9.6,SNR=2.5						
GUMO				LR	LR	06 36 14.2	
	comp=Z,5µm,20.8s,baz=138,slow=34						
FAKI	Fak Fak	43.82	287	PFAKE		06 20 20.0	+16
FAKI				LR	LR		
	comp=Z,6µm,22.0s						
FITZ	Fitzroy Crossi	45.60	263	P	P	06 20 18.3	-0.3
	baz=46,SNR=8.6						
FITZ	Fitzroy Crossi	45.60	263	*e*P	P	06 20 18.1	-0.4
	comp=Z,75nm,1.1s						
FITZ				LR	LR		
	comp=Z,9µm,20.0s						
TAOE	Nuku Hiva Isla	45.65	83	*e*S	S	06 27 00.2	-1.9
	comp=Z,3µm,26.9s						
TAOE				*e*LR	LR	06 33 11.8	
	comp=Z,14µm,25.9s,baz=256						
TAOE	Nuku Hiva Isla	45.65	83	PFAKE		06 20 30.0	+11
TAOE				LR	LR		
	comp=Z,6µm,20.0s						
RKT	Rikitea	47.63	104	*e*S	S	06 27 29.7	-0.4
	comp=Z,3µm,28.2s						
RKT				*e*LQ	LQ	06 31 32.6	
	comp=Z,6µm,31.2s						
RKT				*e*LR	LR	06 34 09.2	
	comp=Z,7µm,28.2s,baz=266						
MIDW	Midway	47.99	10	PFAKE		06 20 50.0	+13
MIDW				LR	LR		
	comp=Z,4µm,19.0s						
KMBL	Kambalda	48.13	245	P	P	06 20 37.1	-1.0
	baz=48,SNR=7.6						
KEKH	Kekaha	48.47	33	PFAKE		06 20 50.0	+9.2
KEKH				LR	LR		
	comp=Z,4µm,20.0s						
KHU	Kahuku	48.60	40	PFAKE		06 20 50.0	+7.9
KHU				LR	LR		
	comp=Z,5µm,21.0s						
KHLU	Kahalu‘u	48.70	39	PFAKE		06 20 50.0	+7.3
KHLU				LR	LR		
	comp=Z,4µm,19.0s						
AIN	Ainahou	48.79	40	PFAKE		06 21 00.0	+17
AIN				LR	LR		
	comp=Z,5µm,21.0s						
MWH	Moku‘aweowe	48.80	40	PFAKE		06 21 00.0	+16
MWH				LR	LR		
	comp=Z,4µm,18.0s						
HUH	Hualalai	48.81	39	PFAKE		06 21 00.0	+16
HUH				LR	LR		
	comp=Z,5µm,21.0s						
SOEI	Soe	48.82	274	P	P	06 20 44.1	+0.3
SOEI	Soe	48.82	274	PFAKE		06 21 00.0	+16
SOEI				LR	LR		
	comp=Z,4µm,19.0s						
HLP	Hilina Pali	48.83	40	PFAKE		06 21 00.0	+16
HLP				LR	LR		
	comp=Z,5µm,21.0s						
MLOA	Mauna Loa Obse	48.85	40	PFAKE		06 21 00.0	+16
MLOA				LR	LR		
	comp=Z,5µm,18.0s						
HON	Honolulu	48.85	36	PFAKE		06 21 00.0	+16
HON				LR	LR		
	comp=Z,5µm,18.0s						
SDHHI	Sand Hill	48.91	40	PFAKE		06 21 00.0	+16

SDHHI				LR	LR		
	comp=Z,5µm,22.0s						
RIM	**Rim**	**48.92**	**40**	PFAKE		06 21 00.0	+16
RIM				LR	LR		
	comp=Z,4µm,20.0s						
KIP	**Kipapa**	**48.93**	**36**	PFAKE		06 21 00.0	+16
KIP				LR	LR		
	comp=Z,4µm,19.0s						
KKO	**Keanakako‘i**	**48.93**	**40**	PFAKE		06 21 00.0	+16
KKO				LR	LR		
	comp=Z,4µm,21.0s						
MLH	**Mauna Loa**	**48.93**	**40**	PFAKE		06 21 00.0	+15
MLH				LR	LR		
	comp=Z,4µm,18.0s						
UWE	**Uwekahuna**	**48.93**	**40**	PFAKE		06 21 00.0	+15
UWE				LR	LR		
	comp=Z,4µm,20.0s						
NPH	**North Pit**	**48.93**	**40**	PFAKE		06 21 00.0	+16
NPH				LR	LR		
	comp=Z,5µm,21.0s						
PUH	**Pauahi**	**48.94**	**40**	PFAKE		06 21 00.0	+15
PUH				LR	LR		
	comp=Z,4µm,21.0s						
UWB	**Uwekahuna B**	**48.94**	**40**	PFAKE		06 21 00.0	+15
UWB				LR	LR		
	comp=Z,4µm,20.0s						
HATHI	**Halema‘uma‘u T**	**48.95**	**40**	PFAKE		06 21 00.0	+15
HATHI				LR	LR		
	comp=Z,5µm,22.0s						
HMH	**Humu‘ula Sheep**	**48.95**	**40**	*e*P	**P**	**06 20 47.2**	**+2.3**
	comp=Z,264nm,1.3s						
HMH				LR	LR		
	comp=Z,5µm,20.0s						
NPOC	**North of Pu‘u**	**49.02**	**40**	PFAKE		06 21 00.0	+15
NPOC				LR	LR		
	comp=Z,4µm,20.0s						
POHA	**Pohakuloa**	**49.04**	**39**	PFAKE		06 21 00.0	+15
POHA				LR	LR		
	comp=Z,4µm,20.0s						
OPA	**Opana**	**49.14**	**35**	PFAKE		06 21 00.0	+14
OPA				LR	LR		
	comp=Z,4µm,20.0s						
BATI	**Baumata**	**49.26**	**273**	P	**P**	**06 20 47.3**	**+0.2**
HLK	**Haleakala**	**49.40**	**38**	PFAKE		06 21 00.0	+12
HLK				LR	LR		
	comp=Z,5µm,20.0s						
KHLH	**Kahului Airpor**	**49.40**	**38**	PFAKE		06 21 00.0	+12
KHLH				LR	LR		
	comp=Z,7µm,20.0s						
MBWA	**Marble Bar**	**50.65**	**258**	*e*P	**P**	**06 20 56.5**	**-1.0**
	comp=Z,73nm,1.2s						
MBWA				LR	LR		
	comp=Z,16µm,20.0s						
MMRI	**Maumere**	**51.07**	**274**	PFAKE		06 21 10.0	+9.2
MMRI				LR	LR		
	comp=Z,2µm,19.0s						
MEEK	**Meekatharra**	**51.09**	**251**	P	**P**	**06 20 59.7**	**-1.2**
	baz=51,SNR=19						
EDFI	**Ende, Flores**	**51.55**	**274**	P	**P**	**06 21 03.5**	**-1.0**
EDFI	**Ende, Flores**	**51.55**	**274**	P	**P**	**06 21 03.0**	**-1.5**
KLBR	**Kellerberrin**	**51.66**	**245**	P	**P**	**06 21 04.1**	**-0.9**
	baz=52,SNR=11						
NWAO	**Narrogin (SRO)**	**52.10**	**243**	P	**P**	**06 21 06.8**	**-1.5**
	comp=Z,24nm,0.9s,baz=328,slow=9.4,SNR=9.1						
NWAO				LR	LR	06 42 10.5	
	comp=Z,17µm,21.3s,baz=326,slow=35						
NWAO	**Narrogin (SRO)**	**52.10**	**243**	P	**P**	**06 21 07.3**	**-0.9**
	baz=52,SNR=5.0						
NWAO	**Narrogin (SRO)**	**52.10**	**243**	*e*P	**P**	**06 21 08.0**	**-0.2**
	comp=Z,74nm,1.1s						
MORW	**Morawa**	**53.22**	**248**	P	**P**	**06 21 15.9**	**-0.8**
	baz=53,SNR=5.8						
WBSI	**Waikabubak, Su**	**53.45**	**272**	P	**P**	**06 21 17.4**	**-1.2**
BKSI	**Bulukumba**	**54.12**	**278**	P	**P**	**06 21 25.9**	**+2.5**
BKSI	**Bulukumba**	**54.12**	**278**	P	**P**	**06 21 21.9**	**-1.5**
APSI	**Ampana**	**54.31**	**283**	P	**P**	**06 21 23.7**	**-1.0**
TTSI	**Tana Toraja**	**55.20**	**280**	P	P	06 21 42.1	+11
PLAI	**Plampang**	**55.21**	**273**	P	**P**	**06 21 36.0**	**+4.7**
JCJ	**Chichijima**	**55.43**	**325**	LR	LR	06 43 16.4	
	comp=Z,2µm,19.0s,baz=112,slow=34						
PCI	**Palu**	**55.98**	**282**	P	**P**	**06 21 38.9**	**+2.0**
TWSI	**Taliwang, Sumb**	**56.09**	**272**	P	**P**	**06 21 37.1**	**-0.5**
TWSI	**Taliwang, Sumb**	**56.09**	**272**	P	**P**	**06 21 35.6**	**-2.0**
MPSI	**Mapaga**	**56.41**	**284**	P	**P**	**06 21 38.6**	**-1.3**
VNDA	**Vanda**	**58.56**	**183**	P	**P**	**06 21 53.0**	**-1.1**
	comp=Z,2.8nm,0.8s,baz=346,slow=8.0,SNR=6.6						
VNDA				LR	LR	06 42 37.2	
	comp=Z,6µm,21.6s,baz=14,slow=32						
VNDA	**Vanda**	**58.56**	**183**	*e*P	**P**	**06 21 53.9**	**-0.2**
	comp=Z,32nm,1.5s						
VNDA	**Vanda**	**58.56**	**183**	*e*P	**P**	**06 21 53.9**	**-0.2**
VNDA				pmax	pmax		
	comp=Z,32nm,1.5s						
SBA	**Scott Base**	**58.69**	**182**	*e*P	**P**	**06 21 55.5**	**+0.5**
	comp=Z,75nm,1.4s						
SBA				LR	LR		
	comp=Z,4µm,22.0s						
SBA	**Scott Base**	**58.69**	**182**	*e*P	**P**	**06 21 55.5**	**+0.5**
SBA				pmax	pmax		
	comp=Z,75nm,1.4s						
SBA				MLR	MLR		
	comp=Z,4µm,22.0s						
JAGI	**Jajag, Banyuwa**	**58.74**	**272**	*e*P	**P**	**06 21 54.7**	**-1.7**
	comp=Z,67nm,1.1s						
JAGI				LR	LR		
	comp=Z,3µm,22.0s						
GMJI	**Gumukmas**	**59.47**	**272**	P	**P**	**06 22 05.3**	**+3.9**
	comp=Z,54nm,1.0s						
GMJI	**Gumukmas**	**59.47**	**272**	P	**P**	**06 21 59.1**	**-2.3**
MYLDM	**Lahad Datu**	**59.68**	**288**	*e*P	**P**	**06 22 03.1**	**+0.3**
	comp=Z,95nm,1.2s						
PWJI	**Pagerwojo**	**61.09**	**271**	P	**P**	**06 22 10.2**	**-2.3**
JHJ	**Hachijo jima 2**	**61.47**	**328**	LR	LR	06 48 44.8	
	comp=Z,2µm,18.0s,baz=139,slow=36						
PCJI	**Pacitan**	**61.63**	**271**	P	**P**	**06 22 18.6**	**+2.4**
PCJI	**Pacitan**	**61.63**	**271**	P	**P**	**06 22 12.5**	**-3.7**
TGY	**Tagaytay City**	**61.80**	**299**	LR	LR	06 47 33.3	
	comp=Z,1µm,19.7s,baz=109,slow=35						
CASY	**Casey**	**61.85**	**204**	*e*P	**P**	**06 22 16.3**	**-0.4**
	comp=Z,56nm,1.1s						
WOJI	**Wonogiri, Jawa**	**61.98**	**271**	P	**P**	**06 22 19.2**	**+0.7**
KKM	**Kota Kinabalu**	**62.10**	**288**	*e*P	**P**	**06 22 19.5**	**0.0**
	comp=Z,152nm,1.3s						
JOW	**Kunigami**	**63.72**	**315**	PFAKE		06 22 40.0	+10
JOW				LR	LR		
	comp=Z,5µm,21.0s						
KPJI	**Karang Pucung**	**64.01**	**271**	P	P	06 22 44.3	+12
STKI	**Sintang**	**64.09**	**280**	P	**P**	**06 22 33.7**	**+1.1**
SBUM	**Sibu**	**64.29**	**283**	*e*P	**P**	**06 22 32.1**	**-1.8**
	comp=Z,84nm,1.6s						
SBUM	**Sibu**	**64.29**	**283**	P	**P**	**06 22 37.0**	**+3.1**
INU	**Inuyama**	**64.63**	**327**	PFAKE		06 22 50.0	+14
INU				LR	LR		
	comp=Z,3µm,20.0s						
MJAR	**Matsushiro Arr**	**64.97**	**329**	P	**P**	**06 22 38.3**	**+0.5**
	comp=Z,14nm,1.0s,baz=169,slow=6.5,SNR=14						
MJAR				LR	LR	06 46 36.7	
	comp=Z,2µm,21.7s,baz=130,slow=32						
MAJO	**Matsushiro**	**64.97**	**329**	*e*P	**P**	**06 22 39.6**	**+1.7**
	comp=Z,40nm,1.3s						
MAJO				LR	LR		
	comp=Z,2µm,21.0s						
MAJO	**Matsushiro**	**64.97**	**329**	⇑*i*P	**P**	**06 22 37.4**	**-0.5**
MAJO				pmax	pmax		
	comp=Z,26nm,1.2s						
MAT	**Matsushiro**	**64.97**	**329**	P	**P**	**06 22 38.2**	**+0.3**
MAT				S	**S**	**06 31 24.6**	**+4.9**
MJB9	**Matsu-Tunnel**	**64.98**	**329**	*e*P	**P**	**06 22 39.0**	**+1.1**
	comp=Z,41nm,1.3s						
MJB9				LR	LR		
	comp=Z,2µm,21.0s						
KSM	**Kuching**	**65.69**	**281**	*e*P	**P**	**06 22 42.3**	**-0.7**
	comp=Z,58nm,1.2s						
YOJ	**Yonaguni jima**	**65.94**	**309**	PFAKE		06 23 00.0	+16
YOJ				LR	LR		
	comp=Z,3µm,20.0s						
DBJI	**Dramaga**	**66.31**	**271**	P	**P**	**06 22 46.0**	**-1.0**
JNU	**Nakatsue**	**66.37**	**321**	P	**P**	**06 22 47.4**	**+0.4**
	comp=Z,22nm,1.0s,baz=62,slow=4.9,SNR=9.2						
JNU	**Nakatsue**	**66.37**	**321**	*e*P	**P**	**06 22 47.5**	**+0.6**
	comp=Z,64nm,1.3s						
JNU				LR	LR		
	comp=Z,2µm,20.0s						
YULB	**Yu-li**	**66.58**	**307**	PFAKE		06 23 00.0	+11
YULB				LR	LR		
	comp=Z,3µm,22.0s						
NACB	**Ninganchiao**	**66.81**	**308**	PFAKE		06 23 00.0	+10
NACB				LR	LR		
	comp=Z,2µm,21.0s						
SBJI	**Serang**	**67.03**	**271**	P	**P**	**06 22 50.5**	**-1.1**
TPUB	**Ta-pu**	**67.03**	**307**	PFAKE		06 23 00.0	+8.6
TPUB				LR	LR		
	comp=Z,3µm,22.0s						
YHNB	**Yeheng**	**67.26**	**308**	PFAKE		06 23 00.0	+7.1
YHNB				LR	LR		
	comp=Z,4µm,22.0s						
CGJI	**Cibinong**	**67.29**	**271**	P	**P**	**06 22 51.0**	**-2.2**
ERM	**Erimo**	**67.30**	**336**	PFAKE		06 23 00.0	+7.4
ERM				LR	LR		
	comp=Z,7µm,20.0s						
TATO	**Taipei**	**67.36**	**309**	PFAKE		06 23 00.0	+6.6
TATO				LR	LR		
	comp=Z,4µm,21.0s						
YUK	**Yuzh-Kuril'sk**	**68.05**	**339**	*c i*P	**P**	**06 22 56.5**	**-0.8**
YUK				*e*		06 23 19.5	
YUK				*i*		06 25 25.8	
YUK				*e*PPP	PPP	06 27 10.6	
YUK				*i* S	**S**	**06 31 56.2**	**-0.5**
YUK				*e*SS	**SS**	**06 36 17.5**	**-2.1**
YUK				pmax	pmax		
	comp=Z,177nm,1.2s						
YUK				pmax	pmax		
	comp=N,119nm,0.6s						
YUK				pmax	pmax		
	comp=E,115nm,0.8s						
YUK				pmax	pmax		
	comp=Z,171nm,1.2s						
KUR	**Kuril'sk**	**68.46**	**341**	*e*P	**P**	**06 22 59.6**	**-0.2**
KUR				*e*S	**S**	**06 32 02.5**	**+1.1**
KUR				*i*		06 32 45.4	
KASI	**Kota Agung**	**68.76**	**272**	P	**P**	**06 23 00.6**	**-1.9**
MIR	**Mirnyy**	**68.84**	**205**	⇑*i*P	**P**	**06 23 04.0**	**+2.0**
MIR				*e*		06 23 28.0	
MIR				*e*PPP	PPP	06 27 20.0	
MIR				*e*PS	PnS	06 33 04.0	+34
ASAJ	**Asahikawa**	**69.31**	**336**	P	**P**	**06 23 05.5**	**+0.3**
	comp=Z,6.0nm,0.8s,baz=62,slow=5.6,SNR=1.9						
ASAJ				LR	LR	06 47 48.0	
	comp=Z,7µm,21.6s,baz=174,slow=31						
MDSI	**Maura Dua**	**69.39**	**272**	P	**P**	**06 23 04.1**	**-2.3**
QZH	**Quanzhou**	**69.49**	**307**	⇓*i*P	**P**	**06 23 05.5**	**-1.3**
QZH				S	**S**	**06 32 12.1**	**-2.4**
QZH				LR	LR		
	comp=Z,1µm,19.9s						
QZH				LR	LR		
	comp=Z,2µm,21.8s						
QZH				LR	LR		
	comp=Z,2µm,21.8s						
RPN	**Rapa Nui**	**70.03**	**113**	LR	LR	06 49 13.9	
	comp=Z,2µm,18.4s,baz=269,slow=32						
QSPA	**South Pole Qui**	**70.76**	**180**	P	**P**	**06 23 12.8**	**-1.3**
	comp=Z,14nm,0.8s,baz=100,slow=0.5,SNR=34						
QSPA				LR	LR	06 49 00.2	
	comp=Z,4µm,21.5s,baz=35,slow=32						
QSPA	**South Pole Qui**	**70.76**	**180**	*e*P	**P**	**06 23 13.7**	**-0.4**
	comp=Z,93nm,1.3s						
KSRS	**Korea Array**	**71.13**	**323**	P	**P**	**06 23 17.1**	**+0.6**
	comp=Z,9.0nm,1.1s,baz=139,slow=6.1,SNR=13						
KSRS				LR	LR	06 52 40.1	
	comp=Z,1µm,19.4s,baz=131,slow=34						
KSAR	**Wonju Array Be**	**71.14**	**323**	P	**P**	**06 23 17.1**	**+0.5**
KSAR	**Wonju Array Be**	**71.14**	**323**	P	**P**	**06 23 17.1**	**+0.5**
KS01	**Wonju Array Si**	**71.16**	**323**	*e*P	**P**	**06 23 17.3**	**+0.6**
SSE	**Sheshan**	**71.21**	**314**	P	**P**	**06 23 16.8**	**-0.3**
SSE				S	**S**	**06 32 34.8**	**+0.4**
SSE				pmax	pmax		
	comp=Z,20nm,0.7s						
SSE				pmax	pmax		
	comp=Z,130nm,3.9s						
SSE				LR	LR		
	comp=Z,780nm,22.8s						
SSE				LR	LR		
	comp=Z,1µm,23.1s						
SKR	**Severo-Kuril's**	**71.42**	**348**	*e*P	**P**	**06 23 15.7**	**-2.2**
SKR				*e*		06 23 40.7	
SKR				*e*S	**S**	**06 32 37.0**	**+1.1**
SKR				*e*		06 33 05.1	
SKR				pmax	pmax		
	comp=Z,200nm,3.7s						
SKR				pmax	pmax		
	comp=Z,500nm,3.6s						
SKR				MLR	MLR		
	comp=Z,4µm,18.0s						
MASI	**Maura Aman, Be**	**71.65**	**273**	P	**P**	**06 23 19.0**	**-1.3**
	comp=Z,68nm,1.3s						
YSS	**Yuzh-Sakhalins**	**71.67**	**338**	PFAKE		06 23 30.0	+10
YSS				LR	LR		
	comp=Z,6µm,22.0s						
YSS	**Yuzh-Sakhalins**	**71.67**	**338**	κ*e*P	**P**	**06 23 21.2**	**+1.6**
YSS				*e**SP	**sP**	**06 23 25.1**	**+0.5**
YSS				*e*		06 23 39.6	
YSS				*e*S	**S**	**06 32 40.6**	**+1.5**
YSS				*e*		06 33 25.4	
YSS				pmax	pmax		
	comp=Z,30nm,1.3s						
YSS				smax	smax		
	comp=N,1µm,10.2s						
MYKOM	**Kota Tinggi**	**71.82**	**279**	PFAKE		06 23 30.0	+8.8
MYKOM				LR	LR		
	comp=Z,2µm,22.0s						
INCN	**Inchon**	**71.89**	**322**	PFAKE		06 23 30.0	+8.8
INCN				LR	LR		
	comp=Z,1µm,20.0s						
ATKA	**Atka Island**	**71.95**	**8**	PFAKE		06 23 30.0	+8.9
ATKA				LR	LR		
	comp=Z,5µm,22.0s						
PET	**Petropavlovsk**	**73.22**	**350**	PFAKE		06 23 40.0	+11
PET				LR	LR		
	comp=Z,7µm,22.0s						
PET	**Petropavlovsk**	**73.22**	**350**	*e*P	**P**	**06 23 28.5**	**-0.2**
PET				*e*S	**S**	**06 32 53.3**	**-3.2**
PET				MLR	MLR		
	comp=Z,4µm,18.0s						
NJ2	**Nanjing**	**73.38**	**313**	*e*P	**P**	**06 23 30.0**	**-0.1**
NJ2				pP	**pP**	**06 23 32.8**	**-0.9**
NJ2				sP	**sP**	**06 23 35.0**	**-0.1**
NJ2				S	**S**	**06 32 59.3**	**+0.1**
NJ2				sS	**sS**	**06 33 05.6**	**+0.4**
NJ2				SKS	**SKSac**	**06 33 36.3**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,270nm,3.5s						
NJ2				LR	LR		
	comp=Z,2µm,20.6s						
NJ2				LR	LR		
	comp=Z,2µm,20.6s						
NJ2				LR	LR		
	comp=Z,4µm,24.9s						
PEA0B	**Petropavlovsk-**	**73.46**	**350**	*e*P	**P**	**06 23 30.8**	**+0.7**
	comp=Z,87nm,1.4s						
PEA0B				LR	LR		
	comp=Z,7µm,20.0s						
PETK	**Petropavlovsk-**	**73.46**	**350**	P	**P**	**06 23 30.5**	**+0.4**
	comp=Z,18nm,1.1s,baz=130,slow=4.5						
PETK	**Petropavlovsk-**	**73.46**	**350**	*e*P	**P**	**06 23 30.7**	**+0.6**
PETK	**Petropavlovsk-**	**73.46**	**350**	*e*P	**P**	**06 23 30.7**	**+0.6**
QIZ	**Qiongzhong**	**73.47**	**297**	P	**P**	**06 23 33.3**	**+2.4**
QIZ				S	**SKiKP**	**06 33 04.5**	**+2.4**
QIZ				LR	LR		
	comp=Z,950nm,24.5s						
QIZ				LR	LR		
	comp=Z,530nm,24.0s						
QIZ				LR	LR		
	comp=Z,950nm,25.0s						
NIKH	**Nikolski High**	**73.51**	**11**	*e*P	**P**	**06 23 30.6**	**+0.3**
	comp=Z,260nm,1.4s						
NIKH				LR	LR		
	comp=Z,3µm,22.0s						
USRK	**Ussuriysk Ar.**	**73.90**	**330**	P	**P**	**06 23 34.2**	**+1.4**
	comp=Z,2.8nm,0.8s,baz=145,slow=5.3						
USRK				LR	LR	06 50 50.7	
	comp=Z,2µm,21.7s,baz=132,slow=32						
BKNI	**Bangkinang**	**73.94**	**276**	PFAKE		06 23 50.0	+16
BKNI				LR	LR		
	comp=Z,3µm,22.0s						
COCO	**West Island**	**73.99**	**262**	PFAKE		06 23 50.0	+16
COCO				LR	LR		
	comp=Z,5µm,20.0s						
TYV	**Tymovskoe**	**75.07**	**340**	*e*P	**P**	**06 23 38.3**	**-1.2**
TYV				*e*		06 33 15.1	
TYV				pmax	pmax		
	comp=Z,600nm,5.2s						
TYV				pmax	pmax		
	comp=Z,17nm,2.4s						
MDJ	**Mudanjiang**	**75.36**	**329**	P	**P**	**06 23 44.4**	**+3.1**
MDJ				S	**S**	**06 33 24.8**	**+3.9**
MDJ				pmax	pmax		
	comp=Z,440nm,2.5s						
MDJ				LR	LR		
	comp=Z,2µm,21.8s						
MDJ				LR	LR		
	comp=Z,2µm,23.5s						
MDJ				LR	LR		
	comp=Z,3µm,21.2s						
IPM	**Ipoh**	**75.41**	**280**	*e*P	**P**	**06 23 42.3**	**-0.1**
	comp=Z,33nm,0.9s						
MNSI	**Mandailing Nat**	**75.47**	**276**	P	**P**	**06 23 40.9**	**-1.8**
WHN	**Wuhan**	**75.70**	**310**	⇑P	**P**	**06 23 46.3**	**+2.7**
WHN				S	**S**	**06 33 26.6**	**+1.3**
WHN				LR	LR		
	comp=Z,3µm,21.9s						
WHN				LR	LR		
	comp=Z,5µm,21.7s						
WHN				LR	LR		
	comp=Z,5µm,21.3s						
DL2	**Dalian**	**75.79**	**320**	P	**P**	**06 23 43.5**	**-0.4**
DL2				S	**S**	**06 33 26.3**	**+0.4**
DL2				pmax	pmax		
	comp=Z,52nm,1.1s						
DL2				pmax	pmax		
	comp=Z,560nm,5.8s						
DL2				LR	LR		
	comp=Z,1µm,19.3s						
DL2				LR	LR		
	comp=Z,860nm,19.8s						
DL2				LR	LR		
	comp=Z,2µm,28.7s						
KULM	**Kulim**	**76.05**	**281**	*e*P	**P**	**06 23 44.6**	**-1.4**
	comp=Z,25nm,1.0s						
PSI	**Prapat**	**76.78**	**278**	*e*P	**P**	**06 23 48.0**	**-2.3**
	comp=Z,41nm,1.1s						
PSI	**Prapat**	**76.78**	**278**	*e*P	**P**	**06 23 48.0**	**-2.3**
PSI				pmax	pmax		
	comp=Z,41nm,1.1s						
CN2	**Changchun**	**76.88**	**326**	*e*P	**P**	**06 23 52.3**	**+2.3**
CN2				*e*S	**S**	**06 33 36.9**	**-0.8**
CN2				*e*SS	**SS**	**06 38 37.0**	**+2.3**
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,1µm,26.0s						
CN2				LR	LR		
	comp=Z,1µm,26.0s						
CN2				LR	LR		
	comp=Z,2µm,29.0s						
TIA	**Tai'an**	**76.98**	**316**	P	**P**	**06 23 51.3**	**+0.5**
TIA				S	**S**	**06 33 41.4**	**+2.3**
TIA				SS	**SS**	**06 38 38.1**	**+1.6**
TIA				pmax	pmax		
	comp=Z,11nm,0.8s						
TIA				LR	LR		
	comp=Z,1µm,25.5s						
TIA				LR	LR		
	comp=Z,1µm,26.5s						
TIA				LR	LR		
	comp=Z,3µm,25.0s						
PANO	**Nakornpanom**	**77.10**	**293**	P	**P**	**06 23 54.2**	**+2.4**
GRNR	**Gornyy**	**77.16**	**337**	*e*P	P	06 23 56.6	+5.1
GRNR				pmax	pmax		
	comp=Z,21nm,1.0s						
GSI	**Gunungsitoli**	**77.53**	**276**	*e*P	**P**	**06 23 53.0**	**-1.4**
	comp=Z,90nm,1.2s						
SKNT	**Sakolnakorn**	**77.58**	**293**	P	**P**	**06 23 54.6**	**+0.1**
NKL	**Nikolayevsk**	**77.66**	**340**	*e*P	**P**	**06 23 50.0**	**-4.2**
NKL				*e*S	**S**	**06 33 52.0**	**+6.3**
NKL				pmax	pmax		
	comp=Z,900nm,10.0s						
NKL				smax	smax		
	comp=N,1µm,12.0s						
NKL				smax	smax		
	comp=E,1µm,12.0s						
KLR	**Kul'dur**	**77.82**	**333**	P	**P**	**06 23 56.4**	**+1.2**
	comp=E,0.4nm,1.0s,baz=162,slow=5.0,SNR=9.0						
KLR	**Kul'dur**	**77.82**	**333**	*ce*P	**P**	**06 23 57.5**	**+2.3**
TRTT	**Trang**	**77.86**	**283**	P	**P**	**06 23 56.6**	**+0.4**
SRAK	**Srakaew**	**78.08**	**289**	P	**P**	**06 23 58.9**	**+1.5**
KCSI	**Kotacane, Aceh**	**78.11**	**278**	P	**P**	**06 23 56.0**	**-1.6**
KHON	**Khomkaen**	**78.33**	**292**	P	P	06 24 04.4	+5.7
NAYO	**Nakonayok**	**78.84**	**289**	P	**P**	**06 24 06.0**	**+4.4**
	comp=E,0.3nm,2.3s,comp=E,20nm						
CHAI	**Chaiyaphum**	**78.88**	**291**	P	**P**	**06 24 03.1**	**+1.3**
	comp=E,2.5nm,0.7s						
GYA	**Guiyang**	**79.51**	**303**	P	**P**	**06 24 06.3**	**+1.1**
GYA				PP	**PP**	**06 27 08.0**	**+2.1**
GYA				S	**S**	**06 34 06.6**	**-0.4**
GYA				SKS	**SKSac**	**06 34 18.8**	**-3.3**
GYA				pmax	pmax		
	comp=E,40nm,1.0s						
GYA				pmax	pmax		
	comp=E,160nm,6.0s						
GYA				LR	LR		
	comp=E,740nm,20.0s						
GYA				LR	LR		
	comp=E,680nm,21.2s						
GYA				LR	LR		
	comp=E,620nm,20.4s						
BJT	**Baijiatuau**	**79.81**	**319**	*e*P	**P**	**06 24 08.4**	**+2.0**
	comp=E,98nm,1.7s						
BJI	**Beijing**	**79.82**	**319**	P	**P**	**06 24 06.8**	**+0.4**
BJI				S	**S**	**06 34 11.3**	**+1.9**
BJI				LR	LR		
	comp=E,3µm,21.8s						
BJI				LR	LR		
	comp=E,4µm,22.7s						
BJI				LR	LR		
	comp=E,5µm,35.5s						
MAW	**Mawson**	**80.00**	**201**	P	**P**	**06 24 07.7**	**+0.7**
	comp=E,14nm,1.0s,baz=112,slow=6.9,SNR=12						
MAW	**Mawson**	**80.00**	**201**	*e*P	**P**	**06 24 07.2**	**+0.2**
	comp=E,13nm,1.2s						
MAW	**Mawson**	**80.00**	**201**	*e*P	**P**	**06 24 07.2**	**+0.2**
MAW				pmax	pmax		
	comp=Z,13nm,1.2s						
PBKT	**Sadao Pong**	**80.05**	**291**	P	**P**	**06 24 09.2**	**+1.1**
PHIT	**Phitsanulok**	**80.78**	**292**	P	**P**	**06 24 14.4**	**+2.4**
TIY	**Taiyuan**	**80.92**	**315**	*e*P	**P**	**06 24 14.8**	**+2.3**
TIY				S	S	06 34 10.3	-11
TIY				LR	LR		
	comp=Z,1µm,20.2s						
TIY				LR	LR		
	comp=Z,3µm,23.2s						
TIY				LR	LR		
	comp=Z,3µm,23.2s						
OHAK	**Old Harbor**	**81.02**	**17**	*e*P	**P**	**06 24 12.1**	**-0.3**
BSI	**Banda Aceh**	**81.10**	**279**	P	**P**	**06 24 12.7**	**-1.2**
NANT	**Nan**	**81.17**	**293**	P	**P**	**06 24 15.2**	**+1.1**
XAN	**Xi'an**	**81.44**	**310**	P	**P**	**06 24 15.1**	**-0.2**
XAN				pP	sP	06 24 19.8	-0.6
XAN				sP	PcP	06 24 22.1	+0.8
XAN				PP	**PP**	**06 27 23.4**	**+1.7**
XAN				S	**S**	**06 34 25.0**	**-1.9**
XAN				SKS	**SKSac**	**06 34 30.1**	**-4.9**
XAN				pmax	pmax		
	comp=Z,230nm,4.0s						
XAN				LR	LR		
	comp=Z,1µm,23.0s						
XAN				LR	LR		
	comp=Z,2µm,23.0s						
XAN				LR	LR		
	comp=Z,4µm,23.0s						
SUKH	**Sukhothai**	**81.58**	**292**	P	**P**	**06 24 18.7**	**+2.4**
KDAK	**Kodiak Island**	**81.70**	**17**	P	**P**	**06 24 16.5**	**+0.6**
	comp=Z,17nm,1.0s,baz=187,slow=2.8,SNR=5.8						
LAMP	**Lampang**	**81.99**	**293**	P	**P**	**06 24 19.8**	**+1.3**
KMI	**Kunming**	**82.08**	**300**	P	**P**	**06 24 20.0**	**+0.9**
KMI				pP	sP	06 24 23.3	-0.8
KMI				sP	PcP	06 24 24.4	-0.1
KMI				PP	**PP**	**06 27 26.9**	**-0.4**
KMI				S	**S**	**06 34 33.6**	**-0.5**
KMI				sS	SKSac	06 34 41.1	+1.0
KMI				SS	**SS**	**06 39 55.0**	**+1.2**
KMI				pmax	pmax		
	comp=Z,17nm,0.8s						
KMI				pmax	pmax		
	comp=Z,180nm,5.3s						

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KMI                                   LR      LR
      comp=Z,480nm,20.7s
KMI                                   LR      LR
      comp=Z,1µm,21.4s
KMI                                   LR      LR
      comp=Z,1µm,19.5s
BGH   Bear Gulch        82.28  46   eP      P        06 24 22.1 +2.5
SCZ2  Santa Cruz Isl    82.51  50    P      P        06 24 22.4 +1.5
      baz=241
CM01  Chiang Mai Arr    82.54 292   eP      P        06 24 21.1 -0.2
CM31  Chiang Mai Arr    82.56 292   eP      P        06 24 23.2 +1.7
CMAR  Chiang Mai Arr    82.56 292    P      P        06 24 21.8 +0.3
      comp=Z,15nm,1.0s,baz=124,slow=3.8,SNR=31
KCPM  Cahto Peak        82.69  44   eP      P        06 24 24.1 +2.2
      comp=Z,126nm,1.6s
CMMT  Chiang Mai        82.70 293    P      P        06 24 22.6 +0.4
CHTO  Chiang Mai        82.70 293   eP      P        06 24 21.2 -0.9
      comp=Z,31nm,1.2s
CHTO  Chiang Mai        82.70 293   eP      P        06 24 21.3 -0.9
CHTO                                 pmax   pmax
      comp=Z,31nm,1.2s
CHTO  Chiang Mai        82.70 293    P      P        06 24 22.7 +0.5
      comp=Z,118nm,1.2s,comp=Z,3µm
PKM   Mcpherson Peak    82.81  49    P      P        06 24 24.3 +1.7
      baz=241
KMRM  Mail Ridge        82.89  43   eP      P        06 24 24.7 +1.9
      comp=Z,129nm,1.5s
SMMC  Simmler           82.89  49    P      P        06 24 24.6 +1.7
      baz=240
PAGB  Antelope Grade    82.92  48   eP      P        06 24 24.4 +1.4
      comp=Z,75nm,1.7s
ZEA   Zeya              83.05 334   eP      P        06 24 27.0 +3.8
ZEA                                 eS      S        06 34 49.0 +6.6
ZEA                                 ePS     PnS      06 35 32.0 -1.7
ZEA                                 eSS     SS       06 40 07.0 +0.2
ZEA                                 eSSS    SSS      06 43 32.0
ZEA                                  pmax   pmax
      comp=N,96nm,1.8s
ZEA                                  pmax   pmax
      comp=Z,190nm,2.5s
ZEA                                  pmax   pmax
      comp=Z,500nm,10.0s
ZEA                                  smax   smax
      comp=E,2µm,8.0s
ZEA                                  smax   smax
      comp=N,900nm,10.0s
HHC   Hu-ho-hao-te      83.18 317   eP      P        06 24 25.1 +0.7
HHC                                  sP     PcP      06 24 33.8 +4.9
HHC                                  S      S        06 34 44.8 +0.2
HHC                                  SS     SS       06 40 11.0 +1.5
HHC                                  pmax   pmax
      comp=N,19nm,1.0s
HHC                                  pmax   pmax
      comp=N,140nm,5.3s
HHC                                  LR     LR
      comp=N,840nm,19.2s
HHC                                  LR     LR
      comp=N,2µm,19.4s
HHC                                  LR     LR
      comp=N,3µm,19.4s
KHMM  Horse Mountain    83.23  43   eP      P        06 24 26.1 +1.4
      comp=N,141nm,1.9s
CNPM  China Poot        83.55  17   eP      P        06 24 26.2 +0.5
      comp=N,197nm,1.6s
SEY   Seymchan          83.69 350    P      P        06 24 26.2 -0.1
      comp=N,15nm,1.0s,baz=148,slow=7.4,SNR=18
SEY   Seymchan          83.69 350⇓iP     P        06 24 26.3  0.0
SEY                                 i                06 24 29.9
SVW2  Sparrevohn        83.80  14   eP      P        06 24 26.8 -0.1
      comp=N,21nm,1.2s
VES   Vestal, Richgr    83.80  49    P      P        06 24 28.9 +1.4
      baz=241,SNR=5.8
CD2   Chengdu           83.80 306    P      P        06 24 27.3 -0.4
CD2                                  pP     pP       06 24 30.4 -1.0
CD2                                  sP     PcP      06 24 31.8  0.0
CD2                                  PP     PP       06 27 40.1 -1.1
CD2                                  S      S        06 34 50.8 -0.3
CD2                                  sS     sS       06 34 56.5 -0.8
CD2                                  SS     SS       06 40 19.3 +0.3
CD2                                  pmax   pmax
      comp=N,20nm,0.7s
CD2                                  pmax   pmax
      comp=N,420nm,6.0s
CD2                                  LR     LR
      comp=N,2µm,20.9s
CD2                                  LR     LR
      comp=N,2µm,22.1s
CD2                                  LR     LR
      comp=N,2µm,22.7s
WDC   Whiskeytown Da    83.84  43   eP      P        06 24 28.6 +1.0
      comp=N,125nm,2.0s
BRLK  Bradley Lake      83.85  17   eP      P        06 24 28.6 +1.4
      comp=N,81nm,1.4s
N02D  Trinity Center    83.94  43    P      P        06 24 29.3 +1.1
      baz=238,SNR=12
RSO   Redoubt South     83.94  16   eP      P        06 24 28.9 +1.0
CMB   Columbia Colle    83.97  46   eP      P        06 24 28.4  0.0
      comp=N,33nm,1.3s
ORV   Oroville          83.99  45   eP      P        06 24 28.3 -0.1
      comp=N,42nm,1.5s
ORV   Oroville          83.99  45   eP      P        06 24 28.3 -0.1
ORV                                  pmax   pmax
      comp=Z,42nm,1.5s
L02D  Cave Junction,    84.00  42    P      P        06 24 30.4 +2.0
      baz=237
AFDM  Forest Hills D    84.03  45   eP      P        06 24 29.0 +0.3
      comp=Z,30nm,1.2s
BFSC  Mount Baldy Ra    84.06  51    P      P        06 24 29.8 +0.7
      baz=242
M02C  Callahan          84.07  42    P      P        06 24 29.6 +0.8
      baz=238,SNR=13
MURC  Murrieta          84.11  52    P      P        06 24 29.9 +0.7
      baz=242
EDW2  Edwards Air Fo    84.12  50    P      P        06 24 30.4 +1.2
      baz=242,SNR=10
ISA   Isabella, Lake    84.15  49    P      P        06 24 30.0 +0.6
      baz=241,SNR=25
ISA   Isabella, Lake    84.15  49   eP      P        06 24 29.9 +0.5
      comp=Z,64nm,1.4s
ISA   Isabella, Lake    84.15  49   eP      P        06 24 29.9 +0.5
ISA                                  pmax   pmax
      comp=Z,64nm,1.4s
O03D  Paynes Creek      84.17  44    P      P        06 24 30.0 +0.6
      baz=239,SNR=11
YBH   Yreka Blue Hor    84.34  42    P      P        06 24 29.9 -0.3
      comp=Z,21nm,1.2s,baz=181,slow=3.5,SNR=19
YBH                                  LR     LR       06 57 32.8
      comp=Z,1µm,18.2s,baz=234,slow=32
YBH   Yreka Blue Hor    84.34  42   eP      P        06 24 30.8 +0.6
      comp=Z,59nm,1.4s
MONP2 Monument Peak     84.36  52    P      P        06 24 31.0 +0.3
      baz=243
IKP   In-Ko-Pah, Jac    84.48  53    P      P        06 24 31.7 +0.5
      baz=243
FRD   Ford Ranch, An    84.50  52    P      P        06 24 31.6 +0.4
      baz=243
BBRC  Big Bear Solar    84.62  51    P      P        06 24 32.4 +0.4
      baz=242
LRMC  Laurel Mtn Rad    84.63  50    P      P        06 24 32.6 +0.7
      baz=242,SNR=5.3
HUMO  Hull Mountain     84.65  41   eP      P        06 24 32.3 +0.6
      comp=Z,50nm,1.4s
PFO   Pinyon Flats O    84.66  52    P      P        06 24 32.7 +0.6
      baz=243
PFO   Pinyon Flats O    84.66  52   eP      P        06 24 33.0 +0.9
      comp=Z,40nm,1.8s
PFO   Pinyon Flats O    84.66  52   eP      P        06 24 33.0 +0.9
PFO                                  pmax   pmax
      comp=Z,40nm,1.8s
XPFO  Piæon Flat        84.66  52   eP      P        06 24 33.1 +1.0
      comp=Z,40nm,1.8s
MDPB  Devils Postpil    84.67  47   eP      P        06 24 32.6 +0.4
      comp=Z,49nm,1.4s
OMMB  Old Mammoth Mi    84.72  47   eP      P        06 24 32.8 +0.2
      comp=Z,48nm,1.4s
CWC   Cottonwood Cre    84.80  49    P      P        06 24 33.3 +0.5
      baz=242
MLAC  Mammoth, Mammo84.84  47    P      P        06 24 33.3 +0.2
      baz=241
SWSC  Sam W. Stewart    84.85  53    P      P        06 24 33.2 +0.3
      baz=243
WAKR  Walker            84.85  46   eP      P        06 24 33.6 +0.6
      comp=Z,182nm,1.9s
BEKR  Beckworth         84.91  45   eP      P        06 24 33.5 +0.2
      comp=Z,66nm,1.6s
M04C  Macdoel           84.92  43    P      P        06 24 33.7 +0.4
      baz=239,SNR=7.3
TIN   Tinemaha, Big     84.98  48    P      P        06 24 34.3 +0.7
      baz=242
I03D  Drain, OR         84.99  40    P      P        06 24 34.1 +0.8
      baz=238
PNTR  Pine Nut          85.03  46   eP      P        06 24 34.2 +0.3
      comp=Z,75nm,1.4s
MPMC  Manual Prospec    85.04  49    P      P        06 24 34.3 +0.3
      baz=242,SNR=14
DAC   Darwin (Calif)    85.07  49   eP      P        06 24 34.0 -0.2
      comp=Z,43nm,1.6s
DAC   Darwin (Calif)    85.07  49   eP      P        06 24 34.0 -0.2
DAC                                  pmax   pmax
      comp=Z,43nm,1.6s
VCNR  Virginia City     85.10  46   eP      P        06 24 34.5 +0.2
      comp=Z,50nm,1.6s
BELC  Belle Mtn. Jos    85.18  52    P      P        06 24 35.1 +0.4
      baz=243,SNR=15
GSC   Goldstone, Bar    85.18  50    P      P        06 24 35.0 +0.3
      baz=242,SNR=7.5
GSC   Goldstone, Bar    85.18  50   eP      P        06 24 34.9 +0.3
      comp=Z,35nm,1.4s
GSC   Goldstone, Bar    85.18  50   eP      P        06 24 34.9 +0.3
GSC                                  pmax   pmax
      comp=Z,35nm,1.4s
YERR  Yerington         85.22  46   eP      P        06 24 35.1 +0.2
      comp=Z,78nm,1.6s
RC01  Rabbit Creek A    85.27  17   eP      P        06 24 35.9 +1.5
      comp=Z,71nm,1.3s
PMSA  Palmer Station    85.30 159    LR     LR       06 55 55.7
      comp=Z,3µm,20.6s,baz=232,slow=31
HEC   Hector,Ludlow     85.31  51    P      P        06 24 35.8 +0.6
      baz=243,SNR=8.2
K04D  Chiloquin, OR     85.41  42    P      P        06 24 36.6 +0.9
      baz=239
BC3   Big Chuckawall    85.43  52    P      P        06 24 36.4 +0.5
      baz=243,SNR=10
PAHR  Pah Rah Range     85.48  45   eP      P        06 24 36.0 -0.1
      comp=Z,60nm,1.5s
J04D  Umpqua Nationa    85.51  41    P      P        06 24 36.9 +0.7
      baz=238,SNR=11
LPIG  La Paz            85.51  63    LR     LR       06 54 34.8
      comp=Z,6µm,19.6s,baz=246,slow=30
GRAC  Grapevine Rang    85.57  48    P      P        06 24 37.2 +0.7
      baz=242,SNR=7.0
NV01  Mina Array Sit    85.59  47   eP      P        06 24 36.5 -0.3
NVAR  Mina Array Bea    85.59  47    P      P        06 24 36.6 -0.2
      comp=Z,7.1nm,1.0s,baz=219,slow=9.3,SNR=19
NVAR                                 LR     LR       06 56 37.5
      comp=Z,5µm,19.1s,baz=108,slow=31
I04A  Tendick Farm,     85.61  41    P      P        06 24 37.4 +0.9
      baz=238,SNR=6.2
GLA   Glamis            85.63  53    P      P        06 24 37.4 +0.5
      baz=244,SNR=7.5
GLA   Glamis            85.63  53   eP      P        06 24 37.5 +0.6
      comp=Z,41nm,1.3s
GLA   Glamis            85.63  53   eP      P        06 24 37.5 +0.6
GLA                                  pmax   pmax
      comp=Z,41nm,1.3s
FURC  Furnace Creek,    85.68  49    P      P        06 24 37.5 +0.6
      baz=242,SNR=6.1
NV11  Mina Array Sit    85.69  47   eP      P        06 24 37.5 +0.3
      comp=Z,5.5nm,1.6s
DIB   Dawson Inlet,     85.73  29   eP      P        06 24 36.7  0.0
      comp=Z,53nm,1.3s
GMRC  Granite Mounta    85.78  51    P      P        06 24 38.3 +0.6
      baz=243,SNR=6.5
SHOC  Shoshone, Teco    85.84  50    P      P        06 24 38.5 +0.7
      baz=243
GLI   Glacier Island    85.85  18   eP      P        06 24 37.5 +0.3
      comp=Z,42nm,1.2s
G03D  McMinnville, O    85.85  39    P      P        06 24 38.5 +0.9
      baz=238
IRM   Iron Mountain     85.88  52    P      P        06 24 38.7 +0.6
      baz=244,SNR=19
TUQ   Turquoise Moun    85.88  50    P      P        06 24 38.6 +0.4
      baz=243,SNR=5.8
FID   Port Fidalgo      85.92  18   eP      P        06 24 38.4 +0.8
      comp=Z,54nm,1.5s
MOD   Modoc Plateau     85.97  43   eP      P        06 24 38.7 +0.2
      comp=Z,51nm,1.4s
EYAK  Cordova Ski Ar    85.98  19   eP      P        06 24 38.5 +0.7
      comp=Z,20nm,1.1s
K05A  Summer Lake       86.01  42   eP      P        06 24 37.1 -1.6
      comp=Z,134nm,1.6s
KVN   Kaiserville       86.03  46   eP      P        06 24 39.1 +0.2
      comp=Z,51nm,1.5s
KVN   Kaiserville       86.03  46   eP      P        06 24 39.1 +0.2
KVN                                  pmax   pmax
      comp=Z,51nm,1.5s
SYO   Syowa Base        86.06 195⇓iX     P        06 24 29.6 -8.7
SYO   Syowa Base        86.06 195⇑ePcP   P        06 24 38.4 +0.1
GHO   Glory Hole Cre    86.06  17   eP      P        06 24 37.8 -0.5
      comp=Z,29nm,1.1s
J05D  Fort Rock, OR     86.08  42    P      P        06 24 39.6 +0.6
      baz=239,SNR=38
LZH   Lanzhou           86.08 310   eP      P        06 24 40.1 +0.9
LZH                                  pP     sP       06 24 45.6 +1.4
LZH                                  sP     pP       06 24 48.3 +5.4
LZH                                  SS     SS       06 40 54.9 +2.3
LZH                                  pmax   pmax
      comp=Z,37nm,1.2s
LZH                                  pmax   pmax
      comp=Z,380nm,4.3s
LZH                                  LR     LR
      comp=Z,2µm,15.7s
LZH                                  LR     LR
      comp=Z,3µm,14.1s
LZH                                  LR     LR
      comp=Z,4µm,16.3s
Y12C  Blythe            86.16  52    P      P        06 24 40.1 +0.7
      baz=244,SNR=6.6
Y12C  Blythe            86.16  52   eP      P        06 24 39.8 +0.3
      comp=Z,51nm,1.4s
RAGM  Ragged Mountai    86.19  19   eP      P        06 24 38.5 -0.5
      comp=Z,84nm,1.8s
H04A  Detroit Lake      86.22  40   eP      P        06 24 39.3 -0.2
      comp=Z,56nm,1.3s
SML   Sawmill           86.25  17   eP      P        06 24 40.7 +1.5
      comp=Z,54nm,1.4s
LDFC  Landfair          86.32  51   eP      P        06 24 40.4  0.0
      comp=Z,64nm,1.2s
TPNV  Topopah Spring    86.34  49    P      P        06 24 40.8 +0.3
      baz=243,SNR=16
TPNV  Topopah Spring    86.34  49   eP      P        06 24 40.6 +0.2
      comp=Z,66nm,1.7s
TPNV  Topopah Spring    86.34  49   eP      P        06 24 40.6 +0.2
TPNV                                 pmax   pmax
      comp=Z,66nm,1.7s
E03A  Lebam             86.40  38   eP      P        06 24 40.7 +0.4
      comp=Z,55nm,1.4s
PINE  Pine Mountain     86.52  41   eP      P        06 24 41.9 +0.6
      comp=Z,108nm,1.5s
SCM   Sheep Creek Mo    86.55  17   eP      P        06 24 40.7  0.0
      comp=Z,107nm,1.8s
SCM   Sheep Creek Mo    86.55  17   eP      P        06 24 40.7  0.0
SCM                                  pmax   pmax
      comp=Z,107nm,1.8s
I05D  Terrebonne, OR    86.56  41    P      P        06 24 41.8 +0.6
      baz=239,SNR=12
CAST  Castle Rocks      86.63  15   eP      P        06 24 40.1 -1.0
      comp=Z,14nm,1.0s
BMRM  Bremner River     86.66  19   eP      P        06 24 40.7 -0.6
      comp=Z,74nm,1.8s
KLU   Klutina           86.68  18   eP      P        06 24 43.3 +1.8
      comp=Z,50nm,1.8s
NLWA  Neilton Lookou    86.68  37   eP      P        06 24 41.9 +0.2
      comp=Z,55nm,1.5s
PDMCI Parker Dam,Lak    86.69  52    P      P        06 24 42.8 +0.9
      baz=244
214A  Organ Pipe Nat    86.69  55    P      P        06 24 42.5 +0.3
      baz=245,SNR=5.1
SHPR  Sheep Range       86.92  50   eP      P        06 24 42.4 -0.9
      comp=Z,26nm,1.4s
TGL   Tana Glacier      87.05  20   eP      P        06 24 43.2 -0.1
      comp=Z,38nm,1.3s
TRF   Thorofare Moun    87.10  15   eP      P        06 24 43.2 -0.3
      comp=Z,10nm,1.0s
BBB   Bella Bella       87.17  32    P      P        06 24 45.0 +1.1
      comp=Z,11nm,1.1s,baz=270,slow=5.1,SNR=2.0
BMN   Battle Mountai    87.28  45   eP      P        06 24 45.2 +0.3
      comp=Z,55nm,1.5s
BMN   Battle Mountai    87.28  45   eP      P        06 24 45.2 +0.3
BMN                                  pmax   pmax
      comp=Z,55nm,1.5s
WVOR  Wild Horse Val    87.31  43   eP      P        06 24 45.3 +0.3
      comp=Z,117nm,1.7s
WVOR  Wild Horse Val    87.31  43   eP      P        06 24 45.3 +0.3
WVOR                                 pmax   pmax
      comp=Z,117nm,1.7s
R11A  Troy Canyon, C    87.44  48    P      P        06 24 46.2 +0.4
      baz=243,SNR=6.9
R11A  Troy Canyon, C    87.44  48   eP      P        06 24 45.1 -0.7
      comp=Z,32nm,1.8s
G06A  Carlson Farm,     87.45  40   eP      P        06 24 45.6 +0.1
      comp=Z,151nm,1.9s
LON   Longmire          87.53  38   eP      P        06 24 45.7 -0.1
      comp=Z,58nm,1.8s
LON   Longmire          87.53  38    P      P        06 24 45.7 -0.1
I07A  Izee              87.56  41   eP      P        06 24 46.4 +0.3
      comp=Z,56nm,1.7s
D05A  Enumclaw          87.66  38   eP      P        06 24 45.8 -0.6
      comp=Z,224nm,1.5s
MCK   McKinley          87.67  16   eP      P        06 24 45.7 -0.4
      comp=Z,45nm,1.6s
MCK   McKinley          87.67  16   eP      P        06 24 45.7 -0.4
MCK                                  pmax   pmax
      comp=Z,45nm,1.6s
J08A  Circle Bar Ran    87.86  42   eP      P        06 24 47.6  0.0
      comp=Z,46nm,1.3s
PAX   Paxson            87.98  17   eP      P        06 24 45.7 -2.0
      comp=Z,13nm,0.7s
PAX   Paxson            87.98  17   eP      P        06 24 45.7 -2.0
PAX                                  pmax   pmax
      comp=Z,13nm,0.7s
A04D  Lummi Island      88.06  36    P      P        06 24 49.4 +1.1
      baz=238
B05A  Bryant            88.16  37    P      P        06 24 49.5 +0.8
      baz=238
JIS   Juneau Island     88.27  25   eP      P        06 24 49.6 +0.7
      comp=Z,17nm,1.2s
BESE  Bessie Mountai    88.29  24   eP      P        06 24 49.4 +0.2
      comp=Z,39nm,1.2s
MLY   Manley            88.31  14   eP      P        06 24 49.0 -0.2
      comp=Z,11nm,1.5s
YAK   Yakutsk           88.31 341    P      P        06 24 50.5 +1.4
      comp=Z,2.3nm,0.5s,baz=324,slow=19,SNR=2.2
YAK   Yakutsk           88.31 341   eP      P        06 24 50.7 +1.6
YAK                                 e                06 24 54.4
YAK                                 e                06 28 19.7
YAK                                 eS      SKSac    06 35 11.0 -6.5
YAK                                 e                06 35 35.0
YAK                                  pmax   pmax
      comp=Z,16nm,0.9s
YAK                                  smax   smax
      comp=N,266nm,5.0s
TUC   Tucson            88.40  55    P      P        06 24 50.8 +0.4
      baz=246
TUC   Tucson            88.40  55   eP      P        06 24 51.1 +0.7
      comp=N,28nm,1.5s
TUC   Tucson            88.40  55    P      P        06 24 51.1 +0.7
TUC                                  pmax   pmax
      comp=Z,28nm,1.5s
LTY   Liberty           88.46  38   eP      P        06 24 50.8 +0.5
      comp=Z,114nm,1.9s
WRH   Wood River Hil    88.49  15   eP      P        06 24 49.8 -0.2
      comp=Z,31nm,1.4s
G08A  Pilot Rock        88.50  41   eP      P        06 24 50.6  0.0
      comp=Z,78nm,1.5s
LCMT  Little Creek M    88.52  50   eP      P        06 24 50.4 -0.5
      comp=Z,18nm,1.3s
CCUT  Cedar City        88.67  49   eP      P        06 24 52.2 +0.5
      comp=Z,54nm,1.8s
HAWA  Hanford           88.70  39   eP      P        06 24 51.4 +0.1
      comp=Z,153nm,1.6s
CCB   Clear Creek Bu    88.71  15   eP      P        06 24 50.2 -0.7
      comp=Z,18nm,1.4s
SKAG  Skagway           88.71  23   eP      P        06 24 51.7 +0.7
      comp=Z,50nm,1.6s
PSUT  Pine Spring       88.74  48   eP      P        06 24 51.6 -0.4
      comp=Z,19nm,1.3s
RIDG  Independ'e Rid    88.77  17   eP      P        06 24 52.3 +1.0
      comp=Z,26nm,1.4s
MDM   Murphy Dome       88.86  15   eP      P        06 24 51.6 -0.1
      comp=Z,26nm,1.5s
SZCU  Shurtz Canyon     88.88  49   eP      P        06 24 53.5 +0.8
      comp=Z,32nm,1.4s
E08A  Dider Farm, El    89.03  40   eP      P        06 24 53.2 +0.3
      comp=Z,122nm,1.5s
IL1   Eielson Array     89.04  16   eP      P        06 24 50.0 -2.5
ILAR  Eielson Array     89.04  16    P      P        06 24 50.9 -1.6
      comp=Z,4.2nm,1.0s,baz=231,slow=6.0,SNR=28
ILAR                                 LR     LR       06 58 01.4
      comp=Z,2µm,21.5s,baz=226,slow=31
ILB   Eielson Array     89.04  16   eP      P        06 24 52.0 -0.5
SCRK  Sand Creek        89.19  17   eP      P        06 24 53.6 +0.2
      comp=Z,26nm,1.6s
USHA  Ushuaia           89.19 149    LR     LR       06 55 31.8
      comp=Z,2µm,21.6s,baz=240,slow=29
SNAA  Sanae             89.24 181    P      P        06 24 55.2 +1.5
SNAA  Sanae             89.24 181    P      P        06 24 51.6 -2.0
      comp=Z,6.2nm,0.9s,baz=198,slow=7.9,SNR=9.5
SNAA                                 LR     LR       07 02 38.0
      comp=Z,2µm,19.5s,baz=182,slow=34
SNAA  Sanae             89.24 181   eP      P        06 24 54.1 +0.5
      comp=Z,79nm,1.5s
SNAA  Sanae             89.24 181 diP      P        06 24 53.7  0.0
WUAZ  Wupatki           89.26  52    P      P        06 24 54.9 +0.4
      baz=246
WUAZ  Wupatki           89.26  52   eP      P        06 24 55.0 +0.5
      comp=Z,70nm,1.8s
BMO   Blue Mountains    89.31  42   eP      P        06 24 53.8 -0.6
      comp=Z,42nm,1.4s
BMO   Blue Mountains    89.31  42   eP      P        06 24 53.8 -0.6
BMO                                  pmax   pmax
      comp=Z,42nm,1.4s
PKCU  Pink Cliffs       89.38  50   eP      P        06 24 56.2 +1.0
      comp=Z,241nm,2.0s
LLLB  Lillooet          89.52  35   eP      P        06 24 55.4 +0.2
      comp=Z,47nm,1.3s
ULN   Ulaanbaatar       89.58 322   eP      P        06 24 55.3 -0.4
      comp=Z,28nm,1.5s
ULN   Ulaanbaatar       89.58 322ceP      P        06 24 56.0 +0.3
ULN                                  pmax   pmax
      comp=Z,33nm,2.5s
MFID  Camas Ranch       89.59  43   eP      P        06 24 55.8 +0.1
      comp=Z,56nm,1.4s
E09A  Wood Farm, Sta    89.59  40   eP      P        06 24 55.6  0.0
      comp=Z,110nm,1.6s
VNA3  Neumayer Olymp    89.66 179    P      P        06 24 53.8 -1.8
WHY   Whitehorse        89.69  23   eP      P        06 24 57.1 +1.3
      comp=Z,45nm,1.8s
MTPU  Mount Pierson     89.72  49   eP      P        06 24 57.7 +0.8
      comp=Z,113nm,2.0s
B08A  Colville Reser    89.79  38   eP      P        06 24 56.1 -0.4
      comp=Z,102nm,1.8s
F10A  Beach Ranch, E    89.89  41   eP      P        06 24 56.9 -0.2
      comp=Z,54nm,1.2s
MSU   Marysvale         89.92  49   eP      P        06 24 58.2 +0.6
MSU   Marysvale         89.92  49   eP      P        06 24 58.2 +0.6
SONM  Songino Array     89.96 322    P      P        06 24 57.0 -0.4
      comp=Z,3.8nm,1.0s,baz=143,slow=4.4,SNR=12
SONM                                 LR     LR       07 05 38.8
      comp=Z,1µm,18.7s,baz=107,slow=36
SONA1 Songino Array     89.96 322   eP      P        06 24 56.6 -0.8
DLBC  Dease Lake        90.13  26    P      P        06 24 58.0 +0.1
      comp=Z,17nm,1.1s,baz=232,slow=5.4,SNR=16
DLBC  Dease Lake        90.13  26   eP      P        06 24 57.8 -0.1
      comp=Z,30nm,1.2s
C09A  Chrisman Ranch    90.14  39   eP      P        06 24 58.4 +0.3
      comp=Z,24nm,1.0s
DUG   Dugway, Tooele    90.19  47    P      P        06 24 58.9 +0.3
      baz=245
DUG   Dugway, Tooele    90.19  47   eP      P        06 24 59.1 +0.4
      comp=Z,57nm,1.8s
DUG   Dugway, Tooele    90.19  47   eP      P        06 24 59.1 +0.4
DUG                                  pmax   pmax
      comp=Z,57nm,1.8s
COLD  Coldfoot          90.28  13   eP      P        06 24 58.2 -0.1
      comp=Z,6.1nm,1.0s
VNA1  Neumayer--Stat    90.28 179    P      P        06 24 56.7 -1.7
W18A  Petrified Fore    90.33  53    P      P        06 24 59.9 +0.4
      baz=247
W18A  Petrified Fore    90.33  53   eP      P        06 25 00.3 +0.8
      comp=Z,37nm,1.3s
BGU   Big Grassy Mou    90.35  46   eP      P        06 24 59.8 +0.4
      comp=Z,30nm,1.4s
GTA   Gaotai            90.40 312   eP      P        06 25 00.5 +0.8
GTA                                  pP     sP       06 25 05.8 +1.1
GTA                                  sP     pP       06 25 08.5 +5.1
GTA                                  S      S        06 35 57.0 +2.4
GTA                                  sS     sS       06 36 06.5 +5.7
GTA                                  pmax   pmax
      comp=Z,95nm,5.9s
GTA                                  LR     LR
      comp=Z,750nm,21.3s
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GTA				LR	LR		
	comp=Z,2µm,22.9s						
GTA				LR	LR		
	comp=Z,2µm,21.3s						
HPIG		90.46	62	*e*P	P	06 25 01.0	+0.7
	comp=Z,26nm,1.2s						
HLID	Hailey	90.57	44	P	P	06 25 00.8	+0.4
	baz=244						
HLID	Hailey	90.57	44	*e*P	P	06 25 00.0	-0.4
	comp=Z,13nm,1.1s						
DAWY	Dawson	90.59	19	*e*P	P	06 24 59.0	-0.9
	comp=Z,17nm,1.1s						
EGAK	Eagle	90.60	18	*e*P	P	06 24 58.5	-1.3
	comp=Z,22nm,1.1s						
NLU	North Lily Min	90.60	48	*e*P	P	06 25 01.0	+0.3
	comp=Z,22nm,1.3s						
121A	Cookes Peak, D	90.82	56	P	P	06 25 02.0	+0.1
	baz=248						
HVU	Hansel Valley	90.89	46	*e*P	P	06 25 02.0	+0.1
	comp=Z,41nm,1.3s						
HVU	Hansel Valley	90.89	46	*e*P	P	06 25 02.0	+0.1
HVU				pmax	pmax		
	comp=Z,41nm,1.3s						
MPU	Maple Canyon	90.93	48	*e*P	P	06 25 02.8	+0.6
	comp=Z,18nm,1.2s						
TMUT	Trail Mountain	90.94	49	*e*P	P	06 25 03.3	+0.9
	comp=Z,46nm,1.3s						
CTU	Camp Tracy	91.13	47	*e*P	P	06 25 03.4	+0.3
	comp=Z,62nm,1.7s						
SHL	Shillong	91.28	297	*e*P	P	06 25 03.5	-0.7
JLU	Jordanelle	91.30	47	*e*P	P	06 25 04.1	+0.1
	comp=Z,37nm,1.5s						
P17A	Butcher Ranch,	91.34	49	*e*P	P	06 25 04.5	+0.4
	comp=Z,52nm,1.6s						
SRU	San Rafael Swe	91.35	49	*e*P	P	06 25 04.4	+0.2
	comp=Z,76nm,1.8s						
SRU	San Rafael Swe	91.35	49	*e*P	P	06 25 04.4	+0.2
SRU				pmax	pmax		
	comp=Z,76nm,1.8s						
BOD	Bodaibo	91.37	332	*e*P	P	06 24 58.7	-4.8
BOD				pmax	pmax		
	comp=Z,12nm,2.5s						
TCUT	Toone Canyon	91.54	47	*e*P	P	06 25 05.2	+0.1
	comp=Z,144nm,1.9s						
TOLK	Toolik Lake Re	91.59	13	*e*P	P	06 25 05.5	+1.2
	comp=Z,25nm,1.9s						
ZAIG	Zacatecas	91.63	67	*e*P	P	06 25 06.7	+0.7
	comp=Z,22nm,1.6s						
HWUT	Hardware Ranch	91.64	46	*e*P	P	06 25 05.4	0.0
	comp=Z,36nm,1.7s						
P18A	Preston Nutter	91.75	49	*e*P	P	06 25 06.2	+0.1
	comp=Z,9.4nm,1.0s						
PV05	Paradox Valley	91.96	50	*e*P	P	06 25 07.7	+0.6
MVCO	Mesa Verde	92.07	51	P	P	06 25 07.7	+0.1
	baz=247						
MVCO	Mesa Verde	92.07	51	*e*P	P	06 25 08.0	+0.4
	comp=Z,18nm,1.3s						
Y22D	IRIS PASSCAL I	92.07	55	P	P	06 25 08.1	+0.5
	baz=248						
Y22E	IRIS PASSCAL I	92.07	55	P	P	06 25 08.1	+0.5
	baz=248						
PV09	Paradox Valley	92.10	50	*e*P	P	06 25 08.2	+0.4
PV10	Paradox Valley	92.12	50	*e*P	P	06 25 08.0	+0.2
PV14	Lion Creek, Pa	92.13	50	*e*P	P	06 25 07.8	-0.1
	comp=Z,43nm,1.5s						
MCMT	McKenzie Canyo	92.14	43	*e*P	P	06 25 07.5	-0.2
PV19	Morning Glory	92.14	50	*e*P	P	06 25 07.9	0.0
	comp=Z,18nm,1.1s						
PV17	East Wray Mesa	92.14	50	*e*P	P	06 25 07.4	-0.5
	comp=Z,47nm,1.5s						
PV20	West Nyswonger	92.16	50	*e*P	P	06 25 08.2	+0.3
	comp=Z,40nm,1.5s						
PV18	Skein Mesa, Pa	92.17	50	*e*P	P	06 25 07.7	-0.3
	comp=Z,38nm,1.6s						
PV23	Carpenter Ridg	92.17	50	*e*P	P	06 25 07.9	-0.2
	comp=Z,33nm,1.2s						
PV16	Nyswonger Mesa	92.19	50	*e*P	P	06 25 08.1	0.0
	comp=Z,25nm,1.4s						
PV13	Radium Mtn., P	92.20	50	*e*P	P	06 25 07.7	-0.5
	comp=Z,43nm,1.7s						
PV03	Paradox Valley	92.21	50	*e*P	P	06 25 08.1	-0.2
PV11	David Mesa, Pa	92.21	50	*e*P	P	06 25 08.3	+0.1
	comp=Z,45nm,1.6s						
PV21	Cone Mtn., Par	92.24	50	*e*P	P	06 25 08.3	0.0
	comp=Z,138nm,2.0s						
PV12	Saucer Basin,	92.27	50	*e*P	P	06 25 08.8	+0.2
	comp=Z,47nm,1.4s						
PV02	Paradox Valley	92.28	50	*e*P	P	06 25 07.6	-0.9
	comp=Z,42nm,1.6s						
MSO	Missoula	92.31	41	P	P	06 25 09.0	+0.6
	baz=244						
MSO	Missoula	92.31	41	*e*P	P	06 25 08.2	-0.1
	comp=Z,18nm,1.8s						
PV22	Blue Mesa, Par	92.36	50	*e*P	P	06 25 08.3	-0.6
	comp=Z,44nm,1.5s						
PV01	Paradox Valley	92.37	50	*e*P	P	06 25 08.5	-0.5
MNTX	Cornudas Mount	92.41	57	P	P	06 25 09.4	+0.3
	baz=249						
MNTX	Cornudas Mount	92.41	57	*e*P	P	06 25 08.9	-0.1
	comp=Z,24nm,1.4s						
DLMT	Dillon	92.52	43	*e*P	P	06 25 09.5	+0.1
	comp=Z,13nm,1.3s						
TASM	ASL Pad, Albuq	92.75	54	P	P	06 25 11.0	+0.2
	baz=248						
ANMO	Albuquerque	92.75	54	P	P	06 25 10.8	+0.1
	comp=Z,6.2nm,1.0s,baz=212,slow=6.1,SNR=14						
ANMO				LR	LR	06 58 13.0	
	comp=Z,2µm,21.7s,baz=250,slow=30						
ANMO	Albuquerque	92.75	54	P	P	06 25 10.9	+0.1
	baz=248						
ANMO	Albuquerque	92.75	54	*e*P	P	06 25 10.5	-0.2
	comp=Z,29nm,1.5s						
ANMO	Albuquerque	92.75	54	*c**e*P	P	06 25 11.2	+0.4
ANMO				pmax	pmax		
	comp=Z,10.0nm,1.2s						
TASL	Snake Pit, Alb	92.75	54	P	P	06 25 10.8	0.0
	baz=248						
LRM	Limekiln Ridge	92.81	42	*e*P	P	06 25 10.4	-0.4
TPAW	Teton Pass	92.82	45	*e*P	P	06 25 10.3	-0.7
	comp=Z,7.4nm,1.0s						
FXWY	Fox Creek	92.83	45	*e*P	P	06 25 10.7	-0.2
	comp=Z,25nm,1.8s						
REDW	Red Top Meadow	92.84	45	*e*P	P	06 25 10.3	-0.7
	comp=Z,39nm,1.4s						
SNOW	Snow King Moun	92.94	45	*e*P	P	06 25 11.4	-0.2
	comp=Z,20nm,1.3s						
TX31	Lajitas Ar. Si	92.96	60	*e*P	P	06 25 12.5	+0.7
TXAR	Lajitas Array	92.96	60	P	P	06 25 11.6	-0.2
	comp=Z,3.4nm,0.9s,baz=229,slow=4.4,SNR=20						
TXAR				LR	LR	06 58 11.1	
	comp=Z,8µm,21.9s,baz=0.0,slow=30						
ZAK	Zakamensk	92.96	323	*e*P	P	06 25 09.6	-1.6
ZAK				pmax	pmax		
	comp=Z,7.0nm,1.7s						
IMW	Indian Meadow	93.00	44	*e*P	P	06 25 12.0	+0.2
	comp=Z,15nm,1.2s						
QLMT	Earthquake Lak	93.05	43	*e*P	P	06 25 11.7	-0.2
MOOW	Moose Ponds	93.06	45	*e*P	P	06 25 12.2	+0.2
	comp=Z,7.1nm,1.2s						
LOHW	Long Hollow	93.10	45	*e*P	P	06 25 12.3	0.0
	comp=Z,12nm,1.4s						
FLWY	Flagg Ranch	93.23	44	*e*P	P	06 25 11.2	-1.6
	comp=Z,13nm,1.4s						
BOZ	Bozeman (W)	93.24	43	P	P	06 25 13.2	+0.5
	baz=246						
BOZ	Bozeman (W)	93.24	43	*e*P	P	06 25 12.8	+0.1
	comp=Z,11nm,1.4s						
BOZ	Bozeman (W)	93.24	43	*e*P	P	06 25 12.8	+0.1
BOZ				pmax	pmax		
	comp=Z,11nm,1.4s						
YFT	Old Faithful	93.29	44	*e*P	P	06 25 13.7	+0.6
	comp=Z,7.4nm,1.1s						
YMR	Madison River	93.29	44	*e*P	P	06 25 12.8	-0.3
	comp=Z,26nm,1.8s						
TLY	Talaya	93.35	324	*e*P	P	06 25 14.2	+1.3
TLY				pmax	pmax		
	comp=Z,7.0nm,1.1s						
O20A	White River Ci	93.37	49	P	P	06 25 13.6	+0.1
	baz=248						
O20A	White River Ci	93.37	49	*e*P	P	06 25 13.3	-0.2
	comp=Z,28nm,1.5s						
H17A	Grant Village	93.43	44	P	P	06 25 13.9	+0.1
	baz=246						
H17A	Grant Village	93.43	44	*e*P	P	06 25 14.2	+0.4
	comp=Z,14nm,1.5s						
TLIG	Tlapa	93.43	73	*e*P	P	06 25 14.2	0.0
	comp=Z,24nm,1.7s						
BW06	Boulder Array	93.47	46	P	P	06 25 14.1	+0.1
	baz=247						
BW06	Boulder Array	93.47	46	*e*P	P	06 25 14.4	+0.5
	comp=Z,13nm,1.4s						
PD31	Pinedale Array	93.47	46	*e*P	P	06 25 13.6	-0.4
PDAR	Pinedale Array	93.47	46	P	P	06 25 12.5	-1.4
	comp=Z,5.2nm,1.1s,baz=204,slow=3.3,SNR=16						
PDAR				PP	PP	06 28 55.9	-2.7
	comp=Z,0.5nm,0.8s,baz=276,slow=1.3,SNR=5.0						
PDAR				LR	LR	07 03 44.4	
	comp=Z,2µm,18.1s,baz=258,slow=33						
PDAR	Pinedale Array	93.47	46	*e*P	P	06 25 13.2	-0.8
PDAR				PP	PP	06 28 55.9	-2.7
S22A	4UR Ranch, Cre	93.50	51	P	P	06 25 14.6	+0.3
	baz=248						
S22A	4UR Ranch, Cre	93.50	51	*e*P	P	06 25 14.6	+0.3
	comp=Z,53nm,1.7s						
HRY	Holter Researc	93.57	42	*e*P	P	06 25 13.5	-0.6
SMCO	Snowmass	93.92	50	*e*P	P	06 25 18.1	+1.7
	comp=Z,9.1nm,1.2s						
SDCO	Great Sand Dun	94.48	52	P	P	06 25 18.7	0.0
	baz=249						
SDCO	Great Sand Dun	94.48	52	*e*P	P	06 25 18.6	-0.2
	comp=Z,16nm,1.5s						
GCMT	Greycliff	94.58	43	*e*P	P	06 25 19.2	+0.3
RLMT	Red Lodge	94.58	44	P	P	06 25 19.4	+0.5
	baz=247						
RLMT	Red Lodge	94.58	44	*e*P	P	06 25 19.0	0.0
	comp=Z,18nm,1.6s						
RWWY	Rawlins	94.67	48	*e*P	P	06 25 18.7	-0.8
	comp=Z,43nm,1.8s						
LNIG	Linares	95.01	66	*e*P	P	06 25 20.8	-0.3
	comp=Z,31nm,1.9s						
ISCO	Idaho Springs	95.12	50	P	P	06 25 22.0	+0.3
	baz=249						
MSTX	Muleshoe	95.26	56	P	P	06 25 22.3	+0.1
	baz=250						
MSTX	Muleshoe	95.26	56	*e*P	P	06 25 21.8	-0.4
	comp=Z,40nm,1.4s						
INK	Inuvik	95.26	17	P	P	06 25 19.8	-1.4
	comp=Z,8.0nm,1.1s,baz=234,slow=4.0,SNR=8.6						
INK	Inuvik	95.26	17	*e*P	P	06 25 20.3	-0.9
	comp=Z,32nm,1.5s						
PALK	Pallekele	95.36	276	LR	LR	07 10 04.1	
	comp=Z,3µm,19.5s,baz=85,slow=37						
EGMT	Eagleton	95.39	41	P	P	06 25 23.1	+0.6
	baz=247						
K22A	Casper	95.50	47	P	P	06 25 23.6	+0.5
	baz=249						
K22A	Casper	95.50	47	*e*P	P	06 25 23.0	-0.2
	comp=Z,12nm,1.1s						
PLCA	Paso Flores	95.51	136	P	P	06 25 23.1	-0.3
	comp=Z,1.7nm,0.9s,baz=270,slow=3.0,SNR=2.1						
PLCA				LR	LR	07 01 18.3	
	comp=Z,893nm,19.6s,baz=267,slow=31						
TIXI	Tiksi	95.75	347	PP	PP	06 29 11.8	-3.6
	comp=Z,7.1nm,0.8s,baz=117,slow=9.0,SNR=3.1						
AMTX	Amarillo	96.41	55	P	P	06 25 27.4	0.0
	baz=251						
AMTX	Amarillo	96.41	55	*e*P	P	06 25 27.1	-0.3
	comp=Z,15nm,1.1s						
JCT	Junction City	96.50	60	P	P	06 25 27.9	0.0
	baz=252						
LAO	LASA Array	97.13	43	P	Pdif	06 25 30.7	+0.2
	baz=250						
ABTX	Abilene, Hawle	97.31	58	P	P	06 25 31.4	0.0
	baz=252						
ABTX	Abilene, Hawle	97.31	58	*e*P	P	06 25 30.8	-0.6
	comp=Z,32nm,1.6s						
RSSD	Black Hills	97.71	46	P	P	06 25 33.2	-0.1
	baz=251						
RSSD	Black Hills	97.71	46	*e*P	P	06 25 32.4	-0.8
	comp=Z,11nm,1.2s						
RSSD	Black Hills	97.71	46	*e*P	P	06 25 32.4	-0.8
RSSD				pmax	pmax		
	comp=Z,11nm,1.2s						
YKA	Yellowknife Ar	98.73	26	P	P	06 25 36.2	-0.9
	comp=Z,1.8nm,0.9s,baz=249,slow=4.3,SNR=12						
YKA				LR	LR	07 06 49.6	
	comp=Z,188nm,18.1s,baz=248,slow=33						
WMQ	Urumqi	100.45	313	P	Pdif	06 25 45.8	+0.5
WMQ				pP	sP	06 25 51.6	+1.2
WMQ				pmax	pmax		
	comp=Z,21nm,0.7s						
WMQ				LR	LR		
	comp=Z,2µm,25.1s						
WMQ				LR	LR		
	comp=Z,3µm,19.5s						
WMQ				LR	LR		
	comp=Z,3µm,25.1s						
MKAR	Makanchi Array	104.88	315	Pdiff	Pdif	06 26 05.0	+0.2
	comp=Z,0.5nm,1.0s,baz=101,slow=5.5,SNR=2.8						
ARU	Arti	119.85	325	PKP	PKPdf	06 30 46.1	-1.9
	comp=Z,1.3nm,0.3s,baz=108,slow=3.2,SNR=3.2						
ARU	Arti	119.85	325	*i* PKIKP	PKPdf	06 30 47.3	-0.7
ARU						06 32 09.2	
ARU						06 37 59.2	
ARU				SP	SP	06 41 57.1	-1.9
ARU				SS	SS	06 48 27.9	-8.9
ARU				MLR	MLR		
	comp=Z,2µm,22.0s						
AKTO	Aktyubinsk	121.08	318	PKP	PKPdf	06 30 49.4	-1.2
	comp=Z,0.7nm,0.4s,baz=78,slow=2.5,SNR=2.6						
APA	Apatity	125.66	343	⇓*i*PKIKP	PKPpre	06 30 46.9	
APA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BDFB	Brasilia	126.10	127	*e*PKPdf	PKPdf	06 31 01.2	-0.2
BDFB	Brasilia	126.10	127	*e*PKIKP	PKPdf	06 31 01.2	-0.2
KLMR	Klimovskoe	127.58	334	*e*PKIKP	PKPdf	06 31 00.9	-1.8
KLMR				pmax	pmax		
	comp=Z,11nm,1.1s						
KLMR	Klimovskoe	127.58	334	*e*PKPdf	PKPdf	06 31 00.9	-1.8
KLMR				AMP		06 31 15.5	
	comp=Z,11nm,1.1s						
KLMR				LQ	LQ	07 17 47.7	
KLMR				LQ	LQ	07 17 47.7	
KLMR				LR	LR	07 21 42.2	
OBN	Obninsk	131.90	328	*e*PKIKP	PKPdf	06 31 11.0	0.0
OBN				*e*		06 33 29.9	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
FINES	FINESS Array B	132.24	340	PKP	PKPdf	06 31 12.1	+0.5
	comp=Z,2.0nm,1.0s,baz=13,slow=1.9,SNR=2.8						
KBZ	Khabaz	132.49	312	PKP	PKPdf	06 31 13.9	+1.3
	comp=Z,1.4nm,0.7s,baz=225,slow=2.9,SNR=2.8						
KIV	Kislovodsk	132.58	312	*e*PKIKP	PKPdf	06 31 11.5	-1.4
KIV				*e*		06 33 33.8	
KIV				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NOA	NORSAR Array B	136.54	348	PKP	PKPdf	06 31 17.9	-1.7
	comp=Z,0.5nm,0.7s,baz=20,slow=3.8,SNR=2.8						
HFS	Hagfors	136.82	346	PKP	PKPdf	06 31 17.5	-2.6
	comp=Z,1.8nm,0.8s,baz=96,slow=2.9,SNR=2.1						
BRTR	Keskin Array B	140.28	309	PKP	PKPdf	06 31 27.9	+0.5
	comp=Z,0.7nm,0.6s,baz=149,slow=2.6,SNR=4.5						
BRTR				PP	PP	06 34 24.8	-0.5
	comp=Z,0.3nm,0.3s,baz=90,slow=2.9,SNR=2.5						
BRTR	Keskin Array B	140.28	309	*c* *i*PKIKP	PKPdf	06 31 29.6	+2.2
KIS	Kishinev	140.31	322	*e*PKP	PKPpre	06 31 17.0	
KIS	Kishinev	140.31	322	*e*PP	PP	06 34 28.0	+3.1
KIS				*e*LR	LR	07 18 30.0	
KIS				LRM1		07 30 38.0	
	comp=Z,2µm,22.0s						
KIS				LRM2		07 37 30.0	
	comp=Z,2µm,19.0s						
KIS	Kishinev	140.31	322	*e*PKHKP	PKPpre	06 31 17.0	
KIS				*e*		06 34 28.0	
BIZ	Bicaz	141.89	324	⇓*i*P	PKPdf	06 31 30.8	+0.9
MLR	Muntele Rosu	142.81	322	PKhKP	PKPpre	06 31 27.3	
	comp=Z,1.5nm,0.8s,baz=26,slow=4.7,SNR=3.7						
MLR	Muntele Rosu	142.81	322	⇓*i*P	PKPdf	06 31 30.1	-1.6
UZH	Uzhgorod	142.84	329	*e*PKIKP	PKPdf	06 31 31.5	+0.1
TRPA	Tarpa	143.05	328	*e*PKPdf	PKPab	06 31 27.3	+0.2
CRVS	Cervenica-Dubn	143.06	329	*e*PKIKP	PKPdf	06 31 32.5	+0.6
CRVS				MLR	MLR		
	comp=Z,1µm,23.9s						
CRVS	Cervenica-Dubn	143.06	329	*e*PKP	PKPdf	06 31 32.5	+0.6
CRVS				*e*L	L	06 32 46.5	
VOIR		143.36	322	⇑*i*P	PKPbc	06 31 31.1	+1.4
VOIR		143.36	322	⇑PKIKP	PKPbc	06 31 31.1	+1.4
ARR	Arges	143.64	323	⇓*i*P	PKPab	06 31 30.0	+0.3
LANS	Liptovska Anna	143.82	331	*e*PKIKP	PKPdf	06 31 35.4	+2.2
LANS	Liptovska Anna	143.82	331	*e*PKP	PKPdf	06 31 35.4	+2.2
DRGR		143.83	326	⇑*i*P	PKPdf	06 31 33.2	-0.2
DRGR		143.83	326	⇑PKIKP	PKPdf	06 31 33.2	-0.2
OKC	Ostrava-Krasne	143.90	333	AMS	AMS	07 33 50.0	
	comp=Z,2µm,21.7s						
EKA	Eskdalemuir Ar	143.96	357	PKP	PKPab	06 31 30.8	+0.3
	comp=Z,3.5nm,0.9s,baz=2.9,slow=2.8,SNR=3.1						
MORC	Moravsky Berou	144.20	334	⇑*i*P	PKPdf	06 31 33.9	0.0
MORC	Moravsky Berou	144.20	334	*e*PKPdf	PKPdf	06 31 33.2	-0.7
MORC	Moravsky Berou	144.20	334	⇑PKIKP	PKPdf	06 31 33.9	0.0
MORC	Moravsky Berou	144.20	334	*e*PKP	PKPab	06 31 29.3	-2.3
UPC	Upice	144.25	336	*e*PKP	PKPbc	06 31 32.4	+0.3
UPC				*e*pPKP	PKiKP	06 31 37.5	0.0
UPC				AMS	AMS	07 35 30.0	
	comp=Z,3µm,21.3s						
UPC	Upice	144.25	336	*e*PKIKP	PKPbc	06 31 32.4	+0.3
UPC				*e*		06 31 37.5	
UPC				MLR	MLR		
	comp=Z,3µm,21.3s						
DPC	Dobruska-Polom	144.25	335	*e*PKP	PKPbc	06 31 32.5	+0.4
DPC				*e*pPKP	pPKPdf	06 31 37.5	-0.3
DPC				AMS	AMS	07 37 40.0	
	comp=Z,2µm,21.1s						
DPC	Dobruska-Polom	144.25	335	*e*PKIKP	PKPbc	06 31 32.5	+0.4
DPC				*e*		06 31 37.5	
DPC				MLR	MLR		
	comp=Z,2µm,21.1s						
MANT	Manisa	144.41	310	*e*PKPdf	PKPab	06 31 32.5	-0.5
PSZ	Piszkesteto	144.50	329	⇑*i*P	PKPdf	06 31 34.1	-0.4
PSZ	Piszkesteto	144.50	329	*e*PKPdf	PKPdf	06 31 34.0	-0.4
PSZ	Piszkesteto	144.50	329	*e*PKPdf	PKPab	06 31 32.9	0.0
PSZ	Piszkesteto	144.50	329	⇑PKIKP	PKPdf	06 31 34.1	-0.4
VYHS	Vyhne	144.59	331	*e*PKIKP	PKPab	06 31 32.9	-0.1
VYHS	Vyhne	144.59	331	*e*PKP	PKPab	06 31 32.9	-0.1
CLL	Collm	144.68	339	*e*PKPdf	PKPab	06 31 33.0	-0.3
	comp=Z,15nm,1.2s						
CLL				*e*pPKPdf	PKPdf	06 31 35.0	+0.4
CLL				*i* PKiKP	pPKPdf	06 31 38.2	-0.2
	comp=Z,31nm,1.0s						
CLL				*i* pPKiKP	pPKiKP	06 31 41.6	-0.5
	comp=Z,54nm,1.1s						
CLL				*e*		06 31 59.0	
CLL				*e*SSS	SSS	06 59 18.0	
CLL				Lmax		07 33 00.0	
CLL	Collm	144.68	339	*e*PKPdf	PKPab	06 31 32.6	-0.7
CLL	Collm	144.68	339	*e*PKIKP	PKPab	06 31 33.0	-0.3
CLL				*i*		06 31 38.2	
CLL				pmax	pmax		
	comp=Z,15nm,1.2s						
BRG	Berggiesshubel	144.72	338	*e*PKP	PKPab	06 31 32.9	-0.5
	comp=Z,38nm,1.2s						
BRG				*i*		06 31 49.3	
	comp=Z,50nm,1.1s						
	comp=N,2µm,20.2s						
	comp=E,2µm,21.9s						
	comp=Z,2µm,20.2s						
BRG	Berggiesshubel	144.72	338	*e*PKIKP	PKPab	06 31 32.9	-0.5
BRG				pmax	pmax		
	comp=Z,38nm,1.2s						
BRG				MLR	MLR		
	comp=N,2µm,20.2s						
BRG				MLR	MLR		
	comp=E,2µm,21.9s						
BRG				MLR	MLR		
	comp=Z,2µm,20.2s						
PVCC	Panska Ves	144.78	337	*e*PKP	PKPdf	06 31 35.4	+0.6
PVCC				AMS	AMS	07 35 00.0	
	comp=Z,3µm,22.1s						
PVCC	Panska Ves	144.78	337	*e*PKIKP	PKPdf	06 31 35.4	+0.6
PVCC				MLR	MLR		
	comp=Z,3µm,22.1s						
JAVC	Velka Javorina	144.84	332	*e*PKP	PKPbc	06 31 34.6	+0.5
VRAC	Vranov	144.95	334	PKPbc	PKPab	06 31 33.7	-0.6
	comp=Z,16nm,1.0s,baz=91,slow=2.4,SNR=11						
VRAC	Vranov	144.95	334	⇑*i*P	PKPab	06 31 34.3	-0.1
VRAC	Vranov	144.95	334	*e*PKP	PKPab	06 31 34.0	-0.4
ALN	Alexandroupoli	145.13	315	*e*PKPbc	PKPbc	06 31 33.7	-1.5
ALN	Alexandroupoli	145.13	315	*e*PKP2	PKPbc	06 31 33.7	-1.5
BZS	Buzias	145.17	325	⇑*i*P	PKPbc	06 31 34.3	-0.9
BZS	Buzias	145.17	325	⇑PKIKP	PKPbc	06 31 34.4	-0.8
KDZ	Kurdzhali	145.17	317	*e*P	PKPdf	06 31 41.3	+5.5
HERR	Herculane	145.19	324	⇑*i*P	PKPbc	06 31 34.5	-0.8
GOPC	GO Pecny, Ondr	145.19	336	*e*PKP	PKPbc	06 31 35.2	0.0
GOPC				AMS	AMS	07 33 20.0	
	comp=Z,3µm,24.1s						
GOPC	GO Pecny, Ondr	145.19	336	*e*PKIKP	PKPbc	06 31 35.2	0.0
GOPC				MLR	MLR		
	comp=Z,3µm,24.1s						
PRA	Prague	145.20	337	AMS	AMS	07 33 20.0	
	comp=Z,3µm,23.3s						
SMOL	Smolenice	145.20	332	*e*PKIKP	PKPdf	06 31 36.4	+0.8
SMOL	Smolenice	145.20	332	*e*PKP	PKPdf	06 31 36.4	+0.8
BUD	Budapest	145.22	330	*e*PKPbc	PKPdf	06 31 39.7	+4.0
KRUC	Moravsky	145.23	334	*e*PKP	PKPbc	06 31 34.7	-0.6
PRU	Pruhonice	145.23	336	*e*PKP	PKPab	06 31 35.5	+0.2
PRU				AMS	AMS	07 33 10.0	
	comp=Z,3µm,22.1s						
PRU	Pruhonice	145.23	336	*e*PKIKP	PKPab	06 31 35.5	+0.2
PRU				MLR	MLR		
	comp=Z,3µm,22.1s						
MPEP	Malo Peshtene	145.31	320	*e*P	PKPdf	06 31 43.0	+7.0
MODS	Modra-Piesok	145.37	332	*e*PKIKP	PKPbc	06 31 35.2	-0.6
MODS	Modra-Piesok	145.37	332	*e*PKP	PKPbc	06 31 35.1	-0.7
MODS				*e*L	L	06 39 59.0	
PLD	Plovdiv	145.40	318	*e*P	PKPab	06 31 36.7	+0.5
RZN	Rozhen	145.61	317	*e*P	PKPab	06 31 39.1	+1.9
MDVR	Moldovita	145.64	324	⇑*i*P	PKPab	06 31 37.2	+0.1
CSKK	Csˆ‡kako	145.67	330	*e*PKPbc	PKPdf	06 31 33.0	-3.4
NKC	Novy Kostel	145.78	339	*e*PKP	PKPab	06 31 39.4	+2.0
NKC				AMS	AMS	07 32 40.0	
	comp=Z,2µm,23.8s						
NKC	Novy Kostel	145.78	339	*e*PKP2	PKPab	06 31 39.4	+2.0
NKC				MLR	MLR		
	comp=Z,2µm,23.8s						
VTS	Vitosha	146.06	320	⇓*i*P	PKPab	06 31 39.0	+0.1
VTS	Vitosha	146.06	320	*e*PKPdf	PKPdf	06 31 37.4	-0.1
VTS	Vitosha	146.06	320	*e*P	PKPab	06 31 41.8	+2.9
VTS	Vitosha	146.06	320	*e*PKP2	PKPdf	06 31 37.4	-0.1
DSB	Dublin	146.12	0	*e*PKPdf	PKPdf	06 31 33.7	-3.3
SOP	Sopron	146.21	332	*e*PKPdf	PKPab	06 31 38.9	-0.2
MMB	Musomiste	146.29	318	*e*P	PKPab	06 31 44.1	+4.5
KHC	Kasperske Hory	146.29	337	*e*PKP	PKPbc	06 31 39.0	+0.4
KHC				*e*x	x	06 38 15.0	
KHC				AMS	AMS	07 34 10.0	
	comp=Z,3µm,23.3s						
KHC	Kasperske Hory	146.29	337	*e*PKPdf	PKPdf	06 31 38.0	+0.5
KHC	Kasperske Hory	146.29	337	*e*PKP2	PKPbc	06 31 39.0	+0.4
KHC				*e*		06 38 15.0	
KHC				MLR	MLR		
	comp=Z,3µm,23.3s						
MORH	Mˆ‡rˆ¡gy, Hung	146.31	328	*e*PKPdf	PKPab	06 31 40.3	+0.9
CONA	Conrad Observa	146.33	333	*i* PKPab	PKPbc	06 31 38.9	+0.1
	comp=Z,23nm,1.0s						
GEC2	GERESS Array S	146.48	336	*e*PKPdf	PKPdf	06 31 37.8	-0.1
GEC2	GERESS Array S	146.48	336	*e*PKP2	PKPdf	06 31 37.8	-0.1
GERES	GERESS Array B	146.48	336	PKPbc	PKPdf	06 31 38.4	+0.4
	comp=Z,5.9nm,0.8s,baz=37,slow=3.3,SNR=20						
GEA0	GERESS Array S	146.48	336	*e*PKPdf	PKPdf	06 31 37.8	-0.1
KKB	Krupnik	146.54	319	*e*P	PKPab	06 31 42.6	+2.0
GRFO	Grafenberg	146.66	339	*e*PKPdf	PKPbc	06 31 39.6	0.0
GRFO	Grafenberg	146.66	339	*e*PKP2	PKPbc	06 31 39.6	0.0
ARSA	Arzberg	147.00	333	*i* pPKPdf	pPKPdf	06 31 41.7	-0.9
	comp=Z,10nm,1.1s						
BEHE	Becsehely	147.02	330	*e*PKPdf	PKPab	06 31 44.4	+2.2
DIVS	Divibare	147.03	324	*e*PKPdf	PKPdf	06 31 38.0	-1.0
MOA	Molln	147.06	334	*i* PKPbc	PKPbc	06 31 40.0	-0.9
	comp=Z,16nm,1.2s						
BEBN	Eben Emael	147.21	346	⇓PKP	PKPab	06 31 44.5	+1.7
MEM	Membach	147.31	346	⇑PKP	PKPab	06 31 44.7	+1.5
UCC	Uccle	147.49	348	⇑PKP	PKPab	06 31 44.5	+0.6
BCLA	Clavier	147.65	346	⇑PKP	PKPab	06 31 50.0	+5.4
SOKA	Soboth	147.65	332	*i* PKPbc	PKPbc	06 31 41.7	-1.0
	comp=Z,10nm,1.1s						
LIT	Litokhoron	147.87	316	*e*PKPbc	PKPbc	06 31 43.0	-0.5
LIT	Litokhoron	147.87	316	PKP2	PKPbc	06 31 42.9	-0.5
OBKA	Obir	147.99	333	*i* PKPdf	PKPdf	06 31 40.1	-0.4
	comp=Z,13nm,1.4s						
BLY	Banja Luka	148.07	328	*e*PKPdf	PKPbc	06 31 42.9	-0.8
DOU	Dourbes	148.11	347	⇓PKP	PKPab	06 31 46.7	+0.3
STU	Stuttgart	148.11	341	*e*PKPbc	PKPbc	06 31 43.0	-0.7
WLF	Walferdange	148.15	345	⇑PKP	PKPbc	06 31 43.9	+0.1
WLF	Walferdange	148.15	345	*e*PKPdf	PKPbc	06 31 43.0	-0.8
WLF	Walferdange	148.15	345	PKP2	PKPbc	06 31 42.9	-0.8
FNA	Florina	148.22	318	*e*PKPbc	PKPdf	06 31 42.7	+1.7
FNA	Florina	148.22	318	*e*PKP2	PKPdf	06 31 42.7	+1.7
MYKA	Terra Mystica	148.28	334	*i* PKPbc	PKPbc	06 31 43.0	-1.3
	comp=Z,9.0nm,0.9s						

LJU	Ljubljana	148.36	332	*e*PKPdf	PKPdf	06 31 42.7	+1.7
LJU				*e*		06 31 49.9	
OHR	Ohrid	148.39	319	*i* P	PKPbc	06 31 44.0	-0.7
BOJS	Bojanci	148.45	331	*e*PKPdf	PKPbc	06 31 43.6	-1.1
BOJS				*e*		06 31 50.5	
PDG	Podgorica	148.51	323	⇓*i*P	PKPbc	06 31 43.7	-1.2
TTG	Podgorica	148.51	323	*e*pPKPdf	pPKPdf	06 31 43.3	-1.8
AGG	Agios Georgios	148.53	315	*e*PKPdf	PKPdf	06 31 43.0	+1.4
AGG	Agios Georgios	148.53	315	*e*PKIKP	PKPdf	06 31 43.0	+1.4
WTTA	Wattenberg	148.56	337	*i* PKPbc	PKPbc	06 31 44.5	-0.7
	comp=Z,24nm,1.2s						
ABTA	Abfaltersbach	148.65	335	*i* PKPbc	PKPbc	06 31 45.2	-0.1
	comp=Z,20nm,1.2s						
RETA	Reutte	148.70	338	*i* PKiKP	PKPbc	06 31 46.0	+0.7
	comp=Z,26nm,1.5s						
BFO	Black Forest	148.77	341	*e*pPKPdf	pPKPdf	06 31 44.3	-1.2
BFO	Black Forest	148.77	341	*c i*PKP2	PKPbc	06 31 45.2	-0.2
FETA	Feichten	149.10	337	*i* PKPbc	PKPbc	06 31 45.9	-0.6
	comp=Z,23nm,1.2s						
DAVA	Damuels	149.18	339	*i* PKiKP	PKPbc	06 31 46.7	0.0
	comp=Z,24nm,1.2s						
ECH	Echery	149.21	343	*e*pPKPdf	pPKPdf	06 31 45.3	-0.9
ECH	Echery	149.21	343	*e*PKP2	pPKPdf	06 31 45.3	-0.9
FUORN	Ofenpass-Fuorn	149.61	337	*e*pPKPdf	pPKPdf	06 31 46.4	-0.8
DAVOX	Davos/Dischmat	149.62	338	PKPbc	PKPbc	06 31 47.0	-0.8
	comp=Z,7.2nm,0.9s,baz=49,slow=5.5,SNR=5.3						
ITM	Ithomi	149.72	312	*e*PKPbc	PKPbc	06 31 47.0	-1.2
TUE	Stuetta	150.07	338	*e*PKPbc	PKPbc	06 31 48.1	-0.9
SENIN	Lac Senin/Sane	150.84	341	*e*PKPbc	PKPbc	06 31 50.8	-0.1
TIP	Timpagrande	152.02	320	*e*PKPbc	PKPbc	06 31 52.6	-1.0
CUC	Castrocucco	152.06	322	*e*PKPbc	PKPbc	06 31 51.6	-2.1
BNI	Bardonecchia	152.21	340	*e*pPKPdf	pPKPdf	06 31 50.9	-0.2
BNI	Bardonecchia	152.21	340	*e*PKIKP	pPKPdf	06 31 50.9	-0.2
ES19	SONSECA Array	159.58	355	*e*PKPab	PKPab	06 32 36.7	+1.6
ESDC	Sonseca Array	159.61	355	PKPab	PKPab	06 32 33.6	-1.6
	comp=Z,2.8nm,1.0s,baz=3.2,slow=4.5,SNR=9.0						
ESLA	Sonseca Array	159.61	355	*e*PKPab	PKPab	06 32 35.9	+0.6
MDT	Midelt	166.47	355	PKPab	PKPab	06 33 04.7	-0.9
	comp=Z,2.0nm,0.9s,baz=63,slow=2.3,SNR=2.6						
DBIC	Dimbokro	167.39	186	PKPab	PKPab	06 33 07.6	-2.2
	comp=Z,3.4nm,1.0s,baz=180,slow=10,SNR=1.8						
TOA0	Torodi Ar. Sit	170.33	232	*e*PKPdf	PKPdf	06 32 05.1	-1.8
TOA0				*e*PKPab	PKPab	06 33 23.0	-0.1
TORD	Torodi Ar. Bea	170.33	232	PKP	PKPdf	06 32 05.8	-1.1
	comp=Z,3.6nm,1.1s,baz=136,slow=2.2						
TORD				PKPab	PKPab	06 33 22.1	-1.0
	baz=135,slow=5.6						

IDC 21 06:21:00.9±1.4, 3°.16S×128°.69E, h0^{km}, mb3.9/6, mb1 4.2/7, mb1mx3.8/55, mbtmp4.0/7, ML4.7/1, Error ellipse: s-maj=103.7km s-min=19.1km az=65.0, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.57	162	P	P	06 25 08.8	+0.3
	2.4nm,0.3s,baz=340,slow=11,SNR=75						
ASAR	Alice Springs	21.00	167	P	P	06 25 46.4	+0.2
	2.6nm,0.3s,baz=345,slow=12,SNR=39						
STKA	Stephens Creek	31.04	158	P	P	06 27 19.9	-0.7
	0.7nm,0.3s,baz=319,slow=11,SNR=3.7						
CMAR	Chiang Mai Arr	36.33	307	P	P	06 28 06.9	+0.1
	1.8nm,0.4s,baz=134,slow=7.0,SNR=4.7						
SONM	Songino Array	54.41	342	P	P	06 30 30.7	+0.8
	0.4nm,0.5s,baz=160,slow=4.6,SNR=2.9						
MKAR	Makanchi Array	64.32	326	P	P	06 31 38.2	-0.2
	0.8nm,0.6s,baz=114,slow=7.6,SNR=5.7						
KURBB	Kurchatov Arra	68.58	328	P	P	06 32 05.0	-0.5
	0.6nm,0.6s,baz=129,slow=5.1,SNR=3.7						

*BJI **21** 06:37:15.5, 15°.21N×147°.89E, h35^{km}, mb4.8/23, mB5.1/11, Ms4.8/6, Ms7 4.8/6*

*IDC **21** 06:37:16.2±0.9, 15°.57N×147°.29E, h0^{km}, mb4.0/15, mb1 4.1/16, mb1mx3.9/64, mbtmp4.0/16, ML3.8/1, Error ellipse: s-maj=25.9km s-min=17.1km az=100.0*

*ISCJB **21** 06:37:18.7±0.6, 15°.51N±0°.07×147°.36E±0°.08, h29^{km}, mb4.4/31, Error ellipse: s-maj=13.0km s-min=7.6km az=31.8*

*NEIC **21** 06:37:20.6±0.5, 15°.46N×147°.45E, h35^{km}, mb4.8/8, Error ellipse: s-maj=12.7km s-min=10.0km az=81.0*

ISC 21 06:37:19.9±0.6, 15°.44N±0°.07×147°.45E±0°.08, h29^{km}, n49, σ1^{s}60/52, mb4.6/31, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	3.10	234	Pn	Pn	06 38 07.8	+0.9
	12nm,0.3s,baz=56,slow=11,SNR=7.8						
GUMO				Sn	Sn	06 38 41.3	-1.7
	40nm,0.3s,baz=144,slow=23,SNR=21						
GUMO	Guam	3.10	234	*e*Pn	Pn	06 38 07.0	+0.1
GUMO				*e*Sn	Sn	06 38 41.6	-1.4
PATS	Pohnpei	13.66	128	*e*Pn	Pn	06 40 29.4	-2.3
MJAR	Matsushiro Arr	22.57	340	P	P	06 42 15.9	-2.1
	0.8nm,0.3s,baz=167,slow=9.3,SNR=3.5						
KSRS	Korea Array	27.93	325	P	P	06 43 04.7	-2.9
	0.5nm,0.3s,baz=138,slow=9.7,SNR=5.7						
KSAR	Wonju Array Be	27.94	325	P	P	06 43 04.7	-3.0
NJ2	Nanjing	30.82	308	*e*P	P	06 43 34.8	+1.4
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
WHN	Wuhan	33.82	302	P	P	06 44 00.0	+0.3
KLR	Kul'dur	36.06	342	P	P	06 44 17.1	-1.8
	0.2nm,0.9s,baz=154,slow=10,SNR=4.8						
WRA	Warramunga Arr	37.45	201	P	P	06 44 31.4	+0.5
	0.5nm,0.6s,baz=23,slow=9.3,SNR=3.7						
XAN	Xi'an	39.30	305	P	P	06 44 38.1	-8.4
XAN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
XAN				pmax	pmax		
	comp=Z,150nm,11.5s						
GYA	Guiyang	39.48	293	*e*P	P	06 44 49.0	+0.8
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC	Hu-ho-hao-te	40.09	316	*e*P	P	06 44 54.3	+1.3
HHC				sP	sP	06 45 09.8	+4.6
HHC				S	S	06 50 53.1	-4.4
HHC				pmax	pmax		
	comp=Z,16nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,5.1s						
HHC				LR	LR		
	comp=Z,610nm,14.7s						
HHC				LR	LR		
	comp=Z,1μm,17.8s						
HHC				LR	LR		
	comp=Z,2μm,17.2s						
ASAR	Alice Springs	41.06	199	P	P	06 45 00.8	-0.3
	comp=Z,0.4nm,0.6s,baz=28,slow=8.8,SNR=4.8						
CD2	Chengdu	42.73	299	*e*P	P	06 45 14.8	0.0
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
KMI	Kunming	42.86	290	P	P	06 45 16.8	+0.7
KMI				pmax	pmax		
	comp=Z,19nm,0.5s						
KMI				pmax	pmax		
	comp=Z,470nm,12.2s						
LZH	Lanzhou	43.88	306	*e*P	P	06 45 24.8	+0.6
LZH				pP	pP	06 45 33.3	+0.4
LZH				sP	sP	06 45 38.3	+1.9
LZH				pmax	pmax		
	comp=Z,29nm,1.1s						
LZH				pmax	pmax		
	comp=Z,82nm,4.7s						
LZH				LR	LR		
	comp=Z,320nm,11.4s						
LZH				LR	LR		
	comp=Z,390nm,10.4s						
LZH				LR	LR		
	comp=Z,420nm,14.0s						
CM01	Chiang Mai Arr	46.38	281	*e*P	P	06 45 44.6	+0.5
CMAR	Chiang Mai Arr	46.39	281	P	P	06 45 44.5	+0.4
	comp=Z,2.0nm,0.3s,baz=74,slow=6.2,SNR=12						
SONM	Songino Array	46.73	323	P	P	06 45 44.6	-1.9
	comp=Z,1.3nm,1.0s,baz=137,slow=8.2,SNR=3.6						
SONA1	Songino Array	46.73	323	*e*P	P	06 45 46.5	0.0
YAK	Yakutsk	48.22	349	*e*P	P	06 45 58.2	+0.5
	comp=Z,24nm,0.8s						
BBOO	Buckleboo	49.20	193	*e*P	P	06 46 06.9	+1.4
	comp=Z,17nm,1.5s						
WMQ	Urumqi	57.72	312	P	P	06 47 09.8	+1.7
WMQ				pP	sP	06 47 20.4	-0.1
WMQ				sP	pP	06 47 23.9	+6.8
WMQ				pmax	pmax		
	comp=Z,24nm,0.8s						
WMQ				pmax	pmax		
	comp=Z,320nm,5.7s						
WMQ				LR	LR		
	comp=Z,1μm,15.1s						
WMQ				LR	LR		
	comp=Z,1μm,23.5s						
WMQ				LR	LR		
	comp=Z,1μm,16.7s						
ZALV	Zalesovo Beam	61.61	323	P	P	06 47 34.1	-0.5
	comp=Z,1.1nm,0.4s,baz=90,slow=8.6,SNR=3.6						
ZALV	Zalesovo Beam	61.61	323	*e*P	P	06 47 34.3	-0.4
MK01	Makanchi Array	61.92	315	*e*P	P	06 47 37.2	+0.2
MK31	Makanchi Array	61.93	315	*e*P	P	06 47 37.2	+0.2
MKAR	Makanchi Array	61.93	315	P	P	06 47 36.8	-0.2
	comp=Z,2.5nm,0.6s,baz=92,slow=7.7,SNR=23						
MKAR	Makanchi Array	61.93	315	*e*P	P	06 47 37.3	+0.3
	comp=Z,17nm,0.6s						
MAKZ	Makanchi	62.14	315	*e*P	P	06 47 38.8	+0.3
	comp=Z,4.9nm,0.9s						
MCK	McKinley	64.69	26	*e*P	P	06 47 54.4	-0.6
	comp=Z,4.1nm,0.6s						
KURK	Kurchatov	64.81	319	*e*P	P	06 47 56.1	+0.2
	comp=Z,20nm,1.1s						
KURBB	Kurchatov Arra	64.86	319	P	P	06 47 56.5	+0.2
	comp=Z,19nm,1.0s,baz=98,slow=6.7,SNR=71						
IL1	Eielson Array	65.84	25	*e*P	P	06 48 03.3	+0.9
ILAR	Eielson Array	65.84	25	P	P	06 48 03.6	+1.3
	comp=Z,0.5nm,0.8s,baz=282,slow=4.3,SNR=6.5						
KSH	Kashi	66.13	307	P	P	06 48 08.4	+3.5
KSH				*e*PP	PP	06 50 35.8	+5.2
BVAR	Borovoye Array	70.05	321	P	P	06 48 29.3	+0.2
	comp=Z,2.5nm,0.7s,baz=93,slow=8.2,SNR=14						
BRVK	Borovoye	70.11	321	*e*P	P	06 48 29.3	-0.2
	comp=Z,2.5nm,0.8s						
KK31	Karatay Array	70.14	311	*e*P	P	06 48 29.9	0.0
KKAR	Karatay Array	70.14	311	*e*P	P	06 48 29.9	0.0
ARU	Arti	76.68	325	P	P	06 49 08.0	-0.1
	comp=Z,3.2nm,0.4s,baz=84,slow=3.7,SNR=6.3						
ARU	Arti	76.68	325	*e*P	P	06 49 08.3	+0.3
	comp=Z,4.6nm,0.8s						
ABKAR	Akbulak array	76.86	318	*e*P	P	06 49 09.0	-0.2
YKA	Yellowknife Ar	80.07	28	P	P	06 49 27.9	+1.2
	comp=Z,0.4nm,0.5s,baz=283,slow=5.3,SNR=4.5						
NVAR	Mina Array Bea	83.82	52	P	P	06 49 49.3	+2.0
	comp=Z,0.2nm,0.4s,baz=258,slow=4.2,SNR=4.1						
ARCES	ARCESS Array B	86.09	343	P	P	06 49 57.2	-0.5
	comp=Z,4.8nm,0.9s,baz=52,slow=7.3,SNR=4.5						
FINES	FINESS Array B	90.53	336	P	P	06 50 17.6	-1.4
	comp=Z,0.8nm,0.6s,baz=69,slow=6.3,SNR=4.1						
SHEL	Horse Pasture	154.19	265	*e*PKPbc	PKPbc	06 57 16.3	-1.8

MEX 21 06:37:59.8±0.4, 13°.90N×93°.54W, h10^{km}, MD4.0, Off coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.82	10	*e*P	Pn	06 38 27.5	-3.8
PCIG				*i* S	Sn	06 38 49.7	-4.7
CCIG	Comitan	2.73	29	*e*P	Pn	06 38 41.1	-2.8
CCIG				*e*S	Sn	06 39 13.1	-4.0
TGIG		2.89	8	*e*P	Pn	06 38 44.0	-2.0
TGIG				*e*S	Sn	06 39 17.6	-3.3

IDC 21 06:41:18.4±3.8, 53°.77N×88°.24E, h0^{km}, mb1 2.6/2, mb1mx2.5/73, mbtmp2.6/2, ML2.2/2, Error ellipse: s-maj=36.1km s-min=20.6km az=42.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	2.04	276	*i*		06 53 20.0	
	baz=94,slow=320,SNR=0.8						
ZALV	Zalesovo Beam	2.04	276	Pg	Pb	06 41 55.2	-1.0
	1.2nm,0.3s,baz=95,slow=15,SNR=7.2						
ZALV				Lg	Lg	06 42 22.7	
	1.8nm,0.3s,baz=92,slow=28,SNR=10						
KURBB	Kurchatov Arra	6.75	246	Pn	Pn	06 42 59.2	+0.6
	0.0nm,0.3s,baz=61,slow=14,SNR=5.4						
KURBB				Lg	Lg	06 44 54.3	
	0.0nm,0.3s,baz=64,slow=34,SNR=4.9						
MKAR	Makanchi Array	7.96	211	Pn	Pn	06 43 16.2	+1.0
	0.1nm,0.3s,baz=31,slow=12,SNR=2.9						

*ISCJB **21** 06:50:57.7±0.7, 21°.96S±0°.04×69°.00W±0°.10, h104^{km}±5^{km}, mb3.5/4, Error ellipse: s-maj=15.6km s-min=5.6km az=12.0*

*GUC **21** 06:50:57.8±0.7, 21°.95S×68°.99W, h95^{km}±4^{km}, ML4.1*

*IDC **21** 06:51:01.0±3.2, 21°.87S×68°.65W, h121^{km}±28^{km}, mb3.3/4, mb1 3.6/6, mb1mx3.3/40, mbtmp3.7/6, Error ellipse: s-maj=36.7km s-min=23.9km az=84.0*

ISC 21 06:50:57.9±0.8, 21°.96S±0°.05×68°.97W±0°.09, h96^{km}±6^{km}, n22, σ0^{s}87/34, mb3.5/4, 6C-5D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.30	302	⇓*i*P	Pn	06 51 12.4	+0.1
PB09				*i* S	Sn	06 51 23.1	+0.1
PB09				IAML		06 51 23.9	
	comp=E,17μm,0.4s						
PB03	IPOC Station P	0.73	263	⇓*i*P	Pn	06 51 15.4	-0.1
PB03				*i* S	Sn	06 51 29.0	+0.4
PB03				IAML		06 51 29.4	
	comp=E,7μm,0.5s						
PB07	IPOC Station P	0.88	285	⇑*i*P	Pn	06 51 17.2	+0.2
PB07				*i* S	Sn	06 51 31.6	+0.3
PB07				IAML		06 51 32.8	
	comp=E,11μm,0.3s						
PB06	IPOC Station P	0.93	217	⇓*i*P	Pn	06 51 17.7	+0.2
PB06				*i* S	Sn	06 51 33.1	+0.9
PB06				IAML		06 51 33.6	
	comp=E,8μm,0.3s						
PB01	IPOC Station P	1.03	332	⇑*i*P	Pn	06 51 18.2	-0.4
PB01				*i* S	Sn	06 51 34.1	+0.1
PB01				IAML		06 51 34.7	
	comp=E,11μm,0.2s						
PB02	IPOC Station P	1.07	306	⇑*i*P	Pn	06 51 18.9	-0.1
PB02				*i* S	Sn	06 51 34.7	-0.2
PB04	IPOC Station P	1.16	251	⇓*i*P	Pn	06 51 20.1	+0.1
PB04				*i* S	Sn	06 51 37.3	+0.6
PB04				IAML		06 51 40.5	
	comp=N,4μm,0.2s						
PB05	IPOC Station P	1.45	232	⇓*i*P	Pn	06 51 23.6	+0.1
PB05				*i* S	Sn	06 51 43.7	+0.9
PB05				IAML		06 51 47.5	
	comp=N,2μm,0.4s						
PB08	IPOC Station P	1.82	355	⇑*i*P	Pn	06 51 28.9	+0.5
PB08				*i* S	Sn	06 51 53.4	+1.9
PB10	IPOC Station P	2.13	223	*e*P	Pn	06 51 32.8	+0.7
PB11	IPOC Station P	2.28	344	⇑*i*P	Pn	06 51 33.9	-0.3
PB11				*i* S	Sn	06 52 02.6	+0.7
MNMC	Minye Minye	2.87	348	⇑*i*P	Pn	06 51 41.7	-0.5
MNMC				*i* S	Sn	06 52 16.7	+0.5
LPAZ	La Paz	5.70	8	P	Pn	06 52 22.8	+2.0
	comp=N,2.3nm,0.3s,baz=184,slow=4.5,SNR=75						
PLCA	Paso Flores	18.77	184	P	Pn	06 55 11.9	+0.9
	comp=N,0.1nm,0.3s,baz=0.0,slow=15,SNR=2.9						
TXAR	Lajitas Array	60.97	325	P	P	07 01 01.8	+0.4
	comp=N,0.2nm,0.6s,baz=144,slow=6.7,SNR=3.7						
PDAR	Pinedale Array	74.48	330	P	P	07 02 26.8	+0.7
	comp=N,0.3nm,0.6s,baz=126,slow=6.1,SNR=2.9						
TORD	Torodi Ar. Bea	77.56	70	P	P	07 02 41.9	-2.0
	comp=N,0.6nm,0.5s,baz=257,slow=5.8						
TORD				pP	pP	07 03 08.1	-0.7
	baz=257,slow=5.2						
YKA	Yellowknife Ar	91.60	341	P	P	07 03 53.7	+0.2
	comp=N,0.8nm,0.6s,baz=129,slow=4.7,SNR=12						
ASAR	Alice Springs	129.48	208	PKP	PKPdf	07 09 56.4	+0.1
	comp=N,0.7nm,0.9s,baz=105,slow=1.7,SNR=6.0						
WRA	Warramunga Arr	132.53	210	PKP	PKPdf	07 10 02.7	+0.6
	comp=N,0.5nm,0.6s,baz=156,slow=1.7,SNR=2.5						
ZALV	Zalesovo Beam	142.39	25	PKP	PKPdf	07 10 17.2	-1.9
	comp=N,0.7nm,0.5s,baz=273,slow=2.5,SNR=2.7						
MKAR	Makanchi Array	146.03	36	PKPbc	PKPbc	07 10 26.4	-0.3
	comp=N,2.1nm,0.8s,baz=323,slow=3.2,SNR=17						

*ISCJB **21** 07:01:28.8±0.4, 51°.51N±0°.02×16°.15E±0°.03, h0^{km}, Error ellipse: s-maj=3.0km s-min=2.5km az=153.8*

*CSEM **21** 07:01:30.7±0.2, 51°.51N×16°.11E, h2^{km}, ML3.5/11, Error ellipse: s-maj=4.3km s-min=2.8km az=85.0*

*PRU **21** 07:01:32.5, 51°.46N×16°.09E, h0^{km}*

*UPP **21** 07:01:34.8, 51°.65N×15°.77E, h10^{km}, ML1.4, Suspected Mining explosion.*

ISC 21 07:01:30.3±0.8, 51°.56N±0°.03×16°.14E±0°.02, h0^{km}, n54, σ1^{s}29/96, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.72	172	*i* Pg	Pg	07 01 44.5	+0.3
KSP				*e*Sg	Sg	07 01 53.3	-0.1
UPC	Upice	1.05	184	*e*PG	Pg	07 01 50.6	+0.1
UPC				*e*SG	Sg	07 02 03.4	-0.7
	comp=Z,121nm,0.4s						
UPC	Upice	1.05	184	Pg	Pg	07 01 50.6	+0.1
UPC				Sg	Sg	07 02 03.4	-0.7
	121nm,0.4s						
DPC	Dobruska-Polom	1.21	174	*e*PG	Pg	07 01 53.2	-0.4
DPC				*e*SG	Sg	07 02 08.2	-1.1
	comp=Z,79nm,0.4s						
DPC	Dobruska-Polom	1.21	174	Pg	Pg	07 01 53.2	-0.4
DPC				Sg	Sg	07 02 08.2	-1.1
	79nm,0.4s						
PVCC	Panska Ves	1.43	225	*e*PG	Pn	07 01 57.9	+0.4
PVCC				*e*SG	Sg	07 02 16.0	-0.2
	comp=Z,230nm,0.2s						
PVCC	Panska Ves	1.43	225	Pg	Pn	07 01 57.9	+0.4
PVCC				Sg	Sg	07 02 16.0	-0.2
	230nm,0.2s						
KRLC	Kraliky	1.54	164	*e*PG	Pb	07 01 59.6	-0.1
KRLC				*e*SG	Sg	07 02 18.3	-1.4
	comp=Z,12nm,0.5s						
KRLC	Kraliky	1.54	164	Pg	Pb	07 01 59.6	-0.1
KRLC				Sg	Sg	07 02 18.3	-1.4
	12nm,0.5s						
BRG	Berggiesshubel	1.54	245	PN	Pn	07 01 59.4	+0.3
BRG				PG	Pb	07 02 00.1	+0.4
BRG				SG	Sn	07 02 19.9	+0.1
	70nm,0.5s						
PRA	Prague	1.84	217	*e*SG	Sn	07 02 27.9	+0.8
	92nm,0.9s						
PRA	Prague	1.84	217	Sg	Sn	07 02 27.9	+0.8
	92nm,0.9s						
GOPC	GO Pecny, Ondr	1.86	208	*e*PN	Pn	07 02 03.3	-0.1
GOPC				*e*PG	Pb	07 02 05.4	+0.3
GOPC	GO Pecny, Ondr	1.86	208	Pn	Pn	07 02 03.3	-0.1
PRU	Pruhonice	1.87	214	*e*PG	Pb	07 02 05.7	+0.4
PRU				*e*SG	Sb	07 02 29.2	0.0
	comp=Z,56nm,0.4s						
PRU	Pruhonice	1.87	214	Pg	Pb	07 02 05.7	+0.4
PRU				Sg	Sb	07 02 29.2	0.0
	56nm,0.4s						
CLL	Collm	1.98	264	*e*Pn	Pn	07 02 05.0	-0.1
CLL				*e*Pg	Pb	07 02 08.0	+0.8
CLL				*e*Sg	Sg	07 02 34.0	+0.1
	comp=Z,23nm,0.6s						
MORC	Moravsky Berou	1.99	153	*e*Pn	Pn	07 02 05.1	-0.2
MORC				*e*Sg	Sb	07 02 32.5	-0.3
MORC	Moravsky Berou	1.99	153	*e*PN	Pn	07 02 05.1	-0.2
MORC				*e*SG	Sb	07 02 32.5	-0.3
OKC	Ostrava-Krasne	2.14	143	*e*SG	Sb	07 02 37.0	-0.1
	comp=Z,22nm,0.6s						
OKC	Ostrava-Krasne	2.14	143	Sg	Sb	07 02 37.0	-0.1
	comp=Z,22nm,0.6s						
VRAC	Vranov	2.27	172	*e*Pn	Pn	07 02 09.8	+0.7
VRAC				*e*Sg	Sb	07 02 41.2	+0.4
VRAC	Vranov	2.27	172	*e*PN	Pn	07 02 09.8	+0.7
VRAC				*e*SG	Sb	07 02 41.2	+0.4
KRUC	Moravsky	2.50	176	*e*Pn	Pn	07 02 13.3	+1.0
KRUC				*e*Sg	Sb	07 02 48.7	+1.2
KRUC	Moravsky	2.50	176	*e*PN	Pn	07 02 13.3	+1.0
KRUC				*e*SG	Sb	07 02 48.7	+1.2
OJC	Ojcow	2.67	119	*e*Pg	Pg	07 02 22.5	+1.0
OJC				*e*Sg	Sg	07 02 57.9	+1.7
OJC	Ojcow	2.67	119	*e*Pg	Pg	07 02 22.5	+1.0
OJC				*e*Sg	Sg	07 02 57.9	+1.7
NKC	Novy Kostel	2.69	242	*e*PN	Pn	07 02 15.6	+0.8
NKC				*e*PG	Pb	07 02 20.5	+1.2
NKC				*e*SG	Sg	07 02 56.8	+0.2
	comp=Z,46nm,0.3s						
NKC	Novy Kostel	2.69	242	Pn	Pn	07 02 15.6	+0.8
KHC	Kasperske Hory	2.93	215	*e*PN	Pn	07 02 18.6	+0.4
KHC				*e*PG	Pb	07 02 24.3	+0.9
KHC				*e*SN	Sn	07 02 51.6	-2.5
KHC				*e*SG	Sb	07 03 02.0	+2.2
	comp=Z,15nm,0.3s						
KHC	Kasperske Hory	2.93	215	Pn	Pn	07 02 18.6	+0.4
LANS	Liptovska Anna	3.22	137	*e*PG	Pg	07 02 30.5	-1.4
LANS				*e*SG	Sg	07 03 14.6	+1.0
LANS	Liptovska Anna	3.22	137	*e*Pg	Pg	07 02 30.5	-1.4
LANS				*e*Sg	Sg	07 03 14.6	+1.0
MODS	Modra-Piesok	3.27	167	*e*PG	Pg	07 02 32.3	-0.7
MODS				*e*SG	Sg	07 03 14.0	-1.3
MODS				*e*LG	Lg	07 03 22.3	
MODS	Modra-Piesok	3.27	167	*e*Pg	Pg	07 02 32.3	-0.7
MODS				*e*Sg	Sg	07 03 14.0	-1.3
VYHS	Vyhne	3.52	149	*e*PG	Pg	07 02 36.7	-1.1
VYHS				*e*SG	Sb	07 03 19.0	+2.2
VYHS				*e*LG	Lg	07 03 29.2	
VYHS	Vyhne	3.52	149	*e*Pg	Pg	07 02 36.7	-1.1
VYHS				*e*Sg	Sb	07 03 19.1	+2.2
CONA	Conrad Observa	3.64	183	*e*Pn	Pn	07 02 29.6	+1.7
	comp=Z,0.4nm,0.1s						
CONA				*i* Sg	Sg	07 03 24.7	-2.4
	comp=Z,22nm,0.5s						
CONA	Conrad Observa	3.64	183	Pn	Pn	07 02 29.6	+1.7
	comp=Z,0.4nm,0.1s						
CONA				Sg	Sg	07 03 24.7	-2.4
	comp=Z,22nm,0.5s						
BSD	Bornholm Skovb	3.64	349	*i* P	Pn	07 02 28.4	+0.6
BSD				*i* S	Sn	07 03 09.9	-1.5
BSD	Bornholm Skovb	3.64	349	*i* P	Pn	07 02 28.4	+0.6
BSD				*i* S	Sn	07 03 09.9	-1.5
MOA	Molln	3.91	199	*e*Pn	Pn	07 02 31.9	+0.3
	comp=Z,0.4nm,0.1s						
MOA				*i* Sg	Sb	07 03 31.0	+3.2
	comp=Z,3.0nm,0.2s						
MOA	Molln	3.91	199	Pn	Pn	07 02 31.9	+0.3
	comp=Z,0.4nm,0.1s						
MOA				Sg	Sb	07 03 31.0	+3.2
	comp=Z,3.0nm,0.2s						
ARSA	Arzberg	4.33	186	*i* Sg	Sg	07 03 46.5	-2.8
	comp=Z,14nm,0.7s						
ARSA	Arzberg	4.33	186	Sg	Sg	07 03 46.5	-2.8
	comp=Z,14nm,0.7s						
LUNU	Lund	4.39	340	S	Sn	07 03 28.3	-1.6
BLEU	Blekinge	4.76	358	P	Pn	07 02 44.0	+0.7
BJUU	Bjuv	4.89	339	S	Sn	07 03 38.8	-3.4
DEL	Delary	5.10	346	P	Pn	07 02 48.1	+0.2
DEL				S	Sn	07 03 43.8	-3.7
VXJU	Vaexsjoe	5.42	353	P	Pn	07 02 52.9	+0.6
OSKU	Oskarshamn	5.65	360	P	Pn	07 02 56.7	+1.2
BYXU	Byxelkrok	5.77	5	P	Pn	07 02 58.3	+1.2
GNOU	Gnosjoe	5.91	347	P	Pn	07 02 59.6	+0.5
EKSU	Eksjoe	6.05	356	P	Pn	07 03 02.0	+1.1

*NNC **21** 07:02:57.2±4.2, 37°.99N×72°.38E, h210^{km}±34^{km}, mb2.5, mpv3.7, Error ellipse: s-maj=38.1km s-min=35.3km az=63.0*

ISC 21 07:02:56.7±3.0, 38°.0N±0°.2×72°.3E±0°.1, h200^{km}, n12, σ1^{s}80/18, 4C-5D, Tajikistan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	2.28	25	⇑P	Pn	07 03 38.1	-0.3
	11nm,0.3s						
SFK				⇓S	Sn	07 04 12.0	+1.0
	28nm,0.3s						
AML	Almayashu	4.32	14	P	Pn	07 04 03.4	+0.6
	SNR=39						
MNAS	Manas	4.54	2	⇑P	Pn	07 04 06.0	+0.7
	12nm,0.3s						
MNAS				⇓S	Sn	07 05 00.9	+1.5
	8.5nm,0.5s						
KZA	Kyzart	4.72	28	P	Pn	07 04 07.6	-0.3
	SNR=11						
EKS2	Erkin-Say	4.85	13	P	Pn	07 04 10.2	+1.0
	SNR=12						
AAK	Ala-Archa	4.99	19	⇑P	Pn	07 04 12.0	+1.0
	6.2nm,0.5s						
AAK				⇓S	Sn	07 05 12.8	+3.1
	3.1nm,0.6s						
AAK	Ala-Archa	4.99	19	P	Pn	07 04 11.9	+0.9

	SNR=7.3						
KK31	Karatay Array	5.32	346	P	Pn	07 04 15.5	+0.4
	1.0nm,0.2s,baz=164,slow=12,SNR=28						
KK31				⇑S	Sn	07 05 17.3	+0.3
	3.4nm,0.3s,baz=165,slow=24,SNR=15						
CHMS	Chumysh	5.39	20	P	Pn	07 04 17.6	+1.5
	SNR=7.6						
TKM2	Tokmak 2	5.59	26	⇓P	Pn	07 04 19.2	+0.4
	3.8nm,0.5s						
TKM2				⇓S	Sn	07 05 18.8	-4.8
	0.9nm,0.5s						
TKM2	Tokmak 2	5.59	26	P	Pn	07 04 19.4	+0.7
	SNR=10.0						
AB31	Akbulak array	14.37	326	P	P	07 06 12.6	+0.2
	1.6nm,0.7s,baz=135,slow=11,SNR=9.8						
AB31				S	S	07 08 48.2	-2.4
	0.5nm,0.3s,baz=161,slow=24,SNR=4.7						

BJI ***21*** *07:19:56.3, 49°.32N×156°.58E, h29km, mb4.8/35, mB5.0/19, Ms4.7/10, Ms7 4.4/10*

KRSC ***21*** *07:19:59.0±2.0, 49°.10N×156°.63E, h80km±32km, ML5.1*

NEIC ***21*** *07:19:58.4±0.2, 49°.27N×156°.09E, h10km, mb4.7/72, Error ellipse: s-maj=5.8km s-min=3.4km az=152.0*

ISCJB ***21*** *07:20:00.4±0.5, 49°.22N±0°.03×156°.16E±0°.04, h36km±3km, mb4.6/148, MS4.6/1, Error ellipse: s-maj=6.5km s-min=2.9km az=139.6*

MOS ***21*** *07:20:00.4±1.1, 49°.22N×156°.18E, h47km, mb4.9/70, Error ellipse: s-maj=7.4km s-min=2.9km az=81.3*

SKHL ***21*** *07:20:00.6±1.1, 49°.07N×156°.47E, h49km±2km, mb5.1/9, Ms3.5/1*

IDC ***21*** *07:20:03.8±2.1, 49°.33N×156°.05E, h51km±18km, mb4.2/39, mb1 4.3/46, mb1mx4.2/76, mbtmp4.4/46, ML4.0/4, MS3.1/1, Ms1 3.1/1, ms1mx2.8/70, Error ellipse: s-maj=13.4km s-min=9.7km az=153.0*

ISC 21 07:20:01.3±0.7**, 49°.14N**±0°.05×**156°.32E**±0°.05**, h35**km±6km**, n405,** σ**1s.26**/440**, mb4.7**/158**, 17C-15D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.55	355	*e*P	Pn	07 20 26.0	-0.3
SKR				AMB	AMB	07 20 27.0	
	2μm,1.5s						
SKR				AMB	AMB	07 20 28.0	
	2μm,0.6s						
SKR				*e*S	Sn	07 20 46.0	+0.8
SKR				A	A	07 20 56.0	
	7μm,0.5s						
SKR				A	A	07 20 56.0	
	5μm,0.5s						
SKR				AMS	AMS	07 21 01.0	
	4μm,19.0s						
SKR				AMS	AMS	07 21 01.0	
	3μm,19.0s						
SKR	Severo-Kuril's	1.55	355	*e*P	Pn	07 20 26.1	-0.3
SKR				*e*S	Sn	07 20 46.1	+0.8
SKR	Severo-Kuril's	1.55	355	*e*PN	Pn	07 20 26.2	-0.2
SKR				*e*S	Sn	07 20 46.2	+1.0
SKR				pmax	pmax		
	comp=Z,2μm,1.5s						
SKR				pmax	pmax		
	comp=Z,2μm,0.6s						
SKR				smax	smax		
	comp=E,5μm,0.5s						
SKR				smax	smax		
	comp=N,7μm,0.6s						
PAU	Pauzhetka	2.35	8	*e*P	Pn	07 20 38.2	+0.8
PAU				AMB	AMB	07 20 39.0	
	comp=N,500nm,0.3s						
PAU				*e*S	Sn	07 21 05.9	+1.0
PAU				A	A	07 21 19.4	
	comp=N,4μm,0.4s						
PAU	Pauzhetka	2.35	8	*e*P	Pn	07 20 37.9	+0.5
PAU				*e*S	Sn	07 21 06.0	+1.0
PAU	Pauzhetka	2.35	8	PN	Pn	07 20 37.9	+0.5
PAU				S	Sn	07 21 06.0	+1.0
KDTR	Khodutka, Kamc	2.90	22	*e*P	Pn	07 20 44.3	-0.6
KDTR				*e*S	Sn	07 21 17.6	-0.9
MIPR	Malaya Ipel'ka	3.15	5	*e*P	Pn	07 20 49.4	+1.0
MIPR	Malaya Ipel'ka	3.15	5	PN	Pn	07 20 49.4	+1.0
ASAK	Asacha	3.40	17	*e*P	Pn	07 20 52.2	+0.3
ASAK				*e*S	Sn	07 21 32.3	+1.3
ASAK	Asacha	3.40	17	PN	Pn	07 20 52.2	+0.3
ASAK				S	Sn	07 21 32.3	+1.3
MTVR	Mutnovka	3.55	19	*e*P	Pn	07 20 54.2	+0.2
MTVR				*e*S	Sn	07 21 34.4	-0.4
MTVR	Mutnovka	3.55	19	PN	Pn	07 20 54.2	+0.2
MTVR				S	Sn	07 21 34.4	-0.4
RUS	Russkaya	3.58	22	*e*P	Pn	07 20 53.5	-0.7
RUS				*e*S	Sn	07 21 33.2	-2.1
RUS	Russkaya	3.58	22	PN	Pn	07 20 53.5	-0.7
GRL	Gorelyy	3.59	17	*e*P	Pn	07 20 55.4	+0.8
GRL				*e*S	Sn	07 21 37.1	+1.3
GRL	Gorelyy	3.59	17	PN	Pn	07 20 55.4	+0.8
GRL				S	Sn	07 21 37.1	+1.3
APC	Apacha	3.83	8	*e*P	Pn	07 20 59.8	+2.2
APC	Apacha	3.83	8	PN	Pn	07 20 59.8	+2.2
KRMR	Karymshinskiy	3.87	17	*e*P	Pn	07 20 58.6	+0.4
KRMR				*e*S	Sn	07 21 43.2	+0.8
KRMR	Karymshinskiy	3.87	17	PN	Pn	07 20 58.6	+0.4
KRMR				S	Sn	07 21 43.2	+0.8
PEA0B	Petropavlovsk-	4.07	12	*e*Pn	Pn	07 21 02.1	+1.1
PETK	Petropavlovsk-	4.07	12	P	Pn	07 21 02.2	+1.2
	baz=180,slow=13						
PETK				S	Sn	07 21 52.7	+5.3
	baz=116,slow=17						
PET	Petropavlovsk	4.16	20	*e*P	Pn	07 21 02.3	+0.1
PET				AMB	AMB	07 21 06.1	
	comp=N,160nm,0.5s						
PET				*e*S	Sn	07 21 49.0	-0.5
PET	Petropavlovsk	4.16	20	*e*Pn	Pn	07 21 02.1	0.0
PET	Petropavlovsk	4.16	20	*i* P	Pn	07 21 02.6	+0.4
PET				*e*S	Sn	07 21 49.7	+0.2
PET	Petropavlovsk	4.16	20	*e*PN	Pn	07 21 02.5	+0.4
PET				*e*S	Sn	07 21 52.4	+2.9
PET				pmax	pmax		
	comp=Z,234nm,0.6s						
PET				smax	smax		
	comp=E,1μm,0.8s						
PET				smax	smax		
	comp=N,965nm,0.6s						
DALK	Dalny	4.19	21	*e*P	Pn	07 21 02.9	+0.3
DALK				*e*S	Sn	07 21 49.5	-0.8
DALK	Dalny	4.19	21	PN	Pn	07 21 02.9	+0.3
UGLR	Uglovaya	4.37	20	*i* P	Pn	07 21 06.0	+0.8
UGLR	Uglovaya	4.37	20	PN	Pn	07 21 06.0	+0.8
AVH	Avacha	4.40	19	*e*P	Pn	07 21 06.9	+1.3
AVH	Avacha	4.40	19	PN	Pn	07 21 06.9	+1.3
KOK	Koryaka	4.41	18	*e*P	Pn	07 21 07.6	+1.9
KOK	Koryaka	4.41	18	PN	Pn	07 21 07.6	+1.9
SMAR	Somma	4.42	20	*e*P	Pn	07 21 07.0	+1.1
SMAR	Somma	4.42	20	PN	Pn	07 21 07.0	+1.1
SDLR	Sedlovina	4.45	20	*i* P	Pn	07 21 06.5	+0.2
SDLR	Sedlovina	4.45	20	PN	Pn	07 21 06.5	+0.2
NLC	Nalytchevo	4.47	24	*e*P	Pn	07 21 05.1	-1.3
NLC	Nalytchevo	4.47	24	PN	Pn	07 21 05.1	-1.3
KRX	Arik	4.47	18	*e*P	Pn	07 21 08.1	+1.5
KRX	Arik	4.47	18	PN	Pn	07 21 08.1	+1.5
SPN	Mys Shipunski	4.60	29	*e*P	Pn	07 21 08.0	-0.2
SPN				*e*S	Sn	07 21 58.8	-1.6
SPN	Mys Shipunski	4.60	29	PN	Pn	07 21 08.0	-0.2
GNL	Ganaly	4.68	12	*i* P	Pn	07 21 11.1	+1.7
GNL	Ganaly	4.68	12	PN	Pn	07 21 11.1	+1.7
KII	Karymskiy	5.28	21	*e*P	Pn	07 21 19.2	+1.6
KII	Karymskiy	5.28	21	PN	Pn	07 21 19.2	+1.6
MKZ	Mys Kozlova	6.38	30	*e*P	Pn	07 21 31.0	-1.6
MKZ				*e*S	Sn	07 22 40.4	-3.7
MKZ	Mys Kozlova	6.38	30	PN	Pn	07 21 31.0	-1.6
TUMD	Tumrok D	6.57	21	*e*P	Pn	07 21 35.6	+0.3
TUMR	Tumrok	6.59	19	*e*P	Pn	07 21 36.9	+1.3
TUMR	Tumrok	6.59	19	PN	Pn	07 21 35.6	0.0
KUR	Kuril'sk	6.96	239	*e*P	Pn	07 21 42.6	+2.0
KUR				AMB	AMB	07 22 05.0	
	comp=N,94nm,0.4s						
KUR				*e*S	Sn	07 22 58.4	0.0
KUR	Kuril'sk	6.96	239	*e*PN	Pn	07 21 42.8	+2.2
KUR				pmax	pmax		
	comp=Z,94nm,0.4s						
KPT	Kopyto	7.24	18	*e*P	Pn	07 21 43.7	-0.9
KPT	Kopyto	7.24	18	PN	Pn	07 21 43.7	-0.9
KIRR	Kirishev	7.25	18	*e*P	Pn	07 21 46.3	+1.5
KIRR	Kirishev	7.25	18	PN	Pn	07 21 46.3	+1.5
BZWR	Bezymyannyi-We	7.29	19	*e*P	Pn	07 21 46.6	+1.2
BZWR	Bezymyannyi-We	7.29	19	PN	Pn	07 21 46.6	+1.2
BZGR	Bezymyannyi-Gr	7.32	20	*e*P	Pn	07 21 47.1	+1.5
BZGR	Bezymyannyi-Gr	7.32	20	PN	Pn	07 21 47.1	+1.5
ZLN	Zelenaya	7.41	20	*e*P	Pn	07 21 46.5	-0.4
ZLN	Zelenaya	7.41	20	PN	Pn	07 21 46.5	-0.4
KRSR	Krestovskiy	7.54	18	*e*P	Pn	07 21 48.0	-0.7
KRSR	Krestovskiy	7.54	18	PN	Pn	07 21 48.0	-0.7
BDR	Baidarnaya	8.01	20	*e*P	Pn	07 21 56.1	+1.0
BDR	Baidarnaya	8.01	20	PN	Pn	07 21 56.1	+1.0
SRKR	Sorokina	8.08	19	*e*P	Pn	07 21 56.3	+0.3
SRKR	Sorokina	8.08	19	PN	Pn	07 21 56.3	+0.3
SMKR	Semkarok	8.08	21	*e*P	Pn	07 21 56.5	+0.5
SMKR	Semkarok	8.08	21	PN	Pn	07 21 56.5	+0.5
KBTR	Krutoberegovo	8.11	27	*i* P	Pn	07 21 55.8	-0.5
KBTR	Krutoberegovo	8.11	27	PN	Pn	07 21 55.8	-0.5
SHO	Shikotan	8.40	235	*e*P	Pn	07 22 00.6	+0.2
SHO				AMB	AMB	07 22 05.0	
	comp=Z,59nm,0.3s						
SHO				*e*S	Sn	07 23 30.0	-3.9
SHO	Shikotan	8.40	235	*e*PN	Pn	07 21 59.0	-1.4
SHO				pmax	pmax		
	comp=Z,59nm,0.3s						
BKI	Bering	8.49	41	*e*P	Pn	07 22 01.5	0.0
BKI				*e*S	Sn	07 23 28.4	-7.5
BKI	Bering	8.49	41	PN	Pn	07 22 01.5	0.0
YUK	Yuzh-Kuril'sk	8.82	239	*e*P	Pn	07 22 07.0	+0.8
YUK				AMB	AMB	07 22 15.0	
	comp=Z,231nm,0.5s						
YUK	Yuzh-Kuril'sk	8.82	239	*e*PN	Pn	07 22 07.2	+1.0
YUK				pmax	pmax		
	comp=Z,231nm,0.5s						
TYV	Tymovskoe	8.97	286	*e*P	Pn	07 22 11.4	+3.2
TYV				AMB	AMB	07 22 14.1	
	comp=Z,17nm,1.0s						
TYV	Tymovskoe	8.97	286	*e*PN	Pn	07 22 11.4	+3.2
TYV				pmax	pmax		
	comp=Z,21nm,1.0s						
TYV				MLR	MLR		
	comp=Z,1μm,15.0s						
TYV				MLR	MLR		
	comp=N,800nm,14.0s						
YSS	Yuzh-Sakhalins	9.35	262	*e*P	Pn	07 22 15.8	+2.5
YSS				AMB	AMB	07 22 17.8	
	comp=N,20nm,0.4s						
YSS				*e*S	Sn	07 23 55.3	-1.8
YSS				A	A	07 24 03.3	
	comp=N,40nm,0.5s						
YSS				AMS	AMS	07 27 13.0	
	comp=N,400nm,15.0s						
YSS	Yuzh-Sakhalins	9.35	262	*e*Pn	Pn	07 22 16.4	+3.0
YSS	Yuzh-Sakhalins	9.35	262	*e*PN	Pn	07 22 17.0	+3.7
YSS				pmax	pmax		
	comp=Z,20nm,0.4s						
YSS				MLR	MLR		
	comp=Z,400nm,15.0s						
UGL	Uglegorsk	9.35	275	*e*P	Pn	07 22 15.6	+2.2
UGL				AMB	AMB	07 22 16.9	
	comp=Z,55nm,0.7s						
UGL				*e*S	Sn	07 23 56.8	-0.4
UGL				A	A	07 23 58.5	
	comp=Z,112nm,0.4s						
UGL				AMS	AMS	07 26 14.4	
	comp=Z,2μm,17.0s						
ASAJ	Asahikawa	10.69	247	P	Pn	07 22 34.3	+2.6
	comp=Z,6.8nm,0.3s,baz=67,slow=16,SNR=20						
ASAJ	Asahikawa	10.69	247	*e*Pn	Pn	07 22 34.1	+2.4
MA2	Magadan	10.94	345	P	Pn	07 22 36.0	+0.9
	comp=Z,3.5nm,0.3s,baz=146,slow=9.8,SNR=22						
MA2	Magadan	10.94	345	*e*P	Pn	07 22 35.8	+0.6
MA2	Magadan	10.94	345	*e*Pn	Pn	07 22 35.0	-0.2
MA2	Magadan	10.94	345	*i* PN	Pn	07 22 35.8	+0.6
MA2				pmax	pmax		
	comp=Z,34nm,0.7s						
ERM	Erimo	11.64	237	*e*P	Pn	07 22 44.7	-0.1
ERM	Erimo	11.64	237	*e*Pn	Pn	07 22 45.3	+0.6
ERM	Erimo	11.64	237	⇓*e*PN	Pn	07 22 44.7	-0.1
SMY	Shemya	11.78	66	*e*Pn	Pn	07 22 45.6	-1.0
SMY	Shemya	11.78	66	*e*PN	Pn	07 22 45.6	-1.0
SEY	Seymchan	14.00	353	P	Pn	07 23 16.9	+0.1
	comp=Z,0.3nm,0.3s,baz=173,slow=10.0,SNR=6.9						
KLR	Kul'dur	16.05	280	P	Pn	07 23 45.3	+1.2
	comp=Z,0.0nm,0.3s,baz=69,slow=12,SNR=13						
KLR				LR	LR	07 30 12.3	
	comp=Z,71nm,18.8s,baz=62,slow=38						
KLR	Kul'dur	16.05	280	⇑*i*P	P	07 23 46.6	-0.5
USRK	Ussuriysk Ar.	17.38	263	P	Pn	07 24 00.7	-0.2
	baz=71,slow=9.2						
MJB9	Matsu-Tunnel	18.24	233	*e*Pn	Pn	07 24 12.8	+1.3
	comp=Z,21nm,1.1s						
MAJO	Matsushiro	18.24	233	*e*P	P	07 24 10.5	-0.9
MAJO	Matsushiro	18.24	233	*e*Pn	Pn	07 24 12.8	+1.3
	comp=Z,21nm,1.1s						
MAJO	Matsushiro	18.24	233	*ce*P	P	07 24 10.5	-0.9
MAJO				pmax	pmax		
	comp=Z,7.0nm,0.9s						
MAT	Matsushiro	18.24	233	P	Pn	07 24 11.8	+0.3
MJAR	Matsushiro Arr	18.24	233	P	Pn	07 24 11.7	+0.2
	comp=Z,0.5nm,0.3s,baz=25,slow=7.4,SNR=9.5						
YAK	Yakutsk	19.64	321	P	P	07 24 24.4	-2.1
	comp=Z,0.0nm,0.3s,baz=232,slow=20,SNR=5.9						
YAK	Yakutsk	19.64	321	*e*P	P	07 24 24.6	-2.0
YAK				*e*S	S	07 28 05.5	-0.5
YAK				pmax	pmax		
	comp=Z,29nm,1.0s						
YAK				pmax	pmax		
	comp=E,17nm,1.3s						
YAK				pmax	pmax		
	comp=N,11nm,1.2s						
YAK				smax	smax		
	comp=N,24nm,1.9s						
YAK				smax	smax		
	comp=E,33nm,2.0s						
INU	Inuyama	19.77	233	*e*P	P	07 24 28.6	+0.4
	comp=E,17nm,0.8s						
KSRS	Korea Array	23.59	251	P	P	07 25 08.7	0.0
	comp=E,5.8nm,1.0s,baz=50,slow=10,SNR=16						
KS01	Wonju Array Si	23.59	251	*e*P	P	07 25 08.5	-0.2
KSAR	Wonju Array Be	23.62	251	P	P	07 25 08.7	-0.3
KSAR	Wonju Array Be	23.62	251	P	P	07 25 08.7	-0.3
TJN	Taejon	24.62	250	⇑*e*P	P	07 25 19.6	+1.4
JNU	Nakatsue	24.79	239	P	P	07 25 19.6	-0.2
	comp=E,11nm,0.9s,baz=36,slow=7.6,SNR=7.9						
JNU	Nakatsue	24.79	239	*e*P	P	07 25 20.6	+0.8
	comp=E,13nm,0.9s						
TIXI	Tiksi	25.86	340	P	P	07 25 27.0	-2.0
	comp=E,19nm,0.7s,baz=128,slow=11,SNR=15						
TIXI	Tiksi	25.86	340	*e*P	P	07 25 26.8	-2.2
TIXI	Tiksi	25.86	340	*e*P	P	07 25 27.6	-1.4
	comp=E,17nm,0.6s						
TIXI	Tiksi	25.86	340	⇑*e*P	P	07 25 26.8	-2.2
TIXI				pmax	pmax		
	comp=Z,16nm,0.7s						
BOD	Bodaibo	26.24	305	*e*P	P	07 25 31.9	-0.8
BOD				pmax	pmax		
	comp=Z,4.0nm,1.7s						
KDAK	Kodiak Island	30.94	54	P	P	07 26 14.3	-0.1
	comp=Z,8.1nm,0.9s,baz=309,slow=14,SNR=3.3						
BPAW	Bear Paw Mtn.	31.54	42	*e*P	P	07 26 20.7	+0.9
	comp=Z,3.4nm,1.0s						
H11S1	WAKE ISLAND Hy	31.69	161	T	T	08 00 18.7	
	baz=346,slow=76,SNR=304						
H11S3	WAKE ISLAND Hy	31.70	161	T	T	08 00 13.0	
	baz=346,slow=76,SNR=467						
MLY	Manley	31.70	40	*e*P	P	07 26 22.7	+1.5
	comp=Z,3.2nm,1.0s						
H11S2	WAKE ISLAND Hy	31.70	161	T	T	08 00 19.8	
	baz=346,slow=76,SNR=220						
TRF	Thorofare Moun	31.83	43	*e*P	P	07 26 24.2	+1.7
	comp=Z,4.9nm,1.2s						
COLD	Coldfoot	32.14	36	*e*P	P	07 26 25.2	+0.3
	comp=Z,3.3nm,0.8s						
HHC	Hu-ho-hao-te	32.31	272	*e*P	P	07 26 27.3	+0.4
HHC				pmax	pmax		
	comp=Z,24nm,1.2s						
HHC				pmax	pmax		
	comp=Z,200nm,8.7s						
TOLK	Toolik Lake Re	32.57	33	*e*P	P	07 26 30.1	+1.3
	comp=Z,4.3nm,0.8s						
SML	Sawmill	32.76	46	*e*P	P	07 26 31.9	+1.4
	comp=Z,17nm,1.1s						
SML	Sawmill	32.76	46	*e*P	P	07 26 31.9	+1.4
SML				pmax	pmax		
	comp=Z,17nm,1.1s						
NJ2	Nanjing	32.76	253	*e*P	P	07 26 29.6	-1.1
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
MDM	Murphy Dome	32.76	40	*e*P	P	07 26 31.9	+1.4
	comp=Z,2.4nm,0.8s						
WRH	Wood River Hil	32.81	41	*e*P	P	07 26 32.3	+1.4
	comp=Z,8.2nm,1.2s						
COLA	College	32.92	41	*e*P	P	07 26 32.5	+0.7
	comp=Z,7.5nm,0.8s						
COLA	College	32.92	41	*e*P	P	07 26 32.5	+0.7
COLA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
CCB	Clear Creek Bu	32.94	41	*e*P	P	07 26 32.8	+0.8
	comp=Z,4.2nm,1.0s						
TLY	Talaya	33.06	295	*e*P	P	07 26 32.3	-1.0
IL1	Eielson Array	33.34	41	*e*P	P	07 26 35.6	+0.1
ILAR	Eielson Array	33.34	41	P	P	07 26 35.7	+0.3
	comp=Z,1.1nm,0.7s,baz=261,slow=8.6,SNR=18						
ILB	Eielson Array	33.34	41	*e*P	P	07 26 35.5	+0.1
FYU	Fort Yukon	34.05	38	*e*P	P	07 26 42.9	+1.3
	comp=Z,11nm,0.9s						
RIDG	Independ'e Rid	34.26	43	*e*P	P	07 26 43.4	-0.2
	comp=Z,6.5nm,1.0s						
SCRK	Sand Creek	34.62	42	*e*P	P	07 26 46.6	-0.1
	comp=Z,6.6nm,1.2s						
EGAK	Eagle	35.79	41	*e*P	P	07 26 56.8	+0.2
	comp=Z,4.9nm,0.8s						
WHN	Wuhan	36.62	255	P	P	07 27 03.8	-0.3
DAWY	Dawson	36.62	42	*e*P	P	07 27 04.9	+1.1
	comp=Z,6.0nm,1.3s						
XAN	Xi'an	37.88	265	P	P	07 27 13.1	-1.7
XAN				pmax	pmax		
	comp=Z,3.0nm,0.5s						
XAN				pmax	pmax		
	comp=Z,350nm,10.6s						
INK	Inuvik	38.47	34	P	P	07 27 20.4	+1.1
	comp=Z,4.9nm,0.8s,baz=273,slow=7.5,SNR=15						
LZH	Lanzhou	39.98	271	*e*P	P	07 27 32.8	+0.3
LZH				pP	pP	07 27 42.4	-0.4
LZH				sP	sP	07 27 46.8	-0.1
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
GTA	Gaotai	40.74	278	P	P	07 27 38.4	-0.4
GTA				pP	pP	07 27 46.1	-2.9
GTA				sP	sP	07 27 49.4	-3.8
GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
GTA				pmax	pmax		
	comp=Z,94nm,4.8s						
ZALV	Zalesovo Beam	42.99	305	P	P	07 27 54.6	-2.2
	comp=Z,1.3nm,0.3s,baz=58,slow=7.2,SNR=3.0						
ZALV				PcP	PcP	07 29 47.1	+0.6
	comp=Z,1.0nm,0.4s,baz=82,slow=3.1,SNR=3.7						
CD2	Chengdu	43.23	265	*e*P	P	07 27 57.5	-1.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
DGZ	Jazzator, Alta	43.35	298	*i* P	P	07 27 56.9	-3.0
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GYA	Guiyang	44.33	258	*e*P	P	07 28 08.4	+0.4
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
WMQ	Urumqi	46.08	291	P	P	07 28 22.5	+0.8
WMQ				pP	pP	07 28 32.0	0.0
WMQ				pmax	pmax		
	comp=Z,15nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,820nm,7.9s						
WMQ				LR	LR		
	comp=Z,680nm,14.3s						
WMQ				LR	LR		
	comp=Z,770nm,15.9s						
WMQ				LR	LR		
	comp=Z,400nm,18.5s						
YKA	Yellowknife Ar	47.72	39	P	P	07 28 35.0	+1.0
	comp=Z,1.7nm,0.8s,baz=298,slow=7.8,SNR=8.5						
YKA	Yellowknife Ar	47.72	39	*e*P	P	07 28 35.0	+1.0
YKA	Yellowknife Ar	47.72	39	P	P	07 28 35.0	+1.0
YKA	Yellowknife Ar	47.72	39	P	P	07 28 35.0	+1.0
YKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
MK31	Makanchi Array	47.77	297	*e*P	P	07 28 33.4	-1.3
MK31	Makanchi Array	47.77	297	*e*P	P	07 28 33.4	-1.3
MKAR	Makanchi Array	47.77	297	P	P	07 28 33.4	-1.3
	comp=Z,2.5nm,0.5s,baz=64,slow=8.4,SNR=15						
MKAR				PcP	PcP	07 30 03.0	-0.3
	comp=Z,0.8nm,0.7s,baz=60,slow=6.8,SNR=2.5						
MKAR	Makanchi Array	47.77	297	*e*P	P	07 28 33.4	-1.3
	comp=Z,32nm,0.8s						
MKAR				PcP	PcP	07 30 03.0	-0.3
MK01	Makanchi Array	47.78	297	*e*P	P	07 28 33.5	-1.2
KMI	Kunming	47.79	260	P	P	07 28 35.8	+0.5
KMI				pmax	pmax		
	comp=Z,14nm,0.7s						
KMI				pmax	pmax		
	comp=Z,310nm,12.8s						
KURK	Kurchatov	47.85	303	*e*P	P	07 28 34.1	-1.1
KURK	Kurchatov	47.85	303	*e*P	P	07 28 34.2	-1.1
	comp=Z,14nm,1.0s						
KURK				PcP	PcP	07 30 03.8	+0.4
KURK	Kurchatov	47.85	303	*d i*P	P	07 28 34.1	-1.1
KURK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KURBB	Kurchatov Arra	47.95	303	P	P	07 28 34.7	-1.3
	comp=Z,11nm,0.9s,baz=66,slow=8.2,SNR=26						
KURBB				PcP	PcP	07 30 03.8	0.0
	comp=Z,2.4nm,0.8s,baz=60,slow=3.3,SNR=6.5						
MAKZ	Makanchi	47.95	297	*e*P	P	07 28 34.9	-1.2
	comp=Z,2.5nm,0.7s						
MAKZ	Makanchi	47.95	297	*e*P	P	07 28 34.9	-1.2
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SPITS	Spitsbergen Ar	50.64	350	P	P	07 28 55.6	-0.6
	comp=Z,2.8nm,0.6s,baz=359,slow=10,SNR=5.0						
BVAR	Borovoye Array	51.01	309	P	P	07 28 58.1	-1.3
	comp=Z,3.5nm,0.3s,baz=53,slow=8.9,SNR=19						
BRVK	Borovoye	51.05	309	*e*P	P	07 28 58.4	-1.2
BRVK	Borovoye	51.05	309	*e*P	P	07 28 58.1	-1.5
	comp=Z,9.7nm,1.0s						
BRVK	Borovoye	51.05	309	*de*P	P	07 28 58.4	-1.2
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
TULEG	Thule	51.35	12	*e*P	P	07 29 03.1	+1.5
	comp=Z,56nm,1.4s						
SVE	Sverdlovsk	53.55	317	*e*P	P	07 29 17.1	-1.0
SVE				pmax	pmax		
	comp=Z,18nm,0.9s						
DAG	Danmarks Havn	54.33	359	*i* P	P	07 29 21.7	-1.8
	comp=Z,4.2nm,0.8s						
ARU	Arti	54.70	318	P	P	07 29 24.7	-1.8
	comp=Z,11nm,0.3s,baz=80,slow=5.9,SNR=26						
ARU	Arti	54.70	318	*e*P	P	07 29 24.5	-2.0
ARU	Arti	54.70	318	*e*P	P	07 29 24.7	-1.8
	comp=Z,25nm,0.9s						
ARU	Arti	54.70	318	*c i*P	P	07 29 24.6	-1.8
ARU				*PP	pP	07 29 35.5	-1.6
ARU						07 30 27.7	
ARU				S	S	07 37 01.7	-2.3
ARU				SS	SS	07 40 41.8	-4.7
ARU				pmax	pmax		
	comp=Z,23nm,0.8s						
CHTO	Chiang Mai	54.75	258	*e*P	P	07 29 28.3	+0.9
	comp=Z,16nm,1.1s						
CHTO	Chiang Mai	54.75	258	*e*P	P	07 29 28.3	+0.9
CHTO				pmax	pmax		
	comp=Z,16nm,1.1s						
CMAR	Chiang Mai Arr	55.01	257	P	P	07 29 30.6	+1.4
	comp=Z,2.9nm,0.4s,baz=32,slow=6.9,SNR=15						
CM01	Chiang Mai Arr	55.03	257	*e*P	P	07 29 30.5	+1.1
PBKT	Sadao Pong	55.12	254	*e*P	P	07 29 31.4	+1.4
	comp=Z,4.1nm,0.6s						
KSH	Kashi	55.73	293	*e*P	P	07 29 36.8	+2.5
KSH				*e*PP	PP	07 31 42.5	+3.9
MOD	Modoc Plateau	56.06	63	*e*P	P	07 29 39.5	+2.8
	comp=Z,9.5nm,1.4s						
ARCES	ARCESS Array B	56.29	341	P	P	07 29 35.7	-2.0
	comp=Z,4.2nm,0.9s,baz=43,slow=7.4,SNR=7.7						
PRGR	Permogore	56.51	328	*e*P	P	07 29 38.0	-1.4
PRGR				pmax	pmax		
	comp=Z,7.0nm,0.6s						
SUMG	Summit	58.15	5	*e*P	P	07 29 51.6	+0.3
	comp=Z,33nm,1.1s						
SUMG	Summit	58.15	5	*i* P	P	07 29 51.4	+0.1
	comp=Z,16nm,0.7s						
SUMG	Summit	58.15	5	*e*P	P	07 29 51.6	+0.3
SUMG				pmax	pmax		

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      comp=Z,33nm,1.1s
PNTR  Pine Nut        58.25  66 eP       P       07 29 55.1 +2.8
      comp=Z,4.8nm,0.8s
HLID  Hailey          58.40  59 eP       P       07 29 55.3 +2.0
      comp=Z,4.1nm,1.4s
ABKAR Akbulak array   58.54 310 eP       P       07 29 52.8 -1.1
BOZ   Bozeman (W)     58.64  55 eP       P       07 29 56.3 +1.5
      comp=Z,6.5nm,1.5s
BOZ   Bozeman (W)     58.64  55 eP       P       07 29 56.3 +1.5
BOZ                               pmax    pmax
      comp=Z,7.0nm,1.5s
AKTO  Aktyubinsk      58.73 312  P       P       07 29 53.8 -1.4
      comp=Z,3.4nm,0.4s,baz=69,slow=8.7,SNR=10
KLMR  Klimovskoe      59.16 329 eP       P       07 29 54.8 -3.2
KLMR                              pmax    pmax
      comp=Z,6.0nm,0.9s
KLMR  Klimovskoe      59.16 329 eP       P       07 29 54.9 -3.1
KLMR                              AMP             07 29 56.6
      comp=Z,6.0nm,0.9s
KVN   Kaiserville     59.17  65 eP       P       07 30 00.6 +2.0
      comp=Z,4.4nm,1.1s
KVN   Kaiserville     59.17  65 eP       P       07 30 00.6 +2.0
KVN                               pmax    pmax
      comp=Z,4.0nm,1.1s
QLMT  Earthquake Lak  59.24  56 eP       P       07 30 00.2 +1.1
YHB   Horse Butte     59.42  56 eP       P       07 30 00.8 +0.5
      comp=Z,5.8nm,1.1s
NVAR  Mina Array Bea  59.45  65  P       P       07 30 02.4 +1.8
      comp=Z,0.3nm,0.3s,baz=294,slow=6.8,SNR=3.6
DZET  Dzherino        60.45 296  P       P       07 30 08.3 +0.9
DZET                              pmax    pmax
      comp=Z,9.0nm,0.7s
LAO   LASA Array      60.77  51 eP       P       07 30 10.8 +1.5
      comp=Z,11nm,1.2s
NIL   Nilore          61.18 289 eP       P       07 30 12.4 +0.1
      comp=Z,10nm,0.8s
NIL   Nilore          61.18 289 eP       P       07 30 12.4 +0.1
NIL                               pmax    pmax
      comp=Z,10.0nm,0.8s
PD31  Pinedale Array  61.61  57 eP       P       07 30 16.2 +0.8
PDAR  Pinedale Array  61.61  57  P       P       07 30 16.3 +1.0
      comp=Z,1.4nm,0.9s,baz=284,slow=2.4,SNR=11
FIA1  FINESS Array S  62.77 336 eP       P       07 30 21.1 -1.3
      comp=Z,9.2nm,1.2s
FINES FINESS Array B  62.77 336  P       P       07 30 21.1 -1.4
      comp=Z,1.3nm,0.5s,baz=27,slow=7.0,SNR=11
SRU   San Rafael Swe  63.54  60 eP       P       07 30 29.9 +1.7
      comp=Z,4.2nm,0.8s
SRU   San Rafael Swe  63.54  60  P       P       07 30 29.8 +1.7
SRU                               pmax    pmax
      comp=Z,4.0nm,0.8s
RSSD  Black Hills     63.65  52 eP       P       07 30 29.6 +0.8
      comp=Z,5.5nm,0.6s
RSSD  Black Hills     63.65  52 eP       P       07 30 29.6 +0.8
RSSD                              pmax    pmax
      comp=Z,5.0nm,0.6s
OBN   Obninsk         64.53 326 eP       P       07 30 35.9 +1.8
OBN                               pmax    pmax
      comp=Z,5.0nm,0.8s
PV22  Blue Mesa, Par  64.92  60 eP       P       07 30 39.2 +1.9
      comp=Z,3.6nm,0.9s
PV17  East Wray Mesa  65.00  60 eP       P       07 30 38.7 +1.0
      comp=Z,9.2nm,0.7s
PV18  Skein Mesa, Pa  65.05  60 eP       P       07 30 39.6 +1.5
      comp=Z,5.8nm,1.0s
PV05  Paradox Valley  65.06  60 eP       P       07 30 40.0 +1.8
PV03  Paradox Valley  65.08  60 eP       P       07 30 39.1 +0.8
PV13  Radium Mtn., P  65.16  60 eP       P       07 30 40.1 +1.3
      comp=Z,11nm,1.2s
SMCO  Snowmass        65.49  58 eP       P       07 30 41.8 +0.6
      comp=Z,2.6nm,0.9s
BORG  Borgarnes       66.44 359 eP       P       07 30 48.1 +1.8
      comp=Z,43nm,1.5s
NC405 NORSAR Array S  66.47 342 eP       P       07 30 45.9 -0.7
NC204 NORSAR Array S  66.51 343 eP       P       07 30 46.2 -0.8
VSR   Storozhevoye    66.56 322 eP       P       07 30 46.1 -1.2
VSR                               pmax    pmax
      comp=Z,13nm,0.8s
NB201 NORSAR Array S  66.61 342 eP       P       07 30 46.9 -0.7
NB2   NORSAR Subarra  66.63 342  P       P       07 30 46.1 -1.6
      comp=Z,1.7nm,0.7s,baz=28,slow=6.5
NOA   NORSAR Array B  66.63 342  P       P       07 30 45.9 -1.8
      comp=Z,1.2nm,0.7s,baz=27,slow=6.4,SNR=10
NC602 NORSAR Array S  66.85 342 eP       P       07 30 48.0 -1.1
HFS   Hagfors         66.94 341  P       P       07 30 48.4 -1.3
      comp=Z,1.2nm,0.3s,baz=29,slow=3.4,SNR=15
GEYT  Alibeck         67.20 302  P       P       07 30 50.7 -1.0
      comp=Z,1.4nm,0.3s,baz=57,slow=9.0,SNR=4.5
ECSD  EROS Data Cent  67.68  49 eP       P       07 30 55.1 +0.5
      comp=Z,4.1nm,0.8s
IVI   Ivigtut         68.26  12 eP       P       07 30 58.6 +0.8
      comp=Z,15nm,0.7s
ANMO  Albuquerque     68.77  61  P       P       07 31 03.2 +1.4
      comp=Z,0.6nm,0.6s,baz=324,slow=8.7,SNR=4.4
ANMO  Albuquerque     68.77  61⇑eP       P       07 31 02.7 +0.9
HYB   Hyderabad       69.07 273 i P      P       07 31 04.5 +0.8
KVAR  Kislovodsk Arr  70.64 315  P       P       07 31 11.6 -1.5
      comp=Z,3.8nm,0.5s,baz=30,slow=20,SNR=2.3
KIV   Kislovodsk      70.64 315 eP       P       07 31 12.6 -0.5
KIV                               pmax    pmax
      comp=Z,3.0nm,0.8s
KBZ   Khabaz          70.72 315  P       P       07 31 12.9 -0.5
      comp=Z,6.5nm,0.7s,baz=41,slow=4.3,SNR=15
AKASG Malin Array Be  70.72 327  P       P       07 31 11.7 -1.6
      comp=Z,2.2nm,0.4s,baz=32,slow=6.3,SNR=7.7
AKBB  Malin Array Si  70.72 327 eP       P       07 31 12.3 -1.0
      comp=Z,3.3nm,0.6s
KIEV  Kiev            70.74 328 eP       P       07 31 11.8 -1.6
KIEV  Kiev            70.74 328 eP       P       07 31 11.8 -1.6
      comp=Z,3.2nm,0.6s
KIEV  Kiev            70.74 328⇓eP       P       07 31 11.8 -1.6
KIEV                              pmax    pmax
      comp=Z,3.0nm,0.6s
NEY   Neytrino        71.17 315⇓eP       P       07 31 17.0 +0.6
NEY                               pmax    pmax
      comp=Z,1.0nm,0.6s
WRA   Warramunga Arr  71.50 202  P       P       07 31 18.5 +0.3
      comp=Z,1.9nm,0.8s,baz=19,slow=6.4,SNR=7.4
AKH   Akhalkalaki     72.22 313⇓iP       P       07 31 23.8 +1.0
GNI   Garni           72.59 312⇑eP       P       07 31 26.3 +1.4
GNI                               pmax    pmax
      comp=Z,14nm,1.1s
OJC   Ojcow           74.23 333 eP       P       07 31 35.1 +0.9
OJC   Ojcow           74.23 333 eP       P       07 31 35.1 +0.9
TX31  Lajitas Ar. Si  74.47  63 eP       P       07 31 37.2 +1.2
TXAR  Lajitas Array   74.47  63  P       P       07 31 37.1 +1.1
      comp=Z,1.5nm,0.7s,baz=301,slow=4.2,SNR=29
EKA   Eskdalemuir Ar  74.49 348  P       P       07 31 35.0 -0.6
      comp=Z,1.3nm,0.3s,baz=20,slow=5.2,SNR=21
EKA   Eskdalemuir Ar  74.49 348  P       P       07 31 35.0 -0.6
EKA                               pmax    pmax
      comp=Z,1.0nm,0.4s
ESK   Eskdalemuir     74.51 348 eP       P       07 31 35.6 -0.1
      comp=Z,7.2nm,0.8s
ESK   Eskdalemuir     74.51 348 eP       P       07 31 35.6 -0.1
ESK                               pmax    pmax
      comp=Z,7.0nm,0.8s
KSP   Ksiaz           74.69 335  P       P       07 31 38.9 +2.1
KSP                               pmax    pmax
      comp=Z,8.0nm,1.2s
BUR08 Bucovina Ar. S  74.72 328 eP       P       07 31 36.4 -0.8
BUR04 Bucovina Ar. S  74.74 328 eP       P       07 31 36.6 -0.8
BURAR Bucovina Array  74.74 328⇓iP       P       07 31 36.6 -0.7
BURAR Bucovina Array  74.74 328  P       P       07 31 36.6 -0.7
DPC   Dobruska-Polom  75.12 335 eP       P       07 31 40.5 +1.1
DPC   Dobruska-Polom  75.12 335 eP       P       07 31 40.5 +1.1
CLL   Collm           75.14 337 i P      P       07 31 39.2 -0.2
      comp=Z,7.0nm,0.9s
CLL   Collm           75.14 337 eP       P       07 31 39.2 -0.2
      comp=Z,7.7nm,1.0s
CLL   Collm           75.14 337 i P      P       07 31 39.2 -0.2
CLL                               pmax    pmax
      comp=Z,7.0nm,0.9s
AS01  Alice Springs   75.17 201 eP       P       07 31 40.9 +1.0
ASAR  Alice Springs   75.19 201  P       P       07 31 41.1 +1.2
      comp=Z,0.6nm,0.6s,baz=11,slow=5.2,SNR=8.7
TRQ   Mont Tremblant  75.23  34 eP       P       07 31 40.8 +0.6
KRLC  Kraliky         75.24 334 eP       P       07 31 41.0 +0.9
KRLC                            ex       x       07 31 48.7
KRLC  Kraliky         75.24 334 eP       P       07 31 41.0 +0.9
KRLC                            e                07 31 48.7
LANS  Liptovska Anna  75.28 332 eP       P       07 31 41.3 +1.0
LANS  Liptovska Anna  75.28 332 eP       P       07 31 41.3 +1.0
MORC  Moravsky Berou  75.29 334⇓iP       P       07 31 40.1 -0.3
MORC  Moravsky Berou  75.29 334 eP       P       07 31 40.7 +0.3
      comp=Z,11nm,1.1s
MORC  Moravsky Berou  75.29 334 eP       P       07 31 40.7 +0.3
MORC                              pmax    pmax
      comp=Z,11nm,1.1s
MORC  Moravsky Berou  75.29 334 eP       P       07 31 40.8 +0.3
VRI   Vrincioaia      75.70 326⇑iP       P       07 31 42.2 -0.6
VRI   Vrincioaia      75.70 326  P       P       07 31 42.2 -0.6
PRU   Pruhonice       75.94 336 eP       P       07 31 44.7 +0.6
PRU   Pruhonice       75.94 336 eP       P       07 31 44.7 +0.6
GOPC  GO Pecny, Ondr  75.94 336 eP       P       07 31 43.7 -0.4
GOPC  GO Pecny, Ondr  75.94 336 eP       P       07 31 43.7 -0.4
VRAC  Vranov          75.98 334  P       P       07 31 44.5 +0.2
      comp=Z,5.3nm,0.7s,baz=24,slow=5.4,SNR=8.3
VRAC  Vranov          75.98 334⇑iP       P       07 31 43.7 -0.6
VRAC  Vranov          75.98 334 eP       P       07 31 45.0 +0.7
VYHS  Vyhne           76.05 332 eP       P       07 31 45.0 +0.3
VYHS                              pmax    pmax
      comp=Z,4.0nm,1.1s
VYHS  Vyhne           76.05 332 eP       P       07 31 45.0 +0.3
JAVC  Velka Javorina  76.07 333 eP       P       07 31 46.5 +1.6
DOPR  Dopca           76.09 327⇓iP       P       07 31 45.5 +0.4
MOX   Moxa            76.10 338  P       P       07 31 46.2 +1.2
MOX                               pmax    pmax
      comp=Z,6.0nm,0.8s
MIAR  Mount Ida       76.15  53 eP       P       07 31 46.1 +0.6
      comp=Z,5.5nm,1.1s
MIAR  Mount Ida       76.15  53 eP       P       07 31 46.1 +0.6
MIAR                              pmax    pmax
      comp=Z,6.0nm,1.1s
HARR  Harsova         76.25 325⇓iP       P       07 31 57.9  +12
KRUC  Moravsky        76.26 334 eP       P       07 31 46.5 +0.6
TIRR  Tirgusor        76.27 324⇓iP       P       07 31 45.8 -0.2
TLB   Topalu          76.30 325⇑iP       P       07 31 44.8 -1.4
MLR   Muntele Rosu    76.30 327  P       P       07 31 46.4  0.0
      comp=Z,7.6nm,0.7s,baz=184,slow=5.5,SNR=15
MLR   Muntele Rosu    76.30 327⇓iP       P       07 31 46.9 +0.5
MLR   Muntele Rosu    76.30 327 eP       P       07 31 46.0 -0.4
      comp=Z,7.7nm,0.8s
MLR   Muntele Rosu    76.30 327 eP       P       07 31 46.0 -0.4
MLR                               pmax    pmax
      comp=Z,8.0nm,0.8s
MODS  Modra-Piesok    76.62 333 eP       P       07 31 48.9 +0.9
MODS                              pmax    pmax
      comp=Z,12nm,1.2s
MODS  Modra-Piesok    76.62 333 eP       P       07 31 48.9 +0.9
VOIR                  76.67 327⇓iP       P       07 31 48.7 +0.3
VOIR                  76.67 327  P       P       07 31 48.6 +0.2
DSB   Dublin          76.94 349 eP       P       07 31 49.8 +0.2
      comp=Z,14nm,0.9s
ILGA  Ilgaz           76.95 319 eP       P       07 31 51.4 +1.2
      comp=Z,22nm,0.8s
KHC   Kasperske Hory  76.98 336 eP       P       07 31 49.8 -0.2
KHC                             ex       x       07 32 06.9
KHC   Kasperske Hory  76.98 336 eP       P       07 31 49.9 -0.1
      comp=Z,4.0nm,0.9s
KHC   Kasperske Hory  76.98 336 eP       P       07 31 49.8 -0.2
KHC                             e                07 32 06.9
WET   Wettzell        77.16 336  P       P       07 31 51.6 +0.6
WET                               pmax    pmax
      comp=Z,12nm,1.0s
GEC2  GERESS Array S  77.21 336 eP       P       07 31 51.3 -0.1
      comp=Z,3.6nm,0.8s
GEC2  GERESS Array S  77.21 336 eP       P       07 31 51.3 -0.1
GEC2                              pmax    pmax
      comp=Z,4.0nm,0.8s
GERES GERESS Array B  77.21 336  P       P       07 31 51.4 -0.1
      comp=Z,2.1nm,0.6s,baz=35,slow=4.9,SNR=21
GEA0  GERESS Array S  77.22 336 eP       P       07 31 51.2 -0.2
MEM   Membach         77.43 341 ⇑P       P       07 31 52.5  0.0
      comp=Z,15nm,0.9s
CONA  Conrad Observa  77.44 334 i pP     P       07 31 52.9 +0.3
      comp=Z,8.0nm,0.9s
BZS   Buzias          77.70 329⇓iP       P       07 31 53.2 -0.9
BCLA  Clavier         77.75 342 ⇑P       P       07 31 54.2 -0.1
      comp=Z,7.2nm,0.9s
UOSS  Minazif         77.78 294 eP       P       07 31 54.7 -0.1
      comp=Z,28nm,1.1s
MOA   Molln           77.96 335 i pP     P       07 31 55.9 +0.4
      comp=Z,5.7nm,0.8s
BR131 Keskin Array S  78.08 318 eP       P       07 31 56.7 +0.2
BRTR  Keskin Array B  78.08 318  P       P       07 31 56.3 -0.2
      comp=Z,8.2nm,0.9s,baz=58,slow=3.5,SNR=29
ARSA  Arzberg         78.15 334 i pP     P       07 31 57.2 +0.7
      comp=Z,7.1nm,0.9s
GIVF  Givet           78.15 342 eP       P       07 31 55.9 -0.6
GIVF                              pmax    pmax
      comp=Z,12nm,1.0s
DOU   Dourbes         78.21 342 ⇑P       P       07 31 56.5 -0.3
BAIF  Baives          78.32 342 eP       P       07 31 57.0 -0.4
BAIF                              pmax    pmax
      comp=Z,10.0nm,1.0s
ANTO  Ankara          78.33 319⇓iP       P       07 31 58.5 +0.8
MDVR  Moldovita       78.41 329⇑iP       P       07 31 57.7 -0.4
SOKA  Soboth          78.81 334 i pP     P       07 32 00.7 +0.4
      comp=Z,15nm,0.9s,SNR=8.5
GROS  Grobnik         78.87 334 i P      P       07 32 00.4 -0.2
KBA   Koelnbreinsper  78.92 335 i pP     P       07 32 02.1 +1.1
      comp=Z,33nm,0.8s,SNR=10
KBA   Koelnbreinsper  78.92 335  P       P       07 32 02.8 +1.8
KBA                               pmax    pmax
      comp=Z,46nm,0.9s
BFO   Black Forest    79.05 339 eP       P       07 32 01.8 +0.3
      comp=Z,7.1nm,0.9s
BFO   Black Forest    79.05 339 eP       P       07 32 01.8 +0.3
BFO                               pmax    pmax
      comp=Z,7.0nm,0.9s
OBKA  Obir            79.10 334 i pP     P       07 32 02.2 +0.3
      comp=Z,5.7nm,0.6s
WTTA  Wattenberg      79.21 336 i pP     P       07 32 03.3 +0.7
      comp=Z,15nm,0.8s,SNR=5.2
CDF   Champ du Feu    79.22 340 eP       P       07 32 02.0 -0.5
CDF                               pmax    pmax
      comp=Z,12nm,0.9s
RETA  Reutte          79.23 337 i pP     P       07 32 02.9 +0.3
      comp=Z,7.1nm,0.8s
LEGS  Legarje         79.39 333 i P      P       07 32 03.0 -0.3
ECH   Echery          79.43 340 eP       P       07 32 03.8 +0.2
      comp=Z,10nm,1.0s
ECH   Echery          79.43 340 eP       P       07 32 03.8 +0.2
ECH                               pmax    pmax
      comp=Z,11nm,1.0s
ABTA  Abfaltersbach   79.45 336 i pP     P       07 32 03.9 +0.1
      comp=Z,13nm,1.1s
SLE   Schleitheim     79.54 339  P       P       07 32 05.1 +0.9
SLE                               pmax    pmax
      comp=Z,14nm,0.8s
DIVS  Divibare        79.59 330 eP       P       07 32 04.0 -0.6
      comp=Z,17nm,0.9s
DAVA  Damuels         79.64 338 i pP     P       07 32 05.2 +0.3
      comp=Z,11nm,0.8s,SNR=6.8
FETA  Feichten        79.67 337 i pP     P       07 32 05.7 +0.6
      comp=Z,11nm,1.0s,SNR=7.3
VTS   Vitosha         79.80 327⇑iP       P       07 32 05.5 -0.4
VTS   Vitosha         79.80 327 eP       P       07 32 05.8 -0.1
      comp=Z,18nm,0.8s
VTS   Vitosha         79.80 327 eP       P       07 32 05.8 -0.1
VTS                               pmax    pmax
      comp=Z,18nm,0.8s
HAU   Haudompre       79.81 340 eP       P       07 32 05.1 -0.5
HAU                               pmax    pmax
      comp=Z,10.0nm,0.9s
HINF  Hinteralfeld    79.87 340 eP       P       07 32 05.2 -0.8
HINF                              pmax    pmax
      comp=Z,5.0nm,1.0s
DAVOX Davos/Dischmat  80.11 337  P       P       07 32 08.1 +0.6
      comp=Z,8.1nm,0.7s,baz=8.9,slow=5.0,SNR=15
FUORN Ofenpass-Fuorn  80.16 337 eP       P       07 32 07.7 -0.1
      comp=Z,15nm,1.0s
ALN   Alexandroupoli  80.21 324 eP       P       07 32 08.3 +0.4
      comp=Z,8.0nm,0.9s
ALN   Alexandroupoli  80.21 324 eP       P       07 32 08.3 +0.4
ALN                               pmax    pmax
      comp=Z,8.0nm,0.9s
TUE   Stuetta         80.53 338 eP       P       07 32 09.7 -0.1
      comp=Z,19nm,0.8s
LDF   La Druitiere    80.55 344 eP       P       07 32 09.1 -0.4
LDF                               pmax    pmax
      comp=Z,8.0nm,0.7s
GRR   Gorron          80.87 345 eP       P       07 32 11.1 -0.2
GRR                               pmax    pmax
      comp=Z,21nm,0.8s
SRS   Serrai          80.95 326  P       P       07 32 12.3 +0.4
SGMF  Saint Gilles    81.28 346 eP       P       07 32 13.4 -0.1
SGMF                              pmax    pmax
      comp=Z,25nm,1.0s
ROSF  Rostrenen       81.32 346 eP       P       07 32 13.6 -0.1
ROSF                              pmax    pmax
      comp=Z,24nm,0.9s
PDG   Podgorica       81.32 329⇑iP       P       07 32 12.9 -0.9
TTG   Podgorica       81.32 329 eP       P       07 32 13.4 -0.4
      comp=Z,20nm,0.8s
TTG   Podgorica       81.32 329 eP       P       07 32 13.4 -0.4
TTG                               pmax    pmax
      comp=Z,20nm,0.8s
SSF   Saint Saulge    81.32 342 eP       P       07 32 14.2 +0.5
SSF                               pmax    pmax
      comp=Z,9.0nm,1.0s
AVF   Avril sur Loir  81.61 342 eP       P       07 32 15.0 -0.2
AVF                               pmax    pmax
      comp=Z,14nm,1.0s
QUIF  Quistinic       81.71 346 eP       P       07 32 17.0 +1.3
QUIF                              pmax    pmax
      comp=Z,19nm,1.2s
FNA   Florina         82.04 327 eP       P       07 32 17.0 -0.7
      comp=Z,8.8nm,0.8s
FNA   Florina         82.04 327 eP       P       07 32 17.0 -0.7
FNA                               pmax    pmax
      comp=Z,9.0nm,0.8s
LPL   La Plagne       82.07 339 eP       P       07 32 18.3 +0.3
LPL                               pmax    pmax
      comp=Z,11nm,0.8s
LPG   La Plagne       82.08 339 eP       P       07 32 18.5 +0.4
LPG                               pmax    pmax
      comp=Z,12nm,0.8s
TCF   Toulx Ste Croi  82.32 342 eP       P       07 32 19.0  0.0
TCF                               pmax    pmax
      comp=Z,11nm,1.1s
ASF   Jabal al Asfar  82.76 312  P       P       07 32 22.2 +0.5
      comp=Z,7.0nm,1.0s,baz=149,slow=2.5,SNR=6.4
MMAI  Mount Meron Ar  82.79 313  P       P       07 32 22.3 +0.5
      comp=Z,5.3nm,0.5s,baz=24,slow=6.4,SNR=12
ORIF  Oris-en-Rattie  82.83 339 eP       P       07 32 22.2 +0.4
ORIF                              pmax    pmax
      comp=Z,12nm,1.1s
VIVF  Saint-Julien-l  83.16 340 eP       P       07 32 23.7 +0.2
VIVF                              pmax    pmax
      comp=Z,8.0nm,1.0s
TIP   Timpagrande     85.07 330⇑iP       P       07 32 32.0 -1.3
TIP   Timpagrande     85.07 330 eP       P       07 32 33.3  0.0
      comp=Z,12nm,1.1s
RAYN  Ar Rayn         85.12 301 eP       P       07 32 33.5 -0.3
      comp=Z,5.0nm,0.8s
RAYN  Ar Rayn         85.12 301 eP       P       07 32 33.5 -0.3
RAYN                              pmax    pmax
      comp=Z,5.0nm,0.8s
EIL   Elat            85.76 312  P       P       07 32 39.4 +2.5
      comp=Z,12nm,0.8s,baz=357,slow=4.3,SNR=2.6
ES19  SONSECA Array   89.83 345 eP       P       07 32 55.8 -0.5
ESDC  Sonseca Array   89.86 345  P       P       07 32 55.1 -1.3
      comp=Z,0.6nm,0.6s,baz=359,slow=3.7,SNR=6.0
KEST  Kesra           90.55 334  P       P       07 32 58.6 -1.0
      comp=Z,5.0nm,0.8s,baz=37,slow=5.1,SNR=6.2
QSPA  South Pole Qui 138.88 180  PKP     PKPdf   07 39 23.2 +0.8
      comp=Z,1.1nm,0.9s,baz=127,slow=5.1,SNR=3.3
CPUP  Villa Florida  145.42  61  PKPbc   PKPab   07 39 35.8 +0.3
      comp=Z,1.6nm,0.9s,baz=3.8,slow=9.1,SNR=4.5
CPUP  Villa Florida  145.42  61 ePKPdf   PKPab   07 39 36.2 +0.7
PLCA  Paso Flores    146.24  94  PKPbc   PKPab   07 39 38.2 -0.1
      comp=Z,1.7nm,0.7s,baz=263,slow=2.2,SNR=5.0
PLCA  Paso Flores    146.24  94 ePKPdf   PKPab   07 39 38.5 +0.2
TRQA  Tornquist      150.44  83 ePKPbc   PKPbc   07 39 49.2 +0.6
TRQA                            ePKPab   PKPab   07 39 55.8 +0.6
TRQA  Tornquist      150.44  83 ePKIKP   PKPbc   07 39 49.2 +0.6
TRQA                            e                07 39 55.8
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KRSC 21 07:23:12.7±1.7,49°.32N×157°.12E,h44^{km}±27^{km},ML3.9, East of Kuril Islands

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Code  Station Name       Δ°  AZ°     Phase ID           Time     Res
                                   Op       ISC       h  m  s    ISC
SKR   Severo-Kuril's   1.51 335  eS       Sn        07 23 56.3 +0.6
PAU   Pauzhetka        2.16 355  eP       Pn        07 23 48.7 +2.5
PAU                              eS       Sn        07 24 15.8 +4.1
KDTR  Khodutka, Kamc   2.57  13  eP       Pn        07 23 55.0 +3.2
KDTR                             eS       Sn        07 24 25.0 +3.3
MIPR  Malaya Ipel'ka   2.97 356  eP       Pn        07 24 00.1 +2.8
ASAK  Asacha           3.11   9  eP       Pn        07 24 03.3 +4.0
MTVR  Mutnovka         3.24  12  eP       Pn        07 24 04.0 +2.9
MTVR                             eS       Sn        07 24 43.2 +4.7
RUS   Russkaya         3.24  15  eP       Pn        07 24 03.7 +2.7
RUS                              eS       Sn        07 24 42.8 +4.5
KRMR  Karymshinskiy    3.58  10  eS       Sn        07 24 52.3 +5.8
UGLR  Uglovaya         4.04  15  eP       Pn        07 24 17.7 +5.6
NLC   Nalytchevo       4.11  19  eP       Pn        07 24 16.4 +3.6
NLC                              eS       Sn        07 25 02.7 +3.2
SDLR  Sedlovina        4.12  15  eP       Pn        07 24 17.0 +3.9
SPN   Mys Shipunski    4.20  25  eP       Pn        07 24 18.9 +4.7
SPN                              eS       Sn        07 25 06.8 +4.8
GNL   Ganaly           4.41   6  eP       Pn        07 24 21.5 +4.3
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ISCJB ***21*** *07:32:41.7±0.2,45°.03N±0°.05×146°.13E±0°.04, h209^{km}±3^{km},mb3.9/96,Error ellipse: s-maj=7.5km s-min=4.4km az=171.2*

SKHL ***21*** *07:32:41.5±1.6,44°.67N×146°.19E,h215^{km}±3^{km},mb4.8/7, msh5.0/7*

MOS ***21*** *07:32:41.4±0.9,45°.11N×146°.08E,h207^{km},mb4.0/33, Error ellipse: s-maj=10.8km s-min=6.3km az=90.6*

JMA ***21*** *07:32:42.9±0.4,44°.81N×146°.25E,h208^{km}±4^{km},M4.0*

IDC ***21*** *07:32:42.9±0.9,45°.27N×146°.05E,h202^{km}±10^{km}, mb3.6/23,mb1 3.8/28,mb1mx3.6/69,mbtmp4.2/28,Error ellipse: s-maj=20.2km s-min=9.6km az=172.0*

NEIC ***21*** *07:32:43.6±0.6,45°.12N×145°.99E,h212^{km}±6^{km},mb4.0/66, Error ellipse: s-maj=11.2km s-min=6.5km az=173.0*

ISC 21 07:32:42.5±0.5,44°.98N±0°.05×146°.21E±0°.04,h209^{km}±5^{km}, n210,σ1^{s}35/235,mb4.0/96,8C-7D,Kuril Islands

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Code  Station Name       Δ°  AZ°     Phase ID           Time     Res
                                   Op       ISC       h  m  s    ISC
LAGR  Lagunnoye        0.97 198  i P      Pn        07 33 12.0 -0.9
LAGR                               AMB    AMB       07 33 14.0
      115nm,0.4s
LAGR                               AMB    AMB       07 33 14.0
      428nm,0.4s
LAGR                               AMB    AMB       07 33 14.0
      150nm,0.4s
LAGR                             eS       S         07 33 37.0 +0.6
LAGR                               A      A         07 33 45.0
      135nm,0.6s
LAGR                               A      A         07 33 45.0
      179nm,0.6s
LAGR  Lagunnoye        0.97 198⇓iPN       Pn        07 33 12.2 -0.7
LAGR                             eS       S         07 33 43.8 +7.4
LAGR                               pmax   pmax
      comp=E,428nm,0.4s
LAGR                               pmax   pmax
      comp=Z,2µm,0.4s
LAGR                               pmax   pmax
      comp=N,1µm,0.3s
LAGR                               smax   smax
      comp=N,1µm,0.7s
LAGR                               smax   smax
      comp=E,2µm,0.6s
YUK   Yuzh-Kuril'sk    0.97 195  i P      Pn        07 33 12.0 -0.9
YUK                                AMB    AMB       07 33 16.0
      comp=E,353nm,0.2s
YUK                                AMB    AMB       07 33 16.0
      comp=E,303nm,0.2s
YUK                                AMB    AMB       07 33 16.0
      comp=E,130nm,0.2s
YUK                              eS       S         07 33 37.0 +0.6
YUK                                A      A         07 33 43.0
      comp=E,724nm,0.4s
YUK                                A      A         07 33 43.0
      comp=E,971nm,0.4s
YUK   Yuzh-Kuril'sk    0.97 195c iPN      Pn        07 33 12.6 -0.3
YUK                              eS       S         07 33 41.0 +4.6
YUK                                pmax   pmax
      comp=Z,1µm,0.2s
YUK                                pmax   pmax
      comp=N,353nm,0.1s
YUK                                pmax   pmax
      comp=E,303nm,0.1s
YUK                                smax   smax
      comp=N,724nm,0.4s
YUK                                smax   smax
      comp=E,971nm,0.2s
GRPR  Tuman            1.03 198  eP       Pn        07 33 12.0 -1.3
GRPR                               AMB    AMB       07 33 13.0
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	comp=E,338nm,0.3s						
GRPR				AMB	AMB	07 33 13.0	
	comp=E,584nm,0.3s						
GRPR				AMB	AMB	07 33 13.0	
	comp=E,350nm,0.3s						
GRPR				*e*S	S	07 33 37.2	+0.1
GRPR				A	A	07 33 43.0	
	comp=E,659nm,0.5s						
GRPR				A	A	07 33 43.0	
	comp=E,966nm,0.5s						
GRPR	Tuman	1.03	198	*e*PN	Pn	07 33 12.6	-0.7
GRPR				*e*S	S	07 33 41.7	+4.6
GRPR				pmax	pmax		
	comp=N,338nm,0.3s						
GRPR				pmax	pmax		
	comp=E,584nm,0.3s						
GRPR				pmax	pmax		
	comp=Z,4µm,0.3s						
GRPR				smax	smax		
	comp=N,659nm,0.5s						
GRPR				smax	smax		
	comp=E,966nm,0.2s						
SHO	Shikotan	1.19	158	*i* P	Pn	07 33 13.0	-1.4
SHO				AMB	AMB	07 33 14.0	
	comp=E,779nm,0.2s						
SHO				AMB	AMB	07 33 14.0	
	comp=E,527nm,0.2s						
SHO				AMB	AMB	07 33 14.0	
	comp=E,189nm,0.2s						
SHO				*i* S	S	07 33 37.0	-2.0
SHO				A	A	07 33 39.0	
	comp=E,30nm,0.2s						
SHO				A	A	07 33 39.0	
	comp=E,10.0nm,0.2s						
SHO	Shikotan	1.19	158*c*	*i*PN	Pn	07 33 13.9	-0.5
SHO				*i* S	S	07 33 37.1	-2.0
SHO				pmax	pmax		
	comp=N,779nm,0.2s						
SHO				pmax	pmax		
	comp=Z,2µm,0.2s						
SHO				pmax	pmax		
	comp=E,527nm,0.3s						
SHO				smax	smax		
	comp=N,3.0nm,0.2s						
SHO				smax	smax		
	comp=E,1.0nm,0.2s						
KUR	Kuril'sk	1.21	77	*i* P	Pn	07 33 14.0	-0.5
KUR				AMB	AMB	07 33 14.0	
	comp=E,22nm,0.4s						
KUR				AMB	AMB	07 33 14.0	
	comp=E,31nm,0.4s						
KUR				AMB	AMB	07 33 14.0	
	comp=E,92nm,0.4s						
KUR				*i* S	S	07 33 39.0	-0.1
KUR				A	A	07 33 40.0	
	comp=E,235nm,0.5s						
KUR				A	A	07 33 40.0	
	comp=E,266nm,0.5s						
KUR	Kuril'sk	1.21	77*d*	*i*PN	Pn	07 33 14.4	-0.1
KUR				*i* S	S	07 33 39.1	-0.1
KUR				pmax	pmax		
	comp=Z,92nm,0.4s						
KUR				pmax	pmax		
	comp=E,31nm,0.2s						
KUR				pmax	pmax		
	comp=N,22nm,0.3s						
KUR				smax	smax		
	comp=N,235nm,0.5s						
KUR				smax	smax		
	comp=E,266nm,0.7s						
JRA	Rausu	1.29	217	P	Pn	07 33 14.9	-0.3
GLVR	Golovnino	1.33	202	*i* P	Pn	07 33 15.0	-0.5
GLVR				AMB	AMB	07 33 16.0	
	comp=E,353nm,0.4s						
GLVR				AMB	AMB	07 33 16.0	
	comp=E,243nm,0.4s						
GLVR				AMB	AMB	07 33 16.0	
	comp=E,240nm,0.4s						
GLVR				*e*S	S	07 33 39.7	-1.2
GLVR				A	A	07 33 46.0	
	comp=E,170nm,0.3s						
GLVR				A	A	07 33 46.0	
	comp=E,180nm,0.3s						
GLVR	Golovnino	1.33	202⇑	*i*PN	Pn	07 33 15.1	-0.5
GLVR				*e*S	S	07 33 45.3	+4.4
GLVR				pmax	pmax		
	comp=N,353nm,0.4s						
GLVR				pmax	pmax		
	comp=Z,2µm,0.4s						
GLVR				pmax	pmax		
	comp=E,243nm,0.3s						
GLVR				smax	smax		
	comp=N,2µm,0.3s						
GLVR				smax	smax		
	comp=E,2µm,0.3s						
NEM2	Nemuro 2	1.64	192	P	Pn	07 33 16.8	-1.4
NEM2				*e*S	S	07 33 42.6	-3.0
JNK	Nakash	1.75	218	P	Pn	07 33 19.1	-0.1
JTKR	Abashiri--Toko	1.93	239	P	Pn	07 33 20.9	+0.1
JTKR				*e*S	S	07 33 50.7	+0.4
JMP	Maruseppu	2.25	246	P	Pn	07 33 24.4	+0.2
JMP				*e*S	S	07 33 56.3	-0.1
JAK	Akkeshi	2.26	209	P	Pn	07 33 23.3	-1.0
JAK				*e*S	S	07 33 54.4	-2.0
JAR	Ashorobuto	2.43	227	P	Pn	07 33 26.4	+0.3
JSE	Soyaes	2.57	271	P	Pn	07 33 28.0	+0.4
JKK2	Kamakawa 2	2.71	247	P	Pn	07 33 29.6	+0.4
JKK2				*e*S	S	07 34 06.1	+0.8
ASAJ	Asahikawa	2.72	253	P	Pn	07 33 30.1	+0.9
	comp=E,36nm,0.3s,baz=72,slow=11,SNR=151						
ASAJ				S	S	07 34 05.6	+0.2
	comp=E,4.5nm,0.3s,baz=227,slow=30,SNR=13						
ASAJ	Asahikawa	2.72	253	*e*Pn	Pn	07 33 29.9	+0.7
JWK2	Keihoku	3.07	278	P	Pn	07 33 34.5	+1.3
YSS	Yuzh-Sakhalins	3.12	311	*i* P	Pn	07 33 33.7	0.0
YSS				AMB	AMB	07 33 34.3	
	comp=E,40nm,0.5s						
YSS				AMB	AMB	07 33 34.3	
	comp=E,90nm,0.5s						
YSS				*e*S	S	07 34 14.8	+1.2
YSS				A	A	07 34 16.2	
	comp=E,90nm,1.0s						
YSS	Yuzh-Sakhalins	3.12	311	*e*Pn	Pn	07 33 33.8	0.0
YSS				*e*S	S	07 34 14.2	+0.6
YSS	Yuzh-Sakhalins	3.12	311⇓	*i*PN	Pn	07 33 33.7	0.0
YSS				*e*S	S	07 34 14.8	+1.2
YSS				pmax	pmax		
	comp=Z,90nm,0.6s						
YSS				pmax	pmax		
	comp=N,40nm,0.4s						
YSS				smax	smax		
	comp=E,90nm,1.3s						
JCH	Churui	3.13	222	P	Pn	07 33 33.1	-1.0
JCH				*e*S	S	07 34 11.1	-2.9
JFR	Furan	3.17	236	P	Pn	07 33 35.5	+1.0
JHR	Hokuryu	3.44	251	P	Pn	07 33 38.7	+1.0
JYG	Yagishiri	3.45	263	P	Pn	07 33 38.5	+0.7
JNBK	Urakawa-nobuka	3.68	224	P	Pn	07 33 39.0	-1.6
ERM	Erimo	3.70	218	*e*P	Pn	07 33 40.4	-0.4
ERM	Erimo	3.70	218	*e*Pn	Pn	07 33 40.8	0.0
ERM	Erimo	3.70	218*d*	*i*PN	Pn	07 33 40.4	-0.4
JSK	Shakotan	4.43	251	P	Pn	07 33 50.1	+0.3
TYV	Tymovskoe	6.36	339	*e*PN	Pn	07 34 12.9	-1.3
TYV				pmax	pmax		
	comp=Z,16nm,1.1s						
USRK	Ussuriysk Ar.	10.18	271	P	Pn	07 35 03.4	-0.3
	baz=84,slow=14						
KLR	Kul'dur	10.73	299	P	Pn	07 35 10.5	-0.3
	comp=Z,0.0nm,0.3s,baz=110,slow=14,SNR=9.1						
KLR	Kul'dur	10.73	299	*e*P	Pn	07 35 09.6	-1.2
KLR	Kul'dur	10.73	299⇓	*e*PN	Pn	07 35 09.6	-1.2
PETK	Petropavlovsk-	11.09	39	P	Pn	07 35 14.3	-0.9
	baz=230,slow=15						
MA2	Magadan	14.88	9	*e*P	Pn	07 36 00.3	-2.3
MA2	Magadan	14.88	9⇓	*e*P	Pn	07 36 00.3	-2.3
MA2				pmax	pmax		
	comp=Z,31nm,1.5s						
KSRS	Korea Array	15.66	248	P	P	07 36 11.6	-0.4
	comp=Z,0.4nm,0.3s,baz=57,slow=12,SNR=12						
SEY	Seymchan	18.34	9	P	P	07 36 39.8	-1.3
	comp=Z,0.6nm,0.3s,baz=182,slow=10,SNR=8.9						
SEY	Seymchan	18.34	9	*e*P	P	07 36 39.6	-1.4
SEY	Seymchan	18.34	9⇑	*e*P	P	07 36 39.6	-1.4
YAK	Yakutsk	19.61	336	*e*P	P	07 36 54.0	-0.6
HHC	Hu-ho-hao-te	25.58	273	*e*P	P	07 37 52.6	+0.2
HHC				pmax	pmax		
	comp=Z,12nm,1.1s						
HHC				pmax	pmax		
	comp=Z,68nm,4.8s						
SONM	Songino Array	27.39	290	P	P	07 38 08.4	-0.1
	comp=Z,0.7nm,0.8s,baz=56,slow=7.3,SNR=3.3						
GAMB	Gambell	30.11	36	*e*P	P	07 38 35.6	+3.5
	comp=Z,40nm,1.2s						
SVW2	Sparrevohn	37.12	43	*e*P	P	07 39 33.4	+0.7
	comp=Z,8.8nm,1.3s						
SII	Sitkinak Islan	38.24	50	*e*P	P	07 39 44.2	+2.2
	comp=Z,12nm,0.9s						
KDAK	Kodiak Island	38.93	48	P	P	07 39 47.3	-0.3
	comp=Z,5.2nm,1.0s,baz=309,slow=6.5,SNR=5.8						
KDAK	Kodiak Island	38.93	48	*e*P	P	07 39 48.5	+0.8
KDAK	Kodiak Island	38.93	48	*i* P	P	07 39 48.5	+0.8
BPAW	Bear Paw Mtn.	39.17	38	*e*P	P	07 39 50.9	+1.2
	comp=Z,2.5nm,1.4s						
KTH	Kantishna Hill	39.22	39	*e*P	P	07 39 50.9	+0.8
	comp=Z,2.6nm,0.9s						
MLY	Manley	39.26	37	*e*P	P	07 39 52.7	+2.3
	comp=Z,1.9nm,1.2s						
CNPM	China Poot	39.40	45	*e*P	P	07 39 52.1	+0.5
	comp=Z,26nm,1.4s						
COLD	Coldfoot	39.49	33	*e*P	P	07 39 53.1	+0.9
	comp=Z,1.0nm,0.8s						
TRF	Thorofare Moun	39.51	39	*e*P	P	07 39 53.2	+0.6
	comp=Z,4.1nm,1.3s						
GHO	Glory Hole Cre	40.27	42	*e*P	P	07 39 57.3	-1.5
	comp=Z,5.3nm,1.0s						
MDM	Murphy Dome	40.32	37	*e*P	P	07 39 59.3	+0.1
	comp=Z,4.7nm,1.4s						
WRH	Wood River Hil	40.41	38	*e*P	P	07 40 00.5	+0.7
	comp=Z,3.7nm,1.1s						
SML	Sawmill	40.54	42	*e*P	P	07 40 02.2	+1.2
	comp=Z,8.1nm,1.0s						
SML	Sawmill	40.54	42	*e*P	P	07 40 02.2	+1.2
SML				pmax	pmax		
	comp=Z,8.0nm,1.0s						
DHY	Denali Highway	40.85	40	*e*P	P	07 40 03.8	+0.1
	comp=Z,3.0nm,0.7s						
IL1	Eielson Array	40.91	37	*e*P	P	07 40 03.7	-0.2
ILAR	Eielson Array	40.91	37	P	P	07 40 03.6	-0.3
	comp=Z,1.1nm,0.4s,baz=271,slow=7.2,SNR=22						
ILB	Eielson Array	40.91	37	*e*P	P	07 40 03.8	-0.1
WMQ	Urumqi	41.03	290	*e*P	P	07 40 06.4	+1.2
GLI	Glacier Island	41.26	43	*e*P	P	07 40 07.2	+0.4
	comp=Z,5.8nm,0.8s						
FYU	Fort Yukon	41.46	34	*e*P	P	07 40 09.3	+1.0
	comp=Z,7.1nm,1.3s						
FID	Port Fidalgo	41.58	43	*e*P	P	07 40 09.3	0.0
	comp=Z,14nm,1.4s						
KLU	Klutina	41.73	42	*e*P	P	07 40 12.2	+1.5
	comp=Z,5.7nm,1.2s						
SCRK	Sand Creek	42.25	38	*e*P	P	07 40 14.7	-0.2
	comp=Z,3.1nm,0.9s						
BMRM	Bremner River	42.45	43	*e*P	P	07 40 17.5	+1.1
	comp=Z,4.3nm,1.0s						
RAGM	Ragged Mountai	42.52	43	*e*P	P	07 40 18.4	+1.4
	comp=Z,7.5nm,1.2s						
EGAK	Eagle	43.34	37	*e*P	P	07 40 23.0	-0.5
	comp=Z,1.2nm,0.6s						
MKAR	Makanchi Array	43.43	296	P	P	07 40 23.3	-1.2
	comp=Z,0.6nm,0.6s,baz=72,slow=8.2,SNR=7.7						
MKAR				PcP	PcP	07 42 09.2	+0.4
	comp=Z,0.2nm,0.4s,baz=45,slow=2.2,SNR=3.8						
MKAR	Makanchi Array	43.43	296	*e*P	P	07 40 24.5	0.0
MKAR	Makanchi Array	43.43	296	*e*P	P	07 40 24.7	+0.2
	comp=Z,6.5nm,0.8s						
MKAR	Makanchi Array	43.43	296	*e*P	P	07 40 24.5	0.0
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MK01	Makanchi Array	43.43	296	*e*P	P	07 40 24.6	+0.1
KURK	Kurchatov	44.29	303	*e*P	P	07 40 30.4	-0.8
KURK	Kurchatov	44.29	303⇑	*e*P	P	07 40 30.4	-0.8
KURK				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KURBB	Kurchatov Arra	44.38	303	P	P	07 40 31.2	-0.6
	comp=Z,0.8nm,0.3s,baz=76,slow=8.9,SNR=5.4						
INK	Inuvik	45.69	31	*e*P	P	07 40 41.4	-0.6
	comp=Z,4.6nm,1.4s						
INK	Inuvik	45.69	31	*e*P	P	07 40 41.4	-0.6
INK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
WHY	Whitehorse	47.13	41	*e*P	P	07 40 55.4	+1.9
	comp=Z,7.8nm,1.3s						
BVAR	Borovoye Array	48.21	308	P	P	07 41 01.9	+0.2
	comp=Z,0.5nm,0.3s,baz=73,slow=10,SNR=3.2						
BRVK	Borovoye	48.25	308	*e*P	P	07 41 00.7	-1.3
BRVK	Borovoye	48.25	308⇓	*e*P	P	07 41 00.7	-1.3
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ARU	Arti	52.99	316	P	P	07 41 36.3	-1.0
	comp=Z,2.2nm,0.3s,baz=120,slow=20,SNR=3.4						
ARU	Arti	52.99	316	*e*P	P	07 41 37.3	0.0
ARU	Arti	52.99	316*c*	*i*P	P	07 41 37.5	+0.2
ARU						07 42 41.5	
ARU						07 43 34.7	
ARU				S	S	07 48 52.4	+2.2
ARU				SS	SKiKP	07 52 34.7	+2.5
ARU				pmax	pmax		
	comp=Z,10.0nm,2.5s						
SPITS	Spitsbergen Ar	53.45	349	P	P	07 41 38.2	-2.2
	comp=Z,6.4nm,0.9s,baz=64,slow=17,SNR=5.6						
RES	Resolute Bay	53.99	17	*e*P	P	07 41 42.7	-1.5
	comp=Z,16nm,1.4s						
RES	Resolute Bay	53.99	17	*e*P	P	07 41 42.7	-1.5
RES				pmax	pmax		
	comp=Z,16nm,1.4s						
YKA	Yellowknife Ar	55.16	34	P	P	07 41 53.0	+0.2
	comp=Z,0.4nm,0.4s,baz=296,slow=6.9,SNR=6.4						
YKA	Yellowknife Ar	55.16	34	P	P	07 41 53.0	+0.2
YKA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ABKAR	Akbulak array	55.77	308	*e*P	P	07 41 57.6	+0.2
ARCES	ARCESS Array B	57.86	339	P	P	07 42 09.8	-2.0
	comp=Z,3.5nm,0.9s,baz=39,slow=6.6,SNR=6.1						
ARCES	ARCESS Array B	57.86	339	*e*P	P	07 42 10.9	-0.9
ARCES	ARCESS Array B	57.86	339	*e*P	P	07 42 10.9	-0.9
ARCES				pmax	pmax		
	comp=Z,4.0nm,0.9s						
DAG	Danmarks Havn	58.15	356	P	P	07 42 11.1	-2.6
DAG				pmax	pmax		
	comp=Z,4.0nm,2.4s						
SUMG	Summit	62.71	2	*e*P	P	07 42 44.4	-0.6
	comp=Z,18nm,1.5s						
SUMG	Summit	62.71	2	*e*P	P	07 42 44.4	-0.6
SUMG				pmax	pmax		
	comp=Z,18nm,1.5s						
YBH	Yreka Blue Hor	62.80	57	P	P	07 42 45.9	+0.1
	comp=Z,0.6nm,0.5s,baz=352,slow=5.7,SNR=5.6						
YBH	Yreka Blue Hor	62.80	57	*e*P	P	07 42 47.8	+2.1
	comp=Z,1.6nm,1.0s						
YBH	Yreka Blue Hor	62.80	57	*e*P	P	07 42 47.8	+2.1
YBH				pmax	pmax		
	comp=Z,2.0nm,1.0s						
K05A	Summer Lake	63.27	55	*e*P	P	07 42 51.1	+2.1
	comp=Z,9.7nm,1.5s						
FIA1	FINESS Array S	63.47	332	*e*P	P	07 42 48.2	-1.5
	comp=Z,11nm,1.5s						
FINES	FINESS Array B	63.48	332	P	P	07 42 47.8	-1.9
	comp=Z,2.6nm,0.5s,baz=45,slow=6.7,SNR=20						
FINES	FINESS Array B	63.48	332	*e*P	P	07 42 48.0	-1.7
FINES	FINESS Array B	63.48	332	*i* P	P	07 42 48.0	-1.7
FINES				pmax	pmax		
	comp=Z,3.0nm,0.5s						
MOD	Modoc Plateau	64.12	56	*e*P	P	07 42 55.8	+1.3
	comp=Z,1.2nm,0.7s						
RUBR	Rubicon Trail	65.99	58	*e*P	P	07 43 06.2	-0.5
	comp=Z,11nm,0.9s						
PAHR	Pah Rah Range	66.04	57	*e*P	P	07 43 08.1	+1.2
	comp=Z,1.9nm,1.1s						
LRM	Limekiln Ridge	66.05	49	*e*P	P	07 43 08.5	+1.5
CMB	Columbia Colle	66.49	59	*e*P	P	07 43 11.5	+1.9
	comp=Z,1.8nm,0.8s						
CMB	Columbia Colle	66.49	59	*e*P	P	07 43 11.5	+1.9
CMB				pmax	pmax		
	comp=Z,2.0nm,0.8s						
YERR	Yerington	66.58	58	*e*P	P	07 43 12.0	+1.7
	comp=Z,2.5nm,0.6s						
WAKR	Walker	66.77	58	*e*P	P	07 43 13.4	+1.8
	comp=Z,4.9nm,1.4s						
BMN	Battle Mountai	66.86	56	*e*P	P	07 43 13.8	+1.8
	comp=Z,1.5nm,0.6s						
BMN	Battle Mountai	66.86	56	*e*P	P	07 43 13.8	+1.8
BMN				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KVN	Kaiserville	67.22	57	*e*P	P	07 43 15.9	+1.5
	comp=Z,2.6nm,0.7s						
KVN	Kaiserville	67.22	57	*e*P	P	07 43 15.9	+1.5
KVN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
NV01	Mina Array Sit	67.50	58	*e*P	P	07 43 17.9	+1.7
NVAR	Mina Array Bea	67.50	58	P	P	07 43 17.3	+1.1
	comp=Z,1.1nm,0.5s,baz=299,slow=6.9,SNR=13						
NC405	NORSAR Array S	68.02	338	*e*P	P	07 43 17.5	-1.2
NC204	NORSAR Array S	68.13	339	*e*P	P	07 43 18.4	-1.1
NB201	NORSAR Array S	68.19	338	*e*P	P	07 43 18.3	-1.5
FRB	Frobisher Bay	68.19	16	P	P	07 43 18.7	-1.0
FRB				pmax	pmax		
	comp=Z,14nm,2.1s						
NB2	NORSAR Subarra	68.22	338	P	P	07 43 18.1	-1.9
	comp=Z,0.9nm,0.5s,baz=32,slow=6.5						
NB2	NORSAR Subarra	68.22	338	P	P	07 43 18.1	-1.9
NOA	NORSAR Array B	68.22	338	P	P	07 43 18.7	-1.3
	comp=Z,1.6nm,0.7s,baz=32,slow=6.5,SNR=21						
FXWY	Fox Creek	68.25	50	*e*P	P	07 43 22.9	+2.1
	comp=Z,1.0nm,0.6s						
HFS	Hagfors	68.30	337	P	P	07 43 18.7	-1.7
	comp=Z,2.4nm,0.3s,baz=31,slow=6.1,SNR=32						
MOOW	Moose Ponds	68.33	49	*e*P	P	07 43 23.1	+1.8
	comp=Z,1.6nm,0.6s						
KIV	Kislovodsk	68.44	311	*e*P	P	07 43 20.8	-1.0
KIV				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KBZ	Khabaz	68.48	311	P	P	07 43 22.8	+1.0
	comp=Z,2.0nm,0.8s,baz=281,slow=3.4,SNR=3.9						
R11A	Troy Canyon, C	69.17	56	*e*P	P	07 43 27.6	+1.2
	comp=Z,0.7nm,0.6s						
HWUT	Hardware Ranch	69.31	52	*e*P	P	07 43 29.1	+1.8
	comp=Z,5.3nm,1.4s						
DAC	Darwin (Calif)	69.33	59	*e*P	P	07 43 28.4	+0.9
DAC	Darwin (Calif)	69.33	59	*e*P	P	07 43 28.4	+0.9
DUG	Dugway, Tooele	69.56	53	*e*P	P	07 43 30.4	+1.6
	comp=Z,5.8nm,1.4s						
DUG	Dugway, Tooele	69.56	53	*e*P	P	07 43 30.4	+1.6
DUG				pmax	pmax		
	comp=Z,6.0nm,1.4s						
BW06	Boulder Array	69.63	50	*e*P	P	07 43 30.3	+1.0
	comp=Z,5.3nm,1.4s						
PD31	Pinedale Array	69.63	50	*e*P	P	07 43 30.4	+1.0
PDAR	Pinedale Array	69.63	50	P	P	07 43 30.1	+0.7
	comp=Z,1.1nm,0.5s,baz=292,slow=1.2,SNR=22						
PDAR	Pinedale Array	69.63	50	*e*P	P	07 43 29.9	+0.6
TPNV	Topopah Spring	69.70	58	*e*P	P	07 43 31.1	+1.4
	comp=Z,1.4nm,0.9s						
TPNV	Topopah Spring	69.70	58	*e*P	P	07 43 31.1	+1.4
TPNV				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KONO	Kongsberg	69.82	338	P	P	07 43 29.1	-0.7
KONO				pmax	pmax		
	comp=Z,11nm,0.8s						
AKASG	Malin Array Be	70.19	323	P	P	07 43 31.3	-0.9
	comp=Z,2.2nm,0.6s,baz=36,slow=6.3,SNR=8.3						
KIEV	Kiev	70.20	323	*e*P	P	07 43 31.3	-1.0
KIEV	Kiev	70.20	323⇑	*e*P	P	07 43 31.3	-1.0
KIEV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MPU	Maple Canyon	70.35	53	*e*P	P	07 43 35.0	+1.4
	comp=Z,1.8nm,0.7s						
MSU	Marysvale	71.05	54	*e*P	P	07 43 39.5	+1.6
MSU	Marysvale	71.05	54	*e*P	P	07 43 39.5	+1.6
P17A	Butcher Ranch,	71.22	53	*e*P	P	07 43 40.9	+2.1
	comp=Z,1.2nm,0.7s						
MTPU	Mount Pierson	71.37	55	*e*P	P	07 43 41.7	+1.7
	comp=Z,1.3nm,0.8s						
PV14	Lion Creek, Pa	72.95	53	*e*P	P	07 43 50.7	+1.5
	comp=Z,4.9nm,1.4s						
B35A	Bob, Littlefor	73.28	37	*e*P	P	07 43 50.3	-0.4
	comp=Z,7.2nm,1.3s						
BUR08	Bucovina Ar. S	74.23	323	*e*P	P	07 43 56.8	+0.4
BUR04	Bucovina Ar. S	74.25	323	*e*P	P	07 43 56.5	0.0
CRVS	Cervenica-Dubn	74.79	326	*e*P	P	07 43 58.9	-0.5
CRVS	Cervenica-Dubn	74.79	326	*e*P	P	07 43 58.9	-0.5
NIE	Niedzica	74.83	327	P	P	07 43 59.7	0.0
NIE				pmax	pmax		
	comp=Z,2.0nm,0.8s						
F36A	Milaca	75.29	39	*e*P	P	07 44 01.9	-0.4
	comp=Z,3.8nm,1.2s						
LANS	Liptovska Anna	75.37	327	*e*P	P	07 44 03.7	+0.9
LANS	Liptovska Anna	75.37	327	*e*P	P	07 44 03.7	+0.9
ECSD	EROS Data Cent	75.51	42	*e*P	P	07 44 03.7	+0.1
	comp=Z,1.9nm,0.7s						
MLR	Muntele Rosu	75.58	321	P	P	07 44 04.1	0.0
	comp=Z,2.2nm,0.6s,baz=206,slow=6.3,SNR=5.1						
MORC	Moravsky Berou	75.59	328	*e*P	P	07 44 04.4	+0.4
	comp=Z,2.3nm,0.7s						
MORC	Moravsky Berou	75.59	328	*e*P	P	07 44 04.4	+0.4
MORC				pmax	pmax		
	comp=Z,2.0nm,0.7s						
CLL	Collm	75.92	332⇑	*i*P	P	07 44 05.1	-0.6
	comp=Z,5.0nm,0.5s						
CLL	Collm	75.92	332	*e*P	P	07 44 05.2	-0.6
	comp=Z,5.2nm,0.4s						
CLL	Collm	75.92	332	*e*P	P	07 44 05.2	-0.6
CLL				pmax	pmax		
	comp=Z,5.0nm,0.4s						
VOIR		76.02	322	P	P	07 44 07.1	+0.6
VOIR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
VYHS	Vyhne	76.15	327	*e*P	P	07 44 07.4	+0.3
VYHS	Vyhne	76.15	327	*e*P	P	07 44 07.4	+0.3
EKA	Eskdalemuir Ar	76.75	343	P	P	07 44 10.0	-0.4
	comp=Z,1.2nm,0.5s,baz=22,slow=4.2,SNR=7.8						
EKA	Eskdalemuir Ar	76.75	343	P	P	07 44 10.0	-0.4
EKA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
I37A	Lemond, Waseca	76.78	40	*e*P	P	07 44 11.5	+0.7
	comp=Z,13nm,1.4s						
COWI	Conover	76.99	36	*e*P	P	07 44 11.9	0.0
	comp=Z,5.3nm,1.0s						
F41A	Three Lakes	77.30	36	*e*P	P	07 44 14.1	+0.5
	comp=Z,17nm,1.4s						
KHC	Kasperske Hory	77.56	330	*e*P	P	07 44 15.4	+0.4
	comp=Z,1.3nm,0.6s						
KHC	Kasperske Hory	77.56	330	*e*P	P	07 44 15.4	+0.4
KHC				pmax	pmax		
	comp=Z,1.0nm,0.6s						
I39A	Houston	77.75	39	*e*P	P	07 44 15.9	-0.2
	comp=Z,4.7nm,0.6s						
GEC2	GERESS Array S	77.76	330	*e*P	P	07 44 15.7	-0.5
	comp=Z,1.4nm,0.6s						
GEC2	GERESS Array S	77.76	330	*e*P	P	07 44 15.7	-0.5
GEC2				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GERES	GERESS Array B	77.76	330	P	P	07 44 15.8	-0.4
	comp=Z,0.9nm,0.5s,baz=41,slow=6.7,SNR=9.8						
GEA0	GERESS Array S	77.77	330	*e*P	P	07 44 16.1	-0.1
GRF	Grafenberg Arr	77.89	332	P	P	07 44 16.8	0.0
GRF				pmax	pmax		
	comp=Z,9.0nm,0.6s						
MMAI	Mount Meron Ar	80.20	307	P	P	07 44 30.6	+0.9
	comp=Z,1.6nm,0.5s,baz=32,slow=6.8,SNR=3.1						
FUORN	Ofenpass-Fuorn	80.86	331	*e*P	P	07 44 33.7	+0.5
	comp=Z,4.9nm,1.0s						
TRQ	Mont Tremblant	82.32	27	*e*P	P	07 44 39.8	-0.8
PLVO	Plevna	82.51	29	*e*P	P	07 44 41.4	-0.1
	comp=Z,5.6nm,1.2s						
TX31	Lajitas Ar. Si	82.53	56	*e*P	P	07 44 43.1	+1.1
TXAR	Lajitas Array	82.53	56	P	P	07 44 43.2	+1.2
	comp=Z,0.6nm,0.5s,baz=285,slow=3.5,SNR=16						
VT1	Waterbury	84.58	27	*e*P	P	07 44 53.0	+0.9
	comp=Z,10nm,1.4s						
O56A	Blue Knob Stat	86.10	33	*e*P	P	07 45 00.4	+0.7
	comp=Z,16nm,1.4s						
SWET	Sewanee	87.27	40	*e*P	P	07 45 06.8	+1.4
	comp=Z,9.4nm,1.5s						
Z50A	Ashland	88.89	41	*e*P	P	07 45 13.7	+0.6
	comp=Z,14nm,1.5s						
PLCA	Paso Flores	152.88	94	PKPbc	PKPbc	07 52 15.0	+0.7
	comp=Z,3.2nm,1.2s,baz=320,slow=4.5,SNR=4.7						
PLCA	Paso Flores	152.88	94	*e*PKPbc	PKPbc	07 52 15.9	+1.5

IDC 21 07:41:15.4±2.4, 29°.48N×141°.05E, h0km, mb3.4/3, mb1 3.6/4, mb1mx3.3/54, mbtmp3.4/4, ML3.0/2, Error ellipse: s-maj=103.8km s-min=22.0km az=70.0, Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCJ	Chichijima	2.58	157	Pn	Pn	07 41 58.9	+0.5
	1.2nm,0.3s,baz=287,slow=19,SNR=5.3						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JCJ				Sn	Sn	07 42 24.8	-5.7
	6.2nm,0.3s,baz=270,slow=20,SNR=4.3						
MJAR	Matsushiro Arr	7.43	342	Pn	Pn	07 43 04.6	-0.6
	0.6nm,0.3s,baz=165,slow=11,SNR=3.8						
WRA	Warramunga Arr	49.56	188	P	P	07 50 08.0	-0.3
	0.2nm,0.3s,baz=6.6,slow=7.6,SNR=3.8						
KURBB	Kurchatov Arra	50.67	313	P	P	07 50 16.5	+0.1
	0.7nm,0.8s,baz=92,slow=7.1,SNR=6.5						
ASAR	Alice Springs	53.28	188	P	P	07 50 35.9	-0.3
	0.2nm,0.6s,baz=10,slow=5.7,SNR=2.7						

IDC 21 08:00:02.2±2.2, 6°.14S×129°.48E, h0^{km}, mb3.8/1, mb1 3.8/3, mb1mx3.3/50, mbtmp3.6/3, ML3.5/2, Error ellipse: s-maj=150.0km s-min=30.4km az=69.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.51	161	Pn	Pn	08 03 27.8	-1.2
	0.1nm,0.3s,baz=344,slow=13,SNR=7.4						
WRA				Sn	Sn	08 05 56.9	-14
	0.4nm,0.3s,baz=334,slow=24,SNR=7.9						
ASAR	Alice Springs	17.94	167	P	P	08 04 14.0	0.0
	0.3nm,0.3s,baz=348,slow=12,SNR=18						
ASAR				S	Sn	08 07 20.9	-13
	0.1nm,0.3s,baz=355,slow=28,SNR=3.6						
MKAR	Makanchi Array	67.23	327	P	P	08 10 58.5	0.0
	0.6nm,0.6s,baz=124,slow=8.2,SNR=9.0						

IDC 21 08:09:49.4±1.1, 5°.89S×130°.15E, h0^{km}, mb3.8/4, mb1 4.0/6, mb1mx3.7/47, mbtmp3.9/6, ML4.0/2, Error ellipse: s-maj=80.3km s-min=20.2km az=61.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.55	164	Pn	Pn	08 13 15.6	-1.3
	0.5nm,0.3s,baz=348,slow=13,SNR=18						
WRA				Sn	Sn	08 15 44.9	-14
	1.8nm,0.3s,baz=340,slow=22,SNR=13						
ASAR	Alice Springs	18.04	169	P	P	08 14 03.6	+1.3
	1.0nm,0.3s,baz=352,slow=11,SNR=64						
ASAR				S	Sn	08 17 08.1	-16
	0.2nm,0.3s,baz=350,slow=26,SNR=5.5						
CTA	Charters Tower	21.08	134	P	P	08 14 36.3	+0.8
	2.6nm,0.8s,baz=299,slow=10,SNR=2.5						
STKA	Stephens Creek	27.99	159	P	P	08 15 40.6	-1.4
	0.7nm,0.4s,baz=342,slow=13,SNR=3.1						
MKAR	Makanchi Array	67.38	327	P	P	08 20 47.0	+0.4
	0.7nm,0.6s,baz=125,slow=8.1,SNR=9.5						
KURBB	Kurchatov Arra	71.64	328	P	P	08 21 12.5	-0.3
	0.6nm,0.6s,baz=130,slow=4.6,SNR=6.8						

MEX 21 08:10:56.2±0.7, 17°.20N×94°.60W, h166^{km}±12^{km}, MD3.9, Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TGIG		1.48	106	eP	Pn	08 11 26.5	-0.4
TGIG				eS	Sn	08 11 48.2	-2.3
HUIG	Huatulco	2.03	226	eP	Pn	08 11 30.6	-2.1
HUIG				eS	Sn	08 11 59.1	-1.8
VHO	Vista Hermosa	2.04	267	eP	Pn	08 11 31.9	-1.1
VHO				eS	Sn	08 11 59.5	-1.9
TLIG	Tlapa	3.80	276	eP	Pn	08 11 53.5	-1.0
TLIG				i S	Sn	08 12 37.9	-2.0

ISCJB 21 08:18:33.9±1.3, 28°.83S±0°.04×70°.80W±0°.07, h107^{km}±9^{km}, Error ellipse: s-maj=10.6km s-min=6.3km az=0.3

SJA 21 08:18:33.3±0.6, 28°.95S×70°.85W, h107^{km}±4^{km}, ML2.3, MW2.8

GUC 21 08:18:35.0±0.5, 28°.95S×70°.21W, h70^{km}±24^{km}, ML2.6

ISC 21 08:18:33.9±2.2, 28°.84S±0°.04×70°.84W±0°.09, h107^{km}±13^{km}, n12, σ0^{s}66/24, 2C-3D, Central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LCO	Las Campanas	0.21	146	eP	Pn	08 18 49.4	0.0
LCO				eS	Sn	08 19 00.6	-0.4
LCO	Las Campanas	0.21	146	⇓iP	Pn	08 18 49.7	+0.3
LCO				i S	Sn	08 19 00.1	-0.9
LCO				IAML		08 19 00.5	
	comp=E,737nm,0.3s						
VACH	Vallenar	0.27	15	⇓iP	Pn	08 18 50.0	+0.7
VACH				i S	Sn	08 19 00.6	-0.2
TLL	Tololo Astrono	1.33	179	eP	Pn	08 18 59.6	+0.8
TLL				i S	Sn	08 19 17.9	+0.3
TLL				IAML		08 19 21.2	
	comp=E,94nm,0.2s						
GO04	Tololo Observa	1.33	179	⇓iP	Pn	08 18 59.5	+0.6
GO04				i S	Sn	08 19 17.9	+0.2
GO03	Copiap	1.35	23	⇑iP	Pn	08 18 59.2	+0.3
GO03				i S	Sn	08 19 17.4	-0.3
GO03				IAML		08 19 18.4	
	comp=N,225nm,0.2s						
CPCH	Copiapo	1.53	16	⇑iP	Pn	08 19 00.9	-0.1
CPCH				i S	Sn	08 19 20.6	-0.9
ACDV	Cuesta del Vie	2.00	132	eP	Pn	08 19 07.0	0.0
ACDV				eS	Sn	08 19 31.6	-0.7
AGUA	GUANDACOL	2.15	108	eP	Pn	08 19 09.2	+0.4
AGUA				eS	Sn	08 19 35.5	0.0
VCA	Vinchina	2.31	88	eP	Pn	08 19 11.4	+0.5
VCA				IAML		08 19 12.9	
	comp=Z,15nm,0.2s						
VCA				eS	Sn	08 19 40.1	+0.8
VCA	Vinchina	2.31	88	eP	Pn	08 19 12.1	+1.1
VCA				i S	Sn	08 19 39.3	-0.1
AMOG	MOGNA	2.92	136	eP	Pn	08 19 18.2	-0.7
AMOG				eS	Sn	08 19 52.1	-1.4

IDC 21 08:22:08.5±6.3, 4°.82S×149°.12E, h84^{km}±63^{km}, mb3.0/3, mb1 3.4/4, mb1mx3.1/43, mbtmp3.5/4, ML1.5/1, Error ellipse: s-maj=122.4km s-min=35.8km az=125.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	4.95	203	P	Pn	08 23 20.1	-0.3
	1.4nm,0.3s,baz=8.1,slow=7.1,SNR=4.0						
PMG				S	Sn	08 24 17.9	+1.4
	1.5nm,0.3s,baz=313,slow=18,SNR=5.2						
WRA	Warramunga Arr	20.81	223	P	P	08 26 41.9	-1.4
	1.0nm,0.7s,baz=48,slow=10,SNR=5.3						
ASAR	Alice Springs	23.80	217	P	P	08 27 14.2	+0.5
	0.6nm,0.7s,baz=56,slow=8.1,SNR=9.8						
ILAR	Eielson Array	83.58	23	P	P	08 34 27.4	+0.3
	0.2nm,0.7s,baz=258,slow=4.5,SNR=4.3						

WEL 21 08:29:24.6, 38°S±9°×18°0W±°, h33^{km}, ML4.2/35, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.39	272	P	Pn	08 29 48.1	+0.5
WMGZ				S	Sn	08 30 05.6	+0.9
MXZ	Matakaoa Point	1.51	282	P	Pn	08 29 49.2	0.0
PUZ	Puketiti	1.52	263	P	Pn	08 29 50.1	+0.7
PUZ				S	Sn	08 30 08.4	+0.4
PKGZ	Pakihiroa	1.65	269	P	Pn	08 29 51.6	+0.4
PKGZ				S	Sn	08 30 11.3	-0.1
CNGZ	Carnagh Statio	1.65	248	P	Pb	08 29 53.3	-1.1
TWGZ	Tauwhareparae	1.75	260	P	Pn	08 29 53.6	+1.0
TWGZ				S	Sn	08 30 15.5	+1.8
HAZ	Te Kaha	1.89	273	P	Pn	08 29 55.0	+0.6
HAZ				S	Sn	08 30 16.9	-0.3
TKGZ	Te Karaka	1.91	253	P	Pn	08 29 56.0	+1.3
TKGZ				S	Sn	08 30 19.7	+2.2
RUGZ	Raukumara Rang	1.97	267	P	Pn	08 29 56.2	+0.5
RUGZ				S	Sn	08 30 19.0	-0.2
RIGZ	Rimuhau	2.06	246	P	Pn	08 29 58.0	+1.1
RIGZ				S	Sn	08 30 23.4	+2.0
PRGZ	Paritu Road	2.07	239	P	Pn	08 29 59.1	+2.1
MWZ	Matawai	2.13	257	P	Pn	08 29 58.5	+0.7
MWZ				S	Sn	08 30 23.8	+0.7
MHGZ	Mahia Peninsul	2.17	234	P	Pn	08 30 00.3	+1.8
RAGZ	Rawiri	2.25	254	P	Pn	08 30 00.6	+1.1
RAGZ				S	Sn	08 30 27.8	+1.6
KNZ	Kokohu	2.26	239	P	Pn	08 30 01.0	+1.4
SNGZ	Shannon Statio	2.39	247	P	Pn	08 30 02.9	+1.5
URZ	Urewera	2.44	260	P	Pn	08 30 03.4	+1.3
WHHZ	Waihua	2.59	242	P	Pn	08 30 05.7	+1.6
RTZ	Ruatahuna	2.61	253	P	Pn	08 30 06.5	+2.0
RAHZ	Arahi	2.63	246	P	Pn	08 30 06.6	+1.9
EDRZ	Edgecumbe	2.71	264	P	Pn	08 30 07.1	+1.2
MUGZ	Murupara	2.74	257	P	Pn	08 30 07.4	+1.2
MARZ	Manawahe	2.76	267	P	Pn	08 30 07.5	+1.0
MTHZ	Maungataniwha	2.78	249	P	Pn	08 30 08.4	+1.6
ARHZ	Aropaoanui	2.84	240	P	Pn	08 30 10.1	+2.6
OPRZ	Ohinepanea	2.86	270	P	Pn	08 30 08.1	+0.3
NMHZ	Naumai	2.90	244	P	Pn	08 30 10.0	+1.6
TARZ	Mount Tarawera	2.91	262	P	Pn	08 30 09.8	+1.2
RRRZ	Republican Roa	2.91	260	P	Pn	08 30 09.7	+1.1
RRRZ				P	Pn	08 30 09.7	+1.1
OMRZ	Omania	3.00	265	P	Pn	08 30 10.7	+0.8
PRRZ	Plateau Road	3.03	257	P	Pn	08 30 12.3	+2.1
ALRZ	Allen Road	3.08	256	P	Pn	08 30 12.1	+1.2
MRHZ	Matea Rd	3.09	251	P	Pn	08 30 12.5	+1.4
TGRZ	Tauranga	3.10	272	P	Pn	08 30 11.3	+0.3
HRRZ	Handcock Road	3.10	260	P	Pn	08 30 12.2	+1.1
KARZ	Kaharoa	3.10	266	P	Pn	08 30 11.8	+0.6
KARZ				P	Pn	08 30 11.8	+0.6
MCHZ	McNeill Hill	3.13	239	P	Pn	08 30 13.1	+1.6
BKZ	Black Stump Fm	3.15	245	P	Pn	08 30 13.2	+1.3
KAHZ	Kahuranaki	3.19	232	P	Pn	08 30 14.5	+2.0
WPRZ	Whakapapatarin	3.21	257	P	Pn	08 30 14.6	+1.9
KWHZ	Kaweka Forest	3.31	241	P	Pn	08 30 15.3	+1.2
PXZ	Pawanui	3.35	229	P	Pn	08 30 15.6	+1.1
KRHZ	Kereru	3.44	238	P	Pn	08 30 16.9	+1.0
RITZ	Rihia Road	3.55	251	P	Pn	08 30 19.1	+1.7
BHHZ	Black Hill Sta	3.58	242	P	Pn	08 30 19.1	+1.2
PRHZ	Porangahau	3.63	228	P	Pn	08 30 19.7	+1.3
TLZ	Tolley Road	3.68	262	P	Pn	08 30 19.6	+0.5
PNHZ	Pukenui	3.69	236	P	Pn	08 30 20.8	+1.5
KUZ	Kuaotunu	3.72	287	P	Pn	08 30 19.4	-0.3
MOVZ	Moawhango	3.77	245	P	Pn	08 30 22.7	+2.2
NGZ	Ngauruhoe	3.80	249	P	Pn	08 30 22.0	+1.1
ANWZ	Angora Road	3.85	227	P	Pn	08 30 21.9	+0.5
FWVZ	Far West T-bar	3.86	248	P	Pn	08 30 24.1	+2.2
TSZ	Takapari Road	3.93	235	P	Pn	08 30 22.9	+0.3
DVHZ	Dannevirke	3.93	231	P	Pn	08 30 23.1	+0.5
MKAZ	Moumakai	4.05	280	P	Pn	08 30 24.5	+0.3
WIAZ	Waiheke Island	4.16	284	P	Pn	08 30 26.2	+0.6
PRWZ	Pori Road	4.21	229	P	Pn	08 30 27.3	+1.0
HIZ	Hauiti	4.23	260	P	Pn	08 30 28.2	+1.6
HIZ				P	Pn	08 30 28.2	+1.6
POWZ	Post Office Ro	4.23	232	P	Pn	08 30 27.7	+1.0
ETAZ	East Tamaki Re	4.27	281	P	Pn	08 30 28.0	+0.8
TIWZ	Tintock	4.39	228	P	Pn	08 30 29.8	+0.9
VRZ	Vera Road	4.42	252	P	Pn	08 30 30.9	+1.7
VRZ				P	Pn	08 30 30.9	+1.7
WAZ	Wanganui	4.45	244	P	Pn	08 30 31.7	+2.0
MRZ	Mangatainoka R	4.51	231	P	Pn	08 30 30.5	0.0
RVAZ	Riverhead Bore	4.59	282	P	Pn	08 30 32.9	+1.3
OGWZ	Otaki Gorge	4.85	231	P	Pn	08 30 35.8	+0.7
KIW	Kapiti Island	5.04	232	P	Pn	08 30 38.4	+0.7
WCZ	Waipu Caves	5.05	291	P	Pn	08 30 38.4	+0.4
OUZ	Omahuta	5.92	295	P	Pn	08 30 51.0	+1.1

ISCJB 21 08:34:22.5±0.4, 39°.07N±0°.03×29°.13E±0°.03, h8^{km}±3^{km}, Error ellipse: s-maj=4.6km s-min=3.5km az=174.4

DDA 21 08:34:22.1, 39°.09N×29°.12E, h6^{km}, Ml2.6

CSEM 21 08:34:22.4±0.1, 39°.10N×29°.13E, h8^{km}, ML2.4, Error ellipse: s-maj=1.7km s-min=1.4km az=151.0

ISK 21 08:34:22.1, 39°.11N×29°.12E, h8^{km}, ML2.4/10

ISC 21 08:34:22.6±0.8, 39°.10N±0°.02×29°.12E±0°.02, h9^{km}±5^{km}, n45, σ0^{s}33/64, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SHAP	Saphane-Kutahy	0.11	133	PG	Pg	08 34 25.4	+0.1
SHAP				SG	Sg	08 34 27.3	+0.1
SHAP	Saphane-Kutahy	0.11	133	i Pg	Pg	08 34 25.4	+0.1
SHAP				eSg	Sg	08 34 27.3	+0.1
SIMA	Simav-Kutahya	0.11	263	PG	Pg	08 34 25.1	-0.2
SIMA				SG	Sg	08 34 26.8	-0.4
SIMA	Simav-Kutahya	0.11	263	i Pg	Pg	08 34 25.1	-0.2
SIMA				eSg	Sg	08 34 26.8	-0.4
SMAA	Simav-Kutahya	0.11	272	PG	Pg	08 34 25.2	-0.1
SMAA				SG	Sg	08 34 27.4	+0.2
SMAA	Simav-Kutahya	0.11	272	i Pg	Pg	08 34 25.2	-0.1
SMAA				eSg	Sg	08 34 27.4	+0.2
GDZ	Gediz	0.28	92	i P	Pg	08 34 28.1	-0.2
GDZ				i S	Sg	08 34 32.5	+0.5
GDZ	Gediz	0.28	92	P	Pg	08 34 28.1	-0.2
GDZ				S	Sg	08 34 32.5	+0.5
DEMI	Demirci	0.32	260	i P	Pg	08 34 28.9	-0.1
DEMI				i S	Sg	08 34 33.2	0.0
DEMI	Demirci	0.32	260	P	Pg	08 34 28.9	-0.1
DEMI				S	Sg	08 34 33.2	0.0
TVSB	Tavsanli	0.44	37	PG	Pg	08 34 30.8	-0.4
TVSB	Tavsanli	0.44	37	ePg	Pg	08 34 30.8	-0.4
KULA	Kula-Manisa	0.68	212	PG	Pg	08 34 35.6	-0.2
KULA	Kula-Manisa	0.68	212	ePg	Pg	08 34 35.6	-0.2
DURS	Dursunbey	0.71	315	i P	Pg	08 34 36.0	-0.3
DURS				i S	Sn	08 34 50.5	+0.4
DURS	Dursunbey	0.71	315	P	Pg	08 34 36.0	-0.3
MANT	Manisa	0.75	216	i P	Pg	08 34 36.8	-0.2
MANT				i S	Sg	08 34 46.4	-0.4
MANT	Manisa	0.75	216	P	Pg	08 34 36.8	-0.2
MANT				S	Sg	08 34 46.4	-0.4
KUTH	Kutahya	0.76	67	PG	Pg	08 34 37.1	-0.2
KUTH	Kutahya	0.76	67	ePg	Pg	08 34 37.1	-0.2
KHAL	Karahalli	0.78	158	i P	Pb	08 34 37.9	-0.5
KHAL				i S	Sg	08 34 48.1	+0.3
KHAL	Karahalli	0.78	158	P	Pb	08 34 37.9	-0.5
KHAL				S	Sg	08 34 48.1	+0.3
BALB	Balikesir	1.10	300	PN	Pn	08 34 44.5	+0.3
BALB	Balikesir	1.10	300	ePn	Pn	08 34 44.5	+0.3
STEP	BALIKESIR_Sava	1.12	285	i P	Pn	08 34 44.6	+0.1
STEP				i S	Sn	08 35 00.9	+0.7
STEP	BALIKESIR_Sava	1.12	285	P	Pn	08 34 44.6	+0.1
STEP				S	Sn	08 35 00.9	+0.7
IGD	Bursa	1.17	3	i P	Pb	08 34 44.5	-0.4
IGD				i S	Sn	08 35 02.2	+1.0
CAVI	Cavuskoy	1.24	27	PN	Pg	08 34 46.1	-0.2
CAVI	Cavuskoy	1.24	27	ePn	Pg	08 34 46.1	-0.2
MDNY	Mudanya-Bursa	1.28	352	PN	Pb	08 34 46.8	-0.1
MDNY	Mudanya-Bursa	1.28	352	ePn	Pb	08 34 46.8	-0.1
BORA	Eskisehir	1.29	52	PN	Pn	08 34 46.6	-0.3
BORA	Eskisehir	1.29	52	i P	Pn	08 34 46.8	-0.1
BORA				i S	Sn	08 35 04.2	-0.2
BORA	Eskisehir	1.29	52	ePn	Pn	08 34 46.6	-0.3
BORA	Eskisehir	1.29	52	P	Pn	08 34 46.8	-0.1
KCTX	Karacabey (Bur	1.31	333	PN	Pb	08 34 47.2	-0.1
KCTX	Karacabey (Bur	1.31	333	ePn	Pb	08 34 47.2	-0.1
YLV	Yalova	1.48	7	PN	Pn	08 34 49.3	-0.2
YLV	Yalova	1.48	7	ePn	Pn	08 34 49.3	-0.2
AYDB	Zeytinkoy-Aydi	1.50	220	PN	Pn	08 34 50.0	+0.2
AYDB	Zeytinkoy-Aydi	1.50	220	ePn	Pn	08 34 50.0	+0.2
SBT5	Esenkoy-Cinarc	1.54	353	PN	Pn	08 34 50.4	+0.2
SBT5	Esenkoy-Cinarc	1.54	353	ePn	Pn	08 34 50.4	+0.2
GULT	Gulveren	1.71	38	PN	Pn	08 34 53.0	+0.3
GULT	Gulveren	1.71	38	ePn	Pn	08 34 53.0	+0.3

IDC 21 09:23:50.7±2.2, 0°.08N×98°.75E, h0^{km}, mb3.7/7, mb1 3.7/7, mb1mx3.5/58, mbtmp3.7/7, Error ellipse: s-maj=79.1km s-min=20.9km az=57.0

ISCJB 21 09:23:56.3±0.8, 0°.15N±0°.08×98°.5E±0°.1, h61^{km}±7^{km}, mb3.7/7, Error ellipse: s-maj=18.5km s-min=12.3km az=159.4

DJA 21 09:23:56.6±0.7, 0°N±4°×9°9E±°, h19^{km}±9^{km}, M3.5/7, MLv3.5/7

ISC 21 09:23:56.9±1.3, 0°.19N±0°.06×98°.49E±0°.09, h47^{km}±14^{km}, n17, σ1^{s}77/13, mb3.9/7, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBSI	Pulau Batu	0.32	221	P	Pn	09 24 05.9	0.0
MNSI	Mandailing Nat	1.25	61	P	Pn	09 24 17.9	0.0
SBSI	Sibolga	1.41	16	P	Pn	09 24 21.5	+1.3
GSI	Gunungsitoli	1.44	320	P	Pn	09 24 20.6	0.0
SISI	Saibi	1.62	158	P	Pn	09 24 25.1	+2.1
BKNI	Bangkinang	2.55	87	P	Pn	09 24 44.5	+8.7
KCSI	Kotacane, Aceh	3.39	348	P	Pn	09 24 47.9	+0.5
H08S2	Diego Garcia H	27.06	253	T	T	09 57 07.4	
	baz=73,slow=74,SNR=4.7						
H08S3	Diego Garcia H	27.07	253	T	T	09 57 07.1	
	baz=73,slow=74,SNR=35						
H08S1	Diego Carcia H	27.08	253	T	T	09 57 10.4	
	baz=73,slow=74,SNR=37						
WRA	Warramunga Arr	40.41	122	P	P	09 31 28.2	-2.7
	0.1nm,0.3s,baz=304,slow=9.0,SNR=6.2						
ASAR	Alice Springs	41.76	127	P	P	09 31 40.2	-1.8
	0.2nm,0.4s,baz=304,slow=7.6,SNR=5.5						
KSRS	Korea Array	45.97	33	P	P	09 32 14.8	-0.8
	0.9nm,0.6s,baz=220,slow=8.5,SNR=5.6						
SONM	Songino Array	47.95	7	P	P	09 32 31.6	+0.6
	0.8nm,0.5s,baz=196,slow=9.0,SNR=5.9						
MKAR	Makanchi Array	48.54	345	P	P	09 32 35.8	+0.3
	0.7nm,0.7s,baz=154,slow=7.8,SNR=6.2						
KURBB	Kurchatov Arra	53.04	344	P	P	09 33 09.8	+0.6
	0.3nm,0.2s,baz=157,slow=7.1,SNR=3.6						
ZALV	Zalesovo Beam	54.76	350	P	P	09 33 24.9	+3.1
	1.0nm,0.4s,baz=158,slow=7.7,SNR=3.2						

WEL 21 09:45:11.5, 39°.3S±0°.9×17°7E±°, h31^{km}±1^{km}, ML3.7/27, Off east coast of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARHZ	Aropaoanui	0.20	292	P	Pb	09 45 17.8	+0.1
ARHZ				S	Sn	09 45 22.8	+0.3
WHHZ	Waihua	0.26	1	P	Pb	09 45 18.8	+0.3
WHHZ				S	Sn	09 45 24.6	+0.5
CKHZ	Cape Kidnapper	0.34	200	P	Pn	09 45 21.2	+0.9
CKHZ				S	Sn	09 45 28.7	+2.5
NMHZ	Naumai	0.41	306	P	Pb	09 45 20.5	-0.1
NMHZ				S	Sn	09 45 27.4	-0.5
MCHZ	McNeill Hill	0.43	255	P	Pn	09 45 21.5	0.0
MCHZ				S	Sn	09 45 29.3	+1.0
RAHZ	Arahi	0.43	345	P	Pb	09 45 21.1	+0.1
RAHZ				S	Sn	09 45 28.6	+0.1
KNZ	Kokohu	0.47	48	P	Pn	09 45 22.5	+0.5
KAHZ	Kahuranaki	0.53	211	P	Pn	09 45 23.8	+0.8
MHGZ	Mahia Peninsul	0.56	71	P	Pn	09 45 24.4	+1.1
SNGZ	Shannon Statio	0.56	9	P	Pn	09 45 23.3	-0.1
SNGZ				S	Sn	09 45 32.8	+1.1
MTHZ	Maungataniwha	0.57	328	P	Pb	09 45 22.6	-0.5
MTHZ				S	Sb	09 45 31.0	-0.1
BKZ	Black Stump Fm	0.60	286	P	Pb	09 45 23.1	-0.5
BKZ				S	Sb	09 45 32.2	+0.3
KWHZ	Kaweka Forest	0.63	262	P	Pb	09 45 24.1	0.0
KWHZ				S	Sn	09 45 34.0	+0.6
PRGZ	Paritu Road	0.66	51	P	Pn	09 45 25.6	+0.9
KRHZ	Kereru	0.73	245	P	Pn	09 45 25.7	0.0
KRHZ				S	Sn	09 45 36.8	+0.9
RTZ	Ruatahuna	0.75	345	P	Pn	09 45 25.6	-0.4
PXZ	Pawanui	0.75	202	P	Pn	09 45 25.9	0.0
RIGZ	Rimuhau	0.76	34	P	Pn	09 45 26.0	0.0
MRHZ	Matea Rd	0.81	308	P	Pn	09 45 26.4	-0.4
RAGZ	Rawiri	0.85	10	P	Pn	09 45 27.5	+0.1
BHHZ	Black Hill Sta	0.92	260	P	Pn	09 45 28.2	-0.1
MUGZ	Murupara	0.93	337	P	Pn	09 45 28.3	-0.1
WPHZ	Waipukurau	0.95	220	P	Pn	09 45 28.9	+0.2
WPHZ				P	Pn	09 45 28.9	+0.2
PNHZ	Pukenui	0.98	234	P	Pn	09 45 29.0	-0.2
HATZ	Hinemaiaia	0.99	296	P	Pn	09 45 29.6	+0.3
TKGZ	Te Karaka	1.02	29	P	Pn	09 45 29.7	+0.1
MWZ	Matawai	1.03	13	P	Pn	09 45 29.7	-0.1
PRHZ	Porangahau	1.03	206	P	Pn	09 45 29.6	-0.2
ALRZ	Allen Road	1.04	318	P	Pn	09 45 30.0	0.0
PRRZ	Plateau Road	1.06	322	P	Pn	09 45 30.3	+0.1
URZ	Urewera	1.08	355	P	Pn	09 45 30.3	-0.2
RITZ	Rihia Road	1.12	288	P	Pb	09 45 31.8	-0.6
RRRZ	Republican Roa	1.14	331	P	Pn	09 45 31.3	-0.1
MOVZ	Moawhango	1.15	266	P	Pn	09 45 32.1	+0.6
WPRZ	Whakapapatarin	1.17	314	P	Pn	09 45 31.8	+0.1
WHTZ	Whakaora	1.20	304	P	Pn	09 45 32.6	+0.5
HRRZ	Handcock Road	1.20	322	P	Pn	09 45 32.3	+0.1
TSZ	Takapari Road	1.22	233	P	Pn	09 45 31.9	-0.4
TUVZ	Tukino	1.22	273	P	Pb	09 45 33.9	-0.3
RATZ	Rangitukua	1.23	292	P	Pn	09 45 33.0	+0.5
TARZ	Mount Tarawera	1.24	333	P	Pn	09 45 32.8	+0.1
KATZ	Kakaramea	1.25	286	P	Pn	09 45 33.4	+0.5
KRVZ	Karewarewa	1.26	281	P	Pn	09 45 33.6	+0.6
DVHZ	Dannevirke	1.26	220	P	Pn	09 45 32.4	-0.6
ANWZ	Angora Road	1.26	207	P	Pn	09 45 32.4	-0.5
NGZ	Ngauruhoe	1.27	277	P	Pn	09 45 34.1	+0.8
WHVZ	Whangaehu Hut	1.27	272	P	Pb	09 45 34.2	-0.8
HSRZ	Hossack Road	1.28	323	P	Pn	09 45 33.5	+0.3
HLRZ	Highlands Stat	1.28	327	P	Pb	09 45 34.8	-0.3
EDRZ	Edgecumbe	1.29	343	P	Pn	09 45 33.3	-0.1
WTVZ	West Tongariro	1.29	279	P	Pn	09 45 34.3	+0.7
TWGZ	Tauwhareparae	1.30	27	P	Pn	09 45 33.9	+0.4
FWVZ	Far West T-bar	1.30	273	P	Pn	09 45 34.5	+0.8
TRVZ	Turoa	1.30	271	P	Pb	09 45 34.8	-0.7
TRVZ				P	Pb	09 45 34.9	-0.7
COVZ	Chateau Observ	1.32	275	P	Pn	09 45 34.6	+0.7
GRRZ	Galatos Road	1.32	318	P	Pn	09 45 34.2	+0.4
WATZ	Wairara	1.32	298	P	Pn	09 45 33.8	0.0
MKRZ	Makatiti	1.34	333	P	Pb	09 45 36.8	+0.8
MTVZ	Mangateitei	1.36	267	P	Pb	09 45 35.5	-0.9
KUTZ	Kaahu Road	1.39	307	P	Pn	09 45 34.6	-0.1
OMRZ	Omania	1.40	331	P	Pn	09 45 35.1	+0.2
UTU	Utuhina	1.41	325	P	Pn	09 45 35.4	+0.3
RUGZ	Raukumara Rang	1.42	15	P	Pn	09 45 35.2	0.0
MARZ	Manawahe	1.42	342	P	Pn	09 45 35.0	-0.1
PKVZ	Pokaka	1.46	271	P	Pn	09 45 36.5	+0.7
PUZ	Puketiti	1.50	33	P	Pn	09 45 35.8	-0.5
KARZ	Kaharoa	1.52	329	P	Pn	09 45 36.7	+0.1
BFZ	Birch Farm	1.54	209	P	Pn	09 45 34.9	-1.9
POWZ	Post Office Ro	1.54	226	P	Pn	09 45 36.7	-0.1
PRWZ	Pori Road	1.55	218	P	Pn	09 45 36.4	-0.6
OPRZ	Ohinepanea	1.58	340	P	Pn	09 45 36.5	-0.9
PKGZ	Pakihiroa	1.59	25	P	Pn	09 45 37.9	+0.3
HAZ	Te Kaha	1.64	16	P	Pn	09 45 38.1	0.0
TLZ	Tolley Road	1.66	307	P	Pn	09 45 38.0	-0.5
OHWZ	Ohakea	1.71	239	P	Pn	09 45 39.5	+0.3
TIWZ	Tintock	1.77	215	P	Pn	09 45 39.3	-0.7
WAZ	Wanganui	1.78	256	P	Pb	09 45 42.4	-1.1
MRZ	Mangatainoka R	1.83	223	P	Pn	09 45 39.7	-1.1
VRZ	Vera Road	1.93	276	P	Pn	09 45 43.0	+0.9
HIZ	Hauiti	2.03	293	P	Pn	09 45 43.8	+0.3
HOWZ	Holdsworth Sta	2.04	220	P	Pn	09 45 42.2	-1.5
TMWZ	Te Maipa	2.04	210	P	Pn	09 45 42.5	-1.3
OGWZ	Otaki Gorge	2.16	226	P	Pn	09 45 44.0	-1.4
MTW	Mount Morrison	2.25	215	P	Pn	09 45 44.6	-2.0
KIW	Kapiti Island	2.34	229	P	Pn	09 45 46.5	-1.3
TRWZ	Traveller	2.37	209	P	Pn	09 45 46.5	-1.8
PREZ	Palmer Road	2.38	269	P	Pn	09 45 50.9	+2.5
CAW	Cannon Point	2.42	222	P	Pn	09 45 47.0	-2.0
PAWZ	Paruwai Farm	2.46	213	P	Pn	09 45 47.5	-2.0
MSWZ	Moikau Station	2.57	215	P	Pn	09 45 48.5	-2.5
PLWZ	Palliser	2.69	213	P	Pn	09 45 50.2	-2.4
DUWZ	D'Urville Isla	2.93	239	P	Pn	09 45 54.3	-1.7
TCW	Tory Channel	2.93	229	P	Pn	09 45 54.2	-1.8
ETAZ	East Tamaki Re	2.99	322	P	Pn	09 45 57.7	+0.9
TUWZ	Tuamarina	3.27	229	P	Pn	09 45 57.9	-2.7
BSWZ	Blackbirch Sta	3.49	226	P	Pn	09 46 01.0	-2.6
NNZ	Nelson	3.49	236	P	Pn	09 46 02.0	-1.7
QRZ	Quartz Range	3.90	246	P	Pn	09 46 07.0	-2.2
THZ	Tophouse	4.09	232	P	Pn	09 46 09.9	-2.0
KHZ	Kahutara	4.16	221	P	Pn	09 46 10.4	-2.4

NEIC 21 09:50:55.9±0.0, 18°.50N×101°.72W, h16^{km}, MD4.0(MEX), After MEX.

MEX 21 09:50:55.7±0.7, 18°.53N×101°.73W, h46^{km}±20^{km}, MD4.1, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.95	165	eP	Pn	09 51 10.8	-1.9
ZIIG				i S	Sn	09 51 23.6	-1.5
ZIIG	Zihuatanejo	0.95	165	eP	Pn	09 51 10.8	-1.9
ZIIG				eS	Sn	09 51 21.0	-4.1
MOIG	Morelia	1.25	24	eP	Pn	09 51 15.8	-1.2
MOIG				eS	Sn	09 51 30.7	-2.3
MOIG	Morelia	1.25	24	eP	Pn	09 51 15.8	-1.2
MOIG				eS	Sn	09 51 30.7	-2.3
ARIG	Puente Sto Nin	1.33	100	eP	Pn	09 51 15.9	-2.0
ARIG				eS	Sn	09 51 31.6	-3.0
ARIG	Puente Sto Nin	1.33	100	eP	Pn	09 51 15.9	-2.0
ARIG				eS	Sn	09 51 31.6	-3.0
MMIG	Aquila	1.55	261	eP	Pn	09 51 19.6	-1.3

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
MMIG				eS	Sn	09 51 36.9	-2.9
MMIG	Aquila	1.55	261	eP	Pn	09 51 19.6	-1.3
MMIG				eS	Sn	09 51 36.9	-2.9
MEIG	Mezcala	2.09	106	eP	Pn	09 51 26.9	-1.5
MEIG	Mezcala	2.09	106	eP	Pn	09 51 26.9	-1.5
PLIG	Platanillo	2.12	93	eP	Pn	09 51 27.1	-1.6
PLIG				eS	Sn	09 51 52.4	-1.6
PLIG	Platanillo	2.12	93	eP	Pn	09 51 27.1	-1.6
PLIG				eS	Sn	09 51 52.4	-1.6
TLIG	Tlapa	3.16	107	eP	Pn	09 51 42.4	-0.7
TLIG				eS	Sn	09 52 17.7	-1.9
TLIG	Tlapa	3.16	107	eP	Pn	09 51 42.4	-0.7
TLIG				eS	Sn	09 52 17.7	-1.9
CJM	Chamela	3.28	288	eP	Pn	09 51 43.7	-0.9
CJM				i S	Sn	09 52 20.7	-1.7

GUC 21 10:06:47.2±0.5, 24°.09S×67°.42W, h175km, ML3.8, 2C-4D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO02	Mina Guanaco	2.25	241	⇑iP	Pn	10 07 27.9	+0.9
GO02				i S	Sn	10 07 59.7	+1.9
PB14	IPOC Station P	2.77	258	eP	Pn	10 07 33.6	+0.4
PB14				i S	Sn	10 08 09.8	+0.9
PB14				IAML		10 08 11.9	
	comp=N,108nm,0.1s						
PB05	IPOC Station P	2.83	295	eP	Pn	10 07 35.5	+1.7
PB05				i S	Sn	10 08 11.9	+2.0
PB05				IAML		10 08 13.8	
	comp=E,134nm,0.4s						
PB10	IPOC Station P	2.93	281	⇑iP	Pn	10 07 36.6	+1.9
PB10				i S	Sn	10 08 13.6	+1.9
PB10				IAML		10 08 18.6	
	comp=E,127nm,0.8s						
PB03	IPOC Station P	2.96	313	⇓iP	Pn	10 07 37.0	+1.8
PB03				IAML		10 08 16.9	
	comp=E,171nm,0.2s						
PB04	IPOC Station P	3.06	304	eP	Pn	10 07 38.3	+1.8
PB04				eS	Sn	10 08 16.6	+1.7
PB04				IAML		10 08 23.8	
	comp=N,262nm,0.3s						
PB07	IPOC Station P	3.27	315	⇓iP	Pn	10 07 40.7	+1.6
PB07				i S	Sn	10 08 21.3	+1.7
PB07				IAML		10 08 23.6	
	comp=E,210nm,0.7s						
PB02	IPOC Station P	3.58	320	⇓iP	Pn	10 07 44.0	+1.0
PB02				i S	Sn	10 08 27.3	+0.8
PB01	IPOC Station P	3.58	327	⇓iP	Pn	10 07 43.9	+0.9
PB01				i S	Sn	10 08 27.7	+1.2

MAN 21 10:09:39.5, 16°.94N×120°.40E, h32km, mb4.6, ML3.5, MS3.4, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOLP	Bolinao	0.72	220	eP	Pb	10 09 54.1	+0.5
BOLP				eS	Sn	10 10 08.0	+4.6
ABRA	Dolores	0.77	23	eP	Pb	10 09 54.5	+0.1
ABRA				eS	Sb	10 10 09.3	+4.7
APYP	Conner	1.22	41	eP	Pn	10 09 59.2	-1.1
APYP				eS	Sb	10 10 17.7	+0.2
SCZP	Santa Cruz	1.25	202	eP	Pn	10 09 60.0	-0.7
SCZP				eS	Sn	10 10 16.8	+0.5
CAUP	Cauayan	1.36	89	eP	Pn	10 10 00.7	-1.6
CAUP				eS	Sn	10 10 19.8	+0.6

MAN 21 10:27:46.0, 9°.61N×125°.71E, h12km, mb4.7, ML3.6, MS3.5, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUTP	Butuan	0.65	187	eP	Pg	10 27 57.8	-0.7
BUTP				eS	Sb	10 28 08.7	+0.5
MSLP	Maasin	0.98	302	eP	Pg	10 28 04.2	-0.8
MSLP				eS	Sb	10 28 18.3	+0.5
CGP	Cagayan de Oro	1.52	221	⇓eP	Pn	10 28 13.0	-0.1
CGP				eS	Sn	10 28 32.8	0.0
BIPH	Bislig	1.56	155	⇑eP	Pn	10 28 12.6	-1.0
BIPH				eS	Sn	10 28 31.7	-2.0
TBP	Tagbilaran	1.82	273	eP	Pn	10 28 17.3	+0.2
BUKP	Musuan	1.84	200	eP	Pn	10 28 16.5	-0.9
BUKP				eS	Sb	10 28 42.1	-0.4
BESP	Borongan	1.99	352	eP	Pn	10 28 19.4	-0.1
BESP				eS	Sn	10 28 45.1	+0.7

WEL 21 10:51:45.4, 38°S±9°×18°0W±°, h33km, ML3.6/24, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.39	272	P	Pn	10 52 08.9	+0.4
WMGZ				S	Sn	10 52 25.9	+0.3
MXZ	Matakaoa Point	1.51	282	P	Pn	10 52 10.8	+0.7
MXZ				S	Sn	10 52 28.2	-0.4
PUZ	Puketiti	1.52	263	P	Pn	10 52 10.8	+0.5
PUZ				S	Sn	10 52 29.7	+0.8
PKGZ	Pakihiroa	1.65	269	P	Pn	10 52 12.5	+0.4
CNGZ	Carnagh Statio	1.65	248	P	Pb	10 52 14.1	-1.2
TWGZ	Tauwhareparae	1.75	260	P	Pn	10 52 14.8	+1.3
TWGZ				S	Sn	10 52 36.1	+1.4
HAZ	Te Kaha	1.89	273	P	Pn	10 52 16.1	+0.7
TKGZ	Te Karaka	1.91	253	P	Pn	10 52 16.7	+1.1
TKGZ				S	Sn	10 52 40.1	+1.7
RUGZ	Raukumara Rang	1.97	267	P	Pn	10 52 17.2	+0.7
RIGZ	Rimuhau	2.06	246	P	Pn	10 52 18.7	+1.0
RIGZ				S	Sn	10 52 44.2	+1.9
PRGZ	Paritu Road	2.07	239	P	Pn	10 52 20.0	+2.2
MWZ	Matawai	2.13	257	P	Pn	10 52 19.3	+0.6
MWZ				P	Pb	10 52 19.3	-4.1
MWZ				S	Sn	10 52 44.3	+0.4
MHGZ	Mahia Peninsul	2.17	234	P	Pn	10 52 20.8	+1.5
MHGZ				S	Sn	10 52 47.9	+2.8
RAGZ	Rawiri	2.25	254	P	Pn	10 52 21.7	+1.3
RAGZ				S	Sn	10 52 48.6	+1.6
KNZ	Kokohu	2.26	239	P	Pn	10 52 21.5	+1.1
KNZ				S	Sn	10 52 48.7	+1.5
SNGZ	Shannon Statio	2.39	247	P	Pn	10 52 23.6	+1.2
URZ	Urewera	2.44	260	P	Pn	10 52 24.4	+1.5
URZ				S	Sn	10 52 51.9	+0.4
WHHZ	Waihua	2.59	242	P	Pn	10 52 26.7	+1.8
RAHZ	Arahi	2.63	246	P	Pn	10 52 27.3	+1.8
MUGZ	Murupara	2.74	257	P	Pn	10 52 28.3	+1.3
MTHZ	Maungataniwha	2.78	249	P	Pn	10 52 29.1	+1.4
ARHZ	Aropaoanui	2.84	240	P	Pn	10 52 30.3	+1.9
OPRZ	Ohinepanea	2.86	270	P	Pn	10 52 29.1	+0.4
NMHZ	Naumai	2.90	244	P	Pn	10 52 30.7	+1.4
MRHZ	Matea Rd	3.09	251	P	Pn	10 52 33.3	+1.3
MCHZ	McNeill Hill	3.13	239	P	Pn	10 52 33.8	+1.4
BKZ	Black Stump Fm	3.15	245	P	Pn	10 52 34.5	+1.8
KAHZ	Kahuranaki	3.19	232	P	Pn	10 52 34.6	+1.2
KWHZ	Kaweka Forest	3.31	241	P	Pn	10 52 35.9	+1.0
KRHZ	Kereru	3.44	238	P	Pn	10 52 37.6	+0.8
BHHZ	Black Hill Sta	3.58	242	P	Pn	10 52 39.7	+1.0
PNHZ	Pukenui	3.69	236	P	Pn	10 52 41.1	+0.8
TSZ	Takapari Road	3.93	235	P	Pn	10 52 44.2	+0.8
DVHZ	Dannevirke	3.93	231	P	Pn	10 52 44.0	+0.5
BFZ	Birch Farm	4.13	226	P	Pn	10 52 45.3	-0.8
PRWZ	Pori Road	4.21	229	P	Pn	10 52 48.0	+0.8
POWZ	Post Office Ro	4.23	232	P	Pn	10 52 48.6	+1.0
TIWZ	Tintock	4.39	228	P	Pn	10 52 49.6	-0.2
MRZ	Mangatainoka R	4.51	231	P	Pn	10 52 51.2	-0.2
MTW	Mount Morrison	4.86	226	P	Pn	10 52 55.5	-0.7
CAW	Cannon Point	5.09	229	P	Pn	10 52 58.6	-0.7
CTZ	Chatham Island	6.33	158	P	Pn	10 53 20.3	+4.0

IDC 21 10:55:02.4±1.9, 7°.24S×124°.98E, h0km, mb3.6/1, mb1 3.9/3, mb1mx3.4/59, mbtmp3.7/3, ML3.1/2, Error ellipse: s-maj=163.0km s-min=30.5km az=60.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.55	145	Pn	Pn	10 58 43.3	+0.1
	0.1nm,0.3s,baz=318,slow=12,SNR=4.5						
WRA				Sn	Sn	11 01 30.0	-6.3
	0.0nm,0.3s,baz=313,slow=22,SNR=3.0						
ASAR	Alice Springs	18.44	153	P	Pn	10 59 19.5	-0.2
	0.1nm,0.3s,baz=330,slow=12,SNR=10						
MKAR	Makanchi Array	65.79	329	P	P	11 05 49.5	0.0
	0.9nm,1.0s,baz=133,slow=6.3,SNR=5.0						

JMA 21 10:55:40.6, 37°.18N×140°.73E, h8km±1km, M1.5, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.10	145	P	Pg	10 55 43.0	+0.1
ONAJ				S	Sg	10 55 44.6	0.0
JFFD	Fukushimafurud	0.16	237	P	Pg	10 55 44.0	0.0
JFFD				S	Sg	10 55 46.3	0.0
JFK	Kawauchi	0.22	32	P	Pg	10 55 45.3	+0.3
JFK				S	Sg	10 55 48.4	+0.3
JFT	Otama	0.46	317	P	Pg	10 55 49.9	+0.3
JFT				S	Sg	10 55 56.3	+0.7
JHO	Hitachi	0.58	193	P	Pg	10 55 51.6	-0.3
JHO				S	Sg	10 55 59.7	+0.2
JMM	Marumori	0.69	4	P	Pg	10 55 53.8	0.0
JFY	Yanaizu	0.85	286	P	Pg	10 55 56.9	0.0
JFY				S	Sg	10 56 08.0	0.0

JMA 21 10:56:08.9±0.2, 36°.81N×138°.60E, h2km±3km, M2.9, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JGK	Kuni	0.25	173	P	Pg	10 56 14.3	+0.6
JGK				S	Sg	10 56 17.9	+1.0
MAT	Matsushiro	0.41	230	P	Pg	10 56 16.6	-0.2
MAT	Matsushiro	0.41	230	P	Pg	10 56 16.6	-0.2
MAT				S	Sg	10 56 21.9	-0.3
JKT	Katashina	0.52	95	P	Pg	10 56 19.1	+0.2
JKT				S	Sg	10 56 26.2	+0.5
JHK	Hiroka	0.55	37	P	Pg	10 56 19.6	+0.1
JHK				S	Sg	10 56 27.0	+0.4
JNG	Nsakai	0.57	225	P	Pg	10 56 19.5	-0.3
JNG				S	Sg	10 56 26.8	-0.4
JAG	Ashikaga	0.79	119	P	Pg	10 56 24.2	+0.2
JAG				S	Sg	10 56 34.5	+0.3
JRY	Ryogami san	0.83	163	P	Pg	10 56 24.4	-0.4
JRY				S	Sg	10 56 35.6	+0.1

DDA ***21*** *11:30:51.1, 39°.18N×30°.12E, h7km, Ml2.5*
ISK ***21*** *11:30:51.2, 39°.22N×30°.08E, h7km, ML2.2/4*
CSEM ***21*** *11:30:52.1±0.2, 39°.24N×30°.09E, h8km, ML2.2, Error ellipse: s-maj=4.2km s-min=3.0km az=145.0*

ISC 21 11:30:51.9±1.1, 39°.23N±0°.03×30°.08E±0°.03, h8km±9km, n24, σ0^{s}.80/38, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUTH	Kutahya	0.17	344	PG	Pg	11 30 55.5	0.0
KUTH				SG	Sg	11 30 58.6	+0.6
KUTH	Kutahya	0.17	344	ePg	Pg	11 30 55.5	0.0
KUTH				eSg	Sg	11 30 58.6	+0.6
GDZ	Gediz	0.49	254	i P	Pg	11 31 01.1	-0.2
GDZ				i S	Sb	11 31 08.6	-1.6
GDZ	Gediz	0.49	254	P	Pg	11 31 01.1	-0.2
GDZ				S	Sb	11 31 08.6	-1.6
TVSB	Tavsanli	0.53	295	PG	Pg	11 31 01.8	-0.3
TVSB				SG	Sg	11 31 09.8	+0.7
TVSB	Tavsanli	0.53	295	ePg	Pg	11 31 01.8	-0.3
TVSB				eSg	Sg	11 31 09.8	+0.7
ESKT	Eskisehir	0.66	64	i P	Pg	11 31 04.2	-0.5
ESKT				i S	Sn	11 31 20.8	+2.4
SEYT	Eskypehyr	0.66	64	P	Pg	11 31 04.2	-0.5
BORA	Eskisehir	0.71	24	PG	Pb	11 31 05.6	-1.0
BORA				SG	Sb	11 31 15.4	-1.2
BORA	Eskisehir	0.71	24	i P	Pb	11 31 05.7	-1.0
BORA				i S	Sb	11 31 16.2	-0.4
BORA	Eskisehir	0.71	24	ePg	Pb	11 31 05.6	-1.0
BORA				eSg	Sb	11 31 15.4	-1.2
BORA				S	Sb	11 31 16.2	-0.4
AUKUT	KUTAHYA	0.73	356	i P	Pg	11 30 55.7	-10
AUKUT				i S	Sg	11 30 59.9	-15
KHAL	Karahalli	0.97	208	i P	Pn	11 31 12.4	+0.4
KHAL				i S	Sb	11 31 24.2	0.0
KHAL	Karahalli	0.97	208	P	Pn	11 31 12.4	+0.4
KHAL				S	Sb	11 31 24.2	0.0
CAVI	Cavuskoy	0.99	349	PG	Pb	11 31 10.9	-0.4
CAVI	Cavuskoy	0.99	349	ePg	Pb	11 31 10.9	-0.4
GULT	Gulveren	1.25	15	PN	Pg	11 31 15.9	+0.1
GULT	Gulveren	1.25	15	ePn	Pg	11 31 15.9	+0.1
AUMIH	MIHALICIK	1.26	59	PN	Pg	11 31 15.9	-0.1
AUMIH	MIHALICIK	1.26	59	ePn	Pg	11 31 15.9	-0.1
DURS	Dursunbey	1.30	287	i P	Pg	11 31 17.1	+0.3
DURS				i S	Sn	11 31 34.5	+0.4
DURS	Dursunbey	1.30	287	P	Pg	11 31 17.1	+0.3
DURS				S	Sn	11 31 34.5	+0.4
KIZT	Kizilcal	1.44	103	PN	Pb	11 31 18.4	-0.7
KIZT	Kizilcal	1.44	103	ePn	Pb	11 31 18.4	-0.7

IDC ***21*** *11:38:56.3±2.8, 15°.16N×92°.97W, h0km, mb3.4/5, mb1 3.8/8, mb1mx3.6/52, mbtmp3.5/8, ML3.3/3, MS3.5/8, Ms1 3.5/8, ms1mx3.2/23, Error ellipse: s-maj=120.2km s-min=25.1km az=42.0*
MEX ***21*** *11:39:00.3±0.7, 14°.70N×93°.61W, h10km, MD4.0*
NEIC ***21*** *11:39:02.7±0.0, 14°.82N×93°.48W, h10km, mb4.2/30, MD3.9(MEX), After MEX.*

ISC 21 11:38:58.6±2.1, 14°.73N±0°.08×93°.50W±0°.05, h8km±11km, n62, σ2^{s}.40/54, mb4.2/22, MS3.5/8, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.00	16	eP	Pg	11 39 16.8	-1.1
PCIG				eS	Sb	11 39 30.7	-1.0
PCIG		1.00	16	eP	Pg	11 39 16.8	-1.1
PCIG				eS	Sg	11 39 29.5	-1.5
CCIG	Comitan	2.03	40	eP	Pn	11 39 32.8	-0.4
CCIG				i S	Sn	11 39 58.5	-0.3
CCIG	Comitan	2.03	40	ePn	Pn	11 39 33.4	+0.2
CCIG				i S	Sn	11 39 56.4	-2.5
CCIG				eSn	Sg	11 40 05.3	+1.6
TGIG		2.07	10	eP	Pn	11 39 33.6	-0.1
TGIG				i S	Sn	11 39 58.5	-1.2
TGIG		2.07	10	eP	Pn	11 39 33.8	+0.1
TGIG				eS	Sn	11 39 56.2	-3.4
CMIG	Matias Romero	2.69	331	Pn	Pn	11 39 39.7	-2.5
	4.3nm,0.3s,baz=173,slow=13,SNR=28						
CMIG				Sn	Sn	11 40 12.8	-2.3
	12nm,0.3s,baz=112,slow=14,SNR=6.6						
VHO	Vista Hermosa	3.88	307	i P	Pn	11 39 57.6	-1.1
VHO				i S	Sn	11 40 41.2	-3.5
TLIG	Tlapa	5.62	301	ePn	Pn	11 40 21.4	-1.2
TLIG				eSn	Sn	11 41 27.9	+0.4
ESTN	Estel	7.11	102	ePn	Pn	11 40 41.9	-1.2
MYIG	MØrida	7.15	30	ePn	Pn	11 40 49.5	+5.9
MOIG	Morelia	8.84	305	ePn	Pn	11 41 08.1	+1.2
JTS	JuntasAbangare	9.44	117	Pn	Pn	11 41 09.6	-5.5
	0.7nm,0.3s,baz=20,slow=12,SNR=3.5						
JTS				Lg	Lg	11 43 35.5	
	0.3nm,0.3s,baz=189,slow=20,SNR=4.8						
JTS	JuntasAbangare	9.44	117	ePn	Pn	11 41 09.2	-5.9
	19nm,0.8s						
JTS				ePcP	PcP	11 47 31.0	-2.8
JCT	Junction City	16.71	341	ePn	P	11 42 56.7	+1.1
	4.8nm,0.9s						
TX31	Lajitas Ar. Si	17.30	329	ePn	P	11 43 04.9	+2.8
TXAR	Lajitas Array	17.30	329	P	Pn	11 43 00.4	-0.3
	0.0nm,0.3s,baz=119,slow=7.3,SNR=5.7						
348A	Jackson	17.38	16	ePn	P	11 43 05.9	+3.1
	48nm,0.6s						
VBMS	Vicksburg	17.62	8	eP	P	11 43 08.8	+3.3
	56nm,1.5s						
656A	Willston	17.74	33	ePn	P	11 43 09.0	+2.1
	76nm,1.5s						
140A	Cam and Jess,	17.83	360	eP	P	11 43 11.4	+3.6
	16nm,0.6s						
ABTX	Abilene, Hawle	18.67	344	eP	Pn	11 43 21.8	+4.4
	6.9nm,1.1s						
Z45A	Winona	18.88	10	eP	Pn	11 43 23.5	+3.6
	21nm,0.8s						
152A	Waverly Hall	19.57	23	eP	Pn	11 43 30.0	+1.8
	9.9nm,1.1s						
MIAR	Mount Ida	19.73	360	eP	Pn	11 43 31.5	+1.4
	13nm,1.1s						
MNTX	Cornudas Mount	20.08	329	eP	Pn	11 43 34.7	+0.3
	1.8nm,0.8s						
PLAL	Pickwick Lake	20.75	13	eP	Pn	11 43 43.8	+1.7
	4.7nm,0.8s						
Y52A	Lilburn	20.88	23	eP	Pn	11 43 44.5	+0.8
	10nm,1.0s						
MSTX	Muleshoe	20.91	338	eP	Pn	11 43 45.0	+0.8
	5.7nm,0.9s						
ROSC	El Rosal	21.29	116	eP	P	11 43 42.9	-3.3
	8.4nm,0.6s						
AMTX	Amarillo	21.38	341	eP	P	11 43 50.4	+3.7
	9.4nm,0.7s						
WVT	Waverly	21.91	12	eP	P	11 43 55.9	+3.7
	12nm,1.4s						
RUSC	La Rusia	21.91	112	eP	P	11 43 46.9	-6.1
	3.8nm,0.9s						
TKL	Tuckaleechee C	22.59	21	LR	LR	11 54 02.4	
	comp=Z,55nm,19.5s,baz=225,slow=41						
ANMO	Albuquerque	23.26	332	P	P	11 44 03.9	-2.9
	0.4nm,0.4s,baz=130,slow=16,SNR=3.2						
TUC	Tucson	23.55	321	eP	P	11 44 09.4	-0.1
	3.8nm,1.0s						
T25A	Trinidad	24.34	338	eP	P	11 44 17.5	+0.3
	8.3nm,0.9s						
SDCO	Great Sand Dun	25.27	337	eP	P	11 44 27.8	+2.0
	3.2nm,1.1s						
SJG	San Juan	26.44	79	LR	LR	11 54 06.1	
	comp=Z,36nm,18.4s,baz=258,slow=35						
URVA	University of	26.80	29	eP	P	11 44 39.5	+0.3
PV01	Paradox Valley	26.86	333	eP	P	11 44 39.6	-0.4
PV12	Saucer Basin,	27.11	333	eP	P	11 44 42.0	-0.3
	9.2nm,1.3s						
ISCO	Idaho Springs	27.14	339	eP	P	11 44 43.4	+0.7
	14nm,1.9s						
RSSD	Black Hills	30.64	345	eP	P	11 45 19.3	+5.7
	3.3nm,0.8s						
PDAR	Pinedale Array	31.16	337	P	P	11 45 16.6	-1.7
	0.1nm,0.5s,baz=132,slow=3.9,SNR=2.6						
PDAR				LR	LR	12 01 04.1	
	comp=Z,33nm,19.7s,baz=149,slow=43						
REDW	Red Top Meadow	32.17	336	eP	P	11 45 32.4	+5.2
	6.8nm,1.1s						
NV01	Mina Array Sit	32.19	322	eP	P	11 45 26.5	-0.9
NVAR	Mina Array Bea	32.19	322	P	P	11 45 26.1	-1.3
	0.7nm,0.8s,baz=136,slow=8.3,SNR=6.7						
NVAR				LR	LR	12 00 07.0	
	comp=Z,146nm,18.6s,baz=235,slow=40						
SNOW	Snow King Moun	32.22	336	eP	P	11 45 33.2	+5.6
	15nm,1.4s						
LOHW	Long Hollow	32.29	336	eP	P	11 45 32.7	+4.5
	4.9nm,1.3s						
TPAW	Teton Pass	32.32	336	eP	P	11 45 33.5	+5.0
	3.6nm,0.9s						
HLID	Hailey	33.84	332	eP	P	11 45 45.5	+3.8
	2.1nm,1.1s						
MCMT	McKenzie Canyo	34.19	335	eP	P	11 45 49.2	+4.4
J08A	Circle Bar Ran	35.65	328	eP	P	11 46 01.5	+4.3
	3.0nm,0.8s						
YBH	Yreka Blue Hor	36.90	323	LR	LR	12 03 14.3	
	comp=Z,70nm,18.2s,baz=154,slow=40						
F10A	Beach Ranch, E	36.98	332	eP	P	11 46 06.5	-2.1
	3.4nm,0.8s						
SCHQ	Schefferville	45.06	22	LR	LR	12 07 40.5	
	comp=Z,112nm,18.1s,baz=240,slow=39						
YKA	Yellowknife Ar	49.99	347	P	P	11 47 49.0	-4.0
	1.8nm,0.8s,baz=150,slow=7.7,SNR=7.0						
ILAR	Eielson Array	61.60	337	P	P	11 49 14.1	-2.3
	0.3nm,0.8s,baz=156,slow=4.7,SNR=3.4						
SPITS	Spitsbergen Ar	79.66	11	LR	LR	12 28 04.5	
	comp=Z,47nm,20.0s,baz=250,slow=37						
NOA	NORSAR Array B	84.20	28	LR	LR	12 27 34.0	
	comp=Z,22nm,20.5s,baz=290,slow=35						
CMAR	Chiang Mai Arr	144.81	339	PKP	PKPab	11 58 35.9	-0.1
	1.0nm,0.3s,baz=295,slow=2.6,SNR=4.4						

ISK ***21*** *11:44:47.1, 40°.51N×37°.27E, h5km, ML2.3/5*
CSEM ***21*** *11:44:48.3±0.2, 40°.53N×37°.27E, h8km, ML2.3, Error ellipse: s-maj=4.7km s-min=3.4km az=12.0*
DDA ***21*** *11:44:48.5, 40°.54N×37°.35E, h7km, Ml2.6*

ISC 21 11:44:48.4±1.4, 40°.53N±0°.03×37°.26E±0°.02, h3km±11km, n23, σ1^{s}.01/39, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TOKT	Tokat	0.58	249	PG	Pg	11 44 59.4	-0.1
TOKT				SG	Sb	11 45 08.5	-1.4
TOKT	Tokat	0.58	249	ePg	Pg	11 44 59.4	-0.1
TOKT				eSg	Sb	11 45 08.5	-1.4
SVSK	Karacayir	0.64	198	PG	Pg	11 45 00.0	-0.7
SVSK				SG	Sb	11 45 10.1	-1.4
SVSK	Karacayir	0.64	198	ePg	Pg	11 45 00.0	-0.7
SVSK				eSg	Sb	11 45 10.1	-1.4
SUSE	Susehri	0.79	114	i P	Pg	11 45 03.1	-0.4
SUSE				i S	Sb	11 45 15.1	-0.8
SUSE	Susehri	0.79	114	P	Pg	11 45 03.1	-0.4
SUSE				S	Sb	11 45 15.1	-0.8
KVT	Kavak	1.07	301	PN	Pg	11 45 09.0	+0.1
KVT				SN	Sn	11 45 24.6	-1.1
KVT	Kavak	1.07	301	ePn	Pg	11 45 09.0	+0.1
KVT				eSn	Sn	11 45 24.6	-1.1
SAMS	Samsun-Alacam	1.16	316	i P	Pn	11 45 11.1	-0.3
SAMS				i S	Sn	11 45 29.2	+1.4
SAMS	Samsun-Alacam	1.16	316	P	Pn	11 45 11.1	-0.3
SAMS				S	Sn	11 45 29.2	+1.4
ESPY	Espiye-Giresun	1.18	70	PN	Pg	11 45 10.8	-0.2
ESPY	Espiye-Giresun	1.18	70	ePn	Pg	11 45 10.8	-0.2
CUSAR	Sarkisla-SIVAS	1.36	215	i P	Pn	11 45 13.9	-0.4
CUSAR				i S	Sn	11 45 35.4	+2.5
CUSAR	Sarkisla-SIVAS	1.36	215	P	Pn	11 45 13.9	-0.4
CUSAR				S	Sn	11 45 35.3	+2.5
KELT	Kelkit	1.57	103	i P	Pn	11 45 16.5	-0.8
KELT				i S	Sb	11 45 38.2	-0.3
KELT	Kelkit	1.57	103	P	Pn	11 45 16.5	-0.8
KELT				S	Sb	11 45 38.2	-0.3
KEMA	Kemaliye	1.58	143	i P	Pn	11 45 16.9	-0.4
KEMA				i S	Sg	11 45 40.4	+1.3
KEMA	Kemaliye	1.58	143	P	Pn	11 45 16.9	-0.4
KEMA				S	Sg	11 45 40.3	+1.3
YOZ	Yozgat	1.73	240	PN	Pn	11 45 19.3	-0.1
YOZ	Yozgat	1.73	240	ePn	Pn	11 45 19.3	-0.1
SNOP	Sinop	2.15	315	PN	Pn	11 45 25.3	+0.3
SNOP	Sinop	2.15	315	ePn	Pn	11 45 25.3	+0.3
SARI	SarD1z-Kayseri	2.22	197	PN	Pn	11 45 26.0	-0.1

ISCJB ***21*** *11:47:36.0±0.4, 36°.16N±0°.04×137°.21E±0°.06, h274km±3km, mb3.7/8, Error ellipse: s-maj=7.6km s-min=6.4km az=13.6*
JMA ***21*** *11:47:36.7±0.1, 36°.11N×137°.26E, h271km±1km, M3.3*
IDC ***21*** *11:47:36.7±0.6, 36°.15N×137°.17E, h270km±7km, mb3.2/6, mb1 3.4/12, mb1mx3.1/72, mbtmp3.9/12, Error ellipse: s-maj=14.9km s-min=9.6km az=70.0*

ISC 21 11:47:36.6±0.7, 36°.21N±0°.05×137°.23E±0°.06, h269km±6km, n31, σ1^{s}.48/46, mb3.5/8, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JGN	Niukaw	0.07	77	P	Pn	11 48 11.4	+0.3
JGN				S	S	11 48 38.2	-0.1
JKG	Kaga	0.73	276	P	Pn	11 48 13.0	+0.6
JKG				eS	S	11 48 41.2	+0.5
MAT	Matsushiro	0.86	67	P	Pn	11 48 13.6	+0.6
MAT				eS	S	11 48 42.1	+0.4
MAT	Matsushiro	0.86	67	P	Pn	11 48 13.6	+0.6
MAT				S	S	11 48 41.9	+0.2
MJAR	Matsushiro Arr	0.86	67	P	Pn	11 48 13.8	+0.8
	23nm,0.3s,baz=248,slow=7.7,SNR=491						
MJAR				S	S	11 48 41.2	-0.6
	1.0nm,0.3s,baz=137,slow=35,SNR=6.9						
JSZ	Suzu	1.24	5	P	Pn	11 48 15.7	+0.7
JSZ				S	S	11 48 46.2	+0.8
JYN	Shimob	1.28	123	P	Pn	11 48 15.5	+0.1
JRY	Ryogami san	1.37	97	P	Pn	11 48 16.5	+0.6
JRY				S	S	11 48 46.1	-0.8
JHG	Hegura jima	1.66	351	P	Pn	11 48 19.1	+1.3
JHG				eS	S	11 48 52.7	+2.2
JWT	Wachi	1.75	239	P	Pn	11 48 18.5	-0.2
JWT				eS	S	11 48 50.3	-1.6
JOD2	Odawara 2	1.78	121	P	Pn	11 48 19.0	+0.1
JOD2				S	S	11 48 52.3	-0.1
JAG	Ashikaga	1.81	82	P	Pn	11 48 19.4	+0.3
JAG				eS	S	11 48 52.3	-0.4

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIE	Ise	1.86	193	P	Pn	11 48 19.6	0.0
JIE				S	S	11 48 52.3	-1.3
JSD	Sado	2.00	24	P	Pn	11 48 21.7	+1.1
JSD				eS	S	11 48 56.2	+0.6
JNS	Sasagawa	2.32	45	P	Pn	11 48 24.3	+0.8
JWY	Kouya	2.39	215	P	Pn	11 48 24.2	-0.2
JWY				eS	S	11 49 00.5	-1.8
JHJ	Hachijo jima 2	3.73	145	P	Pn	11 48 40.4	+2.0
	4.4nm,0.3s,baz=248,slow=19,SNR=2.8						
JHJ				S	S	11 49 26.7	-0.7
	35nm,0.3s,baz=84,slow=23,SNR=10						
JNU	Nakatsue	6.07	241	P	Pn	11 49 06.0	-0.2
	2.5nm,0.3s,baz=160,slow=2.0,SNR=26						
KSRS	Korea Array	7.57	282	P	Pn	11 49 25.9	+1.4
	0.5nm,0.3s,baz=103,slow=12,SNR=23						
ASAJ	Asahikawa	8.90	26	P	Pn	11 49 40.2	-0.9
	2.8nm,0.3s,baz=231,slow=12,SNR=36						
ASAJ				S	S	11 51 14.9	-7.1
	0.9nm,0.3s,baz=72,slow=20,SNR=5.8						
USRK	Ussuriysk Ar.	8.93	335	P	Pn	11 49 42.7	+1.3
	baz=148,slow=11						
JCJ	Chichijima	10.01	154	P	Pn	11 49 48.2	-7.1
	baz=252,slow=16						
JCJ				S	S	11 51 32.3	-16
	baz=343,slow=19						
KLR	Kul'dur	13.62	345	P	Pn	11 50 39.0	-0.4
	0.1nm,0.3s,baz=147,slow=10,SNR=43						
GUMO	Guam	23.54	161	P	P	11 52 23.6	+0.4
	59nm,0.7s,baz=145,slow=5.5,SNR=7.8						
MKAR	Makanchi Array	41.71	302	P	P	11 54 60.0	+0.6
	0.5nm,0.6s,baz=86,slow=9.8,SNR=3.4						
KURBB	Kurchatov Arra	43.86	308	P	P	11 55 14.4	-2.1
	1.5nm,0.9s,baz=84,slow=8.5,SNR=5.9						
ILAR	Eielson Array	51.98	32	P	P	11 56 19.4	+1.2
	0.6nm,0.8s,baz=274,slow=6.7,SNR=9.0						
WRA	Warramunga Arr	55.91	183	P	P	11 56 46.0	-1.0
	7.6nm,0.4s,baz=359,slow=7.6,SNR=187						
ASAR	Alice Springs	59.63	184	P	P	11 57 12.2	-0.5
	1.8nm,0.5s,baz=15,slow=13,SNR=53						
PDAR	Pinedale Array	80.61	43	P	P	11 59 19.1	-0.6
	0.4nm,0.8s,baz=264,slow=1.5,SNR=3.8						
TXAR	Lajitas Array	93.26	50	P	P	12 00 22.7	+1.6
	0.5nm,0.6s,baz=290,slow=2.5,SNR=10.0						

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*IDC **21** 11:54:19.9±3.0, 35°.02S×179°.37W, h0^{km}, mb4.0/2, mb1 4.2/3, mb1mx3.7/40, mbtmp4.0/3, ML3.8/1, MS3.4/3, Ms1 3.4/3, ms1mx2.9/41, Error ellipse: s-maj=71.5km s-min=35.5km az=125.0*

*ISCJB **21** 11:54:21.2±1.1, 35°.17S±0°.08×179°.0W±0°.2, h43^{km}, mb3.8/2, MS3.2/2, Error ellipse: s-maj=19.4km s-min=7.6km az=25.9*

*WEL **21** 11:54:22.6±1.0, 35°S±9°×17°9W±1°2, h5^{km}, ML4.4/19*

ISC 21 11:54:24.0±1.9, 35°.19S±0°.10×179°.0W±0°.2, h43^{km}, n34, σ0^{s}.95/42, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PKGZ	Pakihiroa	3.58	220	P	Pn	11 55 16.4	-0.7
PKGZ				S	Sn	11 55 58.5	+0.4
PUZ	Puketiti	3.63	217	P	Pn	11 55 17.4	-0.3
PUZ				S	Sn	11 55 60.0	+0.8
HAZ	Te Kaha	3.65	224	P	Pn	11 55 17.8	-0.1
HAZ				S	Sn	11 56 01.8	+2.2
TWGZ	Tauwhareparae	3.84	218	P	Pn	11 55 20.8	+0.1
TWGZ				S	Sn	11 56 06.7	+2.1
RUGZ	Raukumara Rang	3.85	223	P	Pn	11 55 20.5	-0.3
CNGZ	Carnagh Statio	3.98	213	P	Pn	11 55 22.7	+0.2
TKGZ	Te Karaka	4.11	217	P	Pn	11 55 25.8	+1.5
TKGZ				S	Sn	11 56 12.1	+1.0
MWZ	Matawai	4.20	221	P	Pn	11 55 24.9	-0.6
MWZ				S	Sn	11 56 13.2	-0.1
RIGZ	Rimuhau	4.37	215	P	Pn	11 55 26.8	-1.0
URZ	Urewera	4.38	224	Pn	Pn	11 55 26.4	-1.5
	5.2nm,0.3s,baz=261,slow=5.0,SNR=22						
URZ				Sn	Sn	11 56 15.9	-1.7
	5.3nm,0.3s,baz=2.1,slow=22,SNR=9.7						
URZ	Urewera	4.38	224	P	Pn	11 55 27.0	-1.0
URZ				S	Sn	11 56 17.6	0.0
RAGZ	Rawiri	4.38	220	P	Pn	11 55 27.1	-0.9
RAGZ				S	Sn	11 56 18.1	+0.3
OPRZ	Ohinepanea	4.45	232	P	Pn	11 55 27.9	-1.1
KUZ	Kuaotunu	4.55	248	P	Pn	11 55 30.1	-0.3
SNGZ	Shannon Statio	4.63	218	P	Pn	11 55 31.1	-0.4
KNZ	Kokohu	4.66	214	P	Pn	11 55 30.4	-1.4
MHGZ	Mahia Peninsul	4.67	211	P	Pn	11 55 31.9	0.0
RTZ	Ruatahuna	4.70	222	P	Pn	11 55 32.2	-0.2
MUGZ	Murupara	4.72	225	P	Pn	11 55 31.7	-1.0
RAHZ	Arahi	4.86	219	P	Pn	11 55 35.3	+0.6
RAHZ				S	Sn	11 56 30.5	+0.9
MTHZ	Maungataniwha	4.94	221	P	Pn	11 55 35.4	-0.4
MKAZ	Moumakai	5.09	246	P	Pn	11 55 38.0	+0.2
NMHZ	Naumai	5.14	219	P	Pn	11 55 39.0	+0.4
MRHZ	Matea Rd	5.17	224	P	Pn	11 55 38.0	-0.8
ARHZ	Aropaoanui	5.17	217	P	Pn	11 55 38.8	-0.1
MCHZ	McNeill Hill	5.46	218	P	Pn	11 55 41.1	-1.7
MCHZ				S	Sn	11 56 43.8	-0.6
WCZ	Waipu Caves	5.47	260	P	Pn	11 55 43.3	+0.3
KWHZ	Kaweka Forest	5.58	219	P	Pn	11 55 44.4	-0.2
DZM	Mont Dzumac	18.24	312	LR	LR	12 04 23.5	
	comp=Z,330nm,18.8s,baz=180,slow=34						
HNR	Honiara	32.04	318	LR	LR	12 11 31.8	
	comp=Z,50nm,19.0s,baz=216,slow=32						
ASAR	Alice Springs	42.24	273	P	P	12 02 12.9	-0.4
	2.6nm,0.8s,baz=112,slow=7.2,SNR=19						
WRA	Warramunga Arr	43.66	278	P	P	12 02 23.7	-1.0
	1.4nm,0.8s,baz=118,slow=7.8,SNR=11						
RPN	Rapa Nui	59.08	103	LR	LR	12 24 50.1	
	comp=Z,16nm,20.4s,baz=154,slow=31						
FINES	FINESS Array B	149.27	337	PKPbc	PKPbc	12 14 08.3	+1.2
	2.1nm,0.8s,baz=94,slow=4.2,SNR=6.0						

IDC 21 11:57:28.8±999.0, 47°.54N×46°.37E, h0^{km}, Error ellipse: s-maj=426.4km s-min=202.4km az=131.0, Ukraine-Moldova-Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	10.77	332	i		13 07 30.0	
	baz=144,slow=314,SNR=1.3						
I26DE	FREYUNG INFRAS	21.72	286	i		14 08 20.0	
	baz=82,slow=300,SNR=1.5						
I48TN	KESRA INFRASON	29.78	260	i		15 01 00.0	
	baz=56,slow=312,SNR=0.6						

MEX 21 11:57:39.5±0.5, 16°.53N×98°.50W, h5^{km}±11^{km}, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.38	111	eP	Pg	11 57 46.6	-0.3
PNIG				eS	Sg	11 57 51.8	-0.1
TLIG	Tlapa	1.03	356	eP	Pg	11 57 56.6	-2.8
TLIG				eS	Sg	11 58 10.0	-2.7
VHO	Vista Hermosa	1.78	72	i P	Pn	11 58 06.7	-4.3
VHO				i S	Sn	11 58 29.5	-4.7
PLIG	Platanillo	2.09	333	i P	Pn	11 58 12.1	-3.1
PLIG				eS	Sn	11 58 36.6	-5.1

RSNC 21 12:00:56.1±0.9, 5°.77N×76°.04W, h23^{km}±3^{km}, ML3.6, Mw3.4, 3D, Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HELC	Santa Helena	0.66	50	⇓iP	Pb	12 01 08.1	-1.0
HELC				eS	Sb	12 01 18.1	+0.1
HELC				i		12 01 20.0	
	comp=Z,2µm,0.4s						
GUYC	Guyana, Colomb	0.84	130	eP	Pb	12 01 11.9	-0.5
GUYC				i		12 01 13.1	
	comp=Z,4µm,0.7s						
GUYC				eS	Sn	12 01 24.1	-0.7
PLMC	San Jos˜' del	0.89	196	eP	Pb	12 01 12.1	-0.9
PLMC				eS	Sb	12 01 24.4	-0.1
NORC	Norcasia	1.18	100	i P	Pn	12 01 16.1	-1.2
NORC				eS	Sn	12 01 31.3	-1.3
DBBC	Dabeiba	1.25	352	eP	Pn	12 01 17.0	-1.3
TOLC	Tolima	1.38	149	eP	Pn	12 01 19.9	-0.2
ANIL	Santa Ana	1.42	154	eP	Pn	12 01 20.3	-0.4
ANIL				eS	Sn	12 01 37.4	-1.4
SOLC	Bahia Solano	1.44	288	eP	Pn	12 01 20.0	-0.7
SOLC				eS	Sn	12 01 37.9	-1.1
PTBC	PUERTO BERRIO,	1.75	64	⇓iP	Pn	12 01 24.4	-0.6
PTBC				eS	Sn	12 01 45.5	-1.1
PTBC				i		12 01 48.2	
	comp=Z,253nm,0.3s						
YOTC	Yotoco, Valle	1.80	190	⇓iP	Pn	12 01 24.5	-1.3
YOTC				eS	Sn	12 01 47.8	-0.3
YOTC				i		12 01 49.2	
	comp=Z,448nm,0.4s						
ZARC	Zaragoza, Cauc	2.07	34	eP	Pn	12 01 28.8	-0.8
ZARC				eS	Sn	12 01 54.0	-0.7
HORQ	Saladito	2.35	195	eP	Pn	12 01 31.8	-1.8
HORQ				eS	Sn	12 02 00.6	-1.2
MARP	Paez Belalcaza	2.91	178	eP	Pn	12 01 41.4	+0.2
MARP				eS	Sn	12 02 15.6	0.0
POPC	Popayan, Colom	3.27	191	eP	Pn	12 01 46.0	-0.2
POPC				i		12 01 57.5	
	comp=Z,70nm,0.2s						
OCAC	Ocana	3.65	48	eP	Pn	12 01 51.2	-0.1
OCAC				i		12 01 53.2	
	comp=Z,296nm,0.2s						
OCAC				eS	Sn	12 02 33.1	-0.6

ISC 21 12:15:25.4±3.2, 42°.5N±0°.3×42°.9E±0°.2, h6^{km}, n5, σ1^{s}.12/10, Western Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONI	Oni	0.40	79	P	Pn	12 15 37.2	-0.6
ONI				S	Sb	12 15 42.8	+1.4
DBOC	Borcka	1.50	219	i P	Pn	12 15 53.2	+0.4
DBOC				i S	Sn	12 16 11.6	-1.2
ARTV	Artvin	1.52	209	i P	Pn	12 15 53.4	+0.1
ARTV				i S	Sn	12 16 12.0	-1.6
DAGI	Agillar	1.62	208	i P	Pn	12 15 55.4	+0.8
DAGI				i S	Sn	12 16 15.0	-0.9
DBAD	Bademkaya	1.75	212	i P	Pn	12 15 57.4	+0.9
DBAD				i S	Sn	12 16 18.7	-0.5

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*DDA **21** 12:17:39.9, 35°.18N×27°.66E, h20^{km}, Ml3.1*

*ISCJB **21** 12:17:44.8±1.2, 35°.47N±0°.06×27°.86E±0°.05, h3^{km}±7^{km}, Error ellipse: s-maj=11.6km s-min=4.7km az=146.3*

*ISK **21** 12:17:45.4, 35°.51N×27°.88E, h10^{km}, ML2.9/9*

*CSEM **21** 12:17:46.1±0.4, 35°.52N×27°.84E, h10^{km}, ML2.3, Error ellipse: s-maj=10.9km s-min=3.9km az=148.0*

*ATH **21** 12:17:46.1, 35°.60N×27°.74E, h20^{km}±3^{km}, ML2.3/3, Error ellipse: s-maj=11.8km s-min=1.8km az=322.0*

ISC 21 12:17:44.3±1.4, 35°.41N±0°.05×27°.92E±0°.04, h15^{km}±9^{km}, n47, σ1^{s}.35/69, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KARP	Karpathos	0.63	283	PG	Pb	12 17 57.5	+0.4
KARP				SG	Sb	12 18 05.9	+0.1
KARP	Karpathos	0.63	283	P	Pg	12 17 56.4	-0.3
KARP				S	Sg	12 18 03.0	-2.2
KARP				AML	AML	12 18 08.5	
	comp=N,802µm,0.2s						
KARP				AML	AML	12 18 09.4	
	comp=E,724µm,0.2s						
KARP	Karpathos	0.63	283	P	Pg	12 17 56.0	-0.7
KARP	Karpathos	0.63	283	ePg	Pb	12 17 57.5	+0.4
KARP				S	Sg	12 18 02.8	-2.4
KARP				eSg	Sb	12 18 05.9	+0.1
ARG	Arkhangelos	0.82	12	PG	Pb	12 18 00.3	+0.1
ARG				SG	Sb	12 18 10.7	-0.4
ARG	Arkhangelos	0.82	12	P	Pb	12 17 59.8	-0.4
ARG				S	Sb	12 18 07.1	-4.0
ARG				AML	AML	12 18 16.9	
	comp=E,539µm,0.3s						
ARG				AML	AML	12 18 18.1	
	comp=N,614µm,0.7s						
ARG	Arkhangelos	0.82	12	P	Pb	12 17 59.6	-0.6
ARG	Arkhangelos	0.82	12	ePg	Pb	12 18 00.3	+0.1
ARG				S	Sb	12 18 08.1	-3.0
ARG				eSg	Sb	12 18 10.7	-0.4
MRSB	Marmaris-Mugla	1.32	10	PN	Pb	12 18 09.2	+0.4
MRSB	Marmaris-Mugla	1.32	10	ePn	Pb	12 18 09.2	+0.4
DAT	Datca	1.34	348	PN	Pb	12 18 09.3	+0.1
DAT				SN	Sg	12 18 27.4	-0.3
DAT	Datca	1.34	348	i P	Pn	12 18 09.1	+0.5
DAT				i S	Sg	12 18 30.5	+2.8
DAT	Datca	1.34	348	ePn	Pb	12 18 09.3	+0.1
DAT				eSn	Sg	12 18 27.4	-0.3
DAT				S	Sg	12 18 30.5	+2.8
ZKR	Zakros	1.43	259	P	Pn	12 18 10.2	+0.6
ZKR				S	Sg	12 18 29.9	-0.4
ZKR				AML	AML	12 18 39.0	
	comp=N,184µm,0.4s						
ZKR				AML	AML	12 18 39.5	
	comp=E,442µm,0.6s						
ZKR	Zakros	1.43	259	P	Pb	12 18 10.8	+0.3
ZKR				S	Sg	12 18 29.8	-0.4
DALY	Dalyan (Mu˜la	1.52	23	PN	Pb	12 18 12.4	+0.2
DALY	Dalyan (Mu˜la	1.52	23	i P	Pg	12 18 13.5	-0.1
DALY				i S	Sg	12 18 38.3	+4.9
DALY	Dalyan (Mu˜la	1.52	23	ePn	Pb	12 18 12.4	+0.2
DALY	Dalyan (Mu˜la	1.52	23	P	Pg	12 18 13.5	-0.1
FETY	Fethiye	1.54	37	PN	Pb	12 18 13.1	+0.5
FETY	Fethiye	1.54	37	ePn	Pb	12 18 13.1	+0.5
FETY	Fethiye	1.54	37	P	Pb	12 18 13.4	+0.8
TURN	Turunc	1.56	21	PN	Pn	12 18 10.1	-1.3
TURN	Turunc	1.56	21	i P	Pn	12 18 09.9	-1.6
TURN				i S	Sn	12 18 29.8	-1.6
TURN	Turunc	1.56	21	ePn	Pn	12 18 10.1	-1.3
TURN				S	Sn	12 18 29.8	-1.6
AKAS	Kas	1.60	59	PN	Pb	12 18 14.4	+0.9
AKAS	Kas	1.60	59	ePn	Pb	12 18 14.4	+0.9
BODT	Bodrum	1.72	344	PN	Pn	12 18 14.5	+0.8
BODT	Bodrum	1.72	344	ePn	Pn	12 18 14.5	+0.8
YER	Yerkesik	1.75	10	PN	Pn	12 18 15.2	+1.1
YER	Yerkesik	1.75	10	ePn	Pn	12 18 15.2	+1.1
MLSB	Milas	1.88	357	PN	Pn	12 18 17.0	+1.1
MLSB	Milas	1.88	357	ePn	Pn	12 18 17.0	+1.1
NPS	Neapolis	1.89	266	P	Pb	12 18 19.8	+1.3
NPS	Neapolis	1.89	266	P	Pb	12 18 18.8	+0.3
LAST	Lasithi	2.01	264	P	Pn	12 18 18.6	+0.8
LAST				S	Sn	12 18 42.3	-0.4
LAST	Lasithi	2.01	264	P	Pn	12 18 19.1	+1.3
LAST				S	Sn	12 18 43.3	+0.6
TAVA	DENIZLI_Tavas	2.20	21	i P	Pb	12 18 22.8	-1.0
TAVA				i S	Sg	12 18 54.2	-0.9
TAVA	DENIZLI_Tavas	2.20	21	P	Pb	12 18 22.8	-1.0
AYDN	Tasoluk	2.25	359	i P	Pn	12 18 22.5	+1.5
AYDN				i S	Sb	12 18 53.3	+1.1
AYDN	Tasoluk	2.25	359	P	Pn	12 18 22.5	+1.5
AYDN				S	Sb	12 18 53.3	+1.1
GOLH	Golhisar	2.25	36	i P	Pb	12 18 24.2	-0.5
GOLH	Golhisar	2.25	36	P	Pb	12 18 24.2	-0.5
AYDB	Zeytinkoy-Aydi	2.53	359	PN	Pn	12 18 26.3	+1.4
AYDB	Zeytinkoy-Aydi	2.53	359	ePn	Pn	12 18 26.3	+1.4
APE	Apeiranthos	2.54	311	PN	Pn	12 18 25.8	+0.8
APE	Apeiranthos	2.54	311	ePn	Pn	12 18 25.8	+0.8

IDC 21 12:34:10.4±8.3, 22°.28N×13°.31W, h0^{km}, mb1 3.5/2, mb1mx3.1/57, mbtmp3.5/2, ML3.6/1, Error ellipse: s-maj=132.3km s-min=69.0km az=36.0, Western Sahara

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I11CV	MAIO ISLAND IN	11.67	235	i		13 41 50.0	
	baz=51,slow=312,SNR=0.7						
KOWA	Kowa	11.73	130	Pn	Pn	12 37 00.6	+1.4
	0.4nm,0.3s,baz=324,slow=17,SNR=2.9						
KOWA				Sn	Sn	12 39 00.8	-10
	0.3nm,0.3s,baz=192,slow=18,SNR=2.4						
KOWA				Lg	Lg	12 40 23.1	
	0.2nm,0.3s,baz=47,slow=19,SNR=2.7						
TORD	Torodi Ar. Bea	16.92	120	Pn	Pn	12 38 07.6	-1.2
	baz=311,slow=11						
TORD				Sn	Sn	12 41 17.7	+0.1
	baz=303,slow=23						
I42PT	GRACIOSA ISLAN	20.90	326	i		14 36 40.0	
	baz=139,slow=320,SNR=0.4						

WEL 21 12:39:19.1, 38°S±14°×18°0W±°, h33^{km}, ML3.9/21, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.39	272	P	Pn	12 39 42.6	+0.5
WMGZ				S	Sn	12 39 59.9	+0.6
MXZ	Matakaoa Point	1.51	282	P	Pn	12 39 44.1	+0.3
PUZ	Puketiti	1.52	263	P	Pn	12 39 44.6	+0.6
PUZ				S	Sn	12 40 03.3	+0.7
PKGZ	Pakihiroa	1.65	269	P	Pn	12 39 46.2	+0.3
PKGZ				S	Sn	12 40 05.9	0.0
CNGZ	Carnagh Statio	1.65	248	P	Pn	12 39 47.3	+1.5
TWGZ	Tauwhareparae	1.75	260	P	Pn	12 39 48.0	+0.9
TWGZ				S	Sn	12 40 09.6	+1.3
HAZ	Te Kaha	1.89	273	P	Pn	12 39 49.6	+0.6
TKGZ	Te Karaka	1.91	253	P	Pn	12 39 50.5	+1.2
TKGZ				S	Sn	12 40 13.9	+1.8
RUGZ	Raukumara Rang	1.97	267	P	Pn	12 39 50.9	+0.7
RIGZ	Rimuhau	2.06	246	P	Pn	12 39 52.4	+1.0
RIGZ				S	Sn	12 40 17.6	+1.6
PRGZ	Paritu Road	2.07	239	P	Pn	12 39 53.1	+1.5
PRGZ				S	Sn	12 40 18.5	+2.3
MWZ	Matawai	2.13	257	P	Pn	12 39 52.9	+0.6
MWZ				S	Sn	12 40 18.6	+0.9
MHGZ	Mahia Peninsul	2.17	234	P	Pn	12 39 54.5	+1.5
MHGZ				S	Sb	12 40 21.7	-2.7
RAGZ	Rawiri	2.25	254	P	Pn	12 39 55.2	+1.1
KNZ	Kokohu	2.26	239	P	Pn	12 39 55.0	+0.9
SNGZ	Shannon Statio	2.39	247	P	Pn	12 39 57.2	+1.2
URZ	Urewera	2.44	260	P	Pn	12 39 57.9	+1.3
WHHZ	Waihua	2.59	242	P	Pn	12 40 00.1	+1.4
RTZ	Ruatahuna	2.61	253	P	Pn	12 40 00.8	+1.8
RAHZ	Arahi	2.63	246	P	Pn	12 40 00.7	+1.5
MUGZ	Murupara	2.74	257	P	Pn	12 40 02.0	+1.3
MTHZ	Maungataniwha	2.78	249	P	Pn	12 40 02.6	+1.2
ARHZ	Aropaoanui	2.84	240	P	Pn	12 40 03.7	+1.6
OPRZ	Ohinepanea	2.86	270	P	Pn	12 40 02.7	+0.3
NMHZ	Naumai	2.90	244	P	Pn	12 40 04.3	+1.3
TARZ	Mount Tarawera	2.91	262	P	Pn	12 40 04.7	+1.5
RRRZ	Republican Roa	2.91	260	P	Pn	12 40 04.4	+1.3
ALRZ	Allen Road	3.08	256	P	Pn	12 40 06.6	+1.1
MRHZ	Matea Rd	3.09	251	P	Pn	12 40 06.9	+1.3
MCHZ	McNeill Hill	3.13	239	P	Pn	12 40 07.5	+1.4
BKZ	Black Stump Fm	3.15	245	P	Pn	12 40 07.5	+1.1
KAHZ	Kahuranaki	3.19	232	P	Pn	12 40 08.0	+0.9
KWHZ	Kaweka Forest	3.31	241	P	Pn	12 40 09.6	+1.0
PXZ	Pawanui	3.35	229	P	Pn	12 40 09.3	+0.2
KRHZ	Kereru	3.44	238	P	Pn	12 40 11.1	+0.6
BHHZ	Black Hill Sta	3.58	242	P	Pn	12 40 13.3	+0.9
PRHZ	Porangahau	3.63	228	P	Pn	12 40 12.9	-0.1
PNHZ	Pukenui	3.69	236	P	Pn	12 40 14.7	+0.8
MOVZ	Moawhango	3.77	245	P	Pn	12 40 16.6	+1.6
ANWZ	Angora Road	3.85	227	P	Pn	12 40 16.4	+0.5
TSZ	Takapari Road	3.93	235	P	Pn	12 40 17.1	0.0
DVHZ	Dannevirke	3.93	231	P	Pn	12 40 17.4	+0.2
MKAZ	Moumakai	4.05	280	P	Pn	12 40 19.5	+0.7
PRWZ	Pori Road	4.21	229	P	Pn	12 40 21.5	+0.6
HIZ	Hauiti	4.23	260	P	Pn	12 40 22.7	+1.5
POWZ	Post Office Ro	4.23	232	P	Pn	12 40 21.9	+0.6
ETAZ	East Tamaki Re	4.27	281	P	Pn	12 40 23.0	+1.2
TIWZ	Tintock	4.39	228	P	Pn	12 40 23.0	-0.5
WAZ	Wanganui	4.45	244	P	Pn	12 40 26.1	+1.8
MRZ	Mangatainoka R	4.51	231	P	Pn	12 40 24.6	-0.4
RVAZ	Riverhead Bore	4.59	282	P	Pn	12 40 27.5	+1.4
TMWZ	Te Maipa	4.61	224	P	Pn	12 40 26.0	-0.5

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*BJI **21** 12:46:28.7, 5°.38S×129°.45E, h243^{km}, mb5.0/70, mB4.7/38*

*ISCJB **21** 12:46:30.0±0.2, 5°.35S±0°.02×129°.35E±0°.02, h246^{km}±2^{km}, mb4.9/131, Error ellipse: s-maj=3.3km s-min=2.6km az=153.2*

*GCMT **21** 12:46:30.9±0.2, 5°.32S×129°.32E, h246^{km}±1^{km}, MW5.1/86, Moment Tensor Solution. s55,c76; s86,c131; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.21±.13; $M_{\theta\theta}$-4.44±.13; $M_{\phi\phi}$1.23±.16; $M_{r\theta}$-1.07±.12; $M_{\theta\phi}$-1.27±.13; $M_{\phi r}$-3.27±.14; Best double couple: $M_0$5.38800×10^{16} NP1:ϕ_s226.00000°, δ66.00000°, λ54.00000°. NP2: ϕ_s108.00000°, δ43.00000°, λ144.00000°. Principal axes: T 5.6380, Plg54.0000°, Azm91.0000°; N -0.5000, Plg33.0000°, Azm242.0000°; P -5.1380, Plg14.0000°, Azm342.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*IDC **21** 12:46:30.6±0.6, 5°.41S×129°.28E, h235^{km}±5^{km}, mb4.5/37, mb1 4.5/39, mb1mx4.5/52, mbtmp5.1/39 Error ellipse: s-maj=9.5km s-min=5.5km az=71.0*

*MOS **21** 12:46:30.3±1.1, 5°.34S×129°.26E, h244^{km}, mb4.9/46, Error ellipse: s-maj=9.1km s-min=5.3km az=111.8*

*NEIC **21** 12:46:30.9±0.3, 5°.39S×129°.27E, h241^{km}±3^{km}, mb5.3/51, Error ellipse: s-maj=4.0km s-min=2.6km az=58.0*

*DJA **21** 12:46:31.0±0.2, 5°S±2°×12°9E±°, h218^{km}±3^{km}, M5.0/37, mb5.2/37, mB5.4/31, MLv5.9/17, Mw(mB)4.8/31*

*KLM **21** 12:46:32.0, 5°.31S×129°.35E, h253^{km}, mb5.4*

ISC 21 12:46:31.3±0.3, 5°.36S±0°.03×129°.35E±0°.03, h247^{km}±3^{km}, h248^{km}:pP-P, n643, σ1^{s}.31/733, mb4.9/130, 9C-14D, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.00	34	P	Pn	12 47 04.9	-1.2
BNDI				S	S	12 47 31.6	-1.7
AAI	Ambon	2.02	325	P	Pn	12 47 13.0	-0.8
AAI				S	S	12 47 45.7	-1.5
AAI	Ambon	2.02	325	P	Pn	12 47 13.3	-0.5
MSAI	Masohi	2.04	348	P	Pn	12 47 13.1	-0.9
MSAI				S	S	12 47 43.8	-3.9
SAUI	Saumlaki	3.25	143	P	Pn	12 47 26.0	-0.4
SAUI				S	S	12 48 09.1	-0.8
SAUI	Saumlaki	3.25	143	ePn	Pn	12 47 25.7	-0.7
SAUI				eS	S	12 48 02.6	-7.3
FAKI	Fak Fak	3.77	50	P	Pn	12 47 31.0	-1.4
FAKI				S	S	12 48 17.1	-3.7
FAKI	Fak Fak	3.77	50	ePn	Pn	12 47 31.7	-0.7
FAKI				eS	S	12 48 17.1	-3.7
KMPI	Kaimana, Papua	4.66	69	P	Pn	12 47 42.4	-0.5
KMPI				S	S	12 48 36.7	-3.1
SANI	Sanana	4.70	314	P	Pn	12 47 42.3	-1.1
SANI				S	S	12 48 38.2	-2.5
SWI	Sorong	4.86	23	P	Pn	12 47 44.2	-1.2
SWI				S	S	12 48 39.1	-5.2
SWI	Sorong	4.86	23	P	Pn	12 47 43.9	-1.5
LBMI	Labuha	5.04	338	P	Pn	12 47 47.0	-0.6
	3µm,0.6s,30µm24nm						
RKPI	Ransiki, Papua	6.15	52	P	Pn	12 48 01.1	-0.3
	1µm,0.5s,13µm31nm						
RKPI				S	S	12 49 09.2	-4.2
	1µm,0.5s,13µm31nm						
TNTI	Ternate	6.41	342	P	Pn	12 48 03.9	-0.7
	992nm,0.8s,8µm2.9nm						
TNTI	Ternate	6.41	342	ePn	Pn	12 48 04.2	-0.3
TNTI				eS	S	12 49 19.7	+0.5
SOEI	Soe	6.67	229	P	Pn	12 48 08.2	+0.3
SOEI	Soe	6.67	229	ePn	Pn	12 48 06.4	-1.5
SOEI				eS	S	12 49 23.2	-2.1
KDI	Kendari	6.85	281	P	Pn	12 48 11.9	+1.7
	172nm,0.9s,1µm0.6nm						
KDI				S	S	12 49 29.4	0.0
	172nm,0.9s,1µm0.6nm						
BATI	Baumata	7.41	229	P	Pn	12 48 16.5	-0.7
BATI				S	S	12 49 39.3	-3.0
MTN	Manton Dam	7.64	167	P	Pn	12 48 18.3	-1.9
	baz=7.7,SNR=523						
MTN	Manton Dam	7.64	167	ePn	Pn	12 48 18.5	-1.6
MTN				eS	S	12 49 40.9	-6.7
SRPI	Serui, Papua	7.70	63	P	Pn	12 48 21.7	+0.8
MMRI	Maumere	7.77	245	P	Pn	12 48 22.6	+0.8
MMRI	Maumere	7.77	245	ePn	Pn	12 48 22.2	+0.4
LUWI	Luwuk	7.84	303	P	Pn	12 48 22.5	-0.2
LUWI	Luwuk	7.84	303	ePn	Pn	12 48 22.1	-0.6
KDU	Kakadu	7.91	157	P	Pn	12 48 21.8	-1.7
	baz=7.9,SNR=1000						
BAKI	Biak	7.92	59	P	Pn	12 48 25.0	+1.4
KMSI	Cibinong	7.97	318	P	Pn	12 48 23.6	-0.7
EDFI	Ende, Flores	8.31	246	P	Pn	12 48 29.3	+0.5
APSI	Ampana	8.87	300	P	Pn	12 48 35.9	+0.2
BKSI	Bulukumba	9.19	270	P	Pn	12 48 40.9	+1.1
MRSI	Marisa	9.40	308	P	Pn	12 48 41.9	-0.6
WAMI	Wamena	9.45	81	P	P	12 48 46.8	-3.0
SPSI	Sidrap Palu	9.65	278	P	Pn	12 48 46.7	+1.1
TTSI	Tana Toraja	9.78	283	P	Pn	12 48 49.1	+1.9
PCI	Palu	10.48	295	P	Pn	12 48 57.2	+1.1

PCI	Palu	10.48	295	P	Pn	12 48 57.4	+1.3
PCI				pmax	pmax		
	comp=Z,738nm,1.0s						
MPSI	Mapaga	11.01	301	P	Pn	12 49 03.7	+1.0
GENI	Genyem	11.14	76	P	Pn	12 49 04.0	-0.3
JAY	Jayapura	11.68	76	P	Pn	12 49 10.9	-0.2
JAY	Jayapura	11.68	76	P	Pn	12 49 11.8	+0.7
JAY				pmax	pmax		
	comp=Z,47nm,0.9s						
DDMP	Don Marcelino,	11.95	342	*e*P	Pn	12 49 11.9	-2.7
PLAI	Plampang	11.99	253	P	Pn	12 49 14.0	-1.0
GSPH	General Santos	12.19	339	⇑*i*P	Pn	12 49 16.5	-1.1
MATI	Mati	12.61	346	*e*P	Pn	12 49 21.6	-1.0
SKMP	Bagumbayan, Su	12.74	338	*e*P	Pn	12 49 22.6	-1.7
DAV	Davao City (W)	12.91	343	P	Pn	12 49 27.1	+0.7
	comp=Z,92nm,0.3s,baz=125,slow=4.4,SNR=7.9						
DAV	Davao City (W)	12.91	343	*e*Pn	Pn	12 49 26.9	+0.6
DAV	Davao City (W)	12.91	343	P	P	12 49 28.0	-0.3
	SNR=7.8						
FITZ	Fitzroy Crossi	13.17	196	*e*Pn	Pn	12 49 26.7	-2.8
KBKI	Kotabaru	13.30	278	P	Pn	12 49 31.8	+0.6
CTBH	Cotabato--PC H	13.50	338	*e*P	Pn	12 49 32.2	-1.4
PALU	Palau	13.62	22	P	P	12 49 36.7	+0.5
	baz=14,SNR=10						
BUKP	Musuan	13.83	342	*e*P	Pn	12 49 36.9	-0.8
PAGZ	Pagadian	14.41	336	*e*P	Pn	12 49 42.7	-1.9
CGP	Cagayan de Oro	14.49	341	⇓*e*P	P	12 49 46.3	+0.5
BUTP	Butuan	14.71	345	*e*P	P	12 49 48.0	-0.3
MYLDM	Lahad Datu	15.07	314	*e*P	Pn	12 49 53.9	+1.3
	comp=Z,230nm,0.9s						
MTKI	Muara Teweh, K	15.08	286	P	Pn	12 49 52.8	0.0
DCPH	Dipolog City	15.09	337	⇑*e*P	Pn	12 49 57.1	+4.2
WRAB	Tennant Creek	15.28	162	*e*P	P	12 49 53.9	-0.7
	comp=Z,1µm,0.9s						
WRAB	Tennant Creek	15.28	162	*d i*P	P	12 49 53.6	-0.9
WRA	Warramunga Arr	15.29	162	P	P	12 49 54.1	-0.5
	comp=Z,47nm,0.3s,baz=343,slow=13,SNR=623						
WRA				S	S	12 52 38.3	-5.2
	comp=Z,16nm,0.3s,baz=338,slow=18,SNR=14						
WRA	Warramunga Arr	15.29	162	*i* P	P	12 49 51.5	-3.1
WRA				pmax	pmax		
	comp=Z,821nm,0.8s						
WB2	Warramunga Arr	15.29	162	*e*P	P	12 49 53.9	-0.7
JAGI	Jajag, Banyuwa	15.40	258	*e*P	P	12 49 53.9	-2.0
	comp=Z,51nm,0.5s						
MSLP	Maasin	16.03	344	*e*P	P	12 50 03.2	+0.4
COEN	Coen	16.07	123	P	Pn	12 50 04.3	-0.3
	baz=16,SNR=373						
COEN	Coen	16.07	123	*e*P	Pn	12 50 04.0	-0.6
	comp=Z,384nm,0.8s						
KKM	Kota Kinabalu	17.33	311	*e*P	P	12 50 17.3	+0.1
	comp=Z,292nm,0.8s						
KKM	Kota Kinabalu	17.33	311	P	P	12 50 18.0	+0.9
KDM	Kudat	17.46	314	P	Pn	12 50 20.0	-0.8
PBKI	Pangkalan Bun	17.83	278	P	Pn	12 50 24.3	-1.0
	comp=Z,186nm,1.4s,comp=Z,2µm						
RCP	Roxas	18.05	339	⇑*e*P	P	12 50 25.7	+0.9
QIS	Mount Isa	18.10	148	P	P	12 50 25.9	+0.6
	baz=18,SNR=136						
PMG	Port Moresby	18.11	104	P	P	12 50 25.5	0.0
	comp=Z,17nm,0.3s,baz=2.9,slow=10.0,SNR=11						
MBWA	Marble Bar	18.27	210	*e*P	P	12 50 26.2	-0.9
	comp=Z,64nm,0.8s						
MANU	Manus Island	18.28	80	*e*P	P	12 50 28.7	+1.4
	comp=Z,307nm,1.4s						
CNP	Catarman	18.36	345	*e*P	P	12 50 28.1	-0.1
STKI	Sintang	18.64	286	P	P	12 50 29.8	-1.5
AS31	Alice Springs	18.72	167	*e*P	P	12 50 32.5	+0.5
	comp=Z,204nm,0.6s						
ASAR	Alice Springs	18.72	167	P	P	12 50 32.5	+0.4
	comp=Z,53nm,0.3s,baz=350,slow=12,SNR=3929						
ASAR				S	S	12 53 50.5	-1.4
	comp=Z,6.6nm,0.3s,baz=349,slow=22,SNR=40						
AS01	Alice Springs	18.73	167	*e*P	P	12 50 32.4	+0.2
SBUM	Sibu	18.79	294	*e*P	P	12 50 33.0	+0.2
	comp=Z,129nm,1.0s						
SBUM	Sibu	18.79	294	P	P	12 50 33.0	+0.2
MTSU	Mount Surprise	19.36	132	P	P	12 50 39.6	+0.7
	baz=20,SNR=180						
WRKA	Warakurna	19.59	183	P	P	12 50 41.6	+0.3
	baz=20,SNR=969						
KSM	Kuching	20.19	289	*e*P	P	12 50 47.0	-0.9
	comp=Z,74nm,1.1s						
KSM	Kuching	20.19	289	P	P	12 50 47.0	-0.9
KPJI	Karang Pucung	20.39	263	P	P	12 50 50.5	+0.6
JCJI	Jatiwangi	21.00	266	P	P	12 50 59.1	+2.8
	comp=Z,85nm,0.7s						
TGY	Tagaytay City	21.06	337	P	P	12 50 57.8	+0.9
	comp=Z,938nm,0.9s,baz=223,slow=3.1,SNR=19						
CTA	Charters Tower	22.01	133	P	P	12 51 07.2	+1.3
	comp=Z,92nm,0.9s,baz=305,slow=12,SNR=42						
CTAO	Charters Tower	22.01	133	*e*P	P	12 51 07.2	+1.3
	comp=Z,120nm,0.9s						
CTAO	Charters Tower	22.01	133	*e*P	P	12 51 07.2	+1.3
CTAO				pmax	pmax		
	comp=Z,120nm,0.9s						
DBJI	Dramaga	22.51	266	P	P	12 51 10.4	-0.1
RABL	Rabaul	22.76	88	*e*P	P	12 51 14.3	+1.5
	comp=Z,217nm,0.8s						
MEEK	Meekatharra	23.51	205	P	P	12 51 18.4	-1.1
	baz=24,SNR=36						
GUMO	Guam	24.33	39	P	P	12 51 27.6	+0.6
	comp=Z,98nm,0.8s,baz=200,slow=11,SNR=9.6						
GUMO	Guam	24.33	39	*e*P	P	12 51 27.6	+0.6
	comp=Z,99nm,0.8s						
FORT	Forrest	25.31	183	P	P	12 51 35.4	-0.2
	baz=25,SNR=66						
FORT	Forrest	25.31	183	*e*P	P	12 51 35.3	-0.4
	comp=Z,202nm,0.8s						
QLP	Quilpie	25.44	148	P	P	12 51 37.3	+0.4
	baz=26,SNR=21						
MYKOM	Kota Tinggi	26.44	285	*e*P	P	12 51 45.2	-0.8
	comp=Z,50nm,1.1s						
MYKOM				*e*pP	pP	12 52 40.0	+5.5
MYKOM	Kota Tinggi	26.44	285	P	P	12 51 45.0	-1.0
MORW	Morawa	26.73	207	P	P	12 51 48.6	+0.2
	baz=27,SNR=5.8						
KMBL	Kambalda	26.80	194	P	P	12 51 48.7	-0.3
	baz=27,SNR=57						
BLDU	Ballidu	27.80	204	P	P	12 51 57.1	-0.8
	baz=28,SNR=24						
RMQ	Roma	28.02	141	P	P	12 52 00.8	+0.9
	baz=28,SNR=8.5						
BBOO	Buckleboo	28.02	168	P	P	12 51 59.7	-0.1
	baz=28,SNR=74						
BBOO	Buckleboo	28.02	168	*e*P	P	12 51 59.4	-0.4
	comp=Z,84nm,1.0s						
KLBR	Kellerberrin	28.27	201	P	P	12 52 01.6	-0.4
	baz=28,SNR=68						
STKA	Stephens Creek	28.77	158	P	P	12 52 06.8	+0.4
	comp=Z,41nm,0.8s,baz=330,slow=9.2,SNR=82						
STKA	Stephens Creek	28.77	158	P	P	12 52 06.8	+0.4
	baz=29,SNR=12						
STKA	Stephens Creek	28.77	158	*e*P	P	12 52 06.4	0.0
	comp=Z,21nm,0.8s						
EIDS	Eidsvold	28.80	136	P	P	12 52 07.0	+0.2
	baz=29,SNR=5.2						
EIDS	Eidsvold	28.80	136	*e*P	P	12 52 06.3	-0.5
EIDS				*e*pP	pP	12 53 01.9	+6.3
BKNI	Bangkinang	28.83	280	*e*P	P	12 52 05.9	-1.3
	comp=Z,58nm,0.5s						
MUN	Mundaring	29.20	203	P	P	12 52 09.6	-0.6
	baz=29,SNR=5.6						
HTT	Hallett	29.32	163	P	P	12 52 11.7	+0.4
	baz=29,SNR=21						
NWAO	Narrogin (SRO)	29.66	201	P	P	12 52 13.9	-0.3
	comp=Z,11nm,0.3s,baz=276,slow=7.4,SNR=45						
NWAO	Narrogin (SRO)	29.66	201	P	P	12 52 13.9	-0.3
	baz=30,SNR=28						
NWAO	Narrogin (SRO)	29.66	201	*e*P	P	12 52 13.8	-0.5
	comp=Z,80nm,1.5s						
NWAO	Narrogin (SRO)	29.66	201	P	P	12 52 14.0	-0.3
NWAO				pmax	pmax		
	comp=Z,11nm,0.3s						
IPM	Ipoh	29.93	289	*e*P	P	12 52 15.6	-1.4
	comp=Z,14nm,0.6s						
SSLB	Suanglung	30.11	345	*e*P	P	12 52 16.4	-1.9
	comp=Z,33nm,1.0s						
CMSA	Cobar Meteorol	30.22	151	P	P	12 52 20.0	+0.8
	baz=30,SNR=44						
YOJ	Yonaguni jima	30.28	348	*e*P	P	12 52 17.6	-2.2
	comp=Z,442nm,1.5s						
YOJ	Yonaguni jima	30.28	348	*e*P	P	12 52 17.6	-2.2
YOJ				pmax	pmax		
	comp=Z,442nm,1.5s						
KULM	Kulim	30.55	290	*e*P	P	12 52 20.9	-1.5
	comp=Z,28nm,0.7s						
KULM	Kulim	30.55	290	P	P	12 52 21.0	-1.3
HNR	Honiara	30.60	99	P	P	12 52 23.3	+0.5
	comp=Z,241nm,0.8s,baz=242,slow=2.4,SNR=9.6						
HNR	Honiara	30.60	99	*e*P	P	12 52 22.0	-0.8
HNR	Honiara	30.60	99	*e*P	P	12 52 22.7	-0.1
	comp=Z,256nm,0.8s						
QIZ	Qiongzhong	30.93	322	*e*P	P	12 52 25.3	-0.2
	comp=Z,53nm,1.1s						
RKGY	Rocky Gully	31.28	200	P	P	12 52 29.5	+1.1
	baz=31,SNR=31						
UBPT	Khong Chiam	31.31	311	P	P	12 52 28.7	-0.2
	comp=Z,105nm,1.1s,comp=Z,995nm						
PSI	Prapat	31.45	284	*e*P	P	12 52 27.9	-2.6
	comp=Z,40nm,1.0s						
PSI	Prapat	31.45	284	*e*P	P	12 52 27.9	-2.6
PSI				pmax	pmax		
	comp=Z,40nm,1.0s						
QZH	Quanzhou	31.89	341	⇑*i*P	P	12 52 33.8	-0.1
QZH				S	S	12 57 25.9	-0.3
QZH				pmax	pmax		
	comp=Z,45nm,0.7s						
JOW	Kunigami	32.02	358	P	P	12 52 35.7	+0.7
	comp=Z,97nm,0.8s,baz=194,slow=7.1,SNR=22						
JOW	Kunigami	32.02	358	*e*P	P	12 52 35.8	+0.8
	comp=Z,97nm,0.8s						
TRTT	Trang	32.36	294	P	P	12 52 37.6	-0.6
	comp=Z,15nm,1.1s						
GSI	Gunungsitoli	32.42	281	*e*P	P	12 52 37.8	-0.9
	comp=Z,30nm,0.8s						
ARMA	Armidale	32.58	143	P	P	12 52 41.6	+1.6
	baz=33,SNR=28						
ARMA	Armidale	32.58	143	*e*P	P	12 52 41.2	+1.2
	comp=Z,65nm,0.8s						
ARPS	Mount Arapiles	33.29	162	P	P	12 52 47.0	+1.1
	baz=33,SNR=40						
SKNT	Sakolnakorn	33.48	312	P	P	12 52 47.5	-0.3
	comp=Z,30nm,0.8s						
YNG	Young	33.77	151	P	P	12 52 51.6	+1.4
	baz=34,SNR=24						
KHON	Khomkaen	33.96	310	P	P	12 52 52.0	+0.1
	comp=Z,44nm,0.9s,comp=Z,940nm						
NAYO	Nakonayok	33.99	305	P	P	12 52 52.0	-0.2
	comp=Z,0.4nm,0.9s						
MGCD	Mangrove Creek	34.33	147	P	P	12 52 56.9	+2.0
	baz=34,SNR=18						
CHAI	Chaiyaphum	34.35	308	P	P	12 52 54.8	-0.5
	comp=Z,23nm,0.9s,comp=Z,254nm						
PHET	Kaeng Krachan	34.66	302	P	P	12 52 58.1	+0.2
	comp=Z,11nm,0.9s						
CAN	Canberra	34.89	151	*e*P	P	12 52 59.9	+0.2
	comp=Z,105nm,0.8s						
CAN	Canberra	34.89	151	*e*P	P	12 52 59.9	+0.2
CAN				pmax	pmax		
	comp=Z,105nm,0.8s						
CNB	Canberra Magne	35.06	151	P	P	12 53 02.7	+1.5
	baz=35,SNR=14						
TOO	Toolangi	35.28	158	P	P	12 53 05.0	+2.0
	baz=35,SNR=31						
PBKT	Sadao Pong	35.53	308	*e*P	P	12 53 05.0	-0.3
PBKT	Sadao Pong	35.53	308	P	P	12 53 05.1	-0.2
	comp=Z,17nm,1.5s						
SRDT	SRDT	35.81	303	P	P	12 53 08.2	+0.5
	comp=Z,35nm,1.2s						
UTTA	Uttaradit	36.54	310	P	P	12 53 13.7	-0.1
	comp=Z,29nm,0.9s,comp=Z,239nm						
CM01	Chiang Mai Arr	38.16	309	*e*P	P	12 53 26.7	-0.8
CM31	Chiang Mai Arr	38.20	309	*e*P	P	12 53 28.1	+0.3
CMAR	Chiang Mai Arr	38.20	309	P	P	12 53 27.9	+0.2
	comp=Z,23nm,0.8s,baz=137,slow=7.4,SNR=132						
CMAR				PcP	PcP	12 55 38.1	+1.2
	comp=Z,2.1nm,0.6s,baz=142,slow=2.0,SNR=5.1						
CMAR				ScP	S	12 59 02.0	-0.7
	comp=Z,5.5nm,0.9s,baz=155,slow=2.9,SNR=13						
CMAR	Chiang Mai Arr	38.20	309	P	P	12 53 28.0	+0.2
CMAR						12 55 38.2	
CMAR						12 59 02.1	
CMAR				pmax	pmax		
	comp=Z,25nm,0.8s						
JNU	Nakatsue	38.30	2	P	P	12 53 28.7	+0.2
	comp=Z,25nm,0.8s,baz=204,slow=3.6,SNR=17						
JNU	Nakatsue	38.30	2	*e*P	P	12 53 28.6	+0.2
	comp=Z,36nm,1.0s						
CMMT	Chiang Mai	38.40	309	P	P	12 53 29.3	-0.1
	comp=Z,93nm,0.9s,comp=Z,757nm						
CHTO	Chiang Mai	38.40	309	*e*P	P	12 53 29.5	0.0
	comp=Z,69nm,0.8s						
CHTO	Chiang Mai	38.40	309	P	P	12 53 29.9	+0.4
	SNR=18						
CHTO	Chiang Mai	38.40	309	*e*P	P	12 53 29.5	0.0
CHTO				pmax	pmax		
	comp=Z,69nm,0.8s						
CHTO	Chiang Mai	38.40	309	P	P	12 53 29.4	0.0
	comp=Z,408nm,1.0s,comp=Z,3µm						
WHN	Wuhan	38.48	339	⇓*i*P	P	12 53 30.6	+0.7
WHN				pP	pP	12 54 25.3	+4.8
WHN				S	S	12 59 06.6	0.0
WHN				pmax	pmax		
	comp=Z,190nm,0.8s						
GYA	Guiyang	38.52	326	⇓*i*P	P	12 53 30.3	-0.2
GYA				pP	pP	12 54 23.3	+2.2
GYA				sP	sP	12 54 50.0	+0.8
GYA				PP	PnPn	12 55 10.8	+1.4
GYA				ScP	ScP	12 59 01.3	-1.1
GYA				S	S	12 59 11.0	+3.4
GYA				sS	sS	13 00 39.4	+1.6
GYA				pmax	pmax		
	comp=Z,60nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,5.0s						
NJ2	Nanjing	38.52	346	*e*P	P	12 53 30.8	+0.6
NJ2				pmax	pmax		
	comp=Z,69nm,0.9s						
DZM	Mont Dzumac	39.52	118	P	P	12 53 39.5	+0.6
	comp=Z,19nm,0.7s,baz=270,slow=9.3,SNR=23						
DZM	Mont Dzumac	39.52	118	*e*P	P	12 53 39.3	+0.5
	comp=Z,195nm,1.9s						
KMI	Kunming	39.84	321	P	P	12 53 42.4	+0.9
KMI				pP	pP	12 54 37.3	+4.8
KMI				sP	sP	12 55 01.3	+0.8
KMI				pmax	pmax		
	comp=Z,65nm,1.1s						
KMI				pmax	pmax		
	comp=Z,130nm,4.3s						
MOO	Moorlands	40.18	159	P	P	12 53 45.8	+1.9
	baz=40,SNR=5.5						
ENH	Enshi	40.22	333	*e*P	P	12 53 43.7	-0.6
	comp=Z,50nm,0.8s						
INU	Inuyama	41.13	10	*e*P	P	12 53 52.1	+0.5
	comp=Z,16nm,1.0s						
TJN	Taejon	41.56	358	*d i*P	P	12 53 55.5	+0.5
MAJO	Matsushiro	42.50	11	*e*P	P	12 54 01.9	-0.8
	comp=Z,25nm,0.9s						
MAJO	Matsushiro	42.50	11	⇓*i*P	P	12 54 01.8	-0.8
MAJO				pmax	pmax		
	comp=Z,27nm,1.0s						
MAT	Matsushiro	42.50	11	P	P	12 54 01.8	-0.9
MAT				S	S	13 00 04.4	-1.5
MJAR	Matsushiro Arr	42.50	11	P	P	12 54 02.0	-0.7
	comp=Z,16nm,1.0s,baz=194,slow=10,SNR=33						
MJB9	Matsu-Tunnel	42.50	11	*e*P	P	12 54 01.7	-1.0
	comp=Z,25nm,0.9s						
KS15	Wonju Array Si	42.60	358	*e*P	P	12 54 03.9	+0.4
KSAR	Wonju Array Be	42.60	358	P	P	12 54 04.2	+0.8
KSAR				pP	pP	12 54 52.6	-2.3
KSAR				PcP	PP	12 55 49.1	+1.2
KSAR	Wonju Array Be	42.60	358	P	P	12 54 04.3	+0.8
KSAR				*PP	pP	12 54 52.7	-2.3
KSAR						12 55 49.1	
KSRS	Korea Array	42.61	358	P	P	12 54 04.2	+0.7
	comp=Z,10nm,0.7s,baz=176,slow=10,SNR=50						
KSRS				pP	pP	12 54 52.6	-2.4
	comp=Z,3.9nm,0.9s,baz=179,slow=9.4,SNR=2.8						
KSRS				PcP	PP	12 55 49.1	+1.1
	comp=Z,2.6nm,0.9s,baz=182,slow=5.4,SNR=4.3						
KS01	Wonju Array Si	42.64	358	*e*P	P	12 54 04.0	+0.3
TIA	Tai'an	42.91	345	P	P	12 54 05.4	-0.6
TIA				pmax	pmax		
	comp=Z,23nm,0.9s						
CD2	Chengdu	43.58	327	⇑P	P	12 54 11.3	-0.2
CD2				pmax	pmax		
	comp=Z,100nm,0.6s						
CD2				pmax	pmax		
	comp=Z,180nm,4.2s						
XAN	Xi'an	43.69	335	P	P	12 54 11.3	-0.9
XAN				pP	pP	12 54 59.1	-5.0
XAN				PP	PP	12 55 57.3	-2.3
XAN				S	S	13 00 19.0	-4.3
XAN				pmax	pmax		
	comp=Z,53nm,1.0s						
XAN				pmax	pmax		
	comp=Z,140nm,4.2s						
TIY	Taiyuan	45.66	341	*e*P	P	12 54 27.3	-0.4
TIY				PP	PP	12 56 20.3	+1.1
TIY				S	S	13 00 59.5	+8.0
TIY				pmax	pmax		
	comp=Z,61nm,0.7s						
TIY				LR	LR		
	comp=Z,89nm,4.8s						
TIY				LR	LR		
	comp=Z,97nm,5.4s						
TIY				LR	LR		
	comp=Z,88nm,14.7s						
BJT	Baijiatuau	46.76	346	*e*P	P	12 54 36.0	-0.1
	comp=Z,147nm,1.2s						
BJT	Baijiatuau	46.76	346	*e*P	P	12 54 36.0	-0.1
BJT				pmax	pmax		
	comp=Z,147nm,1.2s						
SHL	Shillong	47.63	312	*e*P	P	12 54 42.6	-0.7
	comp=Z,40nm,0.7s						
SHL	Shillong	47.63	312	*e*P	P	12 54 42.5	-0.7
SHL	Shillong	47.63	312	*e*P	P	12 54 42.6	-0.7
SHL				pmax	pmax		
	comp=Z,40nm,0.7s						
LZH	Lanzhou	47.66	332	*e*P	P	12 54 44.1	+0.7
LZH				sP	PcP	12 56 08.1	-0.6
LZH				PP	PP	12 56 39.4	+1.8
LZH				S	S	13 01 18.1	-2.1
LZH				SS	SS	13 04 51.8	-0.3
LZH				pmax	pmax		
	comp=Z,86nm,1.3s						
LZH				pmax	pmax		
	comp=Z,280nm,4.8s						
HHC	Hu-ho-hao-te	48.80	342	*e*P	P	12 54 52.3	+0.5
HHC				sP	sP	12 56 09.0	-3.4
HHC				S	S	13 01 35.8	+0.1
HHC				sS	sS	13 03 11.8	+2.5
HHC				pmax	pmax		
	comp=Z,35nm,1.1s						
HHC				pmax	pmax		
	comp=Z,98nm,6.3s						
CN2	Changchun	49.06	356	*e*P	P	12 54 52.9	-0.8
CN2				*e*pP	pP	12 55 47.8	+1.1
CN2				*e*S	S	13 01 38.8	-0.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
USRK	Ussuriysk Ar.	49.39	3	P	P	12 54 56.8	+0.7
	comp=Z,9.0nm,0.7s,baz=172,slow=7.6						
PALK	Pallekele	50.14	284	P	P	12 55 03.8	+1.4
	comp=Z,9.0nm,0.7s,baz=115,slow=4.2,SNR=3.8						
PALK				PcP	PcP	12 56 18.7	+0.6
	comp=Z,5.1nm,0.5s,baz=114,slow=5.0,SNR=3.6						
LSA	Lhasa	50.58	316	P	P	12 55 06.4	+0.5
LSA				pmax	pmax		
	comp=Z,64nm,0.7s						
LSA	Lhasa	50.58	316	*e*P	P	12 55 06.2	+0.4
	comp=Z,51nm,0.7s						
LSA	Lhasa	50.58	316	P	P	12 55 06.6	+0.7
LSA	Lhasa	50.58	316	*e*P	P	12 55 06.3	+0.4
LSA				pmax	pmax		
	comp=Z,51nm,0.7s						
ASAJ	Asahikawa	50.68	12	P	P	12 55 06.7	+0.9
	comp=Z,5.9nm,0.5s,baz=228,slow=8.7,SNR=28						
ASAJ	Asahikawa	50.68	12	*e*P	P	12 55 06.5	+0.7
	comp=Z,25nm,1.3s						
ODAN	Odare	51.70	310	*e*P	P	12 55 13.7	-0.3
	comp=Z,200nm,0.9s						
TAPN	Taplejung	51.72	311	*e*P	P	12 55 14.0	-0.2
	comp=Z,106nm,0.4s						
GTA	Gaotai	52.23	331	⇓P	P	12 55 17.9	+0.3
GTA				pP	pP	12 56 10.0	-1.3
GTA				sP	sP	12 56 36.0	-2.6
GTA				ScP	ScP	12 59 59.3	+0.5
GTA				S	S	13 02 22.8	-0.3
GTA				sS	sS	13 03 56.6	-1.3
GTA				ScS	ScS	13 04 40.9	-0.9
GTA				pmax	pmax		
	comp=Z,56nm,1.0s						
GTA				pmax	pmax		
	comp=Z,98nm,4.8s						
RAMN	Ramite	52.35	310	*e*P	P	12 55 18.8	0.0
	comp=Z,322nm,0.6s						
WHZ	Wether Hill Ro	52.42	147	*e*P	P	12 55 19.2	+0.5
	comp=Z,53nm,0.7s						
HIZ	Hauiti	52.77	135	*e*P	P	12 55 23.8	+2.4
	comp=Z,45nm,0.9s						
LBZ	Lake Benmore	52.78	144	*e*P	P	12 55 21.9	+0.5
	comp=Z,74nm,0.9s						
RPZ	Rata Peaks	52.92	143	*e*P	P	12 55 23.3	+0.9
	comp=Z,107nm,0.8s						
KUR	Kuril'sk	53.03	16	*i* P	P	12 55 25.8	+2.8
THZ	Tophouse	53.03	140	*e*P	P	12 55 23.9	+0.6
	comp=Z,49nm,0.8s						
JIRN	Jiri	53.03	311	*e*P	P	12 55 23.6	-0.3
	comp=Z,158nm,0.5s						
LTZ	Lake Taylor	53.16	141	*e*P	P	12 55 25.4	+1.2
	comp=Z,26nm,0.7s						
OXZ	Oxford	53.31	142	*e*P	P	12 55 25.7	+0.5
	comp=Z,48nm,1.0s						
GUN	Gumba	53.40	311	*e*P	P	12 55 26.2	-0.3
	comp=Z,254nm,0.6s						
YSS	Yuzh-Sakhalins	53.42	11	*e*P	P	12 55 27.1	+1.2
YSS	Yuzh-Sakhalins	53.42	11	⇑*e*P	P	12 55 26.4	+0.5
YSS				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PKIN	Phulchoki	53.59	310	*e*P	P	12 55 27.1	-0.8
	comp=Z,41nm,0.5s						
KHZ	Kahutara	53.77	140	*e*P	P	12 55 29.4	+0.9
	comp=Z,91nm,0.8s						
KKN	Kakani	53.79	310	*e*P	P	12 55 28.7	-0.5
	comp=Z,102nm,0.6s						
DMN	Daman	53.83	310	*e*P	P	12 55 29.3	-0.3
	comp=Z,78nm,0.6s						
BKZ	Black Stump Fm	54.21	135	*e*P	P	12 55 32.4	+0.5
	comp=Z,84nm,0.8s						
URZ	Urewera	54.26	134	*e*P	P	12 55 32.8	+0.7
	comp=Z,67nm,0.8s						
GKN	Gorkha	54.39	310	*e*P	P	12 55 33.1	-0.4
	comp=Z,158nm,0.5s						
KLR	Kul'dur	54.41	2	P	P	12 55 33.3	+0.4
	comp=Z,0.7nm,0.9s,baz=197,slow=3.7,SNR=22						
KLR				PcP	PcP	12 56 33.6	+0.3
	comp=Z,0.2nm,0.8s,baz=210,slow=3.1,SNR=4.1						
KLR				ScP	ScP	13 00 07.2	-0.6
	comp=Z,0.1nm,0.4s,baz=240,slow=4.6,SNR=3.8						
KLR	Kul'dur	54.41	2	*d i*P	P	12 55 33.5	+0.5
HYB	Hyderabad	55.02	295	*i* P	P	12 55 37.0	-1.0
KOLN	Koldanda	55.06	309	*e*P	P	12 55 38.2	-0.2
	comp=Z,131nm,0.7s						
DANN	Dangsing	55.23	310	*e*P	P	12 55 39.3	-0.3
	comp=Z,184nm,0.9s						
PYUN	Piuthan	55.70	309	*e*P	P	12 55 42.5	-0.4
	comp=Z,238nm,0.9s						
ULN	Ulaanbaatar	56.52	342	*e*P	P	12 55 49.3	+1.0
ULN	Ulaanbaatar	56.52	342	P	P	12 55 49.5	+1.3
	SNR=14						
ULN	Ulaanbaatar	56.52	342	*d i*P	P	12 55 49.2	+1.0
ULN				pmax	pmax		
	comp=Z,43nm,1.2s						
SONM	Songino Array	56.69	342	P	P	12 55 50.5	+1.1
	comp=Z,94nm,1.3s,baz=160,slow=6.7,SNR=68						
SONM	Songino Array	56.69	342	P	P	12 55 50.5	+1.1
SONM				pmax	pmax		
	comp=Z,90nm,1.3s						
SONA1	Songino Array	56.70	342	*e*P	P	12 55 49.5	+0.1
AFI	Afiamalu	58.54	103	P	P	12 56 04.5	+1.7
	comp=Z,45nm,0.8s,baz=264,slow=9.2,SNR=6.5						
AFI	Afiamalu	58.54	103	*e*P	P	12 56 04.8	+2.1
AFI	Afiamalu	58.54	103	*e*P	P	12 56 04.9	+2.1
ZEA	Zeya	58.91	359	*e*P	P	12 56 05.2	+0.8
ZEA				pmax	pmax		
	comp=Z,23nm,1.0s						
ZAK	Zakamensk	59.91	341	*e*P	P	12 56 11.8	+0.3
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.2s						
TLY	Talaya	60.93	342	P	P	12 56 19.4	+1.2
	comp=Z,5.0nm,0.6s,baz=199,slow=4.3,SNR=15						
TLY	Talaya	60.93	342	P	P	12 56 19.8	+1.5
	SNR=7.7						
TLY	Talaya	60.93	342	*e*P	P	12 56 18.9	+0.7

TLY				pmax	pmax		
	comp=Z,13nm,1.0s						
IRK	**Irkutsk**	**61.23**	**343**	*e*P	**P**	**12 56 20.2**	**0.0**
IRK				pmax	pmax		
	comp=Z,26nm,1.1s						
WMQ	**Urumqi**	**61.68**	**327**	P	**P**	**12 56 24.5**	**+1.0**
WMQ				PcP	**PcP**	**12 57 05.9**	**+3.5**
WMQ				pP	pP	12 57 18.9	-0.2
WMQ				S	**S**	**13 04 24.5**	**-1.6**
WMQ				ScS	**SKKSac**	**13 05 49.3**	**-1.1**
WMQ				sS	sS	13 06 01.3	-2.6
WMQ				pmax	pmax		
	comp=Z,240nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,210nm,4.1s						
WMQ				LR	LR		
	comp=Z,160nm,20.5s						
WMQ				LR	LR		
	comp=Z,100nm,24.7s						
WMQ				LR	LR		
	comp=Z,110nm,16.5s						
MOY	**Mondy**	**61.77**	**340**	*e*P	**P**	**12 56 25.2**	**+1.2**
MOY				pmax	pmax		
	comp=Z,34nm,1.9s						
CASY	**Casey**	**62.22**	**188**	*e*P	**P**	**12 56 26.4**	**-0.1**
	comp=Z,16nm,1.0s						
CASY				*e*PcP	**PcP**	**12 57 04.8**	**+0.8**
PETK	**Petropavlovsk-**	**62.98**	**19**	P	**P**	**12 56 33.4**	**+1.5**
	comp=Z,6.8nm,0.6s,baz=172,slow=5.3						
PETK				PcP	**PcP**	**12 57 07.8**	**+0.4**
	baz=156,slow=2.2						
PETK	**Petropavlovsk-**	**62.98**	**19**	*e*P	**P**	**12 56 33.0**	**+1.1**
PETK				PcP	**PcP**	**12 57 07.8**	**+0.4**
PETK	**Petropavlovsk-**	**62.98**	**19**	*e*P	**P**	**12 56 33.0**	**+1.1**
PETK						12 57 07.8	
PET	**Petropavlovsk**	**63.22**	**19**	*e*P	**P**	**12 56 34.2**	**+0.8**
PET				pmax	pmax		
	comp=Z,22nm,1.2s						
BOD	**Bodaibo**	**64.19**	**351**	*e*P	**P**	**12 56 38.9**	**-0.7**
BOD				pmax	pmax		
	comp=Z,12nm,1.4s						
NIL	**Nilore**	**65.67**	**311**	*e*P	**P**	**12 56 49.4**	**-0.3**
	comp=Z,103nm,0.6s						
NIL	**Nilore**	**65.67**	**311**	*e*P	**P**	**12 56 49.4**	**-0.3**
NIL				pmax	pmax		
	comp=Z,103nm,0.6s						
DGZ	**Jazzator, Alta**	**65.77**	**332**	*e*P	**P**	**12 56 50.9**	**+0.8**
DGZ				pmax	pmax		
	comp=Z,31nm,1.4s						
MIR	**Mirnyy**	**66.04**	**195**	*e*P	**P**	**12 56 54.0**	**+2.6**
MIR				pmax	pmax		
	comp=Z,42nm,1.0s						
PDGK	**Podgornoye**	**66.11**	**322**	*i* P	**P**	**12 56 52.5**	**+0.1**
PDGK				pmax	pmax		
	comp=Z,34nm,0.7s						
KSH	**Kashi**	**66.38**	**317**	P	**P**	**12 56 55.4**	**+1.2**
KSH				*e*PcP	**PcP**	**12 57 22.6**	**+0.6**
KSH				pP	pP	12 57 54.5	+3.8
KSH				PP	**PP**	**12 59 28.3**	**+4.3**
KSH				PcS		13 01 21.6	
KSH				S	**S**	**13 05 19.3**	**-4.9**
KSH				pmax	pmax		
	comp=Z,39nm,0.7s						
KSH				pmax	pmax		
	comp=Z,62nm,3.6s						
MK01	**Makanchi Array**	**66.49**	**327**	*e*P	**P**	**12 56 54.1**	**-0.5**
MK31	**Makanchi Array**	**66.51**	**327**	*e*P	**P**	**12 56 55.2**	**+0.5**
MK31	**Makanchi Array**	**66.51**	**327**	*e*P	**P**	**12 56 55.2**	**+0.5**
MK31				pmax	pmax		
	comp=Z,19nm,0.4s						
MKAR	**Makanchi Array**	**66.51**	**327**	P	**P**	**12 56 55.2**	**+0.5**
	comp=Z,37nm,0.3s,baz=114,slow=8.4,SNR=527						
YAK	**Yakutsk**	**67.20**	**0**	*e*P	**P**	**12 56 58.9**	**+0.3**
YAK	**Yakutsk**	**67.20**	**0**	*e*P	**P**	**12 56 58.3**	**-0.4**
YAK				*e**PP	**pP**	**12 57 52.4**	**-2.8**
YAK				*e*S	**S**	**13 05 30.7**	**-2.0**
YAK				*e*		13 06 28.1	
YAK				*e*SSS	SSS	13 13 04.1	
YAK				pmax	pmax		
	comp=Z,24nm,0.8s						
YAK				pmax	pmax		
	comp=E,2.0nm,1.0s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.0s						
YAK				smax	smax		
	comp=E,148nm,3.0s						
YAK				smax	smax		
	comp=N,113nm,2.5s						
ULHL	**Ulahol**	**67.56**	**320**	P	**P**	**12 57 02.3**	**+0.6**
	SNR=6.4						
KZA	**Kyzart**	**68.12**	**319**	P	**P**	**12 57 06.6**	**+1.2**
	SNR=34						
SFK	**Sufi-Kurgan**	**68.29**	**317**	P	**P**	**12 57 06.7**	**+0.4**
SFK				pmax	pmax		
	comp=Z,14nm,0.6s						
TKM2	**Tokmak 2**	**68.32**	**320**	P	**P**	**12 57 07.0**	**+0.7**
	SNR=40						
KBK	**Karagaybulak**	**68.60**	**320**	P	**P**	**12 57 09.0**	**+0.9**
	SNR=10						
UCH	**Uchtor**	**68.67**	**319**	P	**P**	**12 57 10.3**	**+1.5**
	SNR=6.2						
AAK	**Ala-Archa**	**68.88**	**320**	P	**P**	**12 57 10.7**	**+0.9**
	SNR=13						
AAK	**Ala-Archa**	**68.88**	**320**	*e*P	**P**	**12 57 10.7**	**+0.9**
AAK	**Ala-Archa**	**68.88**	**320**	P	**P**	**12 57 10.6**	**+0.8**
AAK				pmax	pmax		
	comp=Z,15nm,0.6s						
CHMS	**Chumysh**	**68.89**	**320**	P	**P**	**12 57 09.8**	**+0.1**
	SNR=7.1						
FRU	**Bishkek**	**68.90**	**320**	*e*P	**P**	**12 57 10.0**	**+0.3**
FRU				*e*		12 57 38.0	
AML	**Almayashu**	**69.16**	**319**	P	**P**	**12 57 12.8**	**+1.0**
	SNR=34						
USP	**Ospenovka**	**69.19**	**320**	P	**P**	**12 57 12.0**	**+0.5**
	SNR=25						
KBL	**Kabul**	**69.22**	**310**	*e*P	**P**	**12 57 12.2**	**+0.1**
KBL	**Kabul**	**69.22**	**310**	*e*P	**P**	**12 57 12.2**	**+0.1**
EKS2	**Erkin-Say**	**69.36**	**319**	P	**P**	**12 57 13.6**	**+0.9**
	SNR=28						
ZALV	**Zalesovo Beam**	**69.84**	**334**	P	**P**	**12 57 15.1**	**-0.1**
	comp=Z,3.9nm,0.4s,baz=153,slow=10.0,SNR=5.2						
ZALV				pP	**pP**	**12 58 10.1**	**-2.1**
	comp=Z,2.0nm,0.6s,baz=132,slow=6.4,SNR=1.0						
ZALV	**Zalesovo Beam**	**69.84**	**334**	P	**P**	**12 57 15.1**	**-0.1**
ZALV				*PP	**pP**	**12 58 10.1**	**-2.1**
ZALV				pmax	pmax		
	comp=Z,12nm,0.5s						
MNAS	**Manas**	**70.10**	**319**	P	**P**	**12 57 17.9**	**+0.7**
MNAS				pmax	pmax		
	comp=Z,40nm,1.1s						
SEY	**Seymchan**	**70.33**	**11**	P	**P**	**12 57 19.4**	**+1.5**
	comp=Z,17nm,0.6s,baz=202,slow=4.7,SNR=85						
SEY	**Seymchan**	**70.33**	**11***c*	*i*P	**P**	**12 57 19.3**	**+1.4**
KURBB	**Kurchatov Arra**	**70.78**	**328**	P	**P**	**12 57 21.8**	**+0.8**
	comp=Z,32nm,0.6s,baz=125,slow=4.9,SNR=329						
KURBB				pP	**pP**	**12 58 14.3**	**-3.9**
	comp=Z,4.9nm,0.8s,baz=129,slow=5.4,SNR=2.2						
KURK	**Kurchatov**	**70.79**	**329**	*e*P	**P**	**12 57 21.5**	**+0.5**
KURK				pP	**pP**	**12 58 14.3**	**-3.9**
KURK	**Kurchatov**	**70.79**	**329**	P	**P**	**12 57 21.7**	**+0.7**
	SNR=29						
KURK	**Kurchatov**	**70.79**	**329**	P	**P**	**12 57 21.3**	**+0.3**
KURK				pmax	pmax		
	comp=Z,74nm,0.9s						
NVS	**Novosibirsk**	**71.12**	**334**	*e*P	**P**	**12 57 24.3**	**+1.4**
NVS				*e*		12 58 19.2	
NVS				*e*S	**S**	**13 06 16.2**	**-2.7**
NVS				pmax	pmax		
	comp=N,12nm,1.0s						
NVS				pmax	pmax		
	comp=E,10.0nm,1.0s						
NVS				pmax	pmax		
	comp=Z,20nm,1.0s						
NVS				smax	smax		
	comp=N,43nm,2.5s						
NVS				smax	smax		
	comp=E,80nm,2.5s						
KK31	**Karatay Array**	**71.69**	**319**	*i* P	**P**	**12 57 26.8**	**+0.2**
KK31				pmax	pmax		
	comp=Z,14nm,0.9s						
VNDA	**Vanda**	**74.14**	**173**	P	**P**	**12 57 40.1**	**-0.1**
	comp=Z,12nm,0.8s,baz=319,slow=6.0,SNR=55						
WSAR	**Wadi Sarin**	**74.57**	**296**	P	**P**	**12 57 43.9**	**+0.1**
	comp=Z,10nm,0.8s,baz=197,slow=5.9,SNR=9.0						
SBA	**Scott Base**	**75.03**	**172**	*e*P	**P**	**12 57 46.2**	**+0.8**
	comp=Z,19nm,1.1s						
SBA	**Scott Base**	**75.03**	**172**	*e*P	**P**	**12 57 46.2**	**+0.8**
SBA				pmax	pmax		
	comp=Z,19nm,1.1s						
MAW	**Mawson**	**76.23**	**201**	P	**P**	**12 57 52.4**	**+0.1**
	comp=Z,11nm,0.9s,baz=62,slow=6.4,SNR=9.3						
MAW	**Mawson**	**76.23**	**201**	P	**P**	**12 57 52.7**	**+0.4**
	baz=76,SNR=6.3						
BVAR	**Borovoye Array**	**76.34**	**328**	P	**P**	**12 57 53.6**	**+0.4**
	comp=Z,5.7nm,0.6s,baz=121,slow=10.0,SNR=34						
BRVK	**Borovoye**	**76.41**	**328**	*e*P	**P**	**12 57 53.7**	**+0.1**
	comp=Z,14nm,0.6s						
BRVK				*e*pP	**pP**	**12 58 56.7**	**+5.0**
BRVK	**Borovoye**	**76.41**	**328**	P	**P**	**12 57 54.2**	**+0.6**
	SNR=6.8						
BRVK	**Borovoye**	**76.41**	**328***d*	*i*P	**P**	**12 57 53.7**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TIXI	**Tiksi**	**76.86**	**360**	P	**P**	**12 57 56.0**	**+0.2**
	comp=Z,23nm,0.5s,baz=223,slow=4.7,SNR=10						
TIXI	**Tiksi**	**76.86**	**360***c*	*e*P	**P**	**12 57 55.9**	**+0.2**
TIXI				pmax	pmax		
	comp=Z,17nm,0.6s						
UOSS	**Minazif**	**77.11**	**297**	*i* P	**P**	**12 57 58.0**	**-0.1**
	SNR=7.2						
HATD	**Hatta, Dubai**	**77.14**	**297**	*i* P	**P**	**12 57 58.8**	**+0.4**
	SNR=9.4						
ASHO	**Ashiyiah**	**77.18**	**297**	*i* P	**P**	**12 57 58.9**	**+0.3**
	SNR=11						
BANOM	**Banah**	**77.23**	**298**	P	**P**	**12 58 00.7**	**+1.9**
	SNR=5.2						
BANOM	**Banah**	**77.23**	**298**	*i* P	**P**	**12 57 59.2**	**+0.4**
	SNR=21						
MSFE	**Esma-Masafi**	**77.23**	**297**	*i* P	**P**	**12 57 59.7**	**+0.9**
	SNR=16						
ALNE	**Al Ain**	**77.33**	**296**	*i* P	**P**	**12 57 59.7**	**+0.3**
	SNR=9.0						
SHME	**Shamm**	**77.39**	**298**	*i* P	**P**	**12 58 00.3**	**+0.6**
	SNR=15						
ASUD	**Al Ashush, Dub**	**77.82**	**296**	*i* P	**P**	**12 58 02.6**	**+0.5**
	SNR=7.5						
GEYT	**Alibeck**	**78.67**	**310**	P	**P**	**12 58 06.4**	**-0.1**
	comp=Z,3.6nm,0.6s,baz=125,slow=7.4,SNR=7.5						
AB31	**Akbulak array**	**80.83**	**322**	P	**P**	**12 58 17.4**	**-0.3**
AB31				pmax	pmax		
	comp=Z,4.0nm,0.6s						
OPO	**Ambohidratompo**	**80.90**	**252**	P	**P**	**12 58 18.9**	**-0.1**
	comp=Z,3.5nm,0.6s,baz=0.0,slow=1.0,SNR=4.3						
AKTO	**Aktyubinsk**	**82.39**	**322**	P	**P**	**12 58 26.0**	**+0.1**
	comp=Z,5.9nm,0.6s,baz=112,slow=11,SNR=16						
AKTO				pP	**pP**	**12 59 21.1**	**-3.7**
	comp=Z,3.7nm,0.8s,baz=97,slow=7.0,SNR=2.5						
ARU	**Arti**	**83.98**	**328**	*e*P	**P**	**12 58 33.0**	**-0.8**
	comp=Z,13nm,1.2s						
ARU				*e*pP	**pP**	**12 59 33.6**	**+0.6**
ARU				*e*PP	**PP**	**13 01 50.9**	**-0.5**
ARU	**Arti**	**83.98**	**328***d*	*i*P	**P**	**12 58 33.3**	**-0.5**
ARU				*PP	**pP**	**12 59 30.1**	**-2.9**
ARU						13 01 52.2	
ARU				S	**S**	**13 08 32.3**	**-4.2**
ARU				SS	**SS**	**13 14 10.5**	**-0.4**
ARU				pmax	pmax		
	comp=Z,13nm,1.2s						
QSPA	**South Pole Qui**	**84.61**	**180**	P	**P**	**12 58 36.3**	**-0.6**
	comp=Z,14nm,0.7s,baz=304,slow=1.0,SNR=54						
QSPA	**South Pole Qui**	**84.61**	**180**	*e*P	**P**	**12 58 36.4**	**-0.6**
	comp=Z,55nm,0.8s						
SYO	**Syowa Base**	**84.95**	**201**⇓	*e*P	**P**	**12 58 38.0**	**-0.4**
SYO	**Syowa Base**	**84.95**	**201**⇓	*e*PcP	**PcP**	**12 58 42.4**	**+1.2**
RAYN	**Ar Rayn**	**86.50**	**294**	*e*P	**P**	**12 58 47.0**	**0.0**
	comp=Z,34nm,0.6s						
RAYN	**Ar Rayn**	**86.50**	**294**	*i* P	**P**	**12 58 47.2**	**+0.2**
	SNR=33						
RAYN	**Ar Rayn**	**86.50**	**294**	*e*P	**P**	**12 58 47.1**	**0.0**
RAYN				pmax	pmax		
	comp=Z,34nm,0.6s						
AKT	**Akhty**	**87.26**	**312**	*e*P	**P**	**12 58 50.8**	**+0.4**
AKT				*e**PP	**pP**	**12 59 47.9**	**-2.1**
AKT				pmax	pmax		
	comp=Z,11nm,0.8s						
KDAK	**Kodiak Island**	**88.17**	**32**	P	**P**	**12 58 54.2**	**+0.1**
	comp=Z,9.3nm,0.7s,baz=237,slow=2.5,SNR=8.8						
KDAK	**Kodiak Island**	**88.17**	**32**	*i* P	**P**	**12 58 55.3**	**+1.2**
KBZ	**Khabaz**	**91.10**	**314**	P	**P**	**12 59 08.6**	**+0.4**
	comp=Z,0.9nm,0.5s,baz=127,slow=0.8,SNR=3.9						
NEY	**Neytrino**	**91.18**	**313**⇓	*e*P	**P**	**12 59 09.7**	**+0.9**
NEY				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KIV	**Kislovodsk**	**91.28**	**314**	*e*P	**P**	**12 59 08.9**	**-0.2**
KIV				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TOLK	**Toolik Lake Re**	**91.71**	**21**	P	**P**	**12 59 10.8**	**+0.3**
	baz=260						
ILAR	**Eielson Array**	**92.15**	**25**	P	**P**	**12 59 11.4**	**-1.2**
	comp=Z,4.3nm,0.8s,baz=268,slow=4.3,SNR=46						
ILAR				PKKP	**PKKPdf**	**13 16 25.1**	**-2.0**
	comp=Z,0.4nm,1.0s,baz=108,slow=1.3,SNR=5.4						
KLMR	**Klimovskoe**	**94.56**	**331**	*e*P	**P**	**12 59 22.2**	**-1.5**
KLMR				*e*		13 03 10.4	
KLMR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KLMR	**Klimovskoe**	**94.56**	**331**	*e*P	**P**	**12 59 22.2**	**-1.5**
KLMR				AMP		12 59 32.8	
	comp=Z,5.0nm,1.0s						
KLMR				*e*PP	**PP**	**13 03 10.5**	**-4.5**
EGAK	**Eagle**	**94.59**	**25**	*e*P	**P**	**12 59 23.9**	**+0.1**
	comp=Z,15nm,1.1s						
ASF	**Jabal al Asfar**	**94.89**	**302**	P	**P**	**12 59 25.7**	**-0.3**
	comp=Z,3.0nm,0.7s,baz=57,slow=3.7,SNR=5.0						
DAWY	**Dawson**	**95.33**	**26**	*e*P	**P**	**12 59 27.7**	**+0.4**
	comp=Z,23nm,1.0s						
DAWY				*e*pP	**pP**	**13 00 30.8**	**+3.5**
OBN	**Obninsk**	**95.95**	**325**	*e*P	**P**	**12 59 28.9**	**-1.2**
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
INK	**Inuvik**	**97.59**	**22**	P	**P**	**12 59 37.0**	**-0.2**
	comp=Z,2.7nm,0.6s,baz=286,slow=6.0,SNR=18						
INK	**Inuvik**	**97.59**	**22**	*e*P	**P**	**12 59 35.1**	**-2.1**
	comp=Z,15nm,1.4s						
BRTR	**Keskin Array B**	**97.79**	**309**	P	**P**	**12 59 37.9**	**-1.1**
	comp=Z,0.9nm,0.7s,baz=124,slow=6.1,SNR=5.4						
BRTR	**Keskin Array B**	**97.79**	**309**	*i* P	**P**	**12 59 38.0**	**-1.1**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ARCES	**ARCESS Array B**	**99.83**	**340**	P	**Pdif**	**12 59 46.5**	**-0.7**
	comp=Z,2.3nm,0.5s,baz=75,slow=6.8,SNR=15						
ARCES				PKiKP	**PKiKP**	**13 04 13.6**	**-0.6**
	comp=Z,2.8nm,0.9s,baz=54,slow=0.5,SNR=6.0						
AKASG	**Malin Array Be**	**100.54**	**320**	*i* P	**Pdif**	**12 59 47.7**	**-3.1**
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.3s						
B05A	**Bryant**	**106.31**	**41**	P	**PKiKP**	**13 04 27.3**	**+0.7**
	baz=280						
YKA	**Yellowknife Ar**	**106.57**	**26**	PKiKP	**PKiKP**	**13 04 26.5**	**-0.1**
	comp=Z,0.8nm,0.4s,baz=291,slow=2.2,SNR=7.4						
YKA				PKKPbc	**PKKPbc**	**13 15 45.3**	**-4.3**
	comp=Z,1.2nm,0.8s,baz=88,slow=2.9,SNR=3.9						
HFS	**Hagfors**	**107.22**	**332**	Pdiff	**Pdif**	**13 00 18.9**	**-1.4**
	comp=Z,1.1nm,0.5s,baz=75,slow=6.1,SNR=6.7						
CLL	**Collm**	**110.46**	**323**	*e*PP	PP	13 05 11.0	-2.7
GERES	**GERESS Array B**	**110.75**	**320**	PKiKP	**PKiKP**	**13 04 35.0**	**0.0**
	comp=Z,1.4nm,0.5s,baz=64,slow=1.5,SNR=16						
GERES				PKKPab	**PKKPab**	**13 15 46.1**	**+0.7**
	comp=Z,0.7nm,0.8s,baz=305,slow=4.7,SNR=4.6						
NVAR	**Mina Array Bea**	**110.78**	**51**	Pdiff	**Pdif**	**13 00 41.9**	**+5.0**
	comp=Z,0.7nm,0.7s,baz=239,slow=5.1,SNR=6.2						
NVAR				PKiKP	**PKiKP**	**13 04 36.4**	**+0.8**
	comp=Z,0.9nm,0.8s,baz=250,slow=2.5,SNR=6.8						
NVAR				PP	**PP**	**13 05 16.1**	**-0.7**
	comp=Z,1.2nm,0.9s,baz=269,slow=7.9,SNR=5.2						
NVAR				PKKPbc	**PKKPbc**	**13 15 33.4**	**-2.3**
	comp=Z,0.3nm,0.6s,baz=90,slow=4.4,SNR=3.7						
CWC	**Cottonwood Cre**	**111.29**	**53**	P	**PKiKP**	**13 04 36.3**	**-0.2**
	baz=279						
EDW2	**Edwards Air Fo**	**111.60**	**55**	P	**PKiKP**	**13 04 37.8**	**+0.8**
	baz=279						
MFID	**Camas Ranch**	**111.60**	**45**	*e*PKPdf	**PKiKP**	**13 04 37.6**	**+0.7**
MFID				*e*PP	**PP**	**13 05 20.7**	**-1.7**
MPMC	**Manual Prospec**	**111.82**	**53**	P	**PKiKP**	**13 04 38.6**	**+1.0**
	baz=280						
MSO	**Missoula**	**112.01**	**41**	P	**PKiKP**	**13 04 37.3**	**-0.3**
	baz=286						
FURC	**Furnace Creek,**	**112.25**	**53**	P	**PKiKP**	**13 04 38.3**	**+0.2**
	baz=280						
GSC	**Goldstone, Bar**	**112.50**	**54**	P	**PKiKP**	**13 04 39.9**	**+1.1**
	baz=280						
WTTA	**Wattenberg**	**112.54**	**319**	*i* PKiKP	**PKiKP**	**13 04 38.5**	**-0.1**
	comp=Z,4.6nm,0.4s						
WATA	**Walderalm**	**112.56**	**319**	*e*PKiKP	**PKiKP**	**13 04 39.2**	**+0.6**
	comp=Z,3.0nm,0.5s						
HLID	**Hailey**	**112.56**	**45**	P	**PKiKP**	**13 04 39.6**	**+0.8**
	baz=285						
HLID	**Hailey**	**112.56**	**45**	*e*PKPdf	**PKiKP**	**13 04 39.2**	**+0.5**
TPNV	**Topopah Spring**	**112.65**	**52**	P	**PKiKP**	**13 04 39.8**	**+0.7**
	baz=281						
R11A	**Troy Canyon, C**	**112.89**	**51**	P	**PKiKP**	**13 04 39.4**	**-0.2**
	baz=282						
RETA	**Reutte**	**113.04**	**320**	*e*PKiKP	**PKiKP**	**13 04 38.3**	**-1.2**
	comp=Z,4.3nm,1.3s						
PFO	**Pinyon Flats O**	**113.06**	**56**	P	**PKiKP**	**13 04 40.4**	**+0.5**
	baz=279						
MONP2	**Monument Peak**	**113.20**	**57**	P	**PKiKP**	**13 04 40.9**	**+0.5**
	baz=279						
FETA	**Feichten**	**113.20**	**319**	*e*PKiKP	**PKiKP**	**13 04 38.5**	**-1.3**
	comp=Z,0.8nm,0.4s						
BELC	**Belle Mtn. Jos**	**113.37**	**55**	P	**PKiKP**	**13 04 41.9**	**+1.4**
	baz=280						
GMRC	**Granite Mounta**	**113.51**	**54**	P	**PKiKP**	**13 04 42.0**	**+1.2**
	baz=280						
DAVA	**Damuels**	**113.67**	**320**	*i* PKiKP	**PKiKP**	**13 04 40.7**	**0.0**
	comp=Z,5.8nm,0.4s						
BC3	**Big Chuckawall**	**113.88**	**56**	P	**PKiKP**	**13 04 42.9**	**+1.4**
	baz=280						
BOZ	**Bozeman (W)**	**113.91**	**42**	P	**PKiKP**	**13 04 42.0**	**+0.7**
	baz=288						
IRM	**Iron Mountain**	**114.04**	**55**	P	PKPdf	13 04 42.9	+1.2
	baz=280						
EGMT	**Eagleton**	**114.33**	**39**	P	PKPdf	13 04 42.2	+0.3
	baz=290						
EGMT	**Eagleton**	**114.33**	**39**	*e*PKPdf	PKPdf	13 04 42.2	+0.3
GLA	**Glamis**	**114.50**	**56**	P	PKPdf	13 04 43.4	+0.7
	baz=280						
DUG	**Dugway, Tooele**	**114.57**	**48**	P	PKPdf	13 04 43.6	+1.0
	baz=285						
DUG	**Dugway, Tooele**	**114.57**	**48**	*e*PKPdf	PKPdf	13 04 43.9	+1.2
DUG				*e*PP	**PP**	**13 05 42.5**	**-1.0**
DUG	**Dugway, Tooele**	**114.57**	**48**	*e*PKIKP	PKPdf	13 04 43.9	+1.2
DUG				*e*		13 05 42.5	
H17A	**Grant Village**	**114.99**	**43**	P	PKPdf	13 04 45.5	+2.0
	baz=288						
HWUT	**Hardware Ranch**	**115.11**	**46**	*e*PKPdf	**PKPdf**	**13 04 44.3**	**+0.5**
RLMT	**Red Lodge**	**115.64**	**42**	P	**PKPdf**	**13 04 46.0**	**+1.3**
	baz=290						
BW06	**Boulder Array**	**116.20**	**45**	P	**PKPdf**	**13 04 46.2**	**+0.3**
	baz=288						
PDAR	**Pinedale Array**	**116.20**	**45**	PKP	**PKPdf**	**13 04 46.2**	**+0.4**
	comp=Z,1.6nm,0.7s,baz=210,slow=1.0,SNR=18						
PDAR				PKKPbc	**PKKPbc**	**13 15 16.1**	**-1.6**
	comp=Z,0.5nm,0.4s,baz=119,slow=5.3,SNR=6.5						
214A	**Organ Pipe Nat**	**116.37**	**57**	P	**PKPdf**	**13 04 47.3**	**+1.1**
	baz=281						
WUAZ	**Wupatki**	**116.80**	**53**	P	**PKPdf**	**13 04 48.3**	**+1.2**
	baz=283						
WUAZ	**Wupatki**	**116.80**	**53**	*e*PKPdf	**PKPdf**	**13 04 48.3**	**+1.2**
EKA	**Eskdalemuir Ar**	**117.42**	**332**	PKP	**PKPdf**	**13 04 47.0**	**-0.5**
	comp=Z,0.7nm,0.4s,baz=46,slow=3.2,SNR=9.6						
EKA	**Eskdalemuir Ar**	**117.42**	**332**	PKIKP	**PKPdf**	**13 04 47.0**	**-0.5**
EKA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
O20A	**White River Ci**	**117.95**	**47**	P	**PKPdf**	**13 04 49.9**	**+0.6**
	baz=288						
TUC	**Tucson**	**117.98**	**56**	P	**PKPdf**	**13 04 50.2**	**+0.8**
	baz=282						
TUC	**Tucson**	**117.98**	**56**	*e*PKPdf	**PKPdf**	**13 04 50.4**	**+1.0**
TUC	**Tucson**	**117.98**	**56**	*e*PKIKP	**PKPdf**	**13 04 50.4**	**+1.0**
K22A	**Casper**	**118.34**	**44**	P	**PKPdf**	**13 04 49.7**	**-0.2**
	baz=291						
MVCO	**Mesa Verde**	**118.61**	**50**	P	**PKPdf**	**13 04 51.9**	**+1.3**
	baz=286						
MVCO	**Mesa Verde**	**118.61**	**50**	*e*PKPdf	**PKPdf**	**13 04 51.7**	**+1.0**
MVCO				*e*PP	**PP**	**13 06 11.5**	**-0.3**
N23A	**Red Feather La**	**119.36**	**46**	P	**PKPdf**	**13 04 52.6**	**+0.5**
	baz=290						
RSSD	**Black Hills**	**119.48**	**42**	P	**PKPdf**	**13 04 51.7**	**-0.4**
	baz=294						
RSSD	**Black Hills**	**119.48**	**42**	*e*PKPdf	**PKPdf**	**13 04 51.8**	**-0.3**
RSSD	**Black Hills**	**119.48**	**42**	*e*PKIKP	**PKPdf**	**13 04 51.8**	**-0.3**
S22A	**4UR Ranch, Cre**	**119.73**	**49**	P	**PKPdf**	**13 04 53.5**	**+0.6**
	baz=288						
ISCO	**Idaho Springs**	**119.97**	**47**	P	**PKPdf**	**13 04 53.8**	**+0.5**
	baz=290						
121A	**Cookes Peak, D**	**120.40**	**55**	P	**PKPdf**	**13 04 55.4**	**+1.2**
	baz=284						
SDCO	**Great Sand Dun**	**120.73**	**49**	P	**PKPdf**	**13 04 55.6**	**+0.8**
	baz=289						
SDCO	**Great Sand Dun**	**120.73**	**49**	*e*PKPdf	**PKPdf**	**13 04 55.7**	**+0.8**
ANMO	**Albuquerque**	**120.84**	**52**	PKP	**PKPdf**	**13 04 56.1**	**+1.1**
	comp=Z,6.6nm,0.9s,baz=194,slow=2.9,SNR=30						
ANMO	**Albuquerque**	**120.84**	**52**	*e*PKPdf	**PKPdf**	**13 04 56.2**	**+1.3**
ANMO				*e*PP	**PP**	**13 06 26.2**	**-0.8**
ANMO	**Albuquerque**	**120.84**	**52***c*	*i*PKIKP	**PKPdf**	**13 04 55.9**	**+0.9**
ULM	**Lac du Bonnet**	**121.42**	**32**	PKP	**PKPdf**	**13 04 55.0**	**-0.4**
	comp=Z,7.2nm,0.7s,baz=269,slow=1.3,SNR=9.7						
ULM	**Lac du Bonnet**	**121.42**	**32**	PKIKP	**PKPdf**	**13 04 55.0**	**-0.4**
ULM				pmax	pmax		
	comp=Z,7.0nm,0.7s						
T25A	**Trinidad**	**121.75**	**49**	P	**PKPdf**	**13 04 57.4**	**+0.7**
	baz=289						
A33A	**Warroad**	**122.42**	**33**	P	**PKPdf**	**13 04 56.9**	**-0.4**
	baz=304						
MNTX	**Cornudas Mount**	**122.59**	**56**	P	**PKPdf**	**13 04 59.0**	**+0.8**
	baz=285						
MNTX	**Cornudas Mount**	**122.59**	**56**	*e*PKPdf	**PKPdf**	**13 04 58.7**	**+0.5**
B34A	**Aery, Baudette**	**123.08**	**33**	P	**PKPdf**	**13 04 58.3**	**-0.3**
	baz=304						
H32A	**Carlson Farm,**	**123.55**	**39**	P	**PKPdf**	**13 04 59.8**	**+0.1**
	baz=300						
B35A	**Bob, Littlefor**	**123.66**	**33**	P	**PKPdf**	**13 04 59.4**	**-0.3**
	baz=305						
G33A	**Ortonville**	**123.82**	**38**	P	**PKPdf**	**13 04 59.6**	**-0.6**
	baz=301						
C35A	**Jirik Farms, M**	**123.90**	**34**	P	**PKPdf**	**13 04 59.1**	**-1.1**
	baz=305						
MSTX	**Muleshoe**	**124.03**	**52**	P	**PKPdf**	**13 05 01.4**	**+0.3**
	baz=289						
D35A	**Remer**	**124.20**	**35**	P	**PKPdf**	**13 05 00.3**	**-0.5**
	baz=304						
F34A	**Alexandria**	**124.21**	**36**	P	**PKPdf**	**13 05 00.9**	**0.0**
	baz=302						
E35A	**Pequot Lakes**	**124.30**	**35**	P	**PKPdf**	**13 05 00.6**	**-0.4**
	baz=304						
ECSD	**EROS Data Cent**	**124.45**	**39**	P	**PKPdf**	**13 05 00.8**	**-0.6**
	baz=300						
ECSD	**EROS Data Cent**	**124.45**	**39**	*e*PKPdf	**PKPdf**	**13 05 01.2**	**-0.2**
C36A	**Pine Crest Far**	**124.49**	**33**	P	**PKPdf**	**13 05 01.0**	**-0.3**
	baz=306						
BGNE	**Belgrade**	**124.55**	**42**	P	**PKPdf**	**13 05 01.2**	**-0.5**
	baz=297						
F35A	**Swanville**	**124.58**	**36**	P	**PKPdf**	**13 05 01.4**	**-0.2**
	baz=303						
AMTX	**Amarillo**	**124.59**	**51**	P	**PKPdf**	**13 05 02.4**	**+0.4**
	baz=290						
AMTX	**Amarillo**	**124.59**	**51**	*e*PKPdf	**PKPdf**	**13 05 02.5**	**+0.4**
TXAR	**Lajitas Array**	**124.63**	**58**	PKP	**PKPdf**	**13 05 02.9**	**+0.7**
	comp=Z,4.8nm,0.8s,baz=229,slow=1.4,SNR=44						
TXAR				PKKPab	**PKKPab**	**13 14 45.3**	**+0.3**
	comp=Z,0.6nm,0.9s,baz=80,slow=2.2,SNR=5.9						
C37A	**Embarrass**	**124.86**	**33**	P	**PKPdf**	**13 05 01.5**	**-0.5**
	baz=307						
E36A	**McGregor**	**124.97**	**35**	P	**PKPdf**	**13 05 02.1**	**-0.2**
	baz=305						
G35A	**Watkins**	**124.98**	**37**	P	**PKPdf**	**13 05 02.3**	**0.0**
	baz=303						
H35A	**Sunnyside Ranc**	**125.05**	**37**	P	**PKPdf**	**13 05 02.6**	**+0.1**
	baz=302						
D37A	**Cotton**	**125.07**	**34**	P	**PKPdf**	**13 05 02.5**	**0.0**
	baz=306						
EYMN	**Ely**	**125.11**	**33**	P	**PKPdf**	**13 05 02.9**	**+0.4**
	baz=307						
F36A	**Milaca**	**125.19**	**36**	P	**PKPdf**	**13 05 02.3**	**-0.4**
	baz=304						
G36A	**St. Michael**	**125.41**	**36**	P	**PKPdf**	**13 05 03.5**	**+0.3**
	baz=304						
E38A	**The Farm, Brul**	**125.88**	**34**	P	**PKPdf**	**13 05 03.8**	**-0.2**
	baz=307						
ESDC	**Sonseca Array**	**125.89**	**316**	PKP	**PKPdf**	**13 05 04.8**	**+0.5**
	comp=Z,0.1nm,0.4s,baz=16,slow=2.9,SNR=4.1						
ESDC				PP	**PP**	**13 07 01.4**	**+1.2**
	comp=Z,1.6nm,0.9s,baz=48,slow=7.3,SNR=6.1						
I36A	**Fitzsimmons Fa**	**125.91**	**38**	P	**PKPdf**	**13 05 03.9**	**-0.3**
	baz=303						
J36A	**Seneca 1, Swea**	**126.08**	**39**	P	**PKPdf**	**13 05 04.6**	**+0.1**
	baz=302						
F38A	**Pierce - Schro**	**126.08**	**35**	P	**PKPdf**	**13 05 04.2**	**-0.2**

	baz=306						
I37A	Lemond, Waseca	126.28	37	P	PKPdf	13 05 05.6	+0.7
	baz=303						
K36A	Gilmore City	126.36	39	P	PKPdf	13 05 05.1	0.0
	baz=301						
L36A	Harm Buss Farm	126.50	40	P	PKPdf	13 05 05.2	-0.2
	baz=301						
G38A	Ridgeland	126.55	35	P	PKPdf	13 05 05.2	-0.2
	baz=305						
E39A	Mellen	126.57	34	P	PKPdf	13 05 05.2	-0.2
	baz=308						
J37A	Redenius Farm,	126.57	38	P	PKPdf	13 05 04.9	-0.6
	baz=303						
F39A	Loretta	126.64	34	P	PKPdf	13 05 05.5	0.0
	baz=307						
K37A	Belmond	126.81	39	P	PKPdf	13 05 05.7	-0.3
	baz=302						
WMOK	Wichita Mounta	126.87	50	P	PKPdf	13 05 05.7	-0.6
	baz=292						
WMOK	Wichita Mounta	126.87	50	*e*PKPdf	PKPdf	13 05 05.9	-0.4
WMOK	Wichita Mounta	126.87	50	*e*PKIKP	PKPdf	13 05 05.9	-0.4
G39A	Holcombe	126.88	35	P	PKPdf	13 05 06.1	+0.1
	baz=306						
E40A	Wakefield	126.89	33	P	PKPdf	13 05 06.0	0.0
	baz=308						
I38A	Scanlan Farm,	126.91	37	P	PKPdf	13 05 06.2	+0.1
	baz=304						
ABTX	Abilene, Hawle	126.95	53	P	PKPdf	13 05 07.0	+0.5
	baz=290						
H39A	Augusta	127.16	36	P	PKPdf	13 05 06.7	+0.1
	baz=306						
J38A	Wedel Dairy, R	127.23	38	P	PKPdf	13 05 06.3	-0.4
	baz=304						
M37A	Trindle Farm,	127.25	40	P	PKPdf	13 05 07.4	+0.6
	baz=301						
E41A	Kenton	127.38	33	P	PKPdf	13 05 06.9	0.0
	baz=309						
G40A	Rib Lake	127.44	34	P	PKPdf	13 05 06.0	-1.0
	baz=307						
I39A	Houston	127.50	37	P	PKPdf	13 05 07.0	-0.3
	baz=305						
JCT	Junction City	127.52	55	P	PKPdf	13 05 08.2	+0.5
	baz=288						
JCT	Junction City	127.52	55	*e*PKPdf	PKPdf	13 05 08.4	+0.7
JCT	Junction City	127.52	55	*e*PKIKP	PKPdf	13 05 08.4	+0.7
J39A	Decorah	127.68	37	P	PKPdf	13 05 07.2	-0.4
	baz=304						
H40A	Chili	127.71	35	P	PKPdf	13 05 07.5	-0.1
	baz=307						
F41A	Three Lakes	127.76	33	P	PKPdf	13 05 08.0	+0.3
	baz=309						
M38A	Pleasantville	127.80	40	P	PKPdf	13 05 08.1	+0.3
	baz=302						
O37A	Wolven Farm, M	127.82	42	P	PKPdf	13 05 08.0	+0.1
	baz=300						
TORD	Torodi Ar. Bea	127.84	282	PKP	PKPdf	13 05 07.8	-0.8
	comp=Z,2.7nm,0.9s,baz=71,slow=2.2						
TORD				SKPbc	SKPbc	13 08 03.1	
	baz=79,slow=3.5						
K39A	Oelwein	127.92	38	P	PKPdf	13 05 07.8	-0.3
	baz=304						
P37A	Lathrop	127.97	43	P	PKPdf	13 05 08.0	-0.2
	baz=299						
I40A	Norwalk	128.01	36	P	PKPdf	13 05 07.8	-0.4
	baz=306						
H41A	Junction City	128.14	35	P	PKPdf	13 05 07.7	-0.7
	baz=307						
L39A	Vinton	128.18	39	P	PKPdf	13 05 08.2	-0.3
	baz=303						
K40A	Colesburg	128.39	38	P	PKPdf	13 05 09.1	+0.2
	baz=305						
G42A	Mountain	128.44	34	P	PKPdf	13 05 09.5	+0.5
	baz=309						
P38A	Dawn	128.50	42	P	PKPdf	13 05 10.0	+0.8
	baz=300						
N39A	Derby Farms, D	128.53	40	P	PKPdf	13 05 09.4	+0.1
	baz=302						
TUL1	Leonard	128.63	47	P	PKPdf	13 05 10.4	+0.8
	baz=296						
J41A	Loganville	128.68	36	P	PKPdf	13 05 09.2	-0.3
	baz=306						
L40A	Anamosa	128.69	38	P	PKPdf	13 05 09.2	-0.3
	baz=304						
JFWS	Jewell Farm	128.80	37	P	PKPdf	13 05 09.6	-0.1
	baz=306						
M40A	Post Highland	128.87	39	P	PKPdf	13 05 09.8	-0.1
	baz=303						
R38A	Fenwick Farm,	128.94	44	P	PKPdf	13 05 09.5	-0.6
	baz=299						
I42A	Draeger Farm,	129.00	35	P	PKPdf	13 05 09.9	-0.2
	baz=308						
P39B	Salisbury	129.08	42	P	PKPdf	13 05 10.7	+0.3
	baz=301						
N40A	Mertquake, Sal	129.11	40	P	PKPdf	13 05 10.8	+0.4
	baz=303						
Q39A	Willow Grove F	129.16	43	P	PKPdf	13 05 10.8	+0.3
	baz=300						
MDT	Midelt	129.21	309	PKP	PKPdf	13 05 12.6	+1.7
	comp=Z,2.0nm,0.9s,baz=89,slow=2.9,SNR=3.6						
S38A	Stockton	129.21	45	P	PKPdf	13 05 10.2	-0.4
	baz=298						
T38A	Diamond	129.22	45	P	PKPdf	13 05 10.7	0.0
	baz=298						
J42A	Columbus	129.23	36	P	PKPdf	13 05 10.4	-0.1
	baz=307						
O40A	La Belle	129.33	41	P	PKPdf	13 05 11.0	+0.2
	baz=302						
K42A	Prairie Point,	129.42	37	P	PKPdf	13 05 10.9	0.0
	baz=306						
R39A	Chumby, Stover	129.48	43	P	PKPdf	13 05 10.5	-0.6
	baz=300						
M41A	Milan	129.50	39	P	PKPdf	13 05 11.6	+0.6
	baz=304						
P40A	Paris	129.53	42	P	PKPdf	13 05 11.3	+0.1
	baz=302						
S39A	Bolivar	129.59	44	P	PKPdf	13 05 10.5	-0.9
	baz=299						
J43A	Natural Harves	129.60	35	P	PKPdf	13 05 11.5	+0.2
	baz=308						
L42A	Oliver, Polo	129.68	38	P	PKPdf	13 05 11.4	0.0
	baz=306						
Q40A	Laux Farm, Aux	129.79	42	P	PKPdf	13 05 11.8	0.0
	baz=301						
T39A	Clever	129.87	45	P	PKPdf	13 05 11.1	-0.8
	baz=298						
O41A	Passleys Farm,	129.98	40	P	PKPdf	13 05 12.2	+0.2
	baz=303						
R40A	Maddies Statio	130.02	43	P	PKPdf	13 05 12.1	-0.1
	baz=300						
U39A	Green Forest	130.10	46	P	PKPdf	13 05 11.9	-0.5
	baz=298						
P41A	Barry, Barry	130.10	41	P	PKPdf	13 05 12.7	+0.4
	baz=303						
N42A	Yates City	130.12	39	P	PKPdf	13 05 12.7	+0.4
	baz=304						
S40A	Lebanon	130.20	44	P	PKPdf	13 05 12.1	-0.5
	baz=300						
Q41A	Truxton	130.37	42	P	PKPdf	13 05 12.2	-0.6
	baz=302						
T40A	Mansfield	130.41	44	P	PKPdf	13 05 12.4	-0.6
	baz=299						
W39A	Magazine	130.42	47	P	PKPdf	13 05 13.2	+0.2
	baz=297						
M43A	Waltham Townsh	130.44	38	P	PKPdf	13 05 12.9	+0.1
	baz=306						
X39A	Fountain Ranch	130.48	48	P	PKPdf	13 05 14.1	+0.9
	baz=296						
U40A	Yellville	130.56	46	P	PKPdf	13 05 12.5	-0.7
	baz=298						
P42A	Winchester	130.61	41	P	PKPdf	13 05 13.6	+0.4
	baz=303						
R41A	Rosebud	130.61	43	P	PKPdf	13 05 13.5	+0.2
	baz=301						
PLCA	Paso Flores	130.63	160	PKP	PKPdf	13 05 14.3	+0.9
	comp=Z,5.1nm,0.7s,baz=320,slow=0.6,SNR=15						
PLCA				SKPbc	SKPbc	13 08 13.6	-0.2
	comp=Z,5.0nm,0.9s,baz=264,slow=2.9,SNR=8.1						
S41A	Jillco Farms,	130.73	44	P	PKPdf	13 05 12.4	-1.1
	baz=300						
CCM	Cathedral Cave	130.83	43	P	PKPdf	13 05 14.3	+0.6
	baz=301						
CCM	Cathedral Cave	130.83	43	*e*PKPdf	PKPdf	13 05 14.6	+0.9
CCM	Cathedral Cave	130.83	43	*e*PKIKP	PKPdf	13 05 14.6	+0.9
V40A	Witts Springs	130.84	46	P	PKPdf	13 05 13.1	-0.8
	baz=298						
MIAR	Mount Ida	130.86	48	P	PKPdf	13 05 14.6	+0.7
	baz=296						
MIAR	Mount Ida	130.86	48	*e*PKPdf	PKPdf	13 05 15.1	+1.2
MIAR	Mount Ida	130.86	48	*e*PKIKP	PKPdf	13 05 15.1	+1.2
W40A	Ferguson Farm,	130.94	47	P	PKPdf	13 05 14.6	+0.6
	baz=297						
T41A	Mountain View	130.99	44	P	PKPdf	13 05 13.8	-0.3
	baz=300						
R42A	Luebbering	131.02	42	P	PKPdf	13 05 14.6	+0.6
	baz=302						
P43A	Skaggs, Pawnee	131.11	40	P	PKPdf	13 05 14.7	+0.5
	baz=304						
U41A	Viola	131.22	45	P	PKPdf	13 05 13.9	-0.6
	baz=299						
S42A	Caledonia	131.28	43	P	PKPdf	13 05 14.5	-0.1
	baz=302						
T42A	Van Buren	131.46	44	P	PKPdf	13 05 14.3	-0.6
	baz=301						
O44A	Mansfield	131.49	39	P	PKPdf	13 05 15.9	+1.0
	baz=306						
R43A	Red Bud	131.59	42	P	PKPdf	13 05 15.7	+0.6
	baz=303						
N45A	Kentland	131.67	38	P	PKPdf	13 05 15.9	+0.7
	baz=307						
U42A	Revenden	131.70	45	P	PKPdf	13 05 14.7	-0.7
	baz=300						
P44A	Sand Creek, Wi	131.79	40	P	PKPdf	13 05 15.7	+0.2
	baz=305						
Q44A	Meyer Farm, Va	131.85	41	P	PKPdf	13 05 16.4	+0.8
	baz=304						
V42A	Cord	131.86	45	P	PKPdf	13 05 15.9	+0.2
	baz=299						
S43A	Fulton Ridge,	131.87	43	P	PKPdf	13 05 15.6	-0.1
	baz=302						
O45A	Potomac	131.89	38	P	PKPdf	13 05 16.0	+0.4
	baz=306						
T43A	Greenville	131.98	43	P	PKPdf	13 05 15.4	-0.5
	baz=302						
SFIN	Lafayette	132.20	38	P	PKPdf	13 05 16.2	0.0
	baz=307						
P45A	Graceland, Par	132.31	39	P	PKPdf	13 05 17.7	+1.2
	baz=306						
S44A	Carbondale	132.36	42	P	PKPdf	13 05 16.3	-0.2
	baz=303						
Q45A	Warren Harvey,	132.41	40	P	PKPdf	13 05 17.5	+0.9
	baz=305						
P46A	Rosedale	132.59	39	P	PKPdf	13 05 17.8	+0.8
	baz=306						
R45A	Skylar, Fairfi	132.67	41	P	PKPdf	13 05 17.7	+0.5
	baz=304						
O47A	Sheridan	132.85	37	P	PKPdf	13 05 16.8	-0.7
	baz=308						
KOWA	Kowa	133.26	285	PKP	PKPdf	13 05 18.9	+0.1
	comp=Z,1.4nm,0.4s,baz=14,slow=4.3,SNR=4.3						
KOWA				SKPbc	SKPbc	13 08 23.0	-0.8
	comp=Z,7.3nm,0.9s,baz=54,slow=4.0,SNR=4.7						
O48A	Farmland	133.45	37	P	PKPdf	13 05 18.7	+0.1
	baz=309						
Q47A	Bedord North L	133.48	39	P	PKPdf	13 05 19.5	+0.8
	baz=307						
ELFO	Elginfield	133.60	31	P	PKPdf	13 05 19.4	+0.6
	baz=316						
P48A	Milroy	133.78	38	P	PKPdf	13 05 19.4	+0.2
	baz=308						
R47A	Wooly Knot Far	133.80	40	P	PKPdf	13 05 20.3	+1.1
	baz=306						
U46A	Springville	133.80	43	P	PKPdf	13 05 20.9	+1.6
	baz=303						
Q48A	North Vernon	133.92	38	P	PKPdf	13 05 20.2	+0.7
	baz=308						
O49A	Covington	133.97	36	P	PKPdf	13 05 20.7	+1.1
	baz=310						
WCI	Wyandotte Cave	133.98	40	P	PKPdf	13 05 20.6	+0.9
	baz=306						
WCI	Wyandotte Cave	133.98	40	*e*PKPdf	PKPdf	13 05 21.3	+1.7
WCI				*e*SKPbc	SKPbc	13 08 25.1	-0.3
WCI	Wyandotte Cave	133.98	40	*e*PKIKP	PKPdf	13 05 21.3	+1.7
244A	Avery, Jackson	134.14	50	P	PKPdf	13 05 20.8	+0.7
	baz=297						
V46A	Holladay	134.15	44	P	PKPdf	13 05 19.6	-0.4
	baz=303						
R48A	Northridge Ran	134.15	39	P	PKPdf	13 05 21.4	+1.5
	baz=307						
P49A	Miami Univ. Ec	134.16	37	P	PKPdf	13 05 20.9	+0.9
	baz=309						
WVT	Waverly	134.16	43	P	PKPdf	13 05 19.9	-0.1
	baz=303						
T47A	Sharon Grove	134.17	42	P	PKPdf	13 05 19.9	-0.1
	baz=305						
N50A	Nevada	134.28	35	P	PKPdf	13 05 20.3	+0.2
	baz=312						
U47A	Clarksville	134.36	42	P	PKPdf	13 05 21.4	+1.0
	baz=304						
Q49A	Aurora	134.38	38	P	PKPdf	13 05 21.5	+1.2
	baz=309						
DBIC	Dimbokro	134.45	274	SKPbc	SKPbc	13 08 27.1	-0.6
	comp=Z,15nm,1.0s,baz=88,slow=4.1,SNR=8.0						
S48A	Wiedeman Farm,	134.47	40	P	PKPdf	13 05 21.8	+1.2
	baz=306						
V47A	Nunnelly	134.54	43	P	PKPdf	13 05 21.4	+0.6
	baz=303						
T48A	Bowling Green	134.57	41	P	PKPdf	13 05 21.7	+0.9
	baz=305						
P50A	Jamestown	134.66	36	P	PKPdf	13 05 22.0	+1.1
	baz=310						
ACSO	Alum Creek Sta	134.73	35	P	PKPdf	13 05 21.3	+0.3
	baz=312						
W47A	Westpoint	134.80	44	P	PKPdf	13 05 22.3	+1.1
	baz=303						
U48A	Cassie Pea, Po	134.82	42	P	PKPdf	13 05 21.9	+0.6
	baz=305						
S49A	Springfield	134.89	39	P	PKPdf	13 05 22.0	+0.7
	baz=307						
V48A	Smith Brothers	135.06	43	P	PKPdf	13 05 22.6	+0.8
	baz=304						
T49A	Edmonton	135.13	40	P	PKPdf	13 05 22.0	+0.2
	baz=306						
R50A	Paris	135.18	38	P	PKPdf	13 05 21.3	-0.6
	baz=309						
Q51A	Peebles	135.31	37	P	PKPdf	13 05 22.6	+0.4
	baz=310						
W48A	Pulaski	135.32	44	P	PKPdf	13 05 23.0	+0.7
	baz=303						
Y47A	UCPARC, Winfie	135.33	46	P	PKPdf	13 05 21.4	-0.8
	baz=301						
S50A	Richmond	135.51	39	P	PKPdf	13 05 22.1	-0.5
	baz=308						
X48A	Hartselle	135.61	44	P	PKPdf	13 05 22.5	-0.3
	baz=303						
T50A	Nancy	135.63	40	P	PKPdf	13 05 23.3	+0.5
	baz=307						
M54A	Oil Creek Stat	135.66	31	P	PKPdf	13 05 22.4	-0.3
	baz=316						
V49A	McMinnville	135.66	42	P	PKPdf	13 05 22.6	-0.3
	baz=305						
W49A	Belvidere	135.78	43	P	PKPdf	13 05 22.7	-0.4
	baz=304						
Y48A	Jasper	135.81	45	P	PKPdf	13 05 21.5	-1.6
	baz=302						
Z48A	Northport	135.81	46	P	PKPdf	13 05 21.4	-1.8
	baz=301						
S51A	Beattyville	136.04	38	P	PKPdf	13 05 21.7	-1.8
	baz=309						
347A	Saraland	136.06	49	P	PKPdf	13 05 23.2	-0.4
	baz=298						
X49A	Woodville	136.07	44	P	PKPdf	13 05 22.4	-1.3
	baz=303						
T51A	Gray	136.23	39	P	PKPdf	13 05 23.1	-0.8
	baz=308						
W50A	Signal Mountai	136.38	42	P	PKPdf	13 05 23.5	-0.8
	baz=305						
LRAL	Lakeview Retre	136.39	46	*e*PKPdf	PKPdf	13 05 24.4	+0.1
X50B	Fort Payne	136.57	44	P	PKPdf	13 05 23.8	-0.8
	baz=304						
Z49A	Columbiana	136.64	46	P	PKPdf	13 05 24.6	-0.1
	baz=302						
TZTN	Tazewell	136.74	40	P	PKPdf	13 05 25.1	+0.2
	baz=308						
Z50A	Ashland	137.04	45	P	PKPdf	13 05 25.4	-0.2
	baz=303						
TKL	Tuckaleechee C	137.13	41	PKP	PKPdf	13 05 26.6	+0.9
	comp=Z,12nm,0.7s,baz=125,slow=4.6,SNR=17						
TKL				SKPbc	SKPbc	13 08 34.5	-0.9
	comp=Z,5.9nm,0.8s,baz=231,slow=3.4,SNR=4.8						
V52A	Sevierville	137.14	41	P	PKPdf	13 05 25.8	+0.2
	baz=307						
Y52A	Lilburn	137.99	43	P	PKPdf	13 05 28.4	+1.2
	baz=305						
251A	Midway	138.02	46	P	PKPdf	13 05 28.3	+0.9
	baz=302						
JTS	JuntasAbangare	145.68	80	PKPbc	PKPab	13 05 43.4	+0.3
	comp=Z,88nm,0.7s,baz=18,slow=7.3,SNR=57						
JTS	JuntasAbangare	145.68	80	*e*PKPbc	PKPab	13 05 43.0	0.0
JTS	JuntasAbangare	145.68	80	*e*PKP2	PKPab	13 05 43.0	0.0
CPUP	Villa Florida	147.84	169	PKP	PKPdf	13 05 45.3	+0.6
	comp=Z,43nm,0.9s,baz=191,slow=2.5,SNR=57						
CPUP				PKPbc	PKPbc	13 05 48.6	+0.7
	comp=Z,43nm,0.9s,baz=188,slow=1.8,SNR=47						
NNA	Nana	148.77	124	PKPbc	PKPbc	13 05 51.3	+0.5
	comp=Z,15nm,0.4s,baz=266,slow=5.2,SNR=10						
NNA	Nana	148.77	124	*e*PKPbc	PKPbc	13 05 51.5	+0.7
NNA	Nana	148.77	124	*i* PKP2	PKPbc	13 05 51.9	+1.2
BCIP	Isla Barro Col	150.81	81	*e*PKPbc	PKPbc	13 05 55.6	0.0
BCIP				*e*PKPab	PKPab	13 06 05.0	+1.3
OTAV	Otavalo	151.78	99	*e*PKPdf	PKPdf	13 05 50.6	-1.3
OTAV				*e*PKPbc	PKiKP	13 05 59.0	+0.2
OTAV	Otavalo	151.78	99	*e*PKIKP	PKPdf	13 05 50.6	-1.3
LPAZ	La Paz	152.40	141	PKP	PKPdf	13 05 53.6	+0.8
	comp=Z,3.3nm,1.0s,baz=282,slow=2.0,SNR=6.0						
LPAZ				PKPbc	PKiKP	13 06 00.6	+0.4
	comp=Z,6.7nm,0.3s,baz=144,slow=1.2,SNR=45						
LPAZ				PKPab	PKPab	13 06 12.7	+1.8
	comp=Z,24nm,0.7s,baz=200,slow=5.3,SNR=26						
ROSC	El Rosal	156.42	90	PKPab	PKPab	13 06 29.9	+1.8
	comp=Z,9.2nm,0.8s,baz=252,slow=20,SNR=4.9						
SDV	Santo Domingo	159.87	79	*e*PKPdf	PKPdf	13 06 02.4	+0.2
SDV				*e*PKPab	PKPab	13 06 43.1	+0.4
SAML	Samuel	161.07	139	*e*PKPdf	PKPdf	13 06 03.6	+0.4
SAML	Samuel	161.07	139	*e*PKIKP	PKPdf	13 06 03.6	+0.4

DJA 21 12:46:45.4±0.7, 2°S±7°×10°2E±°, h141^{km}±7^{km}, M3.4/7, MLv3.4/7, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KRJI	Kerinci	0.24	349	P	Pn	12 47 05.8	+1.0
KRJI				S	Sn	12 47 21.3	+1.7
KRJI	Kerinci	0.24	349	P	Pn	12 47 06.8	+2.0
MASI	Maura Aman, Be	1.09	138	P	Pn	12 47 10.5	+0.3
MASI				S	Sn	12 47 29.9	+0.9
MASI	Maura Aman, Be	1.09	138	P	Pn	12 47 11.5	+1.3
MNAI	Manna	2.48	144	P	Pn	12 47 26.3	+0.4
MNAI				S	Sn	12 47 57.2	+0.2
SISI	Saibi	2.62	292	P	Pn	12 47 28.0	+0.4
SISI				S	Sn	12 48 00.0	0.0
BKNI	Bangkinang	2.68	350	P	Pn	12 47 30.5	+2.1
MDSI	Maura Dua	3.42	129	P	Pn	12 47 38.3	+0.5
MDSI				S	Sn	12 48 18.7	+0.3

MEX 21 12:54:00.9±0.3, 26°.98N×112°.50W, h18^{km}±45^{km}, MD3.6, Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
SRIG	Santa Rosalia	0.41	35	*i* P	Pg	12 54 08.1	-1.3
	baz=215,slow=7.9						
SRIG				*e*S	Sg	12 54 13.6	-1.5
GUYB	Guaymas	1.71	57	*e*P	Pn	12 54 26.7	-3.1
GUYB				*e*S	Sn	12 54 46.9	-4.4

GUC 21 13:00:02.1±0.9, 20°.82S×70°.60W, h43^{km}±2^{km}, ML3.7, 5C-6D, Near coast of northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PB02	IPOC Station P	0.83	127⇓	*i*P	Pn	13 00 18.1	+0.6
PB02				*i* S	Sn	13 00 29.6	+0.9
PB02				IAML		13 00 32.0	
	comp=E,7μm,0.5s						
PB01	IPOC Station P	1.07	102⇓	*i*P	Pn	13 00 21.9	+1.2
PB01				*i* S	Sn	13 00 36.1	+1.7
PB01				IAML		13 00 37.5	
	comp=N,3μm,0.2s						
PB07	IPOC Station P	1.13	144⇓	*i*P	Pn	13 00 22.8	+1.2
PB07				*i* S	Sn	13 00 38.3	+2.3
PB07				IAML		13 00 41.1	
	comp=E,1μm,0.3s						
PSGC	Pisagua	1.29	21⇑	*i*P	Pn	13 00 24.6	+0.8
PSGC				*i* S	Sn	13 00 42.2	+2.3
PB11	IPOC Station P	1.38	40⇑	*i*P	Pn	13 00 26.3	+1.3
PB11				*i* S	Sn	13 00 45.0	+2.9
PB03	IPOC Station P	1.46	147⇑	*i*P	Pn	13 00 27.7	+1.5
PB03				*i* S	Sn	13 00 46.7	+2.5
PB08	IPOC Station P	1.52	64⇓	*i*P	Pn	13 00 28.9	+1.8
PB08				*i* S	Sn	13 00 48.8	+3.0
PB08				IAML		13 00 52.1	
	comp=N,2μm,0.7s						
PB04	IPOC Station P	1.57	164⇑	*i*P	Pn	13 00 28.7	+1.0
PB04				IAML		13 00 55.6	
	comp=E,2μm,0.4s						
PB09	IPOC Station P	1.60	128⇓	*i*P	Pn	13 00 31.1	+3.0
PB09				*i* S	Sn	13 00 52.1	+4.4
PB05	IPOC Station P	2.06	170⇓	*i*P	Pn	13 00 35.0	+0.6
PB05				*i* S	Sn	13 01 01.7	+2.8
PB06	IPOC Station P	2.11	153⇑	*i*P	Pn	13 00 36.5	+1.4
PB06				IAML		13 01 12.5	
	comp=E,603nm,0.8s						
PB15	IPOC Station P	2.60	156	*e*P	Pn	13 00 43.8	+1.9

*ISCJB **21** 13:17:04.3±1.2, 14°.79S±0°.08×167°.8E±0°.1, h129^{km}, mb4.0/8, Error ellipse: s-maj=21.6km s-min=9.1km az=160.0*

*IDC **21** 13:17:11.7±3.0, 14°.96S×167°.34E, h172^{km}±22^{km}, mb3.8/8, mb1 3.9/10, mb1mx3.5/48, mbtmp4.3/10, Error ellipse: s-maj=30.0km s-min=15.3km az=68.0*

ISC 21 13:17:06.2±1.3, 14°.80S±0°.09×167°.7E±0°.2, h129^{km}, n11, σ1^{s}93/13, mb4.1/8, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.33	189	P	Pn	13 18 53.3	+2.5
	4.1nm,0.3s,baz=308,slow=9.8,SNR=45						
DZM				S	Sn	13 20 13.4	+0.8
	1.3nm,0.3s,baz=127,slow=20,SNR=2.3						
HNR	Honiara	9.28	304	P	Pn	13 19 20.2	+3.2
	10.0nm,0.3s,baz=159,slow=8.6,SNR=7.0						
HNR				S	Sn	13 21 00.5	+0.7
	20nm,0.3s,baz=0.7,slow=17,SNR=6.1						
CTA	Charters Tower	21.14	253	P	P	13 21 39.9	-1.2
	4.4nm,0.7s,baz=87,slow=15,SNR=4.1						
STKA	Stephens Creek	29.28	230	P	P	13 22 55.9	-0.6
	7.6nm,0.4s,baz=55,slow=8.7,SNR=45						
WRA	Warramunga Arr	32.23	256	P	P	13 23 19.6	-3.0
	3.5nm,0.9s,baz=86,slow=8.5,SNR=14						
ASAR	Alice Springs	33.05	249	P	P	13 23 26.9	-2.9
	7.2nm,0.7s,baz=79,slow=8.9,SNR=50						
VNDA	Vanda	62.80	181	P	P	13 27 17.5	-0.1
	0.7nm,0.7s,baz=359,slow=9.1,SNR=6.2						
CMAR	Chiang Mai Arr	75.38	294	P	P	13 28 35.5	-0.7
	0.6nm,0.7s,baz=102,slow=3.9,SNR=5.8						
SONM	Songino Array	82.81	323	P	P	13 29 16.5	+0.3
	0.4nm,0.4s,baz=127,slow=4.4,SNR=4.3						
MKAR	Makanchi Array	97.56	316	P	P	13 30 25.6	-0.2
	0.6nm,0.7s,baz=97,slow=6.6,SNR=5.5						
ARCES	ARCESS Array B	120.43	346	PKP	PKPdf	13 35 41.4	-0.5
	3.0nm,0.9s,baz=58,slow=3.0,SNR=6.1						

BER 21 13:27:17.7±2.0, 81°.08N×0°.89E, h10^{km}, ML2.3, ML3.6(NAO), North of Svalbard

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
KBS	Kingsbay	2.89	133	Pn	Pn	13 28 01.3	-2.4
KBS				Sn	Sn	13 28 34.2	-4.3
KBS	Kingsbay	2.89	133	*e*P	Pn	13 28 01.4	-2.3
KBS				*e*S	Sn	13 28 33.9	-4.6
KBS				IAML		13 28 41.1	
	comp=Z,27nm,0.1s						
SPA0	Spitsbergen Ar	4.03	128	Pn	Pn	13 28 17.9	-1.4
	baz=319,slow=11						
SPA0	Spitsbergen Ar	4.03	128	Pn	Pn	13 28 17.9	-1.4
	baz=319,slow=11						
HSP	Hornsund	4.93	138	Pn	Pn	13 28 28.7	-3.0
HSP				Sn	Sn	13 29 24.8	-3.9
HSPB	Hornsund (broa	4.94	138	*e*P	Pn	13 28 28.4	-3.3
HSPB				*e*S	Sn	13 29 23.8	-5.0
HSPB				IAML		13 29 26.6	
	comp=Z,8.5nm,0.4s						
ARA0	ARCESS Array S	12.96	139	Pn	Pn	13 30 17.2	-4.3
	baz=347,slow=12						
ARA0	ARCESS Array S	12.96	139	P	Pn	13 30 17.2	-4.3

baz=347,slow=12

GII ***21*** *13:36:30.3±0.5, 33°.93N×32°.83E, h80^{km}*
NIC ***21*** *13:36:31.5±0.3, 33°.92N×32°.73E, h50^{km}, ML3.2*
ISC 21 13:36:28.5±1.8**, 33°.88N**±0°.04×**32°.83E**±0°.08**, h10**^{km}±14^{km}**,**
n22, σ**0^s.46**/30**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SZAC	**Souni**	**0.88**	**3**	P	**Pn**	**13 36 47.5**	**+0.6**
	baz=188						
SZAC				S	**Sn**	**13 36 59.6**	**-0.1**
PPCY	**Paphos**	**1.08**	**338**	P	**Pg**	**13 36 49.0**	**-0.3**
	baz=161						
CSS	**Mathiatis**	**1.16**	**21**	P	**Pn**	**13 36 51.1**	**+0.3**
	baz=205						
CSS				S	**Sn**	**13 37 07.1**	**+0.4**
CSS	**Mathiatis**	**1.16**	**21**	Pn	**Pn**	**13 36 50.8**	**0.0**
AKMC	**Akamas**	**1.22**	**340**	P	**Pb**	**13 36 51.6**	**0.0**
	baz=163						
ALFC	**Alefka**	**1.29**	**352**	P	**Pn**	**13 36 52.7**	**+0.1**
	baz=174						
ALFC				S	**Sb**	**13 37 09.1**	**-0.4**
MAMC	**Mammari**	**1.33**	**14**	P	**Pg**	**13 36 54.2**	**+0.2**
	baz=197						
HNTI	**Hanita**	**2.11**	**111**	Pn	**Pn**	**13 37 03.8**	**-0.1**
HNTI				Sn	**Sn**	**13 37 29.9**	**-0.3**
OFRI	**‘Ofer**	**2.20**	**124**	Pn	**Pn**	**13 37 04.9**	**-0.2**
OFRI				Sn	**Sn**	**13 37 32.9**	**+0.6**
MMA0B	**Mount Meron ar**	**2.32**	**111**	Pn	**Pn**	**13 37 06.7**	**0.0**
KSDI	**Kefar Szold**	**2.46**	**105**	Pn	**Pn**	**13 37 08.7**	**+0.1**
KSDI				Sn	**Sn**	**13 37 38.9**	**+0.2**
NATI	**Neve Ativ**	**2.50**	**103**	Sn	**Sn**	**13 37 38.9**	**-0.9**
MMLI	**Mount Malkishu**	**2.60**	**123**	Pn	**Pn**	**13 37 11.4**	**+0.7**
MMLI				Sn	**Sn**	**13 37 42.6**	**+0.2**
HMDT	**Nahal Hemdat**	**2.78**	**125**	Pn	**Pn**	**13 37 13.1**	**0.0**
DSI	**Dead Sea**	**3.15**	**136**	Pn	**Pn**	**13 37 18.4**	**+0.3**
YTIR	**Yattir**	**3.16**	**142**	Pn	**Pn**	**13 37 19.4**	**+1.0**
MZDA	**Masada**	**3.34**	**139**	Pn	**Pn**	**13 37 21.3**	**+0.7**
PRNI	**Paran**	**3.97**	**152**	Pn	**Pn**	**13 37 29.5**	**+0.1**
PRNI				Sn	**Sn**	**13 38 15.2**	**-0.9**
KRMI	**Paran Flat**	**4.08**	**156**	Pn	**Pn**	**13 37 31.1**	**+0.1**
HRFI	**Mount Harif**	**4.26**	**153**	Pn	**Pn**	**13 37 33.9**	**+0.4**
MBRI	**Mt Berech**	**4.44**	**156**	Pn	**Pn**	**13 37 36.4**	**+0.4**
EIL	**Elat**	**4.57**	**156**	Pn	**Pn**	**13 37 37.9**	**+0.3**

IDC ***21*** *13:38:05.1±2.5, 22°.79N×12°.06W, h0^{km}, mb3.3/1, mb1 3.8/4, mb1mx3.4/58, mbtmp3.7/4, ML4.0/2, Error ellipse: s-maj=78.2km s-min=31.1km az=79.0*
ISC 21 13:38:08.0±2.2**, 22°.8N**±0°.2×**11°.6W**±0°.3**, h10**^{km}**, n8,** σ**1^s.87**/7**,**
Mauritania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KOWA	**Kowa**	**10.89**	**138**	Pn	**Pn**	**13 40 46.9**	**+2.9**
	1.1nm,0.3s,baz=320,slow=13,SNR=18						
KOWA				Sn	**Sn**	**13 42 44.4**	**-1.7**
	0.4nm,0.3s,baz=303,slow=20,SNR=2.1						
KOWA				Lg	Lg	13 44 05.2	
	0.2nm,0.3s,baz=328,slow=19,SNR=2.4						
I11CV	**MAIO ISLAND IN**	**13.30**	**238**	*i*		14 54 40.0	
	baz=49,slow=316,SNR=0.6						
TORD	**Torodi Ar. Bea**	**15.81**	**125**	Pn	**P**	**13 41 53.1**	**-1.5**
	baz=300,slow=11						
DBIC	**Dimbokro**	**17.26**	**157**	P	**Pn**	**13 42 08.8**	**-0.4**
	0.5nm,0.3s,baz=327,slow=10,SNR=4.0						
I42PT	**GRACIOSA ISLAN**	**21.45**	**323**	*i*		15 37 50.0	
	baz=140,slow=379,SNR=0.6						
GERES	**GERESS Array B**	**32.82**	**31**	P	**P**	**13 44 41.2**	**-0.5**
	0.1nm,0.4s,baz=227,slow=8.5,SNR=3.1						
WRA	**Warramunga Arr**	**148.14**	**91**	PKPbc	**PKPbc**	**13 57 55.2**	**+0.3**
	0.3nm,0.6s,baz=294,slow=2.6,SNR=2.9						
ASAR	**Alice Springs**	**148.28**	**99**	PKPbc	**PKPbc**	**13 57 55.4**	**+0.3**
	0.3nm,0.5s,baz=298,slow=2.9,SNR=3.3						

MAN 21 13:51:16.4, 8°.02N×126°.24E, h47^{km}, mb4.5, ML3.3, MS3.1, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	**Bislig**	**0.20**	**36**	⇑*i*P	Pn	13 51 25.9	+1.5
BIPH				*i* S	Sn	13 51 29.9	-0.2
MATI	**Mati**	**1.07**	**179**	*e*P	Pn	13 51 35.7	+0.7
MATI				*e*S	Sn	13 51 54.0	+5.3
BUTP	**Butuan**	**1.12**	**327**	*e*P	Pn	13 51 36.2	+0.4
BUTP				*e*S	Sn	13 51 51.5	+1.4

ISCJB ***21*** *13:57:25.3±0.5, 32°.12N±0°.02×115°.16W±0°.03, h13^{km}±4^{km}, Error ellipse: s-maj=4.2km s-min=3.2km az=170.5*
NEIC ***21*** *13:57:27.1±0.0, 32°.13N×115°.23W, h8^{km}, ML3.2(ECX), ML3.2(PAS), After ECX.*
NEIC Felt at Brawley, California.
ECX ***21*** *13:57:27.1±0.7, 32°.13N×115°.23W, h8^{km}, MD3.2, ML3.4*
MEX ***21*** *13:57:28.2±0.5, 32°.21N×115°.14W, h12^{km}±999^{km}, MD3.9*
ISC 21 13:57:25.5±0.9**, 32°.15N**±0°.02×**115°.23W**±0°.02**, h17**^{km}±8^{km}**,**
n44, σ**1^s.13**/67**, 7C-7D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBIG	**Mexicali**	**0.26**	**6**	*e*P	**Pg**	**13 57 32.6**	**+1.3**
MBIG	**Mexicali**	**0.26**	**6**	*i* P	**Pg**	**13 57 32.6**	**+1.3**
MBIG				*e*S	**Sg**	**13 57 34.9**	**-0.4**
CPBX	**Cerro Prieto**	**0.28**	**347**	*e*P	**Pb**	**13 57 33.0**	**+0.9**
CPBX				*e*S	**Sb**	**13 57 37.3**	**+0.8**
CPBX				IAML		13 57 39.9	
	comp=N,13µm,0.1s						
CPBX				⇓*e*		13 57 39.9	
CPBX	**Cerro Prieto**	**0.28**	**347**	*e*P	**Pb**	**13 57 33.0**	**+0.9**
CPBX				*e*S	**Sb**	**13 57 37.3**	**+0.8**
DREC	**Desert Rsrch C**	**0.68**	**344**	⇓*i*P	**Pn**	**13 57 39.7**	**-0.6**
DREC	**Desert Rsrch C**	**0.68**	**344**	⇓*i*P	**Pn**	**13 57 39.7**	**-0.6**
YMD	**Yuma Desert**	**0.71**	**55**	⇑*i*P	**Pb**	**13 57 39.2**	**-0.1**
YMD	**Yuma Desert**	**0.71**	**55**	⇑*i*P	**Pb**	**13 57 39.2**	**-0.1**
COA	**Coachella**	**0.72**	**7**	⇓*i*P	**Pb**	**13 57 39.7**	**+0.1**
YUH	**Yuha Desert**	**0.77**	**311**	⇓*i*P	**Pb**	**13 57 40.8**	**+0.3**
COK	**Cook Ranch**	**0.82**	**329**	*e*P	**Pn**	**13 57 41.9**	**-0.3**
RMX	**La Rumorosa**	**0.85**	**303**	⇑*i*P	**Pb**	**13 57 41.7**	**-0.2**
RMX				⇓*e*		13 57 52.9	
RMX				IAML		13 57 52.9	
	comp=N,2µm,0.3s						
RMX	**La Rumorosa**	**0.85**	**303**	⇑*i*P	**Pb**	**13 57 41.7**	**-0.2**
IKP	**In-Ko-Pah, Jac**	**0.90**	**304**	P	**Pb**	**13 57 43.1**	**+0.4**
	baz=124,SNR=111						
IKP				S	**Sb**	**13 57 55.7**	**+1.3**
	baz=124						
IKP	**In-Ko-Pah, Jac**	**0.90**	**304**	⇓*i*P	**Pb**	**13 57 43.0**	**+0.4**
SWSC	**Sam W. Stewart**	**0.93**	**329**	P	**Pb**	**13 57 42.7**	**-0.5**
	baz=148,SNR=24						
SWSC				S	**Sn**	**13 57 57.8**	**+1.1**
	baz=148						
GLA	**Glamis**	**0.96**	**20**	P	**Pb**	**13 57 43.0**	**-0.7**
	baz=199,SNR=102						
GLA				S	**Sb**	**13 57 56.4**	**+0.1**
	baz=199						
SPIG	**San Pedro Mart**	**1.11**	**190**	*e*P	**Pb**	**13 57 46.9**	**+0.4**
SPIG				*e*S	**Sb**	**13 58 01.4**	**+0.5**
SPIG	**San Pedro Mart**	**1.11**	**190**	*e*P	**Pb**	**13 57 46.9**	**+0.4**
SPIG				*e*S	**Sb**	**13 58 02.2**	**+1.4**
SPIG	**San Pedro Mart**	**1.11**	**190**	*e*Pn	**Pb**	**13 57 46.9**	**+0.4**
SPIG				*e*S	**Sb**	**13 58 02.2**	**+1.4**
SPX	**San Pedro Mart**	**1.11**	**190**	*e*P	**Pb**	**13 57 46.9**	**+0.4**
SPX				*e*S	**Sb**	**13 58 01.4**	**+0.5**
SPX				IAML		13 58 03.9	
	comp=N,509nm,0.2s						
SPX	**San Pedro Mart**	**1.11**	**190**	*e*Pg	**Pb**	**13 57 46.6**	**+0.1**
SPX				*e*Sg	**Sb**	**13 58 02.2**	**+1.3**
CBX	**Cerro Bola**	**1.23**	**278**	⇑*e*P	**Pn**	**13 57 48.6**	**+0.6**
CBX				*e*S	**Sn**	**13 58 05.3**	**+1.1**
CBX				⇑*e*		13 58 09.1	
CBX				IAML		13 58 09.1	
	comp=E,848nm,0.3s						
MONP2	**Monument Peak**	**1.25**	**307**	P	**Pg**	**13 57 48.4**	**-1.3**
	baz=126,SNR=64						
MONP2				S	**Sb**	**13 58 05.0**	**+0.3**
	baz=126						
TJIG	**Tijuana**	**1.26**	**284**	*e*P	**Pb**	**13 57 48.8**	**0.0**
TJIG	**Tijuana**	**1.26**	**284**	*e*P	**Pb**	**13 57 48.8**	**0.0**
TJIG				*e*S	**Sg**	**13 58 05.0**	**-1.2**
BAR	**Barrett**	**1.33**	**294**	⇑*i*P	**Pg**	**13 57 49.9**	**-1.3**
BAR	**Barrett**	**1.33**	**294**	*e*Pn	**Pg**	**13 57 49.9**	**-1.3**
BC3	**Big Chuckawall**	**1.52**	**353**	P	**Pn**	**13 57 51.3**	**-0.6**
	baz=172,SNR=9.6						
SDRC	**San Diego Road**	**1.56**	**293**	*e*P	**Pb**	**13 57 53.6**	**-0.4**
Y12C	**Blythe**	**1.71**	**20**	P	**Pn**	**13 57 54.5**	**+0.1**
	baz=199,SNR=8.4						
Y12C				Sb	**Sg**	**13 58 19.0**	**-1.5**
	baz=199						
109C	**Camp Elliot, M**	**1.75**	**296**	P	**Pn**	**13 57 56.1**	**+1.0**
	baz=115,SNR=38						
109C				S	**Sn**	**13 58 18.2**	**+1.2**
	baz=115						
CPE	**Camp Elliot**	**1.75**	**296**	*e*Pn	**Pn**	**13 57 56.1**	**+1.1**
FRD	**Ford Ranch, An**	**1.77**	**320**	P	**Pn**	**13 57 55.3**	**-0.2**
	baz=139,SNR=15						
FRD				Sb	**Sg**	**13 58 22.2**	**-0.5**
	baz=139						
PFO	**Pinyon Flats O**	**1.79**	**325**	P	**Pn**	**13 57 55.4**	**-0.3**
	baz=144,SNR=9.9						
PFO				Sb	**Sg**	**13 58 22.5**	**-0.7**
	baz=144						
BELC	**Belle Mtn. Jos**	**1.96**	**341**	P	**Pn**	**13 57 58.7**	**+0.7**
	baz=160,SNR=9.8						
IRM	**Iron Mountain**	**2.01**	**2**	P	**Pn**	**13 57 59.4**	**+0.8**
	baz=181,SNR=21						
214A	**Organ Pipe Nat**	**2.06**	**95**	P	**Pn**	**13 57 58.5**	**-0.8**
	baz=276,SNR=22						
214A				Sb	**Sg**	**13 58 29.8**	**-2.1**
	baz=276						
MURC	**Murrieta**	**2.20**	**312**	P	**Pn**	**13 58 01.8**	**+0.5**
	baz=131,SNR=19						
MURC				Sb	**Sg**	**13 58 35.2**	**-1.1**
	baz=131						
BFSC	**Mount Baldy Ra**	**2.92**	**316**	Pb	**Pg**	**13 58 19.3**	**-2.1**
	baz=135,SNR=7.9						
BFSC				Sb	**Sg**	**13 58 56.8**	**-2.5**
	baz=135						
TUC	**Tucson**	**3.77**	**86**	*e*Pn	**Pn**	**13 58 22.8**	**-0.1**
TUC				*e*Sg	**Sg**	**13 59 22.7**	**-3.9**
WUAZ	**Wupatki**	**4.65**	**43**	*e*Pn	**Pn**	**13 58 37.2**	**+2.2**
WUAZ				*e*Sg	**Sg**	**13 59 53.1**	**-1.6**
MVCO	**Mesa Verde**	**7.50**	**46**	*e*Pn	**Pn**	**13 59 15.5**	**+1.2**
MNTX	**Cornudas Mount**	**8.38**	**90**	*e*Pn	**Pn**	**13 59 28.0**	**+1.8**

IDC 21 14:20:06.7±4.2**, 17°.12S**×**178°.00W, h0**^{km}**, mb4.3**/3**, mb1 4.5**/3**, mb1mx3.7**/44**, mbtmp4.3**/3**, Error ellipse: s-maj=161.7km s-min=68.1km az=145.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**39.35**	**240**	P	P	14 27 38.9	+1.0
	1.8nm,0.5s,baz=107,slow=11,SNR=6.1						
WRA	**Warramunga Arr**	**45.16**	**259**	P	P	14 28 24.9	-0.7
	1.4nm,0.7s,baz=96,slow=6.9,SNR=22						
ASAR	**Alice Springs**	**45.38**	**253**	P	P	14 28 26.7	-0.6
	9.3nm,0.6s,baz=88,slow=8.4,SNR=178						
NOA	**NORSAR Array B**	**135.64**	**354**	PKP	PKPdf	14 39 28.6	-0.1
	0.6nm,0.7s,baz=34,slow=2.0,SNR=3.3						

NEIC ***21*** *14:20:11.8±0.0, 38°.95S×174°.95E, h236^{km}, ML4.0(WEL), After WEL.*
WEL 21 14:20:10.3, 39°S±3°×**17°5E**±°**, h247**^{km}±5^{km}**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VRZ	**Vera Road**	**0.19**	**219**	Pn	Pn	14 20 41.5	-0.6
VRZ				Sn	S	14 21 05.1	-2.2
VRZ	**Vera Road**	**0.19**	**219**	P	Pn	14 20 41.6	-0.6
VRZ				S	S	14 21 04.8	-2.5
TWVZ	**Taurewa**	**0.42**	**103**	Pn	Pn	14 20 42.5	-0.3
TWVZ	**Taurewa**	**0.42**	**103**	P	Pn	14 20 42.5	-0.3
PKVZ	**Pokaka**	**0.46**	**133**	Pn	Pn	14 20 42.6	-0.2
HIZ	**Hauiti**	**0.47**	**354**	Pn	Pn	14 20 42.4	-0.5
HIZ				Sn	S	14 21 05.7	-2.7
HIZ	**Hauiti**	**0.47**	**354**	P	Pn	14 20 42.5	-0.4
HIZ				S	S	14 21 05.8	-2.6
MHEZ	**Mangahewa**	**0.47**	**258**	Pn	Pn	14 20 43.0	+0.2
MHEZ	**Mangahewa**	**0.47**	**258**	P	Pn	14 20 43.0	+0.3
MHEZ				S	S	14 21 06.7	-1.6
COVZ	**Chateau Observ**	**0.54**	**115**	P	Pn	14 20 43.0	-0.2
WTVZ	**West Tongariro**	**0.54**	**105**	Pn	Pn	14 20 43.0	-0.2
WTVZ	**West Tongariro**	**0.54**	**105**	P	Pn	14 20 43.1	-0.1
FWVZ	**Far West T-bar**	**0.57**	**119**	Pn	Pn	14 20 43.2	-0.2
FWVZ	**Far West T-bar**	**0.57**	**119**	P	Pn	14 20 43.2	-0.1
NGZ	**Ngauruhoe**	**0.57**	**111**	Pn	Pn	14 20 43.2	-0.1
KRVZ	**Karewarewa**	**0.58**	**102**	Pn	Pn	14 20 43.2	-0.1
DRZ	**Dome Shelter**	**0.59**	**121**	Pn	Pn	14 20 44.3	+0.7
TRVZ	**Turoa**	**0.59**	**123**	Pn	Pn	14 20 43.3	-0.2
DREZ	**Durham Road**	**0.59**	**249**	Pn	Pn	14 20 43.2	0.0
DREZ				Sn	S	14 21 07.4	-1.6
MTVZ	**Mangateitei**	**0.59**	**133**	Pn	Pn	14 20 43.1	-0.1
WHVZ	**Whangaehu Hut**	**0.61**	**120**	Pn	Pn	14 20 43.4	-0.1
WHVZ	**Whangaehu Hut**	**0.61**	**120**	P	Pn	14 20 43.4	-0.1
KATZ	**Kakaramea**	**0.61**	**90**	P	Pn	14 20 43.1	-0.3
OTVZ	**Oturere**	**0.61**	**108**	Pn	Pn	14 20 43.4	0.0
LREZ	**Lake Rotokare**	**0.62**	**219**	P	Pn	14 20 43.4	+0.1
LREZ				S	S	14 21 07.7	-1.5
WNVZ	**Wahianoa**	**0.64**	**124**	Pn	Pn	14 20 43.4	-0.2
TUVZ	**Tukino**	**0.65**	**117**	Pn	Pn	14 20 43.6	0.0
TUVZ	**Tukino**	**0.65**	**117**	P	Pn	14 20 43.6	+0.1
RATZ	**Rangitukua**	**0.68**	**81**	P	Pn	14 20 43.3	-0.3
PREZ	**Palmer Road**	**0.69**	**238**	Pn	Pn	14 20 43.7	+0.1
PREZ				Sn	S	14 21 08.6	-1.1
WATZ	**Wairara**	**0.69**	**67**	Pn	Pn	14 20 43.6	0.0
WATZ	**Wairara**	**0.69**	**67**	P	Pn	14 20 43.7	0.0
NEZ	**North Egmont**	**0.70**	**245**	Pn	Pn	14 20 43.7	+0.1
RITZ	**Rihia Road**	**0.74**	**90**	Pn	Pn	14 20 43.8	0.0
RITZ	**Rihia Road**	**0.74**	**90**	P	Pn	14 20 43.8	0.0
KHEZ	**Kahui Hut**	**0.77**	**245**	Pn	Pn	14 20 43.8	-0.2
KHEZ	**Kahui Hut**	**0.77**	**245**	P	Pn	14 20 43.9	-0.1
WAZ	**Wanganui**	**0.78**	**176**	Pn	Pn	14 20 44.1	+0.2
WAZ	**Wanganui**	**0.78**	**176**	P	Pn	14 20 44.2	+0.3
WAZ				S	S	14 21 09.1	-1.3
MOVZ	**Moawhango**	**0.78**	**124**	Pn	Pn	14 20 43.6	-0.4
TLZ	**Tolley Road**	**0.81**	**37**	Pn	Pn	14 20 43.9	-0.4
TLZ				Sn	S	14 21 08.3	-2.4
TLZ	**Tolley Road**	**0.81**	**37**	P	Pn	14 20 43.9	-0.3
TLZ				S	S	14 21 08.5	-2.2
KUTZ	**Kaahu Road**	**0.86**	**56**	P	Pn	14 20 44.6	+0.2
NWEZ	**Newall Road**	**0.87**	**250**	Pn	Pn	14 20 44.6	+0.3
NMEZ	**Namu Road**	**0.92**	**241**	Pn	Pn	14 20 44.7	+0.2
HATZ	**Hinemaiaia**	**0.92**	**85**	P	Pn	14 20 44.3	-0.4
BHHZ	**Black Hill Sta**	**1.03**	**120**	Pn	Pn	14 20 45.0	-0.3
WPRZ	**Whakapapatarin**	**1.08**	**65**	Pn	Pn	14 20 45.2	-0.3
WPRZ	**Whakapapatarin**	**1.08**	**65**	P	Pn	14 20 45.3	-0.3
MRHZ	**Matea Rd**	**1.18**	**84**	P	Pn	14 20 45.6	-0.6
MRHZ				S	S	14 21 09.3	-5.0
ALRZ	**Allen Road**	**1.19**	**70**	Pn	Pn	14 20 45.9	-0.4
ALRZ	**Allen Road**	**1.19**	**70**	P	Pn	14 20 45.9	-0.3
HRRZ	**Handcock Road**	**1.22**	**62**	P	Pn	14 20 46.5	0.0
PRRZ	**Plateau Road**	**1.25**	**68**	P	Pn	14 20 46.3	-0.4
KWHZ	**Kaweka Forest**	**1.25**	**111**	P	Pn	14 20 47.0	+0.3
OHWZ	**Ohakea**	**1.27**	**166**	P	Pn	14 20 47.2	+0.6
KRHZ	**Kereru**	**1.31**	**121**	P	Pn	14 20 47.2	+0.2
TSZ	**Takapari Road**	**1.35**	**143**	Pn	Pn	14 20 47.5	+0.2
TSZ	**Takapari Road**	**1.35**	**143**	P	Pn	14 20 47.5	+0.2
PNHZ	**Pukenui**	**1.37**	**134**	Pn	Pn	14 20 47.5	+0.2
PNHZ	**Pukenui**	**1.37**	**134**	P	Pn	14 20 47.6	+0.2
RRRZ	**Republican Roa**	**1.41**	**64**	P	Pn	14 20 47.5	-0.2
MCHZ	**McNeill Hill**	**1.46**	**109**	Pn	Pn	14 20 48.9	+0.8
MCHZ	**McNeill Hill**	**1.46**	**109**	P	Pn	14 20 48.9	+0.9
NMHZ	**Naumai**	**1.48**	**95**	Pn	Pn	14 20 49.1	+0.8
NMHZ	**Naumai**	**1.48**	**95**	P	Pn	14 20 49.1	+0.8
MTHZ	**Maungataniwha**	**1.51**	**86**	P	Pn	14 20 48.3	-0.1
MUGZ	**Murupara**	**1.54**	**72**	P	Pn	14 20 48.1	-0.6
POWZ	**Post Office Ro**	**1.56**	**155**	Pn	Pn	14 20 48.7	0.0
POWZ	**Post Office Ro**	**1.56**	**155**	P	Pn	14 20 48.7	0.0
WPHZ	**Waipukurau**	**1.60**	**133**	Pn	Pn	14 20 49.5	+0.4
WPHZ	**Waipukurau**	**1.60**	**133**	P	Pn	14 20 49.6	+0.4
DVHZ	**Dannevirke**	**1.64**	**144**	Pn	Pn	14 20 49.4	0.0
DVHZ	**Dannevirke**	**1.64**	**144**	P	Pn	14 20 49.4	0.0
ARHZ	**Aropaoanui**	**1.64**	**101**	Pn	Pn	14 20 50.1	+0.7
ARHZ	**Aropaoanui**	**1.64**	**101**	P	Pn	14 20 50.1	+0.7
RAHZ	**Arahi**	**1.69**	**89**	P	Pn	14 20 50.4	+0.4
MARZ	**Manawahe**	**1.70**	**55**	Pn	Pn	14 20 49.0	-1.0
MARZ	**Manawahe**	**1.70**	**55**	P	Pn	14 20 48.9	-1.1
KAHZ	**Kahuranaki**	**1.73**	**119**	Pn	Pn	14 20 50.9	+0.7
KAHZ	**Kahuranaki**	**1.73**	**119**	P	Pn	14 20 50.9	+0.8
MRZ	**Mangatainoka R**	**1.76**	**163**	P	Pn	14 20 50.2	-0.2
PRWZ	**Pori Road**	**1.77**	**153**	Pn	Pn	14 20 50.7	+0.2
PRWZ	**Pori Road**	**1.77**	**153**	P	Pn	14 20 50.7	+0.2
WHHZ	**Waihua**	**1.81**	**94**	P	Pn	14 20 51.3	+0.5
CKHZ	**Cape Kidnapper**	**1.81**	**113**	Pn	Pn	14 20 51.6	+0.8
CKHZ	**Cape Kidnapper**	**1.81**	**113**	P	Pn	14 20 51.6	+0.8
PXZ	**Pawanui**	**1.84**	**126**	Pn	Pn	14 20 51.5	+0.4
PXZ	**Pawanui**	**1.84**	**126**	P	Pn	14 20 51.5	+0.4
OGWZ	**Otaki Gorge**	**1.85**	**174**	Pn	Pn	14 20 51.2	+0.1
OGWZ	**Otaki Gorge**	**1.85**	**174**	P	Pn	14 20 51.2	+0.1
PRHZ	**Porangahau**	**1.85**	**135**	Pn	Pn	14 20 51.6	+0.4
PRHZ	**Porangahau**	**1.85**	**135**	P	Pn	14 20 51.6	+0.4
URZ	**Urewera**	**1.86**	**68**	Pn	Pn	14 20 50.6	-0.7
URZ	**Urewera**	**1.86**	**68**	P	Pn	14 20 50.7	-0.7
MKAZ	**Moumakai**	**1.88**	**6**	P	Pn	14 20 52.0	+0.4
KIW	**Kapiti Island**	**1.88**	**180**	Pn	Pn	14 20 51.2	-0.3
KIW	**Kapiti Island**	**1.88**	**180**	P	Pn	14 20 51.2	-0.2
SNGZ	**Shannon Statio**	**1.90**	**85**	Pn	Pn	14 20 52.0	+0.2
SNGZ	**Shannon Statio**	**1.90**	**85**	P	Pn	14 20 52.0	+0.2
ANWZ	**Angora Road**	**1.91**	**141**	P	Pn	14 20 52.1	+0.4
TIWZ	**Tintock**	**1.95**	**158**	Pn	Pn	14 20 51.9	-0.1
TIWZ	**Tintock**	**1.95**	**158**	P	Pn	14 20 51.9	-0.1
HOWZ	**Holdsworth Sta**	**1.97**	**167**	Pn	Pn	14 20 51.9	-0.4
HOWZ	**Holdsworth Sta**	**1.97**	**167**	P	Pn	14 20 51.9	-0.3
DUWZ	**D’Urville Isla**	**1.98**	**202**	Pn	Pn	14 20 52.1	-0.2
DUWZ	**D’Urville Isla**	**1.98**	**202**	P	Pn	14 20 52.1	-0.2
BFZ	**Birch Farm**	**1.99**	**149**	P	Pn	14 20 52.3	-0.1
RAGZ	**Rawiri**	**2.02**	**77**	Pn	Pn	14 20 52.7	-0.1
RAGZ	**Rawiri**	**2.02**	**77**	P	Pn	14 20 52.7	-0.1
ETAZ	**East Tamaki Re**	**2.02**	**0**	P	Pn	14 20 53.3	+0.5
WTAZ	**Waiatarua**	**2.06**	**352**	P	Pn	14 20 53.9	+0.7
CAW	**Cannon Point**	**2.13**	**177**	Pn	Pn	14 20 53.5	-0.2
CAW	**Cannon Point**	**2.13**	**177**	P	Pn	14 20 53.5	-0.2
MWZ	**Matawai**	**2.15**	**73**	Pn	Pn	14 20 53.6	-0.3
MWZ	**Matawai**	**2.15**	**73**	P	Pn	14 20 53.7	-0.3
KNZ	**Kokohu**	**2.15**	**92**	Pn	Pn	14 20 54.2	+0.3
KNZ	**Kokohu**	**2.15**	**92**	P	Pn	14 20 54.2	+0.3
CPWZ	**Castlepoint**	**2.17**	**153**	Pn	Pn	14 20 54.5	+0.4
CPWZ	**Castlepoint**	**2.17**	**153**	P	Pn	14 20 54.5	+0.5
RVAZ	**Riverhead Bore**	**2.22**	**353**	P	Pn	14 20 55.3	+0.6
MTW	**Mount Morrison**	**2.22**	**168**	Pn	Pn	14 20 54.1	-0.5
MTW	**Mount Morrison**	**2.22**	**168**	P	Pn	14 20 54.1	-0.5
RIGZ	**Rimuhau**	**2.24**	**84**	P	Pn	14 20 54.9	0.0
TMWZ	**Te Maipa**	**2.25**	**161**	Pn	Pn	14 20 54.6	-0.3
TMWZ	**Te Maipa**	**2.25**	**161**	P	Pn	14 20 54.7	-0.3
TCW	**Tory Channel**	**2.28**	**192**	Pn	Pn	14 20 55.2	+0.1
TCW	**Tory Channel**	**2.28**	**192**	P	Pn	14 20 55.2	+0.1
WEL	**Wellington**	**2.31**	**183**	Pn	Pn	14 20 55.0	-0.4
PRGZ	**Paritu Road**	**2.32**	**90**	Pn	Pn	14 20 56.0	+0.5
PRGZ	**Paritu Road**	**2.32**	**90**	P	Pn	14 20 56.0	+0.4
KUZ	**Kuaotunu**	**2.32**	**16**	P	Pn	14 20 56.0	+0.4
MHGZ	**Mahia Peninsul**	**2.34**	**95**	Pn	Pn	14 20 56.4	+0.6
MHGZ	**Mahia Peninsul**	**2.34**	**95**	P	Pn	14 20 56.3	+0.6
TKGZ	**Te Karaka**	**2.36**	**78**	Pn	Pn	14 20 56.3	+0.3
TKGZ	**Te Karaka**	**2.36**	**78**	P	Pn	14 20 56.3	+0.4
RUGZ	**Raukumara Rang**	**2.39**	**66**	P	Pn	14 20 55.4	-1.0
BHW	**Baring Head**	**2.43**	**181**	Pn	Pn	14 20 56.1	-0.4
BHW	**Baring Head**	**2.43**	**181**	P	Pn	14 20 56.1	-0.5
PAWZ	**Paruwai Farm**	**2.43**	**171**	Pn	Pn	14 20 56.3	-0.4
PAWZ	**Paruwai Farm**	**2.43**	**171**	P	Pn	14 20 56.3	-0.4
MSWZ	**Moikau Station**	**2.45**	**174**	Pn	Pn	14 20 56.4	-0.4
MSWZ	**Moikau Station**	**2.45**	**174**	P	Pn	14 20 56.4	-0.4
TRWZ	**Traveller**	**2.49**	**166**	Pn	Pn	14 20 56.9	-0.3
TRWZ	**Traveller**	**2.49**	**166**	P	Pn	14 20 56.9	-0.3
NNZ	**Nelson**	**2.53**	**207**	Pn	Pn	14 20 57.1	-0.4
NNZ	**Nelson**	**2.53**	**207**	P	Pn	14 20 57.1	-0.4
TWGZ	**Tauwhareparae**	**2.53**	**73**	Pn	Pn	14 20 58.2	+0.4
TWGZ	**Tauwhareparae**	**2.53**	**73**	P	Pn	14 20 58.2	+0.4
TUWZ	**Tuamarina**	**2.56**	**197**	Pn	Pn	14 20 57.7	-0.1
TUWZ	**Tuamarina**	**2.56**	**197**	P	Pn	14 20 57.8	-0.1
HAZ	**Te Kaha**	**2.56**	**62**	P	Pn	14 20 57.2	-0.8
PLWZ	**Palliser**	**2.60**	**174**	Pn	Pn	14 20 57.8	-0.6
PLWZ	**Palliser**	**2.60**	**174**	P	Pn	14 20 57.9	-0.5
QRZ	**Quartz Range**	**2.60**	**224**	Pn	Pn	14 20 57.4	-1.0
QRZ	**Quartz Range**	**2.60**	**224**	P	Pn	14 20 57.4	-1.0
CNGZ	**Carnagh Statio**	**2.62**	**80**	Pn	Pn	14 20 59.3	+0.7
CNGZ	**Carnagh Statio**	**2.62**	**80**	P	Pn	14 20 59.3	+0.7
PKGZ	**Pakihiroa**	**2.71**	**67**	P	Pn	14 20 59.5	-0.2
PUZ	**Puketiti**	**2.77**	**72**	Pn	Pn	14 20 60.0	-0.3
PUZ	**Puketiti**	**2.77**	**72**	P	Pn	14 21 00.0	-0.2
CMWZ	**Cape Campbell**	**2.82**	**191**	P	Pn	14 21 01.0	+0.3
BSWZ	**Blackbirch Sta**	**2.85**	**196**	Pn	Pn	14 21 01.2	+0.3
BSWZ	**Blackbirch Sta**	**2.85**	**196**	P	Pn	14 21 01.2	+0.3
WMGZ	**Waiomatatini S**	**2.98**	**68**	Pn	Pn	14 21 02.2	-0.3
WMGZ	**Waiomatatini S**	**2.98**	**68**	P	Pn	14 21 02.2	-0.3
THZ	**Tophouse**	**3.18**	**208**	Pn	Pn	14 21 03.9	-0.6
THZ	**Tophouse**	**3.18**	**208**	P	Pn	14 21 04.0	-0.6
KHZ	**Kahutara**	**3.59**	**196**	Pn	Pn	14 21 09.2	+0.1
KHZ	**Kahutara**	**3.59**	**196**	P	Pn	14 21 09.1	0.0
DSZ	**Denniston Nort**	**3.65**	**220**	Pn	Pn	14 21 08.8	-1.0
DSZ	**Denniston Nort**	**3.65**	**220**	P	Pn	14 21 08.8	-1.0
LTZ	**Lake Taylor**	**4.30**	**207**	Pn	Pn	14 21 16.0	-1.5
LTZ	**Lake Taylor**	**4.30**	**207**	P	Pn	14 21 16.9	-0.6
INZ	**Inchbonnie**	**4.58**	**214**	P	Pn	14 21 20.1	-0.6
OXZ	**Oxford**	**4.86**	**206**	Pn	Pn	14 21 22.9	-1.3
MQZ	**McQueen’s Vall**	**5.02**	**199**	Pn	Pn	14 21 24.7	-1.4
WVZ	**Waitaha Valley**	**5.17**	**216**	Pn	Pn	14 21 27.4	-0.6
RPZ	**Rata Peaks**	**5.55**	**210**	Pn	Pn	14 21 31.5	-1.2
LBZ	**Lake Benmore**	**6.46**	**212**	Pn	Pn	14 21 43.5	-0.6

ISCJB ***21*** *14:42:57.8±1.2, 15°.8S±0°.5×177°.9W±0°.3, h10^{km}, mb3.9/7, MS3.6/25, Error ellipse: s-maj=87.5km s-min=16.8km az=148.4*
IDC ***21*** *14:42:57.7±1.4, 15°.81S×177°.79W, h0^{km}, mb3.9/7, mb1 4.3/7, mb1mx3.8/46, mbtmp3.9/7, MS3.5/28, Ms1 3.5/28, ms1mx3.5/50, Error ellipse: s-maj=98.8km s-min=20.3km az=149.0*
ISC 21 14:42:59.2±1.4**, 15°.8S**±0°.5×**177°.8W**±0°.4**, h10**^{km}**, n37,**
σ**0^s.80**/9**, mb3.9**/7**, MS3.6**/25**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**6.14**	**73**	LR	LR	14 46 26.4	
	comp=Z,301nm,18.4s,baz=339,slow=34						
DZM	**Mont Dzumac**	**16.13**	**245**	LR	LR	14 52 18.9	
	comp=Z,81nm,19.1s,baz=70,slow=35						
DZM	**Mont Dzumac**	**16.13**	**245**	*e*P	P	14 47 03.4	+14
	67nm,1.4s						
DZM				*e*LR	LR	14 50 55.9	
	251nm,24.9s						
RAR	**Rarotonga**	**17.94**	**110**	LR	LR	14 52 11.8	
	comp=Z,225nm,18.2s,baz=285,slow=31						
HNR	**Honiara**	**22.59**	**284**	LR	LR	14 55 23.4	
	comp=Z,750nm,21.2s,baz=107,slow=33						
URZ	**Urewera**	**22.81**	**190**	LR	LR	14 55 09.0	
	comp=Z,270nm,18.1s,baz=60,slow=32						
PPT	**Papeete**	**27.11**	**98**	LR	LR	14 56 15.3	
	comp=Z,129nm,20.6s,baz=193,slow=30						
PPT2	**Papeete2**	**27.11**	**98**	*e*LR	LR	14 55 19.3	
	330nm,27.0s,baz=257						
TBI	**Tubuai**	**27.72**	**110**	*e*LR	LR	14 55 40.3	
	543nm,28.8s						
STKA	**Stephens Creek**	**40.16**	**239**	P	**P**	**14 50 35.4**	**-0.3**
	2.6nm,0.9s,baz=66,slow=10,SNR=4.1						
STKA				LR	LR	15 07 21.1	
	comp=Z,152nm,18.1s,baz=44,slow=36						
RKT	**Rikitea**	**40.94**	**107**	*e*LR	LR	15 01 38.4	
	323nm,30.8s						
WRA	**Warramunga Arr**	**45.60**	**257**	P	**P**	**14 51 21.1**	**+1.1**
	1.6nm,1.1s,baz=91,slow=8.6,SNR=3.6						
ASAR	**Alice Springs**	**45.93**	**252**	P	**P**	**14 51 22.1**	**-0.5**
	3.4nm,0.8s,baz=84,slow=8.4,SNR=51						
ASAR				LR	LR	15 09 02.2	
	comp=Z,150nm,20.6s,baz=110,slow=34						
DAV	**Davao City (W)**	**60.47**	**288**	LR	LR	15 17 36.3	
	comp=Z,28nm,19.1s,baz=127,slow=34						
RPN	**Rapa Nui**	**64.07**	**113**	LR	LR	15 13 45.7	
	comp=Z,66nm,21.6s,baz=226,slow=29						
MJAR	**Matsushiro Arr**	**66.58**	**322**	LR	LR	15 17 25.8	
	comp=Z,22nm,22.0s,baz=120,slow=31						
JOW	**Kunigami**	**67.34**	**309**	LR	LR	15 17 49.2	
	comp=Z,22nm,21.8s,baz=184,slow=31						
JNU	**Nakatsue**	**69.03**	**315**	LR	LR	15 19 51.5	
	comp=Z,33nm,20.6s,baz=123,slow=32						
ASAJ	**Asahikawa**	**69.72**	**331**	LR	LR	15 18 34.3	
	comp=Z,96nm,21.7s,baz=134,slow=31						
PETK	**Petropavlovsk-**	**71.80**	**345**	LR	LR	15 20 36.6	
	comp=Z,15nm,20.0s,baz=193,slow=32						
KSRS	**Korea Array**	**73.52**	**318**	LR	LR	15 21 24.4	
	comp=Z,40nm,19.9s,baz=143,slow=31						
YBH	**Yreka Blue Hor**	**76.55**	**39**	LR	LR	15 20 13.4	

	comp=Z,45nm,19.3s,baz=224,slow=29						
NVAR	Mina Array Bea	77.53	44	P	P	14 54 55.2	-0.4
	0.9nm,0.9s,baz=229,slow=9.4,SNR=5.8						
NVAR				LR	LR	15 25 43.8	
	comp=Z,24nm,18.3s,baz=170,slow=33						
KLR	Kul'dur	78.60	329	LR	LR	15 24 05.0	
	comp=Z,6.3nm,20.7s,slow=31						
MA2	Magadan	79.33	344	LR	LR	15 24 53.4	
	comp=Z,30nm,19.9s,baz=126,slow=32						
ILAR	Eielson Array	83.72	13	P	P	14 55 27.9	-0.1
	1.4nm,1.0s,baz=235,slow=5.6,SNR=8.2						
TXAR	Lajitas Array	84.40	58	P	P	14 55 33.4	+1.0
	0.4nm,1.0s,baz=198,slow=7.6,SNR=3.1						
PDAR	Pinedale Array	85.45	43	P	P	14 55 36.5	-1.0
	0.5nm,0.9s,baz=224,slow=4.1,SNR=3.9						
PDAR				LR	LR	15 30 45.4	
	comp=Z,11nm,18.9s,baz=231,slow=34						
CMAR	Chiang Mai Arr	88.71	289	LR	LR	15 33 07.0	
	comp=Z,22nm,19.9s,baz=135,slow=34						
YKA	Yellowknife Ar	92.20	25	LR	LR	15 30 21.7	
	comp=Z,6.4nm,19.1s,baz=217,slow=31						
SONM	Songino Array	92.33	319	LR	LR	15 33 45.7	
	comp=Z,14nm,20.1s,baz=164,slow=33						
PLCA	Paso Flores	92.37	133	LR	LR	15 28 30.4	
	comp=Z,31nm,22.0s,baz=268,slow=30						
JTS	JuntasAbangare	95.48	81	LR	LR	15 29 02.2	
	comp=Z,62nm,20.2s,baz=310,slow=29						
ULM	Lac du Bonnet	96.95	40	LR	LR	15 33 47.2	
	comp=Z,30nm,19.9s,baz=300,slow=32						
NNA	Nana	97.10	105	LR	LR	15 31 16.5	
	comp=Z,50nm,19.9s,baz=153,slow=30						
BRTR	Keskin Array B	143.66	317	PKP	PKPdf	15 02 35.1	+0.1
	0.5nm,0.3s,baz=113,slow=3.7,SNR=2.4						
GERES	GERESS Array B	145.72	346	PKPbc	PKPab	15 02 38.6	-0.3
	0.5nm,0.7s,baz=350,slow=4.1,SNR=4.7						

ISK ***21*** *15:12:44.1, 36°.54N×29°.21E, h5^{km}, ML2.5/4*
ISCJB ***21*** *15:12:45.2±0.7, 36°.69N±0°.04×29°.22E±0°.04, h9^{km}±10^{km}, Error ellipse: s-maj=7.0km s-min=5.0km az=177.5*
CSEM ***21*** *15:12:45.1±0.3, 36°.69N×29°.22E, h5^{km}, ML2.5, Error ellipse: s-maj=8.9km s-min=6.3km az=3.0*
DDA ***21*** *15:13:32.2, 36°.70N×29°.27E, h4^{km}, Ml2.1*
ISC 21 15:12:45.2±0.9, **36°.68N**±0°.03×**29°.23E**±0°.03, **h8**^{km}±8^{km}, **n15, σ0^{s}.69**/26, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FETY	Fethiye	0.12	247	PG	Pg	15 12 47.4	-0.6
FETY				SG	Sg	15 12 50.3	+0.4
FETY	Fethiye	0.12	247	P	Pg	15 12 47.4	-0.6
FETY				S	Sg	15 12 50.2	+0.4
DALY	Dalyan (Mu˜la	0.48	286	PG	Pg	15 12 54.6	+0.1
DALY				SG	Sb	15 13 02.6	-0.5
DALY	Dalyan (Mu˜la	0.48	286	*i* P	Pg	15 12 54.5	+0.1
DALY				*i* S	Sb	15 13 02.8	-0.3
DALY	Dalyan (Mu˜la	0.48	286	*e*Pg	Pg	15 12 54.6	+0.1
DALY				*e*Sg	Sb	15 13 02.6	-0.5
AKAS	Kas	0.54	146	*i* P	Pg	15 12 54.9	-0.8
AKAS				*i* S	Sb	15 13 05.1	0.0
AKAS	Kas	0.54	146	P	Pg	15 12 54.9	-0.8
AKAS				S	Sb	15 13 05.1	0.0
ELL	Elmali	0.55	83	PG	Pg	15 12 56.4	+0.5
ELL				SG	Sb	15 13 04.7	-0.6
ELL	Elmali	0.55	83	*e*Pg	Pg	15 12 56.4	+0.5
ELL				*e*Sg	Sb	15 13 04.7	-0.6
GOLH	Golhisar	0.61	26	*i* P	Pg	15 12 55.7	-1.4
GOLH				*i* S	Sg	15 13 06.2	+1.0
GOLH	Golhisar	0.61	26	P	Pg	15 12 55.7	-1.4
GOLH				S	Sg	15 13 06.2	+1.0
KORT	Korkueli	0.96	70	PG	Pb	15 13 04.4	+0.3
KORT	Korkueli	0.96	70	*e*Pg	Pb	15 13 04.4	+0.3
DAT	Datca	1.32	272	PN	Pn	15 13 10.1	0.0
DAT	Datca	1.32	272	*e*Pn	Pn	15 13 10.1	0.0

ISCJB ***21*** *15:22:41.6±0.3, 44°.84N±0°.06×141°.96E±0°.08, h277^{km}±4^{km}, mb3.5/9, Error ellipse: s-maj=9.1km s-min=8.8km az=30.1*
JMA ***21*** *15:22:42.3±0.2, 44°.93N×141°.95E, h272^{km}±2^{km}, M3.2*
IDC ***21*** *15:22:42.4±0.6, 44°.87N×141°.97E, h269^{km}±8^{km}, mb3.3/9, mb1 3.3/14, mb1mx3.0/69, mbtmp3.9/14, Error ellipse: s-maj=23.9km s-min=13.3km az=158.0*
ISC 21 15:22:42.4±0.6, **44°.82N**±0°.07×**141°.99E**±0°.07, **h273**^{km}±6^{km}, **n35, σ0^{s}.81**/45, **mb3.6**/9, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSS	Shosan	0.43	193	P	Pn	15 23 18.1	+0.3
JSS				*e*S	S	15 23 45.7	-0.1
JSE	Soyaes	0.45	71	P	Pn	15 23 17.6	-0.1
JSE				*e*S	S	15 23 44.2	-1.5
JWK2	Keihoku	0.50	353	P	Pn	15 23 17.4	-0.4
JYG	Yagishiri	0.56	226	P	Pn	15 23 18.2	+0.1
JYG				*e*S	S	15 23 45.4	-1.0
JRR	Rishiri	0.58	304	P	Pn	15 23 17.9	-0.2
ASAJ	Asahikawa	0.83	148	P	Pn	15 23 19.5	+0.4
	24nm,0.3s,baz=316,slow=4.5,SNR=428						
ASAJ				S	S	15 23 47.9	-0.3
	1.4nm,0.3s,baz=160,slow=33,SNR=7.8						
ASAJ	Asahikawa	0.83	148	P	Pn	15 23 19.3	+0.2
ASAJ				*e*S	S	15 23 48.1	-0.1
JKK2	Kamakawa 2	1.09	150	P	Pn	15 23 21.1	+0.7
JKK2				S	S	15 23 51.8	+1.3
JHR	Hokuryu	1.09	190	P	Pn	15 23 21.2	+0.8
JMP	Maruseppu	1.27	129	P	Pn	15 23 22.1	+0.6
JTKR	Abashiri--Toko	1.62	121	P	Pn	15 23 24.6	+0.9
JFR	Furan	1.71	165	P	Pn	15 23 24.8	+0.2
JAR	Ashorobuto	1.99	139	P	Pn	15 23 27.8	+1.0
JEW	Eniwo	2.02	191	P	Pn	15 23 28.0	+1.0
JEW				*e*S	S	15 24 03.5	+1.1
JRA	Rausu	2.41	110	P	Pn	15 23 31.9	+1.4
JCH	Churui	2.42	155	P	Pn	15 23 29.8	-0.8
JCH				*e*S	S	15 24 06.5	-2.4
JNBK	Urakawa-nobuka	2.60	167	P	Pn	15 23 32.8	+0.5
JAK	Akkeshi	2.67	132	P	Pn	15 23 32.3	-0.7
JAK				*e*S	S	15 24 12.1	-1.2
JKB	Kayabe	3.01	194	P	Pn	15 23 36.1	-0.4
JKB				*e*S	S	15 24 18.1	-1.4
NEM2	Nemuro 2	3.07	117	P	Pn	15 23 36.1	-0.9
USRK	Ussuriysk Ar.	7.18	269	P	Pn	15 24 25.2	-0.2
	baz=89,slow=15						
KLR	Kul'dur	8.27	306	P	Pn	15 24 38.4	-0.6
	0.0nm,0.3s,baz=118,slow=15,SNR=5.5						
MJAR	Matsushiro Arr	8.75	200	P	Pn	15 24 45.0	-0.2
	0.4nm,0.3s,baz=11,slow=13,SNR=6.5						
PETK	Petropavlovsk-	13.22	46	P	P	15 25 41.5	+0.6
	baz=210,slow=8.3						
JNU	Nakatsue	14.51	220	P	Pn	15 25 56.4	+0.5
	0.3nm,0.3s,baz=90,slow=3.0,SNR=3.8						
SEY	Seymchan	19.11	15	P	P	15 26 44.6	-0.4
	0.3nm,0.3s,baz=194,slow=8.6,SNR=9.5						
SONM	Songino Array	24.63	290	P	P	15 27 38.9	+0.6
	3.1nm,0.5s,baz=85,slow=8.6,SNR=21						
MKAR	Makanchi Array	40.79	295	P	P	15 29 57.6	+0.4
	2.2nm,0.6s,baz=82,slow=8.6,SNR=25						
KURBB	Kurchatov Arra	41.92	301	P	P	15 30 06.2	0.0
	0.9nm,0.4s,baz=71,slow=8.8,SNR=6.4						
ILAR	Eielson Array	42.83	37	P	P	15 30 13.6	+0.3
	0.3nm,0.6s,baz=262,slow=6.3,SNR=2.7						
BVAR	Borovoye Array	45.93	307	P	P	15 30 37.7	-0.2
	1.0nm,0.5s,baz=74,slow=8.2,SNR=8.0						
FINES	FINESS Array B	62.18	331	P	P	15 32 33.6	-1.0
	1.3nm,0.8s,baz=66,slow=4.8,SNR=5.2						
HFS	Hagfors	67.21	335	P	P	15 33 06.6	-0.3
	1.8nm,0.8s,baz=15,slow=6.0,SNR=4.5						
AKASG	Malin Array Be	68.47	321	P	P	15 33 14.5	-0.3
	0.9nm,0.4s,baz=45,slow=6.3,SNR=5.2						
PDAR	Pinedale Array	71.98	47	P	P	15 33 36.9	+0.4
	0.2nm,0.5s,baz=191,slow=3.4,SNR=3.5						

CSEM ***21*** *15:23:06.3±0.2, 36°.96N×29°.30E, h10^{km}, ML2.5*
ISK ***21*** *15:23:06.2, 36°.93N×29°.28E, h7^{km}, ML2.5/4*
DDA ***21*** *15:23:06.1, 36°.97N×29°.29E, h7^{km}, Ml2.5*
ISC 21 15:23:06.4±1.1, **36°.96N**±0°.02×**29°.29E**±0°.02, **h2**^{km}±11^{km}, **n27, σ1^{s}.16**/45, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GOLH	Golhisar	0.35	38	*i* P	Pg	15 23 12.7	-0.5
GOLH				*i* S	Sg	15 23 18.8	+1.0
GOLH	Golhisar	0.35	38	P	Pg	15 23 12.7	-0.5
GOLH				S	Sg	15 23 18.8	+1.0
FETY	Fethiye	0.36	207	PG	Pg	15 23 13.1	-0.3
FETY				SG	Sg	15 23 18.5	+0.4
FETY	Fethiye	0.36	207	P	Pg	15 23 13.2	-0.2
FETY				*e*Sg	Sg	15 23 18.5	+0.4
FETY				S	Sb	15 23 20.0	-1.7
DALY	Dalyan (Mu˜la	0.53	254	PG	Pg	15 23 16.6	+0.1
DALY				SG	Sb	15 23 24.6	-1.8
DALY	Dalyan (Mu˜la	0.53	254	*i* P	Pg	15 23 16.7	+0.1
DALY				*i* S	Sb	15 23 24.7	-1.7
DALY	Dalyan (Mu˜la	0.53	254	P	Pg	15 23 16.7	+0.1
DALY				S	Sb	15 23 24.7	-1.7
ELL	Elmali	0.54	113	PG	Pg	15 23 16.9	+0.1
ELL				SG	Sb	15 23 25.1	-1.9
ELL	Elmali	0.54	113	*e*Pg	Pg	15 23 16.9	+0.1
ELL				*e*Sg	Sb	15 23 25.1	-1.9
TURN	Turunc	0.56	261	PG	Pn	15 23 22.6	+1.3
TURN	Turunc	0.56	261	*i* P	Pn	15 23 22.5	+1.2
TURN				*i* S	Sn	15 23 34.9	+3.8
TAVA	DENIZLI_Tavas	0.58	329	*i* P	Pg	15 23 16.5	-1.1
TAVA				*i* S	Sg	15 23 26.1	+0.9
TAVA	DENIZLI_Tavas	0.58	329	P	Pg	15 23 16.5	-1.1
TAVA				S	Sg	15 23 26.1	+0.9
DNZL	Cakiroluk	0.75	345	*i* P	Pb	15 23 22.1	-0.2
DNZL				*i* S	Sb	15 23 31.8	-1.3
DNZL	Cakiroluk	0.75	345	P	Pb	15 23 22.1	-0.2
DNZL				S	Sb	15 23 31.8	-1.3
AKAS	Kas	0.77	161	PG	Pg	15 23 21.4	+0.2
AKAS	Kas	0.77	161	*i* P	Pg	15 23 21.4	+0.2
AKAS				*i* S	Sn	15 23 35.1	-1.5
AKAS	Kas	0.77	161	P	Pg	15 23 21.4	+0.2
YER	Yerkesik	0.82	282	PG	Pb	15 23 22.6	-0.8
YER	Yerkesik	0.82	282	*e*Pg	Pb	15 23 22.6	-0.8
KORT	Korkueli	0.85	87	PG	Pg	15 23 22.8	0.0
KORT	Korkueli	0.85	87	*i* P	Pg	15 23 22.8	0.0
KORT				*i* S	Sb	15 23 34.7	-1.2
KORT	Korkueli	0.85	87	P	Pg	15 23 22.8	0.0
KORT				S	Sb	15 23 34.7	-1.2
ARG	Arkhangelos	1.20	232	PN	Pg	15 23 28.7	-0.6
ARG	Arkhangelos	1.20	232	*e*Pn	Pg	15 23 28.7	-0.6
DAT	Datca	1.39	261	PN	Pb	15 23 32.7	-0.5
DAT	Datca	1.39	261	*e*Pn	Pb	15 23 32.7	-0.5

IDC 21 15:25:17.3±2.2, **3°.35S**×**139°.01E**, **h0**^{km}, **mb3.5**/3, **mb1 3.6**/4, **mb1mx3.4**/45, **mbtmp3.5**/4, **ML3.4**/1, **Error ellipse: s-maj=85.8km s-min=22.0km az=87.0, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	17.11	195	P	Pn	15 29 17.4	-0.7
	0.1nm,0.3s,baz=13,slow=13,SNR=7.4						
WRA				S	Sn	15 32 31.4	+2.1
	0.1nm,0.3s,baz=22,slow=23,SNR=5.1						
ASAR	Alice Springs	20.80	193	P	P	15 29 58.5	-1.8
	0.6nm,0.4s,baz=15,slow=10,SNR=8.0						
STKA	Stephens Creek	28.48	175	P	P	15 31 15.4	+1.0
	0.5nm,0.5s,baz=355,slow=12,SNR=2.3						
MKAR	Makanchi Array	70.47	322	P	P	15 36 33.9	0.0
	0.2nm,0.6s,baz=105,slow=7.9,SNR=2.2						

MEX 21 15:29:32.4±0.6, **17°.98N**×**100°.64W**, **h53**^{km}±8^{km}, **MD3.9**, **Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARIG	Puente Sto Nin	0.41	43	*e*P	Pn	15 29 41.1	-1.8
ARIG				*e*S	Sn	15 29 48.8	-1.7
ZIIG	Zihuatanejo	0.87	245	*e*P	Pn	15 29 46.2	-2.2
ZIIG				*e*S	Sn	15 29 58.6	-1.7
MEIG	Mezcala	0.97	93	*e*P	Pn	15 29 48.7	-1.2
MEIG				*e*S	Sn	15 30 01.7	-1.2
CAIG	El Cayaco	0.99	159	*e*P	Pn	15 29 48.2	-1.9
CAIG				*e*S	Sn	15 30 01.8	-1.4
PLIG	Platanillo	1.16	69	*e*P	Pn	15 29 51.0	-1.4
PLIG				*e*S	Sn	15 30 05.4	-1.8
ACX	Acapulco	1.33	146	*e*P	Pn	15 29 53.5	-1.2
ACX				*e*S	Sn	15 30 08.2	-3.2
YAIG	Yautepec	1.73	59	*e*P	Pn	15 29 58.8	-1.4
YAIG				*i* S	Sn	15 30 19.2	-2.1
TLIG	Tlapa	2.02	102	*e*P	Pn	15 30 02.7	-1.5
TLIG				*i* S	Sn	15 30 25.6	-2.7

IDC 21 15:30:59.5±1.0, **48°.93S**×**121°.53E**, **h0**^{km}, **mb3.9**/6, **mb1 4.1**/6, **mb1mx3.9**/41, **mbtmp3.9**/6, **MS3.6**/9, **Ms1 3.6**/9, **ms1mx3.3**/34, **Error ellipse: s-maj=43.8km s-min=19.4km az=98.0, Western Indian-Antarctic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W1	Cape Leeuwin H	15.05	336	T	T	15 49 56.4	
	baz=159,slow=74,SNR=190						
H01W2	Cape Leeuwin H	15.05	336	T	T	15 49 60.0	
	baz=159,slow=74,SNR=193						
H01W3	Cape Leeuwin H	15.06	336	T	T	15 50 15.1	
	baz=159,slow=74,SNR=197						
NWAO	Narrogin (SRO)	16.31	347	LR	LR	15 39 50.3	
	comp=Z,119nm,21.5s,baz=355,slow=33						
STKA	Stephens Creek	22.77	49	P	P	15 36 03.8	+0.4
	1.4nm,0.8s,baz=288,slow=9.6,SNR=2.9						
STKA				LR	LR	15 43 18.1	
	comp=Z,157nm,20.4s,baz=206,slow=32						
ASAR	Alice Springs	27.04	26	P	P	15 36 43.5	0.0
	1.8nm,0.9s,baz=192,slow=8.6,SNR=8.7						
ASAR				LR	LR	15 46 11.0	
	comp=Z,221nm,20.7s,baz=178,slow=34						
WRA	Warramunga Arr	30.70	24	P	P	15 37 15.8	-0.2
	0.9nm,0.8s,baz=197,slow=7.9,SNR=5.0						
VNDA	Vanda	32.53	165	P	P	15 37 31.6	-0.1
	2.2nm,1.0s,baz=316,slow=8.4,SNR=7.0						
VNDA				LR	LR	15 49 36.7	
	comp=Z,81nm,19.5s,baz=318,slow=34						
QSPA	South Pole Qui	41.20	180	P	P	15 38 45.6	0.0
	7.5nm,1.0s,baz=314,slow=4.6,SNR=12						
QSPA				LR	LR	15 55 09.0	
	comp=Z,67nm,19.3s,baz=350,slow=35						
HNR	Honiara	50.79	52	LR	LR	15 59 41.2	
	comp=Z,66nm,19.0s,baz=209,slow=34						
SNAA	Sanae	53.47	199	LR	LR	16 02 12.5	
	comp=Z,127nm,18.1s,baz=198,slow=35						
GUMO	Guam	65.59	25	LR	LR	16 10 10.5	
	comp=Z,24nm,18.6s,baz=184,slow=36						
CMAR	Chiang Mai Arr	70.03	337	P	P	15 42 13.2	+0.2
	1.4nm,0.7s,baz=185,slow=5.1,SNR=6.2						
TSUM	Tsumeb	84.52	247	LR	LR	16 15 21.1	
	comp=Z,51nm,18.6s,baz=158,slow=32						
EKA	Eskdalemuir Ar	146.24	302	PKPbc	PKPdf	15 50 39.9	+0.2
	0.4nm,0.6s,baz=132,slow=2.5,SNR=4.4						
YKA	Yellowknife Ar	146.76	45	PKPbc	PKPdf	15 50 41.1	+0.8
	0.9nm,0.7s,baz=258,slow=3.1,SNR=3.3						

NNC ***21*** *15:41:22.7±5.3, 37°.39N×71°.47E, h136^{km}±90^{km}, mb3.1, mpv4.0, Error ellipse: s-maj=52.4km s-min=45.6km az=58.0*
ISC 21 15:41:20.2±3.2, **37°.2N**±0°.2×**71°.7E**±0°.1, **h109**^{km}, **n12, σ1^{s}.27**/16, **7C-3D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.18	26	⇓P	Pn	15 42 11.1	+2.4
	29nm,0.3s						
SFK				⇑S	Sn	15 42 47.9	+1.8
	23nm,0.2s						
AML	Almayashu	5.20	17	P	Pn	15 42 36.5	+0.6
	SNR=97						
MNAS	Manas	5.36	6	⇓P	Pn	15 42 38.9	+1.0
	8.4nm,0.4s						
MNAS				⇑S	Sn	15 43 36.8	-1.5
	36nm,0.5s						
UCH	Uchtor	5.50	22	P	Pn	15 42 40.5	+0.3
	SNR=7.6						
EKS2	Erkin-Say	5.72	16	P	Pn	15 42 43.8	+1.0
	SNR=10						
AAK	Ala-Archa	5.87	21	⇑P	Pn	15 42 45.3	+0.4
	8.6nm,0.4s						
AAK				⇑S	Sn	15 43 50.5	-0.4
	17nm,0.7s						
AAK	Ala-Archa	5.87	21	P	Pn	15 42 45.6	+0.7
	SNR=9.1						
KK31	Karatay Array	6.01	352	⇑P	Pn	15 42 47.5	+1.0
	1.6nm,0.2s,baz=181,slow=14,SNR=27						
KK31				⇓S	Sn	15 43 52.3	-1.6
	39nm,0.5s,baz=176,slow=23,SNR=8.0						
CHMS	Chumysh	6.28	21	P	Pn	15 42 50.7	+0.4
	SNR=12						
TKM2	Tokmak 2	6.48	26	P	Pn	15 42 53.0	-0.2
	SNR=5.5						
PDGK	Podgornoye	8.56	42	⇑P	Pn	15 43 19.8	-1.5
	9.1nm,0.7s						
AB31	Akbulak array	14.80	328	⇑P	Pn	15 44 43.4	-0.4
	0.3nm,0.5s,baz=151,slow=11,SNR=7.0						

ISCJB ***21*** *15:53:23.7±0.5, 33°.30N±0°.03×35°.35E±0°.04, h11^{km}±6^{km}, Error ellipse: s-maj=7.1km s-min=3.0km az=31.0*
GII ***21*** *15:53:23.4±0.0, 33°.29N×35°.37E, h5^{km}, MD1.6/2*
CSEM ***21*** *15:53:24.9, 33°.29N×35°.38E, h9^{km}, ML2.8*
GRAL ***21*** *15:53:24.9±0.2, 33°.29N×35°.38E, h10^{km}±7^{km}, MD2.8*
ISC 21 15:53:24.1±1.1, **33°.30N**±0°.03×**35°.37E**±0°.04, **h19**^{km}±2^{km}, **n23, σ0^{s}.56**/38, **Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSDI	Kefar Szold	0.27	114	Pg	Pg	15 53 29.8	-0.4
KSDI				Sg	Sb	15 53 34.5	+0.3
HNTI	Hanita	0.27	217	Pg	Pb	15 53 29.4	-0.9
HNTI				Sg	Sb	15 53 33.7	-0.6
MMA0B	Mount Meron ar	0.29	174	Pg	Pg	15 53 29.7	-0.9
MMA0B				Sg	Sb	15 53 34.6	-0.3
NATI	Neve Ativ	0.31	97	Pg	Pg	15 53 30.6	-0.3
NATI				Sg	Sg	15 53 34.8	-0.8
SHBL	Chebaa	0.32	81	*e*P	Pg	15 53 30.8	-0.4
SHBL				*e*S	Sg	15 53 35.1	-0.8
SHBL	Chebaa	0.32	81	*e*P	Pg	15 53 30.8	-0.4
SHBL				*e*S	Sg	15 53 35.2	-0.8
QRWL	Qaraoun	0.36	47	*e*P	Pg	15 53 31.6	-0.2
QRWL				*e*S	Sg	15 53 36.6	-0.5
QRWL	Qaraoun	0.36	47	*e*P	Pg	15 53 31.6	-0.2
QRWL				*e*S	Sg	15 53 36.6	-0.5
RCY	Rachaya	0.44	63	*e*P	Pg	15 53 32.9	-0.3
RCY				*e*S	Sg	15 53 38.8	-0.6
DQRL	Deir Qamar	0.44	23	*e*P	Pg	15 53 33.0	-0.2
DQRL				*e*S	Sg	15 53 39.0	-0.3
DQRL	Deir Qamar	0.44	23	*e*P	Pg	15 53 33.0	-0.2
DQRL				*e*S	Sg	15 53 39.0	-0.3
KSHT	Keshet	0.49	130	Pg	Pg	15 53 34.4	+0.3
BLGI	Bet Lehem HaGe	0.58	195	Pg	Pb	15 53 35.3	-0.3
BHL	Bhannes	0.65	22	*e*P	Pb	15 53 36.8	0.0
BHL	Bhannes	0.65	22	*e*P	Pb	15 53 36.8	0.0
OFRI	'Ofer	0.75	206	Pg	Pb	15 53 38.1	-0.4
OFRI				Sg	Sg	15 53 49.6	+0.7
MMLI	Mount Malkishu	0.86	177	Pg	Pb	15 53 39.9	-0.5
MMLI				Sg	Sn	15 53 53.2	0.0
HMDT	Nahal Hemdat	1.05	173	Pg	Pb	15 53 43.7	0.0
HMDT				Sg	Sg	15 53 58.7	+0.3
HWQ	Hawqa	1.09	26	*e*P	Pb	15 53 44.1	-0.2
SLTI	Sal'it	1.09	195	Pg	Pb	15 53 44.4	0.0
SLTI				Sg	Sg	15 53 59.7	0.0
DSI	Dead Sea	1.73	180	Pn	Pn	15 53 54.0	+0.9
AMAZ	Amatzia	1.80	192	Pn	Pb	15 53 55.7	-0.8
YTIR	Yattir	1.94	186	Pn	Pn	15 53 57.6	+1.5

DDA ***21*** *16:00:07.2, 36°.26N×44°.35E, h6^{km}, Ml3.5*
ISN ***21*** *16:00:10.7±1.0, 36°.44N×44°.20E, h0^{km}±3^{km}, ML3.4*
TEH ***21*** *16:00:10.5, 36°.48N×44°.24E, h13^{km}, ML3.3*
ISK ***21*** *16:00:12.5, 36°.54N×44°.18E, h5^{km}, ML3.4/7*
CSEM ***21*** *16:00:12.1±0.3, 36°.54N×44°.39E, h2^{km}, ML3.4, Error ellipse: s-maj=12.1km s-min=4.5km az=66.0*
ISC 21 16:00:11.2±1.5, **36°.49N**±0°.03×**44°.25E**±0°.04, **h1**^{km}±12^{km}, **n41, σ1^{s}.57**/59, **Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CUKT	Cukurca	0.91	326	PG	Pb	16 00 29.2	-0.8
CUKT				SG	Sn	16 00 42.6	-2.7
CUKT	Cukurca	0.91	326	*i* P	Pb	16 00 29.2	-0.8
CUKT				*i* S	Sn	16 00 44.0	-1.3
CUKT	Cukurca	0.91	326	*e*Pg	Pb	16 00 29.2	-0.8
CUKT	Cukurca	0.91	326	P	Pb	16 00 29.2	-0.8
CUKT				*e*Sg	Sn	16 00 42.6	-2.7
CUKT				S	Sn	16 00 44.0	-1.3
YOVA	Hakkari_Yˆ…kse	1.10	2	*i* P	Pg	16 00 32.5	+0.3
YOVA				*i* S	Sn	16 00 51.3	+1.3
YOVA	Hakkari_Yˆ…kse	1.10	2	P	Pg	16 00 32.5	+0.3
HAKT	HAKKARI	1.15	338	*i* P	Pb	16 00 33.5	-0.6
HAKT				*i* S	Sn	16 00 53.7	+2.4
HAKT	HAKKARI	1.15	338	P	Pb	16 00 33.5	-0.6
SIRT	Sirnak	1.77	305	PN	Pb	16 00 44.2	-0.3
SIRT				SN	Sg	16 01 07.7	-0.2
SIRT	Sirnak	1.77	305	*e*Pn	Pb	16 00 44.2	-0.3
SIRT	Sirnak	1.77	305	*e*Pn	Pb	16 00 44.2	-0.3
SIRT				*e*Sn	Sg	16 01 07.7	-0.2
SIRN	S˜–rnak	1.78	305	*i* P	Pb	16 00 44.1	-0.6
SIRN				*i* S	Sg	16 01 09.4	+1.0
SIRN	S˜–rnak	1.78	305	P	Pb	16 00 44.1	-0.6
SIRN				S	Sg	16 01 09.4	+1.0
GEVA	Gevas	2.05	333	*i* P	Pb	16 00 47.7	-1.7
GEVA				*i* S	Sg	16 01 17.4	+0.2
GEVA	Gevas	2.05	333	P	Pb	16 00 47.7	-1.7
GEVA				S	Sg	16 01 17.4	+0.2
ISHB	Shabestar	2.10	31	*e*Pn	Pn	16 00 48.7	+0.9
ISHB				*e*		16 00 53.3	
	comp=Z,3µm,0.2s						
ISHB				*e*		16 01 28.2	
	comp=E,4µm,0.2s						
ISHB				*e*		16 01 28.5	
	comp=N,4µm,0.2s						
VANB	Van	2.21	342	PN	Pn	16 00 49.6	+0.4
VANB	Van	2.21	342	*e*Pn	Pn	16 00 49.6	+0.4
VANB	Van	2.21	342	*e*Pn	Pn	16 00 49.6	+0.4
ITBZ	Tabriz	2.31	40	*e*Pn	Pn	16 00 51.5	+0.9
ITBZ				*e*		16 00 58.6	
	comp=Z,1µm,0.1s						
ITBZ				*e*		16 01 27.5	
	comp=E,3µm,0.3s						
ITBZ				*e*		16 01 32.2	
	comp=N,1µm,0.2s						
SRTM	Siirt_Merkez	2.38	310	*i* P	Pb	16 00 53.6	-1.4
SRTM				*i* S	Sg	16 01 29.0	+1.2
SRTM	Siirt_Merkez	2.38	310	P	Pb	16 00 53.6	-1.4
IBST	Bostanabad	2.44	59	*e*Pn	Pn	16 00 53.2	+0.8
IBST				*e*		16 01 31.1	
	comp=Z,963nm,0.2s						
IBST				*e*		16 01 33.4	
	comp=N,1µm,0.2s						
IBST				*e*		16 01 35.5	
	comp=E,858nm,0.2s						
GURO	Guroymak-BITLI	2.71	320	PN	Pb	16 00 57.9	-2.7
GURO	Guroymak-BITLI	2.71	320	*e*Pn	Pb	16 00 57.9	-2.7
BTMN	Batman	2.76	301	*i* P	Pb	16 00 59.5	-1.9
BTMN				*i* S	Sg	16 01 38.7	-1.2
BTMN	Batman	2.76	301	P	Pb	16 00 59.5	-1.9
IVIS	Veis	2.89	132	*e*Pn	Pn	16 00 58.9	+0.4
IVIS				*e*		16 01 35.7	
	comp=E,1µm,0.4s						
IVIS				*e*		16 01 52.2	
	comp=N,1µm,0.4s						
IVIS				*e*		16 01 52.3	
	comp=Z,662nm,0.3s						
MARD	Mardin	2.90	288	*i* P	Pb	16 01 01.9	-1.9
MARD				*i* S	Sb	16 01 39.9	0.0
ISRB	Sarab	3.04	63	*e*Pn	Pn	16 01 02.5	+1.8
MAZI	Mazidag	3.19	289	PN	Pn	16 01 05.0	+2.3
MAZI	Mazidag	3.19	289	*e*Pn	Pn	16 01 05.0	+2.3
BHD	Baghdad	3.21	178	*e*Pn	Pn	16 01 04.0	+1.1
	SNR=4.0						
BHD				*e*Sn	Sn	16 01 43.0	+1.2
	SNR=4.0						
DIY	Diyarbakir	3.50	295	*e*Pn	Pb	16 01 10.6	-3.5
DYBB	Diyarbakir	3.59	295	PN	Pn	16 01 10.6	+2.5
URFA	Urfa	4.45	284	PN	Pn	16 01 22.6	+2.7
URFA	Urfa	4.45	284	*e*Pn	Pn	16 01 22.6	+2.7
PTK	Pertek	4.54	303	PN	Pn	16 01 23.6	+2.3
PTK	Pertek	4.54	303	*e*Pn	Pn	16 01 23.6	+2.3
RTB	Rutbah	4.74	224	*e*Pn	Pn	16 01 24.0	+0.1
	SNR=4.0						
RTB				*e*Sn	Sn	16 02 19.0	-0.5
	SNR=4.0						
NSR	Nassriya	5.69	163	*e*Pn	Pn	16 01 38.0	+1.1
	SNR=4.0						
NSR				*e*Sn	Sn	16 02 42.0	-0.8
	SNR=4.0						

*ISCJB **21** 16:00:59.9±0.3,8°.01S±0°.03×123°.80E±0°.03,h10^{km}, mb4.3/22,MS3.4/6,Error ellipse: s-maj=4.6km s-min=3.3km az=152.0*

*IDC **21** 16:01:00.6±0.6,8°.04S×123°.69E,h0^{km},mb4.2/13, mb1 4.3/14,mb1mx4.0/50,mbtmp4.2/14,ML4.2/1,MS3.2/5, Ms1 3.3/5,ms1mx2.8/50,Error ellipse: s-maj=33.5km s-min=13.1km az=65.0*

*NEIC **21** 16:01:05.2±0.5,8°.12S×123°.73E,h35^{km},mb4.2/4,Error ellipse: s-maj=16.3km s-min=7.6km az=56.0*

*DJA **21** 16:01:05.1±0.5,8°S±1°×12°4E±°,h33^{km}±7^{km},M4.5/16, mb4.9/10,mB4.9/6,MLv4.6/16,Mw(mB)4.2/6*

ISC 21 16:01:01.7±0.4,**8°.10S**±0°.03×**123°.71E**±0°.04,**h10^{km},n65,** σ**2^{s}17**/78,**mb4.4**/22,**MS3.4**/6,**1C-1D,Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMRI	Maumere	1.55	250	P	Pb	16 01 29.0	-1.5
MMRI				S	Sg	16 01 51.8	+0.2
MMRI				Sg	Sb	16 01 58.8	+8.6
MMRI	Maumere	1.55	250	*e*Pn	Pn	16 01 28.9	-0.6
SOEI	Soe	1.74	161	P	Pg	16 01 35.5	+0.3
SOEI				S	Sg	16 02 00.0	+2.2
SOEI				Sg	Sb	16 02 19.5	+24
SOEI	Soe	1.74	161	*e*Pn	Pg	16 01 35.7	+0.5
EDFI	Ende, Flores	2.10	252	P	Pb	16 01 37.6	-2.4
EDFI				S	Sb	16 02 04.3	-1.8
BATI	Baumata	2.10	181	P	Pg	16 01 41.2	-0.8
BATI				S	Sg	16 02 12.8	+3.5
WSI	Waingapu	3.71	245	P	Pn	16 02 01.2	+2.0
BASI	Baing, Sumba	3.74	235	P	Pn	16 02 00.7	+1.1
BASI				S	Sn	16 02 46.4	+2.7
BASI				Sg	Sg	16 03 03.5	+1.5
KDI	Kendari	4.25	345	P	Pn	16 02 06.4	-0.2
KDI				S	Sn	16 02 53.0	-3.3
BKSI	Bulukumba	4.50	308	P	Pn	16 02 09.8	-0.2
WBSI	Waikabubak, Su	4.53	250	P	Pn	16 02 11.6	+1.1
SPSI	Sidrap Palu	5.67	316	P	Pn	16 02 27.0	+0.9
	42nm,0.6s,0.2nm						
SPSI				S	Sn	16 03 30.6	-0.8
	42nm,0.6s,0.2nm						
SPSI				Sg	Sg	16 04 07.9	+3.9
	42nm,0.6s,0.2nm						
PLAI	Plampang	5.91	262	P	Pn	16 02 32.7	+3.3
	184nm,1.0s,1µm0.6nm						
TTSI	Tana Toraja	6.33	322	P	Pn	16 02 36.2	+0.9
	89nm,0.7s,925nm0.3nm						
TTSI				S	Sn	16 03 47.3	-0.4
	89nm,0.7s,925nm0.3nm						
TWSI	Taliwang, Sumb	6.78	264	P	Pn	16 02 41.9	+0.5
	39nm,0.7s,0.2nm						
LUWI	Luwuk	7.07	352	P	Pn	16 02 45.8	+0.5
APSI	Ampana	7.42	344	P	Pn	16 02 50.8	+0.6
	81nm,0.8s,616nm0.3nm						
PCI	Palu	8.12	331	P	Pn	16 03 00.6	+0.8
	71nm,0.7s,666nm0.2nm						
MTN	Manton Dam	8.69	123	*e*Pn	Pn	16 03 08.4	+0.7
MRSI	Marisa	8.70	348	P	Pn	16 03 08.4	+0.7
	17nm,1.1s						
MRSI				S	Sn	16 04 44.9	-1.0
	17nm,1.1s						
MPSI	Mapaga	9.20	335	P	Pn	16 03 15.4	+0.8
FITZ	Fitzroy Crossi	10.12	169	*e*Pn	Pn	16 03 27.0	-0.2
BAKI	Biak	14.13	62	P	P	16 04 28.2	-1.6
DAV	Davao City (W)	15.18	7	LR	LR	16 10 38.8	
	comp=Z,90nm,21.6s,baz=182,slow=38						
WRA	Warramunga Arr	15.64	140	Pn	Pn	16 04 40.0	-2.5
	1.0nm,0.3s,baz=320,slow=13,SNR=43						
WRA				Sn	Sn	16 07 28.6	-7.4
	0.4nm,0.3s,baz=311,slow=23,SNR=9.8						
WRAB	Tennant Creek	15.64	140	*e*Pn	Pn	16 04 40.5	-2.0
	3.8nm,0.5s						
WB2	Warramunga Arr	15.65	140	*e*Pn	Pn	16 04 40.2	-2.4
	28nm,0.8s						
AS31	Alice Springs	18.31	149	*e*P	P	16 05 16.4	+0.2
	4.7nm,0.9s						
ASAR	Alice Springs	18.31	149	P	Pn	16 05 15.5	-0.6
	0.8nm,0.3s,baz=321,slow=12,SNR=60						
ASAR				S	Sn	16 08 37.8	-3.0
	0.1nm,0.3s,baz=336,slow=21,SNR=5.0						
AS01	Alice Springs	18.33	149	*e*P	P	16 05 16.6	+0.2
MDSI	Maura Dua	19.74	279	P	P	16 05 29.5	-2.3
CTA	Charters Tower	24.87	121	P	P	16 06 25.9	+1.1
	17nm,0.9s,baz=291,slow=14,SNR=9.9						
CTAO	Charters Tower	24.87	121	*e*P	P	16 06 24.6	-0.2
NWAO	Narrogin (SRO)	25.43	193	P	P	16 06 30.6	+0.9
	16nm,0.9s,baz=242,slow=8.6,SNR=5.7						
NWAO				LR	LR	16 17 02.3	
	comp=Z,92nm,21.1s,baz=282,slow=38						
NWAO	Narrogin (SRO)	25.43	193	*e*P	P	16 06 30.1	+0.3
STKA	Stephens Creek	28.93	147	P	P	16 07 02.5	+1.2
	2.4nm,0.8s,baz=329,slow=5.3,SNR=7.1						
CMAR	Chiang Mai Arr	35.96	317	P	P	16 08 03.9	+0.9
	1.0nm,0.8s,baz=137,slow=6.9,SNR=7.2						
CMAR				LR	LR	16 24 01.5	
	comp=Z,67nm,18.9s,baz=190,slow=38						
GYA	Guiyang	38.12	335	*e*P	P	16 08 24.0	+2.6
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KMI	Kunming	38.82	329	P	P	16 08 29.8	+2.4
KMI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
KMI				pmax	pmax		
	comp=Z,110nm,5.5s						
NJ2	Nanjing	40.19	354	*e*P	P	16 08 40.4	+2.0
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
JNU	Nakatsue	41.55	9	LR	LR	16 27 37.0	
	comp=Z,17nm,19.8s,baz=124,slow=38						
XAN	Xi’an	44.19	342	P	P	16 09 20.5	+9.4
XAN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,86nm,7.2s						
KSRS	Korea Array	45.48	5	LR	LR	16 30 41.0	
	comp=Z,16nm,18.6s,baz=192,slow=39						
LZH	Lanzhou	47.76	338	*e*P	P	16 09 44.6	+5.3
LZH				pP	sP	16 09 53.1	+9.4
LZH				sP	pP	16 09 57.8	+15
LZH				pmax	pmax		
	comp=Z,23nm,1.2s						
HHC	Hu-ho-hao-te	49.97	348	*e*P	P	16 09 59.6	+3.4
HHC				sP	sP	16 10 11.6	+11
HHC				S	S	16 17 09.9	+3.0
HHC				sS	sS	16 17 24.9	+13
HHC				ScS	ScS	16 19 46.0	-2.0
HHC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,59nm,4.6s						
HHC				LR	LR		
	comp=Z,100nm,15.9s						
HHC				LR	LR		
	comp=Z,91nm,13.9s						
HHC				LR	LR		
	comp=Z,81nm,15.0s						
GTA	Gaotai	52.20	337	*e*P	P	16 10 14.0	+1.0
GTA				pP	sP	16 10 20.3	+2.9
GTA				S	S	16 17 39.5	+1.6
GTA				pmax	pmax		
	comp=Z,3.0nm,1.1s						
GTA				pmax	pmax		
	comp=Z,72nm,4.9s						
GTA				LR	LR		
	comp=Z,84nm,15.9s						
GTA				LR	LR		
	comp=Z,89nm,17.8s						
GTA				LR	LR		
	comp=Z,72nm,17.1s						
RPZ	Rata Peaks	54.35	139	P	P	16 10 30.1	+1.3
	comp=Z,14nm,0.8s,baz=349,slow=2.6,SNR=6.8						
SONM	Songino Array	57.76	346	P	P	16 10 53.2	+0.1
	comp=Z,1.4nm,0.8s,baz=165,slow=8.4,SNR=6.7						
SONA1	Songino Array	57.77	346	*e*P	P	16 10 53.0	-0.2
WMQ	Urumqi	61.10	331	P	P	16 11 18.1	+1.9
KSH	Kashi	64.75	321	P	P	16 11 41.3	+0.6
KSH				sP	sP	16 11 55.1	+10
KSH				*e*PcP	PcP	16 12 14.3	0.0
KSH				PcS		16 16 13.0	
KSH				S	S	16 20 15.8	-5.8
KSH				ScS	SKSac	16 21 26.1	-10
KSH				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KSH				pmax	pmax		
	comp=Z,61nm,4.7s						
MK01	Makanchi Array	65.86	330	*e*P	P	16 11 47.1	-0.5
MK31	Makanchi Array	65.89	330	*e*P	P	16 11 47.5	-0.2
MKAR	Makanchi Array	65.89	330	P	P	16 11 48.0	+0.2
	comp=Z,1.5nm,0.8s,baz=128,slow=7.0,SNR=16						
MAKZ	Makanchi	66.05	330	*e*P	P	16 11 48.3	-0.5
	comp=Z,7.6nm,1.4s						
PETK	Petropavlovsk-	67.46	21	P	P	16 11 57.7	+0.1
	comp=Z,3.6nm,0.9s,baz=129,slow=2.0						
ZALV	Zalesovo Beam	69.96	337	P	P	16 12 12.7	-0.4
	comp=Z,1.4nm,0.6s,baz=125,slow=2.3,SNR=6.8						
KURBB	Kurchatov Arra	70.32	331	P	P	16 12 15.0	-0.4
	comp=Z,1.2nm,0.8s,baz=137,slow=5.6,SNR=7.9						
KURK	Kurchatov	70.34	331	*e*P	P	16 12 14.2	-1.4
VNDA	Vanda	72.19	172	P	P	16 12 27.5	+1.1
	comp=Z,0.8nm,0.9s,baz=295,slow=5.3,SNR=3.6						
BVAR	Borovoye Array	75.77	330	P	P	16 12 48.1	+0.4
	comp=Z,0.3nm,0.4s,baz=90,slow=5.9,SNR=5.2						
SYO	Syowa Base	80.38	201⇓	*e*P	P	16 13 12.0	-1.1
SYO	Syowa Base	80.38	201⇑	*e*PcP	PcP	16 13 19.6	-0.5
QSPA	South Pole Qui	81.89	180	P	P	16 13 21.4	+0.1
	comp=Z,2.0nm,0.7s,baz=321,slow=6.7,SNR=8.1						
CPUP	Villa Florida	145.77	178	PKPbc	PKPab	16 20 42.4	+0.3
	comp=Z,3.9nm,0.9s,baz=202,slow=3.3,SNR=7.2						

IDC 21 16:02:26.9±4.3,**21°.54S**×**174°.50E,h0^{km},mb4.1**/3, **mb1 4.3**/4,**mb1mx3.8**/41,**mbtmp4.0**/4,**ML3.0**/1,**MS3.4**/11, **Ms1 3.5**/11,**ms1mx3.2**/37,**Error ellipse: s-maj=186.6km s-min=42.1km az=155.0,Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.50	264	Pn	Pn	16 04 19.8	+2.1
	0.2nm,0.3s,baz=86,slow=18,SNR=3.1						
DZM				LR	LR	16 06 50.4	
	comp=Z,414nm,21.7s,baz=56,slow=35						
DZM	Mont Dzumac	7.50	264	*e*Pn	Pn	16 04 24.1	+6.4
	61nm,1.3s						
DZM				*e*LR	LR	16 06 09.6	
	544nm,25.4s						
AFI	Afiamalu	15.11	62	LR	LR	16 10 26.1	
	comp=Z,196nm,22.0s,baz=219,slow=32						
RPZ	Rata Peaks	22.30	187	LR	LR	16 16 33.2	
	comp=Z,253nm,18.3s,baz=344,slow=38						
RAR	Rarotonga	23.96	94	LR	LR	16 15 17.5	
	comp=Z,75nm,20.7s,baz=281,slow=32						
PPT	Papeete	34.04	90	LR	LR	16 22 39.7	
	comp=Z,35nm,18.4s,baz=83,slow=36						
ASAR	Alice Springs	37.45	259	P	P	16 09 42.9	+0.6
	4.3nm,0.7s,baz=90,slow=8.7,SNR=12						
ASAR				LR	LR	16 24 05.7	
	comp=Z,112nm,19.9s,baz=126,slow=35						
WRA	Warramunga Arr	37.52	265	P	P	16 09 40.9	-2.0
	1.4nm,0.7s,baz=96,slow=9.3,SNR=4.1						
GUMO	Guam	45.44	318	LR	LR	16 30 04.0	
	comp=Z,18nm,18.8s,baz=156,slow=36						
VNDA	Vanda	56.36	183	LR	LR	16 33 40.4	
	comp=Z,30nm,18.5s,baz=350,slow=33						
ASAJ	Asahikawa	71.58	336	LR	LR	16 37 36.6	
	comp=Z,40nm,21.0s,baz=168,slow=30						
KSRS	Korea Array	73.25	323	LR	LR	16 43 33.5	
	comp=Z,10.0nm,19.0s,baz=220,slow=34						
CMAR	Chiang Mai Arr	83.94	292	P	P	16 14 59.6	+0.3
	1.3nm,0.9s,baz=146,slow=4.2,SNR=5.6						
TXAR	Lajitas Array	93.58	60	LR	LR	16 49 46.8	
	comp=Z,43nm,19.6s,baz=0.0,slow=30						
GERES	GERESS Array B	148.74	335	PKPbc	PKPbc	16 22 15.9	-0.4
	0.5nm,0.8s,baz=46,slow=5.6,SNR=3.1						

WEL 21 16:18:12.5,38°S±9°×**18°0W**±°,**h33^{km},ML4.4**/28,**East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.39	272	P	Pn	16 18 35.9	+0.4
WMGZ				S	Sn	16 18 53.0	+0.3
MXZ	Matakaoa Point	1.51	282	P	Pn	16 18 37.2	0.0
MXZ				S	Sn	16 18 55.6	-0.1
PUZ	Puketiti	1.52	263	P	Pn	16 18 38.2	+0.8
PUZ				S	Sn	16 18 56.9	+0.9
PKGZ	Pakihiroa	1.65	269	P	Pn	16 18 39.6	+0.4
CNGZ	Carnagh Statio	1.65	248	P	Pb	16 18 41.0	-1.3
CNGZ				S	Sb	16 19 03.5	+0.7
TWGZ	Tauwhareparae	1.75	260	P	Pn	16 18 41.7	+1.1
TWGZ				S	Sn	16 19 03.4	+1.6
HAZ	Te Kaha	1.89	273	P	Pn	16 18 42.9	+0.4
TKGZ	Te Karaka	1.91	253	P	Pn	16 18 44.0	+1.3
TKGZ				S	Sn	16 19 07.2	+1.7
RUGZ	Raukumara Rang	1.97	267	P	Pn	16 18 44.1	+0.4
MWZ	Matawai	2.13	257	P	Pn	16 18 46.5	+0.7
MWZ				S	Sn	16 19 11.2	+0.2
RAGZ	Rawiri	2.25	254	P	Pn	16 18 48.7	+1.2
RAGZ				S	Sn	16 19 15.2	+1.1
WHRZ	Whale Island	2.52	270	P	Pn	16 18 52.9	+1.7
WHHZ	Waihua	2.59	242	P	Pn	16 18 53.7	+1.6
WHHZ	Waihua	2.59	242	P	Sn	16 19 24.4	+2.0
RAHZ	Arahi	2.63	246	P	Pn	16 18 54.2	+1.6
RAHZ	Arahi	2.63	246	P	Sn	16 19 25.9	+2.6
EDRZ	Edgecumbe	2.71	264	P	Pn	16 18 55.1	+1.3
MUGZ	Murupara	2.74	257	P	Pn	16 18 55.3	+1.2
MARZ	Manawahe	2.76	267	P	Pn	16 18 55.4	+0.9
MTHZ	Maungataniwha	2.78	249	P	Pn	16 18 56.3	+1.6
ARHZ	Aropaoanui	2.84	240	P	Pn	16 18 57.4	+1.9
OPRZ	Ohinepanea	2.86	270	P	Pn	16 18 56.0	+0.2
NMHZ	Naumai	2.90	244	P	Pn	16 18 58.0	+1.6
TARZ	Mount Tarawera	2.91	262	P	Pn	16 18 58.0	+1.4
RRRZ	Republican Roa	2.91	260	P	Pn	16 18 57.7	+1.1
CKHZ	Cape Kidnapper	2.99	233	P	Pn	16 18 59.4	+1.9
HLRZ	Highlands Stat	3.03	262	P	Pn	16 18 59.6	+1.4
PRRZ	Plateau Road	3.03	257	P	Pn	16 18 59.3	+1.2
ALRZ	Allen Road	3.08	256	P	Pn	16 19 00.2	+1.3
MRHZ	Matea Rd	3.09	251	P	Pn	16 19 00.5	+1.5
MRHZ				S	Sn	16 19 35.0	0.0
TGRZ	Tauranga	3.10	272	P	Pn	16 18 59.1	+0.1
HRRZ	Handcock Road	3.10	260	P	Pn	16 19 00.2	+1.1
KARZ	Kaharoa	3.10	266	P	Pn	16 18 59.7	+0.6
HSRZ	Hossack Road	3.12	261	P	Pn	16 19 00.6	+1.2
MCHZ	McNeill Hill	3.13	239	P	Pn	16 19 01.1	+1.6
BKZ	Black Stump Fm	3.15	245	P	Pn	16 19 01.3	+1.4
KAHZ	Kahuranaki	3.19	232	P	Pn	16 19 01.9	+1.4
WPRZ	Whakapapatarin	3.21	257	P	Pn	16 19 02.2	+1.5
KWHZ	Kaweka Forest	3.31	241	P	Pn	16 19 03.3	+1.3
PXZ	Pawanui	3.35	229	P	Pn	16 19 03.1	+0.6
KRHZ	Kereru	3.44	238	P	Pn	16 19 04.8	+0.9
KUTZ	Kaahu Road	3.47	259	P	Pn	16 19 05.5	+1.2
RITZ	Rihia Road	3.55	251	P	Pn	16 19 07.0	+1.7
BHHZ	Black Hill Sta	3.58	242	P	Pn	16 19 07.1	+1.3
WPHZ	Waipukurau	3.62	232	P	Pn	16 19 07.7	+1.3
PRHZ	Porangahau	3.63	228	P	Pn	16 19 07.0	+0.6
TLZ	Tolley Road	3.68	262	P	Pn	16 19 07.5	+0.4
PNHZ	Pukenui	3.69	236	P	Pn	16 19 08.2	+0.9
KUZ	Kuaotunu	3.72	287	P	Pn	16 19 07.0	-0.6
MOVZ	Moawhango	3.77	245	P	Pn	16 19 10.6	+2.2
TUVZ	Tukino	3.79	247	P	Pn	16 19 10.7	+2.0
NGZ	Ngauruhoe	3.80	249	P	Pn	16 19 10.1	+1.2
WHVZ	Whangaehu Hut	3.85	247	P	Pn	16 19 11.8	+2.2
ANWZ	Angora Road	3.85	227	P	Pn	16 19 09.9	+0.5
ANWZ				P	Pn	16 19 09.9	+0.5
COVZ	Chateau Observ	3.85	249	P	Pn	16 19 11.7	+2.1
FWVZ	Far West T-bar	3.86	248	P	Pn	16 19 11.1	+1.3
TRVZ	Turoa	3.88	247	P	Pn	16 19 11.9	+1.9
TSZ	Takapari Road	3.93	235	P	Pn	16 19 10.8	+0.3
DVHZ	Dannevirke	3.93	231	P	Pn	16 19 11.1	+0.5
MTVZ	Mangateitei	3.97	246	P	Pn	16 19 12.7	+1.6
PKVZ	Pokaka	4.03	248	P	Pn	16 19 13.9	+2.0
MKAZ	Moumakai	4.05	280	P	Pn	16 19 12.3	+0.1
BFZ	Birch Farm	4.13	226	P	Pn	16 19 12.4	-0.8
WIAZ	Waiheke Island	4.16	284	P	Pn	16 19 13.7	+0.1
PRWZ	Pori Road	4.21	229	P	Pn	16 19 14.9	+0.6
HIZ	Hauiti	4.23	260	P	Pn	16 19 16.1	+1.5
POWZ	Post Office Ro	4.23	232	P	Pn	16 19 15.6	+0.9
ETAZ	East Tamaki Re	4.27	281	P	Pn	16 19 15.6	+0.4
TIWZ	Tintock	4.39	228	P	Pn	16 19 16.9	-0.1
VRZ	Vera Road	4.42	252	P	Pn	16 19 18.8	+1.6
EPAZ	Eden Park BICE	4.43	282	P	Pn	16 19 18.5	+1.0
HBAZ	Herne Bay Bore	4.45	282	P	Pn	16 19 18.6	+1.0
WAZ	Wanganui	4.45	244	P	Pn	16 19 19.6	+1.9
MRZ	Mangatainoka R	4.51	231	P	Pn	16 19 18.5	0.0
TMWZ	Te Maipa	4.61	224	P	Pn	16 19 19.0	-0.8
HOWZ	Holdsworth Sta	4.69	229	P	Pn	16 19 20.5	-0.5
OGWZ	Otaki Gorge	4.85	231	P	Pn	16 19 23.1	-0.1
MTW	Mount Morrison	4.86	226	P	Pn	16 19 22.3	-1.1
TRWZ	Traveller	4.92	223	P	Pn	16 19 23.5	-0.6
PAWZ	Paruwai Farm	5.05	225	P	Pn	16 19 25.1	-0.9
CAW	Cannon Point	5.09	229	P	Pn	16 19 26.0	-0.4
MSWZ	Moikau Station	5.18	226	P	Pn	16 19 25.9	-1.7
PLWZ	Palliser	5.28	224	P	Pn	16 19 27.4	-1.6
BHW	Baring Head	5.39	228	P	Pn	16 19 29.8	-0.7
TCW	Tory Channel	5.63	232	P	Pn	16 19 33.3	-0.6
TUWZ	Tuamarina	5.96	232	P	Pn	16 19 37.6	-0.8
BSWZ	Blackbirch Sta	6.17	230	P	Pn	16 19 39.9	-1.3
THZ	Tophouse	6.79	233	P	Pn	16 19 49.3	-0.7
KHZ	Kahutara	6.80	226	P	Pn	16 19 49.7	-0.1
DSZ	Denniston Nort	7.50	236	P	Pn	16 19 59.1	-0.5
LTZ	Lake Taylor	7.76	228	P	Pn	16 20 00.9	-2.2
OKCZ	Okains Bay	7.94	221	P	Pn	16 20 05.1	-0.5
AKCZ	Akaroa Harbour	8.12	220	P	Pn	16 20 07.4	-0.6
MQZ	McQueen’s Vall	8.13	222	P	Pn	16 20 07.0	-1.2
OXZ	Oxford	8.23	226	P	Pn	16 20 07.7	-1.8
INZ	Inchbonnie	8.23	231	P	Pn	16 20 08.7	-0.8
RPZ	Rata Peaks	9.03	227	P	Pn	16 20 20.0	-0.5
ODZ	Otahua Downs	10.10	222	P	Pn	16 20 34.3	-0.9
TUZ	Tuapeka	11.24	221	P	Pn	16 20 51.1	+0.4

KRSC 21 16:37:34.9±1.5,**49°.74N**×**156°.86E,h15^{km}**±19^{km},**ML3.7, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril’s	1.06	333	*e*P	Pb	16 37 53.3	-1.6
SKR				*e*S	Sb	16 38 07.1	-1.4
PAU	Pauzhetka	1.73	359	*e*P	Pn	16 38 05.1	+0.7
PAU				*e*S	Sb	16 38 27.7	-0.1
KDTR	Khodutka, Kamc	2.21	20	*e*P	Pb	16 38 12.8	-1.7
KDTR				*e*S	Sb	16 38 41.3	-0.3
MIPR	Malaya Ipel’ka	2.54	359	*e*P	Pn	16 38 16.3	+0.8
ASAK	Asacha	2.73	13	*e*P	Pb	16 38 20.9	-2.5
MTVR	Mutnovka	2.87	16	*e*P	Pn	16 38 23.0	+2.8
MTVR				*e*S	Sb	16 38 57.7	-3.1
RUS	Russkaya	2.89	20	*e*P	Pn	16 38 21.9	+1.6
RUS				*e*S	Sn	16 38 56.9	+2.2
KRMR	Karymshinskiy	3.20	14	*e*P	Pn	16 38 27.5	+3.0
PET	Petropavlovsk	3.48	18	*e*P	Pn	16 38 31.2	+2.9
PET				*e*S	Sb	16 39 13.6	-4.4
DALK	Dalny	3.50	19	*e*P	Pn	16 38 31.4	+2.7
DALK				*e*S	Sn	16 39 14.3	+4.5
UGLR	Uglovaya	3.69	19	*e*P	Pn	16 38 35.2	+3.9
AVH	Avacha	3.72	18	*e*P	Pn	16 38 36.0	+4.2
KOK	Koryaka	3.73	17	*e*P	Pb	16 38 36.6	-3.8
SMAR	Somma	3.73	18	*e*P	Pn	16 38 35.5	+3.4
SDLR	Sedlovina	3.76	19	*i* P	Pn	16 38 36.1	+3.7
SDLR				*e*S	Sb	16 39 21.8	-4.6
KRX	Arik	3.79	16	*e*P	Pn	16 38 37.0	+4.2
SPN	Mys Shipunski	3.90	29	*e*P	Pn	16 38 37.3	+3.1
SPN				*e*S	Sn	16 39 24.9	+5.2
GNL	Ganaly	4.02	9	*i* P	Pb	16 38 40.8	-4.6

MEX 21 16:38:30.5±0.5,**16°.29N**×**98°.19W,h10^{km}**±2^{km},**MD3.8, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.12	30	*i* P	Pg	16 38 32.7	-0.7
PNIG				*e*S	Sg	16 38 35.1	-0.3
TLIG	Tlapa	1.32	344	*e*P	Pn	16 38 51.5	-3.7
TLIG				*e*S	Sb	16 39 08.0	-4.5
VHO	Vista Hermosa	1.60	61	*e*P	Pn	16 38 55.6	-3.5
VHO				*i* S	Sn	16 39 14.8	-5.2
HUIG	Huatulco	2.07	104	*e*P	Pn	16 39 02.8	-2.6
HUIG				*i* S	Sn	16 39 26.2	-5.0

*ISCJB **21** 16:42:16.9±0.4,3°.02N±0°.07×65°.41E±0°.06,h10^{km}, mb4.3/32,MS3.9/40,Error ellipse: s-maj=11.0km s-min=8.3km az=148.7*

*IDC **21** 16:42:17.0±0.5,3°.02N×65°.54E,h0^{km},mb4.3/23, mb1 4.4/24,mb1mx4.1/67,mbtmp4.3/24,ML3.9/1,MS3.8/41, Ms1 3.8/41,ms1mx3.8/60,Error ellipse: s-maj=14.0km s-min=13.0km az=122.0*

*BJI **21** 16:42:17.0,3°.00N×65°.50E,h10^{km},mb4.6/11,mB5.0/6, Ms4.5/1,Ms7 4.5/1*

*NEIC **21** 16:42:18.3±0.4,3°.03N×65°.55E,h10^{km},mb4.3/3,Error ellipse: s-maj=10.9km s-min=9.1km az=147.0*

*GCMT **21** 16:42:18.3±0.3,2°.99N×65°.40E,h12^{km},MW4.8/76, Moment Tensor Solution. s22,c24; s76,c109; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.62±.07; $M_{\theta\theta}$1.54±.05; $M_{\phi\phi}$0.08±.07; $M_{r\theta}$0.71±.23; $M_{\theta\phi}$-0.54±.06; $M_{\phi r}$0.31±.28; Best double couple: $M_0$1.84200×10^{16} NP1:ϕ_s272.00000°,δ57.00000°,λ-109.00000°. NP2: ϕ_s124.00000°,δ38.00000°,λ-64.00000°. Principal axes: T 1.8190, Plg10.0000°, Azm16.0000°; N 0.0500, Plg15.0000°, Azm283.0000°; P -1.8650, Plg72.0000°, Azm137.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 21 16:42:18.6±0.6,**3°.0N**±0°.1×**65°.49E**±0°.09,**h10^{km},n83,** σ**1^{s}44**/51,**mb4.3**/32,**MS3.9**/40,**Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08N2	Diego Garcia H	10.79	149	T	T	16 55 52.2	
	baz=330,slow=76,SNR=255						
H08N3	Diego Garcia H	10.80	149	T	T	16 55 53.6	
	baz=330,slow=76,SNR=622						
H08N1	Diego Carcia H	10.81	149	T	T	16 56 14.9	
	baz=330,slow=76,SNR=270						
PALK	Pallekele	15.73	74	Pn	Pn	16 45 59.7	-0.8
	0.4nm,0.3s,baz=294,slow=12,SNR=4.3						
PALK				LR	LR	16 50 44.4	
	comp=Z,596nm,19.9s,baz=296,slow=32						
WSAR	Wadi Sarin	21.17	342	LR	LR	16 53 31.3	
	comp=Z,502nm,20.2s,baz=175,slow=32						
OPO	Ambohidratompo	28.01	219	LR	LR	16 57 00.9	
	comp=Z,475nm,18.9s,baz=36,slow=32						
KOLN	Koldanda	30.09	33	*e*P	P	16 48 30.2	+1.6
	30nm,1.3s						
DMN	Daman	30.82	36	*e*P	P	16 48 36.6	+1.5
	22nm,0.9s						
GKN	Gorkha	30.85	34	*e*P	P	16 48 37.3	+2.1
	27nm,1.1s						
PKIN	Phulchoki	30.96	36	*e*P	P	16 48 38.2	+1.8
	19nm,1.1s						
KKN	Kakani	31.05	36	*e*P	P	16 48 39.2	+2.1
	23nm,1.1s						
GUN	Gumba	31.49	36	*e*P	P	16 48 42.7	+1.5
ODAN	Odare	31.66	39	*e*P	P	16 48 44.4	+1.9
	42nm,1.0s						
BRDH	Bariadhala	32.01	50	LR	LR	17 02 43.9	
	comp=Z,312nm,18.1s,baz=244,slow=38						
GEYT	Alibeck	35.40	350	LR	LR	17 03 01.5	
	comp=Z,238nm,22.0s,baz=65,slow=35						
LSA	Lhasa	36.01	40	P	P	16 49 20.2	-0.4
	1.0nm,0.4s						
CMAR	Chiang Mai Arr	36.17	62	P	P	16 49 22.9	+1.3
	3.1nm,0.9s,baz=256,slow=11,SNR=16						
CMAR				LR	LR	17 03 09.3	
	comp=Z,171nm,20.1s,baz=212,slow=35						
CHTO	Chiang Mai	36.30	62	*e*P	P	16 49 19.2	-3.5
	17nm,1.3s						
CHTO	Chiang Mai	36.30	62	P	P	16 49 24.9	+2.2
	57nm,1.4s						
CMMT	Chiang Mai	36.30	62	P	P	16 49 24.8	+2.1
	8.8nm,0.9s						
PAYA	Payao	37.31	62	P	P	16 49 45.5	+14
PBKT	Sadao Pong	37.38	66	P	P	16 49 34.6	+2.7
	5.6nm,0.9s						
KSH	Kashi	37.56	13	P	P	16 49 30.3	-3.0
KSH				*e*PcP	PcP	16 51 51.3	0.0
KSH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KSH				pmax	pmax		
	comp=Z,64nm,3.2s						
CHAI	Chaiyaphum	38.13	68	P	P	16 49 40.8	+2.6
	4.0nm,0.9s						
EIL	Elat	39.26	316	LR	LR	17 04 11.4	
	comp=Z,106nm,19.1s,baz=66,slow=34						
SKNT	Sakolnakorn	40.26	67	P	P	16 49 58.7	+2.6
	4.2nm,1.4s						
AAK	Ala-Archa	40.26	10	P	P	16 49 56.5	+0.6
	1.2nm,0.2s,baz=195,slow=7.4,SNR=4.6						
MMAI	Mount Meron Ar	41.03	320	LR	LR	17 05 30.8	
	comp=Z,76nm,19.0s,baz=135,slow=34						

LSZ	Lusaka	41.15	243	P	P	16 50 04.0	+0.5
	3.5nm,0.6s,baz=83,slow=7.9,SNR=7.4						
LSZ	Lusaka	41.15	243	*e*P	P	16 50 02.6	-0.9
	4.6nm,0.8s						
GNI	Garni	41.46	336	LR	LR	17 07 20.8	
	comp=Z,160nm,21.5s,baz=140,slow=36						
KBZ	Khabaz	45.22	337	P	P	16 50 37.0	+1.0
	2.7nm,0.9s,baz=176,slow=8.4,SNR=4.2						
KBZ				LR	LR	17 11 13.4	
	comp=Z,70nm,20.2s,baz=148,slow=38						
MKAR	Makanchi Array	45.99	16	P	P	16 50 42.2	+0.2
	2.5nm,1.0s,baz=203,slow=7.9,SNR=14						
MKAR				PcP	PcP	16 52 18.2	-0.5
	0.7nm,0.9s,baz=222,slow=3.9,SNR=2.7						
MKAR				LR	LR	17 10 56.7	
	comp=Z,153nm,20.3s,baz=206,slow=37						
BRTR	Keskin Array B	46.57	326	P	P	16 50 47.0	+0.1
	1.0nm,0.7s,baz=145,slow=10,SNR=7.3						
BRTR				LR	LR	17 10 44.9	
	comp=Z,113nm,19.3s,baz=117,slow=37						
AKTO	Aktyubinsk	47.67	354	P	P	16 50 54.6	-0.5
	3.6nm,0.7s,baz=160,slow=8.4,SNR=9.8						
AKTO				LR	LR	17 12 34.9	
	comp=Z,58nm,19.8s,baz=162,slow=38						
LBTB	Lobatse	47.68	232	P	P	16 50 56.2	+0.5
	17nm,0.7s,baz=61,slow=7.6,SNR=29						
LBTB				LR	LR	17 07 37.7	
	comp=Z,281nm,19.1s,baz=66,slow=32						
GTA	Gaotai	47.78	36	*e*P	P	16 50 56.4	0.0
GTA				pP	pP	16 51 00.0	+0.5
GTA				sP	sP	16 51 03.1	+2.4
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KURBB	Kurchatov Arra	48.70	11	P	P	16 51 02.6	-0.5
	2.1nm,0.9s,baz=209,slow=7.8,SNR=14						
KURK	Kurchatov	48.81	11	*e*P	P	16 51 01.4	-2.4
BOSA	Boshof	49.80	228	P	P	16 51 12.1	+0.1
	12nm,0.9s,baz=68,slow=7.7,SNR=11						
BOSA				LR	LR	17 10 11.3	
	comp=Z,172nm,18.4s,baz=47,slow=34						
BVAR	Borovoye Array	50.01	4	P	P	16 51 12.3	-0.7
	0.6nm,0.7s,baz=175,slow=8.8,SNR=5.5						
BVAR				LR	LR	17 12 59.5	
	comp=Z,187nm,21.6s,baz=193,slow=37						
BRVK	Borovoye	50.04	4	P	P	16 51 12.4	-0.8
XAN	Xi’an	50.86	47	P	P	16 51 19.8	0.0
XAN				pP	sP	16 51 24.6	+0.4
XAN				sP	pP	16 51 27.1	+4.1
XAN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,90nm,4.0s						
TSUM	Tsumeb	52.00	243	LR	LR	17 11 01.1	
	comp=Z,240nm,21.7s,baz=62,slow=33						
ZALV	Zalesovo Beam	53.19	14	P	P	16 51 35.4	-1.4
	4.6nm,0.7s,baz=214,slow=8.1,SNR=14						
ZALV				LR	LR	17 13 54.6	
	comp=Z,134nm,21.4s,baz=244,slow=36						
MLR	Muntele Rosu	54.63	327	P	P	16 51 48.4	+0.7
	1.4nm,0.7s,baz=92,slow=2.3,SNR=3.3						
SUR	Sutherland	55.04	227	P	P	16 51 51.6	+0.6
	20nm,0.9s,baz=56,slow=12,SNR=5.7						
AKASG	Malin Array Be	56.47	333	LR	LR	17 20 23.8	
	comp=Z,57nm,18.2s,baz=130,slow=40						
SONM	Songino Array	56.83	32	P	P	16 52 04.0	+0.6
	3.0nm,0.9s,baz=227,slow=7.0,SNR=12						
SONM				LR	LR	17 16 20.7	
	comp=Z,241nm,21.3s,baz=234,slow=36						
H01W3	Cape Leeuwin H	59.16	134	T	T	17 56 12.9	
	baz=299,slow=75,SNR=131						
H01W2	Cape Leeuwin H	59.17	134	T	T	17 56 14.8	
	baz=299,slow=75,SNR=125						
H01W1	Cape Leeuwin H	59.18	134	T	T	17 56 15.7	
	baz=299,slow=75,SNR=147						
DAV	Davao City (W)	59.96	84	LR	LR	17 20 11.6	
	comp=Z,22nm,18.1s,baz=226,slow=38						
NWAO	Narrogin (SRO)	60.55	131	P	P	16 52 28.6	-0.8
	10nm,0.8s,baz=166,slow=7.5,SNR=8.7						
NWAO				LR	LR	17 15 32.8	
	comp=Z,72nm,18.2s,baz=220,slow=33						
KLMR	Klimovskoe	60.98	346	*e*P	P	16 52 31.6	-0.2
KLMR				AMP		16 52 40.0	
	comp=Z,20nm,1.4s						
GERES	GERESS Array B	63.43	325	LR	LR	17 21 20.4	
	comp=Z,45nm,18.6s,baz=114,slow=37						
TORD	Torodi Ar. Bea	63.80	283	P	P	16 52 52.8	+1.2
	comp=Z,0.5nm,0.6s,baz=108,slow=7.7						
TORD				LR	LR	17 19 59.2	
	comp=Z,57nm,19.5s,baz=40,slow=35						
JOW	Kunigami	64.44	62	LR	LR	17 20 27.0	
	comp=Z,73nm,21.8s,baz=296,slow=36						
DAVOX	Davos/Dischmat	64.81	321	LR	LR	17 22 57.2	
	comp=Z,32nm,18.1s,baz=83,slow=38						
FINES	FINESS Array B	65.38	340	LR	LR	17 24 31.6	
	comp=Z,53nm,19.0s,baz=128,slow=39						
KSAR	Wonju Array Be	66.43	50	P	P	16 53 07.0	-1.3
KSRS	Korea Array	66.46	50	P	P	16 53 07.0	-1.5
	comp=Z,0.9nm,0.7s,baz=251,slow=6.9,SNR=4.0						
KSRS				LR	LR	17 25 07.8	
	comp=Z,88nm,18.7s,baz=258,slow=39						
JNU	Nakatsue	67.83	55	LR	LR	17 24 57.1	
	comp=Z,68nm,19.2s,baz=304,slow=38						
HFS	Hagfors	69.24	335	P	P	16 53 25.5	-0.1
	comp=Z,2.6nm,0.8s,baz=126,slow=7.3,SNR=8.6						
KOWA	Kowa	69.41	284	LR	LR	17 24 07.1	
	comp=Z,40nm,19.6s,baz=58,slow=36						
NOA	NORSAR Array B	70.76	335	LR	LR	17 26 20.7	
	comp=Z,38nm,19.4s,baz=110,slow=37						
WRA	Warramunga Arr	71.26	112	P	P	16 53 38.7	-0.1
	comp=Z,6.3nm,0.8s,baz=288,slow=5.4,SNR=26						
ASAR	Alice Springs	71.58	116	P	P	16 53 40.2	-0.4
	comp=Z,3.7nm,0.7s,baz=290,slow=5.5,SNR=47						
MDT	Midelt	71.67	303	LR	LR	17 24 24.5	
	comp=Z,54nm,19.2s,baz=156,slow=35						
ESDC	Sonseca Array	72.31	311	P	P	16 53 43.3	-1.5
	comp=Z,0.3nm,0.6s,baz=101,slow=5.0,SNR=3.2						
MJAR	Matsushiro Arr	74.35	53	LR	LR	17 28 23.5	
	comp=Z,61nm,20.6s,baz=300,slow=37						
JHJ	Hachijo jima 2	75.21	57	LR	LR	17 30 44.1	
	comp=Z,27nm,18.1s,baz=298,slow=39						
ASAJ	Asahikawa	78.66	46	LR	LR	17 30 35.5	
	comp=Z,60nm,18.6s,baz=317,slow=37						
GUMO	Guam	78.98	77	LR	LR	17 26 07.5	
	comp=Z,14nm,21.4s,baz=256,slow=33						
SPITS	Spitsbergen Ar	79.29	351	LR	LR	17 34 04.3	
	comp=Z,29nm,18.7s,baz=200,slow=39						
STKA	Stephens Creek	79.83	123	P	P	16 54 27.1	-0.6
	comp=Z,3.0nm,0.8s,baz=310,slow=11,SNR=6.4						
SNAA	Sanae	86.15	197	LR	LR	17 26 13.9	
	comp=Z,99nm,20.1s,baz=21,slow=31						
PETK	Petropavlovsk-	88.94	37	LR	LR	17 37 48.6	
	comp=Z,130nm,18.9s,baz=270,slow=38						
VNDA	Vanda	94.31	167	LR	LR	17 32 29.3	
	comp=Z,129nm,19.3s,baz=256,slow=32						
SFJD	Kangerlussuaq	97.16	339	LR	LR	17 40 47.7	
	comp=Z,59nm,19.7s,baz=26,slow=36						
PDAR	Pinedale Array	134.21	355	PKP	PKPdf	17 01 37.6	+0.4
	comp=Z,0.2nm,0.5s,baz=358,slow=2.7,SNR=2.2						
NVAR	Mina Array Bea	138.61	5	PKP	PKPdf	17 01 46.2	+0.6
	comp=Z,0.7nm,0.7s,baz=285,slow=2.1,SNR=3.6						
TXAR	Lajitas Array	146.19	343	PKPbc	PKPdf	17 01 59.7	+0.6
	comp=Z,1.4nm,0.8s,baz=70,slow=2.7,SNR=14						

ISCJB **21** *16:53:36.0±0.5, 8.°05S±0.°06×123.°88E±0.°04, h10^{km}, mb3.9/7, MS3.9/1, Error ellipse: s-maj=9.1km s-min=6.1km az=178.2*

IDC **21** *16:53:37.0±1.2, 7.°86S×124.°13E, h0^{km}, mb4.0/7, mb1 4.2/9, mb1mx3.8/54, mbtmp4.0/9, ML3.8/2, MS3.4/2, Ms1 3.5/2, ms1mx2.7/41, Error ellipse: s-maj=63.0km s-min=17.8km az=45.0*

NEIC **21** *16:53:38.3±0.6, 7.°89S×124.°15E, h10^{km}, mb4.0/1, Error ellipse: s-maj=30.7km s-min=8.6km az=52.0*

DJA **21** *16:53:42.6±0.9, 8°S±4°×12°4E±°, h33^{km}±12^{km}, M4.1/8, mb4.4/2, MLv4.0/8*

ISC 21 16:53:37.9±0.7**, 8.°06S**±0.°06×**123.°94E**±0.°06**, h10^{km}, n20, σ2.^{s}08**/21**, mb3.9**/7**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	1.72	169	P	Pg	16 54 13.2	+2.3
MMRI	Maumere	1.78	251	P	Pn	16 54 06.5	-2.2
MMRI				S	Sn	16 54 27.1	-4.3
MMRI				Sg	Sb	16 54 34.0	+1.0
BATI	Baumata	2.15	187	P	Pb	16 54 18.6	+1.6
EDFI	Ende, Flores	2.33	253	P	Pn	16 54 14.4	-2.0
WSI	Waingapu	3.94	246	P	Pg	16 54 56.3	+2.9
BKSI	Bulukumba	4.66	305	P	Pn	16 54 46.0	-2.4
SPSI	Sidrap Palu	5.81	314	P	Pn	16 55 04.5	+0.4
DAV	Davao City (W)	15.12	6	LR	LR	17 03 03.6	
	comp=Z,62nm,19.3s,baz=143,slow=38						
WRA	Warramunga Arr	15.53	141	Pn	Pn	16 57 17.1	0.0
	0.4nm,0.3s,baz=318,slow=13,SNR=27						
WRA				Sn	Sn	17 00 05.1	-4.2
	0.1nm,0.3s,baz=319,slow=25,SNR=4.2						
WRAB	Tennant Creek	15.53	141	*e*Pn	Pn	16 57 17.1	0.0
	7.7nm,0.9s						
ASAR	Alice Springs	18.23	150	P	P	16 57 52.5	+1.1
	0.2nm,0.3s,baz=320,slow=10,SNR=21						
PMG	Port Moresby	22.99	95	P	P	16 58 40.8	-2.2
	20nm,0.9s,baz=303,slow=17,SNR=3.5						
CTA	Charters Tower	24.69	121	P	P	16 59 00.5	+1.1
	9.5nm,0.9s,baz=338,slow=9.4,SNR=2.2						
CMAR	Chiang Mai Arr	36.09	317	P	P	17 00 40.6	+0.5
	0.5nm,0.4s,baz=143,slow=7.7,SNR=4.4						
SONM	Songino Array	57.77	346	P	P	17 03 30.1	+0.8
	0.4nm,0.6s,baz=172,slow=4.4,SNR=3.0						
MKAR	Makanchi Array	65.97	330	P	P	17 04 24.6	+0.1
	0.6nm,0.7s,baz=126,slow=7.2,SNR=7.7						
ZALV	Zalesovo Beam	70.01	337	P	P	17 04 48.7	-0.9
	0.6nm,0.5s,baz=160,slow=14,SNR=3.7						
KURBB	Kurchatov Arra	70.40	331	P	P	17 04 52.3	+0.2
	1.1nm,1.0s,baz=132,slow=5.1,SNR=5.5						
KURK	Kurchatov	70.42	331	P	P	17 04 52.3	+0.1
ILAR	Eielson Array	96.87	26	LR	LR	17 51 54.0	
	comp=Z,37nm,19.0s,baz=336,slow=36						

ISCJB **21** *17:02:08.0±0.5, 13.°19N±0.°08×50.°13E±0.°05, h10^{km}, mb4.2/38, MS3.3/7, Error ellipse: s-maj=12.1km s-min=7.3km az=4.7*

IDC **21** *17:02:08.2±1.0, 13.°16N×50.°10E, h0^{km}, mb3.7/15, mb1 3.9/16, mb1mx3.7/60, mbtmp3.7/16, ML4.2/1, MS3.3/8, Ms1 3.3/8, ms1mx2.9/57, Error ellipse: s-maj=25.1km s-min=19.1km az=22.0*

NEIC **21** *17:02:09.4±0.5, 13.°14N×50.°15E, h10^{km}, mb4.4/23, Error ellipse: s-maj=10.7km s-min=6.6km az=188.0*

ISC 21 17:02:09.4±0.7**, 13.°2N**±0.°1×**50.°14E**±0.°08**, h10^{km}, n67, σ1.^{s}03**/62**, mb4.2**/38**, MS3.3**/7**, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATD	Arta Tunnel	7.30	258	Pn	Pn	17 03 57.7	+1.3
	3.9nm,0.3s,baz=224,slow=22,SNR=13						
ATD				LR	LR	17 06 06.3	
	comp=Z,256nm,19.1s,baz=148,slow=33						
ATD	Arta Tunnel	7.30	258	*e*Pn	Pn	17 03 56.5	+0.1
UOSS	Minazif	13.04	25	*e*Pn	Pn	17 05 13.8	-1.0
GEYT	Alibeck	25.66	15	P	P	17 07 40.5	+1.0
	1.5nm,0.9s,baz=234,slow=12,SNR=3.4						
GEYT				LR	LR	17 19 38.2	
	comp=Z,89nm,19.5s,baz=245,slow=41						
GYA0B	ALIBECK ARRAY	25.66	15	*e*P	P	17 07 38.8	-0.8
	6.1nm,0.8s						
GNI	Garni	27.29	351	LR	LR	17 20 32.7	
	comp=Z,78nm,20.2s,baz=150,slow=40						
H08N2	Diego Garcia H	28.37	132	T	T	17 37 40.4	
	baz=314,slow=76,SNR=7.0						
H08N3	Diego Garcia H	28.38	132	T	T	17 37 38.6	
	baz=314,slow=76,SNR=6.5						
H08N1	Diego Carcia H	28.39	132	T	T	17 37 40.1	
	baz=314,slow=76,SNR=5.5						
BR101	Keskin Array S	30.18	334	*e*P	P	17 08 20.8	+0.7
BR131	Keskin Array S	30.18	334	*e*P	P	17 08 19.4	-0.7
BRTR	Keskin Array B	30.18	334	P	P	17 08 20.8	+0.7
	0.4nm,0.6s,baz=145,slow=8.9,SNR=4.2						
ANTO	Ankara	30.67	333	*e*P	P	17 08 25.6	+1.2
	7.0nm,0.9s						
KBZ	Khabaz	31.08	350	P	P	17 08 29.1	+1.4
	1.7nm,0.7s,baz=197,slow=4.3,SNR=2.6						
LIT	Litokhoron	36.19	323	*e*P	P	17 09 13.2	+0.8
	10nm,0.9s						
ABKAR	Akbulak array	36.88	11	*e*P	P	17 09 18.8	+0.8
KDJ	Kajisay	37.19	34	*e*P	P	17 09 21.8	+0.7
	3.0nm,1.3s						
VTS	Vitosha	37.44	327	*e*P	P	17 09 23.1	-0.1
	8.3nm,1.7s						
MLR	Muntele Rosu	38.19	332	*e*P	P	17 09 31.3	+1.9
	7.4nm,1.3s						
BUR04	Bucovina Ar. S	40.15	334	*e*P	P	17 09 46.6	+0.8
BUR08	Bucovina Ar. S	40.18	334	*e*P	P	17 09 48.6	+2.6
DIVS	Divibare	40.19	326	*e*P	P	17 09 46.6	+0.5
	9.2nm,1.6s						
AKASG	Malin Array Be	41.12	340	P	P	17 09 54.7	+1.2
	0.2nm,0.2s,baz=150,slow=7.4,SNR=3.3						
AKBB	Malin Array Si	41.12	340	*e*P	P	17 09 53.4	-0.2
	6.0nm,1.2s						
KIEV	Kiev	41.12	340	*e*P	P	17 09 53.1	-0.4
	5.8nm,1.2s						
LSA	Lhasa	41.32	60	*e*P	P	17 09 56.8	+0.7
	13nm,1.9s						
MAKZ	Makanchi	42.87	32	*e*P	P	17 10 06.6	-1.4
	6.5nm,1.6s						
BVAR	Borovoye Array	42.91	18	P	P	17 10 08.8	+0.6
	0.3nm,0.5s,baz=225,slow=7.1,SNR=2.6						
BVAR				PcP	PcP	17 12 00.0	+1.2
	0.6nm,0.7s,baz=224,slow=4.0,SNR=3.8						
MK01	Makanchi Array	43.01	32	*e*P	P	17 10 09.8	+0.6
MK31	Makanchi Array	43.02	32	*e*P	P	17 10 09.3	+0.1
MK32	Makanchi Array	43.02	32	*e*P	P	17 10 10.2	+0.9
MKAR	Makanchi Array	43.02	32	P	P	17 10 10.2	+0.9
	0.6nm,0.6s,baz=224,slow=8.4,SNR=5.7						
MKAR				LR	LR	17 29 33.6	
	comp=Z,32nm,21.6s,baz=194,slow=38						
MKAR	Makanchi Array	43.02	32	*e*P	P	17 10 09.3	+0.1
	8.2nm,0.7s						
TAM	Tamanrasset	43.36	289	*e*P	P	17 10 12.0	-0.4
	8.4nm,1.6s						
TAMR	Tamra	43.64	310	*e*P	P	17 10 14.2	-0.1
	33nm,1.1s						
KURBB	Kurchatov Arra	43.92	26	P	P	17 10 17.5	+1.1
	0.7nm,0.7s,baz=225,slow=7.5,SNR=3.2						
KURK	Kurchatov	44.03	26	*e*P	P	17 10 17.1	-0.1
	6.5nm,1.6s						
TSUM	Tsumeb	45.42	226	LR	LR	17 29 02.2	
	comp=Z,77nm,18.5s,baz=32,slow=36						
GEA0	GERESS Array S	46.55	327	*e*P	P	17 10 36.8	-0.6
GEC2	GERESS Array S	46.55	327	*e*P	P	17 10 37.0	-0.5
	6.9nm,1.6s						
GERES	GERESS Array B	46.55	327	P	P	17 10 37.3	-0.1
	0.2nm,0.6s,baz=190,slow=6.8,SNR=4.9						
LHMI	Lhok Sumawe	46.81	95	*e*P	P	17 10 40.5	+0.6
	114nm,1.1s						
TOA0	Torodi Ar. Sit	47.11	276	*e*P	P	17 10 40.5	-1.7
	22nm,1.9s						
CM31	Chiang Mai Arr	47.15	77	*e*P	P	17 10 42.0	-0.4
CMAR	Chiang Mai Arr	47.15	77	P	P	17 10 42.2	-0.2
	0.6nm,0.3s,baz=284,slow=9.4,SNR=6.4						
CMAR				LR	LR	17 30 16.6	
	comp=Z,14nm,21.2s,baz=185,slow=36						
CM01	Chiang Mai Arr	47.16	77	*e*P	P	17 10 43.8	+1.2
FUORN	Ofenpass-Fuorn	47.21	323	*e*P	P	17 10 43.9	+1.1
	5.0nm,1.0s						
BOSA	Boshof	48.01	210	LR	LR	17 31 53.1	
	comp=Z,39nm,18.6s,baz=26,slow=37						
GRFO	Grafenberg	48.37	327	*e*P	P	17 10 52.2	+0.8
	26nm,1.7s						
SENIN	Lac Senin/Sane	48.85	321	*e*P	P	17 10 57.4	+1.9
	3.4nm,1.0s						
ZAA0	Zalesovo Array	49.00	26	*e*P	P	17 10 56.0	-0.2
	8.1nm,1.8s						
ZALV	Zalesovo Beam	49.00	26	P	P	17 10 56.4	+0.2
	1.1nm,0.7s,baz=256,slow=5.8,SNR=3.2						
ZALV				LR	LR	17 33 57.4	
	comp=Z,24nm,19.0s,baz=245,slow=39						
ZALV	Zalesovo Beam	49.00	26	*e*P	P	17 10 55.4	-0.8
ZAA1	Zalesovo Array	49.00	26	*e*P	P	17 10 56.4	+0.1
BFO	Black Forest	49.22	324	*e*P	P	17 10 57.1	-1.0
	4.4nm,1.1s						
PSI	Prapat	49.31	98	*e*P	P	17 10 56.5	-2.8
	18nm,1.6s						
ES19	SONSECA Array	54.17	310	*e*P	P	17 11 35.5	+0.3
ESDC	Sonseca Array	54.21	310	P	P	17 11 34.0	-1.5
	0.1nm,0.3s,baz=88,slow=7.8,SNR=5.4						
NBO04	NORSAR Array S	55.63	338	*e*P	P	17 11 43.7	-1.7
SONA0	Songino Array	57.87	41	*e*P	P	17 12 00.7	-1.0
SONM	Songino Array	57.87	41	P	P	17 12 00.7	-1.0
	0.5nm,0.6s,baz=230,slow=8.9,SNR=2.5						
SONA1	Songino Array	57.88	41	*e*P	P	17 12 02.3	+0.5
EKA	Eskdalemuir Ar	58.77	328	P	P	17 12 07.2	-0.4
	0.3nm,0.5s,baz=121,slow=6.9,SNR=3.3						
WR1	Warramunga Arr	89.10	111	*e*P	P	17 15 06.4	+0.7
	50nm,1.9s						
WRA	Warramunga Arr	89.10	111	P	P	17 15 06.4	+0.7
	1.1nm,0.8s,baz=297,slow=3.5,SNR=6.4						
ASAR	Alice Springs	89.62	114	P	P	17 15 09.5	+1.4
	0.9nm,0.8s,baz=288,slow=4.7,SNR=13						
PDAR	Pinedale Array	121.30	343	PKP	PKPdf	17 21 03.0	-0.5
	0.1nm,0.3s,baz=353,slow=5.0,SNR=2.8						

ISCJB **21** *17:02:59.7±0.5, 33.°30N±0.°02×35.°34E±0.°05, h9^{km}±4^{km}, Error ellipse: s-maj=7.5km s-min=3.0km az=25.2*

GII **21** *17:02:59.8±0.0, 33.°27N×35.°37E, h5^{km}, MD3.1/7*

CSEM **21** *17:03:00.3±0.1, 33.°32N×35.°36E, h10^{km}, MD3.1, Error ellipse: s-maj=2.6km s-min=1.0km az=112.0*

GRAL **21** *17:03:00.9±0.2, 33.°30N×35.°35E, h0^{km}±46^{km}, MD3.2*

ISC 21 17:03:00.2±1.1**, 33.°31N**±0.°02×**35.°34E**±0.°04**, h9^{km}**±11^{km}**, n42, σ0.^{s}38**/55**, Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNTI	Hanita	0.26	212	Pg	Pg	17 03 05.6	+0.1
KSDI	Kefar Szold	0.29	113	Pg	Pg	17 03 06.0	0.0
KSDI	Kefar Szold	0.29	113	Pg	Pg	17 03 06.0	0.0
MMA0B	Mount Meron ar	0.29	169	Pg	Pg	17 03 05.9	-0.2
NATI	Neve Ativ	0.34	97	Pg	Pg	17 03 06.6	-0.2
NATI				Sg	Sg	17 03 11.7	+0.4
SHBL	Chebaa	0.34	83	*e*P	Pg	17 03 06.9	-0.1
SHBL				*e*S	Sg	17 03 11.3	-0.3
SHBL	Chebaa	0.34	83	*e*P	Pg	17 03 06.9	-0.1
SHBL				*e*S	Sg	17 03 11.3	-0.3
QRWL	Qaraoun	0.38	50	*e*P	Pg	17 03 07.5	-0.1
QRWL	Qaraoun	0.38	50	*e*P	Pg	17 03 07.5	-0.1
DQRL	Deir Qamar	0.44	26	*e*P	Pg	17 03 08.9	0.0
DQRL				*e*S	Sg	17 03 14.8	+0.1
DQRL	Deir Qamar	0.44	26	*e*P	Pg	17 03 08.9	0.0
DQRL				*e*S	Sg	17 03 14.9	+0.1
RCY	Rachaya	0.46	65	*e*P	Pg	17 03 09.0	-0.2
RCY				*e*S	Sg	17 03 15.0	-0.2
KSHT	Keshet	0.51	129	Pg	Pg	17 03 10.6	+0.5
BEYL	Beirut	0.58	13	*e*P	Pg	17 03 11.5	0.0
BEYL	Beirut	0.58	13	*e*P	Pg	17 03 11.5	0.0
BLGI	Bet Lehem HaGe	0.58	192	Pg	Pg	17 03 11.5	0.0
BHL	Bhannes	0.65	24	*e*P	Pg	17 03 12.7	-0.2
BHL				*e*S	Sg	17 03 21.4	-0.1
BHL	Bhannes	0.65	24	*e*P	Pg	17 03 12.7	-0.2
BHL				*e*S	Sg	17 03 21.4	-0.1
OFRI	‘Ofer	0.74	204	Pg	Pg	17 03 14.5	-0.1
OFRI				Sg	Sb	17 03 26.0	+0.4
MMLI	Mount Malkishu	0.87	175	Pg	Pg	17 03 16.2	-0.7
MMLI				Sg	Sb	17 03 29.2	+0.1
HMDT	Nahal Hemdat	1.06	171	Pg	Pg	17 03 19.6	-1.0
SLTI	Sal’it	1.09	193	Pg	Pg	17 03 20.2	-1.0
SLTI				Sg	Sb	17 03 35.8	+0.3
HWQ	Hawqa	1.09	27	*e*P	Pg	17 03 20.6	-0.7
HWQ				*e*S	Sg	17 03 35.2	-0.3
HWQ	Hawqa	1.09	27	*e*P	Pg	17 03 20.6	-0.7
HWQ				*e*S	Sg	17 03 35.2	-0.3
DSI	Dead Sea	1.73	179	Pn	Pn	17 03 30.2	-0.2
AMAZ	Amatzia	1.80	192	Pn	Pn	17 03 31.5	+0.1
AMAZ	Amatzia	1.80	192	Pn	Pn	17 03 31.5	+0.1
YTIR	Yattir	1.94	186	Pn	Pn	17 03 34.6	+1.2
MZDA	Masada	1.99	179	Pn	Pn	17 03 34.3	+0.4
MZDA	Masada	1.99	179	Pn	Pn	17 03 34.3	+0.4
KZIT	Kziot	2.52	199	Pn	Pn	17 03 41.6	+0.3
KZIT	Kziot	2.52	199	Pn	Pn	17 03 41.6	+0.3
ZFRI	Zfri	2.75	183	Pn	Pn	17 03 44.5	+0.1
ZFRI	Zfri	2.75	183	Pn	Pn	17 03 44.5	+0.1
PRNI	Paran	2.96	186	Pn	Pn	17 03 47.8	+0.5
PRNI	Paran	2.96	186	Pn	Pn	17 03 47.8	+0.5
HRFI	Mount Harif	3.27	185	Pn	Pn	17 03 51.6	0.0
HRFI	Mount Harif	3.27	185	Pn	Pn	17 03 51.6	0.0
MBRI	Mt Berech	3.52	186	Pn	Pn	17 03 55.4	+0.3
MBRI	Mt Berech	3.52	186	Pn	Pn	17 03 55.4	+0.3
EIL	Elat	3.64	185	Pn	Pn	17 03 56.7	0.0
EIL	Elat	3.64	185	Pn	Pn	17 03 56.7	0.0

NEIC **21** *17:03:44.1±2.9, 33.°37S×178.°16W, h2^{km}±19^{km}, mb4.8/3, Error ellipse: s-maj=14.9km s-min=7.5km az=111.0*

IDC **21** *17:03:44.9±3.4, 33.°19S×178.°28W, h0^{km}, mb3.8/2, mb1 4.0/3, mb1mx3.6/42, mbtmp3.8/3, ML3.5/1, Error ellipse: s-maj=76.2km s-min=47.4km az=121.0*

ISCJB **21** *17:03:45.7±0.8, 33.°45S±0.°05×178.°1W±0.°2, h32^{km}, mb4.1/5, Error ellipse: s-maj=19.4km s-min=4.9km az=19.2*

WEL **21** *17:03:46.3±1.0, 33°S±13°×17°9W±3°3, h12^{km}, ML4.5/13*

ISC 21 17:03:47.4±1.3**, 33.°36S**±0.°08×**178.°1W**±0.°2**, h32^{km}, n38, σ1.^{s}85**/49**, mb3.8**/5**, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	4.08	2	P	Pn	17 04 46.4	-1.2
GLKZ				S	Sn	17 05 32.6	-1.7
RAO	Raoul Island	4.09	2	*e*Pn	Pn	17 04 48.0	+0.2
MXZ	Matakaoa Point	5.12	214	*e*Pn	Pn	17 05 01.2	-0.6
WMGZ	Waiomatatini S	5.28	212	P	Pn	17 05 05.2	+1.1
PKGZ	Pakihiroa	5.49	213	P	Pn	17 05 06.0	-0.9
PKGZ				S	Sn	17 06 07.7	-1.3
HAZ	Te Kaha	5.52	216	P	Pn	17 05 08.6	+1.2
HAZ				S	Sn	17 06 12.7	+2.9
PUZ	Puketiti	5.56	211	P	Pn	17 05 06.9	-1.0
PUZ				S	Sn	17 06 11.0	+0.3
RUGZ	Raukumara Rang	5.74	216	P	Pn	17 05 10.6	+0.1
TWGZ	Tauwhareparae	5.77	212	P	Pn	17 05 10.1	-0.7
TWGZ				S	Sn	17 06 16.6	+0.7
CNGZ	Carnagh Statio	5.93	209	P	Pn	17 05 12.3	-0.7
TKGZ	Te Karaka	6.04	212	P	Pn	17 05 15.5	+1.0
TKGZ				S	Sn	17 06 21.9	-0.7
MWZ	Matawai	6.10	214	P	Pn	17 05 15.5	+0.1
MWZ				S	Sn	17 06 23.3	-0.9
URZ	Urewera	6.25	217	Pn	Pn	17 05 18.1	+0.8
	1.0nm,0.3s,baz=261,slow=3.6,SNR=9.6						
URZ				Sn	Sn	17 06 26.7	-1.0
	4.2nm,0.3s,baz=343,slow=18,SNR=15						
URZ	Urewera	6.25	217	P	Pn	17 05 17.8	+0.4
URZ				S	Sn	17 06 26.6	-1.0
RAGZ	Rawiri	6.29	214	P	Pn	17 05 17.6	-0.3
RIGZ	Rimuhau	6.30	211	P	Pn	17 05 16.7	-1.5
RIGZ				S	Sn	17 06 29.1	+0.1
OUZ	Omahuta	7.12	253	*e*Pn	Pn	17 05 28.5	-0.8
BKZ	Black Stump Fm	7.26	215	*e*Pn	Pn	17 05 31.3	0.0
BKZ				*e*Sn	Sn	17 06 46.0	-6.5
BKZ	Black Stump Fm	7.26	215	P	Pn	17 05 31.8	+0.5
KWHZ	Kaweka Forest	7.49	215	P	Pn	17 05 34.6	+0.1
BFZ	Birch Farm	8.59	210	*e*Pn	Pn	17 05 48.7	-0.9
BFZ				*e*Sn	Sn	17 07 18.4	-6.9
SNZO	South Karori	9.79	214	*e*Pn	Pn	17 06 04.8	-1.0
SNZO				*e*Sn	Sn	17 07 46.0	-8.5
THZ	Tophouse	11.01	218	*e*Pn	Pn	17 06 20.4	-2.2
THZ				*e*Sn	Sn	17 08 13.1	-12
KHZ	Kahutara	11.19	214	*e*Pn	Pn	17 06 25.4	+0.3
KHZ				*e*Sn	Sn	17 08 17.5	-11
RPZ	Rata Peaks	13.37	216	*e*Pn	Pn	17 06 54.9	+0.1
FOZ	Fox Glacier	13.87	219	*e*Pn	Pn	17 07 02.5	+0.8
PYZ	Puysegur Point	17.30	218	*e*Pn	P	17 07 50.7	+3.2
	86nm,1.1s						
AS01	Alice Springs	42.91	270	*e*P	P	17 11 44.4	+1.1
AS31	Alice Springs	42.94	270	*e*P	P	17 11 44.3	+0.7
	2.9nm,1.6s						
ASAR	Alice Springs	42.95	270	P	P	17 11 44.5	+1.0
	1.2nm,0.7s,baz=110,slow=7.4,SNR=20						
WB2	Warramunga Arr	44.19	275	*e*P	P	17 11 53.9	+0.3
WRAB	Tennant Creek	44.19	275	*e*P	P	17 11 56.6	+3.0
	14nm,1.0s						
WR1	Warramunga Arr	44.20	275	*e*P	P	17 11 54.6	+1.0
	27nm,1.7s						
WRA	Warramunga Arr	44.20	275	P	P	17 11 54.6	+1.0
	0.5nm,0.4s,baz=115,slow=7.7,SNR=12						
BVYM	Vineyard	87.53	42	*e*P	P	17 16 33.6	+1.7
FIA0	FINESS Array S	147.87	338	*e*PKPbc	PKPab	17 23 29.9	-1.1
FINES	FINESS Array B	147.87	338	PKPbc	PKPab	17 23 29.9	-1.0
	3.4nm,1.1s,baz=343,slow=4.4,SNR=3.4						
CLL	Collm	160.31	339	*e*PKPab	PKPab	17 24 26.0	+2.2

NNC 21 17:04:58.4±3.4**, 37.°74N**×**72.°00E, h171^{km}**±41^{km}**, mb2.5, mpv3.5, 7D, Error ellipse: s-maj=36.7km s-min=27.7km az=59.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	2.56	27	⇓P	Pn	17 05 41.6	+0.2
	5.7nm,0.3s						
SFK				⇓S	Sn	17 06 15.5	+0.5
	8.6nm,0.3s						
MNAS	**Manas**	4.76	5	⇓P	Pn	17 06 09.6	+0.5
	3.4nm,0.4s						
MNAS				⇓S	Sn	17 07 04.3	-0.2
	4.0nm,0.4s						
AAK	**Ala-Archa**	5.25	21	⇓P	Pn	17 06 15.3	-0.3
	4.1nm,0.4s						
AAK				⇓S	Sn	17 07 17.1	+1.0
	1.7nm,0.5s						
KK31	**Karatay Array**	5.48	349	P	Pn	17 06 19.4	+1.0
	0.6nm,0.2s,baz=161,slow=12,SNR=29						
KK31				S	Sn	17 07 21.9	+0.8
	1.7nm,0.3s,baz=171,slow=22,SNR=13						
TKM2	**Tokmak 2**	5.86	27	⇓P	Pn	17 06 22.3	-1.3
	6.4nm,0.6s						

ISCJB ***21*** *17:21:12.9±0.3, 7°.84S±0°.03×123°.84E±0°.03, h10^{km}, mb4.8/9, Error ellipse: s-maj=5.4km s-min=3.7km az=143.6*

IDC ***21*** *17:21:14.5±1.2, 7°.73S×124°.30E, h0^{km}, mb3.5/3, mb1 3.8/5, mb1mx3.5/48, mbtmp3.7/5, ML3.8/2, Error ellipse: s-maj=175.4km s-min=22.5km az=59.0*

NEIC ***21*** *17:21:15.0±0.5, 7°.99S×123°.75E, h10^{km}, mb4.2/7, Error ellipse: s-maj=12.0km s-min=7.2km az=53.0*

DJA ***21*** *17:21:17.2±0.5, 8°S±2°×12°4E±°, h40^{km}±15^{km}, M4.0/10, mb4.2/3, MLv3.9/10*

ISC 21 17:21:14.5±0.5**, 7°.95S**±0°.04×**123°.73E**±0°.05**, h10**^{km}**, n37, σ2**^{s}**.93**/50**, mb5.2**/8**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMRI	**Maumere**	1.62	245	P	Pn	17 21 44.0	+0.9
MMRI				S	Sg	17 22 07.0	+0.4
MMRI	**Maumere**	1.62	245	*e*Pn	Pn	17 21 43.8	+0.7
SOEI	**Soe**	1.87	163	P	Pb	17 21 48.6	-0.2
SOEI				Pg	Pg	17 21 59.8	+9.4
SOEI				S	Sb	17 22 12.1	-0.2
SOEI				Sg	Sg	17 22 19.1	+4.5
SOEI	**Soe**	1.87	163	*e*Pn	Pg	17 21 49.6	-0.8
EDFI	**Ende, Flores**	2.16	248	P	Pn	17 21 51.6	+0.9
EDFI				S	Sn	17 22 19.4	+1.8
BATI	**Baumata**	2.24	182	P	Pb	17 21 54.1	-1.0
BATI				S	Sb	17 22 23.0	+0.1
BKSI	**Bulukumba**	4.43	306	P	Pn	17 22 22.0	+0.2
BKSI				S	Sn	17 23 06.9	-6.6
WBSI	**Waikabubak, Su**	4.60	248	P	Pn	17 22 26.2	+2.0
SPSI	**Sidrap Palu**	5.58	315	P	Pn	17 22 37.6	0.0
SPSI				S	Sn	17 23 39.3	-2.6
TTSI	**Tana Toraja**	6.24	321	P	Pn	17 22 48.8	+2.2
TTSI				S	Sn	17 23 55.8	-2.2
LUWI	**Luwuk**	6.93	352	*e*Pn	Pn	17 22 56.1	-0.1
SAUI	**Saumlaki**	7.50	91	*e*Pn	Pn	17 23 02.9	-1.2
MTN	**Manton Dam**	8.76	124	*e*Pn	Pn	17 23 23.4	+2.1
MTN				*e*Sn	Sn	17 25 00.6	+0.5
TNTI	**Ternate**	9.40	23	*e*Pn	Pn	17 23 31.8	+1.8
FITZ	**Fitzroy Crossi**	10.26	170	*e*Pn	Pn	17 23 41.8	0.0
FITZ				*e*Sn	Sn	17 25 32.1	-4.8
MYLDM	**Lahad Datu**	14.05	338	*e*Pn	Pn	17 24 33.9	+0.1
SBUM	**Sibu**	15.44	312	*e*Pn	Pn	17 24 49.9	-2.7
	17nm,1.9s						
WRA	**Warramunga Arr**	15.74	140	Pn	Pn	17 24 54.6	-1.8
	0.4nm,0.3s,baz=318,slow=13,SNR=23						
WRA				Sn	Sn	17 27 42.0	-9.1
	0.1nm,0.3s,baz=317,slow=24,SNR=4.6						
WR1	**Warramunga Arr**	15.74	140	*e*Pn	Pn	17 24 54.6	-1.8
	40nm,1.8s						
WR1				*e*Sn	Sn	17 27 42.0	-9.2
WRAB	**Tennant Creek**	15.74	140	*e*Pn	Pn	17 24 52.2	-4.2
	10nm,0.8s						
WB2	**Warramunga Arr**	15.75	140	*e*Pn	Pn	17 24 54.0	-2.5
	8.3nm,0.8s						
AS31	**Alice Springs**	18.42	149	*e*P	P	17 25 31.6	+1.5
	1.3nm,0.7s						
ASAR	**Alice Springs**	18.42	149	P	Pn	17 25 28.6	-1.5
	0.2nm,0.3s,baz=320,slow=12,SNR=25						
ASAR				S	Sn	17 28 49.7	-6.5
	0.1nm,0.3s,baz=319,slow=21,SNR=3.7						
AS01	**Alice Springs**	18.45	149	*e*P	P	17 25 31.6	+1.2
COEN	**Coen**	20.00	109	*e*P	Pn	17 25 50.1	+0.9
	90nm,1.8s						
MNAI	**Manna**	20.95	279	*e*P	P	17 25 58.5	+0.7
	500nm,1.3s						
NWAO	**Narrogin (SRO)**	25.57	193	*e*P	P	17 26 45.2	+1.5
	69nm,1.6s						
STKA	**Stephens Creek**	29.04	147	P	P	17 27 16.8	+1.9
	0.5nm,0.4s,baz=315,slow=10.0,SNR=4.2						
STKA	**Stephens Creek**	29.04	147	*e*P	P	17 27 16.2	+1.3
	4.9nm,1.9s						
LHMI	**Lhok Sumawe**	29.75	295	*e*P	P	17 27 21.7	+0.3
	163nm,1.4s						
PALK	**Pallekele**	45.48	288	*e*P	P	17 29 35.2	+0.7
	58nm,1.5s						
KHZ	**Kahutara**	55.55	137	*e*P	P	17 30 50.0	-0.1
	200nm,2.0s						
SNZO	**South Karori**	55.93	135	*e*P	P	17 30 52.2	-0.6
	94nm,1.3s						
MK32	**Makanchi Array**	65.77	330	*e*P	P	17 32 01.1	+1.3
MKAR	**Makanchi Array**	65.77	330	P	P	17 32 01.1	+1.3
	0.4nm,0.7s,baz=134,slow=8.6,SNR=4.0						
KURBB	**Kurchatov Arra**	70.20	331	P	P	17 32 30.2	+2.8
	0.1nm,0.4s,baz=135,slow=5.6,SNR=3.3						
KURK	**Kurchatov**	70.22	331	*e*P	P	17 32 30.2	+2.6

KRSC 21 17:21:48.5±1.5**, 50°.37N**×**156°.76E, h62**^{km}±18^{km}**, ML3.7, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	0.52	307	*e*P	Pn	17 22 01.3	+0.5
SKR				*e*S	Sn	17 22 10.9	+1.2
PAU	**Pauzhetka**	1.10	2	*e*P	Pn	17 22 09.6	+1.7
PAU				*e*S	Sn	17 22 25.5	+3.2
KDTR	**Khodutka, Kamc**	1.66	29	*e*P	Pn	17 22 17.2	+1.8
KDTR				*e*S	Sn	17 22 38.4	+2.7
MIPR	**Malaya Ipel'ka**	1.91	360	*e*P	Pn	17 22 20.3	+1.6
ASAK	**Asacha**	2.14	19	*e*P	Pn	17 22 24.9	+3.0
RUS	**Russkaya**	2.34	27	*e*P	Pn	17 22 26.3	+1.8
RUS				*e*S	Sn	17 22 54.6	+2.5
UGLR	**Uglovaya**	3.12	23	*e*P	Pn	17 22 39.1	+3.8
AVH	**Avacha**	3.15	22	*e*P	Pn	17 22 39.8	+4.1
SMAR	**Somma**	3.16	23	*e*P	Pn	17 22 40.0	+4.0
SDLR	**Sedlovina**	3.20	23	*e*P	Pn	17 22 39.2	+2.8
NLC	**Nalytchevo**	3.23	29	*e*S	Sn	17 23 15.9	+2.0
SPN	**Mys Shipunski**	3.40	35	*e*P	Pn	17 22 41.5	+2.5
SPN				*e*S	Sn	17 23 20.4	+2.3
GNL	**Ganaly**	3.41	12	*e*P	Pn	17 22 41.3	+2.0

ISCJB ***21*** *17:43:53.0±0.5, 38°.53N±0°.03×31°.94E±0°.05, h8^{km}±6^{km}, Error ellipse: s-maj=6.3km s-min=4.4km az=161.9*

CSEM ***21*** *17:43:52.9±0.1, 38°.53N×31°.95E, h8^{km}, ML2.7, Error ellipse: s-maj=4.7km s-min=2.9km az=60.0*

ISK ***21*** *17:43:52.6, 38°.56N×31°.99E, h11^{km}, ML2.4/7*

DDA ***21*** *17:43:52.7, 38°.53N×31°.93E, h6^{km}, Ml2.7*

ISC 21 17:43:53.0±0.9**, 38°.54N**±0°.02×**31°.95E**±0°.03**, h9**^{km}±7^{km}**, n31, σ0**^{s}**.64**/47**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KDHN	**Kadinhani**	0.13	96	*i* P	Pg	17 43 56.1	0.0
KDHN				*i* S	Sg	17 43 58.6	+0.4
KDHN	**Kadinhani**	0.13	96	P	Pg	17 43 56.1	0.0
KDHN				S	Sg	17 43 58.6	+0.4
KIZT	**Kizilcal**	0.35	351	PG	Pg	17 43 59.3	-0.7
KIZT				SG	Sg	17 44 04.8	+0.2
KIZT	**Kizilcal**	0.35	351	*e*Pg	Pg	17 43 59.3	-0.7
KIZT				*e*Sg	Sg	17 44 04.8	+0.2
LADK	**Ladik-KONYA**	0.47	136	PG	Pg	17 44 02.2	0.0
LADK				SG	Sb	17 44 09.2	-1.4
LADK	**Ladik-KONYA**	0.47	136	*e*Pg	Pg	17 44 02.2	0.0
LADK				*e*Sg	Sb	17 44 09.2	-1.4
DOGA	**KONYA_Doganhis**	0.48	207	*i* P	Pg	17 44 02.1	-0.4
DOGA				*i* S	Sg	17 44 09.2	+0.4
DOGA	**KONYA_Doganhis**	0.48	207	P	Pg	17 44 02.1	-0.4
DOGA				S	Sg	17 44 09.2	+0.4
KONT	**Konya--Tatoy**	0.67	151	PG	Pg	17 44 06.1	0.0
KONT				SG	Sb	17 44 15.9	-0.5
KONT	**Konya--Tatoy**	0.67	151	*i* P	Pg	17 44 06.0	0.0
KONT				*i* S	Sb	17 44 15.7	-0.7
KONT	**Konya--Tatoy**	0.67	151	*e*Pg	Pg	17 44 06.1	0.0
KONT				*e*Sg	Sb	17 44 15.9	-0.5
BOLV	**Bolvadin**	0.80	283	*i* P	Pg	17 44 07.9	-0.6
BOLV				*i* S	Sg	17 44 19.3	+0.3
BOLV	**Bolvadin**	0.80	283	P	Pg	17 44 07.9	-0.6
BOLV				S	Sg	17 44 19.3	+0.3
AUSIV	**SIVRIHISAR**	0.96	341	PG	Pb	17 44 12.1	+0.2
AUSIV	**SIVRIHISAR**	0.96	341	*i* P	Pn	17 44 12.8	+0.1
AUSIV				*i* S	Sn	17 44 28.0	+1.4
AUSIV	**SIVRIHISAR**	0.96	341	*e*Pg	Pb	17 44 12.1	+0.2
AUSIV	**SIVRIHISAR**	0.96	341	P	Pn	17 44 12.9	+0.1
AFSR	**Af¯ar-Bala (A**	1.26	44	PN	Pn	17 44 16.2	-0.8
AFSR	**Af¯ar-Bala (A**	1.26	44	*e*Pn	Pn	17 44 16.2	-0.8
SULT	**Sultanhani-AKS**	1.28	105	PN	Pn	17 44 16.9	-0.2
SULT	**Sultanhani-AKS**	1.28	105	*e*Pn	Pn	17 44 16.9	-0.2
SUTC	**Sutluce-Ispart**	1.30	216	PN	Pn	17 44 16.9	-0.6
SUTC	**Sutluce-Ispart**	1.30	216	*e*Pn	Pn	17 44 16.9	-0.6
ESKT	**Eskisehir**	1.30	319	*i* P	Pb	17 44 17.7	-0.1
ESKT				*i* S	Sn	17 44 36.6	+1.5
SEYT	**Eskypehyr**	1.30	319	P	Pb	17 44 17.7	-0.1
SEYT				S	Sn	17 44 36.6	+1.5
AUMIH	**MIHALICIK**	1.38	345	PN	Pn	17 44 18.4	-0.2
AUMIH	**MIHALICIK**	1.38	345	*e*Pn	Pn	17 44 18.4	-0.2
BORA	**Eskisehir**	1.77	320	PN	Pn	17 44 23.4	-0.6
BORA	**Eskisehir**	1.77	320	*e*Pn	Pn	17 44 23.4	-0.6
TVSB	**Tavsanli**	2.14	296	PN	Pn	17 44 29.7	+0.6
TVSB	**Tavsanli**	2.14	296	*e*Pn	Pn	17 44 29.7	+0.6

MAN 21 17:48:48.4, 13°.84N×**120°.75E, h33**^{km}**, mb3.8, ML2.6, MS2.1, 2C, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TGY	**Tagaytay City**	0.32	35	⇑*i*P	Pn	17 49 00.1	+3.2
TGY				*i* S	Sn	17 49 08.0	+5.9
PGP	**Puerto Galera**	0.39	149	⇑*e*P	Pb	17 48 53.2	-4.2
PGP				*i* S	Sb	17 48 56.1	-7.4
LUBP	**Lubang**	0.50	258	*e*P	Pn	17 48 59.6	+0.4
LUBP				*e*S	Sn	17 49 08.5	+1.7
BOAC	**Boac**	1.13	109	*e*P	Pn	17 49 08.0	+0.1
BOAC				*e*S	Sn	17 49 22.1	-0.1
SJMP	**San Jose**	1.41	165	*e*P	Pn	17 49 12.8	+1.0
SJMP				*e*S	Sn	17 49 29.2	-0.1

IDC ***21*** *17:49:20.6±0.8, 8°.10S×124°.01E, h0^{km}, mb3.8/6, mb1 4.1/8, mb1mx3.8/48, mbtmp3.9/8, ML4.0/2, MS3.0/2, Ms1 3.1/2, ms1mx2.5/45, Error ellipse: s-maj=54.5km s-min=11.5km az=62.0*

ISCJB ***21*** *17:49:24.4±0.3, 8°.06S±0°.03×123°.84E±0°.03, h33^{km}, mb4.6/25, MS3.0/1, Error ellipse: s-maj=5.2km s-min=4.1km az=139.1*

DJA ***21*** *17:49:24.0±0.3, 8°S±2°×12°4E±°, h10^{km}, M4.3/8, mb4.6/7, MLv4.2/8*

NEIC ***21*** *17:49:26.8±0.3, 8°.19S×123°.72E, h35^{km}, mb4.7/21, Error ellipse: s-maj=10.8km s-min=5.3km az=60.0*

ISC 21 17:49:26.7±0.5**, 8°.12S**±0°.05×**123°.80E**±0°.06**, h35**^{km}**, n61, σ2**^{s}**.20**/67**, mb4.5**/25**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMRI	**Maumere**	1.63	252	P	Pn	17 49 50.0	-2.9
MMRI				S	Sn	17 50 14.0	+1.3
MMRI	**Maumere**	1.63	252	*e*Pn	Pn	17 49 50.1	-2.9
SOEI	**Soe**	1.69	164	P	Pn	17 49 55.7	+1.8
SOEI				S	Sn	17 50 19.7	+5.3
SOEI	**Soe**	1.69	164	*e*Pn	Pn	17 49 55.8	+1.8
BATI	**Baumata**	2.08	184	P	Pn	17 50 01.2	+2.0
BATI				S	Sn	17 50 27.7	+3.8
EDFI	**Ende, Flores**	2.18	253	P	Pn	17 49 58.4	-2.2
EDFI				S	Sn	17 50 26.6	+0.1
WSI	**Waingapu**	3.79	246	P	Pn	17 50 24.8	+2.1
WSI				S	Sn	17 51 08.8	+2.8
BKSI	**Bulukumba**	4.59	307	P	Pn	17 50 29.1	-4.6
SPSI	**Sidrap Palu**	5.75	316	P	Pn	17 50 47.4	-2.3
TTSI	**Tana Toraja**	6.41	322	P	Pn	17 50 57.5	-1.2
LUWI	**Luwuk**	7.11	352	*e*Pn	Pn	17 51 06.5	-1.7
PCI	**Palu**	8.18	331	P	Pn	17 51 23.0	-0.1
	33nm,0.7s						
MTN	**Manton Dam**	8.60	124	*e*Pn	Pn	17 51 29.8	+1.0
MPSI	**Mapaga**	9.26	335	P	Pn	17 51 35.6	-2.2
JAGI	**Jajag, Banyuwa**	9.55	267	*e*Pn	Pn	17 51 40.2	-1.7
FITZ	**Fitzroy Crossi**	10.08	170	*e*Pn	Pn	17 51 47.6	-1.4
MBWA	**Marble Bar**	13.55	196	*e*Pn	Pn	17 52 36.5	0.0
MYLDM	**Lahad Datu**	14.23	338	*e*Pn	P	17 52 51.1	-1.7
DAV	**Davao City (W)**	15.19	7	LR	LR	17 58 45.7	
	comp=Z,47nm,19.6s,baz=166,slow=37						
WRA	**Warramunga Arr**	15.57	140	Pn	Pn	17 53 00.5	-3.2
	0.8nm,0.3s,baz=319,slow=13,SNR=36						
WRA				Sn	Sn	17 55 47.8	-7.4
	0.1nm,0.3s,baz=309,slow=25,SNR=3.9						
WRAB	**Tennant Creek**	15.57	140	*e*Pn	Pn	17 53 01.9	-1.8
	22nm,0.8s						
WR1	**Warramunga Arr**	15.57	140	*e*Pn	Pn	17 53 00.5	-3.2
	15nm,0.8s						
WR1				*e*Sn	Sn	17 55 47.8	-7.4
WB2	**Warramunga Arr**	15.57	140	*e*Pn	Pn	17 53 01.2	-2.6
	14nm,0.8s						
AS31	**Alice Springs**	18.24	149	*e*P	P	17 53 36.9	-0.4
	2.2nm,0.7s						
ASAR	**Alice Springs**	18.24	149	P	P	17 53 35.5	-1.7
	0.5nm,0.3s,baz=319,slow=11,SNR=41						
ASAR				S	Sn	17 56 58.8	-1.2
	0.1nm,0.3s,baz=311,slow=21,SNR=4.4						
AS01	**Alice Springs**	18.27	149	*e*P	P	17 53 36.9	-0.6
COEN	**Coen**	19.87	109	*e*P	Pn	17 53 56.8	-0.1
	132nm,1.9s						
FORT	**Forrest**	22.89	171	*e*P	P	17 54 27.0	-0.5
	26nm,0.9s						
NWAO	**Narrogin (SRO)**	25.43	193	P	P	17 54 50.5	-0.7
	8.0nm,0.7s,baz=252,slow=8.0,SNR=5.8						
BBOO	**Buckleboo**	27.07	157	*e*P	P	17 55 06.9	+0.8
	44nm,1.5s						
SSLB	**Suanglung**	31.83	355	*e*P	P	17 55 49.8	+1.4
	98nm,2.0s						
NACB	**Ninganchiao**	32.17	356	*e*P	P	17 55 52.9	+1.6
	24nm,0.9s						
CMAR	**Chiang Mai Arr**	36.04	317	P	P	17 56 26.2	+1.2
	0.3nm,0.4s,baz=146,slow=6.4,SNR=3.6						
CMAR				LR	LR	18 12 49.4	
	comp=Z,26nm,18.4s,baz=185,slow=39						
ENH	**Enshi**	40.57	341	*e*P	P	17 57 05.5	+2.4
	16nm,1.3s						
LSA	**Lhasa**	48.99	322	*e*P	P	17 58 12.9	+2.2
	3.6nm,0.9s						
GTA	**Gaotai**	52.26	337	*e*P	P	17 58 40.4	+5.6
GTA				pP	pP	17 58 44.5	-0.8
GTA				sP	sP	17 58 47.4	-2.0
GTA				pmax	pmax		
	comp=Z,2.0nm,1.1s						
WKZ	**Wanaka**	53.49	141	*e*P	P	17 58 45.0	+1.2
	comp=Z,277nm,1.9s						
RPZ	**Rata Peaks**	54.27	139	*e*P	P	17 58 50.7	+1.2
	comp=Z,118nm,1.9s						
SNZO	**South Karori**	55.76	135	*e*P	P	17 59 00.0	-0.2
	comp=Z,79nm,1.2s						
BKZ	**Black Stump Fm**	56.30	132	*e*P	P	17 59 05.2	+1.0
	comp=Z,38nm,1.5s						
ULN	**Ulaanbaatar**	57.68	347	*e*P	P	17 59 14.1	+0.2
	comp=Z,1.9nm,0.9s						
SONA0	**Songino Array**	57.80	346	*e*P	P	17 59 14.4	-0.3
SONM	**Songino Array**	57.80	346	P	P	17 59 14.4	-0.3
	comp=Z,0.5nm,0.5s,baz=147,slow=8.2,SNR=2.5						
SONA1	**Songino Array**	57.81	346	*e*P	P	17 59 14.6	-0.2
NIL	**Nilore**	63.42	314	*e*P	P	17 59 53.6	+0.4
	comp=Z,11nm,1.4s						
KNTN	**Kanton**	64.35	89	*e*P	P	17 59 59.5	-0.1
	comp=Z,196nm,1.2s						
KDJ	**Kajisay**	65.67	324	*e*P	P	18 00 07.7	-0.2
	comp=Z,4.8nm,1.3s						
MK01	**Makanchi Array**	65.93	330	*e*P	P	18 00 09.4	+0.1
MK31	**Makanchi Array**	65.95	330	*e*P	P	18 00 09.3	-0.1
MK32	**Makanchi Array**	65.95	330	*e*P	P	18 00 08.3	-1.1
MKAR	**Makanchi Array**	65.95	330	P	P	18 00 08.3	-1.1
	comp=Z,0.6nm,0.7s,baz=132,slow=7.3,SNR=6.3						
MKAR	**Makanchi Array**	65.95	330	*e*P	P	18 00 09.3	-0.1
	comp=Z,15nm,0.9s						
MAKZ	**Makanchi**	66.12	330	*e*P	P	18 00 10.3	-0.2
	comp=Z,2.6nm,1.1s						
KBL	**Kabul**	66.89	313	*e*P	P	18 00 16.7	+0.8
	comp=Z,4.7nm,0.6s						
AAK	**Ala-Archa**	67.56	323	*e*P	P	18 00 20.5	+0.5
	comp=Z,2.9nm,0.9s						
ZAA0	**Zalesovo Array**	70.02	337	*e*P	P	18 00 36.2	+1.5
	comp=Z,5.6nm,1.2s						
ZALV	**Zalesovo Beam**	70.02	337	P	P	18 00 34.4	-0.3
	comp=Z,0.5nm,0.4s,baz=123,slow=5.3,SNR=2.7						
ZALV	**Zalesovo Beam**	70.02	337	*e*P	P	18 00 36.5	+1.8
ZAA1	**Zalesovo Array**	70.02	337	*e*P	P	18 00 34.4	-0.3
KURBB	**Kurchatov Arra**	70.39	331	P	P	18 00 36.6	-0.4
	comp=Z,0.3nm,0.6s,baz=138,slow=5.7,SNR=3.4						
KURK	**Kurchatov**	70.41	331	*e*P	P	18 00 36.6	-0.5

NIED ***21*** *18:14:00, 38°.40N×144°.50E, h17^{km}, Mw3.5 Best double couple: $M_0$1.73000×10^{14} NP1:ϕ_s178.00000°, δ72.00000°, λ174.00000°. NP2:ϕ_s269.00000°, δ85.00000°, λ18.00000°.*

JMA 21 18:14:41.2±0.1**, 38°.37N**×**144°.48E, h43**^{km}**, M4.1, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	2.31	289	P	Pn	18 15 18.3	+1.6
OFUJ				*e*S	Sn	18 15 45.2	+1.3
MIYJ	**Miyakonagasawa**	2.40	301	P	Pn	18 15 19.4	+1.4
MIYJ				*e*S	Sn	18 15 47.1	+1.0
JIO	**Ouri**	2.46	273	P	Pn	18 15 20.1	+1.3
JIO				S	Sn	18 15 49.0	+1.4
JMK	**Ichinoseki**	2.62	284	P	Pn	18 15 22.7	+1.8
JMK				*e*S	Sn	18 15 53.8	+2.3
JOM	**Ohasama**	2.72	295	P	Pn	18 15 24.2	+1.8
JOM				*e*S	Sn	18 15 56.6	+2.6
JANG	**Nango**	3.05	312	P	Pn	18 15 28.0	+1.1
JYK	**Kaneyama**	3.27	281	P	Pn	18 15 32.3	+2.3
JYK				*e*S	Sn	18 16 10.2	+2.5
JFT	**Otama**	3.38	257	S	Sn	18 16 12.6	+2.2
JOT	**Ohata**	4.00	320	P	Pn	18 15 41.4	+1.4
JCH	**Churui**	4.32	349	P	Pn	18 15 44.5	+0.1
JKB	**Kayabe**	4.40	324	P	Pn	18 15 46.5	+1.1
JKB				*e*S	Sn	18 16 36.3	+1.0
JRY	**Ryogami san**	5.04	244	P	Pn	18 15 55.5	+1.3
JRY				*e*S	Sn	18 16 49.3	-1.8
NEM2	**Nemuro 2**	5.08	10	P	Pn	18 15 51.7	-3.1
NEM2				*e*S	Sn	18 16 45.9	-6.2
JOSM	**Okushiri--Mats**	5.33	316	P	Pn	18 16 00.4	+2.2
JTKR	**Abashiri--Toko**	5.61	356	P	Pn	18 16 01.6	-0.4
JTKR				*e*S	Sn	18 17 02.2	-3.0
JHR	**Hokuryu**	5.76	340	P	Pn	18 16 06.2	+2.1
JHR				*e*S	Sn	18 17 09.6	+0.8

WEL 21 18:18:07.1, 38°S±12°×**18°0W**±°**, h33**^{km}**, ML3.5**/18**, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	1.39	272	P	Pn	18 18 30.5	+0.4
MXZ	**Matakaoa Point**	1.51	282	P	Pn	18 18 32.0	+0.2
MXZ				S	Sn	18 18 49.9	-0.4
PUZ	**Puketiti**	1.52	263	P	Pn	18 18 32.6	+0.7
PUZ				S	Sn	18 18 51.1	+0.6
PKGZ	**Pakihiroa**	1.65	269	P	Pn	18 18 34.1	+0.3
PKGZ				S	Sn	18 18 53.8	-0.1
CNGZ	**Carnagh Statio**	1.65	248	P	Pn	18 18 35.3	+1.6
TWGZ	**Tauwhareparae**	1.75	260	P	Pn	18 18 36.2	+1.1
TWGZ				S	Sn	18 18 57.4	+1.1
HAZ	**Te Kaha**	1.89	273	P	Pn	18 18 37.7	+0.7
TKGZ	**Te Karaka**	1.91	253	P	Pn	18 18 38.7	+1.5
TKGZ				S	Sn	18 19 01.1	+1.0
RUGZ	**Raukumara Rang**	1.97	267	P	Pn	18 18 38.8	+0.6
RIGZ	**Rimuhau**	2.06	246	P	Pn	18 18 40.4	+1.0
MWZ	**Matawai**	2.13	257	P	Pn	18 18 41.0	+0.7
MWZ				S	Sn	18 19 05.6	0.0
MHGZ	**Mahia Peninsul**	2.17	234	P	Pn	18 18 42.4	+1.4
RAGZ	**Rawiri**	2.25	254	P	Pn	18 18 43.3	+1.3
KNZ	**Kokohu**	2.26	239	P	Pn	18 18 43.3	+1.2
URZ	**Urewera**	2.44	260	P	Pn	18 18 46.2	+1.7
URZ				S	Sn	18 19 13.8	+0.6
MUGZ	**Murupara**	2.74	257	P	Pn	18 18 50.0	+1.3
MTHZ	**Maungataniwha**	2.78	249	P	Pn	18 18 50.7	+1.4
ARHZ	**Aropaoanui**	2.84	240	P	Pn	18 18 52.2	+2.1
NMHZ	**Naumai**	2.90	244	P	Pn	18 18 52.5	+1.5
MRHZ	**Matea Rd**	3.09	251	P	Pn	18 18 55.1	+1.5
MCHZ	**McNeill Hill**	3.13	239	P	Pn	18 18 56.0	+1.9
BKZ	**Black Stump Fm**	3.15	245	P	Pn	18 18 55.8	+1.5
KWHZ	**Kaweka Forest**	3.31	241	P	Pn	18 18 58.0	+1.4
BHHZ	**Black Hill Sta**	3.58	242	P	Pn	18 19 01.5	+1.1
TSZ	**Takapari Road**	3.93	235	P	Pn	18 19 05.2	+0.2
TIWZ	**Tintock**	4.39	228	P	Pn	18 19 11.2	-0.2
MRZ	**Mangatainoka R**	4.51	231	P	Pn	18 19 12.7	-0.3
CTZ	**Chatham Island**	6.33	158	P	Pn	18 19 41.9	+3.9

IDC ***21*** *18:25:26.3±2.0, 7°.19S×146°.79E, h0^{km}, mb3.7/3, mb1 4.0/6, mb1mx3.7/48, mbtmp3.9/6, ML3.4/2, MS3.2/2, Ms1 3.2/2, ms1mx2.6/39, Error ellipse: s-maj=64.0km s-min=22.1km az=80.0*

ISCJB ***21*** *18:25:30.2±1.8, 7°.2S±0°.1×146°.6E±0°.2, h33^{km}, mb3.5/2, MS3.2/2, Error ellipse: s-maj=33.7km s-min=12.8km az=154.0*

ISC 21 18:25:31.4±1.8**, 7°.2S**±0°.1×**146°.7E**±0°.3**, h33**^{km}**, n9, σ0**^{s}**.99**/8**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	2.22	168	Pn	Pn	18 26 04.8	-1.0
	15nm,0.3s,baz=328,slow=6.5,SNR=39						
PMG				Sn	Sn	18 26 33.1	+0.9
	15nm,0.3s,baz=294,slow=7.0,SNR=5.1						
CTA	**Charters Tower**	12.80	182	Pn	Pn	18 28 32.1	+0.9
	0.2nm,0.3s,baz=8.8,slow=17,SNR=2.5						
WRA	**Warramunga Arr**	17.43	222	P	Pn	18 29 32.1	-0.1
	0.1nm,0.3s,baz=37,slow=12,SNR=7.7						
ASAR	**Alice Springs**	20.46	216	P	P	18 30 06.2	-0.2
	7.2nm,0.8s,baz=37,slow=10,SNR=42						
GUMO	**Guam**	20.75	355	LR	LR	18 38 12.6	
	comp=Z,31nm,18.0s,baz=164,slow=37						
STKA	**Stephens Creek**	24.99	190	P	P	18 30 51.5	-0.7
	0.8nm,0.7s,baz=10,slow=11,SNR=3.1						
MKAR	**Makanchi Array**	78.25	321	P	P	18 37 28.9	+0.9
	0.5nm,0.7s,baz=99,slow=7.6,SNR=4.7						
GEYT	**Alibeck**	93.27	308	LR	LR	19 26 41.1	
	comp=Z,20nm,18.4s,baz=235,slow=39						
TORD	**Torodi Ar. Bea**	145.09	283	PKPbc	PKPbc	18 45 05.1	-0.8
	baz=81,slow=3.7						

ATH ***21*** *18:29:11.7, 36°.35N×28°.91E, h44^{km}±3^{km}, ML2.3/2, Error ellipse: s-maj=5.3km s-min=1.3km az=178.0*

ISK ***21*** *18:29:11.8, 36°.44N×28°.92E, h21^{km}, ML2.7/14*

ISCJB ***21*** *18:29:12.7±0.4, 36°.43N±0°.03×28°.92E±0°.03, h26^{km}±4^{km}, Error ellipse: s-maj=5.1km s-min=3.9km az=6.6*

CSEM ***21*** *18:29:12.4±0.2, 36°.42N×28°.95E, h24^{km}±1^{km}, ML3.2, Error ellipse: s-maj=3.9km s-min=2.9km az=8.0*

DDA ***21*** *18:29:31.1, 36°.46N×28°.94E, h25^{km}, Ml3.2*

ISC 21 18:29:12.2±1.0**, 36°.42N**±0°.03×**28°.93E**±0°.02**, h23**^{km}±8^{km}**, n56, σ0**^{s}**.86**/87**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FETY	**Fethiye**	0.25	30	PG	Pb	18 29 18.2	-0.2
FETY				SG	Sb	18 29 22.6	0.0
FETY	**Fethiye**	0.25	30	P	Pb	18 29 18.2	-0.2
FETY				*e*Sg	Sb	18 29 22.6	0.0
FETY				S		18 29 23.5	
DALY	**Dalyan (Mu˜la**	0.46	331	PG	Pb	18 29 21.2	-0.4
DALY				SG	Sb	18 29 27.8	-0.2
DALY	**Dalyan (Mu˜la**	0.46	331	*i* P	Pb	18 29 21.2	-0.4
DALY				*i* S	Sb	18 29 28.2	+0.3
DALY	**Dalyan (Mu˜la**	0.46	331	P	Pb	18 29 21.2	-0.4
DALY				*e*Sg	Sb	18 29 27.8	-0.2
DALY				S	Sb	18 29 28.2	+0.3
TURN	**Turunc**	0.52	330	PG	Pn	18 29 24.6	+0.4
TURN				SG	Sn	18 29 34.3	+1.9
TURN	**Turunc**	0.52	330	*i* P	Pn	18 29 24.9	+0.7
TURN				*i* S	Sn	18 29 34.5	+2.1
TURN	**Turunc**	0.52	330	*e*Pg	Pn	18 29 24.6	+0.4
TURN	**Turunc**	0.52	330	P	Pn	18 29 24.9	+0.7
TURN				*e*Sg	Sn	18 29 34.3	+1.9

AKAS	Kas	0.58	109	PG	Pb	18 29 23.7	0.0
AKAS				SG	Sn	18 29 33.2	-0.7
AKAS	Kas	0.58	109	*i* P	Pb	18 29 23.4	-0.3
AKAS				*i* S	Sn	18 29 33.6	-0.3
AKAS	Kas	0.58	109	*e*Pg	Pb	18 29 23.7	0.0
AKAS				*e*Sg	Sn	18 29 33.2	-0.7
KSL	Kastellorizon	0.59	117	P	Pb	18 29 23.7	-0.2
KSL				S	Sn	18 29 33.8	-0.2
KSL				AML	AML	18 29 34.5	
	comp=E,1814µm,0.5s						
KSL				AML	AML	18 29 37.2	
	comp=N,481µm,0.8s						
MRSB	Marmaris-Mugla	0.66	297	PG	Pb	18 29 24.9	-0.2
MRSB	Marmaris-Mugla	0.66	297	*e*Pg	Pb	18 29 24.9	-0.2
ARG	Arkhangelos	0.68	253	PG	Pb	18 29 25.6	+0.2
ARG				SG	Sn	18 29 35.9	-0.3
ARG	Arkhangelos	0.68	253	P	Pb	18 29 25.5	+0.2
ARG				S	Sb	18 29 35.0	+0.7
ARG				AML	AML	18 29 39.7	
	comp=N,325µm,0.5s						
ARG				AML	AML	18 29 40.6	
	comp=E,442µm,0.4s						
ARG	Arkhangelos	0.68	253	*e*Pg	Pb	18 29 25.6	+0.2
ARG				S	Sb	18 29 35.1	+0.7
ELL	Elmali	0.85	67	PG	Pb	18 29 28.3	-0.1
ELL	Elmali	0.85	67	*e*Pg	Pb	18 29 28.3	-0.1
YER	Yerkesik	0.88	324	PG	Pb	18 29 28.4	-0.5
YER	Yerkesik	0.88	324	*e*Pg	Pb	18 29 28.4	-0.5
GOLH	Golhisar	0.96	32	*i* P	Pb	18 29 29.7	-0.5
GOLH				*i* S	Sn	18 29 42.9	-0.4
GOLH	Golhisar	0.96	32	P	Pb	18 29 29.7	-0.5
GOLH				S	Sn	18 29 42.9	-0.4
TAVA	DENIZLI_Tavas	1.04	359	*i* P	Pn	18 29 30.9	-0.6
TAVA				*i* S	Sb	18 29 44.9	-0.1
TAVA	DENIZLI_Tavas	1.04	359	P	Pn	18 29 30.9	-0.6
TAVA				S	Sb	18 29 44.9	-0.1
DATC	Datca-Mugla	1.08	289	PG	Pb	18 29 32.4	+0.3
DATC	Datca-Mugla	1.08	289	*e*Pg	Pb	18 29 32.4	+0.3
DAT	Datca	1.13	286	PN	Pb	18 29 32.9	-0.2
DAT	Datca	1.13	286	*i* P	Pn	18 29 32.8	+0.1
DAT				*i* S	Sb	18 29 48.9	+1.5
DAT	Datca	1.13	286	*e*Pn	Pb	18 29 32.9	-0.2
DAT				S	Sb	18 29 48.9	+1.5
DNZL	Cakiroluk	1.27	4	*i* P	Pn	18 29 34.5	-0.2
DNZL				*i* S	Sn	18 29 51.1	0.0
DNZL	Cakiroluk	1.27	4	P	Pn	18 29 34.5	-0.2
DNZL				S	Sn	18 29 51.1	0.0
MLSB	Milas	1.27	314	PN	Pn	18 29 34.8	+0.2
MLSB	Milas	1.27	314	*e*Pn	Pn	18 29 34.8	+0.2
KORT	Korkueli	1.28	63	PN	Pn	18 29 35.1	+0.4
KORT	Korkueli	1.28	63	*i* P	Pb	18 29 35.2	-0.5
KORT				*i* S	Sb	18 29 54.3	+2.5
KORT	Korkueli	1.28	63	*e*Pn	Pn	18 29 35.1	+0.4
DENT	Denizli	1.33	4	PN	Pn	18 29 34.9	-0.5
DENT	Denizli	1.33	4	*e*Pn	Pn	18 29 34.9	-0.5
BODT	Bodrum	1.45	297	PN	Pn	18 29 37.3	+0.3
BODT	Bodrum	1.45	297	*e*Pn	Pn	18 29 37.3	+0.3
AYDN	Tasoluk	1.50	326	*i* P	Pb	18 29 38.6	-0.7
AYDN				*i* S	Sb	18 29 58.2	+0.3
AYDN	Tasoluk	1.50	326	P	Pb	18 29 38.6	-0.7
AYDN				S	Sb	18 29 58.2	+0.3
KARP	Karpathos	1.68	239	P	Pn	18 29 41.1	+1.0
KARP	Karpathos	1.68	239	P	Pn	18 29 40.1	0.0
AYDB	Zeytinkoy-Aydi	1.74	332	PN	Pn	18 29 41.1	+0.1
AYDB	Zeytinkoy-Aydi	1.74	332	*e*Pn	Pn	18 29 41.1	+0.1
GCAM	G?zelcaml?	1.86	314	PN	Pn	18 29 43.0	+0.4
GCAM	G?zelcaml?	1.86	314	*e*Pn	Pn	18 29 43.0	+0.4
SUTC	Sutluce-Ispart	1.96	57	PN	Pn	18 29 44.5	+0.3
SUTC	Sutluce-Ispart	1.96	57	*e*Pn	Pn	18 29 44.5	+0.3
SMG	Samos	2.11	308	P	Pb	18 29 48.5	-1.3
SMG				S	Sn	18 30 10.5	-1.1
SMG	Samos	2.11	308	P	Pn	18 29 47.4	+1.3
SMG				S	Sn	18 30 11.2	-0.4
LAST	Lasithi	3.07	247	P	Pn	18 29 59.9	+0.5
LAST				S	Sn	18 30 31.6	-3.8
LAST	Lasithi	3.07	247	P	Pn	18 29 59.4	0.0
LAST				S	Sn	18 30 32.6	-2.8

NNC 21 18:36:37.9±2.3**,37°.05N×70°.72E,h0^{km},mb3.5,mpv3.2, 2C-2D,Error ellipse: s-maj=20.5km s-min=15.6km az=150.0,Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.67	36	⇑P	Pn	18 37 36.1	-0.1
	0.7nm,0.2s						
SFK				⇑S	Sn	18 38 21.5	+1.2
	7.5nm,0.3s						
MNAS	Manas	5.60	14	⇓P	Pn	18 38 02.6	+0.1
	0.9nm,0.3s						
MNAS				⇓S	Sn	18 39 08.6	+1.0
	5.1nm,0.5s						
KK31	Karatay Array	6.04	359	P	Pn	18 38 09.6	+1.1
	1.5nm,0.3s,baz=180,slow=13,SNR=50						
KK31				S	Sn	18 39 19.9	+1.5
	0.8nm,0.4s,baz=186,slow=22,SNR=7.8						
AB31	Akbulak array	14.49	331	P	Pn	18 40 01.6	-2.6
	0.1nm,0.3s,baz=152,slow=12,SNR=5.4						

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*IDC **21** 18:51:05.3±2.0,38°.53N×70°.69E,h0^{km},mb4.0/3, mb1 3.7/11,mb1mx3.4/72,mbtmp3.7/11,ML3.1/8,Error ellipse: s-maj=27.0km s-min=14.0km az=159.0*

*KRNET **21** 18:51:08.6±0.1,39°.06N×70°.27E,mb3.4*

*ISCJB **21** 18:51:10.8±0.4,39°.11N±0°.04×70°.16E±0°.03,h17^{km}, mb4.1/7,Error ellipse: s-maj=6.0km s-min=2.9km az=151.2*

*NNC **21** 18:51:10.8±5.6,38°.88N×70°.66E,h0^{km},mb4.2,mpv3.8, Error ellipse: s-maj=46.4km s-min=23.9km az=10.0*

*NEIC **21** 18:51:15.0±0.7,39°.13N×70°.36E,h44^{km}±8^{km},mb4.1/6, Error ellipse: s-maj=9.4km s-min=7.1km az=124.0*

ISC 21 18:51:11.8±0.8**,39°.04N**±0°.06×**70°.33E**±0°.04**,h17^{km},n92,** σ**1^{s}.91**/113**,mb4.3**/7**,27C-13D,Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BTK	Batken	1.09	20	⇑*i*P	Pb	18 51 29.4	-2.8
	baz=23						
BTK				⇑*i*S	Sb	18 51 44.7	-1.5
	baz=23						
TAS	Tashkent	2.42	341	⇑Pg	Pg	18 51 57.5	-0.8
	59nm,0.2s						
TAS				⇓Lg	Lg	18 52 32.7	
	465nm,0.4s						
TAS	Tashkent	2.42	341	⇑*i*P	Pn	18 51 51.1	+0.4
	baz=42						
TAS				⇑*i*S	Sn	18 52 22.5	+2.6
	baz=42						
SFK	Sufi-Kurgan	2.64	67	⇑Pg	Pn	18 51 53.9	0.0
	27nm,0.5s						
SFK				⇑Lg	Lg	18 52 29.8	
	262nm,0.6s						
SFK	Sufi-Kurgan	2.64	67	⇓*i*P	Pn	18 51 56.0	+2.1
	baz=68						
SFK				⇓*i*S	Sb	18 52 29.0	-2.1
	baz=68						
ARK	Arkit	3.03	24	⇓*i*P	Pn	18 52 00.0	+0.9
	baz=25						
ARK				⇓*i*S	Sn	18 52 37.1	+2.1
	baz=25						
ARSB	Arslanbob	3.06	41	⇑*i*P	Pn	18 52 00.7	+1.2
	baz=42						
ARSB				⇑*i*S	Sn	18 52 38.5	+2.7
	baz=42						
MNAS	Manas	3.82	25	⇑Pn	Pn	18 52 12.1	+2.1
	5.0nm,0.4s						
MNAS				⇑Sn	Sn	18 52 60.0	+5.4
	41nm,0.5s						
MNAS	Manas	3.82	25	⇓*i*P	Pn	18 52 10.7	+0.7
	baz=26						
MNAS				⇓*i*S	Sn	18 52 56.2	+1.6
	baz=26						
AML	Almayashu	4.01	39	P	Pn	18 52 14.3	+1.4
	SNR=25						
AML	Almayashu	4.01	39	⇑*i*P	Pn	18 52 13.9	+1.0
	baz=39						
AML				⇑*i*S	Sn	18 53 01.5	+1.8
	baz=39						
KK31	Karatay Array	4.06	2	⇑Pn	Pn	18 52 16.2	+3.0
	4.9nm,0.4s,baz=178,slow=12						
KK31				⇓Lg	Lg	18 53 21.1	
	21nm,0.4s,baz=170,slow=29						
KK31	Karatay Array	4.06	2	*e*Pn	Pn	18 52 15.7	+2.5
KKAR	Karatay Array	4.06	2	*e*Pn	Pn	18 52 15.8	+2.6
EKS2	Erkin-Say	4.47	35	P	Pn	18 52 21.4	+2.6
	SNR=8.9						
EKS2	Erkin-Say	4.47	35	⇑*i*P	Pn	18 52 19.7	+0.9
	baz=35						
EKS2				⇑*i*S	Sn	18 53 12.0	+1.5
	baz=35						
UCH	Uchtor	4.50	44	P	Sn	18 53 18.2	+6.3
	SNR=10						
UCH	Uchtor	4.50	44	⇑*i*P	Pn	18 52 20.7	+1.0
	baz=44						
UCH				⇑*i*S	Sn	18 53 13.8	+1.9
	baz=44						
KBL	Kabul	4.61	193	*e*Pn	Pn	18 52 21.9	+1.0
AAK	Ala-Archa	4.79	40	Pn	Pn	18 52 25.0	+1.7
	2.6nm,0.3s,baz=196,slow=9.7,SNR=12						
AAK				Sn	Sn	18 53 23.8	+5.4
	2.9nm,0.3s,baz=136,slow=23,SNR=14						
AAK	Ala-Archa	4.79	40	⇑Pn	Pn	18 52 25.4	+2.1
	7.1nm,0.6s						
AAK	Ala-Archa	4.79	40	P	Pn	18 52 26.1	+2.8
	SNR=7.3						
AAK	Ala-Archa	4.79	40	⇑*i*P	Pn	18 52 24.4	+1.1
	baz=41						
AAK				⇑*i*S	Sn	18 53 20.0	+1.6
	baz=41						
KZA	Kyzart	4.82	49	P	Pn	18 52 25.1	+1.1
	SNR=5.5						
KZA	Kyzart	4.82	49	⇓*i*P	Pn	18 52 25.1	+1.1
	baz=50						
KZA				⇓*i*S	Sn	18 53 21.7	+2.0
	baz=50						
FRU1	Bishkek	4.98	39	*e*Pn	Pn	18 52 28.4	+2.5
FRU1	Bishkek	4.98	39	⇑*i*P	Pn	18 52 27.1	+1.2
	baz=40						
FRU1				⇑*i*S	Sn	18 53 24.6	+1.5
	baz=40						
KBK	Karagaybulak	5.03	43	P	Pn	18 52 28.9	+2.2
	SNR=14						
KBK	Karagaybulak	5.03	43	⇓*e*P	Pn	18 52 28.1	+1.4
	baz=43						
KBK				⇓*i*S	Sn	18 53 25.6	+1.1
	baz=43						
CHMS	Chumysh	5.18	39	P	Pn	18 52 30.6	+2.0
	SNR=11						
CHMS	Chumysh	5.18	39	⇑*i*P	Pn	18 52 29.6	+1.0
	baz=39						
CHMS				⇑*i*S	Sn	18 53 29.0	+1.0
	baz=39						
USP	Ospenovka	5.27	35	P	Pn	18 52 31.1	+1.2
	SNR=11						
ULHL	Ulahol	5.52	53	P	Pn	18 52 31.1	-2.3
	SNR=7.3						
TKM2	Tokmak 2	5.56	44	⇑Pn	Pn	18 52 35.4	+1.4
	4.4nm,0.5s						
TKM2				⇓Sn	Sn	18 53 43.6	+6.0
	80nm,0.9s						
TKM2	Tokmak 2	5.56	44	P	Pn	18 52 35.1	+1.2
	SNR=12						
NIL	Nilore	5.87	155	*e*Pn	Pn	18 52 42.3	+4.2
KDJ	Kajisay	6.06	57	*e*Pn	Pn	18 52 40.9	+0.1
GEYT	Alibeck	9.64	267	Pn	Pn	18 53 30.2	+0.5
	0.2nm,0.3s,baz=97,slow=12,SNR=3.6						
GEYT				Sn	Sn	18 55 17.6	-0.1
	0.2nm,0.3s,baz=76,slow=24,SNR=2.8						
GYA0B	ALIBECK ARRAY	9.64	267	*e*Pn	Pn	18 53 30.5	+0.8
MK01	Makanchi Array	11.69	45	*e*Pn	Pn	18 53 57.7	-0.1
MK31	Makanchi Array	11.70	45	*e*Pn	Pn	18 53 58.2	+0.4
MK32	Makanchi Array	11.70	45	*e*Pn	Pn	18 53 58.0	+0.2
MKAR	Makanchi Array	11.70	45	Pn	Pn	18 53 58.0	+0.1
	0.1nm,0.3s,baz=238,slow=8.3,SNR=3.8						
MKAR	Makanchi Array	11.70	45	*e*Pn	Pn	18 53 58.0	+0.1
AB31	Akbulak array	12.63	327	P	Pn	18 54 10.7	+0.1
	1.9nm,0.5s,baz=141,slow=13,SNR=51						
ABKAR	Akbulak array	12.63	327	*e*Pn	Pn	18 54 10.6	0.0
ABKAR				*e*Sn	Sn	18 56 28.6	-2.2
KURBB	Kurchatov Arra	12.95	24	Pn	Pn	18 54 12.4	-2.6
	0.0nm,0.3s,baz=213,slow=12,SNR=3.7						
KURK	Kurchatov	13.06	24	*e*Pn	Pn	18 54 12.3	-4.1
BVAR	Borovoye Array	13.99	0	Pn	Pn	18 54 28.6	-0.5
	0.2nm,0.3s,baz=166,slow=14,SNR=7.5						
BVAR				Sn	Sn	18 57 04.1	+0.1
	0.2nm,0.3s,baz=197,slow=28,SNR=4.2						
BRVK	Borovoye	14.02	360	*e*Pn	Pn	18 54 27.4	-2.2
AKTO	Aktyubinsk	14.34	327	Pn	Pn	18 54 33.9	-0.1
	0.4nm,0.3s,baz=132,slow=16,SNR=5.6						
AKTO				Sn	Sn	18 57 15.1	+2.6
	0.3nm,0.3s,baz=300,slow=20,SNR=4.7						
AKTO	Aktyubinsk	14.34	327	⇑P	P	18 54 42.7	+1.7
	5.8nm,0.6s						
ZAA0	Zalesovo Array	17.89	29	*e*Pn	Pn	18 55 16.9	-2.7
	1.8nm,0.8s						
ZALV	Zalesovo Beam	17.89	29	P	Pn	18 55 17.7	-1.9
	0.2nm,0.3s,baz=236,slow=9.8,SNR=4.1						
ZALV	Zalesovo Beam	17.89	29	*e*Pn	Pn	18 55 17.3	-2.3
ZAA1	Zalesovo Array	17.89	29	*e*Pn	Pn	18 55 17.7	-2.0
ARU	Arti	19.07	340	P	Pn	18 55 34.1	+0.2
	0.0nm,0.3s,baz=90,slow=20,SNR=4.3						
ARU	Arti	19.07	340	*e*P	P	18 55 31.0	-2.1
	3.6nm,0.8s						
KIV	Kislovodsk	21.23	292	*e*P	P	18 55 57.1	+0.2
	4.3nm,0.6s						
RAYN	Ar Rayn	26.14	241	*e*P	P	18 56 45.4	+0.3
	15nm,1.9s						
CSS	Mathiatis	29.69	274	*e*P	P	18 57 17.3	+0.5
	12nm,1.1s						
FIA0	FINESS Array S	35.10	324	*e*P	P	18 58 04.8	+1.0
FIA1	FINESS Array S	35.10	324	*e*P	P	18 58 03.9	+0.1
FINES	FINESS Array B	35.10	324	P	P	18 58 04.8	+1.0
	1.1nm,0.8s,baz=107,slow=12,SNR=5.7						
HFS	Hagfors	40.76	320	P	P	18 58 52.4	+0.8
	2.3nm,0.4s,baz=100,slow=7.9,SNR=24						
NC401	NORSAR Array S	41.77	322	*e*P	P	18 58 58.5	-1.4
NC402	NORSAR Array S	41.79	321	*e*P	P	18 58 58.8	-1.3
NC400	NORSAR Array S	41.81	322	*e*P	P	18 58 59.6	-0.6
NC405	NORSAR Array S	41.81	322	*e*P	P	18 58 59.8	-0.4
NC403	NORSAR Array S	41.83	321	*e*P	P	18 58 58.7	-1.6
NC404	NORSAR Array S	41.84	322	*e*P	P	18 58 58.2	-2.3
NC601	NORSAR Array S	41.87	321	*e*P	P	18 58 59.5	-1.2
NC603	NORSAR Array S	41.90	321	*e*P	P	18 58 59.7	-1.2
NC600	NORSAR Array S	41.91	321	*e*P	P	18 58 59.1	-1.9
NC301	NORSAR Array S	41.93	322	*e*P	P	18 59 00.2	-1.0
NC302	NORSAR Array S	41.94	322	*e*P	P	18 59 00.2	-1.1
NC300	NORSAR Array S	41.97	322	*e*P	P	18 59 01.5	0.0
NC305	NORSAR Array S	41.98	322	*e*P	P	18 59 01.7	+0.1
NB2	NORSAR Subarra	42.05	321	P	P	18 59 02.4	+0.2
	comp=Z,0.4nm,0.5s,baz=91,slow=7.9						
NB200	NORSAR Array S	42.05	321	*e*P	P	18 59 01.3	-0.9
NOA	NORSAR Array B	42.05	321	P	P	18 59 02.6	+0.4
	comp=Z,0.9nm,0.8s,baz=93,slow=8.0,SNR=3.4						
NB205	NORSAR Array S	42.06	321	*e*P	P	18 59 02.0	-0.3
NB203	NORSAR Array S	42.07	321	*e*P	P	18 59 01.2	-1.2
NB204	NORSAR Array S	42.08	321	*e*P	P	18 59 02.2	-0.2
NC202	NORSAR Array S	42.21	322	*e*P	P	18 59 02.8	-1.0
NC201	NORSAR Array S	42.21	322	*e*P	P	18 59 02.1	-1.5
NBO02	NORSAR Array S	42.22	321	*e*P	P	18 59 03.0	-0.6
NBO03	NORSAR Array S	42.23	321	*e*P	P	18 59 03.9	+0.2
NC203	NORSAR Array S	42.25	322	*e*P	P	18 59 03.8	-0.1
NC205	NORSAR Array S	42.26	322	*e*P	P	18 59 04.0	0.0
NC204	NORSAR Array S	42.28	322	*e*P	P	18 59 04.6	+0.4
GRFO	Grafenberg	42.55	305	*e*P	P	18 59 05.5	-1.0
	comp=Z,19nm,1.6s						

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*ISCJB **21** 18:56:47.3±0.5,33°.32N±0°.02×35°.33E±0°.04,h4^{km}±4^{km}, Error ellipse: s-maj=5.9km s-min=2.6km az=25.1*

*CSEM **21** 18:56:47.5±0.2,33°.33N×35°.34E,h5^{km},MD2.6,Error ellipse: s-maj=4.6km s-min=1.8km az=113.0*

*GII **21** 18:56:47.2±0.0,33°.28N×35°.37E,h2^{km},MD2.6/6*

*GRAL **21** 18:56:48.6±0.2,33°.31N×35°.37E,h3^{km}±1^{km},MD3.0*

ISC 21 18:56:47.8±0.9**,33°.31N**±0°.02×**35°.35E**±0°.03**,h12^{km}**±8^{km}**, n44,** σ**0^{s}.62**/74**,Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNTI	Hanita	0.27	213	Pg	Pg	18 56 53.0	-0.5
HNTI				Sg	Sg	18 56 57.6	+0.4
HNTI	Hanita	0.27	213	Pg	Pg	18 56 53.0	-0.5
HNTI				Sg	Sg	18 56 57.6	+0.4
KSDI	Kefar Szold	0.29	115	Pg	Pg	18 56 53.5	-0.2
KSDI				Sg	Sg	18 56 57.9	+0.3
KSDI	Kefar Szold	0.29	115	Pg	Pg	18 56 53.5	-0.2
KSDI				Sg	Sg	18 56 57.9	+0.3
MMA0B	Mount Meron ar	0.30	171	Pg	Pg	18 56 53.5	-0.5
MMA0B				Sg	Sg	18 56 58.7	+0.6
MMA0B	Mount Meron ar	0.30	171	Pg	Pg	18 56 53.5	-0.5
MMA0B				Sg	Sg	18 56 58.7	+0.6
NATI	Neve Ativ	0.33	99	Pg	Pg	18 56 54.3	-0.2
NATI				Sg	Sg	18 56 58.9	0.0
SHBL	Chebaa	0.33	84	*e*P	Pg	18 56 54.4	-0.2
SHBL				*e*S	Sg	18 56 58.7	-0.5
SHBL	Chebaa	0.33	84	*e*P	Pg	18 56 54.4	-0.2
SHBL				*e*S	Sg	18 56 58.7	-0.5
QRWL	Qaraoun	0.36	50	*e*P	Pg	18 56 55.0	-0.2
QRWL	Qaraoun	0.36	50	*e*P	Pg	18 56 55.0	-0.2
DQRL	Deir Qamar	0.43	25	*e*P	Pg	18 56 56.3	-0.1
DQRL				*e*S	Sg	18 57 02.2	-0.1
DQRL	Deir Qamar	0.43	25	*e*P	Pg	18 56 56.3	-0.1
DQRL				*e*S	Sg	18 57 02.2	-0.1
RCY	Rachaya	0.45	66	*e*P	Pg	18 56 56.5	-0.2
RCY				*e*S	Sg	18 57 02.3	-0.4
KSHT	Keshet	0.51	130	Pg	Pb	18 56 58.1	-0.6
KSHT	Keshet	0.51	130	Pg	Pb	18 56 58.1	-0.6
BEYL	Beirut	0.57	12	*e*P	Pg	18 56 58.9	-0.1
BEYL	Beirut	0.57	12	*e*P	Pg	18 56 58.9	-0.1
BLGI	Bet Lehem HaGe	0.59	193	Pg	Pg	18 56 59.1	-0.3
BLGI				Sg	Sb	18 57 08.3	-0.2
BLGI	Bet Lehem HaGe	0.59	193	Pg	Pg	18 56 59.1	-0.3
BLGI				Sg	Sb	18 57 08.3	-0.2
BHL	Bhannes	0.64	23	*e*P	Pg	18 57 00.2	-0.2
BHL				*e*S	Sg	18 57 08.6	-0.3
BHL	Bhannes	0.64	23	*e*P	Pg	18 57 00.2	-0.2
BHL				*e*S	Sg	18 57 08.6	-0.3
OFRI	‘Ofer	0.76	204	Pg	Pg	18 57 02.0	-0.5
OFRI				Sg	Sb	18 57 13.2	0.0
OFRI	‘Ofer	0.76	204	Pg	Pg	18 57 02.0	-0.5
OFRI				Sg	Sb	18 57 13.2	0.0
MMLI	Mount Malkishu	0.88	176	Pg	Pg	18 57 03.9	-0.8
MMLI				Sg	Sb	18 57 16.6	0.0
MMLI	Mount Malkishu	0.88	176	Pg	Pg	18 57 03.9	-0.8
MMLI				Sg	Sb	18 57 16.6	0.0
HMDT	Nahal Hemdat	1.07	172	Pg	Pg	18 57 07.3	-1.1
HMDT				Sg	Sb	18 57 23.1	+1.0
HMDT	Nahal Hemdat	1.07	172	Pg	Pg	18 57 07.3	-1.1
HMDT				Sg	Sb	18 57 23.1	+1.0
HWQ	Hawqa	1.08	27	*e*P	Pg	18 57 08.1	-0.7
HWQ				*e*S	Sg	18 57 22.3	-0.6
HWQ	Hawqa	1.08	27	*e*P	Pg	18 57 08.1	-0.7
HWQ				*e*S	Sg	18 57 22.3	-0.6
SLTI	Sal’it	1.10	194	Pg	Pg	18 57 07.8	-1.2
SLTI				Sg	Sg	18 57 23.1	-0.2
SLTI	Sal’it	1.10	194	Pg	Pg	18 57 07.8	-1.2
SLTI				Sg	Sg	18 57 23.1	-0.2
DSI	Dead Sea	1.74	179	Pn	Pn	18 57 18.0	+0.2
DSI				Sn	Sb	18 57 42.0	+0.5
DSI	Dead Sea	1.74	179	Pn	Pn	18 57 18.0	+0.2
DSI				Sn	Sb	18 57 42.0	+0.5
AMAZ	Amatzia	1.81	192	Pn	Pn	18 57 19.7	+0.8
AMAZ				Sn	Sb	18 57 45.0	+1.4
AMAZ	Amatzia	1.81	192	Pn	Pn	18 57 19.7	+0.8
AMAZ				Sn	Sb	18 57 45.0	+1.4
YTIR	Yattir	1.95	186	Pn	Pn	18 57 22.1	+1.2
YTIR	Yattir	1.95	186	Pn	Pn	18 57 22.1	+1.2
ZFRI	Zfri	2.75	183	Pn	Pn	18 57 32.9	+1.1
ZFRI	Zfri	2.75	183	Pn	Pn	18 57 32.9	+1.1
PRNI	Paran	2.97	186	Pn	Pn	18 57 35.5	+0.7
PRNI	Paran	2.97	186	Pn	Pn	18 57 35.5	+0.7
MBRI	Mt Berech	3.53	186	Pn	Pn	18 57 42.8	+0.3
MBRI	Mt Berech	3.53	186	Pn	Pn	18 57 42.8	+0.3

GUC 21 19:13:22.6±0.6**,23°.43S×70°.52W,h34^{km}**±1^{km}**,ML3.5, 1C-1D,Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB10	IPOC Station P	0.09	203	*e*P	Pb	19 13 28.1	-0.4
PB10				*e*S	Sb	19 13 31.9	-0.6
PB10				IAML		19 13 31.9	
	comp=N,9µm,0.3s						
ANCH	Antofagasta	0.27	159	⇑*i*P	Pb	19 14 14.4	+44
ANCH				*e*S	Sb	19 14 19.3	+44
ANCH				IAML		19 14 19.8	
	comp=E,20µm,0.1s						
PB05	IPOC Station P	0.64	27	*e*P	Pn	19 13 35.0	-0.4
PB05				*i* S	Sn	19 13 44.4	-0.1
PB05				IAML		19 13 44.6	
	comp=N,2µm,0.3s						
PB15	IPOC Station P	0.98	77	⇓*i*P	Pn	19 13 40.6	+0.4
PB15				*e*S	Sb	19 13 54.1	-0.1
PB15				IAML		19 14 01.3	
	comp=E,5µm,0.4s						
PB06	IPOC Station P	1.13	50	*e*P	Pn	19 13 42.7	+0.5
PB06				*e*S	Sb	19 13 57.6	-0.6
PB06				IAML		19 13 58.7	
	comp=E,944nm,0.8s						
PB04	IPOC Station P	1.14	17	*e*P	Pn	19 13 43.0	+0.6
PB04				*i* S	Sb	19 13 58.4	-0.2
PB14	IPOC Station P	1.20	175	*e*P	Pn	19 13 43.8	+0.5
PB14				*i* S	Sn	19 13 59.1	+0.6
PB14				IAML		19 14 00.5	
	comp=E,2µm,0.3s						
PB03	IPOC Station P	1.54	27	*e*P	Pn	19 13 49.0	+1.1
PB03				*e*S	Sb	19 14 09.4	-0.6
PB03				IAML		19 14 12.4	
	comp=E,503nm,0.6s						
PB07	IPOC Station P	1.79	19	*e*P	Pn	19 13 52.4	+1.1
PB07				*e*S	Sb	19 14 16.4	-0.7
PB07				IAML		19 14 22.0	
	comp=E,663nm,0.4s						
GO02	Mina Guanaco	1.92	154	*e*P	Pb	19 13 55.7	-1.5
GO02				IAML		19 14 21.7	
	comp=E,863nm,0.4s						

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*IDC **21** 19:36:21.1±4.3,55°.55N×152°.19W,h0^{km},mb3.9/8, mb1 3.9/9,mb1mx3.6/68,mbtmp3.8/9,ML3.6/1,Error ellipse: s-maj=102.2km s-min=34.1km az=144.0*

*ISCJB **21** 19:36:27.2±0.7,56°.44N±0°.06×152°.43W±0°.09,h20^{km}, mb3.9/8,Error ellipse: s-maj=9.7km s-min=5.2km az=141.5*

*NEIC **21** 19:36:33.3±0.0,56°.56N×153°.06W,h20^{km},ML2.9(AEIC), After AEIC.*

ISC 21 19:36:29.1±1.0**,56°.45N**±0°.07×**152°.74W**±0°.05**,h20^{km},n48,** σ**2^{s}.30**/55**,mb4.0**/8**,Kodiak Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SII	Sitkinak Islan	0.80	278	*e*Pn	Pb	19 36 45.1	+0.7
SII				*e*Sn	Sb	19 36 51.0	-3.8
SII				*e*Sn	Sn	19 36 52.0	-4.7
OHAK	Old Harbor	0.83	339	*e*Pg	Pb	19 36 44.7	0.0
OHAK				*e*Sn	Sb	19 36 49.5	-6.0
KDAK	Kodiak Island	1.34	4	*e*Pn	Pb	19 36 53.2	-0.3
KDAK				*e*Sn	Sn	19 37 00.0	-10
CAHL	Cahill	2.12	320	P	Pn	19 37 04.7	+1.2
KAPH	Katmai Pasha	2.32	339	P	Pb	19 37 09.5	-0.7
CDD	Cape Douglas	2.53	349	P	Pb	19 37 11.7	-2.1
CHGN	Chignik	3.16	270	*e*Pn	Pn	19 37 17.2	-0.4
CHGN				*e*Sn	Sn	19 37 53.3	-1.3
CNPM	China Poot	3.19	14	*e*Pn	Pn	19 37 18.7	+0.7
BRLK	Bradley Lake	3.46	16	*e*Pn	Pn	19 37 21.6	-0.3
VNHG	Veniaminof 1	3.58	269	P	Pn	19 37 24.9	+1.4
RSO	Redoubt South	4.02	360	*e*Pn	Pn	19 37 31.3	+1.6
RSO				*e*Sg	Sb	19 38 34.7	+7.2
RDWB	Redoubt West	4.05	359	P	Pn	19 37 31.2	+1.2
RDWB				S	Sn	19 38 18.3	+1.4
RDJH	Redoubt Jeurge	4.15	360	P	Pn	19 37 33.0	+1.6
SDPT	Sand Point	4.49	259	*e*Pn	Pn	19 37 35.7	-0.2
SVW2	Sparrevohn	4.89	344	*e*Pn	Pn	19 37 43.0	+1.6
SKT	Skwentna	5.58	6	*e*Pn	Pn	19 37 51.4	+0.5
GHO	Glory Hole Cre	5.69	19	P	Pn	19 37 52.7	+0.3
RAGM	Ragged Mountai	5.79	44	*e*Pn	Pn	19 37 52.7	-1.1
RAGM				*e*Sn	Sn	19 38 52.1	-7.5
SML	Sawmill	5.83	21	*e*Pn	Pn	19 37 54.4	0.0
SCM	Sheep Creek Mo	6.07	25	*e*Pn	Pn	19 37 57.0	-0.8
SCM				*e*Sn	Sn	19 39 04.4	-2.2
CAST	Castle Rocks	7.00	2	*e*Pn	Pn	19 38 11.0	+0.7
TRF	Thorofare Moun	7.13	9	*e*Pn	Pn	19 38 12.3	+0.1
TRF				*e*Sn	Sn	19 39 31.6	-1.1
DHY	Denali Highway	7.17	20	*e*Pn	Pn	19 38 12.8	-0.1
DHY				*e*Sn	Sn	19 39 33.0	-0.8
BPAW	Bear Paw Mtn.	7.72	6	*e*Pn	Pn	19 38 19.3	-1.0
BPAW				*e*Sn	Sn	19 39 44.1	-2.9

WRH	**Wood River Hil**	8.37	14	*e*Pn	Pn	19 38 28.7	-0.3
CCB	**Clear Creek Bu**	8.57	14	*e*Pn	Pn	19 38 30.2	-1.7
ILAR	**Eielson Array**	8.82	17	Pn	Pn	19 38 35.5	+0.1
	0.5nm,0.3s,baz=203,slow=14,SNR=14						
ILAR				Sn	Sn	19 40 08.6	-5.5
	0.1nm,0.3s,baz=211,slow=15,SNR=2.5						
ILB	**Eielson Array**	8.82	17	*e*Pn	Pn	19 38 36.2	+0.8
WHY	**Whitehorse**	10.23	58	*e*Pn	Pn	19 38 53.8	-0.9
WHY				*e*Sn	Sn	19 40 47.8	-0.9
H11N2	**WAKE ISLAND Hy**	47.34	236	T	T	20 35 56.0	
H11N3	**WAKE ISLAND Hy**	47.34	236	T	T	20 35 54.3	
	SNR=4.8						
H11N1	**WAKE ISLAND Hy**	47.36	236	T	T	20 35 56.0	
H11S1	**WAKE ISLAND Hy**	48.49	235	T	T	20 37 20.8	
	baz=29,slow=76,SNR=11						
H11S2	**WAKE ISLAND Hy**	48.51	235	T	T	20 37 26.1	
	baz=29,slow=76,SNR=6.8						
H11S3	**WAKE ISLAND Hy**	48.51	235	T	T	20 37 27.2	
	baz=29,slow=76,SNR=4.9						
ARA0	**ARCESS Array S**	54.31	1	*e*P	P	19 45 54.3	+1.0
ARCES	**ARCESS Array B**	54.31	1	P	P	19 45 54.3	+1.0
	3.0nm,0.9s,baz=355,slow=7.7,SNR=3.2						
SONA0	**Songino Array**	57.04	308	*e*P	P	19 46 14.5	+1.2
SONM	**Songino Array**	57.04	308	P	P	19 46 14.5	+1.2
	0.8nm,0.6s,baz=46,slow=6.2,SNR=5.9						
NOA	**NORSAR Array B**	62.17	9	P	P	19 46 49.4	+1.0
	1.2nm,0.8s,baz=350,slow=6.8,SNR=4.0						
FIA0	**FINESS Array S**	62.44	1	*e*P	P	19 46 51.0	+1.0
FINES	**FINESS Array B**	62.44	1	P	P	19 46 51.0	+1.0
	4.7nm,1.2s,baz=327,slow=7.3,SNR=3.3						
HFS	**Hagfors**	63.26	8	P	P	19 46 57.0	+1.4
	2.1nm,1.0s,baz=325,slow=1.8,SNR=3.0						
KURK	**Kurchatov**	65.06	327	*e*P	P	19 47 09.4	+1.9
KURBB	**Kurchatov Arra**	65.17	327	P	P	19 47 09.4	+1.1
	0.2nm,0.5s,baz=26,slow=9.2,SNR=3.4						
BVAR	**Borovoye Array**	65.29	333	P	P	19 47 10.1	+1.1
	0.6nm,0.7s,baz=29,slow=6.6,SNR=4.3						
MK32	**Makanchi Array**	67.31	322	*e*P	P	19 47 23.2	+1.0
MKAR	**Makanchi Array**	67.31	322	P	P	19 47 23.2	+1.0
	0.2nm,0.4s,baz=48,slow=8.6,SNR=2.8						

ATH ***21*** *19:38:45.9, 35°.22N×27°.13E, h11^{km}±4^{km}, ML2.7/5, Error ellipse: s-maj=6.3km s-min=1.1km az=330.0*
ISK ***21*** *19:38:45.9, 35°.21N×27°.08E, h11^{km}, ML2.9/7*
ISCJB ***21*** *19:38:46.0±1.0, 35°.21N±0°.05×27°.12E±0°.05, h3^{km}±6^{km}, Error ellipse: s-maj=9.9km s-min=4.2km az=148.9*
CSEM ***21*** *19:38:47.2±0.3, 35°.24N×27°.08E, h10^{km}, ML2.8, Error ellipse: s-maj=8.3km s-min=3.1km az=154.0*
THE ***21*** *19:38:48.2, 35°.30N×27°.15E, h13^{km}±2^{km}, ML2.8/3, Error ellipse: s-maj=6.1km s-min=1.5km az=331.0*
DDA ***21*** *19:39:08.3, 35°.56N×27°.31E, h31^{km}, Ml3.2*
ISC 21 19:38:46.5±1.4, **35°.22N**±0°.05×**27°.12E**±0°.04, **h9**^{km}±9^{km}, **n63**, σ**1^{s}.17**/90, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	0.33	5	PG	Pg	19 38 53.2	+0.2
KARP				SG	Sg	19 38 58.4	+1.0
KARP	**Karpathos**	0.33	5	P	Pg	19 38 51.9	-1.1
KARP				S	Sg	19 38 57.7	+0.3
KARP				AML	AML	19 39 01.8	
	comp=E,4716µm,0.2s						
KARP				AML	AML	19 39 03.9	
	comp=N,5169µm,0.4s						
KARP	**Karpathos**	0.33	5	P	Pg	19 38 52.5	-0.5
KARP				S	Sg	19 38 58.1	+0.7
KARP	**Karpathos**	0.33	5	P	Pg	19 38 52.5	-0.5
KARP	**Karpathos**	0.33	5	*i* Pg	Pg	19 38 53.2	+0.2
KARP				S	Sg	19 38 57.6	+0.2
KARP				*e*Sg	Sg	19 38 58.4	+1.0
ZKR	**Zakros**	0.75	262	P	Pg	19 38 59.2	-1.8
ZKR				S	Sb	19 39 12.7	+0.6
ZKR				AML	AML	19 39 16.0	
	comp=N,646µm,0.3s						
ZKR				AML	AML	19 39 19.1	
	comp=E,1077µm,0.7s						
ZKR	**Zakros**	0.75	262	P	Pg	19 38 59.7	-1.3
ZKR				S	Sg	19 39 11.7	+1.0
NPS	**Neapolis**	1.24	272	P	Pn	19 39 09.6	-0.4
NPS				S	Sb	19 39 25.2	-1.0
NPS				AML	AML	19 39 36.2	
	comp=E,776µm,0.6s						
NPS				AML	AML	19 39 38.6	
	comp=N,585µm,0.8s						
NPS	**Neapolis**	1.24	272	P	Pn	19 39 09.9	-0.1
NPS				S	Sb	19 39 26.4	+0.2
NPS	**Neapolis**	1.24	272	P	Pn	19 39 09.5	-0.5
NPS				S	Sb	19 39 25.8	-0.4
ARG	**Arkhangelos**	1.29	39	PN	Pn	19 39 10.7	0.0
ARG				SN	Sg	19 39 29.0	+1.1
ARG	**Arkhangelos**	1.29	39	P	Pn	19 39 10.4	-0.3
ARG				S	Sn	19 39 27.8	-0.2
ARG				AML	AML	19 39 36.0	
	comp=N,679µm,0.8s						
ARG				AML	AML	19 39 37.6	
	comp=E,800µm,0.6s						
ARG	**Arkhangelos**	1.29	39	P	Pn	19 39 09.8	-0.9
ARG				S	Sb	19 39 24.9	-2.6
ARG	**Arkhangelos**	1.29	39	P	Pn	19 39 10.2	-0.5
ARG	**Arkhangelos**	1.29	39	*e*Pn	Pn	19 39 10.7	0.0
ARG				S	Sn	19 39 27.8	-0.2
ARG				*e*Sn	Sg	19 39 29.0	+1.1
LAST	**Lasithi**	1.35	268	P	Pn	19 39 11.0	-0.6
LAST				AML	AML	19 39 43.5	
	comp=N,396µm,0.6s						
LAST				AML	AML	19 39 44.3	
	comp=E,413µm,0.9s						
LAST	**Lasithi**	1.35	268	P	Pn	19 39 11.9	+0.3
LAST	**Lasithi**	1.35	268	P	Pn	19 39 11.2	-0.4
DAT	**Datca**	1.55	14	PN	Pn	19 39 14.1	-0.3
DAT	**Datca**	1.55	14	*i* P	Pn	19 39 13.8	-0.6
DAT				*i* S	Sb	19 39 34.8	-0.5
DAT	**Datca**	1.55	14	*e*Pn	Pn	19 39 14.1	-0.3
DAT				S	Sb	19 39 34.8	-0.5
SANT	**Santorini**	1.78	311	PN	Pn	19 39 17.1	-0.4
SANT	**Santorini**	1.78	311	*e*Pn	Pn	19 39 17.1	-0.4
THR6	**Thira Island,**	1.81	309	P	Pn	19 39 17.8	0.0
THR6	**Thira Island,**	1.81	309	P	Pn	19 39 17.8	0.0
THR3	**Thira Island,**	1.84	311	P	Pn	19 39 18.3	+0.1
THR3	**Thira Island,**	1.84	311	P	Pn	19 39 18.3	+0.1
BODT	**Bodrum**	1.84	5	PN	Pn	19 39 18.4	0.0
BODT	**Bodrum**	1.84	5	*e*Pn	Pn	19 39 18.4	0.0
BDRM	**Kayabasi**	1.86	8	*e*P	Pn	19 39 19.2	+0.6
BDRM				*i* S	Sb	19 39 44.0	-0.1
BDRM	**Kayabasi**	1.86	8	P	Pn	19 39 19.2	+0.6
BDRM				S	Sb	19 39 44.0	-0.1
SIVA	**Sivas**	1.91	265	P	Pn	19 39 20.6	+1.3
SIVA	**Sivas**	1.91	265	P	Pn	19 39 20.5	+1.3
DALY	**Dalyan (Mu˜la**	2.02	37	PN	Pn	19 39 21.0	+0.3
DALY	**Dalyan (Mu˜la**	2.02	37	*i* P	Pn	19 39 22.1	+1.4
DALY				*i* S	Sg	19 39 50.5	-0.9
DALY	**Dalyan (Mu˜la**	2.02	37	*e*Pn	Pn	19 39 21.0	+0.3
DALY	**Dalyan (Mu˜la**	2.02	37	P	Pn	19 39 22.1	+1.4
DALY				S	Sg	19 39 50.5	-0.9
TURN	**Turunc**	2.04	36	PN	Pn	19 39 18.0	-3.0
TURN	**Turunc**	2.04	36	*i* P	Pn	19 39 17.9	-3.0
TURN				*i* S	Sn	19 39 42.2	-4.4
TURN	**Turunc**	2.04	36	*e*Pn	Pn	19 39 18.0	-3.0
FETY	**Fethiye**	2.13	48	PN	Pn	19 39 23.0	+0.7
FETY	**Fethiye**	2.13	48	*e*Pn	Pn	19 39 23.0	+0.7
FETY	**Fethiye**	2.13	48	P	Pn	19 39 23.8	+1.5
YER	**Yerkesik**	2.13	26	PN	Pn	19 39 22.5	+0.2
YER	**Yerkesik**	2.13	26	*e*Pn	Pn	19 39 22.5	+0.2
MLSB	**Milas**	2.14	14	PN	Pn	19 39 22.6	+0.2
MLSB	**Milas**	2.14	14	*e*Pn	Pn	19 39 22.6	+0.2
APE	**Apeiranthos**	2.25	326	PN	Pn	19 39 24.1	+0.1
APE	**Apeiranthos**	2.25	326	*e*Pn	Pn	19 39 24.1	+0.1
AKAS	**Kas**	2.26	63	PN	Pn	19 39 24.8	+0.6
AKAS	**Kas**	2.26	63	*e*Pn	Pn	19 39 24.8	+0.6
AYDN	**Tasoluk**	2.51	14	*i* P	Pn	19 39 29.0	+1.4
AYDN				*i* S	Sn	19 39 59.4	+1.0
AYDN	**Tasoluk**	2.51	14	P	Pn	19 39 29.0	+1.4
AYDN				S	Sn	19 39 59.4	+1.0
IMMV	**Iera Moni Meta**	2.58	276	P	Pn	19 39 30.2	+1.6
IMMV	**Iera Moni Meta**	2.58	276	P	Pn	19 39 30.1	+1.6
TAVA	**DENIZLI_Tavas**	2.67	32	*i* P	Pn	19 39 31.2	+1.4
TAVA				*i* S	Sn	19 40 04.2	+1.9
TAVA	**DENIZLI_Tavas**	2.67	32	P	Pn	19 39 31.2	+1.4
TAVA				S	Sn	19 40 04.2	+1.9
ELL	**Elmali**	2.73	55	PN	Pn	19 39 31.6	+1.0
ELL	**Elmali**	2.73	55	*e*Pn	Pn	19 39 31.6	+1.0
AYDB	**Zeytinkoy-Aydi**	2.79	13	PN	Pn	19 39 32.1	+0.6
AYDB	**Zeytinkoy-Aydi**	2.79	13	*e*Pn	Pn	19 39 32.1	+0.6
GOLH	**Golhisar**	2.82	44	*i* P	Pn	19 39 33.5	+1.7
GOLH				*i* S	Sg	19 40 18.3	+1.3
GOLH	**Golhisar**	2.82	44	P	Pn	19 39 33.5	+1.7

IDC ***21*** *19:40:26.0±2.1, 5°.62N×127°.79E, h0^{km}, mb3.8/6, mb1 3.9/6, mb1mx3.6/52, mbtmp3.8/6, Error ellipse: s-maj=193.1km s-min=18.1km az=66.0*
NEIC ***21*** *19:40:35.9±1.5, 5°.19N×127°.01E, h66^{km}±15^{km}, mb4.6/13, Error ellipse: s-maj=21.8km s-min=8.2km az=70.0*
MAN ***21*** *19:40:38.0, 4°.82N×126°.85E, h125^{km}, mb4.8, ML3.7, MS3.6*
ISC 21 19:40:37.6±0.7, **4°.96N**±0°.06×**127°.03E**±0°.09, **h76**^{km}, **n36**, σ**2^{s}.01**/39, **mb4.1**/11, **1D**, **Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	1.74	311	*e*P	Pn	19 41 06.9	+1.0
DDMP				*e*S	Sn	19 41 28.8	+1.5
MATI	**Mati**	2.12	339	*e*P	Pn	19 41 13.5	+2.6
MATI				*e*S	Sn	19 41 39.2	+2.8
GSPH	**General Santos**	2.35	298	⇓*i*P	Pn	19 41 14.5	+0.3
DAV	**Davao City (W)**	2.54	325	*e*Pn	Pn	19 41 10.3	-6.4
SKMP	**Bagumbayan, Su**	2.92	302	*e*P	Pn	19 41 23.1	+1.3
SKMP				*e*S	Sn	19 41 55.9	0.0
BUKP	**Musuan**	3.50	326	*e*P	Pn	19 41 32.2	+2.5
BUKP				*e*S	Sn	19 42 14.3	+4.4
TNTI	**Ternate**	4.18	175	*e*Pn	Pn	19 41 40.9	+2.0
PAGZ	**Pagadian**	4.62	309	*e*P	Pn	19 41 44.9	-0.1
PAGZ				*e*S	Sn	19 41 59.0	-38
LUWI	**Luwuk**	7.33	216	*e*Pn	Pn	19 42 24.5	+2.6
MYLDM	**Lahad Datu**	8.50	272	*e*Pn	Pn	19 42 40.0	+2.0
SBUM	**Sibu**	14.99	261	*e*Pn	Pn	19 44 08.8	+3.4
	3.3nm,0.5s						
KSM	**Kuching**	17.05	259	*e*Pn	Pn	19 44 30.9	-0.3
	8.5nm,0.8s						
MTN	**Manton Dam**	18.15	167	*e*P	P	19 44 42.8	-1.2
	131nm,2.0s						
JAGI	**Jajag, Banyuwa**	18.52	224	*e*P	P	19 44 46.7	-1.4
	136nm,1.9s						
YULB	**Yu-li**	19.14	344	*e*P	Pn	19 44 56.0	-0.4
	96nm,2.0s						
TPUB	**Ta-pu**	19.25	342	*e*P	P	19 44 54.6	-1.4
	223nm,2.0s						
WR1	**Warramunga Arr**	25.77	164	*e*P	P	19 46 03.0	+1.6
	24nm,1.7s						
WRA	**Warramunga Arr**	25.77	164	P	P	19 46 03.0	+1.6
	1.5nm,0.4s,baz=345,slow=10,SNR=20						
WB2	**Warramunga Arr**	25.77	164	*e*P	P	19 46 02.9	+1.4
	49nm,2.0s						
AS31	**Alice Springs**	29.23	167	*e*P	P	19 46 34.5	+2.0
	3.6nm,1.8s						
ASAR	**Alice Springs**	29.23	167	P	P	19 46 34.6	+2.2
	0.3nm,0.3s,baz=347,slow=6.8,SNR=12						
AS01	**Alice Springs**	29.24	167	*e*P	P	19 46 35.5	+3.0
KS15	**Wonju Array Si**	32.34	1	*e*P	P	19 47 00.5	+0.9
KS01	**Wonju Array Si**	32.37	1	*e*P	P	19 46 57.3	-2.6
STKA	**Stephens Creek**	39.17	160	P	P	19 47 57.9	-0.3
	1.5nm,0.3s,baz=339,slow=7.9,SNR=10						
STKA	**Stephens Creek**	39.17	160	*e*P	P	19 47 57.5	-0.6
	1.2nm,0.9s						
ARMA	**Armidale**	42.33	148	*e*P	P	19 48 24.8	+0.5
	80nm,1.6s						
MK01	**Makanchi Array**	56.71	325	*e*P	P	19 50 13.1	-0.3
MK31	**Makanchi Array**	56.73	325	*e*P	P	19 50 12.2	-1.4
MK32	**Makanchi Array**	56.73	325	*e*P	P	19 50 11.8	-1.7
MKAR	**Makanchi Array**	56.73	325	P	P	19 50 11.8	-1.8
	0.3nm,0.4s,baz=115,slow=8.0,SNR=10						
MKAR	**Makanchi Array**	56.73	325	*e*P	P	19 50 11.8	-1.8
	7.7nm,0.9s						
KURBB	**Kurchatov Arra**	60.87	327	P	P	19 50 39.7	-2.4
	0.3nm,0.5s,baz=125,slow=6.9,SNR=3.7						
KURK	**Kurchatov**	60.87	327	*e*P	P	19 50 39.7	-2.4
CASY	**Casey**	72.07	187	*e*P	P	19 51 53.5	+0.3
	15nm,1.8s						
AKTO	**Aktyubinsk**	72.89	321	P	P	19 51 55.0	-3.4
	0.8nm,0.5s,baz=79,slow=5.2,SNR=2.6						

IDC 21 19:41:44.6±1.4, **27°.22N**×**142°.76E**, **h0**^{km}, **mb3.5**/4, **mb1 3.7**/4, **mb1mx3.3**/54, **mbtmp3.5**/4, **MS2.9**/3, **Ms1 2.9**/3, **ms1mx2.5**/42, **Error ellipse: s-maj=26.8km s-min=24.7km az=109.0**, **Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	0.53	257	Pn	Pn	19 41 59.6	+0.1
	459nm,0.3s,baz=22,slow=9.6,SNR=2116						
JCJ				Sn	Sb	19 42 03.4	-1.6
	591nm,0.3s,baz=198,slow=20,SNR=94						
JOW	**Kunigami**	12.92	272	LR	LR	19 48 12.6	
	comp=Z,16nm,20.9s,baz=140,slow=30						
KSRS	**Korea Array**	16.15	313	LR	LR	19 51 29.3	
	comp=Z,27nm,18.3s,baz=230,slow=36						
WRA	**Warramunga Arr**	47.59	191	P	P	19 50 21.8	-0.5
	0.3nm,0.4s,baz=11,slow=8.6,SNR=4.7						
ZALV	**Zalesovo Beam**	49.74	319	P	P	19 50 37.8	-0.8
	0.3nm,0.4s,baz=116,slow=10,SNR=2.4						
ASAR	**Alice Springs**	51.30	190	P	P	19 50 50.8	+0.1
	0.1nm,0.6s,baz=10,slow=6.1,SNR=3.1						
FINES	**FINESS Array B**	78.07	334	P	P	19 53 45.5	+0.5
	0.7nm,0.5s,baz=66,slow=4.7,SNR=9.1						
TXAR	**Lajitas Array**	95.12	53	LR	LR	20 30 10.4	
	comp=Z,24nm,21.6s,baz=0.0,slow=30						

ISCJB ***21*** *20:02:10.0±0.3, 51°.50N±0°.02×16°.12E±0°.03, h0^{km}, Error ellipse: s-maj=2.8km s-min=2.3km az=144.6*
CSEM ***21*** *20:02:11.8±0.1, 51°.50N×16°.08E, h2^{km}, ML3.2/11, Error ellipse: s-maj=3.5km s-min=2.4km az=81.0*
VIE ***21*** *20:02:12.3±0.6, 51°.48N×16°.00E, h0^{km}, mb2.3/6, ml2.8/6, Error ellipse: s-maj=5.5km s-min=4.1km az=18.0 82 km WNW of Wroclaw Suspected Mining induced.*
PRU ***21*** *20:02:13.0, 51°.48N×16°.08E, h0^{km}*
UPP ***21*** *20:02:17.5±2.9, 51°.83N×15°.66E, h1^{km}, ML2.0*
ISC 21 20:02:11.3±0.8, **51°.54N**±0°.03×**16°.09E**±0°.02, **h0**^{km}, **n62**, σ**1^{s}.07**/114, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	0.71	170	*i* Pg	Pg	20 02 25.3	+0.4
KSP				*i* Sg	Sg	20 02 34.0	-0.1
UPC	**Upice**	1.04	183	*e*PG	Pg	20 02 31.1	0.0
UPC				*e*SG	Sg	20 02 44.0	-0.6
	comp=Z,120nm,0.6s						
UPC	**Upice**	1.04	183	Pg	Pg	20 02 31.1	0.0
UPC				Sg	Sg	20 02 44.0	-0.6
	120nm,0.6s						
DPC	**Dobruska-Polom**	1.20	173	*e*PG	Pg	20 02 34.1	-0.2
DPC				*e*SG	Sg	20 02 48.6	-1.3
	comp=Z,44nm,0.3s						
DPC	**Dobruska-Polom**	1.20	173	Pg	Pg	20 02 34.1	-0.2
DPC				Sg	Sg	20 02 48.6	-1.3
	44nm,0.3s						
PVCC	**Panska Ves**	1.40	224	*e*PG	Pg	20 02 37.9	-0.2
PVCC				*e*SG	Sn	20 02 57.1	-0.1
	comp=Z,94nm,0.3s						
PVCC	**Panska Ves**	1.40	224	Pg	Pg	20 02 37.9	-0.2
PVCC				Sg	Sn	20 02 57.1	-0.1
	94nm,0.3s						
BRG	**Berggiesshubel**	1.51	245	PN	Pn	20 02 38.9	-0.6
BRG				PG	Pb	20 02 40.4	+0.2
BRG				SG	Sb	20 03 00.0	+0.2
	60nm,0.5s						
KRLC	**Kraliky**	1.53	163	*e*PG	Pn	20 02 39.7	-0.3
KRLC				*e*SG	Sg	20 02 58.9	-1.6
	comp=Z,20nm,0.4s						
KRLC	**Kraliky**	1.53	163	Pg	Pn	20 02 39.7	-0.3
KRLC				Sg	Sg	20 02 58.9	-1.6
	20nm,0.4s						
PRA	**Prague**	1.81	216	*e*PN	Pn	20 02 43.3	-0.4
PRA	**Prague**	1.81	216	Pn	Pn	20 02 43.3	-0.4
GOPC	**GO Pecny, Ondr**	1.83	207	*e*PN	Pn	20 02 43.5	-0.5
GOPC				*e*PG	Pb	20 02 45.4	-0.2
GOPC	**GO Pecny, Ondr**	1.83	207	Pn	Pn	20 02 43.5	-0.5
PRU	**Pruhonice**	1.84	213	*e*PN	Pn	20 02 43.6	-0.5
PRU				*e*PG	Pb	20 02 45.2	-0.6
PRU				*e*SG	Sb	20 03 09.1	-0.3
	comp=Z,28nm,0.4s						
PRU	**Pruhonice**	1.84	213	Pn	Pn	20 02 43.6	-0.5
CLL	**Collm**	1.95	264	*e*Pn	Pn	20 02 45.0	-0.6
CLL				*e*Pg	Pb	20 02 48.0	+0.4
CLL				*e*Sg	Sg	20 03 14.0	+0.2
	comp=Z,24nm,0.3s						
MORC	**Moravsky Berou**	1.99	152	*e*Pn	Pn	20 02 46.2	-0.1
MORC				*e*Sg	Sb	20 03 13.0	-0.8
MORC	**Moravsky Berou**	1.99	152	*e*PN	Pn	20 02 46.2	-0.1
MORC				*e*SG	Sb	20 03 13.0	-0.8
OKC	**Ostrava-Krasne**	2.15	142	*e*PG	Pb	20 02 51.9	+0.8
OKC				*e*SG	Sg	20 03 19.2	-1.1
	comp=Z,26nm,0.6s						
OKC	**Ostrava-Krasne**	2.15	142	Pg	Pb	20 02 51.9	+0.8
OKC				Sg	Sg	20 03 19.2	-1.1
	comp=Z,26nm,0.6s						
CHZP	**Chorzow**	2.22	123	*e*Pg	Pg	20 02 56.3	+2.4
CHZP				*e*Sg	Sg	20 03 24.8	+2.1
VRAC	**Vranov**	2.26	172	*e*Pn	Pn	20 02 50.1	+0.2
VRAC				*e*Sg	Sb	20 03 22.0	+0.6
VRAC	**Vranov**	2.26	172	*e*PN	Pn	20 02 50.1	+0.2
VRAC				*e*SG	Sb	20 03 22.0	+0.6
KRUC	**Moravsky**	2.49	175	*e*Pn	Pn	20 02 53.4	+0.3
KRUC				*e*Sg	Sb	20 03 28.9	+0.8
KRUC	**Moravsky**	2.49	175	*e*PN	Pn	20 02 53.4	+0.3
KRUC				*e*SG	Sb	20 03 28.9	+0.8
NKC	**Novy Kostel**	2.65	242	*e*PN	Pn	20 02 55.7	+0.4
NKC				*e*PG	Pg	20 03 02.7	+0.6
NKC				*e*SG	Sg	20 03 38.6	+2.1
	comp=Z,28nm,0.3s						
NKC	**Novy Kostel**	2.65	242	Pn	Pn	20 02 55.7	+0.4
OJC	**Ojcow**	2.69	118	*e*Pg	Pg	20 03 03.5	+0.6
OJC				*e*Sg	Sg	20 03 37.7	-0.2
OJC	**Ojcow**	2.69	118	*e*Pg	Pg	20 03 03.5	+0.6
OJC				*e*Sg	Sg	20 03 37.7	-0.2
JAVC	**Velka Javorina**	2.87	159	*e*Pn	Pn	20 02 59.5	+1.1
JAVC				*e*Sg	Sg	20 03 43.3	-0.2
JAVC	**Velka Javorina**	2.87	159	*e*PN	Pn	20 02 59.5	+1.1
JAVC				*e*SG	Sg	20 03 43.3	-0.2
KHC	**Kasperske Hory**	2.90	215	*e*PN	Pn	20 02 58.5	-0.3
KHC				*e*PG	Pb	20 03 04.4	+0.5
KHC				*e*SN	Sn	20 03 33.2	-1.1
KHC				*e*SG	Sg	20 03 42.8	-1.6
	comp=Z,14nm,0.4s						
KHC	**Kasperske Hory**	2.90	215	Pn	Pn	20 02 58.5	-0.3
LANS	**Liptovska Anna**	3.23	137	*e*PG	Pg	20 03 13.3	+0.2
LANS				*e*SG	Sg	20 03 54.3	-0.6
LANS	**Liptovska Anna**	3.23	137	*e*Pg	Pg	20 03 13.3	+0.2
LANS				*e*Sg	Sg	20 03 54.3	-0.6
MODS	**Modra-Piesok**	3.26	166	*e*PG	Pg	20 03 13.5	-0.3
MODS				*e*SG	Sg	20 03 55.4	-0.7
MODS				*e*LG	Lg	20 04 05.1	
MODS	**Modra-Piesok**	3.26	166	*e*Pg	Pg	20 03 13.5	-0.3
MODS				*e*Sg	Sg	20 03 55.4	-0.7
VYHS	**Vyhne**	3.53	149	*e*PG	Pg	20 03 19.2	+0.3
VYHS				*e*SG	Sg	20 04 03.8	-0.7
VYHS				*e*LG	Lg	20 04 11.6	
VYHS	**Vyhne**	3.53	149	*e*Pg	Pg	20 03 19.2	+0.3
VYHS				*e*Sg	Sg	20 04 03.8	-0.7
CONA	**Conrad Observa**	3.62	182	*i* Pn	Pn	20 03 09.8	+1.1
	comp=Z,1.2nm,0.2s						
CONA				*e*Sn	Sn	20 03 52.3	+0.2
	comp=Z,12nm,0.4s						
CONA	**Conrad Observa**	3.62	182	Pn	Pn	20 03 09.8	+1.1
	comp=Z,1.2nm,0.2s						
CONA				Sn	Sn	20 03 52.3	+0.2
	comp=Z,12nm,0.4s						
BSD	**Bornholm Skovb**	3.65	349	*i* P	Pn	20 03 09.5	+0.5
BSD				*i* S	Sn	20 03 51.7	-1.0
BSD	**Bornholm Skovb**	3.65	349	*i* P	Pn	20 03 09.5	+0.5
BSD				*i* S	Sn	20 03 51.7	-1.0
MOA	**Molln**	3.88	198	*i* Pn	Pn	20 03 12.5	+0.3
	comp=Z,2.2nm,0.2s						
MOA				*i* Sn	Sn	20 03 59.1	+0.6
	comp=Z,1.3nm,0.2s						
MOA	**Molln**	3.88	198	Pn	Pn	20 03 12.5	+0.3
	comp=Z,2.2nm,0.2s						
MOA				Sn	Sn	20 03 59.1	+0.6
	comp=Z,1.3nm,0.2s						
ARSA	**Arzberg**	4.31	185	*e*Pn	Pn	20 03 19.0	+0.9
	comp=Z,0.5nm,0.2s						
ARSA				*e*Sn	Sn	20 04 10.3	+1.2
	comp=Z,0.5nm,0.2s						
ARSA	**Arzberg**	4.31	185	Pn	Pn	20 03 19.0	+0.9
	comp=Z,0.5nm,0.2s						
ARSA				Sn	Sn	20 04 10.3	+1.2
	comp=Z,0.5nm,0.2s						
BLEU	**Blekinge**	4.78	358	P	Pn	20 03 25.4	+0.9
BLEU				S	Sn	20 04 17.5	-3.0
BLEU	**Blekinge**	4.78	358	P	Pn	20 03 25.4	+0.9
BLEU				S	Sn	20 04 17.5	-3.0
DEL	**Delary**	5.11	346	P	Pn	20 03 29.0	0.0
DEL				S	Sn	20 04 25.3	-3.4
WTTA	**Wattenberg**	5.17	216	Sg	Sg	20 05 00.3	+2.9
	comp=Z,0.3nm,0.1s						
WTTA	**Wattenberg**	5.17	216	Sg	Sg	20 05 00.3	+2.9
	comp=Z,0.3nm,0.1s						
VXJU	**Vaexsjoe**	5.43	353	P	Pn	20 03 34.5	+1.0
VXJU				S	Sn	20 04 32.8	-3.9
VXJU	**Vaexsjoe**	5.43	353	P	Pn	20 03 34.5	+1.0
OSKU	**Oskarshamn**	5.67	0	P	Pn	20 03 37.8	+1.1
OSKU	**Oskarshamn**	5.67	0	P	Pn	20 03 37.8	+1.1
BYXU	**Byxelkrok**	5.79	5	P	Pn	20 03 39.6	+1.3
EKSU	**Eksjoe**	6.06	356	P	Pn	20 03 43.2	+1.1
EKSU	**Eksjoe**	6.06	356	P	Pn	20 03 43.2	+1.1
FKPU	**Falk**	6.77	349	P	Pn	20 03 52.5	+0.6
FKPU	**Falk**	6.77	349	P	Pn	20 03 52.5	+0.6

ISCJB ***21*** *20:14:35.2±0.5, 26°.98N±0°.05×53°.77E±0°.06, h19^{km}, mb3.6/16, MS3.1/3, Error ellipse: s-maj=10.1km s-min=4.1km az=44.0*
TEH ***21*** *20:14:36.6, 27°.13N×54°.08E, h10^{km}, ML3.4*
DSN ***21*** *20:14:38.1±1.0, 27°.28N×54°.18E, h15^{km}, ML3.5/7, Error ellipse: s-maj=14.3km s-min=4.8km az=12.0*
IDC ***21*** *20:14:39.0±2.4, 27°.03N×53°.93E, h44^{km}±26^{km}, mb3.4/16, mb1 3.6/20, mb1mx3.5/58, mbtmp3.7/20, ML3.2/4, MS3.1/3, Ms1 3.1/3, ms1mx2.5/44, Error ellipse: s-maj=19.5km s-min=13.0km az=36.0*
ISC 21 20:14:35.2±0.6, **26°.86N**±0°.07×**53°.88E**±0°.06, **h19**^{km}, **n51**, σ**1^{s}.49**/51, **mb3.6**/16, **MS2.9**/3, **Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHRM	**Jahrom**	1.66	351	*e*		20 15 29.9	
	comp=N,99nm,0.3s						
JHRM				*e*Pn	Pn	20 15 05.0	+1.5
JHRM				*e*		20 15 51.9	
	comp=Z,99nm,0.0s						
GENO	**Geno**	2.12	75	*e*Pn	Pn	20 15 10.9	+1.1
GENO				*e*		20 15 54.6	
	comp=Z,99nm,0.3s						
SHME	**Shamm**	2.19	111	*e*P	Pb	20 15 13.1	-1.1
	SNR=5.4						
SHME				S	Sb	20 15 40.9	0.0
SHME	**Shamm**	2.19	111	*e*Pn	Pb	20 15 13.1	-1.1
BANOM	**Banah**	2.37	113	P	Pb	20 15 15.9	-1.3
BANOM				S	Sb	20 15 45.1	-1.0
NAZ	**Nazwa, Dubai**	2.46	139	*e*P	Pg	20 15 20.7	-1.8
	SNR=17						
NAZ	**Nazwa, Dubai**	2.46	139	*e*Pn	Pg	20 15 20.7	-1.8
MSFE	**Esma-Masafi**	2.54	125	P	Pb	20 15 20.5	+0.3
MSFE	**Esma-Masafi**	2.54	125	*e*Pn	Pb	20 15 20.4	+0.2
ASUD	**Al Ashush, Dub**	2.58	149	*e*P	Pg	20 15 23.1	-1.7
	SNR=25						
ASUD	**Al Ashush, Dub**	2.58	149	*e*Pn	Pg	20 15 23.6	-1.2
NIAN	**Nian**	2.73	74	*e*Pn	Pn	20 15 19.1	+1.1
NIAN				*e*		20 16 14.6	
	comp=Z,99nm,0.2s						
UOSS	**Minazif**	2.83	132	*e*P	Pb	20 15 24.5	-0.7
	SNR=6.5						
HATD	**Hatta, Dubai**	2.87	134	P	Pb	20 15 25.9	0.0
HATD	**Hatta, Dubai**	2.87	134	*e*Pn	Pb	20 15 25.8	0.0
ASHO	**Ashiyiah**	2.92	137	P	Pb	20 15 26.3	-0.5
IPAR	**Pars**	3.06	346	*e*Pn	Pn	20 15 25.7	+2.8
IPAR				*e*		20 16 20.4	
	comp=Z,2µm,0.4s						
IPAR				*e*		20 16 20.7	
	comp=E,3µm,0.4s						
IPAR				*e*		20 16 22.6	
	comp=N,2µm,0.4s						
ALNE	**Al Ain**	3.26	148	*i* P	Pb	20 15 31.9	-0.7
	SNR=7.7						
ALNE	**Al Ain**	3.26	148	*e*Pn	Pb	20 15 31.9	-0.7

CHMN	Cheshme madani	4.40	46	*e*Pn	Pn	20 15 43.8	+2.4
CHMN				*e*		20 15 46.0	
	comp=Z,99nm,0.1s						
IMEH	Mehriz	4.56	8	*e*Pn	Pn	20 15 43.9	+0.4
IMEH				*e*		20 16 40.4	
	comp=Z,342nm,0.3s						
IMEH				*e*		20 16 54.9	
	comp=N,486nm,0.3s						
KLNJ	Kolanjah	4.59	335	*e*Pn	Pn	20 15 45.5	+1.5
KLNJ				*e*		20 17 10.4	
	comp=Z,99nm,0.3s						
ISAD	Sadrabad	5.04	358	*e*Pn	Pn	20 15 51.4	+1.3
ISAD				*e*		20 15 54.5	
	comp=Z,493nm,0.1s						
ISAD				*e*		20 16 47.8	
	comp=N,587nm,0.2s						
IRAM	Ramesheh	5.10	346	*e*Pn	Pn	20 15 52.3	+1.4
IRAM				*e*		20 15 57.1	
	comp=Z,198nm,0.3s						
IRAM				*e*		20 16 52.3	
	comp=E,271nm,0.1s						
IRAM				*e*		20 16 56.5	
	comp=N,361nm,0.3s						
ICHK	Chekchek	5.39	5	*e*	Pn	20 15 59.2	+4.4
	comp=Z,292nm,0.2s						
ICHK				*e*		20 17 12.7	
	comp=N,281nm,0.3s						
WSAR	Wadi Sarin	5.62	129	P	Pn	20 16 01.7	+3.9
	comp=N,1.2nm,0.3s,baz=315,slow=7.7,SNR=26						
WSAR				S	Sn	20 17 04.9	+3.0
	comp=N,1.2nm,0.3s,baz=141,slow=19,SNR=5.6						
IGAR	Gharneh	5.75	344	*e*	Pn	20 16 05.2	+5.3
	comp=Z,229nm,0.1s						
IGAR				*e*		20 17 07.1	
	comp=N,376nm,0.2s						
IZEF	Zefreh	6.17	348	*e*		20 16 14.0	
	comp=Z,93nm,0.1s						
IZEF				*e*Pn	Pn	20 16 05.1	-0.5
IZEF				*e*		20 17 17.3	
	comp=N,131nm,0.1s						
IZEF				*e*		20 17 24.7	
	comp=E,107nm,0.2s						
ANAR	Anarak	6.31	359	*e*Pn	Pn	20 16 07.3	-0.2
ANAR				*e*		20 17 21.1	
	comp=Z,99nm,0.2s						
GNI	Garni	15.28	332	P	Pn	20 18 10.4	+0.4
	comp=Z,0.6nm,0.3s,baz=135,slow=11,SNR=2.2						
KBZ	Khabaz	19.04	335	P	Pn	20 18 57.6	+0.7
	comp=Z,0.1nm,0.3s,baz=141,slow=6.5,SNR=2.1						
KVAR	Kislovodsk Arr	19.31	335	P	Pn	20 19 00.3	0.0
	baz=143,slow=20,SNR=4.0						
BRTR	Keskin Array B	21.17	312	P	P	20 19 20.1	+0.5
	comp=Z,0.9nm,0.8s,baz=134,slow=11,SNR=4.5						
AKTO	Aktyubinsk	23.76	7	P	P	20 19 45.7	-0.6
	comp=Z,1.2nm,0.4s,baz=186,slow=9.2,SNR=4.2						
AKTO				LR	LR	20 30 49.0	
	comp=Z,23nm,18.7s,baz=122,slow=41						
BVAR	Borovoye Array	28.90	21	P	P	20 20 33.3	+0.5
	comp=Z,1.1nm,0.5s,baz=225,slow=7.3,SNR=8.9						
BVAR				PcP	PcP	20 23 43.5	+1.9
	comp=Z,0.4nm,0.7s,baz=273,slow=2.6,SNR=3.0						
MKAR	Makanchi Array	29.96	41	P	P	20 20 41.4	-0.9
	comp=Z,0.3nm,0.5s,baz=227,slow=9.7,SNR=2.6						
KURBB	Kurchatov Arra	30.28	32	P	P	20 20 43.1	-1.9
	comp=Z,0.4nm,0.6s,baz=233,slow=8.3,SNR=4.1						
ZALV	Zalesovo Beam	35.38	32	P	P	20 21 27.4	-2.1
	comp=Z,1.9nm,0.7s,baz=243,slow=8.9,SNR=6.2						
GERES	GERESS Array B	37.98	316	P	P	20 21 50.1	-1.8
	comp=Z,0.1nm,0.2s,baz=201,slow=40,SNR=2.1						
FINES	FINESS Array B	39.30	339	P	P	20 22 02.4	-0.3
	comp=Z,1.6nm,0.8s,baz=142,slow=9.6,SNR=7.2						
HFS	Hagfors	43.06	332	P	P	20 22 32.9	-0.7
	comp=Z,0.8nm,0.5s,baz=137,slow=9.6,SNR=5.2						
OPO	Ambohidratompo	45.62	189	LR	LR	20 39 50.3	
	comp=Z,93nm,19.9s,baz=240,slow=33						
SONM	Songino Array	45.71	48	P	P	20 22 55.2	0.0
	comp=Z,0.5nm,0.8s,baz=254,slow=10,SNR=3.3						
ARCES	ARCESS Array B	45.80	347	P	P	20 22 55.0	-0.5
	comp=Z,1.4nm,0.7s,baz=149,slow=9.0,SNR=4.0						
ESDC	Sonseca Array	49.25	300	P	P	20 23 23.1	+0.3
	comp=Z,0.2nm,0.4s,baz=74,slow=8.0,SNR=3.7						
EKA	Eskdalemuir Ar	49.72	321	P	P	20 23 25.0	-1.0
	comp=Z,0.2nm,0.4s,baz=104,slow=8.8,SNR=3.5						
MDT	Midelt	50.54	292	LR	LR	20 49 22.7	
	comp=Z,11nm,18.9s,baz=190,slow=41						
TORD	Torodi Ar. Bea	50.57	265	P	P	20 23 34.0	+1.1
	comp=Z,0.3nm,0.5s,baz=59,slow=7.7						
MJAR	Matsushiro Arr	70.28	58	PP	PP	20 28 24.1	+1.1
	comp=Z,0.3nm,0.3s,baz=288,slow=14,SNR=5.8						
WRA	Warramunga Arr	90.75	112	P	P	20 27 38.5	+1.1
	comp=Z,0.3nm,0.7s,baz=310,slow=4.2,SNR=3.4						
ASAR	Alice Springs	92.15	115	P	P	20 27 44.8	+0.9
	comp=Z,0.3nm,0.7s,baz=299,slow=5.2,SNR=3.8						

IDC 21 20:24:55.2±1.5**,25°.64N×109°.84W,h0^{km},mb1 3.5**/4**,**
mb1mx3.4/53**,mbtmp3.1**/4**,ML3.4**/4**,Error ellipse:**
s-maj=27.7km s-min=10.9km az=110.0,Gulf of California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LPIG	La Paz	1.59	196	Pg	Pn	20 25 24.8	+0.2
	14nm,0.3s,baz=10,slow=0.9,SNR=18						
LPIG				Lg	Lg	20 25 44.6	
	38nm,0.3s,baz=287,slow=1.6,SNR=6.4						
TXAR	Lajitas Array	6.60	55	Pn	Pn	20 26 33.8	+0.1
	0.1nm,0.3s,baz=234,slow=12,SNR=4.0						
TXAR				Lg	Lg	20 28 24.1	
	0.9nm,0.3s,baz=246,slow=26,SNR=4.9						
ANMO	Albuquerque	9.72	17	Pn	Pn	20 27 17.4	+0.8
	0.1nm,0.3s,baz=197,slow=16,SNR=3.6						
ANMO				Lg	Lg	20 30 00.3	
	0.1nm,0.3s,baz=311,slow=20,SNR=4.3						
NVAR	Mina Array Bea	14.62	333	Pn	P	20 28 27.3	-2.9
	0.1nm,0.3s,baz=163,slow=11,SNR=5.2						
PDAR	Pinedale Array	17.09	1	P	Pn	20 28 54.0	-1.8
	0.1nm,0.3s,baz=183,slow=9.6,SNR=4.7						
PDAR				Lg	Lg	20 33 52.9	
	0.1nm,0.3s,baz=199,slow=13,SNR=2.1						

GII ***21*** *20:44:22.4±0.2, 36°.63N×26°.96E, h160^{km}*

HLW ***21*** *20:44:22.0, 36°.62N×27°.00E, h10^{km}±18^{km}, Ml4.3*

ISCJB ***21*** *20:44:25.3±0.1, 36°.62N±0°.02×27°.01E±0°.02, h159^{km}±1^{km}, mb4.1/13, Error ellipse: s-maj=3.2km s-min=2.1km az=15.5*

CSEM ***21*** *20:44:26.1±0.1, 36°.63N×27°.01E, h153^{km}±1^{km}, ML3.8, Error ellipse: s-maj=3.4km s-min=2.3km az=2.0*

ATH ***21*** *20:44:26.7, 36°.63N×26°.92E, h142^{km}±3^{km}, ML3.9/8, Error ellipse: s-maj=3.9km s-min=1.2km az=138.0*

IDC ***21*** *20:44:26.5±1.7, 36°.60N×26°.90E, h156^{km}±19^{km}, mb3.4/10, mb1 3.4/17, mb1mx3.2/58, mbtmp3.8/17, Error ellipse: s-maj=16.1km s-min=12.4km az=175.0*

ISK ***21*** *20:44:28.9, 36°.66N×26°.94E, h110^{km}±3^{km}, ML3.8/10*

NIC ***21*** *20:44:28.0±0.2, 36°.33N×27°.24E, h150^{km}, mb4.4, ML3.9*

NEIC ***21*** *20:44:29.3±0.0, 36°.63N×26°.97E, h160^{km}, mb3.9/12, ML4.2(THE), After THE.*

THE ***21*** *20:44:29.3, 36°.63N×26°.97E, h160^{km}±3^{km}, ML4.2/2, Error ellipse: s-maj=3.0km s-min=0.9km az=63.0*

DDA ***21*** *20:45:13.1, 36°.32N×26°.19E, h102^{km}, Ml4.2*

ISC 21 20:44:26.3±0.6**,36°.61N**±0°.03×**26°.99E**±0°.03**,h150**^{km}±5^{km}**,**
n367,σ1^{s}.49/431**,mb3.9**/13**,Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAT	Datca	0.49	76	PG	Pn	20 44 48.0	+0.2
DAT	Datca	0.49	76	*e*Pg	Pn	20 44 48.0	+0.2
BODT	Bodrum	0.52	30	PG	Pn	20 44 47.4	-0.4
BODT	Bodrum	0.52	30	*e*Pn	Pn	20 44 47.8	0.0
BODT	Bodrum	0.52	30	P	Pn	20 44 47.8	0.0
BODT				S	Sn	20 45 02.8	-1.4
BODT	Bodrum	0.52	30	*e*Pg	Pn	20 44 47.4	-0.4
BODT	Bodrum	0.52	30	P	Pn	20 44 47.8	0.0
BODT				S	Sn	20 45 02.8	-1.4
DATC	Datca-Mugla	0.56	75	PG	Pn	20 44 47.6	-0.4
DATC	Datca-Mugla	0.56	75	*e*Pg	Pn	20 44 47.6	-0.4
AMGA	Amorgos Island	0.90	284	P	Pn	20 44 50.9	+0.6
AMGA	Amorgos Island	0.90	284	P	Pn	20 44 50.4	+0.1
MLSB	Milas	0.93	43	PG	Pn	20 44 50.9	+0.3
MLSB	Milas	0.93	43	*e*Pg	Pn	20 44 50.9	+0.3
MRSB	Marmaris-Mugla	0.98	84	PG	Pn	20 44 51.2	+0.3
MRSB	Marmaris-Mugla	0.98	84	*e*Pg	Pn	20 44 51.2	+0.3
ARG	Arkhangelos	1.00	113	PG	Pn	20 44 51.8	+0.7
ARG	Arkhangelos	1.00	113	P	Pn	20 44 52.7	+1.6
ARG				S	Sn	20 45 09.5	-0.5
ARG				AML	AML	20 45 10.9	
	comp=N,8024µm,0.3s						
ARG				AML	AML	20 45 12.8	
	comp=E,14120µm,0.4s						
ARG	Arkhangelos	1.00	113	*e*Pn	Pn	20 44 52.1	+1.0
ARG	Arkhangelos	1.00	113	P	Pn	20 44 52.1	+1.0
ARG				S	Sn	20 45 09.4	-0.6
ARG	Arkhangelos	1.00	113	*e*Pg	Pn	20 44 51.8	+0.7
ARG	Arkhangelos	1.00	113	P	Pn	20 44 52.1	+1.0
ARG				S	Sn	20 45 09.8	-0.2
KARP	Karpathos	1.07	172	PN	Pn	20 44 51.9	+0.1
KARP	Karpathos	1.07	172	P	Pn	20 44 52.6	+0.8
KARP				S	Sn	20 45 10.1	-1.1
KARP				AML	AML	20 45 14.5	
	comp=N,9153µm,0.2s						
KARP				AML	AML	20 45 14.7	
	comp=E,7941µm,0.2s						
KARP	Karpathos	1.07	172	*e*Pn	Pn	20 44 52.4	+0.5
KARP				*e*Sn	Sn	20 45 05.3	-5.9
KARP	Karpathos	1.07	172	P	Pn	20 44 52.3	+0.5
KARP				S	Sn	20 45 09.6	-1.6
KARP	Karpathos	1.07	172	*e*Pn	Pn	20 44 51.9	+0.1
KARP	Karpathos	1.07	172	P	Pn	20 44 52.3	+0.5
KARP				S	Sn	20 45 10.4	-0.8
SMG	Samos	1.10	354	P	Pn	20 44 51.5	-0.5
SMG	Samos	1.10	354	P	Pn	20 44 51.7	-0.3
SMG	Samos	1.10	354	P	Pn	20 44 51.7	-0.3
SMG	Samos	1.10	354	P	Pn	20 44 51.7	-0.3
GCAM	G?zelcaml?	1.10	10	PG	Pn	20 44 51.6	-0.4
GCAM	G?zelcaml?	1.10	10	*e*Pg	Pn	20 44 51.6	-0.4
YER	Yerkesik	1.16	63	PN	Pn	20 44 53.1	+0.5
YER	Yerkesik	1.16	63	P	Pn	20 44 53.4	+0.8
YER	Yerkesik	1.16	63	*e*Pn	Pn	20 44 53.1	+0.5
YER	Yerkesik	1.16	63	P	Pn	20 44 53.4	+0.8
APE	Apeiranthos	1.25	292	PN	Pn	20 44 52.8	-0.6
APE	Apeiranthos	1.25	292	P	Pn	20 44 54.1	+0.7
APE	Apeiranthos	1.25	292	P	Pn	20 44 53.7	+0.3
APE				S	Sn	20 45 12.9	-1.3
APE	Apeiranthos	1.25	292	*e*Pn	Pn	20 44 52.8	-0.6
APE	Apeiranthos	1.25	292	P	Pn	20 44 53.7	+0.3
APE				S	Sn	20 45 12.9	-1.3
SANT	Santorini	1.25	259	PN	Pn	20 44 53.4	0.0
SANT	Santorini	1.25	259	*e*Pn	Pn	20 44 53.9	+0.5
SANT				*e*Sn	Sn	20 45 19.1	+5.0
SANT	Santorini	1.25	259	*e*Pn	Pn	20 44 53.9	+0.5
SANT				*e*Sn	Sn	20 45 19.1	+5.0
AYDN	Tasoluk	1.27	34	*i* P	Pn	20 44 54.0	+0.4
AYDN				*i* S	Sn	20 45 13.6	-0.9
AYDN	Tasoluk	1.27	34	P	Pn	20 44 54.0	+0.4
AYDN				S	Sn	20 45 13.6	-0.9
THR3	Thira Island,	1.29	261	P	Pn	20 44 54.2	+0.4
THR3	Thira Island,	1.29	261	P	Pn	20 44 54.2	+0.4
THR6	Thira Island,	1.30	259	*e*Pn	Pn	20 44 54.6	+0.7
THR6	Thira Island,	1.30	259	P	Pn	20 44 54.6	+0.7
THR6	Thira Island,	1.30	259	P	Pn	20 44 54.6	+0.7
TURN	Turunc	1.33	78	PG	Pn	20 44 51.7	-2.4
TURN	Turunc	1.33	78	*i* P	Pn	20 44 51.7	-2.4
TURN				*i* S	Sn	20 45 09.2	-6.1
TURN	Turunc	1.33	78	P	Pn	20 44 51.7	-2.4
THR5	Thira Island,	1.33	262	P	Pn	20 44 55.4	+1.2
THR5	Thira Island,	1.33	262	P	Pn	20 44 55.4	+1.2
DALY	Dalyan (Mu˜la	1.36	81	PN	Pn	20 44 55.6	+1.2
DALY				SN	Sn	20 45 14.6	-1.2
DALY	Dalyan (Mu˜la	1.36	81	*i* P	Pn	20 44 55.3	+0.9
DALY				*i* S	Sn	20 45 15.7	-0.1
DALY	Dalyan (Mu˜la	1.36	81	P	Pn	20 44 55.3	+0.9
DALY	Dalyan (Mu˜la	1.36	81	*e*Pn	Pn	20 44 55.6	+1.2
DALY				*e*Sn	Sn	20 45 14.6	-1.2
DALY				S		20 45 15.7	
IOSP	Ios island	1.37	275	P	Pn	20 44 55.6	+1.0
IOSP	Ios island	1.37	275	P	Pn	20 44 54.9	+0.4
IOSP				S	Sn	20 45 15.6	-0.5
IOSP	Ios island	1.37	275	P	Pn	20 44 54.9	+0.4
IOSP				S	Sn	20 45 15.6	-0.5
AYDB	Zeytinkoy-Aydi	1.52	28	PN	Pn	20 44 56.4	+0.2
AYDB	Zeytinkoy-Aydi	1.52	28	*e*Pn	Pn	20 44 56.4	+0.2
ZKR	Zakros	1.62	203	P	Pn	20 44 58.6	+1.5
ZKR				S	Sn	20 45 22.2	+1.4
ZKR				AML	AML	20 45 23.1	
	comp=E,6577µm,0.4s						
ZKR				AML	AML	20 45 23.7	
	comp=N,1735µm,0.3s						
ZKR	Zakros	1.62	203	P	Pn	20 44 58.7	+1.5
ZKR	Zakros	1.62	203	P	Pn	20 44 58.2	+1.0
ZKR				S	Sn	20 45 21.3	+0.5
FETY	Fethiye	1.69	89	PN	Pn	20 44 59.0	+1.1
FETY				SN	Sn	20 45 21.4	-0.8
FETY	Fethiye	1.69	89	P	Pn	20 44 58.5	+0.6
FETY	Fethiye	1.69	89	P	Pn	20 44 58.5	+0.6
FETY	Fethiye	1.69	89	*e*Pn	Pn	20 44 59.0	+1.1
FETY				S	Sn	20 45 21.4	-0.8
NPS	Neapolis	1.75	220	P	Pn	20 44 59.0	+0.4
NPS				S	Sn	20 45 22.0	-1.3
NPS				AML	AML	20 45 23.8	
	comp=E,4822µm,0.2s						
NPS				AML	AML	20 45 25.7	
	comp=N,3716µm,0.3s						
NPS	Neapolis	1.75	220	P	Pn	20 44 58.9	+0.3
NPS	Neapolis	1.75	220	P	Pn	20 44 58.9	+0.3
NPS	Neapolis	1.75	220	P	Pn	20 44 59.0	+0.4
NPS				S	Sn	20 45 22.3	-1.0
TAVA	DENIZLI_Tavas	1.76	61	*i* P	Pn	20 44 59.3	+0.5
TAVA				*i* S	Sn	20 45 22.2	-1.6
TAVA	DENIZLI_Tavas	1.76	61	P	Pn	20 44 59.3	+0.5
TAVA				S	Sn	20 45 22.2	-1.6
BLCB	Balcova	1.77	1	PN	Pn	20 44 58.7	-0.1
BLCB	Balcova	1.77	1	*e*Pn	Pn	20 44 58.7	-0.1
URLA	Izmir	1.77	350	PN	Pn	20 44 58.3	-0.6
URLA	Izmir	1.77	350	*e*Pn	Pn	20 44 58.3	-0.6
LAST	Lasithi	1.90	221	P	Pn	20 45 00.6	+0.2
LAST				S	Sn	20 45 25.1	-1.3
LAST				AML	AML	20 45 27.2	
	comp=E,1215µm,0.2s						
LAST				AML	AML	20 45 27.9	
	comp=N,1808µm,0.4s						
LAST	Lasithi	1.90	221	*e*Pn	Pn	20 45 00.6	+0.2
LAST	Lasithi	1.90	221	P	Pn	20 45 00.6	+0.2
LAST	Lasithi	1.90	221	P	Pn	20 45 00.7	+0.3
LAST				S	Sn	20 45 25.4	-1.0
CHOS	Chios island	1.92	338	PN	Pn	20 45 01.2	+0.6
CHOS	Chios island	1.92	338	P	Pn	20 45 00.7	+0.2
CHOS	Chios island	1.92	338	P	Pn	20 45 00.8	+0.2
CHOS	Chios island	1.92	338	P	Pn	20 45 00.8	+0.2
CHOS	Chios island	1.92	338	P	Pn	20 45 00.8	+0.2
CHOS	Chios island	1.92	338	*e*Pn	Pn	20 45 01.2	+0.6
DNZL	Cakiroluk	1.97	56	*i* P	Pn	20 45 01.7	+0.5
DNZL				*i* S	Sn	20 45 27.4	-0.7
DNZL	Cakiroluk	1.97	56	P	Pn	20 45 01.7	+0.5
DNZL				S	Sn	20 45 27.4	-0.7
DENT	Denizli	1.99	55	PN	Pn	20 45 01.8	+0.4
DENT	Denizli	1.99	55	*e*Pn	Pn	20 45 01.8	+0.4
IACM	Heraklion	2.03	231	P	Pn	20 45 02.6	+0.8
IACM				S	Sn	20 45 27.0	-1.9
IACM	Heraklion	2.03	231	P	Pn	20 45 02.4	+0.6
IACM				S	Sn	20 45 27.6	-1.3
AKAS	Kas	2.15	99	PN	Pn	20 45 04.8	+1.5
AKAS	Kas	2.15	99	*i* P	Pn	20 45 04.2	+0.9
AKAS				*i* S	Sn	20 45 31.9	+0.2
AKAS	Kas	2.15	99	P	Pn	20 45 04.2	+0.9
AKAS	Kas	2.15	99	*e*Pn	Pn	20 45 04.8	+1.5
AKAS				S	Sn	20 45 31.9	+0.2
KSL	Kastellorizon	2.15	102	P	Pn	20 45 03.5	+0.3
KSL				AML	AML	20 45 33.3	
	comp=E,3446µm,0.4s						
KSL				AML	AML	20 45 33.6	
	comp=N,1824µm,0.3s						
KSL	Kastellorizon	2.15	102	P	Pn	20 45 04.1	+0.9
GOLH	Golhisar	2.16	72	*i* P	Pn	20 45 04.8	+1.4
GOLH				*i* S	Sn	20 45 30.1	-1.8
GOLH	Golhisar	2.16	72	P	Pn	20 45 04.8	+1.4
GOLH				S	Sn	20 45 30.1	-1.8
MANT	Manisa	2.25	33	*e*Pn	Pn	20 45 04.8	+0.1
MANT	Manisa	2.25	33	*e*Pn	Pn	20 45 04.8	+0.1
KULA	Kula-Manisa	2.32	35	PN	Pn	20 45 05.3	0.0
KULA	Kula-Manisa	2.32	35	*e*Pn	Pn	20 45 05.3	0.0
ELL	Elmali	2.35	86	PN	Pn	20 45 07.1	+1.3
ELL	Elmali	2.35	86	*e*Pn	Pn	20 45 07.1	+1.3
SIVA	Sivas	2.38	229	P	Pn	20 45 07.3	+1.4
SIVA				S	Sn	20 45 37.3	+0.9
SIVA	Sivas	2.38	229	P	Pn	20 45 07.1	+1.1
SIVA	Sivas	2.38	229	P	Pn	20 45 07.1	+1.1
SIVA	Sivas	2.38	229	P	Pn	20 45 07.0	+1.1
SIVA				S	Sn	20 45 36.5	+0.1
DKL	Dikili	2.46	359	PN	Pn	20 45 06.9	0.0
DKL	Dikili	2.46	359	*e*Pn	Pn	20 45 06.9	0.0
VAM	Vamos	2.56	243	P	Pn	20 45 08.1	0.0
VAM				S	Sn	20 45 38.8	-1.6
VAM				AML	AML	20 45 39.8	
	comp=E,1219µm,0.2s						
VAM				AML	AML	20 45 41.7	
	comp=N,1857µm,0.2s						
VAM	Vamos	2.56	243	P	Pn	20 45 08.4	+0.2
VAM	Vamos	2.56	243	P	Pn	20 45 08.4	+0.2
VAM	Vamos	2.56	243	P	Pn	20 45 08.4	+0.2
VAM				S	Sn	20 45 39.2	-1.2
CHAN	Chania	2.62	246	P	Pn	20 45 09.5	+0.6
CHAN	Chania	2.62	246	P	Pn	20 45 09.5	+0.6
IMMV	Iera Moni Meta	2.69	246	P	Pn	20 45 10.1	+0.2
IMMV				S	Sn	20 45 40.6	-2.7
IMMV				AML	AML	20 45 43.5	
	comp=N,1380µm,0.2s						
IMMV				AML	AML	20 45 46.4	
	comp=E,1417µm,0.4s						
IMMV	Iera Moni Meta	2.69	246	P	Pn	20 45 10.3	+0.5
IMMV	Iera Moni Meta	2.69	246	P	Pn	20 45 10.3	+0.5
IMMV				S	Sn	20 45 41.5	-1.9
KORT	Korkueli	2.73	81	PN	Pn	20 45 12.6	+2.2
KORT	Korkueli	2.73	81	*i* P	Pn	20 45 12.1	+1.7
KORT				*i* S	Sn	20 45 45.8	+1.4
KORT	Korkueli	2.73	81	P	Pn	20 45 12.1	+1.7
KORT	Korkueli	2.73	81	*e*Pn	Pn	20 45 12.6	+2.2
KORT				S	Sn	20 45 45.8	+1.4
SIGR	SIGRI	2.75	341	PN	Pn	20 45 11.2	+0.8
SIGR	SIGRI	2.75	341	*e*Pn	Pn	20 45 11.2	+0.8
SIMA	Simav-Kutahya	2.93	32	PN	Pn	20 45 13.2	+0.3
SIMA	Simav-Kutahya	2.93	32	*e*Pn	Pn	20 45 13.2	+0.3
GVDS	Gavdos	2.94	234	P	Pn	20 45 14.4	+1.4
GVDS	Gavdos	2.94	234	P	Pn	20 45 14.4	+1.4
GVD	Gavdhos	2.95	234	P	Pn	20 45 14.0	+1.0
GVD	Gavdhos	2.95	234	P	Pn	20 45 14.0	+1.0
ANKY	Antikythira Is	3.07	257	P	Pn	20 45 14.2	-0.3
ANKY	Antikythira Is	3.07	257	P	Pn	20 45 14.9	+0.4
ANKY	Antikythira Is	3.07	257	P	Pn	20 45 14.8	+0.3
ISP	Isparta	3.07	66	*e*Pn	Pn	20 45 12.7	-2.0
ISP				*e*Sn	Sn	20 45 46.7	-5.4
ISP	Isparta	3.07	66	*e*Pn	Pn	20 45 12.7	-2.0
DID	Didima	3.13	288	P	Pn	20 45 15.8	+0.4
DID	Didima	3.13	288	P	Pn	20 45 15.9	+0.6
KYTH	Kithira	3.19	265	P	Pn	20 45 16.8	+0.7
KYTH	Kithira	3.19	265	P	Pn	20 45 16.9	+0.7
VLI	Veliai	3.26	273	P	Pn	20 45 16.6	-0.3
VLI	Veliai	3.26	273	P	Pn	20 45 17.1	+0.2
TVSB	Tavsanli	3.44	34	PN	Pn	20 45 20.0	+0.6
TVSB	Tavsanli	3.44	34	*e*Pn	Pn	20 45 20.0	+0.6
DYR	Agios Nikonas	3.74	274	P	Pn	20 45 25.8	+2.5
DYR	Agios Nikonas	3.74	274	P	Pn	20 45 24.9	+1.7
VLX	Vlachokerasia	3.76	283	P	Pn	20 45 24.7	+1.1
VLX	Vlachokerasia	3.76	283	P	Pn	20 45 24.6	+1.0
TRIP	Tripoli	3.88	285	P	Pn	20 45 27.1	+2.1
TRIP	Tripoli	3.88	285	P	Pn	20 45 26.5	+1.5
GUR	Goura	3.93	291	P	Pn	20 45 27.9	+2.1
GUR	Goura	3.93	291	P	Pn	20 45 27.3	+1.5
ITM	Ithomi	4.09	279	P	Pn	20 45 29.5	+1.7
ITM	Ithomi	4.09	279	*e*Pn	Pn	20 45 28.8	+1.0
ITM				*e*Sn	Sn	20 46 14.8	-0.7
ITM	Ithomi	4.09	279	*e*Pn	Pn	20 45 28.8	+1.0
ITM	Ithomi	4.09	279	P	Pn	20 45 29.2	+1.4
ITM				*e*Sn	Sn	20 46 14.9	-0.7
PYL	PYLOS	4.22	275	P	Pn	20 45 28.2	-1.2
PYL	PYLOS	4.22	275	P	Pn	20 45 29.4	0.0
LAKA	Lakka	4.30	294	P	Pn	20 45 32.0	+1.5
LAKA	Lakka	4.30	294	P	Pn	20 45 31.8	+1.2
SERG	Sergoula	4.31	296	P	Pn	20 45 32.4	+1.8
SERG	Sergoula	4.31	296	P	Pn	20 45 32.1	+1.5
ALN	Alexandroupoli	4.34	351	*e*Pn	Pn	20 45 31.0	0.0
ALN	Alexandroupoli	4.34	351	*e*Pn	Pn	20 45 31.0	0.0
AGG	Agios Georgios	4.40	305	*e*Pn	Pn	20 45 33.6	+1.8
AGG	Agios Georgios	4.40	305	*e*Pn	Pn	20 45 33.6	+1.8
EFP	Efpalio	4.43	296	P	Pn	20 45 34.4	+2.3
EFP	Efpalio	4.43	296	P	Pn	20 45 33.8	+1.7
AKMC	Akamas	4.62	108	P	Pn	20 45 34.4	-0.4
	baz=288						
AKMC	Akamas	4.62	108	P	Pn	20 45 34.4	-0.4
RLS	Riolos of Patr	4.63	290	P	Pn	20 45 39.1	+4.4
RLS	Riolos of Patr	4.63	290	P	Pn	20 45 37.6	+2.8
PPCY	Paphos	4.69	110	P	Pn	20 45 34.8	-0.8
	baz=290						
PPCY	Paphos	4.69	110	P	Pn	20 45 34.8	-0.8
ALFC	Alefka	4.78	106	P	Pn	20 45 36.6	-0.3
	baz=286						
ALFC				S	Sn	20 46 30.3	-1.6
ALFC	Alefka	4.78	106	P	Pn	20 45 36.6	-0.3
ALFC				S	Sn	20 46 30.3	-1.6
LIT	Litokhoron	4.96	316	*e*Pn	Pn	20 45 40.4	+1.2
LIT	Litokhoron	4.96	316	*e*Pn	Pn	20 45 40.4	+1.2
SZAC	Souni	5.14	109	P	Pn	20 45 41.4	-0.3
	baz=290						
SZAC				S	Sn	20 46 38.8	-1.7
SZAC	Souni	5.14	109	P	Pn	20 45 41.4	-0.3
SZAC				S	Sn	20 46 38.8	-1.7
DSL	Palaion Diasel	5.29	300	P	Pn	20 45 46.7	+3.1
DSL	Palaion Diasel	5.29	300	P	Pn	20 45 45.9	+2.3
CSS	Mathiatis	5.41	106	*e*Pn	Pn	20 45 44.4	-0.8
CSS				*e*Sn	Sn	20 46 44.7	-2.1
CSS	Mathiatis	5.41	106	P	Pn	20 45 44.6	-0.6
CSS	Mathiatis	5.41	106	P	Pn	20 45 45.6	+0.4
	baz=287						
CSS	Mathiatis	5.41	106	Pn	Pn	20 45 44.3	-0.9
CSS	Mathiatis	5.41	106	P	Pn	20 45 44.6	-0.6
CSS				*e*Sn	Sn	20 46 44.7	-2.1
LKD2	Lefkada island	5.47	295	P	Pn	20 45 46.1	+0.2
LKD2	Lefkada island	5.47	295	P	Pn	20 45 46.8	+0.9
ANTO	Ankara	5.61	53	*e*Pn	Pn	20 45 46.3	-1.5
ANTO	Ankara	5.61	53	*e*Pn	Pn	20 45 46.3	-1.5
FNA	Florina	6.05	315	*e*Pn	Pn	20 45 55.2	+1.6
FNA	Florina	6.05	315	*e*Pn	Pn	20 45 55.2	+1.6
BR131	Keskin Array S	6.09	57	*e*Pn	Pn	20 45 53.5	-0.9
BR131	Keskin Array S	6.09	57	*e*Pn	Pn	20 45 53.5	-0.9
BRTR	Keskin Array B	6.09	57	P	Pn	20 45 54.5	+0.1
	comp=E,0.2nm,0.3s,baz=226,slow=15,SNR=8.8						
BRTR				S	Sn	20 47 07.5	+4.3
	comp=E,0.3nm,0.3s,baz=228,slow=27,SNR=7.0						
SGD	Sagiada	6.11	301	P	Pn	20 45 54.3	-0.1
SGD	Sagiada	6.11	301	P	Pn	20 45 55.3	+0.9
VTS	Vitosha	6.64	335	*e*Pn	Pn	20 46 04.2	+2.5
ILGA	Ilgaz	6.87	48	*e*Pn	Pn	20 46 03.4	-1.4
ILGA	Ilgaz	6.87	48	*e*Pn	Pn	20 46 03.4	-1.4
HNTI	Hanita	7.60	115	Pn	Pn	20 46 13.5	-0.8
BLGI	Bet Lehem HaGe	7.79	117	Pn	Pn	20 46 16.4	-0.5
MMA0B	Mount Meron ar	7.80	115	Pn	Pn	20 46 16.4	-0.7
MMAI	Mount Meron Ar	7.80	115	P	Pn	20 46 16.5	-0.6
	comp=E,26nm,0.3s,baz=304,slow=12,SNR=94						
MMAI				S	Sn	20 47 39.6	-4.4
	comp=E,9.0nm,0.3s,baz=304,slow=29,SNR=7.0						
KOT	Kottamia	7.80	147	AMP		20 47 00.0	
	baz=147						
SHBL	Chebaa	7.89	112	*e*P	Pn	20 46 18.1	-0.3
RCY	Rachaya	7.89	111	*e*P	Pn	20 46 17.7	-0.7
HHAG	Hagoal	7.90	146	P	Pn	20 46 17.4	-1.1
	baz=145						
HHAG				S	Sn	20 47 41.9	-4.6
	baz=145						
HHAG	Hagoal	7.90	146	P	Pn	20 46 17.4	-1.1
KSDI	Kefar Szold	7.90	113	Pn	Pn	20 46 17.5	-0.9
NATI	Neve Ativ	7.92	112	Pn	Pn	20 46 18.2	-0.5
RSH		7.95	133	P	Pn	20 46 18.5	-0.6
	baz=133						
RSH		7.95	133	P	Pn	20 46 18.5	-0.6
SLTI	Sal’it	7.96	121	Pn	Pn	20 46 18.2	-0.9
MMLI	Mount Malkishu	8.11	118	Pn	Pn	20 46 20.7	-0.5
KSHT	Keshet	8.11	114	Pn	Pn	20 46 21.5	+0.2
HMDT	Nahal Hemdat	8.29	119	Pn	Pn	20 46 23.9	+0.4
AMAZ	Amatzia	8.30	125	Pn	Pn	20 46 24.0	+0.2
TTG	Podgorica	8.33	317	*e*Pn	Pn	20 46 23.9	-0.1
TTG				*e*Sn	Sn	20 47 55.0	-1.7
TTG	Podgorica	8.33	317	*e*Pn	Pn	20 46 23.9	-0.1
TTG				*e*Sn	Sn	20 47 55.0	-1.7
KZIT	Kziot	8.39	131	Pn	Pn	20 46 24.4	-0.6
TIP	Timpagrande	8.48	291	*e*Pn	Pn	20 46 24.8	-1.4

TIP				*e*Sn	Sn	20 47 48.0	-12
TIP	**Timpagrande**	**8.48**	**291**	*e*Pn	**Pn**	**20 46 24.8**	**-1.4**
YTIR	**Yattir**	**8.54**	**125**	Pn	**Pn**	**20 46 27.4**	**+0.4**
TAR1	**Taranto**	**8.54**	**300**	*e*P	**Pn**	**20 46 26.0**	**-0.9**
TAR1	**Taranto**	**8.54**	**300**	*e*P	**Pn**	**20 46 26.0**	**-0.9**
DSI	**Dead Sea**	**8.59**	**123**	Pn	**Pn**	**20 46 27.5**	**-0.1**
FASA	**Fasano**	**8.62**	**302**	*e*P	**Pn**	**20 46 26.6**	**-1.3**
FASA	**Fasano**	**8.62**	**302**	*e*P	**Pn**	**20 46 26.6**	**-1.3**
FASA				S	**Sn**	**20 47 56.4**	**-7.2**
MASS	**Massafra**	**8.68**	**301**	*e*P	**Pn**	**20 46 27.6**	**-1.2**
MASS	**Massafra**	**8.68**	**301**	*e*P	**Pn**	**20 46 27.6**	**-1.2**
MASS				S	**Sn**	**20 47 57.6**	**-7.6**
MZDA	**Masada**	**8.74**	**125**	Pn	**Pn**	**20 46 29.6**	**+0.1**
HNKL	**Nakhl**	**8.87**	**137**	S	**Sn**	**20 48 04.6**	**-5.3**
	baz=136						
CEL	**Celeste**	**8.97**	**284**	*e*Pn	**Pn**	**20 46 32.3**	**-0.4**
CEL				*e*Sn	Sn	20 48 02.3	-10
CEL	**Celeste**	**8.97**	**284**	*e*Pn	**Pn**	**20 46 32.3**	**-0.4**
BAI	**Bari**	**9.07**	**303**	*e*P	**Pn**	**20 46 33.0**	**-0.9**
BAI	**Bari**	**9.07**	**303**	*e*P	**Pn**	**20 46 33.0**	**-0.9**
SG1	**Sgolgore (BA)**	**9.09**	**301**	*e*P	**Pn**	**20 46 33.1**	**-1.1**
SG1	**Sgolgore (BA)**	**9.09**	**301**	*e*P	**Pn**	**20 46 33.1**	**-1.1**
SG1				S	Sn	20 48 06.9	-8.2
PRNI	**Paran**	**9.15**	**131**	Pn	**Pn**	**20 46 34.4**	**-0.7**
ASF	**Jabal al Asfar**	**9.31**	**116**	P	**Pn**	**20 46 37.8**	**+0.5**
	comp=E,2.1nm,0.3s,baz=251,slow=5.7,SNR=19						
ASF				S	**Sn**	**20 48 20.3**	**-0.2**
	comp=E,0.4nm,0.3s,baz=336,slow=20,SNR=2.5						
HRFI	**Mount Harif**	**9.40**	**132**	Pn	**Pn**	**20 46 38.0**	**-0.4**
CUC	**Castrocucco**	**9.41**	**294**	*e*Pn	**Pn**	**20 46 37.0**	**-1.4**
CUC				*e*Sn	**Sn**	**20 48 16.5**	**-6.2**
CUC	**Castrocucco**	**9.41**	**294**	*e*Pn	**Pn**	**20 46 37.0**	**-1.4**
HFRF	**Wahat Farafira**	**9.50**	**173**	P	**Pn**	**20 46 39.6**	**-0.1**
	baz=172						
HFRF	**Wahat Farafira**	**9.50**	**173**	P	**Pn**	**20 46 39.6**	**-0.1**
MBRI	**Mt Berech**	**9.50**	**133**	Pn	**Pn**	**20 46 39.6**	**-0.2**
EIL	**Elat**	**9.62**	**134**	P	Pn	20 46 48.5	+7.3
	comp=E,2.3nm,0.3s,baz=307,slow=2.4,SNR=56						
EIL				S	**Sn**	**20 48 29.6**	**+1.8**
	comp=E,3.3nm,0.3s,baz=299,slow=21,SNR=10						
EIL	**Elat**	**9.62**	**134**	Pn	**Pn**	**20 46 40.8**	**-0.4**
HKAT	**Jabal Katrina**	**10.00**	**142**	P	**Pn**	**20 46 46.7**	**+0.2**
	baz=142						
HKAT	**Jabal Katrina**	**10.00**	**142**	P	**Pn**	**20 46 46.7**	**+0.2**
VAE	**Valguarnera**	**10.09**	**279**	P	**Pn**	**20 46 49.0**	**+1.5**
	comp=E,0.7nm,0.3s,baz=0.0,slow=9.1,SNR=2.2						
VAE				S	**Sn**	**20 48 32.8**	**-6.4**
	comp=E,4.2nm,0.3s,baz=32,slow=16,SNR=8.7						
WDD	**Wied Dalam**	**10.10**	**269**	*e*Pn	**Pn**	**20 46 46.7**	**-0.9**
WDD				*e*Sn	Sn	20 48 31.1	-8.2
WDD	**Wied Dalam**	**10.10**	**269**	*e*Pn	**Pn**	**20 46 46.7**	**-0.9**
HHRG	**Al Ghardaqah**	**10.90**	**147**	P	**Pn**	**20 47 01.4**	**+3.1**
	baz=147						
BLY	**Banja Luka**	**11.01**	**321**	*e*Pn	Pn	20 46 54.1	-5.5
BUR04	**Bucovina Ar. S**	**11.08**	**354**	*e*Pn	**Pn**	**20 46 57.1**	**-3.3**
HSFG		**11.63**	**148**	P	**Pn**	**20 47 09.0**	**+1.2**
	baz=147						
HSFG		**11.63**	**148**	P	**Pn**	**20 47 09.0**	**+1.2**
TRI	**Trieste**	**13.47**	**317**	*e*Pn	**Pn**	**20 47 32.0**	**+0.7**
TRI	**Trieste**	**13.47**	**317**	*e*Pn	**Pn**	**20 47 32.0**	**+0.7**
AK11	**Malin Array Si**	**14.15**	**6**	*e*Pn	**Pn**	**20 47 42.5**	**+2.6**
AKASG	**Malin Array Be**	**14.18**	**6**	P	**Pn**	**20 47 42.1**	**+1.8**
	comp=E,1.8nm,0.3s,baz=197,slow=12,SNR=6.3						
OJC	**Ojcow**	**14.56**	**341**	*e*Pn	**P**	**20 47 48.9**	**+1.5**
KBA	**Koelnbreinsper**	**14.56**	**320**	*e*Pn	**P**	**20 47 47.8**	**+0.1**
	comp=E,4.6nm,0.6s						
ABTA	**Abfaltersbach**	**14.79**	**318**	*i* P	**P**	**20 47 51.9**	**+1.7**
	comp=E,2.7nm,0.5s						
ABTA	**Abfaltersbach**	**14.79**	**318**	P	**P**	**20 47 51.9**	**+1.7**
	comp=E,2.7nm,0.5s						
WTTA	**Wattenberg**	**15.58**	**318**	*e*P	**P**	**20 48 00.4**	**+1.4**
	comp=E,0.7nm,0.2s						
WTTA	**Wattenberg**	**15.58**	**318**	P	**P**	**20 48 00.4**	**+1.4**
	comp=E,0.7nm,0.2s						
GEA0	**GERESS Array S**	**15.61**	**326**	*e*Pn	**Pn**	**20 47 59.7**	**+1.5**
GEA0	**GERESS Array S**	**15.61**	**326**	*e*Pn	**Pn**	**20 47 59.7**	**+1.5**
GEC2	**GERESS Array S**	**15.61**	**326**	*e*Pn	**Pn**	**20 47 59.5**	**+1.3**
	comp=E,4.5nm,1.2s						
GEC2	**GERESS Array S**	**15.61**	**326**	*e*Pn	**Pn**	**20 47 59.5**	**+1.3**
	comp=E,4.5nm,1.2s						
GERES	**GERESS Array B**	**15.61**	**326**	P	**Pn**	**20 47 59.2**	**+0.9**
	comp=E,0.1nm,0.3s,baz=141,slow=11,SNR=14						
KHC	**Kasperske Hory**	**15.88**	**326**	*e*P	**Pn**	**20 48 02.5**	**+1.1**
KHC	**Kasperske Hory**	**15.88**	**326**	*e*Pn	**Pn**	**20 48 02.8**	**+1.3**
	comp=E,2.1nm,1.3s						
KHC	**Kasperske Hory**	**15.88**	**326**	*e*Pn	**Pn**	**20 48 02.8**	**+1.3**
	comp=E,2.1nm,1.3s						
FETA	**Feichten**	**15.94**	**316**	*e*P	**P**	**20 48 04.8**	**+1.9**
	comp=E,1.1nm,0.4s						
FETA	**Feichten**	**15.94**	**316**	P	**P**	**20 48 04.8**	**+1.9**
	comp=E,1.1nm,0.4s						
FUORN	**Ofenpass-Fuorn**	**15.98**	**314**	*e*Pn	**Pn**	**20 48 03.2**	**+0.3**
	comp=E,3.2nm,0.8s						
FUORN	**Ofenpass-Fuorn**	**15.98**	**314**	*e*Pn	**Pn**	**20 48 03.2**	**+0.3**
	comp=E,3.2nm,0.8s						
RETA	**Reutte**	**16.19**	**317**	*e*Pn	**P**	**20 48 07.0**	**+1.3**
	comp=E,0.7nm,0.3s						
DAVOX	**Davos/Dischmat**	**16.29**	**314**	P	**Pn**	**20 48 05.7**	**-0.9**
	comp=E,0.4nm,0.3s,baz=345,slow=16,SNR=4.8						
TUE	**Stuetta**	**16.44**	**312**	*e*Pn	**P**	**20 48 09.9**	**+1.4**
	comp=E,5.4nm,0.8s						
TUE	**Stuetta**	**16.44**	**312**	*e*Pn	**P**	**20 48 09.9**	**+1.4**
	comp=E,5.4nm,0.8s						
DAVA	**Damuels**	**16.57**	**315**	*e*P	**P**	**20 48 10.5**	**+0.7**
	comp=E,3.2nm,0.3s						
DAVA	**Damuels**	**16.57**	**315**	P	**P**	**20 48 10.5**	**+0.7**
	comp=E,3.2nm,0.3s						
BNI	**Bardonecchia**	**17.50**	**305**	*e*P	**P**	**20 48 20.9**	**+0.8**
	comp=E,18nm,1.6s						
BNI	**Bardonecchia**	**17.50**	**305**	*e*P	**P**	**20 48 20.9**	**+0.8**
	comp=E,18nm,1.6s						
SUW	**Suwalki**	**17.60**	**353**	*e*P	**P**	**20 48 19.1**	**-1.8**
	comp=E,59nm,1.9s						
SENIN	**Lac Senin/Sane**	**17.63**	**310**	*e*P	**P**	**20 48 22.4**	**+0.7**
	comp=E,6.8nm,0.8s						
SENIN	**Lac Senin/Sane**	**17.63**	**310**	*e*P	**P**	**20 48 22.4**	**+0.7**
	comp=E,6.8nm,0.8s						
CLL	**Collm**	**17.76**	**330**	*e*P	**P**	**20 48 23.1**	**+0.4**
	comp=E,3.0nm,1.0s						
CLL	**Collm**	**17.76**	**330**	*e*P	**P**	**20 48 23.1**	**+0.4**
	comp=E,3.0nm,1.0s						
BFO	**Black Forest**	**18.02**	**316**	*e*P	**Pn**	**20 48 28.1**	**+0.9**
	comp=E,3.3nm,0.5s						
ECH	**Echery**	**18.61**	**315**	*e*P	**P**	**20 48 33.0**	**+0.9**
	comp=E,5.9nm,1.3s						
ECH	**Echery**	**18.61**	**315**	*e*P	**P**	**20 48 33.0**	**+0.9**
	comp=E,5.9nm,1.3s						
BSD	**Bornholm Skovb**	**20.27**	**340**	*i* P	**P**	**20 48 48.7**	**-1.1**
BSD	**Bornholm Skovb**	**20.27**	**340**	*e*P	**P**	**20 48 48.7**	**-1.1**
ESDC	**Sonseca Array**	**24.47**	**287**	P	**P**	**20 49 29.9**	**-1.5**
	comp=E,0.2nm,0.3s,baz=86,slow=9.2,SNR=6.9						
FINES	**FINESS Array B**	**24.86**	**359**	P	**P**	**20 49 34.2**	**-0.4**
	comp=E,1.5nm,0.4s,baz=165,slow=8.2,SNR=20						
FIA1	**FINESS Array S**	**24.86**	**359**	*e*P	**P**	**20 49 33.6**	**-1.0**
HFS	**Hagfors**	**25.04**	**344**	P	**P**	**20 49 35.8**	**-0.5**
	comp=E,2.8nm,0.4s,baz=154,slow=11,SNR=33						
KONO	**Kongsberg**	**25.65**	**339**	*e*P	**P**	**20 49 40.9**	**-0.9**
	comp=E,20nm,1.3s						
NC603	**NORSAR Array S**	**26.06**	**343**	*e*P	**P**	**20 49 45.0**	**-0.5**
NC602	**NORSAR Array S**	**26.07**	**343**	*e*P	**P**	**20 49 44.4**	**-1.2**
NC604	**NORSAR Array s**	**26.10**	**343**	*e*P	**P**	**20 49 45.2**	**-0.6**
NC600	**NORSAR Array S**	**26.10**	**343**	*e*P	**P**	**20 49 44.1**	**-1.7**
NC601	**NORSAR Array S**	**26.11**	**343**	*e*P	**P**	**20 49 45.6**	**-0.2**
NAO02	**NORSAR Array S**	**26.29**	**342**	*e*P	**P**	**20 49 47.5**	**0.0**
NC402	**NORSAR Array S**	**26.29**	**343**	*e*P	**P**	**20 49 46.4**	**-1.1**
NAO03	**NORSAR Array S**	**26.30**	**342**	*e*P	**P**	**20 49 47.3**	**-0.3**
NC401	**NORSAR Array S**	**26.31**	**343**	*e*P	**P**	**20 49 46.4**	**-1.4**
NAO00	**NORSAR Array S**	**26.32**	**342**	*e*P	**P**	**20 49 47.2**	**-0.6**
NC403	**NORSAR Array S**	**26.32**	**343**	*e*P	**P**	**20 49 46.2**	**-1.6**
NAO01	**NORSAR Array S**	**26.32**	**342**	*e*P	**P**	**20 49 46.9**	**-0.9**
NAO04	**NORSAR Array S**	**26.33**	**342**	*e*P	**P**	**20 49 47.1**	**-0.8**
NC400	**NORSAR Array S**	**26.33**	**343**	*e*P	**P**	**20 49 46.4**	**-1.5**
NAO05	**NORSAR Array S**	**26.35**	**342**	*e*P	**P**	**20 49 46.6**	**-1.4**
NC405	**NORSAR Array S**	**26.36**	**343**	*e*P	**P**	**20 49 47.5**	**-0.7**
NC404	**NORSAR Array S**	**26.36**	**343**	*e*P	**P**	**20 49 47.6**	**-0.6**
NB202	**NORSAR Array S**	**26.37**	**343**	*e*P	**P**	**20 49 47.7**	**-0.6**
NB203	**NORSAR Array S**	**26.40**	**343**	*e*P	**P**	**20 49 47.6**	**-1.0**
NB201	**NORSAR Array S**	**26.41**	**343**	*e*P	**P**	**20 49 47.0**	**-1.5**
NB2	**NORSAR Subarra**	**26.42**	**343**	P	**P**	**20 49 48.5**	**-0.2**
	comp=Z,0.3nm,0.4s,baz=159,slow=9.3						
NB200	**NORSAR Array S**	**26.42**	**343**	*e*P	**P**	**20 49 48.1**	**-0.6**
NOA	**NORSAR Array B**	**26.42**	**343**	P	**P**	**20 49 46.3**	**-2.4**
	comp=Z,0.2nm,0.4s,baz=152,slow=8.0,SNR=3.2						
NB204	**NORSAR Array S**	**26.44**	**343**	*e*P	**P**	**20 49 48.5**	**-0.4**
NB205	**NORSAR Array S**	**26.45**	**343**	*e*P	**P**	**20 49 48.0**	**-1.0**
NBO03	**NORSAR Array S**	**26.48**	**342**	*e*P	**P**	**20 49 49.2**	**-0.1**
NBO04	**NORSAR Array S**	**26.50**	**342**	*e*P	**P**	**20 49 48.8**	**-0.6**
NBO02	**NORSAR Array S**	**26.51**	**342**	*e*P	**P**	**20 49 49.0**	**-0.5**
NBO00	**NORSAR Array S**	**26.51**	**342**	*e*P	**P**	**20 49 49.6**	**0.0**
NC303	**NORSAR Array S**	**26.54**	**343**	*e*P	**P**	**20 49 49.1**	**-0.6**
NC301	**NORSAR Array S**	**26.56**	**343**	*e*P	**P**	**20 49 48.9**	**-1.0**
NC304	**NORSAR Array S**	**26.60**	**343**	*e*P	**P**	**20 49 49.7**	**-0.6**
NC305	**NORSAR Array S**	**26.60**	**343**	*e*P	**P**	**20 49 49.8**	**-0.5**
NC202	**NORSAR Array S**	**26.68**	**343**	*e*P	**P**	**20 49 50.6**	**-0.7**
NC203	**NORSAR Array S**	**26.69**	**343**	*e*P	**P**	**20 49 50.0**	**-1.1**
NC201	**NORSAR Array S**	**26.71**	**343**	*e*P	**P**	**20 49 50.8**	**-0.6**
NC200	**NORSAR Array S**	**26.72**	**343**	*e*P	**P**	**20 49 50.7**	**-0.7**
NC204	**NORSAR Array S**	**26.73**	**343**	*e*P	**P**	**20 49 51.2**	**-0.3**
NC205	**NORSAR Array S**	**26.76**	**343**	*e*P	**P**	**20 49 51.3**	**-0.5**
EKA	**Eskdalemuir Ar**	**27.76**	**322**	P	**P**	**20 49 58.8**	**-1.9**
	comp=Z,0.3nm,0.5s,baz=108,slow=16,SNR=3.2						
TOA0	**Torodi Ar. Sit**	**32.55**	**231**	*e*P	**P**	**20 50 43.4**	**0.0**
TORD	**Torodi Ar. Bea**	**32.55**	**231**	P	**P**	**20 50 43.4**	**0.0**
	comp=Z,1.8nm,0.3s,baz=35,slow=9.5						
ARCES	**ARCESS Array B**	**32.99**	**359**	P	**P**	**20 50 46.0**	**-0.6**
	comp=Z,5.1nm,1.0s,baz=29,slow=16,SNR=4.0						
KURBB	**Kurchatov Arra**	**39.06**	**52**	P	**P**	**20 51 36.9**	**-1.5**
	comp=Z,0.4nm,0.4s,baz=272,slow=8.6,SNR=6.9						
MK31	**Makanchi Array**	**41.74**	**58**	*e*P	**P**	**20 52 02.2**	**+1.7**
MKAR	**Makanchi Array**	**41.74**	**58**	P	**P**	**20 52 02.2**	**+1.6**
	comp=Z,0.3nm,0.3s,baz=269,slow=9.2,SNR=9.3						
MKAR	**Makanchi Array**	**41.74**	**58**	*e*P	**P**	**20 52 02.4**	**+1.9**
	comp=Z,5.8nm,0.6s						
MK01	**Makanchi Array**	**41.75**	**58**	*e*P	**P**	**20 52 02.2**	**+1.5**
SCO	**Scoresbysund**	**42.53**	**338**	*e*P	**P**	**20 52 09.6**	**+3.1**
	comp=Z,375nm,0.9s						
ZALV	**Zalesovo Beam**	**42.93**	**47**	P	**P**	**20 52 10.7**	**+0.7**
	comp=Z,1.1nm,0.4s,baz=278,slow=9.9,SNR=4.8						
ZALV	**Zalesovo Beam**	**42.93**	**47**	*e*P	**P**	**20 52 10.9**	**+0.9**
MSEY	**Mahe Island**	**48.95**	**141**	*e*P	**P**	**20 52 57.1**	**-0.4**
	comp=Z,54nm,1.3s						
SACV	**Santiago Islan**	**49.75**	**258**	*e*P	**P**	**20 53 04.4**	**+0.7**

IDC ***21*** *20:47:45.3±0.4, 15°.25S×173°.37W, h0^{km}, mb4.5/25, mb1 4.6/25, mb1mx4.5/46, mbtmp4.5/25, ML5.8/1, MS4.5/42, Ms1 4.5/42, ms1mx4.4/46, Error ellipse: s-maj=16.8km s-min=13.5km az=116.0*

BJI ***21*** *20:47:45.5, 15°.02S×173°.33W, h8^{km}, mb5.0/24, mB5.3/21, Ms5.0/14, Ms7 4.7/12*

GCMT ***21*** *20:47:46.6±0.2, 14°.95S×173°.11W, h16^{km}, MW5.2/110, Moment Tensor Solution. s66,c95; s110,c173; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$1.54±.12; M$_{\theta\theta}$2.55±.09; M$_{\phi\phi}$-4.09±.10; M$_{r\theta}$3.27±.33; M$_{\theta\phi}$3.03±.08; M$_{\phi r}$3.18±.31; Best double couple: M$_{0}$6.45400×10^{16} NP1:ϕ_s20.00000°, δ77.00000°, λ138.00000°. NP2: ϕ_s122.00000°, δ49.00000°, λ17.00000°. Principal axes: T 7.0690, Plg38.0000°, Azm332.0000°; N -1.2300, Plg46.0000°, Azm186.0000°; P -5.8390, Plg18.0000°, Azm77.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***21*** *20:47:46.6±0.1, 15°.20S×173°.39W, h10^{km}, mb5.0/157 Error ellipse: s-maj=6.5km s-min=3.3km az=133.0*

ISCJB ***21*** *20:47:49.7±0.1, 15°.21S±0°.04×173°.44W±0°.03, h42^{km}, mb4.9/189, MS4.5/52, Error ellipse: s-maj=6.4km s-min=3.5km az=141.9*

MOS ***21*** *20:47:49.7±1.4, 15°.13S×173°.29W, h33^{km}, mb5.0/43, MS4.6/15, Error ellipse: s-maj=10.3km s-min=7.6km az=70.6*

ISC 21 20:47:51.1±0.3, **15°.32S**±0°.06×**173°.30W**±0°.06, **h42**^{km}, **n635**, σ**1^{s}.09**/594, **mb4.9**/189, **MS4.6**/52, **38C-11D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.04**	**47**	Pn	Pn	20 48 13.1	-10
	209nm,0.3s,baz=58,slow=0.7,SNR=130						
AFI				Sn	Sn	20 48 31.0	-16
	672nm,0.3s,baz=198,slow=20,SNR=17						
AFI	**Afiamalu**	**2.04**	**47**	*e*Pn	Pn	20 48 13.1	-10
AFI				*e*Sn	Sn	20 48 33.2	-14
NIUE	**Niue**	**4.94**	**140**	P	**Pn**	**20 48 59.7**	**-3.1**
	baz=5.0,SNR=12						
FUNA	**Funafuti**	**9.97**	**312**	*e*Pn	Pn	20 50 04.1	-7.8
FUNA				*e*Sn	Sn	20 51 45.6	-17
KNTN	**Kanton**	**12.56**	**7**	*e*Pn	Pn	20 50 37.1	-10
KNTN				*e*Sn	Sn	20 52 45.7	-20
RAR	**Rarotonga**	**14.12**	**117**	Pn	Pn	20 51 02.1	-6.5
	0.6nm,0.3s,baz=223,slow=4.8,SNR=5.2						
RAR				LR	LR	20 55 00.3	
	comp=Z,2µm,21.8s,baz=301,slow=31						
RAR	**Rarotonga**	**14.12**	**117**	*e*Pn	Pn	20 51 00.7	-7.9
RAR	**Rarotonga**	**14.12**	**117**	P	**Pn**	**20 51 08.2**	**-0.4**
RAR				pmax	pmax		
	comp=Z,99nm,2.5s						
RAO	**Raoul Island**	**14.50**	**196**	Pn	**Pn**	**20 51 10.8**	**-2.9**
	comp=Z,41nm,0.3s,baz=66,slow=20,SNR=1.9						
DZM	**Mont Dzumac**	**20.31**	**248**	P	Pn	20 52 25.5	-0.6
	comp=Z,4.5nm,0.8s,baz=90,slow=19,SNR=2.9						
DZM				LR	LR	20 59 00.5	
	comp=Z,2µm,21.6s,baz=86,slow=33						
DZM	**Mont Dzumac**	**20.31**	**248**	*e*P	Pn	20 52 30.4	+4.3
	comp=Z,200nm,1.6s						
DZM				*e*LQ	LQ	20 56 36.4	
	comp=Z,1µm,28.3s						
DZM				*e*LR	LR	20 57 29.3	
	comp=Z,4µm,25.4s						
DZM	**Mont Dzumac**	**20.31**	**248**	*e*P	**P**	**20 52 21.7**	**-2.2**
	comp=Z,274nm,1.8s						
PAE	**Paea**	**22.86**	**99**	*e*T	T	21 16 04.0	
	comp=Z,5.8nm,0.3s						
PPT	**Papeete**	**22.86**	**99**	LR	LR	20 59 09.7	
	comp=Z,1µm,21.6s,baz=264,slow=30						
PPT2	**Papeete2**	**22.86**	**99**	*e*LQ	LQ	20 57 14.6	
	comp=Z,4µm,28.5s						
PPT2				*e*LR	LR	20 58 16.8	
	comp=Z,4µm,25.2s,baz=263						
PPT2	**Papeete2**	**22.86**	**99**	*e*T	T	21 16 05.0	
	comp=Z,9.4nm,0.4s						
TIAR	**Tiarei**	**23.08**	**99**	*e*T	T	21 16 20.3	
	comp=Z,3.6nm,0.3s						
TVO	**Taravao**	**23.18**	**99**	*e*T	T	21 16 28.4	
	comp=Z,2.4nm,0.3s						
TBI	**Tubuai**	**23.85**	**113**	*e*LQ	LQ	20 57 42.3	
	comp=Z,3µm,29.0s						
TBI				*e*LR	LR	20 58 39.1	
	comp=Z,4µm,26.2s,baz=285						
TBI	**Tubuai**	**23.85**	**113**	*e*T	T	21 17 30.7	
	comp=Z,18nm,0.3s						
URZ	**Urewera**	**24.37**	**199**	P	**P**	**20 53 06.6**	**+1.3**
	comp=Z,6.6nm,0.7s,baz=18,slow=3.2,SNR=3.1						
URZ	**Urewera**	**24.37**	**199**	*e*P	**P**	**20 53 06.2**	**+0.9**
	comp=Z,40nm,1.1s						
PMOR	**Pomariorio Ree**	**24.52**	**93**	*e*P	**P**	**20 53 04.6**	**-2.3**
	comp=Z,336nm,1.2s						
PMOR	**Pomariorio Ree**	**24.52**	**93**	*e*T	T	21 18 02.9	
	comp=Z,7.3nm,0.3s						
VAH	**Vaihoa**	**24.77**	**93**	*e*P	**P**	**20 53 06.6**	**-2.5**
	comp=Z,224nm,1.2s						
VAH	**Vaihoa**	**24.77**	**93**	*e*T	T	21 18 21.5	
	comp=Z,12nm,0.3s						
BKZ	**Black Stump Fm**	**25.39**	**199**	*e*P	**P**	**20 53 15.8**	**+1.2**
	comp=Z,16nm,1.0s						
HNR	**Honiara**	**26.76**	**279**	LR	LR	21 02 22.0	
	comp=Z,2µm,18.8s,baz=124,slow=33						
BFZ	**Birch Farm**	**26.86**	**198**	*e*P	**P**	**20 53 26.0**	**-1.9**
	comp=Z,94nm,1.3s						
THZ	**Tophouse**	**28.92**	**202**	*e*P	**P**	**20 53 47.4**	**+1.1**
	comp=Z,128nm,1.8s						
KHZ	**Kahutara**	**29.28**	**200**	*e*P	**P**	**20 53 51.4**	**+2.0**
	comp=Z,133nm,2.0s						
LTZ	**Lake Taylor**	**30.04**	**201**	*e*P	**P**	**20 53 56.1**	**-0.1**
	comp=Z,114nm,1.8s						
OXZ	**Oxford**	**30.60**	**201**	*e*P	**P**	**20 54 02.0**	**+0.9**
	comp=Z,18nm,1.0s						
MQZ	**McQueen's Vall**	**30.72**	**200**	*e*P	**P**	**20 54 03.1**	**+1.0**
	comp=Z,84nm,1.5s						
FOZ	**Fox Glacier**	**31.60**	**204**	*e*P	**P**	**20 54 07.5**	**-2.3**
	comp=Z,174nm,2.0s						
LBZ	**Lake Benmore**	**32.18**	**202**	*e*P	**P**	**20 54 14.3**	**-0.7**
	comp=Z,127nm,1.9s						
WKZ	**Wanaka**	**33.00**	**203**	*e*P	**P**	**20 54 21.6**	**-0.6**
	comp=Z,179nm,2.0s						
TAOE	**Nuku Hiva Isla**	**33.02**	**83**	*e*LR	LR	21 02 52.7	
	comp=Z,3µm,26.2s,baz=252						
TAOE	**Nuku Hiva Isla**	**33.02**	**83**	*e*T	T	21 28 32.3	
	comp=Z,37nm,0.2s						
MLZ	**Mavora Lakes**	**33.80**	**204**	*e*P	**P**	**20 54 27.8**	**-1.3**
	comp=Z,86nm,1.7s						
WHZ	**Wether Hill Ro**	**34.30**	**203**	*e*P	**P**	**20 54 34.8**	**+1.3**
	comp=Z,164nm,2.0s						
EIDS	**Eidsvold**	**34.76**	**248**	*e*P	**P**	**20 54 38.1**	**+0.4**
	comp=Z,33nm,1.4s						
ARMA	**Armidale**	**35.46**	**239**	*e*P	**P**	**20 54 44.2**	**+0.3**
	comp=Z,60nm,1.4s						
RKT	**Rikitea**	**36.93**	**108**	*e*LR	LR	21 04 52.7	
	comp=Z,1µm,26.0s,baz=284						
RKT	**Rikitea**	**36.93**	**108**	*e*T	T	21 33 46.8	
	comp=Z,9.8nm,0.4s						
RMQ	**Roma**	**37.01**	**246**	P	**P**	**20 54 57.3**	**+0.2**
	baz=37						
CTA	**Charters Tower**	**38.75**	**257**	LR	LR	21 08 19.3	
	comp=Z,734nm,21.2s,baz=80,slow=32						
H11S2	**WAKE ISLAND Hy**	**38.95**	**329**	T	T	21 36 56.0	
	baz=147,slow=76,SNR=13						
H11S3	**WAKE ISLAND Hy**	**38.96**	**329**	T	T	21 36 59.8	
	baz=147,slow=76,SNR=11						
H11S1	**WAKE ISLAND Hy**	**38.96**	**329**	T	T	21 36 57.3	
	baz=147,slow=76,SNR=21						
PMG	**Port Moresby**	**39.02**	**274**	LR	LR	21 09 19.1	
	comp=Z,589nm,19.6s,baz=84,slow=33						
CAN	**Canberra**	**39.15**	**232**	*e*P	**P**	**20 55 14.3**	**-0.7**
	comp=Z,87nm,1.7s						
CAN	**Canberra**	**39.15**	**232**	*e*P	**P**	**20 55 14.3**	**-0.7**
CAN				pmax	pmax		
	comp=Z,87nm,1.7s						
MHA	**Mahukona**	**39.21**	**26**	*e*P	**P**	**20 55 14.3**	**-1.2**
MHA	**Mahukona**	**39.21**	**26**	*e*P	**P**	**20 55 14.3**	**-1.2**
KEKH	**Kekaha**	**39.40**	**20**	*e*P	**P**	**20 55 15.4**	**-1.5**
	comp=Z,117nm,1.3s						
KIP	**Kipapa**	**39.48**	**23**	*e*P	**P**	**20 55 16.4**	**-1.3**
	comp=Z,214nm,1.8s						
KIP	**Kipapa**	**39.48**	**23**	*e*P	**P**	**20 55 16.4**	**-1.3**
KIP				pmax	pmax		
	comp=Z,214nm,1.8s						
OPA	**Opana**	**39.72**	**23**	*e*P	**P**	**20 55 19.0**	**-0.7**
	comp=Z,117nm,1.6s						
OPA	**Opana**	**39.72**	**23**	*e*P	**P**	**20 55 19.0**	**-0.7**
OPA				pmax	pmax		
	comp=Z,117nm,1.6s						
H11N3	**WAKE ISLAND Hy**	**39.89**	**330**	T	T	21 37 34.8	
	baz=150,slow=76,SNR=26						
H11N1	**WAKE ISLAND Hy**	**39.90**	**330**	T	T	21 37 59.9	
	baz=150,slow=76,SNR=15						
H11N2	**WAKE ISLAND Hy**	**39.91**	**330**	T	T	21 37 38.0	
	baz=150,slow=76,SNR=21						
MTSU	**Mount Surprise**	**40.62**	**260**	P	**P**	**20 55 27.1**	**-0.3**
	baz=41						
CMSA	**Cobar Meteorol**	**40.67**	**239**	P	**P**	**20 55 27.2**	**-0.4**
	baz=41,SNR=4.7						
COEN	**Coen**	**42.08**	**266**	*e*P	**P**	**20 55 39.6**	**+0.2**
	comp=Z,104nm,1.8s						
TOO	**Toolangi**	**42.59**	**231**	P	**P**	**20 55 42.9**	**-0.3**
	baz=43,SNR=7.4						
TOO	**Toolangi**	**42.59**	**231**	P	**P**	**20 55 43.0**	**-0.3**
TOO				pmax	pmax		
	comp=Z,32nm,0.9s						
STKA	**Stephens Creek**	**44.16**	**240**	P	**P**	**20 55 55.6**	**-0.3**
	comp=Z,7.1nm,0.9s,baz=99,slow=11,SNR=8.8						
STKA				LR	LR	21 12 21.3	
	comp=Z,377nm,21.0s,baz=65,slow=33						
STKA	**Stephens Creek**	**44.16**	**240**	P	**P**	**20 55 56.2**	**+0.3**
	baz=44,SNR=6.2						
STKA	**Stephens Creek**	**44.16**	**240**	*e*P	**P**	**20 55 55.2**	**-0.8**
	comp=Z,3.7nm,1.1s						
STKA	**Stephens Creek**	**44.16**	**240**	*e*P	**P**	**20 55 55.2**	**-0.8**
STKA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
HTT	**Hallett**	**46.66**	**238**	P	**P**	**20 56 15.8**	**-0.1**
	baz=47,SNR=7.1						
BBOO	**Buckleboo**	**48.93**	**240**	*e*P	**P**	**20 56 33.0**	**-0.4**
	comp=Z,52nm,1.8s						
WB2	**Warramunga Arr**	**49.94**	**257**	P	**P**	**20 56 39.9**	**-1.4**
	baz=50						
WB2	**Warramunga Arr**	**49.94**	**257**	*e*P	**P**	**20 56 39.1**	**-2.2**
	comp=Z,17nm,1.1s						
WRAB	**Tennant Creek**	**49.94**	**257**	*e*P	**P**	**20 56 39.8**	**-1.5**
	comp=Z,26nm,1.3s						
WRAB	**Tennant Creek**	**49.94**	**257**	⇑*i*P	**P**	**20 56 41.2**	**-0.1**
WRAB				pmax	pmax		
	comp=Z,24nm,1.3s						
WR1	**Warramunga Arr**	**49.95**	**257**	P	**P**	**20 56 41.1**	**-0.2**
	baz=50						
WR1	**Warramunga Arr**	**49.95**	**257**	*e*P	**P**	**20 56 39.4**	**-2.0**
	comp=Z,42nm,1.5s						
WRA	**Warramunga Arr**	**49.95**	**257**	P	**P**	**20 56 39.4**	**-2.0**
	comp=Z,3.5nm,0.7s,baz=91,slow=7.0,SNR=34						
WRA				LR	LR	21 15 31.1	
	comp=Z,700nm,21.4s,baz=115,slow=33						
AS07	**Alice Springs**	**50.16**	**252**	P	**P**	**20 56 42.3**	**-0.6**
	baz=50						
AS01	**Alice Springs**	**50.18**	**252**	*e*P	**P**	**20 56 41.4**	**-1.7**
AS31	**Alice Springs**	**50.22**	**252**	*e*P	**P**	**20 56 41.7**	**-1.7**
	comp=Z,6.7nm,0.8s						
ASAR	**Alice Springs**	**50.22**	**252**	P	**P**	**20 56 41.8**	**-1.6**
	comp=Z,14nm,0.6s,baz=86,slow=7.7,SNR=124						
ASAR				LR	LR	21 16 03.0	
	comp=Z,1µm,21.4s,baz=94,slow=34						
ASAR	**Alice Springs**	**50.22**	**252**	P	**P**	**20 56 41.8**	**-1.6**
ASAR				pmax	pmax		
	comp=Z,14nm,0.6s						
ASAR				MLR	MLR		
	comp=Z,1µm,21.5s						
GUMO	**Guam**	**50.37**	**303**	LR	LR	21 15 56.8	
	comp=Z,354nm,19.0s,baz=116,slow=34						
GUMO	**Guam**	**50.37**	**303**	*e*P	**P**	**20 56 44.5**	**0.0**
	comp=Z,127nm,1.4s						
GUMO	**Guam**	**50.37**	**303**	*e*P	**P**	**20 56 44.5**	**0.0**
GUMO				pmax	pmax		
	comp=Z,127nm,1.4s						
MTN	**Manton Dam**	**53.83**	**265**	*e*P	**P**	**20 57 10.2**	**-0.1**
	comp=Z,85nm,1.5s						
WRKA	**Warakurna**	**55.31**	**250**	P	**P**	**20 57 20.4**	**-0.6**
	baz=56,SNR=4.6						
FORT	**Forrest**	**55.53**	**243**	*e*P	**P**	**20 57 22.3**	**-0.1**
	comp=Z,21nm,0.8s						
RPN	**Rapa Nui**	**60.23**	**113**	LR	LR	21 17 00.7	
	comp=Z,433nm,21.5s,baz=268,slow=29						
CBIJ	**Chichi jima**	**60.37**	**314**	*e*P	**P**	**20 57 55.9**	**-0.4**
	comp=Z,45nm,1.1s						
JCJ	**Chichijima**	**60.37**	**314**	P	**P**	**20 57 55.6**	**-0.7**
	comp=Z,16nm,0.8s,baz=120,slow=20,SNR=2.8						
SOEI	**Soe**	**61.03**	**267**	*e*P	**P**	**20 58 02.1**	**+0.9**
	comp=Z,77nm,1.4s						
SBA	**Scott Base**	**63.34**	**185**	*e*P	**P**	**20 58 18.5**	**+3.1**
	comp=Z,11nm,1.1s						
VNDA	**Vanda**	**63.46**	**186**	P	**P**	**20 58 17.4**	**+1.1**
	comp=Z,4.2nm,1.0s,baz=2.2,slow=5.9,SNR=12						
VNDA				LR	LR	21 22 33.9	
	comp=Z,132nm,19.6s,baz=18,slow=33						
VNDA	**Vanda**	**63.46**	**186**	*e*P	**P**	**20 58 16.9**	**+0.6**
VNDA				*e*pwP	pP	20 58 19.1	-9.5
VNDA	**Vanda**	**63.46**	**186**	*e*P	**P**	**20 58 16.9**	**+0.6**
DAV	**Davao City (W)**	**64.50**	**286**	LR	LR	21 25 10.1	
	comp=Z,387nm,18.2s,baz=106,slow=35						
NWAO	**Narrogin (SRO)**	**64.74**	**241**	LR	LR	21 24 28.9	
	comp=Z,399nm,21.0s,baz=314,slow=34						
JHJ	**Hachijo jima 2**	**65.77**	**318**	LR	LR	21 24 26.7	
	comp=Z,143nm,18.5s,baz=50,slow=34						
MJAR	**Matsushiro Arr**	**68.94**	**320**	P	**P**	**20 58 51.2**	**-0.8**
	comp=Z,13nm,1.1s,baz=163,slow=6.0,SNR=19						
MJAR				LR	LR	21 23 28.8	
	comp=Z,506nm,21.7s,baz=130,slow=31						
MJAR	**Matsushiro Arr**	**68.94**	**320**	P	**P**	**20 58 51.2**	**-0.8**
MJAR				pmax	pmax		
	comp=Z,11nm,1.1s						
MJAR				MLR	MLR		
	comp=Z,506nm,21.7s						
MAJO	**Matsushiro**	**68.94**	**320**	*e*P	**P**	**20 58 51.1**	**-1.0**
	comp=Z,32nm,1.3s						
MAJO	**Matsushiro**	**68.94**	**320**	*c i*P	**P**	**20 58 51.7**	**-0.4**
MAJO				pmax	pmax		
	comp=Z,31nm,1.4s						
MAT	**Matsushiro**	**68.94**	**320**	P	**P**	**20 58 51.7**	**-0.4**
MAT				S	**S**	**21 07 52.2**	**-1.5**
MJB9	**Matsu-Tunnel**	**68.94**	**320**	*e*P	**P**	**20 58 51.9**	**-0.2**
	comp=Z,31nm,1.3s						
ERM	**Erimo**	**69.75**	**327**	*e*P	**P**	**20 58 55.9**	**-1.0**
ERM				*i*		20 59 18.1	
JOW	**Kunigami**	**70.51**	**306**	LR	LR	21 23 55.8	
	comp=Z,410nm,21.7s,baz=126,slow=31						
CASY	**Casey**	**70.52**	**205**	*e*P	**P**	**20 59 02.3**	**+1.0**
	comp=Z,12nm,1.4s						

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MYLDM Lahad Datu       70.53 281 eP     P      20 59 00.6 -1.7
      comp=Z,38nm,1.4s
SKR   Severo-Kuril's   70.98 340 eP     P      20 58 54.7 -9.5
SKR                              eS     S      21 08 11.7 -5.2
SKR                               pmax  pmax
      comp=Z,100nm,12.3s
SKR                               MLR   MLR
      comp=Z,200nm,20.0s
CIS   Catalina Islan   71.31  46  P     P      20 59 08.4 +1.7
      baz=236
ASAJ  Asahikawa        71.52 328  P     P      20 59 08.4 +0.8
      comp=Z,10nm,1.1s,baz=135,slow=2.9,SNR=5.0
ASAJ                              LR    LR     21 24 29.3
      comp=Z,239nm,21.9s,baz=160,slow=31
ASAJ  Asahikawa        71.52 328 eP     P      20 59 08.6 +0.9
      comp=Z,77nm,1.9s
JNU   Nakatsue         71.81 313  P     P      20 59 10.1 +0.4
      comp=Z,6.7nm,1.1s,baz=102,slow=9.5,SNR=3.9
JNU                               LR    LR     21 25 19.6
      comp=Z,199nm,21.2s,baz=123,slow=31
JNU   Nakatsue         71.81 313 eP     P      20 59 09.3 -0.4
      comp=Z,20nm,1.3s
KMRM  Mail Ridge       71.94  38 eP     P      20 59 10.5 +0.1
      comp=Z,38nm,1.2s
PET   Petropavlovsk    72.23 343 eP     P      20 59 14.2 +2.5
PET                              eS     S      21 08 34.8 +3.6
PET                              ePPS   PPS    21 09 17.0
PET                               MLR   MLR
      comp=Z,300nm,14.0s
PET                               MLR   MLR
      comp=Z,300nm,17.0s
EDW2  Edwards Air Fo   72.42  45  P     P      20 59 14.6 +1.2
      baz=236
CHGN  Chignik          72.44   9 eP     P      20 59 12.5 -0.3
      comp=Z,22nm,1.0s
MONP2 Monument Peak    72.44  48  P     P      20 59 16.7 +3.0
      baz=238
ISA   Isabella, Lake   72.53  44 eP     P      20 59 14.9 +0.9
      comp=Z,5.8nm,1.1s
PEA0B Petropavlovsk-   72.58 342 eP     P      20 59 13.2 -0.6
      comp=Z,44nm,1.3s
PETK  Petropavlovsk-   72.58 342  P     P      20 59 13.4 -0.4
      comp=Z,8.6nm,0.8s,baz=117,slow=8.3
PETK  Petropavlovsk-   72.58 342 eP     P      20 59 12.8 -1.0
PETK  Petropavlovsk-   72.58 342 eP     P      20 59 12.8 -1.0
PEA1  Petropavlovsk-   72.59 342 eP     P      20 59 13.4 -0.4
FRD   Ford Ranch, An   72.64  47  P     P      20 59 15.6 +0.9
      baz=238
CMB   Columbia Colle   72.64  41 eP     P      20 59 14.6  0.0
      comp=Z,3.8nm,1.0s
CMB   Columbia Colle   72.64  41 eP     P      20 59 14.6  0.0
CMB                               pmax  pmax
      comp=Z,4.0nm,1.0s
AFDM  Forest Hills D   72.82  40 eP     P      20 59 13.1 -2.5
      comp=Z,5.2nm,1.0s
WDC   Whiskeytown Da   72.86  38 eP     P      20 59 15.7 -0.1
      comp=Z,8.2nm,1.1s
WDC   Whiskeytown Da   72.86  38 eP     P      20 59 15.7 -0.1
WDC                               pmax  pmax
      comp=Z,8.0nm,1.1s
LPIG  La Paz           72.92  58  LR    LR     21 22 45.0
      comp=Z,336nm,21.6s,baz=228,slow=29
O03D  Paynes Creek     73.13  39  P     P      20 59 16.5 -1.0
      baz=232
M02C  Callahan         73.18  37  P     P      20 59 17.8 +0.1
      baz=231
CWC   Cottonwood Cre   73.23  44  P     P      20 59 18.9 +0.6
      baz=236
OMMB  Old Mammoth Mi   73.29  42 eP     P      20 59 18.1 -0.7
      comp=Z,4.5nm,1.2s
BELC  Belle Mtn. Jos   73.33  47  P     P      20 59 18.9  0.0
      baz=238
YSS   Yuzh-Sakhalins   73.46 330 eP     P      20 59 19.4 +0.2
      comp=Z,20nm,0.9s
YSS   Yuzh-Sakhalins   73.46 330⇓iP     P      20 59 20.0 +0.9
YSS                              e*SP   pP     20 59 26.7 -4.9
YSS                              e             20 59 34.9
YSS                              eS     SKiKP  21 08 47.6 +1.0
YSS                              e             21 09 31.0
YSS                               pmax  pmax
      comp=Z,10.0nm,1.1s
YSS                               smax  smax
      comp=N,190nm,15.0s
DAC   Darwin (Calif)   73.47  44 eP     P      20 59 19.4 -0.3
      comp=N,13nm,1.7s
GSC   Goldstone, Bar   73.47  45  P     P      20 59 19.5 -0.1
      baz=237
GSC   Goldstone, Bar   73.47  45 eP     P      20 59 19.3 -0.3
      comp=N,12nm,1.5s
GSC   Goldstone, Bar   73.47  45 eP     P      20 59 19.3 -0.3
GSC                               pmax  pmax
      comp=Z,12nm,1.5s
YBH   Yreka Blue Hor   73.48  37  P     P      20 59 20.2 +0.7
      comp=Z,1.9nm,0.7s,baz=208,slow=8.0,SNR=4.0
YBH                               LR    LR     21 23 52.7
      comp=Z,251nm,21.3s,baz=234,slow=30
YBH   Yreka Blue Hor   73.48  37 eP     P      20 59 19.7 +0.2
      comp=Z,12nm,1.1s
WAKR  Walker           73.52  41 eP     P      20 59 20.1 +0.1
      comp=Z,27nm,1.8s
GLA   Glamis           73.67  48 eP     P      20 59 21.3 +0.5
      comp=Z,10nm,1.0s
GLA   Glamis           73.67  48 eP     P      20 59 21.3 +0.5
GLA                               pmax  pmax
      comp=Z,10.0nm,1.0s
BEKR  Beckworth        73.75  40 eP     P      20 59 20.9 -0.4
      comp=Z,8.0nm,1.1s
PNTR  Pine Nut         73.76  41 eP     P      20 59 20.7 -0.7
      comp=Z,11nm,1.0s
VCNR  Virginia City    73.85  41 eP     P      20 59 21.3 -0.6
      comp=Z,7.8nm,1.1s
HUMO  Hull Mountain    73.89  36 eP     P      20 59 25.8 +3.9
      comp=Z,12nm,1.2s
YERR  Yerington        73.93  41 eP     P      20 59 22.2 -0.1
      comp=Z,12nm,1.3s
GMRC  Granite Mounta   73.98  46  P     P      20 59 22.2 -0.5
      baz=238
IRM   Iron Mountain    74.02  47  P     P      20 59 22.9 +0.2
      baz=238
M04C  Macdoel          74.02  37  P     P      20 59 23.0 +0.3
      baz=232
RYN   Ryan             74.18  42 eP     P      20 59 22.5 -1.3
      comp=Z,4.7nm,1.2s
LAB   Little Aspen B   74.19  37 eP     P      20 59 24.7 +1.0
NV01  Mina Array Sit   74.21  42 eP     P      20 59 21.9 -2.2
NVAR  Mina Array Bea   74.21  42  P     P      20 59 24.0  0.0
      comp=Z,1.0nm,0.8s,baz=224,slow=6.8,SNR=5.8
NVAR                              LR    LR     21 24 20.8
      comp=Z,296nm,21.2s,baz=119,slow=30
Y12C  Blythe           74.25  48 eP     P      20 59 24.0 -0.1
      comp=Z,10nm,1.3s
PAHR  Pah Rah Range    74.26  40 eP     P      20 59 24.6 +0.4
      comp=Z,10nm,1.2s
VSP   Spence Mountai   74.30  37 eP     P      20 59 25.1 +0.7
NV11  Mina Array Sit   74.31  42 eP     P      20 59 22.9 -1.6
      comp=Z,0.9nm,1.2s
I03D  Drain, OR        74.36  35  P     P      20 59 23.7 -0.7
      baz=230
LDFC  Landfair         74.52  46 eP     P      20 59 26.1 +0.3
      comp=Z,19nm,1.1s
TWG   Pinlang          74.56 299 eP     P      20 59 22.4 -3.7
      comp=Z,539nm,2.0s
214A  Organ Pipe Nat   74.59  50  P     P      20 59 25.0 -1.2
      baz=241
KVN   Kaiserville      74.69  42 eP     P      20 59 24.4 -2.4
      comp=Z,9.3nm,1.1s
KVN   Kaiserville      74.69  42 eP     P      20 59 24.4 -2.4
KVN                               pmax  pmax
      comp=Z,9.0nm,1.1s
QSPA  South Pole Qui   74.72 180  P     P      20 59 27.0 +0.5
      comp=Z,9.1nm,1.0s,baz=31,slow=3.3,SNR=18
QSPA                              LR    LR     21 25 17.4
      comp=Z,150nm,21.7s,baz=49,slow=30
TPNV  Topopah Spring   74.74  44  P     P      20 59 27.1 +0.1
      baz=237
TPNV  Topopah Spring   74.74  44 eP     P      20 59 24.9 -2.2
      comp=Z,34nm,2.0s
TPNV  Topopah Spring   74.74  44 eP     P      20 59 24.9 -2.2
TPNV                              pmax  pmax
      comp=Z,34nm,2.0s
I04A  Tendick Farm,    74.95  36  P     P      20 59 27.9 -0.1
      baz=231
MOD   Modoc Plateau    75.00  38 eP     P      20 59 27.8 -0.6
      comp=Z,11nm,1.0s
K05A  Summer Lake      75.15  37 eP     P      20 59 30.0 +0.6
      comp=Z,17nm,1.1s
SHPR  Sheep Range      75.24  45 eP     P      20 59 30.7 +0.7
      comp=Z,22nm,1.9s
J05D  Fort Rock, OR    75.30  37  P     P      20 59 31.2 +1.1
      baz=232
H04A  Detroit Lake     75.64  35 eP     P      20 59 32.7 +0.8
      comp=Z,12nm,0.9s
PINE  Pine Mountain    75.78  36 eP     P      20 59 33.7 +0.8
      comp=Z,22nm,1.1s
I05D  Terrebonne, OR   75.89  36  P     P      20 59 33.8 +0.4
      baz=232
R11A  Troy Canyon, C   75.94  43  P     P      20 59 34.3 +0.3
      baz=237
R11A  Troy Canyon, C   75.94  43 eP     P      20 59 32.9 -1.1
      comp=Z,16nm,1.9s
BMN   Battle Mountai   76.03  41 eP     P      20 59 33.8 -0.6
      comp=Z,6.9nm,1.0s
BMN   Battle Mountai   76.03  41 eP     P      20 59 33.8 -0.6
BMN                               pmax  pmax
      comp=Z,7.0nm,1.0s
KSRS  Korea Array      76.17 316  P     P      20 59 36.3 +1.3
      comp=Z,5.3nm,1.1s,baz=118,slow=6.9,SNR=17
KSRS                              LR    LR     21 32 02.7
      comp=Z,151nm,18.1s,baz=112,slow=35
KS15  Wonju Array Si   76.19 315 eP     P      20 59 33.1 -2.1
KSAR  Wonju Array Be   76.19 315  P     P      20 59 36.3 +1.2
KS01  Wonju Array Si   76.20 316 eP     P      20 59 35.6 +0.4
TUC   Tucson           76.27  51  P     P      20 59 36.9 +1.1
      baz=242
TUC   Tucson           76.27  51 eP     P      20 59 36.7 +0.9
      comp=Z,14nm,1.4s
TUC   Tucson           76.27  51  P     P      20 59 37.0 +1.2
TUC                               pmax  pmax
      comp=Z,7.0nm,1.1s
WVOR  Wild Horse Val   76.31  38 eP     P      20 59 34.8 -1.1
      comp=Z,14nm,1.3s
WVOR  Wild Horse Val   76.31  38 eP     P      20 59 34.8 -1.1
WVOR                              pmax  pmax
      comp=Z,14nm,1.3s
TYV   Tymovskoe        76.32 333 eP     P      20 59 33.8 -1.8
TYV                               pmax  pmax
      comp=Z,20nm,1.4s
I07A  Izee             76.78  37 eP     P      20 59 39.7 +1.1
      comp=Z,5.2nm,1.0s
LCMT  Little Creek M   76.81  45 eP     P      20 59 39.0 +0.1
      comp=Z,18nm,1.8s
G06A  Carlson Farm,    76.84  35 eP     P      20 59 39.2 +0.4
      comp=Z,40nm,1.9s
J08A  Circle Bar Ran   76.95  38 eP     P      20 59 39.3 -0.2
      comp=Z,14nm,1.1s
BRLK  Bradley Lake     77.00  11 eP     P      20 59 38.6 -0.7
      comp=Z,54nm,1.5s
CCUT  Cedar City       77.01  45 eP     P      20 59 40.8 +0.7
INCN  Inchon           77.06 315 eP     P      20 59 38.6 -1.5
      comp=Z,17nm,0.9s
INCN  Inchon           77.06 315 eP     P      20 59 38.6 -1.5
INCN                              pmax  pmax
      comp=Z,17nm,0.9s
LON   Longmire         77.15  33 eP     P      20 59 40.0 -0.4
      comp=Z,8.2nm,1.4s
LON   Longmire         77.15  33 eP     P      20 59 40.1 -0.4
LON                               pmax  pmax
      comp=Z,8.0nm,1.4s
PSUT  Pine Spring      77.19  44 eP     P      20 59 40.6 -0.4
      comp=Z,4.1nm,1.0s
SZCU  Shurtz Canyon    77.22  45 eP     P      20 59 41.5 +0.3
      comp=Z,26nm,1.9s
D05A  Enumclaw         77.33  33 eP     P      20 59 42.2 +0.8
      comp=Z,39nm,1.5s
WUAZ  Wupatki          77.38  48 eP     P      20 59 42.8 +0.7
      comp=Z,15nm,1.5s
USA0B Ussuriysk Arra   77.38 323 eP     P      20 59 42.0 +0.3
      comp=Z,19nm,1.3s
USRK  Ussuriysk Ar.    77.38 323  P     P      20 59 41.6 -0.1
      comp=Z,6.8nm,1.0s,baz=113,slow=7.0
USRK                              LR    LR     21 27 19.8
      comp=Z,469nm,22.0s,baz=139,slow=31
PKCU  Pink Cliffs      77.67  45 eP     P      20 59 45.6 +1.6
      comp=Z,25nm,1.3s
G08A  Pilot Rock       77.82  36 eP     P      20 59 44.6 +0.4
      comp=Z,11nm,1.1s
HPIG                   77.91  58 eP     P      20 59 45.5 +0.2
      comp=Z,42nm,2.0s
MTPU  Mount Pierson    78.06  45 eP     P      20 59 46.9 +0.8
HAWA  Hanford          78.16  35 eP     P      20 59 46.1 +0.1
      comp=Z,6.8nm,0.8s
CRAG  Craig            78.23  22 eP     P      20 59 47.5 +1.4
      comp=Z,60nm,1.8s
MSU   Marysvale        78.31  45 eP     P      20 59 48.4 +1.1
MSU   Marysvale        78.31  45 eP     P      20 59 48.4 +1.1
RC01  Rabbit Creek A   78.45  11 eP     P      20 59 43.9 -3.4
      comp=Z,23nm,1.0s
E08A  Dider Farm, El   78.48  35 eP     P      20 59 48.0 +0.3
      comp=Z,6.0nm,0.7s
BMO   Blue Mountains   78.51  37 eP     P      20 59 48.4 +0.3
      comp=Z,8.3nm,1.2s
BMO   Blue Mountains   78.51  37 eP     P      20 59 48.4 +0.3
BMO                               pmax  pmax
      comp=Z,8.0nm,1.2s
MFID  Camas Ranch      78.57  39 eP     P      20 59 48.5  0.0
      comp=Z,11nm,1.2s
121A  Cookes Peak, D   78.62  52  P     P      20 59 50.3 +1.2
      baz=244
DUG   Dugway, Tooele   78.74  43  P     P      20 59 51.0 +1.4
      baz=239
DUG   Dugway, Tooele   78.74  43 eP     P      20 59 49.5  0.0
      comp=Z,9.6nm,1.1s
DUG   Dugway, Tooele   78.74  43 eP     P      20 59 49.5  0.0
DUG                               pmax  pmax
      comp=Z,10.0nm,1.1s
GLI   Glacier Island   78.79  13 eP     P      20 59 48.7 -0.4
      comp=Z,14nm,0.9s
ZAIG  Zacatecas        78.88  63 eP     P      20 59 50.2 -0.6
      comp=Z,11nm,1.2s
D08A  Wollman Farm,    78.90  34 eP     P      20 59 49.4 -0.7
      comp=Z,28nm,1.5s
SKT   Skwentna         78.95  10 eP     P      20 59 48.4 -1.7
      comp=Z,29nm,1.6s
BGU   Big Grassy Mou   78.98  42 eP     P      20 59 51.1 +0.2
E09A  Wood Farm, Sta   79.00  35 eP     P      20 59 50.9 +0.3
      comp=Z,8.6nm,1.1s
F10A  Beach Ranch, E   79.20  36 eP     P      20 59 51.4 -0.4
      comp=Z,7.7nm,1.0s
GHO   Glory Hole Cre   79.23  12 eP     P      20 59 51.0 -0.7
      comp=Z,15nm,1.1s
DIV   Divide           79.30  13 eP     P      20 59 50.5 -1.6
      comp=Z,12nm,0.9s
TMUT  Trail Mountain   79.35  44 eP     P      20 59 54.1 +1.0
SML   Sawmill          79.38  12 eP     P      20 59 51.4 -1.0
      comp=Z,28nm,1.6s
SML   Sawmill          79.38  12 eP     P      20 59 51.4 -1.0
SML                               pmax  pmax
      comp=Z,28nm,1.6s
BMRM  Bremner River    79.42  14 eP     P      20 59 52.8 +0.2
      comp=Z,23nm,1.0s
MPU   Maple Canyon     79.43  43 eP     P      20 59 53.4  0.0
B08A  Colville Reser   79.46  33 eP     P      20 59 52.0 -1.1
      comp=Z,6.6nm,1.0s
HLID  Hailey           79.51  39  P     P      20 59 54.4 +0.7
      baz=237
HLID  Hailey           79.51  39 eP     P      20 59 53.8 +0.1
      comp=Z,12nm,1.1s
SPUT  South Promonto   79.55  42 eP     P      20 59 54.2 +0.2
CRQM  Cirque           79.58  15 eP     P      20 59 53.1 -0.6
      comp=Z,16nm,0.4s
HVU   Hansel Valley    79.58  41 eP     P      20 59 54.5 +0.4
HVU   Hansel Valley    79.58  41 eP     P      20 59 54.6 +0.4
KLU   Klutina          79.59  13 eP     P      20 59 52.8 -0.8
      comp=Z,16nm,1.4s
SCM   Sheep Creek Mo   79.60  12 eP     P      20 59 53.3 -0.4
      comp=Z,30nm,1.4s
SCM   Sheep Creek Mo   79.60  12 eP     P      20 59 53.3 -0.4
SCM                               pmax  pmax
      comp=Z,30nm,1.4s
TGL   Tana Glacier     79.65  15 eP     P      20 59 52.8 -1.2
      comp=Z,17nm,1.1s
CTU   Camp Tracy       79.69  43 eP     P      20 59 54.7  0.0
C09A  Chrisman Ranch   79.69  34 eP     P      20 59 53.8 -0.6
      comp=Z,13nm,1.5s
SRU   San Rafael Swe   79.72  45 eP     P      20 59 55.9 +0.9
SRU   San Rafael Swe   79.72  45 eP     P      20 59 55.9 +0.9
P17A  Butcher Ranch,   79.75  44 eP     P      20 59 56.1 +1.0
JLU   Jordanelle       79.84  43 eP     P      20 59 55.8 +0.1
BALM  Baldy            80.02  15 eP     P      20 59 56.1 +0.1
      comp=Z,26nm,1.5s
BALM  Baldy            80.02  15 eP     P      20 59 56.1 +0.1
BALM                              pmax  pmax
      comp=Z,26nm,1.5s
MNTX  Cornudas Mount   80.10  53  P     P      20 59 58.1 +1.1
      baz=245
MNTX  Cornudas Mount   80.10  53 eP     P      20 59 57.2 +0.2
      comp=Z,10nm,1.2s
TCUT  Toone Canyon     80.13  43 eP     P      20 59 56.9 -0.4
      comp=Z,22nm,0.9s
P18A  Preston Nutter   80.16  44 eP     P      20 59 58.1 +0.6
NJ2   Nanjing          80.19 307 eP     P      20 59 56.5 -0.9
NJ2                               pmax  pmax
      comp=Z,12nm,0.5s
CAST  Castle Rocks     80.20  10 eP     P      20 59 55.4 -1.4
      comp=Z,4.4nm,0.9s
PV05  Paradox Valley   80.21  46 eP     P      20 59 56.4 -1.3
MVCO  Mesa Verde       80.22  47 eP     P      20 59 57.0 -0.8
      comp=Z,6.0nm,1.0s
HWUT  Hardware Ranch   80.27  42 eP     P      20 59 57.4 -0.6
      comp=Z,6.8nm,0.9s
PV09  Paradox Valley   80.38  46 eP     P      20 59 59.1 +0.3
PV10  Paradox Valley   80.39  46 eP     P      21 00 00.1 +1.4
PV19  Morning Glory    80.40  46 eP     P      20 59 59.4 +0.7
      comp=Z,16nm,1.2s
PV14  Lion Creek, Pa   80.40  46 eP     P      20 59 58.9 +0.1
      comp=Z,26nm,1.3s
PV17  East Wray Mesa   80.40  46 eP     P      20 59 58.8 +0.1
      comp=Z,7.8nm,0.9s
PV18  Skein Mesa, Pa   80.42  46 eP     P      20 59 59.3 +0.5
      comp=Z,17nm,1.3s
PV20  West Nyswonger   80.42  46 eP     P      20 59 58.9 +0.1
      comp=Z,17nm,1.2s
PV13  Radium Mtn., P   80.44  46 eP     P      20 59 59.9 +1.0
      comp=Z,9.1nm,1.1s
PV16  Nyswonger Mesa   80.44  46 eP     P      20 59 59.3 +0.3
      comp=Z,10nm,1.1s
PV23  Carpenter Ridg   80.44  46 eP     P      20 59 59.7 +0.7
      comp=Z,12nm,1.0s
PV03  Paradox Valley   80.46  46 eP     P      20 59 60.0 +0.9
PV11  David Mesa, Pa   80.47  46 eP     P      20 59 57.2 -1.8
      comp=Z,13nm,0.5s
TX31  Lajitas Ar. Si   80.49  56 eP     P      20 59 58.8 -0.4
LTX   Lajitas          80.49  56 eP     P      20 59 59.7 +0.5
LTX   Lajitas          80.49  56 eP     P      20 59 59.7 +0.5
TXAR  Lajitas Array    80.49  56  P     P      20 59 59.7 +0.5
      comp=Z,3.8nm,1.1s,baz=225,slow=4.8,SNR=19
TXAR                              LR    LR     21 27 56.7
      comp=Z,299nm,20.7s,baz=0.0,slow=30
KLR   Kul'dur          80.50 327ceP     P      20 59 58.8 +0.1
KLR                              i             21 00 06.9
KTH   Kantishna Hill   80.52  10 eP     P      20 59 57.4 -1.2
      comp=Z,28nm,1.5s
PV02  Paradox Valley   80.52  46 eP     P      21 00 00.1 +0.7
      comp=Z,20nm,1.5s
PV21  Cone Mtn., Par   80.52  46 eP     P      20 59 59.4  0.0
      comp=Z,11nm,1.1s
PV12  Saucer Basin,    80.53  46 eP     P      20 59 58.9 -0.5
      comp=Z,27nm,1.3s
TRF   Thorofare Moun   80.53  10 eP     P      20 59 57.6 -1.2
      comp=Z,21nm,1.1s
HARP  HAARP            80.57  13 eP     P      20 59 58.2 -0.6
      comp=Z,33nm,1.5s
PV01  Paradox Valley   80.60  46 eP     P      21 00 00.8 +1.0
PV22  Blue Mesa, Par   80.64  46 eP     P      21 00 01.0 +1.0
      comp=Z,6.0nm,1.1s
SKAG  Skagway          80.64  19 eP     P      20 59 59.7 +0.6
      comp=Z,12nm,0.8s
ANMO  Albuquerque      80.68  50  P     P      21 00 00.3  0.0
      comp=Z,0.7nm,0.4s,baz=268,slow=7.6,SNR=6.7
ANMO                              LR    LR     21 27 43.9
      comp=Z,299nm,21.9s,baz=238,slow=30
ANMO  Albuquerque      80.68  50 eP     P      20 59 59.9 -0.4
      comp=Z,12nm,1.4s
ANMO  Albuquerque      80.68  50⇑iP     P      20 59 59.8 -0.5
ANMO                              pmax  pmax
      comp=Z,6.0nm,1.2s
DHY   Denali Highway   80.72  12 eP     P      20 59 59.3 -0.5
      comp=Z,9.1nm,1.0s
PAX   Paxson           81.01  12 eP     P      21 00 00.7 -0.5
      comp=Z,22nm,1.6s
BPAW  Bear Paw Mtn.    81.02  10 eP     P      21 00 00.6 -0.6
      comp=Z,8.3nm,1.3s
MCK   McKinley         81.03  11 eP     P      21 00 00.5 -0.7
      comp=Z,26nm,1.0s
MCK   McKinley         81.03  11 eP     P      21 00 00.5 -0.7
MCK                               pmax  pmax
      comp=Z,26nm,1.0s
MCMT  McKenzie Canyo   81.14  39 eP     P      21 00 01.9 -0.6
AHID  Auburn Hatcher   81.16  41 eP     P      21 00 02.0 -0.7
      comp=Z,6.4nm,0.9s
BWN   Browne           81.34  10 eP     P      21 00 01.4 -1.4
      comp=Z,29nm,1.0s
MSO   Missoula         81.56  37  P     P      21 00 04.1 -0.5
      baz=237
MSO   Missoula         81.56  37 eP     P      21 00 02.8 -1.7
      comp=Z,10nm,1.0s
DLMT  Dillon           81.57  38 eP     P      21 00 03.6 -1.1
      comp=Z,12nm,1.3s
REDW  Red Top Meadow   81.61  41 eP     P      21 00 05.2 +0.2
      comp=Z,16nm,1.3s
S22A  4UR Ranch, Cre   81.65  47  P     P      21 00 06.8 +1.3
      baz=244
WRH   Wood River Hil   81.86  11 eP     P      21 00 04.2 -1.4
      comp=Z,36nm,1.1s
CCB   Clear Creek Bu   82.07  11 eP     P      21 00 05.3 -1.4
      comp=Z,26nm,1.1s
BW06  Boulder Array    82.14  42  P     P      21 00 08.7 +0.8
      baz=241
PD31  Pinedale Array   82.14  42 eP     P      21 00 06.7 -1.2
PDAR  Pinedale Array   82.14  42  P     P      21 00 07.8 -0.1
      comp=Z,2.0nm,0.9s,baz=225,slow=4.0,SNR=7.3
PDAR                              LR    LR     21 29 52.2
      comp=Z,162nm,19.7s,baz=246,slow=31
BOZ   Bozeman (W)      82.27  39  P     P      21 00 09.2 +0.8
      baz=239
BOZ   Bozeman (W)      82.27  39 eP     P      21 00 08.8 +0.4
      comp=Z,11nm,1.3s
BOZ   Bozeman (W)      82.27  39 eP     P      21 00 08.8 +0.4
BOZ                               pmax  pmax
      comp=Z,11nm,1.3s
LNIG  Linares          82.30  62 eP     P      21 00 07.9 -0.9
      comp=Z,16nm,1.1s
IL1   Eielson Array    82.35  11 eP     P      21 00 06.4 -1.8
ILAR  Eielson Array    82.35  11  P     P      21 00 07.5 -0.7
      comp=Z,4.4nm,1.0s,baz=215,slow=6.2,SNR=16
ILAR                              LR    LR     21 34 07.1
      comp=Z,72nm,18.3s,baz=216,slow=34
ILAR  Eielson Array    82.35  11  P     P      21 00 07.5 -0.7
ILAR                              pmax  pmax
      comp=Z,5.0nm,1.0s
ILAR                              MLR   MLR
      comp=Z,72nm,18.3s
ILB   Eielson Array    82.35  11 eP     P      21 00 06.5 -1.7
SEY   Seymchan         82.47 345⇑iP     P      21 00 09.3 +0.5
SDCO  Great Sand Dun   82.59  48  P     P      21 00 09.7 -0.7
      baz=244
MSTX  Muleshoe         83.04  52  P     P      21 00 12.5 -0.1
      baz=246
MSTX  Muleshoe         83.04  52 eP     P      21 00 12.4 -0.1
      comp=Z,17nm,0.5s
Q24A  Divide           83.37  47  P     P      21 00 14.7 +0.3
      baz=244
ISCO  Idaho Springs    83.41  46  P     P      21 00 14.4 -0.2
      baz=244
RLMT  Red Lodge        83.47  40  P     P      21 00 15.0 +0.3
      baz=241
N23A  Red Feather La   83.67  45  P     P      21 00 16.0 +0.2
      baz=244
K22A  Casper           84.06  43  P     P      21 00 19.0 +1.3
      baz=243
PMSA  Palmer Station   84.21 156  LR    LR     21 29 00.8
      comp=Z,311nm,20.5s,baz=241,slow=29
AMTX  Amarillo         84.23  52  P     P      21 00 18.8 +0.2
      baz=247
EGMT  Eagleton         84.61  37  P     P      21 00 19.0 -1.3
      baz=240
ABTX  Abilene, Hawle   84.94  54  P     P      21 00 22.8 +0.6
      baz=248
ABTX  Abilene, Hawle   84.94  54 eP     P      21 00 21.8 -0.4
      comp=Z,43nm,1.3s
ZEA   Zeya             85.40 329 eP     P      21 00 24.1 +0.1
ZEA                              eS     S      21 10 50.0 -1.8
ZEA                               pmax  pmax
      comp=Z,28nm,1.4s
ZEA                               pmax  pmax
      comp=Z,200nm,6.0s
ZEA                               smax  smax
      comp=N,300nm,12.0s
TOLK  Toolik Lake Re   85.45   9  P     P      21 00 24.4 +0.4
      baz=203
TOLK  Toolik Lake Re   85.45   9 eP     P      21 00 23.0 -1.0
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      comp=N,22nm,1.3s
435B  Jarrell          85.92  57  P        P        21 00 27.2 +0.1
      baz=250
USHA  Ushuaia          85.93 146  LR       LR       21 29 55.7
      comp=N,430nm,20.1s,baz=170,slow=29
LAO   LASA Array       86.09  39  eP       P        21 00 26.4 -1.2
      comp=N,40nm,1.5s
RSSD  Black Hills      86.34  42  P        P        21 00 29.6 +0.4
      baz=245
RSSD  Black Hills      86.34  42  eP       P        21 00 27.8 -1.3
      comp=N,14nm,1.4s
RSSD  Black Hills      86.34  42  eP       P        21 00 27.8 -1.3
RSSD                              pmax     pmax
      comp=Z,14nm,1.4s
WHTX  Lake Whitney,    86.44  56  P        P        21 00 30.6 +1.0
      baz=250
WHTX  Lake Whitney,    86.44  56  eP       P        21 00 28.1 -1.5
      comp=Z,54nm,1.6s
HKT   Hockley          87.06  58  eP       P        21 00 32.7 +0.1
HKT                               pmax     pmax
      comp=Z,35nm,1.2s
MAW   Mawson           87.90 199  P        P        21 00 36.6 +0.6
      comp=Z,8.7nm,0.8s,baz=108,slow=3.2,SNR=4.1
MAW                               LR       LR       21 40 12.9
      comp=Z,224nm,18.4s,baz=94,slow=36
MAW   Mawson           87.90 199  P        P        21 00 37.0 +1.0
      baz=88,SNR=5.1
MAW   Mawson           87.90 199  eP       P        21 00 37.9 +1.9
      comp=Z,2.4nm,0.9s
GYA   Guiyang          88.09 298  eP       P        21 00 38.0 +0.1
GYA                               PP       PP       21 04 07.5 +2.2
GYA                               SKS      SKSac    21 11 04.8 +1.2
GYA                               S        S        21 11 20.3 +1.1
GYA                               pmax     pmax
      comp=Z,10.0nm,1.0s
GYA                               pmax     pmax
      comp=Z,110nm,6.0s
NATX  Nacogdoches      88.61  57  P        P        21 00 41.7 +1.7
      baz=251
XAN   Xi’an            88.66 306  P        P        21 00 39.9 -0.4
XAN                               pmax     pmax
      comp=Z,5.0nm,2.4s
XAN                               pmax     pmax
      comp=Z,130nm,4.2s
HHC   Hu-ho-hao-te     89.04 313  eP       P        21 00 42.6 +0.6
HHC                               sP       pP       21 00 50.9 -3.9
HHC                               PP       PP       21 04 14.1 +1.5
HHC                               S        S        21 11 29.8 +2.2
HHC                               sS       pS       21 11 40.5 -3.4
HHC                               pmax     pmax
      comp=Z,7.0nm,0.9s
HHC                               pmax     pmax
      comp=Z,200nm,6.4s
HHC                               LR       LR
      comp=Z,130nm,15.5s
HHC                               LR       LR
      comp=Z,170nm,17.3s
YAK   Yakutsk          89.08 337  eP       P        21 00 39.1 -2.4
YAK                               pmax     pmax
      comp=Z,9.0nm,1.6s
YAK                               pmax     pmax
      comp=N,3.0nm,1.1s
PLCA  Paso Flores      89.49 132  LR       LR       21 33 33.4
      comp=N,247nm,19.0s,baz=264,slow=31
341A  Kurthwood        89.68  57  P        P        21 00 46.7 +1.6
      baz=252
140A  Cam and Jess,    89.76  56  P        P        21 00 46.8 +1.4
      baz=252
YKA   Yellowknife Ar   89.99  23  P        P        21 00 45.1 -0.6
      comp=N,1.0nm,0.8s,baz=225,slow=4.3,SNR=4.0
YKA                               LR       LR       21 37 55.9
      comp=N,6.9nm,18.2s,baz=224,slow=34
W39A  Magazine         90.40  54  P        P        21 00 49.5 +1.2
      baz=252
T38A  Diamond          90.59  52  P        P        21 00 48.9 -0.3
      baz=251
V39A  Pettigrew        90.71  53  P        P        21 00 48.7 -1.2
      baz=252
Y41A  Eaglette Beard   90.91  55  P        P        21 00 51.4 +0.7
      baz=252
KMI   Kunming          91.08 296  P        P        21 00 52.3 +0.3
KMI                               pmax     pmax
      comp=N,13nm,0.5s
KMI                               pmax     pmax
      comp=N,81nm,5.1s
JTS   JuntasAbangare   91.10  80  LR       LR       21 32 27.6
      comp=N,450nm,20.3s,baz=318,slow=29
R38A  Fenwick Farm,    91.25  51  P        P        21 00 52.0 -0.3
      baz=252
T39A  Clever           91.28  52  P        P        21 00 52.8 +0.3
      baz=252
V40A  Witts Springs    91.33  53  P        P        21 00 52.5 -0.3
      baz=252
P37A  Lathrop          91.36  49  P        P        21 00 52.4 -0.4
      baz=251
W41B  Gary Mavity, V   91.59  54  P        P        21 00 54.6 +0.8
      baz=252
V41A  Mountainview     91.84  53  P        P        21 00 55.8 +0.7
      baz=253
CD2   Chengdu          91.85 301  eP       P        21 00 54.5 -0.8
244A  Avery, Jackson   91.91  57  P        P        21 00 55.6 +0.1
      baz=253
R39A  Chumby, Stover   91.94  51  P        P        21 00 55.5  0.0
      baz=252
T40A  Mansfield        91.97  52  P        P        21 00 56.4 +0.8
      baz=252
S40A  Lebanon          92.12  52  P        P        21 00 56.4 +0.1
      baz=252
U41A  Viola            92.19  53  P        P        21 00 56.9 +0.2
      baz=253
Y43A  Makayla and Ka   92.25  56  P        P        21 00 57.6 +0.6
      baz=253
V42A  Cord             92.44  54  P        P        21 00 57.9 +0.1
      baz=253
P39B  Salisbury        92.50  50  P        P        21 00 58.1 +0.1
      baz=252
R40A  Maddies Statio   92.50  51  P        P        21 00 58.3 +0.2
      baz=253
T41A  Mountain View    92.52  52  P        P        21 00 58.4 +0.2
      baz=253
CMAR  Chiang Mai Arr   92.68 288  P        P        21 01 00.2 +0.9
      comp=N,0.7nm,0.8s,baz=129,slow=1.9,SNR=4.2
CMAR                              LR       LR       21 36 58.5
      comp=N,118nm,20.4s,baz=113,slow=32
S41A  Jillco Farms,    92.69  52  P        P        21 00 58.6 -0.3
      baz=253
U42A  Revenden         92.72  53  P        P        21 00 58.8 -0.2
      baz=253
M38A  Pleasantville    92.77  48  P        P        21 00 59.4 +0.2
      baz=252
Q40A  Laux Farm, Aux   92.86  50  P        P        21 00 58.8 -0.9
      baz=253
K37A  Belmond          92.88  46  P        P        21 00 59.6 -0.1
      baz=252
VNA3  Neumayer Olymp   92.92 175  P        P        21 01 01.6 +2.1
SNAA  Sanae            92.98 177  P        P        21 01 02.9 +3.1
SNAA  Sanae            92.98 177  P        P        21 01 02.3 +2.5
      comp=N,1.9nm,0.6s,baz=288,slow=20,SNR=2.9
SNAA                              LR       LR       21 42 35.2
      comp=N,111nm,18.0s,baz=189,slow=35
SNAA  Sanae            92.98 177  eP       P        21 01 02.2 +2.5
      comp=N,8.8nm,1.3s
SNAA  Sanae            92.98 177  eP       P        21 01 02.2 +2.5
SNAA                              pmax     pmax
      comp=Z,9.0nm,1.3s
NNA   Nana             92.98 103  LR       LR       21 33 54.7
      comp=Z,165nm,20.0s,baz=230,slow=30
T42A  Van Buren        93.03  53  P        P        21 01 00.1 -0.3
      baz=253
P40A  Paris            93.04  50  P        P        21 00 59.8 -0.7
      baz=253
J37A  Redenius Farm,   93.10  46  P        P        21 01 01.2 +0.4
      baz=252
N39A  Derby Farms, D   93.11  49  P        P        21 01 00.7  0.0
      baz=253
L38A  Oak Wood Farm,   93.16  47  P        P        21 01 01.2 +0.2
      baz=252
AGMN  Agassiz Nation   93.17  41  P        P        21 01 01.3 +0.4
      baz=251
CCM   Cathedral Cave   93.21  52  P        P        21 01 00.9 -0.4
      baz=253
O40A  La Belle         93.34  49  P        P        21 01 02.0 +0.2
      baz=253
S42A  Caledonia        93.47  52  P        P        21 01 02.5  0.0
      baz=254
Q41A  Truxton          93.48  51  P        P        21 01 02.8 +0.2
      baz=253
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M39A  Webster          93.52  48  P        P        21 01 02.9 +0.2
      baz=253
VNA1  Neumayer--Stat   93.62 175  P        P        21 01 05.3 +2.7
OXF   Oxford           93.63  55  P        P        21 01 03.5 +0.1
      baz=254
T43A  Greenville       93.66  53  P        P        21 01 03.5 +0.1
      baz=254
A33A  Warroad          93.68  40  P        P        21 01 03.0 -0.2
      baz=251
N40A  Mertquake, Sal   93.78  49  P        P        21 01 03.7 -0.2
      baz=253
P41A  Barry, Barry     93.81  50  P        P        21 01 04.3 +0.2
      baz=254
ULM   Lac du Bonnet    93.81  39  P        P        21 01 02.8 -1.0
      comp=Z,1.9nm,0.7s,baz=265,slow=7.3,SNR=4.2
ULM                               LR       LR       21 37 49.9
      comp=Z,228nm,20.1s,baz=238,slow=32
L39A  Vinton           93.84  47  P        P        21 01 04.5 +0.4
      baz=253
Y46A  Houston          93.90  56  P        P        21 01 04.8 +0.2
      baz=254
F36A  Milaca           93.91  44  P        P        21 01 05.3 +0.9
      baz=252
S43A  Fulton Ridge,    93.96  52  P        P        21 01 05.1 +0.3
      baz=254
M40A  Post Highland    93.98  48  P        P        21 01 04.6 -0.2
      baz=253
W45A  Hickory Valley   93.98  55  P        P        21 01 05.2 +0.2
      baz=254
O41A  Passleys Farm,   94.07  50  P        P        21 01 05.3 +0.1
      baz=254
K39A  Oelwein          94.09  47  P        P        21 01 04.9 -0.4
      baz=253
I38A  Scanlan Farm,    94.17  46  P        P        21 01 06.1 +0.5
      baz=253
C35A  Jirik Farms, M   94.18  42  P        P        21 01 04.7 -0.8
      baz=252
N41A  Harden Midland   94.25  49  P        P        21 01 06.3 +0.2
      baz=254
P42A  Winchester       94.32  50  P        P        21 01 06.5 +0.1
      baz=254
L40A  Anamosa          94.37  48  P        P        21 01 05.9 -0.7
      baz=254
ULN   Ulaanbaatar      94.44 318⇑iP        P        21 01 06.7 -0.2
ULN                               pmax     pmax
      comp=Z,4.0nm,1.3s
B35A  Bob, Littlefor   94.54  41  P        P        21 01 06.9 -0.3
      baz=252
Q43A  New Douglas      94.62  51  P        P        21 01 07.6 -0.1
      baz=254
U45A  Rockin P Farm,   94.64  54  P        P        21 01 08.3 +0.4
      baz=255
SONA0 Songino Array    94.85 318  eP       P        21 01 08.9 +0.1
SONA0                             ePP      PP       21 05 01.0 +2.8
SONM  Songino Array    94.85 318  P        P        21 01 08.9 +0.1
      comp=Z,0.4nm,0.5s,baz=132,slow=4.2,SNR=5.7
SONM                              PP       PP       21 05 01.0 +2.8
      comp=Z,0.3nm,0.5s,baz=131,slow=6.3,SNR=5.6
SONM                              LR       LR       21 38 35.2
      comp=Z,228nm,22.0s,baz=99,slow=32
P43A  Skaggs, Pawnee   94.94  50  P        P        21 01 09.1 -0.1
      baz=254
V46A  Holladay         95.00  54  P        P        21 01 09.7 +0.1
      baz=255
D37A  Cotton           95.02  43  P        P        21 01 08.7 -0.8
      baz=253
F38A  Pierce - Schro   95.04  44  P        P        21 01 09.7 +0.2
      baz=253
H39A  Augusta          95.07  45  P        P        21 01 09.8 +0.1
      baz=254
J40A  Soldiers Grove   95.09  47  P        P        21 01 09.8 -0.1
      baz=254
K41A  Shullsburg       95.18  47  P        P        21 01 10.5 +0.2
      baz=254
W47A  Westpoint        95.27  55  P        P        21 01 11.0 +0.2
      baz=255
O43A  Sugar Creek Fa   95.27  50  P        P        21 01 10.9 +0.2
      baz=255
JFWS  Jewell Farm      95.30  47  P        P        21 01 11.1 +0.2
      baz=254
WVT   Waverly          95.31  54  P        P        21 01 11.2 +0.2
      baz=255
G39A  Holcombe         95.32  45  P        P        21 01 11.4 +0.5
      baz=254
L42A  Oliver, Polo     95.47  48  P        P        21 01 11.7 +0.1
      baz=254
V47A  Nunnelly         95.47  55  P        P        21 01 11.3 -0.5
      baz=255
T46A  Princeton        95.49  53  P        P        21 01 11.9 +0.1
      baz=255
R45A  Skylar, Fairfi   95.52  52  P        P        21 01 12.2 +0.3
      baz=255
J41A  Loganville       95.59  47  P        P        21 01 11.9 -0.2
      baz=254
F39A  Loretta          95.67  44  P        P        21 01 12.0 -0.4
      baz=254
W48A  Pulaski          95.76  55  P        P        21 01 12.5 -0.6
      baz=256
U47A  Clarksville      95.81  54  P        P        21 01 13.8 +0.5
      baz=255
150A  Eclectic         95.86  58  P        P        21 01 13.5 -0.1
      baz=256
K42A  Prairie Point,   95.91  47  P        P        21 01 12.9 -0.7
      baz=255
L43A  Garden Prairie   96.18  48  P        P        21 01 14.9 +0.1
      baz=255
F40A  Park Falls       96.20  44  P        P        21 01 14.9  0.0
      baz=255
P45A  Graceland, Par   96.24  51  P        P        21 01 15.2  0.0
      baz=256
N44A  Piper City       96.27  50  P        P        21 01 15.1 -0.2
      baz=255
W49A  Belvidere        96.29  55  P        P        21 01 15.2 -0.3
      baz=256
U48A  Cassie Pea, Po   96.41  54  P        P        21 01 16.1 +0.1
      baz=256
E40A  Wakefield        96.49  44  P        P        21 01 16.3 +0.1
      baz=255
I42A  Draeger Farm,    96.50  46  P        P        21 01 16.0 -0.2
      baz=255
F41A  Three Lakes      96.84  45  P        P        21 01 18.0 +0.2
      baz=255
U49A  Red Boiling Sp   97.01  54  P        Pdif     21 01 18.9  0.0
      baz=256
GTA   Gaotai           97.20 309  eP       Pdif     21 01 21.8 +2.0
GTA                               pP       pP       21 01 26.6 -5.9
GTA                               sP       sP       21 01 28.8 -8.4
GTA                               pmax     pmax
      comp=Z,2.0nm,0.9s
TKL   Tuckaleechee C   98.39  55  LR       LR       21 38 49.2
      comp=Z,256nm,21.5s,baz=244,slow=31
LPAZ  La Paz           99.75 110  LR       LR       21 39 07.2
      comp=Z,118nm,19.4s,baz=268,slow=31
ROSC  El Rosal         99.91  88  LR       LR       21 37 19.6
      comp=Z,142nm,20.3s,baz=248,slow=30
MK32  Makanchi Array  110.84 315  ePKiKP   PKiKP    21 06 21.1 +1.4
MKAR  Makanchi Array  110.84 315  PP       PKiKP    21 06 21.1 +1.4
      comp=Z,1.0nm,1.1s,baz=110,slow=6.6,SNR=3.8
MKAR  Makanchi Array  110.84 315c iPKIKP   PKiKP    21 06 20.0 +0.3
MKAR                              pmax     pmax
      comp=Z,1.0nm,1.1s
KURK  Kurchatov       113.14 319  ePP      PP       21 07 11.1 -3.0
KURBB Kurchatov Arra  113.21 319  PP       PP       21 07 11.1 -3.5
      comp=Z,0.8nm,0.9s,baz=88,slow=6.1,SNR=4.9
BVAR  Borovoye Array  117.88 322  PKP      PKPdf    21 06 33.2 +0.2
      comp=Z,0.4nm,0.6s,baz=64,slow=6.6,SNR=3.8
BRVK  Borovoye        117.93 322⇑iPKIKP    PKPdf    21 06 33.1  0.0
BRVK                              pmax     pmax
      comp=Z,6.0nm,2.5s
ARU   Arti            123.32 328 i PKIKP   PKPdf    21 06 43.8 +0.5
ARU                                                 21 08 29.5
ARU                               PPP      PPP      21 11 02.9
ARU                                                 21 13 55.3
PRGR  Permogore       126.10 338  ePKIKP   PKPdf    21 06 48.2 -0.3
PRGR                              pmax     pmax
      comp=Z,5.0nm,1.0s
GEYT  Alibeck         129.54 307  PKP      PKPdf    21 06 56.0 +0.1
      comp=Z,0.7nm,0.7s,baz=67,slow=39,SNR=2.5
FIA0  FINESS Array S  131.89 348  ePKPdf   PKPdf    21 06 58.2 -1.3
FIA0  FINESS Array S  131.89 348  ePKIKP   PKPdf    21 06 58.2 -1.3
FINES FINESS Array B  131.89 348  PKP      PKPdf    21 06 58.2 -1.3
      comp=Z,2.0nm,0.8s,baz=29,slow=3.2,SNR=3.5
OBN   Obninsk         134.08 337  ePKIKP   PKPdf    21 07 06.8 +3.0
OBN                               ePPP     PPP      21 12 30.1
OBN                               pmax     pmax
      comp=Z,5.0nm,0.9s
HFS   Hagfors         134.97 355  PKP      PKPdf    21 07 09.9 +4.6
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      comp=Z,5.2nm,1.1s,baz=219,slow=9.0,SNR=3.6
KIV   Kislovodsk      138.20 320  ePKIKP   PKPdf    21 07 09.8 -2.2
KIV                               e                 21 10 00.7
KIV                               pmax     pmax
      comp=Z,3.0nm,0.9s
AKASG Malin Array Be  140.30 338  PKP      PKPdf    21 07 14.2 -1.2
      comp=Z,0.2nm,0.3s,baz=10,slow=2.1,SNR=4.0
AKASG Malin Array Be  140.30 338c iPKIKP   PKPdf    21 07 17.7 +2.2
AKBB  Malin Array Si  140.30 338  ePKPdf   PKPdf    21 07 15.0 -0.4
AKBB  Malin Array Si  140.30 338  ePKIKP   PKPdf    21 07 15.0 -0.4
CLL   Collm           143.75 353  ePKPdf   PKPbc    21 07 20.0 +0.8
CLL                               epPKiKP  PKiKP    21 07 27.0 +2.0
      comp=Z,5.0nm,0.9s
CLL                               ePKSbc   PKSbc    21 11 06.0 +4.6
CLL   Collm           143.75 353  ePKIKP   PKPbc    21 07 20.0 +0.8
CLL                               e                 21 07 27.0
TSUM  Tsumeb          144.06 198  PKP      PKPdf    21 07 23.5 +0.2
      comp=Z,1.7nm,0.5s,baz=173,slow=6.6,SNR=4.5
BRG   Berggiesshubel  144.06 352  ePKP     PKPdf    21 07 24.6 +2.4
      comp=Z,7.2nm,1.3s
BRG   Berggiesshubel  144.06 352  ePKIKP   PKPdf    21 07 24.5 +2.4
BRG                               pmax     pmax
      comp=Z,7.0nm,1.3s
UPC   Upice           144.10 350  AMS      AMS      22 09 10.0
      comp=Z,200nm,21.8s
DPC   Dobruska-Polom  144.20 349  ePKP     PKPdf    21 07 23.0 +0.5
DPC                               epPKP    PKiKP    21 07 28.6 +2.5
DPC                               AMS      AMS      22 09 50.0
      comp=Z,200nm,20.7s
DPC   Dobruska-Polom  144.20 349  ePKIKP   PKPdf    21 07 23.0 +0.5
DPC                               e                 21 07 28.6
DPC                               MLR      MLR
      comp=Z,200nm,20.7s
PVCC  Panska Ves      144.31 351  AMS      AMS      22 09 30.0
      comp=Z,200nm,22.4s
BUR08 Bucovina Ar. S  144.31 338  ePKPdf   PKPbc    21 07 21.5 +0.3
BUR04 Bucovina Ar. S  144.33 338  ePKPdf   PKPbc    21 07 21.3  0.0
BURAR Bucovina Array  144.33 338⇑iP        PKPdf    21 07 22.3 -0.6
BURAR Bucovina Array  144.33 338 ⇑PKIKP    PKPdf    21 07 22.3 -0.6
OKC   Ostrava-Krasne  144.34 347  eSS      SS       21 30 18.3  +59
OKC                               AMS      AMS      22 11 00.0
      comp=Z,200nm,16.3s
KRLC  Kraliky         144.38 349  ePKP     PKPdf    21 07 22.8  0.0
KRLC  Kraliky         144.38 349  ePKIKP   PKPdf    21 07 22.8  0.0
CRVS  Cervenica-Dubn  144.39 343  ePKIKP   PKPdf    21 07 22.1 -0.7
CRVS  Cervenica-Dubn  144.39 343  ePKP     PKPdf    21 07 22.1 -0.7
UZH   Uzhgorod        144.39 342  ePKHKP   PKPpre   21 07 18.9
UZH                               i                 21 07 20.9
UZH                               e                 21 07 29.1
MORC  Moravsky Berou  144.52 348⇓iP        PKPdf    21 07 23.0 -0.1
MORC  Moravsky Berou  144.52 348  ePKPdf   PKPbc    21 07 22.3 +0.6
MORC  Moravsky Berou  144.52 348  ePKIKP   PKPbc    21 07 22.3 +0.6
MORC  Moravsky Berou  144.52 348  ePKP     PKPbc    21 07 22.0 +0.3
BIZ   Bicaz           144.57 337⇑iP        PKPdf    21 07 23.0 -0.2
LANS  Liptovska Anna  144.68 345  ePKIKP   PKPdf    21 07 23.8 +0.4
LANS  Liptovska Anna  144.68 345  ePKP     PKPdf    21 07 23.8 +0.4
TESR  Tescani         144.72 336⇓iP        PKPdf    21 07 24.9 +1.4
TRPA  Tarpa           144.77 342⇑iP        PKPdf    21 07 23.0 -0.5
MEM   Membach         144.80   1 ⇑PKP      PKPdf    21 07 24.4 +1.0
PRU   Pruhonice       144.84 351  AMS      AMS      22 14 10.0
      comp=Z,200nm,21.9s
PRU   Pruhonice       144.84 351  PKIKP    PKPdf    21 07 24.1 +0.5
GOPC  GO Pecny, Ondr  144.88 351  ePKP     PKPdf    21 07 25.3 +1.6
GOPC                              AMS      AMS      22 10 10.0
      comp=Z,200nm,26.7s
GOPC  GO Pecny, Ondr  144.88 351  ePKIKP   PKPdf    21 07 25.3 +1.6
GOPC                              MLR      MLR
      comp=Z,200nm,26.7s
BCLA  Clavier         144.97   2 ⇑PKP      PKPdf    21 07 25.7 +2.0
KECS  Kecovo          145.04 344  ePKIKP   PKPdf    21 07 24.6 +0.6
KECS  Kecovo          145.04 344  ePKP     PKPdf    21 07 24.6 +0.6
ARCR  ARCALIA         145.09 339⇑iP        PKPdf    21 07 24.7 +0.6
VRAC  Vranov          145.15 349  PKPbc    PKPab    21 07 23.8 +0.1
      comp=Z,6.8nm,0.9s,baz=64,slow=2.0,SNR=11
VRAC  Vranov          145.15 349⇑iP        PKPdf    21 07 24.8 +0.7
VRAC  Vranov          145.15 349  ePKP     PKPdf    21 07 24.3 +0.2
CFR   Carcaliu        145.17 333⇑iP        PKPdf    21 07 24.4 +0.2
CFR   Carcaliu        145.17 333 ⇑PKIKP    PKPdf    21 07 24.4 +0.2
VRI   Vrincioaia      145.21 335⇑iP        PKPab    21 07 24.1  0.0
VRI   Vrincioaia      145.21 335 ⇑PKIKP    PKPab    21 07 24.2 +0.1
PLOR  Plostina        145.26 335⇑iP        PKPdf    21 07 24.8 +0.3
PLOR  Plostina        145.26 335 ⇑PKIKP    PKPdf    21 07 24.8 +0.3
DOU   Dourbes         145.28   2 ⇑PKP      PKPdf    21 07 25.6 +1.3
JAVC  Velka Javorina  145.36 347  ePKP     PKPab    21 07 26.0 +1.4
KRUC  Moravsky        145.43 349  ePKP     PKPab    21 07 24.9 +0.1
VYHS  Vyhne           145.44 346  ePKIKP   PKPab    21 07 25.2 +0.3
VYHS  Vyhne           145.44 346  ePKP     PKPab    21 07 25.2 +0.3
GRFO  Grafenberg      145.53 355  ePKPbc   PKPab    21 07 25.6 +0.5
TIRR  Tirgusor        145.61 332⇑iP        PKPab    21 07 26.4 +0.8
TIRR  Tirgusor        145.61 332  ePKPbc   PKPab    21 07 25.8 +0.2
TIRR  Tirgusor        145.61 332 ⇑PKIKP    PKPab    21 07 26.4 +0.8
DOPR  Dopca           145.66 337⇓iP        PKPab    21 07 26.3 +0.5
TLB   Topalu          145.68 333⇓iP        PKPab    21 07 26.2 +0.4
TLB   Topalu          145.68 333 ⇓PKP2     PKPab    21 07 26.2 +0.4
PSZ   Piszkesteto     145.71 344⇑iP        PKPab    21 07 26.5 +0.5
PSZ   Piszkesteto     145.71 344  ePKPbc   PKPab    21 07 27.3 +1.3
PSZ   Piszkesteto     145.71 344  ePKPdf   PKPdf    21 07 25.2 -0.1
PSZ   Piszkesteto     145.71 344  ePKP2    PKPdf    21 07 25.2 -0.1
WLF   Walferdange     145.75   1 ⇑PKP      PKPab    21 07 26.5 +0.6
WLF   Walferdange     145.75   1  ePKPdf   PKPab    21 07 26.1 +0.2
KHC   Kasperske Hory  145.81 352  ePKP     PKPab    21 07 26.5 +0.2
KHC                               epPKP    PKiKP    21 07 30.9 +1.5
KHC                               eSS      SS       21 29 39.2 +2.7
KHC                               AMS      AMS      22 20 30.0
      comp=Z,200nm,19.2s
KHC   Kasperske Hory  145.81 352  ePKPdf   PKPbc    21 07 25.9 +0.1
KHC   Kasperske Hory  145.81 352  ePKP2    PKPab    21 07 26.5 +0.2
KHC                               eSS      SS       21 29 39.2 +2.7
KHC                               MLR      MLR
      comp=Z,200nm,19.2s
MLR   Muntele Rosu    145.84 336  PKPbc    PKPab    21 07 27.0 +0.4
      comp=Z,14nm,0.9s,baz=15,slow=3.9,SNR=16
MLR   Muntele Rosu    145.84 336⇑iP        PKPab    21 07 26.6  0.0
MLR   Muntele Rosu    145.84 336  ePKPdf   PKPbc    21 07 26.3 +0.1
MLR   Muntele Rosu    145.84 336  ePKP2    PKPbc    21 07 26.3 +0.1
WET   Wettzell        145.89 353  PKP2     PKPab    21 07 26.8 +0.2
ISR   Istrita         145.90 335⇓iP        PKPab    21 07 27.4 +0.7
ISR   Istrita         145.90 335 ⇓PKP2     PKPab    21 07 27.4 +0.7
DRGR                  145.90 340⇑iP        PKPab    21 07 26.5 -0.2
DRGR                  145.90 340 ⇑PKP2     PKPab    21 07 26.5 -0.2
MODS  Modra-Piesok    145.91 347  ePKP2    PKPab    21 07 26.9 +0.3
MODS  Modra-Piesok    145.91 347  ePKP     PKPab    21 07 26.8 +0.2
GEC2  GERESS Array S  146.08 352  ePKPdf   PKPbc    21 07 26.8  0.0
GEC2  GERESS Array S  146.08 352  ePKP2    PKPbc    21 07 26.8  0.0
GERES GERESS Array B  146.08 352  PKPbc    PKPbc    21 07 26.3 -0.4
      comp=Z,15nm,1.1s,baz=36,slow=2.5,SNR=27
GEA0  GERESS Array S  146.09 352  ePKPdf   PKPdf    21 07 25.8  0.0
BR101 Keskin Array S  146.16 321  ePKPdf   PKPab    21 07 28.4 +0.3
BR131 Keskin Array S  146.16 321  ePKPdf   PKPab    21 07 27.8 -0.2
BRTR  Keskin Array B  146.16 321  PKPbc    PKPab    21 07 28.4 +0.3
      comp=Z,13nm,0.9s,baz=108,slow=2.7,SNR=56
VOIR                  146.23 336⇑iP        PKPab    21 07 28.3 +0.3
VOIR                  146.23 336 ⇑PKP2     PKPab    21 07 28.3 +0.3
ANTO  Ankara          146.57 322  ePKPdf   PKPbc    21 07 28.5  0.0
ANTO  Ankara          146.57 322  ePKP2    PKPbc    21 07 28.5  0.0
CONA  Conrad Observa  146.61 349  epPKPdf  PKPab    21 07 29.6 +0.2
      comp=Z,26nm,1.8s,SNR=10
MOA   Molln           146.97 351  epPKPdf  PKPbc    21 07 29.8 +0.6
      comp=Z,21nm,1.1s,SNR=6.9
BFO   Black Forest    147.06 358c iPKP2    PKPab    21 07 30.9 -0.2
ECH   Echery          147.20 359  ePKPdf   PKPbc    21 07 29.6 -0.3
ECH   Echery          147.20 359  ePKP2    PKPbc    21 07 29.6 -0.3
BZS   Buzias          147.29 340⇑iP        PKPbc    21 07 29.3 -0.9
BZS   Buzias          147.29 340 ⇑PKP2     PKPbc    21 07 29.3 -0.9
ARSA  Arzberg         147.33 349  epPKPdf  PKPbc    21 07 30.5 +0.2
      comp=Z,19nm,1.7s
MORH  Mˆ‡rˆ¡gy, Hung  147.61 344  ePKPdf   PKPbc    21 07 31.5 +0.4
HERR  Herculane       147.67 339⇑iP        PKPbc    21 07 30.7 -0.6
RETA  Reutte          147.75 355  ePKiKP   PKiKP    21 07 33.4 -0.2
      comp=Z,26nm,1.1s
ASF   Jabal al Asfar  147.82 307  PKPbc    PKPbc    21 07 31.2 -1.0
      comp=Z,1.4nm,0.9s,baz=90,slow=11,SNR=2.6
WATA  Walderalm       147.82 354  eP       PKPab    21 07 34.6 +0.4
      comp=Z,8.0nm,1.0s
KBA   Koelnbreinsper  147.86 351  PKiKP    PKiKP    21 07 33.4 -0.5
      comp=Z,6.5nm,1.0s
WTTA  Wattenberg      147.89 354  epPKPbc  PKPab    21 07 34.0 -0.6
      comp=Z,6.0nm,0.8s
SOKA  Soboth          147.97 349  epPKPdf  PKPbc    21 07 31.9 -0.3
      comp=Z,16nm,1.0s
MDVR  Moldovita       148.00 340⇑iP        PKPbc    21 07 31.2 -1.1
DAVA  Damuels         148.02 356  eP       PKPbc    21 07 32.6 +0.3
      comp=Z,21nm,1.1s
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FETA	Feichten	148.22	355	eP	PKPab	21 07 36.8	+1.0
	comp=Z,12nm,1.1s						
OBKA	Obir	148.22	350	ePKPbc	PKPdf	21 07 30.5	+1.0
	comp=Z,10nm,0.9s						
MYKA	Terra Mystica	148.25	351	ePKPbc	PKPdf	21 07 30.3	+0.7
	comp=Z,12nm,1.0s						
ABTA	Abfaltersbach	148.29	352	ePKiKP	PKiKP	21 07 34.2	-0.5
	comp=Z,16nm,1.1s						
DAVOX	Davos/Dischmat	148.52	356	PKPbc	PKPbc	21 07 33.9	+0.1
	comp=Z,5.9nm,0.9s,baz=349,slow=7.5,SNR=4.6						
MMAI	Mount Meron Ar	148.59	309	PKPbc	PKPbc	21 07 35.5	+1.2
	comp=Z,9.4nm,0.9s,baz=82,slow=1.8,SNR=7.9						
FUORN	Ofenpass-Fuorn	148.65	355	ePKPdf	PKPbc	21 07 32.3	-1.9
SENIN	Lac Senin/Sane	149.05	359	ePKPbc	PKPab	21 07 37.2	-2.1
DIVS	Divibare	149.17	341	ePKPbc	PKPbc	21 07 35.5	+0.2
VTS	Vitosha	149.34	336	⇓iP	PKPbc	21 07 34.3	-1.6
VTS	Vitosha	149.34	336	ePKPbc	PKPbc	21 07 36.0	+0.1
VTS	Vitosha	149.34	336	⇓PKIKP	PKPbc	21 07 34.3	-1.6
BLY	Banja Luka	149.35	345	⇓iP	PKPdf	21 07 32.8	+1.5
BLY	Banja Luka	149.35	345	ePKPbc	PKPbc	21 07 36.3	+0.6
EIL	Elat	150.35	304	PKPbc	PKPbc	21 07 37.8	-0.8
	comp=Z,2.8nm,0.8s,baz=67,slow=21,SNR=3.5						
BNI	Bardonecchia	150.36	0	ePKPbc	PKPbc	21 07 39.4	+1.1
STIP	Stip	150.50	336	i P	PKPbc	21 07 37.4	-1.1
SKO	Skopje	150.55	337	i P	PKPbc	21 07 39.1	+0.5
VAY	Valandovo	150.67	335	i P	PKPbc	21 07 39.5	+0.5
TTG	Podgorica	150.90	341	ePKPdf	PKPdf	21 07 33.5	-0.2
TTG				ePKPbc	PKPbc	21 07 39.1	-0.3
TTG	Podgorica	150.90	341	ePKIKP	PKPdf	21 07 33.5	-0.2
TTG				e		21 07 39.1	
KRUS	Krusevo	151.15	337	i P	PKPbc	21 07 39.8	-0.4
OHR	Ohrid	151.54	337	i P	PKPbc	21 07 41.6	+0.5
FNA	Florina	151.60	336	ePKPbc	PKPbc	21 07 41.0	-0.2
FNA	Florina	151.60	336	ePKIKP	PKPbc	21 07 41.0	-0.2
AGG	Agios Georgios	152.68	333	ePKPbc	PKPbc	21 07 43.1	-0.5
AGG	Agios Georgios	152.68	333	ePKIKP	PKPbc	21 07 43.2	-0.5
ESDC	Sonseca Array	154.00	19	PKP	PKPdf	21 07 40.6	+2.1
	comp=Z,0.3nm,0.8s,baz=238,slow=31,SNR=2.4						
ESDC				PKPbc	PKiKP	21 07 48.2	+1.5
	comp=Z,0.6nm,0.8s,baz=325,slow=2.1,SNR=5.7						
ESDC				PKPab	PKPab	21 08 00.1	+0.1
	comp=Z,0.7nm,0.7s,baz=339,slow=3.8,SNR=7.2						
KOWA	Kowa	169.61	93	PKPab	PKPab	21 09 09.5	+0.7
	comp=Z,2.5nm,0.8s,baz=258,slow=9.3,SNR=2.9						
TOA1	Torodi Ar. Sit	174.69	113	ePKPdf	PKPdf	21 07 59.8	+2.4
TOA1				ePKPab	PKPab	21 09 31.4	+0.1
TORD	Torodi Ar. Bea	174.69	113	PKP	PKPdf	21 07 59.8	+2.4
	comp=Z,1.0nm,1.1s,baz=241,slow=2.6						
TORD				PKPab	PKPab	21 09 31.4	+0.1
	baz=268,slow=4.5						

NNC 21 21:32:56.1±4.3, 36°.95N×70°.94E, h0km, mb3.6, mpv3.2, 5C-1D, Error ellipse: s-maj=37.6km s-min=31.1km az=137.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.66	32	⇓Pn	Pn	21 33 53.3	-1.0
	1.2nm,0.2s						
SFK				⇑Sn	Sn	21 34 40.2	+1.9
	8.3nm,0.3s						
MNAS	Manas	5.66	12	⇑Pn	Pn	21 34 22.2	+0.5
	0.5nm,0.4s						
MNAS				⇑Sn	Sn	21 35 27.6	+0.1
	8.3nm,0.6s						
KK31	Karatay Array	6.16	357	⇑Pn	Pn	21 34 29.8	+1.4
	1.6nm,0.2s,baz=177,slow=12,SNR=66						
KK31				⇑Sn	Sn	21 35 40.9	+1.3
	0.7nm,0.4s,baz=184,slow=22,SNR=8.9						

WEL 21 21:36:49.3, 38°S±9°×18°0W±°, h33km, ML3.6/23, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.46	274	P	Pn	21 37 13.5	+0.2
PUZ	Puketiti	1.58	265	P	Pn	21 37 15.7	+0.7
PUZ				S	Sn	21 37 34.9	+0.5
MXZ	Matakaoa Point	1.59	283	P	Pn	21 37 15.0	-0.1
MXZ				S	Sn	21 37 33.9	-0.7
CNGZ	Carnagh Statio	1.70	251	P	Pb	21 37 18.3	-1.6
PKGZ	Pakihiroa	1.72	271	P	Pn	21 37 17.3	+0.3
TWGZ	Tauwhareparae	1.81	262	P	Pn	21 37 19.2	+1.0
TWGZ				S	Sn	21 37 41.1	+1.0
TKGZ	Te Karaka	1.96	255	P	Pn	21 37 21.4	+1.2
TKGZ				S	Sn	21 37 45.1	+1.5
HAZ	Te Kaha	1.97	275	P	Pn	21 37 20.8	+0.5
HAZ				S	Sn	21 37 42.8	-1.0
RUGZ	Raukumara Rang	2.04	269	P	Pn	21 37 22.2	+0.8
RIGZ	Rimuhau	2.10	248	P	Pn	21 37 23.4	+1.2
RIGZ				S	Sn	21 37 48.9	+1.7
PRGZ	Paritu Road	2.10	242	P	Pn	21 37 24.0	+1.8
MWZ	Matawai	2.19	259	P	Pn	21 37 24.2	+0.8
MWZ				S	Sn	21 37 49.9	+0.6
MHGZ	Mahia Peninsul	2.20	236	P	Pn	21 37 25.3	+1.7
KNZ	Kokohu	2.29	241	P	Pn	21 37 26.2	+1.4
RAGZ	Rawiri	2.30	255	P	Pn	21 37 26.4	+1.4
RAGZ				S	Sn	21 37 53.4	+1.1
SNGZ	Shannon Statio	2.44	249	P	Pn	21 37 28.3	+1.5
URZ	Urewera	2.50	262	P	Pn	21 37 28.8	+1.2
URZ				S	Sn	21 37 57.6	+0.7
RTZ	Ruatahuna	2.66	254	P	Pn	21 37 31.8	+1.8
RTZ				S	Sn	21 38 03.4	+2.3
MUGZ	Murupara	2.79	258	P	Pn	21 37 33.5	+1.7
MTHZ	Maungataniwha	2.83	250	P	Pn	21 37 33.8	+1.6
ARHZ	Aropaoanui	2.87	242	P	Pn	21 37 35.3	+2.5
NMHZ	Naumai	2.94	246	P	Pn	21 37 35.4	+1.7
MRHZ	Matea Rd	3.14	252	P	Pn	21 37 38.3	+1.8
MRHZ				S	Sn	21 38 13.6	+0.7
MCHZ	McNeill Hill	3.16	241	P	Pn	21 37 38.9	+2.2
BKZ	Black Stump Fm	3.19	246	P	Pn	21 37 38.5	+1.3
KAHZ	Kahuranaki	3.22	234	P	Pn	21 37 39.0	+1.4
KWHZ	Kaweka Forest	3.34	243	P	Pn	21 37 40.6	+1.3
KRHZ	Kereru	3.48	240	P	Pn	21 37 42.2	+1.1
BHHZ	Black Hill Sta	3.62	244	P	Pn	21 37 44.3	+1.2

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*ISK **21** 22:02:39.3, 35°.31N×27°.95E, h10km, ML2.7/6*

*ISCJB **21** 22:02:40.7±1.2, 35°.36N±0°.05×27°.95E±0°.06, h7km±5km, Error ellipse: s-maj=10.8km s-min=4.8km az=138.9*

*CSEM **21** 22:02:41.1±0.6, 35°.39N×27°.99E, h8km, ML1.8, Error ellipse: s-maj=14.0km s-min=6.3km az=142.0*

*DDA **21** 22:02:42.2, 35°.53N×27°.72E, h2km, Ml2.6*

*ATH **21** 22:02:45.5, 35°.80N×27°.48E, h10km±2km, ML1.8/1, Error ellipse: s-maj=4.7km s-min=1.2km az=144.0*

ISC 21 22:02:39.5±1.5, 35°.34N±0°.06×27°.91E±0°.04, h19km±3km, n42, σ1ˢ.07/66, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	Karpathos	0.65	289	PG	Pg	22 02 52.9	+0.6
KARP				SG	Sn	22 03 03.1	-0.3
KARP	Karpathos	0.65	289	P	Pn	22 02 53.7	0.0
KARP	Karpathos	0.65	289	P	Pg	22 02 53.1	+0.8
KARP				eSg	Sn	22 03 03.1	-0.3
ARG	Arkhangelos	0.90	11	PG	Pn	22 02 57.5	+0.4
ARG				SG	Sn	22 03 10.6	+1.0
ARG	Arkhangelos	0.90	11	P	Pg	22 02 56.9	-0.1
ARG				S	Sn	22 03 09.1	-0.5
ARG				AML	AML	22 03 14.2	
	comp=N,192μm,0.4s						
ARG				AML	AML	22 03 19.9	
	comp=E,232μm,0.7s						
ARG	Arkhangelos	0.90	11	ePg	Pn	22 02 57.5	+0.4
ARG				S	Sg	22 03 08.3	-0.5
ARG				eSg	Sn	22 03 10.6	+1.0
DAT	Datca	1.42	349	PN	Pg	22 03 06.2	-0.6
DAT				SN	Sg	22 03 26.1	+0.7
DAT	Datca	1.42	349	i P	Pg	22 03 06.2	-0.6
DAT				i S	Sg	22 03 25.7	+0.3
DAT	Datca	1.42	349	P	Pg	22 03 06.2	-0.6
DAT				S	Sg	22 03 25.7	+0.3
DAT				eSn	Sg	22 03 26.1	+0.7
DALY	Dalyan (Mu˜la	1.60	22	PN	Pb	22 03 08.7	+0.3
DALY	Dalyan (Mu˜la	1.60	22	i P	Pg	22 03 09.8	-0.5
DALY				i S	Sg	22 03 31.8	+0.7
DALY	Dalyan (Mu˜la	1.60	22	ePn	Pb	22 03 08.7	+0.3
DALY	Dalyan (Mu˜la	1.60	22	P	Pg	22 03 09.8	-0.5
DALY				S	Sg	22 03 31.8	+0.7
FETY	Fethiye	1.61	36	PN	Pb	22 03 08.8	+0.2
FETY	Fethiye	1.61	36	ePn	Pb	22 03 08.8	+0.2
TURN	Turunc	1.63	20	PN	Pn	22 03 06.9	-0.3
TURN	Turunc	1.63	20	i P	Pn	22 03 07.3	+0.1
TURN				i S	Sn	22 03 26.8	-1.0
TURN	Turunc	1.63	20	ePn	Pn	22 03 06.9	-0.3
TURN	Turunc	1.63	20	P	Pn	22 03 07.3	+0.1
TURN				S	Sn	22 03 26.8	-1.0
BDRM	Kayabasi	1.77	348	i P	Pb	22 03 11.8	+0.5
BDRM				i S	Sb	22 03 33.1	0.0
BDRM	Kayabasi	1.77	348	P	Pb	22 03 11.8	+0.5
BDRM				S	Sb	22 03 33.1	0.0
BODT	Bodrum	1.79	344	PN	Pb	22 03 11.4	-0.3
BODT	Bodrum	1.79	344	ePn	Pb	22 03 11.4	-0.3
YER	Yerkesik	1.82	9	PN	Pb	22 03 12.0	-0.3
YER	Yerkesik	1.82	9	ePn	Pb	22 03 12.0	-0.3
NPS	Neapolis	1.88	268	P	Pg	22 03 15.3	-0.3
NPS				S	Sb	22 03 37.6	+1.2
NPS	Neapolis	1.88	268	P	Pg	22 03 15.5	-0.1
NPS				S	Sb	22 03 37.7	+1.4
LAST	Lasithi	2.00	266	P	Pg	22 03 17.3	-0.6
LAST				S	Sb	22 03 41.6	+1.9
LAST	Lasithi	2.00	266	P	Pg	22 03 17.7	-0.2
LAST				S	Sb	22 03 41.7	+1.9
TAVA	DENIZLI_Tavas	2.27	21	i P	Pg	22 03 22.1	-1.1
TAVA				i S	Sg	22 03 53.0	+0.2
TAVA	DENIZLI_Tavas	2.27	21	P	Pg	22 03 22.1	-1.1
AYDN	Tasoluk	2.32	359	i P	Pb	22 03 20.6	-0.2
AYDN				i S	Sb	22 03 48.5	-0.6
AYDN	Tasoluk	2.32	359	P	Pb	22 03 20.6	-0.2
AYDN				S	Sb	22 03 48.5	-0.6
SMG	Samos	2.52	340	P	Pb	22 03 22.8	-1.4
SMG	Samos	2.52	340	P	Pb	22 03 22.0	-2.2
SIVA	Sivas	2.56	264	P	Pg	22 03 27.5	-1.0
APE	Apeiranthos	2.59	313	P	Pn	22 03 22.4	+2.0
APE				S	Sn	22 03 48.6	-2.8
APE	Apeiranthos	2.59	313	P	Pn	22 03 22.2	+1.8
AYDB	Zeytinkoy-Aydi	2.61	360	PN	Pn	22 03 23.1	+2.3
AYDB	Zeytinkoy-Aydi	2.61	360	ePn	Pn	22 03 23.1	+2.3
IMMV	Iera Moni Meta	3.21	273	P	Pb	22 03 33.5	-2.4
IMMV	Iera Moni Meta	3.21	273	P	Pb	22 03 33.6	-2.3

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*NIED **21** 22:27:00, 45°.20N×149°.80E, h89km, Mw3.9 Best double couple: M₀8.87000×10¹⁴ NP1:φₛ307.00000°, δ67.00000°, λ-2.00000°. NP2:φₛ38.00000°, δ89.00000°, λ-157.00000°.*

*MOS **21** 22:27:13.4±1.1, 45°.78N×149°.72E, h136km, mb3.9/15, Error ellipse: s-maj=9.5km s-min=7.2km az=68.4*

*ISCJB **21** 22:27:15.0±0.3, 45°.60N±0°.04×149°.59E±0°.06, h150km, mb3.9/37, Error ellipse: s-maj=8.0km s-min=3.0km az=137.8*

*SKHL **21** 22:27:14.5±0.2, 45°.66N×149°.71E, h124km±3km, mb4.9/7, msh5.4/7*

*IDC **21** 22:27:16.4±1.9, 45°.97N×149°.57E, h140km±17km, mb3.5/22, mb1 3.6/31, mb1mx3.5/70, mbtmp3.9/31, MS2.3/1, Ms1 2.3/1, ms1mx2.0/48, Error ellipse: s-maj=14.1km s-min=10.3km az=139.0*

*JMA **21** 22:27:16.2±0.5, 45°.19N×149°.78E, h129km, M3.7*

*NEIC **21** 22:27:16.7±0.8, 46°.20N×149°.36E, h125km±7km, mb4.3/10, Error ellipse: s-maj=13.5km s-min=6.2km az=145.0*

ISC 21 22:27:15.8±0.5, 45°.58N±0°.05×149°.72E±0°.06, h150km, n153, σ2ˢ.25/172, mb3.9/37, 6C-6D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	Kuril'sk	1.35	256	i P	Pn	22 27 40.0	-3.7
KUR				AMB	AMB	22 27 41.0	
	77nm,0.6s						
KUR				AMB	AMB	22 27 41.0	
	29nm,0.6s						
KUR				AMB	AMB	22 27 41.0	
	226nm,0.6s						
KUR				i S	Sn	22 28 01.0	-4.0
KUR				A	A	22 28 07.0	
	456nm,0.7s						
KUR				A	A	22 28 07.0	
	459nm,0.7s						
KUR	Kuril'sk	1.35	256c	iPN	Pn	22 27 40.6	-3.1
KUR				i S	Sn	22 28 01.7	-3.3
KUR				pmax	pmax		
	comp=N,77nm,0.6s						
KUR				pmax	pmax		
	comp=Z,226nm,0.6s						
KUR				pmax	pmax		
	comp=E,29nm,0.2s						
KUR				smax	smax		
	comp=N,456nm,0.7s						
KUR				smax	smax		
	comp=E,459nm,0.2s						
SHO	Shikotan	2.67	231	i P	Pn	22 27 57.0	-2.0
SHO				AMB	AMB	22 28 01.0	
	comp=E,33nm,0.3s						
SHO				AMB	AMB	22 28 01.0	
	comp=E,25nm,0.3s						
SHO				AMB	AMB	22 28 01.0	
	comp=E,69nm,0.3s						
SHO				i S	Sn	22 28 29.0	-3.3
SHO				A	A	22 28 30.0	
	comp=E,398nm,0.4s						
SHO				A	A	22 28 30.0	
	comp=E,337nm,0.4s						
SHO	Shikotan	2.67	231d	iPN	Pn	22 27 57.7	-1.3
SHO				i S	Sn	22 28 29.9	-2.4
SHO				pmax	pmax		
	comp=Z,69nm,0.3s						
SHO				pmax	pmax		
	comp=N,33nm,0.2s						
SHO				pmax	pmax		
	comp=E,25nm,0.1s						
SHO				smax	smax		
	comp=N,398nm,0.4s						
SHO				smax	smax		
	comp=E,337nm,0.4s						
YUK	Yuzh-Kuril'sk	3.15	242	i P	Pn	22 28 04.0	-0.9
YUK				AMB	AMB	22 28 07.0	
	comp=E,89nm,0.5s						
YUK				AMB	AMB	22 28 07.0	
	comp=E,179nm,0.5s						
YUK				AMB	AMB	22 28 07.0	
	comp=E,245nm,0.5s						
YUK				i S	Sn	22 28 41.0	-2.0
YUK				A	A	22 28 46.0	
	comp=E,276nm,0.4s						
YUK				A	A	22 28 46.0	
	comp=E,210nm,0.4s						
YUK	Yuzh-Kuril'sk	3.15	242c	iPN	Pn	22 28 04.4	-0.5
YUK				i S	Sn	22 28 41.0	-2.0
YUK				pmax	pmax		
	comp=Z,245nm,0.5s						
YUK				pmax	pmax		
	comp=N,89nm,0.3s						
YUK				pmax	pmax		
	comp=E,179nm,0.3s						
YUK				smax	smax		
	comp=N,276nm,0.4s						
YUK				smax	smax		
	comp=E,452nm,0.4s						
LAGR	Lagunnoye	3.18	243	eP	Pn	22 28 04.0	-1.4
LAGR				AMB	AMB	22 28 06.0	
	comp=E,136nm,0.4s						
LAGR				AMB	AMB	22 28 06.0	
	comp=E,181nm,0.4s						
LAGR				AMB	AMB	22 28 06.0	
	comp=E,247nm,0.4s						
LAGR				eS	Sn	22 28 44.0	+0.2
LAGR				A	A	22 28 51.0	
	comp=E,243nm,0.5s						
LAGR				A	A	22 28 51.0	
	comp=E,420nm,0.5s						
LAGR	Lagunnoye	3.18	243	ePN	Pn	22 28 04.6	-0.8
LAGR				eS	Sn	22 28 44.2	+0.4
LAGR				pmax	pmax		
	comp=Z,247nm,0.4s						
LAGR				pmax	pmax		
	comp=N,136nm,0.3s						
LAGR				pmax	pmax		
	comp=E,181nm,0.5s						
LAGR				smax	smax		
	comp=N,243nm,0.2s						
LAGR				smax	smax		
	comp=E,784nm,0.5s						
GRPR	Tuman	3.22	242	eP	Pn	22 28 05.0	-0.9
GRPR				AMB	AMB	22 28 07.0	
	comp=E,78nm,0.4s						
GRPR				AMB	AMB	22 28 07.0	
	comp=E,49nm,0.4s						
GRPR				AMB	AMB	22 28 07.0	
	comp=E,148nm,0.4s						
GRPR				eS	Sn	22 28 45.0	+0.3
GRPR				A	A	22 28 50.0	
	comp=E,210nm,0.4s						
GRPR				A	A	22 28 50.0	
	comp=E,190nm,0.4s						
GRPR	Tuman	3.22	242	ePN	Pn	22 28 05.2	-0.7
GRPR				eS	Sn	22 28 45.0	+0.3
GRPR				pmax	pmax		
	comp=Z,148nm,0.4s						
GRPR				pmax	pmax		
	comp=E,49nm,0.1s						
GRPR				pmax	pmax		
	comp=N,78nm,0.3s						
GRPR				smax	smax		
	comp=N,426nm,0.4s						
GRPR				smax	smax		
	comp=E,190nm,0.2s						
GLVR	Golovnino	3.51	240	eP	Pn	22 28 09.0	-0.6
GLVR				AMB	AMB	22 28 19.0	
	comp=E,108nm,0.4s						
GLVR				AMB	AMB	22 28 19.0	
	comp=E,160nm,0.4s						
GLVR				AMB	AMB	22 28 19.0	
	comp=E,97nm,0.4s						
GLVR				eS	Sn	22 28 52.0	+0.6
GLVR				A	A	22 29 01.0	
	comp=E,224nm,0.4s						
GLVR				A	A	22 29 01.0	
	comp=E,210nm,0.4s						
GLVR	Golovnino	3.51	240	ePN	Pn	22 28 09.1	-0.6
GLVR				eS	Sn	22 28 52.2	+0.8
GLVR				pmax	pmax		
	comp=N,108nm,0.4s						
GLVR				pmax	pmax		
	comp=Z,97nm,0.4s						
GLVR				pmax	pmax		
	comp=E,160nm,0.5s						
GLVR				smax	smax		
	comp=N,224nm,0.2s						
GLVR				smax	smax		
	comp=E,541nm,0.2s						
NEM2	Nemuro 2	3.60	234	P	Pn	22 28 08.7	-2.1
NEM2				eS	Sn	22 28 50.0	-3.5
JRA	Rausu	3.66	245	P	Pn	22 28 11.1	-0.4
JNK	Nakash	4.09	243	P	Pn	22 28 16.7	-0.4
JAK	Akkeshi	4.43	236	P	Pn	22 28 19.7	-1.9
JAK				eS	Sn	22 29 09.9	-3.0
JTKR	Abashiri--Toko	4.44	251	P	Pn	22 28 21.8	+0.1
JMP	Maruseppu	4.79	253	P	Pn	22 28 26.6	+0.3
JAR	Ashorobuto	4.83	244	P	Pn	22 28 26.8	-0.1
JOB	Onbets	5.00	240	P	Pn	22 28 28.1	-1.0
JOB				eS	Sn	22 29 24.4	-1.9
YSS	Yuzh-Sakhalins	5.02	288	eP	Pn	22 28 27.6	-1.7
YSS				AMB	AMB	22 28 28.7	
	comp=E,30nm,0.9s						
YSS				eS	Sn	22 29 22.2	-4.5
YSS				A	A	22 29 28.4	
	comp=E,50nm,0.9s						
YSS	Yuzh-Sakhalins	5.02	288	ePn	Pn	22 28 24.9	-4.5
YSS	Yuzh-Sakhalins	5.02	288	⇑ePN	Pn	22 28 28.3	-1.0
YSS				eS	Sn	22 29 27.0	+0.3
YSS				pmax	pmax		
	comp=Z,30nm,0.9s						
YSS				smax	smax		
	comp=N,50nm,0.9s						
HRK	Horoka	5.16	248	eP	Pn	22 28 31.5	+0.2
JKK2	Kamakawa 2	5.25	254	P	Pn	22 28 32.8	+0.4
ASAJ	Asahikawa	5.27	256	P	Pn	22 28 33.3	+0.6
	comp=N,4.2nm,0.3s,baz=76,slow=13,SNR=59						
ASAJ				LR	LR	22 30 24.9	
	comp=N,30nm,21.2s,baz=116,slow=36						
ASAJ	Asahikawa	5.27	256	ePn	Pn	22 28 33.4	+0.7
ASAJ	Asahikawa	5.27	256	P	Pn	22 28 33.2	+0.6
JCH	Churui	5.45	239	P	Pn	22 28 33.6	-1.5
JCH				eS	Sn	22 29 33.1	-3.9
MYR	Moyori	5.69	237	eP	Pn	22 28 36.7	-1.5
MYR				eS	Sn	22 29 38.5	-4.2
JAB	Ashibetsu	5.74	251	P	Pn	22 28 40.0	+1.0
ERM	Erimo	5.93	235	eP	Pn	22 28 41.4	-0.1
ERM	Erimo	5.93	235	ePn	Pn	22 28 42.3	+0.8
ERM	Erimo	5.93	235	⇑ePN	Pn	22 28 41.4	-0.1
JEM	Erimo	5.93	235	P	Pn	22 28 40.9	-0.6
JEM				eS	Sn	22 29 46.2	-2.3
JBT2	Biratori 2	5.98	245	P	Pn	22 28 41.0	-1.1
JNBK	Urakawa-nobuka	6.01	239	P	Pn	22 28 40.1	-2.4
JEW	Eniwo	6.54	248	P	Pn	22 28 49.7	+0.1
SKR	Severo-Kuril's	6.66	38	eP	Pn	22 28 48.3	-2.8
SKR	Severo-Kuril's	6.66	38	ePN	Pn	22 28 46.8	-4.3
SKR				eS	Sn	22 29 54.9	-11
SKR				smax	smax		
	comp=N,59nm,0.4s						
SKR				smax	smax		
	comp=E,68nm,0.3s						
JNB	Noboribetsu	6.98	247	P	Pn	22 28 53.9	-1.6
JKB	Kayabe	7.29	243	P	Pn	22 28 57.4	-2.2
JKB				eS	Sn	22 30 14.8	-6.3
JSH	Shimam	7.55	251	P	Pn	22 29 03.0	-0.1
JYM2	Yakumo 2	7.59	246	P	Pn	22 29 02.0	-1.6
JTM	Tenmabayashi	7.93	236	eS	Sn	22 30 29.5	-6.9
JANG	Nango	7.95	232	eS	Sn	22 30 27.9	-9.1
JTH	Tanohata	8.07	228	P	Pn	22 29 07.4	-2.6
JTH				eS	Sn	22 30 32.9	-6.9
JOSM	Okushiri--Mats	8.19	248	P	Pn	22 29 09.9	-1.6
OFUJ	Ofunato	8.81	225	eS	Sn	22 30 50.2	-7.5
JRG	Rokugo	9.12	231	P	Pn	22 29 22.4	-1.6
JRG				eS	Sn	22 30 58.8	-6.3
PEA0B	Petropavlovsk-	9.16	32	ePn	Pn	22 29 20.6	-3.8
PETK	Petropavlovsk-	9.16	32	P	Pn	22 29 20.6	-3.8
	baz=216,slow=11						
JIO	Ouri	9.45	224	eS	Sn	22 31 06.0	-7.2
MJAR	Matsushiro Arr	12.51	228	P	P	22 30 13.1	-1.2
	comp=E,0.3nm,0.3s,baz=23,slow=11,SNR=3.1						
USRK	Ussuriysk Ar.	12.65	270	P	Pn	22 30 10.6	+0.3
	baz=79,slow=15						
KLR	Kul'dur	12.70	293	P	Pn	22 30 10.1	-0.8
	comp=E,0.0nm,0.3s,baz=98,slow=12,SNR=32						
KLR	Kul'dur	12.70	293	eP	Pn	22 30 10.7	-0.2
KLR	Kul'dur	12.70	293d	iPN	Pn	22 30 10.7	-0.2
MA2	Magadan	14.04	2	eP	Pn	22 30 26.0	-1.8
MA2	Magadan	14.04	2	⇑eP	Pn	22 30 26.0	-1.8
INU	Inuyama	14.05	228	ePn	P	22 30 35.1	+3.9
ZEA	Zeya	16.63	307	eP	P	22 30 58.9	-0.8
ZEA				pmax	pmax		
	comp=Z,38nm,1.0s						
SEY	Seymchan	17.46	4	P	P	22 31 05.8	-2.9
	comp=Z,0.3nm,0.3s,baz=187,slow=11,SNR=11						
SEY	Seymchan	17.46	4	eP	P	22 31 06.5	-2.2
SEY	Seymchan	17.46	4	⇓eP	P	22 31 06.5	-2.2
KSRS	Korea Array	18.19	251	P	Pn	22 31 19.1	+0.5
	comp=Z,0.5nm,0.3s,baz=61,slow=11,SNR=12						
KS01	Wonju Array Si	18.20	251	eP	Pn	22 31 19.8	+1.1
JNU	Nakatsue	19.10	236	P	Pn	22 31 29.1	-0.2
	comp=Z,0.2nm,0.3s,baz=29,slow=10,SNR=2.7						
YAK	Yakutsk	20.14	332	P	P	22 31 36.2	-1.6
	comp=Z,0.0nm,0.3s,baz=223,slow=22,SNR=16						
YAK	Yakutsk	20.14	332	eP	P	22 31 37.8	0.0
	comp=Z,80nm,0.8s						
YAK	Yakutsk	20.14	332	eP	P	22 31 38.3	+0.5
YAK				pmax	pmax		
	comp=Z,75nm,0.9s						
YAK				pmax	pmax		
	comp=E,19nm,1.3s						
YAK				pmax	pmax		
	comp=N,25nm,1.2s						
HHC	Hu-ho-hao-te	28.02	274	eP	P	22 32 54.3	+1.6
HHC				pP	pP	22 33 13.8	-10
HHC				S	S	22 37 26.0	0.0
HHC				sS	sS	22 38 16.3	-5.3
HHC				pmax	pmax		
	comp=Z,16nm,1.1s						
HHC				pmax	pmax		
	comp=Z,64nm,4.7s						
ULN	Ulaanbaatar	29.07	290	eP	P	22 33 03.6	+1.6
ULN	Ulaanbaatar	29.07	290	⇑eP	P	22 33 03.6	+1.6
ULN				pmax	pmax		
	comp=Z,1.0nm,0.7s						
H11N2	WAKE ISLAND Hy	29.43	146	T	T	23 04 13.7	
	baz=335,slow=76,SNR=81						
H11N1	WAKE ISLAND Hy	29.44	146	T	T	23 04 16.3	

	baz=335,slow=76,SNR=61						
H11N3	WAKE ISLAND Hy	29.45	145	T	T	23 04 16.7	
	baz=335,slow=76,SNR=82						
SONM	Songino Array	29.51	290	P	P	22 33 05.0	-0.8
	comp=Z,0.7nm,0.6s,baz=81,slow=8.9,SNR=3.0						
H11S1	WAKE ISLAND Hy	30.46	147	T	T	23 05 28.7	
	baz=336,slow=76,SNR=124						
H11S3	WAKE ISLAND Hy	30.47	147	T	T	23 05 29.2	
	baz=336,slow=76,SNR=120						
H11S2	WAKE ISLAND Hy	30.48	147	T	T	23 05 32.2	
	baz=336,slow=76,SNR=85						
XAN	Xi'an	33.05	264	P	P	22 33 39.9	+3.0
XAN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,85nm,3.7s						
GTA	Gaotai	36.81	279	*e*P	P	22 34 10.8	+1.6
GTA				pP	pP	22 34 17.8	-24
GTA				sP	sP	22 34 21.3	-37
GTA				pmax	pmax		
	comp=Z,6.0nm,1.4s						
COLD	Coldfoot	37.62	34	*e*P	P	22 34 16.1	+0.6
	comp=Z,5.0nm,1.4s						
TOLK	Toolik Lake Re	37.98	31	*e*P	P	22 34 19.0	+0.5
	comp=Z,7.8nm,1.3s						
ILAR	Eielson Array	38.93	38	P	P	22 34 25.4	-1.1
	comp=Z,1.1nm,0.8s,baz=276,slow=9.0,SNR=8.4						
ILAR	Eielson Array	38.93	38	*e*P	P	22 34 26.0	-0.4
ILAR	Eielson Array	38.93	38	*e*P	P	22 34 26.0	-0.4
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SCRK	Sand Creek	40.24	39	*e*P	P	22 34 39.0	+1.6
	comp=Z,4.4nm,1.3s						
RAGM	Ragged Mountai	40.37	44	*e*P	P	22 34 39.4	+1.0
	comp=Z,10nm,1.2s						
ZALV	Zalesovo Beam	41.38	306	PcP	PcP	22 36 41.9	0.0
	comp=Z,2.1nm,0.7s,baz=70,slow=5.0,SNR=6.3						
WMQ	Urumqi	43.14	291	*e*P	P	22 35 02.5	+1.3
INK	Inuvik	43.90	31	P	P	22 35 05.8	-1.0
	comp=Z,1.3nm,0.5s,baz=302,slow=11,SNR=10						
INK	Inuvik	43.90	31	*e*P	P	22 35 07.2	+0.4
	comp=Z,12nm,1.6s						
INK	Inuvik	43.90	31	*e*P	P	22 35 07.2	+0.4
INK				pmax	pmax		
	comp=Z,12nm,1.6s						
MK31	Makanchi Array	45.37	297	*e*P	P	22 35 18.1	-0.8
MK31	Makanchi Array	45.37	297	*e*P	P	22 35 18.1	-0.8
MKAR	Makanchi Array	45.37	297	P	P	22 35 17.9	-1.0
	comp=Z,0.7nm,0.6s,baz=74,slow=8.2,SNR=10.0						
MKAR				PcP	PcP	22 36 57.1	+1.5
	comp=Z,0.9nm,0.6s,baz=67,slow=4.7,SNR=7.3						
MKAR	Makanchi Array	45.37	297	*e*P	P	22 35 18.1	-0.8
	comp=Z,8.7nm,0.5s						
MKAR	Makanchi Array	45.37	297	*e*P	P	22 35 18.1	-0.8
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MK01	Makanchi Array	45.38	297	*e*P	P	22 35 19.3	+0.4
MAKZ	Makanchi	45.56	297	*e*P	P	22 35 19.5	-0.9
	comp=Z,7.6nm,1.8s						
MAKZ	Makanchi	45.56	297	*e*P	P	22 35 19.5	-0.9
MAKZ				pmax	pmax		
	comp=Z,8.0nm,1.8s						
KURK	Kurchatov	46.04	303	*e*P	P	22 35 22.9	-1.1
KURK	Kurchatov	46.04	303	*e*P	P	22 35 23.0	-1.1
	comp=Z,2.3nm,0.6s						
KURK	Kurchatov	46.04	303⇓	*i*P	P	22 35 22.9	-1.1
KURK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KURBB	Kurchatov Arra	46.13	303	P	P	22 35 23.0	-1.7
	comp=Z,1.4nm,0.5s,baz=70,slow=8.5,SNR=6.7						
KURBB				PcP	PcP	22 36 59.5	+1.4
	comp=Z,0.5nm,0.5s,baz=81,slow=3.1,SNR=4.7						
CMAR	Chiang Mai Arr	49.79	254	P	P	22 35 55.7	+2.5
	comp=Z,1.1nm,0.7s,baz=39,slow=7.3,SNR=6.2						
CMAR	Chiang Mai Arr	49.79	254	*e*P	P	22 35 56.2	+3.0
CMAR	Chiang Mai Arr	49.79	254	*e*P	P	22 35 56.2	+3.0
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
JIRN	Jiri	52.67	273	*e*P	P	22 36 17.0	+2.0
	comp=Z,42nm,0.5s						
GUN	Gumba	52.73	274	*e*P	P	22 36 17.4	+1.9
	comp=Z,15nm,0.4s						
RAMN	Ramite	52.81	272	*e*P	P	22 36 17.7	+1.7
	comp=Z,19nm,0.5s						
KSH	Kashi	52.90	291	*e*P	P	22 36 20.1	+3.8
KKN	Kakani	53.23	274	*e*P	P	22 36 21.0	+2.1
	comp=Z,11nm,0.5s						
YKA	Yellowknife Ar	53.26	35	P	P	22 36 18.7	+0.3
	comp=Z,0.6nm,0.5s,baz=302,slow=7.2,SNR=2.8						
PKIN	Phulchoki	53.27	274	*e*P	P	22 36 21.7	+2.3
	comp=Z,8.6nm,0.6s						
DMN	Daman	53.46	274	*e*P	P	22 36 22.4	+1.7
	comp=Z,21nm,0.8s						
GKN	Gorkha	53.55	274	*e*P	P	22 36 22.8	+1.6
	comp=Z,22nm,0.5s						
DANN	Dangsing	53.95	275	*e*P	P	22 36 26.5	+2.2
	comp=Z,25nm,0.4s						
ARU	Arti	54.26	317	*e*P	P	22 36 24.0	-1.8
	comp=Z,3.0nm,0.8s						
ARU	Arti	54.26	317*d*	*i*P	P	22 36 24.0	-1.8
ARU				*PP	pP	22 36 53.9	-6.5
ARU						22 37 25.9	
ARU				S	S	22 43 50.5	-0.8
ARU				SS	SS	22 47 39.3	+4.7
ARU				pmax	pmax		
	comp=Z,10.0nm,2.5s						
KOLN	Koldanda	54.41	275	*e*P	P	22 36 29.5	+1.9
	comp=Z,13nm,0.6s						
PYUN	Piuthan	54.64	276	*e*P	P	22 36 30.5	+1.3
SAUI	Saumlaki	55.82	202	*e*P	P	22 36 44.6	+7.2
	comp=Z,586nm,1.0s						
ABKAR	Akbulak array	57.34	309	*e*P	P	22 36 47.1	-0.7
AKTO	Aktyubinsk	57.73	311	P	P	22 36 50.1	-0.3
	comp=Z,0.8nm,0.4s,baz=54,slow=8.7,SNR=2.9						
YBH	Yreka Blue Hor	60.38	59	P	P	22 37 12.8	+3.9
	comp=Z,0.7nm,0.4s,baz=189,slow=10,SNR=2.5						
FINES	FINESS Array B	64.06	334	P	P	22 37 31.7	-1.4
	comp=Z,1.7nm,0.5s,baz=36,slow=7.1,SNR=15						
NVAR	Mina Array Bea	65.07	60	P	P	22 37 41.3	+1.1
	comp=Z,0.5nm,0.7s,baz=297,slow=6.0,SNR=3.8						
WRA	Warramunga Arr	66.69	196	P	P	22 37 53.2	+2.8
	comp=Z,0.8nm,0.8s,baz=15,slow=6.7,SNR=4.0						
RCWM	Renegade Canyo	67.06	62	*e*P	P	22 37 56.2	+3.4
PDAR	Pinedale Array	67.33	52	P	P	22 37 55.7	+1.1
	comp=Z,0.5nm,0.5s,baz=198,slow=4.4,SNR=4.5						
NB2	NORSAR Subarra	68.54	340	P	P	22 38 00.9	-0.7
	comp=Z,0.4nm,0.4s,baz=30,slow=6.5						
NOA	NORSAR Array B	68.54	340	P	P	22 38 01.1	-0.5
	comp=Z,0.6nm,0.4s,baz=29,slow=6.6,SNR=6.4						
NOA	NORSAR Array B	68.54	340	*e*P	P	22 38 01.5	-0.1
NOA	NORSAR Array B	68.54	340	*e*P	P	22 38 01.5	-0.1
HFS	Hagfors	68.69	338	P	P	22 38 01.6	-0.9
	comp=Z,1.0nm,0.6s,baz=57,slow=5.3,SNR=6.7						
KIV	Kislovodsk	69.89	313	*e*P	P	22 38 11.2	+0.9
KIV				*e*		22 40 42.6	
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
ASAR	Alice Springs	70.40	195	P	P	22 38 17.6	+4.3
	comp=Z,0.8nm,0.6s,baz=8.8,slow=4.8,SNR=11						
AKASG	Malin Array Be	71.17	325	P	P	22 38 16.7	-1.0
	comp=Z,0.8nm,0.4s,baz=37,slow=5.9,SNR=4.1						
KIEV	Kiev	71.18	325	*e*P	P	22 38 16.8	-1.0
KIEV	Kiev	71.18	325⇓	*e*P	P	22 38 16.8	-1.0
KIEV				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BUR08	Bucovina Ar. S	75.21	325	*e*P	P	22 38 42.3	+0.6
BUR04	Bucovina Ar. S	75.22	325	*e*P	P	22 38 41.5	-0.3
EKA	Eskdalemuir Ar	76.88	344	P	P	22 38 50.3	-0.5
	comp=Z,0.2nm,0.3s,baz=23,slow=5.6,SNR=2.8						
BRTR	Keskin Array B	77.58	315	P	P	22 38 55.5	+0.3
	comp=Z,0.5nm,0.7s,baz=50,slow=6.7,SNR=3.7						
GERES	GERESS Array B	78.43	332	P	P	22 38 58.9	-0.8
	comp=Z,0.3nm,0.4s,baz=39,slow=6.3,SNR=5.2						
TX31	Lajitas Ar. Si	80.12	58	*e*P	P	22 39 10.9	+1.7
TXAR	Lajitas Array	80.12	58	P	P	22 39 10.8	+1.6
	comp=Z,0.7nm,0.5s,baz=296,slow=4.5,SNR=28						
MMAI	Mount Meron Ar	81.77	309	P	P	22 39 18.3	+0.4
	comp=Z,2.3nm,0.8s,baz=46,slow=4.2,SNR=3.5						
ESDC	Sonseca Array	91.90	340	P	P	22 40 05.8	-1.2
	comp=Z,0.1nm,0.3s,baz=3.1,slow=4.8,SNR=3.1						
PLCA	Paso Flores	150.46	95	PKPbc	PKPbc	22 46 51.0	+1.9
	comp=Z,0.7nm,0.4s,baz=20,slow=3.2,SNR=3.1						

IDC 21 22:40:46.0±3.7, 20°.17S×177°.86W, h432km±48km, mb2.9/4, mb1 3.3/5, mb1mx2.9/46, mbtmp3.9/5, Error ellipse: s-maj=50.9km s-min=21.6km az=163.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	8.52	44	P	P	22 42 47.4	+0.3
	5.1nm,0.3s,baz=230,slow=16,SNR=6.8						
AFI				S	S	22 44 19.8	-6.8
	1.1nm,0.3s,baz=262,slow=16,SNR=1.4						
ASAR	Alice Springs	44.72	256	P	P	22 48 19.6	+0.3
	1.2nm,0.7s,baz=93,slow=8.1,SNR=11						
WRA	Warramunga Arr	44.77	262	P	P	22 48 19.2	-0.5
	0.3nm,0.3s,baz=96,slow=7.4,SNR=12						
QSPA	South Pole Qui	69.90	180	P	P	22 51 11.8	-0.1
	0.6nm,0.6s,baz=8.9,slow=11,SNR=1.7						
TXAR	Lajitas Array	86.77	57	P	P	22 52 43.5	0.0
	0.3nm,0.7s,baz=214,slow=5.9,SNR=5.3						

KRSC 21 22:43:11.2±1.6, 54°.84N×165°.53E, h37km±13km, ML3.8, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BKI	Bering	0.45	34	*e*P	Pn	22 43 21.5	+0.7
BKI				*e*S	Sn	22 43 27.0	-0.8
KBTR	Krutoberegovo	2.07	313	*e*P	Pn	22 43 44.5	+1.3
KBTR				*e*S	Sn	22 44 07.5	-0.2
MKZ	Mys Kozlova	2.23	264	*e*P	Pn	22 43 49.2	+3.8
MKZ				*e*S	Sn	22 44 15.2	+3.6
SMKR	Semkarok	2.89	309	*e*P	Pn	22 43 59.4	+4.8
SMKR				*e*S	Sn	22 44 32.2	+4.1
ZLN	Zelenaya	2.94	296	*e*S	Sn	22 44 33.8	+4.3
BZGR	Bezymyannyi-Gr	2.97	294	*e*S	Sn	22 44 34.9	+4.7
TUMD	Tumrok D	2.98	279	*e*P	Pn	22 44 00.0	+4.2
TUMD				*e*S	Sn	22 44 33.8	+3.6
SRKR	Sorokina	3.07	308	*e*P	Pn	22 44 03.3	+6.3
SRKR				*e*S	Sn	22 44 38.2	+5.7
BZMR	Bezymyannaya	3.08	293	*e*S	Sn	22 44 38.7	+5.8
TUMR	Tumrok	3.13	280	*e*P	Pn	22 44 02.7	+4.7
TUMR				*e*S	Sn	22 44 37.8	+3.7
SDLR	Sedlovina	4.22	251	*e*P	Pn	22 44 18.1	+5.2
SDLR				*e*S	Sn	22 45 04.6	+3.7
SMAR	Somma	4.27	251	*e*P	Pn	22 44 18.8	+5.1
SMAR				*e*S	Sn	22 45 05.1	+2.8
UGLR	Uglovaya	4.28	250	*e*P	Pn	22 44 19.0	+5.3
UGLR				*e*S	Sn	22 45 06.7	+4.3
AVH	Avacha	4.30	251	*e*P	Pn	22 44 19.6	+5.6
AVH				*e*S	Sn	22 45 07.7	+4.8
GNL	Ganaly	4.59	259	*e*P	Pn	22 44 23.7	+5.6
RUS	Russkaya	4.82	243	*e*P	Pn	22 44 25.8	+4.7
RUS				*e*S	Sn	22 45 18.3	+2.7
ASAK	Asacha	5.17	245	*e*P	Pn	22 44 31.4	+5.5
ASAK				*e*S	Sn	22 45 28.1	+3.9

IDC ***21*** *23:18:31.0±2.0, 8°.95S×119°.59E, h0km, mb3.7/3, mb1 4.0/4, mb1mx3.5/54, mbtmp3.8/4, ML3.9/1, Error ellipse: s-maj=187.2km s-min=24.2km az=53.0*
DJA ***21*** *23:18:35.9±0.4, 9°S±2°×12°0E±°, h12km±3km, M4.4/12, mB5.5/1, MLv4.4/12, Mw(mB)4.9/1*
ISCJB ***21*** *23:18:36.8±0.4, 9°.17S±0°.05×119°.52E±0°.03, h58km±6km, mb3.7/2, Error ellipse: s-maj=8.4km s-min=4.8km az=22.3*

ISC 21 23:18:37.7±1.0, 9°.20S±0°.05×119°.53E±0°.04, h48km±11km, n17, $\sigma 1^{s}62$/23, Sumba region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	0.46	197	P	Pn	23 18 47.6	-0.9
WBSI				S	Sn	23 18 54.9	-1.2
WSI	Waingapu	0.89	122	P	Pn	23 18 52.9	-1.0
WSI				S	Sn	23 19 07.1	+1.3
BASI	Baing, Sumba	1.45	135	P	Pn	23 19 03.2	+1.7
BASI				S	Sn	23 19 22.8	+3.4
PLAI	Plampang	1.77	282	P	Pn	23 19 05.8	-0.1
PLAI				S	Sn	23 19 29.3	+2.0
EDFI	Ende, Flores	2.18	78	P	Pn	23 19 11.1	-0.6
TWSI	Taliwang, Sumb	2.65	280	P	Pn	23 19 18.9	+0.9
TWSI				S	Sn	23 19 51.0	+2.0
MMRI	Maumere	2.73	78	P	Pn	23 19 20.0	+0.8
BKSI	Bulukumba	3.90	9	P	Pn	23 19 35.1	0.0
BKSI				S	Sn	23 20 19.6	0.0
IGBI	Denpasar	4.35	275	P	Pn	23 19 42.4	+1.1
IGBI				S	Sn	23 20 30.9	+0.2
JAGI	Jajag, Banyuwa	5.36	277	P	Pn	23 19 55.4	+0.2
JAGI				S	Sn	23 20 55.1	-0.7
WRA	Warramunga Arr	17.86	128	P	Pn	23 22 42.6	-0.2
	0.4nm,0.3s,baz=306,slow=13,SNR=9.6						
WRA				S	Sn	23 25 46.1	-15
	0.1nm,0.3s,baz=308,slow=24,SNR=3.1						
ASAR	Alice Springs	19.90	138	P	P	23 23 06.4	+1.0
	4.5nm,0.6s,baz=315,slow=9.4,SNR=20						
ASAR				S	S	23 26 42.9	-4.1
	1.2nm,0.7s,baz=309,slow=22,SNR=5.8						
STKA	Stephens Creek	30.47	141	P	P	23 24 46.6	+0.5
	0.8nm,0.4s,baz=311,slow=11,SNR=3.4						
H08S2	Diego Garcia H	46.53	268	T	T	00 16 23.8	
	baz=96,slow=75,SNR=9.8						
H08S3	Diego Garcia H	46.54	268	T	T	00 16 27.5	
	baz=96,slow=75,SNR=14						
H08S1	Diego Carcia H	46.55	268	T	T	00 16 27.1	
	baz=96,slow=75,SNR=13						
MKAR	Makanchi Array	64.87	333	P	P	23 29 10.8	-1.1
	0.2nm,0.5s,baz=148,slow=8.5,SNR=3.1						

CSEM 21 23:19:44.0, 67°.83N×20°.20E, h0km, ML0.7, Mining explosion., Sweden

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUA	Kurravaara	0.14	22	P	Pg	23 19 46.9	+0.2
KUA				S	Sg	23 19 49.1	+0.6
RATU	Laukkuluspa	0.23	270	P	Pg	23 19 48.7	+0.3
NIKU	Nikkaluokta	0.44	276	P	Pg	23 19 52.6	+0.1
LANU	Lannavaara	0.71	71	P	Pg	23 19 57.7	+0.1
DUNU	Dundret	0.72	168	P	Pg	23 19 57.5	-0.3
PAJU	Pajala	1.38	124	P	Pg	23 20 09.4	-1.1
ERTU	Ertsjaerv	1.49	148	P	Pn	23 20 11.7	-0.3

IDC 21 23:26:58.6±10.0, 2°.56N×128°.44E, h128km±93km, mb3.4/5, mb1 3.5/5, mb1mx3.1/60, mbtmp3.7/5, Error ellipse: s-maj=130.7km s-min=22.4km az=65.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.10	166	P	P	23 31 53.5	0.0
	0.9nm,0.3s,baz=346,slow=11,SNR=8.7						
ASAR	Alice Springs	26.61	169	P	P	23 32 25.1	-0.2
	0.3nm,0.5s,baz=354,slow=7.5,SNR=2.4						
ASAR				PcP	PcP	23 35 46.0	-0.3
	0.4nm,0.7s,baz=350,slow=2.7,SNR=3.4						
STKA	Stephens Creek	36.46	161	P	P	23 33 51.6	+0.3
	1.7nm,0.3s,baz=345,slow=7.2,SNR=7.8						
MKAR	Makanchi Array	59.48	325	P	P	23 36 48.8	+0.5
	0.2nm,0.4s,baz=117,slow=8.0,SNR=6.0						
BVAR	Borovoye Array	69.22	327	P	P	23 37 51.3	-0.3
	0.5nm,0.7s,baz=111,slow=7.9,SNR=3.8						
TORD	Torodi Ar. Bea	124.90	288	PKP	PKPdf	23 45 43.4	-1.2
	0.1nm,0.4s,baz=82,slow=2.0						
TORD				pPKP	sPKPdf	23 46 34.5	+2.2
	baz=116,slow=3.4						

ISCJB ***21*** *23:31:33.6±0.8, 21°.22S±0°.04×178°.99W±0°.05, h574km±10km, mb4.5/118, Error ellipse: s-maj=7.0km s-min=5.6km az=39.4*
NEIC ***21*** *23:31:36.8±0.4, 21°.20S×178°.97W, h602km±4km, mb4.7/91, Error ellipse: s-maj=5.6km s-min=4.0km az=130.0*
IDC ***21*** *23:31:36.2±0.5, 21°.19S×178°.90W, h592km±5km, mb4.0/30, mb1 4.0/33, mb1mx4.0/50, mbtmp4.9/33, Error ellipse: s-maj=9.2km s-min=8.7km az=121.0*
MOS ***21*** *23:31:37.1±2.7, 20°.96S×179°.15W, h580km, mb4.7/16, Error ellipse: s-maj=11.0km s-min=9.9km az=39.1*

ISC 21 23:31:36.0±0.5, 21°.29S±0°.06×178°.92W±0°.06, h595km±4km, h597km:pP-P, n366, $\sigma 1^{s}23$/410, mb4.7/118, 32C-36D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	10.01	44	P	P	23 33 53.1	-1.9
	3.3nm,0.3s,baz=110,slow=12,SNR=4.5						
AFI				S	S	23 35 39.0	-10
	3.1nm,0.3s,baz=3.9,slow=19,SNR=4.2						
DZM	Mont Dzumac	13.63	264	P	P	23 34 31.2	-0.2
	2.5nm,0.3s,baz=88,slow=16,SNR=17						
DZM	Mont Dzumac	13.63	264	*e*P	P	23 34 32.1	+0.7
MXZ	Matakaoa Point	16.39	188	*e*P	P	23 34 58.9	+2.0
	178nm,1.3s						
URZ	Urewera	17.26	191	P	P	23 35 03.0	-1.9
	3.1nm,0.3s,baz=92,slow=14,SNR=15						
URZ				S	S	23 37 49.0	-5.7
	0.8nm,0.3s,baz=85,slow=20,SNR=7.1						
URZ	Urewera	17.26	191	*e*P	P	23 35 06.7	+1.9
	122nm,1.7s						
URZ				S	S	23 37 49.0	-5.7
RTZ	Ruatahuna	17.62	191	P	P	23 35 19.8	+11
RAR	Rarotonga	17.85	93	P	P	23 35 09.9	-0.6
	1.0nm,0.3s,baz=246,slow=5.1,SNR=5.1						
RAR	Rarotonga	17.85	93	*e*P	P	23 35 11.1	+0.6
	265nm,1.8s						
RAR	Rarotonga	17.85	93	*e*P	P	23 35 11.1	+0.6
RAR				pmax	pmax		
	comp=Z,265nm,1.8s						
HIZ	Hauiti	17.98	196	P	P	23 35 07.3	-4.2
BKZ	Black Stump Fm	18.25	191	*e*P	P	23 35 16.2	+2.2
	comp=Z,20nm,1.2s						
BKZ				*e*S	S	23 38 09.2	-1.6
NGZ	Ngauruhoe	18.44	194	P	P	23 35 16.8	+1.0
KWHZ	Kaweka Forest	18.51	191	P	P	23 35 15.8	-0.6
BHHZ	Black Hill Sta	18.64	192	P	P	23 35 16.0	-1.5
MTVZ	Mangateitei	18.67	194	P	P	23 35 14.2	-3.5
KHEZ	Kahui Hut	18.94	197	P	P	23 35 16.7	-3.6
LREZ	Lake Rotokare	18.99	196	P	P	23 35 17.6	-3.0
KNTN	Kanton	19.70	22	*e*P	P	23 35 25.9	-1.5
	comp=Z,282nm,1.4s						
BFZ	Birch Farm	19.76	191	*e*P	P	23 35 28.2	+0.6
	comp=Z,95nm,1.4s						
OGWZ	Otaki Gorge	20.10	193	P	P	23 35 30.5	-0.2
HOWZ	Holdsworth Sta	20.11	192	P	P	23 35 30.6	-0.2
DUWZ	D'Urville Isla	20.38	196	P	P	23 35 31.3	-1.9
SNZO	South Karori	20.68	194	*e*P	P	23 35 37.0	+1.2
	comp=Z,98nm,1.4s						
TCW	Tory Channel	20.68	195	P	P	23 35 35.6	-0.2
QRZ	Quartz Range	20.78	199	P	P	23 35 37.5	+0.7
NNZ	Nelson	20.91	196	P	P	23 35 37.2	-0.8
TUWZ	Tuamarina	20.97	195	P	P	23 35 37.5	-0.9
THZ	Tophouse	21.55	197	*e*P	P	23 35 44.5	+0.8
	comp=Z,162nm,1.9s						
THZ	Tophouse	21.55	197	P	P	23 35 43.3	-0.4
KHZ	Kahutara	22.00	195	*e*P	P	23 35 48.7	+1.1
	comp=Z,33nm,1.1s						
LTZ	Lake Taylor	22.67	197	*e*P	P	23 35 52.6	-1.0
	comp=Z,23nm,0.9s						
OXZ	Oxford	23.23	197	*e*P	P	23 35 58.1	-0.5
	comp=Z,46nm,1.4s						
HNR	Honiara	23.50	297	P	P	23 36 00.0	-1.4
	comp=Z,135nm,0.5s,baz=242,slow=1.5,SNR=9.7						
RPZ	Rata Peaks	23.87	198	P	P	23 36 06.3	+2.0
	comp=Z,8.0nm,0.5s,baz=294,slow=3.2,SNR=4.9						
TARA	Tarawa	23.88	339	*e*P	P	23 36 04.4	-0.3
	comp=Z,110nm,0.8s						
FOZ	Fox Glacier	24.09	200	*e*P	P	23 36 07.4	+1.3
	comp=Z,167nm,1.9s						
MLZ	Mavora Lakes	26.27	201	*e*P	P	23 36 26.6	+1.2
	comp=Z,41nm,1.5s						
WHZ	Wether Hill Ro	26.79	201	*e*P	P	23 36 31.7	+1.7
	comp=Z,34nm,0.6s						
EIDS	Eidsvold	27.81	256	*e*P	P	23 36 39.5	+0.4
	comp=Z,16nm,0.6s						
CTA	Charters Tower	32.56	266	P	P	23 37 20.9	+0.9
	comp=Z,26nm,0.5s,baz=94,slow=10,SNR=45						
CTAO	Charters Tower	32.56	266	*e*P	P	23 37 20.0	0.0
	comp=Z,27nm,0.5s						
CTAO	Charters Tower	32.56	266	*e*P	P	23 37 20.0	0.0
CTAO				pmax	pmax		
	comp=Z,27nm,0.5s						
PMG	Port Moresby	34.69	285	P	P	23 37 38.3	+0.5
	comp=Z,33nm,0.8s,baz=98,slow=7.0,SNR=6.9						
STKA	Stephens Creek	36.67	245	P	P	23 37 54.7	+0.8
	comp=Z,8.0nm,0.7s,baz=91,slow=9.5,SNR=19						
STKA				ScP	ScP	23 42 53.2	+2.1
	comp=Z,3.6nm,0.9s,baz=45,slow=2.9,SNR=4.7						
STKA	Stephens Creek	36.67	245	*e*P	P	23 37 54.5	+0.6
	comp=Z,2.7nm,1.1s						
STKA				ScP	ScP	23 42 53.2	+2.1
BBOO	Buckleboo	41.42	244	*e*P	P	23 38 32.4	+0.4
	comp=Z,12nm,0.8s						
AS01	Alice Springs	43.46	258	*e*P	P	23 38 47.7	-0.4
AS31	Alice Springs	43.50	258	*e*P	P	23 38 49.0	+0.6
	comp=Z,13nm,1.1s						
ASAR	Alice Springs	43.50	258	P	P	23 38 48.5	+0.1
	comp=Z,27nm,0.8s,baz=98,slow=7.7,SNR=259						
ASAR				PcP	PcP	23 40 23.3	+0.5
	comp=Z,1.9nm,0.6s,baz=106,slow=3.4,SNR=5.1						
ASAR				ScP	ScP	23 43 19.6	+1.4
	comp=Z,2.5nm,0.8s,baz=110,slow=3.7,SNR=9.3						
ASAR				S	S	23 44 33.8	-1.5
	comp=Z,4.1nm,0.8s,baz=94,slow=16,SNR=18						
ASAR				ScS	ScS	23 47 42.5	+0.3
	comp=Z,1.1nm,0.8s,baz=102,slow=7.6,SNR=5.9						
ASAR	Alice Springs	43.50	258	*e*P	P	23 38 48.9	+0.4
ASAR				pmax	pmax		
	comp=Z,28nm,0.8s						
WB2	Warramunga Arr	43.63	263	*e*P	P	23 38 49.4	-0.1
WRAB	Tennant Creek	43.63	263	*e*P	P	23 38 49.0	-0.5
	comp=Z,28nm,0.8s						
WRAB	Tennant Creek	43.63	263*d*	*i*P	P	23 38 49.4	-0.1
WRAB				pmax	pmax		
	comp=Z,30nm,1.0s						
WRA	Warramunga Arr	43.64	263	P	P	23 38 49.4	-0.1
	comp=Z,16nm,0.5s,baz=98,slow=8.8,SNR=117						
WRA				ScP	ScP	23 43 21.4	+2.5
	comp=Z,1.3nm,0.8s,baz=90,slow=4.0,SNR=5.4						
WRA				S	S	23 44 33.4	-3.9
	comp=Z,1.6nm,0.9s,baz=99,slow=14,SNR=3.3						
HMH	Humu'ula Sheep	46.67	31	*e*P	P	23 39 12.5	-0.4
	comp=Z,107nm,1.3s						
KEKH	Kekaha	46.92	25	*e*P	P	23 39 13.6	-0.6
	comp=Z,255nm,1.6s						
FORT	Forrest	48.19	247	*e*P	P	23 39 23.8	+0.1
	comp=Z,22nm,0.6s						
MTN	Manton Dam	48.31	272	*e*P	P	23 39 23.6	-1.3
	comp=Z,31nm,0.6s						
GUMO	Guam	49.65	311	P	P	23 39 34.6	-0.1
	comp=Z,32nm,0.6s,baz=123,slow=2.0,SNR=4.6						
GUMO	Guam	49.65	311	*e*P	P	23 39 35.2	+0.5
	comp=Z,69nm,1.0s						
GUMO	Guam	49.65	311	*e*P	P	23 39 35.2	+0.5
GUMO				pmax	pmax		
	comp=Z,69nm,1.0s						
FITZ	Fitzroy Crossi	52.07	263	*e*P	P	23 39 51.5	-0.7
	comp=Z,49nm,1.6s						
SOEI	Soe	55.67	273	*e*P	P	23 40 18.0	+0.3
	comp=Z,101nm,0.9s						
TNTI	Ternate	56.83	286	*e*P	P	23 40 26.1	+0.6
	comp=Z,52nm,0.9s						
MBWA	Marble Bar	56.84	258	*e*P	P	23 40 25.5	0.0
	comp=Z,24nm,0.7s						
SBA	Scott Base	57.03	184	*e*P	P	23 40 28.5	+2.7
	comp=Z,20nm,0.9s						
SBA	Scott Base	57.03	184	P	P	23 40 28.5	+2.7
SBA				pmax	pmax		
	comp=Z,20nm,1.0s						
VNDA	Vanda	57.05	185	P	P	23 40 28.1	+2.1
	comp=Z,3.6nm,0.7s,baz=1.6,slow=6.8,SNR=25						
VNDA	Vanda	57.05	185	*e*P	P	23 40 28.2	+2.2
	comp=Z,4.9nm,0.8s						
VNDA	Vanda	57.05	185	*e*P	P	23 40 28.2	+2.2
VNDA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LUWI	Luwuk	60.24	281	*e*P	P	23 40 46.9	-1.4
	comp=Z,41nm,0.9s						
CBIJ	Chichi jima	61.08	320	*e*P	P	23 40 53.0	-0.6
	comp=Z,35nm,0.7s						
JCJ	Chichijima	61.08	320	P	P	23 40 53.2	-0.4
	comp=Z,34nm,0.5s,baz=198,slow=4.2,SNR=6.1						
QSPA	South Pole Qui	68.78	180	P	P	23 41 42.4	+1.0
	comp=Z,28nm,0.9s,baz=6.0,slow=8.3,SNR=71						
QSPA	South Pole Qui	68.78	180	*e*P	P	23 41 42.6	+1.2
	comp=Z,99nm,0.8s						
JOW	Kunigami	70.02	311	P	P	23 41 49.8	+0.5
	comp=Z,19nm,0.7s,baz=165,slow=4.6,SNR=4.9						
MJA0	Matsu Arr-Jizo	70.32	324	*e*P	P	23 41 50.7	-0.2
MJA0				pmax	pmax		
	comp=Z,12nm,0.7s						
MJAR	Matsushiro Arr	70.34	324	P	P	23 41 50.8	-0.2
	comp=Z,10nm,0.7s,baz=164,slow=6.0,SNR=30						
MAJO	Matsushiro	70.34	324	*e*P	P	23 41 51.1	+0.1

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      comp=Z,18nm,0.8s
MAJO                                  epP      pP      23 43 51.9 +0.3
MAJO  Matsushiro         70.34 324 d iP       P       23 41 50.7 -0.3
MAJO                                   pmax     pmax
      comp=Z,20nm,0.9s
MAT   Matsushiro         70.34 324    P       P       23 41 50.5 -0.5
MJB9  Matsu-Tunnel       70.34 324   eP       P       23 41 51.1 +0.1
      comp=Z,18nm,0.8s
MJB9                                 epP      pP      23 43 52.6 +0.9
JNU   Nakatsue           72.26 317    P       P       23 42 02.1 -0.1
      comp=Z,7.9nm,0.8s,baz=88,slow=4.9,SNR=7.8
JNU   Nakatsue           72.26 317   eP       P       23 42 02.3  0.0
      comp=Z,33nm,1.3s
KSM   Kuching            72.67 279   eP       P       23 42 04.2 -0.8
      comp=Z,20nm,0.8s
KUR   Kuril'sk           72.79 336 ⇑ eP       P       23 42 05.7 +0.8
NACB  Ninganchiao        73.41 305   eP       P       23 42 08.7 -0.3
      comp=Z,33nm,0.9s
TPUB  Ta-pu              73.68 304   eP       P       23 42 09.8 -0.8
      comp=Z,53nm,0.7s
SSLB  Suanglung          73.69 304   eP       P       23 42 09.9 -0.7
      comp=Z,19nm,0.7s
ASAJ  Asahikawa          74.01 332    P       P       23 42 13.0 +1.1
      comp=Z,16nm,0.8s,baz=204,slow=7.2,SNR=13
ASAJ  Asahikawa          74.01 332   eP       P       23 42 12.1 +0.2
      comp=Z,20nm,0.9s
YSS   Yuzh-Sakhalins     76.22 334 ⇓ eP       P       23 42 24.5 +0.4
YSS                                   pmax     pmax
      comp=Z,10.0nm,1.1s
TJN   Taejon             76.57 318 ⇓ iP       P       23 42 24.4 -1.9
PEA0B Petropavlovsk-     76.81 346   eP       P       23 42 27.4 +0.1
      comp=Z,22nm,0.8s
PETK  Petropavlovsk-     76.81 346    P       P       23 42 26.9 -0.3
      comp=Z,17nm,0.7s,baz=152,slow=4.0
PETK  Petropavlovsk-     76.81 346   eP       P       23 42 26.8 -0.4
PETK  Petropavlovsk-     76.81 346   eP       P       23 42 26.8 -0.4
KSRS  Korea Array        76.91 319    P       P       23 42 28.7 +0.6
      comp=Z,2.6nm,0.8s,baz=137,slow=6.4,SNR=11
KSAR  Wonju Array Be     76.93 319    P       P       23 42 28.7 +0.5
KSAR  Wonju Array Be     76.93 319    P       P       23 42 28.7 +0.5
KS01  Wonju Array Si     76.94 319   eP       P       23 42 28.7 +0.5
SDPT  Sand Point         77.94  11   eP       P       23 42 32.3 -0.9
USRK  Ussuriysk Ar.      79.13 326    P       P       23 42 40.9 +1.1
      comp=Z,16nm,0.8s,baz=116,slow=3.4
CHGN  Chignik            79.21  11   eP       P       23 42 39.4 -0.6
      comp=Z,25nm,0.7s
NJ2   Nanjing            79.72 310   eP       P       23 42 43.8 +0.6
NJ2                                   pmax     pmax
      comp=Z,20nm,0.5s
MAW   Mawson             80.53 200    P       P       23 42 47.6 +0.8
      comp=Z,3.4nm,0.7s,baz=119,slow=6.4,SNR=7.4
PFO   Pinyon Flats O     80.74  49    P       P       23 42 49.6 +0.9
      comp=Z,6.5nm,1.0s,baz=109,slow=6.8,SNR=3.8
WDC   Whiskeytown Da     80.83  40   eP       P       23 42 49.5 +0.7
      comp=Z,6.5nm,0.9s
WDC   Whiskeytown Da     80.83  40   eP       P       23 42 49.5 +0.7
WDC                                   pmax     pmax
      comp=Z,7.0nm,0.9s
DAC   Darwin (Calif)     81.44  46   epP      pP      23 45 00.1 +2.2
YBH   Yreka Blue Hor     81.44  39    P       P       23 42 53.2 +1.1
      comp=Z,6.6nm,0.7s,baz=207,slow=1.4,SNR=18
YBH   Yreka Blue Hor     81.44  39   eP       P       23 42 53.3 +1.3
      comp=Z,7.8nm,0.9s
YBH   Yreka Blue Hor     81.44  39   eP       P       23 42 53.3 +1.3
YBH                                   pmax     pmax
      comp=Z,8.0nm,0.9s
WAKR  Walker             81.51  43   eP       P       23 42 52.8 +0.2
      comp=Z,4.5nm,0.7s
HUMO  Hull Mountain      81.84  38   eP       P       23 42 55.4 +1.5
      comp=Z,11nm,1.1s
YERR  Yerington          81.91  43   eP       P       23 42 55.2 +0.6
      comp=Z,7.5nm,0.6s
NV01  Mina Array Sit     82.19  44   eP       P       23 42 56.5 +0.4
NVAR  Mina Array Bea     82.19  44    P       P       23 42 56.6 +0.5
      comp=Z,3.0nm,0.5s,baz=226,slow=8.0,SNR=27
WHN   Wuhan              82.22 307 ⇑  P       P       23 42 58.8 +2.7
PAHR  Pah Rah Range      82.24  42   eP       P       23 42 57.1 +0.9
      comp=Z,5.0nm,0.9s
NV11  Mina Array Sit     82.29  44   eP       P       23 42 57.0 +0.5
      comp=Z,0.3nm,0.6s
IPM   Ipoh               82.38 278   eP       P       23 42 58.1 +0.8
      comp=Z,23nm,0.7s
KVN   Kaiserville        82.67  43   eP       P       23 42 58.9 +0.4
      comp=Z,4.4nm,0.6s
KVN   Kaiserville        82.67  43   eP       P       23 42 58.9 +0.4
KVN                                   pmax     pmax
      comp=Z,4.0nm,0.6s
TPNV  Topopah Spring     82.71  46   eP       P       23 42 59.3 +0.6
      comp=Z,4.4nm,0.9s
TPNV  Topopah Spring     82.71  46   eP       P       23 42 59.3 +0.6
TPNV                                  pmax     pmax
      comp=Z,4.0nm,0.9s
KLR   Kul'dur            82.77 330    P       P       23 42 59.3 +0.9
      comp=Z,0.7nm,0.8s,baz=93,slow=4.0,SNR=26
MOD   Modoc Plateau      82.97  40   eP       P       23 43 00.5 +0.7
      comp=Z,4.7nm,0.7s
K05A  Summer Lake        83.12  39   eP       P       23 43 01.8 +1.2
      comp=Z,14nm,0.9s
PSI   Prapat             83.70 275   eP       P       23 43 03.8 -0.3
      comp=Z,10nm,0.8s
PSI   Prapat             83.70 275   eP       P       23 43 03.8 -0.3
PSI                                   pmax     pmax
      comp=Z,10.0nm,0.8s
PINE  Pine Mountain      83.73  38   eP       P       23 43 04.8 +1.2
      comp=Z,13nm,0.8s
E03A  Lebam              83.99  35   eP       P       23 43 06.2 +1.7
      comp=Z,24nm,1.0s
MA2   Magadan            84.32 345   eP       P       23 43 06.6 +0.8
G08A  Pilot Rock         85.77  38   eP       P       23 43 14.3 +1.0
      comp=Z,11nm,1.3s
SYO   Syowa Base         85.77 193 ⇑ eP       P       23 43 12.2 -0.6
SYO   Syowa Base         85.77 193 ⇑ eP       P       23 43 17.0 +4.2
GLI   Glacier Island     85.83  15   eP       P       23 43 12.4 -0.6
      comp=Z,23nm,0.8s
PMR   Palmer             85.98  14   eP       P       23 43 13.1 -0.7
PMR   Palmer             85.98  14   eP       P       23 43 13.1 -0.7
MTPU  Mount Pierson      86.03  47   eP       P       23 43 14.4 -0.6
      comp=Z,2.5nm,0.9s
GHO   Glory Hole Cre     86.19  14   eP       P       23 43 12.6 -2.3
      comp=Z,29nm,0.7s
GYA   Guiyang            86.29 300   eP       P       23 43 17.3 +1.1
GYA                                   pP       pP      23 45 26.0 +2.1
GYA                                   sP       sP      23 46 25.8 +2.2
GYA                                   PP       PP      23 46 52.3 +3.4
GYA                                   SKS      SKSac   23 52 45.8 -0.9
GYA                                   S        S       23 53 02.0 -1.1
GYA                                   pmax     pmax
      comp=Z,10.0nm,1.0s
DIV   Divide             86.37  15   eP       P       23 43 15.6 -0.1
      comp=Z,14nm,1.0s
BMO   Blue Mountains     86.47  39   eP       P       23 43 16.9 +0.2
      comp=Z,2.1nm,0.8s
BMRM  Bremner River      86.53  16   eP       P       23 43 15.7 -0.7
      comp=Z,17nm,1.0s
SCM   Sheep Creek Mo     86.61  14   eP       P       23 43 16.6 -0.3
      comp=Z,32nm,0.6s
SCM   Sheep Creek Mo     86.61  14   eP       P       23 43 16.6 -0.3
SCM                                   pmax     pmax
      comp=Z,32nm,0.6s
KLU   Klutina            86.65  15   eP       P       23 43 16.9 -0.2
      comp=Z,9.2nm,1.0s
WRAK  Wrangell Islan     86.78  24   eP       P       23 43 18.3 +0.7
      comp=Z,4.4nm,0.8s
D08A  Wollman Farm,      86.83  36   eP       P       23 43 18.9 +0.8
      comp=Z,9.9nm,0.9s
SEY   Seymchan           86.95 347    P       P       23 43 18.2  0.0
      comp=Z,11nm,0.8s,baz=148,slow=5.4,SNR=17
SEY   Seymchan           86.95 347 ⇑ iP       P       23 43 18.7 +0.4
CAST  Castle Rocks       87.02  12   eP       P       23 43 16.8 -1.8
      comp=Z,14nm,0.8s
F10A  Beach Ranch, E     87.15  38   eP       P       23 43 19.9 +0.1
      comp=Z,11nm,0.9s
SNAA  Sanae              87.25 179    P       P       23 43 19.2 -0.7
      comp=Z,2.7nm,0.8s,baz=200,slow=15,SNR=4.5
SNAA  Sanae              87.25 179   eP       P       23 43 21.5 +1.6
SNAA                                  pmax     pmax
      comp=Z,160nm,0.9s
B08A  Colville Reser     87.37  35   eP       P       23 43 20.7  0.0
      comp=Z,7.8nm,0.8s
TRF   Thorofare Moun     87.40  12   eP       P       23 43 19.4 -1.2
      comp=Z,27nm,0.8s
HLID  Hailey             87.49  41   eP       P       23 43 22.4 +0.8
      comp=Z,2.6nm,0.8s
SRU   San Rafael Swe     87.69  46   eP       P       23 43 23.1 +0.5
      comp=Z,3.8nm,0.8s
BPAW  Bear Paw Mtn.      87.85  12   eP       P       23 43 21.4 -1.1
      comp=Z,9.9nm,1.6s
XAN   Xi'an              87.93 308    P       P       23 43 24.6 +1.0
XAN                                   pmax     pmax
      comp=Z,13nm,0.9s
XAN                                   pmax     pmax
      comp=Z,62nm,4.6s
MCK   McKinley           87.93  13   eP       P       23 43 22.3 -0.6
      comp=Z,18nm,1.0s
MCK   McKinley           87.93  13   eP       P       23 43 22.3 -0.6
MCK                                   pmax     pmax
      comp=Z,18nm,1.0s
TX31  Lajitas Ar. Si     88.21  58   eP       P       23 43 25.8 +0.7
TXAR  Lajitas Array      88.21  58    P       P       23 43 26.1 +1.0
      comp=Z,1.9nm,0.8s,baz=218,slow=6.2,SNR=26
TXAR                                  pP       pP      23 45 32.2 -1.3
      comp=Z,0.4nm,1.1s,baz=216,slow=4.5,SNR=1.8
BWN   Browne             88.21  12   eP       P       23 43 23.6 -0.6
      comp=Z,27nm,0.6s
ANMO  Albuquerque        88.57  52   eP       P       23 43 27.6 +0.8
      comp=Z,2.2nm,1.1s
ANMO  Albuquerque        88.57  52 ⇑ iP       P       23 43 26.9 +0.1
ANMO                                  pmax     pmax
      comp=Z,1.0nm,1.0s
MLY   Manley             88.73  12   eP       P       23 43 25.3 -1.4
      comp=Z,5.9nm,0.6s
WRH   Wood River Hil     88.76  13   eP       P       23 43 25.8 -0.9
      comp=Z,14nm,0.7s
RIDG  Independ'e Rid     88.84  14   eP       P       23 43 27.0 -0.2
      comp=Z,11nm,1.0s
KMI   Kunming            88.94 297    P       P       23 43 29.8 +1.0
KMI                                   pmax     pmax
      comp=Z,9.0nm,0.9s
KMI                                   pmax     pmax
      comp=Z,94nm,4.4s
CCB   Clear Creek Bu     88.97  13   eP       P       23 43 26.5 -1.2
      comp=Z,13nm,0.8s
MCMT  McKenzie Canyo     89.11  41   eP       P       23 43 30.1 +1.0
MDM   Murphy Dome        89.16  13   eP       P       23 43 27.3 -1.3
      comp=Z,9.3nm,0.8s
SCRK  Sand Creek         89.24  15   eP       P       23 43 28.8 -0.3
      comp=Z,4.7nm,0.9s
ILAR  Eielson Array      89.27  13    P       P       23 43 27.9 -1.2
      comp=Z,3.6nm,0.6s,baz=218,slow=5.3,SNR=31
ILAR                                  pP       pP      23 45 35.8 -2.0
      comp=Z,0.8nm,1.0s,baz=231,slow=5.7,SNR=3.6
ILB   Eielson Array      89.27  13   eP       P       23 43 28.2 -0.9
IL1   Eielson Array      89.27  13   eP       P       23 43 27.8 -1.3
IL1                                  epP      pP      23 45 40.9 +3.1
HHC   Hu-ho-hao-te       89.29 315   eP       P       23 43 31.6 +1.7
HHC                                   pP       pP      23 45 39.3 +0.7
HHC                                   SKS      SKSac   23 53 05.4 +1.7
HHC                                   S        S       23 53 27.0 -3.1
HHC                                   pmax     pmax
      comp=Z,14nm,0.9s
HHC                                   pmax     pmax
      comp=Z,60nm,5.6s
PLCA  Paso Flores        89.36 134    P       P       23 43 31.5 +1.2
      comp=Z,4.4nm,0.8s,baz=251,slow=4.6,SNR=8.6
CM01  Chiang Mai Arr     89.54 290   eP       P       23 43 33.0 +1.6
CMAR  Chiang Mai Arr     89.57 290    P       P       23 43 33.4 +1.9
      comp=Z,6.6nm,0.9s,baz=127,slow=3.2,SNR=34
CMAR  Chiang Mai Arr     89.57 290   eP       P       23 43 33.6 +2.0
CMAR                                  pmax     pmax
      comp=Z,7.0nm,0.9s
REDW  Red Top Meadow     89.60  43   eP       P       23 43 32.3 +0.8
      comp=Z,5.4nm,1.0s
CMMT  Chiang Mai         89.70 290    P       P       23 43 33.8 +1.6
      comp=Z,14nm,0.9s
CHTO  Chiang Mai         89.70 290   eP       P       23 43 34.0 +1.8
      comp=Z,7.5nm,0.7s
CHTO  Chiang Mai         89.70 290   eP       P       23 43 34.0 +1.8
CHTO                                  pmax     pmax
      comp=Z,8.0nm,0.7s
CHTO  Chiang Mai         89.70 290    P       P       23 43 33.9 +1.7
LNIG  Linares            89.78  63   eP       P       23 43 32.2 -0.2
      comp=Z,3.3nm,0.8s
LOHW  Long Hollow        89.88  42   eP       P       23 43 33.4 +0.7
      comp=Z,1.9nm,0.7s
PD31  Pinedale Array     90.13  44   eP       P       23 43 34.0 +0.1
PDAR  Pinedale Array     90.13  44    P       P       23 43 34.0 +0.1
      comp=Z,1.9nm,0.6s,baz=213,slow=3.5,SNR=23
PDAR  Pinedale Array     90.13  44   eP       P       23 43 33.6 -0.3
DAWY  Dawson             90.45  16   eP       P       23 43 34.6 -0.1
      comp=Z,6.6nm,1.0s
YAK   Yakutsk            92.52 338 ⇓ eP       P       23 43 43.9 -0.2
YAK                                   pmax     pmax
      comp=Z,9.0nm,0.8s
LZH   Lanzhou            92.56 308   eP       P       23 43 46.3 +1.1
LZH                                   pP       pP      23 45 55.5 +1.2
LZH                                   sP       sP      23 46 58.4 +5.0
LZH                                   pmax     pmax
      comp=Z,18nm,1.3s
LZH                                   pmax     pmax
      comp=Z,84nm,4.3s
ULN   Ulaanbaatar        95.39 319 ⇓ iP       P       23 43 57.7 -0.1
ULN                                   pmax     pmax
      comp=Z,1.0nm,0.9s
SONM  Songino Array      95.78 319    P       P       23 43 59.3 -0.1
      comp=Z,0.3nm,0.4s,baz=121,slow=5.6,SNR=2.3
ZALV  Zalesovo Beam     110.56 321    PKiKP    PKiKP   23 49 00.3 -1.1
      comp=Z,1.0nm,0.5s,baz=226,slow=1.8,SNR=3.9
MKAR  Makanchi Array    111.11 313    Pdiff    Pdif    23 45 09.1 +1.5
      comp=Z,0.2nm,0.5s,baz=105,slow=7.6,SNR=3.7
MKAR                                  PKiKP    PKiKP   23 49 01.2 -1.5
      comp=Z,0.3nm,0.4s,baz=16,slow=0.3,SNR=5.8
BVAR  Borovoye Array    119.12 320    PKP      PKPdf   23 49 16.9 -1.0
      comp=Z,1.9nm,0.4s,baz=84,slow=1.8,SNR=18
SCHQ  Schefferville     119.82  38    PKP      PKPdf   23 49 18.9 -0.3
      comp=Z,4.2nm,0.5s,baz=204,slow=11,SNR=3.0
SPITS Spitsbergen Ar    122.59 356    PKP      PKPdf   23 49 22.6 -1.3
      comp=Z,6.0nm,0.7s,baz=48,slow=2.1,SNR=8.6
SUR   Sutherland        123.39 200   eP        Pdif    23 46 01.8 -1.1
ARU   Arti              125.35 325   ePKPdf    PKPdf   23 49 29.5 -0.2
ARU   Arti              125.35 325   i PKIKP   PKPdf   23 49 29.4 -0.3
ARU                                                    23 55 45.0
ARCES ARCESS Array B    129.53 349    PKP      PKPdf   23 49 36.9 -0.4
      comp=Z,2.9nm,0.5s,baz=27,slow=1.5,SNR=20
ARCES                                 pPKP     PP      23 52 03.1 +6.3
      comp=Z,9.1nm,0.9s,baz=35,slow=2.2,SNR=6.2
ARCES ARCESS Array B    129.53 349   ePKIKP    PKPdf   23 49 37.2 -0.2
ARCES                                 pmax     pmax
      comp=Z,3.0nm,0.5s
FINES FINESS Array B    136.28 343    PKhKP    PKPpre  23 49 36.5
      comp=Z,1.2nm,0.8s,baz=17,slow=1.9,SNR=4.5
FINES                                 PKP      PKPdf   23 49 48.8 -1.4
      comp=Z,2.6nm,0.8s,baz=49,slow=2.8,SNR=9.2
FINES                                 SKP              23 52 27.9
      comp=Z,4.2nm,0.8s,baz=32,slow=5.6,SNR=9.6
FINES FINESS Array B    136.28 343   ePKIKP    PKPdf   23 49 49.7 -0.5
FINES                                 pmax     pmax
      comp=Z,3.0nm,0.8s
OBN   Obninsk           137.03 331   ePKIKP    PKPdf   23 49 51.3 -0.4
OBN                                   pmax     pmax
      comp=Z,4.0nm,0.9s
KMBO  Kilima Mbogo      138.21 242    SKPab    SKPab   23 52 43.9 -0.5
      comp=Z,0.3nm,0.3s,baz=50,slow=1.7,SNR=1.6
KBZ   Khabaz            138.80 313    SKPab    SKPab   23 52 45.7 -0.1
      comp=Z,0.6nm,0.5s,baz=104,slow=4.2,SNR=2.7
KIV   Kislovodsk        138.87 313   ePKIKP    PKPdf   23 49 55.3 -0.4
KIV                                  e                 23 52 55.4
KIV                                  ePPP      PPP     23 56 02.0
KIV                                   pmax     pmax
      comp=Z,4.0nm,1.0s
NB2   NORSAR Subarra139.65 352        PKP      PKPpre  23 49 48.7
      comp=Z,3.1nm,1.0s,baz=10,slow=3.2
NOA   NORSAR Array B139.65 352        PKhKP    PKPpre  23 49 48.2
      comp=Z,0.4nm,0.6s,baz=26,slow=4.0,SNR=8.0
NOA                                   SKPbc    SKPbc   23 52 37.8 +1.0
      comp=Z,2.6nm,0.9s,baz=15,slow=4.4,SNR=5.8
HFS   Hagfors           140.17 350    PKhKP    PKPpre  23 49 50.2
      comp=Z,4.7nm,0.4s,baz=77,slow=3.1,SNR=64
HFS                                   SKPbc    SKPbc   23 52 37.5 -0.6
      comp=Z,3.6nm,0.8s,baz=40,slow=4.7,SNR=4.0
SUW   Suwalki           143.26 338   ePKP      PKPab   23 50 00.8 -0.5
AKASG Malin Array Be    143.27 330    PKhKP    PKPpre  23 50 00.6
      comp=Z,24nm,0.5s,baz=43,slow=4.3,SNR=117
AKASG                                 SKPbc    SKPbc   23 52 45.5 -0.6
      comp=Z,2.1nm,0.7s,baz=38,slow=2.2,SNR=6.7
AKBB  Malin Array Si    143.27 330   ePKPpre   PKPpre  23 50 00.7
KIEV  Kiev              143.28 330   ePKPpre   PKPpre  23 50 00.6
KIEV  Kiev              143.28 330   ePKHKP    PKPpre  23 50 00.6
AK11  Malin Array Si    143.31 330   ePKPdf    PKPab   23 50 00.6 -1.1
GKP   Gorka Klasztor    145.75 343   ePKP      PKPbc   23 50 08.9 -0.1
GKP   Gorka Klasztor    145.75 343   ePKIKP    PKPbc   23 50 09.0 -0.1
EKA   Eskdalemuir Ar    145.86   4    PKPbc    PKPbc   23 50 08.7 -0.7
      comp=Z,7.1nm,0.7s,baz=338,slow=2.6,SNR=25
BEL   Belsk             145.88 338   ePKP      PKPbc   23 50 10.1 +0.6
BEL   Belsk             145.88 338   ePKIKP    PKPbc   23 50 10.1 +0.6
KIS   Kishinev          145.90 325   eP        PKPbc   23 50 10.0 +0.3
ASF   Jabal al Asfar    146.36 296    PKPbc    PKPbc   23 50 12.1 +0.5
      comp=Z,5.2nm,0.8s,baz=86,slow=2.4,SNR=11
BR131 Keskin Array S    146.71 311   ePKPdf    PKPbc   23 50 11.4 -1.0
BRTR  Keskin Array B    146.71 311    PKPbc    PKPbc   23 50 11.9 -0.5
      comp=Z,5.4nm,0.7s,baz=134,slow=4.3,SNR=41
BRTR                                  pPKPbc   pPKPdf  23 52 26.2 -1.5
      comp=Z,0.8nm,1.1s,baz=98,slow=3.1,SNR=2.2
BRTR                                  SKPbc    SKPbc   23 52 52.0 -2.5
      comp=Z,0.6nm,0.8s,baz=63,slow=3.9,SNR=3.2
BRTR                                  sPKPbc   sPKPdf  23 53 21.7 -3.0
      comp=Z,0.7nm,0.8s,baz=54,slow=6.3,SNR=3.6
KWP   Kalwaria Pacla    146.92 334   ePKP      PKPbc   23 50 12.3 -0.2
KWP   Kalwaria Pacla    146.92 334   ePKPbc    PKPbc   23 50 12.1 -0.3
KWP   Kalwaria Pacla    146.92 334   ePKIKP    PKPbc   23 50 12.1 -0.3
PRAR  RASCA             146.99 328 ⇓ iP        PKPbc   23 50 12.7  0.0
TLCR                    147.03 323 ⇑ iP        PKPbc   23 50 12.4 -0.4
TLCR                    147.03 323 ⇑ PKIKP     PKPbc   23 50 12.4 -0.4
ANTO  Ankara            147.25 312 ⇓ iP        PKPbc   23 50 13.8 +0.1
ANTO  Ankara            147.25 312   ePKPbc    PKPbc   23 50 14.1 +0.3
ANTO  Ankara            147.25 312 ⇓ PKIKP     PKPbc   23 50 13.8 +0.1
BR231 Keskin MP Arra    147.27 312   ePKPbc    PKPbc   23 50 14.0 +0.1
BUR08 Bucovina Ar. S    147.29 329   ePKPbc    PKPbc   23 50 14.2 +0.6
BUR04 Bucovina Ar. S    147.31 329   ePKPbc    PKPbc   23 50 13.4 -0.2
BURAR Bucovina Array    147.31 329 ⇑ iP        PKPbc   23 50 14.2 +0.5
BURAR Bucovina Array    147.31 329 ⇑ PKIKP     PKPbc   23 50 14.2 +0.5
BIZ   Bicaz             147.34 328 ⇓ iP        PKPbc   23 50 14.2 +0.6
TESR  Tescani           147.35 326 ⇓ iP        PKPbc   23 50 13.1 -0.6
CFR   Carcaliu          147.41 323 ⇑ iP        PKPbc   23 50 13.5 -0.3
CFR   Carcaliu          147.41 323 ⇑ PKIKP     PKPbc   23 50 13.5 -0.3
MMAI  Mount Meron Ar    147.44 298    PKPbc    PKPbc   23 50 15.1 +0.7
      comp=Z,11nm,0.6s,baz=73,slow=4.8,SNR=20
MMAI                                  pPKPbc   pPKPdf  23 52 29.2 +0.2
      comp=Z,0.6nm,0.5s,baz=66,slow=7.0,SNR=1.8
OJC   Ojcow             147.57 337   ePKP      PKPbc   23 50 13.8 -0.3
OJC   Ojcow             147.57 337   ePKPdf    PKPbc   23 50 12.6 -1.5
OJC   Ojcow             147.57 337   ePKIKP    PKPbc   23 50 12.6 -1.5
TIRR  Tirgusor          147.69 322 ⇑ iP        PKPbc   23 50 14.8 +0.2
TIRR  Tirgusor          147.69 322 ⇑ PKIKP     PKPbc   23 50 14.8 +0.2
VRI   Vrincioaia        147.74 325 ⇓ iP        PKPbc   23 50 14.6 -0.1
VRI   Vrincioaia        147.74 325 ⇓ PKIKP     PKPbc   23 50 14.6 -0.1
PLOR  Plostina          147.79 326 ⇑ iP        PKPbc   23 50 14.1 -0.8
PLOR  Plostina          147.79 326 ⇑ PKIKP     PKPbc   23 50 14.2 -0.7
TLB   Topalu            147.83 323 ⇓ iP        PKPbc   23 50 15.0 +0.1
TLB   Topalu            147.83 323 ⇓ PKIKP     PKPbc   23 50 15.0 +0.1
UZH   Uzhgorod          147.87 333 ⇓ ePKIKP    PKPbc   23 50 13.6 -1.3
UZH                                  i                 23 50 15.5
CVDA  Cernavoda         147.98 322 ⇑ iP        PKPbc   23 50 15.8 +0.5
CRVS  Cervenica-Dubn    148.00 334   ePKIKP    PKPbc   23 50 15.8 +0.5
CRVS  Cervenica-Dubn    148.00 334   ePKP      PKPbc   23 50 15.8 +0.5
NIE   Niedzica          148.04 336   ePKP      PKPbc   23 50 15.3  0.0
NIE   Niedzica          148.04 336   ePKIKP    PKPbc   23 50 15.3  0.0
ARCR  ARCALIA           148.10 329 ⇓ iP        PKPbc   23 50 15.6 +0.1
TRPA  Tarpa             148.15 332 ⇓ iP        PKPbc   23 50 15.5 -0.1
KSP   Ksiaz             148.18 342   ePKP      PKPbc   23 50 15.9 +0.3
DOPR  Dopca             148.37 327 ⇑ iP        PKPbc   23 50 16.8 +0.5
MLR   Muntele Rosu      148.40 326    PKPbc    PKPbc   23 50 16.0 -0.5
      baz=30,slow=4.4
MLR   Muntele Rosu      148.40 326 ⇓ iP        PKPbc   23 50 16.4 -0.1
MLR   Muntele Rosu      148.40 326   ePKPbc    PKPbc   23 50 16.3 -0.2
OKC   Ostrava-Krasne    148.46 339 ⇑ ePKP      PKPbc   23 50 16.6 +0.3
UPC   Upice             148.56 342 ⇑ ePKP      PKPbc   23 50 16.7 +0.1
UPC                                  ePKPAB    PKPab   23 50 21.9 -0.6
LANS  Liptovska Anna    148.57 337   ePKP      PKPbc   23 50 17.6 +0.9
LANS                                 e                 23 50 23.4
DPC   Dobruska-Polom    148.60 341 ⇑ ePKP      PKPbc   23 50 17.3 +0.6
DPC                                  ePKPAB    PKPab   23 50 23.0 +0.3
CSS   Mathiatis         148.61 303   ePKPbc    PKPbc   23 50 16.0 -1.2
CLL   Collm             148.62 346   i PKPbc   PKPbc   23 50 16.3 -0.4
      comp=Z,14nm,0.7s
CLL                                  i PKiKP   PKiKP   23 50 19.0 +1.3
CLL                                ⇓ iPKPab    PKPab   23 50 22.0 -0.7
      comp=Z,12nm,1.1s
CLL                                  epPKPbc   pPKPbc  23 52 33.0  0.0
CLL                                  epPKiKP   pPKiKP  23 52 38.0 +2.9
CLL                                  eSKPbc    SKPbc   23 52 55.0 -3.0
CLL   Collm             148.62 346   ePKPbc    PKPbc   23 50 16.3 -0.4
KRLC  Kraliky           148.70 340 ⇑ ePKP      PKPbc   23 50 16.6 -0.4
KRLC                                 ePKPAB    PKPab   23 50 23.6 +0.5
MORC  Moravsky Berou    148.72 339 ⇑ iP        PKPbc   23 50 16.7 -0.3
MORC  Moravsky Berou    148.72 339   ePKPbc    PKPbc   23 50 16.9 -0.2
MORC  Moravsky Berou    148.72 339   ePKP      PKPbc   23 50 17.2 +0.2
MORC                                 e                 23 50 23.6
CJR   Cluj-Napoca       148.72 329 ⇓ iP        PKPbc   23 50 17.4 +0.2
BRG   Berggiesshubel    148.79 344   i PKP     PKPbc   23 50 17.2  0.0
      comp=Z,21nm,1.6s
BRG                                  i                 23 50 23.2
      comp=Z,7.5nm,0.8s
VOIR                    148.90 326 ⇓ iP        PKPbc   23 50 18.2 +0.5
PVCC  Panska Ves        148.94 343 ⇑ ePKP      PKPbc   23 50 18.1 +0.6
PVCC                                 ePKPAB    PKPab   23 50 24.4 +0.4
WTSB  Winterswijk       149.06 353   ePKPdf    PKPdf   23 50 07.9 -4.8
WTSB                                 ePKPbc    PKPbc   23 50 12.5 -5.2
WTSB                                 ePKPab    PKiKP   23 50 17.3 -1.2
DRGR                    149.08 330 ⇓ iP        PKPbc   23 50 17.6 -0.5
VYHS  Vyhne             149.35 337   ePKP      PKPbc   23 50 18.5 -0.1
VYHS                                 e                 23 50 26.3
PSZ   Piszkesteto       149.41 335 ⇑ iP        PKPbc   23 50 19.0 +0.2
PSZ   Piszkesteto       149.41 335   ePKPbc    PKPbc   23 50 18.9 +0.2
VRAC  Vranov            149.43 340 ⇓ iP        PKPbc   23 50 18.8 +0.1
VRAC  Vranov            149.43 340   ePKP      PKPbc   23 50 18.8 +0.1
VRAC                                 e                 23 50 26.7
GOPC  GO Pecny, Ondr    149.44 342 ⇑ ePKP      PKPbc   23 50 18.6 -0.1
PRU   Pruhonice         149.44 343 ⇑ ePKP      PKPbc   23 50 18.4 -0.3
PRU                                  ePKPAB    PKPab   23 50 26.1  0.0
JAVC  Velka Javorina    149.46 338   ePKP      PKPbc   23 50 20.1 +1.2
JAVC                                 e                 23 50 27.8
LOT   Lotru             149.55 328 ⇑ iP        PKPbc   23 50 18.5 -0.8
KRUC  Moravsky          149.71 340   ePKP      PKPbc   23 50 19.3 -0.1
KRUC                                 e                 23 50 27.7
NKC   Novy Kostel       149.75 345 ⇑ ePKP      PKPbc   23 50 19.7 +0.2
NKC                                  ePKPAB    PKPab   23 50 27.0 -0.4
MODS  Modra-Piesok      150.01 338   ePKP      PKPbc   23 50 20.6 +0.5
MODS                                 e                 23 50 29.0
HGN   Heimansgroeve     150.34 354   ePKPdf    PKPdf   23 50 14.0 -0.9
HGN                                  ePKPbc    PKPbc   23 50 20.4 -0.3
HGN                                  ePKPab    PKPab   23 50 29.2 -0.6
SRE   Strehaia          150.38 327 ⇓ iP        PKPbc   23 50 21.6 +0.5
BZS   Buzias            150.46 330 ⇓ iP        PKPbc   23 50 21.1 -0.1
BZS   Buzias            150.46 330 ⇓ PKIKP     PKPbc   23 50 21.1 -0.1
MEM   Membach           150.48 354 ⇓ PKP       PKPbc   23 50 20.8 -0.3
KHC   Kasperske Hory    150.48 343 ⇑ ePKP      PKPbc   23 50 21.2  0.0
KHC                                  ePKPAB    PKPab   23 50 30.3 -0.3
KHC   Kasperske Hory    150.48 343   ePKPbc    PKPbc   23 50 21.4 +0.1
KHC                                  ePKPab    PKPab   23 50 30.5 -0.1
KHC   Kasperske Hory    150.48 343   ePKIKP    PKPbc   23 50 21.4 +0.1
KHC                                  e                 23 50 30.5
CSKK  Csˆ‡kako          150.50 336 ⇓ ex        PKPbc   23 50 21.3  0.0
GRFO  Grafenberg        150.54 347   ePKPbc    PKPbc   23 50 21.7 +0.4
GRFO                                 ePKPab    PKPab   23 50 30.8  0.0
HERR  Herculane         150.62 328 ⇓ iP        PKPbc   23 50 21.2 -0.4
GEC2  GERESS Array S    150.71 343   ePKPbc    PKPbc   23 50 21.7 -0.1
GEC2  GERESS Array S    150.71 343   ePKIKP    PKPbc   23 50 21.7 -0.1
GERES GERESS Array B    150.71 343    PKPbc    PKPbc   23 50 21.6 -0.3
      comp=Z,4.2nm,0.6s,baz=29,slow=2.4,SNR=48
GERES                                 PKPab    PKPab   23 50 31.4 -0.2
      comp=Z,2.2nm,0.9s,baz=46,slow=3.9,SNR=6.0
GERES                                 pPKPbc   pPKPbc  23 52 39.1 +0.5
      comp=Z,0.3nm,0.6s,baz=28,slow=2.3,SNR=2.7
GEA0  GERESS Array S    150.72 343   ePKPbc    PKPbc   23 50 21.5 -0.3
BCLA  Clavier           150.74 354 ⇑ PKP       PKPab   23 50 30.9 -0.6
SOP   Sopron            150.85 338 ⇓ ex        PKPbc   23 50 21.9 -0.2
BANR  Banloc            150.86 330 ⇓ iP        PKPbc   23 50 22.7 +0.6
CONA  Conrad Observa    150.88 339   ePKiKP    PKPbc   23 50 22.3  0.0
      comp=Z,9.9nm,0.6s,SNR=18
MDVR  Moldovita         151.04 329 ⇑ iP        PKPbc   23 50 21.8 -0.8
DOU   Dourbes           151.12 355 ⇓ PKP       PKPbc   23 50 22.3 -0.2
MORH  Mˆ‡rˆ¡gy, Hung    151.30 334 ⇓ ex        PKPbc   23 50 22.6 -0.5
WLF   Walferdange       151.40 353 ⇓ PKP       PKPbc   23 50 23.7 +0.4
WLF   Walferdange       151.40 353   ePKPbc    PKPbc   23 50 23.9 +0.7
WLF   Walferdange       151.40 353   ePKIKP    PKPbc   23 50 23.9 +0.7
MOA   Molln             151.45 341   ePKPbc    PKPbc   23 50 22.5 -0.9
      comp=Z,3.7nm,0.6s
VTS   Vitosha           151.80 324 ⇓ iP        PKPbc   23 50 24.1 -0.5
VTS   Vitosha           151.80 324   ePKPbc    PKPbc   23 50 24.2 -0.3
VTS                                  ePKPab    PKPab   23 50 37.2 +0.7
VTS   Vitosha           151.80 324   ePKIKP    PKPbc   23 50 24.2 -0.3
VTS                                  e                 23 50 37.2
SOKA  Soboth            152.24 339   ePKPbc    PKPbc   23 50 24.4 -0.9
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	comp=Z,4.3nm,0.7s						
DIVS	**Divibare**	152.37	330	*e*PKPbc	PKPbc	23 50 25.3	-0.3
BFO	**Black Forest**	152.40	350	*e*PKPbc	PKPbc	23 50 25.2	-0.2
BFO				*e*PKPab	PKPab	23 50 38.1	-0.6
BFO	**Black Forest**	152.40	350	*e*PKIKP	PKPbc	23 50 25.3	-0.2
BFO				*e*		23 50 38.1	
OBKA	**Obir**	152.55	340	PKPbc	PKPbc	23 50 24.5	-1.5
	comp=Z,19nm,1.7s						
WATA	**Walderalm**	152.66	344	PKiKP	PKiKP	23 50 26.3	-0.1
	comp=Z,2.4nm,0.5s						
WTTA	**Wattenberg**	152.71	344	*e*PKPbc	PKPbc	23 50 25.6	-0.9
	comp=Z,9.4nm,1.0s						
RETA	**Reutte**	152.71	346	*e*PKPab	PKPab	23 50 37.7	-2.4
	comp=Z,4.1nm,0.5s						
MYKA	**Terra Mystica**	152.73	341	*e*PKPbc	PKPbc	23 50 25.2	-1.2
	comp=Z,6.7nm,0.8s						
ABTA	**Abfaltersbach**	152.95	343	PKPbc	PKPbc	23 50 25.1	-1.8
	comp=Z,5.4nm,0.6s						
DAVA	**Damuels**	153.10	347	*e*PKPab	PKPab	23 50 40.5	-1.3
	comp=Z,6.4nm,0.8s,SNR=5.2						
FETA	**Feichten**	153.16	345	PKPdf	PKPdf	23 50 17.6	-1.8
	comp=Z,5.3nm,1.2s						
DAVOX	**Davos/Dischmat**	153.58	346	PKPbc	PKPbc	23 50 27.8	-0.5
	comp=Z,4.0nm,0.6s,baz=315,slow=4.3,SNR=8.9						
DAVOX				PKPab	PKPab	23 50 43.6	-0.3
	comp=Z,7.5nm,0.7s,baz=284,slow=4.2,SNR=8.7						
FUORN	**Ofenpass-Fuorn**	153.65	346	*e*PKPbc	PKPbc	23 50 28.2	-0.4
FUORN				*e*PKPab	PKPab	23 50 44.8	+0.5
LIT	**Litokhoron**	153.84	321	*e*PKPab	PKPab	23 50 45.0	-0.1
FNA	**Florina**	154.03	323	*e*PKPbc	PKPbc	23 50 28.7	-0.6
FNA	**Florina**	154.03	323	*e*PKIKP	PKPbc	23 50 28.7	-0.6
SENIN	**Lac Senin/Sane**	154.48	350	*e*PKPab	PKPab	23 50 47.7	-0.1
ES19	**SONSECA Array**	161.16	12	*e*PKPab	PKPab	23 51 16.4	-0.5
ESDC	**Sonseca Array**	161.17	12	PKPab	PKPab	23 51 15.6	-1.3
	comp=Z,1.4nm,0.8s,baz=354,slow=4.1,SNR=10						
KEST	**Kesra**	163.89	335	PKPab	PKPab	23 51 29.1	+0.1
	comp=Z,6.7nm,0.9s,baz=256,slow=4.9,SNR=6.1						
LIC	**Lamto**	163.90	158	*e*P	PKPab	23 51 29.8	+0.4
	comp=Z,43nm,1.4s						
KIC	**Kosan Boka**	164.13	158	*e*P	PKPab	23 51 31.1	+0.7
	comp=Z,115nm,2.1s						
TIC	**Toumodi**	164.29	157	*e*P	PKPab	23 51 31.7	+0.5
DBIC	**Dimbokro**	164.37	158	PKPab	PKPab	23 51 31.9	+0.4
	comp=Z,4.6nm,0.9s,baz=200,slow=3.0,SNR=3.7						
MDT	**Midelt**	167.45	23	PKPab	PKPab	23 51 45.0	0.0
	comp=Z,1.4nm,0.9s,baz=309,slow=4.9,SNR=3.8						
KOWA	**Kowa**	171.69	144	PKPab	PKPab	23 52 03.8	-0.2
	comp=Z,3.8nm,0.9s,baz=212,slow=5.9,SNR=5.5						
TOA0	**Torodi Ar. Sit**	171.88	184	*e*PKPab	PKPab	23 52 03.5	-1.1
TORD	**Torodi Ar. Bea**	171.88	184	PKP	PKPdf	23 50 36.9	-1.1
	comp=Z,0.7nm,0.8s,baz=0.7,slow=0.9						
TORD				PKPab	PKPab	23 52 04.5	-0.1
	baz=164,slow=3.7						

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*GUC **21** 23:36:59.2±0.5, 24°.08S×67°.59W, h224^{km}±13^{km}, ML3.9*
*ISCJB **21** 23:37:00.0±1.4, 24°.01S±0°.06×67°.21W±0°.09, h181^{km}, mb2.8/1, Error ellipse: s-maj=13.0km s-min=7.7km az=26.6*
*IDC **21** 23:37:03.1±10.0, 23°.60S×66°.36W, h203^{km}±82^{km}, mb2.9/1, mb1 3.0/2, mb1mx2.8/39, mbtmp3.4/2, Error ellipse: s-maj=128.1km s-min=80.2km az=46.0*
ISC 21 23:36:57.1±1.3, **24°.08S**±0°.08×**67°.01W**±0°.09, **h181**^{km}, **n12**, σ**1^s.40**/19, **9C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO02	**Mina Guanaco**	2.58	245	⇑*i*P	Pn	23 37 42.5	+1.4
GO02				*i* S	Sn	23 38 16.1	+0.8
GO02				IAML		23 38 16.8	
	comp=N,651nm,0.3s						
PB06	**IPOC Station P**	2.72	300	⇑*i*P	Pn	23 37 44.5	+1.9
PB06				*i* S	Sn	23 38 18.4	+0.3
PB06				IAML		23 38 20.7	
	comp=E,581nm,0.1s						
PB09	**IPOC Station P**	3.06	317	⇑*i*P	Pn	23 37 49.1	+2.2
PB09				IAML		23 38 27.9	
	comp=E,143nm,0.3s						
ANCH	**Antofagasta**	3.13	277	⇑*i*P	Pn	23 38 33.4	+46
ANCH				*i* S	Sn	23 39 10.1	+43
PB14	**IPOC Station P**	3.14	259	⇑*i*P	Pn	23 37 48.5	+0.7
PB14				*e*S	Sn	23 38 25.6	-1.7
PB14				IAML		23 38 28.5	
	comp=E,129nm,0.3s						
PB05	**IPOC Station P**	3.17	292	⇑*i*P	Pn	23 37 49.1	+1.0
PB05				*i* S	Sn	23 38 26.5	-1.3
PB05				IAML		23 38 30.5	
	comp=E,145nm,0.3s						
PB03	**IPOC Station P**	3.23	308	⇑*i*P	Pn	23 37 50.2	+1.3
PB03				*i* S	Sn	23 38 28.7	-0.5
PB03				IAML		23 38 30.4	
	comp=N,416nm,0.2s						
PB10	**IPOC Station P**	3.29	279	⇑*i*P	Pn	23 37 50.6	+1.2
PB10				*i* S	Sn	23 38 28.4	-1.7
PB10				IAML		23 38 32.7	
	comp=N,66nm,0.4s						
PB04	**IPOC Station P**	3.37	300	⇑*i*P	Pn	23 37 51.6	+1.1
PB04				*e*S	Sn	23 38 31.0	-1.2
PB04				IAML		23 38 37.2	
	comp=N,306nm,0.3s						
LPAZ	**La Paz**	7.83	352	P	Pn	23 38 50.1	+1.3
	comp=N,0.6nm,0.3s,baz=144,slow=8.1,SNR=19						
LPAZ				S	Sn	23 40 15.7	-1.3
	comp=N,0.1nm,0.3s,baz=132,slow=1.0,SNR=1.7						
TORD	**Torodi Ar. Bea**	76.61	69	P	P	23 48 27.7	-0.5
	comp=N,0.2nm,0.7s,baz=259,slow=6.0						
MKAR	**Makanchi Array**	146.60	40	PKPbc	PKPab	23 56 17.6	-1.1
	comp=N,0.2nm,0.6s,baz=321,slow=3.7,SNR=3.6						

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*NIED **21** 23:38:00, 38°.40N×144°.60E, h5^{km}, Mw3.6 Best double couple: $M_0$2.87000×10^{14} NP1:ϕ_s33.00000°, δ23.00000°, λ-91.00000°. NP2:ϕ_s214.00000°, δ67.00000°, λ-89.00000°.*
JMA 21 23:38:02.4±0.2, **38°.42N**×**144°.62E**, **h39**^{km}, **M3.6, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	2.40	287	P	Pn	23 38 40.7	+1.6
OFUJ				*e*S	Sn	23 39 09.6	+2.3
MIYJ	**Miyakonagasawa**	2.47	299	P	Pn	23 38 41.3	+1.2
MIYJ				*e*S	Sn	23 39 09.8	+0.8
JIO	**Ouri**	2.57	272	P	Pn	23 38 43.0	+1.6
JIO				*e*S	Sn	23 39 12.8	+1.4
JMK	**Ichinoseki**	2.71	282	P	Pn	23 38 45.4	+2.0
JMK				*e*S	Sn	23 39 17.4	+2.4
JOM	**Ohasama**	2.80	293	P	Pn	23 38 46.5	+1.9
JOM				*e*S	Sn	23 39 19.4	+2.2
JYK	**Kaneyama**	3.37	280	P	Pn	23 38 55.0	+2.5
JYK				*e*S	Sn	23 39 33.9	+2.6
JFT	**Otama**	3.50	256	P	Pn	23 38 56.9	+2.6
JFT				*e*S	Sn	23 39 37.1	+2.6
JOT	**Ohata**	4.04	318	*e*S	Sn	23 39 47.1	-0.5
JCH	**Churui**	4.30	348	P	Pn	23 39 05.1	-0.1
JCH				*e*S	Sn	23 39 50.4	-3.6
JKB	**Kayabe**	4.42	323	*e*S	Sn	23 39 56.8	-0.3
NEM2	**Nemuro 2**	5.01	9	P	Pn	23 39 12.3	-2.7
NEM2				*e*S	Sn	23 40 05.6	-6.0
JRY	**Ryogami san**	5.16	244	P	Pn	23 39 18.6	+1.6
JRY				*e*S	Sn	23 40 16.0	+0.7
JTKR	**Abashiri--Toko**	5.57	355	P	Pn	23 39 22.3	-0.4
JTKR				*e*S	Sn	23 40 21.7	-3.7

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*MOS **21** 23:41:24.3±0.0, 42°.32N×46°.62E, h40^{km}, MPVA3.9*
*NORS **21** 23:41:24.2±0.0, 42°.33N×46°.67E, h41^{km}*
*TIF **21** 23:41:24.6, 42°.32N×46°.57E, h8^{km}±2^{km}*
*DRS **21** 23:41:25.4±0.0, 42°.23N×46°.35E, h20^{km}*
*MOS **21** 23:41:25.7±0.8, 42°.38N×46°.62E, h22^{km}, mb4.1/2, Error ellipse: s-maj=7.2km s-min=5.5km az=123.4*
*CSEM **21** 23:41:26.4±0.2, 42°.34N×46°.60E, h20^{km}, mb4.1, Error ellipse: s-maj=4.6km s-min=3.8km az=1.0*
ISC 21 23:41:27.6±0.9, **42°.38N**±0°.02×**46°.67E**±0°.02, **h33**^{km}±1^{km}, **n101**, σ**1^s.20**/179, **5C-3D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
XNZR	**Khunzakh**	0.16	9	⇓*e*PG	Pb	23 41 34.3	+0.2
XNZR				*i*		23 41 40.9	
XNZR	**Khunzakh**	0.16	9	*e*Pg	Pb	23 41 34.3	+0.2
XNZR				*i* Sg	Sb	23 41 40.9	+2.4
XNZR	**Khunzakh**	0.16	9	*e*Pg	Pb	23 41 34.1	0.0
XNZR				*e*Sg	Sb	23 41 40.7	+2.2
GNBR	**Gunib**	0.22	89	⇓*i*PG	Pn	23 41 34.3	+0.4
GNBR				*e*S	Sb	23 41 41.3	+2.2
GNBR				pmax	pmax		
	comp=Z,456nm,0.4s						
GNBR	**Gunib**	0.22	89	*i* Pg	Pn	23 41 34.3	+0.4
	comp=Z,456nm,0.4s						
GNBR				*e*Sg	Sb	23 41 41.3	+2.2
GNBR	**Gunib**	0.22	89	*i* Pg	Pn	23 41 34.3	+0.4
GNBR				*e*Sg	Sb	23 41 41.3	+2.2
ARKR	**Arakani**	0.32	47	*e*PG	Pn	23 41 34.5	-1.5
ARKR				*e*S	Sb	23 41 42.5	+1.2
ARKR				pmax	pmax		
	comp=Z,58nm,0.2s						
ARKR	**Arakani**	0.32	47	*e*Pg	Pn	23 41 34.5	-1.5
	comp=Z,58nm,0.2s						
ARKR				*e*Sg	Sb	23 41 42.5	+1.2
ARKR	**Arakani**	0.32	47	*e*Pg	Pn	23 41 34.5	-1.5
ARKR				*e*Sg	Sb	23 41 42.5	+1.2
UNCR	**Uncukul**	0.34	15	*e*PG	Pb	23 41 35.0	-1.0
UNCR				*i* S	Sb	23 41 43.0	+1.3
UNCR				pmax	pmax		
	comp=Z,68nm,0.3s						
UNCR	**Uncukul**	0.34	15	*e*Pg	Pb	23 41 35.0	-1.0
	comp=Z,68nm,0.3s						
UNCR				*i* Sg	Sb	23 41 43.0	+1.3
UNCR	**Uncukul**	0.34	15	*e*Pg	Pb	23 41 35.0	-1.0
UNCR				*i* Sg	Sb	23 41 43.0	+1.3
KMKR	**Kumukh**	0.41	128	*i* PG	Pb	23 41 36.0	-1.0
KMKR				*i* S	Sb	23 41 44.0	+0.6
KMKR				pmax	pmax		
	comp=Z,309nm,0.1s						
KMKR	**Kumukh**	0.41	128	*i* Pg	Pb	23 41 36.0	-1.0
	comp=Z,309nm,0.1s						
KMKR				*i* Sg	Sb	23 41 44.0	+0.6
KMKR	**Kumukh**	0.41	128	*i* Pg	Pb	23 41 36.0	-1.0
KMKR				*i* Sg	Sb	23 41 44.0	+0.6
BTLR	**Botlikh**	0.43	310	⇑*i*PG	Pb	23 41 36.5	-0.8
BTLR				*i*		23 41 45.1	
BTLR				pmax	pmax		
	comp=Z,152nm,0.2s						
BTLR				smax	smax		
	comp=N,527nm,0.4s						
BTLR	**Botlikh**	0.43	310	*i* Pg	Pb	23 41 36.5	-0.8
	comp=N,152nm,0.2s						
BTLR				*i* Sg	Sn	23 41 45.1	+0.8
	comp=N,527nm,0.4s						
BTLR	**Botlikh**	0.43	310	*e*Pg	Pb	23 41 35.9	-1.4
BTLR				*e*Sg	Sb	23 41 44.0	+0.1
KRNR	**Karanay**	0.47	21	*e*PG	Pb	23 41 37.0	-0.9
KRNR				*e*S	Sn	23 41 46.0	+0.6
KRNR				pmax	pmax		
	comp=Z,33nm,0.1s						
KRNR	**Karanay**	0.47	21	*e*Pg	Pb	23 41 37.0	-0.9
	comp=Z,33nm,0.1s						
KRNR				*e*Sg	Sn	23 41 46.0	+0.6
KRNR	**Karanay**	0.47	21	*e*Pg	Pb	23 41 37.0	-0.9
KRNR				*e*Sg	Sn	23 41 46.0	+0.6
BUJR	**Buynaksk**	0.55	36	*e*PG	Pn	23 41 38.5	-0.5
BUJR				*e*S	Sn	23 41 49.0	+2.0
BUJR	**Buynaksk**	0.55	36	*e*Pg	Pn	23 41 38.5	-0.5
BUJR				*e*Sg	Sn	23 41 49.0	+2.0
BUJR	**Buynaksk**	0.55	36	*e*Pg	Pn	23 41 38.5	-0.5
BUJR				*e*Sg	Sn	23 41 49.0	+2.0
DBC	**Dubki**	0.65	10	⇑*e*PG	Pn	23 41 39.1	-1.3
DBC				*e*		23 41 50.5	
DBC	**Dubki**	0.65	10	*e*Pg	Pn	23 41 39.1	-1.3
DBC				*e*Sg	Sb	23 41 50.5	+1.0
DBC	**Dubki**	0.65	10	*i* Pg	Pn	23 41 39.2	-1.2
DBC				*e*Sg	Sb	23 41 50.5	+1.0
DLMR	**Dylym**	0.69	357	*e*PG	Pn	23 41 39.8	-1.1
DLMR				*e*S	Sb	23 41 50.8	+0.3
DLMR				pmax	pmax		
	comp=Z,46nm,0.3s						
DLMR	**Dylym**	0.69	357	*e*Pg	Pn	23 41 39.8	-1.1
	comp=Z,46nm,0.3s						
DLMR				*e*Sg	Sb	23 41 50.8	+0.3
DLMR	**Dylym**	0.69	357	*e*Pg	Pn	23 41 39.8	-1.1
DLMR				*e*Sg	Sb	23 41 50.8	+0.3
DVE	**Vedeno**	0.70	325	⇑*i*PG	Pn	23 41 40.3	-0.9
DVE				*i* S	Sb	23 41 51.9	+1.0
DVE	**Vedeno**	0.70	325	*i* Pg	Pn	23 41 40.3	-0.9
DVE				*i* Sg	Sb	23 41 51.9	+1.0
DVE	**Vedeno**	0.70	325	*i* Pg	Pn	23 41 40.3	-0.9
DVE				*i* Sg	Sb	23 41 51.9	+1.0
URKR	**Urkarakh**	0.75	107	⇑*i*PG	Pn	23 41 40.2	-1.7
URKR				*i*		23 41 52.1	
URKR	**Urkarakh**	0.75	107	*i* Pg	Pn	23 41 40.2	-1.7
URKR				*i* Sg	Sn	23 41 52.1	0.0
URKR	**Urkarakh**	0.75	107	*i* Pg	Pn	23 41 40.2	-1.7
URKR				*e*Sg	Sn	23 41 52.1	0.0
MAK	**Makhachkala**	0.84	47	*e*PG	Pn	23 41 42.7	-0.4
MAK				*e*		23 41 56.2	
MAK				pmax	pmax		
	comp=Z,44nm,0.2s						
MAK				smax	smax		
	comp=N,200nm,0.3s						
MAK				smax	smax		
	comp=N,233nm,0.6s						
MAK	**Makhachkala**	0.84	47	*e*Pg	Pn	23 41 42.7	-0.4
	comp=N,44nm,0.2s						
MAK				*e*Sg	Sb	23 41 56.2	+1.4
	comp=N,233nm,0.6s						
MAK	**Makhachkala**	0.84	47	*e*Pg	Pn	23 41 42.4	-0.7
MAK				*e*Sg	Sb	23 41 57.3	+2.5
DDFL	**Dedoflistskaro**	1.02	204	P	Pn	23 41 46.3	+0.6
DDFL				S	Sn	23 41 59.1	+0.2
DDFL	**Dedoflistskaro**	1.02	204	P	Pn	23 41 46.3	+0.6
DDFL				S	Sn	23 41 59.1	+0.2
GROC	**Groznyy**	1.04	322	*e*PG	Pn	23 41 45.4	-0.4
GROC				*e*		23 42 01.1	
GROC				pmax	pmax		
	comp=Z,29nm,0.2s						
GROC				smax	smax		
	comp=N,125nm,0.2s						
GROC				smax	smax		
	comp=N,150nm,0.5s						
GROC	**Groznyy**	1.04	322	*e*Pg	Pn	23 41 45.4	-0.4
	comp=N,29nm,0.2s						
GROC				*e*Sg	Sb	23 42 01.1	+0.6
	comp=N,150nm,0.5s						
GROC	**Groznyy**	1.04	322	*e*Pg	Pn	23 41 45.5	-0.3
GROC				*e*Sg	Sb	23 42 01.9	+1.4
AKT	**Akhty**	1.20	139	⇑*i*PG	Pn	23 41 46.3	-1.8
AKT				*e*S	Sn	23 42 03.3	0.0
AKT				pmax	pmax		
	comp=Z,52nm,0.2s						
AKT	**Akhty**	1.20	139	*i* Pg	Pn	23 41 46.3	-1.8
	comp=Z,52nm,0.2s						
AKT				*e*Sg	Sn	23 42 03.3	0.0
AKT	**Akhty**	1.20	139	*i* Pg	Pn	23 41 46.4	-1.7
AKT				*e*Sg	Sn	23 42 03.5	+0.2
DRN	**Derbent**	1.28	105	*e*PG	Pn	23 41 48.6	-0.5
DRN				*e*S	Sb	23 42 06.5	-0.8
DRN				pmax	pmax		
	comp=Z,30nm,0.7s						
DRN	**Derbent**	1.28	105	*e*Pg	Pn	23 41 48.6	-0.5
	comp=Z,30nm,0.7s						
DRN				*e*Sg	Sb	23 42 06.5	-0.8
DRN	**Derbent**	1.28	105	*i* Pg	Pn	23 41 48.7	-0.4
DRN				*e*Sg	Sb	23 42 06.8	-0.4
DGRG	**David-gareji**	1.34	227	P	Pn	23 41 49.1	-1.0
DGRG				S	Sn	23 42 08.2	+1.4
DGRG	**David-gareji**	1.34	227	*e*PG	Pn	23 41 49.1	-1.0
DGRG				*e*S	Sn	23 42 08.2	+1.4
DGRG	**David-gareji**	1.34	227	P	Pn	23 41 49.1	-1.0
DGRG				S	Sn	23 42 08.2	+1.4
KMGR	**Komgaron**	1.49	297	*e*PG	Pn	23 41 52.1	0.0
KMGR				*e*S	Sn	23 42 12.1	+1.7
KMGR	**Komgaron**	1.49	297	*e*Pg	Pn	23 41 52.1	0.0
KMGR				*e*Sg	Sn	23 42 12.1	+1.7
KMGR	**Komgaron**	1.49	297	*e*Pg	Pn	23 41 50.9	-1.2
KMGR				*e*Sg	Sn	23 42 10.3	-0.1
DUS	**Dusheti**	1.49	259	P	Pn	23 41 52.0	-0.1
DUS				S	Sn	23 42 11.9	+1.4
DUS	**Dusheti**	1.49	259	*e*PG	Pn	23 41 52.0	-0.1
DUS				*e*S	Sn	23 42 11.9	+1.4
DUS	**Dusheti**	1.49	259	P	Pn	23 41 52.0	-0.1
DUS				S	Sn	23 42 11.9	+1.4
TBLG	**Delisi**	1.58	246	P	Pn	23 41 53.1	-0.2
TBLG				S	Sn	23 42 14.1	+1.5
TBLG	**Delisi**	1.58	246	*e*PG	Pn	23 41 53.1	-0.2
TBLG				*e*S	Sn	23 42 14.1	+1.5
TBLG	**Delisi**	1.58	246	P	Pn	23 41 53.1	-0.2
TBLG				S	Sn	23 42 14.1	+1.5
BTKR	**Batakoyurt**	1.85	303	*e*PN	Pn	23 41 56.8	-0.2
BTKR	**Batakoyurt**	1.85	303	*e*Pn	Pn	23 41 56.8	-0.2
BTKR	**Batakoyurt**	1.85	303	*i* Pg	Pn	23 41 56.8	-0.2
BTKR				*e*Sg	Sn	23 42 20.8	+1.5
TRKR	**Terskaya**	1.95	314	*e*PN	Pn	23 41 57.7	-0.6
TRKR	**Terskaya**	1.95	314	*e*Pn	Pn	23 41 57.7	-0.6
TRKR	**Terskaya**	1.95	314	*i* Pg	Pn	23 41 57.6	-0.7
TRKR				*e*Sg	Sn	23 42 23.6	+1.9
KORR	**Kora**	2.04	291	*e*PN	Pn	23 41 58.5	-1.1
KORR	**Kora**	2.04	291	*e*Pn	Pn	23 41 58.5	-1.1
KORR	**Kora**	2.04	291	*e*Pg	Pn	23 41 58.5	-1.1
KORR				*e*Sg	Sn	23 42 24.1	+0.1
ZEI	**Tsey**	2.09	282	*e*Pg	Pn	23 41 58.1	-2.3
ZEI				*e*Sg	Sn	23 42 23.5	-1.8
STDR	**Stavd-Durt**	2.16	298	*e*PN	Pn	23 42 01.1	-0.1
STDR	**Stavd-Durt**	2.16	298	*e*Pn	Pn	23 42 01.1	-0.1
STDR	**Stavd-Durt**	2.16	298	*i* Pg	Pn	23 42 00.7	-0.5
STDR				*e*Sg	Sn	23 42 28.1	+1.3
PRTR	**Priterechnaya**	2.22	309	*e*PN	Pn	23 42 01.2	-0.8
PRTR				*e*S	Sn	23 42 29.1	+0.8
PRTR	**Priterechnaya**	2.22	309	*e*Pn	Pn	23 42 01.2	-0.8
PRTR				*e*Sn	Sn	23 42 29.1	+0.8
PRTR	**Priterechnaya**	2.22	309	*e*Pg	Pn	23 42 00.7	-1.3
PRTR				*e*Sg	Sn	23 42 29.1	+0.8
LSNR	**Lesken**	2.28	294	*e*PN	Pn	23 42 01.2	-1.7
LSNR				*e*S	Sn	23 42 29.8	0.0
LSNR	**Lesken**	2.28	294	*e*Pn	Pn	23 42 01.2	-1.7
LSNR				*e*Sn	Sn	23 42 29.8	0.0
LSNR	**Lesken**	2.28	294	*e*Pn	Pn	23 42 01.2	-1.7
LSNR				*e*Sn	Sn	23 42 29.9	0.0
ONI	**Oni**	2.39	276	P	Pn	23 42 07.1	+2.6
ONI				S	Sb	23 42 39.7	+0.6
ONI	**Oni**	2.39	276	*e*PN	Pn	23 42 07.1	+2.6
ONI				*e*S	Sb	23 42 39.7	+0.6
ONI	**Oni**	2.39	276	P	Pn	23 42 07.1	+2.6
ONI				S	Sb	23 42 39.7	+0.6
NCK	**Nalchik**	2.52	297	⇓*i*PN	Pn	23 42 06.1	0.0
NCK				*e*S	Sn	23 42 35.5	-0.2
NCK	**Nalchik**	2.52	297	*i* Pn	Pn	23 42 06.1	0.0
NCK				*e*Sn	Sn	23 42 35.5	-0.2
NCK	**Nalchik**	2.52	297	*e*Pn	Pn	23 42 04.6	-1.6
NCK				*e*Sn	Sn	23 42 35.5	-0.2
KBTC	**Kuba-Taba**	2.79	302	*e*PN	Pn	23 42 08.0	-1.9
KBTC	**Kuba-Taba**	2.79	302	*e*Pn	Pn	23 42 08.0	-1.9
KBTC	**Kuba-Taba**	2.79	302	*e*Pn	Pn	23 42 08.2	-1.6
KBTC				*e*Sn	Sn	23 42 41.6	-0.8
NEY	**Neytrino**	3.03	288	*e*PN	Pn	23 42 12.1	-1.3
NEY				*e*S	Sn	23 42 49.9	+1.3
NEY	**Neytrino**	3.03	288	*e*Pn	Pn	23 42 12.1	-1.3
NEY				*e*Sn	Sn	23 42 49.9	+1.3
NEY	**Neytrino**	3.03	288	*e*Pn	Pn	23 42 11.5	-1.9
NEY				*e*Sn	Sn	23 42 48.1	-0.4
SHA1	**Shidzhatmaz**	3.24	296	*e*PN	Pn	23 42 14.3	-2.0
SHA1	**Shidzhatmaz**	3.24	296	*e*Pn	Pn	23 42 14.3	-2.0
SHA1	**Shidzhatmaz**	3.24	296	*e*Pn	Pn	23 42 14.3	-2.0
SHA1				*e*Sn	Sn	23 42 51.6	-2.1
GOF	**Gofitskoye**	3.75	317	*i* Pn	Pn	23 42 21.1	-2.0
GOF				*e*Sn	Sn	23 43 04.6	-1.5
VSR	**Storozhevoye**	10.22	332	*i* P	Pn	23 43 51.5	-0.2
VSR	**Storozhevoye**	10.22	332	*i* P	Pn	23 43 51.5	-0.2
VSU	**Vasula**	20.37	329	*i* P	P	23 45 59.9	-1.2
VSU				pmax	pmax		
	comp=Z,27nm,1.2s						
DGZ	**Jazzator, Alta**	28.93	61	*i* P	P	23 47 26.6	+3.0
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.4s						

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*NNC **22** 00:29:19.3±1.4, 39°.37N×76°.67E, h3^{km}±9^{km}, mb3.5, mpv3.1, Error ellipse: s-maj=10.4km s-min=5.9km az=134.0*
*SOME **22** 00:29:20.8, 39°.42N×76°.73E, h5^{km}*
ISC 22 00:29:20.7±1.9, **39°.47N**±0°.09×**76°.59E**±0°.05, **h10**^{km}, **n22**, σ**2^s.43**/40, **15C-5D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	2.44	284	⇑Pg	Pb	00 30 05.2	+0.5
	13nm,0.3s						
SFK				⇑Lg	Lg	00 30 39.7	
	40nm,0.3s						
TKM2	**Tokmak 2**	3.53	348	⇓Pg	Pb	00 30 25.4	+2.1
	2.0nm,0.3s						
TKM2				⇓Lg	Lg	00 31 14.7	
	11nm,0.3s						
AAK	**Ala-Archa**	3.54	334	⇑Pg	Pb	00 30 26.5	+3.0
	7.1nm,0.7s						
AAK				⇑Lg	Lg	00 31 15.2	
	18nm,0.4s						
IZV	**Izvestkoviy**	3.57	0	*e*P	Pg	00 30 27.6	-1.4
	9.8nm,0.6s						
IZV				*e*S	Sg	00 31 15.5	+0.2
	27nm,0.5s						
TNSS	**Tian-Shan**	3.58	4	⇑*i*P	Pb	00 30 26.6	+2.3
	18nm,0.5s						
TNSS				*e*S	Sg	00 31 14.5	-1.1
	22nm,0.4s						
KST	**Kastek**	3.60	353	⇑*i*P	Pg	00 30 27.8	-1.9
	5.9nm,0.7s						
KST				*e*S	Sg	00 31 16.1	-0.3
	21nm,0.6s						
MDOK	**Medeo**	3.71	5	⇓*e*P	Pg	00 30 29.9	-1.9
	5.2nm,0.5s						
MDOK				⇑*e*S	Sg	00 31 19.7	-0.1
	34nm,0.8s						
KOTS	**Kotyrbulak**	3.79	6	*e*P	Pg	00 30 31.3	-1.9
	7.6nm,0.3s						
KOTS				*e*S	Sg	00 31 22.2	-0.1
	34nm,0.6s						
DGS	**Degeres**	3.82	351	*e*P	Pg	00 30 32.9	-1.0
	3.3nm,0.6s						
DGS				*e*S	Sg	00 31 24.7	+1.3
	17nm,0.5s						
SATY	**Saty**	3.84	20	⇑*i*P	Pg	00 30 31.9	-2.4
	9.8nm,0.4s						
SATY				*e*S	Sg	00 31 23.4	-0.7
	13nm,0.5s						
UZB	**Uzynbulak**	4.11	26	*e*P	Pg	00 30 36.3	-3.2
	4.2nm,0.3s						
UZB				*e*S	Sg	00 31 30.6	-2.0
	7.1nm,0.8s						
MRKS	**Merke**	4.14	323	⇓*i*P	Pg	00 30 38.7	-1.3
	16nm,0.7s						
MRKS				*e*S	Sg	00 31 34.1	+0.4
	14nm,0.5s						
KURS	**Kuram**	4.19	16	⇑*i*P	Pg	00 30 37.8	-3.1
	5.8nm,0.7s						
KURS				*e*S	Sg	00 31 33.5	-1.7
	10nm,0.6s						
KTBS	**Karatobe**	4.24	1	*e*P	Pg	00 30 39.3	-2.6
	2.1nm,0.5s						
KTBS				*e*S	Sg	00 31 35.6	-1.3
	16nm,0.6s						
SHLS	**Shalkode**	4.28	30	*e*P	Pg	00 30 42.5	-0.1
	8.7nm,0.4s						
SHLS				*e*S	Sg	00 31 42.6	+4.6
	14nm,0.5s						
KPKS	**Kokpek**	4.30	21	*e*P	Pb	00 30 38.6	+2.3
	9.0nm,0.7s						
KPKS				*e*S	Sg	00 31 35.9	-2.7
	30nm,1.1s						
MNAS	**Manas**	4.32	316	⇑Pg	Pb	00 30 40.7	+3.9
	1.6nm,0.4s						
MNAS				⇑Lg	Lg	00 31 40.5	
	8.9nm,0.8s						
CHKK	**Chushkaly**	4.39	4	*e*P	Pb	00 30 41.4	+3.5
	6.6nm,0.4s						
CHKK				*e*S	Sg	00 31 38.9	-2.8
	27nm,0.3s						
KUU	**Kurty**	4.43	358	⇑*i*P	Pg	00 30 42.7	-2.7
	2.1nm,0.2s						
KUU				⇓*i*S	Sg	00 31 41.6	-1.2
	17nm,0.4s						
ARXS	**Arharly**	4.83	11	*e*P	Pg	00 30 49.6	-3.6
	6.3nm,0.6s						
ARXS				*e*S	Sg	00 31 53.5	-2.3
	9.3nm,0.4s						
KTMS	**Ketmen**	4.88	34	*e*P	Pb	00 30 49.5	+3.2
	2.7nm,0.3s						
KTMS				*e*S	Sg	00 31 53.3	-4.1

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
	6.2nm,0.6s						
KK31	**Karatay Array**	**5.84**	**310**	⇑Pn	**Pn**	**00 30 48.4**	**+1.0**
	0.2nm,0.5s,baz=127,slow=13,SNR=7.5						
KK31				⇑Pg	**Pg**	**00 31 08.6**	**-3.9**
	1.0nm,0.7s,baz=125,slow=16,SNR=6.3						
KK31				⇑Lg	Lg	00 32 29.2	
	1.4nm,0.5s,baz=118,slow=29,SNR=5.1						

IDC 22 00:56:39.4±1.6, 3°.22N×65°.78E, h0^{km}, mb3.7/7, mb1 3.9/7, mb1mx3.4/67, mbtmp3.7/7, MS3.3/14, Ms1 3.3/14, ms1mx3.0/60, Error ellipse: s-maj=51.9km s-min=22.5km az=59.0, Carlsberg Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08N2	**Diego Garcia H**	**10.82**	**151**	T	T	01 10 08.8	
	baz=329,slow=76,SNR=107						
H08N3	**Diego Garcia H**	**10.83**	**151**	T	T	01 10 12.3	
	baz=329,slow=76,SNR=80						
H08N1	**Diego Carcia H**	**10.84**	**151**	T	T	01 10 13.7	
	baz=329,slow=76,SNR=94						
PALK	**Pallekele**	**15.39**	**74**	LR	LR	01 04 55.5	
	comp=Z,125nm,19.1s,baz=294,slow=32						
WSAR	**Wadi Sarin**	**21.07**	**341**	LR	LR	01 08 16.5	
	comp=Z,72nm,18.9s,baz=182,slow=33						
CMAR	**Chiang Mai Arr**	**35.82**	**63**	LR	LR	01 17 41.7	
	comp=Z,36nm,18.8s,baz=275,slow=35						
MMAI	**Mount Meron Ar**	**41.07**	**320**	LR	LR	01 19 04.0	
	comp=Z,22nm,21.6s,baz=155,slow=33						
GNI	**Garni**	**41.40**	**335**	LR	LR	01 22 33.2	
	comp=Z,21nm,18.3s,baz=143,slow=38						
MKAR	**Makanchi Array**	**45.72**	**16**	P	P	01 05 03.2	+0.9
	0.3nm,0.8s,baz=199,slow=12,SNR=2.4						
BRTR	**Keskin Array B**	**46.57**	**326**	P	P	01 05 08.6	-0.7
	0.2nm,0.5s,baz=148,slow=9.5,SNR=3.4						
AKTO	**Aktyubinsk**	**47.51**	**353**	LR	LR	01 27 31.4	
	comp=Z,12nm,19.4s,baz=162,slow=39						
KURBB	**Kurchatov Arra**	**48.45**	**11**	P	P	01 05 24.4	+0.9
	0.5nm,1.0s,baz=210,slow=7.2,SNR=3.3						
BVAR	**Borovoye Array**	**49.79**	**4**	LR	LR	01 27 22.5	
	comp=Z,40nm,20.5s,baz=176,slow=37						
BOSA	**Boshof**	**50.15**	**228**	LR	LR	01 25 36.3	
	comp=Z,69nm,18.0s,baz=63,slow=35						
TSUM	**Tsumeb**	**52.35**	**243**	LR	LR	01 25 52.4	
	comp=Z,58nm,18.6s,baz=126,slow=34						
ZALV	**Zalesovo Beam**	**52.93**	**14**	P	P	01 05 56.4	-0.8
	0.7nm,0.6s,baz=187,slow=9.6,SNR=3.3						
ZALV				LR	LR	01 27 16.0	
	comp=Z,30nm,20.5s,baz=346,slow=35						
SONM	**Songino Array**	**56.51**	**32**	P	P	01 06 22.4	-1.2
	0.2nm,0.4s,baz=224,slow=8.1,SNR=2.1						
SONM				LR	LR	01 30 42.7	
	comp=Z,53nm,21.0s,baz=253,slow=36						
DAVOX	**Davos/Dischmat**	**64.84**	**321**	LR	LR	01 34 48.0	
	comp=Z,19nm,20.6s,baz=73,slow=35						
KSRS	**Korea Array**	**66.11**	**50**	LR	LR	01 37 37.8	
	comp=Z,19nm,19.8s,baz=235,slow=37						
NOA	**NORSAR Array B**	**70.71**	**335**	LR	LR	01 42 42.9	
	comp=Z,9.5nm,18.1s,baz=90,slow=39						
WRA	**Warramunga Arr**	**71.07**	**112**	P	P	01 08 00.1	0.0
	4.0nm,0.8s,baz=290,slow=5.7,SNR=12						
ASAR	**Alice Springs**	**71.41**	**116**	P	P	01 08 02.1	0.0
	2.2nm,0.8s,baz=286,slow=6.1,SNR=16						
TXAR	**Lajitas Array**	**146.09**	**343**	PKPbc	PKPbc	01 16 22.1	-0.2
	0.5nm,0.7s,baz=35,slow=4.6,SNR=7.4						

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*IDC **22** 01:01:10.7±3.8, 38°.47N×71°.30E, h0^{km}, mb4.0/3, mb1 3.8/5, mb1mx3.3/61, mbtmp3.7/5, ML2.9/2, MS2.6/1, Ms1 2.6/1, ms1mx2.0/62, Error ellipse: s-maj=67.9km s-min=19.6km az=145.0*

*NNC **22** 01:01:12.3±2.7, 38°.31N×71°.50E, h0^{km}, mb3.8, mpv3.4, Error ellipse: s-maj=20.1km s-min=16.4km az=22.0*

ISC 22 01:01:14.5±1.9, 38°.6N±0°.1×71°.32E±0°.09, h10^{km}, n11, σ2^{s}.89/14, mb3.9/3, 7C-4D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**2.20**	**50**	⇓Pg	**Pb**	**01 01 53.0**	**-1.5**
	40nm,0.4s						
SFK				⇑Lg	Lg	01 02 27.6	
	47nm,0.5s						
MNAS	**Manas**	**3.98**	**13**	⇑Pn	Pb	01 02 18.7	-6.0
	6.2nm,0.9s						
MNAS				⇑Sn	**Sb**	**01 03 10.4**	**-2.6**
	5.9nm,0.5s						
MNAS				⇑Lg	Lg	01 03 29.2	
	33nm,1.0s						
KK31	**Karatay Array**	**4.53**	**353**	⇑Pn	**Pn**	**01 02 25.4**	**+2.2**
	1.0nm,0.4s,baz=178,slow=14,SNR=24						
KK31				⇓Pg	**Pg**	**01 02 42.4**	**+1.2**
	1.6nm,0.5s,baz=173,slow=12,SNR=9.7						
KK31				⇑Sn	**Sb**	**01 03 24.4**	**-4.3**
	2.6nm,0.5s,baz=159,slow=17,SNR=3.6						
KK31				⇓Lg	Lg	01 03 42.0	
	5.4nm,0.5s,baz=163,slow=28,SNR=3.6						
AAK	**Ala-Archa**	**4.69**	**30**	Pn	**Pn**	**01 02 27.1**	**+1.5**
	0.9nm,0.3s,baz=228,slow=3.9,SNR=2.6						
AAK				Pg	**Pg**	**01 02 43.2**	**-1.2**
	1.0nm,0.3s,baz=190,slow=9.1,SNR=12						
AAK				Sn	**Sn**	**01 03 26.2**	**+6.1**
	0.6nm,0.3s,baz=354,slow=20,SNR=1.7						
AAK				Lg	Lg	01 03 45.6	
	0.7nm,0.3s,baz=45,slow=9.0,SNR=1.8						
AAK	**Ala-Archa**	**4.69**	**30**	Pn	**Pn**	**01 02 27.7**	**+2.2**
	1.6nm,0.4s						
AAK				Pg	**Pg**	**01 02 42.6**	**-1.8**
	6.7nm,0.7s						
AAK				Lg	Lg	01 03 44.8	
	13nm,1.0s						
TKM2	**Tokmak 2**	**5.39**	**36**	⇑Pn	Pn	01 02 38.9	+3.7
	2.1nm,0.7s						
TKM2				⇓Lg	Lg	01 04 08.0	
	8.2nm,1.1s						
MKAR	**Makanchi Array**	**11.48**	**41**	Pn	**Pn**	**01 03 59.9**	**+1.4**
	0.1nm,0.3s,baz=226,slow=15,SNR=3.2						
BVAR	**Borovoye Array**	**14.43**	**358**	LR	LR	01 11 06.4	
	comp=Z,26nm,20.1s,baz=108,slow=41						
FINES	**FINESS Array B**	**35.89**	**324**	P	**P**	**01 08 12.2**	**-2.2**
	1.5nm,0.8s,baz=127,slow=9.2,SNR=3.6						
ARCES	**ARCESS Array B**	**39.30**	**337**	P	**P**	**01 08 42.7**	**-0.5**
	3.5nm,1.0s,baz=125,slow=6.1,SNR=4.5						
HFS	**Hagfors**	**41.58**	**320**	P	**P**	**01 09 01.0**	**-1.1**
	1.4nm,0.6s,baz=109,slow=12,SNR=1.9						

TRN 22 01:33:02.2, 14°.77N×61°.08W, h153^{km}, MD3.5, 1C, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FDF	**Fort de France**	**0.07**	**240**	*e*P	Pn	01 33 23.3	+0.6
BAMF	**Morne Balai**	**0.08**	**306**	*e*P	Pn	01 33 23.5	+0.8
BAMF				*e*S	Sn	01 33 39.6	+1.3
CXM	**Morne La Croix**	**0.09**	**297**	*e*P	Pn	01 33 24.3	+1.5
PML	**Morne Lenard**	**0.10**	**276**	*e*P	Pn	01 33 23.2	+0.6
PCM	**Pelee Case Pet**	**0.13**	**290**	*e*P	Pn	01 33 23.2	+0.5
PCM	**Pelee Case Pet**	**0.13**	**290**	*e*P	Pn	01 33 23.4	+0.7
ZAM	**Aeronautique**	**0.20**	**165**	*e*P	Pn	01 33 23.7	+0.9
ZAM				*e*S	Sn	01 33 38.9	+0.4
LPMF	**Morne Lapointe**	**0.23**	**150**	⇑*i*P	Pn	01 33 23.8	+0.9
LPMF				*e*S	Sn	01 33 38.9	+0.3
TRMF	**Trois Ilets**	**0.23**	**172**	*e*P	Pn	01 33 23.5	+0.6
BIM	**Bigot**	**0.25**	**177**	*e*P	Pn	01 33 23.6	+0.6
BIM				*e*S	Sn	01 33 40.1	+1.2
MVM	**Montagne Vaucl**	**0.28**	**140**	*e*P	Pn	01 33 24.0	+1.0
SLB	**Belfond**	**0.94**	**177**	*e*P	Pn	01 33 28.3	+1.5
SLB				*e*S	Sn	01 33 46.2	+0.6
SSV	**Crater Summit**	**1.44**	**184**	*e*S	Sn	01 33 55.4	+1.6
SVCV	**St. Vincent, C**	**1.49**	**182**	*e*P	Pn	01 33 32.5	+0.6
SVCV				*e*S	Sn	01 33 55.9	+1.2
SVB	**Belmont**	**1.50**	**186**	*e*P	Pn	01 33 32.3	+0.3
SVB				*e*S	Sn	01 33 54.4	-0.5

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*IDC **22** 01:34:00.5±1.0, 14°.87N×146°.94E, h0^{km}, mb4.0/12, mb1 4.0/13, mb1mx3.8/57, mbtmp4.0/13, ML4.3/1, MS2.4/1, Ms1 2.4/1, ms1mx2.1/54, Error ellipse: s-maj=27.7km s-min=16.4km az=94.0*

*ISCJB **22** 01:34:02.9±0.8, 14°.87N±0°.09×147°.0E±0°.1, h32^{km}, mb4.0/14, Error ellipse: s-maj=18.4km s-min=8.7km az=34.4*

*NEIC **22** 01:34:05.5±0.6, 14°.87N×146°.90E, h35^{km}, mb4.2/2, Error ellipse: s-maj=18.0km s-min=10.8km az=98.0*

ISC 22 01:34:04.8±1.0, 14°.9N±0°.1×147°.0E±0°.1, h32^{km}, n25, σ0^{s}.88/20, mb4.0/14, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**2.39**	**238**	Pn	**Pn**	**01 34 40.9**	**-0.8**
	78nm,0.3s,baz=90,slow=4.6,SNR=51						
GUMO				Sn	**Sn**	**01 35 10.3**	**+0.4**
	32nm,0.3s,baz=252,slow=17,SNR=3.7						
GUMO				LR	LR	01 35 42.2	
	comp=Z,70nm,18.7s,baz=108,slow=43						
H11S3	**WAKE ISLAND Hy**	**19.24**	**76**	T	T	01 58 04.0	
	SNR=3.5						
H11S1	**WAKE ISLAND Hy**	**19.25**	**76**	T	T	01 58 04.2	
H11S2	**WAKE ISLAND Hy**	**19.25**	**76**	T	T	01 58 04.2	
H11N1	**WAKE ISLAND Hy**	**19.63**	**73**	T	T	01 58 38.9	
	baz=254,slow=75,SNR=4.2						
H11N2	**WAKE ISLAND Hy**	**19.64**	**73**	T	T	01 58 36.9	
H11N3	**WAKE ISLAND Hy**	**19.65**	**73**	T	T	01 58 36.4	
	baz=259,slow=75,SNR=3.8						
MJAR	**Matsushiro Arr**	**22.96**	**342**	P	**P**	**01 39 04.4**	**-2.2**
	0.5nm,0.4s,baz=169,slow=9.2,SNR=4.7						
JNU	**Nakatsue**	**23.32**	**324**	P	**P**	**01 39 10.9**	**+0.7**
	3.9nm,0.7s,baz=78,slow=5.4,SNR=5.4						
KSRS	**Korea Array**	**28.14**	**327**	P	**P**	**01 39 53.7**	**-0.4**
	1.0nm,0.4s,baz=150,slow=9.2,SNR=3.3						
KSAR	**Wonju Array Be**	**28.16**	**327**	P	**P**	**01 39 53.7**	**-0.5**
WRA	**Warramunga Arr**	**36.74**	**200**	P	**P**	**01 41 10.6**	**+1.1**
	0.6nm,0.8s,baz=20,slow=10.0,SNR=3.4						
ASAR	**Alice Springs**	**40.36**	**199**	P	**P**	**01 41 38.7**	**-1.1**
	0.3nm,0.7s,baz=14,slow=9.5,SNR=3.2						
ULN	**Ulaanbaatar**	**46.54**	**323**	*e*P	**P**	**01 42 29.9**	**+0.3**
	2.7nm,0.6s						
SONM	**Songino Array**	**46.90**	**323**	P	**P**	**01 42 33.3**	**+0.9**
	1.8nm,0.7s,baz=137,slow=9.0,SNR=10						
ZALV	**Zalesovo Beam**	**61.79**	**324**	P	**P**	**01 44 20.6**	**+0.2**
	0.6nm,0.4s,baz=129,slow=7.4,SNR=3.2						
MKAR	**Makanchi Array**	**62.00**	**315**	P	**P**	**01 44 23.2**	**+1.1**
	1.8nm,0.4s,baz=91,slow=8.1,SNR=32						
KURK	**Kurchatov**	**64.94**	**319**	*e*P	**P**	**01 44 41.1**	**-0.2**
KURBB	**Kurchatov Arra**	**64.98**	**319**	P	**P**	**01 44 42.3**	**+0.7**
	5.2nm,0.6s,baz=98,slow=6.8,SNR=64						
ILAR	**Eielson Array**	**66.56**	**25**	P	**P**	**01 44 51.8**	**+0.2**
	0.2nm,0.5s,baz=254,slow=6.5,SNR=4.6						
BVAR	**Borovoye Array**	**70.20**	**321**	P	**P**	**01 45 15.2**	**+0.7**
	1.2nm,0.4s,baz=102,slow=6.2,SNR=6.2						
INK	**Inuvik**	**72.42**	**23**	*e*P	**P**	**01 45 27.6**	**0.0**
	1.0nm,0.6s						
ARU	**Arti**	**76.89**	**325**	*e*P	**P**	**01 45 53.8**	**0.0**
FINES	**FINESS Array B**	**90.86**	**336**	P	**P**	**01 47 04.2**	**-0.8**
	1.6nm,0.9s,baz=64,slow=4.4,SNR=4.6						
LPAZ	**La Paz**	**146.19**	**97**	PKPbc	**PKPab**	**01 53 44.9**	**+0.5**
	0.4nm,0.5s,baz=329,slow=5.9,SNR=4.1						

NNC 22 01:35:30.7±3.8, 36°.98N×70°.93E, h0^{km}, mb3.9, mpv3.5, 6C-4D, Error ellipse: s-maj=32.7km s-min=26.6km az=130.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**3.64**	**33**	⇓P	Pn	01 36 29.3	+0.7
	6.9nm,0.4s						
SFK				⇑S	Sn	01 37 14.8	+2.4
	5.0nm,0.3s						
MNAS	**Manas**	**5.64**	**12**	⇑P	Pn	01 36 56.2	+0.3
	5.0nm,0.8s						
MNAS				⇑S	Sn	01 38 02.1	+0.7
	4.2nm,0.6s						
KK31	**Karatay Array**	**6.13**	**357**	⇓P	Pn	01 37 03.4	+0.9
	1.2nm,0.4s,baz=188,slow=9.7,SNR=87						
KK31				⇓S	Sn	01 38 15.3	+1.9
	1.6nm,0.5s,baz=189,slow=26,SNR=5.2						
AAK	**Ala-Archa**	**6.28**	**25**	⇓P	Pn	01 37 04.0	-0.9
	3.0nm,0.3s						
AAK				⇑S	Sn	01 38 17.2	-0.2
	3.2nm,0.6s						
TKM2	**Tokmak 2**	**6.93**	**30**	⇑P	Pn	01 37 11.5	-2.3
	1.4nm,0.5s						
TKM2				⇑S	Sn	01 38 32.3	-1.2
	0.3nm,0.5s						

IDC 22 02:01:55.7±2.5, 15°.36S×178°.34W, h417^{km}±28^{km}, mb3.2/6, mb1 3.5/7, mb1mx3.1/49, mbtmp4.0/7, Error ellipse: s-maj=35.7km s-min=17.5km az=143.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**6.51**	**78**	P	P	02 03 34.5	-0.4
	7.3nm,0.3s,baz=94,slow=2.2,SNR=9.7						
ASAR	**Alice Springs**	**45.60**	**252**	P	P	02 09 37.0	0.0
	5.1nm,0.4s,baz=85,slow=8.4,SNR=161						
QSPA	**South Pole Qui**	**74.68**	**180**	P	P	02 12 50.8	-0.1
	0.9nm,0.5s,baz=58,slow=9.5,SNR=4.3						
YBH	**Yreka Blue Hor**	**76.52**	**39**	P	P	02 13 01.6	0.0
	0.9nm,0.6s,baz=210,slow=8.1,SNR=2.6						
ILAR	**Eielson Array**	**83.40**	**13**	P	P	02 13 36.6	-0.7
	0.2nm,0.5s,baz=242,slow=5.0,SNR=4.3						
TXAR	**Lajitas Array**	**84.58**	**58**	P	P	02 13 45.1	+1.0
	0.1nm,0.6s,baz=232,slow=6.2,SNR=4.6						
PDAR	**Pinedale Array**	**85.47**	**44**	P	P	02 13 48.1	-0.2
	0.2nm,0.5s,baz=232,slow=5.5,SNR=3.3						

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*NIED **22** 02:08:00, 36°.90N×141°.40E, h5^{km}, Mw4.0 Best double couple: $M_0$9.50000×10^{14} NP1:ϕ_s354.00000°, δ44.00000°, λ-122.00000°. NP2:ϕ_s215.00000°, δ54.00000°, λ-63.00000°.*

*ISCJB **22** 02:08:32.1±0.9, 36°.88N±0°.03×141°.43E±0°.05, h16^{km}±6^{km}, mb4.1/22, Error ellipse: s-maj=7.4km s-min=4.3km az=18.7*

*JMA **22** 02:08:33.2±0.1, 36°.88N×141°.36E, h31^{km}±1^{km}, M4.3*

JMA Felt II J1.

*NEIC **22** 02:08:34.7±3.1, 36°.93N×141°.21E, h18^{km}±19^{km}, mb4.3/5, Error ellipse: s-maj=10.9km s-min=6.5km az=128.0*

NEIC Recorded [2 JMA] in Fukushima and Ibaraki.

*IDC **22** 02:08:38.8±2.2, 36°.87N×141°.07E, h51^{km}±20^{km}, mb3.8/16, mb1 4.0/20, mb1mx3.8/69, mbtmp4.1/20, ML2.9/3, MS3.1/2, Ms1 3.1/2, ms1mx2.6/54, Error ellipse: s-maj=20.4km s-min=11.1km az=80.0*

ISC 22 02:08:34.1±1.4, 36°.95N±0°.03×141°.17E±0°.05, h15^{km}±8^{km}, n52, σ1^{s}.07/57, mb4.2/22, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONAJ	**Iwakimizuishiy**	**0.33**	**298**	P	**Pn**	**02 08 43.2**	**-1.3**
ONAJ				S	**Sn**	**02 08 50.7**	**-0.4**
JFK	**Kawauchi**	**0.48**	**331**	P	**Pn**	**02 08 45.3**	**-1.2**
JFK				S	**Sn**	**02 08 53.4**	**-1.3**
JFFD	**Fukushimafurud**	**0.51**	**287**	P	**Pn**	**02 08 46.1**	**-0.7**
JFFD				S	**Sn**	**02 08 54.6**	**-0.7**
JHO	**Hitachi**	**0.58**	**235**	P	**Pb**	**02 08 46.4**	**+0.4**
JHO				S	**Sn**	**02 08 55.7**	**-1.5**
JHYU	**Hitachinakayam**	**0.76**	**218**	P	**Pg**	**02 08 48.4**	**-0.5**
JHYU				S	**Sg**	**02 08 59.0**	**+0.1**
JFT	**Otama**	**0.88**	**311**	P	**Pn**	**02 08 52.5**	**+0.6**
JFT				S	**Sn**	**02 09 06.2**	**+1.8**
JMM	**Marumori**	**0.97**	**342**	P	**Pg**	**02 08 52.4**	**-0.4**
JMM				S	**Sn**	**02 09 06.5**	**-0.1**
JYT	**Yasato**	**1.06**	**228**	P	**Pb**	**02 08 52.9**	**-1.2**
JYT				S	**Sg**	**02 09 08.2**	**-0.2**
JFY	**Yanaizu**	**1.26**	**292**	P	**Pg**	**02 08 58.5**	**+0.2**
JFY				S	**Sg**	**02 09 16.6**	**+2.0**
MJAR	**Matsushiro Arr**	**2.41**	**261**	P	**Pn**	**02 09 14.6**	**+1.6**
	18nm,0.3s,baz=91,slow=14,SNR=195						
MJAR				S	**Sb**	**02 09 47.5**	**+0.7**
	36nm,0.3s,baz=82,slow=10,SNR=4.8						
MJAR				LR	LR	02 10 14.4	
	comp=Z,128nm,20.3s,baz=90,slow=42						
MAJO	**Matsushiro**	**2.41**	**261**	*e*Pn	**Pn**	**02 09 14.6**	**+1.6**
MAT	**Matsushiro**	**2.41**	**261**	P	**Pb**	**02 09 15.0**	**-2.2**
MAT				S	**Sb**	**02 09 47.4**	**+0.7**
JHJ	**Hachijo jima 2**	**3.98**	**197**	P	**Pn**	**02 09 34.9**	**+0.3**
	43nm,0.3s,baz=320,slow=23,SNR=12						
JHJ				S	**Sn**	**02 10 21.4**	**+0.4**
	21nm,0.3s,baz=310,slow=6.9,SNR=3.7						
ERM	**Erimo**	**5.29**	**16**	*e*Pn	**Pn**	**02 09 52.4**	**-0.2**
ERM				*e*Sn	**Sn**	**02 10 52.9**	**-0.3**
ASAJ	**Asahikawa**	**7.25**	**8**	P	**Pn**	**02 10 18.6**	**-0.7**
	1.5nm,0.3s,baz=205,slow=12,SNR=11						
ASAJ				LR	LR	02 13 00.9	
	comp=Z,27nm,19.6s,baz=340,slow=36						
JNU	**Nakatsue**	**9.26**	**249**	P	**Pn**	**02 10 47.8**	**+0.7**
	0.1nm,0.3s,baz=32,slow=17,SNR=3.2						
USRK	**Ussuriysk Ar.**	**10.06**	**319**	P	**Pn**	**02 11 01.1**	**+3.1**
	baz=110,slow=12						
USRK				LR	LR	02 14 36.1	
	comp=Z,108nm,19.8s,baz=148,slow=36						
KSRS	**Korea Array**	**10.58**	**277**	P	Pn	02 11 10.1	+5.0
	0.3nm,0.3s,baz=81,slow=14,SNR=9.0						
KSRS				LR	LR	02 14 53.3	
	comp=Z,83nm,20.2s,baz=114,slow=36						
KSAR	**Wonju Array Be**	**10.61**	**277**	P	Pn	02 11 10.1	+4.6
KLR	**Kul'dur**	**14.06**	**334**	P	**P**	**02 11 56.9**	**-3.5**
	0.0nm,0.3s,baz=124,slow=14,SNR=4.1						
KLR				LR	LR	02 17 12.0	
	comp=Z,7.0nm,20.5s,baz=150,slow=36						
SEY	**Seymchan**	**26.92**	**11**	P	**P**	**02 14 15.1**	**+0.7**
	2.5nm,0.9s,baz=204,slow=20,SNR=2.7						
SONM	**Songino Array**	**27.67**	**304**	P	**P**	**02 14 21.3**	**-0.1**
	2.6nm,0.6s,baz=112,slow=9.2,SNR=18						
H11N2	**WAKE ISLAND Hy**	**28.27**	**120**	T	T	02 43 50.6	
	baz=313,slow=75,SNR=1664						
H11N1	**WAKE ISLAND Hy**	**28.28**	**120**	T	T	02 43 50.0	
	baz=313,slow=75,SNR=1241						
H11N3	**WAKE ISLAND Hy**	**28.29**	**120**	T	T	02 43 50.3	
	baz=313,slow=75,SNR=1191						
H11S1	**WAKE ISLAND Hy**	**28.98**	**122**	T	T	02 44 43.7	
	baz=315,slow=76,SNR=728						
H11S3	**WAKE ISLAND Hy**	**28.98**	**122**	T	T	02 44 41.2	
	baz=315,slow=76,SNR=560						
H11S2	**WAKE ISLAND Hy**	**28.99**	**122**	T	T	02 44 47.0	
	baz=315,slow=76,SNR=447						
ZALV	**Zalesovo Beam**	**41.83**	**312**	P	**P**	**02 16 23.6**	**+0.6**
	3.9nm,0.5s,baz=92,slow=6.8,SNR=12						
KURK	**Kurchatov**	**45.83**	**308**	*e*P	**P**	**02 16 55.8**	**+0.5**
KURBB	**Kurchatov Arra**	**45.90**	**308**	P	**P**	**02 16 55.9**	**0.0**
	5.0nm,0.7s,baz=84,slow=8.4,SNR=44						
ILAR	**Eielson Array**	**49.67**	**32**	P	**P**	**02 17 25.3**	**+0.4**
	1.9nm,0.7s,baz=268,slow=6.6,SNR=26						
EGAK	**Eagle**	**52.12**	**32**	*e*P	**P**	**02 17 43.6**	**+0.3**
	1.1nm,0.6s						
ARU	**Arti**	**56.30**	**319**	*e*P	**P**	**02 18 13.1**	**-0.8**
	8.8nm,0.9s						
WRAB	**Tennant Creek**	**56.94**	**188**	*e*P	**P**	**02 18 17.6**	**-1.2**
	2.8nm,0.7s						
WRA	**Warramunga Arr**	**56.95**	**188**	P	**P**	**02 18 17.9**	**-0.9**
	2.0nm,0.6s,baz=5.8,slow=7.2,SNR=18						
ASAR	**Alice Springs**	**60.67**	**188**	P	**P**	**02 18 43.9**	**-0.8**
	1.4nm,0.8s,baz=14,slow=9.9,SNR=12						
ARCES	**ARCESS Array B**	**64.01**	**339**	P	**P**	**02 19 06.8**	**+0.3**
	3.5nm,1.0s,baz=66,slow=9.6,SNR=7.7						
FINES	**FINESS Array B**	**68.80**	**332**	P	**P**	**02 19 37.2**	**0.0**
	2.0nm,0.6s,baz=60,slow=7.5,SNR=11						
BMO	**Blue Mountains**	**72.13**	**47**	*e*P	**P**	**02 19 58.8**	**+0.7**
	0.7nm,0.7s						
HFS	**Hagfors**	**74.09**	**336**	P	**P**	**02 20 09.2**	**0.0**
	1.5nm,0.7s,baz=49,slow=6.6,SNR=12						
NB2	**NORSAR Subarra**	**74.19**	**337**	P	**P**	**02 20 09.8**	**-0.1**
	comp=Z,1.0nm,0.6s,baz=40,slow=5.9						
NOA	**NORSAR Array B**	**74.19**	**337**	P	**P**	**02 20 09.9**	**+0.1**
	comp=Z,1.3nm,0.8s,baz=43,slow=5.5,SNR=9.3						
AKASG	**Malin Array Be**	**74.25**	**322**	P	**P**	**02 20 10.3**	**0.0**
	comp=Z,1.1nm,0.4s,baz=46,slow=6.2,SNR=8.8						
KIEV	**Kiev**	**74.26**	**322**	*e*P	**P**	**02 20 09.9**	**-0.5**
	comp=Z,2.5nm,0.4s						
NVAR	**Mina Array Bea**	**75.20**	**53**	P	**P**	**02 20 17.4**	**+1.0**
	comp=Z,0.2nm,0.6s,baz=280,slow=5.9,SNR=3.6						
PDAR	**Pinedale Array**	**77.87**	**45**	P	**P**	**02 20 31.9**	**+0.5**
	comp=Z,0.4nm,0.8s,baz=79,slow=3.2,SNR=3.6						
CLL	**Collm**	**81.08**	**330**	*i* P	**P**	**02 20 48.9**	**+0.5**
	comp=Z,14nm,1.7s						
CLL				*e*		02 21 05.0	
GERES	**GERESS Array B**	**82.68**	**328**	P	**P**	**02 20 57.5**	**+0.4**
	comp=Z,0.6nm,0.4s,baz=40,slow=6.0,SNR=13						
TXAR	**Lajitas Array**	**90.33**	**52**	P	**P**	**02 21 35.7**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=301,slow=3.1,SNR=6.8						
LPAZ	**La Paz**	**146.91**	**59**	PKPbc	**PKPbc**	**02 28 16.5**	**-0.6**
	comp=Z,1.3nm,0.8s,baz=22,slow=3.8,SNR=8.1						
SIV	**San Ignacio**	**151.29**	**49**	PKPbc	**PKPbc**	**02 28 27.5**	**0.0**
	comp=Z,1.6nm,0.8s,baz=56,slow=1.2,SNR=12						

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*DDA **22** 02:09:08.6, 39°.10N×29°.13E, h6^{km}, Ml2.7*

*ISCJB **22** 02:09:09.3±0.4, 39°.06N±0°.03×29°.12E±0°.03, h8^{km}±3^{km}, Error ellipse: s-maj=4.6km s-min=3.5km az=179.7*

*CSEM **22** 02:09:09.3±0.1, 39°.07N×29°.12E, h8^{km}, ML2.4, Error ellipse: s-maj=2.3km s-min=1.9km az=162.0*

*ISK **22** 02:09:09.0, 39°.08N×29°.11E, h8^{km}, ML2.4/7*

ISC 22 02:09:09.2±0.8, 39°.09N±0°.02×29°.12E±0°.02, h9^{km}±5^{km}, n45, σ0^{s}.32/66, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHAP	**Saphane-Kutahy**	**0.10**	**129**	PG	**Pg**	**02 09 11.9**	**0.0**
SHAP				SG	**Sg**	**02 09 13.9**	**+0.1**
SHAP	**Saphane-Kutahy**	**0.10**	**129**	*e*Pg	**Pg**	**02 09 11.9**	**0.0**
SHAP				*e*Sg	**Sg**	**02 09 13.9**	**+0.1**
SIMA	**Simav-Kutahya**	**0.10**	**267**	PG	**Pg**	**02 09 11.7**	**-0.2**
SIMA				SG	**Sg**	**02 09 13.5**	**-0.3**
SIMA	**Simav-Kutahya**	**0.10**	**267**	*e*Pg	**Pg**	**02 09 11.7**	**-0.2**
SIMA				*e*Sg	**Sg**	**02 09 13.5**	**-0.3**
SMAA	**Simav-Kutahya**	**0.11**	**276**	PG	**Pg**	**02 09 11.8**	**-0.1**
SMAA				SG	**Sg**	**02 09 13.9**	**+0.1**
SMAA	**Simav-Kutahya**	**0.11**	**276**	*e*Pg	**Pg**	**02 09 11.8**	**-0.1**
SMAA				*e*Sg	**Sg**	**02 09 13.9**	**+0.1**
GDZ	**Gediz**	**0.28**	**90**	*i* P	**Pg**	**02 09 14.8**	**-0.2**
GDZ				*i* S	**Sg**	**02 09 19.0**	**+0.2**
GDZ	**Gediz**	**0.28**	**90**	P	**Pg**	**02 09 14.8**	**-0.2**
GDZ				S	**Sg**	**02 09 19.0**	**+0.2**
DEMI	**Demirci**	**0.32**	**262**	*i* P	**Pg**	**02 09 15.6**	**+0.1**
DEMI				*i* S	**Sg**	**02 09 19.8**	**+0.1**
DEMI	**Demirci**	**0.32**	**262**	P	**Pg**	**02 09 15.6**	**+0.1**
DEMI				S	**Sg**	**02 09 19.8**	**+0.1**
KULA	**Kula-Manisa**	**0.68**	**212**	PG	**Pg**	**02 09 22.1**	**-0.2**
KULA	**Kula-Manisa**	**0.68**	**212**	*e*Pg	**Pg**	**02 09 22.1**	**-0.2**
DURS	**Dursunbey**	**0.71**	**316**	*i* P	**Pg**	**02 09 22.1**	**-0.9**
DURS				*i* S	**Sn**	**02 09 36.8**	**+0.2**
DURS	**Dursunbey**	**0.71**	**316**	P	**Pg**	**02 09 22.1**	**-0.9**
DURS				S	**Sn**	**02 09 36.8**	**+0.2**
MANT	**Manisa**	**0.74**	**216**	*i* P	**Pg**	**02 09 23.4**	**-0.1**
MANT				*i* S	**Sg**	**02 09 33.1**	**-0.1**
MANT	**Manisa**	**0.74**	**216**	P	**Pg**	**02 09 23.4**	**-0.1**
MANT				S	**Sg**	**02 09 33.1**	**-0.1**
KUTH	**Kutahya**	**0.77**	**66**	PG	**Pb**	**02 09 24.6**	**-0.2**
KUTH	**Kutahya**	**0.77**	**66**	*e*Pg	**Pb**	**02 09 24.6**	**-0.2**
KHAL	**Karahalli**	**0.78**	**158**	*i* P	**Pb**	**02 09 24.3**	**-0.6**
KHAL				*i* S	**Sg**	**02 09 34.3**	**0.0**
KHAL	**Karahalli**	**0.78**	**158**	P	**Pb**	**02 09 24.3**	**-0.6**
KHAL				S	**Sg**	**02 09 34.3**	**0.0**
BALB	**Balikesir**	**1.11**	**300**	PN	**Pn**	**02 09 31.0**	**+0.2**
BALB	**Balikesir**	**1.11**	**300**	*e*Pn	**Pn**	**02 09 31.0**	**+0.2**
STEP	**BALIKESIR_Sava**	**1.12**	**285**	*i* P	**Pn**	**02 09 31.3**	**+0.2**
STEP				*i* S	**Sn**	**02 09 47.3**	**+0.6**
STEP	**BALIKESIR_Sava**	**1.12**	**285**	P	**Pn**	**02 09 31.3**	**+0.2**
STEP				S	**Sn**	**02 09 47.3**	**+0.6**
IGD	**Bursa**	**1.18**	**3**	*i* P	**Pg**	**02 09 31.0**	**-0.8**
IGD				*i* S	**Sb**	**02 09 47.4**	**+0.4**
CAVI	**Cavuskoy**	**1.25**	**27**	PN	**Pn**	**02 09 32.9**	**+0.1**
CAVI	**Cavuskoy**	**1.25**	**27**	*e*Pn	**Pn**	**02 09 32.9**	**+0.1**
MDNY	**Mudanya-Bursa**	**1.29**	**352**	PN	**Pb**	**02 09 33.8**	**+0.2**
MDNY	**Mudanya-Bursa**	**1.29**	**352**	*e*Pn	**Pb**	**02 09 33.8**	**+0.2**
BORA	**Eskisehir**	**1.30**	**52**	PN	**Pn**	**02 09 33.7**	**+0.1**
BORA	**Eskisehir**	**1.30**	**52**	*i* P	**Pn**	**02 09 33.5**	**-0.1**
BORA				*i* S	**Sb**	**02 09 50.7**	**0.0**
BORA	**Eskisehir**	**1.30**	**52**	P	**Pn**	**02 09 33.5**	**-0.1**
BORA	**Eskisehir**	**1.30**	**52**	*e*Pn	**Pn**	**02 09 33.7**	**+0.1**
BORA				S	**Sb**	**02 09 50.7**	**0.0**
KCTX	**Karacabey (Bur**	**1.31**	**334**	PN	**Pg**	**02 09 34.4**	**0.0**
KCTX	**Karacabey (Bur**	**1.31**	**334**	*e*Pn	**Pg**	**02 09 34.4**	**0.0**
ADVT	**Abdulvahap**	**1.43**	**19**	PN	**Pb**	**02 09 36.2**	**+0.3**
ADVT	**Abdulvahap**	**1.43**	**19**	*e*Pn	**Pb**	**02 09 36.2**	**+0.3**
YLV	**Yalova**	**1.49**	**8**	PN	**Pb**	**02 09 37.2**	**+0.2**
YLV	**Yalova**	**1.49**	**8**	*e*Pn	**Pb**	**02 09 37.2**	**+0.2**
AYDB	**Zeytinkoy-Aydi**	**1.49**	**221**	PN	**Pn**	**02 09 36.4**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**1.49**	**221**	*e*Pn	**Pn**	**02 09 36.4**	**+0.1**
EDC	**Edincik**	**1.58**	**323**	PN	**Pb**	**02 09 38.2**	**-0.4**
EDC	**Edincik**	**1.58**	**323**	*e*Pn	**Pb**	**02 09 38.2**	**-0.4**
GULT	**Gulveren**	**1.72**	**38**	PN	**Pb**	**02 09 40.4**	**-0.6**
GULT	**Gulveren**	**1.72**	**38**	*e*Pn	**Pb**	**02 09 40.4**	**-0.6**

IDC **22** *02:11:08.4±0.4, 25.°01N×96.°48E, h0^{km}, mb4.8/35, mb1 4.9/37, mb1mx4.7/74, mbtmp4.8/37, ML5.1/2, MS4.3/56, Ms1 4.3/56, ms1mx4.2/66, Error ellipse: s-maj=12.4km s-min=10.7km az=33.0*

ISCJB **22** *02:11:09.4±0.7, 24.°99N±0.°02×96.°38E±0.°02, h16^{km}±5^{km}, mb5.0/197, MS4.4/97, Error ellipse: s-maj=3.2km s-min=2.3km az=9.6*

BJI **22** *02:11:09.2, 24.°98N×96.°48E, h8^{km}, mb5.0/68, mB5.1/42, ML5.2/9, Ms5.0/77, Ms7 4.8/67*

NDI **22** *02:11:10.1±3.0, 25.°01N×96.°58E, h23^{km}, ML5.1, mb5.1(NEIC)*

MOS **22** *02:11:11.7±1.0, 24.°94N×96.°44E, h35^{km}, mb5.2/94, MS4.4/33, Error ellipse: s-maj=6.7km s-min=3.4km az=123.0*

NEIC **22** *02:11:12.2±1.4, 25.°00N×96.°43E, h23^{km}±10^{km}, mb5.1/86, Error ellipse: s-maj=4.6km s-min=3.6km az=225.0*

GCMT **22** *02:11:12.2±0.2, 24.°86N×96.°43E, h18^{km}, MW5.1/112, Moment Tensor Solution. s54,c71; s112,c205; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.15±.12; M$_{\theta\theta}$1.27±.10; M$_{\phi\phi}$-1.12±.11; M$_{r\theta}$-0.57±.25; M$_{\theta\phi}$5.42±.10; M$_{\phi r}$1.41±.27; Best double couple: M$_0$5.75400×10^{16} NP1:ϕ_s187.00000°, δ83.00000°, λ-167.00000°. NP2: ϕ_s95.00000°, δ77.00000°, λ-7.00000°. Principal axes: T 5.6590, Plg4.0000°, Azm321.0000°; N 0.1910, Plg75.0000°, Azm214.0000°; P -5.8500, Plg14.0000°, Azm52.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 22 02:11:12.8±0.5**, 25.°00N**±0.°03×**96.°38E**±0.°03**, h24**^{km}±3^{km}**, h24**^{km}**:pP-P, n612,** σ1^s.68/659**, mb5.0**/199**, MS4.4**/97**, 30C-34D, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JORH	**JORHAT**	**2.59**	**313**	*e*P	**Pn**	**02 11 53.5**	**+0.3**
JORH				*e*S	**Sn**	**02 12 23.5**	**-0.5**
JORH				IAML		02 12 44.6	
	comp=N,7µm,0.7s						
JORH				IAML		02 12 49.8	
	comp=E,14µm,0.4s						
ZIRO	**ZIRO**	**3.39**	**318**	*e*P	**Pn**	**02 12 04.3**	**-0.1**
ZIRO				*e*S	**Sn**	**02 12 44.3**	**+0.2**
ZIRO				IAML		02 12 49.7	
	comp=N,23µm,0.6s						
ZIRO				IAML		02 13 16.9	
	comp=E,20µm,0.6s						
TEZP	**TEZPUR**	**3.61**	**297**	*e*P	**Pn**	**02 12 06.7**	**-0.5**
TEZP				*e*S	**Sn**	**02 12 48.7**	**-0.4**
SAIH	**SAIHA**	**3.99**	**232**	*e*P	**Pn**	**02 12 13.4**	**+0.7**
SAIH				*e*S	**Sn**	**02 12 59.0**	**+0.3**
SAIH				IAML		02 13 24.1	
	comp=N,2µm,0.9s						
SHL	**Shillong**	**4.11**	**279**	*e*Pn	**Pn**	**02 12 13.9**	**-0.4**
SHL	**Shillong**	**4.11**	**279**	*e*P	**Pn**	**02 12 14.2**	**-0.2**
SHL				*e*S	**Sn**	**02 12 59.3**	**-2.5**
SHL	**Shillong**	**4.11**	**279**	*e*P	**Pn**	**02 12 13.9**	**-0.4**
GUWA	**GUWAHATI**	**4.40**	**287**	*e*P	**Pn**	**02 12 17.4**	**-0.7**
GUWA				*e*S	**Sn**	**02 13 06.9**	**-1.7**
GUWA				IAML		02 13 30.9	
	comp=N,10µm,1.1s						
AGT	**Agartala**	**4.81**	**258**	*e*P	**Pn**	**02 12 23.8**	**+0.1**
AGT				*e*S	**Sn**	**02 13 15.2**	**-3.5**
AGT				IAML		02 14 35.4	
	comp=N,6µm,1.1s						
BELO	**BELONIA**	**4.83**	**250**	*e*P	**Pn**	**02 12 23.6**	**-0.5**
BELO				*e*S	**Sn**	**02 13 18.6**	**-0.8**
BRDH	**Bariadhala**	**4.92**	**243**	Pn	**Pn**	**02 12 25.4**	**+0.2**
	comp=N,68nm,0.3s,baz=91,slow=11,SNR=16						
BRDH				Sn	**Sn**	**02 13 24.0**	**+2.6**
	comp=N,100nm,0.3s,baz=313,slow=20,SNR=8.5						
TURI	**Tura**	**5.50**	**277**	*e*P	**Pn**	**02 12 33.6**	**+0.3**
TURI				*e*S	**Sn**	**02 13 36.4**	**+0.5**
KMI	**Kunming**	**5.77**	**87**	Pn	**Pn**	**02 12 38.6**	**+1.4**
KMI				Sn	**Sn**	**02 13 45.3**	**+2.5**
KMI				smax	smax		
	comp=N,2µm,1.2s						
KMI				smax	smax		
	comp=N,2µm,1.3s						
KMI				LR	LR		
	comp=N,14µm,8.2s						
KMI				LR	LR		
	comp=N,8µm,7.8s						
LSA	**Lhasa**	**6.60**	**316**	Pn	**Pn**	**02 12 50.6**	**+1.8**
LSA				Sn	**Sn**	**02 14 03.0**	**-0.5**
LSA				smax	smax		
	comp=N,320nm,1.0s						
LSA				smax	smax		
	comp=N,470nm,0.8s						
LSA	**Lhasa**	**6.60**	**316**	*e*Pn	**Pn**	**02 12 49.9**	**+1.1**
	comp=N,174nm,0.6s						
LSA				*e*Sn	**Sn**	**02 14 02.6**	**-1.0**
LSA	**Lhasa**	**6.60**	**316**	P	**Pn**	**02 12 51.7**	**+2.9**
LSA	**Lhasa**	**6.60**	**316**	Pn	**Pn**	**02 12 51.7**	**+2.9**
LSA	**Lhasa**	**6.60**	**316**	*e*P	**Pn**	**02 12 49.9**	**+1.1**
LSA				*e*		02 14 02.6	
LSA				pmax	pmax		
	comp=Z,174nm,0.6s						
CHTO	**Chiang Mai**	**6.60**	**158**	*e*Pn	**Pn**	**02 12 47.3**	**-1.1**
CHTO				*e*Pg	**Pb**	**02 13 09.6**	**+2.6**
CHTO				*e*Sg	Sb	02 14 39.0	+14
CHTO	**Chiang Mai**	**6.60**	**158**	P	**Pn**	**02 12 47.6**	**-0.9**
	SNR=20						
CHTO	**Chiang Mai**	**6.60**	**158**	*e*P	**Pn**	**02 12 47.3**	**-1.1**
CHTO	**Chiang Mai**	**6.60**	**158**	P	**Pn**	**02 12 47.5**	**-0.9**
	comp=Z,2µm,1.3s,comp=Z,13µmcomp=Z,22nm						
CMMT	**Chiang Mai**	**6.60**	**158**	P	**Pn**	**02 12 47.4**	**-1.1**
	comp=Z,357nm,1.3s,comp=Z,3µmcomp=Z,4.8nm						
CM31	**Chiang Mai Arr**	**6.93**	**159**	*e*Pn	**Pn**	**02 12 52.7**	**-0.3**
CMAR	**Chiang Mai Arr**	**6.93**	**159**	Pn	**Pn**	**02 12 52.4**	**-0.7**
	comp=Z,11nm,0.3s,baz=335,slow=14,SNR=73						
CMAR				Pg	Pb	02 13 17.7	+5.1
	comp=Z,15nm,0.3s,baz=337,slow=16,SNR=27						
CMAR				Lg	Lg	02 14 42.6	
	baz=328,slow=29,SNR=2.8						
CMAR				LR	LR	02 15 45.2	
	comp=Z,4µm,21.3s,baz=341,slow=40						
CM01	**Chiang Mai Arr**	**6.97**	**159**	*e*Pn	**Pn**	**02 12 52.1**	**-1.5**
LAMP	**Lampang**	**7.12**	**154**	P	**Pn**	**02 12 55.2**	**-0.4**
	comp=Z,152nm,1.1s,comp=Z,1µmcomp=Z,0.9nm						
GTK	**Tadong**	**7.36**	**290**	*e*P	**Pn**	**02 12 58.9**	**-0.1**
TAPN	**Taplejung**	**8.13**	**289**	*e*Pn	**Pn**	**02 13 09.8**	**+0.1**
TAPN				*e*Sn	**Sn**	**02 14 40.9**	**-0.2**
	comp=Z,3µm,1.2s						
ODAN	**Odare**	**8.30**	**285**	*e*Pn	**Pn**	**02 13 11.3**	**-0.7**
ODAN				*e*Sn	**Sn**	**02 14 47.0**	**+1.8**
	comp=Z,2µm,1.0s						
CD2	**Chengdu**	**8.79**	**46**	⇓P	**Pn**	**02 13 19.3**	**+0.9**
CD2				pP		02 13 23.8	
CD2				sP		02 13 28.6	
CD2				S	**Sn**	**02 14 57.3**	**+0.6**
CD2				pmax	pmax		
	comp=Z,140nm,0.5s						
CD2				pmax	pmax		
	comp=Z,330nm,3.6s						
CD2				LR	LR		
	comp=Z,12µm,9.2s						
CD2				LR	LR		
	comp=Z,9µm,7.9s						
CD2				LR	LR		
	comp=Z,8µm,9.5s						
RAMN	**Ramite**	**9.01**	**285**	*e*Pn	**Pn**	**02 13 20.7**	**-1.1**
RAMN				*e*Sn	**Sn**	**02 15 03.2**	**+0.5**
	comp=Z,904nm,0.9s						
UMPA	**Umpang Tak**	**9.05**	**165**	P	**Pn**	**02 13 25.5**	**+3.4**
	comp=Z,23nm,0.9s,comp=Z,424nmcomp=Z,0.1nm						
GYA	**Guiyang**	**9.39**	**79**	⇓*i*P	**Pn**	**02 13 26.8**	**0.0**
GYA				PP	**PnPn**	**02 13 36.0**	**+1.6**
GYA				S	**Sn**	**02 15 13.9**	**+2.2**
GYA				SS	**SnSn**	**02 15 26.3**	**+3.0**
GYA				pmax	pmax		
	comp=Z,70nm,0.8s						
GYA				pmax	pmax		
	comp=Z,270nm,4.4s						
GYA				LR	LR		
	comp=Z,5µm,12.8s						
GYA				LR	LR		
	comp=Z,6µm,10.6s						
PBKT	**Sadao Pong**	**9.42**	**152**	P	**Pn**	**02 13 27.3**	**+0.2**
	comp=Z,116nm,0.9s,comp=Z,1µmcomp=Z,0.5nm						
JIRN	**Jiri**	**9.52**	**288**	*e*Pn	**Pn**	**02 13 27.4**	**-1.4**
JIRN				*e*Sn	**Sn**	**02 15 13.4**	**-1.8**
	comp=Z,1µm,1.0s						
BOK	**Bokaro**	**9.64**	**265**	*e*P	**Pn**	**02 13 27.6**	**-2.5**
GUN	**Gumba**	**9.85**	**289**	*e*Pn	**Pn**	**02 13 31.9**	**-1.4**
GUN				*e*Sn	**Sn**	**02 15 20.6**	**-2.7**
	comp=Z,2µm,1.2s						
PKIN	**Phulchoki**	**10.19**	**287**	*e*Pn	**Pn**	**02 13 36.6**	**-1.3**
PKIN				*e*Sn	**Sn**	**02 15 29.6**	**-1.9**
	comp=Z,890nm,0.8s						
KKN	**Kakani**	**10.33**	**288**	*e*Pn	**Pn**	**02 13 38.0**	**-1.8**
KKN				*e*Sn	**Sn**	**02 15 32.3**	**-2.7**
	comp=Z,663nm,0.9s						
DMN	**Daman**	**10.44**	**287**	*e*Pn	**Pn**	**02 13 39.3**	**-2.1**
DMN				*e*Sn	**Sn**	**02 15 35.0**	**-2.8**
	comp=Z,2µm,1.6s						
CHAI	**Chaiyaphum**	**10.46**	**149**	P	**Pn**	**02 13 43.0**	**+1.5**
	comp=Z,13nm,0.7s,comp=Z,193nm						
SKNT	**Sakolnakorn**	**10.68**	**137**	P	**Pn**	**02 13 44.9**	**+0.5**
	comp=Z,33nm,1.2s						
BWNR	**Bhubaneshwar**	**10.83**	**246**	*e*P	**Pn**	**02 13 45.5**	**-1.0**
SRDT	**SRDT**	**10.90**	**166**	P	**Pn**	**02 13 50.8**	**+3.3**
	comp=Z,35nm,1.4s,comp=Z,3µm						
GKN	**Gorkha**	**10.94**	**288**	*e*Pn	**Pn**	**02 13 45.9**	**-2.1**
GKN				*e*Sn	**Sn**	**02 15 47.0**	**-2.7**
	comp=Z,2µm,1.2s						
DANN	**Dangsing**	**11.77**	**289**	*e*Pn	**Pn**	**02 13 55.8**	**-3.7**
DANN				*e*Sn	**Sn**	**02 16 04.8**	**-5.5**
	comp=Z,500nm,0.8s						
KOLN	**Koldanda**	**11.79**	**286**	*e*Pn	**Pn**	**02 13 56.2**	**-3.5**
KOLN				*e*Sn	**Sn**	**02 16 05.2**	**-5.4**
	comp=Z,209nm,0.7s						
PYUN	**Piuthan**	**12.38**	**287**	*e*Pn	**Pn**	**02 14 04.4**	**-3.4**
PYUN				*e*Sn	**Sn**	**02 16 19.4**	**-5.7**
	comp=Z,472nm,1.0s						
PHET	**Kaeng Krachan**	**12.41**	**165**	P	**P**	**02 14 23.9**	**+4.0**
ENH	**Enshi**	**12.75**	**63**	*e*Pn	**Pn**	**02 14 10.8**	**-1.8**
	comp=Z,150nm,1.0s						
LZH	**Lanzhou**	**12.78**	**28**	*e*P	**Pn**	**02 14 11.6**	**-1.6**
LZH				pP	P	02 14 16.1	-8.0
LZH				sP		02 14 19.3	
LZH				S	**Sn**	**02 16 37.3**	**+2.5**
LZH				sS		02 16 44.8	
LZH				SS	**SnSn**	**02 16 52.9**	**+5.6**
LZH				pmax	pmax		
	comp=Z,48nm,1.2s						
LZH				pmax	pmax		
	comp=Z,240nm,4.8s						
LZH				LR	LR		
	comp=Z,10µm,8.3s						
LZH				LR	LR		
	comp=Z,7µm,9.8s						
LZH				LR	LR		
	comp=Z,11µm,9.5s						
UBPT	**Khong Chiam**	**12.89**	**137**	P	**Pn**	**02 14 14.2**	**-0.5**
	comp=Z,50nm,1.3s,comp=Z,1µm						
CHLP	**Challavanipeta**	**13.14**	**243**	*e*P	**Pn**	**02 14 17.1**	**-1.0**
QIZ	**Qiongzhong**	**13.82**	**113**	P	**Pn**	**02 14 26.3**	**-1.1**
QIZ				S	**Sn**	**02 17 00.0**	**-0.2**
QIZ				pmax	pmax		
	comp=Z,17nm,1.2s						
QIZ				LR	LR		
	comp=Z,5µm,12.3s						
QIZ				LR	LR		
	comp=Z,3µm,11.3s						
QIZ				LR	LR		
	comp=Z,2µm,9.8s						
XAN	**Xi’an**	**14.14**	**48**	P	**Pn**	**02 14 27.9**	**-3.8**
XAN				PP	**PnPn**	**02 14 41.4**	**+1.7**
XAN				pmax	pmax		
	comp=Z,25nm,1.0s						
XAN				pmax	pmax		
	comp=Z,150nm,3.7s						
XAN				LR	LR		
	comp=Z,5µm,8.8s						
XAN				LR	LR		
	comp=Z,3µm,9.2s						
XAN				LR	LR		
	comp=Z,4µm,11.9s						
GTA	**Gaotai**	**14.66**	**11**	*e*P	**Pn**	**02 14 39.9**	**+1.1**
GTA				pP	P	02 14 44.3	-0.6
GTA				sP		02 14 46.8	
GTA				S	**Sn**	**02 17 23.1**	**+2.5**
GTA				sS	S	02 17 29.3	-10
GTA				SS	**SnSn**	**02 17 39.3**	**+5.8**
GTA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,85nm,4.8s						
GTA				LR	LR		
	comp=Z,5µm,9.7s						
GTA				LR	LR		
	comp=Z,9µm,14.4s						
GTA				LR	LR		
	comp=Z,6µm,11.0s						
PVM	**Polavaram**	**15.77**	**244**	*e*P	**P**	**02 14 56.9**	**-0.3**
NGP	**Nagpur**	**16.40**	**260**	*e*P	**Pn**	**02 14 59.5**	**-2.1**
WHN	**Wuhan**	**16.83**	**67**	⇑*i*P	**Pn**	**02 15 05.0**	**-1.9**
WHN				pP	**pP**	**02 15 12.6**	**-2.8**
WHN				sP	**sP**	**02 15 17.5**	**-0.9**
WHN				pmax	pmax		
	comp=Z,220nm,1.2s						
WHN				LR	LR		
	comp=Z,5µm,7.0s						
WHN				LR	LR		
	comp=Z,6µm,7.1s						
WHN				LR	LR		
	comp=Z,6µm,8.2s						
RPR	**Rampur**	**16.98**	**252**	*e*P	**P**	**02 15 10.6**	**-0.1**
DDI	**Dehra Dun**	**17.07**	**292**	*e*P	**Pn**	**02 15 08.8**	**-1.2**
TRTT	**Trang**	**17.36**	**169**	P	**P**	**02 15 17.6**	**+2.8**
	comp=Z,11nm,1.3s						
BHPL	**Bhopal**	**17.39**	**268**	*e*P	**Pn**	**02 15 11.4**	**-2.7**
NDI	**New Delhi**	**17.49**	**286**	*e*P	**P**	**02 15 16.0**	**-0.2**
SRSP	**Sriramsagar**	**17.78**	**254**	*e*P	**Pn**	**02 15 17.4**	**-1.4**
ADKI	**Addanki**	**17.86**	**242**	*e*P	**P**	**02 15 21.7**	**+1.3**
SMLA	**Simla**	**18.01**	**294**	*e*x	**Pn**	**02 15 17.4**	**-4.2**
SMLA				*e*x	x	02 18 30.9	
NJS	**Nagarjunasagar**	**18.03**	**245**	*e*P	**P**	**02 15 22.5**	**+0.2**
HYB	**Hyderabad**	**18.24**	**249**	*i* P	**P**	**02 15 27.0**	**+2.4**
HYB				*e*S	**S**	**02 18 53.0**	**+0.7**
HYBB	**Hyderabad (bro**	**18.24**	**249**	*e*P	**P**	**02 15 24.8**	**+0.1**
SRLM	**Srisailam**	**18.60**	**245**	*e*P	**P**	**02 15 28.2**	**-0.4**
TIY	**Taiyuan**	**18.64**	**43**	*e*P	**P**	**02 15 28.1**	**-0.8**
TIY				S	**S**	**02 18 58.8**	**-1.0**
TIY				pmax	pmax		
	comp=Z,26nm,0.8s						
TIY				pmax	pmax		
	comp=Z,310nm,3.5s						
TIY				LR	LR		
	comp=Z,2µm,10.5s						
TIY				LR	LR		
	comp=Z,1µm,8.2s						
TIY				LR	LR		
	comp=Z,790nm,8.2s						
DHRM	**DHARAMSHALA**	**19.03**	**297**	*e*P	**P**	**02 15 31.5**	**-2.0**
DHRM				*e*x	x	02 18 53.9	
SKHT	**Srikalahasti**	**19.29**	**238**	*e*P	**Pn**	**02 15 37.0**	**-0.1**
BSI	**Banda Aceh**	**19.42**	**183**	P	Pn	02 15 47.4	+8.6
LHMI	**Lhok Sumawe**	**19.67**	**178**	P	**Pn**	**02 15 41.8**	**+0.1**
LHMI	**Lhok Sumawe**	**19.67**	**178**	*e*P	**P**	**02 15 40.0**	**-0.2**
	comp=Z,177nm,0.9s						
KULM	**Kulim**	**20.02**	**167**	*e*P	**P**	**02 15 42.7**	**-1.4**
	comp=Z,58nm,1.2s						
WMQ	**Urumqi**	**20.07**	**341**	P	Pn	02 15 45.9	-0.5
WMQ				sP	sP	02 15 52.9	-1.2
WMQ				S	**S**	**02 19 24.9**	**-4.2**
WMQ				sS	Sn	02 19 31.5	-0.1
WMQ				pmax	pmax		
	comp=Z,300nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,2µm,4.5s						
WMQ				LR	LR		
	comp=Z,5µm,11.5s						
WMQ				LR	LR		
	comp=Z,6µm,15.9s						
WMQ				LR	LR		
	comp=Z,2µm,21.1s						
QZH	**Quanzhou**	**20.14**	**85**	*e*P	Pn	02 15 46.8	-0.4
QZH				S	Sn	02 19 33.0	-0.3
QZH				LR	LR		
	comp=Z,3µm,9.0s						
QZH				LR	LR		
	comp=Z,4µm,9.6s						
HHC	**Hu-ho-hao-te**	**20.25**	**35**	*e*P	**P**	**02 15 47.4**	**+0.8**
HHC				pP	pP	02 15 51.1	-2.0
HHC				PP	**PnPn**	**02 16 02.3**	**-1.3**
HHC				S	**S**	**02 19 28.5**	**-4.3**
HHC				sS	Sn	02 19 32.9	-3.2
HHC				SS	**SnSn**	**02 19 57.4**	**+6.6**
HHC				pmax	pmax		
	comp=Z,70nm,0.9s						
HHC				pmax	pmax		
	comp=Z,240nm,5.1s						
HHC				LR	LR		
	comp=Z,3µm,9.6s						
HHC				LR	LR		
	comp=Z,3µm,10.4s						
HHC				LR	LR		
	comp=Z,3µm,10.6s						
URV	**Uravakonda**	**20.54**	**244**	*e*P	**P**	**02 15 49.6**	**-0.2**
MLSI	**Meulaboh, Aceh**	**20.61**	**180**	P	Pn	02 15 55.5	+2.6
IPM	**Ipoh**	**20.89**	**167**	*e*P	**P**	**02 15 51.9**	**-1.6**
	comp=Z,38nm,1.2s						
NJ2	**Nanjing**	**20.94**	**65**	*e*P	**P**	**02 15 54.5**	**+0.6**
NJ2				S	**S**	**02 19 48.4**	**+2.2**
NJ2				pmax	pmax		
	comp=Z,86nm,0.9s						
NJ2				LR	LR		
	comp=Z,6µm,14.4s						
NJ2				LR	LR		
	comp=Z,2µm,12.2s						
NJ2				LR	LR		
	comp=Z,2µm,8.9s						
TIA	**Tai’an**	**21.02**	**53**	P	**P**	**02 15 54.8**	**0.0**
TIA				pmax	pmax		
	comp=Z,130nm,1.1s						
TIA				pmax	pmax		
	comp=Z,440nm,2.8s						
TIA				LR	LR		
	comp=Z,1µm,16.9s						
TIA				LR	LR		
	comp=Z,2µm,12.3s						
TIA				LR	LR		
	comp=Z,3µm,14.6s						
KCSI	**Kotacane, Aceh**	**21.40**	**176**	P	**P**	**02 15 59.8**	**+0.8**
TSI	**Tuntungan**	**21.48**	**174**	P	**P**	**02 16 00.6**	**+0.8**
POO	**Poona**	**21.88**	**257**	*e*P	**P**	**02 16 02.0**	**-2.2**
PSI	**Prapat**	**22.21**	**173**	*e*P	**P**	**02 16 07.7**	**-0.1**
	comp=Z,51nm,1.2s						
PSI	**Prapat**	**22.21**	**173**	*e*P	**P**	**02 16 07.7**	**-0.1**
PSI				pmax	pmax		
	comp=Z,51nm,1.2s						
BJT	**Baijiatuau**	**22.35**	**43**	*e*P	**P**	**02 16 08.6**	**-0.4**
	comp=Z,161nm,1.3s						
BJT				LR	LR		
	comp=Z,1µm,19.0s						
BJT	**Baijiatuau**	**22.35**	**43**	*e*P	**P**	**02 16 08.6**	**-0.4**
BJT				pmax	pmax		
	comp=Z,161nm,1.3s						
BJT				MLR	MLR		
	comp=Z,1µm,19.0s						
BJI	**Beijing**	**22.36**	**43**	⇓*e*P	**P**	**02 16 08.9**	**-0.3**
BJI				S	**S**	**02 20 15.3**	**+1.5**
BJI				pmax	pmax		
	comp=Z,45nm,1.4s						
BJI				LR	LR		
	comp=Z,2µm,13.9s						
BJI				LR	LR		
	comp=Z,2µm,12.0s						
KSH	**Kashi**	**22.45**	**315**	P	**P**	**02 16 10.4**	**+0.1**
KSH				sP	pP	02 16 17.4	+0.5
KSH				PP	**PnPn**	**02 16 38.8**	**+5.1**
KSH				PP	sP	02 16 40.1	+20
KSH				S	**S**	**02 20 10.3**	**-5.4**
KSH				PcS	**PcS**	**02 23 39.8**	**-3.3**
KSH				pmax	pmax		
	comp=Z,150nm,1.4s						
KSH				pmax	pmax		
	comp=Z,430nm,5.2s						
KSH				LR	LR		
	comp=Z,850nm,11.2s						
KSH				LR	LR		
	comp=Z,1µm,11.0s						
KSH				LR	LR		
	comp=Z,410nm,14.0s						
SSE	**Sheshan**	**22.70**	**69**	P	**P**	**02 16 13.3**	**+0.5**
SSE				S	**S**	**02 20 19.3**	**-0.6**
SSE				pmax	pmax		
	comp=Z,32nm,0.7s						
SSE				pmax	pmax		
	comp=Z,120nm,3.1s						
SSE				LR	LR		
	comp=Z,2µm,21.4s						
SSE				LR	LR		
	comp=Z,630nm,20.2s						
PDGK	**Podgornoye**	**22.93**	**327**	P	**P**	**02 16 15.2**	**-0.2**
PDGK				pmax	pmax		
	comp=Z,130nm,1.0s						
NACB	**Ninganchiao**	**22.94**	**87**	*e*P	**P**	**02 16 16.9**	**+1.5**
	comp=Z,60nm,1.0s						
PALK	**Pallekele**	**23.14**	**223**	P	**P**	**02 16 18.9**	**+1.3**
	comp=Z,27nm,0.9s,baz=111,slow=0.9,SNR=6.4						
PALK				LR	LR	02 27 16.4	
	comp=Z,832nm,18.9s,baz=121,slow=42						
PALK	**Pallekele**	**23.14**	**223**	*e*P	**P**	**02 16 17.0**	**-0.6**
	comp=Z,55nm,1.3s						
PALK	**Pallekele**	**23.14**	**223**	P	**P**	**02 16 19.5**	**+2.0**
PALK	**Pallekele**	**23.14**	**223**	P	**P**	**02 16 19.5**	**+2.0**
PALK	**Pallekele**	**23.14**	**223**	*e*P	**P**	**02 16 17.0**	**-0.6**
PALK				pmax	pmax		
	comp=Z,55nm,1.3s						
KDJ	**Kajisay**	**23.32**	**322**	*e*P	**P**	**02 16 18.9**	**-0.4**
	comp=Z,148nm,1.1s						
KDJ	**Kajisay**	**23.32**	**322**	*e*P	**P**	**02 16 18.9**	**-0.4**
KDJ				pmax	pmax		
	comp=Z,148nm,1.1s						
GSI	**Gunungsitoli**	**23.59**	**177**	P	**P**	**02 16 22.7**	**+0.8**
ULHL	**Ulahol**	**23.93**	**321**	P	**P**	**02 16 25.3**	**+0.1**
	SNR=29						
SONM	**Songino Array**	**24.13**	**17**	P	**P**	**02 16 26.2**	**-0.8**
	comp=Z,17nm,1.0s,baz=201,slow=11,SNR=44						
SONM				LR	LR	02 26 41.2	
	comp=Z,1µm,18.6s,baz=199,slow=39						
SONA1	**Songino Array**	**24.14**	**17**	*e*P	**P**	**02 16 25.4**	**-1.7**
MNSI	**Mandailing Nat**	**24.26**	**172**	P	**P**	**02 16 26.5**	**-1.8**
SFK	**Sufi-Kurgan**	**24.32**	**314**	P	**P**	**02 16 28.7**	**-0.3**
SFK				pmax	pmax		
	comp=Z,143nm,1.0s						
ULN	**Ulaanbaatar**	**24.33**	**18**	*e*P	**P**	**02 16 27.5**	**-1.4**
	comp=Z,26nm,0.8s						
ULN				LR	LR		
	comp=Z,606nm,20.0s						
ULN	**Ulaanbaatar**	**24.33**	**18**	P	**P**	**02 16 28.2**	**-0.7**
	SNR=18						
ULN	**Ulaanbaatar**	**24.33**	**18**	⇑*i*P	**P**	**02 16 28.0**	**-0.9**
ULN				pmax	pmax		
	comp=Z,16nm,0.8s						
KZA	**Kyzart**	**24.40**	**319**	P	**P**	**02 16 31.2**	**+1.3**
	SNR=11						
MK01	**Makanchi Array**	**24.46**	**336**	*e*P	**P**	**02 16 29.7**	**-0.2**
MK31	**Makanchi Array**	**24.49**	**336**	*e*P	**P**	**02 16 29.6**	**-0.5**
MK31	**Makanchi Array**	**24.49**	**336**	*e*P	**P**	**02 16 30.0**	**-0.1**
MK31				pmax	pmax		
	comp=Z,100nm,0.8s						
MKAR	**Makanchi Array**	**24.49**	**336**	P	**P**	**02 16 30.4**	**+0.2**
	comp=Z,68nm,0.7s,baz=147,slow=7.7,SNR=125						
MKAR				LR	LR	02 27 16.3	
	comp=Z,902nm,20.8s,baz=148,slow=40						
MAKZ	**Makanchi**	**24.61**	**336**	*e*P	**P**	**02 16 31.6**	**+0.3**
	comp=Z,72nm,0.9s						
MAKZ	**Makanchi**	**24.61**	**336**	*e*P	**P**	**02 16 31.6**	**+0.3**
MAKZ				pmax	pmax		
	comp=Z,72nm,0.9s						
TKM2	**Tokmak 2**	**24.72**	**321**	P	**P**	**02 16 33.1**	**+0.6**
	SNR=28						
TKM2	**Tokmak 2**	**24.72**	**321**	P	**P**	**02 16 32.1**	**-0.4**
TKM2				pmax	pmax		
	comp=Z,62nm,1.4s						
KBK	**Karagaybulak**	**24.93**	**320**	P	**P**	**02 16 35.0**	**+0.6**
	SNR=25						
AAK	**Ala-Archa**	**25.18**	**320**	P	**P**	**02 16 37.4**	**+0.8**
	comp=Z,24nm,0.8s,baz=126,slow=6.6,SNR=30						
AAK	**Ala-Archa**	**25.18**	**320**	P	**P**	**02 16 37.7**	**+1.1**
	SNR=13						
AAK	**Ala-Archa**	**25.18**	**320**	*e*P	**P**	**02 16 37.0**	**+0.4**
	comp=Z,67nm,1.1s						
AAK	**Ala-Archa**	**25.18**	**320**	P	**P**	**02 16 36.7**	**+0.1**
AAK				pmax	pmax		
	comp=Z,57nm,1.1s						
FRU	**Bishkek**	**25.23**	**320**	*e*P	**P**	**02 16 37.5**	**+0.6**
FRU				*e*		02 17 12.0	
FRU				*e*		02 20 15.0	
FRU				pmax	pmax		

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      comp=Z,72nm,1.6s
CHMS  Chumysh          25.25 321   P      P       02 16 37.1  0.0
      SNR=16
AML   Almayashu        25.36 318   P      P       02 16 39.3 +0.7
      SNR=27
DL2   Dalian           25.41  51   P      P       02 16 43.3 +4.8
DL2                                S      S       02 21 15.6  +12
DL2                                pmax   pmax
      comp=Z,78nm,0.8s
DL2                                LR     LR
      comp=N,970nm,11.6s
DL2                                LR     LR
      comp=E,780nm,10.3s
DL2                                LR     LR
      comp=Z,1µm,11.1s
KBL   Kabul            25.50 298  eP      P       02 16 39.5 -0.1
      comp=Z,130nm,1.0s
KBL   Kabul            25.50 298  eP      P       02 16 39.5 -0.1
KBL                                pmax   pmax
      comp=Z,131nm,1.0s
TGY   Tagaytay City    25.51 111   LR     LR      02 26 33.6
      comp=Z,721nm,18.3s,baz=353,slow=36
USP   Ospenovka        25.56 321   P      P       02 16 40.0 +0.1
      SNR=32
EKS2  Erkin-Say        25.62 319   P      P       02 16 41.1 +0.5
      SNR=58
DGZ   Jazzator, Alta   25.62 346  i P     P       02 16 41.0 +0.4
DGZ                                pmax   pmax
      comp=Z,20nm,0.7s
ZAK   Zakamensk        25.90  10  eP      P       02 16 43.0  0.0
ZAK                                pmax   pmax
      comp=Z,49nm,1.4s
HVS   Khovu-Aksy       26.18 356⇓eP      P       02 16 45.0 -0.5
HVS                                pmax   pmax
      comp=Z,130nm,0.8s
MNAS  Manas            26.29 317   P      P       02 16 46.6 -0.1
MNAS                               pmax   pmax
      comp=Z,65nm,1.0s
MOY   Mondy            26.86   6  eP      P       02 16 52.1 +0.4
MOY                                pmax   pmax
      comp=Z,60nm,2.3s
KSM   Kuching          26.98 148  eP      P       02 16 52.1 -0.8
      comp=Z,73nm,1.1s
SBUM  Sibu             27.13 143  eP      P       02 16 54.1 -0.1
      comp=Z,15nm,1.0s
TLY   Talaya           27.21  10  eP      P       02 16 54.6 -0.1
      comp=Z,16nm,1.1s
TLY   Talaya           27.21  10  eP      P       02 16 54.8 +0.1
TLY                                pmax   pmax
      comp=Z,17nm,1.5s
TLY                                MLR    MLR
      comp=Z,492nm,11.0s
KK31  Karatay Array    27.85 317  eP      P       02 17 00.1 -0.5
KK31  Karatay Array    27.85 317  eP      P       02 17 00.1 -0.5
KKAR  Karatay Array    27.85 317  eP      P       02 16 59.6 -1.0
KKAR  Karatay Array    27.85 317  eP      P       02 16 59.6 -1.0
JOW   Kunigami         28.71  79   LR     LR      02 30 13.2
      comp=Z,806nm,19.4s,baz=244,slow=40
STKI  Sintang          28.77 147   P      P       02 17 14.6 +5.7
TJN   Taejon           28.84  59  eP      P       02 17 08.6 -0.8
KURBB Kurchatov Arra   29.05 336   P      P       02 17 10.8 -0.3
      comp=Z,33nm,0.6s,baz=148,slow=9.1,SNR=48
KURK  Kurchatov        29.10 336  eP      P       02 17 10.9 -0.6
KURK  Kurchatov        29.10 336   P      P       02 17 13.1 +1.6
      SNR=10
KURK  Kurchatov        29.10 336ceP      P       02 17 12.2 +0.7
KURK                               pmax   pmax
      comp=Z,41nm,0.7s
KS15  Wonju Array Si   29.52  58  eP      P       02 17 14.9 -0.5
KSAR  Wonju Array Be   29.52  58   P      P       02 17 13.5 -1.9
KSAR  Wonju Array Be   29.52  58   P      P       02 17 13.5 -1.9
KS01  Wonju Array Si   29.53  58  eP      P       02 17 14.4 -1.1
KSRS  Korea Array      29.55  58   P      P       02 17 13.5 -2.2
      comp=Z,2.0nm,0.7s,baz=247,slow=8.9,SNR=11
KSRS                               LR     LR      02 29 57.3
      comp=Z,559nm,19.8s,baz=250,slow=38
ZAA0  Zalesovo Array   30.18 346  eP      P       02 17 21.0  0.0
      comp=Z,48nm,1.0s
ZALV  Zalesovo Beam    30.18 346   P      P       02 17 20.9 -0.1
      comp=Z,35nm,0.7s,baz=169,slow=8.4,SNR=44
ZALV                               LR     LR      02 29 23.5
      comp=Z,354nm,19.0s,baz=229,slow=36
ZALV  Zalesovo Beam    30.18 346  eP      P       02 17 20.4 -0.6
CN2   Changchun        30.21  44  eP      P       02 17 20.0 -1.5
CN2                               esP     pP      02 17 27.1 -1.5
CN2                                PcP    PcP     02 20 20.6 -1.4
CN2                               eS      S       02 22 17.8 -1.8
CN2                               eSS     SnSn    02 23 55.8 +1.8
CN2                                pmax   pmax
      comp=Z,10.0nm,1.7s
CN2                                pmax   pmax
      comp=Z,200nm,3.0s
CN2                                LR     LR
      comp=Z,1µm,16.0s
CN2                                LR     LR
      comp=Z,650nm,16.0s
CN2                                LR     LR
      comp=Z,690nm,17.0s
KRAR  Krasnoyarsk      31.09 356  eP      P       02 17 28.4 -0.6
JNU   Nakatsue         31.11  67   LR     LR      02 30 03.3
      comp=Z,850nm,18.4s,baz=290,slow=37
NVS   Novosibirsk      31.36 345⇑iP      P       02 17 31.1 -0.3
NVS                               eS      S       02 22 36.0 -1.1
NVS                                pmax   pmax
      comp=Z,75nm,1.0s
NVS                                pmax   pmax
      comp=N,58nm,0.8s
NVS                                pmax   pmax
      comp=E,50nm,0.8s
NVS                                smax   smax
      comp=N,22nm,1.9s
NVS                                smax   smax
      comp=E,30nm,1.7s
DAV   Davao City (W)   33.12 118   LR     LR      02 32 32.0
      comp=E,419nm,20.8s,baz=332,slow=39
MDJ   Mudanjiang       33.24  46   P      P       02 17 46.1 -2.0
MDJ                                pP     pP      02 17 50.4 -4.8
MDJ                                PP     PnPn    02 18 54.0 -4.5
MDJ                                S      S       02 23 03.1 -3.7
MDJ                                ScS    ScS     02 28 15.3 +1.6
MDJ                                pmax   pmax
      comp=E,27nm,1.3s
MDJ                                LR     LR
      comp=E,710nm,10.4s
MDJ                                LR     LR
      comp=E,1µm,11.2s
MDJ                                LR     LR
      comp=E,1µm,11.9s
BVA0  Borovoye Array   34.15 332   P      P       02 17 55.8 -0.1
BVA0                               pmax   pmax
      comp=Z,26nm,0.9s
BVAR  Borovoye Array   34.15 332   P      P       02 17 56.7 +0.8
      comp=Z,28nm,0.7s,baz=136,slow=11,SNR=32
BVAR                               LR     LR      02 33 21.8
      comp=Z,528nm,19.9s,baz=133,slow=39
BRVK  Borovoye         34.21 332  eP      P       02 17 56.5 +0.1
BRVK  Borovoye         34.21 332   P      P       02 17 57.2 +0.7
      SNR=16
BRVK  Borovoye         34.21 332⇓iP      P       02 17 56.8 +0.4
BRVK                              e               02 19 11.2
BRVK                              i               02 20 33.7
BRVK                               pmax   pmax
      comp=Z,38nm,1.0s
WSAR  Wadi Sarin       34.43 275   LR     LR      02 34 03.9
      comp=Z,378nm,18.9s,baz=109,slow=40
USRK  Ussuriysk Ar.    34.65  47   P      P       02 17 59.4 -0.9
      comp=Z,12nm,0.8s,baz=254,slow=8.6
USRK                               LR     LR      02 34 52.8
      comp=Z,106nm,20.0s,baz=222,slow=41
GEYT  Alibeck          34.85 301   P      P       02 18 02.6 +0.4
      comp=Z,26nm,0.9s,baz=208,slow=12,SNR=36
GEYT                               LR     LR      02 34 15.2
      comp=Z,468nm,18.2s,baz=225,slow=40
GYA0B ALIBECK ARRAY    34.85 301  eP      P       02 18 02.2  0.0
      comp=Z,54nm,1.0s
BANOM Banah            36.10 280   P      P       02 18 15.3 +2.2
BANOM Banah            36.10 280   P      P       02 18 15.3 +2.2
MDH   Madha            36.19 279   P      P       02 18 15.3 +1.4
MDH   Madha            36.19 279   P      P       02 18 15.3 +1.4
MSFE  Esma-Masafi      36.31 279   P      P       02 18 16.4 +1.5
MSFE  Esma-Masafi      36.31 279   P      P       02 18 16.4 +1.5
UOSS  Minazif          36.33 279   P      P       02 18 17.8 +2.8
UOSS  Minazif          36.33 279   P      P       02 18 17.8 +2.8
INU   Inuyama          36.39  64  eP      P       02 18 16.6 +1.2
      comp=Z,28nm,1.1s
HATD  Hatta, Dubai     36.41 278  i P     P       02 18 19.5 +3.8
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      SNR=8.0
HATD  Hatta, Dubai     36.41 278  i P     P       02 18 19.5 +3.8
      SNR=8.0
ASHO  Ashiyiah         36.50 278  i P     P       02 18 17.2 +0.7
      SNR=11
ASHO  Ashiyiah         36.50 278  i P     P       02 18 17.2 +0.7
      SNR=11
KLR   Kul'dur          36.64  39   LR     LR      02 35 14.6
      comp=Z,45nm,18.1s,baz=242,slow=40
KLR   Kul'dur          36.64  39⇑iP      P       02 18 16.4 -0.9
ZEA   Zeya             36.80  31  eP      P       02 18 18.4 -0.2
ZEA                                pmax   pmax
      comp=Z,36nm,1.2s
ZEA                                MLR    MLR
      comp=Z,1µm,15.0s
ZEA                                MLR    MLR
      comp=E,800nm,12.0s
ASUD  Al Ashush, Dub   37.16 278   P      P       02 18 26.2 +4.1
ASUD  Al Ashush, Dub   37.16 278   P      P       02 18 26.2 +4.1
AB31  Akbulak array    37.27 320   P      P       02 18 22.5 -0.2
AB31                               pmax   pmax
      comp=Z,30nm,0.7s
ABKAR Akbulak array    37.27 320  eP      P       02 18 22.7  0.0
MJB9  Matsu-Tunnel     37.47  62  eP      P       02 18 23.7 -0.9
      comp=Z,20nm,0.8s
MJB9                              eS      S       02 24 05.7 -6.3
MAJO  Matsushiro       37.47  62  eP      P       02 18 23.6 -1.1
      comp=Z,19nm,0.8s
MAJO                               LR     LR
      comp=Z,459nm,21.0s
MAJO  Matsushiro       37.47  62c iP      P       02 18 23.5 -1.1
MAJO                              i *SP   pP      02 18 29.8 -1.9
MAJO                               pmax   pmax
      comp=Z,26nm,1.1s
MAT   Matsushiro       37.47  62   P      P       02 18 22.7 -1.9
MAT                                S      S       02 24 14.2 +2.2
MJAR  Matsushiro Arr   37.47  62   P      P       02 18 23.9 -0.7
      comp=Z,11nm,1.0s,baz=260,slow=8.6,SNR=14
MJAR                               LR     LR      02 34 11.9
      comp=Z,441nm,20.7s,baz=270,slow=37
JHJ   Hachijo jima 2   38.57  68   LR     LR      02 34 13.9
      comp=Z,402nm,20.3s,baz=275,slow=36
AKTO  Aktyubinsk       38.91 321   P      P       02 18 37.5 +0.9
      comp=Z,12nm,0.9s,baz=101,slow=11,SNR=19
AKTO                               LR     LR      02 35 52.5
      comp=Z,647nm,21.0s,baz=131,slow=38
GRNR  Gornyy           40.02  39  eP      P       02 18 46.9 +1.1
GRNR                               pmax   pmax
      comp=Z,42nm,1.0s
SVE   Sverdlovsk       40.89 331ceP      P       02 18 53.9 +1.0
SVE                                pmax   pmax
      comp=Z,72nm,0.8s
SVE                                MLR    MLR
      comp=Z,534nm,17.0s
ARU   Arti             41.61 329   LR     LR      02 38 24.4
      comp=Z,526nm,19.9s,baz=116,slow=39
ARU   Arti             41.61 329  eP      P       02 18 58.5 -0.3
      comp=Z,39nm,1.0s
ARU   Arti             41.61 329c iP      P       02 18 59.1 +0.3
ARU                               e               02 20 36.4
ARU                                               02 20 57.5
ARU                                PPP    PPP     02 21 06.9
ARU                                S      S       02 25 17.2 +3.6
ARU                                pmax   pmax
      comp=Z,55nm,1.7s
ARU                                MLR    MLR
      comp=Z,532nm,20.0s
ASAJ  Asahikawa        41.95  51   P      P       02 19 00.7 -1.1
      comp=Z,10nm,0.8s,baz=305,slow=8.2,SNR=8.2
ASAJ                               LR     LR      02 37 42.9
      comp=Z,295nm,19.1s,baz=301,slow=38
ASAJ  Asahikawa        41.95  51  eP      P       02 19 01.9 +0.2
      comp=Z,42nm,0.9s
ERM   Erimo            41.98  54  eP      P       02 19 00.5 -1.5
ERM                                pmax   pmax
      comp=Z,14nm,0.8s
YSS   Yuzh-Sakhalins   42.69  47  eP      P       02 19 06.6 -1.1
      comp=Z,73nm,1.3s
YSS                                LR     LR
      comp=Z,299nm,20.0s
YSS   Yuzh-Sakhalins   42.69  47κeP      P       02 19 06.9 -0.8
YSS                               e*SP    pP      02 19 14.5 -0.4
YSS                               ePPP    PPP     02 20 58.0
YSS                               eS      S       02 25 29.1 -0.6
YSS                                pmax   pmax
      comp=Z,20nm,1.4s
YSS                                pmax   pmax
      comp=Z,100nm,3.7s
YSS                                MLR    MLR
      comp=Z,520nm,15.0s
YSS                                MLR    MLR
      comp=N,320nm,16.0s
YSS                                MLR    MLR
      comp=E,430nm,13.0s
YAK   Yakutsk          43.26  22   LR     LR      02 38 57.0
      comp=E,418nm,21.7s,baz=274,slow=39
YAK   Yakutsk          43.26  22  eP      P       02 19 13.6 +1.5
YAK                               e*PP    pP      02 19 19.2 -0.2
YAK                               e               02 21 04.0
YAK                               ePPP    PPP     02 21 25.5
YAK                               eS      S       02 25 42.6 +4.9
YAK                               e*SS    sS      02 25 54.6 +5.0
YAK                               eSS     SnSn    02 29 02.9 -6.0
YAK                                pmax   pmax
      comp=Z,12nm,1.0s
YAK                                pmax   pmax
      comp=E,5.0nm,1.2s
YAK                                pmax   pmax
      comp=N,2.0nm,1.2s
YAK                                smax   smax
      comp=N,50nm,2.8s
YAK                                smax   smax
      comp=E,16nm,1.8s
YAK                                MLR    MLR
      comp=Z,617nm,11.0s
YAK                                MLR    MLR
      comp=N,490nm,13.0s
YAK                                MLR    MLR
      comp=E,391nm,10.0s
TYV   Tymovskoe        43.73  41  eP      P       02 19 13.7 -2.4
TYV                                pmax   pmax
      comp=Z,15nm,1.6s
SOEI  Soe              43.96 138  eP      P       02 19 19.5 +1.0
      comp=Z,93nm,1.0s
GROC  Groznyy          44.93 307  eP      P       02 19 26.6 +0.8
GROC                              e               02 21 06.9
GROC                              eS      S       02 26 06.7 +4.1
GROC                               pmax   pmax
      comp=Z,163nm,1.4s
GNI   Garni            45.45 302   LR     LR      02 42 55.0
      comp=Z,203nm,20.6s,baz=82,slow=42
GNI   Garni            45.45 302  eP      P       02 19 30.8 +0.6
GNI   Garni            45.45 302   P      P       02 19 32.5 +2.3
      SNR=15
GNI   Garni            45.45 302  i P     P       02 19 31.5 +1.3
      SNR=12
GNI   Garni            45.45 302  i P     P       02 19 31.5 +1.3
      SNR=12
GNI   Garni            45.45 302d iP      P       02 19 31.0 +0.8
GNI                                pmax   pmax
      comp=Z,134nm,1.0s
TBLG  Delisi           45.56 305  eP      P       02 19 30.8 -0.1
      comp=Z,18nm,0.8s
TBLG  Delisi           45.56 305  eP      P       02 19 30.8 -0.1
TBLG                               pmax   pmax
      comp=Z,18nm,0.8s
RAYN  Ar Rayn          46.19 279  eP      P       02 19 36.0 -0.1
      comp=Z,40nm,1.1s
RAYN                               LR     LR
      comp=Z,557nm,19.0s
RAYN  Ar Rayn          46.19 279  i P     P       02 19 36.0 -0.1
      SNR=29
RAYN  Ar Rayn          46.19 279  i P     P       02 19 36.0 -0.1
      SNR=29
RAYN  Ar Rayn          46.19 279  eP      P       02 19 36.0 -0.1
RAYN                               pmax   pmax
      comp=Z,40nm,1.1s
RAYN                               MLR    MLR
      comp=Z,557nm,19.0s
ZEI   Tsey             46.27 306  eP      P       02 19 36.7  0.0
ZEI                                pmax   pmax
      comp=Z,29nm,0.6s
AKH   Akhalkalaki      46.47 304⇓iP      P       02 19 39.3 +1.1
AKH   Akhalkalaki      46.47 304  eP      P       02 19 39.1 +0.9
      comp=Z,45nm,0.9s
AKH   Akhalkalaki      46.47 304  eP      P       02 19 39.1 +0.9
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AKH                                pmax   pmax
      comp=Z,45nm,0.9s
NCK   Nalchik          46.56 307  eP      P       02 19 38.0 -0.7
NCK                                pmax   pmax
      comp=Z,15nm,0.7s
GUMO  Guam             46.93  95   LR     LR      02 38 58.4
      comp=Z,168nm,20.0s,baz=300,slow=36
KBZ   Khabaz           47.08 307   P      P       02 19 43.3 +0.5
      comp=Z,4.1nm,0.9s,baz=68,slow=7.2,SNR=7.2
KBZ                                LR     LR      02 42 52.1
      comp=Z,313nm,21.5s,baz=87,slow=40
GOF   Gofitskoye       47.12 309⇑iP      P       02 19 43.9 +0.9
GOF                               eS      S       02 26 40.9 +6.9
GOF                                pmax   pmax
      comp=E,110nm,1.1s
NEY   Neytrino         47.17 307  eP      P       02 19 43.0 -0.7
NEY                                pmax   pmax
      comp=Z,5.0nm,0.6s
KIV   Kislovodsk       47.26 308d iP      P       02 19 44.0 -0.3
KIV                               e               02 21 12.8
KIV                               e               02 21 34.7
KIV                               i S     S       02 26 42.2 +6.0
KIV                                pmax   pmax
      comp=Z,31nm,1.0s
KIV                                MLR    MLR
      comp=Z,669nm,24.0s
VRH   Novokhopyorsk    48.94 317  eP      P       02 19 55.5 -1.5
VRH                               eS      S       02 26 59.0 -0.5
VRH                                pmax   pmax
      comp=Z,20nm,1.1s
VRH                                smax   smax
      comp=N,60nm,1.6s
VRH                                MLR    MLR
      comp=Z,740nm,27.0s
SOC   Sochi            49.38 307  eP      P       02 20 00.7 +0.2
SOC                               e               02 21 56.8
SOC                               eS      S       02 27 06.1 +0.1
SOC                               eSS     SS      02 30 37.3 -0.3
SOC                                pmax   pmax
      comp=Z,61nm,1.2s
SOC                                MLR    MLR
      comp=Z,299nm,19.0s
DAMY  Dhamar           49.75 268  eP      P       02 20 03.5 -0.6
      comp=Z,67nm,1.3s
PRGR  Permogore        49.95 331  eP      P       02 20 04.9 +0.3
PRGR                              eS      S       02 27 17.9 +4.4
PRGR                               pmax   pmax
      comp=Z,36nm,0.8s
TIXI  Tiksi            50.13  13   P      P       02 20 04.5 -1.3
      comp=Z,7.9nm,0.4s,baz=209,slow=4.7,SNR=5.4
TIXI                               LR     LR      02 44 20.2
      comp=Z,346nm,19.1s,baz=270,slow=40
TIXI  Tiksi            50.13  13  eP      P       02 20 04.6 -1.1
      comp=Z,6.8nm,0.4s
VORD  Divnogorie       50.41 316  eP      P       02 20 08.1 -0.1
VORD                               pmax   pmax
      comp=Z,9.0nm,1.0s
VSR   Storozhevoye     50.52 317  eP      P       02 20 08.4 -0.7
VSR                               eS      S       02 27 19.5 -2.2
VSR                                pmax   pmax
      comp=Z,20nm,1.1s
VSR                                smax   smax
      comp=N,50nm,1.7s
VSR                                MLR    MLR
      comp=Z,610nm,21.0s
LPSR  Galich'ya Gora   50.89 319  eP      P       02 20 10.9 -0.9
LPSR                              eS      S       02 27 22.4 -4.4
LPSR                               pmax   pmax
      comp=Z,20nm,0.8s
LPSR                               smax   smax
      comp=N,20nm,1.4s
MA2   Magadan          50.90  32   LR     LR      02 44 07.2
      comp=N,425nm,18.4s,baz=252,slow=39
MA2   Magadan          50.90  32  eP      P       02 20 11.9 +0.1
MBWA  Marble Bar       51.19 152  eP      P       02 20 12.7 -1.6
FITZ  Fitzroy Crossi   51.45 144  eP      P       02 20 18.1 +1.7
      comp=N,29nm,1.3s
SKR   Severo-Kuril's   52.03  44  eP      P       02 20 11.4 -9.0
SKR                                pmax   pmax
      comp=Z,200nm,4.0s
SKR                                MLR    MLR
      comp=Z,500nm,16.0s
SKR                                MLR    MLR
      comp=Z,500nm,15.0s
ASF   Jabal al Asfar   52.16 292   P      P       02 20 21.8  0.0
      comp=Z,11nm,0.6s,baz=46,slow=4.9,SNR=16
ASF                                LR     LR      02 47 17.1
      comp=Z,187nm,20.8s,baz=47,slow=42
MOS   Moscow           52.21 322  eP      P       02 20 19.1 -2.5
MOS                                pmax   pmax
      comp=Z,45nm,1.1s
ATD   Arta Tunnel      52.26 265   LR     LR      02 42 32.9
      comp=Z,190nm,20.0s,baz=92,slow=36
ATD   Arta Tunnel      52.26 265  eP      P       02 20 24.2 +1.5
      comp=Z,31nm,1.0s
TOTH  TOTAH            52.39 294  eP      P       02 20 22.6 -0.8
KLMR  Klimovskoe       52.46 329  eP      P       02 20 23.5 +0.2
KLMR                              e               02 22 23.9
KLMR                               pmax   pmax
      comp=Z,41nm,1.1s
KLMR  Klimovskoe       52.46 329  eP      P       02 20 23.6 +0.2
KLMR                               AMP            02 20 25.3
      comp=Z,41nm,1.1s
KLMR                              ePP     PP      02 22 24.0 +1.9
KLMR                               LQ     LQ      02 39 19.1
KLMR                               LR     LR      02 43 06.4
OBN   Obninsk          52.69 321  eP      P       02 20 24.8 -0.4
      comp=Z,20nm,0.9s
OBN                                LR     LR
      comp=Z,184nm,19.0s
OBN   Obninsk          52.69 321⇓eP      P       02 20 25.5 +0.3
OBN                               e               02 21 35.7
OBN                               e               02 22 20.9
OBN                               i S     S       02 27 51.5 +0.1
OBN                                pmax   pmax
      comp=Z,10.0nm,1.0s
OBN                                MLR    MLR
      comp=Z,233nm,16.0s
SEY   Seymchan         52.71  28   LR     LR      02 44 15.2
      comp=Z,1µm,19.4s,baz=150,slow=38
BRBR  Barbar           52.78 294  eP      P       02 20 25.2 -1.3
PETK  Petropavlovsk-   53.28  41   LR     LR      02 46 04.1
      comp=Z,355nm,18.1s,baz=250,slow=39
PETK  Petropavlovsk-   53.28  41  eP      P       02 20 28.3 -1.3
PETK  Petropavlovsk-   53.28  41  eP      P       02 20 28.3 -1.3
MMAI  Mount Meron Ar   53.29 294   P      P       02 20 29.7 -0.4
      comp=Z,2.7nm,0.5s,baz=28,slow=3.7,SNR=4.4
MMAI                               LR     LR      02 48 43.2
      comp=Z,211nm,19.0s,baz=60,slow=42
SIM   Simferopol'      53.43 309  eP      P       02 20 28.8 -2.1
SIM                               eS      S       02 28 08.0 +6.1
SIM                                pmax   pmax
      comp=Z,27nm,0.9s
SIM                                MLR    MLR
      comp=Z,200nm,16.0s
ILGA  Ilgaz            53.84 304  eP      P       02 20 34.3 +0.1
      comp=Z,46nm,0.9s
BR131 Keskin Array S   53.98 302  eP      P       02 20 34.5 -0.7
BRTR  Keskin Array B   53.98 302   P      P       02 20 34.1 -1.1
      comp=Z,8.3nm,0.6s,baz=132,slow=5.2,SNR=32
BRTR                               LR     LR      02 48 23.3
      comp=Z,112nm,18.4s,baz=112,slow=41
ANTO  Ankara           54.62 302⇓iP      P       02 20 39.3 -0.4
ANTO  Ankara           54.62 302  eP      P       02 20 39.1 -0.6
ANTO                               LR     LR
      comp=Z,160nm,22.0s
ANTO  Ankara           54.62 302  eP      P       02 20 39.1 -0.6
ANTO                               MLR    MLR
      comp=Z,160nm,22.0s
CSS   Mathiatis        54.72 296  eP      P       02 20 41.7 +1.2
      comp=Z,12nm,0.8s
AKASG Malin Array Be   56.74 316   P      P       02 20 52.9 -1.7
      comp=Z,3.2nm,0.4s,baz=79,slow=6.5,SNR=20
AKASG                              LR     LR      02 49 17.8
      comp=Z,354nm,20.7s,baz=85,slow=40
AKBB  Malin Array Si   56.74 316  eP      P       02 20 53.2 -1.5
      comp=Z,16nm,0.8s
KIEV  Kiev             56.76 316  eP      P       02 20 52.5 -2.2
      comp=Z,15nm,0.8s
KIEV                               LR     LR
      comp=Z,378nm,20.0s
KIEV  Kiev             56.76 316  i P     P       02 20 52.9 -1.9
      SNR=11
KIEV  Kiev             56.76 316  i P     P       02 20 52.9 -1.9
      SNR=11
KIEV  Kiev             56.76 316c iP      P       02 20 52.9 -1.9
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KIEV				pmax	pmax		
	comp=Z,13nm,0.8s						
AK11	Malin Array Si	56.78	315	eP	P	02 20 53.2	-1.7
APA	Apatity	56.88	336	⇓iP	P	02 20 55.9	+0.5
APA				pmax	pmax		
	comp=Z,13nm,0.7s						
APA				MLR	MLR		
	comp=Z,1µm,14.0s						
KIS	Kishinev	57.08	311	eP	P	02 20 57.0	-0.1
	comp=Z,70nm,1.2s						
KIS	Kishinev	57.08	311	ePcP	PcP	02 21 48.0	-3.9
KIS	Kishinev	57.08	311	ePP	PP	02 23 11.0	+7.1
KIS				LRM	MLR	02 48 12.0	
	comp=Z,400nm,22.0s						
KIS	Kishinev	57.08	311	eP	P	02 20 57.0	-0.1
KIS				e		02 21 09.0	
KIS						02 21 48.0	
KIS				e		02 23 11.0	
KIS				pmax	pmax		
	comp=Z,72nm,1.2s						
KIS				MLR	MLR		
	comp=Z,400nm,22.0s						
TIRR	Tirgusor	57.51	308	⇓iP	P	02 21 01.1	+0.9
TIRR	Tirgusor	57.51	308	eP	P	02 20 59.6	-0.6
	comp=Z,33nm,1.2s						
TIRR	Tirgusor	57.51	308	eP	P	02 20 59.6	-0.6
TIRR				pmax	pmax		
	comp=Z,33nm,1.2s						
CFR	Carcaliu	57.66	309	⇓iP	P	02 21 00.0	-1.2
CFR	Carcaliu	57.66	309	eP	P	02 20 59.9	-1.2
TLB	Topalu	57.77	308	⇑iP	P	02 21 00.2	-1.8
HARR	Harsova	57.84	308	P	P	02 21 03.1	+0.6
WRA	Warramunga Arr	57.96	137	P	P	02 21 02.2	-1.4
	comp=Z,16nm,0.9s,baz=324,slow=7.7,SNR=19						
WRA				LR	LR	02 50 58.4	
	comp=Z,180nm,18.1s,baz=295,slow=41						
WRAB	Tennant Creek	57.96	137	eP	P	02 21 02.0	-1.6
	comp=Z,37nm,1.2s						
WRAB	Tennant Creek	57.96	137	⇑iP	P	02 21 02.9	-0.7
WRAB				pmax	pmax		
	comp=Z,21nm,1.1s						
WB2	Warramunga Arr	57.96	137	eP	P	02 21 03.4	-0.3
ICOR	Ion Corvin	57.98	308	⇑iP	P	02 21 03.1	-0.4
NACGM	Naroch	58.28	320	e	P	02 21 05.0	-0.4
VSU	Vasula	58.44	325	⇑iP	P	02 21 05.7	-0.7
VSU				pmax	pmax		
	comp=Z,48nm,1.0s						
VRI	Vrincioaia	58.59	310	⇓iP	P	02 21 07.6	-0.2
VRI	Vrincioaia	58.59	310	P	P	02 21 07.6	-0.2
TESR	Tescani	58.60	311	⇓iP	P	02 21 07.4	-0.4
IIGN	Ignalina	58.61	321	eP	P	02 21 06.8	-0.9
IIGN				IAmb	IAmb	02 21 12.3	
	comp=Z,16nm,0.6s						
PLOR	Plostina	58.65	310	⇓iP	P	02 21 08.0	-0.2
PLOR	Plostina	58.65	310	P	P	02 21 08.0	-0.2
ISAL	Salakas	58.67	321	eP	P	02 21 07.3	-0.8
ISAL				IAmb	IAmb	02 21 16.6	
	comp=Z,10nm,0.9s						
ISR	Istrita	58.78	309	⇑iP	P	02 21 10.1	+0.9
ISR	Istrita	58.78	309	P	P	02 21 10.1	+0.9
PRAR	RASCA	58.83	312	⇑iP	P	02 21 09.9	+0.5
BIZ	Bicaz	58.94	311	⇓iP	P	02 21 09.2	-1.0
FINES	FINESS Array B	58.97	328	P	P	02 21 09.2	-0.9
	comp=Z,7.4nm,0.6s,baz=85,slow=8.4,SNR=16						
SULR		59.03	309	⇑iP	P	02 21 10.9	+0.1
MLR	Muntele Rosu	59.17	309	LR	LR	02 50 31.4	
	comp=Z,294nm,21.6s,baz=73,slow=40						
MLR	Muntele Rosu	59.17	309	⇓iP	P	02 21 11.5	-0.5
BURAR	Bucovina Array	59.49	312	⇓iP	P	02 21 13.3	-0.8
BURAR	Bucovina Array	59.49	312	P	P	02 21 13.2	-0.8
BUR04	Bucovina Ar. S	59.49	312	eP	P	02 21 13.1	-1.1
BUR08	Bucovina Ar. S	59.50	312	eP	P	02 21 13.2	-1.0
DOPR	Dopca	59.52	310	⇓iP	P	02 21 15.2	+1.0
ALN	Alexandroupoli	59.63	304	eP	P	02 21 15.7	+0.7
	comp=Z,34nm,1.6s						
ALN	Alexandroupoli	59.63	304	eP	P	02 21 15.7	+0.7
ALN				pmax	pmax		
	comp=Z,34nm,1.6s						
ZIMR		59.78	307	⇓iP	P	02 21 15.9	-0.1
VOIR		59.80	309	⇓iP	P	02 21 15.5	-0.8
VOIR		59.80	309	P	P	02 21 15.4	-0.8
PVL	Pavlikeni	59.85	307	P	P	02 21 20.5	+4.0
KDZ	Kurdzhali	60.00	305	i P	P	02 21 18.4	+0.8
LVV	L'vov	60.10	315	eP	P	02 21 18.3	+0.1
LVV				MLR	MLR		
	comp=E,300nm,21.0s						
LVV				MLR	MLR		
	comp=N,100nm,19.0s						
LVV				MLR	MLR		
	comp=Z,300nm,22.0s						
ARCR	ARCALIA	60.12	311	⇑iP	P	02 21 18.1	-0.2
ARCES	ARCESS Array B	60.13	337	P	P	02 21 17.7	-0.3
	comp=Z,8.0nm,0.6s,baz=81,slow=7.6,SNR=18						
ARCES	ARCESS Array B	60.13	337	eP	P	02 21 17.8	-0.2
SUW	Suwalki	60.39	319	eP	P	02 21 20.6	+0.6
SUW	Suwalki	60.39	319	eP	P	02 21 20.6	+0.6
RZN	Rozhen	60.51	305	i P	P	02 21 21.7	+0.4
AS31	Alice Springs	60.52	140	eP	P	02 21 21.0	-0.4
	comp=Z,3.0nm,0.8s						
ASAR	Alice Springs	60.52	140	P	P	02 21 20.6	-0.8
	comp=Z,12nm,0.9s,baz=322,slow=6.8,SNR=29						
ASAR				LR	LR	02 51 29.8	
	comp=Z,235nm,18.4s,baz=312,slow=40						
AS01	Alice Springs	60.55	140	eP	P	02 21 20.2	-1.3
BMR	Baia Mare	60.64	312	⇓iP	P	02 21 22.0	+0.1
HEF	Hetta	60.65	336	eP	P	02 21 21.2	-0.4
CJR	Cluj-Napoca	60.67	311	⇓iP	P	02 21 22.0	-0.2
CJR	Cluj-Napoca	60.67	311	P	P	02 21 21.9	-0.2
LOT	Lotru	60.70	310	⇑iP	P	02 21 23.3	+0.9
PGB	Panagyurishte	60.79	306	i P	P	02 21 23.9	+0.8
KTK1	Kautokeino	60.87	337	eP	P	02 21 21.9	-1.1
HAMF	Hammerfest	60.91	339	eP	P	02 21 23.7	+0.4
NWAO	Narrogin (SRO)	60.94	160	LR	LR	02 47 51.0	
	comp=Z,259nm,20.8s,baz=158,slow=36						
NWAO	Narrogin (SRO)	60.94	160	eP	P	02 21 22.7	-1.2
NWAO	Narrogin (SRO)	60.94	160	eP	P	02 21 22.7	-1.2
KWP	Kalwaria Pacla	60.98	314	eP	P	02 21 23.7	-0.4
KWP	Kalwaria Pacla	60.98	314	eP	P	02 21 23.7	-0.4
TRPA	Tarpa	61.24	313	⇑iP	P	02 21 25.7	-0.2
DRGR		61.27	311	⇓iP	P	02 21 25.4	-0.9
UZH	Uzhgorod	61.35	313	eP	P	02 21 30.5	+3.9
UZH				e		02 21 44.1	
UZH				e		02 22 04.3	
VTS	Vitosha	61.48	306	⇑iP	P	02 21 27.0	-0.9
VTS	Vitosha	61.48	306	i P	P	02 21 27.0	-0.9
KKB	Krupnik	61.69	306	i P	P	02 21 29.0	-0.1
KIF	Kilpisjarvi	61.74	337	eP	P	02 21 28.4	-0.5
CRVS	Cervenica-Dubn	61.86	314	eP	P	02 21 32.0	+1.9
CRVS				pmax	pmax		
	comp=Z,25nm,1.5s						
CRVS	Cervenica-Dubn	61.86	314	eP	P	02 21 32.0	+1.9
BEL	Belsk	61.99	317	eP	P	02 21 29.9	-1.0
BEL	Belsk	61.99	317	eP	P	02 21 29.9	-1.0
BZS	Buzias	62.18	310	⇓iP	P	02 21 32.5	+0.2
BZS	Buzias	62.18	310	P	P	02 21 32.5	+0.2
MDVR	Moldovita	62.23	309	⇑iP	P	02 21 32.8	+0.1
STIP	Stip	62.38	306	i P	P	02 21 30.0	-3.8
TRO	Tromso	62.44	337	eP	P	02 21 32.6	-0.9
KECS	Kecovo	62.55	313	eP	P	02 21 38.0	+3.2
KECS	Kecovo	62.55	313	eP	P	02 21 38.0	+3.2
NIE	Niedzica	62.56	314	eP	P	02 21 34.4	-0.4
NIE	Niedzica	62.56	314	eP	P	02 21 34.4	-0.4
AGG	Agios Georgios	62.76	303	P	P	02 21 34.5	-1.8
AGG				pmax	pmax		
	comp=Z,53nm,0.9s						
OJC	Ojcow	62.78	315	eP	P	02 21 35.9	-0.4
OJC	Ojcow	62.78	315	eP	P	02 21 35.3	-0.9
	comp=Z,13nm,0.7s						
OJC	Ojcow	62.78	315	eP	P	02 21 35.9	-0.4
SKO	Skopje	62.88	306	i P	P	02 21 35.4	-1.7
PSZ	Piszkesteto	63.02	313	⇑iP	P	02 21 38.5	+0.5
PSZ	Piszkesteto	63.02	313	⇓eP	P	02 21 42.8	+4.8
PSZ	Piszkesteto	63.02	313	eP	P	02 21 38.9	+0.8
	comp=Z,26nm,1.4s						
PSZ	Piszkesteto	63.02	313	P	P	02 21 38.8	+0.8
PSZ				pmax	pmax		
	comp=Z,26nm,1.4s						
FNA	Florina	63.14	305	eP	P	02 21 37.1	-1.8
	comp=Z,46nm,1.7s						
FNA	Florina	63.14	305	eP	P	02 21 37.1	-1.8
FNA				pmax	pmax		
	comp=Z,47nm,1.7s						
ITM	Ithomi	63.44	301	eP	P	02 21 41.2	+0.4
	comp=Z,29nm,1.0s						
OHR	Ohrid	63.51	305	i P	P	02 21 45.0	+3.6
DIVS	Divibare	63.56	309	eP	P	02 21 40.4	-1.2
	comp=Z,9.4nm,0.8s						
VYHS	Vyhne	63.64	314	eP	P	02 21 41.0	-1.0
VYHS				pmax	pmax		
	comp=Z,9.0nm,1.3s						
VYHS	Vyhne	63.64	314	eP	P	02 21 41.0	-1.0
SPITS	Spitsbergen Ar	63.66	347	LR	LR	02 52 46.2	
	comp=Z,434nm,18.2s,baz=135,slow=39						
STEI	Steigen	63.77	335	eP	P	02 21 42.5	0.0
OKC	Ostrava-Krasne	63.89	315	eP	P	02 21 43.1	-0.5
OKC				ex	x	02 21 45.0	
OKC				AMS	AMS	02 52 50.0	
	comp=Z,300nm,19.1s						
OKC	Ostrava-Krasne	63.89	315	eP	P	02 21 43.1	-0.5
OKC				MLR	MLR		
	comp=Z,300nm,19.1s						
GKP	Gorka Klasztor	63.98	319	eP	P	02 21 45.3	+1.2
GKP	Gorka Klasztor	63.98	319	eP	P	02 21 45.3	+1.2
MORH	Mˆ‡rˆ¡gy, Hung	64.13	311	⇓eP	P	02 21 45.8	+0.6
MOR8	Moi Rana	64.17	333	eP	P	02 21 44.5	-0.7
IGT	Igoumenitsa	64.17	304	P	P	02 21 45.6	-0.1
MORC	Moravsky Berou	64.29	315	⇓iP	P	02 21 45.3	-1.0
MORC	Moravsky Berou	64.29	315	eP	P	02 21 44.8	-1.4
	comp=Z,11nm,0.9s						
MORC	Moravsky Berou	64.29	315	P	P	02 21 44.8	-1.4
MORC				pmax	pmax		
	comp=Z,11nm,0.9s						
MORC	Moravsky Berou	64.29	315	eP	P	02 21 45.8	-0.5
JAVC	Velka Javorina	64.35	314	eP	P	02 21 47.8	+1.1
PDG	Podgorica	64.39	307	⇓iP	P	02 21 45.7	-1.3
TTG	Podgorica	64.39	307	eP	P	02 21 44.8	-2.2
	comp=Z,26nm,0.8s						
TTG	Podgorica	64.39	307	eP	P	02 21 44.8	-2.2
TTG				pmax	pmax		
	comp=Z,27nm,0.8s						
LOF	Lofoten	64.40	336	eP	P	02 21 45.1	-1.5
OPO	Ambohidratompo	64.57	233	LR	LR	02 47 31.6	
	comp=Z,412nm,21.2s,baz=20,slow=34						
KONS	Konsvik	64.68	334	eP	P	02 21 49.1	+0.7
MODS	Modra-Piesok	64.69	314	eP	P	02 21 50.0	+1.1
MODS				pmax	pmax		
	comp=Z,20nm,1.4s						
MODS	Modra-Piesok	64.69	314	eP	P	02 21 50.0	+1.1
KRLC	Kraliky	64.72	316	eP	P	02 21 48.1	-1.0
KRLC				ex	x	02 21 50.4	
KRLC	Kraliky	64.72	316	eP	P	02 21 48.1	-1.0
KSP	Ksiaz	64.91	316	eP	P	02 21 50.5	+0.2
KSP	Ksiaz	64.91	316	eP	P	02 21 50.5	+0.2
DPC	Dobruska-Polom	64.97	316	eP	P	02 21 50.3	-0.4
DPC				ex	x	02 21 52.1	
DPC				AMS	AMS	02 53 40.0	
	comp=Z,300nm,18.6s						
DPC	Dobruska-Polom	64.97	316	eP	P	02 21 50.3	-0.4
DPC				MLR	MLR		
	comp=Z,300nm,18.6s						
VRAC	Vranov	64.97	315	⇓iP	P	02 21 50.7	0.0
VRAC	Vranov	64.97	315	P	P	02 21 50.6	-0.1
VRAC	Vranov	64.97	315	eP	P	02 21 50.2	-0.5
HFS	Hagfors	65.06	327	P	P	02 21 50.0	-1.1
	comp=Z,12nm,0.5s,baz=119,slow=5.1,SNR=37						
HFS	Hagfors	65.06	327	P	P	02 21 50.0	-1.1
BSD	Bornholm Skovb	65.08	321	i P	P	02 21 51.3	+0.1
UPC	Upice	65.14	316	eP	P	02 21 51.0	-0.8
UPC				AMS	AMS	02 53 20.0	
	comp=Z,300nm,16.1s						
UPC	Upice	65.14	316	eP	P	02 21 51.0	-0.8
UPC				MLR	MLR		
	comp=Z,300nm,16.1s						
KRUC	Moravsky	65.14	314	eP	P	02 21 50.9	-0.9
SOP	Sopron	65.28	313	⇓eP	P	02 21 53.8	+1.1
SOP	Sopron	65.28	313	P	P	02 21 53.6	+0.9
NSS	Namsos	65.34	332	eP	P	02 21 53.2	+0.5
BLY	Banja Luka	65.41	310	eP	P	02 21 55.4	+1.8
	comp=Z,34nm,1.5s						
CONA	Conrad Observa	65.70	313	eP	P	02 21 54.6	-0.9
	comp=Z,23nm,1.3s,SNR=12						
NC405	NORSAR Array S	65.90	328	eP	P	02 21 55.9	-0.6
GOPC	GO Pecny, Ondr	66.02	316	eP	P	02 21 56.9	-0.6
GOPC				ex	x	02 21 59.1	
GOPC				AMS	AMS	02 53 20.0	
	comp=Z,300nm,14.0s						
GOPC	GO Pecny, Ondr	66.02	316	eP	P	02 21 56.9	-0.6
GOPC				MLR	MLR		
	comp=Z,300nm,14.0s						
NC602	NORSAR Array S	66.04	328	eP	P	02 21 57.7	+0.4
CTAO	Charters Tower	66.04	128	eP	P	02 21 58.1	+0.2
CTAO				LR	LR		
	comp=Z,267nm,19.0s						
PVCC	Panska Ves	66.04	316	eP	P	02 21 57.6	0.0
PVCC				AMS	AMS	02 52 20.0	
	comp=Z,400nm,21.7s						
PVCC	Panska Ves	66.04	316	eP	P	02 21 57.6	0.0
PVCC				MLR	MLR		
	comp=Z,400nm,21.7s						
NC303	NORSAR Array S	66.05	328	eP	P	02 21 58.1	+0.7
ARSA	Arzberg	66.05	313	eP	P	02 21 57.2	-0.6
	comp=Z,4.8nm,0.7s						
NB201	NORSAR Array S	66.11	328	eP	P	02 21 59.8	+2.0
NB2	NORSAR Subarra	66.15	328	P	P	02 21 56.7	-1.4
	comp=Z,6.9nm,0.6s,baz=82,slow=6.9						
NB2	NORSAR Subarra	66.15	328	P	P	02 21 56.2	-1.9
NB2	NORSAR Subarra	66.15	328	P	P	02 21 56.7	-1.4
	baz=82,slow=6.9						
NOA	NORSAR Array B	66.15	328	P	P	02 21 56.6	-1.4
	comp=Z,6.6nm,0.6s,baz=82,slow=6.4,SNR=28						
NOA				PP	PP	02 24 25.7	+2.1
	comp=Z,2.4nm,0.8s,baz=81,slow=8.4,SNR=4.4						
PRU	Pruhonice	66.16	316	eP	P	02 21 57.4	-1.0
PRU				ex	x	02 21 59.9	
PRU				eS	S	02 30 45.7	0.0
PRU				AMS	AMS	02 52 20.0	
	comp=Z,200nm,17.5s						
PRU	Pruhonice	66.16	316	eP	P	02 21 57.4	-1.0
PRU				eS	S	02 30 45.7	0.0
PRU				MLR	MLR		
	comp=Z,200nm,17.5s						
TBLU	Trondheim	66.26	330	eP	P	02 22 00.3	+1.6
NC204	NORSAR Array S	66.33	328	eP	P	02 21 58.2	-1.1
NAO01	NORSAR Array S	66.34	328	eP	P	02 21 59.2	-0.1
BRG	Berggiesshubel	66.37	317	eP	P	02 21 59.1	-0.6
	comp=Z,12nm,0.8s						
BRG				PP	PP	02 24 29.0	+3.4
BRG				S	S	02 30 51.0	+2.9
BRG				SS	SS	02 35 03.0	-1.4
	comp=N,247nm,16.4s						
	comp=E,260nm,19.1s						
	comp=Z,317nm,18.2s						
BRG	Berggiesshubel	66.37	317	eP	P	02 21 59.1	-0.6
BRG						02 24 29.0	
BRG				S	S	02 30 51.0	+2.9
BRG				SS	SS	02 35 03.0	-1.4
BRG				pmax	pmax		
	comp=Z,12nm,0.8s						
BRG				MLR	MLR		
	comp=N,247nm,16.4s						
BRG				MLR	MLR		
	comp=E,260nm,19.1s						
BRG				MLR	MLR		
	comp=Z,317nm,18.2s						
SOKA	Soboth	66.50	312	eP	P	02 21 58.6	-2.0
	comp=Z,12nm,1.1s						
MOA	Molln	66.77	313	eP	P	02 22 01.3	-1.0
	comp=Z,8.5nm,0.6s,SNR=9.7						
CLL	Collm	66.87	317	eP	P	02 22 02.0	-0.8
	comp=Z,9.0nm,0.9s						
CLL				epP	pP	02 22 09.0	-1.4
CLL				i		02 22 17.8	
CLL				ePP	PP	02 24 27.0	-3.0
CLL				e(sPP)		02 24 44.0	
CLL				e		02 26 30.0	
CLL				eS	S	02 30 56.0	+1.9
CLL				eSS	SS	02 35 12.0	0.0
CLL				eSSS	SSS	02 38 24.0	
CLL	Collm	66.87	317	eP	P	02 22 03.0	+0.2
	comp=Z,8.5nm,0.9s						
CLL	Collm	66.87	317	eP	P	02 22 02.0	-0.8
CLL				e		02 22 09.0	
CLL				eS	S	02 30 56.0	+1.9
CLL				pmax	pmax		
	comp=Z,9.0nm,0.9s						
GEC2	GERESS Array S	66.93	315	eP	P	02 22 02.8	-0.6
	comp=Z,44nm,1.5s						
GEC2	GERESS Array S	66.93	315	eP	P	02 22 02.8	-0.6
GEC2				pmax	pmax		
	comp=Z,44nm,1.5s						
GERES	GERESS Array B	66.93	315	P	P	02 22 02.6	-0.8
	comp=Z,8.1nm,0.7s,baz=68,slow=5.9,SNR=48						
GERES				LR	LR	02 54 13.4	
	comp=Z,278nm,21.0s,baz=86,slow=39						
GEA0	GERESS Array S	66.93	315	eP	P	02 22 01.8	-1.6
KHC	Kasperske Hory	66.95	315	eP	P	02 22 02.7	-0.8
KHC				ex	x	02 22 04.7	
KHC				eS	S	02 30 54.2	-1.1
KHC				AMS	AMS	02 54 50.0	
	comp=Z,300nm,17.4s						
KHC	Kasperske Hory	66.95	315	eP	P	02 22 02.8	-0.6
	comp=Z,2.3nm,0.8s						
KHC	Kasperske Hory	66.95	315	eP	P	02 22 02.7	-0.8
KHC				eS	S	02 30 54.2	-1.1
KHC				MLR	MLR		
	comp=Z,300nm,17.4s						
TIP	Timpagrande	66.95	304	eP	P	02 22 02.2	-1.5
	comp=Z,9.2nm,0.8s						
DOMB	Dombas	67.00	329	eP	P	02 22 04.0	+0.5
KONO	Kongsberg	67.17	327	eP	P	02 22 04.9	+0.2
NKC	Novy Kostel	67.43	316	AMS	AMS	02 54 00.0	
	comp=Z,300nm,16.1s						
CUC	Castrocucco	67.46	305	eP	P	02 22 06.6	-0.3
	comp=Z,19nm,1.1s						
KBA	Koelnbreinsper	67.54	313	eP	P	02 22 06.4	-1.0
	comp=Z,13nm,0.7s						
MOL	Molde	67.60	330	eP	P	02 22 07.7	+0.5
AKN	Aaknes	67.93	330	eP	P	02 22 11.8	+2.4
ABTA	Abfaltersbach	68.17	313	eP	P	02 22 07.8	-3.5
	comp=Z,12nm,1.1s						
GRFO	Grafenberg	68.33	316	eP	P	02 22 12.2	+0.1
	comp=Z,5.3nm,0.6s						
GRFO	Grafenberg	68.33	316	eP	P	02 22 12.2	+0.1
GRFO				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ODD1	Odda	68.59	327	eP	P	02 22 14.0	+0.4
WTTA	Wattenberg	68.63	313	eP	P	02 22 11.5	-2.8
	comp=Z,12nm,1.0s						
SNART	Snartemo	68.65	326	eP	P	02 22 13.6	-0.3
WATA	Walderalm	68.66	313	eP	P	02 22 15.7	+1.3
	comp=Z,3.3nm,0.5s						
RETA	Reutte	69.15	314	eP	P	02 22 14.9	-2.5
	comp=Z,16nm,0.6s,SNR=5.6						
VAE	Valguarnera	69.18	303	LR	LR	02 57 06.3	
	comp=Z,100nm,20.8s,baz=98,slow=40						
FETA	Feichten	69.29	313	eP	P	02 22 16.1	-2.3
	comp=Z,19nm,1.4s						
FUORN	Ofenpass-Fuorn	69.70	313	eP	P	02 22 23.2	+2.2
	comp=Z,50nm,1.9s						
DAVA	Damuels	69.78	314	eP	P	02 22 20.1	-1.3
	comp=Z,9.0nm,0.5s						
STU	Stuttgart	69.84	315	eP	P	02 22 21.2	-0.2
	comp=Z,18nm,0.8s						
STU	Stuttgart	69.84	315	eP	P	02 22 21.3	-0.2
STU				pmax	pmax		
	comp=Z,18nm,0.8s						
DAVOX	Davos/Dischmat	69.92	313	LR	LR	02 56 29.4	
	comp=Z,412nm,21.3s,baz=82,slow=39						
BFO	Black Forest	70.51	315	eP	P	02 22 25.5	-0.2
	comp=Z,8.3nm,1.1s						
BFO				LR	LR		
	comp=Z,9.0nm,22.0s						
BFO	Black Forest	70.51	315	eP	P	02 22 25.5	-0.2
BFO				pmax	pmax		
	comp=Z,8.0nm,1.1s						
BFO				MLR	MLR		
	comp=Z,9.0nm,22.0s						
HNR	Honiara	70.72	111	LR	LR	02 50 29.2	
	comp=Z,89nm,21.7s,baz=327,slow=33						
STKA	Stephens Creek	71.16	140	P	P	02 22 29.7	0.0
	comp=Z,4.5nm,0.9s,baz=356,slow=4.2,SNR=6.2						
STKA				LR	LR	02 58 21.5	
	comp=Z,306nm,19.6s,baz=282,slow=40						
STKA	Stephens Creek	71.16	140	eP	P	02 22 30.2	+0.5
	comp=Z,3.5nm,1.2s						
CDF	Champ du Feu	71.16	315	eP	P	02 22 29.9	+0.2
CDF				pmax	pmax		
	comp=Z,8.0nm,0.7s						
ECH	Echery	71.30	315	eP	P	02 22 32.4	+2.0
	comp=Z,6.1nm,0.8s						
MEM	Membach	71.33	318	⇑P	P	02 22 31.9	+1.4
	comp=Z,8.0nm,1.1s						
WLF	Walferdange	71.51	317	⇑P	P	02 22 31.4	-0.3
	comp=Z,23nm,1.2s						
WLF	Walferdange	71.51	317	eP	P	02 22 31.9	+0.2
	comp=Z,35nm,1.0s						
WLF	Walferdange	71.51	317	eP	P	02 22 31.9	+0.2
WLF				pmax	pmax		
	comp=Z,35nm,1.0s						
HINF	Hinteralfeld	71.61	315	eP	P	02 22 33.6	+1.3
HINF				pmax	pmax		
	comp=Z,4.0nm,0.8s						
PGF	Pioggiola	71.71	309	eP	P	02 22 33.2	+0.1
PGF				pmax	pmax		
	comp=Z,99nm,1.6s						
SENIN	Lac Senin/Sane	71.74	313	eP	P	02 22 33.7	+0.3
	comp=Z,12nm,0.9s						
BCLA	Clavier	71.81	318	⇑P	P	02 22 34.8	+1.3
HAU	Haudompre	71.88	315	eP	P	02 22 34.3	+0.4
GIVF	Givet	72.20	317	eP	P	02 22 36.5	+0.7
GIVF				pmax	pmax		
	comp=Z,10.0nm,1.0s						
DOU	Dourbes	72.34	318	⇑P	P	02 22 36.4	-0.3
LPG	La Plagne	72.37	312	eP	P	02 22 35.4	-1.9
LPG				pmax	pmax		
	comp=Z,13nm,0.8s						
LPL	La Plagne	72.38	312	eP	P	02 22 35.8	-1.4
LPL				pmax	pmax		
	comp=Z,27nm,1.0s						
CABF	La Chapelle	72.47	314	eP	P	02 22 38.5	+0.9
CABF				pmax	pmax		
	comp=Z,15nm,1.0s						
BNI	Bardonecchia	72.55	312	eP	P	02 22 38.0	-0.2
	comp=Z,18nm,1.1s						
BNI	Bardonecchia	72.55	312	eP	P	02 22 38.0	-0.2
BNI				pmax	pmax		
	comp=Z,18nm,1.1s						
BAIF	Baives	72.59	318	eP	P	02 22 38.9	+0.8
BAIF				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ORIF	Oris-en-Rattie	73.13	312	eP	P	02 22 43.3	+1.7
ORIF				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KEST	Kesra	73.59	302	P	P	02 22 44.1	-0.3
	comp=Z,21nm,1.2s,baz=41,slow=5.0,SNR=10						
KEST				LR	LR	03 00 28.3	
	comp=Z,91nm,20.0s,baz=299,slow=40						
KEST	Kesra	73.59	302	eP	P	02 22 44.8	+0.3
	comp=Z,45nm,1.4s						
VIVF	Saint-Julien-l	73.97	312	eP	P	02 22 46.2	-0.2
VIVF				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SSF	Saint Saulge	74.00	315	eP	P	02 22 44.8	-1.7
SSF				pmax	pmax		
	comp=Z,7.0nm,0.5s						
AVF	Avril sur Loir	74.19	315	eP	P	02 22 46.1	-1.5
AVF				pmax	pmax		
	comp=Z,14nm,0.9s						
EKA	Eskdalemuir Ar	74.99	324	P	P	02 22 52.8	+0.7
	comp=Z,5.6nm,0.5s,baz=70,slow=5.8,SNR=43						
ESK	Eskdalemuir	75.02	324	eP	P	02 22 53.9	+1.7
	comp=Z,8.4nm,0.6s						
ESK	Eskdalemuir	75.02	324	eP	P	02 22 53.9	+1.7
ESK				pmax	pmax		
	comp=Z,8.0nm,0.6s						
TCF	Toulx Ste Croi	75.11	314	eP	P	02 22 51.2	-1.8
TCF				pmax	pmax		
	comp=Z,11nm,0.8s						
TOLK	Toolik Lake Re	75.19	20	eP	P	02 22 52.4	-0.7
	comp=Z,38nm,1.5s						
CAF	Calviac	75.68	313	eP	P	02 22 58.3	+2.0
CAF				pmax	pmax		
	comp=Z,11nm,0.9s						
COLD	Coldfoot	75.72	22	eP	P	02 22 55.7	-0.4
	comp=Z,7.7nm,1.1s						
RJF	Les Rejaudoux	75.91	314	eP	P	02 22 56.1	-1.5
RJF				pmax	pmax		
	comp=Z,10.0nm,0.7s						
FLN	La Foliniere	75.91	317	eP	P	02 22 58.0	+0.5
FLN				pmax	pmax		
	comp=Z,19nm,1.4s						
GRR	Gorron	76.28	317	eP	P	02 23 00.1	+0.5
GRR				pmax	pmax		

	comp=Z,5.0nm,0.5s						
SVW2	Sparrevohn	76.65	28	eP	P	02 23 00.8	-0.7
MLY	Manley	76.66	24	eP	P	02 23 00.6	-0.9
	comp=Z,28nm,1.5s						
BPAW	Bear Paw Mtn.	77.04	25	eP	P	02 23 02.5	-1.2
	comp=Z,13nm,0.5s						
LSZ	Lusaka	77.57	247	eP	P	02 23 08.8	+1.3
	comp=Z,10nm,1.0s						
LSZ				LR	LR		
	comp=Z,231nm,21.0s						
MDM	Murphy Dome	77.60	23	eP	P	02 23 05.6	-1.1
	comp=Z,21nm,1.0s						
FYU	Fort Yukon	77.72	21	eP	P	02 23 07.6	+0.3
	comp=Z,66nm,1.9s						
COLA	College	77.78	23	eP	P	02 23 09.7	+2.0
	comp=Z,28nm,1.4s						
ROSF	Rostrenen	77.79	318	eP	P	02 23 06.9	-1.2
ROSF				pmax	pmax		
	comp=Z,5.0nm,0.5s						
CCB	Clear Creek Bu	77.92	23	eP	P	02 23 08.8	+0.2
	comp=Z,22nm,0.5s						
SUMG	Summit	77.99	347	i P	P	02 23 08.4	-0.9
	comp=Z,69nm,1.1s						
MCK	McKinley	78.01	24	eP	P	02 23 08.0	-1.1
	comp=Z,35nm,0.8s						
ILAR	Eielson Array	78.18	23	P	P	02 23 07.5	-2.4
	comp=Z,4.3nm,1.0s,baz=297,slow=4.6,SNR=18						
ILAR				LR	LR	03 01 57.6	
	comp=Z,305nm,18.1s,baz=310,slow=39						
ILB	Eielson Array	78.18	23	eP	P	02 23 08.7	-1.3
SJPF	Ste Jean	78.56	312	eP	P	02 23 14.4	+1.9
SJPF				pmax	pmax		
	comp=Z,9.0nm,1.0s						
PMR	Palmer	79.09	26	eP	P	02 23 12.7	-2.3
PMR	Palmer	79.09	26	eP	P	02 23 12.7	-2.3
KDAK	Kodiak Island	79.61	31	P	P	02 23 16.1	-1.8
	comp=Z,14nm,1.0s,baz=315,slow=7.1,SNR=4.3						
KDAK	Kodiak Island	79.61	31	ceP	P	02 23 19.1	+1.2
SCRK	Sand Creek	79.67	23	eP	P	02 23 16.3	-2.1
	comp=Z,15nm,0.6s						
PAX	Paxson	79.73	24	eP	P	02 23 18.3	-0.3
	comp=Z,17nm,0.6s						
PAX	Paxson	79.73	24	eP	P	02 23 18.3	-0.3
PAX				pmax	pmax		
	comp=Z,17nm,0.6s						
INK	Inuvik	80.05	17	P	P	02 23 19.3	-0.8
	comp=Z,5.6nm,0.7s,baz=257,slow=1.4,SNR=7.0						
INK	Inuvik	80.05	17	eP	P	02 23 19.6	-0.5
	comp=Z,16nm,1.0s						
INK	Inuvik	80.05	17	eP	P	02 23 19.6	-0.5
INK				pmax	pmax		
	comp=Z,17nm,1.0s						
EGAK	Eagle	80.15	22	eP	P	02 23 19.5	-1.3
	comp=Z,9.5nm,0.8s						
RES	Resolute Bay	80.29	3	eP	P	02 23 20.5	-0.8
	comp=Z,6.2nm,0.9s						
RES	Resolute Bay	80.29	3	eP	P	02 23 20.5	-0.8
RES				pmax	pmax		
	comp=Z,6.0nm,0.9s						
DAWY	Dawson	81.20	22	eP	P	02 23 25.3	-1.1
	comp=Z,9.3nm,0.8s						
BMRM	Bremner River	81.25	26	eP	P	02 23 28.1	+1.3
	comp=Z,46nm,0.6s						
TAM	Tamanrasset	81.41	291	eP	P	02 23 29.4	+1.0
	comp=Z,3.8nm,0.9s						
TAM	Tamanrasset	81.41	291	eP	P	02 23 29.4	+1.0
TAM				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ES19	SONSECA Array	81.81	310	eP	P	02 23 29.3	-0.8
ESDC	Sonseca Array	81.86	310	P	P	02 23 29.4	-1.1
	comp=Z,2.0nm,0.8s,baz=56,slow=5.0,SNR=12						
ESDC				PP	PP	02 26 41.0	+3.5
	comp=Z,1.4nm,0.9s,baz=65,slow=9.1,SNR=4.3						
ESLA	Sonseca Array	81.86	310	eP	P	02 23 31.3	+0.9
	comp=Z,9.9nm,1.2s						
DZM	Mont Dzumac	82.53	118	LR	LR	03 01 42.9	
	comp=Z,69nm,18.7s,baz=254,slow=37						
DZM	Mont Dzumac	82.53	118	eLR	LR	02 49 28.9	
	comp=Z,239nm,26.1s						
MVO	Moncorvo	83.30	312	eP	P	02 23 40.5	+2.6
	comp=Z,16nm,1.8s						
MVO	Moncorvo	83.30	312	eLR	LR	03 00 36.2	
	comp=Z,114nm,18.0s						
PGAV	Gavieira, Arco	83.75	313	eSS	SS	02 39 44.1	+16
MTE	Manteigas	84.00	312	eP	P	02 23 44.6	+3.1
	comp=Z,17nm,1.2s						
MTE	Manteigas	84.00	312	eLR	LR	03 02 05.3	
	comp=Z,146nm,20.0s						
PVIS	Viseu	84.09	312	eP	P	02 23 45.0	+3.1
	comp=Z,14nm,1.5s						
PCBR	Castelo Branco	84.21	311	eP	P	02 23 45.6	+3.1
	comp=Z,14nm,1.8s						
PMRV	Marv??o	84.34	311	eLR	LR	03 01 17.9	
	comp=Z,98nm,18.0s						
LBTB	Lobatse	84.59	239	eP	P	02 23 46.3	+1.6
	comp=Z,16nm,0.9s						
LBTB	Lobatse	84.59	239	eP	P	02 23 46.3	+1.6
LBTB				pmax	pmax		
	comp=Z,16nm,0.9s						
PCAS	Casmilo, Conde	84.81	312	eP	P	02 23 46.1	+0.6
	comp=Z,34nm,1.8s						
MDT	Midelt	85.36	304	LR	LR	03 06 21.3	
	comp=Z,100nm,21.9s,baz=72,slow=39						
PVAQ	Vaqueiros	85.52	309	eSS	SS	02 40 00.1	+5.6
PVAQ	Vaqueiros	85.52	309	eLR	LR	03 02 41.2	
	comp=Z,104nm,18.0s						
SKAG	Skagway	85.74	24	eP	P	02 23 50.7	+0.9
	comp=Z,27nm,1.0s						
BOSA	Boshof	86.68	236	P	P	02 23 53.8	-1.3
	comp=Z,8.3nm,0.9s,baz=66,slow=6.3,SNR=5.9						
BOSA				LR	LR	03 02 35.2	
	comp=Z,140nm,18.7s,baz=23,slow=36						
TSUM	Tsumeb	88.33	248	LR	LR	03 04 34.2	
	comp=Z,227nm,18.4s,baz=43,slow=36						
DLBC	Dease Lake	88.38	22	eP	P	02 24 04.0	+1.3
	comp=Z,6.3nm,1.1s						
TOA0	Torodi Ar. Sit	88.69	284	eP	P	02 24 05.3	+0.4
TORD	Torodi Ar. Bea	88.69	284	P	P	02 24 02.9	-2.0
	comp=Z,4.0nm,1.0s,baz=104,slow=6.1						
TORD				LR	LR	03 08 27.3	
	comp=Z,152nm,19.1s,baz=25,slow=39						
KOWA	Kowa	93.10	287	LR	LR	03 11 33.2	
	comp=Z,181nm,18.4s,baz=42,slow=39						
MAW	Mawson	95.64	192	LR	LR	03 03 40.5	
	comp=Z,85nm,19.1s,baz=53,slow=33						
DBIC	Dimbokro	97.31	281	LR	LR	03 12 36.5	
	comp=Z,106nm,19.8s,baz=45,slow=38						
AFI	Afiamalu	97.40	102	LR	LR	03 05 00.0	
	comp=Z,49nm,21.7s,baz=341,slow=33						
SCHQ	Schefferville	99.20	350	LR	LR	03 12 19.9	
	comp=Z,80nm,21.7s,baz=18,slow=37						
SYO	Syowa Base	102.30	198⇑	ePdiff	Pdif	02 25 06.0	+0.5
SYO	Syowa Base	102.30	198⇑	epPdiff	pPdif	02 25 14.7	+1.4
ANMO	Albuquerque	116.57	21	ePKPdf	PKPdf	02 29 55.7	+0.2
ANMO	Albuquerque	116.57	21	ePKIKP	PKPdf	02 29 55.7	+0.2
PPT2	Papeete2	118.61	97	eLR	LR	03 06 12.4	
	comp=Z,158nm,25.5s						
MNTX	Cornudas Mount	119.91	21	ePKPdf	PKPdf	02 30 01.4	-0.4
TXAR	Lajitas Array	122.65	21	PKP	PKPdf	02 30 05.8	-1.5
	comp=Z,1.1nm,0.8s,baz=276,slow=1.6,SNR=7.0						
JCT	Junction City	122.70	17	ePKPdf	PKPdf	02 30 07.0	-0.2
JCT	Junction City	122.70	17	ePKIKP	PKPdf	02 30 07.0	-0.2
SDV	Santo Domingo	144.02	338	ePKPdf	PKPab	02 30 44.6	-0.3
PTGA	Pitinga	146.76	313	PKPbc	PKPbc	02 30 53.7	0.0
	comp=Z,5.9nm,0.7s,baz=51,slow=5.4,SNR=11						
ROSC	El Rosal	148.99	342	PKPbc	PKPbc	02 31 00.1	-0.1
	comp=Z,7.5nm,0.7s,baz=351,slow=2.5,SNR=7.9						
OTAV	Otavalo	154.42	348	ePKPbc	PKPbc	02 31 11.3	-1.5
SAML	Samuel	154.83	306	ePKPdf	PKPdf	02 31 04.0	-0.4
SAML	Samuel	154.83	306	ePKIKP	PKPdf	02 31 04.0	-0.4
CPUP	Villa Florida	156.28	261	PKP	PKPdf	02 31 06.2	+0.2
	comp=Z,3.0nm,0.9s,baz=360,slow=1.2,SNR=6.8						
SIV	San Ignacio	157.09	289	PKPab	PKPab	02 31 37.8	-0.1
	comp=Z,1.5nm,0.8s,baz=95,slow=5.4,SNR=6.5						
PLCA	Paso Flores	160.89	212	PKPab	PKPab	02 31 51.4	-2.3
	comp=Z,4.0nm,1.0s,baz=232,slow=3.6,SNR=5.0						
LPAZ	La Paz	163.12	298	PKP	PKPdf	02 31 14.6	-0.2
	comp=Z,1.7nm,1.0s,baz=355,slow=4.3,SNR=6.8						

GUC 22 02:18:51.6±0.7, 20°.88S×69°.25W, h108^{km}±3^{km}, ML3.5, 8C-2D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB01	IPOC Station P	0.28	233	eP	Pn	02 19 07.6	+0.5
PB01				eS	Sn	02 19 19.4	+0.7
PB01				IAML		02 19 20.2	
	comp=N,4μm,0.1s						
PB08	IPOC Station P	0.74	7⇓	iP	Pn	02 19 11.2	+0.7
PB08				eS	Sn	02 19 25.7	+1.0
PB08				IAML		02 19 26.9	
	comp=E,2μm,0.2s						
PB02	IPOC Station P	0.75	234⇑	iP	Pn	02 19 11.3	+1.0
PB02				eS	Sn	02 19 25.7	+1.4
PB02				IAML		02 19 27.4	
	comp=E,3μm,0.4s						
PB09	IPOC Station P	0.92	180	eP	Pn	02 19 12.4	+0.4
PB09				eS	Sn	02 19 28.1	+0.9
PB09				IAML		02 19 30.6	
	comp=N,1μm,0.3s						
PB07	IPOC Station P	1.03	215⇑	iP	Pn	02 19 14.0	+0.9
PB07				eS	Sn	02 19 30.6	+1.2
PB07				IAML		02 19 31.2	
	comp=E,1μm,0.3s						
PB11	IPOC Station P	1.17	341	eP	Pn	02 19 15.6	+0.9
PB11				eS	Sn	02 19 33.4	+1.3
PB11				IAML		02 19 33.9	
	comp=E,2μm,0.2s						
PB03	IPOC Station P	1.26	202⇑	iP	Pn	02 19 16.2	+0.6
PB03				eS	Sn	02 19 34.7	+0.9
PB03				IAML		02 19 35.1	
	comp=E,594nm,0.2s						
PSGC	Pisagua	1.51	327⇑	iP	Pn	02 19 19.2	+0.6
PSGC				i S	Sn	02 19 39.9	+0.9
PSGC				IAML		02 19 43.0	
	comp=N,296nm,0.2s						
PB04	IPOC Station P	1.67	210⇑	iP	Pn	02 19 21.1	+0.6
PB04				i S	Sn	02 19 42.8	+0.2
PB04				IAML		02 19 46.3	
	comp=N,201nm,0.4s						
MNMC	Minye Minye	1.77	349⇑	iP	Pn	02 19 22.9	+1.0
MNMC				i S	Sn	02 19 46.2	+1.4
MNMC				IAML		02 19 49.4	
	comp=N,1μm,0.5s						
PB06	IPOC Station P	1.84	189⇑	iP	Pn	02 19 22.9	+0.2
PB12	IPOC Station P	2.47	336⇑	iP	Pn	02 19 30.7	0.0
PB12				i S	Sn	02 20 00.5	-0.2
PB12				IAML		02 20 05.2	
	comp=N,128nm,0.2s						
PB16	IPOC Station P	2.54	354⇓	iP	Pn	02 19 33.8	+1.7
PB16				i S	Sn	02 20 05.0	+2.0

NIED ***22*** *02:22:00, 39°.90N×143°.60E, h11^{km}, Mw4.0 Best double couple: $M_0$1.05000×10^{15} NP1:ϕ_s167.00000°, δ35.00000°, λ45.00000°. NP2:ϕ_s38.00000°, δ66.00000°, λ116.00000°.*

ISCJB ***22*** *02:22:41.2±0.5, 39°.91N±0°.03×143°.72E±0°.05, h6^{km}, mb3.7/17, Error ellipse: s-maj=5.9km s-min=3.6km az=26.0*

JMA ***22*** *02:22:43.7±0.3, 39°.93N×143°.65E, h21^{km}, M4.0*

IDC ***22*** *02:22:47.0±3.0, 39°.81N×143°.71E, h37^{km}±24^{km}, mb3.6/17, mb1 3.7/22, mb1mx3.6/71, mbtmp3.8/22, ML3.5/4, Error ellipse: s-maj=22.1km s-min=14.8km az=90.0*

ISC 22 02:22:42.6±0.7, 39°.89N±0°.05×143°.74E±0°.07, h6^{km}, n44, σ1^{s}29/50, mb3.9/17, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	1.45	272	P	Pn	02 23 07.7	-1.6
MIYJ	Miyakonagasawa	1.52	259	P	Pn	02 23 09.2	-1.1
MIYJ				eS	Sn	02 23 27.5	-2.8
JANG	Nango	1.77	286	P	Pn	02 23 12.5	-1.3
JANG				eS	Sn	02 23 33.9	-2.8
JOM	Ohasama	1.94	258	P	Pn	02 23 15.7	-0.3
JOM				eS	Sn	02 23 38.9	-1.8
JMK	Ichinoseki	2.17	245	P	Pn	02 23 18.3	-0.9
JNBK	Urakawa-nobuka	2.50	343	P	Pn	02 23 24.1	+0.3
JNBK				eS	Sn	02 23 55.1	+0.5
JOT	Ohata	2.53	307	P	Pn	02 23 24.2	0.0
JOT				eS	Sn	02 23 54.0	-1.4
JCH	Churui	2.73	354	P	Pn	02 23 26.7	-0.3
JCH				eS	Sn	02 23 58.6	-1.8
JYK	Kaneyama	2.79	251	P	Pn	02 23 27.6	-0.3
JKB	Kayabe	2.86	315	P	Pn	02 23 29.4	+0.6
JKB				eS	Sn	02 24 02.1	-1.4
JAK	Akkeshi	3.18	13	P	Pn	02 23 32.9	-0.3
JAK				S	Sn	02 24 09.6	-1.8
JFR	Furan	3.38	346	eS	Sn	02 24 15.0	-1.3
JAR	Ashorobuto	3.40	0	P	Pn	02 23 35.5	-0.7
JAR				eS	Sn	02 24 13.9	-2.9
JEW	Eniwo	3.41	330	P	Pn	02 23 37.4	+1.1
JEW				S	Sn	02 24 16.4	-0.7
ASAJ	Asahikawa	4.31	349	Pn	Pn	02 23 49.8	+1.2
	2.6nm,0.3s,baz=179,slow=16,SNR=11						
ASAJ				Sn	Sn	02 24 39.5	+0.4
	2.0nm,0.3s,baz=280,slow=32,SNR=6.7						
MJAR	Matsushiro Arr	5.49	234	Pn	Pn	02 24 05.3	+0.3
	2.7nm,0.3s,baz=42,slow=12,SNR=27						
MAT	Matsushiro	5.49	234	P	Pn	02 24 05.1	+0.1
MAT				S	Sn	02 25 10.7	+2.2
JHJ	Hachijo jima 2	7.47	206	Pn	Pn	02 24 31.7	-0.4
	5.4nm,0.3s,baz=77,slow=18,SNR=2.6						
JHJ				Sn	Sn	02 25 46.4	-11
	5.2nm,0.3s,baz=70,slow=24,SNR=3.8						
USRK	Ussuriysk Ar.	9.74	300	Pn	Pn	02 25 06.5	+3.3
	baz=93,slow=15						
KSRS	Korea Array	12.60	264	Pn	Pn	02 25 44.8	+2.4
	0.0nm,0.3s,baz=77,slow=16,SNR=3.0						
SEY	Seymchan	23.65	10	P	P	02 27 55.4	+1.0
	2.7nm,0.6s,baz=188,slow=7.1,SNR=5.7						
SONM	Songino Array	27.85	299	P	P	02 28 33.3	+0.3
	1.5nm,0.8s,baz=82,slow=9.1,SNR=9.5						
H11N2	WAKE ISLAND Hy	28.27	129	T	T	02 58 27.7	
	baz=318,slow=75,SNR=10						
H11N1	WAKE ISLAND Hy	28.28	129	T	T	02 58 27.7	
	baz=318,slow=75,SNR=14						
H11N3	WAKE ISLAND Hy	28.29	129	T	T	02 58 27.7	
	baz=318,slow=75,SNR=11						
H11S1	WAKE ISLAND Hy	29.10	130	T	T	02 59 31.9	
H11S3	WAKE ISLAND Hy	29.10	130	T	T	02 59 31.9	
H11S2	WAKE ISLAND Hy	29.11	130	T	T	02 59 31.9	
ZALV	Zalesovo Beam	41.41	310	P	P	02 30 29.4	-0.1
	1.1nm,0.6s,baz=64,slow=3.4,SNR=3.6						
MKAR	Makanchi Array	44.21	300	P	P	02 30 52.3	-0.1
	1.1nm,0.9s,baz=91,slow=7.9,SNR=5.9						
KURBB	Kurchatov Arra	45.74	306	P	P	02 31 04.2	-0.2
	2.1nm,0.6s,baz=80,slow=8.7,SNR=14						
ILAR	Eielson Array	46.10	34	P	P	02 31 07.6	+0.4
	0.2nm,0.7s,baz=268,slow=7.0,SNR=2.5						
BVAR	Borovoye Array	50.04	311	P	P	02 31 38.1	+0.4
	0.9nm,0.5s,baz=86,slow=8.8,SNR=5.8						
WRA	Warramunga Arr	60.17	190	P	P	02 32 49.6	-1.6
	0.7nm,0.6s,baz=8.4,slow=7.0,SNR=8.2						
ASAR	Alice Springs	63.89	190	P	P	02 33 15.5	-0.7
	0.2nm,0.5s,baz=353,slow=6.0,SNR=3.9						
FINES	FINESS Array B	67.13	332	P	P	02 33 36.5	-0.2
	1.6nm,0.8s,baz=55,slow=7.7,SNR=7.6						
KBZ	Khabaz	70.42	311	P	P	02 33 57.6	+0.2
	2.3nm,0.8s,baz=59,slow=4.6,SNR=4.9						
HFS	Hagfors	72.22	336	P	P	02 34 08.4	+0.2
	0.7nm,0.5s,baz=54,slow=7.3,SNR=4.5						
NB2	NORSAR Subarra	72.25	338	P	P	02 34 07.8	-0.5
	comp=Z,0.4nm,0.5s,baz=36,slow=6.2						
NOA	NORSAR Array B	72.25	338	P	P	02 34 08.4	+0.1
	comp=Z,1.3nm,0.8s,baz=35,slow=6.1,SNR=4.0						
AKASG	Malin Array Be	73.14	323	P	P	02 34 13.1	-0.7
	comp=Z,0.3nm,0.3s,baz=51,slow=5.0,SNR=2.6						
BRTR	Keskin Array B	78.31	312	P	P	02 34 43.8	+0.1
	comp=Z,0.5nm,0.9s,baz=99,slow=4.8,SNR=3.3						
GERES	GERESS Array B	81.22	329	P	P	02 34 59.5	+0.2
	comp=Z,0.1nm,0.3s,baz=134,slow=9.6,SNR=3.1						
TXAR	Lajitas Array	86.95	54	P	P	02 35 29.7	+0.9
	comp=Z,0.1nm,0.6s,baz=311,slow=5.5,SNR=3.2						

IDC ***22*** *02:24:49.6±2.4, 60°.45N×152°.39W, h64^{km}±48^{km}, mb3.6/3, mb1 3.8/5, mb1mx3.2/77, mbtmp3.9/5, ML3.8/2, Error ellipse: s-maj=71.0km s-min=10.4km az=107.0*

ISCJB ***22*** *02:24:50.2±0.2, 60°.40N±0°.02×152°.03W±0°.05, h102^{km}±3^{km}, mb3.9/3, Error ellipse: s-maj=4.3km s-min=2.9km az=36.8*

NEIC ***22*** *02:24:52.5±0.0, 60°.41N×152°.10W, h87^{km}, ML3.4(AEIC), After AEIC.*

ISC 22 02:24:51.4±0.9, 60°.40N±0°.03×152°.07W±0°.04, h94^{km}±6^{km}, n100, σ0^{s}67/111, mb4.0/3, Southern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RDWB	Redoubt West	0.39	284	P	Pn	02 25 05.0	-0.9
RDWB				S	Sn	02 25 15.7	-1.1
RDJH	Redoubt Jeurge	0.41	299	P	Pn	02 25 05.4	-0.6
ILIM	Iliamna	0.55	235	P	Pn	02 25 06.5	-0.5
HOM	Homer	0.77	164	P	Pn	02 25 09.5	+0.6
HOM				S	Sn	02 25 22.9	+1.0
SPCR	Spurr Chakacha	0.81	355	P	Pn	02 25 09.2	-0.2
SPCR				S	Sn	02 25 22.1	-0.8
BRLK	Bradley Lake	0.87	136	P	Pn	02 25 10.1	+0.1
SPCP	Crater Peak Br	0.87	357	P	Pn	02 25 10.1	-0.1
SPCP				S	Sn	02 25 24.3	+0.1
SPCG	Spurr Capps Gl	0.90	2	P	Pn	02 25 10.4	0.0
CNPM	China Poot	0.97	154	P	Pn	02 25 11.2	+0.2
CNPM				S	Sn	02 25 25.9	+0.1
FIB	Fire Island	1.21	49	P	Pn	02 25 15.3	+1.6
AUP	Augustine Pinn	1.24	214	P	Pn	02 25 14.4	+0.2
AUW	Augustine West	1.25	215	P	Pn	02 25 14.5	+0.3
SUA	Susitna One	1.25	31	P	Pn	02 25 14.9	+0.6
AUI	Augustine Isla	1.27	213	P	Pn	02 25 14.4	0.0
RC01	Rabbit Creek A	1.34	58	P	Pn	02 25 15.6	+0.3
RC01				S	Sn	02 25 33.5	+0.1
PTE	Portage	1.57	71	P	Pn	02 25 18.5	+0.3
SKT	Skwentna	1.61	9	P	Pn	02 25 18.7	0.0
MCNL	McNeil River	1.67	224	P	Pn	02 25 19.3	-0.2
CDD	Cape Douglas	1.67	209	P	Pn	02 25 19.4	-0.1
SVW2	Sparrevohn	1.86	294	P	Pn	02 25 20.9	-1.0
PMR	Palmer	1.87	49	P	Pn	02 25 21.8	-0.1
KNK	Knik Glacier	2.04	58	P	Pn	02 25 24.1	-0.1
KNK				S	Sn	02 25 48.6	-0.7
GHO	Glory Hole Cre	2.06	47	P	Pn	02 25 24.6	0.0
GHO				S	Sn	02 25 49.1	-0.8
TRAP	Trapper Creek	2.14	24	P	Pn	02 25 26.0	+0.6
KAPH	Katmai Pasha	2.15	214	P	Pn	02 25 25.9	+0.2
SML	Sawmill	2.30	50	P	Pn	02 25 27.6	0.0
SML				S	Sn	02 25 54.3	-1.2
KARR	Katmai Rainbow	2.33	216	P	Pn	02 25 28.4	+0.3
KAWH	Katmai	2.45	216	P	Pn	02 25 29.9	+0.2
GLI	Glacier Island	2.50	77	P	Pn	02 25 28.8	-1.4
PPLA	Purkeypile	2.51	359	P	Pn	02 25 31.3	+0.7
KAKN	Katmai Knife C	2.60	217	P	Pn	02 25 31.8	+0.1
KDAK	Kodiak Island	2.63	186	P	Pn	02 25 31.1	-0.9
	18nm,0.3s,baz=47,slow=15,SNR=630						
KDAK				S	Sn	02 26 02.0	-1.3
	31nm,0.3s,baz=192,slow=17,SNR=19						
KABU	Katmai Buttres	2.69	219	P	Pn	02 25 33.3	+0.4
KELA	Mount Kelaz	2.71	225	P	Pn	02 25 33.3	+0.1
SCM	Sheep Creek Mo	2.72	56	P	Pn	02 25 33.3	+0.1
HIN	Hinchinbrook I	2.76	88	P	Pn	02 25 32.7	-1.1
JPK	Jack Peak	2.77	74	P	Pn	02 25 32.9	-1.0
FID	Port Fidalgo	2.78	80	P	Pn	02 25 32.2	-1.8
ANCK	Angle Creek	2.82	220	P	Pn	02 25 35.0	+0.4
HUR	Hurricane	2.84	23	P	Pn	02 25 35.5	+0.7
CAHL	Cahill	2.88	217	P	Pn	02 25 36.1	+0.7
CAST	Castle Rocks	3.04	360	P	Pn	02 25 37.5	+0.1
MID	Middleton Isla	3.05	106	P	Pn	02 25 37.5	0.0
TT01	Tatalina	3.15	325	P	Pn	02 25 38.9	0.0
DIV	Divide	3.18	74	P	Pn	02 25 38.5	-0.8
TRF	Thorofare Moun	3.18	15	P	Pn	02 25 39.5	0.0
KLU	Klutina	3.20	67	P	Pn	02 25 39.1	-0.6
KTH	Kantishna Hill	3.21	9	P	Pn	02 25 40.2	+0.3
OHAK	Old Harbor	3.25	192	P	Pn	02 25 38.0	-2.3
DHY	Denali Highway	3.50	38	P	Pn	02 25 44.1	+0.3
CHUM	Lake Minchumin	3.50	358	P	Pn	02 25 43.6	0.0
PLK4	Peulik 4	3.55	221	P	Pn	02 25 44.5	+0.1
GOAT	Goat Mountain	3.64	84	P	Pn	02 25 44.5	-1.1
MCK	McKinley	3.66	22	P	Pn	02 25 46.2	+0.4
RAGM	Ragged Mountai	3.67	87	P	Pn	02 25 45.5	-0.5
BPAW	Bear Paw Mtn.	3.75	7	P	Pn	02 25 46.5	-0.5
KAIM	Kayak Island	3.85	94	P	Pn	02 25 47.6	-0.8
SII	Sitkinak Islan	4.00	197	P	Pn	02 25 49.9	-0.6
NICHA	Nichawak Mount	4.03	89	P	Pn	02 25 50.2	-0.7
PAX	Paxson	4.07	48	P	Pn	02 25 52.0	+0.6
GLB	Gilahina Butte	4.17	72	P	Pn	02 25 52.5	-0.2
VRDI	Verde Repeater	4.30	75	P	Pn	02 25 53.7	-1.0
NEA	Nenana	4.42	17	P	Pn	02 25 56.6	+0.5
WRH	Wood River Hil	4.49	23	P	Pn	02 25 57.4	+0.4
WAX	Waxell Ridge	4.57	85	P	Pn	02 25 57.7	-0.5
KULT	Kultieth River	4.65	88	P	Pn	02 25 58.5	-0.8
HDA	Harding Lake	4.68	28	P	Pn	02 25 59.8	+0.3
MLY	Manley	4.69	7	P	Pn	02 25 59.5	-0.3
CCB	Clear Creek Bu	4.70	23	P	Pn	02 26 00.1	+0.3
BARK	Barkley Ridge	4.75	86	P	Pn	02 26 00.6	-0.1
PTPK	Patty Peak	4.77	76	P	Pn	02 26 00.9	-0.1
RIDG	Independ'e Rid	4.78	42	P	Pn	02 26 01.2	+0.3
KIAG	Kiagna River	4.81	79	P	Pn	02 26 01.6	+0.1
ISLE	Juniper Island	4.82	83	P	Pn	02 26 01.4	-0.2
BALM	Baldy	4.82	78	P	Pn	02 26 02.0	+0.4
PS08	TAPS Pump Stn8	4.82	28	P	Pn	02 26 01.8	+0.3
COLA	College	4.90	22	P	Pn	02 26 03.0	+0.5
GCSA	Galena City Sc	4.90	335	P	Pn	02 26 02.0	-0.5
MDM	Murphy Dome	4.91	19	P	Pn	02 26 02.9	+0.2
BAGL	Bagley Icefiel	4.95	85	P	Pn	02 26 03.8	+0.6
ILAR	Eielson Array	5.00	26	P	Pn	02 26 03.8	-0.1
	3.3nm,0.3s,baz=217,slow=13,SNR=100						
ILAR				S	Sn	02 26 58.8	-1.6
	4.7nm,0.3s,baz=192,slow=17,SNR=5.0						
ILB	Eielson Array	5.00	26	P	Pn	02 26 04.1	+0.1
MESA	MESA	5.04	88	P	Pn	02 26 05.1	+0.4
GRNC	Granite Creek	5.10	82	P	Pn	02 26 05.7	+0.2
YAH	Yahtse	5.12	86	P	Pn	02 26 06.2	+0.3
BARN	Barnard Glacie	5.15	78	P	Pn	02 26 06.6	+0.4
SCRK	Sand Creek	5.22	43	P	Pn	02 26 06.8	-0.1
CTGM	Chitina Glacie	5.31	79	P	Pn	02 26 08.6	+0.3
BCA3	Beaver Creek A	5.57	57	P	Pn	02 26 11.8	+0.1
VNHG	Veniaminof 1	5.61	225	P	Pn	02 26 14.1	+1.7
YUK2	White River	5.62	71	P	Pn	02 26 12.0	-0.5
PRP	Porcupine Dome	5.94	27	P	Pn	02 26 17.1	+0.2
PNL	Peninsula	6.39	91	P	Pn	02 26 22.9	0.0
EGAK	Eagle	6.68	44	P	Pn	02 26 26.2	-0.6
DAWY	Dawson	6.97	53	ePn	Pn	02 26 31.2	+0.5
BM3	Burnt Mountain	7.77	22	P	Pn	02 26 40.8	-0.9
SONM	Songino Array	54.93	306	P	P	02 34 13.7	+1.4
	1.8nm,0.6s,baz=49,slow=7.4,SNR=12						
KURK	Kurchatov	61.96	326	P	P	02 35 01.2	+0.4
KURBB	Kurchatov Arra	62.07	326	P	P	02 35 01.2	-0.3
	0.6nm,0.4s,baz=28,slow=6.7,SNR=6.1						
MKAR	Makanchi Array	64.41	322	P	P	02 35 16.6	-0.5
	0.4nm,0.6s,baz=39,slow=6.2,SNR=4.7						

WEL 22 02:40:24.2, 38°S±11°×18°0W±°, h33^{km}, ML3.7/19, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.47	268	P	Pn	02 40 48.9	+0.5
MXZ	Matakaoa Point	1.57	278	P	Pn	02 40 50.1	+0.4
MXZ				S	Sn	02 41 08.3	-0.6
PUZ	Puketiti	1.61	259	P	Pn	02 40 51.2	+0.8
PUZ				S	Sn	02 41 11.2	+1.1
PKGZ	Pakihiroa	1.73	266	P	Pn	02 40 52.5	+0.4
CNGZ	Carnagh Statio	1.77	246	P	Pb	02 40 54.4	-1.6
TWGZ	Tauwhareparae	1.85	257	P	Pn	02 40 54.9	+1.3
TWGZ				S	Sn	02 41 17.0	+1.1
HAZ	Te Kaha	1.97	270	P	Pn	02 40 56.1	+0.8
TKGZ	Te Karaka	2.01	250	P	Pn	02 40 57.3	+1.4
TKGZ				S	Sn	02 41 21.4	+1.5
RUGZ	Raukumara Rang	2.06	264	P	Pn	02 40 57.0	+0.4
RIGZ	Rimuhau	2.17	244	P	Pn	02 40 59.4	+1.3
RIGZ				S	Sn	02 41 25.3	+1.4
PRGZ	Paritu Road	2.19	238	P	Pn	02 41 00.5	+2.1
MWZ	Matawai	2.23	255	P	Pn	02 40 59.5	+0.6
MWZ				S	Sn	02 41 25.8	+0.5
MHGZ	Mahia Peninsul	2.30	233	P	Pn	02 41 01.7	+1.8
KNZ	Kokohu	2.38	238	P	Pn	02 41 02.2	+1.3
SNGZ	Shannon Statio	2.51	246	P	Pn	02 41 04.1	+1.4
URZ	Urewera	2.54	258	P	Pn	02 41 04.5	+1.5
RTZ	Ruatahuna	2.72	251	P	Pn	02 41 07.5	+1.9
MUGZ	Murupara	2.84	255	P	Pn	02 41 08.7	+1.4
MTHZ	Maungataniwha	2.90	247	P	Pn	02 41 09.5	+1.5
MTHZ				S	Sn	02 41 43.1	+1.3
ARHZ	Aropaoanui	2.96	239	P	Pn	02 41 10.6	+1.8
NMHZ	Naumai	3.01	243	P	Pn	02 41 11.3	+1.6
MRHZ	Matea Rd	3.20	250	P	Pn	02 41 13.5	+1.2
MCHZ	McNeill Hill	3.25	238	P	Pn	02 41 14.3	+1.4
BKZ	Black Stump Fm	3.27	244	P	Pn	02 41 14.7	+1.5
KAHZ	Kahuranaki	3.32	232	P	Pn	02 41 15.4	+1.5
KWHZ	Kaweka Forest	3.42	240	P	Pn	02 41 16.5	+1.1
KRHZ	Kereru	3.57	237	P	Pn	02 41 18.3	+1.1
BHHZ	Black Hill Sta	3.70	241	P	Pn	02 41 20.3	+1.1
MKAZ	Moumakai	4.12	278	P	Pn	02 41 25.1	+0.3

IDC 22 02:49:37.1±1.9,13°.66S×175°.43E,h0^{km},mb3.8/4, mb1 4.2/4,mb1mx3.6/44,mbtmp3.8/4,Error ellipse: s-maj=121.5km s-min=27.0km az=150.0,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**39.75**	**255**	P	P	02 57 12.1	+0.1
	1.2nm,0.3s,baz=90,slow=8.6,SNR=18						
ASAR	**Alice Springs**	**40.45**	**250**	P	P	02 57 17.4	-0.3
	1.4nm,0.4s,baz=85,slow=8.3,SNR=38						
ILAR	**Eielson Array**	**83.25**	**15**	P	P	03 02 04.5	-0.7
	0.2nm,0.6s,baz=219,slow=7.0,SNR=4.4						
TXAR	**Lajitas Array**	**88.87**	**60**	P	P	03 02 34.4	+0.5
	0.2nm,0.6s,baz=218,slow=5.9,SNR=5.7						

IDC 22 03:01:58.9±6.8,6°.29S×147°.39E,h75^{km}±53^{km},mb3.5/2, mb1 3.7/4,mb1mx3.2/45,mbtmp3.8/4,ML4.0/1,MS3.5/2, Ms1 3.5/2,ms1mx2.8/29,Error ellipse: s-maj=75.0km s-min=49.2km az=93.0,Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.10**	**184**	P	Pn	03 02 44.7	-0.9
	14nm,0.3s,baz=13,slow=4.2,SNR=27						
PMG				S	Sn	03 03 22.7	+1.1
	15nm,0.3s,baz=193,slow=23,SNR=7.7						
WRA	**Warramunga Arr**	**18.57**	**222**	P	P	03 06 09.5	-0.6
	0.5nm,0.3s,baz=42,slow=12,SNR=13						
ASAR	**Alice Springs**	**21.61**	**216**	P	P	03 06 43.0	0.0
	1.5nm,0.4s,baz=52,slow=8.5,SNR=26						
ASAR				LR	LR	03 16 35.5	
	comp=Z,100nm,19.0s,baz=110,slow=41						
STKA	**Stephens Creek**	**26.03**	**191**	P	P	03 07 24.8	-0.4
	1.2nm,0.6s,baz=344,slow=11,SNR=5.8						
NWAO	**Narrogin (SRO)**	**38.58**	**223**	LR	LR	03 24 23.3	
	comp=Z,70nm,20.9s,baz=239,slow=35						
TORD	**Torodi Ar. Bea**	**145.54**	**284**	PKPbc	PKPdf	03 21 29.4	-0.1
	baz=102,slow=4.8						

IDC 22 03:05:16.8±3.4,34°.30S×179°.14W,h0^{km},mb3.6/2, mb1 3.9/3,mb1mx3.6/42,mbtmp3.7/3,ML3.6/1,Error ellipse: s-maj=76.8km s-min=37.3km az=116.0,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**4.97**	**216**	Pn	Pn	03 06 33.2	+0.5
	2.3nm,0.3s,baz=271,slow=4.2,SNR=18						
URZ				Sn	Sn	03 07 29.1	-1.8
	2.2nm,0.3s,baz=116,slow=18,SNR=6.4						
ASAR	**Alice Springs**	**42.09**	**272**	P	P	03 13 10.9	+0.2
	0.6nm,0.5s,baz=109,slow=7.7,SNR=6.4						
WRA	**Warramunga Arr**	**43.44**	**277**	P	P	03 13 21.4	-0.2
	0.4nm,0.4s,baz=117,slow=7.6,SNR=7.9						
FINES	**FINESS Array B**	**148.41**	**337**	PKPbc	PKPbc	03 25 03.5	-0.9
	2.6nm,1.1s,baz=61,slow=6.5,SNR=2.3						

ISCJB 22 03:08:43.6±0.7,24°.81N±0°.09×96°.9E±0°.3,h10^{km},mb4.0/6, Error ellipse: s-maj=36.5km s-min=6.0km az=160.2

IDC 22 03:08:47.1±1.4,25°.15N×96°.79E,h0^{km},mb3.9/4, mb1 4.0/5,mb1mx3.4/67,mbtmp3.9/5,ML4.3/1,MS2.6/1, Ms1 2.8/1,ms1mx2.4/61,Error ellipse: s-maj=85.1km s-min=18.4km az=71.0

NEIC 22 03:08:48.1±0.6,25°.06N×96°.73E,h10^{km},mb4.3/2,Error ellipse: s-maj=29.8km s-min=9.0km az=68.0

ISC 22 03:08:47.2±0.9,24°.9N±0°.1×96°.8E±0°.3,h10^{km},n11, σ1^{s}.52/14,mb4.0/6,Myanmar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHTO	**Chiang Mai**	**6.42**	**161**	*e*Pn	**Pn**	**03 10 24.4**	**+2.4**
	9.0nm,0.7s						
CHTO				*e*Pg	**Pg**	**03 10 48.8**	**-1.5**
CHTO				*e*Sg	**Sg**	**03 12 12.1**	**-1.5**
CHTO	**Chiang Mai**	**6.42**	**161**	P	**Pg**	**03 10 49.6**	**-0.7**
	67nm,1.3s						
CMMT	**Chiang Mai**	**6.43**	**161**	P	**Pg**	**03 10 49.5**	**-0.9**
	15nm,1.3s						
CMAR	**Chiang Mai Arr**	**6.76**	**162**	Pn	**Pn**	**03 10 29.4**	**+2.8**
	1.6nm,0.3s,baz=337,slow=12,SNR=6.4						
CMAR				Pg	**Pg**	**03 10 55.7**	**-1.1**
	0.8nm,0.3s,baz=338,slow=15,SNR=26						
CMAR				Lg	Lg	03 12 27.9	
	0.6nm,0.3s,baz=325,slow=30,SNR=4.9						
CMAR				LR	LR	03 13 41.3	
	comp=Z,46nm,19.8s,baz=300,slow=42						
NIL	**Nilore**	**22.24**	**298**	*e*P	**P**	**03 13 43.5**	**-0.7**
	2.9nm,0.4s						
MKAR	**Makanchi Array**	**24.68**	**336**	P	**P**	**03 14 07.7**	**-0.7**
	2.7nm,0.6s,baz=146,slow=8.8,SNR=23						
KURBB	**Kurchatov Arra**	**29.25**	**336**	P	**P**	**03 14 48.0**	**-1.3**
	0.7nm,0.6s,baz=146,slow=9.2,SNR=5.6						
KURK	**Kurchatov**	**29.29**	**336**	*e*P	**P**	**03 14 49.2**	**-0.4**
ZALV	**Zalesovo Beam**	**30.32**	**346**	P	**P**	**03 14 59.1**	**+0.4**
	0.7nm,0.3s,baz=161,slow=9.2,SNR=1.7						
BVAR	**Borovoye Array**	**34.36**	**332**	P	**P**	**03 15 35.3**	**+1.1**
	0.8nm,0.6s,baz=147,slow=11,SNR=3.3						
TIXI	**Tiksi**	**50.10**	**13**	*e*P	**P**	**03 17 41.3**	**-0.7**
	3.1nm,0.6s						

ISCJB 22 03:27:56.9±1.2,34°.7S±0°.1×178°.7W±0°.2,h33^{km},mb3.6/2, Error ellipse: s-maj=27.0km s-min=9.6km az=28.4

WEL 22 03:28:01.6±1.7,35°S±23'×17°9W±2°4,h197^{km}±41^{km}

IDC 22 03:28:03.9±5.5,32°.29S×179°.90E,h0^{km},mb3.8/2, mb1 4.1/2,mb1mx3.6/39,mbtmp3.8/2,Error ellipse: s-maj=209.2km s-min=62.8km az=159.0

ISC 22 03:27:57.1±2.1,34°.7S±0°.1×178°.5W±0°.2,h35^{km},n25, σ1^{s}.20/31,South of Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PKGZ	**Pakihiroa**	**4.21**	**221**	P	**Pn**	**03 28 58.9**	**+0.1**
PKGZ				S	**Sn**	**03 29 46.2**	**-0.6**
HAZ	**Te Kaha**	**4.28**	**224**	P	**Pn**	**03 29 01.2**	**+1.6**
HAZ				S	**Sn**	**03 29 49.5**	**+1.2**
TWGZ	**Tauwhareparae**	**4.47**	**219**	P	**Pn**	**03 29 04.2**	**+1.7**
TWGZ				S	**Sn**	**03 29 53.8**	**+0.5**
RUGZ	**Raukumara Rang**	**4.48**	**223**	P	**Pn**	**03 29 03.2**	**+0.5**
RUGZ				S	**Sn**	**03 29 54.4**	**+0.9**
CNGZ	**Carnagh Statio**	**4.60**	**215**	P	**Pn**	**03 29 06.3**	**+2.2**
TKGZ	**Te Karaka**	**4.74**	**218**	P	**Pn**	**03 29 08.1**	**+2.1**
MWZ	**Matawai**	**4.83**	**221**	P	**Pn**	**03 29 08.7**	**+1.4**
MWZ				S	**Sn**	**03 30 00.2**	**-1.8**
RIGZ	**Rimuhau**	**4.99**	**216**	P	**Pn**	**03 29 09.2**	**-0.4**
RAGZ	**Rawiri**	**5.00**	**220**	P	**Pn**	**03 29 09.4**	**-0.4**
URZ	**Urewera**	**5.01**	**224**	P	**Pn**	**03 29 09.5**	**-0.2**
URZ				S	**Sn**	**03 30 04.1**	**-2.2**
SNGZ	**Shannon Statio**	**5.26**	**219**	P	**Pn**	**03 29 14.1**	**+0.9**
MHGZ	**Mahia Peninsul**	**5.28**	**212**	P	**Pn**	**03 29 15.4**	**+1.9**
RTZ	**Ruatahuna**	**5.33**	**222**	P	**Pn**	**03 29 14.5**	**+0.2**
MUGZ	**Murupara**	**5.35**	**224**	P	**Pn**	**03 29 14.3**	**-0.2**
MTHZ	**Maungataniwha**	**5.57**	**221**	P	**Pn**	**03 29 18.5**	**+0.9**
MKAZ	**Moumakai**	**5.68**	**244**	P	**Pn**	**03 29 20.5**	**+1.5**
NMHZ	**Naumai**	**5.77**	**220**	P	**Pn**	**03 29 20.9**	**+0.6**
ARHZ	**Aropaoanui**	**5.80**	**217**	P	**Pn**	**03 29 21.3**	**+0.7**
BKZ	**Black Stump Fm**	**5.99**	**221**	P	**Pn**	**03 29 23.0**	**-0.2**
MCHZ	**McNeill Hill**	**6.08**	**218**	P	**Pn**	**03 29 24.9**	**+0.4**
KWHZ	**Kaweka Forest**	**6.21**	**220**	P	**Pn**	**03 29 25.9**	**-0.5**
KAHZ	**Kahuranaki**	**6.27**	**215**	P	**Pn**	**03 29 25.3**	**-1.8**
ASAR	**Alice Springs**	**42.67**	**272**	P	**P**	**03 35 50.5**	**-0.1**
	0.9nm,0.5s,baz=115,slow=7.6,SNR=18						
WRA	**Warramunga Arr**	**44.04**	**277**	P	**P**	**03 36 01.2**	**-0.5**
	0.4nm,0.3s,baz=115,slow=8.5,SNR=7.6						
FINES	**FINESS Array B**	**149.02**	**337**	PKPbc	**PKPab**	**03 47 44.5**	**-0.3**
	0.8nm,0.7s,baz=89,slow=13,SNR=1.3						

SOME 22 03:32:21.5,44°.67N×82°.23E,h15^{km}

NNC 22 03:32:23.7±3.3,44°.71N×82°.08E,h0^{km},mb2.9,mpv2.4, Error ellipse: s-maj=44.6km s-min=12.2km az=118.0

ISC 22 03:32:22.1±2.3,44°.59N±0°.06×82°.18E±0°.10,h1^{km}±14^{km}, n10,σ1^{s}.33/20,1C-6D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DJR	**Jarkent**	**1.73**	**262**	*e*P	**Pb**	**03 32 54.2**	**-0.5**
	1.4nm,0.2s						
DJR				*e*S	**Sg**	**03 33 18.6**	**+1.1**
	2.7nm,0.3s						
KTMS	**Ketmen**	**1.74**	**230**	*e*P	**Pg**	**03 32 55.4**	**0.0**
	2.0nm,0.2s						
KTMS				*e*S	**Sg**	**03 33 20.8**	**+2.8**
	8.2nm,0.3s						
KAPS	**Kapalarasan**	**2.12**	**290**	⇑*i*P	**Pb**	**03 33 00.3**	**-1.1**
	1.4nm,0.2s						
KAPS				*e*S	**Sb**	**03 33 29.2**	**+0.9**
	4.5nm,0.2s						
MK31	**Makanchi Array**	**2.21**	**2**	⇓Pn	**Pn**	**03 33 00.4**	**+0.4**
	1.7nm,0.3s,baz=189,slow=16,SNR=87						
MK31				⇓Sn	**Sn**	**03 33 28.2**	**+0.1**
	0.9nm,0.3s,baz=186,slow=26,SNR=8.5						
MAKZ	**Makanchi**	**2.23**	**356**	⇓Pn	**Pn**	**03 32 59.7**	**-0.6**
	2.3nm,0.5s						
MAKZ				⇓Sn	**Sn**	**03 33 28.3**	**-0.2**
	2.3nm,0.6s						
PDGK	**Podgornoye**	**2.31**	**238**	⇓Pn	**Pn**	**03 33 00.3**	**-1.1**
	0.5nm,0.5s						
PDGK				⇓Sn	**Sg**	**03 33 35.1**	**-1.2**
	2.2nm,0.5s						
SHLS	**Shalkode**	**2.43**	**235**	*e*P	**Pn**	**03 33 02.1**	**-1.0**
	4.5nm,0.2s						
SHLS				*e*S	**Sn**	**03 33 33.2**	**-0.3**
	11nm,0.3s						
KPKS	**Kokpek**	**2.75**	**247**	*e*P	**Pb**	**03 33 11.2**	**-1.0**
	3.2nm,0.1s						
KPKS				*e*S	**Sb**	**03 33 47.7**	**+1.1**
	9.2nm,0.3s						
ARXS	**Arharly**	**3.14**	**265**	*e*P	**Pb**	**03 33 18.2**	**-0.5**
	1.0nm,0.4s						
ARXS				*e*S	**Sb**	**03 33 59.6**	**+2.0**
	3.1nm,0.3s						
KOTS	**Kotyrbulak**	**3.90**	**252**	*e*P	**Pb**	**03 33 33.4**	**+1.5**
	1.4nm,0.5s						
KOTS				*e*S	**Sg**	**03 34 25.4**	**-2.0**
	3.0nm,0.4s						

KRSC 22 03:34:54.7±1.4,48°.22N×157°.90E,h4^{km}±6^{km},ML3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAU	**Pauzhetka**	**3.33**	**348**	*e*S	Sb	03 36 32.3	-2.7
KDTR	**Khodutka, Kamc**	**3.59**	**2**	*e*P	Pn	03 35 54.8	+3.6
KDTR				*e*S	Sn	03 36 38.0	+3.9
MIPR	**Malaya Ipel'ka**	**4.12**	**350**	*e*P	Pn	03 36 01.8	+3.3
ASAK	**Asacha**	**4.17**	**360**	*e*P	Pn	03 36 03.3	+4.1
RUS	**Russkaya**	**4.24**	**5**	*e*P	Pn	03 36 04.3	+4.3
RUS				*e*S	Sn	03 36 54.2	+4.3
MTVR	**Mutnovka**	**4.27**	**2**	*e*P	Pn	03 36 04.5	+3.9
MTVR				*e*S	Sn	03 36 54.5	+3.5
UGLR	**Uglovaya**	**5.03**	**6**	*e*P	Pn	03 36 16.2	+5.2
SPN	**Mys Shipunski**	**5.07**	**15**	S	Sn	03 37 16.8	+6.5
AVH	**Avacha**	**5.08**	**6**	*e*P	Pn	03 36 16.1	+4.4
SMAR	**Somma**	**5.08**	**6**	*e*P	Pn	03 36 17.2	+5.4
SDLR	**Sedlovina**	**5.10**	**7**	*e*P	Pn	03 36 15.2	+3.2
GNL	**Ganaly**	**5.48**	**0**	*e*P	Pn	03 36 21.5	+4.3
MKZ	**Mys Kozlova**	**6.78**	**19**	*e*P	Pn	03 36 39.3	+4.4

ISCJB 22 03:40:37.7±0.3,41°.23S±0°.02×175°.07E±0°.03,h9^{km}±3^{km}, mb3.4/2,Error ellipse: s-maj=3.7km s-min=3.0km az=27.4

WEL 22 03:40:37.0,41°.2S±0°.6×175°.1E±0°.4,h8^{km},ML3.5/25

IDC 22 03:40:59.1±6.8,39°.20S×174°.32E,h132^{km}±75^{km},mb3.1/2, mb1 3.3/3,mb1mx3.1/41,mbtmp3.4/3,Error ellipse: s-maj=135.4km s-min=29.5km az=15.0

ISC 22 03:40:37.4±0.8,41°.21S±0°.02×175°.09E±0°.02,h13^{km}±6^{km}, n81,σ0^{s}.79/89,North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAW	**Cannon Point**	**0.10**	**349**	P	**Pg**	**03 40 39.9**	**-0.4**
CAW				S	**Sg**	**03 40 41.7**	**-0.7**
MSWZ	**Moikau Station**	**0.24**	**151**	P	**Pg**	**03 40 43.1**	**+0.5**
MSWZ				S	**Sg**	**03 40 47.3**	**+1.3**
BHW	**Baring Head**	**0.26**	**219**	P	**Pg**	**03 40 43.2**	**+0.3**
PAWZ	**Paruwai Farm**	**0.31**	**125**	P	**Pb**	**03 40 44.2**	**-0.6**
MTW	**Mount Morrison**	**0.31**	**82**	P	**Pb**	**03 40 44.1**	**-0.8**
MTW				S	**Sb**	**03 40 49.1**	**-0.8**
KIW	**Kapiti Island**	**0.37**	**338**	P	**Pb**	**03 40 45.1**	**-0.8**
KIW				S	**Sg**	**03 40 50.0**	**+0.2**
PLWZ	**Palliser**	**0.38**	**162**	P	**Pb**	**03 40 46.0**	**-0.2**
PLWZ				S	**Sb**	**03 40 52.3**	**+0.2**
OGWZ	**Otaki Gorge**	**0.39**	**9**	P	**Pg**	**03 40 45.2**	**0.0**
OGWZ				S	**Sg**	**03 40 50.6**	**+0.1**
HOWZ	**Holdsworth Sta**	**0.44**	**46**	P	**Pg**	**03 40 46.1**	**-0.1**
TRWZ	**Traveller**	**0.49**	**114**	P	**Pb**	**03 40 47.9**	**0.0**
TRWZ				S	**Sb**	**03 40 56.0**	**+1.0**
TMWZ	**Te Maipa**	**0.61**	**81**	P	**Pb**	**03 40 49.9**	**-0.1**
TCW	**Tory Channel**	**0.62**	**269**	P	**Pb**	**03 40 49.7**	**-0.3**
MRZ	**Mangatainoka R**	**0.66**	**34**	P	**Pg**	**03 40 49.9**	**-0.2**
TIWZ	**Tintock**	**0.74**	**55**	P	**Pb**	**03 40 52.0**	**-0.1**
CMWZ	**Cape Campbell**	**0.85**	**230**	P	**Pn**	**03 40 55.1**	**-0.1**
CPWZ	**Castlepoint**	**0.89**	**71**	P	**Pn**	**03 40 55.8**	**+0.2**
TUWZ	**Tuamarina**	**0.90**	**255**	P	**Pg**	**03 40 54.5**	**-0.2**
PRWZ	**Pori Road**	**0.93**	**46**	P	**Pb**	**03 40 55.6**	**+0.2**
POWZ	**Post Office Ro**	**0.96**	**32**	P	**Pb**	**03 40 55.8**	**-0.1**
DUWZ	**D'Urville Isla**	**0.97**	**294**	P	**Pb**	**03 40 56.4**	**+0.2**
OHWZ	**Ohakea**	**1.01**	**10**	P	**Pb**	**03 40 57.1**	**+0.3**
BFZ	**Birch Farm**	**1.02**	**60**	P	**Pb**	**03 40 57.1**	**+0.2**
BSWZ	**Blackbirch Sta**	**1.05**	**240**	P	**Pn**	**03 40 57.9**	**+0.1**
DVHZ	**Dannevirke**	**1.22**	**42**	P	**Pb**	**03 41 00.2**	**-0.2**
ANWZ	**Angora Road**	**1.29**	**55**	P	**Pn**	**03 41 00.7**	**-0.4**
NNZ	**Nelson**	**1.29**	**269**	P	**Pg**	**03 41 01.9**	**-0.4**
TSZ	**Takapari Road**	**1.32**	**30**	P	**Pb**	**03 41 02.1**	**0.0**
WAZ	**Wanganui**	**1.45**	**357**	P	**Pg**	**03 41 05.1**	**-0.1**
PRHZ	**Porangahau**	**1.50**	**52**	P	**Pn**	**03 41 03.6**	**-0.4**
WPHZ	**Waipukurau**	**1.53**	**42**	P	**Pn**	**03 41 05.1**	**+0.6**
PNHZ	**Pukenui**	**1.54**	**34**	P	**Pn**	**03 41 05.0**	**+0.4**
KHZ	**Kahutara**	**1.68**	**223**	P	**Pn**	**03 41 06.4**	**-0.1**
THZ	**Tophouse**	**1.73**	**251**	P	**Pn**	**03 41 07.9**	**+0.5**
PXZ	**Pawanui**	**1.79**	**50**	P	**Pn**	**03 41 07.0**	**-0.9**
LREZ	**Lake Rotokare**	**1.82**	**343**	P	**Pg**	**03 41 11.9**	**-0.4**
KRHZ	**Kereru**	**1.84**	**32**	P	**Pn**	**03 41 08.9**	**+0.2**
MTVZ	**Mangateitei**	**1.84**	**9**	P	**Pb**	**03 41 11.0**	**0.0**
MOVZ	**Moawhango**	**1.86**	**16**	P	**Pb**	**03 41 10.4**	**-1.0**
BHHZ	**Black Hill Sta**	**1.87**	**24**	P	**Pb**	**03 41 10.5**	**-0.9**
PKVZ	**Pokaka**	**1.92**	**6**	P	**Pb**	**03 41 12.1**	**-0.3**
WHVZ	**Whangaehu Hut**	**1.96**	**11**	P	**Pb**	**03 41 12.4**	**-0.6**
KAHZ	**Kahuranaki**	**1.96**	**45**	P	**Pn**	**03 41 09.8**	**-0.6**
QRZ	**Quartz Range**	**1.98**	**280**	P	**Pb**	**03 41 12.5**	**-0.7**
FWVZ	**Far West T-bar**	**1.98**	**10**	P	**Pb**	**03 41 12.8**	**-0.6**
TUVZ	**Tukino**	**1.98**	**13**	P	**Pb**	**03 41 12.8**	**-0.6**
PREZ	**Palmer Road**	**1.99**	**339**	P	**Pb**	**03 41 14.1**	**+0.5**
NMEZ	**Namu Road**	**2.02**	**332**	P	**Pg**	**03 41 14.9**	**-1.1**
COVZ	**Chateau Observ**	**2.03**	**10**	P	**Pb**	**03 41 13.3**	**-0.9**
KWHZ	**Kaweka Forest**	**2.05**	**30**	P	**Pn**	**03 41 11.9**	**+0.2**
NGZ	**Ngauruhoe**	**2.06**	**11**	P	**Pb**	**03 41 14.0**	**-0.8**
KHEZ	**Kahui Hut**	**2.08**	**336**	P	**Pb**	**03 41 15.5**	**+0.4**
VRZ	**Vera Road**	**2.09**	**353**	P	**Pb**	**03 41 15.0**	**-0.2**
WTVZ	**West Tongariro**	**2.12**	**11**	P	**Pb**	**03 41 15.2**	**-0.6**
DREZ	**Durham Road**	**2.13**	**341**	P	**Pb**	**03 41 16.4**	**+0.6**
MCHZ	**McNeill Hill**	**2.14**	**35**	P	**Pb**	**03 41 16.0**	**-0.1**
TWVZ	**Taurewa**	**2.15**	**7**	P	**Pb**	**03 41 15.1**	**-1.1**
KRVZ	**Karewarewa**	**2.15**	**11**	P	**Pb**	**03 41 15.7**	**-0.5**
PKE	**Pukeiti**	**2.18**	**337**	P	**Pb**	**03 41 16.7**	**0.0**
KATZ	**Kakaramea**	**2.27**	**12**	P	**Pb**	**03 41 19.0**	**+0.6**
RITZ	**Rihia Road**	**2.30**	**15**	P	**Pb**	**03 41 18.9**	**+0.1**
BKZ	**Black Stump Fm**	**2.30**	**28**	P	**Pb**	**03 41 18.0**	**-0.9**
NMHZ	**Naumai**	**2.48**	**33**	P	**Pg**	**03 41 25.8**	**+0.8**
DSZ	**Denniston Nort**	**2.53**	**257**	P	**Pn**	**03 41 19.1**	**+0.8**
MRHZ	**Matea Rd**	**2.58**	**24**	P	**Pn**	**03 41 19.4**	**+0.5**
LTZ	**Lake Taylor**	**2.63**	**232**	P	**Pn**	**03 41 19.4**	**-0.2**
HIZ	**Hauiti**	**2.69**	**356**	P	**Pn**	**03 41 22.9**	**+2.5**
MTHZ	**Maungataniwha**	**2.71**	**30**	P	**Pn**	**03 41 23.1**	**+2.4**
TLZ	**Tolley Road**	**2.89**	**7**	P	**Pb**	**03 41 29.6**	**+0.7**
OKCZ	**Okains Bay**	**2.93**	**210**	P	**Pn**	**03 41 22.5**	**-1.2**
MQZ	**McQueen's Vall**	**3.08**	**215**	P	**Pn**	**03 41 23.9**	**-1.9**
OXZ	**Oxford**	**3.10**	**226**	P	**Pn**	**03 41 25.3**	**-0.8**
AKCZ	**Akaroa Harbour**	**3.12**	**210**	P	**Pn**	**03 41 24.9**	**-1.3**
INZ	**Inchbonnie**	**3.12**	**240**	P	**Pn**	**03 41 26.4**	**+0.1**
URZ	**Urewera**	**3.33**	**29**	P	**Pg**	**03 41 39.2**	**-1.9**
	1.4nm,0.3s,baz=227,slow=9.4,SNR=6.6						
URZ				S	**Sn**	**03 42 07.8**	**-0.8**
	1.9nm,0.3s,baz=67,slow=20,SNR=8.0						
URZ	**Urewera**	**3.33**	**29**	P	**Pb**	**03 41 35.9**	**-0.4**
WVZ	**Waitaha Valley**	**3.74**	**239**	P	**Pn**	**03 41 36.1**	**+1.3**
LBZ	**Lake Benmore**	**4.81**	**227**	P	**Pn**	**03 41 49.4**	**-0.1**
JCZ	**Jackson Bay**	**5.46**	**236**	P	**Pn**	**03 41 58.8**	**+0.2**
ASAR	**Alice Springs**	**38.50**	**284**	P	**P**	**03 47 58.5**	**-1.0**
	0.2nm,0.4s,baz=127,slow=7.7,SNR=7.1						
WRA	**Warramunga Arr**	**40.52**	**289**	P	**P**	**03 48 16.1**	**-0.2**
	0.7nm,0.5s,baz=127,slow=8.3,SNR=13						
TORD	**Torodi Ar. Bea**	**151.46**	**194**	PKPbc	**PKPab**	**04 00 41.8**	**+2.1**
	baz=101,slow=1.5						

IDC 22 03:46:18.3±2.3,5°.05N×123°.29E,h0^{km},mb3.8/3, mb1 4.1/3,mb1mx3.4/58,mbtmp3.8/3,Error ellipse: s-maj=296.2km s-min=25.0km az=63.0,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**27.11**	**157**	P	P	03 52 03.1	0.0
	0.9nm,0.3s,baz=334,slow=9.7,SNR=31						
ASAR	**Alice Springs**	**30.36**	**160**	P	P	03 52 32.1	0.0
	0.5nm,0.4s,baz=338,slow=7.4,SNR=16						
MKAR	**Makanchi Array**	**54.54**	**326**	P	P	03 55 48.1	-0.1
	0.3nm,0.3s,baz=118,slow=7.7,SNR=7.5						

IDC 22 03:55:12.3±2.1,1°.96N×127°.66E,h0^{km},mb3.6/4, mb1 3.8/4,mb1mx3.4/53,mbtmp3.6/4,MS3.4/1,Ms1 3.4/1, ms1mx2.4/45,Error ellipse: s-maj=175.5km s-min=23.5km az=66.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.73**	**164**	P	P	04 00 16.4	+0.3
	2.2nm,0.7s,baz=342,slow=11,SNR=19						
ASAR	**Alice Springs**	**26.18**	**167**	P	P	04 00 49.8	+1.0
	0.4nm,0.4s,baz=339,slow=10,SNR=7.7						
STKA	**Stephens Creek**	**36.15**	**160**	P	P	04 02 14.6	-1.9
	0.8nm,0.4s,baz=331,slow=10,SNR=2.8						
PALK	**Pallekele**	**47.08**	**278**	LR	LR	04 24 11.5	
	comp=Z,43nm,19.0s,baz=80,slow=37						
MKAR	**Makanchi Array**	**59.53**	**325**	P	P	04 05 17.7	+0.1
	0.2nm,0.5s,baz=124,slow=8.4,SNR=2.7						

IDC 22 04:17:59.4±1.4,17°.82S×178°.46W,h529^{km}±16^{km}, mb3.6/14,mb1 3.8/16,mb1mx3.5/50,mbtmp4.5/16,Error ellipse: s-maj=18.7km s-min=10.0km az=149.0

ISCJB 22 04:18:02.6±0.7,17°.8S±0°.1×178°.6W±0°.1,h579^{km}, mb3.9/16,Error ellipse: s-maj=21.2km s-min=11.9km az=145.5

ISC 22 04:18:03.5±0.8,17°.9S±0°.2×178°.6W±0°.1,h579^{km},n30, σ0^{s}.88/30,mb4.0/16,1C,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.62**	**60**	P	P	04 19 51.1	-7.6
	8.4nm,0.3s,baz=50,slow=2.9,SNR=8.8						
AFI				S	S	04 21 22.2	-11
	3.1nm,0.3s,baz=285,slow=23,SNR=2.9						
DZM	**Mont Dzumac**	**14.70**	**251**	P	**P**	**04 21 07.2**	**-2.4**
	1.1nm,0.3s,baz=222,slow=23,SNR=12						
CTA	**Charters Tower**	**33.31**	**260**	P	**P**	**04 23 54.5**	**-0.1**
	3.0nm,0.6s,baz=92,slow=12,SNR=4.2						
STKA	**Stephens Creek**	**38.52**	**241**	P	**P**	**04 24 37.8**	**+0.4**
	2.7nm,0.5s,baz=102,slow=12,SNR=14						
WRA	**Warramunga Arr**	**44.49**	**260**	P	**P**	**04 25 24.2**	**-0.5**
	1.8nm,0.6s,baz=91,slow=6.9,SNR=50						
ASAR	**Alice Springs**	**44.66**	**254**	P	**P**	**04 25 25.9**	**0.0**
	19nm,0.5s,baz=89,slow=7.9,SNR=476						
ASAR				S	**S**	**04 31 22.4**	**+1.4**
	0.8nm,0.8s,baz=90,slow=16,SNR=5.5						
GUMO	**Guam**	**47.73**	**308**	P	**P**	**04 25 49.4**	**+0.3**
	51nm,0.7s,baz=179,slow=11,SNR=5.1						
MJAR	**Matsushiro Arr**	**67.78**	**323**	P	**P**	**04 28 04.0**	**-0.4**
	6.9nm,0.8s,baz=168,slow=6.1,SNR=16						
MAT	**Matsushiro**	**67.78**	**323**	P	**P**	**04 28 04.1**	**-0.4**
ASAJ	**Asahikawa**	**71.17**	**331**	P	**P**	**04 28 25.6**	**+1.2**
	6.9nm,0.7s,baz=217,slow=3.0,SNR=7.0						
QSPA	**South Pole Qui**	**72.19**	**180**	P	**P**	**04 28 30.8**	**+0.6**
	1.7nm,0.7s,baz=109,slow=3.6,SNR=6.5						
KSRS	**Korea Array**	**74.57**	**318**	P	**P**	**04 28 45.1**	**+1.1**
	1.4nm,0.7s,baz=127,slow=6.5,SNR=6.1						
NVAR	**Mina Array Bea**	**79.50**	**44**	P	**P**	**04 29 10.9**	**-0.2**
	3.1nm,0.7s,baz=224,slow=8.4,SNR=25						
KLR	**Kul'dur**	**80.00**	**329**	P	**P**	**04 29 13.9**	**+0.7**
	0.1nm,0.6s,baz=123,slow=11,SNR=2.7						
SEY	**Seymchan**	**83.70**	**347**	P	**P**	**04 29 31.1**	**-0.5**
	4.8nm,0.7s,baz=155,slow=7.8,SNR=9.7						
ILAR	**Eielson Array**	**85.88**	**13**	P	**P**	**04 29 41.0**	**-1.2**
	0.5nm,0.8s,baz=232,slow=5.6,SNR=5.7						
TXAR	**Lajitas Array**	**86.10**	**58**	P	**P**	**04 29 44.9**	**+0.7**
	2.8nm,0.7s,baz=219,slow=6.1,SNR=42						
PDAR	**Pinedale Array**	**87.42**	**43**	P	**P**	**04 29 49.6**	**-0.6**
	1.2nm,0.6s,baz=225,slow=3.2,SNR=16						
CMAR	**Chiang Mai Arr**	**88.73**	**290**	P	**P**	**04 29 58.5**	**+1.9**
	0.7nm,0.3s,baz=103,slow=3.1,SNR=5.3						
MKAR	**Makanchi Array**	**109.00**	**314**	PKiKP	**PKiKP**	**04 35 27.3**	**-0.6**
	0.3nm,0.6s,baz=188,slow=1.4,SNR=2.7						
BRTR	**Keskin Array B**	**144.65**	**315**	PKP	**PKPab**	**04 36 36.0**	**-0.3**
	3.0nm,0.7s,baz=115,slow=2.1,SNR=18						
CRVS	**Cervenica-Dubn**	**145.04**	**337**	*e*PKP	**PKPab**	**04 36 37.0**	**-0.4**
CLL	**Collm**	**145.39**	**347**	⇑*i*PKPbc	**PKPab**	**04 36 37.8**	**-0.8**
	comp=Z,7.0nm,0.9s						
LANS	**Liptovska Anna**	**145.54**	**339**	*e*PKP	**PKPab**	**04 36 39.3**	**-0.1**
MORC	**Moravsky Berou**	**145.62**	**341**	*e*PKP	**PKPab**	**04 36 38.7**	**-1.0**
VRAC	**Vranov**	**146.32**	**342**	*e*PKP	**PKPab**	**04 36 42.7**	**+0.3**
VYHS	**Vyhne**	**146.32**	**339**	*e*PKP	**PKPbc**	**04 36 40.7**	**+0.7**
KRUC	**Moravsky**	**146.60**	**342**	*e*PKP	**PKPbc**	**04 36 41.1**	**+0.4**
MODS	**Modra-Piesok**	**146.94**	**341**	*e*PKP	**PKPbc**	**04 36 41.5**	**-0.2**
GERES	**GERESS Array B**	**147.53**	**345**	PKPbc	**PKPbc**	**04 36 43.7**	**+0.4**
	comp=Z,1.5nm,0.6s,baz=30,slow=2.9,SNR=15						

KRSC 22 04:23:22.5±0.7,53°.65N×160°.73E,h94^{km}±11^{km},ML4.4

ISCJB 22 04:23:23.2±0.4,53°.65N±0°.04×160°.72E±0°.07,h99^{km}±4^{km}, mb3.5/7,Error ellipse: s-maj=8.8km s-min=3.3km az=38.7

MOS 22 04:23:23.6±0.6,53°.66N×160°.71E,h97^{km},mb4.1/4,Error ellipse: s-maj=10.3km s-min=5.0km az=74.1

IDC 22 04:23:25.7±2.0,53°.88N×160°.33E,h103^{km}±20^{km},mb3.3/7, mb1 3.4/8,mb1mx3.1/68,mbtmp3.5/8,Error ellipse: s-maj=34.9km s-min=20.5km az=158.0

ISC 22 04:23:23.9±0.8,53°.66N±0°.04×160°.71E±0°.04,h93^{km}±6^{km}, n89,σ0^{s}.78/122,mb3.7/7,1C,Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SPN	**Mys Shipunski**	**0.69**	**216**	*e*P	**Pn**	**04 23 40.8**	**+0.2**
SPN				*e*S	**Sn**	**04 23 52.6**	**-0.4**
SPN	**Mys Shipunski**	**0.69**	**216**	PN	**Pn**	**04 23 40.8**	**+0.2**
SPN				S	**Sn**	**04 23 52.6**	**-0.4**
KII	**Karymskiy**	**0.83**	**297**	*i* P	**Pn**	**04 23 42.2**	**+0.2**
KII				*e*S	**Sn**	**04 23 55.3**	**-0.3**
KII	**Karymskiy**	**0.83**	**297**	PN	**Pn**	**04 23 42.2**	**+0.2**
KII				S	**Sn**	**04 23 55.3**	**-0.3**
NLC	**Nalytchevo**	**0.95**	**240**	*e*P	**Pn**	**04 23 43.3**	**+0.2**
NLC				*e*S	**Sn**	**04 23 57.5**	**-0.1**
NLC	**Nalytchevo**	**0.95**	**240**	PN	**Pn**	**04 23 43.3**	**+0.2**
NLC				S	**Sn**	**04 23 57.5**	**-0.1**
MKZ	**Mys Kozlova**	**1.08**	**33**	*e*P	**Pn**	**04 23 45.1**	**+0.5**
MKZ				*e*S	**Sn**	**04 24 00.2**	**-0.1**
MKZ	**Mys Kozlova**	**1.08**	**33**	PN	**Pn**	**04 23 45.1**	**+0.5**
MKZ				S	**Sn**	**04 24 00.2**	**-0.1**
SDLR	**Sedlovina**	**1.15**	**251**	*e*P	**Pn**	**04 23 46.1**	**+0.5**
SDLR	**Sedlovina**	**1.15**	**251**	PN	**Pn**	**04 23 46.1**	**+0.5**
SMAR	**Somma**	**1.21**	**252**	*e*P	**Pn**	**04 23 46.8**	**+0.5**
SMAR	**Somma**	**1.21**	**252**	PN	**Pn**	**04 23 46.8**	**+0.5**
UGLR	**Uglovaya**	**1.21**	**249**	*i* P	**Pn**	**04 23 47.0**	**+0.7**
UGLR				*i* S	**Sn**	**04 24 03.9**	**+0.7**
UGLR	**Uglovaya**	**1.21**	**249**	PN	**Pn**	**04 23 47.0**	**+0.7**
UGLR				S	**Sn**	**04 24 03.9**	**+0.7**
AVH	**Avacha**	**1.24**	**252**	*e*P	**Pn**	**04 23 47.4**	**+0.8**
AVH				*e*S	**Sn**	**04 24 04.7**	**+0.9**
AVH	**Avacha**	**1.24**	**252**	PN	**Pn**	**04 23 47.4**	**+0.8**
AVH				S	**Sn**	**04 24 04.7**	**+0.9**
KRX	**Arik**	**1.26**	**257**	*e*P	**Pn**	**04 23 47.5**	**+0.5**
KRX				*e*S	**Sn**	**04 24 04.6**	**+0.2**
KRX	**Arik**	**1.26**	**257**	PN	**Pn**	**04 23 47.5**	**+0.5**
KRX				S	**Sn**	**04 24 04.6**	**+0.2**
KOK	**Koryaka**	**1.29**	**254**	*e*P	**Pn**	**04 23 47.7**	**+0.5**
KOK				*e*S	**Sn**	**04 24 05.1**	**+0.2**
KOK	**Koryaka**	**1.29**	**254**	PN	**Pn**	**04 23 47.7**	**+0.5**
KOK				S	**Sn**	**04 24 05.1**	**+0.2**
DALK	**Dalny**	**1.33**	**243**	*e*P	**Pn**	**04 23 48.1**	**+0.5**
DALK				*e*S	**Sn**	**04 24 05.9**	**+0.4**
DALK	**Dalny**	**1.33**	**243**	PN	**Pn**	**04 23 48.1**	**+0.5**
DALK				S	**Sn**	**04 24 05.9**	**+0.4**

PET	**Petropavlovsk**	**1.39**	**243**	*e*P	**Pn**	**04 23 48.8**	**+0.5**
PET				*e*S	**Sn**	**04 24 06.9**	**+0.2**
PET	**Petropavlovsk**	**1.39**	**243**	⇑*i*PN	**Pn**	**04 23 48.8**	**+0.5**
PET				*e*S	**Sn**	**04 24 06.3**	**-0.4**
PET				pmax	pmax		
	comp=Z,500nm,0.5s						
PET				pmax	pmax		
	comp=Z,475nm,0.4s						
PET				smax	smax		
	comp=N,1µm,0.5s						
PET				smax	smax		
	comp=E,1µm,0.4s						
GNL	**Ganaly**	**1.64**	**272**	*e*P	**Pn**	**04 23 52.0**	**+0.3**
GNL	**Ganaly**	**1.64**	**272**	PN	**Pn**	**04 23 52.0**	**+0.3**
TUMR	**Tumrok**	**1.66**	**349**	*i* P	**Pn**	**04 23 52.8**	**+0.9**
TUMR				*e*S	**Sn**	**04 24 13.4**	**+0.3**
TUMR	**Tumrok**	**1.66**	**349**	PN	**Pn**	**04 23 52.8**	**+0.9**
TUMR				S	**Sn**	**04 24 13.4**	**+0.3**
KRMR	**Karymshinskiy**	**1.76**	**243**	*e*P	**Pn**	**04 23 53.5**	**+0.5**
KRMR				*e*S	**Sn**	**04 24 14.9**	**-0.2**
KRMR	**Karymshinskiy**	**1.76**	**243**	PN	**Pn**	**04 23 53.5**	**+0.5**
KRMR				S	**Sn**	**04 24 14.9**	**-0.2**
RUS	**Russkaya**	**1.81**	**228**	*e*P	**Pn**	**04 23 53.6**	**0.0**
RUS				*e*S	**Sn**	**04 24 15.1**	**-1.1**
RUS	**Russkaya**	**1.81**	**228**	PN	**Pn**	**04 23 53.6**	**0.0**
RUS				S	**Sn**	**04 24 15.1**	**-1.1**
PETK	**Petropavlovsk-**	**1.88**	**254**	P	**Pn**	**04 23 55.2**	**+0.6**
PETK				S	**Sn**	**04 24 17.8**	**-0.2**
	baz=74,slow=19						
PETK				LR	LR	04 24 20.0	
	comp=E,40nm,20.1s,baz=274,slow=31						
MTVR	**Mutnovka**	**1.93**	**233**	*e*P	**Pn**	**04 23 56.0**	**+0.7**
MTVR				*e*S	**Sn**	**04 24 19.1**	**-0.1**
MTVR	**Mutnovka**	**1.93**	**233**	PN	**Pn**	**04 23 56.0**	**+0.7**
MTVR				S	**Sn**	**04 24 19.1**	**-0.1**
GRL	**Gorelyy**	**1.94**	**236**	*e*P	**Pn**	**04 23 56.6**	**+1.2**
GRL				*e*S	**Sn**	**04 24 20.1**	**+0.7**
GRL	**Gorelyy**	**1.94**	**236**	PN	**Pn**	**04 23 56.6**	**+1.2**
GRL				S	**Sn**	**04 24 20.1**	**+0.7**
KMNR	**Kamenistaya**	**2.12**	**353**	*e*P	**Pn**	**04 23 58.9**	**+1.1**
KMNR	**Kamenistaya**	**2.12**	**353**	PN	**Pn**	**04 23 58.9**	**+1.1**
ASAK	**Asacha**	**2.12**	**234**	*e*P	**Pn**	**04 23 59.0**	**+1.2**
ASAK				*e*S	**Sn**	**04 24 24.5**	**+0.8**
ASAK	**Asacha**	**2.12**	**234**	PN	**Pn**	**04 23 59.0**	**+1.2**
ASAK				S	**Sn**	**04 24 24.5**	**+0.8**
APC	**Apacha**	**2.25**	**252**	*e*P	**Pn**	**04 24 00.2**	**+0.8**
APC				*e*S	**Sn**	**04 24 26.4**	**-0.2**
APC	**Apacha**	**2.25**	**252**	PN	**Pn**	**04 24 00.2**	**+0.8**
APC				S	**Sn**	**04 24 26.4**	**-0.2**
KIRR	**Kirishev**	**2.31**	**355**	*e*P	**Pn**	**04 24 01.1**	**+0.8**
KIRR	**Kirishev**	**2.31**	**355**	PN	**Pn**	**04 24 01.1**	**+0.8**
KPT	**Kopyto**	**2.33**	**353**	*e*P	**Pn**	**04 24 00.6**	**+0.1**
KPT	**Kopyto**	**2.33**	**353**	PN	**Pn**	**04 24 00.6**	**+0.1**
ZLN	**Zelenaya**	**2.36**	**1**	*e*P	**Pn**	**04 24 02.1**	**+1.1**
ZLN	**Zelenaya**	**2.36**	**1**	PN	**Pn**	**04 24 02.1**	**+1.1**
LGNR	**Loginova**	**2.43**	**360**	*e*P	**Pn**	**04 24 03.5**	**+1.5**
LGNR	**Loginova**	**2.43**	**360**	PN	**Pn**	**04 24 03.5**	**+1.5**
KDTR	**Khodutka, Kamc**	**2.45**	**222**	*e*P	**Pn**	**04 24 02.2**	**+0.2**
KDTR				*e*S	**Sn**	**04 24 29.5**	**-1.7**
KOZ	**Kozyrevsk**	**2.45**	**349**	*e*P	**Pn**	**04 24 02.9**	**+0.8**
KOZ	**Kozyrevsk**	**2.45**	**349**	PN	**Pn**	**04 24 02.9**	**+0.8**
ESO	**Esso**	**2.55**	**334**	*e*P	**Pn**	**04 24 03.9**	**+0.5**
ESO	**Esso**	**2.55**	**334**	PN	**Pn**	**04 24 03.9**	**+0.5**
KRSR	**Krestovskiy**	**2.56**	**358**	*e*P	**Pn**	**04 24 03.8**	**+0.1**
KRSR	**Krestovskiy**	**2.56**	**358**	PN	**Pn**	**04 24 03.8**	**+0.1**
KLY	**Klyuchi**	**2.66**	**359**	*e*P	**Pn**	**04 24 05.4**	**+0.6**
KLY	**Klyuchi**	**2.66**	**359**	PN	**Pn**	**04 24 05.4**	**+0.6**
MIPR	**Malaya Ipel'ka**	**2.76**	**241**	*e*P	**Pn**	**04 24 07.3**	**+1.1**
MIPR	**Malaya Ipel'ka**	**2.76**	**241**	PN	**Pn**	**04 24 07.3**	**+1.1**
KBTR	**Krutoberegovo**	**2.83**	**25**	*e*P	**Pn**	**04 24 07.9**	**+0.8**
KBTR				*e*S	**Sn**	**04 24 39.6**	**-0.8**
KBTR	**Krutoberegovo**	**2.83**	**25**	PN	**Pn**	**04 24 07.9**	**+0.8**
KBTR				S	**Sn**	**04 24 39.6**	**-0.8**
BDR	**Baidarnaya**	**2.93**	**5**	*e*P	**Pn**	**04 24 09.0**	**+0.5**
BDR	**Baidarnaya**	**2.93**	**5**	PN	**Pn**	**04 24 09.0**	**+0.5**
SMKR	**Semkarok**	**2.96**	**8**	*e*P	**Pn**	**04 24 09.9**	**+1.0**
SMKR	**Semkarok**	**2.96**	**8**	PN	**Pn**	**04 24 09.9**	**+1.0**
SRKR	**Sorokina**	**3.01**	**5**	*e*P	**Pn**	**04 24 10.6**	**+1.0**
SRKR	**Sorokina**	**3.01**	**5**	PN	**Pn**	**04 24 10.6**	**+1.0**
PAU	**Pauzhetka**	**3.24**	**229**	*e*P	**Pn**	**04 24 13.8**	**+1.3**
PAU	**Pauzhetka**	**3.24**	**229**	PN	**Pn**	**04 24 13.8**	**+1.3**
BKI	**Bering**	**3.44**	**61**	*e*P	**Pn**	**04 24 16.7**	**+1.4**
BKI				*e*S	**Sn**	**04 24 54.1**	**-1.0**
BKI	**Bering**	**3.44**	**61**	PN	**Pn**	**04 24 16.7**	**+1.4**
BKI				S	**Sn**	**04 24 54.1**	**-1.0**
KLR	**Kul'dur**	**18.52**	**268**	P	**P**	**04 27 32.3**	**-0.4**
	comp=E,0.0nm,0.3s,baz=71,slow=11,SNR=4.4						
MJAR	**Matsushiro Arr**	**23.19**	**232**	P	**P**	**04 28 23.4**	**+0.9**
	comp=E,2.7nm,0.8s,baz=14,slow=9.5,SNR=7.5						
ILAR	**Eielson Array**	**28.16**	**46**	P	**P**	**04 29 07.8**	**+0.9**
	comp=E,0.2nm,0.8s,baz=270,slow=7.2,SNR=3.0						
H11N2	**WAKE ISLAND Hy**	**34.20**	**170**	T	T	05 06 59.8	
	SNR=86						
H11N3	**WAKE ISLAND Hy**	**34.22**	**170**	T	T	05 07 02.0	
	baz=354,slow=74,SNR=90						
H11N1	**WAKE ISLAND Hy**	**34.22**	**170**	T	T	05 06 59.2	
	baz=158,slow=74,SNR=80						
H11S1	**WAKE ISLAND Hy**	**35.39**	**170**	T	T	05 08 08.3	
H11S3	**WAKE ISLAND Hy**	**35.40**	**170**	T	T	05 08 08.3	
	SNR=2.8						
H11S2	**WAKE ISLAND Hy**	**35.41**	**170**	T	T	05 08 08.3	
H02S1	**DAWSON INLET T**	**38.48**	**63**	T	T	05 13 14.9	
	SNR=5.5						
MKAR	**Makanchi Array**	**48.24**	**296**	P	**P**	**04 31 52.5**	**-2.4**
	comp=E,0.7nm,0.6s,baz=57,slow=7.4,SNR=10						
FINES	**FINESS Array B**	**59.74**	**337**	P	**P**	**04 33 17.4**	**-0.9**
	comp=E,0.7nm,0.5s,baz=42,slow=8.8,SNR=5.8						
NOA	**NORSAR Array B**	**63.10**	**344**	P	**P**	**04 33 40.3**	**-0.6**
	comp=E,0.3nm,0.5s,baz=20,slow=6.7,SNR=3.2						
HFS	**Hagfors**	**63.52**	**342**	P	**P**	**04 33 42.7**	**-1.0**
	comp=E,0.6nm,0.5s,baz=73,slow=6.3,SNR=6.4						
TXAR	**Lajitas Array**	**70.08**	**68**	P	**P**	**04 34 27.3**	**+1.3**
	comp=E,0.2nm,0.5s,baz=298,slow=2.7,SNR=3.6						

IDC 22 04:23:29.7±6.7,**4°.36S**×**139°.71E,h148**^{km}±59^{km},**mb3.5**/5, **mb1 3.7**/6,**mb1mx3.2**/44,**mbtmp4.0**/6,**MS2.6**/1,**Ms1 2.6**/1, **ms1mx2.4**/26,**Error ellipse: s-maj=51.8km s-min=14.2km az=94.0,Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**16.35**	**198**	P	Pn	04 27 05.6	-5.3
	1.5nm,0.3s,baz=21,slow=12,SNR=22						
WRA				S	S	04 29 59.0	-14
	0.6nm,0.3s,baz=14,slow=22,SNR=4.9						
GUMO	**Guam**	**18.55**	**16**	LR	LR	04 35 06.1	
	comp=Z,18nm,18.1s,baz=132,slow=38						
ASAR	**Alice Springs**	**20.00**	**196**	P	P	04 27 50.9	-0.1
	2.6nm,0.3s,baz=24,slow=9.8,SNR=153						
ASAR				S	S	04 31 28.1	+0.3
	0.2nm,0.3s,baz=18,slow=27,SNR=4.1						
MKAR	**Makanchi Array**	**71.69**	**322**	P	P	04 34 35.5	-0.1
	0.4nm,0.6s,baz=100,slow=6.7,SNR=4.7						
KURBB	**Kurchatov Arra**	**75.64**	**325**	P	P	04 34 58.0	-0.5
	0.4nm,0.5s,baz=107,slow=4.6,SNR=4.4						
BVAR	**Borovoye Array**	**81.22**	**325**	P	P	04 35 30.1	+1.0
	0.9nm,0.5s,baz=112,slow=3.9,SNR=5.2						
QSPA	**South Pole Qui**	**85.60**	**180**	P	P	04 35 52.0	+0.7
	2.3nm,0.7s,baz=315,slow=4.3,SNR=12						
ILAR	**Eielson Array**	**86.92**	**24**	P	P	04 35 56.7	-0.9
	0.3nm,0.7s,baz=244,slow=4.8,SNR=4.2						

ISCJB **22** *04:30:17.6±1.1,36°.05N±0°.06×30°.29E±0°.04,h10*^{km}*±6*^{km}*, Error ellipse: s-maj=9.7km s-min=5.6km az=175.4*

ISK **22** *04:30:17.9,36°.14N×30°.33E,h18*^{km}*,ML2.9/7*

CSEM **22** *04:30:18.9±0.3,36°.15N×30°.31E,h15*^{km}*,ML2.6,Error ellipse: s-maj=8.1km s-min=4.4km az=173.0*

DDA **22** *04:30:19.5,36°.23N×30°.29E,h7*^{km}*,Ml2.6*

ISC 22 04:30:18.7±1.3,**36°.13N**±0°.06×**30°.32E**±0°.03,**h17**^{km}±9^{km}, **n31,σ0**^{s}**72**/45,**Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKAS	**Kas**	**0.59**	**281**	PG	**Pg**	**04 30 30.2**	**-0.3**
AKAS				SG	**Sb**	**04 30 39.1**	**+0.4**
AKAS	**Kas**	**0.59**	**281**	*i* P	**Pg**	**04 30 30.1**	**-0.3**
AKAS				*i* S	**Sb**	**04 30 40.0**	**+1.3**
AKAS	**Kas**	**0.59**	**281**	P	**Pg**	**04 30 30.1**	**-0.3**
AKAS				*e*Sg	**Sb**	**04 30 39.1**	**+0.4**
AKAS				S	**Sb**	**04 30 40.0**	**+1.3**
ELL	**Elmali**	**0.70**	**332**	PG	**Pg**	**04 30 31.9**	**-0.7**
ELL				SG	**Sb**	**04 30 42.4**	**+0.4**
ELL	**Elmali**	**0.70**	**332**	*e*Pg	**Pg**	**04 30 31.9**	**-0.7**
ELL				*e*Sg	**Sb**	**04 30 42.4**	**+0.4**
KORT	**Korkueli**	**0.87**	**2**	PG	**Pg**	**04 30 35.2**	**-0.6**
KORT	**Korkueli**	**0.87**	**2**	*i* P	**Pg**	**04 30 34.7**	**-1.1**
KORT				*i* S	**Sn**	**04 30 50.5**	**+1.8**
KORT	**Korkueli**	**0.87**	**2**	P	**Pg**	**04 30 34.7**	**-1.1**
KORT	**Korkueli**	**0.87**	**2**	*e*Pg	**Pg**	**04 30 35.2**	**-0.6**
FETY	**Fethiye**	**1.12**	**297**	PN	**Pb**	**04 30 39.1**	**-0.5**
FETY	**Fethiye**	**1.12**	**297**	P	**Pb**	**04 30 38.9**	**-0.7**
FETY				S	**Sb**	**04 30 54.0**	**+0.1**
GOLH	**Golhisar**	**1.27**	**331**	*i* P	**Pg**	**04 30 42.8**	**-0.4**
GOLH				*i* S	**Sg**	**04 31 01.8**	**+2.0**
GOLH	**Golhisar**	**1.27**	**331**	P	**Pg**	**04 30 42.8**	**-0.4**
KEPZ	**Antalya-Kepez**	**1.29**	**53**	*i* P	**Pg**	**04 30 43.5**	**-0.2**
KEPZ				*i* S	**Sg**	**04 31 00.9**	**+0.3**
KEPZ	**Antalya-Kepez**	**1.29**	**53**	P	**Pg**	**04 30 43.5**	**-0.2**
SUTC	**Sutluce-Ispart**	**1.45**	**22**	PN	**Pn**	**04 30 44.2**	**-0.1**
SUTC	**Sutluce-Ispart**	**1.45**	**22**	*e*Pn	**Pn**	**04 30 44.2**	**-0.1**
DALY	**Dalyan (Mu˜la**	**1.51**	**298**	PN	**Pn**	**04 30 45.0**	**+0.1**
DALY	**Dalyan (Mu˜la**	**1.51**	**298**	*i* P	**Pn**	**04 30 45.4**	**+0.5**
DALY				*i* S	**Sn**	**04 31 03.1**	**-1.1**
DALY	**Dalyan (Mu˜la**	**1.51**	**298**	*e*Pn	**Pn**	**04 30 45.0**	**+0.1**
DALY	**Dalyan (Mu˜la**	**1.51**	**298**	P	**Pn**	**04 30 45.4**	**+0.5**
DALY				S	**Sn**	**04 31 03.1**	**-1.1**
GAZI	**Gazipasa**	**1.62**	**86**	PN	**Pn**	**04 30 46.6**	**+0.1**
GAZI	**Gazipasa**	**1.62**	**86**	*e*Pn	**Pn**	**04 30 46.6**	**+0.1**
TAVA	**DENIZLI_Tavas**	**1.75**	**320**	*i* P	**Pb**	**04 30 49.7**	**-0.7**
TAVA				*i* S	**Sn**	**04 31 10.1**	**-0.2**
TAVA	**DENIZLI_Tavas**	**1.75**	**320**	P	**Pb**	**04 30 49.7**	**-0.7**
TAVA				S	**Sn**	**04 31 10.1**	**-0.2**
YER	**Yerkesik**	**1.92**	**302**	PN	**Pn**	**04 30 51.1**	**+0.4**
YER	**Yerkesik**	**1.92**	**302**	*e*Pn	**Pn**	**04 30 51.1**	**+0.4**
DAT	**Datca**	**2.29**	**286**	PN	**Pn**	**04 30 55.9**	**+0.1**
DAT	**Datca**	**2.29**	**286**	*e*Pn	**Pn**	**04 30 55.9**	**+0.1**
BODT	**Bodrum**	**2.60**	**292**	PN	**Pn**	**04 30 59.6**	**-0.3**
BODT	**Bodrum**	**2.60**	**292**	*e*Pn	**Pn**	**04 30 59.6**	**-0.3**

NIED **22** *04:41:00,42°.50N×143°.00E,h62*^{km}*,Mw5.1 Best double couple: M*$_0$*4.76000×10*^{16} *NP1:φ*$_s$*227.00000°,δ24.00000°, λ105.00000°. NP2:φ*$_s$*31.00000°,δ67.00000°,λ84.00000°.*

BJI **22** *04:41:53.8,42°.39N×143°.26E,h57*^{km}*,mb5.3/67,mB5.2/46, Ms4.5/68,Ms7 4.3/62*

ISCJB **22** *04:41:57.1±0.1,42°.45N±0°.02×142°.94E±0°.02,h73*^{km}*±1*^{km}*, mb5.0/418,Error ellipse: s-maj=2.8km s-min=1.7km az=154.7*

MOS **22** *04:41:57.6±0.9,42°.50N×142°.88E,h75*^{km}*,mb5.5/119, MS4.3/20,Error ellipse: s-maj=5.2km s-min=3.5km az=102.3*

MOS Felt (II) at Yuzhno-Kuril'sk.

NEIC **22** *04:41:57.3±0.1,42°.55N×142°.85E,mb5.1/274,Error ellipse: s-maj=3.0km s-min=1.8km az=151.0*

NEIC Felt [IV] at Obihiro and [III] at Sapporo. Also felt at Tomakomai. Felt at Hachinohe, Honshu. Recorded [4 JMA] in south-central Hokkaido and [2 JMA] in Aomori, Honshu.

SKHL **22** *04:41:57.8±0.9,42°.39N×142°.98E,h81*^{km}*±3*^{km}*,mb5.4/3, mbh5.7/1,Ms4.3/2*

SKHL Felt (II) at Yushno-Kurilsk.

GCMT **22** *04:41:57.3±0.2,42°.43N×142°.91E,h62*^{km}*±1*^{km}*, MW5.1/102,Moment Tensor Solution. s70,c103; s102,c161; Duration: 0 Moment tensor: Scale 10*^{16}*Nm; M*$_{rr}$*4.02±.14; M*$_{\theta\theta}$*-1.94±.12; M*$_{\phi\phi}$*-2.07±.12; M*$_{r\theta}$*0.78±.09; M*$_{\theta\phi}$*-2.35±.09; M*$_{\phi r}$*2.99±.08; Best double couple: M*$_0$*5.21200×10*^{16} *NP1:φ*$_s$*27.00000°,δ64.00000°, λ74.00000°. NP2:φ*$_s$*241.00000°,δ31.00000°,λ120.00000°. Principal axes: T 5.2470, Plg67.0000°, Azm266.0000°; N -0.0600, Plg15.0000°, Azm35.0000°; P -5.1780, Plg17.0000°, Azm129.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

JMA **22** *04:41:58.3±0.1,42°.49N×143°.03E,h61*^{km}*±1*^{km}*,M5.1 Broadband fault plane solution: P waves. NP1: φ*$_s$*31.00000°,δ62.00000°,λ69.00000°. NP2:φ*$_s$*250.00000°, δ34.00000°,λ124.00000°. Principal axes: T Plg66.0000°, Azm263.0000°; N Plg18.0000°, Azm41.0000°; P Plg15.0000°, Azm136.0000°;*

JMA Felt IV J1.

IDC **22** *04:41:59.1±1.2,42°.50N×142°.94E,h75*^{km}*±9*^{km}*,mb4.8/31, mb1 4.9/37,mb1mx4.7/69,mbtmp5.1/37,MS4.0/55, Ms1 4.0/55,ms1mx4.0/61 Error ellipse: s-maj=11.2km s-min=8.8km az=106.0*

ISC 22 04:41:57.7±0.3,**42°.47N**±0°.03×**143°.02E**±0°.02,**h65**^{km}±2^{km}, **h65**^{km}**:pP-P,n1438,σ1**^{s}**21**/1575,**mb5.1**/434,**76C-47D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MYR	**Moyori**	**0.27**	**132**	*e*P	**Pn**	**04 42 08.3**	**+0.1**
MYR				*e*S	**Sn**	**04 42 15.8**	**+0.1**
JNBK	**Urakawa-nobuka**	**0.27**	**226**	⇑P	**Pn**	**04 42 08.3**	**+0.1**
JNBK				S	**Sn**	**04 42 16.4**	**+0.6**
JTHR	**Tokachihiroo**	**0.28**	**130**	P	**Pn**	**04 42 08.4**	**+0.2**
JTHR				*e*S	**Sn**	**04 42 15.8**	**0.0**
JCH	**Churui**	**0.29**	**61**	⇑P	**Pn**	**04 42 08.1**	**-0.2**
JCH				*e*S	**Sn**	**04 42 16.1**	**0.0**
JSHD	**Hidakashinhida**	**0.41**	**262**	P	**Pn**	**04 42 09.6**	**+0.3**
JSHD				*e*S	**Sn**	**04 42 19.1**	**+1.4**
JEM	**Erimo**	**0.47**	**167**	⇑P	**Pn**	**04 42 10.6**	**+0.8**
ERM	**Erimo**	**0.47**	**167**	*e*Pn	**Pn**	**04 42 10.2**	**+0.4**
ERM				*e*Sn	**Sn**	**04 42 20.8**	**+2.3**
ERM	**Erimo**	**0.47**	**167**	*d i*PN	**Pn**	**04 42 10.8**	**+1.0**
JBT2	**Biratori 2**	**0.57**	**303**	⇓P	**Pn**	**04 42 11.2**	**+0.3**
JBT2				*e*S	**Sn**	**04 42 21.4**	**+0.9**
JOB	**Onbets**	**0.74**	**54**	⇑P	**Pn**	**04 42 13.9**	**+1.1**
JOB				S	**Sn**	**04 42 25.8**	**+1.9**
JFR	**Furan**	**0.76**	**336**	⇓P	**Pn**	**04 42 12.6**	**-0.4**
JAR	**Ashorobuto**	**0.99**	**34**	⇑P	**Pn**	**04 42 16.4**	**+0.5**
JAR				*e*S	**Sn**	**04 42 29.8**	**+0.4**
HRK	**Horoka**	**1.00**	**5**	*e*P	**Pn**	**04 42 16.7**	**+0.7**
HRK				*e*S	**Sn**	**04 42 30.1**	**+0.5**
JAB	**Ashibetsu**	**1.19**	**331**	⇓P	**Pn**	**04 42 19.2**	**+0.8**
JAB				*e*S	**Sn**	**04 42 37.3**	**+3.5**
JEW	**Eniwo**	**1.21**	**288**	⇓P	**Pn**	**04 42 19.3**	**+0.6**
JEW				*e*S	**Sn**	**04 42 36.4**	**+2.0**
JAK	**Akkeshi**	**1.35**	**66**	⇑P	**Pn**	**04 42 20.9**	**+0.4**
JAK				*e*S	**Sn**	**04 42 38.4**	**+0.9**
JKK2	**Kamakawa 2**	**1.42**	**352**	⇓P	**Pn**	**04 42 22.3**	**+0.9**
JNB	**Noboribetsu**	**1.46**	**271**	⇓P	**Pn**	**04 42 21.7**	**-0.3**
JNB				S	**Sn**	**04 42 40.6**	**+0.3**
JMP	**Maruseppu**	**1.56**	**9**	⇓P	**Pn**	**04 42 24.3**	**+1.0**
JHR	**Hokuryu**	**1.58**	**324**	⇓P	**Pn**	**04 42 25.2**	**+1.5**
JKB	**Kayabe**	**1.58**	**249**	⇓P	**Pn**	**04 42 23.8**	**+0.2**
JKB				S	**Sn**	**04 42 43.0**	**-0.2**
ASAJ	**Asahikawa**	**1.67**	**350**	P	**Pn**	**04 42 26.1**	**+1.3**
	baz=208,slow=8.9						
ASAJ				S	**Sn**	**04 42 47.2**	**+1.8**
	467nm,0.3s,baz=201,slow=21,SNR=11						
ASAJ				LR	LR	04 43 17.6	
	comp=Z,7µm,19.6s,baz=152,slow=48						
ASAJ	**Asahikawa**	**1.67**	**350**	*e*Pn	**Pn**	**04 42 25.2**	**+0.4**
ASAJ				S	**Sn**	**04 42 47.2**	**+1.8**
ASAJ	**Asahikawa**	**1.67**	**350**	⇓P	**Pn**	**04 42 26.0**	**+1.1**
JNK	**Nakash**	**1.68**	**48**	⇑P	**Pn**	**04 42 25.3**	**+0.4**
JOT	**Ohata**	**1.83**	**234**	⇑P	**Pn**	**04 42 26.9**	**0.0**
JYM2	**Yakumo 2**	**1.99**	**261**	⇓P	**Pn**	**04 42 29.4**	**+0.2**
JYM2				S	**Sn**	**04 42 54.1**	**+1.0**
JSS	**Shosan**	**2.11**	**337**	⇓P	**Pn**	**04 42 32.4**	**+1.7**
JRA	**Rausu**	**2.13**	**46**	S	**Sn**	**04 42 59.6**	**+3.3**
JSR	**Shiriuchi**	**2.15**	**245**	P	**Pn**	**04 42 31.5**	**+0.2**
JSH	**Shimam**	**2.20**	**275**	⇓P	**Pn**	**04 42 32.4**	**+0.4**
JTM	**Tenmabayashi**	**2.23**	**222**	⇑P	**Pn**	**04 42 32.3**	**0.0**
GLVR	**Golovnino**	**2.23**	**55**	*i* P	**Pn**	**04 42 33.0**	**+0.7**
GLVR				AMB	AMB	04 42 34.0	
	2µm,0.5s						
GLVR				AMB	AMB	04 42 34.0	
	975nm,0.5s						
GLVR				AMB	AMB	04 42 34.0	
	5µm,0.5s						
GLVR				*i* S	**Sn**	**04 43 00.0**	**+1.2**
GLVR				A	A	04 43 03.0	
	3µm,0.3s						
GLVR				A	A	04 43 03.0	
	3µm,0.3s						
GLVR	**Golovnino**	**2.23**	**55**	*i* PN	**Pn**	**04 42 33.6**	**+1.3**
GLVR				*i* S	**Sn**	**04 43 00.2**	**+1.4**
GLVR				pmax	pmax		
	comp=E,975nm,0.3s						
GLVR				pmax	pmax		
	comp=N,2µm,0.2s						
GLVR				smax	smax		
	comp=E,34µm,0.2s						
JYG	**Yagishiri**	**2.27**	**330**	⇓P	**Pn**	**04 42 33.9**	**+1.0**
GRPR	**Tuman**	**2.52**	**52**	*i* P	**Pn**	**04 42 37.0**	**+0.6**
GRPR				AMB	AMB	04 42 39.0	
	comp=E,1µm,0.3s						
GRPR				AMB	AMB	04 42 39.0	
	comp=E,2µm,0.3s						
GRPR				AMB	AMB	04 42 39.0	
	comp=E,3µm,0.3s						
GRPR				*e*S	**Sn**	**04 43 07.0**	**+1.0**
GRPR				A	A	04 43 16.0	
	comp=E,951nm,0.4s						
GRPR				A	A	04 43 16.0	
	comp=E,2µm,0.4s						
GRPR	**Tuman**	**2.52**	**52**	*i* PN	**Pn**	**04 42 37.7**	**+1.3**
GRPR				*e*S	**Sn**	**04 43 07.6**	**+1.6**
GRPR				pmax	pmax		
	comp=Z,3µm,0.3s						
GRPR				pmax	pmax		
	comp=N,1µm,0.2s						
GRPR				pmax	pmax		
	comp=E,2µm,0.2s						
GRPR				smax	smax		
	comp=N,10µm,0.3s						
GRPR				smax	smax		
	comp=E,22µm,0.4s						
LAGR	**Lagunnoye**	**2.57**	**51**	*i* P	**Pn**	**04 42 39.0**	**+2.0**
LAGR				AMB	AMB	04 42 41.0	
	comp=E,981nm,0.3s						
LAGR				AMB	AMB	04 42 41.0	
	comp=E,3µm,0.3s						
LAGR				AMB	AMB	04 42 41.0	
	comp=E,5µm,0.3s						
LAGR				*i* S	**Sn**	**04 43 10.0**	**+2.9**
LAGR				A	A	04 43 26.0	
	comp=E,2µm,0.6s						
LAGR				A	A	04 43 26.0	
	comp=E,4µm,0.6s						
LAGR	**Lagunnoye**	**2.57**	**51**	*d i*PN	**Pn**	**04 42 39.0**	**+2.0**
LAGR				*i* S	**Sn**	**04 43 10.8**	**+3.7**
LAGR				pmax	pmax		
	comp=N,981nm,0.3s						
LAGR				pmax	pmax		
	comp=E,3µm,0.3s						
LAGR				pmax	pmax		
	comp=Z,5µm,0.3s						
LAGR				smax	smax		
	comp=N,16µm,0.6s						
LAGR				smax	smax		
	comp=E,44µm,0.6s						
YUK	**Yuzh-Kuril'sk**	**2.60**	**52**	*i* P	**Pn**	**04 42 39.0**	**+1.6**
YUK				AMB	AMB	04 42 40.0	
	comp=E,1µm,0.2s						
YUK				AMB	AMB	04 42 40.0	
	comp=E,309nm,0.2s						
YUK				AMB	AMB	04 42 40.0	
	comp=E,5µm,0.2s						
YUK				*i* S	**Sn**	**04 43 10.0**	**+2.1**
YUK				A	A	04 43 14.0	
	comp=E,900nm,0.4s						
YUK				A	A	04 43 14.0	
	comp=E,2µm,0.4s						
YUK	**Yuzh-Kuril'sk**	**2.60**	**52**	*d i*PN	**Pn**	**04 42 39.0**	**+1.6**
YUK				*i* S	**Sn**	**04 43 10.5**	**+2.6**
YUK				pmax	pmax		
	comp=N,1µm,0.2s						
YUK				pmax	pmax		
	comp=Z,5µm,0.2s						
YUK				pmax	pmax		
	comp=E,309nm,0.1s						
YUK				smax	smax		
	comp=N,9.0nm,0.4s						
YUK				smax	smax		
	comp=E,21nm,0.4s						
JIW	**Iwasaki**	**2.94**	**231**	⇑P	**Pn**	**04 42 42.1**	**+0.1**
JWK2	**Keihoku**	**2.96**	**345**	⇓P	**Pn**	**04 42 44.3**	**+2.1**
MIYJ	**Miyakonagasawa**	**3.03**	**198**	⇓P	**Pn**	**04 42 41.7**	**-1.6**
SHO	**Shikotan**	**3.12**	**62**	*i* P	**Pn**	**04 42 45.0**	**+0.5**
SHO				AMB	AMB	04 42 48.0	
	comp=E,763nm,0.5s						
SHO				AMB	AMB	04 42 48.0	
	comp=E,1µm,0.5s						
SHO				AMB	AMB	04 42 48.0	
	comp=E,2µm,0.5s						
SHO				*e*S	**Sn**	**04 43 21.0**	**+0.4**
SHO				A	A	04 43 25.0	
	comp=E,947nm,0.5s						
SHO				A	A	04 43 25.0	
	comp=E,2µm,0.5s						
SHO	**Shikotan**	**3.12**	**62**	*c i*PN	**Pn**	**04 42 45.7**	**+1.2**
SHO				*e*S	**Sn**	**04 43 21.7**	**+1.1**
SHO				pmax	pmax		
	comp=Z,2µm,0.5s						
SHO				pmax	pmax		
	comp=N,763nm,0.2s						
SHO				pmax	pmax		
	comp=E,1µm,0.3s						
SHO				smax	smax		
	comp=E,15µm,0.5s						
SHO				smax	smax		
	comp=N,9µm,0.4s						
JOM	**Ohasama**	**3.27**	**204**	⇓P	**Pn**	**04 42 45.8**	**-0.7**
OFUJ	**Ofunato**	**3.54**	**197**	⇓P	**Pn**	**04 42 49.0**	**-1.2**
JMK	**Ichinoseki**	**3.77**	**202**	⇓P	**Pn**	**04 42 52.4**	**-1.0**
JIO	**Ouri**	**4.21**	**198**	P	**Pn**	**04 42 57.9**	**-1.5**
KUR	**Kuril'sk**	**4.46**	**50**	*i* P	**Pn**	**04 43 05.4**	**+2.6**
KUR				AMB	AMB	04 43 11.0	
	comp=N,435nm,0.6s						
KUR				AMB	AMB	04 43 11.0	
	comp=N,256nm,0.6s						
KUR				AMB	AMB	04 43 11.0	
	comp=N,973nm,0.6s						
KUR				*i* S	**Sn**	**04 43 58.0**	**+4.5**
KUR				A	A	04 44 16.0	
	comp=N,1µm,0.4s						
KUR				A	A	04 44 16.0	
	comp=N,2µm,0.4s						
KUR	**Kuril'sk**	**4.46**	**50**	*i* PN	**Pn**	**04 43 05.4**	**+2.6**
KUR				*i* S	**Sn**	**04 43 58.4**	**+5.0**
KUR				pmax	pmax		
	comp=Z,973nm,0.6s						
KUR				pmax	pmax		
	comp=N,435nm,0.2s						
KUR				pmax	pmax		
	comp=E,256nm,0.3s						
KUR				smax	smax		
	comp=N,1µm,0.4s						
KUR				smax	smax		
	comp=E,2µm,0.4s						
JOU	**Okura**	**4.47**	**204**	⇓P	**Pn**	**04 43 02.5**	**-0.6**
YSS	**Yuzh-Sakhalins**	**4.49**	**358**	*i* P	**Pn**	**04 43 05.0**	**+1.9**
YSS				AMB	AMB	04 43 06.0	
	comp=E,500nm,1.1s						
YSS				*i* S	**Sn**	**04 43 55.1**	**+1.1**
YSS				A	A	04 43 58.0	
	comp=E,2µm,2.7s						
YSS				A	A	04 44 01.0	
	comp=E,370nm,1.1s						
YSS				AMS	AMS	04 45 17.0	
	comp=E,2µm,13.0s						
YSS				AMS	AMS	04 45 17.0	
	comp=E,2µm,13.0s						
YSS	**Yuzh-Sakhalins**	**4.49**	**358**	*e*Pn	**Pn**	**04 43 05.4**	**+2.3**
YSS	**Yuzh-Sakhalins**	**4.49**	**358**	*d i*PN	**Pn**	**04 43 05.4**	**+2.3**
YSS				*i* S	**Sn**	**04 43 55.1**	**+1.1**
YSS				pmax	pmax		
	comp=Z,500nm,1.1s						
YSS				smax	smax		
	comp=E,2µm,2.7s						
YSS				smax	smax		
	comp=N,370nm,1.1s						
YSS				MLR	MLR		
	comp=Z,2µm,16.0s						
YSS				MLR	MLR		
	comp=N,2µm,13.0s						
YSS				MLR	MLR		
	comp=E,2µm,12.0s						
JYA	**Atsumi**	**4.62**	**214**	⇑P	**Pn**	**04 43 05.2**	**+0.2**
TEY	**Ternei**	**5.30**	**301**	*e*PN	**Pn**	**04 43 13.6**	**-0.7**
TEY				pmax	pmax		
	comp=Z,200nm,0.8s						

TEY				MLR	MLR		
	comp=Z,3µm,10.0s						
JHO	**Hitachi**	**6.15**	**199**	P	**Pn**	**04 43 23.3**	**-2.6**
JHG	**Hegura jima**	**6.56**	**227**	⇑P	**Pn**	**04 43 32.4**	**+0.8**
UGL	**Uglegorsk**	**6.64**	**355**	*e*P	**Pn**	**04 43 33.9**	**+1.3**
UGL				AMB	AMB	04 43 36.0	
	comp=Z,400nm,1.1s						
UGL				AMB	AMB	04 43 36.0	
	comp=Z,800nm,1.1s						
UGL				AMB	AMB	04 43 38.0	
	comp=Z,640nm,0.9s						
UGL				AMS	AMS	04 47 30.0	
	comp=Z,2µm,18.0s						
UGL				AMS	AMS	04 47 30.0	
	comp=Z,800nm,18.0s						
UGL				AMS	AMS	04 47 30.0	
	comp=Z,1µm,18.0s						
MJB9	**Matsu-Tunnel**	**6.99**	**214**	*e*Pn	**Pn**	**04 43 37.8**	**+0.3**
MAJO	**Matsushiro**	**6.99**	**214**	*e*P	**Pn**	**04 43 37.2**	**-0.2**
MAJO	**Matsushiro**	**6.99**	**214**	*e*Pn	**Pn**	**04 43 37.4**	**-0.1**
MAJO	**Matsushiro**	**6.99**	**214**	*c i*PN	**Pn**	**04 43 37.2**	**-0.2**
MAJO				pmax	pmax		
	comp=Z,85nm,0.6s						
MAT	**Matsushiro**	**6.99**	**214**	P	**Pn**	**04 43 37.1**	**-0.3**
MAT				S	**Sn**	**04 44 56.2**	**+0.7**
MJAR	**Matsushiro Arr**	**6.99**	**214**	P	**Pn**	**04 43 37.5**	**0.0**
	comp=Z,12nm,0.3s,baz=26,slow=13,SNR=160						
MJAR				LR	LR	04 47 06.2	
	comp=Z,846nm,20.3s,baz=30,slow=44						
JGN	**Niukaw**	**7.64**	**217**	P	**Pn**	**04 43 47.0**	**+0.6**
USRK	**Ussuriysk Ar.**	**8.22**	**286**	P	**Pn**	**04 43 55.3**	**+1.1**
	baz=86,slow=16						
TYV	**Tymovskoe**	**8.40**	**358**	*e*PN	**Pn**	**04 44 00.1**	**+3.5**
TYV				*e*S	**Sn**	**04 45 32.4**	**+2.6**
TYV				pmax	pmax		
	comp=Z,400nm,2.0s						
TYV				pmax	pmax		
	comp=Z,242nm,0.8s						
TYV				smax	smax		
	comp=E,32nm,1.1s						
JAO	**Obara**	**8.48**	**214**	P	**Pn**	**04 43 57.9**	**+0.1**
INU	**Inuyama**	**8.51**	**215**	*e*Pn	**Pn**	**04 43 57.2**	**-1.0**
MSHR	**Mys Shultsa**	**8.76**	**275**	*c i*PN	**Pn**	**04 44 02.6**	**+1.0**
JKY	**Yasaka**	**9.19**	**225**	P	**Pn**	**04 44 08.3**	**+0.8**
GRNR	**Gornyy**	**9.46**	**334**	⇑*i*PN	Pn	04 44 16.4	+5.3
GRNR				pmax	pmax		
	comp=E,170nm,0.8s						
GRNR				pmax	pmax		
	comp=Z,240nm,0.8s						
JHJ	**Hachijo jima 2**	**9.68**	**196**	P	**Pn**	**04 44 10.2**	**-3.9**
	comp=Z,95nm,0.3s,baz=244,slow=23,SNR=18						
JHJ				S	Sn	04 45 51.4	-10
	comp=Z,71nm,0.3s,baz=61,slow=22,SNR=10						
JHJ				LR	LR	04 48 31.1	
	comp=Z,686nm,21.7s,baz=68,slow=40						
JHJ2	**Mitsune**	**9.68**	**196**	*e*Pn	**Pn**	**04 44 10.0**	**-4.2**
JHJ2				*e*Sn	Sn	04 45 51.2	-10
MDJ	**Mudanjiang**	**9.98**	**287**	P	**Pn**	**04 44 18.3**	**0.0**
MDJ				sP		04 44 37.0	
MDJ				S	**Sn**	**04 46 09.8**	**+1.2**
MDJ				pmax	pmax		
	comp=Z,140nm,0.9s						
MDJ				LR	LR		
	comp=Z,830nm,13.9s						
MDJ				LR	LR		
	comp=Z,2µm,17.9s						
MDJ				LR	LR		
	comp=Z,3µm,21.1s						
MDJ	**Mudanjiang**	**9.98**	**287**	*e*Pn	**Pn**	**04 44 16.4**	**-1.8**
	comp=Z,116nm,1.0s						
KLR	**Kul'dur**	**10.36**	**315**	P	**Pn**	**04 44 24.9**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=116,slow=15,SNR=52						
KLR				LR	LR	04 48 29.3	
	comp=Z,169nm,20.7s,baz=136,slow=38						
KLR	**Kul'dur**	**10.36**	**315**	*e*P	**Pn**	**04 44 25.0**	**+1.6**
KLR	**Kul'dur**	**10.36**	**315**	*c i*PN	**Pn**	**04 44 25.0**	**+1.6**
NKL	**Nikolayevsk**	**10.80**	**352**	*e*PN	**Pn**	**04 44 32.0**	**+2.7**
NKL				*e*S	**Sn**	**04 46 32.0**	**+3.6**
NKL				pmax	pmax		
	comp=N,500nm,4.0s						
NKL				pmax	pmax		
	comp=Z,800nm,2.0s						
NKL				pmax	pmax		
	comp=N,200nm,1.0s						
NKL				pmax	pmax		
	comp=Z,240nm,1.0s						
NKL				smax	smax		
	comp=E,500nm,10.0s						
NKL				MLR	MLR		
	comp=N,300nm,14.0s						
NKL				MLR	MLR		
	comp=E,600nm,14.0s						
NKL				MLR	MLR		
	comp=Z,700nm,14.0s						
OKH	**Okha**	**11.09**	**360**	*e*P	**Pn**	**04 44 35.4**	**+2.1**
OKH				AMB	AMB	04 44 59.1	
	comp=Z,100nm,12.0s						
OKH	**Okha**	**11.09**	**360**	*e*PN	**Pn**	**04 44 35.4**	**+2.1**
OKH				*e*S	Sn	04 46 46.4	+11
OKH				pmax	pmax		
	comp=Z,100nm,12.0s						
OKH				smax	smax		
	comp=N,500nm,11.0s						
SKR	**Severo-Kuril's**	**12.18**	**43**	*e*P	**Pn**	**04 44 50.3**	**+2.1**
SKR				AMB	AMB	04 44 56.2	
	comp=N,400nm,2.2s						
SKR				AMS	AMS	04 49 53.3	
	comp=N,800nm,14.0s						
SKR	**Severo-Kuril's**	**12.18**	**43**	*e*PN	**P**	**04 44 55.3**	**-3.1**
SKR				pmax	pmax		
	comp=Z,400nm,2.2s						
SKR				pmax	pmax		
	comp=Z,100nm,1.9s						
SKR				MLR	MLR		
	comp=Z,700nm,14.0s						
SKR				MLR	MLR		
	comp=Z,800nm,14.0s						
KSRS	**Korea Array**	**12.61**	**252**	P	**Pn**	**04 44 54.8**	**+0.6**
	comp=Z,1.0nm,0.3s,baz=65,slow=13,SNR=126						
KSRS				S	**Sn**	**04 47 21.1**	**+8.3**
	comp=Z,1.7nm,0.3s,baz=66,slow=24,SNR=7.9						
KSRS				LR	LR	04 49 27.1	
	comp=Z,475nm,20.3s,baz=67,slow=36						
KSRS				PcP	**PcP**	**04 50 28.6**	**+1.2**
	baz=115,slow=0.9,SNR=8.4						
KS01	**Wonju Array Si**	**12.62**	**252**	*e*Pn	**Pn**	**04 44 53.0**	**-1.3**
KS15	**Wonju Array Si**	**12.64**	**252**	*e*Pn	**Pn**	**04 44 55.0**	**+0.3**
KS15				*e*Sn	Sn	04 47 23.6	+10
KSAR	**Wonju Array Be**	**12.64**	**252**	P	**Pn**	**04 44 54.8**	**+0.2**
KSAR				S	**Sn**	**04 47 21.1**	**+7.5**
KSAR				PcP	**PcP**	**04 50 28.6**	**+1.2**
KSAR	**Wonju Array Be**	**12.64**	**252**	PN	**Pn**	**04 44 54.8**	**+0.2**
KSAR				S	**Sn**	**04 47 21.1**	**+7.5**
CN2	**Changchun**	**12.90**	**282**	*e*P	**Pn**	**04 44 58.3**	**+0.2**
CN2				*e*pP	P	04 45 07.5	+1.0
CN2				*e*sP		04 45 16.8	
CN2				*e*S	**Sn**	**04 47 19.3**	**-0.6**
CN2				pmax	pmax		
	comp=Z,30nm,0.9s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=Z,1µm,14.0s						
CN2				LR	LR		
	comp=Z,2µm,14.0s						
CN2				LR	LR		
	comp=Z,2µm,16.0s						
JNU	**Nakatsue**	**13.37**	**230**	P	**Pn**	**04 45 03.2**	**-1.4**
	comp=Z,1.0nm,0.3s,baz=42,slow=6.2,SNR=46						
JNU				LR	LR	04 50 22.3	
	comp=Z,380nm,21.9s,baz=112,slow=38						
INCN	**Inchon**	**13.51**	**254**	*e*Pn	**Pn**	**04 45 05.9**	**-0.5**
	comp=Z,28nm,0.8s						
INCN	**Inchon**	**13.51**	**254**	*e*PN	**Pn**	**04 45 05.9**	**-0.5**
INCN				pmax	pmax		
	comp=Z,28nm,0.8s						
TJN	**Taejon**	**13.54**	**248**	*ce*PN	**Pn**	**04 45 07.4**	**+0.7**
PEA0B	**Petropavlovsk-**	**14.48**	**38**	*e*Pn	**Pn**	**04 45 19.4**	**+0.4**
PETK	**Petropavlovsk-**	**14.48**	**38**	P	**Pn**	**04 45 18.8**	**-0.3**
	baz=214,slow=7.6						
PETK				LR	LR	04 51 16.5	
	comp=Z,438nm,18.8s,baz=210,slow=38						
PETK	**Petropavlovsk-**	**14.48**	**38**	*e*Pn	**Pn**	**04 45 17.2**	**-1.8**
PET	**Petropavlovsk**	**14.87**	**39**	*e*P	**Pn**	**04 45 24.6**	**+0.6**
PET	**Petropavlovsk**	**14.87**	**39**	*e*Pn	**Pn**	**04 45 22.9**	**-1.1**
PET	**Petropavlovsk**	**14.87**	**39**	*e*P	P	04 45 37.9	+10
PET				pmax	pmax		
	comp=Z,100nm,6.0s						
PET				MLR	MLR		
	comp=Z,500nm,20.0s						
PET				MLR	MLR		
	comp=Z,500nm,15.0s						
CBIJ	**Chichi jima**	**15.35**	**183**	*e*Pn	**Pn**	**04 45 25.9**	**-4.6**
	comp=Z,192nm,0.7s						
CBIJ				*e*Sn	Sn	04 48 07.3	-12
JCJ	**Chichijima**	**15.35**	**183**	P	**Pn**	**04 45 25.9**	**-4.6**
	baz=348,slow=9.3						
ZEA	**Zeya**	**15.38**	**323**	*e*P	**Pn**	**04 45 29.2**	**-1.5**
ZEA				*e*		04 48 16.0	
ZEA				pmax	pmax		
	comp=Z,300nm,3.0s						
ZEA				pmax	pmax		
	comp=N,86nm,1.2s						
ZEA				pmax	pmax		
	comp=E,83nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,130nm,1.4s						
ZEA				MLR	MLR		
	comp=N,900nm,16.0s						
ZEA				MLR	MLR		
	comp=E,1µm,16.0s						
ZEA				MLR	MLR		
	comp=Z,1µm,16.0s						
HIA	**Hailar**	**17.53**	**301**	*e*Pn	**Pn**	**04 45 56.0**	**-1.6**
	comp=Z,36nm,0.8s						
HIA	**Hailar**	**17.53**	**301**	*e*P	**Pn**	**04 45 56.0**	**-1.6**
HIA				pmax	pmax		
	comp=Z,36nm,0.8s						
MA2	**Magadan**	**17.79**	**13**	P	**P**	**04 45 59.4**	**-1.1**
	comp=Z,2.3nm,0.3s,baz=201,slow=9.8,SNR=8.6						
MA2	**Magadan**	**17.79**	**13**	*e*P	**P**	**04 45 59.8**	**-0.8**
MA2	**Magadan**	**17.79**	**13**	*e*Pn	**P**	**04 45 59.7**	**-0.8**
	comp=Z,48nm,0.9s						
MA2	**Magadan**	**17.79**	**13**	*e*P	**P**	**04 45 59.9**	**-0.6**
MA2				pmax	pmax		
	comp=Z,47nm,1.3s						
JOW	**Kunigami**	**19.71**	**222**	P	**P**	**04 46 20.4**	**-1.4**
	comp=Z,4.1nm,0.3s,baz=1.8,slow=12,SNR=13						
JOW				LR	LR	04 54 41.6	
	comp=Z,308nm,20.9s,baz=49,slow=39						
JOW	**Kunigami**	**19.71**	**222**	*e*P	**P**	**04 46 20.4**	**-1.4**
	comp=Z,44nm,0.7s						
BJI	**Beijing**	**20.30**	**272**	⇓*i*P	**P**	**04 46 26.3**	**-1.8**
BJI				S	**S**	**04 50 06.3**	**-5.6**
BJI				pmax	pmax		
	comp=Z,81nm,1.6s						
BJI				LR	LR		
	comp=Z,1µm,16.7s						
BJI				LR	LR		
	comp=Z,1µm,25.5s						
BJI				LR	LR		
	comp=Z,2µm,26.5s						
BJT	**Baijiatuau**	**20.31**	**272**	*e*P	**P**	**04 46 25.9**	**-2.3**
	comp=Z,174nm,1.0s						
BJT	**Baijiatuau**	**20.31**	**272**	*e*P	**P**	**04 46 25.9**	**-2.3**
BJT				pmax	pmax		
	comp=Z,174nm,1.0s						
YAK	**Yakutsk**	**21.14**	**342**	*e*P	**P**	**04 46 34.6**	**-2.4**
	comp=Z,134nm,0.8s						
YAK	**Yakutsk**	**21.14**	**342**	*e*P	**P**	**04 46 32.8**	**-4.1**
YAK				*e*S	**S**	**04 50 21.7**	**-6.5**
YAK				*e*SS	**SnSn**	**04 51 01.2**	**+6.8**
YAK				*e*		04 57 53.3	
YAK				pmax	pmax		
	comp=N,29nm,1.0s						
YAK				pmax	pmax		
	comp=Z,159nm,1.0s						
YAK				pmax	pmax		
	comp=E,23nm,1.1s						
YAK				smax	smax		
	comp=N,73nm,2.2s						
YAK				smax	smax		
	comp=E,97nm,2.3s						
YAK				MLR	MLR		
	comp=Z,814nm,27.0s						
YAK				MLR	MLR		
	comp=N,2µm,25.0s						
YAK				MLR	MLR		
	comp=E,165nm,11.0s						
SEY	**Seymchan**	**21.22**	**12**	P	**P**	**04 46 36.0**	**-1.9**
	comp=E,49nm,0.7s,baz=190,slow=7.4,SNR=80						
SEY	**Seymchan**	**21.22**	**12**	*ce*P	**P**	**04 46 35.7**	**-2.1**
NJ2	**Nanjing**	**21.79**	**249**	*e*P	**P**	**04 46 40.9**	**-3.3**
NJ2				sP	**pP**	**04 47 00.3**	**+2.1**
NJ2				pmax	pmax		
	comp=E,28nm,0.7s						
NJ2				pmax	pmax		
	comp=E,270nm,3.5s						
NJ2				LR	LR		
	comp=E,1µm,16.3s						
NJ2				LR	LR		
	comp=E,990nm,19.0s						
NJ2				LR	LR		
	comp=E,890nm,19.0s						
HHC	**Hu-ho-hao-te**	**23.49**	**277**	*e*P	**P**	**04 47 00.3**	**-1.4**
HHC				pP	pP	04 47 13.0	-3.5
HHC				sP	sP	04 47 25.3	+0.8
HHC				S	**S**	**04 51 10.3**	**-0.1**
HHC				sS	Sn	04 51 26.9	-8.2
HHC				pmax	pmax		
	comp=E,18nm,1.0s						
HHC				pmax	pmax		
	comp=E,230nm,6.0s						
HHC				LR	LR		
	comp=E,610nm,11.8s						
HHC				LR	LR		
	comp=E,570nm,13.5s						
HHC				LR	LR		
	comp=E,740nm,18.4s						
TIY	**Taiyuan**	**23.80**	**269**	*e*P	**P**	**04 47 05.5**	**+1.0**
TIY				PP	**PnPn**	**04 47 42.0**	**+6.6**
TIY				S	**S**	**04 51 15.4**	**-0.1**
TIY				pmax	pmax		
	comp=E,26nm,0.5s						
TIY				pmax	pmax		
	comp=E,200nm,4.1s						
TIY				LR	LR		
	comp=E,290nm,11.0s						
TIY				LR	LR		
	comp=E,190nm,7.0s						
BOD	**Bodaibo**	**23.86**	**320**	*e*P	**P**	**04 46 59.1**	**-5.6**
BOD				pmax	pmax		
	comp=Z,21nm,0.9s						
YHNB	**Yeheng**	**25.19**	**232**	*e*P	**P**	**04 47 16.2**	**-1.0**
	comp=Z,43nm,0.7s						
WHN	**Wuhan**	**25.81**	**252**	⇑P	**P**	**04 47 20.1**	**-2.6**
WHN				S	**S**	**04 51 41.3**	**-6.1**
WHN				pmax	pmax		
	comp=Z,82nm,0.6s						
WHN				LR	LR		
	comp=Z,1µm,11.1s						
WHN				LR	LR		
	comp=Z,1µm,11.9s						
WHN				LR	LR		
	comp=Z,1µm,23.7s						
SONA1	**Songino Array**	**26.20**	**295**	*e*P	**P**	**04 47 25.0**	**-1.2**
SONM	**Songino Array**	**26.20**	**294**	P	**P**	**04 47 25.9**	**-0.4**
	comp=Z,49nm,0.7s,baz=88,slow=8.5,SNR=262						
SONM				PcP	**PcP**	**04 50 51.9**	**+0.4**
	comp=Z,4.4nm,0.7s,baz=156,slow=2.8,SNR=4.2						
SONM				ScP	**ScP**	**04 54 26.0**	**+0.5**
	comp=Z,1.7nm,1.1s,baz=96,slow=3.0,SNR=3.7						
SONM				LR	LR	04 58 21.1	
	comp=Z,935nm,19.7s,baz=84,slow=38						
YULB	**Yu-li**	**26.22**	**230**	*e*P	**P**	**04 47 26.5**	**0.0**
	comp=Z,96nm,1.8s						
QZH	**Quanzhou**	**26.66**	**237**	P	**P**	**04 47 30.8**	**+0.4**
QZH				S	**S**	**04 52 07.4**	**+6.6**
TPUB	**Ta-pu**	**26.67**	**231**	*e*P	**P**	**04 47 30.7**	**+0.1**
	comp=Z,88nm,1.4s						
TWG	**Pinlang**	**26.79**	**230**	*e*P	**P**	**04 47 31.8**	**+0.2**
	comp=Z,120nm,0.8s						
IRK	**Irkutsk**	**27.70**	**304**	*e*P	**P**	**04 47 37.3**	**-2.3**
IRK				*e*		04 54 00.8	
IRK				pmax	pmax		
	comp=Z,78nm,2.7s						
XAN	**Xi'an**	**27.92**	**264**	P	**P**	**04 47 40.8**	**-0.9**
XAN				pP	pP	04 47 55.4	-2.0
XAN				sP	sP	04 48 02.8	-2.3
XAN				PP	**PnPn**	**04 48 32.0**	**+0.4**
XAN				S	**S**	**04 52 19.3**	**-1.4**
XAN				sS	sS	04 52 44.3	-3.4
XAN				SS	**SnSn**	**04 53 44.6**	**+4.3**
XAN				pmax	pmax		
	comp=Z,16nm,0.8s						
XAN				pmax	pmax		
	comp=Z,150nm,3.5s						
XAN				LR	LR		
	comp=Z,360nm,18.7s						
XAN				LR	LR		
	comp=Z,400nm,18.7s						
XAN				LR	LR		
	comp=Z,450nm,22.3s						
TLY	**Talaya**	**28.05**	**303**	P	**P**	**04 47 43.0**	**+0.3**
	comp=Z,31nm,0.7s,baz=112,slow=4.6,SNR=19						
TLY				PcP	**PcP**	**04 50 56.3**	**+0.6**
	comp=Z,11nm,0.7s,baz=276,slow=1.6,SNR=5.1						
TLY	**Talaya**	**28.05**	**303**	*e*P	**P**	**04 47 42.5**	**-0.2**
TLY	**Talaya**	**28.05**	**303**	*e*P	**P**	**04 47 42.2**	**-0.5**
	comp=Z,37nm,0.8s						
TLY				*e*PcP	**PcP**	**04 50 56.0**	**+0.3**
TLY	**Talaya**	**28.05**	**303**	P	**P**	**04 47 43.0**	**+0.3**
	SNR=13						
TLY	**Talaya**	**28.05**	**303**	*e*P	**P**	**04 47 42.7**	**0.0**
TLY				*e*S	**S**	**04 52 22.6**	**+0.2**
TLY				pmax	pmax		
	comp=Z,52nm,1.0s						
TLY				MLR	MLR		
	comp=Z,722nm,22.0s						
ZAK	**Zakamensk**	**28.23**	**300**	*e*P	**P**	**04 47 43.6**	**-0.8**
ZAK				pmax	pmax		
	comp=Z,30nm,1.0s						
GUMO	**Guam**	**28.82**	**176**	LR	LR	04 58 05.6	
	comp=Z,240nm,21.7s,baz=11,slow=34						
ENH	**Enshi**	**29.42**	**257**	*e*P	**P**	**04 47 53.4**	**-1.7**
	comp=Z,42nm,0.8s						
MOY	**Mondy**	**29.70**	**303**	*e*P	**P**	**04 47 57.7**	**+0.3**
MOY				pmax	pmax		
	comp=Z,116nm,2.0s						
TIXI	**Tiksi**	**30.08**	**351**	*e*P	**P**	**04 48 01.3**	**+0.9**
TIXI	**Tiksi**	**30.08**	**351**	⇓*e*P	**P**	**04 48 01.3**	**+0.9**
TIXI				pmax	pmax		
	comp=Z,14nm,1.5s						
H11N2	**WAKE ISLAND Hy**	**30.34**	**131**	T	T	05 19 38.6	
	baz=325,slow=75,SNR=1107						
H11N1	**WAKE ISLAND Hy**	**30.35**	**131**	T	T	05 19 40.7	
	baz=325,slow=75,SNR=1056						
H11N3	**WAKE ISLAND Hy**	**30.36**	**131**	T	T	05 19 40.0	
	baz=325,slow=75,SNR=1173						
LZH	**Lanzhou**	**30.78**	**271**	⇑P	**P**	**04 48 07.8**	**+0.6**
LZH				pP	pP	04 48 22.5	-0.5
LZH				sP	sP	04 48 30.1	-0.6
LZH				PP	**PnPn**	**04 49 12.8**	**+3.3**
LZH				S	**S**	**04 53 03.0**	**-2.9**
LZH				SS	**SnSn**	**04 54 51.3**	**+1.2**
LZH				pmax	pmax		
	comp=Z,53nm,1.3s						
LZH				pmax	pmax		
	comp=Z,280nm,4.3s						
LZH				LR	LR		
	comp=Z,940nm,12.5s						
LZH				LR	LR		
	comp=Z,790nm,14.1s						
LZH				LR	LR		
	comp=Z,1µm,14.6s						
H11S1	**WAKE ISLAND Hy**	**31.22**	**133**	T	T	05 20 50.2	
	baz=326,slow=76,SNR=1156						
H11S3	**WAKE ISLAND Hy**	**31.22**	**133**	T	T	05 20 45.5	
	baz=326,slow=76,SNR=1780						
H11S2	**WAKE ISLAND Hy**	**31.23**	**133**	T	T	05 20 48.6	
	baz=326,slow=76,SNR=965						
GTA	**Gaotai**	**32.52**	**279**	⇑P	**P**	**04 48 22.8**	**+0.4**
GTA				pP	pP	04 48 35.3	-2.9
GTA				sP	sP	04 48 40.3	-5.6
GTA				PcP	**PcP**	**04 51 09.3**	**+1.6**
GTA				S	**S**	**04 53 35.6**	**+2.7**
GTA				sS	sS	04 54 01.1	+1.1
GTA				PcS	**PcS**	**04 54 53.6**	**+0.7**
GTA				SS	**SnSn**	**04 55 35.0**	**+2.9**
GTA				ScS	**ScS**	**04 58 44.4**	**-1.0**
GTA				pmax	pmax		
	comp=Z,100nm,1.1s						
GTA				pmax	pmax		
	comp=Z,290nm,5.6s						
GTA				LR	LR		
	comp=Z,220nm,17.2s						
GTA				LR	LR		
	comp=Z,420nm,16.2s						
GTA				LR	LR		
	comp=Z,560nm,19.6s						
CD2	**Chengdu**	**33.25**	**263**	P	**P**	**04 48 27.3**	**-1.5**
CD2				pP	pP	04 48 41.4	-3.3
CD2				sP	sP	04 48 48.4	-3.9
CD2				PP	**PnPn**	**04 49 42.8**	**+1.9**
CD2				S	**S**	**04 53 42.8**	**-1.4**
CD2				pmax	pmax		
	comp=Z,100nm,0.5s						
CD2				pmax	pmax		
	comp=Z,160nm,5.0s						
CD2				LR	LR		
	comp=Z,1µm,17.9s						
CD2				LR	LR		
	comp=Z,740nm,11.9s						
CD2				LR	LR		
	comp=Z,320nm,22.4s						
GYA	**Guiyang**	**33.66**	**253**	⇑*i*P	**P**	**04 48 31.5**	**-0.9**
GYA				pP	pP	04 48 48.3	-0.1
GYA				PP	**PnPn**	**04 49 47.0**	**+0.8**
GYA				PcP	**PcP**	**04 51 10.0**	**-1.1**
GYA				S	**S**	**04 53 50.5**	**-0.3**
GYA				sS	sS	04 54 16.4	-1.6
GYA				SS	**SnSn**	**04 55 57.8**	**-2.3**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,4.9s						
GYA				LR	LR		
	comp=Z,610nm,16.8s						
GYA				LR	LR		
	comp=Z,500nm,17.0s						
GYA				LR	LR		
	comp=Z,550nm,17.2s						
HVS	**Khovu-Aksy**	**34.28**	**302**	*e*P	**P**	**04 48 37.5**	**0.0**
HVS	**Khovu-Aksy**	**34.28**	**302**	⇑*e*P	**P**	**04 48 37.5**	**0.0**
HVS				pmax	pmax		
	comp=Z,21nm,0.6s						
KRAR	**Krasnoyarsk**	**34.62**	**311**	⇓*i*P	**P**	**04 48 38.9**	**-1.3**
KMI	**Kunming**	**37.27**	**255**	P	**P**	**04 49 03.6**	**0.0**
KMI				pP	pP	04 49 19.8	+0.2
KMI				S	**S**	**04 54 44.5**	**-1.9**
KMI				sS	sS	04 55 13.0	-0.8
KMI				pmax	pmax		
	comp=Z,62nm,0.9s						
KMI				pmax	pmax		
	comp=Z,250nm,3.1s						
KMI				LR	LR		
	comp=Z,430nm,18.9s						
KMI				LR	LR		
	comp=Z,300nm,17.8s						
KMI				LR	LR		
	comp=Z,290nm,24.0s						
DGZ	**Jazzator, Alta**	**38.45**	**301**	*i* P	**P**	**04 49 14.1**	**+1.0**
DGZ				pmax	pmax		
	comp=Z,77nm,1.2s						
DAV	**Davao City (W)**	**38.48**	**209**	LR	LR	05 03 48.8	
	comp=Z,150nm,21.5s,baz=350,slow=34						
ZAA0	**Zalesovo Array**	**39.37**	**308**	*e*P	**P**	**04 49 20.2**	**-0.3**
	comp=Z,70nm,0.9s						
ZAA0				*e*PcP	**PcP**	**04 51 28.0**	**+0.4**
ZALV	**Zalesovo Beam**	**39.37**	**308**	P	**P**	**04 49 20.2**	**-0.3**
	comp=Z,67nm,0.9s,baz=87,slow=7.6,SNR=83						
ZALV				PcP	**PcP**	**04 51 27.9**	**+0.3**
	comp=Z,40nm,0.6s,baz=96,slow=2.2,SNR=16						
ZALV				ScP	**ScP**	**04 55 10.5**	**+0.2**
	comp=Z,4.2nm,0.8s,baz=134,slow=8.5,SNR=4.8						
ZALV				LR	LR	05 06 38.7	
	comp=Z,472nm,18.4s,baz=70,slow=38						
ZALV	**Zalesovo Beam**	**39.37**	**308**	*e*P	**P**	**04 49 19.4**	**-1.1**
ZALV				*e*PcP	**PcP**	**04 51 27.9**	**+0.3**
ZALV				ScP	**ScP**	**04 55 10.5**	**+0.2**
WMQ	**Urumqi**	**39.74**	**291**	P	**P**	**04 49 24.4**	**+0.5**
WMQ				pP	pP	04 49 41.8	+1.7
WMQ				sP	sP	04 49 46.3	-1.4
WMQ				PcP	**PcP**	**04 51 30.1**	**+1.0**
WMQ				S	**S**	**04 55 24.4**	**+1.4**
WMQ				pmax	pmax		
	comp=Z,190nm,0.9s						

WMQ				pmax	pmax		
	comp=Z,630nm,4.3s						
WMQ				LR	LR		
	comp=Z,930nm,17.5s						
WMQ				LR	LR		
	comp=Z,1µm,25.3s						
WMQ				LR	LR		
	comp=Z,1µm,22.3s						
NVS	**Novosibirsk**	**40.17**	**309**	eP	**P**	**04 49 26.8**	**-0.3**
NVS				pmax	pmax		
	comp=Z,79nm,1.8s						
NVS				pmax	pmax		
	comp=E,49nm,1.5s						
SVW2	**Sparrevohn**	**40.53**	**41**	eP	**P**	**04 49 31.4**	**+1.3**
	comp=E,11nm,0.9s						
NONG	**Nongkai**	**41.62**	**247**	P	**P**	**04 49 40.1**	**+0.6**
	comp=E,1.2nm,0.9s						
SKNT	**Sakolnakorn**	**41.82**	**245**	P	**P**	**04 49 41.9**	**+0.7**
	comp=E,20nm,1.0s						
RSO	**Redoubt South**	**41.95**	**42**	eP	**P**	**04 49 43.5**	**+1.5**
OHAK	**Old Harbor**	**42.03**	**47**	eP	**P**	**04 49 41.6**	**-0.8**
UBPT	**Khong Chiam**	**42.07**	**241**	P	**P**	**04 49 44.4**	**+1.2**
	comp=E,27nm,1.6s						
PPLA	**Purkeypile**	**42.07**	**38**	eP	**P**	**04 49 44.4**	**+1.5**
	comp=E,62nm,1.3s						
CAST	**Castle Rocks**	**42.10**	**37**	eP	**P**	**04 49 44.2**	**+1.2**
	comp=E,27nm,0.7s						
KDAK	**Kodiak Island**	**42.33**	**46**	eP	**P**	**04 49 44.8**	**0.0**
KDAK	**Kodiak Island**	**42.33**	**46**	eP	**P**	**04 49 44.3**	**-0.5**
	comp=E,42nm,1.1s						
KDAK	**Kodiak Island**	**42.33**	**46**	iP	**P**	**04 49 44.8**	**0.0**
SKT	**Skwentna**	**42.43**	**40**	eP	**P**	**04 49 47.7**	**+2.1**
	comp=E,8.0nm,0.8s						
MK01	**Makanchi Array**	**42.49**	**297**	eP	**P**	**04 49 45.1**	**-1.2**
MK31	**Makanchi Array**	**42.49**	**297**	eP	**P**	**04 49 46.1**	**-0.2**
MKAR	**Makanchi Array**	**42.49**	**297**	P	**P**	**04 49 46.1**	**-0.2**
	comp=E,74nm,0.9s,baz=81,slow=8.4,SNR=394						
MKAR				PcP	**PcP**	**04 51 38.2**	**+0.2**
	comp=E,11nm,0.6s,baz=75,slow=5.5,SNR=8.0						
MKAR				LR	LR	05 08 15.6	
	comp=E,241nm,19.5s,baz=78,slow=37						
BPAW	**Bear Paw Mtn.**	**42.56**	**36**	eP	**P**	**04 49 47.5**	**+0.8**
	comp=E,14nm,0.8s						
KTH	**Kantishna Hill**	**42.61**	**37**	eP	**P**	**04 49 47.7**	**+0.5**
	comp=E,50nm,0.9s						
MLY	**Manley**	**42.64**	**35**	eP	**P**	**04 49 48.0**	**+0.6**
	comp=E,15nm,0.9s						
MAKZ	**Makanchi**	**42.69**	**298**	eP	**P**	**04 49 47.6**	**-0.4**
	comp=E,120nm,1.0s						
MAKZ	**Makanchi**	**42.69**	**298**	eP	**P**	**04 49 47.6**	**-0.4**
MAKZ				pmax	pmax		
	comp=Z,120nm,1.0s						
CNPM	**China Poot**	**42.80**	**43**	eP	**P**	**04 49 51.3**	**+2.6**
	comp=Z,20nm,0.9s						
COLD	**Coldfoot**	**42.84**	**32**	eP	**P**	**04 49 48.9**	**0.0**
	comp=Z,26nm,1.3s						
TRF	**Thorofare Moun**	**42.90**	**37**	eP	**P**	**04 49 50.5**	**+0.8**
	comp=Z,18nm,0.8s						
BRLK	**Bradley Lake**	**42.95**	**43**	eP	**P**	**04 49 51.6**	**+1.7**
	comp=Z,25nm,0.8s						
MYLDM	**Lahad Datu**	**43.05**	**217**	eP	**P**	**04 49 53.9**	**+2.8**
	comp=Z,145nm,1.6s						
KHON	**Khomkaen**	**43.05**	**245**	P	**P**	**04 49 51.8**	**+0.7**
	comp=Z,42nm,0.7s,comp=Z,442nm						
TOLK	**Toolik Lake Re**	**43.11**	**30**	P	**P**	**04 49 50.5**	**-0.5**
	baz=269						
TOLK	**Toolik Lake Re**	**43.11**	**30**	eP	**P**	**04 49 51.1**	**0.0**
	comp=Z,16nm,0.9s						
TOLK				eS	**S**	**04 56 16.5**	**+4.4**
LSA	**Lhasa**	**43.19**	**270**	P	**P**	**04 49 53.8**	**+1.1**
LSA				pmax	pmax		
	comp=Z,32nm,0.8s						
LSA	**Lhasa**	**43.19**	**270**	eP	**P**	**04 49 52.7**	**0.0**
	comp=Z,25nm,0.7s						
LSA	**Lhasa**	**43.19**	**270**	P	**P**	**04 49 53.7**	**+1.1**
LSA	**Lhasa**	**43.19**	**270**	eP	**P**	**04 49 52.7**	**0.0**
LSA				pmax	pmax		
	comp=Z,25nm,0.7s						
BWN	**Browne**	**43.22**	**36**	eP	**P**	**04 49 53.7**	**+1.7**
	comp=Z,107nm,1.0s						
MCK	**McKinley**	**43.49**	**37**	eP	**P**	**04 49 54.9**	**+0.7**
	comp=Z,41nm,1.1s						
MCK	**McKinley**	**43.49**	**37**	eP	**P**	**04 49 54.9**	**+0.7**
MCK				pmax	pmax		
	comp=Z,41nm,1.1s						
PMR	**Palmer**	**43.60**	**40**	eP	**P**	**04 49 55.2**	**+0.2**
PMR	**Palmer**	**43.60**	**40**	eP	**P**	**04 49 55.2**	**+0.2**
GHO	**Glory Hole Cre**	**43.67**	**40**	eP	**P**	**04 49 56.2**	**+0.4**
	comp=Z,29nm,0.8s						
MDM	**Murphy Dome**	**43.71**	**35**	eP	**P**	**04 49 56.5**	**+0.6**
	comp=Z,21nm,0.8s						
KURK	**Kurchatov**	**43.73**	**304**	eP	**P**	**04 49 56.0**	**-0.2**
KURK	**Kurchatov**	**43.73**	**304**	eP	**P**	**04 49 56.2**	**-0.1**
KURK				ePcP	**PcP**	**04 51 41.9**	**-0.1**
KURK	**Kurchatov**	**43.73**	**304**	P	**P**	**04 49 56.4**	**+0.1**
	SNR=76						
KURK	**Kurchatov**	**43.73**	**304**c	iP	**P**	**04 49 56.0**	**-0.2**
KURK				pmax	pmax		
	comp=Z,244nm,0.8s						
WRH	**Wood River Hil**	**43.80**	**36**	eP	**P**	**04 49 57.0**	**+0.4**
	comp=Z,22nm,1.0s						
CCB	**Clear Creek Bu**	**43.91**	**35**	eP	**P**	**04 49 57.7**	**+0.2**
	comp=Z,15nm,1.1s						
CHAI	**Chaiyaphum**	**43.92**	**246**	P	**P**	**04 49 58.4**	**+0.2**
	comp=Z,21nm,0.9s,comp=Z,188nm						
SML	**Sawmill**	**43.95**	**40**	eP	**P**	**04 49 58.7**	**+0.8**
	comp=Z,41nm,0.8s						
SML	**Sawmill**	**43.95**	**40**	eP	**P**	**04 49 58.7**	**+0.8**
SML				pmax	pmax		
	comp=Z,41nm,0.8s						
CMMT	**Chiang Mai**	**44.01**	**251**	P	**P**	**04 49 59.2**	**+0.3**
	comp=Z,42nm,0.7s,comp=Z,636nm						
CHTO	**Chiang Mai**	**44.01**	**251**	eP	**P**	**04 49 59.3**	**+0.4**
	comp=Z,24nm,0.6s						
CHTO	**Chiang Mai**	**44.01**	**251**	P	**P**	**04 49 59.7**	**+0.8**
	SNR=8.0						
CHTO	**Chiang Mai**	**44.01**	**251**	P	**P**	**04 49 59.3**	**+0.4**
	comp=Z,178nm,0.7s,comp=Z,2µm						
PHIT	**Phitsanulok**	**44.09**	**248**	P	**P**	**04 50 00.6**	**+1.1**
	comp=Z,32nm,0.9s						
PBKT	**Sadao Pong**	**44.14**	**247**	P	**P**	**04 50 00.2**	**+0.3**
	comp=Z,25nm,0.8s						
DHY	**Denali Highway**	**44.25**	**38**	eP	**P**	**04 50 00.7**	**+0.3**
	comp=Z,29nm,0.8s						
CMAR	**Chiang Mai Arr**	**44.25**	**251**	P	**P**	**04 50 01.4**	**+0.7**
	comp=Z,8.3nm,0.8s,baz=42,slow=7.1,SNR=31						
CMAR				LR	LR	05 09 25.2	
	comp=Z,272nm,18.8s,baz=46,slow=37						
CM01	**Chiang Mai Arr**	**44.27**	**251**	eP	**P**	**04 50 00.5**	**-0.4**
ILAR	**Eielson Array**	**44.29**	**35**	P	**P**	**04 50 00.3**	**-0.2**
	comp=Z,17nm,0.6s,baz=257,slow=5.0,SNR=203						
ILAR				LR	LR	05 08 58.6	
	comp=Z,78nm,21.9s,baz=290,slow=37						
ILB	**Eielson Array**	**44.29**	**35**	eP	**P**	**04 50 00.5**	**-0.1**
IL1	**Eielson Array**	**44.30**	**35**	eP	**P**	**04 49 59.6**	**-1.0**
SCM	**Sheep Creek Mo**	**44.42**	**39**	eP	**P**	**04 50 02.6**	**+0.9**
	comp=Z,29nm,0.8s						
SCM	**Sheep Creek Mo**	**44.42**	**39**	eP	**P**	**04 50 02.6**	**+0.9**
SCM				pmax	pmax		
	comp=Z,29nm,0.8s						
SUKH	**Sukhothai**	**44.43**	**249**	P	**P**	**04 50 03.0**	**+0.8**
	comp=Z,12nm,0.8s						
FYU	**Fort Yukon**	**44.83**	**33**	eP	**P**	**04 50 05.8**	**+1.0**
	comp=Z,140nm,1.8s						
SHL	**Shillong**	**44.92**	**265**	P	**P**	**04 50 06.2**	**-0.1**
SHL				pmax	pmax		
	comp=Z,28nm,1.6s						
FID	**Port Fidalgo**	**44.99**	**41**	eP	**P**	**04 50 05.9**	**-0.2**
	comp=Z,58nm,1.5s						
PAX	**Paxson**	**45.12**	**38**	eP	**P**	**04 50 05.9**	**-1.4**
	comp=Z,12nm,0.9s						
PAX	**Paxson**	**45.12**	**38**	eP	**P**	**04 50 05.9**	**-1.4**
PAX				pmax	pmax		
	comp=Z,12nm,0.9s						
KLU	**Klutina**	**45.13**	**40**	eP	**P**	**04 50 08.2**	**+0.8**
	comp=Z,27nm,0.8s						
DIV	**Divide**	**45.26**	**40**	eP	**P**	**04 50 09.6**	**+1.2**
	comp=Z,34nm,1.0s						
RIDG	**Independ'e Rid**	**45.30**	**37**	eP	**P**	**04 50 08.3**	**-0.3**
	comp=Z,22nm,0.8s						
HARP	**HAARP**	**45.35**	**38**	eP	**P**	**04 50 10.1**	**+1.1**
	comp=Z,60nm,0.8s						
EYAK	**Cordova Ski Ar**	**45.38**	**41**	eP	**P**	**04 50 10.6**	**+1.4**
	comp=Z,23nm,0.9s						
NAYO	**Nakonayok**	**45.51**	**245**	P	**P**	**04 50 12.5**	**+1.7**
	comp=Z,0.3nm,1.1s						
PDGK	**Podgornoye**	**45.52**	**294**	P	**P**	**04 50 10.0**	**-0.8**
PDGK				pmax	pmax		
	comp=Z,50nm,1.1s						
SCRK	**Sand Creek**	**45.64**	**36**	eP	**P**	**04 50 11.1**	**-0.3**
	comp=Z,36nm,0.7s						
UMPA	**Umpang Tak**	**45.84**	**249**	P	**P**	**04 50 16.3**	**+2.8**
	comp=Z,14nm,1.0s,comp=Z,696nm						
BMRM	**Bremner River**	**45.85**	**40**	eP	**P**	**04 50 14.3**	**+1.2**
	comp=Z,34nm,1.0s						
PRZ	**Przheval'sk**	**46.58**	**293**	eP	**P**	**04 50 19.9**	**+0.7**
	comp=Z,59nm,0.9s						
PRZ	**Przheval'sk**	**46.58**	**293**	eP	**P**	**04 50 19.9**	**+0.7**
PRZ				pmax	pmax		
	comp=Z,59nm,0.9s						
EGAK	**Eagle**	**46.73**	**35**	eP	**P**	**04 50 19.8**	**0.0**
	comp=Z,22nm,0.9s						
TGL	**Tana Glacier**	**46.74**	**40**	eP	**P**	**04 50 22.0**	**+1.9**
	comp=Z,36nm,1.0s						
BRDH	**Bariadhala**	**46.80**	**262**	LR	LR	05 11 12.3	
	comp=Z,215nm,19.8s,baz=85,slow=38						
TAPN	**Taplejung**	**47.00**	**270**	eP	**P**	**04 50 23.4**	**+0.7**
	comp=Z,84nm,0.5s						
ODAN	**Odare**	**47.51**	**269**	eP	**P**	**04 50 26.9**	**+0.3**
	comp=Z,105nm,0.7s						
DAWY	**Dawson**	**47.62**	**36**	eP	**P**	**04 50 27.4**	**+0.6**
	comp=Z,6.3nm,0.9s						
JIRN	**Jiri**	**47.95**	**271**	eP	**P**	**04 50 30.5**	**+0.3**
	comp=Z,94nm,0.4s						
BVA0	**Borovoye Array**	**47.96**	**309**	iP	**P**	**04 50 29.2**	**-0.4**
BVA0				pmax	pmax		
	comp=Z,48nm,0.7s						
BVAR	**Borovoye Array**	**47.96**	**309**	P	**P**	**04 50 29.8**	**+0.2**
	comp=Z,54nm,0.7s,baz=77,slow=8.4,SNR=239						
BVAR				PcP	**PcP**	**04 51 57.3**	**+0.5**
	comp=Z,34nm,0.7s,baz=86,slow=2.8,SNR=12						
BVAR				LR	LR	05 12 15.5	
	comp=Z,449nm,18.7s,baz=74,slow=38						
BRVK	**Borovoye**	**48.02**	**309**	eP	**P**	**04 50 29.9**	**0.0**
BRVK	**Borovoye**	**48.02**	**309**	eP	**P**	**04 50 30.1**	**+0.2**
BRVK				ePcP	**PcP**	**04 51 56.9**	**-0.1**
BRVK	**Borovoye**	**48.02**	**309**	P	**P**	**04 50 30.3**	**+0.4**
	SNR=39						
BRVK	**Borovoye**	**48.02**	**309**c	iP	**P**	**04 50 29.9**	**0.0**
BRVK				pmax	pmax		
	comp=Z,149nm,1.7s						
RAMN	**Ramite**	**48.04**	**270**	eP	**P**	**04 50 30.9**	**+0.1**
	comp=Z,277nm,0.8s						
GUN	**Gumba**	**48.04**	**272**	eP	**P**	**04 50 31.1**	**+0.2**
	comp=Z,282nm,0.3s						
ULHL	**Ulahol**	**48.14**	**294**	P	**P**	**04 50 31.3**	**-0.1**
	SNR=34						
TKM2	**Tokmak 2**	**48.30**	**295**	P	**P**	**04 50 33.0**	**+0.4**
	SNR=107						
SBUM	**Sibu**	**48.43**	**223**	eP	**P**	**04 50 34.5**	**+1.0**
	comp=Z,14nm,0.8s						
KKN	**Kakani**	**48.55**	**272**	eP	**P**	**04 50 34.8**	**+0.1**
	comp=Z,159nm,0.8s						
PKIN	**Phulchoki**	**48.58**	**272**	eP	**P**	**04 50 34.8**	**-0.2**
	comp=Z,39nm,0.4s						
DMN	**Daman**	**48.78**	**272**	eP	**P**	**04 50 36.7**	**+0.2**
	comp=Z,76nm,0.5s						
CHMS	**Chumysh**	**48.84**	**295**	P	**P**	**04 50 36.0**	**-0.5**
	SNR=6.6						
KBK	**Karagaybulak**	**48.85**	**295**	P	**P**	**04 50 37.0**	**+0.3**
	SNR=40						
KZA	**Kyzart**	**48.88**	**294**	P	**P**	**04 50 38.2**	**+0.9**
	SNR=25						
USP	**Ospenovka**	**48.90**	**296**	P	**P**	**04 50 37.0**	**0.0**
	SNR=25						
GKN	**Gorkha**	**48.91**	**273**	eP	**P**	**04 50 37.3**	**-0.1**
	comp=Z,88nm,0.5s						
FRU	**Bishkek**	**49.00**	**295**	iP	**P**	**04 50 37.0**	**-0.7**
FRU				pmax	pmax		
	comp=Z,115nm,2.0s						
INK	**Inuvik**	**49.02**	**29**	eP	**P**	**04 50 37.6**	**+0.2**
	comp=Z,22nm,1.1s						
INK	**Inuvik**	**49.02**	**29**	eP	**P**	**04 50 37.6**	**+0.2**
INK				pmax	pmax		
	comp=Z,22nm,1.1s						
AAK	**Ala-Archa**	**49.16**	**295**	P	**P**	**04 50 39.0**	**-0.2**
	SNR=12						
AAK	**Ala-Archa**	**49.16**	**295**	eP	**P**	**04 50 38.9**	**-0.2**
	comp=Z,37nm,1.1s						
AAK	**Ala-Archa**	**49.16**	**295**	eP	**P**	**04 50 38.9**	**-0.2**
AAK				pmax	pmax		
	comp=Z,37nm,1.1s						
DANN	**Dangsing**	**49.37**	**274**	eP	**P**	**04 50 41.6**	**+0.6**
	comp=Z,581nm,0.7s						
KSH	**Kashi**	**49.49**	**290**	P	**P**	**04 50 45.1**	**+3.5**
KSH				pP	pP	04 51 00.8	+2.5
KSH				ePcP	**PcP**	**04 52 05.4**	**+2.7**
KSH				PcS	**PcS**	**04 56 01.1**	**+1.6**
KSH				S	**S**	**04 57 47.3**	**+3.0**
KSH				pmax	pmax		
	comp=Z,51nm,1.2s						
KSH				pmax	pmax		
	comp=Z,140nm,4.3s						
KSH				LR	LR		
	comp=Z,440nm,16.2s						
KSH				LR	LR		
	comp=Z,340nm,13.9s						
KSH				LR	LR		
	comp=Z,550nm,16.0s						
EKS2	**Erkin-Say**	**49.63**	**295**	P	**P**	**04 50 42.6**	**0.0**
	SNR=25						
KOLN	**Koldanda**	**49.80**	**273**	eP	**P**	**04 50 44.5**	**+0.3**
	comp=Z,65nm,0.2s						
AML	**Almayashu**	**49.91**	**295**	P	**P**	**04 50 44.7**	**-0.4**
	SNR=5.4						
PYUN	**Piuthan**	**50.08**	**274**	eP	**P**	**04 50 46.6**	**+0.3**
	comp=Z,230nm,0.8s						
KSM	**Kuching**	**50.24**	**225**	eP	**P**	**04 50 48.6**	**+1.2**
	comp=Z,58nm,0.8s						
WHY	**Whitehorse**	**50.54**	**39**	eP	**P**	**04 50 50.9**	**+1.6**
	comp=Z,15nm,0.8s						
MNAS	**Manas**	**50.56**	**295**	P	**P**	**04 50 49.5**	**-0.2**
MNAS				pmax	pmax		
	comp=Z,76nm,1.0s						
SFK	**Sufi-Kurgan**	**50.97**	**292**	P	**P**	**04 50 52.2**	**-0.7**
SFK				pmax	pmax		
	comp=Z,68nm,1.0s						
SKLT	**Songkhla**	**51.27**	**239**	P	**P**	**04 50 56.7**	**+1.6**
	comp=Z,56nm,1.1s						
TRTT	**Trang**	**51.36**	**240**	P	**P**	**04 50 57.5**	**+1.7**
	comp=Z,18nm,1.6s						
KRAB	**Krabi**	**51.39**	**241**	P	**P**	**04 50 58.9**	**+2.9**
	comp=Z,120nm,0.9s						
SIT	**Sitka**	**51.53**	**44**	eP	**P**	**04 50 57.7**	**+1.2**
	comp=Z,18nm,1.1s						
SIT	**Sitka**	**51.53**	**44**	eP	**P**	**04 50 57.7**	**+1.2**
SIT				pmax	pmax		
	comp=Z,18nm,1.1s						
JIS	**Juneau Island**	**51.58**	**42**	eP	**P**	**04 50 59.0**	**+2.1**
	comp=Z,23nm,1.2s						
KK31	**Karatay Array**	**51.61**	**297**	eP	**P**	**04 50 57.0**	**-0.4**
KK31	**Karatay Array**	**51.61**	**297**	eP	**P**	**04 50 57.0**	**-0.4**
KKAR	**Karatay Array**	**51.61**	**297**	eP	**P**	**04 50 57.0**	**-0.4**
KKAR	**Karatay Array**	**51.61**	**297**	eP	**P**	**04 50 57.0**	**-0.4**
PMG	**Port Moresby**	**51.76**	**175**	LR	LR	05 10 31.7	
	comp=Z,91nm,21.5s,baz=304,slow=33						
SVE	**Sverdlovsk**	**51.98**	**316**d	iP	**P**	**04 51 00.2**	**+0.3**
SVE				pmax	pmax		
	comp=Z,171nm,0.9s						
KULM	**Kulim**	**52.70**	**238**	eP	**P**	**04 51 05.9**	**+0.1**
	comp=Z,46nm,1.0s						
IPM	**Ipoh**	**53.10**	**237**	eP	**P**	**04 51 08.6**	**-0.1**
	comp=Z,26nm,0.9s						
ARU	**Arti**	**53.19**	**316**	eP	**P**	**04 51 08.4**	**-0.4**
ARU	**Arti**	**53.19**	**316**	eP	**P**	**04 51 08.6**	**-0.2**
ARU				ePcP	**PcP**	**04 52 15.6**	**-0.4**
ARU	**Arti**	**53.19**	**316**c	iP	**P**	**04 51 08.5**	**-0.4**
ARU				*PP	**pP**	**04 51 28.1**	**+2.4**
ARU						04 52 15.5	
ARU						04 53 09.3	
ARU				S	**S**	**04 58 34.6**	**0.0**
ARU						05 00 48.7	
ARU				SS	**SS**	**05 02 05.9**	**-8.3**
ARU				pmax	pmax		
	comp=Z,155nm,1.0s						
ARU				MLR	MLR		
	comp=Z,425nm,15.0s						
MYKOM	**Kota Tinggi**	**53.54**	**232**	eP	**P**	**04 51 13.2**	**+1.3**
	comp=Z,20nm,0.6s						
DLBC	**Dease Lake**	**53.64**	**41**	eP	**P**	**04 51 13.2**	**+1.0**
	comp=Z,9.5nm,0.7s						
HNR	**Honiara**	**53.92**	**159**	LR	LR	05 14 05.7	
	comp=Z,27nm,19.9s,baz=328,slow=36						
NDI	**New Delhi**	**54.00**	**278**	eP	**P**	**04 51 13.0**	**-2.2**
NIL	**Nilore**	**54.23**	**285**	eP	**P**	**04 51 17.1**	**+0.3**
	comp=Z,218nm,0.9s						
NIL	**Nilore**	**54.23**	**285**	eP	**P**	**04 51 17.1**	**+0.3**
NIL				pmax	pmax		
	comp=Z,218nm,0.9s						
DIB	**Dawson Inlet,**	**54.55**	**47**	eP	**P**	**04 51 20.3**	**+1.5**
	comp=Z,44nm,1.4s						
SPA0	**Spitsbergen Ar**	**55.44**	**348**	eP	**P**	**04 51 24.5**	**-0.5**
SPA0				IAmb	IAmb	04 51 31.0	
	comp=Z,67nm,1.3s						
SPITS	**Spitsbergen Ar**	**55.44**	**348**	P	**P**	**04 51 24.3**	**-0.7**
	comp=Z,7.8nm,0.5s,baz=41,slow=9.6,SNR=13						
SPITS				LR	LR	05 16 12.1	
	comp=Z,153nm,21.8s,baz=15,slow=37						
AB31	**Akbulak array**	**55.48**	**308**	iP	**P**	**04 51 25.5**	**-0.1**
AB31				pmax	pmax		
	comp=Z,49nm,0.5s						
ABKAR	**Akbulak array**	**55.48**	**308**	eP	**P**	**04 51 25.7**	**+0.1**
KBS	**Kingsbay**	**55.52**	**350**	eP	**P**	**04 51 25.2**	**-0.3**
KBS	**Kingsbay**	**55.52**	**350**	eP	**P**	**04 51 24.9**	**-0.5**
KBS	**Kingsbay**	**55.52**	**350**	eP	**P**	**04 51 25.0**	**-0.5**
KBS	**Kingsbay**	**55.52**	**350**	eP	**P**	**04 51 25.4**	**-0.1**
KBS				IAmb	IAmb	04 51 26.6	
	comp=Z,47nm,1.0s						
PSI	**Prapat**	**55.71**	**237**	eP	**P**	**04 51 28.1**	**+0.3**
	comp=Z,44nm,0.8s						
PSI	**Prapat**	**55.71**	**237**	eP	**P**	**04 51 28.1**	**+0.3**
PSI				pmax	pmax		
	comp=Z,44nm,0.8s						
AKTO	**Aktyubinsk**	**56.05**	**310**	P	**P**	**04 51 29.6**	**-0.1**
	comp=Z,40nm,0.7s,baz=72,slow=13,SNR=97						
AKTO				LR	LR	05 17 32.4	
	comp=Z,284nm,19.4s,baz=72,slow=38						
MTN	**Manton Dam**	**56.11**	**194**	eP	**P**	**04 51 30.8**	**+0.5**
	comp=Z,49nm,0.9s						
COEN	**Coen**	**56.15**	**180**	eP	**P**	**04 51 31.4**	**+0.8**
	comp=Z,76nm,1.1s						
KBL	**Kabul**	**56.75**	**288**	eP	**P**	**04 51 33.9**	**-1.2**
	comp=Z,65nm,1.2s						
KBL	**Kabul**	**56.75**	**288**	eP	**P**	**04 51 33.9**	**-1.2**
KBL				pmax	pmax		
	comp=Z,65nm,1.2s						
PRGR	**Permogore**	**56.93**	**326**	eP	**P**	**04 51 34.6**	**-1.1**
PRGR				pmax	pmax		
	comp=Z,71nm,0.9s						
RES	**Resolute Bay**	**57.04**	**16**	eP	**P**	**04 51 35.6**	**-0.7**
RES	**Resolute Bay**	**57.04**	**16**	eP	**P**	**04 51 35.6**	**-0.7**
APA	**Apatity**	**58.27**	**335**	⇓iP	**P**	**04 51 41.7**	**-3.3**
APA				pmax	pmax		
	comp=Z,13nm,0.7s						
YKW3	**Yellowknife Ar**	**58.48**	**32**	eP	**P**	**04 51 47.0**	**+0.5**
YKA	**Yellowknife Ar**	**58.52**	**32**	P	**P**	**04 51 46.9**	**+0.1**
	comp=Z,8.8nm,0.7s,baz=307,slow=6.5,SNR=27						
YKA				LR	LR	05 19 33.8	
	comp=Z,8.3nm,20.1s,baz=297,slow=38						
YKA	**Yellowknife Ar**	**58.52**	**32**	P	**P**	**04 51 47.0**	**+0.1**
KEV	**Kevo**	**58.82**	**339**	eP	**P**	**04 51 47.0**	**-1.8**
KEV	**Kevo**	**58.82**	**339**	eP	**P**	**04 51 47.0**	**-1.8**
ARCES	**ARCESS Array B**	**59.37**	**339**	P	**P**	**04 51 52.0**	**-0.6**
	comp=Z,8.8nm,0.6s,baz=46,slow=7.8,SNR=60						
ARCES	**ARCESS Array B**	**59.37**	**339**	eP	**P**	**04 51 51.6**	**-1.0**
ARCES	**ARCESS Array B**	**59.37**	**339**	eP	**P**	**04 51 51.6**	**-1.0**
HYB	**Hyderabad**	**59.69**	**266**	iP	**P**	**04 51 55.0**	**-0.6**
KLMR	**Klimovskoe**	**59.86**	**327**	eP	**P**	**04 51 53.6**	**-2.5**
KLMR				pmax	pmax		
	comp=Z,61nm,1.1s						
KLMR	**Klimovskoe**	**59.86**	**327**	eP	**P**	**04 51 53.7**	**-2.4**
KLMR				AMP		04 51 55.9	
	comp=Z,61nm,1.1s						
KTK1	**Kautokeino**	**60.32**	**339**	eP	**P**	**04 51 58.9**	**-0.3**
SGF	**Sodankyl**	**60.44**	**337**	eP	**P**	**04 51 59.4**	**-0.6**
SGF				pmax	pmax		
	comp=Z,58nm,0.7s						
DAG	**Danmarks Havn**	**60.47**	**355**	⇑iP	**P**	**04 51 59.3**	**-0.7**
	comp=Z,21nm,0.7s						
MSF	**Maaselka**	**60.66**	**335**	eP	**P**	**04 52 00.9**	**-0.6**
MSF				pmax	pmax		
	comp=Z,51nm,0.7s						
TRO	**Tromso**	**60.99**	**341**	eP	**P**	**04 52 03.3**	**-0.3**
TRO				IAmb	IAmb	04 52 03.7	
	comp=Z,54nm,0.8s						
LLLB	**Lillooet**	**61.54**	**46**	eP	**P**	**04 52 08.8**	**+1.0**
	comp=Z,20nm,1.0s						
A04D	**Lummi Island**	**62.13**	**48**	P	**P**	**04 52 13.0**	**+1.4**
	baz=304						
NLWA	**Neilton Lookou**	**62.21**	**50**	eP	**P**	**04 52 13.4**	**+1.1**
	comp=Z,24nm,1.1s						
CTA	**Charters Tower**	**62.31**	**177**	LR	LR	05 19 06.7	
	comp=Z,155nm,21.0s,baz=52,slow=36						
CTAO	**Charters Tower**	**62.31**	**177**	eP	**P**	**04 52 14.2**	**+1.1**
GEYT	**Alibeck**	**62.37**	**297**	P	**P**	**04 52 12.6**	**-0.9**
	comp=Z,39nm,0.9s,baz=343,slow=2.0,SNR=24						
GEYT				LR	LR	05 20 58.3	
	comp=Z,352nm,21.8s,baz=25,slow=38						
GYA0B	**ALIBECK ARRAY**	**62.37**	**297**	eP	**P**	**04 52 13.4**	**-0.1**
	comp=Z,75nm,1.0s						
KULLO	**Kullorsuaq**	**62.45**	**6**	iP	**P**	**04 52 12.4**	**-1.0**
	comp=Z,44nm,0.8s						
WRAB	**Tennant Creek**	**62.60**	**189**	eP	**P**	**04 52 14.1**	**-1.0**
	comp=Z,25nm,1.0s						
WRAB				epP	**pP**	**04 52 30.8**	**-1.6**
WRAB	**Tennant Creek**	**62.60**	**189**c	eP	**P**	**04 52 14.2**	**-0.9**
WRAB				pmax	pmax		
	comp=Z,13nm,0.9s						
WB2	**Warramunga Arr**	**62.61**	**189**	eP	**P**	**04 52 13.9**	**-1.2**
WRA	**Warramunga Arr**	**62.61**	**189**	P	**P**	**04 52 14.5**	**-0.6**
	comp=Z,12nm,0.9s,baz=8.1,slow=6.9,SNR=44						
WRA				LR	LR	05 19 14.3	
	comp=Z,68nm,20.2s,baz=185,slow=36						
B05A	**Bryant**	**62.72**	**49**	P	**P**	**04 52 16.6**	**+1.0**
	baz=304						
E03A	**Lebam**	**62.85**	**51**	eP	**P**	**04 52 18.5**	**+2.0**
	comp=Z,37nm,1.0s						
B06A	**Marblemount**	**62.91**	**48**	eP	**P**	**04 52 17.9**	**+1.0**
	comp=Z,30nm,1.0s						
STEI	**Steigen**	**63.16**	**340**	eP	**P**	**04 52 17.3**	**-0.8**
STEI				IAmb	IAmb	04 52 18.4	
	comp=Z,31nm,0.8s						
D05A	**Enumclaw**	**63.38**	**49**	eP	**P**	**04 52 21.4**	**+1.3**
	comp=Z,22nm,0.9s						
LOF	**Lofoten**	**63.41**	**341**	eP	**P**	**04 52 18.8**	**-1.1**
LOF				IAmb	IAmb	04 52 20.4	
	comp=Z,34nm,0.9s						
MOS	**Moscow**	**63.66**	**323**	eP	**P**	**04 52 21.4**	**-0.3**
MOS				pmax	pmax		
	comp=Z,200nm,1.6s						
MOS				pmax	pmax		
	comp=Z,103nm,1.1s						
LON	**Longmire**	**63.73**	**50**	eP	**P**	**04 52 23.7**	**+1.2**
	comp=Z,10nm,0.9s						
LON	**Longmire**	**63.73**	**50**	eP	**P**	**04 52 23.7**	**+1.2**
LON				pmax	pmax		
	comp=Z,10.0nm,0.9s						
G03D	**McMinnville, O**	**63.77**	**52**	P	**P**	**04 52 23.2**	**+0.5**
	baz=305						
LTY	**Liberty**	**64.08**	**49**	eP	**P**	**04 52 25.9**	**+1.1**
	comp=Z,13nm,0.8s						
PUL	**Pulkovo**	**64.17**	**329**	eP	**P**	**04 52 24.5**	**-0.4**
PUL	**Pulkovo**	**64.17**	**329**	iP	**P**	**04 52 24.5**	**-0.4**
PUL				pmax	pmax		
	comp=Z,73nm,0.7s						
B08A	**Colville Reser**	**64.18**	**47**	eP	**P**	**04 52 26.1**	**+0.8**
	comp=Z,32nm,1.4s						
VRH	**Novokhopyorsk**	**64.42**	**317**	eP	**P**	**04 52 25.6**	**-1.2**
VRH				pmax	pmax		
	comp=Z,110nm,1.3s						
OBN	**Obninsk**	**64.52**	**322**	eP	**P**	**04 52 26.4**	**-0.9**
OBN	**Obninsk**	**64.52**	**322**	eP	**P**	**04 52 26.6**	**-0.7**
OBN	**Obninsk**	**64.52**	**322**c	iP	**P**	**04 52 26.4**	**-0.9**
OBN				e		04 52 58.9	
OBN				e		04 54 45.1	
OBN				iS	S	05 00 48.9	-12
OBN				pmax	pmax		
	comp=Z,64nm,0.7s						
OBN				MLR	MLR		
	comp=Z,314nm,17.0s						
I03D	**Drain, OR**	**64.59**	**53**	P	**P**	**04 52 27.2**	**-0.8**
	baz=305						
FINES	**FINESS Array B**	**64.60**	**332**	P	**P**	**04 52 26.4**	**-1.4**
	comp=Z,47nm,0.5s,baz=50,slow=7.5,SNR=414						
FINES				LR	LR	05 22 47.8	
	comp=Z,359nm,21.8s,baz=52,slow=38						
H04A	**Detroit Lake**	**64.70**	**52**	eP	**P**	**04 52 30.3**	**+1.5**
	comp=Z,32nm,1.0s						
MOR8	**Moi Rana**	**64.70**	**339**	eP	**P**	**04 52 26.7**	**-1.8**
MOR8				IAmb	IAmb	04 52 27.2	

	comp=Z,73nm,0.9s						
KONS	Konsvik	64.79	340	*e*P	P	04 52 29.2	+0.3
KONS				IAmb	IAmb	04 52 32.8	
	comp=Z,22nm,1.1s						
PALK	Pallekele	64.81	256	LR	LR	05 23 11.8	
	comp=Z,94nm,18.6s,baz=33,slow=38						
G05D	Wamic, OR	64.88	51	P	P	04 52 29.6	-0.3
	baz=306						
LPSR	Galich'ya Gora	64.96	319	*e*P	P	04 52 29.4	-0.8
LPSR				pmax	pmax		
	comp=Z,100nm,0.9s						
I04A	Tendick Farm,	65.09	53	P	P	04 52 31.7	+0.3
	baz=306						
D08A	Wollman Farm,	65.17	48	*e*P	P	04 52 33.0	+1.2
	comp=Z,20nm,0.8s						
HAWA	Hanford	65.22	49	*e*P	P	04 52 33.2	+1.2
HAWA				*e*pP	pP	04 52 49.7	+0.3
SUMG	Summit	65.25	0	*e*P	P	04 52 32.7	+0.4
	comp=Z,185nm,0.8s						
SUMG	Summit	65.25	0	*i* P	P	04 52 32.7	+0.4
	comp=Z,179nm,0.8s						
SUMG	Summit	65.25	0	*e*P	P	04 52 32.7	+0.4
SUMG				pmax	pmax		
	comp=Z,185nm,0.8s						
G06A	Carlson Farm,	65.28	51	*e*P	P	04 52 34.7	+2.1
G06A				*e*pP	pP	04 52 50.1	+0.2
F07A	Phinny Hill Vi	65.29	50	*e*P	P	04 52 34.0	+1.5
	comp=Z,29nm,0.7s						
L02D	Cave Junction,	65.33	55	P	P	04 52 32.7	-0.2
	baz=306						
I05D	Terrebonne, OR	65.40	52	P	P	04 52 33.3	0.0
	baz=306						
E08A	Dider Farm, El	65.43	49	*e*P	P	04 52 34.9	+1.5
E08A				*e*pP	pP	04 52 50.4	-0.4
J04D	Umpqua Nationa	65.59	53	P	P	04 52 34.4	-0.4
	baz=306						
VSR	Storozhevoye	65.69	318	*e*P	P	04 52 34.3	-0.7
VSR				pmax	pmax		
	comp=Z,70nm,0.8s						
VORD	Divnogorie	65.78	318	*e*P	P	04 52 34.8	-0.8
VORD				pmax	pmax		
	comp=Z,60nm,1.2s						
E09A	Wood Farm, Sta	65.92	48	*e*P	P	04 52 38.0	+1.5
	comp=Z,44nm,1.0s						
PINE	Pine Mountain	65.95	52	*e*P	P	04 52 38.8	+1.7
	comp=Z,44nm,1.0s						
J05D	Fort Rock, OR	66.08	53	P	P	04 52 39.0	+1.1
	baz=307						
YBH	Yreka Blue Hor	66.12	55	LR	LR	05 19 40.1	
	comp=Z,36nm,20.2s,baz=302,slow=34						
YBH	Yreka Blue Hor	66.12	55	*e*P	P	04 52 39.8	+1.7
YBH				*e*pP	pP	04 52 55.3	-0.1
MAK	Makhachkala	66.13	307	*e*P	P	04 52 36.4	-1.6
MAK				*e**PP	pP	04 52 56.4	+1.0
MAK				*e*S	S	05 01 16.4	-4.9
MAK				*e**SS	sS	05 01 52.1	+1.3
MAK				pmax	pmax		
	comp=Z,114nm,1.2s						
MAK				MLR	MLR		
	comp=Z,246nm,20.0s						
G08A	Pilot Rock	66.20	50	*e*P	P	04 52 39.9	+1.3
G08A				*e*pP	pP	04 52 55.9	0.0
M02C	Callahan	66.23	55	P	P	04 52 39.3	+0.5
	baz=306						
AS01	Alice Springs	66.33	189	*e*P	P	04 52 38.6	-0.7
AS31	Alice Springs	66.34	189	*e*P	P	04 52 39.9	+0.5
	comp=Z,2.9nm,0.8s						
ASAR	Alice Springs	66.34	189	P	P	04 52 39.2	-0.2
	comp=Z,5.9nm,0.8s,baz=7.4,slow=5.3,SNR=32						
VSU	Vasula	66.41	329	*c i*P	P	04 52 39.0	-0.5
VSU				pmax	pmax		
	comp=Z,431nm,1.7s						
N02D	Trinity Center	66.57	55	P	P	04 52 41.2	+0.2
	baz=307						
M04C	Macdoel	66.61	54	P	P	04 52 41.6	+0.3
	baz=307						
K05A	Summer Lake	66.61	53	*e*P	P	04 52 43.0	+1.7
	comp=Z,46nm,1.1s						
WALA	Waterton Lakes	66.63	44	*e*P	P	04 52 42.0	+0.8
	comp=Z,19nm,0.9s						
WALA				*e*pP	pP	04 52 57.4	-1.3
NSS	Namsos	66.64	339	*e*P	P	04 52 40.2	-0.6
NSS				IAmb	IAmb	04 52 40.6	
	comp=Z,38nm,1.0s						
F10A	Beach Ranch, E	66.75	48	*e*P	P	04 52 43.3	+1.3
	comp=Z,17nm,1.0s						
WDC	Whiskeytown Da	66.91	56	*e*P	P	04 52 44.4	+1.4
	comp=Z,12nm,0.9s						
WDC	Whiskeytown Da	66.91	56	*e*P	P	04 52 44.4	+1.4
WDC				pmax	pmax		
	comp=Z,12nm,0.9s						
GROC	Groznyy	66.99	308	*e*P	P	04 52 41.5	-1.9
GROC				*e**PP	pP	04 53 01.1	+0.2
GROC				*e*		04 53 09.4	
GROC				*e*S	S	05 01 29.4	-2.3
GROC				pmax	pmax		
	comp=Z,52nm,1.2s						
JTMT	Jette	67.25	46	*e*P	P	04 52 46.8	+1.5
	comp=Z,29nm,0.9s						
BMO	Blue Mountains	67.39	49	*e*P	P	04 52 47.2	+1.0
	comp=Z,11nm,0.9s						
BMO				*e*pP	pP	04 53 02.5	-1.1
BMO	Blue Mountains	67.39	49	*e*P	P	04 52 47.2	+1.0
BMO				*e**PP	pP	04 53 02.5	-1.1
BMO				pmax	pmax		
	comp=Z,11nm,0.9s						
GOF	Gofitskoye	67.43	311	⇑*i*P	P	04 52 46.7	+0.5
GOF				pmax	pmax		
	comp=Z,170nm,1.0s						
MOD	Modoc Plateau	67.46	53	*e*P	P	04 52 47.6	+0.9
	comp=Z,7.6nm,0.8s						
O03D	Paynes Creek	67.53	56	P	P	04 52 46.9	-0.1
	baz=307						
J08A	Circle Bar Ran	67.64	51	*e*P	P	04 52 49.4	+1.6
	comp=Z,21nm,1.0s						
DZM	Mont Dzumac	67.77	157	LR	LR	05 17 49.5	
	comp=Z,121nm,21.7s,baz=12,slow=32						
DZM	Mont Dzumac	67.77	157	*e*LR	LR	05 13 18.5	
	comp=Z,412nm,33.3s						
MSO	Missoula	68.01	46	P	P	04 52 49.9	-0.1
	baz=309						
MSO	Missoula	68.01	46	*e*P	P	04 52 51.0	+1.0
MSO				*e*pP	pP	04 53 06.0	-1.5
NCK	Nalchik	68.08	309	⇓*i*P	P	04 52 51.0	+0.6
NCK				pmax	pmax		
	comp=Z,49nm,0.8s						
WVOR	Wild Horse Val	68.12	52	*e*P	P	04 52 52.1	+1.3
	comp=Z,13nm,1.0s						
WVOR				*e*pP	pP	04 53 07.4	-0.8
TBLU	Trondheim	68.12	339	*e*P	P	04 52 48.9	-1.3
ORV	Oroville	68.16	56	*e*P	P	04 52 51.8	+0.9
ORV				*e*pP	pP	04 53 07.5	-0.9
ORV	Oroville	68.16	56	*e*P	P	04 52 51.8	+0.9
ORV				*e**PP	pP	04 53 07.5	-0.9
KIV	Kislovodsk	68.31	310	*e*P	P	04 52 52.3	+0.4
	comp=Z,163nm,0.9s						
KIV	Kislovodsk	68.31	310	*c i*P	P	04 52 52.2	+0.3
KIV				*e*		04 53 14.9	
KIV				*e*		04 55 20.1	
KIV				*i* S	S	05 01 42.0	-5.8
KIV				pmax	pmax		
	comp=Z,158nm,1.0s						
KBZ	Khabaz	68.33	310	P	P	04 52 52.4	+0.5
	comp=Z,54nm,0.9s,baz=53,slow=5.3,SNR=99						
KBZ				LR	LR	05 26 54.9	
	comp=Z,195nm,21.0s,baz=31,slow=40						
ZEI	Tsey	68.34	309	*e*P	P	04 52 48.7	-3.6
ZEI				pmax	pmax		
	comp=Z,50nm,0.9s						
FFC	Flin Flon	68.50	34	*e*P	P	04 52 52.4	-0.4
	comp=Z,13nm,0.8s						
FFC	Flin Flon	68.50	34	*e*P	P	04 52 52.4	-0.4
FFC				pmax	pmax		
	comp=Z,13nm,0.8s						
IZAR	Zarasai	68.50	327	*e*P	P	04 52 52.6	-0.1
IZAR				IAmb	IAmb	04 52 53.0	
	comp=Z,21nm,0.6s						
TBLG	Delisi	68.51	307	*e*P	P	04 52 53.5	+0.4
	comp=Z,56nm,1.0s						
TBLG	Delisi	68.51	307	P	P	04 52 53.5	+0.4
TBLG				pmax	pmax		
	comp=Z,56nm,1.0s						
IDID	Didziasalis	68.61	327	*e*P	P	04 52 53.3	-0.1
IDID				IAmb	IAmb	04 52 54.6	
	comp=Z,24nm,1.0s						
BEKR	Beckworth	68.67	55	*e*P	P	04 52 55.4	+1.1
	comp=Z,15nm,0.9s						
ISAL	Salakas	68.68	327	*e*P	P	04 52 53.7	-0.1
ISAL				IAmb	IAmb	04 52 54.3	
	comp=Z,24nm,0.7s						
NEY	Neytrino	68.73	310	⇑*e*P	P	04 52 55.2	+0.5
NEY				pmax	pmax		
	comp=Z,6.0nm,0.7s						
IIGN	Ignalina	68.79	327	*e*P	P	04 52 54.5	0.0
IIGN				IAmb	IAmb	04 52 55.6	
	comp=Z,29nm,0.6s						
AFDM	Forest Hills D	68.86	56	*e*P	P	04 52 56.5	+1.2
AFDM				*e*pP	pP	04 53 13.2	+0.4
NACGM	Naroch	68.88	326	*e*	P	04 52 53.0	-2.1
MFID	Camas Ranch	69.12	50	*e*P	P	04 52 57.9	+0.9
	comp=Z,11nm,1.0s						
HRY	Holter Researc	69.20	45	*e*P	P	04 52 58.5	+1.0
EGMT	Eagleton	69.42	43	P	P	04 52 59.2	+0.5
	baz=311,SNR=19						
EGMT	Eagleton	69.42	43	*e*P	P	04 52 59.5	+0.8
	comp=Z,50nm,1.0s						
EGMT				*e*pP	pP	04 53 15.0	-1.2
DOMB	Dombas	69.43	339	*e*P	P	04 52 58.1	-0.3
DOMB				IAmb	IAmb	04 52 58.2	
	comp=Z,21nm,0.7s						
AKH	Akhalkalaki	69.44	308	*e*P	P	04 53 00.5	+1.5
	comp=Z,18nm,0.8s						
AKH	Akhalkalaki	69.44	308	P	P	04 53 00.5	+1.5
AKH				pmax	pmax		
	comp=Z,18nm,0.8s						
LRM	Limekiln Ridge	69.45	46	*e*P	P	04 52 60.0	+0.8
VCNR	Virginia City	69.45	55	*e*P	P	04 53 00.7	+1.5
	comp=Z,11nm,0.8s						
NC405	NORSAR Array S	69.45	337	*e*P	P	04 52 58.1	-0.4
NC303	NORSAR Array S	69.46	337	*e*P	P	04 52 58.1	-0.5
GNI	Garni	69.48	306	LR	LR	05 26 55.6	
	comp=Z,112nm,19.6s,baz=66,slow=39						
GNI	Garni	69.48	306	*e*P	P	04 52 59.6	+0.2
	comp=Z,54nm,1.3s						
GNI	Garni	69.48	306	P	P	04 53 00.9	+1.5
	SNR=10						
GNI	Garni	69.48	306	*i* P	P	04 53 00.4	+1.0
	SNR=5.2						
GNI	Garni	69.48	306	*c i*P	P	04 53 00.3	+1.0
GNI				pmax	pmax		
	comp=Z,139nm,1.3s						
NC204	NORSAR Array S	69.59	338	*e*P	P	04 52 59.0	-0.4
PNTR	Pine Nut	69.61	55	*e*P	P	04 53 01.8	+1.6
	comp=Z,20nm,1.2s						
NB201	NORSAR Array S	69.62	337	*e*P	P	04 52 59.1	-0.5
HFS	Hagfors	69.65	336	LR	LR	05 26 13.9	
	comp=Z,195nm,21.9s,baz=34,slow=38						
NB2	NORSAR Subarra	69.66	337	P	P	04 52 58.9	-1.0
	comp=Z,47nm,0.8s,baz=36,slow=6.2						
NB2	NORSAR Subarra	69.66	337	P	P	04 52 58.9	-1.0
	baz=36,slow=6.2						
NOA	NORSAR Array B	69.66	337	P	P	04 52 59.2	-0.7
	comp=Z,27nm,0.7s,baz=36,slow=6.2,SNR=120						
NOA				LR	LR	05 27 18.0	
	comp=Z,133nm,19.9s,baz=45,slow=39						
DLMT	Dillon	69.67	47	*e*P	P	04 53 01.5	+1.1
	comp=Z,33nm,1.0s						
CMB	Columbia Colle	69.78	57	*e*P	P	04 53 02.4	+1.3
	comp=Z,13nm,1.1s						
CMB	Columbia Colle	69.78	57	*e*P	P	04 53 02.4	+1.3
CMB				pmax	pmax		
	comp=Z,13nm,1.1s						
NBO00	NORSAR Array S	69.79	337	*e*P	P	04 53 00.2	-0.4
AFI	Afiamalu	69.79	133	LR	LR	05 19 19.1	
	comp=Z,53nm,18.9s,baz=323,slow=32						
HJGM	San Juan Grade	69.81	58	*e*P	P	04 53 00.2	-1.0
NC602	NORSAR Array S	69.81	337	*e*P	P	04 53 00.1	-0.7
HLID	Hailey	69.82	49	P	P	04 53 02.2	+0.8
	baz=310,SNR=6.8						
HLID	Hailey	69.82	49	*e*P	P	04 53 02.8	+1.4
	comp=Z,10nm,1.0s						
AKN	Aaknes	69.86	340	*e*P	P	04 53 01.3	+0.2
AKN				IAmb	IAmb	04 53 19.3	
	comp=Z,180nm,2.3s						
MCMT	McKenzie Canyo	69.88	47	*e*P	P	04 53 02.5	+0.8
MCMT				*e*pP	pP	04 53 18.1	-1.3
YERR	Yerington	69.89	55	*e*P	P	04 53 03.5	+1.6
	comp=Z,20nm,0.9s						
NAO01	NORSAR Array S	69.91	337	*e*P	P	04 53 00.5	-0.9
NAO01	NORSAR Array S	69.91	337	*e*P	P	04 53 00.6	-0.7
NAO01				IAmb	IAmb	04 53 01.0	
	comp=Z,51nm,0.9s						
BOZ	Bozeman (W)	70.03	46	P	P	04 53 03.2	+0.6
	baz=311,SNR=40						
BOZ	Bozeman (W)	70.03	46	*e*P	P	04 53 03.4	+0.8
	comp=Z,26nm,0.8s						
BOZ				*e*pP	pP	04 53 18.9	-1.3
BOZ	Bozeman (W)	70.03	46	*e*P	P	04 53 03.4	+0.8
BOZ				*e**PP	pP	04 53 18.9	-1.3
BOZ				pmax	pmax		
	comp=Z,26nm,0.8s						
WAKR	Walker	70.07	56	*e*P	P	04 53 04.7	+1.7
	comp=Z,11nm,0.9s						
BMN	Battle Mountai	70.19	53	*e*P	P	04 53 04.3	+0.6
BMN				*e*pP	pP	04 53 19.8	-1.5
SOC	Sochi	70.22	311	*e*P	P	04 53 02.4	-1.1
SOC				*e**SP	sP	04 53 30.4	+2.0
SOC				*e*		04 55 39.0	
SOC				*e*PPP	PPP	04 57 28.3	
SOC				*e*S	S	05 02 12.0	+2.0
SOC				*e**SS	SKiKP	05 02 42.6	+0.1
SOC				pmax	pmax		
	comp=Z,29nm,0.6s						
SOC				MLR	MLR		
	comp=Z,252nm,20.0s						
SFJD	Kangerlussuaq	70.37	6	LR	LR	05 24 47.4	
	comp=Z,100nm,21.3s,baz=342,slow=36						
SFJD	Kangerlussuaq	70.37	6	*e*P	P	04 53 03.7	-0.3
	comp=Z,39nm,0.9s						
SFJD	Kangerlussuaq	70.37	6	*i* P	P	04 53 03.4	-0.6
	comp=Z,30nm,0.8s						
SFJD	Kangerlussuaq	70.37	6	*e*P	P	04 53 03.7	-0.3
SFJD				pmax	pmax		
	comp=Z,39nm,0.9s						
KVN	Kaiserville	70.54	55	*e*P	P	04 53 07.1	+1.2
	comp=Z,10nm,0.8s						
RYN	Ryan	70.55	55	*e*P	P	04 53 04.7	-1.2
	comp=Z,8.8nm,0.8s						
QLMT	Earthquake Lak	70.64	47	*e*P	P	04 53 07.8	+1.4
QLMT				*e*pP	pP	04 53 23.5	-0.5
BANOM	Banah	70.69	288	P	P	04 53 07.7	+0.9
	SNR=5.5						
BANOM	Banah	70.69	288	*i* P	P	04 53 06.6	-0.2
	SNR=17						
WSAR	Wadi Sarin	70.70	284	LR	LR	05 29 42.0	
	comp=Z,120nm,18.3s,baz=60,slow=40						
SHME	Shamm	70.72	288	*i* P	P	04 53 06.6	-0.3
	SNR=25						
AKASG	Malin Array Be	70.77	322	P	P	04 53 06.0	-0.7
	comp=Z,18nm,0.7s,baz=43,slow=6.6,SNR=69						
AKASG				LR	LR	05 26 59.9	
	comp=Z,263nm,18.3s,baz=50,slow=38						
AKASG	Malin Array Be	70.77	322	*i* P	P	04 53 06.0	-0.7
AKASG				pmax	pmax		
	comp=Z,19nm,0.7s						
AKBB	Malin Array Si	70.77	322	*e*P	P	04 53 06.1	-0.6
	comp=Z,63nm,1.1s						
KIEV	Kiev	70.78	322	*e*P	P	04 53 05.8	-1.0
KIEV	Kiev	70.78	322	*e*P	P	04 53 06.1	-0.7
	comp=Z,67nm,1.2s						
KIEV	Kiev	70.78	322	*i* P	P	04 53 06.1	-0.7
	SNR=36						
KIEV	Kiev	70.78	322	*c i*P	P	04 53 05.8	-1.0
KIEV				pmax	pmax		
	comp=Z,64nm,1.2s						
AK11	Malin Array Si	70.81	322	*e*P	P	04 53 06.2	-0.8
NVAR	Mina Array Bea	70.81	55	LR	LR	05 21 46.8	
	comp=Z,32nm,21.2s,baz=78,slow=34						
YHB	Horse Butte	70.82	47	*e*P	P	04 53 08.9	+1.4
	comp=Z,25nm,0.9s						
MDPB	Devils Postpil	70.84	56	*e*P	P	04 53 09.3	+1.5
	comp=Z,9.6nm,0.9s						
GCMT	Greycliff	70.94	45	*e*P	P	04 53 09.2	+1.1
SUW	Suwalki	70.98	327	*e*P	P	04 53 07.1	-0.9
SUW	Suwalki	70.98	327	*e*P	P	04 53 06.4	-1.6
	comp=Z,52nm,1.1s						
SUW	Suwalki	70.98	327	*e*P	P	04 53 07.1	-0.9
MLAC	Mammoth, Mammo	70.99	56	P	P	04 53 09.4	+0.7
	baz=310						
YMR	Madison River	71.00	46	*e*P	P	04 53 10.2	+1.6
	comp=Z,19nm,0.9s						
MDH	Madha	71.08	287	P	P	04 53 08.4	-0.7
MSFE	Esma-Masafi	71.14	287	*i* P	P	04 53 09.3	-0.2
	SNR=5.8						
YFT	Old Faithful	71.21	47	*e*P	P	04 53 12.7	+2.8
	comp=Z,26nm,0.9s						
KONO	Kongsberg	71.26	337	*de*P	P	04 53 08.2	-1.4
KONO				pmax	pmax		
	comp=Z,18nm,1.0s						
KONO	Kongsberg	71.26	337	*e*P	P	04 53 08.9	-0.6
KONO				IAmb	IAmb	04 53 09.6	
	comp=Z,14nm,0.9s						
STRU	Stroemstad	71.30	336	*e*P	P	04 53 07.5	-2.3
PAGB	Antelope Grade	71.31	59	*e*P	P	04 53 12.4	+2.0
PAGB				*e*pP	pP	04 53 28.1	+0.2
YPP	Pitchstone Pla	71.34	47	*e*P	P	04 53 12.9	+2.2
	comp=Z,6.1nm,0.8s						
UOSS	Minazif	71.36	287	*i* P	P	04 53 10.5	-0.3
	SNR=11						
H17A	Grant Village	71.39	47	P	P	04 53 13.3	+2.3
	baz=312,SNR=11						
H17A	Grant Village	71.39	47	*e*P	P	04 53 13.7	+2.7
	comp=Z,34nm,1.0s						
HATD	Hatta, Dubai	71.49	287	P	P	04 53 13.0	+1.4
	SNR=8.2						
HATD	Hatta, Dubai	71.49	287	*i* P	P	04 53 11.6	0.0
	SNR=13						
IMW	Indian Meadow	71.52	47	*e*P	P	04 53 13.5	+1.7
	comp=Z,16nm,0.8s						
FLWY	Flagg Ranch	71.53	47	*e*P	P	04 53 13.9	+2.2
	comp=Z,12nm,0.9s						
RLMT	Red Lodge	71.60	45	P	P	04 53 12.9	+0.7
	baz=312,SNR=7.9						
RLMT	Red Lodge	71.60	45	*e*P	P	04 53 12.5	+0.3
	comp=Z,11nm,1.0s						
ASHO	Ashiyiah	71.63	287	P	P	04 53 13.7	+1.2
	SNR=8.4						
ASHO	Ashiyiah	71.63	287	*i* P	P	04 53 12.3	-0.1
	SNR=11						
FXWY	Fox Creek	71.64	47	*e*P	P	04 53 14.0	+1.4
	comp=Z,26nm,1.4s						
KLNR	Kaliningrad	71.70	329	⇓*e*P	P	04 53 12.5	+0.2
KLNR				pmax	pmax		
	comp=Z,88nm,0.9s						
MOOW	Moose Ponds	71.72	47	*e*P	P	04 53 14.5	+1.5
	comp=Z,16nm,1.0s						
TIN	Tinemaha, Big	71.73	56	P	P	04 53 13.9	+0.9
	baz=310						
SMMC	Simmler	71.73	59	P	P	04 53 13.8	+0.8
	baz=310						
ASK	Askoy	71.76	340	*e*P	P	04 53 12.7	+0.1
ASK				IAmb	IAmb	04 53 12.9	
	comp=Z,44nm,1.1s						
TPAW	Teton Pass	71.78	47	*e*P	P	04 53 15.0	+1.6
	comp=Z,18nm,1.0s						
BER	Bergen	71.81	339	*e*P	P	04 53 13.1	+0.2
BER				IAmb	IAmb	04 53 13.3	
	comp=Z,27nm,0.8s						
DGMT	Dagmar	71.86	40	P	P	04 53 13.6	+0.1
	baz=314,SNR=9.6						
DGMT	Dagmar	71.86	40	*e*P	P	04 53 13.9	+0.5
DGMT				*e*pP	pP	04 53 29.4	-1.6
ODD1	Odda	71.87	339	*e*P	P	04 53 13.6	+0.2
LOHW	Long Hollow	71.89	47	*e*P	P	04 53 15.7	+1.7
	comp=Z,21nm,1.5s						
SNOW	Snow King Moun	71.91	47	*e*P	P	04 53 15.7	+1.6
SNOW				*e*pP	pP	04 53 31.8	+0.1
REDW	Red Top Meadow	71.92	47	*e*P	P	04 53 15.8	+1.7
	comp=Z,25nm,1.3s						
VES	Vestal, Richgr	71.97	58	P	P	04 53 15.0	+0.7
	baz=310						
LAO	LASA Array	72.10	43	P	P	04 53 15.5	+0.5
	baz=314						
LAO	LASA Array	72.10	43	*e*P	P	04 53 16.2	+1.3
LAO				*e*pP	pP	04 53 31.9	-0.7
PKM	Mcpherson Peak	72.11	59	P	P	04 53 16.4	+1.0
	baz=310						
AHID	Auburn Hatcher	72.18	48	*e*P	P	04 53 16.4	+0.7
AHID				*e*pP	pP	04 53 32.7	-0.6
ASUD	Al Ashush, Dub	72.18	287	P	P	04 53 17.0	+1.3
	SNR=6.6						
ASUD	Al Ashush, Dub	72.18	287	*i* P	P	04 53 15.8	+0.1
	SNR=17						
CWC	Cottonwood Cre	72.21	57	P	P	04 53 16.7	+0.8
	baz=310						
ALNE	Al Ain	72.24	287	*i* P	P	04 53 16.0	-0.1
	SNR=7.8						
GRAC	Grapevine Rang	72.30	56	P	P	04 53 17.3	+1.0
	baz=310,SNR=17						
BLS5	Blasjo	72.33	338	*e*P	P	04 53 16.2	+0.1
SIM	Simferopol'	72.33	315	*e*P	P	04 53 15.6	-0.7
SIM	Simferopol'	72.33	315	*e*P	P	04 53 14.0	-2.3
SIM				pmax	pmax		
	comp=Z,33nm,0.9s						
SIM				MLR	MLR		
	comp=Z,300nm,15.0s						
ISA	Isabella, Lake	72.46	58	P	P	04 53 17.2	-0.1
	baz=310,SNR=5.5						
ISA	Isabella, Lake	72.46	58	*e*P	P	04 53 17.7	+0.4
ISA				*e*pP	PcP	04 53 33.6	-1.2
ISA	Isabella, Lake	72.46	58	*e*P	P	04 53 17.7	+0.4
ISA				*e**PP	PcP	04 53 33.6	-1.2
R11A	Troy Canyon, C	72.50	54	P	P	04 53 18.2	+0.6
	baz=311,SNR=7.1						
R11A	Troy Canyon, C	72.50	54	*e*P	P	04 53 18.9	+1.2
	comp=Z,9.3nm,1.3s						
ARVC	Arvin	72.58	58	P	P	04 53 18.9	+0.9
	baz=310						
DAC	Darwin (Calif)	72.62	57	*e*P	P	04 53 18.4	0.0
	comp=Z,7.1nm,0.8s						
DAC				*e*pP	PcP	04 53 34.9	-0.7
DAC	Darwin (Calif)	72.62	57	*e*P	P	04 53 18.4	0.0
DAC				*e**PP	PcP	04 53 34.9	-0.7
DAC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
HWUT	Hardware Ranch	72.69	49	*e*P	P	04 53 19.8	+1.1
	comp=Z,15nm,1.0s						
MPMC	Manual Prospec	72.82	57	P	P	04 53 19.9	+0.3
	baz=310,SNR=13						
DUG	Dugway, Tooele	72.92	51	P	P	04 53 20.8	+0.7
	baz=312,SNR=7.1						
DUG	Dugway, Tooele	72.92	51	*e*P	P	04 53 21.6	+1.5
	comp=Z,17nm,1.0s						
DUG				*e*pP	PcP	04 53 37.0	+0.2
DUG	Dugway, Tooele	72.92	51	*e*P	P	04 53 21.6	+1.5
DUG				*e**PP	PcP	04 53 37.0	+0.2
DUG				pmax	pmax		
	comp=Z,17nm,1.0s						
FURC	Furnace Creek,	72.94	56	P	P	04 53 20.9	+0.9
	baz=311,SNR=20						
OSI	Osito Audit: C	72.98	59	*e*P	P	04 53 22.3	+1.9
	comp=Z,18nm,0.8s						
TPNV	Topopah Spring	73.01	55	P	P	04 53 21.4	+0.7
	baz=311,SNR=15						
TPNV	Topopah Spring	73.01	55	*e*P	P	04 53 21.8	+1.1
	comp=Z,16nm,0.9s						
TPNV	Topopah Spring	73.01	55	*e*P	P	04 53 21.8	+1.1
TPNV				pmax	pmax		
	comp=Z,16nm,0.9s						
BW06	Boulder Array	73.02	47	P	P	04 53 20.9	+0.1
	baz=313,SNR=9.3						
BW06	Boulder Array	73.02	47	*e*P	P	04 53 21.3	+0.5
	comp=Z,17nm,1.0s						
PD31	Pinedale Array	73.03	47	*e*P	P	04 53 21.0	+0.3
PDAR	Pinedale Array	73.03	47	P	P	04 53 21.2	+0.4
	comp=Z,4.6nm,0.7s,baz=257,slow=2.4,SNR=61						
PDAR				LR	LR	05 26 59.8	
	comp=Z,25nm,18.8s,baz=320,slow=37						
LRMC	Laurel Mtn Rad	73.08	57	P	P	04 53 21.6	+0.6
	baz=310						
TCUT	Toone Canyon	73.11	50	*e*P	P	04 53 22.8	+1.5
	comp=Z,27nm,1.0s						
BSD	Bornholm Skovb	73.24	332	*i* P	P	04 53 20.5	-1.0
	comp=Z,86nm,1.1s						
EDW2	Edwards Air Fo	73.27	58	P	P	04 53 23.1	+1.0
	baz=310,SNR=6.7						
PSUT	Pine Spring	73.41	53	*e*P	P	04 53 24.4	+1.3
	comp=Z,9.1nm,1.1s						
DECC	Green Verdugo	73.46	59	P	P	04 53 24.4	+1.2
	baz=310						
NLU	North Lily Min	73.50	51	*e*P	P	04 53 24.9	+1.3
	comp=Z,16nm,1.0s						
KIS	Kishinev	73.57	319	⇑*e*P	P	04 53 23.5	0.0
	comp=Z,100nm,1.5s						
KIS				LRM	MLR	05 27 17.0	
	comp=Z,300nm,22.0s						
KIS	Kishinev	73.57	319	⇑*e*P	P	04 53 23.5	0.0
KIS				*e*		04 53 50.0	

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KIS                                     pmax      pmax
       comp=Z,120nm,1.5s
KIS                                     MLR       MLR
       comp=Z,300nm,22.0s
BEL    Belsk            73.58 327  eP   P         04 53 23.8 +0.3
BEL    Belsk            73.58 327  eP   P         04 53 23.8 +0.3
COP    Copenhagen       73.63 333  i P  P         04 53 23.5 -0.2
       comp=Z,50nm,0.9s
SHOC   Shoshone, Teco   73.67  56   P   P         04 53 25.6 +1.1
       baz=311
MPU    Maple Canyon     73.71  50  eP   P         04 53 26.2 +1.4
       comp=Z,13nm,0.9s
LVV    L'vov            73.72 324  eP   P         04 53 24.3 -0.1
GSC    Goldstone, Bar   73.74  57   P   P         04 53 25.8 +0.9
       baz=311,SNR=5.6
GSC    Goldstone, Bar   73.74  57  eP   P         04 53 25.8 +0.9
       comp=Z,8.6nm,0.8s
GSC    Goldstone, Bar   73.74  57  eP   P         04 53 25.8 +0.9
GSC                                     pmax      pmax
       comp=Z,9.0nm,0.8s
GKP    Gorka Klasztor   73.86 330  eP   P         04 53 24.9 -0.2
GKP    Gorka Klasztor   73.86 330  eP   P         04 53 24.9 -0.2
BFSC   Mount Baldy Ra   73.89  58   P   P         04 53 26.3 +0.4
       baz=311
SHPR   Sheep Range      73.96  55  eP   P         04 53 27.6 +1.3
       comp=Z,15nm,0.9s
STKA   Stephens Creek   74.00 181   P   P         04 53 27.1 +1.1
       comp=Z,8.3nm,0.8s,baz=349,slow=8.2,SNR=18
STKA   Stephens Creek   74.00 181  eP   P         04 53 27.1 +1.1
       comp=Z,1.9nm,0.8s
STKA   Stephens Creek   74.00 181  eP   P         04 53 27.1 +1.1
STKA                                    pmax      pmax
       comp=Z,2.0nm,0.8s
FORT   Forrest          74.18 193  eP   P         04 53 28.2 +1.2
       comp=Z,42nm,1.0s
TUQ    Turquoise Moun   74.19  56   P   P         04 53 28.1 +0.5
       baz=311,SNR=7.5
ULM    Lac du Bonnet    74.31  35   P   P         04 53 27.5 -0.3
       comp=Z,6.5nm,0.6s,baz=314,slow=5.8,SNR=12
ULM                                     LR        LR        05 28 14.1
       comp=Z,72nm,18.6s,baz=337,slow=37
ULM    Lac du Bonnet    74.31  35  eP   P         04 53 27.5 -0.3
       comp=Z,8.1nm,0.7s
ULM    Lac du Bonnet    74.31  35  eP   P         04 53 27.5 -0.3
ULM                                     pmax      pmax
       comp=Z,8.0nm,0.7s
HEC    Hector,Ludlow    74.34  57   P   P         04 53 29.5 +1.1
       baz=311
CCUT   Cedar City       74.35  53  eP   P         04 53 30.2 +1.6
       comp=Z,7.0nm,1.1s
MSU    Marysvale        74.41  52  eP   P         04 53 30.4 +1.6
MSU    Marysvale        74.41  52  eP   P         04 53 30.5 +1.6
KWP    Kalwaria Pacla   74.44 324  eP   P         04 53 28.9 +0.3
KWP    Kalwaria Pacla   74.44 324  eP   P         04 53 28.9 +0.3
TMUT   Trail Mountain   74.44  51  eP   P         04 53 30.5 +1.3
       comp=Z,8.8nm,0.8s
MDND   Maddock          74.45  38   P   P         04 53 29.1 +0.4
       baz=317
MDND   Maddock          74.45  38  eP   P         04 53 29.6 +0.8
MDND                               epP  pP        04 53 45.0 -1.4
MZR    Muzera           74.52 287  i P  P         04 53 29.0 -0.5
       SNR=10.0
PRAR   RASCA            74.53 321⇓iP    P         04 53 29.1 -0.1
MURC   Murrieta         74.60  59   P   P         04 53 30.0 +0.1
       baz=311
MTPU   Mount Pierson    74.72  52  eP   P         04 53 32.9 +2.0
       comp=Z,7.8nm,0.9s
K22A   Casper           74.73  46   P   P         04 53 30.5 -0.2
       baz=314,SNR=6.1
K22A   Casper           74.73  46  eP   P         04 53 30.9 +0.3
       comp=Z,12nm,0.6s
P18A   Preston Nutter   74.77  50  eP   P         04 53 32.4 +1.3
       comp=Z,15nm,1.0s
LCMT   Little Creek M   74.78  54  eP   P         04 53 32.7 +1.7
       comp=Z,11nm,1.0s
GMRC   Granite Mounta   74.78  57   P   P         04 53 31.8 +0.8
       baz=312,SNR=9.5
BUR08  Bucovina Ar. S   74.80 322  eP   P         04 53 31.0 +0.1
BUR04  Bucovina Ar. S   74.81 322  eP   P         04 53 30.9 -0.1
BURAR  Bucovina Array   74.81 322⇑iP    P         04 53 31.0  0.0
BURAR  Bucovina Array   74.81 322   P   P         04 53 30.9  0.0
TLCR                    74.86 318⇑iP    P         04 53 31.3 +0.2
BIZ    Bicaz            74.90 321⇓iP    P         04 53 31.6 +0.3
LDFC   Landfair         74.93  56  eP   P         04 53 32.9 +1.0
       comp=Z,38nm,1.0s
TESR   Tescani          74.95 320⇑iP    P         04 53 31.7 +0.1
SRU    San Rafael Swe   74.96  51  eP   P         04 53 33.2 +1.2
       comp=Z,18nm,0.7s
RSSD   Black Hills      74.99  43   P   P         04 53 32.1 -0.1
       baz=315
RSSD   Black Hills      74.99  43  eP   P         04 53 32.3 +0.1
RSSD                               epP  pP        04 53 48.4 -1.5
RSSD   Black Hills      74.99  43  eP   P         04 53 32.3 +0.1
RSSD                               e*PP pP        04 53 48.4 -1.5
RWWY   Rawlins          75.03  47  eP   P         04 53 32.3 -0.3
       comp=Z,28nm,1.0s
FRD    Ford Ranch, An   75.04  58   P   P         04 53 33.0 +0.5
       baz=311
PKCU   Pink Cliffs      75.04  53  eP   P         04 53 34.8 +2.1
       comp=Z,14nm,1.2s
PFO    Pinyon Flats O   75.06  58   P   P         04 53 33.2 +0.6
       baz=311
PFO    Pinyon Flats O   75.06  58  eP   P         04 53 34.0 +1.4
PFO                                epP  pP        04 53 49.0 -1.4
PFO    Pinyon Flats O   75.06  58  eP   P         04 53 34.0 +1.4
PFO                                e*PP pP        04 53 49.0 -1.4
XPFO   Piæon Flat       75.06  58  eP   P         04 53 34.0 +1.4
XPFO                               epP  pP        04 53 49.9 -0.5
BELC   Belle Mtn. Jos   75.09  58   P   P         04 53 33.1 +0.3
       baz=312,SNR=5.7
109C   Camp Elliot, M   75.12  59   P   P         04 53 33.4 +0.6
       baz=311
CFR    Carcaliu         75.20 318⇑iP    P         04 53 33.1 +0.1
CFR    Carcaliu         75.20 318   P   P         04 53 33.1 +0.1
ILGA   Ilgaz            75.21 312  eP   P         04 53 34.7 +1.2
       comp=Z,49nm,0.9s
OJC    Ojcow            75.21 326  eP   P         04 53 33.2 +0.2
OJC    Ojcow            75.21 326  eP   P         04 53 33.2 +0.2
       comp=Z,42nm,0.8s
OJC    Ojcow            75.21 326  eP   P         04 53 33.3 +0.2
OJC                                     pmax      pmax
       comp=Z,42nm,0.8s
UZH    Uzhgorod         75.37 324⇑iP    P         04 53 33.9  0.0
UZH                                e                04 53 49.4
UZH                                e                04 53 54.9
UZH                                e                04 58 10.7
UZH                                eS   S         05 03 06.1 -2.3
UZH                                e                05 04 10.7
VRI    Vrincioaia       75.39 320⇓iP    P         04 53 34.3 +0.1
VRI    Vrincioaia       75.39 320   P   P         04 53 34.2 +0.1
PLOR   Plostina         75.43 320⇑iP    P         04 53 34.9 +0.4
PLOR   Plostina         75.43 320   P   P         04 53 34.8 +0.3
A33A   Warroad          75.51  35   P   P         04 53 34.2 -0.6
       baz=320,SNR=11
IRM    Iron Mountain    75.52  57   P   P         04 53 35.6 +0.5
       baz=312,SNR=6.8
CRVS   Cervenica-Dubn   75.52 324  eP   P         04 53 35.1 +0.2
CRVS                                    pmax      pmax
       comp=Z,16nm,1.2s
CRVS   Cervenica-Dubn   75.52 324  eP   P         04 53 35.1 +0.2
O20A   White River Ci   75.54  49   P   P         04 53 35.3 -0.1
       baz=314,SNR=5.1
O20A   White River Ci   75.54  49  eP   P         04 53 35.9 +0.5
       comp=Z,16nm,1.0s
MONP2  Monument Peak    75.55  59   P   P         04 53 35.1 -0.5
       baz=312
ARCR   ARCALIA          75.60 322⇑iP    P         04 53 35.7 +0.3
NIE    Niedzica         75.62 325  eP   P         04 53 36.0 +0.5
NIE    Niedzica         75.62 325  eP   P         04 53 36.0 +0.5
TRPA   Tarpa            75.64 323⇑iP    P         04 53 35.9 +0.4
TRPA   Tarpa            75.64 323⇑eP    P         04 53 35.9 +0.4
BC3    Big Chuckawall   75.66  58   P   P         04 53 36.1 +0.1
       baz=312,SNR=5.2
TLB    Topalu           75.67 318⇓iP    P         04 53 35.7 -0.1
AGMN   Agassiz Nation   75.79  36   P   P         04 53 35.5 -0.9
       baz=319,SNR=8.7
AGMN   Agassiz Nation   75.79  36  eP   P         04 53 36.0 -0.4
       comp=Z,13nm,0.8s
IKP    In-Ko-Pah, Jac   75.91  59   P   P         04 53 37.2 -0.2
       baz=312
SWSC   Sam W. Stewart   75.91  58   P   P         04 53 37.0 -0.3
       baz=312
DOPR   Dopca            75.95 320⇓iP    P         04 53 38.2 +0.8
ISR    Istrita          76.02 319⇑iP    P         04 53 38.5 +0.7
MLR    Muntele Rosu     76.03 320   LR  LR        05 30 59.6
       comp=Z,224nm,19.4s,baz=35,slow=39
MLR    Muntele Rosu     76.03 320⇓iP    P         04 53 38.3 +0.3
MLR    Muntele Rosu     76.03 320  eP   P         04 53 37.9 -0.1
       comp=Z,30nm,1.3s
MLR    Muntele Rosu     76.03 320  eP   P         04 53 37.9 -0.1
MLR                                     pmax      pmax
       comp=Z,30nm,1.3s
PDMCI  Parker Dam,Lak   76.04  56   P   P         04 53 37.9 -0.2
       baz=312
KSP    Ksiaz            76.13 328  eP   P         04 53 38.5 +0.2
KSP    Ksiaz            76.13 328  eP   P         04 53 38.5 +0.2
ICOR   Ion Corvin       76.13 318⇓iP    P         04 53 38.8 +0.4
PV09   Paradox Valley   76.17  50  eP   P         04 53 40.4 +1.2
Y12C   Blythe           76.17  57   P   P         04 53 38.7 -0.2
       baz=312
B34A   Aery, Baudette   76.17  35   P   P         04 53 37.9 -0.7
       baz=320,SNR=12
LANS   Liptovska Anna   76.17 326  eP   P         04 53 39.4 +0.8
LANS   Liptovska Anna   76.17 326  eP   P         04 53 39.4 +0.8
BR131  Keskin Array S   76.18 311  eP   P         04 53 39.0  0.0
BRTR   Keskin Array B   76.18 311   P   P         04 53 38.9  0.0
       comp=Z,12nm,0.8s,baz=74,slow=3.8,SNR=60
BRTR                                    LR        LR        05 32 10.6
       comp=Z,88nm,20.2s,baz=42,slow=40
OKC    Ostrava-Krasne   76.18 327   AMS AMS       05 30 00.0
       comp=Z,200nm,24.0s
PV21   Cone Mtn., Par   76.22  50  eP   P         04 53 40.4 +1.1
       comp=Z,24nm,1.0s
CJR    Cluj-Napoca      76.22 322⇓iP    P         04 53 39.6 +0.6
CJR    Cluj-Napoca      76.22 322   P   P         04 53 39.6 +0.6
C33A   Trail            76.24  36   P   P         04 53 38.3 -0.7
       baz=320,SNR=9.3
PV23   Carpenter Ridg   76.27  50  eP   P         04 53 41.0 +1.3
       comp=Z,28nm,1.0s
N23A   Red Feather La   76.27  47   P   P         04 53 38.7 -1.0
       baz=315
N23A   Red Feather La   76.27  47  eP   P         04 53 41.1 +1.5
       comp=Z,14nm,1.0s
PV14   Lion Creek, Pa   76.32  50  eP   P         04 53 40.9 +1.0
       comp=Z,29nm,1.0s
PV22   Blue Mesa, Par   76.34  50  eP   P         04 53 41.2 +1.3
       comp=Z,26nm,1.0s
PV20   West Nyswonger   76.37  50  eP   P         04 53 41.6 +1.4
       comp=Z,37nm,1.0s
PV19   Morning Glory    76.38  50  eP   P         04 53 41.4 +1.2
       comp=Z,31nm,0.9s
PV17   East Wray Mesa   76.42  50  eP   P         04 53 41.8 +1.3
       comp=Z,26nm,0.7s
PV16   Nyswonger Mesa   76.42  50  eP   P         04 53 41.5 +1.1
       comp=Z,16nm,0.8s
GLA    Glamis           76.45  58  eP   P         04 53 42.0 +1.5
       comp=Z,12nm,0.8s
GLA    Glamis           76.45  58  eP   P         04 53 42.0 +1.5
GLA                                     pmax      pmax
       comp=Z,12nm,0.8s
PV11   David Mesa, Pa   76.45  50  eP   P         04 53 41.9 +1.3
       comp=Z,21nm,0.8s
PV18   Skein Mesa, Pa   76.47  50  eP   P         04 53 42.0 +1.3
       comp=Z,23nm,1.0s
MORC   Moravsky Berou   76.47 327⇑iP    P         04 53 40.6 +0.2
MORC   Moravsky Berou   76.47 327  eP   P         04 53 40.6 +0.2
       comp=Z,31nm,1.0s
MORC   Moravsky Berou   76.47 327  eP   P         04 53 40.6 +0.2
MORC                                    pmax      pmax
       comp=Z,31nm,1.0s
MORC   Moravsky Berou   76.47 327  eP   P         04 53 40.5 +0.2
PV12   Saucer Basin,    76.48  50  eP   P         04 53 42.2 +1.4
       comp=Z,19nm,1.1s
PV03   Paradox Valley   76.50  50  eP   P         04 53 42.0 +1.1
VOIR                    76.50 320⇓iP    P         04 53 41.2 +0.6
VOIR                    76.50 320   P   P         04 53 41.2 +0.6
UPC    Upice            76.50 328  eP   P         04 53 40.9 +0.5
UPC                                     AMS       AMS       05 28 50.0
       comp=Z,200nm,18.7s
UPC    Upice            76.50 328  eP   P         04 53 40.9 +0.5
UPC                                     MLR       MLR
       comp=Z,200nm,18.7s
DPC    Dobruska-Polom   76.51 328  eP   P         04 53 41.2 +0.7
DPC                                     AMS       AMS       05 31 10.0
       comp=Z,200nm,21.1s
DPC    Dobruska-Polom   76.51 328  eP   P         04 53 41.2 +0.7
DPC                                     MLR       MLR
       comp=Z,200nm,21.1s
ANTO   Ankara           76.54 312⇑iP    P         04 53 41.3 +0.4
ANTO   Ankara           76.54 312  eP   P         04 53 41.4 +0.5
       comp=Z,52nm,0.8s
ANTO   Ankara           76.54 312   P   P         04 53 41.6 +0.6
       SNR=8.8
ANTO   Ankara           76.54 312  eP   P         04 53 41.4 +0.5
ANTO                                    pmax      pmax
       comp=Z,52nm,0.8s
KRLC   Kraliky          76.54 328  eP   P         04 53 40.9 +0.2
KRLC   Kraliky          76.54 328  eP   P         04 53 40.9 +0.2
DRGR                    76.57 322⇓iP    P         04 53 41.0  0.0
DRGR                    76.57 322   P   P         04 53 40.9  0.0
PV13   Radium Mtn., P   76.58  50  eP   P         04 53 42.6 +1.3
       comp=Z,33nm,1.2s
PV02   Paradox Valley   76.59  50  eP   P         04 53 42.6 +1.2
       comp=Z,11nm,0.9s
B35A   Bob, Littlefor   76.67  35   P   P         04 53 40.8 -0.6
       baz=321,SNR=21
B35A   Bob, Littlefor   76.67  35  eP   P         04 53 41.0 -0.3
       comp=Z,21nm,0.7s
C34A   RKJ Ranch, Bem   76.70  36   P   P         04 53 40.9 -0.7
       baz=320,SNR=11
WUAZ   Wupatki          76.90  54   P   P         04 53 42.6 -0.5
       baz=313
WUAZ   Wupatki          76.90  54  eP   P         04 53 43.2 +0.1
       comp=Z,10nm,1.1s
SMCO   Snowmass         76.91  49  eP   P         04 53 44.3 +0.9
       comp=Z,15nm,1.0s
PSZ    Piszkesteto      76.95 325⇑iP    P         04 53 43.3 +0.3
PSZ    Piszkesteto      76.95 325⇑eP    P         04 53 43.5 +0.4
PSZ    Piszkesteto      76.95 325  eP   P         04 53 43.4 +0.3
       comp=Z,43nm,1.4s
VYHS   Vyhne            76.95 326  eP   P         04 53 43.2 +0.2
VYHS                                    pmax      pmax
       comp=Z,11nm,1.3s
VYHS   Vyhne            76.95 326  eP   P         04 53 43.2 +0.2
CLL    Collm            76.99 330⇑iP    P         04 53 42.5 -0.6
       comp=Z,41nm,0.9s
CLL                                ePcP PcP       04 53 52.0 -1.9
CLL                                epP  pP        04 54 01.0 +0.1
CLL                                esP  sP        04 54 07.0 -1.1
CLL                                i sPmax          04 54 09.9
CLL                                i                04 56 20.6
CLL                                ePP  PP        04 56 37.0 +0.6
CLL                                ePPP PPP       04 58 36.0
CLL                                eS   S         05 03 23.0 -3.1
CLL                                ePS  PnS       05 04 18.0 +5.8
CLL                                eSS  SS        05 08 30.0 +7.2
CLL                                e                05 12 30.0
CLL    Collm            76.99 330  eP   P         04 53 42.2 -0.9
       comp=Z,40nm,0.9s
CLL    Collm            76.99 330⇑iP    P         04 53 42.5 -0.6
CLL                                e*PP pP        04 54 01.0 +0.1
CLL                                i *SP sP       04 54 09.9 +1.8
CLL                                eS   S         05 03 23.0 -3.1
CLL                                     pmax      pmax
       comp=Z,41nm,0.9s
BRG    Berggiesshubel   77.00 330  eP   P         04 53 42.9 -0.2
       comp=Z,19nm,1.1s
BRG                                e                04 54 09.9
       comp=Z,18nm,1.2s
       comp=N,208nm,21.8s
       comp=E,175nm,18.9s
       comp=Z,293nm,21.9s
BRG    Berggiesshubel   77.00 330  eP   P         04 53 42.9 -0.2
BRG                                e                04 54 09.9
BRG                                     pmax      pmax
       comp=Z,19nm,1.1s
BRG                                     MLR       MLR
       comp=N,208nm,21.8s
BRG                                     MLR       MLR
       comp=E,175nm,18.9s
BRG                                     MLR       MLR
       comp=Z,293nm,21.9s
PVCC   Panska Ves       77.04 329  eP   P         04 53 44.0 +0.6
PVCC                                    AMS       AMS       05 29 10.0
       comp=Z,200nm,22.1s
PVCC   Panska Ves       77.04 329  eP   P         04 53 44.0 +0.6
PVCC                                    MLR       MLR
       comp=Z,200nm,22.1s
C35A   Jirik Farms, M   77.07  36   P   P         04 53 42.9 -0.7
       baz=321,SNR=12
JAVC   Velka Javorina   77.14 326  eP   P         04 53 45.4 +1.3
ISCO   Idaho Springs    77.22  47   P   P         04 53 44.5 -0.5
       baz=315,SNR=9.7
ISCO   Idaho Springs    77.22  47  eP   P         04 53 46.1 +1.1
       comp=Z,19nm,1.4s
ISCO   Idaho Springs    77.22  47  eP   P         04 53 46.1 +1.1
ISCO                                    pmax      pmax
       comp=Z,19nm,1.4s
VRAC   Vranov           77.22 327⇑iP    P         04 53 44.9 +0.4
VRAC   Vranov           77.22 327  eP   P         04 53 44.7 +0.2
SUSD   Miller           77.27  40   P   P         04 53 44.6 -0.3
       baz=318
G32A   Webster          77.35  39   P   P         04 53 45.0 -0.3
       baz=319
MVCO   Mesa Verde       77.42  51   P   P         04 53 45.9 -0.2
       baz=314,SNR=10
MVCO   Mesa Verde       77.42  51  eP   P         04 53 47.4 +1.2
       comp=Z,17nm,1.1s
GOPC   GO Pecny, Ondr   77.45 329  eP   P         04 53 46.1 +0.3
GOPC                                    AMS       AMS       05 29 10.0
       comp=Z,200nm,19.9s
GOPC   GO Pecny, Ondr   77.45 329  eP   P         04 53 46.1 +0.3
GOPC                                    MLR       MLR
       comp=Z,200nm,19.9s
E34A   Wadena           77.46  37   P   P         04 53 45.7 -0.1
       baz=320
PRU    Pruhonice        77.48 329  eP   P         04 53 46.4 +0.5
PRU                                     AMS       AMS       05 28 30.0
       comp=Z,200nm,21.1s
PRU    Pruhonice        77.48 329  eP   P         04 53 46.4 +0.5
PRU                                     MLR       MLR
       comp=Z,200nm,21.1s
KRUC   Moravsky         77.50 327  eP   P         04 53 46.2 +0.2
C36A   Pine Crest Far   77.51  35   P   P         04 53 45.7 -0.4
       baz=321,SNR=12
D35A   Remer            77.51  36   P   P         04 53 45.4 -0.7
       baz=321,SNR=5.2
MODS   Modra-Piesok     77.69 326  eP   P         04 53 47.7 +0.6
MODS                                    pmax      pmax
       comp=Z,23nm,1.1s
MODS   Modra-Piesok     77.69 326  eP   P         04 53 47.7 +0.6
E35A   Pequot Lakes     77.76  37   P   P         04 53 46.7 -0.9
       baz=321
C37A   Embarrass        77.81  35   P   P         04 53 47.3 -0.5
       baz=322,SNR=14
D36A   Goodland         77.82  35   P   P         04 53 47.1 -0.8
       baz=321,SNR=5.2
D36A   Goodland         77.82  35  eP   P         04 53 47.3 -0.6
       comp=Z,9.9nm,0.8s
G33A   Ortonville       77.89  39   P   P         04 53 48.0 -0.3
       baz=320,SNR=9.0
EYMN   Ely              77.92  34   P   P         04 53 47.8 -0.6
       baz=322,SNR=14
EYMN   Ely              77.92  34  eP   P         04 53 48.1 -0.3
       comp=Z,21nm,0.8s
EYMN                               epP  pP        04 54 04.0 -2.3
BZS    Buzias           77.96 322⇑iP    P         04 53 48.4 -0.2
F34A   Alexandria       77.97  37   P   P         04 53 48.3 -0.4
       baz=320,SNR=6.9
S22A   4UR Ranch, Cre   78.00  50   P   P         04 53 49.3 -0.1
       baz=315,SNR=11
S22A   4UR Ranch, Cre   78.00  50  eP   P         04 53 50.6 +1.3
       comp=Z,10nm,1.0s
Q24A   Divide           78.07  48   P   P         04 53 49.1 -0.6
       baz=316,SNR=6.0
NKC    Novy Kostel      78.07 330   AMS AMS       05 30 40.0
       comp=Z,300nm,21.3s
HERR   Herculane        78.15 321⇓iP    P         04 53 49.5 -0.2
D37A   Cotton           78.15  35   P   P         04 53 49.0 -0.7
       baz=322
C38A   Sawbill Land.    78.20  34   P   P         04 53 49.4 -0.6
       baz=322,SNR=29
G34A   Benson           78.22  38   P   P         04 53 49.7 -0.4
       baz=320,SNR=11
F35A   Swanville        78.23  37   P   P         04 53 49.9 -0.3
       baz=321,SNR=5.2
E36A   McGregor         78.30  36   P   P         04 53 50.1 -0.4
       baz=321,SNR=13
OGNE   Ogallala         78.30  45   P   P         04 53 50.4 -0.4
       baz=317
OGNE   Ogallala         78.30  45  eP   P         04 53 50.6 -0.2
EKA    Eskdalemuir Ar   78.41 341   LR  LR        05 34 43.8
       comp=Z,67nm,18.1s,baz=220,slow=40
214A   Organ Pipe Nat   78.44  57   P   P         04 53 51.5 -0.1
       baz=313
SOP    Sopron           78.53 326⇑eP    P         04 53 52.4 +0.7
SOP    Sopron           78.53 326   P   P         04 53 52.5 +0.7
KHC    Kasperske Hory   78.55 329  eP   P         04 53 52.1 +0.2
KHC                                ex   x         04 54 19.0
KHC                                     AMS       AMS       05 29 50.0
       comp=Z,300nm,25.9s
KHC    Kasperske Hory   78.55 329  eP   P         04 53 52.2 +0.3
       comp=Z,12nm,1.0s
KHC    Kasperske Hory   78.55 329  eP   P         04 53 52.2 +0.3
KHC                                     pmax      pmax
       comp=Z,12nm,1.0s
MDVR   Moldovita        78.55 322⇓iP    P         04 53 51.8 -0.2
CONA   Conrad Observa   78.62 327  eP   P         04 53 53.1 +0.7
       comp=Z,25nm,1.5s,SNR=8.9
E37A   Wrenshall        78.63  35   P   P         04 53 52.3  0.0
       baz=322
NWAO   Narrogin (SRO)   78.67 202   LR  LR        05 28 11.2
       comp=Z,39nm,21.6s,baz=216,slow=35
NWAO   Narrogin (SRO)   78.67 202  eP   P         04 53 53.5 +1.0
       comp=Z,31nm,1.0s
NWAO   Narrogin (SRO)   78.67 202  eP   P         04 53 53.5 +1.0
NWAO                                    pmax      pmax
       comp=Z,31nm,1.0s
F36A   Milaca           78.69  36   P   P         04 53 52.1 -0.6
       baz=321
F36A   Milaca           78.69  36  eP   P         04 53 52.0 -0.6
       comp=Z,27nm,1.8s
GEC2   GERESS Array S   78.73 329  eP   P         04 53 52.8 -0.2
       comp=Z,11nm,1.0s
GEC2   GERESS Array S   78.73 329  eP   P         04 53 52.8 -0.2
GEC2                                    pmax      pmax
       comp=Z,11nm,1.0s
GERES  GERESS Array B   78.73 329   P   P         04 53 52.7 -0.2
       comp=Z,5.5nm,0.7s,baz=35,slow=6.0,SNR=50
GERES                                   LR        LR        05 32 32.0
       comp=Z,153nm,19.0s,baz=60,slow=38
GEA0   GERESS Array S   78.74 329  eP   P         04 53 52.7 -0.3
SDCO   Great Sand Dun   78.74  49   P   P         04 53 52.6 -0.8
       baz=316,SNR=10
SDCO   Great Sand Dun   78.74  49  eP   P         04 53 54.3 +0.9
       comp=Z,8.1nm,1.0s
G35A   Watkins          78.76  37   P   P         04 53 53.1  0.0
       baz=321,SNR=8.6
G35A   Watkins          78.76  37  eP   P         04 53 53.1  0.0
       comp=Z,19nm,0.6s
ECSD   EROS Data Cent   78.92  40   P   P         04 53 53.7 -0.3
       baz=320,SNR=21
ECSD   EROS Data Cent   78.92  40  eP   P         04 53 53.9 -0.1
       comp=Z,22nm,0.9s
ECSD                               epP  pP        04 54 09.6 -2.2
E38A   The Farm, Brul   78.96  35   P   P         04 53 53.7 -0.4
       baz=322,SNR=16
E38A   The Farm, Brul   78.96  35  eP   P         04 53 53.4 -0.7
       comp=Z,24nm,0.6s
GRF    Grafenberg Arr   78.97 330   P   P         04 53 54.7 +0.5
GRFO   Grafenberg       78.97 330  eP   P         04 53 54.5 +0.4
       comp=Z,43nm,1.0s
GRFO   Grafenberg       78.97 330  eP   P         04 53 54.6 +0.4
GRFO                                    pmax      pmax
       comp=Z,43nm,1.0s
H35A   Sunnyside Ranc   79.00  38   P   P         04 53 54.2 -0.2
       baz=321,SNR=12
G36A   St. Michael      79.08  37   P   P         04 53 53.9 -0.9
       baz=321
PGB    Panagyurishte    79.08 319  i P  P         04 53 55.3 +0.4
KDZ    Kurdzhali        79.13 317  i P  P         04 53 55.8 +0.6
PLD    Plovdiv          79.15 318  i P  P         04 53 55.2  0.0
PLD    Plovdiv          79.15 318   P   P         04 53 56.4 +1.2
F37A   Hinrichs Farm,   79.19  36   P   P         04 53 54.9 -0.5
       baz=322
ARSA   Arzberg          79.30 327  eP   P         04 53 56.3 +0.3
       comp=Z,5.4nm,0.8s
MOA    Molln            79.32 328  eP   P         04 53 56.1  0.0
       comp=Z,6.6nm,0.9s
F38A   Pierce - Schro   79.33  36   P   P         04 53 55.5 -0.7
       baz=322,SNR=18
ALN    Alexandroupoli   79.37 317  eP   P         04 53 57.0 +0.5
       comp=Z,24nm,1.1s
ALN    Alexandroupoli   79.37 317  eP   P         04 53 57.0 +0.5
ALN                                     pmax      pmax
       comp=Z,24nm,1.1s
KSCO   Kaye Shedlock'   79.40  46   P   P         04 53 56.2 -0.7
       baz=317
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KSCO	Kaye Shedlock’	79.40	46	eP	P	04 53 57.6	+0.8
KSCO				epP	pP	04 54 13.4	-1.3
RDO	Rodhopi	79.45	317	P	P	04 53 57.2	+0.3
RDO	Rodhopi	79.45	317	P	P	04 53 57.2	+0.3
TUC	Tucson	79.45	56	P	P	04 53 57.2	0.0
	baz=314						
TUC	Tucson	79.45	56	eP	P	04 53 58.7	+1.4
TUC				epP	pP	04 54 15.0	-0.1
TUC	Tucson	79.45	56	P	P	04 53 58.6	+1.4
RZN	Rozhen	79.45	318	i P	P	04 53 57.6	+0.4
SPMN	Marine on St.	79.50	36	P	P	04 53 56.7	-0.4
	baz=322,SNR=5.3						
SPMN	Marine on St.	79.50	36	eP	P	04 53 56.8	-0.3
	comp=Z,15nm,0.9s						
H36A	Jessenland, He	79.51	38	P	P	04 53 56.9	-0.2
	baz=321,SNR=7.9						
VTS	Vitosha	79.51	319	⇓iP	P	04 53 57.7	+0.3
VTS	Vitosha	79.51	319	eP	P	04 53 57.7	+0.3
	comp=Z,42nm,1.2s						
VTS	Vitosha	79.51	319	i P	P	04 53 57.6	+0.2
VTS	Vitosha	79.51	319	P	P	04 53 57.5	+0.2
VTS	Vitosha	79.51	319	eP	P	04 53 57.7	+0.2
VTS				pmax	pmax		
	comp=Z,42nm,1.2s						
E39A	Mellen	79.56	35	P	P	04 53 56.9	-0.5
	baz=323,SNR=15						
CSS	Mathiatis	79.68	308	eP	P	04 53 58.3	0.0
	comp=Z,27nm,0.7s						
RAYN	Ar Rayn	79.73	292	eP	P	04 53 58.6	-0.2
	comp=Z,58nm,1.3s						
RAYN	Ar Rayn	79.73	292	i P	P	04 53 58.7	-0.1
	SNR=24						
RAYN	Ar Rayn	79.73	292	eP	P	04 53 58.6	-0.2
RAYN				pmax	pmax		
	comp=Z,58nm,1.3s						
F39A	Loretta	79.77	35	P	P	04 53 58.1	-0.5
	baz=323,SNR=6.1						
E40A	Wakefield	79.78	34	P	P	04 53 58.3	-0.3
	baz=323,SNR=41						
T25A	Trinidad	79.78	49	P	P	04 53 58.6	-0.4
	baz=316,SNR=9.3						
T25A	Trinidad	79.78	49	eP	P	04 53 59.7	+0.7
	comp=Z,17nm,0.9s						
SCHQ	Schefferville	79.78	17	LR	LR	05 33 48.0	
	comp=Z,66nm,18.7s,baz=322,slow=39						
MMAI	Mount Meron Ar	79.82	306	P	P	04 53 59.8	+0.6
	comp=Z,46nm,0.8s,baz=38,slow=5.7,SNR=15						
MMAI				LR	LR	05 33 08.8	
	comp=Z,145nm,21.1s,baz=80,slow=38						
D41A	Chassel	79.83	33	P	P	04 53 58.6	-0.3
	baz=324,SNR=5.5						
D41A	Chassel	79.83	33	eP	P	04 53 59.0	+0.2
	comp=Z,61nm,1.6s						
DIVS	Divibare	79.86	322	eP	P	04 53 58.4	-0.8
	comp=Z,34nm,1.6s						
I36A	Fitzsimmons Fa	79.90	38	P	P	04 53 58.9	-0.4
	baz=321						
BGNE	Belgrade	79.93	42	P	P	04 53 58.9	-0.6
	baz=319						
GROS	Grobnik	79.94	326	i P	P	04 53 59.3	-0.3
BEBN	Eben Emael	79.94	334	⇑P	P	04 53 59.0	-0.3
H37A	Dierke Farm, C	79.95	37	P	P	04 53 59.3	-0.2
	baz=322,SNR=8.1						
G38A	Ridgeland	79.96	36	P	P	04 53 58.8	-0.8
	baz=322,SNR=8.7						
MEM	Membach	80.00	334	⇑P	P	04 53 59.0	-0.7
	comp=Z,15nm,1.0s						
MEM	Membach	80.00	334	P	P	04 53 59.7	0.0
MMB	Musomiste	80.02	318	i P	P	04 54 00.3	+0.3
F40A	Park Falls	80.11	35	P	P	04 53 59.9	-0.5
	baz=323,SNR=7.1						
KKB	Krupnik	80.12	319	i P	P	04 54 00.9	+0.3
NVR	Nevrokopi	80.13	318	P	P	04 54 00.7	+0.1
NVR	Nevrokopi	80.13	318	P	P	04 54 00.7	+0.1
E41A	Kenton	80.15	34	P	P	04 54 00.3	-0.3
	baz=324,SNR=15						
H38A	Maiden Rock	80.16	37	P	P	04 54 00.4	-0.3
	baz=322						
G39A	Holcombe	80.16	36	P	P	04 53 59.8	-0.9
	baz=323						
I37A	Lemond, Waseca	80.18	38	P	P	04 54 00.6	-0.2
	baz=322,SNR=9.3						
I37A	Lemond, Waseca	80.18	38	eP	P	04 54 01.2	+0.3
	comp=Z,31nm,0.6s						
TASM	ASL Pad, Albuq	80.18	51	P	P	04 54 01.1	-0.2
	baz=316,SNR=7.0						
ANMO	Albuquerque	80.19	51	P	P	04 54 01.9	+0.6
	comp=Z,3.0nm,0.7s,baz=315,slow=11,SNR=16						
ANMO				LR	LR	05 26 22.8	
	comp=Z,20nm,21.7s,baz=283,slow=33						
ANMO	Albuquerque	80.19	51	P	P	04 54 01.1	-0.2
	baz=316						
ANMO	Albuquerque	80.19	51	eP	P	04 54 02.0	+0.8
	comp=Z,6.3nm,0.9s						
TASL	Snake Pit, Alb	80.19	51	P	P	04 54 01.0	-0.3
	baz=316,SNR=7.5						
J36A	Seneca 1, Swea	80.29	39	P	P	04 54 00.8	-0.6
	baz=321						
J36A	Seneca 1, Swea	80.29	39	eP	P	04 54 01.3	-0.1
	comp=Z,14nm,0.8s						
OBKA	Obir	80.29	327	eP	P	04 54 00.7	-0.7
	comp=Z,11nm,0.9s						
KBA	Koelnbreinsper	80.31	328	eP	P	04 54 01.9	+0.2
	comp=Z,27nm,1.1s,SNR=5.1						
UCC	Uccle	80.36	335	⇑P	P	04 54 00.7	-0.9
COWI	Conover	80.37	34	eP	P	04 54 01.4	-0.4
	comp=Z,12nm,0.6s						
COWI				epP	pP	04 54 17.1	-2.6
BCLA	Clavier	80.39	334	⇑P	P	04 54 01.2	-0.6
	comp=Z,13nm,1.2s						
SRS	Serrai	80.44	318	P	P	04 54 01.9	-0.4
SRS	Serrai	80.44	318	P	P	04 54 01.9	-0.4
SRS	Serrai	80.44	318	P	P	04 54 01.9	-0.4
STU	Stuttgart	80.47	331	eP	P	04 54 02.1	-0.2
	comp=Z,33nm,1.0s						
STU	Stuttgart	80.47	331	eP	P	04 54 02.1	-0.2
STU				pmax	pmax		
	comp=Z,33nm,1.0s						
PDKS	Podkum	80.47	326	i P	P	04 54 01.9	-0.4
MYKA	Terra Mystica	80.56	327	eP	P	04 54 02.3	-0.5
	comp=Z,25nm,1.6s						
G40A	Rib Lake	80.59	35	P	P	04 54 02.5	-0.5
	baz=323						
G40A	Rib Lake	80.59	35	eP	P	04 54 02.8	-0.3
	comp=Z,12nm,0.8s						
H39A	Augusta	80.60	36	P	P	04 54 02.6	-0.4
	baz=323,SNR=6.4						
E42A	Champion	80.60	33	P	P	04 54 02.5	-0.6
	baz=325						
SNF	Seneffe	80.64	335	⇑P	P	04 54 02.5	-0.6
	comp=Z,17nm,1.0s						
I38A	Scanlan Farm,	80.64	37	P	P	04 54 02.4	-0.9
	baz=322,SNR=6.5						
J37A	Redenius Farm,	80.66	38	P	P	04 54 03.1	-0.3
	baz=322,SNR=7.7						
F41A	Three Lakes	80.67	34	P	P	04 54 03.1	-0.4
	baz=324,SNR=8.6						
F41A	Three Lakes	80.67	34	eP	P	04 54 03.3	-0.2
	comp=Z,22nm,0.9s						
LJU	Ljubljana	80.68	326	i P	P	04 54 02.8	-0.7
STIP	Stip	80.69	319	i P	P	04 54 02.0	-1.5
PLE	Pljevlja	80.73	322	⇑iP	P	04 54 03.4	-0.5
KNT	Kendrikon	80.75	319	P	P	04 54 03.8	-0.1
KNT	Kendrikon	80.75	319	P	P	04 54 03.8	-0.1
KNT	Kendrikon	80.75	319	P	P	04 54 03.8	-0.1
WLF	Walferdange	80.76	333	⇓P	P	04 54 03.3	-0.5
WLF	Walferdange	80.76	333	eP	P	04 54 04.0	+0.2
	comp=Z,12nm,1.1s						
WLF	Walferdange	80.76	333	eP	P	04 54 04.0	+0.2
WLF				pmax	pmax		
	comp=Z,12nm,1.1s						
K36A	Gilmore City	80.77	39	P	P	04 54 03.7	-0.3
	baz=321,SNR=8.0						
LANF	Langenberg	80.78	332	P	P	04 54 03.8	-0.2
VAY	Valandovo	80.79	319	i P	P	04 54 03.8	-0.3
WATA	Walderalm	80.79	329	eP	P	04 54 04.6	+0.4
	comp=Z,7.7nm,0.5s						
GIVF	Givet	80.82	334	eP	P	04 54 02.7	-1.4
GIVF				pmax	pmax		
	comp=Z,21nm,1.2s						
WTTA	Wattenberg	80.82	329	eP	P	04 54 04.5	+0.1
	comp=Z,12nm,0.6s						
SKO	Skopje	80.83	320	i P	P	04 54 04.7	+0.4
IVA	Berane	80.86	321	⇑iP	P	04 54 04.6	0.0
DOU	Dourbes	80.90	334	⇑P	P	04 54 03.9	-0.7
ABTA	Abfaltersbach	80.91	328	eP	P	04 54 03.7	-1.1
	comp=Z,9.1nm,1.3s						
RETA	Reutte	80.97	329	eP	P	04 54 05.0	-0.1
	comp=Z,29nm,1.0s,SNR=11						
E43A	Lone Tree Farm	81.01	32	P	P	04 54 04.5	-0.8
	baz=325						
E43A	Lone Tree Farm	81.01	32	eP	P	04 54 05.1	-0.1
	comp=Z,18nm,0.8s						
H40A	Chili	81.03	35	P	P	04 54 04.6	-0.7
	baz=323,SNR=5.3						
K37A	Belmond	81.05	39	P	P	04 54 04.8	-0.7
	baz=322,SNR=11						
PVY	Plav	81.05	321	⇑iP	P	04 54 05.5	-0.1
KOME	Kolasin	81.05	322	⇑iP	P	04 54 05.4	-0.2
BAIF	Baives	81.05	335	eP	P	04 54 05.0	-0.3
BAIF				pmax	pmax		
	comp=Z,10.0nm,1.0s						
UPM	Unac-Piva	81.05	322	⇑iP	P	04 54 04.9	-0.8
CBKS	Cedar Bluff	81.07	45	P	P	04 54 04.7	-1.0
	baz=318						
CBKS	Cedar Bluff	81.07	45	eP	P	04 54 04.6	-1.0
	comp=Z,24nm,1.0s						
CBKS	Cedar Bluff	81.07	45	eP	P	04 54 04.6	-1.1
CBKS				pmax	pmax		
	comp=Z,24nm,1.0s						
PLG	Polygyros	81.08	318	P	P	04 54 05.2	-0.5
PLG	Polygyros	81.08	318	P	P	04 54 05.2	-0.5
L36A	Harm Buss Farm	81.08	40	P	P	04 54 05.1	-0.5
	baz=321						
121A	Cookes Peak, D	81.11	54	P	P	04 54 05.8	-0.4
	baz=315,SNR=7.0						
J38A	Wedel Dairy, R	81.14	37	P	P	04 54 05.2	-0.8
	baz=322						
I39A	Houston	81.14	37	P	P	04 54 05.1	-0.9
	baz=323						
I39A	Houston	81.14	37	eP	P	04 54 05.6	-0.4
	comp=Z,25nm,0.7s						
BFO	Black Forest	81.15	331	eP	P	04 54 04.8	-1.2
	comp=Z,18nm,1.1s						
BFO	Black Forest	81.15	331	i P	P	04 54 05.9	-0.1
H41A	Junction City	81.35	35	P	P	04 54 06.4	-0.6
	baz=324						
H41A	Junction City	81.35	35	eP	P	04 54 06.6	-0.5
H41A				epP	pP	04 54 23.3	-1.7
G42A	Mountain	81.36	34	P	P	04 54 06.4	-0.6
	baz=324						
FETA	Feichten	81.37	329	eP	P	04 54 07.4	+0.1
	comp=Z,22nm,1.0s,SNR=11						
NKME	Niksic	81.37	322	⇑iP	P	04 54 06.4	-0.9
KRUS	Krusevo	81.39	320	i P	P	04 54 07.3	-0.1
F43A	Flat Rock, Esc	81.39	33	P	P	04 54 06.2	-1.0
	baz=325						
CDF	Champ du Feu	81.45	332	eP	P	04 54 06.5	-1.1
CDF				pmax	pmax		
	comp=Z,18nm,1.0s						
BRY	Bratogost	81.46	322	⇑iP	P	04 54 06.9	-0.9
DAVA	Damuels	81.47	330	eP	P	04 54 07.6	-0.2
	comp=Z,32nm,1.0s,SNR=10.0						
J39A	Decorah	81.47	37	P	P	04 54 06.8	-0.9
	baz=323,SNR=8.3						
L37A	Phoenix Point,	81.49	39	P	P	04 54 07.5	-0.3
	baz=322,SNR=11						
PDG	Podgorica	81.50	322	⇑iP	P	04 54 07.6	-0.3
TTG	Podgorica	81.50	322	eP	P	04 54 07.5	-0.3
TTG	Podgorica	81.50	322	eP	P	04 54 07.6	-0.3
	comp=Z,64nm,1.1s						
TTG	Podgorica	81.50	322	eP	P	04 54 07.6	-0.3
TTG				pmax	pmax		
	comp=Z,64nm,1.1s						
I40A	Norwalk	81.51	36	P	P	04 54 07.3	-0.6
	baz=323,SNR=6.4						
M36A	Felix, Anita	81.52	40	P	P	04 54 07.5	-0.6
	baz=321						
PHP	Peshkopia	81.53	320	P	P	04 54 07.8	-0.3
PHP	Peshkopia	81.53	320	P	P	04 54 07.8	-0.3
PHP	Peshkopia	81.53	320	P	P	04 54 07.8	-0.3
K38A	Parkersburg	81.54	38	P	P	04 54 07.6	-0.5
	baz=322						
K38A	Parkersburg	81.54	38	eP	P	04 54 07.8	-0.2
	comp=Z,17nm,1.1s						
CEME	Cevo	81.56	322	⇑iP	P	04 54 07.5	-0.8
F44A	Big Bay de Noc	81.57	32	P	P	04 54 07.5	-0.6
	baz=326						
SLE	Schleitheim	81.57	331	P	P	04 54 08.0	-0.2
ECH	Echery	81.66	332	eP	P	04 54 07.9	-0.7
	comp=Z,14nm,0.9s						
ECH	Echery	81.66	332	eP	P	04 54 07.9	-0.7
ECH				pmax	pmax		
	comp=Z,14nm,0.9s						
I41A	Arkdale	81.70	36	P	P	04 54 08.7	-0.3
	baz=324						
DRME	Dracevica, Mon	81.72	321	⇑iP	P	04 54 08.7	-0.3
E45A	Wooded Hills,	81.74	31	P	P	04 54 08.6	-0.4
	baz=326						
LIT	Litokhoron	81.76	318	eP	P	04 54 09.0	-0.4
	comp=Z,26nm,1.0s						
LIT	Litokhoron	81.76	318	P	P	04 54 08.9	-0.4
LIT				pmax	pmax		
	comp=Z,26nm,1.0s						
BUM	Brajici-Budva	81.77	322	⇑iP	P	04 54 08.8	-0.6
FNA	Florina	81.78	319	eP	P	04 54 08.8	-0.6
	comp=Z,18nm,0.9s						
FNA	Florina	81.78	319	eP	P	04 54 08.8	-0.6
FNA				pmax	pmax		
	comp=Z,18nm,0.9s						
OHR	Ohrid	81.80	320	i P	P	04 54 09.2	-0.3
OHR	Ohrid	81.80	320	P	P	04 54 09.5	-0.1
HCY	Herceg Novi	81.83	322	⇑iP	P	04 54 08.6	-1.0
L38A	Oak Wood Farm,	81.85	39	P	P	04 54 08.8	-0.9
	baz=322						
J40A	Soldiers Grove	81.85	36	P	P	04 54 08.8	-0.9
	baz=323						
ULC	Ulcinj	81.87	321	⇑iP	P	04 54 09.1	-0.8
FUORN	Ofenpass-Fuorn	81.88	329	eP	P	04 54 10.3	+0.2
	comp=Z,47nm,1.0s						
DAVOX	Davos/Dischmat	81.89	330	P	P	04 54 10.0	-0.1
	comp=Z,8.4nm,0.6s,baz=50,slow=6.0,SNR=16						
DAVOX				LR	LR	05 33 02.1	
	comp=Z,276nm,21.1s,baz=26,slow=37						
DAVOX	Davos/Dischmat	81.89	330	P	P	04 54 10.0	-0.1
K39A	Oelwein	81.89	38	P	P	04 54 09.0	-1.0
	baz=323,SNR=7.8						
H42A	Shiocton	81.91	34	P	P	04 54 09.1	-0.9
	baz=324						
M37A	Trindle Farm,	81.91	40	P	P	04 54 10.0	0.0
	baz=321						
SCIA	State Center	81.91	39	P	P	04 54 09.8	-0.3
	baz=322						
SCIA	State Center	81.91	39	eP	P	04 54 10.3	+0.2
SCIA				epP	pP	04 54 25.7	-2.3
N36A	Muff Farm, Cla	81.94	41	P	P	04 54 09.8	-0.4
	baz=321						
MOF	Molkenrain	81.98	332	P	P	04 54 10.1	-0.3
HINF	Hinteralfeld	82.11	332	eP	P	04 54 10.8	-0.2
HINF				pmax	pmax		
	comp=Z,6.0nm,0.9s						
HAU	Haudompre	82.12	332	eP	P	04 54 09.7	-1.4
HAU				pmax	pmax		
	comp=Z,13nm,1.0s						
F45A	CMU Biological	82.17	32	P	P	04 54 10.7	-0.6
	baz=326						
J41A	Loganville	82.20	36	P	P	04 54 11.0	-0.5
	baz=324,SNR=6.8						
NEST	Nestorio	82.22	319	P	P	04 54 11.5	-0.3
K40A	Colesburg	82.23	37	P	P	04 54 11.1	-0.7
	baz=323						
I42A	Draeger Farm,	82.25	35	P	P	04 54 10.8	-1.0
	baz=324						
I42A	Draeger Farm,	82.25	35	eP	P	04 54 11.7	-0.1
I42A				epP	pP	04 54 27.9	-1.9
H43A	Windswept, Lux	82.26	34	P	P	04 54 11.3	-0.5
	baz=325						
L39A	Vinton	82.30	38	P	P	04 54 11.6	-0.5
	baz=322,SNR=11						
M38A	Pleasantville	82.31	39	P	P	04 54 12.1	-0.1
	baz=322,SNR=11						
N37A	Lee Faris, Mou	82.34	40	P	P	04 54 12.3	0.0
	baz=321						
N37A	Lee Faris, Mou	82.34	40	eP	P	04 54 12.8	+0.4
N37A				epP	pP	04 54 28.9	-1.4
TUE	Stuetta	82.35	330	eP	P	04 54 12.3	-0.3
	comp=Z,15nm,0.9s						
F46A	Macinaw City C	82.39	32	P	P	04 54 11.5	-1.0
	baz=327						
RAR	Rarotonga	82.42	128	LR	LR	05 23 07.8	
	comp=Z,113nm,20.8s,baz=278,slow=30						
KSU1	Kansas State U	82.45	43	P	P	04 54 12.1	-0.8
	baz=320						
KSU1	Kansas State U	82.45	43	eP	P	04 54 12.7	-0.3
KSU1				epP	pP	04 54 28.3	-2.6
JFWS	Jewell Farm	82.46	36	P	P	04 54 11.9	-1.0
	baz=324						
JFWS	Jewell Farm	82.46	36	eP	P	04 54 12.2	-0.7
JFWS				epP	pP	04 54 27.2	-3.7
JFWS	Jewell Farm	82.46	36	eP	P	04 54 12.2	-0.7
LOMF	Lomont	82.52	332	P	P	04 54 13.1	-0.1
I43A	Langenfeld Bro	82.58	35	P	P	04 54 12.6	-0.9
	baz=325						
J42A	Columbus	82.62	36	P	P	04 54 12.9	-0.8
	baz=324,SNR=7.9						
AGG	Agios Georgios	82.66	318	eP	P	04 54 13.0	-1.1
	comp=Z,62nm,1.3s						
AGG	Agios Georgios	82.66	318	eP	P	04 54 13.0	-1.1
AGG				pmax	pmax		
	comp=Z,62nm,1.3s						
K41A	Shullsburg	82.68	37	P	P	04 54 13.3	-0.7
	baz=324,SNR=6.5						
L40A	Anamosa	82.70	38	P	P	04 54 13.5	-0.6
	baz=323,SNR=10						
L40A	Anamosa	82.70	38	eP	P	04 54 13.6	-0.6
	comp=Z,24nm,0.9s						
M39A	Webster	82.73	38	P	P	04 54 13.9	-0.4
	baz=322,SNR=19						
N38A	Joes South For	82.78	40	P	P	04 54 13.9	-0.7
	baz=322,SNR=7.0						
O37A	Wolven Farm, M	82.83	40	P	P	04 54 14.4	-0.5
	baz=322						
AMTX	Amarillo	82.93	48	P	P	04 54 15.0	-0.6
	baz=318						
AMTX	Amarillo	82.93	48	eP	P	04 54 16.7	+1.1
	comp=Z,8.7nm,0.8s						
K42A	Prairie Point,	82.96	36	P	P	04 54 14.8	-0.7
	baz=324,SNR=9.2						
MSTX	Muleshoe	82.99	50	P	P	04 54 15.3	-0.7
	baz=317						
MSTX	Muleshoe	82.99	50	eP	P	04 54 17.1	+1.2
	comp=Z,6.3nm,0.9s						
L41A	Preston	83.02	37	P	P	04 54 15.2	-0.6
	baz=323,SNR=7.3						
N39A	Derby Farms, D	83.05	39	P	P	04 54 15.7	-0.3
	baz=322,SNR=5.5						
N39A	Derby Farms, D	83.05	39	eP	P	04 54 16.2	+0.2
N39A				epP	pP	04 54 32.2	-1.8
M40A	Post Highland	83.09	38	P	P	04 54 16.0	-0.2
	baz=323,SNR=12						
MNTX	Cornudas Mount	83.13	53	P	P	04 54 16.8	+0.2
	baz=316,SNR=6.5						
MNTX	Cornudas Mount	83.13	53	eP	P	04 54 17.5	+0.9
	comp=Z,8.9nm,1.3s						
P37A	Lathrop	83.19	41	P	P	04 54 16.7	-0.1
	baz=321,SNR=9.7						
O38A	Galt	83.19	40	P	P	04 54 16.7	0.0
	baz=322						
SENIN	Lac Senin/Sane	83.19	331	eP	P	04 54 16.6	-0.3
	comp=Z,11nm,0.8s						
ANX	Ano Chora	83.19	317	P	P	04 54 16.0	-0.9
IGT	Igoumenitsa	83.25	319	P	P	04 54 16.2	-0.9
KEK	Kerkira	83.37	319	P	P	04 54 17.2	-0.5
KEK	Kerkira	83.37	319	P	P	04 54 17.2	-0.5
LAKA	Lakka	83.44	317	P	P	04 54 17.3	-0.8
LAKA	Lakka	83.44	317	P	P	04 54 17.3	-0.8
L42A	Oliver, Polo	83.44	37	P	P	04 54 17.2	-0.8
	baz=324						
L42A	Oliver, Polo	83.44	37	eP	P	04 54 17.7	-0.3
	comp=Z,17nm,0.7s						
K43A	Burlington	83.46	35	P	P	04 54 17.5	-0.5
	baz=325						
K43A	Burlington	83.46	35	eP	P	04 54 17.9	-0.1
K43A				epP	pP	04 54 33.8	-2.3
N40A	Mertquake, Sal	83.47	38	P	P	04 54 17.8	-0.4
	baz=323,SNR=5.2						
GUR	Goura	83.49	317	P	P	04 54 16.8	-1.6
GUR	Goura	83.49	317	P	P	04 54 16.8	-1.6
O39A	Kirksville	83.53	39	P	P	04 54 17.7	-0.8
	baz=322						
P38A	Dawn	83.55	40	P	P	04 54 18.4	-0.2
	baz=322,SNR=13						
P38A	Dawn	83.55	40	eP	P	04 54 18.8	+0.2
	comp=Z,27nm,0.9s						
M41A	Milan	83.56	38	P	P	04 54 18.1	-0.5
	baz=324,SNR=7.7						
FLN	La Foliniere	83.63	337	eP	P	04 54 18.4	-0.4
FLN				pmax	pmax		
	comp=Z,7.0nm,0.6s						
LKD2	Lefkada island	83.67	318	P	P	04 54 18.6	-0.7
LKD2	Lefkada island	83.67	318	P	P	04 54 18.6	-0.7
Q37A	Longview Farm,	83.69	41	P	P	04 54 18.5	-0.8
	baz=321						
L43A	Garden Prairie	83.70	36	P	P	04 54 18.7	-0.7
	baz=324						
EVGI	Lefkada island	83.80	318	P	P	04 54 19.4	-0.5
M42A	Sheffield	83.84	37	P	P	04 54 19.2	-0.8
	baz=324						
O40A	La Belle	83.94	39	P	P	04 54 20.6	0.0
	baz=323,SNR=14						
LAST	Lasithi	83.95	313	P	P	04 54 20.8	0.0
LAST	Lasithi	83.95	313	P	P	04 54 20.8	0.0
FSK	Fiskardo	83.97	318	P	P	04 54 19.9	-0.8
Q38A	Cooks Store, C	84.03	41	P	P	04 54 20.7	-0.4
	baz=322,SNR=11						
P39B	Salisbury	84.03	40	P	P	04 54 20.8	-0.2
	baz=322,SNR=6.5						
GRR	Gorron	84.08	337	eP	P	04 54 20.8	-0.3
GRR				pmax	pmax		
	comp=Z,19nm,0.8s						
LPL	La Plagne	84.12	331	eP	P	04 54 22.0	+0.3
LPL				pmax	pmax		
	comp=Z,11nm,0.8s						
LPG	La Plagne	84.13	331	eP	P	04 54 21.1	-0.7
LPG				pmax	pmax		
	comp=Z,13nm,0.7s						
VLS	Valsamata	84.18	318	P	P	04 54 21.2	-0.6
VLS	Valsamata	84.18	318	P	P	04 54 21.2	-0.6
VLS	Valsamata	84.18	318	P	P	04 54 21.2	-0.6
AVF	Avril sur Loir	84.19	333	eP	P	04 54 20.7	-1.0
AVF				pmax	pmax		
	comp=Z,37nm,0.9s						
M43A	Waltham Townsh	84.21	37	P	P	04 54 21.4	-0.5
	baz=324,SNR=9.8						
N42A	Yates City	84.22	38	P	P	04 54 21.6	-0.4
	baz=324,SNR=7.4						
Q39A	Willow Grove F	84.27	40	P	P	04 54 21.9	-0.4
	baz=322						
ITM	Ithomi	84.28	317	P	P	04 54 21.4	-1.0
ITM	Ithomi	84.28	317	P	P	04 54 21.4	-1.0
P40A	Paris	84.33	40	P	P	04 54 22.2	-0.3
	baz=323,SNR=12						
P40A	Paris	84.33	40	eP	P	04 54 22.8	+0.3
	comp=Z,24nm,1.0s						
O41A	Passleys Farm,	84.41	39	P	P	04 54 22.6	-0.3
	baz=323						
SIVA	Sivas	84.42	313	P	P	04 54 22.9	-0.2
SIVA	Sivas	84.42	313	P	P	04 54 22.9	-0.2
VAM	Vamos	84.45	314	P	P	04 54 23.2	0.0
VAM	Vamos	84.45	314	P	P	04 54 23.2	0.0
R38A	Fenwick Farm,	84.49	42	P	P	04 54 22.5	-0.9
	baz=322,SNR=7.6						
N43A	Stutzman Famil	84.52	37	P	P	04 54 23.0	-0.5
	baz=324						
IMMV	Iera Moni Meta	84.53	314	P	P	04 54 23.2	-0.4
BNI	Bardonecchia	84.54	331	eP	P	04 54 23.0	-0.7
	comp=Z,17nm,1.1s						
BNI	Bardonecchia	84.54	331	eP	P	04 54 23.0	-0.7
BNI				pmax	pmax		
	comp=Z,17nm,1.1s						
ANKY	Antikythira Is	84.58	315	P	P	04 54 22.7	-1.1
ANKY	Antikythira Is	84.58	315	P	P	04 54 22.7	-1.1
PYL	PYLOS	84.59	317	P	P	04 54 22.6	-1.3
PYL	PYLOS	84.59	317	P	P	04 54 22.6	-1.3
WMOK	Wichita Mounta	84.63	47	P	P	04 54 23.8	-0.4
	baz=319						
WMOK	Wichita Mounta	84.63	47	eP	P	04 54 24.6	+0.4
	comp=Z,18nm,1.4s						
WMOK	Wichita Mounta	84.63	47	eP	P	04 54 24.6	+0.4
WMOK				pmax	pmax		
	comp=Z,18nm,1.4s						
BUKO	Buck Lake	84.65	28	P	P	04 54 23.3	-0.8
	baz=330						
M44A	Midewin, Midew	84.65	36	P	P	04 54 23.6	-0.5
	baz=325,SNR=6.6						
P41A	Barry, Barry	84.68	39	P	P	04 54 24.2	-0.1
	baz=323,SNR=12						
SGMF	Saint Gilles	84.69	338	eP	P	04 54 24.4	+0.2

SGMF				pmax	pmax		
	comp=Z,19nm,1.0s						
O42A	Bath	84.71	38	P	P	04 54 24.1	-0.4
	baz=324						
Q40A	Laux Farm, Aux	84.74	40	P	P	04 54 24.5	-0.1
	baz=323,SNR=7.9						
ROSF	Rostrenen	84.81	338	P	P	04 54 24.3	-0.5
ROSF				pmax	pmax		
	comp=Z,49nm,1.1s						
R39A	Chumby, Stover	84.82	41	P	P	04 54 24.7	-0.4
	baz=322,SNR=11						
S38A	Stockton	84.93	42	P	P	04 54 24.8	-0.8
	baz=322,SNR=6.1						
O43A	Sugar Creek Fa	84.99	37	P	P	04 54 25.7	-0.2
	baz=324						
M45A	Boilermakers S	85.00	36	P	P	04 54 25.5	-0.4
	baz=325						
CUC	Castrocucco	85.01	322	*e*P	P	04 54 24.8	-1.2
	comp=Z,14nm,1.2s						
P42A	Winchester	85.08	38	P	P	04 54 26.1	-0.3
	baz=324,SNR=5.8						
P42A	Winchester	85.08	38	*e*P	P	04 54 26.3	-0.1
	comp=Z,18nm,0.9s						
N44A	Piper City	85.10	36	P	P	04 54 26.1	-0.3
	baz=325,SNR=5.0						
BWLO	Walkerton	85.16	30	P	P	04 54 27.1	+0.4
	baz=329						
QUIF	Quistinic	85.17	338	*e*P	P	04 54 25.6	-1.0
QUIF				pmax	pmax		
	comp=Z,15nm,1.0s						
S39A	Bolivar	85.17	42	P	P	04 54 26.2	-0.6
	baz=322,SNR=9.8						
S39A	Bolivar	85.17	42	*e*P	P	04 54 26.6	-0.3
	comp=Z,11nm,0.8s						
Q41A	Truxton	85.17	39	P	P	04 54 26.6	-0.2
	baz=323,SNR=13						
CLWO	Collingwood	85.19	30	P	P	04 54 26.8	0.0
	baz=330,SNR=5.8						
PEMO	Pembroke	85.19	27	P	P	04 54 25.8	-1.0
	baz=332						
T38A	Diamond	85.20	43	P	P	04 54 26.8	-0.2
	baz=322,SNR=17						
R40A	Maddies Statio	85.21	40	P	P	04 54 26.8	-0.1
	baz=323,SNR=9.7						
R40A	Maddies Statio	85.21	40	*e*P	P	04 54 26.9	-0.1
	comp=Z,17nm,1.0s						
TIP	Timpagrande	85.23	321	⇓*i*P	P	04 54 27.4	+0.2
TIP	Timpagrande	85.23	321	*e*P	P	04 54 27.1	-0.1
	comp=Z,54nm,1.4s						
SBF	Sospel	85.28	329	*e*P	P	04 54 25.6	-1.7
SBF				pmax	pmax		
	comp=Z,29nm,0.8s						
PMOR	Pomariorio Ree	85.29	115	*e*T	T	06 27 45.1	
	comp=Z,39nm,0.2s						
TUL1	Leonard	85.31	44	P	P	04 54 27.7	+0.1
	baz=321,SNR=5.4						
TUL1	Leonard	85.31	44	*e*P	P	04 54 28.3	+0.7
	comp=Z,15nm,0.8s						
N45A	Kentland	85.33	36	P	P	04 54 27.2	-0.3
	baz=325						
M46A	Old House Fiel	85.36	35	P	P	04 54 27.8	+0.1
	baz=326						
P43A	Skaggs, Pawnee	85.41	38	P	P	04 54 27.2	-0.8
	baz=324						
VIVF	Saint-Julien-l	85.43	332	*e*P	P	04 54 27.3	-0.7
VIVF				pmax	pmax		
	comp=Z,21nm,1.1s						
O44A	Mansfield	85.47	37	P	P	04 54 27.6	-0.7
	baz=325						
BANO	Bancroft	85.53	28	P	P	04 54 27.9	-0.6
	baz=331						
Q42A	Golden Eagle	85.53	39	P	P	04 54 28.6	0.0
	baz=324						
TRQ	Mont Tremblant	85.58	25	*e*P	P	04 54 28.4	-0.4
N46A	Monticello	85.62	35	P	P	04 54 28.8	-0.2
	baz=326						
R41A	Rosebud	85.63	40	P	P	04 54 29.0	-0.1
	baz=323,SNR=7.0						
S40A	Lebanon	85.64	41	P	P	04 54 28.7	-0.4
	baz=323,SNR=7.2						
T39A	Clever	85.66	42	P	P	04 54 28.8	-0.5
	baz=322						
O45A	Potomac	85.72	36	P	P	04 54 29.1	-0.4
	baz=325,SNR=5.9						
AAM	Ann Arbor	85.73	33	P	P	04 54 28.8	-0.7
	baz=328						
ABTX	Abilene, Hawle	85.75	49	P	P	04 54 29.3	-0.5
	baz=319,SNR=5.7						
ABTX	Abilene, Hawle	85.75	49	*e*P	P	04 54 30.6	+0.8
	comp=Z,16nm,1.1s						
PLVO	Plevna	85.81	27	P	P	04 54 29.2	-0.6
	baz=332						
PLVO	Plevna	85.81	27	*e*P	P	04 54 29.4	-0.5
PLVO				*e*pP	pP	04 54 45.6	-2.3
FRF	La Foret Royal	85.83	330	*e*P	P	04 54 28.4	-1.6
FRF				pmax	pmax		
	comp=Z,29nm,1.2s						
TX31	Lajitas Ar. Si	85.86	54	*e*P	P	04 54 31.2	+0.7
TXAR	Lajitas Array	85.86	54	P	P	04 54 31.2	+0.7
	comp=Z,7.0nm,0.6s,baz=295,slow=3.4,SNR=116						
TXAR				LR	LR	05 29 37.2	
	comp=Z,28nm,21.5s,baz=0.0,slow=33						
CCM	Cathedral Cave	85.88	40	P	P	04 54 30.5	+0.2
	baz=323						
CCM	Cathedral Cave	85.88	40	*e*P	P	04 54 31.2	+0.9
	comp=Z,19nm,0.9s						
CCM				*e*pP	pP	04 54 47.4	-1.0
CCM	Cathedral Cave	85.88	40	*e*P	P	04 54 31.2	+0.9
CCM				*e**PP	pP	04 54 47.4	-1.0
CCM				pmax	pmax		
	comp=Z,19nm,0.9s						
ELFO	Elginfield	85.89	31	P	P	04 54 30.5	+0.3
	baz=329						
SFIN	Lafayette	85.89	36	P	P	04 54 29.9	-0.5
	baz=326,SNR=5.8						
SFIN	Lafayette	85.89	36	*e*P	P	04 54 30.6	+0.3
	comp=Z,14nm,0.7s						
Q43A	New Douglas	85.90	38	P	P	04 54 30.4	0.0
	baz=324						
R42A	Luebbering	85.92	40	P	P	04 54 30.3	-0.2
	baz=324,SNR=5.1						
P44A	Sand Creek, Wi	85.96	37	P	P	04 54 30.1	-0.7
	baz=325						
HHAR	Hobbs	85.97	43	*e*P	P	04 54 30.9	+0.1
	comp=Z,9.1nm,0.9s						
T40A	Mansfield	85.99	41	P	P	04 54 30.2	-0.7
	baz=323						
ALFO	Alfred	86.01	26	P	P	04 54 30.2	-0.5
	baz=333,SNR=11						
S41A	Jillco Farms,	86.02	41	P	P	04 54 30.4	-0.6
	baz=323						
PPT	Papeete	86.03	118	LR	LR	05 26 56.5	
	comp=Z,100nm,21.7s,baz=312,slow=31						
PPT2	Papeete2	86.04	118	*e*LR	LR	05 21 40.9	
	comp=Z,504nm,26.0s,baz=324						
PPT2	Papeete2	86.04	118	*e*T	T	06 28 41.5	
	comp=Z,9.6nm,0.3s						
DELO	Deloro Mine	86.08	28	P	P	04 54 29.8	-1.4
	baz=331						
RJF	Les Rejaudoux	86.10	334	*e*P	P	04 54 30.8	-0.5
RJF				pmax	pmax		
	comp=Z,23nm,1.1s						
U39A	Green Forest	86.12	42	P	P	04 54 31.2	-0.4
	baz=322,SNR=20						
TIAR	Tiarei	86.17	118	*e*T	T	06 28 50.6	
	comp=Z,4.3nm,0.3s						
Q44A	Meyer Farm, Va	86.24	38	P	P	04 54 31.7	-0.4
	baz=324						
CAF	Calviac	86.26	333	*e*P	P	04 54 32.0	-0.1
CAF				pmax	pmax		
	comp=Z,37nm,1.0s						
M49A	Liberty Center	86.30	33	P	P	04 54 32.0	-0.3
	baz=327						
P45A	Graceland, Par	86.30	37	P	P	04 54 32.0	-0.4
	baz=325						
P45A	Graceland, Par	86.30	37	*e*P	P	04 54 32.6	+0.2
P45A				*e*pP	pP	04 54 48.7	-1.8
R43A	Red Bud	86.32	39	P	P	04 54 32.0	-0.5
	baz=324						
S42A	Caledonia	86.33	40	P	P	04 54 32.3	-0.2
	baz=324,SNR=13						
FVM	French Village	86.33	39	*e*P	P	04 54 33.5	+1.0
	comp=Z,8.6nm,0.6s						
FVM				*e*pP	pP	04 54 50.0	-0.7
FVM	French Village	86.33	39	*e*P	P	04 54 33.6	+1.0
FVM				*e**PP	pP	04 54 50.0	-0.7
FVM				pmax	pmax		
	comp=Z,9.0nm,0.6s						
TAOE	Nuku Hiva Isla	86.35	105	*e*LR	LR	05 22 05.8	
	comp=Z,348nm,22.7s						
TAOE	Nuku Hiva Isla	86.35	105	*e*T	T	06 29 06.7	
	comp=Z,49nm,0.2s						
HPIG		86.39	56	*e*P	P	04 54 33.2	-0.1
	comp=Z,8.7nm,0.8s						
O47A	Sheridan	86.41	35	P	P	04 54 32.2	-0.7
	baz=326						
T41A	Mountain View	86.44	41	P	P	04 54 32.7	-0.5
	baz=323,SNR=12						
U40A	Yellville	86.45	42	P	P	04 54 32.8	-0.4
	baz=322,SNR=23						
V39A	Pettigrew	86.46	43	P	P	04 54 32.8	-0.5
	baz=322,SNR=12						
P46A	Rosedale	86.47	36	P	P	04 54 33.2	0.0
	baz=326						
Q45A	Warren Harvey,	86.64	38	P	P	04 54 33.9	-0.1
	baz=325,SNR=6.1						
LFF	La Frestale	86.68	334	*e*P	P	04 54 33.9	-0.2
LFF				pmax	pmax		
	comp=Z,43nm,1.0s						
R44A	Waltonville	86.74	38	P	P	04 54 34.4	-0.2
	baz=324						
T42A	Van Buren	86.77	40	P	P	04 54 34.2	-0.5
	baz=323,SNR=11						
T42A	Van Buren	86.77	40	*e*P	P	04 54 34.8	+0.1
	comp=Z,9.3nm,0.6s						
OLIL	Olney	86.79	38	*e*P	P	04 54 35.1	+0.3
	comp=Z,23nm,1.1s						
OLIL				*e*pP	pP	04 54 51.4	-1.5
S43A	Fulton Ridge,	86.82	40	P	P	04 54 34.2	-0.7
	baz=324,SNR=11						
O48A	Farmland	86.82	35	P	P	04 54 34.2	-0.7
	baz=327,SNR=5.2						
W39A	Magazine	86.89	43	P	P	04 54 34.6	-0.7
	baz=322						
V40A	Witts Springs	86.90	42	P	P	04 54 34.5	-0.9
	baz=322						
V40A	Witts Springs	86.90	42	*e*P	P	04 54 35.1	-0.3
	comp=Z,10.0nm,1.0s						
U41A	Viola	86.92	41	P	P	04 54 34.7	-0.8
	baz=323,SNR=8.6						
P47A	Martinsville	86.98	36	P	P	04 54 34.8	-0.9
	baz=326						
LONY	Lake Ozonia	87.00	26	P	P	04 54 34.9	-0.9
	baz=333						
PQI	Presque Isle	87.06	21	*e*P	P	04 54 35.9	-0.1
	comp=Z,9.1nm,0.8s						
R45A	Skylar, Fairfi	87.07	38	P	P	04 54 35.3	-0.9
	baz=325						
S44A	Carbondale	87.11	39	P	P	04 54 35.7	-0.7
	baz=324,SNR=7.8						
T43A	Greenville	87.11	40	P	P	04 54 36.0	-0.3
	baz=324,SNR=10						
N50A	Nevada	87.22	33	P	P	04 54 36.0	-0.8
	baz=328						
O49A	Covington	87.23	34	P	P	04 54 36.0	-0.8
	baz=327						
U42A	Revenden	87.25	41	P	P	04 54 36.3	-0.8
	baz=323						
V41A	Mountainview	87.25	42	P	P	04 54 36.4	-0.7
	baz=323,SNR=11						
W40A	Ferguson Farm,	87.26	43	P	P	04 54 36.4	-0.7
	baz=322,SNR=8.0						
W40A	Ferguson Farm,	87.26	43	*e*P	P	04 54 37.6	+0.5
	comp=Z,14nm,0.8s						
X39A	Fountain Ranch	87.26	44	P	P	04 54 36.5	-0.6
	baz=322						
JCT	Junction City	87.26	50	P	P	04 54 36.8	-0.5
	baz=319						
JCT	Junction City	87.26	50	*e*P	P	04 54 37.2	0.0
	comp=Z,8.4nm,0.9s						
JCT	Junction City	87.26	50	*e*P	P	04 54 37.3	0.0
JCT				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ERPA	Erie	87.31	31	P	P	04 54 36.6	-0.7
	baz=330						
P48A	Milroy	87.37	35	P	P	04 54 37.2	-0.4
	baz=327						
Q47A	Bedord North L	87.37	36	P	P	04 54 37.4	-0.2
	baz=326,SNR=5.7						
S45A	Carrier Mills	87.43	38	P	P	04 54 37.9	-0.1
	baz=325,SNR=6.5						
T44A	Benton	87.44	39	P	P	04 54 37.4	-0.6
	baz=324						
R46A	Gibon Southern	87.48	37	P	P	04 54 37.6	-0.5
	baz=325						
MIAR	Mount Ida	87.51	44	P	P	04 54 38.2	-0.1
	baz=322,SNR=11						
MIAR	Mount Ida	87.51	44	*e*P	P	04 54 38.8	+0.4
	comp=Z,13nm,1.0s						
MIAR				*e*pP	pP	04 54 54.6	-1.9
MIAR	Mount Ida	87.51	44	*e*P	P	04 54 38.8	+0.4
MIAR				*e**PP	pP	04 54 54.6	-1.9
MIAR				pmax	pmax		
	comp=Z,13nm,1.0s						
O50A	Cable	87.56	34	P	P	04 54 38.2	-0.3
	baz=328,SNR=8.1						
WHAR	Wooly Hollow	87.57	42	*e*P	P	04 54 39.0	+0.4
	comp=Z,17nm,0.8s						
MTLF	Montolieu	87.61	333	*e*P	P	04 54 38.3	-0.4
MTLF				pmax	pmax		
	comp=Z,17nm,1.1s						
V42A	Cord	87.61	41	P	P	04 54 38.5	-0.3
	baz=323,SNR=6.4						
P49A	Miami Univ. Ec	87.61	35	P	P	04 54 38.5	-0.3
	baz=327,SNR=7.0						
U43A	Rector	87.63	40	P	P	04 54 38.0	-0.9
	baz=324						
ALLY	Alegheny Colle	87.66	31	*e*P	P	04 54 39.3	+0.4
ALLY				*e*pP	pP	04 54 55.5	-1.5
Q48A	North Vernon	87.68	36	P	P	04 54 38.7	-0.4
	baz=326,SNR=5.7						
W41B	Gary Mavity, V	87.68	42	P	P	04 54 38.8	-0.3
	baz=323,SNR=5.3						
W41B	Gary Mavity, V	87.68	42	*e*P	P	04 54 39.4	+0.2
	comp=Z,11nm,1.1s						
PARMO	Parma	87.71	40	*e*P	P	04 54 40.1	+0.8
PARMO				*e*pP	pP	04 54 56.4	-0.9
ACSO	Alum Creek Sta	87.75	33	P	P	04 54 38.7	-0.7
	baz=328						
ACSO	Alum Creek Sta	87.75	33	*e*P	P	04 54 40.0	+0.6
ACSO				*e*pP	pP	04 54 55.9	-1.7
S46A	Don Dixon Farm	87.82	38	P	P	04 54 39.3	-0.5
	baz=325						
R47A	Wooly Knot Far	87.86	37	P	P	04 54 39.9	-0.1
	baz=326,SNR=8.1						
X40A	Basin Creek Fa	87.93	43	P	P	04 54 39.8	-0.6
	baz=322						
P50A	Jamestown	87.94	34	P	P	04 54 39.9	-0.4
	baz=328,SNR=6.9						
M54A	Oil Creek Stat	87.96	31	P	P	04 54 39.6	-0.8
	baz=330,SNR=5.1						
M54A	Oil Creek Stat	87.96	31	*e*P	P	04 54 40.6	+0.2
	comp=Z,21nm,1.1s						
Q49A	Aurora	87.98	35	P	P	04 54 40.5	0.0
	baz=327						
PKME	Peaks-Kenny Pk	88.01	22	P	P	04 54 39.4	-1.1
	baz=337						
WCI	Wyandotte Cave	88.01	37	P	P	04 54 40.8	+0.1
	baz=326						
WCI	Wyandotte Cave	88.01	37	*e*P	P	04 54 41.2	+0.5
	comp=Z,15nm,0.8s						
WCI	Wyandotte Cave	88.01	37	*e*P	P	04 54 41.2	+0.5
WCI				pmax	pmax		
	comp=Z,15nm,0.8s						
V43A	Jonesboro	88.03	41	P	P	04 54 40.5	-0.3
	baz=324						
R48A	Northridge Ran	88.06	36	P	P	04 54 40.3	-0.6
	baz=326						
X41A	Kaden, Bauxite	88.09	43	P	P	04 54 41.0	-0.1
	baz=323						
T46A	Princeton	88.27	38	P	P	04 54 42.2	+0.3
	baz=325,SNR=14						
N54A	Moraine State	88.31	31	P	P	04 54 42.1	0.0
	baz=330,SNR=11						
N54A	Moraine State	88.31	31	*e*P	P	04 54 42.4	+0.4
	comp=Z,21nm,0.8s						
U45A	Rockin P Farm,	88.43	39	P	P	04 54 42.5	-0.2
	baz=325						
R49A	Shelbyville	88.45	36	P	P	04 54 42.7	0.0
	baz=327						
Q50A	Georgetown	88.50	35	P	P	04 54 42.8	-0.2
	baz=328,SNR=6.8						
S48A	Wiedeman Farm,	88.59	37	P	P	04 54 43.1	-0.3
	baz=326,SNR=6.7						
Z40A	Long Farm, Mag	88.61	44	P	P	04 54 43.3	-0.3
	baz=322,SNR=5.7						
Q51A	Peebles	88.62	34	P	P	04 54 43.5	-0.1
	baz=328,SNR=16						
T47A	Sharon Grove	88.67	38	P	P	04 54 43.9	+0.1
	baz=326						
BINY	Binghamton	88.68	28	P	P	04 54 43.1	-0.7
	baz=332						
U46A	Springville	88.69	39	P	P	04 54 44.1	+0.2
	baz=325						
S49A	Springfield	88.83	36	P	P	04 54 44.5	0.0
	baz=327,SNR=8.4						
R50A	Paris	88.83	35	P	P	04 54 44.6	+0.1
	baz=327,SNR=6.1						
T48A	Bowling Green	88.89	37	P	P	04 54 44.4	-0.5
	baz=326						
SJPF	Ste Jean	88.94	335	*e*P	P	04 54 45.7	+0.7
SJPF				pmax	pmax		
	comp=Z,26nm,1.6s						
Y42A	Garnett, Star	88.97	43	P	P	04 54 45.2	-0.1
	baz=323						
140A	Cam and Jess,	89.00	45	P	P	04 54 45.2	-0.2
	baz=322						
WVT	Waverly	89.04	39	P	P	04 54 45.2	-0.4
	baz=325						
WVT	Waverly	89.04	39	*e*P	P	04 54 45.9	+0.3
	comp=Z,10.0nm,0.8s						
WVT	Waverly	89.04	39	*e*P	P	04 54 45.9	+0.3
WVT				pmax	pmax		
	comp=Z,10.0nm,0.8s						
R51A	Hillsboro	89.13	35	P	P	04 54 45.8	-0.1
	baz=328						
V46A	Holladay	89.18	39	P	P	04 54 45.8	-0.4
	baz=325,SNR=8.1						
W45A	Hickory Valley	89.19	40	P	P	04 54 46.0	-0.3
	baz=324						
T49A	Edmonton	89.28	37	P	P	04 54 46.4	-0.3
	baz=327,SNR=8.3						
T49A	Edmonton	89.28	37	*e*P	P	04 54 47.0	+0.3
	comp=Z,15nm,1.0s						
S50A	Richmond	89.30	36	P	P	04 54 46.1	-0.7
	baz=327,SNR=8.0						
U48A	Cassie Pea, Po	89.32	38	P	P	04 54 46.6	-0.3
	baz=326,SNR=6.1						
KSPA	Keystone Colle	89.33	28	*e*P	P	04 54 47.2	+0.4
	comp=Z,9.2nm,0.8s						
SSPA	Standing Stone	89.38	30	P	P	04 54 46.7	-0.4
	baz=331						
SSPA	Standing Stone	89.38	30	*e*P	P	04 54 47.5	+0.5
	comp=Z,20nm,0.9s						
RPZ	Rata Peaks	89.41	160	P	P	04 54 48.6	+1.9
	comp=Z,11nm,0.7s,baz=334,slow=2.9,SNR=7.1						
V47A	Nunnelly	89.43	39	P	P	04 54 47.1	-0.3
	baz=325,SNR=8.7						
O56A	Blue Knob Stat	89.45	31	P	P	04 54 47.4	0.0
	baz=331,SNR=10						
MCWV	Mont Chateau	89.49	32	P	P	04 54 47.4	-0.2
	baz=330,SNR=5.3						
R52A	Catlettsburg	89.49	34	P	P	04 54 47.5	-0.2
	baz=328						
OXF	Oxford	89.61	41	P	P	04 54 48.0	-0.2
	baz=324						
OXF	Oxford	89.61	41	*e*P	P	04 54 47.8	-0.4
OXF				*e*pP	pP	04 55 04.3	-2.1
OXF	Oxford	89.61	41	*e*P	P	04 54 47.8	-0.4
OXF				*e**PP	pP	04 55 04.3	-2.1
T50A	Nancy	89.66	36	P	P	04 54 48.2	-0.3
	baz=327,SNR=10						
Y44A	Strider, Charl	89.66	42	P	P	04 54 47.9	-0.6
	baz=324						
U49A	Red Boiling Sp	89.66	37	P	P	04 54 47.9	-0.6
	baz=326,SNR=8.4						
ATD	Arta Tunnel	89.68	285	LR	LR	05 41 14.2	
	comp=Z,105nm,18.0s,baz=206,slow=40						
S51A	Beattyville	89.68	35	P	P	04 54 47.9	-0.6
	baz=328						
S51A	Beattyville	89.68	35	*e*P	P	04 54 48.9	+0.3
	comp=Z,9.9nm,0.9s						
S51A				*e*pP	pP	04 55 05.0	-1.7
X45A	UM Field Stati	89.69	41	P	P	04 54 48.6	0.0
	baz=324						
V48A	Smith Brothers	89.83	38	P	P	04 54 48.3	-1.0
	baz=326,SNR=5.4						
V48A	Smith Brothers	89.83	38	*e*P	P	04 54 49.6	+0.4
V48A				*e*pP	pP	04 55 05.8	-1.6
HRV	Adam Dziewonsk	89.86	25	P	P	04 54 48.4	-0.9
	baz=335						
PLAL	Pickwick Lake	89.86	40	*e*P	P	04 54 49.2	-0.3
PLAL				*e*pP	pP	04 55 05.7	-2.0
S52A	Salyersville	89.86	35	P	P	04 54 48.4	-1.0
	baz=328,SNR=5.6						
N59A	State Game Lan	89.89	28	P	P	04 54 48.5	-1.0
	baz=333,SNR=11						
N59A	State Game Lan	89.89	28	*e*P	P	04 54 50.0	+0.5
	comp=Z,25nm,0.9s						
N59A				*e*pP	pP	04 55 06.4	-1.3
WES	Weston	90.05	25	*e*P	P	04 54 51.0	+0.9
	comp=Z,16nm,0.8s						
WES	Weston	90.05	25	*e*P	P	04 54 51.0	+0.9
WES				pmax	pmax		
	comp=Z,16nm,0.8s						
Y45A	Yeager Farm, C	90.06	41	P	P	04 54 49.7	-0.7
	baz=324						
T51A	Gray	90.09	36	P	P	04 54 49.6	-0.9
	baz=328						
Z44A	Pea Ridge, Bel	90.10	42	P	P	04 54 50.2	-0.3
	baz=324						
U50A	Jamestown	90.16	37	P	P	04 54 50.6	-0.2
	baz=327,SNR=8.3						
V49A	McMinnville	90.23	38	P	P	04 54 50.8	-0.3
	baz=326						
W48A	Pulaski	90.27	39	P	P	04 54 50.5	-0.8
	baz=326,SNR=10						
TBI	Tubuai	90.30	122	*e*T	T	06 33 59.0	
	comp=Z,38nm,0.3s						
X47A	Russelville	90.35	40	P	P	04 54 51.3	-0.4
	baz=325						
Y46A	Houston	90.39	41	P	P	04 54 51.1	-0.7
	baz=325						
T52A	Hallie	90.39	35	P	P	04 54 50.7	-1.2
	baz=328						
PAL	Palisades	90.45	27	P	P	04 54 51.1	-0.9
	baz=334						
MVL	Millersville	90.50	29	*e*P	P	04 54 53.0	+0.7
	comp=Z,12nm,0.9s						
U51A	La Follette	90.56	36	P	P	04 54 52.3	-0.4
	baz=328						
W49A	Belvidere	90.60	38	P	P	04 54 52.4	-0.5
	baz=326						
TZTN	Tazewell	90.62	36	P	P	04 54 52.1	-0.9
	baz=328						
TZTN	Tazewell	90.62	36	*e*P	P	04 54 53.5	+0.6
TZTN				*e*pP	pP	04 55 09.6	-1.6
V50A	Pikevile	90.67	37	P	P	04 54 52.8	-0.4
	baz=327						
SWET	Sewanee	90.67	38	*e*P	P	04 54 53.3	0.0
	comp=Z,8.8nm,0.8s						
X48A	Hartselle	90.78	39	P	P	04 54 53.1	-0.6
	baz=326						
U52A	Thorn Hill	90.83	36	P	P	04 54 53.6	-0.4
	baz=328,SNR=6.2						
Y47A	UCPARC, Winfie	90.85	40	P	P	04 54 53.3	-0.8
	baz=325						
V51A	Loudon	90.89	37	P	P	04 54 53.1	-1.1
	baz=327						
V51A	Loudon	90.89	37	*e*P	P	04 54 54.7	+0.5
	comp=Z,14nm,1.1s						
244A	Avery, Jackson	90.96	43	P	P	04 54 53.9	-0.7
	baz=324						
W50A	Signal Mountai	90.96	38	P	P	04 54 54.3	-0.3
	baz=327						
W50A	Signal Mountai	90.96	38	*e*P	P	04 54 54.9	+0.3
	comp=Z,8.2nm,0.9s						
X49A	Woodville	91.07	39	P	P	04 54 54.7	-0.4
	baz=326						
CPCT	Cooper Cave	91.11	37	*e*P	P	04 54 55.8	+0.5
CPCT				*e*pP	pP	04 55 12.2	-1.3
Y48A	Jasper	91.17	40	P	P	04 54 54.6	-0.9
	baz=326						
U53A	Fall Branch	91.19	35	P	P	04 54 54.9	-0.7
	baz=328						
V52A	Sevierville	91.19	36	P	P	04 54 54.5	-1.1
	baz=328						
V52A	Sevierville	91.19	36	*e*P	P	04 54 55.9	+0.3
	comp=Z,25nm,1.6s						
TKL	Tuckaleechee C	91.27	36	P	P	04 54 56.0	+0.1
	comp=Z,8.5nm,0.9s,baz=214,slow=1.8,SNR=10						
TKL				LR	LR	05 39 28.2	
	comp=Z,59nm,19.2s,baz=4.5,slow=38						

TKL	Tuckaleechee C	91.27	36	*e*P	P	04 54 56.4	+0.4
	comp=Z,14nm,1.0s						
146A	Union	91.30	42	P	P	04 54 55.1	-1.1
	baz=325						
BLA	Blacksburg	91.36	33	P	P	04 54 55.2	-1.2
	baz=330						
245A	Little AP, Sta	91.37	43	P	P	04 54 56.1	-0.4
	baz=324						
KEST	Kesra	91.41	324	P	P	04 54 55.8	-1.0
	comp=Z,3.7nm,0.8s,baz=320,slow=7.9,SNR=4.2						
KEST				LR	LR	05 40 24.5	
	comp=Z,256nm,21.0s,baz=304,slow=38						
X50B	Fort Payne	91.42	38	P	P	04 54 55.4	-1.3
	baz=326						
Y49A	Blount Mountai	91.57	39	P	P	04 54 56.3	-1.1
	baz=326						
V53A	Saluda	91.68	36	P	P	04 54 56.8	-1.1
	baz=328						
PBRG	Braganca	91.78	338	*e*P	P	04 54 57.7	-0.6
Y50A	Piedmont	91.86	39	P	P	04 54 57.2	-1.6
	baz=326						
W53A	Cullowhee	91.95	36	P	P	04 54 57.5	-1.8
	baz=328						
PGAV	Gavieira, Arco	92.05	339	*e*P	P	04 54 59.3	-0.3
	comp=Z,33nm,1.6s						
PGAV	Gavieira, Arco	92.05	339	*e*LR	LR	05 30 47.8	
	comp=Z,80nm,20.0s						
X52A	Dahlonega	92.10	37	P	P	04 54 58.6	-1.3
	baz=328						
Y51A	Rockmart	92.16	38	P	P	04 54 59.2	-0.9
	baz=327						
PCAB	Cabril	92.22	339	*e*P	P	04 54 59.7	-0.6
	comp=Z,21nm,1.3s						
Z50A	Ashland	92.30	39	P	P	04 54 59.9	-0.9
	baz=326,SNR=7.2						
Z50A	Ashland	92.30	39	*e*P	P	04 55 01.1	+0.3
	comp=Z,10.0nm,0.7s						
149A	Jones	92.43	40	P	P	04 55 00.5	-0.8
	baz=326						
X53A	Estanollee	92.45	37	P	P	04 54 59.8	-1.6
	baz=328						
MVO	Moncorvo	92.46	338	*e*P	P	04 55 00.9	-0.5
	comp=Z,18nm,0.6s						
MVO	Moncorvo	92.46	338	*e*LR	LR	05 29 26.1	
	comp=Z,109nm,20.0s						
POLO	Lamas de Olo	92.47	338	*e*P	P	04 55 01.1	-0.5
	comp=Z,16nm,1.2s						
PVRL	Vila Real	92.54	338	*e*P	P	04 55 01.3	-0.5
	comp=Z,17nm,1.3s						
150A	Eclectic	92.79	40	P	P	04 55 01.9	-1.1
	baz=326						
ES19	SONSECA Array	92.88	335	*e*P	P	04 55 03.0	-0.4
ESDC	Sonseca Array	92.92	335	P	P	04 55 03.1	-0.5
	comp=Z,4.4nm,0.8s,baz=15,slow=4.0,SNR=29						
ESDC				LR	LR	05 40 56.0	
	comp=Z,87nm,19.9s,baz=110,slow=38						
PAB	San Pablo	93.16	335	*e*P	P	04 55 03.9	-0.8
	comp=Z,9.5nm,1.1s						
PAB	San Pablo	93.16	335	*e*P	P	04 55 03.9	-0.8
PAB				pmax	pmax		
	comp=Z,9.0nm,1.1s						
Y54A	Tignall	93.26	37	P	P	04 55 04.0	-1.2
	baz=328						
MTE	Manteigas	93.31	338	*e*P	P	04 55 05.0	-0.4
	comp=Z,25nm,1.7s						
MTE	Manteigas	93.31	338	*e*LR	LR	05 27 04.3	
	comp=Z,96nm,20.0s						
MTE	Manteigas	93.31	338	*e*P	P	04 55 04.4	-1.0
	comp=Z,9.4nm,0.7s						
PMRV	Marv??o	94.17	337	*e*LR	LR	05 36 29.6	
	comp=Z,74nm,22.0s						
PESTR	Estremoz	94.75	337	*e*P	P	04 55 11.3	-0.7
	comp=Z,15nm,1.4s						
PCVE	Castro Verde	96.03	337	*e*P	P	04 55 17.3	-0.5
	comp=Z,30nm,1.6s						
PVAQ	Vaqueiros	96.15	337	*e*LR	LR	05 36 56.9	
	comp=Z,141nm,20.0s						
MDT	Midelt	99.40	333	LR	LR	05 44 38.4	
	comp=Z,63nm,20.2s,baz=27,slow=38						
TORD	Torodi Ar. Bea	114.24	318	PKP	PKPdf	05 00 27.8	-2.4
	comp=Z,2.7nm,0.5s,baz=34,slow=1.4						
KOWA	Kowa	115.71	324	*e*PKPdf	PKPdf	05 00 32.7	-0.3
LSZ	Lusaka	118.42	275	*e*PKPdf	PKPdf	05 00 38.0	-0.2
LSZ	Lusaka	118.42	275	*e*PKIKP	PKPdf	05 00 38.1	-0.2
VNDA	Vanda	120.28	175	PKP	PKPdf	05 00 39.4	-0.5
	comp=Z,1.5nm,0.8s,baz=306,slow=2.9,SNR=7.8						
SDV	Santo Domingo	120.36	39	*e*PKPdf	PKPdf	05 00 42.0	-0.3
DBIC	Dimbokro	123.01	321	PKP	PKPdf	05 00 46.7	-0.4
	comp=Z,13nm,0.7s,baz=19,slow=1.5,SNR=19						
TIC	Toumodi	123.11	321	*e*PKIKP	PKPdf	05 00 46.5	-0.8
KIC	Kosan Boka	123.23	321	*e*PKIKP	PKPdf	05 00 46.8	-0.7
	comp=Z,26nm,0.7s						
LIC	Lamto	123.48	321	*e*PKIKP	PKPdf	05 00 47.2	-0.8
	comp=Z,47nm,0.8s						
MAW	Mawson	124.95	207	PKP	PKPdf	05 00 49.8	+0.8
	comp=Z,6.8nm,0.8s,baz=323,slow=2.4,SNR=13						
MAW	Mawson	124.95	207	*e*PKPdf	PKPdf	05 00 50.2	+1.2
TSUM	Tsumeb	128.70	279	PKP	PKPdf	05 00 58.5	+0.6
	comp=Z,4.7nm,0.8s,baz=334,slow=7.4,SNR=8.1						
QSPA	South Pole Qui	132.21	180	PKP	PKPdf	05 01 03.4	+0.4
	comp=Z,5.1nm,0.8s,baz=326,slow=1.5,SNR=12						
QSPA	South Pole Qui	132.21	180	*e*PKPdf	PKPdf	05 01 04.0	+1.0
SAML	Samuel	139.45	42	*e*PKPdf	PKPdf	05 01 18.4	+0.4
SAML	Samuel	139.45	42	*e*PKIKP	PKPdf	05 01 18.4	+0.4
LPAZ	La Paz	142.72	55	PKhKP	PKPpre	05 01 20.4	
	comp=Z,2.4nm,0.7s,baz=358,slow=3.9,SNR=9.2						
PB11	IPOC Station P	144.36	61	*e*PKPdf	PKPdf	05 01 26.1	-0.7
PB01	IPOC Station P	145.39	62	*e*PKPdf	PKPab	05 01 29.6	+0.9
PB04	IPOC Station P	145.86	64	*e*PKPdf	PKPdf	05 01 29.4	+0.1
SNAA	Sanae	146.29	199	PKPbc	PKPbc	05 01 29.8	0.0
	comp=Z,13nm,0.7s,baz=146,slow=2.2,SNR=42						
SNAA	Sanae	146.29	199	*e*PKPdf	PKPdf	05 01 28.9	+0.4
SNAA	Sanae	146.29	199	*e*PKP2	PKPdf	05 01 28.9	+0.4
GO02	Mina Guanaco	148.13	68	*e*PKPbc	PKPbc	05 01 37.1	+0.6
LCO	Las Campanas	149.73	75	*e*PKPbc	PKPbc	05 01 41.2	+0.8
LCO	Las Campanas	149.73	75	*e*PKP2	PKPbc	05 01 41.2	+0.8
GO04	Tololo Observa	150.32	77	*e*PKPbc	PKPbc	05 01 42.6	+0.8
ROC1	El Roble	151.62	82	*e*PKPbc	PKPbc	05 01 45.3	+0.5
ROC1				*e*PKPab	PKPab	05 01 51.8	-1.8
BDFB	Brasilia	151.63	23	*e*PKPbc	PKPbc	05 01 45.0	-0.1
BDFB	Brasilia	151.63	23	*e*PKIKP	PKPbc	05 01 45.0	-0.1
PEL	Peldehue	151.95	82	*e*PKPbc	PKPbc	05 01 45.4	+0.2
PEL	Peldehue	151.95	82	*e*PKIKP	PKPbc	05 01 45.4	+0.2
PLCA	Paso Flores	154.93	97	PKPbc	PKPbc	05 01 52.7	+1.2
	comp=Z,2.3nm,0.7s,baz=273,slow=3.5,SNR=6.7						
PLCA				PKPab	sPKPdf	05 02 08.4	-0.2
	comp=Z,2.8nm,0.7s,baz=257,slow=4.1,SNR=7.2						
CPUP	Villa Florida	156.83	52	PKPab	PKPab	05 02 15.3	-0.2
	comp=Z,2.0nm,0.8s,baz=292,slow=3.8,SNR=4.3						

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*JMA **22** 04:43:26.1±0.1, 22°.58N×121°.66E, h32^{km}, M3.6*
*TAP **22** 04:43:26.4, 22°.55N×121°.65E, h20^{km}, ML3.6, C*
ISC 22 04:43:24.5±1.1**, 22°.56N**±0°.02×**121°.73E**±0°.02**, h13**^{km}±9^{km},
n111, σ**0^{s}96**/205**, 1C-1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TWH	Lutao	0.27	302	⇑*i*P	Pb	04 43 31.7	+0.4
	baz=310						
TWH				*i* S	Sb	04 43 35.4	-0.5
	baz=310						
LAY	Lan-yu	0.55	197	*i* P	Pb	04 43 35.8	-0.2
	baz=181						
LAY				S	Sb	04 43 43.7	-0.1
	baz=181						
TTN	Taitung	0.57	290	P	Pb	04 43 36.9	+0.5
	baz=305						
TTN				S	Sb	04 43 44.6	+0.2
	baz=305						
CHKT	Chengkung	0.63	328	⇓*i*P	Pb	04 43 37.7	+0.3
	baz=345						
CHKT				*i* S	Sb	04 43 45.9	-0.3
	baz=345						
TWG	Pinlang	0.66	293	*i* P	Pg	04 43 37.5	+0.2
	baz=307						
TWG				S	Sb	04 43 46.5	-0.5
	baz=307						
ECL	Taimali	0.72	273	*e*P	Pb	04 43 39.0	+0.2
	baz=291						
ECL				S	Sg	04 43 47.6	-0.2
	baz=291						
FULB	Fuli	0.75	328	P	Pb	04 43 39.4	-0.1
	baz=334						
FULB				*i* S	Sb	04 43 49.6	0.0
	baz=334						
TAW	Tawu	0.80	255	P	Pb	04 43 39.9	-0.3
	baz=265						
TAW				S	Sg	04 43 49.1	-1.3
	baz=265						
TWF1	Yuli	0.88	333	*i* P	Pg	04 43 41.9	+0.3
	baz=339						
TWF1				S	Sn	04 43 54.2	-1.2
	baz=339						
ELDTW	Lidau	0.91	314	*i* P	Pb	04 43 41.6	-0.5
	baz=329						
ELDTW				*i* S	Sb	04 43 52.8	-1.4
	baz=329						
YULB	Yu-li	0.92	334	P	Pg	04 43 42.5	+0.3
	baz=349						
YULB				S	Sg	04 43 54.4	+0.1
	baz=349						
HGSD	Ruisui	0.97	343	P	Pb	04 43 43.0	-0.1
	baz=348						
HGSD				*e*S	Sg	04 43 55.9	0.0
	baz=348						
EHY	Hungye	1.01	338	P	Pg	04 43 44.2	+0.1
	baz=327						
EHY				S	Sg	04 43 57.4	+0.1
	baz=327						
TSEB	Hengchuen, Pin	1.01	229	*e*P	Pb	04 43 43.6	-0.3
	baz=229						
TSEB				*e*S	Sb	04 43 57.1	0.0
	baz=229						
MASBT	Mashibuluo	1.01	273	P	Pb	04 43 43.3	-0.7
	baz=281						
MASBT				*e*S	Sg	04 43 57.2	-0.1
	baz=281						
SSD	Sandimen	1.03	280	P	Pb	04 43 43.4	-0.8
	baz=282						
SCZT	Fangliau	1.04	260	P	Pb	04 43 43.9	-0.6
	baz=260						
SCZT				*e*S	Sb	04 43 56.5	-1.5
	baz=260						
TWKBT	Hengchun	1.05	234	*e*P	Pb	04 43 43.4	-1.2
	baz=233						
TWKBT				S	Sb	04 43 56.3	-1.9
	baz=233						
TWK1	Hengchun	1.05	234	*e*P	Pb	04 43 43.1	-1.5
	baz=232						
TWK1				*e*S	Sb	04 43 57.9	-0.5
	baz=232						
HEN	Hengchun	1.07	239	*e*P	Pb	04 43 43.5	-1.4
	baz=226						
HEN				*e*S	Sb	04 43 57.5	-1.4
	baz=226						
STYT	Tauyuan	1.08	304	*i* P	Pb	04 43 44.7	-0.4
	baz=308						
STYT				S	Sb	04 43 57.9	-1.2
	baz=308						
SLGT	Liugui	1.09	293	*e*P	Pb	04 43 44.9	-0.3
	baz=302						
SLGT				*e*S	Sb	04 43 59.1	-0.2
	baz=302						
EGFH	Guangfu	1.14	346	P	Pg	04 43 46.6	+0.2
	baz=332						
EGFH				S	Sn	04 44 01.1	-0.6
	baz=332						
SGLT	Jiouru	1.15	278	*e*S	Sn	04 44 01.4	-0.6
	baz=280						
YUS	Yu-Shan	1.17	322	P	Pb	04 43 46.5	-0.3
	baz=337						
SGST	Jiashian	1.18	296	P	Pg	04 43 47.4	+0.2
	baz=302						
SGST				*e*S	Sg	04 44 02.8	+0.2
	baz=302						
WTP	Ta-pu	1.23	304	*i* P	Pg	04 43 48.1	-0.1
	baz=307						
WTP				S	Sg	04 44 04.3	0.0
	baz=307						
TWM1	Shoushan	1.23	282	P	Pg	04 43 48.9	+0.6
	baz=290						
TWM1				*e*S	Sg	04 44 04.9	+0.6
	baz=290						
TPUB	Ta-pu	1.25	306	*i* P	Pg	04 43 48.3	-0.3
	baz=310						
TPUB				S	Sg	04 44 05.1	+0.2
	baz=310						
CHN1	Nanshi	1.27	299	*i* P	Pg	04 43 49.0	+0.1
	baz=309						
CHN1				S	Sg	04 44 05.2	-0.2
	baz=309						
ALS	Alishan	1.27	318	*i* P	Pb	04 43 48.7	+0.2
	baz=328						
ALS				S	Sn	04 44 04.7	-0.7
	baz=328						
ESL	Shilin	1.27	348	P	Pb	04 43 48.1	-0.3
	baz=337						
ESL				S	Sb	04 44 03.6	-1.1
	baz=337						
TWP	Hsiaoliuchiu	1.28	261	*e*P	Pb	04 43 48.7	+0.2
	baz=262						
TWP				*e*S	Sg	04 44 06.7	+0.8
	baz=262						
ENLB	Shoufeng	1.34	355	P	Pn	04 43 48.7	-0.3
	baz=358						
ENLB				*i* S	Sn	04 44 06.1	-0.6
	baz=358						
TWK	Hsinying	1.34	302	*i* P	Pg	04 43 50.0	-0.3
	baz=316						
TWK				S	Sg	04 44 08.5	+0.7
	baz=316						
CHN3	Shinhua	1.36	292	P	Pg	04 43 52.3	+1.7
	baz=296						
CHN3				*e*S	Sg	04 44 10.6	+2.3
	baz=296						
CHN5	Tsauling	1.41	317	*i* P	Pg	04 43 51.5	-0.2
	baz=320						
CHN5				S	Sg	04 44 09.5	-0.5
	baz=320						
HWA	Hwalien	1.41	355	*e*P	Pn	04 43 49.7	-0.3
	baz=11						
HWA				*e*S	Sn	04 44 08.2	-0.3
	baz=11						
SSLB	Suanglung	1.41	330	P	Pb	04 43 50.7	-0.1
	baz=343						
SSLB				*e*S	Sn	04 44 08.1	-0.4
	baz=343						
TAI1	Yung-k'ang	1.46	289	*e*S	Sb	04 44 10.7	+0.5
	baz=293						
CHN2	Minshiung	1.50	310	*e*P	Pg	04 43 53.2	-0.2
	baz=314						
CHN2				S	Sg	04 44 13.4	+0.4
	baz=314						
TWD	Chiawan	1.52	355	*e*P	Pn	04 43 51.4	0.0
	baz=8.0						
TWD				S	Sn	04 44 10.3	-0.7
	baz=8.0						
SMLT	Sun Moon Lake	1.52	330	*i* P	Pg	04 43 53.2	-0.5
	baz=341						
SMLT				S	Sb	04 44 12.0	+0.1
	baz=341						
CHY	Chiayi	1.52	308	P	Pg	04 43 53.6	-0.1
	baz=312						
CHY				S	Sg	04 44 13.7	+0.2
	baz=312						
SCLT	Jiali	1.54	294	*e*P	Pb	04 43 53.1	+0.2
	baz=297						
SCLT				S	Sg	04 44 13.5	-0.7
	baz=297						
WGK	Gukeng	1.55	316	*e*P	Pg	04 43 54.3	0.0
	baz=320						
WGK				S	Sg	04 44 14.9	+0.4
	baz=320						
WJS	Zhushan	1.56	324	*e*P	Pg	04 43 54.3	-0.1
	baz=340						
WJS				S	Sg	04 44 15.3	+0.7
	baz=340						
TYC	Yuchr	1.56	329	*i* P	Pg	04 43 54.1	-0.3
	baz=345						
TYC				*e*S	Sb	04 44 13.3	+0.4
	baz=345						
WDLH	Douliu	1.57	316	*e*S	Sg	04 44 15.8	+0.7
	baz=319						
CHGB	Renai	1.57	341	P	Pb	04 43 53.3	-0.3
	baz=354						
CHGB				S	Sn	04 44 12.3	-0.5
	baz=354						
CHN8	Yiju	1.60	299	*e*P	Pb	04 43 54.0	+0.1
	baz=303						
CHN8				*e*S	Sb	04 44 14.9	+0.7
	baz=303						
NACB	Ninganchiao	1.61	356	P	Pn	04 43 52.7	0.0
	baz=7.0						
NACB				*i* S	Sn	04 44 12.8	-0.6
	baz=7.0						
WNT	Mingjian	1.62	324	*e*P	Pg	04 43 55.3	-0.4
	baz=327						
WNT				S	Sg	04 44 16.2	-0.6
	baz=327						
WHF	Hehuan Shan	1.63	345	P	Pn	04 43 53.8	+0.4
	baz=348						
WHF				S	Sn	04 44 13.7	-0.8
	baz=348						
WSF	Szhu	1.75	308	*e*P	Pb	04 43 55.6	-0.9
	baz=310						
TWT	Tachien	1.76	343	*e*P	Pb	04 43 56.6	-0.1
	baz=355						
TWT				S	Sn	04 44 16.9	-0.3
	baz=355						
TDCB	Techi	1.76	343	P	Pb	04 43 56.5	-0.3
	baz=355						
TDCB				*e*S	Sn	04 44 17.2	-0.1
	baz=355						
RLNB	Erlin	1.83	317	*e*S	Sb	04 44 21.6	+1.0
	baz=320						
TCU	Taichung	1.85	329	*e*P	Pb	04 43 58.9	+0.7
	baz=331						
TCU				S	Sb	04 44 22.2	+0.9
	baz=331						
WCHH	Zhanghua	1.85	325	*e*P	Pb	04 43 58.5	+0.2
	baz=340						
WCHH				*e*S	Sg	04 44 22.8	-1.4
	baz=340						
NANB	Nanao	1.86	1	P	Pn	04 43 56.9	+0.9
	baz=14						
NANB				S	Sn	04 44 19.9	+0.5
	baz=14						
ENA	Nanau	1.86	0	*e*P	Pn	04 43 56.3	+0.2
	baz=14						
ENA				S	Sn	04 44 19.4	-0.1
	baz=14						
NNSB	Datong	1.88	350	*i* P	Pb	04 43 57.7	-1.1
	baz=3.0						
NNSB				S	Sn	04 44 19.6	-0.7
	baz=3.0						
NNSH	Datong	1.88	350	P	Pb	04 43 57.6	-1.3
	baz=3.0						
NNSH				*e*S	Sn	04 44 19.9	-0.4
	baz=3.0						
NNS	Nan Shan	1.90	350	*e*P	Pb	04 43 59.0	-0.1
	baz=3.0						
NNS				S	Sn	04 44 20.7	+0.1
	baz=3.0						
EOS1	EOS1	2.01	10	P	Pb	04 43 59.6	-1.4
	baz=12						
EOS1				S	Sn	04 44 24.0	+0.8
	baz=12						
WDGT	Dungji	2.03	290	P	Pn	04 43 59.0	+0.6
	baz=294						
WDGT				*e*S	Sn	04 44 23.2	-0.5
	baz=294						
TWC	Suao	2.04	3	*e*P	Pb	04 44 00.7	-0.7
	baz=15						
TWC				S	Sn	04 44 24.6	+0.6
	baz=15						
ENTT	Nioudou	2.07	356	*e*P	Pn	04 43 59.6	+0.6
	baz=358						
ENTT				*e*S	Sb	04 44 26.1	-1.7
	baz=358						
PTSB	Yuanli	2.10	334	*e*P	Pb	04 44 02.1	-0.3
	baz=336						
PTSB				S	Sb	04 44 29.5	+1.0
	baz=336						
YHNB	Yeheng	2.12	351	P	Pb	04 44 01.7	-1.2
	baz=3.0						
YHNB				S	Sn	04 44 27.1	+1.0
	baz=3.0						
NSK	Sanguang	2.13	351	*e*P	Pb	04 44 02.0	-1.1
	baz=2.0						
NSK				S	Sn	04 44 27.2	+0.9
	baz=2.0						
NMLH	Miaoli	2.15	337	*e*P	Pb	04 44 02.8	-0.5
	baz=338						
NMLH				S	Sb	04 44 30.5	+0.7
	baz=338						
TWE	Neicheng	2.15	359	*e*P	Pb	04 44 02.4	-0.9
	baz=10.0						
TWE				*e*S	Sn	04 44 27.6	+0.9
	baz=10.0						
NSTT	Nanjuang	2.16	342	*e*P	Pb	04 44 03.5	-0.1
	baz=344						
NSTT				S	Sb	04 44 29.9	-0.4
	baz=344						
LIOB	Emei	2.17	343	*e*P	Pb	04 44 02.8	-0.9
	baz=357						
LIOB				S	Sb	04 44 30.3	-0.4
	baz=357						
SLBB	Yuanshan	2.18	358	*e*P	Pn	04 44 00.8	+0.2
	baz=11						
SLBB				*e*S	Sn	04 44 28.0	+0.4
	baz=11						
JYNG	Yonagunijimaku	2.19	30	P	Pb	04 44 02.4	-1.6
JYNG				*e*S	Sn	04 44 27.2	-0.4
PHUB	P'eng-hu	2.20	296	*e*P	Pn	04 44 00.8	+0.1
	baz=299						
PHUB				S	Sn	04 44 27.4	-0.5
	baz=299						
NWLT	Wulai	2.21	355	*e*P	Pb	04 44 02.7	-1.8
	baz=356						
NWLT				S	Sn	04 44 28.7	+0.3
	baz=356						
VCHM	Qimei	2.21	287	P	Pn	04 44 00.9	-0.1
	baz=290						
VCHM				S	Sn	04 44 27.4	-0.9
	baz=290						
YOJ	Yonaguni jima	2.23	32	P	Pn	04 44 02.8	+1.7
	baz=32						
YOJ				S	Sn	04 44 29.5	+0.9
	baz=32						
YOJ	Yonaguni jima	2.23	32	P	Pn	04 44 02.6	+1.4
YOJ				*e*S	Sn	04 44 29.1	+0.5
PNG	Penghu	2.24	297	*e*P	Pn	04 44 02.0	+0.7
	baz=300						
PNG				*e*S	Sn	04 44 28.2	-0.6
	baz=300						
EGS		2.28	5	*e*P	Pn	04 44 03.4	+1.5
	baz=17						
EGS				*e*S	Sn	04 44 31.0	+1.2
	baz=17						
NTC	Toucheng	2.28	2	*e*P	Pb	04 44 05.4	-0.2
	baz=14						
NTC				*e*S	Sb	04 44 32.1	-1.6
	baz=14						
WLTB	Daxi	2.32	349	*e*S	Sb	04 44 32.5	-2.4
	baz=359						
TIPB	Shuangxi	2.40	2	P	Pb	04 44 06.3	-1.3
	baz=13						
TIPB				S	Sn	04 44 33.7	+0.8
	baz=13						
TWA	Mucha	2.41	357	*e*S	Sn	04 44 34.8	+1.6
	baz=358						
TATO	Taipei	2.41	355	*e*S	Sn	04 44 34.5	+1.4
	baz=7.0						
HATJ	Hateruma jima	2.42	52	P	Pn	04 44 05.4	+1.6
HATJ				*e*S	Sn	04 44 33.2	-0.1
TWB1	Santiao Chiao	2.45	6	*e*S	Sn	04 44 35.4	+1.4
	baz=17						
TAP	Taipei	2.47	355	*e*P	Pn	04 44 05.8	+1.2
	baz=356						
NWF	Wu-fen Shan	2.50	1	*e*P	Pb	04 44 08.0	-1.3
	baz=351						
NWF				S	Sb	04 44 37.4	-2.6
	baz=351						
WFSB	Wu-fen Shan	2.50	1	*e*P	Pb	04 44 07.5	-1.8
	baz=352						
WFSB				S	Sn	04 44 36.5	+1.2
	baz=352						
TWS1	Kuangyinshan	2.54	354	*e*S	Sb	04 44 39.2	-2.1
	baz=5.0						
IRIF	Iriomote-Funau	2.55	46	P	Pn	04 44 07.3	+1.7
IRIF				S	Sn	04 44 37.7	+1.2
YM04	YM04	2.58	356	*e*P	Pn	04 44 07.5	+1.3
	baz=9.0						
YM04				*e*S	Sn	04 44 38.8	+1.3
	baz=9.0						
YM10	YM10	2.59	357	*e*S	Sb	04 44 40.5	-2.1
	baz=357						
YM11	YM11	2.59	357	*e*S	Sn	04 44 39.8	+2.0
	baz=357						
YM07	YM07	2.60	358	*e*P	Pn	04 44 07.5	+1.1
	baz=358						
YM07				*e*S	Sb	04 44 40.2	-2.8
	baz=358						

YM03	**YM03**	**2.61**	**356**	*e*S	**Sn**	**04 44 39.9**	**+1.7**
	baz=357						
YM08	**YM08**	**2.62**	**357**	*e*P	**Pb**	**04 44 10.0**	**-1.3**
	baz=358						
YM08				*e*S	**Sn**	**04 44 40.3**	**+2.1**
	baz=358						
JKRS	**Kuro-shima**	**2.68**	**51**	P	**Pn**	**04 44 09.3**	**+1.9**
JKRS				*e*S	**Sn**	**04 44 40.5**	**+0.8**
JIJ	**Ishigaki jima**	**2.85**	**51**	P	**Pn**	**04 44 11.1**	**+1.3**
JIJ				S	**Sn**	**04 44 43.7**	**-0.3**
JISG	**Ishigakijimahi**	**3.11**	**49**	P	**Pn**	**04 44 14.4**	**+1.1**
JISG				*e*S	**Sn**	**04 44 49.7**	**-0.7**
VWUC	**VWUC**	**3.19**	**320**	P	**Pn**	**04 44 15.1**	**+0.7**
	baz=310						
VWUC				S	**Sn**	**04 44 50.8**	**-1.6**
	baz=310						
JTJ	**Tarama**	**3.42**	**52**	P	**Pn**	**04 44 19.3**	**+1.7**
JTJ				*e*S	**Sn**	**04 44 57.9**	**-0.2**
KNM	**Kinmen**	**3.54**	**302**	*e*P	**Pn**	**04 44 21.2**	**+1.9**
	baz=302						
JIRB	**Irabujima**	**3.88**	**54**	P	**Pn**	**04 44 25.5**	**+1.6**
JIRB				S	**Sn**	**04 45 09.8**	**+0.4**
JIKM	**Ikemajima**	**3.99**	**53**	P	**Pn**	**04 44 27.0**	**+1.6**
JIKM				*e*S	**Sn**	**04 45 12.7**	**+0.6**

ISCJB ***22*** *04:52:11.6±1.1, 36°.41N±0°.03×43°.30E±0°.06, h12^{km}±8^{km}, Error ellipse: s-maj=7.7km s-min=5.0km az=4.4*

DDA ***22*** *04:52:12.1, 36°.50N×43°.16E, h7^{km}, Ml3.3*

ISN ***22*** *04:52:12.9±1.2, 36°.43N×43°.45E, h33^{km}±11^{km}, ML3.4*

CSEM ***22*** *04:52:13.4±0.3, 36°.48N×43°.46E, h30^{km}, ML3.4, Error ellipse: s-maj=8.3km s-min=5.0km az=74.0*

ISK ***22*** *04:52:13.5, 36°.55N×43°.32E, h26^{km}, ML3.4/4*

ISC 22 04:52:11.6±1.5**, 36°.45N**±0°.04×**43°.19E**±0°.04**, h8**^{km}±12^{km}**, n30, σ1^{s}36**/47**, Iraq**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CUKT	**Cukurca**	**0.87**	**23**	PG	**Pg**	**04 52 28.5**	**+0.2**
CUKT				SG	**Sg**	**04 52 39.4**	**-0.2**
CUKT	**Cukurca**	**0.87**	**23**	*i* P	**Pg**	**04 52 28.2**	**-0.1**
CUKT				*i* S	**Sg**	**04 52 39.9**	**+0.2**
CUKT	**Cukurca**	**0.87**	**23**	P	**Pg**	**04 52 28.2**	**-0.1**
CUKT	**Cukurca**	**0.87**	**23**	*e*Pg	**Pg**	**04 52 28.5**	**+0.2**
CUKT				*e*Sg	**Sg**	**04 52 39.4**	**-0.2**
HAKT	**HAKKARI**	**1.18**	**20**	*i* P	**Pb**	**04 52 33.8**	**-0.7**
HAKT				*i* S	**Sb**	**04 52 49.5**	**-0.6**
HAKT	**HAKKARI**	**1.18**	**20**	P	**Pb**	**04 52 33.8**	**-0.7**
SIRT	**Sirnak**	**1.21**	**331**	PN	**Pn**	**04 52 34.6**	**-0.4**
SIRT				SN	**Sb**	**04 52 50.5**	**-0.3**
SIRT	**Sirnak**	**1.21**	**331**	*e*Pn	**Pn**	**04 52 34.6**	**-0.4**
SIRT				*e*Sn	**Sb**	**04 52 50.5**	**-0.3**
SIRN	**S˜–rnak**	**1.22**	**330**	*i* P	**Pn**	**04 52 34.3**	**-0.8**
SIRN				*i* S	**Sb**	**04 52 51.0**	**+0.1**
SIRN	**S˜–rnak**	**1.22**	**330**	P	**Pn**	**04 52 34.3**	**-0.8**
SIRN				S	**Sb**	**04 52 51.0**	**+0.1**
YOVA	**Hakkari_Yˆ…kse**	**1.44**	**37**	*i* P	**Pb**	**04 52 39.0**	**+0.2**
YOVA				*i* S	**Sg**	**04 52 59.3**	**+1.4**
YOVA	**Hakkari_Yˆ…kse**	**1.44**	**37**	P	**Pb**	**04 52 39.0**	**+0.2**
SRTM	**Siirt_Merkez**	**1.84**	**327**	*i* P	**Pb**	**04 52 45.4**	**-0.3**
SRTM				*i* S	**Sb**	**04 53 10.2**	**+1.2**
SRTM	**Siirt_Merkez**	**1.84**	**327**	P	**Pb**	**04 52 45.4**	**-0.3**
SRTM				S	**Sb**	**04 53 10.2**	**+1.2**
MARD	**Mardin**	**2.12**	**295**	*i* P	**Pb**	**04 52 49.3**	**-1.1**
MARD				*i* S	**Sb**	**04 53 16.9**	**+0.1**
SVAN	**Silvan-Diyarba**	**2.33**	**318**	PN	**Pn**	**04 52 51.6**	**+1.3**
SVAN				SN	**Sn**	**04 53 18.7**	**-0.4**
SVAN	**Silvan-Diyarba**	**2.33**	**318**	*e*Pn	**Pn**	**04 52 51.6**	**+1.3**
SVAN				*e*Sn	**Sn**	**04 53 18.7**	**-0.4**
MAZI	**Mazidag**	**2.42**	**296**	PN	**Pb**	**04 52 53.6**	**-1.9**
MAZI	**Mazidag**	**2.42**	**296**	*e*Pn	**Pb**	**04 52 53.6**	**-1.9**
DIY	**Diyarbakir**	**2.77**	**302**	*e*Pn	**Pb**	**04 52 59.1**	**-2.4**
DYBB	**Diyarbakir**	**2.86**	**303**	PN	**Pn**	**04 52 59.1**	**+1.4**
HANI	**Diyarbakir_Han**	**2.96**	**312**	*i* P	**Pb**	**04 53 06.5**	**+1.7**
HANI				*i* S	**Sg**	**04 53 44.5**	**-2.3**
BNGB	**Bingˆ¶l**	**3.23**	**323**	PN	**Pn**	**04 53 03.8**	**+1.1**
BINT	**Bingol**	**3.23**	**319**	*e*Pn	**Pn**	**04 53 03.8**	**+0.9**
BHD	**Baghdad**	**3.32**	**162**	*e*Pn	**Pn**	**04 53 04.0**	**+0.2**
	SNR=5.0						
BHD				*e*Sn	**Sn**	**04 53 40.0**	**-3.5**
	SNR=5.0						
URFA	**Urfa**	**3.64**	**287**	PN	**Pn**	**04 53 10.9**	**+2.6**
URFA	**Urfa**	**3.64**	**287**	*e*Pn	**Pn**	**04 53 10.9**	**+2.6**
SVRC	**Sivrice-ELAZID**	**3.64**	**303**	PN	**Pn**	**04 53 10.6**	**+2.1**
SVRC	**Sivrice-ELAZID**	**3.64**	**303**	*e*Pn	**Pn**	**04 53 10.6**	**+2.1**
RTB	**Rutbah**	**4.15**	**216**	*e*Pn	**Pn**	**04 53 18.0**	**+2.6**
	SNR=5.0						
RTB				*e*Sn	**Sn**	**04 54 05.0**	**+0.8**
	SNR=5.0						

ISK ***22*** *04:53:11.9, 37°.10N×28°.65E, h14^{km}, ML2.4/7*

CSEM ***22*** *04:53:12.5±0.1, 37°.07N×28°.63E, h20^{km}, ML2.3, Error ellipse: s-maj=2.4km s-min=1.9km az=71.0*

DDA ***22*** *04:53:12.6, 37°.07N×28°.59E, h7^{km}, Ml2.3*

ISCJB ***22*** *04:53:13.0±0.5, 37°.05N±0°.03×28°.61E±0°.04, h21^{km}±7^{km}, Error ellipse: s-maj=6.1km s-min=5.3km az=40.2*

ISC 22 04:53:12.5±0.9**, 37°.07N**±0°.02×**28°.63E**±0°.03**, h17**^{km}±7^{km}**, n27, σ0^{s}29**/41**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DALY	**Dalyan (Mu˜la**	**0.25**	**176**	PG	**Pg**	**04 53 18.0**	**-0.2**
DALY				SG	**Sb**	**04 53 22.8**	**0.0**
DALY	**Dalyan (Mu˜la**	**0.25**	**176**	*i* P	**Pg**	**04 53 17.9**	**-0.2**
DALY				*i* S	**Sb**	**04 53 23.2**	**+0.4**
DALY	**Dalyan (Mu˜la**	**0.25**	**176**	*e*Pg	**Pg**	**04 53 18.0**	**-0.2**
DALY				*e*Sg	**Sb**	**04 53 22.8**	**0.0**
DALY				S	**Sb**	**04 53 23.2**	**+0.4**
YER	**Yerkesik**	**0.28**	**283**	PG	**Pg**	**04 53 18.8**	**0.0**
YER				SG	**Sg**	**04 53 23.3**	**+0.3**
YER	**Yerkesik**	**0.28**	**283**	*e*Pg	**Pg**	**04 53 18.8**	**0.0**
YER				*e*Sg	**Sg**	**04 53 23.3**	**+0.3**
TAVA	**DENIZLI_Tavas**	**0.46**	**30**	*i* P	**Pg**	**04 53 21.7**	**-0.1**
TAVA				*i* S	**Sb**	**04 53 29.2**	**+0.5**
TAVA	**DENIZLI_Tavas**	**0.46**	**30**	P	**Pg**	**04 53 21.7**	**-0.1**
TAVA				S	**Sb**	**04 53 29.2**	**+0.5**
FETY	**Fethiye**	**0.57**	**140**	PG	**Pg**	**04 53 23.5**	**-0.3**
FETY				SG	**Sb**	**04 53 32.5**	**+0.7**
FETY	**Fethiye**	**0.57**	**140**	*e*Pg	**Pg**	**04 53 23.5**	**-0.3**
FETY	**Fethiye**	**0.57**	**140**	P	**Pg**	**04 53 23.8**	**0.0**
FETY				S	**Sb**	**04 53 32.3**	**+0.5**
DNZL	**Cakiroluk**	**0.70**	**28**	*i* P	**Pb**	**04 53 26.4**	**-0.1**
DNZL				*i* S	**Sn**	**04 53 38.4**	**-0.1**
DNZL	**Cakiroluk**	**0.70**	**28**	P	**Pb**	**04 53 26.4**	**-0.1**
MLSB	**Milas**	**0.72**	**288**	PG	**Pg**	**04 53 26.3**	**-0.3**
MLSB	**Milas**	**0.72**	**288**	*e*Pg	**Pg**	**04 53 26.3**	**-0.3**
AYDN	**Tasoluk**	**0.84**	**315**	*i* P	**Pg**	**04 53 28.8**	**-0.1**
AYDN				*i* S	**Sg**	**04 53 39.9**	**-0.2**
AYDN	**Tasoluk**	**0.84**	**315**	P	**Pg**	**04 53 28.8**	**-0.1**
AYDN				S	**Sg**	**04 53 39.8**	**-0.2**
DAT	**Datca**	**0.91**	**248**	PG	**Pg**	**04 53 30.3**	**+0.1**
DAT	**Datca**	**0.91**	**248**	*e*Pg	**Pg**	**04 53 30.3**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**1.05**	**326**	PG	**Pb**	**04 53 32.2**	**-0.2**
AYDB	**Zeytinkoy-Aydi**	**1.05**	**326**	*e*Pg	**Pb**	**04 53 32.2**	**-0.2**
BODT	**Bodrum**	**1.06**	**270**	PG	**Pn**	**04 53 32.8**	**+0.2**
BODT	**Bodrum**	**1.06**	**270**	*e*Pg	**Pn**	**04 53 32.8**	**+0.2**
GCAM	**G?zelcaml?**	**1.28**	**300**	PN	**Pn**	**04 53 35.8**	**+0.2**
GCAM	**G?zelcaml?**	**1.28**	**300**	*e*Pn	**Pn**	**04 53 35.8**	**+0.2**
KULA	**Kula-Manisa**	**1.44**	**1**	PN	**Pn**	**04 53 37.8**	**-0.2**
KULA	**Kula-Manisa**	**1.44**	**1**	*e*Pn	**Pn**	**04 53 37.8**	**-0.2**
KHAL	**Karahalli**	**1.47**	**28**	*i* P	**Pg**	**04 53 41.2**	**+0.4**
KHAL				*i* S	**Sn**	**04 53 56.6**	**-0.7**

IDC ***22*** *05:01:04.3±2.3, 11°.09S×113°.39E, h0^{km}, mb3.6/5, mb1 3.9/5, mb1mx3.6/51, mbtmp3.7/5, MS3.4/2, Ms1 3.4/2, ms1mx2.7/46, Error ellipse: s-maj=96.0km s-min=20.3km az=48.0*

ISCJB ***22*** *05:01:07.1±0.8, 10°.83S±0°.07×113°.68E±0°.06, h23^{km}, mb3.7/5, MS3.4/2, Error ellipse: s-maj=9.7km s-min=8.4km az=178.1*

DJA ***22*** *05:01:09.2±1.2, 11°S±10°×11°4E±°, h15^{km}±16^{km}, M4.3/12, mb4.3/1, MLv4.4/12*

ISC 22 05:01:09.0±1.2**, 10°.76S**±0°.10×**113°.71E**±0°.06**, h23**^{km}**, n18, σ1^{s}08**/18**, mb3.7**/5**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAGI	**Jajag, Banyuwa**	**2.31**	**11**	P	**Pn**	**05 01 45.8**	**0.0**
IGBI	**Denpasar**	**2.39**	**36**	P	**Pb**	**05 01 49.2**	**-2.2**
IGBI				S	**Sn**	**05 02 15.4**	**0.0**
GMJI	**Gumukmas**	**2.48**	**354**	P	**Pn**	**05 01 47.4**	**-0.6**
DNP	**Denpasar**	**2.54**	**36**	P	**Pn**	**05 01 49.5**	**+0.6**
DNP				S	**Sn**	**05 02 20.3**	**+1.2**
BLJI	**Banyuglugur**	**2.99**	**358**	P	**Pn**	**05 01 55.0**	**-0.1**
SRBI	**Singaraja**	**3.04**	**29**	P	**Pn**	**05 01 57.5**	**+1.7**
TWSI	**Taliwang, Sumb**	**3.72**	**58**	P	**Pn**	**05 02 05.9**	**+0.8**
WOJI	**Wonogiri, Jawa**	**4.00**	**316**	P	**Pn**	**05 02 10.0**	**+1.1**
UGM	**Wanagama**	**4.23**	**312**	P	**Pn**	**05 02 11.4**	**-0.7**
PLAI	**Plampang**	**4.45**	**65**	P	**Pn**	**05 02 14.9**	**-0.2**
WBSI	**Waikabubak, Su**	**5.70**	**79**	P	**Pn**	**05 02 32.8**	**+0.4**
WRA	**Warramunga Arr**	**21.87**	**117**	P	**P**	**05 05 59.8**	**-0.6**
	4.9nm,0.6s,baz=290,slow=11,SNR=30						
ASAR	**Alice Springs**	**23.13**	**126**	P	**P**	**05 06 13.1**	**-0.8**
	0.7nm,0.3s,baz=303,slow=9.0,SNR=17						
CMAR	**Chiang Mai Arr**	**32.48**	**333**	P	**P**	**05 07 38.9**	**+0.9**
	0.6nm,0.5s,baz=149,slow=7.2,SNR=4.2						
STKA	**Stephens Creek**	**33.24**	**133**	LR	LR	05 22 23.4	
	comp=Z,105nm,21.5s,baz=15,slow=38						
JHJ	**Hachijo jima 2**	**50.22**	**29**	LR	LR	05 35 27.4	
	comp=Z,22nm,18.2s,baz=276,slow=41						
SONM	**Songino Array**	**58.69**	**354**	P	**P**	**05 11 06.5**	**+1.7**
	0.2nm,0.3s,baz=169,slow=8.1,SNR=2.2						
MKAR	**Makanchi Array**	**63.80**	**336**	P	**P**	**05 11 38.8**	**-0.6**
	0.1nm,0.3s,baz=144,slow=7.0,SNR=3.1						

MAN 22 05:34:13.8, 6°.23N×125°.78E, h109^{km}, mb4.5, ML3.4, MS3.2, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**0.15**	**210**	*e*P	Pn	05 34 33.7	+4.7
DDMP				*e*S	Sn	05 34 46.5	+6.2
MATI	**Mati**	**0.85**	**33**	*e*P	Pn	05 34 34.0	+0.6
MATI				*e*S	Sn	05 34 50.1	+1.9
SKMP	**Bagumbayan, Su**	**1.27**	**283**	*e*P	Pn	05 34 39.0	+1.1
SKMP				*e*S	Sn	05 34 56.9	+0.9
BUKP	**Musuan**	**1.79**	**336**	*e*P	Pn	05 34 44.7	+0.6
BUKP				*e*S	Sn	05 35 07.9	+0.7

IDC ***22*** *05:39:07.1±0.5, 4°.16S×153°.57E, h0^{km}, mb4.8/23, mb1 5.0/25, mb1mx4.8/45, mbtmp4.9/25, ML4.8/2, MS4.3/36, Ms1 4.3/36, ms1mx4.2/44, Error ellipse: s-maj=15.0km s-min=9.6km az=100.0*

DJA ***22*** *05:39:11.8±0.7, 4°S±4°×15°4E±°, h48^{km}±7^{km}, M5.2/19, mb5.2/19, mB5.7/6, Mw(mB)5.2/6*

ISCJB ***22*** *05:39:12.2±0.1, 4°.16S±0°.03×153°.38E±0°.03, h35^{km}, mb5.2/231, MS4.5/60, Error ellipse: s-maj=4.1km s-min=3.2km az=139.2*

BJI ***22*** *05:39:12.5, 4°.20S×153°.40E, h45^{km}, mb5.0/55, mB5.3/41, Ms4.9/48, Ms7 4.6/48*

GCMT ***22*** *05:39:13.4±0.2, 4°.02S×153°.62E, h12^{km}, MW5.0/82, Moment Tensor Solution. s37,c44; s82,c119; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.33±.10; M$_{\theta\theta}$0.49±.08; M$_{\phi\phi}$1.84±.09; M$_{r\theta}$1.17±.30; M$_{\theta\phi}$2.33±.07; M$_{\phi r}$0.34±.24; Best double couple: M$_0$3.28600×10^{16} NP1:φ$_s$238.00000°, δ59.00000°, λ-61.00000°. NP2: φ$_s$12.00000°, δ42.00000°, λ-128.00000°. Principal axes: T 3.7510, Plg9.0000°, Azm308.0000°; N -0.9280, Plg24.0000°, Azm43.0000°; P -2.8200, Plg64.0000°, Azm199.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

MOS ***22*** *05:39:13.2±1.0, 4°.07S×153°.28E, h46^{km}, mb5.4/36, MS4.5/8 Error ellipse: s-maj=10.2km s-min=6.2km az=84.3*

NEIC ***22*** *05:39:13.4±2.1, 4°.17S×153°.38E, h35^{km}±14^{km}, mb5.4/188, Error ellipse: s-maj=4.9km s-min=4.3km az=73.0*

ISC 22 05:39:12.9±0.3**, 4°.10S**±0°.04×**153°.60E**±0°.04**, h35**^{km}**, n498, σ1^{s}83**/478**, mb5.3**/210**, MS4.5**/62**, 13C-4D, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**1.44**	**266**	*e*Pn	**Pn**	**05 39 34.7**	**-1.7**
RABL				*e*Sn	**Sn**	**05 39 53.2**	**-0.9**
RABL				*e*		05 39 57.5	
MANU	**Manus Island**	**6.55**	**288**	*e*Pn	**Pn**	**05 40 45.6**	**-1.2**
HNR	**Honiara**	**8.23**	**130**	Pn	**Pn**	**05 41 09.5**	**-0.4**
	19nm,0.3s,baz=253,slow=2.6,SNR=26						
HNR				Sn	**Sn**	**05 42 43.4**	**+1.7**
	4.1nm,0.3s,baz=306,slow=14,SNR=6.3						
HNR				LR	LR	05 44 44.2	
	comp=Z,8µm,19.1s,baz=284,slow=41						
HNR	**Honiara**	**8.23**	**130**	*e*P	**Pn**	**05 41 09.0**	**-0.9**
HNR				*e*S	**Sn**	**05 42 40.0**	**-1.7**
HNR	**Honiara**	**8.23**	**130**	*e*Pn	**Pn**	**05 41 09.7**	**-0.2**
HNR				*e*Sn	**Sn**	**05 42 42.5**	**+0.8**
HNR	**Honiara**	**8.23**	**130**	*e*P	**Pn**	**05 41 09.7**	**-0.2**
HNR				*e*		05 42 42.5	
PMG	**Port Moresby**	**8.29**	**230**	Pn	**Pn**	**05 41 11.7**	**+1.1**
	4.2nm,0.3s,baz=43,slow=9.7,SNR=7.0						
PMG				Sn	**Sn**	**05 42 46.8**	**+3.7**
	5.5nm,0.3s,baz=74,slow=17,SNR=7.9						
PMG				LR	LR	05 44 24.5	
	comp=Z,1µm,21.4s,baz=90,slow=39						
PATS	**Pohnpei**	**11.84**	**23**	*e*Pn	**Pn**	**05 41 57.1**	**-2.2**
JAY	**Jayapura**	**12.97**	**277**	P	**P**	**05 42 21.6**	**-3.3**
GENI	**Genyem**	**13.49**	**276**	P	**P**	**05 42 27.0**	**-3.7**
COEN	**Coen**	**14.20**	**226**	P	**Pn**	**05 42 32.5**	**+0.9**
	baz=14,SNR=11						
COEN	**Coen**	**14.20**	**226**	*e*P	**Pn**	**05 42 34.7**	**+3.1**
MTSU	**Mount Surprise**	**16.64**	**212**	P	**P**	**05 43 05.1**	**-0.6**
	baz=17,SNR=16						
CTA	**Charters Tower**	**17.43**	**204**	P	**P**	**05 43 14.2**	**-0.2**
	0.3nm,0.3s,baz=32,slow=12,SNR=8.3						
CTA				LR	LR	05 49 26.8	
	comp=Z,578nm,20.2s,baz=28,slow=36						
CTAO	**Charters Tower**	**17.43**	**204**	*e*Pn	**Pn**	**05 43 12.7**	**-0.7**
	77nm,1.3s						
CTAO	**Charters Tower**	**17.43**	**204**	*e*P	**Pn**	**05 43 12.7**	**-0.7**
CTAO				pmax	pmax		
	comp=Z,77nm,1.3s						
RKPI	**Ransiki, Papua**	**19.57**	**277**	P	**Pn**	**05 43 42.5**	**+3.0**
GUMO	**Guam**	**19.59**	**334**	P	**Pn**	**05 43 39.3**	**-0.4**
	comp=Z,1.9nm,0.3s,baz=225,slow=3.8,SNR=8.0						
GUMO				LR	LR	05 51 46.2	
	comp=Z,605nm,18.0s,baz=149,slow=39						
GUMO	**Guam**	**19.59**	**334**	*e*P	**Pn**	**05 43 39.5**	**-0.3**
	comp=Z,370nm,1.4s						
GUMO	**Guam**	**19.59**	**334**	*e*P	**Pn**	**05 43 39.5**	**-0.3**
GUMO				pmax	pmax		
	comp=Z,370nm,1.4s						
EIDS	**Eidsvold**	**21.29**	**186**	P	**P**	**05 43 57.3**	**+0.8**
	baz=21,SNR=7.8						
EIDS	**Eidsvold**	**21.29**	**186**	*e*P	**P**	**05 43 56.2**	**-0.3**
	comp=Z,50nm,1.0s						
QIS	**Mount Isa**	**21.29**	**219**	P	**P**	**05 43 56.5**	**0.0**
	baz=21,SNR=13						
FAKI	**Fak Fak**	**21.34**	**272**	P	**P**	**05 44 00.0**	**+2.8**
FAKI	**Fak Fak**	**21.34**	**272**	*e*P	**P**	**05 44 00.7**	**+3.5**
	comp=Z,334nm,1.6s						
DZM	**Mont Dzumac**	**21.78**	**146**	P	**P**	**05 44 01.4**	**-0.5**
	comp=Z,36nm,1.1s,baz=346,slow=20,SNR=9.0						
DZM				LR	LR	05 52 10.2	
	comp=Z,511nm,18.4s,baz=336,slow=36						
DZM	**Mont Dzumac**	**21.78**	**146**	*e*P	**P**	**05 44 02.5**	**+0.6**
	comp=Z,87nm,1.1s						
DZM				*e*LQ	LQ	05 48 19.6	
	comp=Z,3µm,33.2s						
DZM				*e*LR	LR	05 49 19.3	
	comp=Z,3µm,25.9s						
DZM	**Mont Dzumac**	**21.78**	**146**	*e*P	**P**	**05 44 02.2**	**+0.3**
	comp=Z,36nm,1.0s						
PALU	**Palau**	**22.21**	**301**	P	**P**	**05 44 07.0**	**+0.4**
	baz=22,SNR=7.0						
SWI	**Sorong**	**22.55**	**278**	P	**P**	**05 44 08.9**	**-1.3**
RMQ	**Roma**	**22.74**	**191**	P	**P**	**05 44 12.2**	**+0.2**
	baz=23,SNR=13						
MTN	**Manton Dam**	**23.84**	**247**	*e*P	**P**	**05 44 21.1**	**-2.0**
	comp=Z,172nm,1.5s						
QLP	**Quilpie**	**24.09**	**201**	P	**P**	**05 44 24.8**	**-0.4**
	baz=24,SNR=19						
WRAB	**Tennant Creek**	**24.49**	**228**	*e*P	**P**	**05 44 28.4**	**-0.7**
	comp=Z,79nm,0.8s						
WRAB	**Tennant Creek**	**24.49**	**228**	*i* P	**P**	**05 44 27.3**	**-1.7**
WRAB				pmax	pmax		
	comp=Z,87nm,0.9s						
WB2	**Warramunga Arr**	**24.49**	**228**	*e*P	**P**	**05 44 28.5**	**-0.6**
WRA	**Warramunga Arr**	**24.50**	**228**	P	**P**	**05 44 28.2**	**-1.0**
	comp=Z,40nm,0.7s,baz=53,slow=9.8,SNR=105						
WRA				PcP	**PcP**	**05 48 07.1**	**-0.2**
	comp=Z,7.3nm,1.0s,baz=47,slow=2.5,SNR=4.5						
WRA				S	**S**	**05 48 52.1**	**+4.6**
	comp=Z,22nm,1.2s,baz=50,slow=16,SNR=13						
WRA				ScP	**ScP**	**05 51 46.6**	**+3.1**
	comp=Z,8.2nm,1.3s,baz=47,slow=2.5,SNR=5.2						
WRA				LR	LR	05 55 40.0	
	comp=Z,622nm,18.2s,baz=55,slow=41						
H11S3	**WAKE ISLAND Hy**	**25.89**	**29**	T	T	06 12 33.1	
	baz=210,slow=76,SNR=5973						
H11S2	**WAKE ISLAND Hy**	**25.90**	**30**	T	T	06 12 33.1	
	baz=210,slow=76,SNR=435						
H11S1	**WAKE ISLAND Hy**	**25.91**	**29**	T	T	06 12 33.1	
	baz=210,slow=76,SNR=651						
ARMA	**Armidale**	**26.24**	**184**	P	**P**	**05 44 45.1**	**+0.2**
	baz=26,SNR=9.4						
ARMA	**Armidale**	**26.24**	**184**	*e*P	**P**	**05 44 44.5**	**-0.4**
	comp=Z,60nm,1.0s						
LBMI	**Labuha**	**26.30**	**277**	P	**P**	**05 44 46.7**	**+1.2**
	comp=Z,168nm,1.1s						
TNTI	**Ternate**	**26.66**	**280**	*e*P	**P**	**05 44 48.5**	**-0.3**
	comp=Z,142nm,1.8s						
KNRA	**Kununurra**	**27.00**	**243**	P	**P**	**05 44 51.6**	**-0.2**
	baz=27,SNR=6.0						
H11N1	**WAKE ISLAND Hy**	**27.03**	**28**	T	T	06 13 51.5	
	baz=223,slow=76,SNR=590						
H11N3	**WAKE ISLAND Hy**	**27.05**	**28**	T	T	06 13 51.5	
	baz=223,slow=76,SNR=826						
H11N2	**WAKE ISLAND Hy**	**27.05**	**28**	T	T	06 13 51.5	
	baz=223,slow=76,SNR=1041						
AS01	**Alice Springs**	**27.17**	**222**	*e*P	**P**	**05 44 51.7**	**-1.6**
AS31	**Alice Springs**	**27.20**	**223**	*e*P	**P**	**05 44 52.5**	**-1.1**
	comp=Z,3.1nm,0.8s						
ASAR	**Alice Springs**	**27.20**	**223**	P	**P**	**05 44 52.5**	**-1.1**
	comp=Z,5.1nm,1.0s,baz=60,slow=8.5,SNR=24						
ASAR				S	**S**	**05 49 30.4**	**+0.1**
	comp=Z,1.1nm,1.0s,baz=40,slow=20,SNR=3.1						
ASAR				ScP	**ScP**	**05 51 54.3**	**+2.9**
	comp=Z,2.1nm,1.0s,baz=55,slow=2.8,SNR=6.6						
LHI	**Lord Howe Isla**	**27.75**	**170**	*e*P	**P**	**05 44 58.2**	**-0.2**
	comp=Z,621nm,1.6s						
STKA	**Stephens Creek**	**29.84**	**201**	P	**P**	**05 45 16.5**	**-0.4**
	comp=Z,17nm,0.8s,baz=21,slow=11,SNR=19						
STKA				LR	LR	05 58 02.5	
	comp=Z,430nm,18.6s,baz=15,slow=38						
STKA	**Stephens Creek**	**29.84**	**201**	P	**P**	**05 45 17.1**	**+0.1**
	baz=30,SNR=24						
STKA	**Stephens Creek**	**29.84**	**201**	*e*P	**P**	**05 45 16.8**	**-0.2**
	comp=Z,6.8nm,1.1s						
STKA	**Stephens Creek**	**29.84**	**201**	*e*P	**P**	**05 45 16.8**	**-0.2**
STKA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
DAV	**Davao City (W)**	**30.09**	**292**	LR	LR	05 56 54.1	
	comp=Z,1µm,18.1s,baz=104,slow=36						
FITZ	**Fitzroy Crossi**	**30.69**	**241**	P	**P**	**05 45 22.8**	**-1.8**
	baz=31,SNR=54						
FITZ	**Fitzroy Crossi**	**30.69**	**241**	*e*P	**P**	**05 45 23.0**	**-1.6**
	comp=Z,65nm,0.9s						
LUWI	**Luwuk**	**30.94**	**275**	*e*P	**P**	**05 45 27.1**	**+0.2**
	comp=Z,54nm,0.7s						
CAN	**Canberra**	**31.36**	**187**	*e*P	**P**	**05 45 30.3**	**0.0**
	comp=Z,41nm,1.1s						
CAN	**Canberra**	**31.36**	**187**	*e*P	**P**	**05 45 30.3**	**0.0**
CAN				pmax	pmax		
	comp=Z,41nm,1.1s						
WRKA	**Warakurna**	**32.02**	**227**	P	**P**	**05 45 34.8**	**-1.5**
	baz=32,SNR=19						
EDFI	**Ende, Flores**	**32.03**	**260**	P	**P**	**05 45 32.6**	**-4.0**
APSI	**Ampana**	**32.07**	**275**	P	**P**	**05 45 37.4**	**+0.5**
	comp=Z,52nm,1.1s,comp=Z,560nm						
HTT	**Hallett**	**32.23**	**203**	P	**P**	**05 45 37.5**	**-0.6**
	baz=32,SNR=24						
CBIJ	**Chichi jima**	**32.92**	**341**	*e*P	**P**	**05 45 41.6**	**-2.4**
	comp=Z,66nm,0.8s						
BBOO	**Buckleboo**	**32.94**	**208**	P	**P**	**05 45 43.4**	**-0.8**
	baz=33,SNR=9.0						
BBOO	**Buckleboo**	**32.94**	**208**	*e*P	**P**	**05 45 42.7**	**-1.6**
	comp=Z,17nm,0.9s						
TOO	**Toolangi**	**34.13**	**192**	P	**P**	**05 45 55.6**	**+1.1**
	baz=34,SNR=5.2						
ARPS	**Mount Arapiles**	**34.26**	**197**	P	**P**	**05 45 56.0**	**+0.3**
	baz=34,SNR=22						
AFI	**Afiamalu**	**35.51**	**108**	LR	LR	05 58 55.4	
	comp=Z,433nm,18.2s,baz=266,slow=34						
FORT	**Forrest**	**35.83**	**219**	P	**P**	**05 46 08.6**	**-0.7**
	baz=36,SNR=20						
FORT	**Forrest**	**35.83**	**219**	*e*P	**P**	**05 46 08.2**	**-1.0**
	comp=Z,59nm,1.0s						
MBWA	**Marble Bar**	**37.01**	**240**	*e*P	**P**	**05 46 17.5**	**-2.0**
	comp=Z,54nm,1.0s						
TGY	**Tagaytay City**	**37.10**	**300**	LR	LR	05 58 54.6	
	comp=Z,909nm,21.2s,baz=128,slow=32						
MOO	**Moorlands**	**38.60**	**188**	P	**P**	**05 46 33.6**	**+0.9**
	baz=39,SNR=4.0						
JHJ	**Hachijo jima 2**	**39.26**	**342**	LR	LR	06 00 31.3	
	comp=Z,391nm,20.1s,baz=199,slow=33						
JOW	**Kunigami**	**39.31**	**323**	P	**P**	**05 46 39.1**	**+0.4**
	comp=Z,85nm,1.0s,baz=129,slow=5.9,SNR=12						
JOW				LR	LR	05 59 34.6	
	comp=Z,743nm,21.7s,baz=138,slow=31						
JOW	**Kunigami**	**39.31**	**323**	*e*P	**P**	**05 46 39.1**	**+0.4**
	comp=Z,170nm,1.1s						
MEEK	**Meekatharra**	**40.26**	**233**	P	**P**	**05 46 45.4**	**-1.3**
	baz=40,SNR=20						
KMBL	**Kambalda**	**40.31**	**224**	P	**P**	**05 46 46.6**	**-0.5**
	baz=40,SNR=6.0						
YULB	**Yu-li**	**41.70**	**312**	*e*P	**P**	**05 46 59.7**	**+1.0**
	comp=Z,37nm,1.2s						
SBUM	**Sibu**	**41.86**	**278**	*e*P	**P**	**05 46 59.9**	**-0.2**
	comp=Z,15nm,1.1s						
TPUB	**Ta-pu**	**42.15**	**312**	*e*P	**P**	**05 47 02.5**	**+0.2**
	comp=Z,32nm,1.0s						
SSLB	**Suanglung**	**42.19**	**313**	*e*P	**P**	**05 47 02.0**	**-0.6**
	comp=Z,19nm,0.8s						
INU	**Inuyama**	**42.22**	**340**	*e*P	**P**	**05 47 01.1**	**-1.5**
	comp=Z,42nm,1.2s						
GIRL	**Giralia**	**42.30**	**241**	P	**P**	**05 47 04.6**	**+1.1**
	baz=42,SNR=3.9						
RPZ	**Rata Peaks**	**42.36**	**161**	P	**P**	**05 47 02.6**	**-1.1**
	comp=Z,7.4nm,0.8s,baz=235,slow=2.4,SNR=3.9						
YHNB	**Yeheng**	**42.42**	**314**	*e*P	**P**	**05 47 03.2**	**-1.3**
	comp=Z,167nm,1.6s						
JNU	**Nakatsue**	**42.82**	**332**	P	**P**	**05 47 07.0**	**-0.6**
	comp=Z,36nm,1.0s,baz=132,slow=7.3,SNR=19						
JNU				LR	LR	06 02 38.1	
	comp=Z,241nm,22.0s,baz=124,slow=33						
JNU	**Nakatsue**	**42.82**	**332**	*e*P	**P**	**05 47 07.1**	**-0.6**
	comp=Z,74nm,1.2s						
MJAR	**Matsushiro Arr**	**42.91**	**342**	P	**P**	**05 47 06.9**	**-1.4**
	comp=Z,8.6nm,1.0s,baz=168,slow=9.4,SNR=21						
MJAR				LR	LR	06 05 04.2	
	comp=Z,242nm,18.0s,baz=170,slow=36						
MAJO	**Matsushiro**	**42.91**	**342**	*e*P	**P**	**05 47 06.0**	**-2.3**
	comp=Z,69nm,1.6s						
MAJO	**Matsushiro**	**42.91**	**342**	*i* P	**P**	**05 47 05.6**	**-2.7**
MAJO				pmax	pmax		
	comp=Z,44nm,1.5s						
MAT	**Matsushiro**	**42.91**	**342**	P	**P**	**05 47 06.2**	**-2.1**
MAT				S	**S**	**05 53 23.6**	**-7.4**
MJB9	**Matsu-Tunnel**	**42.92**	**342**	*e*P	**P**	**05 47 06.1**	**-2.3**
	comp=Z,62nm,1.6s						
KLBR	**Kellerberrin**	**43.36**	**227**	P	**P**	**05 47 10.4**	**-1.6**
	baz=43,SNR=11						
MORW	**Morawa**	**43.40**	**231**	P	**P**	**05 47 10.9**	**-1.5**
	baz=43,SNR=5.5						
KSM	**Kuching**	**43.62**	**276**	*e*P	**P**	**05 47 13.0**	**-1.4**
	comp=Z,19nm,1.0s						
BLDU	**Ballidu**	**43.63**	**229**	P	**P**	**05 47 12.8**	**-1.5**
	baz=44,SNR=9.8						
QZH	**Quanzhou**	**44.61**	**312**	⇓*i*P	**P**	**05 47 25.0**	**+2.9**
QZH				S	**S**	**05 54 00.1**	**+4.1**
QZH				LR	LR		
	comp=Z,480nm,19.9s						
MUN	**Mundaring**	**44.69**	**227**	P	**P**	**05 47 21.2**	**-1.5**
	baz=45,SNR=4.3						
RKGY	**Rocky Gully**	**45.53**	**224**	P	**P**	**05 47 29.3**	**-0.1**
	baz=46,SNR=6.7						
ERM	**Erimo**	**46.87**	**349**	*i* P	**P**	**05 47 40.5**	**+0.9**
ERM				pmax	pmax		
	comp=Z,20nm,1.1s						
TJN	**Taejon**	**47.15**	**331**	*ce*P	**P**	**05 47 41.4**	**-0.5**
KSRS	**Korea Array**	**47.75**	**332**	P	**P**	**05 47 46.4**	**-0.2**
	comp=Z,24nm,1.2s,baz=148,slow=7.3,SNR=34						
KSRS				LR	LR	06 06 21.8	
	comp=Z,225nm,19.5s,baz=148,slow=34						

KS15	**Wonju Array Si**	**47.76**	**332**	*e*P	**P**	**05 47 47.2**	**+0.5**
KSAR	**Wonju Array Be**	**47.76**	**332**	P	**P**	**05 47 46.4**	**-0.2**
KSAR	**Wonju Array Be**	**47.76**	**332**	P	**P**	**05 47 46.4**	**-0.2**
KS01	**Wonju Array Si**	**47.78**	**332**	*e*P	**P**	**05 47 46.4**	**-0.5**
RAR	**Rarotonga**	**48.34**	**115**	LR	LR	06 05 46.5	
	comp=Z,386nm,21.8s,baz=274,slow=33						
INCN	**Inchon**	**48.38**	**331**	*e*P	**P**	**05 47 51.7**	**+0.2**
	comp=Z,224nm,1.5s						
INCN	**Inchon**	**48.38**	**331**	*e*P	**P**	**05 47 51.7**	**+0.2**
INCN				pmax	pmax		
	comp=Z,225nm,1.5s						
QIZ	**Qiongzhong**	**48.81**	**300**	P	**P**	**05 47 57.3**	**+2.2**
QIZ				S	**S**	**05 54 58.3**	**+2.0**
QIZ				LR	LR		
	comp=Z,560nm,18.0s						
QIZ				LR	LR		
	comp=Z,760nm,20.1s						
NJ2	**Nanjing**	**48.82**	**320**	*e*P	**P**	**05 47 56.1**	**+1.2**
NJ2				pmax	pmax		
	comp=Z,21nm,0.6s						
NJ2				LR	LR		
	comp=Z,890nm,18.4s						
NJ2				LR	LR		
	comp=Z,540nm,21.4s						
NJ2				LR	LR		
	comp=Z,1µm,21.7s						
ASAJ	**Asahikawa**	**49.01**	**350**	P	**P**	**05 47 56.4**	**+0.3**
	comp=Z,15nm,0.9s,baz=205,slow=7.4,SNR=15						
ASAJ				LR	LR	06 06 05.5	
	comp=Z,393nm,21.0s,baz=168,slow=33						
ASAJ	**Asahikawa**	**49.01**	**350**	*e*P	**P**	**05 47 56.7**	**+0.5**
	comp=Z,227nm,2.0s						
WHN	**Wuhan**	**50.91**	**315**	P	**P**	**05 48 11.8**	**+0.9**
WHN				S	**S**	**05 55 31.1**	**+5.8**
WHN				LR	LR		
	comp=Z,2µm,20.7s						
YSS	**Yuzh-Sakhalins**	**51.73**	**351**	*e*P	**P**	**05 48 16.9**	**+0.2**
	comp=Z,63nm,1.4s						
YSS	**Yuzh-Sakhalins**	**51.73**	**351**	*e*P	**P**	**05 48 16.8**	**+0.1**
YSS				*e*		05 48 32.0	
YSS				*e*		05 51 12.1	
YSS				*e*S	**S**	**05 55 29.4**	**-6.6**
YSS				pmax	pmax		
	comp=Z,30nm,1.1s						
YSS				pmax	pmax		
	comp=Z,240nm,3.0s						
YSS				MLR	MLR		
	comp=Z,320nm,14.0s						
YSS				MLR	MLR		
	comp=N,360nm,16.0s						
USRK	**Ussuriysk Ar.**	**51.85**	**340**	LR	LR	06 06 59.3	
	comp=N,333nm,21.9s,baz=152,slow=32						
TIA	**Tai'an**	**52.63**	**323**	P	**P**	**05 48 24.3**	**+0.6**
TIA				pmax	pmax		
	comp=N,8.0nm,0.8s						
MDJ	**Mudanjiang**	**53.06**	**339**	P	**P**	**05 48 24.1**	**-2.5**
MDJ				pP	pP	05 48 37.0	-0.1
MDJ				sP	sP	05 48 42.6	+1.3
MDJ				PP	**PP**	**05 50 24.8**	**-2.0**
MDJ				S	**S**	**05 55 53.6**	**-0.7**
MDJ				sS	sS	05 56 16.1	+4.5
MDJ				ScS	**ScS**	**05 58 09.5**	**-4.1**
MDJ				SS	**SS**	**05 59 36.3**	**+2.2**
MDJ				pmax	pmax		
	comp=N,58nm,1.5s						
MDJ				LR	LR		
	comp=N,270nm,21.5s						
MDJ				LR	LR		
	comp=N,180nm,23.9s						
MDJ				LR	LR		
	comp=N,470nm,22.3s						
MDJ	**Mudanjiang**	**53.06**	**339**	*e*P	**P**	**05 48 26.8**	**+0.2**
	comp=N,215nm,1.8s						
CN2	**Changchun**	**54.00**	**335**	*e*P	**P**	**05 48 32.3**	**-1.2**
CN2				*e*sP	sP	05 48 50.1	+1.9
CN2				*e*PP	**PP**	**05 50 35.8**	**+0.5**
CN2				*e*S	**S**	**05 56 04.4**	**-2.7**
CN2				*e*SS	**SKiKP**	**05 59 44.6**	**+0.7**
CN2				pmax	pmax		
	comp=N,30nm,1.6s						
CN2				LR	LR		
	comp=N,230nm,15.0s						
CN2				LR	LR		
	comp=N,200nm,15.0s						
CN2				LR	LR		
	comp=N,370nm,16.0s						
ENH	**Enshi**	**54.27**	**312**	*e*P	**P**	**05 48 36.0**	**+0.1**
	comp=N,91nm,1.6s						
NONG	**Nongkai**	**54.39**	**296**	P	**P**	**05 48 39.7**	**+2.9**
SKR	**Severo-Kuril's**	**54.61**	**2**	*e*P	**P**	**05 48 37.7**	**-0.1**
SKR				pmax	pmax		
	comp=Z,100nm,4.1s						
SKR				pmax	pmax		
	comp=Z,400nm,3.8s						
SKR				MLR	MLR		
	comp=Z,300nm,15.0s						
GYA	**Guiyang**	**54.61**	**307**	P	**P**	**05 48 41.8**	**+3.3**
GYA				pP	sP	05 48 54.3	+1.1
GYA				PP	**PP**	**05 50 46.0**	**+4.7**
GYA				S	**S**	**05 56 16.6**	**+0.3**
GYA				sS	sS	05 56 38.4	+4.7
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,6.2s						
GYA				LR	LR		
	comp=Z,710nm,18.8s						
GYA				LR	LR		
	comp=Z,620nm,18.0s						
GYA				LR	LR		
	comp=Z,650nm,18.2s						
PSI	**Prapat**	**55.07**	**276**	*e*P	**P**	**05 48 40.1**	**-1.9**
	comp=Z,23nm,1.3s						
PSI	**Prapat**	**55.07**	**276**	*e*P	**P**	**05 48 40.1**	**-1.9**
PSI				pmax	pmax		
	comp=Z,23nm,1.3s						
TYV	**Tymovskoe**	**55.55**	**352**	*e*P	**P**	**05 48 43.6**	**-1.0**
TYV				pmax	pmax		
	comp=Z,38nm,1.6s						
TYV				pmax	pmax		
	comp=Z,200nm,4.2s						
BJI	**Beijing**	**55.76**	**326**⇑	*e*P	**P**	**05 48 49.0**	**+2.7**
BJI				S	**S**	**05 56 35.6**	**+4.7**
BJI				pmax	pmax		
	comp=Z,23nm,1.9s						
BJI				LR	LR		
	comp=Z,790nm,16.3s						
BJI				LR	LR		
	comp=Z,510nm,24.0s						
BJI				LR	LR		
	comp=Z,880nm,32.2s						
KLR	**Kul'dur**	**56.41**	**343**	LR	LR	06 11 01.5	
	comp=Z,22nm,20.1s,baz=166,slow=34						
KLR	**Kul'dur**	**56.41**	**343**	*c i*P	**P**	**05 48 50.7**	**-0.1**
GRNR	**Gornyy**	**56.62**	**347**	*e*P	**P**	**05 48 55.5**	**+3.2**
GRNR				pmax	pmax		
	comp=Z,130nm,1.2s						
XAN	**Xi'an**	**56.67**	**316**	P	**P**	**05 48 51.9**	**-1.2**
XAN				pP	pP	05 49 04.5	+0.8
XAN				sP	sP	05 49 09.8	+2.0
XAN				PP	**PP**	**05 50 57.6**	**-1.9**
XAN				S	S	05 56 31.8	-12
XAN				ScS	**ScS**	**05 58 33.8**	**-6.2**
XAN				pmax	pmax		
	comp=Z,8.0nm,1.4s						
XAN				pmax	pmax		
	comp=Z,220nm,4.4s						
XAN				LR	LR		
	comp=Z,390nm,19.0s						
XAN				LR	LR		
	comp=Z,480nm,19.8s						
XAN				LR	LR		
	comp=Z,580nm,20.8s						
NANT	**Nan**	**56.82**	**295**	P	**P**	**05 48 56.9**	**+2.6**
	comp=Z,4.6nm,0.6s						
PET	**Petropavlovsk**	**57.07**	**4**	*e*P	**P**	**05 48 55.6**	**+0.2**
PET				*e*S	**S**	**05 56 49.8**	**+2.1**
PET				pmax	pmax		
	comp=Z,200nm,8.3s						
PET				pmax	pmax		
	comp=Z,41nm,1.7s						
PET				MLR	MLR		
	comp=Z,200nm,22.0s						
PEA0B	**Petropavlovsk-**	**57.10**	**3**	*e*P	**P**	**05 48 56.7**	**+1.0**
	comp=Z,281nm,1.8s						
PETK	**Petropavlovsk-**	**57.10**	**3**	P	**P**	**05 48 56.9**	**+1.2**
	comp=Z,26nm,0.9s,baz=145,slow=5.3						
PETK				LR	LR	06 09 27.7	
	comp=Z,270nm,21.8s,baz=193,slow=32						
PETK	**Petropavlovsk-**	**57.10**	**3**	*e*P	**P**	**05 48 56.1**	**+0.5**
PPT	**Papeete**	**57.18**	**108**	LR	LR	06 11 08.4	
	comp=Z,197nm,18.9s,baz=302,slow=34						
PPT2	**Papeete2**	**57.18**	**108**	*e*S	**S**	**05 56 49.2**	**-1.4**
	comp=Z,198nm,26.8s						
PPT2				*e*LR	LR	06 05 49.9	
	comp=Z,417nm,24.5s						
KMI	**Kunming**	**57.27**	**303**	P	**P**	**05 49 01.1**	**+3.5**
KMI				pP	sP	05 49 13.5	+1.1
KMI				S	**S**	**05 56 51.8**	**0.0**
KMI				sS	sS	05 57 11.4	+2.1
KMI				pmax	pmax		
	comp=Z,18nm,0.9s						
KMI				pmax	pmax		
	comp=Z,200nm,4.7s						
KMI				LR	LR		
	comp=Z,290nm,17.7s						
KMI				LR	LR		
	comp=Z,540nm,21.1s						
KMI				LR	LR		
	comp=Z,700nm,21.1s						
PAYA	**Payao**	**57.74**	**296**	P	**P**	**05 49 04.2**	**+3.3**
	comp=Z,5.1nm,0.8s						
TBI	**Tubuai**	**58.12**	**115**	*e*S	**S**	**05 57 01.0**	**-1.6**
	comp=Z,247nm,27.2s						
TBI				*e*LR	LR	06 06 07.7	
	comp=Z,888nm,27.2s,baz=277						
CM01	**Chiang Mai Arr**	**58.28**	**294**	*e*P	**P**	**05 49 04.7**	**+0.1**
CMAR	**Chiang Mai Arr**	**58.31**	**295**	P	**P**	**05 49 05.4**	**+0.6**
	comp=Z,4.2nm,0.9s,baz=117,slow=5.5,SNR=9.4						
CMAR				LR	LR	06 12 51.3	
	comp=Z,227nm,20.0s,baz=112,slow=35						
CMAR	**Chiang Mai Arr**	**58.31**	**295**	*ce*P	**P**	**05 49 07.3**	**+2.5**
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
CMMT	**Chiang Mai**	**58.41**	**295**	P	P	05 49 14.8	+9.3
PMOR	**Pomariorio Ree**	**58.55**	**105**	*e*T	T	06 52 09.1	
	comp=Z,4.0nm,0.2s						
CD2	**Chengdu**	**58.90**	**310**	P	**P**	**05 49 09.4**	**+0.6**
CD2				pP	sP	05 49 22.5	-1.0
CD2				sP	pP	05 49 28.1	+8.7
CD2				PP	**PP**	**05 51 20.1**	**+0.8**
CD2				S	**S**	**05 57 13.0**	**+0.4**
CD2				sS	sS	05 57 35.4	+5.3
CD2				SS	**SS**	**06 01 08.8**	**+2.0**
CD2				pmax	pmax		
	comp=Z,50nm,0.6s						
CD2				pmax	pmax		
	comp=Z,290nm,5.8s						
CD2				LR	LR		
	comp=Z,540nm,14.9s						
CD2				LR	LR		
	comp=Z,760nm,22.9s						
CD2				LR	LR		
	comp=Z,680nm,23.9s						
HHC	**Hu-ho-hao-te**	**58.95**	**324**	*e*P	**P**	**05 49 13.3**	**+4.3**
HHC				pP	sP	05 49 26.8	+3.0
HHC				S	**S**	**05 57 15.6**	**+2.5**
HHC				pmax	pmax		
	comp=Z,18nm,1.0s						
HHC				pmax	pmax		
	comp=Z,140nm,6.8s						
HHC				LR	LR		
	comp=Z,320nm,16.9s						
HHC				LR	LR		
	comp=Z,420nm,17.3s						
HHC				LR	LR		
	comp=Z,540nm,17.5s						
LZH	**Lanzhou**	**61.29**	**315**	*e*P	**P**	**05 49 26.4**	**+1.2**
LZH				pP	pP	05 49 37.5	+1.6
LZH				sP	sP	05 49 44.6	+4.6
LZH				PP	**PP**	**05 51 42.0**	**+1.4**
LZH				S	**S**	**05 57 37.0**	**-6.4**
LZH				sS	sS	05 57 59.8	-1.3
LZH				pmax	pmax		
	comp=Z,50nm,1.3s						
LZH				pmax	pmax		
	comp=Z,220nm,4.3s						
LZH				LR	LR		
	comp=Z,710nm,12.2s						
LZH				LR	LR		
	comp=Z,580nm,12.9s						
LZH				LR	LR		
	comp=Z,990nm,14.1s						
ZEA	**Zeya**	**61.72**	**343**	*e*P	**P**	**05 49 27.3**	**-0.2**
ZEA				pmax	pmax		
	comp=Z,200nm,2.0s						
ZEA				pmax	pmax		
	comp=N,93nm,1.4s						
ZEA				pmax	pmax		
	comp=Z,190nm,1.6s						
MA2	**Magadan**	**63.52**	**358**	*e*P	**P**	**05 49 39.6**	**+0.1**
	comp=Z,274nm,2.0s						
MA2	**Magadan**	**63.52**	**358**⇑	*e*P	**P**	**05 49 41.0**	**+1.6**
MA2				pmax	pmax		
	comp=Z,167nm,2.5s						
GTA	**Gaotai**	**65.69**	**317**	⇓P	**P**	**05 49 54.4**	**+0.2**
GTA				pP	sP	05 50 07.3	-1.8
GTA				sP	pP	05 50 12.9	+7.9
GTA				S	**S**	**05 58 39.6**	**+1.5**
GTA				pmax	pmax		
	comp=Z,15nm,1.4s						
GTA				pmax	pmax		
	comp=Z,170nm,6.1s						
GTA				LR	LR		
	comp=Z,250nm,23.0s						
GTA				LR	LR		
	comp=Z,290nm,23.4s						
GTA				LR	LR		
	comp=Z,440nm,23.9s						
TAOE	**Nuku Hiva Isla**	**65.93**	**98**	*e*LR	LR	06 09 37.3	
	comp=Z,485nm,25.1s						
TAOE	**Nuku Hiva Isla**	**65.93**	**98**	*e*T	T	07 01 25.6	
	comp=Z,92nm,0.2s						
BRDH	**Bariadhala**	**66.05**	**297**	LR	LR	06 16 51.3	
	comp=Z,273nm,21.9s,baz=168,slow=34						
SONM	**Songino Array**	**66.17**	**327**	P	**P**	**05 49 56.7**	**-0.4**
	comp=Z,12nm,1.2s,baz=136,slow=5.6,SNR=25						
SONM				LR	LR	06 18 59.6	
	comp=Z,281nm,18.0s,baz=137,slow=36						
SONA1	**Songino Array**	**66.17**	**327**	*e*P	**P**	**05 49 56.9**	**-0.2**
SEY	**Seymchan**	**66.86**	**359**	*ce*P	**P**	**05 50 02.1**	**+1.1**
YAK	**Yakutsk**	**68.45**	**348**	*e*P	**P**	**05 50 11.6**	**+0.5**
	comp=Z,112nm,1.1s						
YAK	**Yakutsk**	**68.45**	**348**	*e*P	**P**	**05 50 10.9**	**-0.2**
YAK				*e*		05 50 27.6	
YAK				*e*S	**S**	**05 59 09.1**	**-1.1**
YAK				*e**SS	sS	05 59 37.0	+9.0
YAK				*e*		06 00 02.5	
YAK				pmax	pmax		
	comp=Z,81nm,1.5s						
YAK				pmax	pmax		
	comp=N,25nm,1.6s						
YAK				pmax	pmax		
	comp=E,14nm,1.6s						
YAK				smax	smax		
	comp=N,361nm,7.3s						
YAK				smax	smax		
	comp=E,168nm,7.1s						
CASY	**Casey**	**68.91**	**197**	*e*P	**P**	**05 50 12.9**	**-1.0**
	comp=E,100nm,1.8s						
TLY	**Talaya**	**69.88**	**329**	*e*P	**P**	**05 50 20.4**	**+0.2**
TLY				pmax	pmax		
	comp=Z,9.0nm,1.3s						
TLY				MLR	MLR		
	comp=Z,103nm,16.0s						
MOY	**Mondy**	**71.23**	**328**	*e*P	**P**	**05 50 29.4**	**+0.8**
MOY				pmax	pmax		
	comp=Z,27nm,1.6s						
RKT	**Rikitea**	**71.32**	**113**	*e*LR	LR	06 12 21.6	
	comp=Z,872nm,23.0s						
CHGN	**Chignik**	**71.75**	**26**	*e*P	**P**	**05 50 31.9**	**+0.6**
	comp=Z,24nm,0.8s						
GAMB	**Gambell**	**72.50**	**15**	*e*P	**P**	**05 50 37.4**	**+1.6**
	comp=Z,147nm,1.9s						
VNDA	**Vanda**	**73.50**	**178**	P	**P**	**05 50 40.8**	**-0.7**
	comp=Z,2.5nm,0.9s,baz=320,slow=4.9,SNR=9.4						
VNDA	**Vanda**	**73.50**	**178**	*e*P	**P**	**05 50 40.7**	**-0.7**
	comp=Z,51nm,1.9s						
PALK	**Pallekele**	**73.62**	**279**	LR	LR	06 23 37.6	
	comp=Z,99nm,21.5s,baz=96,slow=36						
SII	**Sitkinak Islan**	**73.79**	**27**	*e*P	**P**	**05 50 45.0**	**+1.4**
	comp=Z,65nm,0.8s						
SBA	**Scott Base**	**74.03**	**177**	*e*P	**P**	**05 50 44.2**	**-0.4**
	comp=Z,32nm,2.0s						
SBA	**Scott Base**	**74.03**	**177**	*e*P	**P**	**05 50 44.2**	**-0.4**
SBA				pmax	pmax		
	comp=Z,32nm,2.0s						
OHAK	**Old Harbor**	**74.57**	**27**	*e*P	**P**	**05 50 47.6**	**-0.4**
	comp=Z,66nm,1.1s						
MIR	**Mirnyy**	**74.86**	**201**⇑	*i*P	**P**	**05 50 51.5**	**+1.9**
MIR				*i*		05 51 12.0	
MIR				pmax	pmax		
	comp=Z,228nm,2.0s						
ANM	**Nome**	**74.88**	**17**	*e*P	**P**	**05 50 53.9**	**+4.2**
	comp=Z,90nm,1.4s						
ANM	**Nome**	**74.88**	**17**	*e*P	**P**	**05 50 53.9**	**+4.2**
ANM				pmax	pmax		
	comp=Z,90nm,1.4s						
WMQ	**Urumqi**	**75.77**	**317**	P	**P**	**05 50 56.0**	**+0.6**
WMQ				pP	sP	05 51 10.6	+0.2
WMQ				sP	PcP	05 51 17.0	+9.0
WMQ				pmax	pmax		
	comp=Z,41nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,280nm,3.7s						
WMQ				LR	LR		
	comp=Z,550nm,22.9s						
WMQ				LR	LR		
	comp=Z,470nm,24.1s						
WMQ				LR	LR		
	comp=Z,710nm,25.1s						
SVW2	**Sparrevohn**	**75.87**	**23**	*e*P	**P**	**05 50 57.8**	**+2.3**
	comp=Z,67nm,1.6s						
RSO	**Redoubt South**	**76.63**	**24**	*e*P	**P**	**05 51 02.3**	**+2.2**
CNPM	**China Poot**	**76.75**	**25**	*e*P	**P**	**05 51 00.8**	**+0.2**
	comp=Z,113nm,1.0s						
BRLK	**Bradley Lake**	**77.02**	**25**	*e*P	**P**	**05 51 05.2**	**+3.1**
	comp=Z,72nm,1.3s						
TIXI	**Tiksi**	**77.31**	**352**	*e*P	**P**	**05 51 03.6**	**+0.2**
	comp=Z,13nm,1.1s						
TIXI	**Tiksi**	**77.31**	**352**	*i* P	**P**	**05 51 04.3**	**+0.9**
TIXI				pmax	pmax		
	comp=Z,36nm,1.4s						
SKT	**Skwentna**	**77.97**	**23**	*e*P	**P**	**05 51 09.0**	**+1.7**
	comp=Z,9.9nm,1.1s						
DGZ	**Jazzator, Alta**	**78.01**	**323**	*i* P	**P**	**05 51 06.9**	**-1.1**
DGZ				pmax	pmax		
	comp=Z,9.0nm,1.5s						
RDOG	**Red Dog Mine**	**78.10**	**15**	*e*P	**P**	**05 51 09.6**	**+1.7**
	comp=Z,131nm,1.2s						
RC01	**Rabbit Creek A**	**78.21**	**25**	*e*P	**P**	**05 51 11.5**	**+2.9**
	comp=Z,88nm,1.2s						
PPLA	**Purkeypile**	**78.23**	**22**	*e*P	**P**	**05 51 10.4**	**+1.5**
	comp=Z,78nm,1.5s						
CAST	**Castle Rocks**	**78.56**	**22**	*e*P	**P**	**05 51 11.4**	**+0.8**
	comp=Z,65nm,1.3s						
GHO	**Glory Hole Cre**	**78.90**	**24**	*e*P	**P**	**05 51 14.8**	**+2.3**
	comp=Z,61nm,1.3s						
SML	**Sawmill**	**79.16**	**24**	*e*P	**P**	**05 51 15.5**	**+1.6**
	comp=Z,124nm,1.2s						
SML	**Sawmill**	**79.16**	**24**	*e*P	**P**	**05 51 15.5**	**+1.6**
SML				pmax	pmax		
	comp=Z,124nm,1.2s						
TRF	**Thorofare Moun**	**79.25**	**22**	*e*P	**P**	**05 51 15.0**	**+0.5**
	comp=Z,47nm,1.4s						
BPAW	**Bear Paw Mtn.**	**79.35**	**22**	*e*P	**P**	**05 51 15.4**	**+0.5**
	comp=Z,59nm,1.6s						
FID	**Port Fidalgo**	**79.42**	**26**	*e*P	**P**	**05 51 18.9**	**+3.6**
	comp=Z,68nm,1.4s						
SCM	**Sheep Creek Mo**	**79.59**	**24**	*e*P	**P**	**05 51 19.1**	**+2.8**
	comp=Z,91nm,1.3s						
EYAK	**Cordova Ski Ar**	**79.64**	**26**	*e*P	**P**	**05 51 20.4**	**+3.9**
	comp=Z,43nm,1.2s						
DIV	**Divide**	**79.90**	**25**	*e*P	**P**	**05 51 19.8**	**+1.8**
	comp=Z,78nm,1.4s						
MCK	**McKinley**	**79.92**	**22**	*e*P	**P**	**05 51 18.5**	**+0.5**
	comp=Z,124nm,1.3s						
MCK	**McKinley**	**79.92**	**22**	*e*P	**P**	**05 51 18.5**	**+0.5**
MCK				pmax	pmax		
	comp=Z,124nm,1.3s						
MLY	**Manley**	**79.95**	**21**	*e*P	**P**	**05 51 18.5**	**+0.3**
	comp=Z,112nm,1.6s						
KLU	**Klutina**	**80.01**	**25**	*e*P	**P**	**05 51 20.3**	**+1.7**
	comp=Z,100nm,1.3s						
MK01	**Makanchi Array**	**80.31**	**319**	*e*P	**P**	**05 51 19.4**	**-1.1**
MK31	**Makanchi Array**	**80.33**	**319**	*e*P	**P**	**05 51 20.3**	**-0.3**
MK31	**Makanchi Array**	**80.33**	**319**	*e*P	**P**	**05 51 20.3**	**-0.3**
MKAR	**Makanchi Array**	**80.33**	**319**	P	**P**	**05 51 19.4**	**-1.2**
	comp=Z,3.8nm,1.1s,baz=99,slow=6.3,SNR=16						
MKAR				LR	LR	06 28 07.9	
	comp=Z,216nm,19.1s,baz=88,slow=37						
MKAR	**Makanchi Array**	**80.33**	**319**	*e*P	**P**	**05 51 20.6**	**0.0**
	comp=Z,68nm,1.5s						
BMRM	**Bremner River**	**80.33**	**26**	*e*P	**P**	**05 51 22.6**	**+2.3**
	comp=Z,136nm,1.6s						
MAKZ	**Makanchi**	**80.54**	**319**	*e*P	**P**	**05 51 21.3**	**-0.4**
	comp=Z,34nm,1.6s						
MAKZ	**Makanchi**	**80.54**	**319**	*e*P	**P**	**05 51 21.3**	**-0.4**
MAKZ				pmax	pmax		
	comp=Z,34nm,1.6s						
WRH	**Wood River Hil**	**80.62**	**22**	*e*P	**P**	**05 51 22.1**	**+0.4**
	comp=Z,90nm,1.4s						
HARP	**HAARP**	**80.76**	**24**	*e*P	**P**	**05 51 26.2**	**+3.7**
	comp=Z,53nm,1.2s						
CCB	**Clear Creek Bu**	**80.81**	**22**	*e*P	**P**	**05 51 23.2**	**+0.5**
	comp=Z,92nm,1.5s						
MDM	**Murphy Dome**	**80.81**	**21**	*e*P	**P**	**05 51 23.0**	**+0.2**
	comp=Z,78nm,1.5s						
PAX	**Paxson**	**80.90**	**24**	*e*P	**P**	**05 51 26.2**	**+2.8**
	comp=Z,92nm,1.9s						
COLA	**College**	**80.91**	**22**	*e*P	**P**	**05 51 24.1**	**+0.9**
	comp=Z,100nm,1.4s						
COLA	**College**	**80.91**	**22**	*e*P	**P**	**05 51 24.1**	**+0.9**
COLA				pmax	pmax		
	comp=Z,100nm,1.4s						
ZALV	**Zalesovo Beam**	**81.02**	**326**	LR	LR	06 25 15.6	
	comp=Z,164nm,21.5s,baz=82,slow=34						
ILAR	**Eielson Array**	**81.22**	**22**	P	**P**	**05 51 24.2**	**-0.7**
	comp=Z,21nm,1.0s,baz=252,slow=5.4,SNR=52						
ILAR				LR	LR	06 23 58.3	
	comp=Z,92nm,18.9s,baz=260,slow=33						
ILB	**Eielson Array**	**81.22**	**22**	*e*P	**P**	**05 51 24.2**	**-0.7**
COLD	**Coldfoot**	**81.34**	**19**	*e*P	**P**	**05 51 27.6**	**+2.1**
	comp=Z,80nm,1.4s						
RIDG	**Independ'e Rid**	**81.51**	**23**	*e*P	**P**	**05 51 27.8**	**+1.3**
	comp=Z,152nm,1.6s						
DOT	**Dot Lake**	**81.77**	**24**	*e*P	**P**	**05 51 31.4**	**+3.4**
	comp=Z,98nm,1.4s						
SCRK	**Sand Creek**	**81.95**	**23**	*e*P	**P**	**05 51 29.6**	**+0.6**
	comp=Z,88nm,1.5s						
NVS	**Novosibirsk**	**82.19**	**327**	*e*P	**P**	**05 51 30.6**	**+0.4**
NVS				pmax	pmax		
	comp=Z,30nm,1.9s						
NVS				pmax	pmax		
	comp=E,19nm,1.6s						
TOLK	**Toolik Lake Re**	**82.31**	**18**	P	**P**	**05 51 32.9**	**+2.3**
	baz=238						
TOLK	**Toolik Lake Re**	**82.31**	**18**	*e*P	**P**	**05 51 32.5**	**+1.8**
	comp=E,58nm,1.4s						
FYU	**Fort Yukon**	**82.69**	**21**	*e*P	**P**	**05 51 34.0**	**+1.5**
	comp=E,50nm,1.1s						
KSH	**Kashi**	**83.09**	**310**	P	**P**	**05 51 37.5**	**+2.1**
KSH				sP	sP	05 51 55.6	+5.1
KSH				PP	**PP**	**05 54 51.8**	**+5.0**
KSH				SKS	**S**	**06 01 49.4**	**-3.6**
KSH				S	**SKSac**	**06 01 50.8**	**-4.3**
KSH				SS	**SS**	**06 07 20.1**	**+2.5**
KSH				pmax	pmax		
	comp=E,18nm,1.3s						
KSH				pmax	pmax		
	comp=E,140nm,3.8s						
SIT	**Sitka**	**83.27**	**31**	*e*P	**P**	**05 51 39.3**	**+3.6**
	comp=E,58nm,1.3s						
EGAK	**Eagle**	**83.41**	**23**	*e*P	**P**	**05 51 37.8**	**+1.5**
	comp=E,120nm,1.8s						
H02N1	**VAN INLET T-PH**	**83.69**	**36**	T	T	07 23 51.4	
	SNR=461						
KURK	**Kurchatov**	**83.71**	**322**	*e*P	**P**	**05 51 38.0**	**-0.2**
	comp=E,40nm,1.6s						
KURK	**Kurchatov**	**83.71**	**322**	*ce*P	**P**	**05 51 38.4**	**+0.2**
KURK				pmax	pmax		
	comp=Z,27nm,1.7s						
H02S1	**DAWSON INLET T**	**83.72**	**36**	T	T	07 23 53.7	
	SNR=2389						
KURBB	**Kurchatov Arra**	**83.75**	**322**	P	**P**	**05 51 37.2**	**-1.1**
	comp=Z,2.5nm,1.0s,baz=97,slow=4.8,SNR=18						
DAWY	**Dawson**	**83.83**	**24**	*e*P	**P**	**05 51 40.9**	**+2.3**
	comp=Z,52nm,1.4s						
BESE	**Bessie Mountai**	**83.98**	**30**	*e*P	**P**	**05 51 42.4**	**+2.9**

	comp=Z,115nm,1.4s						
SKAG	Skagway	84.02	29	*e*P	P	05 51 41.9	+2.4
	comp=Z,69nm,1.4s						
TKM2	Tokmak 2	84.02	314	P	P	05 51 40.3	0.0
	SNR=6.9						
KZA	Kyzart	84.11	313	P	P	05 51 41.1	+0.1
	SNR=14						
JIS	Juneau Island	84.12	30	*e*P	P	05 51 42.5	+2.4
	comp=Z,83nm,1.6s						
NIL	Nilore	84.24	304	*e*P	P	05 51 41.3	-0.1
	comp=Z,83nm,1.0s						
NIL	Nilore	84.24	304	*e*P	P	05 51 41.3	-0.1
NIL				pmax	pmax		
	comp=Z,83nm,1.0s						
WHY	Whitehorse	84.61	28	*e*P	P	05 51 44.9	+2.2
	comp=Z,66nm,1.5s						
WRAK	Wrangell Islan	84.65	32	*e*P	P	05 51 45.0	+2.2
	comp=Z,70nm,1.5s						
FRU	Bishkek	84.72	314	*e*P	P	05 51 43.5	-0.1
FRU				pmax	pmax		
	comp=Z,90nm,2.1s						
AAK	Ala-Archa	84.77	313	*e*P	P	05 51 43.9	-0.1
	comp=Z,38nm,1.8s						
AAK	Ala-Archa	84.77	313	*e*P	P	05 51 43.9	-0.1
AAK				pmax	pmax		
	comp=Z,38nm,1.8s						
USP	Ospenovka	84.88	314	P	P	05 51 44.9	+0.5
	SNR=11						
AML	Almayashu	85.26	313	P	P	05 51 47.1	+0.4
	SNR=18						
EKS2	Erkin-Say	85.29	313	P	P	05 51 47.4	+0.8
	SNR=8.6						
QSPA	South Pole Qui	85.86	180	P	P	05 51 47.6	-1.3
	comp=Z,6.3nm,0.9s,baz=330,slow=1.3,SNR=9.5						
QSPA				LR	LR	06 29 56.4	
	comp=Z,90nm,18.0s,baz=4.5,slow=36						
QSPA	South Pole Qui	85.86	180	*e*P	P	05 51 47.5	-1.4
	comp=Z,68nm,1.9s						
DLBC	Dease Lake	86.38	31	*e*P	P	05 51 53.3	+1.8
	comp=Z,84nm,1.5s						
MAW	Mawson	86.52	203	P	P	05 51 51.1	-0.9
	comp=Z,14nm,0.8s,baz=103,slow=7.0,SNR=26						
MAW	Mawson	86.52	203	P	P	05 51 51.0	-0.9
	baz=86,SNR=17						
MAW	Mawson	86.52	203	*e*P	P	05 51 51.0	-0.9
	comp=Z,25nm,1.8s						
INK	Inuvik	87.52	21	LR	LR	06 28 48.2	
	comp=Z,133nm,19.5s,baz=210,slow=34						
I03D	Drain, OR	87.79	46	P	P	05 52 00.1	+1.5
	baz=262						
M02C	Callahan	87.85	48	P	P	05 52 00.4	+1.4
	baz=263						
N02D	Trinity Center	87.91	49	P	P	05 52 00.4	+1.1
	baz=263						
HUMO	Hull Mountain	87.93	47	*e*P	P	05 52 00.9	+1.6
	comp=Z,46nm,1.1s						
NLWA	Neilton Lookou	87.94	42	*e*P	P	05 52 00.7	+1.4
	comp=Z,20nm,1.2s						
WDC	Whiskeytown Da	87.98	49	*e*P	P	05 52 02.3	+2.7
	comp=Z,17nm,1.4s						
YBH	Yreka Blue Hor	88.00	48	LR	LR	06 25 45.6	
	comp=Z,119nm,19.9s,baz=270,slow=32						
YBH	Yreka Blue Hor	88.00	48	*e*P	P	05 52 01.6	+1.8
	comp=Z,6.6nm,1.0s						
YBH	Yreka Blue Hor	88.00	48	*e*P	P	05 52 01.6	+1.8
YBH				pmax	pmax		
	comp=Z,7.0nm,1.0s						
E03A	Lebam	88.03	43	*e*P	P	05 52 01.9	+2.2
	comp=Z,42nm,1.1s						
G03D	McMinnville, O	88.05	45	P	P	05 52 01.5	+1.7
	baz=262						
I04A	Tendick Farm,	88.47	46	P	P	05 52 03.3	+1.4
	baz=263,SNR=7.8						
O03D	Paynes Creek	88.51	50	P	P	05 52 03.5	+1.3
	baz=264						
J04D	Umpqua Nationa	88.62	47	P	P	05 52 04.5	+1.6
	baz=263,SNR=8.1						
M04C	Macdoel	88.65	48	P	P	05 52 04.3	+1.4
	baz=263						
H04A	Detroit Lake	88.74	45	*e*P	P	05 52 04.2	+1.1
	comp=Z,22nm,1.3s						
K04D	Chiloquin, OR	88.81	47	P	P	05 52 04.9	+1.3
	baz=264						
A04D	Lummi Island	88.89	41	P	P	05 52 05.5	+1.8
	baz=263						
AFDM	Forest Hills D	89.00	51	*e*P	P	05 52 06.1	+1.6
	comp=Z,20nm,1.6s						
BVAR	Borovoye Array	89.16	323	P	P	05 52 03.7	-1.2
	comp=Z,3.7nm,0.8s,baz=84,slow=5.9,SNR=20						
BVAR				LR	LR	06 30 52.9	
	comp=Z,283nm,22.0s,baz=99,slow=35						
D05A	Enumclaw	89.18	43	*e*P	P	05 52 07.0	+1.9
	comp=Z,18nm,1.1s						
BRVK	Borovoye	89.23	323	*e*P	P	05 52 04.1	-1.0
	comp=Z,38nm,1.3s						
BRVK				*e*PP	PP	05 55 29.5	-6.4
BRVK	Borovoye	89.23	323	*ce*P	P	05 52 04.5	-0.7
BRVK				pmax	pmax		
	comp=Z,17nm,1.7s						
B05A	Bryant	89.24	42	P	P	05 52 06.9	+1.6
	baz=263						
PAGB	Antelope Grade	89.25	54	*e*P	P	05 52 08.2	+2.6
	comp=Z,30nm,1.3s						
J05D	Fort Rock, OR	89.26	47	P	P	05 52 07.1	+1.3
	baz=264,SNR=19						
I05D	Terrebonne, OR	89.30	46	P	P	05 52 07.3	+1.5
	baz=264,SNR=7.0						
CMB	Columbia Colle	89.36	52	*e*P	P	05 52 08.6	+2.4
	comp=Z,31nm,2.0s						
CMB	Columbia Colle	89.36	52	*e*P	P	05 52 08.6	+2.4
CMB				pmax	pmax		
	comp=Z,31nm,2.0s						
SMMC	Simmler	89.41	55	P	P	05 52 07.8	+1.3
	baz=265						
G05D	Wamic, OR	89.42	45	P	P	05 52 07.8	+1.5
	baz=264						
K05A	Summer Lake	89.45	47	*e*P	P	05 52 08.4	+1.7
	comp=Z,34nm,1.3s						
PKM	Mcpherson Peak	89.52	55	P	P	05 52 08.3	+1.1
	baz=265						
PINE	Pine Mountain	89.53	46	*e*P	P	05 52 08.4	+1.3
	comp=Z,40nm,1.1s						
BEKR	Beckworth	89.56	50	*e*P	P	05 52 08.6	+1.3
	comp=Z,18nm,1.6s						
SCZ2	Santa Cruz Isl	89.59	56	P	P	05 52 08.7	+1.3
	baz=265						
SNCC	San Nicolas Is	89.61	57	P	P	05 52 08.5	+1.1
	baz=265						
MOD	Modoc Plateau	89.80	48	*e*P	P	05 52 09.3	+1.0
	comp=Z,21nm,1.3s						
VCNR	Virginia City	90.05	51	*e*P	P	05 52 11.4	+1.8
	comp=Z,10nm,1.1s						
PNTR	Pine Nut	90.07	51	*e*P	P	05 52 12.3	+2.5
	comp=Z,48nm,1.9s						
LTY	Liberty	90.08	43	*e*P	P	05 52 10.3	+0.9
	comp=Z,14nm,1.4s						
WAKR	Walker	90.15	52	*e*P	P	05 52 12.3	+2.2
	comp=Z,36nm,1.8s						
VES	Vestal, Richgr	90.20	54	P	P	05 52 11.5	+1.4
	baz=265						
PAHR	Pah Rah Range	90.30	50	*e*P	P	05 52 12.2	+1.5
	comp=Z,24nm,1.5s						
YERR	Yerington	90.34	51	*e*P	P	05 52 12.6	+1.6
	comp=Z,10nm,1.2s						
ARVC	Arvin	90.34	55	P	P	05 52 12.3	+1.5
	baz=265						
MDPB	Devils Postpil	90.35	52	*e*P	P	05 52 12.8	+1.7
	comp=Z,27nm,1.5s						
OSI	Osito Audit: C	90.39	55	P	P	05 52 13.2	+2.1
	baz=265						
OMMB	Old Mammoth Mi	90.42	52	*e*P	P	05 52 13.3	+1.8
CIS	Catalina Islan	90.55	57	P	P	05 52 12.8	+0.9
	baz=266						
I07A	Izee	90.59	46	*e*P	P	05 52 13.5	+1.6
	comp=Z,18nm,1.2s						
ISA	Isabella, Lake	90.68	54	P	P	05 52 13.6	+1.1
	baz=266,SNR=6.8						
ISA	Isabella, Lake	90.68	54	*e*P	P	05 52 13.6	+1.1
	comp=Z,16nm,1.4s						
ISA	Isabella, Lake	90.68	54	*e*P	P	05 52 13.6	+1.1
ISA				pmax	pmax		
	comp=Z,16nm,1.4s						
DECC	Green Verdugo	90.68	56	P	P	05 52 13.6	+1.1
	baz=266						
HAWA	Hanford	90.78	44	*e*P	P	05 52 14.3	+1.7
	comp=Z,25nm,1.3s						
PASC	Pasadena Art C	90.80	56	*e*P	P	05 52 14.8	+1.8
	comp=Z,55nm,1.4s						
RYN	Ryan	90.87	52	*e*P	P	05 52 15.1	+1.7
	comp=Z,12nm,1.2s						
MWC	Mount Wilson	90.91	56	*e*P	P	05 52 15.6	+1.9
	comp=Z,57nm,1.1s						
MWC	Mount Wilson	90.91	56	*e*P	P	05 52 15.6	+1.9
MWC				pmax	pmax		
	comp=Z,57nm,1.1s						
TIN	Tinemaha, Big	90.98	53	P	P	05 52 15.3	+1.4
	baz=266						
EDW2	Edwards Air Fo	91.01	55	P	P	05 52 15.9	+1.9
	baz=266,SNR=8.6						
NV01	Mina Array Sit	91.03	52	*e*P	P	05 52 14.6	+0.3
NVAR	Mina Array Bea	91.03	52	P	P	05 52 15.2	+0.9
	comp=Z,4.3nm,0.9s,baz=254,slow=6.4,SNR=32						
NVAR				LR	LR	06 26 44.8	
	comp=Z,214nm,20.2s,baz=95,slow=31						
CWC	Cottonwood Cre	91.06	54	P	P	05 52 15.7	+1.4
	baz=266						
B08A	Colville Reser	91.08	42	*e*P	P	05 52 14.9	+0.9
	comp=Z,7.6nm,1.0s						
G08A	Pilot Rock	91.08	45	*e*P	P	05 52 15.4	+1.2
	comp=Z,29nm,1.3s						
WVOR	Wild Horse Val	91.08	48	*e*P	P	05 52 15.8	+1.5
	comp=Z,22nm,1.2s						
WVOR	Wild Horse Val	91.08	48	*e*P	P	05 52 15.8	+1.5
WVOR				pmax	pmax		
	comp=Z,22nm,1.2s						
E08A	Dider Farm, El	91.11	44	*e*P	P	05 52 16.0	+1.9
	comp=Z,37nm,1.4s						
NV11	Mina Array Sit	91.14	52	*e*P	P	05 52 16.4	+1.7
	comp=Z,1.7nm,1.3s						
KVN	Kaiserville	91.23	51	*e*P	P	05 52 16.6	+1.5
	comp=Z,13nm,1.2s						
KVN	Kaiserville	91.23	51	*e*P	P	05 52 16.7	+1.5
KVN				pmax	pmax		
	comp=Z,13nm,1.2s						
BFSC	Mount Baldy Ra	91.24	56	P	P	05 52 16.6	+1.4
	baz=266,SNR=6.8						
D08A	Wollman Farm,	91.25	43	*e*P	P	05 52 16.2	+1.5
	comp=Z,19nm,1.4s						
J08A	Circle Bar Ran	91.28	47	*e*P	P	05 52 16.1	+1.0
	comp=Z,22nm,1.1s						
LRMC	Laurel Mtn Rad	91.31	55	P	P	05 52 17.4	+1.9
	baz=266,SNR=6.0						
DAC	Darwin (Calif)	91.44	54	*e*P	P	05 52 17.3	+1.2
	comp=Z,41nm,1.3s						
DAC	Darwin (Calif)	91.44	54	*e*P	P	05 52 17.3	+1.2
DAC				pmax	pmax		
	comp=Z,41nm,1.3s						
MPMC	Manual Prospec	91.51	54	P	P	05 52 17.9	+1.4
	baz=266,SNR=16						
MURC	Murrieta	91.58	57	P	P	05 52 18.1	+1.5
	baz=266						
109C	Camp Elliot, M	91.61	57	P	P	05 52 18.9	+2.2
	baz=266						
CPE	Camp Elliot	91.61	57	*e*P	P	05 52 19.4	+2.7
	comp=Z,25nm,1.1s						
GRAC	Grapevine Rang	91.67	53	P	P	05 52 18.6	+1.6
	baz=266						
E09A	Wood Farm, Sta	91.74	44	*e*P	P	05 52 18.4	+1.3
	comp=Z,48nm,1.4s						
BAR	Barrett	91.96	58	*e*P	P	05 52 20.7	+2.3
	comp=Z,29nm,1.4s						
GSC	Goldstone, Bar	92.01	55	P	P	05 52 19.8	+1.2
	baz=266,SNR=9.5						
GSC	Goldstone, Bar	92.01	55	*e*P	P	05 52 19.9	+1.2
	comp=Z,21nm,1.3s						
GSC				*e*pP	pP	05 52 31.4	+1.6
GSC	Goldstone, Bar	92.01	55	*e*P	P	05 52 19.9	+1.2
GSC				*e**PP	pP	05 52 31.4	+1.6
GSC				pmax	pmax		
	comp=Z,21nm,1.3s						
FURC	Furnace Creek,	92.04	54	P	P	05 52 20.0	+1.4
	baz=266,SNR=22						
FRD	Ford Ranch, An	92.07	57	P	P	05 52 20.2	+1.3
	baz=266,SNR=8.0						
MONP2	Monument Peak	92.18	57	P	P	05 52 21.2	+1.5
	baz=267,SNR=8.9						
PFO	Pinyon Flats O	92.19	57	P	P	05 52 21.0	+1.4
	baz=267,SNR=8.6						
PFO	Pinyon Flats O	92.19	57	*e*P	P	05 52 21.6	+2.0
	comp=Z,19nm,1.1s						
XPFO	Piæon Flat	92.20	57	*e*P	P	05 52 21.6	+2.0
	comp=Z,17nm,1.1s						
BMO	Blue Mountains	92.22	45	*e*P	P	05 52 20.5	+1.1
	comp=Z,30nm,1.3s						
BMO	Blue Mountains	92.22	45	*e*P	P	05 52 20.5	+1.1
BMO				pmax	pmax		
	comp=Z,30nm,1.3s						
F10A	Beach Ranch, E	92.34	44	*e*P	P	05 52 20.9	+0.9
	comp=Z,21nm,1.1s						
HEC	Hector,Ludlow	92.37	55	P	P	05 52 21.8	+1.5
	baz=267,SNR=9.3						
IKP	In-Ko-Pah, Jac	92.43	58	P	P	05 52 22.0	+1.3
	baz=267						
SHOC	Shoshone, Teco	92.48	54	P	P	05 52 22.3	+1.6
	baz=267,SNR=18						
TPNV	Topopah Spring	92.56	53	P	P	05 52 22.6	+1.4
	baz=267,SNR=11						
TPNV	Topopah Spring	92.56	53	*e*P	P	05 52 22.8	+1.5
	comp=Z,32nm,1.4s						
TPNV	Topopah Spring	92.56	53	*e*P	P	05 52 22.8	+1.5
TPNV				pmax	pmax		
	comp=Z,33nm,1.4s						
BELC	Belle Mtn. Jos	92.60	56	P	P	05 52 22.9	+1.4
	baz=267,SNR=20						
SWSC	Sam W. Stewart	92.71	57	P	P	05 52 23.4	+1.6
	baz=267,SNR=10						
TUQ	Turquoise Moun	92.74	55	P	P	05 52 23.7	+1.6
	baz=267,SNR=5.6						
GMRC	Granite Mounta	92.92	55	P	P	05 52 24.2	+1.2
	baz=267,SNR=16						
BC3	Big Chuckawall	93.03	57	P	P	05 52 25.1	+1.7
	baz=267,SNR=22						
R11A	Troy Canyon, C	93.16	52	P	P	05 52 25.5	+1.5
	baz=267,SNR=15						
R11A	Troy Canyon, C	93.16	52	*e*P	P	05 52 24.9	+0.8
	comp=Z,12nm,1.3s						
MFID	Camas Ranch	93.20	47	*e*P	P	05 52 25.4	+1.3
	comp=Z,22nm,1.4s						
IRM	Iron Mountain	93.31	56	P	P	05 52 26.2	+1.5
	baz=267,SNR=7.3						
LDFC	Landfair	93.39	55	*e*P	P	05 52 27.2	+2.1
	comp=Z,100nm,1.4s						
SHPR	Sheep Range	93.41	54	*e*P	P	05 52 27.0	+1.8
	comp=Z,36nm,1.5s						
GLA	Glamis	93.53	57	P	P	05 52 27.6	+1.9
	baz=268,SNR=8.4						
GLA	Glamis	93.53	57	*e*P	P	05 52 28.6	+3.0
	comp=Z,41nm,1.2s						
Y12C	Blythe	93.81	57	P	P	05 52 28.5	+1.6
	baz=268						
Y12C	Blythe	93.81	57	*e*P	P	05 52 29.4	+2.5
	comp=Z,40nm,1.5s						
PDMCI	Parker Dam,Lak	94.15	56	P	P	05 52 29.7	+1.2
	baz=268						
HLID	Hailey	94.24	47	P	P	05 52 30.0	+1.1
	baz=268						
HLID	Hailey	94.24	47	*e*P	P	05 52 30.2	+1.3
	comp=Z,11nm,1.3s						
YKA	Yellowknife Ar	94.44	28	P	P	05 52 28.3	-0.8
	comp=Z,3.3nm,0.8s,baz=271,slow=4.6,SNR=8.1						
YKA				LR	LR	06 31 06.3	
	comp=Z,10nm,20.1s,baz=282,slow=33						
YKA	Yellowknife Ar	94.44	28	*i* P	P	05 52 30.2	+1.1
YKA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PSUT	Pine Spring	94.52	52	*e*P	P	05 52 32.0	+1.7
	comp=Z,13nm,1.2s						
SYO	Syowa Base	94.59	199⇓	*e*P	P	05 52 27.7	-2.0
SYO	Syowa Base	94.59	199⇑	*e*PcP	PcP	05 52 30.0	0.0
SYO	Syowa Base	94.59	199⇑	*e*sP	sP	05 52 44.0	-0.8
MSO	Missoula	94.65	43	P	P	05 52 31.7	+1.1
	baz=269						
WALA	Waterton Lakes	94.70	41	*e*P	P	05 52 32.5	+1.7
	comp=Z,28nm,1.2s						
CCUT	Cedar City	94.88	53	*e*P	P	05 52 34.2	+2.2
	comp=Z,13nm,1.2s						
LCMT	Little Creek M	94.97	53	*e*P	P	05 52 34.3	+2.0
	comp=Z,11nm,1.2s						
SZCU	Shurtz Canyon	95.10	53	*e*P	P	05 52 34.6	+1.5
	comp=Z,12nm,1.2s						
214A	Organ Pipe Nat	95.19	58	P	P	05 52 34.3	+1.0
	baz=268						
DUG	Dugway, Tooele	95.36	50	P	P	05 52 34.7	+0.7
	baz=269						
DUG	Dugway, Tooele	95.36	50	*e*P	P	05 52 36.1	+2.0
	comp=Z,5.1nm,1.1s						
DUG	Dugway, Tooele	95.36	50	*e*P	P	05 52 36.1	+2.0
DUG				pmax	pmax		
	comp=Z,5.0nm,1.1s						
MCMT	McKenzie Canyo	95.39	46	*e*P	P	05 52 35.4	+1.2
DLMT	Dillon	95.57	45	*e*P	P	05 52 36.0	+1.1
	comp=Z,7.6nm,1.3s						
LRM	Limekiln Ridge	95.67	45	*e*P	P	05 52 36.4	+0.9
PKCU	Pink Cliffs	95.72	53	*e*P	P	05 52 38.8	+2.8
	comp=Z,58nm,1.6s						
MTPU	Mount Pierson	95.83	52	*e*P	P	05 52 39.0	+2.5
	comp=Z,15nm,1.3s						
MSU	Marysvale	95.84	52	*e*P	P	05 52 38.5	+2.2
MSU	Marysvale	95.84	52	*e*P	P	05 52 38.5	+2.2
ARU	Arti	96.18	326	P	P	05 52 34.7	-2.5
ARU				*PP	pP	05 52 49.3	+0.9
ARU						05 56 29.5	
ARU				S	SKSac	06 03 06.9	-4.1
ARU				SS	SS	06 10 31.2	+5.1
ARU				MLR	MLR		
	comp=Z,284nm,21.0s						
BOZ	Bozeman (W)	96.25	45	P	P	05 52 39.2	+1.2
	baz=271						
BOZ	Bozeman (W)	96.25	45	*e*P	P	05 52 39.0	+1.0
	comp=Z,5.5nm,1.1s						
BOZ	Bozeman (W)	96.25	45	*e*P	P	05 52 39.0	+1.0
BOZ				pmax	pmax		
	comp=Z,6.0nm,1.1s						
JLU	Jordanelle	96.41	50	*e*P	P	05 52 40.2	+1.2
	comp=Z,6.3nm,1.4s						
H06N1	SOCORRO T-PHAS	96.43	72	T	T	07 39 40.2	
	SNR=11						
TMUT	Trail Mountain	96.59	51	*e*P	P	05 52 41.5	+1.6
	comp=Z,14nm,1.3s						
AKTO	Aktyubinsk	96.70	320	LR	LR	06 38 20.1	
	comp=Z,176nm,19.4s,baz=90,slow=37						
FXWY	Fox Creek	96.70	47	*e*P	P	05 52 40.7	+0.6
	comp=Z,4.9nm,1.2s						
YMR	Madison River	96.73	46	*e*P	P	05 52 42.3	+2.0
	comp=Z,6.3nm,1.1s						
TPAW	Teton Pass	96.76	47	*e*P	P	05 52 41.8	+1.3
	comp=Z,7.7nm,1.3s						
IMW	Indian Meadow	96.76	46	*e*P	P	05 52 41.7	+1.2
	comp=Z,7.0nm,1.4s						
GEYT	Alibeck	96.83	308	LR	LR	06 38 31.3	
	comp=Z,102nm,21.4s,baz=15,slow=37						
YFT	Old Faithful	96.83	46	*e*P	P	05 52 44.0	+3.3
	comp=Z,5.2nm,0.9s						
REDW	Red Top Meadow	96.83	47	*e*P	P	05 52 41.9	+1.1
	comp=Z,9.9nm,1.4s						
SNOW	Snow King Moun	96.90	47	*e*P	P	05 52 42.6	+1.4
	comp=Z,3.8nm,1.0s						
MOOW	Moose Ponds	96.90	47	*e*P	P	05 52 41.5	+0.4
	comp=Z,3.4nm,1.2s						
TUC	Tucson	96.92	58	P	P	05 52 42.0	+0.8
	baz=270						
TUC	Tucson	96.92	58	*e*P	P	05 52 44.1	+2.9
	comp=Z,5.4nm,1.3s						
TUC	Tucson	96.92	58	*e*P	P	05 52 44.1	+2.9
TUC				pmax	pmax		
	comp=Z,5.0nm,1.3s						
LOHW	Long Hollow	97.01	47	*e*P	Pdif	05 52 42.7	+1.0
	comp=Z,2.1nm,1.0s						
H17A	Grant Village	97.01	46	P	Pdif	05 52 42.6	+0.8
	baz=271						
H17A	Grant Village	97.01	46	*e*P	Pdif	05 52 44.1	+2.4
	comp=Z,4.3nm,1.0s						
LPIG	La Paz	97.22	66	LR	LR	06 33 52.9	
	comp=Z,296nm,18.0s,baz=240,slow=34						
P18A	Preston Nutter	97.34	51	*e*P	Pdif	05 52 44.8	+1.4
	comp=Z,8.3nm,1.4s						
EGMT	Eagleton	97.48	42	P	Pdif	05 52 44.0	+0.6
	baz=272						
EGMT	Eagleton	97.48	42	*e*P	Pdif	05 52 44.4	+0.9
	comp=Z,11nm,1.2s						
BW06	Boulder Array	97.79	48	P	Pdif	05 52 45.6	+0.4
	baz=272						
BW06	Boulder Array	97.79	48	*e*P	Pdif	05 52 45.3	+0.1
	comp=Z,6.0nm,1.1s						
PD31	Pinedale Array	97.79	48	*e*P	Pdif	05 52 45.4	+0.2
PDAR	Pinedale Array	97.79	48	P	P	05 52 44.6	-0.5
	comp=Z,4.6nm,1.1s,baz=255,slow=2.9,SNR=19						
PDAR				LR	LR	06 36 29.2	
	comp=Z,109nm,18.0s,baz=276,slow=35						
PDAR	Pinedale Array	97.79	48	*e*P	P	05 52 44.0	-1.1
W18A	Petrified Fore	97.79	55	P	Pdif	05 52 46.0	+0.7
	baz=270						
W18A	Petrified Fore	97.79	55	*e*P	Pdif	05 52 47.9	+2.5
	comp=Z,17nm,1.2s						
RLMT	Red Lodge	97.92	45	P	Pdif	05 52 46.3	+0.6
	baz=272						
RLMT	Red Lodge	97.92	45	*e*P	Pdif	05 52 47.2	+1.5
	comp=Z,8.2nm,1.4s						
PV09	Paradox Valley	98.22	52	*e*P	Pdif	05 52 49.3	+2.0
PV14	Lion Creek, Pa	98.31	52	*e*P	Pdif	05 52 49.5	+1.9
	comp=Z,18nm,1.3s						
PV23	Carpenter Ridg	98.32	52	*e*P	Pdif	05 52 49.3	+1.6
	comp=Z,15nm,1.1s						
PV19	Morning Glory	98.35	52	*e*P	Pdif	05 52 49.6	+1.9
	comp=Z,13nm,1.3s						
PV21	Cone Mtn., Par	98.35	52	*e*P	Pdif	05 52 49.2	+1.4
	comp=Z,7.4nm,1.2s						
PV17	East Wray Mesa	98.37	52	*e*P	Pdif	05 52 49.3	+1.5
	comp=Z,7.8nm,1.1s						
PV16	Nyswonger Mesa	98.40	52	*e*P	Pdif	05 52 49.4	+1.4
	comp=Z,12nm,1.3s						
PV18	Skein Mesa, Pa	98.41	52	*e*P	Pdif	05 52 49.3	+1.3
	comp=Z,26nm,2.0s						
PV11	David Mesa, Pa	98.43	52	*e*P	Pdif	05 52 50.1	+2.0
	comp=Z,13nm,1.2s						
PV03	Paradox Valley	98.45	52	*e*P	Pdif	05 52 49.9	+1.7
PV13	Radium Mtn., P	98.48	52	*e*P	Pdif	05 52 49.7	+1.4
	comp=Z,8.8nm,1.4s						
PV12	Saucer Basin,	98.49	52	*e*P	Pdif	05 52 49.8	+1.4
	comp=Z,15nm,1.1s						
PV22	Blue Mesa, Par	98.49	52	*e*P	Pdif	05 52 49.8	+1.4
	comp=Z,6.1nm,1.1s						
PV02	Paradox Valley	98.54	52	*e*P	Pdif	05 52 50.6	+1.9
	comp=Z,8.8nm,1.3s						
MVCO	Mesa Verde	98.76	53	P	Pdif	05 52 50.1	+0.5
	baz=272						
MVCO	Mesa Verde	98.76	53	*e*P	Pdif	05 52 51.6	+2.0
	comp=Z,9.4nm,1.2s						
O20A	White River Ci	98.87	50	P	Pdif	05 52 50.4	+0.4
	baz=272						
O20A	White River Ci	98.87	50	*e*P	Pdif	05 52 51.5	+1.6
	comp=Z,19nm,1.5s						
121A	Cookes Peak, D	99.45	58	P	Pdif	05 52 53.0	+0.3
	baz=271						
LAO	LASA Array	99.95	43	P	Pdif	05 52 55.8	+1.3
	baz=275						
K22A	Casper	100.03	48	P	Pdif	05 52 55.8	+0.7
	baz=274						
S22A	4UR Ranch, Cre	100.07	53	P	Pdif	05 52 56.5	+1.0
	baz=273						
ANMO	Albuquerque	100.49	55	P	Pdif	05 52 57.8	+0.5
	baz=272						
ANMO	Albuquerque	100.49	55	*i* P	Pdif	05 52 58.8	+1.5
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.8s						
N23A	Red Feather La	100.58	49	P	Pdif	05 52 58.2	+0.5
	baz=274						
SDCO	Great Sand Dun	101.12	52	P	Pdif	05 53 00.4	+0.2
	baz=274						
SDCO	Great Sand Dun	101.12	52	*e*Pdif	Pdif	05 53 01.7	+1.6
DGMT	Dagmar	101.15	42	P	Pdif	05 53 00.8	+1.1
	baz=277						
MNTX	Cornudas Mount	101.52	59	P	Pdif	05 53 02.3	+0.6
	baz=272						
RSSD	Black Hills	101.72	46	P	Pdif	05 53 03.5	+0.9
	baz=276						
T25A	Trinidad	102.02	53	P	Pdif	05 53 05.1	+1.0
	baz=274						
TXAR	Lajitas Array	103.10	61	Pdiff	Pdif	05 53 10.1	+1.2
	comp=Z,0.1nm,0.7s,baz=261,slow=4.5,SNR=2.6						
APA	Apatity	104.96	340⇓	*i*P	Pdif	05 53 19.5	+3.3
APA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BORG	Borgarnes	119.36	358⇑	*e*PKIKP	PKPdf	05 57 57.9	-0.3
BOSA	Boshof	120.68	233	PKP	PKPdf	05 58 01.0	-1.0
	comp=Z,5.1nm,1.1s,baz=250,slow=9.0,SNR=3.8						
DPC	Dobruska-Polom	121.60	329	AMS	AMS	06 52 30.0	
	comp=Z,200nm,20.0s						
UPC	Upice	121.66	330	AMS	AMS	06 53 00.0	
	comp=Z,200nm,19.5s						
PVCC	Panska Ves	122.37	330	AMS	AMS	06 51 10.0	
	comp=Z,200nm,19.0s						
CLL	Collm	122.62	332	*e*PKPdf	PKPdf	05 58 04.0	-0.9

CLL				*e*		05 58 08.0	
CLL				*e*PP	**PP**	**05 59 42.0**	**+0.2**
CLL				Lm	MLR	06 52 00.0	
	comp=Z,300nm,20.6s						
CLL	**Collm**	**122.62**	**332**	*e*PKIKP	**PKPdf**	**05 58 04.0**	**-0.9**
CLL				MLR	MLR		
	comp=Z,300nm,20.6s						
GOPC	**GO Pecny, Ondr**	**122.65**	**330**	AMS	AMS	06 50 30.0	
	comp=Z,200nm,18.5s						
PRU	**Pruhonice**	**122.72**	**330**	AMS	AMS	06 50 20.0	
	comp=Z,200nm,18.4s						
NKC	**Novy Kostel**	**123.60**	**331**	AMS	AMS	06 56 20.0	
	comp=Z,300nm,21.5s						
KHC	**Kasperske Hory**	**123.75**	**329**	*e*PKPdf	**PKPdf**	**05 58 07.9**	**+0.7**
KHC				AMS	AMS	06 51 30.0	
	comp=Z,200nm,22.8s						
KHC	**Kasperske Hory**	**123.75**	**329**	*e*PKIKP	**PKPdf**	**05 58 07.9**	**+0.7**
KHC				MLR	MLR		
	comp=Z,200nm,22.8s						
GERES	**GERESS Array B**	**123.87**	**329**	PKP	**PKPdf**	**05 58 07.2**	**-0.4**
	comp=Z,0.9nm,0.6s,baz=64,slow=3.1,SNR=8.6						
BFO	**Black Forest**	**126.87**	**332**	*c i*PKIKP	**PKPdf**	**05 58 13.3**	**+0.1**
MDT	**Midelt**	**144.91**	**327**	PKP	**PKPab**	**05 58 45.9**	**-0.4**
	comp=Z,3.0nm,1.0s,baz=43,slow=1.2,SNR=8.6						
TORD	**Torodi Ar. Bea**	**150.84**	**290**	PKPbc	**PKPbc**	**05 59 01.2**	**-1.6**
	baz=99,slow=2.8						
KOWA	**Kowa**	**155.64**	**297**	PKPab	**PKPab**	**05 59 29.5**	**-0.8**
	comp=Z,3.9nm,0.6s,baz=76,slow=5.1,SNR=10						
DBIC	**Dimbokro**	**158.40**	**278**	PKPab	**PKPab**	**05 59 43.0**	**+0.7**
	comp=Z,4.8nm,0.8s,baz=36,slow=3.8,SNR=5.3						

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*SOME **22** 05:54:18.2, 44.°68N×82.°13E, h5^{km}*

*NNC **22** 05:54:21.0±1.4, 44.°76N×82.°03E, h0^{km}, mb3.0, mpv2.6, Error ellipse: s-maj=19.7km s-min=5.5km az=118.0*

ISC 22 05:54:17.7±1.7**, 44.°67N**±0.°06×**82.°22E**±0.°09**, h10^{km}, n10, σ1.^{s}64**/20**, 6C-2D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJR	**Jarkent**	**1.77**	**260**	*e*P	**Pb**	**05 54 50.4**	**0.0**
	2.9nm,0.2s						
DJR				*e*S	**Sg**	**05 55 13.6**	**-1.1**
	8.6nm,0.2s						
MK31	**Makanchi Array**	**2.12**	**1**	⇑Pn	**Pb**	**05 54 56.1**	**-0.2**
	4.3nm,0.3s,baz=189,slow=16						
MK31				⇑Sn	**Sb**	**05 55 24.0**	**+1.3**
	5.7nm,0.5s,baz=186,slow=26,SNR=10						
KAPS	**Kapalarasan**	**2.12**	**288**	⇑*i*P	**Pb**	**05 54 56.3**	**0.0**
	2.6nm,0.2s						
KAPS				⇓*i*S	**Sg**	**05 55 24.2**	**-1.7**
	10nm,0.3s						
MAKZ	**Makanchi**	**2.14**	**356**	⇑Pn	**Pb**	**05 54 56.0**	**-0.7**
	1.2nm,0.4s						
MAKZ				⇓Sn	**Sb**	**05 55 24.1**	**+0.8**
	6.3nm,0.3s						
PDGK	**Podgornoye**	**2.38**	**237**	⇑Pn	**Pb**	**05 54 59.9**	**-0.9**
	1.1nm,0.4s						
PDGK				⇑Sn	**Sg**	**05 55 31.7**	**-2.7**
	15nm,0.6s						
SHLS	**Shalkode**	**2.50**	**234**	*e*P	**Pn**	**05 54 59.6**	**+1.0**
	9.6nm,0.2s						
SHLS				*e*S	**Sn**	**05 55 29.1**	**-0.2**
	23nm,0.2s						
KPKS	**Kokpek**	**2.82**	**246**	*e*P	**Pb**	**05 55 08.3**	**0.0**
	6.9nm,0.1s						
KPKS				*e*S	**Sb**	**05 55 44.0**	**+1.1**
	28nm,0.3s						
ARXS	**Arharly**	**3.18**	**263**	*e*P	**Pb**	**05 55 14.4**	**+0.1**
	1.5nm,0.3s						
ARXS				*e*S	**Sb**	**05 55 55.0**	**+1.8**
	11nm,0.5s						
CHKK	**Chushkaly**	**3.85**	**260**	*e*P	**Pb**	**05 55 27.5**	**+1.8**
	1.6nm,0.5s						
CHKK				*e*S	**Sg**	**05 56 17.2**	**-4.1**
	5.1nm,0.3s						
KTBS	**Karatobe**	**4.10**	**258**	*e*P	**Pb**	**05 55 30.3**	**+0.3**
	0.2nm,0.2s						
KTBS				*e*S	**Sb**	**05 56 21.8**	**+2.2**
	3.1nm,0.6s						

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*IDC **22** 05:59:53.8±2.0, 11.°27N×126.°39E, h0^{km}, mb3.9/7, mb1 4.0/7, mb1mx3.6/60, mbtmp3.9/7, Error ellipse: s-maj=195.3km s-min=18.2km az=66.0*

*ISCJB **22** 05:59:55.4±1.5, 11.°24N±0.°05×126.°34E±0.°06, h23^{km}±10^{km}, mb3.9/7, Error ellipse: s-maj=9.9km s-min=7.5km az=149.8*

*MAN **22** 05:59:57.5, 11.°24N×126.°24E, h22^{km}, mb4.9, ML3.8, MS3.8*

ISC 22 05:59:55.9±2.6**, 11.°19N**±0.°05×**126.°26E**±0.°08**, h12^{km}**±16^{km}**, n16, σ1.^{s}62**/24**, mb3.9**/7**, 2D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	**Borongan**	**0.90**	**297**	*e*P	**Pb**	**06 00 13.7**	**+0.2**
BESP				*e*S	**Sg**	**06 00 24.5**	**-0.6**
PLP	**Palo**	**1.26**	**269**	⇓*e*P	**Pn**	**06 00 17.9**	**-1.5**
PLP				*i* S	**Sb**	**06 00 36.3**	**+0.5**
SCPH	**Surigao**	**1.60**	**209**	*e*P	**Pn**	**06 00 22.3**	**-1.6**
SCPH				*e*S	**Sn**	**06 00 40.8**	**-3.8**
OCLP	**Ormoc**	**1.63**	**265**	*e*P	**Pn**	**06 00 25.3**	**+0.8**
OCLP				*e*S	**Sn**	**06 00 45.1**	**-0.2**
MSLP	**Maasin**	**1.73**	**233**	*e*P	**Pn**	**06 00 26.1**	**+0.2**
MSLP				*e*S	**Sn**	**06 00 49.3**	**+1.3**
CNP	**Catarman**	**2.04**	**310**	*e*P	**Pn**	**06 00 29.9**	**-0.1**
CNP				*e*S	**Sn**	**06 00 54.9**	**-0.6**
BUTP	**Butuan**	**2.30**	**196**	*e*P	**Pn**	**06 00 33.3**	**-0.4**
BUTP				*e*S	**Sn**	**06 01 05.3**	**+3.4**
RCP	**Roxas**	**3.47**	**276**	⇓*e*P	**Pn**	**06 00 51.7**	**+1.9**
BUKP	**Musuan**	**3.50**	**200**	*e*P	**Pn**	**06 00 52.5**	**+2.2**
BUKP				*e*S	**Sn**	**06 01 29.2**	**-2.5**
WRA	**Warramunga Arr**	**31.95**	**166**	P	**P**	**06 06 20.8**	**-1.0**
	0.5nm,0.5s,baz=346,slow=9.3,SNR=5.2						
ASAR	**Alice Springs**	**35.44**	**168**	P	**P**	**06 06 52.5**	**+0.2**
	0.3nm,0.4s,baz=357,slow=7.3,SNR=7.4						
STKA	**Stephens Creek**	**45.27**	**162**	P	**P**	**06 08 14.7**	**+1.1**
	1.6nm,0.8s,baz=330,slow=8.1,SNR=3.1						
MKAR	**Makanchi Array**	**51.29**	**322**	P	**P**	**06 09 00.1**	**+0.1**
	0.8nm,0.6s,baz=116,slow=8.6,SNR=7.2						
KURBB	**Kurchatov Arra**	**55.31**	**325**	P	**P**	**06 09 29.4**	**0.0**
	0.6nm,0.4s,baz=126,slow=7.1,SNR=6.4						
BVAR	**Borovoye Array**	**60.91**	**325**	P	**P**	**06 10 08.4**	**-0.2**
	0.6nm,0.7s,baz=142,slow=7.3,SNR=3.6						
FINES	**FINESS Array B**	**85.08**	**332**	P	**P**	**06 12 30.8**	**-0.7**
	4.0nm,1.1s,baz=74,slow=6.9,SNR=4.7						

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*SOME **22** 06:02:15.2, 42.°12N×83.°27E, h5^{km}*

*NNC **22** 06:02:19.4±4.5, 42.°23N×82.°99E, h0^{km}, mb3.3, mpv2.9, Error ellipse: s-maj=38.1km s-min=18.6km az=152.0*

ISC 22 06:02:11.2±4.1**, 41.°9N**±0.°2×**83.°4E**±0.°1**, h10^{km}, n7, σ2.^{s}58**/11**, 5C-2D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	**Shalkode**	**3.15**	**295**	*e*P	**Pb**	**06 03 05.9**	**-1.5**
	28nm,0.4s						
SHLS				*e*S	**Sn**	**06 03 42.0**	**+3.2**
	43nm,0.4s						
PDGK	**Podgornoye**	**3.20**	**298**	⇑Pg	**Pb**	**06 03 09.6**	**+1.3**
	4.4nm,0.6s						
PDGK				⇓Lg	Lg	06 03 50.4	
	24nm,0.5s						
UZB	**Uzynbulak**	**3.45**	**293**	*e*P	**Pb**	**06 03 13.6**	**+1.1**
	12nm,0.3s						
UZB				*e*S	**Sb**	**06 03 55.6**	**+1.0**
	15nm,0.4s						
DJR	**Jarkent**	**3.58**	**314**	*e*P	**Pb**	**06 03 15.3**	**+0.7**
	2.9nm,0.4s						
DJR				*e*S	**Sb**	**06 03 58.8**	**+0.7**
	12nm,0.5s						
SATY	**Saty**	**3.85**	**289**	*e*P	**Pg**	**06 03 24.1**	**-0.9**
	10.0nm,0.2s						
SATY				*e*S	**Sg**	**06 04 12.8**	**-2.2**
	25nm,0.2s						
MK31	**Makanchi Array**	**4.95**	**351**	⇑Pn	Pn	06 03 31.6	+5.9
	0.2nm,0.3s,baz=328,slow=46,SNR=17						
MK31				⇑Pg	**Pg**	**06 03 42.0**	**-4.0**
	2.2nm,0.3s,baz=171,slow=14,SNR=50						
MK31				⇑Lg	Lg	06 04 44.6	
	8.7nm,0.6s,baz=177,slow=27,SNR=7.4						
MAKZ	**Makanchi**	**5.00**	**349**	⇓Pg	**Pb**	**06 03 42.7**	**+3.7**
	1.8nm,0.7s						
MAKZ				⇑Lg	Lg	06 04 46.4	
	4.3nm,0.6s						

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*IDC **22** 06:07:13.3±0.7, 4.°81S×149.°78E, h0^{km}, mb4.1/14, mb1 4.3/15, mb1mx4.1/42, mbtmp4.1/15, ML2.4/1, MS3.7/16, Ms1 3.7/16, ms1mx3.5/39, Error ellipse: s-maj=22.3km s-min=12.9km az=94.0*

*NEIC **22** 06:07:15.1±0.5, 4.°82S×149.°67E, h10^{km}, mb4.6/2, Error ellipse: s-maj=13.1km s-min=10.5km az=78.0*

*ISCJB **22** 06:07:16.8±0.5, 4.°85S±0.°06×149.°70E±0.°08, h33^{km}, mb4.1/16, MS3.6/14, Error ellipse: s-maj=12.1km s-min=8.2km az=13.3*

ISC 22 06:07:18.8±0.6**, 4.°80S**±0.°08×**149.°8E**±0.°1**, h35^{km}, n29, σ1.^{s}53**/21**, mb4.2**/16**, MS3.6**/14**, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.25**	**209**	Pn	**Pn**	**06 08 35.1**	**+0.2**
	8.5nm,0.3s,baz=43,slow=5.5,SNR=18						
PMG				Sn	**Sn**	**06 09 34.2**	**-0.1**
	19nm,0.3s,baz=316,slow=19,SNR=11						
PMG				LR	LR	06 10 47.0	
	comp=Z,850nm,20.0s,baz=56,slow=41						
HNR	**Honiara**	**11.11**	**115**	*e*Pn	**Pn**	**06 09 56.1**	**+0.8**
	15nm,0.3s						
GUMO	**Guam**	**18.90**	**345**	LR	LR	06 17 16.9	
	comp=Z,250nm,21.7s,baz=152,slow=32						
WRAB	**Tennant Creek**	**21.25**	**224**	*e*P	**P**	**06 11 59.8**	**-2.3**
	28nm,0.9s						
WRA	**Warramunga Arr**	**21.26**	**224**	P	**P**	**06 12 00.1**	**-2.1**
	21nm,0.9s,baz=48,slow=11,SNR=77						
DZM	**Mont Dzumac**	**23.58**	**138**	P	**P**	**06 12 26.1**	**-0.5**
	8.3nm,0.6s,baz=182,slow=10,SNR=9.5						
DZM				LR	LR	06 20 09.1	
	comp=Z,220nm,21.0s,baz=296,slow=33						
ASAR	**Alice Springs**	**24.20**	**218**	P	**P**	**06 12 30.8**	**-1.5**
	3.3nm,0.6s,baz=57,slow=8.2,SNR=63						
ASAR				S	**S**	**06 16 53.1**	**+4.6**
	1.5nm,1.0s,baz=34,slow=17,SNR=5.6						
ASAR				LR	LR	06 21 11.9	
	comp=Z,255nm,21.5s,baz=43,slow=35						
DAV	**Davao City (W)**	**26.86**	**296**	LR	LR	06 23 15.5	
	comp=Z,114nm,19.2s,baz=330,slow=36						
STKA	**Stephens Creek**	**28.00**	**195**	P	**P**	**06 13 06.9**	**+0.4**
	1.5nm,0.7s,baz=19,slow=13,SNR=3.6						
STKA				LR	LR	06 24 13.9	
	comp=Z,273nm,19.4s,baz=21,slow=36						
JOW	**Kunigami**	**37.69**	**328**	LR	LR	06 26 36.1	
	comp=Z,125nm,22.0s,baz=133,slow=31						
JHJ	**Hachijo jima 2**	**38.88**	**347**	LR	LR	06 27 19.3	
	comp=Z,157nm,21.9s,baz=282,slow=31						
NWAO	**Narrogin (SRO)**	**41.27**	**223**	LR	LR	06 33 07.9	
	comp=Z,238nm,18.8s,baz=298,slow=38						
JNU	**Nakatsue**	**41.74**	**336**	P	**P**	**06 15 05.0**	**+0.3**
	6.5nm,0.9s,baz=152,slow=8.3,SNR=3.8						
JNU				LR	LR	06 31 51.7	
	comp=Z,41nm,18.6s,baz=124,slow=35						
MJAR	**Matsushiro Arr**	**42.52**	**346**	LR	LR	06 31 49.4	
	comp=Z,47nm,18.0s,baz=130,slow=35						
RPZ	**Rata Peaks**	**43.08**	**157**	P	**P**	**06 15 15.8**	**+0.4**
	9.1nm,0.9s,baz=16,slow=15,SNR=3.6						
ASAJ	**Asahikawa**	**49.12**	**353**	LR	LR	06 34 38.0	
	comp=Z,78nm,21.9s,baz=158,slow=34						
USRK	**Ussuriysk Ar.**	**51.33**	**344**	LR	LR	06 34 49.3	
	comp=Z,56nm,21.5s,baz=140,slow=32						
CMAR	**Chiang Mai Arr**	**55.14**	**296**	P	**P**	**06 16 48.2**	**0.0**
	0.9nm,0.5s,baz=120,slow=5.3,SNR=6.7						
CMAR				LR	LR	06 38 02.1	
	comp=Z,19nm,21.3s,baz=198,slow=34						
PETK	**Petropavlovsk-**	**58.08**	**6**	LR	LR	06 37 33.4	
	comp=Z,85nm,21.6s,baz=197,slow=31						
SONM	**Songino Array**	**64.74**	**329**	P	**P**	**06 17 55.2**	**+1.5**
	0.3nm,0.4s,baz=151,slow=7.7,SNR=2.9						
SONM				LR	LR	06 45 26.5	
	comp=Z,48nm,22.0s,baz=146,slow=35						
VNDA	**Vanda**	**72.96**	**177**	P	**P**	**06 18 43.5**	**-0.7**
	0.7nm,0.6s,baz=328,slow=5.5,SNR=3.8						
MKAR	**Makanchi Array**	**78.34**	**320**	P	**P**	**06 19 16.3**	**+0.7**
	0.3nm,0.8s,baz=103,slow=4.6,SNR=2.5						
KURK	**Kurchatov**	**81.91**	**323**	P	**P**	**06 19 34.9**	**+0.2**
KURBB	**Kurchatov Arra**	**81.94**	**322**	P	**P**	**06 19 34.9**	**+0.1**
	0.4nm,0.7s,baz=121,slow=4.7,SNR=3.1						
ILAR	**Eielson Array**	**83.31**	**23**	P	**P**	**06 19 41.5**	**-0.2**
	2.0nm,0.8s,baz=252,slow=5.4,SNR=15						
QSPA	**South Pole Qui**	**85.16**	**180**	P	**P**	**06 19 50.4**	**-1.0**
	2.3nm,0.8s,baz=283,slow=5.4,SNR=7.6						
EGAK	**Eagle**	**85.56**	**24**	*e*P	P	06 19 59.0	+5.9
	4.9nm,1.0s						
BVAR	**Borovoye Array**	**87.43**	**324**	P	**P**	**06 20 01.0**	**-1.6**
	0.4nm,0.4s,baz=90,slow=3.2,SNR=3.0						
TORD	**Torodi Ar. Bea**	**147.41**	**287**	PKPbc	**PKPbc**	**06 26 58.9**	**-1.2**
	baz=83,slow=4.5						

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*ISCJB **22** 06:17:47.3±0.5, 34.°93N±0.°02×25.°86E±0.°02, h13^{km}±3^{km}, mb3.9/15, MS3.8/1, Error ellipse: s-maj=4.1km s-min=2.5km az=4.7*

*ATH **22** 06:17:47.0, 35.°00N×25.°84E, h20^{km}, ML3.7/16, Error ellipse: s-maj=1.4km s-min=0.9km az=169.0*

*THE **22** 06:17:48.3, 34.°97N×25.°79E, h0^{km}±1^{km}, ML3.7/7, Error ellipse: s-maj=2.5km s-min=1.0km az=137.0*

*CSEM **22** 06:17:48.2±0.2, 35.°00N×25.°82E, h5^{km}, ML3.7, Error ellipse: s-maj=4.7km s-min=2.0km az=175.0*

*ISK **22** 06:17:50.7, 35.°19N×25.°99E, h11^{km}, ML3.8/11*

*IDC **22** 06:17:53.0±1.9, 34.°90N×25.°84E, h54^{km}±19^{km}, mb3.8/15, mb1 3.9/23, mb1mx3.7/60, mbtmp4.0/23, ML3.8/8, MS3.2/3, Ms1 3.2/3, ms1mx2.6/63, Error ellipse: s-maj=17.7km s-min=13.0km az=175.0*

*DDA **22** 06:18:09.9, 35.°88N×27.°37E, h38^{km}, Md3.4*

ISC 22 06:17:47.6±1.1**, 34.°98N**±0.°03×**25.°85E**±0.°02**, h8^{km}**±7^{km}**, n210, σ1.^{s}27**/264**, mb4.0**/15**, 6C-3D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZKR	**Zakros**	**0.33**	**66**	P	**Pg**	**06 17 53.6**	**-0.4**
ZKR				S	**Sb**	**06 18 00.6**	**-0.6**
ZKR				AML	AML	06 18 03.9	
ZKR				AML	AML	06 18 04.0	
	comp=N,53430µm,0.5s						
ZKR	**Zakros**	**0.33**	**66**	P	**Pg**	**06 17 53.9**	**-0.2**
ZKR				S	**Sg**	**06 18 00.0**	**+1.6**
NPS	**Neapolis**	**0.34**	**325**	P	**Pg**	**06 17 54.7**	**+0.3**
NPS				S	**Sg**	**06 17 59.0**	**+0.1**
NPS	**Neapolis**	**0.34**	**325**	P	**Pg**	**06 17 54.2**	**-0.2**
NPS				S	**Sb**	**06 18 01.0**	**-0.6**
NPS	**Neapolis**	**0.34**	**325**	P	**Pg**	**06 17 54.2**	**-0.2**
NPS				S	**Sg**	**06 17 59.0**	**+0.1**
LAST	**Lasithi**	**0.35**	**301**	P	**Pg**	**06 17 54.3**	**-0.3**
LAST				S	**Sg**	**06 17 59.6**	**+0.2**
LAST				AML	AML	06 18 00.7	
	comp=N,37607µm,0.5s						
LAST				AML	AML	06 18 06.9	
	comp=E,19623µm,1.0s						
LAST	**Lasithi**	**0.35**	**301**	P	**Pg**	**06 17 54.2**	**-0.4**
LAST				S	**Sg**	**06 18 00.4**	**+1.1**
LAST	**Lasithi**	**0.35**	**301**	P	**Pg**	**06 17 54.3**	**-0.3**
LAST				S	**Sg**	**06 17 59.5**	**+0.2**
IACM	**Heraklion**	**0.72**	**297**	P	**Pg**	**06 18 01.4**	**0.0**
IACM				S	**Sb**	**06 18 11.5**	**-0.9**
IACM	**Heraklion**	**0.72**	**297**	P	**Pg**	**06 18 01.4**	**0.0**
IACM				S	**Sb**	**06 18 11.5**	**-0.9**
KSTL	**Kastelli Herak**	**0.72**	**297**	P	Pg	06 17 56.4	-5.0
KSTL				S	**Sg**	**06 18 04.3**	**-6.4**
KSTL	**Kastelli Herak**	**0.72**	**297**	P	Pg	06 17 56.4	-5.0
SIVA	**Sivas**	**0.86**	**273**	P	**Pg**	**06 18 02.2**	**-1.8**
SIVA				S	**Sg**	**06 18 14.7**	**-0.4**
SIVA				AML	AML	06 18 22.2	
	comp=N,16151µm,0.6s						
SIVA				AML	AML	06 18 23.3	
	comp=E,13652µm,0.6s						
SIVA	**Sivas**	**0.86**	**273**	P	**Pg**	**06 18 02.7**	**-1.3**
SIVA				S	**Sb**	**06 18 17.2**	**+0.9**
SIVA	**Sivas**	**0.86**	**273**	P	**Pg**	**06 18 02.7**	**-1.3**
SIVA				S	**Sg**	**06 18 14.9**	**-0.3**
PRNS	**Prines Rethymn**	**1.17**	**290**	P	**Pb**	**06 18 09.7**	**-0.4**
PRNS				S	**Sn**	**06 18 27.7**	**+1.3**
PRNS	**Prines Rethymn**	**1.17**	**290**	P	**Pb**	**06 18 09.7**	**-0.4**
PRNS				S	**Sn**	**06 18 27.7**	**+1.3**
KARP	**Karpathos**	**1.21**	**62**	PG	**Pn**	**06 18 10.7**	**-0.2**
KARP	**Karpathos**	**1.21**	**62**	P	**Pn**	**06 18 10.3**	**-0.7**
KARP				S	**Sn**	**06 18 28.0**	**+0.5**
KARP				AML	AML	06 18 38.3	
	comp=E,8070µm,0.7s						
KARP				AML	AML	06 18 42.1	
	comp=N,5537µm,0.6s						
KARP	**Karpathos**	**1.21**	**62**	P	**Pn**	**06 18 09.6**	**-1.3**
KARP	**Karpathos**	**1.21**	**62**	P	**Pn**	**06 18 10.2**	**-0.7**
KARP	**Karpathos**	**1.21**	**62**	*e*Pg	**Pn**	**06 18 10.7**	**-0.2**
KARP				S	**Sg**	**06 18 27.4**	**+0.8**
VAM	**Vamos**	**1.42**	**288**	P	**Pn**	**06 18 12.7**	**-1.0**
VAM				S	**Sn**	**06 18 31.8**	**-0.8**
VAM				AML	AML	06 18 39.7	
	comp=E,3735µm,0.7s						
VAM				AML	AML	06 18 43.6	
	comp=N,5460µm,0.5s						
VAM	**Vamos**	**1.42**	**288**	P	**Pn**	**06 18 13.0**	**-0.6**
VAM				S	**Sg**	**06 18 32.7**	**-0.5**
VAM	**Vamos**	**1.42**	**288**	P	**Pn**	**06 18 13.1**	**-0.6**
VAM				S	**Sb**	**06 18 32.3**	**-0.2**
THR6	**Thira Island,**	**1.42**	**345**	P	**Pn**	**06 18 14.0**	**+0.3**
THR6	**Thira Island,**	**1.42**	**345**	P	**Pn**	**06 18 14.1**	**+0.3**
THR6	**Thira Island,**	**1.42**	**345**	P	**Pn**	**06 18 14.1**	**+0.3**
SANT	**Santorini**	**1.42**	**347**	PN	**Pb**	**06 18 14.8**	**+0.4**
SANT				SN	**Sn**	**06 18 32.4**	**-0.4**
SANT	**Santorini**	**1.42**	**347**	P	**Pn**	**06 18 12.5**	**-1.4**
SANT				S	**Sg**	**06 18 34.1**	**+0.7**
SANT				AML	AML	06 18 36.7	
	comp=E,16566µm,0.7s						
SANT				AML	AML	06 18 38.1	
	comp=N,4880µm,0.3s						
SANT	**Santorini**	**1.42**	**347**	⇑*i*P	**Pg**	**06 18 15.4**	**+0.5**
SANT	**Santorini**	**1.42**	**347**	S	**Sg**	**06 18 32.9**	**-0.5**
SANT	**Santorini**	**1.42**	**347**	P	**Pg**	**06 18 14.9**	**0.0**
SANT	**Santorini**	**1.42**	**347**	*e*Pn	**Pb**	**06 18 14.8**	**+0.4**
SANT				*e*Sn	**Sn**	**06 18 32.4**	**-0.4**
SANT				S	**Sg**	**06 18 33.5**	**+0.1**
SAP1	**Santorini-Akro**	**1.42**	**345**	P	**Pn**	**06 18 13.6**	**-0.2**
SAP1				S	**Sb**	**06 18 32.8**	**+0.1**
SAP1	**Santorini-Akro**	**1.42**	**345**	P	**Pn**	**06 18 14.0**	**+0.2**
SAP1	**Santorini-Akro**	**1.42**	**345**	P	**Pn**	**06 18 14.0**	**+0.2**
THR9	**Santorini-Faro**	**1.43**	**344**	P	**Pb**	**06 18 14.4**	**-0.1**
THR9	**Santorini-Faro**	**1.43**	**344**	P	**Pb**	**06 18 14.3**	**-0.2**
THR9	**Santorini-Faro**	**1.43**	**344**	P	**Pn**	**06 18 14.1**	**+0.2**
THT1	**Athinios (Pele**	**1.44**	**346**	P	**Pn**	**06 18 14.2**	**+0.2**
THT1	**Athinios (Pele**	**1.44**	**346**	P	**Pb**	**06 18 14.7**	**0.0**
THT1				S	**Sg**	**06 18 34.8**	**+0.8**
THT1	**Athinios (Pele**	**1.44**	**346**	P	**Pn**	**06 18 14.1**	**+0.1**
THT1				S	**Sg**	**06 18 34.8**	**+0.8**
GVDS	**Gavdos**	**1.45**	**265**	P	**Pb**	**06 18 15.1**	**+0.2**
GVDS	**Gavdos**	**1.45**	**265**	P	**Pb**	**06 18 15.1**	**+0.2**
THR8	**Santorini-Mono**	**1.46**	**348**	P	**Pn**	**06 18 14.2**	**0.0**
THR8	**Santorini-Mono**	**1.46**	**348**	P	**Pn**	**06 18 14.2**	**0.0**
GVD	**Gavdhos**	**1.46**	**265**	P	**Pg**	**06 18 15.6**	**0.0**
GVD				S	**Sg**	**06 18 35.5**	**+1.1**
GVD				AML	AML	06 18 47.9	
	comp=E,3918µm,1.0s						
GVD				AML	AML	06 18 50.0	
	comp=N,3466µm,0.7s						
GVD	**Gavdhos**	**1.46**	**265**	P	**Pn**	**06 18 14.4**	**+0.2**
GVD				S	**Sn**	**06 18 33.3**	**-0.2**
GVD	**Gavdhos**	**1.46**	**265**	P	**Pn**	**06 18 14.4**	**+0.2**
GVD				S	**Sn**	**06 18 33.3**	**-0.2**
STAX	**Taxiarchis Har**	**1.46**	**346**	P	**Pn**	**06 18 14.5**	**+0.3**
STAX				S	**Sn**	**06 18 32.4**	**-1.2**
STAX				AML	AML	06 18 40.7	
	comp=E,8127µm,0.7s						
STAX				AML	AML	06 18 44.9	
	comp=N,4357µm,0.6s						
STAX	**Taxiarchis Har**	**1.46**	**346**	P	**Pn**	**06 18 14.6**	**+0.3**
STAX	**Taxiarchis Har**	**1.46**	**346**	P	**Pn**	**06 18 14.6**	**+0.3**
STAX				S	**Sn**	**06 18 33.2**	**-0.4**
SAP2K	**Karterados**	**1.47**	**347**	P	**Pn**	**06 18 13.8**	**-0.6**
SAP2K				S	**Sb**	**06 18 33.6**	**-0.3**
THR3	**Thira Island,**	**1.47**	**346**	P	**Pn**	**06 18 13.7**	**-0.7**
THR3	**Thira Island,**	**1.47**	**346**	P	**Pb**	**06 18 15.1**	**-0.1**
THR3	**Thira Island,**	**1.47**	**346**	P	**Pb**	**06 18 15.1**	**-0.1**
THR7	**Fira-Santorini**	**1.48**	**347**	P	**Pn**	**06 18 14.0**	**-0.5**
THR7	**Fira-Santorini**	**1.48**	**347**	P	**Pn**	**06 18 14.2**	**-0.4**
THR5	**Thira Island,**	**1.49**	**344**	P	**Pn**	**06 18 14.9**	**+0.2**
THR5	**Thira Island,**	**1.49**	**344**	P	**Pb**	**06 18 15.6**	**0.0**
THR5	**Thira Island,**	**1.49**	**344**	P	**Pn**	**06 18 14.7**	**0.0**
CHAN	**Chania**	**1.57**	**290**	P	**Pn**	**06 18 16.1**	**+0.3**
CHAN	**Chania**	**1.57**	**290**	P	**Pn**	**06 18 16.1**	**+0.3**
IMMV	**Iera Moni Meta**	**1.60**	**288**	P	**Pn**	**06 18 15.9**	**-0.3**
IMMV				S	**Sn**	**06 18 36.5**	**-0.7**
IMMV				AML	AML	06 18 44.8	
	comp=N,3784µm,0.8s						
IMMV				AML	AML	06 18 54.5	
	comp=E,4884µm,0.7s						
IMMV	**Iera Moni Meta**	**1.60**	**288**	P	**Pn**	**06 18 16.6**	**+0.3**
IMMV	**Iera Moni Meta**	**1.60**	**288**	P	**Pn**	**06 18 16.6**	**+0.3**
IMMV				S	**Sn**	**06 18 37.0**	**-0.2**
IOSP	**Ios island**	**1.80**	**345**	P	**Pb**	**06 18 20.4**	**-0.4**
IOSP				S	**Sn**	**06 18 41.4**	**-0.6**
IOSP				AML	AML	06 18 47.2	
	comp=E,2989µm,0.4s						
IOSP				AML	AML	06 18 49.3	
	comp=N,3069µm,0.3s						
IOSP	**Ios island**	**1.80**	**345**	P	**Pn**	**06 18 19.5**	**+0.6**
IOSP	**Ios island**	**1.80**	**345**	P	**Pn**	**06 18 19.5**	**+0.6**
IOSP				S	**Sn**	**06 18 41.8**	**-0.2**
AMGA	**Amorgos Island**	**1.85**	**1**	P	**Pn**	**06 18 19.4**	**-0.3**
AMGA				S	**Sb**	**06 18 44.1**	**-0.8**
AMGA				AML	AML	06 18 50.3	
	comp=N,2821µm,0.4s						
AMGA				AML	AML	06 18 51.0	
	comp=E,2563µm,0.5s						
AMGA	**Amorgos Island**	**1.85**	**1**	P	**Pn**	**06 18 19.5**	**-0.1**
AMGA				S	**Sn**	**06 18 43.8**	**+0.6**
NISR	**Nisiros**	**1.93**	**32**	P	**Pn**	**06 18 20.5**	**-0.2**
NISR	**Nisiros**	**1.93**	**32**	P	**Pn**	**06 18 20.7**	**0.0**
MHLO	**Agia Marina, M**	**2.07**	**326**	P	**Pn**	**06 18 22.5**	**-0.2**
MHLO				S	**Sb**	**06 18 49.9**	**-1.5**
MHLO				AML	AML	06 18 57.4	
	comp=E,5590µm,0.5s						
MHLO				AML	AML	06 19 02.1	
	comp=N,5799µm,0.7s						
MHLO	**Agia Marina, M**	**2.07**	**326**	P	**Pn**	**06 18 23.6**	**+0.9**
MHLO	**Agia Marina, M**	**2.07**	**326**	P	**Pn**	**06 18 23.6**	**+0.9**
MHLO				S	**Sn**	**06 18 49.4**	**+0.7**
APE	**Apeiranthos**	**2.10**	**353**	PN	**Pn**	**06 18 24.0**	**+0.9**
APE	**Apeiranthos**	**2.10**	**353**	P	**Pn**	**06 18 22.6**	**-0.5**
APE				S	**Sn**	**06 18 48.9**	**-0.6**
APE				AML	AML	06 18 58.5	
	comp=N,1084µm,0.5s						
APE				AML	AML	06 19 01.5	
	comp=E,828µm,0.6s						
APE	**Apeiranthos**	**2.10**	**353**	⇑*i*P	**Pn**	**06 18 23.4**	**+0.3**
APE	**Apeiranthos**	**2.10**	**353**	P	**Pn**	**06 18 22.9**	**-0.2**
APE	**Apeiranthos**	**2.10**	**353**	*e*Pn	**Pn**	**06 18 24.0**	**+0.9**
APE				S	**Sn**	**06 18 49.3**	**-0.2**
MHLA	**Plaka, Milos I**	**2.11**	**327**	P	**Pn**	**06 18 22.8**	**-0.4**
MHLA				S	**Sn**	**06 18 49.2**	**-0.4**
MHLA				AML	AML	06 19 05.2	
	comp=N,3989µm,1.6s						
MHLA				AML	AML	06 19 12.2	
	comp=E,2868µm,1.1s						
MHLA	**Plaka, Milos I**	**2.11**	**327**	P	**Pn**	**06 18 23.0**	**-0.2**
MHLA				S	**Sn**	**06 18 49.5**	**-0.1**
ARG	**Arkhangelos**	**2.23**	**56**	PN	**Pn**	**06 18 25.4**	**+0.6**
ARG	**Arkhangelos**	**2.23**	**56**	P	**Pn**	**06 18 25.0**	**+0.3**
ARG				S	**Sn**	**06 18 51.9**	**-0.6**
ARG				AML	AML	06 19 04.5	
	comp=N,1123µm,0.6s						
ARG				AML	AML	06 19 12.5	
	comp=E,1922µm,0.6s						
ARG	**Arkhangelos**	**2.23**	**56**	P	**Pn**	**06 18 26.5**	**+1.7**
ARG	**Arkhangelos**	**2.23**	**56**	P	**Pn**	**06 18 25.1**	**+0.3**
ARG	**Arkhangelos**	**2.23**	**56**	*e*Pn	**Pn**	**06 18 25.4**	**+0.6**
ARG				S	**Sn**	**06 18 52.5**	**0.0**
DAT	**Datca**	**2.24**	**38**	PN	**Pn**	**06 18 25.5**	**+0.4**
DAT	**Datca**	**2.24**	**38**	*i* P	**Pb**	**06 18 27.1**	**-1.3**
DAT				*i* S	**Sn**	**06 18 52.6**	**-0.4**
DAT	**Datca**	**2.24**	**38**	*e*Pn	**Pn**	**06 18 25.5**	**+0.4**
DAT	**Datca**	**2.24**	**38**	P	**Pb**	**06 18 27.1**	**-1.3**
DAT				S	**Sn**	**06 18 52.6**	**-0.4**
ANKY	**Antikythira Is**	**2.26**	**294**	P	**Pn**	**06 18 26.9**	**+1.6**
ANKY	**Antikythira Is**	**2.26**	**294**	P	**Pn**	**06 18 26.1**	**+0.8**
ANKY	**Antikythira Is**	**2.26**	**294**	P	**Pn**	**06 18 26.1**	**+0.8**
DATC	**Datca-Mugla**	**2.30**	**39**	PN	**Pn**	**06 18 26.4**	**+0.5**
DATC	**Datca-Mugla**	**2.30**	**39**	*e*Pn	**Pn**	**06 18 26.4**	**+0.5**
BODT	**Bodrum**	**2.39**	**29**	PN	**Pn**	**06 18 27.4**	**+0.3**
BODT	**Bodrum**	**2.39**	**29**	*e*Pn	**Pn**	**06 18 27.4**	**+0.3**
MRSB	**Marmaris-Mugla**	**2.58**	**47**	PN	**Pn**	**06 18 30.4**	**+0.8**

MRSB	**Marmaris-Mugla**	**2.58**	**47**	*e*Pn	**Pn**	**06 18 30.4**	**+0.8**
KYTH	**Kithira**	**2.62**	**300**	P	**Pn**	**06 18 31.0**	**+0.7**
KYTH				S	**Sn**	**06 19 03.3**	**+1.0**
KYTH				AML	AML	06 19 16.1	
	comp=E,917µm,0.7s						
KYTH				AML	AML	06 19 18.2	
	comp=N,743µm,1.0s						
KYTH	**Kithira**	**2.62**	**300**	P	**Pn**	**06 18 30.6**	**+0.3**
KTHR	**Kythira**	**2.65**	**300**	P	**Pn**	**06 18 31.1**	**+0.5**
KTHR	**Kythira**	**2.65**	**300**	P	**Pn**	**06 18 31.1**	**+0.5**
MLSB	**Milas**	**2.79**	**33**	PN	**Pn**	**06 18 33.3**	**+0.7**
MLSB	**Milas**	**2.79**	**33**	*e*Pn	**Pn**	**06 18 33.3**	**+0.7**
YER	**Yerkesik**	**2.92**	**42**	PN	**Pn**	**06 18 35.1**	**+0.7**
YER	**Yerkesik**	**2.92**	**42**	P	**Pn**	**06 18 36.4**	**+2.0**
YER	**Yerkesik**	**2.92**	**42**	*e*Pn	**Pn**	**06 18 35.1**	**+0.7**
YER	**Yerkesik**	**2.92**	**42**	P	**Pn**	**06 18 36.4**	**+2.0**
DALY	**Dalyan (Mu˜la**	**2.92**	**50**	PN	**Pn**	**06 18 35.4**	**+1.1**
DALY	**Dalyan (Mu˜la**	**2.92**	**50**	*i* P	**Pn**	**06 18 35.7**	**+1.3**
DALY	**Dalyan (Mu˜la**	**2.92**	**50**	*e*Pn	**Pn**	**06 18 35.4**	**+1.1**
DALY	**Dalyan (Mu˜la**	**2.92**	**50**	P	**Pn**	**06 18 35.7**	**+1.3**
GCAM	**G?zelcaml?**	**2.94**	**22**	PN	**Pn**	**06 18 35.7**	**+1.2**
GCAM	**G?zelcaml?**	**2.94**	**22**	*i* P	**Pn**	**06 18 36.4**	**+1.8**
GCAM				*i* S	**Sn**	**06 19 07.1**	**-2.9**
GCAM	**G?zelcaml?**	**2.94**	**22**	*e*Pn	**Pn**	**06 18 35.7**	**+1.2**
GCAM	**G?zelcaml?**	**2.94**	**22**	P	**Pn**	**06 18 36.3**	**+1.8**
GCAM				S	**Sn**	**06 19 07.1**	**-2.9**
VLI	**Veliai**	**2.94**	**307**	P	**Pn**	**06 18 34.9**	**+0.3**
VLI				S	**Sn**	**06 19 08.9**	**-1.1**
VLI	**Veliai**	**2.94**	**307**	P	**Pn**	**06 18 34.9**	**+0.3**
VLI	**Veliai**	**2.94**	**307**	P	**Pn**	**06 18 34.9**	**+0.3**
VLI				S	**Sn**	**06 19 09.3**	**-0.7**
FETY	**Fethiye**	**3.10**	**57**	PN	**Pn**	**06 18 38.1**	**+1.2**
FETY	**Fethiye**	**3.10**	**57**	P	**Pn**	**06 18 38.1**	**+1.2**
FETY	**Fethiye**	**3.10**	**57**	P	**Pn**	**06 18 38.1**	**+1.2**
FETY				S	**Sn**	**06 19 13.5**	**-0.7**
AYDN	**Tasoluk**	**3.14**	**31**	*i* P	**Pn**	**06 18 39.9**	**+2.4**
AYDN	**Tasoluk**	**3.14**	**31**	P	**Pn**	**06 18 39.8**	**+2.4**
DGB	**˜zmir**	**3.18**	**15**	*i* P	**Pn**	**06 18 37.5**	**-0.3**
DGB				*i* S	**Sn**	**06 19 10.2**	**-5.7**
KRND	**KRANIDI**	**3.24**	**318**	P	**Pn**	**06 18 39.9**	**+1.1**
KRND	**KRANIDI**	**3.24**	**318**	P	**Pn**	**06 18 39.9**	**+1.1**
DID	**Didima**	**3.29**	**321**	P	**Pn**	**06 18 40.1**	**+0.6**
DID	**Didima**	**3.29**	**321**	P	**Pn**	**06 18 40.1**	**+0.6**
AKAS	**Kas**	**3.30**	**67**	*i* P	**Pn**	**06 18 36.4**	**-3.3**
AKAS				*i* S	Sn	06 19 05.0	-14
AKAS	**Kas**	**3.30**	**67**	P	**Pn**	**06 18 36.4**	**-3.3**
DYR	**Agios Nikonas**	**3.37**	**303**	P	**Pn**	**06 18 42.6**	**+2.1**
DYR	**Agios Nikonas**	**3.37**	**303**	P	**Pn**	**06 18 42.6**	**+2.1**
AYDB	**Zeytinkoy-Aydi**	**3.39**	**28**	PN	**Pn**	**06 18 41.8**	**+0.9**
AYDB	**Zeytinkoy-Aydi**	**3.39**	**28**	*e*Pn	**Pn**	**06 18 41.8**	**+0.9**
CHOS	**Chios island**	**3.40**	**3**	PN	**Pn**	**06 18 42.4**	**+1.3**
CHOS	**Chios island**	**3.40**	**3**	*e*Pn	**Pn**	**06 18 42.4**	**+1.3**
URLA	**Izmir**	**3.43**	**10**	PN	**Pn**	**06 18 41.8**	**+0.5**
URLA	**Izmir**	**3.43**	**10**	*i* P	**Pn**	**06 18 41.0**	**-0.4**
URLA	**Izmir**	**3.43**	**10**	P	**Pn**	**06 18 41.0**	**-0.4**
URLA	**Izmir**	**3.43**	**10**	*e*Pn	**Pn**	**06 18 41.8**	**+0.5**
TAVA	**DENIZLI_Tavas**	**3.50**	**44**	*i* P	**Pn**	**06 18 44.5**	**+2.0**
TAVA	**DENIZLI_Tavas**	**3.50**	**44**	P	**Pn**	**06 18 44.5**	**+2.0**
BLCB	**Balcova**	**3.53**	**15**	PN	**Pn**	**06 18 43.2**	**+0.5**
BLCB	**Balcova**	**3.53**	**15**	*e*Pn	**Pn**	**06 18 43.2**	**+0.5**
VLX	**Vlachokerasia**	**3.69**	**311**	P	**Pn**	**06 18 45.9**	**+0.9**
VLX	**Vlachokerasia**	**3.69**	**311**	P	**Pn**	**06 18 45.9**	**+0.9**
DNZL	**Cakiroluk**	**3.74**	**43**	*i* P	**Pn**	**06 18 47.2**	**+1.4**
DNZL	**Cakiroluk**	**3.74**	**43**	P	**Pn**	**06 18 47.2**	**+1.4**
ELL	**Elmali**	**3.74**	**61**	PN	**Pn**	**06 18 47.6**	**+1.9**
ELL	**Elmali**	**3.74**	**61**	*e*Pn	**Pn**	**06 18 47.6**	**+1.9**
GOLH	**Golhisar**	**3.75**	**52**	*i* P	**Pn**	**06 18 48.2**	**+2.3**
GOLH	**Golhisar**	**3.75**	**52**	P	**Pn**	**06 18 48.2**	**+2.3**
GUR	**Goura**	**4.09**	**317**	P	**Pn**	**06 18 51.7**	**+1.2**
GUR	**Goura**	**4.09**	**317**	P	**Pn**	**06 18 51.7**	**+1.2**
MANT	**Manisa**	**4.12**	**31**	*i* P	**Pn**	**06 18 53.4**	**+2.3**
MANT	**Manisa**	**4.12**	**31**	P	**Pn**	**06 18 53.4**	**+2.3**
KORT	**Korkueli**	**4.17**	**60**	PN	**Pn**	**06 18 53.4**	**+1.8**
KORT	**Korkueli**	**4.17**	**60**	*i* P	**Pn**	**06 18 54.2**	**+2.5**
KORT	**Korkueli**	**4.17**	**60**	*e*Pn	**Pn**	**06 18 53.4**	**+1.8**
KORT	**Korkueli**	**4.17**	**60**	P	**Pn**	**06 18 54.2**	**+2.5**
KULA	**Kula-Manisa**	**4.19**	**32**	PN	**Pn**	**06 18 53.1**	**+1.3**
KULA	**Kula-Manisa**	**4.19**	**32**	*e*Pn	**Pn**	**06 18 53.1**	**+1.3**
KHAL	**Karahalli**	**4.47**	**40**	*i* P	**Pn**	**06 18 56.8**	**+1.0**
KHAL	**Karahalli**	**4.47**	**40**	P	**Pn**	**06 18 56.8**	**+1.0**
ISP	**Isparta**	**4.72**	**52**	⇑*i*P	**Pb**	**06 19 10.4**	**-0.2**
BALY	**Balya**	**4.96**	**16**	*i* P	**Pn**	**06 19 01.5**	**-0.9**
BALY	**Balya**	**4.96**	**16**	P	**Pn**	**06 19 01.5**	**-0.9**
GDZ	**Gediz**	**5.02**	**34**	*i* P	**Pn**	**06 19 04.0**	**+0.6**
GDZ	**Gediz**	**5.02**	**34**	P	**Pn**	**06 19 04.0**	**+0.6**
KEPZ	**Antalya-Kepez**	**5.04**	**66**	*i* P	**Pn**	**06 19 04.6**	**+1.0**
KEPZ	**Antalya-Kepez**	**5.04**	**66**	P	**Pn**	**06 19 04.6**	**+1.0**
GAZI	**Gazipasa**	**5.41**	**75**	*i* P	**Pn**	**06 19 04.9**	**-3.8**
GAZI				*i* S	Sn	06 20 00.9	-10
KDHN	**Kadinhani**	**6.15**	**53**	*i* P	**Pn**	**06 19 18.9**	**+0.1**
BRTR	**Keskin Array B**	**7.80**	**50**	P	**Pn**	**06 19 43.0**	**+1.5**
	comp=N,0.2nm,0.3s,baz=220,slow=14,SNR=9.5						
VTS	**Vitosha**	**7.88**	**346**	⇑*i*P	**Pn**	**06 19 43.0**	**+0.5**
MMAI	**Mount Meron Ar**	**8.17**	**101**	P	**Pn**	**06 19 46.1**	**-0.4**
	comp=N,2.8nm,0.3s,baz=262,slow=12,SNR=4.5						
TIP	**Timpagrande**	**8.39**	**303**	⇓*i*P	**Pn**	**06 19 47.3**	**-2.2**
EIL	**Elat**	**9.34**	**122**	P	**Pn**	**06 20 06.3**	**+3.7**
	comp=N,1.7nm,0.3s,baz=337,slow=8.0,SNR=9.6						
EIL				S	**Sn**	**06 21 47.4**	**-0.5**
	comp=N,0.4nm,0.3s,baz=303,slow=23,SNR=1.9						
VAE	**Valguarnera**	**9.57**	**288**	P	**Pn**	**06 20 09.3**	**+3.6**
	comp=N,3.8nm,0.3s,baz=177,slow=6.8,SNR=2.1						
ASF	**Jabal al Asfar**	**9.63**	**104**	P	**Pn**	**06 20 08.6**	**+1.9**
	comp=N,0.3nm,0.3s,baz=242,slow=12,SNR=3.9						
TLB	**Topalu**	**9.74**	**9**	⇓*i*P	**Pn**	**06 20 12.2**	**+4.3**
VOIR		**10.46**	**357**	⇓*i*P	**Pn**	**06 20 20.3**	**+2.4**
MLR	**Muntele Rosu**	**10.50**	**0**	P	**Pn**	**06 20 22.5**	**+4.1**
	comp=N,0.2nm,0.3s,baz=210,slow=8.3,SNR=5.4						
MLR	**Muntele Rosu**	**10.50**	**0**	⇑*i*P	**Pn**	**06 20 21.0**	**+2.5**
BZS	**Buzias**	**11.10**	**344**	⇑*i*P	**Pn**	**06 20 27.4**	**+0.8**
KBZ	**Khabaz**	**15.79**	**51**	P	**P**	**06 21 33.8**	**-0.3**
	comp=N,0.1nm,0.3s,baz=270,slow=6.4,SNR=7.1						
AKASG	**Malin Array Be**	**15.90**	**8**	P	**P**	**06 21 35.2**	**-0.2**
	comp=N,2.6nm,0.3s,baz=196,slow=11,SNR=8.1						
GERES	**GERESS Array B**	**16.51**	**331**	P	**P**	**06 21 43.3**	**+1.0**
	comp=N,0.2nm,0.3s,baz=134,slow=11,SNR=4.9						
GERES				LR	LR	06 28 06.1	
	comp=N,32nm,19.3s,baz=134,slow=37						
DAVOX	**Davos/Dischmat**	**16.84**	**319**	LR	LR	06 29 47.5	
	comp=N,69nm,18.4s,baz=94,slow=42						
ESDC	**Sonseca Array**	**24.11**	**290**	P	**P**	**06 23 03.0**	**-0.8**
	comp=N,1.5nm,0.5s,baz=80,slow=9.6,SNR=21						
HFS	**Hagfors**	**26.38**	**346**	P	**P**	**06 23 24.9**	**+0.7**
	comp=N,1.2nm,0.7s,baz=150,slow=9.7,SNR=1.8						
FINES	**FINESS Array B**	**26.48**	**0**	P	**P**	**06 23 26.2**	**+1.2**
	comp=N,0.9nm,0.8s,baz=178,slow=11,SNR=4.4						
EKA	**Eskdalemuir Ar**	**28.52**	**325**	P	**P**	**06 23 43.4**	**+0.1**
	comp=N,0.5nm,0.4s,baz=123,slow=10,SNR=1.3						
TORD	**Torodi Ar. Bea**	**30.81**	**231**	P	**P**	**06 24 03.3**	**-0.7**
	comp=N,1.2nm,0.6s,baz=38,slow=8.9						
KOWA	**Kowa**	**33.73**	**240**	P	**P**	**06 24 29.3**	**-0.4**
	comp=N,1.1nm,0.6s,baz=72,slow=13,SNR=1.6						
BVAR	**Borovoye Array**	**36.06**	**46**	P	**P**	**06 24 48.7**	**-0.8**
	comp=N,1.0nm,0.6s,baz=230,slow=5.7,SNR=3.9						
KURBB	**Kurchatov Arra**	**40.79**	**51**	P	**P**	**06 25 29.4**	**+0.1**
	comp=N,4.8nm,0.6s,baz=275,slow=8.8,SNR=25						
MKAR	**Makanchi Array**	**43.40**	**56**	P	**P**	**06 25 50.9**	**+0.2**
	comp=N,4.0nm,0.5s,baz=278,slow=7.1,SNR=49						
ZALV	**Zalesovo Beam**	**44.72**	**46**	P	**P**	**06 26 00.3**	**-0.7**
	comp=N,2.4nm,0.4s,baz=259,slow=9.1,SNR=6.5						
TSUM	**Tsumeb**	**54.45**	**190**	LR	LR	06 52 17.1	
	comp=N,78nm,18.4s,baz=103,slow=38						
SONM	**Songino Array**	**59.16**	**51**	P	**P**	**06 27 49.1**	**+0.1**
	comp=N,0.9nm,0.6s,baz=278,slow=6.5,SNR=4.8						
USRK	**Ussuriysk Ar.**	**76.56**	**45**	P	**P**	**06 29 37.7**	**-0.7**
	comp=N,2.6nm,0.5s,baz=287,slow=5.1						
KSRS	**Korea Array**	**77.94**	**53**	P	**P**	**06 29 47.2**	**+0.9**
	comp=N,0.8nm,0.6s,baz=299,slow=5.2,SNR=4.3						
ILAR	**Eielson Array**	**80.41**	**357**	P	**P**	**06 29 59.0**	**-0.4**
	comp=N,0.5nm,0.8s,baz=353,slow=4.4,SNR=5.3						
MJAR	**Matsushiro Arr**	**85.02**	**48**	P	**P**	**06 30 23.4**	**-0.4**
	comp=N,0.4nm,0.4s,baz=178,slow=14,SNR=4.3						

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*IDC **22** 06:32:45.5±0.6, 10°.69S×164°.63E, h0^{km}, mb4.5/19, mb1 4.6/20, mb1mx4.4/44, mbtmp4.5/20, ML4.8/1, MS3.7/9, Ms1 3.7/9, ms1mx3.4/46, Error ellipse: s-maj=23.3km s-min=14.1km az=96.0*

*BJI **22** 06:32:47.8, 10°.11S×165°.34E, h22^{km}, mb4.8/24, mB5.1/16, Ms4.6/5, Ms7 4.4/5*

*ISCJB **22** 06:32:48.9±0.3, 10°.71S±0°.05×164°.66E±0°.06, h35^{km}, mb4.6/46, MS3.6/6, Error ellipse: s-maj=7.9km s-min=7.2km az=3.9*

*NEIC **22** 06:32:50.6±1.3, 10°.67S×164°.71E, h36^{km}±12^{km}, mb4.6/21, Error ellipse: s-maj=8.6km s-min=7.1km az=83.0*

ISC 22 06:32:50.7±0.5**, 10°.77S**±0°.06×**164°.76E**±0°.08**, h35^{km}, n96, σ1§61**/87**, mb4.6**/46**, MS3.6**/6**, 1D, Santa Cruz Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**4.92**	**285**	Pn	**Pn**	**06 34 02.1**	**-0.2**
	61nm,0.3s,baz=134,slow=3.5,SNR=19						
HNR				Sn	**Sn**	**06 34 58.5**	**+0.5**
	37nm,0.3s,baz=53,slow=22,SNR=3.3						
HNR				LR	LR	06 35 59.0	
	comp=Z,1µm,18.1s,baz=119,slow=40						
HNR	**Honiara**	**4.92**	**285**	*e*P	**Pn**	**06 34 02.0**	**-0.2**
HNR				*e*S	**Sn**	**06 34 54.0**	**-4.0**
HNR	**Honiara**	**4.92**	**285**	*e*Pn	**Pn**	**06 34 02.1**	**-0.2**
HNR				*e*Sn	**Sn**	**06 35 02.1**	**+4.0**
DZM	**Mont Dzumac**	**11.36**	**172**	Pn	**Pn**	**06 35 31.7**	**+1.1**
	6.1nm,0.3s,baz=325,slow=23,SNR=121						
DZM				LR	LR	06 39 23.9	
	comp=Z,678nm,18.3s,baz=18,slow=35						
DZM	**Mont Dzumac**	**11.36**	**172**	*e*Pn	**Pn**	**06 35 32.1**	**+1.5**
	11nm,0.2s						
DZM				*e*Sn	**Sn**	**06 37 32.0**	**-4.4**
	2.1nm,0.3s						
DZM				*e*LR	LR	06 38 09.0	
	608nm,23.7s						
DZM	**Mont Dzumac**	**11.36**	**172**	*e*Pn	**Pn**	**06 35 31.4**	**+0.8**
PMG	**Port Moresby**	**17.39**	**273**	LR	LR	06 42 56.5	
	comp=Z,152nm,19.3s,baz=108,slow=35						
MANU	**Manus Island**	**19.32**	**295**	*e*P	**P**	**06 37 12.1**	**-1.1**
	98nm,1.0s						
EIDS	**Eidsvold**	**19.47**	**220**	*e*P	**P**	**06 37 14.0**	**-0.6**
	64nm,1.8s						
CTA	**Charters Tower**	**20.09**	**240**	P	Pn	06 37 23.2	-0.1
	7.3nm,0.8s,baz=88,slow=12,SNR=5.4						
CTAO	**Charters Tower**	**20.09**	**240**	*e*P	**P**	**06 37 21.5**	**0.0**
	30nm,1.4s						
COEN	**Coen**	**21.32**	**259**	*e*P	**P**	**06 37 35.0**	**+0.2**
	41nm,1.5s						
AFI	**Afiamalu**	**23.13**	**100**	LR	LR	06 44 43.0	
	comp=Z,116nm,19.2s,baz=162,slow=31						
RAO	**Raoul Island**	**24.50**	**141**	*e*P	**P**	**06 38 07.5**	**+0.8**
	356nm,0.6s						
H11S2	**WAKE ISLAND Hy**	**29.14**	**4**	T	T	07 09 04.7	
	baz=184,slow=76,SNR=89						
H11S3	**WAKE ISLAND Hy**	**29.14**	**4**	T	T	07 09 06.7	
	baz=184,slow=76,SNR=70						
H11S1	**WAKE ISLAND Hy**	**29.15**	**4**	T	T	07 09 06.7	
	baz=184,slow=76,SNR=68						
URZ	**Urewera**	**29.53**	**160**	LR	LR	06 49 29.9	
	comp=Z,186nm,20.1s,baz=346,slow=34						
STKA	**Stephens Creek**	**29.99**	**222**	P	**P**	**06 38 56.6**	**+0.6**
	4.7nm,0.7s,baz=36,slow=11,SNR=13						
STKA				LR	LR	06 50 09.7	
	comp=Z,164nm,19.2s,baz=27,slow=35						
STKA	**Stephens Creek**	**29.99**	**222**	*e*P	**P**	**06 38 56.8**	**+0.7**
	2.0nm,0.9s						
H11N1	**WAKE ISLAND Hy**	**30.36**	**4**	T	T	07 10 38.3	
	baz=184,slow=76,SNR=76						
H11N3	**WAKE ISLAND Hy**	**30.37**	**4**	T	T	07 10 43.7	
	baz=184,slow=76,SNR=48						
H11N2	**WAKE ISLAND Hy**	**30.38**	**4**	T	T	07 10 40.0	
	baz=184,slow=76,SNR=56						
WRAB	**Tennant Creek**	**30.66**	**249**	*e*P	**P**	**06 39 00.2**	**-2.0**
	1.5nm,0.7s						
WRA	**Warramunga Arr**	**30.68**	**249**	P	**P**	**06 38 59.8**	**-2.6**
	1.6nm,0.6s,baz=79,slow=9.1,SNR=16						
WRA				PcP	**PcP**	**06 41 60.0**	**-0.1**
	0.3nm,0.7s,baz=72,slow=3.0,SNR=5.6						
GUMO	**Guam**	**31.23**	**320**	LR	LR	06 50 13.1	
	comp=Z,134nm,20.8s,baz=120,slow=34						
AS31	**Alice Springs**	**32.06**	**242**	*e*P	**P**	**06 39 12.8**	**-1.7**
	1.1nm,0.9s						
ASAR	**Alice Springs**	**32.06**	**242**	P	**P**	**06 39 12.3**	**-2.2**
	1.2nm,0.5s,baz=62,slow=10,SNR=40						
ASAR				PcP	**PcP**	**06 42 03.0**	**-0.6**
	1.3nm,0.8s,baz=66,slow=2.8,SNR=9.1						
RAR	**Rarotonga**	**35.56**	**111**	LR	LR	06 51 45.8	
	comp=Z,74nm,19.1s,baz=271,slow=32						
PPT2	**Papeete2**	**44.70**	**104**	*e*LR	LR	06 53 28.9	
	74nm,21.5s						
TBI	**Tubuai**	**45.33**	**112**	*e*LR	LR	06 53 55.0	
	134nm,28.5s						
MJAR	**Matsushiro Arr**	**53.28**	**333**	P	**P**	**06 42 04.8**	**-1.4**
	5.5nm,0.8s,baz=172,slow=9.0,SNR=22						
MAJO	**Matsushiro**	**53.29**	**333**	*e*P	**P**	**06 42 04.8**	**-1.5**
	8.0nm,0.9s						
MAT	**Matsushiro**	**53.29**	**333**	P	**P**	**06 42 04.9**	**-1.3**
MJB9	**Matsu-Tunnel**	**53.29**	**333**	*e*P	**P**	**06 42 04.8**	**-1.5**
	7.2nm,0.9s						
JNU	**Nakatsue**	**54.30**	**325**	P	**P**	**06 42 13.3**	**-0.4**
	21nm,0.8s,baz=99,slow=4.3,SNR=17						
JNU	**Nakatsue**	**54.30**	**325**	*e*P	**P**	**06 42 11.9**	**-1.8**
	23nm,0.9s						
ASAJ	**Asahikawa**	**58.22**	**341**	P	**P**	**06 42 41.3**	**-0.1**
	22nm,0.8s,baz=214,slow=7.4,SNR=28						
ASAJ	**Asahikawa**	**58.22**	**341**	*e*P	**P**	**06 42 41.2**	**-0.2**
	21nm,0.9s						
KSRS	**Korea Array**	**59.11**	**326**	P	**P**	**06 42 47.5**	**-0.2**
	4.0nm,0.8s,baz=135,slow=7.6,SNR=16						
KSAR	**Wonju Array Be**	**59.12**	**326**	P	**P**	**06 42 47.5**	**-0.3**
KS01	**Wonju Array Si**	**59.14**	**326**	*e*P	**P**	**06 42 46.9**	**-1.1**
NJ2	**Nanjing**	**61.15**	**316**	*e*P	**P**	**06 43 03.6**	**+1.8**
NJ2				pmax	pmax		
	comp=Z,17nm,0.8s						
PETK	**Petropavlovsk-**	**63.91**	**355**	P	**P**	**06 43 19.7**	**-0.2**
	4.7nm,0.8s,baz=141,slow=5.9						
PETK	**Petropavlovsk-**	**63.91**	**355**	*e*P	**P**	**06 43 17.9**	**-2.0**
CN2	**Changchun**	**65.01**	**330**	*e*P	**P**	**06 43 25.3**	**-2.0**
CN2				*e*sP	pP	06 43 39.4	+1.4
CN2				*e*S	**S**	**06 52 03.3**	**-3.7**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.9s						
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CASY	**Casey**	**66.29**	**201**	*e*P	**P**	**06 43 36.0**	**+0.8**
	6.0nm,1.0s						
VNDA	**Vanda**	**66.76**	**181**	P	**P**	**06 43 39.4**	**+1.4**
	2.2nm,0.9s,baz=347,slow=6.2,SNR=7.5						
VNDA	**Vanda**	**66.76**	**181**	*e*P	**P**	**06 43 39.8**	**+1.8**
	4.2nm,1.0s						
SBA	**Scott Base**	**67.08**	**180**	*e*P	**P**	**06 43 42.1**	**+2.0**
	14nm,1.3s						
GYA	**Guiyang**	**67.47**	**305**	*e*P	**P**	**06 43 45.0**	**+1.5**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BJI	**Beijing**	**67.66**	**322**	P	**P**	**06 43 45.3**	**+1.0**
BJI				pmax	pmax		
	comp=Z,8.0nm,0.6s						
XAN	**Xi’an**	**69.22**	**313**	P	**P**	**06 43 53.9**	**-0.4**
XAN				pmax	pmax		
	comp=Z,8.0nm,0.7s						
XAN				pmax	pmax		
	comp=Z,93nm,3.6s						
KMI	**Kunming**	**70.15**	**302**	P	**P**	**06 44 02.1**	**+1.7**
KMI				pmax	pmax		
	comp=Z,18nm,0.5s						
KMI				pmax	pmax		
	comp=Z,160nm,4.2s						
HHC	**Hu-ho-hao-te**	**71.00**	**320**	*e*P	**P**	**06 44 07.8**	**+2.7**
HHC				PP	**PP**	**06 46 49.6**	**+6.6**
HHC				S	**S**	**06 53 18.8**	**-0.1**
HHC				sS	sS	06 53 38.0	+1.2
HHC				pmax	pmax		
	comp=Z,12nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,5.6s						
MA2	**Magadan**	**71.00**	**353**	LR	LR	07 10 20.1	
	comp=Z,70nm,20.9s,baz=188,slow=32						
CM01	**Chiang Mai Arr**	**71.09**	**294**	*e*P	**P**	**06 44 06.6**	**+0.6**
CMAR	**Chiang Mai Arr**	**71.12**	**294**	P	**P**	**06 44 06.2**	**+0.1**
	1.0nm,0.3s,baz=116,slow=4.3,SNR=7.2						
LZH	**Lanzhou**	**73.86**	**313**	*e*P	**P**	**06 44 25.5**	**+3.1**
LZH				pP	pP	06 44 36.3	+3.0
LZH				pmax	pmax		
	comp=Z,31nm,1.2s						
SONM	**Songino Array**	**77.87**	**324**	P	**P**	**06 44 45.4**	**+0.4**
	2.9nm,0.9s,baz=138,slow=6.5,SNR=13						
SONA1	**Songino Array**	**77.88**	**324**	*e*P	**P**	**06 44 45.3**	**+0.3**
GTA	**Gaotai**	**78.17**	**314**	⇓P	**P**	**06 44 47.4**	**+0.6**
GTA				pP	pP	06 44 58.3	+0.5
GTA				sP	sP	06 45 03.0	+1.2
GTA				pmax	pmax		
	comp=Z,6.0nm,1.3s						
QSPA	**South Pole Qui**	**79.23**	**180**	P	**P**	**06 44 53.0**	**+0.8**
	3.5nm,0.8s,baz=49,slow=1.9,SNR=14						
QSPA	**South Pole Qui**	**79.23**	**180**	*e*P	**P**	**06 44 52.9**	**+0.7**
	16nm,1.4s						
GHO	**Glory Hole Cre**	**80.83**	**20**	*e*P	**P**	**06 44 59.3**	**-1.4**
	37nm,1.8s						
CAST	**Castle Rocks**	**80.98**	**18**	*e*P	**P**	**06 45 00.7**	**-0.7**
	3.7nm,0.8s						
H02N1	**VAN INLET T-PH**	**82.96**	**33**	T	T	08 16 27.0	
WRH	**Wood River Hil**	**82.97**	**19**	*e*P	**P**	**06 45 11.2**	**-0.6**
	3.3nm,0.9s						
H02S1	**DAWSON INLET T**	**82.97**	**33**	T	T	08 16 29.6	
	SNR=7.5						
MDM	**Murphy Dome**	**83.27**	**18**	*e*P	**P**	**06 45 12.7**	**-0.7**
	6.8nm,1.0s						
IL1	**Eielson Array**	**83.56**	**19**	*e*P	**P**	**06 45 13.5**	**-1.3**
ILAR	**Eielson Array**	**83.56**	**19**	P	**P**	**06 45 14.2**	**-0.6**
	3.7nm,0.7s,baz=234,slow=5.4,SNR=42						
ILB	**Eielson Array**	**83.56**	**19**	*e*P	**P**	**06 45 13.9**	**-0.9**
SCRK	**Sand Creek**	**83.99**	**20**	*e*P	**P**	**06 45 16.8**	**-0.4**
	4.8nm,0.8s						
COLD	**Coldfoot**	**84.30**	**16**	*e*P	**P**	**06 45 18.4**	**-0.2**
	3.6nm,0.9s						
MAW	**Mawson**	**84.61**	**202**	P	**P**	**06 45 20.8**	**+0.6**
	2.9nm,0.7s,baz=124,slow=6.2,SNR=7.3						
EGAK	**Eagle**	**85.45**	**20**	*e*P	**P**	**06 45 25.1**	**+0.7**
	5.9nm,0.9s						
DAWY	**Dawson**	**85.65**	**21**	*e*P	**P**	**06 45 25.0**	**-0.4**
	7.8nm,1.5s						
NV01	**Mina Array Sit**	**86.58**	**50**	*e*P	**P**	**06 45 30.3**	**-0.7**
NVAR	**Mina Array Bea**	**86.58**	**50**	P	**P**	**06 45 30.9**	**0.0**
	1.6nm,0.9s,baz=238,slow=8.4,SNR=7.6						
WMQ	**Urumqi**	**88.22**	**315**	P	**P**	**06 45 39.4**	**+0.9**
LCMT	**Little Creek M**	**90.10**	**52**	*e*P	**P**	**06 45 45.2**	**-2.3**
	3.0nm,1.2s						
MK01	**Makanchi Array**	**92.65**	**317**	*e*P	**P**	**06 45 58.3**	**-0.7**
MK31	**Makanchi Array**	**92.66**	**317**	*e*P	**P**	**06 45 58.5**	**-0.6**
MKAR	**Makanchi Array**	**92.66**	**317**	P	**P**	**06 45 58.8**	**-0.3**
	6.0nm,0.7s,baz=99,slow=6.0,SNR=64						
MKAR	**Makanchi Array**	**92.66**	**317**	*e*P	**P**	**06 45 58.6**	**-0.4**
	33nm,0.8s						
ZAA0	**Zalesovo Array**	**92.77**	**324**	*e*P	**P**	**06 45 58.5**	**-0.8**
ZALV	**Zalesovo Beam**	**92.77**	**324**	P	**P**	**06 45 58.0**	**-1.3**
	3.4nm,0.8s,baz=123,slow=5.5,SNR=4.5						
MAKZ	**Makanchi**	**92.87**	**317**	*e*P	**P**	**06 45 59.4**	**-0.7**
	7.3nm,1.0s						
PDAR	**Pinedale Array**	**94.08**	**47**	P	**P**	**06 46 05.5**	**-0.4**
	0.4nm,0.8s,baz=27,slow=1.7,SNR=5.3						
KURK	**Kurchatov**	**95.81**	**320**	P	**P**	**06 46 11.8**	**-1.5**
KURBB	**Kurchatov Arra**	**95.85**	**320**	P	**P**	**06 46 11.8**	**-1.7**
	0.3nm,0.4s,baz=100,slow=5.2,SNR=5.4						
BVAR	**Borovoye Array**	**101.14**	**322**	P	**Pdif**	**06 46 36.1**	**-1.2**
	1.4nm,0.8s,baz=46,slow=8.3,SNR=6.0						
GNI	**Garni**	**119.74**	**310**	*e*PKPdf	PKPpre	06 51 28.4	
KEST	**Kesra**	**146.61**	**322**	PKPbc	**PKPdf**	**06 52 28.2**	**+0.6**
	8.5nm,1.0s,baz=335,slow=4.0,SNR=5.4						
ESDC	**Sonseca Array**	**149.51**	**343**	PKPbc	**PKPbc**	**06 52 36.9**	**+0.1**
	1.2nm,1.0s,baz=8.0,slow=3.8,SNR=4.7						

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*CSEM **22** 06:44:59.0, 45°.47N×26°.29E, h126^{km}, MD3.5/4*

BUC 22 06:44:59.0±1.0**, 45°.47N**×**26°.29E, h126^{km}**±9^{km}**, MD3.5**/4**, 48C-33D, Error ellipse: s-maj=7.2km s-min=5.2km az=105.0, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLR	**Muntele Rosu**	**0.24**	**274**	⇑*i*P	Pn	06 45 16.4	-0.2
MLR	**Muntele Rosu**	**0.24**	**274**	⇑*i*P	Pn	06 45 16.4	-0.2
MLR				*i* S	Sn	06 45 29.6	-0.2
MLR	**Muntele Rosu**	**0.24**	**274**	⇑*i*P	Pn	06 45 16.4	-0.2
MLR				*i* S	Sn	06 45 29.6	-0.2
ISR	**Istrita**	**0.40**	**153**	⇓*i*P	Pn	06 45 17.2	+0.1
ISR	**Istrita**	**0.40**	**153**	⇓*i*P	Pn	06 45 17.2	+0.1
ISR				*i* S	Sn	06 45 31.5	+0.8
ISR	**Istrita**	**0.40**	**153**	⇓*i*P	Pn	06 45 17.2	+0.1
ISR				*i* S	Sn	06 45 31.5	+0.8
PLOR	**Plostina**	**0.46**	**34**	⇑*i*P	Pn	06 45 17.2	-0.2
PLOR	**Plostina**	**0.46**	**34**	⇑*i*P	Pn	06 45 17.2	-0.2
PLOR				*i* S	Sn	06 45 30.1	-1.2
PLOR	**Plostina**	**0.46**	**34**	⇑*i*P	Pn	06 45 17.2	-0.2
PLOR				*i* S	Sn	06 45 30.1	-1.2
SECR		**0.46**	**200**	⇑*i*P	Pn	06 45 17.6	+0.2
SECR		**0.46**	**200**	⇑*i*P	Pn	06 45 17.6	+0.2
SECR				*i* S	Sn	06 45 31.9	+0.7
SECR		**0.46**	**200**	⇑*i*P	Pn	06 45 17.6	+0.2
SECR				*i* S	Sn	06 45 31.9	+0.7
GRER		**0.49**	**101**	⇓*i*P	Pn	06 45 18.6	+1.1
GRER		**0.49**	**101**	⇓*i*P	Pn	06 45 18.6	+1.1
GRER		**0.49**	**101**	⇓*i*P	Pn	06 45 18.6	+1.1
VRI	**Vrincioaia**	**0.50**	**38**	⇑*i*P	Pn	06 45 17.6	0.0
VRI	**Vrincioaia**	**0.50**	**38**	⇑*i*P	Pn	06 45 17.6	0.0
VRI				*i* S	Sn	06 45 30.9	-0.7
VRI	**Vrincioaia**	**0.50**	**38**	⇑*i*P	Pn	06 45 17.6	0.0
VRI				*i* S	Sn	06 45 30.9	-0.7
PLAR	**PLOIESTI**	**0.59**	**198**	⇑*i*P	Pn	06 45 18.4	+0.3
PLAR	**PLOIESTI**	**0.59**	**198**	⇑*i*P	Pn	06 45 18.4	+0.3
PLAR	**PLOIESTI**	**0.59**	**198**	⇑*i*P	Pn	06 45 18.4	+0.3
PETR	**Petresti**	**0.71**	**69**	⇓*i*P	Pn	06 45 19.4	+0.5
PETR	**Petresti**	**0.71**	**69**	⇓*i*P	Pn	06 45 19.4	+0.5
PETR				*i* S	Sn	06 45 33.7	-0.3
PETR	**Petresti**	**0.71**	**69**	⇓*i*P	Pn	06 45 19.4	+0.5
PETR				*i* S	Sn	06 45 33.7	-0.3
PGOR	**Pogoanele**	**0.75**	**139**	S	Sn	06 45 35.0	+0.4
PGOR	**Pogoanele**	**0.75**	**139**	*i* S	Sn	06 45 35.0	+0.4
PGOR	**Pogoanele**	**0.75**	**139**	*i* S	Sn	06 45 35.0	+0.4
SULR		**0.80**	**182**	⇑*i*P	Pn	06 45 19.8	+0.2
SULR		**0.80**	**182**	⇑*i*P	Pn	06 45 19.8	+0.2
SULR				*i* S	Sn	06 45 36.0	+0.8
SULR		**0.80**	**182**	⇑*i*P	Pn	06 45 19.8	+0.2
SULR				*i* S	Sn	06 45 36.0	+0.8
DOPR	**Dopca**	**0.80**	**308**	⇓*i*P	Pn	06 45 19.3	-0.4
DOPR	**Dopca**	**0.80**	**308**	⇓*i*P	Pn	06 45 19.3	-0.4
DOPR				*i* S	Sn	06 45 34.0	-1.4
DOPR	**Dopca**	**0.80**	**308**	⇓*i*P	Pn	06 45 19.3	-0.4
DOPR				*i* S	Sn	06 45 34.0	-1.4
VOIR		**0.87**	**268**	⇑*i*P	Pn	06 45 20.1	-0.3
VOIR		**0.87**	**268**	⇑*i*P	Pn	06 45 20.1	-0.3
VOIR				*i* S	Sn	06 45 34.9	-1.7
VOIR		**0.87**	**268**	⇑*i*P	Pn	06 45 20.1	-0.3
VOIR				*i* S	Sn	06 45 34.9	-1.7
MTUR	**Matau**	**0.90**	**254**	⇓*i*P	Pn	06 45 20.5	-0.1
MTUR	**Matau**	**0.90**	**254**	⇓*i*P	Pn	06 45 20.5	-0.1
MTUR	**Matau**	**0.90**	**254**	⇓*i*P	Pn	06 45 20.5	-0.1
TESR	**Tescani**	**1.07**	**13**	⇓*i*P	Pn	06 45 22.1	-0.1
TESR	**Tescani**	**1.07**	**13**	⇓*i*P	Pn	06 45 22.1	-0.1
TESR				*i* S	Sn	06 45 38.5	-1.3
TESR	**Tescani**	**1.07**	**13**	⇓*i*P	Pn	06 45 22.1	-0.1
TESR				*i* S	Sn	06 45 38.5	-1.3
GOLR		**1.13**	**236**	⇑*i*P	Pn	06 45 22.9	+0.1
GOLR		**1.13**	**236**	⇑*i*P	Pn	06 45 22.9	+0.1
GOLR				*i* S	Sn	06 45 41.4	+0.6
GOLR		**1.13**	**236**	⇑*i*P	Pn	06 45 22.9	+0.1
GOLR				*i* S	Sn	06 45 41.4	+0.6
AMRR	**Amara**	**1.14**	**139**	S	Sn	06 45 40.4	-0.5
AMRR	**Amara**	**1.14**	**139**	*i* S	Sn	06 45 40.4	-0.5
AMRR	**Amara**	**1.14**	**139**	*i* S	Sn	06 45 40.4	-0.5
BUC1	**Bucharest**	**1.14**	**189**	⇑*i*P	Pn	06 45 22.9	0.0
BUC1	**Bucharest**	**1.14**	**189**	⇑*i*P	Pn	06 45 22.9	0.0
BUC1				*i* S	Sn	06 45 40.5	-0.4
BUC1	**Bucharest**	**1.14**	**189**	⇑*i*P	Pn	06 45 22.9	0.0
BUC1				*i* S	Sn	06 45 40.5	-0.4
ARR	**Arges**	**1.17**	**265**	⇑*i*P	Pn	06 45 23.4	+0.2
ARR				S	Sn	06 45 40.9	-0.7
ARR	**Arges**	**1.17**	**265**	⇑*i*P	Pn	06 45 23.4	+0.2
ARR				*i* S	Sn	06 45 40.9	-0.7
ARR	**Arges**	**1.17**	**265**	⇑*i*P	Pn	06 45 23.4	+0.2
ARR				*i* S	Sn	06 45 40.9	-0.7
SGRR	**Singureni**	**1.27**	**190**	⇑*i*P	Pn	06 45 24.1	-0.1
SGRR	**Singureni**	**1.27**	**190**	⇑*i*P	Pn	06 45 24.1	-0.1
SGRR				*i* S	Sn	06 45 42.3	-1.0
SGRR	**Singureni**	**1.27**	**190**	⇑*i*P	Pn	06 45 24.1	-0.1
SGRR				*i* S	Sn	06 45 42.3	-1.0
CFR	**Carcaliu**	**1.34**	**102**	⇓*i*P	Pn	06 45 24.5	-0.4
CFR	**Carcaliu**	**1.34**	**102**	⇓*i*P	Pn	06 45 24.5	-0.4
CFR				*i* S	Sn	06 45 42.2	-2.4
CFR	**Carcaliu**	**1.34**	**102**	⇓*i*P	Pn	06 45 24.5	-0.4
CFR				*i* S	Sn	06 45 42.2	-2.4
GIUM	**Giurgiulesti**	**1.35**	**89**	S	Sn	06 45 44.7	-0.2
GIUM	**Giurgiulesti**	**1.35**	**89**	*i* S	Sn	06 45 44.7	-0.2

GIUM	**Giurgiulesti**	**1.35**	**89**	*i* S	Sn	06 45 44.7	-0.2
HARR	**Harsova**	**1.40**	**123**	⇓*i*P	Pn	06 45 25.5	-0.1
HARR	**Harsova**	**1.40**	**123**	⇓*i*P	Pn	06 45 25.5	-0.1
HARR	**Harsova**	**1.40**	**123**	⇓*i*P	Pn	06 45 25.5	-0.1
BIZ	**Bicaz**	**1.47**	**355**	⇑*i*P	Pn	06 45 27.3	+0.9
BIZ	**Bicaz**	**1.47**	**355**	⇑*i*P	Pn	06 45 27.3	+0.9
BIZ				*i* S	Sn	06 45 47.6	+0.2
BIZ	**Bicaz**	**1.47**	**355**	⇑*i*P	Pn	06 45 27.3	+0.9
BIZ				*i* S	Sn	06 45 47.6	+0.2
TLB	**Topalu**	**1.53**	**125**	⇓*i*P	Pn	06 45 26.9	-0.1
TLB	**Topalu**	**1.53**	**125**	⇓*i*P	Pn	06 45 26.9	-0.1
TLB				*i* S	Sn	06 45 46.5	-1.9
TLB	**Topalu**	**1.53**	**125**	⇓*i*P	Pn	06 45 26.9	-0.1
TLB				*i* S	Sn	06 45 46.5	-1.9
CVDA	**Cernavoda**	**1.69**	**132**	S	Sn	06 45 50.8	-0.9
CVDA	**Cernavoda**	**1.69**	**132**	*i* S	Sn	06 45 50.8	-0.9
CVDA	**Cernavoda**	**1.69**	**132**	*i* S	Sn	06 45 50.8	-0.9
ICOR	**Ion Corvin**	**1.73**	**141**	⇑*i*P	Pn	06 45 29.9	+0.4
ICOR	**Ion Corvin**	**1.73**	**141**	⇑*i*P	Pn	06 45 29.9	+0.4
ICOR				*i* S	Sn	06 45 51.9	-0.8
ICOR	**Ion Corvin**	**1.73**	**141**	⇑*i*P	Pn	06 45 29.9	+0.4
ICOR				*i* S	Sn	06 45 51.9	-0.8
TLCR		**1.81**	**98**	⇑*i*P	Pn	06 45 30.6	+0.3
TLCR		**1.81**	**98**	⇑*i*P	Pn	06 45 30.6	+0.3
TLCR				*i* S	Sn	06 45 53.3	-0.9
TLCR		**1.81**	**98**	⇑*i*P	Pn	06 45 30.6	+0.3
TLCR				*i* S	Sn	06 45 53.3	-0.9
TIRR	**Tirgusor**	**1.82**	**123**	⇓*i*P	Pn	06 45 30.4	-0.1
TIRR	**Tirgusor**	**1.82**	**123**	⇓*i*P	Pn	06 45 30.4	-0.1
TIRR				*i* S	Sn	06 45 52.7	-1.8
TIRR	**Tirgusor**	**1.82**	**123**	⇓*i*P	Pn	06 45 30.4	-0.1
TIRR				*i* S	Sn	06 45 52.7	-1.8
BURAR	**Bucovina Array**	**2.27**	**341**	⇓*i*P	Pn	06 45 37.5	+1.4
BURAR	**Bucovina Array**	**2.27**	**341**	⇓*i*P	Pn	06 45 37.5	+1.4
BURAR	**Bucovina Array**	**2.27**	**341**	⇓*i*P	Pn	06 45 37.5	+1.4
SRE	**Strehaia**	**2.33**	**251**	S	Sn	06 46 04.1	-1.7
SRE	**Strehaia**	**2.33**	**251**	*i* S	Sn	06 46 04.1	-1.7
SRE	**Strehaia**	**2.33**	**251**	*i* S	Sn	06 46 04.1	-1.7
HERR	**Herculane**	**2.80**	**259**	⇑*i*P	Pn	06 45 42.0	-0.8
HERR	**Herculane**	**2.80**	**259**	⇑*i*P	Pn	06 45 42.0	-0.8
HERR	**Herculane**	**2.80**	**259**	⇑*i*P	Pn	06 45 42.0	-0.8
MDVR	**Moldovita**	**3.31**	**260**	⇑*i*P	Pn	06 45 49.4	-0.1
MDVR	**Moldovita**	**3.31**	**260**	⇑*i*P	Pn	06 45 49.4	-0.1
MDVR				*i* S	Sn	06 46 25.4	-3.2
MDVR	**Moldovita**	**3.31**	**260**	⇑*i*P	Pn	06 45 49.4	-0.1
MDVR				*i* S	Sn	06 46 25.4	-3.2

IDC 22 06:47:55.1±2.1**,7°.42S**×**127°.03E,h0^{km},mb3.4**/1**, mb1 4.2**/3**,mb1mx3.5**/49**,mbtmp3.9**/3**,ML4.1**/2**,Error ellipse: s-maj=278.7km s-min=30.9km az=63.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**14.32**	**151**	Pn	Pn	06 51 18.1	-1.2
	1.0nm,0.3s,baz=327,slow=14,SNR=38						
WRA				Sn	Sn	06 53 41.7	-17
	1.4nm,0.3s,baz=332,slow=22,SNR=7.2						
ASAR	**Alice Springs**	**17.45**	**159**	P	P	06 52 00.8	-0.6
	0.6nm,0.3s,baz=339,slow=11,SNR=56						
ASAR				S	Sn	06 54 59.9	-15
	0.4nm,0.3s,baz=115,slow=8.5,SNR=6.8						
MKAR	**Makanchi Array**	**67.00**	**328**	P	P	06 58 49.9	0.0
	0.2nm,0.3s,baz=130,slow=8.1,SNR=3.6						

NIED ***22*** *07:00:00,42°.30N×141°.80E,h83^{km},Mw4.1 Best double couple: M$_0$1.63000×10^{15} NP1:φ$_s$129.00000°,δ32.00000°, λ-99.00000°. NP2:φ$_s$320.00000°,δ59.00000°, λ-85.00000°.*

ISCJB ***22*** *07:00:03.5±0.2,42°.33N±0°.02×141°.84E±0°.03,h96^{km}±1^{km}, mb4.3/53,Error ellipse: s-maj=4.5km s-min=2.7km az=146.0*

JMA ***22*** *07:00:03.5±0.1,42°.30N×141°.78E,h94^{km}±2^{km},M4.0 Broadband fault plane solution: P waves. NP1: φ$_s$84.00000°,δ79.00000°,λ161.00000°. NP2: φ$_s$178.00000°,δ72.00000°,λ12.00000°. Principal axes: T Plg21.0000°, Azm40.0000°; N Plg68.0000°, Azm235.0000°; P Plg5.0000°, Azm132.0000°;*

JMA Felt I J1.

BJI ***22*** *07:00:03.3,42°.34N×141°.99E,h102^{km},mb4.7/25, mB4.9/16*

NEIC ***22*** *07:00:04.8±0.4,42°.36N×141°.87E,h96^{km}±3^{km},mb4.6/15, Error ellipse: s-maj=5.4km s-min=3.9km az=142.0*

NEIC Felt at Tomakomai.

SKHL ***22*** *07:00:04.3±1.2,42°.38N×141°.86E,h103^{km}±3^{km},mb5.0/9, msh5.7/6*

MOS ***22*** *07:00:04.2±0.8,42°.34N×141°.91E,h107^{km},mb4.5/17, Error ellipse: s-maj=8.2km s-min=5.9km az=82.3*

IDC ***22*** *07:00:08.0±1.6,42°.62N×141°.79E,h111^{km}±10^{km}, mb3.8/20,mb1 3.9/26,mb1mx3.7/71,mbtmp4.1/26,MS4.8/1, Ms1 4.8/1,ms1mx2.9/63,Error ellipse: s-maj=20.2km s-min=10.6km az=156.0*

ISC 22 07:00:05.0±0.5**,42°.32N**±0°.04×**141°.86E**±0°.03**,h95**^{km}±4^{km}**, n187,**σ1^{s}**47**/221**,mb4.4**/53**,17C-7D,Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSHD	**Hidakashinhida**	**0.46**	**79**	P	**Pn**	**07 00 19.0**	**-1.0**
JSHD				*e*S	**Sn**	**07 00 30.9**	**-0.3**
JBT2	**Biratori 2**	**0.59**	**39**	⇑P	**Pn**	**07 00 19.7**	**-1.4**
JBT2				S	**Sn**	**07 00 31.7**	**-1.3**
JEW	**Eniwo**	**0.60**	**330**	⇓P	**Pn**	**07 00 19.5**	**-1.6**
JEW				S	**Sn**	**07 00 31.2**	**-1.9**
JNB	**Noboribetsu**	**0.62**	**284**	⇓P	**Pn**	**07 00 19.1**	**-2.2**
JNB				S	**Sn**	**07 00 30.8**	**-2.7**
JNBK	**Urakawa-nobuka**	**0.67**	**93**	⇓P	**Pn**	**07 00 20.2**	**-1.5**
JKB	**Kayabe**	**0.75**	**235**	⇑P	**Pn**	**07 00 20.4**	**-2.1**
JKB				S	**Sn**	**07 00 32.2**	**-3.3**
JFR	**Furan**	**1.00**	**33**	⇑P	**Pn**	**07 00 23.5**	**-1.7**
JFR				*e*S	**Sn**	**07 00 39.1**	**-1.2**
ERM	**Erimo**	**1.01**	**107**	*e*Pn	**Pn**	**07 00 24.6**	**-0.6**
ERM				*e*Sn	**Sn**	**07 00 40.0**	**-0.5**
ERM	**Erimo**	**1.01**	**107**	*e*PN	**Pn**	**07 00 24.7**	**-0.6**
ERM				*e*		07 00 40.0	
JEM	**Erimo**	**1.01**	**107**	⇓P	**Pn**	**07 00 24.7**	**-0.5**
JEM				*e*S	**Sn**	**07 00 41.2**	**+0.8**
JOT	**Ohata**	**1.11**	**213**	⇑P	**Pn**	**07 00 24.6**	**-1.8**
JOT				S	**Sn**	**07 00 40.6**	**-1.8**
JYM2	**Yakumo 2**	**1.12**	**260**	⇑P	**Pn**	**07 00 24.8**	**-1.6**
JYM2				S	**Sn**	**07 00 40.4**	**-2.2**
JCH	**Churui**	**1.15**	**75**	⇑P	**Pn**	**07 00 25.9**	**-0.9**
JCH				*e*S	**Sn**	**07 00 42.4**	**-0.9**
JHR	**Hokuryu**	**1.43**	**356**	⇓P	**Pn**	**07 00 29.8**	**-0.3**
JHR				*e*S	**Sn**	**07 00 49.0**	**-0.1**
JSK	**Shakotan**	**1.45**	**316**	⇓P	**Pn**	**07 00 29.4**	**-0.9**
JKK2	**Kamakawa 2**	**1.68**	**23**	⇑P	**Pn**	**07 00 32.9**	**-0.5**
JKK2				*e*S	**Sn**	**07 00 54.4**	**-0.5**
JAR	**Ashorobuto**	**1.71**	**55**	⇑P	**Pn**	**07 00 33.0**	**-0.7**
JAR				*e*S	**Sn**	**07 00 55.4**	**-0.1**
JOSM	**Okushiri--Mats**	**1.78**	**263**	⇑P	**Pn**	**07 00 33.4**	**-1.2**
ASAJ	**Asahikawa**	**1.88**	**17**	P	**Pn**	**07 00 35.6**	**-0.2**
	92nm,0.3s,baz=219,slow=13,SNR=512						
ASAJ				S	**Sn**	**07 00 57.6**	**-1.6**
	48nm,0.3s,baz=182,slow=31,SNR=6.8						
ASAJ				LR	LR	07 01 25.6	
	comp=Z,81nm,20.4s,baz=173,slow=48						
GLVR	**Golovnino**	**3.04**	**61**	*i* P	**Pn**	**07 00 51.0**	**-0.1**
GLVR				AMB	AMB	07 00 53.0	
	244nm,0.3s						
GLVR				AMB	AMB	07 00 53.0	
	222nm,0.3s						
GLVR				AMB	AMB	07 00 53.0	
	63nm,0.3s						
GLVR				*i* S	**Sn**	**07 01 27.0**	**+0.4**
GLVR				A	A	07 01 37.0	
	252nm,0.5s						
GLVR				A	A	07 01 37.0	
	338nm,0.5s						
GLVR	**Golovnino**	**3.04**	**61**	*i* PN	**Pn**	**07 00 51.2**	**+0.1**
GLVR				*i* S	**Sn**	**07 01 27.3**	**+0.7**
GLVR				pmax	pmax		
	comp=N,244nm,0.3s						
GLVR				pmax	pmax		
	comp=Z,627nm,0.3s						
GLVR				pmax	pmax		
	comp=E,222nm,0.2s						
GLVR				smax	smax		
	comp=N,3µm,0.5s						
GLVR				smax	smax		
	comp=E,3µm,0.3s						
GRPR	**Tuman**	**3.32**	**58**	*e*P	**Pn**	**07 00 54.0**	**-0.9**
GRPR				AMB	AMB	07 00 59.0	
	comp=E,283nm,0.2s						
GRPR				AMB	AMB	07 00 59.0	
	comp=E,127nm,0.2s						
GRPR				AMB	AMB	07 00 59.0	
	comp=E,57nm,0.2s						
GRPR				*i* S	**Sn**	**07 01 32.1**	**-1.3**
GRPR				A	A	07 01 38.0	
	comp=E,272nm,0.4s						
GRPR				A	A	07 01 38.0	
	comp=E,148nm,0.4s						
GRPR	**Tuman**	**3.32**	**58**	*e*PN	**Pn**	**07 00 54.8**	**-0.1**
GRPR				*i* S	**Sn**	**07 01 33.1**	**-0.3**
GRPR				pmax	pmax		
	comp=Z,574nm,0.2s						
GRPR				pmax	pmax		
	comp=E,127nm,0.1s						
GRPR				pmax	pmax		
	comp=N,283nm,0.3s						
GRPR				smax	smax		
	comp=E,1µm,0.4s						
GRPR				smax	smax		
	comp=N,272nm,0.1s						
LAGR	**Lagunnoye**	**3.36**	**58**	*i* P	**Pn**	**07 00 55.0**	**-0.4**
LAGR				AMB	AMB	07 00 56.0	
	comp=N,156nm,0.4s						
LAGR				AMB	AMB	07 00 56.0	
	comp=N,144nm,0.4s						
LAGR				AMB	AMB	07 00 56.0	
	comp=N,68nm,0.4s						
LAGR				*i* S	**Sn**	**07 01 35.0**	**+0.7**
LAGR				A	A	07 01 46.0	
	comp=N,280nm,0.5s						
LAGR				A	A	07 01 46.0	
	comp=N,194nm,0.5s						
LAGR	**Lagunnoye**	**3.36**	**58**	*i* PN	**Pn**	**07 00 55.7**	**+0.3**
LAGR				*i* S	**Sn**	**07 01 35.1**	**+0.7**
LAGR				pmax	pmax		
	comp=Z,681nm,0.4s						
LAGR				pmax	pmax		
	comp=N,156nm,0.3s						
LAGR				pmax	pmax		
	comp=E,144nm,0.3s						
LAGR				smax	smax		
	comp=N,3µm,0.6s						
LAGR				smax	smax		
	comp=E,2µm,0.5s						
YUK	**Yuzh-Kuril'sk**	**3.40**	**58**	*i* P	**Pn**	**07 00 56.0**	**+0.1**
YUK				AMB	AMB	07 00 56.0	
	comp=E,55nm,0.3s						
YUK				AMB	AMB	07 00 56.0	
	comp=E,59nm,0.3s						
YUK				AMB	AMB	07 00 56.0	
	comp=E,69nm,0.3s						
YUK				*i* S	**Sn**	**07 01 35.0**	**-0.2**
YUK				A	A	07 01 39.0	
	comp=E,102nm,0.4s						
YUK				A	A	07 01 39.0	
	comp=E,675nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**3.40**	**58**	*i* PN	**Pn**	**07 00 56.3**	**+0.4**
YUK				*i* S	**Sn**	**07 01 35.0**	**-0.2**
YUK				pmax	pmax		
	comp=N,55nm,0.3s						
YUK				pmax	pmax		
	comp=E,59nm,0.3s						
YUK				pmax	pmax		
	comp=Z,685nm,0.3s						
YUK				smax	smax		
	comp=N,1µm,0.4s						
YUK				smax	smax		
	comp=E,675nm,0.4s						
SHO	**Shikotan**	**3.96**	**65**	*i* P	**Pn**	**07 01 03.0**	**-0.5**
SHO				AMB	AMB	07 01 04.0	
	comp=E,100nm,0.5s						
SHO				AMB	AMB	07 01 04.0	
	comp=E,107nm,0.5s						
SHO				AMB	AMB	07 01 04.0	
	comp=E,202nm,0.5s						
SHO				*i* S	**Sn**	**07 01 46.0**	**-2.9**
SHO				A	A	07 01 47.0	
	comp=E,421nm,0.5s						
SHO				A	A	07 01 47.0	
	comp=E,103nm,0.5s						
SHO	**Shikotan**	**3.96**	**65**	*i* PN	**Pn**	**07 01 03.0**	**-0.5**
SHO				*i* S	**Sn**	**07 01 46.2**	**-2.7**
SHO				pmax	pmax		
	comp=E,107nm,0.5s						
SHO				pmax	pmax		
	comp=Z,202nm,0.5s						
SHO				pmax	pmax		
	comp=N,100nm,0.2s						
SHO				smax	smax		
	comp=N,421nm,0.5s						
SHO				smax	smax		
	comp=E,1µm,0.4s						
YSS	**Yuzh-Sakhalins**	**4.68**	**8**	*e*P	**Pn**	**07 01 13.8**	**+0.6**
YSS				AMB	AMB	07 01 15.1	
	comp=E,160nm,0.6s						
YSS	**Yuzh-Sakhalins**	**4.68**	**8**	*e*Pn	**Pn**	**07 01 14.0**	**+0.7**
YSS	**Yuzh-Sakhalins**	**4.68**	**8**	⇑*i*PN	**Pn**	**07 01 14.1**	**+0.9**
YSS				*i* S	**Sn**	**07 02 07.4**	**+1.2**
YSS				pmax	pmax		
	comp=Z,160nm,0.7s						
YSS				smax	smax		
	comp=N,50nm,0.6s						
KUR	**Kuril'sk**	**5.24**	**54**	*e*P	**Pn**	**07 01 21.0**	**+0.2**
KUR				AMB	AMB	07 01 22.0	
	comp=N,14nm,0.4s						
KUR				AMB	AMB	07 01 22.0	
	comp=N,27nm,0.4s						
KUR				AMB	AMB	07 01 22.0	
	comp=N,85nm,0.4s						
KUR				*e*S	**Sn**	**07 02 22.0**	**+2.2**
KUR				A	A	07 02 42.0	
	comp=N,153nm,0.5s						
KUR				A	A	07 02 42.0	
	comp=N,147nm,0.5s						
KUR	**Kuril'sk**	**5.24**	**54**	*d i*PN	**Pn**	**07 01 21.4**	**+0.6**
KUR				*e*S	**Sn**	**07 02 22.0**	**+2.2**
KUR				pmax	pmax		
	comp=E,48nm,0.5s						
KUR				pmax	pmax		
	comp=Z,94nm,0.5s						
KUR				pmax	pmax		
	comp=N,43nm,0.2s						
KUR				smax	smax		
	comp=E,177nm,0.4s						
KUR				smax	smax		
	comp=N,148nm,0.3s						
MJA0	**Matsu Arr-Jizo**	**6.41**	**207**	*e*PN	**Pn**	**07 01 38.8**	**+1.9**
MJA0				pmax	pmax		
	comp=Z,3.0nm,0.3s						
MJB9	**Matsu-Tunnel**	**6.42**	**207**	*e*Pn	**Pn**	**07 01 37.4**	**+0.4**
MAJO	**Matsushiro**	**6.42**	**207**	*e*P	**Pn**	**07 01 38.0**	**+0.9**
MAJO	**Matsushiro**	**6.42**	**207**	*e*Pn	**Pn**	**07 01 37.4**	**+0.3**
MAJO	**Matsushiro**	**6.42**	**207**	*c i*PN	**Pn**	**07 01 38.0**	**+0.9**
MAT	**Matsushiro**	**6.42**	**207**	P	**Pn**	**07 01 37.3**	**+0.2**
MAT				*e*S	**Sn**	**07 02 51.3**	**+2.4**
MJAR	**Matsushiro Arr**	**6.42**	**207**	P	**Pn**	**07 01 37.0**	**-0.1**
	comp=Z,3.1nm,0.3s,baz=12,slow=12,SNR=62						
MJAR	**Matsushiro Arr**	**6.42**	**207**	*e*P	**Pn**	**07 01 38.8**	**+1.7**
MJAR	**Matsushiro Arr**	**6.42**	**207**	PN	**Pn**	**07 01 37.0**	**-0.1**
UGL	**Uglegorsk**	**6.76**	**1**	*e*P	Pn	07 01 36.6	-4.9
UGL				AMB	AMB	07 01 38.0	
	comp=Z,46nm,0.5s						
USRK	**Ussuriysk Ar.**	**7.44**	**288**	P	**Pn**	**07 01 52.2**	**+1.3**
	baz=87,slow=16						
MSHR	**Mys Shultsa**	**7.92**	**275**	*i* PN	**Pn**	**07 01 59.4**	**+2.1**
INU	**Inuyama**	**7.92**	**210**	*e*Pn	**Pn**	**07 01 57.7**	**+0.3**
TYV	**Tymovskoe**	**8.56**	**3**	*e*PN	Pn	07 02 11.0	+5.0
TYV				*e*S	**Sn**	**07 03 44.8**	**+4.0**
TYV				pmax	pmax		
	comp=Z,12nm,1.2s						
TYV				smax	smax		
	comp=E,11nm,2.0s						
MDJ	**Mudanjiang**	**9.21**	**289**	P	**Pn**	**07 02 13.6**	**-1.3**
MDJ				pmax	pmax		
	comp=E,16nm,1.0s						
MDJ	**Mudanjiang**	**9.21**	**289**	*e*Pn	**Pn**	**07 02 13.5**	**-1.3**
KLR	**Kul'dur**	**9.87**	**318**	P	**Pn**	**07 02 24.6**	**+0.7**
	comp=E,0.0nm,0.3s,baz=123,slow=13,SNR=33						
KLR	**Kul'dur**	**9.87**	**318**	*e*P	**Pn**	**07 02 25.3**	**+1.4**
KLR	**Kul'dur**	**9.87**	**318**	*ce*PN	**Pn**	**07 02 25.3**	**+1.4**
KSRS	**Korea Array**	**11.75**	**250**	P	**Pn**	**07 02 53.6**	**+4.3**
	comp=E,0.4nm,0.3s,baz=64,slow=13,SNR=8.2						
KS01	**Wonju Array Si**	**11.76**	**250**	*e*Pn	**Pn**	**07 02 50.5**	**+0.9**
KS01				*e*Sn	**Sn**	**07 05 06.7**	**+7.9**
KSAR	**Wonju Array Be**	**11.78**	**250**	P	**Pn**	**07 02 53.6**	**+3.9**
KSAR	**Wonju Array Be**	**11.78**	**250**	PN	**Pn**	**07 02 53.7**	**+3.9**
JNU	**Nakatsue**	**12.63**	**227**	P	**P**	**07 03 07.8**	**-1.0**
	comp=E,0.3nm,0.3s,baz=37,slow=4.1,SNR=4.1						
ZEA	**Zeya**	**14.99**	**325**	*e*P	**Pn**	**07 03 31.1**	**-0.6**
ZEA				pmax	pmax		
	comp=Z,12nm,1.0s						
PETK	**Petropavlovsk-**	**15.13**	**39**	P	**Pn**	**07 03 31.2**	**-2.3**
	baz=219,slow=9.2						
PETK	**Petropavlovsk-**	**15.13**	**39**	*e*Pn	**Pn**	**07 03 30.9**	**-2.6**
MA2	**Magadan**	**18.14**	**15**	P	**P**	**07 04 08.5**	**-0.9**
	comp=Z,0.8nm,0.3s,baz=181,slow=9.9,SNR=4.5						
MA2	**Magadan**	**18.14**	**15**	*e*P	**Pn**	**07 04 10.4**	**+0.1**
MA2	**Magadan**	**18.14**	**15**	*i* P	**Pn**	**07 04 10.5**	**+0.1**
MA2				pmax	pmax		
	comp=Z,21nm,1.3s						
NJ2	**Nanjing**	**20.94**	**248**	*e*P	**P**	**07 04 38.0**	**-2.0**
NJ2				pmax	pmax		
	comp=Z,18nm,0.7s						
YAK	**Yakutsk**	**21.04**	**344**	*e*P	**P**	**07 04 41.5**	**+0.7**
YAK	**Yakutsk**	**21.04**	**344**	*i* P	**P**	**07 04 41.6**	**+0.7**
YAK				pmax	pmax		
	comp=Z,16nm,0.5s						
SEY	**Seymchan**	**21.56**	**13**	P	**P**	**07 04 44.3**	**-2.1**
	comp=Z,1.3nm,0.4s,baz=181,slow=9.3,SNR=7.8						
SEY	**Seymchan**	**21.56**	**13**	*e*P	**P**	**07 04 44.8**	**-1.6**
SEY	**Seymchan**	**21.56**	**13**	*i* P	**P**	**07 04 44.8**	**-1.6**
HHC	**Hu-ho-hao-te**	**22.65**	**277**	*e*P	**P**	**07 04 58.0**	**-0.3**
HHC				S	**S**	**07 08 58.0**	**-1.3**
HHC				SS	**SnSn**	**07 09 43.0**	**+4.3**
HHC				pmax	pmax		
	comp=Z,12nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,4.9s						
HHC				LR	LR		
	comp=Z,210nm,8.8s						
HHC				LR	LR		
	comp=Z,220nm,10.4s						
HHC				LR	LR		
	comp=Z,300nm,10.6s						
SMY	**Shemya**	**23.94**	**53**	*e*P	**P**	**07 05 09.4**	**-0.7**
	comp=Z,74nm,1.2s						
SMY	**Shemya**	**23.94**	**53**	*e*P	**P**	**07 05 09.4**	**-0.7**
SMY				pmax	pmax		
	comp=Z,74nm,1.2s						
WHN	**Wuhan**	**24.95**	**251**	P	**P**	**07 05 20.9**	**+1.5**
SONA1	**Songino Array**	**25.48**	**295**	*e*P	**P**	**07 05 24.2**	**-0.1**
SONM	**Songino Array**	**25.48**	**295**	P	**P**	**07 05 24.2**	**-0.2**
	comp=Z,5.0nm,0.7s,baz=89,slow=8.6,SNR=23						
ZAK	**Zakamensk**	**27.56**	**300**	*e*P	**P**	**07 05 39.8**	**-3.1**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
H11N2	**WAKE ISLAND Hy**	**30.90**	**129**	T	T	07 38 53.7	
	baz=322,slow=75,SNR=38						
H11N1	**WAKE ISLAND Hy**	**30.91**	**129**	T	T	07 38 55.4	
	baz=322,slow=75,SNR=7.4						
H11N3	**WAKE ISLAND Hy**	**30.92**	**129**	T	T	07 38 56.3	
	baz=322,slow=75,SNR=20						
WAKE	**Wake Island**	**31.11**	**130**	*e*P	**P**	**07 06 13.6**	**-0.9**
	comp=Z,578nm,1.6s						
H11S1	**WAKE ISLAND Hy**	**31.76**	**131**	T	T	07 39 24.0	
	baz=328,slow=76,SNR=86						
H11S3	**WAKE ISLAND Hy**	**31.76**	**131**	T	T	07 39 25.6	
	baz=328,slow=76,SNR=129						
H11S2	**WAKE ISLAND Hy**	**31.78**	**131**	T	T	07 39 24.4	
	baz=328,slow=76,SNR=89						
CD2	**Chengdu**	**32.38**	**262**	*e*P	**P**	**07 06 24.5**	**-1.1**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
GYA	**Guiyang**	**32.80**	**253**	*e*P	**P**	**07 06 31.0**	**+1.7**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TGY	**Tagaytay City**	**33.43**	**219**	LR	LR	07 18 58.9	
	comp=Z,2µm,20.6s,baz=106,slow=34						
QIZ	**Qiongzhong**	**35.68**	**239**	P	**P**	**07 06 54.1**	**0.0**
KMI	**Kunming**	**36.40**	**254**	P	**P**	**07 07 02.0**	**+1.4**
KMI				pP	pP	07 07 23.5	+1.1
KMI				sP	sP	07 07 34.8	+1.4
KMI				pmax	pmax		
	comp=Z,13nm,0.5s						
KMI				pmax	pmax		
	comp=Z,99nm,4.4s						
KMI				LR	LR		
	comp=Z,500nm,9.5s						
KMI				LR	LR		
	comp=Z,420nm,11.8s						
KMI				LR	LR		
	comp=Z,420nm,12.0s						
DGZ	**Jazzator, Alta**	**37.78**	**300**	*i* P	**P**	**07 07 12.5**	**+0.6**
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ZAA0	**Zalesovo Array**	**38.78**	**308**	*e*P	**P**	**07 07 18.6**	**-1.4**
	comp=Z,4.4nm,0.7s						
ZALV	**Zalesovo Beam**	**38.78**	**308**	P	**P**	**07 07 18.6**	**-1.3**
	comp=Z,5.6nm,0.6s,baz=79,slow=8.0,SNR=8.8						
ZALV				PcP	**PcP**	**07 09 29.1**	**-0.3**
	comp=Z,1.5nm,0.5s,baz=50,slow=2.3,SNR=4.0						
WMQ	**Urumqi**	**39.00**	**291**	P	**P**	**07 07 23.4**	**+1.4**
MK01	**Makanchi Array**	**41.80**	**297**	*e*P	**P**	**07 07 44.6**	**-0.4**
MK31	**Makanchi Array**	**41.80**	**297**	*e*P	**P**	**07 07 43.5**	**-1.5**
MK31	**Makanchi Array**	**41.80**	**297**	*e*P	**P**	**07 07 43.5**	**-1.5**
MKAR	**Makanchi Array**	**41.80**	**297**	P	**P**	**07 07 44.4**	**-0.7**
	comp=Z,2.7nm,0.6s,baz=83,slow=9.8,SNR=18						
MKAR				PcP	**PcP**	**07 09 39.4**	**0.0**
	comp=Z,0.6nm,0.5s,baz=101,slow=1.5,SNR=4.2						
MKAR	**Makanchi Array**	**41.80**	**297**	*e*P	**P**	**07 07 43.8**	**-1.2**
	comp=Z,25nm,0.6s						
MKAR				PcP	**PcP**	**07 09 39.4**	**0.0**
MAKZ	**Makanchi**	**42.00**	**297**	*e*P	**P**	**07 07 45.8**	**-0.8**
	comp=Z,3.1nm,0.6s						
MAKZ				*e*PcP	**PcP**	**07 09 36.7**	**-3.4**
MAKZ	**Makanchi**	**42.00**	**297**	*e*P	**P**	**07 07 45.8**	**-0.8**
MAKZ				*e*		07 09 36.7	
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.6s						
CAST	**Castle Rocks**	**42.74**	**37**	*e*P	**P**	**07 07 51.8**	**-0.6**
	comp=Z,4.1nm,0.8s						
KDAK	**Kodiak Island**	**43.05**	**46**	*e*P	**P**	**07 07 54.8**	**-0.1**
KDAK	**Kodiak Island**	**43.05**	**46**	*i* P	**P**	**07 07 54.8**	**-0.1**
KURK	**Kurchatov**	**43.10**	**304**	*e*P	**P**	**07 07 54.9**	**-0.6**
KURK	**Kurchatov**	**43.10**	**304**	*e*P	**P**	**07 07 54.9**	**-0.6**
	comp=Z,9.8nm,0.8s						
KURK	**Kurchatov**	**43.10**	**304**	*e*P	**P**	**07 07 54.9**	**-0.6**
KURK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KURBB	**Kurchatov Arra**	**43.18**	**304**	P	**P**	**07 07 55.4**	**-0.7**
	comp=Z,9.7nm,0.4s,baz=77,slow=8.9,SNR=57						
CMAR	**Chiang Mai Arr**	**43.39**	**250**	P	**P**	**07 07 59.1**	**+1.0**
	comp=Z,1.8nm,0.3s,baz=42,slow=6.7,SNR=6.0						
CMAR	**Chiang Mai Arr**	**43.39**	**250**	*e*P	**P**	**07 07 59.5**	**+1.4**
CMAR	**Chiang Mai Arr**	**43.39**	**250**	*e*P	**P**	**07 07 59.6**	**+1.4**
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
GHO	**Glory Hole Cre**	**44.34**	**39**	*e*P	**P**	**07 08 04.5**	**-0.8**
	comp=Z,26nm,1.4s						
GHO				*e*S	**S**	**07 14 31.7**	**-0.5**
SML	**Sawmill**	**44.61**	**39**	*e*P	**P**	**07 08 06.6**	**-0.9**
	comp=Z,12nm,0.8s						
SML	**Sawmill**	**44.61**	**39**	*e*P	**P**	**07 08 06.6**	**-0.9**
SML				pmax	pmax		
	comp=Z,12nm,0.8s						
DHY	**Denali Highway**	**44.89**	**38**	*e*P	**P**	**07 08 09.1**	**-0.8**
	comp=Z,4.9nm,0.6s						
IL1	**Eielson Array**	**44.91**	**35**	*e*P	**P**	**07 08 08.8**	**-0.9**
IL1				*e*S	**S**	**07 14 37.0**	**-3.3**
ILAR	**Eielson Array**	**44.91**	**35**	P	**P**	**07 08 09.2**	**-0.5**
	comp=Z,1.8nm,0.8s,baz=271,slow=6.8,SNR=28						
ILAR	**Eielson Array**	**44.91**	**35**	*e*P	**P**	**07 08 09.1**	**-0.7**
ILB	**Eielson Array**	**44.91**	**35**	*e*P	**P**	**07 08 09.2**	**-0.5**
ILB				*e*S	**S**	**07 14 37.9**	**-2.4**
SCM	**Sheep Creek Mo**	**45.08**	**39**	*e*P	**P**	**07 08 15.1**	**+3.9**
	comp=Z,16nm,0.6s						
SCM	**Sheep Creek Mo**	**45.08**	**39**	*e*P	**P**	**07 08 15.1**	**+3.9**
SCM				pmax	pmax		
	comp=Z,16nm,0.6s						
SCRK	**Sand Creek**	**46.27**	**36**	*e*P	**P**	**07 08 19.9**	**-0.7**
	comp=Z,5.2nm,0.6s						
JIRN	**Jiri**	**47.09**	**271**	*e*P	**P**	**07 08 28.1**	**+0.3**
	comp=Z,20nm,0.5s						
RAMN	**Ramite**	**47.18**	**269**	*e*P	**P**	**07 08 28.3**	**-0.1**
	comp=Z,28nm,0.6s						

GUN	Gumba	47.19	271	eP	P	07 08 28.6	+0.1
	comp=Z,64nm,0.4s						
EGAK	Eagle	47.34	35	eP	P	07 08 28.0	-0.8
	comp=Z,3.1nm,0.9s						
BVAR	Borovoye Array	47.39	309	P	P	07 08 29.0	-0.4
	comp=Z,3.7nm,0.4s,baz=69,slow=8.5,SNR=19						
BVAR				PcP	PcP	07 09 58.7	+0.2
	comp=Z,1.6nm,0.6s,baz=70,slow=4.7,SNR=3.8						
BRVK	Borovoye	47.44	309	eP	P	07 08 30.8	+1.1
BRVK	Borovoye	47.44	309c	eP	P	07 08 30.8	+1.1
BRVK				pmax	pmax		
	comp=Z,7.0nm,0.6s						
KKN	Kakani	47.70	271	eP	P	07 08 32.5	+0.2
	comp=Z,16nm,0.7s						
PKIN	Phulchoki	47.73	271	eP	P	07 08 32.4	-0.2
	comp=Z,10nm,0.5s						
DMN	Daman	47.92	271	eP	P	07 08 34.3	+0.2
	comp=Z,10.0nm,0.5s						
GKN	Gorkha	48.06	272	eP	P	07 08 35.0	0.0
	comp=Z,8.4nm,0.3s						
DANN	Dangsing	48.52	273	eP	P	07 08 39.1	+0.4
	comp=Z,60nm,0.6s						
KOLN	Koldanda	48.95	272	eP	P	07 08 42.0	0.0
	comp=Z,11nm,0.3s						
PYUN	Piuthan	49.23	273	eP	P	07 08 44.2	+0.2
	comp=Z,8.4nm,0.4s						
INK	Inuvik	49.57	29	P	P	07 08 45.1	-0.6
	comp=Z,2.3nm,0.6s,baz=296,slow=7.7,SNR=3.7						
MNAS	Manas	49.84	295	P	P	07 08 48.4	-0.1
MNAS				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SFK	Sufi-Kurgan	50.23	292	P	P	07 08 51.4	-0.1
SFK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KK31	Karatay Array	50.91	297	eP	P	07 08 55.3	-1.1
KK31	Karatay Array	50.91	297	eP	P	07 08 55.3	-1.1
KKAR	Karatay Array	50.91	297	eP	P	07 08 55.3	-1.1
KKAR	Karatay Array	50.91	297	eP	P	07 08 55.3	-1.1
ARU	Arti	52.71	316	eP	P	07 09 09.6	+0.2
ARU	Arti	52.71	316c	iP	P	07 09 08.3	-1.1
ARU						07 10 14.7	
ARU						07 11 05.7	
ARU				S	S	07 16 30.2	+0.5
ARU				SS	SS	07 20 04.2	-4.6
ARU				pmax	pmax		
	comp=Z,7.0nm,1.2s						
ABKAR	Akbulak array	54.89	308	eP	P	07 09 25.1	-0.4
ARCES	ARCESS Array B	59.19	338	P	P	07 09 55.6	+0.1
	comp=Z,2.1nm,0.8s,baz=52,slow=7.9,SNR=3.7						
ARCES	ARCESS Array B	59.19	338	eP	P	07 09 57.2	+1.7
ARCES	ARCESS Array B	59.19	338	eP	P	07 09 57.2	+1.7
ARCES				pmax	pmax		
	comp=Z,6.0nm,1.1s						
MSF	Maaselka	60.42	334	P	P	07 10 03.2	-0.7
OBN	Obninsk	64.11	322	eP	P	07 10 27.5	-1.1
OBN	Obninsk	64.11	322c	eP	P	07 10 27.5	-1.1
OBN				e*PP	pP	07 10 54.6	+2.1
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
FINES	FINESS Array B	64.32	331	P	P	07 10 29.4	-0.6
	comp=Z,2.7nm,0.5s,baz=52,slow=7.1,SNR=23						
VSU	Vasula	66.10	329c	eP	P	07 10 41.8	+0.3
VSU				pmax	pmax		
	comp=Z,31nm,1.0s						
NCK	Nalchik	67.51	309	iP	P	07 10 51.5	+0.7
NCK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
KIV	Kislovodsk	67.75	310⇑	eP	P	07 10 53.7	+1.3
KIV				e*PP	pP	07 11 16.5	0.0
KIV				e		07 13 21.3	
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KBZ	Khabaz	67.77	309	P	P	07 10 53.0	+0.7
	comp=Z,0.8nm,0.4s,baz=32,slow=9.5,SNR=3.0						
KBZ	Khabaz	67.77	309	P	P	07 10 53.0	+0.7
HFS	Hagfors	69.43	335	P	P	07 11 02.1	-0.3
	comp=Z,1.5nm,0.5s,baz=54,slow=7.3,SNR=20						
NB2	NORSAR Subarra	69.46	337	P	P	07 11 01.9	-0.7
	comp=Z,0.5nm,0.5s,baz=35,slow=6.5						
NOA	NORSAR Array B	69.46	337	P	P	07 11 01.7	-0.9
	comp=Z,0.8nm,0.6s,baz=41,slow=5.9,SNR=6.5						
NOA	NORSAR Array B	69.46	337	eP	P	07 11 02.2	-0.4
NOA	NORSAR Array B	69.46	337	eP	P	07 11 02.2	-0.4
AKASG	Malin Array Be	70.35	321	P	P	07 11 07.5	-0.7
	comp=Z,1.4nm,0.4s,baz=44,slow=6.5,SNR=9.2						
KIEV	Kiev	70.36	321	eP	P	07 11 06.9	-1.4
KIEV	Kiev	70.36	321	iP	P	07 11 06.9	-1.4
KIEV				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NVAR	Mina Array Bea	71.60	55	P	P	07 11 17.0	+0.7
	comp=Z,0.3nm,0.7s,baz=266,slow=6.1,SNR=3.4						
PDAR	Pinedale Array	73.75	47	P	P	07 11 28.1	-0.9
	comp=Z,0.4nm,0.5s,baz=306,slow=0.5,SNR=5.2						
BUR08	Bucovina Ar. S	74.38	321	eP	P	07 11 31.6	-0.7
OJC	Ojcow	74.86	326	eP	P	07 11 34.6	-0.3
	comp=Z,5.3nm,0.8s						
OJC	Ojcow	74.86	326	eP	P	07 11 34.6	-0.3
OJC				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SZCU	Shurtz Canyon	75.26	52	eP	P	07 11 37.2	-0.6
	comp=Z,6.3nm,0.6s						
BRTR	Keskin Array B	75.63	311	P	P	07 11 40.0	+0.3
	comp=Z,0.7nm,0.6s,baz=64,slow=3.4,SNR=3.3						
MORC	Moravsky Berou	76.13	327	P	P	07 11 42.1	-0.2
MORC				pmax	pmax		
	comp=Z,4.0nm,1.8s						
KRLC	Kraliky	76.21	327	eP	P	07 11 47.6	+4.9
KRLC	Kraliky	76.21	327	eP	P	07 11 47.6	+4.9
CLL	Collm	76.69	330	eP	P	07 11 45.0	-0.3
CLL	Collm	76.69	330	eP	P	07 11 45.0	-0.3
KHC	Kasperske Hory	78.23	328	eP	P	07 11 54.4	+0.4
KHC	Kasperske Hory	78.23	328	eP	P	07 11 54.4	+0.4
GERES	GERESS Array B	78.41	328	P	P	07 11 53.9	-1.2
	comp=Z,0.5nm,0.6s,baz=32,slow=6.3,SNR=3.9						
WET	Wettzell	78.49	329	P	P	07 11 55.6	+0.2
WET				pmax	pmax		
	comp=Z,5.0nm,2.6s						
FUORN	Ofenpass-Fuorn	81.57	329	eP	P	07 12 12.3	-0.1
	comp=Z,14nm,1.4s						
TXAR	Lajitas Array	86.64	53	P	P	07 12 39.7	+1.5
	comp=Z,0.2nm,0.5s,baz=316,slow=2.5,SNR=3.4						
SNAA	Sanae	145.88	199	PKPbc	PKPab	07 19 32.2	-0.6
	comp=Z,2.6nm,0.7s,baz=139,slow=5.2,SNR=8.8						
SNAA	Sanae	145.88	199	ePKPdf	PKPbc	07 19 31.9	-0.3
SNAA	Sanae	145.88	199	ePKP2	PKPbc	07 19 31.9	-0.3
SIV	San Ignacio	147.20	44	PKPbc	PKPbc	07 19 37.7	+0.1
	comp=Z,1.6nm,0.6s,baz=293,slow=1.8,SNR=12						

BJI ***22*** *07:02:03.8, 5°.57S×150°.24E, h5^{km}, mb5.1/73, mB5.7/49, Ms5.4/82, Ms7 5.3/76*

ISCJB ***22*** *07:02:11.7±0.2, 4°.95S±0°.02×149°.57E±0°.03, h16^{km}, mb5.2/141, MS5.2/191, Error ellipse: s-maj=4.6km s-min=3.0km az=170.3*

NEIC ***22*** *07:02:13.0±0.0, 4°.71S×149°.65E, h15^{km}, Moment Tensor Solution. s33 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.11; $M_{\theta\theta}$3.37; $M_{\phi\phi}$-3.26; $M_{r\theta}$-0.15; $M_{\theta\phi}$0.72; $M_{\phi r}$0.22; Best double couple: $M_0$3.40000×10^{17} NP1:ϕ_s129.00000°, δ88.00000°, λ-4.00000°. NP2:ϕ_s219.00000°, δ86.00000°, λ-178.00000°. Principal axes: T 3.4500, Plg2.0000°, Azm173.0000°; N -0.0900, Plg85.0000°, Azm290.0000°; P -3.3600, Plg4.0000°, Azm83.0000°;*

NEIC ***22*** *07:02:13.6±1.9, 4°.87S×149°.53E, h20^{km}±14^{km}, mb5.5/60, MS5.3/121, MW5.6, MW5.6 Error ellipse: s-maj=5.9km s-min=4.6km az=68.0, Moment Tensor Solution. s31 Moment tensor: Scale 10^{17}Nm; M_{rr}0.20; $M_{\theta\theta}$2.34; $M_{\phi\phi}$-2.55; $M_{r\theta}$0.79; $M_{\theta\phi}$0.77; $M_{\phi r}$-0.01; Best double couple: $M_0$2.70000×10^{17} NP1:ϕ_s35.00000°, δ76.00000°, λ169.00000°. NP2:ϕ_s128.00000°, δ80.00000°, λ14.00000°. Principal axes: T 2.7100, Plg17.0000°, Azm352.0000°; N -0.0400, Plg72.0000°, Azm163.0000°; P -2.6700, Plg3.0000°, Azm261.0000°;*

NEIC Felt at Lae, Papua New Guinea.

GCMT ***22*** *07:02:13.6±0.1, 4°.84S×149°.61E, h12^{km}, MW5.7/134, Moment Tensor Solution. s121,c213; s134,c350; Duration: 1^{s}6 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.45±.03; $M_{\theta\theta}$3.71±.03; $M_{\phi\phi}$-3.26±.03; $M_{r\theta}$-0.34±.09; $M_{\theta\phi}$0.94±.03; $M_{\phi r}$-0.35±.09; Best double couple: $M_0$3.64300×10^{17} NP1:ϕ_s38.00000°, δ89.00000°, λ-172.00000°. NP2:ϕ_s307.00000°, δ82.00000°, λ-1.00000°. Principal axes: T 3.8690, Plg5.0000°, Azm172.0000°; N -0.4530, Plg82.0000°, Azm42.0000°; P -3.4170, Plg6.0000°, Azm263.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

MOS ***22*** *07:02:14.1±1.2, 4°.93S×149°.51E, h33^{km}, mb5.6/34, MS5.1/22 Error ellipse: s-maj=9.3km s-min=5.9km az=103.5*

IDC ***22*** *07:02:17.8±1.8, 4°.90S×149°.52E, h53^{km}±16^{km}, mb4.6/25, mb1 4.7/28, mb1mx4.6/48, mbtmp4.9/28, ML4.2/3, MS5.1/38, Ms1 5.1/38, ms1mx5.1/42, Error ellipse: s-maj=13.9km s-min=7.7km az=104.0*

DJA ***22*** *07:02:40.3±2.1, 6°S±14°×14°8E±2°2, h53^{km}±17^{km}, M5.8/7, mb5.3/7, mB6.0/6, MLv6.0/1, Mw(mB)5.7/6*

ISC 22 07:02:14.4±0.5, **4°.97S**±0°.03×**149°.66E**±0°.04, **h22**^{km}±3^{km}, **h23**^{km}**:pP-P, n444,** σ**1^{s}90**/377, **mb5.3**/140, **MS5.3**/193, **18C-5D, Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RABL	Rabaul	2.61	73	ePn	Pn	07 02 52.4	-2.9
MANU	Manus Island	3.71	322	ePn	Pn	07 03 05.7	-4.6
MANU				eSn	Sn	07 03 37.3	-16
PMG	Port Moresby	5.05	209	P	Pn	07 03 31.1	+2.3
	89nm,0.3s,baz=38,slow=5.9,SNR=143						
PMG				S	Sn	07 04 31.3	+4.7
	111nm,0.3s,baz=348,slow=20,SNR=6.1						
PMG				LR	LR	07 05 44.6	
	comp=Z,43µm,20.6s,baz=17,slow=41						
JAY	Jayapura	9.27	285	P	Pn	07 04 28.1	+1.3
JAY	Jayapura	9.27	285	P	Pn	07 04 26.0	-0.8
JAY				pmax	pmax		
	comp=Z,38nm,1.1s						
GENI	Genyem	9.76	284	P	Pn	07 04 34.5	+0.9
COEN	Coen	10.98	215	P	Pn	07 04 50.1	-0.1
	baz=11,SNR=23						
COEN	Coen	10.98	215	ePn	Pn	07 04 51.0	+0.8
HNR	Honiara	11.12	114	P	Pn	07 04 58.0	+5.9
	comp=Z,12nm,0.3s,baz=293,slow=8.7,SNR=3.7						
HNR				LR	LR	07 09 46.8	
	comp=Z,12µm,18.2s,baz=276,slow=40						
HNR	Honiara	11.12	114	P	Pn	07 04 50.0	-2.2
HNR	Honiara	11.12	114	ePn	Pn	07 04 54.6	+2.4
HNR	Honiara	11.12	114	eP	Pn	07 04 54.6	+2.4
MTSU	Mount Surprise	14.09	201	P	Pn	07 05 31.9	-0.8
	baz=14,SNR=36						
PATS	Pohnpei	14.57	36	P	P	07 05 45.4	-0.2
	baz=15,SNR=4.3						
PATS	Pohnpei	14.57	36	ePn	P	07 05 48.2	+2.6
CTA	Charters Tower	15.39	192	P	P	07 05 55.0	+0.3
	comp=Z,0.2nm,0.3s,baz=21,slow=15,SNR=7.8						
CTA				LR	LR	07 12 08.0	
	comp=Z,14µm,18.0s,baz=12,slow=38						
CTAO	Charters Tower	15.39	192	ePn	Pn	07 05 48.5	-1.7
	comp=Z,139nm,1.4s						
CTAO	Charters Tower	15.39	192	eP	Pn	07 05 48.5	-1.7
CTAO				pmax	pmax		
	comp=Z,139nm,1.4s						
RKPI	Ransiki, Papua	15.84	282	P	P	07 05 59.9	+0.2
FAKI	Fak Fak	17.49	276	P	P	07 06 18.2	+0.1
FAKI	Fak Fak	17.49	276	ePn	Pn	07 06 14.9	-2.1
	comp=Z,411nm,1.2s						
QIS	Mount Isa	18.32	211	P	P	07 06 27.7	+0.5
	baz=18,SNR=19						
SAUI	Saumlaki	18.49	260	ePn	P	07 06 28.3	-0.8
	comp=Z,2µm,1.5s						
KDU	Kakadu	18.62	245	P	P	07 06 28.7	-1.8
	baz=18,SNR=18						
SWI	Sorong	18.82	282	P	Pn	07 06 34.2	+0.8
GUMO	Guam	19.05	346	P	Pn	07 06 36.4	+0.4
	comp=Z,1.7nm,0.3s,baz=214,slow=1.9,SNR=6.8						
GUMO				LR	LR	07 12 14.3	
	comp=Z,10µm,22.0s,baz=158,slow=32						
GUMO	Guam	19.05	346	eP	P	07 06 33.7	-1.5
	comp=Z,286nm,1.5s						
GUMO	Guam	19.05	346	eP	P	07 06 33.7	-1.5
GUMO				pmax	pmax		
	comp=Z,286nm,1.5s						
PALU	Palau	19.48	309	P	Pn	07 06 42.1	+0.8
	baz=20,SNR=5.4						
MTN	Manton Dam	19.89	246	P	P	07 06 44.0	-0.5
	baz=20,SNR=20						
MTN	Manton Dam	19.89	246	eP	P	07 06 41.6	-2.9
	comp=Z,478nm,1.3s						
EIDS	Eidsvold	20.32	176	P	Pn	07 06 51.0	-0.1
	baz=20,SNR=7.7						
EIDS	Eidsvold	20.32	176	eP	Pn	07 06 51.3	+0.1
	comp=Z,306nm,1.4s						
WRAB	Tennant Creek	21.05	224	eP	P	07 06 56.3	-0.7
	comp=Z,216nm,0.8s						
WRAB				LR	LR		
	comp=Z,7µm,21.0s						
WRAB	Tennant Creek	21.05	224c	eP	P	07 06 56.9	-0.2
WRAB				pmax	pmax		
	comp=Z,207nm,0.7s						
WB2	Warramunga Arr	21.06	224	eP	P	07 06 56.5	-0.7
WRA	Warramunga Arr	21.07	224	P	P	07 06 56.3	-0.9
	comp=Z,171nm,0.8s,baz=47,slow=10,SNR=114						
WRA				S	S	07 10 46.4	-4.6
	comp=Z,6.1nm,1.1s,baz=39,slow=23,SNR=5.0						
WRA				LR	LR	07 15 55.9	
	comp=Z,9µm,19.7s,baz=40,slow=39						
WRA	Warramunga Arr	21.07	224d	eP	P	07 06 56.2	-1.0
RMQ	Roma	21.41	182	P	P	07 07 01.1	+0.3
	baz=21,SNR=12						
QLP	Quilpie	22.11	193	P	P	07 07 09.2	+1.0
	baz=22,SNR=25						
TNTI	Ternate	22.99	284	eP	P	07 07 16.5	-1.3
	comp=Z,206nm,1.3s						
KNRA	Kununurra	23.12	241	P	P	07 07 17.3	-1.8
	baz=23,SNR=27						
DZM	Mont Dzumac	23.51	138	P	P	07 07 23.5	+0.4
	comp=Z,58nm,0.7s,baz=290,slow=11,SNR=37						
DZM				LR	LR	07 14 56.0	
	comp=Z,14µm,20.1s,baz=323,slow=32						
DZM	Mont Dzumac	23.51	138	eP	P	07 07 24.2	+1.1
	comp=Z,361nm,1.1s						
DZM				eLQ	LQ	07 12 15.0	
	comp=Z,21µm,26.1s						
DZM				eLR	LR	07 13 13.8	
	comp=Z,17µm,23.9s						
DZM	Mont Dzumac	23.51	138	eP	P	07 07 23.2	+0.1
	comp=Z,260nm,1.3s						
AS01	Alice Springs	23.97	218	eP	P	07 07 27.1	-0.3
AS31	Alice Springs	24.00	218	eP	P	07 07 27.1	-0.6
	comp=Z,61nm,1.4s						
ASAR	Alice Springs	24.00	218	P	P	07 07 27.4	-0.3
	comp=Z,43nm,0.8s,baz=56,slow=8.4,SNR=521						
ASAR				S	S	07 11 45.4	+1.7
	comp=Z,2.8nm,0.9s,baz=36,slow=17,SNR=3.4						
ASAR				LR	LR	07 17 47.5	
	comp=Z,9µm,19.0s,baz=46,slow=39						
TARA	Tarawa	24.07	75	eP	P	07 07 28.8	+0.4
	comp=Z,705nm,1.5s						
TARA				LR	LR		
	comp=Z,348nm,19.0s						
ARMA	Armidale	25.38	176	P	P	07 07 40.7	+0.5
	baz=25,SNR=6.5						
ARMA	Armidale	25.38	176	eP	P	07 07 40.6	+0.4
	comp=Z,185nm,1.5s						
SOEI	Soe	25.62	258	eP	P	07 07 42.0	-0.6
	comp=Z,143nm,1.2s						
CMSA	Cobar Meteorol	26.69	188	P	P	07 07 52.6	+0.6
	baz=27,SNR=16						
DAV	Davao City (W)	26.85	296	LR	LR	07 18 12.7	
	comp=Z,4µm,18.1s,baz=98,slow=36						
DAV	Davao City (W)	26.85	296⇑	eP	P	07 07 52.0	-1.6
FITZ	Fitzroy Crossi	26.86	239	P	P	07 07 52.2	-1.5
	baz=27,SNR=84						
FITZ	Fitzroy Crossi	26.86	239	eP	P	07 07 52.2	-1.5
	comp=Z,186nm,0.9s						
LUWI	Luwuk	27.13	277	eP	P	07 07 54.9	-1.3
	comp=Z,448nm,1.4s						
MMRI	Maumere	27.47	261	eP	P	07 07 56.7	-2.5
	comp=Z,215nm,1.5s						
STKA	Stephens Creek	27.81	195	P	P	07 08 01.7	-0.3
	comp=Z,7.1nm,0.5s,baz=39,slow=13,SNR=30						
STKA				LR	LR	07 19 11.3	
	comp=Z,9µm,21.1s,baz=10,slow=36						
STKA	Stephens Creek	27.81	195	P	P	07 08 01.9	-0.1
	baz=28,SNR=35						
STKA	Stephens Creek	27.81	195	eP	P	07 08 01.0	-1.0
	comp=Z,7.2nm,1.1s						
STKA	Stephens Creek	27.81	195	eP	P	07 08 01.0	-1.0
STKA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
WRKA	Warakurna	28.61	224	P	P	07 08 08.0	-1.4
	baz=28,SNR=85						
WAKE	Wake Island	29.34	34	PFAKE		07 08 30.0	+14
WAKE				LR	LR		
	comp=Z,2µm,21.0s						
FUNA	Funafuti	29.54	98	eP	P	07 08 17.7	+0.1
	comp=Z,91nm,1.0s						
FUNA				LR	LR		
	comp=Z,3µm,19.0s						
KAPI	Kappang	29.80	269	PFAKE		07 08 30.0	+10
KAPI				LR	LR		
	comp=Z,3µm,19.0s						
HTT	Hallett	30.03	198	P	P	07 08 21.5	-0.3
	baz=30,SNR=10.0						
PCI	Palu	30.05	277	P	P	07 08 22.8	+0.6
PCI				pmax	pmax		
	comp=Z,250nm,1.0s						
CNB	Canberra Magne	30.19	180	P	P	07 08 23.5	+0.3
	baz=30,SNR=4.6						
CAN	Canberra	30.20	181	eP	P	07 08 22.8	-0.5
	comp=Z,73nm,1.5s						
CAN	Canberra	30.20	181	eP	P	07 08 22.8	-0.5
CAN				pmax	pmax		
	comp=Z,73nm,1.5s						
BBOO	Buckleboo	30.47	203	P	P	07 08 25.3	-0.3
	baz=30,SNR=4.7						
BBOO	Buckleboo	30.47	203	eP	P	07 08 24.4	-1.3
	comp=Z,18nm,1.0s						
BBOO				epP	pP	07 08 30.3	-2.0
ARPS	Mount Arapiles	32.45	192	P	P	07 08 43.2	+0.2
	baz=32,SNR=22						
TOO	Toolangi	32.67	186	P	P	07 08 45.9	+0.9
	baz=33,SNR=10						
JCJ	Chichijima	32.69	348	LR	LR	07 21 19.7	
	comp=Z,2µm,18.3s,baz=173,slow=35						
MYLDM	Lahad Datu	32.72	288	eP	P	07 08 40.7	-4.9
	comp=Z,143nm,1.4s						
FORT	Forrest	32.75	216	P	P	07 08 45.5	-0.2
	baz=33,SNR=14						
FORT	Forrest	32.75	216	eP	P	07 08 43.0	-2.7
	comp=Z,68nm,0.8s						
MBWA	Marble Bar	33.20	238	eP	P	07 08 47.9	-1.9
	comp=Z,46nm,0.8s						
MBWA				LR	LR		
	comp=Z,8µm,19.0s						
MEEK	Meekatharra	36.64	231	P	P	07 09 18.4	-1.1
	baz=36,SNR=28						
KMBL	Kambalda	37.00	221	P	P	07 09 21.9	-0.6
	baz=37,SNR=7.0						
MOO	Moorlands	37.37	183	P	P	07 09 27.6	+2.1
	baz=37,SNR=4.4						
JOW	Kunigami	37.79	328	LR	LR	07 21 33.2	
	comp=Z,3µm,21.7s,baz=145,slow=31						
TAU	Tasmania Unive	37.83	183	PFAKE		07 09 40.0	+11
TAU				LR	LR		
	comp=Z,13µm,20.0s						
TAU	Tasmania Unive	37.83	183	P	P	07 09 33.8	+4.5
SBUM	Sibu	38.13	280	eP	P	07 09 30.9	-1.3
	comp=Z,189nm,1.5s						
SBUM	Sibu	38.13	280	P	P	07 09 32.0	-0.2
GIRL	Giralia	38.47	239	P	P	07 09 34.3	-0.6
	baz=38,SNR=4.7						
AFI	Afiamalu	39.01	106	LR	LR	07 23 51.2	
	comp=Z,3µm,19.3s,baz=274,slow=33						
JHJ	Hachijo jima 2	39.03	347	LR	LR	07 25 04.2	
	comp=Z,3µm,18.5s,baz=172,slow=35						
KSM	Kuching	39.83	278	eP	P	07 09 44.6	-2.0
	comp=Z,185nm,1.4s						
KSM	Kuching	39.83	278	P	P	07 09 46.0	-0.5
KLBR	Kellerberrin	39.95	225	P	P	07 09 46.0	-1.3
	baz=40,SNR=9.6						
BLDU	Ballidu	40.15	227	P	P	07 09 48.1	-0.9
	baz=40,SNR=7.5						
TATO	Taipei	40.46	319	PFAKE		07 10 00.0	+8.5
TATO				LR	LR		
	comp=Z,4µm,20.0s						
NWAO	Narrogin (SRO)	41.08	223	LR	LR	07 28 05.7	
	comp=Z,9µm,18.1s,baz=286,slow=38						
MUN	Mundaring	41.25	225	P	P	07 09 57.1	-0.9
	baz=41,SNR=3.6						
URZ	Urewera	41.49	147	LR	LR	07 24 49.4	
	comp=Z,6µm,21.4s,baz=315,slow=32						
BKZ	Black Stump Fm	41.81	148	eP	P	07 10 04.1	+1.5
	comp=Z,20nm,1.0s						
INU	Inuyama	41.83	344	eP	P	07 10 05.3	+2.6
	comp=Z,29nm,1.1s						
JNU	Nakatsue	41.87	336	P	P	07 10 01.2	-1.8
	comp=Z,30nm,0.8s,baz=131,slow=3.5,SNR=27						
JNU				LR	LR	07 25 34.2	
	comp=Z,2µm,21.2s,baz=120,slow=34						
JNU	Nakatsue	41.87	336	eP	P	07 10 01.6	-1.4
	comp=Z,186nm,1.3s						
THZ	Tophouse	42.10	154	eP	P	07 10 06.1	+1.2
	comp=Z,34nm,1.0s						
QZH	Quanzhou	42.39	316⇑	iP	P	07 10 08.1	+0.7
QZH				S	S	07 16 28.8	+1.0
QZH				LR	LR		
	comp=Z,2µm,13.7s						
QZH				LR	LR		
	comp=Z,2µm,17.5s						
QZH				LR	LR		
	comp=Z,2µm,17.5s						
SNZO	South Karori	42.56	152	PFAKE		07 10 20.0	+12
SNZO				LR	LR		
	comp=Z,7µm,22.0s						
LTZ	Lake Taylor	42.66	155	eP	P	07 10 10.4	+1.0
	comp=Z,154nm,1.5s						
MJAR	Matsushiro Arr	42.67	346	P	P	07 10 05.9	-3.5
	comp=Z,4.6nm,0.8s,baz=174,slow=8.9,SNR=12						
MJAR				PcP	PcP	07 12 01.0	-0.3
	comp=Z,2.6nm,0.7s,baz=136,slow=2.7,SNR=2.7						
MJAR				LR	LR	07 25 56.8	
	comp=Z,1µm,21.9s,baz=165,slow=33						
MAJO	Matsushiro	42.67	346	eP	P	07 10 09.6	+0.1
	comp=Z,25nm,1.1s						
MAJO				LR	LR		
	comp=Z,3µm,19.0s						
MAJO	Matsushiro	42.67	346	eP	P	07 10 09.6	+0.1
MAJO				pmax	pmax		
	comp=Z,25nm,1.1s						
MAJO				MLR	MLR		
	comp=Z,3µm,19.0s						
MAT	Matsushiro	42.67	346	P	P	07 10 05.8	-3.7
MAT				S	S	07 16 29.2	-2.4
MJB9	Matsu-Tunnel	42.67	346	eP	P	07 10 10.0	+0.5
	comp=Z,27nm,1.2s						
KHZ	Kahutara	42.90	154	eP	P	07 10 14.3	+3.0
	comp=Z,84nm,1.4s						
RPZ	Rata Peaks	42.95	157	P	P	07 10 11.9	+0.2
	comp=Z,62nm,0.9s,baz=9.3,slow=2.3,SNR=24						
RPZ	Rata Peaks	42.95	157	eP	P	07 10 13.1	+1.4
	comp=Z,68nm,0.9s						
OXZ	Oxford	43.01	156	eP	P	07 10 12.5	+0.2
	comp=Z,68nm,1.3s						
DCZ	Deep Cove	43.12	162	eP	P	07 10 15.2	+2.2
	comp=Z,58nm,1.2s						
LBZ	Lake Benmore	43.20	158	eP	P	07 10 14.2	+0.5
	comp=Z,56nm,1.1s						
MLZ	Mavora Lakes	43.34	161	eP	P	07 10 16.1	+1.3
	comp=Z,87nm,1.2s						
MQZ	McQueen's Vall	43.58	156	eP	P	07 10 18.8	+2.1
	comp=Z,102nm,1.3s						
WHZ	Wether Hill Ro	43.75	162	eP	P	07 10 19.5	+1.4
	comp=Z,57nm,1.3s						
ODZ	Otahua Downs	43.93	159	eP	P	07 10 22.4	+2.8
	comp=Z,24nm,1.2s						
SSE	Sheshan	45.01	325	P	P	07 10 28.4	0.0
SSE				S	S	07 17 07.1	+1.2
SSE				pmax	pmax		
	comp=Z,7.0nm,0.6s						
SSE				pmax	pmax		
	comp=Z,240nm,3.3s						
SSE				LR	LR		
	comp=Z,1µm,18.8s						
SSE				LR	LR		
	comp=Z,1µm,21.1s						
JOHN	Johnston Islan	45.74	61	PFAKE		07 10 50.0	+16
JOHN				LR	LR		
	comp=Z,271nm,19.0s						
MIDW	Midway	45.80	42	PFAKE		07 10 50.0	+15
MIDW				LR	LR		
	comp=Z,2µm,22.0s						
QIZ	Qiongzhong	45.89	302	P	P	07 10 34.9	-0.7
QIZ				S	S	07 17 21.3	+2.2
QIZ				pmax	pmax		
	comp=Z,350nm,5.9s						

QIZ				LR	LR		
	comp=Z,2µm,23.5s						
QIZ	**Qiongzhong**	**45.89**	**302**	PFAKE		07 10 50.0	+14
QIZ				LR	LR		
	comp=Z,2µm,20.0s						
TJN	**Taejon**	**46.13**	**335**	*i* P	**P**	**07 10 36.2**	**-0.9**
MYKOM	**Kota Tinggi**	**46.26**	**277**	*e*P	**P**	**07 10 37.9**	**-0.7**
	comp=Z,192nm,1.6s						
KSRS	**Korea Array**	**46.82**	**336**	P	**P**	**07 10 40.3**	**-2.2**
	comp=Z,4.4nm,0.8s,baz=152,slow=7.8,SNR=17						
KS15	**Wonju Array Si**	**46.82**	**336**	*e*P	**P**	**07 10 41.9**	**-0.7**
KSAR	**Wonju Array Be**	**46.82**	**336**	P	**P**	**07 10 40.3**	**-2.3**
KSAR	**Wonju Array Be**	**46.82**	**336**	P	**P**	**07 10 40.3**	**-2.3**
KS01	**Wonju Array Si**	**46.85**	**336**	*e*P	**P**	**07 10 41.2**	**-1.6**
NJ2	**Nanjing**	**47.07**	**324**	*e*P	**P**	**07 10 43.8**	**-0.8**
NJ2				sP	**pP**	**07 10 48.8**	**-2.7**
NJ2				S	**S**	**07 17 37.1**	**+1.6**
NJ2				pmax	pmax		
	comp=Z,20nm,0.6s						
NJ2				pmax	pmax		
	comp=Z,450nm,4.3s						
NJ2				LR	LR		
	comp=Z,2µm,19.0s						
NJ2				LR	LR		
	comp=Z,3µm,19.0s						
NJ2				LR	LR		
	comp=Z,3µm,22.2s						
ERM	**Erimo**	**47.14**	**353**	*e*P	**P**	**07 10 44.2**	**-0.7**
	comp=Z,38nm,0.9s						
ERM				LR	LR		
	comp=Z,3µm,21.0s						
ERM	**Erimo**	**47.14**	**353**	*i* P	**P**	**07 10 44.9**	**0.0**
ERM				pmax	pmax		
	comp=Z,71nm,1.2s						
INCN	**Inchon**	**47.38**	**335**	*e*P	**P**	**07 10 45.4**	**-1.5**
	comp=Z,287nm,1.4s						
INCN				LR	LR		
	comp=Z,4µm,21.0s						
INCN	**Inchon**	**47.38**	**335**	*e*P	**P**	**07 10 45.4**	**-1.5**
INCN				pmax	pmax		
	comp=Z,287nm,1.4s						
INCN				MLR	MLR		
	comp=Z,4µm,21.0s						
WHN	**Wuhan**	**48.87**	**319**	P	**P**	**07 11 02.6**	**+4.1**
WHN				S	**S**	**07 17 57.6**	**-3.4**
WHN				pmax	pmax		
	comp=Z,350nm,1.6s						
WHN				LR	LR		
	comp=Z,2µm,11.0s						
WHN				LR	LR		
	comp=Z,10µm,22.5s						
WHN				LR	LR		
	comp=Z,6µm,19.6s						
ASAJ	**Asahikawa**	**49.28**	**353**	P	**P**	**07 11 00.6**	**-0.8**
	comp=Z,39nm,1.0s,baz=210,slow=14,SNR=14						
ASAJ				LR	LR	07 31 29.7	
	comp=Z,1µm,19.9s,baz=178,slow=36						
ASAJ	**Asahikawa**	**49.28**	**353**	*e*P	**P**	**07 11 00.7**	**-0.7**
	comp=Z,94nm,1.2s						
IPM	**Ipoh**	**49.48**	**280**	*e*P	**P**	**07 11 01.3**	**-2.3**
	comp=Z,93nm,1.5s						
KULM	**Kulim**	**50.00**	**281**	*e*P	**P**	**07 11 04.5**	**-3.0**
	comp=Z,117nm,1.5s						
KULM	**Kulim**	**50.00**	**281**	P	**P**	**07 11 07.0**	**-0.5**
KUR	**Kuril'sk**	**50.01**	**358**	*c i*P	**P**	**07 11 10.4**	**+3.4**
KUR				*i* S	**S**	**07 18 20.8**	**+4.3**
KUR				*e*		07 20 55.8	
KUR				pmax	pmax		
	comp=N,86nm,1.5s						
KUR				pmax	pmax		
	comp=Z,223nm,1.5s						
KUR				pmax	pmax		
	comp=E,77nm,1.3s						
KUR				pmax	pmax		
	comp=Z,1µm,4.1s						
KUR				MLR	MLR		
	comp=E,564nm,13.0s						
KUR				MLR	MLR		
	comp=Z,1µm,13.0s						
SKNT	**Sakolnakorn**	**50.12**	**297**	P	**P**	**07 11 07.7**	**-0.7**
	comp=Z,30nm,1.0s						
MSHR	**Mys Shultsa**	**50.23**	**342**	*i* P	**P**	**07 11 10.6**	**+1.9**
SKLT	**Songkhla**	**50.41**	**283**	P	**P**	**07 11 11.7**	**+1.1**
	comp=Z,49nm,1.8s,comp=Z,1µm						
DL2	**Dalian**	**50.78**	**332**	P	**P**	**07 11 11.6**	**-1.4**
DL2				S	**S**	**07 18 29.8**	**+2.2**
DL2				ScS	**ScS**	**07 21 02.8**	**+0.2**
DL2				pmax	pmax		
	comp=Z,150nm,1.1s						
DL2				LR	LR		
	comp=Z,1µm,21.5s						
DL2				LR	LR		
	comp=Z,2µm,18.3s						
DL2				LR	LR		
	comp=Z,3µm,21.3s						
SRAK	**Srakaew**	**50.87**	**292**	P	**P**	**07 11 17.9**	**+3.9**
	comp=Z,35nm,1.0s,comp=Z,1µm						
KHON	**Khomkaen**	**50.93**	**296**	P	**P**	**07 11 18.9**	**+4.4**
	comp=Z,11nm,0.8s,comp=Z,488nm						
TIA	**Tai'an**	**51.05**	**326**	P	**P**	**07 11 13.8**	**-1.3**
TIA				S	**S**	**07 18 31.1**	**-0.4**
TIA				pmax	pmax		
	comp=Z,47nm,1.6s						
TIA				pmax	pmax		
	comp=Z,560nm,3.0s						
TIA				LR	LR		
	comp=Z,2µm,18.1s						
TIA				LR	LR		
	comp=Z,2µm,19.2s						
TIA				LR	LR		
	comp=Z,4µm,17.2s						
PSI	**Prapat**	**51.27**	**278**	*e*P	**P**	**07 11 15.2**	**-2.1**
	comp=Z,30nm,1.2s						
PSI	**Prapat**	**51.27**	**278**	*e*P	**P**	**07 11 15.2**	**-2.1**
PSI				pmax	pmax		
	comp=Z,31nm,1.2s						
TRTT	**Trang**	**51.45**	**284**	P	**P**	**07 11 18.7**	**+0.3**
	comp=Z,23nm,1.8s						
USRK	**Ussuriysk Ar.**	**51.47**	**344**	P	**P**	**07 11 17.7**	**-0.3**
	comp=Z,6.1nm,0.6s,baz=188,slow=4.8						
USRK				LR	LR	07 30 49.7	
	comp=Z,3µm,21.9s,baz=143,slow=33						
CHAI	**Chaiyaphum**	**51.54**	**295**	P	**P**	**07 11 19.4**	**+0.4**
	comp=Z,6.6nm,1.1s,comp=Z,172nm						
RAR	**Rarotonga**	**51.58**	**113**	LR	LR	07 30 36.9	
	comp=Z,761nm,20.4s,baz=276,slow=33						
ENH	**Enshi**	**52.02**	**315**	*e*P	**P**	**07 11 21.7**	**-0.8**
	comp=Z,201nm,1.8s						
ENH				LR	LR		
	comp=Z,2µm,20.0s						
GYA	**Guiyang**	**52.05**	**309**	⇑*i*P	**P**	**07 11 23.0**	**+0.2**
GYA				PP	**PP**	**07 13 22.8**	**+1.6**
GYA				S	**S**	**07 18 44.4**	**-1.3**
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,140nm,5.8s						
GYA				LR	LR		
	comp=Z,810nm,18.4s						
GYA				LR	LR		
	comp=Z,720nm,18.0s						
GYA				LR	LR		
	comp=Z,750nm,18.1s						
YSS	**Yuzh-Sakhalins**	**52.06**	**354**	*e*P	**P**	**07 11 21.6**	**-0.8**
	comp=Z,24nm,0.8s						
YSS				LR	LR		
	comp=Z,1µm,20.0s						
YSS	**Yuzh-Sakhalins**	**52.06**	**354**	*e*P	**P**	**07 11 21.7**	**-0.7**
YSS				*e**SP	**sP**	**07 11 35.6**	**+3.5**
YSS				*e*		07 13 26.0	
YSS				*e*S	**S**	**07 18 44.5**	**-0.4**
YSS				*e*SS	**SS**	**07 22 23.7**	**+1.2**
YSS				pmax	pmax		
	comp=Z,840nm,3.5s						
YSS				smax	smax		
	comp=E,670nm,6.1s						
YSS				MLR	MLR		
	comp=N,2µm,16.0s						
GSI	**Gunungsitoli**	**52.40**	**275**	*e*P	**P**	**07 11 23.3**	**-2.3**
	comp=N,79nm,1.0s						
MDJ	**Mudanjiang**	**52.55**	**342**	P	**P**	**07 11 26.1**	**0.0**
MDJ				pP	pP	07 11 31.3	-1.8
MDJ				sP	sP	07 11 33.3	-2.5
MDJ				PP	**PP**	**07 13 24.1**	**-1.2**
MDJ				S	**S**	**07 18 51.9**	**+0.1**
MDJ				ScS	**ScS**	**07 21 16.3**	**+1.6**
MDJ				pmax	pmax		
	comp=N,26nm,1.1s						
MDJ				pmax	pmax		
	comp=N,750nm,3.5s						
MDJ				LR	LR		
	comp=N,1µm,24.7s						
MDJ				LR	LR		
	comp=N,2µm,23.9s						
MDJ				LR	LR		
	comp=N,5µm,26.3s						
MDJ	**Mudanjiang**	**52.55**	**342**	PFAKE		07 11 40.0	+14
MDJ				LR	LR		
	comp=Z,2µm,22.0s						
COCO	**West Island**	**52.65**	**259**	PFAKE		07 11 40.0	+13
COCO				LR	LR		
	comp=Z,3µm,22.0s						
PBKT	**Sadao Pong**	**52.68**	**295**	P	**P**	**07 11 28.1**	**+0.6**
	comp=Z,32nm,2.1s,comp=Z,1µm						
CN2	**Changchun**	**53.24**	**338**	*e*P	**P**	**07 11 29.4**	**-1.8**
CN2				*e*pP	pP	07 11 33.9	-4.3
CN2				*e*sP	sP	07 11 36.4	-4.5
CN2				*e*S	**S**	**07 18 58.3**	**-2.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.5s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,1µm,19.0s						
CN2				LR	LR		
	comp=Z,1µm,19.0s						
CN2				LR	LR		
	comp=Z,2µm,20.0s						
PHIT	**Phitsanulok**	**53.39**	**296**	P	**P**	**07 11 33.9**	**+1.2**
	comp=Z,18nm,0.9s,comp=Z,944nm						
SRDT	**SRDT**	**53.67**	**292**	P	**P**	**07 11 36.1**	**+1.3**
	comp=Z,55nm,1.3s						
SUKH	**Sukhothai**	**54.19**	**296**	P	**P**	**07 11 39.6**	**+1.0**
	comp=Z,7.8nm,1.2s						
BJT	**Baijiatuau**	**54.35**	**329**	*e*P	**P**	**07 11 37.2**	**-2.1**
	comp=Z,223nm,1.9s						
BJT				*e*PP	**PP**	**07 13 37.4**	**-4.2**
BJT				LR	LR		
	comp=Z,3µm,20.0s						
BJT	**Baijiatuau**	**54.35**	**329**	*e*P	**P**	**07 11 37.2**	**-2.1**
BJT				*e*		07 13 37.4	
BJT				pmax	pmax		
	comp=Z,223nm,1.9s						
BJT				MLR	MLR		
	comp=Z,3µm,20.0s						
BJI	**Beijing**	**54.36**	**329**	⇓*e*P	**P**	**07 11 39.5**	**+0.1**
BJI				S	**S**	**07 19 17.4**	**+1.0**
BJI				pmax	pmax		
	comp=Z,72nm,1.9s						
BJI				pmax	pmax		
	comp=Z,1µm,3.1s						
BJI				LR	LR		
	comp=Z,4µm,16.1s						
BJI				LR	LR		
	comp=Z,2µm,13.3s						
BJI				LR	LR		
	comp=Z,4µm,33.2s						
KMI	**Kunming**	**54.52**	**306**	P	**P**	**07 11 40.6**	**-0.6**
KMI				pP	pP	07 11 46.0	-2.2
KMI				sP	sP	07 11 47.1	-3.8
KMI				S	**S**	**07 19 20.8**	**+1.2**
KMI				sS	sS	07 19 30.4	-0.7
KMI				SS	**SS**	**07 23 02.9**	**+0.4**
KMI				pmax	pmax		
	comp=Z,24nm,1.3s						
KMI				pmax	pmax		
	comp=Z,320nm,4.5s						
KMI				LR	LR		
	comp=Z,780nm,13.0s						
KMI				LR	LR		
	comp=Z,1µm,20.4s						
KMI				LR	LR		
	comp=Z,2µm,20.4s						
XAN	**Xi'an**	**54.63**	**318**	P	**P**	**07 11 40.1**	**-1.5**
XAN				pP	pP	07 11 44.8	-3.9
XAN				sP	sP	07 11 47.1	-4.2
XAN				PcP	**PcP**	**07 12 44.6**	**+0.1**
XAN				PP	**PP**	**07 13 44.6**	**+0.3**
XAN				S	**S**	**07 19 20.1**	**-0.4**
XAN				ScS	**ScS**	**07 21 25.4**	**-4.6**
XAN				pmax	pmax		
	comp=Z,20nm,1.6s						
XAN				pmax	pmax		
	comp=Z,410nm,3.8s						
XAN				LR	LR		
	comp=Z,1µm,18.0s						
XAN				LR	LR		
	comp=Z,1µm,20.1s						
XAN				LR	LR		
	comp=Z,2µm,17.3s						
TIY	**Taiyuan**	**54.78**	**324**	*e*P	**P**	**07 11 47.3**	**+4.6**
TIY				PP	**PP**	**07 13 51.8**	**+6.1**
TIY				pmax	pmax		
	comp=Z,24nm,0.6s						
TIY				pmax	pmax		
	comp=Z,400nm,4.4s						
TIY				LR	LR		
	comp=Z,1µm,13.4s						
TIY				LR	LR		
	comp=Z,630nm,11.6s						
TIY				LR	LR		
	comp=Z,2µm,20.1s						
CMAR	**Chiang Mai Arr**	**55.14**	**296**	P	**P**	**07 11 43.9**	**-1.7**
	comp=Z,7.8nm,0.8s,baz=119,slow=5.9,SNR=30						
CMAR				LR	LR	07 34 36.3	
	comp=Z,399nm,19.8s,baz=104,slow=35						
CMAR	**Chiang Mai Arr**	**55.14**	**296**	*i* P	**P**	**07 11 45.2**	**-0.3**
CMAR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CMMT	**Chiang Mai**	**55.25**	**297**	P	**P**	**07 11 46.8**	**+0.4**
	comp=Z,35nm,1.6s,comp=Z,777nm						
CHTO	**Chiang Mai**	**55.26**	**297**	*e*P	**P**	**07 11 46.1**	**-0.3**
	comp=Z,67nm,1.4s						
CHTO				LR	LR		
	comp=Z,773nm,20.0s						
CHTO	**Chiang Mai**	**55.26**	**297**	*e*P	**P**	**07 11 46.1**	**-0.3**
CHTO				pmax	pmax		
	comp=Z,67nm,1.4s						
CHTO				MLR	MLR		
	comp=Z,773nm,20.0s						
CHTO	**Chiang Mai**	**55.26**	**297**	P	**P**	**07 11 46.8**	**+0.4**
	comp=Z,159nm,1.6s,comp=Z,3µm						
SKR	**Severo-Kuril's**	**55.71**	**5**	*e*P	**P**	**07 11 49.9**	**+0.9**
SKR				*e*S	**S**	**07 19 35.3**	**+1.1**
SKR				pmax	pmax		
	comp=Z,52nm,1.2s						
SKR				pmax	pmax		
	comp=Z,700nm,4.2s						
SKR				pmax	pmax		
	comp=Z,300nm,4.1s						
SKR				MLR	MLR		
	comp=Z,2µm,16.0s						
SKR				MLR	MLR		
	comp=Z,1µm,19.0s						
TYV	**Tymovskoe**	**55.94**	**355**	*e*P	**P**	**07 11 52.2**	**+1.5**
TYV				*e*S	**S**	**07 19 38.6**	**+1.3**
TYV				pmax	pmax		
	comp=Z,45nm,1.0s						
TYV				pmax	pmax		
	comp=Z,800nm,3.9s						
TYV				smax	smax		
	comp=N,700nm,8.6s						
KLR	**Kul'dur**	**56.19**	**346**	*ce*P	**P**	**07 11 52.0**	**-0.5**
CD2	**Chengdu**	**56.51**	**312**	⇓P	**P**	**07 11 53.5**	**-1.7**
CD2				pP	pP	07 11 56.8	-5.4
CD2				PP	**PP**	**07 13 59.3**	**-1.9**
CD2				S	**S**	**07 19 45.4**	**-0.2**
CD2				pmax	pmax		
	comp=N,100nm,0.9s						
CD2				pmax	pmax		
	comp=N,930nm,4.1s						
CD2				LR	LR		
	comp=N,3µm,18.5s						
CD2				LR	LR		
	comp=N,2µm,16.9s						
CD2				LR	LR		
	comp=N,2µm,14.9s						
GRNR	**Gornyy**	**56.68**	**350**	*e*P	**P**	**07 11 58.1**	**+2.1**
HHC	**Hu-ho-hao-te**	**57.41**	**326**	*e*P	**P**	**07 12 04.5**	**+3.0**
HHC				pP	sP	07 12 09.8	-1.4
HHC				sP	pP	07 12 11.1	+2.6
HHC				PP	**PP**	**07 14 10.0**	**+0.9**
HHC				S	**S**	**07 19 56.9**	**-0.4**
HHC				SS	**SS**	**07 23 50.6**	**+3.3**
HHC				pmax	pmax		
	comp=N,48nm,1.3s						
HHC				pmax	pmax		
	comp=N,690nm,4.7s						
HHC				LR	LR		
	comp=N,2µm,16.1s						
HHC				LR	LR		
	comp=N,1µm,16.3s						
HHC				LR	LR		
	comp=N,2µm,17.5s						
KIP	**Kipapa**	**57.58**	**61**	PFAKE		07 12 20.0	+17
KIP				LR	LR		
	comp=Z,4µm,21.0s						
KIP	**Kipapa**	**57.58**	**61**	*i* P	**P**	**07 12 05.8**	**+2.9**
PEA0B	**Petropavlovsk-**	**58.26**	**6**	*e*P	**P**	**07 12 11.4**	**+4.3**
	comp=Z,84nm,1.5s						
PETK	**Petropavlovsk-**	**58.26**	**6**	P	**P**	**07 12 06.4**	**-0.7**
	comp=Z,7.3nm,0.7s,baz=174,slow=5.4						
PETK				LR	LR	07 32 55.3	
	comp=Z,1µm,20.9s,baz=192,slow=32						
PETK	**Petropavlovsk-**	**58.26**	**6**	*e*P	**P**	**07 12 06.0**	**-1.1**
PET	**Petropavlovsk**	**58.28**	**6**	PFAKE		07 12 20.0	+13
PET				LR	LR		
	comp=Z,1µm,20.0s						
PET	**Petropavlovsk**	**58.28**	**6**	*e*P	**P**	**07 12 05.3**	**-1.8**
PET				*e*S	S	07 19 59.0	-9.0
PET				pmax	pmax		
	comp=Z,600nm,4.4s						
PET				pmax	pmax		
	comp=Z,300nm,4.9s						
PET				MLR	MLR		
	comp=Z,1µm,21.0s						
NKL	**Nikolayevsk**	**58.40**	**354**	*e*P	**P**	**07 12 07.0**	**-1.0**
NKL				*e*		07 20 15.0	
NKL				pmax	pmax		
	comp=N,500nm,4.0s						
NKL				pmax	pmax		
	comp=Z,700nm,4.0s						
NKL				pmax	pmax		
	comp=Z,70nm,1.2s						
LZH	**Lanzhou**	**59.21**	**317**	*e*P	**P**	**07 12 14.6**	**+0.4**
LZH				pP	pP	07 12 18.8	-2.5
LZH				sP	sP	07 12 22.3	-1.7
LZH				S	**S**	**07 20 21.8**	**+0.7**
LZH				pmax	pmax		
	comp=Z,56nm,1.0s						
LZH				pmax	pmax		
	comp=Z,220nm,4.3s						
LZH				LR	LR		
	comp=Z,2µm,13.6s						
LZH				LR	LR		
	comp=Z,1µm,14.2s						
LZH				LR	LR		
	comp=Z,2µm,15.0s						
POHA	**Pohakuloa**	**59.21**	**64**	PFAKE		07 12 30.0	+15
POHA				LR	LR		
	comp=Z,3µm,20.0s						
HIA	**Hailar**	**59.96**	**338**	*e*P	**P**	**07 12 19.2**	**+0.2**
	comp=Z,55nm,1.1s						
HIA				LR	LR		
	comp=Z,1µm,20.0s						
HIA	**Hailar**	**59.96**	**338**	*e*P	**P**	**07 12 19.2**	**+0.2**
HIA				pmax	pmax		
	comp=Z,55nm,1.1s						
HIA				MLR	MLR		
	comp=Z,1µm,20.0s						
PPT	**Papeete**	**60.66**	**107**	LR	LR	07 34 10.4	
	comp=Z,536nm,21.9s,baz=273,slow=31						
PPT2	**Papeete2**	**60.66**	**107**	*e*S	**S**	**07 20 38.2**	**-2.0**
	comp=Z,2µm,25.8s						
PPT2				*e*LQ	LQ	07 27 45.3	
	comp=Z,3µm,29.8s						
PPT2				*e*LR	LR	07 30 22.9	
	comp=Z,2µm,25.5s						
TBI	**Tubuai**	**61.34**	**114**	*e*S	**S**	**07 20 47.0**	**-1.6**
	comp=Z,757nm,26.0s						
TBI				*e*LQ	LQ	07 28 04.7	
	comp=Z,6µm,35.2s						
TBI				*e*LR	LR	07 30 38.8	
	comp=Z,2µm,27.5s						
ZEA	**Zeya**	**61.45**	**345**	*e*P	**P**	**07 12 28.9**	**-0.1**
ZEA				*e*S	**S**	**07 20 50.0**	**+1.1**
ZEA				*e*		07 21 05.0	
ZEA				*e*PS	**PnS**	**07 21 08.0**	**+3.3**
ZEA				*e*SSS	SSS	07 27 22.0	
ZEA				pmax	pmax		
	comp=N,130nm,1.6s						
ZEA				pmax	pmax		
	comp=Z,130nm,1.4s						
ZEA				pmax	pmax		
	comp=N,400nm,4.0s						
ZEA				pmax	pmax		
	comp=Z,700nm,4.0s						
ZEA				pmax	pmax		
	comp=E,200nm,3.0s						
ZEA				smax	smax		
	comp=N,800nm,10.0s						
ZEA				MLR	MLR		
	comp=N,1µm,16.0s						
ZEA				MLR	MLR		
	comp=Z,1µm,16.0s						
BRDH	**Bariadhala**	**62.98**	**298**	LR	LR	07 38 07.3	
	comp=Z,660nm,21.2s,baz=154,slow=34						
GTA	**Gaotai**	**63.69**	**319**	*e*P	**P**	**07 12 45.0**	**+0.6**
GTA				pP	pP	07 12 48.8	-2.7
GTA				sP	sP	07 12 51.5	-2.7
GTA				S	**S**	**07 21 21.8**	**+4.0**
GTA				sS	sS	07 21 30.4	+0.8
GTA				pmax	pmax		
	comp=Z,11nm,1.1s						
GTA				pmax	pmax		
	comp=Z,670nm,7.4s						
GTA				LR	LR		
	comp=Z,750nm,20.0s						
GTA				LR	LR		
	comp=Z,710nm,22.0s						
GTA				LR	LR		
	comp=Z,1µm,22.0s						
SHL	**Shillong**	**63.72**	**302**	*e*P	**P**	**07 12 47.0**	**+2.1**
MA2	**Magadan**	**64.35**	**1**	PFAKE		07 13 00.0	+12
MA2				LR	LR		
	comp=Z,2µm,20.0s						
MA2	**Magadan**	**64.35**	**1**	*i* P	**P**	**07 12 49.7**	**+1.5**
MA2				pmax	pmax		
	comp=Z,38nm,1.1s						
SONM	**Songino Array**	**64.84**	**329**	P	**P**	**07 12 50.8**	**-1.0**
	comp=Z,2.9nm,0.7s,baz=140,slow=5.5,SNR=20						
SONM				LR	LR	07 40 24.3	
	comp=Z,2µm,21.4s,baz=134,slow=35						
LSA	**Lhasa**	**65.78**	**306**	P	**P**	**07 12 58.8**	**+0.2**
LSA				pmax	pmax		
	comp=Z,19nm,1.3s						
LSA	**Lhasa**	**65.78**	**306**	*e*P	**P**	**07 12 58.4**	**-0.2**
	comp=Z,63nm,1.3s						
LSA				LR	LR		
	comp=Z,683nm,19.0s						
LSA	**Lhasa**	**65.78**	**306**	*e*P	**P**	**07 12 58.4**	**-0.2**
LSA				pmax	pmax		
	comp=Z,63nm,1.3s						
LSA				MLR	MLR		
	comp=Z,683nm,19.0s						
CASY	**Casey**	**66.96**	**196**	*e*P	**P**	**07 13 04.5**	**-0.4**
	comp=Z,9.9nm,0.9s						
CASY				LR	LR		
	comp=Z,631nm,19.0s						
SEY	**Seymchan**	**67.75**	**1**	P	**P**	**07 13 10.8**	**+0.9**
	comp=Z,6.7nm,0.8s,baz=168,slow=9.3,SNR=6.2						
SEY	**Seymchan**	**67.75**	**1**	*i* P	**P**	**07 13 08.8**	**-1.1**
ODAN	**Odare**	**67.95**	**301**	*e*P	**P**	**07 13 11.2**	**-1.1**
	comp=Z,132nm,1.1s						
ZAK	**Zakamensk**	**68.05**	**330**	*e*P	**P**	**07 13 11.5**	**-0.7**
ZAK				pmax	pmax		
	comp=Z,38nm,1.4s						
YAK	**Yakutsk**	**68.56**	**350**	P	**P**	**07 13 14.1**	**-0.9**
	comp=Z,12nm,0.5s,baz=192,slow=21,SNR=12						
YAK	**Yakutsk**	**68.56**	**350**	P	**P**	**07 13 14.1**	**-0.9**
YAK				LR	LR		
	comp=Z,912nm,20.0s						
YAK	**Yakutsk**	**68.56**	**350**	*e*P	**P**	**07 13 15.4**	**+0.4**
YAK				*e**PP	**pP**	**07 13 22.0**	**-0.2**
YAK				*e*		07 13 40.6	
YAK				*e*PPP	PPP	07 17 22.7	
YAK				*e*S	**S**	**07 22 18.0**	**+2.1**
YAK				*e**SS	sS	07 22 38.8	+11

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YAK                                    pmax     pmax
      comp=Z,130nm,2.0s
YAK                                    pmax     pmax
      comp=N,51nm,1.6s
YAK                                    pmax     pmax
      comp=E,7.0nm,0.9s
YAK                                    smax     smax
      comp=N,489nm,9.4s
YAK                                    smax     smax
      comp=E,282nm,5.2s
YAK                                    MLR      MLR
      comp=Z,1µm,21.0s
YAK                                    MLR      MLR
      comp=N,2µm,21.0s
YAK                                    MLR      MLR
      comp=E,287nm,23.0s
RAMN  Ramite            68.65 301  eP       P        07 13 15.4  -1.3
      comp=E,109nm,1.3s
TLY   Talaya            68.69 331  eP       P        07 13 15.6  -0.6
      comp=E,74nm,1.7s
TLY                                    LR       LR
      comp=Z,2µm,20.0s
TLY   Talaya            68.69 331  eP       P        07 13 16.8  +0.7
TLY                                eS       S        07 22 20.2  +2.2
TLY                                    pmax     pmax
      comp=Z,36nm,1.4s
TLY                                    MLR      MLR
      comp=Z,2µm,19.0s
IRK   Irkutsk           68.76 332  eP       P        07 13 18.1  +1.6
IRK                                    pmax     pmax
      comp=Z,112nm,3.2s
BOD   Bodaibo           68.87 340  eP       P        07 13 18.4  +1.3
BOD                                    pmax     pmax
      comp=Z,43nm,1.5s
JIRN  Jiri              69.21 302  eP       P        07 13 19.4  -0.9
      comp=Z,83nm,1.0s
GUN   Gumba             69.55 302  eP       P        07 13 21.5  -0.9
      comp=Z,273nm,1.5s
TAOE  Nuku Hiva Isla    69.71  98  eLR      LR       07 34 34.3
      comp=Z,2µm,34.4s
PKIN  Phulchoki         69.86 302  eP       P        07 13 23.4  -0.8
      comp=Z,171nm,1.6s
PALK  Pallekele         69.88 280   LR      LR       07 48 29.8
      comp=Z,344nm,19.0s,baz=129,slow=40
MOY   Mondy             69.98 330  eP       P        07 13 24.1  -0.1
MOY                                    pmax     pmax
      comp=Z,100nm,2.5s
KKN   Kakani            70.02 302  eP       P        07 13 24.7  -0.4
      comp=Z,89nm,1.0s
DMN   Daman             70.11 302  eP       P        07 13 24.6  -1.1
      comp=Z,193nm,1.2s
GKN   Gorkha            70.63 302  eP       P        07 13 28.2  -0.5
      comp=Z,193nm,1.2s
KOLN  Koldanda          71.44 301  eP       P        07 13 33.1  -0.6
      comp=Z,69nm,0.8s
DANN  Dangsing          71.47 302  eP       P        07 13 33.1  -0.9
      comp=Z,67nm,0.9s
PYUN  Piuthan           72.05 301  eP       P        07 13 35.7  -1.7
      comp=Z,113nm,0.9s
MIR   Mirnyy            72.65 200⇑ iP       P        07 13 42.0  +2.0
MIR                                e                 07 14 03.0
MIR                                e                 07 16 27.0
MIR                                eS       S        07 23 06.0  +2.4
MIR                                ePS      PnS      07 23 46.0   +10
MIR                                    pmax     pmax
      comp=Z,42nm,1.0s
VNDA  Vanda             72.79 177   P       P        07 13 41.0  +0.3
      comp=Z,6.9nm,0.6s,baz=329,slow=6.5,SNR=33
VNDA                                   LR       LR       07 41 21.4
      comp=Z,2µm,21.1s,baz=355,slow=32
VNDA  Vanda             72.79 177   P       P        07 13 41.0  +0.3
SBA   Scott Base        73.39 176  eP       P        07 13 44.5  +0.4
      comp=Z,120nm,2.0s
SBA                                    LR       LR
      comp=Z,2µm,19.0s
SBA   Scott Base        73.39 176  eP       P        07 13 44.5  +0.4
SBA                                    pmax     pmax
      comp=Z,120nm,2.0s
SBA                                    MLR      MLR
      comp=Z,2µm,19.0s
HYB   Hyderabad         73.60 290  i P      P        07 13 45.0  -1.6
WMQ   Urumqi            73.77 318   P       P        07 13 47.3  +0.2
WMQ                                 pP      pP       07 13 51.5  -2.8
WMQ                                 PcP     PcP      07 14 05.6  +2.9
WMQ                                 S       SKiKP    07 23 15.8  +0.2
WMQ                                 ScS     SKSac    07 23 52.4  -0.5
WMQ                                    pmax     pmax
      comp=Z,94nm,1.7s
WMQ                                    LR       LR
      comp=Z,3µm,16.3s
WMQ                                    LR       LR
      comp=Z,2µm,18.9s
WMQ                                    LR       LR
      comp=Z,2µm,21.3s
RKT   Rikitea           74.61 112  eS       S        07 23 27.8  +0.5
      comp=Z,888nm,27.8s
RKT   Rikitea           74.61 112  eLQ      LQ       07 33 46.3
      comp=Z,3µm,37.2s
DGZ   Jazzator, Alta    76.36 324  i P      P        07 14 00.8  -1.2
DGZ                                    pmax     pmax
      comp=Z,6.0nm,1.1s
ZSN   Zaisan            77.02 321⇑ eP       P        07 14 06.0  +0.4
      comp=Z,111nm,16.4s
ZSN                                eS       S        07 23 51.3  -1.6
ZSN                                 LR      LR       07 49 04.3
      comp=Z,108nm,16.1s
TIXI  Tiksi             77.68 353  eP       P        07 14 08.9  +0.2
      comp=Z,30nm,1.4s
TIXI                                   LR       LR
      comp=Z,818nm,19.0s
TIXI  Tiksi             77.68 353ceP        P        07 14 12.1  +3.3
TIXI                                   pmax     pmax
      comp=Z,34nm,1.5s
KDAK  Kodiak Island     77.76  28   PFAKE            07 14 20.0   +11
KDAK                                   LR       LR
      comp=Z,626nm,22.0s
MKAR  Makanchi Array    78.42 320   P       P        07 14 12.3  -1.2
      comp=Z,6.1nm,1.1s,baz=104,slow=5.1,SNR=24
MKAR                                   LR       LR       07 50 00.3
      comp=Z,1µm,18.4s,baz=100,slow=37
MKAR  Makanchi Array    78.42 320  i P      P        07 14 12.6  -0.9
MKAR                                   pmax     pmax
      comp=Z,6.0nm,1.1s
SHLS  Shalkode          79.15 315  eP       P        07 14 14.7  -3.0
      comp=Z,6.3nm,0.9s
UZB   Uzynbulak         79.45 315  eP       P        07 14 18.5  -0.9
      comp=Z,6.9nm,1.1s
ZALV  Zalesovo Beam     79.58 327   P       P        07 14 18.1  -1.5
      comp=Z,9.2nm,0.7s,baz=108,slow=5.0,SNR=14
ZALV                                   LR       LR       07 48 31.3
      comp=Z,2µm,21.9s,baz=106,slow=35
KPKS  Kokpek            79.78 316  eP       P        07 14 21.3  +0.2
      comp=Z,12nm,1.0s
KPKS                                   LR       LR       07 52 35.8
      comp=Z,288nm,16.5s
SATY  Saty              79.86 315⇑ eP       P        07 14 21.3  -0.3
      comp=Z,9.0nm,1.4s
SATY                                   LR       LR       07 51 39.4
      comp=Z,105nm,14.3s
ZHN   Zhinishke         79.87 315  eP       P        07 14 21.1  -0.5
      comp=Z,3.7nm,1.3s
KSH   Kashi             80.69 311   P       P        07 14 27.3  +1.2
KSH                                 pP      pP       07 14 32.5  -0.9
KSH                                 PP      PP       07 17 34.8  +4.6
KSH                                 S       S        07 24 33.3  +0.6
KSH                                 SKS     SKSac    07 24 40.3  -3.2
KSH                                    pmax     pmax
      comp=Z,99nm,1.8s
KSH                                    pmax     pmax
      comp=Z,280nm,3.8s
KSH                                    LR       LR
      comp=Z,660nm,17.5s
KSH                                    LR       LR
      comp=Z,440nm,13.3s
KSH                                    LR       LR
      comp=Z,710nm,19.8s
NVS   Novosibirsk       80.78 328  eP       P        07 14 28.3  +2.2
NVS                                    pmax     pmax
      comp=E,25nm,1.5s
NVS                                    pmax     pmax
      comp=Z,42nm,1.5s
NVS                                    pmax     pmax
      comp=N,12nm,1.3s
MDOK  Medeo             80.84 315  eP       P        07 14 26.8  -0.1
      comp=N,142nm,1.0s
MDOK                               eS       S        07 24 32.2  -2.1
MDOK                                LR      LR       07 53 39.4
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      comp=N,377nm,17.1s
SEM   Semipalatinsk     80.91 323  eP       P        07 14 26.3  -0.9
      comp=N,7.0nm,1.3s
ULHL  Ulahol            81.18 314   P       P        07 14 31.4  +2.7
      SNR=7.9
NIL   Nilore            81.50 305  eP       P        07 14 29.0  -1.5
      comp=N,185nm,1.1s
NIL                                    LR       LR
      comp=Z,335nm,22.0s
NIL   Nilore            81.50 305  eP       P        07 14 29.0  -1.5
NIL                                    pmax     pmax
      comp=Z,185nm,1.1s
NIL                                    MLR      MLR
      comp=Z,335nm,22.0s
KUU   Kurty             81.53 316  eP       P        07 14 30.6  +0.2
      comp=Z,33nm,1.2s
KUU                                eS       S        07 24 39.1  -2.0
KUU                                 LR      LR       07 52 42.0
      comp=Z,176nm,14.1s
TKM2  Tokmak 2          81.81 314   P       P        07 14 34.5  +2.4
      SNR=9.6
KZA   Kyzart            81.85 314   P       P        07 14 33.2  +0.6
      SNR=25
KURK  Kurchatov         81.99 323   P       P        07 14 31.3  -1.3
KURK                                LR      LR
      comp=Z,3µm,21.0s
KURK  Kurchatov         81.99 323   P       P        07 14 31.3  -1.3
KURK                                   pmax     pmax
      comp=Z,39nm,1.3s
KURBB Kurchatov Arra    82.02 323   P       P        07 14 31.3  -1.5
      comp=Z,5.5nm,0.9s,baz=111,slow=4.2,SNR=25
CHMS  Chumysh           82.43 314   P       P        07 14 35.4  +0.3
      SNR=6.8
FRU   Bishkek           82.48 314  eP       P        07 14 36.0  +0.6
FRU                                e                 07 24 55.0
FRU                                    pmax     pmax
      comp=Z,110nm,2.4s
AAK   Ala-Archa         82.53 314   P       P        07 14 34.8  -1.0
AAK                                    pmax     pmax
      comp=Z,15nm,1.0s
USP   Ospenovka         82.67 315   P       P        07 14 37.0  +0.5
      SNR=6.6
AML   Almayashu         82.98 313   P       P        07 14 39.6  +1.1
      SNR=34
EKS2  Erkin-Say         83.05 314   P       P        07 14 41.3  +2.8
      SNR=19
BTLS  Baital            83.41 316⇑ iP       P        07 14 40.5  +0.3
      comp=Z,10nm,1.2s
BTLS                               i S      S        07 24 58.6  -1.7
BTLS                                LR      LR       07 53 29.8
      comp=Z,196nm,17.7s
ILAR  Eielson Array     83.51  23   P       P        07 14 38.0  -2.2
      comp=Z,7.0nm,0.7s,baz=251,slow=5.3,SNR=80
ILAR                                LR      LR       07 51 36.5
      comp=Z,635nm,18.6s,baz=258,slow=35
MAW   Mawson            84.21 203   P       P        07 14 42.5  -1.2
      comp=Z,10nm,0.9s,baz=108,slow=6.8,SNR=18
MAW                                 LR      LR       07 50 35.6
      comp=Z,2µm,20.4s,baz=81,slow=34
MAW   Mawson            84.21 203   P       P        07 14 42.9  -0.8
      baz=84,SNR=12
DZA   Taraz             84.86 314  eP       P        07 14 48.8  +1.2
      comp=Z,29nm,0.9s
QSPA  South Pole Qui    84.99 180   P       P        07 14 47.2  -0.7
      comp=Z,20nm,0.8s,baz=328,slow=0.8,SNR=67
QSPA                                LR      LR       07 50 58.0
      comp=Z,2µm,19.9s,baz=8.0,slow=34
BRZS  Berezniki         85.46 321  eP       P        07 14 50.0  -0.4
      comp=Z,6.6nm,1.3s
BRZS                               eS       S        07 25 11.3  -9.2
BRZS                                LR      LR       07 54 21.3
      comp=Z,243nm,16.2s
IUG   Iuzhnay           85.65 313⇑ iP       P        07 14 52.3  +0.6
      comp=Z,26nm,1.1s
IUG                                eS       S        07 25 14.0  -9.0
EGAK  Eagle             85.76  24   PFAKE            07 15 00.0  +8.5
EGAK                                LR      LR
      comp=Z,1µm,21.0s
CHM   Chimkent          86.00 313  eP       P        07 14 54.5  +1.2
      comp=Z,43nm,1.3s
CHM                                eS       S        07 25 16.5   -10
CHM                                 LR      LR       07 57 30.7
      comp=Z,189nm,19.6s
WRAK  Wrangell Islan    87.50  33   PFAKE            07 15 10.0   +10
WRAK                                LR      LR
      comp=Z,1µm,21.0s
BVA0  Borovoye Array    87.51 324  i P      P        07 14 57.8  -2.6
BVA0                                   pmax     pmax
      comp=Z,26nm,1.4s
BVAR  Borovoye Array    87.51 324   P       P        07 14 58.7  -1.7
      comp=Z,6.8nm,0.9s,baz=107,slow=4.8,SNR=20
BVAR                                LR      LR       07 55 35.4
      comp=Z,732nm,18.3s,baz=89,slow=37
BRVK  Borovoye          87.58 324   PFAKE            07 15 10.0  +9.3
BRVK                                LR      LR
      comp=Z,520nm,19.0s
BRVK  Borovoye          87.58 324ceP        P        07 14 59.8  -0.9
BRVK                                   pmax     pmax
      comp=Z,50nm,1.3s
INK   Inuvik            89.74  21   P       P        07 15 09.9  -0.6
      comp=Z,22nm,1.3s,baz=221,slow=5.1,SNR=8.8
NLWA  Neilton Lookou    91.23  43   PFAKE            07 15 30.0   +12
NLWA                                LR      LR
      comp=Z,602nm,20.0s
YBH   Yreka Blue Hor    91.50  48   LR      LR       07 52 22.7
      comp=Z,948nm,18.8s,baz=264,slow=33
SYO   Syowa Base        92.46 200⇑ eX       P        07 15 20.5  -2.7
SYO   Syowa Base        92.46 200⇓ esP      sP       07 15 30.6  -2.6
AB31  Akbulak array     93.55 319  i P      P        07 15 26.2  -2.4
AB31                                   pmax     pmax
      comp=Z,7.0nm,0.9s
MSEY  Mahe Island       93.75 265   PFAKE            07 15 40.0   +10
MSEY                                LR      LR
      comp=Z,1µm,20.0s
HAWA  Hanford           94.12  44   PFAKE            07 15 40.0  +8.6
HAWA                                LR      LR
      comp=Z,1µm,20.0s
GEYT  Alibeck           94.24 308   P       P        07 15 31.0  -1.2
      comp=Z,1.8nm,0.3s,baz=151,slow=1.5,SNR=5.8
GEYT                                LR      LR       08 00 31.7
      comp=Z,288nm,19.7s,baz=255,slow=37
WVOR  Wild Horse Val    94.58  48   PFAKE            07 15 40.0  +6.3
WVOR                                LR      LR
      comp=Z,1µm,19.0s
NVAR  Mina Array Bea    94.65  52   P       P        07 15 35.8  +1.5
      comp=Z,0.9nm,0.8s,baz=256,slow=7.1,SNR=7.1
NVAR                                LR      LR       07 51 01.4
      comp=Z,730nm,21.4s,baz=90,slow=31
ARU   Arti              94.72 326   PFAKE            07 15 40.0  +6.2
ARU                                 LR      LR
      comp=Z,2µm,20.0s
ARU   Arti              94.72 326d iP       P        07 15 35.0  +1.2
ARU                                                  07 19 22.2
ARU                                 S       SKSac    07 26 07.9   0.0
ARU                                 SP      SP       07 27 56.8  -4.5
ARU                                 PS      PS       07 28 13.1  +8.4
ARU                                    pmax     pmax
      comp=Z,23nm,2.5s
AKTO  Aktyubinsk        94.85 320   LR      LR       07 57 48.4
      comp=Z,1µm,21.7s,baz=91,slow=35
AKTO  Aktyubinsk        94.85 320   P       P        07 15 32.0  -2.6
AKTO                                   pmax     pmax
      comp=Z,15nm,1.2s
BMO   Blue Mountains    95.62  46   PFAKE            07 15 50.0   +12
BMO                                 LR      LR
      comp=Z,921nm,22.0s
PFO   Pinyon Flats O    95.95  57   PFAKE            07 15 50.0   +10
PFO                                 LR      LR
      comp=Z,1µm,19.0s
YKA   Yellowknife Ar    97.04  28   P       Pdif     07 15 44.6  +0.3
      comp=Z,1.3nm,0.7s,baz=278,slow=5.0,SNR=4.3
YKA                                 LR      LR       07 56 40.7
      comp=Z,81nm,21.0s,baz=283,slow=34
RPN   Rapa Nui          97.49 118   LR      LR       07 51 39.5
      comp=Z,380nm,21.6s,baz=284,slow=30
HLID  Hailey            97.69  47   PFAKE            07 16 00.0   +12
HLID                                LR      LR
      comp=Z,1µm,21.0s
DUG   Dugway, Tooele    98.93  50   PFAKE            07 16 00.0  +6.4
DUG                                 LR      LR
      comp=Z,825nm,20.0s
NVL   N'lazarevskaya    99.41 193  eP       Pdif     07 15 53.1  -1.7
NVL                                ePPP     PPP      07 22 05.2
NVL                                eS       SKSac    07 26 28.5  -3.2
NVL                                eSS      SS       07 34 16.3  +1.8
NVL                                    pmax     pmax
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      comp=Z,3.0nm,0.6s
NVL                                    MLR      MLR
      comp=Z,3µm,17.0s
BOZ   Bozeman (W)       99.63  45   PFAKE            07 16 10.0   +13
BOZ                                 LR      LR
      comp=Z,1µm,20.0s
HWUT  Hardware Ranch    99.84  49   PFAKE            07 16 10.0   +12
HWUT                                LR      LR
      comp=Z,912nm,19.0s
ABPO  Ambohimpanom     100.08 250   PFAKE            07 16 10.0   +11
ABPO                                LR      LR
      comp=Z,433nm,21.0s
AHID  Auburn Hatcher   100.14  48   PFAKE            07 16 10.0   +11
AHID                                LR      LR
      comp=Z,1µm,20.0s
WUAZ  Wupatki          100.16  55   PFAKE            07 16 10.0   +11
WUAZ                                LR      LR
      comp=Z,860nm,19.0s
LKWY  Lake             100.55  46   PFAKE            07 16 10.0  +9.2
LKWY                                LR      LR
      comp=Z,913nm,19.0s
TUC   Tucson           100.71  58   PFAKE            07 16 10.0  +8.4
TUC                                 LR      LR
      comp=Z,2µm,19.0s
EGMT  Eagleton         100.76  42   PFAKE            07 16 10.0  +8.6
EGMT                                LR      LR
      comp=Z,638nm,21.0s
BW06  Boulder Array    101.27  48   PFAKE            07 16 20.0   +16
BW06                                LR      LR
      comp=Z,1µm,20.0s
PDAR  Pinedale Array   101.27  48   P       Pdif     07 16 03.2  -0.8
      comp=Z,0.3nm,0.6s,baz=198,slow=2.7,SNR=2.7
RLMT  Red Lodge        101.32  45   PFAKE            07 16 10.0  +5.9
RLMT                                LR      LR
      comp=Z,952nm,20.0s
MVCO  Mesa Verde       102.42  53   PFAKE            07 16 20.0   +11
MVCO                                LR      LR
      comp=Z,919nm,21.0s
KBS   Kingsbay         103.12 352   PFAKE            07 16 20.0  +8.8
KBS                                 LR      LR
      comp=Z,745nm,20.0s
LAO   LASA Array       103.28  43   PFAKE            07 16 20.0  +7.4
LAO                                 LR      LR
      comp=Z,810nm,20.0s
KLMR  Klimovskoe       104.07 332  ePP      PP       07 20 31.1  -2.1
KLMR                                AMP              07 20 37.0
      comp=Z,19nm,1.4s
KLMR                                LQ      LQ       07 55 04.2
KLMR                                LR      LR       08 03 07.6
ANMO  Albuquerque      104.21  55   PFAKE            07 16 30.0   +13
ANMO                                LR      LR
      comp=Z,713nm,19.0s
DGMT  Dagmar           104.40  41   PFAKE            07 16 30.0   +12
DGMT                                LR      LR
      comp=Z,703nm,20.0s
APA   Apatity          104.40 339  i P      Pdif     07 16 12.4  -4.6
APA                                 MLR     MLR
      comp=Z,800nm,16.0s
ISCO  Idaho Springs    104.48  50   PFAKE            07 16 30.0   +12
ISCO                                LR      LR
      comp=Z,784nm,20.0s
GNI   Garni            104.59 310   PFAKE            07 16 30.0   +11
GNI                                 LR      LR
      comp=Z,585nm,19.0s
SDCO  Great Sand Dun   104.76  52   PFAKE            07 16 30.0   +10
SDCO                                LR      LR
      comp=Z,1µm,20.0s
RAYN  Ar Rayn          104.94 293   PFAKE            07 16 30.0  +9.5
RAYN                                LR      LR
      comp=Z,489nm,20.0s
MNTX  Cornudas Mount   105.32  59   PFAKE            07 20 50.0
MNTX                                LR      LR
      comp=Z,1µm,21.0s
KEV   Kevo             105.54 342   PFAKE            07 20 50.0
KEV                                 LR      LR
      comp=Z,2µm,20.0s
KIV   Kislovodsk       105.64 314   PFAKE            07 20 50.0
KIV                                 LR      LR
      comp=Z,715nm,20.0s
OGNE  Ogallala         107.05  49   PFAKE            07 20 50.0
OGNE                                LR      LR
      comp=Z,740nm,19.0s
OBN   Obninsk          107.16 326   PFAKE            07 20 50.0
OBN                                 LR      LR
      comp=Z,984nm,22.0s
CBKS  Cedar Bluff      109.12  51   PFAKE            07 20 50.0
CBKS                                LR      LR
      comp=Z,964nm,21.0s
AGMN  Agassiz Nation   109.86  40   PFAKE            07 21 00.0
AGMN                                LR      LR
      comp=Z,1µm,20.0s
JCT   Junction City    110.19  59   PFAKE            07 21 00.0
JCT                                 LR      LR
      comp=Z,2µm,21.0s
ECSD  EROS Data Cent   110.48  45   PFAKE            07 21 00.0
ECSD                                LR      LR
      comp=Z,1µm,20.0s
WMOK  Wichita Mounta   110.51  55   PFAKE            07 21 00.0
WMOK                                LR      LR
      comp=Z,906nm,20.0s
KSU1  Kansas State U   111.47  50   PFAKE            07 21 00.0
KSU1                                LR      LR
      comp=Z,1µm,20.0s
KVTX  Kingsville       112.17  62   PFAKE            07 21 00.0
KVTX                                LR      LR
      comp=Z,983nm,21.0s
EYMN  Ely              112.76  40   PFAKE            07 21 00.0
EYMN                                LR      LR
      comp=Z,992nm,20.0s
KIEV  Kiev             112.81 324   PFAKE            07 21 00.0
KIEV                                LR      LR
      comp=Z,1µm,20.0s
KIEV  Kiev             112.81 324  i PKIKP  PKiKP    07 20 49.8  +0.4
SCIA  State Center     113.35  46   PFAKE            07 21 00.0
SCIA                                LR      LR
      comp=Z,985nm,22.0s
ANTO  Ankara           113.67 311   PFAKE            07 21 00.0
ANTO                                LR      LR
      comp=Z,290nm,21.0s
KIS   Kishinev         114.36 320  ePP      PP       07 21 51.0  +2.7
KIS                                eSKS     SKSdf    07 28 03.0  -0.5
KIS   Kishinev         114.36 320  ePS      PS       07 31 40.0   +13
KIS                                eLR      LR       08 00 40.0
      comp=Z,900nm,22.0s
NATX  Nacogdoches      114.38  57   PFAKE            07 21 00.0  +6.9
NATX                                LR      LR
      comp=Z,1µm,19.0s
MIAR  Mount Ida        114.77  54   PFAKE            07 21 10.0   +16
MIAR                                LR      LR
      comp=Z,1µm,20.0s
COWI  Conover          114.90  41   PFAKE            07 21 00.0  +6.3
COWI                                LR      LR
      comp=Z,1µm,20.0s
JFWS  Jewell Farm      115.17  45   PFAKE            07 21 10.0   +16
JFWS                                LR      LR
      comp=Z,1µm,20.0s
SFJD  Kangerlussuaq    116.52   9   PFAKE            07 21 10.0   +14
SFJD                                LR      LR
      comp=Z,2µm,21.0s
LSZ   Lusaka           118.65 250   PFAKE            07 21 10.0  +8.1
LSZ                                 LR      LR
      comp=Z,848nm,21.0s
MBAR  Mbarara          118.75 267   PFAKE            07 21 10.0  +7.8
MBAR                                LR      LR
      comp=Z,650nm,21.0s
OKC   Ostrava-Krasne   119.55 326  ePP      PP       07 22 29.8  +5.5
OKC                                eSS      SS       07 38 53.4  +7.0
OKC                                 AMS     AMS      08 12 10.0
      comp=Z,1µm,23.5s
PAYG  Puerto Ayora     119.86  94   PFAKE            07 21 20.0   +16
PAYG                                LR      LR
      comp=Z,407nm,19.0s
AAM   Ann Arbor        119.95  43   PFAKE            07 21 10.0  +6.5
AAM                                 LR      LR
      comp=Z,987nm,20.0s
DPC   Dobruska-Polom   120.28 327  ePP      PP       07 22 34.3  +5.0
DPC                                eSS      SS       07 39 00.6  +4.9
DPC                                 AMS     AMS      08 13 40.0
      comp=Z,2µm,21.1s
UPC   Upice            120.36 328  ePP      PP       07 22 32.8  +3.0
UPC                                eSS      SS       07 38 50.7  -6.0
UPC                                 AMS     AMS      08 14 10.0
      comp=Z,2µm,19.2s
BRAL  Brewton          120.87  57   PFAKE            07 21 20.0   +14
BRAL                                LR      LR
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	comp=Z,823nm,21.0s						
PVCC	**Panska Ves**	**121.11**	**328**	AMS	AMS	08 13 50.0	
	comp=Z,900nm,21.2s						
ACSO	**Alum Creek Sta**	**121.21**	**45**	PFAKE		07 21 20.0	+14
ACSO				LR	LR		
	comp=Z,1µm,21.0s						
BRG	**Berggiesshubel**	**121.23**	**329**	*e*PKP	**PKPdf**	**07 21 07.9**	**+2.2**
	comp=Z,9.2nm,1.2s						
BRG	**Berggiesshubel**	**121.23**	**329**	*e*PKIKP	**PKPdf**	**07 21 07.9**	**+2.2**
BRG				pmax	pmax		
	comp=Z,9.0nm,1.2s						
GOPC	**GO Pecny, Ondr**	**121.34**	**328**	*e*PP	PP	07 22 39.9	+3.3
GOPC				*e*SS	SS	07 39 15.3	+6.0
GOPC				AMS	AMS	08 13 50.0	
	comp=Z,1µm,20.3s						
PRU	**Pruhonice**	**121.43**	**328**	*e*PP	PP	07 22 40.1	+3.0
PRU				*e*SP	SP	07 32 28.3	+1.6
PRU				*e*SS	SS	07 39 10.0	-0.4
PRU				AMS	AMS	08 14 00.0	
	comp=Z,1µm,21.4s						
PRA	**Prague**	**121.44**	**328**	AMS	AMS	08 14 00.0	
	comp=Z,1µm,22.6s						
CLL	**Collm**	**121.46**	**330**	*e*PKPdf	**PKPdf**	**07 21 06.0**	**-0.1**
CLL				*e*pPKPdf	**pPKPdf**	**07 21 12.0**	**-1.6**
CLL				*e*PP	**PP**	**07 22 35.0**	**-2.2**
CLL				*e*PS	**PS**	**07 32 25.0**	**-5.6**
CLL				*e*PPS	PPS	07 33 42.0	
CLL				*e*		07 34 30.0	
CLL				*e*SS	SS	07 39 06.0	-4.6
CLL				*e*SSS	SSS	07 43 24.0	
CLL				*e*		07 44 48.0	
CLL				Lm	MLR	08 18 00.0	
	comp=N,1µm,19.4s						
CLL				Lm	MLR	08 18 00.0	
	comp=E,600nm,18.3s						
CLL				Lm	MLR	08 18 00.0	
	comp=Z,2µm,19.1s						
CLL	**Collm**	**121.46**	**330**	*e*PKIKP	**PKPdf**	**07 21 06.0**	**-0.1**
CLL				MLR	MLR		
	comp=Z,2µm,19.1s						
CONA	**Conrad Observa**	**121.84**	**325**	*e*pPKPdf	**PKPdf**	**07 21 09.7**	**+2.7**
	comp=Z,4.7nm,1.4s						
NKC	**Novy Kostel**	**122.38**	**329**	AMS	AMS	08 12 30.0	
	comp=Z,1µm,23.7s						
ARSA	**Arzberg**	**122.39**	**325**	*e*pPKPdf	**PKPdf**	**07 21 10.9**	**+2.8**
	comp=Z,5.2nm,1.1s						
KHC	**Kasperske Hory**	**122.44**	**327**	*e*PKP	**PKPdf**	**07 21 08.2**	**+0.1**
KHC				*e*PP	**PP**	**07 22 48.0**	**+4.0**
KHC				*e*SP	SP	07 32 35.8	+0.1
KHC				*e*SS	SS	07 39 26.0	+2.7
KHC				AMS	AMS	08 15 30.0	
	comp=Z,1µm,19.1s						
KHC	**Kasperske Hory**	**122.44**	**327**	*e*PKIKP	**PKPdf**	**07 21 08.2**	**+0.1**
KHC				*e*		07 22 48.0	
KHC				*e*SP	SP	07 32 35.8	+0.1
KHC				*e*SS	SS	07 39 26.0	+2.7
KHC				MLR	MLR		
	comp=Z,1µm,19.1s						
GERES	**GERESS Array B**	**122.53**	**327**	PKP	**PKPdf**	**07 21 06.3**	**-2.0**
	comp=Z,0.8nm,0.6s,baz=115,slow=1.9,SNR=6.6						
MOA	**Molln**	**122.78**	**326**	*e*PKiKP	**PKiKP**	**07 21 09.6**	**+0.6**
	comp=Z,6.4nm,1.5s						
SOKA	**Soboth**	**122.98**	**324**	*e*pPKPdf	**PKPdf**	**07 21 11.6**	**+2.3**
	comp=Z,7.1nm,1.4s						
GOGA	**Godfrey**	**123.18**	**53**	PFAKE		07 21 20.0	+10
GOGA				LR	LR		
	comp=Z,927nm,20.0s						
BLA	**Blacksburg**	**124.21**	**48**	PFAKE		07 21 20.0	+8.1
BLA				LR	LR		
	comp=Z,941nm,20.0s						
ABTA	**Abfaltersbach**	**124.39**	**325**	PKiKP	**PKPdf**	**07 21 12.3**	**+0.3**
	comp=Z,7.1nm,1.5s						
WTTA	**Wattenberg**	**124.58**	**326**	*e*pPKPdf	**PKPdf**	**07 21 15.1**	**+2.7**
	comp=Z,14nm,1.3s						
LONY	**Lake Ozonia**	**124.75**	**37**	PFAKE		07 21 20.0	+7.4
LONY				LR	LR		
	comp=Z,871nm,21.0s						
BINY	**Binghamton**	**125.11**	**41**	PFAKE		07 21 20.0	+6.6
BINY				LR	LR		
	comp=Z,1µm,21.0s						
FETA	**Feichten**	**125.22**	**327**	*e*PKPdf	**PKPdf**	**07 21 12.1**	**-1.5**
	comp=Z,5.1nm,0.9s						
ESK	**Eskdalemuir**	**125.27**	**341**	PFAKE		07 21 20.0	+6.7
ESK				LR	LR		
	comp=Z,877nm,21.0s						
MEM	**Membach**	**125.29**	**332**	⇑PKiKP	**PKPdf**	**07 21 12.6**	**-0.9**
DAVA	**Damuels**	**125.52**	**327**	PKiKP	**PKiKP**	**07 21 15.6**	**+1.0**
	comp=Z,6.4nm,1.0s						
JTS	**JuntasAbangare**	**125.67**	**81**	PFAKE		07 21 30.0	+15
JTS				LR	LR		
	comp=Z,2µm,21.0s						
BFO	**Black Forest**	**125.68**	**329**	PFAKE		07 21 30.0	+16
BFO				LR	LR		
	comp=Z,53nm,22.0s						
BCLA	**Clavier**	**125.74**	**333**	⇑PKiKP	**PKPdf**	**07 21 13.7**	**-0.7**
DAVOX	**Davos/Dischmat**	**125.83**	**327**	PKP	**PKPdf**	**07 21 12.7**	**-2.2**
	comp=Z,1.3nm,0.6s,baz=286,slow=7.4,SNR=4.3						
WLF	**Walferdange**	**125.87**	**332**	⇑PKIKP	**PKPdf**	**07 21 15.2**	**+0.6**
NHSC	**New Hope**	**125.88**	**52**	PFAKE		07 21 30.0	+15
NHSC				LR	LR		
	comp=Z,789nm,20.0s						
CBN	**Corbin Frederi**	**126.01**	**45**	PFAKE		07 21 30.0	+15
CBN				LR	LR		
	comp=Z,1µm,20.0s						
DOU	**Dourbes**	**126.29**	**333**	⇑PKiKP	**PKPdf**	**07 21 14.9**	**-0.5**
CNNC	**Cliffs of the**	**126.86**	**49**	PFAKE		07 21 30.0	+13
CNNC				LR	LR		
	comp=Z,154nm,21.0s						
TSUM	**Tsumeb**	**127.07**	**242**	PFAKE		07 21 30.0	+12
TSUM				LR	LR		
	comp=Z,1µm,20.0s						
PKME	**Peaks-Kenny Pk**	**127.45**	**34**	PFAKE		07 21 30.0	+12
PKME				LR	LR		
	comp=Z,1µm,21.0s						
TRQA	**Tornquist**	**128.07**	**148**	PFAKE		07 21 30.0	+11
TRQA				LR	LR		
	comp=Z,1µm,19.0s						
LCO	**Las Campanas**	**128.56**	**133**	PFAKE		07 21 30.0	+9.2
LCO				LR	LR		
	comp=Z,784nm,22.0s						
ATAH	**Atahualpa**	**130.56**	**104**	PKP	**PKPdf**	**07 21 26.1**	**+1.0**
	comp=Z,2.5nm,0.6s,baz=117,slow=9.0,SNR=2.7						
BCIP	**Isla Barro Col**	**130.73**	**82**	PFAKE		07 21 40.0	+15
BCIP				LR	LR		
	comp=Z,1µm,21.0s						
NNA	**Nana**	**130.78**	**110**	PFAKE		07 21 40.0	+15
NNA				LR	LR		
	comp=Z,393nm,21.0s						
OTAV	**Otavalo**	**131.72**	**94**	PFAKE		07 21 40.0	+13
OTAV				LR	LR		
	comp=Z,561nm,20.0s						
MTDJ	**Mount Denham**	**132.08**	**70**	PFAKE		07 21 40.0	+13
MTDJ				LR	LR		
	comp=Z,553nm,20.0s						
GTBY	**Guantanamo Bay**	**134.00**	**67**	PFAKE		07 21 40.0	+9.1
GTBY				LR	LR		
	comp=Z,619nm,20.0s						
ROSC	**El Rosal**	**136.19**	**88**	PKP	**PKPdf**	**07 21 34.0**	**-1.6**
	comp=Z,1.8nm,0.4s,baz=52,slow=22,SNR=3.3						
LPAZ	**La Paz**	**137.06**	**120**	PKP	**PKPdf**	**07 21 36.6**	**-0.9**
	comp=Z,1.3nm,0.8s,baz=4.8,slow=3.5,SNR=4.0						
GRTK	**Grand Turk**	**137.20**	**64**	PFAKE		07 21 50.0	+13
GRTK				LR	LR		
	comp=Z,811nm,20.0s						
BBSR	**BB Station**	**137.89**	**45**	PFAKE		07 21 50.0	+12
BBSR				LR	LR		
	comp=Z,477nm,19.0s						
PAB	**San Pablo**	**138.34**	**329**	PFAKE		07 21 50.0	+11
PAB				LR	LR		
	comp=Z,836nm,20.0s						
CPUP	**Villa Florida**	**139.35**	**141**	PKP	**PKPdf**	**07 21 40.4**	**-0.3**
	comp=Z,1.5nm,0.9s,baz=175,slow=7.1,SNR=3.2						
SDV	**Santo Domingo**	**139.83**	**82**	PFAKE		07 21 50.0	+7.9
SDV				LR	LR		
	comp=Z,665nm,22.0s						
SJG	**San Juan**	**142.66**	**67**	PFAKE		07 22 00.0	+13
SJG				LR	LR		
	comp=Z,644nm,22.0s						
SIV	**San Ignacio**	**143.13**	**125**	PKhKP	PKPpre	07 21 43.1	
	comp=Z,2.4nm,0.8s,baz=250,slow=3.0,SNR=7.7						
MDT	**Midelt**	**143.34**	**322**	PKP	PKPbc	07 21 44.6	-0.3
	comp=Z,3.4nm,1.0s,baz=35,slow=2.9,SNR=4.5						
SAML	**Samuel**	**144.45**	**113**	*e*PKPdf	PKPbc	07 21 49.4	+0.8
SAML				LR	LR		
	comp=Z,470nm,19.0s						
SAML	**Samuel**	**144.45**	**113**	*e*PKIKP	PKPbc	07 21 49.4	+0.8
SAML				MLR	MLR		
	comp=Z,470nm,19.0s						
ANWB	**Willy Bob**	**146.75**	**65**	PFAKE		07 22 10.0	+13
ANWB				LR	LR		
	comp=Z,501nm,20.0s						
BART	**Pico Bartolome**	**147.01**	**352**	*e*P	**PKPdf**	**07 21 49.5**	**-4.4**
BART				*e*S	**PKPbc**	**07 21 54.5**	**-1.4**
BART				A	A	07 21 56.3	
	comp=Z,20nm,0.2s						
CMLA	**Cha da Macela**	**147.07**	**353**	PFAKE		07 22 00.0	+2.5
CMLA				LR	LR		
	comp=Z,477nm,19.0s						
TORD	**Torodi Ar. Bea**	**147.37**	**287**	PKPbc	**PKPdf**	**07 21 54.8**	**-0.2**
	baz=17,slow=2.0						
PSMN	**Pico do Norte,**	**147.76**	**352**	*e*P	**PKPdf**	**07 21 53.4**	**-1.7**
PSMN				*e*S	**PKPab**	**07 22 01.3**	**+1.1**
PSMN				A	A	07 22 04.4	
	comp=Z,10nm,0.3s						
SHEL	**Horse Pasture**	**147.99**	**229**	PFAKE		07 22 10.0	+8.3
SHEL				LR	LR		
	comp=Z,267nm,19.0s						
GRGR	**Grenville**	**148.25**	**75**	PFAKE		07 22 10.0	+7.1
GRGR				LR	LR		
	comp=Z,688nm,20.0s						
PTGA	**Pitinga**	**149.87**	**100**	PKPbc	**PKPbc**	**07 22 03.3**	**-0.7**
	comp=Z,9.3nm,0.8s,baz=271,slow=3.7,SNR=12						
PTGA	**Pitinga**	**149.87**	**100**	PKPbc	**PKPbc**	**07 22 03.3**	**-0.7**
PTGA				LR	LR		
	comp=Z,14µm,19.0s						
BBGH	**Gun Hill**	**150.05**	**72**	PFAKE		07 22 10.0	-0.2
BBGH				LR	LR		
	comp=Z,1µm,21.0s						
KOWA	**Kowa**	**152.42**	**292**	PKPbc	**PKPbc**	**07 22 08.7**	**-1.1**
	comp=Z,2.1nm,0.6s,baz=131,slow=4.8,SNR=4.7						
KOWA				PKPab	**sPKPbc**	**07 22 19.3**	**-0.6**
	comp=Z,11nm,0.9s,baz=86,slow=3.5,SNR=13						
ASCN	**Ascension**	**159.54**	**231**	PFAKE		07 22 20.0	+7.5
ASCN				LR	LR		
	comp=Z,675nm,21.0s						
RCBR	**Riachuelo**	**167.92**	**153**	PFAKE		07 22 30.0	+10
RCBR				LR	LR		
	comp=Z,29µm,19.0s						

JMA 22 07:02:36.3±0.1,23°.80N×142°.17E,h163^{km}±5^{km},M4.7, Volcano Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	**2.82**	**0**	P	Pn	07 03 22.3	+0.4
JHHJ				S	Sn	07 03 58.0	+0.6
CBIJ	**Chichi jima**	**3.28**	**0**	*e*Pn	Pn	07 03 28.6	+0.9
	374nm,0.5s						
CBIJ	**Chichi jima**	**3.28**	**0**	P	Pn	07 03 28.2	+0.5
CBIJ				S	Sn	07 04 07.8	+0.1
JRY	**Ryogami san**	**12.50**	**348**	P	Pn	07 05 29.7	+1.1

MEX 22 07:04:44.8±0.6,16°.25N×98°.37W,h12^{km}±8^{km},MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.27**	**59**	*e*P	Pg	07 04 50.0	-0.4
PNIG				*e*S	Sg	07 04 53.8	-0.3
TLIG	**Tlapa**	**1.32**	**352**	*e*P	Pn	07 05 05.6	-3.6
TLIG				*e*S	Sb	07 05 21.1	-5.4
VHO	**Vista Hermosa**	**1.76**	**62**	*i* P	Pn	07 05 11.2	-4.1
VHO				*i* S	Sn	07 05 32.6	-5.3

IDC 22 07:18:34.7±1.1,3°.78S×153°.87E,h0^{km},mb3.8/3, mb1 4.1/4,mb1mx3.7/44,mbtmp4.0/4,ML4.5/1,Error ellipse: s-maj=53.5km s-min=27.2km az=61.0,New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
HNR	**Honiara**	**8.24**	**133**	Pn	Pn	07 20 35.5	-0.2
	6.3nm,0.3s,baz=255,slow=7.6,SNR=4.0						
HNR				Sn	Sn	07 22 09.4	-0.3
	4.7nm,0.3s,baz=106,slow=13,SNR=2.0						
SONM	**Songino Array**	**66.05**	**327**	P	P	07 29 24.5	+1.0
	0.2nm,0.3s,baz=116,slow=6.6,SNR=2.0						
VNDA	**Vanda**	**73.80**	**178**	P	P	07 30 11.8	+1.2
	0.4nm,0.4s,baz=3.6,slow=8.1,SNR=2.6						
ILAR	**Eielson Array**	**80.83**	**22**	P	P	07 30 50.4	+0.2
	2.3nm,1.1s,baz=239,slow=6.3,SNR=13						
TORD	**Torodi Ar. Bea**	**150.98**	**290**	PKPbc	PKPbc	07 38 28.6	-2.1
	baz=56,slow=1.1						

IDC 22 07:19:13.7±6.3,6°.37S×151°.25E,h104^{km}±54^{km},mb3.5/4, mb1 3.7/5,mb1mx3.3/42,mbtmp3.9/5,Error ellipse: s-maj=74.6km s-min=32.2km az=116.0,New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**5.05**	**233**	P	Pn	07 20 26.5	-0.7
	4.6nm,0.3s,baz=16,slow=19,SNR=4.1						
PMG				S	Sn	07 21 25.7	+1.4
	9.5nm,0.3s,baz=150,slow=11,SNR=5.0						
WRA	**Warramunga Arr**	**21.26**	**229**	P	P	07 23 51.5	-0.2
	4.1nm,0.6s,baz=52,slow=10,SNR=25						
ASAR	**Alice Springs**	**23.96**	**222**	P	P	07 24 19.3	+0.8
	1.3nm,0.7s,baz=57,slow=8.4,SNR=23						
STKA	**Stephens Creek**	**26.94**	**198**	P	P	07 24 44.1	-1.3
	1.3nm,0.6s,baz=21,slow=12,SNR=4.9						
H11S3	**WAKE ISLAND Hy**	**29.02**	**31**	T	T	07 56 23.0	
	baz=220,slow=74,SNR=24						
H11S2	**WAKE ISLAND Hy**	**29.03**	**31**	T	T	07 56 23.5	
	baz=220,slow=74,SNR=14						
H11S1	**WAKE ISLAND Hy**	**29.04**	**31**	T	T	07 56 23.4	
	baz=220,slow=74,SNR=15						
ILAR	**Eielson Array**	**84.18**	**22**	P	P	07 31 33.4	+0.3
	1.4nm,0.7s,baz=257,slow=5.2,SNR=4.2						

MEX 22 07:34:57.8±0.3,15°.97N×98°.31W,h4^{km}±4^{km},MD3.8,Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.45**	**22**	*e*P	Pg	07 35 06.1	-0.4
PNIG				*e*S	Sg	07 35 12.6	+0.3
TLIG	**Tlapa**	**1.60**	**351**	*e*P	Pn	07 35 23.2	-3.8
TLIG				*i* S	Sn	07 35 43.2	-5.1
VHO	**Vista Hermosa**	**1.86**	**54**	*i* P	Pn	07 35 26.8	-4.0
VHO				*i* S	Sn	07 35 50.1	-4.7
PLIG	**Platanillo**	**2.66**	**335**	*i* P	Pn	07 35 39.1	-2.6
PLIG				*i* S	Sn	07 36 10.7	-3.9

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*ISCJB **22** 07:40:13.8±0.4,21°.45S±0°.05×66°.77W±0°.03,h214^{km}±4^{km}, mb3.6/8,Error ellipse: s-maj=7.9km s-min=4.6km az=164.9*

*IDC **22** 07:40:14.9±1.8,21°.34S×66°.55W,h212^{km}±15^{km},mb3.4/8, mb1 3.6/11,mb1mx3.4/40,mbtmp3.9/11,Error ellipse: s-maj=17.6km s-min=15.5km az=84.0*

*GUC **22** 07:40:16.3±0.6,21°.32S×67°.53W,h266^{km}±10^{km},ML4.3*

*SCB **22** 07:40:17.8±2.2,21°.26S×66°.78W,h0^{km}±2^{km},ML3.6/7, Error ellipse: s-maj=8.2km s-min=3.8km az=0.0*

ISC 22 07:40:14.9±0.8,21°.36S±0°.06×66°.76W±0°.04,h209^{km}±7^{km}, n39,σ1^{s}.45/55,mb3.9/8,6C-1D,Southern Bolivia

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PB08	**IPOC Station P**	**2.54**	**298**	P	**Pn**	**07 41 01.0**	**+0.7**
PB08	**IPOC Station P**	**2.54**	**298**	⇑*i*P	**Pn**	**07 41 01.9**	**+1.6**
PB08				*e*S	**S**	**07 41 36.5**	**+1.3**
PB08				IAML		07 41 38.1	
	comp=E,201nm,0.8s						
PB01	**IPOC Station P**	**2.56**	**277**	P	**Pn**	**07 40 59.6**	**-0.6**
PB01	**IPOC Station P**	**2.56**	**277**	⇑*e*P	**Pn**	**07 41 00.7**	**+0.5**
PB01				*e*S	**S**	**07 41 34.5**	**-0.5**
PB01				IAML		07 41 36.9	
	comp=E,406nm,0.2s						
BB05	**Carapari**	**2.85**	**100**	P	**Pn**	**07 41 04.0**	**+0.6**
BB05				S	**S**	**07 41 40.6**	**-0.2**
BB05				AML	AML	07 41 42.7	
	comp=E,197nm,0.5s						
PB03	**IPOC Station P**	**2.87**	**256**	⇑*e*P	**Pn**	**07 41 03.9**	**+0.3**
PB03				*e*S	**S**	**07 41 39.9**	**-1.4**
PB03				IAML		07 41 40.6	
	comp=E,595nm,0.2s						
PB02	**IPOC Station P**	**2.92**	**270**	P	**Pn**	**07 41 04.2**	**0.0**
PB02				S	**S**	**07 41 40.8**	**-1.5**
PB02				AML	AML	07 41 42.3	
	comp=E,119nm,0.3s						
PB02	**IPOC Station P**	**2.92**	**270**	⇓*e*P	**Pn**	**07 41 04.5**	**+0.2**
PB02				*e*S	**S**	**07 41 40.7**	**-1.5**
PB07	**IPOC Station P**	**2.93**	**262**	⇑*e*P	**Pn**	**07 41 04.5**	**+0.1**
PB07				*e*S	**S**	**07 41 41.0**	**-1.7**
PB07				IAML		07 41 41.8	
	comp=E,959nm,0.4s						
BS03	**Mojotorillo**	**3.02**	**48**	P	**Pn**	**07 41 06.0**	**+0.2**
BS03				S	**S**	**07 41 44.2**	**-0.8**
BS03				AML	AML	07 41 50.1	
	comp=E,139nm,0.5s						
PB11	**IPOC Station P**	**3.14**	**300**	P	**Pn**	**07 41 07.5**	**+0.6**
PB11				S	**S**	**07 41 46.7**	**-0.3**
PB11				AML	AML	07 41 48.8	
	comp=E,140nm,0.3s						
PB11	**IPOC Station P**	**3.14**	**300**	⇑*i*P	**Pn**	**07 41 07.4**	**+0.5**
PB11				*e*S	**S**	**07 41 46.2**	**-0.8**
PB11				IAML		07 41 49.3	
	comp=E,1µm,0.1s						
PB04	**IPOC Station P**	**3.29**	**252**	⇑*e*P	**Pn**	**07 41 08.5**	**-0.1**
PB04				*e*S	**S**	**07 41 47.9**	**-2.4**
PB04				IAML		07 41 49.8	
	comp=N,449nm,0.1s						
BS06	**Camiri**	**3.31**	**67**	S	**S**	**07 41 50.0**	**-0.4**
BS07	**San Felipe**	**3.39**	**354**	P	**Pn**	**07 41 12.1**	**+1.9**
MNMC	**Minye Minye**	**3.46**	**309**	P	**Pn**	**07 41 12.2**	**+1.4**
MNMC				S	**S**	**07 41 53.9**	**-0.2**
MNMC				AML	AML	07 41 56.3	
	comp=N,196nm,0.3s						
BB01	**Montecillos**	**3.56**	**24**	P	**Pn**	**07 41 13.7**	**+1.7**
BB01				S	**S**	**07 41 56.3**	**-0.1**
BB01				AML	AML	07 41 57.2	
	comp=N,120nm,0.5s						
PSGC	**Pisagua**	**3.60**	**298**	P	**Pn**	**07 41 12.5**	**+0.2**
PSGC				S	**S**	**07 41 54.5**	**-2.4**
PSGC				AML	AML	07 41 59.4	
	comp=N,155nm,0.5s						
PSGC	**Pisagua**	**3.60**	**298**	*e*P	**Pn**	**07 41 11.8**	**-0.6**
PSGC				*e*S	**S**	**07 41 54.4**	**-2.5**
BB04	**Tambo Quemado**	**3.72**	**325**	P	**Pn**	**07 41 16.5**	**+2.3**
BS05	**Cuyupaya**	**4.33**	**358**	P	**Pn**	**07 41 23.5**	**+1.9**
BB02	**La Guardia**	**4.73**	**44**	P	**Pn**	**07 41 26.9**	**+0.7**
LPAZ	**La Paz**	**5.21**	**345**	P	**Pn**	**07 41 34.8**	**+2.0**
	comp=N,12nm,0.3s,baz=149,slow=7.9,SNR=213						
LPAZ				S	**S**	**07 42 34.6**	**+0.7**
	baz=109,slow=23,SNR=1.2						
LPAZ	**La Paz**	**5.21**	**345**	P	**Pn**	**07 41 34.8**	**+2.0**
SIV	**San Ignacio**	**7.59**	**46**	P	**Pn**	**07 42 02.4**	**-0.5**
	comp=N,4.6nm,0.3s,baz=233,slow=12,SNR=129						
SIV				S	**S**	**07 43 23.8**	**-5.1**
	comp=N,0.3nm,0.3s,baz=220,slow=16,SNR=3.2						
CPUP	**Villa Florida**	**9.95**	**122**	P	**Pn**	**07 42 37.2**	**+3.8**
	comp=N,0.1nm,0.3s,baz=288,slow=9.3,SNR=3.0						
PLCA	**Paso Flores**	**19.58**	**189**	P	**P**	**07 44 27.1**	**-0.1**
	comp=N,0.1nm,0.3s,baz=53,slow=12,SNR=5.5						
PTGA	**Pitinga**	**21.55**	**19**	P	**P**	**07 44 47.0**	**-1.0**
	comp=N,1.8nm,0.5s,baz=293,slow=23,SNR=4.2						
TXAR	**Lajitas Array**	**61.68**	**323**	P	**P**	**07 50 10.6**	**-0.5**
	comp=N,0.2nm,0.5s,baz=148,slow=6.2,SNR=4.2						
KOWA	**Kowa**	**71.13**	**65**	P	**P**	**07 51 10.5**	**-0.6**
	comp=N,0.9nm,0.3s,baz=295,slow=2.4,SNR=3.4						
PDAR	**Pinedale Array**	**75.00**	**329**	P	**P**	**07 51 33.9**	**+0.2**
	comp=N,0.3nm,0.5s,baz=127,slow=6.5,SNR=5.2						
TORD	**Torodi Ar. Bea**	**75.43**	**69**	P	P	07 51 33.6	-2.7
	comp=N,2.6nm,0.6s,baz=262,slow=5.3						
ULM	**Lac du Bonnet**	**75.81**	**341**	P	**P**	**07 51 37.1**	**-0.5**
	comp=N,1.9nm,0.6s,baz=182,slow=6.2,SNR=3.3						
NVAR	**Mina Array Bea**	**76.63**	**321**	P	**P**	**07 51 43.6**	**+0.7**
	comp=N,0.3nm,0.6s,baz=144,slow=7.1,SNR=4.1						
YKA	**Yellowknife Ar**	**91.73**	**340**	P	**P**	**07 52 58.4**	**+0.2**
	comp=N,0.6nm,0.6s,baz=133,slow=4.9,SNR=5.0						
ASAR	**Alice Springs**	**130.93**	**205**	PKP	**PKPdf**	**07 59 01.3**	**-1.0**
	comp=N,0.2nm,0.4s,baz=129,slow=1.9,SNR=5.5						
WRA	**Warramunga Arr**	**134.06**	**208**	PKP	**PKPdf**	**07 59 08.2**	**0.0**
	comp=N,0.2nm,0.3s,baz=154,slow=2.0,SNR=7.3						
MKAR	**Makanchi Array**	**144.33**	**37**	PKP	**PKPab**	**07 59 25.3**	**+0.6**
	comp=N,2.3nm,0.8s,baz=317,slow=3.6,SNR=21						
SONM	**Songino Array**	**153.01**	**10**	PKPbc	**PKPbc**	**07 59 47.2**	**-0.4**
	comp=N,0.6nm,0.4s,baz=321,slow=1.8,SNR=4.1						

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*ISCJB **22** 08:10:00.9±0.6,24°.58N±0°.04×122°.76E±0°.02,h83^{km}±5^{km}, Error ellipse: s-maj=6.9km s-min=2.8km az=176.3*

*TAP **22** 08:10:00.8,24°.58N×122°.74E,h86^{km}±1^{km},ML2.9,C*

*JMA **22** 08:10:00.7±0.2,24°.74N×122°.80E,h83^{km}±3^{km},M1.9*

ISC 22 08:10:01.0±1.4,24°.60N±0°.06×122°.76E±0°.03,h85^{km}±8^{km}, n33,σ0^{s}.80/64,Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
JYNG	**Yonagunijimaku**	**0.22**	**131**	P	**Pn**	**08 10 13.4**	**0.0**
JYNG				*e*S	**Sn**	**08 10 22.8**	**+0.2**
YOJ	**Yonaguni jima**	**0.26**	**121**	P	**Pn**	**08 10 13.6**	**-0.1**
	baz=114						
YOJ				S	**Sn**	**08 10 23.5**	**+0.5**
	baz=114						
YOJ	**Yonaguni jima**	**0.26**	**121**	P	**Pn**	**08 10 13.7**	**+0.1**
EOS1	**EOS1**	**0.58**	**266**	P	**Pn**	**08 10 16.1**	**+0.3**
	baz=266						
EOS1				S	**Sn**	**08 10 28.1**	**+1.2**
	baz=266						
TWC	**Suao**	**0.83**	**271**	*e*P	**Pn**	**08 10 18.3**	**-0.1**
	baz=271						
TWC				*e*S	**Sn**	**08 10 30.4**	**-1.1**
	baz=271						
IRIF	**Iriomote-Funau**	**0.92**	**106**	P	**Pn**	**08 10 19.4**	**0.0**
IRIF				S	**Sn**	**08 10 33.6**	**+0.5**
TIPB	**Shuangxi**	**0.93**	**294**	P	**Pn**	**08 10 19.5**	**-0.1**
	baz=295						
TIPB				*e*S	**Sn**	**08 10 32.9**	**-0.6**
	baz=295						
TWE	**Neicheng**	**1.00**	**277**	P	**Pn**	**08 10 20.5**	**+0.1**
	baz=278						
TWE				*e*S	**Sn**	**08 10 34.9**	**0.0**
	baz=278						
ENTT	**Nioudou**	**1.09**	**273**	P	**Pn**	**08 10 22.5**	**+1.1**
	baz=273						
ENTT				*e*S	**Sn**	**08 10 35.8**	**-1.0**
	baz=273						
HATJ	**Hateruma jima**	**1.09**	**119**	*e*S	**Sn**	**08 10 36.9**	**+0.2**
NWLT	**Wulai**	**1.16**	**279**	P	**Pn**	**08 10 22.6**	**+0.4**
	baz=279						
NWLT				*e*S	**Sn**	**08 10 37.5**	**-0.8**
	baz=279						
TWD	**Chiawan**	**1.18**	**244**	*e*P	**Pn**	**08 10 22.9**	**+0.4**
	baz=244						
TWD				*e*S	**Sn**	**08 10 38.1**	**-0.6**
	baz=244						
JKRS	**Kuro-shima**	**1.19**	**107**	P	**Pn**	**08 10 23.1**	**+0.5**
JKRS				S	**Sn**	**08 10 39.5**	**+0.6**
NNSH	**Datong**	**1.27**	**263**	*e*P	**Pn**	**08 10 23.7**	**0.0**
	baz=263						
NNSH				*e*S	**Sn**	**08 10 39.6**	**-1.2**
	baz=263						
JIJ	**Ishigaki jima**	**1.28**	**100**	P	**Pn**	**08 10 23.3**	**-0.4**
JIJ				*e*S	**Sn**	**08 10 40.5**	**-0.3**
NSK	**Sanguang**	**1.28**	**274**	P	**Pn**	**08 10 24.2**	**+0.5**
	baz=274						
NSK				*e*S	**Sn**	**08 10 41.0**	**0.0**
	baz=274						
JISG	**Ishigakijimahi**	**1.41**	**90**	P	**Pn**	**08 10 24.8**	**-0.5**
JISG				S	**Sn**	**08 10 43.0**	**-0.7**
WHF	**Hehuan Shan**	**1.44**	**252**	*e*P	**Pn**	**08 10 26.3**	**+0.1**
	baz=251						
WHF				*e*S	**Sn**	**08 10 43.7**	**-1.4**
	baz=251						
LIOB	**Emei**	**1.59**	**272**	*e*P	**Pn**	**08 10 27.6**	**0.0**
	baz=272						
LIOB				*e*S	**Sn**	**08 10 47.6**	**-0.4**
	baz=272						
NSTT	**Nanjuang**	**1.60**	**272**	*e*P	**Pn**	**08 10 28.1**	**+0.3**
	baz=271						
NSTT				*e*S	**Sn**	**08 10 47.9**	**-0.3**
	baz=271						
JTJ	**Tarama**	**1.77**	**88**	P	**Pn**	**08 10 29.7**	**-0.2**
JTJ				*e*S	**Sn**	**08 10 51.1**	**-0.8**
TWF1	**Yuli**	**1.82**	**228**	P	**Pn**	**08 10 30.4**	**-0.3**
	baz=226						
TWF1				*e*S	**Sn**	**08 10 52.1**	**-1.2**
	baz=226						

SMLT	Sun Moon Lake	1.84	248	eP	Pn	08 10 32.1	+1.0
	baz=247						
SMLT				eS	Sn	08 10 53.5	-0.4
	baz=247						
TYC	Yuchr	1.87	249	eP	Pn	08 10 32.4	+1.1
	baz=248						
TYC				eS	Sn	08 10 54.4	0.0
	baz=248						
FULB	Fuli	1.94	224	P	Pn	08 10 32.9	+0.7
	baz=223						
FULB				eS	Sn	08 10 54.6	-1.4
	baz=223						
ALS	Alishan	2.09	239	eP	Pn	08 10 35.8	+1.3
	baz=238						
ALS				eS	Sn	08 10 59.4	-0.7
	baz=238						
ELDTW	Lidau	2.12	229	eP	Pn	08 10 34.5	-0.3
	baz=228						
ELDTW				eS	Sn	08 10 58.8	-1.8
	baz=228						
CHN5	Tsauling	2.15	243	eP	Pn	08 10 36.7	+1.6
	baz=242						
CHN5				eS	Sn	08 11 02.5	+1.4
	baz=242						
JIRB	Irabujima	2.20	83	P	Pn	08 10 36.0	+0.3
JIRB				eS	Sn	08 11 02.6	+0.3
TWH	Lutao	2.22	212	eP	Pn	08 10 36.6	+0.7
	baz=211						
TWH				eS	Sn	08 11 01.2	-1.4
	baz=211						
TWG	Pinlang	2.35	222	eP	Pn	08 10 38.0	+0.3
	baz=220						
TWG				eS	Sn	08 11 04.7	-1.1
	baz=220						
TWK	Hsinying	2.47	238	eP	Pn	08 10 40.6	+1.3
	baz=237						
TWK				eS	Sn	08 11 08.3	-0.3
	baz=237						
CHN1	Nanshi	2.48	236	eP	Pn	08 10 41.0	+1.5
	baz=235						
CHN1				eS	Sn	08 11 09.2	+0.3
	baz=235						

NIED **22** *08:20:00, 38.°60N×141.°90E, h50^{km}, Mw4.3 Best double couple: $M_0$3.39000×10^{15} NP1:ϕ_s204.00000°, δ23.00000°, λ92.00000°. NP2:ϕ_s22.00000°, δ67.00000°, λ89.00000°.*

BJI **22** *08:20:28.7, 38.°35N×142.°25E, h38^{km}, mb4.8/48, mB4.9/23, Ms4.2/12, Ms7 4.0/7*

ISCJB **22** *08:20:32.7±0.4, 38.°62N±0.°03×141.°97E±0.°05, h52^{km}±3^{km}, mb4.6/68, MS3.7/6, Error ellipse: s-maj=6.7km s-min=3.5km az=30.6*

MOS **22** *08:20:32.8±0.9, 38.°68N×141.°91E, h50^{km}, mb4.9/23, Error ellipse: s-maj=7.8km s-min=5.0km az=97.5*

JMA **22** *08:20:34.2±0.1, 38.°62N×141.°91E, h48^{km}±1^{km}, M4.3*

JMA Felt III J1.

NEIC **22** *08:20:35.8±0.6, 38.°59N×141.°95E, h68^{km}±4^{km}, mb4.7/17, Error ellipse: s-maj=7.5km s-min=4.8km az=120.0*

NEIC Felt at Ishinomaki and Sendai. Recorded [3 JMA] in Miyagi.

IDC **22** *08:20:37.0±2.1, 38.°60N×141.°79E, h75^{km}±19^{km}, mb4.1/26, mb1 4.2/30, mb1mx4.0/64, mbtmp4.4/30, MS3.3/9, Ms1 3.3/9, ms1mx3.0/70, Error ellipse: s-maj=14.6km s-min=11.6km az=88.0*

ISC 22 08:20:33.1±0.6, **38.°58N**±0.°04×**142.°09E**±0.°05, **h47**^{km}±4^{km}, **n210,** σ**1**^{s}**48**/233, **mb4.6**/68, **MS3.9**/6, **18C-11D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIO	Ouri	0.60	258	P	Pn	08 20 44.9	-0.4
JIO				S	Sn	08 20 52.1	-2.0
OFUJ	Ofunato	0.60	327	P	Pn	08 20 45.3	-0.1
OFUJ				S	Sn	08 20 53.0	-1.2
JMK	Ichinoseki	0.78	299	P	Pn	08 20 47.1	-0.6
JMK				S	Sn	08 20 56.1	-2.2
JOM	Ohasama	1.09	325	P	Pn	08 20 51.8	-0.1
JOM				S	Sn	08 21 04.8	-1.0
JOU	Okura	1.14	260	P	Pn	08 20 52.0	-0.6
JOU				S	Sn	08 21 05.0	-2.1
JMM	Marumori	1.25	236	P	Pn	08 20 53.5	-0.5
JMM				S	Sn	08 21 07.5	-2.2
JYK	Kaneyama	1.40	285	P	Pn	08 20 55.4	-0.7
JRG	Rokugo	1.40	306	P	Pn	08 20 55.5	-0.6
JFK	Kawauchi	1.55	219	P	Pn	08 20 58.3	+0.1
JFK				eS	Sn	08 21 17.7	+0.6
JYS	Shirataka	1.63	258	P	Pn	08 20 59.0	-0.3
ERM	Erimo	3.53	13	ePn	Pn	08 21 27.5	+2.3
ERM				eSn	Sn	08 22 05.5	-0.2
ERM	Erimo	3.53	13	ceP	Pn	08 21 26.7	+1.4
ERM				pmax	pmax		
	comp=Z,55nm,0.6s						
MAJO	Matsushiro	3.70	238	ePn	Pn	08 21 29.1	+1.5
MAJO	Matsushiro	3.70	238	eP	Pn	08 21 29.1	+1.5
MAT	Matsushiro	3.70	238	P	Pn	08 21 29.1	+1.4
MAT				S	Sn	08 22 16.3	+6.3
MJAR	Matsushiro Arr	3.70	238	P	Pn	08 21 29.3	+1.6
	comp=Z,16nm,0.3s,baz=38,slow=12,SNR=128						
MJAR				LR	LR	08 23 05.5	
	comp=Z,350nm,20.7s,baz=115,slow=42						
MJB9	Matsu-Tunnel	3.70	238	ePn	Pn	08 21 29.3	+1.6
INU	Inuyama	5.19	233	ePn	Pn	08 21 50.2	+2.1
ASAJ	Asahikawa	5.54	4	P	Pn	08 21 53.1	+0.2
	comp=Z,3.8nm,0.3s,baz=228,slow=10.0,SNR=32						
ASAJ				S	Sn	08 22 55.0	-0.4
	comp=Z,4.6nm,0.3s,baz=125,slow=18,SNR=5.5						
ASAJ				LR	LR	08 24 27.0	
	comp=Z,169nm,20.8s,baz=181,slow=42						
ASAJ	Asahikawa	5.54	4	ePn	Pn	08 21 55.2	+2.3
ASAJ				eSn	Sn	08 22 57.3	+2.0
JHJ2	Mitsune	5.76	199	ePn	Pn	08 21 56.6	+0.6
JHJ	Hachijo jima 2	5.76	200	P	Pn	08 21 56.2	+0.2
	comp=Z,29nm,0.3s,baz=108,slow=20,SNR=6.0						
JHJ				S	Sn	08 22 57.7	-3.1
	comp=Z,42nm,0.3s,baz=73,slow=20,SNR=4.2						
GLVR	Golovnino	5.77	26	eP	Pn	08 21 57.6	+1.6
GLVR				eS	Sn	08 22 58.9	-1.9
GLVR				smax	smax		
	comp=N,702nm,0.4s						
GLVR				smax	smax		
	comp=E,306nm,0.3s						
GRPR	Tuman	6.08	26	eP	Pn	08 22 01.4	+1.2
GRPR				eS	Sn	08 23 04.6	-3.8
GRPR				pmax	pmax		
	comp=N,27nm,0.2s						
GRPR				pmax	pmax		
	comp=Z,126nm,0.2s						
GRPR				pmax	pmax		
	comp=E,41nm,0.1s						
GRPR				smax	smax		
	comp=N,604nm,0.4s						
GRPR				smax	smax		
	comp=E,544nm,0.4s						
LAGR	Lagunnoye	6.14	26	eP	Pn	08 22 02.3	+1.2
LAGR				eS	Sn	08 23 07.5	-2.4
LAGR				pmax	pmax		
	comp=Z,219nm,0.5s						
LAGR				pmax	pmax		
	comp=E,138nm,0.4s						
LAGR				smax	smax		
	comp=N,663nm,0.3s						
LAGR				smax	smax		
	comp=E,737nm,0.4s						
YUK	Yuzh-Kuril'sk	6.14	26	c iP	Pn	08 22 03.1	+1.9
YUK				i S	Sn	08 23 07.7	-2.4
YUK				pmax	pmax		
	comp=N,49nm,0.3s						
YUK				pmax	pmax		
	comp=Z,129nm,0.3s						
YUK				pmax	pmax		
	comp=E,30nm,0.2s						
YUK				smax	smax		
	comp=E,473nm,0.6s						
YUK				smax	smax		
	comp=N,405nm,0.4s						
SHO	Shikotan	6.38	33	i P	Pn	08 22 05.1	+0.7
SHO				eS	Sn	08 23 12.1	-3.7
SHO				pmax	pmax		
	comp=N,9.0nm,0.2s						
SHO				pmax	pmax		
	comp=Z,17nm,0.2s						
SHO				pmax	pmax		
	comp=E,13nm,0.5s						
SHO				smax	smax		
	comp=E,123nm,0.2s						
SHO				smax	smax		
	comp=N,300nm,0.3s						
TEY	Ternei	7.64	329	eP	Pn	08 22 27.0	+5.3
KUR	Kuril'sk	7.92	31	eP	Pn	08 22 27.9	+2.4
KUR				eS	Sn	08 23 51.6	-2.1
KUR				pmax	pmax		
	comp=Z,31nm,0.5s						
KUR				pmax	pmax		
	comp=N,10.0nm,0.6s						
KUR				pmax	pmax		
	comp=E,12nm,0.3s						
KUR				smax	smax		
	comp=N,64nm,0.4s						
KUR				smax	smax		
	comp=E,82nm,0.4s						
YSS	Yuzh-Sakhalins	8.38	3	ePn	Pn	08 22 32.4	+0.6
YSS	Yuzh-Sakhalins	8.38	3	eP	Pn	08 22 32.9	+1.1
YSS				eS	Sn	08 24 01.0	-4.1
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
YSS				MLR	MLR		
	comp=Z,200nm,14.0s						
MSHR	Mys Shultsa	9.23	299	i P	Pn	08 22 43.2	-0.2
USRK	Ussuriysk Ar.	9.44	310	P	Pn	08 22 46.1	-0.2
	baz=118,slow=15						
USRK				LR	LR	08 26 12.1	
	comp=Z,145nm,19.7s,baz=83,slow=36						
JNU	Nakatsue	10.60	242	P	Pn	08 23 02.5	+0.1
	comp=Z,1.0nm,0.3s,baz=111,slow=3.1,SNR=12						
JNU				LR	LR	08 27 36.0	
	comp=Z,177nm,19.3s,baz=312,slow=40						
JNU	Nakatsue	10.60	242	ePn	Pn	08 23 03.6	+1.2
MDJ	Mudanjiang	11.13	307	P	Pn	08 23 10.1	+0.7
MDJ				pmax	pmax		
	comp=Z,17nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,97nm,3.3s						
MDJ	Mudanjiang	11.13	307	ePn	Pn	08 23 12.7	+3.3
KSRS	Korea Array	11.24	269	P	Pn	08 23 12.7	+1.7
	comp=Z,0.8nm,0.3s,baz=76,slow=14,SNR=18						
KSRS				LR	LR	08 26 57.1	
	comp=Z,166nm,21.9s,baz=78,slow=34						
KS01	Wonju Array Si	11.26	269	ePn	Pn	08 23 13.5	+2.3
KS15	Wonju Array Si	11.27	269	ePn	Pn	08 23 14.0	+2.6
KSAR	Wonju Array Be	11.27	269	P	Pn	08 23 12.7	+1.3
KSAR	Wonju Array Be	11.27	269	P	Pn	08 23 12.7	+1.3
CBIJ	Chichi jima	11.45	180	ePn	Pn	08 23 07.5	-6.5
JCJ	Chichijima	11.45	180	P	Pn	08 23 12.4	-1.6
	comp=Z,4.3nm,0.3s,baz=288,slow=19,SNR=5.3						
KLR	Kul'dur	12.98	328	P	Pn	08 23 32.1	-2.6
	comp=Z,0.0nm,0.3s,baz=81,slow=6.3,SNR=3.7						
KLR				LR	LR	08 27 52.6	
	comp=Z,21nm,20.4s,baz=170,slow=34						
KLR	Kul'dur	12.98	328	i P	Pn	08 23 33.2	-1.5
CN2	Changchun	13.57	298	eP	Pn	08 23 41.3	-1.5
ZEA	Zeya	18.26	331	eP	P	08 24 41.0	-1.5
ZEA				pmax	pmax		
	comp=N,26nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,28nm,0.8s						
NJ2	Nanjing	20.02	258	eP	P	08 25 00.8	-1.1
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
BJI	Beijing	20.09	282	⇑eP	P	08 25 00.8	-1.8
BJI				pmax	pmax		
	comp=Z,15nm,0.7s						
MA2	Magadan	21.73	12	P	P	08 25 21.7	+1.6
	comp=Z,11nm,0.7s,baz=193,slow=13,SNR=3.6						
MA2	Magadan	21.73	12	i P	P	08 25 21.6	+1.5
MA2				pmax	pmax		
	comp=Z,18nm,1.0s						
HHC	Hu-ho-hao-te	23.54	285	eP	P	08 25 40.5	+1.4
HHC				sP	sP	08 25 55.0	-1.5
HHC				S	S	08 29 53.4	+3.6
HHC				sS	sS	08 30 06.3	-3.8
HHC				pmax	pmax		
	comp=Z,17nm,1.0s						
HHC				pmax	pmax		
	comp=Z,130nm,5.1s						
HHC				LR	LR		
	comp=Z,120nm,9.4s						
HHC				LR	LR		
	comp=Z,170nm,8.4s						
HHC				LR	LR		
	comp=Z,150nm,11.8s						
WHN	Wuhan	24.15	259	P	P	08 25 44.0	-0.7
YAK	Yakutsk	24.69	346	P	P	08 25 48.0	-1.3
	comp=Z,16nm,0.5s,baz=139,slow=9.6,SNR=5.8						
YAK	Yakutsk	24.69	346	eP	P	08 25 48.5	-0.8
	comp=Z,41nm,1.1s						
YAK	Yakutsk	24.69	346	eP	P	08 25 46.2	-3.1
YAK				e		08 26 07.3	
YAK				eS	S	08 30 02.6	-5.0
YAK				pmax	pmax		
	comp=Z,24nm,1.0s						
YAK				pmax	pmax		
	comp=N,9.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,7.0nm,1.1s						
YAK				smax	smax		
	comp=N,96nm,4.8s						
YAK				smax	smax		
	comp=E,31nm,2.8s						
SEY	Seymchan	25.17	11	P	P	08 25 56.0	+2.3
	comp=E,9.6nm,0.8s,baz=214,slow=8.1,SNR=14						
SEY	Seymchan	25.17	11	i P	P	08 25 56.1	+2.4
XAN	Xi'an	27.02	271	P	P	08 26 05.8	-5.0
XAN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,120nm,5.0s						
SONA1	Songino Array	27.40	301	eP	P	08 26 12.9	-1.3
SONM	Songino Array	27.40	301	P	P	08 26 14.4	+0.2
	comp=Z,1.7nm,0.6s,baz=112,slow=8.5,SNR=9.7						
SONM				PcP	PcP	08 29 31.7	-0.4
	comp=Z,0.4nm,0.7s,baz=118,slow=1.4,SNR=4.2						
ENH	Enshi	28.03	263	eP	P	08 26 19.2	-0.6
	comp=Z,45nm,0.7s						
H11N2	WAKE ISLAND Hy	28.52	124	T	T	08 56 54.9	
	baz=317,slow=75,SNR=5388						
H11N1	WAKE ISLAND Hy	28.53	124	T	T	08 56 55.6	
	baz=317,slow=75,SNR=4974						
H11N3	WAKE ISLAND Hy	28.54	124	T	T	08 56 56.3	
	baz=317,slow=75,SNR=4156						
WAKE	Wake Island	28.69	125	eP	P	08 26 16.8	-8.9
H11S1	WAKE ISLAND Hy	29.29	126	T	T	08 57 50.8	
	baz=318,slow=76,SNR=451						
H11S3	WAKE ISLAND Hy	29.29	126	T	T	08 57 48.1	
	baz=318,slow=76,SNR=886						
H11S2	WAKE ISLAND Hy	29.31	126	T	T	08 57 51.2	
	baz=318,slow=76,SNR=403						
TLY	Talaya	29.75	309	LR	LR	08 39 56.0	
	comp=Z,94nm,18.2s,baz=290,slow=39						
TLY	Talaya	29.75	309	eP	P	08 26 35.1	+0.1
	comp=Z,5.8nm,0.8s						
TLY	Talaya	29.75	309	eP	P	08 26 34.6	-0.3
TLY				pmax	pmax		
	comp=Z,7.0nm,0.8s						
TLY				MLR	MLR		
	comp=Z,129nm,19.0s						
ZAK	Zakamensk	29.76	306	eP	P	08 26 33.9	-1.2
ZAK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
LZH	Lanzhou	30.37	277	eP	P	08 26 43.1	+2.4
LZH				pP	pP	08 26 55.3	+2.3
LZH				sP	sP	08 27 00.3	+1.8
LZH				pmax	pmax		
	comp=Z,24nm,1.1s						
GYA	Guiyang	32.03	258	eP	P	08 26 54.9	-0.5
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CD2	Chengdu	32.23	268	eP	P	08 26 56.0	-1.0
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
GTA	Gaotai	32.65	285	eP	P	08 27 03.3	+2.6
GTA				pP	pP	08 27 14.9	+1.9
GTA				sP	sP	08 27 20.3	+1.8
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TIXI	Tiksi	33.83	353	eP	P	08 27 09.1	-1.2
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KMI	Kunming	35.74	260	P	P	08 27 27.4	-0.3
KMI				pmax	pmax		
	comp=Z,17nm,0.7s						
KMI				pmax	pmax		
	comp=Z,150nm,4.1s						
DGZ	Jazzator, Alta	39.94	304	i P	P	08 28 03.5	+0.7
DGZ				pmax	pmax		
	comp=Z,22nm,0.7s						
WMQ	Urumqi	40.64	295	P	P	08 28 09.3	+0.7
WMQ				pP	pP	08 28 21.1	0.0
WMQ				sP	sP	08 28 24.6	-2.0
WMQ				pmax	pmax		
	comp=Z,52nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,230nm,4.7s						
WMQ				LR	LR		
	comp=Z,210nm,21.9s						
WMQ				LR	LR		
	comp=Z,170nm,23.9s						
ZAA0	Zalesovo Array	41.29	311	eP	P	08 28 13.5	-0.1
	comp=Z,18nm,1.2s						
ZALV	Zalesovo Beam	41.29	311	P	P	08 28 13.2	-0.4
	comp=Z,7.4nm,0.5s,baz=82,slow=6.8,SNR=9.9						
ZALV				PcP	PcP	08 30 10.7	-0.7
	comp=Z,2.1nm,0.3s,baz=87,slow=4.0,SNR=3.6						
NVS	Novosibirsk	42.18	312	eP	P	08 28 20.0	-0.9
CMAR	Chiang Mai Arr	42.42	254	LR	LR	08 45 36.9	
	comp=Z,29nm,19.9s,baz=225,slow=36						
MK01	Makanchi Array	43.77	301	eP	P	08 28 33.4	-0.5
MK31	Makanchi Array	43.77	301	eP	P	08 28 33.5	-0.4
MK31	Makanchi Array	43.77	301	eP	P	08 28 33.5	-0.4
MKAR	Makanchi Array	43.77	301	P	P	08 28 33.6	-0.3
	comp=Z,3.3nm,0.5s,baz=87,slow=9.6,SNR=43						
MKAR				PcP	PcP	08 30 19.2	-0.8
	comp=Z,0.7nm,0.7s,baz=78,slow=7.5,SNR=2.5						
MKAR	Makanchi Array	43.77	301	eP	P	08 28 33.5	-0.4
	comp=Z,40nm,0.8s						
MKAR				PcP	PcP	08 30 19.2	-0.8
MKAR	Makanchi Array	43.77	301	eP	P	08 28 33.5	-0.4
MKAR						08 30 19.2	
MKAR				pmax	pmax		
	comp=Z,40nm,0.8s						
SHL	Shillong	43.98	268	eP	P	08 28 35.3	-0.7
	comp=Z,8.0nm,0.6s						
SHL	Shillong	43.98	268	eP	P	08 28 35.3	-0.7
SHL				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KURK	Kurchatov	45.42	307	eP	P	08 28 46.5	-0.4
	comp=Z,48nm,1.0s						
KURK				PcP	PcP	08 30 25.5	0.0
KURK	Kurchatov	45.42	307	ceP	P	08 28 46.3	-0.6
KURK				pmax	pmax		
	comp=Z,46nm,1.0s						
KURBB	Kurchatov Arra	45.49	307	P	P	08 28 47.4	-0.1
	comp=Z,25nm,0.4s,baz=81,slow=8.1,SNR=232						
KURBB				PcP	PcP	08 30 25.5	-0.2
	comp=Z,1.5nm,0.7s,baz=83,slow=3.9,SNR=3.7						
KDAK	Kodiak Island	45.60	43	P	P	08 28 50.0	+1.8
	comp=Z,10nm,1.1s,baz=279,slow=7.2,SNR=4.0						
KDAK	Kodiak Island	45.60	43	i P	P	08 28 51.0	+2.8
PDGK	Podgornoye	46.54	297	P	P	08 28 56.0	-0.1
PDGK				pmax	pmax		
	comp=Z,4.0nm,0.5s						
ODAN	Odare	46.87	272	eP	P	08 28 58.7	-0.3
	comp=Z,23nm,0.8s						
JIRN	Jiri	47.43	274	eP	P	08 29 04.3	+0.8
	comp=Z,14nm,0.4s						
RAMN	Ramite	47.44	273	eP	P	08 29 02.9	-0.6
	comp=Z,58nm,0.8s						
GUN	Gumba	47.55	275	eP	P	08 29 04.9	+0.5
	comp=Z,37nm,0.7s						
ILAR	Eielson Array	47.91	33	P	P	08 29 08.1	+1.8
	comp=Z,1.2nm,0.7s,baz=267,slow=6.3,SNR=20						
KKN	Kakani	48.08	275	eP	P	08 29 08.3	0.0
	comp=Z,29nm,0.7s						
PKIN	Phulchoki	48.09	274	eP	P	08 29 08.4	-0.1
	comp=Z,7.1nm,0.5s						
DMN	Daman	48.30	275	eP	P	08 29 09.8	-0.3
	comp=Z,9.0nm,0.5s						
GKN	Gorkha	48.48	275	eP	P	08 29 11.3	0.0
	comp=Z,34nm,0.9s						
DANN	Dangsing	49.00	276	eP	P	08 29 15.8	+0.3
	comp=Z,35nm,0.5s						
KOLN	Koldanda	49.40	276	eP	P	08 29 17.6	-0.8
	comp=Z,6.2nm,0.3s						
PYUN	Piuthan	49.72	276	eP	P	08 29 19.8	-1.1
	comp=Z,158nm,1.2s						
BVAR	Borovoye Array	49.94	311	P	P	08 29 21.9	-0.1
	comp=Z,4.2nm,0.5s,baz=72,slow=7.6,SNR=21						
BVAR				PcP	PcP	08 30 41.8	+0.2
	comp=Z,2.2nm,0.4s,baz=102,slow=2.7,SNR=5.4						
BRVK	Borovoye	49.99	312	eP	P	08 29 22.0	-0.4
	comp=Z,6.0nm,0.7s						
BRVK	Borovoye	49.99	312	ceP	P	08 29 22.2	-0.2
BRVK				pmax	pmax		
	comp=Z,12nm,0.6s						
KSH	Kashi	50.28	293	eP	P	08 29 28.9	+4.0
KSH				pmax	pmax		
	comp=Z,7.0nm,0.4s						
IPM	Ipoh	50.41	238	eP	P	08 29 21.7	-4.2
	comp=Z,11nm,0.5s						
MNAS	Manas	51.67	298	P	P	08 29 35.6	+0.2
MNAS				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SFK	Sufi-Kurgan	51.87	295	P	P	08 29 37.1	+0.2
SFK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KK31	Karatay Array	52.83	299	eP	P	08 29 42.6	-1.1
KK31	Karatay Array	52.83	299	eP	P	08 29 42.6	-1.1
KKAR	Karatay Array	52.83	299	eP	P	08 29 43.5	-0.2
KKAR	Karatay Array	52.83	299	eP	P	08 29 43.6	-0.2
PSI	Prapat	53.05	239	eP	P	08 29 44.5	-1.3
	comp=Z,8.9nm,1.1s						
PSI	Prapat	53.05	239	eP	P	08 29 44.5	-1.3
PSI				pmax	pmax		
	comp=Z,9.0nm,1.1s						
SVE	Sverdlovsk	54.35	318	eP	P	08 29 54.8	+0.1
SVE				pmax	pmax		
	comp=Z,16nm,0.9s						
NIL	Nilore	54.65	288	eP	P	08 29 57.8	+0.5
	comp=Z,23nm,0.7s						
NIL	Nilore	54.65	288	eP	P	08 29 57.8	+0.5
NIL				pmax	pmax		
	comp=Z,23nm,0.7s						
ARU	Arti	55.57	318	eP	P	08 30 02.8	-0.6
	comp=Z,11nm,0.9s						
ARU	Arti	55.57	318	c iP	P	08 30 03.1	-0.3
ARU				*PP	pP	08 30 16.7	+0.3
ARU				S	S	08 37 45.5	+0.1
ARU				pmax	pmax		
	comp=Z,12nm,1.0s						
ABKAR	Akbulak array	57.36	310	eP	P	08 30 15.9	-0.4
AKTO	Aktyubinsk	58.05	311	P	P	08 30 20.7	-0.4
	comp=Z,2.6nm,0.3s,baz=60,slow=12,SNR=13						
CTA	Charters Tower	58.49	175	P	P	08 30 25.4	+1.0
	comp=Z,3.7nm,0.8s,baz=0.0,slow=15,SNR=2.2						
WRAB	Tennant Creek	58.66	189	i P	P	08 30 24.5	-1.1
WRAB				pmax	pmax		
	comp=Z,4.0nm,1.1s						
WRA	Warramunga Arr	58.67	189	P	P	08 30 26.0	+0.3
	comp=Z,2.7nm,0.7s,baz=7.8,slow=7.7,SNR=33						
AS01	Alice Springs	62.39	188	eP	P	08 30 44.9	-6.1
ASAR	Alice Springs	62.39	188	P	P	08 30 51.9	+0.9
	comp=Z,1.0nm,0.6s,baz=7.8,slow=5.0,SNR=15						
ARCES	ARCESS Array B	62.74	339	P	P	08 30 53.1	+0.2
	comp=Z,5.1nm,1.0s,baz=51,slow=8.6,SNR=8.7						
OBN	Obninsk	67.18	323	⇑eP	P	08 31 20.6	-1.3
OBN				e		08 31 52.6	
OBN				e		08 33 48.0	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,101nm,19.0s						
FINES	FINESS Array B	67.70	332	P	P	08 31 24.9	-0.2
	comp=Z,5.3nm,0.8s,baz=30,slow=10,SNR=14						
VSR	Storozhevoye	68.12	319	eP	P	08 31 27.0	-0.9
VSR				pmax	pmax		
	comp=Z,5.0nm,0.5s						
SUMG	Summit	69.14	0	i P	P	08 31 35.3	+0.9
	comp=Z,12nm,0.7s						
VSU	Vasula	69.39	330	d iP	P	08 31 38.8	+3.1
VSU				pmax	pmax		
	comp=Z,17nm,1.0s						
KIV	Kislovodsk	70.30	311	eP	P	08 31 41.5	-0.1
	comp=Z,7.5nm,0.7s						
KIV	Kislovodsk	70.30	311	deP	P	08 31 42.2	+0.5
KIV				e		08 32 01.0	
KIV				e		08 34 17.7	

KIV				eS	SKiKP	08 41 21.4	-1.0
KIV				pmax	pmax		
	comp=Z,16nm,0.9s						
KBZ	**Khabaz**	**70.31**	**311**	P	**P**	**08 31 42.0**	**+0.5**
	comp=Z,6.1nm,0.9s,baz=55,slow=1.7,SNR=11						
KBZ	**Khabaz**	**70.31**	**311**	P	**P**	**08 31 42.0**	**+0.5**
HFS	**Hagfors**	**72.90**	**336**	P	**P**	**08 31 56.9**	**+0.1**
	comp=Z,4.2nm,0.4s,baz=44,slow=6.4,SNR=38						
HFS				LR	LR	09 05 54.4	
	comp=Z,136nm,21.0s,baz=218,slow=37						
NB2	**NORSAR Subarra**	**72.97**	**337**	P	**P**	**08 31 57.1**	**-0.3**
	comp=Z,2.0nm,0.6s,baz=39,slow=6.2						
NB2	**NORSAR Subarra**	**72.97**	**337**	P	**P**	**08 31 57.0**	**-0.3**
NOA	**NORSAR Array B**	**72.97**	**337**	P	**P**	**08 31 57.4**	**+0.1**
	comp=Z,3.2nm,0.7s,baz=38,slow=6.0,SNR=17						
AKASG	**Malin Array Be**	**73.40**	**322**	P	**P**	**08 31 59.6**	**-0.4**
	comp=Z,2.4nm,0.5s,baz=44,slow=6.0,SNR=12						
KIEV	**Kiev**	**73.42**	**322**	ceP	**P**	**08 31 59.7**	**-0.4**
KIEV				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NVAR	**Mina Array Bea**	**73.64**	**54**	P	**P**	**08 32 04.4**	**+2.5**
	comp=Z,0.7nm,0.9s,baz=290,slow=4.4,SNR=4.9						
PDAR	**Pinedale Array**	**76.20**	**46**	P	**P**	**08 32 18.6**	**+1.9**
	comp=Z,1.0nm,0.6s,baz=266,slow=1.2,SNR=14						
BUR08	**Bucovina Ar. S**	**77.42**	**322**	eP	**P**	**08 32 23.7**	**+0.4**
BUR04	**Bucovina Ar. S**	**77.43**	**322**	eP	**P**	**08 32 23.6**	**+0.3**
BURAR	**Bucovina Array**	**77.43**	**322**	⇑iP	**P**	**08 32 23.6**	**+0.3**
BURAR	**Bucovina Array**	**77.43**	**322**	⇑P	**P**	**08 32 23.6**	**+0.3**
BIZ	**Bicaz**	**77.47**	**321**	⇑iP	**P**	**08 32 24.1**	**+0.7**
TESR	**Tescani**	**77.49**	**320**	⇑iP	**P**	**08 32 24.2**	**+0.7**
VRI	**Vrincioaia**	**77.90**	**320**	⇓iP	**P**	**08 32 27.3**	**+1.5**
VRI	**Vrincioaia**	**77.90**	**320**	⇓P	**P**	**08 32 27.3**	**+1.5**
TLB	**Topalu**	**78.10**	**318**	⇓iP	**P**	**08 32 27.0**	**+0.1**
TLB	**Topalu**	**78.10**	**318**	⇓P	**P**	**08 32 27.0**	**+0.1**
BRTR	**Keskin Array B**	**78.23**	**312**	P	**P**	**08 32 27.7**	**-0.3**
	comp=Z,0.9nm,0.4s,baz=143,slow=3.4,SNR=6.0						
BRTR	**Keskin Array B**	**78.23**	**312**	iP	**P**	**08 32 28.2**	**+0.2**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
TRPA	**Tarpa**	**78.34**	**323**	⇓iP	**P**	**08 32 29.0**	**+0.8**
VOIR		**79.04**	**320**	⇑iP	**P**	**08 32 33.1**	**+0.9**
VOIR		**79.04**	**320**	⇑P	**P**	**08 32 33.1**	**+0.9**
MORC	**Moravsky Berou**	**79.36**	**327**	⇓iP	**P**	**08 32 34.8**	**+1.0**
MORC	**Moravsky Berou**	**79.36**	**327**	eP	**P**	**08 32 34.4**	**+0.6**
	comp=Z,4.6nm,0.9s						
MORC	**Moravsky Berou**	**79.36**	**327**	⇓P	**P**	**08 32 34.8**	**+1.0**
DPC	**Dobruska-Polom**	**79.43**	**328**	eP	**P**	**08 32 35.1**	**+0.9**
DPC	**Dobruska-Polom**	**79.43**	**328**	eP	**P**	**08 32 35.1**	**+0.9**
UPC	**Upice**	**79.44**	**328**	eP	**P**	**08 32 35.4**	**+1.2**
UPC	**Upice**	**79.44**	**328**	eP	**P**	**08 32 35.4**	**+1.2**
KRLC	**Kraliky**	**79.45**	**328**	eP	**P**	**08 32 35.1**	**+0.8**
KRLC	**Kraliky**	**79.45**	**328**	eP	**P**	**08 32 35.1**	**+0.8**
VYHS	**Vyhne**	**79.76**	**326**	eP	**P**	**08 32 36.8**	**+0.8**
VYHS	**Vyhne**	**79.76**	**326**	eP	**P**	**08 32 36.8**	**+0.8**
CLL	**Collm**	**80.02**	**330**	eP	**P**	**08 32 38.0**	**+0.7**
	comp=Z,7.0nm,0.8s						
CLL				ePcP	**PcP**	**08 32 43.0**	**-1.7**
CLL				i pP	**sP**	**08 32 56.5**	**+0.3**
CLL				ePP	**PP**	**08 35 40.0**	**+1.1**
CLL	**Collm**	**80.02**	**330**	eP	**P**	**08 32 37.0**	**-0.3**
	comp=Z,6.1nm,0.8s						
CLL	**Collm**	**80.02**	**330**	eP	**P**	**08 32 38.0**	**+0.7**
CLL				i *PP	**pP**	**08 32 49.7**	**-1.3**
CLL				i *SP	**sP**	**08 32 56.5**	**+0.3**
CLL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
VRAC	**Vranov**	**80.11**	**327**	⇑iP	**P**	**08 32 38.6**	**+0.7**
VRAC	**Vranov**	**80.11**	**327**	⇑P	**P**	**08 32 38.6**	**+0.7**
PRU	**Pruhonice**	**80.44**	**329**	eP	**P**	**08 32 40.2**	**+0.6**
PRU	**Pruhonice**	**80.44**	**329**	eP	**P**	**08 32 40.2**	**+0.6**
KHC	**Kasperske Hory**	**81.50**	**329**	eP	**P**	**08 32 45.6**	**+0.2**
KHC	**Kasperske Hory**	**81.50**	**329**	eP	**P**	**08 32 45.1**	**-0.3**
	comp=Z,1.4nm,0.8s						
KHC	**Kasperske Hory**	**81.50**	**329**	eP	**P**	**08 32 45.6**	**+0.2**
GERES	**GERESS Array B**	**81.68**	**328**	P	**P**	**08 32 46.5**	**+0.1**
	comp=Z,1.1nm,0.5s,baz=38,slow=5.4,SNR=10						
GEA0	**GERESS Array S**	**81.69**	**328**	eP	**P**	**08 32 46.5**	**+0.1**
EKA	**Eskdalemuir Ar**	**81.85**	**341**	P	**P**	**08 32 46.6**	**-0.4**
	comp=Z,0.6nm,0.5s,baz=31,slow=4.4,SNR=2.9						
VTS	**Vitosha**	**82.00**	**319**	⇓iP	**P**	**08 32 48.6**	**+0.4**
VTS	**Vitosha**	**82.00**	**319**	eP	**P**	**08 32 49.2**	**+1.0**
	comp=Z,4.6nm,0.7s						
VTS	**Vitosha**	**82.00**	**319**	⇓P	**P**	**08 32 48.6**	**+0.4**
PDG	**Podgorica**	**84.10**	**321**	⇑iP	**P**	**08 32 58.8**	**-0.1**
TTG	**Podgorica**	**84.10**	**321**	eP	**P**	**08 32 58.7**	**-0.1**
	comp=Z,11nm,1.0s						
TTG	**Podgorica**	**84.10**	**321**	eP	**P**	**08 32 58.7**	**-0.1**
TTG				pmax	pmax		
	comp=Z,11nm,1.0s						
BFO	**Black Forest**	**84.22**	**331**	ceP	**P**	**08 33 00.4**	**+1.0**
BFO				pmax	pmax		
	comp=Z,1.0nm,1.0s						
ECH	**Echery**	**84.75**	**332**	eP	**P**	**08 33 02.1**	**0.0**
	comp=Z,4.4nm,0.9s						
FUORN	**Ofenpass-Fuorn**	**84.86**	**329**	eP	**P**	**08 33 03.8**	**+0.8**
	comp=Z,10nm,0.8s						
DAVOX	**Davos/Dischmat**	**84.88**	**329**	P	**P**	**08 33 01.0**	**-2.0**
	comp=Z,2.3nm,0.5s,baz=0.0,slow=3.0,SNR=4.9						
DAVOX	**Davos/Dischmat**	**84.88**	**329**	P	**P**	**08 33 01.0**	**-2.0**
TXAR	**Lajitas Array**	**88.76**	**53**	P	**P**	**08 33 23.9**	**+1.8**
	comp=Z,0.4nm,0.7s,baz=277,slow=3.5,SNR=8.5						
TORD	**Torodi Ar. Bea**	**116.61**	**316**	PKP	**PKPdf**	**08 39 10.1**	**-2.4**
	comp=Z,0.4nm,0.9s,baz=18,slow=2.7						
NNA	**Nana**	**136.44**	**63**	i PKIKP	**PKPdf**	**08 39 47.1**	**-3.2**
SNAA	**Sanae**	**142.38**	**197**	PKhKP	PKPpre	08 39 54.3	
	comp=Z,0.5nm,0.4s,baz=175,slow=12,SNR=5.5						
SIV	**San Ignacio**	**149.66**	**49**	PKPbc	**PKPbc**	**08 40 19.0**	**+1.0**
	comp=Z,1.7nm,0.7s,baz=270,slow=9.1,SNR=8.5						

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*ISCJB **22** 08:35:02.7±0.4, 39°.65N±0°.03×29°.38E±0°.03, h0^{km}, Error ellipse: s-maj=4.3km s-min=3.3km az=141.8*

*CSEM **22** 08:35:03.0±0.2, 39°.64N×29°.39E, h1^{km}, ML2.2, Error ellipse: s-maj=4.8km s-min=3.8km az=123.0, Suspected Mining explosion.*

*DDA **22** 08:35:03.5, 39°.62N×29°.38E, h7^{km}, Md2.5, Suspected Mining explosion.*

*ISK **22** 08:35:03.1, 39°.64N×29°.46E, h8^{km}, ML2.2/7, Suspected Mining explosion.*

ISC 22 08:35:02.8±0.9**, 39°.65N**±0°.02×**29°.39E**±0°.02**, h0^{km}, n31, σ0^{s}.61**/46**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TVSB	**Tavsanli**	**0.21**	**163**	PG	**Pg**	**08 35 07.5**	**+0.7**
TVSB	**Tavsanli**	**0.21**	**163**	ePg	**Pg**	**08 35 07.5**	**+0.7**
GDZ	**Gediz**	**0.56**	**172**	i P	**Pg**	**08 35 13.8**	**+0.2**
GDZ				i S	**Sg**	**08 35 22.1**	**+1.2**
GDZ	**Gediz**	**0.56**	**172**	P	**Pg**	**08 35 13.8**	**+0.2**
GDZ				S	**Sg**	**08 35 22.1**	**+1.2**
CAVI	**Cavuskoy**	**0.66**	**32**	PG	**Pg**	**08 35 15.6**	**+0.2**
CAVI				SG	**Sg**	**08 35 24.8**	**+0.9**
CAVI	**Cavuskoy**	**0.66**	**32**	ePg	**Pg**	**08 35 15.6**	**+0.2**
CAVI				eSg	**Sg**	**08 35 24.8**	**+0.9**
DURS	**Dursunbey**	**0.70**	**267**	i P	**Pg**	**08 35 16.9**	**+0.5**
DURS				i S	**Sg**	**08 35 24.9**	**-0.5**
DURS	**Dursunbey**	**0.70**	**267**	P	**Pg**	**08 35 16.9**	**+0.5**
DURS				S	**Sg**	**08 35 25.0**	**-0.5**
DEMI	**Demirci**	**0.80**	**221**	i P	**Pg**	**08 35 18.4**	**+0.3**
DEMI				i S	**Sn**	**08 35 32.9**	**-1.1**
DEMI	**Demirci**	**0.80**	**221**	P	**Pg**	**08 35 18.4**	**+0.3**
DEMI				S	**Sn**	**08 35 32.9**	**-1.1**
MDNY	**Mudanya-Bursa**	**0.82**	**332**	PG	**Pb**	**08 35 20.2**	**+0.3**
MDNY	**Mudanya-Bursa**	**0.82**	**332**	ePg	**Pb**	**08 35 20.2**	**+0.3**
BORA	**Eskisehir**	**0.86**	**74**	PG	**Pg**	**08 35 18.8**	**-0.4**
BORA				SG	**Sg**	**08 35 30.6**	**+0.2**
BORA	**Eskisehir**	**0.86**	**74**	i P	**Pg**	**08 35 18.6**	**-0.6**
BORA				i S	**Sg**	**08 35 30.5**	**+0.2**
BORA	**Eskisehir**	**0.86**	**74**	ePg	**Pg**	**08 35 18.8**	**-0.4**
BORA				S	**Sg**	**08 35 30.5**	**+0.2**
YLV	**Yalova**	**0.92**	**359**	PG	**Pb**	**08 35 21.9**	**+0.2**
YLV	**Yalova**	**0.92**	**359**	ePg	**Pb**	**08 35 21.9**	**+0.2**
SBT5	**Esenkoy-Cinarc**	**1.06**	**339**	PN	**Pb**	**08 35 24.2**	**+0.2**
SBT5	**Esenkoy-Cinarc**	**1.06**	**339**	ePn	**Pb**	**08 35 24.2**	**+0.2**
ESKT	**Eskisehir**	**1.14**	**96**	i P	**Pb**	**08 35 25.6**	**+0.1**
ESKT				i S	**Sn**	**08 35 42.1**	**-0.5**
SEYT	**Eskypehyr**	**1.14**	**96**	P	**Pb**	**08 35 25.6**	**+0.1**
SEYT				S	**Sn**	**08 35 42.1**	**-0.4**
GULT	**Gulveren**	**1.17**	**48**	PN	**Pg**	**08 35 25.2**	**-0.1**
GULT	**Gulveren**	**1.17**	**48**	ePn	**Pg**	**08 35 25.2**	**-0.1**
HRT	**Hereke**	**1.19**	**10**	PN	**Pg**	**08 35 25.7**	**0.0**
HRT	**Hereke**	**1.19**	**10**	ePn	**Pg**	**08 35 25.7**	**0.0**
KULA	**Kula-Manisa**	**1.26**	**207**	PN	**Pb**	**08 35 27.8**	**+0.2**
KULA	**Kula-Manisa**	**1.26**	**207**	ePn	**Pb**	**08 35 27.8**	**+0.2**
MANT	**Manisa**	**1.32**	**209**	i P	**Pg**	**08 35 28.2**	**0.0**
MANT				i S	**Sg**	**08 35 44.0**	**-1.3**
MANT	**Manisa**	**1.32**	**209**	P	**Pg**	**08 35 28.2**	**0.0**
MANT				S	**Sg**	**08 35 44.0**	**-1.3**
BALY	**Balya**	**1.37**	**274**	i S	**Sg**	**08 35 47.5**	**+0.8**
BALY	**Balya**	**1.37**	**274**	S	**Sg**	**08 35 47.5**	**+0.8**

GUC 22 08:40:15.9±0.5**, 22°.38S×68°.05W, h185^{km}**±16^{km}**, ML3.7, 4C-1D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB03	**IPOC Station P**	**1.62**	**282**	⇑iP	Pn	08 40 50.7	+1.1
PB03				eS	Sn	08 41 17.0	+1.4
PB03				IAML		08 41 18.5	
	comp=E,711nm,0.1s						
PB07	**IPOC Station P**	**1.83**	**291**	⇓eP	Pn	08 40 53.0	+1.3
PB07				eS	Sn	08 41 21.0	+1.5
PB07				IAML		08 41 22.3	
	comp=N,629nm,0.3s						
PB01	**IPOC Station P**	**1.89**	**315**	eP	Pn	08 40 53.1	+0.8
PB01				eS	Sn	08 41 21.9	+1.3
PB01				IAML		08 41 23.3	
	comp=E,560nm,0.3s						
PB04	**IPOC Station P**	**1.95**	**271**	⇑iP	Pn	08 40 54.2	+1.3
PB04				eS	Sn	08 41 23.2	+1.5
PB04				IAML		08 41 26.5	
	comp=N,427nm,0.1s						
PB02	**IPOC Station P**	**2.02**	**301**	eP	Pn	08 40 54.8	+1.1
PB02				eS	Sn	08 41 24.2	+1.3
PB05	**IPOC Station P**	**2.05**	**256**	i P	Pn	08 40 55.0	+1.0
PB05				eS	Sn	08 41 24.5	+1.0
PB05				IAML		08 41 25.9	
	comp=E,245nm,0.6s						
PB08	**IPOC Station P**	**2.46**	**335**	⇑eP	Pn	08 41 00.2	+1.3
PB08				eS	Sn	08 41 34.1	+1.8
PB08				IAML		08 41 36.8	
	comp=N,203nm,0.6s						
PB10	**IPOC Station P**	**2.57**	**244**	i P	Pn	08 41 00.4	+0.7
PB10				eS	Sn	08 41 34.5	+0.6
PB10				IAML		08 41 35.4	
	comp=N,170nm,0.4s						
MNMC	**Minye Minye**	**3.54**	**336**	⇑iP	Pn	08 41 12.6	+0.8
MNMC				i S	Sn	08 41 56.8	+1.3

IDC 22 08:58:13.8±3.3**, 36°.21S×97°.41W, h0^{km}, mb3.7**/5**, mb1 4.1**/5**, mb1mx3.7**/37**, mbtmp3.7**/5**, MS3.9**/1**, Ms1 3.9**/1**, ms1mx3.1**/32**, Error ellipse: s-maj=92.3km s-min=30.6km az=29.0, West Chile Rise**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PLCA	**Paso Flores**	**21.47**	**110**	P	P	09 03 03.4	-0.5
	2.7nm,1.0s,baz=296,slow=10,SNR=3.7						
NNA	**Nana**	**30.43**	**43**	LR	LR	09 13 19.0	
	comp=Z,253nm,21.4s,baz=115,slow=30						
LPAZ	**La Paz**	**32.71**	**60**	P	P	09 04 49.2	+0.4
	2.3nm,0.7s,baz=238,slow=4.9,SNR=15						
TXAR	**Lajitas Array**	**65.46**	**354**	P	P	09 08 57.4	-1.3
	0.1nm,0.7s,baz=159,slow=7.7,SNR=2.5						
NVAR	**Mina Array Bea**	**76.74**	**343**	P	P	09 10 07.8	+0.8
	0.7nm,0.8s,baz=167,slow=7.3,SNR=5.4						
PDAR	**Pinedale Array**	**79.38**	**351**	P	P	09 10 22.1	+0.6
	0.6nm,0.7s,baz=161,slow=5.7,SNR=6.8						
H01W1	**Cape Leeuwin H**	**103.39**	**206**	T	T	11 08 19.7	
	baz=154						
H01W2	**Cape Leeuwin H**	**103.39**	**206**	T	T	11 08 18.7	
	baz=154						
H01W3	**Cape Leeuwin H**	**103.40**	**206**	T	T	11 08 18.6	
	baz=154						

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*IDC **22** 09:02:16.7±6.4, 36°.65N×82°.77E, h0^{km}, mb3.4/1, mb1 3.6/4, mb1mx3.2/62, mbtmp3.6/4, ML3.0/3, Error ellipse: s-maj=88.9km s-min=40.4km az=55.0*

*BJI **22** 09:02:20.0, 36°.89N×82°.75E, h13^{km}, mb3.8/1, ML3.8/7, Ms3.5/1*

ISC 22 09:02:20.6±4.6**, 36°.7N**±0°.3×**82°.6E**±0°.3**, h35^{km}, n5, σ1^{s}.48**/6**, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMQ	**Urumqi**	**8.16**	**27**	P	**Pn**	**09 04 17.9**	**+1.4**
WMQ				smax	smax		
	comp=N,63nm,1.3s						
WMQ				smax	smax		
	comp=E,57nm,0.9s						
MKAR	**Makanchi Array**	**10.14**	**359**	Pn	**Pn**	**09 04 44.7**	**+1.1**
	0.6nm,0.3s,baz=181,slow=12,SNR=12						
MKAR				Sn	**Sn**	**09 06 35.6**	**-0.5**
	0.8nm,0.3s,baz=176,slow=20,SNR=6.1						
MKAR				Lg	Lg	09 07 39.9	
	0.5nm,0.3s,baz=181,slow=28,SNR=4.4						
KURBB	**Kurchatov Arra**	**14.27**	**349**	Pn	**Pn**	**09 05 40.0**	**0.0**
	0.0nm,0.3s,baz=170,slow=10,SNR=2.5						
ZALV	**Zalesovo Beam**	**17.37**	**4**	Pn	**Pn**	**09 06 18.3**	**-1.8**
	0.3nm,0.3s,baz=189,slow=8.2,SNR=2.4						
SONM	**Songino Array**	**20.78**	**50**	P	**P**	**09 06 58.3**	**-0.3**
	1.2nm,0.6s,baz=244,slow=13,SNR=7.2						

KRSC 22 09:14:47.2±1.2**, 55°.56N×165°.70E, h30^{km}**±15^{km}**, ML3.8, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**0.39**	**157**	i P	Pn	09 14 56.5	-0.2
BKI				i S	Sn	09 15 02.8	-0.2
KBTR	**Krutoberegovo**	**1.75**	**293**	eP	Pn	09 15 17.0	+1.6
MKZ	**Mys Kozlova**	**2.50**	**248**	eP	Pb	09 15 29.1	-2.2
MKZ				eS	Sb	09 15 58.4	-3.2
SMKR	**Semkarok**	**2.59**	**295**	eP	Pn	09 15 29.1	+2.1
BDR	**Baidarnaya**	**2.72**	**294**	eP	Pn	09 15 31.9	+3.1
SRKR	**Sorokina**	**2.77**	**295**	eP	Pb	09 15 32.8	-3.2
ZLN	**Zelenaya**	**2.81**	**281**	eP	Pn	09 15 32.7	+2.7
LGNR	**Loginova**	**2.88**	**283**	eP	Pn	09 15 32.5	+1.3
BZMR	**Bezymyannaya**	**2.97**	**279**	eP	Pb	09 15 36.9	-2.6
BZWR	**Bezymyannyi-We**	**2.97**	**280**	eP	Pn	09 15 35.9	+3.5
KMNR	**Kamenistaya**	**3.10**	**276**	eP	Pn	09 15 36.2	+2.1
TUMR	**Tumrok**	**3.18**	**267**	eP	Pb	09 15 39.7	-3.3
SPN	**Mys Shipunski**	**4.14**	**236**	eP	Pn	09 15 52.8	+4.5
SPN				eS	Sn	09 16 40.8	+5.2
NLC	**Nalytchevo**	**4.42**	**240**	eS	Sn	09 16 48.8	+6.3
SDLR	**Sedlovina**	**4.59**	**243**	eP	Pn	09 15 59.0	+4.4
SMAR	**Somma**	**4.64**	**243**	eP	Pn	09 15 59.8	+4.4
UGLR	**Uglovaya**	**4.66**	**242**	eP	Pn	09 16 00.8	+5.3
AVH	**Avacha**	**4.67**	**243**	eP	Pn	09 16 00.3	+4.6
PET	**Petropavlovsk**	**4.85**	**241**	eP	Pn	09 16 04.1	+6.1
PET				eS	Sn	09 16 58.5	+5.5
GNL	**Ganaly**	**4.88**	**251**	eP	Pn	09 16 03.9	+5.3
KRMR	**Karymshinskiy**	**5.22**	**242**	eP	Pn	09 16 07.4	+4.3
KRMR				eS	Sn	09 17 06.0	+3.8
RUS	**Russkaya**	**5.27**	**237**	eP	Pn	09 16 07.8	+4.0
ASAK	**Asacha**	**5.60**	**239**	eP	Pn	09 16 13.5	+5.1
KDTR	**Khodutka, Kamc**	**5.89**	**233**	eP	Pn	09 16 15.9	+3.7

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*CNRM **22** 09:25:39.9, 38°.22N×40°.37E, h15^{km}, ML5.3*

*ISCJB **22** 09:26:02.7±0.1, 37°.56N±0°.01×36°.34E±0°.01, h10^{km}, mb4.9/235, MS4.2/48, Error ellipse: s-maj=1.5km s-min=1.2km az=6.2*

*DDA **22** 09:26:02.3, 37°.57N×36°.37E, h5^{km}, Ml5.0*

*PDA **22** 09:26:02.9, 37°.55N×36°.38E, h8^{km}, mb5.0*

*NIC **22** 09:26:02.1±0.4, 37°.66N×36°.64E, h12^{km}, mb5.0, ML4.7*

*NEIC **22** 09:26:03.0±0.0, 37°.55N×36°.38E, h8^{km}, mb5.0/128, ML5.0(ISK), After ISK.*

NEIC Felt at Adana.

*ISK **22** 09:26:02.7, 37°.54N×36°.38E, h10^{km}, ML5.0/52*

*BJI **22** 09:26:02.0, 37°.50N×36°.40E, h8^{km}, mb5.1/59, mB5.1/37, Ms4.8/34, Ms7 4.5/32*

*IDC **22** 09:26:02.8±0.4, 37°.58N×36°.23E, h0^{km}, mb4.6/30, mb1 4.6/42, mb1mx4.5/63, mbtmp4.6/42, ML4.1/9, MS4.0/40, Ms1 4.0/40, ms1mx3.9/61, Error ellipse: s-maj=9.8km s-min=7.7km az=2.0*

*GCMT **22** 09:26:03.0±0.3, 37°.34N×36°.23E, h19^{km}±1^{km}, MW4.8/76, Moment Tensor Solution. s22,c22; s76,c103; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.81±.17; M$_{\theta\theta}$0.23±.10; M$_{\phi\phi}$1.58±.11; M$_{r\theta}$-0.50±.26; M$_{\theta\phi}$1.03±.06; M$_{\phi r}$-0.33±.18; Best double couple: M$_0$2.06600×10^{16} NP1:ϕ_s38.00000°, δ53.00000°, λ-78.00000°. NP2: ϕ_s198.00000°, δ38.00000°, λ-106.00000°. Principal axes: T 2.2050, Plg7.0000°, Azm119.0000°; N -0.2780, Plg10.0000°, Azm211.0000°; P -1.9280, Plg78.0000°, Azm352.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*PDG **22** 09:26:04.1±0.8, 37°.62N×36°.46E, h9^{km}±3^{km}, ML4.8/10 Error ellipse: s-maj=2.0km s-min=3.2km az=0.0*

*MOS **22** 09:26:04.1±1.2, 37°.62N×36°.34E, h17^{km}, mb5.2/83, MS4.1/24, Error ellipse: s-maj=3.9km s-min=2.5km az=117.3*

*CSEM **22** 09:26:04.1±0.1, 37°.54N×36°.38E, h10^{km}, mb5.0/99, Error ellipse: s-maj=2.6km s-min=1.9km az=173.0*

*GII **22** 09:26:04.0±0.2, 37°.63N×36°.65E, h10^{km}*

*DSN **22** 09:26:04.0±0.7, 37°.38N×36°.17E, h8^{km}, mb5.2/11, Error ellipse: s-maj=12.2km s-min=7.5km az=71.0*

ISC 22 09:26:04.5±0.5**, 37°.57N**±0°.02×**36°.36E**±0°.01**, h10^{km}**±2^{km}**, h10^{km}:pP-P, n1233, σ1^{s}.61**/1355**, mb5.0**/235**, MS4.1**/48**, 52C-57D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANDN	**Andirin**	**0.02**	**320**	⇓iP	**Pg**	**09 26 03.7**	**-2.7**
ANDN				i S	**Sg**	**09 26 04.6**	**-3.1**
KMRS	**Kahramanmaras**	**0.43**	**98**	PG	**Pg**	**09 26 11.5**	**-1.5**
KMRS				SG	**Sg**	**09 26 17.9**	**-0.8**
KMRS	**Kahramanmaras**	**0.43**	**98**	ePg	**Pg**	**09 26 11.0**	**-2.0**
KMRS				eSg	**Sg**	**09 26 17.0**	**-1.7**
KMRS	**Kahramanmaras**	**0.43**	**98**	ePg	**Pg**	**09 26 11.0**	**-2.0**
KMRS				eSg	**Sg**	**09 26 17.0**	**-1.7**
SAIM	**ADANA**	**0.46**	**332**	⇑iP	**Pg**	**09 26 11.0**	**-2.5**
SAIM				i S	**Sg**	**09 26 19.2**	**-0.4**
GAZ	**Gaziantep**	**0.79**	**120**	PG	**Pg**	**09 26 18.4**	**-1.2**
GAZ	**Gaziantep**	**0.79**	**120**	ePg	**Pg**	**09 26 18.4**	**-1.2**
SARI	**SarD1z-Kayseri**	**0.84**	**3**	PG	**Pg**	**09 26 19.6**	**-1.1**
SARI				SG	**Sb**	**09 26 32.5**	**-0.2**
YURE	**YUREGIR**	**0.94**	**218**	PG	**Pg**	**09 26 20.8**	**-1.7**
YURE	**YUREGIR**	**0.94**	**218**	⇓iP	**Pg**	**09 26 20.0**	**-2.6**
YURE				i S	**Sn**	**09 26 38.7**	**+1.4**
YURE	**YUREGIR**	**0.94**	**218**	P	**Pg**	**09 26 20.0**	**-2.6**
YURE	**YUREGIR**	**0.94**	**218**	ePg	**Pg**	**09 26 20.8**	**-1.7**
YAHY	**KAYSERI_Yahyal**	**0.95**	**304**	⇑iP	**Pg**	**09 26 20.1**	**-2.6**
YAHY				i S	**Sg**	**09 26 33.8**	**-1.2**
ELBS	**KAHRAMANMARAS**	**0.97**	**39**	⇑iP	**Pg**	**09 26 20.6**	**-2.6**
ELBS				i S	**Sb**	**09 26 35.7**	**-0.8**
ELBS	**KAHRAMANMARAS**	**0.97**	**39**	P	**Pg**	**09 26 20.6**	**-2.6**
ELBS				S	**Sb**	**09 26 35.7**	**-0.8**
KUZU	**Kuzuini**	**0.98**	**144**	⇑iP	**Pg**	**09 26 22.1**	**-1.2**
KUZU				i S	**Sb**	**09 26 35.8**	**-0.7**
KUZU	**Kuzuini**	**0.98**	**144**	P	**Pg**	**09 26 22.1**	**-1.2**
KUZU				S	**Sb**	**09 26 35.8**	**-0.7**
KARA	**Karaisali**	**1.08**	**254**	PN	**Pg**	**09 26 23.8**	**-1.4**
TAHT	**Tahtakopru-Hat**	**1.20**	**187**	PN	**Pg**	**09 26 25.7**	**-1.8**
TAHT	**Tahtakopru-Hat**	**1.20**	**187**	ePn	**Pg**	**09 26 25.7**	**-1.8**
KRTD	**Karatas-Adana**	**1.23**	**218**	PN	**Pb**	**09 26 26.2**	**-1.6**
KRTS	**Karatas**	**1.27**	**219**	PN	**Pn**	**09 26 27.1**	**-1.1**
GULE	**Gulek**	**1.29**	**258**	⇓iP	**Pn**	**09 26 26.3**	**-2.4**
GULE				i S	**Sn**	**09 26 46.9**	**+0.7**
GULE	**Gulek**	**1.29**	**258**	P	**Pn**	**09 26 26.3**	**-2.4**
GULE				S	**Sn**	**09 26 46.9**	**+0.7**
DARE	**Darende-Malaty**	**1.34**	**41**	PN	**Pn**	**09 26 27.7**	**-1.6**
DARE	**Darende-Malaty**	**1.34**	**41**	ePn	**Pn**	**09 26 27.7**	**-1.6**
BNN	**Bunyan**	**1.34**	**343**	PN	**Pn**	**09 26 28.3**	**-1.2**
BNN	**Bunyan**	**1.34**	**343**	ePn	**Pn**	**09 26 27.9**	**-1.6**
BNN	**Bunyan**	**1.34**	**343**	ePn	**Pn**	**09 26 27.9**	**-1.6**
CUGUR	**Gurin_S˜VAS**	**1.36**	**32**	⇑iP	**Pn**	**09 26 27.9**	**-1.8**
CUGUR				i S	**Sn**	**09 26 49.4**	**+1.5**
CUGUR	**Gurin_S˜VAS**	**1.36**	**32**	P	**Pn**	**09 26 27.9**	**-1.8**
CUGUR				S	**Sn**	**09 26 49.4**	**+1.5**
AKCD	**Akcadag**	**1.44**	**59**	⇑iP	**Pn**	**09 26 28.8**	**-1.9**
AKCD				i S	**Sg**	**09 26 50.5**	**-0.1**
AKCD	**Akcadag**	**1.44**	**59**	P	**Pn**	**09 26 28.8**	**-1.9**
AKCD				S	**Sg**	**09 26 50.5**	**-0.1**
NIG	**Nigde**	**1.49**	**292**	PN	**Pn**	**09 26 30.6**	**-0.9**
NIG	**Nigde**	**1.49**	**292**	ePn	**Pn**	**09 26 30.6**	**-0.9**
NIG	**Nigde**	**1.49**	**292**	ePn	**Pn**	**09 26 30.6**	**-0.9**
ATAB	**Bozova**	**1.54**	**93**	⇑iP	**Pn**	**09 26 30.5**	**-1.6**
ATAB				i S	**Sn**	**09 26 51.9**	**-0.3**
ATAB	**Bozova**	**1.54**	**93**	P	**Pn**	**09 26 30.5**	**-1.6**
ATAB				S	**Sn**	**09 26 51.9**	**-0.3**
YAYL	**Yayladag**	**1.54**	**188**	PN	**Pn**	**09 26 30.9**	**-1.2**
YAYL	**Yayladag**	**1.54**	**188**	⇓iP	**Pn**	**09 26 31.0**	**-1.2**
YAYL				i S	**Sg**	**09 26 54.5**	**+0.4**
YAYL	**Yayladag**	**1.54**	**188**	P	**Pn**	**09 26 31.0**	**-1.2**
MERS	**Mersin**	**1.62**	**245**	PN	**Pn**	**09 26 31.7**	**-1.5**
MERS	**Mersin**	**1.62**	**245**	ePn	**Pn**	**09 26 31.7**	**-1.5**
AVNS	**Nevsehir-Avano**	**1.72**	**317**	⇓iP	**Pn**	**09 26 34.2**	**-0.3**
AVNS				i S	**Sg**	**09 26 59.9**	**+0.2**
AVNS	**Nevsehir-Avano**	**1.72**	**317**	P	**Pn**	**09 26 34.2**	**-0.3**
CUALT	**Altinyayla-SIV**	**1.73**	**10**	⇑iP	**Pn**	**09 26 34.7**	**-0.1**
CUALT				i S	**Sg**	**09 26 58.9**	**-1.3**
CUALT	**Altinyayla-SIV**	**1.73**	**10**	P	**Pn**	**09 26 34.7**	**-0.1**
CUALT				S	**Sg**	**09 26 58.9**	**-1.3**
KERG	**Konya-Eregli**	**1.78**	**266**	⇓iP	**Pn**	**09 26 33.9**	**-1.7**
KERG				i S	**Sg**	**09 27 02.4**	**+0.6**
KERG	**Konya-Eregli**	**1.78**	**266**	P	**Pn**	**09 26 33.8**	**-1.7**
HEKM	**Malatya_Hekimh**	**1.82**	**43**	⇓iP	**Pg**	**09 26 38.4**	**-0.9**
HEKM				i S	**Sg**	**09 27 03.4**	**+0.5**
BSTP	**Nigde**	**1.82**	**283**	i P	**Pb**	**09 26 37.3**	**-0.7**
BSTP				i S	**Sg**	**09 27 04.1**	**+1.1**
CUSAR	**Sarkisla-SIVAS**	**1.85**	**357**	⇓iP	**Pn**	**09 26 36.5**	**+0.1**
CUSAR				i S	**Sb**	**09 27 00.8**	**-1.0**
CUSAR	**Sarkisla-SIVAS**	**1.85**	**357**	P	**Pn**	**09 26 36.5**	**+0.1**
CUSAR				S	**Sb**	**09 27 00.8**	**-1.0**
SURC	**SANLIURFA_SURC**	**1.93**	**110**	⇑iP	**Pn**	**09 26 35.7**	**-1.7**
SURC				i S	**Sg**	**09 27 06.1**	**-0.3**
SURC	**SANLIURFA_SURC**	**1.93**	**110**	P	**Pn**	**09 26 35.7**	**-1.7**
CUKAN	**kangal_SIVAS**	**1.95**	**26**	⇑iP	**Pn**	**09 26 38.1**	**+0.3**
CUKAN				i S	**Sg**	**09 27 05.9**	**-1.3**
CUKAN	**kangal_SIVAS**	**1.95**	**26**	P	**Pn**	**09 26 38.1**	**+0.3**
URFA	**Urfa**	**1.96**	**93**	PN	**Pn**	**09 26 36.3**	**-1.6**
URFA	**Urfa**	**1.96**	**93**	ePn	**Pn**	**09 26 36.3**	**-1.6**
KIZK	**Mersin**	**2.08**	**239**	PN	**Pn**	**09 26 38.2**	**-1.2**
KIZK	**Mersin**	**2.08**	**239**	⇓iP	**Pn**	**09 26 36.5**	**-2.9**
KIZK				i S	**Sb**	**09 27 09.2**	**+1.1**
KIZK	**Mersin**	**2.08**	**239**	P	**Pn**	**09 26 36.5**	**-2.9**
SANL	**SANLIURFA_Merk**	**2.13**	**100**	⇑iP	**Pn**	**09 26 38.3**	**-1.9**
SANL				i S	**Sg**	**09 27 11.8**	**-1.2**
SANL	**SANLIURFA_Merk**	**2.13**	**100**	P	**Pn**	**09 26 38.3**	**-1.9**
YOZ	**Yozgat**	**2.22**	**339**	PN	**Pn**	**09 26 41.5**	**0.0**
YOZ	**Yozgat**	**2.22**	**339**	ePn	**Pn**	**09 26 41.5**	**0.0**
ELZG	**Elazig**	**2.27**	**65**	⇑iP	**Pn**	**09 26 41.1**	**-1.1**
ELZG				i S	**Sg**	**09 27 16.9**	**-0.6**
ELZG	**Elazig**	**2.27**	**65**	P	**Pn**	**09 26 41.1**	**-1.1**
AKSY	**AKSARAY - Alti**	**2.32**	**299**	⇓iP	**Pn**	**09 26 41.9**	**-0.9**
AKSY				i S	**Sg**	**09 27 19.9**	**+1.0**
AKSY	**AKSARAY - Alti**	**2.32**	**299**	P	**Pn**	**09 26 41.9**	**-0.9**
SULT	**Sultanhani-AKS**	**2.34**	**287**	PN	**Pn**	**09 26 42.7**	**-0.3**
SULT	**Sultanhani-AKS**	**2.34**	**287**	ePn	**Pn**	**09 26 42.7**	**-0.3**
SCER	**sogukcermik**	**2.37**	**15**	⇑iP	**Pn**	**09 26 44.1**	**+0.5**
SCER				i S	**Sg**	**09 27 22.1**	**+1.5**
SCER	**sogukcermik**	**2.37**	**15**	P	**Pn**	**09 26 44.1**	**+0.5**
KEMA	**Kemaliye**	**2.39**	**44**	⇑iP	**Pn**	**09 26 43.2**	**-0.6**
KEMA				i S	**Sb**	**09 27 17.0**	**-0.1**
KEMA	**Kemaliye**	**2.39**	**44**	P	**Pn**	**09 26 43.2**	**-0.6**
KEBE	**Keben-Mersin**	**2.39**	**243**	PN	**Pn**	**09 26 43.3**	**-0.5**
KEBE	**Keben-Mersin**	**2.39**	**243**	ePn	**Pn**	**09 26 43.3**	**-0.5**
SVSK	**Karacayir**	**2.40**	**12**	PN	**Pn**	**09 26 43.8**	**0.0**
SVSK	**Karacayir**	**2.40**	**12**	ePn	**Pn**	**09 26 43.8**	**0.0**
SVRC	**Sivrice-ELAZID**	**2.47**	**70**	PN	**Pn**	**09 26 43.8**	**-1.1**
SVRC	**Sivrice-ELAZID**	**2.47**	**70**	ePn	**Pn**	**09 26 43.8**	**-1.1**
IKL	**Isikli**	**2.52**	**239**	PN	**Pn**	**09 26 44.8**	**-0.7**
IKL	**Isikli**	**2.52**	**239**	ePn	**Pn**	**09 26 44.8**	**-0.7**
CDAG	**Cicekdag**	**2.58**	**323**	⇓iP	**Pn**	**09 26 46.0**	**-0.4**
CDAG				i S	**Sg**	**09 27 25.2**	**-2.0**
CDAG	**Cicekdag**	**2.58**	**323**	P	**Pn**	**09 26 46.0**	**-0.4**
TEPE	**Tepekoy-Mersin**	**2.62**	**240**	PN	**Pn**	**09 26 46.2**	**-0.6**
TEPE	**Tepekoy-Mersin**	**2.62**	**240**	ePn	**Pn**	**09 26 46.2**	**-0.6**
REFA	**Refahiye_ERZ˜**	**2.63**	**45**	⇑iP	**Pb**	**09 26 52.1**	**+0.3**
REFA				i S	**Sg**	**09 27 36.6**	**+7.8**
GULN	**MERSIN_Gulnar**	**2.65**	**239**	⇓iP	**Pn**	**09 26 45.5**	**-1.7**
GULN				i S	**Sg**	**09 27 30.2**	**+0.7**
GULN	**MERSIN_Gulnar**	**2.65**	**239**	P	**Pn**	**09 26 45.5**	**-1.7**
AKK2	**Akkuyu-Mersin**	**2.67**	**238**	PN	**Pn**	**09 26 47.0**	**-0.5**
AKK2	**Akkuyu-Mersin**	**2.67**	**238**	ePn	**Pn**	**09 26 47.0**	**-0.5**
EREN	**Erenkoy**	**2.69**	**222**	PN	**Pn**	**09 26 47.4**	**-0.4**

EREN	Erenkoy	2.69	222	ePn	Pn	09 26 47.4	-0.4
OREN	Orenkoy-Mersin	2.69	241	PN	Pn	09 26 47.4	-0.4
OREN	Orenkoy-Mersin	2.69	241	ePn	Pn	09 26 47.4	-0.4
PTK	Pertek	2.73	60	PN	Pn	09 26 47.8	-0.8
PTK	Pertek	2.73	60	ePn	Pn	09 26 47.8	-0.8
TOKT	Tokat	2.75	3	PN	Pn	09 26 48.6	-0.1
TOKT	Tokat	2.75	3	ePn	Pn	09 26 48.6	-0.1
TOKA	Tokat	2.75	2	⇓iP	Pn	09 26 49.1	+0.4
TOKA				iS	Sn	09 27 24.2	+2.1
TOKA	Tokat	2.75	2	P	Pn	09 26 49.1	+0.4
TOKA				S	Sn	09 27 24.2	+2.1
COAL	Corum-Alaca	2.89	339	⇓iP	Pn	09 26 50.9	+0.2
COAL				iS	Sg	09 27 36.3	-0.9
COAL	Corum-Alaca	2.89	339	P	Pn	09 26 50.8	+0.2
ERMK	Ermenek	2.91	252	⇓iP	Pn	09 26 50.7	-0.3
ERMK				iS	Sg	09 27 38.1	+0.3
ERMK	Ermenek	2.91	252	P	Pn	09 26 50.7	-0.3
CORM	Corum	2.94	333	PN	Pn	09 26 51.0	-0.3
CORM	Corum	2.94	333	ePn	Pn	09 26 51.0	-0.3
TNCL	Tunceli-Merkez	2.94	57	⇑iP	Pn	09 26 50.7	-0.7
TNCL				iS	Sg	09 27 40.1	+1.2
TNCL	Tunceli-Merkez	2.94	57	P	Pn	09 26 50.7	-0.7
TEKE	Tekeli-Mersin	2.96	242	PN	Pn	09 26 50.8	-0.8
TEKE	Tekeli-Mersin	2.96	242	ePn	Pn	09 26 50.8	-0.8
DIYA	Diyarbakir	3.00	82	⇑iP	Pn	09 26 51.2	-1.0
DIYA				iS	Sg	09 27 39.5	-1.4
DIYA	Diyarbakir	3.00	82	P	Pn	09 26 51.2	-1.0
SUSE	Susehri	3.00	28	⇑iP	Pn	09 26 52.3	0.0
SUSE				iS	Sg	09 27 39.1	-1.9
SUSE	Susehri	3.00	28	P	Pn	09 26 52.3	0.0
DYBB	Diyarbakir	3.02	82	PN	Pn	09 26 52.0	-0.4
BRTR	Keskin Array B	3.03	316	Pn	Pn	09 26 53.5	+0.9
	14nm,0.3s,baz=137,slow=15,SNR=481						
BRTR				Lg	Lg	09 27 38.0	
	23nm,0.3s,baz=136,slow=37,SNR=5.3						
BRTR	Keskin Array B	3.03	316	iP	Pn	09 26 53.2	+0.6
BRTR				pmax	pmax		
	comp=Z,156nm,0.9s						
BRTR	Keskin Array B	3.03	316	iP	Pn	09 26 53.2	+0.6
	comp=Z,156nm,0.9s						
BR131	Keskin Array S	3.03	316	ePn	Pn	09 26 53.1	+0.5
BR131	Keskin Array S	3.03	316	ePn	Pn	09 26 53.1	+0.5
BOZY	Bozyazi-Mersin	3.08	243	PN	Pn	09 26 53.2	0.0
BOZY	Bozyazi-Mersin	3.08	243	ePn	Pn	09 26 53.2	0.0
DIY	Diyarbakir	3.08	83	ePn	Pn	09 26 52.0	-1.3
ERBA	Erbaa	3.12	6	⇓iP	Pn	09 26 54.4	+0.5
ERBA				iS	Sb	09 27 38.1	-0.2
ERBA	Erbaa	3.12	6	P	Pn	09 26 54.4	+0.5
KKUL	Konya-Kulu	3.14	302	⇓iP	Pn	09 26 54.2	0.0
KKUL				iS	Sg	09 27 48.4	+3.0
KKUL	Konya-Kulu	3.14	302	P	Pn	09 26 54.2	0.0
KMER	Konya-Meram	3.17	275	⇓iP	Pn	09 26 54.8	+0.2
KMER				iS	Sg	09 27 46.9	+0.5
KMER	Konya-Meram	3.17	275	P	Pn	09 26 54.8	+0.2
AFSR	Af¯ar-Bala (A	3.19	307	PN	Pn	09 26 54.9	+0.1
AFSR	Af¯ar-Bala (A	3.19	307	ePn	Pn	09 26 54.9	+0.1
KONT	Konya--Tatoy	3.19	278	PN	Pn	09 26 55.0	+0.3
KONT	Konya--Tatoy	3.19	278	⇓iP	Pn	09 26 55.5	+0.8
KONT				iS	Sg	09 27 51.2	+4.2
KONT	Konya--Tatoy	3.19	278	ePn	Pn	09 26 55.0	+0.3
EZC	Erzincan	3.20	46	P	Pn	09 26 56.4	+1.4
EZC	Erzincan	3.20	46	ePn	Pn	09 26 55.9	+0.9
EZC	Erzincan	3.20	46	P	Pn	09 26 56.4	+1.4
BBAL	Bala	3.21	309	⇓iP	Pn	09 26 55.3	+0.2
BBAL				iS	Sb	09 27 41.4	+0.5
BBAL	Bala	3.21	309	P	Pn	09 26 55.3	+0.2
LADK	Ladik-KONYA	3.22	283	PN	Pn	09 26 55.3	+0.1
LADK	Ladik-KONYA	3.22	283	ePn	Pn	09 26 55.3	+0.1
MAZI	Mazidag	3.25	91	PN	Pn	09 26 54.3	-1.4
MAZI	Mazidag	3.25	91	ePn	Pn	09 26 54.3	-1.4
HWQ	Hawqa	3.30	186	eP	Pn	09 26 56.7	+0.4
HANI	Diyarbakir_Han	3.30	74	⇑iP	Pn	09 26 54.9	-1.4
HANI				iS	Sg	09 27 51.0	+0.4
HANI	Diyarbakir_Han	3.30	74	P	Pn	09 26 54.9	-1.4
ERZN	Erzincan	3.32	52	PN	Pn	09 26 55.9	-0.7
EUZM	Uzumlu	3.38	50	iP	Pb	09 27 03.3	-1.2
EUZM				iS	Sg	09 27 52.8	-0.1
KELT	Kelkit	3.43	40	⇑iP	Pn	09 26 58.1	-0.1
KELT				iS	Sg	09 27 54.3	-0.2
KELT	Kelkit	3.43	40	P	Pn	09 26 58.1	-0.1
AKIN	Ak˜–nc˜–lar- K	3.46	223	PN	Pn	09 26 58.4	0.0
AKIN	Ak˜–nc˜–lar- K	3.46	223	ePn	Pn	09 26 58.4	0.0
MAMC	Mammari	3.48	228	P	Pn	09 26 58.7	0.0
	baz=47						
MAMC	Mammari	3.48	228	P	Pn	09 26 58.7	0.0
GAZI	Gazipasa	3.50	249	PN	Pn	09 26 59.3	+0.3
GAZI	Gazipasa	3.50	249	ePn	Pn	09 26 59.3	+0.3
BINT	Bingol	3.51	67	ePn	Pn	09 27 01.7	+2.5
KVT	Kavak	3.52	356	PN	Pn	09 26 59.4	+0.2
KVT	Kavak	3.52	356	P	Pn	09 27 00.1	+0.9
KVT	Kavak	3.52	356	ePn	Pn	09 26 59.4	+0.2
KVT	Kavak	3.52	356	P	Pn	09 27 00.1	+0.9
MARD	Mardin	3.53	93	⇑iP	Pn	09 26 57.6	-1.9
MARD				iS	Sg	09 27 55.8	-2.0
AKDN	Akdeniz- K˜–br	3.55	231	PN	Pn	09 26 59.4	-0.2
AKDN	Akdeniz- K˜–br	3.55	231	ePn	Pn	09 26 59.4	-0.2
CSS	Mathiatis	3.57	224	PN	Pn	09 26 59.8	-0.1
CSS	Mathiatis	3.57	224	ePn	Pn	09 27 00.5	+0.6
CSS	Mathiatis	3.57	224	P	Pn	09 27 00.8	+0.9
CSS	Mathiatis	3.57	224	P	Pn	09 27 00.3	+0.4
	baz=43						
CSS	Mathiatis	3.57	224	ePn	Pn	09 26 59.8	-0.1
CSS	Mathiatis	3.57	224	P	Pn	09 27 00.3	+0.4
BR231	Keskin MP Arra	3.61	310	ePn	Pn	09 27 02.3	+1.8
BR231	Keskin MP Arra	3.61	310	ePn	Pn	09 27 02.3	+1.8
ANTO	Ankara	3.61	311	PN	Pn	09 27 01.2	+0.6
ANTO	Ankara	3.61	311	⇓iP	Pn	09 27 01.8	+1.2
ANTO	Ankara	3.61	311	ePn	Pn	09 27 01.9	+1.4
ANTO	Ankara	3.61	311	P	Pn	09 27 02.0	+1.4
	SNR=230						
ANTO	Ankara	3.61	311	eP	Pn	09 27 01.9	+1.4
ANTO	Ankara	3.61	311	ePn	Pn	09 27 01.2	+0.6
ANTO	Ankara	3.61	311	eP	Pn	09 27 01.9	+1.4
LOD	Lodumlu	3.64	311	PN	Pn	09 27 01.4	+0.4
LOD	Lodumlu	3.64	311	ePn	Pn	09 27 01.4	+0.4
BGOL	Bingol	3.68	66	⇑iP	Pn	09 27 00.7	-0.8
BGOL				iS	Sg	09 28 04.9	+2.3
BGOL	Bingol	3.68	66	P	Pn	09 27 00.7	-0.8
BNGB	Bingˆ¶l	3.69	66	PN	Pn	09 27 01.7	+0.1
BHL	Bhannes	3.70	189	eP	Pn	09 27 00.6	-1.2
CANT	Cankiri	3.71	326	PN	Pn	09 27 02.4	+0.5
LEF	Lefka	3.72	230	PN	Pn	09 27 02.5	+0.6
LEF	Lefka	3.72	230	ePn	Pn	09 27 02.5	+0.6
KIZT	Kizilcal	3.76	292	PN	Pn	09 27 03.0	+0.3
KIZT	Kizilcal	3.76	292	ePn	Pn	09 27 03.0	+0.3
YEDI	Yedisu-Bingol	3.78	59	PN	Pn	09 27 02.9	0.0
YEDI	Yedisu-Bingol	3.78	59	ePn	Pn	09 27 02.9	0.0
ESPY	Espiye-Giresun	3.82	28	PN	Pn	09 27 03.4	+0.1
ESPY	Espiye-Giresun	3.82	28	ePn	Pn	09 27 03.4	+0.1
ALFC	Alefka	3.87	233	P	Pn	09 27 05.2	+1.1
	baz=51						
ALFC	Alefka	3.87	233	P	Pn	09 27 05.2	+1.1
SVAN	Silvan-Diyarba	3.88	80	PN	Pn	09 27 03.4	-0.8
SVAN	Silvan-Diyarba	3.88	80	iP	Pn	09 27 02.9	-1.3
SVAN				iS	Sg	09 28 16.6	+7.7
SVAN	Silvan-Diyarba	3.88	80	P	Pn	09 27 02.9	-1.3
SVAN	Silvan-Diyarba	3.88	80	ePn	Pn	09 27 03.4	-0.8
DQRL	Deir Qamar	3.91	190	eP	Pn	09 27 05.3	+0.6
BTMN	Batman	3.91	84	⇑iP	Pn	09 27 03.1	-1.5
BTMN				iS	Sg	09 28 09.4	-0.5
BTMN	Batman	3.91	84	P	Pn	09 27 03.1	-1.5
SZAC	Souni	3.97	226	P	Pn	09 27 06.7	+1.2
	baz=45						
SZAC				S	Sn	09 27 56.0	+3.8
SZAC	Souni	3.97	226	P	Pn	09 27 06.7	+1.2
SZAC				S	Sn	09 27 56.0	+3.8
BNGL	BINGOL	4.02	68	iP	Pn	09 27 05.3	-1.0
BNGL				iS	Sg	09 28 15.7	+2.2
ILGA	Ilgaz	4.04	330	ePn	Pn	09 27 07.4	+0.8
ILGA	Ilgaz	4.04	330	ePn	Pn	09 27 07.4	+0.8
QRWL	Qaraoun	4.05	188	eP	Pn	09 27 06.7	+0.2
BAYT	Ayd˜–ntepe-Bay	4.08	45	PN	Pn	09 27 07.2	+0.1
BAYT	Ayd˜–ntepe-Bay	4.08	45	ePn	Pn	09 27 07.2	+0.1
RCY	Rachaya	4.08	186	eP	Pn	09 27 07.8	+0.6
AKMC	Akamas	4.12	233	P	Pn	09 27 08.1	+0.5
	baz=51						
AKMC	Akamas	4.12	233	P	Pn	09 27 08.1	+0.5
DIKM	Dikmen	4.16	349	PN	Pn	09 27 08.7	+0.6
DIKM	Dikmen	4.16	349	ePn	Pn	09 27 08.7	+0.6
PPCY	Paphos	4.21	232	P	Pn	09 27 09.7	+1.1
	baz=50						
PPCY	Paphos	4.21	232	P	Pn	09 27 09.7	+1.1
AUSIV	SIVRIHISAR	4.22	298	PN	Pn	09 27 09.3	+0.4
AUSIV	SIVRIHISAR	4.22	298	ePn	Pn	09 27 09.3	+0.4
SUTC	Sutluce-Ispart	4.26	270	PN	Pn	09 27 09.9	+0.4
SUTC	Sutluce-Ispart	4.26	270	ePn	Pn	09 27 09.9	+0.4
KTUT	Trabzon	4.32	37	PN	Pn	09 27 10.9	+0.7
NATI	Neve Ativ	4.33	187	Pn	Pn	09 27 10.3	0.0
KSDI	Kefar Szold	4.40	188	Pn	Pn	09 27 11.6	+0.2
SRTM	Siirt_Merkez	4.43	83	⇑iP	Pn	09 27 10.0	-1.8
SRTM				iS	Sg	09 28 23.3	-3.3
SRTM	Siirt_Merkez	4.43	83	P	Pn	09 27 10.0	-1.8
AUMIH	MIHALICIK	4.45	303	PN	Pn	09 27 12.9	+0.7
AUMIH	MIHALICIK	4.45	303	ePn	Pn	09 27 12.9	+0.7
SNOP	Sinop	4.53	349	PN	Pn	09 27 14.1	+1.0
SNOP	Sinop	4.53	349	ePn	Pn	09 27 14.1	+1.0
HNTI	Hanita	4.58	193	Pn	Pn	09 27 14.1	+0.3
KSHT	Keshet	4.60	186	Pn	Pn	09 27 14.3	+0.2
MMA0B	Mount Meron ar	4.61	190	Pn	Pn	09 27 14.1	-0.2
MMAI	Mount Meron Ar	4.61	190	Pn	Pn	09 27 14.8	+0.5
	comp=Z,28nm,0.3s,baz=8.4,slow=14,SNR=16						
MMAI				Sn	Sn	09 28 07.0	-0.9
	comp=Z,92nm,0.3s,baz=358,slow=25,SNR=11						
MMAI				LR	LR	09 29 06.0	
	comp=Z,1µm,22.0s,baz=0.0,slow=40						
ISP	Isparta	4.64	275	PN	Pn	09 27 15.6	+0.9
ISP	Isparta	4.64	275	⇓iP	Pn	09 27 16.3	+1.6
ISP	Isparta	4.64	275	S	Sn	09 28 14.4	+5.8
ISP	Isparta	4.64	275	ePn	Pn	09 27 16.1	+1.5
ISP	Isparta	4.64	275	P	Pn	09 27 16.3	+1.6
ISP	Isparta	4.64	275	Pn	Pn	09 27 16.0	+1.3
ISP	Isparta	4.64	275	deP	Pn	09 27 16.3	+1.6
ISP				pmax	pmax		
	comp=Z,259nm,1.0s						
ISP	Isparta	4.64	275	ePn	Pn	09 27 15.6	+0.9
ISP	Isparta	4.64	275	eP	Pn	09 27 16.3	+1.6
	comp=Z,259nm,1.0s						
KORT	Korkueli	4.82	265	PN	Pn	09 27 17.7	+0.4
KORT	Korkueli	4.82	265	ePn	Pn	09 27 17.7	+0.4
SIRT	Sirnak	4.83	89	PN	Pn	09 27 17.4	0.0
SIRT	Sirnak	4.83	89	ePn	Pn	09 27 17.4	0.0
BLGI	Bet Lehem HaGe	4.92	192	Pn	Pn	09 27 18.1	-0.3
MDUB	Mudurnu	4.96	307	PN	Pn	09 27 20.2	+1.1
MDUB	Mudurnu	4.96	307	ePn	Pn	09 27 20.2	+1.1
OFRI	‘Ofer	5.06	193	Pn	Pn	09 27 21.0	+0.5
MMLI	Mount Malkishu	5.17	189	PN	Pn	09 27 22.6	+0.6
MMLI	Mount Malkishu	5.17	189	Pn	Pn	09 27 22.9	+0.9
MMLI	Mount Malkishu	5.17	189	ePn	Pn	09 27 22.6	+0.6
ELL	Elmali	5.22	263	P	Pn	09 27 24.6	+1.9
ELL	Elmali	5.22	263	P	Pn	09 27 24.6	+1.9
HMDT	Nahal Hemdat	5.35	188	Pn	Pn	09 27 24.6	+0.3
ASF	Jabal al Asfar	5.40	175	Pn	Pn	09 27 26.6	+1.4
	comp=Z,2.8nm,0.3s,baz=307,slow=20,SNR=20						
ASF				Lg	Lg	09 28 44.5	
	comp=Z,17nm,0.3s,baz=350,slow=22,SNR=6.9						
SLTI	Sal’it	5.42	192	Pn	Pn	09 27 25.5	+0.1
BCA	Borcka	5.62	45	PN	Pn	09 27 29.0	+0.9
VANB	Van	5.64	77	PN	Pn	09 27 29.3	+0.8
VANB	Van	5.64	77	ePn	Pn	09 27 29.3	+0.8
CUKT	Cukurca	5.78	91	PN	Pn	09 27 30.7	+0.3
CUKT	Cukurca	5.78	91	ePn	Pn	09 27 30.7	+0.3
FETY	Fethiye	5.89	263	P	Pn	09 27 32.8	+1.0
FETY	Fethiye	5.89	263	P	Pn	09 27 32.8	+1.0
FETY	Fethiye	5.89	263	P	Pn	09 27 32.8	+1.0
DSI	Dead Sea	6.04	188	Pn	Pn	09 27 34.2	+0.4
MANT	Manisa	6.23	281	ePn	Pn	09 27 38.7	+2.0
MANT	Manisa	6.23	281	ePn	Pn	09 27 38.7	+2.0
YTIR	Yattir	6.27	190	Pn	Pn	09 27 38.0	+0.8
YER	Yerkesik	6.45	269	P	Pn	09 27 42.2	+2.7
YER	Yerkesik	6.45	269	P	Pn	09 27 42.2	+2.7
YER	Yerkesik	6.45	269	P	Pn	09 27 42.2	+2.7
YER	Yerkesik	6.45	269	P	Pn	09 27 42.2	+2.7
SOC	Sochi	6.53	22	eP	Pn	09 27 40.2	-0.4
SOC				e		09 28 56.9	
SOC				pmax	pmax		
	comp=Z,19nm,0.7s						
SOC				MLR	MLR		
	comp=Z,2µm,10.0s						
SOC	Sochi	6.53	22	eP	Pn	09 27 40.2	-0.4
	comp=Z,19nm,0.7s						
SOC				eS	Sn	09 28 56.9	+1.8
	comp=Z,2µm,10.0s						
KZIT	Kziot	6.84	194	Pn	Pn	09 27 45.1	+0.2
GNI	Garni	7.03	66	Pn	Pn	09 27 52.1	+4.5
	comp=Z,1.1nm,0.3s,baz=154,slow=5.5,SNR=6.1						
GNI				LR	LR	09 30 21.1	
	comp=Z,241nm,19.2s,baz=256,slow=36						
GNI	Garni	7.03	66	P	Pn	09 27 52.5	+4.9
	SNR=6.1						
GNI	Garni	7.03	66	P	Pn	09 27 51.7	+4.1
GNI	Garni	7.03	66	iP	Pn	09 27 45.0	-2.6
GNI	Garni	7.03	66	iP	Pn	09 27 45.0	-2.6
GNI	Garni	7.03	66	ePn	Pn	09 27 52.0	+4.4
RMNI	Mount Ramon	7.08	191	Pn	Pn	09 27 49.6	+1.4
YAL	Yalta	7.11	347	iP	Pn	09 27 49.8	+1.3
YAL				eS	Sn	09 29 11.8	+2.5
YAL	Yalta	7.11	347	iP	Pn	09 27 49.8	+1.3
YAL				eS	Sn	09 29 11.8	+2.5
ALU	Alushta	7.26	349	eP	Pn	09 27 54.0	+3.5
SEV	Sevastopol’	7.26	345	eP	Pn	09 27 49.6	-1.0
SEV				eS	Sn	09 29 13.4	+0.4
SEV	Sevastopol’	7.26	345	eP	Pn	09 27 49.6	-1.0
SEV				eS	Sn	09 29 13.4	+0.4
ANN	Anapa	7.27	6	eP	Pn	09 27 47.3	-3.4
ANN				eS	Sn	09 29 09.3	-4.0
ANN				pmax	pmax		
	comp=Z,38nm,1.1s						
ANN				MLR	MLR		
	comp=Z,461nm,8.0s						
PRNI	Paran	7.29	189	Pn	Pn	09 27 51.7	+0.7
SUDU	Sudak	7.39	352	eP	Pn	09 27 53.2	+0.9
SUDU				eS	Sn	09 29 18.2	+2.1
SUDU	Sudak	7.39	352	eP	Pn	09 27 53.2	+0.9
SUDU				eS	Sn	09 29 18.2	+2.1
NEY	Neytrino	7.47	39	iP	Pn	09 27 55.0	+1.4
NEY	Neytrino	7.47	39	iP	Pn	09 27 55.0	+1.4
SIM	Simferopol’	7.56	348	eP	Pn	09 27 55.6	+0.8
SIM				pmax	pmax		
	comp=Z,30nm,0.9s						
SIM	Simferopol’	7.56	348	eP	Pn	09 27 55.6	+0.8
	comp=Z,30nm,0.9s						
HRFI	Mount Harif	7.59	189	Pn	Pn	09 27 55.6	+0.4
KARP	Karpathos	7.67	258	ePn	Pn	09 27 55.1	-1.2
KARP	Karpathos	7.67	258	ePn	Pn	09 27 55.1	-1.2
TBLG	Delisi	7.69	55	ePn	Pn	09 27 59.4	+2.9
TBLG	Delisi	7.69	55	eP	Pn	09 27 59.4	+2.9
TBLG	Delisi	7.69	55	ePn	Pn	09 27 59.3	+2.9
ZEI	Tsey	7.78	46	eP	Pn	09 28 01.4	+3.5
ZEI				pmax	pmax		
	comp=Z,36nm,0.9s						
MBRI	Mt Berech	7.85	189	Pn	Pn	09 27 59.8	+1.0
KBZ	Khabaz	7.91	37	Pn	Pn	09 28 02.5	+3.1
	comp=Z,0.1nm,0.3s,baz=234,slow=13,SNR=11						
KBZ				Lg	Lg	09 30 02.6	
	comp=Z,0.1nm,0.3s,baz=275,slow=11,SNR=2.8						
KBZ				LR	LR	09 31 43.3	
	comp=Z,1µm,19.0s,baz=239,slow=43						
EIL	Elat	7.96	189	Pn	Pn	09 28 04.9	+4.6
	comp=Z,1.3nm,0.3s,baz=344,slow=13,SNR=8.4						
EIL				Sn	Sn	09 29 35.8	+5.3
	comp=Z,5.0nm,0.3s,baz=351,slow=13,SNR=4.5						
EIL	Elat	7.96	189	Pn	Pn	09 28 01.3	+1.0
KIV	Kislovodsk	7.98	35	ePn	Pn	09 28 04.1	+3.5
KIV	Kislovodsk	7.98	35	P	Pn	09 28 02.3	+1.7
KIV	Kislovodsk	7.98	35	⇓eP	Pn	09 28 02.1	+1.5
KIV				eS	Sn	09 29 30.5	-0.5
KIV				pmax	pmax		
	comp=Z,26nm,1.2s						
KIV				MLR	MLR		
	comp=Z,582nm,15.0s						
KIV	Kislovodsk	7.98	35	eP	Pn	09 28 02.1	+1.5
	comp=Z,26nm,1.2s						
KIV	Kislovodsk	7.98	35	ePn	Pn	09 28 04.1	+3.5
KIV				eS	Sn	09 29 30.5	-0.5
	comp=Z,582nm,15.0s						
KVAR	Kislovodsk Arr	7.99	35	Pn	Pn	09 28 03.3	+2.6
	baz=190,slow=11,SNR=11						
KVAR				Lg	Lg	09 30 02.1	
	baz=243,slow=17,SNR=1.9						
KVAR				LR	LR	09 31 25.1	
	comp=Z,404nm,18.2s,baz=258,slow=40						
NCK	Nalchik	8.09	41	iP	Pn	09 28 01.5	-0.5
NCK	Nalchik	8.09	41	iP	Pn	09 28 01.5	-0.5
PRK	Paraskevi	8.10	285	P	Pn	09 28 05.1	+3.1
PRK	Paraskevi	8.10	285	P	Pn	09 28 05.1	+3.1
PRK	Paraskevi	8.10	285	P	Pn	09 28 05.1	+3.1
PRK	Paraskevi	8.10	285	P	Pn	09 28 05.1	+3.1
APE	Apeiranthos	8.64	270	⇓iP	Pn	09 28 09.1	-0.5
APE	Apeiranthos	8.64	270	iP	Pn	09 28 11.5	+1.9
APE	Apeiranthos	8.64	270	iP	Pn	09 28 11.5	+1.9
ALN	Alexandroupoli	8.66	296	ePn	Pn	09 28 08.7	-1.2
ALN	Alexandroupoli	8.66	296	P	Pn	09 28 14.9	+5.0
ALN	Alexandroupoli	8.66	296	eP	Pn	09 28 08.7	-1.2
ALN	Alexandroupoli	8.66	296	eP	Pn	09 28 08.7	-1.2
GOF	Gofitskoye	9.01	32	eP	Pn	09 28 14.1	-0.5
GOF	Gofitskoye	9.01	32	eP	Pn	09 28 14.1	-0.5
LIA	Limnos Island	9.04	288	P	Pn	09 28 18.5	+3.5
LIA	Limnos Island	9.04	288	P	Pn	09 28 18.5	+3.5
LIA	Limnos Island	9.04	288	P	Pn	09 28 18.5	+3.5
TIRR	Tirgusor	9.13	321	⇑iP	Pn	09 28 17.7	+1.5
TIRR	Tirgusor	9.13	321	ePn	Pn	09 28 16.9	+0.7
TIRR	Tirgusor	9.13	321	eP	Pn	09 28 16.9	+0.7
TIRR	Tirgusor	9.13	321	eP	Pn	09 28 16.9	+0.7
GROC	Groznyy	9.14	49	eP	Pn	09 28 19.1	+2.8
GROC				eS	Sn	09 30 01.5	+2.3
GROC				pmax	pmax		
	comp=Z,141nm,1.4s						
KDZ	Kurdzhali	9.38	299	iP	Pn	09 28 21.1	+1.5
TLB	Topalu	9.41	321	⇑iP	Pn	09 28 21.1	+1.1
CFR	Carcaliu	9.79	324	⇑iP	Pn	09 28 26.2	+0.9
CFR	Carcaliu	9.79	324	P	Pn	09 28 26.0	+0.7
CFR				pmax	pmax		
	comp=Z,50nm,1.8s						
CFR	Carcaliu	9.79	324	P	Pn	09 28 26.0	+0.7
	comp=Z,50nm,1.8s						
RZN	Rozhen	9.88	298	iP	Pn	09 28 30.4	+3.7
PLD	Plovdiv	10.04	300	P	Pn	09 28 31.8	+3.1
MAK	Makhachkala	10.07	54	eP	Pn	09 28 28.1	-1.1
MAK				eS	Sn	09 30 21.5	-0.7
MAK				pmax	pmax		
	comp=Z,255nm,1.2s						
MAK				MLR	MLR		
	comp=Z,2µm,11.0s						
SKIA	Skiathos	10.25	283	P	Pn	09 28 35.1	+3.5
SGRR	Singureni	10.29	313	⇑iP	Pn	09 28 33.2	+1.1
MMB	Musomiste	10.54	296	iP	Pn	09 28 39.4	+3.8
ISR	Istrita	10.55	319	⇓iP	Pn	09 28 37.8	+2.1
ISR	Istrita	10.55	319	P	Pn	09 28 38.3	+2.6
ISR				pmax	pmax		
	comp=Z,118nm,1.1s						
ISR	Istrita	10.55	319	P	Pn	09 28 38.3	+2.6
	comp=Z,118nm,1.1s						
PGB	Panagyurishte	10.58	302	iP	Pn	09 28 40.3	+4.1
LKR	Lokris	10.58	280	P	Pn	09 28 39.5	+3.3
LKR	Lokris	10.58	280	P	Pn	09 28 39.5	+3.3
LKR	Lokris	10.58	280	P	Pn	09 28 39.5	+3.3
LTK	Loutraki	10.61	277	P	Pn	09 28 39.1	+2.6
LTK	Loutraki	10.61	277	P	Pn	09 28 39.1	+2.6
LTK	Loutraki	10.61	277	P	Pn	09 28 39.1	+2.6
AXAR	Agios Charalam	10.85	281	P	Pn	09 28 46.4	+6.5
AXAR	Agios Charalam	10.85	281	P	Pn	09 28 46.4	+6.5
AXAR	Agios Charalam	10.85	281	P	Pn	09 28 46.4	+6.5
KIS	Kishinev	10.95	332	eP	Pn	09 28 40.0	-1.1
	comp=Z,300nm,2.0s						
KIS	Kishinev	10.95	332	ePP	Pn	09 28 54.0	+13
KIS				eS	Sn	09 30 46.0	+2.4
KIS				eL	L	09 33 40.0	
KIS				LRM	MLR	09 35 36.0	
	comp=Z,800nm,14.0s						
KIS	Kishinev	10.95	332	eP	Pn	09 28 40.0	-1.1
KIS				eS	Sn	09 30 46.0	+2.4
KIS				pmax	pmax		
	comp=Z,250nm,2.0s						
KIS				MLR	MLR		
	comp=Z,800nm,14.0s						
KIS	Kishinev	10.95	332	eP	Pn	09 28 40.0	-1.1
	comp=Z,250nm,2.0s						
KIS				eS	Sn	09 30 46.0	+2.4
DSF	Desfina	10.95	279	P	Pn	09 28 43.7	+2.5
DSF	Desfina	10.95	279	P	Pn	09 28 43.7	+2.5
DSF	Desfina	10.95	279	P	Pn	09 28 43.7	+2.5
VRI	Vrincioaia	10.97	322	⇓iP	Pn	09 28 42.9	+1.4
VRI	Vrincioaia	10.97	322	P	Pn	09 28 42.9	+1.4
VRI	Vrincioaia	10.97	322	P	Pn	09 28 42.9	+1.4
PLOR	Plostina	11.00	322	⇑iP	Pn	09 28 44.0	+2.1
PLOR	Plostina	11.00	322	P	Pn	09 28 43.9	+2.1
PLOR	Plostina	11.00	322	P	Pn	09 28 43.9	+2.1
KNT	Kendrikon	11.02	293	P	Pn	09 28 45.8	+3.6
KNT	Kendrikon	11.02	293	P	Pn	09 28 45.8	+3.6
KNT	Kendrikon	11.02	293	P	Pn	09 28 45.8	+3.6
KKB	Krupnik	11.09	297	iP	Pn	09 28 45.8	+2.7
GUR	Goura	11.11	276	P	Pn	09 28 45.8	+2.4
GUR	Goura	11.11	276	P	Pn	09 28 45.8	+2.4
GUR	Goura	11.11	276	P	Pn	09 28 45.8	+2.4
MLR	Muntele Rosu	11.11	319	Pn	Pn	09 28 41.9	-1.5
	comp=Z,0.3nm,0.3s,baz=130,slow=7.9,SNR=2.5						
MLR				LR	LR	09 33 50.5	
	comp=Z,1µm,19.5s,baz=144,slow=42						
MLR	Muntele Rosu	11.11	319	⇑iP	Pn	09 28 45.4	+1.9
MLR	Muntele Rosu	11.11	319	ePn	Pn	09 28 44.9	+1.4
MLR	Muntele Rosu	11.11	319	eP	Pn	09 28 44.9	+1.4
MLR	Muntele Rosu	11.11	319	eP	Pn	09 28 44.9	+1.4
LIT	Litokhoron	11.11	287	ePn	Pn	09 28 45.9	+2.4
LIT	Litokhoron	11.11	287	P	Pn	09 28 45.8	+2.4
LIT	Litokhoron	11.11	287	P	Pn	09 28 45.8	+2.4
AGG	Agios Georgios	11.12	282	ePn	Pn	09 28 46.9	+3.3
AGG	Agios Georgios	11.12	282	P	Pn	09 28 46.4	+2.8
AGG	Agios Georgios	11.12	282	P	Pn	09 28 46.8	+3.3
AGG	Agios Georgios	11.12	282	ePn	Pn	09 28 46.9	+3.3
VTS	Vitosha	11.25	301	⇓iP	Pn	09 28 47.2	+1.8
VTS	Vitosha	11.25	301	ePn	Pn	09 28 45.6	+0.2
VTS	Vitosha	11.25	301	iP	Pn	09 28 48.4	+3.0
VTS	Vitosha	11.25	301	P	Pn	09 28 47.3	+1.8
VTS	Vitosha	11.25	301	eP	Pn	09 28 45.6	+0.2
VTS	Vitosha	11.25	301	eP	Pn	09 28 45.6	+0.2
KLV	Kalavryta, Ach	11.25	277	P	Pn	09 28 47.9	+2.5
KLV	Kalavryta, Ach	11.25	277	P	Pn	09 28 47.9	+2.5
KLV	Kalavryta, Ach	11.25	277	P	Pn	09 28 47.9	+2.5
VAY	Valandovo	11.30	294	iP	Pn	09 28 48.7	+2.7
TRIZ	Trizonia	11.31	278	P	Pn	09 28 48.9	+2.8
SERG	Sergoula	11.32	279	P	Pn	09 28 49.2	+2.9
GRG	Griva	11.34	292	P	Pn	09 28 49.6	+3.1
GRG	Griva	11.34	292	P	Pn	09 28 49.6	+3.1
GRG	Griva	11.34	292	P	Pn	09 28 49.6	+3.1
GRG	Griva	11.34	292	P	Pn	09 28 49.6	+3.1
LAKA	Lakka	11.38	278	P	Pn	09 28 50.0	+2.9
LAKA	Lakka	11.38	278	P	Pn	09 28 50.0	+2.9
LAKA	Lakka	11.38	278	P	Pn	09 28 50.0	+2.9
THL	Klokotos Trika	11.41	284	P	Pn	09 28 50.1	+2.7
ANX	Ano Chora	11.43	280	P	Pn	09 28 51.7	+3.9
EFP	Efpalio	11.44	279	P	Pn	09 28 50.4	+2.5
TESR	Tescani	11.48	324	⇑iP	Pn	09 28 49.2	+0.8
ITM	Ithomi	11.49	272	ePn	Pn	09 28 49.3	+0.7
ITM	Ithomi	11.49	272	ePn	Pn	09 28 49.3	+0.7
VOIR		11.55	316	⇓iP	Pn	09 28 51.7	+2.2
VOIR		11.55	316	P	Pn	09 28 53.5	+4.0
VOIR				pmax	pmax		
	comp=Z,42nm,1.4s						
VOIR		11.55	316	⇓iP	Pn	09 28 51.7	+2.2
STIP	Stip	11.68	295	iP	Pn	09 28 48.7	-2.4
DOPR	Dopca	11.72	319	⇓iP	Pn	09 28 53.0	+1.3
PVO	Paravola	11.74	280	P	Pn	09 28 54.7	+2.8
PDO	Prodromos	12.01	280	P	Pn	09 28 58.8	+3.2
BIZ	Bicaz	12.05	324	⇓iP	Pn	09 28 57.4	+1.2
FNA	Florina	12.06	290	ePn	Pn	09 28 59.6	+3.1
FNA	Florina	12.06	290	P	Pn	09 28 59.3	+2.8
FNA	Florina	12.06	290	eP	Pn	09 28 59.6	+3.1
FNA	Florina	12.06	290	ePn	Pn	09 28 59.6	+3.1
DSL	Palaion Diasel	12.09	282	P	Pn	09 29 00.1	+3.3
DSL	Palaion Diasel	12.09	282	P	Pn	09 29 00.1	+3.3
DSL	Palaion Diasel	12.09	282	P	Pn	09 29 00.1	+3.3
KRUS	Krusevo	12.28	293	iP	Pn	09 29 03.2	+3.8
SKO	Skopje	12.29	296	iP	Pn	09 29 03.2	+3.7
LKD2	Lefkada island	12.42	280	P	Pn	09 29 03.5	+2.2
LKD2	Lefkada island	12.42	280	P	Pn	09 29 03.5	+2.2
LKD2	Lefkada island	12.42	280	P	Pn	09 29 03.5	+2.2
OHR	Ohrid	12.55	291	iP	Pn	09 29 07.1	+3.9
IGT	Igoumenitsa	12.70	284	P	Pn	09 29 07.2	+2.1
IGT	Igoumenitsa	12.70	284	P	Pn	09 29 07.2	+2.1
IGT	Igoumenitsa	12.70	284	P	Pn	09 29 07.2	+2.1
IGT	Igoumenitsa	12.70	284	P	Pn	09 29 07.2	+2.1
SGD	Sagiada	12.78	284	P	Pn	09 29 08.2	+2.0
BURAR	Bucovina Array	12.95	324	⇑iP	Pn	09 29 10.4	+1.8
BURAR	Bucovina Array	12.95	324	P	Pn	09 29 10.4	+1.8

BURAR	Bucovina Array	12.95	324	⇑iP	Pn	09 29 10.4	+1.8
BUR04	Bucovina Ar. S	12.96	324	ePn	Pn	09 29 08.9	+0.2
BUR04	Bucovina Ar. S	12.96	324	ePn	Pn	09 29 08.9	+0.2
BUR08	Bucovina Ar. S	12.98	324	ePn	Pn	09 29 09.2	+0.1
BUR08	Bucovina Ar. S	12.98	324	ePn	Pn	09 29 09.2	+0.1
KUBS	Kucevo	13.02	306	ePn	Pn	09 29 11.8	+2.3
CJR	Cluj-Napoca	13.14	318	⇓iP	Pn	09 29 12.9	+1.7
CJR	Cluj-Napoca	13.14	318	P	Pn	09 29 12.8	+1.6
CJR	Cluj-Napoca	13.14	318	P	Pn	09 29 12.8	+1.6
MDVR	Moldovita	13.17	308	⇓iP	Pn	09 29 13.4	+1.9
MDVR	Moldovita	13.17	308	⇓iP	Pn	09 29 13.4	+1.9
GRUS	Gruza	13.43	303	ePn	Pn	09 29 13.7	-1.3
PVY	Plav	13.52	297	⇑iPn	P	09 29 21.0	-4.7
PVY				eSn	Sn	09 31 45.6	-1.1
VORD	Divnogorie	13.56	8	eP	Pn	09 29 17.2	+0.5
VORD				pmax	pmax		
	comp=Z,20nm,0.3s						
VORD	Divnogorie	13.56	8	eP	Pn	09 29 17.2	+0.5
	comp=Z,20nm,0.3s						
BZS	Buzias	13.64	311	⇓iP	Pn	09 29 19.4	+1.5
BZS	Buzias	13.64	311	P	Pn	09 29 20.1	+2.2
BZS	Buzias	13.64	311	P	Pn	09 29 20.1	+2.2
IVA	Berane	13.65	298	⇓iPn	Pn	09 29 21.9	+3.8
IVA				eSn	Sn	09 31 48.8	-1.0
VSR	Storozhevoye	13.79	7	eP	Pn	09 29 19.7	-0.2
VSR				pmax	pmax		
	comp=Z,20nm,1.1s						
VSR				MLR	MLR		
	comp=Z,670nm,12.0s						
VSR	Storozhevoye	13.79	7	eP	Pn	09 29 19.7	-0.2
	comp=Z,670nm,12.0s						
ULC	Ulcinj	13.87	294	ePn	Pn	09 29 24.6	+3.5
ULC				eSn	Sn	09 31 54.4	-0.9
KOME	Kolasin	13.90	298	⇑iPn	Pn	09 29 25.2	+3.6
KOME				eSn	Sn	09 31 55.1	-1.0
DRME	Dracevica, Mon	13.97	295	⇓iPn	Pn	09 29 25.7	+3.3
DRME				eSn	Sn	09 31 56.6	-0.9
DRME	Dracevica, Mon	13.97	295	eP	Pn	09 29 25.0	+2.6
PDG	Podgorica	13.98	296	⇓iP	Pn	09 29 23.2	+0.7
PDG	Podgorica	13.98	296	⇓iP	Pn	09 29 23.2	+0.7
TTG	Podgorica	13.98	296	⇓iPn	Pn	09 29 25.7	+3.2
TTG				eSn	Sn	09 31 56.6	-1.1
TTG	Podgorica	13.98	296	ePn	Pn	09 29 26.2	+3.7
TTG	Podgorica	13.98	296	ePn	Pn	09 29 26.2	+3.7
DIVS	Divibare	13.99	303	ePn	Pn	09 29 23.9	+1.1
DIVS	Divibare	13.99	303	ePn	Pn	09 29 23.9	+1.1
DIVS	Divibare	13.99	303	eP	Pn	09 29 24.2	+1.4
AK11	Malin Array Si	14.08	341	ePn	Pn	09 29 24.5	+0.7
KIEV	Kiev	14.08	341	ePn	Pn	09 29 23.1	-0.7
KIEV	Kiev	14.08	341	i P	Pn	09 29 24.8	+0.9
	SNR=6.7						
KIEV	Kiev	14.08	341	eP	Pn	09 29 23.2	-0.7
KIEV	Kiev	14.08	341	ePn	Pn	09 29 23.1	-0.7
KIEV	Kiev	14.08	341	P	Pn	09 29 24.8	+0.9
	SNR=6.7						
AKASG	Malin Array Be	14.08	341	Pn	Pn	09 29 22.9	-1.0
	comp=Z,1.1nm,0.3s,baz=158,slow=12,SNR=28						
AKASG				LR	LR	09 35 53.8	
	comp=Z,526nm,18.9s,baz=160,slow=42						
AKASG				ScP	ScP	09 38 17.2	+0.1
	comp=Z,0.4nm,0.3s,baz=175,slow=1.3,SNR=5.5						
AKASG	Malin Array Be	14.08	341	i P	Pn	09 29 22.7	-1.2
AKASG				pmax	pmax		
	comp=Z,37nm,1.1s						
AKBB	Malin Array Si	14.08	341	ePn	Pn	09 29 23.8	-0.1
AKBB	Malin Array Si	14.08	341	eP	Pn	09 29 23.8	-0.1
AKBB	Malin Array Si	14.08	341	ePn	Pn	09 29 23.8	-0.1
PLE	Pljevlja	14.14	299	⇓iPn	Pn	09 29 28.1	+3.3
PLE				eSn	Sn	09 32 00.4	-1.4
VRH	Novokhopyorsk	14.15	14	eP	Pn	09 29 24.8	-0.1
VRH				pmax	pmax		
	comp=Z,50nm,1.6s						
VRH				MLR	MLR		
	comp=Z,960nm,12.0s						
BUM	Brajici-Budva	14.21	295	⇓iPn	Pn	09 29 29.3	+3.6
BUM				eSn	Sn	09 32 02.1	-1.3
VORR	Voronezh	14.25	7	eP	P	09 29 32.0	-1.5
VORR				pmax	pmax		
	comp=Z,300nm,1.4s						
CEME	Cevo	14.25	296	⇓iPn	Pn	09 29 29.4	+3.1
CEME				eSn	Sn	09 32 03.4	-1.0
NKY	Niksic	14.26	297	⇓iPn	P	09 29 30.2	-3.7
NKY				eSn	Sn	09 32 03.6	-1.3
NKME	Niksic	14.28	297	ePn	Pn	09 29 30.2	+3.5
NKME				eSn	Sn	09 32 04.1	-1.1
HCY	Herceg Novi	14.53	295	⇑iPn	Pn	09 29 32.3	+2.2
HCY				eSn	Sn	09 32 09.9	-1.2
HCY	Herceg Novi	14.53	295	⇑iPn	Pn	09 29 32.3	+2.2
FGSL	Fruska Gora	14.54	307	ePn	Pn	09 29 32.6	+2.3
BRY	Bratogost	14.61	297	ePn	P	09 29 34.9	-2.9
BRY				eSn	Sn	09 32 11.6	-1.7
TRPA	Tarpa	14.61	321	⇑iP	Pn	09 29 31.7	+0.6
TRPA	Tarpa	14.61	321	ePn	Pn	09 29 32.0	+0.9
HAPS	Han Pijesak,BI	14.69	302	ePn	Pn	09 29 34.4	+2.0
UZH	Uzhgorod	15.06	322	eP	Pn	09 29 36.7	-0.6
UZH				eS	Sn	09 32 24.3	+0.2
UZH				MLR	MLR		
	comp=N,50nm,12.0s						
UZH				MLR	MLR		
	comp=Z,50nm,12.0s						
LVV	L'vov	15.12	328	eP	Pn	09 29 35.5	-2.6
LVV				MLR	MLR		
	comp=E,200nm,12.0s						
LVV				MLR	MLR		
	comp=Z,400nm,12.0s						
LVV				MLR	MLR		
	comp=N,400nm,11.0s						
LPSR	Galich'ya Gora	15.14	6	eP	Pn	09 29 38.6	+0.3
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
TIP	Timpagrande	15.46	282	⇓iP	Pn	09 29 40.6	-2.1
TIP	Timpagrande	15.46	282	ePn	Pn	09 29 41.3	-1.3
	comp=Z,101nm,1.4s						
TIP	Timpagrande	15.46	282	P	Pn	09 29 40.5	-2.1
TIP	Timpagrande	15.46	282	ePn	Pn	09 29 41.3	-1.3
	comp=Z,101nm,1.4s						
KWP	Kalwaria Pacla	15.56	325	eP	P	09 29 48.2	0.0
KWP	Kalwaria Pacla	15.56	325	eP	P	09 29 48.2	0.0
KWP	Kalwaria Pacla	15.56	325	eP	P	09 29 48.2	0.0
MATE	Matera	15.56	287	⇓iP	Pn	09 29 44.3	+0.4
CRVS	Cervenica-Dubn	15.66	321	eP	Pn	09 29 45.6	+0.5
CRVS				pmax	pmax		
	comp=Z,85nm,1.5s						
CRVS	Cervenica-Dubn	15.66	321	eP	Pn	09 29 45.6	+0.5
PSZ	Piszkesteto	15.88	316	⇓iP	Pn	09 29 48.5	+0.4
PSZ	Piszkesteto	15.88	316	ePn	P	09 29 50.1	-1.7
PSZ	Piszkesteto	15.88	316	ePn	Pn	09 29 49.0	+0.9
	comp=Z,118nm,1.5s						
PSZ	Piszkesteto	15.88	316	eP	Pn	09 29 49.0	+0.9
PSZ				pmax	pmax		
	comp=Z,118nm,1.5s						
PSZ	Piszkesteto	15.88	316	ePn	Pn	09 29 49.0	+0.9
	comp=Z,118nm,1.5s						
KECS	Kecovo	15.89	318	eP	P	09 29 51.5	-0.4
KECS	Kecovo	15.89	318	eP	P	09 29 51.5	-0.4
KECS	Kecovo	15.89	318	eP	P	09 29 51.5	-0.4
RAYN	Ar Rayn	16.05	148	P	Pn	09 29 47.2	-3.1
BLY	Banja Luka	16.10	302	⇑iP	Pn	09 29 51.5	+0.6
BLY	Banja Luka	16.10	302	ePn	Pn	09 29 49.4	-1.5
	comp=Z,62nm,1.3s						
BLY	Banja Luka	16.10	302	ePn	Pn	09 29 49.4	-1.5
	comp=Z,62nm,1.3s						
BLY	Banja Luka	16.10	302	eP	P	09 29 53.7	-0.5
BUD	Budapest	16.14	313	⇓ePn	P	09 29 53.2	-1.3
BUD	Budapest	16.14	313	P	P	09 29 55.6	+1.1
BUD				pmax	pmax		
	comp=Z,41nm,1.4s						
CUC	Castrocucco	16.20	285	ePn	Pn	09 29 51.7	-0.5
	comp=Z,185nm,1.2s						
CUC	Castrocucco	16.20	285	ePn	Pn	09 29 51.7	-0.5
	comp=Z,185nm,1.2s						
CSKK	Csˆ‡kako	16.52	312	⇓ePn	P	09 29 58.4	-0.4
NIE	Niedzica	16.57	321	eP	P	09 29 58.5	-0.9
NIE	Niedzica	16.57	321	eP	P	09 29 58.5	-0.9
VYHS	Vyhne	16.79	316	eP	Pn	09 30 00.3	+0.7
VYHS				pmax	pmax		
	comp=Z,56nm,1.6s						
VYHS	Vyhne	16.79	316	eP	Pn	09 30 00.3	+0.7
VYHS	Vyhne	16.79	316	eP	Pn	09 30 00.3	+0.7
	comp=Z,56nm,1.6s						
LANS	Liptovska Anna	16.83	319	eP	P	09 30 02.3	0.0
LANS	Liptovska Anna	16.83	319	eP	P	09 30 02.3	0.0
LANS	Liptovska Anna	16.83	319	eP	P	09 30 02.3	0.0
BEHE	Becsehely	17.02	308	eP	P	09 30 04.4	+0.1
GEYT	Alibeck	17.21	82	P	P	09 30 05.8	-0.8
	comp=Z,1.6nm,0.3s,baz=299,slow=4.2,SNR=11						
GYA0B	ALIBECK ARRAY	17.21	82	ePn	P	09 30 06.0	-0.6
	comp=Z,108nm,1.4s						
GYA0B	ALIBECK ARRAY	17.21	82	ePn	P	09 30 06.0	-0.6
	comp=Z,108nm,1.4s						
OJC	Ojcow	17.34	322	eP	Pn	09 30 06.5	0.0
OJC	Ojcow	17.34	322	ePn	Pn	09 30 05.8	-0.7
	comp=Z,88nm,1.5s						
OJC	Ojcow	17.34	322	eP	Pn	09 30 06.5	0.0
OJC	Ojcow	17.34	322	ePn	Pn	09 30 05.8	-0.7
	comp=Z,88nm,1.5s						
OJC	Ojcow	17.34	322	eP	Pn	09 30 06.5	0.0
KOGS	Kog	17.34	307	eP	Pn	09 30 06.7	+0.2
KOGS	Kog	17.34	307	P	Pn	09 30 06.7	+0.2
VAE	Valguarnera	17.41	276	P	P	09 30 08.2	-0.5
	comp=Z,0.2nm,0.3s,baz=45,slow=11,SNR=3.6						
VAE				LR	LR	09 37 29.0	
	comp=Z,243nm,21.2s,baz=121,slow=40						
OBN	Obninsk	17.55	0	⇑eP	Pn	09 30 08.4	-0.6
OBN				eS	S	09 33 30.4	-1.9
OBN				pmax	pmax		
	comp=Z,40nm,1.2s						
OBN				MLR	MLR		
	comp=Z,229nm,15.0s						
MODS	Modra-Piesok	17.60	314	eP	P	09 30 10.7	-0.1
MODS				pmax	pmax		
	comp=Z,171nm,1.5s						
MODS	Modra-Piesok	17.60	314	eP	P	09 30 10.7	-0.1
MODS	Modra-Piesok	17.60	314	eP	P	09 30 10.7	-0.1
	comp=Z,171nm,1.5s						
CRES	Cresnjev	17.62	305	eP	P	09 30 11.3	+0.3
CRES	Cresnjev	17.62	305	eP	P	09 30 10.9	-0.1
JAVC	Velka Javorina	17.64	316	ePN	P	09 30 12.5	+1.3
SOP	Sopron	17.69	311	ePn	Pn	09 30 11.1	+0.3
SOP	Sopron	17.69	311	P	P	09 30 13.1	+1.4
SOP				pmax	pmax		
	comp=Z,46nm,1.5s						
GROS	Grobnik	17.82	306	eP	Pn	09 30 12.6	0.0
GROS	Grobnik	17.82	306	eP	Pn	09 30 12.6	0.0
MICGM	Minsk	17.91	344	e	P	09 30 14.0	-0.1
MNK	Minsk	17.91	344	eP	P	09 30 14.0	-0.1
MNK	Minsk	17.91	344	eP	P	09 30 14.0	-0.1
OKC	Ostrava-Krasne	17.94	319	eP	P	09 30 14.5	+0.1
OKC				eS	S	09 33 42.2	+2.0
OKC				AMS	AMS	09 39 00.0	
	comp=Z,900nm,11.3s						
OKC	Ostrava-Krasne	17.94	319	eP	P	09 30 14.5	+0.1
OKC				MLR	MLR		
	comp=Z,900nm,11.3s						
BEL	Belsk	18.00	327	eP	P	09 30 14.8	-0.3
BEL	Belsk	18.00	327	eP	P	09 30 14.8	-0.3
RAC	Raciborz	18.06	320	eP	P	09 30 15.6	-0.2
RAC				MLR	MLR		
	comp=Z,600nm,21.8s						
ARSA	Arzberg	18.13	309	eP	P	09 30 18.3	+1.7
	comp=Z,31nm,1.4s,SNR=11						
ARSA	Arzberg	18.13	309	P	P	09 30 18.3	+1.7
	comp=Z,31nm,1.4s,SNR=11						
MOS	Moscow	18.20	2	eP	Pn	09 30 15.7	-1.3
MOS				eS	S	09 33 45.2	-0.2
MOS				pmax	pmax		
	comp=Z,300nm,2.1s						
MOS				pmax	pmax		
	comp=Z,164nm,1.6s						
SOKA	Soboth	18.20	307	ePn	Pn	09 30 17.0	-0.3
	comp=Z,31nm,1.4s,SNR=6.1						
SOKA	Soboth	18.20	307	P	Pn	09 30 17.0	-0.3
	comp=Z,31nm,1.4s,SNR=6.1						
CONA	Conrad Observa	18.22	311	eP	P	09 30 18.7	+1.1
	comp=Z,34nm,1.6s,SNR=8.3						
CONA	Conrad Observa	18.22	311	P	P	09 30 18.7	+1.1
	comp=Z,34nm,1.6s,SNR=8.3						
AQU	L'Aquila	18.22	292	ePn	Pn	09 30 16.1	-1.4
	comp=Z,231nm,1.5s						
AQU	L'Aquila	18.22	292	eP	Pn	09 30 16.1	-1.4
AQU				pmax	pmax		
	comp=Z,231nm,1.5s						
AQU	L'Aquila	18.22	292	eP	Pn	09 30 16.1	-1.4
	comp=Z,231nm,1.5s						
MORC	Moravsky Berou	18.22	318	⇓iP	Pn	09 30 17.2	-0.2
MORC	Moravsky Berou	18.22	318	ePn	Pn	09 30 16.9	-0.5
	comp=Z,92nm,1.5s						
MORC	Moravsky Berou	18.22	318	eP	Pn	09 30 16.9	-0.5
MORC				pmax	pmax		
	comp=Z,92nm,1.5s						
MORC	Moravsky Berou	18.22	318	ePN	P	09 30 17.6	0.0
CEY	Cerknica	18.27	303	eP	P	09 30 18.6	+0.4
LJU	Ljubljana	18.30	304	eP	Pn	09 30 18.2	-0.2
OBKA	Obir	18.45	306	epP	P	09 30 23.1	+2.8
	comp=Z,43nm,1.2s,SNR=7.0						
KRUC	Moravsky	18.46	315	ePN	Pn	09 30 20.5	+0.2
VRAC	Vranov	18.48	316	P	Pn	09 30 20.8	+0.3
	comp=Z,0.2nm,0.3s,baz=114,slow=12,SNR=27						
VRAC				LR	LR	09 38 34.8	
	comp=Z,274nm,20.8s,baz=143,slow=41						
VRAC	Vranov	18.48	316	⇓iP	P	09 30 19.9	-0.5
VRAC	Vranov	18.48	316	ePn	Pn	09 30 21.1	+0.6
VRAC	Vranov	18.48	316	ePN	Pn	09 30 21.1	+0.6
NACGM	Naroch	18.53	342	e	P	09 30 20.0	-0.9
NACGM				eLR	LR	09 35 12.0	
SUW	Suwalki	18.79	335	eP	P	09 30 23.7	0.0
SUW	Suwalki	18.79	335	eP	P	09 30 23.5	-0.2
	comp=Z,135nm,1.1s						
SUW	Suwalki	18.79	335	eP	P	09 30 23.7	0.0
SUW	Suwalki	18.79	335	eP	P	09 30 23.7	0.0
KRLC	Kraliky	18.79	318	eP	Pn	09 30 24.3	-0.1
KRLC	Kraliky	18.79	318	eP	Pn	09 30 24.3	-0.1
KRLC	Kraliky	18.79	318	eP	Pn	09 30 24.3	-0.1
IDID	Didziasalis	18.92	343	eP	P	09 30 24.4	-0.8
IDID				IAmb	IAmb	09 30 27.9	
	comp=Z,34nm,1.3s						
IDID	Didziasalis	18.92	343	eP	P	09 30 24.4	-0.8
	SNR=62						
IIGN	Ignalina	19.07	342	eP	P	09 30 26.0	-0.9
IIGN				IAmb	IAmb	09 30 29.7	
	comp=Z,56nm,1.4s						
MYKA	Terra Mystica	19.08	306	ePn	Pn	09 30 28.6	+0.6
	comp=Z,166nm,1.4s,SNR=28						
MYKA	Terra Mystica	19.08	306	P	Pn	09 30 28.6	+0.6
	comp=Z,166nm,1.4s,SNR=28						
MOA	Molln	19.15	309	ePn	Pn	09 30 29.7	+1.0
	comp=Z,30nm,1.2s,SNR=14						
MOA	Molln	19.15	309	P	Pn	09 30 29.7	+1.0
	comp=Z,30nm,1.2s,SNR=14						
DPC	Dobruska-Polom	19.19	318	eP	Pn	09 30 29.0	-0.2
DPC				epP	sP	09 30 34.1	+1.8
DPC				eS	S	09 34 10.8	+5.1
DPC				AMS	AMS	09 39 40.0	
	comp=Z,900nm,10.6s						
DPC	Dobruska-Polom	19.19	318	eP	Pn	09 30 29.0	-0.2
DPC				MLR	MLR		
	comp=Z,900nm,10.6s						
DPC	Dobruska-Polom	19.19	318	eP	Pn	09 30 29.0	-0.2
	comp=Z,900nm,10.6s						
ISAL	Salakas	19.30	342	eP	P	09 30 28.6	-0.7
ISAL				IAmb	IAmb	09 30 32.4	
	comp=Z,21nm,1.1s						
ISAL	Salakas	19.30	342	eP	P	09 30 28.6	-0.7
	SNR=53						
IZAR	Zarasai	19.43	343	eP	P	09 30 30.1	-0.7
IZAR				IAmb	IAmb	09 30 34.0	
	comp=Z,24nm,0.9s						
KBA	Koelnbreinsper	19.43	307	ePn	Pn	09 30 32.4	+0.1
	comp=Z,82nm,1.8s,SNR=13						
KBA	Koelnbreinsper	19.43	307	P	Pn	09 30 33.9	+1.7
KBA				pmax	pmax		
	comp=Z,36nm,1.5s						
UPC	Upice	19.45	318	eP	P	09 30 31.3	+0.3
UPC				eS	S	09 34 15.5	+4.8
UPC				AMS	AMS	09 39 50.0	
	comp=Z,800nm,12.7s						
UPC	Upice	19.45	318	eP	P	09 30 31.3	+0.3
UPC				MLR	MLR		
	comp=Z,800nm,12.7s						
UPC	Upice	19.45	318	eP	P	09 30 31.3	+0.3
	comp=Z,800nm,12.7s						
KSP	Ksiaz	19.49	319	eP	Pn	09 30 32.2	-0.5
KSP	Ksiaz	19.49	319	eP	Pn	09 30 32.2	-0.5
GOPC	GO Pecny, Ondr	19.80	315	eP	Pn	09 30 38.2	+1.8
GOPC				epP	sP	09 30 40.7	+1.8
GOPC				eS	Sn	09 34 21.8	+3.1
GOPC				AMS	AMS	09 40 20.0	
	comp=Z,800nm,10.7s						
GOPC	GO Pecny, Ondr	19.80	315	eP	Pn	09 30 38.2	+1.8
GOPC				eS	Sn	09 34 21.8	+3.1
GOPC				MLR	MLR		
	comp=Z,800nm,10.7s						
ABTA	Abfaltersbach	19.85	305	eP	P	09 30 36.1	+0.5
	comp=Z,58nm,1.6s,SNR=13						
ABTA	Abfaltersbach	19.85	305	P	P	09 30 36.1	+0.5
	comp=Z,58nm,1.6s,SNR=13						
GEA0	GERESS Array S	19.91	312	eP	P	09 30 36.0	-0.2
GEA0	GERESS Array S	19.91	312	eP	P	09 30 36.0	-0.2
GEC2	GERESS Array S	19.91	312	eP	P	09 30 36.2	0.0
	comp=Z,58nm,1.3s						
GEC2	GERESS Array S	19.91	312	eP	P	09 30 36.3	0.0
GEC2				pmax	pmax		
	comp=Z,58nm,1.3s						
GEC2	GERESS Array S	19.91	312	eP	P	09 30 36.3	0.0
	comp=Z,58nm,1.3s						
GERES	GERESS Array B	19.91	312	P	P	09 30 36.8	+0.5
	comp=Z,0.5nm,0.3s,baz=115,slow=9.6,SNR=56						
GERES				ScP	ScP	09 38 29.6	+0.4
	comp=Z,0.1nm,0.3s,baz=134,slow=5.8,SNR=4.2						
GERES				LR	LR	09 38 41.5	
	comp=Z,238nm,19.7s,baz=121,slow=38						
PRU	Pruhonice	19.97	315	eP	Pn	09 30 37.8	-0.6
PRU				epP	sP	09 30 41.1	+0.3
PRU				AMS	AMS	09 40 10.0	
	comp=Z,800nm,10.8s						
PRU	Pruhonice	19.97	315	eP	Pn	09 30 37.8	-0.6
PRU				MLR	MLR		
	comp=Z,800nm,10.8s						
PRA	Prague	20.07	315	eP	Pn	09 30 39.0	-0.6
PRA				eS	Sn	09 34 32.5	+7.2
PRA	Prague	20.07	315	eP	Pn	09 30 39.0	-0.6
PRA	Prague	20.07	315	eP	Pn	09 30 39.0	-0.6
AKTK	Aktyubinsk	20.11	43	P	P	09 30 38.2	-0.1
AKTO	Aktyubinsk	20.11	43	P	P	09 30 38.2	-0.1
	comp=Z,16nm,1.2s,baz=240,slow=13,SNR=24						
AKTO				LR	LR	09 40 26.4	
	comp=Z,507nm,18.3s,baz=254,slow=43						
KHC	Kasperske Hory	20.11	312	eP	P	09 30 38.3	-0.1
KHC				eS	S	09 34 24.8	+0.6
KHC				AMS	AMS	09 39 40.0	
	comp=Z,700nm,11.8s						
KHC	Kasperske Hory	20.11	312	eP	P	09 30 38.2	-0.1
	comp=Z,25nm,1.3s						
KHC	Kasperske Hory	20.11	312	eP	P	09 30 38.3	-0.1
KHC				eS	S	09 34 24.8	+0.6
KHC				MLR	MLR		
	comp=Z,700nm,11.8s						
KHC	Kasperske Hory	20.11	312	eP	P	09 30 38.3	-0.1
	comp=Z,700nm,11.8s						
KHC				eS	S	09 34 24.8	+0.6
PVCC	Panska Ves	20.23	317	eP	P	09 30 40.4	+0.8
PVCC				epP	sP	09 30 43.6	0.0
PVCC				AMS	AMS	09 40 00.0	
	comp=Z,1µm,10.9s						
PVCC	Panska Ves	20.23	317	eP	P	09 30 40.4	+0.8
PVCC				e		09 30 43.6	
PVCC				MLR	MLR		
	comp=Z,1µm,10.9s						
PVCC	Panska Ves	20.23	317	eP	P	09 30 40.4	+0.8
	comp=Z,1µm,10.9s						
SHME	Shamm	20.32	119	P	P	09 30 40.3	-0.4
BANOM	Banah	20.51	119	P	P	09 30 42.8	0.0
BANOM	Banah	20.51	119	P	P	09 30 42.8	0.0
WET	Wettzell	20.53	312	P	P	09 30 42.8	-0.1
WET				pmax	pmax		
	comp=Z,64nm,1.3s						
WET	Wettzell	20.53	312	P	P	09 30 42.8	-0.1
	comp=Z,64nm,1.3s						
GKP	Gorka Klasztor	20.55	326	eP	P	09 30 43.4	+0.4
GKP	Gorka Klasztor	20.55	326	eP	P	09 30 43.4	+0.4
GKP	Gorka Klasztor	20.55	326	eP	P	09 30 43.4	+0.4
WTTA	Wattenberg	20.59	306	eP	P	09 30 43.8	+0.1
	comp=Z,54nm,1.4s,SNR=14						
AB31	Akbulak array	20.64	48	i P	P	09 30 43.2	-0.9
AB31				pmax	pmax		
	comp=Z,34nm,1.3s						
AB31	Akbulak array	20.64	48	i P	P	09 30 43.2	-0.9
	comp=Z,34nm,1.3s						
ABKAR	Akbulak array	20.64	48	eP	P	09 30 44.0	-0.1
ABKAR	Akbulak array	20.64	48	eP	P	09 30 44.0	-0.1
MZR	Muzera	20.67	130	P	P	09 30 44.9	+0.4
NAZ	Nazwa, Dubai	20.67	122	P	Pn	09 30 48.0	+1.1
	SNR=8.0						
NAZ	Nazwa, Dubai	20.67	122	i P	P	09 30 45.4	+0.9
	SNR=6.0						
ASUD	Al Ashush, Dub	20.70	123	P	Pn	09 30 51.0	+3.9
	SNR=10						
ASUD	Al Ashush, Dub	20.70	123	i P	P	09 30 45.2	+0.4
	SNR=6.3						
BRG	Berggiesshubel	20.75	317	i P	P	09 30 45.6	+0.4
	comp=Z,146nm,1.5s						
BRG				S	Sn	09 34 47.0	+5.3
	comp=N,10µm,11.5s						
	comp=E,451nm,14.2s						
	comp=Z,1µm,11.8s						
BRG	Berggiesshubel	20.75	317	i P	P	09 30 45.6	+0.4
BRG				pmax	pmax		
	comp=Z,146nm,1.5s						
BRG				MLR	MLR		
	comp=N,10µm,11.5s						
BRG				MLR	MLR		
	comp=E,451nm,14.2s						
BRG				MLR	MLR		
	comp=Z,1µm,11.8s						
MSFE	Esma-Masafi	20.77	120	P	Pn	09 30 46.7	-1.3
UOSS	Minazif	21.07	121	eP	P	09 30 49.2	+0.3
	comp=Z,132nm,1.4s						
UOSS	Minazif	21.07	121	P	P	09 30 49.7	+0.8
UOSS	Minazif	21.07	121	eP	P	09 30 49.2	+0.3
	comp=Z,132nm,1.4s						
FETA	Feichten	21.10	305	eP	P	09 30 49.9	+0.7
	comp=Z,70nm,1.5s,SNR=10						
HATD	Hatta, Dubai	21.10	121	P	P	09 30 49.6	+0.3
FUR	Furstenfeldbru	21.12	308	P	P	09 30 50.4	+1.1
FUR				pmax	pmax		
	comp=Z,68nm,1.9s						
ASHO	Ashiyiah	21.14	122	P	P	09 30 49.9	+0.1
RETA	Reutte	21.22	306	eP	P	09 30 50.0	-0.5
	comp=Z,52nm,1.5s,SNR=18						
RETA	Reutte	21.22	306	P	P	09 30 50.0	-0.5
	comp=Z,52nm,1.5s,SNR=18						
NKC	Novy Kostel	21.27	314	eP	P	09 30 50.7	-0.2
NKC				AMS	AMS	09 42 10.0	
	comp=Z,500nm,12.7s						
NKC	Novy Kostel	21.27	314	eP	P	09 30 50.7	-0.2
NKC				MLR	MLR		
	comp=Z,500nm,12.7s						
FUORN	Ofenpass-Fuorn	21.29	303	eP	P	09 30 50.7	-0.7
	comp=Z,41nm,1.0s						
FUORN	Ofenpass-Fuorn	21.29	303	eP	P	09 30 50.7	-0.7
	comp=Z,41nm,1.0s						
ALNE	Al Ain	21.36	124	P	P	09 30 52.4	+0.4
CLL	Collm	21.48	317	eP	P	09 30 52.0	-1.1
	comp=Z,75nm,1.4s						
CLL				ePmax		09 30 55.0	
CLL				e		09 31 00.0	
CLL				e		09 31 03.0	
CLL				e(PP)		09 31 18.0	
CLL				eS	S	09 34 48.0	-3.2
CLL				Lmax		09 40 00.0	
CLL	Collm	21.48	317	eP	P	09 30 51.7	-1.4
	comp=Z,46nm,1.1s						
CLL	Collm	21.48	317	eP	P	09 30 52.0	-1.1
CLL				eS	S	09 34 48.0	-3.2
CLL				pmax	pmax		
	comp=Z,75nm,1.4s						
CLL	Collm	21.48	317	eP	P	09 30 51.7	-1.4
	comp=Z,46nm,1.1s						
PLN	Plauen	21.55	315	P	P	09 30 54.1	+0.2
DAVOX	Davos/Dischmat	21.59	304	P	P	09 30 53.8	-0.7
	comp=Z,7.7nm,0.6s,baz=103,slow=10,SNR=19						
DAVOX				LR	LR	09 41 07.3	
	comp=Z,567nm,19.2s,baz=82,slow=42						
KEST	Kesra	21.73	273	P	P	09 30 55.8	-0.2
	comp=Z,42nm,1.0s,baz=355,slow=10,SNR=24						
KEST				LR	LR	09 41 52.3	
	comp=Z,439nm,18.4s,baz=44,slow=44						
KEST	Kesra	21.73	273	eP	P	09 30 55.8	-0.2
	comp=Z,91nm,1.1s						
KEST	Kesra	21.73	273	eP	P	09 30 55.8	-0.2
	comp=Z,91nm,1.1s						
DAVA	Damuels	21.73	305	eP	P	09 30 55.5	-0.5
	comp=Z,34nm,0.8s,SNR=15						
DAVA	Damuels	21.73	305	P	P	09 30 55.5	-0.5

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      comp=Z,34nm,0.8s,SNR=15
GRF   Grafenberg Arr    21.75 312  P     P      09 30 55.9 -0.1
GRFO  Grafenberg        21.75 312 eP     P      09 30 55.8 -0.2
      comp=Z,103nm,1.5s
GRFO  Grafenberg        21.75 312 eP     P      09 30 55.8 -0.2
GRFO                               pmax  pmax
      comp=Z,103nm,1.5s
GRFO  Grafenberg        21.75 312 eP     P      09 30 55.8 -0.2
      comp=Z,103nm,1.5s
VSU   Vasula            21.83 346ceP     P      09 30 56.8 +0.1
VSU                                pmax  pmax
      comp=Z,115nm,0.9s
TUE   Stuetta           21.86 303 eP     P      09 30 57.0 -0.5
      comp=Z,21nm,1.0s
TUE   Stuetta           21.86 303 eP     P      09 30 57.0 -0.5
      comp=Z,21nm,1.0s
MOX   Moxa              21.93 314  P     P      09 30 59.5 +1.6
MOX                                pmax  pmax
      comp=Z,18nm,1.5s
THTN  Thala             22.29 273 eP     P      09 31 01.2 -0.8
      comp=Z,162nm,1.4s
THTN  Thala             22.29 273 eP     P      09 31 01.2 -0.8
      comp=Z,162nm,1.4s
STU   Stuttgart         22.63 308 eP     P      09 31 04.2 -1.3
      comp=Z,28nm,1.0s
STU   Stuttgart         22.63 308 eP     P      09 31 04.2 -1.3
STU                                pmax  pmax
      comp=Z,28nm,1.0s
STU   Stuttgart         22.63 308 eP     P      09 31 04.2 -1.3
      comp=Z,28nm,1.0s
SBF   Sospel            22.74 295 eP     P      09 31 05.2 -1.5
SBF                                pmax  pmax
      comp=Z,37nm,0.9s
SLE   Schleitheim       22.77 305  P     P      09 31 06.5 -0.5
SLE                                pmax  pmax
      comp=Z,40nm,1.4s
BFO   Black Forest      23.04 307 eP     P      09 31 08.2 -1.6
      comp=Z,202nm,1.5s
BFO   Black Forest      23.04 307ceP     P      09 31 09.0 -0.8
BFO                                pmax  pmax
      comp=Z,30nm,1.7s
SENIN Lac Senin/Sane    23.22 301 eP     P      09 31 09.7 -2.2
      comp=Z,25nm,1.0s
MBDF  Montbardon        23.31 297 eP     P      09 31 11.9 -0.8
MBDF                               pmax  pmax
      comp=Z,77nm,1.2s
KLMR  Klimovskoe        23.39   4 eP     P      09 31 12.9 -0.2
KLMR                               pmax  pmax
      comp=Z,61nm,1.3s
KLMR  Klimovskoe        23.39   4 eP     P      09 31 13.0 -0.2
KLMR                               AMP          09 31 18.8
      comp=Z,61nm,1.3s
BNI   Bardonecchia      23.42 298 eP     P      09 31 12.2 -1.6
      comp=Z,191nm,1.3s
BNI   Bardonecchia      23.42 298 eP     P      09 31 12.2 -1.6
BNI                                pmax  pmax
      comp=Z,191nm,1.3s
LPG   La Plagne         23.44 299 eP     P      09 31 12.8 -1.3
LPG                                pmax  pmax
      comp=Z,156nm,1.4s
LPL   La Plagne         23.45 299 eP     P      09 31 12.9 -1.3
LPL                                pmax  pmax
      comp=Z,84nm,1.3s
LANF  Langenberg        23.57 308 eP     P      09 31 13.8 -1.3
CDF   Champ du Feu      23.73 306 eP     P      09 31 14.6 -2.2
CDF                                pmax  pmax
      comp=Z,162nm,1.4s
ECH   Echery            23.76 306 eP     P      09 31 15.3 -1.6
      comp=Z,257nm,1.4s
ECH   Echery            23.76 306 eP     P      09 31 15.3 -1.6
ECH                                pmax  pmax
      comp=Z,257nm,1.4s
ECH   Echery            23.76 306 eP     P      09 31 15.3 -1.6
      comp=Z,257nm,1.4s
WSAR  Wadi Sarin        23.86 120  P     P      09 31 19.4 +1.4
      comp=Z,13nm,1.1s,baz=0.2,slow=12,SNR=4.6
WSAR                               LR    LR     09 43 12.6
      comp=Z,432nm,18.5s,baz=340,slow=43
ORIF  Oris-en-Rattie    23.97 297 eP     P      09 31 18.1 -0.9
ORIF                               pmax  pmax
      comp=Z,83nm,1.2s
ARU   Arti              24.00  31  P     P      09 31 19.2  0.0
      comp=Z,4.2nm,0.6s,baz=219,slow=7.0,SNR=12
ARU   Arti              24.00  31 eP     P      09 31 17.8 -1.3
      comp=Z,36nm,1.2s
ARU   Arti              24.00  31d iP    P      09 31 19.1  0.0
ARU                                             09 31 47.2
ARU                                PPP   PPP    09 31 58.2
ARU                                S     S      09 35 37.3 +1.4
ARU                                SS    SnSn   09 36 18.5 +2.6
ARU                                pmax  pmax
      comp=Z,55nm,2.5s
CABF  La Chapelle       24.09 302 eP     P      09 31 19.7 -0.5
CABF                               pmax  pmax
      comp=Z,136nm,1.4s
HAU   Haudompre         24.23 305 eP     P      09 31 18.4 -3.0
HAU                                pmax  pmax
      comp=Z,49nm,1.0s
FINES FINESS Array B    24.75 348  P     P      09 31 25.6 -0.3
      comp=Z,6.3nm,0.6s,baz=138,slow=8.9,SNR=21
FINES                              LR    LR     09 43 05.7
      comp=Z,229nm,19.0s,baz=186,slow=41
FINES FINESS Array B    24.75 348 i P    P      09 31 25.8 -0.1
FINES                              pmax  pmax
      comp=Z,6.0nm,0.6s
PRGR  Permogore         24.78  11 eP     P      09 31 25.4 -0.7
PRGR                               pmax  pmax
      comp=Z,36nm,1.0s
WLF   Walferdange       24.81 309 ⇓P     P      09 31 25.4 -1.2
      comp=Z,15nm,1.5s
WLF   Walferdange       24.81 309 eP     P      09 31 24.7 -1.9
      comp=Z,33nm,1.4s
WLF   Walferdange       24.81 309 eP     P      09 31 24.7 -1.9
WLF                                pmax  pmax
      comp=Z,33nm,1.4s
VIVF  Saint-Julien-l    24.81 297 eP     P      09 31 25.3 -1.4
VIVF                               pmax  pmax
      comp=Z,53nm,1.2s
SVE   Sverdlovsk        25.13  32⇑iP     P      09 31 31.3 +1.9
SVE                                pmax  pmax
      comp=Z,61nm,1.5s
MEM   Membach           25.20 311 ⇑P     P      09 31 29.5 -0.6
BCLA  Clavier           25.56 310 ⇑P     P      09 31 33.0 -0.4
      comp=Z,13nm,1.4s
SMF   Signal de Mont    25.62 301 eP     P      09 31 32.0 -2.0
SMF                                pmax  pmax
      comp=Z,103nm,1.2s
DOU   Dourbes           25.90 309 ⇓P     P      09 31 35.0 -1.5
      comp=Z,15nm,1.5s
SSF   Saint Saulge      25.91 302 eP     P      09 31 34.8 -1.8
SSF                                pmax  pmax
      comp=Z,78nm,1.4s
AVF   Avril sur Loir    25.98 301 eP     P      09 31 35.1 -2.1
AVF                                pmax  pmax
      comp=Z,145nm,1.4s
BAIF  Baives            26.13 309 eP     P      09 31 37.2 -1.3
BAIF                               pmax  pmax
      comp=Z,68nm,1.2s
IUG   Iuzhnay           26.15  69 i P    P      09 31 39.7 +0.8
      comp=Z,18nm,1.2s
IUG                                LR    LR     09 45 09.8
      comp=Z,44nm,12.4s
UCC   Uccle             26.25 311 ⇓P     P      09 31 38.6 -1.0
KK31  Karatay Array     26.49  67 eP     P      09 31 42.4 +0.5
KK31  Karatay Array     26.49  67 i P    P      09 31 41.6 -0.4
KK31                               pmax  pmax
      comp=Z,33nm,1.0s
KK31  Karatay Array     26.49  67 eP     P      09 31 42.4 +0.5
KKAR  Karatay Array     26.49  67 eP     P      09 31 42.7 +0.7
KKAR  Karatay Array     26.49  67 eP     P      09 31 42.7 +0.7
KBL   Kabul             26.52  87 eP     P      09 31 41.5 -1.0
      comp=Z,61nm,1.4s
KBL   Kabul             26.52  87 eP     P      09 31 41.5 -1.0
KBL                                pmax  pmax
      comp=Z,61nm,1.4s
KBL   Kabul             26.52  87 eP     P      09 31 41.5 -1.0
      comp=Z,61nm,1.4s
ATD   Arta Tunnel       26.57 166  LR    LR     09 40 53.5
      comp=Z,345nm,18.2s,baz=340,slow=34
TCF   Toulx Ste Croi    26.69 300 eP     P      09 31 42.0 -1.7
TCF                                pmax  pmax
      comp=Z,28nm,1.2s
HFS   Hagfors           26.80 335  P     P      09 31 44.5  0.0
      comp=Z,7.6nm,0.8s,baz=139,slow=9.5,SNR=11
HFS                                LR    LR     09 44 25.9
      comp=Z,440nm,19.3s,baz=135,slow=41
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RJF   Les Rejaudoux     27.08 298 eP     P      09 31 45.7 -1.5
RJF                                pmax  pmax
      comp=Z,34nm,1.2s
LFF   La Frestale       27.60 297 eP     P      09 31 50.2 -1.7
MNAS  Manas             27.97  68  P     P      09 31 55.8 +0.4
MNAS                               pmax  pmax
      comp=Z,29nm,1.4s
NC602 NORSAR Array S    27.97 334 eP     P      09 31 54.4 -0.6
BRVK  Borovoye          28.11  46 eP     P      09 31 55.9 -0.4
      comp=Z,23nm,1.4s
BRVK  Borovoye          28.11  46  P     P      09 31 57.4 +1.1
      SNR=12
BRVK  Borovoye          28.11  46ceP     P      09 31 56.8 +0.5
BRVK                               pmax  pmax
      comp=Z,61nm,1.7s
BVA0  Borovoye Array    28.16  46 i P    P      09 31 56.8  0.0
BVA0                               pmax  pmax
      comp=Z,21nm,1.3s
BVAR  Borovoye Array    28.16  46  P     P      09 31 57.8 +1.0
      comp=Z,5.8nm,0.9s,baz=247,slow=5.8,SNR=28
BVAR                               PcP   PcP    09 35 10.6 +0.2
      comp=Z,2.8nm,0.9s,baz=289,slow=4.5,SNR=4.5
BVAR                               LR    LR     09 45 16.2
      comp=Z,264nm,18.2s,baz=260,slow=41
NAO01 NORSAR Array S    28.28 334 eP     P      09 31 57.2 -0.5
NB201 NORSAR Array S    28.28 334 eP     P      09 31 56.9 -0.9
NB2   NORSAR Subarra    28.30 334  P     P      09 31 56.7 -1.3
      comp=Z,8.2nm,1.1s,baz=134,slow=9.3
NOA   NORSAR Array B    28.30 334  P     P      09 31 57.1 -0.8
      comp=Z,2.5nm,0.9s,baz=129,slow=9.6,SNR=7.7
NOA                                LR    LR     09 45 12.5
      comp=Z,353nm,18.3s,baz=145,slow=41
MFF   Saint Martin d    28.34 300 eP     P      09 31 56.2 -2.3
MFF                                pmax  pmax
      comp=Z,37nm,1.3s
NC303 NORSAR Array S    28.38 335 eP     P      09 31 58.3 -0.4
LDF   La Druitiere      28.57 304 eP     P      09 32 01.5 +1.0
LDF                                pmax  pmax
      comp=Z,19nm,1.4s
BRZS  Berezniki         28.72  53 eP     P      09 32 01.6 -0.2
      comp=Z,13nm,1.5s
BRZS                               LR    LR     09 45 10.9
      comp=Z,233nm,14.4s
FLN   La Foliniere      28.84 305 eP     P      09 32 03.1 +0.3
FLN                                pmax  pmax
      comp=Z,26nm,1.6s
AML   Almayashu         28.87  69  P     P      09 32 05.9 +2.2
      SNR=14
EKS2  Erkin-Say         28.90  68  P     P      09 32 05.4 +1.7
      SNR=23
SFK   Sufi-Kurgan       28.92  74  P     P      09 32 04.7 +0.7
SFK                                pmax  pmax
      comp=Z,41nm,1.3s
GRR   Gorron            29.03 304 eP     P      09 32 02.0 -2.5
GRR                                pmax  pmax
      comp=Z,36nm,1.2s
BTLS  Baital            29.08  63 eP     P      09 32 05.4 +0.4
      comp=Z,8.7nm,1.2s
BTLS                               LR    LR     09 45 13.6
      comp=Z,82nm,13.5s
AAK   Ala-Archa         29.43  68  P     P      09 32 09.7 +1.3
      comp=Z,7.2nm,0.7s,baz=252,slow=8.9,SNR=24
AAK                                PcP   PcP    09 35 15.2 +1.2
      comp=Z,1.5nm,0.3s,baz=212,slow=6.2,SNR=3.7
AAK                                LR    LR     09 45 45.4
      comp=Z,329nm,19.6s,baz=270,slow=40
AAK   Ala-Archa         29.43  68  P     P      09 32 10.0 +1.6
      SNR=9.1
AAK   Ala-Archa         29.43  68 eP     P      09 32 09.0 +0.6
      comp=Z,52nm,1.5s
AAK                                PcP   PcP    09 35 15.2 +1.2
AAK   Ala-Archa         29.43  68  P     P      09 32 09.4 +1.0
AAK                                pmax  pmax
      comp=Z,40nm,1.5s
AAK   Ala-Archa         29.43  68 eP     P      09 32 09.0 +0.6
      comp=Z,52nm,1.5s
FRU   Bishkek           29.51  68 eP     P      09 32 10.5 +1.6
FRU                                pmax  pmax
      comp=Z,124nm,1.6s
CHMS  Chumysh           29.60  67  P     P      09 32 11.3 +1.6
      SNR=21
KZA   Kyzart            30.03  69  P     P      09 32 16.3 +2.3
      SNR=17
APA   Apatity           30.10 358⇑iP     P      09 32 04.5 -9.3
APA                                pmax  pmax
      comp=Z,6.0nm,0.9s
APA                                MLR   MLR
      comp=Z,700nm,12.0s
NIL   Nilore            30.12  86 eP     P      09 32 14.5 +0.1
      comp=Z,45nm,1.4s
NIL   Nilore            30.12  86 eP     P      09 32 14.5 +0.1
NIL                                pmax  pmax
      comp=Z,45nm,1.4s
NIL   Nilore            30.12  86 eP     P      09 32 14.5 +0.1
      comp=Z,45nm,1.4s
TKM2  Tokmak 2          30.23  67  P     P      09 32 15.7 +0.2
      SNR=26
TKM2  Tokmak 2          30.23  67  P     P      09 32 16.6 +1.1
TKM2                               pmax  pmax
      comp=Z,35nm,1.4s
TAM   Tamanrasset       30.29 250 eP     P      09 32 15.8 -0.3
      comp=Z,42nm,1.2s
TAM   Tamanrasset       30.29 250 eP     P      09 32 15.8 -0.3
TAM                                pmax  pmax
      comp=Z,42nm,1.2s
TAM   Tamanrasset       30.29 250 eP     P      09 32 15.8 -0.3
      comp=Z,42nm,1.2s
QUIF  Quistinic         30.51 303 eP     P      09 32 15.1 -2.5
QUIF                               pmax  pmax
      comp=Z,41nm,1.4s
SESP  Santiago Espad    30.58 283  P     P      09 32 18.0 -0.6
ROSF  Rostrenen         30.62 303 eP     P      09 32 15.9 -2.7
ROSF                               pmax  pmax
      comp=Z,45nm,1.5s
KUU   Kurty             30.72  65⇑iP     P      09 32 20.8 +1.1
      comp=Z,53nm,1.3s
KUU                               eS     S      09 37 24.1 +1.6
KUU                                LR    LR     09 46 21.7
      comp=Z,312nm,13.6s
ULHL  Ulahol            30.75  69  P     P      09 32 22.3 +2.2
      SNR=25
KSH   Kashi             30.88  74  P     P      09 32 20.8 -0.4
KSH                                sP    sP     09 32 27.1 +1.7
KSH                                PP    PnPn   09 33 20.5 -0.9
KSH                               ePcP   PcP    09 35 17.9 +0.1
KSH                                S     S      09 37 22.8 -2.4
KSH                                SS    SnSn   09 39 03.8 -0.4
KSH                                pmax  pmax
      comp=Z,33nm,1.3s
KSH                                pmax  pmax
      comp=Z,170nm,5.2s
KSH                                LR    LR
      comp=Z,340nm,12.7s
KSH                                LR    LR
      comp=Z,420nm,16.2s
AAA   Alma-Ata          31.18  67 eP     P      09 32 25.3 +1.7
      comp=Z,41nm,1.4s
AAA                                LR    LR     09 46 01.3
      comp=Z,173nm,17.9s
MDOK  Medeo             31.27  67 eP     P      09 32 25.6 +1.0
      comp=Z,260nm,1.4s
MDOK                               LR    LR     09 46 07.7
      comp=Z,124nm,19.4s
ES19  SONSECA Array     31.34 287 eP     P      09 32 24.1 -1.1
ES19  SONSECA Array     31.34 287 eP     P      09 32 24.0 -1.1
ESDC  Sonseca Array     31.39 287  P     P      09 32 23.7 -1.9
      comp=Z,14nm,1.1s,baz=73,slow=9.1,SNR=44
ESDC                               LR    LR     09 45 49.8
      comp=Z,188nm,19.4s,baz=45,slow=38
ESLA  Sonseca Array     31.39 287 eP     P      09 32 23.5 -2.1
      comp=Z,20nm,1.1s
ESLA  Sonseca Array     31.39 287 eP     P      09 32 23.5 -2.1
      comp=Z,20nm,1.1s
KDJ   Kajisay           31.45  69 eP     P      09 32 27.5 +1.2
      comp=Z,36nm,1.1s
KDJ   Kajisay           31.45  69  P     P      09 32 27.5 +1.2
KDJ                                pmax  pmax
      comp=Z,36nm,1.1s
KDJ   Kajisay           31.45  69 eP     P      09 32 27.5 +1.2
      comp=Z,36nm,1.1s
PAB   San Pablo         31.71 286 eP     P      09 32 26.7 -1.7
      comp=Z,37nm,1.4s
PAB   San Pablo         31.71 286 eP     P      09 32 26.7 -1.7
PAB                                pmax  pmax
      comp=Z,37nm,1.4s
PAB   San Pablo         31.71 286 eP     P      09 32 26.7 -1.7
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      comp=Z,37nm,1.4s
EKA   Eskdalemuir Ar    31.95 317  P     P      09 32 28.3 -1.9
      comp=Z,2.1nm,0.6s,baz=122,slow=7.9,SNR=6.5
EKA                                LR    LR     09 46 37.2
      comp=Z,165nm,21.1s,baz=165,slow=39
SATY  Saty              32.27  67 eP     P      09 32 34.9 +1.4
      comp=Z,36nm,1.3s
SATY                              eS     S      09 37 48.7 +1.7
SATY                               LR    LR     09 47 23.9
      comp=Z,94nm,14.7s
ZHN   Zhinishke         32.29  67 eP     P      09 32 34.8 +1.3
      comp=Z,12nm,1.2s
KURBB Kurchatov Arra    32.53  53  P     P      09 32 36.1 +0.8
      comp=Z,19nm,1.0s,baz=267,slow=8.8,SNR=78
KURBB                              PcP   PcP    09 35 22.0 +0.1
      comp=Z,4.2nm,0.9s,baz=271,slow=3.3,SNR=15
KURBB                              ScP   ScP    09 39 06.6 +0.8
      comp=Z,0.5nm,0.8s,baz=265,slow=4.6,SNR=6.7
ARCES ARCESS Array B    32.56 353  P     P      09 32 35.4 -0.1
      comp=Z,4.1nm,0.7s,baz=161,slow=7.7,SNR=12
ARCES ARCESS Array B    32.56 353 eP     P      09 32 36.5 +1.0
ARCES ARCESS Array B    32.56 353 eP     P      09 32 36.5 +1.0
KURK  Kurchatov         32.59  53 eP     P      09 32 36.4 +0.4
      comp=Z,46nm,1.1s
KURK                               PcP   PcP    09 35 22.0 -0.1
KURK                               ScP   ScP    09 39 06.6 +0.6
KURK  Kurchatov         32.59  53  P     P      09 32 37.4 +1.4
      SNR=20
KURK  Kurchatov         32.59  53 eP     P      09 32 36.4 +0.4
KURK                                            09 35 22.0
KURK                               pmax  pmax
      comp=Z,47nm,1.1s
UZB   Uzynbulak         32.72  67 eP     P      09 32 37.8 +0.4
      comp=Z,9.3nm,1.7s
HORN  Hornachuelos      32.73 283  P     P      09 32 35.9 -1.4
SHLS  Shalkode          33.04  67 eP     P      09 32 43.8 +3.7
      comp=Z,7.8nm,0.9s
MVO   Moncorvo          33.48 290 eP     P      09 32 42.6 -1.3
      comp=Z,22nm,1.2s
MVO                               eS     S      09 38 08.7 +3.1
MVO   Moncorvo          33.48 290 eLR    LR     09 48 16.4
      comp=Z,104nm,16.0s
MVO   Moncorvo          33.48 290 eP     P      09 32 42.6 -1.3
SEM   Semipalatinsk     33.59  53 eP     P      09 32 46.2 +1.2
      comp=Z,14nm,1.2s
MDT   Midelt            33.63 274  LR    LR     09 46 54.7
      comp=Z,125nm,21.7s,baz=92,slow=37
PVRL  Vila Real         33.98 290 eP     P      09 32 46.6 -1.6
      comp=Z,27nm,1.6s
MTE   Manteigas         33.98 289 eP     P      09 32 47.5 -0.8
      comp=Z,66nm,1.2s
MTE   Manteigas         33.98 289 eLR    LR     09 46 54.5
      comp=Z,269nm,16.0s
MTE   Manteigas         33.98 289 eP     P      09 32 46.4 -2.0
      comp=Z,48nm,1.2s
POLO  Lamas de Olo      34.02 290 eP     P      09 32 48.4 -0.2
POLO  Lamas de Olo      34.02 290 eP     P      09 32 48.4 -0.2
PBAR  Barrancos         34.03 285 eP     P      09 32 47.5 -1.1
      comp=Z,110nm,1.5s
PBAR  Barrancos         34.03 285 eP     P      09 32 47.5 -1.1
PCBR  Castelo Branco    34.03 288 eP     P      09 32 47.7 -0.9
      comp=Z,75nm,1.3s
PCBR  Castelo Branco    34.03 288 eP     P      09 32 47.7 -0.9
PMRV  Marv??o           34.04 287 eP     P      09 32 47.9 -0.9
      comp=Z,57nm,1.7s
PMRV                              eS     S      09 38 16.1 +1.8
PMRV                              eLR    LR     09 45 16.3
      comp=Z,171nm,18.0s
PGAV  Gavieira, Arco    34.29 292 eP     P      09 32 50.5 -0.5
      comp=Z,55nm,1.6s
PGAV  Gavieira, Arco    34.29 292 eLR    LR     09 47 26.3
      comp=Z,183nm,16.0s
PGAV  Gavieira, Arco    34.29 292 eP     P      09 32 50.5 -0.5
PESTR Estremoz          34.31 286 eP     P      09 32 49.6 -1.5
      comp=Z,44nm,1.7s
PESTR                             eS     S      09 38 19.3 +1.0
PESTR Estremoz          34.31 286 eP     P      09 32 48.9 -2.2
      comp=Z,24nm,1.2s
PESTR Estremoz          34.31 286 eP     P      09 32 48.9 -2.2
      comp=Z,24nm,1.2s
MAKZ  Makanchi          34.62  60 eP     P      09 32 54.3 +0.6
      comp=Z,11nm,0.8s
MAKZ  Makanchi          34.62  60 eP     P      09 32 54.3 +0.6
MAKZ                               pmax  pmax
      comp=Z,11nm,0.8s
EVO   Evora             34.70 286 eP     P      09 32 53.2 -1.2
      comp=Z,18nm,1.4s
EVO   Evora             34.70 286 eP     P      09 32 53.2 -1.2
PBEJ  Beja              34.70 285 eP     P      09 32 53.8 -0.7
      comp=Z,80nm,1.6s
PBEJ  Beja              34.70 285 eP     P      09 32 53.8 -0.7
PVAQ  Vaqueiros         34.73 284 eP     P      09 32 53.1 -1.6
      comp=Z,76nm,1.7s
PVAQ  Vaqueiros         34.73 284 eLR    LR     09 48 37.2
      comp=Z,106nm,18.0s
PVAQ  Vaqueiros         34.73 284 eP     P      09 32 53.1 -1.6
PMTG  Montargil         34.75 287 eP     P      09 32 52.6 -2.3
      comp=Z,46nm,1.7s
PMTG                              eS     S      09 38 39.3  +14
PMTG  Montargil         34.75 287 eP     P      09 32 52.6 -2.3
PCAS  Casmilo, Conde    34.77 288 eSS    SS     09 41 01.4 +5.5
PTOM  Tomar             34.78 288 eP     P      09 32 54.3 -0.8
      comp=Z,93nm,1.5s
PTOM  Tomar             34.78 288 eP     P      09 32 54.3 -0.8
MK31  Makanchi Array    34.83  60 eP     P      09 32 56.0 +0.5
MK31  Makanchi Array    34.83  60 eP     P      09 32 56.0 +0.5
MKAR  Makanchi Array    34.83  60  P     P      09 32 56.2 +0.7
      comp=Z,30nm,1.1s,baz=272,slow=7.4,SNR=60
MKAR                               PcP   PcP    09 35 28.2 -0.3
      comp=Z,2.1nm,0.8s,baz=284,slow=5.8,SNR=4.1
MKAR                               ScP   ScP    09 39 15.3 +1.3
      comp=Z,0.8nm,0.9s,baz=318,slow=1.9,SNR=3.4
MKAR                               LR    LR     09 49 07.1
      comp=Z,270nm,21.0s,baz=264,slow=40
MKAR  Makanchi Array    34.83  60 eP     P      09 32 56.2 +0.7
      comp=Z,198nm,1.3s
MKAR                               PcP   PcP    09 35 28.2 -0.3
MKAR                               ScP   ScP    09 39 15.2 +1.3
MKAR  Makanchi Array    34.83  60 eP     P      09 32 56.2 +0.7
MKAR                                            09 35 28.2
MKAR                               pmax  pmax
      comp=Z,198nm,1.3s
MK01  Makanchi Array    34.84  60 eP     P      09 32 55.8 +0.2
PCVE  Castro Verde      34.93 284 eP     P      09 32 54.8 -1.6
      comp=Z,72nm,1.4s
PCVE  Castro Verde      34.93 284 eP     P      09 32 54.8 -1.6
PBDV  Barranco-do-Ve    34.94 283 eP     P      09 32 54.8 -1.7
      comp=Z,86nm,1.4s
PBDV  Barranco-do-Ve    34.94 283 eP     P      09 32 54.8 -1.7
MESJ  Messejana         35.02 284 eP     P      09 32 55.5 -1.7
      comp=Z,49nm,1.3s
MESJ  Messejana         35.02 284 eP     P      09 32 55.5 -1.7
PNCL  Nicolau / Gran    35.19 285 eP     P      09 32 57.6 -1.1
      comp=Z,34nm,1.4s
PNCL  Nicolau / Gran    35.19 285 eP     P      09 32 57.6 -1.1
PTEO  Sao Teotonio      35.48 284 eP     P      09 33 00.2 -0.9
      comp=Z,82nm,1.4s
PMST  Lisbon--Monsan    35.55 286 eP     P      09 33 01.0 -0.8
      comp=Z,154nm,1.3s
PMST  Lisbon--Monsan    35.55 286 eP     P      09 33 01.0 -0.8
NVS   Novosibirsk       35.96  46 eP     P      09 33 05.6 +0.6
NVS                               e             09 34 27.6
NVS                                pmax  pmax
      comp=Z,35nm,1.3s
NVS                                pmax  pmax
      comp=N,7.0nm,1.2s
NVS                                pmax  pmax
      comp=E,17nm,1.2s
ZSN   Zaisan            36.56  59 eP     P      09 33 11.7 +1.3
      comp=E,3.0nm,1.3s
ZSN                               eS     S      09 38 54.4 +1.5
ZSN                                LR    LR     09 51 19.9
      comp=E,26nm,13.2s
ZAA0  Zalesovo Array    36.76  48 eP     P      09 33 12.5 +0.6
      comp=E,32nm,1.4s
ZALV  Zalesovo Beam     36.76  48  P     P      09 33 10.8 -1.1
      comp=E,4.1nm,0.3s,baz=260,slow=8.6,SNR=3.6
ZALV                               LR    LR     09 50 55.9
      comp=E,105nm,19.0s,baz=254,slow=40
DGZ   Jazzator, Alta    38.20  55 i P    P      09 33 24.9 +0.6
DGZ                                pmax  pmax
      comp=Z,31nm,1.3s
WMQ   Urumqi            38.90  64  P     P      09 33 31.9 +1.7
WMQ                                pP    sP     09 33 35.8 +1.3
WMQ                                sP    pP     09 33 38.8 +5.5
WMQ                                S     S      09 39 29.0 +0.5
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WMQ                                 pmax   pmax
      comp=Z,120nm,1.5s
WMQ                                 pmax   pmax
      comp=Z,380nm,3.7s
WMQ                                 LR     LR
      comp=Z,1µm,15.9s
WMQ                                 LR     LR
      comp=Z,1µm,17.7s
WMQ                                 LR     LR
      comp=Z,610nm,16.9s
TOA0  Torodi Ar. Sit    39.30 241  eP      P      09 33 33.0 -0.7
      comp=Z,49nm,1.0s
TORD  Torodi Ar. Bea    39.30 241   P      P      09 33 31.7 -2.0
      comp=Z,26nm,0.9s,baz=46,slow=8.3
TORD                                PcP    PcP    09 35 40.0 -2.5
      baz=56,slow=5.9
TORD                                LR     LR     09 54 02.6
      comp=Z,184nm,18.3s,baz=5.0,slow=43
PYUN  Piuthan           39.96  90  eP      P      09 33 39.8 +0.4
      comp=Z,167nm,1.3s
DANN  Dangsing          40.46  89  eP      P      09 33 44.4 +0.7
      comp=Z,221nm,1.1s
KOLN  Koldanda          40.59  90  eP      P      09 33 45.0 +0.4
      comp=Z,91nm,1.3s
JMIC  Jan Mayen         40.70 339   LR     LR     09 49 28.3
      comp=Z,157nm,20.6s,baz=82,slow=35
GKN   Gorkha            41.31  89  eP      P      09 33 50.9 +0.4
      comp=Z,190nm,1.1s
SPITS Spitsbergen Ar    41.58 354   P      P      09 33 50.7 -1.3
      comp=Z,17nm,0.8s,baz=140,slow=11,SNR=6.3
SPITS                               LR     LR     09 53 45.9
      comp=Z,149nm,19.4s,baz=270,slow=40
DMN   Daman             41.86  89  eP      P      09 33 55.9 +0.8
      comp=Z,180nm,1.2s
KKN   Kakani            41.91  89  eP      P      09 33 55.8 +0.3
      comp=Z,84nm,1.1s
HYB   Hyderabad         42.04 107  i P     P      09 33 55.0 -1.4
PKIN  Phulchoki         42.10  89  eP      P      09 33 57.3 +0.2
      comp=Z,198nm,1.5s
HVS   Khovu-Aksy        42.13  52  i P     P      09 33 57.2 +0.3
HVS                                 pmax   pmax
      comp=Z,28nm,0.8s
GUN   Gumba             42.34  88  eP      P      09 33 59.8 +0.7
      comp=Z,210nm,1.2s
KOWA  Kowa              42.49 248   P      P      09 33 59.9 -0.2
      comp=Z,12nm,0.7s,baz=47,slow=9.7,SNR=36
KOWA                                LR     LR     09 54 41.8
      comp=Z,126nm,18.4s,baz=60,slow=40
KOWA  Kowa              42.49 248  eP      P      09 33 58.0 -2.1
      comp=Z,18nm,0.8s
JIRN  Jiri              42.69  88  eP      P      09 34 02.6 +0.5
      comp=Z,320nm,1.7s
RAMN  Ramite            43.34  89  eP      P      09 34 07.6 +0.4
      comp=Z,163nm,1.0s
ODAN  Odare             44.01  89  eP      P      09 34 12.8 +0.3
      comp=Z,215nm,1.4s
LSA   Lhasa             45.74  83  eP      P      09 34 29.0 +2.4
      comp=Z,24nm,1.1s
LSA   Lhasa             45.74  83  eP      P      09 34 29.0 +2.4
LSA                                 pmax   pmax
      comp=Z,24nm,1.1s
LSA   Lhasa             45.74  83  eP      P      09 34 29.0 +2.4
      comp=Z,24nm,1.1s
MOY   Mondy             46.61  51  eP      P      09 34 34.5 +1.8
MOY                                 pmax   pmax
      comp=Z,63nm,1.6s
PSMN  Pico do Norte,    48.08 289  eP      P      09 34 43.7 -0.5
      comp=Z,51nm,1.1s
PSMN  Pico do Norte,    48.08 289  eP      P      09 34 43.7 -0.5
      comp=Z,51nm,1.1s
PSMA  Santa Maria       48.13 289  eP      P      09 34 44.4 -0.2
      comp=Z,146nm,1.3s
CMLA  Cha da Macela     48.16 290  i P     P      09 34 45.6 +0.7
CMLA  Cha da Macela     48.16 290  i P     P      09 34 45.6 +0.7
SHL   Shillong          48.18  88  eP      P      09 34 45.9 +0.6
      comp=Z,21nm,0.9s
SHL   Shillong          48.18  88  eP      P      09 34 45.9 +0.6
SHL                                 pmax   pmax
      comp=Z,21nm,0.9s
TLY   Talaya            48.23  50  eP      P      09 34 47.0 +1.7
      comp=Z,48nm,1.2s
TLY   Talaya            48.23  50  eP      P      09 34 45.3 +0.1
TLY                                eS      S      09 41 46.6 +2.0
TLY                                eSS     ScS    09 44 35.7 -2.5
TLY                                 pmax   pmax
      comp=Z,43nm,1.1s
TLY                                 MLR    MLR
      comp=Z,220nm,19.0s
DBIC  Dimbokro          48.41 241   P      P      09 34 45.5 -1.5
      comp=Z,12nm,0.7s,baz=21,slow=9.9,SNR=12
DBIC                                LR     LR     09 58 48.4
      comp=Z,80nm,18.1s,baz=18,slow=41
DBIC  Dimbokro          48.41 241  eP      P      09 34 46.4 -0.6
      comp=Z,22nm,0.9s
DBIC  Dimbokro          48.41 241  eP      P      09 34 46.4 -0.6
DBIC                                pmax   pmax
      comp=Z,22nm,0.9s
IRK   Irkutsk           48.51  50  eP      P      09 34 47.7 +0.3
IRK                                 pmax   pmax
      comp=Z,61nm,1.8s
TIC   Toumodi           48.54 241  eP      P      09 34 46.2 -1.8
KIC   Kosan Boka        48.55 241  eP      P      09 34 46.3 -1.8
      comp=Z,192nm,1.4s
GTA   Gaotai            48.78  67   P      P      09 34 51.0 +1.2
GTA                                 pP     sP     09 34 55.4 +1.4
GTA                                 sP     pP     09 34 58.0 +5.2
GTA                                 PcP    PcP    09 36 16.3 +1.7
GTA                                 S      S      09 41 58.8 +6.0
GTA                                 sS     sS     09 42 07.6  +10
GTA                                 pmax   pmax
      comp=Z,24nm,1.2s
GTA                                 pmax   pmax
      comp=Z,120nm,5.4s
GTA                                 LR     LR
      comp=Z,190nm,17.5s
GTA                                 LR     LR
      comp=Z,200nm,19.2s
GTA                                 LR     LR
      comp=Z,170nm,19.2s
LIC   Lamto             48.84 241  eP      P      09 34 48.5 -1.8
      comp=Z,209nm,1.6s
PMAN  Manadas           49.76 292  eP      P      09 34 57.2 +0.1
      comp=Z,71nm,0.8s
ROSA  Rosais            49.85 292  eP      P      09 34 58.1 +0.3
      comp=Z,76nm,1.1s
ROSA  Rosais            49.85 292  eP      P      09 34 57.9 +0.1
      comp=Z,104nm,1.4s
SUMG  Summit            50.09 338  eP      P      09 34 59.8 +0.2
      comp=Z,20nm,1.1s
SUMG  Summit            50.09 338  eP      P      09 34 59.8 +0.2
SUMG                                pmax   pmax
      comp=Z,20nm,1.1s
PALK  Pallekele         50.20 116  eP      P      09 35 00.9 +0.2
      comp=Z,21nm,1.1s
PALK  Pallekele         50.20 116  eP      P      09 35 00.9 +0.2
PALK                                pmax   pmax
      comp=Z,21nm,1.1s
SONM  Songino Array     50.84  55   P      P      09 35 06.9 +1.5
      comp=Z,8.4nm,1.0s,baz=283,slow=6.2,SNR=38
SONM                                PcP    PcP    09 36 22.4 +0.4
      comp=Z,2.3nm,0.9s,baz=269,slow=4.8,SNR=4.7
SONM                                LR     LR     09 59 16.0
      comp=Z,1µm,18.1s,baz=262,slow=39
SONA1 Songino Array     50.85  55  eP      P      09 35 06.5 +1.1
BOD   Bodaibo           52.85  41  eP      P      09 35 19.7 -0.3
BOD                                 pmax   pmax
      comp=Z,43nm,1.2s
LZH   Lanzhou           52.95  70  eP      P      09 35 23.8 +2.5
LZH                                 pP     sP     09 35 27.4 +1.8
LZH                                 sP     pP     09 35 29.9 +5.5
LZH                                 PP     PP     09 37 25.6 +4.9
LZH                                 S      S      09 42 54.3 +3.5
LZH                                 SS     SS     09 46 25.9 -3.6
LZH                                 pmax   pmax
      comp=Z,31nm,1.2s
LZH                                 pmax   pmax
      comp=Z,140nm,4.7s
LZH                                 LR     LR
      comp=Z,500nm,11.8s
LZH                                 LR     LR
      comp=Z,830nm,11.9s
LZH                                 LR     LR
      comp=Z,960nm,12.7s
CD2   Chengdu           55.05  75  eP      P      09 35 33.5 -3.1
CD2                                 pmax   pmax
      comp=Z,20nm,0.5s
TIXI  Tiksi             55.61  23  eP      P      09 35 40.1 +0.3
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      comp=Z,12nm,1.1s
TIXI  Tiksi             55.61  23deP      P      09 35 41.9 +2.0
TIXI                                pmax   pmax
      comp=Z,10.0nm,1.1s
HHC   Hu-ho-hao-te      56.67  61  eP      P      09 35 49.3 +1.2
HHC                                 S      S      09 43 40.4 -0.1
HHC                                 ScS    ScS    09 45 34.4 -3.2
HHC                                 pmax   pmax
      comp=Z,34nm,1.1s
HHC                                 pmax   pmax
      comp=Z,220nm,5.1s
HHC                                 LR     LR
      comp=Z,770nm,15.9s
HHC                                 LR     LR
      comp=Z,530nm,17.1s
HHC                                 LR     LR
      comp=Z,730nm,15.8s
KMI   Kunming           56.98  82   P      P      09 35 50.3 -0.4
KMI                                 pP     pP     09 35 52.3 -1.5
KMI                                 sP     sP     09 35 56.0 +1.0
KMI                                 pmax   pmax
      comp=Z,23nm,0.6s
KMI                                 pmax   pmax
      comp=Z,210nm,4.7s
KMI                                 LR     LR
      comp=Z,1µm,12.9s
KMI                                 LR     LR
      comp=Z,550nm,11.8s
KMI                                 LR     LR
      comp=Z,980nm,13.5s
CHTO  Chiang Mai        57.24  91  eP      P      09 35 52.7 +0.4
      comp=Z,14nm,1.2s
CHTO  Chiang Mai        57.24  91  eP      P      09 35 52.7 +0.4
CHTO                                pmax   pmax
      comp=Z,14nm,1.2s
CMMT  Chiang Mai        57.24  91   P      P      09 35 53.9 +1.6
      comp=Z,10nm,1.4s
CMAR  Chiang Mai Arr    57.43  91   P      P      09 35 53.6  0.0
      comp=Z,8.0nm,0.9s,baz=296,slow=8.2,SNR=30
CMAR  Chiang Mai Arr    57.43  91  i P     P      09 35 53.4 -0.2
CMAR                                pmax   pmax
      comp=Z,8.0nm,0.9s
CM01  Chiang Mai Arr    57.46  91  eP      P      09 35 53.0 -0.9
XAN   Xi'an             57.59  70   P      P      09 35 55.5 +0.9
XAN                                 pP     sP     09 36 05.5 +6.6
XAN                                 sP     pP     09 36 08.8  +11
XAN                                 PP     PP     09 37 59.9 -2.2
XAN                                 S      S      09 43 45.1 -7.6
XAN                                 sS     sS     09 44 02.1 +4.3
XAN                                 pmax   pmax
      comp=Z,24nm,1.1s
XAN                                 pmax   pmax
      comp=Z,78nm,4.0s
XAN                                 LR     LR
      comp=Z,390nm,20.1s
XAN                                 LR     LR
      comp=Z,540nm,17.3s
XAN                                 LR     LR
      comp=Z,400nm,18.7s
HIA   Hailar            58.76  50  eP      P      09 36 05.4 +2.8
      comp=Z,69nm,1.3s
YAK   Yakutsk           59.09  33  eP      P      09 36 05.0 +0.4
      comp=Z,16nm,0.9s
YAK   Yakutsk           59.09  33  eP      P      09 36 05.0 +0.4
YAK                                 pmax   pmax
      comp=Z,16nm,0.9s
TSUM  Tsumeb            59.17 201   LR     LR     10 02 03.0
      comp=Z,125nm,18.3s,baz=78,slow=36
GYA   Guiyang           59.40  79  eP      P      09 36 07.3 -0.1
GYA                                 pmax   pmax
      comp=Z,10.0nm,1.0s
ENH   Enshi             59.73  73  eP      P      09 36 11.7 +2.1
      comp=Z,25nm,1.0s
ENH   Enshi             59.73  73  eP      P      09 36 11.7 +2.1
      comp=Z,25nm,1.0s
PBKT  Sadao Pong        60.08  92   P      P      09 36 13.5 +1.5
      comp=Z,18nm,1.2s
BJI   Beijing           60.20  61⇑eP      P      09 36 14.6 +2.0
BJI                                 pmax   pmax
      comp=Z,28nm,1.2s
BJT   Baijiatuau        60.21  61  eP      P      09 36 14.7 +2.0
      comp=Z,54nm,1.5s
BJT   Baijiatuau        60.21  61  eP      P      09 36 14.7 +2.0
BJT                                 pmax   pmax
      comp=Z,54nm,1.5s
ZEA   Zeya              61.25  43  eP      P      09 36 22.0 +2.5
ZEA                                 pmax   pmax
      comp=Z,28nm,1.2s
ZEA                                 MLR    MLR
      comp=Z,300nm,14.0s
ZEA                                 MLR    MLR
      comp=N,200nm,13.0s
ZEA                                 MLR    MLR
      comp=E,200nm,13.0s
SKNT  Sakolnakorn       62.25  89   P      P      09 36 27.9 +1.1
      comp=E,9.4nm,1.6s
CN2   Changchun         64.67  53  eP      P      09 36 42.3 -0.1
CN2                                ePP     PP     09 39 05.9 +1.6
CN2                                eS      S      09 45 19.0 -3.4
CN2                                 LR     LR
      comp=E,320nm,17.0s
CN2                                 LR     LR
      comp=E,320nm,17.0s
CN2                                 LR     LR
      comp=E,460nm,17.0s
KLR   Kul'dur           65.83  46ceP      P      09 36 50.0 +0.1
NJ2   Nanjing           65.87  67  eP      P      09 36 48.3 -2.1
NJ2                                 pmax   pmax
      comp=E,16nm,0.5s
PSI   Prapat            66.73 105  eP      P      09 36 55.8 -0.5
      comp=E,34nm,1.1s
PSI   Prapat            66.73 105  eP      P      09 36 55.8 -0.5
PSI                                 pmax   pmax
      comp=Z,34nm,1.1s
SCHQ  Schefferville     67.03 322   LR     LR     10 05 34.7
      comp=Z,69nm,21.1s,baz=50,slow=35
SCHQ  Schefferville     67.03 322  eP      P      09 36 56.4 -1.1
      comp=Z,8.4nm,0.7s
IPM   Ipoh              67.29 102  eP      P      09 36 59.5 -0.3
      comp=Z,33nm,1.2s
SEY   Seymchan          67.64  26  i P     P      09 37 02.8 +1.6
USRK  Ussuriysk Ar.     68.55  50   P      P      09 37 07.9 +0.7
      comp=Z,6.1nm,0.9s,baz=298,slow=3.1
MA2   Magadan           69.18  30  i P     P      09 37 12.4 +1.5
MA2                                 pmax   pmax
      comp=Z,20nm,1.1s
KS01  Wonju Array Si    69.46  58  eP      P      09 37 13.1 +0.1
KS15  Wonju Array Si    69.47  58  eP      P      09 37 12.9 -0.1
KSAR  Wonju Array Be    69.47  58   P      P      09 37 13.2 +0.1
KSAR  Wonju Array Be    69.47  58   P      P      09 37 13.2 +0.1
KSRS  Korea Array       69.49  58   P      P      09 37 13.2  0.0
      comp=Z,15nm,1.0s,baz=294,slow=5.6,SNR=40
MYKOM Kota Tinggi       71.16 103  eP      P      09 37 23.8 +0.1
      comp=Z,23nm,1.0s
PQI   Presque Isle      72.28 316  eP      P      09 37 29.6 -0.4
      comp=Z,16nm,1.3s
YSS   Yuzh-Sakhalins    73.22  43  eP      P      09 37 37.3 +1.7
YSS                                e*SP    sP     09 37 44.6 +4.7
YSS                                e              09 37 58.8
YSS                                e              09 40 18.4
YSS                                eS      SKiKP  09 47 07.9 +0.5
YSS                                 pmax   pmax
      comp=Z,20nm,1.1s
YSS                                 MLR    MLR
      comp=Z,200nm,15.0s
PKME  Peaks-Kenny Pk    73.83 315   P      P      09 37 37.5 -1.6
      baz=53
PKME  Peaks-Kenny Pk    73.83 315  eP      P      09 37 38.8 -0.4
      comp=Z,23nm,1.4s
TOLK  Toolik Lake Re    74.02   2  eP      P      09 37 40.7 +0.8
      comp=Z,7.1nm,1.0s
ASAJ  Asahikawa         74.86  46   P      P      09 37 44.6 -0.7
      comp=Z,5.5nm,0.9s,baz=346,slow=12,SNR=6.5
ASAJ                                LR     LR     10 14 12.3
      comp=Z,163nm,19.2s,baz=289,slow=39
ASAJ  Asahikawa         74.86  46  eP      P      09 37 46.7 +1.4
      comp=Z,14nm,1.1s
COLD  Coldfoot          75.41   3  eP      P      09 37 47.8 -0.1
      comp=Z,9.1nm,1.1s
LBNH  Lisbon            75.94 315   P      P      09 37 49.4 -2.1
      baz=51
KSM   Kuching           76.40  99  eP      P      09 37 55.0 +0.5
      comp=Z,25nm,1.5s
HNH   Hanover           76.48 315  eP      P      09 37 54.1 -0.4
      comp=Z,25nm,1.4s
ALFO  Alfred            76.67 318   P      P      09 37 54.0 -1.5
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      baz=50
MJB9  Matsu-Tunnel      76.78  54  eP      P      09 37 57.1 +0.7
      comp=Z,22nm,1.2s
MAJO  Matsushiro        76.79  54  eP      P      09 37 57.0 +0.6
      comp=Z,20nm,1.1s
MAJO  Matsushiro        76.79  54ceP      P      09 37 57.8 +1.4
MAJO                                pmax   pmax
      comp=Z,18nm,1.0s
MAT   Matsushiro        76.79  54   P      P      09 37 57.1 +0.7
MJAR  Matsushiro Arr    76.79  54   P      P      09 37 57.6 +1.2
      comp=Z,9.5nm,1.0s,baz=301,slow=6.0,SNR=32
MJAR                                LR     LR     10 15 09.7
      comp=Z,290nm,18.4s,baz=275,slow=38
LONY  Lake Ozonia       77.16 317   P      P      09 37 56.2 -2.2
      baz=50
BRYW  Bryant College    77.18 313  eP      P      09 37 57.5 -1.0
      comp=Z,36nm,1.4s
YKA   Yellowknife Ar    77.58 347   P      P      09 37 59.7 -0.6
      comp=Z,9.4nm,1.1s,baz=25,slow=6.0,SNR=12
YKA                                 LR     LR     10 13 35.0
      comp=Z,6.5nm,19.2s,baz=22,slow=37
YKA   Yellowknife Ar    77.58 347  i P     P      09 38 02.7 +2.4
YKA                                 pmax   pmax
      comp=Z,5.0nm,0.9s
MLY   Manley            77.58   3  eP      P      09 38 00.3  0.0
      comp=Z,5.2nm,1.0s
MDM   Murphy Dome       77.74   2  eP      P      09 38 02.2 +0.9
      comp=Z,13nm,1.2s
COLA  College           77.84   2  eP      P      09 38 02.1 +0.3
      comp=Z,4.9nm,0.8s
COLA  College           77.84   2   P      P      09 38 02.0 +0.3
COLA                                pmax   pmax
      comp=Z,5.0nm,0.8s
PEMO  Pembroke          77.89 319   P      P      09 38 01.3 -1.1
      baz=48
IL1   Eielson Array     77.96   1  eP      P      09 38 01.9 -0.6
ILAR  Eielson Array     77.96   1   P      P      09 38 02.0 -0.4
      comp=Z,0.5nm,0.9s,baz=340,slow=5.8,SNR=5.5
EGAK  Eagle             77.97 359  eP      P      09 38 02.1 -0.3
      comp=Z,8.1nm,1.1s
CCB   Clear Creek Bu    78.07   2  eP      P      09 38 02.9 -0.1
      comp=Z,4.5nm,1.0s
WRH   Wood River Hil    78.24   2  eP      P      09 38 03.9 -0.1
      comp=Z,4.5nm,0.9s
BPAW  Bear Paw Mtn.     78.50   3  eP      P      09 38 05.2 -0.2
      comp=Z,6.0nm,1.0s
DAWY  Dawson            78.65 358  eP      P      09 38 05.8 -0.5
      comp=Z,12nm,1.4s
SCRK  Sand Creek        78.79   0  eP      P      09 38 06.4 -0.8
      comp=Z,6.0nm,1.0s
RIDG  Independ'e Rid    79.03   1  eP      P      09 38 08.5 +0.1
      comp=Z,12nm,1.0s
CAST  Castle Rocks      79.13   4  eP      P      09 38 09.2 +0.3
      comp=Z,5.8nm,0.8s
BINY  Binghamton        79.52 316   P      P      09 38 09.5 -2.0
      baz=48
JHJ   Hachijo jima 2    79.90  56   LR     LR     10 17 16.8
      comp=Z,169nm,19.0s,baz=290,slow=38
N59A  State Game Lan    80.25 315   P      P      09 38 13.8 -1.6
      baz=48
CLWO  Collingwood       80.31 320   P      P      09 38 15.7  0.0
      baz=46
BWLO  Walkerton         80.97 320   P      P      09 38 18.7 -0.5
      baz=45
SSPA  Standing Stone    81.63 315   P      P      09 38 21.2 -1.6
      baz=47
SSPA  Standing Stone    81.63 315  eP      P      09 38 21.6 -1.2
      comp=Z,12nm,1.2s
M54A  Oil Creek Stat    82.01 317   P      P      09 38 22.6 -2.2
      baz=46
O56A  Blue Knob Stat    82.26 316   P      P      09 38 24.1 -2.1
      baz=46
N54A  Moraine State     82.56 317   P      P      09 38 25.6 -2.1
      baz=46
ULM   Lac du Bonnet     82.96 331   P      P      09 38 28.3 -1.3
      comp=Z,2.5nm,0.7s,baz=19,slow=11,SNR=3.9
ULM                                 LR     LR     10 16 36.7
      comp=Z,72nm,19.1s,baz=7.0,slow=37
ULM   Lac du Bonnet     82.96 331  eP      P      09 38 28.2 -1.3
      comp=Z,5.5nm,1.0s
EYMN  Ely               83.01 328   P      P      09 38 28.0 -1.9
      baz=39
EYMN  Ely               83.01 328  eP      P      09 38 28.6 -1.3
      comp=Z,8.8nm,1.3s
MCWV  Mont Chateau      83.39 316   P      P      09 38 30.0 -2.0
      baz=46
COWI  Conover           83.39 325  eP      P      09 38 30.9 -1.0
      comp=Z,24nm,1.3s
E40A  Wakefield         83.47 326   P      P      09 38 30.4 -2.0
      baz=40,SNR=8.3
C37A  Embarrass         83.48 328   P      P      09 38 30.6 -1.7
      baz=39,SNR=5.4
AAM   Ann Arbor         83.56 320  eP      P      09 38 31.4 -1.4
      comp=Z,14nm,1.0s
AAM   Ann Arbor         83.56 320  eP      P      09 38 31.4 -1.4
AAM                                 pmax   pmax
      comp=Z,14nm,1.0s
B35A  Bob, Littlefor    83.62 329   P      P      09 38 31.0 -2.0
      baz=38,SNR=5.1
B35A  Bob, Littlefor    83.62 329  eP      P      09 38 32.2 -0.8
      comp=Z,9.7nm,1.1s
F41A  Three Lakes       83.66 325   P      P      09 38 31.7 -1.6
      baz=40
F41A  Three Lakes       83.66 325  eP      P      09 38 31.7 -1.6
      comp=Z,7.6nm,0.9s
DLBC  Dease Lake        83.68 353  eP      P      09 38 32.2 -0.9
      comp=Z,7.0nm,1.1s
C36A  Pine Crest Far    83.73 328   P      P      09 38 32.0 -1.6
      baz=38,SNR=5.8
E39A  Mellen            83.82 326   P      P      09 38 32.5 -1.6
      baz=40,SNR=6.0
A33A  Warroad           83.83 330   P      P      09 38 32.5 -1.6
      baz=36,SNR=6.2
B34A  Aery, Baudette    83.89 330   P      P      09 38 32.4 -1.9
      baz=37
F40A  Park Falls        83.98 326   P      P      09 38 32.9 -2.0
      baz=40
D37A  Cotton            84.02 328   P      P      09 38 33.1 -2.0
      baz=38
E38A  The Farm, Brul    84.08 327   P      P      09 38 33.3 -2.1
      baz=39
E38A  The Farm, Brul    84.08 327  eP      P      09 38 34.3 -1.1
      comp=Z,12nm,1.1s
C35A  Jirik Farms, M    84.24 329   P      P      09 38 34.1 -2.1
      baz=37
D36A  Goodland          84.32 328   P      P      09 38 34.8 -1.8
      baz=38
D36A  Goodland          84.32 328  eP      P      09 38 36.0 -0.6
      comp=Z,25nm,1.3s
F39A  Loretta           84.34 326   P      P      09 38 34.9 -1.8
      baz=39
G40A  Rib Lake          84.51 325   P      P      09 38 35.9 -1.7
      baz=40,SNR=6.1
G40A  Rib Lake          84.51 325  eP      P      09 38 36.7 -1.0
      comp=Z,10nm,0.9s
AGMN  Agassiz Nation    84.53 330   P      P      09 38 35.8 -1.8
      baz=36
AGMN  Agassiz Nation    84.53 330  eP      P      09 38 36.8 -0.9
      comp=Z,6.4nm,1.0s
ACSO  Alum Creek Sta    84.69 318   P      P      09 38 36.8 -1.8
      baz=44
ACSO  Alum Creek Sta    84.69 318  eP      P      09 38 37.1 -1.5
      comp=Z,11nm,0.9s
F38A  Pierce - Schro    84.72 327   P      P      09 38 37.0 -1.7
      baz=39,SNR=5.2
H41A  Junction City     84.76 325   P      P      09 38 38.2 -0.7
      baz=40
D35A  Remer             84.77 328   P      P      09 38 36.7 -2.1
      baz=37
E36A  McGregor          84.88 328   P      P      09 38 37.4 -2.0
      baz=38
C33A  Trail             84.93 330   P      P      09 38 37.6 -2.1
      baz=36
G39A  Holcombe          84.93 326   P      P      09 38 37.9 -1.8
      baz=39,SNR=6.8
I42A  Draeger Farm,     84.97 324   P      P      09 38 38.8 -1.1
      baz=40
O50A  Cable             85.09 318   P      P      09 38 38.9 -1.7
      baz=44
H40A  Chili             85.09 325   P      P      09 38 38.1 -2.5
      baz=40
J43A  Natural Harves    85.12 323   P      P      09 38 38.8 -1.9
      baz=41
F37A  Hinrichs Farm,    85.23 327   P      P      09 38 39.3 -1.9
      baz=38
G38A  Ridgeland         85.33 326   P      P      09 38 40.3 -1.4
      baz=39
O49A  Covington         85.44 319   P      P      09 38 40.4 -2.0
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	baz=43,SNR=8.0						
H39A	Augusta	85.45	325	P	P	09 38 40.5	-1.8
	baz=39						
J42A	Columbus	85.50	323	P	P	09 38 41.0	-1.6
	baz=40						
F36A	Milaca	85.51	327	P	P	09 38 40.8	-1.8
	baz=38						
F36A	Milaca	85.51	327	*e*P	P	09 38 41.7	-0.9
	comp=Z,7.7nm,1.1s						
SPMN	Marine on St.	85.70	327	P	P	09 38 41.9	-1.7
	baz=38						
SPMN	Marine on St.	85.70	327	*e*P	P	09 38 42.9	-0.7
	comp=Z,12nm,1.1s						
Q51A	Peebles	85.75	317	P	P	09 38 42.1	-1.9
	baz=44						
I40A	Norwalk	85.76	325	P	P	09 38 42.0	-1.9
	baz=39						
O48A	Farmland	85.82	319	P	P	09 38 42.4	-1.8
	baz=43						
J41A	Loganville	85.89	324	P	P	09 38 42.5	-2.1
	baz=40						
N46A	Monticello	86.16	320	P	P	09 38 44.2	-1.7
	baz=42						
JFWS	Jewell Farm	86.34	324	P	P	09 38 44.6	-2.2
	baz=40						
O47A	Sheridan	86.36	320	P	P	09 38 44.9	-2.0
	baz=42						
R51A	Hillsboro	86.41	317	P	P	09 38 45.4	-1.8
	baz=44						
I38A	Scanlan Farm,	86.42	326	P	P	09 38 45.2	-2.0
	baz=38						
G35A	Watkins	86.43	328	P	P	09 38 44.9	-2.2
	baz=37						
P48A	Milroy	86.54	319	P	P	09 38 45.8	-2.0
	baz=42						
S52A	Salyersville	86.58	316	P	P	09 38 46.1	-1.9
	baz=44						
Q49A	Aurora	86.60	318	P	P	09 38 46.5	-1.6
	baz=43						
J39A	Decorah	86.69	325	P	P	09 38 46.8	-1.7
	baz=39						
L42A	Oliver, Polo	86.76	323	P	P	09 38 47.0	-1.9
	baz=40						
R50A	Paris	86.82	317	P	P	09 38 47.6	-1.6
	baz=43,SNR=5.5						
G34A	Benson	86.90	328	P	P	09 38 47.6	-1.8
	baz=36						
I37A	Lemond, Waseca	86.92	326	P	P	09 38 47.5	-2.1
	baz=38						
I37A	Lemond, Waseca	86.92	326	*e*P	P	09 38 48.8	-0.8
	comp=Z,31nm,1.5s						
T52A	Hallie	86.94	316	P	P	09 38 48.2	-1.6
	baz=44,SNR=6.6						
J37A	Redenius Farm,	87.55	326	P	P	09 38 50.8	-1.9
	baz=38						
T51A	Gray	87.57	316	P	P	09 38 51.4	-1.5
	baz=43						
G32A	Webster	87.66	329	P	P	09 38 51.5	-1.7
	baz=35						
G32A	Webster	87.66	329	*e*P	P	09 38 52.4	-0.7
	comp=Z,22nm,0.9s						
TZTN	Tazewell	87.66	316	P	P	09 38 51.8	-1.5
	baz=44						
U52A	Thorn Hill	87.67	315	P	P	09 38 51.9	-1.5
	baz=44						
S49A	Springfield	87.70	318	P	P	09 38 51.5	-2.0
	baz=42						
L39A	Vinton	87.77	324	P	P	09 38 51.7	-2.1
	baz=38						
N42A	Yates City	87.84	322	P	P	09 38 52.0	-2.1
	baz=40						
V53A	Saluda	87.87	315	P	P	09 38 52.6	-1.9
	baz=44						
V53A	Saluda	87.87	315	*e*P	P	09 38 53.6	-0.8
	comp=Z,14nm,1.1s						
J36A	Seneca 1, Swea	87.88	326	P	P	09 38 52.4	-1.8
	baz=37						
J36A	Seneca 1, Swea	87.88	326	*e*P	P	09 38 53.4	-0.9
	comp=Z,8.1nm,0.9s						
T50A	Nancy	88.02	317	P	P	09 38 53.0	-2.0
	baz=43						
U51A	La Follette	88.04	316	P	P	09 38 53.3	-1.9
	baz=43,SNR=6.8						
V52A	Sevierville	88.19	315	P	P	09 38 54.0	-1.9
	baz=43						
V52A	Sevierville	88.19	315	*e*P	P	09 38 55.4	-0.5
	comp=Z,17nm,1.3s						
S48A	Wiedeman Farm,	88.21	318	P	P	09 38 53.8	-2.1
	baz=42						
T49A	Edmonton	88.33	317	P	P	09 38 54.7	-1.9
	baz=42						
M39A	Webster	88.36	324	P	P	09 38 54.6	-2.0
	baz=38						
Q45A	Warren Harvey,	88.38	320	P	P	09 38 55.0	-1.7
	baz=41						
TKL	Tuckaleechee C	88.42	315	P	P	09 38 56.2	-0.8
	comp=Z,5.9nm,1.0s,baz=68,slow=5.4,SNR=5.9						
TKL				LR	LR	10 19 00.1	
	comp=Z,77nm,19.6s,baz=18,slow=36						
TKL	Tuckaleechee C	88.42	315	*e*P	P	09 38 56.1	-0.9
	comp=Z,20nm,1.3s						
W53A	Cullowhee	88.43	315	P	P	09 38 54.9	-2.2
	baz=44,SNR=5.1						
U50A	Jamestown	88.46	316	P	P	09 38 55.2	-1.9
	baz=43						
ECSD	EROS Data Cent	88.53	328	P	P	09 38 55.6	-1.7
	baz=36						
L37A	Phoenix Point,	88.58	325	P	P	09 38 55.6	-2.0
	baz=37						
T48A	Bowling Green	88.79	318	P	P	09 38 56.6	-2.0
	baz=42,SNR=7.5						
M38A	Pleasantville	88.88	325	P	P	09 38 57.2	-1.8
	baz=38						
R45A	Skylar, Fairfi	88.90	320	P	P	09 38 57.5	-1.6
	baz=41						
U49A	Red Boiling Sp	88.90	317	P	P	09 38 57.1	-2.1
	baz=42						
N39A	Derby Farms, D	88.98	324	*e*P	P	09 38 58.1	-1.3
	comp=Z,7.1nm,0.9s						
X53A	Estanollee	88.99	314	P	P	09 38 58.0	-1.7
	baz=44						
CPCT	Cooper Cave	88.99	316	*e*P	P	09 38 59.0	-0.6
	comp=Z,10nm,1.2s						
Y54A	Tignall	89.10	313	P	P	09 38 58.5	-1.7
	baz=44						
V50A	Pikevile	89.15	316	P	P	09 38 58.2	-2.2
	baz=42						
O40A	La Belle	89.28	323	P	P	09 38 58.8	-2.1
	baz=38						
U48A	Cassie Pea, Po	89.32	317	P	P	09 38 59.3	-1.8
	baz=42						
R44A	Waltonville	89.34	320	P	P	09 38 59.1	-2.1
	baz=40						
W50A	Signal Mountai	89.61	316	P	P	09 39 00.7	-2.0
	baz=42						
Y53A	Monroe	89.62	314	P	P	09 39 00.4	-2.2
	baz=43						
LAO	LASA Array	89.66	335	P	P	09 39 01.1	-1.6
	baz=29						
LAO	LASA Array	89.66	335	*e*P	P	09 39 02.1	-0.6
	comp=Z,13nm,1.0s						
U47A	Clarksville	89.77	318	P	P	09 39 01.1	-2.2
	baz=41						
P40A	Paris	89.82	323	P	P	09 39 01.2	-2.2
	baz=38						
Q41A	Truxton	89.87	322	P	P	09 39 01.8	-1.9
	baz=39						
Z53A	Monticello	90.03	313	P	P	09 39 02.1	-2.4
	baz=43						
V48A	Smith Brothers	90.04	317	P	P	09 39 02.3	-2.3
	baz=42						
LLLB	Lillooet	90.13	346	*e*P	P	09 39 05.0	+0.2
	comp=Z,20nm,1.4s						
P39B	Salisbury	90.19	323	P	P	09 39 03.0	-2.2
	baz=38						
Q40A	Laux Farm, Aux	90.25	322	P	P	09 39 03.5	-2.0
	baz=38						
V47A	Nunnelly	90.35	318	P	P	09 39 03.9	-2.1
	baz=41						
S43A	Fulton Ridge,	90.36	320	P	P	09 39 03.9	-2.1
	baz=40						
Y51A	Rockmart	90.43	315	P	P	09 39 04.2	-2.2
	baz=43						
P38A	Dawn	90.45	324	P	P	09 39 04.5	-1.9
	baz=38						
R41A	Rosebud	90.46	322	P	P	09 39 04.4	-2.0
	baz=39						
W48A	Pulaski	90.55	317	P	P	09 39 04.6	-2.3
	baz=42						
S42A	Caledonia	90.57	321	P	P	09 39 05.2	-1.8
	baz=39						
Q39A	Willow Grove F	90.65	323	P	P	09 39 05.3	-2.0
	baz=38						
W47A	Westpoint	90.82	317	P	P	09 39 06.1	-2.1
	baz=41						
P37A	Lathrop	90.87	324	P	P	09 39 06.2	-2.1
	baz=37						
R40A	Maddies Statio	90.90	322	P	P	09 39 06.8	-1.6
	baz=38						
R40A	Maddies Statio	90.90	322	*e*P	P	09 39 07.6	-0.9
	comp=Z,16nm,1.4s						
Q38A	Cooks Store, C	91.02	323	P	P	09 39 07.2	-1.9
	baz=37						
JTMT	Jette	91.11	341	*e*P	P	09 39 08.2	-1.3
	comp=Z,10nm,1.4s						
PBMO	Poplar Bluff	91.15	320	*e*P	P	09 39 08.4	-1.3
	comp=Z,14nm,1.5s						
S41A	Jillco Farms,	91.19	321	P	P	09 39 08.0	-1.9
	baz=39						
R39A	Chumby, Stover	91.25	323	P	P	09 39 08.3	-1.8
	baz=38						
GCMT	Greycliff	91.56	337	*e*P	P	09 39 11.9	+0.3
T41A	Mountain View	91.62	321	P	P	09 39 10.2	-1.7
	baz=39						
MSO	Missoula	91.86	340	P	P	09 39 11.2	-1.7
	baz=23						
MSO	Missoula	91.86	340	*e*P	P	09 39 12.1	-0.9
	comp=Z,5.0nm,1.2s						
S39A	Bolivar	91.88	322	P	P	09 39 10.9	-2.2
	baz=38						
S39A	Bolivar	91.88	322	*e*P	P	09 39 11.9	-1.2
	comp=Z,9.0nm,1.3s						
U42A	Revenden	91.89	320	P	P	09 39 11.4	-1.7
	baz=39						
T40A	Mansfield	91.91	322	P	P	09 39 11.1	-2.2
	baz=38						
RLMT	Red Lodge	92.04	336	P	P	09 39 12.5	-1.5
	baz=27						
RLMT	Red Lodge	92.04	336	*e*P	P	09 39 14.4	+0.5
	comp=Z,5.5nm,1.1s						
LRAL	Lakeview Retre	92.15	315	P	P	09 39 12.6	-1.8
	baz=42						
LRAL	Lakeview Retre	92.15	315	*e*P	P	09 39 13.0	-1.4
	comp=Z,9.8nm,1.3s						
S38A	Stockton	92.21	323	P	P	09 39 12.9	-1.8
	baz=37						
BOZ	Bozeman (W)	92.33	338	P	P	09 39 13.6	-1.6
	baz=25						
BOZ	Bozeman (W)	92.33	338	*e*P	P	09 39 15.1	-0.1
	comp=Z,4.9nm,1.1s						
BOZ	Bozeman (W)	92.33	338	*e*P	P	09 39 15.1	-0.1
BOZ				pmax	pmax		
	comp=Z,5.0nm,1.1s						
B05A	Bryant	92.42	346	P	P	09 39 13.3	-2.0
	baz=17						
Y46A	Houston	92.54	317	P	P	09 39 14.0	-2.1
	baz=40						
DLMT	Dillon	92.83	339	*e*P	P	09 39 16.9	-0.6
	comp=Z,6.0nm,1.3s						
T38A	Diamond	92.87	323	P	P	09 39 15.6	-2.1
	baz=37						
Y45A	Yeager Farm, C	92.92	318	P	P	09 39 16.1	-1.9
	baz=40						
YMR	Madison River	92.97	337	*e*P	P	09 39 17.3	-0.9
	comp=Z,12nm,1.5s						
U39A	Green Forest	92.99	322	P	P	09 39 16.2	-2.0
	baz=38						
H17A	Grant Village	93.10	337	*e*P	P	09 39 20.7	+1.8
	comp=Z,5.4nm,1.1s						
YFT	Old Faithful	93.13	337	*e*P	P	09 39 20.5	+1.5
	comp=Z,6.1nm,1.0s						
YPP	Pitchstone Pla	93.28	337	*e*P	P	09 39 21.4	+1.5
	comp=Z,8.4nm,1.4s						
FLWY	Flagg Ranch	93.42	337	*e*P	P	09 39 20.9	+0.6
	comp=Z,12nm,1.4s						
IMW	Indian Meadow	93.66	337	*e*P	P	09 39 22.1	+0.6
	comp=Z,4.7nm,1.4s						
MOOW	Moose Ponds	93.74	337	*e*P	P	09 39 22.5	+0.7
	comp=Z,3.4nm,1.3s						
FXWY	Fox Creek	93.92	337	*e*P	P	09 39 23.6	+0.9
	comp=Z,6.4nm,1.4s						
PHWY	Pilot Hill	94.09	332	*e*P	P	09 39 22.2	-1.3
	comp=Z,4.2nm,0.9s						
PDAR	Pinedale Array	94.24	336	P	P	09 39 22.6	-1.5
	comp=Z,0.4nm,0.6s,baz=67,slow=5.0,SNR=5.7						
PDAR				LR	LR	10 23 10.3	
	comp=Z,92nm,20.2s,baz=30,slow=36						
MIAR	Mount Ida	94.49	321	P	P	09 39 23.1	-2.0
	baz=38						
TUL1	Leonard	94.49	323	P	P	09 39 22.9	-2.2
	baz=36						
245A	Little AP, Sta	94.51	317	P	P	09 39 23.2	-2.1
	baz=40						
BMO	Blue Mountains	94.58	342	*e*P	P	09 39 24.5	-1.0
	comp=Z,4.6nm,1.3s						
BMO	Blue Mountains	94.58	342	*e*P	P	09 39 24.5	-1.0
BMO				pmax	pmax		
	comp=Z,5.0nm,1.3s						
N23A	Red Feather La	94.63	332	P	P	09 39 23.7	-2.4
	baz=29						
N23A	Red Feather La	94.63	332	*e*P	P	09 39 24.6	-1.4
	comp=Z,5.6nm,1.3s						
X39A	Fountain Ranch	94.79	321	P	P	09 39 24.3	-2.2
	baz=37						
MFID	Camas Ranch	95.53	340	*e*P	P	09 39 29.5	-0.4
	comp=Z,8.3nm,1.4s						
HVU	Hansel Valley	96.15	337	*e*P	P	09 39 32.5	-0.3
	comp=Z,5.4nm,1.3s						
HVU	Hansel Valley	96.15	337	*e*P	P	09 39 32.5	-0.3
HVU				pmax	pmax		
	comp=Z,5.0nm,1.3s						
WMOK	Wichita Mounta	96.86	324	P	P	09 39 33.9	-2.1
	baz=34						
WMOK	Wichita Mounta	96.86	324	*e*P	P	09 39 34.9	-1.1
	comp=Z,3.3nm,1.0s						
WMOK	Wichita Mounta	96.86	324	*e*P	P	09 39 34.9	-1.1
WMOK				pmax	pmax		
	comp=Z,3.0nm,1.0s						
PV12	Saucer Basin,	97.94	333	*e*P	P	09 39 40.2	-0.9
	comp=Z,4.1nm,1.1s						
YBH	Yreka Blue Hor	98.79	344	LR	LR	10 24 50.6	
	comp=Z,55nm,20.8s,baz=358,slow=36						
ANMO	Albuquerque	100.01	330	LR	LR	10 26 45.6	
	comp=Z,65nm,18.3s,baz=48,slow=36						
SYO	Syowa Base	106.29	179⇑	*e*pPdiff	pPdif	09 40 21.5	+1.4
WRA	Warramunga Arr	108.04	102	PP	PP	09 44 59.1	+3.6
	comp=Z,2.0nm,1.0s,baz=304,slow=7.1,SNR=4.7						
ASAR	Alice Springs	109.76	105	PKiKP	PKiKP	09 44 36.2	+0.2
	comp=Z,0.7nm,0.9s,baz=328,slow=1.9,SNR=5.5						
LPAZ	La Paz	111.11	265	PP	PP	09 45 16.2	-2.3
	comp=Z,1.8nm,1.1s,baz=81,slow=5.1,SNR=4.4						
PLCA	Paso Flores	124.77	242	PKP	PKPdf	09 45 05.0	+0.7
	comp=Z,1.5nm,0.9s,baz=354,slow=5.1,SNR=2.9						
PLCA	Paso Flores	124.77	242	PKIKP	PKPdf	09 45 05.0	+0.7
QSPA	South Pole Qui	127.41	180	PKP	PKPdf	09 45 07.9	-0.6
	comp=Z,2.8nm,1.0s,baz=315,slow=12,SNR=5.2						
QSPA	South Pole Qui	127.41	180	*e*PKPdf	PKPdf	09 45 07.7	-0.8
RAO	Raoul Island	150.34	84	*e*PKPdf	PKPdf	09 45 51.8	+0.9
RAO	Raoul Island	150.34	84	*e*PKIKP	PKPdf	09 45 51.8	+0.9

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*CSEM **22** 09:26:08.6, 37°.16N×22°.04E, h21^{km}, ML1.2/4*

ATH 22 09:26:08.6, 37°.16N×22°.04E, h21^{km}±5^{km}**, ML1.2**/4**, Error ellipse: s-maj=5.3km s-min=1.0km az=252.0, Southern Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MES3	Kyparissia	0.30	287	P	Pb	09 26 15.4	+0.1
MES3				S	Sb	09 26 19.7	-0.2
MES3	Kyparissia	0.30	287	P	Pb	09 26 15.3	0.0
MES3				S	Sb	09 26 19.9	0.0
VLX	Vlachokerasia	0.35	52	P	Pb	09 26 15.7	-0.3
VLX				S	Sb	09 26 22.2	+1.1
VLX				AML	AML	09 26 24.9	
	comp=E,114µm,0.4s						
VLX				AML	AML	09 26 25.2	
	comp=N,111µm,0.5s						
VLX	Vlachokerasia	0.35	52	P	Pb	09 26 15.9	-0.1
VLX				S	Sb	09 26 21.8	+0.7
PYL	PYLOS	0.35	222	P	Pb	09 26 16.4	+0.3
PYL	PYLOS	0.35	222	P	Pb	09 26 16.2	+0.2
AMT	Artemida-Makis	0.46	325	P	Pb	09 26 17.4	-0.5
AMT				S	Sb	09 26 24.8	+0.7
AMT				AML	AML	09 26 27.3	
	comp=N,172µm,0.3s						
AMT				AML	AML	09 26 27.4	
	comp=E,177µm,0.4s						
AMT	Artemida-Makis	0.46	325	P	Pb	09 26 17.6	-0.3
AMT				S	Sb	09 26 24.7	+0.5
DYR	Agios Nikonas	0.46	149	P	Pb	09 26 18.2	+0.2
DYR				S	Sb	09 26 23.8	-0.5
DYR				AML	AML	09 26 25.3	
	comp=E,45µm,0.7s						
DYR				AML	AML	09 26 26.7	
	comp=N,43µm,0.8s						
DYR	Agios Nikonas	0.46	149	P	Pb	09 26 18.1	+0.1
DYR				S	Sb	09 26 24.3	0.0
GUR	Goura	0.81	17	P	Pb	09 26 23.8	-0.3
GUR				S	Sn	09 26 36.9	+0.4
GUR	Goura	0.81	17	P	Pb	09 26 24.0	-0.1
GUR				S	Sn	09 26 36.3	-0.2
VLI	Veliai	0.84	121	P	Pn	09 26 25.1	-0.2
VLI				S	Sn	09 26 36.8	-0.2
VLI	Veliai	0.84	121	P	Pn	09 26 25.0	-0.3
VLI				S	Sn	09 26 36.9	-0.1
KLV	Kalavryta, Ach	0.89	6	P	Pn	09 26 26.0	+0.1
KLV				S	Sn	09 26 37.9	-0.3
KLV				AML	AML	09 26 45.2	
	comp=N,12µm,0.6s						
KLV				AML	AML	09 26 46.8	
	comp=E,22µm,1.3s						
KLV	Kalavryta, Ach	0.89	6	P	Pn	09 26 25.8	-0.1
KLV				S	Sn	09 26 38.0	-0.2

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*IDC **22** 09:30:15.8±1.9, 17°.30S×178°.65W, h521^{km}±21^{km}, mb3.4/8, mb1 3.6/10, mb1mx3.2/43, mbtmp4.4/10, Error ellipse: s-maj=26.6km s-min=14.2km az=155.0*

*ISCJB **22** 09:30:17.6±0.9, 17°.3S±0°.2×178°.8W±0°.2, h550^{km}, mb4.0/9, Error ellipse: s-maj=32.2km s-min=17.5km az=155.5*

ISC 22 09:30:17.2±0.7**, 17°.2S**±0°.2×**178°.6W**±0°.1**, h550**^{km}**, n14, σ1**^{s}.**44**/16**, mb4.4**/9**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	7.37	64	P	P	09 32 06.2	-2.8
	8.9nm,0.3s,baz=172,slow=18,SNR=13						
DZM	Mont Dzumac	14.87	249	P	P	09 33 23.6	-1.9
	0.6nm,0.3s,baz=76,slow=18,SNR=8.1						
CTA	Charters Tower	33.36	260	P	P	09 36 10.4	-0.1
	6.9nm,0.7s,baz=91,slow=13,SNR=9.2						
PMG	Port Moresby	34.15	279	P	P	09 36 18.1	+0.9
	28nm,0.8s,baz=66,slow=19,SNR=5.0						
STKA	Stephens Creek	38.79	240	P	P	09 36 55.6	+0.5
	7.1nm,0.5s,baz=86,slow=10,SNR=47						
WRA	Warramunga Arr	44.56	259	P	P	09 37 40.2	-0.7
	6.3nm,0.5s,baz=96,slow=7.1,SNR=155						
WRA				PcP	PcP	09 39 13.1	+1.0
	0.8nm,0.7s,baz=87,slow=3.4,SNR=3.2						
ASAR	Alice Springs	44.78	254	P	P	09 37 42.6	+0.1
	52nm,0.5s,baz=88,slow=8.0,SNR=1026						
ASAR				PcP	PcP	09 39 12.8	-0.1
	0.6nm,0.7s,baz=90,slow=1.9,SNR=3.1						
NWAO	Narrogin (SRO)	59.35	242	P	P	09 39 26.9	-0.1
	4.9nm,0.8s,baz=151,slow=19,SNR=3.1						
QSPA	South Pole Qui	72.83	180	P	P	09 40 50.7	+0.5
	0.5nm,0.4s,baz=310,slow=12,SNR=3.1						
ILAR	Eielson Array	85.26	13	P	P	09 41 56.5	+0.9
	0.2nm,0.5s,baz=225,slow=4.9,SNR=4.2						
TXAR	Lajitas Array	85.80	58	P	P	09 42 02.2	+3.0
	0.3nm,0.9s,baz=234,slow=7.7,SNR=2.9						
BRTR	Keskin Array B	144.15	315	PKP	PKPdf	09 48 51.0	-0.1
	0.6nm,0.4s,baz=120,slow=3.8,SNR=5.2						
GERES	GERESS Array B	146.89	345	PKPbc	PKPab	09 48 59.7	-1.6
	0.8nm,0.6s,baz=22,slow=1.4,SNR=5.8						
DAVOX	Davos/Dischmat	149.69	348	PKPbc	PKPbc	09 49 05.6	+0.2
	2.8nm,0.6s,baz=149,slow=4.9,SNR=3.0						

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*IDC **22** 09:39:09.1±0.6, 2°.60N×95°.86E, h0^{km}, mb4.5/33, mb1 4.5/34, mb1mx4.3/72, mbtmp4.5/34, ML4.8/1, MS4.0/19, Ms1 4.0/19, ms1mx3.6/67, Error ellipse: s-maj=18.6km s-min=11.9km az=40.0*

*BJI **22** 09:39:10.6, 2°.47N×95°.90E, h28^{km}, mb5.0/55, mB5.0/36, Ms4.6/38, Ms7 4.3/38*

*DJA **22** 09:39:11.4±0.7, 3°N±3°×9°6E±°, h18^{km}±4^{km}, M5.0/13, mb5.1/7, mB5.4/5, MLv5.1/13, Mw(mB)4.9/5*

*NEIC **22** 09:39:12.8±1.6, 2°.62N×95°.85E, h22^{km}±11^{km}, mb4.9/36, Error ellipse: s-maj=7.7km s-min=3.6km az=54.0*

*ISCJB **22** 09:39:13.0±0.6, 2°.61N±0°.03×95°.85E±0°.04, h39^{km}±4^{km}, mb4.8/90, MS4.2/32, Error ellipse: s-maj=7.1km s-min=3.9km az=145.2*

*MOS **22** 09:39:13.5±0.9, 2°.69N×95°.92E, h41^{km}, mb5.1/41, Error ellipse: s-maj=10.0km s-min=5.3km az=105.7*

*KLM **22** 09:39:14.0, 2°.70N×95°.72E, h51^{km}, mb4.9*

ISC 22 09:39:15.2±0.8**, 2°.54N**±0°.04×**95°.80E**±0°.05**, h47**^{km}±6^{km}**, n328, σ1**^{s}.**53**/338**, mb4.9**/96**, MS4.2**/32**, 14C-2D, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNSI	Sinabang, Aceh	0.55	104	P	Pn	09 39 24.1	-2.8
SNSI				S	Sn	09 39 33.1	-2.1
TPTI		1.56	63	P	Pn	09 39 37.7	-2.7
TPTI				S	Sn	09 39 59.4	-0.1
MLSI	Meulaboh, Aceh	1.82	20	P	Pn	09 39 41.6	-2.5
MLSI				S	Sn	09 40 07.6	+1.7
GSI	Gunungsitoli	2.16	125	P	Pn	09 39 47.7	-1.1
GSI				S	Sn	09 40 12.3	-2.1
GSI	Gunungsitoli	2.16	125	*e*Pn	Pn	09 39 47.1	-1.7
GSI				*e*Sn	Sn	09 40 12.8	-1.6
KCSI	Kotacane, Aceh	2.20	64	P	Pn	09 39 47.9	-1.4
KCSI				S	Sn	09 40 19.6	+4.2
LHMI	Lhok Sumawe	2.91	23	P	Pn	09 39 58.3	-0.7
LHMI	Lhok Sumawe	2.91	23	*e*Pn	Pn	09 39 57.7	-1.2
TSI	Tuntungan	2.92	71	P	Pn	09 39 58.7	-0.5
TSI				S	Sn	09 40 35.3	+2.1
BSI	Banda Aceh	2.98	350	P	Pn	09 39 57.0	-3.0
PSI	Prapat	3.14	85	*e*Pn	Pn	09 40 01.1	-1.2
PSI	Prapat	3.14	85	*e*P	Pn	09 40 01.1	-1.2
PBSI	Pulau Batu	3.58	136	P	Pn	09 40 05.8	-2.5
MNSI	Mandailing Nat	4.16	115	P	Pn	09 40 15.8	-0.4
CMBY	CAMPBELL BAY	4.81	337	*e*P	Pn	09 40 23.0	-2.2
CMBY				IAmb	IAmb	09 40 31.3	
	comp=Z,169nm,0.5s						
KULM	Kulim	5.56	60	*e*Pn	Pn	09 40 33.8	-1.6
IPM	Ipoh	5.56	70	*e*Pn	Pn	09 40 34.1	-1.4
BKNI	Bangkinang	5.69	113	P	Pn	09 40 36.4	-0.8
TRTT	Trang	6.54	36	P	Pn	09 40 47.0	-1.8
	comp=Z,46nm,0.5s,comp=Z,0.2nm						
KRAB	Krabi	6.58	31	P	Pn	09 41 02.0	+13
SKLT	Songkhla	6.65	46	P	Pn	09 40 49.1	-1.3
	comp=Z,102nm,1.1s,comp=Z,1µmcomp=Z,0.7nm						
KRJI	Kerinci	7.30	129	P	Pn	09 41 02.8	+3.4
MYKOM	Kota Tinggi	8.08	95	*e*Pn	Pn	09 41 08.6	-1.4
MYKOM	Kota Tinggi	8.08	95	P	Pn	09 41 10.0	-0.1
MNAI	Manna	9.91	134	*e*Pn	Pn	09 41 34.3	-0.9
MDSI	Maura Dua	10.90	130	P	Pn	09 41 47.4	-1.3
LWLI	Liwa	11.16	132	P	Pn	09 41 50.1	-2.2
SRDT	SRDT	12.18	15	P	P	09 42 19.3	+1.8
UMPA	Umpang Tak	13.91	12	P	Pn	09 42 28.0	-1.8
	comp=Z,7.9nm,1.2s,comp=Z,924nm						
KSM	Kuching	14.54	94	*e*Pn	Pn	09 42 37.9	-0.4
PBKT	Sadao Pong	14.84	20	P	Pn	09 42 43.6	+1.4
	comp=Z,49nm,0.8s,comp=Z,783nm						
PALK	Pallekele	15.75	288	Pn	P	09 43 00.0	+2.7
	comp=Z,0.3nm,0.3s,baz=114,slow=10.0,SNR=2.7						
PALK				Sn	Sn	09 45 32.0	-16
	comp=Z,0.5nm,0.3s,baz=117,slow=6.5,SNR=2.2						
PALK				LR	LR	09 48 24.8	
	comp=Z,672nm,19.4s,baz=116,slow=35						
PALK	Pallekele	15.75	288	*ce*P	P	09 43 01.6	+4.3
UBPT	Khong Chiam	15.85	36	P	Pn	09 42 54.4	-0.8
	comp=Z,55nm,1.1s						
STKI	Sintang	15.87	99	P	P	09 42 59.8	+1.2
CM01	Chiang Mai Arr	16.08	11	*e*Pn	Pn	09 42 57.4	-0.8
CM31	Chiang Mai Arr	16.11	11	*e*Pn	Pn	09 42 57.0	-1.6
CMAR	Chiang Mai Arr	16.11	11	Pn	Pn	09 42 56.4	-2.2
	comp=Z,1.4nm,0.3s,baz=201,slow=12,SNR=34						
CMAR				LR	LR	09 48 57.5	
	comp=Z,497nm,20.1s,baz=200,slow=37						
LAMP	Lampang	16.32	13	P	Pn	09 42 59.5	-1.7
	comp=Z,13nm,0.9s,comp=Z,107nm						
SBUM	Sibu	16.41	90	*e*Pn	Pn	09 43 01.0	-1.4
	comp=Z,25nm,0.9s						
SKNT	Sakolnakorn	16.44	29	P	Pn	09 43 03.0	+0.2
CHTO	Chiang Mai	16.46	11	*e*Pn	Pn	09 42 60.0	-3.0

	comp=Z,21nm,0.8s						
CHTO	Chiang Mai	16.46	11	eP	Pn	09 43 00.0	-3.0
CHTO				pmax	pmax		
	comp=Z,21nm,0.8s						
CHTO	Chiang Mai	16.46	11	P	Pn	09 43 00.6	-2.4
	comp=Z,129nm,0.9s						
CMMT	Chiang Mai	16.46	11	P	Pn	09 43 00.5	-2.5
	comp=Z,29nm,0.9s						
UGM	Wanagama	17.99	125	ePn	Pn	09 43 21.9	-0.2
	comp=Z,49nm,1.0s						
SAIH	SAIHA	20.02	352	eP	P	09 43 43.6	-0.7
SAIH				IAmb	IAmb	09 43 53.7	
	comp=Z,33nm,1.1s						
BWNR	Bhubaneshwar	20.16	332	eP	P	09 43 44.8	-1.0
BWNR				IAmb	IAmb	09 43 53.1	
	comp=Z,164nm,2.0s						
KKM	Kota Kinabalu	20.65	80	eP	P	09 43 51.2	-0.1
	comp=Z,29nm,0.7s						
QIZ	Qiongzhong	21.39	39	P	P	09 44 00.8	+1.8
QIZ				LR	LR		
	comp=Z,1µm,16.2s						
QIZ				LR	LR		
	comp=Z,2µm,16.2s						
QIZ				LR	LR		
	comp=Z,800nm,18.6s						
HYB	Hyderabad	22.48	312	i P	P	09 44 13.0	+2.2
MYLDM	Lahad Datu	22.80	83	eP	P	09 44 14.8	+0.6
	comp=Z,52nm,0.8s						
SHL	Shillong	23.20	351	eP	P	09 44 15.1	-3.2
	comp=Z,46nm,1.0s						
SHL	Shillong	23.20	351	eP	P	09 44 17.6	-0.7
SHL				IAmb	IAmb	09 44 18.4	
	comp=Z,22nm,1.0s						
SHL	Shillong	23.20	351	eP	P	09 44 18.0	-0.3
SHL	Shillong	23.20	351	eP	P	09 44 15.1	-3.2
SHL				pmax	pmax		
	comp=Z,46nm,1.0s						
BOK	Bokaro	23.20	336	eP	P	09 44 17.7	-0.4
MNCI	Minicoy	23.33	285	eP	P	09 44 20.0	+0.5
	comp=Z,136nm,1.0s						
KMI	Kunming	23.43	16	P	P	09 44 20.8	+0.3
KMI				pP	pP	09 44 28.8	-3.5
KMI				S	S	09 48 31.0	+0.3
KMI				sS	sS	09 48 45.3	-6.0
KMI				pmax	pmax		
	comp=Z,21nm,0.8s						
KMI				pmax	pmax		
	comp=Z,220nm,4.5s						
KMI				LR	LR		
	comp=Z,1µm,14.6s						
KMI				LR	LR		
	comp=Z,350nm,13.7s						
KMI				LR	LR		
	comp=Z,980nm,14.6s						
TURI	Tura	23.47	348	eP	P	09 44 20.9	+0.2
MOKO	MOKOCHONG	23.68	357	eP	P	09 44 21.4	-1.4
MOKO				IAmb	IAmb	09 44 24.7	
	comp=Z,47nm,1.3s						
GUWA	GUWAHATI	23.84	351	eP	P	09 44 23.2	-1.0
GUWA				IAmb	IAmb	09 44 29.7	
	comp=Z,249nm,2.9s						
JORH	JORHAT	24.11	357	eP	P	09 44 27.0	+0.4
TEZP	TEZPUR	24.11	353	eP	P	09 44 25.2	-1.4
TEZP				IAmb	IAmb	09 44 26.5	
	comp=Z,35nm,0.2s						
ITAN	ITANAGAR	24.54	356	eP	P	09 44 30.0	-0.5
ZIRO	ZIRO	24.91	356	eP	P	09 44 31.9	-2.2
H08S2	Diego Garcia H	25.36	246	T	T	10 10 54.3	
	baz=66,slow=74,SNR=648						
H08S3	Diego Garcia H	25.36	246	T	T	10 10 55.7	
	baz=66,slow=74,SNR=4306						
H08S1	Diego Carcia H	25.37	246	T	T	10 10 53.7	
	baz=66,slow=74,SNR=4619						
ODAN	Odare	25.49	342	eP	P	09 44 40.2	+0.8
	comp=Z,101nm,0.8s						
GTK	Tadong	25.58	345	eP	P	09 44 40.0	-0.2
GTK				IAmb	IAmb	09 44 43.5	
	comp=Z,109nm,1.4s						
RAMN	Ramite	25.82	341	eP	P	09 44 43.6	+1.1
	comp=Z,127nm,0.6s						
GYA	Guiyang	25.97	23⇓	iP	P	09 44 42.6	-1.1
GYA				pP	pP	09 44 54.3	-1.7
GYA				PP	PnPn	09 45 28.0	+4.8
GYA				S	S	09 49 13.3	+2.2
GYA				sS	sS	09 49 27.8	-4.1
GYA				SS	SnSn	09 50 20.0	+8.2
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,5.0s						
GYA				LR	LR		
	comp=Z,510nm,15.2s						
GYA				LR	LR		
	comp=Z,520nm,14.8s						
GYA				LR	LR		
	comp=Z,550nm,14.9s						
H08N1	Diego Carcia H	26.27	250	T	T	10 12 08.8	
	baz=157,slow=77,SNR=20						
H08N2	Diego Garcia H	26.28	250	T	T	10 12 12.2	
	baz=157,slow=77,SNR=18						
H08N3	Diego Garcia H	26.29	250	T	T	10 12 12.2	
	baz=157,slow=77,SNR=16						
JIRN	Jiri	26.61	341	eP	P	09 44 50.6	+0.8
	comp=Z,263nm,0.8s						
PKIN	Phulchoki	26.81	339	eP	P	09 44 51.6	+0.2
	comp=Z,54nm,1.0s						
DMN	Daman	26.94	339	eP	P	09 44 53.0	+0.4
	comp=Z,72nm,0.9s						
GUN	Gumba	26.95	340	eP	P	09 44 53.5	+0.7
	comp=Z,165nm,0.9s						
KKN	Kakani	27.04	339	eP	P	09 44 54.1	+0.6
	comp=Z,128nm,0.9s						
LSA	Lhasa	27.37	351	P	P	09 44 57.5	+0.9
LSA				pmax	pmax		
	comp=Z,49nm,0.8s						
LSA	Lhasa	27.37	351	eP	P	09 44 56.9	+0.3
	comp=Z,47nm,0.9s						
LSA	Lhasa	27.37	351	eP	P	09 44 56.9	+0.3
LSA				pmax	pmax		
	comp=Z,47nm,0.9s						
GKN	Gorkha	27.47	338	eP	P	09 44 57.9	+0.7
	comp=Z,184nm,1.0s						
KOLN	Koldanda	27.66	336	eP	P	09 44 59.8	+0.8
	comp=Z,101nm,0.7s						
DANN	Dangsing	28.12	337	eP	P	09 45 03.7	+0.5
	comp=Z,80nm,0.6s						
PYUN	Piuthan	28.20	336	eP	P	09 45 04.3	+0.5
	comp=Z,81nm,0.9s						
CD2	Chengdu	29.20	14	eP	P	09 45 13.3	+0.8
CD2				pP	pP	09 45 18.0	-6.9
CD2				S	S	09 50 06.5	+4.6
CD2				sS	sS	09 50 14.6	-8.1
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,160nm,5.0s						
CD2				LR	LR		
	comp=Z,1µm,12.9s						
CD2				LR	LR		
	comp=Z,1µm,16.4s						
CD2				LR	LR		
	comp=Z,1µm,12.9s						
ENH	Enshi	30.48	24	eP	P	09 45 22.4	-1.4
	comp=Z,24nm,0.8s						
DDI	Dehra Dun	32.34	330	eP	P	09 45 39.6	-0.6
WHN	Wuhan	32.93	30	P	P	09 45 50.1	+4.9
WHN				LR	LR		
	comp=Z,780nm,19.6s						
SMLA	Simla	33.44	330	eP	P	09 45 50.1	+0.4
SMLA				IAmb	IAmb	09 45 55.9	
	comp=Z,40nm,0.2s						
XAN	Xi’an	33.65	20	P	P	09 45 49.8	-1.8
XAN				pP	pP	09 45 59.0	-5.0
XAN				sP	sP	09 46 03.0	-6.7
XAN				PP	PnPn	09 47 00.8	-3.8
XAN				S	S	09 51 05.0	-6.3
XAN				pmax	pmax		
	comp=Z,30nm,0.9s						
XAN				pmax	pmax		
	comp=Z,140nm,3.6s						
XAN				LR	LR		
	comp=Z,390nm,15.5s						
XAN				LR	LR		
	comp=Z,540nm,15.5s						
XAN				LR	LR		
	comp=Z,400nm,17.3s						
LZH	Lanzhou	34.20	12	eP	P	09 45 55.9	-0.6
LZH				pP	pP	09 46 02.3	-6.7
LZH				sP	sP	09 46 06.0	-8.6
LZH				PP	PP	09 47 14.3	-0.3
LZH				S	S	09 51 22.9	+2.9
LZH				sS	sS	09 51 37.8	-3.2
LZH				SS	SnSn	09 53 34.3	+2.4
LZH				pmax	pmax		
	comp=Z,44nm,1.0s						
LZH				pmax	pmax		
	comp=Z,200nm,4.9s						
LZH				LR	LR		
	comp=Z,560nm,13.0s						
LZH				LR	LR		
	comp=Z,830nm,11.9s						
LZH				LR	LR		
	comp=Z,960nm,13.0s						
DHRM	DHARAMSHALA	34.78	330	eP	P	09 46 00.7	-0.9
DHRM				IAmb	IAmb	09 46 09.6	
	comp=Z,69nm,1.4s						
FITZ	Fitzroy Crossi	35.85	126	eP	P	09 46 10.7	0.0
	comp=Z,4.4nm,0.8s						
NJ2	Nanjing	36.50	34	eP	P	09 46 18.1	+2.0
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
NJ2				LR	LR		
	comp=Z,470nm,10.8s						
NJ2				LR	LR		
	comp=Z,560nm,16.3s						
NJ2				LR	LR		
	comp=Z,590nm,15.7s						
GTA	Gaotai	36.88	5	⇑P	P	09 46 18.5	-0.9
GTA				pP	pP	09 46 25.0	-7.0
GTA				sP	sP	09 46 28.4	-9.2
GTA				S	S	09 52 00.8	-0.1
GTA				pmax	pmax		
	comp=Z,38nm,0.8s						
GTA				pmax	pmax		
	comp=Z,160nm,6.4s						
GTA				LR	LR		
	comp=Z,240nm,12.7s						
GTA				LR	LR		
	comp=Z,220nm,12.4s						
GTA				LR	LR		
	comp=Z,320nm,15.2s						
NIL	Nilore	37.44	328	eP	P	09 46 25.0	+0.9
	comp=Z,20nm,0.7s						
NIL	Nilore	37.44	328	eP	P	09 46 25.0	+0.9
NIL				pmax	pmax		
	comp=Z,20nm,0.7s						
MTN	Manton Dam	38.27	114	eP	P	09 46 30.6	-0.7
	comp=Z,11nm,0.9s						
TIA	Tai’an	38.87	28	P	P	09 46 35.5	-0.6
TIA				pmax	pmax		
	comp=Z,22nm,0.9s						
JOW	Kunigami	39.39	49	P	P	09 46 38.5	-2.1
	comp=Z,7.7nm,0.7s,baz=229,slow=9.3,SNR=4.1						
JOW				LR	LR	10 03 51.9	
	comp=Z,151nm,18.4s,baz=42,slow=38						
JOW	Kunigami	39.39	49	eP	P	09 46 40.1	-0.4
	comp=Z,12nm,0.8s						
NWAO	Narrogin (SRO)	40.69	152	LR	LR	10 03 47.7	
	comp=Z,230nm,19.0s,baz=204,slow=36						
HHC	Hu-ho-hao-te	40.71	18	eP	P	09 46 51.6	+0.2
HHC				sP	pP	09 47 04.6	+0.5
HHC				S	S	09 52 58.0	-0.5
HHC				sS	sS	09 53 16.6	-3.2
HHC				SS	SS	09 56 00.8	+0.2
HHC				pmax	pmax		
	comp=Z,37nm,1.2s						
HHC				pmax	pmax		
	comp=Z,130nm,5.2s						
HHC				LR	LR		
	comp=Z,300nm,15.1s						
HHC				LR	LR		
	comp=Z,500nm,16.1s						
HHC				LR	LR		
	comp=Z,480nm,16.7s						
KSH	Kashi	40.98	336	P	P	09 46 53.3	-0.4
KSH				sP	pP	09 47 04.4	-2.0
KSH				PP	PnPn	09 48 32.3	-1.3
KSH				PcS	PcS	09 52 41.5	-2.8
KSH				S	S	09 53 00.5	-2.2
KSH				SS	SS	09 55 59.1	-7.0
KSH				pmax	pmax		
	comp=Z,120nm,5.6s						
H01W3	Cape Leeuwin H	41.02	157	T	T	10 30 26.2	
	baz=332,slow=76,SNR=593						
H01W2	Cape Leeuwin H	41.03	157	T	T	10 30 27.2	
	baz=332,slow=76,SNR=613						
H01W1	Cape Leeuwin H	41.03	157	T	T	10 30 27.4	
	baz=332,slow=76,SNR=642						
BJT	Baijiatuau	41.63	24	eP	P	09 46 59.2	+0.3
	comp=Z,126nm,1.0s						
BJT	Baijiatuau	41.63	24	eP	P	09 46 59.2	+0.3
BJT				pmax	pmax		
	comp=Z,126nm,1.0s						
BJI	Beijing	41.65	24⇑	eP	P	09 46 59.3	+0.3
BJI				pmax	pmax		
	comp=Z,160nm,0.8s						
BJI				LR	LR		
	comp=Z,400nm,16.7s						
BJI				LR	LR		
	comp=Z,610nm,16.6s						
BJI				LR	LR		
	comp=Z,250nm,23.7s						
WMQ	Urumqi	41.73	351	P	P	09 47 00.4	+0.7
WMQ				pP	pP	09 47 09.8	-2.6
WMQ				sP	sP	09 47 13.4	-4.6
WMQ				pmax	pmax		
	comp=Z,64nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,610nm,5.1s						
WMQ				LR	LR		
	comp=Z,580nm,19.5s						
WMQ				LR	LR		
	comp=Z,550nm,20.3s						
WMQ				LR	LR		
	comp=Z,350nm,22.7s						
SFK	Sufi-Kurgan	42.43	334	P	P	09 47 06.8	+1.1
SFK				pmax	pmax		
	comp=Z,37nm,0.9s						
KDJ	Kajisay	42.80	340	eP	P	09 47 09.4	+0.8
	comp=Z,38nm,0.9s						
KDJ	Kajisay	42.80	340	eP	P	09 47 09.4	+0.8
KDJ				pmax	pmax		
	comp=Z,38nm,0.9s						
PDGK	Podgornoye	43.13	343	P	P	09 47 12.0	+0.8
PDGK				pmax	pmax		
	comp=Z,26nm,0.9s						
WRA	Warramunga Arr	43.93	122	P	P	09 47 18.1	+0.2
	comp=Z,4.0nm,0.7s,baz=302,slow=9.2,SNR=21						
WRA	Warramunga Arr	43.93	122	ceP	P	09 47 17.8	-0.1
WRA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
WRAB	Tennant Creek	43.94	122	eP	P	09 47 17.8	-0.1
	comp=Z,7.8nm,0.9s						
WRAB	Tennant Creek	43.94	122	ceP	P	09 47 18.4	+0.5
WRAB				pmax	pmax		
	comp=Z,15nm,1.7s						
WB2	Warramunga Arr	43.94	122	eP	P	09 47 17.8	-0.2
	comp=Z,8.2nm,0.8s						
AAK	Ala-Archa	44.23	337	P	P	09 47 21.5	+1.4
	comp=Z,3.7nm,0.5s,baz=153,slow=6.5,SNR=9.5						
AAK	Ala-Archa	44.23	337	eP	P	09 47 19.3	-0.8
	comp=Z,11nm,0.9s						
AAK	Ala-Archa	44.23	337	P	P	09 47 21.2	+1.1
AAK				pmax	pmax		
	comp=Z,13nm,1.0s						
FRU	Bishkek	44.35	338	eP	P	09 47 21.5	+0.6
FRU				e		09 47 29.5	
TJN	Taejon	44.52	37	ceP	P	09 47 21.1	-1.2
JNU	Nakatsue	44.76	43	P	P	09 47 23.1	-1.3
	comp=Z,3.8nm,0.7s,baz=278,slow=3.1,SNR=2.4						
MNAS	Manas	44.90	336	P	P	09 47 26.7	+1.3
MNAS				pmax	pmax		
	comp=Z,12nm,1.1s						
FORT	Forrest	45.20	140	eP	P	09 47 30.1	+2.3
	comp=Z,24nm,0.6s						
AS31	Alice Springs	45.32	127	eP	P	09 47 29.5	+0.5
	comp=Z,1.0nm,0.6s						
ASAR	Alice Springs	45.32	127	P	P	09 47 29.2	+0.3
	comp=Z,1.9nm,0.6s,baz=299,slow=8.1,SNR=40						
AS01	Alice Springs	45.36	127	eP	P	09 47 29.0	-0.2
KS15	Wonju Array Si	45.55	36	eP	P	09 47 29.2	-1.2
KSAR	Wonju Array Be	45.55	36	P	P	09 47 29.4	-1.0
KSAR	Wonju Array Be	45.55	36	P	P	09 47 29.4	-1.0
KS01	Wonju Array Si	45.57	36	eP	P	09 47 29.9	-0.8
KSRS	Korea Array	45.58	36	P	P	09 47 29.4	-1.2
	comp=Z,6.4nm,0.8s,baz=219,slow=8.3,SNR=20						
MK01	Makanchi Array	45.59	347	eP	P	09 47 31.1	+0.4
MK31	Makanchi Array	45.62	347	eP	P	09 47 31.3	+0.4
MK31	Makanchi Array	45.62	347	eP	P	09 47 31.3	+0.4
MKAR	Makanchi Array	45.62	347	P	P	09 47 31.3	+0.4
	comp=Z,9.3nm,0.5s,baz=162,slow=7.9,SNR=146						
MKAR				LR	LR	10 11 21.0	
	comp=Z,100nm,18.2s,baz=165,slow=42						
MKAR	Makanchi Array	45.62	347	eP	P	09 47 31.1	+0.3
	comp=Z,105nm,0.8s						
MAKZ	Makanchi	45.70	347	eP	P	09 47 32.1	+0.5
	comp=Z,24nm,0.9s						
MAKZ	Makanchi	45.70	347	eP	P	09 47 32.1	+0.5
MAKZ				pmax	pmax		
	comp=Z,24nm,0.9s						
SONM	Songino Array	46.04	10	P	P	09 47 34.1	-0.2
	comp=Z,15nm,0.7s,baz=190,slow=9.1,SNR=72						
SONM				PcP	PcP	09 49 11.4	+1.2
	comp=Z,2.2nm,0.6s,baz=191,slow=3.4,SNR=4.9						
SONA1	Songino Array	46.05	10	eP	P	09 47 34.4	-0.1
KK31	Karatay Array	46.24	334	eP	P	09 47 37.5	+1.6
KK31	Karatay Array	46.24	334	eP	P	09 47 37.5	+1.6
KKAR	Karatay Array	46.24	334	eP	P	09 47 37.1	+1.2
KKAR	Karatay Array	46.24	334	eP	P	09 47 37.1	+1.2
DGZ	Jazzator, Alta	47.52	353	i P	P	09 47 44.0	-1.9
DGZ				pmax	pmax		
	comp=Z,5.0nm,1.1s						
HVS	Khovu-Aksy	48.45	358	i P	P	09 47 52.2	-0.8
HVS				pmax	pmax		
	comp=Z,36nm,1.2s						
CN2	Changchun	48.77	28	eP	P	09 47 54.0	-1.5
CN2				ePP	PP	09 49 47.3	-1.7
CN2				eS	S	09 54 54.3	-0.8
CN2				eSS	SS	09 58 20.6	-5.6
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,320nm,17.0s						
CN2				LR	LR		
	comp=Z,320nm,17.0s						
CN2				LR	LR		
	comp=Z,460nm,18.0s						
MOY	Mondy	49.15	4	eP	P	09 47 58.3	-0.1
GEYT	Alibeck	49.29	320	P	P	09 47 59.9	+0.3
	comp=Z,1.7nm,0.3s,baz=119,slow=12,SNR=3.4						
TLY	Talaya	49.41	6	eP	P	09 48 00.7	+0.5
	comp=Z,8.8nm,0.9s						
TLY	Talaya	49.41	6	eP	P	09 48 00.6	+0.4
TLY				pmax	pmax		
	comp=Z,14nm,1.5s						
TLY				MLR	MLR		
	comp=Z,180nm,14.0s						
KURBB	Kurchatov Arra	50.09	346	P	P	09 48 06.0	+0.7
	comp=Z,12nm,0.8s,baz=168,slow=6.8,SNR=75						
KURBB				PcP	PcP	09 49 25.7	+1.2
	comp=Z,2.3nm,0.8s,baz=167,slow=4.4,SNR=2.1						
KURK	Kurchatov	50.15	346	eP	P	09 48 06.7	+0.9
	comp=Z,16nm,0.8s						
KURK				PcP	PcP	09 49 25.6	+1.0
KURK	Kurchatov	50.15	346	eP	P	09 48 06.7	+0.9
KURK						09 49 25.7	
KURK				pmax	pmax		
	comp=Z,16nm,0.8s						
MJAR	Matsushiro Arr	51.67	44	P	P	09 48 18.1	+0.5
	comp=Z,0.6nm,0.6s,baz=210,slow=7.2,SNR=4.0						
MJAR				PcP	PcP	09 49 31.1	+0.4
	comp=Z,3.1nm,0.9s,baz=248,slow=5.8,SNR=9.2						
BBOO	Buckleboo	51.81	136	eP	P	09 48 20.2	+1.6
	comp=Z,8.4nm,1.0s						
ZAA0	Zalesovo Array	52.03	352	eP	P	09 48 20.4	+0.5
	comp=Z,29nm,1.0s						
ZALV	Zalesovo Beam	52.03	352	P	P	09 48 20.1	+0.2
	comp=Z,12nm,0.3s,baz=166,slow=8.8,SNR=4.1						
ZALV	Zalesovo Beam	52.03	352	eP	P	09 48 19.9	0.0
OPO	Ambohidratompo	52.22	244	LR	LR	10 09 14.0	
	comp=Z,89nm,18.1s,baz=346,slow=34						
USRK	Ussuriysk Ar.	52.37	32	P	P	09 48 22.3	-0.3
	comp=Z,4.4nm,0.9s,baz=247,slow=3.0						
PMG	Port Moresby	52.53	104	LR	LR	10 13 47.0	
	comp=Z,114nm,18.2s,baz=173,slow=40						
NVS	Novosibirsk	53.13	351	eP	P	09 48 25.7	-2.3
NVS				eS	S	09 55 48.6	-6.4
NVS				pmax	pmax		
	comp=Z,15nm,0.9s						
NVS				pmax	pmax		
	comp=N,8.0nm,0.7s						
NVS				smax	smax		
	comp=E,10.0nm,1.6s						
CTA	Charters Tower	54.36	117	P	P	09 48 37.5	-0.2
	comp=E,8.5nm,1.1s,baz=306,slow=8.1,SNR=5.6						
CTAO	Charters Tower	54.36	117	eP	P	09 48 38.6	+1.0
BVA0	Borovoye Array	54.53	341	i P	P	09 48 37.8	-0.5
BVA0				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BVAR	Borovoye Array	54.53	341	P	P	09 48 38.5	+0.2
	comp=Z,6.5nm,0.7s,baz=142,slow=7.5,SNR=35						
BRVK	Borovoye	54.60	341	eP	P	09 48 39.0	+0.2
	comp=Z,10nm,0.7s						
BRVK	Borovoye	54.60	341	ceP	P	09 48 38.9	+0.2
BRVK				pmax	pmax		
	comp=Z,6.0nm,0.6s						
STKA	Stephens Creek	55.29	132	P	P	09 48 45.1	+0.9
	comp=Z,6.0nm,0.8s,baz=301,slow=8.3,SNR=12						
STKA	Stephens Creek	55.29	132	eP	P	09 48 45.1	+0.9
	comp=Z,1.4nm,0.8s						
AB31	Akbulak array	55.68	332	i P	P	09 48 46.7	+0.1
AB31				pmax	pmax		
	comp=Z,17nm,1.0s						
ABKAR	Akbulak array	55.68	332	eP	P	09 48 46.1	-0.5
KLR	Kul’dur	55.71	28	P	P	09 48 46.8	-0.1
	comp=Z,0.8nm,0.8s,baz=248,slow=7.3,SNR=36						
KLR				LR	LR	10 15 58.1	
	comp=Z,16nm,19.1s,baz=184,slow=40						
KLR	Kul’dur	55.71	28	c iP	P	09 48 46.6	-0.3
ZEA	Zeya	57.20	22	eP	P	09 48 57.2	-0.2
ZEA				pmax	pmax		
	comp=Z,15nm,1.0s						
AKTO	Aktyubinsk	57.40	332	P	P	09 48 59.1	+0.3
	comp=Z,4.8nm,0.9s,baz=136,slow=7.3,SNR=11						
ASAJ	Asahikawa	58.46	38	P	P	09 49 06.8	+0.3
	comp=Z,4.9nm,1.0s,baz=195,slow=20,SNR=3.3						
GNI	Garni	59.36	316	i P	P	09 49 13.3	+0.3
GNI				pmax	pmax		
	comp=Z,15nm,0.8s						
YSS	Yuzh-Sakhalins	60.05	35	eP	P	09 49 17.2	-0.2
TOO	Toolangi	60.88	136	P	P	09 49 25.3	+2.1
SVE	Sverdlovsk	60.93	339⇑	eP	P	09 49 23.8	+0.6
SVE				pmax	pmax		
	comp=Z,32nm,1.0s						
ARU	Arti	61.41	337	P	P	09 49 26.0	-0.5
	comp=Z,3.9nm,0.5s,baz=137,slow=2.4,SNR=16						
ARU	Arti	61.41	337	eP	P	09 49 26.6	+0.2
	comp=Z,16nm,1.0s						
ARU	Arti	61.41	337	c iP	P	09 49 26.1	-0.3
ARU						09 50 08.7	
ARU				S	S	09 57 46.6	+2.7
ARU				SS	SS	10 01 44.0	-1.3
ARU				pmax	pmax		
	comp=Z,18nm,1.0s						
KBZ	Khabaz	62.15	319	P	P	09 49 32.1	+0.5
	comp=Z,2.9nm,0.9s,baz=143,slow=5.3,SNR=4.7						
KVAR	Kislovodsk Arr	62.38	319	P	P	09 49 32.7	-0.6
	comp=Z,4.5nm,0.6s,baz=144,slow=8.7,SNR=3.0						
KIV	Kislovodsk	62.38	319⇓	eP	P	09 49 33.9	+0.6
KIV				e		09 50 14.2	
KIV				e		09 51 50.2	
KIV				eS	S	09 58 06.2	+9.4
KIV				pmax	pmax		
	comp=Z,8.0nm,1.3s						
YAK	Yakutsk	64.54	17	LR	LR	10 21 19.2	
	comp=Z,314nm,18.3s,baz=262,slow=39						
YAK	Yakutsk	64.54	17	eP	P	09 49 46.5	-0.6
	comp=Z,76nm,1.1s						
YAK	Yakutsk	64.54	17	eP	P	09 49 45.9	-1.2
YAK				e		09 52 08.4	
YAK				eS	S	09 58 22.2	-0.6
YAK				e*SS	pS	09 58 38.4	-0.5
YAK				pmax	pmax		
	comp=Z,54nm,1.0s						
YAK				pmax	pmax		
	comp=N,13nm,1.3s						

YAK				pmax	pmax		
	comp=E,15nm,1.5s						
YAK				pmax	pmax		
	comp=Z,11nm,0.9s						
YAK				pmax	pmax		
	comp=N,4.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.0s						
YAK				smax	smax		
	comp=N,22nm,1.8s						
YAK				smax	smax		
	comp=E,28nm,2.4s						
YAK				MLR	MLR		
	comp=Z,684nm,17.0s						
YAK				MLR	MLR		
	comp=N,388nm,16.0s						
YAK				MLR	MLR		
	comp=E,252nm,17.0s						
BRTR	**Keskin Array B**	**67.17**	**312**	P	**P**	**09 50 05.0**	**+0.2**
	comp=E,2.1nm,1.2s,baz=143,slow=10,SNR=4.4						
BRTR				LR	LR	10 20 31.0	
	comp=E,48nm,21.6s,baz=100,slow=37						
BRTR	**Keskin Array B**	**67.17**	**312**	*ce*P	**P**	**09 50 06.0**	**+1.3**
BRTR				pmax	pmax		
	comp=Z,2.0nm,1.2s						
ISP	**Isparta**	**69.03**	**310**	*i* P	**P**	**09 50 16.8**	**+0.4**
ISP				pmax	pmax		
	comp=Z,7.0nm,1.0s						
PRGR	**Permogore**	**69.86**	**337**	*e*P	**P**	**09 50 20.5**	**-0.3**
PRGR				pmax	pmax		
	comp=Z,19nm,0.6s						
MA2	**Magadan**	**70.75**	**26**	LR	LR	10 25 37.0	
	comp=Z,119nm,18.0s,baz=262,slow=40						
MA2	**Magadan**	**70.75**	**26**	*i* P	**P**	**09 50 26.5**	**+0.2**
MA2				pmax	pmax		
	comp=Z,16nm,1.1s						
OBN	**Obninsk**	**70.75**	**328**	*ce*P	**P**	**09 50 25.8**	**-0.5**
OBN				*e*		09 50 46.2	
OBN				*e*		09 53 05.6	
OBN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
OBN				MLR	MLR		
	comp=Z,68nm,18.0s						
KLMR	**Klimovskoe**	**71.94**	**335**	*e*P	**P**	**09 50 32.5**	**-1.0**
KLMR				pmax	pmax		
	comp=Z,11nm,1.1s						
KLMR	**Klimovskoe**	**71.94**	**335**	*e*P	**P**	**09 50 32.5**	**-1.0**
KLMR				AMP		09 50 43.1	
	comp=Z,11nm,1.1s						
TIXI	**Tiksi**	**72.12**	**10**	*e*P	**P**	**09 50 34.1**	**-0.3**
	comp=Z,9.9nm,0.8s						
TIXI	**Tiksi**	**72.12**	**10**	*ce*P	**P**	**09 50 33.3**	**-1.0**
TIXI				pmax	pmax		
	comp=Z,10.0nm,0.7s						
SEY	**Seymchan**	**73.09**	**24**	*i* P	**P**	**09 50 39.5**	**-0.8**
DZM	**Mont Dzumac**	**73.11**	**114**	LR	LR	10 24 53.4	
	comp=Z,103nm,18.8s,baz=276,slow=38						
AKASG	**Malin Array Be**	**73.34**	**322**	P	**P**	**09 50 42.0**	**0.0**
	comp=Z,2.8nm,0.8s,baz=87,slow=5.2,SNR=6.1						
AKASG	**Malin Array Be**	**73.34**	**322**	P	**P**	**09 50 42.0**	**0.0**
KIEV	**Kiev**	**73.35**	**322**	*i* P	**P**	**09 50 40.9**	**-1.1**
KIEV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MLR	**Muntele Rosu**	**74.13**	**317**	P	**P**	**09 50 47.8**	**+0.9**
	comp=Z,2.8nm,0.9s,baz=84,slow=8.0,SNR=3.1						
BOSA	**Boshof**	**74.24**	**239**	LR	LR	10 20 47.1	
	comp=Z,119nm,18.7s,baz=30,slow=34						
BUR08	**Bucovina Ar. S**	**75.11**	**319**	*e*P	**P**	**09 50 54.0**	**+1.4**
FINES	**FINESS Array B**	**78.17**	**333**	P	**P**	**09 51 09.8**	**+0.4**
	comp=Z,5.8nm,0.8s,baz=117,slow=6.6,SNR=14						
TSUM	**Tsumeb**	**79.72**	**250**	LR	LR	10 24 53.6	
	comp=Z,91nm,18.2s,baz=340,slow=34						
ARCES	**ARCESS Array B**	**80.81**	**340**	P	**P**	**09 51 24.4**	**+0.8**
	comp=Z,3.7nm,0.6s,baz=95,slow=5.6,SNR=24						
ARCES	**ARCESS Array B**	**80.81**	**340**	*e*P	**P**	**09 51 24.9**	**+1.3**
KHZ	**Kahutara**	**82.68**	**133**	*e*P	**P**	**09 51 35.3**	**+1.3**
	comp=Z,17nm,1.1s						
GEA0	**GERESS Array S**	**82.88**	**319**	*e*P	**P**	**09 51 36.3**	**+1.3**
GEC2	**GERESS Array S**	**82.89**	**319**	*e*P	**P**	**09 51 37.0**	**+1.9**
	comp=Z,3.5nm,0.9s						
GEC2	**GERESS Array S**	**82.89**	**319**	*e*P	**P**	**09 51 37.0**	**+1.9**
GEC2				pmax	pmax		
	comp=Z,4.0nm,0.9s						
GERES	**GERESS Array B**	**82.89**	**319**	P	**P**	**09 51 36.3**	**+1.3**
	comp=Z,2.9nm,1.0s,baz=93,slow=5.3,SNR=15						
KHC	**Kasperske Hory**	**82.99**	**319**	*e*P	**P**	**09 51 36.5**	**+1.0**
KHC				*e*x	x	09 52 00.0	
KHC	**Kasperske Hory**	**82.99**	**319**	*e*P	**P**	**09 51 36.5**	**+1.0**
CLL	**Collm**	**83.51**	**321**	*i* P	**P**	**09 51 35.8**	**-2.3**
CLL				pmax	pmax		
	comp=Z,66nm,2.8s						
HFS	**Hagfors**	**83.86**	**330**	P	**P**	**09 51 40.5**	**+0.8**
	comp=Z,4.8nm,0.9s,baz=100,slow=3.5,SNR=5.5						
HFS				LR	LR	10 34 17.2	
	comp=Z,69nm,18.0s,baz=101,slow=40						
NB2	**NORSAR Subarra**	**85.16**	**331**	P	**P**	**09 51 46.4**	**+0.1**
	comp=Z,1.0nm,0.9s,baz=97,slow=5.1						
NOA	**NORSAR Array B**	**85.16**	**331**	P	**P**	**09 51 46.5**	**+0.1**
	comp=Z,2.5nm,1.0s,baz=95,slow=5.2,SNR=4.2						
NOA				LR	LR	10 34 16.4	
	comp=Z,64nm,20.1s,baz=90,slow=39						
SPITS	**Spitsbergen Ar**	**85.36**	**348**	P	**P**	**09 51 47.5**	**+0.5**
	comp=Z,9.5nm,1.0s,baz=30,slow=8.9,SNR=3.3						
SPITS				LR	LR	10 34 58.1	
	comp=Z,128nm,21.2s,baz=65,slow=39						
DAVOX	**Davos/Dischmat**	**85.36**	**317**	P	**P**	**09 51 48.7**	**+0.9**
	comp=Z,5.2nm,1.0s,baz=77,slow=6.3,SNR=3.7						
BFO	**Black Forest**	**86.43**	**318**	*e*P	**P**	**09 51 54.1**	**+1.2**
	comp=Z,4.9nm,1.0s						
BFO	**Black Forest**	**86.43**	**318**	*e*P	**P**	**09 51 54.1**	**+1.2**
BFO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NVL	**N'lazarevskaya**	**90.39**	**199**	*e*P	P	09 52 19.4	+8.3
NVL				pmax	pmax		
	comp=Z,3.0nm,0.5s						
TORD	**Torodi Ar. Bea**	**93.42**	**283**	P	**P**	**09 52 27.2**	**+0.8**
	comp=Z,0.4nm,0.9s,baz=78,slow=7.5						
TORD				LR	LR	10 34 51.2	
	comp=Z,58nm,18.1s,baz=40,slow=36						
SNAA	**Sanae**	**95.12**	**198**	LR	LR	10 28 11.4	
	comp=Z,69nm,21.6s,baz=71,slow=31						
DSB	**Dublin**	**95.24**	**324**	*e*P	**P**	**09 52 35.1**	**+1.3**
	comp=Z,21nm,1.0s						
SDPT	**Sand Point**	**95.70**	**34**	*e*P	**P**	**09 52 35.4**	**-0.5**
	comp=Z,23nm,1.1s						
ILAR	**Eielson Array**	**99.02**	**23**	PP	PP	09 56 47.4	-5.4
	comp=Z,0.5nm,0.9s,baz=310,slow=5.7,SNR=4.4						
J05D	**Fort Rock, OR**	**123.53**	**32**	P	**PKPdf**	**09 58 09.0**	**+1.1**
	baz=314						
F10A	**Beach Ranch, E**	**123.55**	**27**	*e*PKPdf	**PKPdf**	**09 58 08.8**	**+0.9**
K05A	**Summer Lake**	**124.09**	**32**	*e*PKPdf	**PKPdf**	**09 58 10.7**	**+1.6**
BOZ	**Bozeman (W)**	**126.24**	**24**	P	**PKPdf**	**09 58 14.2**	**+1.1**
	baz=325						
HLID	**Hailey**	**126.68**	**27**	P	**PKPdf**	**09 58 14.9**	**+0.9**
	baz=321						
LAO	**LASA Array**	**127.27**	**19**	*e*PKPdf	**PKPdf**	**09 58 13.1**	**-1.9**
NV01	**Mina Array Sit**	**128.50**	**34**	*e*PKPdf	**PKPdf**	**09 58 19.4**	**+1.7**
NVAR	**Mina Array Bea**	**128.50**	**34**	PKP	**PKPdf**	**09 58 18.3**	**+0.6**
	comp=Z,0.9nm,0.8s,baz=270,slow=2.7,SNR=7.0						
MLAC	**Mammoth, Mammo**	**128.75**	**35**	P	**PKPdf**	**09 58 18.4**	**+0.2**
	baz=313						
BW06	**Boulder Array**	**129.42**	**24**	P	**PKPdf**	**09 58 19.8**	**+0.4**
	baz=326						
BW06	**Boulder Array**	**129.42**	**24**	*e*PKPdf	**PKPdf**	**09 58 21.5**	**+2.1**
PDAR	**Pinedale Array**	**129.42**	**24**	PKP	**PKPdf**	**09 58 19.4**	**0.0**
	comp=Z,0.3nm,0.6s,baz=177,slow=2.1,SNR=4.6						
PDAR	**Pinedale Array**	**129.42**	**24**	*e*PKPdf	**PKPdf**	**09 58 20.1**	**+0.8**
R11A	**Troy Canyon, C**	**130.04**	**32**	P	**PKPdf**	**09 58 20.1**	**-0.6**
	baz=317						
R11A	**Troy Canyon, C**	**130.04**	**32**	*e*PKPdf	**PKPdf**	**09 58 22.9**	**+2.2**
DUG	**Dugway, Tooele**	**130.05**	**29**	P	**PKPdf**	**09 58 20.1**	**-0.5**
	baz=321						
K22A	**Casper**	**130.70**	**22**	P	**PKPdf**	**09 58 21.2**	**-0.5**
	baz=330						
OSI	**Osito Audit: C**	**130.84**	**38**	*e*PKPpre	PKPpre	09 58 12.6	
O20A	**White River Ci**	**132.16**	**25**	P	**PKPdf**	**09 58 26.0**	**+1.4**
	baz=327						
BAR	**Barrett**	**133.41**	**39**	*e*PKPdf	**PKPdf**	**09 58 30.1**	**+3.2**
TASM	**ASL Pad, Albuq**	**137.26**	**27**	P	**PKPdf**	**09 58 33.5**	**-0.8**
	baz=326						
ANMO	**Albuquerque**	**137.26**	**27**	P	**PKPdf**	**09 58 33.5**	**-0.8**
	baz=326						
ANMO	**Albuquerque**	**137.26**	**27**	*c i*PKIKP	**PKPdf**	**09 58 34.0**	**-0.3**
ANMO				pmax	pmax		
	comp=Z,5.0nm,2.5s						
TASL	**Snake Pit, Alb**	**137.26**	**27**	P	**PKPdf**	**09 58 33.5**	**-0.8**
	baz=326						
MNTX	**Cornudas Mount**	**140.44**	**29**	P	**PKPdf**	**09 58 39.4**	**-0.6**
	baz=326						
U47A	**Clarksville**	**141.11**	**4**	P	**PKPdf**	**09 58 40.5**	**-0.4**
	baz=355						
TXAR	**Lajitas Array**	**143.23**	**29**	PKhKP	PKPpre	09 58 42.8	
	comp=Z,0.5nm,0.7s,baz=283,slow=2.1,SNR=7.3						
Y46A	**Houston**	**143.50**	**7**	P	**PKPdf**	**09 58 44.6**	**-0.7**
	baz=352						
JCT	**Junction City**	**143.94**	**23**	P	**PKPdf**	**09 58 45.4**	**-0.9**
	baz=333						
JCT	**Junction City**	**143.94**	**23**	*e*PKPdf	**PKPdf**	**09 58 45.3**	**-1.0**
JCT	**Junction City**	**143.94**	**23**	*e*PKIKP	**PKPdf**	**09 58 45.3**	**-1.0**
HPIG		**144.11**	**34**	*e*PKPdf	**PKPdf**	**09 58 46.7**	**-0.1**
Z47A	**Carrollton**	**144.26**	**6**	P	**PKPdf**	**09 58 46.0**	**-0.7**
	baz=353						
Z52A	**Williamson**	**144.46**	**0**	P	**PKPdf**	**09 58 46.4**	**-0.6**
	baz=360						
241A	**Mo Tay, Goldon**	**144.64**	**13**	*e*PKPdf	**PKPdf**	**09 58 50.3**	**+2.9**
242A	**Grayson**	**144.77**	**12**	P	**PKPdf**	**09 58 47.2**	**-0.4**
	baz=346						
VBMS	**Vicksburg**	**144.91**	**9**	P	PKPbc	09 58 46.9	0.0
	baz=349						
149A	**Jones**	**144.97**	**4**	P	**PKPab**	**09 58 47.1**	**0.0**
	baz=355						
152A	**Waverly Hall**	**144.98**	**1**	P	PKPbc	09 58 47.2	0.0
	baz=359						
CPUP	**Villa Florida**	**145.00**	**225**	PKPbc	**PKPbc**	**09 58 47.3**	**-0.1**
	comp=Z,0.8nm,0.5s,baz=106,slow=7.4,SNR=2.8						
244A	**Avery, Jackson**	**145.06**	**10**	P	**PKPbc**	**09 58 47.4**	**-0.1**
	baz=349,SNR=5.6						
151A	**Opelika**	**145.11**	**2**	P	**PKPbc**	**09 58 47.6**	**0.0**
	baz=358,SNR=6.8						
245A	**Little AP, Sta**	**145.19**	**8**	P	**PKPbc**	**09 58 47.5**	**-0.3**
	baz=350,SNR=8.9						
341A	**Kurthwood**	**145.25**	**14**	P	**PKPbc**	**09 58 47.7**	**-0.4**
	baz=344,SNR=6.5						
341A	**Kurthwood**	**145.25**	**14**	*e*PKPbc	**PKPdf**	**09 58 49.3**	**+0.9**
247A	**Quitman**	**145.34**	**7**	P	**PKPbc**	**09 58 47.9**	**-0.4**
	baz=352						
248A	**Dixon Mills**	**145.39**	**5**	P	**PKPbc**	**09 58 48.0**	**-0.5**
	baz=354,SNR=5.5						
342A	**Flagon Creek P**	**145.40**	**12**	P	**PKPbc**	**09 58 48.0**	**-0.5**
	baz=346						
251A	**Midway**	**145.54**	**2**	P	**PKPdf**	**09 58 48.5**	**-0.4**
	baz=358,SNR=14						
249A	**Camden**	**145.56**	**4**	P	**PKPdf**	**09 58 48.5**	**-0.4**
	baz=355,SNR=14						
253A	**Americus**	**145.59**	**360**	P	**PKPdf**	**09 58 48.5**	**-0.5**
	SNR=5.3						
253A	**Americus**	**145.59**	**360**	*e*PKPdf	**PKPab**	**09 58 50.3**	**+0.9**
250A	**Grady**	**145.61**	**3**	P	**PKPdf**	**09 58 48.3**	**-0.7**
	baz=356,SNR=6.3						
250A	**Grady**	**145.61**	**3**	*e*PKPdf	**PKPab**	**09 58 50.0**	**+0.5**
344A	**Westbrook Farm**	**145.63**	**10**	P	**PKPdf**	**09 58 48.4**	**-0.7**
	baz=348,SNR=5.2						
344A	**Westbrook Farm**	**145.63**	**10**	*e*PKPdf	**PKPab**	**09 58 51.0**	**+1.5**
252A	**Lumpkin**	**145.65**	**1**	P	**PKPdf**	**09 58 48.2**	**-0.9**
	baz=359,SNR=7.1						
255A	**Hazlehurst**	**145.68**	**357**	P	**PKPdf**	**09 58 48.5**	**-0.6**
	baz=3.0						
255A	**Hazlehurst**	**145.68**	**357**	*e*PKPdf	**PKPab**	**09 58 50.9**	**+1.2**
254A	**Abbeville**	**145.69**	**359**	P	**PKPdf**	**09 58 48.2**	**-0.9**
	baz=1.5,SNR=5.0						
346A	**Big Creek Wild**	**145.89**	**8**	P	**PKPdf**	**09 58 48.9**	**-0.6**
	baz=351						
346A	**Big Creek Wild**	**145.89**	**8**	*e*PKPdf	**PKPab**	**09 58 50.7**	**+0.1**
347A	**Saraland**	**145.99**	**7**	P	**PKPdf**	**09 58 49.3**	**-0.4**
	baz=352,SNR=5.9						
833A	**Chaparral WMA,**	**146.01**	**24**	P	**PKPdf**	**09 58 49.0**	**-0.8**
	baz=332						
833A	**Chaparral WMA,**	**146.01**	**24**	*e*PKPdf	**PKPab**	**09 58 51.1**	**0.0**
352A	**Blakely**	**146.16**	**1**	P	**PKPdf**	**09 58 49.7**	**-0.3**
	baz=359,SNR=6.7						
352A	**Blakely**	**146.16**	**1**	*e*PKPdf	**PKPab**	**09 58 52.0**	**+0.5**
350A	**Dozier**	**146.16**	**3**	P	**PKPdf**	**09 58 49.6**	**-0.4**
	baz=356						
349A	**Repton**	**146.18**	**5**	P	**PKPdf**	**09 58 49.3**	**-0.7**
	baz=355						
TIGA	**Tifton**	**146.20**	**359**	P	**PKPdf**	**09 58 49.2**	**-0.8**
	baz=1.0						
356A	**Blackshear**	**146.26**	**357**	P	**PKPdf**	**09 58 49.5**	**-0.6**
	baz=3.6						
355A	**Pearson**	**146.28**	**358**	P	**PKPdf**	**09 58 49.3**	**-0.8**
	baz=2.3,SNR=5.2						
353A	**Camilla**	**146.30**	**0**	P	**PKPdf**	**09 58 49.3**	**-0.9**
	baz=360						
351A	**Pinckard**	**146.34**	**2**	P	**PKPdf**	**09 58 49.5**	**-0.8**
	baz=357,SNR=5.5						
BRAL	**Brewton**	**146.37**	**4**	*e*PKPdf	**PKPab**	**09 58 53.0**	**+0.6**
541A	**Lake Charles**	**146.46**	**14**	*e*PKPdf	**PKPab**	**09 58 52.9**	**+0.2**
453A	**Whigham**	**146.79**	**0**	P	**PKPdf**	**09 58 50.2**	**-0.8**
	baz=360						
453A	**Whigham**	**146.79**	**0**	*e*PKPbc	**PKPab**	**09 58 54.6**	**+0.6**
455A	**Stateville**	**146.88**	**358**	P	**PKPdf**	**09 58 50.5**	**-0.7**
	baz=2.0						
451A	**Vernon**	**146.99**	**2**	*e*PKPbc	**PKPab**	**09 58 55.1**	**+0.3**
555A	**McAlpin**	**147.50**	**358**	P	**PKPdf**	**09 58 51.5**	**-0.7**
	baz=2.2						
555A	**McAlpin**	**147.50**	**358**	*e*PKPbc	**PKPab**	**09 58 56.6**	**-0.1**
656A	**Willston**	**148.23**	**357**	*e*PKPbc	**PKPab**	**09 58 58.6**	**-1.1**
LNIG	**Linares**	**148.96**	**28**	*e*PKPbc	**PKPbc**	**09 58 59.4**	**+0.5**

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*CSEM **22** 10:02:34.7, 40°.01N×34°.83E, h7^{km}, ML2.5*
*DDA **22** 10:02:34.7, 40°.01N×34°.83E, h7^{km}, Ml2.5*
ISC 22 10:02:31.4±1.9**, 39°.83N**±0°.09×**35°.00E**±0°.07**, h14**^{km}±18^{km}**,**
n11, σ0ˢ62/20**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YOZ	**Yozgat**	**0.31**	**127**	PG	**Pn**	**10 02 41.4**	**-0.3**
COAL	**Corum-Alaca**	**0.42**	**359**	*i* P	**Pg**	**10 02 39.8**	**-0.1**
COAL				*i* S	**Sg**	**10 02 44.8**	**-0.9**
COAL	**Corum-Alaca**	**0.42**	**359**	P	**Pg**	**10 02 39.8**	**-0.1**
COAL				S	**Sg**	**10 02 44.8**	**-0.9**
CORM	**Corum**	**0.45**	**321**	PG	**Pb**	**10 02 41.0**	**-0.1**
CORM				SG	**Sb**	**10 02 47.6**	**-0.1**
CDAG	**Cicekdag**	**0.53**	**247**	*i* P	**Pn**	**10 02 44.8**	**+0.2**
CDAG				*i* S	**Sn**	**10 02 53.0**	**-0.3**
CDAG	**Cicekdag**	**0.53**	**247**	P	**Pn**	**10 02 44.8**	**+0.2**
CDAG				S	**Sn**	**10 02 53.0**	**-0.3**
CTAK	**Corum_Osmancik**	**0.83**	**349**	*i* P	**Pg**	**10 02 47.9**	**+0.4**
CTAK				*i* S	**Sg**	**10 02 58.8**	**+0.3**
CTAK	**Corum_Osmancik**	**0.83**	**349**	P	**Pg**	**10 02 47.9**	**+0.4**
CTAK				S	**Sg**	**10 02 58.8**	**+0.3**
SVSK	**Karacayir**	**1.54**	**86**	PG	**Pg**	**10 03 01.4**	**+0.4**
BOYT	**Boyabat**	**1.59**	**357**	*i* P	**Pg**	**10 03 01.5**	**-0.4**
BOYT				*i* S	**Sg**	**10 03 23.8**	**+1.3**
BOYT	**Boyabat**	**1.59**	**357**	P	**Pg**	**10 03 01.5**	**-0.4**
BOYT				S	**Sg**	**10 03 23.8**	**+1.3**

JMA 22 10:07:59.9±0.2**, 32°.08N×140°.69E, h39**^{km}**, M3.6,**
Southeast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	**1.24**	**323**	P	Pn	10 08 21.2	+0.4
JHCJ				S	Sn	10 08 36.7	+0.4
JHJ2	**Mitsune**	**1.27**	**325**	P	Pn	10 08 21.8	+0.7
JHJ2				S	Sn	10 08 37.9	+1.1
JMKN	**Mikurajimanish**	**2.03**	**333**	P	Pn	10 08 32.4	+0.8
JMKN				S	Sn	10 08 56.4	+0.7
BSO3	**Boso 3**	**2.72**	**357**	P	Pn	10 08 42.0	+1.2
BSO3				S	Sn	10 09 13.7	+1.4
JIM2	**Oshima 3**	**2.83**	**339**	P	Pn	10 08 43.9	+1.3
JIM2				*e*S	Sn	10 09 16.5	+1.0

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*ISCJB **22** 10:12:52.3±0.7, 36°.17N±0°.04×140°.03E±0°.07, h63^{km}±5^{km}, mb3.5/3, Error ellipse: s-maj=9.2km s-min=6.6km az=168.2*
*JMA **22** 10:12:53.6±0.1, 36°.19N×140°.01E, h52^{km}±1^{km}, M3.7 Broadband fault plane solution: P waves. NP1: ϕ_s65.00000°, δ72.00000°, λ89.00000°. NP2: ϕ_s248.00000°, δ18.00000°, λ93.00000°. Principal axes: T Plg63.0000°, Azm334.0000°; N Plg1.0000°, Azm66.0000°; P Plg27.0000°, Azm156.0000°;*
JMA Felt II J1.
*IDC **22** 10:12:53.2±1.2, 35°.34N×137°.86E, h0^{km}, mb3.5/3, mb1 3.7/4, mb1mx3.3/73, mbtmp3.6/4, ML3.6/1 Error ellipse: s-maj=21.2km s-min=16.0km az=63.0*
ISC 22 10:12:53.2±1.0**, 36°.18N**±0°.05×**140°.02E**±0°.06**, h55**^{km}±8^{km}**,**
n12, σ0ˢ65/21**, mb3.6**/3**, 1C-4D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYT	**Yasato**	**0.15**	**72**	⇑P	**Pn**	**10 13 01.9**	**+0.1**
JYT				S	**Sn**	**10 13 07.8**	**-0.2**
JAG	**Ashikaga**	**0.52**	**298**	⇓P	**Pn**	**10 13 05.2**	**+0.2**
JAG				S	**Sn**	**10 13 13.2**	**-0.3**
JKT	**Katashina**	**0.85**	**313**	⇓P	**Pn**	**10 13 09.2**	**0.0**
JKT				S	**Sn**	**10 13 21.0**	**0.0**
JRY	**Ryogami san**	**0.92**	**260**	⇓P	**Pn**	**10 13 10.4**	**+0.4**
JRY				S	**Sn**	**10 13 22.5**	**+0.1**
JOD2	**Odawara 2**	**1.19**	**220**	P	**Pn**	**10 13 14.5**	**+0.9**
JOD2				S	**Sn**	**10 13 29.4**	**+0.6**
JFY	**Yanaizu**	**1.25**	**348**	⇓P	**Pn**	**10 13 14.9**	**+0.5**
JFY				S	**Sn**	**10 13 31.2**	**+1.0**
MJAR	**Matsushiro Arr**	**1.51**	**284**	Pn	**Pn**	**10 13 17.5**	**-0.3**
	18nm,0.3s,baz=198,slow=17,SNR=139						
MJAR				Sn	**Sn**	**10 13 35.1**	**-1.3**
	10nm,0.3s,baz=193,slow=25,SNR=13						
MAT	**Matsushiro**	**1.51**	**284**	P	**Pn**	**10 13 18.8**	**+0.9**
MAT				S	**Sn**	**10 13 36.9**	**+0.4**
JHJ	**Hachijo jima 2**	**3.06**	**184**	Pn	**Pn**	**10 13 39.6**	**+0.5**
	24nm,0.3s,baz=325,slow=20,SNR=15						
JHJ				Sn	**Sn**	**10 14 13.8**	**-0.6**
	20nm,0.3s,baz=261,slow=19,SNR=3.1						
MKAR	**Makanchi Array**	**43.63**	**303**	P	**P**	**10 20 51.7**	**-0.4**
	0.3nm,0.7s,baz=80,slow=6.7,SNR=4.0						
KURBB	**Kurchatov Arra**	**45.65**	**308**	P	**P**	**10 21 08.5**	**+0.5**
	0.8nm,0.6s,baz=82,slow=7.9,SNR=9.1						
WRA	**Warramunga Arr**	**56.08**	**186**	P	**P**	**10 22 26.0**	**-0.7**
	0.3nm,0.5s,baz=1.4,slow=7.6,SNR=7.0						

IDC 22 10:14:18.6±1.6**, 16°.34S×176°.01W, h357**^{km}±44^{km}**,**
mb3.3/4**, mb1 3.5**/5**, mb1mx3.0**/52**, mbtmp4.0**/5**, Error ellipse: s-maj=152.4km s-min=24.2km az=140.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**4.75**	**60**	P	Pn	10 15 36.5	+0.6
	8.4nm,0.3s,baz=143,slow=5.1,SNR=14						
AFI				S	S	10 16 38.6	+0.1
	1.3nm,0.3s,baz=210,slow=20,SNR=2.7						
STKA	**Stephens Creek**	**41.39**	**240**	P	P	10 21 30.7	-0.7
	0.6nm,0.3s,baz=90,slow=9.1,SNR=4.7						
WRA	**Warramunga Arr**	**47.19**	**258**	P	P	10 22 16.6	-0.4
	0.7nm,0.6s,baz=92,slow=7.3,SNR=21						
ASAR	**Alice Springs**	**47.43**	**253**	P	P	10 22 19.2	+0.4
	2.7nm,0.4s,baz=89,slow=7.6,SNR=106						
ILAR	**Eielson Array**	**83.87**	**12**	P	P	10 26 08.4	0.0
	0.5nm,0.6s,baz=214,slow=6.4,SNR=5.9						

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*ISCJB **22** 10:16:24.3±0.1, 32°.44N±0°.02×49°.79E±0°.02, h11^{km}, mb4.6/122, MS3.5/11, Error ellipse: s-maj=3.0km s-min=2.1km az=19.7*
*BJI **22** 10:16:25.5, 32°.60N×49°.90E, h14^{km}, mb4.7/24, mB4.8/14, Ms4.3/6, Ms7 4.1/6*
*CSEM **22** 10:16:26.2±0.1, 32°.51N×49°.79E, h10^{km}, mb4.6/77, Error ellipse: s-maj=4.3km s-min=2.9km az=30.0*
*TEH **22** 10:16:26.4, 32°.55N×49°.93E, h10^{km}, ML4.3*
*MOS **22** 10:16:26.0±1.2, 32°.56N×49°.85E, h25^{km}, mb4.7/49, Error ellipse: s-maj=6.4km s-min=3.7km az=122.4*
*GII **22** 10:16:27.5±0.0, 32°.55N×49°.90E, h30^{km}*
*THR **22** 10:16:27.4±1.1, 32°.60N×49°.94E, h14^{km}±8^{km}, ML4.2*
*NEIC **22** 10:16:27.4±0.0, 32°.60N×49°.94E, h14^{km}, mb4.6/41, ML4.2(THR), MN4.3(TEH), After THR.*
*IDC **22** 10:16:29.2±3.0, 32°.61N×49°.83E, h33^{km}±23^{km}, mb4.0/30, mb1 4.1/38, mb1mx4.0/66, mbtmp4.2/38, ML4.1/7, MS3.4/12, Ms1 3.4/12, ms1mx3.1/56, Error ellipse: s-maj=11.4km s-min=9.4km az=157.0*
*SGS **22** 10:16:29.8, 32°.78N×49°.78E, h30^{km}*
ISC 22 10:16:25.9±0.3**, 32°.54N**±0°.03×**49°.92E**±0°.02**, h11**^{km}**, n517,**
σ1ˢ70/536**, mb4.6**/122**, MS3.5**/12**, 24C-21D, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPIR	**Pirpir**	**0.84**	**80**	Pg	**Pg**	**10 16 40.8**	**-1.3**
IPIR	**Pirpir**	**0.84**	**80**	*e*Pg	**Pg**	**10 16 41.0**	**-1.1**
IPIR				*e*		10 16 54.7	
	comp=N,86μm,0.2s						
IPIR				*e*		10 16 56.9	
	comp=Z,80μm,0.2s						
IPIR				*e*		10 16 58.6	
	comp=E,92μm,0.2s						
IPIR	**Pirpir**	**0.84**	**80**	Pg	**Pg**	**10 16 40.8**	**-1.3**
ZNGN	**Zangian**	**0.90**	**118**	*e*Pg	**Pg**	**10 16 43.1**	**-0.2**
ZNGN				*e*Sg	**Sn**	**10 16 58.6**	**+0.7**
ZNGN				*e*		10 17 00.8	
	comp=E,99nm,0.2s						
ZNGN				*e*		10 17 05.3	
	comp=N,99nm,0.3s						
ZNGN				*e*		10 17 06.1	
	comp=Z,99nm,0.2s						
ZNGN	**Zangian**	**0.90**	**118**	*e*Pg	**Pg**	**10 16 43.1**	**-0.2**
ZNGN				*e*Sg	**Sn**	**10 16 58.6**	**+0.7**
ROKH	**ROKH**	**0.97**	**101**	*e*Pg	**Pg**	**10 16 43.1**	**-1.5**
ROKH				*e*		10 17 00.3	
	comp=E,99nm,0.2s						
ROKH				*e*		10 17 04.0	
	comp=Z,99nm,0.2s						
ROKH				*e*		10 17 07.5	
	comp=N,99nm,0.2s						
ROKH	**ROKH**	**0.97**	**101**	*e*Pg	**Pg**	**10 16 43.1**	**-1.5**
SHGR	**Shooshtar-Gavs**	**1.04**	**246**	Pg	**Pn**	**10 16 47.0**	**+0.6**
SHGR	**Shooshtar-Gavs**	**1.04**	**246**	*e*Pg	**Pn**	**10 16 47.4**	**+1.0**
SHGR				IAML		10 17 10.3	
	comp=N,7μm,0.6s						
SHGR				IAML		10 17 12.7	
	comp=E,6μm,0.5s						
SHGR	**Shooshtar-Gavs**	**1.04**	**246**	*e*Pg	**Pn**	**10 16 47.4**	**+1.0**
SHGR	**Shooshtar-Gavs**	**1.04**	**246**	Pg	**Pn**	**10 16 47.0**	**+0.6**
KHMZ	**Khomeyn**	**1.20**	**2**	*e*Pg	**Pb**	**10 16 46.1**	**-2.7**
KHMZ	**Khomeyn**	**1.20**	**2**	*e*Pg	**Pb**	**10 16 46.1**	**-2.7**
IKLH	**Kolahrood**	**1.60**	**60**	Pg	**Pn**	**10 16 54.7**	**+0.3**
IKLH	**Kolahrood**	**1.60**	**60**	*e*Pn	**Pn**	**10 16 54.5**	**+0.1**
IKLH				*e*		10 17 22.7	
	comp=N,84μm,0.3s						
IKLH				*e*		10 17 23.6	
	comp=Z,41μm,0.2s						
IKLH				*e*		10 17 26.3	
	comp=E,55μm,0.3s						
IKLH	**Kolahrood**	**1.60**	**60**	*e*Pn	**Pn**	**10 16 54.5**	**+0.1**
AHWZ	**Ahwaz**	**1.62**	**222**	*e*Pn	**Pg**	**10 16 58.0**	**+1.0**
AHWZ				*e*		10 17 26.1	
	comp=E,99nm,0.2s						
AHWZ				*e*		10 17 27.4	
	comp=N,99nm,0.3s						
AHWZ				*e*		10 17 28.9	
	comp=Z,99nm,0.2s						
AHWZ	**Ahwaz**	**1.62**	**222**	*e*Pn	**Pg**	**10 16 58.0**	**+1.0**
IGAR	**Gharneh**	**1.80**	**94**	*e*Pn	**Pb**	**10 16 58.8**	**-0.3**
IGAR				*e*		10 17 02.7	
	comp=Z,27μm,0.1s						
IGAR				*e*		10 17 29.1	
	comp=N,51μm,0.1s						
IKFM	**Kafar-mosalman**	**2.00**	**300**	*e*Pn	**Pb**	**10 17 01.7**	**-0.5**
IKFM				*e*		10 17 34.7	
	comp=E,99nm,0.1s						
IKFM				*e*		10 17 35.2	
	comp=N,99nm,0.4s						
IKFM				*e*		10 17 35.7	
	comp=Z,99nm,0.2s						
IKFM	**Kafar-mosalman**	**2.00**	**300**	*e*Pn	**Pb**	**10 17 01.7**	**-0.5**
HSAM	**Samen**	**2.00**	**327**	*e*Pn	**Pb**	**10 17 02.7**	**+0.2**
HSAM				*e*		10 17 32.5	
	comp=E,99nm,0.4s						
HSAM				*e*		10 17 35.5	
	comp=N,99nm,0.3s						
HSAM	**Samen**	**2.00**	**327**	*e*Pn	**Pb**	**10 17 02.7**	**+0.2**
ASAO	**Ashtian**	**2.01**	**3**	Pn	**Pn**	**10 17 01.0**	**+1.0**
ASAO	**Ashtian**	**2.01**	**3**	*e*Pn	**Pb**	**10 17 01.4**	**-1.1**
ASAO				IAML		10 17 32.4	
	comp=E,2μm,0.6s						
ASAO	**Ashtian**	**2.01**	**3**	*e*Pn	**Pn**	**10 17 00.3**	**+0.3**
ASAO	**Ashtian**	**2.01**	**3**	*e*Pn	**Pb**	**10 17 01.5**	**-1.1**
IZEF	**Zefreh**	**2.07**	**79**	Pn	**Pb**	**10 17 02.3**	**-1.3**
IZEF	**Zefreh**	**2.07**	**79**	*e*		10 17 08.1	
	comp=Z,15μm,0.2s						
IZEF				*e*Pn	**Pb**	**10 17 02.4**	**-1.2**

IZEF				*e*		10 17 34.3	
	comp=N,35µm,0.3s						
IZEF				*e*		10 17 36.6	
	comp=E,30µm,0.2s						
KLNJ	Kolanjah	2.09	136	*e*Pn	Pb	10 17 04.2	+0.2
KLNJ				*e*		10 17 43.1	
	comp=N,99nm,0.3s						
KLNJ				*e*		10 17 45.9	
	comp=E,99nm,0.3s						
KLNJ				*e*		10 17 50.8	
	comp=Z,99nm,0.3s						
KLNJ	Kolanjah	2.09	136	*e*Pn	Pb	10 17 04.2	+0.2
IRAM	Ramesheh	2.21	109	Pn	Pb	10 17 04.7	-1.4
IRAM	Ramesheh	2.21	109	*e*		10 17 48.7	
	comp=N,13µm,0.2s						
IRAM				*e*Pn	Pb	10 17 05.1	-1.0
IRAM				*e*		10 17 49.5	
	comp=Z,14µm,0.4s						
IRAM				*e*		10 17 58.3	
	comp=E,18µm,0.2s						
IRAM	Ramesheh	2.21	109	Pn	Pb	10 17 04.7	-1.4
GHVR	GHOM	2.25	30	Pn	Pb	10 17 05.0	-1.7
GHVR				Sg	Sb	10 17 35.0	+0.4
GHVR	GHOM	2.25	30	*e*Pn	Pb	10 17 05.7	-1.0
GHVR				*e*Sg	Sb	10 17 35.4	+0.7
GHVR				IAML		10 17 41.0	
	comp=E,2µm,0.5s						
GHVR				IAML		10 17 45.7	
	comp=N,2µm,0.5s						
GHVR	GHOM	2.25	30	*e*Pn	Pb	10 17 05.7	-1.0
GHVR	GHOM	2.25	30	*e*Pn	Pb	10 17 05.7	-1.0
GHVR				Sg	Sb	10 17 35.0	+0.4
NASN	Na’in	2.45	83	Pn	Pb	10 17 09.0	-1.2
NASN	Na’in	2.45	83	*e*Pn	Pb	10 17 09.0	-1.2
NASN	Na’in	2.45	83	*e*Pn	Pb	10 17 09.0	-1.2
IBZA	Bozab	2.58	319	Pn	Pn	10 17 09.6	+1.7
IBZA	Bozab	2.58	319	*e*		10 17 57.6	
	comp=Z,99nm,0.6s						
IBZA				*e*Pn	Pn	10 17 09.8	+1.9
IKOM	Komasi	2.59	310	Pn	Pn	10 17 09.6	+1.7
IKOM	Komasi	2.59	310	*e*Pn	Pn	10 17 10.1	+2.2
IKOM				*e*		10 18 01.1	
	comp=Z,99nm,0.4s						
IKOM	Komasi	2.59	310	Pn	Pn	10 17 09.6	+1.7
IRAZ	Razeghan	2.86	0	*e*Pn	Pn	10 17 14.2	+2.5
IRAZ				*e*		10 18 00.5	
	comp=Z,27µm,0.4s						
IRAZ				*e*		10 18 09.3	
	comp=N,15µm,0.4s						
IRAZ				*e*		10 18 10.2	
	comp=E,40µm,0.4s						
IRAZ	Razeghan	2.86	0	*e*Pn	Pn	10 17 14.2	+2.5
HKZM	Kohzaman	2.96	344	*e*Pn	Pn	10 17 14.9	+1.9
HKZM				*e*		10 18 04.9	
	comp=N,99nm,0.3s						
HKZM				*e*		10 18 06.4	
	comp=E,99nm,0.4s						
HKZM				*e*		10 18 06.8	
	comp=Z,99nm,0.3s						
HKZM	Kohzaman	2.96	344	*e*Pn	Pn	10 17 14.9	+1.9
KCHF	Cheshme Sefid,	2.96	307	*e*Pn	Pn	10 17 13.9	+0.8
KCHF				*e*		10 18 12.4	
	comp=Z,99nm,0.3s						
KCHF	Cheshme Sefid,	2.96	307	*e*Pn	Pn	10 17 13.9	+0.8
QABG	Abgarm-Qazvin	3.17	355	*e*Pn	Pb	10 17 19.4	-3.1
QABG				*e*		10 18 15.8	
	comp=Z,99nm,0.6s						
QABG				*e*		10 18 16.4	
	comp=E,99nm,0.8s						
QABG				*e*		10 18 19.2	
	comp=N,99nm,1.1s						
QABG	Abgarm-Qazvin	3.17	355	*e*Pn	Pb	10 17 19.4	-3.1
IMHD	Mahdasht	3.20	11	*e*Pn	Pn	10 17 18.7	+2.4
IMHD				*e*		10 17 23.9	
	comp=Z,9µm,0.2s						
IMHD				*e*		10 18 16.4	
	comp=N,16µm,0.4s						
IMHD				*e*		10 18 19.2	
	comp=E,18µm,0.3s						
IMHD	Mahdasht	3.20	11	*e*Pn	Pn	10 17 18.7	+2.4
IVIS	Veis	3.24	309	Pn	Pn	10 17 17.8	+1.0
IVIS	Veis	3.24	309	*e*Pn	Pn	10 17 18.2	+1.4
IVIS				*e*		10 17 40.1	
	comp=Z,5µm,0.3s						
IVIS				*e*		10 18 18.2	
	comp=E,14µm,0.5s						
IVIS				*e*		10 18 29.4	
	comp=N,13µm,0.4s						
IVIS	Veis	3.24	309	Pn	Pn	10 17 17.8	+1.0
ISAD	Sadrabad	3.26	100	*e*Pn	Pb	10 17 21.1	-2.8
ISAD				*e*		10 18 20.1	
	comp=Z,4µm,0.3s						
ISAD				*e*		10 18 20.7	
	comp=N,7µm,0.3s						
ISAD				*e*		10 18 29.5	
	comp=E,7µm,0.3s						
ISAD	Sadrabad	3.26	100	*e*Pn	Pb	10 17 21.1	-2.8
ANAR	Anarak	3.27	78	*e*Pn	Pn	10 17 20.2	+2.9
ANAR				*e*		10 18 11.5	
	comp=E,99nm,0.5s						
ANAR				*e*		10 18 13.3	
	comp=N,99nm,0.4s						
ANAR				*e*		10 18 17.4	
	comp=Z,99nm,0.4s						
ANAR	Anarak	3.27	78	*e*Pn	Pn	10 17 20.2	+2.9
ILIN	Lien	3.42	315	Pn	Pn	10 17 20.7	+1.3
ILIN	Lien	3.42	315	*e*Pn	Pn	10 17 20.9	+1.5
ILIN				*e*		10 18 21.6	
	comp=Z,7µm,0.3s						
ILIN				*e*		10 18 28.8	
	comp=E,10µm,0.4s						
ILIN	Lien	3.42	315	Pn	Pn	10 17 20.7	+1.3
THKV	Tehran--Karaj	3.46	13	Pn	Pn	10 17 22.0	+2.0
THKV	Tehran--Karaj	3.46	13	*e*Pn	Pn	10 17 22.6	+2.6
THKV				IAML		10 18 27.4	
	comp=N,296nm,0.6s						
THKV	Tehran--Karaj	3.46	13	*e*Pn	Pn	10 17 22.6	+2.6
IDMV	Damavand	3.50	30	*e*Pn	Pn	10 17 23.4	+2.8
IDMV				*e*		10 18 24.4	
	comp=N,11µm,0.3s						
IDMV				*e*		10 18 24.7	
	comp=E,9µm,0.2s						
IDMV				*e*		10 18 37.0	
	comp=Z,8µm,0.6s						
IDMV	Damavand	3.50	30	*e*Pn	Pn	10 17 23.4	+2.8
CHTH	Charan	3.51	16	Pn	Pn	10 17 23.0	+2.4
CHTH	Charan	3.51	16	*e*Pn	Pn	10 17 23.8	+3.2
CHTH	Charan	3.51	16	Pn	Pn	10 17 23.0	+2.4
DAMV	Damavand	3.52	28	Pn	Pn	10 17 23.0	+2.1
DAMV				Sg	Sb	10 18 15.0	+3.6
DAMV	Damavand	3.52	28	*e*Pn	Pn	10 17 23.5	+2.6
DAMV				*e*Sg	Sg	10 18 15.2	-4.0
DAMV				IAML		10 18 22.8	
	comp=E,331nm,0.6s						
DAMV	Damavand	3.52	28	*e*Pn	Pn	10 17 23.5	+2.6
DAMV	Damavand	3.52	28	*e*Pn	Pn	10 17 23.5	+2.6
DAMV				Sg	Sb	10 18 15.0	+3.6
IAFJ	Afjeh	3.63	24	*e*Pn	Pn	10 17 25.7	+3.3
IAFJ				*e*		10 17 27.0	
	comp=Z,7µm,0.2s						
IAFJ				*e*		10 18 25.6	
	comp=N,14µm,0.3s						
IAFJ	Afjeh	3.63	24	*e*Pn	Pn	10 17 25.2	+2.8
SHI	Shiraz	3.65	142	*e*		10 18 44.0	
	comp=Z,12µm,0.6s						
IPAR	Pars	3.80	134	*e*Pn	Pn	10 17 28.1	+3.4
IPAR				*e*		10 18 44.9	
	comp=Z,5µm,0.4s						
IPAR				*e*		10 18 50.2	
	comp=E,5µm,0.5s						
IPAR				*e*		10 18 57.4	
	comp=N,8µm,0.4s						
IPAR	Pars	3.80	134	*e*Pn	Pn	10 17 28.1	+3.4
ILAS	Lasjerd	3.80	41	*e*Pn	Pn	10 17 26.5	+1.8
ILAS				*e*		10 18 35.3	
	comp=Z,6µm,0.4s						
ILAS	Lasjerd	3.80	41	*e*Pn	Pn	10 17 26.5	+1.8
ICHK	Chekchek	3.81	93	*e*Pn	Pn	10 17 28.2	+3.4
ICHK				*e*		10 18 31.8	
	comp=N,5µm,0.3s						
ICHK				*e*		10 18 39.4	
	comp=E,7µm,0.3s						
ICHK				*e*		10 18 42.3	
	comp=Z,4µm,0.3s						
ICHK	Chekchek	3.81	93	*e*Pn	Pn	10 17 28.2	+3.4
IGZV	Ghazvin	3.85	4	Pn	Pn	10 17 26.1	+0.8
IGZV	Ghazvin	3.85	4	*e*Pn	Pn	10 17 28.3	+3.0
IGZV				*e*		10 17 39.8	
	comp=Z,3µm,0.3s						
IGZV				*e*		10 18 34.8	
	comp=E,13µm,0.3s						
IGZV				*e*		10 18 44.2	
	comp=N,8µm,0.3s						
IGZV	Ghazvin	3.85	4	Pn	Pn	10 17 26.1	+0.8
AHBU	AHRAM	3.85	162	*e*Pn	Pn	10 17 29.3	+4.2
IFIR	Firoozkooh	3.89	36	*e*Pn	Pn	10 17 29.2	+3.3
IFIR				*e*		10 17 42.1	
	comp=Z,3µm,0.1s						
IFIR				*e*		10 18 42.0	
	comp=N,4µm,0.3s						
IFIR				*e*		10 18 43.1	
	comp=E,10µm,0.5s						
IFIR	Firoozkooh	3.89	36	*e*Pn	Pn	10 17 29.2	+3.3
IMEH	Mehriz	4.15	105	*e*Pn	Pn	10 17 32.6	+3.1
IMEH				*e*		10 18 30.6	
	comp=Z,1µm,0.3s						
IMEH				*e*		10 19 00.1	
	comp=N,6µm,0.7s						
IMEH	Mehriz	4.15	105	*e*Pn	Pn	10 17 32.6	+3.1
ISRV	Sarvestan	4.18	138	*e*Pn	Pn	10 17 33.2	+3.3
ISRV				*e*		10 18 49.8	
	comp=N,8µm,0.4s						
ISRV				*e*		10 19 27.2	
	comp=Z,6µm,0.5s						
ISRV	Sarvestan	4.18	138	*e*Pn	Pn	10 17 33.2	+3.3
ZNJK	Zanjan	4.25	347	Pn	Pn	10 17 33.0	+2.2
ZNJK	Zanjan	4.25	347	*e*Pn	Pn	10 17 33.2	+2.5
ZNJK	Zanjan	4.25	347	Pn	Pn	10 17 33.0	+2.2
ISHM	Shahmirzad	4.30	40	*e*Pn	Pn	10 17 34.0	+2.5
ISHM				*e*		10 18 55.2	
	comp=Z,5µm,0.3s						
IANJ	Anjilo	4.42	48	*e*Pn	Pn	10 17 35.8	+2.6
IANJ				*e*		10 19 01.1	
	comp=Z,3µm,0.4s						
IANJ	Anjilo	4.42	48	*e*Pn	Pn	10 17 35.8	+2.6
GHIR	Ghir-Karzin	5.00	147	Pn	Pn	10 17 43.0	+2.0
GHIR	Ghir-Karzin	5.00	147	*e*Pn	Pn	10 17 43.9	+2.9
GHIR	Ghir-Karzin	5.00	147	Pn	Pn	10 17 43.0	+2.0
ISRB	Sarab	5.59	341	*e*		10 18 15.2	
	comp=N,1µm,0.2s						
ISRB				*e*		10 19 32.1	
	comp=Z,1µm,0.4s						
ISRB				*e*		10 19 37.0	
	comp=E,2µm,0.4s						
IBST	Bostanabad	5.71	335	*e*Pn	Pn	10 17 54.0	+3.1
IBST				*e*		10 18 17.3	
	comp=N,372nm,0.4s						
IBST				*e*		10 18 17.6	
	comp=Z,397nm,0.2s						
IBST				*e*		10 19 53.9	
	comp=E,367nm,0.4s						
IBST	Bostanabad	5.71	335	*e*Pn	Pn	10 17 54.0	+3.1
TPRV	Parvadeh(Tabas	5.72	83	*e*Pn	Pn	10 17 53.8	+2.9
TPRV				*e*		10 19 38.1	
	comp=Z,99nm,0.9s						
TPRV	Parvadeh(Tabas	5.72	83	*e*Pn	Pn	10 17 53.8	+2.9
TNSJ	Nastanj	5.79	74	*e*Pn	Pn	10 17 54.3	+2.5
TNSJ				*e*		10 19 49.5	
	comp=Z,99nm,0.5s						
TNSJ	Nastanj	5.79	74	*e*Pn	Pn	10 17 54.3	+2.5
SHRO	Shahrood	6.11	54	*e*Pn	Pn	10 17 59.1	+2.8
SHRO	Shahrood	6.11	54	*e*Pn	Pn	10 17 59.1	+2.8
TKDS	Koohdasht(Taba	6.14	78	*e*Pn	Pn	10 17 59.0	+2.3
TKDS				*e*		10 19 55.6	
	comp=Z,99nm,1.3s						
TKDS	Koohdasht(Taba	6.14	78	*e*Pn	Pn	10 17 59.0	+2.3
TABS	Tabas	6.15	78	Pn	Pn	10 17 59.0	+2.2
TABS	Tabas	6.15	78	*e*Pn	Pn	10 17 59.4	+2.6
TABS	Tabas	6.15	78	*e*Pn	Pn	10 17 59.4	+2.6
GRMI	Germi	6.47	346	Pn	Pn	10 18 04.0	+2.8
GRMI	Germi	6.47	346	*e*Pn	Pn	10 18 04.2	+3.0
GRMI	Germi	6.47	346	Pn	Pn	10 18 04.0	+2.8
BOQSS		6.66	184	P	Pn	10 18 06.7	+2.9
ISHB	Shabestar	6.72	330	*e*		10 18 32.7	
	comp=Z,557nm,0.5s						
ISHB				*e*		10 18 55.1	
	comp=N,794nm,0.3s						
ISHB				*e*		10 20 12.6	
	comp=E,903nm,0.5s						
GENO	Geno	7.46	132	*e*Pn	Pn	10 18 16.0	+1.1
GENO				*e*		10 18 22.7	
	comp=N,99nm,0.1s						
GENO				*e*		10 18 29.0	
	comp=E,99nm,0.2s						
GENO				*e*		10 21 13.6	
	comp=Z,99nm,1.4s						
GENO	Geno	7.46	132	*e*Pn	Pn	10 18 16.0	+1.1
SHME	Shamm	8.45	138	Pn	Pn	10 18 29.9	+1.7
SHME	Shamm	8.45	138	*e*Pn	Pn	10 18 28.0	-0.3
BTHS		8.50	174	P	Pn	10 18 31.4	+2.4
GEYT	Alibeck	8.60	49	Pn	Pn	10 18 31.0	+0.6
	comp=Z,2.5nm,0.3s,baz=249,slow=11,SNR=11						
GEYT				Lg	Lg	10 21 02.9	
	comp=Z,0.7nm,0.3s,baz=245,slow=14,SNR=2.7						
GEYT				LR	LR	10 22 12.4	
	comp=Z,321nm,20.6s,baz=240,slow=40						
GYA0B	ALIBECK ARRAY	8.60	49	*e*Pn	Pn	10 18 33.6	+3.3
GYA0B	ALIBECK ARRAY	8.60	49	*e*Pn	Pn	10 18 33.6	+3.3
BANOM	Banah	8.63	138	P	Pn	10 18 31.7	+0.9
	SNR=37						
BANOM	Banah	8.63	138	*i* Pn	Pn	10 18 31.7	+0.9
	SNR=34						
BANOM	Banah	8.63	138	P	Pn	10 18 31.7	+0.9
	SNR=37						
GNI	Garni	8.66	333	Pn	Pn	10 18 35.4	+4.0
	comp=Z,1.3nm,0.3s,baz=149,slow=5.9,SNR=2.5						
GNI				Lg	Lg	10 21 03.1	
	comp=Z,0.6nm,0.3s,baz=162,slow=18,SNR=2.6						
GNI	Garni	8.66	333*c*	*i*P	Pn	10 18 30.6	-0.8
GNI	Garni	8.66	333	*i* P	Pn	10 18 30.6	-0.8
SHRT	Shahrakht	8.78	80	Pn	Pn	10 18 36.0	+3.2
SHRT	Shahrakht	8.78	80	*e*Pn	Pn	10 18 36.7	+3.8
SHRT	Shahrakht	8.78	80	Pn	Pn	10 18 36.0	+3.2
MSFE	Esma-Masafi	9.00	141	*i* Pn	Pn	10 18 35.9	0.0
	SNR=27						
MSFE	Esma-Masafi	9.00	141	*e*Pn	Pn	10 18 35.9	0.0
MSFE	Esma-Masafi	9.00	141	*e*Pn	Pn	10 18 35.9	0.0
MSFE	Esma-Masafi	9.00	141	P	Pn	10 18 36.2	+0.3
	SNR=29						
NAZ	Nazwa, Dubai	9.05	145	*i* Pn	Pn	10 18 36.8	+0.2
	SNR=14						
NAZ	Nazwa, Dubai	9.05	145	*e*Pn	Pn	10 18 38.6	+2.0
NAZ	Nazwa, Dubai	9.05	145	*e*Pn	Pn	10 18 38.6	+2.0
AJN	Ajban	9.11	149	*i* Pn	Pn	10 18 37.2	-0.1
	SNR=8.5						
MDH	Madha	9.12	141	*i* Pn	Pn	10 18 37.1	-0.5
	SNR=11						
MDH	Madha	9.12	141	P	Pn	10 18 39.0	+1.4
	SNR=11						
ASUD	Al Ashush, Dub	9.21	148	P	Pn	10 18 40.0	+1.3
	SNR=48						
ASUD	Al Ashush, Dub	9.21	148	*i* Pn	Pn	10 18 40.0	+1.3
	SNR=50						
ASUD	Al Ashush, Dub	9.21	148	*e*Pn	Pn	10 18 39.8	+1.1
ASUD	Al Ashush, Dub	9.21	148	*e*Pn	Pn	10 18 39.8	+1.1
UOSS	Minazif	9.36	142	*e*Pn	Pn	10 18 41.1	+0.3
UOSS				*e*Sn	Sn	10 20 22.0	-4.1
UOSS	Minazif	9.36	142	P	Pn	10 18 41.6	+0.8
	SNR=38						
UOSS	Minazif	9.36	142	*i* Pn	Pn	10 18 40.5	-0.3
	SNR=18						
UOSS	Minazif	9.36	142	*e*Pn	Pn	10 18 41.1	+0.3
UOSS	Minazif	9.36	142	P	Pn	10 18 41.6	+0.8
	SNR=38						
UOSS				*e*Sn	Sn	10 20 22.0	-4.1
HATD	Hatta, Dubai	9.42	143	Pn	Pn	10 18 42.5	+0.9
HATD	Hatta, Dubai	9.42	143	*e*Pn	Pn	10 18 43.2	+1.5
HATD	Hatta, Dubai	9.42	143	*e*Pn	Pn	10 18 43.2	+1.5
ASHO	Ashiyiah	9.50	144	P	Pn	10 18 43.7	+0.9
	SNR=15						
ASHO	Ashiyiah	9.50	144	*i* Pn	Pn	10 18 42.9	+0.1
	SNR=16						
ASHO	Ashiyiah	9.50	144	P	Pn	10 18 43.7	+0.9
	SNR=15						
RAYN	Ar Rayn	9.79	205	*e*Pn	Pn	10 18 45.5	-1.2
RAYN				*e*Sn	Sn	10 20 33.9	-2.8
RAYN	Ar Rayn	9.79	205	*i* Pn	Pn	10 18 45.6	-1.2
	SNR=47						
RAYN	Ar Rayn	9.79	205	*e*P	Pn	10 18 45.5	-1.2
RAYN				*e*		10 20 33.9	
RAYN	Ar Rayn	9.79	205	*e*P	Pn	10 18 45.5	-1.2
RAYN				*e*S	Sn	10 20 33.9	-2.8
ALNE	Al Ain	9.89	147	Pn	Pn	10 18 48.8	+0.7
ALNE	Al Ain	9.89	147	*e*Pn	Pn	10 18 48.8	+0.7
ALNE	Al Ain	9.89	147	*e*Pn	Pn	10 18 48.8	+0.7
ALNE	Al Ain	9.89	147	P	Pn	10 18 49.4	+1.3
	SNR=16						
ASF	Jabal al Asfar	11.02	272	Pn	Pn	10 19 03.0	-0.5
	comp=Z,3.3nm,0.3s,baz=48,slow=4.7,SNR=24						
ASF				Sn	Sn	10 21 01.1	-5.7
	comp=Z,0.7nm,0.3s,baz=252,slow=20,SNR=3.2						
ASF				Lg	Lg	10 22 18.6	
	baz=143,slow=20,SNR=1.8						
NATI	Neve Ativ	11.94	277	Pn	Pn	10 19 15.6	-0.5
NCK	Nalchik	12.02	337	*i* P	Pn	10 19 17.3	+0.2
NCK	Nalchik	12.02	337	*i* P	Pn	10 19 17.3	+0.2
WSAR	Wadi Sarin	12.04	138	Pn	Pn	10 19 17.8	+0.2
	comp=Z,1.7nm,0.3s,baz=343,slow=6.6,SNR=27						
WSAR				LR	LR	10 24 31.0	
	comp=Z,233nm,21.8s,baz=335,slow=40						
NEY	Neytrino	12.10	334	*i* P	Pn	10 19 18.5	+0.1
NEY	Neytrino	12.10	334	*i* P	Pn	10 19 18.5	+0.1
HMDT	Nahal Hemdat	12.17	273	Pn	Pn	10 19 18.7	-0.5
MMAI	Mount Meron Ar	12.22	276	Pn	Pn	10 19 20.5	+0.4
	comp=Z,2.8nm,0.3s,baz=90,slow=15,SNR=3.2						
MMAI				LR	LR	10 25 13.4	
	comp=Z,167nm,18.5s,baz=85,slow=43						
MZDA	Masada	12.43	268	Pn	Pn	10 19 22.9	+0.2
KVAR	Kislovodsk Arr	12.73	336	LR	LR	10 25 26.5	
	comp=Z,55nm,20.9s,baz=114,slow=42						
KIV	Kislovodsk	12.73	336⇑	*e*P	Pn	10 19 27.4	+0.5
KIV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,79nm,15.0s						
KIV	Kislovodsk	12.73	336	*e*P	Pn	10 19 27.4	+0.5
	comp=Z,79nm,15.0s						
PRNI	Paran	12.92	264	Pn	Pn	10 19 29.3	-0.2
HRFI	Mount Harif	12.97	263	Pn	Pn	10 19 30.2	0.0
MBRI	Mt Berech	13.13	262	Pn	Pn	10 19 32.0	-0.5
EIL	Elat	13.14	261	Pn	Pn	10 19 34.5	+2.0
	comp=Z,1.0nm,0.3s,baz=138,slow=5.7,SNR=5.7						
EIL	Elat	13.14	261	Pn	Pn	10 19 31.0	-1.5
MHTO	MHTO	13.56	146	P	Pn	10 19 39.0	+0.7
	SNR=6.4						
CSS	Mathiatis	14.01	284	*e*Pn	Pn	10 19 44.9	+0.5
CSS	Mathiatis	14.01	284	*e*Pn	Pn	10 19 44.9	+0.5
BR131	Keskin Array S	14.97	303	*e*Pn	Pn	10 19 58.3	+0.8
BR131	Keskin Array S	14.97	303	*e*Pn	Pn	10 19 58.3	+0.8
BRTR	Keskin Array B	14.97	303	Pn	Pn	10 19 58.4	+0.8
	comp=Z,0.1nm,0.3s,baz=122,slow=12,SNR=8.8						
ANTO	Ankara	15.62	303	*e*Pn	P	10 20 10.6	+0.3
	comp=Z,12nm,0.7s						
ANTO	Ankara	15.62	303	*e*P	P	10 20 10.6	+0.3
ANTO				pmax	pmax		
	comp=Z,12nm,0.7s						
ANTO	Ankara	15.62	303	*e*P	P	10 20 10.6	+0.3
	comp=Z,12nm,0.7s						
ISP	Isparta	16.70	294⇑	*i*P	P	10 20 21.4	-0.9
ISP	Isparta	16.70	294	*e*Pn	P	10 20 23.0	+0.7
	comp=Z,27nm,0.9s						
ISP	Isparta	16.70	294*d*	*e*P	Pn	10 20 19.8	-0.2
ISP				pmax	pmax		
	comp=Z,41nm,1.3s						
ISP	Isparta	16.70	294	*e*P	Pn	10 20 19.8	-0.2
	comp=Z,41nm,1.3s						
ISP	Isparta	16.70	294	*e*Pn	P	10 20 23.0	+0.7
	comp=Z,27nm,0.9s						
ABKAR	Akbulak array	18.31	21	*e*P	P	10 20 40.9	+1.0
ABKAR	Akbulak array	18.31	21	*e*P	P	10 20 40.9	+1.0
AKTK	Aktyubinsk	18.86	16	P	Pn	10 20 47.7	+1.2
AKTO	Aktyubinsk	18.86	16	P	Pn	10 20 47.6	+1.1
	comp=Z,0.4nm,0.3s,baz=203,slow=12,SNR=6.7						
KK31	Karatay Array	19.34	51	*e*P	Pn	10 20 52.8	+0.4
KK31	Karatay Array	19.34	51	*e*P	Pn	10 20 52.8	+0.4
KK31	Karatay Array	19.34	51	*e*P	Pn	10 20 52.8	+0.4
KKAR	Karatay Array	19.34	51	*e*P	Pn	10 20 52.7	+0.3
KKAR	Karatay Array	19.34	51	*e*P	Pn	10 20 52.7	+0.3
KKAR	Karatay Array	19.34	51	*e*P	Pn	10 20 52.7	+0.3
NIL	Nilore	19.58	80	*e*P	P	10 20 54.4	+0.4
	comp=Z,12nm,0.9s						
NIL	Nilore	19.58	80	*e*P	P	10 20 54.4	+0.4
NIL				pmax	pmax		
	comp=Z,12nm,0.9s						
NIL	Nilore	19.58	80	*e*P	P	10 20 54.4	+0.4
	comp=Z,12nm,0.9s						
VRH	Novokhopyorsk	19.60	344	*e*P	P	10 20 53.5	-0.5
VRH				pmax	pmax		
	comp=Z,30nm,0.9s						
VRH	Novokhopyorsk	19.60	344	*e*P	P	10 20 53.5	-0.5
	comp=Z,30nm,0.9s						
VORD	Divnogorie	20.01	340	*e*P	P	10 20 56.9	-1.5
VORD				pmax	pmax		
	comp=Z,10.0nm,0.9s						
VORD	Divnogorie	20.01	340	*e*P	P	10 20 56.9	-1.5
	comp=Z,10.0nm,0.9s						
VSR	Storozhevoye	20.27	340	*e*P	P	10 20 59.5	-1.8
VSR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
VSR	Storozhevoye	20.27	340	*e*P	P	10 20 59.5	-1.8
	comp=Z,9.0nm,0.6s						
SFK	Sufi-Kurgan	20.39	62	P	Pn	10 21 05.5	+0.4
SFK				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SFK	Sufi-Kurgan	20.39	62	P	Pn	10 21 05.5	+0.4
	comp=Z,8.0nm,0.9s						
APE	Apeiranthos	20.51	290	*i* P	P	10 21 03.1	-1.0
APE	Apeiranthos	20.51	290	*i* P	P	10 21 03.1	-1.0
TIRR	Tirgusor	20.54	312⇓	*i*P	P	10 21 04.5	+0.2
TIRR	Tirgusor	20.54	312	P	P	10 21 04.5	+0.2
TIRR	Tirgusor	20.54	312	P	P	10 21 04.5	+0.2
ALN	Alexandroupoli	20.83	300	*e*P	P	10 21 07.4	-0.1
	comp=Z,11nm,0.9s						
ALN	Alexandroupoli	20.83	300	*e*P	P	10 21 07.4	-0.1
ALN				pmax	pmax		
	comp=Z,11nm,0.9s						
ALN	Alexandroupoli	20.83	300	*e*P	P	10 21 07.4	-0.1
	comp=Z,11nm,0.9s						
TLB	Topalu	20.84	312⇑	*i*P	P	10 21 07.8	+0.3
CFR	Carcaliu	21.06	313⇓	*i*P	P	10 21 09.5	-0.4
CFR	Carcaliu	21.06	313	P	P	10 21 09.1	-0.8
CFR				pmax	pmax		
	comp=Z,12nm,0.8s						
CFR	Carcaliu	21.06	313	P	P	10 21 09.1	-0.8
	comp=Z,12nm,0.8s						
LPSR	Galich’ya Gora	21.57	342	*e*P	P	10 21 14.1	-1.3
LPSR				pmax	pmax		
	comp=Z,100nm,0.8s						
LPSR	Galich’ya Gora	21.57	342	*e*P	P	10 21 14.1	-1.3
	comp=Z,100nm,0.8s						
KIS	Kishinev	21.62	318	*e*P	P	10 21 22.0	+6.1
KIS	Kishinev	21.62	318	*e*P	P	10 21 22.0	+6.1
KIS	Kishinev	21.62	318	*e*P	P	10 21 22.0	+6.1
AAK	Ala-Archa	21.86	56	P	P	10 21 20.9	+2.2
	comp=Z,1.8nm,0.3s,baz=215,slow=9.0,SNR=4.6						
AAK				LR	LR	10 31 09.4	
	comp=Z,114nm,19.4s,baz=250,slow=40						
AAK	Ala-Archa	21.86	56	*e*P	P	10 21 20.5	+1.7
	comp=Z,4.6nm,0.7s						
AAK	Ala-Archa	21.86	56	*e*P	P	10 21 20.5	+1.7
	comp=Z,4.6nm,0.7s						
ISR	Istrita	22.03	312⇓	*i*P	P	10 21 21.2	+0.8
ISR	Istrita	22.03	312	P	P	10 21 22.3	+1.9
ISR				pmax	pmax		
	comp=Z,44nm,0.9s						
ISR	Istrita	22.03	312	P	P	10 21 22.3	+1.9
	comp=Z,44nm,0.9s						
KSH	Kashi	22.15	64	*e*P	P	10 21 20.1	-1.7
KSH				PP	PnPn	10 21 45.0	+1.1
KSH				S	S	10 25 14.5	-11
KSH				*e*PcP	PcP	10 25 20.3	+1.5
KSH				SS	SnSn	10 25 51.9	-0.5
KSH				pmax	pmax		
	comp=Z,36nm,1.0s						
KSH				pmax	pmax		
	comp=Z,120nm,4.2s						
VRI	Vrincioaia	22.26	313⇓	*i*P	P	10 21 22.9	0.0
VRI	Vrincioaia	22.26	313	P	P	10 21 22.5	-0.4
VRI				pmax	pmax		
	comp=Z,181nm,1.2s						
VRI	Vrincioaia	22.26	313	P	P	10 21 22.5	-0.4
	comp=Z,181nm,1.2s						
PLOR	Plostina	22.30	313⇓	*i*P	P	10 21 23.4	+0.1
PLOR	Plostina	22.30	313	P	P	10 21 23.3	0.0
PLOR	Plostina	22.30	313	P	P	10 21 23.3	0.0

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MLR   Muntele Rosu      22.57 312  P      P       10 21 28.0 +1.7
      comp=Z,39nm,0.8s,baz=132,slow=2.1,SNR=50
MLR   Muntele Rosu      22.57 312⇑iP      P       10 21 27.0 +0.7
MLR   Muntele Rosu      22.57 312 eP      P       10 21 27.5 +1.2
      comp=Z,44nm,0.8s
MLR   Muntele Rosu      22.57 312 eP      P       10 21 27.5 +1.2
MLR                                pmax   pmax
      comp=Z,45nm,0.8s
MLR   Muntele Rosu      22.57 312 eP      P       10 21 27.5 +1.2
      comp=Z,45nm,0.8s
TESR  Tescani           22.62 315⇓iP      P       10 21 26.3 -0.4
VOIR                    23.12 311⇑iP      P       10 21 32.4 +0.4
VOIR                    23.12 311  P      P       10 21 32.6 +0.6
VOIR                               pmax   pmax
      comp=Z,45nm,1.1s
VOIR                    23.12 311  P      P       10 21 32.6 +0.6
      comp=Z,45nm,1.1s
DOPR  Dopca             23.14 313⇑iP      P       10 21 32.3 +0.2
BIZ   Bicaz             23.16 315⇓iP      P       10 21 32.9 +0.6
AGG   Agios Georgios    23.24 294 eP      P       10 21 32.9 -0.3
      comp=Z,43nm,1.0s
AGG   Agios Georgios    23.24 294 eP      P       10 21 32.9 -0.3
AGG                                pmax   pmax
      comp=Z,43nm,1.0s
AGG   Agios Georgios    23.24 294 eP      P       10 21 32.9 -0.3
      comp=Z,43nm,1.0s
LIT   Litokhoron        23.29 297 eP      P       10 21 34.4 +0.7
      comp=Z,15nm,0.8s
LIT   Litokhoron        23.29 297  P      P       10 21 34.3 +0.7
LIT   Litokhoron        23.29 297 eP      P       10 21 34.4 +0.7
      comp=Z,15nm,0.8s
VTS   Vitosha           23.34 303⇓iP      P       10 21 34.0 -0.3
VTS   Vitosha           23.34 303 eP      P       10 21 34.2 -0.2
      comp=Z,10.0nm,1.1s
VTS   Vitosha           23.34 303 eP      P       10 21 34.2 -0.2
VTS                                pmax   pmax
      comp=Z,10.0nm,1.1s
VTS   Vitosha           23.34 303 eP      P       10 21 34.2 -0.2
      comp=Z,10.0nm,1.1s
ITM   Ithomi            23.39 289 eP      P       10 21 34.1 -0.6
      comp=Z,16nm,0.7s
ITM   Ithomi            23.39 289 eP      P       10 21 34.1 -0.6
      comp=Z,16nm,0.7s
KDJ   Kajisay           23.61  58 eP      P       10 21 37.8 +0.7
      comp=Z,4.3nm,0.8s
KDJ   Kajisay           23.61  58  P      P       10 21 37.8 +0.7
KDJ                                pmax   pmax
      comp=Z,4.0nm,0.9s
KDJ   Kajisay           23.61  58  P      P       10 21 37.8 +0.7
      comp=Z,4.0nm,0.9s
AKASG Malin Array Be    23.71 326  P      P       10 21 36.2 -1.4
      comp=Z,3.2nm,0.4s,baz=137,slow=9.1,SNR=14
AKBB  Malin Array Si    23.71 326 eP      P       10 21 35.8 -1.9
      comp=Z,12nm,0.8s
AKBB  Malin Array Si    23.71 326 eP      P       10 21 35.8 -1.9
AKBB                               pmax   pmax
      comp=Z,12nm,0.8s
KIEV  Kiev              23.71 326 eP      P       10 21 35.6 -2.1
      comp=Z,10nm,0.8s
KIEV  Kiev              23.71 326ceP      P       10 21 35.1 -2.6
KIEV                               pmax   pmax
      comp=Z,14nm,1.0s
KIEV  Kiev              23.71 326 eP      P       10 21 35.1 -2.6
      comp=Z,14nm,1.0s
AK11  Malin Array Si    23.72 326 eP      P       10 21 35.3 -2.5
AK11  Malin Array Si    23.72 326 eP      P       10 21 35.3 -2.5
STIP  Stip              23.84 300 eP      P       10 21 36.5 -2.6
LOT   Lotru             23.94 310⇓iP      P       10 21 40.0 -0.1
BURAR Bucovina Array    24.02 316⇓iP      P       10 21 41.0 +0.1
BURAR Bucovina Array    24.02 316  P      P       10 21 40.9 +0.1
BUR04 Bucovina Ar. S    24.03 316 eP      P       10 21 40.6 -0.2
BUR04 Bucovina Ar. S    24.03 316 eP      P       10 21 40.7 -0.2
BUR08 Bucovina Ar. S    24.05 316 eP      P       10 21 40.9 -0.2
BUR08 Bucovina Ar. S    24.05 316 eP      P       10 21 40.9 -0.2
FNA   Florina           24.25 298 eP      P       10 21 42.6 -0.4
      comp=Z,10nm,0.8s
FNA   Florina           24.25 298 eP      P       10 21 42.6 -0.4
FNA                                pmax   pmax
      comp=Z,11nm,0.8s
FNA   Florina           24.25 298 eP      P       10 21 42.6 -0.4
      comp=Z,11nm,0.8s
SKO   Skopje            24.45 301 eP      P       10 21 46.0 +1.2
OBN   Obninsk           24.45 341⇑eP      P       10 21 44.1 -0.4
OBN                               e               10 22 17.3
OBN                                pmax   pmax
      comp=Z,10.0nm,0.6s
OBN                                MLR    MLR
      comp=Z,57nm,18.0s
HERR  Herculane         24.62 308⇓iP      P       10 21 45.5 -0.7
ARU   Arti              24.63  12 eP      P       10 21 47.1 +1.0
      comp=Z,13nm,1.0s
ARU   Arti              24.63  12c iP     P       10 21 47.2 +1.0
ARU                                               10 22 20.3
ARU                                PPP    PPP     10 22 29.2
ARU                                S      S       10 26 10.9 +3.7
ARU                                SS     SnSn    10 27 01.6 +8.9
ARU                                pmax   pmax
      comp=Z,8.0nm,1.0s
ARU   Arti              24.63  12 i P     P       10 21 47.2 +1.0
      comp=Z,8.0nm,1.0s
ARU                                S      S       10 26 10.9 +3.7
MDVR  Moldovita         25.05 307⇓iP      P       10 21 50.6 +0.4
DRGR                    25.16 312⇑iP      P       10 21 51.8 +0.6
BRVK  Borovoye          25.21  30 eP      P       10 21 54.3 +2.8
      comp=Z,6.6nm,0.9s
BRVK  Borovoye          25.21  30ceP      P       10 21 52.9 +1.4
BRVK                               pmax   pmax
      comp=Z,26nm,1.3s
BRVK  Borovoye          25.21  30 eP      P       10 21 52.9 +1.4
      comp=Z,26nm,1.3s
BVAR  Borovoye Array    25.23  30  P      P       10 21 52.7 +1.0
      comp=Z,3.4nm,0.5s,baz=220,slow=6.6,SNR=12
BZS   Buzias            25.41 309⇑iP      P       10 21 53.6 +0.3
LVV   L’vov             25.84 320 eP      P       10 21 58.0 +0.8
LVV   L’vov             25.84 320 eP      P       10 21 58.0 +0.8
TRPA  Tarpa             25.85 315⇑iP      P       10 21 57.8 +0.5
DIVS  Divibare          26.02 305 eP      P       10 21 59.6 +0.6
      comp=Z,10nm,0.8s
DIVS  Divibare          26.02 305 eP      P       10 21 59.6 +0.6
      comp=Z,10nm,0.8s
UZH   Uzhgorod          26.23 316⇓eP      P       10 22 01.7 +0.9
UZH                               e               10 22 08.1
UZH                               e               10 22 56.3
UZH                               eS      S       10 26 28.5 -4.3
UZH   Uzhgorod          26.23 316 eP      P       10 22 01.7 +0.9
UZH                               eS      S       10 26 28.5 -4.3
KWP   Kalwaria Pacla    26.47 318 eP      P       10 22 02.8 -0.2
      comp=Z,925nm,0.5s
KWP   Kalwaria Pacla    26.47 318 eP      P       10 22 02.8 -0.2
KWP   Kalwaria Pacla    26.47 318 eP      P       10 22 02.8 -0.2
      comp=Z,925nm,0.5s
CRVS  Cervenica-Dubn    26.84 316 eP      P       10 22 07.3 +1.0
CRVS                               pmax   pmax
      comp=Z,14nm,0.9s
CRVS  Cervenica-Dubn    26.84 316 eP      P       10 22 07.3 +1.0
PSZ   Piszkesteto       27.37 313⇓iP      P       10 22 11.5 +0.3
PSZ   Piszkesteto       27.37 313 eP      P       10 22 12.2 +1.0
      comp=Z,8.7nm,0.8s
PSZ   Piszkesteto       27.37 313 eP      P       10 22 12.2 +1.0
PSZ                                pmax   pmax
      comp=Z,9.0nm,0.8s
PSZ   Piszkesteto       27.37 313 eP      P       10 22 12.2 +1.0
      comp=Z,8.7nm,0.8s
TIP   Timpagrande       27.57 293⇓iP      P       10 22 12.9 -0.2
TIP   Timpagrande       27.57 293 eP      P       10 22 13.4 +0.4
      comp=Z,12nm,1.2s
TIP   Timpagrande       27.57 293 eP      P       10 22 13.4 +0.4
      comp=Z,12nm,1.2s
KURBB Kurchatov Arra    27.75  41  P      P       10 22 15.4 +1.0
      comp=Z,0.7nm,0.2s,baz=241,slow=9.4,SNR=7.8
KURK  Kurchatov         27.85  41 eP      P       10 22 16.5 +1.2
      comp=Z,6.6nm,1.0s
KURK  Kurchatov         27.85  41ceP      P       10 22 16.8 +1.5
KURK                               pmax   pmax
      comp=Z,93nm,2.5s
KURK  Kurchatov         27.85  41 eP      P       10 22 16.5 +1.2
      comp=Z,6.6nm,1.0s
CSKK  Csˆ‡kako          28.19 311⇓eP      P       10 22 19.3 +0.9
VYHS  Vyhne             28.25 313 eP      P       10 22 18.9  0.0
VYHS                               pmax   pmax
      comp=Z,3.0nm,1.5s
VYHS  Vyhne             28.25 313 eP      P       10 22 18.9  0.0
CUC   Castrocucco       28.36 295 eP      P       10 22 18.7 -1.3
      comp=Z,6.1nm,0.9s
CUC   Castrocucco       28.36 295 eP      P       10 22 18.7 -1.3
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      comp=Z,6.1nm,0.9s
OJC   Ojcow             28.41 317 eP      P       10 22 20.5 +0.2
OJC   Ojcow             28.41 317 eP      P       10 22 20.4 +0.1
      comp=Z,14nm,1.2s
OJC   Ojcow             28.41 317 eP      P       10 22 20.4 +0.1
OJC                                pmax   pmax
      comp=Z,14nm,1.2s
OJC   Ojcow             28.41 317 eP      P       10 22 20.4 +0.1
      comp=Z,14nm,1.2s
MK01  Makanchi Array    28.47  51 eP      P       10 22 21.6 +0.7
MK01  Makanchi Array    28.47  51 eP      P       10 22 21.6 +0.7
MK31  Makanchi Array    28.47  51 eP      P       10 22 21.8 +0.9
MK31  Makanchi Array    28.47  51 eP      P       10 22 21.8 +0.9
MK31  Makanchi Array    28.47  51 eP      P       10 22 21.8 +0.9
MKAR  Makanchi Array    28.47  51  P      P       10 22 21.4 +0.5
      comp=Z,1.9nm,0.9s,baz=244,slow=8.0,SNR=14
MKAR                               LR     LR      10 33 48.4
      comp=Z,79nm,18.8s,baz=222,slow=36
MKAR  Makanchi Array    28.47  51 eP      P       10 22 21.6 +0.7
      comp=Z,17nm,0.7s
MKAR  Makanchi Array    28.47  51ceP      P       10 22 22.1 +1.2
MKAR  Makanchi Array    28.47  51 eP      P       10 22 21.6 +0.7
      comp=Z,17nm,0.7s
KLMR  Klimovskoe        29.14 350 eP      P       10 22 24.2 -2.4
KLMR                               pmax   pmax
      comp=Z,12nm,1.3s
KLMR  Klimovskoe        29.14 350 eP      P       10 22 24.3 -2.4
KLMR                               AMP            10 22 29.4
      comp=Z,12nm,1.3s
MODS  Modra-Piesok      29.17 312 eP      P       10 22 27.3 +0.2
MODS                               pmax   pmax
      comp=Z,11nm,1.3s
MODS  Modra-Piesok      29.17 312 eP      P       10 22 27.3 +0.2
MODS  Modra-Piesok      29.17 312 eP      P       10 22 27.3 +0.2
      comp=Z,11nm,1.3s
SOP   Sopron            29.39 311  P      P       10 22 29.8 +0.8
SOP                                pmax   pmax
      comp=Z,19nm,1.0s
SOP   Sopron            29.39 311  P      P       10 22 29.8 +0.8
      comp=Z,19nm,1.0s
MORC  Moravsky Berou    29.54 315⇑iP      P       10 22 29.7 -0.7
MORC  Moravsky Berou    29.54 315 eP      P       10 22 30.1 -0.3
      comp=Z,6.0nm,0.9s
MORC  Moravsky Berou    29.54 315 eP      P       10 22 30.1 -0.3
MORC                               pmax   pmax
      comp=Z,6.0nm,0.9s
MORC  Moravsky Berou    29.54 315 eP      P       10 22 29.9 -0.5
CONA  Conrad Observa    29.91 311 eP      P       10 22 33.6 -0.2
      comp=Z,6.9nm,0.9s
CONA  Conrad Observa    29.91 311  P      P       10 22 33.6 -0.2
      comp=Z,6.9nm,0.9s
ARSA  Arzberg           29.92 310 eP      P       10 22 33.8  0.0
      comp=Z,3.3nm,0.6s
ARSA  Arzberg           29.92 310  P      P       10 22 33.8  0.0
      comp=Z,3.3nm,0.6s
VRAC  Vranov            29.93 314  P      P       10 22 33.1 -0.7
      comp=Z,4.7nm,0.7s,baz=112,slow=7.9,SNR=8.4
VRAC                               LR     LR      10 36 27.5
      comp=Z,50nm,18.3s,baz=108,slow=40
VRAC  Vranov            29.93 314⇑iP      P       10 22 34.0 +0.2
VRAC  Vranov            29.93 314 eP      P       10 22 33.7 -0.1
KRUC  Moravsky          29.96 313 eP      P       10 22 34.3 +0.2
SOKA  Soboth            30.09 308 eP      P       10 22 35.1 -0.2
      comp=Z,7.2nm,1.2s
SOKA  Soboth            30.09 308  P      P       10 22 35.1 -0.2
      comp=Z,7.2nm,1.2s
KRLC  Kraliky           30.11 315 eP      P       10 22 34.8 -0.6
KRLC                              epP     sP      10 22 40.4 +0.2
KRLC  Kraliky           30.11 315 eP      P       10 22 34.8 -0.6
KRLC                              e               10 22 40.4
VSU   Vasula            30.29 336 i P     P       10 22 36.1 -0.7
VSU                                pmax   pmax
      comp=Z,85nm,2.1s
DPC   Dobruska-Polom    30.48 316 eP      P       10 22 38.5 -0.3
DPC   Dobruska-Polom    30.48 316 eP      P       10 22 38.5 -0.3
MOA   Molln             30.91 310 eP      P       10 22 42.8 +0.3
      comp=Z,12nm,0.8s,SNR=6.5
MOA   Molln             30.91 310  P      P       10 22 42.8 +0.3
      comp=Z,12nm,0.8s,SNR=6.5
KBA   Koelnbreinsper    31.31 308 eP      P       10 22 44.5 -1.7
      comp=Z,20nm,0.7s,SNR=7.4
KBA   Koelnbreinsper    31.31 308  P      P       10 22 46.5 +0.3
KBA                                pmax   pmax
      comp=Z,30nm,0.8s
WMQ   Urumqi            31.51  58  P      P       10 22 50.8 +2.9
WMQ                                LR     LR
      comp=Z,180nm,24.3s
WMQ                                LR     LR
      comp=Z,120nm,22.7s
GEA0  GERESS Array S    31.56 312 eP      P       10 22 47.8 -0.6
GEC2  GERESS Array S    31.56 312 eP      P       10 22 47.8 -0.6
      comp=Z,10nm,1.4s
GEC2  GERESS Array S    31.56 312 eP      P       10 22 47.8 -0.6
GEC2                               pmax   pmax
      comp=Z,10.0nm,1.4s
GERES GERESS Array B    31.56 312  P      P       10 22 47.8 -0.6
      comp=Z,2.1nm,0.7s,baz=110,slow=8.9,SNR=19
GERES                              PcP    PcP     10 25 40.5 -0.3
      comp=Z,0.8nm,0.9s,baz=116,slow=6.2,SNR=3.9
KHC   Kasperske Hory    31.73 312 eP      P       10 22 49.3 -0.5
KHC                               epP     pP      10 22 52.5 -0.6
KHC   Kasperske Hory    31.73 312 eP      P       10 22 48.7 -1.1
      comp=Z,3.3nm,1.0s
KHC   Kasperske Hory    31.73 312 eP      P       10 22 49.3 -0.5
KHC                               e               10 22 52.5
KHC   Kasperske Hory    31.73 312 eP      P       10 22 49.3 -0.5
ABTA  Abfaltersbach     31.78 308 eP      P       10 22 50.3  0.0
      comp=Z,10nm,0.9s
ABTA  Abfaltersbach     31.78 308  P      P       10 22 50.3  0.0
      comp=Z,10nm,0.9s
BRG   Berggiesshubel    32.09 316 eP      P       10 22 52.1 -0.7
BRG                                pmax   pmax
      comp=Z,4.0nm,1.0s
WET   Wettzell          32.17 312  P      P       10 22 52.9 -0.7
WET                                pmax   pmax
      comp=Z,110nm,1.0s
NVS   Novosibirsk       32.34  36 eP      P       10 22 54.7 -0.2
WTTA  Wattenberg        32.48 308 eP      P       10 22 56.0 -0.6
      comp=Z,14nm,1.0s
WTTA  Wattenberg        32.48 308  P      P       10 22 56.0 -0.6
      comp=Z,14nm,1.0s
WATA  Walderalm         32.54 308 eP      P       10 22 57.2 +0.2
      comp=Z,9.0nm,0.6s,SNR=12
WATA  Walderalm         32.54 308  P      P       10 22 57.2 +0.2
      comp=Z,9.0nm,0.6s,SNR=12
DGZ   Jazzator, Alta    32.64  47 i P     P       10 22 57.6 -0.2
DGZ                                pmax   pmax
      comp=Z,1.0nm,0.9s
ZALV  Zalesovo Beam     32.73  39  P      P       10 22 57.2 -1.2
      comp=Z,4.7nm,0.3s,baz=262,slow=10.0,SNR=3.3
FINES FINESS Array B    32.79 339  P      P       10 22 57.7 -1.1
      comp=Z,1.0nm,0.5s,baz=138,slow=12,SNR=10
FINES FINESS Array B    32.79 339ceP      P       10 22 58.4 -0.4
CLL   Collm             32.79 316⇓iP      P       10 22 58.7 -0.3
      comp=Z,12nm,1.0s
CLL                               esP     sP      10 23 05.0 +1.2
CLL                               e(PP)           10 24 03.0
CLL                                Lm     MLR     10 36 00.0
      comp=N,100nm,21.8s
CLL                                Lm     MLR     10 36 00.0
      comp=E,100nm,20.6s
CLL                                Lm     MLR     10 36 00.0
      comp=Z,100nm,21.5s
CLL   Collm             32.79 316 eP      P       10 22 58.9 -0.2
      comp=Z,8.9nm,0.9s
CLL   Collm             32.79 316⇓iP      P       10 22 58.7 -0.3
CLL                               e               10 23 05.0
CLL                                pmax   pmax
      comp=Z,12nm,1.0s
FETA  Feichten          33.04 308 eP      P       10 23 01.2 -0.2
      comp=Z,21nm,0.7s,SNR=11
FETA  Feichten          33.04 308  P      P       10 23 01.2 -0.2
      comp=Z,21nm,0.7s,SNR=11
RETA  Reutte            33.11 308 eP      P       10 23 00.5 -1.4
      comp=Z,8.9nm,0.9s
RETA  Reutte            33.11 308  P      P       10 23 00.5 -1.4
      comp=Z,8.9nm,0.9s
FUORN Ofenpass-Fuorn    33.27 307 eP      P       10 23 03.9 +0.4
      comp=Z,8.4nm,0.8s
GRFO  Grafenberg        33.37 312 eP      P       10 23 03.5 -0.5
      comp=Z,10nm,0.8s
GRFO  Grafenberg        33.37 312 eP      P       10 23 03.5 -0.5
GRFO                               pmax   pmax
      comp=Z,10.0nm,0.8s
GRFO  Grafenberg        33.37 312 eP      P       10 23 03.5 -0.5
      comp=Z,10nm,0.8s
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DAVOX Davos/Dischmat    33.56 307  P      P       10 23 04.5 -1.5
      comp=Z,6.2nm,0.7s,baz=105,slow=12,SNR=10
DAVOX                              LR     LR      10 40 10.8
      comp=Z,53nm,18.1s,baz=270,slow=42
DAVA  Damuels           33.66 308 eP      P       10 23 05.9 -0.9
      comp=Z,27nm,0.7s,SNR=11
SENIN Lac Senin/Sane    35.25 306 eP      P       10 23 19.8 -0.8
      comp=Z,4.9nm,0.6s
LPG   La Plagne         35.53 304 eP      P       10 23 24.1 +0.9
LPG                                pmax   pmax
      comp=Z,7.0nm,0.6s
LPG   La Plagne         35.53 304 eP      P       10 23 24.1 +0.9
      comp=Z,7.0nm,0.6s
BNI   Bardonecchia      35.53 303 eP      P       10 23 22.7 -0.3
      comp=Z,16nm,0.8s
LPL   La Plagne         35.54 304 eP      P       10 23 23.4 +0.2
LPL                                pmax   pmax
      comp=Z,37nm,1.3s
KMBO  Kilima Mbogo      35.56 202  P      P       10 23 24.1 +0.5
      comp=Z,9.2nm,0.2s,baz=232,slow=20,SNR=11
ECH   Echery            35.63 309 eP      P       10 23 22.5 -1.2
      comp=Z,5.0nm,0.9s
ECH   Echery            35.63 309 eP      P       10 23 22.5 -1.2
ECH                                pmax   pmax
      comp=Z,5.0nm,0.9s
ORIF  Oris-en-Rattie    36.09 303 eP      P       10 23 29.5 +1.8
ORIF                               pmax   pmax
      comp=Z,20nm,1.6s
ORIF  Oris-en-Rattie    36.09 303 eP      P       10 23 29.5 +1.8
      comp=Z,20nm,1.6s
CABF  La Chapelle       36.11 306 eP      P       10 23 27.3 -0.6
CABF                               pmax   pmax
      comp=Z,17nm,0.8s
HAU   Haudompre         36.13 308 eP      P       10 23 25.5 -2.5
HAU                                pmax   pmax
      comp=Z,5.0nm,1.0s
HAU   Haudompre         36.13 308 eP      P       10 23 25.5 -2.5
      comp=Z,5.0nm,1.0s
HFS   Hagfors           36.44 330  P      P       10 23 28.6 -1.8
      comp=Z,2.2nm,0.4s,baz=132,slow=10,SNR=17
WLF   Walferdange       36.56 311 ⇑P      P       10 23 30.7 -0.8
      comp=Z,6.9nm,0.9s
MEM   Membach           36.84 313 ⇑P      P       10 23 34.8 +0.8
BCLA  Clavier           37.24 312 ⇓P      P       10 23 39.1 +1.7
GIVF  Givet             37.48 311 eP      P       10 23 40.1 +0.7
GIVF                               pmax   pmax
      comp=Z,11nm,1.0s
DOU   Dourbes           37.63 311 ⇓P      P       10 23 40.6 -0.1
NC405 NORSAR Array S    37.79 331 eP      P       10 23 41.9  0.0
BAIF  Baives            37.87 311 eP      P       10 23 41.6 -1.1
BAIF                               pmax   pmax
      comp=Z,7.0nm,0.9s
NB2   NORSAR Subarra    37.96 330  P      P       10 23 41.6 -1.8
      comp=Z,0.8nm,0.5s,baz=123,slow=8.6
NOA   NORSAR Array B    37.96 330  P      P       10 23 42.0 -1.3
      comp=Z,0.6nm,0.5s,baz=122,slow=8.3,SNR=5.4
KONO  Kongsberg         37.98 328ceP      P       10 23 40.8 -2.7
KONO                               pmax   pmax
      comp=Z,10.0nm,1.3s
AVF   Avril sur Loir    38.00 306 eP      P       10 23 42.6 -1.3
AVF                                pmax   pmax
      comp=Z,13nm,1.3s
PALK  Pallekele         38.08 125c iP     P       10 23 41.3 -3.5
TCF   Toulx Ste Croi    38.75 305 eP      P       10 23 49.3 -0.9
TCF                                pmax   pmax
      comp=Z,9.0nm,1.3s
ARCES ARCESS Array B    39.50 347  P      P       10 23 56.6 +0.4
      comp=Z,1.8nm,0.8s,baz=152,slow=10.0,SNR=7.5
LDF   La Druitiere      40.49 308 eP      P       10 24 04.0 -0.7
GTA   Gaotai            40.54  66  P      P       10 24 06.6 +1.3
GTA                                pP     sP      10 24 14.1 +4.0
GTA                                sP     pP      10 24 17.3 +8.6
GTA                                pmax   pmax
      comp=Z,5.0nm,1.0s
FLN   La Foliniere      40.74 309 eP      P       10 24 07.4 +0.7
FLN                                pmax   pmax
      comp=Z,21nm,1.4s
GRR   Gorron            40.97 308 eP      P       10 24 06.9 -1.7
GRR                                pmax   pmax
      comp=Z,15nm,1.2s
SGMF  Saint Gilles      42.09 308 eP      P       10 24 17.3 -0.5
SGMF                               pmax   pmax
      comp=Z,4.0nm,0.5s
QUIF  Quistinic         42.49 307 eP      P       10 24 19.3 -1.7
QUIF                               pmax   pmax
      comp=Z,12nm,0.9s
ROSF  Rostrenen         42.57 308 eP      P       10 24 19.3 -2.4
ROSF                               pmax   pmax
      comp=Z,5.0nm,0.7s
EKA   Eskdalemuir Ar    43.18 318  P      P       10 24 25.1 -1.4
      comp=Z,4.4nm,0.7s,baz=101,slow=7.3,SNR=9.2
ESDC  Sonseca Array     43.56 295  P      P       10 24 29.2 -0.7
      comp=Z,0.9nm,0.7s,baz=77,slow=9.0,SNR=6.5
LZH   Lanzhou           44.21  70 eP      P       10 24 36.6 +1.3
LZH                                pP     sP      10 24 43.3 +3.2
LZH                                sP     pP      10 24 46.9 +8.1
LZH                                pmax   pmax
      comp=Z,20nm,1.1s
SONM  Songino Array     44.78  53  P      P       10 24 40.1 +0.5
      comp=Z,0.3nm,0.3s,baz=272,slow=9.9,SNR=3.1
MDT   Midelt            45.45 286  P      P       10 24 43.9 -1.4
      comp=Z,2.0nm,0.8s,baz=88,slow=11,SNR=3.9
CMAR  Chiang Mai Arr    46.04  95  P      P       10 24 49.6 -0.2
      comp=Z,1.3nm,0.6s,baz=296,slow=8.5,SNR=7.0
CMAR                               LR     LR      10 48 19.2
      comp=Z,28nm,18.9s,baz=170,slow=41
CMAR  Chiang Mai Arr    46.04  95ceP      P       10 24 50.2 +0.3
PCBR  Castelo Branco    46.21 296 eP      P       10 24 51.5 +0.6
      comp=Z,18nm,1.3s
PCBR  Castelo Branco    46.21 296 eP      P       10 24 51.5 +0.6
PESTR Estremoz          46.47 295 eP      P       10 24 51.5 -1.5
      comp=Z,17nm,1.9s
PESTR Estremoz          46.47 295 eP      P       10 24 51.5 -1.5
KMI   Kunming           46.47  85  P      P       10 24 54.3 +0.8
KMI                                pmax   pmax
      comp=Z,13nm,0.7s
KMI                                pmax   pmax
      comp=Z,86nm,4.1s
PTOM  Tomar             46.96 296 eP      P       10 24 57.0 +0.2
      comp=Z,26nm,1.8s
PTOM  Tomar             46.96 296 eP      P       10 24 57.0 +0.2
MESJ  Messejana         47.15 293 eP      P       10 25 02.6 +4.3
      comp=Z,14nm,1.4s
MESJ  Messejana         47.15 293 eP      P       10 25 02.6 +4.3
PNCL  Nicolau / Gran    47.34 294 eP      P       10 25 00.1 +0.3
      comp=Z,19nm,1.6s
PNCL  Nicolau / Gran    47.34 294 eP      P       10 25 00.1 +0.3
TOA0  Torodi Ar. Sit    47.99 258 eP      P       10 25 05.3 +0.2
      comp=Z,8.6nm,0.8s
TORD  Torodi Ar. Bea    47.99 258  P      P       10 25 04.2 -1.0
      comp=Z,5.5nm,0.7s,baz=52,slow=6.4
SPITS Spitsbergen Ar    48.01 351  P      P       10 25 04.6 +0.1
      comp=Z,6.7nm,0.8s,baz=151,slow=3.3,SNR=5.2
XAN   Xi’an             48.74  71  P      P       10 25 10.6 -0.2
XAN                                pmax   pmax
      comp=Z,7.0nm,0.9s
XAN                                pmax   pmax
      comp=Z,94nm,4.3s
HHC   Hu-ho-hao-te      49.23  62 eP      P       10 25 16.1 +1.6
HHC                                S      S       10 32 22.1 +1.8
HHC                                sS     sS      10 32 31.9 +5.9
HHC                                ScS    ScS     10 34 59.0 -7.7
HHC                                pmax   pmax
      comp=Z,22nm,1.1s
HHC                                pmax   pmax
      comp=Z,89nm,6.6s
HHC                                LR     LR
      comp=Z,120nm,13.9s
HHC                                LR     LR
      comp=Z,120nm,13.9s
HHC                                LR     LR
      comp=Z,110nm,13.5s
GYA   Guiyang           49.28  82 eP      P       10 25 16.0 +0.9
GYA                                pmax   pmax
      comp=Z,10.0nm,1.0s
OPO   Ambohidratompo    50.88 183  P      P       10 25 29.6 +2.4
      comp=Z,3.4nm,0.8s,baz=300,slow=20,SNR=3.0
KOWA  Kowa              52.06 263  P      P       10 25 36.2 +0.2
      comp=Z,9.5nm,0.8s,baz=60,slow=12,SNR=20
KOWA  Kowa              52.06 263 eP      P       10 25 36.5 +0.5
      comp=Z,8.8nm,0.8s
IPM   Ipoh              55.23 109 eP      P       10 25 58.0 -1.4
      comp=Z,9.3nm,0.8s
TIXI  Tiksi             56.01  22 i P     P       10 26 04.6 +0.5
TIXI                               pmax   pmax
      comp=Z,3.0nm,1.0s
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DBIC	Dimbokro	56.92	256	P	P	10 26 10.7	-0.7
	comp=Z,3.9nm,0.6s,baz=18,slow=7.3,SNR=7.7						
DBIC	Dimbokro	56.92	256	*e*P	P	10 26 11.9	+0.5
	comp=Z,7.2nm,1.1s						
DBIC	Dimbokro	56.92	256	*e*P	P	10 26 11.9	+0.5
DBIC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIC	Kosan Boka	57.01	255	*e*P	P	10 26 11.8	-0.2
	comp=Z,18nm,0.7s						
TIC	Toumodi	57.07	256	*e*P	P	10 26 12.3	-0.2
NJ2	Nanjing	57.28	70	*e*P	P	10 26 14.4	+0.6
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
LIC	Lamto	57.32	255	*e*P	P	10 26 14.2	0.0
	comp=Z,38nm,0.8s						
CN2	Changchun	58.53	55	*e*P	P	10 26 19.6	-2.8
CN2				*e*sP	sP	10 26 30.8	+3.6
CN2				pmax	pmax		
	comp=Z,10.0nm,1.3s						
SUMG	Summit	58.83	339	*e*P	P	10 26 24.7	+0.3
	comp=Z,24nm,1.3s						
SUMG	Summit	58.83	339	*e*P	P	10 26 24.7	+0.3
SUMG				pmax	pmax		
	comp=Z,25nm,1.3s						
TSUM	Tsumeb	60.03	216	P	P	10 26 33.0	0.0
	comp=Z,1.5nm,0.6s,baz=24,slow=8.9,SNR=4.0						
KLR	Kul'dur	61.13	48	*i* P	P	10 26 39.2	-0.9
LBTB	Lobatse	61.75	205	*e*P	P	10 26 46.2	+1.6
	comp=Z,3.8nm,0.6s						
LBTB	Lobatse	61.75	205	*e*P	P	10 26 46.2	+1.6
LBTB				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KSAR	Wonju Array Be	62.34	62	P	P	10 26 47.3	-1.2
KSAR	Wonju Array Be	62.34	62	P	P	10 26 47.3	-1.2
KSRS	Korea Array	62.37	61	P	P	10 26 47.3	-1.3
	comp=Z,1.4nm,0.6s,baz=285,slow=6.6,SNR=7.7						
KSRS				LR	LR	10 57 10.9	
	comp=Z,44nm,18.0s,baz=230,slow=39						
KSRS	Korea Array	62.37	61	P	P	10 26 47.3	-1.3
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KSRS				MLR	MLR		
	comp=Z,44nm,18.0s						
BOSA	Boshof	65.17	204	P	P	10 27 07.7	+0.4
	comp=Z,5.7nm,0.8s,baz=18,slow=6.0,SNR=9.5						
BOSA	Boshof	65.17	204	*e*P	P	10 27 08.5	+1.3
	comp=Z,17nm,1.3s						
BOSA	Boshof	65.17	204	*e*P	P	10 27 08.5	+1.3
BOSA				pmax	pmax		
	comp=Z,17nm,1.3s						
JNU	Nakatsue	66.27	65	LR	LR	10 58 23.1	
	comp=Z,38nm,19.9s,baz=305,slow=38						
ASAJ	Asahikawa	69.95	50	LR	LR	11 00 55.8	
	comp=Z,63nm,18.8s,baz=260,slow=38						
SCHQ	Schefferville	77.49	328	P	P	10 28 21.2	-0.1
	comp=Z,1.5nm,0.5s,baz=81,slow=1.9,SNR=3.6						
YKA	Yellowknife Ar	84.48	353	P	P	10 28 58.3	-0.1
	comp=Z,1.3nm,0.8s,baz=5.2,slow=5.1,SNR=4.5						
YKA	Yellowknife Ar	84.48	353	*i* P	P	10 29 01.0	+2.6
YKA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
C40A	Isle Royale Na	91.90	334	*e*P	P	10 29 34.4	+0.1
	comp=Z,5.9nm,0.8s						
E43A	Lone Tree Farm	92.34	332	*e*P	P	10 29 36.8	+0.5
	comp=Z,13nm,1.4s						
WRA	Warramunga Arr	95.99	110	P	P	10 29 52.9	-0.6
	comp=Z,0.4nm,0.9s,baz=297,slow=7.4,SNR=3.1						
ASAR	Alice Springs	97.62	113	P	P	10 29 59.6	-1.2
	comp=Z,0.3nm,0.7s,baz=301,slow=4.7,SNR=3.6						
KEKH	Kekaha	118.83	32	*e*PKPdf	PKPdf	10 35 16.6	+1.7

IDC 22 10:21:12.6±2.0**,2°.55N**×**95°.83E,h0**^{km}**,mb3.7**/6**,mb1 3.9**/7**, mb1mx3.5**/64**,mbtmp3.7**/7**,ML4.4**/1**,Error ellipse: s-maj=83.9km s-min=20.1km az=58.0,Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	Chiang Mai Arr	16.10	11	Pn	P	10 25 02.6	-1.3
	0.5nm,0.3s,baz=200,slow=10,SNR=5.0						
H08S2	Diego Garcia H	25.39	246	T	T	10 52 59.9	
	baz=66,slow=74,SNR=9.7						
H08S3	Diego Garcia H	25.39	246	T	T	10 52 59.9	
	baz=66,slow=74,SNR=13						
H08S1	Diego Carcia H	25.41	246	T	T	10 53 01.1	
	baz=66,slow=74,SNR=8.3						
H01W3	Cape Leeuwin H	41.02	157	T	T	11 12 33.3	
	baz=332,slow=76,SNR=68						
H01W2	Cape Leeuwin H	41.03	157	T	T	11 12 30.8	
	baz=332,slow=76,SNR=66						
H01W1	Cape Leeuwin H	41.03	157	T	T	11 12 34.7	
	baz=332,slow=76,SNR=67						
WRA	Warramunga Arr	43.91	122	P	P	10 29 21.5	0.0
	0.2nm,0.3s,baz=301,slow=9.3,SNR=5.8						
ASAR	Alice Springs	45.30	127	P	P	10 29 32.5	-0.1
	0.2nm,0.5s,baz=300,slow=7.8,SNR=7.2						
MKAR	Makanchi Array	45.61	347	P	P	10 29 35.0	+0.3
	1.2nm,0.4s,baz=159,slow=8.7,SNR=18						
SONM	Songino Array	46.02	10	P	P	10 29 37.1	-0.9
	1.0nm,0.6s,baz=188,slow=9.5,SNR=7.9						
KURBB	Kurchatov Arra	50.08	346	P	P	10 30 09.8	+0.6
	0.6nm,0.5s,baz=169,slow=7.0,SNR=8.6						
ZALV	Zalesovo Beam	52.02	352	P	P	10 30 22.6	-1.1
	4.5nm,0.3s,baz=178,slow=7.2,SNR=3.8						

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*SOME **22** 10:31:43.2, 43°.50N×81°.90E, h5^{km}*
*NNC **22** 10:31:43.9±2.1, 43°.18N×82°.09E, h0^{km}, mb2.9, mpv2.5, Error ellipse: s-maj=22.1km s-min=6.7km az=147.0*
ISC 22 10:31:44.5±2.4**, 43°.29N**±0°.09×**81°.89E**±0°.09**, h12**^{km}±12^{km}**, n13,**σ**2^{s}63**/25**, 4C-4D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	Ketmen	1.14	278	*e*P	Pg	10 32 05.2	-1.2
	7.2nm,0.1s						
KTMS				*e*S	Sg	10 32 20.4	-0.7
	15nm,0.3s						
PDGK	Podgornoye	1.75	272	⇑Pn	Pb	10 32 17.3	+0.6
	5.3nm,0.4s						
PDGK				⇑Sn	Sg	10 32 43.7	+2.8
	19nm,0.6s						
SHLS	Shalkode	1.78	266	*e*P	Pn	10 32 12.0	-3.3
	17nm,0.3s						
SHLS				*e*S	Sn	10 32 32.4	-5.6
	31nm,0.4s						
DJR	Jarkent	1.84	305	⇑*i*P	Pn	10 32 17.3	+1.2
	4.5nm,0.3s						
DJR				*e*S	Sb	10 32 42.0	+0.7
	10nm,0.5s						
UZB	Uzynbulak	2.10	267	*e*P	Pb	10 32 22.7	0.0
	8.0nm,0.3s						
UZB				*e*S	Sb	10 32 50.7	+1.8
	12nm,0.5s						
KPKS	Kokpek	2.35	275	*e*P	Pb	10 32 27.2	+0.4
	11nm,0.2s						
KPKS				*e*S	Sb	10 32 58.6	+2.8
	29nm,0.4s						
KAPS	Kapalarasan	2.70	318	*e*P	Pb	10 32 30.8	-2.0
	1.6nm,0.1s						
KAPS				*e*S	Sb	10 33 05.2	-0.7
	7.5nm,0.3s						
KURS	Kuram	2.72	275	*e*P	Pb	10 32 33.9	+0.7
	2.1nm,0.5s						
KURS				*e*S	Sb	10 33 09.8	+3.3
	4.6nm,0.4s						
ARXS	Arharly	3.09	289	*e*P	Pb	10 32 38.9	-0.5
	1.1nm,0.4s						
ARXS				*e*S	Sb	10 33 18.4	+1.3
	5.9nm,0.3s						
KOTS	Kotyrbulak	3.49	271	*e*P	Pb	10 32 47.0	+0.6
	2.7nm,0.3s						
KOTS				*e*S	Sb	10 33 32.1	+3.3
	9.9nm,0.4s						
MK31	Makanchi Array	3.51	4	⇓Pn	Pn	10 32 41.6	+2.7
	0.1nm,0.3s,baz=186,slow=14,SNR=11						
MK31				⇓Pg	Pg	10 32 49.6	-2.1
	0.5nm,0.4s,baz=180,slow=15,SNR=8.7						
MK31				⇓Lg	Lg	10 33 40.9	
	0.9nm,0.5s,baz=188,slow=26,SNR=3.8						
MAKZ	Makanchi	3.52	1	⇑Pn	Pn	10 32 41.9	+2.9
	1.1nm,0.6s						
MAKZ				⇓Lg	Lg	10 33 35.9	
	0.6nm,0.3s						
CHKK	Chushkaly	3.61	281	*e*P	Pb	10 32 49.5	+1.2
	1.3nm,0.3s						
CHKK				*e*S	Sb	10 33 37.5	+5.5
	4.6nm,0.3s						

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*ISCJB **22** 10:36:37.5±0.3, 14°.50N±0°.02×89°.14W±0°.03, h29^{km}±3^{km}, mb4.4/113, Error ellipse: s-maj=4.9km s-min=3.3km az=153.9*
*CASC **22** 10:36:38.4±6.0, 14°.47N×89°.28W, h10^{km}, ML4.0, mb4.4(NEIC)*
*NEIC **22** 10:36:41.7±0.6, 14°.50N×89°.11W, h51^{km}±5^{km}, mb4.4/117, MD4.0(SNET), Error ellipse: s-maj=5.8km s-min=3.6km az=51.0*
NEIC Felt [II] at Copan. Also felt at Mercedes and Ostuman. Felt [I] at Citala, El Salvador. Felt at Esquipulas, Guatemala.
*IDC **22** 10:36:43.2±2.8, 14°.58N×88°.99W, h61^{km}±25^{km}, mb3.9/22, mb1 4.1/25, mb1mx3.9/47, mbtmp4.2/25, ML3.7/3, MS3.3/4, Ms1 3.3/4, ms1mx2.8/41, Error ellipse: s-maj=23.2km s-min=10.3km az=46.0*
ISC 22 10:36:37.0±1.0**, 14°.50N**±0°.03×**89°.13W**±0°.03**, h16**^{km}±6^{km}**, n425,**σ**1^{s}05**/431**, mb4.6**/113**, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MTO3	Montecristo	0.24	246	*e*P	Pg	10 36 41.6	-1.0
MTO3				*e*S	Sg	10 36 45.5	-1.0
MTO3				IAML		10 36 48.2	
	comp=Z,12µm,0.3s						
LLGN	La Laguna	0.37	152	*e*P	Pg	10 36 44.1	-0.6
LLGN				*e*S	Sb	10 36 50.4	-0.5
LLGN				IAML		10 36 57.0	
	comp=Z,23µm,0.4s						
UNIC	Santa Ana	0.65	219	*e*P	Pg	10 36 49.3	-0.6
UNIC				*e*S	Sb	10 36 59.2	+0.2
CEDA	San Andres	0.74	200	*e*P	Pb	10 36 51.2	-0.3
CEDA				*e*S	Sb	10 37 01.8	+0.4
CEDA				IAML		10 37 10.4	
	comp=Z,10µm,0.4s						
LFU	La Fuente	0.75	179	*e*P	Pg	10 36 51.1	-0.5
LBRS	Las Brisas	0.76	174	*e*P	Pg	10 36 51.3	-0.6
UDBS	Soyapango	0.77	182	*e*P	Pb	10 36 52.0	-0.1
UDBS				*e*S	Sb	10 37 03.8	+1.4
UDBS				IAML		10 37 11.0	
	comp=Z,7µm,0.3s						
BOQS	Boqueron	0.77	191	*e*P	Pb	10 36 52.0	-0.2
BOQS				*e*P	Pb	10 36 52.0	-0.2
UEES	San Salvador	0.78	188	*e*P	Pb	10 36 52.2	-0.1
UEES				IAML		10 37 10.1	
	comp=Z,11µm,0.2s						
SNJE	San Jose	0.78	216	*e*P	Pg	10 36 51.5	-0.7
RTR	El Retiro	0.78	220	*e*P	Pb	10 36 52.1	-0.3
OPAM	San Salvador	0.78	185	*e*P	Pb	10 36 52.2	-0.1
OPAM				*e*S	Sn	10 37 04.3	-0.5
UESS	San Salvador	0.79	185	*e*P	Pb	10 36 52.1	-0.4
UESS				*e*S	Sb	10 37 04.0	+0.9
UESS				IAML		10 37 09.6	
	comp=Z,5µm,0.2s						
UTEC	San Salvador	0.80	185	*e*S	Sb	10 37 04.4	+1.2
UTEC				IAML		10 37 13.5	
	comp=Z,5µm,0.4s						
SBLS	San Blas	0.81	216	*e*P	Pg	10 36 52.2	-0.7
SNET	Serv Nac Est T	0.81	187	*e*P	Pg	10 36 52.4	-0.5
SNET				*e*P	Pg	10 36 52.4	-0.5
SNET				*e*S	Sb	10 37 04.4	+0.8
SNET				IAML		10 37 09.0	
	comp=Z,4µm,0.3s						
COLS	Colinas	0.84	191	*e*P	Pb	10 36 53.5	0.0
LFRS	El Faro	0.87	176	*e*P	Pg	10 36 53.1	-0.9
LFRS				*e*S	Sn	10 37 08.2	+1.0
SNVI	San Vicente	0.93	162	*e*P	Pb	10 36 54.7	-0.2
UESV	Ojushtada	1.16	163	*e*P	Pb	10 36 54.0	-4.7
UESV				*e*S	Sb	10 37 07.9	-5.6
UESV				IAML		10 37 12.8	
	comp=Z,12µm,0.6s						
IXG	Ixpaco	1.32	256	*i* P	Pn	10 37 00.6	-0.4
VSM	San Miguel	1.35	142	*e*P	Pb	10 37 01.6	-0.5
CSGN	Cosiguina Volc	2.15	135	*e*P	Pb	10 37 15.5	-0.2
CNGN	Cerro Negro	3.09	130	*e*P	Pb	10 37 30.6	-1.1
CNGN				*e*S	Sb	10 38 11.6	+2.4
MOMN	Momotombo	3.27	129	*e*P	Pb	10 37 33.1	-1.6
COPN	Copaltepe	3.38	133	*e*P	Pn	10 37 30.2	+1.0
CCIG	Comitan	3.40	302	*e*Pn	Pn	10 37 30.0	+0.4
MATN	Matagalpa	3.48	116	*e*P	Pn	10 37 30.9	+0.3
BOAB	BOACO BROADBAN	3.94	121	*e*P	Pn	10 37 37.0	+0.1
BOAB				*e*S	Sb	10 38 37.3	+3.7
ESPN	Las Esperanzas	5.23	115	*e*Pn	Pn	10 37 54.9	+0.3
ESPN	Las Esperanzas	5.23	115	*e*P	Pn	10 37 55.0	+0.3
ESPN				*e*S	Sb	10 39 10.9	+0.1
ESPN				IAML		10 39 31.2	
	comp=E,448nm,1.0s						
JTS	JuntasAbangare	5.84	135	P	Pn	10 38 06.7	+3.6
	comp=E,1.1nm,0.3s,baz=36,slow=17,SNR=11						
MYIG	MØrida	6.45	355	*e*Pn	Pn	10 38 12.1	+0.7
TLIG	Tlapa	9.57	290	*e*Pn	Pn	10 38 55.9	+1.6
LNIG	Linares	14.19	318	*e*Pn	Pn	10 39 56.4	-1.1
ZAIG	Zacatecas	15.15	305	*e*Pn	Pn	10 40 12.6	+1.9
	comp=E,4.6nm,0.9s						
HELC	Santa Helena	15.71	120	*e*Pn	P	10 40 20.9	-1.4
	comp=E,42nm,0.8s						
541A	Lake Charles	15.93	347	*e*Pn	P	10 40 24.7	+0.5
	comp=E,213nm,1.3s						
656A	Willston	16.00	21	*e*Pn	P	10 40 26.3	+1.3
	comp=E,29nm,0.7s						
555A	McAlpin	16.55	19	*e*Pn	Pn	10 40 29.5	+1.0
	comp=E,52nm,1.3s						
HKT	Hockley	16.57	339	*e*Pn	P	10 40 31.2	0.0
	comp=E,16nm,1.4s						
833A	Chaparral WMA,	16.73	327	P	P	10 40 33.6	+0.5
	baz=143						
833A	Chaparral WMA,	16.73	327	*e*Pn	P	10 40 33.3	+0.2
	comp=E,21nm,0.8s						
344A	Westbrook Farm	16.94	355	*e*P	P	10 40 36.9	+1.6
	comp=E,21nm,0.8s						
341A	Kurthwood	17.16	348	*e*Pn	P	10 40 37.9	+0.2
	comp=E,16nm,1.0s						
ROSC	El Rosal	17.46	122	P	P	10 40 43.9	+2.3
	comp=E,0.8nm,0.3s,baz=59,slow=8.7,SNR=9.4						
ROSC				LR	LR	10 47 48.4	
	comp=E,112nm,19.2s,baz=263,slow=38						
251A	Midway	17.84	10	P	P	10 40 46.6	+1.3
	baz=192						
252A	Lumpkin	17.87	12	P	P	10 40 46.8	+1.1
	baz=194						
NATX	Nacogdoches	17.91	345	P	P	10 40 48.2	+2.1
	baz=162						
NATX	Nacogdoches	17.91	345	*e*P	P	10 40 47.5	+1.4
	comp=E,14nm,0.8s						
435B	Jarrell	17.97	336	P	P	10 40 48.5	+1.7
	baz=153						
435B	Jarrell	17.97	336	*e*P	P	10 40 48.1	+1.3
	comp=E,18nm,0.8s						
149A	Jones	18.14	6	P	P	10 40 49.9	+1.3
	baz=187						
150A	Eclectic	18.25	8	P	P	10 40 51.2	+1.4
	baz=190						
151A	Opelika	18.28	10	P	P	10 40 52.0	+1.8
	baz=192						
140A	Cam and Jess,	18.51	348	P	Pn	10 40 55.3	+2.5
	baz=166						
152A	Waverly Hall	18.53	12	P	Pn	10 40 54.2	+1.1
	baz=193						
152A	Waverly Hall	18.53	12	*e*P	Pn	10 40 56.6	+3.5
	comp=E,4.7nm,0.9s						
Z47A	Carrollton	18.64	3	P	Pn	10 40 55.9	+1.5
	baz=183						
JCT	Junction City	18.69	330	P	Pn	10 40 57.6	+2.4
	baz=146						
JCT	Junction City	18.69	330	*e*P	Pn	10 40 56.8	+1.6
	comp=E,6.1nm,0.6s						
Z49A	Columbiana	18.76	7	P	Pn	10 40 56.9	+1.0
	baz=188						
Z42A	Norrel Spur, H	18.87	353	P	Pn	10 40 59.5	+2.3
	baz=172						
WHTX	Lake Whitney,	19.00	338	P	Pn	10 41 01.1	+2.2
	baz=154,SNR=10						
WHTX	Lake Whitney,	19.00	338	*e*P	Pn	10 41 00.5	+1.6
	comp=E,22nm,0.4s						
Z40A	Long Farm, Mag	19.07	349	P	Pn	10 41 00.9	+1.2
	baz=167						
Z52A	Williamson	19.09	12	P	Pn	10 41 00.5	+0.5
	baz=194						
Y45A	Yeager Farm, C	19.29	359	P	Pn	10 41 03.3	+1.1
	baz=179						
Y46A	Houston	19.30	1	P	Pn	10 41 02.8	+0.4
	baz=181						
Y47A	UCPARC, Winfie	19.35	3	P	Pn	10 41 04.4	+1.3
	baz=184						
Z53A	Monticello	19.37	14	P	Pn	10 41 03.5	+0.3
	baz=196						
Y48A	Jasper	19.41	5	P	Pn	10 41 04.3	+0.5
	baz=186						
Y49A	Blount Mountai	19.43	7	P	Pn	10 41 04.8	+0.8
	baz=188						
GOGA	Godfrey	19.52	14	P	Pn	10 41 04.6	-0.4
	baz=196						
GOGA	Godfrey	19.52	14	*e*P	Pn	10 41 04.8	-0.3
	comp=E,14nm,1.4s						
Y41A	Eaglette Beard	19.55	351	P	Pn	10 41 06.6	+1.2
	baz=170						
Y51A	Rockmart	19.66	10	P	Pn	10 41 06.8	0.0
	baz=192						
HPIG		19.78	311	*e*P	Pn	10 41 08.2	-0.2
	comp=E,8.8nm,0.9s						
Y40A	Okolona	19.79	350	P	Pn	10 41 09.3	+1.1
	baz=168						
Y52A	Lilburn	19.82	13	P	Pn	10 41 08.2	-0.5
	baz=194						
Y52A	Lilburn	19.82	13	*e*P	Pn	10 41 08.0	-0.7
	comp=E,7.1nm,1.0s						
X45A	UM Field Stati	19.84	359	P	Pn	10 41 08.8	-0.1
	baz=179						
Y53A	Monroe	19.92	14	P	Pn	10 41 09.5	-0.2
	baz=196						
OXF	Oxford	19.93	359	P	Pn	10 41 10.0	+0.1
	baz=179						
OXF	Oxford	19.93	359	*e*P	Pn	10 41 09.9	+0.1
	comp=E,32nm,1.3s						
X48A	Hartselle	19.95	5	P	Pn	10 41 10.2	0.0
	baz=186						
X48A	Hartselle	19.95	5	*e*P	Pn	10 41 10.4	+0.2
	comp=E,12nm,1.3s						
TXAR	Lajitas Array	19.96	320	P	Pn	10 41 11.5	+1.0
	comp=E,0.4nm,0.3s,baz=146,slow=9.1,SNR=33						
TXAR				S	S	10 44 53.3	+0.3
	comp=E,0.1nm,0.3s,baz=122,slow=15,SNR=3.4						
TX31	Lajitas Ar. Si	19.96	320	*e*P	Pn	10 41 11.5	+1.0
X47A	Russelville	19.96	3	P	Pn	10 41 10.6	+0.3
	baz=184,SNR=5.5						
X46A	Booneville	19.98	1	P	Pn	10 41 10.3	-0.2
	baz=182						
Y54A	Tignall	20.14	16	P	Pn	10 41 11.5	-0.9
	baz=198						
X40A	Basin Creek Fa	20.18	351	P	Pn	10 41 12.4	-0.5
	baz=170						
NHSC	New Hope	20.23	22	P	Pn	10 41 12.7	-0.8
	baz=206						
MIAR	Mount Ida	20.36	349	P	Pn	10 41 14.7	-0.3
	baz=168,SNR=7.9						
MIAR	Mount Ida	20.36	349	*e*P	Pn	10 41 14.4	-0.6
	comp=E,13nm,0.9s						
UALR	University of	20.39	352	*e*P	Pn	10 41 14.9	-0.5
	comp=E,31nm,1.3s						
X39A	Fountain Ranch	20.43	348	P	Pn	10 41 15.5	-0.3
	baz=166						
ABTX	Abilene, Hawle	20.43	334	P	Pn	10 41 15.7	-0.2
	baz=150						
ABTX	Abilene, Hawle	20.43	334	*e*P	Pn	10 41 15.8	0.0
	comp=E,17nm,1.2s						
X52A	Dahlonega	20.57	12	P	Pn	10 41 16.3	-1.2
	baz=194						
X53A	Estanollee	20.60	14	P	P	10 41 16.3	+0.8
	baz=196,SNR=5.4						
W48A	Pulaski	20.65	5	P	Pn	10 41 17.4	-0.9
	baz=186,SNR=5.4						
W49A	Belvidere	20.69	7	P	Pn	10 41 18.8	-0.1
	baz=188						
W47A	Westpoint	20.71	4	P	Pn	10 41 18.6	-0.5
	baz=184						
W41B	Gary Mavity, V	20.78	353	P	Pn	10 41 19.3	-0.5
	baz=171						
W41B	Gary Mavity, V	20.78	353	*e*P	Pn	10 41 18.6	-1.2
	comp=E,10nm,1.3s						
W50A	Signal Mountai	20.90	9	P	P	10 41 19.8	+1.0
	baz=190						
WHAR	Wooly Hollow	20.90	353	*e*P	P	10 41 18.8	0.0
	comp=E,9.9nm,1.0s						
W40A	Ferguson Farm,	20.91	351	*e*P	P	10 41 19.3	+0.4
	comp=E,16nm,1.2s						
JSC	Jenkinsville	20.94	18	*e*P	Pn	10 41 21.6	-0.1
	comp=E,12nm,1.0s						
W51A	Cleveland	20.95	10	P	P	10 41 20.0	+0.7
	baz=192						
HBAR	Harrisburg	21.01	357	*e*P	P	10 41 21.1	+1.2
	comp=E,35nm,1.0s						
W39A	Magazine	21.03	349	P	P	10 41 22.2	+2.0
	baz=167						
W39A	Magazine	21.03	349	*e*P	P	10 41 22.5	+2.3
	comp=E,6.5nm,0.9s						
V46A	Holladay	21.23	2	P	P	10 41 23.8	+1.5
	baz=183						
V48A	Smith Brothers	21.25	5	P	P	10 41 23.5	+0.9
	baz=186						
V48A	Smith Brothers	21.25	5	*e*P	P	10 41 24.1	+1.5
	comp=E,5.0nm,0.9s						
CPCT	Cooper Cave	21.27	10	*e*P	P	10 41 23.6	+0.8
	comp=E,5.5nm,1.0s						
W53A	Cullowhee	21.27	14	P	P	10 41 23.9	+1.0
	baz=196						
V47A	Nunnelly	21.29	4	P	P	10 41 23.7	+0.8
	baz=184,SNR=6.4						
V42A	Cord	21.31	355	P	P	10 41 24.7	+1.5
	baz=174,SNR=6.0						
V41A	Mountainview	21.37	353	P	P	10 41 25.2	+1.3
	baz=172,SNR=9.0						
V49A	McMinnville	21.38	7	P	P	10 41 25.2	+1.4
	baz=188						
V50A	Pikevile	21.39	9	P	P	10 41 24.7	+0.7
	baz=191						
V40A	Witts Springs	21.47	352	*e*P	P	10 41 26.9	+1.9
	comp=E,16nm,1.4s						
WVT	Waverly	21.57	3	P	P	10 41 27.4	+1.5
	baz=183						
WVT	Waverly	21.57	3	*e*P	P	10 41 26.9	+0.9
	comp=E,6.9nm,1.1s						
TKL	Tuckaleechee C	21.61	12	P	P	10 41 26.9	+0.5
	comp=E,5.5nm,1.0s,baz=167,slow=8.5,SNR=4.9						
TKL				S	S	10 45 20.1	-5.2
	comp=E,1.7nm,0.8s,baz=341,slow=9.4,SNR=3.0						
TKL	Tuckaleechee C	21.61	12	*e*P	P	10 41 27.1	+0.7
	comp=E,14nm,1.3s						
TKL				S	S	10 45 20.1	-5.2
V39A	Pettigrew	21.63	350	P	P	10 41 27.8	+1.1
	baz=168						
V51A	Loudon	21.64	11	P	P	10 41 28.0	+1.2
	baz=192						
KMSC	Kings Mountain	21.72	17	P	P	10 41 28.6	+1.0
	baz=201						
KMSC	Kings Mountain	21.72	17	*e*P	P	10 41 28.7	+1.1
	comp=E,8.8nm,1.0s						
U46A	Springville	21.79	2	P	P	10 41 29.1	+0.8
	baz=182,SNR=7.4						
V52A	Sevierville	21.82	12	P	P	10 41 29.5	+0.8
	baz=194						
V53A	Saluda	21.83	14	P	P	10 41 30.0	+1.2
	baz=196						
V53A	Saluda	21.83	14	*e*P	P	10 41 30.1	+1.3
	comp=E,9.1nm,1.0s						
U42A	Revenden	21.84	355	P	P	10 41 30.1	+1.2
	baz=174,SNR=12						
U41A	Viola	21.90	354	P	P	10 41 30.7	+1.2
	baz=173,SNR=5.8						
U47A	Clarksville	21.91	4	P	P	10 41 31.0	+1.4
	baz=185,SNR=7.3						
WMOK	Wichita Mounta	21.95	338	P	P	10 41 31.3	+1.2
	baz=154						
WMOK	Wichita Mounta	21.95	338	*e*P	P	10 41 30.6	+0.5
	comp=E,3.4nm,0.8s						
U40A	Yellville	22.02	352	P	P	10 41 32.0	+1.2
	baz=170						
U48A	Cassie Pea, Po	22.04	6	P	P	10 41 32.6	+1.5
	baz=187						
HHAR	Hobbs	22.11	350	*e*P	P	10 41 32.5	+0.7
	comp=E,6.0nm,0.8s						
LPIG	La Paz	22.13	299	LR	LR	10 51 24.1	
	comp=E,53nm,19.9s,baz=185,slow=40						
U49A	Red Boiling Sp	22.13	7	P	P	10 41 32.6	+0.6
	baz=189						
U39A	Green Forest	22.14	351	P	P	10 41 33.3	+1.2
	baz=169,SNR=5.1						
TUL1	Leonard	22.14	346	P	P	10 41 33.1	+1.0
	baz=163,SNR=7.4						
TUL1	Leonard	22.14	346	*e*P	P	10 41 32.5	+0.3

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      comp=E,14nm,0.8s
U50A  Jamestown        22.16   9  P      P      10 41 32.9 +0.5
      baz=191
PBMO  Poplar Bluff     22.22 357 eP      P      10 41 33.3 +0.4
      comp=E,20nm,1.0s
U51A  La Follette      22.26  11  P      P      10 41 34.4 +1.0
      baz=193
U52A  Thorn Hill       22.40  12  P      P      10 41 36.0 +1.0
      baz=195
T45A  Paducah          22.43   1  P      P      10 41 36.1 +0.9
      baz=181
T47A  Sharon Grove     22.47   4  P      P      10 41 36.6 +1.0
      baz=185
T46A  Princeton        22.48   3  P      P      10 41 36.4 +0.7
      baz=183
T42A  Van Buren        22.51 356  P      P      10 41 36.2 +0.2
      baz=175
T42A  Van Buren        22.51 356 eP      P      10 41 36.0  0.0
      comp=E,7.4nm,1.0s
T43A  Greenville       22.52 358  P      P      10 41 36.8 +0.7
      baz=177,SNR=12
T41A  Mountain View    22.57 355  P      P      10 41 37.8 +1.1
      baz=173,SNR=7.2
MNTX  Cornudas Mount   22.68 322  P      P      10 41 38.3 +0.4
      baz=135
MNTX  Cornudas Mount   22.68 322 eP      P      10 41 37.8  -0.1
      comp=E,4.2nm,1.2s
T49A  Edmonton         22.74   7  P      P      10 41 39.0 +0.5
      baz=189,SNR=8.3
T49A  Edmonton         22.74   7 eP      P      10 41 38.9 +0.4
      comp=E,12nm,1.0s
T39A  Clever           22.75 351  P      P      10 41 39.8 +1.2
      baz=169
T50A  Nancy            22.75   9  P      P      10 41 39.3 +0.6
      baz=191
T40A  Mansfield        22.76 353  P      P      10 41 39.7 +1.0
      baz=172,SNR=10
T51A  Gray             22.85  11  P      P      10 41 40.1 +0.5
      baz=193
T38A  Diamond          22.91 349  P      P      10 41 41.5 +1.2
      baz=167
MSTX  Muleshoe         22.99 330  P      P      10 41 41.8 +0.6
      baz=144,SNR=8.7
MSTX  Muleshoe         22.99 330 eP      P      10 41 42.2 +1.0
      comp=E,19nm,1.0s
S43A  Fulton Ridge,    23.00 358  P      P      10 41 41.7 +0.5
      baz=178,SNR=8.1
S47A  Hartford         23.09   5  P      P      10 41 42.1  0.0
      baz=186
S45A  Carrier Mills    23.09   1  P      P      10 41 42.1  0.0
      baz=181
S44A  Carbondale       23.10 360  P      P      10 41 42.6 +0.4
      baz=180,SNR=8.3
S41A  Jillco Farms,    23.11 355  P      P      10 41 42.9 +0.5
      baz=174
SIUC  Southern Illin   23.12 360 eP      P      10 41 42.8 +0.3
      comp=E,27nm,0.9s
S46A  Don Dixon Farm   23.13   3  P      P      10 41 42.6 +0.1
      baz=183
S40A  Lebanon          23.20 353  P      P      10 41 43.8 +0.6
      baz=172
S42A  Caledonia        23.22 357  P      P      10 41 43.5 +0.1
      baz=176
S48A  Wiedeman Farm,   23.23   6  P      P      10 41 44.2 +0.7
      baz=188
AMTX  Amarillo         23.24 333  P      P      10 41 44.6 +0.9
      baz=148
AMTX  Amarillo         23.24 333 eP      P      10 41 45.7 +2.0
      comp=E,14nm,0.8s
S39A  Bolivar          23.40 352  P      P      10 41 45.6 +0.4
      baz=170,SNR=19
S39A  Bolivar          23.40 352 eP      P      10 41 45.7 +0.5
      comp=E,17nm,0.9s
USIN  University of    23.41   3 eP      P      10 41 45.5 +0.2
      comp=E,49nm,1.4s
S38A  Stockton         23.43 350  P      P      10 41 45.8 +0.3
      baz=168
S49A  Springfield      23.44   8  P      P      10 41 45.8 +0.2
      baz=189
S50A  Richmond         23.47   9  P      P      10 41 46.3 +0.4
      baz=192
CCM   Cathedral Cave   23.54 356  P      P      10 41 47.2 +0.6
      baz=175
CCM   Cathedral Cave   23.54 356 eP      P      10 41 47.7 +1.2
      comp=E,15nm,0.7s
S51A  Beattyville      23.57  11  P      P      10 41 48.0 +1.1
      baz=193
R43A  Red Bud          23.69 358  P      P      10 41 48.6 +0.5
      baz=178,SNR=9.5
R45A  Skylar, Fairfi   23.71   2  P      P      10 41 48.8 +0.5
      baz=182
R42A  Luebbering       23.73 357  P      P      10 41 48.9 +0.4
      baz=176
WCI   Wyandotte Cave   23.77   6  P      P      10 41 49.0 +0.2
      baz=187
WCI   Wyandotte Cave   23.77   6 eP      P      10 41 49.2 +0.4
      comp=E,16nm,0.8s
R41A  Rosebud          23.79 356  P      P      10 41 49.0  0.0
      baz=175,SNR=13
R47A  Wooly Knot Far   23.81   5  P      P      10 41 49.0  -0.2
      baz=186
R40A  Maddies Statio   23.86 354  P      P      10 41 49.8 +0.1
      baz=172,SNR=14
R40A  Maddies Statio   23.86 354 eP      P      10 41 50.2 +0.5
      comp=E,18nm,1.1s
BLA   Blacksburg       23.91  17  P      P      10 41 50.7 +0.5
      baz=201
R38A  Fenwick Farm,    23.97 351  P      P      10 41 51.5 +0.7
      baz=169
R39A  Chumby, Stover   23.97 352  P      P      10 41 50.8  0.0
      baz=171,SNR=13
SLM   Saint Louis      24.06 358 eP      P      10 41 52.2 +0.6
      comp=E,18nm,0.7s
R50A  Paris            24.07   9  P      P      10 41 52.1 +0.4
      baz=191
OLIL  Olney            24.16   2 eP      P      10 41 52.5  0.0
      comp=E,20nm,1.0s
R51A  Hillsboro        24.21  11  P      P      10 41 53.4 +0.4
      baz=193
PCRV  Puerto La Cruz   24.30  97  P      P      10 41 54.6 +0.5
      comp=E,5.1nm,0.6s,baz=267,slow=2.3,SNR=6.2
Q44A  Meyer Farm, Va   24.31   0  P      P      10 41 53.8  -0.1
      baz=180,SNR=8.6
Q45A  Warren Harvey,   24.32   2  P      P      10 41 53.8  -0.1
      baz=182,SNR=9.8
Q42A  Golden Eagle     24.35 357  P      P      10 41 54.9 +0.6
      baz=177
Q41A  Truxton          24.43 356  P      P      10 41 55.2 +0.2
      baz=175,SNR=9.8
Q47A  Bedord North L   24.46   5  P      P      10 41 54.8  -0.5
      baz=186
Q48A  North Vernon     24.52   6  P      P      10 41 55.4  -0.4
      baz=188
Q40A  Laux Farm, Aux   24.54 354  P      P      10 41 55.7  -0.3
      baz=173,SNR=6.1
Q39A  Willow Grove F   24.68 353  P      P      10 41 57.3  0.0
      baz=171,SNR=5.4
Q38A  Cooks Store, C   24.69 352  P      P      10 41 57.7 +0.4
      baz=170
Q49A  Aurora           24.70   8  P      P      10 41 57.3  -0.1
      baz=190
Q37A  Longview Farm,   24.73 350  P      P      10 41 58.1 +0.4
      baz=168
P44A  Sand Creek, Wi   24.88   1  P      P      10 41 59.2 +0.2
      baz=181
Q51A  Peebles          24.96  11  P      P      10 41 59.6  -0.2
      baz=193
P45A  Graceland, Par   24.96   3  P      P      10 41 59.5  -0.3
      baz=183
P45A  Graceland, Par   24.96   3 eP      P      10 41 59.1  -0.7
      comp=E,11nm,1.0s
P42A  Winchester       25.01 358  P      P      10 41 59.9  -0.3
      baz=177
P42A  Winchester       25.01 358 eP      P      10 41 59.5  -0.7
      comp=E,10nm,1.0s
P47A  Martinsville     25.02   5  P      P      10 41 59.9  -0.4
      baz=186
P43A  Skaggs, Pawnee   25.05 359  P      P      10 42 00.5  -0.1
      baz=179
P40A  Paris            25.07 355  P      P      10 42 00.8  0.0
      baz=173,SNR=11
P40A  Paris            25.07 355 eP      P      10 42 00.8  0.0
      comp=E,13nm,0.8s
P39B  Salisbury        25.10 353  P      P      10 42 01.3 +0.3
      baz=172,SNR=6.4
P41A  Barry, Barry     25.14 356  P      P      10 42 01.4  0.0
      baz=176
URVA  University of    25.18  22 eP      P      10 42 03.2 +1.4
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IP07  Quail            25.32  21 eP      P      10 42 03.5 +0.5
      comp=E,16nm,0.8s
P38A  Dawn             25.33 352  P      P      10 42 03.2 +0.1
      baz=170
P38A  Dawn             25.33 352 eP      P      10 42 02.9  -0.2
      comp=E,11nm,0.8s
IP05  Hopewell Churc   25.34  21 eP      P      10 42 04.2 +1.0
      comp=E,12nm,0.9s
IP06  Yanceyville      25.35  21 eP      P      10 42 04.4 +1.1
      comp=E,16nm,0.8s
KSU1  Kansas State U   25.38 346  P      P      10 42 03.9 +0.3
      baz=163
KSU1  Kansas State U   25.38 346 eP      P      10 42 03.9 +0.3
      comp=E,11nm,0.8s
IP01  Cuckoo           25.39  21 eP      P      10 42 03.9 +0.2
      comp=E,15nm,0.8s
P37A  Lathrop          25.41 351  P      P      10 42 03.9  0.0
      baz=168
IP03  Louisa           25.42  21 eP      P      10 42 05.0 +1.1
      comp=E,16nm,0.7s
IP04  Greensprings     25.45  21 eP      P      10 42 04.5 +0.3
      comp=E,22nm,0.7s
CVRD  Centerville Ro   25.53  21 eP      P      10 42 04.6  -0.3
      comp=E,16nm,0.9s
O41A  Passleys Farm,   25.57 357  P      P      10 42 04.8  -0.5
      baz=176
O40A  La Belle         25.64 355  P      P      10 42 05.7  -0.2
      baz=174,SNR=6.1
PTRD  Partlow Road     25.64  21 eP      P      10 42 06.9 +0.9
      comp=E,40nm,1.4s
TASL  Snake Pit, Alb   25.65 326  P      P      10 42 06.9 +0.5
      baz=138
ANMO  Albuquerque      25.65 326  P      P      10 42 08.3 +2.0
      comp=E,0.9nm,0.8s,baz=165,slow=13,SNR=5.0
ANMO  Albuquerque      25.65 326  P      P      10 42 06.6 +0.2
      baz=138
TASM  ASL Pad, Albuq   25.66 326  P      P      10 42 06.7 +0.3
      baz=138
O45A  Potomac          25.68   2  P      P      10 42 05.9  -0.4
      baz=183
O47A  Sheridan         25.77   5  P      P      10 42 06.7  -0.4
      baz=186
CBN   Corbin Frederi   25.81  22  P      P      10 42 08.3 +0.8
      baz=207
CBN   Corbin Frederi   25.81  22 eP      P      10 42 08.8 +1.4
      comp=E,23nm,0.9s
O38A  Galt             25.81 352  P      P      10 42 07.9 +0.5
      baz=170
O39A  Kirksville       25.83 354  P      P      10 42 08.0 +0.3
      baz=172
SFIN  Lafayette        25.84   4  P      P      10 42 07.7  -0.1
      baz=184
O48A  Farmland         25.90   7  P      P      10 42 07.9  -0.4
      baz=189
O49A  Covington        25.93   8  P      P      10 42 09.1 +0.5
      baz=191
CBKS  Cedar Bluff      25.97 341  P      P      10 42 09.5 +0.5
      baz=156
CBKS  Cedar Bluff      25.97 341 eP      P      10 42 10.1 +1.2
      comp=E,13nm,1.0s
N41A  Harden Midland   26.15 357 eP      P      10 42 10.3  -0.3
      comp=E,11nm,0.8s
N42A  Yates City       26.24 358  P      P      10 42 11.4  0.0
      baz=178
T25A  Trinidad         26.34 332 eP      P      10 42 13.7 +1.2
      comp=E,9.5nm,1.4s
N43A  Stutzman Famil   26.34 360  P      P      10 42 12.2  -0.1
      baz=180
N40A  Mertquake, Sal   26.37 356  P      P      10 42 12.4  -0.1
      baz=175
N46A  Monticello       26.38   4  P      P      10 42 12.7 +0.1
      baz=185
N38A  Joes South For   26.44 353  P      P      10 42 13.4 +0.2
      baz=171
N39A  Derby Farms, D   26.45 354  P      P      10 42 13.3 +0.1
      baz=173
N39A  Derby Farms, D   26.45 354 eP      P      10 42 13.3 +0.1
      comp=E,17nm,0.6s
N37A  Lee Faris, Mou   26.53 351 eP      P      10 42 14.1  0.0
      comp=E,17nm,0.8s
M41A  Milan            26.81 358  P      P      10 42 17.9 +1.5
      baz=177
M43A  Waltham Townsh   26.84   0  P      P      10 42 17.3 +0.6
      baz=180
M40A  Post Highland    26.89 356  P      P      10 42 17.0  -0.2
      baz=175
M39A  Webster          27.01 355  P      P      10 42 18.3  0.0
      baz=174,SNR=7.1
M38A  Pleasantville    27.05 353  P      P      10 42 18.5  -0.1
      baz=171,SNR=11
O56A  Blue Knob Stat   27.29  18  P      P      10 42 21.1 +0.2
      baz=203
M36A  Felix, Anita     27.30 351  P      P      10 42 21.3 +0.4
      baz=168
L41A  Preston          27.50 358  P      P      10 42 22.4  -0.3
      baz=177
L40A  Anamosa          27.52 357  P      P      10 42 22.7  -0.2
      baz=176
L40A  Anamosa          27.52 357 eP      P      10 42 22.8  -0.2
      comp=E,9.9nm,0.9s
N54A  Moraine State    27.54  15  P      P      10 42 23.6 +0.5
      baz=199
N54A  Moraine State    27.54  15 eP      P      10 42 23.7 +0.6
      comp=E,21nm,1.5s
L39A  Vinton           27.64 355  P      P      10 42 24.0 +0.1
      baz=174
L38A  Oak Wood Farm,   27.74 354  P      P      10 42 25.0 +0.2
      baz=172,SNR=7.1
MVL   Millersville     27.76  21 eP      P      10 42 27.0 +1.9
      comp=E,16nm,1.2s
L37A  Phoenix Point,   27.82 353  P      P      10 42 26.0 +0.5
      baz=170
SSPA  Standing Stone   27.83  19  P      P      10 42 26.0 +0.3
      baz=204
S22A  4UR Ranch, Cre   27.98 329  P      P      10 42 27.8 +0.4
      baz=141
S22A  4UR Ranch, Cre   27.98 329 eP      P      10 42 29.0 +1.5
      comp=E,2.5nm,1.0s
Q24A  Divide           28.17 333  P      P      10 42 28.7  -0.4
      baz=146
K39A  Oelwein          28.21 356  P      P      10 42 29.0  0.0
      baz=174
K38A  Parkersburg      28.22 354 eP      P      10 42 29.0  -0.2
      comp=E,15nm,1.1s
K36A  Gilmore City     28.41 352  P      P      10 42 31.7 +0.8
      baz=169
K37A  Belmond          28.43 353  P      P      10 42 31.4 +0.4
      baz=171,SNR=7.2
J41A  Loganville       28.78 359  P      P      10 42 35.1 +1.0
      baz=178
N59A  State Game Lan   28.78  21  P      P      10 42 34.8 +0.6
      baz=208
N59A  State Game Lan   28.78  21 eP      P      10 42 35.2 +1.0
      comp=E,11nm,1.0s
J38A  Wedel Dairy, R   28.86 355  P      P      10 42 34.7  -0.2
      baz=173
J37A  Redenius Farm,   28.96 353  P      P      10 42 36.0 +0.3
      baz=171
PV12  Saucer Basin,    29.42 327 eP      P      10 42 42.5 +2.4
      comp=E,4.3nm,0.9s
I38A  Scanlan Farm,    29.57 355  P      P      10 42 40.9  -0.3
      baz=174
I37A  Lemond, Waseca   29.64 354  P      P      10 42 41.8 +0.1
      baz=172
I37A  Lemond, Waseca   29.64 354 eP      P      10 42 41.4  -0.4
      comp=E,15nm,1.0s
ECSD  EROS Data Cent   29.83 349  P      P      10 42 43.2  -0.3
      baz=165
BINY  Binghamton       29.85  20  P      P      10 42 43.2  -0.4
      baz=206
BINY  Binghamton       29.85  20 eP      P      10 42 43.5  -0.2
      comp=E,19nm,1.4s
H39A  Augusta          30.14 357  P      P      10 42 46.3 +0.2
      baz=176
H38A  Maiden Rock      30.20 356  P      P      10 42 46.8 +0.2
      baz=174
H36A  Jessenland, He   30.26 353  P      P      10 42 47.6 +0.4
      baz=171,SNR=10
H35A  Sunnyside Ranc   30.49 352  P      P      10 42 49.0  -0.2
      baz=169
IRM   Iron Mountain    30.59 314  P      P      10 42 51.6 +1.3
      baz=124
G40A  Rib Lake         30.68 359  P      P      10 42 52.7 +1.7
      baz=178
SPMN  Marine on St.    30.78 355  P      P      10 42 51.5  -0.3
      baz=173
SPMN  Marine on St.    30.78 355 eP      P      10 42 51.5  -0.3
      comp=E,14nm,1.1s
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SUSD  Miller           31.00 346  P      P      10 42 53.8  0.0
      baz=161
LDFC  Landfair         31.08 316 eP      P      10 42 56.8 +2.0
      comp=E,9.7nm,0.9s
TRY   Troy             31.13  22 eP      P      10 42 56.1 +1.2
      comp=E,21nm,1.1s
GMRC  Granite Mounta   31.29 315  P      P      10 42 56.8 +0.2
      baz=124
P17A  Butcher Ranch,   31.29 327 eP      P      10 42 58.3 +1.6
      comp=E,3.7nm,0.9s
F38A  Pierce - Schro   31.45 356  P      P      10 42 57.3  -0.3
      baz=175
G32A  Webster          31.47 349  P      P      10 42 58.2 +0.3
      baz=164
G32A  Webster          31.47 349 eP      P      10 42 57.7  -0.2
      comp=E,26nm,0.9s
F36A  Milaca           31.48 354  P      P      10 42 57.9  -0.1
      baz=172
F36A  Milaca           31.48 354 eP      P      10 42 57.6  -0.4
      comp=E,4.7nm,1.0s
F35A  Swanville        31.59 353  P      P      10 42 59.2 +0.2
      baz=170
E39A  Mellen           31.80 358  P      P      10 43 01.5 +0.7
      baz=177
E42A  Champion         31.85   2  P      P      10 43 01.6 +0.4
      baz=182
E40A  Wakefield        31.85 359  P      P      10 43 01.7 +0.5
      baz=179
NCB   Newcomb          32.01  21 eP      P      10 43 03.8 +1.1
      comp=E,8.2nm,1.4s
E38A  The Farm, Brul   32.07 357  P      P      10 43 03.4 +0.2
      baz=176
E36A  McGregor         32.11 355  P      P      10 43 03.6 +0.1
      baz=172
E35A  Pequot Lakes     32.26 353  P      P      10 43 05.1 +0.2
      baz=170
D41A  Chassel          32.47   1  P      P      10 43 08.3 +1.7
      baz=181
LONY  Lake Ozonia      32.47  20  P      P      10 43 06.6  -0.1
      baz=207,SNR=5.3
LONY  Lake Ozonia      32.47  20 eP      P      10 43 06.3  -0.4
      comp=E,13nm,0.9s
PTGA  Pitinga          32.59 115  P      P      10 43 08.5 +0.4
      comp=E,1.5nm,0.4s,baz=292,slow=11,SNR=3.9
D37A  Cotton           32.68 356  P      P      10 43 07.8  -0.6
      baz=174
D36A  Goodland         32.75 355  P      P      10 43 08.6  -0.6
      baz=173
D36A  Goodland         32.75 355 eP      P      10 43 08.6  -0.6
      comp=E,8.9nm,0.8s
TPNV  Topopah Spring   32.91 318  P      P      10 43 10.3  -0.5
      baz=126
FURC  Furnace Creek,   33.04 317  P      P      10 43 11.4  -0.3
      baz=124
C38A  Sawbill Land.    33.17 357  P      P      10 43 13.6 +0.8
      baz=176
PDAR  Pinedale Array   33.20 332  P      P      10 43 14.2 +0.7
      comp=E,0.2nm,0.7s,baz=133,slow=7.8,SNR=2.5
PDAR                             PcP    PcP    10 45 55.4  -0.6
      comp=E,0.1nm,0.4s,baz=127,slow=5.7,SNR=3.0
C36A  Pine Crest Far   33.30 355  P      P      10 43 14.4 +0.4
      baz=173
C35A  Jirik Farms, M   33.35 354  P      P      10 43 13.7  -0.7
      baz=171,SNR=10
OSI   Osito Audit: C   33.35 312 eP      P      10 43 15.6 +1.0
      comp=E,8.1nm,0.5s
EYMN  Ely              33.41 357  P      P      10 43 13.8  -1.0
      baz=176
B35A  Bob, Littlefor   33.98 355  P      P      10 43 19.2  -0.6
      baz=172
B35A  Bob, Littlefor   33.98 355 eP      P      10 43 19.1  -0.7
      comp=E,6.7nm,1.0s
AGMN  Agassiz Nation   34.16 352  P      P      10 43 21.2  -0.1
      baz=168
AGMN  Agassiz Nation   34.16 352 eP      P      10 43 20.6  -0.8
      comp=E,6.0nm,0.8s
B34A  Aery, Baudette   34.19 353  P      P      10 43 21.5  -0.2
      baz=170
VES   Vestal, Richgr   34.22 314  P      P      10 43 22.0  -0.1
      baz=121
REDW  Red Top Meadow   34.26 331 eP      P      10 43 21.2  -1.5
      comp=E,3.9nm,0.7s
SNOW  Snow King Moun   34.30 332 eP      P      10 43 23.9 +1.0
      comp=E,6.3nm,0.8s
LOHW  Long Hollow      34.34 332 eP      P      10 43 24.4 +1.1
      comp=E,1.9nm,0.8s
SAML  Samuel           34.71 131 eP      P      10 43 26.0  -0.6
      comp=E,3.0nm,1.4s
A33A  Warroad          34.73 353  P      P      10 43 25.7  -0.5
      baz=169,SNR=6.9
PKME  Peaks-Kenny Pk   34.96  25  P      P      10 43 28.9 +0.6
      baz=215
NV11  Mina Array Sit   35.00 318 eP      P      10 43 31.3 +2.3
      comp=E,0.3nm,1.0s
NV01  Mina Array Sit   35.09 318 eP      P      10 43 31.9 +2.0
NVAR  Mina Array Bea   35.09 318  P      P      10 43 31.6 +1.7
      comp=E,4.0nm,0.9s,baz=134,slow=8.8,SNR=19
NVAR                             PcP    PcP    10 46 00.5  -1.0
      comp=E,0.5nm,0.7s,baz=113,slow=5.0,SNR=4.0
NVAR                             LR     LR     10 59 36.3
      comp=E,67nm,19.4s,baz=30,slow=39
KVN   Kaiserville      35.32 319 eP      P      10 43 33.7 +1.8
      comp=E,7.2nm,1.4s
ULM   Lac du Bonnet    36.08 353  P      P      10 43 38.0 +0.1
      comp=E,4.9nm,0.9s,baz=174,slow=9.8,SNR=5.0
ULM                              PcP    PcP    10 46 03.2  -0.6
      comp=E,2.0nm,0.6s,baz=358,slow=5.1,SNR=3.1
ULM   Lac du Bonnet    36.08 353 eP      P      10 43 38.1 +0.3
      comp=E,7.6nm,0.9s
ULM                              PcP    PcP    10 46 03.2  -0.6
DGMT  Dagmar           36.09 343  P      P      10 43 38.8 +0.7
      baz=155
DGMT  Dagmar           36.09 343 eP      P      10 43 39.2 +1.2
      comp=E,12nm,0.8s
LPAZ  La Paz           36.96 145  P      P      10 43 47.0 +0.5
      comp=E,0.6nm,0.5s,baz=45,slow=6.7,SNR=5.5
LPAZ  La Paz           36.96 145 eP      P      10 43 46.9 +0.5
      comp=E,1.6nm,0.9s
MNMC  Minye Minye      38.56 150 eP      P      10 44 00.5 +0.9
      comp=E,8.9nm,0.9s
YBH   Yreka Blue Hor   39.74 320 LR     LR     11 03 39.3
      comp=E,36nm,21.5s,baz=244,slow=41
I03D  Drain, OR        41.22 322  P      P      10 44 22.4 +1.2
      baz=124
SCHQ  Schefferville    43.83  18  P      P      10 44 41.0  -1.2
      comp=E,6.0nm,0.8s,baz=234,slow=3.2,SNR=6.5
SCHQ                             PcP    PcP    10 46 28.5  0.0
      comp=E,1.8nm,0.5s,baz=250,slow=4.0,SNR=4.2
YKA   Yellowknife Ar   51.22 345  P      P      10 45 39.0  -0.5
      comp=E,1.6nm,0.8s,baz=141,slow=8.2,SNR=5.9
YKA                              PcP    PcP    10 46 54.8 +0.2
      comp=E,2.8nm,0.7s,baz=148,slow=3.9,SNR=9.6
DIB   Dawson Inlet,    51.50 328 eP      P      10 45 41.2  -0.6
      comp=E,25nm,1.5s
GO05  HualaæØ          51.87 162 eP      P      10 45 45.9 +1.1
      comp=E,3.5nm,0.8s
PLCA  Paso Flores      57.59 163  P      P      10 46 26.7 +0.5
      comp=E,4.0nm,1.0s,baz=347,slow=8.4,SNR=6.0
PLCA  Paso Flores      57.59 163 eP      P      10 46 26.8 +0.5
      comp=E,1.8nm,1.0s
IL1   Eielson Array    63.50 336 eP      P      10 47 06.6 +0.4
ILAR  Eielson Array    63.50 336  P      P      10 47 06.0  -0.2
      comp=E,1.3nm,0.7s,baz=163,slow=4.6,SNR=16
ILB   Eielson Array    63.50 336 eP      P      10 47 06.6 +0.4
CCB   Clear Creek Bu   63.81 336 eP      P      10 47 08.3 +0.1
      comp=E,1.9nm,1.0s
MDM   Murphy Dome      64.10 336 eP      P      10 47 10.5 +0.3
      comp=E,2.6nm,1.2s
TRF   Thorofare Moun   64.39 334 eP      P      10 47 12.4 +0.1
      comp=E,9.5nm,0.9s
SKT   Skwentna         64.45 332 eP      P      10 47 12.7 +0.1
      comp=E,7.4nm,1.1s
BPAW  Bear Paw Mtn.    64.90 335 eP      P      10 47 15.5 +0.1
      comp=E,5.8nm,0.8s
MLY   Manley           65.12 336 eP      P      10 47 17.4 +0.5
      comp=E,4.6nm,0.8s
CAST  Castle Rocks     65.14 334 eP      P      10 47 16.7  -0.3
      comp=E,2.4nm,0.9s
TOLK  Toolik Lake Re   66.01 340  P      P      10 47 21.8  -0.8
      baz=113
SVW2  Sparrevohn       66.08 331 eP      P      10 47 23.0  -0.1
      comp=E,7.0nm,1.2s
CHGN  Chignik          66.58 325 eP      P      10 47 26.6 +0.3
      comp=E,8.9nm,0.9s
EKA   Eskdalemuir Ar   75.93  36  P      P      10 48 21.3  -1.7
      comp=E,1.9nm,0.7s,baz=258,slow=5.6,SNR=3.7
ESDC  Sonseca Array    77.22  52  P      P      10 48 30.1  -0.6
      comp=E,1.9nm,0.7s,baz=285,slow=5.5,SNR=15
```

ES19	**SONSECA Array**	**77.27**	**52**	*e*P	**P**	**10 48 30.8**	**-0.2**
MDT	**Midelt**	**77.75**	**59**	P	**P**	**10 48 34.1**	**+0.2**
	comp=E,6.6nm,1.2s,baz=295,slow=6.9,SNR=3.4						
KOWA	**Kowa**	**81.85**	**77**	P	**P**	**10 48 56.6**	**+0.3**
	comp=E,4.4nm,0.7s,baz=288,slow=7.5,SNR=11						
KOWA	**Kowa**	**81.85**	**77**	*e*P	**P**	**10 48 56.7**	**+0.5**
	comp=E,12nm,1.2s						
NOA	**NORSAR Array B**	**82.38**	**29**	P	**P**	**10 48 58.8**	**+0.6**
	comp=E,2.1nm,1.0s,baz=287,slow=4.9,SNR=4.0						
TIC	**Toumodi**	**82.69**	**85**	*e*P	**P**	**10 48 59.4**	**-1.3**
LIC	**Lamto**	**82.78**	**85**	*e*P	**P**	**10 48 59.7**	**-1.4**
	comp=E,40nm,1.3s						
DBIC	**Dimbokro**	**82.84**	**85**	P	**P**	**10 49 01.7**	**+0.3**
	comp=E,6.9nm,1.1s,baz=222,slow=6.0,SNR=3.9						
KIC	**Kosan Boka**	**83.02**	**85**	*e*P	**P**	**10 49 01.3**	**-1.1**
	comp=E,40nm,1.4s						
HFS	**Hagfors**	**83.81**	**29**	P	**P**	**10 49 06.7**	**+1.1**
	comp=E,1.1nm,0.6s,baz=276,slow=4.2,SNR=2.7						
ARCES	**ARCESS Array B**	**84.78**	**19**	P	**P**	**10 49 10.3**	**0.0**
	comp=E,1.9nm,0.8s,baz=268,slow=3.2,SNR=4.0						
FUORN	**Ofenpass-Fuorn**	**85.91**	**43**	*e*P	**P**	**10 49 17.1**	**+0.3**
	comp=E,7.7nm,0.8s						
CLL	**Collm**	**86.22**	**38**	*i* P	**P**	**10 49 17.7**	**-0.1**
	comp=Z,10.0nm,1.5s						
VLC	**Villacollemand**	**86.71**	**45**	*e*P	**P**	**10 49 20.7**	**+0.3**
	comp=Z,26nm,1.3s						
KHC	**Kasperske Hory**	**87.27**	**40**	*e*P	**P**	**10 49 23.7**	**+0.6**
GERES	**GERESS Array B**	**87.44**	**40**	P	**P**	**10 49 23.9**	**-0.1**
	comp=Z,1.2nm,0.9s,baz=290,slow=3.8,SNR=8.1						
TOA0	**Torodi Ar. Sit**	**87.56**	**77**	*e*P	**P**	**10 49 23.9**	**-1.2**
	comp=Z,11nm,1.5s						
TORD	**Torodi Ar. Bea**	**87.56**	**77**	P	**P**	**10 49 23.0**	**-2.0**
	comp=Z,1.1nm,0.6s,baz=291,slow=5.4						
FINES	**FINESS Array B**	**88.86**	**26**	P	**P**	**10 49 28.8**	**-1.5**
	comp=Z,1.6nm,0.8s,baz=326,slow=12,SNR=2.5						
KS01	**Wonju Array Si**	**117.67**	**327**	*e*PKPdf	**PKPdf**	**10 55 23.4**	**+0.5**
WB2	**Warramunga Arr**	**138.20**	**256**	*e*PKPdf	**PKPdf**	**10 56 02.0**	**-0.3**
WRA	**Warramunga Arr**	**138.21**	**256**	PKP	**PKPdf**	**10 56 00.6**	**-1.7**
	comp=Z,0.8nm,1.0s,baz=87,slow=2.8,SNR=4.5						
ASAR	**Alice Springs**	**138.45**	**251**	PKP	**PKPdf**	**10 56 00.6**	**-2.1**
	comp=Z,0.2nm,0.6s,baz=127,slow=1.4,SNR=3.4						
CHTO	**Chiang Mai**	**145.96**	**346**	*e*PKPdf	**PKPdf**	**10 56 16.6**	**+0.4**
CM31	**Chiang Mai Arr**	**146.30**	**346**	*e*PKPdf	**PKPbc**	**10 56 17.8**	**0.0**
CMAR	**Chiang Mai Arr**	**146.30**	**346**	PKPbc	**PKPbc**	**10 56 18.1**	**+0.2**
	comp=Z,7.6nm,0.9s,baz=348,slow=4.7,SNR=22						
CM01	**Chiang Mai Arr**	**146.33**	**346**	*e*PKPdf	**PKPbc**	**10 56 17.8**	**-0.1**

GUC 22 10:49:53.6±0.4**,23.°53S**×**66.°85W,h180**^{km}±26^{km}**,ML3.7, 6C-1D,Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GO02	**Mina Guanaco**	**2.98**	**236**	⇑*i*P	Pn	10 50 44.0	+1.7
GO02				⇑*i*P		10 50 44.1	
GO02				*e*S	Sn	10 51 22.9	+2.6
GO02				IAML		10 51 25.1	
	comp=N,126nm,0.1s						
PB03	**IPOC Station P**	**3.06**	**298**	⇑*i*P	Pn	10 50 45.2	+2.1
PB03				*e*S	Sn	10 51 23.9	+2.2
PB03				IAML		10 51 24.1	
	comp=N,154nm,0.4s						
PB05	**IPOC Station P**	**3.16**	**282**	⇑*i*P	Pn	10 50 46.1	+1.8
PB05				*e*S	Sn	10 51 26.1	+2.4
PB05				IAML		10 51 28.0	
	comp=N,30nm,0.3s						
PB07	**IPOC Station P**	**3.33**	**302**	⇑*i*P	Pn	10 50 48.4	+1.9
PB07				*i* S	Sn	10 51 29.3	+1.6
PB07				IAML		10 51 29.5	
	comp=N,184nm,0.3s						
PB10	**IPOC Station P**	**3.40**	**269**	⇑*i*P	Pn	10 50 49.1	+1.9
PB10				*i* S	Sn	10 51 30.5	+1.6
PB08	**IPOC Station P**	**3.99**	**327**	⇓*i*P	Pn	10 50 57.6	+2.6
PB08				*e*S	Sn	10 51 45.4	+2.4

IDC 22 10:55:46.5±3.3**,4.°75S**×**145.°52E,h163**^{km}±36^{km}**,mb3.5**/7**, mb1 3.5**/9**,mb1mx3.3**/45**,mbtmp3.9**/9**,MS2.6**/1**,Ms1 2.6**/1**, ms1mx2.3**/30**,Error ellipse: s-maj=32.0km s-min=22.9km az=110.0,Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**4.90**	**161**	P	Pn	10 56 59.6	+0.8
	2.9nm,0.3s,baz=349,slow=13,SNR=9.8						
PMG				S	Sn	10 57 55.4	-0.1
	11nm,0.3s,baz=118,slow=22,SNR=25						
GUMO	**Guam**	**18.23**	**358**	LR	LR	11 06 33.8	
	comp=Z,19nm,19.5s,baz=238,slow=36						
WRA	**Warramunga Arr**	**18.62**	**215**	P	P	10 59 51.4	-0.3
	0.3nm,0.3s,baz=35,slow=12,SNR=15						
ASAR	**Alice Springs**	**21.89**	**210**	P	P	11 00 26.8	0.0
	1.9nm,0.7s,baz=42,slow=7.1,SNR=30						
STKA	**Stephens Creek**	**27.23**	**187**	P	P	11 01 15.7	+0.3
	1.1nm,0.8s,baz=340,slow=12,SNR=2.5						
CMAR	**Chiang Mai Arr**	**51.37**	**298**	P	P	11 04 35.2	+0.3
	1.0nm,0.3s,baz=108,slow=5.8,SNR=3.0						
MKAR	**Makanchi Array**	**75.60**	**321**	P	P	11 07 13.6	+0.1
	0.4nm,0.4s,baz=104,slow=7.3,SNR=7.1						
KURBB	**Kurchatov Arra**	**79.36**	**323**	P	P	11 07 33.7	-0.5
	0.3nm,0.3s,baz=98,slow=5.7,SNR=3.9						
BVAR	**Borovoye Array**	**84.90**	**324**	P	P	11 08 02.7	-0.3
	0.8nm,0.6s,baz=99,slow=8.9,SNR=5.5						
ILAR	**Eielson Array**	**84.92**	**23**	P	P	11 08 03.1	+0.2
	0.9nm,0.7s,baz=256,slow=5.1,SNR=12						

IDC 22 10:57:16.6±4.1**,1.°90S**×**138.°05E,h0**^{km}**,mb3.7**/4**, mb1 3.9**/5**,mb1mx3.6**/46**,mbtmp3.8**/5**,ML3.8**/1**,Error ellipse: s-maj=188.9km s-min=23.5km az=85.0,Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.30**	**191**	P	Pn	11 01 30.8	-1.4
	0.3nm,0.3s,baz=12,slow=11,SNR=14						
WRA				S	Sn	11 04 43.4	-14
	0.1nm,0.3s,baz=15,slow=22,SNR=4.6						
ASAR	**Alice Springs**	**22.01**	**190**	P	P	11 02 13.4	+0.7
	1.8nm,0.6s,baz=20,slow=11,SNR=16						
ASAR				S	S	11 06 12.9	-3.7
	1.1nm,1.1s,baz=13,slow=22,SNR=3.4						
MKAR	**Makanchi Array**	**68.75**	**322**	P	P	11 08 22.5	0.0
	0.3nm,0.5s,baz=114,slow=6.7,SNR=2.3						
KURBB	**Kurchatov Arra**	**72.69**	**325**	P	P	11 08 46.8	+0.5
	0.3nm,0.4s,baz=118,slow=5.3,SNR=4.8						
BVAR	**Borovoye Array**	**78.27**	**325**	P	P	11 09 18.1	-0.4
	0.6nm,0.6s,baz=106,slow=5.7,SNR=4.2						

IDC 22 11:04:23.7±26.0**,19.°51S**×**173.°04W,h0**^{km}**,mb4.1**/4**, mb1 4.2**/4**,mb1mx3.6**/48**,mbtmp4.1**/4**,MS3.6**/1**,Ms1 3.5**/1**, ms1mx2.5**/44**,Error ellipse: s-maj=497.1km s-min=163.2km az=75.0,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**38.24**	**262**	P	P	11 11 46.2	+0.4
	3.2nm,0.6s,baz=90,slow=9.1,SNR=4.2						
STKA	**Stephens Creek**	**42.41**	**244**	P	P	11 12 19.7	-0.6
	1.0nm,0.5s,baz=98,slow=12,SNR=4.0						
STKA				LR	LR	11 27 22.0	
	comp=Z,71nm,18.1s,baz=18,slow=32						
ASAR	**Alice Springs**	**49.28**	**255**	P	P	11 13 14.6	-0.2
	1.6nm,0.5s,baz=95,slow=8.3,SNR=29						
WRA	**Warramunga Arr**	**49.36**	**260**	P	P	11 13 15.3	0.0
	0.6nm,0.3s,baz=96,slow=7.2,SNR=37						

MEX 22 11:07:14.7±0.7**,17.°54N**×**102.°44W,h16**^{km}±15^{km}**,MD3.8, Near coast of Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.93**	**86**	*e*P	Pb	11 07 29.5	-2.9
ZIIG				*e*S	Sb	11 07 40.0	-4.5
MMIG	**Aquila**	**1.14**	**311**	*e*P	Pn	11 07 32.1	-3.9
MMIG				*i* S	Sb	11 07 45.9	-4.8
ARIG	**Puente Sto Nin**	**2.12**	**69**	*e*P	Pn	11 07 47.0	-2.6
ARIG				*i* S	Sn	11 08 11.1	-4.5
MEIG	**Mezcala**	**2.71**	**81**	*i* P	Pn	11 07 54.2	-3.5
MEIG				*i* S	Sn	11 08 25.9	-4.3

IDC ***22*** *11:11:38.1*±*3.5,29.°09N*×*138.°18E,h406*^{km}±*96*^{km}*,mb2.5/4, mb1 2.8/8,mb1mx2.6/62,mbtmp3.6/8,Error ellipse: s-maj=185.1km s-min=14.9km az=68.0*

JMA ***22*** *11:11:39.4*±*0.1,29.°49N*×*139.°48E,h464*^{km}*,M3.6*

ISC 22 11:11:38.5±0.9**,29.°36N**±0.°08×**139.°3E**±0.°2**,h445**^{km}**,n20,** σ**1**^{s}**90**/27**,mb2.8**/4**,Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CBIJ	**Chichi jima**	**3.38**	**131**	P	**P**	**11 12 50.8**	**+2.6**
CBIJ				S	**S**	**11 13 47.2**	**+2.5**
JCJ	**Chichijima**	**3.38**	**131**	P	**P**	**11 12 50.1**	**+1.9**
	baz=330,slow=17						
JCJ				S	**S**	**11 13 40.3**	**-4.5**
	baz=65,slow=18						
JHJ	**Hachijo jima 2**	**3.77**	**6**	P	**P**	**11 12 54.2**	**+3.0**
	8.3nm,0.3s,baz=320,slow=8.7,SNR=4.5						
JHJ				S	**S**	**11 13 51.5**	**+1.1**
	17nm,0.3s,baz=204,slow=20,SNR=4.3						
JMKN	**Mikurajimanish**	**4.53**	**3**	P	**P**	**11 12 59.3**	**+1.3**
JIE	**Ise**	**5.49**	**337**	P	**P**	**11 13 10.2**	**+2.9**
BSO3	**Boso 3**	**5.52**	**10**	*e*S	**S**	**11 14 19.7**	**-0.2**
BSO4	**Boso 4**	**5.68**	**8**	S	**S**	**11 14 22.2**	**-1.0**
JOD2	**Odawara 2**	**5.89**	**358**	P	**P**	**11 13 12.9**	**+1.5**
JOD2				*e*S	**S**	**11 14 26.3**	**-1.1**
JNY	**Yasuok**	**6.11**	**349**	P	**P**	**11 13 15.5**	**+1.8**
JHU	**Hanno**	**6.47**	**360**	P	**P**	**11 13 18.5**	**+1.1**
JRY	**Ryogami san**	**6.65**	**357**	P	**P**	**11 13 20.7**	**+1.4**
JRY				*e*S	**S**	**11 14 40.8**	**-1.0**
JYT	**Yasato**	**6.89**	**6**	P	**P**	**11 13 23.2**	**+1.4**
JYT				*e*S	**S**	**11 14 44.0**	**-2.3**
JAG	**Ashikaga**	**7.05**	**1**	P	**P**	**11 13 23.7**	**+0.2**
MJAR	**Matsushiro Arr**	**7.22**	**353**	P	**P**	**11 13 26.1**	**+0.7**
	1.2nm,0.3s,baz=167,slow=12,SNR=16						
MAT	**Matsushiro**	**7.22**	**353**	P	**P**	**11 13 26.8**	**+1.4**
MAT				*e*S	**S**	**11 14 53.0**	**0.0**
USRK	**Ussuriysk Ar.**	**15.92**	**340**	P	**P**	**11 14 60.0**	**+0.6**
	baz=165,slow=12						
MKAR	**Makanchi Array**	**47.10**	**308**	P	**P**	**11 19 27.0**	**-1.7**
	0.1nm,0.4s,baz=99,slow=7.7,SNR=2.8						
WRA	**Warramunga Arr**	**49.25**	**186**	P	**P**	**11 19 45.1**	**+0.1**
	0.2nm,0.4s,baz=1.3,slow=7.7,SNR=9.5						
KURBB	**Kurchatov Arra**	**49.66**	**313**	P	**P**	**11 19 45.4**	**-2.3**
	0.3nm,0.5s,baz=92,slow=6.8,SNR=6.1						
ASAR	**Alice Springs**	**52.98**	**186**	P	**P**	**11 20 12.4**	**+0.1**
	0.1nm,0.4s,baz=22,slow=10,SNR=5.3						

BJI ***22*** *11:20:01.0,13.°10N*×*50.°10E,h10*^{km}*,mb4.7/28,mB5.1/22, Ms4.5/8,Ms7 4.2/4*

IDC ***22*** *11:20:02.4*±*0.5,13.°17N*×*50.°11E,h0*^{km}*,mb4.3/31, mb1 4.4/32,mb1mx4.3/64,mbtmp4.3/32,ML4.3/1,MS3.7/10, Ms1 3.7/10,ms1mx3.4/30,Error ellipse: s-maj=13.5km s-min=12.6km az=175.0*

MOS ***22*** *11:20:02.1*±*1.2,13.°18N*×*50.°16E,h10*^{km}*,mb5.0/54,Error ellipse: s-maj=9.5km s-min=4.1km az=109.9*

ISCJB ***22*** *11:20:02.4*±*0.3,13.°07N*±*0.°05*×*50.°04E*±*0.°03,h15*^{km}*, mb4.6/125,MS3.7/9,Error ellipse: s-maj=7.5km s-min=4.5km az=4.2*

NEIC ***22*** *11:20:03.6*±*0.3,13.°13N*×*50.°08E,h10*^{km}*,mb4.8/39,Error ellipse: s-maj=6.4km s-min=5.0km az=187.0*

CSEM ***22*** *11:20:03.8*±*0.2,13.°12N*×*50.°05E,h10*^{km}*,mb4.7/63,Error ellipse: s-maj=8.6km s-min=6.3km az=3.0*

DHMR ***22*** *11:20:05.9*±*2.2,13.°39N*×*49.°58E,h11*^{km}±*240*^{km}*,ML4.1*

ISC 22 11:20:04.1±0.8**,13.°20N**±0.°07×**49.°98E**±0.°05**,h12**^{km}±4^{km}**, n312,**σ**1**^{s}**58**/316**,mb4.6**/125**,MS3.6**/9**,36C-18D,Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MUKL	**Al Mukalla**	**1.57**	**324**	*i* P	Pn	11 20 26.4	-5.5
MUKL				*i* S	**Sn**	**11 20 45.7**	**-6.4**
MUKL				AML	AML	11 20 46.9	
	comp=N,3μm,0.6s						
BDHA	**Al Bayda'**	**4.36**	**281**	*i* P	**Pn**	**11 21 09.7**	**-0.7**
BDHA				AML	AML	11 21 14.8	
	comp=E,1μm,0.3s						
BDHA				*i* S	**Sn**	**11 21 59.0**	**-2.4**
BDHA	**Al Bayda'**	**4.36**	**281**	*i* P	**Pn**	**11 21 09.7**	**-0.7**
	comp=E,629nm,0.3s						
BDHA				*i* S	**Sn**	**11 21 59.0**	**-2.4**
LBOS		**4.65**	**279**	⇓*i*P	**Pn**	**11 21 13.6**	**-0.9**
LBOS				*i* S	**Sn**	**11 22 04.8**	**-3.8**
DAMY	**Dhamar**	**5.59**	**285**	*e*Pn	**Pn**	**11 21 26.8**	**-0.7**
DHBB	**Dhamar BB**	**5.60**	**285**	*i* P	**Pn**	**11 21 25.3**	**-2.3**
DHBB				*i* S	**Sn**	**11 22 27.5**	**-4.5**
DHBB	**Dhamar BB**	**5.60**	**285**	*i* P	**Pn**	**11 21 25.3**	**-2.3**
DHBB				*i* S	**Sn**	**11 22 27.5**	**-4.5**
UDYN	**Al 'Udayn**	**5.89**	**278**	*i* P	**Pn**	**11 21 29.5**	**-2.0**
UDYN				*i* S	**Sn**	**11 22 33.2**	**-5.9**
ATD	**Arta Tunnel**	**7.16**	**257**	Pn	**Pn**	**11 21 50.4**	**+1.6**
	comp=E,4.4nm,0.3s,baz=326,slow=4.5,SNR=18						
ATD				LR	LR	11 24 00.1	
	comp=E,1μm,18.8s,baz=82,slow=33						
ATD	**Arta Tunnel**	**7.16**	**257**	*e*Pn	**Pn**	**11 21 48.9**	**+0.1**
ATD	**Arta Tunnel**	**7.16**	**257**	*e*Pn	**Pn**	**11 21 48.9**	**+0.1**
WSAR	**Wadi Sarin**	**12.93**	**38**	LR	LR	11 27 52.6	
	comp=E,750nm,19.8s,baz=237,slow=36						
KMBO	**Kilima Mbogo**	**19.02**	**223**	LR	LR	11 32 01.0	
	comp=E,410nm,20.6s,baz=103,slow=38						
EIL	**Elat**	**21.51**	**322**	P	**P**	**11 24 59.9**	**+6.8**
	comp=E,16nm,1.0s,baz=186,slow=3.1,SNR=5.3						
EIL				LR	LR	11 33 18.5	
	comp=E,241nm,20.1s,baz=66,slow=37						
ASF	**Jabal al Asfar**	**22.37**	**330**	P	**P**	**11 25 04.9**	**+2.5**
	comp=E,17nm,1.1s,baz=98,slow=4.5,SNR=14						
MMAI	**Mount Meron Ar**	**23.80**	**328**	P	**P**	**11 25 19.0**	**+2.1**
	comp=E,5.2nm,0.7s,baz=167,slow=13,SNR=5.8						
MMAI				LR	LR	11 35 28.7	
	comp=E,146nm,18.7s,baz=160,slow=39						
GEYT	**Alibeck**	**25.68**	**15**	P	**P**	**11 25 36.9**	**+2.8**
	comp=E,8.6nm,0.8s,baz=229,slow=11,SNR=10.0						
GYA0B	**ALIBECK ARRAY**	**25.68**	**15**	*e*P	**P**	**11 25 34.6**	**+0.5**
	comp=E,28nm,1.0s						
GNI	**Garni**	**27.24**	**351**	P	**P**	**11 25 54.2**	**+5.9**
	comp=E,24nm,0.9s,baz=152,slow=2.8,SNR=8.5						
GNI	**Garni**	**27.24**	**351**	*e*P	**P**	**11 25 49.3**	**+0.9**
	comp=E,31nm,1.0s						
GNI	**Garni**	**27.24**	**351**	*ce*P	**P**	**11 25 50.4**	**+2.1**
GNI				pmax	pmax		
	comp=Z,49nm,1.5s						
H08N2	**Diego Garcia H**	**28.50**	**132**	T	T	11 55 33.3	
	baz=313,slow=76,SNR=11						
H08N3	**Diego Garcia H**	**28.51**	**132**	T	T	11 55 35.0	
	baz=313,slow=76,SNR=9.9						
H08N1	**Diego Carcia H**	**28.52**	**132**	T	T	11 55 35.0	
	baz=313,slow=76,SNR=9.6						
ISP	**Isparta**	**30.03**	**328**	*ce*P	**P**	**11 26 14.0**	**+0.8**
ISP				pmax	pmax		
	comp=Z,21nm,1.3s						
BR131	**Keskin Array S**	**30.10**	**334**	*e*P	**P**	**11 26 14.6**	**+0.9**
BRTR	**Keskin Array B**	**30.10**	**334**	P	**P**	**11 26 15.0**	**+1.3**
	comp=Z,3.5nm,0.9s,baz=158,slow=11,SNR=13						
BRTR				PcP	**PcP**	**11 29 16.4**	**+1.0**
	comp=Z,2.4nm,1.0s,baz=129,slow=3.5,SNR=4.6						
BRTR				LR	LR	11 40 26.8	
	comp=Z,63nm,18.4s,baz=126,slow=41						
BR231	**Keskin MP Arra**	**30.56**	**333**	*e*P	**P**	**11 26 19.8**	**+1.9**
ANTO	**Ankara**	**30.58**	**333**	⇑*i*P	**P**	**11 26 19.9**	**+2.0**
ANTO	**Ankara**	**30.58**	**333**	*e*P	**P**	**11 26 19.8**	**+1.9**
	comp=Z,33nm,0.9s						
ANTO	**Ankara**	**30.58**	**333**	*e*P	**P**	**11 26 19.8**	**+1.9**
ANTO				pmax	pmax		
	comp=Z,33nm,0.9s						
NCK	**Nalchik**	**30.69**	**351**	*i* P	**P**	**11 26 21.3**	**+2.5**
NCK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
NCK	**Nalchik**	**30.69**	**351**	*i* P	**P**	**11 26 21.3**	**+2.5**
	comp=Z,4.0nm,0.6s						
PALK	**Pallekele**	**30.78**	**98**	LR	LR	11 35 56.6	
	comp=Z,142nm,19.2s,baz=300,slow=31						
KBZ	**Khabaz**	**31.03**	**350**	P	**P**	**11 26 24.0**	**+2.3**
	comp=Z,6.6nm,0.9s,baz=189,slow=4.1,SNR=5.4						
ILGA	**Ilgaz**	**31.18**	**336**	*e*P	**P**	**11 26 24.0**	**+0.5**
	comp=Z,41nm,1.4s						
KIV	**Kislovodsk**	**31.29**	**350**	*e*P	**P**	**11 26 26.3**	**+2.2**
	comp=Z,14nm,1.1s						
KIV	**Kislovodsk**	**31.29**	**350**	*ce*P	**P**	**11 26 26.8**	**+2.7**
KIV				pmax	pmax		
	comp=Z,16nm,1.3s						
ABPO	**Ambohimpanom**	**32.12**	**185**	*e*P	P	11 26 25.6	-6.2
	comp=Z,12nm,1.4s						
ABPO	**Ambohimpanom**	**32.12**	**185**	*e*P	P	11 26 25.6	-6.2
ABPO				pmax	pmax		
	comp=Z,12nm,1.4s						
APE	**Apeiranthos**	**32.30**	**322**	*i* P	**P**	**11 26 35.2**	**+2.1**
SFK	**Sufi-Kurgan**	**33.79**	**33**	P	**P**	**11 26 48.2**	**+1.9**
SFK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
ALN	**Alexandroupoli**	**34.64**	**327**	*e*P	**P**	**11 26 56.0**	**+2.7**
	comp=Z,14nm,1.2s						
ALN	**Alexandroupoli**	**34.64**	**327**	*e*P	**P**	**11 26 56.1**	**+2.7**
ALN				pmax	pmax		
	comp=Z,14nm,1.2s						
KK31	**Karatay Array**	**34.67**	**27**	*e*P	**P**	**11 26 53.7**	**0.0**
KK31	**Karatay Array**	**34.67**	**27**	*e*P	**P**	**11 26 53.7**	**0.0**
KKAR	**Karatay Array**	**34.67**	**27**	*e*P	**P**	**11 26 53.5**	**-0.1**
KKAR	**Karatay Array**	**34.67**	**27**	*e*P	**P**	**11 26 53.5**	**-0.1**
AGG	**Agios Georgios**	**35.48**	**321**	*e*P	**P**	**11 27 01.3**	**+0.6**
	comp=Z,58nm,1.5s						
AGG	**Agios Georgios**	**35.48**	**321**	*e*P	**P**	**11 27 01.3**	**+0.6**
AGG				pmax	pmax		
	comp=Z,58nm,1.5s						
SRS	**Serrai**	**36.12**	**325**	P	**P**	**11 27 08.4**	**+2.3**
AAK	**Ala-Archa**	**36.20**	**31**	P	**P**	**11 27 08.5**	**+1.5**
	comp=Z,2.0nm,0.5s,baz=219,slow=4.6,SNR=4.7						
AAK	**Ala-Archa**	**36.20**	**31**	*e*P	**P**	**11 27 08.5**	**+1.5**
	comp=Z,9.7nm,1.4s						
TIRR	**Tirgusor**	**36.20**	**334**	⇓*i*P	**P**	**11 27 08.4**	**+1.7**
TIRR	**Tirgusor**	**36.20**	**334**	*e*P	**P**	**11 27 08.2**	**+1.5**
	comp=Z,25nm,1.0s						
TIRR	**Tirgusor**	**36.20**	**334**	*e*P	**P**	**11 27 08.2**	**+1.5**
TIRR				pmax	pmax		
	comp=Z,25nm,1.0s						
FRU	**Bishkek**	**36.40**	**31**	*e*P	**P**	**11 27 13.0**	**+4.4**
TLB	**Topalu**	**36.46**	**333**	⇑*i*P	**P**	**11 27 10.1**	**+1.1**
TLB	**Topalu**	**36.46**	**333**	⇑P	**P**	**11 27 10.1**	**+1.1**
ABKAR	**Akbulak array**	**36.88**	**11**	*e*P	**P**	**11 27 12.6**	**+0.1**
ABKAR	**Akbulak array**	**36.88**	**11**	*e*P	**P**	**11 27 12.6**	**+0.1**
CFR	**Carcaliu**	**36.89**	**334**	⇑*i*P	**P**	**11 27 13.9**	**+1.3**
CFR	**Carcaliu**	**36.89**	**334**	P	**P**	**11 27 16.3**	**+3.7**
CFR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
IGT	**Igoumenitsa**	**37.02**	**321**	P	P	11 27 20.4	+6.6
FNA	**Florina**	**37.16**	**323**	*e*P	**P**	**11 27 16.0**	**+0.9**
	comp=Z,11nm,1.1s						
FNA	**Florina**	**37.16**	**323**	*e*P	**P**	**11 27 16.0**	**+0.9**
FNA				pmax	pmax		
	comp=Z,11nm,1.1s						
VTS	**Vitosha**	**37.34**	**327**	⇑*i*P	**P**	**11 27 17.2**	**+0.5**
VTS	**Vitosha**	**37.34**	**327**	*e*P	**P**	**11 27 17.7**	**+1.1**
	comp=Z,8.9nm,1.1s						
VTS	**Vitosha**	**37.34**	**327**	⇑P	**P**	**11 27 17.2**	**+0.5**
AKTK	**Aktyubinsk**	**37.71**	**8**	P	**P**	**11 27 20.0**	**+0.5**
AKTO	**Aktyubinsk**	**37.71**	**8**	P	**P**	**11 27 20.0**	**+0.5**
	comp=Z,2.0nm,0.6s,baz=205,slow=12,SNR=9.0						
AKTO	**Aktyubinsk**	**37.71**	**8**	P	**P**	**11 27 20.0**	**+0.5**
AKTO	**Aktyubinsk**	**37.71**	**8**	P	**P**	**11 27 20.0**	**+0.5**
VRI	**Vrincioaia**	**38.04**	**333**	⇓*i*P	**P**	**11 27 23.9**	**+1.5**
VRI	**Vrincioaia**	**38.04**	**333**	⇓P	**P**	**11 27 23.9**	**+1.5**
PLOR	**Plostina**	**38.07**	**333**	⇓*i*P	**P**	**11 27 24.6**	**+1.9**
PLOR	**Plostina**	**38.07**	**333**	⇓P	**P**	**11 27 24.6**	**+1.9**
PLOR	**Plostina**	**38.07**	**333**	P	**P**	**11 27 24.6**	**+1.9**
MLR	**Muntele Rosu**	**38.10**	**332**	⇑*i*P	**P**	**11 27 24.7**	**+1.6**
MLR	**Muntele Rosu**	**38.10**	**332**	*e*P	**P**	**11 27 21.9**	**-1.2**
	comp=Z,15nm,1.2s						
MLR	**Muntele Rosu**	**38.10**	**332**	*e*P	**P**	**11 27 21.9**	**-1.2**
MLR				pmax	pmax		
	comp=Z,15nm,1.2s						
VOIR		**38.47**	**332**	⇓*i*P	**P**	**11 27 27.7**	**+1.6**
VOIR		**38.47**	**332**	⇓P	**P**	**11 27 27.7**	**+1.6**
VRH	**Novokhopyorsk**	**38.49**	**352**	*e*P	**P**	**11 27 23.8**	**-2.3**
VRH				pmax	pmax		
	comp=Z,7.0nm,0.3s						
TESR	**Tescani**	**38.58**	**334**	⇓*i*P	**P**	**11 27 27.9**	**+0.9**
DOPR	**Dopca**	**38.72**	**332**	⇓*i*P	**P**	**11 27 29.3**	**+1.2**
VSR	**Storozhevoye**	**38.92**	**349**	*e*P	**P**	**11 27 28.8**	**-0.9**
VSR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
VSR	**Storozhevoye**	**38.92**	**349**	*e*P	**P**	**11 27 28.8**	**-0.9**
	comp=Z,10.0nm,0.7s						
BIZ	**Bicaz**	**39.15**	**334**	⇓*i*P	**P**	**11 27 32.5**	**+0.8**
PDGK	**Podgornoye**	**39.32**	**35**	P	**P**	**11 27 37.6**	**+4.2**
PDGK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MDVR	**Moldovita**	**39.63**	**328**	⇓*i*P	**P**	**11 27 35.4**	**-0.4**
ARCR	**ARCALIA**	**40.03**	**333**	⇑*i*P	**P**	**11 27 40.4**	**+1.4**
BURAR	**Bucovina Array**	**40.06**	**334**	⇑*i*P	**P**	**11 27 40.2**	**+0.8**
BURAR	**Bucovina Array**	**40.06**	**334**	⇑P	**P**	**11 27 40.2**	**+0.8**
BUR04	**Bucovina Ar. S**	**40.06**	**334**	*e*P	**P**	**11 27 40.3**	**+0.9**
BUR08	**Bucovina Ar. S**	**40.09**	**334**	*e*P	**P**	**11 27 40.1**	**+0.6**
BUR08	**Bucovina Ar. S**	**40.09**	**334**	*e*P	**P**	**11 27 40.2**	**+0.6**
BZS	**Buzias**	**40.26**	**329**	⇑*i*P	**P**	**11 27 41.0**	**+0.1**
BZS	**Buzias**	**40.26**	**329**	⇑P	**P**	**11 27 41.1**	**+0.1**
LPSR	**Galich'ya Gora**	**40.29**	**350**	*e*P	**P**	**11 27 39.8**	**-1.3**
LPSR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
LPSR	**Galich'ya Gora**	**40.29**	**350**	*e*P	**P**	**11 27 39.8**	**-1.3**
	comp=Z,6.0nm,0.6s						
BANR	**Banloc**	**40.34**	**328**	⇑*i*P	**P**	**11 27 41.1**	**-0.5**
DRGR		**40.57**	**331**	⇓*i*P	**P**	**11 27 44.1**	**+0.5**
DRGR		**40.57**	**331**	⇓P	**P**	**11 27 44.1**	**+0.5**
DRGR		**40.57**	**331**	P	**P**	**11 27 44.1**	**+0.5**
AK11	**Malin Array Si**	**41.04**	**340**	*e*P	**P**	**11 27 47.3**	**0.0**
AK11	**Malin Array Si**	**41.04**	**340**	*e*P	**P**	**11 27 47.3**	**0.0**
AKASG	**Malin Array Be**	**41.04**	**340**	P	**P**	**11 27 47.5**	**+0.2**
	comp=Z,3.6nm,0.7s,baz=146,slow=7.6,SNR=16						
AKASG				PcP	**PcP**	**11 29 47.4**	**+0.3**
	comp=Z,4.4nm,1.1s,baz=149,slow=2.1,SNR=4.5						
AKBB	**Malin Array Si**	**41.04**	**340**	*e*P	**P**	**11 27 47.3**	**0.0**
	comp=Z,9.3nm,0.9s						
AKBB	**Malin Array Si**	**41.04**	**340**	*e*P	**P**	**11 27 47.3**	**0.0**
AKBB				pmax	pmax		
	comp=Z,9.0nm,0.9s						
AKBB	**Malin Array Si**	**41.04**	**340**	*e*P	**P**	**11 27 47.3**	**0.0**
	comp=Z,9.3nm,0.9s						
KIEV	**Kiev**	**41.04**	**340**	*e*P	**P**	**11 27 47.5**	**+0.2**
	comp=Z,25nm,1.5s						
KIEV	**Kiev**	**41.04**	**340**	*ce*P	**P**	**11 27 45.6**	**-1.7**
KIEV				pmax	pmax		
	comp=Z,16nm,1.3s						
KIEV	**Kiev**	**41.04**	**340**	*e*P	**P**	**11 27 47.5**	**+0.2**
	comp=Z,25nm,1.5s						
SHL	**Shillong**	**41.23**	**66**	*e*P	**P**	**11 27 47.9**	**-1.6**
	comp=Z,19nm,1.3s						
SHL	**Shillong**	**41.23**	**66**	*e*P	**P**	**11 27 47.9**	**-1.6**
SHL				pmax	pmax		
	comp=Z,19nm,1.3s						
TRPA	**Tarpa**	**41.63**	**332**	⇓*i*P	**P**	**11 27 53.5**	**+1.3**
BLY	**Banja Luka**	**42.05**	**325**	⇓*i*P	**P**	**11 27 55.0**	**-0.7**
BLY	**Banja Luka**	**42.05**	**325**	*e*P	**P**	**11 27 57.2**	**+1.5**
	comp=Z,32nm,1.3s						
KWP	**Kalwaria Pacla**	**42.67**	**334**	*e*P	**P**	**11 28 01.7**	**+1.0**
	comp=Z,75nm,0.9s						
KWP	**Kalwaria Pacla**	**42.67**	**334**	*e*P	**P**	**11 28 01.7**	**+1.0**
KWP				pmax	pmax		
	comp=Z,75nm,0.9s						
CRVS	**Cervenica-Dubn**	**42.68**	**332**	*e*P	**P**	**11 28 01.9**	**+1.1**
CRVS				pmax	pmax		
	comp=Z,14nm,1.3s						
CRVS	**Cervenica-Dubn**	**42.68**	**332**	*e*P	**P**	**11 28 01.9**	**+1.1**
CRVS	**Cervenica-Dubn**	**42.68**	**332**	*e*P	**P**	**11 28 01.9**	**+1.1**
	comp=Z,14nm,1.3s						
PSZ	**Piszkesteto**	**42.72**	**330**	*e*P	P	11 28 07.0	+5.8
PSZ	**Piszkesteto**	**42.72**	**330**	*e*P	**P**	**11 28 01.9**	**+0.7**
	comp=Z,19nm,1.4s						
PSZ	**Piszkesteto**	**42.72**	**330**	*e*P	**P**	**11 28 01.9**	**+0.7**
PSZ				pmax	pmax		
	comp=Z,19nm,1.4s						
PSZ	**Piszkesteto**	**42.72**	**330**	*e*P	**P**	**11 28 01.9**	**+0.7**
	comp=Z,19nm,1.4s						
KEST	**Kesra**	**42.84**	**309**	P	**P**	**11 28 04.3**	**+2.0**
	comp=Z,12nm,0.9s,baz=116,slow=4.5,SNR=3.1						
MAKZ	**Makanchi**	**42.93**	**32**	*e*P	**P**	**11 28 02.9**	**0.0**
	comp=Z,11nm,1.3s						
BRVK	**Borovoye**	**42.93**	**18**	*ce*P	**P**	**11 28 03.7**	**+1.0**
BRVK				pmax	pmax		
	comp=Z,31nm,2.5s						
BRVK	**Borovoye**	**42.93**	**18**	*e*P	**P**	**11 28 03.7**	**+1.0**
	comp=Z,31nm,2.5s						
BVAR	**Borovoye Array**	**42.93**	**18**	P	**P**	**11 28 02.5**	**-0.3**
	comp=Z,1.5nm,0.7s,baz=197,slow=9.0,SNR=9.0						
BVAR				PcP	**PcP**	**11 29 53.6**	**+0.3**
	comp=Z,2.2nm,0.8s,baz=194,slow=3.0,SNR=6.0						
MK01	**Makanchi Array**	**43.07**	**33**	*e*P	**P**	**11 28 03.5**	**-0.5**
MK31	**Makanchi Array**	**43.08**	**33**	*e*P	**P**	**11 28 03.6**	**-0.5**
MK31	**Makanchi Array**	**43.08**	**33**	*e*P	**P**	**11 28 03.6**	**-0.5**
MKAR	**Makanchi Array**	**43.08**	**33**	P	**P**	**11 28 03.9**	**-0.2**

	comp=Z,1.5nm,0.5s,baz=225,slow=6.7,SNR=16						
MKAR				LR	LR	11 48 49.0	
	comp=Z,80nm,20.8s,baz=231,slow=40						
MKAR	**Makanchi Array**	**43.08**	**33**	*e*P	**P**	**11 28 03.6**	**-0.5**
	comp=Z,45nm,1.0s						
OBN	**Obninsk**	**43.12**	**349**	*e*P	**P**	**11 28 04.8**	**+0.6**
	comp=Z,21nm,0.4s						
OBN	**Obninsk**	**43.12**	**349**	*ce*P	**P**	**11 28 04.6**	**+0.5**
OBN				pmax	pmax		
	comp=Z,12nm,0.9s						
OBN	**Obninsk**	**43.12**	**349**	*e*P	**P**	**11 28 04.8**	**+0.6**
	comp=Z,21nm,0.4s						
MOS	**Moscow**	**43.52**	**350**	*e*P	**P**	**11 28 08.7**	**+1.3**
MOS				*e*		11 29 50.8	
MOS				pmax	pmax		
	comp=Z,48nm,1.2s						
MOS	**Moscow**	**43.52**	**350**	*e*P	**P**	**11 28 08.7**	**+1.3**
	comp=Z,48nm,1.2s						
VYHS	**Vyhne**	**43.62**	**330**	*e*P	**P**	**11 28 08.6**	**+0.2**
VYHS				pmax	pmax		
	comp=Z,8.0nm,1.6s						
VYHS	**Vyhne**	**43.62**	**330**	*e*P	**P**	**11 28 08.6**	**+0.2**
VYHS	**Vyhne**	**43.62**	**330**	*e*P	**P**	**11 28 08.6**	**+0.2**
	comp=Z,8.0nm,1.6s						
ARU	**Arti**	**43.65**	**7**	*d i*P	**P**	**11 28 07.9**	**-0.5**
ARU						11 29 50.0	
ARU				PPP	PPP	11 30 28.7	
ARU				S	**S**	**11 34 39.5**	**+1.7**
ARU				pmax	pmax		
	comp=Z,6.0nm,1.7s						
ARU	**Arti**	**43.65**	**7**	*i* P	**P**	**11 28 07.9**	**-0.5**
	comp=Z,6.0nm,1.7s						
ARU				S	**S**	**11 34 39.5**	**+1.7**
KURBB	**Kurchatov Arra**	**43.96**	**26**	P	**P**	**11 28 11.1**	**0.0**
	comp=Z,2.3nm,0.9s,baz=227,slow=7.5,SNR=14						
KURBB				PcP	**PcP**	**11 29 56.7**	**-0.1**
	comp=Z,0.8nm,0.8s,baz=234,slow=3.8,SNR=3.8						
KURK	**Kurchatov**	**44.07**	**26**	*e*P	**P**	**11 28 11.3**	**-0.6**
	comp=Z,4.5nm,0.9s						
KURK				PcP	**PcP**	**11 29 56.7**	**-0.5**
KURK	**Kurchatov**	**44.07**	**26**	*ce*P	**P**	**11 28 12.4**	**+0.5**
KURK				pmax	pmax		
	comp=Z,47nm,1.3s						
KURK	**Kurchatov**	**44.07**	**26**	*e*P	**P**	**11 28 11.3**	**-0.6**
	comp=Z,4.5nm,0.9s						
SOP	**Sopron**	**44.23**	**328**	P	**P**	**11 28 16.5**	**+3.2**
SOP				pmax	pmax		
	comp=Z,13nm,1.3s						
OJC	**Ojcow**	**44.38**	**333**	*e*P	**P**	**11 28 14.3**	**-0.2**
	comp=Z,16nm,1.5s						
OJC	**Ojcow**	**44.38**	**333**	*e*P	**P**	**11 28 14.3**	**-0.2**
OJC				pmax	pmax		
	comp=Z,16nm,1.5s						
OJC	**Ojcow**	**44.38**	**333**	*e*P	**P**	**11 28 14.3**	**-0.2**
	comp=Z,16nm,1.5s						
SOKA	**Soboth**	**44.42**	**326**	*e*P	**P**	**11 28 16.0**	**+1.0**
	comp=Z,9.9nm,1.7s						
SOKA	**Soboth**	**44.42**	**326**	P	**P**	**11 28 16.0**	**+1.0**
	comp=Z,9.9nm,1.7s						
WMQ	**Urumqi**	**44.42**	**39**	P	**P**	**11 28 16.3**	**+1.3**
WMQ				pP	sP	11 28 20.8	+0.5
WMQ				pmax	pmax		
	comp=Z,19nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,240nm,4.9s						
WMQ				LR	LR		
	comp=Z,120nm,19.9s						
WMQ				LR	LR		
	comp=Z,290nm,24.5s						
ARSA	**Arzberg**	**44.51**	**327**	*e*P	**P**	**11 28 16.3**	**+0.7**
	comp=Z,11nm,1.6s						
ARSA	**Arzberg**	**44.51**	**327**	P	**P**	**11 28 16.3**	**+0.7**
	comp=Z,11nm,1.6s						
OBKA	**Obir**	**44.59**	**325**	*e*P	**P**	**11 28 17.0**	**+0.7**
	comp=Z,9.6nm,1.0s						
CONA	**Conrad Observa**	**44.75**	**328**	*e*P	**P**	**11 28 18.8**	**+1.2**
	comp=Z,19nm,1.6s						
LBTB	**Lobatse**	**44.81**	**212**	P	**P**	**11 28 19.6**	**+1.3**
	comp=Z,4.2nm,0.8s,baz=25,slow=4.9,SNR=4.1						
MORC	**Moravsky Berou**	**45.12**	**331**	⇑*i*P	**P**	**11 28 20.5**	**+0.1**
MORC	**Moravsky Berou**	**45.12**	**331**	*e*P	**P**	**11 28 20.5**	**+0.1**
	comp=Z,9.8nm,1.4s						
MORC	**Moravsky Berou**	**45.12**	**331**	*e*P	**P**	**11 28 20.5**	**+0.1**
MORC				pmax	pmax		
	comp=Z,10.0nm,1.4s						
MORC	**Moravsky Berou**	**45.12**	**331**	*e*P	**P**	**11 28 20.5**	**+0.1**
	comp=Z,9.8nm,1.4s						
MORC	**Moravsky Berou**	**45.12**	**331**	*e*P	**P**	**11 28 20.7**	**+0.3**
MYKA	**Terra Mystica**	**45.17**	**325**	*e*P	**P**	**11 28 22.0**	**+1.2**
	comp=Z,16nm,1.4s						
KRUC	**Moravsky**	**45.21**	**329**	*e*P	**P**	**11 28 21.2**	**+0.1**
VRAC	**Vranov**	**45.27**	**330**	⇑*i*P	**P**	**11 28 22.3**	**+0.7**
VRAC	**Vranov**	**45.27**	**330**	⇑P	**P**	**11 28 22.3**	**+0.7**
VRAC	**Vranov**	**45.27**	**330**	P	**P**	**11 28 22.3**	**+0.7**
VRAC	**Vranov**	**45.27**	**330**	*e*P	**P**	**11 28 21.8**	**+0.2**
MOA	**Molln**	**45.55**	**327**	*e*P	**P**	**11 28 24.6**	**+0.8**
	comp=Z,14nm,1.4s						
MOA	**Molln**	**45.55**	**327**	P	**P**	**11 28 24.6**	**+0.8**
	comp=Z,14nm,1.4s						
KBA	**Koelnbreinsper**	**45.59**	**325**	*e*P	**P**	**11 28 25.1**	**+0.7**
	comp=Z,7.5nm,0.8s						
KBA	**Koelnbreinsper**	**45.59**	**325**	P	**P**	**11 28 27.8**	**+3.4**
KBA				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KBA	**Koelnbreinsper**	**45.59**	**325**	P	**P**	**11 28 25.1**	**+0.7**
	comp=Z,7.5nm,0.8s						
ABTA	**Abfaltersbach**	**45.87**	**324**	*e*P	**P**	**11 28 24.7**	**-1.7**
	comp=Z,5.4nm,1.0s						
SUW	**Suwalki**	**45.88**	**338**	*e*P	**P**	**11 28 25.9**	**-0.3**
	comp=Z,36nm,1.1s						
SUW	**Suwalki**	**45.88**	**338**	*e*P	**P**	**11 28 25.9**	**-0.3**
SUW				pmax	pmax		
	comp=Z,36nm,1.1s						
SUW	**Suwalki**	**45.88**	**338**	*e*P	**P**	**11 28 25.9**	**-0.3**
	comp=Z,36nm,1.1s						
DPC	**Dobruska-Polom**	**46.09**	**330**	*e*P	**P**	**11 28 29.4**	**+1.3**
DPC	**Dobruska-Polom**	**46.09**	**330**	*e*P	**P**	**11 28 29.4**	**+1.3**
DPC	**Dobruska-Polom**	**46.09**	**330**	*e*P	**P**	**11 28 29.4**	**+1.3**
GEA0	**GERESS Array S**	**46.45**	**327**	*e*P	**P**	**11 28 30.2**	**-0.8**
GEA0	**GERESS Array S**	**46.45**	**327**	*e*P	**P**	**11 28 30.2**	**-0.8**
GEC2	**GERESS Array S**	**46.45**	**327**	*e*P	**P**	**11 28 30.7**	**-0.3**
	comp=Z,13nm,1.4s						
GEC2	**GERESS Array S**	**46.45**	**327**	*e*P	**P**	**11 28 30.7**	**-0.3**
GEC2				pmax	pmax		
	comp=Z,13nm,1.4s						
GERES	**GERESS Array B**	**46.45**	**327**	P	**P**	**11 28 31.0**	**0.0**
	comp=Z,1.2nm,0.8s,baz=126,slow=6.8,SNR=13						
GOPC	**GO Pecny, Ondr**	**46.56**	**329**	*e*P	**P**	**11 28 32.9**	**+1.1**
GOPC	**GO Pecny, Ondr**	**46.56**	**329**	*e*P	**P**	**11 28 32.9**	**+1.1**
GOPC	**GO Pecny, Ondr**	**46.56**	**329**	*e*P	**P**	**11 28 32.9**	**+1.1**
WTTA	**Wattenberg**	**46.66**	**324**	*e*P	**P**	**11 28 33.7**	**+0.9**
	comp=Z,5.8nm,0.7s						
KHC	**Kasperske Hory**	**46.69**	**328**	*e*P	**P**	**11 28 32.6**	**-0.2**
KHC	**Kasperske Hory**	**46.69**	**328**	*e*P	**P**	**11 28 32.6**	**-0.2**
KHC	**Kasperske Hory**	**46.69**	**328**	*e*P	**P**	**11 28 32.6**	**-0.2**
WATA	**Walderalm**	**46.73**	**325**	*e*P	**P**	**11 28 33.8**	**+0.5**
	comp=Z,12nm,1.2s						
TOA0	**Torodi Ar. Sit**	**46.95**	**276**	*e*P	**P**	**11 28 36.2**	**+0.8**
	comp=Z,6.5nm,0.9s						
TORD	**Torodi Ar. Bea**	**46.95**	**276**	P	**P**	**11 28 35.4**	**+0.1**
	comp=Z,2.3nm,0.9s,baz=90,slow=7.2						
FETA	**Feichten**	**47.04**	**324**	*e*P	**P**	**11 28 35.9**	**+0.2**
	comp=Z,9.6nm,1.3s						
RETA	**Reutte**	**47.28**	**324**	*e*P	**P**	**11 28 36.7**	**-0.8**
	comp=Z,17nm,1.6s						
RETA	**Reutte**	**47.28**	**324**	P	**P**	**11 28 36.7**	**-0.8**
	comp=Z,17nm,1.6s						
CM31	**Chiang Mai Arr**	**47.29**	**77**	*e*P	**P**	**11 28 37.2**	**-0.7**
CMAR	**Chiang Mai Arr**	**47.29**	**77**	P	**P**	**11 28 37.7**	**-0.2**
	comp=Z,3.0nm,0.7s,baz=273,slow=8.5,SNR=16						
CM01	**Chiang Mai Arr**	**47.30**	**77**	*e*P	**P**	**11 28 37.1**	**-0.9**
DAVOX	**Davos/Dischmat**	**47.41**	**323**	P	**P**	**11 28 39.3**	**+0.6**
	comp=Z,6.0nm,1.1s,baz=110,slow=2.6,SNR=5.0						
DGZ	**Jazzator, Alta**	**47.58**	**32**	*i* P	**P**	**11 28 38.9**	**-1.0**
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.1s						
BRG	**Berggiesshubel**	**47.59**	**330**	*e*P	**P**	**11 28 39.5**	**-0.2**
	comp=Z,16nm,1.5s						
BRG	**Berggiesshubel**	**47.59**	**330**	*e*P	**P**	**11 28 39.5**	**-0.2**
BRG				pmax	pmax		
	comp=Z,16nm,1.5s						
BRG	**Berggiesshubel**	**47.59**	**330**	*e*P	**P**	**11 28 39.5**	**-0.2**
	comp=Z,16nm,1.5s						
DAVA	**Damuels**	**47.67**	**324**	*e*P	**P**	**11 28 40.0**	**-0.7**
	comp=Z,13nm,1.2s						
DAVA	**Damuels**	**47.67**	**324**	P	**P**	**11 28 40.0**	**-0.7**
	comp=Z,13nm,1.2s						
BOSA	**Boshof**	**47.95**	**210**	P	**P**	**11 28 43.8**	**+0.9**
	comp=Z,5.0nm,0.9s,baz=49,slow=11,SNR=4.9						
KLMR	**Klimovskoe**	**48.19**	**353**	*e*P	**P**	**11 28 43.0**	**-1.2**
KLMR				pmax	pmax		
	comp=Z,29nm,1.1s						
KLMR	**Klimovskoe**	**48.19**	**353**	*e*P	**P**	**11 28 43.0**	**-1.2**
	comp=Z,29nm,1.1s						
KLMR	**Klimovskoe**	**48.19**	**353**	*e*P	**P**	**11 28 43.0**	**-1.2**
KLMR				AMP		11 28 48.3	
	comp=Z,29nm,1.1s						
CLL	**Collm**	**48.32**	**330**	⇑*i*P	**P**	**11 28 45.3**	**-0.1**
	comp=Z,15nm,1.5s						
CLL				*i* pP	**pP**	**11 28 49.4**	**+0.2**
CLL	**Collm**	**48.32**	**330**	*e*P	**P**	**11 28 45.7**	**+0.3**
	comp=Z,9.9nm,1.3s						
CLL	**Collm**	**48.32**	**330**	⇑*i*P	**P**	**11 28 45.3**	**-0.1**
CLL				*i*		11 28 49.4	
CLL				pmax	pmax		
	comp=Z,15nm,1.5s						
CLL	**Collm**	**48.32**	**330**	*e*P	**P**	**11 28 45.7**	**+0.3**
	comp=Z,9.9nm,1.3s						
PRGR	**Permogore**	**48.47**	**357**	*e*P	**P**	**11 28 45.3**	**-1.0**
PRGR				pmax	pmax		
	comp=Z,11nm,0.7s						
PRGR	**Permogore**	**48.47**	**357**	*e*P	**P**	**11 28 45.3**	**-1.0**
	comp=Z,11nm,0.7s						
MOX	**Moxa**	**48.61**	**328**	P	**P**	**11 28 49.4**	**+1.7**
MOX				pmax	pmax		
	comp=Z,6.0nm,1.4s						
MOX	**Moxa**	**48.61**	**328**	P	**P**	**11 28 49.4**	**+1.7**
	comp=Z,6.0nm,1.4s						
SENIN	**Lac Senin/Sane**	**48.74**	**321**	*e*P	**P**	**11 28 49.5**	**+0.5**
	comp=Z,13nm,1.0s						
STU	**Stuttgart**	**48.85**	**325**	*e*P	**P**	**11 28 49.8**	**+0.2**
	comp=Z,12nm,1.2s						
STU	**Stuttgart**	**48.85**	**325**	*e*P	**P**	**11 28 49.8**	**+0.2**
STU				pmax	pmax		
	comp=Z,12nm,1.2s						
NVS	**Novosibirsk**	**48.99**	**25**	*e*P	**P**	**11 28 49.5**	**-1.0**
ZAA0	**Zalesovo Array**	**49.05**	**27**	*e*P	**P**	**11 28 50.4**	**-0.5**
	comp=Z,3.8nm,0.8s						
ZALV	**Zalesovo Beam**	**49.05**	**27**	P	**P**	**11 28 50.6**	**-0.3**
	comp=Z,3.1nm,0.3s,baz=240,slow=8.0,SNR=2.1						
BFO	**Black Forest**	**49.11**	**324**	*e*P	**P**	**11 28 51.8**	**+0.2**
	comp=Z,19nm,1.3s						
BFO	**Black Forest**	**49.11**	**324**	*ce*P	**P**	**11 28 52.3**	**+0.7**
BFO				pmax	pmax		
	comp=Z,3.0nm,1.3s						
PBKT	**Sadao Pong**	**49.29**	**79**	P	P	11 28 58.6	+5.2
CABF	**La Chapelle**	**49.59**	**321**	*e*P	**P**	**11 29 00.0**	**+4.6**
CABF				pmax	pmax		
	comp=Z,38nm,1.4s						
ECH	**Echery**	**49.73**	**323**	*e*P	**P**	**11 28 56.6**	**+0.3**
	comp=Z,6.9nm,1.0s						
ECH	**Echery**	**49.73**	**323**	*e*P	**P**	**11 28 56.6**	**+0.3**
ECH				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CDF	**Champ du Feu**	**49.76**	**324**	*e*P	**P**	**11 28 57.1**	**+0.5**
CDF				pmax	pmax		
	comp=Z,14nm,1.3s						
HAU	**Haudompre**	**50.10**	**323**	*e*P	**P**	**11 28 58.6**	**-0.5**
HAU				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KMI	**Kunming**	**50.95**	**68**	P	**P**	**11 29 05.8**	**-0.4**
KMI				pmax	pmax		
	comp=Z,11nm,0.7s						
KMI				pmax	pmax		
	comp=Z,130nm,4.1s						
WLF	**Walferdange**	**51.02**	**325**	⇑P	**P**	**11 29 06.1**	**+0.1**
	comp=Z,12nm,1.2s						
WLF				⇑XP	**sP**	**11 29 10.9**	**-0.5**
WLF	**Walferdange**	**51.02**	**325**	*e*P	**P**	**11 29 06.6**	**+0.5**
	comp=Z,26nm,1.2s						
WLF	**Walferdange**	**51.02**	**325**	P	**P**	**11 29 06.1**	**+0.1**
	comp=Z,12nm,1.2s						
FINES	**FINESS Array B**	**51.19**	**346**	P	**P**	**11 29 06.1**	**-0.9**
	comp=Z,7.6nm,0.8s,baz=148,slow=11,SNR=11						
FINES	**FINESS Array B**	**51.19**	**346**	*ce*P	**P**	**11 29 08.5**	**+1.5**
AVF	**Avril sur Loir**	**51.36**	**320**	*e*P	**P**	**11 29 12.5**	**+3.9**
AVF				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MEM	**Membach**	**51.58**	**326**	⇑P	**P**	**11 29 10.6**	**+0.3**
MEM	**Membach**	**51.58**	**326**	P	**P**	**11 29 10.5**	**+0.3**
BGF	**Bois d’Agland**	**51.58**	**320**	*e*P	**P**	**11 29 10.9**	**+0.6**
BGF				pmax	pmax		
	comp=Z,24nm,1.3s						
BCLA	**Clavier**	**51.87**	**325**	⇑P	**P**	**11 29 13.2**	**+0.8**
	comp=Z,12nm,1.5s						
BCLA	**Clavier**	**51.87**	**325**	P	**P**	**11 29 13.2**	**+0.8**
	comp=Z,12nm,1.5s						
TCF	**Toulx Ste Croi**	**51.87**	**319**	*e*P	**P**	**11 29 12.9**	**+0.4**
TCF				pmax	pmax		
	comp=Z,11nm,1.6s						
GIVF	**Givet**	**51.99**	**325**	*e*P	**P**	**11 29 14.1**	**+0.8**
GIVF				pmax	pmax		
	comp=Z,19nm,1.1s						
DOU	**Dourbes**	**52.11**	**324**	⇑P	**P**	**11 29 14.5**	**+0.3**
	comp=Z,8.6nm,1.2s						
DOU				⇓XP	**sP**	**11 29 19.3**	**-0.2**
DOU	**Dourbes**	**52.11**	**324**	P	**P**	**11 29 14.5**	**+0.3**
	comp=Z,8.6nm,1.2s						
BAIF	**Baives**	**52.32**	**324**	*e*P	**P**	**11 29 16.7**	**+1.0**
BAIF				pmax	pmax		
	comp=Z,14nm,1.2s						
KOWA	**Kowa**	**52.34**	**278**	P	**P**	**11 29 16.8**	**+0.4**
	comp=Z,4.5nm,0.9s,baz=84,slow=8.6,SNR=6.5						
CD2	**Chengdu**	**52.37**	**61**	*e*P	**P**	**11 29 14.8**	**-1.7**
LZH	**Lanzhou**	**53.26**	**55**	*e*P	**P**	**11 29 25.8**	**+2.7**
LZH				pP	sP	11 29 30.5	+2.1
LZH				sP	pP	11 29 34.5	+7.5
LZH				pmax	pmax		
	comp=Z,21nm,1.2s						
MDT	**Midelt**	**53.31**	**301**	P	**P**	**11 29 24.0**	**+0.5**
	comp=Z,3.0nm,1.1s,baz=91,slow=12,SNR=3.4						
HFS	**Hagfors**	**53.89**	**338**	P	**P**	**11 29 26.6**	**-0.5**
	comp=Z,3.5nm,0.7s,baz=149,slow=17,SNR=3.8						
ES19	**SONSECA Array**	**54.04**	**310**	*e*P	**P**	**11 29 29.4**	**+0.7**
ESDC	**Sonseca Array**	**54.08**	**310**	P	**P**	**11 29 29.9**	**+1.0**
	comp=Z,6.1nm,0.9s,baz=91,slow=7.0,SNR=19						
ESDC				PcP	**PcP**	**11 30 34.5**	**+0.6**
	comp=Z,1.0nm,0.7s,baz=98,slow=5.4,SNR=2.2						
ESLA	**Sonseca Array**	**54.08**	**310**	*e*P	**P**	**11 29 29.2**	**+0.2**
	comp=Z,11nm,1.1s						
PAB	**San Pablo**	**54.34**	**309**	*e*P	**P**	**11 29 31.5**	**+0.6**
	comp=Z,21nm,1.4s						
PAB	**San Pablo**	**54.34**	**309**	*e*P	**P**	**11 29 31.5**	**+0.6**
PAB				pmax	pmax		
	comp=Z,21nm,1.4s						
OUL	**Oulu**	**54.40**	**348**	*e*P	**P**	**11 29 35.4**	**+4.7**
OUL				pmax	pmax		
	comp=Z,20nm,1.2s						
FLN	**La Foliniere**	**54.52**	**321**	*e*P	**P**	**11 29 35.8**	**+3.8**
FLN				pmax	pmax		
	comp=Z,11nm,1.0s						
MSF	**Maaselka**	**54.53**	**350**	*e*P	**P**	**11 29 34.2**	**+2.5**
GYA	**Guiyang**	**54.55**	**67**	*e*P	**P**	**11 29 32.3**	**-0.4**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GRR	**Gorron**	**54.61**	**321**	*e*P	**P**	**11 29 35.8**	**+3.2**
GRR				pmax	pmax		
	comp=Z,9.0nm,1.2s						
GRR	**Gorron**	**54.61**	**321**	*e*P	**P**	**11 29 35.8**	**+3.2**
	comp=Z,9.0nm,1.2s						
NB2	**NORSAR Subarra**	**55.41**	**338**	P	**P**	**11 29 37.3**	**-0.9**
	comp=Z,14nm,1.7s,baz=128,slow=7.4						
NOA	**NORSAR Array B**	**55.41**	**338**	P	**P**	**11 29 38.2**	**+0.1**
	comp=Z,3.8nm,1.1s,baz=133,slow=7.1,SNR=4.2						
SGMF	**Saint Gilles**	**55.62**	**320**	*e*P	**P**	**11 29 39.5**	**-0.4**
SGMF				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ROSF	**Rostrenen**	**56.10**	**320**	*e*P	**P**	**11 29 46.5**	**+3.2**
ROSF				pmax	pmax		
	comp=Z,15nm,1.2s						
ROSF	**Rostrenen**	**56.10**	**320**	*e*P	**P**	**11 29 46.5**	**+3.2**
	comp=Z,15nm,1.2s						
XAN	**Xi’an**	**57.07**	**58**	P	**P**	**11 29 49.8**	**-0.8**
XAN				pmax	pmax		
	comp=Z,8.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,100nm,3.7s						
SONM	**Songino Array**	**57.95**	**41**	P	**P**	**11 29 56.2**	**-0.4**
	comp=Z,1.5nm,0.6s,baz=238,slow=7.2,SNR=13						
SONA1	**Songino Array**	**57.96**	**41**	*e*P	**P**	**11 29 56.7**	**0.0**
SONA1	**Songino Array**	**57.96**	**41**	*e*P	**P**	**11 29 56.7**	**0.0**
EKA	**Eskdalemuir Ar**	**58.67**	**328**	P	**P**	**11 30 03.2**	**+1.9**
	comp=Z,2.5nm,0.8s,baz=116,slow=9.6,SNR=4.3						
HHC	**Hu-ho-hao-te**	**60.04**	**50**	*e*P	**P**	**11 30 11.1**	**-0.2**
HHC				sP	sP	11 30 18.3	+1.7
HHC				PP	**PP**	**11 32 20.9**	**-2.8**
HHC				S	**S**	**11 38 24.9**	**+0.8**
HHC				sS	sS	11 38 32.8	+2.3
HHC				pmax	pmax		
	comp=Z,24nm,1.0s						
HHC				pmax	pmax		
	comp=Z,180nm,5.0s						
HHC				LR	LR		
	comp=Z,120nm,13.3s						
HHC				LR	LR		
	comp=Z,160nm,13.7s						
HHC				LR	LR		
	comp=Z,130nm,14.5s						
BJI	**Beijing**	**63.44**	**52**	⇑*e*P	**P**	**11 30 32.8**	**-1.2**
BJI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
NJ2	**Nanjing**	**65.30**	**61**	*e*P	**P**	**11 30 44.1**	**-2.2**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
CN2	**Changchun**	**70.53**	**48**	*e*P	P	11 31 13.9	-5.1
KSAR	**Wonju Array Be**	**72.56**	**55**	P	**P**	**11 31 30.4**	**-1.0**
KSAR	**Wonju Array Be**	**72.56**	**55**	P	**P**	**11 31 30.4**	**-1.0**
KSRS	**Korea Array**	**72.59**	**55**	P	**P**	**11 31 30.4**	**-1.2**
	comp=Z,1.3nm,0.9s,baz=274,slow=7.6,SNR=3.0						
YAK	**Yakutsk**	**73.61**	**29**	*e*P	**P**	**11 31 36.7**	**-0.5**
	comp=Z,32nm,1.2s						
YAK	**Yakutsk**	**73.61**	**29**	*i* P	**P**	**11 31 35.5**	**-1.7**
YAK				pmax	pmax		
	comp=Z,14nm,1.0s						
JOW	**Kunigami**	**73.84**	**66**	LR	LR	12 03 29.0	
	comp=Z,50nm,21.7s,baz=171,slow=35						
TIXI	**Tiksi**	**74.06**	**19**	P	**P**	**11 31 38.4**	**-1.3**
	comp=Z,3.1nm,0.8s,baz=212,slow=0.5,SNR=4.4						
TIXI	**Tiksi**	**74.06**	**19**	*e*P	**P**	**11 31 38.6**	**-1.0**
	comp=Z,7.2nm,1.1s						
TIXI	**Tiksi**	**74.06**	**19**	*ce*P	**P**	**11 31 38.7**	**-0.9**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KLR	**Kul’dur**	**74.77**	**42**	P	**P**	**11 31 42.6**	**-1.6**
	comp=Z,0.2nm,1.0s,baz=314,slow=8.8,SNR=4.9						
KLR	**Kul’dur**	**74.77**	**42**	*ce*P	**P**	**11 31 41.4**	**-2.8**
MAW	**Mawson**	**81.12**	**175**	P	**P**	**11 32 18.8**	**-0.1**
	comp=Z,2.0nm,0.8s,baz=334,slow=7.0,SNR=6.0						
SFJD	**Kangerlussuaq**	**82.06**	**337**	LR	LR	12 10 12.6	
	comp=Z,31nm,21.6s,baz=42,slow=37						
WRA	**Warramunga Arr**	**89.25**	**111**	P	**P**	**11 33 00.6**	**-0.1**
	comp=Z,4.4nm,1.0s,baz=297,slow=3.1,SNR=16						
WRAB	**Tennant Creek**	**89.26**	**111**	*ce*P	**P**	**11 32 57.9**	**-2.9**
WRAB				pmax	pmax		
	comp=Z,15nm,1.3s						
WB2	**Warramunga Arr**	**89.26**	**111**	*e*P	**P**	**11 32 57.6**	**-3.2**
ASAR	**Alice Springs**	**89.77**	**114**	P	**P**	**11 33 03.0**	**-0.2**
	comp=Z,3.9nm,1.1s,baz=288,slow=4.8,SNR=16						
AS01	**Alice Springs**	**89.82**	**114**	*e*P	**P**	**11 33 02.9**	**-0.5**
PDAR	**Pinedale Array**	**121.23**	**342**	PKP	**PKPdf**	**11 38 57.7**	**-0.1**
	comp=Z,0.7nm,0.9s,baz=39,slow=5.8,SNR=3.2						
BUOR	**Burton Butte**	**124.34**	**353**	*e*PKPpre	PKPpre	11 38 54.3	
NVAR	**Mina Array Bea**	**127.49**	**348**	PKP	**PKPdf**	**11 39 10.8**	**+0.9**
	comp=Z,0.7nm,0.8s,baz=161,slow=0.5,SNR=6.5						
MNTX	**Cornudas Mount**	**129.49**	**333**	*e*PKPdf	**PKPdf**	**11 39 12.0**	**-1.6**
TX31	**Lajitas Ar. Si**	**130.65**	**329**	*e*PKPdf	**PKPdf**	**11 39 15.3**	**-0.7**
TXAR	**Lajitas Array**	**130.65**	**329**	PKP	**PKPdf**	**11 39 16.7**	**+0.7**
	comp=Z,1.0nm,1.1s,baz=174,slow=2.5,SNR=6.8						

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*ISCJB **22** 11:21:11.6±0.8, 13.°2N±0.°1×50.°03E±0.°10, h10^{km}, mb3.9/12, Error ellipse: s-maj=19.4km s-min=13.3km az=168.8*

*IDC **22** 11:21:12.0±1.0, 13.°24N×50.°07E, h0^{km}, mb3.9/12, mb1 4.1/13, mb1mx3.8/67, mbtmp3.9/13, ML4.2/1, Error ellipse: s-maj=25.3km s-min=19.0km az=11.0*

ISC 22 11:21:13.5±0.9**, 13.°2N**±0.°2×**50.°1E**±0.°1**, h10^{km}, n15,** σ**0.^{s}62**/15**, mb3.9**/12**, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATD	**Arta Tunnel**	**7.26**	**257**	Pn	**Pn**	**11 22 59.8**	**+0.1**
	3.7nm,0.3s,baz=68,slow=19,SNR=3.5						
GEYT	**Alibeck**	**25.61**	**15**	P	**P**	**11 26 43.3**	**+0.2**
	2.0nm,0.2s,baz=224,slow=8.1,SNR=3.0						
BRTR	**Keskin Array B**	**30.09**	**334**	P	**P**	**11 27 24.4**	**+1.1**
	0.9nm,0.8s,baz=134,slow=12,SNR=2.5						
AKASG	**Malin Array Be**	**41.03**	**340**	P	**P**	**11 28 56.2**	**-0.6**
	1.4nm,0.7s,baz=148,slow=7.1,SNR=2.4						
MKAR	**Makanchi Array**	**43.00**	**32**	P	**P**	**11 29 12.7**	**-0.4**
	0.4nm,0.5s,baz=220,slow=8.7,SNR=3.3						
KURBB	**Kurchatov Arra**	**43.88**	**26**	P	**P**	**11 29 20.6**	**+0.5**
	0.9nm,0.8s,baz=226,slow=8.1,SNR=4.3						
GERES	**GERESS Array B**	**46.46**	**327**	P	**P**	**11 29 40.4**	**-0.4**
	0.4nm,0.5s,baz=126,slow=6.9,SNR=2.4						
TORD	**Torodi Ar. Bea**	**47.03**	**276**	P	**P**	**11 29 45.6**	**-0.1**
	1.1nm,1.0s,baz=72,slow=4.7						
CMAR	**Chiang Mai Arr**	**47.19**	**77**	P	**P**	**11 29 46.8**	**-0.1**
	0.7nm,0.3s,baz=270,slow=8.1,SNR=2.4						
FINES	**FINESS Array B**	**51.16**	**345**	P	**P**	**11 30 16.2**	**-0.4**
	3.8nm,0.8s,baz=152,slow=13,SNR=2.6						
ESDC	**Sonseca Array**	**54.11**	**310**	P	**P**	**11 30 38.3**	**-0.6**
	0.9nm,0.7s,baz=102,slow=5.0,SNR=3.2						
WRA	**Warramunga Arr**	**89.18**	**111**	P	**P**	**11 34 10.1**	**0.0**
	3.2nm,0.8s,baz=297,slow=3.5,SNR=6.9						
ASAR	**Alice Springs**	**89.72**	**114**	P	**P**	**11 34 12.1**	**-0.5**
	0.8nm,0.7s,baz=49,slow=10,SNR=5.4						
NVAR	**Mina Array Bea**	**127.46**	**348**	PKP	**PKPdf**	**11 40 20.6**	**+1.1**
	0.5nm,0.7s,baz=118,slow=0.5,SNR=3.6						
TXAR	**Lajitas Array**	**130.66**	**329**	PKP	**PKPdf**	**11 40 26.4**	**+0.7**
	0.3nm,0.7s,baz=66,slow=1.1,SNR=2.4						

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*ISCJB **22** 11:28:29.7±0.9, 39.°87N±0.°04×142.°3E±0.°1, h54^{km}±7^{km}, mb3.5/5, Error ellipse: s-maj=15.4km s-min=6.5km az=9.0*

*JMA **22** 11:28:31.3±0.1, 39.°84N×142.°26E, h43^{km}±1^{km}, M3.3*

*IDC **22** 11:28:34.1±1.8, 40.°05N×142.°28E, h90^{km}±19^{km}, mb3.2/5, mb1 3.5/7, mb1mx3.2/67, mbtmp3.7/7, MS2.5/1, Ms1 2.5/1, ms1mx1.9/24, Error ellipse: s-maj=33.7km s-min=13.5km az=93.0*

ISC 22 11:28:30.6±1.3**, 39.°87N**±0.°04×**142.°3E**±0.°1**, h47^{km}**±9^{km}**, n23,** σ**1.^{s}36**/23**, mb3.5**/5**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	**Tanohata**	**0.32**	**283**	P	**Pn**	**11 28 40.2**	**+0.5**
JTH				S	**Sn**	**11 28 46.3**	**+0.1**
MIYJ	**Miyakonagasawa**	**0.45**	**231**	P	**Pn**	**11 28 41.2**	**+0.1**
MIYJ				S	**Sn**	**11 28 48.1**	**-0.5**
JKZ	**Kuzumaki**	**0.73**	**280**	P	**Pn**	**11 28 45.5**	**+0.8**
JKZ				S	**Sn**	**11 28 55.5**	**+0.5**
JANG	**Nango**	**0.77**	**312**	P	**Pn**	**11 28 45.5**	**+0.3**
JANG				S	**Sn**	**11 28 55.9**	**+0.1**
JOM	**Ohasama**	**0.85**	**243**	P	**Pn**	**11 28 46.7**	**+0.4**
JOM				S	**Sn**	**11 28 57.9**	**+0.2**
OFUJ	**Ofunato**	**0.91**	**211**	P	**Pn**	**11 28 47.3**	**+0.2**
OFUJ				S	**Sn**	**11 28 58.6**	**-0.5**
JMK	**Ichinoseki**	**1.22**	**222**	P	**Pn**	**11 28 51.9**	**+0.6**
JMK				S	**Sn**	**11 29 07.0**	**+0.4**
JAH	**Hinai**	**1.30**	**285**	P	**Pn**	**11 28 53.4**	**+1.1**
ASAJ	**Asahikawa**	**4.26**	**3**	P	**Pn**	**11 29 35.0**	**+2.2**
	0.4nm,0.3s,baz=196,slow=9.3,SNR=6.3						
ASAJ				S	**Sn**	**11 30 21.1**	**-0.1**
	0.4nm,0.3s,baz=315,slow=20,SNR=2.6						
MJAR	**Matsushiro Arr**	**4.61**	**225**	P	**Pn**	**11 29 41.5**	**+3.7**
	0.4nm,0.3s,baz=29,slow=12,SNR=11						
JHJ	**Hachijo jima 2**	**7.02**	**197**	P	Pn	11 30 17.8	+6.9
	27nm,0.3s,baz=81,slow=23,SNR=5.6						
KSRS	**Korea Array**	**11.47**	**262**	LR	LR	11 35 38.7	
	comp=Z,22nm,19.8s,baz=198,slow=37						
H11N2	**WAKE ISLAND Hy**	**29.15**	**126**	T	T	12 05 03.2	
	baz=318,slow=76,SNR=58						
H11N1	**WAKE ISLAND Hy**	**29.16**	**126**	T	T	12 05 03.5	
	baz=318,slow=76,SNR=59						
H11N3	**WAKE ISLAND Hy**	**29.17**	**126**	T	T	12 05 08.7	
	baz=318,slow=76,SNR=61						
H11S1	**WAKE ISLAND Hy**	**29.96**	**128**	T	T	12 06 13.3	
	baz=320,slow=76,SNR=7.4						
H11S3	**WAKE ISLAND Hy**	**29.96**	**128**	T	T	12 06 16.2	
	baz=320,slow=76,SNR=6.1						
H11S2	**WAKE ISLAND Hy**	**29.97**	**128**	T	T	12 06 08.7	
	baz=320,slow=76,SNR=5.6						
CMAR	**Chiang Mai Arr**	**42.91**	**253**	P	**P**	**11 36 25.3**	**+0.5**
	0.8nm,0.2s,baz=56,slow=7.6,SNR=5.0						
MKAR	**Makanchi Array**	**43.24**	**300**	P	**P**	**11 36 26.7**	**-0.5**

	0.2nm,0.5s,baz=80,slow=7.2,SNR=3.1						
KURBB	Kurchatov Arra	44.84	306	P	P	11 36 36.4	-3.5
	0.3nm,0.4s,baz=78,slow=8.9,SNR=3.5						
WRA	Warramunga Arr	59.95	189	P	P	11 38 31.7	-0.4
	0.4nm,0.6s,baz=6.1,slow=6.8,SNR=5.6						
ASAR	Alice Springs	63.68	189	P	P	11 38 57.0	0.0
	0.3nm,0.7s,baz=353,slow=4.7,SNR=3.3						

ISCJB ***22*** *11:35:00.3±0.5, 13°.33N±0°.07×49°.96E±0°.05, h10^{km}, mb4.0/19, Error ellipse: s-maj=9.9km s-min=6.2km az=15.3*
IDC ***22*** *11:35:00.2±0.9, 13°.22N×50°.13E, h0^{km}, mb3.9/16, mb1 4.0/16, mb1mx3.8/60, mbtmp3.9/16, Error ellipse: s-maj=24.3km s-min=18.4km az=29.0*
CSEM ***22*** *11:35:00.7±0.2, 13°.28N×49°.97E, h2^{km}, mb4.6/4, Error ellipse: s-maj=11.3km s-min=7.1km az=12.0*
NEIC ***22*** *11:35:01.9±0.5, 13°.25N×50°.14E, h10^{km}, mb4.6/4, Error ellipse: s-maj=12.2km s-min=8.6km az=193.0*
DHMR ***22*** *11:35:03.9±6.7, 13°.36N×49°.64E, h2^{km}±82^{km}, ML3.5*
ISC 22 11:35:02.5±0.7**, 13°.39N**±0°.09×**49°.94E**±0°.07**, h10^{km}, n48, σ1^{s}.44**/48**, mb4.0**/19**, 1C-3D, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MUKL	Al Mukalla	1.39	321	*i* P	Pn	11 35 25.5	-2.4
MUKL				*e*		11 35 25.7	
	baz=100,slow=5.6						
MUKL				*i* S	Sb	11 35 43.5	-2.8
MUKL				AML	AML	11 35 43.9	
	comp=N,412nm,0.5s						
BDHA	Al Bayda’	4.29	278	⇓*i*P	Pn	11 36 07.4	-0.6
BDHA				AML	AML	11 36 08.6	
	comp=E,351nm,0.3s						
BDHA				*i* S	Sn	11 36 58.4	+0.1
BDHA	Al Bayda’	4.29	278	⇓*i*P	Pn	11 36 07.4	-0.6
	comp=E,175nm,0.3s						
BDHA				*i* S	Sn	11 36 58.4	+0.1
LBOS		4.58	277	⇑*i*P	Pn	11 36 11.2	-0.9
LBOS				*i* S	Sn	11 37 01.8	-3.8
DAMY	Dhamar	5.51	283	*e*Pn	Pn	11 36 29.5	+4.6
GEYT	Alibeck	25.50	15	P	P	11 40 31.3	+0.2
	comp=E,0.7nm,0.5s,baz=191,slow=12,SNR=2.5						
H08N2	Diego Garcia H	28.66	132	T	T	12 10 32.4	
	baz=313,slow=76,SNR=5.5						
H08N3	Diego Garcia H	28.67	132	T	T	12 10 33.0	
	baz=313,slow=76,SNR=5.9						
H08N1	Diego Carcia H	28.68	132	T	T	12 10 33.4	
	baz=313,slow=76,SNR=4.9						
BRTR	Keskin Array B	29.90	334	P	P	11 41 12.5	+1.9
	comp=E,0.8nm,0.7s,baz=146,slow=10,SNR=2.6						
BR101	Keskin Array S	29.90	334	*e*P	P	11 41 12.5	+1.8
ABKAR	Akbulak array	36.70	11	*e*P	P	11 42 10.5	+0.9
ABKAR	Akbulak array	36.70	11	*e*P	P	11 42 10.5	+0.9
TTG	Podgorica	39.26	323	*e*P	P	11 42 33.0	+1.7
	comp=E,15nm,1.2s						
TTG	Podgorica	39.26	323	*e*P	P	11 42 33.0	+1.7
	comp=E,15nm,1.2s						
AKASG	Malin Array Be	40.85	340	P	P	11 42 45.2	+0.8
	comp=E,0.3nm,0.4s,baz=154,slow=7.7,SNR=3.7						
AKBB	Malin Array Si	40.85	340	*e*P	P	11 42 44.2	-0.1
	comp=E,2.5nm,0.6s						
AKBB	Malin Array Si	40.85	340	*e*P	P	11 42 44.2	-0.1
	comp=E,2.5nm,0.6s						
BVAR	Borovoye Array	42.76	18	P	P	11 42 59.6	-0.4
	comp=E,0.3nm,0.6s,baz=196,slow=11,SNR=2.3						
MK01	Makanchi Array	42.93	33	*e*P	P	11 43 01.1	-0.4
MK31	Makanchi Array	42.94	33	*e*P	P	11 43 01.5	-0.1
MK32	Makanchi Array	42.94	33	*e*P	P	11 43 00.8	-0.9
MKAR	Makanchi Array	42.94	33	P	P	11 43 00.8	-0.9
	comp=E,0.7nm,0.5s,baz=218,slow=5.7,SNR=5.0						
MKAR	Makanchi Array	42.94	33	*e*P	P	11 43 01.6	0.0
	comp=E,7.7nm,0.6s						
KURBB	Kurchatov Arra	43.81	26	P	P	11 43 08.4	-0.1
	comp=E,0.5nm,0.5s,baz=223,slow=8.0,SNR=3.9						
KURK	Kurchatov	43.91	26	*e*P	P	11 43 08.4	-0.9
GERES	GERESS Array B	46.27	327	P	P	11 43 28.9	+0.6
	comp=E,0.4nm,0.6s,baz=155,slow=16,SNR=3.1						
TORD	Torodi Ar. Bea	46.89	276	P	P	11 43 33.9	+0.4
	comp=E,1.0nm,1.0s,baz=66,slow=9.3						
TOA1	Torodi Ar. Sit	46.90	276	*e*P	P	11 43 33.9	+0.3
CMAR	Chiang Mai Arr	47.28	77	P	P	11 43 32.9	-3.7
	comp=E,0.7nm,0.3s,baz=263,slow=9.9,SNR=4.7						
FIA0	FINESS Array S	50.99	346	*e*P	P	11 44 03.6	-0.6
FIA0	FINESS Array S	50.99	346	*e*P	P	11 44 03.6	-0.6
FINES	FINESS Array B	50.99	346	P	P	11 44 03.6	-0.6
	comp=E,1.3nm,0.7s,baz=151,slow=11,SNR=3.2						
ES19	SONSECA Array	53.88	310	*e*P	P	11 44 26.4	+0.3
ESDC	Sonseca Array	53.92	310	P	P	11 44 26.8	+0.4
	comp=E,0.7nm,0.7s,baz=96,slow=6.8,SNR=6.4						
SONA0	Songino Array	57.84	42	*e*P	P	11 44 55.0	+0.6
SONM	Songino Array	57.84	42	P	P	11 44 55.0	+0.6
	comp=E,0.9nm,1.0s,baz=265,slow=7.2,SNR=1.6						
SPITS	Spitsbergen Ar	66.90	353	P	P	11 45 56.7	+2.2
	comp=E,6.6nm,0.9s,baz=119,slow=24,SNR=4.5						
SYO	Syowa Base	82.52	184	⇓*e*P	P	11 47 23.4	-1.5
WRA	Warramunga Arr	89.35	111	P	P	11 47 58.1	-1.8
	comp=E,2.2nm,0.8s,baz=299,slow=3.7,SNR=9.5						
WR1	Warramunga Arr	89.36	111	*e*P	P	11 47 58.1	-1.8
	comp=E,16nm,1.3s						
ASAR	Alice Springs	89.89	114	P	P	11 47 60.0	-2.4
	comp=E,1.2nm,1.0s,baz=285,slow=4.4,SNR=6.1						
AS01	Alice Springs	89.93	114	*e*P	P	11 48 01.4	-1.2
STKA	Stephens Creek	98.33	121	P	P	11 48 40.2	-0.7
	comp=E,0.6nm,0.5s,baz=112,slow=18,SNR=2.7						
PD31	Pinedale Array	121.03	342	*e*PKPdf	PKPdf	11 53 55.8	-0.3
PDAR	Pinedale Array	121.03	342	PKP	PKPdf	11 53 56.4	+0.3
	comp=E,0.3nm,0.8s,baz=98,slow=2.7,SNR=2.8						
NV01	Mina Array Sit	127.29	348	*e*PKPdf	PKPdf	11 54 08.0	-0.2
NVAR	Mina Array Bea	127.29	348	PKP	PKPdf	11 54 08.5	+0.3
	comp=E,0.3nm,0.6s,baz=9.5,slow=2.7,SNR=2.2						

ISCJB ***22*** *11:39:37.5±0.4, 13°.32N±0°.06×49°.94E±0°.04, h10^{km}, mb4.1/22, Error ellipse: s-maj=9.4km s-min=5.2km az=5.4*
IDC ***22*** *11:39:37.1±0.9, 13°.16N×50°.01E, h0^{km}, mb3.9/16, mb1 4.0/17, mb1mx3.8/63, mbtmp3.9/17, ML4.3/1, MS3.5/2, Ms1 3.5/2, ms1mx2.7/54, Error ellipse: s-maj=22.5km s-min=17.5km az=9.0*
NEIC ***22*** *11:39:38.9±0.4, 13°.19N×50°.08E, h10^{km}, mb4.4/6, Error ellipse: s-maj=10.2km s-min=7.1km az=184.0*
CSEM ***22*** *11:39:39.3±0.2, 13°.28N×50°.01E, h10^{km}, mb4.4/6*
DHMR ***22*** *11:39:40.8±1.9, 13°.39N×49°.53E, h2^{km}±251^{km}, ML3.6*
ISC 22 11:39:39.4±0.7**, 13°.3N**±0°.1×**49°.94E**±0°.07**, h10^{km}, n55, σ1^{s}.46**/54**, mb4.0**/22**, 1C, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MUKL	Al Mukalla	1.45	323	*i* P	Pn	11 40 01.7	-4.1
MUKL				*i* S	Sn	11 40 20.6	-4.2
MUKL				AML	AML	11 40 34.6	
	comp=N,419nm,0.7s						
BDHA	Al Bayda’	4.30	279	*i* P	Pn	11 40 45.2	0.0
BDHA				AML	AML	11 40 50.2	
	comp=E,710nm,0.4s						
BDHA				*i* S	Sn	11 41 33.8	-1.8
BDHA	Al Bayda’	4.30	279	*i* P	Pn	11 40 45.2	0.0
	comp=E,355nm,0.4s						
LBOS		4.60	277	⇑*i*P	Pn	11 40 48.9	-0.4
LBOS				*i* S	Sn	11 41 41.6	-1.3
DAMY	Dhamar	5.53	284	*e*Pn	Pn	11 41 04.2	+2.0
DAMY	Dhamar	5.53	284	*e*Pn	Pn	11 41 04.2	+2.0
UDYN	Al ‘Udayn	5.85	277	*i* S	Sn	11 42 09.4	-4.1
ATD	Arta Tunnel	7.16	256	Pn	Pn	11 41 25.7	+1.4
	comp=E,5.1nm,0.3s,baz=75,slow=24,SNR=11						
ATD				LR	LR	11 43 35.2	
	comp=E,316nm,18.1s,baz=14,slow=33						
ATD	Arta Tunnel	7.16	256	*e*Pn	Pn	11 41 26.5	+2.3
WSAR	Wadi Sarin	12.86	39	LR	LR	11 47 28.0	
	comp=E,191nm,20.9s,baz=216,slow=36						
ASF	Jabal al Asfar	22.25	330	P	P	11 44 40.9	+4.2
	comp=E,1.2nm,0.3s,baz=195,slow=2.5,SNR=3.5						
GEYT	Alibeck	25.57	15	P	P	11 45 09.4	+0.7
	comp=E,1.2nm,0.6s,baz=232,slow=3.5,SNR=3.5						
H08N2	Diego Garcia H	28.60	132	T	T	12 15 03.2	
	baz=313,slow=76,SNR=10						
H08N3	Diego Garcia H	28.61	132	T	T	12 15 04.0	
	baz=313,slow=76,SNR=7.0						
H08N1	Diego Carcia H	28.62	132	T	T	12 15 04.8	
	baz=313,slow=76,SNR=9.7						
BR101	Keskin Array S	29.98	334	*e*P	P	11 45 50.5	+2.2
BRTR	Keskin Array B	29.98	334	P	P	11 45 50.5	+2.2
	comp=E,0.7nm,0.8s,baz=138,slow=8.7,SNR=3.6						
ABKAR	Akbulak array	36.77	11	*e*P	P	11 46 47.3	+0.2
AKTO	Aktyubinsk	37.60	8	P	P	11 46 55.9	+1.8
	comp=E,1.1nm,0.5s,baz=190,slow=14,SNR=3.0						
AKASG	Malin Array Be	40.92	340	P	P	11 47 23.1	+1.2
	comp=E,0.6nm,0.6s,baz=144,slow=7.8,SNR=4.1						
AKBB	Malin Array Si	40.92	340	*e*P	P	11 47 22.4	+0.5
	comp=E,1.1nm,0.6s						
BVAR	Borovoye Array	42.83	18	P	P	11 47 37.7	+0.2
	comp=E,1.2nm,0.9s,baz=223,slow=40,SNR=3.3						
BVAR				PcP	PcP	11 49 28.2	-0.3
	comp=E,0.7nm,0.6s,baz=172,slow=2.9,SNR=5.3						
MK01	Makanchi Array	42.99	33	*e*P	P	11 47 38.6	-0.3
MK31	Makanchi Array	43.00	33	*e*P	P	11 47 39.8	+0.7
MK32	Makanchi Array	43.00	33	*e*P	P	11 47 39.0	0.0
MKAR	Makanchi Array	43.00	33	P	P	11 47 39.0	0.0
	comp=E,0.9nm,0.5s,baz=226,slow=8.2,SNR=11						
MKAR	Makanchi Array	43.00	33	*e*P	P	11 47 38.2	-0.8
	comp=E,13nm,0.8s						
KURBB	Kurchatov Arra	43.87	26	P	P	11 47 45.7	-0.2
	comp=E,0.5nm,0.6s,baz=226,slow=7.8,SNR=4.5						
KURK	Kurchatov	43.98	26	*e*P	P	11 47 45.7	-1.1
KURK	Kurchatov	43.98	26	*e*P	P	11 47 45.7	-1.1
GEC2	GERESS Array S	46.33	327	*e*P	P	11 48 05.8	+0.1
	comp=E,1.2nm,0.9s						
GEC2	GERESS Array S	46.33	327	*e*P	P	11 48 05.8	+0.1
	comp=E,1.2nm,0.9s						
GERES	GERESS Array B	46.33	327	P	P	11 48 05.8	+0.1
	comp=E,0.3nm,0.5s,baz=156,slow=7.3,SNR=3.2						
TOA0	Torodi Ar. Sit	46.91	276	*e*P	P	11 48 10.7	+0.2
TORD	Torodi Ar. Bea	46.91	276	P	P	11 48 10.6	0.0
	comp=E,1.2nm,0.9s,baz=88,slow=7.7						
TOA1	Torodi Ar. Sit	46.91	276	*e*P	P	11 48 10.6	0.0
CM31	Chiang Mai Arr	47.30	77	*e*P	P	11 48 11.9	-1.6
CMAR	Chiang Mai Arr	47.30	77	P	P	11 48 11.9	-1.6
	comp=E,0.9nm,0.4s,baz=272,slow=8.8,SNR=10						
FIA0	FINESS Array S	51.06	346	*e*P	P	11 48 41.6	-0.1
FIA0	FINESS Array S	51.06	346	*e*P	P	11 48 41.6	-0.1
FINES	FINESS Array B	51.06	346	P	P	11 48 41.6	-0.1
	comp=E,2.3nm,0.8s,baz=147,slow=13,SNR=4.2						
HFS	Hagfors	53.77	338	P	P	11 49 01.3	-0.5
	comp=E,1.4nm,0.7s,baz=145,slow=9.6,SNR=3.7						
ES19	SONSECA Array	53.94	310	*e*P	P	11 49 05.2	+1.8
ESDC	Sonseca Array	53.98	310	P	P	11 49 02.7	-1.1
	comp=E,0.8nm,0.6s,baz=91,slow=5.2,SNR=7.7						
SONA0	Songino Array	57.89	42	*e*P	P	11 49 31.8	0.0
SONA0	Songino Array	57.89	42	*e*P	P	11 49 31.8	0.0
SONM	Songino Array	57.89	42	P	P	11 49 31.8	0.0
	comp=E,1.6nm,0.9s,baz=226,slow=7.7,SNR=3.8						
SCO	Scoresbysund	71.51	340	*e*P	P	11 50 59.3	-0.8
	comp=E,79nm,0.8s						
WR1	Warramunga Arr	89.32	111	*e*P	P	11 52 35.8	-0.9
	comp=E,10nm,1.1s						
WRA	Warramunga Arr	89.32	111	P	P	11 52 35.8	-0.9
	comp=E,3.1nm,1.0s,baz=298,slow=3.7,SNR=12						
WB2	Warramunga Arr	89.33	111	*e*P	P	11 52 35.8	-0.9
	comp=E,10nm,1.3s						
ASAR	Alice Springs	89.85	114	P	P	11 52 38.0	-1.1
	comp=E,0.7nm,0.5s,baz=289,slow=4.6,SNR=14						
AS31	Alice Springs	89.85	114	*e*P	P	11 52 38.0	-1.1
	comp=E,1.2nm,1.3s						
AS01	Alice Springs	89.89	114	*e*P	P	11 52 38.3	-1.0
NVAR	Mina Array Bea	127.36	348	PKP	PKPdf	11 58 44.6	-0.6
	comp=E,0.4nm,0.8s,baz=30,slow=2.9,SNR=2.9						

NIED ***22*** *11:49:00, 36°.60N×141°.20E, h8^{km}, Mw3.5 Best double couple: M$_0$2.07000×10^{14} NP1:φ$_s$16.00000°, δ44.00000°, λ-76.00000°. NP2:φ$_s$177.00000°, δ48.00000°, λ-103.00000°.*
IDC ***22*** *11:49:14.3±1.7, 36°.67N×141°.52E, h0^{km}, mb3.5/3, mb1 3.6/6, mb1mx3.3/65, mbtmp3.5/6, ML3.2/3, Error ellipse: s-maj=42.4km s-min=23.7km az=80.0*
ISCJB ***22*** *11:49:17.4±1.1, 36°.57N±0°.04×141°.25E±0°.07, h23^{km}±7^{km}, mb3.6/3, Error ellipse: s-maj=10.1km s-min=5.8km az=12.6*
JMA ***22*** *11:49:18.6, 36°.58N×141°.16E, h30^{km}±1^{km}, M3.9*
JMA Felt II J1.
ISC 22 11:49:16.6±1.6**, 36°.60N**±0°.04×**141°.29E**±0°.06**, h13^{km}**±10^{km}**, n20, σ1^{s}.04**/24**, mb3.7**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	Hitachi	0.58	272	P	Pg	11 49 28.3	+0.3
JHO				S	Sg	11 49 35.2	-0.5
JHYU	Hitachinakayam	0.62	246	P	Pg	11 49 29.2	+0.5
JHYU				S	Sg	11 49 36.7	-0.2
ONAJ	Iwakimizuishiy	0.64	322	P	Pb	11 49 30.3	+0.5
ONAJ				S	Sb	11 49 38.9	+0.2
JFFD	Fukushimafurud	0.77	310	P	Pb	11 49 31.9	0.0
JFFD				S	Sg	11 49 41.4	-0.2
JFK	Kawauchi	0.84	337	P	Pb	11 49 33.4	+0.3
JFK				S	Sb	11 49 44.5	+0.1
JYT	Yasato	0.96	248	P	Pb	11 49 34.2	-0.9
JYT				S	Sb	11 49 45.9	-1.8
JFT	Otama	1.20	321	P	Pb	11 49 39.4	+0.2
JFT				S	Sb	11 49 54.2	-0.4
MJAR	Matsushiro Arr	2.48	270	Pn	Pn	11 49 57.5	+0.7
	3.9nm,0.3s,baz=82,slow=9.4,SNR=51						
MJAR				Sn	Sn	11 50 25.0	-2.0
	6.4nm,0.3s,baz=85,slow=15,SNR=7.2						
MAT	Matsushiro	2.48	270	P	Pn	11 49 57.4	+0.6
MAT				S	Sn	11 50 28.1	+1.1
JHJ	Hachijo jima 2	3.68	200	Pn	Pn	11 50 15.2	+1.9
	8.1nm,0.3s,baz=241,slow=19,SNR=3.5						
JHJ				Sn	Sn	11 50 57.0	+0.4
	12nm,0.3s,baz=250,slow=18,SNR=2.6						
ASAJ	Asahikawa	7.58	7	Pn	Pn	11 51 04.4	-2.4
	0.3nm,0.3s,baz=322,slow=28,SNR=5.9						
H11N2	WAKE ISLAND Hy	28.01	120	T	T	12 24 32.2	
	baz=313,slow=75,SNR=98						
H11N1	WAKE ISLAND Hy	28.02	120	T	T	12 24 32.8	
	baz=313,slow=75,SNR=90						
H11N3	WAKE ISLAND Hy	28.03	120	T	T	12 24 34.4	
	baz=313,slow=75,SNR=85						
H11S1	WAKE ISLAND Hy	28.71	122	T	T	12 25 34.8	
	baz=314,slow=76,SNR=111						
H11S3	WAKE ISLAND Hy	28.71	122	T	T	12 25 34.9	
	baz=314,slow=76,SNR=86						
H11S2	WAKE ISLAND Hy	28.72	122	T	T	12 25 27.2	
	baz=314,slow=76,SNR=72						
KURBB	Kurchatov Arra	46.19	308	P	P	11 57 41.9	+0.8
	0.5nm,0.6s,baz=81,slow=8.3,SNR=4.4						
WRA	Warramunga Arr	56.61	188	P	P	11 58 59.9	+0.5
	0.7nm,0.8s,baz=5.8,slow=7.3,SNR=7.7						
ASAR	Alice Springs	60.34	188	P	P	11 59 25.2	-0.2
	0.3nm,0.8s,baz=1.0,slow=4.6,SNR=4.1						

IDC ***22*** *11:49:31.3±1.0, 45°.52N×151°.98E, h0^{km}, mb3.6/8, mb1 3.8/8, mb1mx3.5/64, mbtmp3.6/8, Error ellipse: s-maj=28.6km s-min=25.9km az=167.0*
JMA ***22*** *11:49:32.9±0.4, 45°.43N×151°.79E, h30^{km}, M3.9*
ISCJB ***22*** *11:49:33.4±1.2, 44°.9N±0°.2×151°.8E±0°.2, h41^{km}, mb3.6/8, Error ellipse: s-maj=37.4km s-min=7.1km az=155.7*
ISC 22 11:49:34.1±1.4**, 44°.8N**±0°.3×**151°.9E**±0°.1**, h41^{km}, n14, σ1^{s}.55**/16**, mb3.5**/8**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NEM2	Nemuro 2	4.69	254	P	Pn	11 50 42.3	0.0
NEM2				*e*S	Sn	11 51 33.5	-1.8
JRA	Rausu	4.96	262	P	Pn	11 50 47.8	+1.8
JNK	Nakash	5.33	259	P	Pn	11 50 52.2	+1.1
JNK				*e*S	Sn	11 51 50.9	-0.3
JAK	Akkeshi	5.53	253	P	Pn	11 50 54.0	+0.1
JAK				*e*S	Sn	11 51 54.8	-1.4
JTKR	Abashiri--Toko	5.81	264	P	Pn	11 50 59.4	+1.7
JMP	Maruseppu	6.19	266	P	Pn	11 51 04.8	+1.8
ILAR	Eielson Array	38.59	37	P	P	11 56 50.2	-2.5
	0.3nm,0.6s,baz=262,slow=8.2,SNR=5.4						
MKAR	Makanchi Array	47.12	298	P	P	11 58 03.5	+1.5
	0.4nm,0.8s,baz=60,slow=8.5,SNR=3.0						
NVAR	Mina Array Bea	64.08	61	P	P	12 00 05.4	+1.3
	0.4nm,0.7s,baz=300,slow=7.3,SNR=4.0						
FINES	FINESS Array B	65.44	335	P	P	12 00 11.9	-0.3
	0.9nm,0.8s,baz=67,slow=4.7,SNR=2.5						
HFS	Hagfors	69.98	339	P	P	12 00 40.5	-0.4
	2.7nm,1.0s,baz=79,slow=7.6,SNR=3.6						
ASAR	Alice Springs	70.11	198	P	P	12 00 49.4	+7.3
	0.4nm,0.9s,baz=12,slow=6.1,SNR=3.3						
AKASG	Malin Array Be	72.69	326	P	P	12 00 55.6	-1.7
	0.8nm,0.6s,baz=37,slow=6.3,SNR=2.8						
TXAR	Lajitas Array	79.18	59	P	P	12 01 36.3	+1.4
	0.2nm,0.7s,baz=310,slow=3.4,SNR=3.0						

SOME ***22*** *11:52:22.8, 44°.28N×81°.73E, h15^{km}*
NNC ***22*** *11:52:23.6±13.0, 44°.34N×81°.63E, h0^{km}±83^{km}, mb2.7, mpv2.3, Error ellipse: s-maj=132.9km s-min=38.1km az=126.0*
ISC 22 11:52:18.2±2.2**, 44°.24N**±0°.07×**81°.92E**±0°.09**, h13^{km}**±14^{km}**, n7, σ1^{s}.44**/12**, 3C-3D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DJR	Jarkent	1.53	274	*e*P	Pg	11 52 48.3	+0.8
	2.5nm,0.4s						
DJR				*e*S	Sg	11 53 06.0	-1.4
	1.9nm,0.4s						
PDGK	Podgornoye	1.98	243	⇑Pn	Pg	11 52 56.5	+0.4
	1.5nm,0.4s						
PDGK				⇑Sn	Sg	11 53 22.0	+0.2
	9.8nm,0.5s						
SHLS	Shalkode	2.08	239	*e*P	Pn	11 52 54.6	+1.7
	7.3nm,0.2s						
SHLS				*e*S	Sn	11 53 17.4	-1.4
	21nm,0.3s						
KAPS	Kapalarasan	2.10	301	*e*P	Pg	11 52 59.6	+1.2
	6.4nm,0.3s						
KAPS				*e*S	Sg	11 53 25.1	-0.5
	11nm,0.3s						
UZB	Uzynbulak	2.37	243	*e*P	Pg	11 53 02.8	-0.8
	3.8nm,0.5s						
UZB				*e*S	Sb	11 53 31.3	+1.3
	5.8nm,0.4s						
MK31	Makanchi Array	2.56	6	⇓Pn	Pg	11 53 08.3	+1.0
	0.4nm,0.3s,baz=199,slow=13,SNR=11						
MK31				⇓Lg	Lg	11 53 43.6	
	1.4nm,0.4s,baz=189,slow=28,SNR=7.8						
MAKZ	Makanchi	2.57	1	⇓Pn	Pb	11 53 02.1	-2.0
	1.4nm,0.6s						
MAKZ				⇑Lg	Lg	11 53 43.0	
	2.4nm,0.4s						

IDC ***22*** *11:54:49.6±1.4, 5°.12N×92°.65E, h0^{km}, mb3.4/5, mb1 3.7/7, mb1mx3.4/70, mbtmp3.5/7, ML3.8/2, MS3.2/1, Ms1 3.2/1, ms1mx2.5/39, Error ellipse: s-maj=48.7km s-min=20.9km az=52.0*
ISCJB ***22*** *11:54:51.0±0.9, 5°.0N±0°.1×92°.42E±0°.09, h27^{km}, mb3.4/5, MS3.2/1, Error ellipse: s-maj=18.9km s-min=12.0km az=13.4*
ISC 22 11:54:53.3±1.2**, 5°.1N**±0°.2×**92°.49E**±0°.10**, h27^{km}, n14, σ1^{s}.57**/8**, mb3.5**/5**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PALK	Pallekele	11.92	281	Pn	Pn	11 57 43.7	+2.1
	0.3nm,0.3s,baz=116,slow=17,SNR=2.2						
PALK				Sn	Sn	11 59 51.4	-2.5
	2.2nm,0.3s,baz=294,slow=7.5,SNR=5.8						
CMAR	Chiang Mai Arr	14.72	25	Pn	Pn	11 58 19.6	-0.2
	0.2nm,0.3s,baz=214,slow=13,SNR=3.0						
H08S3	Diego Garcia H	23.61	238	T	T	12 25 06.8	
	baz=59,slow=75,SNR=73						
H08S2	Diego Garcia H	23.61	238	T	T	12 25 09.0	
	baz=59,slow=75,SNR=16						
H08S1	Diego Carcia H	23.63	238	T	T	12 25 10.8	
	baz=59,slow=75,SNR=39						
MKAR	Makanchi Array	42.49	350	P	P	12 02 47.1	+0.9
	0.2nm,0.5s,baz=161,slow=7.0,SNR=3.2						
H01W3	Cape Leeuwin H	44.67	154	T	T	12 49 47.6	
	baz=330,slow=76,SNR=6.1						
H01W2	Cape Leeuwin H	44.68	154	T	T	12 49 52.2	
	baz=330,slow=76,SNR=6.5						
H01W1	Cape Leeuwin H	44.69	154	T	T	12 49 59.0	
	baz=330,slow=76,SNR=6.6						
KURBB	Kurchatov Arra	46.88	348	P	P	12 03 21.4	+0.2
	0.4nm,0.5s,baz=164,slow=7.3,SNR=5.7						
WRA	Warramunga Arr	48.07	122	P	P	12 03 30.4	-0.5
	0.5nm,0.9s,baz=305,slow=9.6,SNR=4.5						
ASAR	Alice Springs	49.47	127	P	P	12 03 41.3	-0.3
	0.2nm,0.6s,baz=300,slow=7.1,SNR=4.7						
BVAR	Borovoye Array	51.13	343	P	P	12 03 52.9	-0.8
	0.4nm,0.6s,baz=146,slow=7.3,SNR=2.9						
ASAJ	Asahikawa	58.59	40	LR	LR	12 31 01.3	
	comp=Z,16nm,18.1s,baz=202,slow=37						

IDC ***22*** *12:04:06.0±2.2, 24°.14S×179°.96E, h500^{km}±22^{km}, mb3.1/10, mb1 3.3/11, mb1mx3.1/42, mbtmp4.0/11, Error ellipse: s-maj=19.3km s-min=17.3km az=37.0*
ISCJB ***22*** *12:04:07.7±0.8, 24°.2S±0°.1×179°.8E±0°.1, h526^{km}, mb3.5/9, Error ellipse: s-maj=17.8km s-min=13.4km az=4.7*
ISC 22 12:04:08.5±0.7**, 24°.3S**±0°.1×**179°.9E**±0°.1**, h526^{km}, n19, σ1^{s}.34**/21**, mb3.4**/9**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
URZ	Urewera	14.16	189	P	P	12 07 08.1	-1.3
	2.4nm,0.3s,baz=354,slow=1.6,SNR=14						
URZ				S	S	12 09 38.6	+0.1
	0.6nm,0.3s,baz=100,slow=21,SNR=6.6						
RPZ	Rata Peaks	20.73	198	P	P	12 08 12.6	+0.4
	5.3nm,0.6s,baz=252,slow=3.2,SNR=4.8						
CTA	Charters Tower	31.40	271	P	P	12 09 46.8	+0.3
	3.3nm,0.7s,baz=89,slow=9.2,SNR=8.2						
STKA	Stephens Creek	34.52	249	P	P	12 10 12.2	-0.6
	0.5nm,0.5s,baz=90,slow=7.1,SNR=2.4						
ASAR	Alice Springs	41.90	261	P	P	12 11 12.9	-0.1
	0.5nm,0.5s,baz=98,slow=6.9,SNR=8.6						
ASAR				ScP	ScP	12 15 59.8	+3.1
	1.1nm,1.0s,baz=110,slow=4.0,SNR=5.6						
WRA	Warramunga Arr	42.31	267	P	P	12 11 15.8	-0.4
	0.8nm,0.7s,baz=96,slow=8.5,SNR=25						
WRA				ScP	ScP	12 16 02.0	+3.6
	0.3nm,0.8s,baz=96,slow=3.7,SNR=4.5						
QSPA	South Pole Qui	65.83	180	P	P	12 14 02.5	+1.0
	2.2nm,0.6s,baz=290,slow=1.6,SNR=10						
MAW	Mawson	77.39	200	P	P	12 15 09.4	+0.7
	0.7nm,0.4s,baz=179,slow=1.5,SNR=9.5						
SNAA	Sanae	84.31	179	P	P	12 15 44.0	-0.5
	0.7nm,0.6s,baz=218,slow=12,SNR=5.5						
NVAR	Mina Array Bea	85.06	44	P	P	12 15 49.0	+0.1
	0.3nm,0.6s,baz=223,slow=6.1,SNR=3.8						
TXAR	Lajitas Array	90.68	58	P	P	12 16 15.8	+0.5
	0.8nm,0.7s,baz=214,slow=6.5,SNR=14						
MKAR	Makanchi Array	112.34	313	PKiKP	PKiKP	12 21 43.0	-1.4
	0.2nm,0.4s,baz=330,slow=0.5,SNR=4.7						
KURBB	Kurchatov Arra	115.45	316	PKP	PKPdf	12 21 48.8	-1.3
	0.4nm,0.6s,baz=105,slow=2.3,SNR=4.1						
BVAR	Borovoye Array	120.65	319	PKP	PKPdf	12 21 59.1	-1.1
	0.9nm,0.8s,baz=223,slow=32,SNR=4.2						
ARCES	ARCESS Array B	132.22	348	PKP	PKPdf	12 22 21.6	-0.2
	2.8nm,0.8s,baz=53,slow=1.8,SNR=8.2						
FINES	FINESS Array B	138.76	341	PKP	PKPdf	12 22 34.0	-0.1
	0.4nm,0.3s,baz=104,slow=4.4,SNR=3.0						
HFS	Hagfors	142.88	349	PKhKP	PKPpre	12 22 37.8	
	3.4nm,0.4s,baz=83,slow=4.5,SNR=34						
AKASG	Malin Array Be	145.23	327	PKPbc	PKPdf	12 22 45.8	-0.1
	0.7nm,0.3s,baz=44,slow=3.9,SNR=5.2						
BRTR	Keskin Array B	147.73	307	PKPbc	PKPbc	12 22 53.5	-0.8
	0.7nm,0.6s,baz=121,slow=4.8,SNR=3.5						

IDC 22 12:21:56.7±6.7**, 19°.76N**×**144°.01E, h0^{km}, mb3.4**/6**, mb1 3.5**/6**, mb1mx3.4**/53**, mbtmp3.4**/6**, Error ellipse: s-maj=273.7km s-min=21.5km az=78.0, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	40.58	194	P	P	12 29 36.2	-2.0
	0.6nm,1.0s,baz=14,slow=8.4,SNR=5.2						
SONM	Songino Array	41.32	321	P	P	12 29 45.3	+1.0
	0.3nm,0.4s,baz=146,slow=8.5,SNR=2.4						
ASAR	Alice Springs	44.27	193	P	P	12 30 09.8	+1.6
	0.2nm,0.7s,baz=21,slow=13,SNR=3.2						
MKAR	Makanchi Array	56.58	314	P	P	12 31 41.4	+0.1
	0.1nm,0.5s,baz=93,slow=8.7,SNR=2.9						
KURBB	Kurchatov Arra	59.47	318	P	P	12 32 01.2	-0.2
	0.8nm,0.5s,baz=92,slow=7.8,SNR=8.0						
BVAR	Borovoye Array	64.64	320	P	P	12 32 35.2	-1.0
	0.5nm,0.4s,baz=91,slow=7.6,SNR=5.8						

SOME ***22*** *12:37:15.1, 40°.18N×71°.85E, h0^{km}*
KRNET ***22*** *12:37:15.5±0.1, 40°.19N×71°.89E, h19^{km}, mb3.3*

*NNC **22** 12:37:16.6±2.2, 40°.16N×71°.92E, h8^{km}±17^{km}, mb3.7, mpv3.3, Error ellipse: s-maj=18.6km s-min=6.2km az=34.0*

ISC 22 12:37:14.6±1.3, **40°.18N**±0°.04×**71°.88E**±0°.03, **h13**^{km}±12^{km}, **n21**, σ**1^{s}31**/39, **18C-10D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BTK	**Batken**	**0.82**	**262**	⇑*i*P	**Pn**	**12 37 31.4**	**-0.5**
	baz=61						
BTK				⇑*i*S	**Sn**	**12 37 43.2**	**-0.8**
	baz=61						
SFK	**Sufi-Kurgan**	**1.25**	**97**	⇑P	**Pg**	**12 37 39.2**	**+0.4**
	45nm,0.3s						
SFK				⇓S	**Sg**	**12 37 56.6**	**+1.5**
	102nm,0.4s						
SFK	**Sufi-Kurgan**	**1.25**	**97**	⇑*i*P	**Pg**	**12 37 38.9**	**+0.2**
	baz=97						
SFK				⇑*i*S	**Sg**	**12 37 55.5**	**+0.4**
	baz=97						
ARSB	**Arslanbob**	**1.42**	**36**	⇓*i*P	**Pb**	**12 37 41.2**	**+0.3**
	baz=36						
ARSB				⇓*i*S	**Sg**	**12 38 00.5**	**+0.2**
	baz=36						
ARK	**Arkit**	**1.62**	**2**	⇓*i*P	**Pb**	**12 37 44.8**	**+0.4**
	baz=2.0						
ARK				⇓*i*S	**Sg**	**12 38 06.4**	**-0.3**
	baz=2.0						
TAS	**Tashkent**	**2.28**	**301**	⇑*i*P	**Pb**	**12 37 55.3**	**-0.3**
	baz=1.0						
TAS				⇑*i*S	**Sb**	**12 38 24.3**	**+0.6**
	baz=1.0						
MNAS	**Manas**	**2.35**	**11**	⇓Pg	**Pg**	**12 38 01.3**	**+1.6**
	11nm,0.4s						
MNAS				⇑Lg	Lg	12 38 33.2	
	31nm,0.4s						
MNAS	**Manas**	**2.35**	**11**	⇑*i*P	**Pb**	**12 37 56.1**	**-0.8**
	baz=11						
MNAS				⇑*i*S	**Sb**	**12 38 26.2**	**+0.3**
	baz=11						
AML	**Almayashu**	**2.38**	**34**	⇑*i*P	**Pb**	**12 37 56.9**	**-0.6**
	baz=34						
AML				⇑*i*S	**Sb**	**12 38 27.2**	**+0.2**
	baz=34						
IUG	**Iuzhnay**	**2.41**	**325**	*e*P	**Pg**	**12 37 60.0**	**-0.9**
	164nm,0.3s						
IUG				*e*S	**Sg**	**12 38 31.8**	**-0.3**
	333nm,0.4s						
CHM	**Chimkent**	**2.74**	**322**	*e*P	**Pg**	**12 38 06.9**	**-0.2**
	175nm,0.3s						
CHM				*e*S	**Sg**	**12 38 43.7**	**+1.0**
	448nm,0.3s						
DZA	**Taraz**	**2.74**	**352**	*e*P	**Pg**	**12 38 06.0**	**-1.1**
	49nm,0.3s						
DZA				⇑*i*S	**Sg**	**12 38 42.3**	**-0.4**
	260nm,0.3s						
UCH	**Uchtor**	**2.85**	**43**	⇓*i*P	**Pb**	**12 38 03.6**	**-2.0**
	baz=43						
UCH				⇓*i*S	**Sb**	**12 38 38.3**	**-2.2**
	baz=43						
KK31	**Karatay Array**	**3.10**	**341**	⇓Pn	**Pb**	**12 38 06.1**	**-3.4**
	0.7nm,0.3s,baz=150,slow=11,SNR=145						
KK31				⇑Pg	**Pg**	**12 38 14.6**	**+0.7**
	3.3nm,0.3s,baz=147,slow=11,SNR=50						
KK31				⇑Lg	Lg	12 38 51.2	
	45nm,0.5s,baz=156,slow=29,SNR=12						
AAK	**Ala-Archa**	**3.15**	**38**	Pg	**Pg**	**12 38 13.6**	**-1.3**
	7.3nm,0.4s						
AAK				Lg	Lg	12 38 54.5	
	23nm,0.7s						
BRLS	**Borolday**	**3.24**	**332**	*e*P	**Pb**	**12 38 13.0**	**+1.2**
	2.3nm,0.4s						
BRLS				*e*S	**Sb**	**12 38 54.0**	**+2.8**
	61nm,0.3s						
TKM2	**Tokmak 2**	**3.91**	**44**	⇑Pn	**Pn**	**12 38 17.2**	**+2.8**
	2.8nm,0.4s						
TKM2				⇑Lg	Lg	12 39 18.8	
	5.6nm,0.5s						
KST	**Kastek**	**4.19**	**46**	*e*P	**Pg**	**12 38 34.5**	**-0.3**
	8.7nm,0.4s						
KST				*e*S	**Sg**	**12 39 28.7**	**-0.3**
	9.3nm,0.5s						
TNSS	**Tian-Shan**	**4.75**	**51**	⇓*i*P	**Pg**	**12 38 44.0**	**-1.6**
	5.3nm,0.4s						
TNSS				⇑*i*S	**Sg**	**12 39 47.0**	**-0.1**
	9.7nm,0.7s						
MDOK	**Medeo**	**4.88**	**51**	*e*P	**Pg**	**12 38 46.0**	**-2.1**
	2.8nm,0.3s						
MDOK				*e*S	**Sg**	**12 39 50.7**	**-0.7**
	6.9nm,0.6s						
CHKK	**Chushkaly**	**5.29**	**44**	*e*P	**Pg**	**12 38 55.6**	**-0.1**
	1.1nm,0.5s						
CHKK				*e*S	**Sg**	**12 40 05.2**	**+1.0**
	8.3nm,0.4s						

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*IDC **22** 13:00:12.9±2.7, 8°.02S×111°.09E, h0^{km}, mb4.0/6, mb1 4.1/6, mb1mx3.7/54, mbtmp4.0/6, MS3.7/2, Ms1 3.7/2, ms1mx2.7/51, Error ellipse: s-maj=145.7km s-min=18.3km az=53.0*

*ISCJB **22** 13:00:31.0±0.5, 8°.2S±0°.1×111°.45E±0°.04, h147^{km}±5^{km}, mb3.9/6, Error ellipse: s-maj=17.5km s-min=5.5km az=9.4*

*DJA **22** 13:00:32.6±0.4, 8°S±6°×11°1E±°, h133^{km}±3^{km}, M3.7/16, mb4.1/3, MLv3.6/16*

ISC 22 13:00:31.1±0.8, **8°.14S**±0°.09×**111°.42E**±0°.04, **h153**^{km}±6^{km}, **n24**, σ**1^{s}62**/32, **mb4.0**/6, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCJI	**Pacitan**	**0.25**	**256**	P	**Pn**	**13 00 52.0**	**+0.2**
PCJI				S	**Sn**	**13 01 07.1**	**-0.5**
PWJI	**Pagerwojo**	**0.40**	**73**	P	**Pn**	**13 00 51.9**	**-0.4**
PWJI				S	**Sn**	**13 01 06.7**	**-1.8**
WOJI	**Wonogiri, Jawa**	**0.58**	**301**	P	**Pn**	**13 00 53.7**	**+0.5**
WOJI				S	**Sn**	**13 01 10.0**	**0.0**
NGJI	**Ngawi**	**0.77**	**3**	P	**Pn**	**13 00 55.9**	**+1.5**
UGM	**Wanagama**	**0.92**	**284**	P	**Pn**	**13 00 56.0**	**+0.5**
UGM				S	**Sn**	**13 01 14.3**	**+0.1**
TBJI	**Tambak Boyo**	**1.38**	**18**	P	**Pn**	**13 01 00.1**	**+0.4**
SMRI	**Semarang**	**1.45**	**318**	P	**Pn**	**13 00 59.4**	**-1.1**
SMRI				S	**Sn**	**13 01 23.5**	**+0.6**
GRJI	**Gresik**	**1.60**	**41**	P	**Pn**	**13 01 02.3**	**+0.3**
GRJI				S	Sn	13 01 41.8	+16
GMJI	**Gumukmas**	**2.01**	**94**	P	**Pn**	**13 01 06.1**	**-0.4**
GMJI				S	**Sn**	**13 01 32.5**	**-1.2**
BLJI	**Banyuglugur**	**2.19**	**80**	P	**Pn**	**13 01 09.0**	**+0.4**
BLJI				S	**Sn**	**13 01 43.9**	**+6.4**
KPJI	**Karang Pucung**	**2.59**	**288**	P	**Pn**	**13 01 15.4**	**+1.9**
JAGI	**Jajag, Banyuwa**	**2.72**	**97**	P	**Pn**	**13 01 14.8**	**-0.3**
JAGI				S	**Sn**	**13 01 48.1**	**-1.0**
CMJI	**Cimerak**	**2.96**	**277**	P	**Pn**	**13 01 19.7**	**+1.5**
CMJI				S	**Sn**	**13 01 55.1**	**+0.6**
SRBI	**Singaraja**	**3.75**	**89**	P	**Pn**	**13 01 28.6**	**+0.3**
TWSI	**Taliwang, Sumb**	**5.43**	**97**	P	**Pn**	**13 01 51.3**	**+0.9**
	18nm,0.9s,0.1nm						
CGJI	**Cibinong**	**5.88**	**285**	P	**Pn**	**13 01 57.7**	**+1.4**
	36nm,1.3s,0.2nm						
PLAI	**Plampang**	**6.32**	**97**	P	**Pn**	**13 02 02.9**	**+0.7**
WRA	**Warramunga Arr**	**25.10**	**120**	P	**P**	**13 05 42.3**	**+0.4**
	1.5nm,0.7s,baz=294,slow=11,SNR=11						
ASAR	**Alice Springs**	**26.50**	**128**	P	**P**	**13 05 55.2**	**+0.7**
	0.9nm,0.4s,baz=303,slow=7.9,SNR=29						
CTA	**Charters Tower**	**35.72**	**113**	LR	LR	13 22 38.0	
	comp=Z,184nm,20.8s,baz=30,slow=37						
STKA	**Stephens Creek**	**36.67**	**134**	P	**P**	**13 07 24.6**	**+1.4**
	2.1nm,0.8s,baz=297,slow=9.0,SNR=4.0						
SONM	**Songino Array**	**55.90**	**356**	P	**P**	**13 09 52.2**	**-0.9**
	1.3nm,0.4s,baz=175,slow=8.1,SNR=7.6						
SONM				LR	LR	13 36 53.8	
	comp=Z,44nm,19.0s,baz=224,slow=40						
MKAR	**Makanchi Array**	**60.52**	**337**	P	**P**	**13 10 23.6**	**-1.5**
	1.9nm,0.4s,baz=152,slow=7.4,SNR=20						
ZALV	**Zalesovo Beam**	**65.80**	**343**	P	**P**	**13 10 57.3**	**-2.4**
	1.1nm,0.4s,baz=162,slow=5.2,SNR=4.2						

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*ISCJB **22** 13:02:20.9±1.3, 31°.40N±0°.04×114°.27W±0°.03, h13^{km}±10^{km}, Error ellipse: s-maj=7.9km s-min=3.9km az=157.7*

*NEIC **22** 13:02:22.0±0.0, 31°.35N×114°.27W, h10^{km}, ML3.2(PAS), ML3.5(ECX), After ECX.*

*MEX **22** 13:02:22.3±0.8, 31°.24N×114°.10W, h20^{km}, MD4.0*

*ECX **22** 13:02:22.0±0.3, 31°.35N×114°.27W, h10^{km}, MD3.3, ML3.5*

ISC 22 13:02:20.7±1.4, **31°.34N**±0°.05×**114°.30W**±0°.04, **h14**^{km}±11^{km}, **n53**, σ**1^{s}63**/66, **3D, Gulf of California**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SPX	**San Pedro Mart**	**1.04**	**254**	*e*P	**Pg**	**13 02 40.7**	**-0.2**
SPX				*e*S	**Sn**	**13 02 55.6**	**-0.2**
SPX				IAML		13 02 56.4	
	comp=E,630nm,0.5s						
SPX				⇓*e*		13 02 56.4	
SPIG	**San Pedro Mart**	**1.04**	**254**	*e*P	**Pb**	**13 02 40.8**	**0.0**
SPIG				*e*S	**Sn**	**13 02 55.7**	**-0.1**
SPIG	**San Pedro Mart**	**1.04**	**254**	*e*P	**Pb**	**13 02 40.7**	**0.0**
SPIG				*e*S	**Sg**	**13 02 54.7**	**+0.1**
MBIG	**Mexicali**	**1.31**	**324**	*e*P	**Pb**	**13 02 45.4**	**+0.3**
MBIG				*i* S	**Sg**	**13 03 03.2**	**+0.1**
CPBX	**Cerro Prieto**	**1.38**	**322**	*e*P	**Pn**	**13 02 45.4**	**-0.1**
CPBX				*e*S	**Sb**	**13 03 04.5**	**+0.8**
CPBX				⇓*e*		13 03 09.4	
CPBX				IAML		13 03 09.4	
	comp=E,2µm,0.4s						
214A	**Organ Pipe Nat**	**1.41**	**64**	P	**Pn**	**13 02 45.5**	**-0.5**
	baz=244,SNR=91						
214A				S	**Sn**	**13 03 02.8**	**-1.6**
	baz=244						
ZAX	**El Zacaton**	**1.70**	**276**	*e*P	**Pb**	**13 02 51.5**	**-0.3**
ZAX				*e*S	**Sb**	**13 03 13.7**	**+0.6**
GLA	**Glamis**	**1.77**	**345**	P	**Pn**	**13 02 50.0**	**-0.9**
	baz=164,SNR=312						
GLA				S	**Sn**	**13 03 11.3**	**-1.9**
	baz=164						
GLA	**Glamis**	**1.77**	**345**	*e*Pn	**Pn**	**13 02 49.9**	**-1.0**
ECNX	**Esteban Cantu**	**1.99**	**280**	*e*P	**Pb**	**13 02 57.2**	**+0.4**
IKP	**In-Ko-Pah, Jac**	**2.02**	**311**	P	**Pn**	**13 02 53.0**	**-1.5**
	baz=129,SNR=7.8						
SWSC	**Sam W. Stewart**	**2.05**	**322**	P	**Pn**	**13 02 54.9**	**+0.1**
	baz=140,SNR=14						
PBX	**Punta Banda**	**2.11**	**282**	*e*P	**Pb**	**13 02 57.7**	**-1.1**
CBX	**Cerro Bola**	**2.24**	**296**	*e*P	**Pn**	**13 02 59.0**	**+1.6**
CBX				*e*S	**Sb**	**13 03 28.4**	**-0.2**
CBX				IAML		13 03 43.7	
	comp=E,346nm,0.8s						
CBX				⇓*e*		13 03 43.7	
CBX	**Cerro Bola**	**2.24**	**296**	*e*P	**Pn**	**13 02 57.8**	**+0.4**
CBX				*i* S	**Sn**	**13 03 25.9**	**+0.9**
CBX	**Cerro Bola**	**2.24**	**296**	*e*Pn	**Pn**	**13 02 57.3**	**-0.1**
TJIG	**Tijuana**	**2.30**	**299**	*e*P	**Pn**	**13 02 58.4**	**+0.2**
TJIG				*i* S	**Sn**	**13 03 27.2**	**+0.9**
MONP2	**Monument Peak**	**2.38**	**311**	P	**Pn**	**13 02 59.2**	**-0.3**
	baz=130						
Y12C	**Blythe**	**2.41**	**355**	P	**Pn**	**13 02 59.7**	**-0.1**
	baz=175						
Y12C				S	**Sn**	**13 03 26.8**	**-2.3**
	baz=175						
Y12C	**Blythe**	**2.41**	**355**	*e*Pn	**Pn**	**13 02 59.5**	**-0.2**
BAR	**Barrett**	**2.42**	**304**	*e*Pn	**Pn**	**13 02 59.1**	**-0.8**
BC3	**Big Chuckawall**	**2.51**	**337**	P	**Pn**	**13 03 00.7**	**-0.5**
	baz=156,SNR=8.9						
109C	**Camp Elliot, M**	**2.84**	**304**	P	**Pn**	**13 03 05.0**	**-0.6**
	baz=122						
109C				S	**Sn**	**13 03 38.7**	**-0.9**
	baz=122						
CPE	**Camp Elliot**	**2.84**	**304**	*e*Pn	**Pn**	**13 03 04.3**	**-1.4**
IRM	**Iron Mountain**	**2.90**	**346**	P	**Pn**	**13 03 06.2**	**-0.3**
	baz=165,SNR=50						
FRD	**Ford Ranch, An**	**2.90**	**318**	Pb	**Pb**	**13 03 10.7**	**-1.6**
	baz=137,SNR=9.4						
XPFO	**Piæon Flat**	**2.91**	**322**	*e*Pn	**Pn**	**13 03 07.4**	**+0.7**
PFO	**Pinyon Flats O**	**2.91**	**322**	Pb	**Pb**	**13 03 09.8**	**-2.7**
	baz=140,SNR=9.1						
PFO	**Pinyon Flats O**	**2.91**	**322**	*e*Pn	**Pn**	**13 03 07.5**	**+0.7**
TUC	**Tucson**	**3.14**	**71**	*e*Pn	**Pn**	**13 03 09.0**	**-0.9**
HSIG		**3.71**	**128**	*e*Pn	**Pn**	**13 03 15.4**	**-2.2**
LDFC	**Landfair**	**3.79**	**350**	*e*Pn	**Pn**	**13 03 20.0**	**+1.2**
PASC	**Pasadena Art C**	**4.33**	**312**	*e*Pn	**Pn**	**13 03 26.1**	**0.0**
GSC	**Goldstone, Bar**	**4.48**	**333**	*e*Pn	**Pn**	**13 03 28.6**	**+0.4**
WUAZ	**Wupatki**	**4.83**	**30**	*e*Pn	**Pn**	**13 03 34.5**	**+1.4**
SHPR	**Sheep Range**	**5.20**	**352**	*e*Pn	**Pn**	**13 03 39.9**	**+1.6**
W18A	**Petrified Fore**	**5.37**	**44**	*e*Pn	**Pn**	**13 03 42.1**	**+1.5**
DAC	**Darwin (Calif)**	**5.64**	**332**	*e*Pn	**Pn**	**13 03 45.0**	**+0.7**
LCMT	**Little Creek M**	**5.73**	**8**	*e*Pn	**Pn**	**13 03 47.0**	**+1.5**
TPNV	**Topopah Spring**	**5.83**	**344**	*e*Pn	**Pn**	**13 03 50.2**	**+3.4**
CCUT	**Cedar City**	**6.24**	**7**	*e*Pn	**Pn**	**13 03 54.7**	**+2.1**
PKCU	**Pink Cliffs**	**6.31**	**15**	*e*Pn	**Pn**	**13 03 56.8**	**+3.2**
SZCU	**Shurtz Canyon**	**6.32**	**9**	*e*Pn	**Pn**	**13 03 56.5**	**+2.8**
MTPU	**Mount Pierson**	**6.91**	**14**	*e*Pn	**Pn**	**13 04 05.5**	**+3.6**
R11A	**Troy Canyon, C**	**7.07**	**352**	*e*Pn	**Pn**	**13 04 06.1**	**+2.1**
PSUT	**Pine Spring**	**7.19**	**3**	*e*Pn	**Pn**	**13 04 08.4**	**+2.9**
MSU	**Marysvale**	**7.37**	**13**	*e*Pn	**Pn**	**13 04 11.2**	**+3.2**
TCRU	**Three Creeks R**	**7.41**	**11**	*e*Pn	**Pn**	**13 04 12.1**	**+3.4**
MVCO	**Mesa Verde**	**7.57**	**38**	*e*Pn	**Pn**	**13 04 12.4**	**+1.5**
PV01	**Paradox Valley**	**8.25**	**33**	*e*Pn	**Pn**	**13 04 22.6**	**+2.3**
PV23	**Carpenter Ridg**	**8.32**	**30**	*e*Pn	**Pn**	**13 04 24.3**	**+3.2**
P17A	**Butcher Ranch,**	**8.62**	**19**	*e*Pn	**Pn**	**13 04 26.5**	**+1.4**
P18A	**Preston Nutter**	**8.90**	**21**	*e*Pn	**Pn**	**13 04 32.2**	**+3.0**

IDC 22 13:11:44.6±5.0, **24°.26S**×**177°.77W**, **h0**^{km}, **mb4.3**/4, **mb1 4.4**/4, **mb1mx3.7**/42, **mbtmp4.3**/4, **Error ellipse: s-maj=135.6km s-min=84.1km az=152.0, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CTA	**Charters Tower**	**33.52**	**270**	P	P	13 18 27.9	+1.8
	4.4nm,0.3s,baz=95,slow=11,SNR=22						
STKA	**Stephens Creek**	**36.49**	**249**	P	P	13 18 52.4	+0.8
	1.0nm,0.3s,baz=86,slow=12,SNR=9.2						
ASAR	**Alice Springs**	**43.99**	**260**	P	P	13 19 52.9	-1.2
	0.6nm,0.4s,baz=104,slow=7.7,SNR=39						
WRA	**Warramunga Arr**	**44.42**	**266**	P	P	13 19 56.1	-1.4
	1.7nm,0.3s,baz=104,slow=7.9,SNR=90						
HFS	**Hagfors**	**143.27**	**350**	PKP	PKPdf	13 31 20.3	0.0
	2.1nm,0.9s,baz=46,slow=6.2,SNR=4.9						

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*IDC **22** 13:36:58.7±0.7, 14°.93S×167°.36E, h125^{km}±5^{km}, mb4.6/31, mb1 4.6/33, mb1mx4.6/45, mbtmp5.0/33, MS3.6/17, Ms1 3.6/17, ms1mx3.4/40, Error ellipse: s-maj=10.4km s-min=8.7km az=72.0*

*NEIC **22** 13:36:58.4±0.1, 14°.86S×167°.37E, mb4.8/86, Error ellipse: s-maj=4.1km s-min=3.4km az=115.0*

*GCMT **22** 13:36:58.4±0.3, 14°.86S×167°.17E, h127^{km}±2^{km}, MW5.0/87, Moment Tensor Solution. s35,c37; s87,c127; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.39±.10; $M_{\theta\theta}$1.12±.12; $M_{\phi\phi}$-3.50±.11; $M_{r\theta}$-1.67±.09; $M_{\theta\phi}$-0.16±.14; $M_{\phi r}$-0.39±.10; Best double couple: $M_0$3.54600×10^{16} NP1:ϕ_s212.00000°, δ58.00000°, λ131.00000°. NP2: ϕ_s333.00000°, δ50.00000°, λ43.00000°. Principal axes: T 3.5490, Plg56.0000°, Azm177.0000°; N 0.0040, Plg34.0000°, Azm7.0000°; P -3.5430, Plg5.0000°, Azm274.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*BJI **22** 13:36:58.8, 14°.36S×167°.50E, h127^{km}, mb4.8/36, mB4.9/30*

*WEL **22** 13:36:58.0, 14°.86S×167°.37E, h128^{km}*

*ISCJB **22** 13:36:59.8±1.1, 14°.88S±0°.03×167°.31E±0°.03, h150^{km}±10^{km}, mb4.7/131, Error ellipse: s-maj=5.2km s-min=4.2km az=38.0*

*MOS **22** 13:36:59.4±1.0, 14°.84S×167°.32E, h143^{km}, mb4.8/29, Error ellipse: s-maj=9.0km s-min=8.4km az=9.1*

ISC 22 13:36:58.6±0.6, **14°.87S**±0°.05×**167°.37E**±0°.05, **h127**^{km}±5^{km}, **n385**, σ**1^{s}19**/391, **mb4.8**/131, **8C-6D, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**7.21**	**187**	P	**Pn**	**13 38 41.8**	**+0.2**
	126nm,0.3s,baz=20,slow=13,SNR=176						
DZM				S	**Sn**	**13 40 05.1**	**+3.0**
	36nm,0.3s,baz=319,slow=19,SNR=7.5						
DZM	**Mont Dzumac**	**7.21**	**187**	*e*Pn	**Pn**	**13 38 41.7**	**+0.2**
	540nm,0.7s						
DZM				*e*Sn	**Sn**	**13 39 56.7**	**-5.3**
	319nm,0.3s						
DZM	**Mont Dzumac**	**7.21**	**187**	*e*Pn	**Pn**	**13 38 41.3**	**-0.3**
DZM				S	**Sn**	**13 40 05.1**	**+3.0**
HNR	**Honiara**	**9.05**	**306**	P	**Pn**	**13 39 06.5**	**+0.2**
	52nm,0.3s,baz=186,slow=3.4,SNR=17						
HNR				S	**Sn**	**13 40 48.3**	**+1.7**
	43nm,0.3s,baz=66,slow=20,SNR=5.3						
HNR				LR	LR	13 42 24.3	
	comp=Z,315nm,21.9s,baz=138,slow=36						
HNR	**Honiara**	**9.05**	**306**	*e*P	**Pn**	**13 39 05.0**	**-1.3**
HNR				*e*S	**Sn**	**13 40 43.0**	**-3.5**
HNR	**Honiara**	**9.05**	**306**	*e*Pn	**Pn**	**13 39 05.5**	**-0.8**
HNR				S	**Sn**	**13 40 48.3**	**+1.7**
EIDS	**Eidsvold**	**18.50**	**233**	P	**Pn**	**13 41 06.3**	**-0.4**
	baz=18,SNR=18						
EIDS	**Eidsvold**	**18.50**	**233**	*e*P	**Pn**	**13 41 07.4**	**+0.7**
	41nm,0.6s						
GLKZ	**Green Lake**	**19.74**	**139**	P	**Pn**	**13 41 21.1**	**0.0**
AFI	**Afiamalu**	**20.22**	**90**	P	Pn	13 41 25.7	-1.2
	54nm,0.9s,baz=78,slow=13,SNR=3.6						
PMG	**Port Moresby**	**20.49**	**283**	P	**P**	**13 41 27.6**	**+1.0**
	38nm,0.8s,baz=95,slow=7.3,SNR=9.5						
CTA	**Charters Tower**	**20.79**	**253**	P	**P**	**13 41 30.9**	**+1.0**
	31nm,0.7s,baz=79,slow=11,SNR=42						
CTAO	**Charters Tower**	**20.79**	**253**	*e*P	**P**	**13 41 30.9**	**+1.0**
	39nm,0.8s						
CTAO	**Charters Tower**	**20.79**	**253**	*e*P	**P**	**13 41 30.9**	**+1.0**
CTAO				pmax	pmax		
	comp=Z,39nm,0.8s						
RMQ	**Roma**	**20.87**	**233**	P	**P**	**13 41 32.5**	**+1.8**
	baz=21,SNR=18						
OUZ	**Omahuta**	**21.02**	**166**	*e*P	**P**	**13 41 33.5**	**+1.5**
	comp=Z,162nm,0.9s						
OUZ	**Omahuta**	**21.02**	**166**	P	**P**	**13 41 33.6**	**+1.5**
ARMA	**Armidale**	**21.18**	**220**	P	**P**	**13 41 36.6**	**+2.5**
	baz=21,SNR=11						
ARMA	**Armidale**	**21.18**	**220**	*e*P	**P**	**13 41 35.2**	**+1.1**
	comp=Z,98nm,1.1s						
WCZ	**Waipu Caves**	**21.89**	**165**	P	**P**	**13 41 43.0**	**+1.6**
NIUE	**Niue**	**22.10**	**104**	P	**P**	**13 41 45.2**	**+1.4**
	baz=22,SNR=4.1						
MTSU	**Mount Surprise**	**22.34**	**258**	P	**P**	**13 41 47.0**	**+0.8**
	baz=22,SNR=30						
GRZ	**Great Barrier**	**22.48**	**163**	P	**P**	**13 41 48.8**	**+1.4**
ABAZ	**Army Bay**	**22.64**	**164**	P	**P**	**13 41 50.3**	**+1.4**
EPAZ	**Eden Park BICE**	**22.88**	**165**	P	**P**	**13 41 53.7**	**+2.5**
WTAZ	**Waiatarua**	**22.89**	**165**	P	**P**	**13 41 52.9**	**+1.6**
WIAZ	**Waiheke Island**	**22.90**	**164**	P	**P**	**13 41 52.7**	**+1.3**
ETAZ	**East Tamaki Re**	**23.00**	**164**	P	**P**	**13 41 53.4**	**+1.1**
KUZ	**Kuaotunu**	**23.02**	**163**	P	**P**	**13 41 53.4**	**+0.9**
MKAZ	**Moumakai**	**23.20**	**164**	P	**P**	**13 41 55.2**	**+1.0**
COEN	**Coen**	**23.45**	**269**	P	**P**	**13 41 57.4**	**+0.6**
	baz=24,SNR=9.3						
MGCD	**Mangrove Creek**	**23.48**	**216**	P	**P**	**13 41 58.4**	**+1.6**
	baz=24,SNR=32						
MANU	**Manus Island**	**23.50**	**301**	*e*P	**P**	**13 41 56.0**	**-1.2**
	comp=Z,52nm,1.4s						
RIV	**Riverview**	**23.91**	**215**	P	**P**	**13 42 02.2**	**+1.6**
	baz=24,SNR=8.4						
RIV	**Riverview**	**23.91**	**215**	P	**P**	**13 42 02.9**	**+2.3**
RIV				pmax	pmax		
	comp=Z,424nm,0.8s						
TGRZ	**Tauranga**	**24.09**	**163**	P	**P**	**13 42 04.9**	**+2.7**
TLZ	**Tolley Road**	**24.45**	**164**	P	**P**	**13 42 06.7**	**+1.1**
HIZ	**Hauiti**	**24.46**	**166**	P	**P**	**13 42 06.9**	**+1.3**
OMRZ	**Omania**	**24.47**	**163**	P	**P**	**13 42 08.8**	**+3.0**
QLP	**Quilpie**	**24.53**	**238**	P	**P**	**13 42 07.4**	**+0.9**
	baz=24,SNR=13						
HAZ	**Te Kaha**	**24.59**	**160**	P	**P**	**13 42 07.5**	**+0.8**
MXZ	**Matakaoa Point**	**24.59**	**159**	P	**P**	**13 42 07.3**	**+0.4**
HRRZ	**Handcock Road**	**24.71**	**163**	P	**P**	**13 42 10.5**	**+2.5**
PKGZ	**Pakihiroa**	**24.81**	**159**	P	**P**	**13 42 08.9**	**0.0**
URZ	**Urewera**	**24.84**	**162**	P	**P**	**13 42 09.2**	**+0.2**
	comp=Z,74nm,0.8s,baz=263,slow=3.0,SNR=38						
URZ	**Urewera**	**24.84**	**162**	*e*P	**P**	**13 42 09.0**	**-0.1**
	comp=Z,82nm,0.7s						
URZ	**Urewera**	**24.84**	**162**	P	**P**	**13 42 09.2**	**+0.2**
PRRZ	**Plateau Road**	**24.84**	**163**	P	**P**	**13 42 09.7**	**+0.6**
WMGZ	**Waiomatatini S**	**24.86**	**159**	P	**P**	**13 42 11.1**	**+1.8**
MUGZ	**Murupara**	**24.93**	**162**	P	**P**	**13 42 10.7**	**+0.7**
VRZ	**Vera Road**	**25.02**	**166**	P	**P**	**13 42 11.6**	**+0.9**
MWZ	**Matawai**	**25.03**	**161**	P	**P**	**13 42 10.7**	**-0.2**
PUZ	**Puketiti**	**25.04**	**159**	P	**P**	**13 42 11.4**	**+0.5**
TWGZ	**Tauwhareparae**	**25.04**	**160**	P	**P**	**13 42 10.8**	**-0.1**
MRHZ	**Matea Rd**	**25.16**	**163**	P	**P**	**13 42 13.0**	**+0.9**
TKGZ	**Te Karaka**	**25.23**	**160**	P	**P**	**13 42 12.2**	**-0.4**
SNGZ	**Shannon Statio**	**25.39**	**162**	P	**P**	**13 42 13.9**	**-0.2**
RIGZ	**Rimuhau**	**25.45**	**161**	P	**P**	**13 42 13.9**	**-0.7**
BKZ	**Black Stump Fm**	**25.49**	**163**	*e*P	**P**	**13 42 15.2**	**+0.1**
	comp=Z,80nm,0.5s						
YNG	**Young**	**25.83**	**218**	P	**P**	**13 42 19.2**	**+1.0**
	baz=26,SNR=12						
CMSA	**Cobar Meteorol**	**25.84**	**226**	P	**P**	**13 42 18.9**	**+0.6**
	baz=26,SNR=39						
CNB	**Canberra Magne**	**26.00**	**215**	P	**P**	**13 42 20.7**	**+1.0**
	baz=26,SNR=36						
BFZ	**Birch Farm**	**26.85**	**165**	*e*P	**P**	**13 42 26.0**	**-1.2**
	comp=Z,37nm,0.7s						
QIS	**Mount Isa**	**27.03**	**254**	P	**P**	**13 42 29.3**	**+0.3**
	baz=27,SNR=3.5						
THZ	**Tophouse**	**27.22**	**171**	*e*P	**P**	**13 42 30.3**	**-0.3**
	comp=Z,38nm,0.7s						
MILA	**Mila**	**27.40**	**213**	P	**P**	**13 42 33.3**	**+1.1**
	baz=27,SNR=8.8						
KHZ	**Kahutara**	**27.96**	**170**	*e*P	**P**	**13 42 36.0**	**-1.0**
	comp=Z,40nm,0.6s						
LTZ	**Lake Taylor**	**28.13**	**172**	*e*P	**P**	**13 42 38.4**	**-0.2**
	comp=Z,108nm,0.6s						
OXZ	**Oxford**	**28.64**	**173**	*e*P	**P**	**13 42 42.4**	**-0.6**
	comp=Z,77nm,0.6s						
FOZ	**Fox Glacier**	**28.64**	**176**	*e*P	**P**	**13 42 42.8**	**-0.3**
	comp=Z,86nm,0.8s						
RPZ	**Rata Peaks**	**28.91**	**174**	P	**P**	**13 42 45.7**	**+0.2**
	comp=Z,66nm,0.7s,baz=301,slow=2.9,SNR=45						
RPZ	**Rata Peaks**	**28.91**	**174**	*e*P	**P**	**13 42 45.6**	**+0.1**
	comp=Z,71nm,0.7s						
STKA	**Stephens Creek**	**28.98**	**230**	P	**P**	**13 42 47.1**	**+0.8**
	comp=Z,34nm,0.5s,baz=46,slow=8.7,SNR=138						
STKA				PcP	**PcP**	**13 45 51.9**	**-0.1**
	comp=Z,12nm,0.7s,baz=72,slow=2.3,SNR=6.8						
STKA				ScP	**ScP**	**13 49 23.0**	**+1.1**
	comp=Z,5.0nm,0.8s,baz=57,slow=3.9,SNR=7.6						
STKA				LR	LR	13 52 58.1	
	comp=Z,99nm,21.1s,baz=59,slow=33						
STKA	**Stephens Creek**	**28.98**	**230**	P	**P**	**13 42 47.5**	**+1.2**
	baz=29,SNR=118						
STKA	**Stephens Creek**	**28.98**	**230**	*e*P	**P**	**13 42 46.4**	**+0.2**
	comp=Z,22nm,1.2s						
STKA				PcP	**PcP**	**13 45 51.9**	**-0.1**
STKA				ScP	**ScP**	**13 49 23.0**	**+1.1**
MQZ	**McQueen's Vall**	**29.09**	**172**	*e*P	**P**	**13 42 46.4**	**-0.6**
	comp=Z,29nm,0.7s						
LBZ	**Lake Benmore**	**29.51**	**176**	*e*P	**P**	**13 42 49.7**	**-1.1**
	comp=Z,42nm,0.7s						
TOO	**Toolangi**	**29.80**	**217**	P	**P**	**13 42 54.2**	**+0.8**
	baz=30,SNR=18						
TOO	**Toolangi**	**29.80**	**217**	P	**P**	**13 42 54.3**	**+0.8**
TOO				pmax	pmax		
	comp=Z,33nm,1.2s						
DCZ	**Deep Cove**	**30.49**	**180**	*e*P	**P**	**13 42 59.0**	**-0.5**
	comp=Z,85nm,0.9s						
WHZ	**Wether Hill Ro**	**30.93**	**179**	*e*P	**P**	**13 43 02.7**	**-0.6**
	comp=Z,30nm,0.9s						
ARPS	**Mount Arapiles**	**31.50**	**221**	P	**P**	**13 43 09.4**	**+1.0**
	baz=32,SNR=12						
HTT	**Hallett**	**31.70**	**229**	P	**P**	**13 43 11.2**	**+0.8**
	baz=32,SNR=33						
RAR	**Rarotonga**	**31.83**	**106**	P	**P**	**13 43 11.1**	**-0.4**
	comp=Z,22nm,0.8s,baz=200,slow=10,SNR=3.7						
RAR				LR	LR	13 55 09.4	
	comp=Z,32nm,18.5s,baz=246,slow=34						
WB2	**Warramunga Arr**	**31.88**	**256**	*e*P	**P**	**13 43 10.5**	**-1.5**
WRAB	**Tennant Creek**	**31.88**	**256**	*e*P	**P**	**13 43 11.3**	**-0.7**
WRAB	**Tennant Creek**	**31.88**	**256**	*ce*P	**P**	**13 43 10.2**	**-1.8**
WRAB				pmax	pmax		
	comp=Z,25nm,2.5s						
WRA	**Warramunga Arr**	**31.89**	**256**	P	**P**	**13 43 11.0**	**-1.1**
	comp=Z,2.9nm,0.5s,baz=84,slow=8.6,SNR=44						
WRA				PcP	**PcP**	**13 45 59.8**	**-0.1**
	comp=Z,5.2nm,0.8s,baz=87,slow=2.9,SNR=8.3						
WRA				ScP	**ScP**	**13 49 33.1**	**+1.4**
	comp=Z,1.5nm,0.7s,baz=81,slow=3.5,SNR=7.8						
WRA				PKiKP	**PKiKP**	**13 53 26.9**	**-1.5**
	comp=Z,0.8nm,0.5s,baz=4.1,slow=0.3,SNR=12						
MOO	**Moorlands**	**32.51**	**208**	P	**P**	**13 43 18.2**	**+1.0**
	baz=32,SNR=5.9						
AS01	**Alice Springs**	**32.67**	**249**	*e*P	**P**	**13 43 17.9**	**-1.1**
AS31	**Alice Springs**	**32.71**	**249**	*e*P	**P**	**13 43 18.1**	**-1.2**
	comp=Z,5.9nm,0.3s						
ASAR	**Alice Springs**	**32.72**	**249**	P	**P**	**13 43 18.4**	**-1.0**
	comp=Z,6.1nm,0.4s,baz=78,slow=8.9,SNR=213						
ASAR				PcP	**PcP**	**13 46 01.8**	**-0.4**
	comp=Z,5.4nm,0.9s,baz=82,slow=2.8,SNR=8.3						
ASAR				S	**S**	**13 48 22.8**	**-3.9**
	comp=Z,1.8nm,0.9s,baz=74,slow=18,SNR=7.0						
ASAR				ScP	**ScP**	**13 49 35.5**	**+1.0**
	comp=Z,3.2nm,0.9s,baz=84,slow=3.3,SNR=10						

ASAR				LR	LR	13 56 02.4	
	comp=Z,161nm,19.4s,baz=78,slow=35						
BBOO	Buckleboo	33.57	232	P	P	13 43 27.6	+1.0
	baz=34,SNR=11						
BBOO	Buckleboo	33.57	232	eP	P	13 43 27.0	+0.4
	comp=Z,42nm,0.6s						
KDU	Kakadu	33.95	269	P	P	13 43 29.6	-0.4
	baz=34,SNR=5.5						
MTN	Manton Dam	35.22	269	P	P	13 43 42.5	+1.5
	baz=35,SNR=4.2						
GUMO	Guam	36.00	321	LR	LR	13 57 11.3	
	comp=Z,60nm,19.8s,baz=130,slow=34						
KNRA	Kununurra	37.22	264	P	P	13 43 57.4	-0.6
	baz=37,SNR=7.2						
WRKA	Warakurna	37.98	248	P	P	13 44 03.7	-0.6
	baz=38,SNR=37						
FORT	Forrest	39.31	239	P	P	13 44 15.5	+0.2
	baz=39,SNR=28						
FORT	Forrest	39.31	239	eP	P	13 44 15.0	-0.3
	comp=Z,46nm,0.6s						
PAE	Paea	41.35	100	eP	P	13 44 34.0	+1.7
	comp=Z,10nm,0.9s						
PPT2	Papeete2	41.36	100	eP	P	13 44 33.7	+1.2
	comp=Z,56nm,0.9s						
PPT2	Papeete2	41.36	100	eLR	LR	13 56 05.7	
	comp=Z,234nm,28.2s						
PPT	Papeete	41.36	100	P	P	13 44 34.5	+2.1
	comp=Z,52nm,0.8s,baz=77,slow=7.6,SNR=5.3						
TBI	Tubuai	41.52	108	eLR	LR	13 56 11.3	
	comp=Z,269nm,35.0s						
TIAR	Tiarei	41.58	100	eP	P	13 44 35.5	+1.3
	comp=Z,11nm,0.7s						
TVO	Taravao	41.66	100	eP	P	13 44 36.0	+1.1
	comp=Z,17nm,0.7s						
PMOR	Pomariorio Ree	43.16	96	eP	P	13 44 48.7	+1.7
	comp=Z,114nm,1.1s						
VAH	Vaihoa	43.40	97	eP	P	13 44 50.2	+1.3
	comp=Z,73nm,1.0s						
KMBL	Kambalda	44.61	240	P	P	13 44 58.1	-0.3
	baz=45,SNR=6.4						
MBWA	Marble Bar	45.60	255	eP	P	13 45 06.3	-0.1
DAV	Davao City (W)	46.82	295	LR	LR	14 04 39.4	
	comp=Z,42nm,18.7s,baz=162,slow=36						
MEEK	Meekatharra	46.82	247	P	P	13 45 15.8	-0.1
	baz=47,SNR=23						
KLBR	Kellerberrin	48.12	241	P	P	13 45 25.2	-0.6
	baz=48,SNR=9.5						
NWAO	Narrogin (SRO)	48.76	239	P	P	13 45 30.1	-0.7
	comp=Z,18nm,0.8s,baz=306,slow=7.3,SNR=15						
NWAO				LR	LR	14 06 51.0	
	comp=Z,167nm,18.1s,baz=137,slow=37						
NWAO	Narrogin (SRO)	48.76	239	P	P	13 45 30.2	-0.5
	baz=49,SNR=11						
NWAO	Narrogin (SRO)	48.76	239	eP	P	13 45 29.9	-0.8
	comp=Z,23nm,0.8s						
BLDU	Ballidu	48.88	242	P	P	13 45 31.1	-0.6
	baz=49,SNR=7.9						
MORW	Morawa	49.30	244	P	P	13 45 34.6	-0.3
	baz=49,SNR=7.9						
MUN	Mundaring	49.48	241	P	P	13 45 36.1	-0.1
	baz=50,SNR=4.4						
GIRL	Giralia	50.69	253	P	P	13 45 46.5	+1.1
	baz=51,SNR=4.0						
JOW	Kunigami	56.22	317	P	P	13 46 26.6	+0.9
	comp=Z,12nm,0.6s,baz=151,slow=7.9,SNR=6.5						
MJAR	Matsushiro Arr	58.08	332	P	P	13 46 38.3	-0.3
	comp=Z,6.0nm,0.6s,baz=179,slow=8.4,SNR=36						
MAJO	Matsushiro	58.08	332	eP	P	13 46 38.3	-0.4
	comp=Z,8.8nm,0.6s						
MAJO	Matsushiro	58.08	332	ceP	P	13 46 38.2	-0.4
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MAT	Matsushiro	58.08	332	P	P	13 46 38.5	-0.1
MJB9	Matsu-Tunnel	58.09	332	eP	P	13 46 38.2	-0.4
	comp=Z,9.1nm,0.6s						
JNU	Nakatsue	59.10	324	P	P	13 46 45.9	+0.2
	comp=Z,8.4nm,0.7s,baz=16,slow=7.4,SNR=8.8						
VNDA	Vanda	62.72	181	P	P	13 47 09.8	+0.2
	comp=Z,16nm,0.5s,baz=355,slow=7.9,SNR=141						
VNDA	Vanda	62.72	181	eP	P	13 47 09.7	+0.1
	comp=Z,20nm,0.6s						
ASAJ	Asahikawa	62.91	340	P	P	13 47 12.4	+1.2
	comp=Z,21nm,0.7s,baz=210,slow=6.7,SNR=32						
ASAJ				LR	LR	14 12 43.9	
	comp=Z,23nm,19.2s,baz=168,slow=34						
ASAJ	Asahikawa	62.91	340	eP	P	13 47 12.0	+0.8
	comp=Z,22nm,0.8s						
SBA	Scott Base	62.99	180	eP	P	13 47 12.2	+0.9
	comp=Z,66nm,0.8s						
SBA	Scott Base	62.99	180	eP	P	13 47 12.2	+0.9
SBA				pmax	pmax		
	comp=Z,66nm,0.8s						
CASY	Casey	63.43	202	eP	P	13 47 14.4	0.0
	comp=Z,32nm,0.6s						
KSRS	Korea Array	63.91	326	P	P	13 47 18.7	+0.7
	comp=Z,0.8nm,0.7s,baz=138,slow=7.1,SNR=5.4						
KSRS				pP	PcP	13 47 50.9	-1.6
	comp=Z,1.3nm,0.7s,baz=134,slow=5.2,SNR=3.3						
KSRS				LR	LR	14 16 08.5	
	comp=Z,20nm,18.1s,baz=169,slow=37						
KSAR	Wonju Array Be	63.93	326	P	P	13 47 18.7	+0.6
KSAR				pP	PcP	13 47 50.9	-1.7
KSAR	Wonju Array Be	63.93	326	P	P	13 47 18.7	+0.6
KSAR				*PP	PcP	13 47 50.9	-1.7
YSS	Yuzh-Sakhalins	65.40	342	eP	P	13 47 27.6	+0.2
	comp=Z,18nm,0.9s						
YSS	Yuzh-Sakhalins	65.40	342	⇑iP	P	13 47 29.2	+1.8
YSS				e		13 48 02.8	
YSS				e		13 48 14.9	
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
NJ2	Nanjing	65.85	316	eP	P	13 47 30.8	+0.2
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
USRK	Ussuriysk Ar.	67.06	333	P	P	13 47 40.0	+2.0
	comp=Z,6.7nm,0.6s,baz=118,slow=8.1						
PETK	Petropavlovsk-	68.21	354	P	P	13 47 45.7	+0.6
	comp=Z,6.7nm,0.6s,baz=134,slow=8.2						
PETK				LR	LR	14 11 15.4	
	comp=Z,30nm,21.8s,baz=142,slow=30						
PETK	Petropavlovsk-	68.21	354	eP	P	13 47 45.3	+0.1
MDJ	Mudanjiang	68.45	332	P	P	13 47 46.4	-0.4
MDJ				pP	pP	13 48 18.9	+0.8
MDJ				sP	sP	13 48 33.5	+1.7
MDJ				S	S	13 56 41.0	+2.6
MDJ				pmax	pmax		
	comp=Z,20nm,0.6s						
IPM	Ipoh	68.47	281	eP	P	13 47 47.4	-0.3
	comp=Z,34nm,1.5s						
CN2	Changchun	69.82	329	eP	P	13 47 54.4	-0.9
CN2				epP	pP	13 48 25.4	-1.2
CN2				eS	S	13 56 53.3	-1.2
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,140nm,16.0s						
CN2				LR	LR		
	comp=Z,70nm,16.0s						
CN2				LR	LR		
	comp=Z,100nm,17.0s						
GRNR	Gornyy	70.76	340	eP	P	13 48 04.7	+3.8
GRNR				pmax	pmax		
	comp=Z,26nm,1.0s						
KLR	Kul'dur	71.18	336	ceP	P	13 48 04.7	+1.3
GYA	Guiyang	71.88	305	eP	P	13 48 09.3	+1.0
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BJI	Beijing	72.44	321	⇑eP	P	13 48 13.1	+2.0
BJI				pmax	pmax		
	comp=Z,12nm,0.7s						
PBKT	Sadao Pong	72.61	293	P	P	13 48 16.9	+4.3
UTTA	Uttaradit	73.41	294	P	P	13 48 19.7	+2.4
	comp=Z,3.2nm,0.8s						
XAN	Xi'an	73.86	313	P	P	13 48 20.8	+1.1
XAN				pmax	pmax		
	comp=Z,4.0nm,0.5s						
XAN				pmax	pmax		
	comp=Z,94nm,4.3s						
KMI	Kunming	74.47	302	P	P	13 48 24.8	+1.2
KMI				pmax	pmax		
	comp=Z,12nm,0.5s						
KMI				pmax	pmax		
	comp=Z,170nm,4.8s						
LAMP	Lampang	74.52	294	P	P	13 48 26.0	+2.2
	comp=Z,8.5nm,0.8s						
CM01	Chiang Mai Arr	75.07	294	eP	P	13 48 26.9	-0.1
CM01				epP	pP	13 48 59.0	+0.3
CMAR	Chiang Mai Arr	75.10	294	P	P	13 48 28.4	+1.3
	comp=Z,2.9nm,0.6s,baz=124,slow=5.1,SNR=17						
CMAR				pP	pP	13 48 59.2	+0.3
	comp=Z,5.2nm,0.9s,baz=127,slow=4.6,SNR=6.2						
CMAR	Chiang Mai Arr	75.10	294	iP	P	13 48 28.3	+1.2
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
QSPA	South Pole Qui	75.15	180	P	P	13 48 26.9	+0.1
	comp=Z,48nm,0.9s,baz=355,slow=1.4,SNR=119						
QSPA	South Pole Qui	75.15	180	eP	P	13 48 26.4	-0.3
	comp=Z,44nm,0.8s						
CMMT	Chiang Mai	75.22	294	P	P	13 48 29.6	+1.7
CHTO	Chiang Mai	75.23	294	eP	P	13 48 27.7	-0.2
	comp=Z,5.1nm,0.8s						
CHTO	Chiang Mai	75.23	294	eP	P	13 48 27.7	-0.2
CHTO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CHTO	Chiang Mai	75.23	294	P	P	13 48 29.6	+1.7
	comp=Z,28nm,1.1s						
HHC	Hu-ho-hao-te	75.76	320	eP	P	13 48 31.8	+1.2
HHC				pP	pP	13 49 03.5	+1.1
HHC				PP	PP	13 51 21.1	-1.3
HHC				S	S	13 58 03.5	+1.3
HHC				pmax	pmax		
	comp=Z,13nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,6.8s						
ZEA	Zeya	76.47	337	eP	P	13 48 35.1	+1.0
ZEA				pmax	pmax		
	comp=Z,25nm,0.7s						
LZH	Lanzhou	78.49	312	eP	P	13 48 50.5	+4.5
LZH				pP	pP	13 49 18.9	+0.9
LZH				sP	sP	13 49 32.1	+0.5
LZH				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MAW	Mawson	81.79	202	P	P	13 49 03.2	+0.3
	comp=Z,11nm,0.6s,baz=112,slow=5.7,SNR=44						
MAW				LR	LR	14 20 45.1	
	comp=Z,35nm,20.9s,baz=57,slow=32						
MAW	Mawson	81.79	202	P	P	13 49 03.2	+0.3
	baz=82,SNR=40						
MAW	Mawson	81.79	202	eP	P	13 49 02.9	0.0
	comp=Z,7.6nm,1.2s						
YAK	Yakutsk	82.20	343	eP	P	13 49 04.9	-0.1
	comp=Z,52nm,0.5s						
YAK	Yakutsk	82.20	343	eP	P	13 49 04.4	-0.6
YAK				pmax	pmax		
	comp=Z,24nm,0.9s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.3s						
YAK				pmax	pmax		
	comp=E,10.0nm,1.3s						
SONM	Songino Array	82.67	324	P	P	13 49 08.6	+0.6
	comp=E,2.9nm,0.4s,baz=140,slow=5.2,SNR=23						
SONA1	Songino Array	82.67	324	eP	P	13 49 07.8	-0.2
GTA	Gaotai	82.84	314	P	P	13 49 10.4	+1.3
GTA				pP	pP	13 49 40.4	-1.0
GTA				sP	sP	13 49 54.6	-0.3
GTA				S	S	13 59 18.3	+1.1
GTA				pmax	pmax		
	comp=E,6.0nm,1.1s						
GTA				pmax	pmax		
	comp=E,63nm,5.6s						
GTA				LR	LR		
	comp=E,160nm,21.0s						
GTA				LR	LR		
	comp=E,96nm,19.2s						
GTA				LR	LR		
	comp=E,99nm,19.2s						
PMR	Palmer	83.60	19	eP	P	13 49 11.4	-0.9
	comp=E,8.7nm,0.7s						
PMR	Palmer	83.60	19	eP	P	13 49 11.4	-0.9
PMR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
SHL	Shillong	83.72	298	eP	P	13 49 12.6	-1.4
	comp=Z,24nm,0.6s						
SHL	Shillong	83.72	298	eP	P	13 49 12.6	-1.4
SHL				pmax	pmax		
	comp=Z,24nm,0.6s						
GHO	Glory Hole Cre	83.80	19	eP	P	13 49 13.6	+0.1
	comp=Z,8.2nm,0.7s						
CAST	Castle Rocks	84.10	17	eP	P	13 49 13.1	-1.7
	comp=Z,19nm,0.7s						
TRF	Thorofare Moun	84.65	18	eP	P	13 49 15.8	-2.0
	comp=Z,9.6nm,0.8s						
BPAW	Bear Paw Mtn.	84.94	17	eP	P	13 49 17.3	-1.7
	comp=Z,3.7nm,1.0s						
MCK	McKinley	85.26	18	eP	P	13 49 18.9	-1.7
	comp=Z,6.1nm,0.8s						
MCK	McKinley	85.26	18	eP	P	13 49 19.0	-1.7
MCK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BWN	Browne	85.43	17	eP	P	13 49 21.1	-0.4
	comp=Z,20nm,0.7s						
YBH	Yreka Blue Hor	85.45	45	P	P	13 49 23.0	+0.8
	comp=Z,2.0nm,0.6s,baz=135,slow=2.9,SNR=7.8						
YBH				LR	LR	14 20 37.0	
	comp=Z,46nm,18.7s,baz=252,slow=31						
YBH	Yreka Blue Hor	85.45	45	P	P	13 49 23.0	+0.8
YBH				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AFDM	Forest Hills D	85.55	48	eP	P	13 49 21.2	-1.5
	comp=Z,3.2nm,0.8s						
CMB	Columbia Colle	85.62	49	eP	P	13 49 22.9	-0.1
	comp=Z,2.9nm,0.8s						
CMB	Columbia Colle	85.62	49	eP	P	13 49 22.9	-0.1
CMB				pmax	pmax		
	comp=Z,3.0nm,0.8s						
LSA	Lhasa	85.72	302	eP	P	13 49 23.9	-0.4
	comp=Z,8.8nm,0.5s						
LSA	Lhasa	85.72	302	eP	P	13 49 23.9	-0.4
LSA				pmax	pmax		
	comp=Z,9.0nm,0.5s						
ZAK	Zakamensk	85.73	325	eP	P	13 49 23.2	-0.2
ZAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
WRH	Wood River Hil	86.06	18	eP	P	13 49 23.9	-0.6
	comp=Z,6.4nm,0.7s						
TLY	Talaya	86.17	326	eP	P	13 49 25.5	+0.1
	comp=Z,6.5nm,0.8s						
TLY	Talaya	86.17	326	eP	P	13 49 26.1	+0.7
TLY				pmax	pmax		
	comp=Z,7.0nm,0.9s						
CCB	Clear Creek Bu	86.27	18	eP	P	13 49 24.0	-1.6
	comp=Z,4.7nm,0.7s						
BEKR	Beckworth	86.34	47	eP	P	13 49 26.8	+0.1
	comp=Z,2.7nm,0.8s						
HDA	Harding Lake	86.35	18	eP	P	13 49 25.1	-0.9
	comp=Z,11nm,0.7s						
MDM	Murphy Dome	86.38	17	eP	P	13 49 24.9	-1.3
	comp=Z,6.0nm,0.9s						
COLA	College	86.42	18	eP	P	13 49 25.1	-1.1
	comp=Z,7.8nm,0.7s						
COLA	College	86.42	18	eP	P	13 49 25.1	-1.1
COLA				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MDPB	Devils Postpil	86.43	50	eP	P	13 49 27.2	-0.1
	comp=Z,3.8nm,0.8s						
BAR	Barrett	86.51	55	eP	P	13 49 28.0	+0.4
	comp=Z,3.7nm,0.8s						
ILAR	Eielson Array	86.63	18	P	P	13 49 26.5	-0.8
	comp=Z,6.5nm,0.6s,baz=238,slow=5.0,SNR=73						
ILAR				LR	LR	14 21 22.0	
	comp=Z,36nm,19.9s,baz=276,slow=31						
ILB	Eielson Array	86.63	18	eP	P	13 49 25.5	-1.8
IL1	Eielson Array	86.63	18	eP	P	13 49 25.7	-1.6
SCRK	Sand Creek	86.97	19	eP	P	13 49 28.3	-0.8
	comp=Z,3.0nm,0.8s						
PFO	Pinyon Flats O	87.00	54	eP	P	13 49 29.6	-0.4
	comp=Z,3.3nm,0.8s						
PFO	Pinyon Flats O	87.00	54	eP	P	13 49 29.6	-0.4
PFO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
XPFO	Piæon Flat	87.00	54	eP	P	13 49 29.6	-0.4
	comp=Z,3.3nm,0.8s						
RYN	Ryan	87.20	49	eP	P	13 49 30.6	-0.3
	comp=Z,2.1nm,0.9s						
NV01	Mina Array Sit	87.29	49	eP	P	13 49 31.1	-0.3
NVAR	Mina Array Bea	87.29	49	P	P	13 49 32.2	+0.8
	comp=Z,1.4nm,0.7s,baz=229,slow=7.7,SNR=14						
NVAR				LR	LR	14 23 37.3	
	comp=Z,28nm,18.3s,baz=91,slow=32						
NV11	Mina Array Sit	87.40	49	eP	P	13 49 32.2	+0.4
	comp=Z,0.3nm,1.1s						
PINE	Pine Mountain	87.47	43	eP	P	13 49 31.7	-0.5
	comp=Z,5.5nm,0.8s						
COLD	Coldfoot	87.54	15	eP	P	13 49 31.9	+0.3
	comp=Z,4.0nm,0.9s						
KVN	Kaiserville	87.66	49	eP	P	13 49 33.2	+0.1
	comp=Z,1.8nm,0.6s						
KVN	Kaiserville	87.66	49	eP	P	13 49 33.2	+0.1
KVN				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ODAN	Odare	87.96	298	eP	P	13 49 35.1	+0.2
	comp=Z,36nm,0.6s						
GLA	Glamis	88.10	55	eP	P	13 49 35.5	+0.3
	comp=Z,7.8nm,0.6s						
GLA	Glamis	88.10	55	eP	P	13 49 35.5	+0.3
GLA				pmax	pmax		
	comp=Z,8.0nm,0.6s						
TPNV	Topopah Spring	88.29	51	eP	P	13 49 36.2	+0.1
	comp=Z,3.2nm,0.6s						
TPNV	Topopah Spring	88.29	51	eP	P	13 49 36.2	+0.1
TPNV				pmax	pmax		
	comp=Z,3.0nm,0.6s						
EGAK	Eagle	88.42	20	eP	P	13 49 34.7	-1.2
	comp=Z,3.2nm,0.7s						
LDFC	Landfair	88.54	53	eP	P	13 49 37.4	+0.1
	comp=Z,9.3nm,0.7s						
Y12C	Blythe	88.57	55	eP	P	13 49 37.9	+0.6
	comp=Z,5.9nm,1.2s						
SYO	Syowa Base	88.60	197	⇓eP	P	13 49 35.9	-0.9
SYO	Syowa Base	88.60	197	⇓iPcP	PcP	13 49 41.4	+3.1
PALK	Pallekele	88.65	278	LR	LR	14 31 27.9	
	comp=Z,86nm,18.1s,baz=205,slow=37						
RAMN	Ramite	88.66	298	eP	P	13 49 38.2	0.0
	comp=Z,15nm,0.4s						
J08A	Circle Bar Ran	88.96	45	eP	P	13 49 39.3	+0.2
	comp=Z,5.5nm,1.0s						
JIRN	Jiri	89.22	299	eP	P	13 49 39.5	-1.5
G08A	Pilot Rock	89.36	43	eP	P	13 49 40.9	0.0
	comp=Z,4.1nm,0.8s						
PKIN	Phulchoki	89.87	298	eP	P	13 49 44.2	+0.3
	comp=Z,14nm,0.6s						
KKN	Kakani	90.03	299	eP	P	13 49 44.4	-0.2
DMN	Daman	90.12	298	eP	P	13 49 44.6	-0.5
	comp=Z,34nm,1.0s						
BMO	Blue Mountains	90.29	43	eP	P	13 49 44.8	-0.4
	comp=Z,1.7nm,0.6s						
BMO	Blue Mountains	90.29	43	eP	P	13 49 44.8	-0.4
BMO				pmax	pmax		
	comp=Z,2.0nm,0.6s						
LCMT	Little Creek M	90.59	52	eP	P	13 49 46.7	-0.1
	comp=Z,2.7nm,0.8s						
PSUT	Pine Spring	90.61	50	eP	P	13 49 47.2	+0.2
	comp=Z,2.9nm,0.7s						
GKN	Gorkha	90.63	299	eP	P	13 49 46.6	-0.7
	comp=Z,22nm,0.7s						
CCUT	Cedar City	90.67	51	eP	P	13 49 47.5	+0.1
	comp=Z,4.9nm,1.3s						
F10A	Beach Ranch, E	90.73	42	eP	P	13 49 46.9	-0.3
	comp=Z,6.0nm,0.8s						
MFID	Camas Ranch	90.79	45	eP	P	13 49 46.7	-0.9
	comp=Z,2.1nm,0.8s						
TUC	Tucson	91.12	57	eP	P	13 49 49.2	-0.2
	comp=Z,2.7nm,0.8s						
TUC	Tucson	91.12	57	eP	P	13 49 49.2	-0.2
TUC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WUAZ	Wupatki	91.58	54	eP	P	13 49 51.8	+0.3
	comp=Z,3.0nm,0.8s						
MTPU	Mount Pierson	91.71	51	eP	P	13 49 52.8	+0.5
	comp=Z,2.3nm,0.8s						
TMUT	Trail Mountain	92.81	50	eP	P	13 49 57.6	+0.3
	comp=Z,2.9nm,1.1s						
WMQ	Urumqi	92.90	315	P	P	13 49 57.9	+0.6
WMQ				sP	sP	13 50 46.6	+3.1
WMQ				pmax	pmax		
	comp=Z,16nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,170nm,3.7s						
INK	Inuvik	92.99	19	LR	LR	14 26 25.3	
	comp=Z,33nm,19.2s,baz=204,slow=32						
SNAA	Sanae	93.41	183	P	P	13 49 58.0	-1.2
SNAA	Sanae	93.41	183	P	P	13 49 58.0	-1.2
	comp=Z,6.7nm,0.8s,baz=190,slow=10.0,SNR=44						
SNAA	Sanae	93.41	183	eP	P	13 49 57.7	-1.6
	comp=Z,16nm,1.1s						
SNAA	Sanae	93.41	183	c iP	P	13 49 57.6	-1.6
P18A	Preston Nutter	93.61	50	eP	P	13 50 00.0	-1.0
	comp=Z,2.2nm,0.9s						
VNA3	Neumayer Olymp	94.07	181	P	P	13 50 00.7	-1.4
PV23	Carpenter Ridg	94.22	51	eP	P	13 50 03.8	0.0
	comp=Z,4.6nm,0.7s						
PV21	Cone Mtn., Par	94.28	51	eP	P	13 50 04.1	+0.1
	comp=Z,3.8nm,0.7s						
PV22	Blue Mesa, Par	94.41	51	eP	P	13 50 04.1	-0.4
	comp=Z,3.6nm,1.0s						
VNA1	Neumayer--Stat	94.64	181	P	P	13 50 03.7	-1.1
DGZ	Jazzator, Alta	94.84	320	i P	P	13 50 06.0	-0.2
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
PDAR	Pinedale Array	94.97	47	P	P	13 50 05.9	-1.2
	comp=Z,0.3nm,0.6s,baz=242,slow=3.2,SNR=3.8						
PDAR				PKKPbc	PKKPdf	14 06 59.2	-4.3
	comp=Z,0.4nm,0.8s,baz=63,slow=4.2,SNR=4.5						
PDAR				LR	LR	14 29 39.5	
	comp=Z,25nm,18.0s,baz=260,slow=33						
ANMO	Albuquerque	95.30	55	i P	P	13 50 07.8	-0.9
ANMO				pmax	pmax		
	comp=Z,1.0nm,0.9s						
TX31	Lajitas Ar. Si	96.26	61	eP	P	13 50 12.8	-0.2
TXAR	Lajitas Array	96.26	61	P	P	13 50 13.7	+0.6
	comp=Z,0.7nm,0.7s,baz=220,slow=5.1,SNR=14						
TXAR				PP	PP	13 54 08.1	-0.1
	comp=Z,0.2nm,0.8s,baz=238,slow=6.2,SNR=4.2						
TXAR				PKKPbc	PKKPbc	14 06 59.0	-0.3
	comp=Z,0.2nm,0.5s,baz=93,slow=1.8,SNR=4.0						
MK01	Makanchi Array	97.36	316	eP	P	13 50 17.1	-0.5
MK31	Makanchi Array	97.38	316	eP	P	13 50 17.0	-0.6
MKAR	Makanchi Array	97.38	316	P	Pdif	13 50 18.0	+0.3
	comp=Z,5.1nm,0.7s,baz=99,slow=5.7,SNR=51						
MKAR				pP	pP	13 50 50.5	0.0
	comp=Z,1.7nm,0.7s,baz=73,slow=8.0,SNR=2.3						
MKAR				PKiKP	PKiKP	13 54 51.5	-0.5
	comp=Z,0.3nm,0.5s,baz=42,slow=1.9,SNR=4.5						
MKAR	Makanchi Array	97.38	316	eP	P	13 50 17.1	-0.5
	comp=Z,29nm,0.7s						
MKAR				pP	pP	13 50 50.5	0.0
MKAR				PKiKP	PKiKP	13 54 51.5	-0.5
ZAA0	Zalesovo Array	97.57	324	eP	P	13 50 16.7	-1.5
	comp=Z,5.2nm,0.7s						
ZALV	Zalesovo Beam	97.57	324	P	P	13 50 17.6	-0.7
	comp=Z,5.8nm,0.7s,baz=123,slow=5.3,SNR=14						
ZALV	Zalesovo Beam	97.57	324	eP	P	13 50 16.9	-1.3
MAKZ	Makanchi	97.59	316	eP	P	13 50 17.4	-1.1
	comp=Z,2.7nm,0.8s						
YKA	Yellowknife Ar	97.63	27	P	P	13 50 16.9	-1.3
	comp=Z,1.0nm,0.7s,baz=258,slow=5.0,SNR=3.4						
YKA	Yellowknife Ar	97.63	27	P	P	13 50 17.0	-1.3
KURK	Kurchatov	100.58	320	P	Pdif	13 50 32.2	+0.5
KURK	Kurchatov	100.58	320	P	Pdif	13 50 32.2	+0.5
KURBB	Kurchatov Arra	100.61	320	P	Pdif	13 50 32.2	+0.3
	comp=Z,0.4nm,0.5s,baz=92,slow=4.5,SNR=4.0						
BVAR	Borovoye Array	105.92	321	Pdiff	Pdif	13 50 55.9	+0.4
	comp=Z,0.2nm,0.4s,baz=116,slow=6.6,SNR=3.4						
BVAR				PKiKP	PKiKP	13 55 06.6	-0.7
	comp=Z,0.4nm,0.4s,baz=29,slow=3.3,SNR=4.0						
OPO	Ambohidratompo	112.36	242	PKiKP	PKiKP	13 55 20.4	-0.2
	comp=Z,2.8nm,0.7s,baz=93,slow=17,SNR=4.0						
ARU	Arti	112.66	325	PKIKP	PKiKP	13 55 19.0	-0.8
AKTO	Aktyubinsk	113.64	319	PKiKP	PKiKP	13 55 21.1	-0.7
	comp=Z,1.1nm,0.5s,baz=180,slow=2.0,SNR=5.1						
SPITS	Spitsbergen Ar	115.09	354	PKP	PKPdf	13 55 23.1	-0.9
	comp=Z,3.8nm,0.9s,baz=36,slow=11,SNR=3.4						
ARCES	ARCESS Array B	120.42	345	PKP	PKPdf	13 55 33.8	-0.5
	comp=Z,6.9nm,0.5s,baz=67,slow=0.9,SNR=72						
ARCES				PKKPbc	PKKPab	14 05 39.3	-2.5
	comp=Z,0.8nm,0.6s,baz=237,slow=4.2,SNR=4.2						
KLMR	Klimovskoe	120.86	333	ePKIKP	PKPdf	13 55 33.3	-2.1
KLMR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KLMR	Klimovskoe	120.86	333	ePKPdf	PKPdf	13 55 33.3	-2.1
KLMR				AMP		13 55 35.6	
	comp=Z,7.0nm,0.8s						
BOSA	Boshof	123.33	220	PKP	PKPdf	13 55 41.3	-0.1
	comp=Z,4.8nm,0.8s,baz=133,slow=1.2,SNR=9.9						
RAYN	Ar Rayn	124.74	288	ePKPdf	PKPdf	13 55 43.4	-0.6
RAYN	Ar Rayn	124.74	288	ePKIKP	PKPdf	13 55 43.4	-0.6
OBN	Obninsk	124.88	328	⇑ePKIKP	PKPdf	13 55 43.4	+0.2
OBN				e		13 57 34.3	
OBN				pmax	pmax		

	comp=Z,8.0nm,0.9s						
KBZ	Khabaz	124.92	313	PKP	PKPdf	13 55 43.8	+0.1
	comp=Z,1.5nm,0.8s,baz=112,slow=10,SNR=3.7						
KIV	Kislovodsk	125.02	314	⇓*e*PKIKP	PKPdf	13 55 43.7	-0.4
KIV				*e*		13 56 17.1	
KIV				*e*		13 57 30.9	
KIV				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NEY	Neytrino	125.16	313	*i* PKIKP	PKPdf	13 55 45.6	+1.1
FINES	FINESS Array B	125.89	338	PKP	PKPdf	13 55 44.7	-0.3
	comp=Z,3.1nm,0.6s,baz=9.4,slow=6.3,SNR=26						
SOC	Sochi	127.19	314	*i* PKIKP	PKPdf	13 55 45.9	-2.2
SOC				*e*		13 57 49.4	
SOC				*e*PS	SP	14 07 42.5	+2.5
SOC				*e*SS	SS	14 15 09.6	+22
SOC				pmax	pmax		
	comp=Z,17nm,0.8s						
LSZ	Lusaka	129.75	235	*e*PKPdf	PKPdf	13 55 53.0	-0.9
LSZ	Lusaka	129.75	235	*e*PKIKP	PKPdf	13 55 53.0	-0.9
NB2	NORSAR Subarra	130.79	345	PKPdf	PKPdf	13 55 54.5	0.0
	comp=Z,1.1nm,0.6s,baz=31,slow=1.9						
NOA	NORSAR Array B	130.79	345	PKP	PKPdf	13 55 54.7	+0.2
	comp=Z,1.2nm,0.6s,baz=36,slow=2.1,SNR=8.5						
NOA				SKPbc	SKPab	13 59 09.0	+1.9
	comp=Z,2.4nm,0.8s,baz=30,slow=3.0,SNR=7.5						
HFS	Hagfors	130.89	343	PKP	PKPdf	13 55 54.6	0.0
	comp=Z,2.1nm,0.6s,baz=129,slow=2.0,SNR=8.5						
HFS				SKPbc	SKPab	13 59 08.6	+1.1
	comp=Z,5.3nm,1.0s,baz=116,slow=6.6,SNR=4.0						
AKASG	Malin Array Be	130.91	326	PKP	PKPdf	13 55 54.4	-0.6
	comp=Z,0.5nm,0.4s,baz=49,slow=3.0,SNR=4.4						
AKASG				SKPbc	SKPab	13 59 08.4	+0.5
	comp=Z,2.9nm,0.7s,baz=47,slow=4.4,SNR=13						
BRTR	Keskin Array B	132.68	311	PKP	PKPdf	13 55 59.2	+0.3
	comp=Z,1.1nm,0.6s,baz=126,slow=3.7,SNR=6.1						
BRTR				SKPbc	SKPab	13 59 16.2	+0.2
	comp=Z,1.6nm,1.0s,baz=105,slow=1.6,SNR=6.1						
BURAR	Bucovina Array	134.78	324	⇑PKIKP	PKPdf	13 56 04.1	+1.6
BUR04	Bucovina Ar. S	134.79	324	*e*PKPdf	PKPdf	13 56 02.7	+0.2
MLR	Muntele Rosu	135.49	321	⇓PKIKP	PKPdf	13 56 04.4	+0.5
VOIR		136.05	322	⇓PKIKP	PKPdf	13 56 06.5	+1.6
BZS	Buzias	137.96	324	⇓PKIKP	PKPdf	13 56 08.3	0.0
BRG	Berggiesshubel	138.18	335	*e*PKP	PKPpre	13 56 01.2	
	comp=Z,2.7nm,0.9s						
BRG				*e*		13 56 10.4	
	comp=Z,3.6nm,0.7s						
BRG	Berggiesshubel	138.18	335	*e*PKHKP	PKPpre	13 56 01.2	
BRG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GOPC	GO Pecny, Ondr	138.55	333	*e*PKPpre	PKPpre	13 56 03.3	
GOPC				*e*PKPdf	PKiKP	13 56 11.4	0.0
GOPC	GO Pecny, Ondr	138.55	333	*e*PKIKP	PKPpre	13 56 03.3	
PRU	Pruhonice	138.60	334	*e*PKPpre	PKPpre	13 56 02.8	
PRU				*e*PKPdf	PKiKP	13 56 11.3	-0.2
PRU	Pruhonice	138.60	334	*e*PKHKP	PKPpre	13 56 02.8	
EKA	Eskdalemuir Ar	138.97	352	PKP	PKPdf	13 56 10.2	+0.4
	comp=Z,1.3nm,0.5s,baz=7.6,slow=1.5,SNR=5.4						
CONA	Conrad Observa	139.49	330	*e*PKPdf	PKPpre	13 56 06.8	
	comp=Z,2.0nm,0.7s						
KHC	Kasperske Hory	139.66	333	*e*PKPpre	PKPpre	13 56 06.5	
KHC				*e*PKPdf	PKiKP	13 56 13.7	0.0
KHC	Kasperske Hory	139.66	333	*e*PKIKP	PKPpre	13 56 06.5	
GERES	GERESS Array B	139.82	333	PKhKP	PKPpre	13 56 06.2	
	comp=Z,1.5nm,0.5s,baz=34,slow=3.0,SNR=13						
GEA0	GERESS Array S	139.82	333	*e*PKPpre	PKPpre	13 56 05.2	
MOA	Molln	140.30	332	*e*PKPdf	PKPpre	13 56 07.8	
	comp=Z,1.6nm,0.6s						
FNA	Florina	140.77	318	*e*PKPpre	PKPpre	13 56 05.5	
FNA	Florina	140.77	318	*e*PKHKP	PKPpre	13 56 05.5	
SOKA	Soboth	140.78	330	*e*PKPdf	PKPpre	13 56 09.0	
	comp=Z,11nm,1.7s						
MYKA	Terra Mystica	141.48	331	*e*PKPdf	PKPpre	13 56 10.1	
	comp=Z,1.3nm,0.5s						
WATA	Walderalm	141.89	333	*e*PKPdf	PKPpre	13 56 12.8	
	comp=Z,2.3nm,0.4s						
ABTA	Abfaltersbach	141.92	332	*e*PKPdf	PKPpre	13 56 11.9	
	comp=Z,1.2nm,0.4s						
WTTA	Wattenberg	141.92	333	*e*PKPdf	PKPpre	13 56 11.3	
	comp=Z,4.2nm,0.7s						
WLF	Walferdange	142.07	340	*e*PKPpre	PKPpre	13 56 10.7	
WLF	Walferdange	142.07	340	*e*PKHKP	PKPpre	13 56 10.7	
RETA	Reutte	142.12	334	*e*PKPdf	PKPpre	13 56 11.7	
	comp=Z,1.0nm,0.4s						
ITM	Ithomi	142.14	312	*e*PKPpre	PKPpre	13 56 10.9	
BFO	Black Forest	142.42	337	*e*PKPpre	PKPpre	13 56 12.6	
BFO	Black Forest	142.42	337	*e*PKIKP	PKPpre	13 56 12.6	
FETA	Feichten	142.50	334	*e*PKPdf	PKPpre	13 56 13.2	
	comp=Z,10nm,0.7s						
DAVA	Damuels	142.65	335	*e*PKPdf	PKPpre	13 56 13.6	
	comp=Z,4.6nm,0.6s						
FUORN	Ofenpass-Fuorn	143.01	334	*e*PKPdf	PKPbc	13 56 15.5	+0.6
DAVOX	Davos/Dischmat	143.05	334	PKP	PKPbc	13 56 15.4	+0.5
	comp=Z,22nm,0.5s,baz=220,slow=6.9,SNR=56						
TUE	Stuetta	143.52	334	*e*PKPdf	PKPbc	13 56 16.5	+0.3
SENIN	Lac Senin/Sane	144.44	336	*e*PKPdf	PKPbc	13 56 18.8	-0.2
AQU	L'Aquila	144.61	326	*e*PKPdf	PKPab	13 56 19.3	0.0
AQU	L'Aquila	144.61	326	*e*PKIKP	PKPab	13 56 19.3	0.0
TIP	Timpagrande	144.62	319	*e*PKPdf	PKPbc	13 56 19.6	0.0
CUC	Castrocucco	144.73	321	*e*PKPbc	PKPab	13 56 18.7	-1.1
VLC	Villacollemand	144.85	331	*e*PKPbc	PKPab	13 56 19.4	-0.7
CEL	Celeste	145.70	318	*e*PKPdf	PKPdf	13 56 21.5	-0.9
BNI	Bardonecchia	145.77	335	*e*PKPdf	PKPab	13 56 23.6	0.0
BNI	Bardonecchia	145.77	335	*e*PKP2	PKPab	13 56 23.6	0.0
CLTB	Caltabellotta	147.81	319	*e*PKPbc	PKPbc	13 56 28.5	-0.6
KEST	Kesra	151.38	321	PKPbc	PKPbc	13 56 38.0	+0.1
	comp=Z,8.7nm,0.4s,baz=253,slow=1.0,SNR=29						
KEST	Kesra	151.38	321	*e*PKPbc	PKPbc	13 56 38.0	+0.1
THTN	Thala	151.90	321	*e*PKPbc	PKPbc	13 56 39.1	0.0
PBRG	Braganca	152.69	350	*e*PKPab	PKPab	13 56 52.0	+0.4
POLO	Lamas de Olo	153.26	352	*e*PKPbc	PKPbc	13 56 42.2	+0.3
POLO	Lamas de Olo	153.26	352	*e*PKPab	PKPab	13 56 54.6	+0.5
PVRL	Vila Real	153.35	352	*e*PKPbc	PKPbc	13 56 42.5	+0.4
PVRL	Vila Real	153.35	352	*e*PKPab	PKPab	13 56 55.3	+0.9
MVO	Moncorvo	153.36	351	*e*PKPbc	PKPbc	13 56 42.3	+0.2
PVIS	Viseu	153.93	352	*e*PKPbc	PKPbc	13 56 43.2	-0.1
PVIS	Viseu	153.93	352	*e*PKPab	PKPab	13 56 57.6	+0.7
ES19	SONSECA Array	154.11	344	*e*PKPbc	PKPbc	13 56 43.1	-0.7
ESDC	Sonseca Array	154.15	345	PKPbc	PKPbc	13 56 43.8	0.0
	comp=Z,0.7nm,0.6s,baz=10,slow=2.8,SNR=7.8						
ESDC				PKPab	PKPab	13 56 58.3	+0.4
	comp=Z,1.9nm,0.6s,baz=14,slow=3.9,SNR=12						
MTE	Manteigas	154.18	351	*e*PKPbc	PKPbc	13 56 45.0	+1.1
PCBR	Castelo Branco	154.72	351	*e*PKPab	PKPab	13 57 00.8	+0.6
PTOM	Tomar	155.07	352	*e*PKPab	PKPab	13 57 03.2	+1.5
PMRV	Marv??o	155.11	350	*e*PKPbc	PKPdf	13 56 46.2	+9.3
PMRV	Marv??o	155.11	350	*e*PKPab	PKPab	13 57 02.9	+1.0
PESTR	Estremoz	155.69	350	*e*PKPab	PKPab	13 57 05.0	+0.6
PBEJ	Beja	156.56	351	*e*PKPab	PKPab	13 57 10.5	+2.4
PNCL	Nicolau / Gran	156.57	352	*e*PKPab	PKPab	13 57 09.1	+0.9
MESJ	Messejana	156.79	351	*e*PKPab	PKPab	13 57 10.7	+1.6
PVAQ	Vaqueiros	157.14	350	*e*PKPab	PKPab	13 57 11.1	+0.4
MORF	Marmelete	157.38	352	*e*PKPab	PKPab	13 57 13.6	+1.8
MDT	Midelt	160.71	339	PKPab	PKPab	13 57 28.4	+2.0
	comp=Z,1.5nm,0.8s,baz=45,slow=7.1,SNR=3.3						
TOA0	Torodi Ar. Sit	166.00	265	*e*PKPdf	PKPdf	13 56 47.7	-1.7
TOA0				*e*PKPab	PKPab	13 57 48.0	-2.2
TORD	Torodi Ar. Bea	166.00	265	PKP	PKPdf	13 56 48.9	-0.5
	comp=Z,2.2nm,0.7s,baz=30,slow=1.1						
TORD				PKPab	PKPab	13 57 50.0	-0.2
	baz=108,slow=4.7						
KIC	Kosan Boka	168.53	223	*e*PKIKP	PKPdf	13 56 50.1	-1.2
	comp=Z,34nm,1.2s						
LIC	Lamto	168.62	222	*e*PKIKP	PKPdf	13 56 50.2	-1.2
	comp=Z,33nm,1.5s						
DBIC	Dimbokro	168.84	224	PKP	PKPdf	13 56 50.6	-0.9
	comp=Z,2.5nm,0.5s,baz=118,slow=2.9,SNR=6.4						
DBIC				PKPab	PKPab	13 58 02.5	-0.1
	comp=Z,2.1nm,0.6s,baz=92,slow=3.8,SNR=4.8						
TIC	Toumodi	168.93	223	*e*PKIKP	PKPdf	13 56 50.5	-1.1
KOWA	Kowa	171.66	269	PKP	PKPdf	13 56 52.3	-0.7
	comp=Z,2.6nm,0.6s,baz=298,slow=1.5,SNR=7.4						
KOWA				PKPab	PKPab	13 58 14.8	-0.5
	comp=Z,1.3nm,0.5s,baz=78,slow=8.1,SNR=3.9						

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*IDC **22** 13:54:24.8±28.0, 51°.44N×175°.19W, h0^{km}, mb3.2/2, mb1 3.5/3, mb1mx3.2/70, mbtmp3.1/3, ML3.2/1, Error ellipse: s-maj=563.8km s-min=74.3km az=85.0*
*NEIC **22** 13:54:38.2±0.0, 51°.78N×174°.61W, h5^{km}, ML2.9(AEIC), After AEIC.*
ISC 22 13:54:34.7±2.5**, 51°.5N**±0°.1×**174°.37W**±0°.09**, h17**^{km}±12^{km}**, n20,** σ1ˢ**58**/19**, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ATKA	Atka Island	0.68	9	P	Pg	13 54 48.4	+0.4
ATKA				S	Sb	13 54 56.4	-0.8
KOFP	Korovin Flat P	0.76	13	P	Pb	13 54 50.9	+1.3
KOKL	Mount Kliuchef	0.80	8	P	Pb	13 54 51.1	+0.9
KOKL				S	Sb	13 55 00.1	-0.7
KOWE	Korovin West	0.84	5	P	Pb	13 54 51.7	+0.9
KOWE				S	Sb	13 55 00.8	-1.1
GSCK	Great Sitkin C	1.21	294	P	Pg	13 54 57.1	-0.9
GSCK				S	Sn	13 55 12.8	-0.1
GSTD	Great Sitkin T	1.22	296	P	Pg	13 54 57.3	-0.9
GSTD				S	Sn	13 55 13.2	0.0
GSSP	Great Sitkin S	1.25	297	P	Pg	13 54 57.9	-1.0
ETKA	Kagalaska Isla	1.31	285	P	Pb	13 54 59.0	+0.2
ETKA				S	Sn	13 55 15.7	+0.4
ADAG	Mount Adagdak	1.46	289	P	Pn	13 55 01.6	+1.3
ADAG				S	Sn	13 55 20.0	+1.0
KIMD	Kanaga Island	1.80	278	P	Pn	13 55 07.0	+2.1
TAFP	Tanaga Falls P	2.27	281	P	Pn	13 55 14.2	+2.6
ILAR	Eielson Array	19.43	36	P	P	13 58 56.0	-3.9
	0.1nm,0.3s,baz=223,slow=9.3,SNR=6.1						
H11N2	WAKE ISLAND Hy	34.98	212	T	T	14 39 05.6	
	baz=22,slow=76						
H11N3	WAKE ISLAND Hy	34.99	212	T	T	14 39 06.2	
	baz=22						
H11N1	WAKE ISLAND Hy	35.00	212	T	T	14 39 06.7	
	baz=22,slow=76						
H11S1	WAKE ISLAND Hy	36.19	211	T	T	14 40 46.1	
	baz=19,slow=76,SNR=5.3						
H11S2	WAKE ISLAND Hy	36.20	211	T	T	14 40 38.2	
	baz=19,slow=76,SNR=5.2						
H11S3	WAKE ISLAND Hy	36.21	211	T	T	14 40 40.1	
	baz=19,slow=76,SNR=4.9						
PDAR	Pinedale Array	43.61	75	P	P	14 02 35.9	-2.3
	0.3nm,0.5s,baz=316,slow=3.8,SNR=4.0						
TXAR	Lajitas Array	55.89	85	P	P	14 04 07.4	-4.2
	0.2nm,0.7s,baz=313,slow=4.5,SNR=3.0						

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*ISCJB **22** 14:08:09.3±0.5, 37°.23N±0°.03×28°.20E±0°.04, h0^{km}, Error ellipse: s-maj=5.5km s-min=3.6km az=33.9*
*CSEM **22** 14:08:09.7±0.1, 37°.23N×28°.20E, h1^{km}, ML2.4, Error ellipse: s-maj=3.4km s-min=2.4km az=38.0, Suspected Mining explosion.*
*DDA **22** 14:08:09.3, 37°.23N×28°.21E, h7^{km}, Md2.5, Suspected Mining explosion.*
*ISK **22** 14:08:09.1, 37°.24N×28°.19E, h7^{km}, ML2.4/9*
ISC 22 14:08:08.9±0.9**, 37°.25N**±0°.03×**28°.22E**±0°.03**, h0**^{km}**, n27,** σ**0ˢ73**/37**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YER	Yerkesik	0.12	156	PG	Pg	14 08 12.2	+0.9
YER	Yerkesik	0.12	156	*e*Pg	Pg	14 08 12.2	+0.9
MLSB	Milas	0.36	277	PG	Pg	14 08 16.4	+0.6
MLSB				SG	Sg	14 08 21.3	+0.9
MLSB	Milas	0.36	277	*e*Pg	Pg	14 08 16.4	+0.6
MLSB				*e*Sg	Sg	14 08 21.3	+0.9
TURN	Turunc	0.48	141	PG	Pg	14 08 18.6	+0.4
TURN				SG	Sg	14 08 25.4	+0.9
TURN	Turunc	0.48	141	*i* P	Pg	14 08 18.7	+0.5
TURN				*i* S	Sg	14 08 24.1	-0.4
TURN	Turunc	0.48	141	P	Pg	14 08 18.7	+0.5
TURN				S	Sg	14 08 24.1	-0.4
TURN				*e*Sg	Sg	14 08 25.4	+0.9
AYDN	Tasoluk	0.49	327	*i* P	Pb	14 08 20.1	-0.4
AYDN				*i* S	Sg	14 08 25.6	+0.9
AYDN	Tasoluk	0.49	327	P	Pb	14 08 20.1	-0.4
AYDN				S	Sg	14 08 25.6	+0.9
DALY	Dalyan (Mu˜la	0.55	141	PG	Pg	14 08 20.5	+1.0
DALY	Dalyan (Mu˜la	0.55	141	*e*Pg	Pg	14 08 20.5	+1.0
TAVA	DENIZLI_Tavas	0.59	68	*i* P	Pb	14 08 22.5	+0.2
TAVA				*i* S	Sb	14 08 29.7	-1.5
TAVA	DENIZLI_Tavas	0.59	68	P	Pb	14 08 22.5	+0.2
TAVA				S	Sb	14 08 29.7	-1.5
DAT	Datca	0.73	225	PG	Pg	14 08 23.5	+0.6
DAT	Datca	0.73	225	*i* P	Pb	14 08 24.2	-0.4
DAT	Datca	0.73	225	*e*Pg	Pg	14 08 23.5	+0.6
DAT	Datca	0.73	225	P	Pb	14 08 24.2	-0.4
AYDB	Zeytinkoy-Aydi	0.74	340	PG	Pg	14 08 23.9	+0.7
AYDB	Zeytinkoy-Aydi	0.74	340	*e*Pg	Pg	14 08 23.9	+0.7
BODT	Bodrum	0.75	256	PG	Pg	14 08 23.6	+0.3
BODT	Bodrum	0.75	256	*e*Pg	Pg	14 08 23.6	+0.3
GCAM	G?zelcaml?	0.90	300	PG	Pg	14 08 26.5	+0.2
GCAM	G?zelcaml?	0.90	300	*e*Pg	Pg	14 08 26.5	+0.2
ARG	Arkhangelos	1.03	184	PG	Pg	14 08 29.3	+0.6
ARG	Arkhangelos	1.03	184	*e*Pg	Pg	14 08 29.3	+0.6
AKAS	Kas	1.51	132	PN	Pn	14 08 37.1	-0.2
AKAS	Kas	1.51	132	*e*Pn	Pn	14 08 37.1	-0.2

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*IDC **22** 14:10:08.1±0.6, 29°.25S×176°.06W, h0^{km}, mb4.1/11, mb1 4.3/13, mb1mx4.0/47, mbtmp4.1/13, ML3.7/2, MS3.3/6, Ms1 3.4/6, ms1mx3.0/44, Error ellipse: s-maj=21.4km s-min=16.2km az=164.0*
*ISCJB **22** 14:10:11.1±0.6, 29°.48S±0°.09×176°.02W±0°.07, h28^{km}, mb4.0/12, MS3.5/3, Error ellipse: s-maj=13.3km s-min=9.1km az=173.5*
*NEIC **22** 14:10:13.5±2.1, 29°.34S×176°.14W, h37^{km}±18^{km}, mb4.5/1, Error ellipse: s-maj=17.7km s-min=13.8km az=65.0*
ISC 22 14:10:12.4±0.6**, 29°.38S**±0°.09×**176°.14W**±0°.08**, h28**^{km}**, n31,** σ**0ˢ98**/24**, mb4.0**/11**, MS3.4**/3**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.56	274	Pn	Pb	14 10 39.8	-0.8
	528nm,0.3s,baz=83,slow=6.5,SNR=30						
RAO				Sn	Sb	14 11 01.4	+1.5
	1µm,0.3s,baz=262,slow=24,SNR=15						
URZ	Urewera	10.48	211	Pn	Pn	14 12 39.8	-1.0
	0.2nm,0.3s,baz=35,slow=16,SNR=2.5						
URZ				Sn	Sn	14 14 36.0	-1.2
	2.0nm,0.3s,baz=318,slow=24,SNR=10						
AFI	Afiamalu	15.91	16	LR	LR	14 19 00.4	
	comp=Z,20nm,21.1s,baz=158,slow=34						
RAR	Rarotonga	16.87	65	LR	LR	14 18 49.6	
	comp=Z,124nm,21.0s,baz=243,slow=31						
DZM	Mont Dzumac	17.29	291	LR	LR	14 18 46.3	
	comp=Z,142nm,18.0s,baz=110,slow=30						
DZM	Mont Dzumac	17.29	291	*e*P	P	14 14 19.8	+6.7
	63nm,1.5s						
DZM				*e*LR	LR	14 18 25.7	
	232nm,27.9s						
RPZ	Rata Peaks	17.59	212	P	P	14 14 16.7	+0.5
	0.6nm,0.3s,baz=29,slow=10,SNR=3.9						
PPT2	Papeete2	26.97	70	*e*LR	LR	14 22 14.0	
	86nm,24.0s						
PPT	Papeete	26.98	70	LR	LR	14 25 04.0	
	comp=Z,97nm,18.8s,baz=240,slow=33						
STKA	Stephens Creek	36.29	255	P	P	14 17 15.2	+1.7
	1.9nm,0.7s,baz=143,slow=20,SNR=2.9						
ASAR	Alice Springs	44.79	265	P	P	14 18 23.3	-0.7
	1.3nm,0.7s,baz=106,slow=6.2,SNR=9.1						
WRA	Warramunga Arr	45.69	270	P	P	14 18 29.8	-1.3
	1.9nm,0.8s,baz=108,slow=7.8,SNR=9.2						
GUMO	Guam	56.93	313	LR	LR	14 44 31.3	
	comp=Z,20nm,18.1s,baz=136,slow=36						
QSPA	South Pole Qui	60.73	180	P	P	14 20 23.0	+1.8
	2.2nm,1.0s,baz=60,slow=3.0,SNR=3.9						
MJAR	Matsushiro Arr	78.34	324	P	P	14 22 10.9	+0.9
	0.8nm,0.8s,baz=160,slow=5.2,SNR=3.6						
PLCA	Paso Flores	82.01	132	P	P	14 22 30.3	+0.2
	1.1nm,0.9s,baz=275,slow=12,SNR=3.2						
PETK	Petropavlovsk-	85.24	345	P	P	14 22 45.7	-0.3
	1.5nm,0.8s,baz=145,slow=10						
NVAR	Mina Array Bea	86.40	42	P	P	14 22 52.7	+0.3
	1.4nm,0.9s,baz=225,slow=7.1,SNR=9.3						
NVAR				LR	LR	14 56 54.1	
	comp=Z,54nm,18.0s,baz=103,slow=32						
TXAR	Lajitas Array	90.48	56	P	P	14 23 11.9	+0.1
	0.5nm,0.8s,baz=264,slow=3.8,SNR=5.2						
HLID	Hailey	91.98	40	*e*P	P	14 23 19.0	+0.5
	2.4nm,1.2s						
ILAR	Eielson Array	96.58	12	P	P	14 23 37.6	-1.2
	0.3nm,0.7s,baz=208,slow=7.6,SNR=4.9						
LPAZ	La Paz	97.07	113	P	Pdif	14 23 42.9	-0.4
	0.8nm,0.8s,baz=153,slow=6.8,SNR=4.0						
MKAR	Makanchi Array	118.35	310	PKP	PKPdf	14 28 56.4	-0.5
	0.3nm,0.8s,baz=85,slow=3.0,SNR=2.3						
KURK	Kurchatov	121.51	314	PKP	PKPdf	14 29 02.2	-0.6
KURBB	Kurchatov Arra	121.55	314	PKP	PKPdf	14 29 02.2	-0.7
	0.3nm,0.6s,baz=109,slow=2.3,SNR=4.4						
FINES	FINESS Array B	144.71	342	PKP	PKPbc	14 29 44.2	-0.5
	1.9nm,0.8s,baz=11,slow=2.8,SNR=5.3						
NB2	NORSAR Subarra	147.96	353	PKP	PKPbc	14 29 53.6	-0.8
	comp=Z,1.3nm,0.6s,baz=8.5,slow=2.9						
NOA	NORSAR Array B	147.96	353	PKPbc	PKPbc	14 29 54.0	-0.4
	comp=Z,2.1nm,0.7s,baz=13,slow=4.5,SNR=6.5						
HFS	Hagfors	148.53	351	PKPbc	PKPbc	14 29 55.1	-0.8
	comp=Z,2.9nm,0.7s,baz=64,slow=6.8,SNR=4.7						
AKASG	Malin Array Be	151.43	325	PKPbc	PKPbc	14 30 02.6	-0.6
	comp=Z,1.3nm,0.7s,baz=46,slow=2.6,SNR=4.5						
TORD	Torodi Ar. Bea	163.73	172	PKPab	PKPab	14 31 06.2	+0.9
	baz=212,slow=3.5						

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*CSEM **22** 14:14:54.1±0.5, 27°.58N×55°.94E, h2^{km}, ML3.6, Error ellipse: s-maj=12.0km s-min=10.0km az=77.0*
*OMAN **22** 14:14:54.3±1.2, 27°.53N×55°.71E, h8^{km}, Error ellipse: s-maj=20.1km s-min=9.4km az=65.0*
*IDC **22** 14:14:55.2±1.1, 27°.28N×55°.56E, h0^{km}, mb3.7/11, mb1 3.8/12, mb1mx3.6/60, mbtmp3.7/12, ML3.6/1, Error ellipse: s-maj=25.1km s-min=19.4km az=20.0*
*TEH **22** 14:14:56.7, 27°.27N×55°.62E, h8^{km}, ML3.4*
*DSN **22** 14:14:57.5±0.9, 27°.44N×55°.95E, h15^{km}, ML3.6/8, Error ellipse: s-maj=18.1km s-min=5.7km az=69.0*
ISC 22 14:14:56.5±1.5**, 27°.30N**±0°.03×**55°.60E**±0°.06**, h7**^{km}±10^{km}**, n53,** σ**1ˢ39**/59**, mb3.7**/11**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GENO	Geno	0.52	79	*e*Sg	Sb	14 15 15.7	-0.2
GENO				*e*Pg	Pg	14 15 06.4	-0.1
GENO				*e*		14 15 17.8	
	comp=E,99nm,0.1s						
GENO				*e*		14 15 18.0	
	comp=Z,99nm,0.1s						
GENO				*e*		14 15 20.0	
	comp=N,99nm,0.1s						
NIAN	Nian	1.13	77	*e*Pg	Pn	14 15 19.5	+0.7
NIAN				*e*		14 15 39.2	
	comp=E,99nm,0.1s						
NIAN				*e*		14 15 39.4	
	comp=Z,99nm,0.1s						
NIAN				*e*		14 15 41.5	
	comp=N,99nm,0.2s						
SHME	Shamm	1.34	159	*e*P	Pn	14 15 21.6	-0.1
	SNR=67						
SHME				S	Sn	14 15 41.4	+1.6
SHME	Shamm	1.34	159	*e*Pg	Pb	14 15 21.9	0.0
SHME	Shamm	1.34	159	P	Pb	14 15 22.0	0.0
	SNR=69						
SHME				S	Sn	14 15 42.4	+2.6
KHSK	Kohestak	1.41	112	*e*Pg	Pg	14 15 23.4	0.0
KHSK				*e*		14 15 46.9	
	comp=N,99nm,0.2s						
KHSK				*e*		14 15 47.3	
	comp=E,99nm,0.1s						
KHSK				*e*		14 15 48.1	
	comp=Z,99nm,0.1s						
BANOM	Banah	1.51	155	P	Pb	14 15 24.8	-0.1
	SNR=72						
BANOM				S	Sg	14 15 46.9	+1.8
BANOM	Banah	1.51	155	*e*P	Pb	14 15 24.7	-0.2
	SNR=72						
BANOM				S	Sg	14 15 45.6	+0.6
BANOM	Banah	1.51	155	P	Pb	14 15 24.7	-0.2
	SNR=72						
BANOM				S	Sg	14 15 46.9	+1.8
MSFE	Esma-Masafi	2.00	165	*e*P	Pb	14 15 32.4	-0.9
	SNR=11						
MSFE	Esma-Masafi	2.00	165	*e*Pn	Pb	14 15 32.8	-0.4
MSFE	Esma-Masafi	2.00	165	P	Pb	14 15 31.9	-1.3
MDH	Madha	2.09	162	P	Pb	14 15 33.3	-1.5
MDH	Madha	2.09	162	P	Pn	14 15 32.9	+0.9
MDH				S	Sg	14 16 02.3	-1.4
NAZ	Nazwa, Dubai	2.31	179	P	Pb	14 15 37.3	-1.1
NAZ	Nazwa, Dubai	2.31	179	P	Pb	14 15 37.5	-1.0
NAZ	Nazwa, Dubai	2.31	179	*e*Pn	Pb	14 15 37.8	-0.6
NAZ	Nazwa, Dubai	2.31	179	P	Pb	14 15 37.3	-1.1
UOSS	Minazif	2.41	167	P	Pn	14 15 37.3	+0.9
UOSS	Minazif	2.41	167	*e*P	Pn	14 15 37.7	+1.3
	SNR=16						
UOSS	Minazif	2.41	167	P	Pn	14 15 37.7	+1.3
	SNR=16						
HATD	Hatta, Dubai	2.51	169	*e*P	Pn	14 15 39.6	+1.7
	SNR=8.6						
HATD	Hatta, Dubai	2.51	169	*e*Pn	Pb	14 15 40.0	-2.0
HATD	Hatta, Dubai	2.51	169	P	Pn	14 15 39.6	+1.7
	SNR=8.6						
NGRK	Negar Kerman	2.54	23	*e*Pn	Pb	14 15 42.2	-0.4
NGRK				*e*		14 16 20.0	
	comp=N,99nm,0.2s						
NGRK				*e*		14 16 21.2	
	comp=Z,99nm,0.2s						
NGRK				*e*		14 16 22.5	
	comp=E,99nm,0.1s						
ASHO	Ashiyiah	2.64	171	P	Pn	14 15 40.7	+1.1
	SNR=46						
ASHO	Ashiyiah	2.64	171	*e*P	Pn	14 15 40.7	+1.1
	SNR=46						
ASHO	Ashiyiah	2.64	171	P	Pn	14 15 40.7	+1.1
	SNR=46						
ASUD	Al Ashush, Dub	2.68	185	P	Pb	14 15 42.8	-2.0
ASUD	Al Ashush, Dub	2.68	185	*e*Pn	Pb	14 15 43.3	-1.5
ASUD	Al Ashush, Dub	2.68	185	P	Pb	14 15 42.8	-2.0
ISRV	Sarvestan	3.01	314	*e*		14 16 45.6	
	comp=E,1µm,0.4s						
ISRV				*e*		14 16 51.1	
	comp=Z,973nm,0.4s						
ISRV				*e*		14 16 54.1	
	comp=N,2µm,0.3s						
CHMN	Cheshme madani	3.07	33	*e*Pn	Pb	14 15 50.0	-1.6
CHMN				*e*		14 16 34.2	
	comp=E,99nm,0.2s						
CHMN				*e*		14 16 37.1	
	comp=Z,99nm,0.2s						
CHMN				*e*		14 16 37.3	
	comp=N,99nm,0.2s						
ALNE	Al Ain	3.24	178	*e*Pn	Pn	14 15 49.0	+1.2
IMEH	Mehriz	4.16	348	*e*		14 16 07.7	
	comp=Z,239nm,0.2s						
IMEH				*e*Pn	Pn	14 16 04.0	+3.3
WSAR	Wadi Sarin	4.89	145	Pn	Pn	14 16 10.7	+0.2
	comp=Z,2.2nm,0.3s,baz=142,slow=19,SNR=36						
WSAR				Sn	Sn	14 17 06.6	-0.8
	comp=Z,1.5nm,0.3s,baz=180,slow=12,SNR=4.4						
KLNJ	Kolanjah	5.09	317	*e*Pn	Pn	14 16 17.9	+4.3
KLNJ				*e*		14 17 23.8	
	comp=Z,99nm,0.2s						
KLNJ				*e*		14 17 27.6	
	comp=N,99nm,0.2s						
KLNJ				*e*		14 17 42.5	
	comp=E,99nm,0.4s						
IRAM	Ramesheh	5.29	329	*e*Pn	Pn	14 16 18.7	+2.5
IRAM				*e*		14 16 22.2	
	comp=Z,212nm,0.3s						
IRAM				*e*		14 16 22.5	
	comp=N,251nm,0.2s						
IRAM				*e*		14 17 21.6	
	comp=E,163nm,0.3s						
IGAR	Gharneh	5.95	330	*e*		14 16 30.0	
	comp=Z,288nm,0.2s						
JLN	Jalan Bani Buh	6.19	145	P	Pn	14 16 27.8	-0.6
IZEF	Zefreh	6.25	334	*e*Pn	Pn	14 16 31.5	+2.1
IZEF				*e*		14 16 36.4	
	comp=Z,72nm,0.2s						
IZEF				*e*		14 16 38.9	
	comp=N,67nm,0.2s						
IZEF				*e*		14 18 04.3	
	comp=E,60nm,0.0s						
MHTO	MHTO	6.65	161	P	Pn	14 16 34.7	0.0
BRTR	Keskin Array B	22.04	310	P	P	14 19 52.0	+0.1
	comp=E,1.1nm,0.6s,baz=125,slow=13,SNR=7.8						
BVAR	Borovoye Array	27.95	19	P	P	14 20 48.1	+0.6
	comp=E,0.7nm,0.9s,baz=185,slow=8.7,SNR=3.4						
KURBB	Kurchatov Arra	29.10	31	P	P	14 20 57.4	-0.3
	comp=E,0.3nm,0.2s,baz=234,slow=8.1,SNR=2.5						
AKASG	Malin Array Be	30.79	326	P	P	14 21 11.8	-0.8
	comp=E,0.6nm,0.5s,baz=133,slow=8.4,SNR=3.3						
ZALV	Zalesovo Beam	34.20	31	P	P	14 21 42.3	-0.2
	comp=E,2.3nm,0.6s,baz=220,slow=11,SNR=7.2						
GERES	GERESS Array B	38.73	315	P	P	14 22 20.8	-0.6
	comp=E,0.3nm,0.6s,baz=140,slow=6.3,SNR=2.3						
FINES	FINESS Array B	39.45	338	P	P	14 22 26.9	-0.1
	comp=E,0.8nm,0.5s,baz=138,slow=10,SNR=7.3						

HFS	Hagfors	43.41	331	P	P	14 22 58.9	-0.7
	comp=E,0.6nm,0.4s,baz=123,slow=10,SNR=7.2						
TORD	Torodi Ar. Bea	52.13	266	P	P	14 24 07.2	-0.7
	comp=E,0.6nm,0.6s,baz=67,slow=6.6						
KSRS	Korea Array	60.57	61	P	P	14 25 07.4	-0.5
	comp=E,0.6nm,0.6s,baz=279,slow=7.5,SNR=6.0						
ILAR	Eielson Array	86.57	9	P	P	14 27 41.4	+1.2
	comp=E,0.2nm,0.7s,baz=335,slow=4.0,SNR=3.0						

WEL 22 14:23:22.8, 38°S±9°×18°0W±°, h33km, ML3.6/20, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.46	274	P	Pn	14 23 47.1	+0.3
WMGZ				S	Sn	14 24 05.0	+0.1
PUZ	Puketiti	1.58	265	P	Pn	14 23 49.0	+0.5
PUZ				S	Sn	14 24 07.9	0.0
MXZ	Matakaoa Point	1.59	283	P	Pn	14 23 48.6	0.0
MXZ				S	Sn	14 24 07.5	-0.5
CNGZ	Carnagh Statio	1.70	251	P	Pn	14 23 51.7	+1.6
PKGZ	Pakihiroa	1.72	271	P	Pn	14 23 50.8	+0.3
TWGZ	Tauwhareparae	1.81	262	P	Pn	14 23 52.6	+0.9
TWGZ				S	Sn	14 24 15.1	+1.6
TKGZ	Te Karaka	1.96	255	P	Pn	14 23 55.1	+1.4
TKGZ				S	Sn	14 24 18.8	+1.7
HAZ	Te Kaha	1.97	275	P	Pn	14 23 54.4	+0.7
RUGZ	Raukumara Rang	2.04	269	P	Pn	14 23 55.5	+0.6
RIGZ	Rimuhau	2.10	248	P	Pn	14 23 56.8	+1.1
RIGZ				S	Sn	14 24 22.7	+1.9
PRGZ	Paritu Road	2.10	242	P	Pb	14 23 58.0	-2.3
MWZ	Matawai	2.19	259	P	Pn	14 23 57.5	+0.7
MWZ				S	Sn	14 24 23.2	+0.4
MHGZ	Mahia Peninsul	2.20	236	P	Pn	14 23 59.1	+2.1
KNZ	Kokohu	2.29	241	P	Pn	14 23 59.7	+1.4
URZ	Urewera	2.50	262	P	Pn	14 24 02.5	+1.4
URZ				S	Sn	14 24 31.8	+1.4
WHHZ	Waihua	2.62	244	P	Pn	14 24 05.0	+2.1
WHHZ				S	Sn	14 24 36.1	+2.5
RAHZ	Arahi	2.67	248	P	Pn	14 24 05.5	+2.0
RAHZ				S	Sn	14 24 36.8	+2.0
MUGZ	Murupara	2.79	258	P	Pn	14 24 06.4	+1.2
MTHZ	Maungataniwha	2.83	250	P	Pn	14 24 07.3	+1.5
ARHZ	Aropaoanui	2.87	242	P	Pn	14 24 08.4	+2.1
NMHZ	Naumai	2.94	246	P	Pn	14 24 09.1	+1.8
MCHZ	McNeill Hill	3.16	241	P	Pn	14 24 12.1	+1.9
BKZ	Black Stump Fm	3.19	246	P	Pn	14 24 11.9	+1.2
KWHZ	Kaweka Forest	3.34	243	P	Pn	14 24 14.1	+1.3
KRHZ	Kereru	3.48	240	P	Pn	14 24 16.2	+1.6
BHHZ	Black Hill Sta	3.62	244	P	Pn	14 24 17.9	+1.3
PNHZ	Pukenui	3.72	237	P	Pn	14 24 18.9	+0.9
DVHZ	Dannevirke	3.95	232	P	Pn	14 24 22.0	+0.9
MRZ	Mangatainoka R	4.53	232	P	Pn	14 24 29.0	0.0
MTW	Mount Morrison	4.88	227	P	Pn	14 24 34.1	+0.3
CTZ	Chatham Island	6.25	159	P	Pn	14 24 58.3	+5.6

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*IDC **22** 14:26:56.6±1.0, 45°97N×154°03E, h0km, mb3.8/5, mb1 3.9/7, mb1mx3.4/74, mbtmp3.8/7, ML3.1/1, MS2.5/1, Ms1 2.5/1, ms1mx2.0/64, Error ellipse: s-maj=35.9km s-min=22.9km az=112.0*

*ISCJB **22** 14:26:57.6±0.9, 46°1N±0°1×153°8E±0°2, h20km, mb3.8/5, Error ellipse: s-maj=25.1km s-min=14.7km az=37.7*

ISC 22 14:26:59.7±1.1, 46°0N±0°2×153°9E±0°2, h20km, n14, σ0s91/8, mb3.8/5, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PETK	Petropavlovsk-	7.49	18	Pn	Pn	14 28 46.7	-0.9
	baz=178,slow=11						
PETK				LR	LR	14 33 09.1	
	comp=Z,31nm,18.1s,baz=119,slow=49						
ASAJ	Asahikawa	8.24	261	Pn	Pn	14 28 57.6	-0.4
	0.3nm,0.3s,baz=144,slow=14,SNR=5.6						
MJAR	Matsushiro Arr	15.13	237	Pn	P	14 30 37.1	-0.1
	0.1nm,0.3s,baz=38,slow=7.7,SNR=5.7						
H11N2	WAKE ISLAND Hy	28.34	154	T	T	15 05 12.5	
	baz=334						
H11N1	WAKE ISLAND Hy	28.35	154	T	T	15 05 16.3	
	baz=334						
H11N3	WAKE ISLAND Hy	28.36	154	T	T	15 05 05.0	
	baz=334						
H11S1	WAKE ISLAND Hy	29.43	155	T	T	15 06 41.3	
	baz=348						
H11S3	WAKE ISLAND Hy	29.44	155	T	T	15 06 10.8	
	baz=348						
H11S2	WAKE ISLAND Hy	29.45	155	T	T	15 06 25.3	
	baz=348						
FINES	FINESS Array B	64.91	335	P	P	14 37 38.1	+1.0
	3.1nm,1.1s,baz=59,slow=7.4,SNR=5.0						
WRA	Warramunga Arr	68.03	200	P	P	14 37 56.7	-0.8
	0.6nm,0.9s,baz=24,slow=7.5,SNR=3.5						
HFS	Hagfors	69.31	340	P	P	14 38 06.2	+1.1
	1.5nm,0.7s,baz=33,slow=8.6,SNR=2.7						
ASAR	Alice Springs	71.72	199	P	P	14 38 20.6	+0.5
	0.4nm,0.7s,baz=11,slow=4.7,SNR=9.6						
TXAR	Lajitas Array	77.35	61	P	P	14 38 53.2	+0.1
	0.6nm,0.7s,baz=306,slow=4.6,SNR=10						

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*ATH **22** 14:27:27.7, 41°10N×20°04E, h13km±1km, ML3.6/13, Error ellipse: s-maj=1.6km s-min=0.8km az=165.0*

*IDC **22** 14:27:27.8±1.0, 40°87N×20°06E, h0km, mb3.8/9, mb1 3.8/14, mb1mx3.6/65, mbtmp3.8/14, ML3.5/5, MS2.6/3, Ms1 2.6/3, ms1mx2.2/62, Error ellipse: s-maj=14.8km s-min=12.4km az=32.0*

*SKO **22** 14:27:27.7, 40°93N×19°91E, h0km, M3.0, ML3.5*

*ISCJB **22** 14:27:29.9±0.3, 40°999N±0°010×20°07E±0°01, h10km±2km, mb3.8/7, Error ellipse: s-maj=1.9km s-min=1.5km az=143.3*

*THE **22** 14:27:30.5, 40°98N×20°15E, h0km±1km, ML3.5/11, Error ellipse: s-maj=2.0km s-min=0.7km az=323.0*

*TIR **22** 14:27:30.4, 40°92N×20°16E, h10km, Md3.7/6*

*ROM **22** 14:27:30.7±0.4, 40°99N±0°03×20°01E±0°03, h10km, ML3.8/24*

*CSEM **22** 14:27:30.3±0.1, 40°97N×20°09E, h2km, ML3.5/7, Error ellipse: s-maj=2.2km s-min=1.4km az=63.0*

*PDG **22** 14:27:30.7±0.7, 40°94N×20°03E, h12km±1km, ML3.4/11, Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*

*BEO **22** 14:27:31.6±0.4, 40°93N×20°16E, h11km±3km, ML3.5/5*

ISC 22 14:27:30.5±1.0, 40°95N±0°01×20°10E±0°01, h13km±7km, n384, σ1s33/501, mb3.8/7, 35C-21D, Greece-Albania border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHR	Ohrid	0.55	73	⇑ iPg	Pg	14 27 40.4	-0.9
OHR				i Sg	Sg	14 27 49.0	+0.3
OHR				eLg	Lg	14 27 49.4	
	comp=E,2µm,0.5s						
OHR				eLg	Lg	14 27 50.2	
	comp=N,1µm,0.6s						
KBN	Korca	0.61	122	P	Pg	14 27 41.2	-1.3
KBN				S	Sg	14 27 50.8	+0.2
KBN	Korca	0.61	122	P	Pg	14 27 41.2	-1.3
KBN				S	Sg	14 27 50.8	+0.2
KBN	Korca	0.61	122	i PG	Pg	14 27 41.3	-1.3
KBN				i SG	Sg	14 27 51.3	+0.7
VLO	Vlora	0.67	224	P	Pb	14 27 44.4	+0.5
VLO				S	Sn	14 27 54.6	-1.2
VLO	Vlora	0.67	224	P	Pb	14 27 44.4	+0.5
VLO				S	Sn	14 27 54.6	-1.2
VLO	Vlora	0.67	224	i PG	Pb	14 27 44.2	+0.3
VLO				i SG	Sn	14 27 54.3	-1.5
PHP	Peshkopia	0.78	19	P	Pg	14 27 44.7	-0.9
PHP	Peshkopia	0.78	19	P	Pg	14 27 44.7	-0.9
PHP	Peshkopia	0.78	19	i PG	Pg	14 27 44.3	-1.3
PHP				i SG	Sn	14 27 59.2	+0.4
NEST	Nestorio	0.90	126	P	Pg	14 27 45.6	-2.3
NEST				S	Sg	14 27 59.9	+0.3
NEST				AML	AML	14 28 06.7	
	comp=E,3196µm,0.8s						
NEST				AML	AML	14 28 07.8	
	comp=N,2332µm,0.3s						
NEST	Nestorio	0.90	126	P	Pg	14 27 46.2	-1.6
NEST				S	Sg	14 28 00.1	+0.5
NEST	Nestorio	0.90	126	P	Pg	14 27 46.3	-1.6
NEST				S	Sg	14 28 00.1	+0.5
KRUS	Krusevo	0.96	64	i Pg	Pg	14 27 48.0	-1.1
KRUS				i Sg	Sg	14 28 02.5	+0.8
FNA	Florina	0.98	99	ePg	Pg	14 27 47.9	-1.5
FNA				eSg	Sg	14 28 01.6	-0.7
FNA	Florina	0.98	99	P	Pg	14 27 48.5	-1.0
FNA				S	Sg	14 28 02.5	+0.2
FNA				AML	AML	14 28 09.2	
	comp=E,7412µm,0.6s						
FNA				AML	AML	14 28 09.5	
	comp=N,7566µm,0.5s						
FNA	Florina	0.98	99	P	Pg	14 27 47.8	-1.6
FNA				S	Sg	14 28 02.7	+0.5
FNA	Florina	0.98	99	P	Pg	14 27 48.1	-1.3
FNA				eSg	Sg	14 28 01.6	-0.7
FNA				S	Sg	14 28 02.7	+0.5
SRN	Sarande	1.07	184	P	Pn	14 27 51.3	+0.2
SRN				S	Sn	14 28 08.2	+2.4
SRN	Sarande	1.07	184	P	Pn	14 27 51.3	+0.2
SRN				S	Sn	14 28 08.2	+2.4
SRN	Sarande	1.07	184	i PG	Pn	14 27 51.5	+0.4
SRN				i SG	Sn	14 28 08.6	+2.7
PENT	Pentalofos	1.09	133	P	Pg	14 27 50.0	-1.5
PENT				AML	AML	14 28 13.0	
	comp=N,2752µm,0.5s						
PENT				AML	AML	14 28 18.5	
	comp=E,2120µm,0.6s						
PENT	Pentalofos	1.09	133	P	Pg	14 27 50.4	-1.1
PUK	Puka	1.10	352	i PN	Pg	14 27 51.3	-0.5
PUK				i SN	Sn	14 28 10.2	+3.3
ULC	Ulcinj	1.20	328	⇓ iPg	Pb	14 27 52.8	-0.3
ULC				eSg	Sn	14 28 11.7	+2.5
ULC	Ulcinj	1.20	328	⇓ iPg	Pb	14 27 52.8	-0.3
ULC				eSg	Sn	14 28 11.7	+2.5
KASA	Kassiopi	1.21	186	P	Pg	14 27 55.1	+1.4
KASA				S	Sn	14 28 13.1	+3.9
KASA				AML	AML	14 28 14.7	
	comp=E,6680µm,0.4s						
KASA				AML	AML	14 28 14.7	
	comp=N,5115µm,0.6s						
KASA	Kassiopi	1.21	186	P	Pg	14 27 54.1	+0.4
KASA				S	Sn	14 28 12.4	+3.2
KEK	Kerkira	1.26	191	P	Pg	14 27 55.1	+0.5
KEK				S	Sn	14 28 11.6	+1.1
KEK				AML	AML	14 28 16.7	
	comp=N,4496µm,0.7s						
KEK				AML	AML	14 28 18.6	
	comp=E,5426µm,0.5s						
KEK	Kerkira	1.26	191	P	Pg	14 27 54.6	0.0
KEK				S	Sn	14 28 13.1	+2.6
KEK	Kerkira	1.26	191	P	Pg	14 27 54.6	0.0
KEK				S	Sn	14 28 12.4	+1.9
SGD	Sagiada	1.34	176	P	Pg	14 27 56.6	+0.4
SGD	Sagiada	1.34	176	P	Pb	14 27 55.6	+0.2
SGD	Sagiada	1.34	176	P	Pg	14 27 56.2	0.0
KPRO	Kipourio	1.38	135	P	Pn	14 27 55.4	-0.1
KPRO	Kipourio	1.38	135	P	Pg	14 27 57.1	0.0
KPRO				S	Sg	14 28 16.4	+1.3
KPRO	Kipourio	1.38	135	P	Pg	14 27 57.1	0.0
KPRO				S	Sg	14 28 16.4	+1.3
JAN	Janina	1.41	156	P	Pg	14 27 58.0	+0.3
JAN				S	Sg	14 28 20.2	+4.2
JAN				AML	AML	14 28 24.6	
	comp=N,2707µm,0.9s						
JAN				AML	AML	14 28 25.8	
	comp=E,4370µm,0.4s						
JAN	Janina	1.41	156	P	Pn	14 27 56.2	+0.3
JAN				S	Sg	14 28 17.7	+1.7
JAN	Janina	1.41	156	P	Pg	14 27 57.5	-0.1
JAN				S	Sg	14 28 17.7	+1.7
DRME	Dracevica, Mon	1.42	331	⇓ iPg	Pg	14 27 57.3	-0.4
DRME				eSg	Sg	14 28 18.3	+2.2
DRME	Dracevica, Mon	1.42	331	⇓ iPg	Pg	14 27 57.3	-0.4
DRME				eSg	Sg	14 28 18.3	+2.2
BCI	Bajram Curri	1.42	359	i PN	Pg	14 27 59.9	+2.2
BCI				i SN	Sg	14 28 17.0	+0.9
KZN	Kozani	1.42	116	P	Pn	14 27 55.2	-0.9
KZN				S	Sg	14 28 18.0	+1.6
KZN				AML	AML	14 28 22.6	
	comp=E,3040µm,0.6s						
KZN				AML	AML	14 28 24.3	
	comp=N,2571µm,0.5s						
KZN	Kozani	1.42	116	P	Pn	14 27 56.3	+0.2
KZN				S	Sg	14 28 17.8	+1.4
KZN	Kozani	1.42	116	P	Pn	14 27 56.3	+0.2
KZN				S	Sg	14 28 17.8	+1.4
IGT	Igoumenitsa	1.43	173	ePg	Pb	14 27 57.2	+0.3
IGT				eSg	Sg	14 28 16.7	+0.3
IGT	Igoumenitsa	1.43	173	P	Pb	14 27 57.1	+0.3
IGT				S	Sg	14 28 18.6	+2.2
IGT				AML	AML	14 28 20.4	
	comp=N,2519µm,0.4s						
IGT				AML	AML	14 28 20.6	
	comp=E,4118µm,0.5s						
IGT	Igoumenitsa	1.43	173	P	Pb	14 27 57.2	+0.3
IGT				S	Sg	14 28 18.6	+2.2
IGT	Igoumenitsa	1.43	173	P	Pb	14 27 57.2	+0.3
IGT				eSg	Sg	14 28 16.7	+0.3
IGT				S	Sg	14 28 18.6	+2.2
SKO	Skopje	1.43	44	ePg	Pn	14 27 57.1	+0.9
SKO				eSg	Sb	14 28 16.8	+1.6
SKO	Skopje	1.43	44	P	Pn	14 27 56.7	+0.5
SKO	Skopje	1.43	44	i Pn	Pb	14 27 57.3	+0.2
SKO				eSg	Sb	14 28 16.8	+1.6
SKO	Skopje	1.43	44	P	Pn	14 27 56.7	+0.5
SKO	Skopje	1.43	44	ePg	Pn	14 27 57.1	+0.9
SKO				eSg	Sb	14 28 16.8	+1.6
SCTE	Santa Cesarea	1.52	235	P	Pn	14 27 57.2	-0.1
SCTE				S	Sg	14 28 19.5	0.0
SCTE	Santa Cesarea	1.52	235	P	Pn	14 27 57.3	-0.1
SCTE				S	Sg	14 28 19.2	-0.3
PDG	Podgorica	1.61	337	ePg	Pb	14 28 00.6	+0.6
PDG				eSg	Sg	14 28 24.1	+1.8
PDG	Podgorica	1.61	337	⇑ iP	Pb	14 28 00.2	+0.2
PDG	Podgorica	1.61	337	⇓ iPn	Pb	14 28 00.0	0.0
PDG	Podgorica	1.61	337	ePg	Pb	14 28 00.6	+0.6
PDG				S	Sn	14 28 19.4	+0.2
PDG				eSn	Sg	14 28 23.2	+0.9
PDG				eSg	Sg	14 28 24.1	+1.8
TTG	Podgorica	1.61	337	⇓ iPn	Pb	14 28 00.0	0.0
TTG				eSn	Sg	14 28 23.2	+0.9
BUM	Brajici-Budva	1.63	327	⇑ iPn	Pb	14 28 00.3	-0.1
BUM				eSn	Sg	14 28 23.0	+0.2
BUM	Brajici-Budva	1.63	327	⇑ iPn	Pb	14 28 00.3	-0.1
BUM				eSn	Sg	14 28 23.0	+0.2
PVY	Plav	1.65	356	⇓ iPn	Pb	14 28 00.9	+0.1
PVY				eSn	Sg	14 28 24.3	+0.8
PVY	Plav	1.65	356	⇓ iPn	Pb	14 28 00.9	+0.1
PVY				eSn	Sg	14 28 24.3	+0.8
STIP	Stip	1.74	64	i Pn	Pb	14 28 03.0	+0.7
GRG	Griva	1.74	89	P	Pn	14 28 01.4	+0.9
GRG				S	Sg	14 28 26.4	-0.1
GRG				AML	AML	14 28 32.6	
	comp=N,1674µm,0.5s						
GRG				AML	AML	14 28 34.7	
	comp=E,1397µm,0.9s						
GRG	Griva	1.74	89	P	Pn	14 28 00.8	+0.4
GRG				S	Sb	14 28 25.4	+1.3
GRG	Griva	1.74	89	P	Pn	14 28 00.9	+0.5
GRG				S	Sb	14 28 25.4	+1.3
CEME	Cevo	1.82	331	ePn	Pn	14 28 02.3	+0.7
CEME				eSn	Sg	14 28 28.0	-1.2
CEME	Cevo	1.82	331	ePn	Pn	14 28 02.3	+0.7
CEME				eSn	Sg	14 28 28.0	-1.2
VAY	Valandovo	1.90	78	P	Pn	14 28 02.6	0.0
VAY	Valandovo	1.90	78	i Pn	Pn	14 28 02.6	0.0
VAY				eSn	Sb	14 28 29.9	+1.3
VAY				eLg	Lg	14 28 34.0	
	comp=N,268nm,0.8s						
VAY				eLg	Lg	14 28 36.0	
	comp=E,196nm,0.7s						
VAY	Valandovo	1.90	78	P	Pn	14 28 02.6	0.0
HCY	Herceg Novi	1.92	322	⇑ iPn	Pn	14 28 03.8	+0.9
HCY				eSn	Sb	14 28 30.2	+1.0
HCY	Herceg Novi	1.92	322	⇑ iPn	Pn	14 28 03.8	+0.9
HCY				eSn	Sb	14 28 30.2	+1.0
BEY	Berane	1.93	355	⇑ iPn	Pb	14 28 05.1	-0.4
BEY				eSn	Sb	14 28 30.9	+1.4
IVA	Berane	1.93	355	⇑ iPn	Pb	14 28 05.1	-0.4
IVA				eSn	Sb	14 28 30.9	+1.4
KOME	Kolasin	1.95	347	ePn	Pb	14 28 05.1	-0.8
KOME				eSn	Sb	14 28 31.5	+1.4
KOME	Kolasin	1.95	347	ePn	Pb	14 28 05.1	-0.8
KOME				eSn	Sb	14 28 31.5	+1.4
DSL	Palaion Diasel	1.97	157	P	Pb	14 28 06.7	+0.5
DSL	Palaion Diasel	1.97	157	P	Pb	14 28 05.7	-0.5
DSL	Palaion Diasel	1.97	157	P	Pb	14 28 05.7	-0.5
LIT	Litokhoron	2.01	114	P	Pn	14 28 05.2	+1.2
LIT	Litokhoron	2.01	114	P	Pn	14 28 05.3	+1.2
LIT	Litokhoron	2.01	114	P	Pn	14 28 05.3	+1.2
NKME	Niksic	2.01	335	⇑ iPn	Pn	14 28 05.5	+1.4
NKME				eSn	Sb	14 28 32.0	+0.2
NKME	Niksic	2.01	335	⇑ iPn	Pn	14 28 05.5	+1.4
NKME				eSn	Sb	14 28 32.0	+0.2
CGL1	Ceglie Messapi	2.01	262	ePn	Pn	14 28 03.9	-0.2
CGL1				Sn	Sg	14 28 35.1	-0.1
CGL1	Ceglie Messapi	2.01	262	ePn	Pn	14 28 03.9	-0.2
CGL1				Sn	Sg	14 28 35.1	-0.1
THL	Klokotos Trika	2.01	133	P	Pn	14 28 05.8	+1.7
THL				S	Sg	14 28 35.1	-0.1
THL				AML	AML	14 28 37.7	
	comp=N,948µm,0.6s						
THL				AML	AML	14 28 39.0	
	comp=E,956µm,0.6s						
THL	Klokotos Trika	2.01	133	P	Pn	14 28 05.8	+1.7
THL				S	Sb	14 28 32.4	+0.5
THL	Klokotos Trika	2.01	133	P	Pn	14 28 05.8	+1.7
THL				S	Sb	14 28 32.4	+0.5
NKY	Niksic	2.04	336	⇑ iPn	Pn	14 28 05.9	+1.3
NKY				eSn	Sb	14 28 33.3	+0.6
NKY	Niksic	2.04	336	⇑ iPn	Pn	14 28 05.9	+1.3
NKY				eSn	Sb	14 28 33.3	+0.6
FASA	Fasano	2.09	267	ePn	Pn	14 28 04.9	-0.2
FASA	Fasano	2.09	267	ePn	Pn	14 28 04.9	-0.2
KNT	Kendrikon	2.13	83	P	Pn	14 28 06.9	+1.2
KNT	Kendrikon	2.13	83	P	Pn	14 28 06.3	+0.6
KNT	Kendrikon	2.13	83	P	Pn	14 28 06.3	+0.6
TAR1	Taranto	2.18	260	ePn	Pn	14 28 06.0	-0.4
TAR1	Taranto	2.18	260	ePn	Pn	14 28 06.0	-0.4
THE	Thessaloniki	2.20	97	P	Pn	14 28 05.5	-1.1
THE	Thessaloniki	2.20	97	P	Pn	14 28 06.3	-0.3
TREB	Trebinje	2.20	324	ePn	Pn	14 28 07.0	+0.3
LKD2	Lefkada island	2.20	169	P	Pn	14 28 07.4	+0.7
LKD2				S	Sb	14 28 37.4	+0.1
LKD2				AML	AML	14 28 48.4	
	comp=E,1300µm,0.9s						
LKD2				AML	AML	14 28 49.0	
	comp=N,1469µm,0.9s						
LKD2	Lefkada island	2.20	169	P	Pn	14 28 07.8	+1.1
LKD2	Lefkada island	2.20	169	P	Pn	14 28 07.9	+1.2
LKD2				S	Sb	14 28 37.8	+0.5
BARS	Barje	2.26	34	ePn	Pn	14 28 08.5	+0.9
MASS	Massafra	2.27	263	ePn	Pn	14 28 06.9	-0.7
MASS	Massafra	2.27	263	ePn	Pn	14 28 06.9	-0.7
BRY	Bratogost	2.27	330	⇓ iPn	Pn	14 28 08.7	+0.9
BRY				eSn	Sb	14 28 38.3	-1.2
BRY	Bratogost	2.27	330	⇓ iPn	Pn	14 28 08.7	+0.9
BRY				eSn	Sb	14 28 38.3	-1.2
HORT	Hortiatis	2.30	98	P	Pn	14 28 07.8	-0.4
HORT	Hortiatis	2.30	98	P	Pn	14 28 08.2	0.0
NOCI	Noci	2.31	267	P	Pn	14 28 08.5	+0.3
NOCI				S	Sn	14 28 35.7	-0.8
NOCI	Noci	2.31	267	P	Pn	14 28 07.9	-0.3
NOCI				S	Sn	14 28 36.0	-0.5
NOCI	Noci	2.31	267	P	Pn	14 28 07.8	-0.4
NOCI				AML	AML		
	comp=E,1088µm,0.4s						
NOCI				AML	AML		
	comp=N,1305µm,0.5s						
NOCI				AML	AML		
	comp=N,1305µm,0.5s						
NOCI				AML	AML		
	comp=E,1088µm,0.4s						
SJES	Sjenica	2.31	358	ePn	Pb	14 28 10.6	-1.5
SJES	Sjenica	2.31	358	ePn	Pb	14 28 10.6	-1.5
MGNA	Meganis¸„	2.35	167	P	Pb	14 28 11.6	-1.1
MGNA	Meganis¸„	2.35	167	P	Pb	14 28 11.1	-1.6
EVGI	Lefkada island	2.36	169	P	Pn	14 28 08.9	0.0
EVGI	Lefkada island	2.36	169	P	Pn	14 28 09.7	+0.7
EVGI	Lefkada island	2.36	169	P	Pn	14 28 09.9	+0.9
SELS	Selova	2.39	18	ePn	Pn	14 28 11.3	+1.9
EVR	Evrytania	2.42	147	P	Pb	14 28 13.1	-0.8
EVR				AML	AML	14 28 56.0	
	comp=E,1056µm,1.0s						
EVR				AML	AML	14 28 59.1	
	comp=N,888µm,0.9s						
EVR	Evrytania	2.42	147	P	Pb	14 28 12.3	-1.6
UPM	Unac-Piva	2.42	339	⇑ iPn	Pn	14 28 10.9	+1.0
UPM				eSn	Sb	14 28 42.0	-1.8
UPM	Unac-Piva	2.42	339	⇑ iPn	Pn	14 28 10.9	+1.0
UPM				eSn	Sb	14 28 42.0	-1.8
PLE	Pljevlja	2.44	348	⇑ iPn	Pn	14 28 11.8	+1.7
PLE				eSn	Sb	14 28 42.6	-1.6
PLE	Pljevlja	2.44	348	⇑ iPn	Pn	14 28 11.8	+1.7
PLE				eSn	Sb	14 28 42.6	-1.6
BAI	Bari	2.44	275	ePn	Pn	14 28 09.8	-0.2
BAI	Bari	2.44	275	ePn	Pn	14 28 09.8	-0.2
SOH	Sokhos	2.47	92	P	Pn	14 28 11.0	+0.6
SOH	Sokhos	2.47	92	P	Pn	14 28 11.0	+0.6
SOH	Sokhos	2.47	92	P	Pn	14 28 11.0	+0.6
PDO	Prodromos	2.49	160	P	Pn	14 28 12.2	+1.5
PDO	Prodromos	2.49	160	P	Pn	14 28 12.2	+1.5
PDO	Prodromos	2.49	160	P	Pn	14 28 12.4	+1.7
FSK	Fiskardo	2.51	172	P	Pn	14 28 10.2	-0.8
FSK	Fiskardo	2.51	172	P	Pn	14 28 11.4	+0.4
PVO	Paravola	2.58	154	P	Pn	14 28 14.1	+2.2
PVO	Paravola	2.58	154	P	Pn	14 28 14.0	+2.2
PVO	Paravola	2.58	154	P	Pn	14 28 13.9	+2.0
AGG	Agios Georgios	2.58	138	P	Pn	14 28 14.5	+2.6
AGG				S	Sb	14 28 47.5	-0.6
AGG				AML	AML	14 28 52.9	
	comp=N,1766µm,0.8s						
AGG				AML	AML	14 28 56.1	
	comp=E,1360µm,0.5s						
AGG	Agios Georgios	2.58	138	P	Pn	14 28 13.9	+2.0
AGG	Agios Georgios	2.58	138	P	Pn	14 28 13.9	+2.0
AGG				S	Sb	14 28 47.3	-0.8
MATE	Matera	2.59	264	⇑ iP	Pn	14 28 12.0	-0.1
MATE	Matera	2.59	264	⇑ iP	Pn	14 28 12.0	-0.1
MATE				S	Sn	14 28 44.0	+0.5
SG1	Sgolgore (BA)	2.60	269	ePn	Pn	14 28 12.3	+0.1
SG1	Sgolgore (BA)	2.60	269	ePn	Pn	14 28 12.3	+0.1
PLG	Polygyros	2.61	102	P	Pn	14 28 12.4	0.0
PLG	Polygyros	2.61	102	P	Pn	14 28 12.7	+0.3
IVAS	Ivanjica	2.63	1	ePn	Pn	14 28 14.5	+1.9
IVAS	Ivanjica	2.63	1	ePn	Pn	14 28 14.5	+1.9
STON	Ston	2.63	318	ePn	Pn	14 28 13.9	+1.4
STON	Ston	2.63	318	ePn	Pn	14 28 12.9	+0.3
STON				Sn	Sn	14 28 43.8	-0.4
STON	Ston	2.63	318	ePn	Pn	14 28 13.9	+1.4
SRS	Serrai	2.65	85	ePn	Pn	14 28 13.1	+0.2
SRS	Serrai	2.65	85	P	Pn	14 28 13.5	+0.7
SRS	Serrai	2.65	85	P	Pn	14 28 13.1	+0.2
SRS	Serrai	2.65	85	P	Pn	14 28 13.2	+0.3
AMUR	Altamura	2.65	270	P	Pn	14 28 13.1	+0.2
AMUR				AML	AML		
	comp=E,512µm,0.4s						
AMUR				AML	AML		
	comp=N,484µm,0.4s						
AMUR				AML	AML		
	comp=E,512µm,0.4s						
AMUR				AML	AML		
	comp=N,484µm,0.4s						
FYTO	Fytoko, Volos	2.66	124	P	Pn	14 28 14.5	+1.4
FYTO	Fytoko, Volos	2.66	124	P	Pn	14 28 14.5	+1.4
ANX	Ano Chora	2.74	149	P	Pb	14 28 17.8	-1.6
ANX	Ano Chora	2.74	149	P	Pn	14 28 16.9	+2.7
VLS	Valsamata	2.79	172	P	Pn	14 28 13.6	-1.2
VLS	Valsamata	2.79	172	P	Pn	14 28 15.2	+0.3
MIGL	Miglionico	2.80	264	P	Pn	14 28 15.6	+0.6
MIGL				AML	AML		
	comp=E,2135µm,0.5s						
MIGL				AML	AML		
	comp=N,2090µm,0.6s						
MIGL				AML	AML		
	comp=E,2135µm,0.5s						
MIGL				AML	AML		
	comp=N,2090µm,0.6s						
VTS	Vitosha	2.84	54	ePn	Pn	14 28 16.8	+1.1
VTS				eSn	Sn	14 28 50.9	+1.0
VTS	Vitosha	2.84	54	⇑ iP	Pn	14 28 17.0	+1.2
VTS	Vitosha	2.84	54	P	Pn	14 28 16.9	+1.2
VTS	Vitosha	2.84	54	ePn	Pn	14 28 16.8	+1.1
VTS				eSn	Sn	14 28 50.9	+1.0

VTS				S	Sb	14 28 53.4	-2.6
XOR	Xorichti	2.85	123	P	Pn	14 28 15.2	-0.5
XOR	Xorichti	2.85	123	P	Pn	14 28 16.1	+0.5
NVR	Nevrokopi	2.87	81	P	Pn	14 28 17.2	+1.3
NVR	Nevrokopi	2.87	81	P	Pn	14 28 16.6	+0.7
EFP	Efpalio	2.88	150	P	Pb	14 28 19.4	-2.3
EFP	Efpalio	2.88	150	P	Pn	14 28 18.7	+2.7
KFL	Anninata	2.88	169	P	Pn	14 28 15.9	-0.2
KFL				S	Sn	14 28 54.2	+3.6
KFL	Anninata	2.88	169	P	Pn	14 28 17.0	+0.9
KFL				S	Sb	14 28 54.6	-2.4
NEO	Neokhori	2.90	123	P	Pn	14 28 16.4	0.0
NEO	Neokhori	2.90	123	P	Pn	14 28 17.1	+0.7
PAIG	Paliouri	2.92	109	P	Pn	14 28 16.2	-0.3
PAIG	Paliouri	2.92	109	P	Pn	14 28 16.9	+0.4
BOVS	Bovan	2.94	23	*e*Pn	Pn	14 28 18.2	+1.4
BOVS	Bovan	2.94	23	*e*Pn	Pn	14 28 18.2	+1.4
SERG	Sergoula	2.95	149	P	Pn	14 28 20.1	+3.1
SERG	Sergoula	2.95	149	P	Pn	14 28 19.5	+2.5
MRVN	Minervino Murg	2.96	273	P	Pn	14 28 17.1	0.0
MRVN				S	Sn	14 28 50.5	-2.0
MRVN				AML	AML		
	comp=E,279µm,0.4s						
MRVN				AML	AML		
	comp=N,260µm,0.4s						
MRVN				AML	AML		
	comp=E,279µm,0.4s						
MRVN				AML	AML		
	comp=N,260µm,0.4s						
BBLS	Lazići	2.96	350	*e*Pn	Pn	14 28 19.4	+2.2
BBLS	Lazići	2.96	350	*e*Pn	Pn	14 28 19.4	+2.2
GRUS	Gruza	2.97	9	*e*Pn	Pn	14 28 19.6	+2.3
GRUS	Gruza	2.97	9	*e*Pn	Pn	14 28 19.6	+2.3
ZAPS	Zavoj	2.99	38	*e*Pn	Pn	14 28 19.1	+1.5
TRIZ	Trizonia	3.00	149	P	Pb	14 28 21.7	-2.0
TRIZ	Trizonia	3.00	149	P	Pn	14 28 20.6	+3.0
KALE	Kalithea	3.00	148	P	Pn	14 28 20.9	+3.2
KALE	Kalithea	3.00	148	P	Pn	14 28 20.3	+2.5
OUR	Ouranopolis	3.02	100	P	Pn	14 28 18.2	+0.3
OUR	Ouranopolis	3.02	100	P	Pn	14 28 18.5	+0.6
TIP	Timpagrande	3.12	236	P	Pn	14 28 18.3	-1.0
TIP	Timpagrande	3.12	236	⇓*i*P	Pn	14 28 19.8	+0.5
TIP	Timpagrande	3.12	236	P	Pn	14 28 19.1	-0.2
SKIA	Skiathos	3.14	123	P	Pn	14 28 19.5	0.0
SKIA	Skiathos	3.14	123	P	Pn	14 28 20.3	+0.7
VTN	Vitineika	3.14	164	P	Pn	14 28 21.7	+2.1
VTN	Vitineika	3.14	164	P	Pn	14 28 21.7	+2.1
DIVS	Divibare	3.15	359	*e*Pn	Pn	14 28 21.2	+1.4
DIVS	Divibare	3.15	359	*e*Pn	Pn	14 28 21.2	+1.4
DSF	Desfina	3.15	143	P	Pn	14 28 21.1	+1.3
DSF	Desfina	3.15	143	P	Pn	14 28 21.4	+1.6
SCHR	S. Chirico Rap	3.15	258	P	Pn	14 28 20.6	+0.7
SCHR				AML	AML		
	comp=E,204µm,1.4s						
SCHR				AML	AML		
	comp=N,182µm,0.5s						
SCHR				AML	AML		
	comp=E,204µm,1.4s						
SCHR				AML	AML		
	comp=N,182µm,0.5s						
ACER	Acerenza	3.16	268	P	Pn	14 28 20.2	+0.3
ACER				AML	AML		
	comp=E,988µm,0.6s						
ACER				AML	AML		
	comp=N,885µm,1.2s						
ACER				AML	AML		
	comp=E,1020µm,0.5s						
ACER				AML	AML		
	comp=N,950µm,1.2s						
ACER				AML	AML		
	comp=E,1020µm,0.5s						
ACER				AML	AML		
	comp=E,988µm,0.6s						
ACER				AML	AML		
	comp=N,885µm,1.2s						
ACER				AML	AML		
	comp=N,950µm,1.2s						
SMIA	Simia	3.16	130	P	Pn	14 28 21.6	+1.7
SMIA	Simia	3.16	130	P	Pn	14 28 21.6	+1.7
LKR	Lokris	3.20	135	P	Pn	14 28 22.1	+1.7
LKR	Lokris	3.20	135	P	Pn	14 28 22.2	+1.7
MS1	Monte Sant'Ang	3.22	285	*e*Pn	Pn	14 28 20.7	-0.1
MS1	Monte Sant'Ang	3.22	285	*e*Pn	Pn	14 28 20.7	-0.1
TRAZ	Trapeza	3.22	149	P	Pn	14 28 24.0	+3.2
TRAZ	Trapeza	3.22	149	P	Pn	14 28 23.4	+2.6
MSAG	Monte S. Angel	3.25	285	P	Pn	14 28 21.0	-0.2
MSAG				S	Sn	14 28 57.8	-1.9
MSAG				AML	AML		
	comp=E,346µm,0.6s						
MSAG				AML	AML		
	comp=N,544µm,0.5s						
MSAG				AML	AML		
	comp=E,346µm,0.6s						
MSAG				AML	AML		
	comp=N,544µm,0.5s						
HAPS	Han Pijesak,Bl	3.25	345	*e*Pn	Pn	14 28 21.9	+0.7
HAPS	Han Pijesak,Bl	3.25	345	*e*Pn	Pn	14 28 21.9	+0.7
TRUS	Trudelj	3.28	4	*e*Pn	Pn	14 28 23.3	+1.7
TRUS	Trudelj	3.28	4	*e*Pn	Pn	14 28 23.3	+1.7
KLV	Kalavryta, Ach	3.31	151	P	Pn	14 28 24.6	+2.7
KLV	Kalavryta, Ach	3.31	151	P	Pn	14 28 24.3	+2.3
SIRI	Monte Sirino -	3.31	258	P	Pn	14 28 21.7	-0.4
SIRI				S	Sn	14 29 01.2	-0.2
SIRI				AML	AML		
	comp=E,287µm,0.6s						
SIRI				AML	AML		
	comp=N,327µm,0.6s						
SIRI				AML	AML		
	comp=E,287µm,0.6s						
SIRI				AML	AML		
	comp=N,327µm,0.6s						
MCEL	Monticello	3.33	261	P	Pn	14 28 22.4	+0.1
MCEL				AML	AML		
	comp=E,542µm,0.7s						
MCEL				AML	AML		
	comp=N,396µm,0.6s						
MCEL				AML	AML		
	comp=E,542µm,0.7s						
MCEL				AML	AML		
	comp=N,396µm,0.6s						
SGRT	San Giovanni R	3.38	285	P	Pn	14 28 22.6	-0.4
SGRT				S	Sn	14 29 01.6	-1.3
SGRT				AML	AML		
	comp=E,233µm,0.8s						
SGRT				AML	AML		
	comp=N,260µm,0.5s						
SGRT				AML	AML		
	comp=E,233µm,0.8s						
SGRT				AML	AML		
	comp=N,260µm,0.5s						
MTSN	Montesano sull	3.38	260	P	Pn	14 28 23.3	+0.3
MTSN				AML	AML		
	comp=E,494µm,0.5s						
MTSN				AML	AML		
	comp=N,412µm,0.6s						
MTSN				AML	AML		
	comp=N,412µm,0.6s						
MTSN				AML	AML		
	comp=E,494µm,0.5s						
VULT	Monte Vulture	3.40	272	AML	AML		
	comp=N,702µm,0.8s						
VULT				AML	AML		
	comp=E,478µm,0.9s						
VULT				AML	AML		
	comp=N,702µm,0.8s						
VULT				AML	AML		
	comp=E,478µm,0.9s						
AOS	Alonnisos	3.40	120	P	Pn	14 28 23.3	+0.1
AOS	Alonnisos	3.40	120	P	Pn	14 28 24.0	+0.8
CUC	Castrocucco	3.41	255	P	Pn	14 28 24.0	+0.7
CUC	Castrocucco	3.41	255	P	Pn	14 28 23.6	+0.3
CUC	Castrocucco	3.41	255	P	Pn	14 28 23.7	+0.3
CUC				AML	AML		
	comp=E,480µm,0.6s						
CUC				AML	AML		
	comp=N,450µm,0.5s						
CUC				AML	AML		
	comp=E,480µm,0.6s						
CUC				AML	AML		
	comp=N,450µm,0.5s						
SVIS	Svilajnac	3.42	14	*e*Pn	Pn	14 28 25.7	+2.3
SLCN	Sala Consilina	3.44	262	P	Pn	14 28 24.9	+1.0
SLCN				AML	AML		
	comp=E,672µm,0.5s						
SLCN				AML	AML		
	comp=N,384µm,0.5s						
SLCN				AML	AML		
	comp=E,690µm,0.5s						
SLCN				AML	AML		
	comp=N,370µm,0.6s						
SLCN				AML	AML		
	comp=E,690µm,0.5s						
SLCN				AML	AML		
	comp=N,370µm,0.6s						
SLCN				AML	AML		
	comp=E,672µm,0.5s						
SLCN				AML	AML		
	comp=N,384µm,0.5s						
PROD	Prodromos	3.45	140	P	Pn	14 28 25.7	+1.9
PROD	Prodromos	3.45	140	P	Pn	14 28 25.8	+1.9
GUR	Goura	3.47	149	P	Pn	14 28 25.4	+1.1
GUR	Goura	3.47	149	P	Pn	14 28 25.8	+1.5
MRLC	Muro Lucano	3.50	268	P	Pn	14 28 25.5	+0.9
MRLC				AML	AML		
	comp=E,234µm,0.6s						
MRLC				AML	AML		
	comp=N,262µm,0.6s						
MRLC				AML	AML		
	comp=N,262µm,0.6s						
MRLC				AML	AML		
	comp=E,234µm,0.6s						
THAL	Thalero	3.52	145	P	Pn	14 28 26.9	+2.1
THAL	Thalero	3.52	145	P	Pn	14 28 26.9	+2.1
THAS	Thassos island	3.52	94	P	Pn	14 28 24.4	-0.5
THAS	Thassos island	3.52	94	P	Pn	14 28 25.0	+0.1
MGR	Morigerati	3.56	258	P	Pn	14 28 26.1	+0.8
MGR				AML	AML		
	comp=E,520µm,0.7s						
MGR				AML	AML		
	comp=N,448µm,0.5s						
MGR				AML	AML		
	comp=N,448µm,0.5s						
MGR				AML	AML		
	comp=E,520µm,0.7s						
TEKS	Tekeris	3.62	354	*e*Pn	Pn	14 28 27.9	+1.6
TEKS	Tekeris	3.62	354	*e*Pn	Pn	14 28 27.9	+1.6
AMT	Artemida-Makis	3.63	159	P	Pn	14 28 27.8	+1.4
AMT	Artemida-Makis	3.63	159	P	Pn	14 28 28.2	+1.8
KUBS	Kucevo	3.65	18	*e*Pn	Pn	14 28 26.5	-0.1
KUBS	Kucevo	3.65	18	*e*Pn	Pn	14 28 26.5	-0.1
LTK	Loutraki	3.67	142	P	Pn	14 28 27.8	+0.9
LTK	Loutraki	3.67	142	P	Pn	14 28 28.4	+1.5
LOUT	Loutraki	3.70	142	P	Pn	14 28 31.1	+3.8
LOUT	Loutraki	3.70	142	P	Pn	14 28 30.2	+2.9
BULG	Bulgheria - Ca	3.70	258	P	Pn	14 28 27.8	+0.4
BULG				AML	AML		
	comp=E,552µm,0.6s						
BULG				AML	AML		
	comp=N,398µm,1.6s						
BULG				AML	AML		
	comp=E,569µm,0.6s						
BULG				AML	AML		
	comp=N,392µm,0.5s						
BULG				AML	AML		
	comp=E,569µm,0.6s						
BULG				AML	AML		
	comp=N,392µm,0.5s						
BULG				AML	AML		
	comp=N,398µm,1.6s						
BULG				AML	AML		
	comp=E,552µm,0.6s						
MCRV	Calabrutti - M	3.74	269	P	Pn	14 28 28.8	+0.8
MCRV				AML	AML		
	comp=E,180µm,0.5s						
MCRV				AML	AML		
	comp=N,219µm,0.5s						
MCRV				AML	AML		
	comp=E,180µm,0.5s						
MCRV				AML	AML		
	comp=N,219µm,0.5s						
TRIP	Tripoli	3.81	153	P	Pn	14 28 32.8	+3.9
TRIP	Tripoli	3.81	153	P	Pn	14 28 32.0	+3.1
MES3	Kyparissia	3.89	161	P	Pn	14 28 30.4	+0.5
MES3	Kyparissia	3.89	161	P	Pn	14 28 31.4	+1.5
VLX	Vlachokerasia	3.99	153	P	Pn	14 28 34.3	+2.9
VLX	Vlachokerasia	3.99	153	P	Pn	14 28 33.9	+2.5
PSB1	Pescosannita	4.01	276	P	Pn	14 28 31.8	+0.2
PSB1				AML	AML		
	comp=E,132µm,0.8s						
PSB1				AML	AML		
	comp=N,126µm,0.9s						
PSB1				AML	AML		
	comp=E,132µm,0.8s						
PSB1				AML	AML		
	comp=N,126µm,0.9s						
MDVR	Moldovita	4.01	17	⇑*i*P	Pn	14 28 31.4	-0.2
MDVR	Moldovita	4.01	17	⇑*i*P	Pn	14 28 31.4	-0.2
MDVR				S	Sn	14 29 20.3	+1.8
LIA	Limnos Island	4.02	103	P	Pn	14 28 31.0	-0.7
LIA	Limnos Island	4.02	103	P	Pn	14 28 32.0	+0.3
ITM	Ithomi	4.02	159	P	Pn	14 28 32.7	+0.9
ITM	Ithomi	4.02	159	P	Pn	14 28 33.4	+1.6
PTL	Penteli	4.11	134	P	Pn	14 28 33.9	+1.0
PTL	Penteli	4.11	134	P	Pn	14 28 34.5	+1.6
RDO	Rodhopi	4.12	85	P	Pn	14 28 33.5	+0.5
RDO	Rodhopi	4.12	85	P	Pn	14 28 33.6	+0.6
ATHU	Athens Univers	4.12	135	P	Pn	14 28 34.8	+1.7
ATHU	Athens Univers	4.12	135	P	Pn	14 28 35.1	+2.0
DION	Dionisos Attik	4.12	133	P	Pn	14 28 35.3	+2.1
DION	Dionisos Attik	4.12	133	P	Pn	14 28 35.3	+2.1
SMTH	Samothraki Isl	4.16	95	P	Pn	14 28 35.0	+1.4
SMTH	Samothraki Isl	4.16	95	P	Pn	14 28 34.8	+1.2
FGSL	Fruska Gora	4.21	357	*e*Pn	Pn	14 28 35.3	+0.9
FRGS	Fruska Gora	4.21	357	*e*Pn	Pn	14 28 35.3	+0.9
DID	Didima	4.21	144	P	Pn	14 28 34.8	+0.4
DID	Didima	4.21	144	P	Pn	14 28 35.7	+1.3
PYL	PYLOS	4.25	162	P	Pn	14 28 33.5	-1.3
PYL	PYLOS	4.25	162	P	Pn	14 28 35.4	+0.6
TRIV	Trivento	4.26	283	P	Pn	14 28 35.6	+0.6
TRIV				AML	AML		
	comp=E,169µm,0.6s						
TRIV				AML	AML		
	comp=N,222µm,0.9s						
TRIV				AML	AML		
	comp=E,169µm,0.6s						
TRIV				AML	AML		
	comp=N,222µm,0.9s						
HERR	Herculane	4.28	23	⇑*i*P	Pn	14 28 36.5	+1.2
HERR	Herculane	4.28	23	⇑*i*P	Pn	14 28 36.5	+1.2
HERR				S	Sn	14 29 26.1	+1.0
SGG	Gregorio Mates	4.34	278	AML	AML		
	comp=E,316µm,0.5s						
SGG				AML	AML		
	comp=E,316µm,0.5s						
SGG				AML	AML		
	comp=N,256µm,0.4s						
SGG				AML	AML		
	comp=N,256µm,0.4s						
BLY	Banja Luka	4.36	332	⇑*i*P	Pn	14 28 35.7	-0.7
BLY	Banja Luka	4.36	332	⇑*i*P	Pn	14 28 35.7	-0.7
BLY	Banja Luka	4.36	332	*e*Pn	Pn	14 28 37.6	+1.2
ALN	Alexandroupoli	4.50	89	P	Pn	14 28 38.6	+0.2
ALN	Alexandroupoli	4.50	89	P	Pn	14 28 39.0	+0.6
DYR	Agios Nikonas	4.53	157	P	Pn	14 28 40.2	+1.4
DYR	Agios Nikonas	4.53	157	P	Pn	14 28 40.7	+2.0
CERA	Filignano	4.63	280	P	Pn	14 28 41.7	+1.5
CERA				AML	AML		
	comp=E,472µm,0.5s						
CERA				AML	AML		
	comp=N,460µm,0.5s						
CERA				AML	AML		
	comp=E,472µm,0.5s						
CERA				AML	AML		
	comp=N,460µm,0.5s						
VLI	Veliai	4.77	151	P	Pn	14 28 43.7	+1.7
VLI	Veliai	4.77	151	P	Pn	14 28 44.2	+2.2
UDBI	Udbina	4.79	320	*e*Pn	Pn	14 28 44.6	+2.2
UDBI				Sn	Sn	14 29 38.6	+0.8
BZS	Buzias	4.79	13	*e*Pn	Pn	14 28 43.6	+1.3
BZS	Buzias	4.79	13	⇑*i*P	Pn	14 28 42.5	+0.2
BZS	Buzias	4.79	13	⇑*i*P	Pn	14 28 42.5	+0.2
BZS	Buzias	4.79	13	*e*Pn	Pn	14 28 43.6	+1.3
BZS				S	Sn	14 29 38.4	+0.7
POFI	Posta Fibreno	4.87	281	P	Pn	14 28 44.6	+1.1
POFI				AML	AML		
	comp=E,140µm,0.7s						
POFI				AML	AML		
	comp=N,69µm,0.4s						
POFI				AML	AML		
	comp=E,140µm,0.7s						
POFI				AML	AML		
	comp=N,69µm,0.4s						
AQU	L'Aquila	5.21	288	*e*Pn	Pn	14 28 48.8	+0.7
KYTH	Kithira	5.21	153	P	Pn	14 28 50.2	+2.0
NVLJ	Novalja	5.28	315	*e*Pn	Pn	14 28 49.8	+0.8
NVLJ				Sn	Sn	14 29 49.0	-0.6
FIAM	Fiamignano	5.40	286	P	Pn	14 28 52.1	+1.4
FIAM				AML	AML		
	comp=E,170µm,0.9s						
FIAM				AML	AML		
	comp=N,109µm,0.8s						
FIAM				AML	AML		
	comp=E,170µm,0.9s						
FIAM				AML	AML		
	comp=N,109µm,0.8s						
FDMO	Fiordimonte	5.63	294	P	Pn	14 28 53.8	0.0
FDMO				AML	AML		
	comp=E,88µm,0.8s						
FDMO				AML	AML		
	comp=N,89µm,0.4s						
FDMO				AML	AML		
	comp=N,89µm,0.4s						
FDMO				AML	AML		
	comp=E,88µm,0.8s						
ANKY	Antikythira Is	5.66	153	P	Pn	14 28 55.9	+1.6
ANKY	Antikythira Is	5.66	153	P	Pn	14 28 56.5	+2.2
OZLJ	Ozalj	5.76	326	*i* Pn	Pn	14 28 56.9	+1.4
VOIR		5.76	37	⇓*i*P	Pn	14 28 56.5	+0.8
VOIR		5.76	37	⇓*i*P	Pn	14 28 56.5	+0.8
CRES	Cresnjev	5.93	327	*e*Pn	Pn	14 28 58.6	+0.6
DRGR		6.14	17	⇓*i*P	Pn	14 29 01.3	+0.4
DRGR		6.14	17	⇓*i*P	Pn	14 29 01.3	+0.4
DRGR				S	Sn	14 30 10.3	-0.6
MLR	Muntele Rosu	6.23	41	Pn	Pn	14 29 04.9	+2.7
	comp=E,0.9nm,0.3s,baz=285,slow=7.1,SNR=7.7						
MLR				Sn	Sn	14 30 14.9	+1.6
	baz=162,slow=20,SNR=2.2						
MLR	Muntele Rosu	6.23	41	⇓*i*P	Pn	14 29 03.1	+0.9
MLR	Muntele Rosu	6.23	41	⇓*i*P	Pn	14 29 03.1	+0.9
ISR	Istrita	6.30	46	⇓*i*P	Pn	14 29 04.7	+1.7
ISR	Istrita	6.30	46	⇓*i*P	Pn	14 29 04.7	+1.7
CEY	Cerknica	6.33	321	*e*Pn	Pn	14 29 03.9	+0.5
SOKA	Soboth	6.80	329	*e*Pn	Pn	14 29 10.7	+0.7
	comp=E,2.8nm,0.4s						
SOKA				*e*Sn	Sn	14 30 27.4	+0.2
	comp=E,4.7nm,0.6s						
SOKA	Soboth	6.80	329	Pn	Pn	14 29 10.7	+0.7
	comp=E,2.8nm,0.4s						
SOKA				Sn	Sn	14 30 27.4	+0.2
	comp=E,4.7nm,0.6s						
PLOR	Plostina	6.84	42	⇑*i*P	Pn	14 29 11.9	+1.5
PLOR	Plostina	6.84	42	⇑*i*P	Pn	14 29 11.9	+1.5
HARR	Harsova	6.86	54	⇑*i*P	Pn	14 29 12.1	+1.4
HARR	Harsova	6.86	54	⇑*i*P	Pn	14 29 12.1	+1.4
TLB	Topalu	6.88	55	⇑*i*P	Pn	14 29 12.4	+1.4
TLB	Topalu	6.88	55	⇑*i*P	Pn	14 29 12.4	+1.4
VRI	Vrincioaia	6.89	42	⇑*i*P	Pn	14 29 12.5	+1.4
VRI	Vrincioaia	6.89	42	⇑*i*P	Pn	14 29 12.5	+1.4
ARSA	Arzberg	7.11	334	*e*Pn	Pn	14 29 14.8	+0.6
	comp=E,2.9nm,0.5s						
ARSA	Arzberg	7.11	334	Pn	Pn	14 29 14.8	+0.6
	comp=E,2.9nm,0.5s						
KECS	Kecovo	7.54	2	*e*PG	Pg	14 29 53.1	-1.6
VYHS	Vyhne	7.60	354	*e*SN	Sn	14 30 45.9	-0.9
VYHS	Vyhne	7.60	354	*e*Sn	Sn	14 30 45.9	-0.9
CONA	Conrad Observa	7.61	338	*e*Pn	Pn	14 29 29.4	+8.4
	comp=E,1.0nm,0.5s						
TLCR		7.66	54	⇓*i*P	Pn	14 29 22.9	+1.3
TLCR		7.66	54	⇓*i*P	Pn	14 29 22.9	+1.3
KBA	Koelnbreinsper	7.82	324	Sn	Sn	14 30 54.0	+1.4
	comp=E,2.1nm,0.4s						
KBA	Koelnbreinsper	7.82	324	Sn	Sn	14 30 54.0	+1.4
	comp=E,2.1nm,0.4s						
ABTA	Abfaltersbach	7.98	319	*e*Pn	Pn	14 29 25.8	-0.3
	comp=E,0.4nm,0.2s						
ABTA				*e*Sn	Sn	14 30 54.9	-1.3
	comp=E,4.8nm,0.6s						
ABTA	Abfaltersbach	7.98	319	Pn	Pn	14 29 25.8	-0.3
	comp=E,0.4nm,0.2s						
MOA	Molln	8.06	331	*e*Pn	Pn	14 29 29.4	+2.2
	comp=E,2.4nm,0.5s						
MOA				Sn	Sn	14 30 58.9	+0.7
	comp=E,1.7nm,0.4s						
MOA	Molln	8.06	331	Pn	Pn	14 29 29.4	+2.2
	comp=E,2.4nm,0.5s						
MOA				Sn	Sn	14 30 58.9	+0.7
	comp=E,1.7nm,0.4s						
WTTA	Wattenberg	8.77	319	*e*Pn	Pn	14 29 38.6	+1.6
	comp=E,3.6nm,0.4s						
WTTA				*e*Sn	Sn	14 31 15.3	-0.5
	comp=E,4.6nm,0.7s						
WTTA	Wattenberg	8.77	319	Pn	Pn	14 29 38.6	+1.6
	comp=E,3.6nm,0.4s						
WTTA				Sn	Sn	14 31 15.3	-0.5
	comp=E,4.6nm,0.7s						
WATA	Walderalm	8.85	319	*i* Pn	Pn	14 29 40.1	+2.0
	comp=E,8.3nm,0.4s						
WATA				*e*Sn	Sn	14 31 18.7	+1.1
	comp=E,2.6nm,0.5s						
WATA	Walderalm	8.85	319	Pn	Pn	14 29 40.1	+2.0
	comp=E,8.3nm,0.4s						
WATA				Sn	Sn	14 31 18.7	+1.1
	comp=E,2.6nm,0.5s						
FETA	Feichten	9.08	315	Pn	Pn	14 29 43.4	+2.1
	comp=E,3.5nm,0.7s						
FETA				Sn	Sn	14 31 24.7	+1.3
	comp=E,2.0nm,0.6s						
FETA	Feichten	9.08	315	Pn	Pn	14 29 43.4	+2.1
	comp=E,3.5nm,0.7s						
FETA				Sn	Sn	14 31 24.7	+1.3
	comp=E,2.0nm,0.6s						
GERES	GERESS Array B	9.10	332	Pn	Pn	14 29 42.1	+0.5
	comp=E,0.2nm,0.3s,baz=163,slow=14,SNR=5.8						
GERES				Sn	Sn	14 31 24.9	+1.0
	comp=E,0.3nm,0.3s,baz=150,slow=26,SNR=3.5						
KHC	Kasperske Hory	9.39	333	*e*PN	Pn	14 29 54.4	+9.0
KHC				*e*x	x	14 31 28.5	
DAVOX	Davos/Dischmat	9.40	312	Pn	Pn	14 29 46.7	+0.9
	comp=E,0.4nm,0.3s,baz=152,slow=18,SNR=4.6						
DAVOX				Sn	Sn	14 31 28.6	-2.8
	comp=E,0.2nm,0.3s,baz=331,slow=19,SNR=3.3						
DAVOX				LR	LR	14 35 05.2	
	comp=E,26nm,21.5s,baz=84,slow=48						
DAVA	Damuels	9.70	314	*e*Pn	Pn	14 29 51.7	+1.9
	comp=E,1.1nm,0.4s						
DAVA				*e*Sn	Sn	14 31 38.2	-0.4
	comp=E,3.6nm,0.5s						
DAVA	Damuels	9.70	314	Pn	Pn	14 29 51.7	+1.9
	comp=E,1.1nm,0.4s						
DAVA				Sn	Sn	14 31 38.2	-0.4
	comp=E,3.6nm,0.5s						
BRTR	Keskin Array B	10.41	92	Pn	Pn	14 30 01.5	+2.0
	comp=E,0.2nm,0.3s,baz=280,slow=13,SNR=4.6						
CLL	Collm	11.46	337	*e*(P)	Pn	14 30 19.0	+5.3
MMAI	Mount Meron Ar	14.56	118	LR	LR	14 37 39.2	
	comp=E,36nm,18.1s,baz=160,slow=42						
KVAR	Kislovodsk Arr	16.93	72	LR	LR	14 39 22.5	
	comp=E,23nm,19.3s,baz=148,slow=42						
HFS	Hagfors	19.62	350	P	P	14 31 58.6	+0.2
	comp=E,0.2nm,0.3s,baz=182,slow=12,SNR=5.8						
NOA	NORSAR Array B	20.84	348	P	P	14 32 12.6	+0.9
	comp=E,0.3nm,0.6s,baz=159,slow=7.3,SNR=2.5						
FINES	FINESS Array B	20.84	8	P	P	14 32 10.5	-1.2
	comp=E,1.8nm,0.8s,baz=177,slow=12,SNR=6.7						
AKTO	Aktyubinsk	27.86	57	P	P	14 33 19.2	-0.5
	comp=E,1.0nm,0.6s,baz=228,slow=14,SNR=3.0						
TORD	Torodi Ar. Bea	32.04	215	P	P	14 33 56.1	-0.8
	comp=E,1.3nm,1.0s,baz=32,slow=8.5						
BVAR	Borovoye Array	35.65	53	P	P	14 34 28.1	+0.2
	comp=E,1.6nm,0.7s,baz=270,slow=2.9,SNR=12						
KURBB	Kurchatov Arra	40.90	56	P	P	14 35 10.9	-1.2
	comp=E,0.4nm,0.4s,baz=286,slow=9.7,SNR=3.2						
ZALV	Zalesovo Beam	44.12	50	P	P	14 35 37.8	-0.5
	comp=E,3.7nm,0.5s,baz=286,slow=9.3,SNR=8.7						
MKAR	Makanchi Array	44.18	61	P	P	14 35 37.9	-1.0
	comp=E,0.8nm,0.7s,baz=324,slow=7.1,SNR=9.1						
KSRS	Korea Array	77.83	51	P	P	14 39 26.9	-0.7
	comp=E,0.5nm,0.5s,baz=309,slow=4.0,SNR=4.3						
ASAR	Alice Springs	122.75	94	PKP	PKPdf	14 46 24.8	-1.5
	comp=E,0.2nm,0.8s,baz=317,slow=1.4,SNR=3.2						

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*WEL **22** 14:34:30.8, 38˚S±7˚×18˚0W±˚, h33^{km}, ML4.4/24*

*IDC **22** 14:34:30.5±0.9, 37˚.17S×179˚.76E, h0^{km}, mb4.2/6,* *mb1 4.3/7, mb1mx4.0/40, mbtmp4.2/7, ML3.8/1, MS3.6/2, Ms1 3.6/2, ms1mx2.8/39, Error ellipse: s-maj=28.9km s-min=24.5km az=177.0*

ISC 22 14:34:28.5±3.5**, 37°.90S**±0°.07×**179°.72W**±0°.08**, h9**^{km}±21^{km}**, n99, σ1ˢ.59**/112**, mb4.2**/6**, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.48	273	P	Pn	14 34 55.5	+0.2
WMGZ				S	Sn	14 35 14.1	-0.7
MXZ	Matakaoa Point	1.60	282	P	Pn	14 34 56.8	-0.3
MXZ				S	Sn	14 35 15.1	-2.7
PUZ	Puketiti	1.61	263	P	Pn	14 34 57.8	+0.7
PUZ				S	Sn	14 35 17.8	-0.2
CNGZ	Carnagh Statio	1.73	250	P	Pb	14 35 01.1	+0.5
PKGZ	Pakihiroa	1.74	270	P	Pn	14 34 59.1	0.0
TWGZ	Tauwhareparae	1.83	261	P	Pn	14 35 01.3	+0.9
TWGZ				S	Sn	14 35 24.3	+0.6
HAZ	Te Kaha	1.98	273	P	Pn	14 35 02.4	+0.2
TKGZ	Te Karaka	1.99	254	P	Pn	14 35 03.8	+1.4
TKGZ				S	Sn	14 35 28.8	+1.3
RUGZ	Raukumara Rang	2.06	267	P	Pn	14 35 03.7	+0.2
RIGZ	Rimuhau	2.14	247	P	Pn	14 35 06.0	+1.5
RIGZ				S	Sn	14 35 32.3	+1.2
PRGZ	Paritu Road	2.14	241	P	Pb	14 35 06.9	-0.7
MWZ	Matawai	2.21	258	P	Pn	14 35 06.2	+0.7
MWZ				S	Sn	14 35 32.3	-0.8
MHGZ	Mahia Peninsul	2.24	235	P	Pn	14 35 08.2	+2.3
MHGZ				S	Sb	14 35 37.1	0.0
KNZ	Kokohu	2.33	240	P	Pn	14 35 08.9	+1.8
RAGZ	Rawiri	2.33	254	P	Pn	14 35 08.3	+1.1
SNGZ	Shannon Statio	2.47	248	P	Pn	14 35 10.8	+1.7
SNGZ				S	Sn	14 35 40.2	+0.8
URZ	Urewera	2.52	261	Pn	Pn	14 35 11.0	+1.3
	25nm,0.3s,baz=259,slow=2.2,SNR=136						
URZ				Sn	Sn	14 35 39.9	-0.7
	27nm,0.3s,baz=246,slow=14,SNR=8.0						
URZ	Urewera	2.52	261	P	Pn	14 35 11.0	+1.3
URZ				S	Sn	14 35 40.1	-0.6
WHHZ	Waihua	2.66	243	P	Pn	14 35 13.7	+2.1
WHHZ				S	Sn	14 35 45.9	+1.8
RAHZ	Arahi	2.71	247	P	Pn	14 35 14.3	+2.0
RAHZ				S	Sn	14 35 46.0	+0.8
MUGZ	Murupara	2.82	257	P	Pn	14 35 15.3	+1.4
MTHZ	Maungataniwha	2.86	250	P	Pn	14 35 16.1	+1.6
ARHZ	Aropaoanui	2.91	241	P	Pn	14 35 17.5	+2.4
OPRZ	Ohinepanea	2.95	270	P	Pn	14 35 15.7	+0.1
NMHZ	Naumai	2.97	245	P	Pn	14 35 18.0	+1.9
NMHZ	Naumai	2.97	245	P	Sn	14 35 53.0	+1.1
TARZ	Mount Tarawera	3.00	262	P	Pn	14 35 17.7	+1.4
RRRZ	Republican Roa	3.00	260	P	Pn	14 35 18.0	+1.7
CKHZ	Cape Kidnapper	3.06	234	P	Pn	14 35 19.7	+2.6
ALRZ	Allen Road	3.17	257	P	Pn	14 35 20.1	+1.4
MRHZ	Matea Rd	3.17	252	P	Pn	14 35 20.9	+2.1
TGRZ	Tauranga	3.19	272	P	Pn	14 35 19.1	+0.2
HRRZ	Handcock Road	3.19	260	P	Pn	14 35 19.8	+0.9
KARZ	Kaharoa	3.19	267	P	Pn	14 35 19.5	+0.5
MCHZ	McNeill Hill	3.20	240	P	Pn	14 35 20.9	+1.9
BKZ	Black Stump Fm	3.23	246	P	Pn	14 35 21.1	+1.6
KAHZ	Kahuranaki	3.26	233	P	Pn	14 35 21.7	+1.8
KWHZ	Kaweka Forest	3.38	242	P	Pn	14 35 23.2	+1.6
PXZ	Pawanui	3.41	230	P	Pn	14 35 23.0	+1.1
KRHZ	Kereru	3.52	239	P	Pn	14 35 25.0	+1.6
KUTZ	Kaahu Road	3.56	259	P	Pn	14 35 24.8	+0.7
RITZ	Rihia Road	3.63	251	P	Pn	14 35 26.8	+1.8
BHHZ	Black Hill Sta	3.66	243	P	Pn	14 35 27.1	+1.6
WPHZ	Waipukurau	3.69	233	P	Pn	14 35 27.7	+2.0
PRHZ	Porangahau	3.69	229	P	Pn	14 35 27.0	+1.2
PNHZ	Pukenui	3.76	236	P	Pn	14 35 28.2	+1.3
KUZ	Kuaotunu	3.81	286	P	Pn	14 35 26.7	-0.7
MOVZ	Moawhango	3.85	246	P	Pn	14 35 29.5	+1.4
TUVZ	Tukino	3.87	248	P	Pn	14 35 31.2	+2.8
NGZ	Ngauruhoe	3.88	249	P	Pn	14 35 31.5	+3.0
ANWZ	Angora Road	3.91	228	P	Pn	14 35 29.5	+0.8
WHVZ	Whangaehu Hut	3.92	248	P	Pn	14 35 32.1	+2.8
COVZ	Chateau Observ	3.93	249	P	Pn	14 35 31.4	+2.2
FWVZ	Far West T-bar	3.94	248	P	Pn	14 35 31.7	+2.2
DVHZ	Dannevirke	4.00	232	P	Pn	14 35 31.1	+1.1
MTVZ	Mangateitei	4.04	247	P	Pn	14 35 32.4	+1.7
MKAZ	Moumakai	4.15	279	P	Pn	14 35 31.8	-0.3
BFZ	Birch Farm	4.18	227	P	Pn	14 35 32.3	-0.2
PRWZ	Pori Road	4.27	230	P	Pn	14 35 35.4	+1.7
POWZ	Post Office Ro	4.30	233	P	Pn	14 35 36.0	+1.8
HIZ	Hauiti	4.32	260	P	Pn	14 35 35.9	+1.5
ETAZ	East Tamaki Re	4.36	281	P	Pn	14 35 35.1	0.0
VRZ	Vera Road	4.50	253	P	Pn	14 35 39.2	+2.3
WAZ	Wanganui	4.53	244	P	Pn	14 35 40.8	+3.5
HBAZ	Herne Bay Bore	4.54	282	P	Pn	14 35 38.0	+0.5
MRZ	Mangatainoka R	4.57	231	P	Pn	14 35 38.4	+0.5
TMWZ	Te Maipa	4.67	225	P	Pn	14 35 39.6	+0.3
RVAZ	Riverhead Bore	4.68	282	P	Pn	14 35 39.5	+0.1
HOWZ	Holdsworth Sta	4.75	229	P	Pn	14 35 40.3	-0.1
MTW	Mount Morrison	4.92	227	P	Pn	14 35 42.2	-0.5
TRWZ	Traveller	4.97	224	P	Pn	14 35 42.9	-0.5
PAWZ	Paruwai Farm	5.11	226	P	Pn	14 35 45.3	-0.1
CAW	Cannon Point	5.15	230	P	Pn	14 35 45.7	-0.1
MSWZ	Moikau Station	5.23	226	P	Pn	14 35 45.8	-1.2
PLWZ	Palliser	5.33	225	P	Pn	14 35 47.2	-1.2
TCW	Tory Channel	5.70	233	P	Pn	14 35 53.5	+0.2
TUWZ	Tuamarina	6.03	232	P	Pn	14 35 57.0	-0.9
THZ	Tophouse	6.86	233	P	Pn	14 36 09.4	0.0
OKCZ	Okains Bay	7.99	221	P	Pn	14 36 25.1	+0.3
AKCZ	Akaroa Harbour	8.17	221	P	Pn	14 36 27.2	-0.1
MQZ	McQueen's Vall	8.19	223	P	Pn	14 36 26.4	-1.1
OXZ	Oxford	8.28	227	P	Pn	14 36 28.1	-0.7
RPZ	Rata Peaks	9.09	227	Pn	Pn	14 36 40.0	+0.1
	0.6nm,0.3s,baz=336,slow=18,SNR=4.5						
RPZ				Sn	Sn	14 38 14.5	-7.8
	2.6nm,0.3s,baz=305,slow=23,SNR=17						
ODZ	Otahua Downs	10.15	222	P	Pn	14 36 54.2	-0.3
TUZ	Tuapeka	11.29	221	P	Pn	14 37 10.5	+0.5
DZM	Mont Dzumac	19.77	319	LR	LR	14 45 32.8	
	comp=Z,103nm,19.3s,baz=124,slow=35						
STKA	Stephens Creek	32.13	269	P	P	14 40 55.3	-1.1
	1.1nm,0.4s,baz=113,slow=12,SNR=3.1						
CTA	Charters Tower	34.40	291	P	P	14 41 13.8	-2.5
	4.0nm,0.8s,baz=114,slow=10.0,SNR=3.4						
ASAR	Alice Springs	41.88	276	P	P	14 42 19.1	-0.2
	4.7nm,0.8s,baz=120,slow=8.2,SNR=56						
ASAR				PcP	PcP	14 44 16.0	+0.9
	0.6nm,0.7s,baz=122,slow=4.2,SNR=4.0						
WRA	Warramunga Arr	43.53	281	P	P	14 42 32.2	-0.6
	5.3nm,0.9s,baz=122,slow=7.4,SNR=46						
WRA				PcP	PcP	14 44 22.1	+1.5
	1.0nm,0.9s,baz=126,slow=2.9,SNR=4.3						
QSPA	South Pole Qui	52.23	180	P	P	14 43 48.7	+9.0
	0.9nm,0.8s,baz=26,slow=2.9,SNR=2.9						
KSRS	Korea Array	89.19	321	P	P	14 47 24.5	+0.1
	0.8nm,0.7s,baz=145,slow=4.5,SNR=3.6						
CPUP	Villa Florida	96.34	130	LR	LR	15 24 34.0	
	comp=Z,36nm,20.2s,baz=214,slow=31						
MKAR	Makanchi Array	121.33	307	PKP	PKPdf	14 53 22.8	+1.1
	0.4nm,0.9s,baz=126,slow=2.0,SNR=2.6						
KURBB	Kurchatov Arra	125.04	310	PKP	PKPdf	14 53 30.0	+1.3
	0.4nm,0.2s,baz=165,slow=2.7,SNR=2.6						
ARCES	ARCESS Array B	145.52	345	PKP	PKPab	14 54 08.0	+1.5
	7.4nm,1.1s,baz=355,slow=3.0,SNR=8.0						
DBIC	Dimbokro	148.56	170	PKPbc	PKPab	14 54 21.2	+1.4
	10nm,1.1s,baz=132,slow=2.5,SNR=3.3						
FINES	FINESS Array B	151.49	334	PKPbc	PKPbc	14 54 24.0	+1.9
	3.2nm,0.9s,baz=38,slow=9.6,SNR=6.0						
AKASG	Malin Array Be	155.83	311	PKPab	PKPab	14 54 47.7	-1.5
	0.2nm,0.3s,baz=52,slow=4.1,SNR=2.3						

KRSC 22 14:41:46.8±1.3**, 49°.16N**×**157°.18E, h30**^{km}±22^{km}**, ML3.8, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.67	336	*e*P	Pn	14 42 14.8	+0.9
SKR				*e*S	Sn	14 42 35.1	+0.8
PAU	Pauzhetka	2.32	354	*e*P	Pn	14 42 24.5	+1.7
PAU				*e*S	Sb	14 42 53.4	-2.6
KDTR	Khodutka, Kamc	2.71	12	*e*P	Pb	14 42 31.8	-2.7
KDTR				*e*S	Sb	14 43 04.0	-3.2
MIPR	Malaya Ipel'ka	3.13	355	*e*P	Pn	14 42 37.3	+3.3
ASAK	Asacha	3.25	8	*e*P	Pn	14 42 39.8	+4.0
RUS	Russkaya	3.38	14	*e*P	Pn	14 42 40.8	+3.4
RUS				*e*S	Sn	14 43 20.6	+4.1
MTVR	Mutnovka	3.38	10	*e*P	Pn	14 42 40.3	+2.7
KRMR	Karymshinskiy	3.72	9	*e*P	Pn	14 42 46.6	+4.5
APC	Apacha	3.77	360	*e*P	Pn	14 42 47.0	+4.3
PET	Petropavlovsk	3.97	13	*e*P	Pn	14 42 49.6	+4.0
PET				*e*S	Sn	14 43 36.7	+5.6
DALK	Dalny	4.00	14	*e*P	Pn	14 42 50.6	+4.7
UGLR	Uglovaya	4.18	14	*e*P	Pn	14 42 53.2	+4.7
AVH	Avacha	4.22	13	*e*P	Pn	14 42 54.1	+5.0
NLC	Nalytchevo	4.24	18	*e*P	Pn	14 42 52.7	+3.5
SDLR	Sedlovina	4.26	14	*e*P	Pn	14 42 53.9	+4.3
KRX	Arik	4.30	12	*e*P	Pn	14 42 55.5	+5.3
SPN	Mys Shipunski	4.33	23	*e*P	Pn	14 42 54.5	+4.1
SPN				*e*S	Sn	14 43 46.1	+6.3
GNL	Ganaly	4.56	6	*e*P	Pn	14 42 58.3	+4.5
KBTR	Krutoberegovo	7.84	24	*e*P	Pn	14 43 43.0	+4.4

IDC ***22*** *14:56:43.0±1.5, 13°.25N×48°.95E, h0^{km}, mb3.7/4, mb1 3.9/5, mb1mx3.4/59, mbtmp3.7/5, ML3.8/1, MS2.9/2, Ms1 2.8/2, ms1mx2.4/53, Error ellipse: s-maj=46.4km s-min=33.1km az=134.0*

DHMR ***22*** *14:56:51.2±4.1, 13°.44N×49°.65E, h20^{km}±82^{km}, ML3.3*

ISC 22 14:56:44.4±1.2**, 13°.1N**±0°.1×**49°.09E**±0°.09**, h10**^{km}**, n13, σ1ˢ.35**/7**, mb3.6**/4**, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MUKL	Al Mukalla	1.42	358	*i* P	Pg	14 57 13.1	+1.4
MUKL				*e*		14 57 13.3	
	baz=121,slow=7.4						
MUKL				*i* S	Sn	14 57 29.2	+0.1
MUKL				AML	AML	14 57 35.5	
	comp=N,284nm,0.7s						
BDHA	Al Bayda'	3.55	285	*i* P	Pg	14 57 54.3	+1.8
BDHA				AML	AML	14 58 00.2	
	comp=E,157nm,0.3s						
BDHA				*i* S	Sg	14 58 44.3	+5.7
LBOS		3.83	283	*i* P	Pg	14 57 58.3	+0.5
LBOS				*i* S	Sg	14 58 48.7	+1.2
ATD	Arta Tunnel	6.29	257	Pn	Pn	14 58 16.0	-1.3
	comp=E,2.1nm,0.3s,baz=189,slow=19,SNR=3.7						
GNI	Garni	27.27	353	LR	LR	15 15 23.0	
	comp=E,25nm,20.1s,baz=128,slow=41						
H08N2	Diego Garcia H	29.05	130	T	T	15 32 18.0	
	baz=314						
H08N3	Diego Garcia H	29.06	130	T	T	15 32 19.9	
	baz=314						
H08N1	Diego Carcia H	29.07	130	T	T	15 32 23.6	
	baz=314						
KBZ	Khabaz	31.04	351	LR	LR	15 18 28.7	
	comp=E,19nm,18.7s,baz=74,slow=42						
MKAR	Makanchi Array	43.68	33	P	P	15 04 48.9	-0.6
	comp=E,0.4nm,0.6s,baz=221,slow=7.5,SNR=5.4						
KURBB	Kurchatov Arra	44.48	27	P	P	15 04 54.8	-1.0
	comp=E,0.2nm,0.3s,baz=228,slow=7.4,SNR=3.9						
WRA	Warramunga Arr	90.00	110	P	P	15 09 45.9	+1.0
	comp=E,0.6nm,0.7s,baz=302,slow=3.5,SNR=5.9						
ASAR	Alice Springs	90.50	114	P	P	15 09 48.5	+1.4
	comp=E,0.4nm,0.8s,baz=288,slow=4.9,SNR=4.6						

WEL ***22*** *15:03:04.0, 38°S±8°×18°0W±°, h33^{km}, ML4.3/25*

IDC ***22*** *15:03:03.4±2.4, 37°.64S×179°.95E, h0^{km}, mb4.1/2, mb1 4.3/4, mb1mx3.8/41, mbtmp4.1/4, ML3.6/2, Error ellipse: s-maj=74.1km s-min=28.7km az=150.0*

NEIC ***22*** *15:03:04.8±0.0, 37°.58S×179°.67W, h40^{km}, mb3.9/1, ML4.2(WEL), After WEL.*

ISC 22 15:03:01.1±2.2**, 37°.68S**±0°.07×**179°.70W**±0°.08**, h7**^{km}±12^{km}**, n87, σ1ˢ.40**/107**, mb4.0**/3**, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.50	264	Pn	Pg	15 03 29.5	-0.3
WMGZ				Sn	Sb	15 03 49.1	+0.6
WMGZ	Waiomatatini S	1.50	264	P	Pg	15 03 29.6	-0.3
WMGZ				S	Sn	15 03 48.6	+0.4
MXZ	Matakaoa Point	1.59	273	Pn	Pb	15 03 30.1	-0.6
MXZ				Sn	Sn	15 03 49.7	-0.7
MXZ	Matakaoa Point	1.59	273	P	Pb	15 03 30.3	-0.4
MXZ				S	Sn	15 03 48.9	-1.5
PUZ	Puketiti	1.66	256	Pn	Pb	15 03 31.8	-0.3
PUZ				Sn	Sn	15 03 51.2	-1.1
PUZ	Puketiti	1.66	256	P	Pb	15 03 32.4	+0.3
PUZ				S	Sn	15 03 51.5	-0.8
PKGZ	Pakihiroa	1.77	262	P	Pb	15 03 32.9	-1.1
CNGZ	Carnagh Statio	1.84	243	Pn	Pb	15 03 34.9	-0.1
CNGZ				Sn	Sn	15 03 58.5	+2.0
CNGZ	Carnagh Statio	1.84	243	P	Pb	15 03 35.1	+0.1
TWGZ	Tauwhareparae	1.90	254	P	Pb	15 03 36.3	+0.2
TWGZ				S	Sn	15 03 58.3	+0.1
HAZ	Te Kaha	2.00	267	P	Pb	15 03 36.8	-0.9
TKGZ	Te Karaka	2.08	248	Pn	Pn	15 03 37.5	+1.1
TKGZ				Sn	Sn	15 04 03.7	+1.2
TKGZ	Te Karaka	2.08	248	P	Pn	15 03 37.6	+1.1
TKGZ				S	Sn	15 04 02.2	-0.3
RUGZ	Raukumara Rang	2.10	261	P	Pn	15 03 37.8	+1.0
RIGZ	Rimuhau	2.25	242	P	Pn	15 03 39.8	+1.0
RIGZ				S	Sn	15 04 05.9	-0.9
PRGZ	Paritu Road	2.27	236	Pn	Pn	15 03 40.7	+1.6
PRGZ	Paritu Road	2.27	236	P	Pn	15 03 41.0	+2.0
MWZ	Matawai	2.29	252	P	Pn	15 03 39.9	+0.6
MWZ				S	Sn	15 04 06.6	-1.1
MHGZ	Mahia Peninsul	2.39	231	Pn	Pn	15 03 42.0	+1.4
MHGZ	Mahia Peninsul	2.39	231	P	Pn	15 03 42.0	+1.4
RAGZ	Rawiri	2.42	249	Pn	Pn	15 03 42.1	+1.0
RAGZ				Sn	Sn	15 04 09.9	-1.2
RAGZ	Rawiri	2.42	249	P	Pn	15 03 42.7	+1.5
RAGZ				S	Sn	15 04 10.6	-0.5
KNZ	Kokohu	2.46	236	P	Pn	15 03 42.6	+0.9
SNGZ	Shannon Statio	2.58	244	Pn	Pn	15 03 44.5	+1.2
SNGZ				Sn	Sn	15 04 14.9	-0.1
SNGZ	Shannon Statio	2.58	244	P	Pn	15 03 44.5	+1.2
URZ	Urewera	2.59	256	Pn	Pn	15 03 44.8	+1.5
	17nm,0.3s,baz=214,slow=1.0,SNR=17						
URZ				Sn	Sn	15 04 14.3	-0.7
	54nm,0.3s,baz=263,slow=20,SNR=25						
URZ	Urewera	2.59	256	P	Pn	15 03 44.8	+1.5
URZ				S	Sn	15 04 14.3	-0.7
WHHZ	Waihua	2.79	239	P	Pn	15 03 47.9	+1.8
WHHZ				S	Sn	15 04 19.8	-0.2
RAHZ	Arahi	2.81	243	P	Pn	15 03 48.2	+1.7
MUGZ	Murupara	2.90	253	P	Pn	15 03 48.9	+1.2
MTHZ	Maungataniwha	2.96	246	P	Pn	15 03 50.1	+1.5
MTHZ				S	Sn	15 04 23.7	-0.8
OPRZ	Ohinepanea	2.97	266	P	Pn	15 03 49.8	+1.2
ARHZ	Aropaoanui	3.04	238	Pn	Pn	15 03 51.3	+1.7
ARHZ	Aropaoanui	3.04	238	P	Pn	15 03 51.3	+1.7
TARZ	Mount Tarawera	3.05	258	P	Pn	15 03 51.7	+1.9
RRRZ	Republican Roa	3.06	256	P	Pn	15 03 52.1	+2.2
NMHZ	Naumai	3.09	242	Pn	Pn	15 03 51.5	+1.2
NMHZ	Naumai	3.09	242	P	Pn	15 03 51.6	+1.2
NMHZ				S	Sn	15 04 26.7	-0.9
PRRZ	Plateau Road	3.19	254	P	Pn	15 03 54.4	+2.7
CKHZ	Cape Kidnapper	3.21	231	P	Pn	15 03 53.6	+1.7
HRRZ	Handcock Road	3.25	256	P	Pn	15 03 53.8	+1.3
HSRZ	Hossack Road	3.26	258	P	Pn	15 03 54.2	+1.5
MCHZ	McNeill Hill	3.33	237	Pn	Pn	15 03 55.0	+1.4
MCHZ	McNeill Hill	3.33	237	P	Pn	15 03 55.0	+1.4
BKZ	Black Stump Fm	3.34	242	Pn	Pn	15 03 54.5	+0.7
BKZ	Black Stump Fm	3.34	242	P	Pn	15 03 54.9	+1.1
KAHZ	Kahuranaki	3.41	231	Pn	Pn	15 03 55.6	+0.9
KAHZ	Kahuranaki	3.41	231	P	Pn	15 03 55.6	+0.9
KWHZ	Kaweka Forest	3.50	239	P	Pn	15 03 57.2	+1.1
PXZ	Pawanui	3.57	228	Pn	Pn	15 03 56.6	-0.2
PXZ	Pawanui	3.57	228	P	Pn	15 03 56.5	-0.3
KRHZ	Kereru	3.65	236	P	Pn	15 03 58.6	+0.6
RITZ	Rihia Road	3.73	248	P	Pn	15 04 00.4	+1.4
BHHZ	Black Hill Sta	3.78	240	Pn	Pn	15 04 00.7	+0.9
BHHZ	Black Hill Sta	3.78	240	P	Pn	15 04 00.8	+0.9
PNHZ	Pukenui	3.90	234	Pn	Pn	15 04 02.2	+0.6
PNHZ	Pukenui	3.90	234	P	Pn	15 04 01.9	+0.4
MOVZ	Moawhango	3.96	243	P	Pn	15 04 04.1	+1.7
ANWZ	Angora Road	4.07	226	P	Pn	15 04 03.4	-0.4
MKAZ	Moumakai	4.13	276	P	Pn	15 04 05.3	+0.8
TSZ	Takapari Road	4.14	234	P	Pn	15 04 05.3	+0.6
DVHZ	Dannevirke	4.15	230	Pn	Pn	15 04 05.0	+0.1
DVHZ	Dannevirke	4.15	230	P	Pn	15 04 05.0	+0.1
ETAZ	East Tamaki Re	4.34	278	P	Pn	15 04 09.0	+1.5
HIZ	Hauiti	4.37	257	P	Pn	15 04 09.5	+1.5
PRWZ	Pori Road	4.43	228	P	Pn	15 04 09.0	+0.3
POWZ	Post Office Ro	4.45	231	Pn	Pn	15 04 09.7	+0.8
POWZ	Post Office Ro	4.45	231	P	Pn	15 04 09.9	+0.9
WAZ	Wanganui	4.64	242	P	Pn	15 04 12.8	+1.1
RVAZ	Riverhead Bore	4.65	279	P	Pn	15 04 13.3	+1.5
MRZ	Mangatainoka R	4.73	229	Pn	Pn	15 04 12.0	-0.8
MRZ	Mangatainoka R	4.73	229	P	Pn	15 04 12.2	-0.6
TMWZ	Te Maipa	4.84	224	P	Pn	15 04 13.6	-0.7
HOWZ	Holdsworth Sta	4.91	228	Pn	Pn	15 04 13.9	-1.5
WCZ	Waipu Caves	5.08	288	P	Pn	15 04 19.2	+1.5
MTW	Mount Morrison	5.09	225	Pn	Pn	15 04 15.8	-1.9
CAW	Cannon Point	5.31	228	Pn	Pn	15 04 19.7	-1.0
CTZ	Chatham Island	6.49	160	Pn	Pn	15 04 41.2	+4.2
CTZ	Chatham Island	6.49	160	P	Pn	15 04 41.3	+4.2
THZ	Tophouse	7.01	232	P	Pn	15 04 44.1	-0.1
OXZ	Oxford	8.45	226	P	Pn	15 05 04.5	+0.6
RPZ	Rata Peaks	9.25	226	Pn	Pn	15 05 13.9	-1.0
	0.6nm,0.3s,baz=87,slow=3.1,SNR=3.4						
RPZ				Sn	Sn	15 06 48.3	-11
	2.6nm,0.3s,baz=9.9,slow=22,SNR=8.9						
ASAR	Alice Springs	41.87	276	P	P	15 10 52.9	+0.8
	2.3nm,0.8s,baz=119,slow=8.0,SNR=27						
WRAB	Tennant Creek	43.51	281	*e*P	P	15 11 06.5	+1.2
	1.4nm,0.6s						
WRA	Warramunga Arr	43.51	281	P	P	15 11 05.8	+0.4
	1.2nm,0.4s,baz=123,slow=7.7,SNR=36						
ARCES	ARCESS Array B	145.31	345	PKPbc	PKPdf	15 22 41.5	+3.0
	2.3nm,0.9s,baz=32,slow=2.2,SNR=5.4						
FINES	FINESS Array B	151.29	334	PKPbc	PKPab	15 22 57.3	-5.2
	2.5nm,0.9s,baz=42,slow=4.3,SNR=4.2						

MEX 22 15:07:26.0±43.0**, 25°.07N**×**99°.06W, h20**^{km}±999^{km}**, MD3.6, Northern Mexico**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LNIG	Linares	0.41	246	*e*P	Pb	15 07 33.5	-1.0
	baz=231,slow=7.4						
LNIG				*e*S	Sb	15 07 37.9	-2.4

MEX 22 15:11:16.3±0.3**, 16°.49N**×**98°.49W, h20**^{km}±25^{km}**, MD3.5, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.36	105	*i* P	Pb	15 11 22.8	-1.2
PNIG				*i* S	Sb	15 11 28.0	-1.4
TLIG	Tlapa	1.07	356	*e*P	Pb	15 11 33.0	-3.3
TLIG				*e*S	Sb	15 11 46.1	-3.8

WEL 22 15:17:17.5, 38°S±9°×**18°0W**±°**, h33**^{km}**, ML3.6**/20**, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.47	268	P	Pn	15 17 42.4	+0.8
MXZ	Matakaoa Point	1.57	278	P	Pn	15 17 43.2	+0.1
MXZ				S	Sn	15 18 01.2	-1.0
PUZ	Puketiti	1.61	259	P	Pn	15 17 44.6	+0.9
PUZ				S	Sn	15 18 03.9	+0.5
PKGZ	Pakihiroa	1.73	266	P	Pn	15 17 45.6	+0.2
PKGZ				S	Sn	15 18 06.2	-0.2
CNGZ	Carnagh Statio	1.77	246	P	Pb	15 17 47.7	-1.5
TWGZ	Tauwhareparae	1.85	257	P	Pn	15 17 48.2	+1.3
TWGZ				S	Sn	15 18 10.9	+1.7
HAZ	Te Kaha	1.97	270	P	Pn	15 17 49.2	+0.7
HAZ				S	Sn	15 18 12.9	+0.9
TKGZ	Te Karaka	2.01	250	P	Pn	15 17 50.3	+1.2
TKGZ				S	Sn	15 18 14.9	+1.7
RUGZ	Raukumara Rang	2.06	264	P	Pn	15 17 50.2	+0.4
RIGZ	Rimuhau	2.17	244	P	Pn	15 17 52.4	+1.0
RIGZ				S	Sn	15 18 18.9	+1.6
PRGZ	Paritu Road	2.19	238	P	Pn	15 17 53.9	+2.3
MWZ	Matawai	2.23	255	P	Pn	15 17 52.7	+0.5
MWZ				S	Sn	15 18 19.4	+0.8
MHGZ	Mahia Peninsul	2.30	233	P	Pn	15 17 54.7	+1.6
RAGZ	Rawiri	2.35	252	P	Pn	15 17 56.0	+2.1
KNZ	Kokohu	2.38	238	P	Pn	15 17 55.5	+1.3
SNGZ	Shannon Statio	2.51	246	P	Pn	15 17 57.8	+1.8
URZ	Urewera	2.54	258	P	Pn	15 17 57.8	+1.5
WHHZ	Waihua	2.71	241	P	Pn	15 18 00.9	+2.2
WHHZ				S	Sn	15 18 32.3	+2.0
RAHZ	Arahi	2.74	245	P	Pn	15 18 01.2	+2.0
MUGZ	Murupara	2.84	255	P	Pn	15 18 01.8	+1.3
MTHZ	Maungataniwha	2.90	247	P	Pn	15 18 02.9	+1.5
ARHZ	Aropaoanui	2.96	239	P	Pn	15 18 04.4	+2.3
NMHZ	Naumai	3.01	243	P	Pn	15 18 04.9	+1.9
MCHZ	McNeill Hill	3.25	238	P	Pn	15 18 08.3	+2.2
BKZ	Black Stump Fm	3.27	244	P	Pn	15 18 07.6	+1.1
KWHZ	Kaweka Forest	3.42	240	P	Pn	15 18 10.1	+1.4

SKO ***22*** *15:26:50.3, 40°.94N×19°.89E, h0^{km}, M1.9, ML2.3*

ATH ***22*** *15:26:52.0, 41°.10N×20°.08E, h23^{km}±1^{km}, ML2.3/9, Error ellipse: s-maj=2.4km s-min=1.0km az=42.0*

CSEM ***22*** *15:26:53.8±0.2, 40°.95N×20°.11E, h2^{km}, ML2.9, Error ellipse: s-maj=4.4km s-min=3.0km az=84.0*

THE ***22*** *15:26:53.4, 41°.02N×20°.15E, h4^{km}±1^{km}, ML2.3/6, Error ellipse: s-maj=2.1km s-min=1.0km az=145.0*

TIR ***22*** *15:26:53.6, 40°.96N×20°.18E, h10^{km}, Md2.9/6*

BEO ***22*** *15:26:55.6±0.4, 40°.97N×20°.22E, h5^{km}±4^{km}, ML2.4/5*

ISC 22 15:26:53.9±1.1**, 40°.95N**±0°.02×**20°.12E**±0°.02**, h4**^{km}±10^{km}**, n92, σ1ˢ.34**/148**, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHR	Ohrid	0.54	73	*i* Pg	Pg	15 27 03.4	-0.9
OHR				*i* Sg	Sg	15 27 11.9	+0.6
OHR				*e*Lg	Lg	15 27 12.4	
	comp=E,138nm,0.4s						
OHR				*e*Lg	Lg	15 27 13.2	
	comp=N,83nm,0.3s						
KBN	Korca	0.61	123	P	Pg	15 27 04.3	-1.3
KBN				S	Sg	15 27 14.2	+0.8
KBN	Korca	0.61	123	*i* Pg	Pg	15 27 01.4	-4.2
KBN	Korca	0.61	123	P	Pg	15 27 04.3	-1.3
KBN				S	Sg	15 27 14.2	+0.8
KBN	Korca	0.61	123	*i* PG	Pg	15 27 01.4	-4.2
KBN				*i* SG	Sg	15 27 14.4	+1.0
PHP	Peshkopia	0.77	18	*i* Pg	Pg	15 27 08.2	-0.5
PHP				*i* Sg	Sb	15 27 20.0	-0.8
PHP	Peshkopia	0.77	18	*i* PG	Pg	15 27 08.2	-0.5
PHP				*i* SG	Sb	15 27 20.1	-0.8
NEST	Nestorio	0.89	127	P	Pg	15 27 10.0	-1.0
NEST				S	Sb	15 27 25.1	+0.9
NEST				AML	AML	15 27 25.8	
	comp=N,155μm,0.3s						
NEST				AML	AML	15 27 30.0	
	comp=E,192μm,0.8s						
NEST	Nestorio	0.89	127	P	Pg	15 27 10.3	-0.7
NEST				S	Sb	15 27 24.0	-0.2
NEST	Nestorio	0.89	127	P	Pg	15 27 10.3	-0.7
NEST				S	Sb	15 27 24.0	-0.2
KRUS	Krusevo	0.95	64	*i* Pg	Pg	15 27 10.7	-1.5
KRUS				*i* Sg	Sb	15 27 25.7	-0.3
FNA	Florina	0.97	100	*e*Pg	Pg	15 27 11.1	-1.5
FNA				*e*Sg	Sg	15 27 24.3	-0.8
FNA	Florina	0.97	100	P	Pg	15 27 10.2	-2.4
FNA				S	Sb	15 27 26.8	+0.3
FNA				AML	AML	15 27 32.4	
	comp=E,476μm,0.6s						
FNA				AML	AML	15 27 32.7	
	comp=N,474μm,0.5s						
FNA	Florina	0.97	100	P	Pg	15 27 11.0	-1.5
FNA				S	Sb	15 27 25.9	-0.6
FNA	Florina	0.97	100	P	Pg	15 27 11.0	-1.5
FNA				*e*Sg	Sg	15 27 24.3	-0.8
FNA				S	Sb	15 27 25.9	-0.6
SRN	Sarande	1.07	185	P	Pg	15 27 14.6	+0.1
SRN				S	Sn	15 27 32.2	+1.1
SRN	Sarande	1.07	185	*i* Pn	Pg	15 27 14.3	-0.2
SRN	Sarande	1.07	185	P	Pg	15 27 14.6	+0.1
SRN				*i* Sn	Sn	15 27 31.8	+0.7
SRN				S	Sn	15 27 32.2	+1.1
SRN	Sarande	1.07	185	*i* PN	Pg	15 27 14.3	-0.2
SRN				*i* SN	Sn	15 27 31.8	+0.7
PENT	Pentalofos	1.09	134	P	Pg	15 27 14.4	-0.4
PENT				S	Sn	15 27 31.9	+0.4
PENT	Pentalofos	1.09	134	P	Pg	15 27 14.6	-0.1
PENT				S	Sn	15 27 31.8	+0.3
PUK	Puka	1.10	351	*i* Pn	Pg	15 27 15.0	0.0
PUK				*i* Sn	Sn	15 27 33.7	+1.8
PUK	Puka	1.10	351	*i* PN	Pg	15 27 15.0	0.0

PUK				*i* SN	**Sn**	**15 27 33.7**	**+1.8**
KASA	**Kassiopi**	**1.21**	**187**	P	**Pn**	**15 27 19.4**	**+1.8**
KASA				S	**Sn**	**15 27 36.7**	**+2.3**
KASA	**Kassiopi**	**1.21**	**187**	P	**Pn**	**15 27 18.5**	**+0.9**
KASA				S	**Sn**	**15 27 36.4**	**+1.9**
KEK	**Kerkira**	**1.26**	**191**	P	**Pb**	**15 27 18.1**	**-0.1**
KEK				S	**Sn**	**15 27 35.9**	**+0.2**
KEK				AML	AML	15 27 41.6	
	comp=E,272µm,0.4s						
KEK				AML	AML	15 27 43.2	
	comp=N,217µm,0.5s						
KEK	**Kerkira**	**1.26**	**191**	P	**Pg**	**15 27 17.9**	**-0.2**
KEK				S	**Sn**	**15 27 36.4**	**+0.7**
KEK	**Kerkira**	**1.26**	**191**	P	**Pg**	**15 27 17.9**	**-0.2**
KEK				S	**Sn**	**15 27 36.4**	**+0.7**
SGD	**Sagiada**	**1.34**	**176**	P	**Pg**	**15 27 19.7**	**0.0**
SGD	**Sagiada**	**1.34**	**176**	P	**Pn**	**15 27 19.3**	**-0.1**
SGD	**Sagiada**	**1.34**	**176**	P	**Pb**	**15 27 19.5**	**-0.1**
KPRO	**Kipourio**	**1.38**	**136**	P	**Pg**	**15 27 20.8**	**+0.5**
KPRO				AML	AML	15 27 50.1	
	comp=E,137µm,0.6s						
KPRO				AML	AML	15 27 51.1	
	comp=N,157µm,0.8s						
KPRO	**Kipourio**	**1.38**	**136**	P	**Pb**	**15 27 20.2**	**-0.1**
JAN	**Janina**	**1.41**	**156**	P	**Pg**	**15 27 20.9**	**-0.1**
JAN				AML	AML	15 27 47.1	
	comp=N,108µm,0.3s						
JAN				AML	AML	15 27 48.7	
	comp=E,214µm,0.5s						
JAN	**Janina**	**1.41**	**156**	P	**Pb**	**15 27 20.6**	**-0.2**
BCI	**Bajram Curri**	**1.41**	**359**	*i* Pn	**Pg**	**15 27 21.0**	**0.0**
BCI				*i* Sn	**Sn**	**15 27 40.2**	**+0.7**
BCI	**Bajram Curri**	**1.41**	**359**	*i* PN	**Pg**	**15 27 21.0**	**0.0**
BCI				*i* SN	**Sn**	**15 27 40.2**	**+0.6**
KZN	**Kozani**	**1.42**	**117**	P	**Pn**	**15 27 19.4**	**-1.1**
KZN				S	**Sb**	**15 27 38.9**	**-0.5**
KZN				AML	AML	15 27 45.5	
	comp=E,182µm,0.5s						
KZN				AML	AML	15 27 47.2	
	comp=N,155µm,0.5s						
KZN	**Kozani**	**1.42**	**117**	P	**Pn**	**15 27 19.8**	**-0.7**
KZN				S	**Sn**	**15 27 39.5**	**-0.1**
KZN	**Kozani**	**1.42**	**117**	P	**Pn**	**15 27 19.8**	**-0.7**
KZN				S	**Sn**	**15 27 39.5**	**-0.1**
SKO	**Skopje**	**1.42**	**44**	*e*Pg	**Pn**	**15 27 20.1**	**-0.5**
SKO				*e*Sg	**Sn**	**15 27 39.6**	**-0.1**
SKO	**Skopje**	**1.42**	**44**	*e*Pg	**Pn**	**15 27 19.9**	**-0.7**
SKO				*i* Sg	**Sn**	**15 27 39.6**	**-0.1**
SKO	**Skopje**	**1.42**	**44**	*e*Pg	**Pn**	**15 27 20.1**	**-0.5**
SKO				*e*Sg	**Sn**	**15 27 39.6**	**-0.1**
IGT	**Igoumenitsa**	**1.43**	**173**	*e*Pg	**Pb**	**15 27 20.9**	**-0.2**
IGT				*e*Sg	**Sn**	**15 27 41.9**	**+2.1**
IGT	**Igoumenitsa**	**1.43**	**173**	P	**Pb**	**15 27 20.9**	**-0.2**
IGT				S	**Sn**	**15 27 41.9**	**+2.1**
IGT				AML	AML	15 27 43.5	
	comp=E,206µm,0.5s						
IGT				AML	AML	15 27 44.6	
	comp=N,131µm,0.4s						
IGT	**Igoumenitsa**	**1.43**	**173**	P	**Pn**	**15 27 20.7**	**+0.1**
IGT				S	**Sn**	**15 27 40.9**	**+1.1**
IGT	**Igoumenitsa**	**1.43**	**173**	P	**Pn**	**15 27 20.8**	**+0.1**
IGT				S	**Sn**	**15 27 40.9**	**+1.1**
IGT				*e*Sg	**Sn**	**15 27 41.9**	**+2.1**
SCTE	**Santa Cesarea**	**1.53**	**236**	P	**Pn**	**15 27 20.1**	**-2.0**
SCTE				S	**Sb**	**15 27 42.5**	**-0.1**
SCTE	**Santa Cesarea**	**1.53**	**236**	P	**Pn**	**15 27 20.5**	**-1.5**
SCTE				S	**Sn**	**15 27 42.3**	**-0.1**
PDG	**Podgorica**	**1.61**	**337**	*e*Pg	**Pg**	**15 27 25.0**	**+0.2**
PDG				*e*Sg	**Sg**	**15 27 47.0**	**+1.3**
PDG	**Podgorica**	**1.61**	**337**	*e*Pg	**Pg**	**15 27 25.0**	**+0.2**
PDG				*e*Sg	**Sg**	**15 27 47.0**	**+1.3**
STIP	**Stip**	**1.73**	**64**	*e*Pg	**Pb**	**15 27 26.1**	**-0.1**
STIP				*i* Sg	**Sg**	**15 27 57.0**	**+7.7**
GRG	**Griva**	**1.73**	**89**	P	**Pn**	**15 27 24.2**	**-0.6**
GRG	**Griva**	**1.73**	**89**	P	**Pn**	**15 27 23.7**	**-1.1**
GRG	**Griva**	**1.73**	**89**	P	**Pn**	**15 27 23.7**	**-1.1**
VAY	**Valandovo**	**1.89**	**78**	*e*Pg	**Pn**	**15 27 26.9**	**-0.1**
VAY				*i* Sg	**Sg**	**15 27 56.5**	**+1.9**
VAY				*e*Lg	Lg	15 27 58.5	
	comp=E,11nm,0.7s						
VAY				*e*Lg	Lg	15 28 00.7	
	comp=N,19nm,0.8s						
DSL	**Palaion Diasel**	**1.97**	**157**	P	**Pn**	**15 27 29.0**	**+1.0**
DSL	**Palaion Diasel**	**1.97**	**157**	P	**Pn**	**15 27 28.6**	**+0.6**
LIT	**Litokhoron**	**2.00**	**114**	P	**Pn**	**15 27 28.8**	**+0.3**
LIT	**Litokhoron**	**2.00**	**114**	P	**Pn**	**15 27 28.3**	**-0.2**
THL	**Klokotos Trika**	**2.01**	**133**	P	**Pn**	**15 27 29.5**	**+1.0**
THL				AML	AML	15 28 00.6	
	comp=N,49µm,0.5s						
THL				AML	AML	15 28 02.0	
	comp=E,49µm,0.6s						
THL	**Klokotos Trika**	**2.01**	**133**	P	**Pn**	**15 27 29.0**	**+0.4**
LKD2	**Lefkada island**	**2.20**	**169**	P	**Pn**	**15 27 30.9**	**-0.4**
LKD2				S	**Sn**	**15 28 00.1**	**+1.1**
LKD2	**Lefkada island**	**2.20**	**169**	P	**Pn**	**15 27 31.2**	**-0.1**
LKD2				S	**Sn**	**15 28 00.2**	**+1.3**
SJES	**Sjenica**	**2.31**	**357**	*e*Pn	**Pn**	**15 27 34.3**	**+1.5**
NOCI	**Noci**	**2.32**	**267**	P	**Pn**	**15 27 30.7**	**-2.2**
NOCI				S	**Sn**	**15 27 58.4**	**-3.4**
NOCI	**Noci**	**2.32**	**267**	P	**Pn**	**15 27 30.8**	**-2.1**
NOCI				S	**Sn**	**15 27 58.9**	**-3.0**
EVGI	**Lefkada island**	**2.37**	**170**	P	**Pn**	**15 27 32.5**	**-1.0**
EVGI	**Lefkada island**	**2.37**	**170**	P	**Pn**	**15 27 33.1**	**-0.4**
SELS	**Selova**	**2.38**	**18**	*e*Pn	**Pb**	**15 27 35.8**	**-1.6**
PDO	**Prodromos**	**2.49**	**160**	P	**Pn**	**15 27 35.3**	**+0.1**
PDO	**Prodromos**	**2.49**	**160**	P	**Pn**	**15 27 35.5**	**+0.3**
FSK	**Fiskardo**	**2.51**	**172**	P	**Pn**	**15 27 33.8**	**-1.8**
AGG	**Agios Georgios**	**2.57**	**138**	P	**Pn**	**15 27 37.6**	**+1.3**
AGG				S	**Sn**	**15 28 07.2**	**-0.9**
AGG				AML	AML	15 28 19.3	
	comp=E,93µm,0.6s						
AGG				AML	AML	15 28 21.0	
	comp=N,95µm,0.6s						
AGG	**Agios Georgios**	**2.57**	**138**	P	**Pn**	**15 27 37.1**	**+0.7**
AGG				S	**Sn**	**15 28 08.1**	**0.0**
PVO	**Paravola**	**2.57**	**155**	P	**Pb**	**15 27 38.6**	**-2.0**
PVO	**Paravola**	**2.57**	**155**	P	**Pn**	**15 27 37.7**	**+1.4**
IVAS	**Ivanjica**	**2.62**	**1**	*e*Pn	**Pn**	**15 27 38.1**	**+1.0**
IVAS	**Ivanjica**	**2.62**	**1**	*e*Pn	**Pn**	**15 27 38.1**	**+1.0**
STON	**Ston**	**2.63**	**318**	*e*Pn	**Pn**	**15 27 35.9**	**-1.2**
STON				Sn	**Sn**	**15 28 07.5**	**-1.9**
ANX	**Ano Chora**	**2.74**	**149**	P	**Pn**	**15 27 39.7**	**+1.0**
ANX	**Ano Chora**	**2.74**	**149**	P	**Pn**	**15 27 39.3**	**+0.6**
VTS	**Vitosha**	**2.83**	**54**	*e*Pn	**Pn**	**15 27 40.4**	**+0.3**
VTS				*e*Sn	**Sn**	**15 28 13.9**	**-0.9**
VTS	**Vitosha**	**2.83**	**54**	*e*Pn	**Pn**	**15 27 40.4**	**+0.3**
VTS				*e*Sn	**Sn**	**15 28 13.9**	**-0.9**
BOVS	**Bovan**	**2.93**	**23**	*e*Pn	**Pn**	**15 27 41.3**	**+0.1**
BOVS	**Bovan**	**2.93**	**23**	*e*Pn	**Pn**	**15 27 41.3**	**+0.1**
BBLS	**Lazići**	**2.96**	**350**	*e*Pn	**Pn**	**15 27 43.6**	**+1.9**
BBLS	**Lazići**	**2.96**	**350**	*e*Pn	**Pn**	**15 27 43.6**	**+1.9**
ZAPS	**Zavoj**	**2.98**	**38**	*e*Pn	**Pn**	**15 27 43.6**	**+1.6**
ZAPS	**Zavoj**	**2.98**	**38**	*e*Pn	**Pn**	**15 27 43.6**	**+1.6**
CUC	**Castrocucco**	**3.42**	**255**	P	**Pn**	**15 27 47.4**	**-0.6**
CUC	**Castrocucco**	**3.42**	**255**	P	**Pn**	**15 27 47.1**	**-0.9**

MAN 22 15:28:22.2, 13°.54N×120°.26E, h30km, mb4.1, ML3.0, MS2.6, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	**Lubang**	**0.19**	**356**	*e*P	Pn	15 28 29.8	+0.7
LUBP				*e*S	Sb	15 28 34.6	+2.1
PGP	**Puerto Galera**	**0.67**	**93⇑**	*e*P	Pb	15 28 35.0	-0.6
PGP				*e*S	Sn	15 28 45.4	+0.1
SJMP	**San Jose**	**1.36**	**142**	*e*P	Pn	15 28 45.5	+0.4
SJMP				*e*S	Sn	15 29 00.0	-2.2
BUSP	**Coron**	**1.53**	**182**	*e*P	Pn	15 28 47.4	-0.1
BUSP				*e*S	Sn	15 29 05.9	-0.5
BOAC	**Boac**	**1.54**	**93**	*e*P	Pn	15 28 34.8	-13
BOAC				*e*S	Sn	15 29 06.7	0.0

MEX 22 15:31:14.1±0.8, 16°.30N×98°.46W, h5km±21km, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.33**	**75**	*e*P	Pg	15 31 20.2	-0.4
PNIG				*e*S	Sg	15 31 24.8	-0.2
TLIG	**Tlapa**	**1.26**	**355**	*e*P	Pg	15 31 34.6	-3.6
TLIG				*e*S	Sg	15 31 49.9	-4.6
VHO	**Vista Hermosa**	**1.82**	**65**	*e*P	Pn	15 31 42.0	-4.3
VHO				*i* S	Sn	15 32 04.6	-5.3

WEL 22 15:34:04.9, 38°S±6°×18°0W±°, h72km±23km, ML3.7/16, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**1.44**	**266**	P	Pn	15 34 29.6	+0.5
WMGZ				S	Sn	15 34 47.9	+0.6
MXZ	**Matakaoa Point**	**1.53**	**276**	P	Pn	15 34 30.8	+0.4
MXZ				S	Sn	15 34 49.5	-0.1
PUZ	**Puketiti**	**1.59**	**257**	P	Pn	15 34 31.9	+0.7
PUZ				S	Sn	15 34 51.8	+0.8
PKGZ	**Pakihiroa**	**1.71**	**264**	P	Pn	15 34 33.1	+0.4
PKGZ				S	Sn	15 34 54.0	+0.2
CNGZ	**Carnagh Statio**	**1.76**	**244**	P	Pn	15 34 35.3	+2.0
TWGZ	**Tauwhareparae**	**1.83**	**255**	P	Pn	15 34 35.3	+1.0
TWGZ				S	Sn	15 34 58.1	+1.4
HAZ	**Te Kaha**	**1.94**	**269**	P	Pn	15 34 36.5	+0.8
TKGZ	**Te Karaka**	**2.00**	**249**	P	Pn	15 34 37.9	+1.3
TKGZ				S	Sn	15 35 02.6	+1.8
RUGZ	**Raukumara Rang**	**2.03**	**263**	P	Pn	15 34 37.7	+0.6
PRGZ	**Paritu Road**	**2.19**	**237**	P	Pn	15 34 41.2	+2.0
MWZ	**Matawai**	**2.21**	**254**	P	Pn	15 34 40.2	+0.7
MWZ				S	Sn	15 35 06.5	+0.5
MHGZ	**Mahia Peninsul**	**2.31**	**231**	P	Pn	15 34 42.6	+1.9
RAGZ	**Rawiri**	**2.34**	**250**	P	Pn	15 34 42.6	+1.3
KNZ	**Kokohu**	**2.38**	**237**	P	Pn	15 34 43.1	+1.4
KNZ				S	Sn	15 35 11.0	+1.1
SNGZ	**Shannon Statio**	**2.50**	**244**	P	Pn	15 34 44.9	+1.5
SNGZ				S	Sn	15 35 14.6	+1.8
URZ	**Urewera**	**2.52**	**257**	P	Pn	15 34 45.2	+1.7
URZ				S	Sn	15 35 14.1	+0.9
WHHZ	**Waihua**	**2.71**	**239**	P	Pn	15 34 48.1	+2.0
WHHZ				S	Sn	15 35 20.0	+2.2
MUGZ	**Murupara**	**2.83**	**254**	P	Pn	15 34 49.2	+1.5
MTHZ	**Maungataniwha**	**2.89**	**246**	P	Pn	15 34 50.2	+1.6
OPRZ	**Ohinepanea**	**2.91**	**267**	P	Pn	15 34 49.8	+0.9

MEX 22 15:45:25.4±0.4, 15°.66N×96°.07W, h9km±5km, MD3.6, Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.11**	**340**	*i* P	Pg	15 45 27.5	-0.6
HUIG				*i* S	Sg	15 45 29.6	-0.4
VHO	**Vista Hermosa**	**1.54**	**336**	*i* P	Pn	15 45 50.0	-3.2
VHO				*e*S	Sn	15 46 08.3	-5.1
TLIG	**Tlapa**	**3.05**	**309**	*i* P	Pn	15 46 11.5	-2.4
TLIG				*i* S	Sn	15 46 46.6	-3.9

*IDC **22** 15:49:15.2±0.8, 0°.53S×134°.40E, h0km, mb4.2/9, mb1 4.3/10, mb1mx4.0/51, mbtmp4.2/10, ML4.2/1, MS2.9/2, Ms1 2.9/2, ms1mx2.5/42, Error ellipse: s-maj=44.2km s-min=15.4km az=71.0*

*ISCJB **22** 15:49:18.5±0.6, 0°.57S±0°.07×134°.34E±0°.09, h33km, mb4.3/11, MS2.7/1, Error ellipse: s-maj=13.8km s-min=9.2km az=159.4*

*DJA **22** 15:49:19.7±1.5, 1°S±12°×13°4E±°, h19km±8km, M4.6/3, MLv4.6/3*

*NEIC **22** 15:49:20.9±0.6, 0°.63S×134°.15E, h35km, mb4.1/1, Error ellipse: s-maj=30.5km s-min=10.2km az=69.0*

NEIC Felt [II] at Manokwari.

ISC 22 15:49:20.8±0.8, 0°.61S±0°.10×134°.30E±0°.08, h35km, n22, σ1ˢ.14/20, mb4.2/11, Irian Jaya region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RKPI	**Ransiki, Papua**	**0.91**	**188**	P	**Pn**	**15 49 35.6**	**-1.5**
SRPI	**Serui, Papua**	**2.31**	**123**	P	**Pn**	**15 49 56.8**	**+0.4**
SWI	**Sorong**	**3.05**	**265**	P	**Pn**	**15 50 06.8**	**+0.3**
FAKI	**Fak Fak**	**3.08**	**222**	P	**Pn**	**15 50 07.9**	**+0.9**
PMG	**Port Moresby**	**15.50**	**125**	LR	LR	16 00 07.7	
	comp=Z,82nm,20.6s,baz=250,slow=42						
WRAB	**Tennant Creek**	**19.21**	**180**	*e*P	**P**	**15 53 40.8**	**-1.1**
	7.3nm,0.6s						
WRA	**Warramunga Arr**	**19.22**	**180**	P	**P**	**15 53 40.9**	**-1.1**
	0.7nm,0.3s,baz=357,slow=11,SNR=36						
CTA	**Charters Tower**	**22.62**	**150**	P	**P**	**15 54 21.7**	**+2.9**
	6.1nm,0.8s,baz=313,slow=13,SNR=4.0						
CTAO	**Charters Tower**	**22.62**	**150**	P	**P**	**15 54 18.8**	**-0.1**
	43nm,0.8s						
ASAR	**Alice Springs**	**22.93**	**181**	P	**P**	**15 54 20.8**	**-1.2**
	1.9nm,0.4s,baz=5.9,slow=10,SNR=83						
STKA	**Stephens Creek**	**31.86**	**168**	P	**P**	**15 55 42.8**	**+0.2**
	1.0nm,0.4s,baz=341,slow=12,SNR=6.8						
KSRS	**Korea Array**	**38.33**	**352**	LR	LR	16 12 07.4	
	comp=Z,11nm,19.6s,baz=230,slow=36						
CMAR	**Chiang Mai Arr**	**39.57**	**300**	P	**P**	**15 56 49.1**	**+0.1**
	2.1nm,0.7s,baz=114,slow=6.7,SNR=12						
MKAR	**Makanchi Array**	**65.46**	**323**	P	**P**	**16 00 00.8**	**+0.4**
	5.1nm,0.4s,baz=108,slow=8.6,SNR=105						
ZALV	**Zalesovo Beam**	**67.94**	**331**	P	**P**	**16 00 14.7**	**-1.3**
	2.2nm,0.6s,baz=121,slow=7.1,SNR=5.8						
KURK	**Kurchatov**	**69.49**	**326**	*e*P	**P**	**16 00 25.5**	**-0.2**
	39nm,1.0s						
KURBB	**Kurchatov Arra**	**69.50**	**326**	P	**P**	**16 00 25.6**	**-0.2**
	3.0nm,0.7s,baz=118,slow=5.6,SNR=25						
BVAR	**Borovoye Array**	**75.09**	**326**	P	**P**	**16 00 58.8**	**-0.3**
	1.7nm,0.6s,baz=118,slow=8.6,SNR=16						
VNDA	**Vanda**	**78.28**	**174**	P	**P**	**16 01 17.6**	**+0.9**
	1.0nm,0.6s,baz=343,slow=3.7,SNR=6.1						
ILAR	**Eielson Array**	**85.78**	**25**	P	**P**	**16 01 54.8**	**-1.5**
	1.0nm,0.9s,baz=254,slow=5.1,SNR=7.0						
CPUP	**Villa Florida**	**150.97**	**158**	PKPbc	**PKPbc**	**16 09 11.6**	**+0.9**
	2.3nm,0.9s,baz=198,slow=2.4,SNR=4.9						
LPAZ	**La Paz**	**152.22**	**128**	PKPbc	**PKPbc**	**16 09 15.6**	**+0.9**
	0.9nm,0.6s,baz=346,slow=4.3,SNR=4.5						

DJA 22 15:49:53.6±1.2, 8°S±12°×12°1E±°, h10km, M3.7/6, MLv3.7/6, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDFI	**Ende, Flores**	**0.61**	**149**	P	Pg	15 50 05.7	+0.1
MMRI	**Maumere**	**0.95**	**116**	P	Pb	15 50 12.1	-0.1
WSI	**Waingapu**	**1.79**	**216**	P	Pn	15 50 25.0	+0.4
BASI	**Baing, Sumba**	**2.13**	**201**	P	Pn	15 50 29.3	0.0
WBSI	**Waikabubak, Su**	**2.41**	**234**	P	Pn	15 50 32.9	-0.3

*ISCJB **22** 15:56:19.3±0.4, 24°.33N±0°.02×122°.23E±0°.02, h54km±5km, Error ellipse: s-maj=3.4km s-min=2.8km az=153.7*

*JMA **22** 15:56:19.4±0.2, 24°.38N×122°.28E, h67km±2km, M2.1*

*TAP **22** 15:56:19.1, 24°.33N×122°.19E, h58km, ML3.0, B*

ISC 22 15:56:19.8±1.2, 24°.33N±0°.03×122°.23E±0°.02, h52km±9km, n58, σ0ˢ.74/103, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.24**	**337**	*i* P	**Pn**	**15 56 29.0**	**+0.4**
	baz=346						
EOS1				S	**Sn**	**15 56 36.1**	**+1.2**
	baz=346						
TWC	**Suao**	**0.45**	**309**	P	**Pn**	**15 56 30.3**	**-0.3**
	baz=313						
TWC				*e*S	**Sn**	**15 56 38.1**	**-0.2**
	baz=313						
NANB	**Nanao**	**0.45**	**283**	P	**Pn**	**15 56 30.4**	**-0.2**
	baz=283						
NANB				S	**Sn**	**15 56 38.8**	**+0.4**
	baz=283						
ENA	**Nanau**	**0.46**	**283**	P	**Pn**	**15 56 30.4**	**-0.2**
	baz=283						
ENA				S	**Sn**	**15 56 38.7**	**+0.2**
	baz=283						
EGS		**0.58**	**332**	*e*S	**Sn**	**15 56 41.2**	**+0.1**
	baz=336						
TWD	**Chiawan**	**0.63**	**247**	*e*S	**Sn**	**15 56 41.6**	**-0.5**
	baz=245						
NTC	**Toucheng**	**0.64**	**325**	*e*P	**Pn**	**15 56 32.5**	**-0.4**
	baz=328						
NTC				*e*S	**Sn**	**15 56 42.0**	**-0.3**
	baz=328						
TWE	**Neicheng**	**0.65**	**308**	*e*P	**Pn**	**15 56 32.9**	**0.0**
	baz=310						
TWE				*e*S	**Sn**	**15 56 42.5**	**+0.1**
	baz=310						
JYNG	**Yonagunijimaku**	**0.66**	**79**	P	**Pn**	**15 56 33.1**	**0.0**
JYNG				*e*S	**Sn**	**15 56 43.3**	**+0.4**
HWA	**Hwalien**	**0.67**	**239**	*e*S	**Sn**	**15 56 43.5**	**+0.5**
	baz=235						
ENTT	**Nioudou**	**0.68**	**297**	P	**Pn**	**15 56 33.4**	**0.0**
	baz=298						
ENTT				S	**Sn**	**15 56 43.1**	**-0.1**
	baz=298						
SLBB	**Yuanshan**	**0.69**	**308**	*e*P	**Pn**	**15 56 33.8**	**+0.2**
	baz=310						
SLBB				*e*S	**Sn**	**15 56 44.2**	**+0.8**
	baz=310						
ENLB	**Shoufeng**	**0.71**	**234**	*e*S	**Sn**	**15 56 43.9**	**0.0**
	baz=231						
TWB1	**Santiao Chiao**	**0.71**	**342**	*e*P	**Pn**	**15 56 33.0**	**-0.8**
	baz=345						
TWB1				*e*S	**Sn**	**15 56 42.7**	**-1.3**
	baz=345						
YOJ	**Yonaguni jima**	**0.72**	**79**	*e*P	**Pn**	**15 56 34.0**	**+0.1**
	baz=79						
YOJ				*e*S	**Sn**	**15 56 45.5**	**+1.3**
	baz=79						
YOJ	**Yonaguni jima**	**0.72**	**79**	P	**Pn**	**15 56 33.8**	**-0.1**
YOJ				*e*S	**Sn**	**15 56 44.7**	**+0.5**
TIPB	**Shuangxi**	**0.74**	**330**	*e*P	**Pn**	**15 56 33.6**	**-0.6**
	baz=332						
TIPB				*e*S	**Sn**	**15 56 44.1**	**-0.6**
	baz=332						
NNSH	**Datong**	**0.78**	**278**	P	**Pn**	**15 56 34.1**	**-0.6**
	baz=277						
NNSH				*e*S	**Sn**	**15 56 45.0**	**-0.7**
	baz=277						
NNS	**Nan Shan**	**0.79**	**278**	*e*P	**Pn**	**15 56 34.2**	**-0.7**
	baz=278						
NNS				*e*S	**Sn**	**15 56 45.0**	**-1.0**
	baz=278						
NWLT	**Wulai**	**0.80**	**304**	*e*P	**Pn**	**15 56 34.9**	**0.0**
	baz=305						
NWLT				*e*S	**Sn**	**15 56 45.9**	**-0.1**
	baz=305						
NWF	**Wu-fen Shan**	**0.84**	**331**	*e*P	**Pn**	**15 56 35.1**	**-0.5**
	baz=333						
NWF				*e*S	**Sn**	**15 56 46.1**	**-1.0**
	baz=333						
NSK	**Sanguang**	**0.87**	**294**	*e*P	**Pn**	**15 56 35.6**	**-0.3**
	baz=294						
NSK				*e*S	**Sn**	**15 56 47.3**	**-0.4**
	baz=294						
ESL	**Shilin**	**0.89**	**235**	*e*P	**Pn**	**15 56 35.2**	**-0.9**
	baz=232						
ESL				*e*S	**Sn**	**15 56 47.4**	**-0.7**
	baz=232						
WHF	**Hehuan Shan**	**0.90**	**259**	*e*P	**Pn**	**15 56 36.0**	**-0.6**
	baz=257						
WHF				*e*S	**Sn**	**15 56 48.1**	**-0.8**
	baz=257						
TATO	**Taipei**	**0.93**	**314**	*e*P	**Pn**	**15 56 36.9**	**+0.3**
	baz=315						
TATO				*e*S	**Sn**	**15 56 49.4**	**+0.3**
	baz=315						
EGFH	**Guangfu**	**0.98**	**228**	*e*S	**Sn**	**15 56 49.4**	**-0.9**
	baz=226						
YM07	**YM07**	**1.01**	**327**	*e*P	**Pn**	**15 56 36.8**	**-0.9**
	baz=328						
YM07				*e*S	**Sn**	**15 56 49.5**	**-1.5**
	baz=328						
YM10	**YM10**	**1.02**	**324**	*e*P	**Pn**	**15 56 37.1**	**-0.9**
	baz=325						
YM10				*e*S	**Sn**	**15 56 51.2**	**-0.2**
	baz=325						
YM11	**YM11**	**1.02**	**325**	*e*P	**Pn**	**15 56 38.0**	**0.0**
	baz=326						
YM11				*e*S	**Sn**	**15 56 51.6**	**+0.2**
	baz=326						
YM04	**YM04**	**1.04**	**323**	*e*P	**Pn**	**15 56 37.8**	**-0.3**
	baz=324						
YM04				*e*S	**Sn**	**15 56 50.6**	**-1.0**
	baz=324						
YM03	**YM03**	**1.05**	**324**	*e*S	**Sn**	**15 56 52.8**	**+0.7**
	baz=325						
TWS1	**Kuangyinshan**	**1.07**	**316**	*e*P	**Pn**	**15 56 38.1**	**-0.3**
	baz=317						
TWS1				*e*S	**Sn**	**15 56 53.2**	**+0.9**
	baz=317						
NTST	**Danshui**	**1.09**	**320**	*e*S	**Sn**	**15 56 53.5**	**+0.6**
	baz=321						
NCUH	**Zhongli**	**1.15**	**304**	*e*S	**Sn**	**15 56 55.2**	**+1.0**
	baz=304						
LIOB	**Emei**	**1.15**	**286**	*e*P	**Pn**	**15 56 39.7**	**+0.1**
	baz=286						
LIOB				*e*S	**Sn**	**15 56 54.5**	**+0.2**
	baz=286						
NSTT	**Nanjuang**	**1.16**	**285**	*e*P	**Pn**	**15 56 40.0**	**+0.3**
	baz=285						
NSTT				*e*S	**Sn**	**15 56 54.9**	**+0.4**
	baz=285						
EHY	**Hungye**	**1.17**	**226**	*e*P	**Pn**	**15 56 39.5**	**-0.4**
	baz=223						
SMLT	**Sun Moon Lake**	**1.29**	**250**	*e*P	**Pn**	**15 56 41.8**	**+0.2**
	baz=249						
SMLT				*e*S	**Sn**	**15 56 57.7**	**-0.3**
	baz=249						
TWF1	**Yuli**	**1.29**	**222**	*e*P	**Pn**	**15 56 40.6**	**-0.9**
	baz=219						
TWF1				*e*S	**Sn**	**15 56 57.5**	**-0.2**
	baz=219						
TYC	**Yuchr**	**1.32**	**252**	*e*P	**Pn**	**15 56 41.9**	**0.0**
	baz=250						
TYC				*e*S	**Sn**	**15 56 58.1**	**-0.3**
	baz=250						
NMLH	**Miaoli**	**1.33**	**279**	*e*P	**Pn**	**15 56 42.5**	**+0.5**
	baz=279						
IRIF	**Iriomote-Funau**	**1.37**	**89**	P	**Pn**	**15 56 42.3**	**-0.2**
IRIF				*e*S	**Sn**	**15 56 59.7**	**+0.1**
FULB	**Fuli**	**1.41**	**218**	*e*P	**Pn**	**15 56 42.8**	**-0.4**
	baz=215						
FULB				*e*S	**Sn**	**15 56 59.4**	**-1.3**
	baz=215						
WJS	**Zhushan**	**1.46**	**250**	*e*P	**Pn**	**15 56 44.8**	**+1.0**
	baz=249						
WJS				*e*S	**Sn**	**15 57 02.5**	**+0.7**
	baz=249						
WNT	**Mingjian**	**1.48**	**253**	*e*P	**Pn**	**15 56 45.1**	**+1.1**
	baz=251						
ELDTW	**Lidau**	**1.59**	**225**	*e*P	**Pn**	**15 56 44.4**	**-1.2**
	baz=223						
ELDTW				*e*S	**Sn**	**15 57 03.8**	**-1.3**
	baz=223						
CHN5	**Tsauling**	**1.59**	**243**	*e*P	**Pn**	**15 56 46.1**	**+0.4**
	baz=242						
CHN5				*e*S	**Sn**	**15 57 06.4**	**+1.2**
	baz=242						
JKRS	**Kuro-shima**	**1.63**	**93**	P	**Pn**	**15 56 46.3**	**+0.3**
JKRS				*e*S	**Sn**	**15 57 06.2**	**+0.4**
WDLH	**Douliu**	**1.67**	**248**	*e*P	**Pn**	**15 56 47.2**	**+0.6**
	baz=247						
WDLH				*e*S	**Sn**	**15 57 08.0**	**+1.0**
	baz=247						
JIJ	**Ishigaki jima**	**1.75**	**88**	P	**Pn**	**15 56 47.2**	**-0.4**
JIJ				S	**Sn**	**15 57 08.6**	**-0.2**
TWH	**Lutao**	**1.75**	**203**	*e*P	**Pn**	**15 56 46.5**	**-1.2**
	baz=201						
STYT	**Tauyuan**	**1.78**	**230**	*e*P	**Pn**	**15 56 48.7**	**+0.5**
	baz=228						
STYT				*e*S	**Sn**	**15 57 10.9**	**+1.2**
	baz=228						
WTP	**Ta-pu**	**1.83**	**234**	*e*P	**Pn**	**15 56 49.5**	**+0.6**
	baz=232						
WTP				*e*S	**Sn**	**15 57 12.3**	**+1.4**
	baz=232						
TWG	**Pinlang**	**1.84**	**216**	*e*P	**Pn**	**15 56 48.0**	**-1.0**
	baz=213						
TWG				*e*S	**Sn**	**15 57 09.2**	**-1.8**
	baz=213						
TWK	**Hsinying**	**1.91**	**237**	*e*P	**Pn**	**15 56 51.3**	**+1.3**
	baz=235						
TWK				*e*S	**Sn**	**15 57 14.0**	**+1.0**
	baz=235						
JISG	**Ishigakijimahi**	**1.91**	**82**	P	**Pn**	**15 56 49.4**	**-0.5**
CHN1	**Nanshi**	**1.93**	**234**	*e*P	**Pn**	**15 56 51.6**	**+1.4**
	baz=233						
CHN1				*e*S	**Sn**	**15 57 14.6**	**+1.2**
	baz=233						
SLGT	**Liugui**	**1.97**	**228**	*e*P	**Pn**	**15 56 51.8**	**+1.0**
	baz=226						
SLGT				*e*S	**Sn**	**15 57 15.5**	**+1.3**
	baz=226						

IDC ***22*** *15:56:38.9±2.5, 0°.81N×92°.77E, h0km, mb3.6/4, mb1 3.7/5, mb1mx3.4/69, mbtmp3.5/5, ML3.1/1, Error ellipse: s-maj=76.2km s-min=24.5km az=65.0*
ISCJB ***22*** *15:56:44.1±1.1, 0°.96N±0°.10×93°.03E±0°.07, h33km, mb3.7/4, Error ellipse: s-maj=13.8km s-min=10.3km az=176.0*
DJA ***22*** *15:56:49.9±1.0, 1°N±8°×9°3E±°, h10km, M4.4/7, mb4.3/2, mB5.3/1, MLv4.5/7, Mw(mB)4.7/1*
ISC 22 15:56:45.4±1.4, **1°.0N**±0°.1×**93°.0E**±0°.1, **h35km, n14, σ1^{s}35**/16, **mb3.7**/4, **Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNSI	Sinabang, Aceh	3.64	67	P	Pn	15 57 40.8	+1.5
SNSI				S	Sn	15 58 19.8	-1.2
GSI	Gunungsitoli	4.61	86	P	Pn	15 57 54.3	+1.6
GSI				S	Sn	15 58 43.2	-1.9
MLSI	Meulaboh, Aceh	4.73	46	P	Pn	15 57 55.3	+1.0
TPTI		4.77	62	P	Pn	15 57 55.7	+0.8
TPTI				S	Sn	15 58 48.2	-0.8
BSI	Banda Aceh	5.04	27	P	Pn	15 57 59.8	+1.1
KCSI	Kotacane, Aceh	5.41	62	P	Pn	15 58 05.9	+2.1
MNSI	Mandailing Nat	6.61	92	P	Pn	15 58 22.1	+2.0
KRJI	Kerinci	9.02	110	P	Pn	15 59 06.6	+13
CMAR	Chiang Mai Arr	18.32	18	P	Pn	16 00 57.1	+0.1
	0.0nm,0.3s,baz=210,slow=12,SNR=3.9						
WRA	Warramunga Arr	45.56	119	P	P	16 05 01.4	-0.9
	1.6nm,0.7s,baz=297,slow=8.6,SNR=13						
MKAR	Makanchi Array	46.57	350	P	P	16 05 09.5	-0.4
	0.3nm,0.6s,baz=162,slow=7.9,SNR=3.7						
ASAR	Alice Springs	46.70	124	P	P	16 05 10.5	-0.8
	0.5nm,0.8s,baz=302,slow=7.3,SNR=7.6						
KSRS	Korea Array	48.51	37	P	P	16 05 25.5	+0.5
	0.8nm,0.7s,baz=225,slow=9.6,SNR=3.8						
TXAR	Lajitas Array	145.91	26	PKPbc	PKPdf	16 16 21.1	-0.4
	0.4nm,0.6s,baz=280,slow=1.7,SNR=6.1						

ISCJB ***22*** *15:59:27.5±0.3, 32°.32N±0°.04×49°.76E±0°.03, h11km, mb4.2/23, MS2.8/1, Error ellipse: s-maj=6.1km s-min=3.3km az=7.4*
CSEM ***22*** *15:59:29.6±0.2, 32°.43N×49°.77E, h10km, mb4.4/15, Error ellipse: s-maj=7.8km s-min=4.6km az=19.0*
TEH ***22*** *15:59:29.7, 32°.54N×49°.94E, h10km, ML3.8*
NEIC ***22*** *15:59:29.3±0.0, 32°.63N×49°.97E, h10km, mb4.2/5, ML3.6(THR), MN3.7(TEH), After TEH.*
IDC ***22*** *15:59:29.2±2.4, 32°.71N×49°.64E, h0km, mb3.9/6, mb1 3.9/9, mb1mx3.6/60, mbtmp3.8/9, ML3.5/3, MS2.8/2, Ms1 2.8/2, ms1mx2.3/58, Error ellipse: s-maj=47.2km s-min=23.6km az=154.0*
THR ***22*** *15:59:30.8±0.6, 32°.60N×49°.90E, h14km±6km, ML3.6*
ISC 22 15:59:30.1±0.5, **32°.46N**±0°.04×**49°.86E**±0°.03, **h11km, n157, σ1^{s}83**/163, **mb4.2**/23, **13C-17D, Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPIR	Pirpir	0.90	75	Pg	Pg	15 59 43.9	-3.6
IPIR				Sg	Sg	15 59 56.4	-2.9
IPIR	Pirpir	0.90	75	*e*Pg	Pg	15 59 44.4	-3.1
IPIR				*e*		16 00 00.5	
	comp=E,71µm,0.2s						
IPIR				*e*		16 00 00.5	
	comp=N,67µm,0.2s						
IPIR				*e*		16 00 04.7	
	comp=Z,30µm,0.2s						
ZNGN	Zangian	0.91	112	*e*Pg	Pg	15 59 46.4	-1.2
ZNGN				*e*		16 00 09.2	
	comp=Z,99nm,0.3s						
ZNGN	Zangian	0.91	112	*e*Pg	Pg	15 59 46.4	-1.2
SHGR	Shooshtar-Gavs	0.96	249	*e*Pg	Pn	15 59 50.5	+0.9
SHGR				IAML		16 00 13.6	
	comp=E,2µm,0.8s						
SHGR				IAML		16 00 17.3	
	comp=N,2µm,0.4s						
SHGR	Shooshtar-Gavs	0.96	249	*e*Pg	Pn	15 59 50.5	+0.9
SHGR	Shooshtar-Gavs	0.96	249	*e*Pg	Pn	15 59 50.5	+0.9
ROKH	ROKH	1.00	96	*e*Pg	Pg	15 59 46.7	-2.7
ROKH				*e*Sg	Sg	16 00 02.2	-0.2
ROKH				*e*		16 00 06.4	
	comp=Z,99nm,0.2s						
ROKH	ROKH	1.00	96	*e*Pg	Pg	15 59 46.7	-2.7
ROKH				*e*Sg	Sg	16 00 02.2	-0.2
IKLH	Kolahrood	1.68	59	Pn	Pn	15 59 57.0	-2.7
IKLH	Kolahrood	1.68	59	*e*Pn	Pn	15 59 57.2	-2.5
IKLH				*e*		16 00 02.9	
	comp=Z,13µm,0.2s						
IKLH				*e*		16 00 26.4	
	comp=N,15µm,0.1s						
IKLH				*e*		16 00 32.2	
	comp=E,23µm,0.4s						
IKLH	Kolahrood	1.68	59	*e*Pn	Pn	15 59 57.2	-2.5
IGAR	Gharneh	1.84	91	*e*		16 00 07.4	
	comp=Z,9µm,0.1s						
IGAR				*e*Pn	Pn	16 00 02.3	+0.4
IGAR				*e*		16 00 36.0	
	comp=N,16µm,0.2s						
IKFM	Kafar-mosalman	2.00	303	*e*		16 00 44.0	
	comp=Z,99nm,0.4s						
IKFM				*e*Pn	Pb	16 00 05.2	-1.3
KLNJ	Kolanjah	2.06	134	*e*Pn	Pb	16 00 07.8	0.0
KLNJ				*e*		16 01 03.4	
	comp=Z,99nm,0.4s						
KLNJ	Kolanjah	2.06	134	*e*Pn	Pb	16 00 07.8	0.0
ASAO	Ashtian	2.09	4	*e*Pn	Pn	16 00 05.4	+0.1
ASAO				*e*Sg	Sn	16 00 32.2	+0.7
ASAO				IAML		16 00 41.9	
	comp=E,456nm,0.6s						
ASAO	Ashtian	2.09	4	*e*Pn	Pn	16 00 05.4	+0.1
ASAO	Ashtian	2.09	4	*e*Pn	Pn	16 00 05.4	+0.1
ASAO				*e*Sg	Sn	16 00 32.2	+0.7
IZEF	Zefreh	2.13	77	*e*		16 00 10.8	
	comp=Z,7µm,0.3s						
IZEF				*e*Pn	Pn	16 00 05.7	-0.1
IZEF				*e*		16 00 40.6	
	comp=N,5µm,0.3s						
IZEF				*e*		16 00 42.1	
	comp=E,7µm,0.3s						
IRAM	Ramesheh	2.23	106	*e*		16 00 13.9	
	comp=E,3µm,0.2s						
IRAM				*e*Pn	Pn	16 00 08.9	+1.7
IRAM				*e*		16 00 46.8	
	comp=N,5µm,0.2s						
IRAM				*e*		16 00 48.9	
	comp=Z,3µm,0.4s						
GHVR	GHOM	2.35	30	*e*Pn	Pn	16 00 09.1	+0.4
GHVR				*e*Sg	Sn	16 00 39.5	+1.9
GHVR				IAML		16 00 46.3	
	comp=E,288nm,0.7s						
GHVR				IAML		16 00 47.5	
	comp=N,292nm,0.6s						
GHVR	GHOM	2.35	30	*e*Pn	Pn	16 00 09.1	+0.4
GHVR	GHOM	2.35	30	*e*Pn	Pn	16 00 09.1	+0.4
GHVR				*e*Sg	Sn	16 00 39.5	+1.9
NASN	Na'in	2.51	81	*e*Pn	Pn	16 00 12.5	+1.3
NASN	Na'in	2.51	81	*e*Pn	Pn	16 00 12.5	+1.3
NASN	Na'in	2.51	81	*e*Pn	Pn	16 00 12.5	+1.3
IKOM	Komasi	2.61	312	Pn	Pn	16 00 13.2	+0.8
IKOM	Komasi	2.61	312	Pn	Pn	16 00 13.2	+0.8
IBZA	Bozab	2.62	321	*e*Pn	Pn	16 00 13.4	+0.9
IBZA				*e*		16 00 57.4	
	comp=Z,99nm,0.3s						
IBZA	Bozab	2.62	321	*e*Pn	Pn	16 00 13.4	+0.9
IRAZ	Razeghan	2.94	1	*e*Pn	Pn	16 00 18.0	+1.0
IRAZ				*e*		16 01 00.8	
	comp=N,4µm,0.3s						
IRAZ				*e*		16 01 04.0	
	comp=Z,6µm,0.5s						
IRAZ				*e*		16 01 06.8	
	comp=E,10µm,0.4s						
IRAZ	Razeghan	2.94	1	*e*Pn	Pn	16 00 18.0	+1.0
KCHF	Cheshme Sefid,	2.98	308	*e*Pn	Pn	16 00 18.2	+0.7
KCHF				*e*		16 01 10.6	
	comp=Z,99nm,0.5s						
KCHF	Cheshme Sefid,	2.98	308	*e*Pn	Pn	16 00 18.2	+0.7
QABG	Abgarm-Qazvin	3.25	356	*e*Pn	Pn	16 00 23.6	+2.3
QABG				*e*		16 01 19.4	
	comp=Z,99nm,0.5s						
QABG	Abgarm-Qazvin	3.25	356	*e*Pn	Pn	16 00 23.6	+2.3
IVIS	Veis	3.26	310	*e*Pn	Pn	16 00 21.5	+0.3
IVIS				*e*		16 00 23.7	
	comp=Z,2µm,0.1s						
IVIS				*e*		16 00 24.3	
	comp=E,2µm,0.1s						
IVIS				*e*		16 01 20.7	
	comp=N,2µm,0.3s						
IVIS	Veis	3.26	310	*e*Pn	Pn	16 00 21.5	+0.3
ISAD	Sadrabad	3.29	98	*e*		16 01 21.9	
	comp=N,2µm,0.3s						
ISAD				*e*		16 01 22.2	
	comp=Z,1µm,0.3s						
IMHD	Mahdasht	3.29	12	*e*Pn	Pn	16 00 22.3	+0.6
IMHD				*e*		16 00 33.5	
	comp=Z,2µm,0.1s						
IMHD				*e*		16 01 12.5	
	comp=E,4µm,0.2s						
IMHD				*e*		16 01 16.4	
	comp=N,5µm,0.3s						
IMHD	Mahdasht	3.29	12	*e*Pn	Pn	16 00 22.3	+0.6
ILIN	Lien	3.45	316	*e*Pn	Pn	16 00 24.2	+0.2
ILIN				*e*		16 00 26.3	
	comp=Z,1µm,0.2s						
ILIN				*e*		16 01 39.3	
	comp=E,2µm,0.2s						
ILIN	Lien	3.45	316	*e*Pn	Pn	16 00 24.2	+0.2
IDMV	Damavand	3.60	29	*e*Pn	Pn	16 00 27.0	+0.9
IDMV				*e*		16 00 46.7	
	comp=Z,1µm,0.3s						
IDMV				*e*		16 01 26.9	
	comp=E,2µm,0.3s						
IDMV				*e*		16 01 37.8	
	comp=N,2µm,0.4s						
IDMV	Damavand	3.60	29	*e*Pn	Pn	16 00 27.0	+0.9
IAFJ	Afjeh	3.72	24	*e*Pn	Pn	16 00 28.8	+1.0
IAFJ				*e*		16 01 33.6	
	comp=Z,2µm,0.3s						
IAFJ				*e*		16 01 39.1	
	comp=N,3µm,0.3s						
IAFJ	Afjeh	3.72	24	*e*Pn	Pn	16 00 28.8	+1.0
IPAR	Pars	3.77	133	*e*		16 01 54.7	
	comp=N,2µm,0.5s						
IPAR				*e*		16 01 55.7	
	comp=Z,1µm,0.4s						
IPAR				*e*		16 01 58.3	
	comp=E,1µm,0.3s						
ICHK	Chekchek	3.85	92	*e*Pn	Pn	16 00 31.8	+2.3
ICHK				*e*		16 00 46.5	
	comp=Z,2µm,0.2s						
ICHK				*e*		16 01 41.1	
	comp=N,1µm,0.3s						
ICHK	Chekchek	3.85	92	*e*Pn	Pn	16 00 31.8	+2.3
ILAS	Lasjerd	3.89	41	*e*Pn	Pn	16 00 30.7	+0.6
ILAS				*e*		16 01 53.1	
	comp=E,2µm,0.4s						
ILAS	Lasjerd	3.89	41	*e*Pn	Pn	16 00 30.7	+0.6
IGZV	Ghazvin	3.93	4	*e*Pn	Pn	16 00 30.8	+0.2
IGZV				*e*		16 01 31.8	
	comp=Z,1µm,0.3s						
IGZV				*e*		16 01 36.1	
	comp=E,3µm,0.3s						
IGZV				*e*		16 01 38.7	
	comp=N,2µm,0.3s						
IGZV	Ghazvin	3.93	4	*e*Pn	Pn	16 00 30.8	+0.2
IFIR	Firoozkooh	3.98	36	*e*Pn	Pn	16 00 32.4	+1.0
IFIR				*e*		16 00 45.6	
	comp=Z,970nm,0.2s						
IFIR				*e*		16 00 49.3	
	comp=N,889nm,0.2s						
IFIR				*e*		16 01 40.4	
	comp=E,951nm,0.3s						
IFIR	Firoozkooh	3.98	36	*e*Pn	Pn	16 00 32.4	+1.0
ISRV	Sarvestan	4.15	137	*e*Pn	Pn	16 00 36.5	+2.9
ISRV				*e*		16 01 35.5	
	comp=E,1µm,0.2s						
ISRV				*e*		16 01 39.3	
	comp=N,2µm,0.3s						
ISRV				*e*		16 02 34.6	
	comp=Z,876nm,0.4s						
ISRV	Sarvestan	4.15	137	*e*Pn	Pn	16 00 36.5	+2.9
IMEH	Mehriz	4.18	103	*e*Pn	Pn	16 00 35.8	+1.8
IMEH				*e*		16 01 03.1	
	comp=Z,347nm,0.3s						
IMEH	Mehriz	4.18	103	*e*Pn	Pn	16 00 35.8	+1.8
ISHM	Shahmirzad	4.39	39	*e*Pn	Pn	16 00 38.4	+1.4
ISHM				*e*		16 00 55.3	
	comp=Z,1µm,0.3s						
IANJ	Anjilo	4.51	47	*e*Pn	Pn	16 00 39.7	+1.1
IANJ				*e*		16 01 58.0	
	comp=Z,493nm,0.3s						
IANJ	Anjilo	4.51	47	*e*Pn	Pn	16 00 39.7	+1.1
TNSJ	Nastanj	5.85	73	*e*Pn	Pn	16 00 58.0	+1.1
TNSJ	Nastanj	5.85	73	*e*Pn	Pn	16 00 58.0	+1.1
TKDS	Koohdasht(Taba	6.21	77	*e*Pn	Pn	16 01 02.1	+0.3
TKDS	Koohdasht(Taba	6.21	77	*e*Pn	Pn	16 01 02.1	+0.3
GEYT	Alibeck	8.69	49	Pn	Pn	16 01 37.4	+1.6
	comp=Z,0.5nm,0.3s,baz=266,slow=19,SNR=10						
GYA0B	ALIBECK ARRAY	8.69	49	*e*Pn	Pn	16 01 38.6	+2.9
GYA0B	ALIBECK ARRAY	8.69	49	*e*Pn	Pn	16 01 38.6	+2.9
GNI	Garni	8.72	333	LR	LR	16 05 18.3	
	comp=Z,52nm,21.9s,baz=156,slow=42						
UOSS	Minazif	9.32	142	*e*Pn	Pn	16 01 44.4	-0.1
UOSS	Minazif	9.32	142	*e*Pn	Pn	16 01 44.4	-0.1
RAYN	Ar Rayn	9.70	204	*e*Pn	Pn	16 01 48.9	-0.7
RAYN	Ar Rayn	9.70	204	*e*Pn	Pn	16 01 48.9	-0.7
ASF	Jabal al Asfar	10.97	272	Pn	Pn	16 02 06.4	-0.7
	comp=Z,1.2nm,0.3s,baz=29,slow=9.6,SNR=14						
ASF				Sn	Sn	16 03 55.7	-14
	comp=Z,0.3nm,0.3s,baz=84,slow=3.9,SNR=1.7						
WSAR	Wadi Sarin	12.01	138	Pn	Pn	16 02 21.1	-0.3
	comp=Z,0.5nm,0.3s,baz=323,slow=6.4,SNR=10						
WSAR				Sn	Sn	16 04 30.2	-5.2
	comp=Z,0.3nm,0.3s,baz=117,slow=7.3,SNR=2.9						
BR131	Keskin Array S	14.98	304	*e*Pn	Pn	16 03 01.7	-0.2
BR131	Keskin Array S	14.98	304	*e*Pn	Pn	16 03 01.7	-0.2
BRTR	Keskin Array B	14.98	304	Pn	Pn	16 03 01.3	-0.6
	comp=Z,0.1nm,0.3s,baz=116,slow=13,SNR=4.6						
ISP	Isparta	16.69	294	⇑*i*P	P	16 03 27.4	+1.0
ISP	Isparta	16.69	294	⇑*i*P	P	16 03 27.4	+1.0
KK31	Karatay Array	19.43	51	*e*P	Pn	16 04 01.3	+3.7
KKAR	Karatay Array	19.43	51	*e*P	Pn	16 04 01.2	+3.6
NIL	Nilore	19.64	80	*e*P	Pn	16 04 04.1	+3.9
	comp=Z,6.1nm,1.0s						
TIRR	Tirgusor	20.57	312	⇓*i*P	P	16 04 08.5	-0.2
TIRR	Tirgusor	20.57	312	⇓*i*P	P	16 04 08.5	-0.2
TLB	Topalu	20.86	312	⇑*i*P	P	16 04 11.6	-0.3
TLB	Topalu	20.86	312	⇑*i*P	P	16 04 11.6	-0.3
CFR	Carcaliu	21.09	313	⇓*i*P	P	16 04 13.1	-1.3
CFR	Carcaliu	21.09	313	⇓*i*P	P	16 04 13.1	-1.3
ISR	Istrita	22.05	312	⇓*i*P	P	16 04 25.1	+0.3
ISR	Istrita	22.05	312	⇓*i*P	P	16 04 25.1	+0.3
KSH	Kashi	22.23	64	P	P	16 04 28.3	+1.5
KSH				sP	sP	16 04 41.3	+10
KSH				PP	PnPn	16 04 55.3	+6.1
KSH				S	S	16 08 23.8	-7.7
KSH				SS	SnSn	16 09 04.8	+6.4
KSH				PcS	PcS	16 12 00.8	-1.0
KSH				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KSH				pmax	pmax		
	comp=Z,81nm,4.0s						
VRI	Vrincioaia	22.29	314	⇓*i*P	P	16 04 26.4	-0.9
VRI	Vrincioaia	22.29	314	⇓*i*P	P	16 04 26.4	-0.9
PLOR	Plostina	22.33	314	⇑*i*P	P	16 04 27.4	-0.4
PLOR	Plostina	22.33	314	⇑*i*P	P	16 04 27.4	-0.4
MLR	Muntele Rosu	22.60	312	⇓*i*P	P	16 04 30.8	0.0
MLR	Muntele Rosu	22.60	312	*e*P	P	16 04 30.6	-0.2
	comp=Z,18nm,0.8s						
MLR	Muntele Rosu	22.60	312	*e*P	P	16 04 30.6	-0.2
	comp=Z,18nm,0.8s						
TESR	Tescani	22.65	315	⇓*i*P	P	16 04 31.1	-0.1
TESR	Tescani	22.65	315	⇓*i*P	P	16 04 31.1	-0.1
VOIR		23.14	311	⇑*i*P	P	16 04 35.7	-0.7
VOIR		23.14	311	⇑*i*P	P	16 04 35.7	-0.7
DOPR	Dopca	23.16	313	⇓*i*P	P	16 04 35.9	-0.6
DOPR	Dopca	23.16	313	⇓*i*P	P	16 04 35.9	-0.6
VTS	Vitosha	23.35	303	⇑*i*P	P	16 04 38.2	-0.4
VTS	Vitosha	23.35	303	⇑*i*P	P	16 04 38.2	-0.4
AKASG	Malin Array Be	23.75	326	P	P	16 04 39.3	-3.0
	comp=Z,1.9nm,0.5s,baz=136,slow=9.1,SNR=14						
AKBB	Malin Array Si	23.75	326	*e*P	P	16 04 39.3	-3.0
	comp=Z,4.0nm,0.6s						
AKBB	Malin Array Si	23.75	326	*e*P	P	16 04 39.3	-3.0
	comp=Z,4.0nm,0.6s						
KIEV	Kiev	23.75	326	*e*P	P	16 04 39.1	-3.2
	comp=Z,3.8nm,0.6s						
KIEV	Kiev	23.75	326	*e*P	P	16 04 39.1	-3.2
	comp=Z,3.8nm,0.6s						
BURAR	Bucovina Array	24.05	316	⇓*i*P	P	16 04 44.0	-1.3
BURAR	Bucovina Array	24.05	316	⇓*i*P	P	16 04 44.0	-1.3
BUR04	Bucovina Ar. S	24.06	316	*e*P	P	16 04 43.5	-1.8
BUR04	Bucovina Ar. S	24.06	316	*e*P	P	16 04 43.5	-1.8
BUR08	Bucovina Ar. S	24.08	316	*e*P	P	16 04 44.3	-1.3
BUR08	Bucovina Ar. S	24.08	316	*e*P	P	16 04 44.3	-1.3
DRGR		25.19	313	⇑*i*P	P	16 04 55.0	-0.6
DRGR		25.19	313	⇑*i*P	P	16 04 55.0	-0.6
BVAR	Borovoye Array	25.33	30	P	P	16 04 55.8	-0.9
	comp=Z,0.6nm,0.5s,baz=224,slow=8.4,SNR=6.3						
BZS	Buzias	25.43	309	⇓*i*P	P	16 04 56.5	-1.2
BZS	Buzias	25.43	309	⇓*i*P	P	16 04 56.5	-1.2
TRPA	Tarpa	25.88	315	⇑*i*P	P	16 05 01.2	-0.6
DIVS	Divibare	26.03	305	*e*P	P	16 05 01.8	-1.5
	comp=Z,5.0nm,0.9s						
DIVS	Divibare	26.03	305	*e*P	P	16 05 01.8	-1.5
	comp=Z,5.0nm,0.9s						
CRVS	Cervenica-Dubn	26.87	316	*e*P	P	16 05 10.7	-0.1
VYHS	Vyhne	28.27	314	*e*P	P	16 05 22.8	-0.5
CONA	Conrad Observa	29.93	311	*e*P	P	16 05 37.1	-1.1
	comp=Z,1.9nm,0.7s						
CONA	Conrad Observa	29.93	311	P	P	16 05 37.1	-1.1
	comp=Z,1.9nm,0.7s						
ARSA	Arzberg	29.94	310	*e*P	P	16 05 35.4	-2.8
	comp=Z,1.2nm,0.5s						
MOA	Molln	30.93	310	*e*P	P	16 05 45.7	-1.2
	comp=Z,3.3nm,0.5s						
KBA	Koelnbreinsper	31.32	309	*e*P	P	16 05 49.8	-0.8
	comp=Z,6.4nm,0.6s						
KBA	Koelnbreinsper	31.32	309	P	P	16 05 49.8	-0.8
	comp=Z,6.4nm,0.6s						
GEA0	GERESS Array S	31.58	312	*e*P	P	16 05 50.9	-1.8
GEA0	GERESS Array S	31.58	312	*e*P	P	16 05 50.9	-1.8
GERES	GERESS Array B	31.59	312	P	P	16 05 50.9	-1.8
	comp=Z,0.6nm,0.4s,baz=110,slow=9.0,SNR=10.0						
WMQ	Urumqi	31.59	58	P	P	16 05 58.3	+5.5
KHC	Kasperske Hory	31.75	312	*e*P	P	16 05 52.5	-1.6
ABTA	Abfaltersbach	31.80	308	*e*P	P	16 05 52.2	-2.4
	comp=Z,7.0nm,0.9s						
ABTA	Abfaltersbach	31.80	308	P	P	16 05 52.2	-2.4
	comp=Z,7.0nm,0.9s						
BRG	Berggiesshubel	32.11	316	*e*P	P	16 06 02.5	+5.2
	comp=Z,3.0nm,0.9s						
WTTA	Wattenberg	32.50	308	*e*P	P	16 05 59.3	-1.6
	comp=Z,3.4nm,0.5s						
WATA	Walderalm	32.56	308	*e*P	P	16 06 00.7	-0.7
	comp=Z,4.3nm,0.5s						
WATA	Walderalm	32.56	308	P	P	16 06 00.7	-0.7
	comp=Z,4.3nm,0.5s						
CLL	Collm	32.82	316	*e*P	P	16 06 03.0	-0.4
	comp=Z,5.0nm,1.2s						
FINES	FINESS Array B	32.85	339	P	P	16 06 01.8	-1.7
	comp=Z,1.8nm,0.9s,baz=141,slow=6.9,SNR=3.4						
FETA	Feichten	33.05	308	*e*P	P	16 06 04.2	-1.5
	comp=Z,6.9nm,0.7s						
DAVA	Damuels	33.67	308	*e*P	P	16 06 09.4	-1.7
	comp=Z,5.8nm,0.4s						
HFS	Hagfors	36.49	330	P	P	16 06 33.3	-1.8
	comp=Z,1.3nm,0.6s,baz=127,slow=9.3,SNR=7.8						
NOA	NORSAR Array B	38.01	330	LR	LR	16 24 37.8	
	comp=Z,15nm,18.6s,baz=95,slow=40						
TOA0	Torodi Ar. Sit	47.93	258	*e*P	P	16 08 06.9	-1.9
TORD	Torodi Ar. Bea	47.93	258	P	P	16 08 08.2	-0.6
	comp=Z,2.2nm,0.7s,baz=58,slow=7.2						
HHC	Hu-ho-hao-te	49.31	62	*e*P	P	16 08 23.3	+4.0
HHC				pmax	pmax		
	comp=Z,15nm,1.0s						
HHC				pmax	pmax		
	comp=Z,140nm,4.8s						

TEH 22 16:23:26.2, 32°.54N×49°.94E, h10km, ML2.5, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPIR	Pirpir	0.82	80	*e*Pg	Pg	16 23 41.1	-1.0
IPIR				*e*		16 23 56.2	
	comp=Z,3µm,0.1s						
ZNGN	Zangian	0.88	118	*e*Pg	Pg	16 23 43.1	-0.2
ZNGN				*e*		16 24 01.4	
	comp=Z,99nm,0.2s						
ROKH	ROKH	0.95	101	*e*Pg	Pg	16 23 43.1	-1.4
ROKH				*e*Sg	Sg	16 23 56.9	0.0
ROKH				*e*		16 24 00.2	
	comp=Z,99nm,0.1s						
IKLH	Kolahrood	1.59	60	*e*Pg	Pn	16 23 54.9	+0.3
IKLH				*e*		16 24 22.6	
	comp=Z,629nm,0.2s						
IGAR	Gharneh	1.79	94	*e*		16 24 29.7	
	comp=Z,648nm,0.1s						
IZEF	Zefreh	2.05	79	*e*		16 24 39.3	
	comp=Z,292nm,0.2s						
IZEF				*e*Pg	Pb	16 24 04.0	+0.3
KLNJ	Kolanjah	2.08	137	*e*		16 24 45.8	
	comp=Z,99nm,0.3s						
KLNJ				*e*Pn	Pg	16 24 05.4	-0.7
IRAM	Ramesheh	2.20	109	*e*Pn	Pb	16 24 05.1	-1.1

JMA ***22*** *16:25:02.3±0.2, 43°.90N×147°.81E, h1km, M3.5*
SKHL ***22*** *16:25:03.9±1.3, 44°.37N×147°.94E, h48km±8km, mb4.4/6*
ISC 22 16:25:00.9±2.7, **44°.26N**±0°.10×**148°.1E**±0°.2, **h21km**±5km, **n15, σ1^{s}31**/26, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	Shikotan	0.97	247	*i* P	Pb	16 25 20.0	+1.0
SHO				AMB	AMB	16 25 20.0	
	50nm,0.2s						
SHO				AMB	AMB	16 25 20.0	
	64nm,0.2s						
SHO				AMB	AMB	16 25 20.0	
	173nm,0.2s						
SHO				*i* S	Sb	16 25 31.0	-0.4
SHO				A	A	16 25 32.0	
	117nm,0.3s						
SHO				A	A	16 25 32.0	
	379nm,0.3s						
KUR	Kuril'sk	0.99	352	*i* P	Pb	16 25 19.0	-0.3
KUR				AMB	AMB	16 25 20.0	
	12nm,0.3s						
KUR				AMB	AMB	16 25 20.0	
	9.0nm,0.3s						
KUR				AMB	AMB	16 25 20.0	
	215nm,0.3s						
KUR				*i* S	Sb	16 25 32.0	+0.1
KUR				A	A	16 25 33.0	
	235nm,0.2s						
KUR				A	A	16 25 33.0	
	166nm,0.2s						
YUK	Yuzh-Kuril'sk	1.61	263	*e*P	Pn	16 25 28.0	0.0
YUK				AMB	AMB	16 25 29.0	
	40nm,0.3s						
YUK				AMB	AMB	16 25 29.0	
	98nm,0.3s						
YUK				AMB	AMB	16 25 29.0	
	205nm,0.3s						
YUK				*e*S	Sn	16 25 46.0	-2.1
YUK				A	A	16 25 51.0	
	97nm,0.2s						
YUK				A	A	16 25 51.0	
	251nm,0.2s						
LAGR	Lagunnoye	1.66	264	*e*P	Pn	16 25 29.0	+0.3
LAGR				AMB	AMB	16 25 30.0	
	7.0nm,0.3s						
LAGR				AMB	AMB	16 25 30.0	
	89nm,0.3s						
LAGR				*e*S	Sn	16 25 47.0	-2.3
LAGR				A	A	16 25 50.0	
	270nm,0.3s						
LAGR				A	A	16 25 50.0	
	125nm,0.3s						
GRPR	Tuman	1.68	262	*e*P	Pn	16 25 29.0	0.0
GRPR				AMB	AMB	16 25 30.0	
	6.0nm,0.3s						
GRPR				AMB	AMB	16 25 30.0	
	20nm,0.3s						
GRPR				AMB	AMB	16 25 30.0	
	85nm,0.3s						
GRPR				*e*S	Sn	16 25 48.0	-1.8
GRPR				A	A	16 25 53.0	
	243nm,0.3s						
GRPR				A	A	16 25 53.0	
	186nm,0.3s						
NEM2	Nemuro 2	1.91	243	P	Pn	16 25 31.8	-0.3

NEM2				*e*S	**Sn**	**16 25 53.0**	**-2.5**
GLVR	**Golovnino**	**1.91**	**255**	*i* P	**Pn**	**16 25 33.0**	**+0.8**
GLVR				AMB	AMB	16 25 34.0	
	20nm,0.3s						
GLVR				AMB	AMB	16 25 34.0	
	72nm,0.3s						
GLVR				*e*S	**Sn**	**16 25 55.0**	**-0.6**
GLVR				A	A	16 25 57.0	
	171nm,0.3s						
GLVR				A	A	16 25 57.0	
	103nm,0.3s						
JRA	**Rausu**	**2.15**	**263**	P	**Pn**	**16 25 36.9**	**+1.4**
JRA				*e*S	**Sn**	**16 26 02.9**	**+1.5**
JNK	**Nakash**	**2.51**	**256**	P	**Pn**	**16 25 41.5**	**+1.0**
JNK				*e*S	**Sn**	**16 26 10.1**	**-0.4**
JAK	**Akkeshi**	**2.75**	**244**	P	**Pn**	**16 25 44.2**	**+0.4**
JAK				*e*S	**Sn**	**16 26 14.6**	**-1.8**
JTKR	**Abashiri--Toko**	**3.01**	**266**	P	**Pn**	**16 25 48.9**	**+1.6**
JAR	**Ashorobuto**	**3.26**	**254**	P	**Pn**	**16 25 52.4**	**+1.6**
JAR				*e*S	**Sn**	**16 26 28.6**	**-0.3**
JOB	**Onbets**	**3.36**	**248**	P	**Pn**	**16 25 53.2**	**+1.1**
JCH	**Churui**	**3.80**	**246**	P	**Pn**	**16 25 58.7**	**+0.5**
JNBK	**Urakawa-nobuka**	**4.36**	**245**	P	**Pn**	**16 26 06.6**	**+0.8**

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*MOS **22** 16:25:38.0±2.3, 49°.99N×156°.92E, h49^{km}, mb4.1/1, Error ellipse: s-maj=37.0km s-min=5.1km az=79.8*

KRSC 22 16:25:38.0±1.9**, 49°.99N×156°.92E, h49^{km}**±24^{km}**, ML4.1, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	**Severo-Kuril's**	**0.86**	**324**	*e*P	Pn	16 25 53.4	-0.4
SKR				*e*S	Sn	16 26 04.1	-1.3
SKR	**Severo-Kuril's**	**0.86**	**324**	*e*PN	Pn	16 25 53.4	-0.4
SKR				*i* S	Sn	16 26 04.0	-1.4
SKR				pmax	pmax		
	comp=Z,75nm,0.3s						
SKR				smax	smax		
	comp=N,2μm,0.2s						
SKR				smax	smax		
	comp=E,2μm,0.3s						
PAU	**Pauzhetka**	**1.48**	**357**	*e*P	Pn	16 26 04.4	+2.2
PAU				*e*S	Sn	16 26 22.6	+2.2
PAU	**Pauzhetka**	**1.48**	**357**	PN	Pn	16 26 04.4	+2.2
PAU				S	Sn	16 26 22.6	+2.2
KDTR	**Khodutka, Kamc**	**1.96**	**21**	*e*P	Pn	16 26 11.6	+2.8
KDTR				*e*S	Sn	16 26 35.8	+3.6
MIPR	**Malaya Ipel'ka**	**2.29**	**358**	*e*P	Pn	16 26 15.4	+2.1
MIPR				*e*S	Sn	16 26 42.5	+2.2
MIPR	**Malaya Ipel'ka**	**2.29**	**358**	PN	Pn	16 26 15.4	+2.1
MIPR				S	Sn	16 26 42.5	+2.2
ASAK	**Asacha**	**2.48**	**14**	*e*P	Pn	16 26 19.4	+3.5
ASAK	**Asacha**	**2.48**	**14**	PN	Pn	16 26 19.4	+3.5
MTVR	**Mutnovka**	**2.62**	**17**	*e*P	Pn	16 26 21.8	+3.9
MTVR				*e*S	Sn	16 26 52.8	+4.2
MTVR	**Mutnovka**	**2.62**	**17**	PN	Pn	16 26 21.8	+3.9
MTVR				S	Sn	16 26 52.8	+4.2
RUS	**Russkaya**	**2.64**	**22**	*e*P	Pn	16 26 21.1	+3.0
RUS				*e*S	Sn	16 26 52.3	+3.4
RUS	**Russkaya**	**2.64**	**22**	PN	Pn	16 26 21.1	+3.0
RUS				S	Sn	16 26 52.3	+3.4
APC	**Apacha**	**2.94**	**3**	*e*P	Pn	16 26 25.1	+2.9
APC	**Apacha**	**2.94**	**3**	PN	Pn	16 26 25.1	+2.9
KRMR	**Karymshinskiy**	**2.94**	**14**	*e*P	Pn	16 26 26.4	+4.2
KRMR	**Karymshinskiy**	**2.94**	**14**	PN	Pn	16 26 26.4	+4.2
PET	**Petropavlovsk**	**3.23**	**19**	*e*P	Pn	16 26 29.9	+3.8
PET				*e*S	Sn	16 27 07.6	+4.4
PET	**Petropavlovsk**	**3.23**	**19**	*e*PN	Pn	16 26 30.0	+3.9
PET				*e*S	Sn	16 27 08.2	+5.0
PET				smax	smax		
	comp=N,77nm,0.5s						
PET				smax	smax		
	comp=E,78nm,0.6s						
DALK	**Dalny**	**3.25**	**20**	*e*P	Pn	16 26 30.2	+3.7
DALK				*e*S	Sn	16 27 07.9	+4.0
DALK	**Dalny**	**3.25**	**20**	PN	Pn	16 26 30.2	+3.7
DALK				S	Sn	16 27 07.9	+4.0
UGLR	**Uglovaya**	**3.44**	**19**	*e*P	Pn	16 26 33.4	+4.3
UGLR	**Uglovaya**	**3.44**	**19**	PN	Pn	16 26 33.4	+4.3
AVH	**Avacha**	**3.47**	**18**	*e*P	Pn	16 26 34.5	+5.0
AVH	**Avacha**	**3.47**	**18**	PN	Pn	16 26 34.5	+5.0
KOK	**Koryaka**	**3.48**	**17**	*e*P	Pn	16 26 33.5	+3.9
KOK	**Koryaka**	**3.48**	**17**	PN	Pn	16 26 33.5	+3.9
SDLR	**Sedlovina**	**3.51**	**20**	*e*P	Pn	16 26 33.6	+3.5
SDLR	**Sedlovina**	**3.51**	**20**	PN	Pn	16 26 33.6	+3.5
NLC	**Nalytchevo**	**3.53**	**24**	*e*S	Sn	16 27 14.7	+4.1
KRX	**Arik**	**3.54**	**17**	*e*P	Pn	16 26 32.4	+1.8
KRX	**Arik**	**3.54**	**17**	PN	Pn	16 26 32.4	+1.8
SPN	**Mys Shipunski**	**3.67**	**31**	*e*P	Pn	16 26 35.9	+3.8
SPN				*e*S	Sn	16 27 17.1	+3.1
SPN	**Mys Shipunski**	**3.67**	**31**	PN	Pn	16 26 35.9	+3.8
SPN				S	Sn	16 27 17.1	+3.1
GNL	**Ganaly**	**3.77**	**9**	*e*P	Pn	16 26 37.9	+4.3
GNL				*e*S	Sn	16 27 21.8	+5.1
GNL	**Ganaly**	**3.77**	**9**	PN	Pn	16 26 37.9	+4.3
GNL				S	Sn	16 27 21.8	+5.1
KII	**Karymskiy**	**4.34**	**20**	*e*P	Pn	16 26 46.7	+5.2
KII	**Karymskiy**	**4.34**	**20**	PN	Pn	16 26 46.7	+5.2
MKZ	**Mys Kozlova**	**5.44**	**31**	*e*P	Pn	16 26 58.9	+2.5
MKZ	**Mys Kozlova**	**5.44**	**31**	PN	Pn	16 26 58.9	+2.5
TUMR	**Tumrok**	**5.65**	**19**	*e*P	Pn	16 27 04.3	+4.8
TUMR	**Tumrok**	**5.65**	**19**	PN	Pn	16 27 04.3	+4.8
KBTR	**Krutoberegovo**	**7.17**	**27**	*e*P	Pn	16 27 23.2	+3.1
KBTR	**Krutoberegovo**	**7.17**	**27**	PN	Pn	16 27 23.2	+3.1

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*ISCJB **22** 16:31:04.2±1.1, 5°.4S±0°.3×151°.4E±0°.3, h57^{km}, mb3.7/5, MS3.1/1, Error ellipse: s-maj=60.6km s-min=11.0km az=41.6*

*IDC **22** 16:31:05.1±5.8, 5°.51S×151°.54E, h56^{km}±50^{km}, mb3.5/5, mb1 3.9/6, mb1mx3.4/44, mbtmp3.8/6, ML2.0/1, MS3.1/2, Ms1 3.0/2, ms1mx2.6/36, Error ellipse: s-maj=63.9km s-min=31.3km az=129.0*

ISC 22 16:31:05.3±1.3**, 5°.5S**±0°.3×**151°.5E**±0°.4**, h57^{km}, n8, σ0^{s}.83**/8**, mb3.7**/5**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.84**	**228**	P	**Pn**	**16 32 29.9**	**+0.6**
	2.9nm,0.3s,baz=40,slow=7.0,SNR=9.8						
PMG				S	**Sn**	**16 33 34.4**	**-0.7**
	7.9nm,0.3s,baz=121,slow=11,SNR=9.9						
PMG				LR	LR	16 34 53.3	
	comp=Z,116nm,20.4s,baz=24,slow=39						
WRA	**Warramunga Arr**	**22.06**	**228**	P	**P**	**16 35 56.2**	**+0.6**
	2.4nm,0.6s,baz=53,slow=9.8,SNR=33						
ASAR	**Alice Springs**	**24.81**	**221**	P	**P**	**16 36 21.4**	**-0.9**
	2.2nm,0.8s,baz=57,slow=8.9,SNR=38						
STKA	**Stephens Creek**	**27.87**	**198**	LR	LR	16 46 47.9	
	comp=Z,55nm,21.9s,baz=5.2,slow=34						
MKAR	**Makanchi Array**	**80.00**	**319**	P	**P**	**16 43 09.0**	**+0.3**
	0.4nm,0.8s,baz=77,slow=6.4,SNR=3.1						
ILAR	**Eielson Array**	**83.25**	**22**	P	**P**	**16 43 24.4**	**-0.9**
	0.4nm,0.7s,baz=240,slow=5.2,SNR=6.1						
NVAR	**Mina Array Bea**	**93.49**	**52**	P	**P**	**16 44 16.1**	**+0.7**
	0.6nm,0.8s,baz=238,slow=8.3,SNR=3.9						
TORD	**Torodi Ar. Bea**	**149.30**	**287**	PKPbc	**PKPbc**	**16 50 48.7**	**-0.1**
	baz=106,slow=3.7						

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*DMN **22** 16:44:09.7±0.7, 30°.89N×88°.80E, h10^{km}, Ml4.6/4, Error ellipse: s-maj=15.1km s-min=10.9km az=55.0*

*IDC **22** 16:44:16.3±0.6, 29°.88N×88°.05E, h0^{km}, mb4.4/23, mb1 4.5/25, mb1mx4.2/69, mbtmp4.3/25, ML3.8/2, MS3.9/28, Ms1 3.9/28, ms1mx3.8/64, Error ellipse: s-maj=17.5km s-min=12.5km az=24.0*

*BJI **22** 16:44:17.7, 29°.78N×88°.01E, h14^{km}, mb4.6/55, mB4.9/38, ML5.1/1, Ms4.8/62, Ms7 4.6/55*

*MOS **22** 16:44:18.1±1.0, 29°.86N×88°.05E, h23^{km}, mb5.1/53, MS4.0/9, Error ellipse: s-maj=7.7km s-min=3.9km az=122.0*

*NEIC **22** 16:44:20.4±1.4, 29°.95N×88°.04E, h29^{km}±10^{km}, mb4.9/47, Error ellipse: s-maj=5.7km s-min=3.7km az=215.0*

*GCMT **22** 16:44:20.4±0.3, 29°.93N×88°.32E, h25^{km}, MW5.0/63, Moment Tensor Solution. s30,c33; s63,c108; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.63±.15; $M_{\theta\theta}$-0.11±.09; $M_{\phi\phi}$2.74±.10; $M_{r\theta}$1.94±.26; $M_{\theta\phi}$0.02±.06; $M_{\phi r}$-1.83±.18; Best double couple: $M_0$3.74100×10^{16} NP1: ϕ_s332.00000°, δ68.00000°, λ-112.00000°. NP2: ϕ_s200.00000°, δ31.00000°, λ-47.00000°. Principal axes: T 3.4070, Plg20.0000°, Azm79.0000°; N 0.6700, Plg21.0000°, Azm341.0000°; P -4.0750, Plg61.0000°, Azm209.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*ISCJB **22** 16:44:21.7±0.4, 29°.93N±0°.02×88°.10E±0°.02, h51^{km}±4^{km}, mb4.7/116, MS4.1/37 Error ellipse: s-maj=4.2km s-min=3.1km az=24.9*

*NDI **22** 16:44:23.0±2.6, 29°.84N×88°.08E, h29^{km}, ML4.8, mb4.9(NEIC)*

ISC 22 16:44:21.2±0.5**, 29°.91N**±0°.03×**87°.94E**±0°.03**, h32^{km}**±3^{km}**, h32^{km}:pP-P, n321, σ2^{s}.16**/358**, mb4.8**/116**, MS4.1**/38**, 18C-12D, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAPN	**Taplejung**	**2.56**	**185**	*e*Pn	**Pb**	**16 45 05.8**	**-0.9**
TAPN				*e*Sn	Sb	16 45 46.7	+8.9
	952nm,1.0s						
GTK	**Tadong**	**2.65**	**167**	*e*P	**Pn**	**16 45 03.6**	**+1.7**
GTK				*e*S	**Sn**	**16 45 31.0**	**-1.9**
GUN	**Gumba**	**2.69**	**223**	*e*Pn	**Pb**	**16 45 08.0**	**-0.9**
GUN				*e*Sn	Sb	16 45 51.6	+10
	900nm,0.9s						
JIRN	**Jiri**	**2.72**	**215**	*e*Pn	**Pb**	**16 45 08.2**	**-1.2**
LSA	**Lhasa**	**2.80**	**93**	Pn	**Pn**	**16 45 05.9**	**+1.6**
LSA				Sn	**Sn**	**16 45 40.1**	**+2.9**
LSA	**Lhasa**	**2.80**	**93**	*e*Pn	**Pn**	**16 45 04.2**	**-0.1**
LSA	**Lhasa**	**2.80**	**93**	*e*P	**Pn**	**16 45 05.6**	**+1.4**
	SNR=162						
LSA	**Lhasa**	**2.80**	**93**	*e*P	**Pn**	**16 45 04.2**	**-0.1**
ODAN	**Odare**	**3.08**	**189**	*e*Pn	**Pb**	**16 45 12.0**	**-3.5**
ODAN				*e*Sn	**Sb**	**16 45 59.0**	**+6.3**
KKN	**Kakani**	**3.15**	**228**	*e*Pn	**Pb**	**16 45 14.2**	**-2.4**
KKN				*e*Sn	**Sb**	**16 46 01.5**	**+6.9**
	2μm,1.6s						
RAMN	**Ramite**	**3.18**	**202**	*e*Pn	**Pb**	**16 45 13.6**	**-3.6**
RAMN				*e*Sn	**Sb**	**16 46 01.0**	**+5.5**
PKIN	**Phulchoki**	**3.22**	**224**	*e*Pn	**Pb**	**16 45 15.0**	**-3.0**
DMN	**Daman**	**3.38**	**228**	*e*Pn	**Pb**	**16 45 17.1**	**-3.6**
GKN	**Gorkha**	**3.46**	**237**	*e*Pn	**Pb**	**16 45 17.8**	**-4.1**
DANN	**Dangsing**	**3.97**	**248**	*e*Pn	**Pn**	**16 45 24.1**	**+3.9**
DANN				*e*Sn	**Sb**	**16 46 19.8**	**+1.4**
	299nm,0.7s						
KOLN	**Koldanda**	**4.36**	**242**	*e*Pn	**Pn**	**16 45 29.8**	**+4.3**
PYUN	**Piuthan**	**4.69**	**249**	*e*Pn	**Pn**	**16 45 34.4**	**+4.3**
TURI	**Tura**	**4.83**	**153**	*e*P	**Pn**	**16 45 33.1**	**+1.3**
TURI				*e*S	**Sn**	**16 46 21.3**	**-5.5**
GUWA	**GUWAHATI**	**4.97**	**137**	*e*P	**Pn**	**16 45 32.0**	**-1.6**
GUWA				*e*S	**Sn**	**16 46 25.0**	**-5.1**
TEZP	**TEZPUR**	**5.40**	**126**	*e*P	**Pn**	**16 45 41.2**	**+1.7**
TEZP				*e*S	**Sn**	**16 46 34.6**	**-6.0**
TEZP				IAML		16 47 08.5	
	comp=N,210μm,2.4s						
SHL	**Shillong**	**5.56**	**140**	*e*Pn	**Pn**	**16 45 41.6**	**-0.4**
SHL	**Shillong**	**5.56**	**140**	*e*P	**Pn**	**16 45 41.8**	**-0.2**
SHL				*e*x	Sn	16 46 34.3	-11
SHL	**Shillong**	**5.56**	**140**	*e*P	**Pn**	**16 45 41.6**	**-0.4**
ZIRO	**ZIRO**	**5.71**	**113**	*e*P	**Pn**	**16 45 45.2**	**+1.2**
ITAN	**ITANAGAR**	**5.79**	**117**	*e*P	**Pn**	**16 45 42.9**	**-2.0**
ITAN				*e*x	**Sn**	**16 46 58.5**	**+8.3**
BOK	**Bokaro**	**6.36**	**197**	*e*P	**Pn**	**16 45 55.6**	**+2.8**
AGT	**Agartala**	**6.69**	**153**	*e*P	**Pn**	**16 45 55.8**	**-1.6**
SILR	**SILCHAR**	**6.69**	**139**	*e*P	**Pn**	**16 45 56.1**	**-1.2**
MOKO	**MOKOCHONG**	**6.82**	**120**	*e*P	**Pn**	**16 45 59.7**	**+0.5**
DDI	**Dehra Dun**	**8.57**	**275**	*e*P	**Pn**	**16 46 26.2**	**+3.1**
SMLA	**Simla**	**9.37**	**280**	*e*P	**Pn**	**16 46 36.1**	**+2.1**
SMLA				*e*S	**Sn**	**16 48 13.9**	**-4.4**
BWNR	**Bhubaneshwar**	**9.77**	**192**	*e*P	**Pn**	**16 46 41.2**	**+1.7**
DHRM	**DHARAMSHALA**	**10.25**	**286**	*e*P	**Pn**	**16 46 50.2**	**+3.9**
DHRM				*e*S	**Sn**	**16 48 36.2**	**-4.0**
DHRM				IAML		16 50 22.7	
	comp=N,38nm,0.1s						
DHRM				IAML		16 50 22.7	
	comp=E,34nm,0.1s						
BHPL	**Bhopal**	**11.51**	**237**	*e*P	**Pn**	**16 47 04.3**	**+0.8**
BHPL				*e*S	**Sn**	**16 49 04.8**	**-6.2**
BHPL				IAML		16 50 39.4	
NIL	**Nilore**	**13.04**	**290**	*e*Pn	**Pn**	**16 47 21.4**	**-2.9**
NIL	**Nilore**	**13.04**	**290**	*e*P	**Pn**	**16 47 21.4**	**-2.9**
GTA	**Gaotai**	**13.60**	**43**	P	**Pn**	**16 47 29.6**	**-2.5**
GTA				pP	P	16 47 35.0	-5.6
GTA				sP		16 47 38.3	
GTA				S	**Sn**	**16 49 59.0**	**-3.1**
GTA				pmax	pmax		
	comp=E,5.0nm,1.5s						
GTA				pmax	pmax		
	comp=E,86nm,5.5s						
GTA				LR	LR		
	comp=E,2μm,16.1s						
GTA				LR	LR		
	comp=E,2μm,11.3s						
GTA				LR	LR		
	comp=E,2μm,12.4s						
CD2	**Chengdu**	**13.69**	**82**	P	**Pn**	**16 47 34.8**	**+1.6**
CD2				S	**Sn**	**16 50 07.9**	**+3.6**
CD2				pmax	pmax		
	comp=E,20nm,0.5s						
CD2				pmax	pmax		
	comp=E,140nm,4.2s						
CD2				LR	LR		
	comp=E,2μm,9.3s						
CD2				LR	LR		
	comp=E,5μm,9.9s						
CD2				LR	LR		
	comp=E,6μm,8.6s						
WMQ	**Urumqi**	**13.89**	**359**	*e*P	**Pn**	**16 47 36.4**	**+0.6**
WMQ				pP	P	16 47 42.8	-0.9
WMQ				sP		16 47 50.0	
WMQ				S	**Sn**	**16 50 11.8**	**+2.9**
WMQ				sS	S	16 50 21.3	-8.9
WMQ				LR	LR		
	comp=E,2μm,11.9s						
WMQ				LR	LR		
	comp=E,1μm,9.5s						
WMQ				LR	LR		
	comp=E,740nm,16.3s						
KMI	**Kunming**	**13.97**	**106**	P	**Pn**	**16 47 37.0**	**-0.2**
KMI				pP	P	16 47 43.8	-1.1
KMI				PP	**PnPn**	**16 47 47.1**	**+1.9**
KMI				S	**Sn**	**16 50 12.3**	**+0.9**
KMI				pmax	pmax		
	comp=E,9.0nm,0.9s						
KMI				pmax	pmax		
	comp=E,170nm,3.7s						
KMI				LR	LR		
	comp=E,490nm,5.6s						
KMI				LR	LR		
	comp=E,780nm,6.9s						
KMI				LR	LR		
	comp=E,1μm,11.2s						
THW	**Thamme Wali**	**14.13**	**286**	P	**Pn**	**16 47 38.6**	**-0.7**
CEP	**Cherat**	**14.17**	**290**	P	**Pn**	**16 47 37.7**	**-2.1**
CEP				S	**Sn**	**16 50 11.0**	**-5.0**
LZH	**Lanzhou**	**14.69**	**61**	*e*P	**Pn**	**16 47 45.6**	**-1.4**
LZH				pP	P	16 47 52.4	-0.4
LZH				sP		16 47 56.4	
LZH				S	**Sn**	**16 50 30.9**	**+2.1**
LZH				sS	S	16 50 42.8	-4.1
LZH				pmax	pmax		
	comp=E,49nm,1.0s						
LZH				pmax	pmax		
	comp=E,280nm,4.3s						
LZH				LR	LR		
	comp=E,3μm,10.5s						
LZH				LR	LR		
	comp=E,4μm,10.0s						
LZH				LR	LR		
	comp=E,4μm,10.5s						
CHTO	**Chiang Mai**	**14.91**	**135**	*e*Pn	**Pn**	**16 47 45.8**	**-4.0**
CHTO	**Chiang Mai**	**14.91**	**135**	*e*P	**Pn**	**16 47 45.8**	**-4.0**
CHTO	**Chiang Mai**	**14.91**	**135**	P	**Pn**	**16 47 51.1**	**+1.3**
	comp=E,90nm,0.9s						
CMMT	**Chiang Mai**	**14.91**	**135**	P	**Pn**	**16 47 51.0**	**+1.1**
	comp=E,20nm,0.9s						
UZB	**Uzynbulak**	**15.02**	**334**	*e*P	**Pn**	**16 47 52.2**	**+1.0**
	comp=E,3.0nm,2.1s						
UZB				*e*S	**Sn**	**16 50 38.1**	**+1.6**
UZB				LR	LR	16 54 18.6	
	comp=E,135nm,10.2s						
HYB	**Hyderabad**	**15.11**	**217**	*i* P	**Pn**	**16 47 52.0**	**-0.5**
CM31	**Chiang Mai Arr**	**15.18**	**136**	*e*Pn	**Pn**	**16 47 52.4**	**-1.0**
CMAR	**Chiang Mai Arr**	**15.18**	**136**	Pn	**Pn**	**16 47 51.3**	**-2.1**
	comp=E,0.1nm,0.3s,baz=316,slow=13,SNR=12						
CMAR				LR	LR	16 54 15.2	
	comp=E,286nm,20.5s,baz=334,slow=40						
SATY	**Saty**	**15.18**	**332**	*e*P	**Pn**	**16 47 54.7**	**+1.3**
	comp=E,9.1nm,1.0s						
SATY				LR	LR	16 54 16.7	
	comp=E,208nm,11.6s						
CM01	**Chiang Mai Arr**	**15.22**	**136**	*e*Pn	**Pn**	**16 47 50.5**	**-3.5**
ZHN	**Zhinishke**	**15.26**	**333**	*e*P	**Pn**	**16 47 55.6**	**+1.1**
	comp=E,5.3nm,1.3s						
ZHN				LR	LR	16 54 24.2	
	comp=E,133nm,10.8s						
KPKS	**Kokpek**	**15.42**	**334**	*e*P	**Pn**	**16 47 57.4**	**+0.9**
	comp=E,3.2nm,1.1s						
KPKS				LR	LR	16 54 37.7	
	comp=E,262nm,11.8s						
KBL	**Kabul**	**16.64**	**291**	*e*Pn	**Pn**	**16 48 11.4**	**-0.9**
	comp=E,32nm,1.1s						
KBL	**Kabul**	**16.64**	**291**	*e*P	**Pn**	**16 48 11.4**	**-0.9**
KBL				pmax	pmax		
	comp=Z,32nm,1.1s						
AAK	**Ala-Archa**	**16.67**	**323**	Pn	**P**	**16 48 15.0**	**+0.3**
	comp=Z,0.3nm,0.3s,baz=114,slow=13,SNR=15						
AAK				LR	LR	16 55 55.7	
	comp=Z,127nm,21.7s,baz=124,slow=42						
AAK	**Ala-Archa**	**16.67**	**323**	*e*Pn	**Pn**	**16 48 12.6**	**0.0**
	comp=Z,58nm,1.9s						
AAK	**Ala-Archa**	**16.67**	**323**	P	**P**	**16 48 15.0**	**+0.3**
UTTA	**Uttaradit**	**16.71**	**134**	P	**P**	**16 48 19.2**	**+4.1**
	comp=Z,3.2nm,1.0s						
KUU	**Kurty**	**16.73**	**330**	*e*P	**P**	**16 48 15.4**	**+0.2**
	comp=Z,22nm,1.1s						
KUU				*e*S	**Sn**	**16 51 21.0**	**+2.9**
KUU				LR	LR	16 55 30.5	
	comp=Z,276nm,11.5s						
FRU	**Bishkek**	**16.75**	**324**	*e*P	**P**	**16 48 16.0**	**+0.6**
FRU				pmax	pmax		
	comp=Z,110nm,2.2s						
GYA	**Guiyang**	**16.86**	**97**	P	**Pn**	**16 48 12.3**	**-2.8**
GYA				pP	pP	16 48 22.0	-3.3
GYA				PP	**sP**	**16 48 28.4**	**-1.0**
GYA				S	**Sn**	**16 51 18.9**	**-2.7**
GYA				SS	**SnSn**	**16 51 39.5**	**+4.7**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,120nm,4.7s						
GYA				LR	LR		
	comp=Z,540nm,12.2s						
GYA				LR	LR		
	comp=Z,520nm,12.5s						
GYA				LR	LR		
	comp=Z,550nm,12.9s						
PHIT	**Phitsanulok**	**17.05**	**135**	P	**P**	**16 48 22.5**	**+3.7**
	comp=Z,14nm,0.9s						
MK01	**Makanchi Array**	**17.39**	**347**	*e*Pn	**Pn**	**16 48 19.2**	**-2.3**
MK31	**Makanchi Array**	**17.42**	**347**	*e*Pn	**Pn**	**16 48 19.8**	**-2.0**
MK31	**Makanchi Array**	**17.42**	**347**	*i* P	**Pn**	**16 48 20.6**	**-1.2**
MK31				pmax	pmax		
	comp=Z,16nm,1.0s						
MKAR	**Makanchi Array**	**17.42**	**347**	Pn	**Pn**	**16 48 20.3**	**-1.5**
	comp=Z,0.4nm,0.3s,baz=156,slow=12,SNR=17						
MKAR				LR	LR	16 56 03.8	
	comp=Z,321nm,18.1s,baz=160,slow=40						
MKAR	**Makanchi Array**	**17.42**	**347**	*e*Pn	**Pn**	**16 48 19.8**	**-2.0**
	comp=Z,55nm,0.8s						
MKAR	**Makanchi Array**	**17.42**	**347**	*i* P	**Pn**	**16 48 22.2**	**+0.4**
MKAR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MAKZ	**Makanchi**	**17.50**	**346**	*e*Pn	**Pn**	**16 48 21.4**	**-1.4**
	comp=Z,52nm,1.6s						
MAKZ	**Makanchi**	**17.50**	**346**	P	**Pn**	**16 48 21.6**	**-1.1**
MAKZ				pmax	pmax		
	comp=Z,19nm,1.0s						
MNAS	**Manas**	**17.65**	**320**	P	**P**	**16 48 27.7**	**+2.2**
MNAS				pmax	pmax		
	comp=Z,18nm,1.6s						
ZSN	**Zaisan**	**17.67**	**353**	*e*P	**Pn**	**16 48 24.6**	**-0.3**
	comp=Z,3.3nm,1.2s						
ZSN				*e*S	**Sn**	**16 51 40.4**	**-0.4**
ZSN				LR	LR	16 56 42.8	
	comp=Z,58nm,11.8s						
PBKT	**Sadao Pong**	**17.86**	**135**	P	**P**	**16 48 29.0**	**+1.2**
	comp=Z,37nm,1.1s,comp=Z,982nm						
XAN	**Xi'an**	**18.27**	**72**	P	**P**	**16 48 29.8**	**-2.5**
XAN				pP	Pn	16 48 33.6	+1.3
XAN				sP	pP	16 48 36.8	-3.9
XAN				PP	**sP**	**16 48 47.1**	**+2.3**
XAN				S	**S**	**16 52 00.1**	**+0.5**
XAN				pmax	pmax		
	comp=Z,7.0nm,1.4s						
XAN				pmax	pmax		
	comp=Z,100nm,3.9s						
XAN				LR	LR		
	comp=Z,1μm,8.3s						
XAN				LR	LR		
	comp=Z,3μm,8.6s						
XAN				LR	LR		
	comp=Z,3μm,10.1s						
IUG	**Iuzhnay**	**18.90**	**315**	*e*P	**Pn**	**16 48 42.2**	**+2.2**
	comp=Z,4.2nm,0.7s						
IUG				*e*S	**S**	**16 52 14.6**	**+2.4**
KK31	**Karatay Array**	**19.17**	**318**	*e*P	**P**	**16 48 42.8**	**+0.7**
KK31	**Karatay Array**	**19.17**	**318**	*i* P	**Pn**	**16 48 44.1**	**+0.9**
KK31				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KKAR	**Karatay Array**	**19.17**	**318**	*e*P	**Pn**	**16 48 43.2**	**0.0**
KKAR	**Karatay Array**	**19.17**	**318**	*e*P	**Pn**	**16 48 43.2**	**0.0**
DGZ	**Jazzator, Alta**	**19.77**	**359**	*i* P	**Pn**	**16 48 50.1**	**-0.3**
DGZ				pmax	pmax		
	comp=Z,8.0nm,1.3s						
HVS	**Khovu-Aksy**	**21.64**	**10**	*i* P	**P**	**16 49 07.6**	**-1.2**
HVS				pmax	pmax		
	comp=Z,108nm,1.1s						
UBPT	**Khong Chiam**	**21.73**	**128**	P	**P**	**16 49 11.2**	**+1.3**
	comp=Z,35nm,0.9s						
TIY	**Taiyuan**	**21.75**	**63**	*e*P	**P**	**16 49 11.5**	**+1.4**
TIY				S	**S**	**16 53 07.0**	**-2.1**
TIY				LR	LR		
	comp=Z,710nm,6.2s						
TIY				LR	LR		
	comp=Z,1μm,6.7s						
TIY				LR	LR		
	comp=Z,1μm,7.8s						
KURBB	**Kurchatov Arra**	**21.86**	**344**	P	**P**	**16 49 10.7**	**-0.4**
	comp=Z,23nm,0.9s,baz=158,slow=10.0,SNR=70						
KURK	**Kurchatov**	**21.93**	**344**	*e*P	**P**	**16 49 10.8**	**-1.0**
	comp=Z,26nm,1.0s						
KURK	**Kurchatov**	**21.93**	**344**	*ce*P	**P**	**16 49 11.6**	**-0.2**
KURK				pmax	pmax		
	comp=Z,347nm,1.7s						
HHC	**Hu-ho-hao-te**	**22.07**	**54**	*e*P	**P**	**16 49 12.9**	**-0.7**
HHC				PP	**PnPn**	**16 49 42.8**	**+6.7**
HHC				S	**S**	**16 53 11.0**	**-4.3**
HHC				sS	Sn	16 53 22.3	-4.7
HHC				pmax	pmax		
	comp=Z,26nm,1.0s						
HHC				pmax	pmax		
	comp=Z,160nm,5.0s						
HHC				LR	LR		
	comp=Z,1μm,8.7s						
HHC				LR	LR		
	comp=Z,2μm,11.0s						
HHC				LR	LR		
	comp=Z,2μm,10.6s						
WHN	**Wuhan**	**22.82**	**82**	P	**P**	**16 49 25.4**	**+3.9**
WHN				S	**S**	**16 53 28.5**	**-0.2**
WHN				pmax	pmax		
	comp=Z,100nm,1.4s						
WHN				LR	LR		
	comp=Z,4μm,12.1s						
WHN				LR	LR		
	comp=Z,4μm,13.3s						
WHN				LR	LR		
	comp=Z,7μm,12.4s						
SONM	**Songino Array**	**22.85**	**33**	P	**P**	**16 49 21.1**	**-0.7**
	comp=Z,16nm,0.7s,baz=218,slow=7.7,SNR=26						
SONM				LR	LR	16 58 17.7	
	comp=Z,180nm,19.7s,baz=224,slow=37						
SONA1	**Songino Array**	**22.86**	**33**	*e*P	**P**	**16 49 20.8**	**-1.2**
BRZS	**Berezniki**	**23.13**	**334**	*e*P	**P**	**16 49 25.6**	**+1.0**
	comp=Z,8.7nm,1.1s						
BRZS				LR	LR	16 59 43.5	
	comp=Z,79nm,10.1s						

ZAK	Zakamensk	23.48	25	eP	P	16 49 27.2	-0.9
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.3s						
PALK	Pallekele	23.52	198	LR	LR	16 58 50.3	
	comp=Z,150nm,20.0s,baz=116,slow=37						
MOY	Mondy	23.80	20	eP	P	16 49 33.3	+2.1
MOY				pmax	pmax		
	comp=Z,29nm,2.6s						
ZAA0	Zalesovo Array	24.13	355	eP	P	16 49 32.7	-1.4
	comp=Z,45nm,1.8s						
ZALV	Zalesovo Beam	24.13	355	P	P	16 49 33.9	-0.1
	comp=Z,3.9nm,0.8s,baz=177,slow=8.9,SNR=9.8						
ZALV	Zalesovo Beam	24.13	355	eP	P	16 49 33.5	-0.5
ZALV	Zalesovo Beam	24.13	355	eP	P	16 49 33.5	-0.5
TLY	Talaya	24.68	24	LR	LR	17 00 28.3	
	comp=Z,294nm,18.4s,baz=210,slow=39						
TLY	Talaya	24.68	24	eP	P	16 49 39.4	+0.2
TLY				eS	S	16 53 52.5	-6.2
TLY				pmax	pmax		
	comp=Z,8.0nm,2.2s						
TLY				MLR	MLR		
	comp=Z,318nm,14.0s						
NVS	Novosibirsk	25.14	354	eP	P	16 49 43.3	+0.1
NVS				eS	S	16 54 05.6	-0.3
NVS				pmax	pmax		
	comp=Z,24nm,2.0s						
NVS				pmax	pmax		
	comp=N,21nm,1.8s						
NVS				pmax	pmax		
	comp=E,6.0nm,1.2s						
NVS				smax	smax		
	comp=N,23nm,2.4s						
BJI	Beijing	25.16	59	⇑eP	P	16 49 42.8	-0.7
BJI				S	S	16 54 14.3	+7.9
BJI				pmax	pmax		
	comp=N,10.0nm,0.7s						
BJI				LR	LR		
	comp=N,1µm,17.7s						
BJI				LR	LR		
	comp=N,1µm,10.3s						
BJI				LR	LR		
	comp=N,680nm,24.3s						
KRAR	Krasnoyarsk	26.32	6	i P	P	16 49 52.5	-1.4
BVA0	Borovoye Array	26.43	336	i P	P	16 49 55.1	+0.1
BVA0				pmax	pmax		
	comp=Z,8.0nm,1.3s						
BVAR	Borovoye Array	26.43	336	P	P	16 49 55.9	+0.9
	comp=Z,0.7nm,0.4s,baz=144,slow=5.3,SNR=5.5						
BVAR				PcP	PcP	16 53 20.7	+1.0
	comp=Z,0.4nm,0.4s,baz=174,slow=2.0,SNR=4.8						
BRVK	Borovoye	26.50	336	eP	P	16 49 55.4	-0.2
	comp=Z,7.7nm,1.0s						
BRVK	Borovoye	26.50	336	ceP	P	16 49 57.2	+1.6
BRVK				pmax	pmax		
	comp=Z,30nm,1.7s						
NJ2	Nanjing	26.55	77	eP	P	16 49 54.3	-1.9
NJ2				S	S	16 54 26.4	-2.3
NJ2				sS	sS	16 54 45.1	+1.2
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,290nm,4.1s						
NJ2				LR	LR		
	comp=Z,820nm,8.7s						
NJ2				LR	LR		
	comp=Z,1µm,11.4s						
NJ2				LR	LR		
	comp=Z,1µm,11.4s						
WSAR	Wadi Sarin	26.99	263	LR	LR	17 03 22.0	
	comp=Z,181nm,18.5s,baz=108,slow=42						
KULM	Kulim	27.27	151	eP	P	16 50 02.4	-0.5
	comp=Z,12nm,0.9s						
SSE	Sheshan	28.61	79	P	P	16 50 18.1	+3.4
SSE				S	S	16 55 04.1	+2.9
SSE				pmax	pmax		
	comp=Z,18nm,0.7s						
SSE				pmax	pmax		
	comp=Z,140nm,3.4s						
SSE				LR	LR		
	comp=Z,390nm,8.2s						
SSE				LR	LR		
	comp=Z,580nm,9.4s						
HATD	Hatta, Dubai	28.64	268	P	P	16 50 18.2	+3.1
AB31	Akbulak array	28.70	320	i P	P	16 50 16.7	+1.4
AB31				pmax	pmax		
	comp=Z,1.0nm,0.5s						
ABKAR	Akbulak array	28.70	320	eP	P	16 50 16.1	+0.7
ASHO	Ashiyiah	28.75	267	P	P	16 50 20.0	+3.9
AKTO	Aktyubinsk	30.38	321	LR	LR	17 03 18.0	
	comp=Z,188nm,19.6s,baz=132,slow=38						
AKTO	Aktyubinsk	30.38	321	P	P	16 50 30.9	+0.7
AKTO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
CN2	Changchun	32.77	55	eP	P	16 50 48.8	-2.5
CN2				esP	pP	16 51 02.3	+1.7
CN2				ePP	PnPn	16 51 57.9	-2.1
CN2				eS	S	16 56 00.0	-6.0
CN2				esS	pS	16 56 17.3	+1.1
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,6.0s						
CN2				LR	LR		
	comp=Z,330nm,15.0s						
CN2				LR	LR		
	comp=Z,580nm,15.0s						
CN2				LR	LR		
	comp=Z,970nm,16.0s						
SVE	Sverdlovsk	33.01	332	eP	P	16 50 55.5	+2.3
BOD	Bodaibo	33.23	25	eP	P	16 50 55.4	+0.3
BOD				pmax	pmax		
	comp=Z,11nm,1.3s						
ARU	Arti	33.61	331	eP	P	16 50 58.6	+0.2
	comp=Z,12nm,1.1s						
ARU	Arti	33.61	331	d iP	P	16 50 59.3	+0.9
ARU						16 52 07.4	
ARU				S	S	16 56 23.1	+4.4
ARU				SS	SnSn	16 58 21.1	-2.1
ARU				pmax	pmax		
	comp=Z,15nm,1.2s						
ARU				MLR	MLR		
	comp=Z,279nm,13.0s						
KSAR	Wonju Array Be	33.89	66	P	P	16 51 00.4	-0.7
KSAR	Wonju Array Be	33.89	66	P	P	16 51 00.4	-0.7
KS01	Wonju Array Si	33.89	66	eP	P	16 50 60.0	-1.2
KSRS	Korea Array	33.92	66	P	P	16 51 00.4	-1.0
	comp=Z,2.9nm,1.0s,baz=268,slow=8.3,SNR=9.1						
KSRS				LR	LR	17 05 41.5	
	comp=Z,314nm,18.9s,baz=264,slow=38						
KSRS	Korea Array	33.92	66	P	P	16 51 00.4	-1.0
KSRS				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KSRS				MLR	MLR		
	comp=Z,314nm,18.9s						
JOW	Kunigami	35.50	85	LR	LR	17 06 50.2	
	comp=Z,344nm,21.0s,baz=270,slow=38						
GROC	Groznyy	35.98	303	eP	P	16 51 14.8	-4.3
GROC				e		16 53 41.2	
GROC				eS	S	16 56 51.9	-3.8
GROC				pmax	pmax		
	comp=Z,92nm,1.3s						
GNI	Garni	36.51	298	LR	LR	17 09 59.5	
	comp=Z,130nm,18.3s,baz=92,slow=42						
GNI	Garni	36.51	298	deP	P	16 51 27.4	+3.6
GNI				pmax	pmax		
	comp=Z,87nm,1.3s						
JNU	Nakatsue	36.56	74	LR	LR	17 07 44.4	
	comp=Z,360nm,18.5s,baz=302,slow=39						
ZEA	Zeya	37.05	39	eP	P	16 51 28.9	+0.9
ZEA				pmax	pmax		
	comp=Z,12nm,1.0s						
ZEA				MLR	MLR		
	comp=E,1µm,11.0s						
ZEA				MLR	MLR		
	comp=Z,2µm,11.0s						
ZEA				MLR	MLR		
	comp=N,700nm,12.0s						
ZEI	Tsey	37.32	302	eP	P	16 51 31.8	+1.0
ZEI				pmax	pmax		
	comp=Z,14nm,0.4s						
USRK	Ussuriysk Ar.	37.48	55	LR	LR	17 08 35.9	
	comp=Z,236nm,20.8s,baz=254,slow=39						
AKH	Akhalkalaki	37.52	300	eP	P	16 51 33.4	+1.0
	comp=Z,25nm,0.8s						
AKH	Akhalkalaki	37.52	300	eP	P	16 51 33.4	+1.0
AKH				pmax	pmax		
	comp=Z,25nm,0.8s						
NCK	Nalchik	37.61	304	ceP	P	16 51 35.6	+2.6
NCK				pmax	pmax		
	comp=Z,27nm,0.7s						
KBZ	Khabaz	38.14	304	P	P	16 51 38.8	+1.4
	comp=Z,2.7nm,0.8s,baz=80,slow=8.1,SNR=4.8						
KBZ				LR	LR	17 09 42.3	
	comp=Z,327nm,19.0s,baz=88,slow=40						
GOF	Gofitskoye	38.19	306	eP	P	16 51 40.3	+2.4
NEY	Neytrino	38.22	303	ceP	P	16 51 43.0	+4.6
NEY				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KLR	Kul’dur	38.24	47	P	P	16 51 37.4	-0.8
	comp=Z,0.7nm,0.7s,baz=269,slow=10,SNR=12						
KLR	Kul’dur	38.24	47	ceP	P	16 51 37.6	-0.6
RAYN	Ar Rayn	38.27	271	eP	P	16 51 39.1	+0.2
	comp=Z,36nm,1.6s						
RAYN	Ar Rayn	38.27	271	i P	P	16 51 40.5	+1.6
	SNR=7.0						
RAYN	Ar Rayn	38.27	271	eP	P	16 51 39.1	+0.2
RAYN				pmax	pmax		
	comp=Z,36nm,1.6s						
KIV	Kislovodsk	38.31	304	ceP	P	16 51 41.7	+2.7
KIV				e		16 53 08.9	
KIV				eSS	SS	17 00 42.2	+22
KIV				pmax	pmax		
	comp=Z,16nm,1.7s						
KIV				MLR	MLR		
	comp=Z,237nm,19.0s						
VRH	Novokhopyorsk	40.22	315	eP	P	16 51 55.9	+1.3
VRH				pmax	pmax		
	comp=Z,30nm,0.7s						
INU	Inuyama	41.35	69	eP	P	16 52 02.7	-1.5
	comp=Z,14nm,1.1s						
GRNR	Gornyy	41.52	46	eP	P	16 52 07.8	+2.3
GRNR				pmax	pmax		
	comp=Z,20nm,0.9s						
VORD	Divnogorie	41.66	314	eP	P	16 52 07.1	+0.6
VORD				pmax	pmax		
	comp=Z,20nm,1.0s						
VSR	Storozhevoye	41.79	315	eP	P	16 52 08.5	+0.9
VSR				pmax	pmax		
	comp=Z,20nm,1.1s						
YAK	Yakutsk	42.02	28	P	P	16 52 09.8	+0.5
	comp=Z,4.9nm,0.4s,baz=3.5,slow=5.6,SNR=4.8						
YAK	Yakutsk	42.02	28	i P	P	16 52 09.2	-0.1
YAK				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PRGR	Permogore	42.05	331	eP	P	16 52 09.2	-0.4
PRGR				pmax	pmax		
	comp=Z,7.0nm,0.5s						
MJB9	Matsu-Tunnel	42.18	67	eP	P	16 52 08.7	-2.3
	comp=Z,17nm,1.2s						
MAJO	Matsushiro	42.18	67	eP	P	16 52 08.8	-2.2
	comp=Z,17nm,1.2s						
MAJO	Matsushiro	42.18	67	ceP	P	16 52 11.4	+0.4
MAJO				pmax	pmax		
	comp=Z,18nm,1.3s						
MAT	Matsushiro	42.18	67	P	P	16 52 09.7	-1.3
MAT				S	S	16 58 30.2	+1.1
MJAR	Matsushiro Arr	42.18	67	P	P	16 52 10.8	-0.3
	comp=Z,13nm,1.1s,baz=279,slow=10,SNR=17						
MJAR				LR	LR	17 10 36.3	
	comp=Z,112nm,18.5s,baz=220,slow=38						
LPSR	Galich’ya Gora	42.22	317	eP	P	16 52 12.5	+1.4
LPSR				pmax	pmax		
	comp=Z,30nm,0.8s						
MOS	Moscow	43.72	321	eP	P	16 52 24.8	+1.6
MOS				pmax	pmax		
	comp=Z,49nm,1.4s						
JHJ	Hachijo jima 2	43.95	72	LR	LR	17 12 24.0	
	comp=Z,196nm,18.3s,baz=179,slow=38						
OBN	Obninsk	44.15	320	ceP	P	16 52 28.3	+1.7
OBN				e		16 54 12.4	
OBN				i S	S	16 58 55.1	-2.3
OBN				i SS	SS	17 02 10.2	-5.2
OBN				pmax	pmax		
	comp=Z,37nm,1.1s						
OBN				MLR	MLR		
	comp=Z,103nm,16.0s						
KLMR	Klimovskoe	44.38	328	eP	P	16 52 28.5	+0.1
KLMR				e		16 54 11.3	
KLMR				pmax	pmax		
	comp=Z,28nm,1.1s						
KLMR	Klimovskoe	44.38	328	eP	P	16 52 28.5	+0.1
KLMR				AMP		16 52 30.4	
	comp=Z,28nm,1.1s						
KLMR				ePP	PcP	16 54 11.3	-0.5
KLMR				LQ	LQ	17 07 59.8	
SIM	Simferopol’	44.50	305	eP	P	16 52 37.3	+7.7
SIM				eS	S	16 59 15.0	+12
BR131	Keskin Array S	45.04	298	eP	P	16 52 32.7	-1.5
BRTR	Keskin Array B	45.04	298	P	P	16 52 35.0	+0.8
	comp=Z,1.5nm,0.9s,baz=94,slow=7.6,SNR=12						
BRTR				LR	LR	17 16 17.6	
	comp=Z,139nm,19.2s,baz=74,slow=43						
BRTR	Keskin Array B	45.04	298	P	P	16 52 35.0	+0.8
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BRTR				MLR	MLR		
	comp=Z,139nm,19.2s						
ASAJ	Asahikawa	45.10	56	P	P	16 52 34.0	-0.4
	comp=Z,16nm,1.0s,baz=279,slow=12,SNR=9.3						
ASAJ				LR	LR	17 12 12.2	
	comp=Z,179nm,19.4s,baz=250,slow=37						
ASAJ	Asahikawa	45.10	56	eP	P	16 52 32.0	-2.4
	comp=Z,36nm,1.2s						
ASAJ	Asahikawa	45.10	56	P	P	16 52 34.0	-0.4
ASAJ				pmax	pmax		
	comp=Z,12nm,0.9s						
ASAJ				MLR	MLR		
	comp=Z,179nm,19.4s						
YSS	Yuzh-Sakhalins	45.24	52	eP	P	16 52 34.0	-1.4
	comp=Z,30nm,1.4s						
YSS	Yuzh-Sakhalins	45.24	52	eP	P	16 52 36.2	+0.7
YSS				e		16 52 45.8	
ATD	Arta Tunnel	45.63	256	LR	LR	17 13 01.6	
	comp=Z,135nm,18.4s,baz=37,slow=38						
EIL	Elat	45.63	284	LR	LR	17 14 41.6	
	comp=Z,263nm,19.2s,baz=68,slow=40						
ANTO	Ankara	45.68	298	eP	P	16 52 39.0	-0.2
	comp=Z,15nm,0.9s						
ANTO	Ankara	45.68	298	eP	P	16 52 39.0	-0.2
ANTO				pmax	pmax		
	comp=Z,15nm,0.9s						
ISP	Isparta	47.68	296	ceP	P	16 52 55.5	+0.6
ISP				pmax	pmax		
	comp=Z,14nm,1.3s						
AKASG	Malin Array Be	47.96	313	P	P	16 52 56.4	-0.3
	comp=Z,2.0nm,0.5s,baz=82,slow=6.6,SNR=18						
AKASG				LR	LR	17 15 30.6	
	comp=Z,179nm,19.6s,baz=70,slow=39						
AKASG	Malin Array Be	47.96	313	P	P	16 52 56.4	-0.3
AKASG				pmax	pmax		
	comp=Z,6.0nm,0.6s						
AKASG				MLR	MLR		
	comp=Z,179nm,19.6s						
AKBB	Malin Array Si	47.96	313	eP	P	16 52 56.1	-0.6
	comp=Z,9.2nm,0.8s						
AKBB	Malin Array Si	47.96	313	eP	P	16 52 56.1	-0.6
AKBB				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KIEV	Kiev	47.97	313	eP	P	16 52 56.1	-0.7
	comp=Z,8.8nm,0.7s						
KIEV	Kiev	47.97	313	i P	P	16 52 56.7	-0.1
	SNR=8.2						
KIEV	Kiev	47.97	313	ceP	P	16 52 56.4	-0.4
KIEV				pmax	pmax		
	comp=Z,6.0nm,0.9s						
AK11	Malin Array Si	48.00	313	eP	P	16 52 56.4	-0.6
VRI	Vrincioaia	49.68	307	⇓iP	P	16 53 11.6	+1.6
TESR	Tescani	49.69	307	⇓iP	P	16 53 10.7	+0.6
IDID	Didziasalis	49.74	319	eP	P	16 53 10.7	+0.3
IIGN	Ignalina	50.04	319	eP	P	16 53 12.7	+0.1
BIZ	Bicaz	50.05	308	⇑iP	P	16 53 14.3	+1.5
IZAR	Zarasai	50.06	320	eP	P	16 53 13.4	+0.7
VSU	Vasula	50.07	323	ceP	P	16 53 12.9	+0.2
ISAL	Salakas	50.11	319	eP	P	16 53 13.5	+0.4
MLR	Muntele Rosu	50.25	306	LR	LR	17 17 50.8	
	comp=Z,167nm,19.6s,baz=77,slow=40						
MLR	Muntele Rosu	50.25	306	⇑iP	P	16 53 16.5	+2.0
MLR	Muntele Rosu	50.25	306	eP	P	16 53 15.3	+0.8
	comp=Z,24nm,1.1s						
MLR	Muntele Rosu	50.25	306	eP	P	16 53 15.3	+0.8
MLR				pmax	pmax		
	comp=Z,24nm,1.1s						
DOPR	Dopca	50.60	307	⇓iP	P	16 53 19.4	+2.4
BURAR	Bucovina Array	50.61	309	⇑iP	P	16 53 19.0	+1.8
BUR04	Bucovina Ar. S	50.61	309	eP	P	16 53 16.4	-0.8
FINES	FINESS Array B	50.81	327	P	P	16 53 18.5	+0.1
	comp=Z,2.3nm,0.4s,baz=115,slow=9.0,SNR=29						
FINES				LR	LR	17 18 21.4	
	comp=Z,117nm,19.2s,baz=102,slow=40						
VOIR		50.88	306	⇓iP	P	16 53 20.7	+1.5
MA2	Magadan	51.03	36	i P	P	16 53 20.8	+0.8
MA2				pmax	pmax		
	comp=Z,15nm,1.2s						
SANT	Santorini	51.92	295	⇓iP	P	16 53 27.9	+0.8
KWP	Kalwaria Pacla	52.16	312	eP	P	16 53 30.4	+1.8
KWP	Kalwaria Pacla	52.16	312	eP	P	16 53 30.4	+1.8
DRGR		52.38	308	⇑iP	P	16 53 32.4	+2.0
VAF	Ylistaro	52.61	329	eP	P	16 53 33.9	+2.2
VAF				pmax	pmax		
	comp=Z,28nm,1.4s						
ARCES	ARCESS Array B	52.72	337	P	P	16 53 33.2	+0.8
	comp=Z,4.6nm,0.8s,baz=106,slow=7.5,SNR=10						
BZS	Buzias	53.26	307	P	P	16 53 40.5	+3.7
BZS				pmax	pmax		
	comp=Z,4.0nm,1.7s						
MDVR	Moldovita	53.30	306	⇓iP	P	16 53 39.2	+2.0
NIE	Niedzica	53.74	311	eP	P	16 53 42.4	+2.1
NIE	Niedzica	53.74	311	eP	P	16 53 42.4	+2.1
AGG	Agios Georgios	53.81	298	eP	P	16 53 40.6	-0.4
	comp=Z,48nm,0.8s						
AGG	Agios Georgios	53.81	298	eP	P	16 53 40.6	-0.4
AGG				pmax	pmax		
	comp=Z,48nm,0.8s						
OKC	Ostrava-Krasne	55.09	312	AMS	AMS	17 19 30.0	
	comp=Z,300nm,11.5s						
MORC	Moravsky Berou	55.48	312	⇓iP	P	16 53 54.8	+1.8
MORC	Moravsky Berou	55.48	312	eP	P	16 53 53.1	+0.1
	comp=Z,3.7nm,0.9s						
MORC	Moravsky Berou	55.48	312	eP	P	16 53 53.1	+0.1
MORC				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MORC	Moravsky Berou	55.48	312	eP	P	16 53 54.7	+1.8
JAVC	Velka Javorina	55.52	311	eP	P	16 53 55.6	+2.3
KSP	Ksiaz	56.15	314	eP	P	16 53 59.4	+1.7
KSP	Ksiaz	56.15	314	eP	P	16 53 59.4	+1.7
VRAC	Vranov	56.16	312	⇓iP	P	16 53 59.5	+1.7
VRAC	Vranov	56.16	312	P	P	16 53 59.8	+2.0
VRAC				pmax	pmax		
	comp=Z,10.0nm,1.3s						
VRAC	Vranov	56.16	312	eP	P	16 53 59.3	+1.5
DPC	Dobruska-Polom	56.19	313	eP	P	16 53 59.0	+0.9
DPC				epP	pP	16 54 03.7	-4.1
DPC	Dobruska-Polom	56.19	313	eP	P	16 53 59.0	+0.9
DPC				e		16 54 03.7	
KRUC	Moravsky	56.32	311	eP	P	16 54 00.3	+1.4
UPC	Upice	56.37	313	AMS	AMS	17 20 30.0	
	comp=Z,200nm,14.4s						
HFS	Hagfors	56.80	325	LR	LR	17 19 37.8	
	comp=Z,199nm,19.0s,baz=124,slow=37						
GOPC	GO Pecny, Ondr	57.23	313	AMS	AMS	17 22 40.0	
	comp=Z,200nm,11.9s						
PRU	Pruhonice	57.38	313	eP	P	16 54 08.2	+1.8
PRU				epP	pP	16 54 13.2	-3.0
PRU				AMS	AMS	17 18 30.0	
	comp=Z,200nm,13.8s						
PRU	Pruhonice	57.38	313	eP	P	16 54 08.2	+1.8
PRU				e		16 54 13.2	
PRU				MLR	MLR		
	comp=Z,200nm,13.8s						
BRG	Berggiesshubel	57.62	314	eP	P	16 54 09.3	+1.2
	comp=Z,17nm,1.7s						
BRG	Berggiesshubel	57.62	314	eP	P	16 54 09.3	+1.2
BRG				pmax	pmax		
	comp=Z,17nm,1.7s						
NB2	NORSAR Subarra	57.96	326	P	P	16 54 09.6	-0.8
	comp=Z,2.7nm,0.8s,baz=85,slow=7.4						
NOA	NORSAR Array B	57.96	326	P	P	16 54 09.7	-0.7
	comp=Z,5.2nm,0.8s,baz=85,slow=7.1,SNR=12						
NOA				LR	LR	17 19 14.8	
	comp=Z,128nm,21.2s,baz=95,slow=36						
GEC2	GERESS Array S	58.11	312	eP	P	16 54 12.0	+0.3
	comp=Z,9.6nm,1.1s						
GEC2	GERESS Array S	58.11	312	eP	P	16 54 12.0	+0.3
GEC2				pmax	pmax		
	comp=Z,10.0nm,1.1s						
GERES	GERESS Array B	58.11	312	P	P	16 54 12.1	+0.4
	comp=Z,2.1nm,0.6s,baz=78,slow=7.0,SNR=20						
GERES				LR	LR	17 21 47.7	
	comp=Z,140nm,19.1s,baz=92,slow=39						
GEA0	GERESS Array S	58.11	312	eP	P	16 54 11.6	-0.1
CLL	Collm	58.14	314	eP	P	16 54 13.0	+1.3
	comp=Z,4.0nm,1.0s						
CLL				ePP	PP	16 56 17.0	-3.4
CLL				eS	S	17 02 15.0	+4.2
CLL				e(SS)		17 06 30.0	
CLL				eSSS	SSS	17 08 30.0	
CLL				LmV		17 21 00.0	
	comp=Z,100nm,20.2s						
CLL	Collm	58.14	314	eP	P	16 54 13.0	+1.3
CLL				eS	S	17 02 15.0	+4.2
CLL				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KHC	Kasperske Hory	58.14	312	eP	P	16 54 13.3	+1.5
KHC				ex	x	16 54 16.4	
KHC	Kasperske Hory	58.14	312	eP	P	16 54 13.3	+1.5
KHC				e		16 54 16.4	
MOX	Moxa	59.12	314	P	P	16 54 22.2	+3.6
MOX				pmax	pmax		
	comp=Z,7.0nm,2.3s						
DAVOX	Davos/Dischmat	61.06	310	LR	LR	17 22 32.1	
	comp=Z,159nm,20.2s,baz=85,slow=38						
CDF	Champ du Feu	62.36	312	eP	P	16 54 41.4	+0.6
CDF				pmax	pmax		
	comp=Z,7.0nm,1.1s						
MEM	Membach	62.61	315	⇑P	P	16 54 43.5	+1.2
WLF	Walferdange	62.76	314	⇓P	P	16 54 45.3	+2.0
HINF	Hinteralfeld	62.79	312	eP	P	16 54 44.2	+0.6
HINF				pmax	pmax		
	comp=Z,12nm,1.3s						
HAU	Haudompre	63.07	312	eP	P	16 54 46.1	+0.7
HAU				pmax	pmax		
	comp=Z,20nm,1.6s						
BCLA	Clavier	63.09	315	⇓P	P	16 54 46.4	+0.9
LPG	La Plagne	63.50	309	eP	P	16 54 49.6	+1.0
LPG				pmax	pmax		
	comp=Z,14nm,1.2s						
LPL	La Plagne	63.50	309	eP	P	16 54 49.6	+1.0
LPL				pmax	pmax		
	comp=Z,16nm,1.2s						
DOU	Dourbes	63.62	314	⇑P	P	16 54 48.3	-0.7
SMF	Signal de Mont	65.09	311	eP	P	16 54 59.1	+0.4
SMF				pmax	pmax		
	comp=Z,14nm,1.2s						
SSF	Saint Saulge	65.19	311	eP	P	16 54 59.8	+0.5
SSF				pmax	pmax		
	comp=Z,19nm,1.3s						
AVF	Avril sur Loir	65.37	311	eP	P	16 55 00.9	+0.4
AVF				pmax	pmax		
	comp=Z,12nm,1.3s						
TCF	Toulx Ste Croi	66.28	311	eP	P	16 55 07.3	+0.9
TCF				pmax	pmax		
	comp=Z,23nm,1.3s						
WRA	Warramunga Arr	66.73	132	P	P	16 55 08.5	-1.0
	comp=Z,4.3nm,0.7s,baz=324,slow=6.4,SNR=66						
WRAB	Tennant Creek	66.73	132	eP	P	16 55 08.7	-0.8
	comp=Z,6.2nm,0.9s						
WRAB	Tennant Creek	66.73	132	eP	P	16 55 08.7	-0.8
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.9s						
WB2	Warramunga Arr	66.74	132	eP	P	16 55 08.4	-1.2
WB2				ePcP	PcP	16 55 38.0	-0.4
RJF	Les Rejaudoux	67.06	310	eP	P	16 55 12.6	+1.2
RJF				pmax	pmax		
	comp=Z,16nm,1.3s						
GRR	Gorron	67.54	314	eP	P	16 55 14.8	+0.5
GRR				pmax	pmax		
	comp=Z,17nm,1.2s						
SGMF	Saint Gilles	68.65	314	eP	P	16 55 22.1	+0.8
SGMF				pmax	pmax		
	comp=Z,17nm,1.3s						
ROSF	Rostrenen	69.07	314	eP	P	16 55 24.7	+0.8
ROSF				pmax	pmax		
	comp=Z,13nm,1.0s						
AS31	Alice Springs	69.19	135	eP	P	16 55 24.3	-0.7
	comp=Z,2.3nm,0.8s						
ASAR	Alice Springs	69.19	135	P	P	16 55 24.2	-0.7
	comp=Z,3.6nm,0.7s,baz=319,slow=6.3,SNR=47						

AS01	Alice Springs	69.22	135	eP	P	16 55 24.1	-1.0
TAM	Tamanrasset	72.73	287	eP	P	16 55 45.0	-1.8
	comp=Z,14nm,1.6s						
TAM	Tamanrasset	72.73	287	eP	P	16 55 45.0	-1.8
TAM				pmax	pmax		
	comp=Z,14nm,1.6s						
ES19	SONSECA Array	72.89	306	eP	P	16 55 45.8	-1.6
ESDC	Sonseca Array	72.95	306	P	P	16 55 48.0	+0.3
	comp=Z,7.6nm,1.3s,baz=58,slow=5.6,SNR=9.4						
TOLK	Toolik Lake Re	73.09	19	eP	P	16 55 45.6	-2.4
	comp=Z,23nm,1.3s						
COLD	Coldfoot	73.83	20	eP	P	16 55 51.3	-1.0
	comp=Z,13nm,1.1s						
MLY	Manley	75.07	22	eP	P	16 55 57.9	-1.7
	comp=Z,13nm,1.2s						
BPAW	Bear Paw Mtn.	75.59	23	eP	P	16 56 01.5	-1.1
	comp=Z,14nm,1.3s						
CAST	Castle Rocks	75.65	24	eP	P	16 56 02.1	-0.8
	comp=Z,37nm,1.2s						
FYU	Fort Yukon	75.73	19	eP	P	16 56 03.2	0.0
	comp=Z,46nm,1.4s						
SVW2	Sparrevohn	75.78	27	eP	P	16 56 02.6	-1.1
	comp=Z,14nm,1.3s						
MDM	Murphy Dome	75.92	21	eP	P	16 56 03.5	-1.0
	comp=Z,24nm,1.2s						
PPLA	Purkeypile	75.94	24	eP	P	16 56 04.5	-0.2
	comp=Z,38nm,1.3s						
COLA	College	76.10	21	eP	P	16 56 03.7	-1.7
	comp=Z,14nm,0.8s						
COLA	College	76.10	21	eP	P	16 56 03.7	-1.7
COLA				pmax	pmax		
	comp=Z,14nm,0.8s						
CCB	Clear Creek Bu	76.27	21	eP	P	16 56 05.3	-1.1
	comp=Z,12nm,1.3s						
IL1	Eielson Array	76.47	21	eP	P	16 56 06.0	-1.6
ILAR	Eielson Array	76.47	21	P	P	16 56 06.5	-1.1
	comp=Z,6.0nm,1.1s,baz=300,slow=4.9,SNR=27						
ILAR				PP	PP	16 58 58.0	-1.0
	comp=Z,0.4nm,0.7s,baz=310,slow=7.3,SNR=4.2						
ILB	Eielson Array	76.47	21	eP	P	16 56 06.3	-1.2
HDA	Harding Lake	76.70	21	eP	P	16 56 07.3	-1.6
	comp=Z,19nm,1.5s						
SKT	Skwentna	76.76	25	eP	P	16 56 08.0	-1.3
	comp=Z,13nm,0.8s						
INK	Inuvik	77.37	15	eP	P	16 56 11.7	-0.8
	comp=Z,19nm,1.1s						
INK	Inuvik	77.37	15	eP	P	16 56 11.7	-0.8
INK				pmax	pmax		
	comp=Z,19nm,1.1s						
RIDG	Independ'e Rid	77.83	21	eP	P	16 56 14.9	-0.4
	comp=Z,11nm,1.0s						
SCRK	Sand Creek	77.93	21	eP	P	16 56 14.9	-1.1
	comp=Z,15nm,1.1s						
SML	Sawmill	78.02	24	eP	P	16 56 16.0	-0.3
	comp=Z,19nm,0.8s						
SML	Sawmill	78.02	24	eP	P	16 56 16.0	-0.3
SML				pmax	pmax		
	comp=Z,19nm,0.8s						
EGAK	Eagle	78.19	19	eP	P	16 56 17.4	+0.2
	comp=Z,14nm,1.4s						
DAWY	Dawson	79.23	19	eP	P	16 56 23.0	0.0
	comp=Z,27nm,1.6s						
TOA0	Torodi Ar. Sit	80.35	280	eP	P	16 56 29.3	-0.6
TORD	Torodi Ar. Bea	80.35	280	P	P	16 56 30.3	+0.4
	comp=Z,2.6nm,0.9s,baz=46,slow=5.0						
TSUM	Tsumeb	83.47	244	LR	LR	17 35 29.5	
	comp=Z,48nm,18.2s,baz=242,slow=37						
YKW3	Yellowknife Ar	86.09	10	eP	P	16 56 56.7	-1.8
	comp=Z,14nm,1.0s						
YKA	Yellowknife Ar	86.15	10	P	P	16 56 59.2	+0.3
	comp=Z,4.8nm,0.8s,baz=330,slow=4.8,SNR=11						
DLBC	Dease Lake	86.45	19	eP	P	16 57 00.3	-0.3
	comp=Z,11nm,1.1s						
CMLA	Cha da Macela	88.36	313	i P	P	16 57 12.9	+2.8
DBIC	Dimbokro	89.13	277	P	P	16 57 16.4	+2.4
	comp=Z,1.7nm,0.4s,baz=44,slow=4.2,SNR=5.9						
SAML	Samuel	145.87	302	ePKPdf	PKPdf	17 03 56.9	-0.6
SAML	Samuel	145.87	302	ePKP2	PKPdf	17 03 56.9	-0.6
OTAV	Otavalo	147.33	334	ePKPbc	PKPbc	17 04 02.0	-0.9
OTAV	Otavalo	147.33	334	ePKP2	PKPbc	17 04 02.0	-0.9
CPUP	Villa Florida	149.23	268	PKPbc	PKPbc	17 04 07.2	+0.2
	comp=Z,6.1nm,0.8s,baz=68,slow=3.3,SNR=15						
CPUP	Villa Florida	149.23	268	ePKPbc	PKPbc	17 04 06.4	-0.6

ISCJB ***22*** *16:47:27.3±0.5, 30°.31S±0°.07×177°.5W±0°.1, h35^{km}, mb4.5/18, Error ellipse: s-maj=16.8km s-min=10.2km az=172.2*

IDC ***22*** *16:47:28.4±3.4, 30°.19S×177°.32W, h33^{km}±23^{km}, mb4.3/14, mb1 4.4/14, mb1mx4.2/43, mbtmp4.5/14, Error ellipse: s-maj=21.6km s-min=15.5km az=89.0*

NEIC ***22*** *16:47:29.2±1.8, 30°.18S×177°.39W, h41^{km}±14^{km}, mb4.7/2, Error ellipse: s-maj=15.1km s-min=10.6km az=95.0*

ISC 22 16:47:28.3±0.6**, 30°.28S**±0°.09×**177°.3W**±0°.1**, h35^{km}, n47, σ1^{s}35**/47**, mb4.5**/18**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.14	333	Pn	Pn	16 47 46.9	-1.0
	580nm,0.3s,baz=226,slow=3.1,SNR=17						
URZ	Urewera	9.19	209	Pn	Pn	16 49 32.7	-5.7
	1.0nm,0.3s,baz=270,slow=3.7,SNR=10						
RPZ	Rata Peaks	16.29	211	Pn	Pn	16 51 10.1	-4.2
	1.2nm,0.3s,baz=54,slow=1.4,SNR=7.9						
DZM	Mont Dzumac	16.69	295	Pn	P	16 51 25.7	+4.0
	0.4nm,0.3s,baz=71,slow=16,SNR=7.7						
CTA	Charters Tower	34.35	279	P	P	16 54 14.2	+2.1
	7.2nm,0.8s,baz=84,slow=7.3,SNR=6.7						
CTAO	Charters Tower	34.35	279	eP	P	16 54 10.2	-1.9
STKA	Stephens Creek	35.07	257	P	P	16 54 19.6	+1.5
	9.8nm,0.8s,baz=96,slow=10,SNR=18						
ASAR	Alice Springs	43.70	267	P	P	16 55 29.3	-0.9
	7.8nm,0.8s,baz=105,slow=7.5,SNR=53						
ASAR				ScP	ScP	17 01 06.5	+0.6
	0.6nm,0.8s,baz=118,slow=4.2,SNR=4.5						
WRAB	Tennant Creek	44.67	272	eP	P	16 55 37.1	-0.9
WRA	Warramunga Arr	44.67	272	P	P	16 55 36.9	-1.1
	20nm,1.0s,baz=112,slow=7.7,SNR=37						
SBA	Scott Base	48.20	184	eP	P	16 56 07.2	+2.3
	3.6nm,0.8s						
VNDA	Vanda	48.28	186	P	P	16 56 06.8	+1.3
	0.7nm,0.6s,baz=17,slow=5.2,SNR=3.6						
CASY	Casey	55.52	208	eP	P	16 56 59.0	-0.6
	9.7nm,0.8s						
QSPA	South Pole Qui	59.83	180	P	P	16 57 31.4	+1.3
	5.9nm,0.8s,baz=58,slow=1.1,SNR=22						
QSPA	South Pole Qui	59.83	180	eP	P	16 57 30.8	+0.7
MAW	Mawson	72.63	200	P	P	16 58 52.4	+0.6
	4.5nm,0.8s,baz=113,slow=7.1,SNR=10						
SNAA	Sanae	78.26	178	P	P	16 59 24.3	+0.1
VNA3	Neumayer Olymp	78.39	176	P	P	16 59 24.2	-0.6
MJAR	Matsushiro Arr	78.47	325	P	P	16 59 25.2	-0.5
	3.7nm,1.0s,baz=170,slow=7.0,SNR=12						
VNA1	Neumayer--Stat	79.06	176	P	P	16 59 28.7	+0.2
ASAJ	Asahikawa	82.60	332	P	P	16 59 48.6	+1.0
	9.8nm,0.9s,baz=242,slow=5.3,SNR=12						
KSRS	Korea Array	84.63	319	P	P	16 59 58.0	-0.2
	2.0nm,0.9s,baz=141,slow=6.1,SNR=6.3						
KSAR	Wonju Array Be	84.65	319	P	P	16 59 58.0	-0.2
YSS	Yuzh-Sakhalins	84.89	334	eP	P	16 59 59.9	+0.7
	22nm,0.9s						
PETK	Petropavlovsk-	85.84	345	P	P	17 00 03.9	+0.1
	2.1nm,0.7s,baz=125,slow=8.0						
USRK	Ussuriysk Ar.	87.38	326	P	P	17 00 11.6	0.0
	4.2nm,0.8s,baz=93,slow=2.9						
NVAR	Mina Array Bea	87.76	42	P	P	17 00 14.1	+0.3
	1.6nm,0.9s,baz=223,slow=8.8,SNR=9.3						
KLR	Kul'dur	91.22	329	P	P	17 00 30.1	+0.6
	0.2nm,0.8s,baz=99,slow=2.8,SNR=6.9						
TXAR	Lajitas Array	91.83	57	P	P	17 00 33.7	+0.7
	0.9nm,1.2s,baz=224,slow=7.0,SNR=4.2						
KURK	Kurchatov	121.38	314	PKP	PKPdf	17 06 16.2	-1.2
KURBB	Kurchatov Arra	121.42	314	PKP	PKPdf	17 06 16.2	-1.3
	0.7nm,0.7s,baz=106,slow=1.9,SNR=8.8						
BVAR	Borovoye Array	126.72	316	PKP	PKPdf	17 06 26.6	-1.0
	1.0nm,0.8s,baz=151,slow=3.3,SNR=7.3						
FINES	FINESS Array B	145.23	340	PKPbc	PKPbc	17 07 00.3	-1.0
	22nm,0.9s,baz=42,slow=4.0,SNR=44						
KBZ	Khabaz	145.52	304	PKPbc	PKPdf	17 07 02.6	0.0
	5.8nm,1.0s,baz=333,slow=2.2,SNR=8.3						
NB2	NORSAR Subarra	148.71	352	PKP	PKPbc	17 07 09.8	-1.5
	comp=Z,1.5nm,0.8s,baz=15,slow=2.6						
NOA	NORSAR Array B	148.71	352	PKPbc	PKPbc	17 07 10.3	-1.0
	comp=Z,3.3nm,0.9s,baz=14,slow=4.2,SNR=6.6						
HFS	Hagfors	149.24	349	PKPbc	PKPbc	17 07 11.8	-0.7
	comp=Z,5.3nm,0.8s,baz=46,slow=8.3,SNR=6.6						
ASF	Jabal al Asfar	150.74	283	PKPbc	PKPbc	17 07 18.0	+0.7
	comp=Z,5.4nm,0.9s,baz=118,slow=2.3,SNR=10						
AKASG	Malin Array Be	151.55	323	PKPbc	PKPbc	17 07 17.7	-0.6
	comp=Z,3.8nm,0.8s,baz=46,slow=2.7,SNR=13						
KIEV	Kiev	151.56	323	ePKPbc	PKPbc	17 07 17.2	-1.2
MMAI	Mount Meron Ar	152.06	284	PKPbc	PKPbc	17 07 20.9	+0.7
	comp=Z,7.4nm,0.7s,baz=58,slow=5.4,SNR=12						
BRTR	Keskin Array B	153.05	299	PKPbc	PKPbc	17 07 22.1	-0.3
	comp=Z,0.7nm,0.5s,baz=129,slow=4.0,SNR=5.0						
CLL	Collm	157.63	343	ePKPab	PKPab	17 07 52.0	-0.7
BRG	Berggiesshubel	157.77	341	ePKP	PKPab	17 08 01.2	+7.9
	comp=Z,6.4nm,1.3s						
KHC	Kasperske Hory	159.43	339	ePKPAB	PKPab	17 08 01.5	+0.8
KHC				epPKP	pPKPab	17 08 09.5	-2.4
GERES	GERESS Array B	159.64	339	PKPab	PKPab	17 08 01.6	-0.1
	comp=Z,0.2nm,0.4s,baz=48,slow=1.5,SNR=2.5						
TORD	Torodi Ar. Bea	162.93	177	PKPab	PKPab	17 08 16.3	-0.4
	baz=174,slow=3.2						

ISCJB ***22*** *16:56:01.6±2.7, 21°.93S±0°.04×175°.01W±0°.03, h12^{km}±16^{km}, mb5.2/233, MS4.8/58, Error ellipse: s-maj=7.3km s-min=4.2km az=151.5*

IDC ***22*** *16:56:02.1±0.4, 21°.83S×174°.99W, h0^{km}, mb4.9/22, mb1 5.0/23, mb1mx4.8/44, mbtmp4.9/23, ML4.7/1, MS4.7/41, Ms1 4.7/41, ms1mx4.6/50, Error ellipse: s-maj=18.4km s-min=13.6km az=153.0*

MOS ***22*** *16:56:02.2±1.0, 21°.74S×175°.02W, h33^{km}, mb5.4/49, MS4.9/16, Error ellipse: s-maj=9.9km s-min=8.0km az=64.1*

BJI ***22*** *16:56:02.8, 21°.44S×174°.86W, h8^{km}, mb5.4/41, mB5.7/32, Ms5.2/30, Ms7 4.9/32*

NEIC ***22*** *16:56:02.6±0.1, 21°.80S×175°.03W, h10^{km}, mb5.3/196, Error ellipse: s-maj=7.2km s-min=3.9km az=151.0*

GCMT ***22*** *16:56:02.6±0.1, 22°.03S×174°.48W, h25^{km}, MW5.4/120, Moment Tensor Solution. s105,c192; s120,c226; Duration: 1^{s}3 Moment tensor: Scale 10^{17}Nm; M$_{rr}$1.46±.03; M$_{\theta\theta}$-0.10±.02; M$_{\phi\phi}$-1.36±.02; M$_{r\theta}$0.44±.04; M$_{\theta\phi}$-0.62±.01; M$_{\phi r}$0.83±.04; Best double couple: M$_{0}$1.80200×10^{17} NP1:φ$_{s}$25.00000°, δ61.00000°, λ93.00000°. NP2:φ$_{s}$199.00000°, δ29.00000°, λ84.00000°. Principal axes: T 1.7260, Plg74.0000°, Azm304.0000°; N 0.1560, Plg3.0000°, Azm204.0000°; P -1.8780, Plg16.0000°, Azm113.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 22 16:56:06.4±0.6**, 21°.97S**±0°.06×**174°.85W**±0°.05**, h32^{km}**±3^{km}**, h33^{km}:pP-P, n751, σ1^{s}30**/761**, mb5.3**/231**, MS4.9**/58**, 65C-27D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIUE	Niue	5.44	59	P	Pn	16 57 18.1	-7.1
	baz=5.2,SNR=64						
RAO	Raoul Island	7.76	200	Sn	Sn	16 59 22.6	-1.3
	40nm,0.3s,baz=83,slow=22,SNR=4.0						
AFI	Afiamalu	8.53	21	Pn	Pn	16 58 01.9	-5.9
	20nm,0.3s,baz=180,slow=3.3,SNR=26						
AFI				Sn	Sn	16 59 30.0	-13
	32nm,0.3s,baz=168,slow=17,SNR=5.5						
AFI	Afiamalu	8.53	21	ePn	Pn	16 58 01.6	-6.3
AFI				Sn	Sn	16 59 29.9	-13
RAR	Rarotonga	14.05	90	Pn	Pn	16 59 15.8	-7.4
	10nm,0.3s,baz=253,slow=8.3,SNR=19						
RAR				Sn	Sn	17 01 37.8	-20
	4.2nm,0.3s,baz=56,slow=17,SNR=4.9						
RAR				LR	LR	17 05 19.7	
	comp=Z,1μm,18.8s,baz=256,slow=39						
RAR				T	T	17 13 58.6	
	41nm,0.3s,baz=88,slow=15,SNR=6.7						
RAR	Rarotonga	14.05	90	ePn	Pn	16 59 15.2	-8.0
RAR				Sn	Sn	17 01 37.8	-20
RAR				TT		17 13 58.6	
FUNA	Funafuti	14.54	336	ePn	Pn	16 59 24.5	-5.5
DZM	Mont Dzumac	17.35	266	P	P	17 00 10.8	+3.5
	1.7nm,0.3s,baz=76,slow=22,SNR=15						
DZM				LR	LR	17 04 56.8	
	comp=Z,2μm,20.9s,baz=102,slow=31						
DZM	Mont Dzumac	17.35	266	eP	P	17 00 09.9	+2.6
	193nm,1.4s						
DZM				eLQ	LQ	17 03 26.2	
	10μm,31.9s						
DZM				eLR	LR	17 04 09.6	
	7μm,22.1s						
URZ	Urewera	17.65	201	P	P	17 00 11.9	+1.5
	2.5nm,0.3s,baz=357,slow=1.3,SNR=8.0						
URZ				S	Sn	17 03 11.9	-13
	1.1nm,0.3s,baz=83,slow=18,SNR=4.2						
URZ	Urewera	17.65	201	eP	Pn	17 00 09.2	-0.5
	66nm,1.1s						
URZ				S	Sn	17 03 11.9	-13
BKZ	Black Stump Fm	18.67	201	eP	P	17 00 19.6	-2.2
	123nm,1.8s						
HIZ	Hauiti	18.71	206	eP	P	17 00 21.3	-0.9
	610nm,2.0s						
BFZ	Birch Farm	20.12	200	eP	Pn	17 00 39.0	-0.6
	52nm,0.9s						
LTZ	Lake Taylor	23.37	204	eP	P	17 01 11.1	-1.0
	66nm,1.4s						
TBI	Tubuai	23.46	98	eS	S	17 05 19.6	-5.1
	2μm,24.9s						
TBI				eLR	LR	17 06 51.5	
	5μm,28.8s,baz=269						
TBI	Tubuai	23.46	98	eT	T	17 25 06.0	
	19nm,0.4s						
OXZ	Oxford	23.93	204	eP	P	17 01 14.1	-3.3
	247nm,2.0s						
PAE	Paea	24.15	84	eP	P	17 01 18.8	-0.9
	10nm,1.0s						
PAE	Paea	24.15	84	eT	T	17 25 58.8	
	46nm,0.4s						
PPT2	Papeete2	24.17	84	eP	P	17 01 19.1	-0.9
	89nm,1.1s						
PPT2				eS	S	17 05 32.6	-3.6
	2μm,26.6s						
PPT2				eLQ	LQ	17 05 54.6	
	5μm,27.5s						
PPT2				eLR	LR	17 07 09.6	
	5μm,25.8s,baz=252						
PPT2	Papeete2	24.17	84	eT	T	17 26 01.9	
	40nm,0.4s						
PPT	Papeete	24.17	84	P	P	17 01 20.4	+0.5
	65nm,1.0s,baz=344,slow=7.4,SNR=3.5						
PPT				LR	LR	17 08 24.0	
	comp=Z,2μm,20.9s,baz=265,slow=31						
PPT				T	T	17 26 34.4	
	68nm,0.4s,baz=236,slow=20,SNR=4.8						
PPTF	Pamatai, Papee	24.18	84	eP	P	17 01 19.8	-0.3
	105nm,1.0s						
TIAR	Tiarei	24.39	84	eP	P	17 01 21.0	-0.9
	34nm,1.0s						
TIAR	Tiarei	24.39	84	eT	T	17 26 17.5	
	6.2nm,0.4s						
TVO	Taravao	24.42	85	eP	P	17 01 21.3	-1.0
	41nm,1.2s						
RPZ	Rata Peaks	24.64	205	LR	LR	17 10 53.3	
	comp=Z,4μm,20.5s,baz=22,slow=36						
RPZ	Rata Peaks	24.64	205	eP	P	17 01 19.4	-4.5
	78nm,1.3s						
FOZ	Fox Glacier	24.99	207	eP	P	17 01 25.4	-1.7
	106nm,1.2s						
HNR	Honiara	27.22	293	LR	LR	17 10 53.2	
	comp=Z,2μm,21.2s,baz=141,slow=33						
ARMA	Armidale	31.14	247	P	P	17 02 23.5	+1.1
	baz=31,SNR=7.0						
EIDS	Eidsvold	31.34	257	P	P	17 02 24.7	+0.7
	baz=32,SNR=6.0						
MGCD	Mangrove Creek	32.05	242	P	P	17 02 32.5	+2.3
	baz=32,SNR=5.8						
RMQ	Roma	33.42	255	P	P	17 02 42.2	0.0
	baz=34,SNR=15						
TAOE	Nuku Hiva Isla	35.80	74	eS	S	17 08 39.2	+0.4
	640nm,24.9s						
TAOE				eLR	LR	17 12 26.7	
	3μm,26.9s						
TAOE	Nuku Hiva Isla	35.80	74	eT	T	17 40 34.9	
	53nm,0.3s						
CTA	Charters Tower	36.29	266	P	P	17 03 06.3	-0.9
	35nm,0.6s,baz=91,slow=11,SNR=116						
CTA				LR	LR	17 17 11.9	
	comp=Z,1μm,18.6s,baz=93,slow=35						
CTAO	Charters Tower	36.29	266	eP	P	17 03 06.2	-0.9
	31nm,0.6s						
CTAO	Charters Tower	36.29	266	eP	P	17 03 06.3	-0.9
CTAO				pmax	pmax		
	comp=Z,31nm,0.6s						
CMSA	Cobar Meteorol	36.33	246	P	P	17 03 06.3	-1.0
	baz=36,SNR=44						
RKT	Rikitea	36.77	100	eLR	LR	17 12 59.5	
	comp=Z,2μm,29.8s,baz=263						
RKT	Rikitea	36.77	100	eT	T	17 41 43.0	
	comp=Z,12nm,0.3s						
QLP	Quilpie	37.47	255	P	P	17 03 16.0	-1.0
	baz=38,SNR=16						
TOO	Toolangi	37.47	236	P	P	17 03 16.5	-0.6
	baz=38,SNR=9.3						
MOO	Moorlands	37.64	228	P	P	17 03 20.5	+2.1
	baz=38,SNR=4.8						
MTSU	Mount Surprise	38.47	268	P	P	17 03 24.8	-0.8
	baz=39,SNR=7.1						
PMG	Port Moresby	38.53	283	P	P	17 03 24.7	-1.4
	comp=Z,26nm,0.8s,baz=89,slow=7.4,SNR=9.9						
PMG				LR	LR	17 18 08.8	
	comp=Z,3μm,18.1s,baz=138,slow=35						
STKA	Stephens Creek	39.84	246	P	P	17 03 36.0	-1.0
	comp=Z,6.6nm,0.5s,baz=91,slow=9.9,SNR=13						
STKA				LR	LR	17 19 17.0	
	comp=Z,3μm,18.3s,baz=80,slow=35						
STKA	Stephens Creek	39.84	246	P	P	17 03 36.7	-0.3
	baz=40,SNR=10						
STKA	Stephens Creek	39.84	246	eP	P	17 03 35.6	-1.4
	comp=Z,4.5nm,1.3s						
STKA	Stephens Creek	39.84	246	eP	P	17 03 35.6	-1.4
STKA				pmax	pmax		
	comp=Z,5.0nm,1.3s						
ARPS	Mount Arapiles	40.18	239	P	P	17 03 39.2	-0.5
	baz=40,SNR=6.4						
COEN	Coen	40.61	274	P	P	17 03 42.9	-0.6
	baz=41,SNR=7.3						
MANU	Manus Island	41.73	293	eP	P	17 03 50.2	-2.5
	comp=Z,122nm,1.4s						
HTT	Hallett	42.19	244	P	P	17 03 55.1	-1.2
	baz=42,SNR=10.0						
QIS	Mount Isa	42.35	263	P	P	17 03 56.1	-1.7
	baz=42,SNR=12						
BBOO	Buckleboo	44.56	245	eP	P	17 04 13.3	-2.2
	comp=Z,27nm,1.0s						
KHLU	Kahalu‘u	45.28	26	eP	P	17 04 20.6	-0.6
	comp=Z,108nm,1.1s						
HMH	Humu‘ula Sheep	45.45	26	eP	P	17 04 22.0	-0.8
	comp=Z,158nm,1.0s						
POHA	Pohakuloa	45.57	26	eP	P	17 04 21.9	-1.8
	comp=Z,95nm,1.0s						
HPAH	Hawaii Prepara	45.75	26	eP	P	17 04 25.3	+0.4
	comp=Z,117nm,0.9s						
KIP	Kipapa	46.15	22	eP	P	17 04 26.9	-1.1
	comp=Z,182nm,1.4s						
KIP	Kipapa	46.15	22	ceP	P	17 04 28.1	+0.1
AS01	Alice Springs	47.02	258	eP	P	17 04 32.0	-2.9
AS31	Alice Springs	47.06	258	eP	P	17 04 33.5	-1.9
	comp=Z,9.8nm,1.0s						
ASAR	Alice Springs	47.06	258	P	P	17 04 33.3	-2.0
	comp=Z,17nm,0.7s,baz=80,slow=5.9,SNR=245						
ASAR				PcP	PcP	17 06 08.0	+0.9
	comp=Z,9.5nm,0.9s,baz=104,slow=4.2,SNR=6.6						
ASAR				S	S	17 11 20.1	-5.3
	comp=Z,0.9nm,0.9s,baz=96,slow=15,SNR=4.4						
ASAR				LR	LR	17 24 07.3	
	comp=Z,3μm,18.1s,baz=100,slow=36						
JAY	Jayapura	47.29	288	P	P	17 04 36.4	-0.8
	comp=Z,350nm,0.8s,comp=Z,5μm						
WB2	Warramunga Arr	47.31	263	eP	P	17 04 34.4	-2.8
WRAB	Tennant Creek	47.31	263	eP	P	17 04 34.1	-3.2
	comp=Z,30nm,0.7s						
WRAB	Tennant Creek	47.31	263	ceP	P	17 04 34.8	-2.5
WRAB				pmax	pmax		
	comp=Z,13nm,1.1s						
WRA	Warramunga Arr	47.32	263	P	P	17 04 35.0	-2.3
	comp=Z,24nm,0.9s,baz=97,slow=8.6,SNR=139						
WRA				PcP	PcP	17 06 08.8	+0.7
	comp=Z,10nm,0.9s,baz=95,slow=4.1,SNR=6.7						
WRA				LR	LR	17 23 07.5	
	comp=Z,2μm,20.4s,baz=100,slow=34						
KDU	Kakadu	50.92	271	P	P	17 05 03.1	-1.9
	baz=51,SNR=14						
FORT	Forrest	51.43	248	P	P	17 05 07.0	-1.6
	baz=52,SNR=51						
FORT	Forrest	51.43	248	eP	P	17 05 06.0	-2.6
	comp=Z,103nm,0.6s						
WRKA	Warakurna	51.91	255	P	P	17 05 10.5	-1.7
	baz=52,SNR=45						
MTN	Manton Dam	52.11	271	P	P	17 05 11.5	-2.3
	baz=52,SNR=6.6						
MTN	Manton Dam	52.11	271	eP	P	17 05 11.6	-2.3
	comp=Z,18nm,0.8s						
GUMO	Guam	53.01	308	LR	LR	17 25 13.2	
	comp=Z,584nm,21.0s,baz=140,slow=33						
KNRA	Kununurra	53.50	266	P	P	17 05 22.5	-1.6
	baz=54,SNR=16						
SAUI	Saumlaki	53.58	276	P	P	17 05 24.5	-0.2
FITZ	Fitzroy Crossi	55.75	263	P	P	17 05 39.1	-1.3
	baz=56,SNR=32						
FITZ	Fitzroy Crossi	55.75	263	eP	P	17 05 38.8	-1.6
	comp=Z,29nm,1.1s						
SBA	Scott Base	56.62	185	eP	P	17 05 49.0	+3.3
	comp=Z,21nm,1.0s						
SBA	Scott Base	56.62	185	P	P	17 05 49.0	+3.3
SBA				pmax	pmax		
	comp=Z,21nm,1.0s						
VNDA	Vanda	56.73	186	P	P	17 05 48.9	+2.4
	comp=Z,1.6nm,1.0s,baz=16,slow=7.3,SNR=6.2						
VNDA				LR	LR	17 29 03.8	
	comp=Z,399nm,18.9s,baz=14,slow=35						
VNDA	Vanda	56.73	186	eP	P	17 05 48.8	+2.3
	comp=Z,13nm,1.0s						
VNDA	Vanda	56.73	186	eP	P	17 05 48.8	+2.3
VNDA				pmax	pmax		
	comp=Z,13nm,1.0s						
RPN	Rapa Nui	59.23	109	LR	LR	17 27 46.6	
	comp=Z,915nm,18.3s,baz=283,slow=32						
SOEI	Soe	59.48	271	P	P	17 06 08.3	+1.4
	comp=Z,91nm,0.7s						
SOEI	Soe	59.48	271	eP	P	17 06 05.7	-1.2
	comp=Z,295nm,1.7s						
KLBR	Kellerberrin	60.11	245	P	P	17 06 09.9	-1.0
	baz=60,SNR=13						
MEEK	Meekatharra	60.22	251	P	P	17 06 10.2	-1.5
	baz=60,SNR=9.1						
NWAO	Narrogin (SRO)	60.35	244	LR	LR	17 29 27.1	
	comp=Z,716nm,21.6s,baz=326,slow=33						
MBWA	Marble Bar	60.40	257	eP	P	17 06 10.7	-2.3
	comp=Z,22nm,0.6s						
BLDU	Ballidu	61.15	246	P	P	17 06 16.9	-1.0
	baz=61,SNR=25						
MUN	Mundaring	61.35	245	P	P	17 06 18.8	-0.4
	baz=62,SNR=9.8						
MORW	Morawa	61.99	248	P	P	17 06 22.8	-0.8
	baz=62,SNR=11						
EDFI	Ende, Flores	62.21	272	P	P	17 06 24.7	-0.7
	comp=Z,21nm,0.8s						
CASY	Casey	63.91	206	eP	P	17 06 37.1	+1.3
	comp=Z,35nm,1.3s						
GIRL	Giralia	64.99	254	P	P	17 06 43.7	+0.1
	baz=65,SNR=9.2						
DAV	Davao City (W)	65.09	289	LR	LR	17 33 51.7	
	comp=Z,569nm,18.7s,baz=122,slow=35						
PCI	Palu	66.83	279	P	P	17 06 57.2	+1.7
QSPA	South Pole Qui	68.11	180	LR	LR	17 33 28.2	
	comp=Z,686nm,20.3s,baz=36,slow=33						
PWJI	Pagerwojo	71.64	269	P	P	17 07 26.5	+1.2
	comp=Z,41nm,2.0s						
TGY	Tagaytay City	72.44	294	LR	LR	17 34 05.6	
	comp=Z,275nm,22.0s,baz=95,slow=32						
MJAR	Matsushiro Arr	73.15	322	P	P	17 07 32.8	-1.0
	comp=Z,8.9nm,0.8s,baz=166,slow=6.1,SNR=39						
MJAR				LR	LR	17 39 01.6	
	comp=Z,63nm,18.6s,baz=105,slow=35						
MAJO	Matsushiro	73.15	322	eP	P	17 07 32.7	-1.2
	comp=Z,11nm,0.8s						
MAJO	Matsushiro	73.15	322	i P	P	17 07 33.5	-0.3
MAJO				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MAT	Matsushiro	73.15	322	P	P	17 07 32.9	-0.9
MAT				S	S	17 16 42.0	-18
MJB9	Matsu-Tunnel	73.16	322	eP	P	17 07 32.7	-1.2
	comp=Z,12nm,0.8s						
JOW	Kunigami	73.37	309	LR	LR	17 37 12.1	
	comp=Z,282nm,19.7s,baz=115,slow=34						
NIKH	Nikolski High	74.81	4	eP	P	17 07 42.2	-0.9
	comp=Z,111nm,1.1s						
YUK	Yuzh-Kuril'sk	74.90	332	d iP	P	17 07 42.2	-1.6
YUK				e		17 10 32.0	

YUK				*e*S	S	17 17 14.9	-3.9
YUK				pmax	pmax		
	comp=Z,101nm,0.9s						
KUR	Kuril'sk	75.01	334	*e*P	P	17 07 44.1	-0.3
KUR				*i*		17 07 59.3	
KUR				*e*S	S	17 17 22.9	+3.0
KUR						17 18 08.0	
KUR				pmax	pmax		
	comp=Z,142nm,1.2s						
JNU	Nakatsue	75.37	315	LR	LR	17 36 13.9	
	comp=Z,320nm,21.9s,baz=122,slow=32						
UNV	Unalaska Valle	75.84	5	*e*P	P	17 07 47.5	-1.5
	comp=Z,41nm,1.0s						
ASAJ	Asahikawa	76.44	330	P	P	17 07 53.8	+1.1
	comp=Z,16nm,0.7s,baz=204,slow=8.5,SNR=25						
ASAJ				LR	LR	17 39 04.6	
	comp=Z,679nm,18.8s,baz=165,slow=34						
ASAJ	Asahikawa	76.44	330	*e*P	P	17 07 53.1	+0.4
	comp=Z,103nm,1.4s						
KSM	Kuching	76.52	277	*e*P	P	17 07 51.0	-2.8
	comp=Z,34nm,1.3s						
SKR	Severo-Kuril's	76.74	342	*e*P	P	17 07 53.7	-0.5
SBC	Santa Barbara	76.76	44	P	P	17 07 56.3	+1.6
	baz=232						
PKM	Mcpherson Peak	76.97	44	P	P	17 07 57.4	+1.3
	baz=231						
SMMC	Simmler	77.12	43	P	P	17 07 57.5	+0.7
	baz=231						
SAO	San Andreas Ge	77.13	41	*e*P	P	17 07 57.0	+0.3
	comp=Z,38nm,1.1s						
SAO	San Andreas Ge	77.13	41	*e*P	P	17 07 57.1	+0.3
SAO				pmax	pmax		
	comp=Z,38nm,1.1s						
LPIG	La Paz	77.67	58	LR	LR	17 36 21.2	
	comp=Z,777nm,18.3s,baz=228,slow=31						
BAR	Barrett	77.71	47	*e*P	P	17 07 59.2	-0.9
	comp=Z,34nm,1.7s						
MURC	Murrieta	77.90	46	P	P	17 08 01.8	+0.6
	baz=233						
BFSC	Mount Baldy Ra	77.98	45	P	P	17 08 02.4	+0.6
	baz=233						
MONP2	Monument Peak	78.00	47	P	P	17 08 02.6	+0.6
	baz=234						
VES	Vestal, Richgr	78.03	43	P	P	17 08 03.2	+1.4
	baz=232,SNR=5.5						
KMRM	Mail Ridge	78.07	38	*e*P	P	17 08 02.2	+0.2
	comp=Z,96nm,1.1s						
IKP	In-Ko-Pah, Jac	78.08	47	P	P	17 08 03.0	+0.7
	baz=234						
EDW2	Edwards Air Fo	78.14	45	P	P	17 08 03.2	+0.7
	baz=233,SNR=5.9						
PET	Petropavlovsk	78.15	344*c*	*i*P	P	17 08 00.9	-1.1
PET				*e*S	S	17 17 53.5	-0.5
PET				pmax	pmax		
	comp=Z,24nm,2.0s						
PET				pmax	pmax		
	comp=Z,300nm,13.0s						
FRD	Ford Ranch, An	78.24	47	P	P	17 08 04.0	+0.8
	baz=234,SNR=5.1						
ISA	Isabella, Lake	78.31	44	P	P	17 08 04.3	+0.8
	baz=232,SNR=6.5						
ISA	Isabella, Lake	78.31	44	*e*P	P	17 08 03.2	-0.3
	comp=Z,28nm,1.1s						
ISA	Isabella, Lake	78.31	44	*e*P	P	17 08 03.2	-0.3
ISA				pmax	pmax		
	comp=Z,28nm,1.1s						
PFO	Pinyon Flats O	78.40	47	P	P	17 08 05.4	+1.3
	baz=234						
PFO	Pinyon Flats O	78.40	47	*e*P	P	17 08 03.4	-0.7
	comp=Z,23nm,1.4s						
PFO	Pinyon Flats O	78.40	47	*e*P	P	17 08 03.4	-0.7
PFO				pmax	pmax		
	comp=Z,23nm,1.4s						
TPFO	Pinon Flats	78.40	47	P	P	17 08 04.7	+0.7
	baz=234						
XPFO	Piæon Flat	78.40	47	*e*P	P	17 08 03.2	-0.9
	comp=Z,23nm,1.4s						
SWSC	Sam W. Stewart	78.46	47	P	P	17 08 05.3	+1.1
	baz=234						
PEA0B	Petropavlovsk-	78.47	344	*e*P	P	17 08 03.4	-0.5
	comp=Z,78nm,1.0s						
PETK	Petropavlovsk-	78.47	344	P	P	17 08 03.6	-0.3
	comp=Z,44nm,0.8s,baz=118,slow=8.0						
PETK				LR	LR	17 37 34.3	
	comp=Z,323nm,20.2s,baz=153,slow=32						
PETK	Petropavlovsk-	78.47	344	*e*P	P	17 08 03.2	-0.6
YSS	Yuzh-Sakhalins	78.54	332	*e*P	P	17 08 04.0	-0.3
	comp=Z,90nm,1.0s						
YSS	Yuzh-Sakhalins	78.54	332α	*i*P	P	17 08 05.2	+0.9
YSS				*e**SP	PcP	17 08 12.0	-1.3
YSS				*i* S	S	17 17 59.7	+1.2
YSS				*e*PS	ScS	17 18 24.0	+1.3
YSS				*e*PPS	PPS	17 18 45.2	
YSS				pmax	pmax		
	comp=Z,70nm,1.0s						
CMB	Columbia Colle	78.59	41	*e*P	P	17 08 04.6	-0.3
	comp=Z,21nm,1.0s						
CMB	Columbia Colle	78.59	41	*e*P	P	17 08 04.6	-0.3
CMB				pmax	pmax		
	comp=Z,21nm,1.0s						
PMSA	Palmer Station	78.77	156	LR	LR	17 35 11.7	
	comp=Z,379nm,21.4s,baz=242,slow=30						
AFDM	Forest Hills D	78.83	40	*e*P	P	17 08 06.0	-0.2
	comp=Z,20nm,1.1s						
BELC	Belle Mtn. Jos	78.94	46	P	P	17 08 08.2	+1.1
	baz=234						
WDC	Whiskeytown Da	78.98	38	*e*P	P	17 08 06.0	-0.9
	comp=Z,32nm,1.2s						
WDC	Whiskeytown Da	78.98	38	*e*P	P	17 08 06.0	-0.9
WDC				pmax	pmax		
	comp=Z,32nm,1.2s						
CWC	Cottonwood Cre	79.04	43	P	P	17 08 08.9	+1.3
	baz=232						
BC3	Big Chuckawall	79.11	47	P	P	17 08 09.2	+1.2
	baz=235						
MDPB	Devils Postpil	79.14	42	*e*P	P	17 08 08.2	-0.1
	comp=Z,26nm,0.9s						
N02D	Trinity Center	79.14	37	P	P	17 08 09.3	+1.4
	baz=228,SNR=6.2						
GSC	Goldstone, Bar	79.17	45	P	P	17 08 09.2	+1.0
	baz=233						
GSC	Goldstone, Bar	79.17	45	*e*P	P	17 08 06.7	-1.6
	comp=Z,21nm,1.1s						
GSC	Goldstone, Bar	79.17	45	*e*P	P	17 08 06.7	-1.6
GSC				pmax	pmax		
	comp=Z,21nm,1.1s						
OMMB	Old Mammoth Mi	79.18	42	*e*P	P	17 08 08.3	-0.2
	comp=Z,23nm,1.2s						
MPMC	Manual Prospec	79.18	44	P	P	17 08 09.3	+0.8
	baz=233,SNR=8.7						
GLA	Glamis	79.19	48	P	P	17 08 09.4	+1.1
	baz=235						
GLA	Glamis	79.19	48	*e*P	P	17 08 07.6	-0.7
	comp=Z,27nm,1.1s						
GLA	Glamis	79.19	48	*e*P	P	17 08 07.6	-0.7
GLA				pmax	pmax		
	comp=Z,27nm,1.1s						
CHGN	Chignik	79.20	9	*e*P	P	17 08 06.8	-0.9
	comp=Z,50nm,1.3s						
HEC	Hector,Ludlow	79.20	46	P	P	17 08 09.3	+0.9
	baz=234,SNR=6.7						
O03D	Paynes Creek	79.21	38	P	P	17 08 09.0	+0.7
	baz=229,SNR=7.0						
DAC	Darwin (Calif)	79.25	44	*e*P	P	17 08 08.0	-0.8
	comp=Z,15nm,1.3s						
DAC	Darwin (Calif)	79.25	44	*e*P	P	17 08 08.0	-0.8
DAC				pmax	pmax		
	comp=Z,15nm,1.3s						
M02C	Callahan	79.34	37	P	P	17 08 10.1	+1.1
	baz=228						
L02D	Cave Junction,	79.44	36	P	P	17 08 10.3	+0.9
	baz=228						
WAKR	Walker	79.47	41	*e*P	P	17 08 09.3	-0.7
	comp=Z,43nm,1.0s						
KEBM	Edson Butte	79.53	35	*e*P	P	17 08 10.6	+0.6
	comp=Z,156nm,1.7s						
IRM	Iron Mountain	79.61	47	P	P	17 08 11.7	+1.2
	baz=235,SNR=5.7						
GMRC	Granite Mounta	79.63	46	P	P	17 08 11.9	+1.2
	baz=234						
YBH	Yreka Blue Hor	79.65	37	LR	LR	17 37 52.2	
	comp=Z,265nm,19.4s,baz=224,slow=32						
YBH	Yreka Blue Hor	79.65	37	*e*P	P	17 08 11.2	+0.5
	comp=Z,28nm,1.0s						
YBH	Yreka Blue Hor	79.65	37	*e*P	P	17 08 11.2	+0.5
YBH				pmax	pmax		
	comp=Z,28nm,1.0s						
PNTR	Pine Nut	79.74	41	*e*P	P	17 08 11.9	+0.5
	comp=Z,44nm,0.9s						
HSIG		79.74	53	*e*P	P	17 08 09.6	-1.8
	comp=Z,22nm,1.2s						
BEKR	Beckworth	79.78	40	*e*P	P	17 08 11.3	-0.2
	comp=Z,20nm,1.1s						
Y12C	Blythe	79.80	47	P	P	17 08 12.7	+1.2
	baz=235						
Y12C	Blythe	79.80	47	*e*P	P	17 08 10.7	-0.8
	comp=Z,17nm,1.1s						
GRAC	Grapevine Rang	79.83	43	P	P	17 08 13.0	+1.3
	baz=233,SNR=5.3						
FURC	Furnace Creek,	79.83	44	P	P	17 08 12.8	+1.1
	baz=233						
VCNR	Virginia City	79.84	40	*e*P	P	17 08 12.2	+0.3
	comp=Z,30nm,1.0s						
YERR	Yerington	79.89	41	*e*P	P	17 08 12.3	+0.1
	comp=Z,31nm,1.1s						
KSRS	Korea Array	79.94	317	P	P	17 08 12.3	+0.1
	comp=Z,3.0nm,0.8s,baz=135,slow=6.6,SNR=12						
KSRS				LR	LR	17 37 57.1	
	comp=Z,334nm,21.1s,baz=126,slow=32						
KSAR	Wonju Array Be	79.96	317	P	P	17 08 12.3	0.0
KSAR	Wonju Array Be	79.96	317	P	P	17 08 12.3	0.0
KS01	Wonju Array Si	79.97	317	*e*P	P	17 08 12.3	-0.1
214A	Organ Pipe Nat	79.98	50	P	P	17 08 13.5	+0.9
	baz=236						
HUMO	Hull Mountain	80.10	36	*e*P	P	17 08 13.6	+0.6
	comp=Z,24nm,1.1s						
RYN	Ryan	80.11	41	*e*P	P	17 08 13.0	-0.4
	comp=Z,32nm,1.2s						
NV01	Mina Array Sit	80.12	42	*e*P	P	17 08 13.6	+0.2
NVAR	Mina Array Bea	80.12	42	P	P	17 08 14.3	+0.8
	comp=Z,8.5nm,0.9s,baz=223,slow=8.9,SNR=49						
NVAR				LR	LR	17 37 55.3	
	comp=Z,692nm,19.2s,baz=112,slow=31						
LDFC	Landfair	80.17	46	*e*P	P	17 08 11.7	-2.0
	comp=Z,35nm,1.0s						
M04C	Macdoel	80.17	37	P	P	17 08 14.9	+1.4
	baz=229,SNR=5.7						
NV11	Mina Array Sit	80.21	42	*e*P	P	17 08 13.7	-0.2
	comp=Z,2.1nm,1.0s						
PAHR	Pah Rah Range	80.26	40	*e*P	P	17 08 13.1	-1.0
	comp=Z,20nm,1.1s						
TPNV	Topopah Spring	80.52	44	P	P	17 08 16.5	+0.9
	baz=234,SNR=8.3						
TPNV	Topopah Spring	80.52	44	*e*P	P	17 08 15.3	-0.2
	comp=Z,16nm,1.0s						
TPNV	Topopah Spring	80.52	44	*e*P	P	17 08 15.4	-0.2
TPNV				pmax	pmax		
	comp=Z,16nm,1.0s						
I03D	Drain, OR	80.62	35	P	P	17 08 16.6	+0.9
	baz=228						
KVN	Kaiserville	80.63	41	*e*P	P	17 08 15.9	-0.2
	comp=Z,15nm,1.1s						
KVN	Kaiserville	80.63	41	*e*P	P	17 08 15.9	-0.2
KVN				pmax	pmax		
	comp=Z,15nm,1.1s						
SHPR	Sheep Range	80.96	45	*e*P	P	17 08 17.5	-0.5
	comp=Z,18nm,1.1s						
J04D	Umpqua Nationa	80.98	36	P	P	17 08 19.4	+1.5
	baz=229						
MOD	Modoc Plateau	81.12	38	*e*P	P	17 08 17.4	-1.2
	comp=Z,18nm,0.9s						
MAW	Mawson	81.16	199	P	P	17 08 20.1	+1.7
	comp=Z,10nm,0.9s,baz=130,slow=8.5,SNR=16						
MAW				LR	LR	17 43 29.3	
	comp=Z,601nm,20.2s,baz=107,slow=35						
MAW	Mawson	81.16	199	P	P	17 08 20.1	+1.7
	baz=81,SNR=14						
MAW	Mawson	81.16	199	*e*P	P	17 08 17.0	-1.4
	comp=Z,5.7nm,1.2s						
MAW	Mawson	81.16	199	*e*P	P	17 08 17.0	-1.4
MAW				pmax	pmax		
	comp=Z,6.0nm,1.2s						
I04A	Tendick Farm,	81.19	36	P	P	17 08 19.9	+1.0
	baz=228						
USHA	Ushuaia	81.28	146	LR	LR	17 38 35.1	
	comp=Z,352nm,19.0s,baz=218,slow=31						
K05A	Summer Lake	81.32	37	*e*P	P	17 08 20.0	+0.2
	comp=Z,44nm,1.0s						
J05D	Fort Rock, OR	81.49	36	P	P	17 08 21.6	+1.0
	baz=229,SNR=11						
KDAK	Kodiak Island	81.60	12	*e*P	P	17 08 20.2	-0.4
KDAK	Kodiak Island	81.60	12*c*	*e*P	P	17 08 21.8	+1.2
TYV	Tymovskoe	81.60	334	*e*P	P	17 08 20.9	+0.1
TYV				pmax	pmax		
	comp=Z,200nm,2.6s						
TYV				pmax	pmax		
	comp=Z,44nm,1.0s						
TUC	Tucson	81.61	50	P	P	17 08 22.4	+1.0
	baz=238						
TUC	Tucson	81.61	50	*e*P	P	17 08 21.9	+0.5
	comp=Z,16nm,1.0s						
TUC	Tucson	81.61	50	*e*P	P	17 08 21.9	+0.5
TUC				pmax	pmax		
	comp=Z,16nm,1.0s						
G03D	McMinnville, O	81.69	34	P	P	17 08 23.0	+1.7
	baz=227						
R11A	Troy Canyon, C	81.77	43	P	P	17 08 23.1	+0.9
	baz=234,SNR=6.4						
R11A	Troy Canyon, C	81.77	43	*e*P	P	17 08 21.7	-0.5
	comp=Z,20nm,1.6s						
USRK	Ussuriysk Ar.	81.84	324	P	P	17 08 22.7	+0.5
	comp=Z,17nm,1.0s,baz=139,slow=2.9						
USRK				LR	LR	17 41 30.4	
	comp=Z,404nm,19.7s,baz=123,slow=33						
H04A	Detroit Lake	81.90	35	*e*P	P	17 08 21.9	-0.6
	comp=Z,38nm,1.1s						
PINE	Pine Mountain	81.98	36	*e*P	P	17 08 22.4	-0.8
	comp=Z,58nm,1.1s						
BMN	Battle Mountai	82.01	41	*e*P	P	17 08 24.9	+1.5
	comp=Z,30nm,1.3s						
BMN	Battle Mountai	82.01	41	*e*P	P	17 08 24.9	+1.5
BMN				pmax	pmax		
	comp=Z,30nm,1.3s						
I05D	Terrebonne, OR	82.12	36	P	P	17 08 24.9	+1.1
	baz=229,SNR=6.0						
WVOR	Wild Horse Val	82.41	38	*e*P	P	17 08 25.5	+0.1
	comp=Z,30nm,1.1s						
WVOR	Wild Horse Val	82.41	38	*e*P	P	17 08 25.5	+0.1
WVOR				pmax	pmax		
	comp=Z,29nm,1.1s						
E03A	Lebam	82.44	33	*e*P	P	17 08 25.9	+0.6
	comp=Z,59nm,1.1s						
LCMT	Little Creek M	82.51	45	*e*P	P	17 08 26.4	+0.3
	comp=Z,17nm,1.1s						
G05D	Wamic, OR	82.73	35	P	P	17 08 28.0	+1.1
	baz=229						
CCUT	Cedar City	82.74	45	*e*P	P	17 08 27.9	+0.6
	comp=Z,21nm,1.1s						
NLWA	Neilton Lookou	82.87	32	*e*P	P	17 08 28.4	+0.8
	comp=Z,18nm,1.0s						
WUAZ	Wupatki	82.93	47	*e*P	P	17 08 29.0	+0.6
	comp=Z,61nm,1.8s						
SZCU	Shurtz Canyon	82.94	45	*e*P	P	17 08 28.9	+0.5
	comp=Z,28nm,1.2s						
I07A	Izee	82.96	37	*e*P	P	17 08 28.4	+0.1
	comp=Z,15nm,1.1s						
PSUT	Pine Spring	82.98	44	*e*P	P	17 08 28.7	+0.1
	comp=Z,13nm,1.0s						
NJ2	Nanjing	83.08	308	*e*P	P	17 08 29.8	+0.8
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
J08A	Circle Bar Ran	83.08	38	*e*P	P	17 08 29.2	+0.3
	comp=Z,25nm,1.1s						
G06A	Carlson Farm,	83.09	35	*e*P	P	17 08 28.8	0.0
	comp=Z,38nm,1.1s						
PKCU	Pink Cliffs	83.37	45	*e*P	P	17 08 32.1	+1.3
	comp=Z,64nm,1.1s						
MDJ	Mudanjiang	83.42	324	P	P	17 08 28.1	-2.3
MDJ				S	S	17 18 55.0	+5.6
MDJ				pmax	pmax		
	comp=Z,52nm,1.0s						
MDJ				LR	LR		
	comp=Z,230nm,17.5s						
MDJ				LR	LR		
	comp=Z,240nm,20.7s						
MDJ				LR	LR		
	comp=Z,420nm,17.5s						
MDJ	Mudanjiang	83.42	324	*e*P	P	17 08 29.5	-1.0
	comp=Z,54nm,1.1s						
GLK	Glacier Lake	83.45	34	*e*P	P	17 08 31.8	+1.0
D05A	Enumclaw	83.67	33	*e*P	P	17 08 32.0	+0.3
	comp=Z,120nm,1.4s						
G08A	Pilot Rock	84.03	36	*e*P	P	17 08 33.9	+0.2
	comp=Z,40nm,1.0s						
MSU	Marysvale	84.05	44	*e*P	P	17 08 35.0	+0.9
MSU	Marysvale	84.05	44	*e*P	P	17 08 35.0	+0.9
GRNR	Gornyy	84.18	331	*e*P	P	17 08 37.7	+3.5
GRNR				pmax	pmax		
	comp=Z,78nm,1.0s						
SVW2	Sparrevohn	84.23	9	*e*P	P	17 08 33.0	-1.1
	comp=Z,67nm,2.0s						
B05A	Bryant	84.34	32	P	P	17 08 36.2	+1.1
	baz=228,SNR=11						
HAWA	Hanford	84.43	35	*e*P	P	17 08 35.5	0.0
	comp=Z,48nm,1.4s						
DUG	Dugway, Tooele	84.59	43	P	P	17 08 37.6	+0.9
	baz=236						
DUG	Dugway, Tooele	84.59	43	*e*P	P	17 08 36.3	-0.4
	comp=Z,8.6nm,1.1s						
DUG	Dugway, Tooele	84.59	43	*e*P	P	17 08 36.3	-0.4
DUG				pmax	pmax		
	comp=Z,9.0nm,1.1s						
MFID	Camas Ranch	84.64	39	*e*P	P	17 08 36.7	-0.1
	comp=Z,22nm,1.1s						
BMO	Blue Mountains	84.67	37	*e*P	P	17 08 36.5	-0.5
	comp=Z,43nm,1.7s						
BMO	Blue Mountains	84.67	37	*e*P	P	17 08 36.5	-0.5
BMO				pmax	pmax		
	comp=Z,43nm,1.7s						
E08A	Dider Farm, El	84.74	35	*e*P	P	17 08 35.6	-1.5
	comp=Z,14nm,0.9s						
NLU	North Lily Min	84.92	43	*e*P	P	17 08 38.6	+0.1
	comp=Z,8.2nm,1.2s						
TMUT	Trail Mountain	85.12	44	*e*P	P	17 08 40.0	+0.5
	comp=Z,38nm,0.9s						
D08A	Wollman Farm,	85.18	35	*e*P	P	17 08 39.6	+0.3
	comp=Z,20nm,1.0s						
MNTX	Cornudas Mount	85.24	53	P	P	17 08 41.1	+1.1
	baz=241						
MNTX	Cornudas Mount	85.24	53	*e*P	P	17 08 40.2	+0.2
	comp=Z,17nm,1.3s						
MPU	Maple Canyon	85.24	43	*e*P	P	17 08 40.1	+0.1
	comp=Z,8.9nm,1.0s						
E09A	Wood Farm, Sta	85.25	35	*e*P	P	17 08 39.4	-0.3
	comp=Z,21nm,1.1s						
CN2	Changchun	85.27	321	*e*P	P	17 08 36.8	-3.0
CN2				*e*S	S	17 19 05.0	-2.9
CN2				LR	LR		
	comp=Z,250nm,16.0s						
CN2				LR	LR		
	comp=Z,190nm,16.0s						
CN2				LR	LR		
	comp=Z,150nm,17.0s						
KLR	Kul'dur	85.30	328	P	P	17 08 40.8	+1.0
	comp=Z,0.9nm,0.9s,baz=103,slow=2.9,SNR=22						
KLR				LR	LR	17 41 00.4	
	comp=Z,73nm,21.7s,baz=130,slow=32						
KLR	Kul'dur	85.30	328*c*	*i*P	P	17 08 40.5	+0.7
SUA	Susitna One	85.38	11	*e*P	P	17 08 39.6	-0.5
	comp=Z,30nm,0.8s						
TX31	Lajitas Ar. Si	85.41	56	*e*P	P	17 08 40.8	-0.2
TXAR	Lajitas Array	85.41	56	P	P	17 08 41.6	+0.6
	comp=Z,3.6nm,1.1s,baz=216,slow=6.2,SNR=19						
TXAR				LR	LR	17 40 56.2	
	comp=Z,356nm,18.6s,baz=0.0,slow=32						
F10A	Beach Ranch, E	85.41	36	*e*P	P	17 08 40.0	-0.6
	comp=Z,26nm,0.9s						
SPUT	South Promonto	85.45	42	*e*P	P	17 08 40.7	-0.3
	comp=Z,17nm,1.1s						
SRU	San Rafael Swe	85.46	45	*e*P	P	17 08 41.1	-0.1
	comp=Z,28nm,1.1s						
SRU	San Rafael Swe	85.46	45	P	P	17 08 42.3	+1.1
HVU	Hansel Valley	85.51	42	*e*P	P	17 08 41.1	-0.2
	comp=Z,16nm,1.1s						
HVU	Hansel Valley	85.51	42	*e*P	P	17 08 41.1	-0.2
HVU				pmax	pmax		
	comp=Z,16nm,1.1s						
P17A	Butcher Ranch,	85.52	44	*e*P	P	17 08 41.6	+0.2
	comp=Z,48nm,1.5s						
CTU	Camp Tracy	85.54	43	*e*P	P	17 08 41.2	-0.3
	comp=Z,12nm,1.1s						
HLID	Hailey	85.56	39	P	P	17 08 42.4	+0.8
	baz=234						
HLID	Hailey	85.56	39	*e*P	P	17 08 41.4	-0.1
	comp=Z,13nm,1.0s						
GLI	Glacier Island	85.56	13	*e*P	P	17 08 40.6	-0.3
	comp=Z,45nm,0.9s						
JLU	Jordanelle	85.68	43	*e*P	P	17 08 41.1	-1.2
	comp=Z,26nm,1.5s						
WHN	Wuhan	85.68	305	P	P	17 08 44.6	+2.4
WHN				S	S	17 19 10.8	-1.8
WHN				LR	LR		
	comp=Z,980nm,13.4s						
SKT	Skwentna	85.72	11	*e*P	P	17 08 40.4	-1.3
	comp=Z,14nm,1.1s						
B08A	Colville Reser	85.79	33	*e*P	P	17 08 41.3	-1.1
	comp=Z,8.8nm,0.9s						
PMR	Palmer	85.80	12	*e*P	P	17 08 41.5	-0.5
PMR	Palmer	85.80	12	*e*P	P	17 08 41.5	-0.5
SYO	Syowa Base	85.92	192⇑	*e*P	P	17 08 40.2	-2.5
SYO	Syowa Base	85.92	192⇓	*i*PcP	P	17 08 43.8	+1.1
P18A	Preston Nutter	85.92	44	*e*P	P	17 08 43.6	0.0
	comp=Z,11nm,1.0s						
WRAK	Wrangell Islan	85.93	22	*e*P	P	17 08 42.7	0.0
	comp=Z,28nm,1.4s						
C09A	Chrisman Ranch	85.99	34	*e*P	P	17 08 42.9	-0.5
	comp=Z,15nm,1.0s						
TCUT	Toone Canyon	85.99	43	*e*P	P	17 08 44.3	+0.4
	comp=Z,54nm,1.1s						
MA2	Magadan	86.00	343	LR	LR	17 44 27.3	
	comp=Z,297nm,19.6s,baz=156,slow=34						
MA2	Magadan	86.00	343	*e*P	P	17 08 43.1	0.0
MA2				pmax	pmax		
	comp=Z,30nm,1.3s						
GHO	Glory Hole Cre	86.00	12	*e*P	P	17 08 42.8	-0.4
	comp=Z,34nm,1.0s						
LLLB	Lillooet	86.02	31	*e*P	P	17 08 43.7	+0.2
	comp=Z,20nm,1.1s						
PV09	Paradox Valley	86.05	46	*e*P	P	17 08 44.1	-0.2
PV17	East Wray Mesa	86.05	46	*e*P	P	17 08 42.6	-1.5
	comp=Z,19nm,1.2s						
PV19	Morning Glory	86.05	46	*e*P	P	17 08 43.7	-0.4
	comp=Z,14nm,1.1s						
PV14	Lion Creek, Pa	86.06	46	*e*P	P	17 08 41.9	-2.3
	comp=Z,9.1nm,1.1s						
TASM	ASL Pad, Albuq	86.06	50	P	P	17 08 45.3	+1.0
	baz=240						
ANMO	Albuquerque	86.06	50	P	P	17 08 45.1	+0.8
	comp=Z,7.5nm,0.9s,baz=210,slow=7.3,SNR=18						
ANMO				LR	LR	17 43 09.2	
	comp=Z,536nm,18.0s,baz=246,slow=33						
ANMO	Albuquerque	86.06	50	P	P	17 08 45.2	+0.9
	baz=240						
ANMO	Albuquerque	86.06	50	*e*P	P	17 08 43.2	-1.0
	comp=Z,24nm,1.0s						
ANMO	Albuquerque	86.06	50*c*	*e*P	P	17 08 45.2	+0.9
ANMO				pmax	pmax		
	comp=Z,15nm,1.1s						
TASL	Snake Pit, Alb	86.06	50	P	P	17 08 45.1	+0.9
	baz=240						
PV18	Skein Mesa, Pa	86.06	46	*e*P	P	17 08 42.6	-1.6
	comp=Z,17nm,1.2s						
DIV	Divide	86.07	14	*e*P	P	17 08 42.7	-0.8
	comp=Z,43nm,1.1s						
PV20	West Nyswonger	86.08	46	*e*P	P	17 08 43.2	-1.0
	comp=Z,29nm,1.5s						
PV13	Radium Mtn., P	86.08	46	*e*P	P	17 08 43.0	-1.3
	comp=Z,32nm,1.6s						
PV16	Nyswonger Mesa	86.09	46	*e*P	P	17 08 42.8	-1.6
	comp=Z,32nm,1.6s						
PV03	Paradox Valley	86.11	46	*e*P	P	17 08 42.4	-2.0
PLCA	Paso Flores	86.13	132	LR	LR	17 40 58.9	
	comp=Z,404nm,19.1s,baz=270,slow=31						
PV02	Paradox Valley	86.16	46	*e*P	P	17 08 43.8	-0.9
	comp=Z,8.8nm,1.1s						
HWUT	Hardware Ranch	86.17	42	*e*P	P	17 08 44.0	-0.7
	comp=Z,12nm,1.3s						
PV12	Saucer Basin,	86.17	46	*e*P	P	17 08 44.3	-0.5
	comp=Z,26nm,1.4s						
PV21	Cone Mtn., Par	86.19	46	*e*P	P	17 08 44.6	-0.3
	comp=Z,29nm,1.5s						
BMRM	Bremner River	86.19	14	*e*P	P	17 08 42.7	-1.4
	comp=Z,54nm,1.2s						
IPM	Ipoh	86.22	276	*e*P	P	17 08 42.8	-2.5
	comp=Z,15nm,0.7s						
PV22	Blue Mesa, Par	86.30	46	*e*P	P	17 08 44.7	-0.6
	comp=Z,26nm,1.5s						
KLU	Klutina	86.37	13	*e*P	P	17 08 42.4	-2.6
	comp=Z,28nm,1.4s						
SCM	Sheep Creek Mo	86.38	13	*e*P	P	17 08 44.5	-0.5
	comp=Z,38nm,1.0s						

SCM	Sheep Creek Mo	86.38	13	eP	P	17 08 44.5	-0.5
SCM				pmax	pmax		
	comp=Z,38nm,1.0s						
SNAA	Sanae	86.44	177	P	P	17 08 46.8	+1.4
SNAA	Sanae	86.44	177	LR	LR	17 42 59.6	
	comp=Z,516nm,20.6s,baz=186,slow=32						
SNAA	Sanae	86.44	177	eP	P	17 08 45.2	-0.2
	comp=Z,34nm,1.5s						
SNAA	Sanae	86.44	177	i P	P	17 08 46.3	+0.9
VNA3	Neumayer Olymp	86.46	175	P	P	17 08 46.8	+1.3
JIS	Juneau Island	86.71	20	eP	P	17 08 44.9	-1.7
	comp=Z,20nm,1.3s						
LNIG	Linares	86.73	62	eP	P	17 08 46.3	-1.3
	comp=Z,32nm,1.4s						
CAST	Castle Rocks	86.97	10	eP	P	17 08 46.3	-1.5
	comp=Z,43nm,1.4s						
AHID	Auburn Hatcher	87.10	41	eP	P	17 08 48.4	-0.7
	comp=Z,17nm,1.2s						
VNA1	Neumayer--Stat	87.15	176	P	P	17 08 50.4	+1.7
MCMT	McKenzie Canyo	87.21	39	eP	P	17 08 47.5	-2.2
S22A	4UR Ranch, Cre	87.21	47	P	P	17 08 50.9	+0.9
	baz=240						
S22A	4UR Ranch, Cre	87.21	47	eP	P	17 08 49.2	-0.7
	comp=Z,9.9nm,1.1s						
TRF	Thorofare Moun	87.30	11	eP	P	17 08 48.9	-0.7
	comp=Z,50nm,1.0s						
SKAG	Skagway	87.37	19	eP	P	17 08 49.1	-0.7
	comp=Z,39nm,1.2s						
DHY	Denali Highway	87.50	12	eP	P	17 08 49.2	-1.3
	comp=Z,65nm,1.7s						
O20A	White River Ci	87.50	45	P	P	17 08 52.0	+0.9
	baz=239						
O20A	White River Ci	87.50	45	eP	P	17 08 49.9	-1.3
	comp=Z,7.7nm,1.0s						
REDW	Red Top Meadow	87.58	41	eP	P	17 08 50.4	-1.0
	comp=Z,16nm,1.5s						
TPAW	Teton Pass	87.59	41	eP	P	17 08 49.5	-2.0
	comp=Z,5.8nm,1.0s						
FXWY	Fox Creek	87.62	41	eP	P	17 08 50.0	-1.8
	comp=Z,13nm,1.7s						
DLMT	Dillon	87.66	39	eP	P	17 08 50.5	-1.3
	comp=Z,9.3nm,1.3s						
MSO	Missoula	87.74	37	P	P	17 08 53.3	+1.2
	baz=234						
MSO	Missoula	87.74	37	eP	P	17 08 50.8	-1.2
	comp=Z,7.1nm,1.1s						
PAX	Paxson	87.78	13	eP	P	17 08 51.1	-0.7
	comp=Z,17nm,0.6s						
PAX	Paxson	87.78	13	eP	P	17 08 51.1	-0.7
PAX				pmax	pmax		
	comp=Z,17nm,0.6s						
BPAW	Bear Paw Mtn.	87.79	10	eP	P	17 08 50.4	-1.3
	comp=Z,17nm,1.3s						
MCK	McKinley	87.80	11	eP	P	17 08 51.2	-0.6
	comp=Z,50nm,1.2s						
MCK	McKinley	87.80	11	eP	P	17 08 51.2	-0.6
MCK				pmax	pmax		
	comp=Z,50nm,1.2s						
IMW	Indian Meadow	87.82	41	eP	P	17 08 52.2	-0.5
	comp=Z,4.1nm,1.0s						
SMCO	Snowmass	87.84	46	eP	P	17 08 51.2	-1.8
	comp=Z,7.7nm,1.0s						
LOHW	Long Hollow	87.86	41	eP	P	17 08 50.7	-2.1
	comp=Z,5.7nm,1.2s						
BW06	Boulder Array	88.05	42	P	P	17 08 53.9	+0.1
	baz=238						
BW06	Boulder Array	88.05	42	eP	P	17 08 52.7	-1.1
	comp=Z,3.7nm,0.8s						
PD31	Pinedale Array	88.05	42	eP	P	17 08 52.3	-1.5
PDAR	Pinedale Array	88.05	42	P	P	17 08 53.4	-0.4
	comp=Z,1.8nm,0.8s,baz=206,slow=3.4,SNR=17						
PDAR				LR	LR	17 43 36.2	
	comp=Z,498nm,18.9s,baz=256,slow=32						
PDAR	Pinedale Array	88.05	42	eP	P	17 08 52.7	-1.1
FLWY	Flagg Ranch	88.06	40	eP	P	17 08 51.0	-2.8
	comp=Z,13nm,1.1s						
BWN	Browne	88.11	11	eP	P	17 08 51.1	-2.1
	comp=Z,105nm,1.4s						
SDCO	Great Sand Dun	88.12	48	P	P	17 08 55.3	+1.0
	baz=240						
SDCO	Great Sand Dun	88.12	48	eP	P	17 08 54.0	-0.3
	comp=Z,5.2nm,1.1s						
GSI	Gunungsitoli	88.23	272	eP	P	17 08 54.6	-0.4
	comp=Z,171nm,1.2s						
MSTX	Muleshoe	88.25	52	P	P	17 08 55.6	+0.8
	baz=242						
MSTX	Muleshoe	88.25	52	eP	P	17 08 54.4	-0.4
	comp=Z,27nm,1.1s						
DLBC	Dease Lake	88.28	22	eP	P	17 08 54.6	+0.3
	comp=Z,13nm,1.0s						
BOZ	Bozeman (W)	88.35	39	P	P	17 08 55.9	+0.8
	baz=236						
BOZ	Bozeman (W)	88.35	39	eP	P	17 08 54.6	-0.4
	comp=Z,12nm,1.3s						
BOZ	Bozeman (W)	88.35	39	eP	P	17 08 54.6	-0.4
BOZ				pmax	pmax		
	comp=Z,12nm,1.3s						
SKNT	Sakolnakorn	88.37	289	P	P	17 08 57.7	+2.2
SEY	Seymchan	88.49	346	ceP	P	17 08 55.2	+0.2
T25A	Trinidad	88.58	49	P	P	17 08 57.0	+0.6
	baz=241						
RIDG	Independ’e Rid	88.60	13	eP	P	17 08 55.6	0.0
	comp=Z,48nm,1.5s						
WRH	Wood River Hil	88.63	11	eP	P	17 08 55.3	-0.3
	comp=Z,80nm,1.4s						
MLY	Manley	88.69	10	eP	P	17 08 53.8	-2.2
	comp=Z,23nm,1.5s						
TRTT	Trang	88.71	279	P	P	17 08 59.7	+2.4
HDA	Harding Lake	88.78	12	eP	P	17 08 54.7	-1.7
	comp=Z,18nm,1.0s						
CCB	Clear Creek Bu	88.84	11	eP	P	17 08 55.6	-1.0
	comp=Z,60nm,1.5s						
Q24A	Divide	88.96	47	P	P	17 08 58.9	+0.6
	baz=241						
SCRK	Sand Creek	88.99	13	eP	P	17 08 57.0	-0.5
	comp=Z,27nm,1.4s						
BJT	Baijiatuau	89.00	314	eP	P	17 08 56.7	-1.3
	comp=Z,81nm,1.7s						
BJI	Beijing	89.01	314	⇑eP	P	17 08 58.8	+0.8
BJI				SKS	SKSac	17 19 25.6	+0.3
BJI				S	ScS	17 19 49.3	+0.1
BJI				pmax	pmax		
	comp=Z,35nm,1.7s						
BJI				LR	LR		
	comp=Z,480nm,18.0s						
BJI				LR	LR		
	comp=Z,400nm,20.6s						
BJI				LR	LR		
	comp=Z,280nm,18.0s						
COLA	College	89.04	11	eP	P	17 08 56.3	-1.2
	comp=Z,37nm,1.1s						
COLA	College	89.04	11	eP	P	17 08 56.3	-1.2
COLA				pmax	pmax		
	comp=Z,37nm,1.1s						
MDM	Murphy Dome	89.05	11	eP	P	17 08 57.0	-0.7
	comp=Z,48nm,1.4s						
WALA	Waterton Lakes	89.06	35	eP	P	17 08 57.3	-1.0
	comp=Z,16nm,1.0s						
ISCO	Idaho Springs	89.06	46	P	P	17 08 58.7	0.0
	baz=240						
IL1	Eielson Array	89.12	12	eP	P	17 08 57.2	-0.7
ILAR	Eielson Array	89.12	12	P	P	17 08 57.8	-0.2
	comp=Z,10nm,1.1s,baz=216,slow=4.7,SNR=43						
ILAR				LR	LR	17 46 06.4	
	comp=Z,120nm,18.2s,baz=212,slow=34						
ILB	Eielson Array	89.12	12	eP	P	17 08 56.5	-1.5
ENH	Enshi	89.30	303	eP	P	17 08 57.6	-2.0
	comp=Z,152nm,1.5s						
N23A	Red Feather La	89.39	45	P	P	17 09 00.6	+0.4
	baz=240						
AMTX	Amarillo	89.47	52	P	P	17 09 00.5	0.0
	baz=243						
AMTX	Amarillo	89.47	52	P	P	17 09 00.2	-0.2
	comp=Z,29nm,1.4s						
RLMT	Red Lodge	89.49	40	eP	P	17 09 00.2	-0.3
	comp=Z,15nm,1.4s						
GYA	Guiyang	89.93	299	eP	P	17 09 03.0	+0.2
GYA				PP	PP	17 12 37.5	+1.3
GYA				SKS	SKSac	17 19 31.0	-0.7
GYA				S	S	17 19 53.3	-0.3
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,5.8s						
ABTX	Abilene, Hawle	89.98	55	P	P	17 09 03.2	+0.4
	baz=244						
ABTX	Abilene, Hawle	89.98	55	eP	P	17 09 02.0	-0.8

	comp=Z,41nm,1.5s						
DAWY	Dawson	90.09	15	eP	P	17 09 02.2	-0.4
	comp=Z,21nm,0.9s						
LHMI	Lhok Sumawe	90.27	275	eP	P	17 09 01.3	-3.3
	comp=Z,169nm,1.1s						
EGAK	Eagle	90.30	14	eP	P	17 09 02.8	-0.7
	comp=Z,19nm,0.9s						
ZEA	Zeya	90.35	330	eP	P	17 09 05.0	+1.0
ZEA				pmax	pmax		
	comp=N,80nm,1.8s						
ZEA				pmax	pmax		
	comp=Z,96nm,1.8s						
KSCO	Kaye Shedlock’	90.71	48	eP	P	17 09 07.2	+0.9
	comp=Z,15nm,1.0s						
EGMT	Eagleton	90.76	38	P	P	17 09 07.5	+1.3
	baz=238						
EGMT	Eagleton	90.76	38	eP	P	17 09 07.0	+0.8
	comp=Z,18nm,1.3s						
COLD	Coldfoot	90.81	9	eP	P	17 09 07.2	+1.3
	comp=Z,16nm,1.2s						
PBKT	Sadao Pong	90.87	287	P	P	17 09 09.6	+2.4
XAN	Xi’an	91.36	306	P	P	17 09 10.1	+0.9
XAN				pP	PcP	17 09 14.8	+4.6
XAN				sP	pP	17 09 17.1	-2.5
XAN				pmax	pmax		
	comp=Z,43nm,1.2s						
XAN				pmax	pmax		
	comp=Z,140nm,3.6s						
LAO	LASA Array	92.12	40	P	P	17 09 13.8	+1.3
	baz=240						
LAO	LASA Array	92.12	40	eP	P	17 09 10.4	-2.1
	comp=Z,35nm,1.3s						
RSSD	Black Hills	92.20	43	P	P	17 09 14.5	+1.4
	baz=242						
RSSD	Black Hills	92.20	43	eP	P	17 09 11.6	-1.5
	comp=Z,13nm,1.1s						
RSSD	Black Hills	92.20	43	eP	P	17 09 11.6	-1.5
RSSD				pmax	pmax		
	comp=Z,13nm,1.1s						
HHC	Hu-ho-hao-te	92.49	313	eP	P	17 09 15.8	+1.4
HHC				PP	PP	17 13 00.0	+3.9
HHC				SKS	SKSac	17 19 42.1	-3.5
HHC				pmax	pmax		
	comp=Z,18nm,1.1s						
HHC				pmax	pmax		
	comp=Z,83nm,5.2s						
HHC				LR	LR		
	comp=Z,270nm,16.9s						
HHC				LR	LR		
	comp=Z,410nm,17.5s						
HHC				LR	LR		
	comp=Z,440nm,18.0s						
KMI	Kunming	92.63	296	P	P	17 09 17.8	+2.3
KMI				pP	pP	17 09 22.0	-3.9
KMI				S	S	17 20 19.1	+0.7
KMI				SS	SS	17 26 30.1	-1.5
KMI				pmax	pmax		
	comp=Z,24nm,1.0s						
KMI				pmax	pmax		
	comp=Z,180nm,3.6s						
KMI				LR	LR		
	comp=Z,330nm,18.2s						
KMI				LR	LR		
	comp=Z,450nm,20.2s						
KMI				LR	LR		
	comp=Z,700nm,22.6s						
NNA	Nana	92.85	104	LR	LR	17 41 06.3	
	comp=Z,550nm,21.6s,baz=279,slow=29						
CM01	Chiang Mai Arr	93.34	288	eP	P	17 09 16.1	-2.6
CM31	Chiang Mai Arr	93.37	288	eP	P	17 09 15.8	-3.1
CMAR	Chiang Mai Arr	93.37	288	P	P	17 09 20.0	+1.2
	comp=Z,13nm,0.9s,baz=122,slow=3.2,SNR=66						
CMAR	Chiang Mai Arr	93.37	288	P	P	17 09 20.0	+1.2
CMAR				pmax	pmax		
	comp=Z,13nm,0.9s						
CMMT	Chiang Mai	93.50	289	P	P	17 09 21.0	+1.6
CHTO	Chiang Mai	93.50	289	eP	P	17 09 17.2	-2.2
	comp=Z,20nm,1.0s						
CHTO	Chiang Mai	93.50	289	eP	P	17 09 17.2	-2.2
CHTO				pmax	pmax		
	comp=Z,20nm,1.0s						
CD2	Chengdu	94.05	302	eP	P	17 09 20.3	-1.5
CD2				S	S	17 20 30.4	0.0
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.0s						
CD2				LR	LR		
	comp=Z,700nm,22.4s						
DGMT	Dagmar	94.19	39	P	P	17 09 23.6	+1.7
	baz=242						
DGMT	Dagmar	94.19	39	eP	P	17 09 22.4	+0.5
	comp=Z,50nm,1.2s						
YAK	Yakutsk	94.59	337	eP	P	17 09 21.8	-1.6
	comp=Z,12nm,0.7s						
YAK	Yakutsk	94.59	337	i P	P	17 09 22.4	-0.9
YAK				pmax	pmax		
	comp=Z,23nm,1.7s						
INK	Inuvik	94.94	14	eP	P	17 09 22.6	-2.2
	comp=Z,9.5nm,1.0s						
INK	Inuvik	94.94	14	eP	P	17 09 22.6	-2.2
INK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PB11	IPOC Station P	95.98	114	eP	P	17 09 32.6	+1.6
	comp=Z,16nm,0.9s						
LZH	Lanzhou	96.00	306	eP	P	17 09 31.9	+1.2
LZH				pP	pP	17 09 36.9	-4.1
LZH				sP	sP	17 09 39.9	-4.8
LZH				PP	PP	17 13 29.1	+5.4
LZH				S	S	17 20 53.3	+6.0
LZH				pmax	pmax		
	comp=Z,21nm,1.2s						
LZH				pmax	pmax		
	comp=Z,91nm,4.7s						
LZH				LR	LR		
	comp=Z,480nm,15.2s						
LZH				LR	LR		
	comp=Z,500nm,16.3s						
LZH				LR	LR		
	comp=Z,720nm,18.4s						
MNMC	Minye Minye	96.30	113	eP	P	17 09 35.3	+2.7
	comp=Z,13nm,0.7s						
YKA	Yellowknife Ar	96.64	24	P	P	17 09 32.6	-0.1
	comp=Z,2.0nm,0.8s,baz=232,slow=4.5,SNR=6.4						
YKA				LR	LR	17 45 55.3	
	comp=Z,40nm,21.4s,baz=238,slow=31						
ECSD	EROS Data Cent	96.84	46	P	P	17 09 34.5	+0.3
	baz=246						
ECSD	EROS Data Cent	96.84	46	eP	P	17 09 34.4	+0.3
	comp=Z,18nm,1.1s						
G32A	Webster	96.88	44	P	P	17 09 34.9	+0.6
	baz=246						
G32A	Webster	96.88	44	eP	P	17 09 34.9	+0.6
	comp=Z,26nm,0.8s						
LPAZ	La Paz	98.79	111	P	Pdif	17 09 46.6	+2.2
	comp=Z,0.5nm,0.6s,baz=194,slow=4.1,SNR=4.0						
LPAZ				LR	LR	17 48 25.3	
	comp=Z,417nm,18.0s,baz=304,slow=32						
SONA1	Songino Array	98.80	318	eP	P	17 09 42.7	-0.3
SONM	Songino Array	98.80	318	P	Pdif	17 09 43.1	+0.1
	comp=Z,2.1nm,1.1s,baz=113,slow=7.2,SNR=9.2						
GTA	Gaotai	100.18	308	P	Pdif	17 09 49.8	+0.5
GTA				pP	pPdif	17 09 55.0	-4.7
GTA				sP	pP	17 09 58.5	-1.3
GTA				S	Sdif	17 21 18.3	-4.3
GTA				sS	pS	17 21 28.4	-7.7
GTA				pmax	pmax		
	comp=Z,4.0nm,1.6s						
GTA				pmax	pmax		
	comp=Z,84nm,8.1s						
GTA				LR	LR		
	comp=Z,230nm,18.9s						
GTA				LR	LR		
	comp=Z,310nm,19.9s						
GTA				LR	LR		
	comp=Z,460nm,20.6s						
WMQ	Urumqi	110.11	310	Pdif	Pdif	17 10 33.1	-0.2
WMQ				PP	PP	17 15 11.1	+2.0
WMQ				AMB	AMB		
	comp=Z,300nm,5.1s						
WMQ				LR	LR		
	comp=Z,450nm,18.3s						
WMQ				LR	LR		
	comp=Z,780nm,22.1s						
WMQ				LR	LR		
	comp=Z,1µm,23.9s						

ZALV	Zalesovo Beam	113.48	321	PKiKP	PKiKP	17 14 40.2	-0.6
	comp=Z,1.9nm,0.6s,baz=134,slow=4.3,SNR=7.1						
MKAR	Makanchi Array	114.34	313	PKP	PKPdf	17 14 42.3	-0.5
	comp=Z,1.7nm,0.7s,baz=100,slow=0.7,SNR=16						
KURK	Kurchatov	117.07	317	ePKPdf	PKPdf	17 14 45.6	-2.2
KURK	Kurchatov	117.07	317	c iPKIKP	PKPdf	17 14 46.1	-1.7
KURK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KURBB	Kurchatov Arra	117.12	317	PKP	PKPdf	17 14 47.4	-0.5
	comp=Z,3.1nm,0.8s,baz=96,slow=1.8,SNR=20						
KSH	Kashi	118.14	304	ePKP	PKPdf	17 14 51.6	+1.2
KSH				PP	PP	17 16 11.1	+5.0
KSH				PKS	PKSdf	17 18 28.8	+1.6
FRU	Bishkek	119.44	308	ePKIKP	PKPdf	17 14 53.0	+0.3
BVAR	Borovoye Array	122.09	320	PKP	PKPdf	17 14 57.3	-0.1
	comp=Z,7.8nm,0.9s,baz=86,slow=2.2,SNR=42						
BRVK	Borovoye	122.15	320	ePKPdf	PKPdf	17 14 56.8	-0.7
BRVK	Borovoye	122.15	320	c iPKIKP	PKPdf	17 14 57.3	-0.2
BRVK				pmax	pmax		
	comp=Z,20nm,1.7s						
OPO	Ambohidratompo	122.42	229	PKP	PKPdf	17 15 00.5	+1.1
	comp=Z,5.0nm,0.8s,baz=92,slow=7.6,SNR=5.9						
KK31	Karatay Array	122.46	308	ePKPdf	PKPdf	17 14 57.6	-0.9
KK31	Karatay Array	122.46	308	ePKIKP	PKPdf	17 14 57.6	-0.9
KKAR	Karatay Array	122.46	308	ePKPdf	PKPdf	17 14 57.5	-0.9
KKAR	Karatay Array	122.46	308	ePKIKP	PKPdf	17 14 57.6	-0.9
KBL	Kabul	123.17	298	ePKPdf	PKPdf	17 14 59.2	-1.2
KBL	Kabul	123.17	298	ePKIKP	PKPdf	17 14 59.2	-1.2
SPITS	Spitsbergen Ar	123.48	357	PKP	PKPdf	17 14 60.0	+0.5
	comp=Z,12nm,0.8s,baz=82,slow=13,SNR=7.5						
SPITS	Spitsbergen Ar	123.48	357	PKIKP	PKPdf	17 15 00.0	+0.5
SUMG	Summit	123.86	14	i P	PKPdf	17 15 00.9	+0.1
	comp=Z,35nm,1.0s						
SVE	Sverdlovsk	126.86	326	i PKIKP	PKPdf	17 15 07.2	+0.8
SVE				pmax	pmax		
	comp=Z,27nm,1.2s						
SVE				MLR	MLR		
	comp=Z,605nm,20.0s						
ARU	Arti	128.07	325	PKP	PKPdf	17 15 09.2	+0.4
	comp=Z,8.6nm,0.6s,baz=117,slow=0.3,SNR=23						
ARU	Arti	128.07	325	ePKPdf	PKPdf	17 15 08.4	-0.4
ARU	Arti	128.07	325	i PKIKP	PKPdf	17 15 08.9	+0.2
ARU						17 17 09.0	
ARU						17 22 19.9	
ARU				MLR	MLR		
	comp=Z,693nm,21.0s						
ABKAR	Akbulak array	129.17	316	ePKPdf	PKPdf	17 15 09.6	-1.5
ARCES	ARCESS Array B	130.87	351	PKP	PKPdf	17 15 12.8	-0.9
	comp=Z,4.7nm,0.8s,baz=48,slow=1.8,SNR=6.8						
PRGR	Permogore	131.60	336	ePKIKP	PKPdf	17 15 15.6	+0.3
PRGR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KLMR	Klimovskoe	134.38	337	ePKIKP	PKPdf	17 15 19.0	-1.5
KLMR				pmax	pmax		
	comp=Z,15nm,1.4s						
KLMR	Klimovskoe	134.38	337	ePKPdf	PKPdf	17 15 19.0	-1.5
KLMR				AMP		17 15 28.9	
	comp=Z,15nm,1.4s						
LSZ	Lusaka	136.64	213	PKP	PKPdf	17 15 27.9	+1.5
	comp=Z,2.1nm,0.4s,baz=159,slow=1.6,SNR=6.5						
LSZ	Lusaka	136.64	213	ePKPdf	PKPdf	17 15 28.1	+1.7
FINES	FINESS Array B	137.97	345	PKhKP	PKPpre	17 15 24.4	
	comp=Z,14nm,1.2s,baz=175,slow=24,SNR=6.8						
OBN	Obninsk	139.43	333	⇑iPKIKP	PKPdf	17 15 30.7	+0.7
OBN				e		17 18 22.2	
OBN				pmax	pmax		
	comp=Z,65nm,1.9s						
OBN				MLR	MLR		
	comp=Z,379nm,20.0s						
VSR	Storozhevoye	140.63	326	ePKIKP	PKPdf	17 15 32.1	-0.3
NB2	NORSAR Subarra	140.73	355	PKP	PKPpre	17 15 28.5	
	comp=Z,5.9nm,1.1s,baz=16,slow=3.2						
NOA	NORSAR Array B	140.73	355	PKhKP	PKPpre	17 15 25.2	
	comp=Z,3.3nm,1.0s,baz=14,slow=4.4,SNR=5.4						
NCK	Nalchik	141.64	313	ePKIKP	PKPdf	17 15 33.8	-0.7
KIV	Kislovodsk	142.08	314	⇓ePKIKP	PKPdf	17 15 35.4	0.0
KIV				e		17 18 47.5	
KIV				e		17 22 34.5	
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
NEY	Neytrino	142.33	313	i PKIKP	PKPdf	17 15 35.0	-0.9
ANN	Anapa	145.07	318	i PKIKP	PKPbc	17 15 39.6	-0.3
ANN				pmax	pmax		
	comp=Z,84nm,1.0s						
SUW	Suwalki	145.21	341	ePKP	PKPab	17 15 40.1	0.0
SUW	Suwalki	145.21	341	ePKPbc	PKPbc	17 15 39.8	-0.2
SUW	Suwalki	145.21	341	ePKIKP	PKPbc	17 15 39.8	-0.2
MUD	Monsted U’grnd	145.43	356	i P	PKPab	17 15 41.0	+0.2
	comp=Z,115nm,1.0s						
AKASG	Malin Array Be	145.69	333	PKPbc	PKPdf	17 15 41.2	-0.1
	comp=Z,40nm,0.7s,baz=39,slow=4.3,SNR=138						
AKBB	Malin Array Si	145.69	333	ePKPdf	PKPdf	17 15 40.5	-0.8
KIEV	Kiev	145.70	333	ePKPdf	PKPdf	17 15 40.2	-1.1
KIEV	Kiev	145.70	333	ePKIKP	PKPdf	17 15 40.2	-1.1
AK11	Malin Array Si	145.73	333	ePKPdf	PKPdf	17 15 40.5	-0.8
BSD	Bornholm Skovb	146.10	350	i P	PKPbc	17 15 42.6	-0.2
	comp=Z,86nm,1.1s						
EKA	Eskdalemuir Ar	146.11	9	PKPbc	PKPbc	17 15 42.4	-0.4
	comp=Z,7.2nm,0.7s,baz=345,slow=2.4,SNR=8.8						
ORDU	Ordu-Boztepe	146.54	312	i P	PKPab	17 15 45.7	0.0
SUSE	Susehri	146.62	311	i P	PKPbc	17 15 45.5	+0.4
KEMA	Kemaliye	146.77	309	i P	PKPab	17 15 47.5	+0.9
GKP	Gorka Klasztor	147.41	346	ePKP	PKPbc	17 15 47.1	+0.5
GKP	Gorka Klasztor	147.41	346	ePKP2	PKPbc	17 15 47.1	+0.5
ERBA	Erbaa	147.43	312	i P	PKPdf	17 15 45.4	+0.7
SCER	sogukcermik	147.51	311	i P	PKPbc	17 15 48.0	+0.4
BEL	Belsk	147.82	342	ePKP	PKPbc	17 15 48.8	+1.1
BEL	Belsk	147.82	342	ePKP2	PKPbc	17 15 48.8	+1.1
SINO	SINOP_Merkez	147.86	315	i P	PKPbc	17 15 49.1	+0.9
HAVZ	Havza	147.96	314	i P	PKPbc	17 15 48.0	-0.6
CUALT	Altinyayla-SIV	148.01	310	i P	PKPbc	17 15 49.3	+0.3
ELBS	KAHRAMANMARAS	148.10	308	i P	PKPbc	17 15 50.5	+1.3
CUSAR	Sarkisla-SIVAS	148.32	310	i P	PKPbc	17 15 49.3	-0.5
BOYT	Boyabat	148.34	315	i P	PKPbc	17 15 48.0	-1.6
LVV	L’vov	148.46	336	ePKP2	PKPbc	17 15 50.0	+0.4
KIS	Kishinev	148.55	328	⇑ePKIKP	PKPbc	17 15 50.0	+0.1
KIS	Kishinev	148.55	328	ePKHKP	PKPpre	17 15 54.0	
KIS	Kishinev	148.55	328	ePKP2	PKPab	17 16 03.0	+10
KIS				LRM	MLR	18 18 28.0	
	comp=Z,400nm,22.0s						
KIS	Kishinev	148.55	328	⇑iPKP2	PKPbc	17 15 50.0	+0.1
KIS				pmax	pmax		
	comp=Z,180nm,1.5s						
CTAK	Corum_Osmancik	148.78	313	i P	PKPbc	17 15 52.3	+1.3
COAL	Corum-Alaca	148.83	313	i P	PKPbc	17 15 52.1	+1.1
SAIM	ADANA	149.00	308	i P	PKPbc	17 15 51.9	+0.4
KWP	Kalwaria Pacla	149.10	338	ePKP	PKPbc	17 15 52.1	+0.9
KWP	Kalwaria Pacla	149.10	338	ePKPbc	PKPbc	17 15 52.0	+0.8
KWP	Kalwaria Pacla	149.10	338	ePKP2	PKPbc	17 15 52.1	+0.9
LEOM	Leova	149.20	328	⇓iP	PKPbc	17 15 52.3	+0.8
LEOM	Leova	149.20	328	⇓PKP2	PKPbc	17 15 52.3	+0.8
ILGA	Ilgaz	149.31	315	i P	PKPbc	17 15 53.2	+0.9
YAHY	KAYSERI_Yahyal	149.48	309	i P	PKPbc	17 15 51.9	-0.8
CDAG	Cicekdag	149.54	312	i P	PKPbc	17 15 51.9	-0.9
OJC	Ojcow	149.54	341	ePKP	PKPbc	17 15 52.7	+0.4
OJC	Ojcow	149.54	341	ePKPdf	PKPdf	17 15 46.5	-1.2
AVNS	Nevsehir-Avano	149.56	310	i P	PKPbc	17 15 53.8	+0.9
BUR08	Bucovina Ar. S	149.73	333	ePKPdf	PKPdf	17 15 46.8	-1.5
BUR08				ePKPbc	PKiKP	17 15 53.5	-0.5
BUR04	Bucovina Ar. S	149.75	333	ePKPdf	PKPdf	17 15 48.4	+0.1
BUR04				ePKPbc	PKiKP	17 15 54.0	0.0
BURAR	Bucovina Array	149.75	333	⇑iP	PKPbc	17 15 53.9	+0.9
BURAR	Bucovina Array	149.75	333	⇑PKP2	PKPbc	17 15 53.9	+0.9
YURE	YUREGIR	149.75	306	i P	PKPbc	17 15 53.2	-0.1
ELDT	Eldivan	149.77	314	i P	PKPbc	17 15 54.5	+1.1
TLCR		149.79	326	⇓iP	PKPbc	17 15 53.9	+0.9
TLCR		149.79	326	⇓PKP2	PKPbc	17 15 53.9	+0.9
BIZ	Bicaz	149.87	331	⇓iP	PKPbc	17 15 54.4	+1.2
KSP	Ksiaz	149.89	346	ePKP	PKPbc	17 15 54.2	+1.1
KSP	Ksiaz	149.89	346	ePKP2	PKPbc	17 15 54.2	+1.1
TESR	Tescani	149.94	330	⇑iP	PKPbc	17 15 54.0	+0.6
BTIN	Bart˜–n	149.95	317	i P	PKPbc	17 15 53.1	-0.5
BR131	Keskin Array S	149.99	313	ePKPdf	PKPdf	17 15 46.8	-2.1
BR131				ePKPbc	PKPbc	17 15 54.1	+0.2
BRTR	Keskin Array B	149.99	313	PKP	PKPdf	17 15 48.7	-0.3
	comp=Z,0.9nm,0.8s,baz=107,slow=1.3,SNR=6.4						
BRTR				PKPbc	PKPbc	17 15 54.2	+0.3
	comp=Z,25nm,0.8s,baz=131,slow=3.4,SNR=112						
WTSB	Winterswijk	150.03	358	ePKPdf	PKPbc	17 15 53.9	+0.5
WTSB				ePKPbc	pPKPdf	17 15 59.0	-0.1
WTSB				ePKPab	sPKPbc	17 16 06.9	-0.7
ASF	Jabal al Asfar	150.06	297	PKPbc	PKPbc	17 15 55.5	+1.3
	comp=Z,20nm,0.9s,baz=10,slow=1.7,SNR=30						

CLL	Collm	150.08	350	ePKPdf	PKPdf	17 15 49.0	+0.5
CLL				⇑iPKPbc	PKiKP	17 15 54.3	-0.1
	comp=Z,76nm,1.1s						
CLL				ePKPab	pPKPdf	17 15 59.0	-0.2
	comp=Z,37nm,1.1s						
CLL				epPKPab	sPKPdf	17 16 02.0	-0.8
CLL				e		17 16 06.0	
CLL				eSKPdf	SKPdf	17 19 24.0	+4.2
CLL				ePP	PP	17 19 30.0	+2.6
CLL				eSS	SS	17 38 38.0	-3.7
CLL				eSSS	SSS	17 44 17.0	
CLL				eSSSS		17 48 12.0	
CLL				LmV		18 27 00.0	
	comp=Z,300nm,21.4s						
CLL	Collm	150.08	350	ePKPdf	PKPdf	17 15 47.2	-1.3
CLL				ePKPbc	PKiKP	17 15 54.2	-0.2
NIE	Niedzica	150.09	340	ePKP	PKPbc	17 15 54.7	+1.0
NIE	Niedzica	150.09	340	ePKP2	PKPbc	17 15 54.7	+1.0
CRVS	Cervenica-Dubn	150.15	338	ePKP2	PKPbc	17 15 54.9	+1.1
CRVS	Cervenica-Dubn	150.15	338	ePKP	PKPbc	17 15 54.9	+1.1
CFR	Carcaliu	150.15	326	⇑iP	PKPbc	17 15 54.4	+0.5
CFR	Carcaliu	150.15	326	⇑PKP2	PKPbc	17 15 54.4	+0.5
GULE	Gulek	150.22	307	i P	PKPbc	17 15 56.2	+1.6
UPC	Upice	150.27	346	⇑ePKP	PKPbc	17 15 55.2	+1.2
UPC				AMS	AMS	18 24 20.0	
	comp=Z,400nm,22.9s						
UPC	Upice	150.27	346	ePKIKP	PKPbc	17 15 55.2	+1.2
UPC				MLR	MLR		
	comp=Z,400nm,22.9s						
BRG	Berggiesshubel	150.34	349	ePKP	PKPdf	17 15 49.6	+0.7
	comp=Z,10.0nm,1.2s						
BRG	Berggiesshubel	150.34	349	i PKP	PKPbc	17 15 55.1	+0.9
	comp=Z,46nm,1.1s						
BRG	Berggiesshubel	150.34	349	ePKIKP	PKPdf	17 15 49.6	+0.7
BRG				i		17 15 55.1	
BRG				pmax	pmax		
	comp=Z,10.0nm,1.2s						
BRG	Berggiesshubel	150.34	349	SS	SS	17 38 50.0	+5.4
DPC	Dobruska-Polom	150.34	345	⇑ePKP	PKPbc	17 15 55.5	+1.2
DPC				ePKPAB	PKPab	17 16 00.3	-0.3
DPC	Dobruska-Polom	150.34	345	ePKIKP	PKPbc	17 15 55.5	+1.2
DPC				e		17 16 00.3	
OKC	Ostrava-Krasne	150.35	343	⇑ePKP	PKPbc	17 15 55.4	+1.2
OKC				AMS	AMS	18 19 50.0	
	comp=Z,300nm,22.8s						
OKC	Ostrava-Krasne	150.35	343	ePKIKP	PKPbc	17 15 55.4	+1.2
OKC				MLR	MLR		
	comp=Z,300nm,22.8s						
VRI	Vrincioaia	150.37	329	⇑iP	PKPbc	17 15 54.9	+0.4
VRI	Vrincioaia	150.37	329	⇑PKIKP	PKPbc	17 15 54.9	+0.4
AKSY	AKSARAY - Alti	150.39	311	i P	PKPbc	17 15 54.5	-0.4
CMDR	Camlidere-ANKA	150.40	315	i P	PKPdf	17 15 51.9	+2.3
TRPA	Tarpa	150.41	336	⇓iP	PKPbc	17 15 55.1	+0.7
TRPA	Tarpa	150.41	336	⇑ePKKPdf	PKPbc	17 15 55.5	+1.1
BMR	Baia Mare	150.41	334	⇓iP	PKPbc	17 15 55.4	+0.9
BMR	Baia Mare	150.41	334	⇓PKIKP	PKPbc	17 15 55.4	+0.9
PLOR	Plostina	150.42	329	⇑iP	PKPbc	17 15 54.9	+0.3
PLOR	Plostina	150.42	329	⇑PKIKP	PKPbc	17 15 54.9	+0.3
BBAL	Bala	150.43	313	i P	PKPbc	17 15 55.6	+0.6
KRLC	Kraliky	150.49	345	⇑ePKP	PKPbc	17 15 55.8	+1.2
KRLC	Kraliky	150.49	345	ePKIKP	PKPbc	17 15 55.8	+1.2
TIRR	Tirgusor	150.50	325	⇓iP	PKPbc	17 15 55.4	+0.7
TIRR	Tirgusor	150.50	325	⇓PKIKP	PKPbc	17 15 55.4	+0.7
ANTO	Ankara	150.50	314	⇑iP	PKPbc	17 15 55.7	+0.7
ANTO	Ankara	150.50	314	ePKPdf	PKPdf	17 15 46.9	-2.8
ANTO				ePKPbc	PKPbc	17 15 55.4	+0.3
ANTO	Ankara	150.50	314	ePKIKP	PKPdf	17 15 46.9	-2.8
ANTO				e		17 15 55.4	
BR231	Keskin MP Arra	150.52	313	ePKPbc	PKPbc	17 15 56.4	+1.3
ARCR	ARCALIA	150.53	333	⇑iP	PKPbc	17 15 56.0	+1.2
PVCC	Panska Ves	150.55	348	⇑ePKP	PKPbc	17 15 56.1	+1.4
PVCC				ePKPAB	pPKPdf	17 16 00.5	+0.5
PVCC				AMS	AMS	18 34 00.0	
	comp=Z,300nm,15.7s						
PVCC	Panska Ves	150.55	348	ePKIKP	PKPbc	17 15 56.1	+1.4
PVCC				e		17 16 00.5	
PVCC				MLR	MLR		
	comp=Z,300nm,15.7s						
MORC	Moravsky Berou	150.57	344	⇓iP	PKPbc	17 15 55.6	+0.8
MORC	Moravsky Berou	150.57	344	ePKPdf	PKPdf	17 15 51.1	+1.7
MORC				ePKPbc	PKPbc	17 15 55.0	+0.1
MORC	Moravsky Berou	150.57	344	PKIKP	PKPdf	17 15 51.1	+1.7
MORC	Moravsky Berou	150.57	344	ePKP	PKPbc	17 15 55.4	+0.6
LANS	Liptovska Anna	150.59	341	ePKIKP	PKPbc	17 15 56.6	+1.7
LANS	Liptovska Anna	150.59	341	ePKP	PKPbc	17 15 56.6	+1.7
HARR	Harsova	150.59	326	⇑iP	PKPbc	17 15 56.2	+1.2
TLB	Topalu	150.60	326	⇑iP	PKPbc	17 15 55.9	+0.9
TLB	Topalu	150.60	326	⇑PKIKP	PKPbc	17 15 55.9	+0.9
KERG	Konya-Eregli	150.65	308	i P	PKPdf	17 15 49.3	-0.8
DOPR	Dopca	150.93	330	⇑iP	PKPbc	17 15 56.9	+1.1
KIZK	Mersin	150.99	306	i P	PKPbc	17 15 56.6	+0.4
ISR	Istrita	151.00	328	⇑iP	PKPbc	17 15 56.4	+0.4
ISR	Istrita	151.00	328	⇑PKIKP	PKPbc	17 15 56.4	+0.4
PRA	Prague	151.02	348	⇑ePKP	PKPbc	17 15 57.3	+1.5
PRA	Prague	151.02	348	ePKIKP	PKPbc	17 15 57.3	+1.5
MLR	Muntele Rosu	151.02	329	PKPbc	PKPbc	17 15 56.8	+0.6
	comp=Z,44nm,1.0s,baz=31,slow=3.1,SNR=40						
MLR	Muntele Rosu	151.02	329	⇓iP	PKPbc	17 15 56.1	-0.1
MLR	Muntele Rosu	151.02	329	ePKPdf	PKPdf	17 15 49.4	-1.0
MLR				ePKPbc	PKPbc	17 15 56.3	+0.1
MLR	Muntele Rosu	151.02	329	ePKIKP	PKPdf	17 15 49.4	-1.0
MLR				e		17 15 56.3	
PRU	Pruhonice	151.07	347	⇑ePKP	PKPbc	17 15 57.0	+1.1
PRU				AMS	AMS	18 21 20.0	
	comp=Z,400nm,23.0s						
PRU	Pruhonice	151.07	347	ePKIKP	PKPbc	17 15 57.0	+1.1
PRU				MLR	MLR		
	comp=Z,400nm,23.0s						
MMAI	Mount Meron Ar	151.09	299	PKPbc	PKPbc	17 15 57.7	+1.0
	comp=Z,36nm,0.8s,baz=64,slow=3.9,SNR=44						
GOPC	GO Pecny, Ondr	151.09	347	⇑ePKP	PKPbc	17 15 57.2	+1.2
GOPC				AMS	AMS	18 31 30.0	
	comp=Z,300nm,18.8s						
GOPC	GO Pecny, Ondr	151.09	347	ePKIKP	PKPbc	17 15 57.2	+1.2
GOPC				MLR	MLR		
	comp=Z,300nm,18.8s						
NKC	Novy Kostel	151.21	350	⇑ePKP	PKPbc	17 15 57.3	+1.0
NKC	Novy Kostel	151.21	350	ePKIKP	PKPbc	17 15 57.3	+1.0
UCC	Uccle	151.22	1	⇑PKP	PKPbc	17 15 56.9	+0.6
UCC	Uccle	151.22	1	ePKPbc	PKPbc	17 15 56.2	0.0
BEBN	Eben Emael	151.23	359	⇑PKP	PKPbc	17 15 56.8	+0.5
VRAC	Vranov	151.25	344	⇑iP	PKPbc	17 15 57.5	+1.1
VRAC	Vranov	151.25	344	⇑PKIKP	PKPbc	17 15 57.5	+1.1
VRAC	Vranov	151.25	344	ePKP	PKPbc	17 15 57.1	+0.7
HGN	Heimansgroeve	151.26	359	ePKPdf	PKPbc	17 15 56.8	+0.5
HGN				ePKPbc	pPKPdf	17 16 00.4	-0.6
HGN				ePKPab	sPKPdf	17 16 04.8	+0.1
SAHE	Sakarya_HENDEK	151.26	317	i P	PKPdf	17 15 49.3	-1.5
VYHS	Vyhne	151.36	341	ePKIKP	PKPbc	17 15 57.5	+0.8
VYHS	Vyhne	151.36	341	ePKP	PKPbc	17 15 57.5	+0.8
JAVC	Velka Javorina	151.37	343	ePKP	PKPbc	17 15 58.5	+1.7
AUMIH	MIHALICIK	151.37	315	i P	PKPbc	17 15 58.4	+1.2
MEM	Membach	151.41	359	⇑PKP	PKPbc	17 15 57.2	+0.5
DRGR		151.44	334	⇑iP	PKPbc	17 15 57.4	+0.4
DRGR		151.44	334	⇑PKIKP	PKPbc	17 15 57.4	+0.4
SULR		151.46	327	⇓iP	PKPbc	17 15 58.0	+1.0
VOIR		151.48	330	⇑iP	PKPbc	17 15 58.3	+1.1
VOIR		151.48	330	⇑PKIKP	PKPbc	17 15 58.3	+1.1
SNF	Seneffe	151.51	1	⇓PKP	PKPbc	17 15 58.0	+1.0
KRUC	Moravsky	151.52	344	ePKP	PKPbc	17 15 57.6	+0.6
PSZ	Piszkesteto	151.53	339	⇓iP	PKPbc	17 15 57.4	+0.2
PSZ	Piszkesteto	151.53	339	⇑ePKKPdf	PKPbc	17 15 58.2	+1.0
PSZ	Piszkesteto	151.53	339	ePKPbc	PKPbc	17 15 57.4	+0.2
PSZ	Piszkesteto	151.53	339	⇓PKIKP	PKPbc	17 15 57.4	+0.2
KDHN	Kadinhani	151.60	312	i P	PKPdf	17 15 54.5	+3.0
BCLA	Clavier	151.61	360	⇑PKP	PKPbc	17 15 57.4	+0.3
KONT	Konya--Tatoy	151.69	310	i P	PKPbc	17 15 58.4	+0.6
ERMK	Ermenek	151.84	307	i P	PKPbc	17 15 59.5	+1.1
GRFO	Grafenberg	151.92	352	ePKPbc	PKPbc	17 15 58.7	+0.8
MODS	Modra-Piesok	151.92	343	ePKIKP	PKPbc	17 15 59.0	+1.0
MODS	Modra-Piesok	151.92	343	ePKP	PKPbc	17 15 59.0	+1.0
DOU	Dourbes	151.93	1	⇑PKP	PKPbc	17 15 58.6	+0.8
ESKT	Eskisehir	151.97	314	i P	PKPbc	17 15 59.3	+0.7
BORA	Eskisehir	152.04	315	i P	PKPbc	17 15 58.9	+0.3
LOT	Lotru	152.06	331	⇓iP	PKPbc	17 15 58.8	+0.3
KHC	Kasperske Hory	152.08	348	ePKPDF	PKPdf	17 15 51.5	-0.2
KHC				⇑ePKP	PKiKP	17 15 59.4	+0.7
KHC				ePKPAB	pPKPbc	17 16 08.5	-0.5
KHC				AMS	AMS	18 24 40.0	
	comp=Z,400nm,24.2s						
KHC	Kasperske Hory	152.08	348	ePKPdf	PKPdf	17 15 51.9	+0.1
KHC				ePKPbc	PKiKP	17 15 58.9	+0.2
KHC	Kasperske Hory	152.08	348	ePKIKP	PKPdf	17 15 51.9	+0.1
KHC				e		17 15 58.9	
DEV	Deva	152.09	333	⇑iP	PKPbc	17 15 59.1	+0.7
DEV	Deva	152.09	333	⇑PKIKP	PKPbc	17 15 59.1	+0.7
CSS	Mathiatis	152.15	304	ePKPbc	PKPbc	17 15 58.3	-0.6
EIL	Elat	152.16	292	PKPbc	PKPbc	17 16 02.0	+2.9
	comp=Z,24nm,0.9s,baz=351,slow=2.3,SNR=21						
GEC2	GERESS Array S	152.33	348	ePKPdf	PKPdf	17 15 51.9	-0.3
GEC2				ePKPbc	PKiKP	17 15 59.2	-0.1
GEC2	GERESS Array S	152.33	348	ePKIKP	PKPdf	17 15 51.9	-0.3
GEC2				e		17 15 59.2	
GERES	GERESS Array B	152.33	348	PKP	PKPdf	17 15 52.3	+0.1
	comp=Z,1.3nm,0.9s,baz=343,slow=1.4,SNR=10						
GERES				PKPbc	PKiKP	17 15 59.4	+0.1
	comp=Z,8.6nm,0.9s,baz=48,slow=2.0,SNR=33						
GEA0	GERESS Array S	152.34	348	ePKPdf	PKPdf	17 15 51.6	-0.6
GEA0				ePKPbc	PKPbc	17 15 59.1	+0.1
WLF	Walferdange	152.35	359	⇓PKP	PKPbc	17 16 00.1	+1.2
WLF	Walferdange	152.35	359	ePKPdf	PKPdf	17 15 52.2	+0.1
WLF				ePKPbc	PKiKP	17 15 59.7	+0.6
WLF	Walferdange	152.35	359	ePKIKP	PKPdf	17 15 52.2	+0.1
WLF				e		17 15 59.7	
CSKK	Csˆ‡kako	152.55	340	⇓ePKKPdf	PKPbc	17 16 00.3	+0.9
CONA	Conrad Observa	152.71	344	pPKPdf	PKPdf	17 15 53.2	+0.4
	comp=Z,25nm,1.9s						
SOP	Sopron	152.75	343	⇑ePKKPdf	PKPbc	17 16 01.0	+1.2
BZS	Buzias	152.84	334	⇑iP	PKPbc	17 16 00.9	+0.8
BZS	Buzias	152.84	334	⇑PKIKP	PKPbc	17 16 00.9	+0.8
SRE	Strehaia	152.92	331	⇓iP	PKPbc	17 16 01.2	+0.9
SRE	Strehaia	152.92	331	⇓PKIKP	PKPbc	17 16 01.2	+0.9
ISP	Isparta	153.04	312	⇓iP	PKPbc	17 16 00.4	-0.5
ISP	Isparta	153.04	312	ePKPbc	PKPbc	17 16 01.1	+0.2
ISP	Isparta	153.04	312	⇓PKIKP	PKPbc	17 16 00.5	-0.5
HERR	Herculane	153.10	332	⇓iP	PKPbc	17 16 01.3	+0.6
MOA	Molln	153.16	346	epPKPdf	PKPdf	17 15 53.9	+0.5
	comp=Z,11nm,1.4s						
ARSA	Arzberg	153.42	344	ePKPdf	PKPdf	17 15 54.0	+0.3
	comp=Z,3.8nm,1.1s						
MDVR	Moldovita	153.48	333	⇑iP	PKPbc	17 16 00.0	-1.6
BFO	Black Forest	153.57	355	ePKPdf	PKPdf	17 15 53.0	-0.9
BFO				ePKPbc	PKiKP	17 16 02.5	+0.7
BFO	Black Forest	153.57	355	ePKIKP	PKPdf	17 15 53.0	-0.9
ECH	Echery	153.76	357	ePKPab	PKPab	17 16 14.5	-0.4
SOKA	Soboth	154.08	344	PKPdf	PKPdf	17 15 54.9	+0.1
	comp=Z,13nm,1.6s						
KBA	Koelnbreinsper	154.09	347	PKPdf	PKPdf	17 15 54.9	0.0
	comp=Z,6.3nm,0.8s						
RETA	Reutte	154.14	351	epPKPdf	PKPdf	17 15 57.5	+2.6
	comp=Z,10nm,1.1s						
WATA	Walderalm	154.17	350	epPKPdf	PKPdf	17 15 56.7	+1.7
	comp=Z,2.8nm,0.6s						
WTTA	Wattenberg	154.23	350	PKPdf	PKPdf	17 15 55.0	-0.1
	comp=Z,8.3nm,0.9s						
OBKA	Obir	154.36	345	ePKPdf	PKPdf	17 15 54.9	-0.3
	comp=Z,8.8nm,1.1s						
MYKA	Terra Mystica	154.45	346	i PKPdf	PKPdf	17 15 54.4	-0.9
	comp=Z,7.7nm,1.1s						
DAVA	Damuels	154.46	353	epPKPdf	PKPdf	17 15 56.8	+1.4
	comp=Z,13nm,1.0s						
VTS	Vitosha	154.49	328	⇑iP	PKPbc	17 16 04.2	+0.2
VTS	Vitosha	154.49	328	ePKPdf	PKPdf	17 15 56.0	+0.4
VTS				ePKPbc	PKiKP	17 16 04.3	+0.3
VTS	Vitosha	154.49	328	ePKIKP	PKPdf	17 15 56.0	+0.4
VTS				e		17 16 04.3	
ABTA	Abfaltersbach	154.57	348	ePKPdf	PKPdf	17 15 54.4	-1.1
	comp=Z,12nm,1.1s						
FETA	Feichten	154.60	351	PKPdf	PKPdf	17 15 55.7	+0.1
	comp=Z,7.2nm,1.0s						
DIVS	Divibare	154.75	334	ePKPdf	PKPdf	17 15 55.0	-0.8
FUORN	Ofenpass-Fuorn	155.06	352	ePKPdf	PKPdf	17 15 57.5	+1.2
SENIN	Lac Senin/Sane	155.60	356	ePKPab	PKPab	17 16 23.5	+0.5
PDG	Podgorica	156.43	333	⇑iP	PKPdf	17 16 07.8	+10
FNA	Florina	156.75	327	ePKPdf	PKPdf	17 15 58.1	-0.4
FNA	Florina	156.75	327	ePKIKP	PKPdf	17 15 58.1	-0.4
BNI	Bardonecchia	156.94	357	ePKPab	PKPab	17 16 29.1	+0.3
PGAV	Gavieira, Arco	157.10	26	ePKPab	PKPab	17 16 29.9	+0.4
PGAV	Gavieira, Arco	157.10	26	eLR	LR	18 14 50.9	
	comp=Z,312nm,22.0s						
PMOZ	Porto Moniz, M	157.45	57	eLR	LR	18 16 21.8	
	comp=Z,305nm,18.0s						
POLO	Lamas de Olo	157.79	26	ePKPab	PKPab	17 16 33.1	+0.6
PBRG	Braganca	157.84	24	ePKPab	PKPab	17 16 33.2	+0.6
PVRL	Vila Real	157.90	26	ePKPdf	PKPdf	17 16 01.8	+1.8
MVO	Moncorvo	158.28	25	ePKPdf	PKPdf	17 16 01.6	+1.1
MVO	Moncorvo	158.28	25	eLR	LR	18 18 43.0	
	comp=Z,362nm,18.0s						
MTE	Manteigas	158.70	28	ePKPdf	PKPdf	17 16 01.1	+0.1
MTE	Manteigas	158.70	28	eLR	LR	18 15 12.6	
	comp=Z,412nm,20.0s						
PCBR	Castelo Branco	159.19	28	ePKPdf	PKPdf	17 16 03.3	+1.8
LIS	Lisbon	159.29	33	eP	PKPdf	17 16 00.9	-0.8
LIS	Lisbon	159.29	33	ePKIKP	PKPdf	17 16 00.8	-0.8
PMRV	Marv??o	159.57	29	ePKPdf	PKPdf	17 16 03.6	+1.6
PMRV	Marv??o	159.57	29	eLR	LR	18 14 50.0	
	comp=Z,284nm,20.0s						
PESTR	Estremoz	159.93	30	ePKPdf	PKPdf	17 16 04.2	+1.8
MESJ	Messejana	160.43	33	eP	PKPdf	17 16 02.2	-0.8
MESJ				AMS	AMS	18 40 57.8	
	comp=Z,351nm,19.3s						
MESJ	Messejana	160.43	33	ePKIKP	PKPdf	17 16 02.1	-0.8
MORF	Marmelete	160.61	35	eP	PKPdf	17 16 02.5	-0.8
MORF				AMS	AMS	18 28 10.2	
	comp=N,321nm,21.4s						
MORF	Marmelete	160.61	35	ePKIKP	PKPdf	17 16 02.4	-0.8
ES19	SONSECA Array	160.72	22	ePKPdf	PKPdf	17 16 03.6	+0.3
ESDC	Sonseca Array	160.72	22	PKP	PKPdf	17 16 04.2	+0.9
	comp=N,2.4nm,0.9s,baz=354,slow=3.0,SNR=16						
PVAQ	Vaqueiros	161.02	33	eLR	LR	18 15 19.5	
	comp=N,320nm,18.0s						
PBDV	Barranco-do-Ve	161.03	34	ePKPdf	PKPdf	17 16 05.7	+2.0
LIC	Lamto	161.51	146	ePKIKP	PKPdf	17 16 04.9	+0.1
	comp=N,41nm,1.1s						
KIC	Kosan Boka	161.77	147	ePKIKP	PKPdf	17 16 05.0	-0.1
	comp=N,35nm,1.1s						
TIC	Toumodi	161.87	146	ePKIKP	PKPdf	17 16 05.2	0.0
DBIC	Dimbokro	161.98	146	PKP	PKPdf	17 16 05.7	+0.4
	comp=N,8.0nm,0.9s,baz=108,slow=0.8,SNR=8.1						
DBIC	Dimbokro	161.98	146	ePKPdf	PKPdf	17 16 06.1	+0.8
DBIC	Dimbokro	161.98	146	ePKIKP	PKPdf	17 16 06.1	+0.8
KOWA	Kowa	168.56	129	ePKPdf	PKPdf	17 16 09.1	-1.7
TOA0	Torodi Ar. Sit	170.63	159	ePKPdf	PKPdf	17 16 11.3	-0.7
TORD	Torodi Ar. Bea	170.63	159	PKP	PKPdf	17 16 10.6	-1.4
	comp=N,3.9nm,1.0s,baz=7.1,slow=0.9						
TAM	Tamanrasset	179.11	337	ePKPdf	PKPdf	17 16 15.6	+1.1
TAM	Tamanrasset	179.11	337	ePKIKP	PKPdf	17 16 15.6	+1.1

BJI **22** *17:05:40.4, 21°.80S×174°.70W, h10^{km}, mb5.1/13, mB5.3/2, Ms7 4.7/2*

IDC **22** *17:05:41.7±0.7, 21°.86S×175°.13W, h0^{km}, mb4.6/15, mb1 4.8/15, mb1mx4.5/42, mbtmp4.6/15, MS4.3/7, Ms1 4.3/7, ms1mx3.9/47, Error ellipse: s-maj=26.7km s-min=16.9km az=134.0*

NEIC **22** *17:05:42.5±0.5, 21°.85S×174°.99W, h10^{km}, mb4.9/5, Error ellipse: s-maj=19.8km s-min=10.8km az=120.0*

GCMT **22** *17:05:42.5±0.3, 22°.00S×174°.42W, h31^{km}, MW5.2/86, Moment Tensor Solution. s47,c53; s86,c128; Duration: 1^{s}0 Moment tensor: Scale 10^{17}Nm; M_{rr}0.79±.04; $M_{\theta\theta}$-0.19±.02; $M_{\phi\phi}$-0.59±.02; $M_{r\theta}$0.14±.03; $M_{\theta\phi}$-0.23±.01; $M_{\phi r}$0.22±.02; Best double couple: $M_0$0.78700×10^{17} NP1:ϕ_s27.00000°, δ55.00000°, λ93.00000°. NP2: ϕ_s202.00000°, δ36.00000°, λ86.00000°. Principal axes: T 0.8290, Plg80.0000°, Azm308.0000°; N -0.0840, Plg2.0000°, Azm205.0000°; P -0.7450, Plg10.0000°, Azm115.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISCJB **22** *17:05:44.8±0.4, 21°.94S±0°.07×175°.12W±0°.08, h33^{km}, mb4.7/29, MS4.3/4 Error ellipse: s-maj=12.1km s-min=8.0km az=33.6*

MOS **22** *17:05:51.0±1.1, 20°.81S×176°.63W, h33^{km}, mb5.1/14, Error ellipse: s-maj=18.5km s-min=13.0km az=41.6*

ISC 22 17:05:45.8±0.4, **22°.07S**±0°.08×**174°.88W**±0°.09, **h33**^{km}, **n184,** σ**1^{s}68**/169, **mb4.8**/28, **MS4.3**/4, **33C-17D, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NIUE	Niue	5.51	58	P	Pn	17 06 57.9	-7.7
	baz=5.2,SNR=7.5						
AFI	Afiamalu	8.64	20	Pn	Pn	17 07 42.2	-6.4
	32nm,0.3s,baz=17,slow=12,SNR=15						
AFI				Sn	Sn	17 09 09.0	-16
	16nm,0.3s,baz=171,slow=22,SNR=3.8						
AFI				LR	LR	17 10 32.5	
	comp=Z,2µm,19.6s,baz=196,slow=34						
RAR	Rarotonga	14.07	89	Pn	Pn	17 08 55.5	-7.4
	3.0nm,0.3s,baz=280,slow=9.0,SNR=5.9						
RAR				LR	LR	17 15 09.5	
	comp=Z,456nm,18.1s,baz=228,slow=40						
RAR				T	T	17 23 30.6	
	23nm,0.3s,baz=263,slow=22,SNR=6.0						
RAR	Rarotonga	14.07	89	Pn	Pn	17 08 55.5	-7.5
	52nm,0.9s						
DZM	Mont Dzumac	17.31	266	LR	LR	17 14 45.6	
	comp=Z,1µm,18.1s,baz=103,slow=32						
DZM	Mont Dzumac	17.31	266	eP	P	17 09 49.9	+3.6
	129nm,1.4s						
DZM				eLQ	LQ	17 13 05.8	
	3µm,27.4s						
DZM				eLR	LR	17 13 49.5	
	2µm,22.1s						
URZ	Urewera	17.54	201	S	Sn	17 12 55.9	-6.2
	0.6nm,0.3s,baz=301,slow=22,SNR=4.9						
TBI	Tubuai	23.48	98	eS	S	17 14 58.0	-6.2
	545nm,25.2s						
TBI				eLQ	LQ	17 15 22.0	
	838nm,30.3s						
TBI				eLR	LR	17 16 32.0	
	2µm,27.2s,baz=273						
TBI	Tubuai	23.48	98	eT	T	17 34 38.9	
	16nm,0.4s						
PAE	Paea	24.18	84	eT	T	17 35 34.2	
	24nm,0.4s						
PPT2	Papeete2	24.20	84	eS	S	17 15 10.8	-5.3
	472nm,25.0s						
PPT2				eLQ	LQ	17 15 47.8	
	1µm,25.8s						
PPT2				eLR	LR	17 16 48.0	
	2µm,25.8s,baz=253						
PPT2	Papeete2	24.20	84	eT	T	17 35 36.7	
	18nm,0.4s						
PPT	Papeete	24.21	84	LR	LR	17 18 03.5	
	comp=Z,638nm,20.9s,baz=266,slow=30						
PPT				T	T	17 36 18.4	
	28nm,0.4s,baz=283,slow=23,SNR=5.6						
TIAR	Tiarei	24.42	84	eT	T	17 35 52.6	
	4.9nm,0.4s						
TVO	Taravao	24.45	85	eT	T	17 35 55.0	
	5.8nm,0.4s						
RPZ	Rata Peaks	24.54	205	P	P	17 11 03.8	+1.4
	6.8nm,0.5s,baz=322,slow=0.8,SNR=7.3						
PMOR	Pomariorio Ree	26.51	79	eT	T	17 38 29.6	
	3.6nm,0.3s						
HNR	Honiara	27.24	294	LR	LR	17 20 31.9	
	comp=Z,590nm,20.7s,baz=139,slow=33						
ARMA	Armidale	31.08	247	P	P	17 12 02.7	+1.5
	baz=31,SNR=3.9						
RMQ	Roma	33.37	255	P	P	17 12 21.4	+0.3
	baz=34,SNR=11						
TAOE	Nuku Hiva Isla	35.86	74	eLR	LR	17 22 06.5	
	874nm,27.0s						
CTA	Charters Tower	36.26	266	P	P	17 12 45.4	-0.8
	11nm,0.5s,baz=94,slow=10,SNR=29						
CMSA	Cobar Meteorol	36.27	246	P	P	17 12 45.7	-0.5
	baz=36,SNR=18						
RKT	Rikitea	36.78	99	eLR	LR	17 22 35.3	
	1µm,28.8s						
RKT	Rikitea	36.78	99	eT	T	17 51 15.9	
	10nm,0.3s						
TOO	Toolangi	37.39	237	P	P	17 12 55.9	+0.1
	baz=38,SNR=7.4						
TOO	Toolangi	37.39	237	P	P	17 12 55.3	-0.4
QLP	Quilpie	37.41	255	P	P	17 12 55.1	-0.8
	baz=38,SNR=11						
MOO	Moorlands	37.55	228	P	P	17 12 58.2	+1.2
	baz=38,SNR=5.0						
PMG	Port Moresby	38.53	283	LR	LR	17 26 32.2	
	comp=Z,713nm,19.9s,baz=132,slow=33						
STKA	Stephens Creek	39.78	246	P	P	17 13 15.3	-0.4
	4.5nm,0.5s,baz=93,slow=10,SNR=18						
STKA	Stephens Creek	39.78	246	P	P	17 13 15.3	-0.4
	baz=40,SNR=21						
HTT	Hallett	42.12	244	P	P	17 13 34.3	-0.8
	baz=42,SNR=8.9						
BBOO	Buckleboo	44.49	245	P	P	17 13 52.9	-1.3
	baz=45,SNR=11						
KIP	Kipapa	46.26	22	i P	P	17 14 07.9	-0.2
ASAR	Alice Springs	47.01	258	P	P	17 14 12.9	-1.4
	9.3nm,0.8s,baz=85,slow=6.0,SNR=70						
ASAR				S	S	17 20 59.2	-4.9
	0.7nm,0.7s,baz=100,slow=15,SNR=6.2						
WRAB	Tennant Creek	47.27	263	eP	P	17 14 12.9	-3.4
	8.0nm,0.9s						
WRAB	Tennant Creek	47.27	263	ceP	P	17 14 17.1	+0.8
WRAB				pmax	pmax		
	comp=Z,15nm,0.8s						
WRA	Warramunga Arr	47.28	263	P	P	17 14 14.3	-2.0
	comp=Z,15nm,0.9s,baz=100,slow=8.7,SNR=30						
KDU	Kakadu	50.90	271	P	P	17 14 42.4	-1.7
	baz=51,SNR=4.7						
FORT	Forrest	51.37	248	P	P	17 14 46.3	-1.2
	baz=52,SNR=22						
WRKA	Warakurna	51.85	255	P	P	17 14 49.8	-1.5
	baz=52,SNR=40						
KNRA	Kununurra	53.46	266	P	P	17 15 02.1	-1.1
	baz=54,SNR=5.5						
FITZ	Fitzroy Crossi	55.71	263	P	P	17 15 18.4	-1.0
	baz=56,SNR=9.1						
SBA	Scott Base	56.52	185	P	P	17 15 26.7	+2.3
SBA				pmax	pmax		
	comp=Z,9.0nm,2.4s						
RPN	Rapa Nui	59.22	109	LR	LR	17 37 26.1	
	comp=Z,324nm,18.2s,baz=283,slow=32						
KLBR	Kellerberrin	60.04	245	P	P	17 15 49.2	-0.5
	baz=60,SNR=5.7						
MBWA	Marble Bar	60.35	258	eP	P	17 15 50.7	-1.3
BLDU	Ballidu	61.08	246	P	P	17 15 56.3	-0.6
	baz=61,SNR=12						
MUN	Mundaring	61.28	245	P	P	17 15 59.5	+1.3
	baz=62,SNR=5.4						
MORW	Morawa	61.93	248	P	P	17 16 03.3	+0.7
	baz=62,SNR=4.2						
CASY	Casey	63.81	206	eP	P	17 16 14.7	+0.3
	comp=Z,12nm,0.9s						
QSPA	South Pole Qui	68.01	180	eP	P	17 16 41.8	+0.2
MJAR	Matsushiro Arr	73.21	322	P	P	17 17 12.1	-1.4
	comp=Z,4.2nm,0.8s,baz=166,slow=6.0,SNR=22						
MAJO	Matsushiro	73.22	322	eP	P	17 17 11.9	-1.6
	comp=Z,5.7nm,0.8s						
MAJO	Matsushiro	73.22	322	i P	P	17 17 12.7	-0.9
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MAT	Matsushiro	73.22	322	P	P	17 17 11.8	-1.8
KUR	Kuril'sk	75.09	334	⇑eP	P	17 17 23.8	-0.4
ASAJ	Asahikawa	76.51	330	P	P	17 17 33.0	+0.6
	comp=Z,10nm,0.8s,baz=198,slow=6.4,SNR=20						
ASAJ	Asahikawa	76.51	330	P	P	17 17 33.0	+0.6
ASAJ				pmax	pmax		
	comp=Z,11nm,0.8s						
PETK	Petropavlovsk-	78.56	344	P	P	17 17 42.9	-0.7
	comp=Z,18nm,0.8s,baz=121,slow=7.7						
YSS	Yuzh-Sakhalins	78.62	332	⇑iP	P	17 17 44.2	+0.1
YSS				pmax	pmax		
	comp=Z,30nm,1.1s						
KSRS	Korea Array	80.00	317	P	P	17 17 52.4	+0.6
	comp=Z,1.6nm,0.9s,baz=142,slow=6.3,SNR=5.2						
KSRS	Korea Array	80.00	317	P	P	17 17 52.4	+0.6
KSRS				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KSAR	Wonju Array Be	80.02	317	P	P	17 17 52.4	+0.5
KSAR	Wonju Array Be	80.02	317	P	P	17 17 52.4	+0.5
NVAR	Mina Array Bea	80.21	42	P	P	17 17 53.4	+0.1
	comp=Z,1.9nm,0.8s,baz=224,slow=8.3,SNR=9.7						
MAW	Mawson	81.06	199	P	P	17 17 59.4	+2.2
	comp=Z,5.9nm,0.8s,baz=144,slow=3.1,SNR=17						
TYV	Tymovskoe	81.68	334	eP	P	17 18 00.3	-0.2
TYV				pmax	pmax		
	comp=Z,17nm,1.0s						
USRK	Ussuriysk Ar.	81.91	324	P	P	17 18 02.1	+0.2
	comp=Z,7.3nm,1.0s,baz=163,slow=1.5						
MDJ	Mudanjiang	83.49	324	P	P	17 18 08.3	-1.8
MDJ				pmax	pmax		
	comp=Z,21nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,120nm,3.0s						
MDJ	Mudanjiang	83.49	324	eP	P	17 18 09.3	-0.8
	comp=Z,14nm,1.0s						

GRNR	**Gornyy**	**84.25**	**331**	*e*P	**P**	**17 18 16.9**	**+3.0**
GRNR				pmax	pmax		
	comp=Z,44nm,1.0s						
CN2	**Changchun**	**85.33**	**321**	*e*P	**P**	**17 18 18.5**	**-0.9**
CN2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KLR	**Kul'dur**	**85.37**	**328**	*i* P	**P**	**17 18 19.5**	**0.0**
TXAR	**Lajitas Array**	**85.48**	**56**	P	**P**	**17 18 23.6**	**+2.9**
	comp=Z,2.1nm,1.1s,baz=224,slow=6.2,SNR=6.1						
SNAA	**Sanae**	**86.34**	**177**	P	**P**	**17 18 26.3**	**+2.0**
SNAA	**Sanae**	**86.34**	**177**	*i* P	**P**	**17 18 25.2**	**+0.9**
VNA3	**Neumayer Olymp**	**86.37**	**175**	P	**P**	**17 18 25.7**	**+1.4**
VNA1	**Neumayer--Stat**	**87.05**	**176**	P	**P**	**17 18 30.0**	**+2.4**
SEY	**Seymchan**	**88.58**	**346**	*ce*P	**P**	**17 18 35.3**	**+0.5**
ILAR	**Eielson Array**	**89.23**	**12**	P	**P**	**17 18 36.9**	**-1.0**
	comp=Z,1.2nm,0.8s,baz=215,slow=4.7,SNR=13						
DAWY	**Dawson**	**90.20**	**15**	*e*P	**P**	**17 18 42.4**	**-0.1**
	comp=Z,6.6nm,1.0s						
ZEA	**Zeya**	**90.43**	**330**	*e*P	**P**	**17 18 44.0**	**+0.3**
ZEA				pmax	pmax		
	comp=Z,40nm,1.8s						
XAN	**Xi'an**	**91.40**	**306**	P	**P**	**17 18 49.0**	**+0.3**
XAN				pmax	pmax		
	comp=Z,19nm,1.1s						
CMAR	**Chiang Mai Arr**	**93.38**	**288**	P	**P**	**17 18 59.2**	**+1.0**
	comp=Z,3.1nm,1.0s,baz=117,slow=3.0,SNR=16						
CMAR	**Chiang Mai Arr**	**93.38**	**288**	*ce*P	**P**	**17 18 59.9**	**+1.7**
CMAR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
CHTO	**Chiang Mai**	**93.51**	**289**	P	**P**	**17 18 58.8**	**0.0**
CHTO				pmax	pmax		
	comp=Z,8.0nm,2.1s						
GTA	**Gaotai**	**100.22**	**308**	*e*P	**Pdif**	**17 19 28.6**	**-0.3**
GTA				pP	pPdif	17 19 33.1	-6.3
GTA				sP	pP	17 19 36.3	-3.2
GTA				pmax	pmax		
	comp=Z,2.0nm,1.2s						
MKAR	**Makanchi Array**	**114.39**	**313**	PKP	PKPdf	17 24 21.5	-0.6
	comp=Z,0.5nm,0.7s,baz=249,slow=2.1,SNR=4.3						
KURK	**Kurchatov**	**117.12**	**317**	PKP	**PKPdf**	**17 24 26.6**	**-0.7**
KURK	**Kurchatov**	**117.12**	**317**	*c i*PKIKP	**PKPdf**	**17 24 25.2**	**-2.0**
KURK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KURBB	**Kurchatov Arra**	**117.17**	**317**	PKP	**PKPdf**	**17 24 26.6**	**-0.8**
	comp=Z,1.2nm,0.8s,baz=88,slow=1.9,SNR=9.9						
BVAR	**Borovoye Array**	**122.15**	**320**	PKP	**PKPdf**	**17 24 36.5**	**-0.4**
	comp=Z,1.7nm,0.7s,baz=107,slow=1.5,SNR=13						
BRVK	**Borovoye**	**122.21**	**320**	*c i*PKIKP	**PKPdf**	**17 24 36.7**	**-0.3**
BRVK				pmax	pmax		
	comp=Z,9.0nm,2.5s						
SVE	**Sverdlovsk**	**126.93**	**325**	*e*PKIKP	**PKPdf**	**17 24 46.5**	**+0.6**
ARU	**Arti**	**128.14**	**325**	*e*PKPdf	**PKPdf**	**17 24 48.3**	**+0.1**
ARU	**Arti**	**128.14**	**325**	*i* PKIKP	**PKPdf**	**17 24 48.5**	**+0.3**
ARU						17 26 52.7	
ARU						17 31 59.3	
ARU				SS	SS	17 44 09.6	+5.6
ARCES	**ARCESS Array B**	**130.96**	**351**	PKP	**PKPdf**	**17 24 55.9**	**+2.7**
	comp=Z,3.2nm,0.8s,baz=349,slow=1.2,SNR=8.5						
KLMR	**Klimovskoe**	**134.46**	**337**	*e*PKIKP	**PKPdf**	**17 24 58.0**	**-2.0**
KLMR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KLMR	**Klimovskoe**	**134.46**	**337**	*e*PKPdf	**PKPdf**	**17 24 58.1**	**-2.0**
KLMR				AMP		17 25 01.1	
	comp=Z,7.0nm,1.0s						
FINES	**FINESS Array B**	**138.06**	**345**	PKP	**PKPdf**	**17 25 07.6**	**+0.9**
	comp=Z,0.6nm,0.4s,baz=96,slow=3.8,SNR=7.6						
FINES	**FINESS Array B**	**138.06**	**345**	*c i*PKIKP	**PKPdf**	**17 25 08.8**	**+2.1**
FINES				pmax	pmax		
	comp=Z,1.0nm,0.4s						
OBN	**Obninsk**	**139.50**	**333**	⇓*i*PKIKP	**PKPdf**	**17 25 11.1**	**+1.6**
OBN				*e*		17 28 04.7	
OBN				pmax	pmax		
	comp=Z,11nm,1.4s						
KIV	**Kislovodsk**	**142.13**	**314**	⇓*e*PKHKP	PKPpre	17 25 12.9	
KIV				*e*		17 28 18.5	
KIV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ANN	**Anapa**	**145.13**	**318**	*e*PKHKP	PKPpre	17 25 18.8	
ANN				pmax	pmax		
	comp=Z,61nm,1.6s						
SUW	**Suwalki**	**145.29**	**341**	*e*PKP	**PKPbc**	**17 25 19.2**	**-0.4**
AKASG	**Malin Array Be**	**145.77**	**333**	PKPbc	**PKPdf**	**17 25 20.5**	**-0.3**
	comp=Z,11nm,0.5s,baz=40,slow=4.2,SNR=62						
KIEV	**Kiev**	**145.78**	**333**	*e*PKPdf	**PKPdf**	**17 25 20.5**	**-0.3**
OJC	**Ojcow**	**149.63**	**341**	*e*PKP	**PKPbc**	**17 25 32.5**	**+0.7**
OJC	**Ojcow**	**149.63**	**341**	*e*PKIKP	**PKPbc**	**17 25 32.5**	**+0.7**
BURAR	**Bucovina Array**	**149.82**	**332**	⇑*i*P	**PKPbc**	**17 25 33.6**	**+1.1**
BURAR	**Bucovina Array**	**149.82**	**332**	⇑PKIKP	**PKPbc**	**17 25 33.6**	**+1.1**
BIZ	**Bicaz**	**149.95**	**331**	⇓*i*P	**PKPbc**	**17 25 33.9**	**+1.2**
KSP	**Ksiaz**	**149.98**	**346**	*e*PKP	**PKPbc**	**17 25 33.3**	**+0.7**
BRTR	**Keskin Array B**	**150.04**	**312**	PKPbc	**PKPbc**	**17 25 33.4**	**0.0**
	comp=Z,7.5nm,0.8s,baz=133,slow=2.8,SNR=48						
ASF	**Jabal al Asfar**	**150.08**	**296**	PKPbc	**PKPbc**	**17 25 34.8**	**+1.2**
	comp=Z,5.3nm,0.8s,baz=299,slow=2.4,SNR=13						
NIE	**Niedzica**	**150.18**	**340**	*e*PKP	**PKPbc**	**17 25 34.5**	**+1.3**
NIE	**Niedzica**	**150.18**	**340**	*e*PKIKP	**PKPbc**	**17 25 34.5**	**+1.3**
CLL	**Collm**	**150.18**	**350**	*e*PKPdf	**PKPdf**	**17 25 28.0**	**0.0**
CLL				*e*PKPbc	**PKPbc**	**17 25 33.0**	**-0.1**
	comp=Z,23nm,1.1s						
CLL				*i* PKPab	**PKPab**	**17 25 40.0**	**+0.9**
	comp=Z,20nm,1.0s						
CLL				*e*		17 25 46.0	
CFR	**Carcaliu**	**150.22**	**326**	⇓*i*P	**PKPbc**	**17 25 33.9**	**+0.5**
CFR	**Carcaliu**	**150.22**	**326**	⇓PKIKP	**PKPbc**	**17 25 33.9**	**+0.5**
CRVS	**Cervenica-Dubn**	**150.24**	**338**	*e*PKIKP	**PKPbc**	**17 25 34.1**	**+0.7**
CRVS	**Cervenica-Dubn**	**150.24**	**338**	*e*PKP	**PKPbc**	**17 25 34.1**	**+0.7**
UPC	**Upice**	**150.36**	**346**	⇑*e*PKP	**PKPbc**	**17 25 34.6**	**+1.0**
UPC	**Upice**	**150.36**	**346**	*e*PKIKP	**PKPbc**	**17 25 34.6**	**+1.0**
DPC	**Dobruska-Polom**	**150.44**	**345**	⇑*e*PKP	**PKPbc**	**17 25 34.6**	**+0.8**
DPC				*e*x	x	17 25 39.7	
DPC	**Dobruska-Polom**	**150.44**	**345**	*e*PKIKP	**PKPbc**	**17 25 34.6**	**+0.8**
DPC				*e*		17 25 39.7	
BRG	**Berggiesshubel**	**150.44**	**349**	*e*PKP	**PKPbc**	**17 25 34.2**	**+0.5**
	comp=Z,20nm,1.2s						
	comp=N,187nm,17.6s						
	comp=E,213nm,20.5s						
	comp=Z,318nm,23.1s						
VRI	**Vrincioaia**	**150.44**	**329**	⇓*i*P	**PKPbc**	**17 25 34.1**	**+0.1**
VRI	**Vrincioaia**	**150.44**	**329**	⇓PKIKP	**PKPbc**	**17 25 34.1**	**+0.1**
PLOR	**Plostina**	**150.49**	**329**	⇓*i*P	**PKPbc**	**17 25 34.7**	**+0.6**
PLOR	**Plostina**	**150.49**	**329**	⇓PKIKP	**PKPbc**	**17 25 34.7**	**+0.6**
ANTO	**Ankara**	**150.55**	**313**	⇑*i*P	**PKPbc**	**17 25 35.4**	**+0.9**
ANTO	**Ankara**	**150.55**	**313**	*e*PKPbc	**PKPbc**	**17 25 35.1**	**+0.6**
ANTO	**Ankara**	**150.55**	**313**	⇑PKIKP	**PKPbc**	**17 25 35.4**	**+0.9**
TIRR	**Tirgusor**	**150.56**	**325**	⇓*i*P	**PKPbc**	**17 25 34.5**	**+0.3**
TIRR	**Tirgusor**	**150.56**	**325**	⇓PKIKP	**PKPbc**	**17 25 34.5**	**+0.3**
PVCC	**Panska Ves**	**150.65**	**348**	*e*PKP	**PKPbc**	**17 25 35.2**	**+1.0**
PVCC				*e*x	x	17 25 40.0	
PVCC	**Panska Ves**	**150.65**	**348**	*e*PKIKP	**PKPbc**	**17 25 35.2**	**+1.0**
PVCC				*e*		17 25 40.0	
MORC	**Moravsky Berou**	**150.66**	**343**	⇑*i*P	**PKPbc**	**17 25 34.1**	**-0.3**
MORC	**Moravsky Berou**	**150.66**	**343**	*e*PKP	**PKPbc**	**17 25 34.8**	**+0.4**
HARR	**Harsova**	**150.66**	**326**	⇑*i*P	**PKPbc**	**17 25 35.4**	**+0.9**
HARR	**Harsova**	**150.66**	**326**	⇑PKIKP	**PKPbc**	**17 25 35.4**	**+0.9**
TLB	**Topalu**	**150.67**	**325**	⇓*i*P	**PKPbc**	**17 25 35.2**	**+0.7**
TLB	**Topalu**	**150.67**	**325**	⇓PKIKP	**PKPbc**	**17 25 35.2**	**+0.7**
DOPR	**Dopca**	**151.00**	**330**	⇓*i*P	**PKPbc**	**17 25 35.8**	**+0.5**
ISR	**Istrita**	**151.07**	**328**	⇑*i*P	**PKPbc**	**17 25 36.4**	**+0.9**
ISR	**Istrita**	**151.07**	**328**	⇑PKIKP	**PKPbc**	**17 25 36.4**	**+0.9**
MLR	**Muntele Rosu**	**151.09**	**329**	PKPbc	**PKPbc**	**17 25 36.0**	**+0.4**
	comp=Z,12nm,1.0s,baz=1.7,slow=1.8,SNR=14						
MLR	**Muntele Rosu**	**151.09**	**329**	⇑*i*P	**PKPbc**	**17 25 35.7**	**0.0**
MMAI	**Mount Meron Ar**	**151.12**	**299**	PKPbc	**PKPbc**	**17 25 37.1**	**+1.1**
	comp=Z,13nm,0.8s,baz=54,slow=3.3,SNR=13						
PRU	**Pruhonice**	**151.16**	**347**	*e*PKP	**PKPbc**	**17 25 35.9**	**+0.4**
PRU	**Pruhonice**	**151.16**	**347**	*e*PKIKP	**PKPbc**	**17 25 35.9**	**+0.4**
GOPC	**GO Pecny, Ondr**	**151.19**	**347**	⇑*e*PKP	**PKPbc**	**17 25 36.2**	**+0.6**
CJR	**Cluj-Napoca**	**151.22**	**333**	⇑*i*P	**PKPbc**	**17 25 36.6**	**+0.8**
CJR	**Cluj-Napoca**	**151.22**	**333**	⇑PKIKP	**PKPbc**	**17 25 36.6**	**+0.8**
VRAC	**Vranov**	**151.34**	**344**	*e*PKP	**PKPbc**	**17 25 36.9**	**+1.0**
VYHS	**Vyhne**	**151.45**	**341**	*e*PKIKP	**PKPbc**	**17 25 35.9**	**-0.3**
VYHS	**Vyhne**	**151.45**	**341**	*e*PKP	**PKPbc**	**17 25 35.8**	**-0.4**
JAVC	**Velka Javorina**	**151.46**	**343**	*e*PKP	**PKPbc**	**17 25 37.4**	**+1.1**
DRGR		**151.52**	**334**	⇓*i*P	**PKPbc**	**17 25 36.8**	**+0.3**
VOIR		**151.56**	**330**	⇑*i*P	**PKPbc**	**17 25 36.0**	**-0.7**
VOIR		**151.56**	**330**	⇑PKIKP	**PKPbc**	**17 25 36.0**	**-0.7**
KRUC	**Moravsky**	**151.61**	**344**	*e*PKP	**PKPbc**	**17 25 36.5**	**-0.1**
PSZ	**Piszkesteto**	**151.62**	**339**	⇓*i*P	**PKPbc**	**17 25 37.7**	**+1.0**
MODS	**Modra-Piesok**	**152.01**	**343**	*e*PKIKP	**PKPbc**	**17 25 38.3**	**+0.7**
MODS	**Modra-Piesok**	**152.01**	**343**	*e*PKP	**PKPbc**	**17 25 38.2**	**+0.7**
KHC	**Kasperske Hory**	**152.17**	**348**	*e*PKPDF	**PKPdf**	**17 25 31.0**	**-0.2**
KHC				⇑*e*PKP	**PKPbc**	**17 25 38.5**	**+0.6**
KHC				*e*pPKP	**pPKPdf**	**17 25 41.6**	**-0.5**
KHC	**Kasperske Hory**	**152.17**	**348**	*e*PKIKP	**PKPbc**	**17 25 38.5**	**+0.6**
KHC				*e*		17 25 41.6	
GERES	**GERESS Array B**	**152.42**	**348**	PKP	**PKPdf**	**17 25 31.7**	**+0.1**
	comp=Z,0.5nm,0.8s,baz=198,slow=0.8,SNR=4.3						
GERES				PKPbc	**PKiKP**	**17 25 38.7**	**-0.1**
	comp=Z,1.7nm,0.8s,baz=8.7,slow=1.8,SNR=12						
CONA	**Conrad Observa**	**152.80**	**344**	PKiKP	**PKiKP**	**17 25 39.5**	**-0.1**
	comp=Z,4.8nm,0.9s						
BZS	**Buzias**	**152.92**	**334**	⇑*i*P	**PKPbc**	**17 25 39.9**	**+0.3**
BZS	**Buzias**	**152.92**	**334**	⇑PKIKP	**PKPbc**	**17 25 39.9**	**+0.3**
ISP	**Isparta**	**153.09**	**311**	⇑*i*P	**PKPbc**	**17 25 45.1**	**+4.7**
ISP	**Isparta**	**153.09**	**311**	⇑PKIKP	**PKPbc**	**17 25 45.1**	**+4.7**
HERR	**Herculane**	**153.17**	**332**	⇓*i*P	**PKPbc**	**17 25 40.3**	**+0.1**
MOA	**Molln**	**153.25**	**346**	PKPab	**PKPab**	**17 25 47.6**	**-4.5**
	comp=Z,9.3nm,1.8s						
MDVR	**Moldovita**	**153.56**	**333**	⇑*i*P	**PKPdf**	**17 25 33.1**	**-0.3**
SOKA	**Soboth**	**154.17**	**344**	PKPab	**PKPab**	**17 25 51.8**	**-4.3**
	comp=Z,5.1nm,1.1s						
WATA	**Walderalm**	**154.26**	**350**	pPKiKP	**PKPbc**	**17 25 48.8**	**+6.1**
	comp=Z,2.0nm,0.5s						
DAVA	**Damuels**	**154.55**	**352**	*e*PKPab	**PKPab**	**17 25 51.8**	**-6.0**
	comp=Z,9.8nm,1.3s						
VTS	**Vitosha**	**154.56**	**328**	⇑*i*P	**PKPbc**	**17 25 43.0**	**-0.5**
VTS	**Vitosha**	**154.56**	**328**	⇑PKIKP	**PKPbc**	**17 25 43.1**	**-0.4**

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*ISCJB **22** 17:09:11.9±0.8, 13°.3N±0°.1×49°.92E±0°.05, h10^{km}, mb3.8/9, Error ellipse: s-maj=21.6km s-min=7.1km az=177.2*

*IDC **22** 17:09:12.4±1.1, 13°.22N×50°.14E, h0^{km}, mb3.8/9, mb1 4.1/10, mb1mx3.7/62, mbtmp3.9/10, ML4.5/1, MS3.3/1, Ms1 3.3/1, ms1mx2.7/56, Error ellipse: s-maj=28.8km s-min=23.4km az=10.0*

ISC 22 17:09:13.9±1.0**, 13°.3N**±0°.2×**49°.94E**±0°.08**, h10^{km}, n17, σ1^s.40**/16**, mb3.9**/9**, 1C, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BDHA	**Al Bayda'**	**4.30**	**280**	*i* P	**Pn**	**17 10 19.5**	**-0.1**
BDHA				*e*		17 10 19.6	
	baz=114,slow=16						
BDHA				AML	AML	17 10 24.7	
	comp=N,177nm,0.3s						
BDHA				*i* S	**Sn**	**17 11 07.2**	**-2.8**
LBOS		**4.59**	**278**	⇑*i*P	**Pn**	**17 10 23.6**	**-0.1**
LBOS				*i* S	**Sn**	**17 11 15.8**	**-1.5**
ATD	**Arta Tunnel**	**7.14**	**257**	Pn	**Pn**	**17 11 00.4**	**+1.8**
	comp=N,7.2nm,0.3s,baz=107,slow=18,SNR=17						
WSAR	**Wadi Sarin**	**12.88**	**39**	LR	LR	17 16 52.4	
	comp=N,162nm,21.6s,baz=232,slow=36						
H08N2	**Diego Garcia H**	**28.60**	**132**	T	T	17 44 38.9	
	baz=314,slow=76,SNR=10						
H08N3	**Diego Garcia H**	**28.61**	**132**	T	T	17 44 39.0	
	baz=314,slow=76,SNR=10.0						
H08N1	**Diego Carcia H**	**28.62**	**132**	T	T	17 44 46.0	
	baz=314,slow=76,SNR=10						
BRTR	**Keskin Array B**	**29.99**	**334**	P	**P**	**17 15 24.8**	**+2.0**
	comp=N,0.6nm,0.8s,baz=159,slow=9.3,SNR=3.7						
BVAR	**Borovoye Array**	**42.85**	**18**	P	**P**	**17 17 12.1**	**-0.1**
	comp=N,0.5nm,0.5s,baz=199,slow=4.0,SNR=2.5						
BVAR				PcP	**PcP**	**17 19 03.0**	**-0.1**
	comp=N,0.6nm,0.6s,baz=129,slow=3.9,SNR=3.8						
MKAR	**Makanchi Array**	**43.02**	**33**	P	**P**	**17 17 13.3**	**-0.3**
	comp=N,0.6nm,0.5s,baz=226,slow=7.6,SNR=8.3						
KURBB	**Kurchatov Arra**	**43.89**	**26**	P	**P**	**17 17 19.8**	**-0.8**
	comp=N,0.5nm,0.8s,baz=228,slow=7.8,SNR=3.9						
CMAR	**Chiang Mai Arr**	**47.31**	**77**	P	**P**	**17 17 46.9**	**-1.2**
	comp=N,1.8nm,0.8s,baz=272,slow=8.8,SNR=8.6						
ESDC	**Sonseca Array**	**53.98**	**310**	P	**P**	**17 18 39.4**	**+1.1**
	comp=N,1.0nm,0.8s,baz=89,slow=6.9,SNR=4.6						
SONM	**Songino Array**	**57.91**	**42**	P	**P**	**17 19 06.3**	**-0.1**
	comp=N,0.8nm,0.6s,baz=250,slow=4.3,SNR=4.2						
WRA	**Warramunga Arr**	**89.32**	**111**	P	**P**	**17 22 10.2**	**-0.9**
	comp=N,1.2nm,0.8s,baz=303,slow=3.5,SNR=7.8						
ASAR	**Alice Springs**	**89.85**	**114**	P	**P**	**17 22 12.5**	**-1.1**
	comp=N,1.0nm,0.8s,baz=287,slow=4.7,SNR=14						
NVAR	**Mina Array Bea**	**127.38**	**348**	PKP	**PKPdf**	**17 28 21.2**	**+1.5**
	comp=N,0.2nm,0.6s,baz=302,slow=3.3,SNR=3.6						

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*CSEM **22** 17:13:28.0, 38°.28N×22°.16E, h12^{km}, ML0.5/1*

ATH 22 17:13:28.1, 38°.28N×22°.16E, h12^{km}±4^{km}, ML0.5/1**, Error ellipse: s-maj=4.3km s-min=1.1km az=262.0, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TRIZ	**Trizonia**	**0.11**	**322**	P	Pg	17 13 30.8	-0.3
TRIZ				S	Sg	17 13 33.2	-0.1
TRIZ	**Trizonia**	**0.11**	**322**	P	Pg	17 13 31.0	-0.1
TRIZ				S	Sg	17 13 33.3	0.0
KALE	**Kalithea**	**0.12**	**352**	P	Pg	17 13 31.1	-0.1
KALE				S	Sg	17 13 33.6	+0.1
KALE	**Kalithea**	**0.12**	**352**	P	Pg	17 13 31.1	-0.1
KALE				S	Sg	17 13 33.5	0.0
TRAZ	**Trapeza**	**0.12**	**159**	P	Pg	17 13 30.4	-0.8
TRAZ				S	Sg	17 13 33.6	+0.1
TRAZ	**Trapeza**	**0.12**	**159**	P	Pg	17 13 30.8	-0.4
TRAZ				S	Sg	17 13 33.5	0.0
SERG	**Sergoula**	**0.16**	**329**	P	Pg	17 13 31.8	0.0
SERG				AML	AML	17 13 35.0	
	comp=E,49μm,0.2s						
SERG				S	Sg	17 13 35.2	+0.8
SERG				AML	AML	17 13 35.7	
	comp=N,37μm,0.2s						
SERG	**Sergoula**	**0.16**	**329**	P	Pg	17 13 31.8	0.0
SERG				S	Sg	17 13 34.9	+0.4
KLV	**Kalavryta, Ach**	**0.23**	**182**	P	Pg	17 13 33.6	+0.5
KLV				S	Sg	17 13 37.2	+0.8
KLV	**Kalavryta, Ach**	**0.23**	**182**	P	Pg	17 13 33.3	+0.3
KLV				S	Sg	17 13 36.9	+0.5
DSF	**Desfina**	**0.32**	**65**	P	Pg	17 13 35.0	+0.4
DSF	**Desfina**	**0.32**	**65**	P	Pg	17 13 34.7	+0.1

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*IDC **22** 17:25:49.3±3.0, 31°.05N×140°.70E, h0^{km}, mb3.5/6, mb1 3.7/8, mb1mx3.4/60, mbtmp3.6/8, ML3.5/2, Error ellipse: s-maj=118.0km s-min=18.9km az=74.0*

*JMA **22** 17:25:54.7±0.2, 31°.82N×141°.10E, h0^{km}, M3.8*

*ISCJB **22** 17:25:56.2±1.3, 31°.66N±0°.08×141°.1E±0°.2, h57^{km}, mb3.6/6, Error ellipse: s-maj=21.2km s-min=9.4km az=163.1*

ISC 22 17:25:55.6±1.4**, 31°.45N**±0°.10×**141°.1E**±0°.2**, h57^{km}, n17, σ1^s.88**/23**, mb3.5**/6**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	**Aogashimamukai**	**1.49**	**313**	P	**Pn**	**17 26 19.4**	**-0.8**
JHCJ	**Hachijojimakas**	**1.94**	**327**	P	**Pn**	**17 26 25.4**	**-0.8**
JHCJ				*e*S	**Sn**	**17 26 47.2**	**-2.2**
JHJ2	**Mitsune**	**1.96**	**328**	P	**Pn**	**17 26 26.1**	**-0.4**
JHJ2				*e*S	**Sn**	**17 26 48.3**	**-1.7**
JHJ	**Hachijo jima 2**	**1.98**	**327**	Pn	**Pn**	**17 26 26.2**	**-0.6**
	35nm,0.3s,baz=346,slow=22,SNR=16						
JHJ				Sn	**Sn**	**17 26 48.3**	**-2.2**
	52nm,0.3s,baz=140,slow=23,SNR=6.9						
JMKN	**Mikurajimanish**	**2.73**	**333**	P	**Pn**	**17 26 36.6**	**-0.4**
JMKN				*e*S	**Sn**	**17 27 07.0**	**-1.8**
JKO	**Kozu shima**	**3.17**	**330**	P	**Pn**	**17 26 44.1**	**+1.1**
BSO3	**Boso 3**	**3.37**	**352**	*e*S	**Sn**	**17 27 21.0**	**-3.2**
JOD2	**Odawara 2**	**4.14**	**337**	P	**Pn**	**17 26 56.4**	**0.0**
JHU	**Hanno**	**4.63**	**342**	P	**Pn**	**17 27 03.4**	**+0.3**
JHU				*e*S	**Sn**	**17 27 52.7**	**-2.8**
MJAR	**Matsushiro Arr**	**5.60**	**336**	Pn	**Pn**	**17 27 18.5**	**+2.2**
	1.1nm,0.3s,baz=167,slow=14,SNR=22						
MAT	**Matsushiro**	**5.60**	**336**	P	**Pn**	**17 27 19.7**	**+3.3**
MAT				S	**Sn**	**17 28 19.0**	**-0.4**
SONM	**Songino Array**	**30.98**	**312**	P	**P**	**17 32 10.1**	**+2.5**
	0.4nm,0.4s,baz=107,slow=8.4,SNR=3.9						
MKAR	**Makanchi Array**	**47.02**	**307**	P	**P**	**17 34 22.2**	**+0.9**
	0.5nm,0.6s,baz=87,slow=10,SNR=6.5						
KURBB	**Kurchatov Arra**	**49.35**	**312**	P	**P**	**17 34 40.0**	**+0.9**
	0.4nm,0.6s,baz=91,slow=7.7,SNR=6.8						
WRA	**Warramunga Arr**	**51.51**	**188**	P	**P**	**17 34 53.9**	**-1.7**
	0.2nm,0.4s,baz=4.4,slow=7.5,SNR=5.1						
BVAR	**Borovoye Array**	**54.22**	**315**	P	**P**	**17 35 16.4**	**+1.0**
	0.8nm,0.5s,baz=90,slow=7.4,SNR=8.7						
ASAR	**Alice Springs**	**55.23**	**188**	P	**P**	**17 35 20.6**	**-2.4**
	0.3nm,0.9s,baz=0.6,slow=6.1,SNR=5.1						

MEX 22 17:38:34.8±0.3**, 16°.21N×98°.06W, h6^{km}±3^{km}, MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.19**	**339**	*e*P	Pg	17 38 38.3	-0.4
PNIG				*e*S	Sg	17 38 41.3	0.0
TLIG	**Tlapa**	**1.43**	**340**	*e*P	Pn	17 38 57.9	-3.6
TLIG				*e*S	Sb	17 39 15.3	-5.3
VHO	**Vista Hermosa**	**1.53**	**56**	*e*P	Pn	17 38 59.3	-3.6
VHO				*i* S	Sn	17 39 18.3	-5.0

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*IDC **22** 18:02:05.1±0.4, 12°.06N×86°.56W, h0^{km}, mb4.4/22, mb1 4.6/24, mb1mx4.4/46, mbtmp4.4/24, ML4.0/2, MS4.2/18, Ms1 4.2/18, ms1mx4.0/46, Error ellipse: s-maj=19.8km s-min=10.0km az=58.0*

*ISCJB **22** 18:02:07.9±0.2, 11°.59N±0°.02×87°.18W±0°.02, h33^{km}, mb4.9/269, MS4.3/19, Error ellipse: s-maj=3.9km s-min=2.1km az=37.7*

*CASC **22** 18:02:08.6±2.3, 11°.47N×87°.28W, h36^{km}±999^{km}, MD4.5, ML3.9, mb5.0(NEIC)*

*MOS **22** 18:02:09.8±1.4, 11°.78N×86°.96W, h43^{km}, mb5.0/34, Error ellipse: s-maj=14.2km s-min=5.1km az=113.1*

*BJI **22** 18:02:11.3, 11°.70N×87°.20W, h40^{km}, mB5.3/5, Ms5.1/3, Ms7 4.9/5*

*NEIC **22** 18:02:12.1±0.6, 11°.64N×87°.03W, h56^{km}±5^{km}, mb5.0/263, Error ellipse: s-maj=5.8km s-min=3.8km az=221.0*

*GCMT **22** 18:02:12.1±0.4, 11°.26N×87°.57W, h21^{km}±1^{km}, MW5.0/70, Moment Tensor Solution. s33,c43; s70,c95; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.96±.19; $M_{\theta\theta}$-2.26±.13; $M_{\phi\phi}$-0.69±.14; $M_{r\theta}$1.16±.20; $M_{\theta\phi}$1.10±.09; $M_{\phi r}$-1.03±.28; Best double couple: $M_0$3.28200×10^{16} NP1:ϕ_s124.00000°, δ59.00000°, λ96.00000°. NP2: ϕ_s291.00000°, δ32.00000°, λ79.00000°. Principal axes: T 3.3670, Plg75.0000°, Azm52.0000°; N -0.1620, Plg6.0000°, Azm300.0000°; P -3.1960, Plg14.0000°, Azm209.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 22 18:02:08.6±1.2**, 11°.57N**±0°.04×**87°.15W**±0°.05**, h27^{km}**±8^{km}**, n927, σ1^s.29**/915**, mb5.0**/269**, MS4.3**/19**, 7C-1D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COPN	**Copaltepe**	**0.82**	**42**	*e*P	**Pn**	**18 02 26.1**	**+1.8**
XAVN	**Gruta Xavier**	**0.99**	**54**	*e*P	**Pb**	**18 02 28.7**	**+1.6**
APYN	**Apoyeque**	**1.02**	**50**	*e*P	**Pb**	**18 02 28.9**	**+1.1**
CNGN	**Cerro Negro**	**1.03**	**25**	*e*P	**Pb**	**18 02 29.0**	**+1.2**
CNGN				IAML		18 02 52.0	
	comp=N,3μm,0.7s						
MOMN	**Momotombo**	**1.03**	**35**	*e*P	**Pb**	**18 02 28.9**	**+1.2**
MGAN	**Managua**	**1.05**	**57**	*e*P	**Pb**	**18 02 29.1**	**+1.0**
MASN	**Masaya**	**1.06**	**67**	*e*P	**Pb**	**18 02 29.0**	**+0.6**
CSGN	**Cosiguina Volc**	**1.46**	**344**	*e*P	**Pb**	**18 02 34.6**	**-0.5**
CSGN				*e*S	**Sb**	**18 02 53.2**	**-0.1**
BOAB	**BOACO BROADBAN**	**1.69**	**59**	*e*P	**Pn**	**18 02 37.6**	**+1.3**
ESTN	**Estel**	**1.71**	**26**	*e*Pn	**Pb**	**18 02 38.5**	**-0.8**
ESTN	**Estel**	**1.71**	**26**	⇑*e*P	**Pb**	**18 02 38.5**	**-0.8**
MATN	**Matagalpa**	**1.81**	**41**	*e*P	**Pb**	**18 02 39.8**	**-1.3**
LCND	**La Caˆ–ada**	**1.88**	**337**	*e*P	**Pn**	**18 02 38.2**	**-0.7**
LCND				*e*S	**Sn**	**18 03 01.0**	**-0.7**
LCND				IAML		18 03 16.9	
	comp=Z,3μm,0.4s						
VCR	**Vista de Mar**	**2.07**	**134**	*e*P	**Pn**	**18 02 39.7**	**-1.9**
MESS	**Mesas**	**2.09**	**113**	*e*P	**Pn**	**18 02 42.7**	**+0.8**
RCON	**San Juan de Ri**	**2.14**	**27**	⇑*e*P	**Pb**	**18 02 44.7**	**-2.0**
CUI	**Cuipilapa**	**2.15**	**115**	*e*P	**Pn**	**18 02 42.7**	**0.0**
CUI				*e*S	**Sn**	**18 03 09.1**	**+0.6**
VSM	**San Miguel**	**2.15**	**329**	*e*P	**Pn**	**18 02 43.2**	**+0.3**
LCY	**Lacayo**	**2.16**	**329**	*e*P	**Pn**	**18 02 43.0**	**+0.1**
PACA	**Pacayal**	**2.21**	**329**	*e*P	**Pn**	**18 02 43.6**	**0.0**
TECA	**Tecapa**	**2.33**	**326**	*e*P	**Pn**	**18 02 44.6**	**-0.7**
UESV	**Ojushtada**	**2.41**	**319**	IAML		18 03 36.0	
	comp=Z,2μm,0.5s						
JTS	**JuntasAbangare**	**2.50**	**120**	Pn	**Pn**	**18 02 47.2**	**-0.3**
	comp=Z,16nm,0.3s,baz=22,slow=17,SNR=51						
JTS				Sn	**Sn**	**18 03 17.8**	**+0.6**
	comp=Z,137nm,0.3s,baz=184,slow=18,SNR=7.2						
JTS				LR	LR	18 03 51.3	
	comp=Z,2μm,19.1s,baz=355,slow=45						
JTS	**JuntasAbangare**	**2.50**	**120**	*e*P	**Pn**	**18 02 49.6**	**+2.0**
LFRS	**El Faro**	**2.77**	**318**	*e*P	**Pn**	**18 02 50.7**	**-0.6**
LFRS				*e*S	**Sn**	**18 03 22.9**	**-0.9**
ESPN	**Las Esperanzas**	**2.86**	**77**	*e*Pn	**Pn**	**18 02 53.2**	**+0.9**
ESPN	**Las Esperanzas**	**2.86**	**77**	*e*P	**Pn**	**18 02 53.5**	**+1.1**
SNET	**Serv Nac Est T**	**2.93**	**316**	IAML		18 03 40.4	
	comp=Z,611nm,0.3s						
UEES	**San Salvador**	**2.96**	**317**	IAML		18 03 50.6	
	comp=Z,562nm,0.4s						
BOQS	**Boqueron**	**3.00**	**316**	*e*P	**Pn**	**18 02 54.4**	**-0.1**
SRA1	**San Ramˆ‡n**	**3.01**	**119**	*e*P	**Pb**	**18 03 01.1**	**-0.5**
SRA1				*e*S	**Sn**	**18 03 32.3**	**+2.5**
HDC	**Heredia**	**3.36**	**117**	*e*Pn	**Pb**	**18 03 04.5**	**-3.0**
HDC	**Heredia**	**3.36**	**117**	*e*P	**Pn**	**18 03 00.6**	**+1.1**
SJS	**Escuela Geolog**	**3.44**	**118**	*e*P	**Pb**	**18 03 05.9**	**-3.1**
CVTR	**Volcan Turrial**	**3.67**	**114**	⇓*e*P	**Pn**	**18 03 07.0**	**+3.1**
URSC	**Urasca**	**3.73**	**117**	*e*P	**Pn**	**18 03 05.7**	**+1.1**
URSC				*e*S	**Sn**	**18 03 49.6**	**+1.8**
BUS	**Buena Vista**	**3.89**	**121**	*e*P	**Pn**	**18 03 08.6**	**+1.7**
BUS				*e*S	**Sn**	**18 03 53.0**	**+1.1**
IXG	**Ixpaco**	**4.14**	**309**	*e*P	**Pn**	**18 03 09.6**	**-0.6**
EDLM	**Las Mercedes**	**4.17**	**123**	*e*P	**Pn**	**18 03 12.1**	**+1.5**
EDLM				*e*S	**Sn**	**18 03 55.8**	**-2.8**
EDBA	**Buenos Aires**	**4.50**	**122**	*e*P	**Pn**	**18 03 14.8**	**-0.1**
EDBA				*e*S	**Sn**	**18 04 03.8**	**-2.6**
CCIG	**Comitan**	**6.74**	**315**	*e*Pn	**Pn**	**18 03 47.4**	**+1.4**
BCIP	**Isla Barro Col**	**7.58**	**108**	*e*Pn	**Pn**	**18 03 55.5**	**-1.8**
	comp=Z,74nm,1.0s						
CMIG	**Matias Romero**	**9.29**	**307**	Pn	**Pn**	**18 04 21.4**	**+0.6**
	comp=Z,3.2nm,0.3s,baz=107,slow=11,SNR=10						
CMIG				Sn	**Sn**	**18 05 58.9**	**-5.6**
	baz=53,slow=18,SNR=2.1						
DBBC	**Dabeiba**	**11.70**	**112**	*e*P	**Pn**	**18 04 58.4**	**+4.4**
GRGC	**Isla de Gorgon**	**12.31**	**133**	*e*P	**Pn**	**18 05 05.0**	**+2.8**
TLIG	**Tlapa**	**12.55**	**300**	*e*Pn	**Pn**	**18 05 07.4**	**+1.8**
ZARC	**Zaragoza, Cauc**	**12.78**	**107**	*e*P	**P**	**18 05 19.0**	**-0.4**
YOTC	**Yotoco, Valle**	**13.08**	**124**	*e*P	**P**	**18 05 23.0**	**+0.1**
HORQ	**Saladito**	**13.16**	**127**	*e*P	**Pn**	**18 05 16.3**	**+2.2**
PTBC	**PUERTO BERRIO,**	**13.49**	**111**	*e*P	**P**	**18 05 28.3**	**+1.0**
CODC	**Agustˆ›n Codaz**	**13.56**	**96**	*e*P	**P**	**18 05 24.3**	**-3.8**
OCAC	**Ocana**	**14.02**	**102**	*e*P	**P**	**18 05 33.8**	**+0.5**
OTAV	**Otavalo**	**14.19**	**142**	*e*Pn	**P**	**18 05 38.3**	**+2.8**
OTAV	**Otavalo**	**14.19**	**142**	*e*P	**P**	**18 05 38.3**	**+2.8**
ROSC	**El Rosal**	**14.34**	**117**	Pn	**P**	**18 05 40.9**	**+3.7**
	comp=Z,2.6nm,0.3s,baz=46,slow=4.6,SNR=19						
ROSC				LR	LR	18 11 06.8	
	comp=Z,446nm,19.4s,baz=202,slow=38						
ROSC	**El Rosal**	**14.34**	**117**	*e*Pn	**Pn**	**18 05 32.8**	**+2.4**
ROSC	**El Rosal**	**14.34**	**117**	*e*P	**P**	**18 05 40.3**	**+3.1**
BARC	**Barichara**	**14.65**	**109**	*e*P	**P**	**18 05 40.9**	**+0.5**
CHIC	**Chingaza**	**14.96**	**116**	*e*P	**Pn**	**18 05 40.2**	**+1.6**
RUSC	**La Rusia**	**15.00**	**111**	*e*P	**P**	**18 05 44.2**	**-0.3**
VILC	**Villavicencio,**	**15.24**	**118**	*e*P	**P**	**18 05 47.6**	**+0.7**
YOPC	**Yopal, Colombi**	**15.82**	**112**	*e*P	**P**	**18 05 55.5**	**+2.3**
058A	**Arcadia**	**16.21**	**17**	P	**P**	**18 05 56.3**	**-1.1**
	baz=199						
SDV	**Santo Domingo**	**16.47**	**98**	*e*Pn	**Pn**	**18 05 57.1**	**-1.0**
	comp=Z,46nm,0.8s						
857A	**Zephyrhills**	**17.24**	**15**	P	**P**	**18 06 10.5**	**+1.7**
	baz=196						
859A	**Kempfer Cattle**	**17.42**	**19**	P	**P**	**18 06 12.1**	**+1.2**
	baz=200						
LNIG	**Linares**	**17.66**	**320**	*e*Pn	**P**	**18 06 13.6**	**0.0**
	comp=Z,450nm,2.0s						
757A	**Oxford**	**17.93**	**15**	P	**P**	**18 06 18.3**	**+2.0**
	baz=196,SNR=6.2						
758A	**Lake Helen**	**18.18**	**17**	P	**P**	**18 06 20.9**	**+1.7**
	baz=199						
656A	**Willston**	**18.23**	**13**	P	**P**	**18 06 20.4**	**+0.7**
	baz=194						
657A	**Interlachen**	**18.59**	**15**	P	**Pn**	**18 06 26.0**	**+1.9**
	baz=196						
658A	**Bunnell**	**18.59**	**16**	P	**Pn**	**18 06 25.7**	**+1.5**
	baz=198						
KVTX	**Kingsville**	**18.83**	**329**	P	**Pn**	**18 06 26.8**	**-0.1**
	comp=Z,115nm,1.0s						
556A	**Lake Butler**	**18.87**	**13**	P	**Pn**	**18 06 28.7**	**+1.3**
	baz=194						
555A	**McAlpin**	**18.87**	**11**	P	**Pn**	**18 06 29.2**	**+1.8**
	baz=192,SNR=7.2						
555A	**McAlpin**	**18.87**	**11**	*e*P	**Pn**	**18 06 29.4**	**+1.9**
	comp=Z,76nm,1.1s						
543A	**St. Martinvill**	**18.94**	**347**	P	**Pn**	**18 06 31.3**	**+3.0**
	baz=165,SNR=6.1						

451A	Vernon	19.00	4	P	Pn	18 06 30.9	+1.9
	baz=184						
557A	Orange Park	19.04	15	P	Pn	18 06 30.8	+1.3
	baz=196						
449A	Pace	19.10	360	P	Pn	18 06 30.4	+0.2
	baz=179						
542A	Morse	19.14	346	P	Pn	18 06 31.5	+0.8
	baz=163						
450A	Crestview	19.15	1	P	Pn	18 06 31.8	+0.9
	baz=181						
447A	Lucedale	19.19	356	P	Pn	18 06 32.8	+1.6
	baz=175,SNR=6.6						
541A	Lake Charles	19.24	344	P	Pn	18 06 32.5	+0.6
	baz=161						
541A	Lake Charles	19.24	344	*e*P	Pn	18 06 33.3	+1.4
	comp=Z,245nm,0.9s						
446A	Poplarville	19.24	354	P	Pn	18 06 32.7	+0.8
	baz=173						
452A	Marianna	19.27	5	P	Pn	18 06 33.8	+1.5
	baz=186,SNR=8.6						
448A	Bay Minette	19.28	358	P	Pn	18 06 33.3	+0.9
	baz=178						
445A	Amite	19.30	352	P	Pn	18 06 33.8	+1.2
	baz=170						
454A	Quitman	19.33	9	P	Pn	18 06 34.4	+1.4
	baz=190,SNR=11						
444A	Pine Grove	19.34	351	P	Pn	18 06 34.6	+1.4
	baz=169,SNR=8.1						
453A	Whigham	19.37	7	P	Pn	18 06 35.6	+2.1
	baz=188,SNR=10						
453A	Whigham	19.37	7	*e*P	Pn	18 06 35.7	+2.1
	comp=Z,108nm,0.9s						
455A	Stateville	19.46	11	P	Pn	18 06 35.2	+0.7
	baz=192,SNR=12						
BRAL	Brewton	19.51	0	P	Pn	18 06 35.8	+0.7
	baz=180,SNR=7.9						
BRAL	Brewton	19.51	0	*e*P	P	18 06 33.0	-0.7
	comp=Z,224nm,1.2s						
443A	Delano Plantat	19.58	348	P	Pn	18 06 36.8	+0.8
	baz=166,SNR=7.7						
456A	Hilliard	19.65	13	P	Pn	18 06 37.6	+0.9
	baz=195						
351A	Pinckard	19.66	4	P	Pn	18 06 38.4	+1.4
	baz=184,SNR=9.8						
442A	Mamou	19.67	346	P	Pn	18 06 38.5	+1.5
	baz=164,SNR=6.0						
349A	Repton	19.69	360	P	Pn	18 06 38.3	+1.0
	baz=180,SNR=20						
348A	Jackson	19.76	358	P	Pn	18 06 39.2	+1.0
	baz=178,SNR=14						
348A	Jackson	19.76	358	*e*P	Pn	18 06 38.6	+0.4
	comp=Z,243nm,0.9s						
350A	Dozier	19.77	2	P	Pn	18 06 39.0	+0.7
	baz=182,SNR=6.3						
347A	Saraland	19.78	356	P	Pn	18 06 39.2	+0.8
	baz=176,SNR=14						
345A	Thompson Farm,	19.83	353	P	Pn	18 06 39.1	+0.2
	baz=171,SNR=5.5						
346A	Big Creek Wild	19.84	354	P	Pn	18 06 39.8	+0.8
	baz=173,SNR=10.0						
346A	Big Creek Wild	19.84	354	*e*P	Pn	18 06 39.7	+0.6
	comp=Z,122nm,0.8s						
353A	Camilla	19.87	7	P	Pn	18 06 40.0	+0.6
	baz=188,SNR=24						
441A	DeRidder	19.89	345	P	Pn	18 06 41.6	+1.9
	baz=162,SNR=9.5						
352A	Blakely	19.92	6	P	Pn	18 06 41.1	+1.1
	baz=186,SNR=20						
352A	Blakely	19.92	6	*e*P	Pn	18 06 40.9	+0.8
	comp=Z,87nm,0.8s						
HKT	Hockley	20.00	337	*e*P	P	18 06 39.7	+0.7
	comp=Z,99nm,1.4s						
HKT	Hockley	20.00	337	*e*P	P	18 06 39.7	+0.7
HKT				pmax	pmax		
	comp=Z,99nm,1.4s						
TIGA	Tifton	20.05	9	P	Pn	18 06 42.4	+0.8
	baz=190,SNR=9.1						
344A	Westbrook Farm	20.07	351	P	Pn	18 06 42.3	+0.6
	baz=169,SNR=17						
344A	Westbrook Farm	20.07	351	*e*P	Pn	18 06 41.7	0.0
	comp=Z,148nm,0.9s						
355A	Pearson	20.08	11	P	Pn	18 06 41.9	0.0
	baz=192						
833A	Chaparral WMA,	20.23	327	P	P	18 06 42.3	+0.6
	baz=143,SNR=23						
833A	Chaparral WMA,	20.23	327	*e*P	P	18 06 42.2	+0.6
	comp=Z,186nm,1.0s						
342A	Flagon Creek P	20.29	347	P	Pn	18 06 44.3	0.0
	baz=165,SNR=18						
342A	Flagon Creek P	20.29	347	*e*P	Pn	18 06 44.3	0.0
	comp=Z,200nm,0.8s						
249A	Camden	20.31	0	P	Pn	18 06 44.6	0.0
	baz=180,SNR=30						
250A	Grady	20.33	2	P	Pn	18 06 44.9	+0.1
	baz=182,SNR=13						
250A	Grady	20.33	2	*e*P	Pn	18 06 44.9	0.0
	comp=Z,96nm,1.0s						
247A	Quitman	20.43	356	P	Pn	18 06 46.0	0.0
	baz=176,SNR=17						
248A	Dixon Mills	20.44	359	P	Pn	18 06 46.1	+0.1
	baz=178,SNR=23						
357A	Townsend	20.44	14	P	Pn	18 06 47.4	+1.2
	baz=196						
341A	Kurthwood	20.44	345	P	Pn	18 06 46.1	-0.1
	baz=163,SNR=121						
341A	Kurthwood	20.44	345	*e*P	Pn	18 06 45.7	-0.4
	comp=Z,490nm,0.9s						
252A	Lumpkin	20.45	6	P	Pn	18 06 46.4	+0.2
	baz=186,SNR=35						
251A	Midway	20.49	4	P	Pn	18 06 46.6	-0.1
	baz=184,SNR=26						
ATAH	Atahualpa	20.52	154	P	Pn	18 06 48.0	+0.4
	comp=Z,8.4nm,0.9s,baz=321,slow=13,SNR=6.9						
ATAH				LR	LR	18 13 49.0	
	comp=Z,1µm,18.1s,baz=339,slow=34						
245A	Little AP, Sta	20.52	353	P	Pn	18 06 46.6	-0.5
	baz=172,SNR=16						
254A	Abbeville	20.59	9	P	Pn	18 06 47.3	-0.6
	baz=190,SNR=22						
243A	Waterproof	20.61	349	P	Pn	18 06 47.6	-0.4
	baz=168,SNR=11						
244A	Avery, Jackson	20.64	351	P	P	18 06 47.0	+1.0
	baz=170						
255A	Hazlehurst	20.72	11	P	Pn	18 06 49.6	+0.3
	baz=193,SNR=6.8						
255A	Hazlehurst	20.72	11	*e*P	P	18 06 48.0	+1.1
	comp=Z,282nm,1.8s						
256A	Glennville	20.89	13	P	Pn	18 06 51.6	+0.3
	baz=194						
242A	Grayson	20.91	348	P	Pn	18 06 50.7	-0.9
	baz=166,SNR=22						
151A	Opelika	20.93	4	P	Pn	18 06 51.3	-0.5
	baz=185,SNR=37						
149A	Jones	20.93	1	P	Pn	18 06 51.3	-0.6
	baz=181,SNR=8.5						
150A	Eclectic	20.97	3	P	Pn	18 06 52.3	0.0
	baz=183,SNR=74						
148A	Greensboro	20.98	359	P	Pn	18 06 51.9	-0.6
	baz=178,SNR=45						
147A	Livingston	21.03	357	P	P	18 06 52.8	+2.5
	baz=177,SNR=11						
147A	Livingston	21.03	357	*e*P	P	18 06 51.7	+1.4
	comp=Z,182nm,0.8s						
241A	Mo Tay, Goldon	21.04	346	P	P	18 06 52.8	+2.4
	baz=164						
146A	Union	21.04	356	P	P	18 06 52.0	+1.5
	baz=174,SNR=8.7						
145A	Houston Renfro	21.09	353	P	P	18 06 52.6	+1.7
	baz=172						
152A	Waverly Hall	21.12	6	P	P	18 06 53.2	+1.9
	baz=186,SNR=55						
153A	Fort Valley	21.20	8	P	P	18 06 53.8	+1.6
	baz=189,SNR=6.2						
NATX	Nacogdoches	21.26	342	P	P	18 06 54.1	+1.4
	baz=159,SNR=16						
NATX	Nacogdoches	21.26	342	*e*P	P	18 06 53.9	+1.1
	comp=Z,106nm,0.8s						
240A	Hunter Patters	21.27	344	P	P	18 06 54.1	+1.2
	baz=162,SNR=8.5						
240A	Hunter Patters	21.27	344	*e*P	P	18 06 54.0	+1.2
	comp=Z,151nm,0.8s						
154A	Montrose	21.27	9	P	P	18 06 54.9	+2.1
	baz=191						
SJG	San Juan	21.30	70	P	P	18 06 44.8	-8.5
	comp=Z,7.1nm,0.7s,baz=233,slow=15,SNR=2.3						
142A	Monroe	21.34	349	P	P	18 06 56.1	+2.5
	baz=167						
LRAL	Lakeview Retre	21.37	0	P	P	18 06 55.6	+1.7
	baz=180,SNR=69						
LRAL	Lakeview Retre	21.37	0	*e*P	P	18 06 55.2	+1.3
	comp=Z,76nm,0.8s						
155A	Kite	21.39	11	P	P	18 06 56.8	+2.6
	baz=192,SNR=12						
143A	Socs Landing,	21.40	350	P	P	18 06 56.3	+2.1
	baz=168						
143A	Socs Landing,	21.40	350	*e*P	P	18 06 54.7	+0.5
	comp=Z,78nm,1.0s						
435B	Jarrell	21.43	335	P	P	18 06 56.5	+1.9
	baz=151						
435B	Jarrell	21.43	335	*e*P	P	18 06 55.3	+0.7
	comp=Z,41nm,0.9s						
Z49A	Columbiana	21.53	1	P	P	18 06 57.3	+1.6
	baz=181,SNR=48						
Z47A	Carrollton	21.55	358	P	P	18 06 57.3	+1.5
	baz=177,SNR=26						
Z46A	Louisville	21.59	356	P	P	18 06 58.2	+2.0
	baz=175,SNR=16						
141A	Papa Simpson,	21.60	347	P	P	18 06 58.0	+1.7
	baz=164,SNR=10						
Z50A	Ashland	21.62	3	P	P	18 06 58.3	+1.7
	baz=183,SNR=49						
Z50A	Ashland	21.62	3	*e*P	P	18 06 57.9	+1.4
	comp=Z,94nm,1.0s						
156A	Sylvania	21.62	13	P	P	18 06 59.5	+2.9
	baz=195,SNR=6.3						
Z52A	Williamson	21.67	6	P	P	18 06 59.4	+2.3
	baz=187,SNR=22						
Z48A	Northport	21.71	359	P	P	18 06 58.7	+1.1
	baz=179,SNR=57						
Z51A	Franklin	21.72	4	P	P	18 07 01.2	+3.5
	baz=185,SNR=30						
140A	Cam and Jess,	21.79	345	P	P	18 06 59.1	+0.6
	baz=162						
140A	Cam and Jess,	21.79	345	*e*P	P	18 06 59.8	+1.3
	comp=Z,158nm,1.2s						
Z44A	Pea Ridge, Bel	21.82	353	P	P	18 06 59.6	+0.9
	baz=171,SNR=18						
Z45A	Winona	21.83	354	P	P	18 06 60.0	+1.2
	baz=173,SNR=11						
Z45A	Winona	21.83	354	*e*P	P	18 07 00.1	+1.2
	comp=Z,78nm,0.8s						
Z53A	Monticello	21.86	8	P	P	18 07 01.1	+2.0
	baz=189,SNR=50						
Z54A	Sparta	21.93	10	P	P	18 07 02.2	+2.3
	baz=191,SNR=17						
GOGA	Godfrey	22.00	8	P	P	18 07 02.7	+2.0
	baz=189,SNR=64						
GOGA	Godfrey	22.00	8	*e*P	P	18 07 01.7	+1.0
	comp=Z,85nm,0.9s						
GOGA	Godfrey	22.00	8	*e*P	P	18 07 01.7	+1.0
GOGA				pmax	pmax		
	comp=Z,85nm,0.9s						
Z55A	Blythe	22.04	11	P	P	18 07 03.4	+2.3
	baz=193						
Z42A	Norrel Spur, H	22.05	349	P	P	18 07 01.9	+0.7
	baz=167						
PCRV	Puerto La Cruz	22.15	91	P	P	18 07 01.4	-1.1
	comp=Z,66nm,0.8s,baz=244,slow=4.3,SNR=17						
JCT	Junction City	22.18	330	P	P	18 07 02.8	+0.1
	baz=145,SNR=8.4						
JCT	Junction City	22.18	330	*e*P	P	18 07 02.6	-0.2
	comp=Z,27nm,0.8s						
JCT	Junction City	22.18	330	*e*P	P	18 07 02.6	-0.2
JCT				pmax	pmax		
	comp=Z,27nm,0.8s						
Y49A	Blount Mountai	22.20	2	P	P	18 07 04.0	+1.2
	baz=182,SNR=81						
Y49A	Blount Mountai	22.20	2	*e*P	P	18 07 03.6	+0.8
	comp=Z,97nm,0.8s						
Z41A	Richland Creek	22.20	347	P	P	18 07 04.0	+1.2
	baz=165,SNR=22						
Z41A	Richland Creek	22.20	347	*e*P	P	18 07 03.7	+0.8
	comp=Z,113nm,0.8s						
Y47A	UCPARC, Winfie	22.24	358	P	P	18 07 04.6	+1.3
	baz=178,SNR=15						
Y48A	Jasper	22.24	360	P	P	18 07 04.3	+1.0
	baz=180,SNR=47						
Y50A	Piedmont	22.26	3	P	P	18 07 04.7	+1.2
	baz=183,SNR=46						
Y46A	Houston	22.27	356	P	P	18 07 04.3	+0.8
	baz=175,SNR=46						
CSU	Charleston Sou	22.29	16	*e*P	P	18 07 04.6	+0.8
Y45A	Yeager Farm, C	22.30	355	P	P	18 07 05.4	+1.4
	baz=174,SNR=15						
Y51A	Rockmart	22.31	5	P	P	18 07 05.5	+1.5
	baz=185,SNR=75						
NHSC	New Hope	22.37	16	P	P	18 07 06.4	+1.7
	baz=198,SNR=9.4						
NHSC	New Hope	22.37	16	*e*P	P	18 07 05.8	+1.1
	comp=Z,85nm,1.0s						
Y52A	Lilburn	22.37	7	P	P	18 07 06.5	+1.7
	baz=188,SNR=59						
Y52A	Lilburn	22.37	7	*e*P	P	18 07 06.0	+1.3
	comp=Z,127nm,0.9s						
Y53A	Monroe	22.42	8	P	P	18 07 07.1	+1.9
	baz=189,SNR=47						
WHTX	Lake Whitney,	22.44	337	P	P	18 07 05.6	+0.2
	baz=152,SNR=15						
WHTX	Lake Whitney,	22.44	337	*e*P	P	18 07 05.7	+0.2
	comp=Z,46nm,0.8s						
STVI	Saint Thomas	22.46	70	*e*P	P	18 07 06.1	+0.3
	comp=Z,60nm,1.0s						
Y54A	Tignall	22.57	10	P	P	18 07 08.7	+2.0
	baz=191,SNR=42						
Y42A	Garnett, Star	22.57	350	P	P	18 07 07.4	+0.6
	baz=168						
Y41A	Eaglette Beard	22.77	348	P	P	18 07 09.1	+0.2
	baz=166,SNR=15						
X48A	Hartselle	22.78	0	P	P	18 07 09.4	+0.4
	baz=180,SNR=37						
X48A	Hartselle	22.78	0	*e*P	P	18 07 08.5	-0.5
	comp=Z,47nm,0.8s						
X50B	Fort Payne	22.83	3	P	P	18 07 10.2	+0.7
	baz=184,SNR=28						
X45A	UM Field Stati	22.84	355	P	P	18 07 09.8	+0.1
	baz=174,SNR=21						
X49A	Woodville	22.85	2	P	P	18 07 10.6	+0.8
	baz=182,SNR=71						
X47A	Russelville	22.86	358	P	P	18 07 09.8	0.0
	baz=178,SNR=58						
X46A	Booneville	22.92	357	P	P	18 07 10.8	+0.3
	baz=176,SNR=8.2						
OXF	Oxford	22.93	355	P	P	18 07 10.6	0.0
	baz=174						
OXF	Oxford	22.93	355	*e*P	P	18 07 10.2	-0.4
	comp=Z,197nm,1.0s						
OXF	Oxford	22.93	355	*e*P	P	18 07 10.2	-0.4
OXF				pmax	pmax		
	comp=Z,197nm,1.0s						
X51A	Calhoun	22.99	5	P	P	18 07 12.4	+1.2
	baz=185,SNR=13						
X44A	Crenshaw	22.99	354	P	P	18 07 10.9	-0.3
	baz=172						
Y40A	Okolona	23.03	347	P	P	18 07 11.9	+0.3
	baz=164,SNR=8.0						
X43A	Marvell	23.10	352	P	P	18 07 12.8	+0.6
	baz=170						
X43A	Marvell	23.10	352	*e*P	P	18 07 12.7	+0.4
	comp=Z,46nm,0.9s						
X53A	Estanollee	23.10	8	P	P	18 07 13.0	+0.7
	baz=189,SNR=18						
X52A	Dahlonega	23.12	7	P	P	18 07 13.3	+0.7
	baz=188,SNR=31						
JSC	Jenkinsville	23.24	12	*e*P	P	18 07 15.5	+1.8
	comp=Z,53nm,1.1s						
JSC	Jenkinsville	23.24	12	*e*P	P	18 07 15.5	+1.8
JSC				pmax	pmax		
	comp=Z,53nm,1.1s						
X42A	Stuttgart	23.24	351	P	P	18 07 14.2	+0.5
	baz=169						
PLAL	Pickwick Lake	23.33	358	*e*P	P	18 07 14.1	-0.5
	comp=Z,49nm,0.9s						
X41A	Kaden, Bauxite	23.34	349	P	P	18 07 15.2	+0.5
	baz=166,SNR=10.0						
X40A	Basin Creek Fa	23.40	348	P	P	18 07 15.4	+0.1
	baz=166,SNR=19						
X40A	Basin Creek Fa	23.40	348	*e*P	P	18 07 15.3	+0.1
	comp=Z,61nm,1.4s						
TXAR	Lajitas Array	23.44	321	P	P	18 07 16.2	+0.3
	comp=Z,13nm,0.7s,baz=134,slow=10,SNR=123						
TXAR				PcP	PcP	18 11 02.1	+0.3
	comp=Z,3.9nm,0.9s,baz=134,slow=3.6,SNR=6.1						
TXAR				ScP	ScP	18 14 41.3	+3.0
	comp=Z,0.6nm,0.8s,baz=132,slow=3.5,SNR=4.1						
TX31	Lajitas Ar. Si	23.44	321	*e*P	P	18 07 16.3	+0.4
W49A	Belvidere	23.46	2	P	P	18 07 16.0	+0.1
	baz=182,SNR=62						
W48A	Pulaski	23.47	0	P	P	18 07 16.3	+0.3
	baz=180,SNR=129						
W46A	Michie	23.49	357	P	P	18 07 16.2	+0.1
	baz=177,SNR=6.3						
W45A	Hickory Valley	23.56	356	P	P	18 07 16.5	-0.4
	baz=175,SNR=6.6						
SWET	Sewanee	23.57	2	*e*P	P	18 07 17.3	+0.3
	comp=Z,100nm,1.1s						
W47A	Westpoint	23.58	359	P	P	18 07 16.9	-0.2
	baz=179,SNR=98						
UALR	University of	23.58	349	*e*P	P	18 07 17.0	-0.1
	comp=Z,84nm,1.0s						
W50A	Signal Mountai	23.59	4	P	P	18 07 17.8	+0.6
	baz=184,SNR=66						
W50A	Signal Mountai	23.59	4	*e*P	P	18 07 17.4	+0.2
	comp=Z,106nm,0.8s						
W51A	Cleveland	23.59	5	P	P	18 07 17.6	+0.5
	baz=186,SNR=53						
W52A	Murphy	23.60	7	P	P	18 07 17.8	+0.5
	baz=188,SNR=14						
W52A	Murphy	23.60	7	*e*P	P	18 07 18.6	+1.3
	comp=Z,58nm,0.8s						
MIAR	Mount Ida	23.61	347	P	P	18 07 17.2	-0.2
	baz=164,SNR=57						
MIAR	Mount Ida	23.61	347	*e*P	P	18 07 16.7	-0.7
	comp=Z,51nm,0.8s						
MIAR	Mount Ida	23.61	347	*e*P	P	18 07 16.7	-0.7
MIAR				pmax	pmax		
	comp=Z,51nm,0.8s						
BG3	Lake Jocassee	23.63	9	*e*P	P	18 07 18.2	+0.6
	comp=Z,54nm,0.8s						
W43A	Forest City	23.64	353	P	P	18 07 17.9	+0.3
	baz=171						
X39A	Fountain Ranch	23.71	346	P	P	18 07 18.5	+0.2
	baz=163,SNR=31						
W53A	Cullowhee	23.77	8	P	P	18 07 20.4	+1.3
	baz=189,SNR=11						
CPCT	Cooper Cave	23.90	5	*e*P	P	18 07 20.3	+0.2
	comp=Z,82nm,0.9s						
ABTX	Abilene, Hawle	23.90	333	P	P	18 07 19.7	-0.5
	baz=148,SNR=13						
ABTX	Abilene, Hawle	23.90	333	*e*P	P	18 07 19.2	-1.0
	comp=Z,133nm,1.8s						
W41B	Gary Mavity, V	23.95	350	P	P	18 07 20.0	-0.6
	baz=167,SNR=40						
W41B	Gary Mavity, V	23.95	350	*e*P	P	18 07 20.2	-0.3
	comp=Z,62nm,1.1s						
KMSC	Kings Mountain	24.06	12	P	P	18 07 21.8	+0.2
	baz=194,SNR=18						
V48A	Smith Brothers	24.07	1	P	P	18 07 21.7	0.0
	baz=180,SNR=30						
V48A	Smith Brothers	24.07	1	*e*P	P	18 07 21.9	+0.2
	comp=Z,51nm,0.8s						
V50A	Pikevile	24.07	4	P	P	18 07 21.5	-0.2
	baz=185						
WHAR	Wooly Hollow	24.07	350	*e*P	P	18 07 21.1	-0.7
	comp=Z,48nm,0.9s						
HBAR	Harrisburg	24.09	353	*e*P	P	18 07 21.2	-0.7
	comp=Z,133nm,0.9s						
V49A	McMinnville	24.12	2	P	P	18 07 21.9	-0.2
	baz=183,SNR=54						
V45A	Humboldt	24.12	356	P	P	18 07 21.8	-0.4
	baz=175						
W40A	Ferguson Farm,	24.13	348	P	P	18 07 22.2	0.0
	baz=165,SNR=19						
W40A	Ferguson Farm,	24.13	348	*e*P	P	18 07 22.4	+0.2
	comp=Z,141nm,1.5s						
V46A	Holladay	24.14	358	P	P	18 07 21.0	-1.4
	baz=177,SNR=20						
V47A	Nunnelly	24.16	359	P	P	18 07 21.7	-0.7
	baz=179,SNR=50						
TKL	Tuckaleechee C	24.18	7	P	P	18 07 23.5	+0.8
	comp=Z,62nm,0.8s,baz=183,slow=10,SNR=61						
TKL	Tuckaleechee C	24.18	7	*e*P	P	18 07 23.6	+0.8
	comp=Z,102nm,1.0s						
TKL	Tuckaleechee C	24.18	7	*e*P	P	18 07 23.6	+0.9
TKL				pmax	pmax		
	comp=Z,102nm,1.0s						
V51A	Loudon	24.26	6	P	P	18 07 23.9	+0.4
	baz=186,SNR=36						
V51A	Loudon	24.26	6	*e*P	P	18 07 24.4	+0.9
	comp=Z,76nm,0.8s						
W39A	Magazine	24.28	347	P	P	18 07 23.8	+0.1
	baz=164,SNR=21						
W39A	Magazine	24.28	347	*e*P	P	18 07 23.8	+0.1
	comp=Z,31nm,0.9s						
V53A	Saluda	24.32	9	P	P	18 07 25.0	+1.0
	baz=190,SNR=47						
V53A	Saluda	24.32	9	*e*P	P	18 07 25.0	+1.0
	comp=Z,65nm,0.9s						
V52A	Sevierville	24.38	7	P	P	18 07 25.2	+0.6
	baz=188,SNR=16						
V52A	Sevierville	24.38	7	*e*P	P	18 07 22.0	-2.6
	comp=Z,35nm,0.9s						
V42A	Cord	24.44	352	P	P	18 07 23.7	-1.4
	baz=170,SNR=30						
WVT	Waverly	24.46	359	P	P	18 07 24.3	-1.0
	baz=178						
WVT	Waverly	24.46	359	*e*P	P	18 07 24.3	-1.0
	comp=Z,18nm,1.0s						
WVT	Waverly	24.46	359	*e*P	P	18 07 24.3	-1.0
WVT				pmax	pmax		
	comp=Z,19nm,1.0s						
V41A	Mountainview	24.53	350	P	P	18 07 25.1	-0.9
	baz=168,SNR=64						
V40A	Witts Springs	24.67	349	P	P	18 07 26.5	-0.8
	baz=166,SNR=41						
V40A	Witts Springs	24.67	349	*e*P	P	18 07 25.8	-1.5
	comp=Z,48nm,0.8s						
U46A	Springville	24.70	358	P	P	18 07 26.6	-0.8
	baz=177,SNR=35						
U45A	Rockin P Farm,	24.72	357	P	P	18 07 27.0	-0.6
	baz=176,SNR=6.2						
U47A	Clarksville	24.77	360	P	P	18 07 27.0	-1.0
	baz=179,SNR=27						
U50A	Jamestown	24.83	4	P	P	18 07 28.9	+0.3
	baz=185,SNR=31						
U48A	Cassie Pea, Po	24.84	1	P	P	18 07 28.7	0.0
	baz=181,SNR=17						
U51A	La Follette	24.86	6	P	P	18 07 29.4	+0.4
	baz=187,SNR=18						
U49A	Red Boiling Sp	24.87	3	P	P	18 07 28.9	-0.1
	baz=183,SNR=51						
U43A	Rector	24.87	354	P	P	18 07 28.3	-0.7
	baz=172,SNR=8.4						
V39A	Pettigrew	24.87	347	P	P	18 07 28.7	-0.4
	baz=164,SNR=51						
U44A	Portageville	24.93	355	P	P	18 07 29.1	-0.5
	baz=174						
U42A	Revenden	24.95	352	P	P	18 07 28.6	-1.1
	baz=170,SNR=31						
U52A	Thorn Hill	24.95	7	P	P	18 07 30.3	+0.5
	baz=188,SNR=17						
U53A	Fall Branch	25.03	9	P	P	18 07 31.1	+0.6
	baz=190,SNR=20						
U41A	Viola	25.04	351	P	P	18 07 29.7	-0.9
	baz=169,SNR=18						
TZTN	Tazewell	25.08	7	P	P	18 07 31.3	+0.4
	baz=188,SNR=9.9						
TZTN	Tazewell	25.08	7	*e*P	P	18 07 31.8	+0.9
	comp=Z,21nm,0.9s						
U40A	Yellville	25.21	349	P	P	18 07 31.6	-0.6
	baz=166,SNR=54						
PBMO	Poplar Bluff	25.28	354	*e*P	P	18 07 32.0	-0.6
	comp=Z,53nm,0.8s						
LPIG	La Paz	25.28	303	LR	LR	18 17 55.9	
	comp=Z,466nm,18.7s,baz=113,slow=37						
T47A	Sharon Grove	25.31	0	P	P	18 07 32.6	-0.4
	baz=180,SNR=35						
T47A	Sharon Grove	25.31	0	*e*P	P	18 07 32.4	-0.6
	comp=Z,62nm,0.8s						
U39A	Green Forest	25.36	348	P	P	18 07 33.1	-0.4
	baz=165,SNR=21						
T46A	Princeton	25.37	359	P	P	18 07 33.0	-0.5
	baz=178,SNR=27						
WMOK	Wichita Mounta	25.38	337	P	P	18 07 33.4	-0.3
	baz=152,SNR=50						
WMOK	Wichita Mounta	25.38	337	*e*P	P	18 07 33.2	-0.4
	comp=Z,76nm,1.1s						
WMOK	Wichita Mounta	25.38	337	*e*P	P	18 07 33.3	-0.4
WMOK				pmax	pmax		
	comp=Z,76nm,1.1s						
T50A	Nancy	25.43	4	P	P	18 07 34.0	0.0
	baz=185,SNR=14						
T48A	Bowling Green	25.44	1	P	P	18 07 34.0	-0.1
	baz=181,SNR=7.9						
T51A	Gray	25.45	6	P	P	18 07 34.6	+0.3

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      baz=187,SNR=26
TUL1  Leonard          25.47 344  P     P      18 07 34.3 -0.1
      baz=160,SNR=59
TUL1  Leonard          25.47 344  eP    P      18 07 34.3 -0.1
      comp=Z,205nm,0.9s
T49A  Edmonton         25.47   3  P     P      18 07 34.3 -0.1
      baz=183,SNR=36
T49A  Edmonton         25.47   3  eP    P      18 07 34.5  0.0
      comp=Z,57nm,1.0s
T44A  Benton           25.50 355  P     P      18 07 34.1 -0.6
      baz=174,SNR=16
NNA   Nana             25.54 156  P     P      18 07 38.9 +3.7
      comp=Z,12nm,0.7s,baz=298,slow=7.9,SNR=4.8
NNA                               LR    LR     18 16 19.1
      comp=Z,321nm,18.2s,baz=348,slow=33
T43A  Greenville       25.56 354  P     P      18 07 34.6 -0.7
      baz=173,SNR=35
T42A  Van Buren        25.60 353  P     P      18 07 34.4 -1.2
      baz=171,SNR=40
T42A  Van Buren        25.60 353  eP    P      18 07 34.4 -1.2
      comp=Z,36nm,0.8s
T41A  Mountain View    25.70 351  P     P      18 07 35.5 -1.0
      baz=169,SNR=38
T52A  Hallie           25.71   8  P     P      18 07 37.0 +0.4
      baz=189,SNR=6.8
S47A  Hartford         25.92   0  P     P      18 07 37.6 -0.8
      baz=180
T40A  Mansfield        25.93 350  P     P      18 07 37.8 -0.8
      baz=168
T39A  Clever           25.96 349  P     P      18 07 38.1 -0.8
      baz=166,SNR=22
S48A  Wiedeman Farm,   26.00   2  P     P      18 07 38.5 -0.7
      baz=182,SNR=9.9
S46A  Don Dixon Farm   26.01 359  P     P      18 07 38.5 -0.8
      baz=178,SNR=10.0
S43A  Fulton Ridge,    26.03 355  P     P      18 07 38.3 -1.1
      baz=173,SNR=18
S45A  Carrier Mills    26.03 357  P     P      18 07 38.6 -0.9
      baz=176
S44A  Carbondale       26.09 356  P     P      18 07 39.4 -0.6
      baz=175,SNR=14
SIUC  Southern Illin   26.10 356  eP    P      18 07 39.4 -0.7
      comp=Z,60nm,0.9s
S50A  Richmond         26.12   5  P     P      18 07 40.2  0.0
      baz=186,SNR=8.1
S51A  Beattyville      26.16   6  P     P      18 07 40.9 +0.2
      baz=188,SNR=18
S51A  Beattyville      26.16   6  eP    P      18 07 41.0 +0.4
      comp=Z,27nm,0.8s
S49A  Springfield      26.16   3  P     P      18 07 40.4 -0.2
      baz=184,SNR=9.5
T38A  Diamond          26.16 347  P     P      18 07 40.0 -0.7
      baz=164,SNR=23
MNTX  Cornudas Mount   26.16 323  P     P      18 07 40.3 -0.5
      baz=136,SNR=22
MNTX  Cornudas Mount   26.16 323  eP    P      18 07 40.6 -0.2
      comp=Z,66nm,1.8s
S41A  Jillco Farms,    26.24 352  P     P      18 07 40.4 -1.0
      baz=170,SNR=26
BLA   Blacksburg       26.24  12  P     P      18 07 42.3 +0.9
      baz=195,SNR=7.2
BLA   Blacksburg       26.24  12  eP    P      18 07 42.9 +1.4
      comp=Z,42nm,1.1s
BLA   Blacksburg       26.24  12  P     P      18 07 42.9 +1.4
BLA                               pmax  pmax
      comp=Z,42nm,1.1s
S52A  Salyersville     26.26   7  P     P      18 07 41.7 +0.2
      baz=189,SNR=6.9
USIN  University of    26.29 359  eP    P      18 07 41.7 -0.2
      comp=Z,30nm,0.9s
S42A  Caledonia        26.30 353  P     P      18 07 40.5 -1.4
      baz=172,SNR=14
S40A  Lebanon          26.36 350  P     P      18 07 41.5 -1.1
      baz=168,SNR=14
FVM   French Village   26.47 354  eP    P      18 07 44.0 +0.6
      comp=Z,11nm,0.9s
MSTX  Muleshoe         26.48 330  P     P      18 07 43.3 -0.4
      baz=144,SNR=34
MSTX  Muleshoe         26.48 330  eP    P      18 07 43.3 -0.4
      comp=Z,70nm,1.0s
R46A  Gibon Southern   26.54 359  P     P      18 07 43.4 -0.7
      baz=179,SNR=10.0
WCI   Wyandotte Cave   26.56   2  P     P      18 07 43.8 -0.4
      baz=182
WCI   Wyandotte Cave   26.56   2  eP    P      18 07 42.8 -1.5
      comp=Z,153nm,0.8s
WCI   Wyandotte Cave   26.56   2  eP    P      18 07 42.8 -1.5
WCI                               pmax  pmax
      comp=Z,153nm,0.8s
S39A  Bolivar          26.60 349  P     P      18 07 43.4 -1.2
      baz=166,SNR=65
S39A  Bolivar          26.60 349  eP    P      18 07 43.6 -1.0
      comp=Z,66nm,0.8s
R47A  Wooly Knot Far   26.62   1  P     P      18 07 43.9 -0.9
      baz=181,SNR=9.7
R44A  Waltonville      26.62 357  P     P      18 07 44.3 -0.6
      baz=176,SNR=13
CCM   Cathedral Cave   26.63 353  P     P      18 07 44.6 -0.3
      baz=171
CCM   Cathedral Cave   26.63 353  eP    P      18 07 45.0 +0.1
      comp=Z,73nm,1.1s
CCM   Cathedral Cave   26.63 353  eP    P      18 07 45.0 +0.1
CCM                               pmax  pmax
      comp=Z,73nm,1.1s
R45A  Skylar, Fairfi   26.63 358  P     P      18 07 44.4 -0.5
      baz=177,SNR=9.5
S38A  Stockton         26.65 348  P     P      18 07 44.3 -0.9
      baz=165,SNR=17
R49A  Shelbyville      26.67   3  P     P      18 07 44.9 -0.4
      baz=184,SNR=6.4
AMTX  Amarillo         26.71 333  P     P      18 07 45.1 -0.7
      baz=147
AMTX  Amarillo         26.71 333  eP    P      18 07 43.2 -2.6
      comp=Z,76nm,1.3s
R43A  Red Bud          26.71 355  P     P      18 07 45.1 -0.6
      baz=174,SNR=9.0
R50A  Paris            26.72   5  P     P      18 07 45.7  0.0
      baz=186,SNR=8.1
R48A  Northridge Ran   26.75   2  P     P      18 07 45.4 -0.6
      baz=182
R42A  Luebbering       26.80 354  P     P      18 07 46.1 -0.4
      baz=172,SNR=6.8
R51A  Hillsboro        26.81   6  P     P      18 07 46.6  0.0
      baz=188,SNR=19
R41A  Rosebud          26.89 353  P     P      18 07 46.0 -1.2
      baz=171,SNR=22
R52A  Catlettsburg     26.96   8  P     P      18 07 47.8 -0.1
      baz=190
R40A  Maddies Statio   27.00 351  P     P      18 07 47.1 -1.2
      baz=169,SNR=14
R40A  Maddies Statio   27.00 351  eP    P      18 07 46.9 -1.3
      comp=Z,36nm,1.2s
R39A  Chumby, Stover   27.15 350  P     P      18 07 48.4 -1.2
      baz=167,SNR=22
R38A  Fenwick Farm,    27.19 348  P     P      18 07 48.8 -1.1
      baz=165,SNR=28
Q45A  Warren Harvey,   27.23 358  P     P      18 07 49.8 -0.4
      baz=178,SNR=15
Q47A  Bedord North L   27.26   1  P     P      18 07 50.1 -0.5
      baz=181,SNR=14
Q44A  Meyer Farm, Va   27.27 357  P     P      18 07 49.8 -0.8
      baz=176,SNR=16
Q48A  North Vernon     27.28   2  P     P      18 07 50.0 -0.7
      baz=183,SNR=10
Q50A  Georgetown       27.31   5  P     P      18 07 50.5 -0.5
      baz=186
Q43A  New Douglas      27.36 356  P     P      18 07 51.1 -0.3
      baz=174
Q49A  Aurora           27.40   4  P     P      18 07 51.4 -0.4
      baz=184,SNR=11
Q41A  Truxton          27.52 353  P     P      18 07 51.7 -1.1
      baz=171,SNR=9.2
Q51A  Peebles          27.55   6  P     P      18 07 53.4 +0.2
      baz=188,SNR=30
Q40A  Laux Farm, Aux   27.66 352  P     P      18 07 53.2 -1.0
      baz=169,SNR=7.1
P44A  Sand Creek, Wi   27.82 358  P     P      18 07 54.8 -0.8
      baz=177,SNR=6.9
P47A  Martinsville     27.82   1  P     P      18 07 54.7 -0.9
      baz=182,SNR=12
P48A  Milroy           27.82   3  P     P      18 07 54.6 -1.0
      baz=183,SNR=11
P45A  Graceland, Par   27.85 359  P     P      18 07 55.2 -0.7
      baz=178,SNR=6.3
Q39A  Willow Grove F   27.85 350  P     P      18 07 54.8 -1.1
      baz=168,SNR=14
Q38A  Cooks Store, C   27.88 349  P     P      18 07 55.2 -0.9
      baz=166,SNR=12
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CBN   Corbin Frederi   27.93  17  P     P      18 07 56.2 -0.3
      baz=200
CBN   Corbin Frederi   27.93  17  eP    P      18 07 58.3 +1.8
      comp=Z,36nm,0.7s
P46A  Rosedale         27.94 360  P     P      18 07 55.8 -0.8
      baz=180
P49A  Miami Univ. Ec   27.94   4  P     P      18 07 55.2 -1.4
      baz=185,SNR=7.2
Q37A  Longview Farm,   27.96 348  P     P      18 07 56.3 -0.6
      baz=164
P43A  Skaggs, Pawnee   28.04 356  P     P      18 07 56.2 -1.3
      baz=175
P42A  Winchester       28.05 355  P     P      18 07 56.9 -0.7
      baz=173,SNR=6.4
P50A  Jamestown        28.09   6  P     P      18 07 57.3 -0.7
      baz=187
P40A  Paris            28.19 352  P     P      18 07 57.8 -1.1
      baz=170,SNR=11
P40A  Paris            28.19 352  eP    P      18 07 57.0 -1.8
      comp=Z,50nm,1.6s
121A  Cookes Peak, D   28.20 321  P     P      18 08 00.2 +0.9
      baz=133
P41A  Barry, Barry     28.21 354  P     P      18 07 57.3 -1.8
      baz=172
P39B  Salisbury        28.25 351  P     P      18 07 58.0 -1.4
      baz=168,SNR=12
O44A  Mansfield        28.50 358  P     P      18 08 00.8 -0.8
      baz=177
P38A  Dawn             28.51 350  P     P      18 08 00.6 -1.2
      baz=167,SNR=24
P38A  Dawn             28.51 350  eP    P      18 08 00.4 -1.4
      comp=Z,58nm,1.0s
O47A  Sheridan         28.57   2  P     P      18 08 01.1 -1.1
      baz=182,SNR=14
O45A  Potomac          28.57 359  P     P      18 08 01.2 -1.1
      baz=179,SNR=7.2
O49A  Covington        28.61   5  P     P      18 08 02.0 -0.7
      baz=186,SNR=12
O41A  Passleys Farm,   28.63 354  P     P      18 08 01.5 -1.3
      baz=172,SNR=11
O48A  Farmland         28.63   3  P     P      18 08 01.8 -1.0
      baz=184,SNR=5.7
P37A  Lathrop          28.63 348  P     P      18 08 01.6 -1.2
      baz=165,SNR=6.3
O50A  Cable            28.64   6  P     P      18 08 02.5 -0.4
      baz=187,SNR=20
O43A  Sugar Creek Fa   28.67 357  P     P      18 08 02.8 -0.3
      baz=175
KSU1  Kansas State U   28.68 345  P     P      18 08 02.9 -0.4
      baz=160
KSU1  Kansas State U   28.68 345  eP    P      18 08 01.3 -2.0
      comp=Z,20nm,0.8s
SFIN  Lafayette        28.70   0  P     P      18 08 02.5 -1.0
      baz=180,SNR=8.5
SFIN  Lafayette        28.70   0  eP    P      18 08 02.4 -1.0
      comp=Z,23nm,0.8s
MCWV  Mont Chateau     28.72  12  P     P      18 08 04.2 +0.7
      baz=195
O40A  La Belle         28.75 352  P     P      18 08 02.5 -1.3
      baz=170,SNR=7.2
ACSO  Alum Creek Sta   28.79   7  P     P      18 08 04.5 +0.3
      baz=188,SNR=6.6
O39A  Kirksville       28.97 351  P     P      18 08 05.1 -0.7
      baz=169
N44A  Piper City       29.13 358  P     P      18 08 06.4 -0.8
      baz=178
O37A  Wolven Farm, M   29.15 349  P     P      18 08 06.3 -1.1
      baz=166,SNR=5.9
TASL  Snake Pit, Alb   29.15 326  P     P      18 08 08.5 +0.7
      baz=138,SNR=6.9
ANMO  Albuquerque      29.15 326  P     P      18 08 08.7 +0.9
      comp=Z,2.7nm,0.8s,baz=155,slow=8.4,SNR=13
ANMO                              PcP   PcP    18 11 16.3 +1.3
      comp=Z,2.3nm,0.9s,baz=152,slow=11,SNR=3.4
ANMO  Albuquerque      29.15 326  P     P      18 08 08.4 +0.7
      baz=138
ANMO  Albuquerque      29.15 326ceP     P      18 08 08.5 +0.7
ANMO                              pmax  pmax
      comp=Z,5.0nm,1.0s
TASM  ASL Pad, Albuq   29.15 326  P     P      18 08 08.3 +0.6
      baz=138,SNR=6.9
N45A  Kentland         29.17 359  P     P      18 08 06.6 -0.9
      baz=179,SNR=6.3
N41A  Harden Midland   29.21 354  P     P      18 08 06.4 -1.5
      baz=172,SNR=10
N41A  Harden Midland   29.21 354  eP    P      18 08 06.8 -1.1
      comp=Z,40nm,1.0s
N46A  Monticello       29.21   1  P     P      18 08 06.9 -1.0
      baz=181,SNR=20
N42A  Yates City       29.26 356  P     P      18 08 07.9 -0.4
      baz=174,SNR=5.9
N50A  Nevada           29.30   6  P     P      18 08 09.0 +0.2
      baz=188,SNR=6.8
N43A  Stutzman Famil   29.31 357  P     P      18 08 08.0 -0.9
      baz=176,SNR=10
N40A  Mertquake, Sal   29.46 353  P     P      18 08 08.9 -1.2
      baz=171,SNR=6.3
N39A  Derby Farms, D   29.57 352  P     P      18 08 10.4 -0.8
      baz=169,SNR=11
O56A  Blue Knob Stat   29.58  13  P     P      18 08 11.4 +0.2
      baz=197,SNR=11
PTGA  Pitinga          29.64 113  P     P      18 08 10.4 -1.7
      comp=Z,3.9nm,0.8s,baz=321,slow=7.8,SNR=8.2
M44A  Midewin, Midew   29.72 359  P     P      18 08 11.2 -1.2
      baz=178
M44A  Midewin, Midew   29.72 359  eP    P      18 08 11.2 -1.2
      comp=Z,29nm,1.1s
M46A  Old House Fiel   29.73   1  P     P      18 08 11.5 -1.1
      baz=181,SNR=7.3
N37A  Lee Faris, Mou   29.73 349  P     P      18 08 11.9 -0.7
      baz=166,SNR=9.9
N37A  Lee Faris, Mou   29.73 349  eP    P      18 08 11.8 -0.8
      comp=Z,52nm,0.8s
M43A  Waltham Townsh   29.80 357  P     P      18 08 12.4 -0.8
      baz=176,SNR=5.1
T25A  Trinidad         29.82 332  P     P      18 08 14.4 +0.7
      baz=144,SNR=9.1
M41A  Milan            29.84 355  P     P      18 08 13.1 -0.4
      baz=173,SNR=6.7
M49A  Liberty Center   29.92   5  P     P      18 08 14.3  0.0
      baz=186,SNR=7.8
M50A  Fremont          29.94   6  P     P      18 08 14.8 +0.4
      baz=188
N54A  Moraine State    29.95  11  P     P      18 08 14.8 +0.3
      baz=194,SNR=9.7
M40A  Post Highland    29.97 353  P     P      18 08 13.8 -0.8
      baz=171
TUC   Tucson           29.98 317  P     P      18 08 15.0  0.0
      baz=128
TUC   Tucson           29.98 317  P     P      18 08 15.2 +0.2
TUC                               pmax  pmax
      comp=Z,6.0nm,1.1s
SSPA  Standing Stone   30.09  14  P     P      18 08 16.6 +0.9
      baz=198
SSPA  Standing Stone   30.09  14  eP    P      18 08 16.5 +0.8
      comp=Z,165nm,0.8s
PSUB  Penn St. - Bra   30.09  18  eP    P      18 08 17.2 +1.5
      comp=Z,16nm,1.0s
M39A  Webster          30.12 352  P     P      18 08 15.0 -0.9
      baz=170,SNR=8.4
M38A  Pleasantville    30.21 351  P     P      18 08 15.8 -1.0
      baz=168,SNR=8.7
M37A  Trindle Farm,    30.33 350  P     P      18 08 16.9 -1.0
      baz=166,SNR=6.0
L42A  Oliver, Polo     30.40 356  P     P      18 08 17.4 -1.0
      baz=175,SNR=7.7
L42A  Oliver, Polo     30.40 356  eP    P      18 08 17.7 -0.8
      comp=Z,63nm,1.0s
L44A  Lake County Fo   30.50 359  P     P      18 08 17.7 -1.6
      baz=178
M36A  Felix, Anita     30.52 349  P     P      18 08 18.7 -0.8
      baz=165
L43A  Garden Prairie   30.53 358  P     P      18 08 18.4 -1.3
      baz=177,SNR=5.8
L41A  Preston          30.53 355  P     P      18 08 18.7 -0.9
      baz=173,SNR=11
M54A  Oil Creek Stat   30.54  11  P     P      18 08 20.1 +0.4
      baz=194,SNR=9.7
M54A  Oil Creek Stat   30.54  11  eP    P      18 08 20.3 +0.6
      comp=Z,35nm,0.8s
L40A  Anamosa          30.59 354  P     P      18 08 19.2 -0.9
      baz=172,SNR=17
L40A  Anamosa          30.59 354  eP    P      18 08 19.0 -1.1
      comp=Z,40nm,0.9s
ALLY  Alegheny Colle   30.59  10  eP    P      18 08 20.6 +0.5
      comp=Z,47nm,1.0s
KSCO  Kaye Shedlock’   30.61 336  P     P      18 08 20.6 +0.1
      baz=149
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KSCO  Kaye Shedlock’   30.61 336  eP    P      18 08 21.1 +0.6
      comp=Z,23nm,0.8s
SCIA  State Center     30.69 351  eP    P      18 08 20.9 -0.1
      comp=Z,50nm,1.3s
LUPA  Lehigh Univers   30.73  18  eP    P      18 08 22.7 +1.3
      comp=Z,2.9nm,0.9s
L39A  Vinton           30.73 353  P     P      18 08 20.6 -0.8
      baz=170,SNR=9.8
AAM   Ann Arbor        30.77   5  P     P      18 08 22.3 +0.6
      baz=186
AAM   Ann Arbor        30.77   5  eP    P      18 08 22.3 +0.6
      comp=Z,43nm,0.9s
AAM   Ann Arbor        30.77   5  eP    P      18 08 22.3 +0.6
AAM                               pmax  pmax
      comp=Z,43nm,0.9s
SDCO  Great Sand Dun   30.82 331  P     P      18 08 23.4 +0.7
      baz=143,SNR=17
SDCO  Great Sand Dun   30.82 331  eP    P      18 08 23.7 +1.1
      comp=Z,8.2nm,0.9s
L38A  Oak Wood Farm,   30.88 352  P     P      18 08 21.7 -1.0
      baz=169,SNR=13
N59A  State Game Lan   30.90  17  P     P      18 08 24.1 +1.1
      baz=202,SNR=26
N59A  State Game Lan   30.90  17  eP    P      18 08 24.1 +1.1
      comp=Z,47nm,0.8s
L37A  Phoenix Point,   30.98 350  P     P      18 08 22.8 -0.8
      baz=167
K41A  Shullsburg       31.05 355  P     P      18 08 23.2 -0.9
      baz=174,SNR=11
BRNJ  Basking Ridge    31.05  19  eP    P      18 08 25.8 +1.6
      comp=Z,32nm,0.8s
ERPA  Erie             31.07  10  P     P      18 08 24.7 +0.3
      baz=193,SNR=8.0
ERPA  Erie             31.07  10  eP    P      18 08 24.9 +0.5
      comp=Z,78nm,0.8s
214A  Organ Pipe Nat   31.16 315  P     P      18 08 25.1 -0.2
      baz=125
K42A  Prairie Point,   31.16 357  P     P      18 08 24.1 -1.0
      baz=176,SNR=7.4
K40A  Colesburg        31.21 354  P     P      18 08 24.6 -1.0
      baz=172,SNR=10
BGNE  Belgrade         31.26 344  P     P      18 08 25.8 -0.4
      baz=159
BGNE  Belgrade         31.26 344  eP    P      18 08 25.7 -0.4
      comp=Z,47nm,0.6s
K39A  Oelwein          31.30 353  P     P      18 08 25.1 -1.2
      baz=171,SNR=16
JFWS  Jewell Farm      31.35 356  P     P      18 08 25.5 -1.3
      baz=174,SNR=8.8
JFWS  Jewell Farm      31.35 356  eP    P      18 08 26.0 -0.8
      comp=Z,36nm,0.9s
JFWS  Jewell Farm      31.35 356  eP    P      18 08 26.0 -0.8
JFWS                              pmax  pmax
      comp=Z,36nm,0.9s
K38A  Parkersburg      31.35 352  P     P      18 08 25.6 -1.2
      baz=169
K38A  Parkersburg      31.35 352  eP    P      18 08 26.0 -0.8
      comp=Z,39nm,0.9s
SAML  Samuel           31.36 130  eP    P      18 08 26.7 -0.5
      comp=Z,32nm,0.9s
SAML  Samuel           31.36 130  eP    P      18 08 26.7 -0.5
SAML                              pmax  pmax
      comp=Z,32nm,0.9s
S22A  4UR Ranch, Cre   31.47 329  P     P      18 08 28.9 +0.5
      baz=141,SNR=16
S22A  4UR Ranch, Cre   31.47 329  eP    P      18 08 29.1 +0.7
      comp=Z,30nm,1.6s
KSPA  Keystone Colle   31.50  16  eP    P      18 08 29.3 +1.2
      comp=Z,39nm,0.9s
K37A  Belmond          31.59 351  P     P      18 08 28.0 -1.0
      baz=168,SNR=18
K36A  Gilmore City     31.60 350  P     P      18 08 28.7 -0.4
      baz=166
J42A  Columbus         31.68 357  P     P      18 08 28.6 -1.2
      baz=176,SNR=16
J43A  Natural Harves   31.72 358  P     P      18 08 28.5 -1.6
      baz=177
J41A  Loganville       31.78 356  P     P      18 08 29.8 -0.8
      baz=174,SNR=12
J40A  Soldiers Grove   31.87 355  P     P      18 08 30.4 -0.9
      baz=173,SNR=18
J39A  Decorah          31.90 354  P     P      18 08 30.1 -1.5
      baz=171,SNR=10
ELFO  Elginfield       31.91   8  P     P      18 08 31.4 -0.4
      baz=191,SNR=8.0
MVCO  Mesa Verde       31.94 327  P     P      18 08 32.2 -0.2
      baz=137,SNR=9.7
MVCO  Mesa Verde       31.94 327  eP    P      18 08 33.0 +0.6
      comp=Z,11nm,0.8s
J38A  Wedel Dairy, R   31.97 353  P     P      18 08 30.9 -1.4
      baz=170,SNR=15
BINY  Binghamton       32.04  16  P     P      18 08 33.5 +0.6
      baz=201,SNR=22
BINY  Binghamton       32.04  16  eP    P      18 08 33.0 +0.1
      comp=Z,56nm,0.8s
TYNO  Tyneside         32.04  10  P     P      18 08 33.1 +0.2
      baz=193,SNR=7.2
OGNE  Ogallala         32.06 338  P     P      18 08 32.9 -0.3
      baz=152
OGNE  Ogallala         32.06 338  eP    P      18 08 34.4 +1.2
      comp=Z,22nm,0.8s
MMNY  Mt. Morris Dam   32.08  13  eP    P      18 08 33.9 +0.7
      comp=Z,62nm,1.2s
J37A  Redenius Farm,   32.11 351  P     P      18 08 32.6 -0.9
      baz=168,SNR=11
I43A  Langenfeld Bro   32.21 359  P     P      18 08 33.1 -1.3
      baz=178,SNR=12
I42A  Draeger Farm,    32.24 358  P     P      18 08 33.4 -1.2
      baz=176,SNR=14
I42A  Draeger Farm,    32.24 358  eP    P      18 08 33.9 -0.8
      comp=Z,99nm,1.3s
J36A  Seneca 1, Swea   32.26 350  P     P      18 08 33.8 -1.0
      baz=166,SNR=21
J36A  Seneca 1, Swea   32.26 350  eP    P      18 08 33.8 -1.0
      comp=Z,78nm,0.8s
I40A  Norwalk          32.35 355  P     P      18 08 34.1 -1.5
      baz=173,SNR=13
I39A  Houston          32.39 354  P     P      18 08 34.7 -1.3
      baz=172,SNR=15
I39A  Houston          32.39 354  eP    P      18 08 34.9 -1.1
      comp=Z,47nm,0.9s
WUAZ  Wupatki          32.41 321  eP    P      18 08 38.4 +1.9
      comp=Z,10nm,1.1s
I41A  Arkdale          32.46 356  P     P      18 08 35.5 -1.0
      baz=175,SNR=11
I41A  Arkdale          32.46 356  eP    P      18 08 35.5 -1.0
      comp=Z,56nm,0.8s
ACTO  Acton            32.51  10  P     P      18 08 37.3 +0.3
      baz=193,SNR=13
ISCO  Idaho Springs    32.53 333  P     P      18 08 36.7 -0.9
      baz=145,SNR=6.7
ISCO  Idaho Springs    32.53 333  eP    P      18 08 37.8 +0.2
      comp=Z,4.3nm,0.8s
ISCO  Idaho Springs    32.53 333  eP    P      18 08 37.8 +0.2
ISCO                              pmax  pmax
      comp=Z,4.0nm,0.8s
SMCO  Snowmass         32.66 331  eP    P      18 08 39.5 +0.6
      comp=Z,15nm,1.1s
I38A  Scanlan Farm,    32.66 353  P     P      18 08 36.8 -1.6
      baz=170,SNR=9.6
BASO  Ashfield         32.67   7  P     P      18 08 38.2 -0.3
      baz=190,SNR=9.0
I37A  Lemond, Waseca   32.78 352  P     P      18 08 38.2 -1.2
      baz=168,SNR=16
I37A  Lemond, Waseca   32.78 352  eP    P      18 08 38.2 -1.2
      comp=Z,55nm,0.9s
H43A  Windswept, Lux   32.79 359  P     P      18 08 38.1 -1.3
      baz=179
PV02  Paradox Valley   32.80 328  eP    P      18 08 41.1 +1.2
      comp=Z,15nm,1.0s
PV13  Radium Mtn., P   32.81 328  eP    P      18 08 41.1 +1.1
      comp=Z,13nm,0.7s
BWLO  Walkerton        32.85   8  P     P      18 08 39.8 -0.1
      baz=191,SNR=8.5
H42A  Shiocton         32.85 358  P     P      18 08 38.8 -1.2
      baz=177,SNR=5.3
H42A  Shiocton         32.85 358  eP    P      18 08 38.5 -1.4
      comp=Z,38nm,0.7s
I36A  Fitzsimmons Fa   32.88 351  P     P      18 08 39.2 -1.0
      baz=167
PV03  Paradox Valley   32.90 328  eP    P      18 08 41.4 +0.6
PV12  Saucer Basin,    32.92 328  eP    P      18 08 41.9 +1.0
      comp=Z,40nm,0.7s
PV18  Skein Mesa, Pa   32.92 328  eP    P      18 08 41.6 +0.7
      comp=Z,28nm,0.7s
PV11  David Mesa, Pa   32.94 328  eP    P      18 08 42.1 +1.0
      comp=Z,29nm,0.7s
PV17  East Wray Mesa   32.97 328  eP    P      18 08 42.0 +0.6
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	comp=Z,36nm,0.7s						
PV16	Nyswonger Mesa	32.97	328	*e*P	P	18 08 42.2	+0.7
	comp=Z,20nm,0.8s						
DRWO	Darlington Wes	33.00	11	P	P	18 08 41.5	+0.2
	baz=195,SNR=11						
H41A	Junction City	33.00	357	P	P	18 08 40.2	-1.1
	baz=175,SNR=7.8						
H41A	Junction City	33.00	357	*e*P	P	18 08 40.2	-1.1
	comp=Z,31nm,0.8s						
PV19	Morning Glory	33.01	328	*e*P	P	18 08 42.5	+0.7
	comp=Z,17nm,0.8s						
PV20	West Nyswonger	33.02	328	*e*P	P	18 08 42.3	+0.4
	comp=Z,21nm,0.6s						
PKRO	Pickering	33.03	11	P	P	18 08 41.7	+0.2
	baz=194,SNR=6.9						
H40A	Chili	33.06	356	P	P	18 08 40.5	-1.2
	baz=174,SNR=23						
PV22	Blue Mesa, Par	33.07	328	*e*P	P	18 08 43.2	+0.9
	comp=Z,33nm,1.4s						
PV14	Lion Creek, Pa	33.08	328	*e*P	P	18 08 43.1	+0.8
	comp=Z,19nm,0.8s						
ECSD	EROS Data Cent	33.08	347	P	P	18 08 40.6	-1.4
	baz=163,SNR=45						
ECSD	EROS Data Cent	33.08	347	*e*P	P	18 08 40.6	-1.4
	comp=Z,37nm,0.9s						
WLVO	Wesleyville	33.12	12	P	P	18 08 42.5	+0.2
	baz=196,SNR=9.2						
PV23	Carpenter Ridg	33.13	328	*e*P	P	18 08 43.6	+0.8
	comp=Z,20nm,0.8s						
GLA	Glamis	33.18	315	*e*P	P	18 08 45.8	+2.7
	comp=Z,16nm,1.1s						
GLA	Glamis	33.18	315	*e*P	P	18 08 45.8	+2.7
GLA				pmax	pmax		
	comp=Z,16nm,1.1s						
H39A	Augusta	33.19	355	P	P	18 08 41.7	-1.2
	baz=172,SNR=9.8						
PV21	Cone Mtn., Par	33.19	328	*e*P	P	18 08 43.6	+0.3
	comp=Z,7.4nm,0.9s						
TRY	Troy	33.19	18	*e*P	P	18 08 44.1	+1.2
	comp=Z,56nm,0.9s						
PV09	Paradox Valley	33.23	328	*e*P	P	18 08 44.4	+0.7
H37A	Dierke Farm, C	33.27	352	P	P	18 08 42.8	-0.8
	baz=170						
H38A	Maiden Rock	33.28	353	P	P	18 08 42.6	-1.2
	baz=171,SNR=10						
CLWO	Collingwood	33.29	9	P	P	18 08 43.9	+0.1
	baz=192,SNR=16						
BMRO	Meriville Lake	33.30	8	P	P	18 08 43.8	-0.2
	baz=190,SNR=5.5						
H36A	Jessenland, He	33.41	351	P	P	18 08 44.2	-0.6
	baz=168,SNR=12						
PDMCI	Parker Dam,Lak	33.42	317	P	P	18 08 45.2	+0.1
	baz=126						
LPAZ	La Paz	33.47	145	P	P	18 08 47.8	+1.5
	comp=Z,4.7nm,1.2s,baz=345,slow=3.4,SNR=3.2						
LPAZ				LR	LR	18 23 03.7	
	comp=Z,423nm,19.9s,baz=328,slow=38						
LPAZ	La Paz	33.47	145	*e*P	P	18 08 50.4	+4.1
	comp=Z,4.4nm,1.0s						
LPAZ	La Paz	33.47	145	*e*P	P	18 08 50.4	+4.1
LPAZ				pmax	pmax		
	comp=Z,4.0nm,1.0s						
N23A	Red Feather La	33.57	334	P	P	18 08 46.5	-0.1
	baz=145						
N23A	Red Feather La	33.57	334	*e*P	P	18 08 47.1	+0.4
	comp=Z,7.1nm,0.8s						
G41A	Antigo	33.57	357	P	P	18 08 44.4	-1.9
	baz=176						
G42A	Mountain	33.58	358	P	P	18 08 44.7	-1.6
	baz=178,SNR=12						
G42A	Mountain	33.58	358	*e*P	P	18 08 44.7	-1.6
	comp=Z,36nm,0.8s						
G43A	Wallace	33.58	359	P	P	18 08 44.6	-1.7
	baz=179,SNR=5.2						
G43A	Wallace	33.58	359	*e*P	P	18 08 44.6	-1.7
	comp=Z,17nm,0.8s						
H35A	Sunnyside Ranc	33.67	350	P	P	18 08 45.7	-1.4
	baz=166,SNR=29						
G40A	Rib Lake	33.69	356	P	P	18 08 46.0	-1.3
	baz=174,SNR=19						
G40A	Rib Lake	33.69	356	*e*P	P	18 08 45.8	-1.5
	comp=Z,37nm,0.9s						
PHWY	Pilot Hill	33.70	335	*e*P	P	18 08 48.2	+0.4
	comp=Z,7.4nm,0.8s						
G38A	Ridgeland	33.73	354	P	P	18 08 45.9	-1.8
	baz=172,SNR=14						
G39A	Holcombe	33.78	355	P	P	18 08 46.5	-1.6
	baz=173,SNR=31						
ACCN	Adirondack Com	33.79	18	*e*P	P	18 08 48.8	+0.6
	comp=Z,43nm,1.4s						
SADO	Sadowa	33.79	10	P	P	18 08 47.5	-0.7
	comp=Z,27nm,0.7s,baz=216,slow=8.5,SNR=22						
SWSC	Sam W. Stewart	33.80	314	P	P	18 08 49.0	+0.5
	baz=122						
DELO	Deloro Mine	33.84	12	P	P	18 08 47.3	-1.3
	baz=197,SNR=8.3						
IKP	In-Ko-Pah, Jac	33.87	313	P	P	18 08 49.7	+0.5
	baz=122						
TOBO	Tobermory, Bru	33.89	7	P	P	18 08 48.3	-0.7
	baz=190,SNR=7.5						
SPMN	Marine on St.	33.89	353	P	P	18 08 47.4	-1.6
	baz=170,SNR=21						
SPMN	Marine on St.	33.89	353	*e*P	P	18 08 47.5	-1.6
	comp=Z,81nm,1.1s						
BC3	Big Chuckawall	33.95	315	P	P	18 08 51.3	+1.4
	baz=124,SNR=8.8						
IRM	Iron Mountain	34.02	316	P	P	18 08 51.5	+1.1
	baz=125						
O20A	White River Ci	34.02	330	P	P	18 08 51.4	+0.9
	baz=141,SNR=25						
O20A	White River Ci	34.02	330	*e*P	P	18 08 51.0	+0.5
	comp=Z,26nm,1.0s						
G36A	St. Michael	34.02	352	P	P	18 08 49.3	-0.9
	baz=168,SNR=6.5						
F45A	CMU Biological	34.03	2	P	P	18 08 49.0	-1.2
	baz=183,SNR=8.9						
F41A	Three Lakes	34.10	358	P	P	18 08 49.4	-1.5
	baz=176,SNR=11						
F41A	Three Lakes	34.10	358	*e*P	P	18 08 49.4	-1.5
	comp=Z,23nm,0.8s						
F43A	Flat Rock, Esc	34.15	360	P	P	18 08 49.6	-1.7
	baz=180,SNR=11						
NCB	Newcomb	34.16	17	*e*P	P	18 08 51.5	+0.1
	comp=Z,12nm,0.8s						
KLBO	Killbear Provi	34.19	9	P	P	18 08 50.5	-1.1
	baz=192,SNR=7.0						
PKCU	Pink Cliffs	34.25	323	*e*P	P	18 08 54.6	+1.9
	comp=Z,25nm,1.0s						
BANO	Bancroft	34.26	12	P	P	18 08 51.9	-0.4
	baz=196,SNR=6.1						
F44A	Big Bay de Noc	34.30	1	P	P	18 08 50.7	-1.8
	baz=181,SNR=47						
SUSD	Miller	34.30	345	P	P	18 08 51.9	-0.8
	baz=159,SNR=10						
F40A	Park Falls	34.33	356	P	P	18 08 51.2	-1.7
	baz=175,SNR=28						
G34A	Benson	34.34	349	P	P	18 08 51.6	-1.4
	baz=165,SNR=13						
F39A	Loretta	34.38	355	P	P	18 08 51.8	-1.5
	baz=173,SNR=21						
BUKO	Buck Lake	34.40	10	P	P	18 08 53.3	-0.2
	baz=193,SNR=16						
SRU	San Rafael Swe	34.41	327	*e*P	P	18 08 54.8	+0.9
	comp=Z,16nm,0.7s						
SRU	San Rafael Swe	34.41	327	*e*P	P	18 08 54.8	+0.9
SRU				pmax	pmax		
	comp=Z,16nm,0.7s						
G33A	Ortonville	34.44	348	P	P	18 08 52.8	-1.1
	baz=164,SNR=12						
PLVO	Plevna	34.46	13	P	P	18 08 53.9	-0.1
	baz=197,SNR=12						
PLVO	Plevna	34.46	13	*e*P	P	18 08 53.8	-0.1
	comp=Z,38nm,1.0s						
COWI	Conover	34.46	358	*e*P	P	18 08 52.2	-1.8
	comp=Z,42nm,0.8s						
FFD	Franklin Falls	34.50	20	*e*P	P	18 08 55.0	+0.7
	comp=Z,57nm,1.3s						
F38A	Pierce - Schro	34.51	354	P	P	18 08 52.9	-1.5
	baz=172,SNR=28						
BELC	Belle Mtn. Jos	34.52	315	P	P	18 08 54.8	-0.1
	baz=123,SNR=6.0						
LDFC	Landfair	34.52	317	*e*P	P	18 08 57.6	+2.7
	comp=Z,19nm,1.0s						
LCMT	Little Creek M	34.53	322	*e*P	P	18 08 56.7	+1.8
	comp=Z,5.5nm,0.9s						
F36A	Milaca	34.61	352	P	P	18 08 53.5	-1.8
	baz=169,SNR=30						
F36A	Milaca	34.61	352	*e*P	P	18 08 53.6	-1.7
	comp=Z,30nm,0.8s						
XPFO	Piæon Flat	34.62	314	*e*P	P	18 08 57.9	+2.2
	comp=Z,9.8nm,1.0s						
PFO	Pinyon Flats O	34.63	314	P	P	18 08 55.4	-0.4
	baz=122						
PFO	Pinyon Flats O	34.63	314	*e*P	P	18 08 55.2	-0.6
	comp=Z,9.6nm,1.0s						
PFO	Pinyon Flats O	34.63	314	*e*P	P	18 08 55.2	-0.6
PFO				pmax	pmax		
	comp=Z,10.0nm,1.0s						
P18A	Preston Nutter	34.64	328	*e*P	P	18 08 56.9	+0.9
	comp=Z,19nm,1.1s						
LONY	Lake Ozonia	34.66	16	P	P	18 08 55.7	-0.1
	baz=202,SNR=21						
LONY	Lake Ozonia	34.66	16	*e*P	P	18 08 55.5	-0.3
	comp=Z,48nm,0.9s						
FRD	Ford Ranch, An	34.67	314	P	P	18 08 55.6	-0.5
	baz=122						
E43A	Lone Tree Farm	34.69	0	P	P	18 08 54.4	-1.6
	baz=180,SNR=18						
E43A	Lone Tree Farm	34.69	0	*e*P	P	18 08 54.3	-1.6
	comp=Z,41nm,0.8s						
E45A	Wooded Hills,	34.71	2	P	P	18 08 55.5	-0.6
	baz=183						
G32A	Webster	34.72	347	P	P	18 08 55.1	-1.2
	baz=162,SNR=33						
G32A	Webster	34.72	347	*e*P	P	18 08 54.6	-1.7
	comp=Z,163nm,0.9s						
E42A	Champion	34.75	359	P	P	18 08 55.1	-1.4
	baz=178,SNR=17						
RWWY	Rawlins	34.77	333	*e*P	P	18 08 56.9	-0.2
	comp=Z,24nm,1.1s						
P17A	Butcher Ranch,	34.79	327	*e*P	P	18 08 57.8	+0.6
	comp=Z,26nm,0.8s						
F34A	Alexandria	34.81	350	P	P	18 08 55.7	-1.3
	baz=166,SNR=8.5						
E39A	Mellen	34.81	356	P	P	18 08 55.8	-1.2
	baz=174,SNR=47						
E41A	Kenton	34.81	358	P	P	18 08 55.4	-1.7
	baz=177,SNR=7.8						
SZCU	Shurtz Canyon	34.81	323	*e*P	P	18 08 58.9	+1.5
	comp=Z,13nm,1.1s						
E40A	Wakefield	34.84	357	P	P	18 08 56.0	-1.3
	baz=175,SNR=22						
MSU	Marysvale	34.90	325	*e*P	P	18 08 59.5	+1.3
MSU	Marysvale	34.90	325	*e*P	P	18 08 59.5	+1.3
TMUT	Trail Mountain	34.91	326	*e*P	P	18 08 59.7	+1.3
	comp=Z,9.3nm,0.8s						
CCUT	Cedar City	34.95	322	*e*P	P	18 09 00.4	+1.8
	comp=Z,7.7nm,1.1s						
E44A	Grand Marais A	34.95	1	P	P	18 08 57.9	-0.4
	baz=182,SNR=8.1						
E44A	Grand Marais A	34.95	1	*e*P	P	18 08 57.8	-0.4
	comp=Z,78nm,0.9s						
PEMO	Pembroke	35.03	12	P	P	18 08 58.6	-0.2
	baz=197,SNR=12						
MNMC	Minye Minye	35.07	150	*e*P	P	18 09 05.3	+5.5
	comp=Z,25nm,1.2s						
LBNH	Lisbon	35.10	19	P	P	18 09 00.0	+0.5
	baz=206,SNR=5.0						
LBNH	Lisbon	35.10	19	*e*P	P	18 09 00.2	+0.6
	comp=Z,63nm,1.6s						
LBNH	Lisbon	35.10	19	*e*P	P	18 09 00.2	+0.6
LBNH				pmax	pmax		
	comp=Z,63nm,1.6s						
E38A	The Farm, Brul	35.12	355	P	P	18 08 58.4	-1.4
	baz=172,SNR=14						
E38A	The Farm, Brul	35.12	355	*e*P	P	18 08 58.3	-1.4
	comp=Z,45nm,0.8s						
E36A	McGregor	35.22	353	P	P	18 08 58.8	-1.7
	baz=169,SNR=18						
K22A	Casper	35.26	335	P	P	18 09 01.0	-0.2
	baz=146,SNR=8.4						
K22A	Casper	35.26	335	*e*P	P	18 09 01.2	0.0
	comp=Z,14nm,0.8s						
D41A	Chassel	35.40	358	P	P	18 09 00.7	-1.4
	baz=177,SNR=7.8						
D41A	Chassel	35.40	358	*e*P	P	18 09 00.7	-1.4
	comp=Z,30nm,0.8s						
SHPR	Sheep Range	35.41	319	*e*P	P	18 09 05.1	+2.6
	comp=Z,4.6nm,1.3s						
E35A	Pequot Lakes	35.41	351	P	P	18 09 01.2	-1.0
	baz=168,SNR=7.0						
E34A	Wadena	35.49	350	P	P	18 09 01.5	-1.4
	baz=166,SNR=7.2						
ALFO	Alfred	35.52	15	P	P	18 09 03.2	+0.2
	baz=201,SNR=13						
RSSD	Black Hills	35.56	339	P	P	18 09 03.7	0.0
	baz=150						
RSSD	Black Hills	35.56	339	*e*P	P	18 09 04.2	+0.5
	comp=Z,9.2nm,0.8s						
RSSD	Black Hills	35.56	339	*e*P	P	18 09 04.2	+0.5
RSSD				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MPU	Maple Canyon	35.66	327	*e*P	P	18 09 05.5	+0.9
	comp=Z,14nm,0.9s						
D37A	Cotton	35.75	354	P	P	18 09 03.5	-1.6
	baz=171,SNR=21						
GSC	Goldstone, Bar	35.79	316	P	P	18 09 05.6	-0.2
	baz=124						
GSC	Goldstone, Bar	35.79	316	*e*P	P	18 09 08.0	+2.3
	comp=Z,18nm,1.8s						
GSC	Goldstone, Bar	35.79	316	*e*P	P	18 09 08.0	+2.3
GSC				pmax	pmax		
	comp=Z,18nm,1.8s						
BFSC	Mount Baldy Ra	35.80	314	P	P	18 09 06.3	+0.4
	baz=122,SNR=5.5						
NLU	North Lily Min	35.85	326	*e*P	P	18 09 07.3	+0.9
	comp=Z,9.5nm,1.3s						
D36A	Goodland	35.85	353	P	P	18 09 04.6	-1.4
	baz=170,SNR=12						
D36A	Goodland	35.85	353	*e*P	P	18 09 04.0	-2.0
	comp=Z,37nm,0.7s						
D35A	Remer	35.88	352	P	P	18 09 04.4	-1.8
	baz=168,SNR=12						
PSUT	Pine Spring	35.89	323	*e*P	P	18 09 07.7	+1.0
	comp=Z,8.9nm,0.9s						
JLU	Jordanelle	35.98	328	*e*P	P	18 09 08.3	+0.8
	comp=Z,9.7nm,0.8s						
MWC	Mount Wilson	36.08	314	*e*P	P	18 09 10.3	+2.0
	comp=Z,16nm,1.0s						
MWC	Mount Wilson	36.08	314	*e*P	P	18 09 10.3	+2.0
MWC				pmax	pmax		
	comp=Z,16nm,1.0s						
WVL	Waterville	36.16	21	*e*P	P	18 09 10.1	+1.6
	comp=Z,127nm,1.8s						
TRQ	Mont Tremblant	36.16	15	*e*P	P	18 09 08.4	-0.2
C38A	Sawbill Land.	36.20	355	P	P	18 09 07.0	-2.0
	baz=173,SNR=13						
CTU	Camp Tracy	36.21	328	*e*P	P	18 09 10.2	+0.9
	comp=Z,11nm,0.8s						
C40A	Isle Royale Na	36.27	358	P	P	18 09 07.9	-1.6
	baz=176,SNR=11						
C40A	Isle Royale Na	36.27	358	*e*P	P	18 09 08.0	-1.5
	comp=Z,42nm,0.8s						
C37A	Embarrass	36.29	354	P	P	18 09 08.3	-1.4
	baz=172,SNR=11						
TPNV	Topopah Spring	36.37	319	P	P	18 09 11.5	+0.7
	baz=126,SNR=5.8						
TPNV	Topopah Spring	36.37	319	*e*P	P	18 09 12.7	+1.9
	comp=Z,11nm,1.2s						
EDW2	Edwards Air Fo	36.38	315	P	P	18 09 11.7	+1.0
	baz=122,SNR=7.2						
C36A	Pine Crest Far	36.39	354	P	P	18 09 09.2	-1.4
	baz=170,SNR=15						
DUG	Dugway, Tooele	36.42	326	P	P	18 09 11.7	+0.5
	baz=134,SNR=6.4						
DUG	Dugway, Tooele	36.42	326	*e*P	P	18 09 12.2	+1.1
	comp=Z,13nm,1.3s						
DUG	Dugway, Tooele	36.42	326	*e*P	P	18 09 12.2	+1.1
DUG				pmax	pmax		
	comp=Z,13nm,1.3s						
EYMN	Ely	36.45	355	P	P	18 09 09.0	-2.0
	baz=173,SNR=16						
EYMN	Ely	36.45	355	*e*P	P	18 09 09.3	-1.7
	comp=Z,19nm,0.8s						
C35A	Jirik Farms, M	36.47	352	P	P	18 09 09.4	-1.9
	baz=168,SNR=26						
FURC	Furnace Creek,	36.49	318	P	P	18 09 13.2	+1.6
	baz=125						
MPMC	Manual Prospec	36.67	317	P	P	18 09 14.4	+1.0
	baz=124,SNR=7.1						
BW06	Boulder Array	36.69	332	P	P	18 09 12.8	-0.7
	baz=141,SNR=11						
BW06	Boulder Array	36.69	332	*e*P	P	18 09 12.2	-1.2
	comp=Z,6.1nm,0.8s						
PD31	Pinedale Array	36.69	332	*e*P	P	18 09 13.3	-0.2
PDAR	Pinedale Array	36.69	332	P	P	18 09 12.9	-0.5
	comp=Z,4.1nm,0.6s,baz=120,slow=9.6,SNR=44						
PDAR				PcP	PcP	18 11 36.2	+0.3
	comp=Z,3.5nm,1.0s,baz=116,slow=3.4,SNR=5.2						
PDAR				ScP	ScP	18 15 23.9	+2.9
	comp=Z,0.5nm,0.7s,baz=134,slow=4.3,SNR=4.0						
PDAR				LR	LR	18 28 23.5	
	comp=Z,201nm,19.3s,baz=138,slow=43						
PDAR	Pinedale Array	36.69	332	*e*P	P	18 09 11.6	-1.9
PDAR				PcP	PcP	18 11 36.2	+0.3
PDAR				ScP	ScP	18 15 23.9	+2.9
HWUT	Hardware Ranch	36.78	329	*e*P	P	18 09 14.2	0.0
	comp=Z,28nm,0.7s						
R11A	Troy Canyon, C	36.81	321	P	P	18 09 15.1	+0.6
	baz=129						
R11A	Troy Canyon, C	36.81	321	*e*P	P	18 09 16.0	+1.5
	comp=Z,7.8nm,1.3s						
PKME	Peaks-Kenny Pk	36.89	21	P	P	18 09 15.3	+0.5
	baz=210,SNR=8.3						
PKME	Peaks-Kenny Pk	36.89	21	*e*P	P	18 09 15.7	+0.8
	comp=Z,134nm,1.8s						
SPUT	South Promonto	37.02	328	*e*P	P	18 09 16.8	+0.6
	comp=Z,12nm,0.7s						
BGU	Big Grassy Mou	37.05	327	*e*P	P	18 09 17.4	+0.9
	comp=Z,11nm,1.0s						
B35A	Bob, Littlefor	37.09	353	P	P	18 09 14.9	-1.6
	baz=169,SNR=10.0						
B35A	Bob, Littlefor	37.09	353	*e*P	P	18 09 14.8	-1.7
	comp=Z,33nm,1.3s						
ARVC	Arvin	37.09	314	P	P	18 09 16.7	-0.1
	baz=121						
CWC	Cottonwood Cre	37.28	317	P	P	18 09 19.1	+0.5
	baz=124						
B34A	Aery, Baudette	37.33	352	P	P	18 09 17.1	-1.5
	baz=168,SNR=33						
AGMN	Agassiz Nation	37.34	350	P	P	18 09 17.6	-1.0
	baz=166,SNR=27						
AGMN	Agassiz Nation	37.34	350	*e*P	P	18 09 17.1	-1.5
	comp=Z,41nm,0.9s						
AHID	Auburn Hatcher	37.41	331	*e*P	P	18 09 19.9	+0.3
	comp=Z,20nm,0.6s						
HVU	Hansel Valley	37.53	328	*e*P	P	18 09 21.0	+0.5
HVU	Hansel Valley	37.53	328	*e*P	P	18 09 21.0	+0.5
VES	Vestal, Richgr	37.64	315	P	P	18 09 22.7	+1.3
	baz=122,SNR=7.5						
MDND	Maddock	37.65	346	P	P	18 09 21.0	-0.3
	baz=160,SNR=11						
MDND	Maddock	37.65	346	*e*P	P	18 09 21.1	-0.1
	comp=Z,246nm,1.4s						
PKM	Mcpherson Peak	37.66	313	P	P	18 09 22.3	+0.5
	baz=120,SNR=5.7						
REDW	Red Top Meadow	37.75	331	*e*P	P	18 09 22.5	+0.1
	comp=Z,37nm,0.8s						
SNOW	Snow King Moun	37.78	332	*e*P	P	18 09 23.6	+0.8
	comp=Z,30nm,0.7s						
LOHW	Long Hollow	37.83	332	*e*P	P	18 09 23.2	+0.2
	comp=Z,29nm,1.5s						
A33A	Warroad	37.88	351	P	P	18 09 22.3	-0.9
	baz=167,SNR=25						
TPAW	Teton Pass	37.89	331	*e*P	P	18 09 24.0	+0.3
	comp=Z,20nm,0.8s						
MOOW	Moose Ponds	37.99	332	*e*P	P	18 09 24.8	+0.2
	comp=Z,10nm,0.8s						
SMMC	Simmler	38.01	314	P	P	18 09 23.9	-0.6
	baz=120						
FXWY	Fox Creek	38.04	332	*e*P	P	18 09 25.2	+0.3
	comp=Z,6.0nm,0.8s						
IMW	Indian Meadow	38.20	332	*e*P	P	18 09 26.0	-0.3
	comp=Z,8.3nm,0.7s						
FLWY	Flagg Ranch	38.23	332	*e*P	P	18 09 27.0	+0.5
	comp=Z,22nm,1.1s						
PAGB	Antelope Grade	38.40	314	*e*P	P	18 09 30.9	+3.1
	comp=Z,30nm,1.1s						
H17A	Grant Village	38.42	333	P	P	18 09 28.0	-0.2
	baz=141						
H17A	Grant Village	38.42	333	*e*P	P	18 09 32.0	+3.9
	comp=Z,20nm,1.5s						
RLMT	Red Lodge	38.42	335	P	P	18 09 27.6	-0.5
	baz=143,SNR=13						
RLMT	Red Lodge	38.42	335	*e*P	P	18 09 27.4	-0.7
	comp=Z,8.7nm,0.7s						
YPP	Pitchstone Pla	38.43	332	*e*P	P	18 09 29.6	+1.4
	comp=Z,5.2nm,0.8s						
NV11	Mina Array Sit	38.47	319	*e*P	P	18 09 30.1	+1.7
	comp=Z,0.7nm,1.0s						
OMMB	Old Mammoth Mi	38.55	318	*e*P	P	18 09 31.5	+2.1
	comp=Z,5.0nm,1.0s						
LAO	LASA Array	38.55	339	P	P	18 09 28.5	-0.5
	baz=149						
LAO	LASA Array	38.55	339	*e*P	P	18 09 30.1	+1.1
	comp=Z,12nm,0.6s						
NV01	Mina Array Sit	38.56	319	*e*P	P	18 09 30.3	+0.9
NVAR	Mina Array Bea	38.56	319	P	P	18 09 30.7	+1.4
	comp=Z,3.9nm,0.9s,baz=128,slow=7.0,SNR=23						
NVAR				PcP	PcP	18 11 43.0	+1.3
	comp=Z,4.6nm,0.8s,baz=140,slow=3.7,SNR=13						
NVAR				ScP	ScP	18 15 34.9	+6.8
	comp=Z,0.2nm,0.6s,baz=121,slow=3.0,SNR=3.5						
NVAR				LR	LR	18 29 25.8	
	comp=Z,513nm,19.5s,baz=229,slow=43						
YFT	Old Faithful	38.58	333	*e*P	P	18 09 31.4	+1.9
	comp=Z,21nm,1.1s						
MDPB	Devils Postpil	38.61	318	*e*P	P	18 09 32.5	+2.7
	comp=Z,7.0nm,0.9s						
KVN	Kaiserville	38.80	320	*e*P	P	18 09 32.5	+1.2
	comp=Z,7.1nm,1.0s						
KVN	Kaiserville	38.80	320	*e*P	P	18 09 32.5	+1.2
KVN				pmax	pmax		
	comp=Z,7.0nm,1.0s						
RYN	Ryan	38.81	319	*e*P	P	18 09 33.4	+2.0
	comp=Z,38nm,2.0s						
YHB	Horse Butte	38.97	333	*e*P	P	18 09 34.7	+2.0
	comp=Z,6.7nm,0.7s						
GCMT	Greycliff	39.13	335	*e*P	P	18 09 34.1	+0.2
QLMT	Earthquake Lak	39.14	332	*e*P	P	18 09 35.5	+1.4
ULM	Lac du Bonnet	39.23	351	P	P	18 09 32.4	-2.1
	comp=Z,33nm,0.8s,baz=166,slow=9.2,SNR=32						
ULM				LR	LR	18 26 19.3	
	comp=Z,242nm,19.7s,baz=140,slow=37						
ULM	Lac du Bonnet	39.23	351	*e*P	P	18 09 32.9	-1.6
	comp=Z,35nm,0.8s						
ULM	Lac du Bonnet	39.23	351	*e*P	P	18 09 32.9	-1.6
ULM				pmax	pmax		
	comp=Z,35nm,0.8s						
WAKR	Walker	39.33	319	*e*P	P	18 09 39.3	+3.5
	comp=Z,9.9nm,1.1s						
DGMT	Dagmar	39.45	342	P	P	18 09 35.8	-0.6
	baz=153,SNR=9.2						
DGMT	Dagmar	39.45	342	*e*P	P	18 09 36.3	-0.1
	comp=Z,54nm,0.9s						
YERR	Yerington	39.48	319	*e*P	P	18 09 38.5	+1.4
	comp=Z,27nm,1.5s						
HLID	Hailey	39.64	329	P	P	18 09 38.4	+0.1
	baz=135,SNR=27						
HLID	Hailey	39.64	329	*e*P	P	18 09 38.6	+0.3
	comp=Z,8.1nm,0.8s						
CMB	Columbia Colle	39.70	317	*e*P	P	18 09 40.1	+1.4
	comp=Z,7.7nm,1.1s						
MCMT	McKenzie Canyo	39.80	331	*e*P	P	18 09 40.8	+1.1
BOZ	Bozeman (W)	39.82	333	P	P	18 09 39.8	+0.1
	baz=141,SNR=19						
BOZ	Bozeman (W)	39.82	333	*e*P	P	18 09 39.8	+0.1
	comp=Z,8.3nm,0.7s						
BOZ	Bozeman (W)	39.82	333	*e*P	P	18 09 39.8	+0.1
BOZ				pmax	pmax		
	comp=Z,8.0nm,0.7s						
PAHR	Pah Rah Range	39.98	320	*e*P	P	18 09 42.8	+1.7
	comp=Z,25nm,1.8s						
DLMT	Dillon	40.08	332	*e*P	P	18 09 42.7	+0.8
	comp=Z,15nm,1.2s						
MFID	Camas Ranch	40.28	327	*e*P	P	18 09 44.0	+0.5
	comp=Z,31nm,2.0s						
LRM	Limekiln Ridge	40.36	333	*e*P	P	18 09 44.8	+0.4
BEKR	Beckworth	40.69	320	*e*P	P	18 09 48.3	+1.2
	comp=Z,8.2nm,1.0s						
EGMT	Eagleton	40.98	337	P	P	18 09 49.2	+0.1
	baz=145,SNR=6.6						
EGMT	Eagleton	40.98	337	*e*P	P	18 09 49.2	+0.1
	comp=Z,22nm,1.3s						
WVOR	Wild Horse Val	41.19	324	*e*P	P	18 09 51.5	+0.5
	comp=Z,12nm,1.1s						
WVOR	Wild Horse Val	41.19	324	*e*P	P	18 09 51.5	+0.5
WVOR				pmax	pmax		
	comp=Z,13nm,1.1s						
J08A	Circle Bar Ran	41.68	325	*e*P	P	18 09 55.3	+0.3
	comp=Z,26nm,1.6s						
MSO	Missoula	41.80	332	P	P	18 09 56.0	0.0
	baz=138,SNR=9.0						
MSO	Missoula	41.80	332	*e*P	P	18 09 56.0	0.0

	comp=Z,12nm,1.0s						
BMO	Blue Mountains	42.04	328	eP	P	18 09 56.9	-1.0
	comp=Z,5.0nm,0.7s						
BMO	Blue Mountains	42.04	328	eP	P	18 09 56.9	-1.0
BMO				pmax	pmax		
	comp=Z,5.0nm,0.7s						
M04C	Macdoel	42.70	321	P	P	18 10 03.2	-0.3
	baz=125						
F10A	Beach Ranch, E	42.76	329	eP	P	18 10 03.5	-0.3
	comp=Z,11nm,0.8s						
KCSM	Cold Springs	43.08	319	eP	P	18 10 10.7	+4.1
G08A	Pilot Rock	43.20	327	eP	P	18 10 07.9	+0.5
	comp=Z,2.6nm,0.8s						
YBH	Yreka Blue Hor	43.22	321	P	P	18 10 06.9	-0.6
	comp=Z,1.8nm,0.9s,baz=108,slow=6.4,SNR=2.6						
YBH				LR	LR	18 31 06.2	
	comp=Z,369nm,20.3s,baz=140,slow=40						
PINE	Pine Mountain	43.35	324	eP	P	18 10 08.7	0.0
	comp=Z,9.2nm,0.8s						
WALA	Waterton Lakes	43.48	335	eP	P	18 10 09.8	+0.2
	comp=Z,29nm,1.7s						
J04D	Umpqua Nationa	43.71	323	P	P	18 10 12.1	+0.4
	baz=126						
RPN	Rapa Nui	44.08	209	P	P	18 10 21.4	+6.9
	comp=Z,74nm,0.9s,baz=31,slow=1.2,SNR=2.1						
I04A	Tendick Farm,	44.21	323	P	P	18 10 15.0	-0.4
	baz=126,SNR=8.0						
HAWA	Hanford	44.23	328	eP	P	18 10 15.4	0.0
	comp=Z,8.8nm,0.8s						
D08A	Wollman Farm,	44.36	329	eP	P	18 10 16.2	-0.3
	comp=Z,13nm,0.7s						
C09A	Chrisman Ranch	44.55	330	eP	P	18 10 18.1	0.0
	comp=Z,12nm,0.6s						
FFC	Flin Flon	44.62	348	eP	P	18 10 15.7	-2.8
	comp=Z,13nm,1.0s						
FFC	Flin Flon	44.62	348	eP	P	18 10 15.7	-2.8
FFC				pmax	pmax		
	comp=Z,13nm,1.0s						
B08A	Colville Reser	45.45	330	eP	P	18 10 24.8	-0.4
	comp=Z,6.1nm,0.8s						
G03D	McMinnville, O	45.53	324	P	P	18 10 25.7	-0.2
	baz=126						
LON	Longmire	45.66	327	eP	P	18 10 27.0	0.0
	comp=Z,4.6nm,0.8s						
LON	Longmire	45.66	327	eP	P	18 10 27.0	0.0
LON				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SCHQ	Schefferville	46.04	16	P	P	18 10 27.2	-2.5
	comp=Z,14nm,0.8s,baz=197,slow=5.7,SNR=6.6						
SCHQ				LR	LR	18 29 36.5	
	comp=Z,492nm,20.3s,baz=216,slow=36						
SCHQ	Schefferville	46.04	16	eP	P	18 10 28.4	-1.3
	comp=Z,20nm,0.9s						
B06A	Marblemount	46.62	329	eP	P	18 10 34.4	0.0
	comp=Z,12nm,0.7s						
BDFB	Brasilia	47.24	124	eP	P	18 10 39.7	-0.1
	comp=Z,41nm,0.7s						
BDFB	Brasilia	47.24	124	eP	P	18 10 39.7	-0.1
BDFB				pmax	pmax		
	comp=Z,41nm,0.7s						
CPUP	Villa Florida	47.54	143	P	P	18 10 40.8	-1.1
	comp=Z,2.2nm,0.8s,baz=327,slow=6.0,SNR=5.9						
CPUP				LR	LR	18 31 46.2	
	comp=Z,204nm,18.5s,baz=332,slow=37						
CPUP	Villa Florida	47.54	143	eP	P	18 10 40.7	-1.1
	comp=Z,35nm,1.8s						
CPUP	Villa Florida	47.54	143	eP	P	18 10 40.7	-1.1
CPUP				pmax	pmax		
	comp=Z,35nm,1.8s						
LLLB	Lillooet	48.19	331	eP	P	18 10 46.8	+0.1
	comp=Z,11nm,0.7s						
PLCA	Paso Flores	54.26	164	P	P	18 11 34.0	+1.7
	comp=Z,7.8nm,1.0s,baz=352,slow=9.6,SNR=6.6						
PLCA	Paso Flores	54.26	164	eP	P	18 11 35.4	+3.2
	comp=Z,19nm,1.3s						
PLCA	Paso Flores	54.26	164	P	P	18 11 36.5	+4.2
PLCA				pmax	pmax		
	comp=Z,14nm,0.9s						
YKA	Yellowknife Ar	54.54	345	P	P	18 11 32.3	-1.6
	comp=Z,8.7nm,0.7s,baz=141,slow=7.4,SNR=38						
YKA				PcP	PcP	18 12 36.5	-0.4
	comp=Z,1.7nm,0.8s,baz=147,slow=5.0,SNR=4.5						
YKW3	Yellowknife Ar	54.60	345	eP	P	18 11 33.2	-1.1
	comp=Z,12nm,1.0s						
TRQA	Tornquist	54.70	156	⇑eP	P	18 11 40.0	+4.5
TRQA				pmax	pmax		
	comp=Z,15nm,1.7s						
DLBC	Dease Lake	56.83	335	eP	P	18 11 51.1	+0.5
	comp=Z,7.0nm,0.7s						
SFJD	Kangerlussuaq	60.48	16	LR	LR	18 38 51.2	
	comp=Z,270nm,19.2s,baz=224,slow=37						
INK	Inuvik	64.13	343	P	P	18 12 38.5	-1.6
	comp=Z,8.2nm,0.9s,baz=116,slow=7.5,SNR=12						
INK	Inuvik	64.13	343	eP	P	18 12 40.2	+0.1
	comp=Z,8.0nm,0.8s						
INK	Inuvik	64.13	343	eP	P	18 12 40.2	+0.1
INK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
RIDG	Independ'e Rid	65.71	336	eP	P	18 12 50.9	+0.4
	comp=Z,6.9nm,0.8s						
IL1	Eielson Array	66.94	336	eP	P	18 12 57.0	-1.4
ILAR	Eielson Array	66.94	336	P	P	18 12 57.5	-0.9
	comp=Z,3.0nm,0.7s,baz=129,slow=4.6,SNR=34						
ILAR				PP	PP	18 15 29.0	+3.1
	comp=Z,1.1nm,0.8s,baz=116,slow=5.5,SNR=4.6						
ILB	Eielson Array	66.94	336	eP	P	18 12 58.0	-0.4
CCB	Clear Creek Bu	67.26	336	eP	P	18 12 59.1	-1.3
	comp=Z,23nm,1.9s						
KDAK	Kodiak Island	67.27	328	iP	P	18 13 01.1	+0.6
SUMG	Summit	67.37	14	P	P	18 13 00.1	-1.3
MDM	Murphy Dome	67.55	336	eP	P	18 13 03.8	+1.5
	comp=Z,5.9nm,1.0s						
BWN	Browne	67.76	335	eP	P	18 13 04.2	+0.6
	comp=Z,27nm,0.9s						
RSO	Redoubt South	68.06	331	eP	P	18 13 06.6	+0.8
BPAW	Bear Paw Mtn.	68.36	335	eP	P	18 13 06.6	-0.8
	comp=Z,8.1nm,0.8s						
MLY	Manley	68.57	336	eP	P	18 13 08.1	-0.6
	comp=Z,7.7nm,0.7s						
CAST	Castle Rocks	68.61	334	eP	P	18 13 07.8	-1.1
	comp=Z,22nm,1.8s						
COLD	Coldfoot	69.12	338	eP	P	18 13 12.7	+0.6
	comp=Z,9.0nm,1.2s						
CHGN	Chignik	70.07	326	eP	P	18 13 18.0	0.0
	comp=Z,22nm,0.7s						
FALS	False Pass	72.72	324	eP	P	18 13 35.0	+1.0
	comp=Z,54nm,0.7s						
DAG	Danmarks Havn	73.94	13	iP	P	18 13 37.4	-3.5
DAG				eS	PcP	18 13 53.4	-2.8
DAG	Danmarks Havn	73.94	13	P	P	18 13 39.2	-1.7
DAG				pmax	pmax		
	comp=Z,10.0nm,2.4s						
UNV	Unalaska Valle	74.47	323	eP	P	18 13 45.5	+1.1
	comp=Z,51nm,1.1s						
EKA	Eskdalemuir Ar	77.17	36	P	P	18 13 56.0	-3.7
	comp=Z,4.0nm,1.0s,baz=265,slow=4.8,SNR=3.5						
ESDC	Sonseca Array	77.50	52	P	P	18 13 58.8	-3.3
	comp=Z,1.2nm,0.7s,baz=283,slow=5.3,SNR=8.2						
ES19	SONSECA Array	77.55	52	eP	P	18 13 59.7	-2.7
MDT	Midelt	77.60	59	LR	LR	18 44 44.9	
	comp=Z,276nm,19.3s,baz=354,slow=33						
KOWA	Kowa	80.61	77	P	P	18 14 17.2	-2.3
	comp=Z,1.5nm,0.7s,baz=270,slow=5.1,SNR=4.4						
NOA	NORSAR Array B	83.99	29	P	P	18 14 33.6	-2.8
	comp=Z,1.4nm,1.0s,baz=284,slow=5.1,SNR=3.1						
NOA				LR	LR	18 49 28.8	
	comp=Z,94nm,20.6s,baz=260,slow=34						
HFS	Hagfors	85.40	30	LR	LR	18 49 50.4	
	comp=Z,166nm,18.5s,baz=209,slow=34						
ARCES	ARCESS Array B	86.92	19	P	P	18 14 48.1	-2.6
	comp=Z,4.5nm,0.8s,baz=336,slow=4.2,SNR=5.8						
FINES	FINESS Array B	90.63	26	LR	LR	18 55 17.7	
	comp=Z,122nm,18.5s,baz=244,slow=36						
VAE	Valguarnera	92.04	51	LR	LR	18 50 58.0	
	comp=Z,275nm,18.7s,baz=150,slow=32						
SEY	Seymchan	92.88	337	iP	P	18 15 20.4	+1.6
OBN	Obninsk	98.60	29	⇑eP	P	18 15 43.5	-1.4
OBN				e		18 19 39.6	
OBN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,137nm,18.0s						
ZALV	Zalesovo Beam	114.39	5	PKiKP	PKiKP	18 20 45.4	-0.5
	comp=Z,1.0nm,0.6s,baz=293,slow=3.5,SNR=3.4						
BOSA	Boshof	115.04	116	PKP	PKPdf	18 20 47.8	-0.2
	comp=Z,2.0nm,0.8s,baz=336,slow=1.4,SNR=5.0						
KURK	Kurchatov	116.75	10	PKP	PKPdf	18 20 50.0	-0.5
KURK	Kurchatov	116.75	10c	iPKIKP	PKPdf	18 20 49.1	-1.4
KURK				pmax	pmax		
	comp=Z,19nm,1.7s						
KURBB	Kurchatov Arra	116.82	10	PKP	PKPdf	18 20 50.0	-0.6
	comp=Z,1.1nm,0.7s,baz=345,slow=2.0,SNR=12						
DGZ	Jazzator, Alta	118.81	4	iPKIKP	PKPdf	18 20 54.5	-0.2
SONA1	Songino Array	119.63	350	ePKPdf	PKPdf	18 20 56.0	-0.4
SONM	Songino Array	119.65	350	PKP	PKPdf	18 20 55.8	-0.6
	comp=Z,1.7nm,0.7s,baz=341,slow=1.3,SNR=13						
GEYT	Alibeck	120.99	32	PKP	PKPdf	18 20 57.8	-1.3
	comp=Z,1.7nm,0.6s,baz=243,slow=1.0,SNR=5.9						
MKAR	Makanchi Array	121.14	8	PKP	PKPdf	18 20 57.8	-1.3
	comp=Z,0.9nm,0.7s,baz=338,slow=2.6,SNR=9.7						
MK01	Makanchi Array	121.17	8	ePKPdf	PKPdf	18 20 58.1	-1.1
KS01	Wonju Array Si	121.17	328	ePKPdf	PKPdf	18 20 59.4	0.0
KSRS	Korea Array	121.17	328	PKP	PKPdf	18 20 59.7	+0.3
	comp=Z,2.7nm,0.7s,baz=23,slow=1.2,SNR=13						
KSAR	Wonju Array Be	121.20	328	PKP	PKPdf	18 20 59.7	+0.2
KSAR	Wonju Array Be	121.20	328	PKIKP	PKPdf	18 20 59.7	+0.2
WMQ	Urumqi	124.68	5	ePKP	PKPdf	18 21 06.0	-0.1
WMQ				LR	LR		
	comp=Z,320nm,23.7s						
WMQ				LR	LR		
	comp=Z,370nm,24.7s						
WMQ				LR	LR		
	comp=Z,230nm,22.7s						
HHC	Hu-ho-hao-te	125.05	343	ePKP	PKPdf	18 21 08.4	+1.5
KSH	Kashi	126.81	16	ePKP	PKPdf	18 21 11.9	+1.6
KSH				PKS	PKSdf	18 24 46.8	-0.3
GTA	Gaotai	128.87	353	ePKP	PKPdf	18 21 14.5	+0.2
GTA				sPKP		18 21 33.4	
NJ2	Nanjing	129.99	331	ePKP	PKPdf	18 21 15.1	-1.3
STKA	Stephens Creek	130.88	238	PKP	PKPdf	18 21 20.3	+2.2
	comp=Z,2.3nm,0.7s,baz=338,slow=3.9,SNR=7.2						
LZH	Lanzhou	131.48	348	ePKP	PKPdf	18 21 20.0	+0.6
LZH				sPKP		18 21 40.8	
LZH				LR	LR		
	comp=Z,72nm,14.4s						
LZH				LR	LR		
	comp=Z,87nm,16.0s						
LZH				LR	LR		
	comp=Z,120nm,17.3s						
WHN	Wuhan	133.31	334	PKP	PKPdf	18 21 23.9	+1.2
CD2	Chengdu	136.49	346	PKP	PKPdf	18 21 27.3	-1.5
ASAR	Alice Springs	139.21	247	PKhKP	PKPpre	18 21 26.1	
	comp=Z,0.4nm,0.8s,baz=131,slow=3.7,SNR=4.0						
ASAR				PKP	PKiKP	18 21 35.1	-1.1
	comp=Z,2.2nm,0.7s,baz=109,slow=3.1,SNR=13						
WRAB	Tennant Creek	139.29	253	ePKPdf	PKPdf	18 21 33.6	-0.6
WRAB	Tennant Creek	139.29	253c	iPKIKP	PKPdf	18 21 33.5	-0.6
WRAB				pmax	pmax		
	comp=Z,30nm,2.5s						
WRA	Warramunga Arr	139.30	253	PKhKP	PKPpre	18 21 31.1	
	comp=Z,3.4nm,0.7s,baz=90,slow=2.0,SNR=11						
WRA				PKP	PKPdf	18 21 35.1	+1.0
	comp=Z,3.4nm,0.7s,baz=89,slow=2.2,SNR=26						
GYA	Guiyang	139.89	341	ePdif	Pdif	18 18 47.0	-2.5
GYA				PKP	PKPdf	18 21 34.4	-0.8
GYA				PP	PP	18 24 33.6	+3.7
GYA				AMB	AMB		
	comp=Z,120nm,7.9s						
KMI	Kunming	142.28	345	PKP	PKPdf	18 21 38.3	-1.4
NWAO	Narrogin (SRO)	149.14	223	PKPbc	PKPab	18 21 59.0	-0.3
	comp=Z,8.3nm,0.7s,baz=16,slow=4.2,SNR=6.5						
CHTO	Chiang Mai	149.22	349	ePKPbc	PKPbc	18 21 55.2	-0.4
CHTO	Chiang Mai	149.22	349	ePKP2	PKPbc	18 21 55.2	-0.4
CHTO	Chiang Mai	149.22	349	P	PKPbc	18 21 55.3	-0.3
	comp=Z,132nm,1.2s						
CMMT	Chiang Mai	149.22	349	P	PKPbc	18 21 55.3	-0.3
	comp=Z,30nm,1.2s						
CMAR	Chiang Mai Arr	149.57	349	PKP	PKPdf	18 21 52.6	+0.7
	comp=Z,15nm,0.8s,baz=340,slow=3.3,SNR=61						
CMAR				PKPbc	PKPbc	18 21 57.0	+0.5
	comp=Z,15nm,0.8s,baz=332,slow=2.9,SNR=59						
SKNT	Sakolnakorn	149.58	339	P	PKPbc	18 21 57.2	+0.7
UTTA	Uttaradit	149.90	345	P	PKPbc	18 21 57.3	0.0
	comp=Z,15nm,0.9s,comp=Z,127nm						
SUKH	Sukhothai	150.37	347	P	PKPbc	18 21 58.9	+0.5
	comp=Z,23nm,0.9s						
PHIT	Phitsanulok	150.47	345	P	PKPbc	18 21 59.5	+0.9
	comp=Z,67nm,0.9s,comp=Z,586nm						
UBPT	Khong Chiam	150.54	335	P	PKPbc	18 22 00.5	+1.6
	comp=Z,24nm,2.5s						
KHON	Khomkaen	150.57	340	P	PKPbc	18 21 59.9	+1.0
	comp=Z,32nm,0.9s						
PBKT	Sadao Pong	150.91	344	P	PKPbc	18 22 00.1	+0.4
	comp=Z,62nm,1.0s,comp=Z,2μm						

IDC ***22*** *18:04:45.2±1.1, 11°.88N×86°.87W, h0^{km}, mb4.0/9, mb1 4.3/11, mb1mx3.9/50, mbtmp4.0/11, ML3.7/1, MS4.3/3, Ms1 4.4/3, ms1mx3.6/44, Error ellipse: s-maj=43.4km s-min=15.6km az=52.0*

ISCJB ***22*** *18:04:48.3±0.8, 11°.8N±0°.1×87°.0W±0°.2, h35^{km}, mb4.0/9, MS4.3/3, Error ellipse: s-maj=28.9km s-min=7.5km az=45.0*

ISC 22 18:04:50.1±0.9**, 11°.9N**±0°.2×**86°.9W**±0°.2**, h35^{km}, n14, σ0ˢ.58**/13**, mb4.0**/9**, MS4.2**/3**, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTS	JuntasAbangare	2.49	128	Pn	Pn	18 05 28.2	-0.1
	baz=347,slow=19,SNR=2.4						
JTS				Sn	Sn	18 05 57.9	+0.5
	27nm,0.3s,baz=336,slow=20,SNR=5.1						
CMIG	Matias Romero	9.29	305	Pn	Pn	18 07 01.5	-0.1
	0.8nm,0.3s,baz=147,slow=9.0,SNR=3.1						
PCRV	Puerto La Cruz	21.95	92	LR	LR	18 18 16.9	
	comp=Z,755nm,20.8s,baz=286,slow=37						
TXAR	Lajitas Array	23.35	321	P	P	18 09 56.0	+0.4
	1.9nm,0.6s,baz=131,slow=9.7,SNR=7.5						
TKL	Tuckaleechee C	23.87	6	P	P	18 10 01.6	+1.1
	6.7nm,0.7s,baz=205,slow=12,SNR=4.2						
SADO	Sadowa	33.47	10	P	P	18 11 25.8	-0.2
	4.1nm,0.7s,baz=206,slow=10,SNR=4.4						
LPAZ	La Paz	33.59	146	P	P	18 11 27.9	-0.1
	0.9nm,0.7s,baz=321,slow=8.1,SNR=2.6						
PDAR	Pinedale Array	36.53	332	P	P	18 11 52.7	0.0
	1.0nm,0.6s,baz=128,slow=7.0,SNR=4.7						
ULM	Lac du Bonnet	38.98	351	P	P	18 12 12.3	-0.6
	2.4nm,0.6s,baz=167,slow=7.5,SNR=3.0						
YKA	Yellowknife Ar	54.31	345	P	P	18 14 12.4	-0.3
	1.3nm,0.7s,baz=136,slow=7.7,SNR=3.9						
ILAR	Eielson Array	66.76	336	P	P	18 15 38.2	+0.5
	1.2nm,0.9s,baz=119,slow=4.5,SNR=4.2						
ILAR				LR	LR	18 48 07.5	
	comp=Z,162nm,19.8s,baz=126,slow=39						
TORD	Torodi Ar. Bea	86.05	77	P	P	18 17 27.2	-0.8
	0.4nm,0.7s,baz=296,slow=8.1						
MLR	Muntele Rosu	97.04	41	LR	LR	19 00 29.5	
	comp=Z,240nm,18.4s,baz=260,slow=34						
CMAR	Chiang Mai Arr	149.32	349	PKPbc	PKPbc	18 24 36.7	+0.4
	1.5nm,0.7s,baz=345,slow=3.9,SNR=5.4						

KRNET ***22*** *18:12:45.1±0.1, 41°.95N×72°.24E, h6^{km}, mb2.4*

NNC ***22*** *18:12:45.7±1.8, 42°.03N×72°.08E, h0^{km}, mb2.7, mpv2.4, Error ellipse: s-maj=13.6km s-min=5.6km az=161.0*

ISC 22 18:12:44.4±1.2**, 41°.93N**±0°.04×**72°.12E**±0°.04**, h24**^{km}±11^{km}**, n12, σ0ˢ.81**/23**, 16C-8D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARK	Arkit	0.18	221	⇓iP	Pb	18 12 50.0	+0.1
	baz=29						
ARK				⇓iS	Sb	18 12 53.5	-0.1
	baz=29						
MNAS	Manas	0.62	27	⇑P	Pb	18 12 56.4	-0.4
	2.8nm,0.3s						
MNAS				⇓S	Sb	18 13 04.7	-0.6
	14nm,0.3s						
MNAS	Manas	0.62	27	⇑iP	Pb	18 12 56.6	-0.2
	baz=20						
MNAS				⇑iS	Sb	18 13 04.2	-1.0
	baz=20						
ARSB	Arslanbob	0.89	133	⇑iP	Pb	18 13 01.3	+0.1
	baz=38						
ARSB				⇑iS	Sn	18 13 12.8	-0.9
	baz=38						
AML	Almayashu	1.19	80	⇓iP	Pb	18 13 06.4	-0.1
	baz=80						
AML				⇓iS	Sn	18 13 20.9	-0.6
	baz=80						
EKS2	Erkin-Say	1.43	59	⇓iP	Pb	18 13 10.9	+0.4
	baz=58						
EKS2				⇓iS	Sb	18 13 28.8	+0.5
	baz=58						
KK31	Karatay Array	1.67	315	⇑P	Pb	18 13 14.5	0.0
	0.9nm,0.3s,baz=129,slow=15,SNR=31						
KK31				⇑S	Sb	18 13 36.1	+1.1
	0.9nm,0.3s,baz=130,slow=28,SNR=9.1						
USP	Ospenovka	2.21	52	⇑iP	Pb	18 13 24.5	+0.8
	baz=51						
USP				⇑iS	Sb	18 13 52.0	+1.4
	baz=51						
CHMS	Chumysh	2.22	60	⇑iP	Pb	18 13 24.6	+0.7
	baz=60						
CHMS				⇑iS	Sb	18 13 52.1	+1.1
	baz=60						
KZA	Kyzart	2.34	85	⇑iP	Pb	18 13 26.5	+0.4
	baz=86						
KZA				⇑iS	Sb	18 13 55.8	+1.1
	baz=86						
TKM2	Tokmak 2	2.76	68	⇓Pn	Pb	18 13 33.4	+0.3
	1.5nm,0.4s						
TKM2				⇑Lg	Lg	18 14 10.7	
	1.1nm,0.6s						
TKM2	Tokmak 2	2.76	68	⇑iP	Pb	18 13 32.3	-0.8
	baz=68						
TKM2				⇑iS	Sb	18 14 05.5	-1.1
	baz=68						

WEL ***22*** *18:15:07.6±1.2, 30°S±5°×17°7W±2°0, h12^{km}, ML5.4/2*

IDC ***22*** *18:15:08.8±0.4, 30°.19S×177°.31W, h0^{km}, mb4.6/23, mb1 4.7/24, mb1mx4.6/41, mbtmp4.6/24, ML4.5/1, MS4.5/32, Ms1 4.5/32, ms1mx4.5/42, Error ellipse: s-maj=15.8km s-min=12.6km az=64.0*

MOS ***22*** *18:15:09.7±1.0, 30°.23S×177°.40W, h33^{km}, mb5.0/24, MS4.6/9, Error ellipse: s-maj=11.5km s-min=9.7km az=100.3*

ISCJB ***22*** *18:15:11.6±0.3, 30°.60S±0°.03×177°.28W±0°.06, h33^{km}, mb4.8/53, MS4.6/35, Error ellipse: s-maj=8.1km s-min=3.2km az=21.5*

BJI ***22*** *18:15:11.5, 30°.32S×177°.33W, h30^{km}, mb5.2/20, mB5.4/8, Ms5.0/8, Ms7 4.8/8*

GCMT ***22*** *18:15:16.1±0.2, 30°.19S×176°.96W, h19^{km}, MW5.1/93, Moment Tensor Solution. s64,c92; s93,c139; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$5.17±.20; M$_{\theta\theta}$-0.78±.14; M$_{\phi\phi}$-4.39±.13; M$_{r\theta}$-0.07±.34; M$_{\theta\phi}$-1.46±.10; M$_{\phi r}$3.85±.29; Best double couple: M$_0$6.33200×10^{16} NP1:φ$_s$8.00000°, δ64.00000°, λ80.00000°. NP2: φ$_s$209.00000°, δ28.00000°, λ109.00000°. Principal axes: T 6.5690, Plg70.0000°, Azm257.0000°; N -0.4700, Plg9.0000°, Azm12.0000°; P -6.0940, Plg18.0000°, Azm105.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***22*** *18:15:16.1±0.3, 30°.55S×177°.43W, h60^{km}, mb4.9/22 Error ellipse: s-maj=11.0km s-min=7.4km az=131.0*

ISC 22 18:15:13.7±0.4**, 30°.42S**±0°.04×**177°.26W**±0°.07**, h33^{km}, n199, σ2ˢ.08**/194**, mb4.9**/52**, MS4.6**/35**, 15C-3D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GLKZ	Green Lake	1.29	333	P	Pn	18 15 31.9	-3.5
RAO	Raoul Island	1.30	334	Pn	Pn	18 15 31.1	-4.5
	998nm,0.3s,baz=91,slow=7.2,SNR=31						
RAO				Sn	Sn	18 15 46.9	-4.9
	2μm,0.3s,baz=79,slow=19,SNR=13						
RAO				LR	LR	18 16 00.1	
	comp=Z,11μm,21.9s,baz=130,slow=48						
RIZ	Raoul Island	1.31	333	P	Pn	18 15 32.0	-3.7
WMGZ	Waiomatatini S	8.20	205	P	Pn	18 17 08.0	-2.4
WMGZ				S	Sn	18 18 40.8	-1.2
PKGZ	Pakihiroa	8.39	206	P	Pn	18 17 08.4	-4.6
PKGZ				S	Sn	18 18 44.4	-2.3
HAZ	Te Kaha	8.39	208	P	Pn	18 17 09.8	-3.2
HAZ				S	Sn	18 18 47.0	+0.4
PUZ	Puketiti	8.48	205	P	Pn	18 17 10.4	-4.0
PUZ				S	Sn	18 18 47.5	-1.4
RUGZ	Raukumara Rang	8.61	208	P	Pn	18 17 12.2	-3.9
TWGZ	Tauwhareparae	8.68	206	P	Pn	18 17 12.8	-4.2
CNGZ	Carnagh Statio	8.87	204	P	Pn	18 17 16.4	-3.2
WCZ	Waipu Caves	8.93	230	P	Pn	18 17 25.1	+4.7
TKGZ	Te Karaka	8.96	205	P	Pn	18 17 17.6	-3.1
MWZ	Matawai	8.99	207	P	Pn	18 17 16.5	-4.7
MWZ				S	Sn	18 19 00.6	-0.7
OUZ	Omahuta	9.06	236	P	Pn	18 17 28.3	+6.1
URZ	Urewera	9.10	209	Pn	Pn	18 17 17.0	-5.6
	1.7nm,0.3s,baz=268,slow=3.0,SNR=12						
URZ				Sn	Sn	18 19 02.1	-1.8
	6.9nm,0.3s,baz=88,slow=17,SNR=8.6						
URZ	Urewera	9.10	209	ePn	Pn	18 17 19.5	-3.1
URZ				Sn	Sn	18 19 02.1	-1.8
URZ	Urewera	9.10	209	P	Pn	18 17 18.3	-4.4
URZ				S	Sn	18 19 01.8	-2.1
RIGZ	Rimuhau	9.23	205	P	Pn	18 17 21.7	-2.8
RIGZ				S	Sn	18 19 05.6	-1.6
MUGZ	Murupara	9.43	210	P	Pn	18 17 24.0	-3.2
SNGZ	Shannon Statio	9.45	207	P	Pn	18 17 24.3	-3.2
MHGZ	Mahia Peninsul	9.57	203	P	Pn	18 17 24.4	-4.7
MTHZ	Maungataniwha	9.71	208	P	Pn	18 17 29.3	-1.8
THZ	Tophouse	13.82	212	ePn	Pn	18 18 26.8	-0.5
KHZ	Kahutara	14.07	209	ePn	Pn	18 18 28.6	-2.0
OXZ	Oxford	15.45	211	ePn	Pn	18 18 44.6	-4.6
	73nm,0.5s						
MQZ	McQueen's Vall	15.50	208	ePn	Pn	18 18 43.8	-5.9
	93nm,1.8s						
RPZ	Rata Peaks	16.20	212	Pn	Pn	18 18 53.3	-5.5
	2.2nm,0.3s,baz=68,slow=3.9,SNR=11						
RPZ				Sn	Sn	18 21 41.4	-16
	0.8nm,0.3s,baz=320,slow=7.9,SNR=4.4						
RPZ	Rata Peaks	16.20	212	ePn	Pn	18 18 55.9	-2.8
	34nm,1.0s						
RPZ				Sn	Sn	18 21 41.4	-16
DZM	Mont Dzumac	16.81	296	Pn	P	18 19 12.0	+3.5
	1.1nm,0.3s,baz=164,slow=15,SNR=8.7						
DZM				LR	LR	18 24 33.1	
	comp=Z,6μm,18.2s,baz=123,slow=34						
DZM	Mont Dzumac	16.81	296	eP	P	18 19 12.1	+3.5
	319nm,1.6s						
DZM				eLQ	LQ	18 22 35.9	
	2μm,26.9s						
DZM				eLR	LR	18 23 09.8	
	5μm,24.9s						
DZM	Mont Dzumac	16.81	296	ePn	Pn	18 19 03.9	-2.8
	109nm,1.1s						
AFI	Afiamalu	17.19	18	Pn	Pn	18 19 09.3	-2.3
	1.5nm,0.3s,baz=64,slow=8.7,SNR=4.0						
AFI				Sn	Sn	18 21 55.6	-26
	1.5nm,0.3s,baz=315,slow=19,SNR=1.8						
ODZ	Otahua Downs	17.42	210	ePn	Pn	18 19 11.1	-3.1
	32nm,0.8s						
RAR	Rarotonga	18.20	64	P	Pn	18 19 15.5	-8.3
	0.7nm,0.3s,baz=233,slow=15,SNR=2.2						
RAR				S	Sn	18 22 21.5	-24
	0.6nm,0.3s,baz=95,slow=15,SNR=2.3						
RAR				LR	LR	18 25 24.3	
	comp=Z,491nm,18.6s,baz=249,slow=34						
MLZ	Mavora Lakes	18.82	213	eP	P	18 19 28.4	-2.1
	120nm,1.6s						
TBI	Tubuai	25.73	81	eLQ	LQ	18 25 33.7	
	1μm,26.2s						
TBI				eLR	LR	18 26 43.8	
	2μm,29.8s,baz=248						
TBI	Tubuai	25.73	81	eT	T	18 46 36.5	
	9.6nm,0.4s						
ARMA	Armidale	26.79	262	P	P	18 20 53.1	+2.2
	baz=27,SNR=5.3						
PPT2	Papeete2	28.24	69	eLQ	LQ	18 26 29.3	
	1μm,24.2s						
PPT2				eLR	LR	18 27 59.0	
	1μm,25.2s,baz=233						
PPT	Papeete	28.25	69	LR	LR	18 29 10.9	
	comp=Z,492nm,20.0s,baz=245,slow=30						
EIDS	Eidsvold	28.38	272	P	P	18 21 07.4	+2.3
	baz=28,SNR=5.4						
MILA	Mila	28.60	248	P	P	18 21 09.2	+2.2
	baz=29,SNR=8.8						
CAN	Canberra	28.68	251	P	P	18 21 09.9	+2.2
CAN				pmax	pmax		
	comp=Z,26nm,1.9s						
HNR	Honiara	29.80	310	LR	LR	18 32 21.1	
	comp=Z,1μm,18.4s,baz=176,slow=35						
RMQ	Roma	30.07	269	P	P	18 21 21.1	+1.0
	baz=30,SNR=9.9						

TOO	Toolangi	31.55	247	P	P	18 21 35.7	+2.7
	baz=32,SNR=6.0						
TOO	Toolangi	31.55	247	P	P	18 21 35.1	+2.1
TOO				pmax	pmax		
	comp=Z,22nm,0.9s						
CMSA	Cobar Meteorol	31.69	258	P	P	18 21 36.8	+2.5
	baz=32,SNR=6.2						
QLP	Quilpie	33.95	267	P	P	18 21 54.0	-0.1
	baz=34,SNR=41						
CTA	Charters Tower	34.44	279	P	P	18 21 58.8	+0.4
	comp=Z,4.6nm,0.5s,baz=96,slow=14,SNR=12						
CTA				LR	LR	18 34 59.8	
	comp=Z,3µm,18.1s,baz=112,slow=35						
CTAO	Charters Tower	34.44	279	eP	P	18 21 57.0	-1.4
	comp=Z,29nm,1.1s						
CTAO	Charters Tower	34.44	279	eP	P	18 21 57.0	-1.4
CTAO				pmax	pmax		
	comp=Z,29nm,1.1s						
ARPS	Mount Arapiles	34.46	248	P	P	18 21 59.7	+1.3
	baz=35,SNR=5.2						
STKA	Stephens Creek	35.10	257	P	P	18 22 04.7	+0.7
	comp=Z,10nm,0.8s,baz=100,slow=13,SNR=15						
STKA				LR	LR	18 35 42.9	
	comp=Z,2µm,18.3s,baz=91,slow=35						
STKA	Stephens Creek	35.10	257	P	P	18 22 05.3	+1.3
	baz=35,SNR=10.0						
STKA	Stephens Creek	35.10	257	eP	P	18 22 04.3	+0.3
	comp=Z,4.9nm,0.8s						
MTSU	Mount Surprise	36.93	280	P	P	18 22 21.3	+1.5
	baz=37,SNR=5.9						
HTT	Hallett	37.11	254	P	P	18 22 21.3	+0.1
	baz=37,SNR=28						
RKT	Rikitea	38.27	89	eLR	LR	18 32 26.0	
	comp=Z,1µm,27.2s						
PMG	Port Moresby	39.20	295	LR	LR	18 36 44.6	
	comp=Z,820nm,18.7s,baz=133,slow=33						
BBOO	Buckleboo	39.58	254	P	P	18 22 41.0	-1.0
	baz=40,SNR=31						
BBOO	Buckleboo	39.58	254	eP	P	18 22 40.8	-1.2
	comp=Z,33nm,0.6s						
QIS	Mount Isa	39.96	274	P	P	18 22 46.0	+0.8
	baz=40,SNR=3.2						
TAOE	Nuku Hiva Isla	40.73	66	eLR	LR	18 33 47.4	
	comp=Z,945nm,27.8s						
AS01	Alice Springs	43.71	267	eP	P	18 23 13.9	-2.1
AS31	Alice Springs	43.75	267	eP	P	18 23 14.0	-2.3
	comp=Z,4.6nm,1.1s						
ASAR	Alice Springs	43.75	267	P	P	18 23 14.5	-1.8
	comp=Z,8.7nm,0.8s,baz=110,slow=7.5,SNR=37						
ASAR				PcP	PcP	18 25 02.4	-0.4
	comp=Z,1.6nm,0.8s,baz=121,slow=3.9,SNR=2.7						
ASAR				ScP	ScP	18 28 54.9	+2.9
	comp=Z,0.5nm,0.7s,baz=109,slow=4.4,SNR=5.0						
ASAR				LR	LR	18 41 25.9	
	comp=Z,3µm,18.3s,baz=110,slow=36						
WB2	Warramunga Arr	44.73	272	eP	P	18 23 22.8	-1.4
WRAB	Tennant Creek	44.73	272	eP	P	18 23 22.5	-1.6
	comp=Z,20nm,0.8s						
WRAB	Tennant Creek	44.73	272	deP	P	18 23 24.3	+0.1
WRAB				pmax	pmax		
	comp=Z,28nm,1.0s						
WRA	Warramunga Arr	44.74	272	P	P	18 23 22.8	-1.4
	comp=Z,18nm,0.8s,baz=111,slow=7.8,SNR=41						
WRA				PcP	PcP	18 25 06.8	+0.7
	comp=Z,2.9nm,0.9s,baz=119,slow=3.0,SNR=3.0						
WRA				ScP	ScP	18 28 59.0	+2.9
	comp=Z,1.2nm,1.1s,baz=105,slow=4.1,SNR=3.8						
WRA				S	S	18 29 57.7	-1.4
	comp=Z,0.7nm,0.6s,baz=110,slow=8.1,SNR=5.1						
WRA				LR	LR	18 41 26.4	
	comp=Z,2µm,18.3s,baz=105,slow=35						
FORT	Forrest	46.66	255	eP	P	18 23 38.1	-1.2
	comp=Z,20nm,0.8s						
SBA	Scott Base	48.06	184	eP	P	18 23 52.0	+2.6
	comp=Z,11nm,1.0s						
SBA	Scott Base	48.06	184	eP	P	18 23 52.1	+2.6
SBA				pmax	pmax		
	comp=Z,11nm,1.0s						
WRKA	Warakurna	48.11	262	P	P	18 23 49.4	-1.3
	baz=48,SNR=12						
VNDA	Vanda	48.14	186	P	P	18 23 52.6	+2.5
	comp=Z,1.4nm,0.8s,baz=13,slow=8.7,SNR=8.4						
VNDA				LR	LR	18 41 57.8	
	comp=Z,475nm,19.5s,baz=30,slow=33						
FITZ	Fitzroy Crossi	53.00	270	P	P	18 24 26.5	-1.0
	baz=53,SNR=9.4						
KIP	Kipapa	54.77	22	i P	P	18 24 40.6	+0.4
NWAO	Narrogin (SRO)	54.99	249	LR	LR	18 46 33.6	
	comp=Z,562nm,19.9s,baz=309,slow=34						
CASY	Casey	55.42	208	eP	P	18 24 43.9	-0.6
	comp=Z,15nm,0.6s						
GUMO	Guam	56.95	315	LR	LR	18 46 33.3	
	comp=Z,349nm,19.5s,baz=121,slow=33						
MORW	Morawa	57.14	253	P	P	18 24 58.7	+1.3
	baz=57,SNR=6.3						
RPN	Rapa Nui	58.81	105	LR	LR	18 47 01.1	
	comp=Z,337nm,18.1s,baz=272,slow=32						
QSPA	South Pole Qui	59.69	180	P	P	18 25 17.2	+2.4
	comp=Z,8.6nm,0.8s,baz=22,slow=2.4,SNR=26						
QSPA				LR	LR	18 48 36.9	
	comp=Z,868nm,19.4s,baz=43,slow=34						
PMSA	Palmer Station	71.98	156	LR	LR	18 55 58.7	
	comp=Z,572nm,18.6s,baz=248,slow=34						
MAW	Mawson	72.51	200	P	P	18 26 38.0	+1.2
	comp=Z,16nm,1.1s,baz=125,slow=6.5,SNR=13						
MAW	Mawson	72.51	200	P	P	18 26 37.6	+0.9
	baz=73,SNR=8.5						
TGY	Tagaytay City	74.10	297	P	P	18 26 46.3	-0.7
	comp=Z,42nm,0.3s,baz=128,slow=17,SNR=2.3						
JHJ	Hachijo jima 2	75.14	324	LR	LR	18 56 24.6	
	comp=Z,112nm,18.2s,baz=114,slow=33						
USHA	Ushuaia	75.54	146	LR	LR	18 57 25.1	
	comp=Z,429nm,18.9s,baz=260,slow=34						
JOW	Kunigami	77.15	312	P	P	18 27 05.4	+1.2
	comp=Z,6.6nm,0.6s,baz=158,slow=11,SNR=2.1						
JOW				LR	LR	19 00 54.0	
	comp=Z,129nm,18.4s,baz=132,slow=36						
SYO	Syowa Base	77.24	193	⇑eP	P	18 27 02.0	-2.1
SYO	Syowa Base	77.24	193	⇓epP	pP	18 27 09.9	-4.5
SYO	Syowa Base	77.24	193	⇑ePcP	PcP	18 27 14.4	-0.3
SNAA	Sanae	78.11	178	P	P	18 27 09.6	+0.6
SNAA	Sanae	78.11	178	ceP	P	18 27 07.7	-1.4
VNA3	Neumayer Olymp	78.24	176	P	P	18 27 10.0	+0.3
MJAR	Matsushiro Arr	78.63	325	P	P	18 27 11.7	-0.5
	comp=Z,3.0nm,0.9s,baz=167,slow=5.9,SNR=11						
MJAR				LR	LR	18 56 36.7	
	comp=Z,112nm,21.4s,baz=130,slow=32						
MAJO	Matsushiro	78.63	325	eP	P	18 27 08.3	-3.9
	comp=Z,12nm,1.1s						
MAJO	Matsushiro	78.63	325	ceP	P	18 27 12.5	+0.3
MAJO				pmax	pmax		
	comp=Z,24nm,2.5s						
MAT	Matsushiro	78.63	325	P	P	18 27 11.2	-1.0
NVL	N'lazarevskaya	78.89	183	eP	P	18 27 15.4	+2.2
NVL				eS	S	18 37 11.4	+2.6
NVL				pmax	pmax		
	comp=Z,4.0nm,0.6s						
NVL				MLR	MLR		
	comp=Z,626nm,18.0s						
VNA1	Neumayer--Stat	78.91	176	P	P	18 27 14.7	+1.4
JNU	Nakatsue	80.00	318	P	P	18 27 19.3	-0.5
	comp=Z,8.1nm,1.0s,baz=68,slow=6.9,SNR=3.4						
JNU				LR	LR	18 58 23.2	
	comp=Z,117nm,21.1s,baz=122,slow=32						
PLCA	Paso Flores	82.02	133	P	P	18 27 32.1	+1.4
	comp=Z,3.5nm,0.9s,baz=237,slow=8.1,SNR=6.1						
PLCA				LR	LR	18 58 29.9	
	comp=Z,365nm,18.1s,baz=290,slow=32						
ASAJ	Asahikawa	82.76	332	P	P	18 27 33.1	-0.9
	comp=Z,14nm,0.9s,baz=185,slow=3.4,SNR=13						
LPIG	La Paz	84.00	58	LR	LR	19 00 14.8	
	comp=Z,322nm,18.3s,baz=222,slow=32						
KSRS	Korea Array	84.78	319	P	P	18 27 43.9	-0.7
	comp=Z,3.0nm,0.9s,baz=148,slow=5.4,SNR=8.4						
KSRS				LR	LR	19 03 05.6	
	comp=Z,170nm,19.3s,baz=116,slow=34						
KSAR	Wonju Array Be	84.80	319	P	P	18 27 43.9	-0.8
KSAR	Wonju Array Be	84.80	319	P	P	18 27 43.9	-0.8
KS01	Wonju Array Si	84.81	319	eP	P	18 27 44.9	+0.1
YSS	Yuzh-Sakhalins	85.05	334	eP	P	18 27 45.7	+0.1
	comp=Z,38nm,0.9s						
YSS	Yuzh-Sakhalins	85.05	334	eP	P	18 27 46.6	+0.9
YSS				e		18 27 55.2	
YSS				e		18 30 57.0	
YSS				ePPP	PPP	18 33 05.0	
YSS				eS	S	18 38 19.6	+7.2
YSS				pmax	pmax		
	comp=Z,30nm,0.8s						
PET	Petropavlovsk	85.71	346	eP	P	18 27 49.4	+0.6
PET				eS	S	18 38 23.9	+5.2
PET				MLR	MLR		
	comp=Z,300nm,18.0s						
PFO	Pinyon Flats O	85.75	47	⇑eP	P	18 27 52.9	+3.2
PFO				pmax	pmax		
	comp=Z,13nm,2.5s						
PETK	Petropavlovsk-	86.00	345	P	P	18 27 49.3	-1.0
	comp=Z,8.2nm,0.8s,baz=120,slow=5.5						
PETK				LR	LR	19 04 21.8	
	comp=Z,187nm,18.9s,baz=146,slow=34						
PETK	Petropavlovsk-	86.00	345	eP	P	18 27 48.4	-1.9
CMB	Columbia Colle	86.35	41	eP	P	18 27 52.5	0.0
	comp=Z,5.3nm,0.9s						
CMB	Columbia Colle	86.35	41	eP	P	18 27 52.5	0.0
CMB				pmax	pmax		
	comp=Z,5.0nm,0.9s						
AFDM	Forest Hills D	86.65	41	eP	P	18 27 53.8	-0.2
	comp=Z,6.8nm,1.2s						
NJ2	Nanjing	86.75	310	eP	P	18 27 55.4	+0.9
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
USRK	Ussuriysk Ar.	87.53	326	P	P	18 27 58.3	+0.3
	comp=Z,5.3nm,0.9s,baz=131,slow=3.6						
YBH	Yreka Blue Hor	87.66	38	LR	LR	18 59 13.0	
	comp=Z,259nm,21.2s,baz=195,slow=30						
NV01	Mina Array Sit	87.82	42	eP	P	18 27 59.2	-0.6
NVAR	Mina Array Bea	87.82	42	P	P	18 27 59.2	-0.6
	comp=Z,3.8nm,0.9s,baz=219,slow=6.7,SNR=20						
TYV	Tymovskoe	88.33	336	eP	P	18 28 07.7	+6.1
TYV				eS	S	18 38 53.3	+9.2
TYV				pmax	pmax		
	comp=Z,15nm,1.0s						
TYV				pmax	pmax		
	comp=Z,100nm,2.7s						
TYV				smax	smax		
	comp=N,400nm,8.3s						
TUC	Tucson	88.62	51	eP	P	18 28 02.5	-1.1
	comp=N,7.7nm,1.0s						
TUC	Tucson	88.62	51	eP	P	18 28 02.5	-1.1
TUC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
WUAZ	Wupatki	90.20	48	P	P	18 28 08.2	-2.8
	comp=Z,8.3nm,1.0s						
CN2	Changchun	90.55	322	eP	P	18 28 12.3	+0.1
CN2				esP	sP	18 28 24.8	-1.7
CN2				eS	S	18 39 04.1	-1.0
CN2				eSS	SS	18 45 10.5	+3.0
CN2				pmax	pmax		
	comp=Z,20nm,1.1s						
CN2				pmax	pmax		
	comp=Z,200nm,6.0s						
CN2				LR	LR		
	comp=Z,150nm,18.0s						
CN2				LR	LR		
	comp=Z,230nm,18.0s						
CN2				LR	LR		
	comp=Z,120nm,18.0s						
GRNR	Gornyy	90.60	333	eP	P	18 28 16.4	+4.1
GRNR				pmax	pmax		
	comp=Z,21nm,1.0s						
KLR	Kul'dur	91.38	329	ceP	P	18 28 16.7	+0.8
TXAR	Lajitas Array	91.86	57	P	P	18 28 19.4	+0.6
	comp=Z,0.9nm,0.9s,baz=201,slow=6.6,SNR=5.9						
TXAR				LR	LR	19 00 22.5	
	comp=Z,132nm,21.7s,baz=0.0,slow=30						
GYA	Guiyang	92.12	299	eP	P	18 28 19.0	-1.1
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
DUG	Dugway, Tooele	92.20	44	P	P	18 28 20.2	0.0
DUG				pmax	pmax		
	comp=Z,3.0nm,1.5s						
MFID	Camas Ranch	92.52	40	eP	P	18 28 20.5	-1.1
	comp=Z,6.9nm,1.2s						
NNA	Nana	92.80	106	P	P	18 28 24.3	+0.8
	comp=Z,3.5nm,0.4s,baz=291,slow=8.6,SNR=1.9						
NNA				LR	LR	19 03 49.1	
	comp=Z,157nm,18.5s,baz=216,slow=31						
ANMO	Albuquerque	93.09	51	P	P	18 28 23.8	-0.6
	comp=Z,1.3nm,0.9s,baz=180,slow=2.0,SNR=4.0						
ANMO				LR	LR	19 06 35.0	
	comp=Z,230nm,18.2s,baz=257,slow=33						
ANMO	Albuquerque	93.09	51	ceP	P	18 28 24.2	-0.3
ANMO				pmax	pmax		
	comp=Z,1.0nm,1.0s						
HLID	Hailey	93.40	40	eP	P	18 28 25.0	-0.7
	comp=Z,4.2nm,1.1s						
MA2	Magadan	93.48	344	i P	P	18 28 25.2	-0.2
MA2				pmax	pmax		
	comp=Z,11nm,1.0s						
CMAR	Chiang Mai Arr	94.02	289	P	P	18 28 29.7	+0.8
	comp=Z,0.6nm,0.4s,baz=140,slow=3.5,SNR=5.2						
CMAR				LR	LR	19 12 25.5	
	comp=Z,70nm,19.0s,baz=174,slow=37						
CHTO	Chiang Mai	94.19	289	P	P	18 28 29.7	0.0
CHTO				pmax	pmax		
	comp=Z,5.0nm,2.1s						
KMI	Kunming	94.41	296	P	P	18 28 29.9	-0.9
KMI				pmax	pmax		
	comp=Z,4.0nm,0.5s						
PDAR	Pinedale Array	95.71	43	P	P	18 28 36.0	-0.4
	comp=Z,0.2nm,0.5s,baz=207,slow=3.5,SNR=3.6						
PDAR				LR	LR	19 06 06.7	
	comp=Z,238nm,19.3s,baz=234,slow=32						
CD2	Chengdu	96.64	302	eP	P	18 28 39.5	-1.2
HHC	Hu-ho-hao-te	96.71	314	eP	P	18 28 41.8	+1.0
HHC				sP	sP	18 28 56.4	+1.3
HHC				PP	PP	18 32 39.8	+3.5
HHC				SS	SS	18 46 38.9	+2.9
HHC				pmax	pmax		
	comp=Z,21nm,1.2s						
HHC				LR	LR		
	comp=Z,180nm,15.7s						
HHC				LR	LR		
	comp=Z,170nm,16.1s						
HHC				LR	LR		
	comp=Z,200nm,15.7s						
LPAZ	La Paz	97.55	114	P	Pdif	18 28 47.4	+1.4
	comp=Z,0.5nm,0.5s,baz=172,slow=8.2,SNR=2.5						
LPAZ				LR	LR	19 07 06.3	
	comp=Z,80nm,18.1s,baz=288,slow=32						
ILAR	Eielson Array	97.81	13	P	P	18 28 44.5	-0.5
	comp=Z,0.3nm,0.9s,baz=235,slow=3.2,SNR=3.5						
LZH	Lanzhou	99.25	306	eP	Pdif	18 28 55.6	+3.2
LZH				pP	pP	18 29 03.8	+0.8
LZH				sP	sP	18 29 07.8	+1.0
LZH				pmax	pmax		
	comp=Z,25nm,1.2s						
CPUP	Villa Florida	99.47	128	LR	LR	19 08 49.0	
	comp=Z,378nm,18.2s,baz=256,slow=32						
WMQ	Urumqi	113.75	308	ePKP	PKiKP	18 33 47.5	-1.3
WMQ				LR	LR		
	comp=Z,330nm,22.5s						
WMQ				LR	LR		
	comp=Z,370nm,29.1s						
WMQ				LR	LR		
	comp=Z,290nm,23.9s						
MKAR	Makanchi Array	118.28	310	PKP	PKPdf	18 33 56.5	-0.9
	comp=Z,0.3nm,0.6s,baz=72,slow=0.9,SNR=4.3						
KURK	Kurchatov	121.53	314	PKP	PKPdf	18 34 01.1	-2.3
KURK	Kurchatov	121.53	314	c iPKIKP	PKPdf	18 34 03.4	0.0
KURK				pmax	pmax		
	comp=Z,51nm,2.5s						
KURBB	Kurchatov Arra	121.57	314	PKP	PKPdf	18 34 01.1	-2.4
	comp=Z,1.0nm,0.7s,baz=108,slow=1.9,SNR=8.7						
BVAR	Borovoye Array	126.87	316	PKP	PKPdf	18 34 13.3	-0.3
	comp=Z,0.9nm,0.5s,baz=108,slow=3.3,SNR=8.7						
BRVK	Borovoye	126.94	316	c iPKIKP	PKPdf	18 34 14.2	+0.5
BRVK				pmax	pmax		
	comp=Z,13nm,2.5s						
ARU	Arti	133.51	321	PKP	PKPdf	18 34 25.8	-0.3
	comp=Z,1.4nm,0.5s,baz=58,slow=7.1,SNR=3.6						
ARU	Arti	133.51	321	i PKIKP	PKPdf	18 34 35.6	+10
ARCES	ARCESS Array B	138.75	348	PKhKP	PKPpre	18 34 26.3	
	comp=Z,2.0nm,0.8s,baz=2.9,slow=1.8,SNR=2.8						
GNI	Garni	144.65	298	c iPKIKP	PKPdf	18 34 47.6	+0.5
GNI				pmax	pmax		
	comp=Z,94nm,1.7s						
ZEI	Tsey	145.06	302	i PKIKP	PKPbc	18 34 46.4	-0.9
ZEI				pmax	pmax		
	comp=Z,31nm,0.8s						
NCK	Nalchik	145.19	304	c iPKIKP	PKPdf	18 34 47.7	-0.1
GOF	Gofitskoye	145.32	306	ePKIKP	PKPdf	18 34 48.2	+0.3
GOF				pmax	pmax		
	comp=Z,20nm,0.8s						
FINES	FINESS Array B	145.38	340	PKPbc	PKPbc	18 34 45.1	-2.3
	comp=Z,22nm,0.6s,baz=38,slow=4.8,SNR=71						
LPSR	Galich'ya Gora	145.54	320	ePKIKP	PKPdf	18 34 47.4	-0.6
LPSR				pmax	pmax		
	comp=Z,40nm,1.0s						
OBN	Obninsk	145.55	326	⇑ePKP2	PKPdf	18 34 46.5	-1.4
OBN				e		18 38 09.3	
OBN				pmax	pmax		
	comp=Z,18nm,1.0s						
KBZ	Khabaz	145.66	304	PKPbc	PKPab	18 34 49.1	-0.1
	comp=Z,8.4nm,0.9s,baz=174,slow=2.4,SNR=12						
KIV	Kislovodsk	145.77	304	d iPKIKP	PKPbc	18 34 49.3	-0.1
KIV				e		18 38 12.2	
KIV				pmax	pmax		
	comp=Z,12nm,1.0s						
NEY	Neytrino	145.86	303	c iPKIKP	PKPab	18 34 50.7	+0.5
VSR	Storozhevoye	145.98	318	ePKIKP	PKPdf	18 34 48.3	-0.5
VSR				pmax	pmax		
	comp=Z,20nm,1.1s						
VORD	Divnogorie	146.01	318	ePKIKP	PKPdf	18 34 48.0	-0.8
VORD				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VSU	Vasula	147.50	337	c iPKP2	PKPbc	18 34 52.7	-1.0
NB2	NORSAR Subarra	148.87	352	PKP	PKPbc	18 34 56.2	-1.1
	comp=Z,2.2nm,0.6s,baz=12,slow=2.7						
NOA	NORSAR Array B	148.87	352	PKPbc	PKPbc	18 34 56.0	-1.3
	comp=Z,4.5nm,0.8s,baz=14,slow=4.3,SNR=10.0						
ANN	Anapa	149.26	308	i PKP2	PKPab	18 35 01.5	-1.9
ANN				pmax	pmax		
	comp=Z,33nm,1.0s						
HFS	Hagfors	149.39	349	PKPbc	PKPdf	18 34 56.3	+2.1
	comp=Z,8.1nm,0.8s,baz=113,slow=3.3,SNR=13						
ASF	Jabal al Asfar	150.83	282	PKPbc	PKPbc	18 35 02.9	-0.3
	comp=Z,8.6nm,0.9s,baz=80,slow=2.4,SNR=18						
AKASG	Malin Array Be	151.70	323	PKPbc	PKPbc	18 35 02.9	-1.5
	comp=Z,6.3nm,0.8s,baz=46,slow=2.8,SNR=16						
KIEV	Kiev	151.72	323	c iPKIKP	PKPbc	18 35 04.1	-0.3
KIEV				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MMAI	Mount Meron Ar	152.16	284	PKPbc	PKPbc	18 35 06.5	+0.3
	comp=Z,13nm,0.8s,baz=84,slow=6.4,SNR=17						
BRTR	Keskin Array B	153.17	299	PKPbc	PKPbc	18 35 07.1	-1.1
	comp=Z,1.8nm,0.6s,baz=143,slow=5.2,SNR=12						
EKA	Eskdalemuir Ar	154.75	8	PKPab	PKPab	18 35 26.2	+0.2
	comp=Z,3.3nm,0.9s,baz=328,slow=2.5,SNR=3.3						
CRVS	Cervenica-Dubn	156.69	328	ePKP2	PKPab	18 35 34.6	0.0
CRVS	Cervenica-Dubn	156.69	328	ePKP	PKPab	18 35 34.6	0.0
DPC	Dobruska-Polom	157.63	337	ePKPAB	PKPab	18 35 42.8	+4.2
DPC	Dobruska-Polom	157.63	337	ePKP2	PKPab	18 35 42.8	+4.2
CLL	Collm	157.78	343	i PKPab	PKPab	18 35 38.0	-1.1
	comp=Z,5.0nm,1.0s						
CLL				e		18 35 48.0	
CLL				e(pPKPab)		18 35 52.0	
CLL				LmV		19 56 00.0	
	comp=Z,200nm,19.2s						
CLL				LmH		19 57 00.0	
	comp=N,100nm,19.6s						
CLL				LmH		19 57 00.0	
	comp=E,100nm,18.1s						
CLL	Collm	157.78	343	i PKP2	PKPab	18 35 38.0	-1.1
CLL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BRG	Berggiesshubel	157.92	341	ePKP	PKPab	18 35 39.7	0.0
	comp=Z,3.1nm,1.0s						
BRG				e		18 35 50.4	
	comp=Z,3.8nm,0.8s						
BRG	Berggiesshubel	157.92	341	ePKP2	PKPab	18 35 39.7	0.0
BRG				pmax	pmax		
	comp=Z,3.0nm,1.0s						
VYHS	Vyhne	158.17	330	ePKP2	PKPab	18 35 40.8	-0.1
VYHS	Vyhne	158.17	330	ePKP	PKPab	18 35 40.8	-0.1
KHC	Kasperske Hory	159.58	339	ePKPAB	PKPab	18 35 45.2	-1.8
KHC				epPKP	sPKPab	18 36 00.0	-1.4
KHC	Kasperske Hory	159.58	339	ePKP2	PKPab	18 35 45.2	-1.8
GERES	GERESS Array B	159.80	339	PKPab	PKPab	18 35 47.7	-0.3
	comp=Z,0.4nm,0.6s,baz=311,slow=1.9,SNR=4.4						
TORD	Torodi Ar. Bea	162.78	177	PKP	PKPdf	18 35 12.9	-0.1
	comp=Z,1.7nm,1.1s,baz=171,slow=1.4						
TORD				PKPab	PKPab	18 36 02.1	+0.4
	baz=174,slow=4.3						
KOWA	Kowa	162.97	157	PKP	PKPdf	18 35 12.7	-0.5
	comp=Z,1.7nm,0.7s,baz=153,slow=2.3,SNR=3.8						

THR **22** *18:17:11.2±3.3, 27°.79N×56°.00E, h15^{km}±32^{km}, ML3.5*
CSEM **22** *18:17:12.9, 27°.80N×56°.57E, h17^{km}, ML3.6*
TEH **22** *18:17:12.9, 27°.80N×56°.57E, h17^{km}, ML3.6*
ISCJB **22** *18:17:14.1±0.4, 27°.79N±0°.03×56°.51E±0°.06, h10^{km}, Error ellipse: s-maj=7.7km s-min=4.4km az=160.8*
ISC 22 18:17:12.5±0.9**, 27°.77N**±0°.03×**56°.57E**±0°.04**, h10^{km}, n38, σ1^{s}99/41, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIAN	Nian	0.31	131	ePg	Pb	18 17 20.8	+0.7
NIAN				eSg	Sb	18 17 26.0	+0.8
NIAN				e		18 17 28.2	
	comp=E,99nm,0.2s						
NIAN				e		18 17 28.5	
	comp=N,99nm,0.1s						
NIAN				e		18 17 28.7	
	comp=Z,99nm,0.1s						
NIAN	Nian	0.31	131	ePg	Pb	18 17 20.8	+0.7
NIAN				eSg	Sb	18 17 26.0	+0.8
GENO	Geno	0.51	224	ePg	Pb	18 17 25.2	+1.6
GENO				e		18 17 36.4	
	comp=E,99nm,0.1s						
GENO				e		18 17 40.4	
	comp=N,99nm,0.1s						
GENO				e		18 17 41.7	
	comp=Z,99nm,0.1s						
GENO	Geno	0.51	224	ePg	Pb	18 17 25.2	+1.6
BNDS	Bandar-Abbas	0.51	224	ePg	Pg	18 17 19.1	-3.3
BNDS				eSg	Sg	18 17 25.5	-3.7
KHSK	Kohestak	1.09	157	ePn	Pn	18 17 35.7	+1.9
KHSK				e		18 17 53.8	
	comp=E,99nm,0.1s						
KHSK				e		18 17 54.0	
	comp=N,99nm,0.1s						
KHSK				e		18 17 54.6	
	comp=Z,99nm,0.1s						
KHSK	Kohestak	1.09	157	ePn	Pn	18 17 35.7	+1.9
SHME	Shamm	1.75	193	ePn	Pb	18 17 45.1	+0.3
NGRK	Negar Kerman	1.88	4	ePn	Pb	18 17 47.6	+0.5
NGRK				e		18 18 15.2	
	comp=E,99nm,0.1s						
NGRK				e		18 18 15.8	
	comp=Z,99nm,0.1s						
NGRK				e		18 18 16.1	
	comp=N,99nm,0.1s						
NGRK	Negar Kerman	1.88	4	ePn	Pb	18 17 47.6	+0.5
KRBR	Kerman	2.22	4	ePn	Pb	18 17 52.0	-0.8
KRBR				eSg	Sb	18 18 21.5	+1.1
KRBR				IAML		18 18 24.2	
	comp=N,346nm,0.4s						
KRBR				IAML		18 18 26.1	
	comp=E,378nm,0.5s						
TVBK	TV Kerman	2.22	4	ePn	Pb	18 17 53.1	+0.2
TVBK				e		18 18 24.8	
	comp=Z,99nm,0.1s						
TVBK				e		18 18 26.1	
	comp=N,99nm,0.2s						
TVBK				e		18 18 27.8	
	comp=E,99nm,0.2s						
TVBK	TV Kerman	2.22	4	ePn	Pb	18 17 53.1	+0.2
CHMN	Cheshme madani	2.25	22	ePn	Pb	18 17 52.4	-1.1
CHMN				e		18 18 24.2	
	comp=Z,99nm,0.1s						
CHMN				e		18 18 24.9	
	comp=N,99nm,0.1s						
CHMN				e		18 18 25.9	
	comp=E,99nm,0.1s						
CHMN	Cheshme madani	2.25	22	ePn	Pb	18 17 52.4	-1.1
MSFE	Esma-Masafi	2.42	189	ePn	Pb	18 17 55.3	-0.9
MSFE	Esma-Masafi	2.42	189	ePn	Pb	18 17 55.3	-0.9
NAZ	Nazwa, Dubai	2.88	197	ePn	Pn	18 18 01.0	+2.5
NAZ	Nazwa, Dubai	2.88	197	ePn	Pn	18 18 01.0	+2.5
HATD	Hatta, Dubai	2.95	188	ePn	Pn	18 18 02.4	+2.9
HATD	Hatta, Dubai	2.95	188	ePn	Pn	18 18 02.4	+2.9
GHIR	Ghir-Karzin	3.21	280	IAML		18 17 38.8	
	comp=E,78nm,0.5s						
ASUD	Al Ashush, Dub	3.32	200	ePn	Pn	18 18 07.5	+3.0
ASUD	Al Ashush, Dub	3.32	200	ePn	Pn	18 18 07.5	+3.0
ALNE	Al Ain	3.77	192	ePn	Pn	18 18 13.5	+2.8
ALNE	Al Ain	3.77	192	ePn	Pn	18 18 13.5	+2.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
IMEH	Mehriz	4.00	335	ePn	Pn	18 18 16.3	+2.3
IMEH				e		18 18 19.2	
	comp=Z,261nm,0.1s						
IMEH				e		18 18 19.2	
	comp=Z,261nm,0.1s						
IMEH				e		18 19 06.0	
	comp=N,238nm,0.1s						
IMEH	Mehriz	4.00	335	ePn	Pn	18 18 16.3	+2.3
ZHSF	Zahedan	4.12	63	eP	Pb	18 18 24.4	-0.9
KLNJ	Kolanjah	5.42	308	ePn	Pn	18 18 35.9	+2.2
KLNJ				e		18 19 39.2	
	comp=Z,99nm,0.1s						
KLNJ				e		18 19 41.0	
	comp=E,99nm,0.2s						
KLNJ				e		18 19 42.1	
	comp=N,99nm,0.1s						
KLNJ	Kolanjah	5.42	308	ePn	Pn	18 18 35.9	+2.2
IRAM	Ramesheh	5.43	319	ePn	Pn	18 18 35.4	+1.6
IRAM				e		18 18 38.7	
	comp=Z,243nm,0.0s						
IRAM				e		18 19 38.3	
	comp=N,563nm,0.2s						
IRAM				e		18 19 39.2	
	comp=E,569nm,0.2s						
IRAM	Ramesheh	5.43	319	ePn	Pn	18 18 35.4	+1.6
IGAR	Gharneh	6.07	321	ePn	Pn	18 18 44.8	+2.3
IGAR				e		18 18 45.5	
	comp=N,652nm,0.1s						
IZEF	Zefreh	6.29	325	ePn	Pn	18 18 46.6	+1.0
IZEF				e		18 18 50.0	
	comp=Z,74nm,0.1s						
IZEF				e		18 19 58.0	
	comp=E,78nm,0.2s						
IZEF				e		18 20 00.7	
	comp=N,104nm,0.3s						
IZEF	Zefreh	6.29	325	ePn	Pn	18 18 46.6	+1.0
IKLH	Kolahrood	7.01	323	ePn	Pn	18 18 57.5	+2.0
IKLH				e		18 19 05.9	
	comp=Z,95nm,0.2s						
IKLH				e		18 20 18.1	
	comp=N,140nm,0.1s						
IKLH	Kolahrood	7.01	323	ePn	Pn	18 18 57.5	+2.0

MEX 22 18:19:05.2±0.4, 16°.02N×98°.63W, h9km±78km, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.61	52	i P	Pg	18 19 16.0	-1.1
PNIG				i S	Sg	18 19 24.6	-0.4
TLIG	Tlapa	1.54	2	eP	Pn	18 19 29.6	-3.4
TLIG				i S	Sn	18 19 48.1	-5.1

GUC 22 18:31:44.4±0.6, 33°.83S×72°.32W, h39km±7km, ML3.6

ISC 22 18:31:40.2±2.1, 33°.80S±0°.05×72°.63W±0°.10, h15km±12km, n20, σ1s.96/28, 1C, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
GO05	HualaæØ	1.34	155	⇑iP	Pg	18 32 06.3	+0.3
GO05				i S	Sg	18 32 23.8	+0.3
GO05				IAML		18 32 31.8	
	comp=E,2μm,0.4s						
ROCH	El Roble	1.58	59	eP	Pn	18 32 08.7	+0.7
ROCH				eS	Sg	18 32 33.3	+1.9
ROCH				IAML		18 32 38.4	
	comp=E,2μm,0.6s						
NICH	Los Niches	1.67	136	eP	Pg	18 32 12.5	+0.2
NICH				eS	Sb	18 32 30.1	-1.4
ANTU	Antumapu	1.68	83	eP	Pb	18 32 10.0	-0.9
ANTU				eS	Sg	18 32 32.7	-1.7
ANTU				IAML		18 32 36.0	
	comp=E,2μm,0.6s						
PEL	Peldehue	1.75	69	eP	Pb	18 32 11.3	-0.8
PEL				eS	Sn	18 32 32.1	-0.1
PEL				IAML		18 32 47.3	
	comp=E,1μm,0.6s						
CLCH	Cerro Calan	1.79	78	eP	Pb	18 32 11.6	-1.2
CLCH				eS	Sn	18 32 32.5	-0.8
CLCH				IAML		18 32 48.0	
	comp=E,2μm,0.5s						
FCH	Farellones	2.01	77	eP	Pb	18 32 15.3	-1.3
FCH				IAML		18 32 51.3	
	comp=N,902nm,0.4s						
LMEL	Las Melosas	2.02	92	eP	Pb	18 32 15.4	-1.3
LMEL				IAML		18 32 47.8	
	comp=N,984nm,0.4s						
CCHI	Chillan	2.83	171	eP	Pb	18 32 29.1	-1.4
AUSP	Uspallata	3.14	61	i P	Pb	18 32 34.2	-1.8
AUSP				i S	Sg	18 33 23.2	+1.9
ARCO	CERRO ARCO	3.24	74	i P	Pb	18 32 36.0	-1.5
ARCO				IAML		18 32 42.8	
	comp=Z,225nm,0.4s						
AAGR	Agrelo	3.26	78	i P	Pb	18 32 36.5	-1.3
ASAL	Salagasta	3.40	70	i P	Pb	18 32 38.0	-2.3
RTLS	Leoncito	3.44	56	i P	Pb	18 32 37.6	-3.5
RTLS				i S	Sg	18 33 29.6	-1.3
RTLS				IAML		18 33 34.1	
	comp=Z,119nm,0.4s						
AVIZ	Vizcacheras	3.45	86	i P	Pb	18 32 39.6	-1.5
RTCV	Cerro Valdivia	3.95	62	i P	Pn	18 32 44.5	+4.2
RTLL	Cerro Villicun	4.29	56	i P	Pn	18 32 48.6	+3.6
AMOG	MOGNA	4.51	52	i P	Pn	18 32 51.4	+3.2
AGUA	GUANDACOL	5.56	40	i P	Pn	18 33 03.8	+1.2
VCA	Vinchina	6.31	38	i P	Pn	18 33 13.1	+0.2
VCA				IAML		18 35 12.6	
	comp=Z,47nm,0.6s						

CASC 22 18:33:21.0±1.1, 10°.92N×87°.51W, h12km±44km, ML3.8, mb4.5(NEIC)

IDC 22 18:33:26.3±1.0, 11°.74N×87°.03W, h0km, mb3.9/9, mb1 4.1/9, mb1mx3.8/50, mbtmp3.9/9, ML3.3/1, Error ellipse: s-maj=44.1km s-min=16.3km az=52.0

ISC 22 18:33:25.6±0.7, 11°.25N±0°.05×87°.36W±0°.05, h10km, n29, σ2s.22/36, mb3.9/9, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
COPN	Copaltepe	1.19	39	eP	Pn	18 33 48.0	-0.3
COPN				eS	Sn	18 34 09.1	+4.5
XAVN	Gruta Xavier	1.35	49	eP	Pg	18 33 49.9	-1.6
APYN	Apoyeque	1.39	45	eP	Pg	18 33 50.5	-1.8
CNGN	Cerro Negro	1.40	28	eP	Pg	18 33 51.0	-1.5
CNGN				eS	Sg	18 34 14.2	+3.5
CNGN				IAML		18 34 25.6	
	comp=N,1μm,0.3s						
MOMN	Momotombo	1.40	35	eP	Pg	18 33 50.5	-2.1
MOMN				eS	Sg	18 34 13.0	+2.2
MGAN	Managua	1.41	51	eP	Pg	18 33 50.7	-1.9
MGAN				eS	Sg	18 34 14.2	+3.2
CSGN	Cosiguina Volc	1.73	354	eP	Pn	18 33 54.8	-0.9
CSGN				eP	Pb	18 33 56.1	-1.3
CSGN				eS	Sg	18 34 21.9	+0.8
BOAB	BOACO BROADBAN	2.04	54	eP	Pn	18 33 59.0	-1.0
ESTN	Estel	2.08	28	eP	Pb	18 34 01.1	-2.3
LCND	La Caˆ–ada	2.11	346	eP	Pn	18 33 60.0	-1.0
MATN	Matagalpa	2.18	40	eP	Pn	18 34 01.3	-0.8
TECA	Tecapa	2.49	334	eP	Pn	18 34 04.8	-1.6
RCON	San Juan de Ri	2.51	28	eP	Pn	18 34 06.3	-0.3
UESV	Ojushtada	2.54	327	IAML		18 35 23.8	
	comp=Z,804nm,0.6s						
JTS	JuntasAbangare	2.56	112	Pn	Pb	18 34 09.6	-1.9
	comp=Z,6.2nm,0.3s,baz=14,slow=16,SNR=17						
JTS				Sn	Sb	18 34 39.8	-3.3
	comp=Z,34nm,0.3s,baz=339,slow=16,SNR=12						
TXAR	Lajitas Array	23.56	322	P	P	18 38 37.4	+0.9
	comp=Z,1.0nm,0.6s,baz=134,slow=9.8,SNR=18						
TXAR				PcP	PcP	18 42 25.1	+3.3
	comp=Z,0.4nm,0.8s,baz=159,slow=5.8,SNR=3.3						
TKL	Tuckaleechee C	24.52	7	P	P	18 38 43.4	-1.8
	comp=Z,5.0nm,0.7s,baz=180,slow=9.8,SNR=7.2						
SADO	Sadowa	34.14	10	P	P	18 40 08.9	-1.8
	comp=Z,3.0nm,0.5s,baz=262,slow=7.1,SNR=3.3						
PDAR	Pinedale Array	36.87	332	P	P	18 40 34.1	-0.4
	comp=Z,0.5nm,0.5s,baz=128,slow=10,SNR=7.6						
SIV	San Ignacio	37.55	136	P	P	18 40 43.0	+2.8
	comp=Z,2.8nm,0.7s,baz=319,slow=8.4,SNR=5.2						
NVAR	Mina Array Bea	38.66	320	P	P	18 40 51.9	+2.2
	comp=Z,0.4nm,0.8s,baz=110,slow=7.8,SNR=3.2						
ULM	Lac du Bonnet	39.51	351	P	P	18 40 53.6	-2.8
	comp=Z,2.5nm,0.5s,baz=188,slow=5.3,SNR=3.4						
YKA	Yellowknife Ar	54.78	345	P	P	18 42 54.4	-0.9
	comp=Z,0.8nm,0.7s,baz=139,slow=7.5,SNR=4.1						
ILAR	Eielson Array	67.14	336	P	P	18 44 19.1	-0.2
	comp=Z,0.3nm,0.6s,baz=139,slow=4.7,SNR=5.7						
SONM	Songino Array	119.92	349	PKP	PKPdf	18 52 16.0	-0.7
	comp=Z,0.2nm,0.4s,baz=197,slow=4.5,SNR=3.1						
KSRS	Korea Array	121.32	327	PKP	PKPdf	18 52 21.5	+2.0
	comp=Z,0.3nm,0.4s,baz=72,slow=2.5,SNR=2.6						
ASAR	Alice Springs	138.89	247	PKhKP	PKPpre	18 52 44.5	
	comp=Z,0.6nm,0.7s,baz=122,slow=8.5,SNR=6.1						
ASAR				PKP	PKiKP	18 52 53.8	-1.5
	comp=Z,0.2nm,0.8s,baz=101,slow=2.7,SNR=3.5						
WRA	Warramunga Arr	139.01	253	PKP	PKPdf	18 52 58.4	+5.0
	comp=Z,0.4nm,0.8s,baz=120,slow=7.9,SNR=6.2						
CMAR	Chiang Mai Arr	149.83	348	PKPbc	PKPbc	18 53 17.9	+0.9
	comp=Z,1.3nm,0.8s,baz=348,slow=3.6,SNR=6.0						

SOME 22 18:33:53.5, 44°.33N×81°.38E, h10km

NNC 22 18:33:53.8±3.4, 44°.56N×81°.39E, h24km±45km, mb3.0, mpv2.5, Error ellipse: s-maj=30.0km s-min=18.0km az=22.0

ISC 22 18:33:51.0±1.8, 44°.27N±0°.06×81°.72E±0°.08, h31km±18km, n16, σ0s.93/30, 4C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
KTMS	Ketmen	1.28	231	eP	Pb	18 34 14.7	+0.1
	36nm,0.1s						
KTMS				eS	Sb	18 34 30.5	-0.2
	57nm,0.2s						
DJR	Jarkent	1.39	273	eP	Pb	18 34 16.4	+0.1
	2.9nm,0.2s						
DJR				eS	Sb	18 34 33.2	-0.5
	10nm,0.2s						
PDGK	Podgornoye	1.86	241	⇑Pn	Pb	18 34 23.3	-1.1
	1.5nm,0.4s						
PDGK				⇑Sn	Sb	18 34 47.5	+0.1
	30nm,0.6s						
KAPS	Kapalarasan	1.97	302	eP	Pb	18 34 25.2	-0.9
	5.3nm,0.4s						
KAPS				eS	Sb	18 34 49.0	-1.2
	16nm,0.3s						
SHLS	Shalkode	1.98	237	eP	Pn	18 34 22.6	+0.2
	12nm,0.2s						
SHLS				eS	Sn	18 34 45.1	-1.1
	72nm,0.4s						
UZB	Uzynbulak	2.25	241	eP	Pb	18 34 29.8	-1.2
	4.9nm,0.3s						
UZB				eS	Sb	18 34 56.2	-2.3
	15nm,0.4s						
KPKS	Kokpek	2.33	251	eP	Pb	18 34 32.8	+0.3
	11nm,0.1s						
KPKS				eS	Sb	18 35 01.4	+0.5
	57nm,0.4s						
MAKZ	Makanchi	2.55	4	⇑Pg	Pb	18 34 36.0	0.0
	1.2nm,0.4s						
MAKZ				⇓Lg	Lg	18 35 06.3	
	4.3nm,0.5s						
MK31	Makanchi Array	2.56	9	⇓Pg	Pb	18 34 36.8	+0.5
	1.1nm,0.3s,baz=195,slow=16,SNR=130						
MK31				⇑Lg	Lg	18 35 06.6	
	5.1nm,0.5s,baz=197,slow=29,SNR=8.6						
SATY	Saty	2.69	245	eP	Pb	18 34 39.0	+0.5
	3.1nm,0.1s						
SATY				eS	Sb	18 35 12.0	+0.9
	27nm,0.3s						
ARXS	Arharly	2.80	270	eP	Pb	18 34 40.8	+0.5
	1.9nm,0.4s						
ARXS				eS	Sb	18 35 14.9	+0.7
	14nm,0.4s						
CHKK	Chushkaly	3.43	265	eP	Pb	18 34 51.1	0.0
	1.6nm,0.6s						
CHKK				eS	Sb	18 35 32.8	+0.4
	9.3nm,0.2s						
KOTS	Kotyrbulak	3.49	254	eP	Pb	18 34 51.8	-0.3
	1.0nm,0.4s						
KOTS				eS	Sb	18 35 35.1	+0.9
	8.1nm,0.3s						
MDOK	Medeo	3.56	254	eP	Pb	18 34 53.9	+0.6
	0.8nm,0.6s						
MDOK				eS	Sb	18 35 37.2	+1.0
	3.6nm,0.7s						
TNSS	Tian-Shan	3.67	252	eP	Pb	18 34 56.6	+1.3
	1.8nm,0.8s						
TNSS				eS	Sb	18 35 41.4	+1.8
	3.6nm,0.6s						
KTBS	Karatobe	3.68	263	eP	Pb	18 34 55.5	+0.3
	0.3nm,0.2s						
KTBS				eS	Sb	18 35 40.0	+0.7
	3.5nm,0.6s						

IDC 22 18:33:56.9±5.6, 11°.94N×86°.84W, h33km±41km, mb4.0/8, mb1 4.3/9, mb1mx3.8/48, mbtmp4.2/9, ML3.3/1, MS3.8/3, Ms1 3.8/3, ms1mx3.1/42, Error ellipse: s-maj=42.8km s-min=17.5km az=49.0

NEIC 22 18:33:57.3±2.1, 11°.81N×86°.90W, h44km±19km, mb4.5/18, Error ellipse: s-maj=22.3km s-min=10.2km az=60.0

ISC 22 18:33:56.5±0.7, 11°.6N±0°.1×87°.1W±0°.1, h35km, n250, σ1s.46/235, mb4.4/26, MS3.6/3, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
JTS	JuntasAbangare	2.50	122	Pn	Pn	18 34 34.1	-0.7
	7.1nm,0.3s,baz=19,slow=15,SNR=7.8						
JTS				Sn	Sn	18 35 04.1	-0.1
	54nm,0.3s,baz=319,slow=20,SNR=6.0						
ROSC	El Rosal	14.34	117	Pn	P	18 37 26.1	+1.9
	2.8nm,0.3s,baz=338,slow=22,SNR=4.9						
454A	Quitman	19.27	9	P	Pn	18 38 20.8	+1.5
	baz=190						
455A	Stateville	19.40	11	P	P	18 38 22.2	+2.6
	baz=192						
351A	Pinckard	19.61	4	P	P	18 38 24.5	+2.6
	baz=184						
349A	Repton	19.63	360	P	P	18 38 24.6	+2.5
	baz=179,SNR=5.3						
348A	Jackson	19.71	358	P	P	18 38 24.7	+1.8
	baz=177						
347A	Saraland	19.73	356	P	P	18 38 25.1	+2.0
	baz=175						
353A	Camilla	19.81	7	P	P	18 38 26.5	+2.5
	baz=188						
441A	DeRidder	19.85	344	P	P	18 38 25.6	+1.2
	baz=162						
352A	Blakely	19.86	6	P	P	18 38 27.4	+2.8
	baz=186						
HKT	Hockley	19.96	337	P	P	18 38 25.3	-0.3
	59nm,1.2s						
TIGA	Tifton	19.99	9	P	P	18 38 28.5	+2.5
	baz=190						
344A	Westbrook Farm	20.01	351	P	P	18 38 27.8	+1.5
	baz=169						
833A	Chaparral WMA,	20.20	327	P	P	18 38 29.4	+1.0
	baz=142						
342A	Flagon Creek P	20.24	347	P	P	18 38 29.4	+0.7
	baz=164						
249A	Camden	20.25	360	P	P	18 38 30.9	+2.0
	baz=179						
250A	Grady	20.27	2	P	P	18 38 31.1	+2.0
	baz=182						
247A	Quitman	20.38	356	P	P	18 38 32.1	+1.9
	baz=175						
248A	Dixon Mills	20.38	358	P	P	18 38 32.3	+2.1
	baz=178						
252A	Lumpkin	20.39	6	P	P	18 38 33.3	+3.0
	baz=186						
341A	Kurthwood	20.40	345	P	P	18 38 32.0	+1.6
	baz=162						
251A	Midway	20.43	4	P	P	18 38 33.0	+2.2
	baz=184						
245A	Little AP, Sta	20.47	353	P	P	18 38 32.6	+1.4
	baz=172						
254A	Abbeville	20.53	9	P	P	18 38 34.4	+2.6
	baz=190						
ATAH	Atahualpa	20.56	155	LR	LR	18 44 49.0	
	comp=Z,275nm,20.6s,baz=343,slow=32						
151A	Opelika	20.87	4	P	P	18 38 37.4	+1.8
	baz=184						
149A	Jones	20.88	1	P	P	18 38 37.1	+1.5
	baz=180						
150A	Eclectic	20.91	3	P	P	18 38 38.2	+2.2
	baz=182,SNR=7.0						
148A	Greensboro	20.93	359	P	P	18 38 37.9	+1.7
	baz=178						
147A	Livingston	20.98	357	P	P	18 38 38.2	+1.5
	baz=176,SNR=5.7						
152A	Waverly Hall	21.06	6	P	P	18 38 40.0	+2.4
	baz=186						
154A	Montrose	21.21	9	P	P	18 38 42.0	+2.8
	baz=190						
NATX	Nacogdoches	21.21	342	P	P	18 38 39.9	+0.6
	baz=159						
NATX	Nacogdoches	21.21	342	P	P	18 38 39.4	+0.1
	25nm,0.8s						
SJG	San Juan	21.25	70	LR	LR	18 45 35.8	
	comp=Z,144nm,21.5s,baz=238,slow=33						
LRAL	Lakeview Retre	21.31	0	P	P	18 38 42.0	+1.8
	baz=180,SNR=5.6						
LRAL	Lakeview Retre	21.31	0	eP	P	18 38 41.3	+1.0
	18nm,1.0s						
Z49A	Columbiana	21.48	1	P	P	18 38 43.9	+1.9
	baz=181,SNR=6.5						
Z47A	Carrollton	21.49	358	P	P	18 38 43.4	+1.2
	baz=177						
Z46A	Louisville	21.53	356	P	P	18 38 43.7	+1.0
	baz=174						
Z50A	Ashland	21.56	3	P	P	18 38 44.7	+1.8
	baz=183						
Z52A	Williamson	21.61	6	P	P	18 38 45.7	+2.3
	baz=187						
Z48A	Northport	21.66	359	P	P	18 38 45.3	+1.3
	baz=178,SNR=5.5						
Z51A	Franklin	21.66	4	P	P	18 38 46.3	+2.2
	baz=185						
Z44A	Pea Ridge, Bel	21.77	352	P	P	18 38 46.4	+1.3
	baz=171						
Z53A	Monticello	21.80	8	P	P	18 38 47.7	+2.2
	baz=189,SNR=7.1						
Z54A	Sparta	21.87	10	P	P	18 38 48.5	+2.3
	baz=191						
GOGA	Godfrey	21.94	8	P	P	18 38 49.2	+2.1
	baz=189,SNR=6.4						
GOGA	Godfrey	21.94	8	eP	P	18 38 47.1	0.0
	19nm,0.8s						
PCRV	Puerto La Cruz	22.12	92	P	P	18 38 48.4	-0.8
	10nm,0.8s,baz=269,slow=3.4,SNR=4.4						
Y49A	Blount Mountai	22.14	2	P	P	18 38 50.3	+1.1
	baz=181,SNR=8.2						
JCT	Junction City	22.15	330	P	P	18 38 50.1	+0.7
	baz=145						
Z41A	Richland Creek	22.16	347	P	P	18 38 49.4	+0.1
	baz=164						
Y47A	UCPARC, Winfie	22.19	358	P	P	18 38 50.3	+0.7
	baz=178,SNR=8.4						
Y48A	Jasper	22.19	360	P	P	18 38 50.5	+0.8
	baz=179,SNR=10						
Y46A	Houston	22.21	356	P	P	18 38 50.4	+0.5
	baz=175,SNR=5.3						
Y45A	Yeager Farm, C	22.25	355	P	P	18 38 51.3	+0.9
	baz=173						
Y51A	Rockmart	22.25	5	P	P	18 38 51.5	+1.1
	baz=185,SNR=8.2						
Z40A	Long Farm, Mag	22.29	346	P	P	18 38 51.2	+0.4
	baz=163						
Y52A	Lilburn	22.31	7	P	P	18 38 52.7	+1.6
	baz=187,SNR=6.1						
Y53A	Monroe	22.36	8	P	P	18 38 53.3	+1.7
	baz=189,SNR=6.8						
WHTX	Lake Whitney,	22.40	336	P	P	18 38 52.1	+0.1
	baz=152						
Y54A	Tignall	22.50	10	P	P	18 38 54.8	+1.7
	baz=191,SNR=7.0						
X48A	Hartselle	22.72	0	P	P	18 38 55.4	0.0
	baz=180,SNR=5.9						
X50B	Fort Payne	22.77	3	P	P	18 38 56.3	+0.3
	baz=183,SNR=5.2						
X45A	UM Field Stati	22.79	355	P	P	18 38 55.8	-0.4
	baz=174						
X49A	Woodville	22.80	2	P	P	18 38 56.3	+0.2
	baz=182,SNR=10						
X47A	Russelville	22.80	358	P	P	18 38 56.0	-0.2
	baz=178,SNR=9.2						
X46A	Booneville	22.87	357	P	P	18 38 56.6	-0.3
	baz=176						
OXF	Oxford	22.88	355	P	P	18 38 56.4	-0.6
	baz=174						
X51A	Calhoun	22.93	5	P	P	18 38 58.3	+0.7
	baz=185						
X53A	Estanollee	23.04	8	P	P	18 38 59.5	+0.8
	baz=189						
X52A	Dahlonega	23.06	7	P	P	18 38 59.4	+0.5
	baz=188,SNR=5.5						
X40A	Basin Creek Fa	23.35	348	P	P	18 39 01.0	-0.7
	baz=165						
W49A	Belvidere	23.40	2	P	P	18 39 02.0	-0.3
	baz=182,SNR=8.0						
W48A	Pulaski	23.41	0	P	P	18 39 02.3	0.0
	baz=180,SNR=8.9						
TXAR	Lajitas Array	23.42	321	P	P	18 39 02.5	-0.1
	2.9nm,0.5s,baz=138,slow=9.4,SNR=10						
TXAR				PcP	PcP	18 42 50.7	+2.2
	0.6nm,0.8s,baz=144,slow=3.4,SNR=4.8						
W47A	Westpoint	23.52	359	P	P	18 39 03.0	-0.5
	baz=178,SNR=9.0						
W50A	Signal Mountai	23.53	4	P	P	18 39 03.6	0.0
	baz=184,SNR=8.3						
W51A	Cleveland	23.53	5	P	P	18 39 03.2	-0.3
	baz=185,SNR=5.3						
W52A	Murphy	23.54	7	P	P	18 39 04.0	+0.3
	baz=187						
MIAR	Mount Ida	23.57	347	P	P	18 39 03.1	-0.8
	baz=163,SNR=5.2						
MIAR	Mount Ida	23.57	347	eP	P	18 39 01.8	-2.1
	12nm,0.7s						
X39A	Fountain Ranch	23.66	345	P	P	18 39 03.7	-1.0
	baz=162						
W53A	Cullowhee	23.71	8	P	P	18 39 05.7	+0.3
	baz=189						
ABTX	Abilene, Hawle	23.86	333	P	P	18 39 05.7	-1.1
	baz=148						
W41B	Gary Mavity, V	23.90	350	P	P	18 39 06.0	-1.0
	baz=167						
V50A	Pikevile	24.01	4	P	P	18 39 07.9	-0.2
	baz=184						
V48A	Smith Brothers	24.01	1	P	P	18 39 07.7	-0.4
	baz=180						
V49A	McMinnville	24.06	2	P	P	18 39 08.3	-0.3
	baz=182,SNR=6.9						
V46A	Holladay	24.09	358	P	P	18 39 08.1	-0.7
	baz=177						
V47A	Nunnelly	24.10	359	P	P	18 39 08.4	-0.5
	baz=178,SNR=5.8						
TKL	Tuckaleechee C	24.12	7	P	P	18 39 09.8	+0.7
	16nm,0.7s,baz=182,slow=10,SNR=13						
V51A	Loudon	24.20	5	P	P	18 39 09.8	0.0
	baz=186,SNR=8.5						
W39A	Magazine	24.23	347	P	P	18 39 08.6	-1.5
	baz=163						
V53A	Saluda	24.25	9	P	P	18 39 10.7	+0.4
	baz=190,SNR=5.3						
V52A	Sevierville	24.32	7	P	P	18 39 11.2	+0.2
	baz=188						
V42A	Cord	24.38	352	P	P	18 39 09.9	-1.5
	baz=169						
WVT	Waverly	24.41	359	P	P	18 39 10.9	-0.8
	baz=178						
V41A	Mountainview	24.48	350	P	P	18 39 11.2	-1.2
	baz=168,SNR=8.8						
V40A	Witts Springs	24.62	349	P	P	18 39 12.1	-1.6
	baz=166						
U46A	Springville	24.65	358	P	P	18 39 12.8	-1.1
	baz=177						
U47A	Clarksville	24.71	360	P	P	18 39 13.4	-1.0
	baz=179,SNR=5.3						
U50A	Jamestown	24.77	4	P	P	18 39 14.5	-0.5
	baz=185						
U48A	Cassie Pea, Po	24.78	1	P	P	18 39 14.7	-0.4
	baz=181						
U51A	La Follette	24.80	6	P	P	18 39 14.9	-0.4
	baz=187						
U49A	Red Boiling Sp	24.81	3	P	P	18 39 14.6	-0.7
	baz=183,SNR=5.5						
V39A	Pettigrew	24.82	347	P	P	18 39 14.0	-1.5
	baz=164,SNR=6.9						
U52A	Thorn Hill	24.89	7	P	P	18 39 15.9	-0.3
	baz=188						
U42A	Revenden	24.90	352	P	P	18 39 14.7	-1.5
	baz=170						
U53A	Fall Branch	24.97	9	P	P	18 39 16.8	-0.1
	baz=190						
U41A	Viola	24.99	351	P	P	18 39 15.7	-1.3
	baz=168						
TZTN	Tazewell	25.02	7	P	P	18 39 17.0	-0.3
	baz=188						

TZTN	Tazewell	25.02	7	eP	P	18 39 14.3	-3.0
	4.0nm,0.8s						
U40A	Yellville	25.16	349	P	P	18 39 16.9	-1.7
	baz=166,SNR=5.9						
T47A	Sharon Grove	25.25	0	P	P	18 39 18.4	-1.0
	baz=180						
U39A	Green Forest	25.31	348	P	P	18 39 18.4	-1.6
	baz=165						
T46A	Princeton	25.32	359	P	P	18 39 19.0	-0.9
	baz=178						
WMOK	Wichita Mounta	25.34	337	P	P	18 39 18.5	-1.7
	baz=152						
WMOK	Wichita Mounta	25.34	337	P	P	18 39 19.8	-0.4
	13nm,1.1s						
T50A	Nancy	25.37	4	P	P	18 39 19.9	-0.5
	baz=185						
T51A	Gray	25.39	6	P	P	18 39 20.0	-0.7
	baz=187,SNR=5.3						
T49A	Edmonton	25.41	3	P	P	18 39 20.0	-0.8
	baz=183						
T43A	Greenville	25.51	354	P	P	18 39 20.5	-1.2
	baz=172						
T42A	Van Buren	25.55	353	P	P	18 39 20.6	-1.4
	baz=170						
T41A	Mountain View	25.65	351	P	P	18 39 21.4	-1.6
	baz=169						
T39A	Clever	25.91	348	P	P	18 39 23.8	-1.6
	baz=165						
S43A	Fulton Ridge,	25.97	355	P	P	18 39 24.6	-1.3
	baz=173						
S44A	Carbondale	26.03	356	P	P	18 39 25.3	-1.1
	baz=175						
S50A	Richmond	26.06	5	P	P	18 39 26.1	-0.6
	baz=186						
S51A	Beattyville	26.10	6	P	P	18 39 26.4	-0.6
	baz=187						
S49A	Springfield	26.10	3	P	P	18 39 26.1	-0.9
	baz=184						
T38A	Diamond	26.11	347	P	P	18 39 25.7	-1.5
	baz=163						
MNTX	Cornudas Mount	26.14	323	P	P	18 39 26.5	-1.0
	baz=135						
MNTX	Cornudas Mount	26.14	323	eP	P	18 39 26.9	-0.5
	5.1nm,1.2s						
S41A	Jillco Farms,	26.18	352	P	P	18 39 26.3	-1.5
	baz=169						
S40A	Lebanon	26.31	350	P	P	18 39 27.2	-1.8
	baz=168						
MSTX	Muleshoe	26.44	330	P	P	18 39 28.9	-1.5
	baz=143						
WCI	Wyandotte Cave	26.50	1	P	P	18 39 30.1	-0.6
	baz=181						
WCI	Wyandotte Cave	26.50	1	eP	P	18 39 26.9	-3.8
	36nm,0.8s						
S39A	Bolivar	26.55	349	P	P	18 39 29.7	-1.4
	baz=166,SNR=5.5						
R47A	Wooly Knot Far	26.57	1	P	P	18 39 30.2	-1.0
	baz=181						
R44A	Waltonville	26.57	357	P	P	18 39 29.9	-1.4
	baz=175						
R45A	Skylar, Fairfi	26.58	358	P	P	18 39 29.9	-1.4
	baz=177						
CCM	Cathedral Cave	26.58	353	P	P	18 39 30.0	-1.4
	baz=170						
CCM	Cathedral Cave	26.58	353	eP	P	18 39 28.9	-2.5
	57nm,0.9s						
S38A	Stockton	26.60	348	P	P	18 39 30.2	-1.4
	baz=164						
R43A	Red Bud	26.66	355	P	P	18 39 30.5	-1.6
	baz=173						
R50A	Paris	26.66	5	P	P	18 39 31.4	-0.8
	baz=186						
AMTX	Amarillo	26.68	333	P	P	18 39 30.5	-1.9
	baz=146						
R51A	Hillsboro	26.75	6	P	P	18 39 32.5	-0.4
	baz=187						
R41A	Rosebud	26.83	353	P	P	18 39 32.1	-1.6
	baz=170						
R40A	Maddies Statio	26.95	351	P	P	18 39 33.0	-1.7
	baz=168						
R39A	Chumby, Stover	27.10	350	P	P	18 39 34.3	-1.8
	baz=167						
R38A	Fenwick Farm,	27.14	348	P	P	18 39 34.8	-1.6
	baz=165,SNR=5.2						
Q45A	Warren Harvey,	27.17	358	P	P	18 39 35.5	-1.2
	baz=177						
Q47A	Bedord North L	27.21	1	P	P	18 39 36.1	-0.9
	baz=181						
Q51A	Peebles	27.50	6	P	P	18 39 39.0	-0.6
	baz=188,SNR=6.7						
P47A	Martinsville	27.76	1	P	P	18 39 41.1	-0.8
	baz=181						
P48A	Milroy	27.76	3	P	P	18 39 40.9	-1.1
	baz=183						
P49A	Miami Univ. Ec	27.88	4	P	P	18 39 42.2	-0.8
	baz=185						
P38A	Dawn	28.46	350	P	P	18 39 46.7	-1.5
	baz=166						
O47A	Sheridan	28.51	2	P	P	18 39 47.5	-1.2
	baz=182						
O45A	Potomac	28.52	359	P	P	18 39 47.4	-1.3
	baz=178						
O49A	Covington	28.56	4	P	P	18 39 48.4	-0.7
	baz=185						
O50A	Cable	28.58	6	P	P	18 39 48.6	-0.6
	baz=187,SNR=5.3						
N46A	Monticello	29.16	1	P	P	18 39 53.4	-0.9
	baz=180						
N54A	Moraine State	29.89	11	P	P	18 40 00.5	-0.3
	baz=194						
SSPA	Standing Stone	30.02	14	P	P	18 40 02.2	+0.2
	baz=198						
SSPA	Standing Stone	30.02	14	P	P	18 39 59.2	-2.9
	20nm,0.6s						
M38A	Pleasantville	30.15	351	P	P	18 40 01.5	-1.7
	baz=168						
M54A	Oil Creek Stat	30.48	11	P	P	18 40 05.9	-0.2
	baz=194						
L40A	Anamosa	30.54	354	P	P	18 40 04.8	-1.7
	baz=172						
SDCO	Great Sand Dun	30.79	331	P	P	18 40 07.2	-2.0
	baz=142						
L38A	Oak Wood Farm,	30.83	352	P	P	18 40 07.8	-1.3
	baz=168						
N59A	State Game Lan	30.84	17	P	P	18 40 10.0	+0.7
	baz=202						
BGNE	Belgrade	31.21	344	P	P	18 40 10.9	-1.7
	baz=158						
SAML	Samuel	31.37	130	eP	P	18 40 12.1	-2.1
	5.0nm,0.8s						
K37A	Belmond	31.54	351	P	P	18 40 13.9	-1.5
	baz=167						
J42A	Columbus	31.62	357	P	P	18 40 14.8	-1.3
	baz=176						
J41A	Loganville	31.73	356	P	P	18 40 15.6	-1.4
	baz=174						
BINY	Binghamton	31.97	16	P	P	18 40 20.0	+0.7
	baz=201						
J37A	Redenius Farm,	32.06	351	P	P	18 40 18.3	-1.7
	baz=168						
I42A	Draeger Farm,	32.19	358	P	P	18 40 19.8	-1.3
	baz=176						
J36A	Seneca 1, Swea	32.20	350	P	P	18 40 19.9	-1.4
	baz=166						
I40A	Norwalk	32.29	355	P	P	18 40 20.6	-1.4
	baz=173						
I39A	Houston	32.34	354	P	P	18 40 20.9	-1.5
	baz=172						
I37A	Lemond, Waseca	32.73	352	P	P	18 40 24.6	-1.3
	baz=168						
H40A	Chili	33.00	356	P	P	18 40 27.1	-1.1
	baz=174						
ECSD	EROS Data Cent	33.03	347	P	P	18 40 26.9	-1.6
	baz=162						
ECSD	EROS Data Cent	33.03	347	P	P	18 40 24.4	-4.1
	5.1nm,0.6s						
H36A	Jessenland, He	33.35	351	P	P	18 40 30.0	-1.3
	baz=167						
H35A	Sunnyside Ranc	33.62	350	P	P	18 40 31.8	-1.8
	baz=166						
G40A	Rib Lake	33.63	356	P	P	18 40 32.3	-1.4
	baz=174						
G39A	Holcombe	33.73	355	P	P	18 40 32.8	-1.7
	baz=172						
SADO	Sadowa	33.73	10	P	P	18 40 33.3	-1.2
	6.2nm,0.6s,baz=217,slow=8.5,SNR=5.6						
SPMN	Marine on St.	33.84	353	P	P	18 40 33.9	-1.5
	baz=170						
O20A	White River Ci	33.98	330	P	P	18 40 35.2	-1.9
	baz=140						
F41A	Three Lakes	34.04	358	P	P	18 40 35.8	-1.5
	baz=176						
F43A	Flat Rock, Esc	34.09	360	P	P	18 40 36.3	-1.4
	baz=180						
F44A	Big Bay de Noc	34.24	1	P	P	18 40 37.7	-1.2
	baz=181						
F40A	Park Falls	34.27	356	P	P	18 40 37.5	-1.7
	baz=174						
G34A	Benson	34.29	349	P	P	18 40 37.7	-1.7
	baz=165						
F39A	Loretta	34.33	355	P	P	18 40 38.0	-1.8
	baz=173						
F38A	Pierce - Schro	34.46	354	P	P	18 40 39.0	-1.9
	baz=171,SNR=5.8						
F36A	Milaca	34.55	352	P	P	18 40 39.6	-2.1
	baz=168						
LONY	Lake Ozonia	34.60	16	P	P	18 40 42.4	+0.2
	baz=202,SNR=5.7						
LONY	Lake Ozonia	34.60	16	eP	P	18 40 40.0	-2.1
	21nm,1.3s						
E43A	Lone Tree Farm	34.63	0	P	P	18 40 40.7	-1.6
	baz=180						
E42A	Champion	34.70	359	P	P	18 40 41.2	-1.7
	baz=178						
E39A	Mellen	34.76	356	P	P	18 40 41.8	-1.6
	baz=174						
E40A	Wakefield	34.78	357	P	P	18 40 41.9	-1.8
	baz=175						
E36A	McGregor	35.16	353	P	P	18 40 45.0	-1.9
	baz=169						
D37A	Cotton	35.70	354	P	P	18 40 49.8	-1.8
	baz=171						
D36A	Goodland	35.80	353	P	P	18 40 50.7	-1.7
	baz=170						
D35A	Remer	35.82	352	P	P	18 40 50.5	-2.1
	baz=168						
C38A	Sawbill Land.	36.15	355	P	P	18 40 53.3	-2.0
	baz=173						
C40A	Isle Royale Na	36.22	358	P	P	18 40 54.2	-1.7
	baz=176						
C37A	Embarrass	36.24	354	P	P	18 40 54.3	-1.9
	baz=171						
C36A	Pine Crest Far	36.34	353	P	P	18 40 55.0	-2.0
	baz=170						
EYMN	Ely	36.39	355	P	P	18 40 55.5	-1.9
	baz=172						
EYMN	Ely	36.39	355	eP	P	18 40 54.9	-2.6
	4.5nm,1.0s						
C35A	Jirik Farms, M	36.42	352	P	P	18 40 56.0	-1.7
	baz=168,SNR=5.9						
BW06	Boulder Array	36.65	332	P	P	18 40 59.1	-0.9
	1.2nm,0.5s						
PDAR	Pinedale Array	36.65	332	P	P	18 40 59.2	-0.8
	1.4nm,0.6s,baz=120,slow=9.7,SNR=11						
B35A	Bob, Littlefor	37.04	353	P	P	18 41 00.9	-2.0
	baz=169						
B34A	Aery, Baudette	37.28	352	P	P	18 41 03.0	-2.0
	baz=167						
AGMN	Agassiz Nation	37.28	350	P	P	18 41 02.9	-2.1
	baz=165						
AGMN	Agassiz Nation	37.28	350	eP	P	18 41 03.1	-1.9
	5.3nm,0.6s						
A33A	Warroad	37.83	351	P	P	18 41 07.8	-1.9
	baz=166,SNR=6.6						
RLMT	Red Lodge	38.39	335	P	P	18 41 12.2	-2.5
	baz=143						
NVAR	Mina Array Bea	38.54	319	P	P	18 41 16.8	+0.7
	0.7nm,0.7s,baz=126,slow=6.7,SNR=4.5						
NVAR				PcP	PcP	18 43 29.0	+0.6
	0.8nm,0.8s,baz=130,slow=3.6,SNR=4.5						
ULM	Lac du Bonnet	39.18	351	P	P	18 41 18.8	-2.2
	4.6nm,0.5s,baz=161,slow=9.8,SNR=4.0						
HLID	Hailey	39.61	328	P	P	18 41 22.8	-2.1
	baz=135						
BOZ	Bozeman (W)	39.79	333	P	P	18 41 24.4	-1.9
	baz=140						
BOZ	Bozeman (W)	39.79	333	eP	P	18 41 25.2	-1.1
	2.8nm,0.7s						
RPN	Rapa Nui	44.15	209	LR	LR	18 55 22.7	
	comp=Z,158nm,18.9s,baz=271,slow=29						
YKA	Yellowknife Ar	54.49	345	P	P	18 43 18.9	-1.5
	1.9nm,0.7s,baz=139,slow=7.6,SNR=8.9						
ILAR	Eielson Array	66.90	336	P	P	18 44 43.9	-1.1
	1.0nm,0.6s,baz=149,slow=4.6,SNR=8.1						
KURK	Kurchatov	116.69	10	PKP	PKPdf	18 52 36.2	-0.9
KURBB	Kurchatov Arra	116.76	10	PKP	PKPdf	18 52 36.2	-1.0
	0.3nm,0.6s,baz=331,slow=2.1,SNR=1.8						
SONM	Songino Array	119.60	350	PKP	PKPdf	18 52 42.5	-0.5
	0.3nm,0.3s,baz=137,slow=1.3,SNR=3.7						
MKAR	Makanchi Array	121.08	8	PKP	PKPdf	18 52 44.0	-1.8
	0.3nm,0.7s,baz=26,slow=3.6,SNR=2.9						
KSRS	Korea Array	121.14	328	PKP	PKPdf	18 52 44.9	-1.2
	0.3nm,0.5s,baz=7.8,slow=2.5,SNR=3.3						
KSAR	Wonju Array Be	121.17	328	PKP	PKPdf	18 52 44.9	-1.2
STKA	Stephens Creek	130.94	238	PKP	PKPdf	18 53 07.2	+2.2
	1.1nm,0.7s,baz=75,slow=7.4,SNR=1.6						
ASAR	Alice Springs	139.26	247	PKP	PKPdf	18 53 22.2	+1.5
	0.7nm,0.7s,baz=101,slow=3.0,SNR=4.4						
WRA	Warramunga Arr	139.35	253	PKP	PKPdf	18 53 23.3	+2.3
	0.9nm,0.6s,baz=90,slow=2.4,SNR=4.3						
CMAR	Chiang Mai Arr	149.52	349	PKPbc	PKPdf	18 53 42.6	+4.0
	3.9nm,0.8s,baz=350,slow=3.8,SNR=9.3						

DHMR 22 18:42:40.4±2.0, 13°.37N×49°.62E, h20^{km}±999^{km}, ML3.5, 1D, Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MUKL	Al Mukalla	1.23	333	i P	Pn	18 43 01.8	-0.7
MUKL				i S	Sn	18 43 20.0	+1.5
MUKL				AML	AML	18 43 20.9	
	comp=N,581nm,0.4s						
BDHA	Al Bayda’	3.98	279	i P	Pn	18 43 43.4	+2.9
BDHA				e		18 43 43.6	
	baz=110,slow=16						
BDHA				AML	AML	18 43 44.1	
	comp=E,274nm,0.3s						
BDHA				i S	Sn	18 44 32.3	+5.5
LBOS		4.28	277	⇓iP	Pn	18 43 47.4	+2.8
LBOS				i S	Sn	18 44 38.3	+4.2

MAN 22 18:42:48.0, 7°.57N×127°.07E, h23^{km}, mb4.7, ML3.5, MS3.4, 1C, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BIPH	Bislig	0.93	311	⇑eP	Pn	18 43 07.0	+1.3
BIPH				eS	Sn	18 43 20.2	+1.9
MATI	Mati	1.02	233	eP	Pn	18 43 05.6	-1.2
MATI				eS	Sn	18 43 20.9	+0.5
DDMP	Don Marcelino,	1.98	223	eP	Pn	18 43 14.0	-6.1
BUTP	Butuan	2.00	314	eP	Pn	18 43 20.4	+0.1
BUTP				eS	Sn	18 43 46.4	+1.7
BUKP	Musuan	2.02	279	eP	Pb	18 43 23.0	-0.9
BUKP				eS	Sb	18 43 52.3	+3.6

WEL 22 18:44:56.3, 38°S±10°×18°0W±°, h33^{km}, ML3.8/18, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	Waiomatatini S	1.47	268	P	Pn	18 45 20.9	+0.5
WMGZ				P	Pn	18 45 20.9	+0.5
MXZ	Matakaoa Point	1.57	278	P	Pn	18 45 22.1	+0.3
MXZ				S	Sn	18 45 40.6	-0.3
PUZ	Puketiti	1.61	259	P	Pn	18 45 23.2	+0.7
PUZ				S	Sn	18 45 43.3	+1.2
PKGZ	Pakihiroa	1.73	266	P	Pn	18 45 24.5	+0.3
PKGZ				S	Sn	18 45 45.6	+0.4
TWGZ	Tauwhareparae	1.85	257	P	Pn	18 45 26.8	+1.1
TWGZ				S	Sn	18 45 49.2	+1.3
HAZ	Te Kaha	1.97	270	P	Pn	18 45 28.2	+0.9
HAZ				S	Sn	18 45 50.8	+0.1
TKGZ	Te Karaka	2.01	250	P	Pn	18 45 29.3	+1.4
RUGZ	Raukumara Rang	2.06	264	P	Pn	18 45 29.1	+0.5
RIGZ	Rimuhau	2.17	244	P	Pn	18 45 31.5	+1.3
RIGZ				S	Sn	18 45 57.6	+1.6
PRGZ	Paritu Road	2.19	238	P	Pn	18 45 32.5	+2.1
PRGZ				P	Pn	18 45 32.5	+2.1
MWZ	Matawai	2.23	255	P	Pn	18 45 31.5	+0.6
MWZ				S	Sn	18 45 57.7	+0.4
MHGZ	Mahia Peninsul	2.30	233	P	Pn	18 45 33.9	+2.0
KNZ	Kokohu	2.38	238	P	Pn	18 45 34.7	+1.7
SNGZ	Shannon Statio	2.51	246	P	Pn	18 45 36.0	+1.2
SNGZ				S	Sn	18 46 05.7	+1.5
URZ	Urewera	2.54	258	P	Pn	18 45 36.6	+1.5
RAHZ	Arahi	2.74	245	P	Pn	18 45 40.0	+2.0
MUGZ	Murupara	2.84	255	P	Pn	18 45 40.6	+1.3
MTHZ	Maungataniwha	2.90	247	P	Pn	18 45 41.6	+1.5
ARHZ	Aropaoanui	2.96	239	P	Pn	18 45 43.9	+3.0
TARZ	Mount Tarawera	3.00	260	P	Pn	18 45 43.3	+1.7
MCHZ	McNeill Hill	3.25	238	P	Pn	18 45 46.6	+1.7
BKZ	Black Stump Fm	3.27	244	P	Pn	18 45 46.7	+1.5

IDC 22 18:45:42.4±1.6, 1°.72N×127°.42E, h0^{km}, mb3.5/4, mb1 3.6/4, mb1mx3.3/49, mbtmp3.5/4, Error ellipse: s-maj=132.5km s-min=27.0km az=69.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	22.57	163	P	P	18 50 44.2	-0.4
	0.2nm,0.5s,baz=342,slow=10,SNR=5.5						
SONM	Songino Array	49.41	341	P	P	18 54 34.1	-0.1
	0.3nm,0.6s,baz=158,slow=9.9,SNR=3.3						
MKAR	Makanchi Array	59.59	326	P	P	18 55 48.5	+0.3
	0.3nm,0.5s,baz=115,slow=7.6,SNR=6.7						
KURBB	Kurchatov Arra	63.80	328	P	P	18 56 16.2	-0.2
	0.6nm,0.6s,baz=130,slow=6.1,SNR=7.2						

IDC 22 19:06:33.4±1.7, 7°.31S×146°.19E, h182^{km}±27^{km}, mb3.1/4, mb1 3.2/6, mb1mx3.0/42, mbtmp3.6/6, Error ellipse: s-maj=49.0km s-min=15.3km az=103.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	2.29	155	P	Pn	19 07 14.8	+0.9
	4.8nm,0.3s,baz=348,slow=9.3,SNR=22						
PMG				S	Sn	19 07 45.6	+0.1
	1.5nm,0.3s,baz=300,slow=20,SNR=4.8						
WRA	Warramunga Arr	17.02	221	P	P	19 10 19.4	-0.5
	0.2nm,0.3s,baz=48,slow=11,SNR=13						
ASAR	Alice Springs	20.09	215	P	P	19 10 52.8	-0.3
	0.7nm,0.5s,baz=48,slow=8.7,SNR=16						
ASAR				S	S	19 14 29.9	+1.0
	0.5nm,0.8s,baz=35,slow=18,SNR=3.5						
STKA	Stephens Creek	24.82	189	P	P	19 11 39.4	+0.6
	1.3nm,0.6s,baz=15,slow=16,SNR=3.1						
CMAR	Chiang Mai Arr	53.17	299	P	P	19 15 33.0	-0.1
	1.0nm,0.5s,baz=116,slow=7.3,SNR=5.5						
MKAR	Makanchi Array	77.99	321	P	P	19 18 12.0	+0.3
	0.1nm,0.3s,baz=106,slow=4.7,SNR=2.7						
TORD	Torodi Ar. Bea	144.60	282	PKP	PKPab	19 25 47.2	-1.2
	0.5nm,0.6s,baz=70,slow=2.9						

IDC 22 19:27:46.8±3.1, 4°.12S×153°.64E, h71^{km}±29^{km}, mb3.6/9, mb1 3.9/11, mb1mx3.6/43, mbtmp4.0/11, MS3.1/1, Ms1 3.1/1, ms1mx2.6/34, Error ellipse: s-maj=22.8km s-min=16.5km az=147.0

ISCJB 22 19:27:47.9±0.6, 4°.22S±0°.07×153°.67E±0°.06, h100^{km}, mb3.7/9, Error ellipse: s-maj=10.1km s-min=9.0km az=169.7

ISC 22 19:27:49.5±0.6, 4°.25S±0°.09×153°.68E±0°.08, h100^{km}, n19, σ1^{s}.49/16, mb3.7/9, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	8.08	130	P	Pn	19 29 41.6	-2.5
	8.9nm,0.3s,baz=248,slow=2.5,SNR=4.3						
HNR				S	Sn	19 31 15.6	+1.9
	3.8nm,0.3s,baz=32,slow=19,SNR=2.2						
HNR				LR	LR	19 33 13.0	
	comp=Z,131nm,19.1s,baz=247,slow=40						
PMG	Port Moresby	8.25	231	P	Pn	19 29 43.9	-2.6
	0.4nm,0.3s,baz=350,slow=11,SNR=2.3						
PMG				S	Sn	19 31 19.8	+1.7
	0.6nm,0.3s,baz=240,slow=20,SNR=2.4						
WRA	Warramunga Arr	24.46	229	P	P	19 32 59.0	-0.3
	6.0nm,0.7s,baz=52,slow=9.8,SNR=45						
WRA				PcP	PcP	19 36 37.0	+1.2
	0.6nm,0.8s,baz=46,slow=2.3,SNR=2.8						
H11S3	WAKE ISLAND Hy	25.98	29	T	T	19 59 58.2	
	baz=210,slow=76,SNR=93						
H11S2	WAKE ISLAND Hy	25.99	29	T	T	19 59 57.1	
	baz=210,slow=76,SNR=69						
H11S1	WAKE ISLAND Hy	26.00	29	T	T	19 59 58.1	
	baz=210,slow=76,SNR=71						
H11N1	WAKE ISLAND Hy	27.13	28	T	T	20 01 36.7	
	baz=222						
H11N3	WAKE ISLAND Hy	27.14	28	T	T	20 01 40.1	
	baz=222						
ASAR	Alice Springs	27.14	223	P	P	19 33 24.3	+0.7
	1.0nm,0.6s,baz=56,slow=8.7,SNR=12						
H11N2	WAKE ISLAND Hy	27.14	28	T	T	20 01 40.2	
	baz=222						
STKA	Stephens Creek	29.73	201	P	P	19 33 47.9	+1.5
	1.4nm,0.7s,baz=24,slow=8.9,SNR=4.8						
PETK	Petropavlovsk-	57.24	3	P	P	19 37 27.3	+1.0
	2.5nm,0.9s,baz=128,slow=9.3						
SONM	Songino Array	66.33	327	P	P	19 38 26.3	-1.3
	0.3nm,0.6s,baz=142,slow=7.3,SNR=2.6						
MKAR	Makanchi Array	80.49	319	P	P	19 39 51.5	+0.9
	0.2nm,0.5s,baz=98,slow=10,SNR=2.9						
ILAR	Eielson Array	81.32	22	P	P	19 39 54.0	-0.6
	0.9nm,0.7s,baz=238,slow=5.3,SNR=14						
BVAR	Borovoye Array	89.33	323	P	P	19 40 34.0	-0.6
	0.3nm,0.5s,baz=234,slow=41,SNR=4.3						
NVAR	Mina Array Bea	91.06	52	P	P	19 40 44.1	+0.8
	0.4nm,0.7s,baz=266,slow=8.0,SNR=3.7						
GERES	GERESS Array B	124.04	329	PKP	PKPdf	19 46 36.9	+0.5
	0.1nm,0.4s,baz=77,slow=2.1,SNR=3.1						
TORD	Torodi Ar. Bea	150.96	290	PKPbc	PKPbc	19 47 31.6	-0.1
	baz=57,slow=1.6						

IDC 22 19:40:41.6±0.9, 12°.05N×86°.61W, h0^{km}, mb4.0/8, mb1 4.3/9, mb1mx3.9/44, mbtmp4.0/9, ML3.8/2, MS3.5/7, Ms1 3.5/7, ms1mx3.1/50, Error ellipse: s-maj=46.2km s-min=16.8km az=46.0

ISCJB 22 19:40:42.3±0.3, 11°.39N±0°.04×87°.38W±0°.03, h33^{km}, mb4.5/66, MS3.5/6, Error ellipse: s-maj=6.3km s-min=2.8km az=33.3

CASC 22 19:40:44.6±2.4, 11°.47N×87°.23W, h22^{km}±13^{km}, MD4.4, ML3.6, mb4.5(NEIC)

NEIC 22 19:40:46.4±0.9, 11°.53N×87°.14W, h52^{km}±7^{km}, mb4.5/62, Error ellipse: s-maj=11.0km s-min=7.0km az=205.0

ISC 22 19:40:44.0±1.7, 11°.42N±0°.05×87°.26W±0°.06, h26^{km}±12^{km}, n380, σ1^{s}.36/376, mb4.5/66, MS3.5/6, 1C-1D, Near coast of Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COPN	Copaltepe	1.00	41	eP	Pn	19 41 02.9	+0.5
COPN				eS	Sb	19 41 13.7	-1.7
XAVN	Gruta Xavier	1.17	51	eP	Pn	19 41 04.5	-0.1
CNGN	Cerro Negro	1.21	27	eP	Pb	19 41 05.7	-0.5
CNGN				eS	Sn	19 41 27.0	+6.2
MOMN	Momotombo	1.21	35	eP	Pn	19 41 05.5	+0.2
MASN	Masaya	1.22	62	eP	Pn	19 41 04.4	-1.1
MGAN	Managua	1.23	54	eP	Pn	19 41 05.7	+0.3
MGAN				eS	Sn	19 41 27.4	+6.2
MGAN				IAML		19 41 32.5	
	comp=N,558nm,0.4s						
CRIN	San Cristobal	1.29	9	eP	Pn	19 41 06.9	+0.5
CSGN	Cosiguina Volc	1.57	349	eP	Pn	19 41 10.6	+0.2
CSGN				eS	Sb	19 41 32.8	+0.7
CRZ1	La Cruz	1.63	102	eP	Pn	19 41 10.7	-0.3
BOAB	BOACO BROADBAN	1.86	57	eP	Pn	19 41 13.9	-0.3
ESTN	Estel	1.88	27	ePn	Pn	19 41 15.1	+0.5
CNCH	Conchagua	1.93	343	eP	Pn	19 41 14.9	-0.3
LCND	La Caˆ–ada	1.98	342	eP	Pn	19 41 15.7	-0.1
MATN	Matagalpa	1.99	41	eP	Pn	19 41 16.3	+0.3
VCR	Vista de Mar	2.05	129	eP	Pn	19 41 16.6	-0.3
MESS	Mesas	2.13	108	eP	Pn	19 41 18.4	+0.3
CUI	Cuipilapa	2.19	110	eP	Pn	19 41 19.6	+0.8
CUI				eS	Sn	19 41 45.9	+0.8
PACA	Pacayal	2.29	333	eP	Pn	19 41 19.9	-0.2
RCON	San Juan de Ri	2.32	28	eP	Pn	19 41 20.9	+0.3
TECA	Tecapa	2.39	330	eP	Pn	19 41 21.5	-0.2
UESV	Ojushtada	2.46	323	IAML		19 42 13.8	
	comp=Z,824nm,0.6s						
JTS	JuntasAbangare	2.53	116	Pn	Pn	19 41 23.0	-0.4

	comp=Z,8.9nm,0.3s,baz=24,slow=17,SNR=8.6						
JTS	comp=Z,37nm,0.3s,baz=42,slow=21,SNR=7.2			Sn	Sn	19 41 54.6	+1.3
JTS	comp=Z,258nm,19.6s,baz=354,slow=44			LR	LR	19 42 27.0	
JTS	JuntasAbangare	2.53	116	*e*P	Pn	19 41 25.2	+1.8
TGUH	Tegucigalpa,Un	2.62	360	*e*Pn	Pn	19 41 25.7	+1.0
LFRS	El Faro	2.81	321	*e*P	Pn	19 41 27.4	0.0
ESPN	Las Esperanzas	3.00	75	*e*Pn	Pn	19 41 29.4	-0.4
ESPN	Las Esperanzas	3.00	75	*e*P	Pn	19 41 28.5	-1.3
UEES	San Salvador comp=Z,299nm,0.5s	3.00	320	IAML		19 42 31.9	
SRA1	San Ramˆ‡n	3.04	116	*e*P	Pn	19 41 32.7	+2.2
CGA2	Cerro Gallo 2	3.08	117	*e*P	Pn	19 41 32.5	+1.5
LCR2	La Lucha 2	3.61	117	*e*P	Pn	19 41 40.1	+1.7
CVTR	Volcan Turrial	3.71	112	*e*P	Pn	19 41 42.0	+2.0
URSC	Urasca	3.77	114⇑	*e*P	Pn	19 41 43.4	+2.9
BUS	Buena Vista	3.91	118⇓	*e*P	Pn	19 41 44.3	+1.5
BUS				*e*S	Sn	19 42 28.2	+0.2
CMIG	Matias Romero comp=Z,2.1nm,0.3s,baz=127,slow=11,SNR=19	9.29	308	Pn	Pn	19 42 57.9	+1.5
TLIG	Tlapa	12.53	300	*e*Pn	Pn	19 43 43.6	+2.7
ROSC	El Rosal comp=Z,3.5nm,0.3s,baz=287,slow=19,SNR=4.6	14.37	116	Pn	Pn	19 43 59.5	-6.8
LNIG	Linares comp=Z,16nm,1.0s	17.71	321	*e*Pn	Pn	19 44 48.7	-0.2
BRAL	Brewton baz=180	19.66	1	P	P	19 45 12.0	+1.1
442A	Mamou baz=164	19.79	347	P	Pn	19 45 14.3	+0.3
351A	Pinckard baz=184	19.82	4	P	Pn	19 45 14.2	-0.1
349A	Repton baz=180	19.84	0	P	Pn	19 45 14.3	-0.2
441A	DeRidder baz=162	20.01	345	P	Pn	19 45 16.7	+0.2
353A	Camilla baz=188	20.03	8	P	P	19 45 16.4	+1.4
352A	Blakely baz=186	20.08	6	P	Pn	19 45 17.0	-0.4
HKT	Hockley comp=Z,19nm,1.4s	20.09	338	*e*P	P	19 45 13.3	-2.3
344A	Westbrook Farm baz=170	20.19	351	P	P	19 45 18.2	+1.5
344A	Westbrook Farm comp=Z,32nm,0.8s	20.19	351	*e*P	P	19 45 16.1	-0.7
TIGA	Tifton baz=190,SNR=5.6	20.21	9	P	P	19 45 18.2	+1.3
833A	Chaparral WMA, baz=143	20.30	328	P	P	19 45 19.1	+1.1
833A	Chaparral WMA, comp=Z,28nm,0.8s	20.30	328	*e*P	P	19 45 18.2	+0.3
342A	Flagon Creek P baz=165	20.41	347	P	P	19 45 20.7	+1.7
ATAH	Atahualpa comp=Z,171nm,18.7s,baz=344,slow=34	20.43	154	LR	LR	19 52 25.9	
249A	Camden baz=180,SNR=5.9	20.46	0	P	P	19 45 21.1	+1.4
250A	Grady baz=182	20.48	2	P	P	19 45 20.9	+1.0
250A	Grady comp=Z,20nm,1.0s	20.48	2	*e*P	P	19 45 20.7	+0.8
341A	Kurthwood baz=163,SNR=19	20.56	345	P	P	19 45 22.4	+1.6
341A	Kurthwood comp=Z,97nm,0.9s	20.56	345	*e*P	P	19 45 22.0	+1.3
247A	Quitman baz=176	20.57	357	P	P	19 45 22.0	+1.2
248A	Dixon Mills baz=178	20.58	359	P	P	19 45 22.3	+1.4
252A	Lumpkin baz=187	20.61	6	P	P	19 45 22.7	+1.4
251A	Midway baz=185,SNR=6.0	20.65	4	P	P	19 45 22.4	+0.7
245A	Little AP, Sta baz=172	20.66	354	P	P	19 45 23.0	+1.2
254A	Abbeville baz=191	20.75	10	P	P	19 45 24.5	+1.7
255A	Hazlehurst baz=193	20.88	11	P	P	19 45 24.5	+0.3
242A	Grayson baz=166,SNR=5.1	21.03	348	P	P	19 45 27.5	+1.7
149A	Jones baz=181	21.08	1	P	P	19 45 27.2	+0.8
151A	Opelika baz=185,SNR=7.7	21.08	5	P	P	19 45 27.4	+1.0
150A	Eclectic baz=183,SNR=18	21.12	3	P	P	19 45 28.1	+1.4
148A	Greensboro baz=179,SNR=9.1	21.13	359	P	P	19 45 28.0	+1.2
147A	Livingston baz=177,SNR=7.4	21.18	358	P	P	19 45 28.4	+1.1
146A	Union baz=175	21.18	356	P	P	19 45 28.8	+1.3
152A	Waverly Hall baz=187,SNR=13	21.28	6	P	P	19 45 29.8	+1.3
152A	Waverly Hall comp=Z,27nm,0.9s	21.28	6	*e*P	P	19 45 28.9	+0.4
NATX	Nacogdoches baz=159	21.37	342	P	P	19 45 30.9	+1.4
LRAL	Lakeview Retre baz=180,SNR=12	21.52	1	P	P	19 45 31.4	+0.4
Z49A	Columbiana baz=182,SNR=11	21.68	2	P	P	19 45 33.3	+0.4
Z47A	Carrollton baz=178	21.69	358	P	P	19 45 33.2	+0.4
141A	Papa Simpson, baz=165	21.72	347	P	P	19 45 33.7	+0.6
Z46A	Louisville baz=175	21.73	356	P	P	19 45 33.5	+0.2
Z50A	Ashland baz=183,SNR=11	21.77	3	P	P	19 45 34.4	+0.6
Z52A	Williamson baz=187,SNR=6.2	21.82	6	P	P	19 45 34.8	+0.5
Z48A	Northport baz=179,SNR=9.8	21.86	359	P	P	19 45 35.1	+0.4
Z51A	Franklin baz=185,SNR=5.7	21.88	5	P	P	19 45 36.4	+1.5
Z53A	Monticello baz=189,SNR=13	22.02	8	P	P	19 45 37.6	+1.2
Z54A	Sparta baz=191	22.09	10	P	P	19 45 38.2	+1.0
GOGA	Godfrey baz=190,SNR=9.7	22.16	8	P	P	19 45 38.8	+0.8
GOGA	Godfrey comp=Z,21nm,1.0s	22.16	8	*e*P	P	19 45 35.2	-2.8
PCRV	Puerto La Cruz comp=Z,14nm,0.8s,baz=232,slow=4.9,SNR=5.7	22.25	91	P	P	19 45 38.9	-0.3
JCT	Junction City baz=146	22.26	330	P	P	19 45 40.3	+1.2
Z41A	Richland Creek baz=165	22.32	348	P	P	19 45 40.4	+0.7
Y49A	Blount Mountai baz=182,SNR=19	22.35	2	P	P	19 45 40.2	+0.2
Y49A	Blount Mountai comp=Z,29nm,0.6s	22.35	2	*e*P	P	19 45 39.7	-0.3
Y47A	UCPARC, Winfie baz=178,SNR=9.4	22.39	359	P	P	19 45 40.6	+0.2
Y48A	Jasper baz=180,SNR=24	22.39	0	P	P	19 45 40.7	+0.3
Y46A	Houston baz=176,SNR=11	22.41	357	P	P	19 45 40.7	+0.1
Y50A	Piedmont baz=184,SNR=8.8	22.41	3	P	P	19 45 41.1	+0.4
Y45A	Yeager Farm, C baz=174	22.44	355	P	P	19 45 40.8	-0.2
Y51A	Rockmart baz=185,SNR=23	22.47	5	P	P	19 45 41.5	+0.2
WHTX	Lake Whitney, baz=153	22.53	337	P	P	19 45 42.2	+0.3
WHTX	Lake Whitney, comp=Z,12nm,0.8s	22.53	337	*e*P	P	19 45 40.8	-1.2
Y52A	Lilburn baz=188,SNR=15	22.53	7	P	P	19 45 42.4	+0.4
Y52A	Lilburn comp=Z,32nm,1.0s	22.53	7	*e*P	P	19 45 42.0	+0.1
NHSC	New Hope baz=198	22.54	16	P	P	19 45 42.4	+0.4
Y53A	Monroe baz=189,SNR=9.8	22.58	8	P	P	19 45 43.2	+0.7
Y54A	Tignall baz=191,SNR=10	22.73	10	P	P	19 45 44.3	+0.3
Y41A	Eaglette Beard baz=166	22.89	348	P	P	19 45 45.7	0.0
X48A	Hartselle baz=180,SNR=8.2	22.93	0	P	P	19 45 45.8	-0.3
X48A	Hartselle comp=Z,11nm,0.7s	22.93	0	*e*P	P	19 45 45.2	-0.9
X45A	UM Field Stati baz=174	22.98	355	P	P	19 45 46.4	-0.3
X50B	Fort Payne baz=184,SNR=9.4	22.98	3	P	P	19 45 46.4	-0.3
X47A	Russelville baz=178,SNR=16	23.00	359	P	P	19 45 46.3	-0.5
X49A	Woodville baz=182,SNR=18	23.00	2	P	P	19 45 46.4	-0.4
OXF	Oxford baz=174,SNR=5.6	23.07	355	P	P	19 45 47.1	-0.5
OXF	Oxford comp=Z,32nm,0.8s	23.07	355	*e*P	P	19 45 43.0	-4.5
X51A	Calhoun baz=186	23.14	5	P	P	19 45 47.8	-0.5
X53A	Estanollee baz=190,SNR=5.5	23.26	8	P	P	19 45 49.6	+0.1
X52A	Dahlonega baz=188,SNR=10	23.28	7	P	P	19 45 49.9	+0.2
JSC	Jenkinsville comp=Z,16nm,1.2s	23.41	13	*e*P	P	19 45 49.5	-1.4
TXAR	Lajitas Array comp=Z,3.2nm,0.5s,baz=135,slow=9.8,SNR=56	23.49	322	P	P	19 45 52.5	+0.6
TXAR	comp=Z,0.9nm,0.8s,baz=123,slow=4.6,SNR=5.6			PcP	PcP	19 49 39.4	+1.9
TX31	Lajitas Ar. Si	23.49	322	*e*P	P	19 45 51.9	0.0
X40A	Basin Creek Fa baz=166	23.52	348	P	P	19 45 51.5	-0.5
W49A	Belvidere baz=182,SNR=18	23.61	2	P	P	19 45 52.3	-0.6
W48A	Pulaski baz=180,SNR=26	23.61	1	P	P	19 45 52.3	-0.6
W45A	Hickory Valley baz=175	23.70	356	P	P	19 45 52.9	-0.8
UALR	University of comp=Z,12nm,0.9s	23.71	350	*e*P	P	19 45 52.8	-1.0
SWET	Sewanee comp=Z,15nm,0.9s	23.72	3	*e*P	P	19 45 53.7	-0.3
W47A	Westpoint baz=179,SNR=19	23.73	359	P	P	19 45 53.2	-0.9
MIAR	Mount Ida baz=164,SNR=14	23.73	347	P	P	19 45 53.5	-0.5
MIAR	Mount Ida comp=Z,14nm,0.9s	23.73	347	*e*P	P	19 45 52.1	-2.0
W50A	Signal Mountai baz=184,SNR=18	23.74	4	P	P	19 45 53.5	-0.7
W50A	Signal Mountai comp=Z,25nm,0.8s	23.74	4	*e*P	P	19 45 53.7	-0.5
W51A	Cleveland baz=186,SNR=12	23.74	5	P	P	19 45 53.6	-0.6
W52A	Murphy baz=188,SNR=5.3	23.76	7	P	P	19 45 54.3	-0.1
X39A	Fountain Ranch baz=163,SNR=7.4	23.82	346	P	P	19 45 54.4	-0.5
W53A	Cullowhee baz=190	23.93	8	P	P	19 45 55.9	-0.3
ABTX	Abilene, Hawle baz=149,SNR=6.0	23.98	334	P	P	19 45 56.0	-0.5
ABTX	Abilene, Hawle comp=Z,6.3nm,0.6s	23.98	334	*e*P	P	19 45 55.3	-1.2
CPCT	Cooper Cave comp=Z,17nm,0.8s	24.05	5	*e*P	P	19 45 56.8	-0.3
W41B	Gary Mavity, V baz=168,SNR=6.8	24.08	350	P	P	19 45 56.4	-0.9
WHAR	Wooly Hollow comp=Z,7.7nm,0.8s	24.20	350	*e*P	P	19 45 56.8	-1.7
V48A	Smith Brothers baz=181,SNR=9.3	24.22	1	P	P	19 45 57.9	-0.7
KMSC	Kings Mountain baz=194	24.22	12	P	P	19 45 57.6	-1.1
V50A	Pikevile baz=185	24.22	4	P	P	19 45 57.6	-1.0
W40A	Ferguson Farm, baz=166	24.25	348	P	P	19 45 58.2	-0.6
W40A	Ferguson Farm, comp=Z,30nm,1.5s	24.25	348	*e*P	P	19 45 58.5	-0.4
V49A	McMinnville baz=183,SNR=13	24.27	3	P	P	19 45 58.3	-0.8
V46A	Holladay baz=178	24.29	358	P	P	19 45 57.6	-1.6
V47A	Nunnelly baz=179,SNR=9.2	24.30	359	P	P	19 45 58.2	-1.2
TKL	Tuckaleechee C comp=Z,16nm,0.7s,baz=181,slow=11,SNR=23	24.34	7	P	P	19 45 59.8	+0.1
TKL	Tuckaleechee C comp=Z,21nm,0.8s	24.34	7	*e*P	P	19 45 59.0	-0.7
W39A	Magazine baz=164,SNR=6.5	24.40	347	P	P	19 45 59.5	-0.7
W39A	Magazine comp=Z,7.1nm,0.8s	24.40	347	*e*P	P	19 45 59.6	-0.7
V51A	Loudon baz=187,SNR=9.3	24.42	6	P	P	19 46 00.4	-0.1
V51A	Loudon comp=Z,19nm,0.8s	24.42	6	*e*P	P	19 45 59.9	-0.5
V53A	Saluda baz=190,SNR=10	24.48	9	P	P	19 46 00.2	-0.8
V53A	Saluda comp=Z,14nm,0.8s	24.48	9	*e*P	P	19 46 00.4	-0.7
V52A	Sevierville baz=188	24.54	7	P	P	19 46 00.6	-0.9
V52A	Sevierville comp=Z,6.9nm,0.8s	24.54	7	*e*P	P	19 46 00.7	-0.8
V42A	Cord baz=170,SNR=8.8	24.57	352	P	P	19 46 00.4	-1.4
WVT	Waverly baz=178	24.61	359	P	P	19 46 01.5	-0.6
WVT	Waverly comp=Z,9.9nm,1.3s	24.61	359	*e*P	P	19 46 00.6	-1.5
V41A	Mountainview baz=168,SNR=16	24.66	350	P	P	19 46 01.5	-1.1
V40A	Witts Springs baz=167,SNR=8.4	24.80	349	P	P	19 46 02.9	-1.0
V40A	Witts Springs comp=Z,9.6nm,0.8s	24.80	349	*e*P	P	19 46 02.1	-1.8
U46A	Springville baz=178,SNR=18	24.84	358	P	P	19 46 03.0	-1.2
U47A	Clarksville baz=180	24.91	360	P	P	19 46 03.6	-1.3
U50A	Jamestown baz=185,SNR=7.5	24.98	5	P	P	19 46 04.8	-0.8
U48A	Cassie Pea, Po baz=181	24.99	1	P	P	19 46 04.5	-1.2
V39A	Pettigrew baz=165,SNR=20	24.99	348	P	P	19 46 05.6	-0.1
U43A	Rector baz=172	25.00	354	P	P	19 46 05.1	-0.6
U49A	Red Boiling Sp baz=183,SNR=9.1	25.02	3	P	P	19 46 05.0	-0.9
U51A	La Follette baz=187	25.02	6	P	P	19 46 04.7	-1.2
U42A	Revenden baz=170,SNR=7.4	25.08	352	P	P	19 46 05.8	-0.6
U41A	Viola baz=169	25.17	351	P	P	19 46 06.2	-1.0
U53A	Fall Branch baz=191	25.19	9	P	P	19 46 06.8	-0.7
TZTN	Tazewell baz=188	25.24	7	P	P	19 46 07.1	-0.7
TZTN	Tazewell comp=Z,5.7nm,0.8s	25.24	7	*e*P	P	19 46 04.9	-3.0
U40A	Yellville baz=167,SNR=9.1	25.34	349	P	P	19 46 07.9	-0.9
T47A	Sharon Grove baz=180,SNR=8.7	25.46	0	P	P	19 46 08.7	-1.2
T47A	Sharon Grove comp=Z,14nm,0.8s	25.46	0	*e*P	P	19 46 08.8	-1.0
WMOK	Wichita Mounta baz=153,SNR=11	25.48	338	P	P	19 46 10.2	+0.1
U39A	Green Forest baz=165,SNR=5.3	25.48	348	P	P	19 46 09.2	-0.9
T46A	Princeton baz=178,SNR=5.9	25.52	359	P	P	19 46 09.4	-1.0
TUL1	Leonard baz=160,SNR=13	25.58	344	P	P	19 46 10.1	-0.9
TUL1	Leonard comp=Z,38nm,0.8s	25.58	344	*e*P	P	19 46 10.3	-0.6
T50A	Nancy baz=185	25.58	4	P	P	19 46 10.1	-0.9
T48A	Bowling Green baz=182	25.59	2	P	P	19 46 10.2	-0.8
T51A	Gray baz=187,SNR=6.6	25.61	6	P	P	19 46 10.2	-1.0
T49A	Edmonton baz=184	25.62	3	P	P	19 46 10.6	-0.8
T43A	Greenville baz=173,SNR=6.2	25.70	354	P	P	19 46 10.7	-1.3
T42A	Van Buren baz=171,SNR=8.4	25.73	353	P	P	19 46 11.3	-1.1
T42A	Van Buren comp=Z,6.9nm,0.8s	25.73	353	*e*P	P	19 46 10.3	-2.0
T41A	Mountain View baz=170	25.84	352	P	P	19 46 12.0	-1.2
T40A	Mansfield baz=168	26.05	350	P	P	19 46 14.3	-0.9
T39A	Clever baz=166	26.08	349	P	P	19 46 14.4	-1.2
S48A	Wiedeman Farm, baz=182	26.15	2	P	P	19 46 15.1	-1.0
S43A	Fulton Ridge, baz=174	26.16	355	P	P	19 46 15.1	-1.2
MNTX	Cornudas Mount baz=136	26.22	323	P	P	19 46 16.8	0.0
MNTX	Cornudas Mount comp=Z,3.4nm,0.9s	26.22	323	P	P	19 46 14.2	-2.6
S50A	Richmond baz=186	26.27	5	P	P	19 46 16.2	-1.1
T38A	Diamond baz=164,SNR=5.6	26.28	347	P	P	19 46 16.5	-0.8
S49A	Springfield baz=184	26.31	4	P	P	19 46 16.6	-1.0
S51A	Beattyville baz=188,SNR=6.1	26.32	7	P	P	19 46 16.8	-0.9
S41A	Jillco Farms, baz=170	26.37	352	P	P	19 46 17.0	-1.1
S52A	Salyersville baz=189	26.42	7	P	P	19 46 17.6	-1.0
S42A	Caledonia baz=172	26.43	354	P	P	19 46 17.3	-1.3
S40A	Lebanon baz=168	26.49	351	P	P	19 46 17.9	-1.3
MSTX	Muleshoe baz=144,SNR=11	26.55	330	P	P	19 46 19.4	-0.5
MSTX	Muleshoe comp=Z,13nm,0.8s	26.55	330	*e*P	P	19 46 19.4	-0.5
R46A	Gibon Southern baz=179	26.68	360	P	P	19 46 20.0	-0.9
WCI	Wyandotte Cave baz=182	26.71	2	P	P	19 46 20.2	-1.0
WCI	Wyandotte Cave comp=Z,10.0nm,0.8s	26.71	2	*e*P	P	19 46 16.8	-4.4
S39A	Bolivar baz=166,SNR=12	26.72	349	P	P	19 46 20.1	-1.2
CCM	Cathedral Cave baz=171	26.76	353	P	P	19 46 20.9	-0.7
CCM	Cathedral Cave comp=Z,15nm,1.1s	26.76	353	*e*P	P	19 46 18.1	-3.5
R44A	Waltonville baz=176	26.77	357	P	P	19 46 20.8	-0.9
R47A	Wooly Knot Far baz=181	26.77	1	P	P	19 46 20.3	-1.4
S38A	Stockton baz=165	26.77	348	P	P	19 46 20.5	-1.2
R45A	Skylar, Fairfi baz=178	26.78	358	P	P	19 46 20.7	-1.1
AMTX	Amarillo baz=147	26.79	333	P	P	19 46 21.3	-0.8
AMTX	Amarillo comp=Z,14nm,0.9s	26.79	333	P	P	19 46 20.0	-2.1
R43A	Red Bud baz=174	26.85	355	P	P	19 46 21.7	-0.7
R50A	Paris baz=186	26.88	5	P	P	19 46 21.7	-1.0
R51A	Hillsboro baz=188,SNR=6.0	26.97	6	P	P	19 46 22.8	-0.7
R41A	Rosebud baz=171	27.02	353	P	P	19 46 22.6	-1.3
R40A	Maddies Statio baz=169	27.13	351	P	P	19 46 23.6	-1.3
R39A	Chumby, Stover baz=167,SNR=6.3	27.28	350	P	P	19 46 25.2	-1.1
R38A	Fenwick Farm, baz=165,SNR=6.9	27.31	349	P	P	19 46 25.6	-1.0
Q45A	Warren Harvey, baz=178	27.37	358	P	P	19 46 25.9	-1.2
Q47A	Bedord North L baz=182,SNR=5.4	27.41	1	P	P	19 46 26.3	-1.2
Q44A	Meyer Farm, Va baz=176	27.41	357	P	P	19 46 26.2	-1.3
Q48A	North Vernon baz=183	27.43	3	P	P	19 46 26.3	-1.4
Q51A	Peebles baz=188,SNR=13	27.71	7	P	P	19 46 29.4	-0.8
P47A	Martinsville baz=182	27.97	2	P	P	19 46 30.9	-1.5
Q39A	Willow Grove F baz=168	27.98	350	P	P	19 46 31.1	-1.4
Q38A	Cooks Store, C baz=166	28.01	349	P	P	19 46 31.5	-1.3
P39B	Salisbury baz=168	28.38	351	P	P	19 46 35.7	-0.4
O44A	Mansfield baz=177	28.64	358	P	P	19 46 36.9	-1.5
P38A	Dawn baz=167	28.64	350	P	P	19 46 37.3	-1.2
O45A	Potomac baz=179	28.72	359	P	P	19 46 37.7	-1.4
O47A	Sheridan baz=182	28.72	2	P	P	19 46 37.6	-1.5
O48A	Farmland baz=184	28.78	3	P	P	19 46 38.3	-1.4
O50A	Cable baz=187,SNR=6.9	28.79	6	P	P	19 46 39.0	-0.8
SFIN	Lafayette baz=180	28.84	0	P	P	19 46 38.9	-1.4
TASL	Snake Pit, Alb baz=138	29.21	326	P	P	19 46 42.8	-1.1
ANMO	Albuquerque comp=Z,1.1nm,0.8s,baz=174,slow=5.8,SNR=4.9	29.21	326	P	P	19 46 44.9	+1.1
ANMO	Albuquerque baz=138	29.21	326	P	P	19 46 42.3	-1.5
TASM	ASL Pad, Albuq baz=138	29.21	326	P	P	19 46 42.8	-1.1
N46A	Monticello baz=181	29.36	1	P	P	19 46 43.4	-1.4
N43A	Stutzman Famil baz=176	29.45	357	P	P	19 46 44.5	-1.1
PTGA	Pitinga comp=Z,65nm,19.3s,baz=176,slow=40	29.68	112	LR	LR	20 00 24.4	
T25A	Trinidad baz=144	29.90	332	P	P	19 46 49.1	-0.8
N54A	Moraine State baz=194	30.11	11	P	P	19 46 50.5	-1.0
M39A	Webster baz=170	30.25	353	P	P	19 46 51.3	-1.4
SSPA	Standing Stone baz=198	30.25	14	P	P	19 46 52.3	-0.4
SSPA	Standing Stone comp=Z,11nm,0.8s	30.25	14	*e*P	P	19 46 51.7	-1.0
M38A	Pleasantville baz=168	30.33	351	P	P	19 46 52.2	-1.2
L42A	Oliver, Polo baz=175	30.54	356	P	P	19 46 53.9	-1.4
M36A	Felix, Anita baz=165	30.64	349	P	P	19 46 55.5	-0.7
M54A	Oil Creek Stat baz=194	30.70	11	P	P	19 46 55.9	-0.9
L40A	Anamosa baz=172	30.72	354	P	P	19 46 55.6	-1.3
SDCO	Great Sand Dun baz=143,SNR=6.2	30.90	331	P	P	19 46 58.6	-0.2
SDCO	Great Sand Dun comp=Z,1.9nm,0.7s	30.90	331	P	P	19 46 59.5	+0.7
L38A	Oak Wood Farm, baz=169	31.01	352	P	P	19 46 58.3	-1.1
N59A	State Game Lan baz=202,SNR=6.7	31.08	17	P	P	19 46 59.8	-0.3
K42A	Prairie Point, baz=176	31.30	357	P	P	19 47 00.9	-1.0
K39A	Oelwein baz=171	31.43	353	P	P	19 47 01.7	-1.4
S22A	4UR Ranch, Cre baz=141	31.54	329	P	P	19 47 04.2	-0.3
K37A	Belmond baz=168,SNR=5.0	31.72	351	P	P	19 47 04.2	-1.4
J40A	Soldiers Grove baz=173	32.00	355	P	P	19 47 06.6	-1.5
BINY	Binghamton baz=201	32.21	16	P	P	19 47 09.0	-1.0
BINY	Binghamton comp=Z,12nm,1.0s	32.21	16	*e*P	P	19 47 08.9	-1.0
J37A	Redenius Farm, baz=168	32.24	351	P	P	19 47 09.2	-1.0
I43A	Langenfeld Bro baz=178	32.36	359	P	P	19 47 09.8	-1.4
J36A	Seneca 1, Swea baz=167,SNR=7.3	32.38	350	P	P	19 47 10.3	-1.1
I40A	Norwalk baz=174	32.48	355	P	P	19 47 10.9	-1.5

I39A	Houston	32.53	354	P	P	19 47 11.3	-1.4
	baz=172						
I41A	Arkdale	32.60	357	P	P	19 47 11.9	-1.5
	baz=175						
I37A	Lemond, Waseca	32.91	352	P	P	19 47 14.9	-1.2
	baz=169						
PV03	Paradox Valley	32.96	328	*e*P	P	19 47 17.1	+0.2
PV12	Saucer Basin,	32.98	328	*e*P	P	19 47 17.4	+0.3
	comp=Z,11nm,0.7s						
PV18	Skein Mesa, Pa	32.99	328	*e*P	P	19 47 17.6	+0.5
	comp=Z,9.8nm,0.6s						
PV11	David Mesa, Pa	33.01	328	*e*P	P	19 47 17.6	+0.3
	comp=Z,12nm,0.7s						
PV16	Nyswonger Mesa	33.04	328	*e*P	P	19 47 17.4	-0.2
	comp=Z,5.8nm,0.8s						
PV17	East Wray Mesa	33.04	328	*e*P	P	19 47 16.2	-1.4
	comp=Z,12nm,0.7s						
PV20	West Nyswonger	33.09	328	*e*P	P	19 47 17.1	-0.8
	comp=Z,9.0nm,0.6s						
PV14	Lion Creek, Pa	33.14	328	*e*P	P	19 47 16.3	-2.1
	comp=Z,5.7nm,0.8s						
H41A	Junction City	33.14	357	P	P	19 47 16.6	-1.5
	baz=176						
H40A	Chili	33.19	356	P	P	19 47 16.9	-1.6
	baz=174						
ECSD	EROS Data Cent	33.20	348	P	P	19 47 17.0	-1.6
	baz=163,SNR=12						
ECSD	EROS Data Cent	33.20	348	P	P	19 47 15.4	-3.2
	comp=Z,4.5nm,0.6s						
WLVO	Wesleyville	33.28	12	P	P	19 47 18.3	-1.0
	baz=196						
LPAZ	La Paz	33.41	145	LR	LR	20 02 22.7	
	comp=Z,68nm,18.3s,baz=336,slow=39						
H38A	Maiden Rock	33.42	353	P	P	19 47 19.0	-1.5
	baz=171						
CLWO	Collingwood	33.45	9	P	P	19 47 19.7	-1.1
	baz=192						
H36A	Jessenland, He	33.53	351	P	P	19 47 20.5	-1.0
	baz=168						
G42A	Mountain	33.72	359	P	P	19 47 21.3	-1.9
	baz=178						
H35A	Sunnyside Ranc	33.80	350	P	P	19 47 22.3	-1.5
	baz=166,SNR=7.1						
G40A	Rib Lake	33.83	356	P	P	19 47 22.5	-1.6
	baz=175						
IKP	In-Ko-Pah, Jac	33.89	313	P	P	19 47 22.9	-2.0
	baz=122						
G39A	Holcombe	33.91	355	P	P	19 47 23.2	-1.6
	baz=173						
SADO	Sadowa	33.96	10	P	P	19 47 23.3	-1.8
	comp=Z,7.9nm,0.7s,baz=204,slow=8.8,SNR=11						
DELO	Deloro Mine	34.01	12	P	P	19 47 24.1	-1.5
	baz=197						
TOBO	Tobermory, Bru	34.05	7	P	P	19 47 24.4	-1.5
	baz=190						
F41A	Three Lakes	34.24	358	P	P	19 47 26.6	-1.1
	baz=177						
F43A	Flat Rock, Esc	34.29	0	P	P	19 47 26.1	-2.0
	baz=180						
KLBO	Killbear Provi	34.35	9	P	P	19 47 26.0	-2.6
	baz=192						
SUSD	Miller	34.41	345	P	P	19 47 27.7	-1.5
	baz=159						
F44A	Big Bay de Noc	34.44	1	P	P	19 47 27.3	-2.1
	baz=181,SNR=9.4						
F40A	Park Falls	34.47	356	P	P	19 47 27.8	-1.9
	baz=175						
SRU	San Rafael Swe	34.48	327	*e*P	P	19 47 29.0	-1.0
	comp=Z,5.6nm,0.6s						
F39A	Loretta	34.52	355	P	P	19 47 28.1	-2.0
	baz=174,SNR=6.3						
BUKO	Buck Lake	34.56	10	P	P	19 47 29.2	-1.2
	baz=194						
PLVO	Plevna	34.62	13	P	P	19 47 29.4	-1.6
	baz=198						
F38A	Pierce - Schro	34.65	354	P	P	19 47 29.1	-2.0
	baz=172,SNR=7.2						
F36A	Milaca	34.74	352	P	P	19 47 29.9	-2.1
	baz=169,SNR=5.7						
F36A	Milaca	34.74	352	*e*P	P	19 47 29.2	-2.8
	comp=Z,6.6nm,0.8s						
LONY	Lake Ozonia	34.83	16	P	P	19 47 31.7	-1.1
	baz=202,SNR=5.7						
LONY	Lake Ozonia	34.83	16	*e*P	P	19 47 29.3	-3.5
	comp=Z,9.7nm,0.8s						
E43A	Lone Tree Farm	34.84	0	P	P	19 47 30.8	-1.9
	baz=180						
E43A	Lone Tree Farm	34.84	0	*e*P	P	19 47 30.9	-1.9
	comp=Z,9.8nm,0.8s						
G32A	Webster	34.84	347	P	P	19 47 30.9	-1.9
	baz=162						
G32A	Webster	34.84	347	*e*P	P	19 47 30.3	-2.6
	comp=Z,26nm,0.7s						
E42A	Champion	34.90	359	P	P	19 47 31.4	-2.0
	baz=179						
E39A	Mellen	34.95	356	P	P	19 47 32.0	-1.8
	baz=174,SNR=8.1						
E40A	Wakefield	34.98	357	P	P	19 47 32.3	-1.8
	baz=175,SNR=5.6						
PEMO	Pembroke	35.20	12	P	P	19 47 34.3	-1.6
	baz=197						
E38A	The Farm, Brul	35.26	355	P	P	19 47 34.5	-1.9
	baz=172						
E36A	McGregor	35.35	353	P	P	19 47 35.4	-1.8
	baz=170,SNR=5.4						
ALFO	Alfred	35.69	15	P	P	19 47 38.9	-1.2
	baz=201						
D37A	Cotton	35.89	354	P	P	19 47 40.1	-1.7
	baz=171						
D36A	Goodland	35.99	353	P	P	19 47 40.6	-2.1
	baz=170,SNR=6.3						
D35A	Remer	36.01	352	P	P	19 47 40.8	-2.1
	baz=168						
C38A	Sawbill Land.	36.34	355	P	P	19 47 43.7	-2.0
	baz=173						
C40A	Isle Royale Na	36.41	358	P	P	19 47 44.2	-2.1
	baz=177						
DUG	Dugway, Tooele	36.49	326	P	P	19 47 45.1	-2.1
	baz=134						
C36A	Pine Crest Far	36.52	354	P	P	19 47 46.0	-1.3
	baz=171						
EYMN	Ely	36.58	355	P	P	19 47 45.6	-2.1
	baz=173						
EYMN	Ely	36.58	355	P	P	19 47 42.5	-5.3
	comp=Z,4.9nm,0.9s						
BW06	Boulder Array	36.77	332	P	P	19 47 48.4	-1.3
	baz=141						
BW06	Boulder Array	36.77	332	*e*P	P	19 47 44.4	-5.3
	comp=Z,1.6nm,0.6s						
PD31	Pinedale Array	36.77	332	*e*P	P	19 47 48.2	-1.5
PDAR	Pinedale Array	36.77	332	P	P	19 47 49.5	-0.2
	comp=Z,1.8nm,0.6s,baz=121,slow=9.5,SNR=26						
PDAR	Pinedale Array	36.77	332	*e*P	P	19 47 48.5	-1.1
HWUT	Hardware Ranch	36.85	329	*e*P	P	19 47 49.3	-1.1
	comp=Z,8.1nm,0.7s						
B35A	Bob, Littlefor	37.22	353	P	P	19 47 51.6	-1.5
	baz=169						
AGMN	Agassiz Nation	37.46	351	P	P	19 47 53.7	-1.5
	baz=166						
AGMN	Agassiz Nation	37.46	351	*e*P	P	19 47 52.7	-2.5
	comp=Z,7.5nm,0.8s						
B34A	Aery, Baudette	37.46	352	P	P	19 47 53.4	-1.8
	baz=168,SNR=6.0						
MDND	Maddock	37.76	346	P	P	19 47 57.2	-0.6
	baz=160						
REDW	Red Top Meadow	37.83	332	*e*P	P	19 47 59.2	+0.5
	comp=Z,14nm,0.4s						
LOHW	Long Hollow	37.90	332	*e*P	P	19 47 58.2	-1.1
	comp=Z,3.7nm,0.9s						
A33A	Warroad	38.01	351	P	P	19 47 58.3	-1.5
	baz=167,SNR=6.7						
RLMT	Red Lodge	38.51	335	P	P	19 48 04.2	-0.2
	baz=144						
NVAR	Mina Array Bea	38.60	320	P	P	19 48 06.6	+1.4
	comp=Z,0.6nm,0.6s,baz=121,slow=8.1,SNR=5.6						
NVAR				PcP	PcP	19 50 19.3	+1.9
	comp=Z,0.9nm,0.8s,baz=160,slow=4.5,SNR=4.5						
ULM	Lac du Bonnet	39.36	351	P	P	19 48 08.8	-2.4
	comp=Z,5.8nm,0.6s,baz=163,slow=9.1,SNR=7.1						
DGMT	Dagmar	39.55	342	P	P	19 48 12.3	-0.6
	baz=153						
HLID	Hailey	39.71	329	P	P	19 48 13.9	-0.5
	baz=135,SNR=7.2						
HLID	Hailey	39.71	329	*e*P	P	19 48 12.8	-1.6
	comp=Z,2.5nm,0.8s						
BOZ	Bozeman (W)	39.91	333	P	P	19 48 16.1	+0.1
	baz=141,SNR=6.5						
BOZ	Bozeman (W)	39.91	333	*e*P	P	19 48 15.9	-0.1
	comp=Z,2.6nm,0.5s						
SCHQ	Schefferville	46.21	16	LR	LR	20 08 24.1	
	comp=Z,95nm,18.6s,baz=131,slow=37						
CPUP	Villa Florida	47.49	143	LR	LR	20 09 16.0	
	comp=Z,60nm,19.1s,baz=310,slow=36						
YKA	Yellowknife Ar	54.65	345	P	P	19 50 08.6	-1.7
	comp=Z,2.4nm,0.7s,baz=140,slow=7.5,SNR=14						
ILAR	Eielson Array	67.03	336	P	P	19 51 33.6	-0.9
	comp=Z,1.0nm,0.7s,baz=145,slow=4.6,SNR=17						
ESDC	Sonseca Array	77.68	52	P	P	19 52 35.5	-3.1
	comp=Z,0.2nm,0.5s,baz=296,slow=7.6,SNR=2.6						
MDT	Midelt	77.77	59	LR	LR	20 25 25.6	
	comp=Z,28nm,18.0s,baz=336,slow=35						
KURK	Kurchatov	116.91	10	PKP	PKPdf	19 59 26.2	-0.2
KURBB	Kurchatov Arra	116.99	10	PKP	PKPdf	19 59 26.2	-0.3
	comp=Z,0.2nm,0.6s,baz=342,slow=1.9,SNR=3.9						
SONM	Songino Array	119.77	349	PKP	PKPdf	19 59 32.4	+0.3
	comp=Z,0.7nm,0.8s,baz=356,slow=1.9,SNR=5.3						
GEYT	Alibeck	121.17	32	PKP	PKPdf	19 59 34.7	-0.4
	comp=Z,0.3nm,0.5s,baz=233,slow=6.3,SNR=2.8						
KSRS	Korea Array	121.24	328	PKP	PKPdf	19 59 35.8	+0.7
	comp=Z,0.3nm,0.5s,baz=36,slow=1.8,SNR=4.2						
KSAR	Wonju Array Be	121.27	328	PKP	PKPdf	19 59 35.8	+0.6
MKAR	Makanchi Array	121.30	8	PKP	PKPdf	19 59 34.2	-0.8
	comp=Z,0.3nm,0.5s,baz=316,slow=3.3,SNR=4.6						
KSH	Kashi	126.98	16	*e*PKP	PKPdf	19 59 47.8	+1.6
STKA	Stephens Creek	130.71	238	PKhKP	PKPpre	19 59 52.6	
	comp=Z,1.9nm,0.8s,baz=17,slow=1.5,SNR=3.3						
ASAR	Alice Springs	139.05	247	PKhKP	PKPpre	20 00 01.7	
	comp=Z,0.4nm,0.8s,baz=107,slow=3.5,SNR=2.7						
ASAR				PKP	PKiKP	20 00 12.1	+0.7
	comp=Z,0.6nm,0.6s,baz=104,slow=2.6,SNR=7.8						
WRA	Warramunga Arr	139.16	253	PKhKP	PKPpre	20 00 05.0	
	comp=Z,0.7nm,1.1s,baz=91,slow=2.2,SNR=3.0						
WRA				PKP	PKiKP	20 00 13.9	+2.2
	comp=Z,1.1nm,0.6s,baz=90,slow=2.1,SNR=15						
CMAR	Chiang Mai Arr	149.69	348	PKPbc	PKPbc	20 00 33.1	+0.7
	comp=Z,3.1nm,0.6s,baz=348,slow=4.0,SNR=24						

IDC 22 20:26:55.4±2.6, 20°.18S×177°.58W, h483^{km}±51^{km}, mb3.6/5, mb1 3.7/7, mb1mx3.1/50, mbtmp4.5/7, Error ellipse: s-maj=33.9km s-min=22.3km az=18.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	8.35	43	P	P	20 28 56.8	+1.6
	5.2nm,0.3s,baz=221,slow=6.3,SNR=5.8						
AFI				S	S	20 30 31.9	-1.6
	9.5nm,0.3s,baz=45,slow=20,SNR=6.0						
URZ	Urewera	18.60	193	P	P	20 30 41.3	-0.6
	0.5nm,0.3s,baz=173,slow=19,SNR=2.9						
URZ				S	S	20 34 01.7	+15
	0.4nm,0.3s,baz=127,slow=20,SNR=3.1						
CTA	Charters Tower	33.91	264	P	P	20 32 57.9	+0.4
	4.7nm,0.3s,baz=90,slow=9.7,SNR=10						
STKA	Stephens Creek	38.28	244	P	P	20 33 33.5	0.0
	2.4nm,0.5s,baz=95,slow=12,SNR=17						
ASAR	Alice Springs	44.97	256	P	P	20 34 26.6	-0.2
	9.3nm,0.5s,baz=97,slow=7.6,SNR=83						
WRA	Warramunga Arr	45.03	262	P	P	20 34 26.7	-0.7
	3.6nm,0.7s,baz=98,slow=8.2,SNR=128						
QSPA	South Pole Qui	69.89	180	P	P	20 37 17.1	+0.3
	1.6nm,0.8s,baz=335,slow=6.5,SNR=3.6						

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*ISCJB **22** 20:29:40.9±0.5, 35°.36N±0°.04×140°.32E±0°.06, h65^{km}±4^{km}, mb3.8/10, Error ellipse: s-maj=8.7km s-min=5.8km az=160.5*

*IDC **22** 20:29:41.1±1.7, 35°.34N×140°.27E, h43^{km}±15^{km}, mb3.6/10, mb1 3.7/15, mb1mx3.5/72, mbtmp3.9/15, ML3.3/4, Error ellipse: s-maj=22.1km s-min=6.5km az=69.0*

*JMA **22** 20:29:42.0±0.1, 35°.41N×140°.40E, h55^{km}±2^{km}, M3.4 Broadband fault plane solution: P waves. NP1: ϕ_s347.00000°, δ64.00000°, λ88.00000°. NP2: ϕ_s172.00000°, δ26.00000°, λ94.00000°. Principal axes: T Plg71.0000°, Azm253.0000°; N Plg2.0000°, Azm348.0000°; P Plg19.0000°, Azm79.0000°;*

JMA Felt I J1.

ISC 22 20:29:41.3±0.8, 35°.36N±0°.05×140°.40E±0°.06, h57^{km}±7^{km}, n30, σ1^{s}.80/33, mb3.9/10, 5C-2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JCN	Nagara	0.17	291	⇑P	Pn	20 29 51.2	+0.9
KTR	Katsuura	0.22	198	⇑P	Pn	20 29 51.3	+0.7
KTR				S	Sn	20 29 58.4	+1.2
BSO4	Boso 4	0.37	188	⇑P	Pn	20 29 52.8	+1.2
BSO4				*e*X		20 30 01.0	
BSO3	Boso 3	0.56	170	⇑P	Pn	20 29 54.6	+1.1
BSO3				X		20 30 05.0	
BSO1	Boso 1	0.85	146	⇑P	Pn	20 29 57.5	+0.7
JYT	Yasato	0.88	349	P	Pn	20 29 57.8	+0.1
JYT				*e*S	Sn	20 30 09.3	-0.5
JIM2	Oshima 3	1.02	231	⇓P	Pn	20 29 59.4	-0.1
JIM2				S	Sn	20 30 12.6	-0.4
JOD2	Odawara 2	1.07	265	⇓P	Pn	20 30 00.5	+0.2
JOD2				*e*S	Sn	20 30 14.2	-0.1
MJAR	Matsushiro Arr	2.13	304	P	Pn	20 30 14.2	-0.4
	15nm,0.3s,baz=106,slow=13,SNR=90						
MJAR				S	Sn	20 30 36.7	-3.3
	11nm,0.3s,baz=139,slow=15,SNR=9.6						
MAT	Matsushiro	2.13	304	P	Pn	20 30 15.5	+0.9
MAT				S	Sn	20 30 37.8	-2.2
JHJ	Hachijo jima 2	2.29	193	P	Pn	20 30 17.3	+0.6
	32nm,0.3s,baz=47,slow=19,SNR=13						
JHJ				S	Sn	20 30 42.8	-1.0
	94nm,0.3s,baz=246,slow=22,SNR=12						
JNU	Nakatsue	8.19	257	P	Pn	20 31 37.7	+0.1
	0.2nm,0.3s,baz=66,slow=9.3,SNR=2.8						
JCJ	Chichijima	8.38	169	P	Pn	20 31 39.3	-0.8
	19nm,0.3s,baz=0.0,slow=19,SNR=20						
JCJ				S	Sn	20 33 07.7	-5.5
	2.9nm,0.3s,baz=285,slow=20,SNR=4.5						
ASAJ	Asahikawa	8.91	10	P	Pn	20 31 46.1	-1.2
	0.3nm,0.3s,baz=208,slow=15,SNR=5.2						
ASAJ				S	Sn	20 33 20.9	-5.2
	0.7nm,0.3s,baz=295,slow=19,SNR=3.7						
H11N2	WAKE ISLAND Hy	28.06	117	T	T	21 04 42.7	
	baz=309,slow=75,SNR=82						
H11N1	WAKE ISLAND Hy	28.07	117	T	T	21 04 57.2	
	baz=309,slow=75,SNR=63						
H11N3	WAKE ISLAND Hy	28.08	117	T	T	21 05 02.9	
	baz=309,slow=75,SNR=61						
SONM	Songino Array	28.08	307	P	P	20 35 28.3	+0.7
	0.4nm,0.5s,baz=101,slow=7.0,SNR=2.7						
H11S1	WAKE ISLAND Hy	28.71	119	T	T	21 05 28.4	
	baz=311,slow=75,SNR=43						
H11S3	WAKE ISLAND Hy	28.71	119	T	T	21 05 27.6	
	baz=311,slow=75,SNR=46						
H11S2	WAKE ISLAND Hy	28.72	119	T	T	21 05 28.6	
	baz=311,slow=75,SNR=41						
ZALV	Zalesovo Beam	42.46	314	P	P	20 37 31.5	+1.1
	0.7nm,0.4s,baz=118,slow=7.1,SNR=3.6						
MKAR	Makanchi Array	44.33	303	P	P	20 37 45.6	-0.1
	0.8nm,0.7s,baz=81,slow=9.8,SNR=5.3						
KURBB	Kurchatov Arra	46.40	309	P	P	20 38 02.7	+0.7
	1.4nm,0.5s,baz=82,slow=7.6,SNR=13						
BVAR	Borovoye Array	51.10	313	P	P	20 38 39.6	+1.6
	0.4nm,0.3s,baz=104,slow=10,SNR=3.5						
ILAR	Eielson Array	51.35	32	P	P	20 38 41.4	+1.7
	0.4nm,0.9s,baz=265,slow=6.0,SNR=3.1						
WRA	Warramunga Arr	55.30	187	P	P	20 39 09.5	+0.4
	0.9nm,0.3s,baz=1.8,slow=7.6,SNR=26						
ARU	Arti	57.08	319	P	P	20 39 22.1	+0.7
	1.7nm,0.5s,baz=86,slow=16,SNR=3.6						
ASAR	Alice Springs	59.02	187	P	P	20 39 35.2	-0.2
	0.3nm,0.4s,baz=17,slow=13,SNR=9.1						
FINES	FINESS Array B	69.91	332	P	P	20 40 47.1	+1.1
	1.5nm,0.8s,baz=64,slow=6.8,SNR=5.1						

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*NNC **22** 20:29:31.4±3.7, 35°.58N×87°.73E, h0^{km}, mb5.1, Error ellipse: s-maj=49.0km s-min=34.4km az=44.0*

*IDC **22** 20:29:37.5±0.5, 36°.00N×87°.35E, h0^{km}, mb4.1/27, mb1 4.3/32, mb1mx4.1/67, mbtmp4.2/32, ML3.4/5, MS4.4/60, Ms1 4.4/60, ms1mx4.4/66, Error ellipse: s-maj=16.2km s-min=11.0km az=31.0*

*BJI **22** 20:29:39.9, 36°.23N×87°.21E, h7^{km}, mb4.5/32, mB4.9/25, ML4.9/5, Ms4.9/41, Ms7 4.9/30*

*GCMT **22** 20:29:41.5±0.2, 36°.09N×87°.28E, h24^{km}, MW5.2/104, Moment Tensor Solution. s44,c63; s104,c179; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.88±.18; $M_{\theta\theta}$-4.24±.13; $M_{\phi\phi}$5.11±.14; $M_{r\theta}$-0.31±.21; $M_{\theta\phi}$4.36±.11; $M_{\phi r}$0.64±.20; Best double couple: $M_0$6.43500×10^{16} NP1: ϕ_s157.00000°, δ88.00000°, λ-173.00000°. NP2: ϕ_s66.00000°, δ83.00000°, λ-2.00000°. Principal axes: T 6.8580, Plg4.0000°, Azm291.0000°; N -0.8510, Plg83.0000°, Azm170.0000°; P -6.0120, Plg6.0000°, Azm22.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*MOS **22** 20:29:41.3±1.3, 36°.25N×87°.45E, h28^{km}, mb4.7/20 Error ellipse: s-maj=9.5km s-min=4.6km az=118.9*

*NEIC **22** 20:29:41.5±2.3, 36°.04N×87°.34E, h25^{km}±16^{km}, mb4.4/5, Error ellipse: s-maj=8.2km s-min=5.7km az=214.0*

*ISCJB **22** 20:29:41.3±0.2, 36°.08N±0°.02×87°.24E±0°.03, h33^{km}, mb4.2/58, MS4.5/74, Error ellipse: s-maj=3.8km s-min=2.8km az=144.2*

ISC 22 20:29:43.3±0.3, 35°.96N±0°.04×87°.22E±0°.03, h35^{km}, n251, σ2^{s}.34/225, mb4.3/58, MS4.5/75, 20C-16D, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LSA	Lhasa	7.07	151	Pn	Pn	20 31 29.0	+4.4
LSA				LR	LR		
	comp=N,4μm,9.7s						
LSA				LR	LR		
	comp=E,9μm,12.3s						
LSA				LR	LR		
	comp=Z,4μm,13.0s						
LSA	Lhasa	7.07	151	P	Pn	20 31 28.0	+3.4
LSA				pmax	pmax		
	comp=Z,53nm,1.7s						
WMQ	Urumqi	7.86	3	Pn	Pn	20 31 34.1	-1.0
WMQ				Sn	Sn	20 32 57.5	-5.3
WMQ				smax	smax		
	comp=Z,370nm,1.3s						
WMQ				smax	smax		
	comp=Z,390nm,1.3s						
WMQ				LR	LR		
	comp=Z,7μm,15.1s						
WMQ				LR	LR		
	comp=Z,5μm,21.9s						
GUN	Gumba	8.11	188	*e*P	Pn	20 31 42.8	+4.0
	comp=Z,66nm,0.9s						
DANN	Dangsing	8.13	202	*e*P	Pn	20 31 40.2	+1.1
	comp=Z,60nm,0.7s						
GKN	Gorkha	8.23	196	*e*P	Pn	20 31 43.0	+2.7
	comp=Z,39nm,1.1s						
KKN	Kakani	8.31	192	*e*P	Pn	20 31 44.0	+2.5
	comp=Z,33nm,0.8s						
JIRN	Jiri	8.32	186	*e*P	Pn	20 31 45.7	+3.9
PKIN	Phulchoki	8.50	191	*e*P	Pn	20 31 46.3	+2.1
	comp=Z,45nm,0.8s						
DMN	Daman	8.52	193	*e*P	Pn	20 31 46.8	+2.4
	comp=Z,61nm,1.0s						
PYUN	Piuthan	8.62	206	*e*P	Pn	20 31 46.2	+0.5
	comp=Z,161nm,1.0s						
GTK	Tadong	8.70	172	*e*x	Pn	20 31 37.3	-9.4
GTK				*e*S	Sn	20 33 21.1	-2.5
KOLN	Koldanda	8.73	202	*e*P	Pn	20 31 47.9	+0.7
	comp=Z,72nm,0.7s						
RAMN	Ramite	9.00	184	*e*P	Pn	20 31 52.7	+1.7
	comp=Z,52nm,0.9s						
ODAN	Odare	9.08	179	*e*P	Pn	20 31 53.8	+1.8
	comp=Z,73nm,0.9s						
PDGK	Podgornoye	9.46	323	⇑Pn	Pn	20 31 56.9	-0.2
	comp=Z,45nm,0.8s						
PDGK				⇑Lg	Lg	20 34 51.6	
	comp=Z,278nm,1.4s						
PDGK	Podgornoye	9.46	323	*i* P	Pn	20 31 56.9	-0.2
PDGK				pmax	pmax		
	comp=Z,45nm,0.8s						
DDI	Dehra Dun	9.52	236	*e*P	Pn	20 31 58.7	+0.8
DDI				*e*S	Sn	20 33 40.9	-2.7
DDI				IAML		20 34 46.6	
	comp=N,145nm,0.1s						
DDI				IAML		20 34 47.4	
	comp=E,370nm,0.2s						
KSH	Kashi	9.58	295	P	Pn	20 32 00.8	+2.0
KSH				sP		20 32 05.1	
KSH				S	Sn	20 33 45.8	+0.5
KSH				pmax	pmax		
	comp=E,790nm,2.9s						
KSH				LR	LR		
	comp=E,3μm,8.3s						
SMLA	Simla	9.67	243	*e*P	Pn	20 31 58.1	-1.8
SMLA				*e*S	Sn	20 33 42.4	-4.9
DHRM	DHARAMSHALA	9.78	251	*e*P	Pn	20 32 02.2	+0.6
DHRM				*e*S	Sn	20 33 42.8	-7.4
ZIRO	ZIRO	10.13	144	*e*P	Pn	20 32 06.0	-0.3
ZIRO				*e*x	x	20 32 17.6	
GUWA	GUWAHATI	10.46	157	*e*P	Pn	20 32 09.4	-1.4
GUWA				*e*x	x	20 32 57.0	
GUWA				IAML		20 33 43.2	
	comp=N,63nm,1.0s						
GUWA				IAML		20 33 48.8	
	comp=E,7.8nm,0.8s						
TEZP	TEZPUR	10.47	151	*e*P	Pn	20 32 10.7	-0.1
GTA	Gaotai	10.56	67	P	Pn	20 32 12.0	-0.2
GTA				pP		20 32 16.6	
GTA				sP		20 32 18.9	
GTA				S	Sn	20 34 05.3	-4.0
GTA				pmax	pmax		
	comp=E,10.0nm,1.9s						
GTA				pmax	pmax		
	comp=E,59nm,4.3s						
GTA				LR	LR		
	comp=E,10μm,13.1s						
GTA				LR	LR		
	comp=E,12μm,13.1s						
ULHL	Ulahol	10.58	310	P	Pn	20 32 15.4	+2.9
	SNR=12						
KNDC	Almaty	10.72	316	⇓Pn	Pn	20 32 14.8	+0.5
	comp=E,131nm,0.8s						
KNDC				⇓Lg	Lg	20 35 29.4	
TURI	Tura	10.72	165	*e*P	Pn	20 32 12.5	-1.8
SHL	Shillong	11.11	158	*e*P	Pn	20 32 16.9	-3.0
SHL	Shillong	11.11	158	P	Pn	20 32 18.1	-1.7
SHL				pmax	pmax		
	comp=Z,12nm,0.6s						
KZA	Kyzart	11.13	307	P	Pn	20 32 19.6	-0.6
	SNR=9.4						
TKM2	Tokmak 2	11.35	311	⇓Pn	Pn	20 32 21.0	-2.1
	comp=Z,30nm,1.3s						
TKM2				⇓Lg	Lg	20 35 52.7	
TKM2	Tokmak 2	11.35	311	P	Pn	20 32 25.2	+2.2
	SNR=11						
TKM2	Tokmak 2	11.35	311	*i* P	Pn	20 32 20.9	-2.1
TKM2				pmax	pmax		
	comp=Z,30nm,1.3s						
MK01	Makanchi Array	11.41	343	*e*Pn	Pn	20 32 23.2	-0.4
MK31	Makanchi Array	11.43	343	Pn	Pn	20 32 23.1	-1.0
	comp=Z,4.7nm,0.7s,baz=153,slow=14,SNR=42						
MK31				⇓Lg	Lg	20 35 45.6	
	comp=Z,108nm,1.4s,baz=148,slow=30,SNR=7.1						
MK31	Makanchi Array	11.43	343	*e*Pn	Pn	20 32 22.2	-1.8
MK31	Makanchi Array	11.43	343	*i* P	Pn	20 32 23.0	-1.0
MK31				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MKAR	Makanchi Array	11.43	343	Pn	Pn	20 32 21.7	-2.2
	comp=Z,0.4nm,0.3s,baz=149,slow=14,SNR=30						
MKAR				LR	LR	20 37 24.5	
	comp=Z,2μm,18.5s,baz=158,slow=41						
MKAR	Makanchi Array	11.43	343	*e*Pn	Pn	20 32 22.3	-1.7
MKAR	Makanchi Array	11.43	343	*e*P	Pn	20 32 23.3	-0.7
MOKO	MOKOCHONG	11.46	145	*e*P	Pn	20 32 24.1	-0.5
MAKZ	Makanchi	11.52	342	*e*Pn	Pn	20 32 23.5	-1.7
SFK	Sufi-Kurgan	11.55	295	P	Pn	20 32 24.6	-1.2
SFK				pmax	pmax		
	comp=Z,62nm,1.7s						
KBK	Karagaybulak	11.61	309	P	Pn	20 32 26.6	0.0
	SNR=11						
NIL	Nilore	11.71	263	Pn	Pn	20 32 23.2	-4.6
NIL	Nilore	11.71	263	P	Pn	20 32 23.2	-4.6
KOHI	KOHIMA	11.80	148	*e*P	Pn	20 32 29.3	+0.1
AAK	Ala-Archa	11.89	308	Pn	Pn	20 32 29.2	-1.2
	comp=Z,0.4nm,0.3s,baz=134,slow=8.6,SNR=17						
AAK				LR	LR	20 38 03.4	
	comp=Z,3μm,20.4s,baz=100,slow=42						
AAK	Ala-Archa	11.89	308	⇓Pn	Pn	20 32 29.9	-0.5
	comp=Z,37nm,1.1s						
AAK				⇓Lg	Lg	20 36 05.5	
AAK	Ala-Archa	11.89	308	P	Pn	20 32 33.1	+2.7

	SNR=9.7						
AAK	Ala-Archa	11.89	308	ePn	Pn	20 32 30.6	+0.2
AAK	Ala-Archa	11.89	308	iP	Pn	20 32 29.9	-0.5
AAK				pmax	pmax		
	comp=Z,37nm,1.1s						
FRU	Bishkek	11.91	309	eP	Pn	20 32 31.0	+0.4
FRU				eS	Sn	20 34 47.0	+4.8
FRU				pmax	pmax		
	comp=Z,120nm,2.1s						
AML	Almayashu	12.18	304	P	Pn	20 32 35.5	+0.9
	SNR=30						
BOK	Bokaro	12.18	186	eP	Pn	20 32 34.9	+0.6
USP	Ospenovka	12.21	311	P	Pn	20 32 35.0	+0.3
	SNR=6.5						
EKS2	Erkin-Say	12.36	307	P	Pn	20 32 36.1	-0.7
	SNR=24						
AGT	Agartala	12.53	163	eP	Pn	20 32 38.0	-1.1
MNAS	Manas	13.13	304	P	Pn	20 32 46.5	-0.8
MNAS				pmax	pmax		
	comp=Z,13nm,1.8s						
LZH	Lanzhou	13.46	85	eP	Pn	20 32 50.0	-1.9
LZH				pP	P	20 32 53.5	-7.3
LZH				sP		20 32 56.8	
LZH				S	Sn	20 35 23.5	+3.1
LZH				sS	S	20 35 37.6	-5.6
LZH				pmax	pmax		
	comp=Z,25nm,1.2s						
LZH				pmax	pmax		
	comp=Z,160nm,4.9s						
LZH				LR	LR		
	comp=Z,4µm,11.8s						
LZH				LR	LR		
	comp=Z,7µm,13.6s						
DGZ	Jazzator, Alta	13.73	1	iP	Pn	20 32 52.2	-3.3
BRDH	Bariadhala	13.79	163	LR	LR	20 38 44.7	
	comp=Z,1µm,20.1s,baz=268,slow=40						
CD2	Chengdu	14.70	105	P	P	20 33 12.6	-1.8
CD2				S	Sn	20 35 57.8	+7.5
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,160nm,5.0s						
CD2				LR	LR		
	comp=Z,6µm,10.5s						
KK31	Karatay Array	14.72	304	ePn	Pn	20 33 11.5	+2.7
KK31	Karatay Array	14.72	304	iP	Pn	20 33 08.1	-0.7
KK31				pmax	pmax		
	comp=Z,58nm,1.5s						
KKAR	Karatay Array	14.72	304	ePn	Pn	20 33 11.4	+2.6
KBL	Kabul	14.92	270	ePn	Pn	20 33 07.8	-4.0
KBL	Kabul	14.92	270	eP	Pn	20 33 07.8	-4.0
BHPL	Bhopal	15.26	216	ex	Pn	20 33 12.0	-4.1
BWNR	Bhubaneshwar	15.66	185	ex	Pn	20 33 19.4	-1.8
HVS	Khovu-Aksy	15.87	15	iP	Pn	20 33 20.1	-3.8
KURBB	Kurchatov Arra	15.94	340	Pn	Pn	20 33 22.1	-2.6
	comp=Z,0.1nm,0.3s,baz=157,slow=12,SNR=16						
KURK	Kurchatov	16.00	340	ePn	Pn	20 33 22.3	-3.2
	comp=Z,22nm,1.0s						
KURK	Kurchatov	16.00	340	ceP	Pn	20 33 22.5	-3.0
KURK				pmax	pmax		
	comp=Z,29nm,2.5s						
KMI	Kunming	17.17	125	P	P	20 33 42.3	+0.3
KMI				pP	Pn	20 33 43.3	+2.7
KMI				sP	pP	20 33 49.4	-1.7
KMI				S	S	20 36 59.8	+0.7
KMI				sS	sS	20 37 04.5	-9.0
KMI				pmax	pmax		
	comp=Z,19nm,0.9s						
KMI				pmax	pmax		
	comp=Z,230nm,4.7s						
KMI				LR	LR		
	comp=Z,3µm,12.5s						
KMI				LR	LR		
	comp=Z,3µm,13.9s						
XAN	Xi'an	17.89	90	P	Pn	20 33 48.3	-1.0
XAN				pP	P	20 33 51.8	+2.1
XAN				sP	pP	20 33 55.3	-3.5
XAN				PP	sP	20 34 04.9	+1.6
XAN				S	S	20 37 18.1	+4.8
XAN				pmax	pmax		
	comp=Z,29nm,1.9s						
XAN				pmax	pmax		
	comp=Z,290nm,3.8s						
XAN				LR	LR		
	comp=Z,2µm,12.6s						
XAN				LR	LR		
	comp=Z,2µm,10.8s						
ZAA0	Zalesovo Array	18.06	355	ePn	Pn	20 33 49.1	-2.1
	comp=Z,67nm,1.9s						
ZALV	Zalesovo Beam	18.06	355	P	Pn	20 33 48.6	-2.7
	comp=Z,0.2nm,0.3s,baz=175,slow=12,SNR=9.8						
ZALV				LR	LR	20 41 59.8	
	comp=Z,1µm,21.7s,baz=173,slow=41						
ZALV	Zalesovo Beam	18.06	355	ePn	Pn	20 33 48.0	-3.2
SONM	Songino Array	18.50	44	P	P	20 33 55.5	-1.0
	comp=Z,0.2nm,0.3s,baz=232,slow=12,SNR=29						
SONM				LR	LR	20 41 26.1	
	comp=Z,3µm,20.6s,baz=234,slow=38						
ZAK	Zakamensk	18.52	34	eP	P	20 33 54.2	-2.3
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.2s						
SONA1	Songino Array	18.52	44	eP	P	20 33 54.9	-1.7
MOY	Mondy	18.53	28	eP	Pn	20 34 01.2	+4.1
MOY				pmax	pmax		
	comp=Z,39nm,1.6s						
NVS	Novosibirsk	19.08	353	eP	P	20 34 00.9	-1.6
NVS				e		20 37 22.9	
TLY	Talaya	19.61	32	P	P	20 34 08.6	+0.1
	comp=Z,0.0nm,0.3s,baz=235,slow=12,SNR=3.1						
TLY				LR	LR	20 41 55.1	
	comp=Z,1µm,20.8s,baz=224,slow=38						
TLY	Talaya	19.61	32	eP	Pn	20 34 10.0	0.0
TLY				pmax	pmax		
	comp=Z,7.0nm,0.9s						
TLY				MLR	MLR		
	comp=Z,2µm,20.0s						
HHC	Hu-ho-hao-te	19.67	68	eP	Pn	20 34 10.6	-0.3
HHC				sP	sP	20 34 23.3	+0.3
HHC				S	S	20 37 48.8	-0.5
HHC				sS	sS	20 37 56.8	-7.2
HHC				pmax	pmax		
	comp=Z,35nm,1.2s						
HHC				pmax	pmax		
	comp=Z,170nm,5.2s						
HHC				LR	LR		
	comp=Z,590nm,12.8s						
HHC				LR	LR		
	comp=Z,3µm,14.9s						
HHC				LR	LR		
	comp=Z,4µm,13.9s						
CHTO	Chiang Mai	19.98	146	P	P	20 34 10.5	-2.1
	comp=Z,12nm,1.4s						
CHTO	Chiang Mai	19.98	146	P	P	20 34 10.5	-2.1
CHTO				pmax	pmax		
	comp=Z,12nm,1.4s						
CHTO	Chiang Mai	19.98	146	P	Pn	20 34 25.7	+11
CMMT	Chiang Mai	19.98	146	P	Pn	20 34 25.6	+11
HYB	Hyderabad	20.01	205	iP	Pn	20 34 15.0	+0.1
TIY	Taiyuan	20.25	78	eP	Pn	20 34 21.5	+3.8
TIY				S	S	20 37 58.8	-2.0
TIY				pmax	pmax		
	comp=Z,200nm,5.6s						
TIY				LR	LR		
	comp=Z,690nm,7.1s						
IRK	Irkutsk	20.29	31	eP	P	20 34 14.9	-0.9
IRK				pmax	pmax		
	comp=Z,46nm,1.5s						
CMAR	Chiang Mai Arr	20.29	146	P	P	20 34 15.1	-0.9
	comp=Z,2.5nm,0.9s,baz=323,slow=9.1,SNR=12						
CMAR				LR	LR	20 42 04.0	
	comp=Z,1µm,18.0s,baz=328,slow=37						
CM01	Chiang Mai Arr	20.33	146	eP	P	20 34 16.2	-0.2
KRAR	Krasnoyarsk	20.42	9	iP	P	20 34 14.0	-3.1
BVAR	Borovoye Array	20.77	330	P	P	20 34 20.8	-0.2
	comp=Z,24nm,0.8s,baz=133,slow=10,SNR=36						
BVAR				LR	LR	20 43 13.1	
	comp=Z,2µm,18.7s,baz=139,slow=39						
BRVK	Borovoye	20.84	330	ceP	P	20 34 20.5	-1.2
BRVK				pmax	pmax		
	comp=Z,93nm,2.5s						
SUKH	Sukhothai	21.45	146	P	P	20 34 36.4	+7.9
	comp=Z,3.4nm,0.9s						
UTTA	Uttaradit	21.66	143	P	P	20 34 41.5	+11
	comp=Z,2.7nm,1.2s						
PHIT	Phitsanulok	22.07	144	P	P	20 34 36.9	+1.7
	comp=Z,14nm,1.2s						
NONG	Nongkai	22.73	137	P	P	20 34 43.0	+0.7
	comp=Z,1.3nm,1.6s						
PBKT	Sadao Pong	22.87	144	P	P	20 34 46.5	+2.8
	comp=Z,18nm,1.2s						
BJT	Baijiatuau	23.13	71	P	P	20 34 49.8	+3.6
BJT				pmax	pmax		
	comp=Z,15nm,1.3s						
WHN	Wuhan	23.29	96	P	P	20 34 42.8	-5.1
WHN				S	S	20 39 01.3	+3.4
WHN				LR	LR		
	comp=N,6µm,13.6s						
WHN				LR	LR		
	comp=E,4µm,10.2s						
WHN				LR	LR		
	comp=Z,8µm,12.6s						
GEYT	Alibeck	23.30	284	P	P	20 34 50.7	+2.7
	comp=Z,1.9nm,0.9s,baz=151,slow=6.4,SNR=10.0						
GEYT				LR	LR	20 45 51.7	
	comp=Z,1µm,18.1s,baz=240,slow=42						
GYA0B	ALIBECK ARRAY	23.30	284	eP	P	20 34 48.5	+0.5
	comp=Z,17nm,1.1s						
ABKAR	Akbulak array	23.91	312	eP	P	20 34 53.5	-0.3
SKNT	Sakolnakorn	24.07	137	P	P	20 34 59.0	+3.6
	comp=Z,11nm,2.1s						
PANO	Nakornpanom	24.29	136	P	P	20 35 00.7	+3.3
	comp=Z,0.7nm,1.9s						
AKTO	Aktyubinsk	25.53	314	P	P	20 35 08.6	+0.2
	comp=Z,6.3nm,0.8s,baz=105,slow=10,SNR=15						
AKTO				LR	LR	20 46 27.1	
	comp=Z,3µm,18.9s,baz=118,slow=40						
PHET	Kaeng Krachan	25.53	151	P	P	20 35 19.0	+10
	comp=Z,5.0nm,0.9s						
UBPT	Khong Chiam	26.28	137	P	P	20 35 17.2	+1.8
	comp=Z,32nm,1.6s						
NJ2	Nanjing	26.45	89	eP	P	20 35 21.8	+4.9
NJ2				S	S	20 39 55.3	+6.9
NJ2				pmax	pmax		
	comp=Z,17nm,0.5s						
NJ2				pmax	pmax		
	comp=Z,260nm,3.6s						
NJ2				LR	LR		
	comp=Z,2µm,10.8s						
NJ2				LR	LR		
	comp=Z,2µm,10.0s						
NJ2				LR	LR		
	comp=Z,1µm,11.9s						
SVE	Sverdlovsk	27.47	328⇑	eP	P	20 35 27.7	+1.9
SVE				pmax	pmax		
	comp=Z,27nm,1.5s						
SVE				MLR	MLR		
	comp=Z,1µm,14.0s						
WSAR	Wadi Sarin	27.79	251	P	P	20 35 29.7	+0.6
	comp=Z,4.3nm,0.7s,baz=56,slow=3.6,SNR=2.5						
WSAR				LR	LR	20 49 11.7	
	comp=Z,627nm,18.9s,baz=61,slow=42						
ARU	Arti	28.16	326	P	P	20 35 32.1	+0.2
	comp=Z,3.2nm,0.8s,baz=102,slow=4.3,SNR=7.7						
ARU				LR	LR	20 47 46.2	
	comp=Z,2µm,19.3s,baz=118,slow=39						
ARU	Arti	28.16	326c	iP	P	20 35 32.7	+0.7
ARU						20 36 15.4	
ARU				S	S	20 40 15.6	+0.8
ARU				SS	SnSn	20 41 32.1	-0.2
ARU				pmax	pmax		
	comp=Z,17nm,1.7s						
ARU				MLR	MLR		
	comp=Z,3µm,19.0s						
SSE	Sheshan	28.64	90	P	P	20 35 37.9	+1.4
SSE				S	S	20 40 26.1	+3.2
SSE				pmax	pmax		
	comp=Z,6.0nm,0.7s						
SSE				pmax	pmax		
	comp=Z,76nm,3.5s						
SSE				LR	LR		
	comp=Z,520nm,17.1s						
SSE				LR	LR		
	comp=Z,490nm,18.6s						
PALK	Pallekele	29.17	193	LR	LR	20 47 47.5	
	comp=Z,617nm,20.6s,baz=293,slow=37						
MAK	Makhachkala	31.22	295	eP	P	20 36 01.1	+1.9
MAK				eS	S	20 41 05.2	+2.1
KSAR	Wonju Array Be	32.47	75	P	P	20 36 08.1	-2.2
KSAR	Wonju Array Be	32.47	75	P	P	20 36 08.1	-2.2
KSRS	Korea Array	32.49	75	P	P	20 36 08.1	-2.4
	comp=Z,2.8nm,0.8s,baz=274,slow=8.5,SNR=9.9						
KSRS				LR	LR	20 49 42.0	
	comp=Z,438nm,20.9s,baz=283,slow=37						
GNI	Garni	33.47	290	P	P	20 36 21.8	+2.5
	comp=Z,3.2nm,0.5s,baz=114,slow=14,SNR=2.2						
GNI				LR	LR	20 52 18.4	
	comp=Z,556nm,19.2s,baz=115,slow=40						
KBZ	Khabaz	34.56	297	PP	PP	20 37 40.1	-6.8
	comp=Z,2.0nm,0.9s,baz=81,slow=11,SNR=5.4						
KBZ				LR	LR	20 54 14.8	
	comp=Z,589nm,18.3s,baz=82,slow=43						
KIV	Kislovodsk	34.70	297⇓	eP	P	20 36 33.4	+3.6
KIV				e		20 37 47.7	
KIV				iS	S	20 42 08.1	+11
KIV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KLR	Kul'dur	34.85	54	P	P	20 36 29.5	-1.4
	comp=Z,0.1nm,0.7s,baz=230,slow=16,SNR=3.5						
KLR				LR	LR	20 52 00.1	
	comp=Z,127nm,18.0s,baz=262,slow=39						
KLR	Kul'dur	34.85	54	iP	P	20 36 27.9	-3.0
USRK	Ussuriysk Ar.	34.87	62	LR	LR	20 51 12.7	
	comp=Z,515nm,20.0s,baz=263,slow=37						
VRH	Novokhopyorsk	35.68	310	eP	P	20 36 39.3	+1.3
VRH				pmax	pmax		
	comp=Z,6.0nm,0.4s						
VRH				MLR	MLR		
	comp=Z,2µm,15.0s						
JNU	Nakatsue	35.86	82	LR	LR	20 53 09.7	
	comp=Z,621nm,18.6s,baz=302,slow=40						
JOW	Kunigami	35.99	93	LR	LR	20 53 24.4	
	comp=Z,1µm,18.5s,baz=282,slow=40						
PRGR	Permogore	36.54	328	eP	P	20 36 46.6	+1.5
PRGR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
YAK	Yakutsk	37.08	32	LR	LR	20 52 13.1	
	comp=Z,529nm,19.7s,baz=266,slow=37						
VORD	Divnogorie	37.18	309	eP	P	20 36 51.5	+0.7
VORD				pmax	pmax		
	comp=Z,6.0nm,0.8s						
TGY	Tagaytay City	37.23	117	LR	LR	20 52 36.4	
	comp=Z,591nm,21.5s,baz=71,slow=37						
VSR	Storozhevoye	37.28	309	eP	P	20 36 50.4	-1.2
VSR				pmax	pmax		
	comp=Z,3.0nm,0.5s						
VSR				MLR	MLR		
	comp=Z,1µm,15.0s						
LPSR	Galich'ya Gora	37.57	312	eP	P	20 36 52.5	-1.5
LPSR				pmax	pmax		
	comp=Z,9.0nm,0.5s						
ANN	Anapa	38.42	299	eP	P	20 37 12.2	+11
ANN				pmax	pmax		
	comp=Z,36nm,0.7s						
ANN				MLR	MLR		
	comp=Z,926nm,17.0s						
MOS	Moscow	38.77	317	eP	P	20 37 05.6	+1.5
MOS				MLR	MLR		
	comp=E,1µm,16.0s						
MOS				MLR	MLR		
	comp=Z,2µm,16.0s						
MOS				MLR	MLR		
	comp=N,800nm,13.0s						
KLMR	Klimovskoe	39.00	325	eP	P	20 37 04.7	-1.3
KLMR				e		20 38 34.0	
KLMR				pmax	pmax		
	comp=Z,20nm,1.0s						
KLMR	Klimovskoe	39.00	325	eP	P	20 37 04.7	-1.3
KLMR				AMP		20 37 08.8	
	comp=Z,20nm,1.0s						
KLMR				ePP	PP	20 38 34.1	-1.4
KLMR				LQ	LQ	20 50 01.2	
KLMR				LR	LR	20 53 16.0	
OBN	Obninsk	39.28	315⇓	eP	P	20 37 07.7	-0.6
OBN				e		20 38 38.2	
OBN				pmax	pmax		
	comp=Z,28nm,1.8s						
OBN				MLR	MLR		
	comp=Z,2µm,17.0s						
MJAR	Matsushiro Arr	40.73	74	P	P	20 37 20.2	-0.4
	comp=Z,1.1nm,0.7s,baz=277,slow=10,SNR=7.3						
MJAR				LR	LR	20 54 55.5	
	comp=Z,516nm,20.0s,baz=270,slow=37						
SIM	Simferopol'	40.75	300	P	P	20 37 25.0	+4.3
SIM				iS	S	20 43 40.0	+11
SIM				MLR	MLR		
	comp=E,600nm,13.0s						
ASF	Jabal al Asfar	41.48	280	LR	LR	20 57 56.9	
	comp=E,498nm,19.3s,baz=40,slow=41						
BRTR	Keskin Array B	41.95	292	P	P	20 37 30.8	0.0
	comp=E,2.6nm,0.7s,baz=99,slow=8.8,SNR=14						
BRTR	Keskin Array B	41.95	292	eP	P	20 37 34.1	+3.2
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MMAI	Mount Meron Ar	42.40	282	P	P	20 37 34.5	+0.1
	comp=Z,0.2nm,0.2s,baz=147,slow=32,SNR=2.4						
MMAI				LR	LR	20 58 34.4	
	comp=Z,301nm,20.9s,baz=60,slow=41						
ASAJ	Asahikawa	42.48	61	LR	LR	20 56 35.8	
	comp=Z,501nm,18.5s,baz=287,slow=38						
JHJ	Hachijo jima 2	42.97	78	LR	LR	20 55 49.4	
	comp=Z,449nm,18.1s,baz=290,slow=37						
AKASG	Malin Array Be	43.56	309	P	P	20 37 42.6	-0.9
	comp=Z,1.4nm,0.7s,baz=77,slow=6.7,SNR=7.4						
AKASG				PP	PP	20 39 26.4	+1.5
	comp=Z,0.2nm,0.3s,baz=86,slow=12,SNR=6.1						
AKASG				LR	LR	20 57 46.6	
	comp=Z,1µm,19.4s,baz=75,slow=39						
AKASG	Malin Array Be	43.56	309	eP	P	20 37 46.2	+2.7
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KIEV	Kiev	43.57	308	iP	P	20 37 42.7	-0.9
KIEV				pmax	pmax		
	comp=Z,4.0nm,1.0s						
EIL	Elat	43.94	277	P	P	20 37 47.2	+0.3
	comp=Z,2.9nm,0.8s,baz=96,slow=9.2,SNR=2.6						
VSU	Vasula	44.97	320	ceP	P	20 37 56.4	+1.8
VSU				pmax	pmax		
	comp=Z,25nm,1.0s						
HARR	Harsova	45.14	300⇑	iP	P	20 38 07.7	+11
HARR	Harsova	45.14	300	⇑P	P	20 38 07.7	+11
DAV	Davao City (W)	45.35	120	LR	LR	20 59 30.4	
	comp=Z,752nm,19.5s,baz=326,slow=40						
PETR	Petresti	45.45	302⇑	iP	P	20 37 56.2	-2.5
FINES	FINESS Array B	45.50	324	P	P	20 37 58.2	-0.6
	comp=Z,1.8nm,0.8s,baz=66,slow=14,SNR=2.9						
FINES				LR	LR	20 58 03.2	
	comp=Z,803nm,19.3s,baz=92,slow=38						
VRI	Vrincioaia	45.77	302⇓	iP	P	20 38 04.5	+3.2
VRI	Vrincioaia	45.77	302	⇓P	P	20 38 04.5	+3.2
PLOR	Plostina	45.83	302⇑	iP	P	20 38 05.4	+3.7
PLOR	Plostina	45.83	302	⇑P	P	20 38 05.5	+3.7
ISR	Istrita	46.03	301⇑	iP	P	20 38 00.0	-3.4
ISR	Istrita	46.03	301	P	P	20 38 00.0	-3.4
MLR	Muntele Rosu	46.38	302	P	P	20 38 07.2	+1.0
	comp=Z,8.7nm,0.8s,baz=150,slow=6.0,SNR=15						
MLR				LR	LR	21 02 15.7	
	comp=Z,681nm,18.2s,baz=63,slow=42						
MLR	Muntele Rosu	46.38	302⇓	iP	P	20 38 07.3	+1.1
BURAR	Bucovina Array	46.51	305⇑	iP	P	20 38 00.3	-6.9
BURAR	Bucovina Array	46.51	305	⇑P	P	20 38 00.3	-6.9
BUR04	Bucovina Ar. S	46.51	305	eP	P	20 38 05.6	-1.6
MA2	Magadan	46.59	39	LR	LR	20 58 53.4	
	comp=Z,870nm,19.6s,baz=266,slow=38						
DOPR	Dopca	46.67	302⇓	iP	P	20 38 08.2	-0.2
ATD	Arta Tunnel	46.80	250	P	P	20 38 11.9	+2.2
	comp=Z,3.5nm,0.6s,baz=18,slow=6.4,SNR=2.4						
ATD				LR	LR	20 59 46.3	
	comp=Z,172nm,21.3s,baz=44,slow=39						
ARCES	ARCESS Array B	46.96	335	P	P	20 38 11.1	+0.9
	comp=Z,6.0nm,0.8s,baz=74,slow=9.0,SNR=8.6						
VOIR		47.01	302⇑	iP	P	20 38 11.9	+0.8
VOIR		47.01	302	P	P	20 38 10.7	-0.4
VOIR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
LOT	Lotru	47.89	302⇓	iP	P	20 38 19.2	+1.2
TRPA	Tarpa	48.20	306⇑	iP	P	20 38 20.6	+0.5
DRGR		48.34	304⇓	iP	P	20 38 21.1	-0.2
DRGR		48.34	304	⇓P	P	20 38 21.1	-0.2
BZS	Buzias	49.33	303⇑	iP	P	20 38 29.9	+1.0
BZS	Buzias	49.33	303	⇑P	P	20 38 29.9	+1.0
OJC	Ojcow	49.59	309	eP	P	20 38 30.9	+0.1
	comp=Z,6.9nm,0.9s						
OJC	Ojcow	49.59	309	eP	P	20 38 30.9	+0.1
OJC				pmax	pmax		
	comp=Z,7.0nm,0.9s						
VYHS	Vyhne	50.55	307	eP	P	20 38 38.7	+0.6
VYHS				pmax	pmax		
	comp=Z,6.0nm,1.7s						
VYHS	Vyhne	50.55	307	eP	P	20 38 38.7	+0.6
OKC	Ostrava-Krasne	50.71	309	AMS	AMS	21 01 40.0	
	comp=Z,1µm,17.6s						
PETK	Petropavlovsk-	50.96	47	LR	LR	21 02 16.6	
	comp=Z,756nm,18.8s,baz=279,slow=38						
MORC	Moravsky Berou	51.11	309	P	P	20 38 43.1	+0.8
MORC				pmax	pmax		
	comp=Z,3.0nm,1.2s						
MORC	Moravsky Berou	51.11	309	eP	P	20 38 44.9	+2.6
SPITS	Spitsbergen Ar	51.17	346	LR	LR	21 02 49.2	
	comp=Z,622nm,19.5s,baz=135,slow=39						
JAVC	Velka Javorina	51.22	307	eP	P	20 38 47.1	+3.9
HFS	Hagfors	51.59	322	P	P	20 38 44.6	-1.1
	comp=Z,5.3nm,0.8s,baz=85,slow=6.2,SNR=4.2						
HFS				LR	LR	21 01 57.7	
	comp=Z,880nm,18.7s,baz=81,slow=38						
DPC	Dobruska-Polom	51.75	310	eP	P	20 38 47.3	+0.1
DPC				ex	x	20 38 50.5	
DPC				AMS	AMS	21 02 20.0	
	comp=Z,1µm,16.9s						
DPC	Dobruska-Polom	51.75	310	eP	P	20 38 47.3	+0.1
DPC				MLR	MLR		
	comp=Z,1µm,16.9s						
VRAC	Vranov	51.81	308	eP	P	20 38 50.2	+2.6
UPC	Upice	51.91	310	AMS	AMS	21 02 30.0	
	comp=Z,1µm,17.2s						
KRUC	Moravsky	52.00	308	eP	P	20 38 49.9	+1.0
NC405	NORSAR Array S	52.43	324	eP	P	20 38 51.8	-0.2
NB2	NORSAR Subarra	52.68	324	P	P	20 38 52.5	-1.4
	comp=Z,3.2nm,0.7s,baz=82,slow=7.4						
NOA	NORSAR Array B	52.68	324	P	P	20 38 52.9	-0.9
	comp=Z,4.4nm,0.7s,baz=82,slow=7.4,SNR=11						
NOA				LR	LR	21 02 14.2	
	comp=Z,587nm,20.3s,baz=65,slow=37						
NOA	NORSAR Array B	52.68	324	eP	P	20 38 53.1	-0.8
NOA				pmax	pmax		
	comp=Z,4.0nm,0.7s						
PVCC	Panska Ves	52.80	310	AMS	AMS	21 02 50.0	
	comp=Z,1µm,15.8s						
GOPC	GO Pecny, Ondr	52.81	309	AMS	AMS	21 02 50.0	
	comp=Z,1µm,15.8s						
PRU	Pruhonice	52.95	309	AMS	AMS	21 03 00.0	
	comp=Z,2µm,16.8s						
PRA	Prague	53.00	310	AMS	AMS	21 03 00.0	
	comp=Z,2µm,16.8s						
BRG	Berggiesshubel	53.11	311	eP	P	20 38 58.2	+1.1
	comp=Z,6.1nm,1.2s						
	comp=N,364nm,17.4s						
	comp=E,670nm,17.8s						
	comp=Z,891nm,14.3s						
BRG	Berggiesshubel	53.11	311	eP	P	20 38 58.2	+1.1
BRG				pmax	pmax		
	comp=Z,6.0nm,1.2s						
BRG				MLR	MLR		
	comp=N,364nm,17.4s						
BRG				MLR	MLR		
	comp=E,670nm,17.8s						
BRG				MLR	MLR		
	comp=Z,891nm,14.3s						
CLL	Collm	53.58	311	i (P)	P	20 39 02.8	+2.2
CLL				eS	S	20 46 39.0	+7.7
CLL				eSS	SS	20 50 12.0	+0.5
CLL	Collm	53.58	311	iP	P	20 39 02.8	+2.2
CLL				eS	S	20 46 39.0	+7.7
GERES	GERESS Array B	53.77	308	P	P	20 39 01.9	-0.2
	comp=Z,1.8nm,0.8s,baz=66,slow=6.6,SNR=14						
GERES				LR	LR	21 04 39.5	
	comp=Z,970nm,19.6s,baz=80,slow=39						
GERES	GERESS Array B	53.77	308	eP	P	20 39 03.5	+1.4
GERES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KHC	Kasperske Hory	53.77	309	eP	P	20 39 04.6	+2.5
KHC				AMS	AMS	21 03 50.0	
	comp=Z,1µm,16.2s						
KHC	Kasperske Hory	53.77	309	eP	P	20 39 04.6	+2.5
KHC				MLR	MLR		
	comp=Z,1µm,16.2s						
NKC	Novy Kostel	54.19	310	AMS	AMS	21 03 40.0	
	comp=Z,1µm,16.6s						

GUMO	**Guam**	**56.04**	**98**	LR	LR	21 03 55.9	
	comp=Z,197nm,18.9s,baz=300,slow=37						
DAVOX	**Davos/Dischmat**	**56.84**	**307**	LR	LR	21 07 02.6	
	comp=Z,1µm,18.5s,baz=65,slow=40						
VAE	**Valguarnera**	**56.97**	**295**	LR	LR	21 08 19.3	
	comp=Z,148nm,18.3s,baz=51,slow=41						
KEST	**Kesra**	**61.40**	**295**	LR	LR	21 11 24.7	
	comp=Z,266nm,20.3s,baz=332,slow=41						
EKA	**Eskdalemuir Ar**	**61.52**	**319**	P	**P**	**20 39 55.8**	**-0.7**
	comp=Z,1.7nm,0.7s,baz=61,slow=7.4,SNR=3.5						
EKA				LR	LR	21 08 59.6	
	comp=Z,716nm,18.9s,baz=45,slow=38						
ES19	**SONSECA Array**	**68.91**	**304**	*e*P	**P**	**20 40 43.4**	**-1.2**
ESDC	**Sonseca Array**	**68.97**	**304**	P	**P**	**20 40 44.0**	**-1.0**
	comp=Z,0.9nm,0.7s,baz=44,slow=4.3,SNR=6.9						
ESDC				LR	LR	21 14 00.6	
	comp=Z,282nm,20.7s,baz=60,slow=39						
RES	**Resolute Bay**	**69.62**	**1**	LR	LR	21 13 53.6	
	comp=Z,215nm,20.7s,baz=21,slow=38						
ILAR	**Eielson Array**	**71.07**	**22**	P	**P**	**20 40 55.4**	**-2.0**
	comp=Z,0.5nm,0.8s,baz=317,slow=4.9,SNR=4.6						
ILAR				PP	PP	20 43 44.2	+10
	comp=Z,0.3nm,0.7s,baz=291,slow=7.4,SNR=4.3						
ILAR				LR	LR	21 15 05.6	
	comp=Z,338nm,20.3s,baz=328,slow=38						
WRAB	**Tennant Creek**	**71.27**	**133**	*ce*P	**P**	**20 41 00.5**	**+1.3**
WRAB				pmax	pmax		
	comp=Z,12nm,1.3s						
WRA	**Warramunga Arr**	**71.27**	**133**	P	**P**	**20 40 58.5**	**-0.7**
	comp=Z,3.0nm,0.9s,baz=330,slow=6.0,SNR=11						
WRA	**Warramunga Arr**	**71.27**	**133**	*e*P	**P**	**20 40 59.8**	**+0.6**
WRA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
INK	**Inuvik**	**71.69**	**15**	LR	LR	21 18 22.7	
	comp=Z,118nm,18.2s,baz=326,slow=41						
PMG	**Port Moresby**	**72.18**	**116**	LR	LR	21 17 50.3	
	comp=Z,50nm,18.0s,baz=346,slow=40						
ASAR	**Alice Springs**	**73.93**	**136**	P	**P**	**20 41 14.9**	**-0.1**
	comp=Z,2.3nm,0.9s,baz=328,slow=6.3,SNR=11						
ASAR				LR	LR	21 17 09.0	
	comp=Z,84nm,18.6s,baz=317,slow=39						
ASAR	**Alice Springs**	**73.93**	**136**	*e*P	**P**	**20 41 16.8**	**+1.9**
ASAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
AS01	**Alice Springs**	**73.95**	**136**	*e*P	**P**	**20 41 16.5**	**+1.4**
TORD	**Torodi Ar. Bea**	**78.82**	**278**	P	**P**	**20 41 42.9**	**-0.1**
	comp=Z,1.1nm,0.7s,baz=45,slow=6.3						
TORD				LR	LR	21 21 12.1	
	comp=Z,150nm,18.1s,baz=10.0,slow=39						
YKA	**Yellowknife Ar**	**80.32**	**10**	P	**P**	**20 41 49.2**	**-1.1**
	comp=Z,0.8nm,0.7s,baz=338,slow=5.4,SNR=3.1						
YKA				LR	LR	21 21 10.6	
	comp=Z,21nm,20.4s,baz=307,slow=39						
DLBC	**Dease Lake**	**80.94**	**19**	LR	LR	21 21 41.9	
	comp=Z,233nm,19.3s,baz=313,slow=39						
HNR	**Honiara**	**81.81**	**108**	LR	LR	21 19 27.1	
	comp=Z,112nm,18.9s,baz=305,slow=37						
KOWA	**Kowa**	**82.61**	**282**	P	**P**	**20 42 02.1**	**-1.1**
	comp=Z,0.8nm,0.4s,baz=330,slow=3.2,SNR=2.3						
KOWA				LR	LR	21 24 51.6	
	comp=Z,246nm,19.5s,baz=56,slow=40						
STKA	**Stephens Creek**	**84.56**	**136**	P	**P**	**20 42 11.4**	**-1.4**
	comp=Z,1.2nm,0.7s,baz=5.0,slow=16,SNR=2.8						
STKA				LR	LR	21 23 28.3	
	comp=Z,155nm,21.6s,baz=325,slow=38						
TSUM	**Tsumeb**	**85.66**	**243**	LR	LR	21 21 17.2	
	comp=Z,128nm,20.0s,baz=36,slow=36						
BOSA	**Boshof**	**86.75**	**231**	LR	LR	21 20 13.9	
	comp=Z,150nm,20.4s,baz=40,slow=35						
DBIC	**Dimbokro**	**87.80**	**277**	LR	LR	21 26 56.4	
	comp=Z,169nm,18.4s,baz=41,slow=39						
ULM	**Lac du Bonnet**	**94.12**	**2**	LR	LR	21 27 00.3	
	comp=Z,216nm,22.0s,baz=328,slow=37						
DZM	**Mont Dzumac**	**94.46**	**114**	LR	LR	21 24 57.9	
	comp=Z,75nm,19.4s,baz=284,slow=35						
YBH	**Yreka Blue Hor**	**97.96**	**22**	LR	LR	21 30 34.5	
	comp=Z,136nm,21.4s,baz=344,slow=37						
PMSA	**Palmer Station**	**146.42**	**202**	PKPbc	**PKPdf**	**20 49 18.3**	**+0.2**
	comp=Z,16nm,0.9s,baz=252,slow=6.4,SNR=2.5						
CPUP	**Villa Florida**	**148.32**	**278**	PKPbc	**PKPbc**	**20 49 26.7**	**+0.7**
	comp=Z,0.8nm,0.4s,baz=94,slow=1.7,SNR=3.7						

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*CSEM **22** 20:40:42.4, 35°.60N×6°.69W, h5^{km}*

CNRM 22 20:40:42.4, 35°.60N×6°.69W, h5^{km}, Strait of Gibraltar

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RSA	**Sarsar**	**1.01**	**135**	P	Pb	20 41 02.4	0.0
RSA				S	Sg	20 41 14.5	-0.4
CZD	**Col de Zad**	**2.90**	**151**	P	Pn	20 41 28.7	-0.8
CZD				S	Sn	20 42 06.2	+1.2
MDT	**Midelt**	**3.27**	**148**	P	Pn	20 41 35.3	+0.9
MDT				S	Sn	20 42 16.7	+2.9

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*ISCJB **22** 20:51:14.2±0.7, 38°.28N±0°.03×141°.93E±0°.08, h59^{km}±6^{km}, mb3.8/8, MS3.6/2, Error ellipse: s-maj=10.6km s-min=5.1km az=11.5*

*JMA **22** 20:51:15.8±0.1, 38°.32N×141°.82E, h58^{km}±1^{km}, M3.8*

JMA Felt II J1.

*IDC **22** 20:51:17.2±1.0, 38°.23N×141°.95E, h73^{km}±7^{km}, mb3.5/8, mb1 3.7/14, mb1mx3.4/70, mbtmp3.9/14, MS3.6/2, Ms1 3.6/2, ms1mx3.0/43, Error ellipse: s-maj=21.4km s-min=13.8km az=73.0*

ISC 22 20:51:15.0±0.8**, 38°.30N**±0°.04×**141°.99E**±0°.07**, h47**^{km}±5^{km}**, n38, σ1^{s}59**/47**, mb3.7**/9**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIO	**Ouri**	**0.53**	**287**	P	**Pn**	**20 51 26.5**	**+0.2**
JIO				S	**Sn**	**20 51 33.9**	**-0.6**
OFUJ	**Ofunato**	**0.82**	**342**	P	**Pn**	**20 51 30.8**	**+0.6**
OFUJ				S	**Sn**	**20 51 41.5**	**+0.2**
JMK	**Ichinoseki**	**0.89**	**318**	P	**Pn**	**20 51 31.3**	**+0.2**
JMK				S	**Sn**	**20 51 42.3**	**-0.6**
JMM	**Marumori**	**1.04**	**246**	P	**Pn**	**20 51 32.5**	**-0.6**
JMM				S	**Sn**	**20 51 44.6**	**-1.9**
JOU	**Okura**	**1.04**	**274**	P	**Pn**	**20 51 32.7**	**-0.5**
JOU				S	**Sn**	**20 51 45.1**	**-1.6**
JFK	**Kawauchi**	**1.28**	**224**	P	**Pn**	**20 51 36.5**	**0.0**
JFK				S	**Sn**	**20 51 51.5**	**-1.0**
JOM	**Ohasama**	**1.29**	**335**	P	**Pn**	**20 51 36.9**	**+0.3**
JOM				S	**Sn**	**20 51 52.6**	**-0.2**
JYK	**Kaneyama**	**1.42**	**296**	P	**Pn**	**20 51 37.9**	**-0.4**
JYK				S	**Sn**	**20 51 54.5**	**-1.3**
JYS	**Shirataka**	**1.52**	**268**	P	**Pn**	**20 51 39.3**	**-0.3**
JYS				S	**Sn**	**20 51 57.0**	**-1.2**
JFT	**Otama**	**1.52**	**240**	P	**Pn**	**20 51 39.8**	**+0.1**
JFT				S	**Sn**	**20 51 57.3**	**-1.0**
JRG	**Rokugo**	**1.52**	**316**	P	**Pn**	**20 51 39.8**	**+0.1**
JRG				S	**Sn**	**20 51 57.5**	**-0.9**
JYA	**Atsumi**	**1.81**	**280**	P	**Pn**	**20 51 43.2**	**-0.5**
MJAR	**Matsushiro Arr**	**3.48**	**241**	P	**Pn**	**20 52 08.0**	**+1.3**
	7.4nm,0.3s,baz=36,slow=14,SNR=68						
MJAR				S	**Sn**	**20 52 51.9**	**+5.3**
	2.2nm,0.3s,baz=84,slow=9.8,SNR=4.2						
MAT	**Matsushiro**	**3.48**	**241**	P	**Pn**	**20 52 08.0**	**+1.4**
MAT				S	**Sn**	**20 52 51.3**	**+4.7**
JHJ	**Hachijo jima 2**	**5.47**	**200**	P	**Pn**	**20 52 33.6**	**-0.3**
	15nm,0.3s,baz=93,slow=23,SNR=14						
JHJ				S	**Sn**	**20 53 32.0**	**-3.5**
	44nm,0.3s,baz=245,slow=23,SNR=8.7						
ASAJ	**Asahikawa**	**5.83**	**4**	P	**Pn**	**20 52 39.0**	**+0.2**
	1.1nm,0.3s,baz=213,slow=12,SNR=12						
ASAJ				S	**Sn**	**20 53 42.1**	**-2.2**
	0.7nm,0.3s,baz=164,slow=20,SNR=2.4						
USRK	**Ussuriysk Ar.**	**9.56**	**311**	P	**Pn**	**20 53 30.8**	**+0.9**
	baz=123,slow=15						
JNU	**Nakatsue**	**10.40**	**244**	P	**Pn**	**20 53 43.0**	**+1.5**
	0.2nm,0.3s,baz=23,slow=12,SNR=3.7						
KSRS	**Korea Array**	**11.15**	**270**	P	**Pn**	**20 53 54.0**	**+2.4**
	0.4nm,0.3s,baz=79,slow=14,SNR=5.9						
JCJ	**Chichijima**	**11.17**	**179**	P	**Pn**	**20 53 51.2**	**-0.9**
	1.8nm,0.3s,baz=345,slow=20,SNR=4.1						
JCJ				S	Sn	20 55 46.5	-9.0
	baz=288,slow=20						
KLR	**Kul'dur**	**13.18**	**329**	P	**Pn**	**20 54 21.5**	**+2.2**
	0.0nm,0.3s,baz=207,slow=6.8,SNR=2.5						
SONM	**Songino Array**	**27.48**	**302**	P	**P**	**20 56 57.6**	**+0.8**
	0.3nm,0.7s,baz=101,slow=7.5,SNR=2.8						
H11N2	**WAKE ISLAND Hy**	**28.43**	**124**	T	T	21 27 26.0	
	baz=316,slow=76,SNR=260						
H11N1	**WAKE ISLAND Hy**	**28.44**	**124**	T	T	21 27 26.7	
	baz=316,slow=76,SNR=408						
H11N3	**WAKE ISLAND Hy**	**28.45**	**124**	T	T	21 27 27.4	
	baz=316,slow=76,SNR=312						
H11S1	**WAKE ISLAND Hy**	**29.19**	**126**	T	T	21 28 27.9	
	baz=317						
H11S3	**WAKE ISLAND Hy**	**29.19**	**126**	T	T	21 28 27.3	
	baz=317						
H11S2	**WAKE ISLAND Hy**	**29.21**	**126**	T	T	21 28 28.9	
	baz=317						
ZALV	**Zalesovo Beam**	**41.41**	**311**	LR	LR	21 15 37.7	
	comp=Z,82nm,18.8s,baz=247,slow=35						
MKAR	**Makanchi Array**	**43.84**	**301**	P	**P**	**20 59 15.5**	**-0.9**
	0.8nm,0.6s,baz=84,slow=11,SNR=8.6						
MKAR				pP	**sP**	**20 59 35.0**	**+0.4**
	0.6nm,0.6s,baz=88,slow=10,SNR=4.0						
KURBB	**Kurchatov Arra**	**45.59**	**307**	P	**P**	**20 59 29.0**	**-1.3**
	1.3nm,0.6s,baz=81,slow=8.1,SNR=16						
KURBB				pP	**sP**	**20 59 49.3**	**+0.8**
	2.3nm,0.5s,baz=80,slow=8.0,SNR=7.4						
ILAR	**Eielson Array**	**48.19**	**33**	pP	pP	21 00 06.2	+3.1
	0.5nm,0.7s,baz=262,slow=5.7,SNR=5.3						
BVAR	**Borovoye Array**	**50.07**	**312**	P	**P**	**21 00 03.8**	**-1.0**
	0.2nm,0.5s,baz=99,slow=9.2,SNR=2.8						
WRA	**Warramunga Arr**	**58.38**	**188**	P	**P**	**21 01 04.5**	**-1.1**
	1.8nm,0.4s,baz=6.1,slow=6.9,SNR=47						
ASAR	**Alice Springs**	**62.10**	**188**	P	**P**	**21 01 30.3**	**-0.7**
	1.4nm,0.8s,baz=355,slow=3.8,SNR=13						
AFI	**Afiamalu**	**67.60**	**131**	LR	LR	21 27 00.2	
	comp=Z,38nm,22.0s,baz=70,slow=32						
HFS	**Hagfors**	**73.12**	**336**	P	**P**	**21 02 39.2**	**-0.9**
	1.8nm,0.7s,baz=59,slow=5.6,SNR=4.8						
TXAR	**Lajitas Array**	**88.99**	**53**	P	**P**	**21 04 05.7**	**+0.7**
	0.1nm,0.5s,baz=316,slow=5.0,SNR=2.9						
TXAR				pP	**sP**	**21 04 22.8**	**-1.4**
	0.3nm,0.7s,baz=295,slow=4.9,SNR=2.9						

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*ISCJB **22** 20:58:31.8±0.8, 6°.82N±0°.04×73°.15W±0°.04, h148^{km}±6^{km}, mb2.9/1, Error ellipse: s-maj=7.3km s-min=6.2km az=29.6*

*IDC **22** 20:58:33.7±7.2, 4°.40N×76°.78W, h88^{km}±71^{km}, mb2.9/1, mb1 3.5/2, mb1mx3.0/51, mbtmp3.5/2, ML2.7/1, Error ellipse: s-maj=85.1km s-min=38.1km az=33.0*

*RSNC **22** 20:58:33.3±1.1, 6°.78N×73°.15W, h142^{km}±5^{km}, ML3.2, Mw3.4*

ISC 22 20:58:32.4±1.0**, 6°.82N**±0°.05×**73°.14W**±0°.05**, h145**^{km}±7^{km}**, n20, σ0^{s}86**/33**, 2D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	**0.23**	**190**	*i* P	**Pn**	**20 58 52.6**	**+0.2**
BARC				*e*S	**Sn**	**20 59 07.3**	**-0.4**
BARC				*i*		20 59 09.4	
	comp=Z,401nm,0.2s						
BRRC	**Barranca, Sant**	**0.63**	**297**	⇓*i*P	**Pn**	**20 58 54.5**	**+0.6**
BRRC				*i*		20 58 59.2	
	comp=Z,390nm,0.1s						
BRRC				*e*S	**Sn**	**20 59 11.0**	**+0.7**
PAMC	**Pamplona, Colo**	**0.68**	**41**	*e*S	**Sn**	**20 59 12.4**	**+0.6**
RUSC	**La Rusia**	**0.93**	**176**	*e*P	**Pn**	**20 58 56.5**	**-0.1**
RUSC				*e*S	**Sn**	**20 59 14.1**	**-1.0**
RUSC				*i*		20 59 17.0	
	comp=Z,237nm,0.3s						
PTBC	**PUERTO BERRIO,**	**1.33**	**258**	*e*P	**Pn**	**20 58 59.4**	**-0.5**
PTBC				*e*S	**Sn**	**20 59 20.2**	**-0.6**
PTBC				*i*		20 59 28.2	
	comp=Z,206nm,0.4s						
TAMC	**Tame, Arauca**	**1.40**	**106**	⇓*i*P	**Pn**	**20 59 00.8**	**+0.3**
TAMC				*e*S	**Sn**	**20 59 21.9**	**-0.1**
OCAC	**Ocana**	**1.42**	**353**	*e*P	**Pn**	**20 59 00.8**	**0.0**
YOPC	**Yopal, Colombi**	**1.63**	**154**	*e*P	**Pn**	**20 59 03.1**	**0.0**
YOPC				*e*S	**Sn**	**20 59 26.0**	**-0.6**
YOPC				*i*		20 59 28.8	
	comp=Z,127nm,0.3s						
ZARC	**Zaragoza, Cauc**	**1.83**	**291**	*e*P	**Pn**	**20 59 05.0**	**-0.2**
ZARC				*e*S	**Sn**	**20 59 30.6**	**+0.2**
ZARC				*i*		20 59 38.4	
	comp=Z,240nm,0.2s						
NORC	**Norcasia**	**2.12**	**234**	*e*P	**Pn**	**20 59 08.5**	**-0.2**
NORC				*e*S	**Sn**	**20 59 36.0**	**-0.6**
CHIC	**Chingaza**	**2.26**	**195**	*e*P	**Pn**	**20 59 10.5**	**-0.2**
CHIC				*e*S	**Sn**	**20 59 38.9**	**-1.3**
CHIC				*i*		20 59 44.1	
	comp=Z,92nm,0.4s						
ROSC	**El Rosal**	**2.29**	**211**	P	**Pn**	**20 59 12.4**	**+1.3**
	comp=Z,31nm,0.3s,baz=248,slow=16,SNR=31						
ROSC				S	**Sn**	**20 59 43.2**	**+2.3**
	comp=Z,14nm,0.3s,baz=240,slow=20,SNR=10						
ROSC	**El Rosal**	**2.29**	**211**	*e*P	**Pn**	**20 59 12.4**	**+1.3**
ROSC				*i*		20 59 47.2	
	comp=Z,183nm,0.3s						
HELC	**Santa Helena**	**2.45**	**255**	*e*P	**Pn**	**20 59 13.2**	**+0.1**
HELC				*e*S	**Sn**	**20 59 44.9**	**+0.6**
HELC				*i*		20 59 51.1	
	comp=Z,125nm,0.4s						
VILC	**Villavicencio,**	**2.75**	**192**	*e*P	**Pn**	**20 59 16.3**	**-0.2**
VILC				*e*S	**Sn**	**20 59 49.8**	**-0.8**
VILC				*i*		20 59 55.8	
	comp=Z,75nm,0.4s						
DBBC	**Dabeiba**	**3.05**	**274**	*e*P	**Pn**	**20 59 20.0**	**-0.3**
DBBC				*e*S	**Sn**	**20 59 56.5**	**-0.8**
TOLC	**Tolima**	**3.10**	**224**	*e*P	**Pn**	**20 59 22.1**	**+0.8**
TXAR	**Lajitas Array**	**36.45**	**312**	P	**P**	**21 05 22.6**	**-0.9**
	comp=Z,0.2nm,0.6s,baz=130,slow=9.4,SNR=4.4						
ASAR	**Alice Springs**	**149.09**	**234**	PKP	**PKPdf**	**21 18 00.0**	**-0.1**
	comp=Z,0.1nm,0.4s,baz=121,slow=3.6,SNR=3.2						
WRA	**Warramunga Arr**	**150.32**	**241**	PKPbc	**PKPdf**	**21 18 04.0**	**+1.8**
	comp=Z,1.3nm,1.2s,baz=106,slow=2.7,SNR=6.3						

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*ISCJB **22** 21:22:00.2±0.4, 7°.46N±0°.03×73°.14W±0°.04, h141^{km}±4^{km}, mb3.4/3, Error ellipse: s-maj=5.9km s-min=5.1km az=176.6*

*RSNC **22** 21:22:02.4±0.8, 7°.44N×73°.19W, h130^{km}±4^{km}, ML3.6, Mw3.7*

*IDC **22** 21:22:02.0±1.5, 7°.42N×73°.00W, h153^{km}±15^{km}, mb3.2/3, mb1 3.6/6, mb1mx3.1/46, mbtmp3.8/6, Error ellipse: s-maj=22.0km s-min=14.7km az=138.0*

ISC 22 21:22:00.6±0.8**, 7°.47N**±0°.04×**73°.13W**±0°.05**, h136**^{km}±7^{km}**, n24, σ1^{s}52**/39**, mb3.5**/3**, 1C-1D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BRRC	**Barranca, Sant**	**0.68**	**238**	⇓*i*P	**Pn**	**21 22 22.1**	**+0.5**
BRRC				*i*		21 22 22.6	
	comp=Z,1µm,0.2s						
BRRC				*e*S	**Sn**	**21 22 37.2**	**-0.2**
OCAC	**Ocana**	**0.79**	**346**	*e*P	**Pn**	**21 22 23.7**	**+1.2**
OCAC				*e*S	**Sn**	**21 22 39.6**	**+0.5**
OCAC				*i*		21 22 47.4	
	comp=Z,2µm,0.6s						
BARC	**Barichara**	**0.88**	**184**	*e*P	**Pn**	**21 22 24.0**	**+0.7**
BARC				*e*S	**Sn**	**21 22 39.9**	**-0.7**
BARC				*i*		21 22 41.7	
	comp=Z,1µm,0.3s						
RUSC	**La Rusia**	**1.57**	**178**	*e*P	**Pn**	**21 22 30.8**	**+0.3**
RUSC				*e*S	**Sn**	**21 22 52.8**	**-0.4**
PTBC	**PUERTO BERRIO,**	**1.61**	**235**	*e*P	**Pn**	**21 22 30.3**	**-0.1**
PTBC				*e*S	**Sn**	**21 22 52.4**	**-0.8**
PTBC				*i*		21 22 55.1	
	comp=Z,344nm,0.3s						
TAMC	**Tame, Arauca**	**1.68**	**128**	*e*P	**Pn**	**21 22 32.9**	**+1.6**
TAMC				*e*S	**Sn**	**21 22 56.1**	**+1.5**
ZARC	**Zaragoza, Cauc**	**1.72**	**271**	*e*P	**Pn**	**21 22 32.1**	**+0.5**
ZARC				*e*S	**Sn**	**21 22 55.4**	**+0.1**
ZARC				*i*		21 23 00.2	
	comp=Z,941nm,0.5s						
YOPC	**Yopal, Colombi**	**2.22**	**161**	*e*P	**Pn**	**21 22 39.0**	**+1.3**
YOPC				*e*S	**Sn**	**21 23 06.9**	**+0.7**
YOPC				*i*		21 23 08.6	
	comp=Z,200nm,0.3s						
CODC	**Agustˆ›n Codaz**	**2.47**	**353**	*e*P	**Pn**	**21 22 41.7**	**+1.0**
CODC				*e*S	**Sn**	**21 23 12.2**	**+0.6**
CODC				*i*		21 23 16.6	
	comp=Z,190nm,0.5s						
NORC	**Norcasia**	**2.57**	**222**	*e*P	**Pn**	**21 22 42.5**	**+0.5**
NORC				*e*S	**Sn**	**21 23 13.8**	**0.0**
HELC	**Santa Helena**	**2.70**	**242**	*e*P	**Pn**	**21 22 44.5**	**+0.5**
HELC				*i*		21 23 25.9	
	comp=Z,279nm,0.4s						
SDV	**Santo Domingo**	**2.84**	**60**	*e*P	**Pn**	**21 22 47.7**	**+2.1**
ROSC	**El Rosal**	**2.87**	**204**	P	**Pn**	**21 22 48.4**	**+2.2**
	comp=Z,21nm,0.3s,baz=154,slow=16,SNR=33						
ROSC				S	**Sn**	**21 23 24.5**	**+3.2**
	comp=Z,14nm,0.3s,baz=342,slow=19,SNR=5.0						
CHIC	**Chingaza**	**2.89**	**192**	*e*P	**Pn**	**21 22 47.3**	**+0.9**
CHIC				*e*S	**Sn**	**21 23 21.3**	**-0.4**
CHIC				*i*		21 23 29.7	
	comp=Z,112nm,0.5s						
DBBC	**Dabeiba**	**3.09**	**262**	*e*P	**Pn**	**21 22 48.9**	**+0.2**
SJCC	**San Jacinto, C**	**3.15**	**320**	⇑*i*P	**Pn**	**21 22 49.8**	**+0.3**
SJCC				*i*		21 23 29.2	
	comp=Z,126nm,0.4s						
VILC	**Villavicencio,**	**3.38**	**190**	*e*P	**Pn**	**21 22 53.6**	**+1.0**
VILC				*e*S	**Sn**	**21 23 32.2**	**-0.6**
VILC				*i*		21 23 43.3	
	comp=Z,90nm,0.4s						
PCRV	**Puerto La Cruz**	**8.81**	**72**	P	**Pn**	**21 24 05.4**	**+0.4**
	comp=Z,7.2nm,0.3s,baz=220,slow=8.3,SNR=31						
PCRV				S	**Sn**	**21 25 42.8**	**0.0**
	comp=Z,1.1nm,0.3s,baz=0.0,slow=20,SNR=2.8						
PTGA	**Pitinga**	**15.45**	**121**	P	**Pn**	**21 25 31.3**	**-0.1**
	comp=Z,0.1nm,0.3s,baz=312,slow=18,SNR=2.4						
PTGA				S	**Sn**	**21 28 16.6**	**-6.5**
	comp=Z,0.3nm,0.3s,baz=324,slow=19,SNR=3.7						
LPAZ	**La Paz**	**24.12**	**168**	P	**P**	**21 27 03.9**	**-0.7**
	comp=Z,1.4nm,0.6s,baz=38,slow=1.1,SNR=9.1						
TXAR	**Lajitas Array**	**36.03**	**311**	P	**P**	**21 28 49.9**	**+0.9**
	comp=Z,0.6nm,1.1s,baz=131,slow=11,SNR=3.7						
YKA	**Yellowknife Ar**	**62.65**	**340**	P	**P**	**21 32 10.9**	**+0.5**
	comp=Z,0.4nm,0.6s,baz=132,slow=7.3,SNR=5.3						
ASAR	**Alice Springs**	**149.48**	**235**	PKPbc	**PKPbc**	**21 41 33.8**	**-0.9**
	comp=Z,0.6nm,0.8s,baz=112,slow=3.4,SNR=4.1						
WRA	**Warramunga Arr**	**150.64**	**242**	PKPbc	**PKPbc**	**21 41 36.5**	**-1.0**
	comp=Z,0.6nm,0.5s,baz=106,slow=2.6,SNR=15						

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*ROM **22** 21:29:29.3±0.1, 44°.889N±0°.007×10°.885E±0°.009, h10^{km}, ML2.7/23*

*ISCJB **22** 21:29:31.4±0.3, 44°.88N±0°.02×10°.78E±0°.04, h17^{km}±4^{km}, Error ellipse: s-maj=4.5km s-min=3.2km az=30.0*

*CSEM **22** 21:29:31.2±0.3, 44°.94N×10°.72E, h2^{km}, ML2.7/13, Error ellipse: s-maj=7.7km s-min=3.6km az=141.0*

*LDG **22** 21:29:31.4±0.4, 44°.88N×10°.93E, h2^{km}, Ml2.8/17, Error ellipse: s-maj=8.8km s-min=4.8km az=96.0*

*STR **22** 21:29:40.7±1.5, 45°N±8°×1°0E±1°6, h0^{km}, M3.6/5, MLv3.6/5*

ISC 22 21:29:31.0±0.8**, 44°.92N**±0°.02×**10°.88E**±0°.02**, h15**^{km}±4^{km}**, n104, σ1^{s}19**/143**, 1C-5D, Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NDIM	**Novi di Modena**	**0.04**	**159**	*i* P	**Pg**	**21 29 32.2**	**-1.5**
NDIM				S	**Sg**	**21 29 34.1**	**-1.4**
T0825	**Gonzaga (MN)**	**0.06**	**335**	*i* P	**Pg**	**21 29 34.2**	**+0.3**
T0825				S	**Sg**	**21 29 38.5**	**+2.7**
T0825				AML	AML		
	comp=E,27300µm,0.4s						
T0825				AML	AML		
	comp=N,42700µm,1.2s						
T0825				AML	AML		
	comp=E,27300µm,0.4s						
T0825				AML	AML		
	comp=N,42700µm,1.2s						
T0825				AML	AML		
	comp=E,27350µm,0.4s						
T0825				AML	AML		
	comp=N,42700µm,1.2s						
T0825				AML	AML		
	comp=E,27350µm,0.4s						
T0825				AML	AML		
	comp=N,42700µm,1.2s						
SBPO	**S.Benedetto Po**	**0.13**	**12**	P	**Pb**	**21 29 35.3**	**+0.2**
NOVE	**Novellara**	**0.17**	**223**	P	**Pg**	**21 29 34.9**	**-0.3**
NOVE				AML	AML		
	comp=E,15700µm,0.3s						
NOVE				AML	AML		
	comp=N,7710µm,0.8s						
NOVE				AML	AML		
	comp=E,15650µm,0.3s						
NOVE				AML	AML		
	comp=N,7710µm,0.8s						
NOVE				AML	AML		
	comp=E,15650µm,0.3s						
NOVE				AML	AML		
	comp=N,7710µm,0.8s						
NOVE				AML	AML		
	comp=N,7710µm,0.8s						
NOVE				AML	AML		
	comp=E,15650µm,0.3s						
T0802	**SanFelice sul**	**0.22**	**102**	P	**Pg**	**21 29 35.8**	**-0.1**
T0802				S	**Sb**	**21 29 41.3**	**+0.9**
T0802				AML	AML		
	comp=E,3575µm,0.2s						
T0802				AML	AML		
	comp=N,6680µm,0.3s						
T0802				AML	AML		
	comp=E,3575µm,0.2s						
T0802				AML	AML		
	comp=N,6680µm,0.3s						
T0802				AML	AML		
	comp=E,3575µm,0.2s						
T0802				AML	AML		
	comp=N,6685µm,0.3s						
T0802				AML	AML		
	comp=N,6685µm,0.3s						
T0802				AML	AML		
	comp=E,3575µm,0.2s						
RAVA	**Ravarino**	**0.24**	**134**	P	**Pg**	**21 29 35.9**	**-0.4**
RAVA				S	**Sb**	**21 29 41.0**	**0.0**
RAVA				AML	AML		
	comp=E,3215µm,0.7s						
RAVA				AML	AML		
	comp=N,2205µm,0.4s						
RAVA				AML	AML		
	comp=E,3215µm,0.7s						
RAVA				AML	AML		
	comp=N,2200µm,0.4s						
RAVA				AML	AML		
	comp=E,3210µm,0.7s						
RAVA				AML	AML		
	comp=N,2205µm,0.4s						
RAVA				AML	AML		
	comp=N,2205µm,0.4s						
RAVA				AML	AML		
	comp=E,3210µm,0.7s						
T0800	**Massa Finalese**	**0.27**	**106**	AML	AML		
	comp=N,4080µm,1.1s						
T0800				AML	AML		
	comp=E,3710µm,0.3s						
T0800				AML	AML		
	comp=N,4085µm,1.1s						
T0800				AML	AML		
	comp=E,3770µm,0.4s						
T0800				AML	AML		
	comp=N,4290µm,1.1s						
T0800				AML	AML		
	comp=E,3710µm,0.3s						
T0800				AML	AML		
	comp=N,4085µm,1.1s						
T0800				AML	AML		
	comp=E,3770µm,0.4s						
T0800				AML	AML		
	comp=N,4290µm,1.1s						
T0800				AML	AML		
	comp=E,3710µm,0.3s						
T0800				AML	AML		
	comp=E,3770µm,0.4s						
T0800				AML	AML		
	comp=N,4295µm,1.1s						
T0800				AML	AML		
	comp=E,3770µm,0.4s						
T0800				AML	AML		
	comp=E,3710µm,0.3s						
T0800				AML	AML		
	comp=N,4080µm,1.1s						
T0800				AML	AML		
	comp=N,4295µm,1.1s						
MODE	**Modena**	**0.30**	**170**	P	**Pg**	**21 29 36.7**	**-0.5**
MODE				AML	AML		
	comp=E,13800µm,0.9s						
MODE				AML	AML		
	comp=N,4490µm,0.4s						
MODE				AML	AML		
	comp=E,13800µm,0.9s						
MODE				AML	AML		
	comp=N,4485µm,0.4s						
MODE				AML	AML		
	comp=E,13850µm,0.9s						
MODE				AML	AML		

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         comp=N,4490µm,0.4s
MODE                                AML       AML
         comp=E,13850µm,0.9s
MODE                                AML       AML
         comp=N,4490µm,0.4s
TEOL     Teolo              0.71   52⇓ePg     Pb         21 29 45.1 +0.1
TEOL                                  eSg     Sn         21 29 56.7 -0.4
TEOL     Teolo              0.71   52 ePg     Pb         21 29 45.1 +0.1
TEOL                                  eSg     Sn         21 29 56.7 -0.4
TEOL     Teolo              0.71   52  P      Pb         21 29 45.2 +0.1
TEOL                                AML       AML
         comp=E,1560µm,0.4s
TEOL                                AML       AML
         comp=N,1265µm,0.4s
TEOL                                AML       AML
         comp=E,1560µm,0.4s
TEOL                                AML       AML
         comp=N,1265µm,0.4s
TEOL                                AML       AML
         comp=N,1265µm,0.4s
TEOL                                AML       AML
         comp=E,1560µm,0.4s
ROVR     Rover ̂¤ Verone     0.74   11  P      Pb         21 29 45.6  0.0
ROVR                                AML       AML
         comp=E,643µm,0.2s
ROVR                                AML       AML
         comp=N,1215µm,1.5s
ROVR                                AML       AML
         comp=E,643µm,0.2s
ROVR                                AML       AML
         comp=N,1215µm,1.5s
ROVR                                AML       AML
         comp=E,643µm,0.2s
ROVR                                AML       AML
         comp=N,1215µm,1.5s
SALO     Salr               0.74 340   P      Pb         21 29 46.0 +0.4
SALO                                AML       AML
         comp=E,506µm,0.8s
SALO                                AML       AML
         comp=N,557µm,0.4s
SALO                                AML       AML
         comp=E,506µm,0.8s
SALO                                AML       AML
         comp=N,556µm,0.4s
SALO                                AML       AML
         comp=E,506µm,0.8s
SALO                                AML       AML
         comp=N,556µm,0.4s
MARN     Marana (Italy)     0.75   18⇓ePg     Pn         21 29 47.1 +0.1
MARN                                  eSg     Sn         21 29 59.0 +0.8
MARN     Marana (Italy)     0.75   18 ePg     Pn         21 29 47.2 +0.1
MARN                                  eSg     Sn         21 29 59.0 +0.8
BALD     Monte Baldo        0.76 357⇓ ePg     Pn         21 29 47.7 +0.4
BALD                                  eSg     Sn         21 29 60.0 +1.3
BALD     Monte Baldo        0.76 357  ePg     Pn         21 29 47.7 +0.4
MAGA     Magasa             0.87 348   P      Pb         21 29 47.8 -0.1
MAGA                                AML       AML
         comp=E,1365µm,0.3s
MAGA                                AML       AML
         comp=N,1084µm,1.3s
MAGA                                AML       AML
         comp=E,1365µm,0.3s
MAGA                                AML       AML
         comp=N,1086µm,1.3s
MAGA                                AML       AML
         comp=E,1365µm,0.3s
MAGA                                AML       AML
         comp=N,1086µm,1.3s
DOSS     Dosso del Somm     0.98   13⇓ePg     Pn         21 29 50.3 -0.1
DOSS     Dosso del Somm     0.98   13 ePg     Pn         21 29 50.3 -0.1
BOB      Bobbio (Coli)      1.03 262   P      Pg         21 29 51.4 +0.5
BOB                                 AML       AML
         comp=E,344µm,1.6s
BOB                                 AML       AML
         comp=N,336µm,0.6s
BOB                                 AML       AML
         comp=E,344µm,1.6s
BOB                                 AML       AML
         comp=N,336µm,0.6s
BOB                                 AML       AML
         comp=N,336µm,0.6s
BOB                                 AML       AML
         comp=E,344µm,1.6s
MAIM     Mastiano           1.04 196   P      Pb         21 29 50.6 -0.1
MAIM                                AML       AML
         comp=E,179µm,0.4s
MAIM                                AML       AML
         comp=N,142µm,0.8s
MAIM                                AML       AML
         comp=E,179µm,0.4s
MAIM                                AML       AML
         comp=N,142µm,0.8s
MAIM                                AML       AML
         comp=N,142µm,0.8s
MAIM                                AML       AML
         comp=E,179µm,0.4s
RNI      Roncone            1.07 350⇑ ePg     Pn         21 29 51.5 -0.1
RNI                                   eSg     Sn         21 30 08.6 +2.2
RNI      Roncone            1.07 350  ePg     Pn         21 29 51.5 -0.1
RNI                                   eSg     Sn         21 30 08.6 +2.2
PLMA     Palmaria, Port     1.14 221   P      Pb         21 29 52.4  0.0
PLMA                                AML       AML
         comp=E,251µm,0.7s
PLMA                                AML       AML
         comp=N,314µm,0.6s
PLMA                                AML       AML
         comp=E,251µm,0.7s
PLMA                                AML       AML
         comp=N,314µm,0.6s
PLMA                                AML       AML
         comp=E,251µm,0.7s
PLMA                                AML       AML
         comp=N,314µm,0.6s
MSSA     Maissana           1.15 239   P      Pb         21 29 52.8 +0.3
MSSA                                AML       AML
         comp=E,172µm,0.2s
MSSA                                AML       AML
         comp=N,130µm,1.5s
MSSA                                AML       AML
         comp=E,172µm,0.2s
MSSA                                AML       AML
         comp=N,130µm,1.5s
MSSA                                AML       AML
         comp=N,130µm,1.5s
MSSA                                AML       AML
         comp=E,172µm,0.2s
CGRP     Cima Grappa        1.16   34⇓ePg     Pb         21 29 53.0 +0.3
CGRP                                  eSg     Sg         21 30 10.1 +1.6
CGRP     Cima Grappa        1.16   34 ePg     Pb         21 29 53.0 +0.3
CGRP                                  eSg     Sg         21 30 10.1 +1.6
CGRP     Cima Grappa        1.16   34  P      Pn         21 29 52.7  0.0
CGRP                                AML       AML
         comp=E,160µm,0.9s
CGRP                                AML       AML
         comp=N,116µm,1.1s
CGRP                                AML       AML
         comp=E,160µm,0.9s
CGRP                                AML       AML
         comp=N,115µm,1.1s
CGRP                                AML       AML
         comp=N,115µm,1.1s
CGRP                                AML       AML
         comp=E,160µm,0.9s
MABI     Malga Bissina      1.16 347   P      Pb         21 29 52.9  0.0
MABI                                AML       AML
         comp=E,109µm,1.5s
MABI                                AML       AML
         comp=N,78µm,0.7s
MABI                                AML       AML
         comp=E,108µm,1.5s
MABI                                AML       AML
         comp=N,78µm,0.7s
MABI                                AML       AML
         comp=E,108µm,1.5s
MABI                                AML       AML
         comp=N,78µm,0.7s
GORR     Gorreto            1.17 255   P      Pg         21 29 53.4 -0.3
GORR                                AML       AML
         comp=E,410µm,0.4s
GORR                                AML       AML
         comp=N,322µm,0.4s
GORR                                AML       AML
         comp=E,410µm,0.4s
GORR                                AML       AML
         comp=N,322µm,0.4s
GORR                                AML       AML
         comp=E,410µm,0.4s
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GORR                                AML       AML
         comp=N,322µm,0.4s
PANI     Panarotta          1.17   16 ePg     Pg         21 29 53.4 -0.3
CSNT     Castellina Chi     1.48 168   P      Pn         21 29 57.4 +0.3
CARE     Lago del Cares     1.51 355  ePg     Pb         21 29 58.9 +0.1
CARE     Lago del Cares     1.51 355  ePg     Pb         21 29 58.9 +0.1
BRMO     Bormio             1.59 347   P      Pb         21 30 00.6 +0.4
BRMO                                AML       AML
         comp=E,49µm,0.5s
BRMO                                AML       AML
         comp=N,43µm,0.6s
BRMO                                AML       AML
         comp=E,49µm,0.5s
BRMO                                AML       AML
         comp=N,43µm,0.6s
BRMO                                AML       AML
         comp=E,49µm,0.5s
BRMO                                AML       AML
         comp=N,43µm,0.6s
PCP      Piancastagn        1.71 258   P      Pb         21 30 02.8 +0.8
PCP                                 AML       AML
         comp=E,56µm,1.3s
PCP                                 AML       AML
         comp=N,90µm,0.6s
PCP                                 AML       AML
         comp=E,56µm,1.3s
PCP                                 AML       AML
         comp=N,90µm,0.6s
PCP                                 AML       AML
         comp=N,90µm,0.6s
PCP                                 AML       AML
         comp=E,56µm,1.3s
MOSI     Grossmontoni       1.71 352  AML       AML
         comp=E,151µm,0.9s
MOSI                                AML       AML
         comp=E,151µm,0.9s
MOSI                                AML       AML
         comp=N,218µm,0.3s
MOSI                                AML       AML
         comp=N,218µm,0.3s
MOSI                                AML       AML
         comp=N,218µm,0.3s
MOSI                                AML       AML
         comp=E,151µm,0.9s
ABSI     Aberstueckl        1.83   10 AML       AML
         comp=E,186µm,0.3s
ABSI                                AML       AML
         comp=E,186µm,0.3s
ABSI                                AML       AML
         comp=N,166µm,0.5s
ABSI                                AML       AML
         comp=N,166µm,0.5s
FINB     Finale Ligure      1.97 249  AML       AML
         comp=N,2µm,1.5s
FINB                                AML       AML
         comp=E,222µm,1.3s
FINB                                AML       AML
         comp=N,2µm,1.5s
FINB                                AML       AML
         comp=E,222µm,1.3s
FETA     Feichten           2.10 357   Pn     Pg         21 30 10.4 -0.9
         comp=E,3.8nm,0.4s,SNR=10
FETA     Feichten           2.10 357   Pn     Pg         21 30 10.4 -0.9
         comp=E,3.8nm,0.4s,SNR=10
ABTA     Abfaltersbach      2.15   31  Pn     Pb         21 30 09.2 -0.5
         comp=E,1.9nm,0.3s
ABTA     Abfaltersbach      2.15   31  Pn     Pb         21 30 09.2 -0.5
         comp=E,1.9nm,0.3s
RISI     Rein               2.19   22 AML       AML
         comp=E,101µm,0.3s
RISI                                AML       AML
         comp=N,124µm,0.4s
RISI                                AML       AML
         comp=N,124µm,0.4s
RISI                                AML       AML
         comp=E,101µm,0.3s
WTTA     Wattenberg         2.40   12  Pn     Pb         21 30 13.2 -0.7
         comp=E,1.7nm,0.2s
WTTA     Wattenberg         2.40   12  Pn     Pb         21 30 13.2 -0.7
         comp=E,1.7nm,0.2s
WATA     Walderalm          2.46   11  Pn     Pb         21 30 14.4 -0.6
         comp=E,0.1nm,0.1s,SNR=10
WATA     Walderalm          2.46   11  Pn     Pb         21 30 14.4 -0.6
         comp=E,0.1nm,0.1s,SNR=10
DAVA     Damuels            2.46 344   Pn     Pb         21 30 13.6 -1.4
DAVA     Damuels            2.46 344   Pn     Pb         21 30 13.6 -1.4
RETA     Reutte             2.57 358   Pn     Pb         21 30 15.6 -1.1
         comp=E,1.0nm,0.2s
RETA     Reutte             2.57 358   Pn     Pb         21 30 15.6 -1.1
         comp=E,1.0nm,0.2s
LUCF     Luceram            2.73 249   Pn     Pn         21 30 16.3 +2.0
LUCF                                   Sg     Sb         21 30 50.0 -2.9
LUCF     Luceram            2.73 249   Pn     Pn         21 30 16.3 +2.0
PGF      Pioggiola          2.74 211  ePn     Pn         21 30 14.8 +0.4
PGF                                   eSn     Sn         21 30 46.1 -1.1
         comp=E,7.2nm,0.3s
PGF      Pioggiola          2.74 211  ePn     Pn         21 30 14.8 +0.4
PGF                                   eSn     Sn         21 30 46.1 -1.1
         comp=E,3.6nm,0.3s
KBA      Koelnbreinsper     2.76   38  Pn     Pb         21 30 18.5 -1.5
         comp=E,2.2nm,0.3s
KBA      Koelnbreinsper     2.76   38  Pn     Pb         21 30 18.5 -1.5
         comp=E,2.2nm,0.3s
MBDF     Montbardon         2.93 268  ePn     Pn         21 30 15.8 -1.3
         SNR=1.0
MBDF     Montbardon         2.93 268  ePn     Pn         21 30 15.8 -1.3
         SNR=1.0
LPG      La Plagne          2.97 283  ePn     Pn         21 30 18.3 +0.5
LPG      La Plagne          2.97 283  ePn     Pn         21 30 18.3 +0.5
LPL      La Plagne          2.99 283  ePn     Pn         21 30 17.8 -0.2
LPL                                   eSn     Sn         21 30 54.2 +0.5
         comp=E,3.5nm,0.3s,SNR=1.0
LPL                                   eSg     Sg         21 31 08.5 +1.5
         comp=E,2.5nm,0.3s,SNR=1.0
LPL      La Plagne          2.99 283  ePn     Pn         21 30 17.8 -0.2
LPL                                   eSn     Sn         21 30 54.2 +0.5
         comp=E,1.8nm,0.3s,SNR=1.0
CALF     Calern             3.07 249   Pn     Pn         21 30 20.9 +1.9
CALF     Calern             3.07 249   Pn     Pn         21 30 20.9 +1.9
FRF      La Foret Royal     3.33 247  ePn     Pn         21 30 23.1 +0.6
FRF                                   eSn     Sn         21 31 03.2 +1.4
         comp=E,8.3nm,0.3s,SNR=1.0
FRF      La Foret Royal     3.33 247  ePn     Pn         21 30 23.1 +0.6
FRF                                   eSn     Sn         21 31 03.2 +1.4
         comp=E,4.2nm,0.3s,SNR=1.0
SOKA     Soboth             3.39   57 eP      Pg         21 30 34.2 -1.8
         comp=E,0.8nm,0.3s
LMR      La Mourre          3.52 245  ePn     Pn         21 30 25.4 +0.3
LMR                                   eSn     Sn         21 31 05.9 -0.6
         comp=E,4.0nm,0.3s,SNR=1.0
LMR      La Mourre          3.52 245  ePn     Pn         21 30 25.4 +0.3
LMR                                   eSn     Sn         21 31 05.9 -0.6
         comp=E,2.0nm,0.3s,SNR=1.0
ORIF     Oris-en-Rattie     3.55 272  ePn     Pn         21 30 25.8 +0.2
         SNR=1.0
ORIF                                  eSn     Sn         21 31 06.7 -0.6
         comp=E,12nm,0.6s
ORIF     Oris-en-Rattie     3.55 272  ePn     Pn         21 30 25.8 +0.2
         SNR=1.0
ORIF                                  eSn     Sn         21 31 06.7 -0.6
         comp=E,5.8nm,0.6s
KIZ      Kirchzarten        3.66 327   Pn     Pn         21 30 28.4 +1.4
KIZ      Kirchzarten        3.66 327   Pn     Pn         21 30 28.4 +1.4
MOA      Molln              3.75   37 ePn     Pn         21 30 30.2 +1.9
         comp=E,0.8nm,0.3s
MOA      Molln              3.75   37  Pn     Pn         21 30 30.2 +1.9
         comp=E,0.8nm,0.3s
CABF     La Chapelle        3.75 298  ePn     Pn         21 30 29.8 +1.4
         SNR=1.0
CABF                                  eSn     Sn         21 31 12.0 -0.3
         comp=E,2.4nm,0.3s,SNR=1.0
CABF     La Chapelle        3.75 298  ePn     Pn         21 30 29.8 +1.4
         SNR=1.0
CABF                                  eSn     Sn         21 31 12.0 -0.3
         comp=E,1.2nm,0.3s,SNR=1.0
SMRF     Simiane la Rot     3.92 258  ePn     Pn         21 30 33.4 +2.9
SMRF                                  eSn     Sn         21 31 21.3 +5.1
SMRF     Simiane la Rot     3.92 258  ePn     Pn         21 30 33.4 +2.9
HINF     Hinteralfeld       4.02 318  ePn     Pn         21 30 32.8 +0.8
         SNR=1.0
HINF                                  eSn     Sn         21 31 17.8 -0.9
         comp=E,2.5nm,0.2s,SNR=1.0
HINF     Hinteralfeld       4.02 318  ePn     Pn         21 30 32.8 +0.8
         SNR=1.0
HINF                                  eSn     Sn         21 31 17.8 -0.9
         comp=E,1.2nm,0.2s,SNR=1.0
OPP      Oppenau            4.03 334   Pn     Pn         21 30 32.8 +0.7
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OPP      Oppenau            4.03 334   Pn     Pn         21 30 32.8 +0.7
ECH      Echery             4.18 323   Pn     Pn         21 30 34.5 +0.4
ECH      Echery             4.18 323   Pn     Pn         21 30 34.5 +0.4
CDF      Champ du Feu       4.28 326  ePn     Pn         21 30 36.4 +0.8
         SNR=1.0
CDF                                   eSn     Sn         21 31 24.1 -1.2
         comp=E,1.9nm,0.3s,SNR=1.0
CDF      Champ du Feu       4.28 326  ePn     Pn         21 30 36.4 +0.8
         SNR=1.0
CDF                                   eSn     Sn         21 31 24.1 -1.2
         comp=E,0.9nm,0.3s,SNR=1.0
HAU      Haudompre          4.39 316  ePn     Pn         21 30 37.4 +0.3
         SNR=1.0
HAU                                   eSn     Sn         21 31 27.1 -0.9
         comp=E,10.0nm,0.3s,SNR=1.0
HAU      Haudompre          4.39 316  ePn     Pn         21 30 37.4 +0.3
         SNR=1.0
HAU                                   eSn     Sn         21 31 27.1 -0.9
         comp=E,5.0nm,0.3s,SNR=1.0
VIVF     Saint-Julien-l     4.41 271  ePn     Pn         21 30 37.3  0.0
VIVF                                  eSn     Sn         21 31 27.5 -0.9
         comp=E,1.0nm,0.3s
VIVF     Saint-Julien-l     4.41 271  ePn     Pn         21 30 37.3  0.0
VIVF                                  eSn     Sn         21 31 27.5 -0.9
         comp=E,0.5nm,0.3s
KHC      Kasperske Hory     4.60   23 ePN     Pn         21 30 40.2 +0.3
KHC                                   ePG     Pg         21 31 00.0 +1.0
KHC                                   eSN     Sn         21 31 32.8 -0.2
KHC                                   eSG     Sg         21 31 58.3 -0.2
KHC      Kasperske Hory     4.60   23  Pn     Pn         21 30 40.2 +0.3
SMF      Signal de Mont     5.22 292  ePn     Pn         21 30 49.1 +0.7
SMF                                   eSn     Sn         21 31 47.2 -1.0
         comp=E,3.2nm,0.3s,SNR=1.0
SMF      Signal de Mont     5.22 292  ePn     Pn         21 30 49.1 +0.7
SMF                                   eSn     Sn         21 31 47.2 -1.0
         comp=E,1.6nm,0.3s,SNR=1.0
LOR      Lormes             5.42 298  ePn     Pn         21 30 51.1  0.0
         baz=119,SNR=1.0
LOR                                   eSn     Sn         21 31 51.9 -1.3
         comp=E,2.8nm,0.3s,SNR=1.0
LOR      Lormes             5.42 298  ePn     Pn         21 30 51.1  0.0
         SNR=1.0
LOR                                   eSn     Sn         21 31 51.9 -1.3
         comp=E,1.4nm,0.3s,SNR=1.0
SSF      Saint Saulge       5.57 295  eSn     Sn         21 31 54.5 -2.3
         comp=E,1.3nm,0.3s
SSF      Saint Saulge       5.57 295  eSn     Sn         21 31 54.5 -2.3
         comp=E,0.6nm,0.3s
AVF      Avril sur Loir     5.58 292  ePn     Pn         21 30 53.6 +0.3
         SNR=1.0
AVF                                   eSn     Sn         21 31 53.1 -4.0
AVF      Avril sur Loir     5.58 292  ePn     Pn         21 30 53.6 +0.3
         SNR=1.0
```

ISCJB ***22*** *21:30:22.6±0.6, 19°.3S±0°.2×177°.6W±0°.2, h550^{km}, mb3.6/7, Error ellipse: s-maj=27.4km s-min=9.9km az=137.5*

IDC ***22*** *21:30:24.2±1.8, 19°.28S×177°.57W, h558^{km}±20^{km}, mb3.1/7, mb1 3.4/9, mb1mx3.1/45, mbtmp4.1/9, Error ellipse: s-maj=21.5km s-min=13.9km az=137.0*

ISC 22 21:30:23.4±0.6**, 19°.2S**±0°.2×**177°.6W**±0°.2**, h550**^{km}**, n18, **σ1^{s}**25**/21**, mb3.8**/7**, Fiji Islands region**

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Code     Station Name         Δ°   AZ°   Phase ID               Time     Res
                                        Op       ISC          h  m  s   ISC
AFI      Afiamalu           7.64   47   P        P          21 32 19.5 +1.7
         5.8nm,0.3s,baz=233,slow=5.1,SNR=5.7
AFI                                     S        S          21 33 48.4 -3.1
         0.8nm,0.3s,baz=229,slow=19,SNR=2.3
URZ      Urewera           19.54  193   P        P          21 34 13.9 -1.2
         1.8nm,0.3s,baz=237,slow=2.7,SNR=8.3
STKA     Stephens Creek    38.74  243   P        P          21 37 01.4 +0.4
         2.8nm,0.6s,baz=96,slow=10,SNR=7.7
WRA      Warramunga Arr    45.21  261   P        P          21 37 51.5 -0.5
         1.3nm,0.4s,baz=98,slow=7.9,SNR=45
WRA                                     PcP      PcP        21 39 20.1 -0.4
         0.1nm,0.4s,baz=96,slow=3.1,SNR=5.0
ASAR     Alice Springs     45.24  255   P        P          21 37 52.3 +0.1
         2.6nm,0.5s,baz=85,slow=8.1,SNR=46
ASAR                                    PcP      PcP        21 39 19.9 -0.7
         1.3nm,0.9s,baz=101,slow=3.9,SNR=6.5
QSPA     South Pole Qui    70.84  180   P        P          21 40 45.2 +0.4
         2.5nm,0.8s,baz=8.3,slow=2.8,SNR=7.5
NVAR     Mina Array Bea    79.80   43   P        P          21 41 35.0 -0.2
         0.3nm,0.5s,baz=232,slow=4.4,SNR=2.5
MAW      Mawson            82.91  200   P        P          21 41 49.9 -0.4
         1.5nm,0.7s,baz=148,slow=5.4,SNR=5.2
TXAR     Lajitas Array     86.01   57   P        P          21 42 07.9 +1.6
         0.2nm,0.6s,baz=213,slow=6.5,SNR=3.2
MKAR     Makanchi Array   110.63  314   PKiKP    PKiKP      21 47 52.9 -0.9
         0.3nm,0.6s,baz=119,slow=3.1,SNR=4.5
BVAR     Borovoye Array   118.37  320   PKP      PKPdf      21 48 07.6 -0.8
         0.6nm,0.5s,baz=0.0,slow=3.5,SNR=5.2
ARCES    ARCESS Array B   127.74  350   PKP      PKPdf      21 48 24.4 -1.4
         2.5nm,0.8s,baz=27,slow=2.2,SNR=5.4
BRTR     Keskin Array B   146.28  314   PKPbc    PKPdf      21 49 02.0 +1.2
         1.0nm,0.6s,baz=130,slow=4.3,SNR=7.5
ASF      Jabal al Asfar   146.54  300   PKPbc    PKPbc      21 49 04.2 +0.3
         1.6nm,0.7s,baz=50,slow=7.9,SNR=3.6
MLR      Muntele Rosu     147.37  329   PKPbc    PKPdf      21 49 04.6 +2.2
         1.9nm,0.9s,baz=12,slow=9.3,SNR=4.6
MMAI     Mount Meron Ar   147.53  302   PKPbc    PKPbc      21 49 06.6 +0.1
         1.5nm,0.5s,baz=69,slow=4.6,SNR=7.0
GERES    GERESS Array B   149.08  345   PKPbc    PKPbc      21 49 09.3 -0.5
         0.9nm,0.6s,baz=24,slow=2.7,SNR=8.6
DAVOX    Davos/Dischmat   151.84  349   PKPbc    PKPbc      21 49 16.8 +0.3
         2.2nm,0.5s,baz=0.0,slow=18,SNR=6.6
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SOME ***22*** *21:35:05.8, 44°.23N×81°.15E, h15^{km}*

NNC ***22*** *21:35:06.4±9.7, 44°.48N×81°.05E, h30^{km}±179^{km}, mb2.8, mpv2.2, Error ellipse: s-maj=95.5km s-min=45.9km az=25.0*

ISC 22 21:35:03.9±1.8**, 44°.10N**±0°.05×**81°.25E**±0°.07**, h6**^{km}±12^{km}**, n14, **σ1^{s}**20**/26**, 4C-1D, Northern Xinjiang**

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Code     Station Name         Δ°   AZ°   Phase ID               Time     Res
                                        Op       ISC          h  m  s   ISC
KTMS     Ketmen             0.92  225   eP       Pn         21 35 24.1 +0.5
         4.0nm,0.2s
KTMS                                    eS       Sn         21 35 37.8 +0.6
         13nm,0.2s
DJR      Jarkent            1.07  283   eP       Pg         21 35 24.4  0.0
         1.9nm,0.2s
DJR                                     eS       Sg         21 35 38.3 -0.1
         10nm,0.3s
PDGK     Podgornoye         1.49  239   ⇑P       Pg         21 35 32.6 +0.2
         1.3nm,0.3s
PDGK                                    ⇑S       Sg         21 35 53.1 +1.4
         9.9nm,0.4s
SHLS     Shalkode           1.60  235   eP       Pn         21 35 31.3 -1.6
         4.7nm,0.2s
SHLS                                    eS       Sn         21 35 51.1 -2.8
         30nm,0.3s
KAPS     Kapalarasan        1.79  312   eP       Pn         21 35 36.2 +0.8
         2.8nm,0.1s
KAPS                                    eS       Sn         21 35 58.5 -0.1
         15nm,0.5s
UZB      Uzynbulak          1.88  240   eP       Pg         21 35 39.9 +0.1
         1.7nm,0.5s
UZB                                     eS       Sg         21 36 04.6 +0.4
         9.7nm,0.2s
KPKS     Kokpek             1.96  252   eP       Pb         21 35 40.0  0.0
         7.4nm,0.1s
KPKS                                    eS       Sb         21 36 05.5 +0.7
         43nm,0.4s
SATY     Saty               2.31  244   eP       Pb         21 35 46.8 +0.7
         2.5nm,0.4s
SATY                                    eS       Sb         21 36 16.4 +1.5
         26nm,0.4s
ARXS     Arharly            2.46  274   eP       Pb         21 35 48.0 -0.6
         1.3nm,0.5s
ARXS                                    eS       Sb         21 36 18.5 -0.8
         7.9nm,0.5s
MAKZ     Makanchi           2.75   10   ⇑Pg      Pn         21 35 49.1 +0.5
         1.0nm,0.8s
MAKZ                                    ⇑Lg      Lg         21 36 23.7
         0.9nm,0.3s
MK31     Makanchi Array     2.79   15   Pg       Pb         21 35 53.7 -0.5
         0.6nm,0.7s,baz=195,slow=16,SNR=19
MK31                                    ⇓Lg      Lg         21 36 24.9
         0.4nm,0.3s,baz=203,slow=29,SNR=8.8
CHKK     Chushkaly          3.08  267   eP       Pb         21 35 59.4 +0.3
         1.6nm,0.2s
CHKK                                    eS       Sb         21 36 38.2 +1.2
         5.4nm,0.2s
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KOTS	Kotyrbulak	3.12	255	eP	Pg	21 36 02.6	-1.1
	1.3nm,0.3s						
KOTS				eS	Sg	21 36 41.7	-2.4
	3.7nm,0.4s						
KTBS	Karatobe	3.32	265	eP	Pb	21 36 04.0	+0.8
	0.2nm,0.2s						
KTBS				eS	Sb	21 36 45.8	+1.9
	1.4nm,0.4s						

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*IDC **22** 21:47:32.3±1.0, 12°.86N×50°.16E, h0^{km}, mb3.9/13, mb1 4.1/14, mb1mx3.7/66, mbtmp4.0/14, ML4.3/1, MS3.3/16, Ms1 3.3/16, ms1mx3.0/60, Error ellipse: s-maj=24.5km s-min=18.2km az=179.0*

*NEIC **22** 21:47:33.8±0.5, 12°.94N×50°.16E, h10^{km}, mb4.4/8, Error ellipse: s-maj=13.6km s-min=9.4km az=177.0*

*CSEM **22** 21:47:34.3±0.3, 13°.00N×50°.17E, h10^{km}, mb4.5/7, Error ellipse: s-maj=15.9km s-min=10.3km az=171.0*

ISC 22 21:47:34.8±0.8**, 13°.3N**±0°.1×**50°.02E**±0°.07**, h10**^{km}**, n51, σ2^s.06**/44**, mb4.1**/21**, MS3.2**/14**, 1C, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BDHA	Al Bayda'	4.38	279	i P	Pn	21 48 40.0	-1.7
BDHA				e		21 48 40.3	
	baz=113,slow=16						
BDHA				AML	AML	21 48 45.1	
	comp=N,134nm,0.4s						
BDHA				i S	Sn	21 49 29.9	-3.1
BDHA	Al Bayda'	4.38	279	i P	Pn	21 48 40.0	-1.7
	comp=N,67nm,0.4s						
LBOS		4.67	277	⇑iP	Pn	21 48 43.9	-1.9
LBOS				i S	Sn	21 49 37.0	-3.2
ATD	Arta Tunnel	7.23	257	Pn	Pn	21 49 20.6	-0.1
	comp=N,4.5nm,0.3s,baz=357,slow=4.6,SNR=28						
ATD				Sn	Sn	21 50 45.0	+2.1
	baz=278,slow=23,SNR=1.6						
ATD				LR	LR	21 51 21.8	
	comp=N,214nm,18.4s,baz=73,slow=32						
ATD	Arta Tunnel	7.23	257	ePn	Pn	21 49 20.9	+0.2
ATD				Sn	Sn	21 50 45.0	+2.1
WSAR	Wadi Sarin	12.81	38	LR	LR	21 55 22.2	
	comp=N,196nm,19.5s,baz=236,slow=36						
EIL	Elat	21.44	322	LR	LR	21 59 52.8	
	comp=N,47nm,20.0s,baz=73,slow=34						
ASF	Jabal al Asfar	22.29	329	P	P	21 52 35.8	+3.3
	comp=N,3.7nm,0.9s,baz=148,slow=15,SNR=4.6						
MMAI	Mount Meron Ar	23.72	328	P	P	21 52 50.5	+3.3
	comp=N,0.7nm,0.4s,baz=144,slow=5.4,SNR=3.8						
MMAI				LR	LR	22 02 51.6	
	comp=N,43nm,18.8s,baz=135,slow=38						
GEYT	Alibeck	25.55	15	P	P	21 53 07.0	+3.0
	comp=N,1.8nm,0.7s,baz=229,slow=11,SNR=8.2						
GEYT				LR	LR	22 05 01.8	
	comp=N,81nm,19.7s,baz=235,slow=40						
GYA0B	ALIBECK ARRAY	25.55	15	eP	P	21 53 05.0	+1.1
	comp=N,7.4nm,0.8s						
GNI	Garni	27.13	351	LR	LR	22 05 56.5	
	comp=N,100nm,18.7s,baz=168,slow=40						
BRTR	Keskin Array B	30.00	334	P	P	21 53 48.4	+4.4
	comp=N,1.0nm,0.8s,baz=152,slow=9.6,SNR=5.6						
BRTR				LR	LR	22 06 37.4	
	comp=N,32nm,18.1s,baz=126,slow=38						
BR101	Keskin Array S	30.01	334	eP	P	21 53 48.4	+4.4
KBZ	Khabaz	30.92	350	LR	LR	22 09 32.8	
	comp=N,22nm,18.4s,baz=159,slow=42						
KIV	Kislovodsk	31.17	350	eP	P	21 53 50.7	-3.4
	comp=N,4.9nm,1.0s						
OPO	Ambohidratompo	31.81	185	LR	LR	22 06 09.7	
	comp=N,45nm,18.6s,baz=4.0,slow=36						
ABKAR	Akbulak array	36.76	11	eP	P	21 54 43.1	+0.7
ABKAR	Akbulak array	36.76	11	eP	P	21 54 43.1	+0.7
AKTO	Aktyubinsk	37.59	8	LR	LR	22 13 10.7	
	comp=N,28nm,18.4s,baz=133,slow=40						
MLR	Muntele Rosu	38.01	332	LR	LR	22 11 29.8	
	comp=N,50nm,18.3s,baz=98,slow=37						
BVAR	Borovoye Array	42.81	18	P	P	21 55 36.4	+3.6
	comp=N,0.7nm,0.6s,baz=206,slow=6.3,SNR=6.0						
BVAR				LR	LR	22 15 50.6	
	comp=N,60nm,18.7s,baz=211,slow=39						
MAKZ	Makanchi	42.81	32	eP	P	21 55 33.9	+1.0
	comp=N,4.3nm,1.4s						
MK32	Makanchi Array	42.96	33	eP	P	21 55 33.9	-0.2
MK32	Makanchi Array	42.96	33	eP	P	21 55 33.9	-0.2
MKAR	Makanchi Array	42.96	33	P	P	21 55 33.9	-0.2
	comp=N,0.6nm,0.5s,baz=220,slow=6.8,SNR=5.6						
MKAR	Makanchi Array	42.96	33	eP	P	21 55 34.0	-0.2
	comp=N,13nm,0.8s						
MKAR	Makanchi Array	42.96	33	eP	P	21 55 34.0	-0.2
	comp=N,13nm,0.8s						
TAM	Tamanrasset	43.20	289	eP	P	21 55 37.6	+1.0
	comp=N,6.1nm,1.5s						
KURBB	Kurchatov Arra	43.84	26	P	P	21 55 41.8	+0.7
	comp=N,0.5nm,0.4s,baz=226,slow=7.9,SNR=5.0						
KURK	Kurchatov	43.94	26	eP	P	21 55 41.8	-0.1
TSUM	Tsumeb	45.45	225	LR	LR	22 16 26.6	
	comp=N,88nm,18.2s,baz=11,slow=38						
VLC	Villacollemand	45.69	320	eP	P	21 55 56.1	+0.1
	comp=N,58nm,1.5s						
TORD	Torodi Ar. Bea	46.98	276	P	P	21 56 06.0	-0.6
	comp=N,0.7nm,1.0s,baz=142,slow=7.2						
TOA1	Torodi Ar. Sit	46.98	276	eP	P	21 56 06.0	-0.6
CM31	Chiang Mai Arr	47.22	77	eP	P	21 56 07.3	-1.1
CMAR	Chiang Mai Arr	47.22	77	P	P	21 56 07.4	-1.1
	comp=N,1.6nm,0.3s,baz=276,slow=9.0,SNR=7.8						
BOSA	Boshof	48.08	210	LR	LR	22 18 35.4	
	comp=N,29nm,19.3s,baz=52,slow=39						
ZALV	Zalesovo Beam	48.92	27	P	P	21 56 23.3	+2.3
	comp=N,1.3nm,0.6s,baz=243,slow=8.6,SNR=6.3						
ZAA1	Zalesovo Array	48.92	27	eP	P	21 56 23.3	+2.3
ZAA1	Zalesovo Array	48.92	27	eP	P	21 56 23.3	+2.3
HFS	Hagfors	53.79	338	LR	LR	22 23 08.1	
	comp=N,33nm,18.3s,baz=154,slow=39						
NOA	NORSAR Array B	55.31	338	LR	LR	22 24 05.3	
	comp=N,18nm,19.3s,baz=120,slow=39						
SONA0	Songino Array	57.84	42	eP	P	21 57 26.4	-0.5
SONA0	Songino Array	57.84	42	eP	P	21 57 26.4	-0.5
SONM	Songino Array	57.84	42	P	P	21 57 26.4	-0.5
	comp=N,0.9nm,0.7s,baz=234,slow=6.9,SNR=3.4						
SCO	Scoresbysund	71.53	340	eP	P	21 58 57.0	+1.4
	comp=N,979nm,0.9s						
WRA	Warramunga Arr	89.25	111	P	P	22 00 30.2	-1.6
	comp=N,1.0nm,0.7s,baz=299,slow=3.7,SNR=8.4						
WR1	Warramunga Arr	89.25	111	eP	P	22 00 30.2	-1.6
	comp=N,6.8nm,1.1s						
ASAR	Alice Springs	89.79	114	P	P	22 00 31.9	-2.4
	comp=N,0.7nm,0.9s,baz=295,slow=4.3,SNR=5.5						
AS31	Alice Springs	89.79	114	eP	P	22 00 31.9	-2.4
	comp=N,1.6nm,1.3s						

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*CSEM **22** 21:52:40.3, 41°.03N×45°.18E, h0^{km}, ML1.5*

TIF 22 21:52:40.3, 41°.03N×45°.18E, h15^{km}±3^{km}, Eastern Caucasus

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGRG	David-gareji	0.44	19	P	Pb	21 52 50.2	+0.4
DGRG				S	Sn	21 52 58.1	-1.8
DGRG	David-gareji	0.44	19	P	Pb	21 52 50.2	+0.4
DGRG				S	Sn	21 52 58.1	-1.8
TBLG	Delisi	0.77	335	P	Pb	21 52 55.8	+0.4
TBLG				S	Sn	21 53 07.3	-0.8
TBLG	Delisi	0.77	335	P	Pb	21 52 55.8	+0.4
TBLG				S	Sn	21 53 07.3	-0.7
DDFL	Dedoflistskaro	0.82	60	P	Pn	21 52 58.0	+0.6
DDFL				S	Sn	21 53 10.1	+0.8
DDFL	Dedoflistskaro	0.82	60	P	Pn	21 52 58.0	+0.7
DDFL				S	Sn	21 53 10.1	+0.9
DUS	Dusheti	1.11	341	P	Pg	21 53 02.6	+0.8
DUS				S	Sn	21 53 19.6	+3.0
DUS	Dusheti	1.11	341	P	Pg	21 53 02.7	+0.9
DUS				S	Sn	21 53 19.6	+3.0
BGD	Bogdanovka	1.22	281	P	Sn	21 53 22.0	+2.7
BGD	Bogdanovka	1.22	281	P	Sn	21 53 22.0	+2.7

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*NIED **22** 21:57:00, 38°.30N×141°.80E, h59^{km}, Mw4.0 Best double couple: M$_0$9.94000×10^{14} NP1:φ$_s$221.00000°, δ49.00000°, λ126.00000°. NP2:φ$_s$353.00000°, δ52.00000°, λ56.00000°.*

*ISCJB **22** 21:57:53.0±0.7, 38°.30N±0°.03×141°.91E±0°.08, h63^{km}±5^{km}, mb3.8/13, Error ellipse: s-maj=10.7km s-min=5.0km az=16.7*

*JMA **22** 21:57:54.4, 38°.32N×141°.82E, h57^{km}±1^{km}, M4.0*

JMA Felt II J1.

*IDC **22** 21:57:55.3±2.1, 38°.31N×141°.84E, h69^{km}±18^{km}, mb3.6/13, mb1 3.8/19, mb1mx3.6/70, mbtmp4.0/19, MS2.9/2, Ms1 2.9/2, ms1mx2.4/59, Error ellipse: s-maj=21.8km s-min=13.6km az=81.0*

ISC 22 21:57:53.1±1.1**, 38°.30N**±0°.04×**142°.03E**±0°.08**, h51**^{km}±10^{km}**, n41, σ1^s.32**/51**, mb3.8**/13**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIO	Ouri	0.56	287	P	Pn	21 58 05.2	+0.2
JIO				S	Sn	21 58 12.7	-0.9
OFUJ	Ofunato	0.83	340	P	Pn	21 58 09.4	+0.8
OFUJ				S	Sn	21 58 20.2	+0.3
JMK	Ichinoseki	0.91	316	P	Pn	21 58 10.0	+0.4
JMK				S	Sn	21 58 20.8	-0.9
JMM	Marumori	1.06	247	P	Pn	21 58 11.1	-0.6
JMM				S	Sn	21 58 23.2	-2.2
JOU	Okura	1.07	274	P	Pn	21 58 11.4	-0.4
JOU				S	Sn	21 58 24.0	-1.7
JFK	Kawauchi	1.30	225	P	Pn	21 58 15.2	+0.3
JFK				S	Sn	21 58 30.4	-0.8
JOM	Ohasama	1.31	334	P	Pn	21 58 15.6	+0.6
JOM				S	Sn	21 58 31.3	0.0
JYK	Kaneyama	1.45	296	P	Pn	21 58 16.6	-0.2
JYK				S	Sn	21 58 33.2	-1.5
JRG	Rokugo	1.54	316	P	Pn	21 58 18.3	+0.1
JRG				S	Sn	21 58 37.2	+0.1
JYS	Shirataka	1.54	268	P	Pn	21 58 17.9	-0.3
JYS				S	Sn	21 58 35.6	-1.5
JFT	Otama	1.55	240	P	Pn	21 58 18.4	+0.2
JFT				S	Sn	21 58 36.0	-1.2
JYA	Atsumi	1.84	280	P	Pn	21 58 21.9	-0.3
MAT	Matsushiro	3.51	241	P	Pn	21 58 46.7	+1.6
MAT				S	Sn	21 59 29.6	+4.2
MJAR	Matsushiro Arr	3.51	241	P	Pn	21 58 46.5	+1.4
	11nm,0.3s,baz=36,slow=14,SNR=82						
MJAR				S	Sn	21 59 27.3	+1.9
	2.9nm,0.3s,baz=49,slow=13,SNR=4.6						
JHJ	Hachijo jima 2	5.48	200	P	Pn	21 59 12.4	+0.3
	25nm,0.3s,baz=75,slow=20,SNR=7.7						
JHJ				S	Sn	22 00 03.3	-11
	48nm,0.3s,baz=37,slow=20,SNR=5.8						
ASAJ	Asahikawa	5.83	4	P	Pn	21 59 17.2	+0.3
	2.0nm,0.3s,baz=227,slow=10,SNR=16						
ASAJ				S	Sn	22 00 19.9	-2.5
	1.5nm,0.3s,baz=18,slow=20,SNR=3.1						
ASAJ				LR	LR	22 01 49.7	
	comp=Z,43nm,20.0s,baz=141,slow=40						
USRK	Ussuriysk Ar.	9.58	311	P	Pn	22 00 08.8	+0.6
	baz=124,slow=15						
JNU	Nakatsue	10.43	244	P	Pn	22 00 20.4	+0.4
	0.3nm,0.3s,baz=51,slow=8.0,SNR=5.2						
JNU				LR	LR	22 04 49.7	
	comp=Z,147nm,18.9s,baz=322,slow=40						
JCJ	Chichijima	11.17	179	P	Pn	22 00 27.3	-2.8
	baz=323,slow=20						
KSRS	Korea Array	11.18	270	P	Pn	22 00 32.4	+2.3
	0.8nm,0.3s,baz=78,slow=14,SNR=7.8						
KLR	Kul'dur	13.20	329	P	Pn	22 00 60.0	+2.4
	0.0nm,0.3s,baz=165,slow=12,SNR=2.2						
SONM	Songino Array	27.51	302	P	P	22 03 34.6	-0.1
	0.4nm,0.5s,baz=117,slow=6.9,SNR=3.7						
H11N2	WAKE ISLAND Hy	28.41	124	T	T	22 34 04.7	
	baz=316,slow=76,SNR=472						
H11N1	WAKE ISLAND Hy	28.42	124	T	T	22 34 05.4	
	baz=316,slow=76,SNR=828						
H11N3	WAKE ISLAND Hy	28.43	124	T	T	22 34 06.0	
	baz=316,slow=76,SNR=640						
H11S1	WAKE ISLAND Hy	29.17	126	T	T	22 35 00.9	
	baz=318,slow=76,SNR=69						
H11S3	WAKE ISLAND Hy	29.17	126	T	T	22 35 01.5	
	baz=318,slow=76,SNR=357						
H11S2	WAKE ISLAND Hy	29.18	126	T	T	22 35 02.6	
	baz=318,slow=76,SNR=79						
ZALV	Zalesovo Beam	41.44	311	P	P	22 05 33.1	-1.3
	1.7nm,0.5s,baz=88,slow=7.7,SNR=6.0						
ZALV				PcP	PcP	22 07 31.1	-0.3
	0.4nm,0.3s,baz=97,slow=4.8,SNR=2.3						
MKAR	Makanchi Array	43.87	301	P	P	22 05 54.0	-0.3
	1.4nm,0.7s,baz=86,slow=10.0,SNR=16						
KURBB	Kurchatov Arra	45.62	307	P	P	22 06 07.4	-0.7
	1.8nm,0.5s,baz=82,slow=8.3,SNR=19						
BVAR	Borovoye Array	50.09	312	P	P	22 06 42.0	-0.6
	0.3nm,0.5s,baz=72,slow=7.3,SNR=4.1						
BVAR				PcP	PcP	22 08 01.2	-0.4
	0.5nm,0.5s,baz=56,slow=3.6,SNR=3.7						
WRA	Warramunga Arr	58.38	188	P	P	22 07 43.0	-0.3
	2.9nm,0.4s,baz=6.3,slow=7.0,SNR=65						
ASAR	Alice Springs	62.11	188	P	P	22 08 08.9	+0.2
	2.0nm,0.8s,baz=6.9,slow=6.1,SNR=15						
HFS	Hagfors	73.14	336	P	P	22 09 17.6	-0.2
	0.7nm,0.5s,baz=48,slow=4.3,SNR=6.7						
NOA	NORSAR Array B	73.21	337	P	P	22 09 17.4	-0.9
	1.0nm,0.8s,baz=47,slow=5.2,SNR=3.1						
AKASG	Malin Array Be	73.60	322	P	P	22 09 18.9	-1.7
	0.3nm,0.4s,baz=45,slow=6.1,SNR=3.3						
PDAR	Pinedale Array	76.44	46	P	P	22 09 39.0	+1.5
	0.4nm,0.6s,baz=267,slow=1.1,SNR=5.4						
GERES	GERESS Array B	81.89	328	P	P	22 10 06.9	-0.1
	0.1nm,0.3s,baz=61,slow=6.9,SNR=3.0						
TXAR	Lajitas Array	88.97	53	P	P	22 10 44.1	+1.6
	0.2nm,0.5s,baz=290,slow=3.0,SNR=5.2						
LPAZ	La Paz	145.63	59	PKPbc	PKPbc	22 17 27.7	+0.5
	0.8nm,0.7s,baz=326,slow=7.3,SNR=5.0						

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*SKO **22** 22:10:50.0, 41°.33N×22°.76E, h15^{km}, M2.1, ML2.4*

*ISCJB **22** 22:10:50.7±0.3, 41°.35N±0°.01×22°.76E±0°.02, h2^{km}±3^{km}, Error ellipse: s-maj=2.7km s-min=2.2km az=143.2*

*ATH **22** 22:10:51.3, 41°.30N×22°.76E, h16^{km}±2^{km}, ML2.9/7, Error ellipse: s-maj=2.7km s-min=1.0km az=149.0*

*CSEM **22** 22:10:51.4±0.1, 41°.32N×22°.76E, h2^{km}, ML2.8, Error ellipse: s-maj=4.1km s-min=3.1km az=77.0*

*THE **22** 22:10:51.9, 41°.30N×22°.77E, h0^{km}±1^{km}, ML2.8/8, Error ellipse: s-maj=1.3km s-min=0.5km az=275.0*

*BEO **22** 22:10:52.0±0.3, 41°.31N×22°.76E, h7^{km}±2^{km}, ML2.8/6*

ISC 22 22:10:51.7±0.8**, 41°.32N**±0°.01×**22°.75E**±0°.01**, h10**^{km}±5^{km}**, n128, σ0^s.89**/182**, 16C-13D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VAY	Valandovo	0.14	272	ePg	Pg	22 10 54.6	-0.3
VAY				eSg	Sg	22 10 57.6	+0.5
VAY	Valandovo	0.14	272	P	Pg	22 10 54.6	-0.3
VAY				S	Sg	22 10 57.4	+0.3
VAY	Valandovo	0.14	272	⇑iPg	Pg	22 10 54.8	-0.1
VAY				eLg	Lg	22 10 57.5	
	comp=E,1µm,0.3s						
VAY				i Sg	Sg	22 10 57.6	+0.5
VAY				eLg	Lg	22 10 58.4	
	comp=N,2µm,0.4s						
VAY	Valandovo	0.14	272	P	Pg	22 10 54.6	-0.3
VAY				S	Sg	22 10 57.4	+0.3
KNT	Kendrikon	0.19	145	P	Pg	22 10 55.5	-0.2
KNT				S	Sg	22 10 57.7	-0.7
KNT				AML	AML	22 10 58.4	
	comp=N,26346µm,0.2s						
KNT				AML	AML	22 10 58.6	
	comp=E,28615µm,0.2s						
KNT	Kendrikon	0.19	145	P	Pg	22 10 55.6	-0.2
KNT				S	Sg	22 10 58.2	-0.3
KNT	Kendrikon	0.19	145	P	Pg	22 10 55.5	-0.2
KNT				S	Sg	22 10 58.2	-0.3
GRG	Griva	0.45	217	P	Pg	22 11 00.7	+0.2
GRG				S	Sg	22 11 06.0	-0.3
GRG				AML	AML	22 11 08.0	
	comp=E,4291µm,0.1s						
GRG				AML	AML	22 11 08.2	
	comp=N,3453µm,0.2s						
GRG	Griva	0.45	217	P	Pg	22 11 00.4	-0.1
GRG				S	Sb	22 11 07.4	-1.0
GRG	Griva	0.45	217	P	Pg	22 11 00.4	-0.1
GRG				S	Sg	22 11 06.2	-0.2
STIP	Stip	0.57	312	i Pg	Pg	22 11 00.6	-2.1
STIP				i Sg	Sg	22 11 07.5	-2.7
SRS	Serrai	0.66	107	ePg	Pg	22 11 04.1	-0.4
SRS				eSg	Sb	22 11 13.6	-1.0
SRS	Serrai	0.66	107	P	Pg	22 11 04.1	-0.4
SRS	Serrai	0.66	107	P	Pg	22 11 03.9	-0.6
SRS				S	Sb	22 11 13.6	-1.0
SRS	Serrai	0.66	107	ePg	Pg	22 11 04.1	-0.4
	baz=1.0						
SRS				S	Sb	22 11 13.6	-1.0
SOH	Sokhos	0.67	137	P	Pb	22 11 04.9	-0.6
SOH				S	Sg	22 11 12.9	-0.6
SOH				AML	AML	22 11 16.0	
	comp=E,3196µm,0.2s						
SOH				AML	AML	22 11 16.3	
	comp=N,3044µm,0.2s						
SOH	Sokhos	0.67	137	P	Pg	22 11 04.1	-0.6
SOH				S	Sb	22 11 14.5	-0.4
SOH	Sokhos	0.67	137	P	Pg	22 11 04.5	-0.2
SOH				S	Sg	22 11 13.1	-0.4
THE	Thessaloniki	0.70	167	P	Pg	22 11 05.1	-0.1
THE				S	Sb	22 11 15.1	-0.7
THE				AML	AML	22 11 15.3	
	comp=E,1756µm,0.2s						
THE				AML	AML	22 11 15.8	
	comp=N,1100µm,0.5s						
THE	Thessaloniki	0.70	167	P	Pg	22 11 04.8	-0.5
THE				S	Sb	22 11 15.0	-0.7
THE	Thessaloniki	0.70	167	P	Pg	22 11 04.8	-0.5
THE				S	Sg	22 11 14.6	+0.2
HORT	Hortiatis	0.77	160	P	Pb	22 11 06.7	-0.4
HORT				S	Sg	22 11 16.2	-0.2
HORT				AML	AML	22 11 19.6	
	comp=N,1574µm,0.3s						
HORT				AML	AML	22 11 19.8	
	comp=E,1699µm,0.3s						
HORT	Hortiatis	0.77	160	P	Pg	22 11 06.1	-0.4
HORT				S	Sb	22 11 17.2	-0.4
HORT	Hortiatis	0.77	160	P	Pg	22 11 06.2	-0.3
HORT				S	Sg	22 11 16.2	-0.2
NVR	Nevrokopi	0.84	87	P	Pg	22 11 07.5	-0.3
NVR				S	Sg	22 11 17.6	-1.1
NVR				AML	AML	22 11 19.5	
	comp=E,1837µm,0.2s						
NVR				AML	AML	22 11 23.6	
	comp=N,1574µm,0.2s						
NVR	Nevrokopi	0.84	87	P	Pg	22 11 07.2	-0.6
NVR				S	Sb	22 11 19.9	+0.3
NVR	Nevrokopi	0.84	87	P	Pg	22 11 07.2	-0.6
NVR				S	Sg	22 11 18.2	-0.5
KTI	Kastanea	1.04	208	P	Pg	22 11 10.8	-0.9
KTI	Kastanea	1.04	208	P	Pg	22 11 10.8	-0.9
PLG	Polygyros	1.08	151	P	Pg	22 11 11.7	-0.8
PLG				S	Sg	22 11 25.0	-1.4
PLG				AML	AML	22 11 27.8	
	comp=E,870µm,0.4s						
PLG				AML	AML	22 11 31.8	
	comp=N,868µm,0.4s						
PLG	Polygyros	1.08	151	P	Pg	22 11 11.6	-0.8
PLG				S	Sb	22 11 27.1	+0.5
PLG	Polygyros	1.08	151	P	Pg	22 11 11.6	-0.8
PLG				S	Sg	22 11 25.6	-0.8
KRUS	Krusevo	1.13	273	ePn	Pb	22 11 13.6	+0.1
KRUS				i Sg	Sb	22 11 28.4	+0.1
FNA	Florina	1.17	243	ePg	Pg	22 11 13.1	-1.1
FNA				eSg	Sb	22 11 29.7	+0.5
FNA	Florina	1.17	243	P	Pg	22 11 13.1	-1.1
FNA	Florina	1.17	243	P	Pg	22 11 13.3	-0.9
FNA	Florina	1.17	243	P	Pg	22 11 13.3	-0.9
FNA				eSg	Sb	22 11 29.7	+0.5
	baz=6.0						
SKO	Skopje	1.18	304	ePg	Pn	22 11 14.5	+0.2
SKO				eSg	Sb	22 11 29.8	+0.2
SKO	Skopje	1.18	304	i Pn	Pn	22 11 14.9	+0.6
SKO	Skopje	1.18	304	ePg	Pn	22 11 14.5	+0.2
	baz=2.0						
SKO				eSg	Sb	22 11 29.8	+0.2
	baz=1.0						
LIT	Litokhoron	1.23	189	P	Pb	22 11 13.9	-1.1
LIT	Litokhoron	1.23	189	P	Pb	22 11 14.2	-0.8
LIT	Litokhoron	1.23	189	P	Pb	22 11 14.2	-0.8
KZN	Kozani	1.25	217	P	Pn	22 11 14.3	-1.1
KZN	Kozani	1.25	217	P	Pg	22 11 15.7	-0.1
KZN				S	Sn	22 11 34.1	+1.8
KZN	Kozani	1.25	217	P	Pg	22 11 15.7	-0.1
KZN				S	Sn	22 11 34.1	+1.8
VTS	Vitosha	1.32	15	ePg	Pg	22 11 16.9	-0.1
VTS				eSg	Sn	22 11 34.4	+0.4
VTS	Vitosha	1.32	15	⇑iP	Pg	22 11 17.1	+0.1
VTS				S	Sg	22 11 34.0	-0.2
VTS	Vitosha	1.32	15	P	Pb	22 11 16.7	+0.1
VTS				S	Sn	22 11 36.7	+2.7
VTS	Vitosha	1.32	15	ePg	Pg	22 11 16.9	-0.1
	baz=2.0						
VTS				S	Sg	22 11 34.0	-0.2
OUR	Ouranopolis	1.35	136	P	Pn	22 11 16.6	0.0
OUR				S	Sn	22 11 36.0	+1.4
OUR	Ouranopolis	1.35	136	P	Pn	22 11 16.6	0.0
OUR				S	Sn	22 11 36.0	+1.4
KAVA	Kavala	1.37	103	P	Pg	22 11 17.9	0.0
KAVA	Kavala	1.37	103	P	Pg	22 11 17.4	-0.5
OHR	Ohrid	1.49	263	ePn	Pn	22 11 19.0	+0.5
OHR				i Sg	Sg	22 11 40.1	+0.5
OHR				eLg	Lg	22 11 42.0	
	comp=N,96nm,1.1s						
OHR				eLg	Lg	22 11 45.0	
	comp=E,71nm,0.8s						
PAIG	Paliouri	1.56	153	P	Pn	22 11 19.9	+0.5
PAIG				S	Sb	22 11 40.6	+0.3
PAIG	Paliouri	1.56	153	P	Pn	22 11 19.9	+0.5
PAIG				S	Sb	22 11 40.6	+0.3
NEST	Nestorio	1.58	236	P	Pb	22 11 20.8	-0.2
NEST	Nestorio	1.58	236	P	Pb	22 11 20.7	-0.2
NEST	Nestorio	1.58	236	P	Pb	22 11 20.7	-0.2
THAS	Thassos island	1.65	115	P	Pn	22 11 20.5	-0.2
THAS				S	Sg	22 11 44.4	-0.3
THAS	Thassos island	1.65	115	P	Pn	22 11 20.5	-0.2
THAS				S	Sg	22 11 44.4	-0.3
BARS	Barje	1.65	335	ePg	Pn	22 11 21.4	+0.6
BARS				eSg	Sg	22 11 44.3	-0.6
BARS	Barje	1.65	335	ePg	Pn	22 11 21.4	+0.6
	baz=3.0						
BARS				eSg	Sg	22 11 44.3	-0.6
	baz=4.0						
PLD	Plovdiv	1.66	61	ePn	Pn	22 11 20.9	+0.1
PLD	Plovdiv	1.66	61	ePn	Pn	22 11 20.9	+0.1
	baz=5.0						
PENT	Pentalofos	1.66	228	P	Pb	22 11 21.9	-0.5
PENT	Pentalofos	1.66	228	P	Pb	22 11 21.9	-0.5
KPRO	Kipourio	1.72	218	P	Pb	22 11 23.3	-0.2
KPRO	Kipourio	1.72	218	P	Pb	22 11 23.3	-0.2
THL	Klokotos Trika	1.84	198	P	Pn	22 11 23.1	-0.2
THL	Klokotos Trika	1.84	198	P	Pn	22 11 23.9	+0.6
THL	Klokotos Trika	1.84	198	P	Pn	22 11 23.9	+0.6
ZAPS	Zavoj	1.96	357	ePn	Pb	22 11 26.6	-0.9
XOR	Xorichti	1.98	170	P	Pn	22 11 25.5	+0.3
XOR	Xorichti	1.98	170	P	Pn	22 11 25.5	+0.3
RDO	Rodhopi	2.11	94	P	Pn	22 11 27.6	+0.6
RDO	Rodhopi	2.11	94	P	Pn	22 11 27.6	+0.6
SELS	Selova	2.25	328	ePn	Pn	22 11 29.1	0.0
BOVS	Bovan	2.44	342	ePn	Pn	22 11 33.5	+1.9
BOVS	Bovan	2.44	342	ePn	Pn	22 11 33.5	+1.9
	baz=9.0						
ALN	Alexandroupoli	2.52	98	P	Pn	22 11 33.3	+0.6
ALN	Alexandroupoli	2.52	98	P	Pn	22 11 33.3	+0.6
ZAGS	Zajecar	2.52	351	ePn	Pn	22 11 33.9	+1.2
ZAGS	Zajecar	2.52	351	ePn	Pn	22 11 33.9	+1.2
	baz=3.0						
SJES	Sjenica	2.83	314	ePn	Pn	22 11 38.1	+1.0
PDG	Podgorica	2.84	294	⇑iP	Pb	22 11 39.9	-2.5
PDG	Podgorica	2.84	294	⇑iP	Pb	22 11 39.9	-2.5
PDG				S	Sn	22 12 13.2	+1.9
IVAS	Ivanjica	2.97	320	ePn	Pn	22 11 39.1	+0.2
IVAS	Ivanjica	2.97	320	ePn	Pn	22 11 39.1	+0.2
	baz=5.0						
GRUS	Gruza	2.98	330	ePn	Pn	22 11 39.3	+0.3
GRUS	Gruza	2.98	330	ePn	Pn	22 11 39.3	+0.3
	baz=5.0						
ZIMR		3.03	39	⇓iP	Pn	22 11 41.3	+1.6
ZIMR		3.03	39	S	Sn	22 12 18.0	+1.9
KUBS	Kucevo	3.19	346	ePn	Pn	22 11 41.0	-0.9
KUBS	Kucevo	3.19	346	ePn	Pn	22 11 41.0	-0.9
	baz=8.0						
SRE	Strehaia	3.36	6	⇑iP	Pn	22 11 44.2	0.0
SRE	Strehaia	3.36	6	⇑iP	Pn	22 11 44.2	0.0
TRUS	Trudelj	3.38	330	ePn	Pn	22 11 44.7	+0.2
TRUS	Trudelj	3.38	330	ePn	Pn	22 11 44.7	+0.2
	baz=6.0						
DIVS	Divibare	3.44	325	ePn	Pn	22 11 45.8	+0.3

DIVS	Divibare	3.44	325	*e*Pn	Pn	22 11 45.8	+0.3
	baz=3.0						
MDVR	Moldovita	3.55	348	⇓*i*P	Pn	22 11 47.2	+0.4
MDVR	Moldovita	3.55	348	⇓*i*P	Pn	22 11 47.2	+0.4
BBLS	Lazići	3.55	317	*e*Pn	Pn	22 11 48.2	+1.3
BBLS	Lazići	3.55	317	*e*Pn	Pn	22 11 48.2	+1.3
	baz=7.0						
HERR	Herculane	3.57	356	⇑*i*P	Pn	22 11 46.9	-0.2
HERR	Herculane	3.57	356	⇑*i*P	Pn	22 11 46.9	-0.2
TEKS	Tekeris	4.00	325	*e*Pn	Pn	22 11 53.6	+0.5
TEKS	Tekeris	4.00	325	*e*Pn	Pn	22 11 53.6	+0.5
LOT	Lotru	4.20	10	⇓*i*P	Pn	22 11 56.2	+0.4
LOT	Lotru	4.20	10	⇓*i*P	Pn	22 11 56.2	+0.4
LOT				S	Sn	22 12 44.6	-0.3
ARR	Arges	4.28	18	⇑*i*P	Pn	22 11 57.1	+0.2
ARR	Arges	4.28	18	⇑*i*P	Pn	22 11 57.1	+0.2
ARR				S	Sn	22 12 47.6	+0.8
BZS	Buzias	4.38	349	⇑*i*P	Pn	22 11 58.5	+0.3
BZS	Buzias	4.38	349	⇑*i*P	Pn	22 11 58.5	+0.3
BZS				S	Sn	22 12 49.2	0.0
VOIR		4.45	21	⇑*i*P	Pn	22 12 00.4	+1.2
VOIR		4.45	21	⇑*i*P	Pn	22 12 00.4	+1.2
VOIR				S	Sn	22 12 51.5	+0.5
MLR	Muntele Rosu	4.78	28	⇓*i*P	Pn	22 12 05.6	+1.8
MLR	Muntele Rosu	4.78	28	⇓*i*P	Pn	22 12 05.6	+1.8
DOPR	Dopca	5.03	21	⇓*i*P	Pn	22 12 08.0	+0.9
DOPR	Dopca	5.03	21	⇓*i*P	Pn	22 12 08.0	+0.9
TLB	Topalu	5.07	48	⇑*i*P	Pn	22 12 08.9	+1.2
TLB	Topalu	5.07	48	⇑*i*P	Pn	22 12 08.9	+1.2
PLOR	Plostina	5.34	31	⇓*i*P	Pn	22 12 14.0	+2.5
PLOR	Plostina	5.34	31	⇓*i*P	Pn	22 12 14.0	+2.5
VRI	Vrincioaia	5.39	31	⇓*i*P	Pn	22 12 14.1	+2.0
VRI	Vrincioaia	5.39	31	⇓*i*P	Pn	22 12 14.1	+2.0

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*NIED **22** 22:12:00, 24°.50N×122°.10E, h38^{km}, Mw4.2 Best double couple: M$_0$2.56000×10^{15} NP1:ϕ_s270.00000°, δ18.00000°, λ-111.00000°. NP2:ϕ_s112.00000°, δ73.00000°, λ-83.00000°.*

*IDC **22** 22:12:14.5±1.0, 24°.34N×121°.95E, h0^{km}, mb3.8/7, mb1 3.9/8, mb1mx3.5/60, mbtmp3.8/8, ML3.6/1, MS3.2/10, Ms1 3.2/10, ms1mx2.9/68, Error ellipse: s-maj=43.1km s-min=19.7km az=62.0*

*BJI **22** 22:12:16.2, 24°.33N×122°.08E, h6^{km}, mb3.9/2, ML3.6/5*

*ISCJB **22** 22:12:18.5±0.3, 24°.39N±0°.02×122°.11E±0°.02, h23^{km}±3^{km}, mb3.6/7, MS3.2/6, Error ellipse: s-maj=3.4km s-min=2.2km az=161.0*

*TAP **22** 22:12:18.6, 24°.38N×122°.01E, h21^{km}, ML4.3, B*

*JMA **22** 22:12:19.3±0.2, 24°.45N×122°.11E, h45^{km}±4^{km}, M3.5*

ISC 22 22:12:18.4±0.6**, 24°.36N**±0°.02×**122°.08E**±0°.02**, h20**^{km}±2^{km}**, n104, σ1^{s}00**/131**, mb3.9**/7**, MS3.1**/6**, 16C-10D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS1	EOS1	0.20	13	⇑P	Pb	22 12 24.2	+0.3
	baz=39						
EOS1				S	Sb	22 12 28.6	+0.8
	baz=39						
NANB	Nanao	0.31	283	⇓P	Pb	22 12 24.6	-0.5
	baz=288						
NANB				S	Sb	22 12 28.6	-1.2
	baz=288						
ENA	Nanau	0.32	283	⇓*i*P	Pb	22 12 24.7	-0.6
	baz=288						
ENA				S	Sb	22 12 28.9	-1.1
	baz=288						
TWC	Suao	0.33	320	⇓*i*P	Pb	22 12 25.1	-0.4
	baz=335						
TWC				S	Sb	22 12 29.1	-1.2
	baz=335						
TWD	Chiawan	0.52	238	P	Pb	22 12 28.3	-0.5
	baz=233						
TWD				*e*S	Sn	22 12 38.2	-0.6
	baz=233						
TWE	Neicheng	0.52	314	⇓*i*P	Pb	22 12 28.5	-0.4
	baz=321						
TWE				*e*S	Sb	22 12 34.1	-1.9
	baz=321						
ENTT	Nioudou	0.55	301	⇓P	Pb	22 12 28.9	-0.4
	baz=305						
ENTT				*e*S	Sb	22 12 35.9	-0.9
	baz=305						
NTC	Toucheng	0.55	336	*e*P	Pb	22 12 29.2	-0.1
	baz=344						
NTC				*e*S	Sb	22 12 36.7	0.0
	baz=344						
HWA	Hwalien	0.57	229	P	Pn	22 12 31.2	-0.2
	baz=235						
ENLB	Shoufeng	0.63	224	⇑P	Pb	22 12 31.1	+0.4
	baz=217						
ENLB				S	Sn	22 12 41.9	+0.4
	baz=217						
NNS	Nan Shan	0.65	278	⇓P	Pb	22 12 30.5	-0.6
	baz=282						
NNS				*e*S	Sb	22 12 38.0	-1.8
	baz=282						
TWB1	Santiao Chiao	0.65	353	*e*P	Pb	22 12 31.0	-0.1
	baz=353						
TIPB	Shuangxi	0.66	340	⇓*i*P	Pb	22 12 31.2	0.0
	baz=346						
TIPB				S	Sb	22 12 39.2	-0.7
	baz=346						
NWLT	Wulai	0.67	309	*e*P	Pb	22 12 30.9	-0.5
	baz=312						
NSK	Sanguang	0.73	296	⇑*i*P	Pb	22 12 32.0	-0.4
	baz=300						
NSK				S	Sb	22 12 40.7	-1.3
	baz=300						
NWF	Wu-fen Shan	0.76	339	*e*P	Pn	22 12 33.7	-0.3
	baz=337						
NWF				*e*S	Sb	22 12 43.0	0.0
	baz=337						
WHF	Hehuan Shan	0.77	254	⇓P	Pb	22 12 32.9	-0.5
	baz=257						
WHF				*e*S	Sb	22 12 45.0	+1.5
	baz=257						
JYNG	Yonagunijimaku	0.80	83	P	Pb	22 12 33.6	+0.1
JYNG				*e*S	Sb	22 12 44.7	+0.9
ESL	Shilin	0.80	228	⇑P	Pb	22 12 33.5	0.0
	baz=221						
ESL				*e*S	Sn	22 12 45.5	-0.3
	baz=221						
TATO	Taipei	0.82	319	⇑P	Pb	22 12 33.9	0.0
	baz=316						
TATO				*e*S	Sb	22 12 44.3	-0.2
	baz=316						
TAP1	Taipei	0.85	324	P	Pn	22 12 35.3	+0.2
	baz=320						
TAP1				*e*S	Sb	22 12 45.9	+0.6
	baz=320						
YOJ	Yonaguni jima	0.86	83	⇑P	Pb	22 12 34.7	+0.1
	baz=76						
YOJ	Yonaguni jima	0.86	83	P	Pb	22 12 34.6	+0.1
YOJ				*e*S	Sb	22 12 46.1	+0.5
WLTB	Daxi	0.90	304	*e*P	Pn	22 12 36.1	+0.2
	baz=306						
EGFH	Guangfu	0.91	221	*e*P	Pb	22 12 35.0	-0.4
	baz=201						
YM07	YM07	0.92	333	⇑P	Pn	22 12 36.0	-0.1
	baz=337						
YM10	YM10	0.92	330	⇑P	Pn	22 12 36.1	-0.1
	baz=333						
YM11	YM11	0.93	330	⇑P	Pn	22 12 37.1	+0.8
	baz=334						
YM04	YM04	0.93	328	⇑P	Pb	22 12 36.0	+0.2
	baz=332						
YM08	YM08	0.94	332	*e*P	Pb	22 12 36.0	0.0
	baz=335						
TWS1	Kuangyinshan	0.95	321	*e*P	Pn	22 12 37.0	+0.4
	baz=339						
TWS1				*e*S	Sn	22 12 49.8	+0.2
	baz=339						
YM03	YM03	0.95	329	*e*P	Pn	22 12 37.1	+0.4
	baz=333						
NTST	Danshui	0.99	325	*e*P	Pn	22 12 37.4	+0.3
	baz=328						
LIOB	Emei	1.01	287	P	Pn	22 12 38.0	+0.6
	baz=293						
TWY	Chenhua	1.01	335	*e*P	Pn	22 12 37.9	+0.5
	baz=339						
NCUH	Zhongli	1.01	307	*e*P	Pn	22 12 37.8	+0.4
	baz=303						
NSTT	Nanjuang	1.02	286	⇑P	Pn	22 12 38.3	+0.8
	baz=293						
EHY	Hungye	1.09	219	*e*P	Pn	22 12 37.2	-1.3
	baz=215						
HSN	Hsinchu	1.10	294	*e*P	Pb	22 12 39.3	+0.5
	baz=298						
HSN				*e*S	Sn	22 12 55.5	+2.3
	baz=298						
SMLT	Sun Moon Lake	1.18	247	⇑P	Pn	22 12 39.9	+0.2
	baz=244						
NMLH	Miaoli	1.19	279	⇑P	Pb	22 12 41.4	+1.3
	baz=279						
TYC	Yuchr	1.20	248	⇑P	Pn	22 12 40.3	+0.3
	baz=235						
TWF1	Yuli	1.23	216	*e*P	Pn	22 12 39.2	-1.2
	baz=227						
TCU	Taichung	1.30	261	*e*P	Pb	22 12 42.6	+0.6
	baz=260						
WJS	Zhushan	1.34	247	*e*P	Pb	22 12 43.3	+0.4
	baz=235						
YUS	Yu-Shan	1.34	230	*e*P	Pn	22 12 42.1	-0.3
	baz=211						
YUS				*e*S	Sn	22 13 00.3	+0.4
	baz=211						
FULB	Fuli	1.36	212	*e*P	Pn	22 12 41.3	-0.8
	baz=194						
WNT	Mingjian	1.36	250	⇑P	Pb	22 12 44.0	+0.8
	baz=247						
WNT				*e*S	Sb	22 13 03.2	+3.1
	baz=247						
CHKT	Chengkung	1.41	208	*e*P	Pn	22 12 41.7	-1.2
	baz=187						
WCHH	Zhanghua	1.42	259	*e*P	Pb	22 12 44.4	+0.4
	baz=258						
CHN5	Tsauling	1.49	240	⇑P	Pb	22 12 45.4	+0.1
	baz=221						
CHN5				*e*S	Sb	22 13 07.1	+3.3
	baz=221						
IRIF	Iriomote-Funau	1.51	90	P	Pn	22 12 43.9	-0.3
IRIF				*e*S	Sn	22 13 02.9	-0.3
ELDTW	Lidau	1.52	220	*e*P	Pn	22 12 43.7	-0.7
	baz=203						
WGK	Gukeng	1.54	245	*e*P	Pb	22 12 46.5	+0.3
	baz=243						
WDLH	Douliu	1.56	245	*e*P	Pb	22 12 46.7	+0.2
	baz=243						
HATJ	Hateruma jima	1.60	100	P	Pn	22 12 46.5	+1.0
STYT	Tauyuan	1.70	226	*e*P	Pn	22 12 47.5	+0.6
	baz=210						
WTCT	Ta-ch’eng	1.71	254	*e*P	Pn	22 12 48.4	+1.4
	baz=253						
TWH	Lutao	1.73	199	*e*P	Pn	22 12 45.7	-1.5
	baz=181						
CHY	Chiayi	1.74	241	*e*P	Pb	22 12 49.5	0.0
	baz=239						
WTP	Ta-pu	1.74	231	*e*P	Pb	22 12 49.0	-0.6
	baz=228						
JKRS	Kuro-shima	1.77	93	P	Pn	22 12 48.2	+0.5
JKRS				*e*S	Sn	22 13 10.2	+0.6
TWG	Pinlang	1.79	211	*e*P	Pn	22 12 46.5	-1.5
	baz=208						
TWK	Hsinying	1.82	234	*e*P	Pn	22 12 50.0	+1.5
	baz=216						
TWK				S	Sb	22 13 14.9	+1.7
	baz=216						
CHN1	Nanshi	1.84	231	*e*P	Pn	22 12 50.4	+1.6
	baz=229						
WSF	Szhu	1.84	248	*e*P	Pn	22 12 50.0	+1.2
	baz=246						
WSF				*e*S	Sb	22 13 15.7	+1.7
	baz=246						
SGST	Jiashian	1.87	228	⇓P	Pb	22 12 51.0	-0.8
	baz=224						
SGST				S	Sb	22 13 15.6	+0.9
	baz=224						
JIJ	Ishigaki jima	1.88	89	P	Pn	22 12 49.0	-0.4
JIJ				*e*S	Sn	22 13 11.9	-0.6
SLGT	Liugui	1.89	224	*e*P	Pn	22 12 50.9	+1.5
	baz=222						
CHN8	Yiju	1.98	240	*e*P	Pn	22 12 52.4	+1.6
	baz=222						
CHN8				*e*S	Sb	22 13 18.7	+0.7
	baz=222						
CHN3	Shinhua	2.02	231	*e*P	Pb	22 12 53.4	-1.0
	baz=229						
ECL	Taimali	2.03	211	*e*P	Pn	22 12 50.5	-0.9
	baz=207						
JISG	Ishigakijimahi	2.05	83	P	Pn	22 12 51.2	-0.4
JISG				*e*S	Sn	22 13 16.2	-0.4
SSD	Sandimen	2.08	220	*e*P	Pn	22 12 53.6	+1.5
	baz=217						
SCLT	Jiali	2.09	236	*e*P	Pb	22 12 54.8	-0.7
	baz=234						
TWM1	Shoushan	2.15	225	*e*P	Pb	22 12 55.9	-0.8
	baz=223						
LAY	Lan-yu	2.36	192	*e*P	Pn	22 12 54.2	-1.8
	baz=186						
SCZT	Fangliau	2.39	214	*e*P	Pn	22 12 57.9	+1.6
	baz=199						
JTJ	Tarama	2.41	83	P	Pn	22 12 57.2	+0.6
JTJ				*e*S	Sn	22 13 25.5	+0.1
PNG	Penghu	2.44	252	*e*P	Pn	22 12 57.3	+0.3
	baz=251						
WDGT	Dungji	2.47	244	*e*P	Pn	22 12 58.1	+0.7
	baz=243						
WDGT				*e*S	Sb	22 13 30.0	-2.0
	baz=243						
JIRB	Irabujima	2.86	80	P	Pn	22 13 03.3	+0.6
JIKM	Ikemajima	2.94	78	P	Pn	22 13 04.9	+1.0
JOGS	Gusukube	3.06	82	P	Pn	22 13 06.1	+0.6
QZH	Quanzhou	3.23	281	⇓*i*Pn	Pn	22 13 07.8	0.0
QZH				Sn	Sn	22 13 44.6	-1.0
QZH				smax	smax		
	comp=N,150nm,0.6s						
QZH				smax	smax		
	comp=E,110nm,0.5s						
KNM	Kinmen	3.32	272	*e*P	Pn	22 13 10.6	+1.4
	baz=271						
JOW	Kunigami	6.11	65	Pn	Pn	22 13 47.6	+0.1
	3.1nm,0.3s,baz=252,slow=20,SNR=5.7						
JNU	Nakatsue	11.65	39	LR	LR	22 20 24.5	
	comp=Z,92nm,18.4s,baz=298,slow=42						
KSRS	Korea Array	13.98	20	Pn	P	22 15 44.9	+1.8
	0.2nm,0.3s,baz=206,slow=11,SNR=12						
KSRS				LR	LR	22 21 48.2	
	comp=Z,49nm,18.6s,baz=219,slow=41						
JHJ	Hachijo jima 2	17.80	57	LR	LR	22 22 40.5	
	comp=Z,58nm,18.9s,baz=99,slow=35						
MJAR	Matsushiro Arr	18.43	45	LR	LR	22 23 55.8	
	comp=Z,60nm,19.8s,baz=200,slow=38						
CMAR	Chiang Mai Arr	22.31	259	LR	LR	22 26 15.0	
	comp=Z,70nm,19.0s,baz=80,slow=38						
GUMO	Guam	24.03	112	LR	LR	22 26 42.0	
	comp=Z,36nm,19.0s,baz=91,slow=36						
SONM	Songino Array	26.54	336	P	P	22 17 54.8	0.0
	0.8nm,0.6s,baz=147,slow=8.2,SNR=6.3						
WMQ	Urumqi	34.13	313	*e*P	P	22 19 04.3	+2.4
MKAR	Makanchi Array	38.78	315	P	P	22 19 40.1	-1.5
	0.1nm,0.3s,baz=104,slow=9.9,SNR=6.5						
PETK	Petropavlovsk-	39.27	34	LR	LR	22 35 52.8	
	comp=Z,31nm,20.4s,baz=146,slow=36						
ZALV	Zalesovo Beam	40.55	327	P	P	22 19 54.6	-1.4
	1.0nm,0.4s,baz=118,slow=8.1,SNR=4.1						
ZALV				LR	LR	22 37 09.8	
	comp=Z,23nm,18.8s,baz=252,slow=37						
WRA	Warramunga Arr	45.62	164	P	P	22 20 36.3	-1.2
	1.0nm,0.7s,baz=346,slow=8.6,SNR=5.4						
BVAR	Borovoye Array	48.06	320	P	P	22 20 55.3	-0.9
	0.6nm,0.5s,baz=108,slow=9.3,SNR=7.0						
ASAR	Alice Springs	49.10	166	P	P	22 21 04.7	+0.2
	0.3nm,0.7s,baz=336,slow=6.5,SNR=3.8						
FINES	FINESS Array B	71.71	330	P	P	22 23 36.9	-1.7
	3.1nm,1.0s,baz=79,slow=7.2,SNR=3.8						
HFS	Hagfors	77.81	331	LR	LR	23 01 15.3	
	comp=Z,37nm,19.1s,baz=70,slow=38						
NOA	NORSAR Array B	78.45	332	LR	LR	23 01 28.0	
	comp=Z,16nm,21.1s,baz=100,slow=38						

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*OMAN **22** 22:15:41.0±0.6, 27°.56N×55°.50E, h14^{km}, Error ellipse: s-maj=9.3km s-min=4.3km az=60.0*

*CSEM **22** 22:15:42.5±0.8, 27°.59N×55°.84E, h10^{km}, ML3.3, Error ellipse: s-maj=19.1km s-min=15.7km az=70.0*

*TEH **22** 22:15:44.7, 27°.30N×55°.67E, h14^{km}, ML3.2*

*ISCJB **22** 22:15:45.8±1.3, 27°.33N±0°.03×55°.62E±0°.07, h15^{km}±12^{km}, mb3.4/4, Error ellipse: s-maj=11.1km s-min=5.1km az=172.3*

*DSN **22** 22:15:45.3±1.0, 27°.44N×55°.89E, h15^{km}, ML3.3/9, Error ellipse: s-maj=20.8km s-min=6.5km az=65.0*

*IDC **22** 22:15:52.1±4.6, 26°.96N×55°.62E, h90^{km}±60^{km}, mb3.1/4, mb1 3.1/5, mb1mx2.8/57, mbtmp3.4/5, ML3.1/1, Error ellipse: s-maj=35.4km s-min=25.3km az=143.0*

ISC 22 22:15:46.7±1.4**, 27°.33N**±0°.04×**55°.69E**±0°.07**, h22**^{km}±13^{km}**, n43, σ1^{s}31**/50**, mb3.3**/4**, Southern Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GENO	Geno	0.43	81	*e*Pg	Pb	22 15 54.3	-1.5
GENO				*e*Sg	Sb	22 16 01.8	-0.2
GENO				*e*		22 16 05.4	
	comp=Z,99nm,0.1s						
GENO				*e*		22 16 05.5	
	comp=E,99nm,0.1s						
GENO				*e*		22 16 07.4	
	comp=N,99nm,0.1s						
NIAN	Nian	1.04	77	*e*		22 16 26.3	
	comp=N,99nm,0.1s						
NIAN				*e*Pg	Pb	22 16 07.6	+1.6
NIAN				*e*		22 16 27.0	
	comp=Z,99nm,0.1s						
NIAN				*e*		22 16 28.0	
	comp=E,99nm,0.2s						
SHME	Shamm	1.34	162	*e*P	Pn	22 16 09.8	-0.2
	SNR=14						
SHME				S	Sb	22 16 28.7	+0.9
SHME	Shamm	1.34	162	*e*Pn	Pn	22 16 10.1	0.0
SHME	Shamm	1.34	162	P	Pn	22 16 10.4	+0.3
	SNR=14						
KHSK	Kohestak	1.34	115	*e*Pg	Pb	22 16 11.8	+0.7
KHSK				*e*		22 16 34.7	
	comp=E,99nm,0.1s						
KHSK				*e*		22 16 34.9	
	comp=Z,99nm,0.2s						
KHSK				*e*		22 16 35.2	
	comp=N,99nm,0.1s						
BANOM	Banah	1.50	159	P	Pn	22 16 12.7	+0.4
	SNR=56						
BANOM				S	Sb	22 16 34.4	+1.8
BANOM	Banah	1.50	159	*e*P	Pn	22 16 12.5	+0.2
	SNR=58						
BANOM				S	Sb	22 16 34.1	+1.4
BANOM	Banah	1.50	159	P	Pn	22 16 12.5	+0.2
	SNR=58						
BANOM				S	Sb	22 16 34.4	+1.8
UMQ	Umm Al-Quwin	1.80	181	P	Pb	22 16 17.9	-1.0
MSFE	Esma-Masafi	2.01	168	*e*P	Pn	22 16 20.1	+0.8
	SNR=8.1						
MSFE	Esma-Masafi	2.01	168	*e*Pn	Pn	22 16 20.2	+0.9
MSFE	Esma-Masafi	2.01	168	P	Pn	22 16 18.4	-0.9
MSFE				S	Sb	22 16 46.8	-0.3
MDH	Madha	2.10	165	P	Pn	22 16 20.8	+0.3
MDH	Madha	2.10	165	P	Pn	22 16 20.8	+0.3
MDH				S	Sb	22 16 49.9	+0.3
NAZ	Nazwa, Dubai	2.33	181	P	Pn	22 16 22.5	-1.2
NAZ	Nazwa, Dubai	2.33	181	P	Pn	22 16 24.9	+1.2
NAZ	Nazwa, Dubai	2.33	181	*e*Pn	Pn	22 16 25.3	+1.6
NAZ	Nazwa, Dubai	2.33	181	P	Pn	22 16 24.9	+1.2
UOSS	Minazif	2.42	169	P	Pn	22 16 23.8	-1.2
UOSS	Minazif	2.42	169	*e*P	Pn	22 16 25.2	+0.3
	SNR=7.0						
UOSS	Minazif	2.42	169	P	Pn	22 16 25.2	+0.3
	SNR=7.0						
NGRK	Negar Kerman	2.48	21	*e*Pn	Pb	22 16 29.2	-1.6
NGRK				*e*		22 17 11.8	
	comp=E,99nm,0.1s						
NGRK				*e*		22 17 16.8	
	comp=Z,99nm,0.2s						
NGRK				*e*		22 17 22.4	
	comp=N,99nm,0.2s						
HATD	Hatta, Dubai	2.53	171	P	Pn	22 16 25.6	-0.8
HATD	Hatta, Dubai	2.53	171	*e*P	Pn	22 16 27.2	+0.8
	SNR=9.1						
HATD	Hatta, Dubai	2.53	171	*e*Pn	Pn	22 16 27.5	+1.1
HATD	Hatta, Dubai	2.53	171	P	Pn	22 16 27.2	+0.8
	SNR=9.1						
ASHO	Ashiyiah	2.66	173	*e*P	Pn	22 16 28.8	+0.6
	SNR=23						
ASHO	Ashiyiah	2.66	173	P	Pn	22 16 28.8	+0.6
	SNR=23						
ASUD	Al Ashush, Dub	2.71	187	*e*P	Pn	22 16 30.2	+1.3
	SNR=5.5						
ASUD	Al Ashush, Dub	2.71	187	*e*Pn	Pn	22 16 31.0	+2.1
ASUD	Al Ashush, Dub	2.71	187	P	Pn	22 16 30.2	+1.3
	SNR=5.5						
CHMN	Cheshme madani	3.00	32	*e*Pn	Pb	22 16 38.0	-1.6
CHMN				*e*		22 17 18.2	
	comp=Z,99nm,0.2s						
CHMN				*e*		22 17 29.2	
	comp=E,99nm,0.3s						
CHMN				*e*		22 17 32.0	
	comp=N,99nm,0.2s						
IMEH	Mehriz	4.15	347	*e*Pn	Pn	22 16 51.6	+2.7
WSAR	Wadi Sarin	4.87	146	P	Pn	22 16 59.1	+0.5
	comp=N,0.9nm,0.3s,baz=334,slow=12,SNR=11						
WSAR				S	Sn	22 17 52.5	-1.7
	comp=N,0.5nm,0.3s,baz=313,slow=19,SNR=3.8						
KLNJ	Kolanjah	5.12	317	*e*		22 17 11.0	
	comp=E,99nm,0.2s						
KLNJ				*e*		22 18 20.8	
	comp=N,99nm,0.3s						
KLNJ				*e*		22 19 10.5	
	comp=Z,99nm,0.5s						
IRAM	Ramesheh	5.31	328	*e*		22 17 10.0	
	comp=Z,97nm,0.3s						
IRAM				*e*Pn	Pn	22 17 06.6	+1.7
IRAM				*e*		22 18 12.1	
	comp=N,117nm,0.2s						
IRAM				*e*		22 18 18.0	
	comp=E,100nm,0.3s						
IGAR	Gharneh	5.96	329	*e*Pn	Pn	22 17 15.1	+1.3
IGAR				*e*		22 17 17.5	
	comp=Z,127nm,0.3s						
JLN	Jalan Bani Buh	6.17	146	P	Pn	22 17 15.9	-0.5
BRTR	Keskin Array B	22.09	310	P	P	22 20 42.1	+1.8
	comp=Z,0.7nm,0.7s,baz=125,slow=12,SNR=4.5						
BVAR	Borovoye Array	27.90	19	P	P	22 21 37.7	+2.9
	comp=Z,0.3nm,0.6s,baz=201,slow=7.7,SNR=2.2						
ZALV	Zalesovo Beam	34.13	31	P	P	22 22 30.0	+0.2
	comp=Z,1.2nm,0.6s,baz=246,slow=10,SNR=5.0						
TORD	Torodi Ar. Bea	52.22	266	P	P	22 24 53.3	-3.0
	comp=Z,0.2nm,0.5s,baz=60,slow=8.3						

IDC 22 22:18:17.3±2.7**, 1°.22N**×**123°.88E, h326**^{km}±26^{km}**, mb3.3**/8**, mb1 3.4**/8**, mb1mx3.0**/54**, mbtmp4.0**/8**, Error ellipse: s-maj=51.0km s-min=9.0km az=67.0, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	23.40	155	P	P	22 22 57.5	-0.6
	3.6nm,0.8s,baz=337,slow=10.0,SNR=20						
WRA				S	S	22 26 46.4	-0.3
	1.6nm,0.9s,baz=334,slow=16,SNR=6.6						
ASAR	Alice Springs	26.59	159	P	P	22 23 26.6	-0.1
	0.6nm,0.5s,baz=335,slow=7.2,SNR=10.0						
ASAR				PcP	PcP	22 26 42.9	+1.2
	0.6nm,0.4s,baz=344,slow=2.1,SNR=7.3						
ASAR				S	S	22 27 38.1	+1.1
	1.5nm,0.8s,baz=347,slow=21,SNR=7.9						
NWAO	Narrogin (SRO)	34.54	190	P	P	22 24 36.0	+0.1
	3.5nm,0.3s,baz=37,slow=8.8,SNR=9.9						
STKA	Stephens Creek	36.95	154	P	P	22 24 56.8	+0.5
	1.2nm,0.4s,baz=326,slow=6.0,SNR=3.0						
SONM	Songino Array	48.85	344	P	P	22 26 31.2	+0.4
	1.1nm,0.8s,baz=161,slow=8.7,SNR=8.7						
MKAR	Makanchi Array	58.06	327	P	P	22 27 36.9	-0.2
	0.4nm,0.4s,baz=124,slow=7.8,SNR=13						
MKAR				PcP	PcP	22 28 24.6	-0.4
	0.5nm,0.7s,baz=130,slow=3.2,SNR=3.8						
KURBB	Kurchatov Arra	62.37	329	P	P	22 28 05.6	-0.3
	0.9nm,0.2s,baz=144,slow=7.4,SNR=2.7						
BVAR	Borovoye Array	67.91	328	P	P	22 28 40.8	-0.5
	0.2nm,0.4s,baz=134,slow=10,SNR=3.1						
TORD	Torodi Ar. Bea	120.93	286	PKP	PKPdf	22 36 32.0	-0.3
	0.4nm,0.8s,baz=122,slow=2.9						

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*ATH **22** 22:22:58.8, 41°.06N×20°.08E, h19^{km}±1^{km}, ML2.8/7, Error ellipse: s-maj=3.1km s-min=1.3km az=152.0*

*SKO **22** 22:22:58.6, 40°.91N×19°.99E, h0^{km}, M2.4, ML2.8*

*THE **22** 22:23:00.3, 41°.00N×20°.14E, h0^{km}±2^{km}, ML2.8/9, Error*

ellipse: s-maj=2.2km s-min=0.8km az=304.0
*TIR **22** 22:23:00.1, 40°.94N×20°.22E, h12^{km}, Md3.2/9*
*BEO **22** 22:23:01.5±0.4, 41°.01N×20°.09E, h4^{km}±4^{km}, ML2.9/5*
*CSEM **22** 22:23:01.3±0.1, 40°.92N×20°.16E, h10^{km}, ML3.2, Error ellipse: s-maj=3.7km s-min=2.3km az=65.0*
*PDG **22** 22:23:01.5±0.6, 40°.99N×20°.17E, h11^{km}±1^{km}, ML3.0/10, Error ellipse: s-maj=0.8km s-min=1.1km az=0.0*
ISC 22 22:23:00.6±1.1**, 40°.96N**±0°.01×**20°.15E**±0°.01**, h3**^{km}±10^{km}**,**
n170, σ1^{s}28/247**, 19C-11D, Greece-Albania border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHR	Ohrid	0.52	72	ePg	Pg	22 23 10.8	+0.4
OHR				iSg	Sb	22 23 19.6	-0.6
OHR				eLg	Lg	22 23 19.8	
	comp=N,357nm,0.3s						
OHR				eLg	Lg	22 23 20.0	
	comp=E,596nm,0.5s						
KBN	Korca	0.59	124	P	Pg	22 23 11.2	-0.6
KBN				S	Sg	22 23 20.8	+1.4
KBN	Korca	0.59	124	iPg	Pg	22 23 10.9	-0.9
KBN	Korca	0.59	124	P	Pg	22 23 11.2	-0.6
KBN				iSg	Sg	22 23 20.3	+0.9
KBN	Korca	0.59	124	iPG	Pg	22 23 10.9	-0.9
KBN				iSG	Sg	22 23 20.3	+0.9
VLO	Vlora	0.70	226	iPg	Pb	22 23 14.7	-0.7
VLO				iSg	Sb	22 23 26.3	+0.9
VLO	Vlora	0.70	226	iPG	Pb	22 23 14.7	-0.6
VLO				iSG	Sb	22 23 26.3	+1.0
PHP	Peshkopia	0.76	17	P	Pg	22 23 14.0	-1.2
PHP	Peshkopia	0.76	17	P	Pg	22 23 14.0	-1.2
PHP	Peshkopia	0.76	17	iPg	Pg	22 23 14.9	-0.3
PHP				iSg	Sb	22 23 26.8	-0.5
PHP	Peshkopia	0.76	17	iPG	Pg	22 23 14.9	-0.3
PHP				iSG	Sb	22 23 26.8	-0.6
NEST	Nestorio	0.87	128	P	Pg	22 23 16.7	-0.6
NEST				S	Sb	22 23 30.4	-0.1
NEST				AML	AML	22 23 33.3	
	comp=N,544µm,0.7s						
NEST				AML	AML	22 23 39.0	
	comp=E,649µm,0.5s						
NEST	Nestorio	0.87	128	P	Pg	22 23 16.2	-1.1
NEST				S	Sb	22 23 30.1	-0.4
NEST	Nestorio	0.87	128	P	Pg	22 23 17.0	-0.3
NEST				S	Sb	22 23 30.1	-0.4
KRUS	Krusevo	0.93	63	ePg	Pg	22 23 17.8	-0.5
KRUS				iSg	Sb	22 23 32.5	+0.3
FNA	Florina	0.94	100	ePg	Pg	22 23 18.4	-0.3
FNA				eSg	Sb	22 23 33.2	+0.6
FNA	Florina	0.94	100	P	Pg	22 23 18.4	-0.3
FNA				S	Sb	22 23 33.6	+1.0
FNA				AML	AML	22 23 37.5	
	comp=E,2014µm,0.4s						
FNA				AML	AML	22 23 38.8	
	comp=N,2251µm,0.6s						
FNA	Florina	0.94	100	P	Pg	22 23 18.0	-0.7
FNA				S	Sb	22 23 33.1	+0.5
FNA	Florina	0.94	100	P	Pg	22 23 18.0	-0.7
FNA	Florina	0.94	100	ePg	Pg	22 23 18.4	-0.3
FNA				eSg	Sb	22 23 33.2	+0.6
PENT	Pentalofos	1.07	135	P	Pg	22 23 19.8	-1.3
PENT	Pentalofos	1.07	135	P	Pg	22 23 20.4	-0.7
SRN	Sarande	1.08	186	P	Pg	22 23 20.6	-0.7
SRN				S	Sn	22 23 38.4	+0.3
SRN	Sarande	1.08	186	P	Pg	22 23 20.6	-0.7
SRN	Sarande	1.08	186	iPg	Pg	22 23 21.1	-0.2
SRN				S	Sn	22 23 38.4	+0.3
SRN	Sarande	1.08	186	iPG	Pg	22 23 21.1	-0.2
SRN				iSG	Sn	22 23 38.2	+0.1
PUK	Puka	1.10	350	iPg	Pb	22 23 22.7	+0.3
PUK				iSg	Sn	22 23 39.1	+0.2
PUK	Puka	1.10	350	iPG	Pb	22 23 22.7	+0.3
PUK				iSG	Sn	22 23 39.1	+0.2
ULC	Ulcinj	1.22	326	⇑iPg	Pg	22 23 23.7	-0.2
ULC				eSg	Sn	22 23 42.6	+1.0
ULC	Ulcinj	1.22	326	⇑iPg	Pg	22 23 23.7	-0.2
ULC	Ulcinj	1.22	326	P	Pb	22 23 24.5	+0.2
ULC				eSg	Sn	22 23 42.6	+1.0
KASA	Kassiopi	1.22	188	P	Pn	22 23 25.0	+0.5
KASA				AML	AML	22 23 47.8	
	comp=E,981µm,0.3s						
KASA				AML	AML	22 23 47.9	
	comp=N,545µm,0.3s						
KASA	Kassiopi	1.22	188	P	Pb	22 23 24.3	0.0
KEK	Kerkira	1.27	192	P	Pg	22 23 24.8	-0.1
KEK				AML	AML	22 23 48.1	
	comp=E,782µm,0.4s						
KEK				AML	AML	22 23 50.3	
	comp=N,608µm,0.5s						
KEK	Kerkira	1.27	192	P	Pg	22 23 24.6	-0.3
KEK				S	Sn	22 23 44.9	+2.1
KEK	Kerkira	1.27	192	P	Pg	22 23 24.6	-0.3
KEK				S	Sn	22 23 44.9	+2.1
PRZK	Prizren	1.33	20	P	Pn	22 23 27.0	+0.8
PRZK				S	Sg	22 23 30.4	-13
SGD	Sagiada	1.34	177	P	Pg	22 23 25.9	-0.4
SGD	Sagiada	1.34	177	P	Pg	22 23 25.9	-0.4
SGD	Sagiada	1.34	177	P	Pg	22 23 25.9	-0.4
KZN	Kozani	1.39	117	P	Pg	22 23 26.2	-1.1
KZN				S	Sn	22 23 48.3	+2.3
KZN	Kozani	1.39	117	P	Pg	22 23 26.2	-1.1
KZN				S	Sn	22 23 48.3	+2.3
JAN	Janina	1.40	157	P	Pn	22 23 26.3	-0.8
JAN				AML	AML	22 23 54.0	
	comp=N,502µm,0.6s						
JAN				AML	AML	22 23 55.8	
	comp=E,710µm,0.4s						
JAN	Janina	1.40	157	P	Pn	22 23 26.8	-0.3
JAN	Janina	1.40	157	P	Pn	22 23 26.8	-0.3
SKO	Skopje	1.40	43	ePg	Pn	22 23 27.3	+0.2
SKO				eSg	Sb	22 23 46.4	+0.6
SKO	Skopje	1.40	43	P	Pn	22 23 26.8	-0.3
SKO	Skopje	1.40	43	ePn	Pn	22 23 27.4	+0.3
SKO				iSg	Sb	22 23 46.3	+0.5
SKO	Skopje	1.40	43	P	Pn	22 23 26.8	-0.3
SKO	Skopje	1.40	43	ePg	Pn	22 23 27.3	+0.2
SKO				eSg	Sb	22 23 46.4	+0.6
BCI	Bajram Curri	1.41	358	iPn	Pb	22 23 28.4	+0.8
BCI				iSn	Sn	22 23 49.9	+3.5
BCI	Bajram Curri	1.41	358	iPN	Pb	22 23 28.4	+0.8
BCI				iSN	Sn	22 23 49.9	+3.5
DRME	Dracevica, Mon	1.43	330	⇑iPg	Pg	22 23 27.7	-0.3
DRME				eSg	Sn	22 23 49.6	+2.8
DRME	Dracevica, Mon	1.43	330	⇑iPg	Pg	22 23 27.7	-0.3
DRME				eSg	Sn	22 23 49.6	+2.8
IGT	Igoumenitsa	1.43	174	ePg	Pn	22 23 27.7	+0.2
IGT				eSg	Sn	22 23 49.7	+3.0
IGT	Igoumenitsa	1.43	174	P	Pn	22 23 27.6	+0.2
IGT				S	Sn	22 23 47.2	+0.5
IGT				AML	AML	22 23 51.0	
	comp=N,587µm,0.5s						
IGT				AML	AML	22 23 53.5	
	comp=E,688µm,0.4s						
IGT	Igoumenitsa	1.43	174	P	Pn	22 23 27.2	-0.2
IGT				S	Sn	22 23 48.7	+2.0
IGT	Igoumenitsa	1.43	174	P	Pn	22 23 27.2	-0.2
IGT	Igoumenitsa	1.43	174	ePg	Pn	22 23 27.7	+0.2
IGT				S	Sn	22 23 48.7	+2.0
IGT				eSg	Sn	22 23 49.7	+3.0
SCTE	Santa Cesarea	1.56	236	P	Pn	22 23 26.2	-3.0
SCTE				S	Sg	22 23 51.6	+1.0
SCTE				AML	AML	22 23 52.4	
	comp=N,151µm,0.4s						
SCTE				AML	AML	22 23 56.4	
	comp=E,189µm,0.4s						
SCTE	Santa Cesarea	1.56	236	P	Pn	22 23 27.0	-2.2
SCTE				S	Sg	22 23 50.3	-0.3
PDG	Podgorica	1.62	336	ePg	Pn	22 23 29.9	-0.2
PDG				eSg	Sn	22 23 51.0	-0.4
PDG	Podgorica	1.62	336	⇑iP	Pn	22 23 29.9	-0.2
PDG	Podgorica	1.62	336	S	Sb	22 23 51.9	-0.1
PDG	Podgorica	1.62	336	ePg	Pn	22 23 29.9	-0.2
PDG	Podgorica	1.62	336	⇑iPn	Pb	22 23 30.8	-0.3
PDG				eSg	Sn	22 23 51.0	-0.4
PDG				eSn	Sg	22 23 54.1	+1.5
TTG	Podgorica	1.62	336	⇑iPn	Pb	22 23 30.8	-0.3
TTG				eSn	Sg	22 23 54.1	+1.5
BUM	Brajici-Budva	1.64	325	⇑iPn	Pn	22 23 30.4	0.0
BUM				eSn	Sg	22 23 54.7	+1.4
BUM	Brajici-Budva	1.64	325	⇑iPn	Pn	22 23 30.4	0.0
BUM				eSn	Sg	22 23 54.7	+1.4
PVY	Plav	1.64	355	⇓iPn	Pb	22 23 31.5	-0.1
PVY				eSn	Sg	22 23 54.7	+1.3
PVY	Plav	1.64	355	⇓iPn	Pb	22 23 31.5	-0.1
PVY				eSn	Sg	22 23 54.7	+1.3
PEJK	Peje	1.69	3	P	Pg	22 23 33.7	+0.7
PEJK				S	Sn	22 23 37.7	-16
STIP	Stip	1.70	64	ePn	Pb	22 23 32.9	+0.3
GRG	Griva	1.71	89	P	Pn	22 23 30.6	-0.7
GRG	Griva	1.71	89	P	Pn	22 23 30.7	-0.6
GRG				S	Sb	22 23 55.0	+0.5
GRG	Griva	1.71	89	P	Pn	22 23 30.7	-0.6
GRG				S	Sb	22 23 55.0	+0.5
CEME	Cevo	1.84	330	⇑iPn	Pn	22 23 33.0	-0.1
CEME				eSn	Sg	22 23 59.1	-0.6
CEME	Cevo	1.84	330	⇑iPn	Pn	22 23 33.0	-0.1
CEME				eSn	Sg	22 23 59.1	-0.6
VAY	Valandovo	1.86	78	P	Pn	22 23 32.3	-1.1
VAY				S	Sn	22 23 57.9	+0.4
VAY	Valandovo	1.86	78	ePn	Pn	22 23 32.9	-0.6
VAY				eSg	Sg	22 24 00.7	+0.2
VAY				eLg	Lg	22 24 05.7	
	comp=E,45nm,0.7s						
VAY				eLg	Lg	22 24 07.9	
	comp=N,55nm,0.7s						
VAY	Valandovo	1.86	78	P	Pn	22 23 32.3	-1.1
VAY				S	Sn	22 23 57.9	+0.4
BEY	Berane	1.93	354	ePn	Pn	22 23 35.2	+0.8
BEY	Berane	1.93	354	P	Pb	22 23 36.5	+0.1
BEY				eSn	Sb	22 24 01.4	+0.5
IVA	Berane	1.93	354	ePn	Pn	22 23 35.2	+0.8
IVA				eSn	Sb	22 24 01.4	+0.5
HCY	Herceg Novi	1.94	321	ePn	Pn	22 23 35.1	+0.6
HCY				eSn	Sb	22 24 01.8	+0.6
HCY	Herceg Novi	1.94	321	ePn	Pn	22 23 35.1	+0.6
HCY				eSn	Sb	22 24 01.8	+0.6
KOME	Kolasin	1.95	346	⇓iPn	Pn	22 23 35.7	+1.0
KOME				eSn	Sb	22 24 02.0	+0.3
KOME	Kolasin	1.95	346	⇓iPn	Pn	22 23 35.7	+1.0
KOME				eSn	Sb	22 24 02.0	+0.3
DSL	Palaion Diasel	1.96	158	P	Pn	22 23 35.2	+0.4
DSL	Palaion Diasel	1.96	158	P	Pn	22 23 35.2	+0.4
LIT	Litokhoron	1.98	115	P	Pn	22 23 35.0	0.0
LIT	Litokhoron	1.98	115	P	Pn	22 23 35.3	+0.3
LIT	Litokhoron	1.98	115	P	Pn	22 23 34.9	-0.1
THL	Klokotos Trika	1.99	134	P	Pn	22 23 35.8	+0.6
THL	Klokotos Trika	1.99	134	P	Pn	22 23 35.5	+0.3
THL	Klokotos Trika	1.99	134	P	Pn	22 23 35.5	+0.3
NKME	Niksic	2.02	334	⇓iPn	Pn	22 23 35.7	+0.1
NKME				eSn	Sb	22 24 03.5	0.0
NKME	Niksic	2.02	334	⇓iPn	Pn	22 23 35.7	+0.1
NKME				eSn	Sb	22 24 03.5	0.0
CGL1	Ceglie Messapi	2.05	262	ePn	Pg	22 23 40.9	+1.0
CGL1				Sn	Sb	22 24 05.1	+0.7
KNT	Kendrikon	2.09	83	P	Pn	22 23 35.6	-1.0
KNT	Kendrikon	2.09	83	P	Pn	22 23 35.8	-0.7
KNT				S	Sn	22 24 04.6	+1.6
KNT	Kendrikon	2.09	83	P	Pn	22 23 35.8	-0.7
KNT				S	Sn	22 24 04.6	+1.6
FASA	Fasano	2.12	267	ePn	Pn	22 23 36.9	-0.1
LKD2	Lefkada island	2.20	170	P	Pn	22 23 38.0	-0.1
LKD2	Lefkada island	2.20	170	P	Pn	22 23 38.0	-0.1
TREB	Trebinje	2.21	323	ePn	Pn	22 23 37.4	-0.9
TREB	Trebinje	2.21	323	ePn	Pn	22 23 37.4	-0.9
BRY	Bratogost	2.29	329	⇑iPn	Pn	22 23 40.7	+1.3
BRY				eSn	Sb	22 24 10.3	-1.0
BRY	Bratogost	2.29	329	⇑iPn	Pn	22 23 40.7	+1.3
BRY				eSn	Sb	22 24 10.3	-1.0
MASS	Massafra	2.31	263	ePn	Pb	22 23 41.7	-1.1
SJES	Sjenica	2.31	357	ePg	Pn	22 23 41.0	+1.3
SJES				eSg	Sb	22 24 12.1	+0.2
SJES	Sjenica	2.31	357	ePg	Pn	22 23 41.0	+1.3
SJES				eSg	Sb	22 24 12.1	+0.2
NOCI	Noci	2.35	267	P	Pn	22 23 37.2	-2.8
NOCI	Noci	2.35	267	P	Pn	22 23 37.6	-2.5
EVGI	Lefkada island	2.36	170	P	Pn	22 23 40.1	-0.2
EVGI	Lefkada island	2.36	170	P	Pn	22 23 40.1	-0.2
SELS	Selova	2.38	17	ePn	Pn	22 23 41.2	+0.7
UPM	Unac-Piva	2.43	338	⇑iPn	Pn	22 23 42.0	+0.6
UPM				eSn	Sn	22 24 13.3	+1.6
UPM	Unac-Piva	2.43	338	⇑iPn	Pn	22 23 42.0	+0.6
UPM				eSn	Sn	22 24 13.3	+1.6
PLE	Pljevlja	2.44	347	⇑iPn	Pn	22 23 42.4	+0.9
PLE				eSn	Sn	22 24 13.8	+1.9
PLE	Pljevlja	2.44	347	⇑iPn	Pn	22 23 42.4	+0.9
PLE				eSn	Sn	22 24 13.8	+1.9
BAI	Bari	2.48	275	ePn	Pn	22 23 38.4	-3.5
PDO	Prodromos	2.48	161	P	Pn	22 23 41.9	-0.1
PDO	Prodromos	2.48	161	P	Pn	22 23 41.9	-0.1
AGG	Agios Georgios	2.56	138	P	Pn	22 23 44.7	+1.7
AGG	Agios Georgios	2.56	138	P	Pn	22 23 44.0	+1.0
PLG	Polygyros	2.57	102	P	Pn	22 23 43.3	+0.1
PLG	Polygyros	2.57	102	P	Pn	22 23 43.3	+0.1
SRS	Serrai	2.61	85	ePn	Pn	22 23 44.9	+1.2
SRS	Serrai	2.61	85	P	Pn	22 23 43.1	-0.6
SRS	Serrai	2.61	85	P	Pn	22 23 43.1	-0.6
SRS	Serrai	2.61	85	ePn	Pn	22 23 44.9	+1.2
IVAS	Ivanjica	2.62	0	ePn	Pn	22 23 44.2	+0.3
IVAS	Ivanjica	2.62	0	ePn	Pn	22 23 44.2	+0.3
SG1	Sgolgore (BA)	2.63	269	ePn	Pn	22 23 42.7	-1.3
SG1				Sn	Sb	22 24 22.3	+1.1
STON	Ston	2.65	317	ePn	Pn	22 23 43.6	-0.6
STON	Ston	2.65	317	ePn	Pn	22 23 43.6	-0.6
STON				Sn	Sn	22 24 14.6	-2.2
STON	Ston	2.65	317	ePn	Pn	22 23 43.6	-0.6
VTS	Vitosha	2.81	53	⇓iP	Pn	22 23 43.3	-3.3
VTS	Vitosha	2.81	53	S	Sn	22 24 13.1	-8.0
VTS	Vitosha	2.81	53	P	Pn	22 23 47.0	+0.4
VTS	Vitosha	2.81	53	P	Pn	22 23 47.0	+0.4
XOR	Xorichti	2.82	123	P	Pn	22 23 46.0	-0.6
XOR	Xorichti	2.82	123	P	Pn	22 23 46.0	-0.6
NVR	Nevrokopi	2.83	81	P	Pn	22 23 46.9	+0.1
NVR	Nevrokopi	2.83	81	P	Pn	22 23 46.9	+0.1
BOVS	Bovan	2.92	23	ePn	Pn	22 23 48.1	+0.2
BOVS	Bovan	2.92	23	ePn	Pn	22 23 48.1	+0.2
BBLS	Lazići	2.96	350	ePn	Pn	22 23 48.9	+0.3
BBLS	Lazići	2.96	350	ePn	Pn	22 23 48.9	+0.3
GRUS	Gruza	2.96	8	ePn	Pn	22 23 48.0	-0.5
GRUS	Gruza	2.96	8	ePn	Pn	22 23 48.0	-0.5
DIVS	Divibare	3.14	358	ePn	Pn	22 23 51.7	+0.6
DIVS	Divibare	3.14	358	ePn	Pn	22 23 51.7	+0.6
TIP	Timpagrande	3.15	237	⇑iP	Pn	22 23 50.0	-1.2
ZAGS	Zajecar	3.25	28	ePn	Pn	22 23 53.6	+1.2
ZAGS	Zajecar	3.25	28	ePn	Pn	22 23 53.6	+1.2
MS1	Monte Sant'Ang	3.26	285	ePn	Pn	22 23 50.7	-1.9
TRUS	Trudelj	3.27	3	ePn	Pn	22 23 53.2	+0.4
TRUS	Trudelj	3.27	3	ePn	Pn	22 23 53.2	+0.4
TEKS	Tekeris	3.62	353	ePn	Pn	22 23 57.8	+0.2
TEKS	Tekeris	3.62	353	ePn	Pn	22 23 57.8	+0.2
KUBS	Kucevo	3.63	18	ePn	Pn	22 23 56.4	-1.4
KUBS	Kucevo	3.63	18	ePn	Pn	22 23 56.4	-1.4
BLY	Banja Luka	4.37	331	⇑iP	Pn	22 24 07.7	-0.2
BZS	Buzias	4.78	12	⇓iP	Pn	22 24 11.1	-2.4
BZS	Buzias	4.78	12	S	Sn	22 25 04.5	-4.9
LOT	Lotru	5.21	29	⇓iP	Pn	22 24 16.4	-3.1
VOIR		5.73	37	⇓iP	Pn	22 24 22.7	-4.0
TRPA	Tarpa	7.37	13	⇓iP	Pn	22 24 45.2	-3.9

SJA 22 22:23:30.8±0.7**, 31°.54S×71°.56W, h10**^{km}±33^{km}**, ML2.8,**
MW3.6, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTLS	Leoncito	1.95	98	iP	Pb	22 24 06.5	0.0
RTLS				iS	Sg	22 24 33.3	-0.1
RTLS				IAML		22 24 34.3	
	comp=Z,72nm,0.5s						
AUSP	Uspallata	1.97	111	iP	Pb	22 24 06.5	-0.4
AUSP				iS	Sg	22 24 33.9	-0.3
AROD	Rodeo	2.26	53	iP	Pb	22 24 11.2	-0.7
ASAL	Salagasta	2.54	115	iP	Pb	22 24 15.0	-1.5
RTCV	Cerro Valdivia	2.59	98	iP	Pb	22 24 15.5	-1.9
RTLL	Cerro Villicun	2.65	86	iP	Pb	22 24 16.1	-2.2
AMOG	MOGNA	2.69	78	iP	Pb	22 24 16.9	-2.2
AGUA	GUANDACOL	3.35	53	iP	Pn	22 24 26.1	+2.8

DJA 22 22:32:32.0±1.0**, 8°S**±7°×**12°4E**±°**, h15**^{km}**, M3.6**/5**, MLv3.6**/5**,**
Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMRI	Maumere	1.75	233	P	Pn	22 33 02.5	+0.6
MMRI				S	Sn	22 33 23.4	-0.6
SOEI	Soe	2.25	164	P	Pn	22 33 09.1	+0.2
SOEI				S	Sn	22 33 37.0	+0.4
EDFI	Ende, Flores	2.27	239	P	Pn	22 33 10.7	+1.6
EDFI				Pg	Pg	22 33 14.3	-1.2
BATI	Baumata	2.62	180	P	Pn	22 33 15.1	+1.3
BATI				S	Sn	22 33 46.7	+1.3

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*ISCJB **22** 22:46:03.6±1.1, 7°.93N±0°.06×82°.97W±0°.03, h15^{km}±8^{km}, Error ellipse: s-maj=10.7km s-min=3.9km az=24.3*
*CASC **22** 22:46:05.3±2.5, 8°.02N×82°.95W, h14^{km}±7^{km}, MD3.9, ML4.0, MW4.1(UPA)*
ISC 22 22:46:04.4±2.2**, 8°.06N**±0°.10×**82°.96W**±0°.05**, h7**^{km}±11^{km}**,**
n28, σ0^{s}89/41**, Panama-Costa Rica border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACR	Cerro Adams	0.63	341	eP	Pg	22 46 16.6	+0.1
ACR				AMP		22 46 18.4	
	comp=Z,2µm,0.2s						
ACR				eS	Sg	22 46 23.6	-1.0
TBS2		0.79	22	eP	Pg	22 46 20.8	+1.2
TBS2				eS	Sn	22 46 33.6	-0.8
EDPN	Palmar Norte	1.02	331	eP	Pb	22 46 23.6	-0.8
EDPN				eS	Sb	22 46 38.5	+0.4
EDBA	Buenos Aires	1.14	344	eP	Pn	22 46 26.3	-0.6
EDLM	Las Mercedes	1.36	333	eP	Pn	22 46 29.4	-0.5
EDDO	Dominical	1.49	323	eP	Pn	22 46 31.0	-0.5
EDDO				eS	Sn	22 46 51.2	-0.1
BUS	Buena Vista	1.68	332	eP	Pn	22 46 34.1	-0.6
BUS				eS	Sb	22 46 58.0	+0.4
URSC	Urasca	1.94	336	eP	Pn	22 46 38.0	0.0
LCR2	La Lucha 2	1.96	329	eP	Pn	22 46 38.3	-0.1
CVTR	Volcan Turrial	2.10	338	eP	Pn	22 46 41.2	+0.8
HDC	Heredia	2.24	330	eP	Pn	22 46 42.7	+0.7
HDC				eS	Sn	22 47 11.6	+1.5
CGA2	Cerro Gallo 2	2.45	323	eP	Pn	22 46 44.7	-0.2
PNME	Penonome	2.64	81	eP	Pn	22 46 46.6	-0.8
PNME				eS	Sn	22 47 18.4	-1.4
AZU	Azuero	2.68	95	eP	Pn	22 46 47.3	-0.6
AZU				eS	Sn	22 47 21.4	+0.8
JTS	JuntasAbangare	2.96	319	eP	Pn	22 46 52.8	+0.8
JTS				eS	Sn	22 47 28.0	+0.2
ZANG	Zanguenga, Cho	3.19	74	eP	Pn	22 46 55.6	+0.6
ZANG				AMP		22 47 01.6	
	comp=Z,3µm,0.5s						
ZANG				eS	Sn	22 47 33.3	-0.1
BCIP	Isla Barro Col	3.28	70	eP	Pn	22 46 56.1	-0.2
BCIP				eS	Sn	22 47 35.1	-0.6
BCIP	Isla Barro Col	3.28	70	eP	Pn	22 46 56.7	+0.4
BCIP				eS	Sn	22 47 35.0	-0.6
VCR	Vista de Mar	3.34	308	eP	Pn	22 46 57.2	-0.1
CUI	Cuipilapa	3.38	320	eP	Pn	22 46 59.2	+1.6
MESS	Mesas	3.46	321	eP	Pn	22 47 00.9	+2.1
UPA	Univ. de Panam	3.51	75	eP	Pn	22 46 59.0	-0.5
UPA				eS	Sn	22 47 40.4	-0.9
ESPN	Las Esperanzas	4.32	342	eP	Pn	22 47 11.3	+0.8
UPD2	Meteti	4.92	84	eP	Pn	22 47 18.7	-0.1
CAPC	Capurgana	5.58	84	eP	Pn	22 47 30.2	+2.3
DBBC	Dabeiba	6.77	98	eP	Pn	22 47 45.2	+0.8
HELC	Santa Helena	7.61	104	eP	Pn	22 47 56.2	+0.1
ZARC	Zaragoza, Cauc	8.05	93	eP	Pn	22 48 01.3	-0.5

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*DDA **22** 22:55:06.5, 35°.21N×28°.98E, h4^{km}, Ml2.9*
*ISK **22** 22:55:07.3, 35°.14N×29°.29E, h16^{km}, ML3.0/14*
*CSEM **22** 22:55:08.2±0.2, 35°.13N×29°.24E, h15^{km}, ML3.0, Error ellipse: s-maj=4.8km s-min=2.8km az=4.0*
*ATH **22** 22:55:08.0, 35°.10N×29°.02E, h12^{km}±3^{km}, ML2.2/1, Error ellipse: s-maj=6.5km s-min=1.2km az=138.0*
*NIC **22** 22:55:14.9±0.2, 35°.28N×29°.63E, h25^{km}, ML3.1*
ISC 22 22:55:05.2±1.7**, 35°.02N**±0°.04×**29°.20E**±0°.02**, h13**^{km}±13^{km}**,**
n91, σ1^{s}90/120**, Eastern Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSL	Kastellorizon	1.17	15	P	Pb	22 55 28.0	+0.7
KSL				S	Sn	22 55 46.4	+3.3
KSL				AML	AML	22 55 50.7	
	comp=N,167µm,0.7s						
KSL				AML	AML	22 56 07.7	
	comp=E,246µm,0.6s						
AKAS	Kas	1.25	15	PN	Pn	22 55 29.1	+0.5
AKAS				SN	Sb	22 55 44.6	-0.4
AKAS	Kas	1.25	15	iP	Pn	22 55 29.8	+1.2
AKAS				iS	Sb	22 55 44.6	-0.4
AKAS	Kas	1.25	15	ePn	Pn	22 55 29.1	+0.5
AKAS	Kas	1.25	15	P	Pn	22 55 29.8	+1.2
AKAS				S	Sb	22 55 44.6	-0.4
ARG	Arkhangelos	1.48	324	PN	Pb	22 55 33.2	+0.6
ARG	Arkhangelos	1.48	324	ePn	Pb	22 55 33.2	+0.6
FETY	Fethiye	1.61	357	PN	Pn	22 55 34.5	+1.0
FETY				SN	Sn	22 55 53.8	-0.4
FETY	Fethiye	1.61	357	P	Pn	22 55 32.5	-1.0
FETY	Fethiye	1.61	357	ePn	Pn	22 55 34.5	+1.0
FETY				eSn	Sn	22 55 53.8	-0.4
KARP	Karpathos	1.75	288	PN	Pg	22 55 38.6	-0.2
KARP	Karpathos	1.75	288	P	Pb	22 55 37.8	+0.6
KARP	Karpathos	1.75	288	P	Pb	22 55 37.8	+0.6
KARP	Karpathos	1.75	288	ePn	Pg	22 55 38.6	-0.2
ELL	Elmali	1.82	18	PN	Pn	22 55 36.8	+0.4
ELL	Elmali	1.82	18	ePn	Pn	22 55 36.8	+0.4
DALY	Dalyan (Mu˜la	1.85	346	PN	Pn	22 55 37.8	+1.2
DALY	Dalyan (Mu˜la	1.85	346	iP	Pn	22 55 37.3	+0.7
DALY				iS	Sn	22 55 57.2	-2.7
DALY	Dalyan (Mu˜la	1.85	346	P	Pn	22 55 37.3	+0.7
DALY	Dalyan (Mu˜la	1.85	346	ePn	Pn	22 55 37.8	+1.2
DALY				S	Sn	22 55 57.2	-2.7
TURN	Turunc	1.91	345	PN	Pn	22 55 39.1	+1.6
TURN	Turunc	1.91	345	iP	Pn	22 55 38.5	+1.0
TURN	Turunc	1.91	345	P	Pn	22 55 38.5	+1.0
TURN	Turunc	1.91	345	ePn	Pn	22 55 39.1	+1.6
DAT	Datca	2.15	323	PN	Pn	22 55 42.9	+1.9
DAT	Datca	2.15	323	iP	Pn	22 55 42.4	+1.4
DAT	Datca	2.15	323	P	Pn	22 55 42.4	+1.4
DAT	Datca	2.15	323	ePn	Pn	22 55 42.9	+1.9
GOLH	Golhisar	2.23	7	iP	Pn	22 55 44.9	+2.9
GOLH				iS	Sn	22 56 10.5	+0.9
GOLH	Golhisar	2.23	7	P	Pn	22 55 44.9	+2.9
GOLH				S	Sn	22 56 10.5	+0.9
YER	Yerkesik	2.24	341	PN	Pn	22 55 43.6	+1.5
YER	Yerkesik	2.24	341	ePn	Pn	22 55 43.6	+1.5
ZKR	Zakros	2.45	273	P	Pb	22 55 48.4	-0.7
ZKR				S	Sb	22 56 17.4	-1.9
ZKR	Zakros	2.45	273	P	Pb	22 55 48.2	-0.9
ZKR				S	Sb	22 56 17.3	-1.9
TAVA	DENIZLI_Tavas	2.45	355	iP	Pn	22 55 46.4	+1.3
TAVA				iS	Sn	22 56 14.9	0.0
TAVA	DENIZLI_Tavas	2.45	355	P	Pn	22 55 46.3	+1.3
TAVA				S	Sn	22 56 14.9	0.0
BODT	Bodrum	2.55	324	PN	Pn	22 55 47.9	+1.6
BODT	Bodrum	2.55	324	ePn	Pn	22 55 47.9	+1.6
AKMC	Akamas	2.57	89	P	Pn	22 55 48.9	+2.3
	baz=277						
AKMC	Akamas	2.57	89	P	Pn	22 55 48.9	+2.3
PPCY	Paphos	2.59	92	P	Pn	22 55 49.1	+2.3
	baz=280						
PPCY	Paphos	2.59	92	P	Pn	22 55 49.1	+2.3
DNZL	Cakiroluk	2.67	357	iP	Pn	22 55 50.3	+2.2
DNZL	Cakiroluk	2.67	357	P	Pn	22 55 50.3	+2.2
KEPZ	Antalya-Kepez	2.71	45	iP	Pn	22 55 50.6	+2.1
KEPZ				iS	Sn	22 56 20.0	-1.2
KEPZ	Antalya-Kepez	2.71	45	P	Pn	22 55 50.6	+2.1
KEPZ				S	Sn	22 56 20.0	-1.2
BRDR	BURDUR-Merkez	2.76	14	iP	Pn	22 55 51.6	+2.3
BRDR	BURDUR-Merkez	2.76	14	P	Pn	22 55 51.6	+2.3
ALFC	Alefka	2.79	86	P	Pn	22 55 51.5	+1.8
	baz=273						
ALFC				S	Sn	22 56 20.5	-2.7
ALFC	Alefka	2.79	86	P	Pn	22 55 51.5	+1.8
ALFC				S	Sn	22 56 20.5	-2.7
GAZI	Gazipasa	2.81	64	PN	Pn	22 55 51.4	+1.5
GAZI	Gazipasa	2.81	64	iP	Pn	22 55 49.8	-0.1
GAZI				iS	Sn	22 56 22.1	-1.6
GAZI	Gazipasa	2.81	64	P	Pn	22 55 49.8	-0.1
GAZI	Gazipasa	2.81	64	ePn	Pn	22 55 51.4	+1.5

GAZI				S	Sn	22 56 22.1	-1.6
AYDN	Tasoluk	2.84	338	*i* P	Pn	22 55 53.2	+2.8
AYDN				*i* S	Sn	22 56 23.7	-0.8
AYDN	Tasoluk	2.84	338	P	Pn	22 55 53.2	+2.8
AYDN				S	Sn	22 56 23.7	-0.8
SUTC	Sutluce-Ispart	2.85	30	PN	Pn	22 55 51.6	+1.0
SUTC	Sutluce-Ispart	2.85	30	*e*Pn	Pn	22 55 51.6	+1.0
NPS	Neapolis	2.95	276	P	Pb	22 55 56.2	-1.5
NPS				S	Sb	22 56 29.5	-4.2
NPS	Neapolis	2.95	276	P	Pb	22 55 55.6	-2.1
NPS				S	Sb	22 56 29.4	-4.2
LEF	Lefka	3.03	87	PN	Pn	22 55 54.4	+1.5
LEF	Lefka	3.03	87	P	Pn	22 55 54.4	+1.5
LEF				S	Sn	22 56 27.7	-1.3
SZAC	Souni	3.04	94	P	Pn	22 55 55.8	+2.7
	baz=281						
SZAC	Souni	3.04	94	P	Pn	22 55 55.8	+2.7
LAST	Lasithi	3.06	274	P	Pb	22 55 57.6	-1.9
LAST				S	Sn	22 56 31.1	+1.3
LAST	Lasithi	3.06	274	P	Pb	22 55 57.1	-2.4
LAST				S	Sn	22 56 31.5	+1.7
AYDB	Zeytinkoy-Aydi	3.10	341	PN	Pn	22 55 55.6	+1.5
AYDB	Zeytinkoy-Aydi	3.10	341	*e*Pn	Pn	22 55 55.6	+1.5
MAMC	Mammari	3.30	86	P	Pn	22 55 59.0	+2.4
	baz=273						
MAMC	Mammari	3.30	86	P	Pn	22 55 59.0	+2.4
TEKE	Tekeli-Mersin	3.38	70	PN	Pn	22 55 59.5	+1.8
TEKE	Tekeli-Mersin	3.38	70	*e*Pn	Pn	22 55 59.5	+1.8
CSS	Mathiatis	3.39	90	PN	Pn	22 56 00.2	+2.3
CSS	Mathiatis	3.39	90	P	Pn	22 56 00.0	+2.1
	baz=276						
CSS				S	Sn	22 56 35.9	-2.2
CSS	Mathiatis	3.39	90	*e*Pn	Pn	22 56 00.2	+2.3
CSS				S	Sn	22 56 35.9	-2.2
ERMK	Ermenek	3.42	61	*i* P	Pn	22 56 01.3	+2.8
ERMK	Ermenek	3.42	61	P	Pn	22 56 01.3	+2.8
SIVA	Sivas	3.60	271	P	Pn	22 56 04.8	+4.0
SIVA				S	Sn	22 56 44.6	+1.4
SIVA	Sivas	3.60	271	P	Pn	22 56 04.5	+3.7
SIVA				S	Sn	22 56 45.0	+1.8
IKL	Isikli	3.85	70	PN	Pn	22 56 06.2	+2.0
IKL	Isikli	3.85	70	*e*Pn	Pn	22 56 06.2	+2.0
KONT	Konya--Tatoy	3.87	40	PN	Pn	22 56 06.3	+1.8
KONT	Konya--Tatoy	3.87	40	*e*Pn	Pn	22 56 06.3	+1.8
KEBE	Keben-Mersin	3.94	68	PN	Pn	22 56 07.4	+1.9
KEBE	Keben-Mersin	3.94	68	*e*Pn	Pn	22 56 07.4	+1.9
EREN	Erenkoy	4.10	81	PN	Pn	22 56 10.0	+2.4
EREN	Erenkoy	4.10	81	*e*Pn	Pn	22 56 10.0	+2.4
IMMV	Iera Moni Meta	4.29	277	P	Pn	22 56 13.0	+2.8
IMMV	Iera Moni Meta	4.29	277	P	Pn	22 56 13.5	+3.2
ANKY	Antikythira Is	4.89	282	P	Pn	22 56 19.4	+1.0
ANKY	Antikythira Is	4.89	282	P	Pn	22 56 20.9	+2.4

IDC 22 23:16:06.1±1.2, 30°.01S×178°.50W, h0^{km}, mb4.0/4, mb1 4.2/4, mb1mx3.8/44, mbtmp4.0/4, Error ellipse: s-maj=34.9km s-min=16.0km az=134.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.91	34	Pn	Pn	23 16 26.8	+0.7
	83nm,0.3s,baz=253,slow=19,SNR=2.2						
RAO				Sn	Sn	23 16 39.5	-0.5
	288nm,0.3s,baz=150,slow=20,SNR=9.8						
STKA	Stephens Creek	34.15	256	P	P	23 22 53.7	+0.8
	2.1nm,0.7s,baz=90,slow=11,SNR=4.8						
ASAR	Alice Springs	42.70	267	P	P	23 24 04.8	-0.2
	0.7nm,0.5s,baz=102,slow=7.5,SNR=11						
WRA	Warramunga Arr	43.65	272	P	P	23 24 12.1	-0.6
	1.1nm,0.3s,baz=110,slow=8.1,SNR=20						
QSPA	South Pole Qui	60.09	180	P	P	23 26 14.7	-0.2
	0.9nm,0.4s,baz=38,slow=4.7,SNR=5.0						

SJA 22 23:24:39.2±0.8, 29°.43S×70°.80W, h22^{km}±52^{km}, ML2.8, MW3.6, Central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AROD	Rodeo	1.36	123	*i* P	Pb	23 25 06.0	+1.7
AROD				*i* S	Sb	23 25 25.5	+4.0
ACDV	Cuesta del Vie	1.63	117	*i* P	Pb	23 25 09.4	+0.6
ACDV				*i* S	Sb	23 25 31.2	+2.2
AGUA	GUANDACOL	2.01	92	*i* P	Pb	23 25 13.9	-1.3
AGUA				*i* S	Sb	23 25 39.8	0.0
VCA	Vinchina	2.37	74	*i* P	Pb	23 25 19.3	-2.0
VCA				*i* S	Sb	23 25 49.8	-0.5
VCA				IAML		23 25 53.6	
	comp=Z,50nm,0.3s						
AMOG	MOGNA	2.50	128	*i* P	Pb	23 25 21.1	-2.3

DJA 22 23:31:08.8±1.0, 2°N±5°×9°3E±°, h10^{km}, M4.4/6, mb4.5/2, MLv4.3/6, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNSI	Sinabang, Aceh	3.17	87	P	Pg	23 32 07.5	-2.1
MLSI	Meulaboh, Aceh	3.81	58	P	Pn	23 32 07.8	+0.2
MLSI				S	Sn	23 32 53.2	+0.6
BSI	Banda Aceh	3.87	33	P	Pn	23 32 05.9	-2.6
GSI	Gunungsitoli	4.51	102	P	Pn	23 32 18.2	+1.0
GSI				S	Sn	23 33 10.7	+0.9
KCSI	Kotacane, Aceh	4.78	74	P	Pn	23 32 23.0	+2.1
KCSI				S	Sn	23 33 17.9	+1.5
LHMI	Lhok Sumawe	4.81	52	P	Pn	23 32 22.4	+1.1
PBSI	Pulau Batu	5.60	114	P	Pn	23 32 32.0	-0.3
	99nm,0.8s,0.4nm						
PBSI				S	Sn	23 33 36.2	-0.6
	99nm,0.8s,0.4nm						

IDC 22 23:34:26.1±2.2, 6°.45S×129°.73E, h0^{km}, mb3.5/1, mb1 3.8/3, mb1mx3.4/46, mbtmp3.6/3, ML3.7/2, Error ellipse: s-maj=136.8km s-min=30.9km az=69.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.14	162	Pn	Pn	23 37 47.8	-0.1
	0.4nm,0.3s,baz=345,slow=13,SNR=14						
WRA				Sn	Sn	23 40 12.8	-13
	0.5nm,0.3s,baz=336,slow=24,SNR=6.3						
ASAR	Alice Springs	17.59	167	P	Pn	23 38 33.0	+0.1
	0.2nm,0.3s,baz=344,slow=10,SNR=15						
ASAR				S	Sn	23 41 34.1	-15
	baz=353,slow=26,SNR=2.1						
MKAR	Makanchi Array	67.62	327	P	P	23 45 24.9	0.0
	0.3nm,0.6s,baz=122,slow=5.4,SNR=3.4						

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*IDC **23** 00:07:06.4±1.2, 55°.02N×161°.98E, h0^{km}, mb3.5/4, mb1 3.8/5, mb1mx3.3/72, mbtmp3.6/5, MS3.1/2, Ms1 3.1/2, ms1mx2.5/63, Error ellipse: s-maj=41.9km s-min=24.4km az=135.0*

*MOS **23** 00:07:09.5±1.9, 54°.77N×162°.14E, h42^{km}, mb4.0/2, Error ellipse: s-maj=8.5km s-min=4.8km az=81.5*

*KRSC **23** 00:07:09.5±0.7, 54°.77N×162°.14E, h42^{km}±8^{km}, ML4.3*

*ISCJB **23** 00:07:11.2±0.4, 54°.80N±0°.02×162°.12E±0°.06, h43^{km}±6^{km}, mb3.4/4, MS3.9/1, Error ellipse: s-maj=6.5km s-min=3.4km az=21.5*

ISC 23 00:07:11.0±1.0, 54°.85N±0°.03×162°.10E±0°.04, h30^{km}±7^{km}, n86, σ1^{s}.25/107, mb3.5/4, Near east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKZ	Mys Kozlova	0.36	216	*i* P	Pb	00 07 19.2	-0.1
MKZ				*i* S	Sb	00 07 24.9	0.0
MKZ	Mys Kozlova	0.36	216	PN	Pb	00 07 19.2	-0.1
MKZ				S	Sb	00 07 24.9	0.0
TUMD	Tumrok D	1.04	291	*i* P	Pn	00 07 29.4	-0.2
TUMD				*e*S	Sb	00 07 43.4	-0.3
TUMR	Tumrok	1.20	292	*e*P	Pn	00 07 32.3	+0.3
TUMR	Tumrok	1.20	292	PN	Pn	00 07 32.3	+0.3
ZLN	Zelenaya	1.38	328	*e*P	Pn	00 07 35.5	+1.1
ZLN				*e*S	Sb	00 07 53.6	0.0
ZLN	Zelenaya	1.38	328	PN	Pn	00 07 35.5	+1.1
ZLN				S	Sb	00 07 53.6	0.0
KMNR	Kamenistaya	1.40	311	*i* P	Pb	00 07 35.8	-0.8
KMNR	Kamenistaya	1.40	311	PN	Pb	00 07 35.8	-0.8
BZMR	Bezymyannaya	1.42	321	*e*P	Pn	00 07 35.8	+0.8
BZMR	Bezymyannaya	1.42	321	PN	Pn	00 07 35.8	+0.8
KBTR	Krutoberegovo	1.42	16	*e*P	Pn	00 07 34.8	-0.1
KBTR				*e*S	Sn	00 07 53.1	+0.5
KBTR	Krutoberegovo	1.42	16	PN	Pn	00 07 34.8	-0.1
KBTR				S	Sn	00 07 53.1	+0.5
BZWR	Bezymyannyi-We	1.44	321	*e*P	Pn	00 07 35.2	-0.1
BZWR	Bezymyannyi-We	1.44	321	PN	Pn	00 07 35.2	-0.1
LGNR	Loginova	1.48	328	*e*P	Pb	00 07 37.2	-0.8
LGNR	Loginova	1.48	328	PN	Pb	00 07 37.2	-0.8
CIRR	Tsirk	1.48	329	*e*P	Pn	00 07 36.7	+0.9
CIRR	Tsirk	1.48	329	PN	Pn	00 07 36.7	+0.9
KIRR	Kirishev	1.49	319	*e*P	Pn	00 07 36.8	+0.8
KIRR	Kirishev	1.49	319	PN	Pn	00 07 36.8	+0.8
KPT	Kopyto	1.55	317	*e*P	Pn	00 07 37.7	+1.0
KPT	Kopyto	1.55	317	PN	Pn	00 07 37.7	+1.0
KRSR	Krestovskiy	1.62	328	*e*P	Pn	00 07 39.1	+1.4
KRSR	Krestovskiy	1.62	328	PN	Pn	00 07 39.1	+1.4
KLY	Klyuchi	1.68	331	*e*P	Pn	00 07 38.6	+0.2
KLY				*e*S	Sn	00 07 59.8	+0.9
KLY	Klyuchi	1.68	331	PN	Pn	00 07 38.6	+0.2
KLY				S	Sn	00 07 59.8	+0.9
KII	Karymskiy	1.75	243	*e*P	Pn	00 07 39.5	+0.1
KII	Karymskiy	1.75	243	PN	Pn	00 07 39.5	+0.1
KOZ	Kozyrevsk	1.75	315	*e*P	Pn	00 07 40.8	+1.4
KOZ	Kozyrevsk	1.75	315	PN	Pn	00 07 40.8	+1.4
SMKR	Semkarok	1.77	349	*e*P	Pn	00 07 41.2	+1.4
SMKR				*e*S	Sb	00 08 03.3	-1.5
SMKR	Semkarok	1.77	349	PN	Pn	00 07 41.2	+1.4
SMKR				S	Sb	00 08 03.3	-1.5
BDR	Baidarnaya	1.80	344	*e*P	Pn	00 07 40.8	+0.7
BDR	Baidarnaya	1.80	344	PN	Pn	00 07 40.8	+0.7
SRKR	Sorokina	1.89	344	*e*P	Pn	00 07 42.5	+1.2
SRKR	Sorokina	1.89	344	PN	Pn	00 07 42.5	+1.2
SPN	Mys Shipunski	2.14	216	*i* P	Pn	00 07 43.1	-1.6
SPN				*e*S	Sn	00 08 07.2	-3.0
SPN	Mys Shipunski	2.14	216	PN	Pn	00 07 43.1	-1.6
SPN				S	Sn	00 08 07.2	-3.0
ESO	Esso	2.22	301	*e*P	Pn	00 07 46.7	+0.9
ESO	Esso	2.22	301	PN	Pn	00 07 46.7	+0.9
BKI	Bering	2.26	79	*e*P	Pn	00 07 47.7	+1.4
BKI				*e*S	Sn	00 08 14.2	+1.1
BKI	Bering	2.26	79	PN	Pn	00 07 47.7	+1.4
BKI				S	Sn	00 08 14.2	+1.1
NLC	Nalytchevo	2.34	225	*e*P	Pn	00 07 47.1	-0.3
NLC				*e*S	Sn	00 08 14.9	-0.1
NLC	Nalytchevo	2.34	225	PN	Pn	00 07 47.1	-0.3
NLC				S	Sn	00 08 14.9	-0.1
SDLR	Sedlovina	2.46	232	*e*P	Pn	00 07 50.0	+0.8
SDLR	Sedlovina	2.46	232	PN	Pn	00 07 50.0	+0.8
SMAR	Somma	2.51	232	*e*P	Pn	00 07 50.8	+0.8
SMAR	Somma	2.51	232	PN	Pn	00 07 50.8	+0.8
KRX	Arik	2.52	235	*e*P	Pn	00 07 51.4	+1.4
KRX	Arik	2.52	235	PN	Pn	00 07 51.4	+1.4
UGLR	Uglovaya	2.53	231	*e*P	Pn	00 07 51.3	+1.1
UGLR	Uglovaya	2.53	231	PN	Pn	00 07 51.3	+1.1
AVH	Avacha	2.54	233	*e*P	Pn	00 07 51.3	+1.1
AVH	Avacha	2.54	233	PN	Pn	00 07 51.3	+1.1
KOK	Koryaka	2.57	234	*e*P	Pn	00 07 52.0	+1.3
KOK	Koryaka	2.57	234	PN	Pn	00 07 52.0	+1.3
GNL	Ganaly	2.70	246	*e*P	Pn	00 07 53.6	+1.1
GNL	Ganaly	2.70	246	PN	Pn	00 07 53.6	+1.1
PET	Petropavlovsk	2.73	229	*e*P	Pn	00 07 53.7	+0.8
PET				*e*S	Sn	00 08 25.7	+0.8
PET	Petropavlovsk	2.73	229	PN	Pn	00 07 53.7	+0.8
PET				S	Sn	00 08 25.7	+0.8
KRMR	Karymshinskiy	3.10	231	*e*P	Pn	00 07 59.4	+1.5
KRMR				*e*S	Sn	00 08 36.1	+2.2
KRMR	Karymshinskiy	3.10	231	PN	Pn	00 07 59.4	+1.5
KRMR				S	Sn	00 08 36.1	+2.2
PETK	Petropavlovsk-	3.13	238	Pn	Pn	00 07 59.5	+1.2
	baz=69,slow=19						
PETK				Sn	Sn	00 08 39.0	+4.4
	baz=78,slow=23						
PETK				LR	LR	00 09 15.5	
	comp=Z,47nm,19.0s,baz=101,slow=41						
RUS	Russkaya	3.23	223	*e*P	Pn	00 07 59.4	-0.2
RUS				*e*S	Sn	00 08 36.9	0.0
RUS	Russkaya	3.23	223	PN	Pn	00 07 59.4	-0.2
RUS				S	Sn	00 08 36.9	0.0
MTVR	Mutnovka	3.32	226	*e*P	Pn	00 08 02.1	+1.0
MTVR	Mutnovka	3.32	226	PN	Pn	00 08 02.1	+1.0
APC	Apacha	3.50	239	*e*P	Pn	00 08 05.5	+2.1
APC	Apacha	3.50	239	PN	Pn	00 08 05.5	+2.1
ASAK	Asacha	3.51	227	*e*P	Pn	00 08 05.4	+1.8
ASAK	Asacha	3.51	227	PN	Pn	00 08 05.4	+1.8
KDTR	Khodutka, Kamc	3.88	220	*e*P	Pn	00 08 08.2	-0.4
KDTR				*e*S	Sn	00 08 53.4	+0.3
MIPR	Malaya Ipel'ka	4.09	233	*e*P	Pn	00 08 13.0	+1.4
MIPR	Malaya Ipel'ka	4.09	233	PN	Pn	00 08 13.0	+1.4
PAU	Pauzhetka	4.64	225	*e*P	Pn	00 08 21.6	+2.5
PAU	Pauzhetka	4.64	225	PN	Pn	00 08 21.6	+2.5
ILAR	Eielson Array	26.75	48	P	P	00 12 47.6	0.0
	0.2nm,0.7s,baz=271,slow=9.4,SNR=4.3						
H11N2	WAKE ISLAND Hy	35.25	172	T	T	00 51 17.8	
	baz=355,slow=76,SNR=72						
H11N3	WAKE ISLAND Hy	35.26	172	T	T	00 51 19.0	
	baz=355,slow=76,SNR=76						
H11N1	WAKE ISLAND Hy	35.26	172	T	T	00 51 24.2	
	baz=355,slow=76,SNR=83						
KURK	Kurchatov	47.82	302	P	P	00 15 44.2	-1.2
KURBB	Kurchatov Arra	47.92	301	P	P	00 15 44.2	-2.0
	0.2nm,0.5s,baz=58,slow=7.4,SNR=2.6						
WRA	Warramunga Arr	78.18	207	P	P	00 19 07.3	-0.1
	0.6nm,0.8s,baz=25,slow=5.9,SNR=4.5						
ASF	Jabal al Asfar	81.40	316	LR	LR	01 01 50.7	
	comp=Z,50nm,18.5s,baz=112,slow=40						
ASAR	Alice Springs	81.85	206	P	P	00 19 28.1	+1.0
	0.8nm,0.7s,baz=21,slow=6.0,SNR=7.8						

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*OTT **23** 00:09:32.7±0.2, 73°.32N×70°.45W, h18^{km}, ML3.5/10, Baffin Bay Seismic Zone. 256km east from Pond Inlet, Nu*

ISC 23 00:09:29.8±0.9, 73°.23N±0°.06×70°.61W±0°.05, h10^{km}, n13, σ3^{s}.26/25, Baffin Bay

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CLRN	Clyde River	2.84	166	PN	Pn	00 10 19.2	+4.1
CLRN				SN	Sn	00 10 50.7	+1.4
CLRN				Trac		00 10 52.4	
	comp=Z,66nm,0.2s						
MRYN	Mary River	3.29	239	PN	Pn	00 10 24.4	+3.2
MRYN				SN	Sn	00 11 02.9	+2.6
MRYN				Trac		00 11 09.9	
	comp=Z,9.2nm,0.2s						
TULEG	Thule	3.36	7	PN	Pn	00 10 24.0	+1.8
TULEG				SN	Sn	00 10 59.2	-2.8
TULEG				Trac		00 11 00.9	
	comp=Z,18nm,0.2s						
KULLO	Kullorsuaq	3.96	64	PN	Pn	00 10 31.4	+1.0
KULLO				SN	Sn	00 11 13.8	-3.2
KULLO				Trac		00 11 16.1	
	comp=Z,13nm,0.1s						
KULLO	Kullorsuaq	3.96	64	*i* P	Pn	00 10 31.9	+1.4
KULLO				*i* S	Sn	00 11 13.0	-3.9
ILON	Igloolik, Nuna	5.29	228	PN	Pn	00 10 52.0	+3.3
ILON				SN	Sn	00 11 49.5	0.0
ILON				Trac		00 11 55.2	
	comp=Z,6.0nm,0.2s						
RES	Resolute Bay	6.86	294	PN	Pn	00 11 11.6	+1.4
RES				SN	Sn	00 12 24.7	-3.4
RES				Trac		00 12 54.8	
	comp=Z,24nm,1.2s						
SMLN	Simpson Lake,	8.35	247	PN	Pn	00 11 34.1	+3.4
SMLN				SN	Sn	00 13 01.9	-3.0
SMLN				Trac		00 13 17.2	
	comp=Z,17nm,0.9s						
CDKN	Chidliak Camp	9.17	168	PN	Pn	00 11 44.4	+2.6
CDKN				SN	Sn	00 13 20.7	-4.2
CDKN				Trac		00 13 25.4	
	comp=Z,3.8nm,0.2s						
SUMG	Summit	9.42	78	*i* P	Pn	00 11 47.1	+1.5
SUMG				*i* S	Sn	00 13 23.7	-7.9
STLN	Stellar Camp,	9.55	243	PN	Pn	00 11 50.5	+3.3
STLN				SN	Sn	00 13 29.7	-4.6
STLN				Trac		00 13 39.1	
	comp=Z,31nm,1.2s						
FRB	Frobisher Bay	9.56	174	PN	Pn	00 11 46.3	-0.9
FRB				SN	Sn	00 13 30.1	-4.4
FRB				Trac		00 13 35.0	
	comp=Z,2.1nm,0.1s						
CB31	Cambridge Bay	11.73	267	PN	Pn	00 12 18.7	+1.8
CB31				SN	Sn	00 14 21.9	-5.7
CB31				Trac		00 14 53.3	
	comp=Z,3.8nm,0.6s						

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*IDC **23** 00:15:06.0±1.2, 29°.82N×88°.09E, h0^{km}, mb3.9/17, mb1 4.0/19, mb1mx3.8/68, mbtmp3.9/19, ML3.3/1, Error ellipse: s-maj=26.2km s-min=23.4km az=136.0*

*ISCJB **23** 00:15:09.7±0.3, 29°.78N±0°.04×87°.87E±0°.05, h37^{km}, mb3.9/19, Error ellipse: s-maj=7.1km s-min=4.6km az=137.5*

*NEIC **23** 00:15:11.1±0.5, 29°.79N×88°.02E, h35^{km}, mb4.3/2, Error ellipse: s-maj=13.5km s-min=9.0km az=206.0*

*NDI **23** 00:15:12.0±2.7, 29°.78N×87°.93E, h35^{km}, ML4.3, mb4.3(NEIC)*

*BJI **23** 00:15:15.3, 30°.49N×88°.58E, h15^{km}, mb4.3/3, mB4.5/2, ML4.0/1, Ms3.9/1, Ms7 3.8/1*

ISC 23 00:15:11.3±0.5, 29°.76N±0°.06×87°.85E±0°.05, h37^{km}, n43, σ1^{s}.85/47, mb4.1/19, 1C, Xizang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTK	Tadong	2.52	165	*e*P	Pn	00 15 52.0	+2.2
GTK				*e*S	Sn	00 16 19.5	+0.1
GTK				IAML		00 16 43.0	
	comp=N,3µm,1.3s						
LSA	Lhasa	2.87	90	Pn	Pn	00 15 56.8	+1.9
LSA				Sn	Sn	00 16 29.4	+1.0
LSA	Lhasa	2.87	90	*e*Pb	Pn	00 15 55.2	+0.3
LSA				*e*Sg	Sn	00 16 30.2	+1.8
TURI	Tura	4.74	152	*e*P	Pn	00 16 20.1	0.0
TURI				*e*S	Sn	00 17 10.4	-3.5
GUWA	GUWAHATI	4.92	135	*e*P	Pn	00 16 23.5	+1.0
TEZP	TEZPUR	5.37	124	*e*P	Pn	00 16 27.5	-1.4
TEZP				*e*x	x	00 17 17.1	
SHL	Shillong	5.50	138	*e*P	Pn	00 16 32.0	+1.2
BOK	Bokaro	6.20	197	*e*P	Pn	00 16 40.3	+0.1
MOKO	MOKOCHONG	6.81	119	*e*P	Pn	00 16 47.6	-1.2
BELO	BELONIA	7.24	153	*e*P	Pn	00 16 54.6	+0.1
DDI	Dehra Dun	8.51	276	*e*P	Pn	00 17 12.0	+0.1
DDI				*e*S	Sn	00 18 40.2	-6.5
DDI				IAML		00 20 27.7	
	comp=E,125nm,0.5s						
DDI				IAML		00 20 27.9	
	comp=N,167nm,0.7s						
SMLA	Simla	9.32	281	*e*P	Pn	00 17 26.0	+2.9
BWNR	Bhubaneshwar	9.61	192	*e*x	Pn	00 17 32.1	+5.1
DHRM	DHARAMSHALA	10.22	287	*e*P	Pn	00 17 37.1	+1.5
BHPL	Bhopal	11.37	238	*e*P	Pn	00 17 53.4	+2.2
NIL	Nilore	13.02	291	*e*Pn	Pn	00 18 14.3	+0.6
	comp=N,17nm,0.7s						
WMQ	Urumqi	14.03	360	*e*P	Pn	00 18 24.3	-3.2
CMAR	Chiang Mai Arr	15.13	136	Pn	Pn	00 18 38.6	-3.7
	baz=318,slow=13,SNR=4.5						
MKAR	Makanchi Array	17.55	347	P	Pn	00 19 12.8	-0.1
	comp=N,0.1nm,0.3s,baz=153,slow=11,SNR=11						
KURBB	Kurchatov Arra	21.98	344	P	P	00 20 01.4	-0.5
	comp=N,4.6nm,0.8s,baz=158,slow=11,SNR=19						
KURK	Kurchatov	22.05	344	*e*P	P	00 20 01.8	-0.8
SONM	Songino Array	23.02	33	P	P	00 20 12.0	-1.0
	comp=N,1.5nm,0.9s,baz=220,slow=12,SNR=8.5						
ZALV	Zalesovo Beam	24.27	356	P	P	00 20 24.8	+0.1
	comp=N,1.0nm,0.7s,baz=181,slow=10,SNR=2.7						
TLY	Talaya	24.85	24	*e*P	P	00 20 28.5	-1.5
	comp=N,7.9nm,0.8s						
GEYT	Alibeck	25.92	296	P	P	00 20 40.1	+0.1
	comp=N,1.4nm,0.9s,baz=141,slow=9.6,SNR=4.2						
BVAR	Borovoye Array	26.54	336	P	P	00 20 45.9	+0.5
	comp=N,0.5nm,0.7s,baz=144,slow=10,SNR=4.7						
ARU	Arti	33.70	331	P	P	00 21 48.8	+0.2
	comp=N,2.5nm,0.8s,baz=180,slow=7.1						
BRTR	Keskin Array B	45.05	298	P	P	00 23 25.2	+1.6
	comp=N,0.4nm,0.6s,baz=102,slow=8.4,SNR=4.0						
AKASG	Malin Array Be	48.01	313	P	P	00 23 47.2	+0.8
	comp=N,2.6nm,0.7s,baz=81,slow=6.9,SNR=7.1						
KIEV	Kiev	48.02	313	*e*P	P	00 23 47.0	+0.5
	comp=N,1.7nm,0.6s						
MLR	Muntele Rosu	50.28	306	P	P	00 24 06.2	+2.1
	comp=N,3.7nm,0.8s,baz=48,slow=3.0,SNR=5.9						
MLR	Muntele Rosu	50.28	306	⇑*i*P	P	00 24 07.3	+3.2
FINES	FINESS Array B	50.90	327	P	P	00 24 07.8	-0.5
	comp=N,2.8nm,0.9s,baz=110,slow=8.3,SNR=9.2						
HFS	Hagfors	56.88	325	P	P	00 24 52.9	+0.8
	comp=N,2.9nm,0.7s,baz=108,slow=14,SNR=6.7						
NB2	NORSAR Subarra	58.05	326	P	P	00 25 00.4	+0.1
	comp=Z,0.8nm,0.6s,baz=85,slow=6.9						
NOA	NORSAR Array B	58.05	326	P	P	00 25 00.8	+0.5
	comp=Z,1.5nm,0.7s,baz=86,slow=6.9,SNR=4.5						
GERES	GERESS Array B	58.15	312	P	P	00 25 02.9	+1.6
	comp=Z,0.5nm,0.6s,baz=74,slow=4.9,SNR=5.9						
ILAR	Eielson Array	76.64	21	P	P	00 26 57.4	-0.5
	comp=Z,0.6nm,0.8s,baz=289,slow=5.2,SNR=6.1						
TORD	Torodi Ar. Bea	80.30	280	P	P	00 27 20.5	+1.6
	comp=Z,0.8nm,0.8s,baz=67,slow=4.0						
KOWA	Kowa	84.53	283	P	P	00 27 43.1	+2.2
	comp=Z,1.3nm,0.8s,baz=88,slow=11,SNR=3.1						
YKA	Yellowknife Ar	86.31	10	P	P	00 27 47.8	-1.1
	comp=Z,0.9nm,0.8s,baz=334,slow=5.7,SNR=3.8						
SIV	San Ignacio	148.37	289	PKPbc	PKPbc	00 34 55.0	+0.7
	comp=Z,1.3nm,0.9s,baz=51,slow=7.3,SNR=7.8						
CPUP	Villa Florida	149.15	268	PKPbc	PKPbc	00 34 57.2	+1.2
	comp=Z,2.1nm,0.7s,baz=48,slow=4.5,SNR=7.0						

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*IDC **23** 00:21:21.2±3.1, 12°.90N×50°.20E, h0^{km}, mb3.7/8, mb1 3.8/9, mb1mx3.5/70, mbtmp3.8/9, ML4.1/1, MS3.6/6, Ms1 3.6/6, ms1mx2.9/69, Error ellipse: s-maj=65.8km s-min=24.4km az=150.0*

*ISCJB **23** 00:21:24.2±0.9, 13°.35N±0°.09×49°.86E±0°.07, h10^{km}, mb3.6/8, MS3.7/5, Error ellipse: s-maj=12.4km s-min=9.2km az=172.5*

*DHMR **23** 00:21:27.8±3.6, 13°.36N×49°.63E, h26^{km}±999^{km}, ML3.6*

ISC 23 00:21:26.8±1.3, 13°.5N±0°.1×49°.79E±0°.09, h10^{km}, n17, σ1^{s}.84/15, mb3.7/8, MS3.6/5, 2C, Eastern Gulf of Aden

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MUKL	Al Mukalla	1.24	324	*i* P	Pb	00 21 48.6	-1.6
MUKL				*i* S	Sn	00 22 07.2	+0.3
MUKL				AML	AML	00 22 07.8	
	comp=N,603nm,0.6s						
BDHA	Al Bayda'	4.13	277	⇑*i*P	Pn	00 22 30.5	+0.3
BDHA				*e*		00 22 30.7	
	baz=110,slow=16						
BDHA				AML	AML	00 22 31.4	
	comp=E,293nm,0.4s						
BDHA				*i* S	Sn	00 23 19.9	+1.2
LBOS		4.43	276	⇑*i*P	Pn	00 22 34.6	+0.2
LBOS				*i* S	Sn	00 23 23.6	-2.6
ATD	Arta Tunnel	7.04	255	Pn	Pn	00 23 10.9	+0.8
	comp=E,3.0nm,0.3s,baz=106,slow=19,SNR=6.4						
WSAR	Wadi Sarin	12.83	40	LR	LR	00 29 34.3	
	comp=E,73nm,18.8s,baz=234,slow=38						
ASF	Jabal al Asfar	22.04	330	P	P	00 26 25.9	+4.1
	comp=E,2.4nm,0.9s,baz=285,slow=4.3,SNR=5.3						
GEYT	Alibeck	25.46	15	P	P	00 26 56.5	+1.4
	comp=E,1.6nm,0.8s,baz=267,slow=13,SNR=3.7						
GEYT				LR	LR	00 37 38.9	
	comp=E,31nm,20.6s,baz=220,slow=38						
BRTR	Keskin Array B	29.77	334	P	P	00 27 35.9	+2.1
	comp=E,0.6nm,0.8s,baz=145,slow=5.3,SNR=3.8						
LSZ	Lusaka	35.67	218	LR	LR	00 43 15.2	
	comp=E,73nm,18.2s,baz=60,slow=37						
BVAR	Borovoye Array	42.73	18	P	P	00 29 21.9	-2.2
	comp=E,0.2nm,0.6s,baz=198,slow=4.2,SNR=2.4						
MKAR	Makanchi Array	42.95	33	P	P	00 29 25.3	-0.8
	comp=E,0.4nm,0.5s,baz=220,slow=7.3,SNR=3.6						
TSUM	Tsumeb	45.39	225	LR	LR	00 48 39.1	
	comp=E,67nm,18.8s,baz=21,slow=36						
TORD	Torodi Ar. Bea	46.74	275	P	P	00 29 56.0	-0.6
	comp=E,1.0nm,0.9s,baz=81,slow=7.0						
CMAR	Chiang Mai Arr	47.41	77	LR	LR	00 49 22.0	
	comp=E,177nm,19.1s,baz=138,slow=36						
FINES	FINESS Array B	50.88	346	P	P	00 30 28.2	+0.5
	comp=E,2.4nm,0.9s,baz=166,slow=17,SNR=3.5						
ESDC	Sonseca Array	53.76	309	P	P	00 30 49.6	0.0
	comp=E,1.0nm,0.9s,baz=92,slow=6.2,SNR=5.4						
TLY	Talaya	57.43	37	LR	LR	00 59 51.0	
	comp=E,269nm,19.2s,baz=136,slow=40						

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*IDC **23** 00:22:02.6±0.4, 2°.47S×135°.48E, h0^{km}, mb4.6/28,* mb1 4.6/29, mb1mx4.5/56, mbtmp4.6/29, ML2.7/1, MS4.2/26, Ms1 4.2/26, ms1mx4.1/43, Error ellipse: s-maj=22.3km s-min=10.4km az=71.0

BJI 23 00:22:04.6, 2°.21S×135°.33E, h6^{km}, mb5.0/49, mB5.2/39, Ms4.7/47, Ms7 4.4/46

NEIC 23 00:22:04.7±0.2, 2°.54S×135°.41E, h10^{km}, mb5.2/43, Error ellipse: s-maj=5.8km s-min=4.3km az=81.0

NEIC Felt [III] at Nabire and Serui.

GCMT 23 00:22:04.7±0.2, 2°.41S×135°.37E, h15^{km}, MW5.2/109, Moment Tensor Solution. s58,c77; s109,c180; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$0.35±.14; M$_{\theta\theta}$-4.73±.12; M$_{\phi\phi}$4.38±.14; M$_{r\theta}$0.81±.40; M$_{\theta\phi}$5.39±.11; M$_{\phi r}$3.59±.41; Best double couple: M$_0$7.90100×10^{16} NP1:φ$_s$338.00000°, δ78.00000°, λ158.00000°. NP2: φ$_s$73.00000°, δ68.00000°, λ13.00000°. Principal axes: T 8.4790, Plg24.0000°, Azm294.0000°; N -1.1580, Plg65.0000°, Azm131.0000°; P -7.3220, Plg7.0000°, Azm27.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.

MOS 23 00:22:05.7±1.1, 2°.47S×135°.45E, h31^{km}, mb5.3/33 Error ellipse: s-maj=11.9km s-min=6.1km az=124.2

DJA 23 00:22:06.0±0.2, 2°S±3°×13°6E±°, h10^{km}, M5.2/39, mB5.6/24, mb5.2/39, MLv5.7/12, Mw(mB)5.1/24

ISCJB 23 00:22:06.2±0.2, 2°.52S±0°.02×135°.48E±0°.03, h33^{km}, mb5.0/115, MS4.4/39, Error ellipse: s-maj=3.9km s-min=3.5km az=155.1

ISC 23 00:22:08.5±0.3, **2°.55S**±0°.04×**135°.53E**±0°.04, **h35^{km}, n335,** σ**1^s.91**/299, **mb5.2**/114, **MS4.4**/39, **7C, Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SRPI	Serui, Papua	0.98	46	P	Pn	00 22 22.1	-3.7
BAKI	Biak	1.47	23	P	Pn	00 22 29.5	-3.0
RKPI	Ransiki, Papua	1.70	307	P	Pn	00 22 32.0	-3.7
KMPI	Kaimana, Papua	2.13	239	P	Pn	00 22 43.4	+1.9
FAKI	Fak Fak	3.29	264	P	Pn	00 22 56.4	-1.2
FAKI	Fak Fak	3.29	264	*e*Pn	Pn	00 22 55.9	-1.7
SWI	Sorong	4.58	291	P	Pn	00 23 13.7	-1.6
SWI	Sorong	4.58	291	P	Pn	00 23 13.7	-1.6
GENI	Genyem	4.64	91	P	Pn	00 23 17.4	+1.3
JAY	Jayapura	5.17	90	P	Pn	00 23 23.5	0.0
	3µm,0.8s,32µm26nm						
JAY	Jayapura	5.17	90	P	Pn	00 23 23.5	0.0
JAY				pmax	pmax		
	comp=Z,185nm,0.8s						
MSAI	Masohi	6.64	263	P	Pn	00 23 45.7	+2.1
	comp=Z,101nm,1.2s,comp=Z,1.1nm						
SAUI	Saumlaki	6.84	218	*e*Pn	Pn	00 23 44.4	-1.9
AAI	Ambon	7.41	261	P	Pn	00 23 54.1	-0.1
LBMI	Labuha	8.24	283	P	Pn	00 24 03.9	-1.8
	comp=Z,313nm,0.7s,comp=Z,4µmcomp=Z,1.6nm						
KDU	Kakadu	10.51	197	P	Pn	00 24 33.6	-3.1
	baz=10,SNR=106						
MTN	Manton Dam	11.11	203	P	Pn	00 24 43.7	-1.2
	baz=11,SNR=23						
MTN	Manton Dam	11.11	203	*e*Pn	Pn	00 24 44.3	-0.7
KMSI	Cibinong	11.95	285	P	Pn	00 24 54.7	-1.8
LUWI	Luwuk	12.84	276	P	Pn	00 25 05.5	-3.1
	comp=Z,128nm,1.1s,comp=Z,5µm						
LUWI	Luwuk	12.84	276	*e*Pn	Pn	00 25 05.0	-3.6
KDI	Kendari	12.96	263	P	Pn	00 25 10.1	-0.2
SOEI	Soe	13.28	237	P	Pn	00 25 16.7	+2.0
SOEI	Soe	13.28	237	*e*Pn	Pn	00 25 11.9	-2.9
PMG	Port Moresby	13.42	121	Pn	Pn	00 25 17.0	+0.5
	comp=Z,1.6nm,0.3s,baz=334,slow=8.8,SNR=3.6						
PMG				Sn	Sn	00 27 34.3	-10
	comp=Z,0.7nm,0.3s,baz=290,slow=15,SNR=1.7						
PMG				LR	LR	00 31 43.4	
	comp=Z,4µm,21.3s,baz=297,slow=43						
COEN	Coen	13.62	147	P	Pn	00 25 17.7	-1.5
	baz=14,SNR=43						
COEN	Coen	13.62	147	*e*Pn	Pn	00 25 17.3	-1.9
MRSI	Marisa	13.91	282	P	Pn	00 25 22.3	-1.0
	comp=Z,91nm,0.6s,comp=Z,1µm						
APSI	Ampana	13.97	276	P	Pn	00 25 21.5	-2.5
	comp=Z,144nm,0.8s,comp=Z,2µm						
BATI	Baumata	14.02	237	P	Pn	00 25 27.2	+2.4
	comp=Z,142nm,0.7s,comp=Z,1µm						
KNRA	Kununurra	14.64	207	P	Pn	00 25 30.5	-2.8
	baz=14,SNR=9.3						
EDFI	Ende, Flores	15.08	245	P	Pn	00 25 40.1	+1.0
	comp=Z,119nm,1.6s,comp=Z,2µm						
BKSI	Bulukumba	15.61	259	P	Pn	00 25 45.4	-0.6
TTSI	Tana Toraja	15.70	268	P	P	00 25 52.9	+2.1
PCI	Palu	15.77	276	P	P	00 25 49.6	-2.0
	comp=Z,330nm,1.2s,comp=Z,3µm						
PCI	Palu	15.77	276	P	P	00 25 49.6	-2.0
PCI				pmax	pmax		
	comp=Z,330nm,1.2s						
SPSI	Sidrap Palu	15.79	264	P	Pn	00 25 48.4	0.0
	comp=Z,142nm,1.1s,comp=Z,2µm						
MPSI	Mapaga	15.89	280	P	Pn	00 25 48.7	-0.9
	comp=Z,36nm,1.5s,comp=Z,597nm						
WSI	Waingapu	16.70	244	P	P	00 26 13.6	+12
WRAB	Tennant Creek	17.31	184	*e*Pn	Pn	00 26 07.5	-0.1
	comp=Z,118nm,0.8s						
WRAB	Tennant Creek	17.31	184	*i* P	Pn	00 26 02.8	-4.7
WB2	Warramunga Arr	17.32	184	*e*Pn	Pn	00 26 07.6	-0.1
	comp=Z,112nm,0.8s						
WRA	Warramunga Arr	17.32	184	P	Pn	00 26 03.6	-4.1
	comp=Z,1.3nm,0.3s,baz=3.6,slow=13,SNR=42						
WRA				S	Sn	00 29 06.0	-13
	comp=Z,1.2nm,0.3s,baz=6.5,slow=22,SNR=4.0						
WRA				LR	LR	00 33 08.1	
	comp=Z,2µm,18.4s,baz=0.0,slow=38						
MTSU	Mount Surprise	17.72	151	P	Pn	00 26 11.6	-1.0
	baz=18,SNR=14						
FITZ	Fitzroy Crossi	18.24	211	P	P	00 26 17.5	-1.4
	baz=18,SNR=12						
FITZ	Fitzroy Crossi	18.24	211	*e*Pn	P	00 26 16.9	-2.0
	comp=Z,219nm,1.5s						
QIS	Mount Isa	18.33	168	P	P	00 26 18.6	-1.4
	baz=18,SNR=34						
SMKI	Samarinda	18.43	276	P	Pn	00 26 21.9	+0.6
GUMO	Guam	18.52	30	LR	LR	00 33 58.3	
	comp=Z,907nm,18.3s,baz=202,slow=39						
MYLDM	Lahad Datu	18.66	294	*e*P	Pn	00 26 23.9	-0.3
	comp=Z,454nm,1.2s						
PLAI	Plampang	18.72	250	P	Pn	00 26 28.0	+3.1
RCP	Roxas	18.93	318⇑	*e*P	Pn	00 26 35.2	+7.9
KBKI	Kotabaru	19.35	267	P	Pn	00 26 34.7	+2.3
	comp=Z,59nm,1.1s,comp=Z,6µm						
TWSI	Taliwang, Sumb	19.54	251	P	Pn	00 26 34.7	0.0
CTA	Charters Tower	20.33	150	P	P	00 26 41.3	-0.6
	comp=Z,16nm,0.9s,baz=334,slow=12,SNR=9.1						
CTAO	Charters Tower	20.33	150	*e*P	Pn	00 26 45.5	+1.5
	comp=Z,267nm,1.8s						
CTAO	Charters Tower	20.33	150	*e*P	Pn	00 26 45.5	+1.5
CTAO				pmax	pmax		
	comp=Z,267nm,1.8s						
MTKI	Muara Teweh, K	20.68	274	P	Pn	00 26 49.5	+1.3
	comp=Z,138nm,0.9s						
SRBI	Singaraja	20.95	254	P	Pn	00 26 56.8	+5.5
AS01	Alice Springs	21.04	184	*e*P	P	00 26 49.0	-0.5
AS31	Alice Springs	21.05	184	*e*P	P	00 26 49.9	+0.3
	comp=Z,63nm,0.6s						
ASAR	Alice Springs	21.05	184	P	P	00 26 49.4	-0.2
	comp=Z,64nm,0.9s,baz=9.0,slow=11,SNR=254						
ASAR				S	S	00 30 37.3	-4.8
	comp=Z,6.5nm,0.9s,baz=9.4,slow=24,SNR=2.5						
ASAR				LR	LR	00 36 30.5	
	comp=Z,1µm,19.3s,baz=3.0,slow=41						
KKM	Kota Kinabalu	21.09	294	*e*P	P	00 26 49.0	-1.2
	comp=Z,163nm,1.1s						
JAGI	Jajag, Banyuwa	22.06	254	*e*P	P	00 26 58.9	-1.6
	comp=Z,155nm,1.4s						
BLJI	Banyuglugur	22.44	256	P	P	00 27 13.0	+8.5
GRJI	Gresik	23.37	259	P	P	00 27 24.5	+10
WRKA	Warakurna	23.41	197	P	P	00 27 13.7	-0.8
	baz=23,SNR=38						
SBUM	Sibu	23.82	282	*e*P	P	00 27 18.4	-0.1
	comp=Z,132nm,1.4s						
PBKI	Pangkalan Bun	23.83	269	P	P	00 27 27.2	+8.6
MBWA	Marble Bar	24.06	219	*e*P	P	00 27 21.4	+0.8
	comp=Z,139nm,1.4s						
STKI	Sintang	24.18	276	P	P	00 27 29.6	+7.7
PWJI	Pagerwojo	24.23	256	P	P	00 27 25.5	+3.2
NGJI	Ngawi	24.44	258	P	P	00 27 34.9	+11
WOJI	Wonogiri, Jawa	25.05	257	P	P	00 27 42.8	+13
QLP	Quilpie	25.31	162	P	P	00 27 32.1	+0.1
	baz=25,SNR=14						
SMRI	Semarang	25.39	259	P	P	00 27 34.8	+2.0
	comp=Z,889nm,1.6s,comp=Z,15µm						
SMRI	Semarang	25.39	259	*e*P	P	00 27 34.1	+1.3
	comp=Z,2µm,1.5s						
KPJI	Karang Pucung	26.91	259	P	P	00 27 48.6	+2.0
EIDS	Eidsvold	27.18	148	P	P	00 27 50.0	+1.1
	baz=27,SNR=4.7						
EIDS	Eidsvold	27.18	148	*e*P	P	00 27 52.7	+3.8
	comp=Z,27nm,0.8s						
FORT	Forrest	28.95	193	*e*P	P	00 28 04.6	0.0
	comp=Z,91nm,0.8s						
YOJ	Yonaguni jima	29.48	336	*e*P	P	00 28 11.0	+1.7
	comp=Z,371nm,1.5s						
YOJ	Yonaguni jima	29.48	336	*e*P	P	00 28 11.0	+1.7
YOJ				pmax	pmax		
	comp=Z,371nm,1.5s						
STKA	Stephens Creek	29.72	170	P	P	00 28 09.8	-1.6
	comp=Z,2.5nm,0.4s,baz=337,slow=7.7,SNR=5.7						
STKA				LR	LR	00 40 57.7	
	comp=Z,1µm,20.5s,baz=344,slow=38						
STKA	Stephens Creek	29.72	170	P	P	00 28 10.8	-0.7
	baz=30,SNR=5.4						
STKA	Stephens Creek	29.72	170	*e*P	P	00 28 11.7	+0.2
	comp=Z,4.0nm,0.8s						
STKA	Stephens Creek	29.72	170	*e*P	P	00 28 11.7	+0.2
STKA				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BBOO	Buckleboo	30.10	179	P	P	00 28 15.0	+0.2
	baz=30,SNR=9.0						
BBOO	Buckleboo	30.10	179	*e*P	P	00 28 15.3	+0.5
	comp=Z,34nm,1.0s						
CBIJ	Chichi jima	30.17	12	*e*P	P	00 28 19.2	+3.8
	comp=Z,310nm,1.8s						
MDSI	Maura Dua	31.35	266	P	P	00 28 32.7	+6.7
MASI	Maura Aman, Be	33.25	268	P	P	00 28 49.8	+7.0
KRJI	Kerinci	34.04	270	P	P	00 28 55.9	+6.2
ARPS	Mount Arapiles	34.54	171	P	P	00 28 54.6	+0.9
	baz=34,SNR=13						
UBPT	Khong Chiam	34.62	302	P	P	00 28 53.2	-1.4
	comp=Z,71nm,1.3s						
NWAO	Narrogin (SRO)	34.75	208	LR	LR	00 45 14.2	
	comp=Z,437nm,20.2s,baz=286,slow=40						
DZM	Mont Dzumac	35.75	125	*e*LR	LR	00 38 45.8	
	comp=Z,2µm,28.8s						
JNU	Nakatsue	35.75	353	P	P	00 29 02.5	-1.6
	comp=Z,14nm,0.9s,baz=172,slow=4.7,SNR=8.7						
JNU				LR	LR	00 43 21.9	
	comp=Z,427nm,19.6s,baz=130,slow=36						
JNU	Nakatsue	35.75	353	*e*P	P	00 29 02.8	-1.4
	comp=Z,67nm,1.1s						
MNSI	Mandailing Nat	36.09	275	P	P	00 29 15.5	+8.2
SKLT	Songkhla	36.15	286	P	P	00 29 15.2	+7.4
PANO	Nakornpanom	36.24	304	P	P	00 29 07.1	-1.4
	comp=Z,2.1nm,1.0s						
SISI	Saibi	36.44	271	P	P	00 29 14.4	+4.1
	comp=Z,82nm,0.9s						
SKNT	Sakolnakorn	36.69	303	P	P	00 29 10.4	-1.9
	comp=Z,40nm,1.1s						
PSI	Prapat	36.97	278	*e*P	P	00 29 12.9	-2.1
	comp=Z,44nm,1.3s						
PSI	Prapat	36.97	278	*e*P	P	00 29 12.9	-2.1
PSI				pmax	pmax		
	comp=Z,44nm,1.3s						
TRTT	Trang	37.21	286	P	P	00 29 23.7	+6.9
KHON	Khomkaen	37.37	301	P	P	00 29 17.2	-0.9
	comp=Z,18nm,0.9s						
NJ2	Nanjing	37.88	337	*e*P	P	00 29 22.3	+0.1
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
CHAI	Chaiyaphum	37.89	300	P	P	00 29 29.1	+6.5
KCSI	Kotacane, Aceh	38.22	279	P	P	00 29 32.8	+7.4
WHN	Wuhan	38.62	330	P	P	00 29 27.9	-0.6
PHET	Kaeng Krachan	38.81	294	P	P	00 29 39.1	+8.8
MAJO	Matsushiro	38.98	3	*e*P	P	00 29 32.1	+0.7
	comp=Z,6.9nm,1.0s						
MAJO	Matsushiro	38.98	3	*i* P	P	00 29 31.4	0.0
MAJO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MJAR	Matsushiro Arr	38.98	3	P	P	00 29 29.7	-1.7
	comp=Z,1.0nm,0.4s,baz=193,slow=8.7,SNR=4.1						
PBKT	Sadao Pong	39.06	300	P	P	00 29 30.9	-1.5
	comp=Z,16nm,1.6s,comp=Z,2µm						
MLSI	Meulaboh, Aceh	39.68	280	P	P	00 29 43.1	+5.5
SRDT	SRDT	39.79	296	P	P	00 29 38.2	-0.3
	comp=Z,52nm,2.2s						
PHIT	Phitsanulok	39.81	301	P	P	00 29 38.8	+0.2
	comp=Z,29nm,1.0s,comp=Z,404nm						
GYA	Guiyang	40.12	318	P	P	00 29 38.0	-3.2
GYA				PP	PnPn	00 31 18.3	+0.7
GYA				S	S	00 35 48.0	+2.4
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,130nm,5.4s						
GYA				LR	LR		
	comp=Z,540nm,18.2s						
GYA				LR	LR		
	comp=Z,520nm,18.5s						
GYA				LR	LR		
	comp=Z,550nm,18.9s						
NANT	Nan	40.30	303	P	P	00 29 41.3	-1.4
	comp=Z,13nm,1.0s						
UMPA	Umpang Tak	40.74	298	P	P	00 29 45.0	-1.4
	comp=Z,12nm,0.9s,comp=Z,676nm						
ENH	Enshi	41.03	325	*e*P	P	00 29 48.0	-0.6
	comp=Z,1.3nm,0.3s						
CM01	Chiang Mai Arr	41.59	302	*e*P	P	00 29 51.8	-1.6
CM01				*e*pP	P	00 29 52.1	-1.3
CM31	Chiang Mai Arr	41.62	302	*e*P	P	00 29 52.6	-1.0
CMAR	Chiang Mai Arr	41.62	302	P	P	00 29 52.5	-1.1
	comp=Z,12nm,0.8s,baz=125,slow=6.7,SNR=61						
CMMT	Chiang Mai	41.78	302	P	P	00 29 53.2	-1.7
	comp=Z,48nm,1.1s						
CHTO	Chiang Mai	41.78	302	*e*P	P	00 29 53.1	-1.8
	comp=Z,38nm,0.9s						
CHTO	Chiang Mai	41.78	302	P	P	00 29 53.9	-1.0
	SNR=10						
CHTO	Chiang Mai	41.78	302	*e*P	P	00 29 53.1	-1.8
CHTO				pmax	pmax		
	comp=Z,38nm,0.9s						
CHTO	Chiang Mai	41.78	302	P	P	00 29 53.3	-1.6
	comp=Z,211nm,1.1s						
KMI	Kunming	42.04	313	P	P	00 29 56.6	-0.6
KMI				pP	pP	00 30 02.9	-4.6
KMI				sP	sP	00 30 05.1	-6.6
KMI				S	S	00 36 14.0	-0.4
KMI				pmax	pmax		
	comp=Z,24nm,1.3s						
KMI				pmax	pmax		
	comp=Z,200nm,3.5s						
KMI				LR	LR		
	comp=Z,430nm,21.8s						
KMI				LR	LR		
	comp=Z,380nm,17.7s						
KMI				LR	LR		
	comp=Z,580nm,23.1s						
DL2	Dalian	43.20	344	*e*P	P	00 30 13.0	+6.9
DL2				S	S	00 36 44.8	+14
DL2				LR	LR		
	comp=N,330nm,18.2s						
DL2				LR	LR		
	comp=E,1µm,16.5s						
DL2				LR	LR		
	comp=Z,460nm,15.1s						
XAN	Xi’an	44.19	328	P	P	00 30 12.8	-1.4
XAN				pP	pP	00 30 20.8	-3.8
XAN				sP	sP	00 30 22.6	-6.1
XAN				PP	PcP	00 31 57.9	-0.8
XAN				S	S	00 36 44.8	-0.5
XAN				sS	sS	00 36 57.3	-5.0
XAN				SS	SS	00 39 52.9	-11
XAN				pmax	pmax		
	comp=Z,17nm,1.5s						
XAN				pmax	pmax		
	comp=Z,260nm,4.8s						
XAN				LR	LR		
	comp=Z,510nm,19.1s						
XAN				LR	LR		
	comp=Z,440nm,19.8s						
XAN				LR	LR		
	comp=Z,480nm,20.1s						
CD2	Chengdu	44.98	320	*e*P	P	00 30 20.5	-0.1
CD2				S	S	00 36 59.6	+2.7
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,160nm,5.0s						
CD2				LR	LR		
	comp=Z,790nm,26.8s						
CD2				LR	LR		
	comp=Z,710nm,23.8s						
BJT	Baijiatuau	45.93	339	*e*P	P	00 30 26.9	-1.0
	comp=Z,54nm,0.6s						
BJT	Baijiatuau	45.93	339	*e*P	P	00 30 26.9	-1.0
BJT				pmax	pmax		
	comp=Z,54nm,0.6s						
BJI	Beijing	45.95	339⇑	*e*P	P	00 30 26.6	-1.4
BJI				pP	pP	00 30 33.4	-5.0
BJI				S	S	00 37 08.8	-1.7
BJI				pmax	pmax		
	comp=Z,34nm,0.8s						
BJI				LR	LR		
	comp=Z,1µm,17.3s						
BJI				LR	LR		
	comp=Z,1µm,18.3s						
BJI				LR	LR		
	comp=Z,530nm,20.8s						
USRK	Ussuriysk Ar.	46.65	357	P	P	00 30 32.3	-1.1
	comp=Z,2.5nm,0.6s,baz=238,slow=8.3						
USRK				LR	LR	00 49 15.4	
	comp=Z,282nm,19.8s,baz=165,slow=35						
ASAJ	Asahikawa	46.89	7	P	P	00 30 34.1	-1.2
	comp=Z,2.8nm,0.3s,baz=321,slow=10,SNR=3.8						
ASAJ				LR	LR	00 49 22.1	
	comp=Z,276nm,21.4s,baz=160,slow=35						
CN2	Changchun	47.03	350	*e*P	P	00 30 37.5	+1.1
MDJ	Mudanjiang	47.26	354	P	P	00 30 42.1	+3.9
MDJ				pP	pP	00 30 45.3	-3.3
MDJ				sP	sP	00 30 46.8	-6.0
MDJ				PP	PP	00 32 32.4	+2.7
MDJ				ScP	ScP	00 36 08.0	+7.4
MDJ				PcS	PcS	00 36 09.4	+5.3
MDJ				S	S	00 37 33.4	+4.3
MDJ				pmax	pmax		
	comp=Z,26nm,0.8s						
MDJ				pmax	pmax		
	comp=Z,150nm,6.2s						
MDJ				LR	LR		
	comp=Z,350nm,25.5s						
MDJ				LR	LR		
	comp=Z,310nm,19.1s						
MDJ				LR	LR		
	comp=Z,460nm,21.5s						
HHC	Hu-ho-hao-te	48.42	336	*e*P	P	00 30 46.8	-0.6
HHC				pP	pP	00 30 50.9	-7.0
HHC				sP	sP	00 30 58.3	-3.7
HHC				S	S	00 37 46.5	+0.6
HHC				sS	sS	00 37 57.3	-5.8
HHC				pmax	pmax		
	comp=Z,28nm,1.2s						
HHC				pmax	pmax		
	comp=Z,210nm,5.8s						
HHC				LR	LR		
	comp=Z,420nm,16.3s						
HHC				LR	LR		
	comp=Z,660nm,15.7s						
HHC				LR	LR		
	comp=Z,440nm,17.3s						
LZH	Lanzhou	48.50	325	*e*P	P	00 30 48.8	+0.6
LZH				pP	pP	00 30 51.8	-6.8
LZH				sP	sP	00 30 53.3	-9.5
LZH				PcP	PcP	00 32 13.4	-0.5
LZH				*e*S	S	00 37 49.3	+2.0
LZH				sS	sS	00 37 55.6	-8.9
LZH				SS	SS	00 41 13.4	-4.3
LZH				pmax	pmax		
	comp=Z,36nm,1.0s						
LZH				pmax	pmax		
	comp=Z,230nm,4.9s						
LZH				LR	LR		
	comp=Z,2µm,14.5s						
LZH				LR	LR		
	comp=Z,2µm,14.4s						
LZH				LR	LR		
	comp=Z,2µm,15.3s						
KUR	Kuril’sk	48.83	12	*i* P	P	00 30 49.4	-0.9
YSS	Yuzh-Sakhalins	49.71	6	*e*P	P	00 31 06.8	+10
YSS				pmax	pmax		
	comp=Z,20nm,1.4s						
YSS				MLR	MLR		
	comp=Z,300nm,14.0s						
SHL	Shillong	50.66	306	*e*P	P	00 31 03.4	-1.5
	comp=Z,158nm,0.8s						
SHL	Shillong	50.66	306	*e*P	P	00 31 03.4	-1.5
SHL				pmax	pmax		
	comp=Z,158nm,0.8s						
KLR	Kul’dur	51.68	357	P	P	00 31 10.5	-1.4
	comp=Z,0.4nm,0.7s,baz=195,slow=3.4,SNR=12						
KLR				LR	LR	00 51 53.5	
	comp=Z,27nm,18.8s,baz=190,slow=35						
KLR	Kul’dur	51.68	357	*e*P	P	00 31 09.6	-2.3
RPZ	Rata Peaks	51.68	148	P	P	00 31 12.6	+0.6
	comp=Z,7.7nm,0.7s,baz=50,slow=21,SNR=2.3						
URZ	Urewera	52.01	138	P	P	00 31 14.8	+0.3
	comp=Z,29nm,1.2s,baz=165,slow=8.5,SNR=2.4						
MXZ	Matakaoa Point	52.44	137	*e*P	P	00 31 20.0	+2.2
	comp=Z,225nm,1.3s						
MQZ	McQueen’s Vall	52.55	147	*e*P	P	00 31 19.8	+1.4
	comp=Z,132nm,1.9s						
GTA	Gaotai	53.10	326	*e*P	P	00 31 22.4	-0.4
GTA				pP	pP	00 31 27.8	-5.5
GTA				sP	sP	00 31 30.8	-6.7
GTA				S	S	00 38 50.8	-0.1
GTA				sS	pS	00 38 59.3	-4.1
GTA				pmax	pmax		
	comp=Z,8.0nm,1.7s						
GTA				pmax	pmax		
	comp=Z,61nm,6.6s						
GTA				LR	LR		
	comp=Z,280nm,18.5s						
GTA				LR	LR		
	comp=Z,170nm,17.2s						
GTA				LR	LR		
	comp=Z,320nm,17.5s						
LSA	Lhasa	53.17	311	P	P	00 31 23.5	-0.4
LSA	Lhasa	53.17	311	*e*P	P	00 31 23.4	-0.5
	comp=Z,64nm,0.8s						
LSA	Lhasa	53.17	311	*i* P	P	00 31 28.4	+4.5
	SNR=8.8						
LSA	Lhasa	53.17	311	*i* P	P	00 31 28.4	+4.5
	SNR=8.8						
LSA	Lhasa	53.17	311	*e*P	P	00 31 23.4	-0.4
LSA				pmax	pmax		
	comp=Z,64nm,0.8s						
AFI	Afiamalu	53.24	105	LR	LR	00 55 23.1	
	comp=Z,288nm,18.0s,baz=286,slow=38						
TAPN	Taplejung	54.80	306	*e*P	P	00 31 34.7	-0.9
	comp=Z,116nm,0.9s						
ODAN	Odare	54.85	306	*e*P	P	00 31 34.7	-1.2
	comp=Z,298nm,0.8s						
RAMN	Ramite	55.53	305	*e*P	P	00 31 39.9	-1.0
	comp=Z,292nm,0.8s						
PALK	Pallekele	55.57	281	LR	LR	00 56 40.2	
	comp=Z,165nm,22.0s,baz=76,slow=37						
NKL	Nikolayevsk	55.67	4	*e*P	P	00 31 30.0	-11
NKL				pmax	pmax		
	comp=Z,80nm,1.5s						
JIRN	Jiri	56.15	306	*e*P	P	00 31 44.3	-1.1
	comp=Z,206nm,0.8s						
SONM	Songino Array	56.27	337	P	P	00 31 44.5	-1.1
	comp=Z,1.8nm,0.6s,baz=153,slow=7.8,SNR=9.7						
SONA1	Songino Array	56.28	337	*e*P	P	00 31 44.5	-1.2
GUN	Gumba	56.51	306	*e*P	P	00 31 46.8	-1.1
	comp=Z,266nm,0.8s						
ZEA	Zeya	56.52	354	*e*P	P	00 31 46.8	-0.3
ZEA				pmax	pmax		
	comp=Z,17nm,1.0s						
PKIN	Phulchoki	56.76	305	*e*P	P	00 31 49.3	-0.4
	comp=Z,61nm,0.7s						
KKN	Kakani	56.94	306	*e*P	P	00 31 49.5	-1.4
	comp=Z,185nm,1.0s						
DMN	Daman	57.01	305	*e*P	P	00 31 50.3	-1.1
	comp=Z,228nm,1.0s						
JOHN	Johnston Islan	57.51	68	*e*P	P	00 31 56.2	+1.5
	comp=Z,213nm,1.2s						
GKN	Gorkha	57.55	306	*e*P	P	00 31 54.0	-1.1
	comp=Z,312nm,1.0s						
KOLN	Koldanda	58.31	305	*e*P	P	00 31 59.7	-0.8
	comp=Z,285nm,0.8s						
DANN	Dangsing	58.40	306	*e*P	P	00 32 00.2	-1.0
	comp=Z,337nm,0.8s						
PEA0B	Petropavlovsk-	58.50	15	*e*P	P	00 32 01.9	+0.8
	comp=Z,29nm,1.1s						

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PETK  Petropavlovsk-    58.50  15  P       P        00 32 00.7 -0.4
      comp=Z,2.0nm,0.6s,baz=244,slow=13
PETK  Petropavlovsk-    58.50  15 eP       P        00 32 00.8 -0.3
PETK  Petropavlovsk-    58.50  15 eP       P        00 32 00.8 -0.3
PET   Petropavlovsk     58.69  16 eP       P        00 32 04.3 +2.0
PET                               eS       S        00 40 05.2 +0.7
PET                                pmax    pmax
      comp=Z,24nm,1.2s
PYUN  Piuthan           58.93 305 eP       P        00 32 04.3 -0.5
      comp=Z,1µm,0.8s
ZAK   Zakamensk         59.54 337 eP       P        00 32 05.1 -3.4
ZAK                                pmax    pmax
      comp=Z,15nm,1.4s
HYB   Hyderabad         59.56 292 i P      P        00 32 08.0 -1.1
HYB                               esP      pP       00 32 15.0 -4.8
TLY   Talaya            60.43 338  P       P        00 32 14.0 -0.4
      baz=275,slow=19
TLY   Talaya            60.43 338 eP       P        00 32 14.7 +0.2
      comp=Z,12nm,0.6s
TLY   Talaya            60.43 338 eP       P        00 32 15.2 +0.8
TLY                               eS       S        00 40 34.7 +7.6
TLY                                pmax    pmax
      comp=Z,14nm,0.8s
TLY                                MLR     MLR
      comp=Z,246nm,17.0s
MOY   Mondy             61.45 336 eP       P        00 32 20.9 -0.6
MOY                                pmax    pmax
      comp=Z,48nm,1.8s
BOD   Bodaibo           62.62 347 eP       P        00 32 19.9 -9.1
BOD                                pmax    pmax
      comp=Z,16nm,1.2s
WMQ   Urumqi            62.94 323  P       P        00 32 31.0 -0.6
WMQ                                pP      pP       00 32 37.6 -4.7
WMQ                                sP      sP       00 32 40.0 -6.4
WMQ                                S       S        00 41 00.5 +1.1
WMQ                                SS      SS       00 45 07.3 +2.0
WMQ                                pmax    pmax
      comp=Z,130nm,1.1s
WMQ                                pmax    pmax
      comp=Z,440nm,4.1s
WMQ                                LR      LR
      comp=Z,550nm,17.5s
WMQ                                LR      LR
      comp=Z,380nm,18.5s
WMQ                                LR      LR
      comp=Z,310nm,24.7s
MA2   Magadan           63.10   9  LR      LR       00 57 16.5
      comp=Z,107nm,21.8s,baz=170,slow=34
HVS   Khovu-Aksy        64.24 332 i P      P        00 32 39.1 -0.9
HVS                                pmax    pmax
      comp=Z,31nm,0.9s
YAK   Yakutsk           64.56 357  P       P        00 32 40.3 -1.5
      comp=Z,2.4nm,0.4s,baz=53,slow=16,SNR=1.4
YAK   Yakutsk           64.56 357 eP       P        00 32 48.0 +6.2
YAK                               e                 00 35 05.4
YAK                               e*SS     sS       00 41 33.0 -3.4
YAK                               eSSS     SSS      00 48 22.7
YAK                                pmax    pmax
      comp=Z,42nm,0.9s
YAK                                pmax    pmax
      comp=N,9.0nm,0.9s
YAK                                pmax    pmax
      comp=E,3.0nm,0.9s
YAK                                pmax    pmax
      comp=Z,61nm,2.4s
YAK                                pmax    pmax
      comp=N,43nm,2.3s
YAK                                pmax    pmax
      comp=E,18nm,2.2s
RAR   Rarotonga         65.53 112  LR      LR       01 00 27.3
      comp=E,98nm,21.0s,baz=256,slow=35
DGZ   Jazzator, Alta    66.45 328 i P      P        00 32 53.5 -1.0
DGZ                                pmax    pmax
      comp=Z,5.0nm,1.0s
MK01  Makanchi Array    67.73 323 eP       P        00 33 01.7 -0.8
MK31  Makanchi Array    67.75 324 eP       P        00 33 02.0 -0.6
MK31  Makanchi Array    67.75 324 eP       P        00 33 02.0 -0.6
MKAR  Makanchi Array    67.75 324  P       P        00 33 01.9 -0.7
      comp=Z,10nm,0.8s,baz=116,slow=8.2,SNR=59
MKAR                               LR      LR       01 03 24.5
      comp=Z,172nm,20.9s,baz=114,slow=37
MKAR  Makanchi Array    67.75 324 eP       P        00 33 02.0 -0.7
      comp=Z,217nm,0.6s
MAKZ  Makanchi          67.94 323 eP       P        00 33 03.1 -0.7
      comp=Z,64nm,0.8s
MAKZ  Makanchi          67.94 323 i P      P        00 33 02.5 -1.3
MAKZ                               pmax    pmax
      comp=Z,60nm,0.7s
PRZ   Przheval’sk       68.20 318 eP       P        00 33 06.7 +0.9
      comp=Z,56nm,1.0s
PRZ   Przheval’sk       68.20 318 eP       P        00 33 06.7 +0.9
PRZ                                pmax    pmax
      comp=Z,56nm,1.0s
KSH   Kashi             68.68 314  P       P        00 33 09.5 +0.7
KSH                                sP      pP       00 33 16.5 -3.1
KSH                               ePcP     PcP      00 33 33.5  0.0
KSH                                S       S        00 42 09.5 -0.2
KSH                                ScS     ScS      00 43 05.9 -0.6
KSH                                SS      SS       00 46 37.1 +2.2
KSH                                pmax    pmax
      comp=Z,51nm,1.0s
KSH                                pmax    pmax
      comp=Z,160nm,5.5s
NIL   Nilore            68.70 308 eP       P        00 33 08.2 -0.7
      comp=Z,295nm,0.9s
NIL                               e                 00 33 15.5
NIL   Nilore            68.70 308 eP       P        00 33 08.2 -0.7
NIL                               e                 00 33 15.5
NIL                                pmax    pmax
      comp=Z,295nm,0.9s
KZA   Kyzart            70.17 317  P       P        00 33 18.4 +0.1
      SNR=9.3
ZAA0  Zalesovo Array    70.23 331 eP       P        00 33 16.1 -1.8
      comp=Z,18nm,0.8s
ZALV  Zalesovo Beam     70.23 331  P       P        00 33 15.9 -1.9
      comp=Z,4.1nm,0.8s,baz=106,slow=5.3,SNR=9.3
ZALV                               LR      LR       01 03 40.2
      comp=Z,161nm,21.7s,baz=80,slow=36
ZALV  Zalesovo Beam     70.23 331 eP       P        00 33 15.7 -2.1
ZALV  Zalesovo Beam     70.23 331 eP       P        00 33 15.7 -2.1
TKM2  Tokmak 2          70.27 318  P       P        00 33 18.1 -0.5
      SNR=6.7
KBK   Karagaybulak      70.60 317  P       P        00 33 28.8 +8.2
      SNR=9.4
FRU   Bishkek           70.89 317 eP       P        00 33 30.5 +8.3
AAK   Ala-Archa         70.90 317  P       P        00 33 21.4 -1.0
      comp=Z,1.4nm,0.3s,baz=113,slow=7.0,SNR=2.1
AAK   Ala-Archa         70.90 317 eP       P        00 33 22.2 -0.2
      comp=Z,51nm,1.6s
AAK   Ala-Archa         70.90 317  P       P        00 33 21.6 -0.8
AAK                                pmax    pmax
      comp=Z,22nm,1.4s
USP   Ospenovka         71.14 318  P       P        00 33 23.1 -0.6
      SNR=8.0
AML   Almayashu         71.26 316  P       P        00 33 24.9  0.0
      SNR=14
EKS2  Erkin-Say         71.40 317  P       P        00 33 24.9 -0.5
      SNR=6.4
NVS   Novosibirsk       71.50 331 eP       P        00 33 24.0 -1.5
NVS                               eS       S        00 42 42.1 +0.4
NVS                                pmax    pmax
      comp=Z,37nm,1.6s
NVS                                pmax    pmax
      comp=N,29nm,1.7s
NVS                                pmax    pmax
      comp=E,27nm,1.6s
NVS                                smax    smax
      comp=N,12nm,2.1s
NVS                                smax    smax
      comp=E,24nm,2.1s
KURK  Kurchatov         71.78 326 eP       P        00 33 26.2 -1.1
      comp=E,24nm,0.8s
KURK  Kurchatov         71.78 326  P       P        00 33 25.9 -1.4
      SNR=20
KURK  Kurchatov         71.78 326ceP       P        00 33 24.7 -2.6
KURK                               pmax    pmax
      comp=Z,12nm,1.3s
KURBB Kurchatov Arra    71.79 326  P       P        00 33 26.3 -1.0
      comp=Z,5.8nm,0.2s,baz=114,slow=4.6,SNR=6.6
KK31  Karatay Array     73.81 316 eP       P        00 33 39.0 -0.5
KK31  Karatay Array     73.81 316  P       P        00 33 38.4 -1.1
KK31                               pmax    pmax
      comp=Z,21nm,0.8s
KKAR  Karatay Array     73.81 316 eP       P        00 33 39.0 -0.5
KKAR  Karatay Array     73.81 316 eP       P        00 33 39.0 -0.5
PPT   Papeete           74.84 107  LR      LR       01 04 51.5
      comp=Z,87nm,19.7s,baz=192,slow=34
PPT2  Papeete2          74.84 107 eS       S        00 43 16.6 -4.6
      comp=Z,133nm,27.8s
PPT2  Papeete2          74.84 107 eLR      LR       00 57 00.4
      comp=Z,888nm,32.2s
TBI   Tubuai            75.23 113 eLR      LR       00 57 05.2
      comp=Z,682nm,37.2s
VNDA  Vanda             76.23 174  P       P        00 33 53.3 +0.4
      comp=Z,1.9nm,0.8s,baz=320,slow=6.5,SNR=12
VNDA                               LR      LR       01 05 47.3
      comp=Z,560nm,21.9s,baz=351,slow=34
VNDA  Vanda             76.23 174 eP       P        00 33 54.0 +1.1
      comp=Z,6.6nm,0.8s
VNDA  Vanda             76.23 174 eP       P        00 33 54.0 +1.1
VNDA                               pmax    pmax
      comp=Z,7.0nm,0.8s
SBA   Scott Base        77.04 174 eP       P        00 33 57.4 -0.1
      comp=Z,9.5nm,1.1s
SBA   Scott Base        77.04 174 eP       P        00 33 57.4 -0.1
SBA                                pmax    pmax
      comp=Z,10.0nm,1.1s
BVA0  Borovoye Array    77.38 326 i P      P        00 33 57.9 -1.9
BVA0                               pmax    pmax
      comp=Z,20nm,0.8s
BVAR  Borovoye Array    77.38 326  P       P        00 33 58.9 -0.9
      comp=Z,5.4nm,0.8s,baz=113,slow=6.8,SNR=35
BRVK  Borovoye          77.45 326 eP       P        00 33 59.5 -0.7
      comp=Z,21nm,0.8s
BRVK  Borovoye          77.45 326  P       P        00 34 00.4 +0.2
      SNR=16
BRVK  Borovoye          77.45 326ceP       P        00 33 58.8 -1.4
BRVK                               pmax    pmax
      comp=Z,13nm,1.3s
SDPT  Sand Point        77.65  32 eP       P        00 34 04.0 +2.8
      comp=Z,210nm,1.8s
BIDO  Bidbid            79.49 294  P       P        00 34 21.0 +9.0
      SNR=8.0
MAW   Mawson            81.08 202  P       P        00 34 20.1 +0.4
      comp=Z,2.1nm,1.0s,baz=41,slow=9.7,SNR=2.7
UOSS  Minazif           81.40 296  P       P        00 34 26.4 +4.0
UOSS  Minazif           81.40 296  P       P        00 34 26.4 +4.0
HATD  Hatta, Dubai      81.45 295  P       P        00 34 27.8 +5.2
HATD  Hatta, Dubai      81.45 295  P       P        00 34 27.8 +5.2
MSFE  Esma-Masafi       81.49 296 i P      P        00 34 28.0 +5.1
      SNR=6.3
MSFE  Esma-Masafi       81.49 296 i P      P        00 34 28.0 +5.1
      SNR=6.3
ASHO  Ashiyiah          81.50 295  P       P        00 34 27.9 +5.0
ASHO  Ashiyiah          81.50 295  P       P        00 34 27.9 +5.0
SHME  Shamm             81.59 297 i P      P        00 34 28.2 +4.9
      SNR=7.1
SHME  Shamm             81.59 297 i P      P        00 34 28.2 +4.9
      SNR=7.1
GEYT  Alibeck           81.66 309  P       P        00 34 22.9 -0.6
      comp=Z,2.3nm,0.9s,baz=245,slow=6.4,SNR=8.3
GEYT                               LR      LR       01 14 12.4
      comp=Z,81nm,19.6s,baz=25,slow=38
GYA0B ALIBECK ARRAY     81.66 309 eP       P        00 34 23.7 +0.3
      comp=Z,63nm,1.4s
ALNE  Al Ain            81.71 295 i P      P        00 34 29.2 +5.2
      SNR=12
ALNE  Al Ain            81.71 295 i P      P        00 34 29.2 +5.2
      SNR=12
ASUD  Al Ashush, Dub    82.16 295  P       P        00 34 33.6 +7.3
      SNR=5.1
ASUD  Al Ashush, Dub    82.16 295 i P      P        00 34 31.4 +5.1
      SNR=7.4
ASUD  Al Ashush, Dub    82.16 295 i P      P        00 34 31.4 +5.1
      SNR=7.4
AB31  Akbulak array     82.56 320 i P      P        00 34 26.1 -1.7
AB31                               pmax    pmax
      comp=Z,22nm,0.9s
ABKAR Akbulak array     82.56 320 eP       P        00 34 26.8 -1.0
SVE   Sverdlovsk        83.90 328 eP       P        00 34 34.0 -0.6
SVE                                pmax    pmax
      comp=Z,57nm,1.4s
TAOE  Nuku Hiva Isla    84.01  99 eLR      LR       01 01 09.2
      comp=Z,410nm,29.4s
AKTO  Aktyubinsk        84.02 321  P       P        00 34 33.9 -1.5
      comp=Z,5.8nm,1.0s,baz=91,slow=6.1,SNR=11
AKTO                               LR      LR       01 15 37.7
      comp=Z,97nm,18.8s,baz=101,slow=38
SKT   Skwentna          84.30  27 eP       P        00 34 41.0 +4.4
      comp=Z,12nm,1.0s
CAST  Castle Rocks      84.47  26 eP       P        00 34 38.7 +1.3
      comp=Z,14nm,1.2s
ARU   Arti              84.93 327  P       P        00 34 39.2 -0.7
      comp=Z,3.5nm,0.6s,baz=182,slow=2.0,SNR=11
ARU   Arti              84.93 327 eP       P        00 34 38.5 -1.3
      comp=Z,22nm,0.7s
ARU   Arti              84.93 327c iP      P        00 34 38.3 -1.5
ARU                                                 00 37 53.5
ARU                                PPP     PPP      00 39 46.8
ARU                                S       S        00 45 02.1 -3.9
ARU                                SS      SS       00 50 34.7 -4.5
ARU                                pmax    pmax
      comp=Z,15nm,1.2s
BPAW  Bear Paw Mtn.     85.13  25 eP       P        00 34 42.3 +1.6
      comp=Z,16nm,1.2s
MLY   Manley            85.49  24 eP       P        00 34 43.8 +1.3
      comp=Z,14nm,1.0s
DHY   Denali Highway    86.44  26 eP       P        00 34 50.6 +3.2
      comp=Z,29nm,1.0s
WRH   Wood River Hil    86.44  25 eP       P        00 34 46.6 -0.6
      comp=Z,39nm,1.2s
MDM   Murphy Dome       86.50  24 eP       P        00 34 49.1 +1.6
      comp=Z,7.1nm,0.9s
CCB   Clear Creek Bu    86.60  25 eP       P        00 34 47.8 -0.1
      comp=Z,29nm,1.0s
DIV   Divide            86.77  28 eP       P        00 34 51.2 +2.2
      comp=Z,43nm,1.1s
IL1   Eielson Array     87.02  25 eP       P        00 34 50.0  0.0
ILAR  Eielson Array     87.02  25  P       P        00 34 48.8 -1.2
      comp=Z,4.1nm,0.9s,baz=260,slow=4.3,SNR=23
ILAR                               LR      LR       01 12 51.4
      comp=Z,128nm,19.3s,baz=275,slow=35
ILB   Eielson Array     87.02  25 eP       P        00 34 49.1 -0.9
BMRM  Bremner River     87.30  29 eP       P        00 34 53.7 +2.2
      comp=Z,87nm,1.6s
QSPA  South Pole Qui    87.39 180  P       P        00 34 52.4 +0.4
      comp=Z,4.5nm,0.9s,baz=0.1,slow=1.3,SNR=8.9
QSPA                               LR      LR       01 13 03.6
      comp=Z,448nm,21.8s,baz=10.0,slow=35
QSPA  South Pole Qui    87.39 180 eP       P        00 34 52.4 +0.4
      comp=Z,119nm,1.0s
OPO   Ambohidratompo    87.62 252  P       P        00 34 53.9 -0.2
      comp=Z,2.0nm,0.8s,baz=274,slow=14,SNR=1.9
RIDG  Independ’e Rid    87.69  26 eP       P        00 34 54.7 +1.4
      comp=Z,32nm,1.2s
EGAK  Eagle             89.44  25 eP       P        00 35 02.2 +0.7
      comp=Z,16nm,1.1s
SYO   Syowa Base        89.77 201⇑esP      P        00 35 08.7 +5.8
DAWY  Dawson            90.12  26 eP       P        00 35 07.5 +2.7
      comp=Z,11nm,1.0s
RAYN  Ar Rayn           91.03 293 eP       P        00 35 09.4 -0.5
      comp=Z,24nm,0.9s
RAYN  Ar Rayn           91.03 293 eP       P        00 35 09.4 -0.5
RAYN                               pmax    pmax
      comp=Z,24nm,0.9s
PRGR  Permogore         92.18 331 eP       P        00 35 10.8 -3.5
PRGR                               pmax    pmax
      comp=Z,7.0nm,0.7s
GNI   Garni             92.23 310  LR      LR       01 20 06.4
      comp=Z,73nm,21.8s,baz=102,slow=38
INK   Inuvik            92.71  22  P       P        00 35 15.8 -0.7
      comp=Z,0.9nm,0.8s,baz=305,slow=12,SNR=1.9
INK   Inuvik            92.71  22 eP       P        00 35 20.1 +3.6
      comp=Z,14nm,1.4s
INK   Inuvik            92.71  22 eP       P        00 35 20.1 +3.6
INK                                pmax    pmax
      comp=Z,14nm,1.4s
ATD   Arta Tunnel       93.13 281  LR      LR       01 19 37.2
      comp=Z,36nm,18.3s,baz=226,slow=37
KLMR  Klimovskoe        95.15 331 eP       P        00 35 25.0 -2.9
KLMR                               pmax    pmax
      comp=Z,11nm,1.1s
KLMR  Klimovskoe        95.15 331 eP       P        00 35 25.0 -2.9
KLMR                               AMP              00 35 38.5
      comp=Z,11nm,1.1s
KLMR                               LQ      LQ       01 09 01.1
OBN   Obninsk           97.22 325 eP       P        00 35 34.7 -2.7
OBN                               i                 00 35 45.2
OBN                               e                 00 39 33.0
OBN                                pmax    pmax
      comp=Z,4.0nm,0.9s
OBN                                MLR     MLR
      comp=Z,130nm,18.0s
NVL   N’lazarevskaya    98.16 196 eP       Pdif     00 35 41.9 +0.5
NVL                               eS       SKSac    00 46 15.7 -0.6
NVL                                pmax    pmax
      comp=Z,3.0nm,0.5s
SPITS Spitsbergen Ar    98.26 350  LR      LR       01 22 20.3
      comp=Z,50nm,21.2s,baz=40,slow=37
ARCES ARCESS Array B    99.31 340  P       Pdif     00 35 45.5 -1.1
      comp=Z,2.1nm,0.8s,baz=53,slow=6.2,SNR=1.4
MMAI  Mount Meron Ar    99.88 303  LR      LR       01 29 44.3
      comp=Z,76nm,18.4s,baz=130,slow=41
BRTR  Keskin Array B   100.77 310  P       Pdif     00 35 53.2 -0.7
      comp=Z,0.1nm,0.4s,baz=210,slow=30,SNR=2.0
YKA   Yellowknife Ar   101.35  26  P       Pdif     00 35 55.7  0.0
      comp=Z,0.2nm,0.5s,baz=267,slow=11,SNR=1.4
FINES FINESS Array B   101.46 332  P       Pdif     00 35 55.4 -0.8
      comp=Z,2.2nm,0.9s,baz=293,slow=25,SNR=1.0
NVAR  Mina Array Bea   104.23  51  Pdiff   Pdif     00 36 10.4 +0.9
      comp=Z,0.3nm,0.4s,baz=347,slow=30,SNR=1.8
GOPC  GO Pecny, Ondr   111.34 323  AMS     AMS      01 34 50.0
      comp=Z,200nm,20.3s
CLL   Collm            111.81 325 eSKKSac  SKKSac   00 48 26.0 +3.5
CLL                               ePS      PS       00 50 54.0 -1.6
CLL                               eSS      SS       00 57 18.0  +22
CLL                                LmH              01 23 00.0
      comp=N,300nm,20.2s
CLL                                LmH              01 23 00.0
      comp=E,300nm,20.3s
CLL                                LmV              01 30 00.0
      comp=Z,300nm,20.7s
ARSA  Arzberg          111.88 321  pPKiKP  PKiKP    00 40 43.5 +3.4
      comp=Z,6.9nm,1.5s
KHC   Kasperske Hory   112.37 323  AMS     AMS      01 28 50.0
      comp=Z,200nm,18.8s
OBKA  Obir             112.78 320  PKiKP   PKiKP    00 40 42.3 +0.4
      comp=Z,20nm,1.4s
ABTA  Abfaltersbach    113.98 321  P       PKiKP    00 40 49.4 +5.3
      comp=Z,14nm,1.8s
WATA  Walderalm        114.33 322 ePKiKP   PKiKP    00 40 45.6 +0.7
      comp=Z,1.9nm,0.7s
FETA  Feichten         114.98 322 ePKPdf   PKPdf    00 40 45.0 -1.2
      comp=Z,6.2nm,1.3s
DAVA  Damuels          115.39 322 ePKPdf   PKPdf    00 40 43.4 -3.5
      comp=Z,8.3nm,1.6s
DAVOX Davos/Dischmat   115.61 322  PKP     PKPdf    00 40 48.3 +0.8
      comp=Z,2.0nm,0.8s,baz=339,slow=21,SNR=3.1
TXAR  Lajitas Array    117.92  58  PKP     PKPdf    00 40 51.1 -1.2
      comp=Z,0.1nm,0.4s,baz=232,slow=49,SNR=1.7
TORD  Torodi Ar. Bea   133.16 286  PKP     PKPdf    00 41 20.9 -0.7
      comp=Z,0.9nm,0.8s,baz=94,slow=2.8
DBIC  Dimbokro         140.31 277  PKP     PKPdf    00 41 34.9  0.0
      comp=Z,3.2nm,1.0s,baz=311,slow=3.4,SNR=2.1
NNA   Nana             144.74 115  PKP     PKPbc    00 41 41.8 +0.1
      comp=Z,3.7nm,0.4s,baz=156,slow=12,SNR=1.9
NNA   Nana             144.74 115c iPKIKP  PKPdf    00 41 43.2 +0.4
ATAH  Atahualpa        144.81 106  PKP     PKPbc    00 41 42.7 +0.3
      comp=Z,3.8nm,0.6s,baz=178,slow=5.3,SNR=2.3
CPUP  Villa Florida    148.71 157  PKPbc   PKPbc    00 41 52.1 -0.7
      comp=Z,0.8nm,0.7s,baz=50,slow=18,SNR=1.6
LPAZ  La Paz           150.05 129  PKPbc   PKPbc    00 41 57.3 +0.1
      comp=Z,3.0nm,0.8s,baz=219,slow=3.5,SNR=11
ROSC  El Rosal         150.13  85  PKPbc   PKPbc    00 41 57.0 -0.2
      comp=Z,5.6nm,0.6s,baz=220,slow=16,SNR=3.3
SIV   San Ignacio      155.32 139  PKPbc   PKPbc    00 42 09.8
      comp=Z,0.6nm,0.7s,baz=279,slow=15,SNR=3.3
SIV                                PKPab   PKPab    00 42 24.5 +0.1
      comp=Z,1.4nm,0.9s,baz=255,slow=2.1,SNR=5.1
```

ISCJB ***23*** *00:46:39.9±1.3, 12°.3S±0°.1×166°.8E±0°.2, h220km, mb3.8/5, Error ellipse: s-maj=29.9km s-min=20.3km az=10.0*

IDC ***23*** *00:46:44.8±8.0, 12°.62S×166°.86E, h259km±87km, mb3.5/5, mb1 3.6/6, mb1mx3.3/51, mbtmp4.0/6, Error ellipse: s-maj=83.6km s-min=25.0km az=161.0*

ISC 23 00:46:41.1±1.1, **12°.4S**±0°.1×**166°.8E**±0°.2, **h220km, n8, σ0ˢ96**/9, **mb3.9**/5, **Santa Cruz Islands**

```
Code  Station Name        Δ°   AZ°   Phase ID            Time      Res
                                    Op      ISC         h  m  s    ISC
DZM   Mont Dzumac         9.68 182  P       Pn        00 48 56.2 +0.2
      0.3nm,0.3s,baz=126,slow=19,SNR=4.6
CTA   Charters Tower     21.17 246  P       P         00 51 10.6 +0.9
      5.4nm,0.8s,baz=60,slow=8.1,SNR=3.1
WRA   Warramunga Arr     32.05 252  P       P         00 52 46.6 -1.0
      1.1nm,0.8s,baz=86,slow=9.1,SNR=8.1
ASAR  Alice Springs      33.18 246  P       P         00 52 56.5 -0.9
      0.8nm,0.6s,baz=72,slow=9.3,SNR=12
ILAR  Eielson Array      84.41  18  P       P         00 58 47.8 -0.6
      1.6nm,0.7s,baz=232,slow=5.2,SNR=15
MKAR  Makanchi Array     95.18 317  P       P         00 59 40.4 +0.8
      0.5nm,0.5s,baz=90,slow=5.7,SNR=6.7
ARCES ARCESS Array B    117.85 346  PKP     PKPdf     01 04 60.0 -0.8
      3.3nm,0.9s,baz=46,slow=2.3,SNR=7.8
ESDC  Sonseca Array     151.58 345  PKPbc   PKPbc     01 06 09.8 +0.2
      0.3nm,0.6s,baz=29,slow=2.9,SNR=4.2
ESDC                                PKPab   PKPab     01 06 20.0 +1.1
      0.3nm,0.5s,baz=357,slow=3.9,SNR=6.1
```

NEIC ***23*** *00:50:00.8±0.0, 52°.24N×170°.43W, h28km, mb4.1/31, ML3.9(AEIC), After AEIC.*

ISCJB ***23*** *00:50:01.6±0.3, 52°.32N±0°.05×170°.57W±0°.04, h55km, mb4.2/31, MS3.6/1, Error ellipse: s-maj=8.0km s-min=3.0km az=162.1*

IDC ***23*** *00:50:06.2±6.6, 52°.48N×170°.71W, h90km±61km, mb3.7/9, mb1 3.9/11, mb1mx3.4/73, mbtmp3.9/11, ML3.3/1, MS3.6/1, Ms1 3.6/1, ms1mx2.6/67, Error ellipse: s-maj=35.2km s-min=16.0km az=9.0*

ISC 23 00:50:03.3±0.8, **52°.3N**±0°.1×**170°.45W**±0°.05, **h55km, n100, σ1ˢ47**/96, **mb4.2**/31, **Fox Islands**

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Code  Station Name        Δ°   AZ°   Phase ID            Time      Res
                                    Op      ISC         h  m  s    ISC
NIKH  Nikolski High       1.16  56 ePn      Pn        00 50 21.2 -2.1
OKSO  Okmok South         1.72  53  P       Pn        00 50 30.2 -0.6
OKSO                                S       Sn        00 50 51.6 -0.1
OKCE  Okmok Cone E        1.76  51  P       Pn        00 50 30.9 -0.5
OKCE                                S       Sn        00 50 54.7 +2.0
KOFP  Korovin Flat P      2.24 270  P       Pn        00 50 37.2 -0.8
KOKL  Mount Kliuchef      2.30 271  P       Pn        00 50 38.1 -0.8
ATKA  Atka Island         2.31 268 ePn      Pn        00 50 36.6 -2.2
KOWE  Korovin West        2.33 272  P       Pn        00 50 38.4 -0.8
MCIR  Makushin Cirqu      2.68  52  P       Pn        00 50 43.8 -0.2
MSW   Makushin Switc      2.71  53  P       Pn        00 50 44.3 -0.1
MSW                                 S       Sn        00 51 16.5 +0.5
MTBL  Makushin Table      2.79  53  P       Pn        00 50 45.8 +0.2
UNV   Unalaska Valle      2.82  56 ePn      Pn        00 50 45.5 -0.2
AKRB  Akutan Reef Bi      3.18  54  P       Pn        00 50 51.1 +0.2
AKMO  Akutan Morgan       3.19  55  P       Pn        00 50 50.6 -0.4
ZRO   Akutan Zero         3.21  55  P       Pn        00 50 50.7 -0.5
AKLV  Akutan Long Va      3.26  54  P       Pn        00 50 52.2 +0.4
AKGG  Akutan Green G      3.26  53  P       Pn        00 50 52.1 +0.3
AKUT  Akutan              3.33  56 ePn      Pn        00 50 53.7 +0.8
GSTR  Great Sitkin T      3.46 268 ePn      Pn        00 50 54.1 -0.6
GSCK  Great Sitkin C      3.53 267  P       Pn        00 50 53.2 -2.4
ETKA  Kagalaska Isla      3.71 265  P       Pn        00 50 55.4 -2.6
ADAG  Mount Adagdak       3.81 267  P       Pn        00 50 57.7 -1.7
KIKV  Kanaga Island       4.17 266  P       Pn        00 51 02.7 -1.7
SSBA  Shishaldin          4.49  55  P       Pn        00 51 09.0 +0.3
TAPA  Tanaga Point A      4.58 266  P       Pn        00 51 07.8 -2.1
TAFP  Tanaga Falls P      4.67 268  P       Pn        00 51 10.1 -1.1
TASE  Tanaga Southea      4.71 267  P       Pn        00 51 11.1 -0.7
SPIA  Saint Paul Isl      4.85   1 ePn      Pn        00 51 14.4 +0.8
FALS  False Pass          4.89  56 ePn      Pn        00 51 14.8 +0.7
CERAA Semis’ Rag’d T      6.10 270  P       Pn        00 51 30.2 -0.5
CESW  Semis’ Southwe      6.17 270  P       Pn        00 51 31.5 -0.2
SDPT  Sand Point          6.62  59 ePn      Pn        00 51 38.6 +0.7
CHGN  Chignik             8.07  56 ePn      Pn        00 51 57.3 -0.4
SII   Sitkinak Islan     10.36  60 ePn      Pn        00 52 28.7 -0.4
KDAK  Kodiak Island      11.59  55  P       Pn        00 52 44.3 -1.3
      0.4nm,0.3s,baz=100,slow=12,SNR=6.8
KDAK                                S       Sn        00 54 46.5 -6.8
      0.1nm,0.3s,baz=111,slow=8.6,SNR=2.1
SVW2  Sparrevohn         11.96  37 ePn      Pn        00 52 51.4 +0.6
CAST  Castle Rocks       14.71  34 ePn      Pn        00 53 30.0 +2.1
BPAW  Bear Paw Mtn.      15.53  33 ePn      P         00 53 40.4 -1.5
      16nm,1.5s
MCK   McKinley           16.02  36 ePn      P         00 53 46.7 -0.6
      18nm,1.4s
MLY   Manley             16.23  31 ePn      P         00 53 49.8 +0.2
      9.8nm,1.3s
DHY   Denali Highway     16.25  40 ePn      P         00 53 49.6 -0.3
      20nm,1.8s
WRH   Wood River Hil     16.75  35 ePn      P         00 53 57.5 +2.1
      16nm,1.2s
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CCB	Clear Creek Bu	16.96	35	*e*Pn	P	00 53 58.4	+0.8
	12nm,1.2s						
MDM	Murphy Dome	17.00	33	*e*Pn	P	00 53 59.7	+1.6
	10.0nm,1.4s						
IL1	Eielson Array	17.35	35	*e*Pn	P	00 54 03.4	+1.4
ILAR	Eielson Array	17.35	35	P	Pn	00 54 01.0	-0.3
	0.1nm,0.3s,baz=222,slow=11,SNR=6.4						
ILB	Eielson Array	17.35	35	*e*Pn	P	00 54 02.6	+0.6
RIDG	Independ'e Rid	17.57	40	*e*Pn	P	00 54 04.8	+0.4
	16nm,1.5s						
TOLK	Toolik Lake Re	19.13	23	*e*P	Pn	00 54 24.0	+1.2
	15nm,1.5s						
PETK	Petropavlovsk-	19.23	285	P	P	00 54 21.7	-1.0
	baz=96,slow=14						
EGAK	Eagle	19.48	39	*e*P	Pn	00 54 26.9	0.0
	2.3nm,0.8s						
JIS	Juneau Island	21.17	59	*e*P	P	00 54 45.3	+1.6
	6.6nm,1.0s						
DLBC	Dease Lake	23.47	59	P	P	00 55 08.8	+1.1
	12nm,1.1s,baz=277,slow=9.0,SNR=14						
DLBC	Dease Lake	23.47	59	*e*P	P	00 55 10.0	+2.4
	30nm,1.3s						
INK	Inuvik	23.74	34	P	P	00 55 08.6	-1.4
	1.3nm,0.6s,baz=261,slow=6.2,SNR=5.7						
VSP	Spence Mountai	33.76	88	*e*P	P	00 56 44.4	+4.7
H11N2	WAKE ISLAND Hy	37.03	217	T	T	01 36 19.0	
	baz=24,slow=76,SNR=17						
H11N3	WAKE ISLAND Hy	37.03	217	T	T	01 36 27.9	
	baz=24,slow=76,SNR=16						
H11N1	WAKE ISLAND Hy	37.04	217	T	T	01 36 30.4	
	baz=24,slow=76,SNR=16						
PNTR	Pine Nut	37.12	90	*e*P	P	00 57 08.6	0.0
	12nm,1.1s						
LRM	Limekiln Ridge	37.64	76	*e*P	P	00 57 13.6	+0.7
HLID	Hailey	37.68	81	*e*P	P	00 57 13.5	+0.3
	4.1nm,1.5s						
MCMT	McKenzie Canyo	37.93	78	*e*P	P	00 57 16.5	+1.1
KVN	Kaiserville	38.06	89	*e*P	P	00 57 16.7	+0.2
	5.1nm,1.0s						
H11S1	WAKE ISLAND Hy	38.22	217	T	T	01 38 08.0	
	baz=22,slow=76,SNR=94						
H11S2	WAKE ISLAND Hy	38.23	217	T	T	01 38 15.3	
	baz=22,slow=76,SNR=90						
H11S3	WAKE ISLAND Hy	38.24	217	T	T	01 38 12.7	
	baz=22,slow=76,SNR=90						
NVAR	Mina Array Bea	38.32	90	P	P	00 57 18.7	-0.1
	0.8nm,0.7s,baz=278,slow=7.3,SNR=3.6						
SPUT	South Promonto	40.16	82	*e*P	P	00 57 35.2	+1.2
	3.7nm,1.5s						
BW06	Boulder Array	41.06	78	*e*P	P	00 57 42.2	+0.7
	3.2nm,0.9s						
PD31	Pinedale Array	41.06	78	*e*P	P	00 57 42.5	+1.0
PDAR	Pinedale Array	41.06	78	P	P	00 57 42.2	+0.8
	3.5nm,0.9s,baz=297,slow=4.8,SNR=16						
PDAR	Pinedale Array	41.06	78	*e*P	P	00 57 41.7	+0.3
MSU	Marysvale	42.03	85	*e*P	P	00 57 49.6	+0.2
TMUT	Trail Mountain	42.13	84	*e*P	P	00 57 52.1	+1.8
	2.9nm,0.8s						
CN2	Changchun	42.38	285	*e*P	P	00 57 56.6	+4.7
P18A	Preston Nutter	42.51	83	*e*P	P	00 57 55.2	+1.8
	4.7nm,1.1s						
SRU	San Rafael Swe	42.66	83	*e*P	P	00 57 55.5	+0.9
	3.2nm,1.0s						
O20A	White River Ci	43.42	81	*e*P	P	00 58 01.3	+0.6
	8.0nm,1.0s						
PV22	Blue Mesa, Par	44.08	83	*e*P	P	00 58 06.1	+0.1
	15nm,2.0s						
PV16	Nyswonger Mesa	44.14	83	*e*P	P	00 58 07.2	+0.8
	14nm,1.8s						
PV11	David Mesa, Pa	44.18	83	*e*P	P	00 58 07.0	+0.3
	16nm,1.5s						
PV18	Skein Mesa, Pa	44.19	83	*e*P	P	00 58 07.3	+0.4
	4.1nm,1.1s						
PV12	Saucer Basin,	44.21	83	*e*P	P	00 58 07.3	+0.3
	4.5nm,1.0s						
PV03	Paradox Valley	44.22	83	*e*P	P	00 58 08.0	+0.9
PV13	Radium Mtn., P	44.30	83	*e*P	P	00 58 08.2	+0.4
	4.1nm,0.7s						
PV02	Paradox Valley	44.32	83	*e*P	P	00 58 08.3	+0.4
	3.9nm,0.7s						
PV01	Paradox Valley	44.47	83	*e*P	P	00 58 09.5	+0.4
SDCO	Great Sand Dun	46.58	81	*e*P	P	00 58 26.9	+1.1
	1.5nm,1.0s						
T25A	Trinidad	47.63	81	*e*P	P	00 58 34.5	+0.5
	5.7nm,1.0s						
HHC	Hu-ho-hao-te	52.31	290	*e*P	P	00 59 10.8	+1.5
HHC				sP	sP	00 59 29.0	-1.2
HHC				S	S	01 06 33.8	+3.3
HHC				pmax	pmax		
	comp=Z,13nm,1.0s						
HHC				pmax	pmax		
	comp=Z,180nm,4.9s						
WMOK	Wichita Mounta	52.64	80	*e*P	P	00 59 12.1	+0.5
	comp=Z,2.8nm,0.8s						
LPIG	La Paz	53.14	98	LR	LR	01 19 04.3	
	comp=Z,51nm,19.9s,baz=273,slow=33						
TX31	Lajitas Ar. Si	53.41	88	*e*P	P	00 59 18.4	+0.9
TXAR	Lajitas Array	53.41	88	P	P	00 59 18.1	+0.6
	comp=Z,2.0nm,0.8s,baz=295,slow=5.3,SNR=28						
WMQ	Urumqi	63.03	307	*e*P	P	01 00 29.1	+4.7
BVAR	Borovoye Array	63.34	324	P	P	01 00 24.9	-1.3
	comp=Z,0.2nm,0.3s,baz=24,slow=7.9,SNR=3.6						
GYA	Guiyang	65.29	282	*e*P	P	01 00 41.0	+1.5
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
FINES	FINESS Array B	65.80	351	P	P	01 00 40.5	-1.6
	comp=Z,1.3nm,0.8s,baz=239,slow=24,SNR=2.3						
HFS	Hagfors	67.83	358	P	P	01 00 52.4	-2.6
	comp=Z,4.0nm,0.9s,baz=357,slow=3.2,SNR=6.9						
CMAR	Chiang Mai Arr	75.98	282	P	P	01 01 41.6	-2.9
	comp=Z,0.6nm,0.3s,baz=36,slow=7.8,SNR=3.0						

NIED ***23*** *01:05:00, 37°.20N×141°.50E, h50km, Mw3.9 Best double couple: M$_0$7.57000×10^{14} NP1:φ$_s$47.00000°, δ45.00000°, λ80.00000°. NP2:φ$_s$241.00000°, δ46.00000°, λ100.00000°.*

IDC ***23*** *01:05:48.8±0.9, 37°.11N×141°.73E, h0km, mb3.8/8, mb1 3.8/13, mb1mx3.7/66, mbtmp3.8/13, ML3.7/4, MS2.9/4, Ms1 3.0/4, ms1mx2.6/61, Error ellipse: s-maj=20.1km s-min=16.1km az=79.0*

JMA ***23*** *01:05:54.5±0.1, 37°.21N×141°.53E, h47km±2km, M4.0*

JMA Felt II J1.

ISC 23 01:05:49.3±1.8**, 37°.11N**±0°.04×**141°.68E**±0°.06**, h7**km±11km**, n32,** σ1^s**63**/37**, mb3.7**/9**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	0.70	292	P	Pn	01 06 06.1	+0.5
JFK				S	Sb	01 06 14.0	+0.4
ONAJ	Iwakimizuishiy	0.71	270	P	Pn	01 06 06.8	+1.0
ONAJ				S	Sn	01 06 15.3	-1.7
JFFD	Fukushimafurud	0.90	269	P	Pn	01 06 09.3	+0.9
JFFD				S	Sb	01 06 19.7	+0.3
JHO	Hitachi	1.02	241	P	Pn	01 06 11.5	+1.5
JHO				*e*S	Sn	01 06 23.6	-1.0
JMM	Marumori	1.04	317	P	Pn	01 06 10.4	+0.1
JMM				S	Sg	01 06 22.3	-0.4
JFT	Otama	1.15	291	P	Pg	01 06 13.1	+1.7
JFT				S	Sb	01 06 26.1	-0.6
JIO	Ouri	1.37	349	P	Pg	01 06 15.4	-0.2
JIO				S	Sb	01 06 30.4	-2.6
JOU	Okura	1.50	328	P	Pg	01 06 17.3	-0.7
JOU				S	Sn	01 06 35.0	-1.4
JFY	Yanaizu	1.61	281	P	Pg	01 06 19.5	-0.6
JYS	Shirataka	1.70	311	P	Pb	01 06 20.5	-0.4
MJAR	Matsushiro Arr	2.84	260	Pn	Pb	01 06 37.1	-3.3
	6.1nm,0.3s,baz=81,slow=16,SNR=13						
MJAR				Sn	Sb	01 07 12.8	-2.7
	14nm,0.3s,baz=75,slow=29,SNR=7.0						
MJAR				LR	LR	01 07 55.1	
	comp=Z,115nm,18.4s,baz=65,slow=44						
MAT	Matsushiro	2.85	260	P	Pb	01 06 39.1	-1.3
MAT				S	Sb	01 07 14.7	-0.8
JHJ	Hachijo jima 2	4.27	202	Pn	Pn	01 06 55.0	+0.3
	11nm,0.3s,baz=135,slow=23,SNR=6.2						
JHJ				Sn	Sn	01 07 46.2	+1.4
	66nm,0.3s,baz=241,slow=22,SNR=9.2						
JHJ				LR	LR	01 08 46.4	
	comp=Z,112nm,18.2s,baz=202,slow=42						
JCJ	Chichijima	9.99	177	Pn	Pn	01 08 14.2	+1.0
	1.5nm,0.3s,baz=270,slow=20,SNR=3.8						
JCJ				Sn	Sn	01 09 59.7	-5.9
	7.2nm,0.3s,baz=287,slow=19,SNR=4.6						
USRK	Ussuriysk Ar.	10.22	317	Pn	Pn	01 08 17.1	+0.8
	baz=135,slow=14						
USRK				LR	LR	01 12 02.1	
	comp=Z,80nm,19.5s,baz=104,slow=36						
KSRS	Korea Array	10.97	276	Pn	Pn	01 08 28.3	+1.7
	0.4nm,0.3s,baz=89,slow=14,SNR=3.6						
SONM	Songino Array	27.93	304	P	P	01 11 41.2	+1.0
	1.5nm,0.7s,baz=108,slow=9.0,SNR=8.9						
H11N2	WAKE ISLAND Hy	28.00	121	T	T	01 41 58.4	
	baz=313,slow=75,SNR=26						
H11N1	WAKE ISLAND Hy	28.01	121	T	T	01 41 58.4	
	baz=313,slow=75,SNR=29						
H11N3	WAKE ISLAND Hy	28.02	121	T	T	01 41 59.9	
	baz=313,slow=75,SNR=17						
H11S1	WAKE ISLAND Hy	28.72	123	T	T	01 42 46.4	
	baz=316						
H11S3	WAKE ISLAND Hy	28.72	123	T	T	01 42 45.7	
	baz=316						
H11S2	WAKE ISLAND Hy	28.73	123	T	T	01 42 49.6	
	baz=316						
CMAR	Chiang Mai Arr	41.72	255	LR	LR	01 31 05.5	
	comp=Z,25nm,18.1s,baz=195,slow=36						
ZALV	Zalesovo Beam	42.03	312	P	P	01 13 41.7	+0.6
	0.8nm,0.5s,baz=94,slow=5.9,SNR=2.8						
MKAR	Makanchi Array	44.26	302	P	P	01 13 59.4	0.0
	0.3nm,0.4s,baz=77,slow=7.5,SNR=4.2						
KURBB	Kurchatov Arra	46.13	308	P	P	01 14 14.0	-0.1
	1.6nm,0.5s,baz=83,slow=8.1,SNR=7.0						
ILAR	Eielson Array	49.32	32	P	P	01 14 39.9	+1.2
	0.7nm,0.8s,baz=273,slow=7.0,SNR=11						
BVAR	Borovoye Array	50.68	312	P	P	01 14 50.1	+0.8
	0.5nm,0.5s,baz=79,slow=7.5,SNR=4.5						
WRA	Warramunga Arr	57.16	188	P	P	01 15 37.4	+0.6
	0.5nm,0.6s,baz=6.4,slow=7.4,SNR=13						
ASAR	Alice Springs	60.89	188	P	P	01 16 03.1	+0.5
	0.6nm,0.7s,baz=17,slow=7.7,SNR=5.2						
TXAR	Lajitas Array	89.91	53	P	P	01 18 49.6	+0.1
	0.1nm,0.6s,baz=298,slow=1.9,SNR=3.1						

JMA 23 01:10:15.7, 36°.88N×140°.56E, h10km, M2.9, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFFD	Fukushimafurud	0.21	0	P	Pg	01 10 20.2	+0.1
JFFD				S	Sg	01 10 23.1	0.0
JHO	Hitachi	0.27	178	P	Pg	01 10 21.2	+0.1
JHO				S	Sg	01 10 25.0	+0.2
ONAJ	Iwakimizuishiy	0.29	41	P	Pg	01 10 21.7	+0.1
ONAJ				*e*S	Sg	01 10 25.9	+0.3
JFK	Kawauchi	0.55	27	P	Pg	01 10 26.1	-0.3
JFK				S	Sg	01 10 33.6	0.0
JFT	Otama	0.66	344	P	Pg	01 10 28.3	-0.2
JFT				S	Sg	01 10 37.3	+0.1
JFY	Yanaizu	0.86	308	P	Pg	01 10 32.2	-0.1
JFY				S	Sg	01 10 43.3	-0.3
MAT	Matsushiro	1.92	261	P	Pb	01 10 49.8	-1.0
MAT				S	Sb	01 11 15.1	+0.2

IDC ***23*** *01:14:52.9±3.9, 37°.29S×179°.89E, h0km, mb4.0/2, mb1 4.2/3, mb1mx3.8/40, mbtmp4.0/3, ML3.5/1, Error ellipse: s-maj=109.9km s-min=38.0km az=147.0*

WEL ***23*** *01:14:53.9, 38°S±9°×18°0W±°, h33km, ML4.3/25*

NEIC ***23*** *01:14:54.5±0.0, 37°.61S×179°.70W, h34km, ML4.2(WEL), After WEL.*

ISC 23 01:14:53.0±3.5**, 37°.72S**±0°.07×**179°.8W**±0°.1**, h12**km±22km**, n84,** σ0^s**99**/101**, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.40	265	P	Pb	01 15 19.0	0.0
MXZ	Matakaoa Point	1.49	276	Pn	Pn	01 15 19.6	+0.1
MXZ				Sn	Sn	01 15 38.0	-0.9
MXZ	Matakaoa Point	1.49	276	P	Pn	01 15 19.6	+0.1
MXZ				S	Sn	01 15 37.8	-1.1
PUZ	Puketiti	1.55	256	Pn	Pn	01 15 20.8	+0.3
PUZ				Sn	Sn	01 15 40.7	+0.1
PUZ	Puketiti	1.55	256	P	Pn	01 15 20.8	+0.3
PUZ				S	Sn	01 15 40.8	+0.1
PKGZ	Pakihiroa	1.67	264	P	Pn	01 15 22.2	+0.1
CNGZ	Carnagh Statio	1.73	243	Pn	Pb	01 15 24.2	-0.4
CNGZ	Carnagh Statio	1.73	243	P	Pb	01 15 24.3	-0.4
TWGZ	Tauwhareparae	1.79	255	Pn	Pn	01 15 24.5	+0.8
TWGZ	Tauwhareparae	1.79	255	P	Pn	01 15 24.3	+0.6
TWGZ				S	Sn	01 15 47.2	+0.7
HAZ	Te Kaha	1.89	268	P	Pn	01 15 25.8	+0.7
TKGZ	Te Karaka	1.97	248	Pn	Pn	01 15 25.4	-0.7
TKGZ	Te Karaka	1.97	248	P	Pn	01 15 26.9	+0.7
TKGZ				S	Sn	01 15 50.7	-0.1
RUGZ	Raukumara Rang	1.99	262	P	Pn	01 15 26.6	+0.1
RIGZ	Rimuhau	2.14	242	P	Pn	01 15 28.9	+0.4
RIGZ				S	Sn	01 15 54.9	-0.1
PRGZ	Paritu Road	2.16	236	Pn	Pn	01 15 30.4	+1.5
PRGZ	Paritu Road	2.16	236	P	Pn	01 15 30.4	+1.5
MWZ	Matawai	2.18	253	Pn	Pn	01 15 29.2	+0.1
MWZ	Matawai	2.18	253	P	Pn	01 15 29.1	+0.1
MWZ				P	Pn	01 15 29.2	+0.1
MWZ				S	Sn	01 15 55.2	-0.8
MHGZ	Mahia Peninsul	2.28	231	Pn	Pn	01 15 31.4	+0.9
MHGZ	Mahia Peninsul	2.28	231	P	Pn	01 15 31.4	+0.9
RAGZ	Rawiri	2.31	250	P	Pn	01 15 32.1	+1.2
KNZ	Kokohu	2.35	236	Pn	Pn	01 15 31.9	+0.4
KNZ	Kokohu	2.35	236	P	Pn	01 15 31.9	+0.4
SNGZ	Shannon Statio	2.47	244	Pn	Pn	01 15 33.6	+0.5
SNGZ	Shannon Statio	2.47	244	P	Pn	01 15 33.8	+0.7
URZ	Urewera	2.48	257	Pn	Pn	01 15 33.7	+0.5
	12nm,0.3s,baz=208,slow=1.2,SNR=56						
URZ				Sn	Sn	01 16 03.1	-0.2
	66nm,0.3s,baz=300,slow=15,SNR=44						
URZ	Urewera	2.48	257	Pn	Pn	01 15 34.0	+0.9
URZ				Sn	Sn	01 16 03.1	-0.2
URZ	Urewera	2.48	257	P	Pn	01 15 34.1	+0.9
URZ				S	Sn	01 16 03.1	-0.2
RTZ	Ruatahuna	2.67	249	P	Pn	01 15 36.7	+0.8
WHHZ	Waihua	2.68	239	P	Pn	01 15 36.8	+0.9
WHHZ				S	Sn	01 16 08.6	+0.4
RAHZ	Arahi	2.71	243	P	Pn	01 15 37.5	+1.2
RAHZ				S	Sn	01 16 09.2	+0.2
MUGZ	Murupara	2.79	253	P	Pn	01 15 38.3	+0.9
MTHZ	Maungataniwha	2.85	246	P	Pn	01 15 39.4	+1.0
MTHZ				S	Sn	01 16 12.7	0.0
ARHZ	Aropaoanui	2.93	237	Pn	Pn	01 15 40.5	+1.1
ARHZ	Aropaoanui	2.93	237	P	Pn	01 15 40.7	+1.3
ARHZ				S	Sn	01 16 15.5	+1.0
TARZ	Mount Tarawera	2.94	259	Pn	Pn	01 15 40.3	+0.7
TARZ	Mount Tarawera	2.94	259	P	Pn	01 15 40.9	+1.3
NMHZ	Naumai	2.98	241	P	Pn	01 15 40.7	+0.6
CKHZ	Cape Kidnapper	3.10	230	P	Pn	01 15 42.5	+0.8
HRRZ	Handcock Road	3.14	257	P	Pn	01 15 43.7	+1.4
MCHZ	McNeill Hill	3.22	237	Pn	Pn	01 15 44.5	+1.1
MCHZ	McNeill Hill	3.22	237	P	Pn	01 15 44.1	+0.7
MCHZ				S	Sn	01 16 22.2	+0.5
BKZ	Black Stump Fm	3.23	242	Pn	Pn	01 15 43.9	+0.3
BKZ	Black Stump Fm	3.23	242	P	Pn	01 15 44.1	+0.5
KAHZ	Kahuranaki	3.31	230	P	Pn	01 15 44.4	-0.1
KWHZ	Kaweka Forest	3.40	239	P	Pn	01 15 46.5	+0.7
PXZ	Pawanui	3.46	227	Pn	Pn	01 15 46.2	-0.5
PXZ	Pawanui	3.46	227	P	Pn	01 15 45.9	-0.8
KRHZ	Kereru	3.54	236	P	Pn	01 15 48.1	+0.3
BHHZ	Black Hill Sta	3.67	240	Pn	Pn	01 15 49.9	+0.3
BHHZ	Black Hill Sta	3.67	240	P	Pn	01 15 49.9	+0.3
KUZ	Kuaotunu	3.68	284	P	Pn	01 15 49.6	-0.1
WPHZ	Waipukurau	3.73	230	P	Pn	01 15 50.5	0.0
PNHZ	Pukenui	3.80	234	Pn	Pn	01 15 51.2	-0.2
PNHZ	Pukenui	3.80	234	P	Pn	01 15 51.2	-0.2
MOVZ	Moawhango	3.85	243	P	Pn	01 15 53.8	+1.7
TUVZ	Tukino	3.87	245	P	Pn	01 15 55.3	+2.9
WNVZ	Wahianoa	3.93	245	Pn	Pn	01 15 54.6	+1.3
ANWZ	Angora Road	3.97	225	P	Pn	01 15 53.0	-0.6
TSZ	Takapari Road	4.03	233	Pn	Pn	01 15 54.1	-0.4
TSZ	Takapari Road	4.03	233	P	Pn	01 15 54.2	-0.3
MKAZ	Moumakai	4.04	277	P	Pn	01 15 54.7	+0.2
DVHZ	Dannevirke	4.04	229	Pn	Pn	01 15 54.3	-0.4
DVHZ	Dannevirke	4.04	229	P	Pn	01 15 54.0	-0.7
BFZ	Birch Farm	4.25	225	Pn	Pn	01 15 55.3	-2.2
HIZ	Hauiti	4.27	258	P	Pn	01 15 58.4	+0.7
PRWZ	Pori Road	4.32	228	Pn	Pn	01 15 58.4	-0.1
PRWZ	Pori Road	4.32	228	P	Pn	01 15 58.5	-0.1
POWZ	Post Office Ro	4.34	231	P	Pn	01 15 58.3	-0.6
VRZ	Vera Road	4.48	250	P	Pn	01 16 02.0	+1.4
MRZ	Mangatainoka R	4.62	229	Pn	Pn	01 16 01.2	-1.4
MRZ	Mangatainoka R	4.62	229	P	Pn	01 16 01.4	-1.3
HOWZ	Holdsworth Sta	4.81	227	Pn	Pn	01 16 03.1	-2.1
MTW	Mount Morrison	4.99	225	Pn	Pn	01 16 04.9	-2.7
WCZ	Waipu Caves	5.00	289	P	Pn	01 16 08.7	+0.9
KIW	Kapiti Island	5.15	231	Pn	Pn	01 16 09.1	-0.8
SNZO	South Karori	5.54	228	*e*Pn	Pn	01 16 17.3	+2.0
SNZO				*e*S	Sn	01 17 06.5	-12
CTZ	Chatham Island	6.48	159	Pn	Pn	01 16 30.5	+2.3
QRZ	Quartz Range	6.69	240	Pn	Pn	01 16 29.7	-1.3
THZ	Tophouse	6.90	232	Pn	Pn	01 16 36.8	+2.8
ASAR	Alice Springs	41.77	276	P	P	01 22 41.8	-0.6
	1.8nm,0.8s,baz=120,slow=7.7,SNR=13						
WRA	Warramunga Arr	43.42	281	P	P	01 22 54.9	-0.9
	1.1nm,0.4s,baz=123,slow=7.2,SNR=20						
ARCES	ARCESS Array B	145.32	345	PKP	PKPab	01 34 30.4	+0.8
	2.9nm,0.9s,baz=40,slow=4.7,SNR=6.4						

IDC 23 01:17:57.0±1.6**, 4°.69N**×**96°.06E, h0**km**, mb3.6**/5**, mb1 3.7**/5**, mb1mx3.4**/61**, mbtmp3.6**/5**, Error ellipse: s-maj=65.3km s-min=22.7km az=54.0, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	43.60	346	P	P	01 26 03.1	+0.1
	0.3nm,0.3s,baz=156,slow=8.8,SNR=9.4						
SONM	Songino Array	43.89	10	P	P	01 26 05.3	-0.2
	0.4nm,0.6s,baz=210,slow=8.3,SNR=2.8						
WRA	Warramunga Arr	44.88	124	P	P	01 26 13.3	-0.4
	0.5nm,0.6s,baz=303,slow=9.4,SNR=6.2						
ASAR	Alice Springs	46.43	129	P	P	01 26 26.1	+0.2
	0.5nm,0.6s,baz=305,slow=7.4,SNR=4.6						
BRTR	Keskin Array B	65.95	312	P	P	01 28 45.2	-0.2
	0.1nm,0.3s,baz=108,slow=7.9,SNR=3.9						

IDC 23 01:47:35.5±2.1**, 17°.18S**×**175°.03W, h0**km**, mb3.9**/6**, mb1 4.3**/6**, mb1mx3.8**/46**, mbtmp3.9**/6**, Error ellipse: s-maj=138.9km s-min=23.5km az=152.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	47.94	258	P	P	01 56 16.4	+0.2
	0.7nm,0.6s,baz=95,slow=8.5,SNR=5.1						
ASAR	Alice Springs	48.09	253	P	P	01 56 17.1	-0.3
	4.4nm,0.7s,baz=87,slow=8.4,SNR=27						
NVAR	Mina Array Bea	76.69	42	P	P	01 59 29.4	+0.6
	1.3nm,0.9s,baz=226,slow=8.4,SNR=6.7						
TXAR	Lajitas Array	82.89	56	P	P	02 00 02.1	-0.5
	0.5nm,1.0s,baz=220,slow=3.3,SNR=4.7						
ILAR	Eielson Array	84.49	12	P	P	02 00 09.4	-0.4
	1.0nm,1.1s,baz=211,slow=4.4,SNR=5.1						
PDAR	Pinedale Array	84.62	42	P	P	02 00 11.4	+0.1
	1.0nm,0.9s,baz=224,slow=4.1,SNR=6.7						

IDC 23 01:47:52.5±6.8**, 17°.56S**×**178°.11W, h558**km±83km**, mb2.9**/5**, mb1 3.3**/5**, mb1mx2.8**/47**, mbtmp3.8**/5**, Error ellipse: s-maj=121.5km s-min=25.6km az=157.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	44.98	259	P	P	01 55 18.7	-0.1
	1.0nm,0.3s,baz=96,slow=7.7,SNR=39						
ASAR	Alice Springs	45.16	254	P	P	01 55 19.9	-0.3
	3.4nm,0.7s,baz=92,slow=7.7,SNR=26						
NVAR	Mina Array Bea	78.98	44	P	P	01 58 58.8	-0.4
	0.1nm,0.3s,baz=234,slow=7.7,SNR=2.3						
ILAR	Eielson Array	85.49	13	P	P	01 59 31.4	+0.2
	0.3nm,0.5s,baz=226,slow=4.8,SNR=4.8						
TXAR	Lajitas Array	85.57	58	P	P	01 59 33.2	+0.7
	0.3nm,0.7s,baz=201,slow=6.7,SNR=5.1						
BRTR	Keskin Array B	144.74	315	PKP	PKPdf	02 06 24.9	-1.6
	0.4nm,0.5s,baz=96,slow=2.9,SNR=3.8						
MMAI	Mount Meron Ar	146.20	304	PKPbc	PKPbc	02 06 30.8	-0.5
	0.7nm,0.5s,baz=87,slow=6.1,SNR=3.4						
GERES	GERESS Array B	147.35	345	PKPbc	PKPbc	02 06 33.1	-0.8
	0.3nm,0.8s,baz=29,slow=3.3,SNR=4.1						

IDC 23 01:48:28.8±2.9**, 17°.76S**×**177°.18W, h0**km**, mb3.7**/3**, mb1 4.1**/3**, mb1mx3.5**/47**, mbtmp3.7**/3**, Error ellipse: s-maj=318.5km s-min=34.8km az=159.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	45.81	259	P	P	01 56 52.3	-0.5
	0.6nm,0.3s,baz=96,slow=7.0,SNR=6.5						
ASAR	Alice Springs	45.96	254	P	P	01 56 54.2	+0.2
	0.5nm,0.3s,baz=88,slow=8.2,SNR=5.9						
TXAR	Lajitas Array	84.93	57	P	P	02 01 06.3	0.0
	0.1nm,0.7s,baz=226,slow=6.7,SNR=3.9						

ISCJB ***23*** *02:01:38.5±0.5, 45°.33N±0°.08×141°.9E±0°.1, h314km±6km, mb3.0/5, Error ellipse: s-maj=14.1km s-min=11.6km az=146.9*

IDC ***23*** *02:01:38.8±1.2, 45°.79N×141°.80E, h281km±40km, mb2.9/5, mb1 3.0/6, mb1mx2.8/66, mbtmp3.5/6, Error ellipse: s-maj=81.7km s-min=18.2km az=178.0*

JMA ***23*** *02:01:39.4±0.1, 45°.49N×142°.07E, h305km, M2.9*

ISC 23 02:01:39.0±0.8**, 45°.33N**±0°.09×**141°.93E**±0°.08**, h309**km±7km**, n21,** σ1^s**39**/29**, mb3.0**/5**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JWK2	Keihoku	0.03	234	P	Pn	02 02 18.0	-0.1
JWK2				*e*S	S	02 02 48.4	-0.8
JRR	Rishiri	0.48	246	P	Pn	02 02 19.0	+0.4
JSE	Soyaes	0.59	129	P	Pn	02 02 18.9	0.0
JSS	Shosan	0.94	183	P	Pn	02 02 21.1	+0.9
ASAJ	Asahikawa	1.31	158	P	Pn	02 02 22.7	+0.7
	2.0nm,0.3s,baz=40,slow=7.9,SNR=4.0						
ASAJ				S	S	02 02 56.5	+0.2
	0.7nm,0.3s,baz=105,slow=30,SNR=8.7						
ASAJ	Asahikawa	1.31	158	P	Pn	02 02 23.3	+1.3
JKK2	Kamakawa 2	1.57	158	P	Pn	02 02 24.7	+1.1
JKK2				*e*S	S	02 03 00.0	+0.8
JTKR	Abashiri--Toko	1.96	133	P	Pn	02 02 27.0	+0.7
JAR	Ashorobuto	2.43	146	P	Pn	02 02 31.2	+1.0
JAR				*e*S	S	02 03 11.9	+0.9
JEW	Eniwo	2.52	188	*e*S	S	02 03 13.6	+1.1
JCH	Churui	2.91	159	P	Pn	02 02 34.4	-0.2
JCH				*e*S	S	02 03 16.0	-3.0
JAK	Akkeshi	3.07	139	P	Pn	02 02 36.5	+0.4
JAK				*e*S	S	02 03 19.6	-2.1
JNBK	Urakawa-nobuka	3.11	169	P	Pn	02 02 37.7	+1.2
JNBK				*e*S	S	02 03 22.0	-0.6
NEM2	Nemuro 2	3.37	124	*e*S	S	02 03 23.7	-3.4
JKB	Kayabe	3.51	191	P	Pn	02 02 40.8	+0.3
JKB				*e*S	S	02 03 28.3	-1.5
USRK	Ussuriysk Ar.	7.17	264	P	Pn	02 03 20.0	-2.5
	baz=82,slow=14						
SONM	Songino Array	24.42	289	P	P	02 06 30.8	+0.7
	0.7nm,0.5s,baz=81,slow=8.4,SNR=4.8						
KURBB	Kurchatov Arra	41.62	301	P	P	02 08 57.0	-0.3
	0.4nm,0.5s,baz=74,slow=9.3,SNR=6.4						
ILAR	Eielson Array	42.44	37	P	P	02 09 03.3	-0.4
	0.3nm,0.6s,baz=277,slow=9.2,SNR=6.3						
BVAR	Borovoye Array	45.59	307	P	P	02 09 28.0	-0.7
	0.4nm,0.3s,baz=77,slow=9.0,SNR=4.2						
TXAR	Lajitas Array	84.78	53	P	P	02 13 40.5	+1.5
	0.1nm,0.5s,baz=297,slow=4.4,SNR=4.5						

IDC ***23*** *02:02:35.9±1.7, 27°.68N×56°.87E, h0km, mb3.7/6, mb1 3.8/7, mb1mx3.4/62, mbtmp3.7/7, ML4.2/1, MS3.5/1, Ms1 3.5/1, ms1mx2.4/60, Error ellipse: s-maj=34.7km s-min=28.2km az=53.0*

TEH ***23*** *02:02:37.3, 27°.60N×56°.74E, h13km, ML3.6*

ISCJB ***23*** *02:02:37.3±0.6, 27°.63N±0°.02×56°.90E±0°.06, h19km±4km, mb3.5/6, MS3.5/1, Error ellipse: s-maj=8.6km s-min=4.0km az=172.7*

OMAN ***23*** *02:02:37.5±3.1, 27°.52N×57°.03E, h13km, Error ellipse: s-maj=19.5km s-min=5.0km az=1.0*

DSN ***23*** *02:02:39.1±1.2, 27°.63N×56°.77E, h15km, ML3.8/8, Error ellipse: s-maj=42.8km s-min=9.6km az=108.0*

CSEM ***23*** *02:02:39.2±0.2, 27°.56N×56°.75E, h10km, ML3.6, Error ellipse: s-maj=7.9km s-min=4.0km az=82.0*

ISC 23 02:02:38.1±0.7**, 27°.54N**±0°.03×**56°.80E**±0°.05**, h15**km±5km**,**

n75,σ1^{s}64/92,mb3.4/6,Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIAN	Nian	0.04	55	ePg	Pg	02 02 40.8	-0.2
NIAN				eSg	Sg	02 02 43.1	+0.3
NIAN				e		02 02 43.8	
	comp=E,99nm,0.1s						
NIAN				e		02 02 43.9	
	comp=N,99nm,0.1s						
NIAN				e		02 02 44.3	
	comp=Z,99nm,0.1s						
NIAN	Nian	0.04	55	ePg	Pg	02 02 40.8	-0.2
NIAN				eSg	Sg	02 02 43.1	+0.3
GENO	Geno	0.57	256	ePg	Pg	02 02 49.1	-0.5
GENO				eSg	Sb	02 02 58.0	-0.1
GENO				e		02 03 00.8	
	comp=Z,99nm,0.1s						
GENO				e		02 03 01.5	
	comp=E,99nm,0.1s						
GENO				e		02 03 02.7	
	comp=N,99nm,0.1s						
GENO	Geno	0.57	256	ePg	Pg	02 02 49.1	-0.5
GENO				eSg	Sb	02 02 58.0	-0.1
KHSK	Kohestak	0.81	164	ePg	Pn	02 02 56.0	+1.0
KHSK				e		02 02 57.6	
	comp=Z,99nm,0.2s						
KHSK				e		02 03 11.0	
	comp=N,99nm,0.2s						
KHSK				e		02 03 12.1	
	comp=E,99nm,0.2s						
KHSK	Kohestak	0.81	164	ePg	Pn	02 02 56.0	+1.0
SHME	Shamm	1.60	202	eP	Pb	02 03 07.5	+0.2
	SNR=45						
SHME				S	Sg	02 03 29.7	0.0
SHME	Shamm	1.60	202	ePn	Pn	02 03 06.5	+0.6
SHME	Shamm	1.60	202	P	Pn	02 03 06.5	+0.6
	SNR=45						
SHME				S	Sb	02 03 28.4	+1.1
BANOM	Banah	1.67	196	P	Pn	02 03 08.2	+1.4
	SNR=141						
BANOM				S	Sb	02 03 29.7	+0.2
BANOM	Banah	1.67	196	eP	Pn	02 03 08.4	+1.6
	SNR=42						
BANOM				S	Sg	02 03 32.4	+0.4
BANOM	Banah	1.67	196	P	Pn	02 03 08.4	+1.6
	SNR=42						
BANOM				S	Sb	02 03 29.7	+0.2
NGRK	Negar Kerman	2.10	358	ePn	Pn	02 03 14.5	+1.4
NGRK				e		02 03 15.3	
	comp=Z,99nm,0.1s						
NGRK				e		02 03 44.9	
	comp=N,99nm,0.2s						
NGRK				e		02 03 46.1	
	comp=E,99nm,0.1s						
NGRK	Negar Kerman	2.10	358	ePn	Pn	02 03 14.5	+1.4
MSFE	Esma-Masafi	2.25	195	eP	Pn	02 03 17.0	+2.2
	SNR=5.4						
MSFE	Esma-Masafi	2.25	195	ePn	Pn	02 03 17.2	+2.4
MSFE	Esma-Masafi	2.25	195	P	Pn	02 03 14.7	-0.1
	SNR=5.5						
MSFE	Esma-Masafi	2.25	195	ePn	Pn	02 03 17.2	+2.4
MDH	Madha	2.28	192	eP	Pn	02 03 16.3	+1.2
	SNR=7.6						
MDH	Madha	2.28	192	P	Pn	02 03 16.3	+1.2
	SNR=7.6						
CHMN	Cheshme madani	2.40	15	ePn	Pn	02 03 20.3	+3.1
CHMN				e		02 03 53.7	
	comp=E,99nm,0.3s						
CHMN				e		02 03 54.1	
	comp=N,99nm,0.2s						
CHMN				e		02 03 59.0	
	comp=Z,99nm,0.2s						
CHMN	Cheshme madani	2.40	15	ePn	Pn	02 03 20.3	+3.1
TVBK	TV Kerman	2.44	359	ePn	Pn	02 03 20.2	+2.5
TVBK				e		02 03 21.7	
	comp=Z,99nm,0.1s						
TVBK				e		02 03 54.9	
	comp=E,99nm,0.2s						
TVBK				e		02 03 55.9	
	comp=N,99nm,0.1s						
TVBK	TV Kerman	2.44	359	ePn	Pn	02 03 20.2	+2.5
UOSS	Minazif	2.64	192	P	Pn	02 03 20.5	+0.4
	SNR=8.2						
UOSS				S	Sn	02 03 54.0	+2.1
UOSS	Minazif	2.64	192	eP	Pn	02 03 22.4	+2.3
	SNR=7.5						
UOSS	Minazif	2.64	192	P	Pn	02 03 22.4	+2.3
	SNR=7.5						
UOSS				S	Sn	02 03 54.0	+2.1
NAZ	Nazwa, Dubai	2.74	202	p	Pn	02 03 21.7	+0.2
NAZ	Nazwa, Dubai	2.74	202	eP	Pn	02 03 24.8	+3.3
	SNR=12						
NAZ	Nazwa, Dubai	2.74	202	ePn	Pb	02 03 25.0	-1.8
NAZ	Nazwa, Dubai	2.74	202	P	Pn	02 03 24.8	+3.3
	SNR=12						
HATD	Hatta, Dubai	2.77	193	p	Pn	02 03 22.1	+0.2
HATD				S	Sn	02 03 56.8	+1.7
HATD	Hatta, Dubai	2.77	193	eP	Pb	02 03 25.8	-1.5
	SNR=9.6						
HATD	Hatta, Dubai	2.77	193	ePn	Pb	02 03 26.8	-0.5
HATD	Hatta, Dubai	2.77	193	P	Pb	02 03 25.8	-1.5
	SNR=9.6						
HATD				S	Sn	02 03 56.8	+1.7
KHGB	Koh Gabri	2.84	354	ePn	Pn	02 03 25.7	+2.5
KHGB				e		02 03 26.1	
	comp=Z,99nm,0.1s						
KHGB				e		02 03 33.7	
	comp=N,99nm,0.1s						
KHGB				e		02 04 07.1	
	comp=E,99nm,0.2s						
KHGB	Koh Gabri	2.84	354	ePn	Pn	02 03 25.7	+2.5
ASHO	Ashiyiah	2.92	193	p	Pn	02 03 25.1	+1.0
ASHO				S	Sn	02 04 01.0	+2.1
ASHO	Ashiyiah	2.92	193	i P	Pn	02 03 25.7	+1.6
	SNR=13						
ASHO	Ashiyiah	2.92	193	P	Pn	02 03 25.7	+1.6
	SNR=13						
ASHO				S	Sn	02 04 01.0	+2.1
ASUD	Al Ashush, Dub	3.19	205	P	Pn	02 03 30.0	+2.3
	SNR=13						
ASUD	Al Ashush, Dub	3.19	205	i P	Pn	02 03 30.0	+2.3
	SNR=13						
ASUD	Al Ashush, Dub	3.19	205	ePn	Pn	02 03 30.0	+2.3
ASUD	Al Ashush, Dub	3.19	205	P	Pn	02 03 30.0	+2.3
	SNR=13						
ALNE	Al Ain	3.59	195	ePn	Pn	02 03 36.8	+3.5
ALNE	Al Ain	3.59	195	ePn	Pn	02 03 36.8	+3.5
ISRV	Sarvestan	3.73	300	ePn	Pn	02 03 37.8	+2.3
ISRV				e		02 04 46.3	
	comp=Z,555nm,0.2s						
ISRV				e		02 04 52.1	
	comp=N,2µm,0.3s						
ISRV	Sarvestan	3.73	300	ePn	Pn	02 03 37.8	+2.3
HOQ	Hoqain	3.97	173	ePn	Pn	02 03 40.3	+1.9
HOQ	Hoqain	3.97	173	ePn	Pn	02 03 40.3	+1.9
BIDO	Bidbid	4.18	163	P	Pn	02 03 41.4	+0.1
	SNR=14						
BIDO				S	Sn	02 04 30.1	+0.3
BIDO	Bidbid	4.18	163	P	Pn	02 03 41.4	+0.1
	SNR=14						
BIDO				S	Sn	02 04 30.1	+0.3
IMEH	Mehriz	4.29	334	e	Pb	02 03 52.5	-0.9
	comp=N,290nm,0.1s						
IMEH				e		02 03 57.2	
	comp=Z,307nm,0.1s						
WSAR	Wadi Sarin	4.59	158	Pn	Pn	02 03 48.6	+1.6
	comp=Z,11nm,0.3s,baz=341,slow=3.8,SNR=118						
WSAR				Sn	Sn	02 04 39.7	-0.4
	comp=Z,11nm,0.3s,baz=218,slow=22,SNR=12						
KLNJ	Kolanjah	5.71	308	ePn	Pn	02 04 03.8	+1.0
KLNJ				e		02 05 09.1	
	comp=E,99nm,0.1s						
KLNJ				e		02 05 09.7	
	comp=N,99nm,0.1s						
KLNJ				e		02 05 13.6	
	comp=Z,99nm,0.1s						
KLNJ	Kolanjah	5.71	308	ePn	Pn	02 04 03.8	+1.0
IRAM	Ramesheh	5.74	319	e		02 04 06.2	
	comp=Z,203nm,0.1s						
IRAM				ePn	Pn	02 04 03.2	+0.3
IRAM				e		02 04 08.1	
	comp=E,331nm,0.1s						
IRAM				e		02 05 11.9	
	comp=N,250nm,0.1s						
ANAR	Anarak	6.23	336	ePn	Pn	02 04 10.2	+0.6
ANAR				e		02 04 11.0	
	comp=N,99nm,0.1s						
ANAR	Anarak	6.23	336	ePn	Pn	02 04 10.2	+0.6
IZEF	Zefreh	6.59	325	ePn	Pn	02 04 14.6	-0.2
IZEF				e		02 04 17.8	
	comp=Z,99nm,0.1s						
IZEF				e		02 04 17.9	
	comp=N,95nm,0.1s						
IZEF				e		02 05 30.5	
	comp=E,78nm,0.2s						
IZEF	Zefreh	6.59	325	ePn	Pn	02 04 14.6	-0.2
MHTO	MHTO	6.61	170	P	Pn	02 04 17.0	+2.2
	SNR=14						
ZNGN	Zangian	6.89	313	ePn	Pn	02 04 19.3	+0.4
ZNGN				e		02 04 23.2	
	comp=N,99nm,0.1s						
ZNGN				e		02 04 29.1	
	comp=E,99nm,0.1s						
ZNGN				e		02 05 50.2	
	comp=Z,99nm,0.2s						
ZNGN	Zangian	6.89	313	ePn	Pn	02 04 19.3	+0.4
IPIR	Pirpir	7.24	316	ePn	Pn	02 04 24.3	+0.6
IPIR	Pirpir	7.24	316	ePn	Pn	02 04 24.3	+0.6
IKLH	Kolahrood	7.31	323	ePn	Pn	02 04 25.7	+1.0
IKLH				e		02 04 30.3	
	comp=Z,89nm,0.1s						
IKLH				e		02 04 30.7	
	comp=N,107nm,0.1s						
IKLH				e		02 04 37.3	
	comp=E,87nm,0.1s						
IKLH	Kolahrood	7.31	323	ePn	Pn	02 04 25.7	+1.0
BRTR	Keskin Array B	22.72	308	P	P	02 07 40.3	+0.7
	comp=E,0.9nm,0.5s,baz=131,slow=12,SNR=9.7						
AKTO	Aktyubinsk	22.88	2	P	P	02 07 40.4	-0.6
	comp=E,0.4nm,0.4s,baz=178,slow=15,SNR=2.7						
BVAR	Borovoye Array	27.39	18	P	P	02 08 22.3	-0.5
	comp=E,0.3nm,0.5s,baz=213,slow=5.0,SNR=1.7						
MKAR	Makanchi Array	27.76	39	P	P	02 08 24.4	-1.8
	comp=E,0.2nm,0.5s,baz=221,slow=8.8,SNR=3.3						
FINES	FINESS Array B	39.64	337	P	P	02 10 06.8	-2.1
	comp=E,3.0nm,1.0s,baz=131,slow=7.8,SNR=4.9						
KEST	Kesra	40.90	294	LR	LR	02 32 08.5	
	comp=E,55nm,18.0s,baz=300,slow=43						
HFS	Hagfors	43.73	330	P	P	02 10 41.1	-1.4
	comp=E,4.5nm,1.1s,baz=125,slow=12,SNR=5.3						

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*NIED **23** 02:15:00,38°.20N×141°.90E,h62^{km},Mw3.7 Best double couple: M$_0$4.60000×10^{14} NP1:φ$_s$5.00000°,δ20.00000°, λ102.00000°. NP2:φ$_s$173.00000°,δ71.00000°,λ86.00000°.*

*ISCJB **23** 02:15:45.1±0.7,38°.22N±0°.04×141°.93E±0°.07,h64^{km}±6^{km}, mb3.9/8,Error ellipse: s-maj=10.3km s-min=5.0km az=21.1*

*JMA **23** 02:15:46.3,38°.23N×141°.82E,h64^{km}±1^{km},M3.9*

JMA Felt II J1.

*IDC **23** 02:15:47.5±2.8,38°.15N×141°.83E,h74^{km}±27^{km},mb3.7/8, mb1 3.9/11,mb1mx3.5/64,mbtmp4.0/11,MS2.7/2, Ms1 2.7/2,ms1mx2.3/57,Error ellipse: s-maj=25.0km s-min=20.0km az=51.0*

ISC 23 02:15:45.0±1.4,**38°.17N**±0°.04×**142°.01E**±0°.08,**h50**^{km}±12^{km}, **n33,σ1^{s}15**/42,**mb3.9**/8,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIO	Ouri	0.59	298	P	Pn	02 15 58.1	+0.7
JIO				S	Sn	02 16 06.4	+0.1
OFUJ	Ofunato	0.94	343	P	Pn	02 16 02.7	+0.7
OFUJ				eS	Sn	02 16 14.5	0.0
JMK	Ichinoseki	1.00	322	P	Pn	02 16 03.1	+0.4
JMK				eS	Sn	02 16 15.1	-0.6
JMM	Marumori	1.01	253	P	Pn	02 16 03.0	+0.1
JMM				eS	Sn	02 16 15.2	-0.8
JOU	Okura	1.08	281	P	Pn	02 16 03.8	0.0
JOU				eS	Sn	02 16 16.5	-1.2
JFK	Kawauchi	1.21	229	P	Pn	02 16 06.3	+0.7
JFK				eS	Sn	02 16 21.3	+0.4
JOM	Ohasama	1.42	337	P	Pn	02 16 08.7	+0.4
JOM				eS	Sn	02 16 25.6	-0.3
JFT	Otama	1.48	244	P	Pn	02 16 10.0	+0.8
JFT				eS	Sn	02 16 27.4	-0.1
JYK	Kaneyama	1.50	300	P	Pn	02 16 09.2	-0.2
JYK				eS	Sn	02 16 26.5	-1.3
JYS	Shirataka	1.54	272	P	Pn	02 16 10.0	0.0
JYS				eS	Sn	02 16 28.0	-0.8
JRG	Rokugo	1.63	319	P	Pn	02 16 11.3	0.0
JRG				eS	Sn	02 16 31.1	0.0
JYA	Atsumi	1.86	284	P	Pn	02 16 14.1	-0.2
JYA				eS	Sn	02 16 35.7	-0.9
JFY	Yanaizu	1.98	248	P	Pn	02 16 16.8	+0.7
JFY				eS	Sn	02 16 39.6	-0.2
MJAR	Matsushiro Arr	3.44	243	P	Pn	02 16 37.9	+1.8
	6.3nm,0.3s,baz=62,slow=8.1,SNR=41						
MJAR				S	Sn	02 17 18.4	+2.8
	2.0nm,0.3s,baz=126,slow=13,SNR=5.1						
MJAR				LR	LR	02 18 11.3	
	comp=Z,111nm,18.1s,baz=50,slow=44						
MAT	Matsushiro	3.44	243	P	Pn	02 16 38.1	+2.0
MAT				S	Sn	02 17 18.1	+2.4
JHJ	Hachijo jima 2	5.36	200	P	Pn	02 17 02.8	+0.3
	9.5nm,0.3s,baz=66,slow=20,SNR=2.8						
JHJ				S	Sn	02 17 59.1	-3.7
	26nm,0.3s,baz=227,slow=23,SNR=6.5						
USRK	Ussuriysk Ar.	9.66	312	P	Pn	02 18 02.2	+0.9
	baz=124,slow=13						
KSRS	Korea Array	11.17	271	LR	LR	02 21 42.7	
	comp=Z,35nm,19.1s,baz=306,slow=32						
SONM	Songino Array	27.57	302	P	P	02 21 27.4	+0.1
	0.5nm,0.6s,baz=101,slow=7.7,SNR=4.1						
H11N2	WAKE ISLAND Hy	28.35	123	T	T	02 51 47.9	
	baz=316,slow=76,SNR=239						
H11N1	WAKE ISLAND Hy	28.36	123	T	T	02 52 00.4	
	baz=316,slow=76,SNR=254						
H11N3	WAKE ISLAND Hy	28.37	123	T	T	02 52 01.1	
	baz=316,slow=76,SNR=298						
H11S1	WAKE ISLAND Hy	29.10	125	T	T	02 52 52.6	
	baz=318,slow=76,SNR=136						
H11S3	WAKE ISLAND Hy	29.11	125	T	T	02 52 52.7	
	baz=318,slow=76,SNR=160						
H11S2	WAKE ISLAND Hy	29.12	125	T	T	02 52 53.9	
	baz=318,slow=76,SNR=90						
ZALV	Zalesovo Beam	41.51	311	P	P	02 23 25.6	-1.4
	1.3nm,0.5s,baz=73,slow=6.3,SNR=4.3						
MKAR	Makanchi Array	43.93	301	P	P	02 23 46.0	-0.8
	2.5nm,0.6s,baz=85,slow=9.3,SNR=20						
KURBB	Kurchatov Arra	45.69	307	P	P	02 23 59.2	-1.4
	3.2nm,0.4s,baz=81,slow=8.1,SNR=25						
ILAR	Eielson Array	48.28	33	P	P	02 24 21.1	+0.4
	0.6nm,0.7s,baz=267,slow=6.4,SNR=8.6						
WRA	Warramunga Arr	58.25	188	P	P	02 25 33.8	-0.6
	0.7nm,0.6s,baz=5.4,slow=6.8,SNR=4.9						
PDAR	Pinedale Array	76.53	46	P	P	02 27 30.8	+0.7
	0.5nm,0.6s,baz=271,slow=2.3,SNR=5.2						
TXAR	Lajitas Array	89.05	53	P	P	02 28 35.7	+0.7
	0.5nm,0.5s,baz=288,slow=3.3,SNR=9.7						
LPAZ	La Paz	145.70	59	PKPbc	PKPdf	02 35 19.2	+0.1
	0.8nm,0.5s,baz=43,slow=3.4,SNR=7.6						

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*ISCJB **23** 02:19:39.3±0.7,5°.0N±0°.1×127°.4E±0°.2,h150^{km},mb3.8/12, Error ellipse: s-maj=29.3km s-min=13.8km az=162.4*

*IDC **23** 02:19:41.5±0.8,4°.96N×127°.40E,h152^{km}±7^{km},mb3.6/12, mb1 3.7/12,mb1mx3.5/51,mbtmp4.0/12,Error ellipse: s-maj=28.6km s-min=12.6km az=71.0*

ISC 23 02:19:41.4±0.8,**5°.0N**±0°.1×**127°.4E**±0°.2,**h150**^{km},**n12, σ0^{s}86**/16,**mb3.9**/12,**Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	25.69	165	P	P	02 24 57.6	-0.1
	1.0nm,0.6s,baz=344,slow=10,SNR=13						
ASAR	Alice Springs	29.18	168	P	P	02 25 28.4	-0.4
	0.3nm,0.5s,baz=355,slow=10,SNR=3.8						
ASAR				pP	pP	02 26 01.6	+1.1
	0.3nm,0.6s,baz=355,slow=10,SNR=2.1						
CMAR	Chiang Mai Arr	30.84	298	P	P	02 25 43.3	-0.3
	1.6nm,0.4s,baz=101,slow=8.6,SNR=5.9						
KSRS	Korea Array	32.32	1	P	P	02 25 56.6	+0.4
	1.0nm,0.6s,baz=186,slow=10,SNR=3.9						
SONM	Songino Array	46.34	341	P	P	02 27 53.2	+0.8
	1.0nm,0.6s,baz=155,slow=7.9,SNR=6.4						
PETK	Petropavlovsk-	54.03	22	P	P	02 28 50.6	+0.6
	4.7nm,0.6s,baz=186,slow=4.2						
MKAR	Makanchi Array	56.92	324	P	P	02 29 11.4	+0.6
	0.9nm,0.4s,baz=116,slow=8.1,SNR=15						
MKAR				pP	pP	02 29 46.0	+0.1
	0.5nm,0.5s,baz=119,slow=7.4,SNR=2.8						
ZALV	Zalesovo Beam	59.78	332	P	P	02 29 29.6	-0.9
	1.0nm,0.6s,baz=116,slow=3.4,SNR=3.6						
KURBB	Kurchatov Arra	61.05	327	P	P	02 29 39.6	+0.4
	3.1nm,0.7s,baz=124,slow=5.9,SNR=25						
KURBB				pP	pP	02 30 13.7	-1.0
	0.7nm,0.6s,baz=125,slow=5.9,SNR=2.6						
BVAR	Borovoye Array	66.64	327	P	P	02 30 16.3	+0.5
	1.4nm,0.8s,baz=104,slow=4.8,SNR=7.1						
BVAR				pP	pP	02 30 53.0	+1.2
	0.4nm,0.4s,baz=94,slow=5.9,SNR=2.2						
ILAR	Eielson Array	83.69	25	P	P	02 31 52.2	-0.9
	0.4nm,0.5s,baz=247,slow=5.5,SNR=7.7						
ARCES	ARCESS Array B	89.51	340	P	P	02 32 19.7	-1.5
	2.1nm,0.9s,baz=95,slow=7.4,SNR=3.6						

IDC 23 02:40:08.6±1.5,**2°.27S**×**139°.19E,h0**^{km},**mb3.6**/5, **mb1 3.7**/6,**mb1mx3.5**/41,**mbtmp3.6**/6,**ML3.4**/1,**MS3.2**/2, **Ms1 3.2**/2,**ms1mx2.6**/44,**Error ellipse: s-maj=66.6km s-min=24.8km az=92.0,Near north coast of Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DAV	Davao City (W)	16.45	304	LR	LR	02 51 08.9	
	comp=Z,43nm,18.2s,baz=164,slow=40						
WRA	Warramunga Arr	18.19	195	P	Pn	02 44 22.1	-0.7
	0.1nm,0.3s,baz=18,slow=12,SNR=6.0						
ASAR	Alice Springs	21.88	193	P	P	02 45 03.6	+0.3
	0.4nm,0.5s,baz=20,slow=10,SNR=6.3						
SONM	Songino Array	57.53	334	LR	LR	03 16 30.3	
	comp=Z,32nm,18.6s,baz=342,slow=38						
MKAR	Makanchi Array	69.74	322	P	P	02 51 21.1	+0.5
	0.7nm,0.6s,baz=106,slow=7.3,SNR=5.5						
KURBB	Kurchatov Arra	73.65	325	P	P	02 51 43.0	-1.1
	0.7nm,0.9s,baz=109,slow=4.8,SNR=4.0						
BVAR	Borovoye Array	79.23	325	P	P	02 52 16.2	+0.5
	0.8nm,0.4s,baz=108,slow=7.7,SNR=7.2						
ILAR	Eielson Array	85.24	24	P	P	02 52 47.2	+0.3
	0.4nm,0.8s,baz=238,slow=5.2,SNR=5.2						

CASC 23 02:58:42.9±2.3,**11°.87N**×**87°.35W,h21**^{km}±12^{km},**MD3.9, ML3.8,2C,Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
COPN	Copaltepe	0.80	67	eP	Pb	02 58 58.0	-0.1
COPN				eS	Sn	02 59 10.4	+0.1
TELN	Telica	0.89	35	eP	Pb	02 58 59.3	-0.4
CNGN	Cerro Negro	0.89	45	eP	Pb	02 58 59.2	-0.6
MOMN	Momotombo	0.95	56	⇑eP	Pb	02 58 59.9	-0.9
XAVN	Gruta Xavier	1.04	74	eP	Pb	02 59 01.1	-1.0
MGAN	Managua	1.11	75	eP	Pn	02 59 02.0	-1.3
MGAN				eS	Sb	02 59 16.6	-0.8
CSGN	Cosiguina Volc	1.12	349	eP	Pb	02 59 03.8	+0.1
CNCH	Conchagua	1.48	341	eP	Pn	02 59 09.1	+0.6
CNCH				eS	Sb	02 59 28.8	+0.7
CNCH				IAML		02 59 29.9	
	comp=E,2µm,0.3s						
LCND	La Caˆ–ada	1.53	340	eP	Pn	02 59 08.5	-0.5
LCND				IAML		02 59 31.1	
	comp=Z,774nm,0.3s						
ESTN	Estel	1.55	38	⇑eP	Pn	02 59 08.9	-0.6
BOAB	BOACO BROADBAN	1.74	70	eP	Pn	02 59 10.6	-1.4
MATN	Matagalpa	1.74	53	eP	Pn	02 59 11.0	-1.1
PACA	Pacayal	1.85	329	eP	Pn	02 59 13.6	-0.1
PACA				eS	Sn	02 59 37.3	+0.8
PACA				IAML		02 59 42.7	
	comp=E,2µm,0.2s						
TECA	Tecapa	1.97	325	eP	Pn	02 59 14.5	-0.7
RCON	San Juan de Ri	1.98	36	eP	Pn	02 59 14.8	-0.6
TGUH	Tegucigalpa,Un	2.18	2	eP	Pn	02 59 18.2	+0.3
LFRS	El Faro	2.42	316	eP	Pn	02 59 20.5	-0.9
LBRS	Las Brisas	2.49	319	eP	Pn	02 59 22.6	+0.2
JTS	JuntasAbangare	2.83	123	eP	Pn	02 59 27.4	+0.5
ESPN	Las Esperanzas	3.00	83	eP	Pn	02 59 32.0	+2.8

DJA 23 03:25:57.2±1.2,**3°N**±8°×**9°9E**±°,**h11**^{km}±7^{km},**M2.2**/5, **MLv2.2**/5,**Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TSI	Tuntungan	0.15	308	P	Pg	03 26 01.2	+0.6
KCSI	Kotacane, Aceh	0.91	277	P	Pb	03 26 15.1	0.0
KCSI				S	Sb	03 26 27.8	+0.5
TPTI		1.50	264	P	Pn	03 26 23.2	-0.9
BSI	Banda Aceh	3.96	302	P	Pg	03 27 14.6	+1.5

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*IDC **23** 03:26:45.0±1.2,30°.65N×140°.72E,h0^{km},mb3.5/3, mb1 3.7/4,mb1mx3.4/59,mbtmp3.5/4,ML3.3/1,MS4.0/2, Ms1 4.0/2,ms1mx2.7/40,Error ellipse: s-maj=50.3km s-min=27.3km az=74.0*

*JMA **23** 03:26:53.9±0.3,31°.69N×141°.29E,h2^{km},M3.5*

ISC 23 03:26:53.6±2.4,**31°.5N**±0°.2×**141°.2E**±0°.1,**h10**^{km},**n14, σ1^{s}86**/12,**mb3.5**/3,**Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAOM	Aogashimamukai	1.57	309	P	Pn	03 27 21.8	+0.2
JAOM				eS	Sn	03 27 42.0	+0.1
JHCJ	Hachijojimakas	1.98	323	P	Pn	03 27 26.9	-0.3
JHCJ				eS	Sn	03 27 51.3	-0.8
JHJ2	Mitsune	2.00	324	P	Pn	03 27 28.0	+0.5
JHJ2				S	Sn	03 27 52.1	-0.5
JHJ	Hachijo jima 2	2.02	324	Pn	Pn	03 27 28.1	+0.3
	14nm,0.3s,baz=332,slow=23,SNR=11						
JHJ				Sn	Sn	03 27 50.9	-2.3
	30nm,0.3s,baz=253,slow=19,SNR=5.7						
JHJ				LR	LR	03 28 33.4	
	comp=Z,105nm,21.9s,baz=85,slow=42						
JHO	Hitachi	5.14	354	P	Pn	03 28 11.0	+0.4
JHO				eS	Sn	03 29 08.6	-1.4
MJAR	Matsushiro Arr	5.62	335	Pn	Pn	03 28 21.9	+4.6
	0.4nm,0.3s,baz=164,slow=14,SNR=3.9						
H11S3	WAKE ISLAND Hy	26.39	113	T	T	04 01 24.6	
	baz=304,slow=75,SNR=5.5						
H11S1	WAKE ISLAND Hy	26.39	113	T	T	04 01 21.1	
	baz=304,slow=75,SNR=4.4						
H11S2	WAKE ISLAND Hy	26.41	113	T	T	04 01 18.9	
	baz=304,slow=75,SNR=3.7						
KURBB	Kurchatov Arra	49.42	312	P	P	03 35 38.3	-5.3
	0.3nm,0.5s,baz=89,slow=8.0,SNR=3.8						
WRA	Warramunga Arr	51.56	188	P	P	03 35 46.3	-14
	0.1nm,0.3s,baz=4.7,slow=7.7,SNR=6.7						
WRA				LR	LR	03 54 16.6	
	comp=Z,307nm,21.2s,baz=50,slow=33						
DZM	Mont Dzumac	58.49	152	LR	LR	03 59 08.0	
	comp=Z,72nm,19.5s,baz=19,slow=34						
TXAR	Lajitas Array	93.63	52	P	P	03 40 07.3	-3.4
	0.2nm,0.6s,baz=284,slow=3.6,SNR=3.8						
LPAZ	La Paz	149.32	67	PKPbc	PKPdf	03 46 38.6	-1.1
	0.6nm,0.8s,baz=301,slow=5.9,SNR=3.4						

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*IDC **23** 03:28:40.2±0.6,15°.20S×178°.03W,h0^{km},mb4.1/15, mb1 4.3/16,mb1mx4.1/46,mbtmp4.1/16,ML3.8/1,MS4.3/35, Ms1 4.3/35,ms1mx4.3/41,Error ellipse: s-maj=27.0km s-min=14.9km az=144.0*

*ISCJB **23** 03:28:43.8±0.4,15°.4S±0°.1×177°.90W±0°.08,h35^{km}, mb4.3/26,MS4.4/32,Error ellipse: s-maj=16.4km s-min=9.9km az=157.1*

*NEIC **23** 03:28:45.4±0.4,15°.24S×177°.99W,h35^{km},mb4.6/12, Error ellipse: s-maj=17.1km s-min=8.3km az=152.0*

*GCMT **23** 03:28:45.3±0.2,15°.21S×177°.83W,h12^{km},MW5.1/103, Moment Tensor Solution. s61,c80; s103,c168; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.18±.10; M$_{\theta\theta}$-2.94±.10; M$_{\phi\phi}$3.12±.09; M$_{r\theta}$-0.80±.26; M$_{\theta\phi}$4.16±.08; M$_{\phi r}$0.34±.25; Best double couple: M$_0$5.22100×10^{16} NP1:φ$_s$72.00000°,δ84.00000°,λ-7.00000°. NP2: φ$_s$162.00000°,δ83.00000°,λ-174.00000°. Principal axes: T 5.2370, Plg1.0000°, Azm117.0000°; N -0.0330, Plg80.0000°, Azm211.0000°; P -5.2040, Plg10.0000°, Azm27.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 23 03:28:44.9±0.5,**15°.4S**±0°.1×**177°.84W**±0°.08,**h35**^{km},**n85, σ1^{s}90**/53,**mb4.4**/26,**MS4.3**/32,**Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**6.04**	**77**	Pn	**Pn**	**03 30 11.0**	**-1.0**
	2.4nm,0.3s,baz=58,slow=19,SNR=3.2						
AFI				LR	LR	03 32 00.5	
	comp=Z,1μm,18.8s,baz=266,slow=32						
AFI	**Afiamalu**	**6.04**	**77**	*e*Pn	**Pn**	**03 30 11.5**	**-0.5**
AFI				*e*S	Sn	03 31 10.3	-10
DZM	**Mont Dzumac**	**16.30**	**244**	Pn	**Pn**	**03 32 24.4**	**-7.0**
	0.2nm,0.3s,baz=233,slow=20,SNR=2.7						
DZM				LR	LR	03 37 42.2	
	comp=Z,1μm,20.1s,baz=70,slow=33						
DZM	**Mont Dzumac**	**16.30**	**244**	*e*P	**P**	**03 32 39.2**	**+5.2**
	46nm,1.4s						
DZM				*e*LQ	LQ	03 35 51.5	
	7μm,28.4s						
DZM				*e*LR	LR	03 36 32.3	
	2μm,23.1s						
RAR	**Rarotonga**	**18.10**	**111**	LR	LR	03 38 16.7	
	comp=Z,1μm,19.9s,baz=272,slow=31						
HNR	**Honiara**	**22.48**	**283**	LR	LR	03 41 01.3	
	comp=Z,5μm,20.1s,baz=134,slow=33						
PAE	**Paea**	**27.17**	**99**	*e*T	T	04 02 13.9	
	1.5nm,0.3s						
PPT2	**Papeete2**	**27.18**	**99**	*e*S	**S**	**03 38 57.9**	**-4.2**
	188nm,24.5s						
PPT2				*e*LQ	LQ	03 40 02.3	
	2μm,28.0s						
PPT2				*e*LR	LR	03 41 10.0	
	3μm,26.2s,baz=263						
PPT	**Papeete**	**27.18**	**99**	LR	LR	03 42 24.1	
	comp=Z,699nm,20.8s,baz=266,slow=30						
TBI	**Tubuai**	**27.88**	**111**	*e*S	**S**	**03 39 11.2**	**-1.8**
	278nm,25.8s						
TBI				*e*LQ	LQ	03 40 25.6	
	948nm,27.0s						
TBI				*e*LR	LR	03 41 35.6	
	3μm,27.8s,baz=284						
TBI	**Tubuai**	**27.88**	**111**	*e*T	T	04 03 14.4	
	5.2nm,0.3s						
RPZ	**Rata Peaks**	**29.79**	**196**	LR	LR	03 45 58.1	
	comp=Z,1μm,21.0s,baz=32,slow=35						
CTA	**Charters Tower**	**34.48**	**257**	P	**P**	**03 35 29.8**	**-0.1**
	12nm,1.1s,baz=84,slow=10,SNR=4.4						
CTAO	**Charters Tower**	**34.48**	**257**	*e*P	**P**	**03 35 29.4**	**-0.5**
PMG	**Port Moresby**	**34.67**	**276**	LR	LR	03 47 47.9	
	comp=Z,705nm,18.4s,baz=62,slow=33						
H11S2	**WAKE ISLAND Hy**	**36.95**	**335**	T	T	04 14 45.7	
	baz=150						
H11S3	**WAKE ISLAND Hy**	**36.96**	**335**	T	T	04 14 49.6	
	baz=150,slow=74						
H11S1	**WAKE ISLAND Hy**	**36.96**	**335**	T	T	04 14 47.7	
	baz=150,slow=74						
TAOE	**Nuku Hiva Isla**	**37.37**	**84**	*e*LR	LR	03 45 47.8	
	830nm,26.4s,baz=256						
H11N3	**WAKE ISLAND Hy**	**37.97**	**336**	T	T	04 16 16.6	
	baz=153						
H11N1	**WAKE ISLAND Hy**	**37.98**	**336**	T	T	04 16 11.8	
	baz=153,slow=74						
H11N2	**WAKE ISLAND Hy**	**37.99**	**336**	T	T	04 16 12.5	
	baz=153,slow=74						
STKA	**Stephens Creek**	**40.36**	**239**	P	**P**	**03 36 19.8**	**+0.2**
	11nm,1.0s,baz=56,slow=7.1,SNR=14						
STKA				LR	LR	03 51 19.0	
	comp=Z,656nm,20.1s,baz=70,slow=34						
RKT	**Rikitea**	**41.07**	**108**	*e*LR	LR	03 47 42.0	
	1μm,26.8s,baz=282						
RKT	**Rikitea**	**41.07**	**108**	*e*T	T	04 19 40.9	
	2.8nm,0.3s						
WRA	**Warramunga Arr**	**45.68**	**257**	P	**P**	**03 37 01.7**	**-1.1**
	2.4nm,1.0s,baz=88,slow=8.6,SNR=8.1						
ASAR	**Alice Springs**	**46.05**	**252**	P	**P**	**03 37 04.8**	**-0.8**
	1.8nm,0.6s,baz=83,slow=8.5,SNR=22						
ASAR				LR	LR	03 54 49.3	
	comp=Z,355nm,19.6s,baz=96,slow=34						
GUMO	**Guam**	**46.79**	**306**	LR	LR	03 54 54.5	
	comp=Z,135nm,20.9s,baz=109,slow=34						
DAV	**Davao City (W)**	**60.33**	**288**	LR	LR	04 03 34.9	
	comp=Z,149nm,18.5s,baz=156,slow=35						
JHJ	**Hachijo jima 2**	**62.96**	**321**	LR	LR	04 06 33.1	
	comp=Z,229nm,18.0s,baz=128,slow=36						
VNDA	**Vanda**	**62.99**	**185**	P	**P**	**03 39 10.5**	**+2.7**
	1.1nm,1.0s,baz=353,slow=8.1,SNR=3.6						
VNDA				LR	LR	04 01 52.7	
	comp=Z,182nm,20.3s,baz=27,slow=32						
RPN	**Rapa Nui**	**64.24**	**113**	LR	LR	04 01 58.0	
	comp=Z,129nm,19.8s,baz=284,slow=31						
MJAR	**Matsushiro Arr**	**66.24**	**322**	P	**P**	**03 39 27.9**	**-1.7**
	1.6nm,0.9s,baz=175,slow=6.7,SNR=3.7						
MJAR				LR	LR	04 02 32.9	
	comp=Z,105nm,20.4s,baz=155,slow=31						
JOW	**Kunigami**	**67.07**	**308**	LR	LR	04 03 07.6	
	comp=Z,166nm,21.7s,baz=120,slow=31						
TGY	**Tagaytay City**	**67.25**	**293**	LR	LR	04 05 09.4	
	comp=Z,548nm,21.1s,baz=116,slow=33						
JNU	**Nakatsue**	**68.72**	**315**	LR	LR	04 04 28.2	
	comp=Z,184nm,20.3s,baz=123,slow=31						
ASAJ	**Asahikawa**	**69.35**	**331**	LR	LR	04 07 31.7	
	comp=Z,420nm,18.6s,baz=164,slow=34						
PETK	**Petropavlovsk-**	**71.40**	**345**	P	**P**	**03 40 01.2**	**-0.1**
	2.9nm,0.7s,baz=130,slow=8.7						
PETK				LR	LR	04 05 54.2	
	comp=Z,128nm,21.5s,baz=170,slow=31						
KSRS	**Korea Array**	**73.20**	**318**	LR	LR	04 06 43.2	
	comp=Z,250nm,21.0s,baz=125,slow=31						
QSPA	**South Pole Qui**	**74.66**	**180**	P	**P**	**03 40 21.5**	**+0.8**
	1.0nm,0.6s,baz=35,slow=2.3,SNR=4.2						
QSPA				LR	LR	04 08 35.1	
	comp=Z,279nm,20.7s,baz=44,slow=32						
QSPA	**South Pole Qui**	**74.66**	**180**	*e*P	**P**	**03 40 21.5**	**+0.8**
	3.0nm,0.6s						
USRK	**Ussuriysk Ar.**	**74.86**	**325**	LR	LR	04 07 36.1	
	comp=Z,124nm,21.0s,baz=129,slow=31						
CMB	**Columbia Colle**	**75.64**	**43**	*e*P	**P**	**03 40 27.8**	**+1.1**
	4.2nm,0.6s						
YBH	**Yreka Blue Hor**	**76.23**	**39**	P	**P**	**03 40 31.7**	**+1.7**
	2.9nm,0.8s,baz=224,slow=6.6,SNR=6.7						
YBH				LR	LR	04 06 28.1	
	comp=Z,420nm,21.0s,baz=234,slow=30						
LPIG	**La Paz**	**76.71**	**60**	LR	LR	04 05 42.6	
	comp=Z,212nm,21.8s,baz=220,slow=29						
NVAR	**Mina Array Bea**	**77.23**	**44**	P	**P**	**03 40 36.8**	**+0.8**
	2.4nm,0.5s,baz=228,slow=9.5,SNR=12						
H02S1	**DAWSON INLET T**	**78.63**	**26**	T	T	05 06 41.3	
BMN	**Battle Mountai**	**78.99**	**43**	*e*P	**P**	**03 40 46.1**	**+0.5**
	3.1nm,0.8s						
TUC	**Tucson**	**79.73**	**52**	*e*P	**P**	**03 40 51.0**	**+1.3**
	11nm,1.4s						
HLID	**Hailey**	**82.38**	**41**	*e*P	**P**	**03 41 04.8**	**+1.2**
	6.9nm,1.2s						
ILAR	**Eielson Array**	**83.32**	**13**	P	**P**	**03 41 07.5**	**-0.3**
	0.8nm,0.8s,baz=225,slow=6.9,SNR=8.4						
ILAR				LR	LR	04 12 57.0	
	comp=Z,166nm,19.9s,baz=210,slow=32						
MNTX	**Cornudas Mount**	**83.68**	**55**	*e*P	**P**	**03 41 11.8**	**+1.3**
	15nm,1.8s						
ANMO	**Albuquerque**	**84.11**	**52**	P	**P**	**03 41 14.1**	**+1.3**
	0.6nm,0.8s,baz=222,slow=4.7,SNR=4.5						
ANMO				LR	LR	04 11 59.5	
	comp=Z,316nm,19.6s,baz=246,slow=31						
ANMO	**Albuquerque**	**84.11**	**52**	*e*P	**P**	**03 41 12.8**	**0.0**
	7.5nm,1.5s						
AHID	**Auburn Hatcher**	**84.13**	**43**	*e*P	**P**	**03 41 13.0**	**+0.2**
	1.4nm,0.5s						
TXAR	**Lajitas Array**	**84.19**	**58**	P	**P**	**03 41 15.7**	**+2.5**
	1.1nm,1.0s,baz=242,slow=5.3,SNR=8.0						
TXAR				LR	LR	04 11 49.8	
	comp=Z,311nm,19.3s,baz=0.0,slow=31						
DAWY	**Dawson**	**84.52**	**16**	*e*P	**P**	**03 41 14.3**	**+0.3**
	2.7nm,1.0s						
EGAK	**Eagle**	**84.65**	**15**	*e*P	**P**	**03 41 14.6**	**+0.1**
	12nm,1.4s						
BOZ	**Bozeman (W)**	**85.09**	**40**	*e*P	**P**	**03 41 17.8**	**+0.3**
	21nm,1.6s						
BW06	**Boulder Array**	**85.15**	**43**	*e*P	**P**	**03 41 18.5**	**+0.6**
	13nm,1.6s						
PDAR	**Pinedale Array**	**85.15**	**43**	P	**P**	**03 41 18.1**	**+0.2**
	0.5nm,0.5s,baz=225,slow=3.8,SNR=7.3						
PDAR				LR	LR	04 12 13.7	
	comp=Z,207nm,20.8s,baz=258,slow=31						
YKA	**Yellowknife Ar**	**91.82**	**25**	P	**P**	**03 41 48.7**	**-0.2**
	0.2nm,0.6s,baz=238,slow=4.3,SNR=2.8						
YKA				LR	LR	04 18 51.6	
	comp=Z,60nm,18.6s,baz=251,slow=33						
SONM	**Songino Array**	**92.01**	**319**	P	**P**	**03 41 53.2**	**+2.9**
	0.2nm,0.3s,baz=132,slow=2.1,SNR=4.5						
SONM				LR	LR	04 18 29.1	
	comp=Z,104nm,21.6s,baz=109,slow=33						
SNAA	**Sanae**	**93.09**	**178**	LR	LR	04 19 34.6	
	comp=Z,114nm,21.0s,baz=187,slow=33						
JTS	**JuntasAbangare**	**95.42**	**81**	LR	LR	04 17 13.5	
	comp=Z,84nm,18.2s,baz=303,slow=30						
ULM	**Lac du Bonnet**	**96.64**	**40**	LR	LR	04 19 16.1	
	comp=Z,270nm,20.6s,baz=279,slow=31						
NNA	**Nana**	**97.22**	**104**	LR	LR	04 18 42.7	
	comp=Z,36nm,18.2s,baz=248,slow=31						
BRTR	**Keskin Array B**	**143.35**	**318**	PKP	PKPbc	03 48 13.8	+0.5
	1.4nm,1.0s,baz=169,slow=1.3,SNR=4.8						
KHC	**Kasperske Hory**	**145.07**	**347**	*e*PKPAB	**PKPab**	**03 48 17.9**	**-0.3**
KHC				*e*pPKP	**pPKPdf**	**03 48 30.5**	**+0.3**
MMAI	**Mount Meron Ar**	**145.17**	**306**	PKP	**PKPab**	**03 48 18.7**	**-0.4**
	2.5nm,0.6s,baz=66,slow=8.1,SNR=4.4						
GERES	**GERESS Array B**	**145.31**	**347**	PKPbc	**PKPbc**	**03 48 17.6**	**-1.5**
	0.8nm,0.8s,baz=5.7,slow=1.0,SNR=5.0						
CONA	**Conrad Observa**	**145.63**	**344**	PKiKP	**PKPab**	**03 48 21.3**	**+1.0**
	5.5nm,0.8s						
MOA	**Molln**	**146.11**	**345**	PKPdf	**PKPdf**	**03 48 17.1**	**-3.4**
	23nm,1.6s						
ARSA	**Arzberg**	**146.34**	**344**	*e*PKPbc	**PKPdf**	**03 48 20.7**	**-0.2**
	4.8nm,1.1s						
SOKA	**Soboth**	**147.00**	**344**	*e*PKPdf	**PKPdf**	**03 48 19.8**	**-2.4**
	7.6nm,1.0s						
KBA	**Koelnbreinsper**	**147.06**	**346**	*e*PKPdf	**PKPdf**	**03 48 21.2**	**-1.1**
	15nm,1.3s						
WATA	**Walderalm**	**147.20**	**348**	PKPdf	**PKPdf**	**03 48 20.2**	**-2.3**
	2.6nm,0.5s						
RETA	**Reutte**	**147.21**	**349**	PKPdf	**PKPdf**	**03 48 19.0**	**-3.4**
	7.4nm,1.2s						
WTTA	**Wattenberg**	**147.25**	**348**	*e*PKPdf	**PKPdf**	**03 48 22.4**	**-0.3**
	5.1nm,1.0s						
OBKA	**Obir**	**147.29**	**344**	*e*PKPdf	**PKPdf**	**03 48 22.0**	**-0.7**
	13nm,1.4s						
MYKA	**Terra Mystica**	**147.41**	**345**	*e*PKiKP	**PKiKP**	**03 48 27.7**	**+0.2**
	8.1nm,1.1s						
DAVA	**Damuels**	**147.55**	**350**	PKPbc	**PKPdf**	**03 48 24.4**	**+1.3**
	27nm,1.7s						
ABTA	**Abfaltersbach**	**147.56**	**347**	PKiKP	**PKPab**	**03 48 27.6**	**-0.2**
	7.7nm,1.2s						
FETA	**Feichten**	**147.66**	**349**	*e*PKPdf	**PKPdf**	**03 48 22.4**	**-0.9**
	9.9nm,1.2s						
DAVOX	**Davos/Dischmat**	**148.04**	**350**	PKPbc	**PKPbc**	**03 48 26.5**	**-0.6**
	1.3nm,0.6s,baz=20,slow=14,SNR=2.3						

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*SJA **23** 03:29:43.7±0.3, 32°.07S×72°.22W, h33^{km}, ML2.8, MW3.0*

*GUC **23** 03:29:46.8±0.6, 32°.28S×71°.35W, h13^{km}±9^{km}, ML2.5*

ISC 23 03:29:41.8±2.5**, 32°.34S**±0°.04×**71°.9W**±0°.1**, h5**^{km}±13^{km}**, n15, σ0^{s}.84**/25**, 1D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROCH	**El Roble**	**0.96**	**131**	⇓*i*P	**Pn**	**03 30 02.1**	**0.0**
ROCH				*i* S	**Sg**	**03 30 13.4**	**+0.7**
ROCH				IAML		03 30 14.2	
	comp=E,439nm,0.2s						
PEL	**Peldehue**	**1.28**	**129**	*e*P	**Pn**	**03 30 06.9**	**+0.5**
PEL				*e*S	**Sb**	**03 30 21.8**	**-1.4**
PEL				IAML		03 30 23.0	
	comp=E,346nm,0.3s						
CLCH	**Cerro Calan**	**1.54**	**133**	*e*P	**Pb**	**03 30 11.6**	**+0.7**
CLCH				*e*S	**Sn**	**03 30 30.1**	**-0.3**
CLCH				IAML		03 30 30.8	
	comp=E,205nm,0.2s						
FCH	**Farellones**	**1.66**	**127**	*e*P	**Pb**	**03 30 13.0**	**0.0**
FCH				*e*S	**Sn**	**03 30 32.9**	**-0.8**
FCH				IAML		03 30 33.7	
	comp=E,110nm,0.2s						
LMEL	**Las Melosas**	**2.06**	**137**	*e*P	**Pb**	**03 30 19.3**	**-0.4**
LMEL				*e*S	**Sn**	**03 30 44.5**	**+1.3**
AUSP	**Uspallata**	**2.11**	**87**	*e*P	**Pg**	**03 30 22.7**	**+0.5**
AUSP				*e*S	**Sg**	**03 30 49.3**	**-0.3**
RTLS	**Leoncito**	**2.25**	**77**	*e*P	**Pg**	**03 30 25.8**	**+0.8**
RTLS				*e*S	**Sg**	**03 30 56.0**	**+1.7**
RTLS				IAML		03 30 57.9	
	comp=Z,18nm,0.4s						
GO04	**Tololo Observa**	**2.35**	**23**	*e*P	**Pb**	**03 30 25.2**	**+0.4**
GO04				*e*S	**Sb**	**03 30 54.4**	**+0.2**
ASAL	**Salagasta**	**2.58**	**96**	*e*P	**Pg**	**03 30 30.4**	**-0.9**
ASAL				*e*S	**Sg**	**03 31 05.1**	**+0.4**
AAGR	**Agrelo**	**2.67**	**107**	*e*P	**Pg**	**03 30 32.6**	**-0.5**
RTCV	**Cerro Valdivia**	**2.87**	**81**	*e*P	**Pb**	**03 30 34.8**	**+1.2**
RTCV				*e*S	**Sg**	**03 31 13.3**	**-0.7**
AROD	**Rodeo**	**2.99**	**44**	*e*P	**Pg**	**03 30 38.0**	**-1.1**
RTLL	**Cerro Villicun**	**3.07**	**72**	*e*P	**Pb**	**03 30 36.0**	**-0.8**
RTLL				IAML		03 31 28.3	
	comp=Z,15nm,0.4s						
AMOG	**MOGNA**	**3.21**	**65**	*e*P	**Pb**	**03 30 39.0**	**-0.3**
AGUA	**GUANDACOL**	**4.07**	**46**	*e*P	Pn	03 30 35.7	-9.1
AGUA				*e*S	**Sg**	**03 31 52.2**	**-0.3**

IDC 23 03:35:15.9±3.4**, 34°.19S**×**179°.12W, h0**^{km}**, mb3.6**/2**, mb1 3.8**/3**, mb1mx3.6**/42**, mbtmp3.6**/3**, ML3.5**/1**, MS4.0**/1**, Ms1 4.0**/1**, ms1mx2.9**/27**, Error ellipse: s-maj=76.3km s-min=48.1km az=120.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**5.08**	**216**	Pn	Pn	03 36 32.7	-0.6
	1.7nm,0.3s,baz=278,slow=3.8,SNR=8.8						
URZ				Sn	Sn	03 37 28.7	-3.9
	1.7nm,0.3s,baz=148,slow=19,SNR=4.2						
HNR	**Honiara**	**31.24**	**317**	LR	LR	03 50 19.6	
	comp=Z,252nm,19.7s,baz=324,slow=29						
ASAR	**Alice Springs**	**42.11**	**272**	P	P	03 43 09.3	-0.7
	0.8nm,0.7s,baz=111,slow=7.3,SNR=12						
WRA	**Warramunga Arr**	**43.44**	**277**	P	P	03 43 21.6	+0.7
	0.5nm,0.8s,baz=116,slow=7.7,SNR=7.1						
FINES	**FINESS Array B**	**148.31**	**337**	PKPbc	PKPbc	03 55 02.7	-0.6
	1.6nm,0.8s,baz=42,slow=6.5,SNR=2.2						

IDC 23 03:45:04.4±1.9**, 3°.03S**×**152°.19E, h0**^{km}**, mb3.8**/3**, mb1 4.2**/3**, mb1mx3.6**/42**, mbtmp3.8**/3**, Error ellipse: s-maj=133.5km s-min=25.8km az=125.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**24.21**	**225**	P	P	03 50 23.6	+0.5
	2.5nm,0.6s,baz=52,slow=10.0,SNR=18						
H11S3	**WAKE ISLAND Hy**	**25.72**	**33**	T	T	04 17 22.0	
	baz=210,slow=76,SNR=34						
H11S2	**WAKE ISLAND Hy**	**25.72**	**33**	T	T	04 17 20.7	
	baz=210,slow=76,SNR=26						
H11S1	**WAKE ISLAND Hy**	**25.73**	**33**	T	T	04 17 21.1	
	baz=210,slow=76,SNR=34						
ASAR	**Alice Springs**	**27.09**	**219**	P	P	03 50 50.0	+0.9
	0.4nm,0.6s,baz=55,slow=8.7,SNR=6.6						
ILAR	**Eielson Array**	**80.76**	**22**	P	P	03 57 18.4	-1.1
	1.3nm,0.9s,baz=238,slow=5.6,SNR=9.9						
H02N1	**VAN INLET T-PH**	**83.65**	**36**	T	T	05 29 47.1	
	SNR=45						
H02S1	**DAWSON INLET T**	**83.67**	**36**	T	T	05 29 46.5	
	SNR=95						
TORD	**Torodi Ar. Bea**	**149.15**	**291**	PKPbc	PKPbc	04 04 55.7	-0.3
	baz=77,slow=2.6						

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*CSEM **23** 03:45:18.5±0.7, 51°.45N×16°.12E, h1^{km}, ML2.5/6, Error ellipse: s-maj=9.8km s-min=5.3km az=5.0*

*PRU **23** 03:45:20.0, 51°.41N×16°.07E, h0^{km}*

ISC 23 03:45:17.4±1.8**, 51°.52N**±0°.08×**16°.16E**±0°.05**, h0**^{km}**, n19, σ0^{s}.51**/32**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	**Ksiaz**	**0.68**	**173**	*e*Pg	**Pg**	**03 45 30.9**	**+0.5**
KSP				*e*Sg	**Sg**	**03 45 39.4**	**+0.1**
UPC	**Upice**	**1.02**	**185**	*e*PG	**Pg**	**03 45 37.3**	**+0.5**
UPC				*e*SG	**Sg**	**03 45 49.7**	**-0.3**
	comp=Z,10nm,0.3s						
UPC	**Upice**	**1.02**	**185**	Pg	**Pg**	**03 45 37.3**	**+0.5**
UPC				Sg	**Sg**	**03 45 49.7**	**-0.3**
	10nm,0.3s						
DPC	**Dobruska-Polom**	**1.17**	**175**	*e*PG	**Pg**	**03 45 39.9**	**+0.1**
DPC				*e*SG	**Sg**	**03 45 54.6**	**-0.4**
	comp=Z,2.7nm,0.2s						
DPC	**Dobruska-Polom**	**1.17**	**175**	Pg	**Pg**	**03 45 39.9**	**+0.1**
DPC				Sg	**Sg**	**03 45 54.6**	**-0.4**
	2.7nm,0.2s						
PVCC	**Panska Ves**	**1.41**	**226**	*e*PG	**Pg**	**03 45 44.5**	**+0.1**
PVCC				*e*SG	**Sg**	**03 46 02.1**	**-0.6**
	comp=Z,13nm,0.2s						
PVCC	**Panska Ves**	**1.41**	**226**	Pg	**Pg**	**03 45 44.5**	**+0.1**
PVCC				Sg	**Sg**	**03 46 02.1**	**-0.6**
	13nm,0.2s						
KRLC	**Kraliky**	**1.50**	**165**	*e*PG	**Pg**	**03 45 46.1**	**+0.1**
KRLC				*e*SG	**Sg**	**03 46 05.3**	**-0.1**
	comp=Z,0.9nm,0.2s						
KRLC	**Kraliky**	**1.50**	**165**	Pg	**Pg**	**03 45 46.1**	**+0.1**
KRLC				Sg	**Sg**	**03 46 05.3**	**-0.1**
	0.9nm,0.2s						
BRG	**Berggiesshubel**	**1.54**	**246**	PG	**Pb**	**03 45 46.6**	**-0.1**
BRG				SG	**Sg**	**03 46 06.3**	**-0.4**
	3.6nm,0.3s						
PRU	**Pruhonice**	**1.85**	**215**	*e*SG	**Sb**	**03 46 15.3**	**-0.3**
	comp=Z,2.4nm,0.3s						
PRU	**Pruhonice**	**1.85**	**215**	Sg	**Sb**	**03 46 15.3**	**-0.3**
	2.4nm,0.3s						
MORC	**Moravsky Berou**	**1.95**	**153**	*e*Pn	**Pn**	**03 45 51.8**	**0.0**
MORC				*e*Sg	**Sb**	**03 46 18.4**	**-0.3**
MORC	**Moravsky Berou**	**1.95**	**153**	*e*PN	**Pn**	**03 45 51.8**	**0.0**
MORC				*e*SG	**Sb**	**03 46 18.4**	**-0.3**
CLL	**Collm**	**1.99**	**265**	*e*Pg	**Pg**	**03 45 56.0**	**+0.5**
CLL				*e*Sg	**Sg**	**03 46 21.0**	**-0.3**
NKC	**Novy Kostel**	**2.68**	**243**	*e*SG	**Sg**	**03 46 42.7**	**-0.8**
	comp=Z,2.8nm,0.3s						
NKC	**Novy Kostel**	**2.68**	**243**	Sg	**Sg**	**03 46 42.7**	**-0.8**
	2.8nm,0.3s						
KHC	**Kasperske Hory**	**2.91**	**216**	*e*SG	**Sb**	**03 46 47.5**	**+1.3**
KHC	**Kasperske Hory**	**2.91**	**216**	Sg	**Sb**	**03 46 47.5**	**+1.3**

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*MOS **23** 04:38:40.6±1.2, 79°.41N×3°.03E, h10^{km}, mb4.8/39, Error ellipse: s-maj=30.2km s-min=5.3km az=94.0*

*ISCJB **23** 04:38:41.9±0.1, 79°.44N±0°.03×2°.5E±0°.1, h10^{km}, mb4.5/155, MS4.0/47, Error ellipse: s-maj=4.4km s-min=2.3km az=30.3*

*BJI **23** 04:38:41.7, 79°.60N×3°.30E, h8^{km}, mb4.7/21, mB5.2/13, Ms4.5/7, Ms7 4.2/9*

*IDC **23** 04:38:42.3±0.4, 79°.50N×2°.97E, h0^{km}, mb4.0/30, mb1 4.2/36, mb1mx4.0/75, mbtmp4.1/36, ML3.2/4, MS4.0/43, Ms1 4.0/43, ms1mx3.8/69, Error ellipse: s-maj=11.7km s-min=8.7km az=33.0*

*CSEM **23** 04:38:42.2±0.1, 79°.50N×3°.11E, h2^{km}, mb4.7/99, Error ellipse: s-maj=5.0km s-min=2.6km az=37.0*

*NEIC **23** 04:38:44.0±0.1, 79°.48N×3°.18E, h10^{km}, mb4.7/100, Error ellipse: s-maj=5.6km s-min=3.0km az=29.0*

*GCMT **23** 04:38:44.0±0.3, 79°.57N×2°.69E, h12^{km}, MW4.8/75, Moment Tensor Solution. s20,c21; s75,c101; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.67±.08; $M_{\theta\theta}$0.25±.10; $M_{\phi\phi}$1.42±.06; $M_{r\theta}$0.44±.29; $M_{\theta\phi}$0.58±.06; $M_{\phi r}$-0.86±.23; Best double couple: $M_0$1.91300×10^{16} NP1:ϕ_s2.00000°, δ59.00000°, λ-112.00000°. NP2: ϕ_s220.00000°, δ37.00000°, λ-59.00000°. Principal axes: T 1.7850, Plg11.0000°, Azm108.0000°; N 0.2540, Plg18.0000°, Azm14.0000°; P -2.0400, Plg68.0000°, Azm228.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*BER **23** 04:38:45.6±2.9, 79°.52N×4°.31E, h10^{km}, ML3.2, ML4.0(NAO)*

ISC 23 04:38:43.0±1.9**, 79°.52N**±0°.05×**3°.20E**±0°.04**, h4**^{km}±11^{km}**, n550, σ1^{s}.60**/548**, mb4.6**/160**, MS4.0**/48**, 13C-3D, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**1.75**	**106**	Pg	**Pn**	**04 39 10.6**	**-3.4**
KBS				Lg	Lg	04 39 29.8	
KBS	**Kingsbay**	**1.75**	**106**	*e*Pn	**Pn**	**04 39 10.4**	**-3.5**
KBS				*e*Sn	Sn	04 39 23.6	-13
KBS	**Kingsbay**	**1.75**	**106**	*e*P	**Pn**	**04 39 10.4**	**-3.5**
KBS	**Kingsbay**	**1.75**	**106**	*e*Pn	**Pn**	**04 39 10.4**	**-3.5**
KBS				*e*Sn	Sn	04 39 23.6	-13
KBS				Lg	Lg	04 39 29.8	
KBS	**Kingsbay**	**1.75**	**106**	⇑*i*P	**Pn**	**04 39 10.5**	**-3.5**
KBS				*e*S	**Sn**	**04 39 30.3**	**-6.3**
BRBA	**Barentsburg A**	**2.60**	**119**	Pn	**Pn**	**04 39 24.0**	**-1.7**
SPA0	**Spitsbergen Ar**	**2.89**	**111**	Pn	**Pn**	**04 39 27.1**	**-2.5**
	baz=328,slow=14						
SPA0				Sn	**Sn**	**04 39 58.1**	**-6.7**
	baz=313,slow=18						
SPA0				Lg	Lg	04 40 03.4	
SPA0	**Spitsbergen Ar**	**2.89**	**111**	*e*Pn	**Pn**	**04 39 27.3**	**-2.3**
SPA0				*e*Sn	**Sn**	**04 40 03.5**	**-1.2**
SPA0	**Spitsbergen Ar**	**2.89**	**111**	*e*Pn	**Pn**	**04 39 27.3**	**-2.3**
SPA0				Lg	Lg	04 40 03.4	
SPA0	**Spitsbergen Ar**	**2.89**	**111**	⇑*i*P	**Pn**	**04 39 27.2**	**-2.5**
SPA0				*e*S	**Sn**	**04 39 59.2**	**-5.5**
SPA0				IAML		04 40 16.4	
	comp=Z,240nm,0.7s						
SPITS	**Spitsbergen Ar**	**2.89**	**111**	Pn	**Pn**	**04 39 27.2**	**-2.5**
	baz=326,slow=13,SNR=431						
SPITS				Sn	**Sn**	**04 39 57.9**	**-6.8**
	baz=275,slow=16,SNR=4.2						
SPITS				LR	LR	04 40 42.6	
	comp=Z,4μm,19.2s,baz=310,slow=41						
HSP	**Hornsund**	**3.56**	**129**	Pn	**Pn**	**04 39 36.6**	**-2.2**
HSP				Sn	**Sn**	**04 40 15.1**	**-6.2**
HSPB	**Hornsund (broa**	**3.56**	**129**	*e*P	**Pn**	**04 39 36.6**	**-2.2**
HSPB				*e*		04 40 14.9	
HSPB	**Hornsund (broa**	**3.56**	**129**	Pn	**Pn**	**04 39 36.6**	**-2.2**
HSPB	**Hornsund (broa**	**3.56**	**129**	*e*P	**Pn**	**04 39 36.7**	**-2.2**
HSPB				*e*S	**Sn**	**04 40 14.5**	**-6.8**
DAG	**Danmarks Havn**	**5.25**	**250**	⇑*i*P	**Pn**	**04 39 58.8**	**-3.2**
DAG				*i* S	**Sn**	**04 40 54.1**	**-8.7**
DAG	**Danmarks Havn**	**5.25**	**250**	P	**Pn**	**04 39 59.4**	**-2.6**
BJO	**Bjornoya**	**6.16**	**136**	*e*P	**Pn**	**04 40 13.2**	**-1.3**
JNW	**Jan Mayen West**	**9.00**	**205**	*e*P	**Pn**	**04 40 52.4**	**-1.0**
JNE	**Jan Mayen East**	**9.03**	**205**	*e*P	**Pn**	**04 40 51.1**	**-2.7**
JMIC	**Jan Mayen**	**9.05**	**205**	Pn	**Pn**	**04 40 52.1**	**-2.0**
	comp=Z,28nm,0.3s,baz=63,slow=2.6,SNR=18						
JMIC				Sn	Sn	04 42 25.6	-11
	comp=Z,10nm,0.3s,baz=159,slow=18,SNR=7.2						
JMIC				LR	LR	04 43 34.2	
	comp=Z,202nm,21.2s,baz=22,slow=32						
JMIC	**Jan Mayen**	**9.05**	**205**	*e*P	**Pn**	**04 40 51.7**	**-2.3**
JMI	**Jan Mayen**	**9.12**	**205**	*e*P	**Pn**	**04 40 54.1**	**-1.0**
HAMF	**Hammerfest**	**10.26**	**139**	*e*P	**Pn**	**04 41 08.0**	**-2.6**
KEV	**Kevo**	**11.50**	**135**	*e*Pn	**Pn**	**04 41 26.8**	**-0.8**
KEV				*e*Sn	Sn	04 43 25.2	-11
KEV	**Kevo**	**11.50**	**135**	P	**Pn**	**04 41 25.3**	**-2.3**
KEV	**Kevo**	**11.50**	**135**	*e*P	**Pn**	**04 41 27.1**	**-0.5**
ARA0	**ARCESS Array S**	**11.52**	**138**	Pn	**Pn**	**04 41 26.5**	**-1.4**
	baz=349,slow=12						
ARA0				Sn	Sn	04 43 25.3	-11
	baz=2.3,slow=28						
ARA0	**ARCESS Array S**	**11.52**	**138**	Pn	**Pn**	**04 41 26.5**	**-1.4**
	baz=349,slow=12						
ARA0				Sn	Sn	04 43 25.3	-11
	baz=2.3,slow=28						
ARCES	**ARCESS Array B**	**11.52**	**138**	Pn	**Pn**	**04 41 26.1**	**-1.7**
	comp=Z,0.5nm,0.3s,baz=348,slow=12,SNR=37						
ARCES	**ARCESS Array B**	**11.52**	**138**	*e*Pn	**Pn**	**04 41 25.0**	**-2.9**
ARCES				*e*Sn	Sn	04 43 25.8	-11
ARCES	**ARCESS Array B**	**11.52**	**138**	*e*P	**Pn**	**04 41 26.3**	**-1.6**
SUMG	**Summit**	**11.87**	**257**	*e*Pn	**Pn**	**04 41 28.6**	**-4.3**
SUMG				*e*Sn	Sn	04 43 30.6	-15
SUMG	**Summit**	**11.87**	**257**	*i* P	**Pn**	**04 41 29.1**	**-3.8**
SUMG				*i* S	Sn	04 43 33.0	-13
SUMG	**Summit**	**11.87**	**257**	*e*P	**Pn**	**04 41 28.6**	**-4.3**
SGF	**Sodankyl**	**13.63**	**140**	P	**Pn**	**04 41 58.4**	**+1.8**
TULEG	**Thule**	**14.31**	**296**	*e*Pn	Pn	04 41 57.8	-8.0
APA	**Apatity**	**14.41**	**129**	⇓*i*P	**Pn**	**04 42 03.5**	**-3.8**
APA				pmax	pmax		
	comp=Z,8.0nm,1.2s						
APA				MLR	MLR		
	comp=Z,900nm,12.0s						
ILULI	**Ilulissat**	**16.97**	**263**	*e*Pn	**P**	**04 42 48.2**	**+5.5**
	comp=Z,51nm,1.0s						
ILULI	**Ilulissat**	**16.97**	**263**	*e*P	**P**	**04 42 48.2**	**+5.5**
ILULI				pmax	pmax		
	comp=Z,51nm,1.0s						
VAF	**Ylistaro**	**17.50**	**150**	*e*P	**P**	**04 42 52.8**	**+4.3**
VAF				pmax	pmax		
	comp=Z,31nm,1.6s						
NBO00	**NORSAR Array S**	**18.72**	**168**	*e*P	**Pn**	**04 43 08.3**	**+5.8**
NB2	**NORSAR Subarra**	**18.73**	**168**	P	**Pn**	**04 43 03.0**	**+0.5**
	comp=Z,154nm,3.3s,baz=357,slow=11						
NOA	**NORSAR Array B**	**18.73**	**168**	P	**P**	**04 43 02.0**	**-0.2**
	comp=Z,0.0nm,0.3s,baz=351,slow=12,SNR=3.6						
NOA				LR	LR	04 48 59.9	
	comp=Z,289nm,21.9s,baz=10.0,slow=33						

SFJD	**Kangerlussuaq**	**18.83**	**259**	P	**Pn**	**04 43 03.9**	**+0.2**
	comp=Z,1.5nm,0.3s,baz=3.4,slow=12,SNR=2.7						
SFJD				S	Sn	04 46 10.8	-24
	comp=Z,0.7nm,0.3s,baz=84,slow=10,SNR=3.0						
SFJD				LR	LR	04 50 42.3	
	comp=Z,743nm,19.3s,baz=4.5,slow=38						
SFJD	**Kangerlussuaq**	**18.83**	**259**	*e*Pn	**Pn**	**04 43 03.5**	**-0.1**
SFJD				S	Sn	04 46 10.8	-24
FIA0	**FINESS Array S**	**19.40**	**146**	P	**P**	**04 43 09.7**	**+0.3**
	baz=330,slow=12						
FIA0	**FINESS Array S**	**19.40**	**146**	P	**P**	**04 43 09.7**	**+0.3**
	baz=330,slow=12						
FIA1	**FINESS Array S**	**19.40**	**146**	*e*P	**P**	**04 43 09.2**	**-0.2**
	comp=Z,17nm,1.0s						
FINES	**FINESS Array B**	**19.40**	**146**	P	**Pn**	**04 43 10.9**	**+0.3**
	comp=Z,0.4nm,0.3s,baz=344,slow=10.0,SNR=12						
FINES				LR	LR	04 50 22.3	
	comp=Z,405nm,21.4s,baz=4.0,slow=36						
HFS	**Hagfors**	**19.74**	**164**	P	**P**	**04 43 13.6**	**+0.4**
	slow=12						
HFS	**Hagfors**	**19.74**	**164**	P	**P**	**04 43 13.6**	**+0.4**
	comp=Z,0.3nm,0.3s,baz=4.6,slow=7.4,SNR=8.3						
HFS				LR	LR	04 49 42.6	
	comp=Z,334nm,20.5s,baz=354,slow=34						
HFS	**Hagfors**	**19.74**	**164**	P	**P**	**04 43 13.6**	**+0.4**
	slow=12						
RES	**Resolute Bay**	**19.80**	**309**	P	**P**	**04 43 11.1**	**-2.6**
	comp=Z,0.6nm,0.3s,baz=40,slow=8.7,SNR=4.9						
RES				S	S	04 46 34.9	-22
	comp=Z,0.3nm,0.3s,baz=106,slow=20,SNR=3.0						
RES				LR	LR	04 50 42.3	
	comp=Z,643nm,18.9s,baz=58,slow=36						
RES	**Resolute Bay**	**19.80**	**309**	*e*P	**P**	**04 43 11.2**	**-2.5**
	comp=Z,5.2nm,0.7s						
RES				S	S	04 46 34.9	-22
RES	**Resolute Bay**	**19.80**	**309**	*e*P	**P**	**04 43 11.2**	**-2.5**
RES				pmax	pmax		
	comp=Z,5.0nm,0.7s						
KLMR	**Klimovskoe**	**21.65**	**128**	*e*P	**P**	**04 43 32.4**	**-1.4**
KLMR				*e*S	**S**	**04 47 29.6**	**-4.0**
KLMR				pmax	pmax		
	comp=Z,36nm,1.3s						
KLMR	**Klimovskoe**	**21.65**	**128**	*e*P	**P**	**04 43 32.4**	**-1.4**
KLMR				AMP		04 43 40.3	
	comp=Z,36nm,1.3s						
KLMR				*e*S	**S**	**04 47 29.7**	**-3.9**
KLMR				LQ	LQ	04 50 01.2	
KLMR				LR	LR	04 50 33.7	
PRGR	**Permogore**	**21.83**	**120**	*e*P	**P**	**04 43 35.5**	**-0.2**
PRGR				pmax	pmax		
	comp=Z,26nm,0.8s						
VSU	**Vasula**	**22.40**	**147**	*ce*P	**P**	**04 43 41.4**	**-0.4**
VSU				pmax	pmax		
	comp=Z,110nm,1.1s						
EKA	**Eskdalemuir Ar**	**24.39**	**189**	P	**P**	**04 44 02.0**	**+0.3**
	comp=Z,2.6nm,0.6s,baz=358,slow=8.0,SNR=10						
EKA	**Eskdalemuir Ar**	**24.39**	**189**	P	**P**	**04 44 02.0**	**+0.3**
FRB	**Frobisher Bay**	**25.04**	**274**	P	**P**	**04 44 08.0**	**+0.5**
	comp=Z,9.7nm,1.1s,baz=58,slow=8.0,SNR=2.3						
FRB				LR	LR	04 54 30.3	
	comp=Z,403nm,18.4s,baz=14,slow=38						
ISAL	**Salakas**	**25.19**	**149**	*e*P	**P**	**04 44 09.3**	**+0.4**
ISAL				IAmb	IAmb	04 44 10.9	
	comp=Z,7.4nm,0.9s						
IIGN	**Ignalina**	**25.41**	**149**	*e*P	**P**	**04 44 11.4**	**+0.4**
IIGN				IAmb	IAmb	04 44 14.1	
	comp=Z,7.1nm,0.9s						
IDID	**Didziasalis**	**25.50**	**148**	*e*P	**P**	**04 44 12.2**	**+0.4**
IDID				IAmb	IAmb	04 44 14.8	
	comp=Z,7.2nm,0.8s						
TIXI	**Tiksi**	**26.02**	**36**	P	**P**	**04 44 17.7**	**+1.3**
	comp=Z,4.5nm,0.9s,baz=333,slow=6.8,SNR=4.8						
TIXI	**Tiksi**	**26.02**	**36**	*ce*P	**P**	**04 44 19.3**	**+3.0**
TIXI				pmax	pmax		
	comp=Z,8.0nm,1.0s						
OBN	**Obninsk**	**26.81**	**136**	⇓*e*P	**P**	**04 44 24.1**	**+0.5**
OBN				*e*		04 45 03.1	
OBN				*e*S	**S**	**04 49 07.5**	**+7.7**
OBN				pmax	pmax		
	comp=Z,13nm,0.5s						
OBN				MLR	MLR		
	comp=Z,428nm,22.0s						
CLL	**Collm**	**28.53**	**167**	*e*P	**P**	**04 44 40.0**	**+0.9**
	comp=Z,19nm,1.9s						
CLL				Lm	MLR	04 55 00.0	
	comp=N,200nm,20.0s						
CLL				Lm	MLR	04 55 00.0	
	comp=E,100nm,21.0s						
CLL				Lm	MLR	04 55 00.0	
	comp=Z,200nm,20.6s						
CLL	**Collm**	**28.53**	**167**	*e*P	**P**	**04 44 40.0**	**+0.9**
CLL				pmax	pmax		
	comp=Z,19nm,1.9s						
ARU	**Arti**	**28.93**	**109**	P	**P**	**04 44 41.3**	**-1.2**
	comp=Z,2.4nm,0.3s,baz=249,slow=17,SNR=4.5						
ARU	**Arti**	**28.93**	**109**	*e*P	**P**	**04 44 43.2**	**+0.7**
	comp=Z,17nm,1.4s						
ARU	**Arti**	**28.93**	**109**	*d i*P	**P**	**04 44 43.5**	**+1.0**
ARU						04 45 32.0	
ARU				S	**S**	**04 49 36.0**	**+2.8**
ARU				SS	**SnSn**	**04 50 55.4**	**+0.7**
ARU				pmax	pmax		
	comp=Z,17nm,1.7s						
ARU				MLR	MLR		
	comp=Z,444nm,21.0s						
BRG	**Berggiesshubel**	**29.01**	**166**	*e*P	**P**	**04 44 44.0**	**+0.7**
	comp=Z,12nm,1.6s						
BRG				*e*		04 44 53.5	
	comp=Z,22nm,1.8s comp=N,207nm,16.1s comp=E,134nm,19.6s comp=Z,291nm,15.2s						
BRG	**Berggiesshubel**	**29.01**	**166**	*e*P	**P**	**04 44 44.0**	**+0.7**
BRG				pmax	pmax		
	comp=Z,12nm,1.7s						
BRG				MLR	MLR		
	comp=N,207nm,16.1s						
BRG				MLR	MLR		
	comp=E,134nm,19.6s						
BRG				MLR	MLR		
	comp=Z,291nm,15.2s						
UPC	**Upice**	**29.47**	**163**	AMS	AMS	04 55 50.0	
	comp=Z,200nm,15.2s						
NKC	**Novy Kostel**	**29.58**	**168**	P	**P**	**04 44 52.5**	**+4.0**
NKC				pmax	pmax		
	comp=Z,4.0nm,1.4s						
DPC	**Dobruska-Polom**	**29.64**	**163**	AMS	AMS	04 55 30.0	
	comp=Z,200nm,17.4s						
OJC	**Ojcow**	**29.99**	**158**	*e*P	**P**	**04 44 53.2**	**+1.2**
OJC	**Ojcow**	**29.99**	**158**	*e*P	**P**	**04 44 53.2**	**+1.2**
GOPC	**GO Pecny, Ondr**	**30.00**	**165**	AMS	AMS	04 56 00.0	
	comp=Z,200nm,21.0s						
OKC	**Ostrava-Krasne**	**30.26**	**161**	AMS	AMS	04 56 00.0	
	comp=Z,200nm,15.2s						
MORC	**Moravsky Berou**	**30.29**	**161**	*e*P	**P**	**04 44 55.2**	**+0.5**
AKASG	**Malin Array Be**	**30.31**	**146**	P	**P**	**04 44 54.0**	**-0.7**
	comp=Z,1.0nm,0.5s,baz=343,slow=9.3,SNR=6.7						
AKASG				LR	LR	04 56 54.0	
	comp=Z,298nm,22.0s,baz=5.0,slow=36						
KIEV	**Kiev**	**30.31**	**146**	⇑*e*P	**P**	**04 44 54.5**	**-0.3**
KIEV				pmax	pmax		
	comp=Z,8.0nm,1.7s						
INK	**Inuvik**	**30.34**	**330**	P	**P**	**04 44 54.5**	**-0.4**
	comp=Z,1.2nm,0.9s,baz=346,slow=4.2,SNR=2.1						
INK				LR	LR	04 59 09.0	
	comp=Z,133nm,19.9s,baz=357,slow=40						
VRAC	**Vranov**	**30.70**	**163**	*e*P	**P**	**04 44 59.2**	**+0.9**
KHC	**Kasperske Hory**	**30.73**	**167**	AMS	AMS	04 56 00.0	
	comp=Z,300nm,21.1s						
NIE	**Niedzica**	**30.82**	**158**	*e*P	**P**	**04 45 01.0**	**+1.6**
NIE	**Niedzica**	**30.82**	**158**	*e*P	**P**	**04 45 01.0**	**+1.6**
KRUC	**Moravsky**	**30.93**	**163**	*e*P	**P**	**04 45 01.3**	**+0.9**
VSR	**Storozhevoye**	**30.96**	**134**	*i* P	**P**	**04 45 00.9**	**+0.3**
VSR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
GERES	**GERESS Array B**	**31.02**	**166**	P	**P**	**04 45 03.0**	**+1.8**
	comp=Z,0.7nm,0.7s,baz=8.3,slow=10,SNR=6.1						
GERES				LR	LR	04 56 44.1	
	comp=Z,236nm,19.2s,baz=64,slow=35						
LDF	**La Druitiere**	**31.07**	**184**	*e*P	**P**	**04 45 00.6**	**-1.0**
LDF				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GRR	**Gorron**	**31.29**	**185**	*e*P	**P**	**04 45 02.7**	**-0.8**
GRR				pmax	pmax		
	comp=Z,11nm,1.2s						
ROSF	**Rostrenen**	**31.39**	**188**	*e*P	**P**	**04 45 03.8**	**-0.6**
ROSF				pmax	pmax		
	comp=Z,53nm,2.0s						
SGMF	**Saint Gilles**	**31.45**	**187**	*e*P	**P**	**04 45 07.4**	**+2.5**
SGMF				pmax	pmax		
	comp=Z,28nm,1.8s						
VYHS	**Vyhne**	**31.64**	**160**	*e*P	**P**	**04 45 07.7**	**+1.1**
VYHS				pmax	pmax		
	comp=Z,7.0nm,1.6s						
VYHS	**Vyhne**	**31.64**	**160**	*e*P	**P**	**04 45 07.7**	**+1.1**
HAU	**Haudompre**	**31.66**	**176**	*e*P	**P**	**04 45 07.2**	**+0.4**
HAU				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MODS	**Modra-Piesok**	**31.67**	**162**	*e*P	**P**	**04 45 07.4**	**+0.5**
MODS				pmax	pmax		
	comp=Z,14nm,1.3s						
MODS	**Modra-Piesok**	**31.67**	**162**	*e*P	**P**	**04 45 07.4**	**+0.5**
CONA	**Conrad Observa**	**32.04**	**164**	*e*pP	**P**	**04 45 11.7**	**+1.5**
	comp=Z,7.5nm,1.2s						
FETA	**Feichten**	**32.73**	**170**	*e*P	**P**	**04 45 15.7**	**-0.7**
	comp=Z,6.9nm,1.3s						
DAVOX	**Davos/Dischmat**	**32.95**	**172**	LR	LR	04 56 53.9	
	comp=Z,180nm,21.0s,baz=347,slow=33						
BUR04	**Bucovina Ar. S**	**32.99**	**152**	*e*P	**P**	**04 45 19.1**	**+0.6**
SCHQ	**Schefferville**	**33.07**	**265**	LR	LR	04 59 26.1	
	comp=Z,231nm,19.1s,baz=359,slow=38						
BGF	**Bois d’Agland**	**33.08**	**180**	*e*P	**P**	**04 45 19.3**	**0.0**
BGF				pmax	pmax		
	comp=Z,16nm,1.0s						
TCF	**Toulx Ste Croi**	**33.36**	**181**	*e*P	**P**	**04 45 21.5**	**-0.2**
TCF				pmax	pmax		
	comp=Z,8.0nm,1.0s						
OBKA	**Obir**	**33.39**	**166**	*e*pP	**P**	**04 45 23.0**	**+1.0**
	comp=Z,0.5nm,0.1s						
YKA	**Yellowknife Ar**	**33.79**	**312**	P	**P**	**04 45 25.1**	**-0.2**
	comp=Z,0.2nm,0.7s,baz=8.0,slow=8.5,SNR=2.9						
YKA				PcP	**PcP**	**04 48 04.1**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=5.0,slow=2.6,SNR=7.6						
YKA				LR	LR	04 58 55.7	
	comp=Z,38nm,19.5s,baz=24,slow=36						
LPL	**La Plagne**	**34.15**	**176**	*e*P	**P**	**04 45 29.6**	**+0.8**
LPL				pmax	pmax		
	comp=Z,7.0nm,1.2s						
BRVK	**Borovoye**	**34.22**	**99**	*e*P	**P**	**04 45 30.0**	**+0.9**
	comp=Z,1.5nm,0.4s						
BRVK	**Borovoye**	**34.22**	**99**	*ce*P	**P**	**04 45 30.3**	**+1.2**
BRVK				pmax	pmax		
	comp=Z,20nm,1.7s						
BVAR	**Borovoye Array**	**34.27**	**99**	P	**P**	**04 45 29.8**	**+0.3**
	comp=Z,1.3nm,0.7s,baz=352,slow=8.7,SNR=7.3						
BVAR				LR	LR	05 02 35.3	
	comp=Z,577nm,18.4s,baz=350,slow=42						
RJF	**Les Rejaudoux**	**34.34**	**182**	*e*P	**P**	**04 45 30.2**	**0.0**
RJF				pmax	pmax		
	comp=Z,10.0nm,0.9s						
EGAK	**Eagle**	**34.46**	**334**	*e*P	**P**	**04 45 31.1**	**+0.1**
	comp=Z,6.4nm,1.2s						
AKTO	**Aktyubinsk**	**34.59**	**113**	P	**P**	**04 45 33.1**	**+0.9**
	comp=Z,2.7nm,0.8s,baz=6.0,slow=11,SNR=7.6						
AKTO				LR	LR	05 01 13.0	
	comp=Z,307nm,18.0s,baz=0.2,slow=39						
IL1	**Eielson Array**	**34.89**	**338**	*e*P	**P**	**04 45 35.4**	**+0.6**
IL1				*e*PcP	**PcP**	**04 48 06.7**	**-0.4**
ILAR	**Eielson Array**	**34.89**	**338**	P	**P**	**04 45 34.9**	**+0.1**
	comp=Z,1.6nm,0.9s,baz=357,slow=8.1,SNR=7.2						
ILAR				PcP	**PcP**	**04 48 06.8**	**-0.3**
	comp=Z,1.6nm,0.7s,baz=335,slow=4.0,SNR=13						
ILAR				LR	LR	04 58 49.3	
	comp=Z,111nm,21.1s,baz=351,slow=35						
MLR	**Muntele Rosu**	**35.16**	**152**	LR	LR	05 00 25.2	
	comp=Z,258nm,18.3s,baz=16,slow=37						
ZALV	**Zalesovo Beam**	**36.03**	**84**	LR	LR	05 05 21.1	
	comp=Z,238nm,18.4s,baz=271,slow=44						
ABKAR	**Akbulak array**	**36.05**	**111**	*e*P	**P**	**04 45 47.6**	**+2.7**
CAST	**Castle Rocks**	**36.57**	**342**	*e*P	**P**	**04 45 50.8**	**+1.6**
	comp=Z,7.8nm,1.2s						
EPF	**Esparros**	**36.63**	**184**	*e*P	**P**	**04 45 49.8**	**-0.1**
BOD	**Bodaibo**	**37.28**	**56**	*e*P	P	04 45 43.6	-12
GOF	**Gofitskoye**	**37.52**	**132**	*e*P	**P**	**04 46 00.9**	**+3.5**
KURK	**Kurchatov**	**37.98**	**91**	*e*P	**P**	**04 46 02.1**	**+0.8**
	comp=Z,8.2nm,1.0s						
KURK	**Kurchatov**	**37.98**	**91**	*ce*P	**P**	**04 46 00.8**	**-0.5**
KURK				pmax	pmax		
	comp=Z,42nm,1.0s						
KURBB	**Kurchatov Arra**	**38.06**	**92**	P	**P**	**04 46 02.6**	**+0.7**
	comp=Z,2.1nm,0.2s,baz=340,slow=7.7,SNR=11						
KIV	**Kislovodsk**	**38.55**	**133**	*e*P	**P**	**04 46 06.9**	**+0.7**
KIV				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KBZ	**Khabaz**	**38.80**	**132**	P	**P**	**04 46 07.8**	**-0.3**
	comp=Z,3.2nm,0.8s,baz=290,slow=4.4,SNR=6.0						
KBZ				LR	LR	05 02 38.2	
	comp=Z,197nm,19.8s,baz=347,slow=37						
ES19	**SONSECA Array**	**40.03**	**189**	*e*P	**P**	**04 46 19.7**	**+1.1**
ESDC	**Sonseca Array**	**40.06**	**189**	P	**P**	**04 46 17.9**	**-1.0**
	comp=Z,1.3nm,0.8s,baz=4.5,slow=8.7,SNR=9.2						
PAB	**San Pablo**	**40.20**	**189**	*e*P	**P**	**04 46 20.3**	**+0.2**
	comp=Z,4.7nm,0.9s						
PAB	**San Pablo**	**40.20**	**189**	*e*P	**P**	**04 46 20.3**	**+0.2**
PAB				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ILGA	**Ilgaz**	**40.32**	**144**	*e*P	**P**	**04 46 25.2**	**+4.1**
	comp=Z,5.7nm,1.0s						
DGZ	**Jazzator, Alta**	**40.57**	**83**	*i* P	**P**	**04 46 23.8**	**+0.7**
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.0s						
TLY	**Talaya**	**41.53**	**67**	P	**P**	**04 46 31.8**	**+1.0**
	comp=Z,6.2nm,0.8s,baz=105,slow=5.5,SNR=6.9						
TLY	**Talaya**	**41.53**	**67**	*e*P	**P**	**04 46 31.6**	**+0.8**
	comp=Z,10nm,0.7s						
TLY	**Talaya**	**41.53**	**67**	⇑*e*P	**P**	**04 46 32.9**	**+2.1**
TLY				pmax	pmax		
	comp=Z,7.0nm,0.8s						
BRTR	**Keskin Array B**	**41.62**	**144**	P	**P**	**04 46 32.6**	**+0.8**
	comp=Z,1.4nm,0.6s,baz=339,slow=6.6,SNR=7.8						
BRTR				PcP	**PcP**	**04 48 28.8**	**+0.2**
	comp=Z,0.5nm,0.7s,baz=315,slow=0.6,SNR=3.1						
BRTR				LR	LR	05 05 09.3	
	comp=Z,104nm,20.2s,baz=10,slow=38						
BRTR	**Keskin Array B**	**41.62**	**144**	*i* P	**P**	**04 46 33.2**	**+1.4**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MK31	**Makanchi Array**	**42.43**	**90**	*e*P	**P**	**04 46 38.9**	**+0.7**
MK31	**Makanchi Array**	**42.43**	**90**	*e*P	**P**	**04 46 38.9**	**+0.7**
MKAR	**Makanchi Array**	**42.43**	**90**	P	**P**	**04 46 38.5**	**+0.3**
	comp=Z,1.7nm,0.6s,baz=342,slow=7.2,SNR=16						
MKAR				LR	LR	05 08 51.2	
	comp=Z,270nm,18.0s,baz=333,slow=43						
MKAR	**Makanchi Array**	**42.43**	**90**	*e*P	**P**	**04 46 38.9**	**+0.7**
	comp=Z,17nm,0.6s						
MKAR	**Makanchi Array**	**42.43**	**90**	*e*P	**P**	**04 46 38.9**	**+0.7**
MKAR				pmax	pmax		
	comp=Z,17nm,0.6s						
MK01	**Makanchi Array**	**42.45**	**90**	*e*P	**P**	**04 46 38.6**	**+0.3**
GNI	**Garni**	**42.57**	**131**	LR	LR	05 05 30.6	
	comp=Z,67nm,19.0s,baz=338,slow=38						
ULM	**Lac du Bonnet**	**42.67**	**291**	LR	LR	05 04 40.3	
	comp=Z,517nm,18.2s,baz=346,slow=36						
PKME	**Peaks-Kenny Pk**	**42.70**	**263**	P	**P**	**04 46 40.2**	**-0.1**
	baz=15						
TRQ	**Mont Tremblant**	**42.73**	**269**	*e*P	**P**	**04 46 42.3**	**+1.6**
ZEA	**Zeya**	**43.12**	**46**	*e*P	**P**	**04 46 44.0**	**+0.3**
ZEA				pmax	pmax		
	comp=Z,28nm,1.2s						
ALFO	**Alfred**	**43.37**	**269**	P	**P**	**04 46 46.1**	**+0.4**
	baz=15						
C40A	**Isle Royale Na**	**43.75**	**284**	P	**P**	**04 46 46.3**	**-2.5**
	baz=15						
PEMO	**Pembroke**	**43.75**	**271**	P	**P**	**04 46 48.0**	**-0.8**
	baz=15						
A33A	**Warroad**	**43.86**	**290**	P	**P**	**04 46 49.1**	**-0.6**
	baz=15						
B35A	**Bob, Littlefor**	**44.13**	**288**	P	**P**	**04 46 49.6**	**-2.2**
	baz=15						
EYMN	**Ely**	**44.14**	**286**	P	**P**	**04 46 51.7**	**-0.3**
	baz=15						
LONY	**Lake Ozonia**	**44.29**	**268**	*e*P	**P**	**04 46 54.8**	**+1.6**
	comp=Z,18nm,1.4s						
BUKO	**Buck Lake**	**44.37**	**273**	P	**P**	**04 46 53.8**	**-0.1**
	baz=15						
BANO	**Bancroft**	**44.51**	**272**	P	**P**	**04 46 55.1**	**+0.1**
	baz=15						
AGMN	**Agassiz Nation**	**44.56**	**290**	*e*P	P	04 47 00.2	+4.9
	comp=Z,9.3nm,1.1s						
DELO	**Deloro Mine**	**44.94**	**271**	P	**P**	**04 46 57.2**	**-1.2**
	baz=15						
AAK	**Ala-Archa**	**45.02**	**99**	P	**P**	**04 47 00.8**	**+1.5**
	comp=Z,1.4nm,0.3s,baz=334,slow=4.4,SNR=4.7						
AAK				LR	LR	05 08 34.1	
	comp=Z,436nm,19.2s,baz=310,slow=40						
D37A	**Cotton**	**45.06**	**286**	P	**P**	**04 46 59.5**	**+0.2**
	baz=15						
D35A	**Remer**	**45.42**	**288**	P	**P**	**04 47 01.5**	**-0.7**
	baz=15						
SONM	**Songino Array**	**45.71**	**66**	P	**P**	**04 47 04.8**	**+0.2**
	comp=Z,0.3nm,0.5s,baz=335,slow=6.4,SNR=2.6						
SONM				LR	LR	05 08 42.0	
	comp=Z,160nm,18.9s,baz=354,slow=39						
ULN	**Ulaanbaatar**	**45.79**	**66**	*e*P	**P**	**04 47 05.7**	**+0.4**
	comp=Z,6.6nm,1.2s						
ULN	**Ulaanbaatar**	**45.79**	**66**	*ce*P	**P**	**04 47 06.0**	**+0.7**
ULN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
E36A	**McGregor**	**45.83**	**287**	P	**P**	**04 47 04.1**	**-1.3**
	baz=15						
F39A	**Loretta**	**46.00**	**285**	P	**P**	**04 47 05.4**	**-1.4**
	baz=15						
WMQ	**Urumqi**	**46.29**	**85**	P	**P**	**04 47 12.1**	**+3.0**
WMQ				LR	LR		
	comp=Z,210nm,17.9s						
F37A	**Hinrichs Farm,**	**46.48**	**286**	P	**P**	**04 47 09.8**	**-0.8**
	baz=15						
G40A	**Rib Lake**	**46.50**	**284**	P	**P**	**04 47 10.0**	**-0.7**
	baz=15						
G40A	**Rib Lake**	**46.50**	**284**	*e*P	**P**	**04 47 10.7**	**0.0**
	comp=Z,15nm,1.4s						
F36A	**Milaca**	**46.51**	**287**	P	**P**	**04 47 10.3**	**-0.5**
	baz=14						
WALA	**Waterton Lakes**	**46.72**	**306**	*e*P	**P**	**04 47 12.7**	**+0.2**
	comp=Z,3.0nm,1.1s						
GEYT	**Alibeck**	**46.77**	**117**	LR	LR	05 09 06.2	
	comp=Z,94nm,18.8s,baz=25,slow=39						
PETK	**Petropavlovsk-**	**46.79**	**21**	LR	LR	05 06 14.9	
	comp=Z,50nm,20.4s,baz=8.1,slow=35						
G38A	**Ridgeland**	**46.88**	**285**	P	**P**	**04 47 12.8**	**-1.0**
	baz=14						
MDT	**Midelt**	**46.92**	**189**	P	**P**	**04 47 13.2**	**-1.1**
	comp=Z,1.8nm,0.8s,baz=20,slow=7.7,SNR=3.4						
H39A	**Augusta**	**47.26**	**284**	P	**P**	**04 47 16.2**	**-0.4**
	baz=14						
G35A	**Watkins**	**47.30**	**288**	P	**P**	**04 47 15.9**	**-1.0**
	baz=14						
I43A	**Langenfeld Bro**	**47.47**	**281**	P	**P**	**04 47 17.7**	**-0.5**
	baz=14						
I42A	**Draeger Farm,**	**47.60**	**282**	P	**P**	**04 47 18.1**	**-1.2**
	baz=14						
ERPA	**Erie**	**47.70**	**273**	P	**P**	**04 47 19.2**	**-0.8**
	baz=14						
LAO	**LASA Array**	**47.84**	**299**	P	**P**	**04 47 20.3**	**-0.9**
	baz=14						
LAO	**LASA Array**	**47.84**	**299**	*e*P	**P**	**04 47 22.3**	**+1.1**
	comp=Z,7.6nm,1.0s						
H35A	**Sunnyside Ranc**	**47.86**	**288**	P	**P**	**04 47 21.0**	**-0.3**
	baz=14						
I40A	**Norwalk**	**47.90**	**284**	P	**P**	**04 47 20.7**	**-1.0**
	baz=14						
J43A	**Natural Harves**	**48.01**	**281**	P	**P**	**04 47 21.8**	**-0.7**
	baz=14						
I38A	**Scanlan Farm,**	**48.06**	**285**	P	**P**	**04 47 22.1**	**-0.8**
	baz=14						
N59A	**State Game Lan**	**48.09**	**268**	P	**P**	**04 47 22.8**	**-0.4**
	baz=14						
KLR	**Kul’dur**	**48.12**	**44**	*i* P	**P**	**04 47 24.3**	**+1.1**
M54A	**Oil Creek Stat**	**48.23**	**272**	P	**P**	**04 47 23.3**	**-0.9**
	baz=14						
I37A	**Lemond, Waseca**	**48.28**	**286**	P	**P**	**04 47 24.3**	**-0.2**
	baz=14						
A04D	**Lummi Island**	**48.28**	**314**	P	**P**	**04 47 24.2**	**-0.2**
	baz=12						
J41A	**Loganville**	**48.30**	**283**	P	**P**	**04 47 24.4**	**-0.4**
	baz=14						
KSH	**Kashi**	**48.32**	**98**	*e*P	**P**	**04 47 28.4**	**+3.3**
KSH				PcS	**PcS**	**04 52 50.1**	**+2.5**
KSH				S	**S**	**04 54 27.1**	**+1.8**
KSH				sS	sS	04 54 37.1	+10
KSH				ScS	**ScS**	**04 57 18.1**	**-0.2**
KSH				SS	**SS**	**04 57 52.1**	**-2.0**
J40A	**Soldiers Grove**	**48.41**	**283**	P	**P**	**04 47 25.3**	**-0.2**
	baz=14						
MMAI	**Mount Meron Ar**	**48.45**	**143**	P	**P**	**04 47 26.7**	**+0.7**
	comp=Z,1.3nm,0.5s,baz=358,slow=4.6,SNR=2.3						
MMAI				LR	LR	05 08 40.3	
	comp=Z,52nm,21.6s,baz=160,slow=37						
J39A	**Decorah**	**48.64**	**284**	P	**P**	**04 47 26.8**	**-0.5**
	baz=14						
K43A	**Burlington**	**48.65**	**281**	P	**P**	**04 47 27.0**	**-0.4**
	baz=14						
L48A	**N Adams**	**48.68**	**277**	P	**P**	**04 47 27.2**	**-0.5**
	baz=14						
HRY	**Holter Researc**	**48.70**	**304**	*e*P	**P**	**04 47 27.6**	**-0.3**
SSPA	**Standing Stone**	**48.75**	**270**	P	**P**	**04 47 26.8**	**-1.4**
	baz=14						
K42A	**Prairie Point,**	**48.75**	**282**	P	**P**	**04 47 27.3**	**-0.9**
	baz=14						
JFWS	**Jewell Farm**	**48.78**	**283**	P	**P**	**04 47 27.5**	**-0.9**
	baz=14						
N54A	**Moraine State**	**48.82**	**272**	P	**P**	**04 47 28.3**	**-0.4**
	baz=14						
N54A	**Moraine State**	**48.82**	**272**	*e*P	**P**	**04 47 29.7**	**+0.9**
	comp=Z,18nm,1.1s						
MSO	**Missoula**	**48.90**	**306**	P	**P**	**04 47 28.8**	**-0.6**
	baz=12,SNR=5.4						
MSO	**Missoula**	**48.90**	**306**	*e*P	**P**	**04 47 29.7**	**+0.2**
	comp=Z,6.8nm,1.1s						
J37A	**Redenius Farm,**	**48.99**	**286**	P	**P**	**04 47 28.9**	**-1.2**
	baz=14						
ECSD	**EROS Data Cent**	**49.11**	**289**	P	**P**	**04 47 29.9**	**-1.0**
	baz=14						
ECSD	**EROS Data Cent**	**49.11**	**289**	*e*P	**P**	**04 47 30.5**	**-0.5**
	comp=Z,9.5nm,0.9s						
ECSD				*e*PcP	**PcP**	**04 48 54.0**	**-0.3**
O56A	**Blue Knob Stat**	**49.23**	**271**	P	**P**	**04 47 31.6**	**-0.3**
	baz=14						
O56A	**Blue Knob Stat**	**49.23**	**271**	*e*P	**P**	**04 47 32.4**	**+0.4**
	comp=Z,13nm,1.2s						
K39A	**Oelwein**	**49.28**	**284**	P	**P**	**04 47 31.4**	**-0.8**
	baz=14						
N50A	**Nevada**	**49.58**	**275**	P	**P**	**04 47 34.2**	**-0.4**
	baz=14						
L41A	**Preston**	**49.64**	**283**	P	**P**	**04 47 34.5**	**-0.5**
	baz=14						
BOZ	**Bozeman (W)**	**49.75**	**303**	*e*P	**P**	**04 47 35.3**	**-0.8**
	comp=Z,6.0nm,1.5s						
BOZ	**Bozeman (W)**	**49.75**	**303**	*e*P	**P**	**04 47 35.3**	**-0.8**
BOZ				pmax	pmax		
	comp=Z,6.0nm,1.5s						
K36A	**Gilmore City**	**49.80**	**287**	P	**P**	**04 47 35.7**	**-0.5**
	baz=14						
RLMT	**Red Lodge**	**49.85**	**301**	P	**P**	**04 47 36.4**	**-0.5**
	baz=13						
RLMT	**Red Lodge**	**49.85**	**301**	*e*P	**P**	**04 47 37.3**	**+0.5**
	comp=Z,5.2nm,1.2s						
L39A	**Vinton**	**49.86**	**284**	P	**P**	**04 47 35.8**	**-0.9**
	baz=14						
M44A	**Midewin, Midew**	**49.87**	**280**	P	**P**	**04 47 36.6**	**-0.1**
	baz=14						
M43A	**Waltham Townsh**	**49.99**	**281**	P	**P**	**04 47 37.2**	**-0.4**
	baz=14						
RSSD	**Black Hills**	**49.99**	**296**	P	**P**	**04 47 36.8**	**-1.1**
	baz=13						
RSSD	**Black Hills**	**49.99**	**296**	*e*P	**P**	**04 47 38.0**	**+0.1**
	comp=Z,1.6nm,0.8s						
RSSD	**Black Hills**	**49.99**	**296**	*e*P	**P**	**04 47 38.0**	**+0.1**
RSSD				pmax	pmax		
	comp=Z,2.0nm,0.8s						
L38A	**Oak Wood Farm,**	**50.02**	**285**	P	**P**	**04 47 36.8**	**-1.0**
	baz=14						
MCWV	**Mont Chateau**	**50.06**	**272**	P	**P**	**04 47 37.9**	**-0.3**
	baz=14						
MCWV	**Mont Chateau**	**50.06**	**272**	*e*P	**P**	**04 47 38.6**	**+0.4**
	comp=Z,16nm,1.1s						
ACSO	**Alum Creek Sta**	**50.07**	**275**	P	**P**	**04 47 37.5**	**-0.8**
	baz=14						
ACSO	**Alum Creek Sta**	**50.07**	**275**	*e*P	**P**	**04 47 38.5**	**+0.2**
	comp=Z,11nm,0.9s						
N46A	**Monticello**	**50.11**	**279**	P	**P**	**04 47 37.7**	**-0.9**
	baz=14						
L37A	**Phoenix Point,**	**50.17**	**286**	P	**P**	**04 47 38.3**	**-0.7**
	baz=14						
O50A	**Cable**	**50.27**	**276**	P	**P**	**04 47 39.2**	**-0.7**
	baz=14						
SCIA	**State Center**	**50.29**	**285**	P	**P**	**04 47 39.7**	**-0.2**
	baz=14						
SCIA	**State Center**	**50.29**	**285**	*e*P	**P**	**04 47 39.7**	**-0.2**
	comp=Z,18nm,1.1s						
L36A	**Harm Buss Farm**	**50.36**	**287**	P	**P**	**04 47 39.7**	**-0.7**

	baz=14						
O49A	Covington	50.36	276	P	P	04 47 39.2	-1.3
	baz=14						
O48A	Farmland	50.44	277	P	P	04 47 40.3	-0.8
	baz=14						
N44A	Piper City	50.46	280	P	P	04 47 40.3	-0.9
	baz=14						
M40A	Post Highland	50.47	284	P	P	04 47 40.2	-1.1
	baz=14						
N43A	Stutzman Famil	50.51	281	P	P	04 47 40.6	-1.0
	baz=14						
M39A	Webster	50.52	284	P	P	04 47 40.8	-0.9
	baz=14						
O47A	Sheridan	50.65	278	P	P	04 47 41.9	-0.8
	baz=14						
SFIN	Lafayette	50.68	279	P	P	04 47 42.1	-0.8
	baz=14						
MCMT	McKenzie Canyo	50.69	304	*e*P	P	04 47 43.8	+0.6
M38A	Pleasantville	50.76	285	P	P	04 47 42.5	-1.0
	baz=14						
H17A	Grant Village	50.77	302	P	P	04 47 43.4	-0.4
	baz=12						
P50A	Jamestown	50.83	276	P	P	04 47 43.4	-0.6
	baz=14						
YPP	Pitchstone Pla	50.92	302	*e*P	P	04 47 47.2	+2.1
	comp=Z,7.8nm,1.4s						
N40A	Mertquake, Sal	50.99	284	P	P	04 47 44.2	-1.1
	baz=14						
P49A	Miami Univ. Ec	51.07	277	P	P	04 47 45.4	-0.4
	baz=14						
FLWY	Flagg Ranch	51.09	302	*e*P	P	04 47 48.2	+1.9
	comp=Z,14nm,1.5s						
O44A	Mansfield	51.15	280	P	P	04 47 46.3	-0.1
	baz=14						
N39A	Derby Farms, D	51.16	284	P	P	04 47 45.2	-1.3
	baz=14						
N39A	Derby Farms, D	51.16	284	*e*P	P	04 47 46.4	-0.2
	comp=Z,12nm,1.1s						
CVRD	Centerville Ro	51.23	269	*e*P	P	04 47 47.9	+0.8
	comp=Z,16nm,1.4s						
P48A	Milroy	51.27	277	P	P	04 47 46.7	-0.7
	baz=14						
IMW	Indian Meadow	51.31	302	*e*P	P	04 47 49.0	+1.0
	comp=Z,7.5nm,1.3s						
Q51A	Peebles	51.31	275	P	P	04 47 47.6	0.0
	baz=14						
P47A	Martinsville	51.39	278	P	P	04 47 47.1	-1.2
	baz=14						
MOOW	Moose Ponds	51.42	302	*e*P	P	04 47 49.4	+0.6
	comp=Z,5.2nm,1.3s						
LOHW	Long Hollow	51.53	302	*e*P	P	04 47 49.5	-0.1
	comp=Z,3.7nm,1.3s						
FXWY	Fox Creek	51.57	302	*e*P	P	04 47 50.0	+0.1
	comp=Z,7.3nm,1.3s						
N37A	Lee Faris, Mou	51.58	286	*e*P	P	04 47 48.5	-1.2
	comp=Z,6.9nm,0.8s						
Q50A	Georgetown	51.60	276	P	P	04 47 49.0	-0.8
	baz=14						
Q49A	Aurora	51.61	277	P	P	04 47 48.8	-1.1
	baz=14						
O41A	Passleys Farm,	51.61	283	P	P	04 47 48.7	-1.2
	baz=14						
TPAW	Teton Pass	51.71	302	*e*P	P	04 47 50.3	-0.6
	comp=Z,6.9nm,1.4s						
BLO	Bloomington	51.74	278	*e*P	P	04 47 50.2	-0.7
	comp=Z,6.5nm,0.8s						
BLO	Bloomington	51.74	278	*e*P	P	04 47 50.2	-0.7
BLO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
O40A	La Belle	51.78	284	P	P	04 47 49.6	-1.5
	baz=13						
K22A	Casper	51.83	298	P	P	04 47 50.1	-1.6
	baz=13						
K22A	Casper	51.83	298	*e*P	P	04 47 51.1	-0.5
	comp=Z,8.4nm,1.1s						
P44A	Sand Creek, Wi	51.84	280	P	P	04 47 50.5	-1.1
	baz=14						
Q48A	North Vernon	51.84	277	P	P	04 47 50.7	-0.8
	baz=14						
R52A	Catlettsburg	51.85	274	P	P	04 47 50.8	-0.9
	baz=13						
Q47A	Bedord North L	51.96	278	P	P	04 47 51.4	-1.1
	baz=13						
P42A	Winchester	52.03	282	*e*P	P	04 47 51.4	-1.6
	comp=Z,7.6nm,1.2s						
R51A	Hillsboro	52.06	275	P	P	04 47 52.5	-0.7
	baz=13						
HLID	Hailey	52.16	305	P	P	04 47 53.5	-0.7
	baz=12						
BW06	Boulder Array	52.20	301	P	P	04 47 53.5	-1.0
	baz=12						
BW06	Boulder Array	52.20	301	*e*P	P	04 47 54.8	+0.3
	comp=Z,3.9nm,1.1s						
PD31	Pinedale Array	52.20	301	*e*P	P	04 47 53.7	-0.8
PDAR	Pinedale Array	52.20	301	P	P	04 47 54.8	+0.3
	comp=Z,0.4nm,0.6s,baz=23,slow=5.6,SNR=6.6						
PDAR				LR	LR	05 10 43.4	
	comp=Z,179nm,18.7s,baz=18,slow=37						
PDAR	Pinedale Array	52.20	301	*e*P	P	04 47 54.1	-0.4
R50A	Paris	52.21	276	P	P	04 47 54.0	-0.4
	baz=13						
R49A	Shelbyville	52.35	277	P	P	04 47 54.7	-0.7
	baz=13						
P40A	Paris	52.39	284	P	P	04 47 54.8	-0.9
	baz=13						
P40A	Paris	52.39	284	*e*P	P	04 47 55.2	-0.5
	comp=Z,6.8nm,1.1s						
BLA	Blacksburg	52.54	272	P	P	04 47 56.2	-0.7
	baz=13						
BLA	Blacksburg	52.54	272	*e*P	P	04 47 56.8	-0.1
	comp=Z,15nm,1.0s						
BLA	Blacksburg	52.54	272	*e*P	P	04 47 56.8	-0.1
BLA				pmax	pmax		
	comp=Z,15nm,1.0s						
P39B	Salisbury	52.56	284	P	P	04 47 55.8	-1.1
	baz=13						
S52A	Salyersville	52.57	274	P	P	04 47 56.6	-0.5
	baz=13,SNR=8.1						
R47A	Wooly Knot Far	52.60	278	P	P	04 47 56.0	-1.2
	baz=13						
CN2	Changchun	52.60	50	*e*P	P	04 48 00.8	+3.6
WCI	Wyandotte Cave	52.62	278	P	P	04 47 56.5	-0.9
	baz=13						
S51A	Beattyville	52.70	275	P	P	04 47 56.9	-1.1
	baz=13						
S51A	Beattyville	52.70	275	*e*P	P	04 47 57.8	-0.3
	comp=Z,8.4nm,0.9s						
P37A	Lathrop	52.74	286	P	P	04 47 56.7	-1.6
	baz=13						
GTA	Gaotai	52.75	75	*e*P	P	04 48 05.1	+6.6
GTA				pP	sP	04 48 11.3	+11
GTA				sP	pP	04 48 14.1	+14
GTA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
Q41A	Truxton	52.80	283	P	P	04 47 57.2	-1.6
	baz=13						
S50A	Richmond	52.81	276	P	P	04 47 58.1	-0.7
	baz=13,SNR=7.6						
S49A	Springfield	52.87	277	P	P	04 47 58.0	-1.2
	baz=13						
RWWY	Rawlins	52.87	298	*e*P	P	04 47 58.4	-1.2
	comp=Z,14nm,1.4s						
Q40A	Laux Farm, Aux	52.92	283	P	P	04 47 58.4	-1.2
	baz=13						
R45A	Skylar, Fairfi	52.92	280	P	P	04 47 58.7	-1.0
	baz=13						
I04A	Tendick Farm,	53.07	313	P	P	04 47 59.1	-1.6
	baz=11						
S48A	Wiedeman Farm,	53.13	277	P	P	04 48 00.2	-1.0
	baz=13						
Q38A	Cooks Store, C	53.22	285	P	P	04 48 00.6	-1.2
	baz=13						
R43A	Red Bud	53.23	281	P	P	04 48 01.5	-0.4
	baz=13						
S47A	Hartford	53.34	278	P	P	04 48 02.4	-0.3
	baz=13						
HHC	Hu-ho-hao-te	53.36	64	*e*P	P	04 48 03.4	+0.4
HHC				sP	sP	04 48 11.6	+6.7
HHC				S	S	04 55 31.1	-4.0
HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC				pmax	pmax		
	comp=Z,170nm,5.2s						
HHC				LR	LR		
	comp=Z,200nm,15.5s						
HHC				LR	LR		
	comp=Z,220nm,13.1s						
HHC				LR	LR		
	comp=Z,190nm,14.7s						
R42A	Luebbering	53.38	282	P	P	04 48 02.1	-0.9
	baz=13						
S46A	Don Dixon Farm	53.41	279	P	P	04 48 02.9	-0.3
	baz=13						
T51A	Gray	53.42	275	P	P	04 48 02.5	-0.9
	baz=13						
N23A	Red Feather La	53.44	297	P	P	04 48 02.9	-0.9
	baz=12,SNR=5.2						
N23A	Red Feather La	53.44	297	*e*P	P	04 48 04.0	+0.2
	comp=Z,17nm,1.4s						
R41A	Rosebud	53.47	283	P	P	04 48 02.1	-1.6
	baz=13						
NCAT	North Carolina	53.52	271	*e*P	P	04 48 04.6	+0.6
	comp=Z,11nm,0.9s						
T50A	Nancy	53.53	276	P	P	04 48 02.8	-1.3
	baz=13,SNR=7.5						
T49A	Edmonton	53.57	277	P	P	04 48 03.7	-0.8
	baz=13						
KSU1	Kansas State U	53.61	288	P	P	04 48 03.7	-1.0
	baz=13						
R40A	Maddies Statio	53.63	283	P	P	04 48 03.3	-1.6
	baz=13,SNR=6.5						
R40A	Maddies Statio	53.63	283	*e*P	P	04 48 03.9	-1.0
	comp=Z,17nm,1.2s						
S44A	Carbondale	53.68	280	P	P	04 48 04.0	-1.2
	baz=13						
CCM	Cathedral Cave	53.68	282	P	P	04 48 03.7	-1.5
	baz=13						
CCM	Cathedral Cave	53.68	282	*e*P	P	04 48 05.0	-0.2
	comp=Z,5.7nm,1.0s						
CCM	Cathedral Cave	53.68	282	*e*P	P	04 48 05.0	-0.2
CCM				pmax	pmax		
	comp=Z,6.0nm,1.0s						
T48A	Bowling Green	53.73	277	P	P	04 48 04.9	-0.7
	baz=13						
R39A	Chumby, Stover	53.75	284	P	P	04 48 04.5	-1.2
	baz=13						
U53A	Fall Branch	53.76	274	P	P	04 48 05.2	-0.6
	baz=13,SNR=5.4						
TZTN	Tazewell	53.76	275	P	P	04 48 05.1	-0.7
	baz=13						
TZTN	Tazewell	53.76	275	*e*P	P	04 48 05.3	-0.6
	comp=Z,8.6nm,0.9s						
U52A	Thorn Hill	53.87	274	P	P	04 48 06.3	-0.4
	baz=13,SNR=6.5						
S42A	Caledonia	53.88	282	P	P	04 48 05.5	-1.2
	baz=13						
S43A	Fulton Ridge,	53.94	281	P	P	04 48 05.6	-1.6
	baz=13						
T47A	Sharon Grove	53.97	278	P	P	04 48 05.9	-1.5
	baz=13						
U51A	La Follette	54.00	275	P	P	04 48 06.8	-0.8
	baz=13						
R38A	Fenwick Farm,	54.03	285	P	P	04 48 06.3	-1.4
	baz=13						
T46A	Princeton	54.06	279	P	P	04 48 06.9	-1.1
	baz=13						
U50A	Jamestown	54.12	276	P	P	04 48 07.0	-1.5
	baz=13						
S41A	Jillco Farms,	54.23	283	P	P	04 48 07.6	-1.6
	baz=13,SNR=6.8						
U48A	Cassie Pea, Po	54.34	277	P	P	04 48 08.9	-1.1
	baz=13						
S40A	Lebanon	54.35	283	P	P	04 48 08.8	-1.3
	baz=13,SNR=7.1						
S39A	Bolivar	54.41	284	P	P	04 48 09.1	-1.5
	baz=13,SNR=6.9						
S39A	Bolivar	54.41	284	*e*P	P	04 48 09.4	-1.1
	comp=Z,12nm,1.1s						
V52A	Sevierville	54.45	274	P	P	04 48 09.8	-1.1
	baz=13						
V52A	Sevierville	54.45	274	*e*P	P	04 48 10.9	0.0
	comp=Z,11nm,1.0s						
T43A	Greenville	54.45	281	P	P	04 48 09.4	-1.5
	baz=13						
ISCO	Idaho Springs	54.46	296	P	P	04 48 10.4	-0.9
	baz=12						
V53A	Saluda	54.47	274	P	P	04 48 10.0	-1.1
	baz=13						
V53A	Saluda	54.47	274	*e*P	P	04 48 11.2	+0.1
	comp=Z,10nm,1.0s						
U47A	Clarksville	54.54	278	P	P	04 48 10.2	-1.3
	baz=13,SNR=5.9						
O20A	White River Ci	54.56	299	P	P	04 48 12.2	+0.3
	baz=12,SNR=8.6						
O20A	White River Ci	54.56	299	*e*P	P	04 48 12.6	+0.7
	comp=Z,31nm,1.2s						
S38A	Stockton	54.57	285	P	P	04 48 10.2	-1.5
	baz=13,SNR=8.6						
V51A	Loudon	54.62	275	P	P	04 48 11.4	-0.8
	baz=13						
V51A	Loudon	54.62	275	*e*P	P	04 48 12.4	+0.3
	comp=Z,9.3nm,1.0s						
T42A	Van Buren	54.65	282	P	P	04 48 10.6	-1.7
	baz=13						
T42A	Van Buren	54.65	282	*e*P	P	04 48 11.2	-1.1
	comp=Z,5.9nm,1.2s						
TKL	Tuckaleechee C	54.66	274	P	P	04 48 11.8	-0.6
	comp=Z,4.0nm,0.8s,baz=45,slow=8.8,SNR=7.9						
TKL				LR	LR	05 11 54.4	
	comp=Z,205nm,19.0s,baz=16,slow=36						
TKL	Tuckaleechee C	54.66	274	*e*P	P	04 48 12.4	0.0
	comp=Z,11nm,0.9s						
TKL	Tuckaleechee C	54.66	274	*e*P	P	04 48 12.4	0.0
TKL				pmax	pmax		
	comp=Z,11nm,0.9s						
KMSC	Kings Mountain	54.72	272	P	P	04 48 12.2	-0.6
	baz=13						
T41A	Mountain View	54.76	283	P	P	04 48 11.7	-1.4
	baz=13,SNR=6.8						
PBMO	Poplar Bluff	54.78	281	*e*P	P	04 48 12.2	-1.0
	comp=Z,10nm,1.1s						
T40A	Mansfield	54.79	283	P	P	04 48 11.6	-1.7
	baz=13						
V50A	Pikevile	54.89	276	P	P	04 48 12.5	-1.6
	baz=13						
BJI	Beijing	54.90	60⇑	*e*P	P	04 48 12.9	-1.1
BJI				pmax	pmax		
	comp=Z,4.0nm,0.7s						
WVT	Waverly	54.94	279	P	P	04 48 12.6	-1.8
	baz=13						
V49A	McMinnville	54.94	277	P	P	04 48 12.6	-1.8
	baz=13						
W53A	Cullowhee	55.02	274	P	P	04 48 14.2	-1.0
	baz=13						
T39A	Clever	55.06	284	P	P	04 48 14.1	-1.2
	baz=13						
PAULI	Pauline	55.12	272	*e*P	P	04 48 16.2	+0.5
	comp=Z,8.5nm,1.0s						
V48A	Smith Brothers	55.13	277	P	P	04 48 14.7	-1.2
	baz=13						
V48A	Smith Brothers	55.13	277	*e*P	P	04 48 14.8	-1.0
	comp=Z,9.4nm,1.0s						
YBH	Yreka Blue Hor	55.14	312	LR	LR	05 12 02.6	
	comp=Z,116nm,19.6s,baz=7.0,slow=36						
BG3	Lake Jocassee	55.15	273	*e*P	P	04 48 16.1	+0.1
	comp=Z,11nm,1.1s						
U43A	Rector	55.17	281	P	P	04 48 14.8	-1.2
	baz=13						
V47A	Nunnelly	55.18	278	P	P	04 48 14.3	-1.8
	baz=13						
T38A	Diamond	55.22	285	P	P	04 48 14.4	-2.0
	baz=13						
W52A	Murphy	55.24	274	P	P	04 48 15.3	-1.3
	baz=13						
SMCO	Snowmass	55.29	297	*e*P	P	04 48 18.0	+0.6
	comp=Z,10nm,1.1s						
V46A	Holladay	55.31	279	P	P	04 48 15.6	-1.5
	baz=13						
W51A	Cleveland	55.32	275	P	P	04 48 16.1	-1.1
	baz=13						
U42A	Revenden	55.34	282	P	P	04 48 16.2	-1.1
	baz=13,SNR=8.5						
P18A	Preston Nutter	55.37	301	*e*P	P	04 48 18.5	+0.6
	comp=Z,8.8nm,1.4s						
W50A	Signal Mountai	55.39	276	P	P	04 48 15.9	-1.8
	baz=13						
W50A	Signal Mountai	55.39	276	*e*P	P	04 48 17.2	-0.5
	comp=Z,11nm,1.1s						
U41A	Viola	55.47	283	P	P	04 48 17.1	-1.2
	baz=13						
M02C	Callahan	55.49	312	P	P	04 48 17.5	-1.0
	baz=10						
V45A	Humboldt	55.52	280	P	P	04 48 17.4	-1.2
	baz=13						
U40A	Yellville	55.62	283	P	P	04 48 18.1	-1.3
	baz=13						
W49A	Belvidere	55.64	277	P	P	04 48 17.5	-2.0
	baz=13						
X53A	Estanollee	55.70	274	P	P	04 48 18.4	-1.5
	baz=13						
U39A	Green Forest	55.71	284	P	P	04 48 18.2	-1.8
	baz=13						
X52A	Dahlonega	55.71	274	P	P	04 48 18.9	-1.2
	baz=13						
TMUT	Trail Mountain	55.85	301	*e*P	P	04 48 22.3	+1.0
	comp=Z,3.4nm,0.9s						
HHAR	Hobbs	55.89	284	*e*P	P	04 48 20.1	-1.2
	comp=Z,7.7nm,1.4s						
V42A	Cord	55.90	282	P	P	04 48 19.8	-1.5
	baz=13						
X51A	Calhoun	55.92	275	P	P	04 48 20.1	-1.4
	baz=13						
V41A	Mountainview	56.05	283	P	P	04 48 21.1	-1.4
	baz=13						
V40A	Witts Springs	56.15	283	P	P	04 48 21.2	-2.0
	baz=13						
X50B	Fort Payne	56.17	276	P	P	04 48 21.6	-1.7
	baz=13						
PV22	Blue Mesa, Par	56.21	299	*e*P	P	04 48 24.2	+0.4
	comp=Z,11nm,1.0s						
Y54A	Tignall	56.21	273	P	P	04 48 22.6	-1.0
	baz=13						
PV21	Cone Mtn., Par	56.21	299	*e*P	P	04 48 24.4	+0.6
	comp=Z,18nm,1.0s						
X49A	Woodville	56.24	277	P	P	04 48 22.4	-1.4
	baz=13						
V39A	Pettigrew	56.27	284	P	P	04 48 21.7	-2.4
	baz=13						
PV09	Paradox Valley	56.30	299	*e*P	P	04 48 25.3	+0.8
PV23	Carpenter Ridg	56.33	299	*e*P	P	04 48 25.4	+0.7
	comp=Z,19nm,1.0s						
PV12	Saucer Basin,	56.42	299	*e*P	P	04 48 26.3	+0.9
	comp=Z,12nm,1.1s						
X48A	Hartselle	56.43	277	P	P	04 48 24.3	-0.8
	baz=13						
SDCO	Great Sand Dun	56.45	296	P	P	04 48 23.9	-1.6
	baz=12,SNR=6.7						
SDCO	Great Sand Dun	56.45	296	*e*P	P	04 48 25.2	-0.4
	comp=Z,8.0nm,1.4s						
PV16	Nyswonger Mesa	56.45	299	*e*P	P	04 48 26.3	+0.8
	comp=Z,14nm,1.1s						
PV11	David Mesa, Pa	56.45	299	*e*P	P	04 48 26.3	+0.8
	comp=Z,34nm,1.4s						
Y52A	Lilburn	56.46	274	P	P	04 48 24.3	-1.0
	baz=13						
Y52A	Lilburn	56.46	274	*e*P	P	04 48 25.1	-0.3
	comp=Z,9.5nm,1.0s						
PV19	Morning Glory	56.46	299	*e*P	P	04 48 25.9	+0.4
	comp=Z,14nm,1.1s						
NHSC	New Hope	56.48	270	P	P	04 48 24.2	-1.3
	baz=13						
PV17	East Wray Mesa	56.48	299	*e*P	P	04 48 26.4	+0.7
	comp=Z,9.5nm,0.9s						
PV03	Paradox Valley	56.49	299	*e*P	P	04 48 26.3	+0.5
PV18	Skein Mesa, Pa	56.51	299	*e*P	P	04 48 26.7	+0.8
	comp=Z,12nm,1.1s						
X47A	Russelville	56.51	278	P	P	04 48 24.4	-1.4
	baz=13						
PV02	Paradox Valley	56.52	299	*e*P	P	04 48 27.2	+1.1
	comp=Z,6.9nm,1.0s						
WHAR	Wooly Hollow	56.56	283	*e*P	P	04 48 25.1	-1.0
	comp=Z,7.9nm,1.1s						
TUL1	Leonard	56.58	286	P	P	04 48 24.8	-1.4
	baz=12						
PV13	Radium Mtn., P	56.58	299	*e*P	P	04 48 27.3	+0.9
	comp=Z,26nm,1.2s						
Y51A	Rockmart	56.61	275	P	P	04 48 25.0	-1.4
	baz=13						
S22A	4UR Ranch, Cre	56.66	297	P	P	04 48 24.9	-2.3
	baz=12,SNR=9.8						
S22A	4UR Ranch, Cre	56.66	297	*e*P	P	04 48 27.8	+0.7
	comp=Z,8.4nm,1.3s						
W41B	Gary Mavity, V	56.66	283	P	P	04 48 25.9	-0.9
	baz=13						
LZH	Lanzhou	56.69	72	*e*P	P	04 48 24.3	-2.9
LZH				pP	sP	04 48 30.0	+0.9
LZH				sP	pP	04 48 33.6	+5.0
LZH				pmax	pmax		
	comp=Z,17nm,1.2s						
LZH				LR	LR		
	comp=Z,470nm,14.1s						
MSU	Marysvale	56.77	302	*e*P	P	04 48 29.2	+1.4
MSU	Marysvale	56.77	302	*e*P	P	04 48 29.2	+1.4
GOGA	Godfrey	56.79	274	P	P	04 48 25.9	-1.8
	baz=13						
OXF	Oxford	56.80	280	P	P	04 48 26.4	-1.4
	baz=13						
TAM	Tamanrasset	56.80	177	*e*P	P	04 48 29.9	+1.8
TAM	Tamanrasset	56.80	177	P	P	04 48 31.0	+2.9
TAM				pmax	pmax		
	comp=Z,3.0nm,1.6s						
Z54A	Sparta	56.85	273	P	P	04 48 27.1	-0.9
	baz=13						
X45A	UM Field Stati	56.88	280	P	P	04 48 27.0	-1.4
	baz=13						
Y49A	Blount Mountai	56.89	277	P	P	04 48 27.0	-1.4
	baz=13						
W39A	Magazine	56.92	284	P	P	04 48 27.3	-1.2
	baz=12						
Z53A	Monticello	56.94	274	P	P	04 48 27.0	-1.7
	baz=13						
Y48A	Jasper	56.98	277	P	P	04 48 26.9	-2.1
	baz=13						
X43A	Marvell	57.06	281	P	P	04 48 28.1	-1.4
	baz=13						
Y47A	UCPARC, Winfie	57.11	278	P	P	04 48 28.2	-1.7
	baz=13						
Z52A	Williamson	57.18	274	P	P	04 48 29.1	-1.4
	baz=13						
MTPU	Mount Pierson	57.23	302	*e*P	P	04 48 32.7	+1.5
	comp=Z,10.0nm,1.3s						
Y46A	Houston	57.31	279	P	P	04 48 29.8	-1.5
	baz=13						
X41A	Kaden, Bauxite	57.37	283	P	P	04 48 30.0	-1.8
	baz=12						
155A	Kite	57.38	272	P	P	04 48 30.6	-1.2
	baz=12						
X40A	Basin Creek Fa	57.44	283	P	P	04 48 30.8	-1.5
	baz=12,SNR=5.5						
X40A	Basin Creek Fa	57.44	283	*e*P	P	04 48 31.5	-0.8
	comp=Z,4.3nm,0.9s						
R11A	Troy Canyon, C	57.44	305	P	P	04 48 31.7	-0.8
	baz=11						
Y45A	Yeager Farm, C	57.45	280	P	P	04 48 31.7	-0.7
	baz=12						
MVCO	Mesa Verde	57.46	298	P	P	04 48 32.2	-0.5
	baz=12,SNR=9.0						
MVCO	Mesa Verde	57.46	298	*e*P	P	04 48 33.0	+0.3
	comp=Z,13nm,1.2s						
Y44A	Strider, Charl	57.48	280	P	P	04 48 31.5	-1.0
	baz=12						
MIAR	Mount Ida	57.51	284	P	P	04 48 31.6	-1.2
	baz=12,SNR=8.9						
MIAR	Mount Ida	57.51	284	*e*P	P	04 48 32.1	-0.7
	comp=Z,10nm,0.9s						
MIAR	Mount Ida	57.51	284	*e*P	P	04 48 32.1	-0.7
MIAR				pmax	pmax		
	comp=Z,10.0nm,0.9s						
Z49A	Columbiana	57.56	277	P	P	04 48 32.6	-0.5
	baz=12						
X39A	Fountain Ranch	57.64	284	P	P	04 48 33.2	-0.6
	baz=12						
Y43A	Makayla and Ka	57.66	281	P	P	04 48 33.1	-0.7
	baz=12						
NV01	Mina Array Sit	57.77	308	*e*P	P	04 48 35.1	+0.3
NVAR	Mina Array Bea	57.77	308	P	P	04 48 34.4	-0.5
	comp=Z,0.6nm,0.9s,baz=34,slow=2.8,SNR=4.8						
NVAR				LR	LR	05 13 14.8	
	comp=Z,115nm,19.0s,baz=323,slow=36						
SZCU	Shurtz Canyon	57.80	303	*e*P	P	04 48 36.0	+0.9
	comp=Z,5.5nm,1.2s						
PKCU	Pink Cliffs	57.83	302	*e*P	P	04 48 37.0	+1.6
	comp=Z,20nm,1.2s						
CCUT	Cedar City	57.89	303	*e*P	P	04 48 37.4	+1.7
	comp=Z,6.7nm,1.4s						
Y40A	Okolona	57.98	283	P	P	04 48 35.0	-1.1
	baz=12						
150A	Eclectic	58.04	276	P	P	04 48 35.4	-1.1
	baz=12						
Z44A	Pea Ridge, Bel	58.19	280	P	P	04 48 36.4	-1.1
	baz=12						
149A	Jones	58.19	277	P	P	04 48 36.5	-1.1
	baz=12						
WMOK	Wichita Mounta	58.24	289	*e*P	P	04 48 38.0	0.0

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          comp=Z,7.4nm,1.1s
WMOK  Wichita Mounta     58.24 289 eP     P       04 48 38.0  0.0
WMOK                                pmax   pmax
          comp=Z,7.0nm,1.1s
KNB   Kanab              58.33 302 eP     P       04 48 39.7 +1.0
          comp=Z,12nm,1.1s
KNB   Kanab              58.33 302 eP     P       04 48 39.7 +1.0
KNB                                 pmax   pmax
          comp=Z,12nm,1.1s
252A  Lumpkin            58.40 274  P     P       04 48 38.1 -0.9
          baz=12
LCMT  Little Creek M     58.40 303 eP     P       04 48 40.5 +1.3
          comp=Z,10nm,1.3s
251A  Midway             58.43 275  P     P       04 48 38.4 -0.8
          baz=12
Z40A  Long Farm, Mag     58.74 283  P     P       04 48 40.6 -0.8
          baz=12
KSRS  Korea Array        59.18  50  LR    LR      05 14 38.8
          comp=Z,50nm,18.6s,baz=340,slow=36
245A  Little AP, Sta     59.30 279  P     P       04 48 44.3 -1.0
          baz=12
ANMO  Albuquerque        59.34 296  P     P       04 48 44.9 -0.8
          comp=Z,0.5nm,0.3s,baz=12,slow=8.3,SNR=4.6
ANMO                                LR    LR      05 14 48.1
          comp=Z,298nm,19.9s,baz=16,slow=36
ANMO  Albuquerque        59.34 296  P     P       04 48 44.6 -1.2
          baz=12
ANMO  Albuquerque        59.34 296 eP     P       04 48 45.9 +0.1
          comp=Z,3.8nm,1.0s
ANMO  Albuquerque        59.34 296ceP     P       04 48 45.2 -0.6
ANMO                                pmax   pmax
          comp=Z,4.0nm,1.7s
TASL  Snake Pit, Alb     59.34 296  P     P       04 48 44.2 -1.6
          baz=12
TASM  ASL Pad, Albuq     59.34 296  P     P       04 48 45.0 -0.8
          baz=12
244A  Avery, Jackson     59.43 280  P     P       04 48 44.8 -1.4
          baz=12
453A  Whigham            59.44 274  P     P       04 48 45.7 -0.5
          baz=12
WUAZ  Wupatki            59.57 301  P     P       04 48 46.9 -0.5
          baz=11
WUAZ  Wupatki            59.57 301 eP     P       04 48 47.8 +0.5
          comp=Z,8.2nm,0.9s
347A  Saraland           59.67 278  P     P       04 48 47.5 -0.4
          baz=12
MSTX  Muleshoe           59.67 292 eP     P       04 48 48.1  0.0
          comp=Z,6.0nm,1.1s
CWC   Cottonwood Cre     59.69 307  P     P       04 48 47.8 -0.4
          baz=10
MPMC  Manual Prospec     59.97 306  P     P       04 48 49.7 -0.5
          baz=10
344A  Westbrook Farm     60.02 280  P     P       04 48 49.9 -0.3
          baz=12
ISA   Isabella, Lake     60.51 307  P     P       04 48 53.2 -0.4
          baz=10
341A  Kurthwood          60.57 282  P     P       04 48 53.9 -0.1
          baz=12
GSC   Goldstone, Bar     60.62 306  P     P       04 48 54.4  0.0
          baz=10
WSAR  Wadi Sarin         61.23 120  LR    LR      05 18 29.3
          comp=Z,80nm,21.6s,baz=15,slow=39
MJAR  Matsushiro Arr     61.41  40  P     P       04 48 59.6 -0.1
          comp=Z,0.7nm,0.4s,baz=336,slow=6.9,SNR=8.0
PFO   Pinyon Flats O     62.22 305  P     P       04 49 04.4 -0.9
          baz=10
MNTX  Cornudas Mount     62.33 294  P     P       04 49 05.3 -0.7
          baz=11
HKT   Hockley            62.39 285⇑eP     P       04 49 05.2 -1.1
HKT                                 pmax   pmax
          comp=Z,13nm,1.2s
JCT   Junction City      62.57 289 eP     P       04 49 07.1 -0.5
          comp=Z,6.1nm,0.9s
JCT   Junction City      62.57 289 eP     P       04 49 07.1 -0.5
JCT                                 pmax   pmax
          comp=Z,6.0nm,0.9s
TUC   Tucson             62.62 299  P     P       04 49 08.1 +0.1
          baz=11
TUC   Tucson             62.62 299 eP     P       04 49 08.5 +0.5
          comp=Z,7.3nm,1.0s
TUC   Tucson             62.62 299 eP     P       04 49 08.5 +0.5
TUC                                 pmax   pmax
          comp=Z,7.0nm,1.0s
SWSC  Sam W. Stewart     62.78 304  P     P       04 49 09.1 +0.2
          baz=10
MONP2 Monument Peak      62.92 305  P     P       04 49 10.1  0.0
          baz=10
NJ2   Nanjing            63.14  59 eP     P       04 49 10.4 -0.9
NJ2                                 pmax   pmax
          comp=Z,10.0nm,0.5s
TX31  Lajitas Ar. Si     64.36 292 eP     P       04 49 18.8 -0.7
TXAR  Lajitas Array      64.36 292  P     P       04 49 19.1 -0.4
          comp=Z,1.1nm,0.9s,baz=45,slow=5.5,SNR=9.9
TXAR                                LR    LR      05 18 02.0
          comp=Z,243nm,19.4s,baz=0.0,slow=37
TOA0  Torodi Ar. Sit     66.39 182 eP     P       04 49 31.9 -0.8
TORD  Torodi Ar. Bea     66.39 182  P     P       04 49 31.2 -1.5
          comp=Z,2.8nm,0.9s,baz=346,slow=5.6
GYA   Guiyang            66.58  72 eP     P       04 49 35.4 +1.4
GYA                                 pmax   pmax
          comp=Z,10.0nm,1.0s
KMI   Kunming            67.20  76  P     P       04 49 39.1 +1.1
KMI                                 pmax   pmax
          comp=Z,5.0nm,0.6s
LNIG  Linares            67.97 287 eP     P       04 49 42.1 -0.5
          comp=Z,5.8nm,1.1s
LPIG  La Paz             70.58 297  LR    LR      05 21 51.1
          comp=Z,378nm,18.2s,baz=14,slow=37
CMAR  Chiang Mai Arr     73.02  81  P     P       04 50 13.3 -0.3
          comp=Z,1.2nm,0.3s,baz=346,slow=6.5,SNR=7.4
CMAR                                LR    LR      05 26 17.1
          comp=Z,94nm,19.9s,baz=354,slow=39
CM01  Chiang Mai Arr     73.06  81 eP     P       04 50 12.8 -0.9
PCRV  Puerto La Cruz     76.08 250  P     P       04 50 32.0 +0.6
          comp=Z,6.9nm,0.6s,baz=90,slow=2.0,SNR=5.7
JTS   JuntasAbangare     79.61 270  LR    LR      05 25 57.8
          comp=Z,91nm,20.6s,baz=26,slow=36
PALK  Pallekele          80.62 101  LR    LR      05 30 14.8
          comp=Z,212nm,18.8s,baz=288,slow=38
RUSC  La Rusia           81.75 258 eP     P       04 51 02.5 -0.6
          comp=Z,4.6nm,0.8s
ROSC  El Rosal           83.00 259  LR    LR      05 28 16.5
          comp=Z,43nm,18.7s,baz=38,slow=36
OTAV  Otavalo            88.24 262 eP     P       04 51 36.6 +1.0
          comp=Z,3.8nm,1.0s
OTAV  Otavalo            88.24 262 eP     P       04 51 36.6 +1.0
OTAV                                pmax   pmax
          comp=Z,4.0nm,1.0s
NNA   Nana               99.90 258  LR    LR      05 37 41.3
          comp=Z,31nm,22.0s,baz=334,slow=35
ASAR  Alice Springs     120.13  53  PKP   PKPdf   04 57 33.2 -1.0
          comp=Z,0.4nm,0.8s,baz=6.3,slow=3.4,SNR=3.2
VNA1  Neumayer--Stat    150.12 188  PKP   PKPbc   04 58 34.0 +1.5
          baz=80,slow=3.3
VNA3  Neumayer Olymp    150.75 188  PKP   PKPbc   04 58 34.4 +0.2
          baz=80,slow=3.3
MAW   Mawson            150.76 137  PKPbc PKPbc   04 58 33.2 -0.9
          comp=Z,2.0nm,0.8s,baz=338,slow=5.4,SNR=3.5
SNAA  Sanae             151.04 184  PKP   PKPbc   04 58 35.2 +0.3
          baz=80,slow=3.3
SNAA  Sanae             151.04 184  PKPbc PKPbc   04 58 34.6 -0.3
          comp=Z,4.2nm,0.9s,baz=346,slow=3.9,SNR=7.4
```

ISCJB ***23*** *04:43:14.2±0.8, 29°.25N±0°.08×100°.23E±0°.06, h10km, mb3.8/7, MS3.0/2, Error ellipse: s-maj=12.8km s-min=5.9km az=157.4*

IDC ***23*** *04:43:15.5±1.1, 29°.53N×100°.51E, h0km, mb4.1/6, mb1 4.1/8, mb1mx3.6/72, mbtmp3.9/8, MS3.1/3, Ms1 3.1/3, ms1mx2.7/60, Error ellipse: s-maj=38.1km s-min=19.0km az=67.0*

BJI ***23*** *04:43:16.4, 29°.23N×100°.10E, h10km, ML3.6/8, Ms3.6/5, Ms7 3.6/4*

ISC 23 04:43:16.8±0.7**, 29°.22N**±0°.06×**100°.07E**±0°.06**, h10**km**, n18,** σ**3s.22**/21**, mb3.9**/7**, Sichuan**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time     Res
                                     Op     ISC       h  m  s   ISC
CD2   Chengdu             3.61  61   Pn     Pn      04 44 11.5 -1.4
CD2                                  Pg     Pb      04 44 21.9 +1.1
CD2                                  Sn     Sn      04 44 50.9 -4.7
CD2                                  Sg     Sg      04 45 10.5 -2.4
CD2                                  smax   smax
          comp=N,350nm,1.0s
CD2                                  smax   smax
          comp=E,230nm,1.3s
KMI   Kunming             4.72 149   Pg     Pb      04 44 39.0 -0.8
KMI                                  Sg     Sb      04 45 39.0 +2.2
KMI                                  LR     LR
          comp=N,590nm,7.2s
KMI                                  LR     LR
          comp=Z,430nm,8.1s
LZH   Lanzhou             7.55  24  eP      Pn      04 45 01.3 -5.8
LZH                                  pP     Pb      04 45 08.3  -20
LZH                                  sP     Pg      04 45 11.3  -30
LZH                                 eS      Sn      04 46 30.9 -2.0
LZH                                  sS     Sb      04 46 35.0  -23
LZH                                  pmax   pmax
          comp=Z,26nm,1.0s
LZH                                  pmax   pmax
          comp=Z,87nm,4.1s
LZH                                  LR     LR
          comp=N,860nm,7.1s
LZH                                  LR     LR
          comp=E,490nm,7.2s
LZH                                  LR     LR
          comp=Z,810nm,8.3s
SHL   Shillong            8.14 245  eP      Pn      04 45 16.0 +0.8
BRDH  Bariadhala         10.00 231   LR     LR      04 49 53.3
          comp=Z,81nm,19.3s,baz=82,slow=38
CMAR  Chiang Mai Arr     10.76 186   Pn     Pn      04 45 57.5 +6.5
          baz=6.4,slow=12,SNR=4.0
CMAR                                 Pg             04 46 38.3
          comp=Z,0.6nm,0.3s,baz=356,slow=18,SNR=14
CMAR                                 Lg     Lg      04 49 02.2
          baz=8.0,slow=33,SNR=2.9
HHC   Hu-ho-hao-te       14.93  36  eP      P       04 46 53.3 -0.3
HHC                                  PP     PnPn    04 47 05.0 +9.0
HHC                                  S      Sn      04 49 39.6 +6.2
HHC                                  sS     S       04 49 45.0 -6.5
HHC                                  pmax   pmax
          comp=Z,13nm,1.1s
HHC                                  pmax   pmax
          comp=Z,78nm,6.7s
HHC                                  LR     LR
          comp=N,250nm,8.2s
HHC                                  LR     LR
          comp=E,170nm,7.3s
HHC                                  LR     LR
          comp=Z,320nm,7.8s
WMQ   Urumqi             17.62 329  eP      P       04 47 22.8 -0.6
SONM  Songino Array      19.22  13   P      P       04 47 37.4 -3.7
          baz=200,slow=10,SNR=2.3
MKAR  Makanchi Array     22.37 327   P      P       04 48 15.1  0.0
          comp=Z,2.8nm,0.7s,baz=135,slow=12,SNR=11
AAK   Ala-Archa          24.55 310   P      P       04 48 37.6 +0.6
          comp=Z,1.4nm,0.3s,baz=110,slow=5.7,SNR=5.2
KSRS  Korea Array        24.61  63   P      P       04 48 39.0 +1.7
          comp=Z,0.7nm,0.5s,baz=266,slow=11,SNR=4.6
KSRS                                 LR     LR      04 57 49.1
          comp=Z,41nm,21.2s,baz=240,slow=36
KSRS  Korea Array        24.61  63   P      P       04 48 39.0 +1.7
KSRS                                 pmax   pmax
          comp=Z,1.0nm,0.5s
JNU   Nakatsue           26.59  74   LR     LR      05 01 12.1
          comp=Z,48nm,18.0s,baz=305,slow=41
KURBB Kurchatov Arra     26.84 329   P      P       04 48 57.0 -0.3
          comp=Z,1.6nm,0.6s,baz=142,slow=9.0,SNR=11
FINES FINESS Array B     57.20 327   P      P       04 53 03.0 -0.7
          comp=Z,1.2nm,0.6s,baz=90,slow=8.3,SNR=5.3
WRA   Warramunga Arr     59.00 142   P      P       04 53 16.8 -0.1
          comp=Z,1.8nm,0.9s,baz=331,slow=7.5,SNR=9.3
ILAR  Eielson Array      73.01  24   P      P       04 54 44.5 -2.0
          comp=Z,0.4nm,0.9s,baz=299,slow=4.0,SNR=4.2
```

NIED ***23*** *05:23:00, 37°.30N×141°.80E, h44km, Mw3.6 Best double couple: M₀2.55000×10¹⁴ NP1:φs279.00000°, δ42.00000°, λ-108.00000°. NP2:φs123.00000°, δ50.00000°, λ-74.00000°.*

JMA ***23*** *05:23:47.3±0.2, 37°.30N×141°.85E, h41km±3km, M3.7*

IDC ***23*** *05:23:49.4±4.0, 37°.11N×141°.99E, h54km±38km, mb3.3/4, mb1 3.5/6, mb1mx3.2/60, mbtmp3.6/6, ML3.2/2, Error ellipse: s-maj=28.7km s-min=18.0km az=66.0*

ISC 23 05:23:44.2±2.3**, 37°.27N**±0°.04×**141°.94E**±0°.07**, h13**km±13km**, n24,** σ**1s.25**/30**, mb3.6**/4**, Near east coast of eastern Honshu**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time     Res
                                     Op     ISC       h  m  s   ISC
JFK   Kawauchi            0.85 277   P      Pn      05 24 01.9 -0.1
JFK                                  S      Sg      05 24 12.1 +0.2
ONAJ  Iwakimizuishiy      0.93 260   P      Pn      05 24 03.0  0.0
ONAJ                                 S      Sg      05 24 14.2  0.0
JMM   Marumori            1.09 304   P      Pb      05 24 05.2 +0.3
JMM                                  S      Sb      05 24 18.2 -0.8
JFFD  Fukushimafurud      1.11 261   P      Pn      05 24 05.8 +0.3
JFFD                                 S      Sb      05 24 19.0 -0.8
JIO   Ouri                1.27 339   P      Pn      05 24 07.9 +0.2
JIO                                 eS      Sb      05 24 22.6 -1.7
JHO   Hitachi             1.28 239   P      Pn      05 24 07.9 +0.1
JHO                                 eS      Sb      05 24 22.7 -1.8
JFT   Otama               1.30 282   P      Pb      05 24 09.2 +0.7
JFT                                 eS      Sb      05 24 24.4 -0.7
JOU   Okura               1.49 318   P      Pb      05 24 12.0 +0.2
JOU                                 eS      Sn      05 24 29.4 -0.6
JYS   Shirataka           1.76 303   P      Pb      05 24 16.2 -0.2
JYS                                 eS      Sn      05 24 37.1 +0.3
JMK   Ichinoseki          1.77 342   P      Pb      05 24 16.1 -0.5
JFY   Yanaizu             1.79 275   P      Pb      05 24 16.4 -0.4
MJAR  Matsushiro Arr      3.08 257   P      Pn      05 24 35.5 +3.0
          1.4nm,0.3s,baz=72,slow=16,SNR=2.1
MJAR                                 S      Sn      05 25 11.9 +2.7
          2.5nm,0.3s,baz=90,slow=17,SNR=2.1
MAT   Matsushiro          3.08 257   P      Pn      05 24 31.5 -1.0
MAT                                  S      Sb      05 25 14.2 -2.1
JHJ   Hachijo jima 2      4.50 204   P      Pn      05 24 53.5 +1.4
          9.3nm,0.3s,baz=233,slow=15,SNR=1.6
JHJ                                  S      Sn      05 25 41.8 -2.5
          21nm,0.3s,baz=246,slow=19,SNR=3.7
H11N2 WAKE ISLAND Hy     27.91 122   T      T       05 59 07.0
          baz=315,slow=75,SNR=16
H11N1 WAKE ISLAND Hy     27.92 122   T      T       05 59 03.2
          baz=315,slow=75,SNR=14
H11N3 WAKE ISLAND Hy     27.93 122   T      T       05 59 08.2
          baz=315,slow=75,SNR=16
H11S1 WAKE ISLAND Hy     28.64 124   T      T       06 00 03.7
          baz=317,slow=76,SNR=13
H11S3 WAKE ISLAND Hy     28.64 124   T      T       06 00 04.7
          baz=317,slow=76,SNR=14
H11S2 WAKE ISLAND Hy     28.66 124   T      T       06 00 06.3
          baz=317,slow=76,SNR=14
MKAR  Makanchi Array     44.35 302   P      P       05 31 54.1 +0.1
          0.6nm,0.8s,baz=91,slow=9.4,SNR=5.0
KURBB Kurchatov Arra     46.19 308   P      P       05 32 08.6 +0.1
          0.8nm,0.5s,baz=82,slow=7.9,SNR=4.6
ILAR  Eielson Array      49.07  32   P      P       05 32 31.6 +0.9
          0.4nm,0.7s,baz=260,slow=7.0,SNR=6.5
WRA   Warramunga Arr     57.35 188   P      P       05 33 31.9 -0.2
          0.3nm,0.5s,baz=6.3,slow=7.3,SNR=7.0
```

GII ***23*** *05:39:19.6±0.3, 34°.96N×34°.06E, h10km, MD2.1/2*

ISCJB ***23*** *05:39:19.3±0.3, 35°.04N±0°.02×33°.93E±0°.03, h60km±5km, Error ellipse: s-maj=5.0km s-min=3.2km az=159.6*

CSEM ***23*** *05:39:20.2±0.1, 35°.07N×33°.91E, h53km±3km, ML3.0, Error ellipse: s-maj=3.6km s-min=2.3km az=71.0*

DDA ***23*** *05:39:21.0, 35°.22N×33°.72E, h48km, Ml3.3*

NIC ***23*** *05:39:21.7±0.3, 35°.02N×33°.81E, h46km, ML3.0*

ISK ***23*** *05:39:22.5, 35°.34N×33°.62E, h21km, ML2.6/14*

ISC 23 05:39:20.2±1.2**, 35°.06N**±0°.02×**33°.91E**±0°.03**, h56**km±6km**, n77,** σ**0s.79**/113**, Cyprus region**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time     Res
                                     Op     ISC       h  m  s   ISC
PHNC  Paralimni           0.11 117   P      Pn      05 39 29.8 +1.0
          baz=275
PHNC                                 S      Sn      05 39 35.5 +0.5
PHNC  Paralimni           0.11 117   P      Pn      05 39 29.8 +1.0
PHNC                                 S      Sn      05 39 35.5 +0.5
AKIN  Ak˜–nc˜–lar- K      0.37 264   PG     Pn      05 39 29.9 -0.6
AKIN                                 SG     Sn      05 39 36.4 -1.5
AKIN  Ak˜–nc˜–lar- K      0.37 264  ePg     Pn      05 39 29.9 -0.6
AKIN                                eSg     Sn      05 39 36.4 -1.5
CSS   Mathiatis           0.48 259   PG     Pn      05 39 32.1 +0.4
CSS                                  SG     Sn      05 39 39.5 -0.5
CSS   Mathiatis           0.48 259   P      Pn      05 39 31.4 -0.3
          baz=81
CSS                                  S      Sn      05 39 38.8 -1.2
CSS   Mathiatis           0.48 259   Pg     Pn      05 39 30.8 -0.9
CSS                                  Sg     Sn      05 39 39.7 -0.3
CSS   Mathiatis           0.48 259   P      Pn      05 39 31.4 -0.3
CSS   Mathiatis           0.48 259  ePg     Pn      05 39 32.1 +0.4
CSS                                  S      Sn      05 39 38.8 -1.2
CSS                                  Sg             05 39 39.7
EREN  Erenkoy             0.52  24   PG     Pn      05 39 32.2 +0.1
EREN                                 SG     Sn      05 39 41.0 +0.3
EREN  Erenkoy             0.52  24  ePg     Pn      05 39 32.2 +0.1
EREN                                eSg     Sn      05 39 41.0 +0.3
MAMC  Mammari             0.58 282   P      Pn      05 39 33.1 +0.3
          baz=107
MAMC  Mammari             0.58 282   P      Pn      05 39 33.1 +0.3
LEF   Lefka               0.84 275   PG     Pn      05 39 36.3 +0.3
LEF   Lefka               0.84 275   P      Pn      05 39 36.2 +0.3
LEF                                  S      Sn      05 39 47.7 +0.2
SZAC  Souni               0.90 251   P      Pn      05 39 37.2 +0.5
          baz=70
SZAC  Souni               0.90 251   P      Pn      05 39 37.2 +0.5
ALFC  Alefka              1.08 276   P      Pn      05 39 39.2  0.0
          baz=97
ALFC                                 S      Sn      05 39 52.9 -0.3
ALFC  Alefka              1.08 276   P      Pn      05 39 39.2  0.0
ALFC                                 S      Sn      05 39 52.9 -0.3
AKK2  Akkuyu-Mersin       1.12 345   PG     Pn      05 39 38.6 -1.1
AKK2  Akkuyu-Mersin       1.12 345  ePg     Pn      05 39 38.6 -1.1
AKK1  Akkuyu-Mersin       1.13 345   PG     Pn      05 39 38.8 -1.0
AKK1  Akkuyu-Mersin       1.13 345  ePg     Pn      05 39 38.8 -1.0
GULN  MERSIN_Gulnar       1.17 345  i P     Pn      05 39 39.8 -0.5
GULN                                i S     Sn      05 39 54.2 -1.0
GULN  MERSIN_Gulnar       1.17 345   P      Pn      05 39 39.8 -0.5
GULN                                 S      Sn      05 39 54.2 -1.0
IKL   Isikli              1.20 351   PG     Pn      05 39 40.4 -0.3
IKL   Isikli              1.20 351  ePg     Pn      05 39 40.4 -0.3
TEPE  Tepekoy-Mersin      1.20 346   PG     Pn      05 39 40.2 -0.5
TEPE  Tepekoy-Mersin      1.20 346  ePg     Pn      05 39 40.2 -0.5
OREN  Orenkoy-Mersin      1.21 342   PG     Pn      05 39 40.0 -0.8
OREN  Orenkoy-Mersin      1.21 342  ePg     Pn      05 39 40.0 -0.8
TEKE  Tekeli-Mersin       1.26 329   PG     Pn      05 39 41.3 -0.3
TEKE  Tekeli-Mersin       1.26 329  ePg     Pn      05 39 41.3 -0.3
BOZY  Bozyazi-Mersin      1.30 324   PG     Pn      05 39 40.7 -1.3
BOZY  Bozyazi-Mersin      1.30 324  ePg     Pn      05 39 40.7 -1.3
PPCY  Paphos              1.30 263   P      Pn      05 39 42.7 +0.7
          baz=83
PPCY  Paphos              1.30 263   P      Pn      05 39 42.7 +0.7
KEBE  Keben-Mersin        1.40 354   PN     Pn      05 39 43.4 -0.1
KEBE  Keben-Mersin        1.40 354  ePn     Pn      05 39 43.4 -0.1
KIZK  Mersin              1.44   8   PN     Pn      05 39 44.4 +0.5
KIZK  Mersin              1.44   8  i P     Pn      05 39 43.9  0.0
KIZK                                i S     Sn      05 40 01.6 -0.1
KIZK  Mersin              1.44   8   P      Pn      05 39 43.9  0.0
KIZK                                 S      Sn      05 40 01.6 -0.1
GAZI  Gazipasa            1.75 313   PN     Pn      05 39 47.3 -0.9
GAZI  Gazipasa            1.75 313  i P     Pn      05 39 47.9 -0.3
GAZI                                i S     Sn      05 40 07.7 -1.8
GAZI  Gazipasa            1.75 313  ePn     Pn      05 39 47.3 -0.9
GAZI  Gazipasa            1.75 313   P      Pn      05 39 47.9 -0.3
GAZI                                 S      Sn      05 40 07.7 -1.8
ERMK  Ermenek             1.78 333  i P     Pn      05 39 49.9 +1.1
ERMK                                i S     Sn      05 40 10.8 +0.4
ERMK  Ermenek             1.78 333   P      Pn      05 39 49.9 +1.1
ERMK                                 S      Sn      05 40 10.8 +0.4
YAYL  Yayladag            2.04  61  i P     Pn      05 39 52.1 -0.2
YAYL                                i S     Sn      05 40 14.7 -2.0
YAYL  Yayladag            2.04  61   P      Pn      05 39 52.1 -0.2
YAYL                                 S      Sn      05 40 14.7 -2.0
GULE  Gulek               2.33  17  i P     Pn      05 39 56.4 +0.1
GULE                                i S     Sn      05 40 23.8 -0.1
GULE  Gulek               2.33  17   P      Pn      05 39 56.4 +0.1
GULE                                 S      Sn      05 40 23.8 -0.1
NATI  Neve Ativ           2.34 139   Pn     Pn      05 39 55.8 -0.5
NATI                                 Sn     Sn      05 40 22.1 -1.8
KSDI  Kefar Szold         2.36 142   Pn     Pn      05 39 55.8 -0.7
KSDI  Kefar Szold         2.36 142   Pn     Pn      05 39 55.8 -0.7
KERG  Konya-Eregli        2.36   4  i P     Pn      05 39 57.7 +1.0
KERG                                i S     Sn      05 40 26.1 +1.5
KERG  Konya-Eregli        2.36   4   P      Pn      05 39 57.7 +1.0
KERG                                 S      Sn      05 40 26.0 +1.5
MMA0B Mount Meron ar      2.38 148   Pn     Pn      05 39 56.0 -0.9
MMA0B Mount Meron ar      2.38 148   Pn     Pn      05 39 56.0 -0.9
OFRI  ‘Ofer               2.59 159   Pn     Pn      05 40 00.3 +0.6
OFRI  ‘Ofer               2.59 159   Pn     Pn      05 40 00.3 +0.6
KSHT  Keshet              2.60 142   Pn     Pn      05 40 00.0 +0.1
KSHT  Keshet              2.60 142   Pn     Pn      05 40 00.0 +0.1
KEPZ  Antalya-Kepez       2.62 315  i P     Pn      05 40 01.4 +1.2
KEPZ                                i S     Sn      05 40 31.9 +1.0
KEPZ  Antalya-Kepez       2.62 315   P      Pn      05 40 01.4 +1.2
KEPZ                                 S      Sn      05 40 31.9 +1.0
MMLI  Mount Malkishu      2.90 154   Pn     Pn      05 40 03.9  0.0
MMLI                                 Sn     Sn      05 40 37.5 -0.1
MMLI  Mount Malkishu      2.90 154   Pn     Pn      05 40 03.9  0.0
MMLI                                 Sn     Sn      05 40 37.5 -0.1
HMDT  Nahal Hemdat        3.10 154   Pn     Pn      05 40 06.6 -0.1
HMDT                                 Sn     Sn      05 40 42.5  0.0
HMDT  Nahal Hemdat        3.10 154   Pn     Pn      05 40 06.6 -0.1
HMDT                                 Sn     Sn      05 40 42.5  0.0
DSI   Dead Sea            3.69 160   Pn     Pn      05 40 15.4 +0.7
DSI                                  Sn     Sn      05 40 57.2 +0.3
DSI   Dead Sea            3.69 160   Pn     Pn      05 40 15.4 +0.7
DSI                                  Sn     Sn      05 40 57.2 +0.3
YTIR  Yattir              3.82 164   Pn     Pn      05 40 17.1 +0.5
YTIR  Yattir              3.82 164   Pn     Pn      05 40 17.1 +0.5
PRNI  Paran               4.78 169   Pn     Pn      05 40 29.5 -0.2
PRNI  Paran               4.78 169   Pn     Pn      05 40 29.5 -0.2
MBRI  Mt Berech           5.31 171   Pn     Pn      05 40 37.9 +0.8
MBRI  Mt Berech           5.31 171   Pn     Pn      05 40 37.9 +0.8
```

SKHL ***23*** *05:40:34.6±0.9, 43°.37N×146°.80E, h47km±6km, mb4.0/5*

JMA ***23*** *05:40:35.0±0.4, 43°.37N×146°.78E, h42km±4km, M2.9*

ISC 23 05:40:33.9±2.1**, 43°.46N**±0°.08×**146°.82E**±0°.07**, h18**km±5km**, n13,** σ**0s.45**/22**, Kuril Islands**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time     Res
                                     Op     ISC       h  m  s   ISC
SHO   Shikotan            0.41   1  i P     Pn      05 40 45.0 +0.1
SHO                                  AMB    AMB     05 40 46.0
          13nm,0.2s
SHO                                  AMB    AMB     05 40 46.0
          81nm,0.2s
SHO                                  AMB    AMB     05 40 46.0
          38nm,0.2s
SHO                                 i S     Sn      05 40 52.0  0.0
SHO                                  A      A       05 40 53.0
          665nm,0.3s
SHO                                  A      A       05 40 53.0
          2µm,0.3s
NEM2  Nemuro 2            0.79 263   P      Pg      05 40 49.3 -0.1
NEM2                                eS      Sg      05 41 00.0 +0.1
YUK   Yuzh-Kuril’sk       0.90 310  i P     Pb      05 40 51.0  0.0
YUK                                  AMB    AMB     05 40 53.0
          17nm,0.2s
YUK                                  AMB    AMB     05 40 53.0
          15nm,0.2s
YUK                                  AMB    AMB     05 40 53.0
          33nm,0.2s
YUK                                 eS      Sb      05 41 03.0 +0.4
YUK                                  A      A       05 41 04.0
          625nm,0.4s
YUK                                  A      A       05 41 04.0
          343nm,0.4s
GRPR  Tuman               0.93 305  eP      Pb      05 40 51.0 -0.4
GRPR                                 AMB    AMB     05 40 52.0
          187nm,0.3s
GRPR                                eS      Sg      05 41 04.0 -0.2
GRPR                                 A      A       05 41 05.0
          393nm,0.4s
GRPR                                 A      A       05 41 05.0
          436nm,0.4s
LAGR  Lagunnoye           0.96 309  eP      Pb      05 40 52.0 +0.1
LAGR                                eS      Sg      05 41 05.0 -0.1
LAGR                                 A      A       05 41 06.0
          811nm,0.3s
LAGR                                 A      A       05 41 06.0
          437nm,0.3s
GLVR  Golovnino           0.99 287  eP      Pb      05 40 52.0 -0.4
GLVR                                 AMB    AMB     05 40 52.0
          22nm,0.2s
GLVR                                 AMB    AMB     05 40 52.0
          45nm,0.2s
GLVR                                 AMB    AMB     05 40 52.0
          103nm,0.2s
```

GLVR				*e*S	**Sg**	**05 41 06.0**	**0.0**
GLVR				A	A	05 41 06.0	
	357nm,0.3s						
GLVR				A	A	05 41 06.0	
	377nm,0.3s						
JRA	**Rausu**	**1.32**	**292**	P	**Pn**	**05 40 57.7**	**+0.3**
JNK	**Nakash**	**1.54**	**275**	P	**Pn**	**05 41 00.1**	**-0.2**
JNK				*e*S	**Sn**	**05 41 19.2**	**-0.6**
KUR	**Kuril'sk**	**1.93**	**23**	*e*P	**Pn**	**05 41 06.0**	**+0.3**
KUR				AMB	AMB	05 41 07.0	
	33nm,0.3s						
KUR				*e*S	**Sn**	**05 41 29.0**	**-0.4**
KUR				A	A	05 41 32.0	
	110nm,0.2s						
KUR				A	A	05 41 32.0	
	69nm,0.2s						
JTKR	**Abashiri--Toko**	**2.17**	**285**	P	**Pn**	**05 41 10.2**	**+1.1**
JAR	**Ashorobuto**	**2.23**	**267**	P	**Pn**	**05 41 10.4**	**+0.5**
JAR				*e*S	**Sn**	**05 41 37.0**	**0.0**
JOB	**Onbets**	**2.25**	**257**	P	**Pn**	**05 41 10.8**	**+0.6**
JCH	**Churui**	**2.67**	**253**	*e*S	**Sn**	**05 41 47.2**	**-0.7**

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*ISK **23** 05:59:51.9,39°.38N×25°.94E,h13^{km},ML2.3/16*
*DDA **23** 05:59:52.9,39°.46N×26°.02E,h7^{km},Ml2.8*
*ISCJB **23** 05:59:52.5±0.4,39°.38N±0°.02×25°.97E±0°.03,h10^{km}±3^{km}, Error ellipse: s-maj=4.5km s-min=3.1km az=175.2*
*THE **23** 05:59:52.5,39°.40N×25°.97E,h2^{km}±1^{km},ML2.1/4,Error ellipse: s-maj=1.1km s-min=0.3km az=187.0*
*ATH **23** 05:59:53.0,39°.37N×25°.95E,h11^{km}±5^{km},ML2.1/5,Error ellipse: s-maj=5.6km s-min=0.9km az=193.0*
*CSEM **23** 05:59:52.4±0.1,39°.38N×25°.95E,h11^{km},ML2.3,Error ellipse: s-maj=2.3km s-min=1.4km az=75.0*
ISC 23 05:59:52.6±0.8,**39°.39N**±0°.02×**25°.96E**±0°.02,**h13**^{km}±5^{km}, **n67**,σ**0^{s}.40**/103,**Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GPNR	**Gulpinar-Canak**	**0.15**	**63**	PG	**Pg**	**05 59 56.4**	**+0.1**
GPNR				SG	**Sg**	**05 59 59.1**	**+0.2**
GPNR	**Gulpinar-Canak**	**0.15**	**63**	*e*Pg	**Pg**	**05 59 56.4**	**+0.1**
GPNR				*e*Sg	**Sg**	**05 59 59.1**	**+0.2**
SIGR	**SIGRI**	**0.19**	**205**	PG	**Pg**	**05 59 56.7**	**-0.2**
SIGR				SG	**Sg**	**05 59 59.5**	**-0.4**
SIGR	**SIGRI**	**0.19**	**205**	P	**Pg**	**05 59 56.7**	**-0.2**
SIGR				S	**Sg**	**05 59 59.3**	**-0.5**
SIGR				AML	AML	06 00 00.0	
	comp=E,2632μm,0.2s						
SIGR				AML	AML	06 00 02.7	
	comp=N,693μm,0.3s						
SIGR	**SIGRI**	**0.19**	**205**	P	**Pg**	**05 59 56.7**	**-0.2**
SIGR				S	**Sg**	**05 59 59.7**	**-0.2**
SIGR	**SIGRI**	**0.19**	**205**	P	**Pg**	**05 59 56.7**	**-0.2**
SIGR				S	**Sg**	**05 59 59.7**	**-0.2**
PRK	**Paraskevi**	**0.28**	**120**	P	**Pg**	**05 59 58.5**	**0.0**
PRK				S	**Sg**	**06 00 03.0**	**+0.6**
PRK				AML	AML	06 00 03.0	
	comp=N,1379μm,0.4s						
PRK				AML	AML	06 00 03.2	
	comp=E,1745μm,0.3s						
PRK	**Paraskevi**	**0.28**	**120**	P	**Pg**	**05 59 58.4**	**0.0**
PRK				S	**Sg**	**06 00 02.2**	**-0.2**
PRK	**Paraskevi**	**0.28**	**120**	P	**Pg**	**05 59 58.4**	**0.0**
PRK				S	**Sg**	**06 00 02.2**	**-0.2**
BOZC	**Bozcaada**	**0.46**	**9**	PG	**Pg**	**06 00 01.8**	**0.0**
BOZC				SG	**Sb**	**06 00 08.8**	**-0.6**
BOZC	**Bozcaada**	**0.46**	**9**	*i*P	**Pg**	**06 00 01.7**	**0.0**
BOZC				*i*S	**Sb**	**06 00 09.1**	**-0.3**
BOZC	**Bozcaada**	**0.46**	**9**	*e*Pg	**Pg**	**06 00 01.8**	**0.0**
BOZC				*e*Sg	**Sb**	**06 00 08.8**	**-0.6**
EZN	**Ezine**	**0.52**	**33**	PG	**Pg**	**06 00 02.2**	**-0.7**
EZN	**Ezine**	**0.52**	**33**	P	**Pg**	**06 00 02.1**	**-0.8**
EZN				S	**Sg**	**06 00 10.2**	**+0.3**
EZN	**Ezine**	**0.52**	**33**	*e*Pg	**Pg**	**06 00 02.2**	**-0.7**
EZN				S	**Sg**	**06 00 10.2**	**+0.3**
AYVA	**Ayvalik**	**0.57**	**98**	*i*P	**Pg**	**06 00 03.2**	**-0.6**
AYVA				*i*S	**Sg**	**06 00 12.0**	**+0.5**
AYVA	**Ayvalik**	**0.57**	**98**	P	**Pg**	**06 00 03.2**	**-0.6**
AYVA				S	**Sg**	**06 00 12.0**	**+0.5**
BAYC	**CANAKKALE_Bayr**	**0.58**	**52**	*i*P	**Pg**	**06 00 03.6**	**-0.3**
BAYC				*i*S	**Sg**	**06 00 11.6**	**0.0**
BAYC	**CANAKKALE_Bayr**	**0.58**	**52**	P	**Pg**	**06 00 03.7**	**-0.3**
BAYC				S	**Sg**	**06 00 11.6**	**0.0**
LIA	**Limnos Island**	**0.79**	**311**	P	**Pb**	**06 00 08.2**	**+0.1**
LIA				S	**Sb**	**06 00 20.0**	**+1.3**
LIA				AML	AML	06 00 21.0	
	comp=E,259μm,0.4s						
LIA				AML	AML	06 00 21.3	
	comp=N,255μm,0.3s						
LIA	**Limnos Island**	**0.79**	**311**	P	**Pg**	**06 00 07.6**	**-0.3**
LIA				S	**Sb**	**06 00 19.3**	**+0.5**
LIA	**Limnos Island**	**0.79**	**311**	P	**Pg**	**06 00 07.6**	**-0.3**
LIA				S	**Sb**	**06 00 19.3**	**+0.5**
DKL	**Dikili**	**0.80**	**113**	PG	**Pb**	**06 00 08.2**	**-0.2**
DKL	**Dikili**	**0.80**	**113**	*e*Pg	**Pb**	**06 00 08.2**	**-0.2**
GADA	**Gvkgeada**	**0.81**	**357**	PG	**Pg**	**06 00 08.2**	**-0.1**
GADA				SG	**Sb**	**06 00 19.7**	**+0.4**
GADA	**Gvkgeada**	**0.81**	**357**	P	**Pg**	**06 00 07.5**	**-0.8**
GADA				S	**Sb**	**06 00 19.3**	**0.0**
GADA	**Gvkgeada**	**0.81**	**357**	P	**Pg**	**06 00 07.5**	**-0.8**
GADA	**Gvkgeada**	**0.81**	**357**	*e*Pg	**Pg**	**06 00 08.2**	**-0.1**
GADA				S	**Sb**	**06 00 19.3**	**0.0**
CHOS	**Chios island**	**1.00**	**176**	PG	**Pb**	**06 00 11.9**	**0.0**
CHOS	**Chios island**	**1.00**	**176**	P	**Pg**	**06 00 11.1**	**-0.8**
CHOS				S	**Sb**	**06 00 25.7**	**+0.8**
CHOS				AML	AML	06 00 27.1	
	comp=N,206μm,0.5s						
CHOS				AML	AML	06 00 30.7	
	comp=E,250μm,0.2s						
CHOS	**Chios island**	**1.00**	**176**	P	**Pg**	**06 00 11.3**	**-0.7**
CHOS				S	**Sn**	**06 00 26.7**	**+0.2**
CHOS	**Chios island**	**1.00**	**176**	P	**Pg**	**06 00 11.3**	**-0.7**
CHOS	**Chios island**	**1.00**	**176**	*e*Pg	**Pb**	**06 00 11.9**	**0.0**
CHOS				S	**Sb**	**06 00 25.4**	**+0.4**
GELI	**Tayfur-Gelibol**	**1.09**	**21**	PN	**Pb**	**06 00 13.1**	**-0.2**
GELI	**Tayfur-Gelibol**	**1.09**	**21**	*e*Pn	**Pb**	**06 00 13.1**	**-0.2**
SMTH	**Samothraki Isl**	**1.13**	**343**	P	**Pn**	**06 00 14.4**	**+0.2**
SMTH				S	**Sn**	**06 00 30.2**	**+0.6**
SMTH				AML	AML	06 00 32.9	
	comp=E,86μm,0.1s						
SMTH				AML	AML	06 00 33.0	
	comp=N,129μm,0.4s						
SMTH	**Samothraki Isl**	**1.13**	**343**	P	**Pb**	**06 00 13.4**	**-0.7**
SMTH				S	**Sn**	**06 00 29.6**	**-0.1**
SMTH	**Samothraki Isl**	**1.13**	**343**	P	**Pn**	**06 00 14.5**	**+0.2**
SMTH				S	**Sn**	**06 00 29.6**	**-0.1**
URLA	**Izmir**	**1.14**	**154**	PN	**Pb**	**06 00 13.9**	**-0.3**
URLA	**Izmir**	**1.14**	**154**	*e*Pn	**Pb**	**06 00 13.9**	**-0.3**
LPK	**Lapseki**	**1.16**	**32**	PN	**Pb**	**06 00 14.5**	**-0.1**
LPK	**Lapseki**	**1.16**	**32**	*e*Pn	**Pb**	**06 00 14.5**	**-0.1**
BLCB	**Balcova**	**1.31**	**139**	PN	**Pn**	**06 00 16.7**	**+0.1**
BLCB	**Balcova**	**1.31**	**139**	*e*Pn	**Pn**	**06 00 16.7**	**+0.1**
BALY	**Balya**	**1.33**	**74**	*i*P	**Pn**	**06 00 16.9**	**-0.1**
BALY				*i*S	**Sb**	**06 00 34.7**	**+0.2**
BALY	**Balya**	**1.33**	**74**	P	**Pn**	**06 00 16.9**	**-0.1**
BALY				S	**Sb**	**06 00 34.7**	**+0.2**
ERIK	**Erikli-Kesan**	**1.35**	**18**	PN	**Pn**	**06 00 17.2**	**0.0**
ERIK	**Erikli-Kesan**	**1.35**	**18**	*e*Pn	**Pn**	**06 00 17.2**	**0.0**
ENEZ	**Enez**	**1.36**	**6**	PN	**Pn**	**06 00 17.3**	**0.0**
ENEZ	**Enez**	**1.36**	**6**	*e*Pn	**Pn**	**06 00 17.3**	**0.0**
GONE	**Gonen-Balikesi**	**1.49**	**63**	PN	**Pn**	**06 00 19.2**	**+0.1**
GONE	**Gonen-Balikesi**	**1.49**	**63**	*e*Pn	**Pn**	**06 00 19.2**	**+0.1**
BALB	**Balikesir**	**1.51**	**80**	PN	**Pn**	**06 00 19.4**	**0.0**
BALB	**Balikesir**	**1.51**	**80**	*e*Pn	**Pn**	**06 00 19.4**	**0.0**
ALN	**Alexandroupoli**	**1.51**	**3**	PN	**Pn**	**06 00 19.5**	**+0.1**
ALN	**Alexandroupoli**	**1.51**	**3**	P	**Pn**	**06 00 19.4**	**+0.1**
ALN				S	**Sb**	**06 00 40.0**	**+0.4**
ALN	**Alexandroupoli**	**1.51**	**3**	*e*Pn	**Pn**	**06 00 19.5**	**+0.1**
ALN				S	**Sb**	**06 00 40.0**	**+0.4**
KESN	**Edirne-Kesan**	**1.54**	**21**	*i*P	**Pn**	**06 00 19.6**	**-0.6**
KESN				*i*S	**Sb**	**06 00 41.0**	**+0.1**
KESN	**Edirne-Kesan**	**1.54**	**21**	P	**Pn**	**06 00 19.6**	**-0.6**
KESN				S	**Sb**	**06 00 41.0**	**+0.1**
RKY	**Sarkoy-Tekirda**	**1.60**	**35**	PN	**Pn**	**06 00 20.9**	**+0.2**
RKY	**Sarkoy-Tekirda**	**1.60**	**35**	*e*Pn	**Pn**	**06 00 20.9**	**+0.2**
RDO	**Rodhopi**	**1.79**	**350**	PN	**Pn**	**06 00 23.4**	**+0.2**
RDO	**Rodhopi**	**1.79**	**350**	*e*Pn	**Pn**	**06 00 23.4**	**+0.2**
AYDB	**Zeytinkoy-Aydi**	**2.09**	**133**	PN	**Pn**	**06 00 27.7**	**+0.3**
AYDB	**Zeytinkoy-Aydi**	**2.09**	**133**	*e*Pn	**Pn**	**06 00 27.7**	**+0.3**
SBT3	**Marmara-Eregli**	**2.15**	**45**	PN	**Pn**	**06 00 28.9**	**+0.8**
SBT3	**Marmara-Eregli**	**2.15**	**45**	*e*Pn	**Pn**	**06 00 28.9**	**+0.8**

MAN 23 06:07:32.0,5°.85N×125°.79E,h52^{km},mb4.6,ML3.5,MS3.3, 1D,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**0.26**	**343**	*e*P	Pn	06 07 43.2	+2.1
DDMP				*e*S	Sn	06 07 51.3	+3.8
GSPH	**General Santos**	**0.87**	**286**	⇓*i*P	Pn	06 07 47.4	-0.7
GSPH				*i*S	Sn	06 07 57.4	-2.6
MATI	**Mati**	**1.18**	**23**	*e*P	Pn	06 07 53.1	+0.8
MATI				*e*S	Sn	06 08 08.3	+1.0
SKMP	**Bagumbayan, Su**	**1.41**	**298**	*e*P	Pn	06 07 54.1	-1.2
SKMP				*e*S	Sn	06 08 09.8	-3.0
BUKP	**Musuan**	**2.14**	**340**	*e*P	Pn	06 08 07.1	+1.7
BUKP				*e*S	Sn	06 08 32.1	+1.3

MEX 23 06:33:09.9±0.3,**16°.23N×98°.18W,h4**^{km}±2^{km},**MD3.6,Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.17**	**16**	*e*P	Pg	06 33 13.1	-0.2
PNIG				*e*S	Sg	06 33 15.5	0.0
TLIG	**Tlapa**	**1.38**	**344**	*e*P	Pn	06 33 32.4	-3.7
TLIG				*e*S	Sg	06 33 49.8	-4.5
VHO	**Vista Hermosa**	**1.62**	**59**	*e*P	Pn	06 33 35.5	-3.9
VHO				*e*S	Sn	06 33 56.2	-4.6

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*ISCJB **23** 06:40:34.9±0.2,16°.10S±0°.04×173°.62W±0°.05,h10^{km}, mb4.6/99,MS4.0/7,Error ellipse: s-maj=8.2km s-min=4.5km az=35.0*
*IDC **23** 06:40:34.6±0.4,16°.07S×173°.59W,h0^{km},mb4.4/25, mb1 4.6/27,mb1mx4.5/50,mbtmp4.5/27,ML4.1/2,MS3.7/9, Ms1 3.7/9,ms1mx3.4/52,Error ellipse: s-maj=16.1km s-min=11.7km az=126.0*
*NEIC **23** 06:40:36.5±0.1,16°.07S×173°.59W,h10^{km},mb4.7/78, Error ellipse: s-maj=6.7km s-min=3.6km az=127.0*
*BJI **23** 06:40:37.2,15°.93S×173°.54W,h20^{km},mb5.0/13,mB5.3/9, Ms5.2/5,Ms7 5.0/6*
ISC 23 06:40:36.4±0.3,**16°.01S**±0°.07×**173°.48W**±0°.07,**h10**^{km}, **n254**,σ**1^{s}.06**/237,**mb4.7**/99,**MS4.0**/7,**13C-12D,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.66**	**39**	Pn	**Pn**	**06 41 19.1**	**-0.3**
	163nm,0.3s,baz=195,slow=2.7,SNR=195						
AFI				Sn	**Sn**	**06 41 46.6**	**-5.2**
	362nm,0.3s,baz=52,slow=23,SNR=16						
AFI				LR	LR	06 42 04.1	
	comp=Z,236nm,21.1s,baz=196,slow=32						
AFI	**Afiamalu**	**2.66**	**39**	*e*Pn	**Pn**	**06 41 19.2**	**-0.3**
AFI				*e*Sn	**Sn**	**06 41 49.1**	**-2.7**
KNTN	**Kanton**	**13.26**	**8**	*e*Pn	**Pn**	**06 43 46.0**	**+1.1**
RAR	**Rarotonga**	**13.99**	**114**	Pn	**Pn**	**06 43 55.0**	**+0.2**
	1.8nm,0.3s,baz=307,slow=5.1,SNR=4.5						
RAR				Sn	Sn	06 46 13.8	-16
	0.5nm,0.3s,baz=168,slow=14,SNR=2.1						
RAR				LR	LR	06 47 58.8	
	comp=Z,268nm,20.9s,baz=273,slow=32						
RAR	**Rarotonga**	**13.99**	**114**	*e*Pn	**Pn**	**06 43 57.2**	**+2.4**
RAR				Sn	Sn	06 46 13.8	-16
DZM	**Mont Dzumac**	**19.90**	**249**	LR	LR	06 52 27.4	
	comp=Z,203nm,18.6s,baz=50,slow=36						
DZM	**Mont Dzumac**	**19.90**	**249**	*e*P	**Pn**	**06 45 13.9**	**+3.9**
	58nm,1.0s						
DZM				*e*LR	LR	06 50 01.4	
	945nm,27.1s						
DZM	**Mont Dzumac**	**19.90**	**249**	*e*P	**Pn**	**06 45 09.9**	**-0.1**
	24nm,0.9s						
PAE	**Paea**	**22.94**	**98**	*e*T	T	07 09 04.3	
	3.5nm,0.3s						
PPT	**Papeete**	**22.94**	**97**	LR	LR	06 52 04.3	
	comp=Z,137nm,20.7s,baz=281,slow=30						
PPT2	**Papeete2**	**22.94**	**97**	*e*S	S	06 49 40.6	-11
	47nm,24.8s						
PPT2				*e*LQ	LQ	06 50 08.6	
	380nm,27.0s						
PPT2				*e*LR	LR	06 50 56.5	
	665nm,27.5s,baz=256						
PPT2	**Papeete2**	**22.94**	**97**	*e*T	T	07 09 06.4	
	4.6nm,0.3s						
TIAR	**Tiarei**	**23.16**	**97**	*e*T	T	07 09 22.0	
	2.7nm,0.3s						
URZ	**Urewera**	**23.66**	**199**	P	**P**	**06 45 46.6**	**-1.5**
	8.6nm,0.5s,baz=351,slow=4.4,SNR=9.1						
URZ	**Urewera**	**23.66**	**199**	*e*P	**P**	**06 45 46.7**	**-1.4**
	88nm,1.4s						
TBI	**Tubuai**	**23.75**	**112**	*e*LR	LR	06 51 25.2	
	836nm,29.2s,baz=286						
TBI	**Tubuai**	**23.75**	**112**	*e*T	T	07 10 06.4	
	15nm,0.3s						
PMOR	**Pomariorio Ree**	**24.68**	**91**	*e*T	T	07 11 15.0	
	3.8nm,0.2s						
BKZ	**Black Stump Fm**	**24.69**	**199**	*e*P	**P**	**06 45 55.8**	**-1.9**
	20nm,1.2s						
HNR	**Honiara**	**26.71**	**281**	LR	LR	06 55 23.8	
	comp=Z,606nm,21.5s,baz=153,slow=33						
THZ	**Tophouse**	**28.22**	**202**	*e*P	**P**	**06 46 28.6**	**-1.0**
KHZ	**Kahutara**	**28.58**	**200**	*e*P	**P**	**06 46 30.5**	**-2.1**
	32nm,1.3s						
LTZ	**Lake Taylor**	**29.34**	**202**	*e*P	**P**	**06 46 39.2**	**-0.3**
	5.4nm,0.6s						
LHI	**Lord Howe Isla**	**29.38**	**233**	*e*P	**P**	**06 46 38.8**	**-1.1**
	332nm,1.4s						
OXZ	**Oxford**	**29.90**	**201**	*e*P	**P**	**06 46 43.9**	**-0.4**
	12nm,0.6s						
MQZ	**McQueen's Vall**	**30.02**	**200**	*e*P	**P**	**06 46 45.2**	**-0.2**
	20nm,1.2s						
RPZ	**Rata Peaks**	**30.59**	**202**	P	**P**	**06 46 49.4**	**-1.0**
	4.9nm,0.7s,baz=48,slow=12,SNR=2.6						
RPZ	**Rata Peaks**	**30.59**	**202**	*e*P	**P**	**06 46 49.6**	**-0.9**
	18nm,1.2s						
FOZ	**Fox Glacier**	**30.90**	**204**	*e*P	**P**	**06 46 52.0**	**-1.1**
LBZ	**Lake Benmore**	**31.49**	**203**	*e*P	**P**	**06 46 55.9**	**-2.5**
	24nm,1.3s						
ODZ	**Otahua Downs**	**31.89**	**202**	*e*P	**P**	**06 47 00.6**	**-1.3**
	7.8nm,1.3s						
MLZ	**Mavora Lakes**	**33.10**	**204**	*e*P	**P**	**06 47 12.7**	**+0.1**
	19nm,1.2s						
TAOE	**Nuku Hiva Isla**	**33.29**	**82**	*e*LR	LR	06 55 40.1	
	385nm,29.2s						
TAOE	**Nuku Hiva Isla**	**33.29**	**82**	*e*T	T	07 21 46.6	
	41nm,0.2s						
WHZ	**Wether Hill Ro**	**33.61**	**204**	*e*P	**P**	**06 47 14.8**	**-2.2**
	24nm,1.2s						
EIDS	**Eidsvold**	**34.34**	**248**	*e*P	**P**	**06 47 22.2**	**-1.5**
	12nm,0.8s						
ARMA	**Armidale**	**34.96**	**240**	*e*P	**P**	**06 47 28.0**	**-1.1**
	27nm,1.3s						
RKT	**Rikitea**	**36.89**	**107**	*e*LR	LR	06 57 20.6	
	520nm,29.0s						
RKT	**Rikitea**	**36.89**	**107**	*e*T	T	07 26 31.6	
	5.9nm,0.3s						
CTA	**Charters Tower**	**38.43**	**258**	P	**P**	**06 47 57.5**	**-1.2**
	2.6nm,0.6s,baz=92,slow=14,SNR=4.2						
CTAO	**Charters Tower**	**38.43**	**258**	*e*P	**P**	**06 47 57.9**	**-0.7**
	14nm,1.4s						
PMG	**Port Moresby**	**38.90**	**275**	P	**P**	**06 48 01.2**	**-1.4**
	18nm,0.9s,baz=45,slow=2.9,SNR=3.4						
PMG				LR	LR	07 02 00.2	
	comp=Z,151nm,21.8s,baz=122,slow=33						
H11S2	**WAKE ISLAND Hy**	**39.44**	**330**	T	T	07 30 23.3	
	baz=150						
H11S3	**WAKE ISLAND Hy**	**39.45**	**330**	T	T	07 30 22.3	
	baz=150						
H11S1	**WAKE ISLAND Hy**	**39.46**	**330**	T	T	07 30 23.3	
	baz=150						
H11N3	**WAKE ISLAND Hy**	**40.40**	**331**	T	T	07 31 25.5	
	baz=150,slow=76,SNR=23						
H11N1	**WAKE ISLAND Hy**	**40.40**	**331**	T	T	07 31 53.2	
	baz=150,slow=76,SNR=10						
H11N2	**WAKE ISLAND Hy**	**40.41**	**331**	T	T	07 31 25.9	
	baz=150,slow=76,SNR=8.2						
STKA	**Stephens Creek**	**43.67**	**240**	P	**P**	**06 48 40.4**	**-1.1**
	11nm,0.7s,baz=92,slow=9.8,SNR=26						
STKA	**Stephens Creek**	**43.67**	**240**	*e*P	**P**	**06 48 40.5**	**-1.1**
	3.4nm,0.8s						
WB2	**Warramunga Arr**	**49.62**	**257**	*e*P	**P**	**06 49 28.1**	**-0.4**
	20nm,1.2s						
WRAB	**Tennant Creek**	**49.62**	**257**	*e*P	**P**	**06 49 28.2**	**-0.3**
	16nm,1.1s						
WRA	**Warramunga Arr**	**49.63**	**257**	P	**P**	**06 49 26.6**	**-1.9**
	5.4nm,0.8s,baz=92,slow=7.5,SNR=51						
WRA				PcP	**PcP**	**06 50 48.7**	**-1.4**
	0.7nm,0.6s,baz=90,slow=3.6,SNR=5.0						
AS01	**Alice Springs**	**49.80**	**252**	*e*P	**P**	**06 49 27.6**	**-2.3**
AS01				*e*PcP	**PcP**	**06 50 50.5**	**-0.2**
AS31	**Alice Springs**	**49.85**	**252**	*e*P	**P**	**06 49 28.7**	**-1.5**
	6.3nm,0.8s						
ASAR	**Alice Springs**	**49.85**	**252**	P	**P**	**06 49 28.6**	**-1.6**
	20nm,0.8s,baz=87,slow=8.2,SNR=118						
ASAR				PcP	**PcP**	**06 50 47.9**	**-3.0**
	1.9nm,0.6s,baz=93,slow=4.7,SNR=4.6						
ASAR				LR	LR	07 09 23.5	
	comp=Z,177nm,19.1s,baz=90,slow=35						
MTN	**Manton Dam**	**53.60**	**266**	*e*P	**P**	**06 49 58.1**	**-0.2**
	24nm,0.8s						
RPN	**Rapa Nui**	**60.13**	**112**	LR	LR	07 09 19.2	
	comp=Z,60nm,21.6s,baz=234,slow=29						
SOEI	**Soe**	**60.82**	**268**	*e*P	**P**	**06 50 50.8**	**+1.2**
	36nm,0.8s						
SBA	**Scott Base**	**62.64**	**185**	*e*P	**P**	**06 51 02.7**	**+2.1**
	2.9nm,0.8s						
VNDA	**Vanda**	**62.77**	**186**	P	**P**	**06 51 01.7**	**+0.2**
	1.7nm,0.8s,baz=13,slow=7.1,SNR=10						
VNDA	**Vanda**	**62.77**	**186**	*e*P	**P**	**06 51 02.8**	**+1.3**
	3.1nm,0.9s						
MJAR	**Matsushiro Arr**	**69.35**	**320**	P	**P**	**06 51 44.1**	**-0.3**
	0.9nm,0.3s,baz=153,slow=6.5,SNR=3.8						
ASAJ	**Asahikawa**	**72.01**	**328**	P	**P**	**06 52 01.5**	**+1.0**
	9.4nm,0.7s,baz=198,slow=5.2,SNR=9.3						
ASAJ	**Asahikawa**	**72.01**	**328**	*e*P	**P**	**06 52 01.8**	**+1.4**
	9.3nm,0.7s						
JNU	**Nakatsue**	**72.15**	**313**	P	**P**	**06 52 00.6**	**-1.0**
	6.3nm,0.8s,baz=54,slow=8.7,SNR=6.2						
PEA0B	**Petropavlovsk-**	**73.18**	**342**	*e*P	**P**	**06 52 07.9**	**+0.7**
	15nm,0.9s						
PETK	**Petropavlovsk-**	**73.18**	**342**	P	**P**	**06 52 05.9**	**-1.3**
	11nm,0.8s,baz=116,slow=6.6						
PETK	**Petropavlovsk-**	**73.18**	**342**	*e*P	**P**	**06 52 08.0**	**+0.8**
YSS	**Yuzh-Sakhalins**	**73.97**	**330**	*e*P	**P**	**06 52 13.4**	**+1.4**
	31nm,1.1s						
QSPA	**South Pole Qui**	**74.04**	**180**	P	**P**	**06 52 11.9**	**-0.5**
	5.7nm,0.8s,baz=25,slow=2.3,SNR=15						
QSPA	**South Pole Qui**	**74.04**	**180**	*e*P	**P**	**06 52 12.5**	**+0.1**
	6.6nm,0.9s						
YBH	**Yreka Blue Hor**	**74.13**	**37**	P	**P**	**06 52 14.4**	**+1.3**
	3.9nm,0.9s,baz=230,slow=5.2,SNR=5.9						
WAKR	**Walker**	**74.15**	**41**	*e*P	**P**	**06 52 15.8**	**+2.3**
	4.4nm,1.2s						
NV01	**Mina Array Sit**	**74.83**	**42**	*e*P	**P**	**06 52 18.6**	**+1.1**
NVAR	**Mina Array Bea**	**74.83**	**42**	P	**P**	**06 52 17.3**	**-0.2**
	0.8nm,0.7s,baz=229,slow=9.2,SNR=8.3						
KDAK	**Kodiak Island**	**75.53**	**11**	*e*P	**P**	**06 52 21.6**	**+0.9**
	34nm,1.4s						
MOD	**Modoc Plateau**	**75.65**	**38**	*e*P	**P**	**06 52 21.8**	**-0.2**
	5.4nm,1.0s						
K05A	**Summer Lake**	**75.80**	**37**	*e*P	**P**	**06 52 24.8**	**+1.8**
	9.9nm,1.2s						
PINE	**Pine Mountain**	**76.43**	**36**	*e*P	**P**	**06 52 26.8**	**+0.3**
	12nm,1.2s						
KS15	**Wonju Array Si**	**76.55**	**316**	*e*P	**P**	**06 52 30.3**	**+3.3**
KS01	**Wonju Array Si**	**76.56**	**316**	*e*P	**P**	**06 52 29.1**	**+1.9**
E03A	**Lebam**	**76.76**	**33**	*e*P	**P**	**06 52 29.3**	**+1.3**
	34nm,1.3s						
J08A	**Circle Bar Ran**	**77.60**	**38**	*e*P	**P**	**06 52 33.2**	**+0.2**
	3.8nm,1.0s						
PSUT	**Pine Spring**	**77.80**	**44**	*e*P	**P**	**06 52 35.9**	**+1.5**
	2.6nm,0.9s						
USRK	**Ussuriysk Ar.**	**77.82**	**323**	P	**P**	**06 52 34.2**	**+0.2**
	2.5nm,0.9s,baz=190,slow=7.3						
D05A	**Enumclaw**	**78.00**	**33**	*e*P	**P**	**06 52 34.6**	**-0.3**
	5.0nm,0.8s						
RSO	**Redoubt South**	**78.02**	**10**	*e*P	**P**	**06 52 35.2**	**+0.2**
SVW2	**Sparrevohn**	**78.17**	**9**	*e*P	**P**	**06 52 36.2**	**+0.6**
	2.7nm,0.9s						
PKCU	**Pink Cliffs**	**78.28**	**45**	*e*P	**P**	**06 52 39.7**	**+2.5**
	5.1nm,1.0s						
G08A	**Pilot Rock**	**78.47**	**36**	*e*P	**P**	**06 52 38.2**	**+0.4**
	2.7nm,0.8s						
MTPU	**Mount Pierson**	**78.67**	**45**	*e*P	**P**	**06 52 40.6**	**+1.2**
	2.2nm,0.9s						
TCRU	**Three Creeks R**	**78.78**	**44**	*e*P	**P**	**06 52 38.4**	**-1.4**
	10nm,1.5s						
MSU	**Marysvale**	**78.91**	**45**	*e*P	**P**	**06 52 42.2**	**+1.6**
GLI	**Glacier Island**	**79.49**	**13**	*e*P	**P**	**06 52 43.0**	**+0.2**
	22nm,1.2s						
D08A	**Wollman Farm,**	**79.56**	**35**	*e*P	**P**	**06 52 44.2**	**+0.7**
	6.6nm,1.0s						
SKT	**Skwentna**	**79.65**	**10**	*e*P	**P**	**06 52 44.1**	**+0.3**
	3.4nm,1.0s						
TMUT	**Trail Mountain**	**79.96**	**44**	*e*P	**P**	**06 52 47.9**	**+1.5**
	3.2nm,0.8s						
BMRM	**Bremner River**	**80.12**	**14**	*e*P	**P**	**06 52 47.0**	**+0.6**
	13nm,1.0s						
HLID	**Hailey**	**80.15**	**39**	*e*P	**P**	**06 52 47.9**	**+0.8**
	2.2nm,1.0s						
NJ2	**Nanjing**	**80.46**	**307**	*e*P	**P**	**06 52 49.6**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.6s						
CAST	**Castle Rocks**	**80.91**	**10**	*e*P	**P**	**06 52 49.6**	**-0.9**
	3.4nm,0.8s						
KLR	**Kul'dur**	**80.98**	**327**	P	**P**	**06 52 51.0**	**-0.2**
	0.1nm,0.8s,baz=123,slow=3.1,SNR=3.7						
PV10	**Paradox Valley**	**80.99**	**46**	*e*P	**P**	**06 52 52.7**	**+0.9**
TXAR	**Lajitas Array**	**81.02**	**56**	P	**P**	**06 52 52.4**	**+0.5**
	0.6nm,0.9s,baz=224,slow=5.2,SNR=5.9						
PV23	**Carpenter Ridg**	**81.04**	**46**	*e*P	**P**	**06 52 53.6**	**+1.5**
	4.0nm,0.7s						
TRF	**Thorofare Moun**	**81.23**	**10**	*e*P	**P**	**06 52 52.2**	**-0.2**
	4.4nm,0.7s						
ANMO	**Albuquerque**	**81.25**	**50**	P	**P**	**06 52 54.3**	**+1.0**
	0.7nm,0.7s,baz=232,slow=8.7,SNR=4.7						
ANMO	**Albuquerque**	**81.25**	**50**	*e*P	**P**	**06 52 53.7**	**+0.5**
	2.1nm,1.1s						
DHY	**Denali Highway**	**81.42**	**12**	*e*P	**P**	**06 52 53.7**	**+0.2**
	6.5nm,1.2s						
MCK	**McKinley**	**81.73**	**11**	*e*P	**P**	**06 52 55.3**	**+0.5**
	13nm,0.8s						
DLMT	**Dillon**	**82.21**	**38**	*e*P	**P**	**06 52 59.1**	**+1.1**
	6.5nm,1.4s						
S22A	**4UR Ranch, Cre**	**82.24**	**47**	*e*P	**P**	**06 52 60.0**	**+1.5**
	3.7nm,0.9s						
TPAW	**Teton Pass**	**82.25**	**41**	*e*P	**P**	**06 52 59.0**	**+0.6**
	2.5nm,0.9s						
SNOW	**Snow King Moun**	**82.36**	**41**	*e*P	**P**	**06 52 59.4**	**+0.5**
	7.3nm,1.3s						
WHY	**Whitehorse**	**82.44**	**18**	*e*P	**P**	**06 53 00.7**	**+1.9**
	1.9nm,0.6s						
IMW	**Indian Meadow**	**82.46**	**40**	*e*P	**P**	**06 53 00.0**	**+0.5**
	2.5nm,1.0s						
MOOW	**Moose Ponds**	**82.51**	**41**	*e*P	**P**	**06 53 00.5**	**+0.8**
	2.4nm,1.2s						
RIDG	**Independ'e Rid**	**82.53**	**12**	*e*P	**P**	**06 52 59.7**	**+0.5**
	3.5nm,0.8s						
WRH	**Wood River Hil**	**82.56**	**11**	*e*P	**P**	**06 52 59.1**	**-0.1**
	11nm,0.9s						
MLY	**Manley**	**82.63**	**10**	*e*P	**P**	**06 52 59.7**	**+0.1**
	4.1nm,0.9s						
FLWY	**Flagg Ranch**	**82.70**	**40**	*e*P	**P**	**06 53 01.4**	**+0.7**
	4.0nm,1.0s						
BW06	**Boulder Array**	**82.77**	**42**	*e*P	**P**	**06 53 01.4**	**+0.3**
	2.4nm,0.8s						
PD31	**Pinedale Array**	**82.77**	**42**	*e*P	**P**	**06 53 01.6**	**+0.5**
PDAR	**Pinedale Array**	**82.77**	**42**	P	**P**	**06 53 01.5**	**+0.5**
	1.7nm,0.7s,baz=223,slow=3.3,SNR=17						
PDAR	**Pinedale Array**	**82.77**	**42**	*e*P	**P**	**06 53 01.4**	**+0.3**
CCB	**Clear Creek Bu**	**82.77**	**11**	*e*P	**P**	**06 52 59.9**	**-0.3**
	8.4nm,0.7s						
SMCO	**Snowmass**	**82.79**	**46**	*e*P	**P**	**06 53 02.7**	**+1.3**
	3.0nm,0.9s						
BOZ	**Bozeman (W)**	**82.91**	**39**	*e*P	**P**	**06 53 02.5**	**+0.8**
	2.3nm,1.0s						
SCRK	**Sand Creek**	**82.92**	**13**	*e*P	**P**	**06 53 01.7**	**+0.5**
	4.4nm,0.7s						
COLA	**College**	**82.97**	**11**	*e*P	**P**	**06 53 01.3**	**+0.1**
	10nm,0.8s						
MDM	**Murphy Dome**	**82.98**	**11**	*e*P	**P**	**06 53 01.6**	**+0.2**
	20nm,1.5s						
IL1	**Eielson Array**	**83.05**	**11**	*e*P	**P**	**06 53 01.6**	**-0.1**
ILAR	**Eielson Array**	**83.05**	**11**	P	**P**	**06 53 01.6**	**-0.2**
	2.3nm,0.7s,baz=230,slow=6.4,SNR=45						
ILB	**Eielson Array**	**83.05**	**11**	*e*P	**P**	**06 53 01.6**	**-0.1**
HRY	**Holter Researc**	**83.38**	**38**	*e*P	**P**	**06 53 04.3**	**+0.4**
PMSA	**Palmer Station**	**83.66**	**156**	LR	LR	07 22 18.1	
	comp=Z,73nm,21.2s,baz=9.0,slow=30						
DAWY	**Dawson**	**84.03**	**14**	*e*P	**P**	**06 53 07.2**	**+0.4**

	5.2nm,0.8s						
RLMT	Red Lodge	84.11	40	*e*P	P	06 53 08.5	+0.6
	7.2nm,1.4s						
EGAK	Eagle	84.23	13	*e*P	P	06 53 08.2	+0.5
	2.9nm,0.9s						
COLD	Coldfoot	84.75	9	*e*P	P	06 53 11.3	+1.0
	9.8nm,1.3s						
AMTX	Amarillo	84.79	52	*e*P	P	06 53 11.6	+0.2
	4.4nm,0.7s						
ABTX	Abilene, Hawle	85.48	54	*e*P	P	06 53 14.9	0.0
	6.5nm,0.8s						
BJI	Beijing	85.83	314	⇓*e*P	P	06 53 18.4	+2.1
BJI				pmax	pmax		
	comp=Z,11nm,0.7s						
MAW	Mawson	87.19	199	P	P	06 53 22.4	-0.3
	1.6nm,0.6s,baz=96,slow=9.2,SNR=4.3						
HHC	Hu-ho-hao-te	89.38	313	*e*P	P	06 53 35.0	+1.4
HHC				PP	PP	06 57 06.0	+1.2
HHC				S	S	07 04 24.3	+0.4
HHC				sS	sS	07 04 38.9	+9.4
HHC				pmax	pmax		
	comp=Z,11nm,1.0s						
HHC				pmax	pmax		
	comp=Z,130nm,5.3s						
HHC				LR	LR		
	comp=N,350nm,15.0s						
HHC				LR	LR		
	comp=E,300nm,15.1s						
HHC				LR	LR		
	comp=Z,330nm,15.8s						
YKA	Yellowknife Ar	90.68	23	P	P	06 53 38.6	-0.3
	0.7nm,0.9s,baz=239,slow=4.3,SNR=5.5						
VNA3	Neumayer Olymp	92.26	175	P	P	06 53 46.0	-0.4
SNAA	Sanae	92.31	177	P	P	06 53 46.3	-0.4
	3.2nm,1.0s,baz=191,slow=5.2,SNR=3.1						
CMAR	Chiang Mai Arr	92.73	288	P	P	06 53 50.0	+0.4
	1.2nm,0.4s,baz=107,slow=2.8,SNR=5.7						
VNA1	Neumayer--Stat	92.96	175	P	P	06 53 49.6	0.0
LZH	Lanzhou	93.52	306	*e*P	P	06 53 51.3	-1.7
LZH				pP	sP	06 54 00.1	+2.6
LZH				sP	pP	06 54 03.1	+6.8
LZH				pmax	pmax		
	comp=Z,19nm,1.2s						
SONM	Songino Array	95.24	318	P	P	06 54 00.0	-0.5
	0.5nm,0.5s,baz=132,slow=4.1,SNR=3.9						
MKAR	Makanchi Array	111.19	314	PKiKP	PKiKP	06 59 08.6	-2.0
	0.4nm,0.5s,baz=119,slow=0.5,SNR=7.4						
KSH	Kashi	115.77	306	*e*PKP	PKPdf	06 59 23.4	+3.7
KSH				PP	PP	07 00 31.8	+8.9
KSH				PKS	PKSdf	07 02 57.5	+1.1
BVAR	Borovoye Array	118.31	322	PKP	PKPdf	06 59 23.1	-0.8
	0.9nm,0.5s,baz=108,slow=3.2,SNR=5.9						
ARCES	ARCESS Array B	125.19	352	PKP	PKPdf	06 59 36.2	-0.5
	6.9nm,0.8s,baz=354,slow=0.9,SNR=24						
ARCES	ARCESS Array B	125.19	352	*e*PKPdf	PKPdf	06 59 36.6	-0.2
AKTO	Aktyubinsk	126.41	322	PKP	PKPdf	06 59 39.6	0.0
	1.0nm,0.3s,baz=34,slow=7.3,SNR=2.6						
FIA1	FINESS Array S	132.51	347	*e*PKPdf	PKPdf	06 59 50.6	-0.2
FINES	FINESS Array B	132.51	347	PKP	PKPdf	06 59 50.8	0.0
	2.2nm,0.6s,baz=22,slow=6.2,SNR=11						
HFS	Hagfors	135.63	355	PKP	PKPdf	06 59 56.2	-0.5
	3.1nm,0.8s,baz=8.1,slow=2.0,SNR=5.3						
AKASG	Malin Array Be	140.86	337	PKhKP	PKPpre	07 00 00.4	
	0.5nm,0.5s,baz=36,slow=3.4,SNR=3.2						
AKASG				PKP	PKPdf	07 00 06.1	-0.5
	2.1nm,0.8s,baz=43,slow=3.3,SNR=4.8						
OJC	Ojcow	144.22	345	*e*PKP	PKPab	07 00 10.6	+0.2
OJC	Ojcow	144.22	345	*e*PKPdf	PKPbc	07 00 11.0	+0.3
KSP	Ksiaz	144.37	349	*e*PKP	PKPbc	07 00 11.7	+0.5
CLL	Collm	144.40	353	⇑*i*PKPdf	PKPab	07 00 11.2	+0.2
CLL				*e*PKiKP	PKiKP	07 00 17.0	+0.5
CLL	Collm	144.40	353	*e*PKPdf	PKPab	07 00 11.2	+0.2
BRG	Berggiesshubel	144.71	352	*e*PKP	PKPab	07 00 11.6	-0.5
	5.0nm,1.1s						
NIE	Niedzica	144.84	344	*e*PKP	PKPbc	07 00 13.4	+0.6
DPC	Dobruska-Polom	144.84	349	*e*PKP	PKPdf	07 00 13.6	-0.2
BUR08	Bucovina Ar. S	144.88	338	*e*PKPdf	PKPab	07 00 13.2	+0.1
BUR04	Bucovina Ar. S	144.90	338	*e*PKPdf	PKPbc	07 00 13.4	+0.3
BURAR	Bucovina Array	144.90	338	⇓*i*P	PKPab	07 00 13.0	-0.1
PVCC	Panska Ves	144.96	351	*e*PKP	PKPdf	07 00 14.6	+0.7
OKC	Ostrava-Krasne	144.96	347	*e*PKP	PKPdf	07 00 13.9	0.0
CRVS	Cervenica-Dubn	144.99	343	*e*PKP	PKPab	07 00 13.7	+0.4
KRLC	Kraliky	145.01	348	*e*PKP	PKPab	07 00 13.8	+0.4
BIZ	Bicaz	145.13	336	⇑*i*P	PKPdf	07 00 14.5	+0.2
MORC	Moravsky Berou	145.15	347	⇑*i*P	PKPdf	07 00 14.5	+0.2
MORC	Moravsky Berou	145.15	347	*e*PKPbc	PKPab	07 00 14.2	+0.3
MORC	Moravsky Berou	145.15	347	*e*PKP	PKPab	07 00 14.2	+0.3
UCC	Uccle	145.25	2	*e*PKPbc	PKPbc	07 00 14.2	+0.2
LANS	Liptovska Anna	145.29	345	*e*PKP	PKPdf	07 00 15.4	+0.8
TLCR		145.39	332	⇓*i*P	PKPab	07 00 14.9	+0.1
MEM	Membach	145.48	1	⇑PKP	PKPbc	07 00 15.0	+0.2
PRU	Pruhonice	145.49	351	*e*PKP	PKPab	07 00 15.6	+0.6
GOPC	GO Pecny, Ondr	145.52	351	*e*PKP	PKPab	07 00 15.6	+0.4
NKC	Novy Kostel	145.53	353	*e*PKP	PKPbc	07 00 15.3	+0.3
KECS	Kecovo	145.64	343	*e*PKP	PKPab	07 00 16.6	+0.9
BCLA	Clavier	145.66	1	⇑PKP	PKPbc	07 00 15.7	+0.4
CFR	Carcaliu	145.70	332	⇓*i*P	PKPab	07 00 15.9	0.0
VRI	Vrincioaia	145.76	335	⇓*i*P	PKPbc	07 00 15.8	0.0
VRAC	Vranov	145.78	348	*e*PKP	PKPab	07 00 16.4	+0.2
PLOR	Plostina	145.80	335	⇑*i*P	PKPab	07 00 16.6	+0.2
DOU	Dourbes	145.96	2	⇑PKP	PKPab	07 00 17.0	+0.2
JAVC	Velka Javorina	145.99	347	*e*PKP	PKPab	07 00 18.1	+1.1
KRUC	Moravsky	146.06	348	*e*PKP	PKPbc	07 00 16.8	+0.2
VYHS	Vyhne	146.06	345	*e*PKP	PKPab	07 00 17.3	+0.1
GRFO	Grafenberg	146.19	355	*e*PKPdf	PKPbc	07 00 17.4	+0.4
TLB	Topalu	146.20	332	⇑*i*P	PKPab	07 00 17.9	+0.1
DOPR	Dopca	146.21	336	⇓*i*P	PKPab	07 00 18.1	+0.2
PSZ	Piszkesteto	146.32	344	*e*PKPdf	PKPbc	07 00 17.5	-0.1
MLR	Muntele Rosu	146.38	335	⇑*i*P	PKPbc	07 00 18.4	+0.5
MLR	Muntele Rosu	146.38	335	*e*PKPdf	PKPbc	07 00 18.4	+0.5
WLF	Walferdange	146.43	0	⇓PKP	PKPab	07 00 18.7	+0.1
WLF	Walferdange	146.43	0	*e*PKPdf	PKPbc	07 00 18.2	+0.5
KHC	Kasperske Hory	146.46	352	*e*PKP	PKPab	07 00 18.6	-0.2
KHC	Kasperske Hory	146.46	352	*e*PKPdf	PKPbc	07 00 18.3	+0.4
DRGR		146.48	340	⇓*i*P	PKPbc	07 00 18.0	-0.1
MODS	Modra-Piesok	146.53	347	*e*PKP	PKPab	07 00 19.5	+0.5
BR131	Keskin Array S	146.57	320	*e*PKPdf	PKPbc	07 00 18.6	0.0
BRTR	Keskin Array B	146.57	320	PKPbc	PKPbc	07 00 18.9	+0.2
	6.9nm,0.8s,baz=126,slow=2.1,SNR=33						
GEC2	GERESS Array S	146.73	351	*e*PKPdf	PKPbc	07 00 18.4	-0.4
GERES	GERESS Array B	146.73	351	PKPbc	PKPbc	07 00 18.9	+0.1
	4.3nm,0.7s,baz=15,slow=5.5,SNR=24						
GEA0	GERESS Array S	146.73	351	*e*PKPdf	PKPbc	07 00 18.7	-0.1
VOIR		146.78	336	⇓*i*P	PKPab	07 00 19.9	-0.3
ANTO	Ankara	147.00	321	*e*PKPbc	PKPbc	07 00 20.3	+0.5
ARR	Arges	147.00	336	⇑*i*P	PKPab	07 00 21.4	+0.3
CONA	Conrad Observa	147.25	348	*e*pPKPdf	PKPbc	07 00 20.7	+0.5
	23nm,1.2s,SNR=6.3						
STU	Stuttgart	147.25	357	*e*PKPbc	PKPbc	07 00 20.4	+0.3
MOA	Molln	147.61	350	*e*pPKPdf	PKPbc	07 00 21.4	+0.2
	10nm,1.1s						
BFO	Black Forest	147.73	358	*e*PKPdf	PKPdf	07 00 20.3	+1.6
BZS	Buzias	147.87	340	⇓*i*P	PKPbc	07 00 22.1	+0.2
ECH	Echery	147.88	359	*e*PKPbc	PKPbc	07 00 22.2	+0.3
ARSA	Arzberg	147.96	348	*e*pPKPdf	PKPbc	07 00 22.0	-0.2
	8.0nm,1.2s						
ASF	Jabal al Asfar	148.08	306	PKPbc	PKPbc	07 00 23.5	+0.5
	3.7nm,0.8s,baz=45,slow=1.4,SNR=7.5						
HERR	Herculane	148.24	338	⇓*i*P	PKPbc	07 00 23.3	+0.4
RETA	Reutte	148.41	354	*e*P	PKPbc	07 00 23.2	-0.2
	17nm,1.3s						
WATA	Walderalm	148.48	353	*e*P	PKPbc	07 00 23.4	-0.3
	5.1nm,0.5s						
KBA	Koelnbreinsper	148.50	351	*e*P	PKPbc	07 00 23.6	-0.2
	5.4nm,0.7s						
WTTA	Wattenberg	148.54	353	*e*P	PKPbc	07 00 24.0	+0.1
	12nm,0.7s						
MDVR	Moldovita	148.58	339	⇑*i*P	PKPab	07 00 26.4	-0.9
SOKA	Soboth	148.61	349	*e*P	PKPbc	07 00 23.9	0.0
	15nm,1.3s						
DAVA	Damuels	148.69	356	*e*P	PKPbc	07 00 24.4	+0.2
	19nm,1.0s						
OBKA	Obir	148.86	349	*e*PKPdf	PKPdf	07 00 20.3	-0.4
	14nm,1.3s						
FETA	Feichten	148.88	354	*e*P	PKPbc	07 00 24.8	+0.1
	16nm,1.1s,SNR=5.8						
MYKA	Terra Mystica	148.90	350	P	PKPbc	07 00 24.2	-0.4
	9.4nm,0.8s						
ABTA	Abfaltersbach	148.94	352	*e*P	PKPbc	07 00 24.6	-0.2
	18nm,0.8s						
DAVOX	Davos/Dischmat	149.19	355	PKPbc	PKPbc	07 00 26.0	+0.4
	14nm,0.7s,baz=346,slow=6.7,SNR=14						
FUORN	Ofenpass-Fuorn	149.32	355	*e*PKPbc	PKPbc	07 00 26.6	+0.7
TUE	Stuetta	149.53	356	*e*PKPbc	PKPbc	07 00 27.1	+0.7
SENIN	Lac Senin/Sane	149.73	359	*e*PKPbc	PKPbc	07 00 27.1	+0.1
DIVS	Divibare	149.75	341	*e*PKPbc	PKPbc	07 00 27.4	+0.5
VTS	Vitosha	149.89	335	⇑*i*P	PKPbc	07 00 27.8	+0.4
VTS	Vitosha	149.89	335	*e*PKPbc	PKPbc	07 00 27.0	-0.3
BLY	Banja Luka	149.96	345	⇑*i*P	PKPbc	07 00 28.4	+1.1
BLY	Banja Luka	149.96	345	*e*PKPbc	PKPbc	07 00 26.1	-1.2
MANT	Manisa	150.39	323	*e*PKPbc	PKPbc	07 00 28.9	+0.1
BNI	Bardonecchia	151.04	360	*e*PKPbc	PKPbc	07 00 30.9	+0.8
PDG	Podgorica	151.49	340	⇓*i*P	PKPbc	07 00 31.1	+0.2
FNA	Florina	152.15	335	*e*PKPbc	PKPbc	07 00 32.4	-0.2
ESDC	Sonseca Array	154.71	19	PKPab	PKPab	07 00 53.4	+0.5
	0.2nm,0.3s,baz=356,slow=4.0,SNR=3.7						
TORD	Torodi Ar. Bea	174.53	121	PKPab	PKPab	07 02 19.0	-1.6
	baz=235,slow=6.8						

GCMT ***23*** *06:54:31.1±0.2, 52°.23N×173°.15E, h14^{km}, MW5.2/102, Moment Tensor Solution. s69,c99; s102,c162; Duration: 1^{s}0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.24±.17; $M_{\theta\theta}$-5.50±.14; $M_{\phi\phi}$1.25±.12; $M_{r\theta}$4.41±.41; $M_{\theta\phi}$1.15±.10; $M_{\phi r}$3.15±.38; Best double couple: $M_0$7.44400×10^{16} NP1:ϕ_s69.00000°, δ71.00000°, λ63.00000°. NP2:ϕ_s306.00000°, δ33.00000°, λ142.00000°. Principal axes: T 7.6870, Plg56.0000°, Azm304.0000°; N -0.4960, Plg25.0000°, Azm79.0000°; P -7.2000, Plg21.0000°, Azm180.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***23*** *06:54:31.1±0.0, 52°.02N×172°.87E, h25^{km}, mb5.0/298, ML4.5(AEIC), After AEIC.*

IDC ***23*** *06:54:32.1±0.4, 52°.19N×173°.37E, h0^{km}, mb4.8/48, mb1 4.9/50, mb1mx4.9/75, mbtmp4.8/50, ML5.7/1, MS4.5/59, Ms1 4.5/59, ms1mx4.4/71, Error ellipse: s-maj=12.7km s-min=8.4km az=169.0*

ISCJB ***23*** *06:54:34.1±0.6, 52°.13N±0°.03×173°.38E±0°.02, h27^{km}±3^{km}, mb5.0/521, MS4.6/90, Error ellipse: s-maj=4.8km s-min=1.7km az=1.9*

MOS ***23*** *06:54:35.0±0.9, 52°.13N×173°.29E, h34^{km}, mb5.2/131, MS4.7/25, Error ellipse: s-maj=5.4km s-min=3.9km az=133.7*

BJI ***23*** *06:54:36.8, 52°.52N×173°.00E, h35^{km}, mb5.1/61, mB5.3/44, Ms5.0/49, Ms7 4.7/50*

KRSC ***23*** *06:54:37.7±2.6, 52°.12N×172°.66E, h48^{km}±24^{km}, ML5.2*

ISC 23 06:54:35.0±0.7, **52°.05N**±0°.05×**173°.22E**±0°.03, **h20**^{km}±3^{km}, **n1525**, σ**1^{s}43**/1566, **mb5.1**/539, **MS4.7**/90, **56C-18D, Near Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMY	Shemya	0.86	38	P	Pb	06 54 49.5	-1.9
SMY				S	Sg	06 55 03.8	+0.4
SMY	Shemya	0.86	38	P	Pb	06 54 49.5	-1.9
SMY				S	Sg	06 55 03.8	+0.4
LSSA	Little Sitkin	3.27	90	P	Pn	06 55 25.0	-0.2
LSSE	Little Sitkin	3.31	90	P	Pn	06 55 25.1	-0.5
LSPA	Little Sitkin	3.31	90	P	Pn	06 55 25.0	-0.6
LSPA				S	Sn	06 56 08.4	+4.0
AMKA	Amchitka	3.84	98	P	Pn	06 55 32.1	-0.8
AMKA				S	Sn	06 56 19.9	+2.4
CETU	Semis' Tuman	3.88	89	P	Pn	06 55 33.3	-0.2
CESW	Semis' Southwe	3.92	90	P	Pn	06 55 33.3	-0.8
CEAP	Semis' Anvil P	3.92	88	P	Pn	06 55 33.9	-0.2
GAEA	Gareloi East	4.98	90	P	Pn	06 55 47.6	-1.0
BKI	Bering	5.35	309	*e*P	Pn	06 55 55.0	+1.4
BKI	Bering	5.35	309	P	Pn	06 55 55.0	+1.4
TASE	Tanaga Southea	5.41	89	P	Pn	06 55 54.3	-0.3
TAFP	Tanaga Falls P	5.44	88	P	Pn	06 55 54.4	-0.6
TAFP				S	Sn	06 57 00.8	+3.8
TAPA	Tanaga Point A	5.55	89	P	Pn	06 55 55.5	-1.0
KIMD	Kanaga Island	5.91	89	P	Pn	06 56 00.1	-1.4
KIKV	Kanaga Island	5.94	88	P	Pn	06 56 00.3	-1.5
KINC	Kanaga Island	5.96	87	P	Pn	06 56 00.9	-1.2
ADAG	Mount Adagdak	6.28	87	P	Pn	06 56 07.4	+0.9
GSCK	Great Sitkin C	6.55	86	P	Pn	06 56 10.5	+0.2
MKZ	Mys Kozlova	7.33	295	*e*P	Pn	06 56 21.1	+0.3
MKZ				*e*S	Sn	06 57 39.6	-3.8
MKZ	Mys Kozlova	7.33	295	P	Pn	06 56 21.1	+0.3
MKZ				S	Sn	06 57 39.6	-3.8
KBTR	Krutoberegovo	7.39	308	*e*P	Pn	06 56 22.8	+1.1
KBTR	Krutoberegovo	7.39	308	P	Pn	06 56 22.8	+1.1
ATKA	Atka Island	7.75	84	P	Pn	06 56 26.6	0.0
KOFP	Korovin Flat P	7.80	83	P	Pn	06 56 27.4	-0.1
SPN	Mys Shipunski	8.11	283	*e*P	Pn	06 56 31.3	-0.3
SPN				*e*S	Sn	06 57 59.1	-3.5
SPN	Mys Shipunski	8.11	283	P	Pn	06 56 31.3	-0.3
SPN				S	Sn	06 57 59.1	-3.5
SMKR	Semkarok	8.23	308	*e*P	Pn	06 56 36.4	+3.1
SMKR	Semkarok	8.23	308	P	Pn	06 56 36.4	+3.1
ZLN	Zelenaya	8.32	303	*e*P	Pn	06 56 36.2	+1.7
ZLN	Zelenaya	8.32	303	P	Pn	06 56 36.2	+1.7
BDR	Baidarnaya	8.35	308	*e*P	Pn	06 56 37.1	+2.1
BDR	Baidarnaya	8.35	308	P	Pn	06 56 37.1	+2.1
CIRR	Tsirk	8.38	304	*e*P	Pn	06 56 37.9	+2.4
CIRR	Tsirk	8.38	304	P	Pn	06 56 37.9	+2.4
LGNR	Loginova	8.40	304	*e*P	Pn	06 56 38.3	+2.5
LGNR	Loginova	8.40	304	P	Pn	06 56 38.3	+2.5
SRKR	Sorokina	8.41	308	*e*P	Pn	06 56 38.0	+2.2
SRKR	Sorokina	8.41	308	P	Pn	06 56 38.0	+2.2
TUMR	Tumrok	8.41	298	*e*P	Pn	06 56 38.0	+2.2
TUMR				*i* S	Sn	06 58 08.0	-2.2
TUMR	Tumrok	8.41	298	P	Pn	06 56 38.0	+2.2
TUMR				S	Sn	06 58 08.0	-2.2
BZMR	Bezymyannaya	8.45	302	*e*P	Pn	06 56 38.5	+2.2
BZMR	Bezymyannaya	8.45	302	P	Pn	06 56 38.5	+2.2
BZWR	Bezymyannyi-We	8.46	303	*e*P	Pn	06 56 39.0	+2.5
BZWR	Bezymyannyi-We	8.46	303	P	Pn	06 56 39.0	+2.5
KLY	Klyuchi	8.52	305	*e*P	Pn	06 56 37.4	+0.3
KLY	Klyuchi	8.52	305	P	Pn	06 56 37.4	+0.3
KMNR	Kamenistaya	8.52	301	*e*P	Pn	06 56 39.0	+1.8
KMNR	Kamenistaya	8.52	301	P	Pn	06 56 39.0	+1.8
KRSR	Krestovskiy	8.52	304	*e*P	Pn	06 56 38.7	+1.4
KRSR	Krestovskiy	8.52	304	P	Pn	06 56 38.7	+1.4
NLC	Nalytchevo	8.52	283	*e*P	Pn	06 56 36.4	-0.8
NLC				*e*S	Sn	06 58 06.6	-6.1
NLC	Nalytchevo	8.52	283	P	Pn	06 56 36.4	-0.8
NLC				S	Sn	06 58 06.6	-6.1
KIRR	Kirishev	8.53	302	*e*P	Pn	06 56 39.5	+2.0
KIRR	Kirishev	8.53	302	P	Pn	06 56 39.5	+2.0
KII	Karymskiy	8.54	289	*e*P	Pn	06 56 37.4	-0.1
KII	Karymskiy	8.54	289	P	Pn	06 56 37.4	-0.1
KPT	Kopyto	8.60	302	*e*P	Pn	06 56 40.3	+1.9
KPT	Kopyto	8.60	302	P	Pn	06 56 40.3	+1.9
SDLR	Sedlovina	8.80	284	*e*P	Pn	06 56 41.8	+0.6
SDLR	Sedlovina	8.80	284	P	Pn	06 56 41.8	+0.6
KOZ	Kozyrevsk	8.82	302	*e*P	Pn	06 56 43.4	+2.2
KOZ	Kozyrevsk	8.82	302	P	Pn	06 56 43.4	+2.2
UGLR	Uglovaya	8.84	283	*e*P	Pn	06 56 42.4	+0.8
UGLR	Uglovaya	8.84	283	P	Pn	06 56 42.4	+0.8
SMAR	Somma	8.85	284	*e*P	Pn	06 56 42.3	+0.3
SMAR	Somma	8.85	284	P	Pn	06 56 42.3	+0.3
AVH	Avacha	8.89	284	*e*P	Pn	06 56 43.2	+0.9
AVH	Avacha	8.89	284	P	Pn	06 56 43.2	+0.9
PET	Petropavlovsk	8.94	282	*e*Pn	Pn	06 56 44.2	+1.3
PET	Petropavlovsk	8.94	282	*e*P	Pn	06 56 43.5	+0.6
PET				*e*S	Sn	06 58 17.9	-5.0
PET	Petropavlovsk	8.94	282	*ce*P	Pn	06 56 38.2	-4.7
PET				*e*S	Sn	06 58 15.8	-7.1
PET				pmax	pmax		
	comp=Z,300nm,15.2s						
PET				pmax	pmax		
	comp=Z,63nm,1.0s						
PET				pmax	pmax		
	comp=Z,400nm,17.4s						
PET				smax	smax		
	comp=N,243nm,0.7s						
PET				smax	smax		
	comp=E,213nm,0.6s						
PET				MLR	MLR		
	comp=Z,3µm,14.0s						
PET				MLR	MLR		
	comp=Z,3µm,14.0s						
KRX	Arik	8.95	284	*e*P	Pn	06 56 43.0	-0.2
KRX	Arik	8.95	284	P	Pn	06 56 43.0	-0.2
KOK	Koryaka	8.95	284	*e*P	Pn	06 56 43.8	+0.6
KOK	Koryaka	8.95	284	P	Pn	06 56 43.8	+0.6
RUS	Russkaya	9.04	278	*e*P	Pn	06 56 44.3	0.0
RUS				*e*S	Sn	06 58 18.9	-6.4
RUS	Russkaya	9.04	278	P	Pn	06 56 44.3	0.0
RUS				S	Sn	06 58 18.9	-6.4
MTVR	Mutnovka	9.24	279	*e*P	Pn	06 56 48.2	+1.1
MTVR				*i* S	Sn	06 58 25.0	-5.5
MTVR	Mutnovka	9.24	279	P	Pn	06 56 48.2	+1.1
MTVR				S	Sn	06 58 25.0	-5.5
KRMR	Karymshinskiy	9.26	281	*e*P	Pn	06 56 47.0	-0.2
KRMR				*e*S	Sn	06 58 25.5	-5.2
KRMR	Karymshinskiy	9.26	281	P	Pn	06 56 47.0	-0.2
KRMR				S	Sn	06 58 25.5	-5.2
TILK	Tilichiki	9.28	338	*e*P	Pn	06 56 49.8	+2.2
TILK	Tilichiki	9.28	338	P	Pn	06 56 49.8	+2.2
KDTR	Khodutka, Kamc	9.37	274	*e*P	Pn	06 56 48.0	-0.7
KDTR				*e*S	Sn	06 58 26.3	-7.1
GNL	Ganaly	9.39	286	*i* P	Pn	06 56 50.7	+1.5
GNL	Ganaly	9.39	286	P	Pn	06 56 50.7	+1.5
ESO	Esso	9.39	300	*e*P	Pn	06 56 50.7	+1.6
ESO	Esso	9.39	300	P	Pn	06 56 50.7	+1.6
ASAK	Asacha	9.42	278	*e*P	Pn	06 56 50.5	+1.0
ASAK	Asacha	9.42	278	P	Pn	06 56 50.5	+1.0
PEA0B	Petropavlovsk-	9.51	282	*e*Pn	Pn	06 56 51.9	+1.1
PETK	Petropavlovsk-	9.51	282	Pn	Pn	06 56 51.9	+1.1
	baz=93,slow=19						
PETK				Sn	Sn	06 58 32.9	-4.2
	baz=76,slow=27						
PETK				LR	LR	07 00 18.4	
	comp=Z,2µm,22.0s,baz=97,slow=36						
PETK	Petropavlovsk-	9.51	282	*e*Pn	Pn	06 56 52.8	+1.9
PETK				Sn	Sn	06 58 32.9	-4.2
APC	Apacha	9.84	281	*e*P	Pn	06 56 56.4	+1.1
APC				*e*S	Sn	06 58 39.6	-5.5
APC	Apacha	9.84	281	P	Pn	06 56 56.4	+1.1
APC				S	Sn	06 58 39.6	-5.5
MIPR	Malaya Ipel'ka	10.12	278	*e*P	Pn	06 57 00.2	+1.0
MIPR	Malaya Ipel'ka	10.12	278	P	Pn	06 57 00.2	+1.0
PAU	Pauzhetka	10.20	273	*e*P	Pn	06 57 00.2	+0.1
PAU				*e*S	Sn	06 58 48.0	-5.8
PAU	Pauzhetka	10.20	273	P	Pn	06 57 00.2	+0.1
PAU				S	Sn	06 58 48.0	-5.8
PALN	Palana	10.28	318	*e*P	Pn	06 57 04.4	+3.1
PALN	Palana	10.28	318	P	Pn	06 57 04.4	+3.1
SKR	Severo-Kuril's	10.79	269	*e*P	Pn	06 57 06.9	-1.3
SKR				*e*S	Sn	06 59 01.0	-7.2
SKR	Severo-Kuril's	10.79	269	*e*P	Pn	06 57 07.9	-0.3
SKR				pmax	pmax		
	comp=Z,154nm,0.7s						
SKR				pmax	pmax		
	comp=Z,200nm,1.9s						
SKR				MLR	MLR		
	comp=Z,1µm,17.0s						
SPIA	Saint Paul Isl	10.86	55	P	Pn	06 57 10.4	+1.2
NIKH	Nikolski High	10.96	78	P	Pn	06 57 11.8	+1.1
UNV	Unalaska Valle	12.36	74	*e*Pn	Pn	06 57 30.3	+0.7
AKUT	Akutan	12.79	72	*e*Pn	Pn	06 57 38.1	+2.6
GAMB	Gambell	14.17	28	*e*P	Pn	06 57 57.4	+3.1
FALS	False Pass	14.18	69	*e*Pn	Pn	06 57 57.3	+2.8
MA2	Magadan	14.64	310	Pn	Pn	06 58 02.1	+1.3
	comp=Z,3.3nm,0.3s,baz=109,slow=11,SNR=14						
MA2	Magadan	14.64	310	*e*Pn	Pn	06 58 03.0	+2.1
MA2	Magadan	14.64	310	⇑*e*P	Pn	06 58 01.9	+1.1
MA2				pmax	pmax		
	comp=Z,129nm,2.5s						
SDPT	Sand Point	15.88	68	*e*Pn	Pn	06 58 16.9	-0.2
	comp=Z,144nm,1.4s						
ANM	Nome	16.72	33	*e*Pn	Pn	06 58 28.1	+0.2
	comp=Z,108nm,1.0s						
ANM	Nome	16.72	33	*e*P	Pn	06 58 28.1	+0.2
ANM				pmax	pmax		
	comp=Z,108nm,1.0s						
CHGN	Chignik	17.07	64	*e*Pn	Pn	06 58 32.1	-0.2
KUR	Kuril'sk	18.03	258	*d i*P	P	06 58 47.7	+3.1
KUR				pmax	pmax		
	comp=Z,27nm,1.1s						
KUR				pmax	pmax		
	comp=Z,762nm,7.7s						
KUR				MLR	MLR		
	comp=Z,543nm,13.0s						
KUR				MLR	MLR		
	comp=N,627nm,12.0s						
KUR				MLR	MLR		
	comp=E,116nm,10.0s						
TYV	Tymovskoe	19.02	279	*e*P	Pn	06 58 58.8	+2.6
TYV				*e*S	S	07 02 31.6	+1.3
TYV				pmax	pmax		
	comp=Z,21nm,0.8s						
TYV				pmax	pmax		
	comp=Z,1µm,5.3s						
TYV				smax	smax		
	comp=E,16nm,2.2s						
TYV				smax	smax		
	comp=E,700nm,11.0s						
TYV				MLR	MLR		
	comp=E,2µm,15.0s						
TYV				MLR	MLR		
	comp=Z,1µm,15.0s						
SVW2	Sparrevohn	19.24	50	*e*P	P	06 58 57.8	-0.1
	comp=Z,32nm,0.8s						
SHO	Shikotan	19.39	256	*e*P	P	06 58 55.1	-4.5
SHO				*e*S	Sn	07 02 32.6	-5.0
SHO				pmax	pmax		
	comp=Z,21nm,0.7s						
SHO				pmax	pmax		
	comp=E,7.0nm,0.1s						
SHO				pmax	pmax		
	comp=N,7.0nm,0.4s						
SHO				MLR	MLR		
	comp=Z,575nm,12.0s						
SII	Sitkinak Islan	19.43	64	*e*P	P	06 58 58.4	-1.5
	comp=Z,50nm,0.6s						
NKL	Nikolayevsk	19.71	286	*e*P	Pn	06 59 05.0	+0.6
NKL				*e*S	Sn	07 02 47.0	+2.0
NKL				pmax	pmax		
	comp=N,43nm,1.0s						
NKL				pmax	pmax		
	comp=E,86nm,1.0s						
NKL				pmax	pmax		
	comp=Z,140nm,1.0s						
NKL				pmax	pmax		
	comp=E,1µm,12.0s						
NKL				pmax	pmax		
	comp=Z,1µm,9.0s						
NKL				smax	smax		
	comp=N,1µm,10.0s						
NKL				smax	smax		
	comp=E,500nm,10.0s						
NKL				MLR	MLR		
	comp=N,2µm,14.0s						
NKL				MLR	MLR		
	comp=Z,2µm,14.0s						
RDOG	Red Dog Mine	19.76	27	*e*P	P	06 59 03.0	-0.4
	comp=Z,56nm,0.9s						
YUK	Yuzh-Kuril'sk	19.88	257	*e*P	P	06 59 01.1	-3.8
YUK				*e*S	S	07 02 43.2	-4.5
YUK				pmax	pmax		
	comp=Z,89nm,0.6s						
YUK				pmax	pmax		
	comp=N,61nm,0.5s						
YUK				pmax	pmax		
	comp=E,22nm,0.2s						
LAGR	Lagunnoye	19.92	257	P	P	06 58 59.0	-6.3
LAGR				S	S	07 02 43.5	-4.9
OHAK	Old Harbor	19.92	62	*e*P	P	06 59 01.6	-3.6
	comp=E,80nm,0.9s						
GRPR	Tuman	19.96	257	*e*P	P	06 59 01.9	-3.9
GRPR				S	S	07 02 46.1	-3.2
GLVR	Golovnino	20.25	257	*e*P	P	06 59 02.2	-6.7
GLVR				*e*S	S	07 02 45.2	-10
KDAK	Kodiak Island	20.32	60	P	P	06 59 07.8	-1.7
	comp=E,36nm,0.4s,baz=168,slow=2.9,SNR=48						
KDAK				S	S	07 02 48.2	-7.9
	comp=E,9.5nm,1.0s,baz=336,slow=20,SNR=5.5						
KDAK	Kodiak Island	20.32	60	*e*P	P	06 59 07.8	-1.7
	comp=E,123nm,0.9s						
KDAK				S	S	07 02 48.2	-7.9
KDAK	Kodiak Island	20.32	60	*i* P	P	06 59 07.6	-1.9
YSS	Yuzh-Sakhalins	20.34	268	*e*P	Pn	06 59 13.0	+1.0
YSS	Yuzh-Sakhalins	20.34	268	α*i*P	Pn	06 59 13.0	+1.0
YSS				*e**SP	sP	06 59 21.5	+3.5
YSS				*e*		06 59 30.3	
YSS				*e*PPP	PPP	06 59 46.0	
YSS				*e*S	Sn	07 02 59.0	-1.4
YSS				*e*SS	SnSn	07 03 20.0	+5.2
YSS				pmax	pmax		
	comp=Z,50nm,1.2s						
YSS				pmax	pmax		
	comp=Z,600nm,11.0s						

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YSS                                   MLR     MLR
       comp=Z,1µm,14.0s
YSS                                   MLR     MLR
       comp=E,800nm,15.0s
RSO    Redoubt South     20.48  52   eP      P       06 59 11.3 -0.2
HOM    Homer             20.93  55   eP      P       06 59 16.6 +0.4
       comp=E,280nm,1.2s
SPU    Mount Spurr       20.93  51   eP      P       06 59 16.8 +0.5
CNPM   China Poot        21.12  55   eP      P       06 59 17.9 -0.3
       comp=E,207nm,1.4s
PPLA   Purkeypile        21.24  46   eP      P       06 59 19.3 -0.4
       comp=E,159nm,1.2s
BRLK   Bradley Lake      21.32  55   eP      P       06 59 20.1 -0.2
       comp=E,56nm,0.9s
SKT    Skwentna          21.33  49   eP      P       06 59 20.4 -0.1
       comp=E,103nm,1.0s
CAST   Castle Rocks      21.43  45   eP      P       06 59 21.2 -0.3
       comp=E,78nm,0.9s
SUA    Susitna One       21.61  50   eP      P       06 59 25.6 +2.1
       comp=E,40nm,0.8s
ASAJ   Asahikawa         21.82 261    P      P       06 59 27.9 +2.2
       comp=E,30nm,0.8s,baz=47,slow=4.7,SNR=21
ASAJ                                  LR      LR     07 07 29.2
       comp=E,296nm,20.6s,baz=122,slow=35
ASAJ   Asahikawa         21.82 261   eP      P       06 59 27.8 +2.0
       comp=E,76nm,1.1s
ASAJ   Asahikawa         21.82 261    P      P       06 59 28.0 +2.2
ASAJ                                  pmax    pmax
       comp=Z,30nm,0.8s
ASAJ                                  MLR     MLR
       comp=Z,296nm,20.6s
KTH    Kantishna Hill    21.96  45   eP      P       06 59 26.3 -1.1
       comp=Z,112nm,0.9s
RC01   Rabbit Creek A    22.03  51   eP      P       06 59 26.9 -1.1
       comp=Z,40nm,1.0s
BPAW   Bear Paw Mtn.     22.09  43   eP      P       06 59 27.6 -1.0
       comp=Z,26nm,0.8s
TRF    Thorofare Moun    22.22  45   eP      P       06 59 29.1 -1.1
       comp=Z,122nm,1.0s
MLY    Manley            22.46  41   eP      P       06 59 31.5 -1.1
       comp=Z,50nm,0.9s
GHO    Glory Hole Cre    22.51  50   eP      P       06 59 34.2 +1.0
       comp=Z,50nm,1.0s
ERM    Erimo             22.67 256   eP      P       06 59 37.2 +2.3
       comp=Z,118nm,1.4s
ERM    Erimo             22.67 256⇑eP      P       06 59 37.2 +2.3
ERM                                   pmax    pmax
       comp=Z,80nm,1.7s
BWN    Browne            22.75  43   eP      P       06 59 36.9 +1.3
       comp=Z,468nm,1.0s
SML    Sawmill           22.80  50   eP      P       06 59 34.7 -1.5
       comp=Z,163nm,0.9s
SML    Sawmill           22.80  50   eP      P       06 59 34.7 -1.5
SML                                   pmax    pmax
       comp=Z,163nm,0.9s
GRNR   Gornyy            22.84 281   eP      P       06 59 40.3 +3.6
GRNR                                  pmax    pmax
       comp=Z,63nm,1.0s
MCK    McKinley          22.87  45   eP      P       06 59 35.1 -1.8
       comp=Z,99nm,1.0s
MCK    McKinley          22.87  45   eP      P       06 59 35.1 -1.8
MCK                                   pmax    pmax
       comp=Z,99nm,1.0s
SCM    Sheep Creek Mo    23.27  50   eP      P       06 59 39.5 -1.6
       comp=Z,114nm,0.8s
SCM    Sheep Creek Mo    23.27  50   eP      P       06 59 39.5 -1.6
SCM                                   pmax    pmax
       comp=Z,114nm,0.8s
GLI    Glacier Island    23.29  52   eP      P       06 59 39.7 -1.6
       comp=Z,38nm,0.7s
GLI                                  ePcP    PcP     07 03 29.3 +1.5
WRH    Wood River Hil    23.40  43   eP      P       06 59 40.8 -1.5
       comp=Z,86nm,0.8s
COLD   Coldfoot          23.43  36   eP      P       06 59 40.6 -1.9
       comp=Z,26nm,1.0s
DHY    Denali Highway    23.43  47   eP      P       06 59 40.9 -1.9
       comp=Z,30nm,0.8s
MDM    Murphy Dome       23.46  42   eP      P       06 59 40.9 -2.0
       comp=Z,76nm,0.9s
CCB    Clear Creek Bu    23.56  43   eP      P       06 59 42.9 -0.9
       comp=Z,72nm,0.8s
FID    Port Fidalgo      23.58  53   eP      P       06 59 41.1 -3.0
       comp=Z,54nm,1.0s
COLA   College           23.60  42   eP      P       06 59 42.9 -1.2
       comp=Z,134nm,0.9s
COLA   College           23.60  42   eP      P       06 59 42.9 -1.2
COLA                                  pmax    pmax
       comp=Z,134nm,0.9s
HDA    Harding Lake      23.87  43   eP      P       06 59 44.3 -2.6
       comp=Z,31nm,0.9s
KLU    Klutina           23.91  51   eP      P       06 59 45.5 -1.8
       comp=Z,56nm,1.2s
EYAK   Cordova Ski Ar    23.93  53   eP      P       06 59 45.9 -1.5
       comp=Z,38nm,1.2s
DIV    Divide            23.95  52   eP      P       06 59 45.6 -2.1
       comp=Z,18nm,0.9s
IL1    Eielson Array     23.98  43   eP      P       06 59 45.4 -2.5
ILAR   Eielson Array     23.98  43    P      P       06 59 45.8 -2.0
       comp=Z,11nm,0.6s,baz=250,slow=9.2,SNR=95
ILB    Eielson Array     23.98  43   eP      P       06 59 45.6 -2.2
TOLK   Toolik Lake Re    24.21  33    P      P       06 59 48.6 -1.4
       baz=246
TOLK   Toolik Lake Re    24.21  33   eP      P       06 59 48.1 -1.8
       comp=Z,52nm,0.7s
PAX    Paxson            24.27  47   eP      P       06 59 49.2 -1.5
       comp=Z,104nm,1.2s
PAX    Paxson            24.27  47   eP      P       06 59 49.2 -1.5
PAX                                   pmax    pmax
       comp=Z,104nm,1.2s
HARP   HAARP             24.35  49   eP      P       06 59 49.4 -1.9
       comp=Z,74nm,0.9s
RAGM   Ragged Mountai    24.46  54   eP      P       06 59 50.3 -2.1
       comp=Z,59nm,0.6s
BMRM   Bremner River     24.51  52   eP      P       06 59 51.2 -1.6
       comp=Z,29nm,0.9s
RIDG   Independ'e Rid    24.66  45   eP      P       06 59 51.5 -2.6
       comp=Z,32nm,0.9s
DOT    Dot Lake          24.99  46   eP      P       06 59 56.5 -0.6
       comp=Z,57nm,0.9s
SCRK   Sand Creek        25.07  45   eP      P       06 59 56.2 -1.7
       comp=Z,37nm,1.0s
FYU    Fort Yukon        25.07  39   eP      P       06 59 57.1 -0.7
       comp=Z,134nm,1.1s
YAK    Yakutsk           25.22 310    P      P       06 59 58.9 -0.2
       comp=Z,12nm,0.5s,baz=262,slow=22,SNR=32
YAK                                   LR      LR     07 10 08.1
       comp=Z,2µm,18.7s,baz=90,slow=37
YAK    Yakutsk           25.22 310   eP      P       06 59 58.7 -0.4
       comp=Z,409nm,0.9s
YAK    Yakutsk           25.22 310d iP      P       06 59 58.6 -0.5
YAK                                  e*PP    sP      07 00 08.1 +0.6
YAK                                  ePPP    PPP     07 00 43.4
YAK                                  eS      S       07 04 19.7 -3.5
YAK                                  eSSS    SSS     07 05 21.3
YAK                                   pmax    pmax
       comp=Z,422nm,1.0s
YAK                                   pmax    pmax
       comp=N,56nm,1.1s
YAK                                   pmax    pmax
       comp=E,266nm,1.1s
YAK                                   smax    smax
       comp=N,163nm,1.8s
YAK                                   smax    smax
       comp=E,163nm,1.9s
YAK                                   MLR     MLR
       comp=Z,2µm,20.0s
YAK                                   MLR     MLR
       comp=E,1µm,18.0s
YAK                                   MLR     MLR
       comp=N,919nm,18.0s
TGL    Tana Glacier      25.38  53   eP      P       07 00 00.5 -0.2
       comp=N,48nm,0.9s
BALM   Baldy             25.61  52   eP      P       07 00 01.2 -1.7
       comp=N,39nm,1.2s
BALM   Baldy             25.61  52   eP      P       07 00 01.2 -1.7
BALM                                  pmax    pmax
       comp=Z,39nm,1.2s
KLR    Kul'dur           26.20 280    P      P       07 00 08.5 +0.4
       comp=Z,1.2nm,0.7s,baz=63,slow=8.4,SNR=23
KLR                                   LR      LR     07 12 33.1
       comp=Z,103nm,18.0s,baz=73,slow=41
KLR    Kul'dur           26.20 280⇑eP      P       07 00 08.2 +0.1
EGAK   Eagle             26.39  44   eP      P       07 00 07.3 -2.4
       comp=Z,28nm,0.7s
DAWY   Dawson            27.09  45   eP      P       07 00 14.9 -1.2
       comp=Z,34nm,0.9s
DAWY                                 ePcP    PcP     07 03 36.7 +0.4
ZEA    Zeya              27.42 292   eP      P       07 00 19.4 +0.3
ZEA                                  eS      S       07 04 49.0 -9.1
ZEA                                   pmax    pmax
       comp=Z,55nm,1.4s
ZEA                                   smax    smax
       comp=N,400nm,10.0s
ZEA                                   MLR     MLR
       comp=E,1µm,14.0s
ZEA                                   MLR     MLR
       comp=Z,2µm,14.0s
TIXI   Tiksi             27.64 331    P      P       07 00 20.5 -0.3
       comp=Z,18nm,0.7s,baz=117,slow=12,SNR=8.6
TIXI   Tiksi             27.64 331   eP      P       07 00 20.2 -0.6
       comp=Z,21nm,0.7s
TIXI   Tiksi             27.64 331c iP      P       07 00 20.0 -0.8
TIXI                                  pmax    pmax
       comp=Z,35nm,1.3s
TIXI                                  MLR     MLR
       comp=Z,1µm,15.0s
USRK   Ussuriysk Ar.     28.30 270    P      P       07 00 27.5 +0.5
       comp=Z,4.1nm,0.8s,baz=52,slow=9.5
USRK                                  LR      LR     07 11 00.4
       comp=Z,488nm,21.8s,baz=57,slow=35
MAJO   Matsushiro        29.12 252   eP      P       07 00 36.6 +2.1
       comp=Z,32nm,1.1s
MAJO   Matsushiro        29.12 252c iP      P       07 00 36.5 +2.1
MAJO                                  pmax    pmax
       comp=Z,11nm,1.0s
MAT    Matsushiro        29.12 252    P      P       07 00 36.6 +2.2
MAT                                   S      S       07 05 28.0 +2.7
MJAR   Matsushiro Arr    29.12 252    P      P       07 00 35.4 +1.0
       comp=Z,2.5nm,0.8s,baz=45,slow=6.7,SNR=6.9
MJB9   Matsu-Tunnel      29.12 252   eP      P       07 00 36.7 +2.3
       comp=Z,32nm,1.1s
BESE   Bessie Mountai    29.60  57   eP      P       07 00 37.3 -1.2
       comp=Z,16nm,1.3s
SIT    Sitka             29.65  60   eP      P       07 00 37.9 -1.0
       comp=Z,20nm,1.0s
SIT                                  ePcP    PcP     07 03 43.6 +1.0
SIT    Sitka             29.65  60   eP      P       07 00 37.9 -1.0
SIT                                  e               07 03 43.7
SIT                                   pmax    pmax
       comp=Z,20nm,1.0s
INK    Inuvik            29.83  37    P      P       07 00 39.3 -1.0
       comp=Z,6.0nm,0.7s,baz=278,slow=12,SNR=8.1
INK                                   LR      LR     07 13 44.8
       comp=Z,897nm,18.7s,baz=248,slow=39
INK    Inuvik            29.83  37   eP      P       07 00 38.8 -1.5
       comp=Z,21nm,1.0s
JIS    Juneau Island     29.90  57   eP      P       07 00 40.6 -0.4
       comp=Z,11nm,0.9s
JIS                                  ePcP    PcP     07 03 44.5 +1.2
WRAK   Wrangell Islan    31.40  60   eP      P       07 00 54.5 +0.2
       comp=Z,9.9nm,0.8s
DLBC   Dease Lake        32.11  56    LR      LR     07 15 30.1
       comp=Z,1µm,18.4s,baz=281,slow=39
DLBC   Dease Lake        32.11  56   eP      P       07 01 00.7  0.0
       comp=Z,16nm,1.0s
H02N1  VAN INLET T-PH    32.26  66    P      P       07 01 01.9 -0.1
H02S1  DAWSON INLET T    32.32  66    P      P       07 01 01.5 -0.9
CN2    Changchun         32.54 275   eP      P       07 01 04.4 -0.1
CN2                                  epP     sP      07 01 14.0 +1.1
CN2                                  eS      S       07 06 16.8 -1.8
CN2                                   pmax    pmax
       comp=Z,10.0nm,1.0s
CN2                                   LR      LR
       comp=Z,1µm,16.0s
CN2                                   LR      LR
       comp=Z,680nm,16.0s
CN2                                   LR      LR
       comp=Z,850nm,18.0s
H11N2  WAKE ISLAND Hy    32.63 191    T      T       07 36 03.4
       baz=7.1,slow=76,SNR=107
H11N3  WAKE ISLAND Hy    32.65 191    T      T       07 36 00.0
       baz=7.1,slow=76,SNR=121
H11N1  WAKE ISLAND Hy    32.65 191    T      T       07 36 02.1
       baz=7.1,slow=76,SNR=142
BOD    Bodaibo           33.53 304   eP      P       07 01 11.9 -1.1
BOD                                   pmax    pmax
       comp=Z,35nm,1.5s
H11S1  WAKE ISLAND Hy    33.87 191    T      T       07 37 27.2
       baz=6.7,slow=76,SNR=106
H11S3  WAKE ISLAND Hy    33.88 191    T      T       07 37 36.7
       baz=6.7,slow=76,SNR=66
H11S2  WAKE ISLAND Hy    33.88 191    T      T       07 37 36.9
       baz=6.7,slow=76,SNR=32
KSRS   Korea Array       34.72 263    P      P       07 01 26.1 +2.7
       comp=Z,5.0nm,0.8s,baz=58,slow=8.3,SNR=14
KSRS                                  LR      LR     07 16 46.2
       comp=Z,293nm,18.2s,baz=58,slow=38
KSRS   Korea Array       34.72 263    P      P       07 01 26.2 +2.7
KSRS                                  pmax    pmax
       comp=Z,4.0nm,0.7s
KSRS                                  MLR     MLR
       comp=Z,293nm,18.2s
KS01   Wonju Array Si    34.72 263   eP      P       07 01 25.0 +1.5
KSAR   Wonju Array Be    34.75 263    P      P       07 01 26.1 +2.4
KSAR   Wonju Array Be    34.75 263    P      P       07 01 26.2 +2.4
BBB    Bella Bella       35.16  66    LR      LR     07 14 28.0
       comp=Z,184nm,18.2s,baz=286,slow=34
BBB    Bella Bella       35.16  66   eP      P       07 01 26.9 -0.2
       comp=Z,23nm,0.8s
TJN    Taejon            35.75 262⇑eP      P       07 01 35.3 +2.9
JNU    Nakatsue          35.83 255    P      P       07 01 35.4 +2.2
       comp=Z,5.3nm,0.8s,baz=37,slow=5.1,SNR=4.8
JNU    Nakatsue          35.83 255   eP      P       07 01 35.2 +2.1
       comp=Z,45nm,1.3s
DL2    Dalian            37.69 270    P      P       07 01 49.6 +0.7
DL2                                   S      S       07 07 37.0 -0.8
DL2                                   pmax    pmax
       comp=Z,64nm,0.8s
DL2                                   LR      LR
       comp=Z,760nm,12.8s
DL2                                   LR      LR
       comp=Z,610nm,13.3s
DL2                                   LR      LR
       comp=Z,600nm,15.4s
YKW3   Yellowknife Ar    38.31  45   eP      P       07 01 52.8 -1.0
       comp=Z,13nm,0.8s
YKA    Yellowknife Ar    38.33  45    P      P       07 01 53.1 -0.9
       comp=Z,11nm,0.8s,baz=288,slow=8.0,SNR=62
YKA                                   ScP    ScP     07 07 52.6 -1.3
       comp=Z,1.8nm,1.1s,baz=302,slow=3.5,SNR=5.3
LLLB   Lillooet          39.36  65   eP      P       07 02 02.4 -0.4
       comp=Z,31nm,0.8s
NLWA   Neilton Lookou    39.81  71   eP      P       07 02 06.8 +0.2
       comp=Z,26nm,1.1s
A04D   Lummi Island      39.81  68    P      P       07 02 05.7 -0.8
       baz=300
BJI    Beijing           40.37 276⇓eP      P       07 02 13.4 +2.1
BJI                                   S      S       07 08 20.9 +2.8
BJI                                   pmax    pmax
       comp=Z,16nm,1.1s
BJI                                   LR      LR
       comp=Z,1µm,19.2s
BJI                                   LR      LR
       comp=Z,930nm,19.0s
BJI                                   LR      LR
       comp=Z,690nm,28.4s
B05A   Bryant            40.39  69    P      P       07 02 10.9 -0.5
       baz=301,SNR=10
E03A   Lebam             40.43  72   eP      P       07 02 12.9 +1.3
       comp=Z,27nm,1.0s
B06A   Marblemount       40.61  68   eP      P       07 02 13.1  0.0
       comp=Z,37nm,1.4s
D05A   Enumclaw          41.01  70   eP      P       07 02 17.7 +1.2
       comp=Z,41nm,1.1s
RES    Resolute Bay      41.16  24    LR      LR     07 20 47.7
       comp=Z,485nm,20.5s,baz=286,slow=38
RES    Resolute Bay      41.16  24   eP      P       07 02 16.6 -0.7
       comp=Z,20nm,1.2s
RES    Resolute Bay      41.16  24   eP      P       07 02 16.6 -0.7
RES                                   pmax    pmax
       comp=Z,20nm,1.2s
G03D   McMinnville, O    41.32  73    P      P       07 02 18.9 -0.2
       baz=303
LON    Longmire          41.34  71   eP      P       07 02 18.2 -1.1
       comp=Z,9.4nm,0.8s
LON    Longmire          41.34  71   eP      P       07 02 18.2 -1.1
LON                                   pmax    pmax
       comp=Z,9.0nm,0.8s
TLY    Talaya            41.44 298   eP      P       07 02 20.6 +0.6
       comp=Z,21nm,1.2s
TLY    Talaya            41.44 298   eP      P       07 02 20.6 +0.6
TLY                                  e               07 04 03.6
TLY                                  eSS     SS      07 11 37.8  0.0
TLY                                   pmax    pmax
       comp=Z,14nm,0.9s
TLY                                   MLR     MLR
       comp=Z,379nm,12.0s
ULN    Ulaanbaatar       41.45 291   eP      P       07 02 21.2 +0.9
       comp=Z,22nm,1.1s
ULN    Ulaanbaatar       41.45 291c eP      P       07 02 21.1 +0.8
ULN                                   pmax    pmax
       comp=Z,22nm,1.0s
COR    Corvallis         41.64  74   eP      P       07 02 22.0 +0.3
       comp=Z,47nm,1.3s
COR    Corvallis         41.64  74   eP      P       07 02 22.0 +0.3
COR                                   pmax    pmax
       comp=Z,47nm,1.3s
LTY    Liberty           41.73  69   eP      P       07 02 22.3 -0.2
       comp=Z,14nm,0.8s
SONA1  Songino Array     41.83 292   eP      P       07 02 23.9 +0.5
SONM   Songino Array     41.84 292    P      P       07 02 24.4 +0.9
       comp=Z,7.0nm,0.6s,baz=61,slow=8.7,SNR=31
SONM                                  PcP    PcP     07 04 19.0 -0.1
       comp=Z,2.7nm,0.8s,baz=29,slow=3.3,SNR=3.3
SONM                                  ScP    ScP     07 08 08.5 +0.5
       comp=Z,4.9nm,1.2s,baz=44,slow=1.7,SNR=8.9
SONM                                  LR      LR     07 21 49.8
       comp=Z,580nm,18.5s,baz=56,slow=39
B08A   Colville Reser    41.92  67   eP      P       07 02 23.4 -0.6
       comp=Z,25nm,0.9s
I03D   Drain, OR         42.11  75    P      P       07 02 24.4 -1.2
       baz=305
TIA    Tai'an            42.17 271    P      P       07 02 27.5 +1.4
TIA                                   pmax    pmax
       comp=Z,28nm,1.6s
H04A   Detroit Lake      42.25  73   eP      P       07 02 26.4 -0.3
       comp=Z,19nm,1.1s
I04A   Tendick Farm,     42.62  75    P      P       07 02 29.4 -0.4
       baz=305,SNR=5.4
HHC    Hu-ho-hao-te      42.70 280   eP      P       07 02 31.4 +0.8
HHC                                   pP     sP      07 02 44.1 +5.0
HHC                                   S      S       07 08 53.8 +0.9
HHC                                   sS     sS      07 09 09.5 +6.5
HHC                                   ScS    ScS     07 12 26.0 -4.5
HHC                                   pmax    pmax
       comp=Z,15nm,0.9s
HHC                                   pmax    pmax
       comp=Z,200nm,4.1s
HHC                                   LR      LR
       comp=Z,780nm,15.6s
HHC                                   LR      LR
       comp=Z,600nm,15.6s
C09A   Chrisman Ranch    42.82  67   eP      P       07 02 30.0 -1.3
       comp=Z,29nm,1.0s
D08A   Wollman Farm,     42.85  69   eP      P       07 02 31.8 +0.3
       comp=Z,18nm,0.9s
HAWA   Hanford           42.86  70   eP      P       07 02 30.9 -0.7
       comp=Z,32nm,0.8s
MOY    Mondy             42.88 299   eP      P       07 02 32.2 +0.3
MOY                                   pmax    pmax
       comp=Z,32nm,2.2s
F07A   Phinny Hill Vi    42.90  71   eP      P       07 02 32.8 +0.8
       comp=Z,27nm,0.8s
I05D   Terrebonne, OR    42.94  73    P      P       07 02 31.8 -0.6
       baz=305
E08A   Dider Farm, El    43.08  69   eP      P       07 02 32.1 -1.2
       comp=Z,21nm,1.0s
J04D   Umpqua Nationa    43.11  75    P      P       07 02 33.4 -0.6
       baz=305
PINE   Pine Mountain     43.49  74   eP      P       07 02 37.1 +0.1
       comp=Z,21nm,1.4s
E09A   Wood Farm, Sta    43.59  69   eP      P       07 02 36.4 -1.2
       comp=Z,26nm,1.1s
J05D   Fort Rock, OR     43.61  75    P      P       07 02 37.6 -0.3
       baz=306,SNR=7.0
YBH    Yreka Blue Hor    43.63  77    P      P       07 02 38.5 +0.4
       comp=Z,8.3nm,0.9s,baz=279,slow=6.1,SNR=11
YBH    Yreka Blue Hor    43.63  77   eP      P       07 02 37.4 -0.7
       comp=Z,15nm,1.2s
K04D   Chiloquin, OR     43.68  76    P      P       07 02 37.8 -0.7
       baz=306
G08A   Pilot Rock        43.80  71   eP      P       07 02 39.2 -0.2
       comp=Z,12nm,1.4s
NJ2    Nanjing           43.87 265   eP      P       07 02 41.4 +1.5
NJ2                                   pmax    pmax
       comp=Z,15nm,0.5s
N02D   Trinity Center    44.09  78    P      P       07 02 40.9 -0.8
       baz=307
M04C   Macdoel           44.13  77    P      P       07 02 41.4 -0.7
       baz=307
K05A   Summer Lake       44.14  75   eP      P       07 02 41.8 -0.4
       comp=Z,19nm,1.1s
K05A                                 ePP     PcP     07 04 27.3 +0.3
I07A   Izee              44.17  73   eP      P       07 02 42.4  0.0
       comp=Z,7.8nm,0.9s
F10A   Beach Ranch, E    44.42  69   eP      P       07 02 43.6 -0.8
       comp=Z,15nm,1.0s
WALA   Waterton Lakes    44.59  64   eP      P       07 02 44.8 -0.9
       comp=Z,38nm,0.9s
WALA                                 ePcP    PcP     07 04 29.0 +0.7
GUMO   Guam              44.60 221    LR      LR     07 18 30.1
       comp=Z,342nm,21.8s,baz=62,slow=32
KRAR   Krasnoyarsk       44.85 308   i P     P       07 02 44.5 -2.9
MOD    Modoc Plateau     44.98  76   eP      P       07 02 48.7 -0.2
       comp=Z,18nm,1.3s
BMO    Blue Mountains    45.02  70   eP      P       07 02 47.3 -1.8
       comp=Z,14nm,0.9s
BMO    Blue Mountains    45.02  70   eP      P       07 02 47.3 -1.8
BMO                                   pmax    pmax
       comp=Z,14nm,0.9s
O03D   Paynes Creek      45.05  78    P      P       07 02 48.4 -1.0
       baz=308
JTMT   Jette             45.11  65   eP      P       07 02 48.7 -1.1
       comp=Z,21nm,1.2s
J08A   Circle Bar Ran    45.20  73   eP      P       07 02 50.3 -0.3
       comp=Z,8.6nm,1.1s
ORV    Oroville          45.69  79   eP      P       07 02 54.3  0.0
       comp=Z,6.2nm,0.8s
ORV    Oroville          45.69  79   eP      P       07 02 54.3  0.0
ORV                                   pmax    pmax
       comp=Z,6.0nm,0.8s
MSO    Missoula          45.82  66    P      P       07 02 53.8 -1.6
       baz=305
MSO    Missoula          45.82  66   eP      P       07 02 54.6 -0.8
       comp=Z,28nm,1.2s
BEKR   Beckworth         46.19  78   eP      P       07 02 58.9 +0.4
       comp=Z,8.8nm,1.2s
AFDM   Forest Hills D    46.39  79   eP      P       07 02 58.3 -1.6
       comp=Z,9.3nm,1.5s
MFID   Camas Ranch       46.72  71   eP      P       07 03 01.5 -1.1
PAHR   Pah Rah Range     46.87  77   eP      P       07 03 02.5 -1.4
       comp=Z,9.9nm,1.1s
VCNR   Virginia City     46.97  78   eP      P       07 03 03.8 -0.8
       comp=Z,11nm,1.1s
HVS    Khovu-Aksy        47.03 302⇓eP      P       07 03 05.1 +0.2
HVS                                   pmax    pmax
       comp=Z,17nm,0.8s
HRY    Holter Researc    47.07  65   eP      P       07 03 04.5 -0.7
PNTR   Pine Nut          47.13  78   eP      P       07 03 05.5 -0.5
       comp=Z,18nm,0.8s
LRM    Limekiln Ridge    47.24  66   eP      P       07 03 06.7  0.0
CMB    Columbia Colle    47.32  80   eP      P       07 03 07.8 +0.6
       comp=Z,13nm,1.4s
CMB    Columbia Colle    47.32  80   eP      P       07 03 07.8 +0.6
CMB                                   pmax    pmax
       comp=Z,13nm,1.4s
YERR   Yerington         47.41  78   eP      P       07 03 07.1 -1.0
       comp=Z,15nm,1.3s
DLMT   Dillon            47.43  67   eP      P       07 03 07.1 -1.0
       comp=Z,4.9nm,0.9s
DLMT                                 ePcP    PcP     07 04 39.0 +0.7
HLID   Hailey            47.46  70    P      P       07 03 07.3 -1.1
       baz=307,SNR=17
HLID   Hailey            47.46  70   eP      P       07 03 07.3 -1.1
       comp=Z,7.7nm,0.9s
EGMT   Eagleton          47.46  63    P      P       07 03 06.6 -1.6
       baz=305,SNR=9.3
EGMT   Eagleton          47.46  63   eP      P       07 03 06.9 -1.3
       comp=Z,18nm,0.8s
WAKR   Walker            47.60  79   eP      P       07 03 08.9 -0.6
       comp=Z,9.4nm,1.2s
MCMT   McKenzie Canyo    47.60  68   eP      P       07 03 08.2 -1.3
FFC    Flin Flon         47.69  51   eP      P       07 03 07.8 -2.0
       comp=Z,7.4nm,0.9s
FFC    Flin Flon         47.69  51   eP      P       07 03 07.8 -2.0
FFC                                   pmax    pmax
       comp=Z,7.0nm,0.9s
WHN    Wuhan             47.69 267  ⇑P      P       07 03 11.3 +1.2
BMN    Battle Mountai    47.72  75   eP      P       07 03 09.6 -0.8
       comp=Z,12nm,1.2s
BMN    Battle Mountai    47.72  75   eP      P       07 03 09.6 -0.8
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BMN				pmax	pmax		
	comp=Z,11nm,1.2s						
BOZ	**Bozeman (W)**	**47.84**	**66**	P	**P**	**07 03 09.8**	**-1.5**
	baz=306,SNR=25						
BOZ	**Bozeman (W)**	**47.84**	**66**	*e*P	**P**	**07 03 09.7**	**-1.6**
	comp=Z,22nm,1.2s						
BOZ	**Bozeman (W)**	**47.84**	**66**	*e*P	**P**	**07 03 09.7**	**-1.6**
BOZ				pmax	pmax		
	comp=Z,22nm,1.2s						
KVN	**Kaiserville**	**48.06**	**77**	*e*P	**P**	**07 03 11.5**	**-1.6**
	comp=Z,6.0nm,1.1s						
KVN	**Kaiserville**	**48.06**	**77**	*e*P	**P**	**07 03 11.5**	**-1.6**
KVN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
RYN	**Ryan**	**48.07**	**78**	*e*P	**P**	**07 03 12.8**	**-0.4**
	comp=Z,7.1nm,1.0s						
NV01	**Mina Array Sit**	**48.33**	**78**	*e*P	**P**	**07 03 14.0**	**-1.3**
NVAR	**Mina Array Bea**	**48.33**	**78**	P	**P**	**07 03 14.9**	**-0.3**
	comp=Z,4.9nm,0.9s,baz=291,slow=7.3,SNR=22						
NVAR				ScP	**ScP**	**07 08 35.4**	**+0.4**
	comp=Z,0.1nm,0.3s,baz=291,slow=2.5,SNR=3.5						
NVAR				LR	LR	07 20 23.5	
	comp=Z,528nm,21.3s,baz=66,slow=32						
MDPB	**Devils Postpil**	**48.37**	**79**	*e*P	**P**	**07 03 15.1**	**-0.5**
	comp=Z,8.7nm,1.1s						
QLMT	**Earthquake Lak**	**48.41**	**67**	*e*P	**P**	**07 03 14.9**	**-0.9**
NV11	**Mina Array Sit**	**48.42**	**78**	*e*P	**P**	**07 03 15.0**	**-0.8**
	comp=Z,0.4nm,0.8s						
OMMB	**Old Mammoth Mi**	**48.43**	**79**	*e*P	**P**	**07 03 15.8**	**-0.4**
	comp=Z,9.8nm,1.2s						
YHB	**Horse Butte**	**48.59**	**67**	*e*P	**P**	**07 03 16.1**	**-1.1**
	comp=Z,22nm,0.9s						
XAN	**Xi'an**	**48.65**	**275**	P	**P**	**07 03 18.8**	**+1.2**
XAN				pP	sP	07 03 29.0	+2.9
XAN				sP	pP	07 03 32.9	+9.2
XAN				PP	**PP**	**07 05 10.1**	**-0.3**
XAN				S	**S**	**07 10 13.0**	**-5.6**
XAN				sS	sS	07 10 29.5	+0.7
XAN				ScS	**ScS**	**07 13 06.1**	**-2.9**
XAN				pmax	pmax		
	comp=Z,18nm,1.1s						
XAN				pmax	pmax		
	comp=Z,360nm,4.8s						
XAN				LR	LR		
	comp=Z,730nm,15.5s						
XAN				LR	LR		
	comp=Z,730nm,16.5s						
XAN				LR	LR		
	comp=Z,670nm,17.6s						
YMR	**Madison River**	**48.77**	**67**	*e*P	**P**	**07 03 17.5**	**-1.1**
	comp=Z,20nm,1.1s						
KBS	**Kingsbay**	**48.80**	**355**	*e*P	**P**	**07 03 17.8**	**-0.3**
	comp=Z,21nm,1.0s						
KBS	**Kingsbay**	**48.80**	**355**	*e*P	**P**	**07 03 17.8**	**-0.3**
KBS				pmax	pmax		
	comp=Z,21nm,1.0s						
GCMT	**Greycliff**	**48.83**	**65**	*e*P	**P**	**07 03 17.8**	**-1.1**
PAGB	**Antelope Grade**	**48.90**	**82**	*e*P	**P**	**07 03 18.8**	**-0.6**
	comp=Z,20nm,1.1s						
YFT	**Old Faithful**	**48.98**	**67**	*e*P	**P**	**07 03 19.8**	**-0.3**
	comp=Z,11nm,0.7s						
YPP	**Pitchstone Pla**	**49.10**	**67**	*e*P	**P**	**07 03 21.1**	**-0.1**
	comp=Z,9.9nm,1.0s						
H17A	**Grant Village**	**49.16**	**67**	P	**P**	**07 03 21.1**	**-0.5**
	baz=308,SNR=14						
H17A	**Grant Village**	**49.16**	**67**	*e*P	**P**	**07 03 22.1**	**+0.5**
	comp=Z,13nm,0.9s						
IMW	**Indian Meadow**	**49.26**	**68**	*e*P	**P**	**07 03 21.2**	**-1.1**
	comp=Z,6.9nm,0.9s						
KULLO	**Kullorsuaq**	**49.26**	**16**	⇑*i*P	**P**	**07 03 21.0**	**-0.6**
	comp=Z,116nm,1.2s						
SPA0	**Spitsbergen Ar**	**49.26**	**354**	*e*P	**P**	**07 03 20.9**	**-0.8**
SPA0	**Spitsbergen Ar**	**49.26**	**354**	*e*P	**P**	**07 03 20.3**	**-1.4**
SPITS	**Spitsbergen Ar**	**49.26**	**354**	P	**P**	**07 03 20.6**	**-1.1**
	comp=Z,47nm,0.8s,baz=21,slow=12,SNR=35						
SPITS				LR	LR	07 23 26.9	
	comp=Z,692nm,20.2s,baz=10.0,slow=35						
FLWY	**Flagg Ranch**	**49.28**	**67**	*e*P	**P**	**07 03 22.1**	**-0.4**
	comp=Z,12nm,0.8s						
FXWY	**Fox Creek**	**49.36**	**68**	*e*P	**P**	**07 03 21.6**	**-1.5**
	comp=Z,4.4nm,1.3s						
RLMT	**Red Lodge**	**49.45**	**65**	P	**P**	**07 03 22.7**	**-1.0**
	baz=308,SNR=25						
RLMT	**Red Lodge**	**49.45**	**65**	*e*P	**P**	**07 03 23.5**	**-0.2**
	comp=Z,29nm,1.1s						
MOOW	**Moose Ponds**	**49.46**	**68**	*e*P	**P**	**07 03 22.9**	**-0.9**
	comp=Z,2.6nm,0.9s						
TPAW	**Teton Pass**	**49.50**	**68**	*e*P	**P**	**07 03 23.4**	**-0.8**
	comp=Z,4.3nm,0.9s						
VES	**Vestal, Richgr**	**49.53**	**81**	P	**P**	**07 03 24.0**	**-0.3**
	baz=311						
LOHW	**Long Hollow**	**49.62**	**68**	*e*P	**P**	**07 03 24.6**	**-0.5**
	comp=Z,3.8nm,0.9s						
SNOW	**Snow King Moun**	**49.63**	**68**	*e*P	**P**	**07 03 24.0**	**-1.1**
	comp=Z,6.3nm,1.1s						
REDW	**Red Top Meadow**	**49.63**	**68**	*e*P	**P**	**07 03 26.6**	**+1.4**
PKM	**Mcpherson Peak**	**49.72**	**83**	P	**P**	**07 03 25.6**	**-0.3**
	baz=312						
CWC	**Cottonwood Cre**	**49.75**	**80**	P	**P**	**07 03 25.8**	**-0.4**
	baz=311						
GRAC	**Grapevine Rang**	**49.82**	**79**	P	**P**	**07 03 26.0**	**-0.5**
	baz=311						
AHID	**Auburn Hatcher**	**49.86**	**69**	*e*P	**P**	**07 03 25.0**	**-1.9**
	comp=Z,8.3nm,0.9s						
ZAA0	**Zalesovo Array**	**49.86**	**309**	*e*P	**P**	**07 03 25.2**	**-1.3**
	comp=Z,4.9nm,0.8s						
ZALV	**Zalesovo Beam**	**49.86**	**309**	P	**P**	**07 03 24.7**	**-1.8**
	comp=Z,1.9nm,0.5s,baz=44,slow=6.6,SNR=7.5						
ZALV				LR	LR	07 26 31.7	
	comp=Z,769nm,18.1s,baz=65,slow=38						
R11A	**Troy Canyon, C**	**50.02**	**76**	P	**P**	**07 03 26.8**	**-1.4**
	baz=310,SNR=14						
R11A	**Troy Canyon, C**	**50.02**	**76**	*e*P	**P**	**07 03 27.2**	**-0.9**
	comp=Z,7.7nm,1.0s						
ISA	**Isabella, Lake**	**50.02**	**81**	P	**P**	**07 03 28.1**	**0.0**
	baz=312						
ISA	**Isabella, Lake**	**50.02**	**81**	*e*P	**P**	**07 03 27.6**	**-0.5**
	comp=Z,4.4nm,0.9s						
ISA	**Isabella, Lake**	**50.02**	**81**	*e*P	**P**	**07 03 27.6**	**-0.5**
ISA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SBC	**Santa Barbara**	**50.08**	**83**	P	**P**	**07 03 28.5**	**+0.1**
	baz=312						
NVS	**Novosibirsk**	**50.08**	**311**	⇓*i*P	**P**	**07 03 27.9**	**-0.2**
NVS				*e*		07 03 39.8	
NVS				*e*		07 05 25.3	
NVS				pmax	pmax		
	comp=Z,68nm,1.8s						
NVS				pmax	pmax		
	comp=N,21nm,1.7s						
NVS				pmax	pmax		
	comp=E,28nm,1.5s						
DAC	**Darwin (Calif)**	**50.16**	**80**	*e*P	**P**	**07 03 28.9**	**-0.3**
	comp=E,6.6nm,1.0s						
DAC	**Darwin (Calif)**	**50.16**	**80**	*e*P	**P**	**07 03 28.9**	**-0.3**
DAC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ARVC	**Arvin**	**50.16**	**82**	P	**P**	**07 03 29.2**	**+0.1**
	baz=312						
LAO	**LASA Array**	**50.19**	**62**	P	**P**	**07 03 28.4**	**-0.8**
	baz=308,SNR=15						
LAO	**LASA Array**	**50.19**	**62**	*e*P	**P**	**07 03 28.8**	**-0.4**
	comp=Z,30nm,1.0s						
DGMT	**Dagmar**	**50.20**	**59**	P	**P**	**07 03 27.9**	**-1.3**
	baz=307,SNR=5.2						
DGMT	**Dagmar**	**50.20**	**59**	*e*P	**P**	**07 03 28.0**	**-1.1**
	comp=Z,18nm,0.8s						
HWUT	**Hardware Ranch**	**50.32**	**70**	*e*P	**P**	**07 03 30.4**	**0.0**
	comp=Z,11nm,1.4s						
MPMC	**Manual Prospec**	**50.36**	**80**	P	**P**	**07 03 30.5**	**-0.3**
	baz=312,SNR=8.2						
LZH	**Lanzhou**	**50.40**	**280**	*e*P	**P**	**07 03 33.0**	**+2.0**
LZH				pP	sP	07 03 42.9	+3.3
LZH				sP	pP	07 03 46.8	+10
LZH				PcP	**PcP**	**07 04 53.3**	**+4.1**
LZH				PP	**PP**	**07 05 24.8**	**-1.6**
LZH				*e*S	**S**	**07 10 42.5**	**-0.8**
LZH				sS	sS	07 11 00.9	+7.4
LZH				SS	**SS**	**07 14 12.5**	**-4.2**
LZH				pmax	pmax		
	comp=Z,80nm,1.2s						
LZH				pmax	pmax		
	comp=Z,310nm,4.6s						
LZH				LR	LR		
	comp=Z,2µm,13.8s						
LZH				LR	LR		
	comp=Z,2µm,13.0s						
LZH				LR	LR		
	comp=Z,2µm,14.4s						
SCZ2	**Santa Cruz Isl**	**50.43**	**83**	P	**P**	**07 03 31.3**	**+0.2**
	baz=312						
HSPB	**Hornsund (broa**	**50.44**	**354**	*e*P	**P**	**07 03 29.8**	**-0.8**
FURC	**Furnace Creek,**	**50.47**	**79**	P	**P**	**07 03 30.5**	**-0.8**
	baz=311						
DUG	**Dugway, Tooele**	**50.48**	**73**	P	**P**	**07 03 30.1**	**-1.5**
	baz=310,SNR=9.3						
DUG	**Dugway, Tooele**	**50.48**	**73**	*e*P	**P**	**07 03 31.4**	**-0.2**
	comp=Z,17nm,1.1s						
DUG	**Dugway, Tooele**	**50.48**	**73**	P	**P**	**07 03 31.4**	**-0.2**
DUG				pmax	pmax		
	comp=Z,17nm,1.1s						
TPNV	**Topopah Spring**	**50.53**	**78**	P	**P**	**07 03 30.9**	**-1.1**
	baz=311,SNR=13						
TPNV	**Topopah Spring**	**50.53**	**78**	*e*P	**P**	**07 03 31.2**	**-0.7**
	comp=Z,11nm,0.8s						
TPNV	**Topopah Spring**	**50.53**	**78**	*e*P	**P**	**07 03 31.3**	**-0.7**
TPNV				pmax	pmax		
	comp=Z,11nm,0.8s						
OSI	**Osito Audit: C**	**50.57**	**82**	P	**P**	**07 03 31.1**	**-1.1**
	baz=312						
OSI	**Osito Audit: C**	**50.57**	**82**	*e*P	**P**	**07 03 32.6**	**+0.4**
	comp=Z,33nm,1.0s						
LRMC	**Laurel Mtn Rad**	**50.63**	**80**	P	**P**	**07 03 31.7**	**-1.1**
	baz=312						
GTA	**Gaotai**	**50.66**	**286**	⇑P	**P**	**07 03 34.0**	**+1.1**
GTA				pP	sP	07 03 44.3	+2.8
GTA				sP	pP	07 03 48.0	+8.9
GTA				PcP	**PcP**	**07 04 50.8**	**+0.7**
GTA				S	**S**	**07 10 50.3**	**+3.6**
GTA				sS	sS	07 11 06.1	+9.2
GTA				pmax	pmax		
	comp=Z,31nm,1.4s						
GTA				pmax	pmax		
	comp=Z,150nm,7.4s						
GTA				LR	LR		
	comp=Z,890nm,15.5s						
GTA				LR	LR		
	comp=Z,820nm,16.1s						
GTA				LR	LR		
	comp=Z,2µm,15.8s						
BLG	**Laguna Peak, P**	**50.70**	**83**	P	**P**	**07 03 32.3**	**-0.8**
	baz=312						
TCUT	**Toone Canyon**	**50.72**	**71**	*e*P	**P**	**07 03 32.5**	**-0.9**
	comp=Z,8.8nm,0.8s						
BW06	**Boulder Array**	**50.75**	**68**	P	**P**	**07 03 32.3**	**-1.4**
	baz=309,SNR=14						
BW06	**Boulder Array**	**50.75**	**68**	*e*P	**P**	**07 03 32.7**	**-0.9**
	comp=Z,9.3nm,0.9s						
PD31	**Pinedale Array**	**50.75**	**68**	*e*P	**P**	**07 03 32.6**	**-1.0**
PDAR	**Pinedale Array**	**50.75**	**68**	P	**P**	**07 03 32.6**	**-1.0**
	comp=Z,5.5nm,0.8s,baz=293,slow=3.6,SNR=42						
PDAR	**Pinedale Array**	**50.75**	**68**	*e*P	**P**	**07 03 32.4**	**-1.2**
CTU	**Camp Tracy**	**50.79**	**71**	*e*P	**P**	**07 03 34.2**	**+0.3**
	comp=Z,10nm,1.1s						
EDW2	**Edwards Air Fo**	**50.84**	**81**	P	**P**	**07 03 33.6**	**-0.6**
	baz=312						
PSUT	**Pine Spring**	**50.93**	**75**	*e*P	**P**	**07 03 34.1**	**-1.0**
	comp=Z,5.5nm,0.7s						
JLU	**Jordanelle**	**51.02**	**71**	*e*P	**P**	**07 03 35.1**	**-0.6**
	comp=Z,15nm,1.3s						
DECC	**Green Verdugo**	**51.05**	**82**	P	**P**	**07 03 34.9**	**-0.8**
	baz=312						
DGZ	**Jazzator, Alta**	**51.12**	**304**	*e*P	**P**	**07 03 36.3**	**0.0**
DGZ				pmax	pmax		
	comp=Z,7.0nm,1.1s						
PASC	**Pasadena Art C**	**51.20**	**82**	*e*P	**P**	**07 03 36.5**	**-0.4**
	comp=Z,29nm,1.2s						
DAG	**Danmarks Havn**	**51.23**	**3**	⇑*i*P	**P**	**07 03 35.4**	**-1.1**
	comp=Z,21nm,0.9s						
MWC	**Mount Wilson**	**51.24**	**82**	*e*P	**P**	**07 03 36.7**	**-0.7**
	comp=Z,38nm,1.0s						
MWC	**Mount Wilson**	**51.24**	**82**	*e*P	**P**	**07 03 36.7**	**-0.7**
MWC				pmax	pmax		
	comp=Z,38nm,1.0s						
GSC	**Goldstone, Bar**	**51.28**	**80**	P	**P**	**07 03 36.6**	**-1.0**
	baz=312,SNR=21						
GSC	**Goldstone, Bar**	**51.28**	**80**	*e*P	**P**	**07 03 37.3**	**-0.3**
	comp=Z,30nm,1.1s						
GSC	**Goldstone, Bar**	**51.28**	**80**	*e*P	**P**	**07 03 37.3**	**-0.3**
GSC				pmax	pmax		
	comp=Z,30nm,1.1s						
MPU	**Maple Canyon**	**51.29**	**72**	*e*P	**P**	**07 03 37.7**	**0.0**
	comp=Z,9.6nm,1.3s						
RRX	**Edison Barstow**	**51.45**	**81**	P	**P**	**07 03 37.8**	**-0.9**
	baz=312						
BFSC	**Mount Baldy Ra**	**51.47**	**82**	P	**P**	**07 03 37.8**	**-1.2**
	baz=313,SNR=5.3						
SHPR	**Sheep Range**	**51.48**	**78**	*e*P	**P**	**07 03 38.4**	**-0.7**
	comp=Z,4.7nm,1.0s						
CIS	**Catalina Islan**	**51.58**	**83**	P	**P**	**07 03 38.5**	**-1.2**
	baz=313						
TCRU	**Three Creeks R**	**51.72**	**74**	*e*P	**P**	**07 03 40.9**	**-0.1**
	comp=Z,12nm,1.1s						
TUQ	**Turquoise Moun**	**51.73**	**79**	P	**P**	**07 03 40.3**	**-0.6**
	baz=312						
CCUT	**Cedar City**	**51.87**	**76**	*e*P	**P**	**07 03 41.8**	**-0.3**
	comp=Z,8.1nm,1.0s						
HEC	**Hector,Ludlow**	**51.88**	**80**	P	**P**	**07 03 40.6**	**-1.5**
	baz=312						
BBRC	**Big Bear Solar**	**51.91**	**81**	P	**P**	**07 03 41.2**	**-1.3**
	baz=313,SNR=5.6						
MSU	**Marysvale**	**51.95**	**74**	*e*P	**P**	**07 03 42.4**	**-0.2**
MSU	**Marysvale**	**51.95**	**74**	*e*P	**P**	**07 03 42.4**	**-0.2**
SZCU	**Shurtz Canyon**	**52.01**	**75**	*e*P	**P**	**07 03 42.5**	**-0.6**
	comp=Z,6.2nm,1.3s						
TMUT	**Trail Mountain**	**52.01**	**72**	*e*P	**P**	**07 03 42.6**	**-0.6**
	comp=Z,15nm,1.0s						
P17A	**Butcher Ranch,**	**52.17**	**72**	*e*P	**P**	**07 03 44.2**	**0.0**
	comp=Z,14nm,1.3s						
MURC	**Murrieta**	**52.19**	**82**	P	**P**	**07 03 43.2**	**-1.1**
	baz=313,SNR=7.3						
MTPU	**Mount Pierson**	**52.25**	**74**	*e*P	**P**	**07 03 45.4**	**+0.3**
	comp=Z,9.1nm,1.1s						
LCMT	**Little Creek M**	**52.30**	**76**	*e*P	**P**	**07 03 46.5**	**+1.3**
	comp=Z,12nm,1.0s						
GMRC	**Granite Mounta**	**52.32**	**80**	P	**P**	**07 03 44.5**	**-0.9**
	baz=313,SNR=10						
P18A	**Preston Nutter**	**52.36**	**72**	*e*P	**P**	**07 03 45.8**	**0.0**
	comp=Z,9.8nm,1.1s						
LDFC	**Landfair**	**52.46**	**79**	*e*P	**P**	**07 03 45.4**	**-1.0**
	comp=Z,18nm,0.8s						
SRU	**San Rafael Swe**	**52.53**	**72**	*e*P	**P**	**07 03 46.8**	**-0.2**
	comp=Z,17nm,1.0s						
SRU	**San Rafael Swe**	**52.53**	**72**	*e*P	**P**	**07 03 46.8**	**-0.2**
SRU				pmax	pmax		
	comp=Z,17nm,1.0s						
KNB	**Kanab**	**52.55**	**76**	*e*P	**P**	**07 03 47.4**	**+0.3**
	comp=Z,25nm,1.4s						
KNB	**Kanab**	**52.55**	**76**	*e*P	**P**	**07 03 47.4**	**+0.3**
KNB				pmax	pmax		
	comp=Z,25nm,1.4s						
K22A	**Casper**	**52.55**	**66**	P	**P**	**07 03 45.8**	**-1.2**
	baz=310,SNR=6.3						
K22A	**Casper**	**52.55**	**66**	*e*P	**P**	**07 03 46.1**	**-0.9**
	comp=Z,9.9nm,0.9s						
PKCU	**Pink Cliffs**	**52.57**	**75**	*e*P	**P**	**07 03 47.8**	**+0.4**
	comp=Z,9.2nm,1.0s						
FRD	**Ford Ranch, An**	**52.62**	**82**	P	**P**	**07 03 47.2**	**-0.4**
	baz=313,SNR=6.8						
PFO	**Pinyon Flats O**	**52.63**	**81**	P	**P**	**07 03 46.7**	**-1.0**
	baz=313						
PFO	**Pinyon Flats O**	**52.63**	**81**	*e*P	**P**	**07 03 47.4**	**-0.3**
	comp=Z,8.7nm,1.1s						
PFO	**Pinyon Flats O**	**52.63**	**81**	*e*P	**P**	**07 03 47.4**	**-0.3**
PFO				pmax	pmax		
	comp=Z,9.0nm,1.1s						
XPFO	**Piæon Flat**	**52.63**	**81**	*e*P	**P**	**07 03 47.4**	**-0.3**
	comp=Z,7.8nm,1.0s						
BELC	**Belle Mtn. Jos**	**52.65**	**81**	P	**P**	**07 03 47.2**	**-0.7**
	baz=313						
109C	**Camp Elliot, M**	**52.73**	**83**	P	**P**	**07 03 47.8**	**-0.5**
	baz=313						
CPE	**Camp Elliot**	**52.73**	**83**	*e*P	**P**	**07 03 48.2**	**0.0**
	comp=Z,31nm,1.3s						
NEE2	**Needles Airpor**	**52.97**	**79**	P	**P**	**07 03 49.0**	**-1.0**
	baz=313						
RSSD	**Black Hills**	**52.99**	**63**	P	**P**	**07 03 49.0**	**-1.3**
	baz=310						
RSSD	**Black Hills**	**52.99**	**63**	*e*P	**P**	**07 03 49.7**	**-0.7**
	comp=Z,13nm,0.9s						
RSSD	**Black Hills**	**52.99**	**63**	*e*P	**P**	**07 03 49.7**	**-0.7**
RSSD				pmax	pmax		
	comp=Z,13nm,0.9s						
MDND	**Maddock**	**53.00**	**57**	P	**P**	**07 03 49.4**	**-0.6**
	baz=310,SNR=7.3						
MDND	**Maddock**	**53.00**	**57**	*e*P	**P**	**07 03 49.9**	**-0.2**
	comp=Z,49nm,0.8s						
IRM	**Iron Mountain**	**53.06**	**80**	P	**P**	**07 03 49.8**	**-1.0**
	baz=313,SNR=11						
BAR	**Barrett**	**53.14**	**82**	*e*P	**P**	**07 03 51.0**	**-0.3**
	comp=Z,16nm,1.0s						
MONP2	**Monument Peak**	**53.15**	**82**	P	**P**	**07 03 50.7**	**-0.9**
	baz=314,SNR=6.3						
O20A	**White River Ci**	**53.19**	**70**	P	**P**	**07 03 50.5**	**-1.3**
	baz=311,SNR=9.0						
O20A	**White River Ci**	**53.19**	**70**	*e*P	**P**	**07 03 51.0**	**-0.9**
	comp=Z,8.4nm,0.8s						
BC3	**Big Chuckawall**	**53.22**	**81**	P	**P**	**07 03 51.2**	**-0.8**
	baz=313						
ULM	**Lac du Bonnet**	**53.36**	**53**	P	**P**	**07 03 51.4**	**-1.3**
	comp=Z,7.5nm,0.6s,baz=305,slow=7.6,SNR=14						
ULM				LR	LR	07 27 31.9	
	comp=Z,552nm,18.5s,baz=318,slow=37						
ULM	**Lac du Bonnet**	**53.36**	**53**	*e*P	**P**	**07 03 51.7**	**-0.9**
	comp=Z,19nm,1.1s						
ULM	**Lac du Bonnet**	**53.36**	**53**	*e*P	**P**	**07 03 51.7**	**-0.9**
ULM				pmax	pmax		
	comp=Z,19nm,1.1s						
SWSC	**Sam W. Stewart**	**53.49**	**82**	P	**P**	**07 03 53.0**	**-0.8**
	baz=314						
IKP	**In-Ko-Pah, Jac**	**53.50**	**82**	P	**P**	**07 03 53.3**	**-0.8**
	baz=314						
PDMCI	**Parker Dam,Lak**	**53.57**	**79**	P	**P**	**07 03 53.6**	**-0.8**
	baz=313						
Y12C	**Blythe**	**53.72**	**80**	P	**P**	**07 03 54.5**	**-1.0**
	baz=313,SNR=8.9						
Y12C	**Blythe**	**53.72**	**80**	*e*P	**P**	**07 03 55.7**	**+0.2**
	comp=Z,14nm,0.9s						
SUMG	**Summit**	**53.72**	**11**	*e*P	**P**	**07 03 54.7**	**-0.8**
	comp=Z,214nm,1.3s						
SUMG	**Summit**	**53.72**	**11**	⇑*i*P	**P**	**07 03 55.1**	**-0.4**
	comp=Z,207nm,1.3s						
SUMG	**Summit**	**53.72**	**11**	*e*P	**P**	**07 03 54.7**	**-0.8**
SUMG				pmax	pmax		
	comp=Z,214nm,1.3s						
PV09	**Paradox Valley**	**53.75**	**72**	*e*P	**P**	**07 03 55.7**	**-0.4**
PV21	**Cone Mtn., Par**	**53.80**	**72**	*e*P	**P**	**07 03 57.6**	**+1.2**
	comp=Z,7.5nm,0.9s						
PV23	**Carpenter Ridg**	**53.85**	**72**	*e*P	**P**	**07 03 58.0**	**+1.1**
	comp=Z,7.7nm,0.7s						
PV14	**Lion Creek, Pa**	**53.90**	**72**	*e*P	**P**	**07 03 56.9**	**-0.2**
	comp=Z,9.1nm,1.0s						
PV22	**Blue Mesa, Par**	**53.93**	**72**	*e*P	**P**	**07 03 56.9**	**-0.3**
	comp=Z,9.4nm,0.9s						
PV20	**West Nyswonger**	**53.95**	**72**	*e*P	**P**	**07 03 57.2**	**-0.2**
	comp=Z,21nm,1.3s						
PV19	**Morning Glory**	**53.96**	**72**	*e*P	**P**	**07 03 57.4**	**-0.1**
	comp=Z,8.9nm,0.9s						
CD2	**Chengdu**	**53.97**	**276**	*e*P	**P**	**07 03 57.0**	**-0.5**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
PV17	**East Wray Mesa**	**54.00**	**72**	*e*P	**P**	**07 03 57.5**	**-0.3**
	comp=Z,32nm,1.2s						
PV16	**Nyswonger Mesa**	**54.00**	**72**	*e*P	**P**	**07 03 57.5**	**-0.4**
	comp=Z,12nm,0.9s						
GLA	**Glamis**	**54.01**	**81**	P	**P**	**07 03 56.9**	**-0.8**
	baz=314						
GLA	**Glamis**	**54.01**	**81**	*e*P	**P**	**07 03 57.8**	**+0.1**
	comp=Z,14nm,0.8s						
GLA	**Glamis**	**54.01**	**81**	*e*P	**P**	**07 03 57.8**	**+0.1**
GLA				pmax	pmax		
	comp=Z,14nm,0.8s						
N23A	**Red Feather La**	**54.02**	**68**	P	**P**	**07 03 57.0**	**-1.0**
	baz=311						
N23A	**Red Feather La**	**54.02**	**68**	*e*P	**P**	**07 03 58.9**	**+0.9**
	comp=Z,18nm,1.5s						
PV11	**David Mesa, Pa**	**54.04**	**72**	*e*P	**P**	**07 03 57.8**	**-0.3**
	comp=Z,20nm,0.8s						
PV18	**Skein Mesa, Pa**	**54.05**	**72**	*e*P	**P**	**07 03 57.8**	**-0.4**
	comp=Z,19nm,0.9s						
PV12	**Saucer Basin,**	**54.06**	**72**	*e*P	**P**	**07 03 58.1**	**-0.2**
	comp=Z,22nm,1.2s						
PV03	**Paradox Valley**	**54.08**	**72**	*e*P	**P**	**07 03 57.6**	**-0.7**
PV13	**Radium Mtn., P**	**54.16**	**72**	*e*P	**P**	**07 03 58.7**	**-0.3**
	comp=Z,27nm,0.8s						
PV02	**Paradox Valley**	**54.18**	**72**	*e*P	**P**	**07 03 58.8**	**-0.4**
	comp=Z,16nm,0.9s						
WUAZ	**Wupatki**	**54.42**	**76**	P	**P**	**07 04 00.3**	**-0.5**
	baz=313						
WUAZ	**Wupatki**	**54.42**	**76**	*e*P	**P**	**07 04 01.0**	**+0.2**
	comp=Z,10nm,1.0s						
A33A	**Warroad**	**54.45**	**54**	P	**P**	**07 03 59.3**	**-1.3**
	baz=311						
SMCO	**Snowmass**	**54.56**	**70**	*e*P	**P**	**07 04 01.6**	**-0.5**
	comp=Z,3.7nm,0.8s						
AGMN	**Agassiz Nation**	**54.62**	**55**	P	**P**	**07 04 00.3**	**-1.6**
	baz=311,SNR=12						
AGMN	**Agassiz Nation**	**54.62**	**55**	*e*P	**P**	**07 04 00.9**	**-1.0**
	comp=Z,25nm,1.2s						
WMQ	**Urumqi**	**54.72**	**298**	P	**P**	**07 04 03.8**	**+1.0**
WMQ				pP	sP	07 04 14.8	+3.4
WMQ				sP	pP	07 04 23.3	+14
WMQ				S	**S**	**07 11 41.8**	**-0.2**
WMQ				pmax	pmax		
	comp=Z,110nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,470nm,5.3s						
WMQ				LR	LR		
	comp=Z,3µm,19.3s						
WMQ				LR	LR		
	comp=Z,2µm,21.5s						
WMQ				LR	LR		
	comp=Z,1µm,17.7s						
ILULI	**Ilulissat**	**54.76**	**18**	*e*P	**P**	**07 04 01.7**	**-0.9**
	comp=Z,36nm,1.0s						
ILULI	**Ilulissat**	**54.76**	**18**	*i* P	**P**	**07 04 01.5**	**-1.1**
	comp=Z,34nm,1.0s						
ILULI	**Ilulissat**	**54.76**	**18**	*e*P	**P**	**07 04 01.7**	**-0.9**
ILULI				pmax	pmax		
	comp=Z,36nm,1.0s						
KURK	**Kurchatov**	**54.85**	**309**	*e*P	**P**	**07 04 03.2**	**-0.3**
	comp=Z,135nm,1.3s						
KURK				ScP	**ScP**	**07 09 03.9**	**+1.2**
KURK	**Kurchatov**	**54.85**	**309**	*c i*P	**P**	**07 04 03.2**	**-0.3**
KURK				pmax	pmax		
	comp=Z,130nm,1.3s						
FRB	**Frobisher Bay**	**54.93**	**29**	P	**P**	**07 04 02.3**	**-1.6**
FRB				pmax	pmax		
	comp=Z,65nm,1.0s						
ISCO	**Idaho Springs**	**54.93**	**68**	P	**P**	**07 04 02.7**	**-2.0**
	baz=312,SNR=12						
ISCO	**Idaho Springs**	**54.93**	**68**	*e*P	**P**	**07 04 05.0**	**+0.3**
	comp=Z,12nm,1.2s						
ISCO	**Idaho Springs**	**54.93**	**68**	*e*P	**P**	**07 04 05.0**	**+0.3**
ISCO				pmax	pmax		
	comp=Z,12nm,1.2s						
KURBB	**Kurchatov Arra**	**54.96**	**309**	P	**P**	**07 04 04.0**	**-0.3**
	comp=Z,34nm,0.7s,baz=52,slow=7.1,SNR=239						
KURBB				ScP	**ScP**	**07 09 03.9**	**+0.7**
	comp=Z,1.3nm,1.0s,baz=44,slow=4.9,SNR=5.9						
MVCO	**Mesa Verde**	**54.98**	**73**	P	**P**	**07 04 04.0**	**-1.1**
	baz=313,SNR=8.4						
MVCO	**Mesa Verde**	**54.98**	**73**	*e*P	**P**	**07 04 04.5**	**-0.6**
	comp=Z,10nm,1.0s						
C33A	**Trail**	**55.02**	**55**	P	**P**	**07 04 03.6**	**-1.3**
	baz=311						
B34A	**Aery, Baudette**	**55.11**	**54**	P	**P**	**07 04 03.4**	**-2.0**
	baz=311,SNR=6.3						
GYA	**Guiyang**	**55.34**	**270**	*e*P	**P**	**07 04 07.3**	**-0.2**
GYA				pP	sP	07 04 21.4	+5.3
GYA				PP	**PP**	**07 06 15.0**	**+3.9**
GYA				S	**S**	**07 11 49.4**	**-1.3**
GYA				sS	sS	07 12 08.6	+7.6
GYA				SS	**SS**	**07 15 34.0**	**-0.9**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,5.4s						
GYA				LR	LR		
	comp=Z,440nm,17.2s						
GYA				LR	LR		
	comp=Z,320nm,17.5s						
GYA				LR	LR		
	comp=Z,350nm,17.9s						
C34A	**RKJ Ranch, Bem**	**55.53**	**55**	P	**P**	**07 04 06.6**	**-1.9**
	baz=312						
SUSD	**Miller**	**55.55**	**60**	P	**P**	**07 04 07.2**	**-1.6**
	baz=312						
S22A	**4UR Ranch, Cre**	**55.60**	**71**	P	**P**	**07 04 08.0**	**-1.6**
	baz=313,SNR=15						
S22A	**4UR Ranch, Cre**	**55.60**	**71**	*e*P	**P**	**07 04 09.6**	**0.0**

	comp=Z,13nm,1.1s						
MK31	Makanchi Array	55.62	304	*e*P	P	07 04 08.5	-0.8
MK31	Makanchi Array	55.62	304	*i* P	P	07 04 08.3	-0.9
MK31				pmax	pmax		
	comp=Z,9.0nm,0.6s						
MKAR	Makanchi Array	55.62	304	P	P	07 04 08.6	-0.7
	comp=Z,12nm,0.7s,baz=50,slow=6.9,SNR=108						
MKAR				LR	LR	07 28 49.0	
	comp=Z,1µm,21.3s,baz=36,slow=37						
MKAR	Makanchi Array	55.62	304	*e*P	P	07 04 08.5	-0.7
	comp=Z,81nm,0.6s						
MK01	Makanchi Array	55.64	304	*e*P	P	07 04 08.6	-0.8
B35A	Bob, Littlefor	55.66	54	P	P	07 04 08.2	-1.2
	baz=312,SNR=6.8						
B35A	Bob, Littlefor	55.66	54	*e*P	P	07 04 08.2	-1.2
	comp=Z,11nm,0.8s						
Q24A	Divide	55.76	69	P	P	07 04 09.7	-0.9
	baz=312						
MAKZ	Makanchi	55.78	304	*e*P	P	07 04 09.7	-0.6
	comp=Z,20nm,0.8s						
MAKZ	Makanchi	55.78	304	*e*P	P	07 04 09.7	-0.6
MAKZ				pmax	pmax		
	comp=Z,20nm,0.8s						
G32A	Webster	55.78	59	P	P	07 04 08.8	-1.6
	baz=312						
G32A	Webster	55.78	59	*e*P	P	07 04 09.4	-0.9
	comp=Z,29nm,0.8s						
C35A	Jirik Farms, M	55.97	54	P	P	07 04 10.1	-1.5
	baz=312,SNR=7.8						
214A	Organ Pipe Nat	55.99	80	P	P	07 04 11.4	-0.6
	baz=314,SNR=17						
E34A	Wadena	56.16	56	P	P	07 04 11.5	-1.6
	baz=312						
OGNE	Ogallala	56.20	65	P	P	07 04 13.0	-0.5
	baz=312,SNR=17						
OGNE	Ogallala	56.20	65	*e*P	P	07 04 13.7	+0.2
	comp=Z,57nm,1.0s						
D35A	Remer	56.35	55	P	P	07 04 12.7	-1.7
	baz=312						
SDCO	Great Sand Dun	56.38	70	P	P	07 04 13.1	-2.0
	baz=313,SNR=26						
SDCO	Great Sand Dun	56.38	70	*e*P	P	07 04 15.4	+0.3
	comp=Z,17nm,1.2s						
ARCES	ARCESS Array B	56.45	347	P	P	07 04 13.7	-1.0
	comp=Z,14nm,0.8s,baz=35,slow=7.1,SNR=22						
C36A	Pine Crest Far	56.50	54	P	P	07 04 14.0	-1.5
	baz=313,SNR=5.3						
E35A	Pequot Lakes	56.52	56	P	P	07 04 14.2	-1.4
	baz=312						
F34A	Alexandria	56.59	57	P	P	07 04 14.5	-1.6
	baz=312						
D36A	Goodland	56.73	55	P	P	07 04 15.4	-1.7
	baz=313						
D36A	Goodland	56.73	55	*e*P	P	07 04 16.5	-0.6
	comp=Z,17nm,1.1s						
SFJD	Kangerlussuaq	56.75	19	P	P	07 04 15.9	-1.0
	comp=Z,9.9nm,0.5s,baz=332,slow=11,SNR=3.9						
SFJD				LR	LR	07 30 01.0	
	comp=Z,137nm,22.0s,baz=346,slow=38						
G34A	Benson	56.77	58	P	P	07 04 16.1	-1.3
	baz=313						
C37A	Embarrass	56.85	53	P	P	07 04 16.8	-1.1
	baz=313						
F35A	Swanville	56.91	56	P	P	07 04 17.0	-1.4
	baz=313,SNR=8.4						
APA	Apatity	56.96	343⇑	*i*P	P	07 04 16.6	-1.7
TUC	Tucson	56.98	78	P	P	07 04 18.6	-0.5
	baz=314						
TUC	Tucson	56.98	78	*e*P	P	07 04 19.4	+0.3
	comp=Z,15nm,1.1s						
TUC	Tucson	56.98	78	*e*P	P	07 04 19.4	+0.3
TUC				pmax	pmax		
	comp=Z,15nm,1.1s						
EYMN	Ely	57.04	53	P	P	07 04 18.3	-1.0
	baz=313,SNR=5.4						
EYMN	Ely	57.04	53	*e*P	P	07 04 18.8	-0.4
	comp=Z,20nm,0.9s						
BVA0	Borovoye Array	57.04	315	*i* P	P	07 04 19.1	-0.1
BVA0				pmax	pmax		
	comp=Z,39nm,0.8s						
BVAR	Borovoye Array	57.04	315	P	P	07 04 19.3	0.0
	comp=Z,26nm,0.7s,baz=49,slow=7.2,SNR=144						
BVAR				LR	LR	07 30 33.4	
	comp=Z,2µm,20.3s,baz=49,slow=38						
BRVK	Borovoye	57.07	316	*e*P	P	07 04 19.3	-0.1
	comp=Z,35nm,0.7s						
BRVK	Borovoye	57.07	316*c*	*i*P	P	07 04 19.1	-0.3
BRVK				pmax	pmax		
	comp=Z,107nm,1.7s						
D37A	Cotton	57.11	54	P	P	07 04 18.7	-1.1
	baz=313,SNR=12						
E36A	McGregor	57.13	55	P	P	07 04 19.1	-0.8
	baz=313,SNR=14						
KSCO	Kaye Shedlock’	57.17	67	P	P	07 04 19.9	-0.5
	baz=313,SNR=11						
KSCO	Kaye Shedlock’	57.17	67	*e*P	P	07 04 20.9	+0.4
	comp=Z,70nm,1.3s						
ECSD	EROS Data Cent	57.28	59	P	P	07 04 19.3	-1.7
	baz=313,SNR=10						
ECSD	EROS Data Cent	57.28	59	*e*P	P	07 04 20.0	-1.0
	comp=Z,11nm,1.0s						
C38A	Sawbill Land.	57.30	53	P	P	07 04 19.9	-1.2
	baz=313						
G35A	Watkins	57.38	57	P	P	07 04 20.8	-0.9
	baz=313						
G35A	Watkins	57.38	57	*e*P	P	07 04 20.6	-1.1
	comp=Z,16nm,1.0s						
T25A	Trinidad	57.42	70	P	P	07 04 22.0	-0.4
	baz=314,SNR=12						
T25A	Trinidad	57.42	70	*e*P	P	07 04 22.9	+0.5
	comp=Z,27nm,1.0s						
F36A	Milaca	57.44	56	P	P	07 04 20.7	-1.4
	baz=313						
F36A	Milaca	57.44	56	*e*P	P	07 04 21.4	-0.7
	comp=Z,7.1nm,0.9s						
E37A	Wrenshall	57.53	55	P	P	07 04 21.3	-1.5
	baz=313						
H35A	Sunnyside Ranc	57.56	58	P	P	07 04 22.1	-0.9
	baz=313,SNR=9.9						
TASM	ASL Pad, Albuq	57.73	73	P	P	07 04 24.1	-0.5
	baz=314,SNR=7.1						
ANMO	Albuquerque	57.74	73	P	P	07 04 24.7	+0.2
	comp=Z,5.7nm,1.1s,baz=310,slow=8.1,SNR=10						
ANMO				LR	LR	07 26 55.3	
	comp=Z,297nm,21.2s,baz=319,slow=34						
ANMO	Albuquerque	57.74	73	P	P	07 04 24.1	-0.5
	baz=314						
ANMO	Albuquerque	57.74	73	*e*P	P	07 04 24.8	+0.2
	comp=Z,7.7nm,1.1s						
ANMO	Albuquerque	57.74	73	*e*P	P	07 04 24.8	+0.2
ANMO				pmax	pmax		
	comp=Z,8.0nm,1.1s						
TASL	Snake Pit, Alb	57.74	73	P	P	07 04 23.9	-0.7
	baz=314,SNR=7.4						
G36A	St. Michael	57.75	57	P	P	07 04 23.5	-0.8
	baz=313						
E38A	The Farm, Brul	57.93	54	P	P	07 04 24.4	-1.1
	baz=314,SNR=8.6						
E38A	The Farm, Brul	57.93	54	*e*P	P	07 04 24.9	-0.6
	comp=Z,26nm,0.8s						
F37A	Hinrichs Farm,	57.99	55	P	P	07 04 25.0	-1.0
	baz=314,SNR=7.2						
BGNE	Belgrade	58.03	62	P	P	07 04 25.8	-0.6
	baz=314,SNR=10						
BGNE	Belgrade	58.03	62	*e*P	P	07 04 25.9	-0.4
	comp=Z,92nm,0.9s						
Y22D	IRIS PASSCAL I	58.07	74	P	P	07 04 27.0	+0.1
	baz=314						
Y22D	IRIS PASSCAL I	58.07	74	*e*P	P	07 04 29.1	+2.3
	comp=Z,27nm,0.9s						
H36A	Jessenland, He	58.11	57	P	P	07 04 26.5	-0.4
	baz=314,SNR=18						
F38A	Pierce - Schro	58.21	55	P	P	07 04 27.2	-0.3
	baz=314,SNR=34						
SVE	Sverdlovsk	58.22	323⇑	*e*P	P	07 04 28.1	+0.7
SVE				*e*S	S	07 12 33.2	+5.4
SVE				pmax	pmax		
	comp=Z,43nm,1.3s						
SVE				MLR	MLR		
	comp=Z,747nm,17.0s						
SGF	Sodankyl	58.23	346	*e*P	P	07 04 27.1	-0.2
SGF				pmax	pmax		
	comp=Z,32nm,1.2s						
SPMN	Marine on St.	58.25	56	P	P	07 04 26.7	-1.1
	baz=314,SNR=9.4						
SPMN	Marine on St.	58.25	56	*e*P	P	07 04 27.2	-0.6
	comp=Z,31nm,1.0s						
I36A	Fitzsimmons Fa	58.45	58	P	P	07 04 28.1	-1.2
	baz=314						
E39A	Mellen	58.58	54	P	P	07 04 28.7	-1.4
	baz=314						
121A	Cookes Peak, D	58.63	76	P	P	07 04 30.4	-0.5
	baz=315,SNR=6.5						
H37A	Dierke Farm, C	58.63	57	P	P	07 04 29.7	-0.8
	baz=314,SNR=12						
F39A	Loretta	58.72	54	P	P	07 04 30.2	-0.9
	baz=314,SNR=12						
KMI	Kunming	58.73	272	P	P	07 04 34.0	+2.3
KMI				pmax	pmax		
	comp=Z,15nm,0.6s						
KMI				LR	LR		
	comp=Z,380nm,14.2s						
J36A	Seneca 1, Swea	58.76	59	P	P	07 04 30.1	-1.3
	baz=314,SNR=17						
J36A	Seneca 1, Swea	58.76	59	*e*P	P	07 04 30.6	-0.8
	comp=Z,41nm,0.9s						
G38A	Ridgeland	58.77	56	P	P	07 04 30.1	-1.3
	baz=314,SNR=19						
I37A	Lemond, Waseca	58.77	57	P	P	07 04 30.8	-0.7
	baz=314,SNR=28						
I37A	Lemond, Waseca	58.77	57	*e*P	P	07 04 31.3	-0.2
	comp=Z,70nm,1.0s						
E40A	Wakefield	58.86	53	P	P	07 04 31.2	-0.9
	baz=314,SNR=17						
H38A	Maiden Rock	58.89	56	P	P	07 04 31.5	-0.8
	baz=314,SNR=31						
CBKS	Cedar Bluff	58.94	66	P	P	07 04 31.9	-0.9
	baz=314						
CBKS	Cedar Bluff	58.94	66	*e*P	P	07 04 32.6	-0.2
	comp=Z,78nm,1.4s						
CBKS	Cedar Bluff	58.94	66	*e*P	P	07 04 32.6	-0.2
CBKS				pmax	pmax		
	comp=Z,78nm,1.4s						
G39A	Holcombe	59.03	55	P	P	07 04 32.2	-1.1
	baz=314,SNR=14						
D41A	Chassel	59.09	52	P	P	07 04 33.0	-0.6
	baz=315						
F40A	Park Falls	59.12	54	P	P	07 04 32.7	-1.2
	baz=315,SNR=9.4						
K36A	Gilmore City	59.18	59	P	P	07 04 33.1	-1.2
	baz=314,SNR=12						
J37A	Redenius Farm,	59.19	58	P	P	07 04 33.3	-1.0
	baz=314,SNR=12						
HSIG		59.20	81	*e*P	P	07 04 34.6	0.0
	comp=Z,28nm,1.0s						
MSF	Maaselka	59.22	344	*e*P	P	07 04 34.8	+0.6
MSF				pmax	pmax		
	comp=Z,47nm,1.2s						
PRGR	Permogore	59.26	334	*e*P	P	07 04 34.7	+0.2
PRGR				pmax	pmax		
	comp=Z,77nm,0.9s						
ARU	Arti	59.28	324	*e*P	P	07 04 34.7	0.0
	comp=Z,40nm,0.7s						
ARU	Arti	59.28	324*c*	*i*P	P	07 04 34.7	0.0
ARU						07 05 18.4	
ARU				S	S	07 12 40.5	-1.0
ARU				pmax	pmax		
	comp=Z,74nm,1.2s						
ARU				MLR	MLR		
	comp=Z,871nm,19.0s						
E41A	Kenton	59.31	53	P	P	07 04 34.3	-0.9
	baz=315,SNR=7.7						
I38A	Scanlan Farm,	59.31	57	P	P	07 04 34.5	-0.7
	baz=314,SNR=12						
DAV	Davao City (W)	59.40	238	LR	LR	07 26 11.2	
	comp=Z,156nm,21.0s,baz=148,slow=32						
H39A	Augusta	59.40	56	P	P	07 04 34.7	-1.1
	baz=315						
L36A	Harm Buss Farm	59.44	60	P	P	07 04 34.8	-1.3
	baz=314						
PDGK	Podgornoye	59.44	302	P	P	07 04 36.1	-0.2
PDGK				pmax	pmax		
	comp=Z,29nm,1.4s						
COWI	Conover	59.48	53	*e*P	P	07 04 35.8	-0.6
	comp=Z,33nm,1.4s						
K37A	Belmond	59.52	59	P	P	07 04 35.4	-1.3
	baz=314,SNR=15						
G40A	Rib Lake	59.54	54	P	P	07 04 35.7	-1.0
	baz=315,SNR=8.0						
G40A	Rib Lake	59.54	54	*e*P	P	07 04 36.2	-0.5
	comp=Z,23nm,1.3s						
SRIG	Santa Rosalia	59.63	84	*e*P	P	07 04 36.8	-0.8
	comp=Z,21nm,1.0s						
J38A	Wedel Dairy, R	59.74	57	P	P	07 04 37.1	-1.0
	baz=315,SNR=18						
F41A	Three Lakes	59.75	53	P	P	07 04 37.6	-0.7
	baz=315,SNR=9.3						
F41A	Three Lakes	59.75	53	*e*P	P	07 04 37.8	-0.5
	comp=Z,20nm,0.8s						
M36A	Felix, Anita	59.82	60	P	P	07 04 37.8	-0.9
	baz=315						
E42A	Champion	59.85	52	P	P	07 04 37.4	-1.5
	baz=315						
I39A	Houston	59.86	56	P	P	07 04 37.8	-1.2
	baz=315,SNR=8.9						
I39A	Houston	59.86	56	*e*P	P	07 04 38.1	-0.9
	comp=Z,35nm,1.1s						
H40A	Chili	59.90	55	P	P	07 04 38.1	-1.1
	baz=315,SNR=11						
L37A	Phoenix Point,	59.91	59	P	P	07 04 38.2	-1.2
	baz=315,SNR=23						
K38A	Parkersburg	60.06	58	*e*P	P	07 04 39.6	-0.7
	comp=Z,17nm,1.0s						
G41A	Antigo	60.09	54	P	P	07 04 39.4	-1.2
	baz=315						
J39A	Decorah	60.13	57	P	P	07 04 39.4	-1.4
	baz=315,SNR=21						
N36A	Muff Farm, Cla	60.18	61	P	P	07 04 40.0	-1.3
	baz=315						
F42A	Maple Grove Fa	60.22	53	P	P	07 04 40.2	-1.2
	baz=316						
M37A	Trindle Farm,	60.25	60	P	P	07 04 40.6	-1.1
	baz=315						
H41A	Junction City	60.27	55	P	P	07 04 40.8	-1.0
	baz=315						
H41A	Junction City	60.27	55	*e*P	P	07 04 39.4	-2.5
	comp=Z,22nm,1.0s						
I40A	Norwalk	60.30	56	P	P	07 04 41.0	-1.0
	baz=315						
L38A	Oak Wood Farm,	60.31	59	P	P	07 04 40.9	-1.3
	baz=315,SNR=13						
E43A	Lone Tree Farm	60.34	52	P	P	07 04 41.2	-1.0
	baz=316						
SCIA	State Center	60.34	59	P	P	07 04 41.5	-0.8
	baz=315						
SCIA	State Center	60.34	59	*e*P	P	07 04 41.8	-0.5
	comp=Z,44nm,0.9s						
G42A	Mountain	60.44	53	P	P	07 04 42.0	-1.0
	baz=316						
G42A	Mountain	60.44	53	*e*P	P	07 04 42.5	-0.4
	comp=Z,16nm,0.9s						
K39A	Oelwein	60.48	58	P	P	07 04 41.4	-1.9
	baz=315,SNR=9.6						
KSU1	Kansas State U	60.48	63	P	P	07 04 41.5	-1.8
	baz=315,SNR=7.2						
KSU1	Kansas State U	60.48	63	*e*P	P	07 04 42.0	-1.4
	comp=Z,17nm,0.7s						
OUL	Oulu	60.51	345	P	P	07 04 43.2	+0.2
I41A	Arkdale	60.56	55	P	P	07 04 42.3	-1.4
	baz=316						
I41A	Arkdale	60.56	55	*e*P	P	07 04 43.1	-0.7
	comp=Z,17nm,0.8s						
AMTX	Amarillo	60.58	70	P	P	07 04 43.8	-0.3
	baz=315						
AMTX	Amarillo	60.58	70	*e*P	P	07 04 44.1	-0.1
	comp=Z,22nm,1.0s						
J40A	Soldiers Grove	60.58	56	P	P	07 04 42.5	-1.4
	baz=315,SNR=9.9						
MSTX	Muleshoe	60.59	72	P	P	07 04 43.6	-0.7
	baz=315,SNR=14						
MSTX	Muleshoe	60.59	72	*e*P	P	07 04 43.9	-0.4
	comp=Z,24nm,1.1s						
PRZ	Przheval’sk	60.60	302	*e*P	P	07 04 45.0	+0.7
	comp=Z,19nm,0.9s						
PRZ	Przheval’sk	60.60	302	*e*P	P	07 04 45.0	+0.7
PRZ				pmax	pmax		
	comp=Z,19nm,0.9s						
N37A	Lee Faris, Mou	60.62	61	P	P	07 04 43.3	-0.9
	baz=315,SNR=15						
N37A	Lee Faris, Mou	60.62	61	*e*P	P	07 04 44.0	-0.3
	comp=Z,72nm,0.8s						
F43A	Flat Rock, Esc	60.64	52	P	P	07 04 43.5	-0.8
	baz=316						
MNTX	Cornudas Mount	60.66	75	P	P	07 04 44.7	+0.1
	baz=316,SNR=76						
MNTX	Cornudas Mount	60.66	75	*e*P	P	07 04 44.7	+0.1
	comp=Z,37nm,1.0s						
E44A	Grand Marais A	60.68	51	P	P	07 04 43.7	-0.8
	baz=316						
M38A	Pleasantville	60.70	59	P	P	07 04 43.3	-1.4
	baz=315,SNR=13						
G43A	Wallace	60.80	53	P	P	07 04 44.1	-1.3
	baz=316						
G43A	Wallace	60.80	53	*e*P	P	07 04 44.7	-0.7
	comp=Z,18nm,1.0s						
L39A	Vinton	60.83	58	P	P	07 04 44.5	-1.2
	baz=315,SNR=12						
K40A	Colesburg	60.87	57	P	P	07 04 44.6	-1.3
	baz=316						
F44A	Big Bay de Noc	60.90	52	P	P	07 04 44.8	-1.3
	baz=316						
H42A	Shiocton	60.91	54	P	P	07 04 44.7	-1.4
	baz=316						
H42A	Shiocton	60.91	54	*e*P	P	07 04 45.2	-1.0
	comp=Z,12nm,1.0s						
J41A	Loganville	60.98	56	P	P	07 04 45.3	-1.3
	baz=316,SNR=20						
O37A	Wolven Farm, M	61.08	61	P	P	07 04 46.1	-1.3
	baz=315,SNR=6.7						
N38A	Joes South For	61.12	60	P	P	07 04 45.9	-1.7
	baz=316,SNR=11						
I42A	Draeger Farm,	61.16	55	P	P	07 04 46.6	-1.3
	baz=316						
I42A	Draeger Farm,	61.16	55	*e*P	P	07 04 47.0	-0.8
	comp=Z,21nm,1.0s						
JFWS	Jewell Farm	61.18	56	P	P	07 04 46.2	-1.8
	baz=316,SNR=7.0						
JFWS	Jewell Farm	61.18	56	*e*P	P	07 04 46.6	-1.4
	comp=Z,22nm,1.0s						
JFWS	Jewell Farm	61.18	56	*e*P	P	07 04 46.6	-1.4
JFWS				pmax	pmax		
	comp=Z,22nm,1.0s						
M39A	Webster	61.20	59	P	P	07 04 46.8	-1.3
	baz=316,SNR=9.9						
E45A	Wooded Hills,	61.23	51	P	P	07 04 47.2	-1.0
	baz=317						
L40A	Anamosa	61.28	58	P	P	07 04 47.2	-1.5
	baz=316,SNR=8.2						
L40A	Anamosa	61.28	58	*e*P	P	07 04 47.5	-1.2
	comp=Z,22nm,0.8s						
H43A	Windswept, Lux	61.32	54	P	P	07 04 47.7	-1.2
	baz=316						
H43A	Windswept, Lux	61.32	54	*e*P	P	07 04 47.8	-1.2
	comp=Z,20nm,0.8s						
K41A	Shullsburg	61.37	57	P	P	07 04 47.8	-1.5
	baz=316,SNR=17						
P37A	Lathrop	61.38	62	P	P	07 04 47.7	-1.7
	baz=316,SNR=11						
N39A	Derby Farms, D	61.45	59	P	P	07 04 48.3	-1.6
	baz=316,SNR=16						
N39A	Derby Farms, D	61.45	59	*e*P	P	07 04 48.8	-1.1
	comp=Z,44nm,1.0s						
J42A	Columbus	61.47	55	P	P	07 04 48.5	-1.4
	baz=316						
O38A	Galt	61.47	61	P	P	07 04 48.6	-1.4
	baz=316,SNR=13						
KDJ	Kajisay	61.49	303	*e*P	P	07 04 49.8	-0.6
	comp=Z,22nm,0.8s						
KLMR	Klimovskoe	61.51	336	*e*P	P	07 04 47.8	-2.1
KLMR				*e*		07 07 03.5	
KLMR				pmax	pmax		
	comp=Z,102nm,1.3s						
KLMR	Klimovskoe	61.51	336	*e*P	P	07 04 47.8	-2.1
KLMR				AMP		07 04 50.9	
	comp=Z,102nm,1.3s						
KLMR				*e*PP	PP	07 07 03.5	-1.3
KLMR				LQ	LQ	07 28 19.0	
KLMR				LR	LR	07 30 50.5	
F45A	CMU Biological	61.55	51	P	P	07 04 49.1	-1.4
	baz=317						
I43A	Langenfeld Bro	61.55	54	P	P	07 04 49.1	-1.4
	baz=316						
M40A	Post Highland	61.60	58	P	P	07 04 49.3	-1.5
	baz=316,SNR=6.7						
L41A	Preston	61.65	57	P	P	07 04 49.7	-1.5
	baz=316,SNR=12						
TKM2	Tokmak 2	61.74	304	P	P	07 04 52.2	+0.2
	SNR=16						
TKM2	Tokmak 2	61.74	304	P	P	07 04 52.1	+0.1
TKM2				pmax	pmax		
	comp=Z,16nm,0.8s						
K42A	Prairie Point,	61.74	56	P	P	07 04 50.4	-1.4
	baz=316,SNR=12						
J43A	Natural Harves	61.78	55	P	P	07 04 50.5	-1.5
	baz=316						
P38A	Dawn	61.79	61	P	P	07 04 50.5	-1.7
	baz=316,SNR=11						
P38A	Dawn	61.79	61	*e*P	P	07 04 50.6	-1.5
	comp=Z,19nm,0.7s						
Q37A	Longview Farm,	61.83	62	P	P	07 04 50.3	-2.1
	baz=316						
F46A	Macinaw City C	61.85	51	P	P	07 04 50.3	-2.1
	baz=317,SNR=8.6						
O39A	Kirksville	61.88	60	P	P	07 04 51.1	-1.6
	baz=316						
ULHL	Ulahol	61.89	303	P	P	07 04 53.6	+0.5
	SNR=9.0						
N40A	Mertquake, Sal	61.94	59	P	P	07 04 51.7	-1.5
	baz=316						
USP	Ospenovka	62.05	305	P	P	07 04 54.4	+0.5
	SNR=15						
CHMS	Chumysh	62.11	305	P	P	07 04 54.6	+0.3
	SNR=8.2						
M41A	Milan	62.13	58	P	P	07 04 52.7	-1.7
	baz=316						
L42A	Oliver, Polo	62.13	57	P	P	07 04 52.7	-1.7
	baz=316						
L42A	Oliver, Polo	62.13	57	*e*P	P	07 04 53.0	-1.4
	comp=Z,32nm,0.9s						
Q38A	Cooks Store, C	62.22	62	P	P	07 04 52.9	-2.2
	baz=316,SNR=6.7						
KBK	Karagaybulak	62.26	304	P	P	07 04 56.2	+0.6
	SNR=6.6						
HNR	Honiara	62.29	195	LR	LR	07 28 10.6	
	comp=Z,330nm,20.5s,baz=57,slow=32						
FRU	Bishkek	62.30	305	*e*P	P	07 04 56.0	+0.4
FRU				*e*		07 05 05.0	
FRU				pmax	pmax		
	comp=Z,80nm,1.4s						
K43A	Burlington	62.31	55	P	P	07 04 53.9	-1.8
	baz=317						
P39B	Salisbury	62.31	61	P	P	07 04 54.2	-1.4
	baz=316,SNR=22						
O40A	La Belle	62.33	60	P	P	07 04 54.7	-1.1
	baz=316,SNR=38						
WMOK	Wichita Mounta	62.36	68	P	P	07 04 55.0	-1.1
	baz=316						
WMOK	Wichita Mounta	62.36	68	*e*P	P	07 04 54.2	-1.9
	comp=Z,32nm,1.5s						
WMOK	Wichita Mounta	62.36	68	*e*P	P	07 04 54.2	-1.9
WMOK				pmax	pmax		
	comp=Z,31nm,1.5s						
SCHQ	Schefferville	62.41	34	P	P	07 04 55.3	-0.8
	comp=Z,50nm,0.7s,baz=333,slow=6.5,SNR=49						
SCHQ				LR	LR	07 35 04.0	
	comp=Z,565nm,18.2s,baz=329,slow=39						
SCHQ	Schefferville	62.41	34	*e*P	P	07 04 55.1	-0.9
	comp=Z,65nm,0.8s						
N41A	Harden Midland	62.45	59	P	P	07 04 54.8	-1.7
	baz=316,SNR=8.9						
N41A	Harden Midland	62.45	59	*e*P	P	07 04 55.1	-1.5
	comp=Z,52nm,1.1s						
L43A	Garden Prairie	62.48	56	P	P	07 04 55.1	-1.6
	baz=317						
M42A	Sheffield	62.48	57	P	P	07 04 55.2	-1.6
	baz=316						
LSA	Lhasa	62.49	284	*e*P	P	07 04 58.5	+0.9
	comp=Z,24nm,1.3s						
AAK	Ala-Archa	62.50	305	P	P	07 04 57.6	+0.5
	SNR=8.7						
AAK	Ala-Archa	62.50	305	*e*P	P	07 04 56.9	-0.2
	comp=Z,18nm,0.8s						
AAK	Ala-Archa	62.50	305	P	P	07 04 57.3	+0.2
AAK				pmax	pmax		
	comp=Z,26nm,1.0s						
Q39A	Willow Grove F	62.51	61	P	P	07 04 55.4	-1.6
	baz=316,SNR=9.5						
KZA	Kyzart	62.52	304	P	P	07 04 58.2	+0.6
	SNR=10						
R38A	Fenwick Farm,	62.62	62	P	P	07 04 55.1	-2.7
	baz=316						
P40A	Paris	62.66	60	P	P	07 04 56.6	-1.3
	baz=316,SNR=13						
P40A	Paris	62.66	60	*e*P	P	07 04 56.7	-1.3

	comp=Z,41nm,0.8s						
N42A	Yates City	62.79	58	P	P	07 04 57.0	-1.9
	baz=317						
EKS2	Erkin-Say	62.85	305	P	P	07 04 60.0	+0.6
	SNR=19						
O41A	Passleys Farm,	62.86	59	P	P	07 04 57.9	-1.4
	baz=317,SNR=13						
L44A	Lake County Fo	62.91	56	P	P	07 04 58.0	-1.6
	baz=317						
M43A	Waltham Townsh	62.91	57	P	P	07 04 58.3	-1.4
	baz=317,SNR=10.0						
VAF	Ylistaro	62.93	345	eP	P	07 05 00.1	+0.7
VAF				pmax	pmax		
	comp=Z,53nm,1.2s						
R39A	Chumby, Stover	63.00	62	P	P	07 04 57.7	-2.6
	baz=316,SNR=7.7						
S38A	Stockton	63.02	63	P	P	07 04 57.8	-2.6
	baz=316,SNR=12						
Q40A	Laux Farm, Aux	63.03	61	P	P	07 04 58.7	-1.8
	baz=316,SNR=10						
P41A	Barry, Barry	63.08	59	P	P	07 04 59.3	-1.5
	baz=317,SNR=16						
N43A	Stutzman Famil	63.16	57	P	P	07 04 59.9	-1.4
	baz=317						
LPIG	La Paz	63.16	85	LR	LR	07 26 39.0	
	comp=Z,304nm,21.8s,baz=282,slow=31						
TUL1	Leonard	63.21	65	P	P	07 05 00.3	-1.5
	baz=316,SNR=6.7						
TUL1	Leonard	63.21	65	eP	P	07 05 00.7	-1.0
	comp=Z,13nm,0.8s						
O42A	Bath	63.22	58	P	P	07 05 00.3	-1.4
	baz=317						
T38A	Diamond	63.24	64	P	P	07 04 59.8	-2.1
	baz=316,SNR=9.0						
AML	Almayashu	63.28	305	P	P	07 05 03.3	+0.7
	SNR=22						
S39A	Bolivar	63.30	62	P	P	07 05 01.1	-1.1
	baz=317						
S39A	Bolivar	63.30	62	eP	P	07 05 00.3	-1.9
	comp=Z,8.8nm,1.1s						
ABTX	Abilene, Hawle	63.38	71	P	P	07 05 02.6	-0.3
	baz=317,SNR=15						
ABTX	Abilene, Hawle	63.38	71	eP	P	07 05 02.7	-0.3
	comp=Z,52nm,1.1s						
TX31	Lajitas Ar. Si	63.38	76	eP	P	07 05 02.9	-0.2
TXAR	Lajitas Array	63.38	76	P	P	07 05 02.9	-0.2
	comp=Z,20nm,0.7s,baz=301,slow=4.0,SNR=251						
TXAR				LR	LR	07 29 40.0	
	comp=Z,298nm,21.0s,baz=0.0,slow=33						
TXAR				PKP2bc		07 34 08.5	
	comp=Z,0.2nm,0.8s,baz=90,slow=1.8,SNR=2.6						
TXAR				PKP2ab		07 34 18.2	
	comp=Z,0.7nm,1.0s,baz=141,slow=5.8,SNR=4.8						
M44A	Midewin, Midew	63.41	56	P	P	07 05 01.6	-1.4
	baz=317						
M44A	Midewin, Midew	63.41	56	eP	P	07 05 02.1	-0.9
	comp=Z,30nm,0.8s						
R40A	Maddies Statio	63.44	61	P	P	07 05 01.0	-2.2
	baz=317,SNR=18						
R40A	Maddies Statio	63.44	61	eP	P	07 05 01.0	-2.2
	comp=Z,18nm,0.8s						
Q41A	Truxton	63.51	60	P	P	07 05 02.3	-1.3
	baz=317,SNR=16						
P42A	Winchester	63.53	59	P	P	07 05 02.4	-1.3
	baz=317						
P42A	Winchester	63.53	59	eP	P	07 05 02.4	-1.3
	comp=Z,17nm,0.8s						
O43A	Sugar Creek Fa	63.56	58	P	P	07 05 02.7	-1.3
	baz=317						
T39A	Clever	63.75	63	P	P	07 05 03.0	-2.3
	baz=317						
N44A	Piper City	63.80	57	P	P	07 05 04.4	-1.1
	baz=317,SNR=9.0						
S40A	Lebanon	63.81	62	P	P	07 05 03.3	-2.4
	baz=317,SNR=6.8						
M45A	Boilermakers S	63.82	56	P	P	07 05 03.8	-1.8
	baz=318						
FIA1	FINESS Array S	63.86	343	eP	P	07 05 04.8	-0.8
	comp=Z,62nm,1.0s						
FINES	FINESS Array B	63.86	343	P	P	07 05 04.9	-0.7
	comp=Z,26nm,0.8s,baz=19,slow=12,SNR=36						
FINES				LR	LR	07 37 25.8	
	comp=Z,493nm,18.5s,baz=32,slow=40						
R41A	Rosebud	63.91	61	P	P	07 05 04.6	-1.7
	baz=317,SNR=14						
Q42A	Golden Eagle	63.92	60	P	P	07 05 05.2	-1.1
	baz=317,SNR=9.0						
P43A	Skaggs, Pawnee	63.92	59	P	P	07 05 04.8	-1.5
	baz=317						
HPIG		63.92	79	eP	P	07 05 06.1	-0.6
	comp=Z,24nm,1.0s						
HHAR	Hobbs	63.98	64	eP	P	07 05 05.1	-1.7
	comp=Z,20nm,1.2s						
KSH	Kashi	64.01	301	P	P	07 05 11.3	+4.2
KSH				sP	sP	07 05 25.3	+10
KSH				ePcP	PcP	07 05 45.0	+2.6
KSH				S	S	07 13 43.3	+1.1
KSH				ScS	SKKSac	07 14 57.9	-1.9
KSH				SS	SS	07 17 54.6	+4.3
KSH				pmax	pmax		
	comp=Z,46nm,1.2s						
KSH				pmax	pmax		
	comp=Z,170nm,5.1s						
KSH				LR	LR		
	comp=Z,420nm,13.7s						
KSH				LR	LR		
	comp=Z,510nm,14.3s						
KSH				LR	LR		
	comp=Z,450nm,18.6s						
N45A	Kentland	64.08	56	P	P	07 05 06.3	-1.1
	baz=318						
O44A	Mansfield	64.10	57	P	P	07 05 05.9	-1.6
	baz=317						
AKTO	Aktyubinsk	64.12	320	P	P	07 05 07.6	+0.1
	comp=Z,38nm,0.9s,baz=54,slow=8.5,SNR=62						
AKTO				LR	LR	07 35 40.2	
	comp=Z,497nm,18.5s,baz=37,slow=38						
AKTO	Aktyubinsk	64.12	320	P	P	07 05 06.9	-0.6
AKTO				pmax	pmax		
	comp=Z,46nm,0.8s						
T40A	Mansfield	64.13	62	P	P	07 05 05.7	-2.1
	baz=317,SNR=12						
KK31	Karatay Array	64.15	307	eP	P	07 05 07.7	-0.2
KK31	Karatay Array	64.15	307	i P	P	07 05 07.5	-0.3
KK31				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KKAR	Karatay Array	64.15	307	eP	P	07 05 07.8	-0.1
U39A	Green Forest	64.16	64	P	P	07 05 06.2	-1.8
	baz=317,SNR=33						
CCM	Cathedral Cave	64.16	61	P	P	07 05 06.6	-1.4
	baz=317						
CCM	Cathedral Cave	64.16	61	eP	P	07 05 06.4	-1.5
	comp=Z,13nm,0.8s						
CCM	Cathedral Cave	64.16	61	eP	P	07 05 06.4	-1.5
CCM				pmax	pmax		
	comp=Z,13nm,0.8s						
S41A	Jillco Farms,	64.23	61	P	P	07 05 06.5	-2.0
	baz=317,SNR=28						
R42A	Luebbering	64.24	60	P	P	07 05 06.6	-1.8
	baz=317,SNR=8.3						
AB31	Akbulak array	64.26	318	i P	P	07 05 08.6	+0.2
AB31				pmax	pmax		
	comp=Z,12nm,0.6s						
ABKAR	Akbulak array	64.26	318	eP	P	07 05 08.3	-0.1
M46A	Old House Fiel	64.26	55	P	P	07 05 06.8	-1.7
	baz=318						
M46A	Old House Fiel	64.26	55	eP	P	07 05 07.5	-1.1
	comp=Z,24nm,1.0s						
KLBO	Killbear Provi	64.30	49	P	P	07 05 06.3	-2.4
	baz=319						
Q43A	New Douglas	64.34	59	P	P	07 05 08.0	-1.1
	baz=317,SNR=6.5						
BMRO	Meriville Lake	64.40	50	P	P	07 05 08.3	-1.2
	baz=319						
O45A	Potomac	64.42	57	P	P	07 05 08.6	-0.9
	baz=318,SNR=20						
UBPT	Khong Chiam	64.43	262	P	P	07 05 24.7	+15
N46A	Monticello	64.45	56	P	P	07 05 08.4	-1.4
	baz=318						
V39A	Pettigrew	64.46	64	P	P	07 05 08.3	-1.8
	baz=317,SNR=22						
P44A	Sand Creek, Wi	64.52	58	P	P	07 05 09.0	-1.3
	baz=318,SNR=7.7						
U40A	Yellville	64.52	63	P	P	07 05 08.5	-1.8
	baz=317,SNR=27						
BUKO	Buck Lake	64.61	48	P	P	07 05 09.4	-1.4
	baz=320						
S42A	Caledonia	64.61	61	P	P	07 05 09.3	-1.6
	baz=317,SNR=18						
T41A	Mountain View	64.62	62	P	P	07 05 08.6	-2.3
	baz=317,SNR=13						
BASO	Ashfield	64.63	50	P	P	07 05 10.6	-0.3
	baz=319						
SFIN	Lafayette	64.64	56	P	P	07 05 09.7	-1.3
	baz=318,SNR=11						
SFIN	Lafayette	64.64	56	eP	P	07 05 10.0	-1.1
	comp=Z,20nm,0.9s						
FVM	French Village	64.65	60	eP	P	07 05 10.3	-0.9
	comp=Z,17nm,1.0s						
FVM	French Village	64.65	60	eP	P	07 05 10.3	-0.9
FVM				pmax	pmax		
	comp=Z,17nm,1.0s						
R43A	Red Bud	64.70	60	P	P	07 05 10.0	-1.5
	baz=318						
Q44A	Meyer Farm, Va	64.73	59	P	P	07 05 09.9	-1.7
	baz=318						
BWLO	Walkerton	64.80	50	P	P	07 05 10.6	-1.4
	baz=319						
L48A	N Adams	64.83	54	P	P	07 05 11.0	-1.3
	baz=318						
JCT	Junction City	64.84	72	P	P	07 05 11.8	-0.7
	baz=317,SNR=17						
JCT	Junction City	64.84	72	eP	P	07 05 11.3	-1.3
	comp=Z,28nm,0.9s						
JCT	Junction City	64.84	72	eP	P	07 05 11.3	-1.3
JCT				pmax	pmax		
	comp=Z,28nm,0.9s						
W39A	Magazine	64.86	65	P	P	07 05 11.2	-1.4
	baz=317,SNR=16						
W39A	Magazine	64.86	65	eP	P	07 05 11.4	-1.1
	comp=Z,19nm,0.8s						
P45A	Graceland, Par	64.94	57	P	P	07 05 11.5	-1.5
	baz=318,SNR=5.9						
P45A	Graceland, Par	64.94	57	eP	P	07 05 11.6	-1.4
	comp=Z,16nm,0.8s						
V40A	Witts Springs	64.94	64	P	P	07 05 11.6	-1.6
	baz=317,SNR=48						
V40A	Witts Springs	64.94	64	eP	P	07 05 11.5	-1.6
	comp=Z,51nm,1.0s						
CLWO	Collingwood	64.94	49	P	P	07 05 11.5	-1.5
	baz=319						
AAM	Ann Arbor	64.95	53	P	P	07 05 11.7	-1.3
	baz=319						
T42A	Van Buren	64.99	61	P	P	07 05 11.2	-2.2
	baz=318,SNR=9.1						
T42A	Van Buren	64.99	61	eP	P	07 05 11.4	-2.0
	comp=Z,9.7nm,0.8s						
M48A	Edgerton	65.03	54	P	P	07 05 11.9	-1.6
	baz=318						
L49A	Milan	65.04	53	P	P	07 05 12.3	-1.3
	baz=319						
U41A	Viola	65.05	63	P	P	07 05 11.7	-2.0
	baz=318,SNR=19						
SHL	Shillong	65.07	280	eP	P	07 05 14.2	-0.1
	comp=Z,22nm,0.8s						
SHL	Shillong	65.07	280	P	P	07 05 14.7	+0.5
SHL				pmax	pmax		
	comp=Z,22nm,0.8s						
WHTX	Lake Whitney,	65.11	70	P	P	07 05 13.6	-0.6
	baz=317						
WHTX	Lake Whitney,	65.11	70	eP	P	07 05 13.8	-0.4
	comp=Z,20nm,0.9s						
S43A	Fulton Ridge,	65.14	60	P	P	07 05 13.0	-1.4
	baz=318,SNR=10						
P46A	Rosedale	65.15	57	P	P	07 05 13.3	-1.1
	baz=318						
X39A	Fountain Ranch	65.17	65	P	P	07 05 13.8	-0.8
	baz=317,SNR=28						
R44A	Waltonville	65.18	59	P	P	07 05 13.0	-1.5
	baz=318,SNR=7.3						
PMG	Port Moresby	65.19	209	LR	LR	07 28 59.4	
	comp=Z,238nm,20.5s,baz=10.0,slow=32						
Q45A	Warren Harvey,	65.19	58	P	P	07 05 13.6	-1.0
	baz=318,SNR=12						
O47A	Sheridan	65.22	56	P	P	07 05 12.8	-2.1
	baz=318						
SADO	Sadowa	65.24	48	eP	P	07 05 12.8	-2.1
	comp=Z,7.4nm,0.9s						
W40A	Ferguson Farm,	65.25	64	P	P	07 05 14.0	-1.1
	baz=318,SNR=24						
W40A	Ferguson Farm,	65.25	64	eP	P	07 05 14.2	-0.9
	comp=Z,61nm,1.0s						
V41A	Mountainview	65.33	63	P	P	07 05 13.7	-1.9
	baz=318,SNR=24						
OLIL	Olney	65.34	58	eP	P	07 05 13.9	-1.6
	comp=Z,30nm,1.1s						
T43A	Greenville	65.39	61	P	P	07 05 14.4	-1.6
	baz=318,SNR=15						
M49A	Liberty Center	65.41	54	P	P	07 05 14.5	-1.5
	baz=319						
PEMO	Pembroke	65.41	47	P	P	07 05 13.7	-2.3
	baz=320						
U42A	Revenden	65.41	62	P	P	07 05 13.8	-2.3
	baz=318,SNR=12						
ELFO	Elginfield	65.41	51	P	P	07 05 15.4	-0.6
	baz=319						
MIAR	Mount Ida	65.45	65	P	P	07 05 15.4	-0.9
	baz=318,SNR=21						
MIAR	Mount Ida	65.45	65	eP	P	07 05 15.6	-0.8
	comp=Z,36nm,1.2s						
MIAR	Mount Ida	65.45	65	eP	P	07 05 15.6	-0.8
MIAR				pmax	pmax		
	comp=Z,36nm,1.2s						
S44A	Carbondale	65.49	60	P	P	07 05 15.3	-1.4
	baz=318						
Q46A	CEJHS Indians,	65.51	58	P	P	07 05 15.4	-1.3
	baz=318						
PBMO	Poplar Bluff	65.54	61	eP	P	07 05 15.5	-1.4
	comp=Z,40nm,0.9s						
R45A	Skylar, Fairfi	65.57	59	P	P	07 05 15.8	-1.3
	baz=318						
BANO	Bancroft	65.61	47	P	P	07 05 15.7	-1.6
	baz=320						
WHAR	Wooly Hollow	65.62	64	eP	P	07 05 16.0	-1.4
	comp=Z,13nm,0.9s						
ACTO	Acton	65.69	50	P	P	07 05 17.5	-0.4
	baz=320						
W41B	Gary Mavity, V	65.72	64	P	P	07 05 16.8	-1.4
	baz=318,SNR=11						
W41B	Gary Mavity, V	65.72	64	eP	P	07 05 16.6	-1.5
	comp=Z,38nm,1.4s						
O48A	Farmland	65.73	55	P	P	07 05 16.1	-2.0
	baz=319						
P47A	Martinsville	65.73	57	P	P	07 05 16.6	-1.5
	baz=318,SNR=18						
V42A	Cord	65.73	63	P	P	07 05 16.1	-2.1
	baz=318,SNR=6.8						
CMMT	Chiang Mai	65.75	270	P	P	07 05 20.7	+2.1
	comp=Z,10nm,0.8s,comp=Z,684nm						
T44A	Benton	65.76	60	P	P	07 05 16.8	-1.6
	baz=318						
BLO	Bloomington	65.83	57	eP	P	07 05 17.0	-1.8
	comp=Z,16nm,0.8s						
BLO	Bloomington	65.83	57	eP	P	07 05 17.0	-1.8
BLO				pmax	pmax		
	comp=Z,16nm,0.8s						
U43A	Rector	65.85	62	P	P	07 05 17.4	-1.6
	baz=318						
S45A	Carrier Mills	65.86	59	P	P	07 05 17.6	-1.5
	baz=318						
PKRO	Pickering	65.89	49	P	P	07 05 17.1	-2.0
	baz=320						
X40A	Basin Creek Fa	65.90	65	P	P	07 05 17.9	-1.4
	baz=318,SNR=10.0						
X40A	Basin Creek Fa	65.90	65	eP	P	07 05 18.2	-1.1
	comp=Z,11nm,1.0s						
435B	Jarrell	65.92	70	P	P	07 05 19.0	-0.5
	baz=318						
435B	Jarrell	65.92	70	eP	P	07 05 19.0	-0.5
	comp=Z,51nm,1.3s						
PARMO	Parma	65.99	61	eP	P	07 05 18.9	-1.0
	comp=Z,58nm,0.8s						
Y40A	Okolona	66.00	65	P	P	07 05 19.0	-1.0
	baz=318						
CM31	Chiang Mai Arr	66.03	270	eP	P	07 05 19.7	-0.6
CMAR	Chiang Mai Arr	66.03	270	P	P	07 05 21.4	+1.1
	comp=Z,4.3nm,0.4s,baz=26,slow=7.0,SNR=14						
R46A	Gibon Southern	66.03	58	P	P	07 05 18.5	-1.6
	baz=318						
CM01	Chiang Mai Arr	66.04	269	eP	P	07 05 20.9	+0.5
W42A	Bald Knob	66.05	63	P	P	07 05 18.4	-1.8
	baz=318						
Q47A	Bedord North L	66.06	57	P	P	07 05 18.8	-1.5
	baz=319,SNR=6.3						
X41A	Kaden, Bauxite	66.08	64	P	P	07 05 19.0	-1.4
	baz=318,SNR=7.5						
DRWO	Darlington Wes	66.12	49	P	P	07 05 19.4	-1.1
	baz=320						
DELO	Deloro Mine	66.13	48	P	P	07 05 18.0	-2.6
	baz=321						
USIN	University of	66.14	59	eP	P	07 05 19.8	-0.9
	comp=Z,33nm,1.0s						
U44A	Portageville	66.14	61	P	P	07 05 19.1	-1.7
	baz=318						
NC303	NORSAR Array S	66.14	351	eP	P	07 05 20.4	-0.1
NC204	NORSAR Array S	66.16	351	eP	P	07 05 20.2	-0.4
TRQ	Mont Tremblant	66.17	45	eP	P	07 05 18.7	-2.3
P48A	Milroy	66.18	56	P	P	07 05 19.4	-1.6
	baz=319,SNR=13						
O49A	Covington	66.19	55	P	P	07 05 19.6	-1.5
	baz=319						
V43A	Jonesboro	66.21	62	P	P	07 05 19.9	-1.4
	baz=318						
NC405	NORSAR Array S	66.22	350	eP	P	07 05 20.1	-0.8
WLVO	Wesleyville	66.23	49	P	P	07 05 20.3	-0.9
	baz=320						
HBAR	Harrisburg	66.32	62	eP	P	07 05 21.9	0.0
	comp=Z,84nm,1.2s						
S46A	Don Dixon Farm	66.32	59	P	P	07 05 20.3	-1.7
	baz=318						
T45A	Paducah	66.32	60	P	P	07 05 20.6	-1.3
	baz=318						
T45A	Paducah	66.32	60	eP	P	07 05 20.9	-1.0
	comp=Z,87nm,1.4s						
NB201	NORSAR Array S	66.33	351	eP	P	07 05 20.9	-0.8
NB2	NORSAR Subarra	66.34	351	P	P	07 05 20.9	-0.9
	comp=Z,35nm,0.9s,baz=12,slow=6.5						
NB2	NORSAR Subarra	66.34	351	P	P	07 05 20.9	-0.9
	baz=12,slow=6.5						
NOA	NORSAR Array B	66.34	351	P	P	07 05 21.1	-0.6
	comp=Z,14nm,0.8s,baz=12,slow=6.4,SNR=35						
NOA				LR	LR	07 33 44.9	
	comp=Z,219nm,21.4s,baz=15,slow=36						
N50A	Nevada	66.35	54	P	P	07 05 20.6	-1.4
	baz=319						
Q48A	North Vernon	66.42	57	P	P	07 05 21.2	-1.3
	baz=319						
U44B	Burton Farm, H	66.45	61	P	P	07 05 21.7	-1.1
	baz=318						
MOS	Moscow	66.47	334	eP	P	07 05 22.9	+0.3
MOS				pmax	pmax		
	comp=Z,70nm,1.1s						
MOS				MLR	MLR		
	comp=Z,1µm,18.0s						
Y41A	Eaglette Beard	66.48	65	P	P	07 05 22.1	-0.9
	baz=318						
R47A	Wooly Knot Far	66.49	58	P	P	07 05 22.0	-1.0
	baz=319						
P49A	Miami Univ. Ec	66.49	56	P	P	07 05 21.5	-1.5
	baz=319,SNR=7.2						
Z40A	Long Farm, Mag	66.49	66	P	P	07 05 22.1	-1.0
	baz=318						
ALFO	Alfred	66.50	45	P	P	07 05 20.2	-2.7
	baz=322						
VSU	Vasula	66.51	342	deP	P	07 05 23.1	+0.3
VSU				pmax	pmax		
	comp=Z,134nm,1.0s						
X42A	Stuttgart	66.53	64	P	P	07 05 21.6	-1.7
	baz=318						
V44A	Blytheville	66.53	62	P	P	07 05 22.1	-1.2
	baz=318						
GLAT	Glass	66.53	61	eP	P	07 05 23.1	-0.3
	comp=Z,46nm,0.9s						
NAO01	NORSAR Array S	66.57	351	eP	P	07 05 21.7	-1.5
O50A	Cable	66.58	54	P	P	07 05 22.4	-1.2
	baz=319						
NC602	NORSAR Array S	66.61	350	eP	P	07 05 22.2	-1.2
W43A	Forest City	66.64	63	P	P	07 05 22.6	-1.4
	baz=318						
WCI	Wyandotte Cave	66.66	58	P	P	07 05 22.9	-1.2
	baz=319						
WCI	Wyandotte Cave	66.66	58	eP	P	07 05 22.7	-1.4
	comp=Z,23nm,0.9s						
WCI	Wyandotte Cave	66.66	58	eP	P	07 05 22.7	-1.4
WCI				pmax	pmax		
	comp=Z,23nm,0.9s						
833A	Chaparral WMA,	66.67	74	P	P	07 05 24.0	-0.3
	baz=318						
833A	Chaparral WMA,	66.67	74	eP	P	07 05 23.0	-1.2
	comp=Z,15nm,0.7s						
T46A	Princeton	66.70	59	P	P	07 05 23.2	-1.2
	baz=319,SNR=23						
UTMT	University of	66.70	61	eP	P	07 05 23.7	-0.7
	comp=Z,108nm,1.1s						
R48A	Northridge Ran	66.75	57	P	P	07 05 23.0	-1.7
	baz=319						
U45A	Rockin P Farm,	66.75	60	P	P	07 05 23.9	-0.8
	baz=318						
HALT	Halls	66.77	61	eP	P	07 05 23.6	-1.2
	comp=Z,171nm,1.4s						
MEDO	Medina	66.79	49	P	P	07 05 22.6	-2.3
	baz=321						
Q49A	Aurora	66.80	56	P	P	07 05 23.6	-1.4
	baz=319						
ODAN	Odare	66.82	284	eP	P	07 05 26.3	+0.7
	comp=Z,41nm,0.9s						
S47A	Hartford	66.83	58	P	P	07 05 23.9	-1.2
	baz=319,SNR=8.1						
Z41A	Richland Creek	66.83	65	P	P	07 05 24.3	-0.9
	baz=318						
Z41A	Richland Creek	66.83	65	eP	P	07 05 24.4	-0.8
	comp=Z,15nm,0.9s						
ACSO	Alum Creek Sta	66.84	54	P	P	07 05 23.6	-1.6
	baz=320						
ACSO	Alum Creek Sta	66.84	54	eP	P	07 05 24.1	-1.2
	comp=Z,18nm,1.1s						
140A	Cam and Jess,	66.85	66	P	P	07 05 24.5	-0.9
	baz=318						
140A	Cam and Jess,	66.85	66	eP	P	07 05 25.1	-0.2
	comp=Z,42nm,1.2s						
ERPA	Erie	66.87	51	P	P	07 05 24.4	-1.0
	baz=320						
ERPA	Erie	66.87	51	eP	P	07 05 24.2	-1.2
	comp=Z,45nm,0.8s						
NATX	Nacogdoches	66.89	68	P	P	07 05 25.0	-0.7
	baz=318						
NATX	Nacogdoches	66.89	68	eP	P	07 05 24.8	-0.8
	comp=Z,30nm,1.0s						
P50A	Jamestown	66.90	55	P	P	07 05 24.1	-1.5
	baz=319						
CCAR	Cane Creek	66.92	64	eP	P	07 05 25.1	-0.7
	comp=Z,65nm,1.3s						
GUN	Gumba	66.95	286	eP	P	07 05 27.3	+0.8
	comp=Z,133nm,1.0s						
JIRN	Jiri	66.95	286	eP	P	07 05 27.6	+1.0
	comp=Z,97nm,0.7s						
HFS	Hagfors	66.96	349	P	P	07 05 24.7	-1.0
	comp=Z,10nm,0.7s,baz=54,slow=2.5,SNR=16						
HFS				LR	LR	07 33 51.4	
	comp=Z,329nm,21.9s,baz=8.0,slow=35						
AFI	Afiamalu	66.96	164	LR	LR	07 28 35.3	
	comp=Z,647nm,21.1s,baz=5.0,slow=30						
X43A	Marvell	66.96	63	P	P	07 05 24.8	-1.3
	baz=318						
X43A	Marvell	66.96	63	eP	P	07 05 24.8	-1.3
	comp=Z,31nm,1.0s						
Y42A	Garnett, Star	66.97	64	P	P	07 05 25.1	-1.1
	baz=318						
MET	Memphis--Engin	67.03	62	eP	P	07 05 25.1	-1.4
	comp=Z,178nm,1.4s						
U46A	Springville	67.06	60	P	P	07 05 25.2	-1.5
	baz=319						
W44A	Shelby Farms P	67.09	62	P	P	07 05 25.9	-1.0
	baz=318						
V45A	Humboldt	67.10	61	P	P	07 05 25.9	-1.1
	baz=319						
ALLY	Alegheny Colle	67.15	51	eP	P	07 05 25.9	-1.3
	comp=Z,50nm,0.9s						
T47A	Sharon Grove	67.16	59	P	P	07 05 26.3	-1.0
	baz=319,SNR=11						
T47A	Sharon Grove	67.16	59	eP	P	07 05 26.2	-1.2
	comp=Z,75nm,1.5s						
240A	Hunter Patters	67.19	67	P	P	07 05 26.8	-0.8
	baz=318						
R49A	Shelbyville	67.19	57	P	P	07 05 26.4	-1.1
	baz=319						
S48A	Wiedeman Farm,	67.21	58	P	P	07 05 26.6	-1.1
	baz=319,SNR=10.0						
RAMN	Ramite	67.23	285	eP	P	07 05 28.8	+0.6
	comp=Z,141nm,0.9s						
141A	Papa Simpson,	67.26	66	P	P	07 05 27.0	-1.0
	baz=318						
Z42A	Norrel Spur, H	67.30	65	P	P	07 05 27.3	-0.9
	baz=318						

OBN	Obninsk	67.31	335	*e*P	P	07 05 28.2	+0.3
	comp=Z,44nm,1.0s						
OBN	Obninsk	67.31	335*c*	*i*P	P	07 05 27.5	-0.4
OBN				*i*		07 05 42.6	
OBN				*e*		07 07 54.9	
OBN				*e*SS	SS	07 18 39.9	-0.4
OBN				pmax	pmax		
	comp=Z,75nm,1.7s						
OBN				MLR	MLR		
	comp=Z,862nm,19.0s						
BRDH	Bariadhala	67.36	278	LR	LR	07 39 18.0	
	comp=Z,198nm,18.1s,baz=46,slow=40						
MMNY	Mt. Morris Dam	67.38	49	*e*P	P	07 05 26.6	-2.0
	comp=Z,22nm,1.0s						
X44A	Crenshaw	67.38	63	P	P	07 05 27.8	-1.0
	baz=319,SNR=6.5						
Q50A	Georgetown	67.39	56	P	P	07 05 27.5	-1.2
	baz=320,SNR=7.2						
Y43A	Makayla and Ka	67.39	64	P	P	07 05 27.8	-1.0
	baz=318						
KKN	Kakani	67.39	286	*e*P	P	07 05 30.0	+0.8
	comp=Z,63nm,0.9s						
W45A	Hickory Valley	67.42	62	P	P	07 05 28.0	-0.9
	baz=319,SNR=7.5						
LONY	Lake Ozonia	67.42	46	P	P	07 05 28.0	-0.9
	baz=322						
LONY	Lake Ozonia	67.42	46	*e*P	P	07 05 27.3	-1.6
	comp=Z,14nm,1.3s						
WVT	Waverly	67.42	60	P	P	07 05 27.7	-1.2
	baz=319						
WVT	Waverly	67.42	60	*e*P	P	07 05 27.8	-1.2
	comp=Z,13nm,0.8s						
WVT	Waverly	67.42	60	*e*P	P	07 05 27.8	-1.2
WVT				pmax	pmax		
	comp=Z,13nm,0.8s						
T48A	Bowling Green	67.44	58	P	P	07 05 28.3	-0.8
	baz=319,SNR=7.2						
U47A	Clarksville	67.47	59	P	P	07 05 28.6	-0.7
	baz=319						
PKIN	Phulchoki	67.48	286	*e*P	P	07 05 30.8	+1.0
	comp=Z,42nm,0.7s						
M54A	Oil Creek Stat	67.49	51	P	P	07 05 28.3	-1.1
	baz=320,SNR=12						
M54A	Oil Creek Stat	67.49	51	*e*P	P	07 05 28.5	-0.9
	comp=Z,28nm,0.8s						
V46A	Holladay	67.51	60	P	P	07 05 28.4	-1.2
	baz=319,SNR=11						
S49A	Springfield	67.51	57	P	P	07 05 28.5	-1.1
	baz=319,SNR=9.6						
HKT	Hockley	67.55	70	*e*P	P	07 05 28.5	-1.3
	comp=Z,14nm,1.1s						
HKT	Hockley	67.55	70	*e*P	P	07 05 28.5	-1.3
HKT				pmax	pmax		
	comp=Z,15nm,1.1s						
Q51A	Peebles	67.57	55	P	P	07 05 28.5	-1.4
	baz=320						
GKN	Gorkha	67.61	287	*e*P	P	07 05 31.2	+0.7
	comp=Z,106nm,1.1s						
DMN	Daman	67.63	286	*e*P	P	07 05 31.7	+1.0
	comp=Z,52nm,0.9s						
R50A	Paris	67.63	56	P	P	07 05 29.2	-1.1
	baz=320,SNR=6.8						
241A	Mo Tay, Goldon	67.68	66	P	P	07 05 30.1	-0.6
	baz=318						
241A	Mo Tay, Goldon	67.68	66	*e*P	P	07 05 29.7	-0.9
	comp=Z,38nm,1.1s						
Z43A	Armstrong Fami	67.74	64	P	P	07 05 30.3	-0.7
	baz=319						
Y44A	Strider, Charl	67.75	63	P	P	07 05 30.1	-1.0
	baz=319						
N54A	Moraine State	67.75	52	P	P	07 05 29.8	-1.3
	baz=320,SNR=9.8						
N54A	Moraine State	67.75	52	*e*P	P	07 05 29.5	-1.5
	comp=Z,39nm,1.3s						
OXF	Oxford	67.78	62	P	P	07 05 30.1	-1.1
	baz=319,SNR=13						
OXF	Oxford	67.78	62	*e*P	P	07 05 30.1	-1.1
	comp=Z,96nm,1.1s						
OXF	Oxford	67.78	62	*e*P	P	07 05 30.2	-1.1
OXF				pmax	pmax		
	comp=Z,96nm,1.1s						
V47A	Nunnelly	67.81	60	P	P	07 05 30.4	-1.1
	baz=319,SNR=7.1						
U48A	Cassie Pea, Po	67.82	59	P	P	07 05 30.6	-0.9
	baz=319,SNR=13						
142A	Monroe	67.84	65	P	P	07 05 30.7	-0.9
	baz=319						
X45A	UM Field Stati	67.85	62	P	P	07 05 30.5	-1.2
	baz=319						
W46A	Michie	67.87	61	P	P	07 05 30.6	-1.3
	baz=319						
DANN	Dangsing	67.87	288	*e*P	P	07 05 33.1	+0.8
	comp=Z,77nm,0.9s						
T49A	Edmonton	67.90	58	P	P	07 05 31.1	-0.9
	baz=319,SNR=12						
T49A	Edmonton	67.90	58	*e*P	P	07 05 30.9	-1.1
	comp=Z,19nm,1.1s						
R51A	Hillsboro	68.00	56	P	P	07 05 31.8	-0.8
	baz=320,SNR=26						
143A	Socs Landing,	68.03	65	P	P	07 05 32.0	-0.8
	baz=319						
143A	Socs Landing,	68.03	65	*e*P	P	07 05 32.0	-0.8
	comp=Z,32nm,1.3s						
341A	Kurthwood	68.05	67	P	P	07 05 32.7	-0.3
	baz=319,SNR=5.3						
341A	Kurthwood	68.05	67	*e*P	P	07 05 31.4	-1.6
	comp=Z,24nm,1.2s						
S50A	Richmond	68.05	57	P	P	07 05 32.2	-0.8
	baz=320						
242A	Grayson	68.08	66	P	P	07 05 32.3	-0.9
	baz=319						
KVTX	Kingsville	68.13	73	*e*P	P	07 05 32.5	-1.0
	comp=Z,45nm,0.6s						
Z44A	Pea Ridge, Bel	68.14	64	P	P	07 05 32.7	-0.8
	baz=319						
PLAL	Pickwick Lake	68.15	61	*e*P	P	07 05 32.1	-1.4
	comp=Z,18nm,0.8s						
Y45A	Yeager Farm, C	68.19	63	P	P	07 05 33.1	-0.8
	baz=319,SNR=11						
X46A	Booneville	68.19	62	P	P	07 05 32.5	-1.4
	baz=319,SNR=6.7						
W47A	Westpoint	68.20	60	P	P	07 05 32.7	-1.3
	baz=319,SNR=8.7						
U49A	Red Boiling Sp	68.22	58	P	P	07 05 32.9	-1.1
	baz=320,SNR=11						
V48A	Smith Brothers	68.25	60	P	P	07 05 33.1	-1.1
	baz=319,SNR=11						
V48A	Smith Brothers	68.25	60	*e*P	P	07 05 32.7	-1.5
	comp=Z,25nm,1.2s						
T50A	Nancy	68.33	57	P	P	07 05 33.6	-1.1
	baz=320,SNR=14						
KOLN	Koldanda	68.40	288	*e*P	P	07 05 35.9	+0.4
	comp=Z,26nm,0.8s						
R52A	Catlettsburg	68.45	55	P	P	07 05 33.8	-1.7
	baz=320						
441A	DeRidder	68.47	67	P	P	07 05 34.2	-1.5
	baz=319						
Z45A	Winona	68.48	63	P	P	07 05 34.6	-1.1
	baz=319						
Z45A	Winona	68.48	63	*e*P	P	07 05 34.2	-1.4
	comp=Z,59nm,1.3s						
342A	Flagon Creek P	68.50	66	P	P	07 05 35.5	-0.3
	baz=319						
342A	Flagon Creek P	68.50	66	*e*P	P	07 05 34.9	-0.9
	comp=Z,15nm,0.9s						
S51A	Beattyville	68.50	56	P	P	07 05 34.6	-1.2
	baz=320,SNR=7.8						
S51A	Beattyville	68.50	56	*e*P	P	07 05 34.2	-1.5
	comp=Z,15nm,1.0s						
PYUN	Piuthan	68.51	288	*e*P	P	07 05 36.8	+0.6
	comp=Z,108nm,1.1s						
Y46A	Houston	68.55	62	P	P	07 05 34.9	-1.2
	baz=319,SNR=15						
243A	Waterproof	68.60	65	P	P	07 05 35.9	-0.5
	baz=319						
X47A	Russelville	68.61	61	P	P	07 05 35.0	-1.5
	baz=319,SNR=6.6						
144A	Alexander Plac	68.63	64	P	P	07 05 35.5	-1.1
	baz=319						
W48A	Pulaski	68.64	60	P	P	07 05 35.5	-1.2
	baz=319,SNR=18						
BINY	Binghamton	68.68	48	P	P	07 05 35.5	-1.4
	baz=322						
BINY	Binghamton	68.68	48	*e*P	P	07 05 35.5	-1.4
	comp=Z,14nm,1.2s						
V49A	McMinnville	68.72	59	P	P	07 05 36.0	-1.1
	baz=320,SNR=9.7						
S52A	Salyersville	68.73	56	P	P	07 05 36.1	-1.1
	baz=320,SNR=11						
U50A	Jamestown	68.78	58	P	P	07 05 36.3	-1.3
	baz=320,SNR=6.9						
ACCN	Adirondack Com	68.80	46	*e*P	P	07 05 35.7	-1.8
	comp=Z,10.0nm,0.8s						
MCWV	Mont Chateau	68.83	52	P	P	07 05 36.7	-1.0
	baz=321						
MCWV	Mont Chateau	68.83	52	*e*P	P	07 05 36.8	-1.0
	comp=Z,15nm,0.9s						
T51A	Gray	68.83	57	P	P	07 05 36.8	-1.0
	baz=320						
LBNH	Lisbon	68.88	44	P	P	07 05 36.4	-1.6
	baz=323						
LPSR	Galich'ya Gora	68.88	332	*e*P	P	07 05 37.6	-0.3
LPSR				pmax	pmax		
	comp=Z,30nm,0.9s						
VBMS	Vicksburg	68.88	65	P	P	07 05 37.5	-0.7
	baz=319						
VBMS	Vicksburg	68.88	65	*e*P	P	07 05 37.1	-1.1
	comp=Z,48nm,1.1s						
ZAIG	Zacatecas	68.89	80	*e*P	P	07 05 38.9	+0.2
	comp=Z,18nm,1.1s						
145A	Houston Renfro	68.92	64	P	P	07 05 37.7	-0.7
	baz=319						
244A	Avery, Jackson	68.92	65	P	P	07 05 37.9	-0.6
	baz=319,SNR=10						
442A	Mamou	68.94	67	P	P	07 05 37.2	-1.3
	baz=319						
343A	Vidalia	68.97	66	P	P	07 05 37.9	-0.9
	baz=319						
O56A	Blue Knob Stat	68.98	51	P	P	07 05 37.3	-1.4
	baz=321						
O56A	Blue Knob Stat	68.98	51	*e*P	P	07 05 37.0	-1.8
	comp=Z,26nm,1.3s						
541A	Lake Charles	68.99	68	P	P	07 05 39.0	+0.1
	baz=319						
SSPA	Standing Stone	69.02	50	P	P	07 05 37.7	-1.2
	baz=322						
SSPA	Standing Stone	69.02	50	*e*P	P	07 05 37.0	-1.9
	comp=Z,27nm,0.9s						
W49A	Belvidere	69.02	60	P	P	07 05 37.8	-1.2
	baz=320,SNR=9.3						
Z46A	Louisville	69.02	63	P	P	07 05 38.4	-0.7
	baz=319						
Y47A	UCPARC, Winfie	69.08	62	P	P	07 05 38.0	-1.5
	baz=319,SNR=13						
X48A	Hartselle	69.10	61	P	P	07 05 37.8	-1.8
	baz=320,SNR=6.4						
X48A	Hartselle	69.10	61	*e*P	P	07 05 37.7	-1.8
	comp=Z,23nm,1.5s						
SWET	Sewanee	69.12	59	*e*P	P	07 05 37.5	-2.1
	comp=Z,13nm,0.8s						
IZAR	Zarasai	69.14	341	*e*P	P	07 05 39.7	+0.3
IZAR				IAmb	IAmb	07 05 40.2	
	comp=Z,19nm,0.7s						
LNIG	Linares	69.17	76	*e*P	P	07 05 39.0	-1.1
	comp=Z,12nm,1.2s						
V50A	Pikevile	69.21	59	P	P	07 05 39.1	-1.1
	baz=320,SNR=8.6						
T52A	Hallie	69.22	56	P	P	07 05 39.2	-1.0
	baz=320,SNR=8.8						
U51A	La Follette	69.24	57	P	P	07 05 39.2	-1.2
	baz=320,SNR=7.4						
443A	Delano Plantat	69.27	66	P	P	07 05 40.1	-0.4
	baz=319						
VRH	Novokhopyorsk	69.27	330	*e*P	P	07 05 39.5	-0.8
VRH				pmax	pmax		
	comp=Z,40nm,0.8s						
VRH				MLR	MLR		
	comp=Z,490nm,16.0s						
KSPA	Keystone Colle	69.29	49	*e*P	P	07 05 39.0	-1.6
	comp=Z,8.9nm,0.9s						
542A	Morse	69.31	67	P	P	07 05 40.7	-0.1
	baz=319						
ISAL	Salakas	69.33	341	*e*P	P	07 05 41.0	+0.4
ISAL				IAmb	IAmb	07 05 42.5	
	comp=Z,22nm,1.1s						
344A	Westbrook Farm	69.34	65	P	P	07 05 40.7	-0.4
	baz=319,SNR=5.8						
344A	Westbrook Farm	69.34	65	*e*P	P	07 05 40.6	-0.4
	comp=Z,32nm,0.9s						
TZTN	Tazewell	69.36	57	P	P	07 05 40.1	-1.0
	baz=320						
TZTN	Tazewell	69.36	57	*e*P	P	07 05 40.5	-0.7
	comp=Z,9.3nm,0.9s						
245A	Little AP, Sta	69.37	64	P	P	07 05 40.4	-0.8
	baz=319						
146A	Union	69.38	63	P	P	07 05 40.5	-0.7
	baz=319,SNR=9.3						
146A	Union	69.38	63	*e*P	P	07 05 40.4	-0.9
	comp=Z,76nm,1.1s						
X49A	Woodville	69.44	60	P	P	07 05 40.3	-1.3
	baz=320,SNR=26						
Y48A	Jasper	69.44	61	P	P	07 05 39.9	-1.8
	baz=320,SNR=8.8						
IDID	Didziasalis	69.45	340	*e*P	P	07 05 41.7	+0.4
IDID				IAmb	IAmb	07 05 43.0	
	comp=Z,23nm,0.6s						
W50A	Signal Mountai	69.46	59	P	P	07 05 40.7	-1.1
	baz=320,SNR=12						
W50A	Signal Mountai	69.46	59	*e*P	P	07 05 40.2	-1.6
	comp=Z,23nm,1.0s						
Z47A	Carrollton	69.50	62	P	P	07 05 40.9	-1.0
	baz=320,SNR=11						
V51A	Loudon	69.51	58	P	P	07 05 41.0	-1.0
	baz=320,SNR=9.8						
V51A	Loudon	69.51	58	*e*P	P	07 05 40.7	-1.3
	comp=Z,17nm,0.9s						
IIGN	Ignalina	69.52	341	*e*P	P	07 05 42.2	+0.4
IIGN				IAmb	IAmb	07 05 42.6	
	comp=Z,21nm,0.6s						
U52A	Thorn Hill	69.57	57	P	P	07 05 41.4	-1.0
	baz=320						
Z48A	Northport	69.64	62	P	P	07 05 41.3	-1.5
	baz=320,SNR=12						
CPCT	Cooper Cave	69.69	58	*e*P	P	07 05 42.2	-1.0
	comp=Z,18nm,1.1s						
543A	St. Martinvill	69.73	67	P	P	07 05 42.5	-1.0
	baz=319						
147A	Livingston	69.78	63	P	P	07 05 42.6	-1.2
	baz=320						
147A	Livingston	69.78	63	*e*P	P	07 05 42.9	-0.8
	comp=Z,45nm,1.1s						
W51A	Cleveland	69.78	59	P	P	07 05 42.5	-1.3
	baz=320,SNR=7.3						
N59A	State Game Lan	69.79	49	P	P	07 05 42.3	-1.4
	baz=322,SNR=5.7						
N59A	State Game Lan	69.79	49	*e*P	P	07 05 42.0	-1.8
	comp=Z,26nm,1.3s						
246A	Jackson Lee, B	69.81	64	P	P	07 05 43.1	-0.8
	baz=320						
345A	Thompson Farm,	69.84	65	P	P	07 05 43.5	-0.6
	baz=319						
NIL	Nilore	69.84	299	*e*P	P	07 05 44.4	+0.2
	comp=Z,39nm,0.9s						
X50B	Fort Payne	69.84	60	P	P	07 05 42.6	-1.6
	baz=320,SNR=14						
V52A	Sevierville	69.87	57	P	P	07 05 43.3	-1.0
	baz=320,SNR=6.0						
V52A	Sevierville	69.87	57	*e*P	P	07 05 42.7	-1.6
	comp=Z,21nm,1.2s						
444A	Pine Grove	69.89	66	P	P	07 05 43.4	-1.0
	baz=319						
PAGS	Pennsylvania G	69.89	50	*e*P	P	07 05 42.8	-1.5
	comp=Z,22nm,1.1s						
Y49A	Blount Mountai	69.89	61	P	P	07 05 42.9	-1.6
	baz=320,SNR=7.5						
Y49A	Blount Mountai	69.89	61	*e*P	P	07 05 42.6	-1.8
	comp=Z,11nm,0.8s						
TKL	Tuckaleechee C	69.92	58	P	P	07 05 43.5	-1.0
	comp=Z,11nm,0.9s,baz=299,slow=3.9,SNR=12						
TKL				LR	LR	07 37 59.9	
	comp=Z,850nm,18.8s,baz=328,slow=37						
TKL	Tuckaleechee C	69.92	58	*e*P	P	07 05 43.5	-1.0
	comp=Z,22nm,1.1s						
TKL	Tuckaleechee C	69.92	58	*e*P	P	07 05 43.6	-1.0
TKL				pmax	pmax		
	comp=Z,22nm,1.1s						
MICGM	Minsk	69.96	339	*e*P	P	07 05 43.0	-1.5
MNK	Minsk	69.96	339	*e*P	P	07 05 43.0	-1.5
U53A	Fall Branch	70.00	56	P	P	07 05 44.2	-0.9
	baz=321,SNR=9.7						
VSR	Storozhevoye	70.03	331	*e*P	P	07 05 44.3	-0.7
VSR				pmax	pmax		
	comp=Z,40nm,1.1s						
VSR				MLR	MLR		
	comp=Z,1µm,21.0s						
247A	Quitman	70.07	63	P	P	07 05 44.8	-0.7
	baz=320						
346A	Big Creek Wild	70.10	64	P	P	07 05 44.9	-0.8
	baz=320						
346A	Big Creek Wild	70.10	64	*e*P	P	07 05 44.4	-1.3
	comp=Z,54nm,1.4s						
445A	Amite	70.10	66	P	P	07 05 44.9	-0.9
	baz=320						
544A	White Castle	70.11	67	P	P	07 05 44.2	-1.6
	baz=319						
X51A	Calhoun	70.19	59	P	P	07 05 45.0	-1.2
	baz=320						
X51A	Calhoun	70.19	59	*e*P	P	07 05 45.0	-1.2
	comp=Z,28nm,1.2s						
148A	Greensboro	70.19	62	P	P	07 05 44.4	-1.8
	baz=320						
LRAL	Lakeview Retre	70.20	62	P	P	07 05 44.7	-1.6
	baz=320,SNR=7.1						
LRAL	Lakeview Retre	70.20	62	*e*P	P	07 05 44.6	-1.7
	comp=Z,7.1nm,0.8s						
VORD	Divnogorie	70.22	331	*e*P	P	07 05 45.8	-0.3
VORD				pmax	pmax		
	comp=Z,30nm,0.9s						
LUPA	Lehigh Univers	70.23	49	*e*P	P	07 05 45.1	-1.3
	comp=Z,1.3nm,0.9s						
Y50A	Piedmont	70.23	60	P	P	07 05 45.1	-1.4
	baz=320,SNR=7.8						
MVL	Millersville	70.24	50	*e*P	P	07 05 45.3	-1.2
	comp=Z,12nm,1.0s						
W52A	Murphy	70.27	58	P	P	07 05 45.6	-1.2
	baz=320,SNR=6.4						
W52A	Murphy	70.27	58	*e*P	P	07 05 45.2	-1.6
	comp=Z,32nm,1.4s						
Z49A	Columbiana	70.34	61	P	P	07 05 45.5	-1.6
	baz=320,SNR=17						
V53A	Saluda	70.41	57	P	P	07 05 46.8	-0.9
	baz=321,SNR=6.1						
V53A	Saluda	70.41	57	*e*P	P	07 05 46.0	-1.6
	comp=Z,9.0nm,0.8s						
HRV	Adam Dziewonsk	70.43	45	P	P	07 05 45.8	-1.8
	baz=324						
BLA	Blacksburg	70.44	54	P	P	07 05 46.6	-1.2
	baz=321						
BLA	Blacksburg	70.44	54	*e*P	P	07 05 46.2	-1.6
	comp=Z,14nm,1.1s						
BLA	Blacksburg	70.44	54	*e*P	P	07 05 46.2	-1.6
BLA				pmax	pmax		
	comp=Z,14nm,1.1s						
SDMD	Soldier's Deli	70.47	51	*e*P	P	07 05 46.8	-1.1
	comp=Z,12nm,1.0s						
248A	Dixon Mills	70.52	63	P	P	07 05 47.2	-1.0
	baz=320						
PAL	Palisades	70.58	48	P	P	07 05 46.7	-1.8
	baz=323						
Y51A	Rockmart	70.59	60	P	P	07 05 46.9	-1.8
	baz=320,SNR=9.9						
347A	Saraland	70.60	64	P	P	07 05 48.3	-0.5
	baz=320,SNR=5.5						
446A	Poplarville	70.60	65	P	P	07 05 48.3	-0.5
	baz=320						
W53A	Cullowhee	70.61	58	P	P	07 05 47.9	-1.1
	baz=321,SNR=9.2						
Z50A	Ashland	70.62	61	P	P	07 05 47.4	-1.5
	baz=320,SNR=14						
Z50A	Ashland	70.62	61	*e*P	P	07 05 46.8	-2.1
	comp=Z,20nm,0.9s						
149A	Jones	70.65	62	P	P	07 05 47.6	-1.4
	baz=320,SNR=6.4						
X52A	Dahlonega	70.67	58	P	P	07 05 48.1	-1.1
	baz=321,SNR=11						
BG3	Lake Jocassee	70.87	58	*e*P	P	07 05 49.4	-1.0
	comp=Z,35nm,1.4s						
IP04	Greensprings	70.90	52	*e*P	P	07 05 49.6	-0.9
	comp=Z,12nm,0.9s						
645A	Chauvin	70.92	67	P	P	07 05 49.9	-0.9
	baz=320						
249A	Camden	70.94	62	P	P	07 05 49.8	-1.1
	baz=320,SNR=7.0						
348A	Jackson	70.94	63	P	P	07 05 50.1	-0.7
	baz=320						
348A	Jackson	70.94	63	*e*P	P	07 05 50.6	-0.3
	comp=Z,54nm,1.0s						
Z51A	Franklin	70.97	60	P	P	07 05 49.4	-1.6
	baz=320						
447A	Lucedale	71.00	64	P	P	07 05 50.0	-1.2
	baz=320						
IP03	Louisa	71.00	52	*e*P	P	07 05 49.8	-1.3
	comp=Z,13nm,1.1s						
X53A	Estanollee	71.05	58	P	P	07 05 50.4	-1.2
	baz=321,SNR=7.0						
150A	Eclectic	71.06	61	P	P	07 05 49.9	-1.6
	baz=320,SNR=6.6						
CVRD	Centerville Ro	71.06	52	*e*P	P	07 05 50.6	-0.9
	comp=Z,8.9nm,0.8s						
IP07	Quail	71.07	52	*e*P	P	07 05 50.7	-0.8
	comp=Z,12nm,0.7s						
IP06	Yanceyville	71.08	52	*e*P	P	07 05 50.7	-0.9
	comp=Z,12nm,0.9s						
IP01	Cuckoo	71.10	52	*e*P	P	07 05 50.8	-0.9
	comp=Z,10nm,1.1s						
PTRD	Partlow Road	71.11	52	*e*P	P	07 05 50.8	-1.0
	comp=Z,8.6nm,0.8s						
Y52A	Lilburn	71.14	59	P	P	07 05 50.9	-1.2
	baz=321,SNR=9.4						
Y52A	Lilburn	71.14	59	*e*P	P	07 05 50.9	-1.2
	comp=Z,15nm,0.8s						
CBN	Corbin Frederi	71.17	52	P	P	07 05 50.6	-1.5
	baz=322						
CBN	Corbin Frederi	71.17	52	*e*P	P	07 05 51.7	-0.4
	comp=Z,25nm,1.3s						
IP05	Hopewell Churc	71.27	52	*e*P	P	07 05 52.0	-0.8
	comp=Z,8.2nm,0.9s						
448A	Bay Minette	71.33	64	P	P	07 05 52.5	-0.7
	baz=320						
349A	Repton	71.38	63	P	P	07 05 52.6	-0.9
	baz=320						
SUW	Suwalki	71.39	342	*e*P	P	07 05 52.7	-0.5
SUW	Suwalki	71.39	342	*e*P	P	07 05 52.7	-0.5
	comp=Z,55nm,0.9s						
SUW	Suwalki	71.39	342	*e*P	P	07 05 52.7	-0.5
SUW				pmax	pmax		
	comp=Z,55nm,0.9s						
KBL	Kabul	71.39	302	*e*P	P	07 05 53.0	-0.8
	comp=Z,31nm,0.8s						
KBL	Kabul	71.39	302	P	P	07 05 53.0	-0.8
KBL				pmax	pmax		
	comp=Z,31nm,0.9s						
Y53A	Monroe	71.41	59	P	P	07 05 52.4	-1.2
	baz=321,SNR=8.6						
250A	Grady	71.41	62	P	P	07 05 52.2	-1.5
	baz=320						
250A	Grady	71.41	62	*e*P	P	07 05 52.1	-1.6
	comp=Z,46nm,1.2s						
Z52A	Williamson	71.47	60	P	P	07 05 52.8	-1.3
	baz=321,SNR=9.2						
151A	Opelika	71.50	61	P	P	07 05 52.3	-1.9
	baz=321						
KMSC	Kings Mountain	71.58	56	P	P	07 05 53.7	-1.0
	baz=321,SNR=8.3						
KMSC	Kings Mountain	71.58	56	*e*P	P	07 05 53.5	-1.2
	comp=Z,22nm,1.1s						
PAULI	Pauline	71.58	57	*e*P	P	07 05 53.6	-1.1
	comp=Z,11nm,1.1s						
BRAL	Brewton	71.60	63	P	P	07 05 54.1	-0.7
	baz=320						
BRAL	Brewton	71.60	63	*e*P	P	07 05 53.8	-1.0
	comp=Z,53nm,1.1s						
NCAT	North Carolina	71.65	55	*e*P	P	07 05 53.8	-1.3
	comp=Z,18nm,1.5s						
152A	Waverly Hall	71.72	60	P	P	07 05 53.7	-1.8
	baz=321						
152A	Waverly Hall	71.72	60	*e*P	P	07 05 53.9	-1.7
	comp=Z,15nm,1.1s						
251A	Midway	71.79	61	P	P	07 05 54.4	-1.6
	baz=321						
350A	Dozier	71.80	62	P	P	07 05 55.3	-0.7
	baz=320						
GOGA	Godfrey	71.81	59	P	P	07 05 54.6	-1.4
	baz=321						
GOGA	Godfrey	71.81	59	*e*P	P	07 05 54.4	-1.7
	comp=Z,10nm,1.0s						
GOGA	Godfrey	71.81	59	*e*P	P	07 05 54.4	-1.7
GOGA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
449A	Pace	71.82	63	P	P	07 05 55.5	-0.7
	baz=320						
Z53A	Monticello	71.86	59	P	P	07 05 55.1	-1.3
	baz=321,SNR=10						
Y54A	Tignall	71.87	58	P	P	07 05 55.5	-0.9

	baz=321,SNR=11						
153A	Fort Valley	72.20	60	P	P	07 05 56.9	-1.6
	baz=321						
252A	Lumpkin	72.22	61	P	P	07 05 58.3	-0.3
	baz=321						
Z54A	Sparta	72.28	59	P	P	07 05 57.6	-1.3
	baz=321,SNR=8.8						
JSC	Jenkinsville	72.29	57	eP	P	07 05 57.9	-1.0
	comp=Z,10nm,0.8s						
JSC	Jenkinsville	72.29	57	eP	P	07 05 57.9	-1.0
JSC				pmax	pmax		
	comp=Z,11nm,0.8s						
351A	Pinckard	72.31	62	P	P	07 05 57.9	-1.2
	baz=321						
253A	Americus	72.50	60	P	P	07 05 59.5	-0.7
	baz=321						
253A	Americus	72.50	60	eP	P	07 05 58.1	-2.2
	comp=Z,79nm,1.4s						
352A	Blakely	72.52	61	P	P	07 05 59.1	-1.3
	baz=321						
TAOE	Nuku Hiva Isla	72.61	131	eS	S	07 15 22.0	-3.0
	comp=Z,576nm,28.2s						
TAOE	Nuku Hiva Isla	72.61	131	eLR	LR	07 28 24.6	
	comp=Z,939nm,23.2s,baz=337						
154A	Montrose	72.62	59	P	P	07 05 59.7	-1.3
	baz=321,SNR=5.2						
154A	Montrose	72.62	59	eP	P	07 05 59.7	-1.3
	comp=Z,30nm,0.7s						
Z55A	Blythe	72.66	58	P	P	07 06 00.1	-1.0
	baz=322,SNR=6.3						
451A	Vernon	72.74	62	P	P	07 06 00.8	-0.9
	baz=321						
452A	Marianna	72.87	62	P	P	07 06 01.5	-0.9
	baz=321						
EKA	Eskdalemuir Ar	72.94	358	P	P	07 06 02.0	-0.5
	comp=Z,8.2nm,0.7s,baz=5.8,slow=5.3,SNR=17						
EKA				LR	LR	07 37 03.6	
	comp=Z,153nm,18.8s,baz=335,slow=35						
EKA	Eskdalemuir Ar	72.94	358	P	P	07 06 02.0	-0.5
155A	Kite	72.95	59	P	P	07 06 01.8	-1.1
	baz=322						
353A	Camilla	73.00	61	P	P	07 06 02.3	-1.0
	baz=321						
254A	Abbeville	73.04	60	P	P	07 06 02.1	-1.3
	baz=321						
AKASG	Malin Array Be	73.18	337	P	P	07 06 03.5	-0.4
	comp=Z,17nm,0.8s,baz=27,slow=6.2,SNR=36						
AKASG				PP	PP	07 08 44.4	-1.8
	comp=Z,1.3nm,0.8s,baz=19,slow=8.4,SNR=5.2						
AKASG				LR	LR	07 42 02.8	
	comp=Z,627nm,19.3s,baz=25,slow=39						
AKBB	Malin Array Si	73.18	337	eP	P	07 06 03.6	-0.3
	comp=Z,21nm,0.8s						
KIEV	Kiev	73.19	337	eP	P	07 06 03.5	-0.6
	comp=Z,21nm,0.9s						
KIEV	Kiev	73.19	337	c iP	P	07 06 03.6	-0.4
KIEV				pmax	pmax		
	comp=Z,19nm,0.9s						
AK11	Malin Array Si	73.22	337	eP	P	07 06 03.3	-0.8
TIGA	Tifton	73.27	60	P	P	07 06 03.5	-1.3
	baz=321						
TIGA	Tifton	73.27	60	eP	P	07 06 04.2	-0.6
	comp=Z,31nm,1.0s						
453A	Whigham	73.33	61	P	P	07 06 04.3	-0.8
	baz=321						
453A	Whigham	73.33	61	eP	P	07 06 04.1	-1.1
	comp=Z,62nm,1.1s						
255A	Hazlehurst	73.49	59	P	P	07 06 04.9	-1.1
	baz=322,SNR=6.2						
255A	Hazlehurst	73.49	59	eP	P	07 06 05.0	-1.1
	comp=Z,58nm,1.0s						
355A	Pearson	73.74	60	P	P	07 06 06.5	-1.0
	baz=322,SNR=7.7						
256A	Glennville	73.76	59	P	P	07 06 07.2	-0.4
	baz=322						
NHSC	New Hope	73.77	57	P	P	07 06 06.7	-1.0
	baz=322						
NHSC	New Hope	73.77	57	eP	P	07 06 07.4	-0.3
	comp=Z,31nm,0.8s						
553A	Crawfordville	73.79	62	P	P	07 06 07.2	-0.6
	baz=321						
454A	Quitman	73.81	61	P	P	07 06 07.2	-0.8
	baz=321						
BEL	Belsk	73.91	343	eP	P	07 06 08.9	+0.7
BEL	Belsk	73.91	343	eP	P	07 06 08.9	+0.7
RGRS	Roger Stewart	73.92	57	eP	P	07 06 08.0	-0.6
	comp=Z,572nm,1.3s						
DZM	Mont Dzumac	74.04	187	LR	LR	07 33 51.2	
	comp=Z,674nm,20.3s,baz=35,slow=32						
DZM	Mont Dzumac	74.04	187	eLR	LR	07 28 58.5	
	comp=Z,1μm,24.1s						
GEYT	Alibeck	74.08	312	P	P	07 06 09.2	-0.4
	comp=Z,4.7nm,0.9s,baz=65,slow=8.4,SNR=8.5						
GEYT				PP	PP	07 08 50.1	-4.3
	comp=Z,0.9nm,0.3s,baz=59,slow=12,SNR=2.9						
GEYT				LR	LR	07 41 35.4	
	comp=Z,564nm,18.8s,baz=315,slow=38						
GYA0B	ALIBECK ARRAY	74.08	312	eP	P	07 06 10.0	+0.4
	comp=Z,18nm,1.0s						
455A	Stateville	74.11	60	P	P	07 06 08.9	-0.9
	baz=322,SNR=5.2						
356A	Blackshear	74.14	59	P	P	07 06 09.2	-0.7
	baz=322						
GOF	Gofitskoye	74.19	326	⇑iP	P	07 06 10.7	+0.7
GOF				pmax	pmax		
	comp=Z,140nm,1.3s						
257A	Skidaway Islan	74.21	58	P	P	07 06 09.1	-1.2
	baz=322						
554A	Perry	74.27	61	P	P	07 06 09.1	-1.6
	baz=322						
357A	Townsend	74.40	59	P	P	07 06 10.2	-1.3
	baz=322						
555A	McAlpin	74.63	61	P	P	07 06 12.2	-0.5
	baz=322						
555A	McAlpin	74.63	61	eP	P	07 06 12.6	-0.2
	comp=Z,40nm,0.8s						
456A	Hilliard	74.67	60	P	P	07 06 12.0	-1.0
	baz=322						
456A	Hilliard	74.67	60	eP	P	07 06 12.3	-0.7
	comp=Z,68nm,1.1s						
PMOR	Pomariorio Ree	74.80	141	eT	T	08 27 01.5	
	comp=Z,11nm,0.3s						
GROC	Groznyy	74.80	323	eP	P	07 06 01.8	-12
GROC				e		07 06 18.1	
GROC				pmax	pmax		
	comp=Z,22nm,0.6s						
457A	Yulee	75.00	59	P	P	07 06 13.8	-1.0
	baz=322						
556A	Lake Butler	75.03	60	P	P	07 06 14.3	-0.7
	baz=322						
DSB	Dublin	75.07	360	eP	P	07 06 14.7	-0.2
	comp=Z,36nm,1.1s						
LVV	L'vov	75.18	340	eP	P	07 06 15.8	+0.1
TLIG	Tlapa	75.27	80	eP	P	07 06 16.6	-0.2
	comp=Z,20nm,1.2s						
KIV	Kislovodsk	75.27	325	eP	P	07 06 16.5	+0.1
	comp=Z,16nm,0.8s						
KIV	Kislovodsk	75.27	325	i P	P	07 06 17.1	+0.7
KIV				i		07 06 25.0	
KIV				i S	S	07 16 00.2	+5.7
KIV				pmax	pmax		
	comp=Z,29nm,1.3s						
557A	Orange Park	75.38	60	P	P	07 06 16.8	-0.2
	baz=322						
KBZ	Khabaz	75.40	325	P	P	07 06 18.0	+1.0
	comp=Z,16nm,1.0s,baz=26,slow=2.7,SNR=22						
KBZ				LR	LR	07 45 32.6	
	comp=Z,562nm,18.3s,baz=21,slow=41						
AKT	Akhty	75.55	321	eP	P	07 06 17.6	-0.4
AKT				e		07 06 29.0	
AKT				e		07 09 07.3	
AKT				pmax	pmax		
	comp=Z,43nm,1.3s						
CTA	Charters Tower	75.60	206	P	P	07 06 19.5	+1.3
	comp=Z,4.7nm,0.8s,baz=13,slow=12,SNR=3.3						
KSP	Ksiaz	75.64	345	eP	P	07 06 18.2	0.0
KSP	Ksiaz	75.64	345	eP	P	07 06 18.2	0.0
KWP	Kalwaria Pacla	75.64	341	eP	P	07 06 20.0	+1.7
	comp=Z,3μm,1.5s						
OJC	Ojcow	75.64	343	eP	P	07 06 18.9	+0.6
OJC	Ojcow	75.64	343	eP	P	07 06 18.9	+0.6
	comp=Z,45nm,0.9s						
OJC	Ojcow	75.64	343	eP	P	07 06 18.9	+0.6
657A	Interlachen	75.64	60	P	P	07 06 18.4	-0.2
	baz=322						
CLL	Collm	75.67	347	⇓iP	P	07 06 18.2	-0.2
	comp=Z,47nm,1.7s						
CLL				e		07 06 35.0	
CLL				ePPP	PPP	07 10 54.0	
CLL				eS	S	07 15 54.0	-4.3
CLL				ePS	PnS	07 16 36.0	+1.0
CLL				eSS	SS	07 20 52.0	+3.7
CLL				eSSS	SSS	07 24 12.0	
CLL				LmV		07 40 00.0	
	comp=Z,400nm,20.4s						
CLL	Collm	75.67	347	eP	P	07 06 17.9	-0.5
	comp=Z,20nm,1.3s						
CLL	Collm	75.67	347	⇓iP	P	07 06 18.2	-0.2
CLL				pmax	pmax		
	comp=Z,47nm,1.7s						
CLL				MLR	MLR		
	comp=Z,400nm,20.4s						
ZEI	Tsey	75.86	324	eP	P	07 06 19.7	-0.2
ZEI				pmax	pmax		
	comp=Z,27nm,1.0s						
BRG	Berggiesshubel	75.96	347	i P	P	07 06 19.6	-0.5
	comp=Z,36nm,1.5s						
	comp=N,435nm,22.6s						
	comp=E,346nm,20.5s						
	comp=Z,392nm,23.9s						
BRG	Berggiesshubel	75.96	347	i P	P	07 06 19.6	-0.5
BRG				pmax	pmax		
	comp=Z,36nm,1.5s						
BRG				MLR	MLR		
	comp=N,435nm,22.6s						
BRG				MLR	MLR		
	comp=E,346nm,20.5s						
BRG				MLR	MLR		
	comp=Z,392nm,23.9s						
UPC	Upice	76.01	345	eP	P	07 06 20.8	+0.4
UPC				AMS	AMS	07 44 30.0	
	comp=Z,600nm,18.0s						
UPC	Upice	76.01	345	eP	P	07 06 20.8	+0.4
UPC				MLR	MLR		
	comp=Z,600nm,18.0s						
DPC	Dobruska-Polom	76.11	345	eP	P	07 06 21.4	+0.4
DPC				ex	x	07 06 31.5	
DPC				AMS	AMS	07 45 40.0	
	comp=Z,500nm,19.3s						
DPC	Dobruska-Polom	76.11	345	eP	P	07 06 21.4	+0.4
DPC				e		07 06 31.5	
DPC				MLR	MLR		
	comp=Z,500nm,19.3s						
PVCC	Panska Ves	76.21	346	AMS	AMS	07 43 30.0	
	comp=Z,500nm,17.2s						
ANN	Anapa	76.28	329	eP	P	07 06 25.2	+3.2
ANN				pmax	pmax		
	comp=Z,50nm,1.1s						
KRLC	Kraliky	76.30	345	eP	P	07 06 22.6	+0.5
KRLC				epP	pP	07 06 27.8	-0.8
KRLC	Kraliky	76.30	345	eP	P	07 06 22.6	+0.5
KRLC				e		07 06 27.8	
OKC	Ostrava-Krasne	76.30	344	eP	P	07 06 23.1	+1.1
OKC				AMS	AMS	07 45 00.0	
	comp=Z,400nm,17.2s						
OKC	Ostrava-Krasne	76.30	344	eP	P	07 06 23.1	+1.1
OKC				MLR	MLR		
	comp=Z,400nm,17.2s						
NIE	Niedzica	76.31	342	eP	P	07 06 23.1	+0.9
NIE	Niedzica	76.31	342	eP	P	07 06 23.1	+0.9
MORC	Moravsky Berou	76.46	344	⇑iP	P	07 06 23.8	+0.8
MORC	Moravsky Berou	76.46	344	eP	P	07 06 23.3	+0.3
	comp=Z,65nm,1.5s						
MORC	Moravsky Berou	76.46	344	⇑P	P	07 06 23.8	+0.8
MORC	Moravsky Berou	76.46	344	⇑iP	P	07 06 23.3	+0.3
TBLG	Delisi	76.47	323	eP	P	07 06 24.1	+0.9
	comp=Z,71nm,1.4s						
758A	Lake Helen	76.49	60	P	P	07 06 23.4	0.0
	baz=322						
MOX	Moxa	76.50	348	P	P	07 06 21.5	-1.7
MOX				pmax	pmax		
	comp=Z,12nm,1.5s						
PPT	Papeete	76.51	144	LR	LR	07 31 39.4	
	comp=Z,536nm,20.1s,baz=324,slow=29						
PPT2	Papeete2	76.53	144	eS	S	07 16 09.8	+1.2
	comp=Z,184nm,25.2s						
PPT2	Papeete2	76.53	144	eLR	LR	07 30 06.8	
	comp=Z,1μm,22.8s,baz=339						
CRVS	Cervenica-Dubn	76.58	341	eP	P	07 06 24.4	+0.7
CRVS				pmax	pmax		
	comp=Z,20nm,0.9s						
CRVS	Cervenica-Dubn	76.58	341	eP	P	07 06 24.4	+0.7
SOC	Sochi	76.62	327	eP	P	07 06 24.3	+0.3
SOC				e		07 09 11.8	
SOC				ePPP	PPP	07 11 02.0	
SOC				eS	S	07 16 09.3	+0.2
SOC				pmax	pmax		
	comp=Z,8.0nm,0.4s						
SOC				MLR	MLR		
	comp=Z,423nm,18.0s						
UZH	Uzhgorod	76.67	341	eP	P	07 06 24.2	0.0
UZH				e		07 06 32.8	
UZH				e		07 06 40.8	
RAR	Rarotonga	76.68	154	LR	LR	07 33 46.0	
	comp=Z,465nm,18.9s,baz=308,slow=31						
KIS	Kishinev	76.72	336	eP	P	07 06 24.0	-0.5
KIS				LRM	MLR	07 43 40.0	
	comp=Z,800nm,17.0s						
KIS	Kishinev	76.72	336	eP	P	07 06 24.0	-0.5
KIS				e		07 06 32.0	
KIS				MLR	MLR		
	comp=N,700nm,16.0s						
KIS				MLR	MLR		
	comp=Z,800nm,17.0s						
LANS	Liptovska Anna	76.73	343	eP	P	07 06 26.1	+1.6
LANS	Liptovska Anna	76.73	343	eP	P	07 06 26.1	+1.6
PRU	Pruhonice	76.74	346	eP	P	07 06 24.9	+0.4
PRU				epP	pP	07 06 29.1	-1.8
PRU				ex	x	07 06 37.9	
PRU				AMS	AMS	07 43 50.0	
	comp=Z,500nm,18.0s						
PRU	Pruhonice	76.74	346	eP	P	07 06 24.9	+0.4
PRU				e		07 06 37.9	
PRU				MLR	MLR		
	comp=Z,500nm,18.0s						
GOPC	GO Pecny, Ondr	76.77	346	eP	P	07 06 25.5	+0.7
GOPC				AMS	AMS	07 44 00.0	
	comp=Z,600nm,19.0s						
GOPC	GO Pecny, Ondr	76.77	346	eP	P	07 06 25.5	+0.7
GOPC				MLR	MLR		
	comp=Z,600nm,19.0s						
NKC	Novy Kostel	76.79	347	P	P	07 06 26.8	+1.9
957A	Wimauma	76.95	62	P	P	07 06 25.2	-0.8
	baz=322						
BUR08	Bucovina Ar. S	76.98	338	eP	P	07 06 26.6	+0.6
858A	St. Cloud	76.99	61	P	P	07 06 25.8	-0.5
	baz=323						
BUR04	Bucovina Ar. S	77.00	338	eP	P	07 06 26.6	+0.4
BURAR	Bucovina Array	77.00	338	⇑iP	P	07 06 26.9	+0.7
BURAR	Bucovina Array	77.00	338	⇑P	P	07 06 26.9	+0.7
VRAC	Vranov	77.08	345	LR	LR	07 43 25.0	
	comp=Z,262nm,20.1s,baz=16,slow=38						
VRAC	Vranov	77.08	345	⇑iP	P	07 06 27.1	+0.6
VRAC	Vranov	77.08	345	⇑P	P	07 06 27.1	+0.6
VRAC	Vranov	77.08	345	⇑iP	P	07 06 27.0	+0.6
TRPA	Tarpa	77.10	340	⇑iP	P	07 06 28.0	+1.5
TRPA	Tarpa	77.10	340	⇑eP	P	07 06 28.1	+1.5
KECS	Kecovo	77.17	342	eP	P	07 06 28.2	+1.2
KECS	Kecovo	77.17	342	eP	P	07 06 28.1	+1.1
AKH	Akhalkalaki	77.21	324	⇑iP	P	07 06 28.8	+1.2
AKH	Akhalkalaki	77.21	324	eP	P	07 06 28.3	+0.7
	comp=Z,16nm,1.1s						
JAVC	Velka Javorina	77.33	344	⇑iP	P	07 06 29.6	+1.7
KRUC	Moravsky	77.35	345	⇑iP	P	07 06 28.3	+0.3
859A	Kempfer Cattle	77.36	61	P	P	07 06 27.9	-0.5
	baz=323						
BIZ	Bicaz	77.44	338	⇑iP	P	07 06 29.2	+0.7
VYHS	Vyhne	77.47	343	eP	P	07 06 29.6	+0.9
VYHS				pmax	pmax		
	comp=Z,34nm,1.6s						
VYHS	Vyhne	77.47	343	eP	P	07 06 29.6	+0.9
GRFO	Grafenberg	77.48	348	eP	P	07 06 27.6	-1.1
	comp=Z,30nm,1.4s						
GRFO	Grafenberg	77.48	348	eP	P	07 06 27.6	-1.1
GRFO				pmax	pmax		
	comp=Z,30nm,1.4s						
058A	Arcadia	77.67	62	P	P	07 06 29.6	-0.5
	baz=323						
ARCR	ARCALIA	77.70	339	⇓iP	P	07 06 31.6	+1.6
SMOL	Smolenice	77.70	344	P	P	07 06 31.8	+1.8
KHC	Kasperske Hory	77.71	346	eP	P	07 06 30.5	+0.4
KHC				epP	pP	07 06 36.6	+0.1
KHC				ex	x	07 06 47.0	
KHC				AMS	AMS	07 44 10.0	
	comp=Z,500nm,20.9s						
KHC	Kasperske Hory	77.71	346	eP	P	07 06 30.4	+0.4
	comp=Z,12nm,1.2s						
KHC	Kasperske Hory	77.71	346	eP	P	07 06 30.5	+0.4
KHC				e		07 06 36.6	
KHC				e		07 06 47.0	
KHC				MLR	MLR		
	comp=Z,500nm,20.9s						
GIVF	Givet	77.75	352	eP	P	07 06 29.7	-0.5
GIVF				pmax	pmax		
	comp=Z,21nm,1.2s						
959A	Okeechobee	77.80	61	P	P	07 06 30.5	-0.3
	baz=323						
WET	Wettzell	77.80	347	P	P	07 06 31.4	+0.9
PSZ	Piszkesteto	77.83	342	⇑iP	P	07 06 32.2	+1.4
PSZ	Piszkesteto	77.83	342	⇑eP	P	07 06 32.4	+1.6
PSZ	Piszkesteto	77.83	342	eP	P	07 06 31.1	+0.4
	comp=Z,61nm,1.2s						
PSZ	Piszkesteto	77.83	342	⇑P	P	07 06 32.2	+1.4
BAIF	Baives	77.84	353	eP	P	07 06 30.5	-0.2
BAIF				pmax	pmax		
	comp=Z,36nm,1.4s						
GNI	Garni	77.84	322	P	P	07 06 32.9	+1.8
	comp=Z,6.2nm,0.4s,baz=112,slow=19,SNR=9.1						
GNI				LR	LR	07 45 14.8	
	comp=Z,780nm,20.6s,baz=26,slow=39						
GNI	Garni	77.84	322	eP	P	07 06 32.5	+1.4
	comp=Z,14nm,0.6s						
MODS	Modra-Piesok	77.86	344	eP	P	07 06 32.2	+1.3
MODS				pmax	pmax		
	comp=Z,40nm,1.0s						
MODS	Modra-Piesok	77.86	344	eP	P	07 06 32.2	+1.3
GEC2	GERESS Array S	77.97	346	eP	P	07 06 30.8	-0.8
	comp=Z,26nm,1.4s						
GEC2	GERESS Array S	77.97	346	eP	P	07 06 30.8	-0.8
GEC2				pmax	pmax		
	comp=Z,26nm,1.4s						
GERES	GERESS Array B	77.97	346	P	P	07 06 31.2	-0.4
	comp=Z,4.8nm,0.8s,baz=33,slow=5.1,SNR=24						
GERES				PP	PP	07 09 28.1	+1.2
	comp=Z,0.4nm,0.3s,baz=27,slow=6.6,SNR=3.4						
GERES				LR	LR	07 45 58.1	
	comp=Z,298nm,18.3s,baz=15,slow=40						
GEA0	GERESS Array S	77.98	346	eP	P	07 06 31.4	-0.2
WLF	Walferdange	78.06	351	eP	P	07 06 31.9	-0.1
	comp=Z,28nm,1.4s						
WLF	Walferdange	78.06	351	eP	P	07 06 31.9	-0.1
WLF				pmax	pmax		
	comp=Z,28nm,1.4s						
059A	Moore Haven	78.10	61	P	P	07 06 32.0	-0.5
	baz=323						
PSI	Prapat	78.17	259	eP	P	07 06 33.8	+0.6
	comp=Z,34nm,1.5s						
CJR	Cluj-Napoca	78.22	339	⇑iP	P	07 06 34.2	+1.3
CJR	Cluj-Napoca	78.22	339	⇑P	P	07 06 34.2	+1.3
PLOR	Plostina	78.33	337	⇓iP	P	07 06 33.9	+0.4
PLOR	Plostina	78.33	337	⇓P	P	07 06 33.9	+0.4
DRGR		78.34	340	⇑iP	P	07 06 34.3	+0.7
DRGR		78.34	340	⇑P	P	07 06 34.3	+0.7
BUD	Budapest	78.41	342	⇑eP	P	07 06 35.6	+1.7
BUD	Budapest	78.41	342	P	P	07 06 36.6	+2.7
BUD				pmax	pmax		
	comp=Z,60nm,1.1s						
059Z	Ave Maria	78.43	62	P	P	07 06 34.4	+0.1
	baz=323						
060A	Indiantown	78.46	61	P	P	07 06 34.2	-0.3
	baz=323						
CONA	Conrad Observa	78.53	345	epP	P	07 06 35.7	+1.0
	comp=Z,34nm,1.5s,SNR=12						
SOP	Sopron	78.66	344	⇑eP	P	07 06 36.5	+1.2
SOP	Sopron	78.66	344	P	P	07 06 38.4	+3.1
SOP				pmax	pmax		
	comp=Z,27nm,1.4s						
CSKK	Csˆ‡kako	78.67	343	⇑eP	P	07 06 36.9	+1.6
MLR	Muntele Rosu	78.83	337	P	P	07 06 37.7	+1.2
	comp=Z,11nm,0.8s,baz=126,slow=6.1,SNR=12						
MLR				LR	LR	07 45 53.4	
	comp=Z,828nm,19.5s,baz=25,slow=39						
MLR	Muntele Rosu	78.83	337	⇑iP	P	07 06 38.2	+1.7
MLR	Muntele Rosu	78.83	337	eP	P	07 06 36.1	-0.4
	comp=Z,14nm,0.8s						
MLR	Muntele Rosu	78.83	337	eP	P	07 06 36.1	-0.4
MLR				pmax	pmax		
	comp=Z,14nm,0.8s						
060Z	West Palm Beac	78.86	61	P	P	07 06 36.4	-0.3
	baz=323						
MOA	Molln	78.86	346	epP	P	07 06 36.7	+0.3
	comp=Z,14nm,1.4s						
VOIR		79.10	338	⇑iP	P	07 06 39.1	+1.3
VOIR		79.10	338	⇑P	P	07 06 39.1	+1.3
BFO	Black Forest	79.17	350	eP	P	07 06 37.2	-0.8
	comp=Z,7.8nm,0.9s						
BFO	Black Forest	79.17	350	i P	P	07 06 38.3	+0.2
CDF	Champ du Feu	79.20	351	eP	P	07 06 37.8	-0.5
CDF				pmax	pmax		
	comp=Z,21nm,1.3s						
ARSA	Arzberg	79.25	345	epP	P	07 06 39.3	+0.8
	comp=Z,26nm,1.4s						
ARR	Arges	79.26	338	⇓iP	P	07 06 40.5	+1.8
HYB	Hyderabad	79.28	284	i P	P	07 06 33.0	-6.2
WRAB	Tennant Creek	79.30	217	eP	P	07 06 40.1	+1.1
	comp=Z,16nm,0.9s						
WRAB	Tennant Creek	79.30	217	⇑eP	P	07 06 40.9	+1.9
WRAB				pmax	pmax		
	comp=Z,17nm,1.1s						
WB2	Warramunga Arr	79.30	217	eP	P	07 06 39.9	+0.8
	comp=Z,18nm,0.9s						
WRA	Warramunga Arr	79.31	217	P	P	07 06 39.8	+0.7
	comp=Z,10nm,1.0s,baz=32,slow=6.1,SNR=42						
WRA				LR	LR	07 40 18.1	
	comp=Z,175nm,19.6s,baz=20,slow=35						
WC3	Warramunga Arr	79.31	217	eP	P	07 06 40.7	+1.7
	comp=Z,25nm,1.3s						
ECH	Echery	79.40	351	eP	P	07 06 38.1	-1.2
	comp=Z,9.3nm,1.0s						
ECH	Echery	79.40	351	eP	P	07 06 38.2	-1.2
ECH				pmax	pmax		
	comp=Z,9.0nm,1.0s						
FLN	La Foliniere	79.42	356	eP	P	07 06 38.7	-0.7
FLN				pmax	pmax		
	comp=Z,46nm,1.4s						
LDF	La Druitiere	79.57	356	eP	P	07 06 39.4	-0.8
BZS	Buzias	79.69	340	⇓iP	P	07 06 41.6	+0.7
BZS	Buzias	79.69	340	⇓P	P	07 06 41.6	+0.7
MORH	Mˆ‡rˆ¡gy, Hung	79.70	342	⇑eP	P	07 06 41.4	+0.4
RETA	Reutte	79.71	348	ePcP	P	07 06 41.5	+0.4
	comp=Z,10nm,1.1s						
WATA	Walderalm	79.75	347	epP	P	07 06 43.2	+1.8
	comp=Z,18nm,1.0s						
KBA	Koelnbreinsper	79.75	346	ePcP	P	07 06 42.7	+1.3
	comp=Z,102nm,1.8s,SNR=15						
KBA	Koelnbreinsper	79.75	346	P	P	07 06 42.5	+1.0
BEHE	Becsehely	79.79	344	⇓eP	P	07 06 43.7	+2.2
GRR	Gorron	79.81	356	eP	P	07 06 41.0	-0.5
GRR				pmax	pmax		
	comp=Z,38nm,1.3s						
WTTA	Wattenberg	79.81	347	ePcP	P	07 06 42.9	+1.1
	comp=Z,34nm,1.3s,SNR=5.4						
HINF	Hinteralfeld	79.83	351	eP	P	07 06 41.1	-0.6
HINF				pmax	pmax		
	comp=Z,9.0nm,1.0s						
SOKA	Soboth	79.88	345	ePcP	P	07 06 43.0	+0.9
	comp=Z,62nm,1.3s,SNR=11						
ROSF	Rostrenen	79.94	358	eP	P	07 06 41.9	-0.4
ROSF				pmax	pmax		
	comp=Z,47nm,1.4s						
SGMF	Saint Gilles	80.01	357	eP	P	07 06 42.1	-0.5
SGMF				pmax	pmax		
	comp=Z,55nm,1.7s						
DAVA	Damuels	80.02	349	ePcP	P	07 06 43.5	+0.6
	comp=Z,4.9nm,0.6s						
OBKA	Obir	80.12	345	ePcP	P	07 06 43.7	+0.3
	comp=Z,25nm,0.7s						
MYKA	Terra Mystica	80.14	346	ePcP	P	07 06 44.7	+1.2
	comp=Z,13nm,0.9s						
GSI	Gunungsitoli	80.17	259	eP	P	07 06 43.9	-0.1
	comp=Z,56nm,1.4s						
FETA	Feichten	80.17	348	i PcP	P	07 06 44.1	+0.4
	comp=Z,25nm,1.5s,SNR=5.3						
ABTA	Abfaltersbach	80.20	347	ePcP	P	07 06 44.1	+0.3
	comp=Z,35nm,1.4s,SNR=5.6						
HERR	Herculane	80.22	339	⇑iP	P	07 06 43.9	+0.1
QUIF	Quistinic	80.36	358	eP	P	07 06 44.0	-0.5

QUIF				pmax	pmax		
	comp=Z,22nm,1.3s						
MDVR	**Moldovita**	**80.46**	**340**	⇑*i*P	**P**	**07 06 45.4**	**+0.2**
DAVOX	**Davos/Dischmat**	**80.51**	**348**	P	**P**	**07 06 46.2**	**+0.6**
	comp=Z,8.0nm,0.8s,baz=6.2,slow=9.7,SNR=8.6						
DAVOX				LR	LR	07 42 21.5	
	comp=Z,321nm,21.8s,baz=44,slow=36						
FUORN	**Ofenpass-Fuorn**	**80.62**	**348**	*e*P	**P**	**07 06 46.8**	**+0.5**
	comp=Z,13nm,0.8s						
ILGA	**Ilgaz**	**80.83**	**330**	*e*P	**P**	**07 06 48.2**	**+0.7**
	comp=Z,19nm,1.1s						
TUE	**Stuetta**	**80.88**	**349**	*e*P	**P**	**07 06 48.2**	**+0.5**
	comp=Z,14nm,0.9s						
AVF	**Avril sur Loir**	**81.15**	**353**	*e*P	**P**	**07 06 48.4**	**-0.4**
AVF				pmax	pmax		
	comp=Z,26nm,1.3s						
FITZ	**Fitzroy Crossi**	**81.18**	**225**	*e*P	**P**	**07 06 50.1**	**+1.0**
	comp=Z,20nm,1.3s						
SENIN	**Lac Senin/Sane**	**81.22**	**350**	*e*P	**P**	**07 06 48.0**	**-1.5**
	comp=Z,10nm,1.0s						
BLY	**Banja Luka**	**81.39**	**343**	⇓*i*P	**P**	**07 06 49.8**	**-0.3**
DIVS	**Divibare**	**81.47**	**341**	*e*P	**P**	**07 06 50.2**	**-0.5**
	comp=Z,14nm,0.9s						
MFF	**Saint Martin d**	**81.56**	**355**	P	**P**	**07 06 50.6**	**-0.3**
TBI	**Tubuai**	**81.87**	**146**	*e*LR	LR	07 32 40.7	
	comp=Z,878nm,22.8s,baz=331						
BR131	**Keskin Array S**	**82.06**	**330**	*e*P	**P**	**07 06 54.2**	**+0.3**
BRTR	**Keskin Array B**	**82.06**	**330**	P	**P**	**07 06 54.1**	**+0.3**
	comp=Z,5.1nm,0.8s,baz=40,slow=3.4,SNR=26						
BRTR				PP	**PP**	**07 10 00.7**	**-0.3**
	comp=Z,1.5nm,0.9s,baz=15,slow=5.1,SNR=3.9						
BRTR				LR	LR	07 48 39.3	
	comp=Z,125nm,18.7s,baz=9.5,slow=40						
LPL	**La Plagne**	**82.12**	**350**	*e*P	**P**	**07 06 54.8**	**+0.6**
LPG	**La Plagne**	**82.13**	**350**	*e*P	**P**	**07 06 55.1**	**+0.7**
LPG				pmax	pmax		
	comp=Z,48nm,1.4s						
ANTO	**Ankara**	**82.19**	**330**	*e*P	**P**	**07 06 53.9**	**-0.6**
	comp=Z,11nm,0.8s						
ANTO	**Ankara**	**82.19**	**330**	*e*P	**P**	**07 06 53.9**	**-0.6**
ANTO				pmax	pmax		
	comp=Z,11nm,0.8s						
VTS	**Vitosha**	**82.22**	**338**	⇑*i*P	**P**	**07 06 54.5**	**-0.1**
VTS	**Vitosha**	**82.22**	**338**	*e*P	**P**	**07 06 54.6**	**-0.1**
	comp=Z,8.2nm,0.7s						
VTS	**Vitosha**	**82.22**	**338**	*e*P	**P**	**07 06 54.6**	**-0.1**
VTS				pmax	pmax		
	comp=Z,8.0nm,0.7s						
BNI	**Bardonecchia**	**82.58**	**350**	*e*P	**P**	**07 06 57.8**	**+1.3**
	comp=Z,17nm,1.0s						
BNI	**Bardonecchia**	**82.58**	**350**	*e*P	**P**	**07 06 57.8**	**+1.3**
BNI				pmax	pmax		
	comp=Z,17nm,1.0s						
RJF	**Les Rejaudoux**	**82.76**	**354**	*e*P	**P**	**07 06 58.1**	**+0.8**
RJF				pmax	pmax		
	comp=Z,13nm,1.2s						
ORIF	**Oris-en-Rattie**	**82.79**	**351**	*e*P	**P**	**07 06 58.1**	**+0.5**
ORIF				pmax	pmax		
	comp=Z,28nm,1.1s						
AS01	**Alice Springs**	**82.86**	**216**	*e*P	**P**	**07 06 58.9**	**+1.1**
AS31	**Alice Springs**	**82.87**	**216**	*e*P	**P**	**07 06 58.7**	**+0.7**
	comp=Z,3.3nm,1.1s						
ASAR	**Alice Springs**	**82.87**	**216**	P	**P**	**07 06 59.1**	**+1.1**
	comp=Z,7.9nm,1.0s,baz=25,slow=4.6,SNR=26						
ASAR				LR	LR	07 41 41.0	
	comp=Z,234nm,19.8s,baz=32,slow=34						
VIVF	**Saint-Julien-l**	**82.97**	**352**	*e*P	**P**	**07 06 58.6**	**+0.2**
VIVF				pmax	pmax		
	comp=Z,29nm,1.6s						
CAF	**Calviac**	**83.10**	**354**	*e*P	**P**	**07 06 58.0**	**-1.1**
CAF				pmax	pmax		
	comp=Z,23nm,1.2s						
LFF	**La Frestale**	**83.17**	**355**	*e*P	**P**	**07 06 59.2**	**-0.2**
LFF				pmax	pmax		
	comp=Z,8.0nm,0.8s						
PDG	**Podgorica**	**83.23**	**341**	⇑*i*P	**P**	**07 07 00.0**	**+0.3**
SJPF	**Ste Jean**	**85.09**	**356**	*e*P	**P**	**07 07 09.7**	**+0.5**
SJPF				pmax	pmax		
	comp=Z,14nm,1.0s						
WSAR	**Wadi Sarin**	**85.86**	**303**	P	**P**	**07 07 12.5**	**-0.8**
	comp=Z,12nm,0.8s,baz=39,slow=5.9,SNR=6.0						
WSAR				LR	LR	07 49 11.4	
	comp=Z,190nm,19.5s,baz=68,slow=38						
PALK	**Pallekele**	**85.87**	**276**	LR	LR	07 47 14.8	
	comp=Z,88nm,21.7s,baz=261,slow=37						
MMAI	**Mount Meron Ar**	**87.59**	**326**	LR	LR	07 53 16.2	
	comp=Z,279nm,18.1s,baz=335,slow=40						
STKA	**Stephens Creek**	**88.05**	**207**	P	**P**	**07 07 24.2**	**+0.6**
	comp=Z,4.9nm,0.7s,baz=24,slow=6.3,SNR=11						
STKA				LR	LR	07 42 24.2	
	comp=Z,158nm,20.0s,baz=25,slow=33						
STKA	**Stephens Creek**	**88.05**	**207**	*e*P	**P**	**07 07 25.2**	**+1.7**
	comp=Z,1.6nm,0.8s						
ES19	**SONSECA Array**	**88.59**	**358**	*e*P	**P**	**07 07 25.4**	**-1.0**
ESDC	**Sonseca Array**	**88.62**	**358**	P	**P**	**07 07 25.5**	**-1.0**
	comp=Z,1.1nm,0.6s,baz=352,slow=4.7,SNR=9.3						
VAE	**Valguarnera**	**88.94**	**343**	LR	LR	07 53 03.1	
	comp=Z,236nm,18.1s,baz=352,slow=40						
JTS	**JuntasAbangare**	**89.14**	**74**	LR	LR	07 47 59.9	
	comp=Z,90nm,22.0s,baz=18,slow=36						
KEST	**Kesra**	**91.45**	**347**	P	**P**	**07 07 38.6**	**-1.3**
	comp=Z,3.3nm,0.6s,baz=346,slow=4.2,SNR=3.8						
KEST				LR	LR	07 51 43.6	
	comp=Z,136nm,19.7s,baz=326,slow=38						
RAYN	**Ar Rayn**	**91.98**	**313**	*e*P	**P**	**07 07 42.0**	**-0.5**
	comp=Z,9.7nm,1.1s						
RAYN	**Ar Rayn**	**91.98**	**313**	*e*P	**P**	**07 07 42.0**	**-0.5**
RAYN				pmax	pmax		
	comp=Z,10.0nm,1.1s						
RPZ	**Rata Peaks**	**95.41**	**182**	LR	LR	07 45 07.8	
	comp=Z,558nm,20.8s,baz=22,slow=32						
MDT	**Midelt**	**95.47**	**358**	LR	LR	07 50 01.5	
	comp=Z,109nm,21.5s,baz=8.0,slow=35						
NWAO	**Narrogin (SRO)**	**97.76**	**225**	LR	LR	07 52 10.5	
	comp=Z,154nm,19.7s,baz=294,slow=35						
ROSC	**El Rosal**	**99.74**	**69**	LR	LR	07 57 34.6	
	comp=Z,50nm,19.8s,baz=354,slow=38						
PLCA	**Paso Flores**	**135.94**	**101**	PKP	**PKPdf**	**07 13 54.2**	**+0.3**
	comp=Z,1.6nm,0.8s,baz=274,slow=3.1,SNR=4.0						
PLCA	**Paso Flores**	**135.94**	**101**	PKP	**PKPdf**	**07 13 54.2**	**+0.3**
PLCA				*e*PKPdf	**PKiKP**	**07 13 54.3**	**-1.2**
QSPA	**South Pole Qui**	**141.80**	**180**	PKhKP	PKPpre	07 13 58.8	
	comp=Z,1.6nm,0.9s,baz=305,slow=2.5,SNR=5.4						
QSPA	**South Pole Qui**	**141.80**	**180**	PKPpre	PKPpre	07 13 58.8	
QSPA				*e*PKPpre	PKPpre	07 13 59.1	
MAW	**Mawson**	**143.98**	**218**	PKP	PKPbc	07 14 05.5	+0.1
	comp=Z,21nm,1.0s,baz=90,slow=4.8,SNR=24						
MAW	**Mawson**	**143.98**	**218**	PKP	PKPbc	07 14 05.5	+0.1
MAW				*e*PKPdf	**PKPab**	**07 14 05.9**	**+1.0**
USHA	**Ushuaia**	**144.21**	**119**	PKP	PKPbc	07 14 06.9	+0.4
	comp=Z,22nm,0.8s,baz=181,slow=2.7,SNR=7.6						
BOSA	**Boshof**	**146.62**	**302**	PKPbc	**PKPdf**	**07 14 14.4**	**+0.9**
	comp=Z,8.7nm,0.8s,baz=18,slow=2.7,SNR=12						
BOSA	**Boshof**	**146.62**	**302**	PKPbc	**PKPdf**	**07 14 14.4**	**+0.9**
BOSA				*e*PKPdf	**PKPbc**	**07 14 15.0**	**0.0**
PMSA	**Palmer Station**	**148.62**	**136**	PKPbc	**PKPbc**	**07 14 19.9**	**+0.8**
	comp=Z,23nm,0.8s,baz=254,slow=3.1,SNR=4.9						
SYO	**Syowa Base**	**152.53**	**214**	⇓*e*PKPbc	**PKPbc**	**07 14 27.7**	**-0.6**
SYO	**Syowa Base**	**152.53**	**214**	⇓*i*PKiKP	**PKiKP**	**07 14 30.0**	**+1.4**
VNA3	**Neumayer Olymp**	**160.70**	**177**	PKP	**PKPab**	**07 15 13.0**	**-1.1**
VNA3				SKS	**SKSdf**	**07 21 35.0**	**-0.2**

SKO 23 06:58:34.2,41°.31N×20°.89E,h23^{km},M0.9,ML1.2, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHR	**Ohrid**	**0.21**	**199**	*e*Pg	Pb	06 58 40.1	+0.2
OHR				*i* Sg	Sb	06 58 44.0	+0.4
OHR				*e*Lg	Lg	06 58 44.2	
	comp=N,36nm,0.4s						
OHR				*e*Lg	Lg	06 58 44.5	
	comp=E,62nm,0.4s						
KRUS	**Krusevo**	**0.28**	**78**	*i* Pg	Pb	06 58 40.8	0.0
KRUS				*i* Sg	Sb	06 58 44.5	-0.7
STIP	**Stip**	**1.05**	**68**	*i* Pg	Pb	06 58 57.9	+4.2
STIP				*i* Sg	Sn	06 59 14.6	+7.1

IDC ***23*** *07:04:19.1±0.9,22°.45S×173°.21E,h0^{km},mb4.3/12, mb1 4.4/13,mb1mx4.1/50,mbtmp4.3/13,ML4.1/1,MS3.6/8, Ms1 3.6/8,ms1mx3.3/46,Error ellipse: s-maj=25.1km s-min=20.6km az=26.0*

ISCJB ***23*** *07:04:22.8±0.4,22°.55S±0°.07×173°.13E±0°.06,h32^{km}, mb4.6/23,MS3.7/5,Error ellipse: s-maj=10.4km s-min=7.5km az=8.1*

NEIC ***23*** *07:04:25.8±1.7,22°.51S×173°.12E,h44^{km}±15^{km},mb4.6/15, Error ellipse: s-maj=9.4km s-min=8.1km az=46.0*

ISC 23 07:04:24.4±0.5**,22°.52S**±0°.10×**173°.20E**±0°.07**,h32^{km},n53, σ0^{s}.97**/46**,mb4.5**/23**,MS3.8**/5**,1C-1D,Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**6.27**	**273**	Pn	**Pn**	**07 05 54.8**	**0.0**
	4.8nm,0.3s,baz=157,slow=14,SNR=36						
DZM				Sn	**Sn**	**07 07 03.9**	**-1.5**
	1.1nm,0.3s,baz=127,slow=20,SNR=2.8						
DZM				LR	LR	07 07 12.9	
	comp=Z,68nm,19.9s,baz=160,slow=28						
DZM	**Mont Dzumac**	**6.27**	**273**	*e*Pn	**Pn**	**07 05 56.8**	**+2.0**
	19nm,0.3s						
DZM				*e*Sn	**Sn**	**07 07 05.9**	**+0.5**
	21nm,0.3s						
DZM				*e*LR	LR	07 07 22.1	
	673nm,22.6s						
DZM	**Mont Dzumac**	**6.27**	**273**	*e*Pn	**Pn**	**07 05 55.0**	**+0.2**
DZM				*e*Sn	**Sn**	**07 07 06.6**	**+1.2**
URZ	**Urewera**	**16.05**	**169**	LR	LR	07 13 11.6	
	comp=Z,253nm,20.2s,baz=349,slow=33						
HNR	**Honiara**	**18.18**	**314**	LR	LR	07 14 46.0	
	comp=Z,239nm,18.6s,baz=103,slow=34						
LTZ	**Lake Taylor**	**20.23**	**182**	*e*P	**P**	**07 08 57.4**	**+0.6**
	33nm,1.1s						
EIDS	**Eidsvold**	**20.41**	**258**	*e*P	Pn	07 09 03.8	+2.6
	37nm,1.1s						
OXZ	**Oxford**	**20.78**	**182**	*e*P	**P**	**07 09 03.3**	**+0.5**
	38nm,1.1s						
ARMA	**Armidale**	**20.83**	**243**	*e*P	Pn	07 09 08.6	+2.4
	37nm,1.4s						
RPZ	**Rata Peaks**	**21.22**	**184**	P	**P**	**07 09 07.8**	**+0.3**
	9.5nm,0.9s,baz=63,slow=16,SNR=3.0						
RPZ				LR	LR	07 16 23.6	
	comp=Z,388nm,21.4s,baz=13,slow=34						
RAR	**Rarotonga**	**25.11**	**92**	LR	LR	07 20 01.8	
	comp=Z,77nm,18.2s,baz=260,slow=38						
RAR	**Rarotonga**	**25.11**	**92**	*e*P	**P**	**07 09 47.4**	**+0.8**
	101nm,1.4s						
CTA	**Charters Tower**	**25.20**	**270**	P	**P**	**07 09 47.7**	**+0.3**
	3.3nm,0.7s,baz=50,slow=7.9,SNR=4.3						
STKA	**Stephens Creek**	**29.52**	**245**	P	**P**	**07 10 25.9**	**-0.2**
	1.3nm,0.5s,baz=90,slow=10,SNR=3.5						
STKA				LR	LR	07 21 21.3	
	comp=Z,153nm,18.6s,baz=63,slow=35						
STKA	**Stephens Creek**	**29.52**	**245**	*e*P	**P**	**07 10 25.9**	**-0.2**
	1.9nm,1.2s						
MCQ	**Macquarie Isla**	**33.69**	**195**	*e*P	**P**	**07 11 02.0**	**-0.3**
	267nm,1.4s						
PPT2	**Papeete2**	**35.25**	**89**	*e*LR	LR	07 20 44.1	
	160nm,25.2s						
AS01	**Alice Springs**	**36.04**	**260**	*e*P	**P**	**07 11 23.7**	**+0.6**
AS31	**Alice Springs**	**36.08**	**260**	*e*P	**P**	**07 11 23.6**	**+0.1**
	1.5nm,1.0s						
ASAR	**Alice Springs**	**36.09**	**260**	P	**P**	**07 11 22.6**	**-0.9**
	1.7nm,0.7s,baz=79,slow=9.5,SNR=12						
WB2	**Warramunga Arr**	**36.23**	**267**	*e*P	**P**	**07 11 23.9**	**-0.9**
WRAB	**Tennant Creek**	**36.23**	**267**	*e*P	**P**	**07 11 23.5**	**-1.3**
	4.1nm,0.8s						
WR1	**Warramunga Arr**	**36.24**	**267**	*e*P	**P**	**07 11 23.0**	**-1.9**
	3.1nm,0.9s						
WRA	**Warramunga Arr**	**36.24**	**267**	P	**P**	**07 11 23.0**	**-1.9**
	1.1nm,0.7s,baz=98,slow=8.3,SNR=12						
FORT	**Forrest**	**40.95**	**249**	*e*P	**P**	**07 12 04.1**	**-0.1**
	34nm,0.8s						
MTN	**Manton Dam**	**41.09**	**276**	*e*P	**P**	**07 12 05.5**	**-0.1**
	36nm,1.5s						
H11S2	**WAKE ISLAND Hy**	**41.24**	**351**	T	T	07 56 25.3	
	baz=167						
H11S3	**WAKE ISLAND Hy**	**41.25**	**351**	T	T	07 56 27.8	
	baz=167						
H11S1	**WAKE ISLAND Hy**	**41.26**	**351**	T	T	07 56 28.7	
	baz=167						
FITZ	**Fitzroy Crossi**	**44.67**	**267**	*e*P	**P**	**07 12 35.0**	**+0.4**
	18nm,1.5s						
NWAO	**Narrogin (SRO)**	**50.11**	**245**	P	**P**	**07 13 15.9**	**-0.9**
	14nm,0.9s,baz=86,slow=15,SNR=3.6						
WRMHI	**West Rim**	**51.80**	**39**	*e*P	**P**	**07 13 29.3**	**-0.4**
	236nm,0.5s						
VNDA	**Vanda**	**55.33**	**183**	P	**P**	**07 13 53.4**	**-1.2**
	1.1nm,1.0s,baz=3.1,slow=9.2,SNR=4.5						
VNDA				LR	LR	07 33 21.5	
	comp=Z,128nm,22.0s,baz=24,slow=32						
SBA	**Scott Base**	**55.48**	**182**	*e*P	**P**	**07 13 57.6**	**+2.0**
	22nm,1.4s						
QSPA	**South Pole Qui**	**67.56**	**180**	P	**P**	**07 15 18.1**	**+0.5**
	8.4nm,1.0s,baz=34,slow=2.6,SNR=4.6						
QSPA	**South Pole Qui**	**67.56**	**180**	*e*P	**P**	**07 15 18.3**	**+0.7**
	27nm,1.4s						
KIWB	**Kanaga Island**	**74.53**	**6**	*e*P	**P**	**07 16 01.6**	**+2.0**
GSTR	**Great Sitkin T**	**74.88**	**7**	*e*P	**P**	**07 16 02.2**	**+0.5**
PETK	**Petropavlovsk-**	**76.50**	**350**	LR	LR	07 42 58.1	
	comp=Z,66nm,21.6s,baz=123,slow=30						
MAW	**Mawson**	**76.79**	**202**	P	**P**	**07 16 13.3**	**+0.8**
	4.2nm,0.8s,baz=125,slow=12,SNR=4.3						
MAW	**Mawson**	**76.79**	**202**	*e*P	**P**	**07 16 13.3**	**+0.8**
	1.0nm,0.8s						
SYO	**Syowa Base**	**82.80**	**195**	⇑*e*P	**P**	**07 16 43.6**	**-1.4**
SYO	**Syowa Base**	**82.80**	**195**	⇓*e*PcP	**PcP**	**07 16 49.2**	**-0.7**
HIA	**Hailar**	**85.81**	**328**	*e*P	**P**	**07 17 01.1**	**+0.6**
	70nm,0.6s						
HIA	**Hailar**	**85.81**	**328**	*e*pP	**P**	**07 17 01.1**	**+0.6**
SNAA	**Sanae**	**86.03**	**181**	P	**P**	**07 17 00.5**	**-1.0**
	2.1nm,0.8s,baz=214,slow=7.3,SNR=3.4						
SNAA	**Sanae**	**86.03**	**181**	*e*P	**P**	**07 17 00.5**	**-1.0**
	3.0nm,0.9s						
MOD	**Modoc Plateau**	**88.75**	**43**	*e*P	**P**	**07 17 14.8**	**-0.2**
ILAR	**Eielson Array**	**92.30**	**16**	P	**P**	**07 17 29.7**	**-1.1**
	0.7nm,0.7s,baz=226,slow=7.4,SNR=2.1						
PLCA	**Paso Flores**	**93.63**	**137**	P	**P**	**07 17 38.3**	**+0.3**
	3.1nm,1.0s,baz=200,slow=7.6,SNR=4.6						
ARA0	**ARCESS Array S**	**129.14**	**346**	*e*PKPdf	**PKPdf**	**07 23 28.1**	**-0.5**
ARCES	**ARCESS Array B**	**129.14**	**346**	PKP	**PKPdf**	**07 23 28.1**	**-0.5**
	3.5nm,1.0s,baz=57,slow=3.3,SNR=4.7						
EKA	**Eskdalemuir Ar**	**147.11**	**356**	PKPbc	**PKPbc**	**07 24 03.5**	**-0.3**
	1.6nm,0.5s,baz=3.8,slow=3.2,SNR=6.6						

MEX 23 07:08:14.9±0.7**,15°.89N**×**98°.36W,h3^{km}**±5^{km}**,MD3.9,Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.55**	**24**	*i* P	Pg	07 08 24.6	-0.8
PNIG				*e*S	Sg	07 08 33.5	+0.9
TLIG	**Tlapa**	**1.68**	**353**	*e*P	Pn	07 08 41.6	-3.7
TLIG				*e*S	Sn	07 09 02.1	-5.4
VHO	**Vista Hermosa**	**1.95**	**53**	*e*P	Pn	07 08 45.9	-3.3
VHO				*e*S	Sn	07 09 09.6	-4.8
CAIG	**El Cayaco**	**2.16**	**302**	*e*P	Pn	07 08 48.3	-3.6
CAIG				*e*S	Sn	07 09 15.3	-4.0

BJI ***23*** *07:09:31.1,52°.34N×179°.58W,h144^{km},mb5.0/41, mB5.2/23*

ISCJB ***23*** *07:09:34.4±0.2,52°.16N±0°.03×179°.72W±0°.02, h163^{km}±1^{km},mb4.6/407,Error ellipse: s-maj=5.1km s-min=2.2km az=174.4*

MOS ***23*** *07:09:34.2±1.0,52°.25N×179°.80W,h155^{km},mb4.6/76, Error ellipse: s-maj=7.1km s-min=5.9km az=59.7*

NEIC ***23*** *07:09:35.6±0.0,51°.83N×179°.69W,h150^{km},mb4.8/298, ML4.5(AEIC),After AEIC.*

IDC ***23*** *07:09:36.8±0.5,52°.25N×179°.84W,h167^{km}±4^{km},mb4.2/46, mb1 4.3/47,mb1mx4.2/75,mbtmp4.7/47,MS3.4/1, Ms1 3.4/1,ms1mx2.7/70,Error ellipse: s-maj=9.7km s-min=6.2km az=166.0*

ISC 23 07:09:35.4±0.4**,52°.11N**±0°.06×**179°.77W**±0°.03**, h158^{km}**±2^{km}**,h158^{km}:pP-P,n1129,**σ**1^{s}.03**/1179**,mb4.7**/407**, 7C-13D,Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CERAA	**Semis' Rag'd T**	**0.39**	**239**	P	**Pn**	**07 09 56.4**	**-0.8**
CERB	**Semis' Cerberu**	**0.41**	**245**	P	**Pn**	**07 09 56.7**	**-0.6**
CETU	**Semis' Tuman**	**0.47**	**253**	P	**Pn**	**07 09 57.0**	**-0.5**
GALAA	**Gareloi Lava P**	**0.71**	**119**	P	**Pn**	**07 09 57.0**	**-1.8**
GAEA	**Gareloi East**	**0.71**	**117**	P	**Pn**	**07 09 57.7**	**-1.1**
AMKA	**Amchitka**	**0.93**	**219**	P	**Pn**	**07 09 59.0**	**-1.3**
AMKA				S	**Sn**	**07 10 16.7**	**-2.7**
LSSA	**Little Sitkin**	**1.07**	**262**	P	**Pn**	**07 10 01.1**	**-0.4**
TASE	**Tanaga Southea**	**1.11**	**104**	P	**Pn**	**07 10 01.1**	**-0.8**
TAFP	**Tanaga Falls P**	**1.13**	**100**	P	**Pn**	**07 10 01.0**	**-1.0**
TAFP				S	**Sn**	**07 10 20.5**	**-1.9**
TAFL	**Tanaga Flats**	**1.21**	**106**	P	**Pn**	**07 10 01.0**	**-1.7**
TAPA	**Tanaga Point A**	**1.25**	**103**	P	**Pn**	**07 10 01.2**	**-1.9**
KICM	**Kanaga Island**	**1.60**	**96**	P	**Pn**	**07 10 04.9**	**-1.7**
KICM				S	**Sn**	**07 10 29.3**	**-1.3**
KIKV	**Kanaga Island**	**1.63**	**97**	P	**Pn**	**07 10 04.9**	**-1.9**
KIWB	**Kanaga Island**	**1.64**	**98**	*e*Pn	**Pn**	**07 10 04.4**	**-2.6**
KIWB				*e*Sn	**Sn**	**07 10 29.6**	**-1.7**
KIRH	**Kanaga Island**	**1.67**	**96**	P	**Pn**	**07 10 04.6**	**-2.7**
ADAG	**Mount Adagdak**	**1.96**	**92**	P	**Pn**	**07 10 08.5**	**-2.0**
ETKA	**Kagalaska Isla**	**2.10**	**95**	P	**Pn**	**07 10 10.0**	**-2.1**
ETKA				S	**Sn**	**07 10 38.1**	**-2.3**
GSCK	**Great Sitkin C**	**2.23**	**91**	P	**Pn**	**07 10 11.7**	**-1.9**
GSTR	**Great Sitkin T**	**2.29**	**89**	*e*Pn	Pn	07 10 04.5	-10
KOWE	**Korovin West**	**3.41**	**83**	P	**Pn**	**07 10 28.8**	**+0.6**
KOKL	**Mount Kliuchef**	**3.44**	**84**	P	**Pn**	**07 10 29.1**	**+0.5**
ATKA	**Atka Island**	**3.44**	**86**	P	**Pn**	**07 10 27.8**	**-0.7**
ATKA				S	**Sn**	**07 11 07.7**	**-2.1**
KOFP	**Korovin Flat P**	**3.50**	**85**	P	**Pn**	**07 10 29.7**	**+0.4**
SMY	**Shemya**	**3.80**	**282**	P	**Pn**	**07 10 32.0**	**-1.2**
SMY	**Shemya**	**3.80**	**282**	P	**Pn**	**07 10 32.0**	**-1.2**
NIKH	**Nikolski High**	**6.72**	**78**	P	**Pn**	**07 11 11.3**	**-0.3**
SPIA	**Saint Paul Isl**	**7.50**	**44**	P	**Pn**	**07 11 23.4**	**+1.4**
MCIR	**Makushin Cirqu**	**7.99**	**72**	P	**Pn**	**07 11 28.8**	**+0.3**
MTBL	**Makushin Table**	**8.11**	**72**	P	**Pn**	**07 11 31.5**	**+1.3**
UNV	**Unalaska Valle**	**8.20**	**73**	P	**Pn**	**07 11 31.5**	**+0.2**
UNV				S	**Sn**	**07 13 01.9**	**-0.7**
AKRB	**Akutan Reef Bi**	**8.49**	**71**	P	**Pn**	**07 11 36.3**	**+1.2**
AKMO	**Akutan Morgan**	**8.52**	**71**	P	**Pn**	**07 11 36.5**	**+1.0**
AKGG	**Akutan Green G**	**8.55**	**70**	P	**Pn**	**07 11 37.1**	**+1.2**
AKLV	**Akutan Long Va**	**8.56**	**71**	P	**Pn**	**07 11 37.1**	**+1.0**
AHB	**Akutan Harbor**	**8.64**	**71**	P	**Pn**	**07 11 38.1**	**+1.1**
AKUT	**Akutan**	**8.66**	**71**	P	**Pn**	**07 11 38.4**	**+1.0**
AKSA	**Akutan Strait**	**8.71**	**71**	P	**Pn**	**07 11 38.3**	**+0.3**
WEBT	**Westdahl Beart**	**9.32**	**69**	P	**Pn**	**07 11 47.0**	**+0.8**
WESP	**Westdahl Peak**	**9.32**	**69**	P	**Pn**	**07 11 47.2**	**+0.9**
SSBA	**Shishaldin**	**9.71**	**68**	P	**Pn**	**07 11 51.6**	**+0.3**
SSLW	**Shishaldin Wes**	**9.71**	**68**	P	**Pn**	**07 11 52.5**	**+1.1**
FALS	**False Pass**	**10.13**	**68**	*e*Pn	**Pn**	**07 11 56.8**	**0.0**
SDPT	**Sand Point**	**11.87**	**67**	*e*Pn	**Pn**	**07 12 18.2**	**-1.3**
GAMB	**Gambell**	**12.45**	**17**	*e*Pn	**P**	**07 12 29.7**	**-2.7**
PET	**Petropavlovsk**	**13.15**	**283**	⇑*e*P	**Pn**	**07 12 37.0**	**+1.0**
CHGN	**Chignik**	**13.17**	**63**	*e*Pn	**Pn**	**07 12 34.7**	**-1.5**
PEA0B	**Petropavlovsk-**	**13.72**	**283**	*e*Pn	**Pn**	**07 12 45.0**	**+1.7**
PETK	**Petropavlovsk-**	**13.72**	**283**	P	**P**	**07 12 45.1**	**-1.5**
	baz=85,slow=17						
PETK				S	**Sn**	**07 15 10.4**	**-4.8**
	baz=68,slow=16						
PETK	**Petropavlovsk-**	**13.72**	**283**	*e*Pn	**Pn**	**07 12 44.7**	**+1.5**
PETK				S	**Sn**	**07 15 10.4**	**-4.8**
ANM	**Nome**	**14.55**	**25**	*e*P	**P**	**07 12 56.4**	**+0.7**
ANM	**Nome**	**14.55**	**25**	*e*P	**P**	**07 12 56.4**	**+0.7**
SKR	**Severo-Kuril's**	**15.10**	**274**	⇑*e*P	**Pn**	**07 12 59.9**	**-0.6**
SII	**Sitkinak Islan**	**15.54**	**63**	*e*Pn	**Pn**	**07 13 04.7**	**-1.1**
	135nm,0.5s						
SVW2	**Sparrevohn**	**15.98**	**46**	*e*Pn	**P**	**07 13 13.0**	**+1.3**
	26nm,0.6s						
OHAK	**Old Harbor**	**16.10**	**61**	*e*Pn	**Pn**	**07 13 09.2**	**-3.4**
	70nm,0.7s						
KDAK	**Kodiak Island**	**16.55**	**59**	P	**P**	**07 13 15.5**	**-2.3**
	12nm,0.3s,baz=283,slow=2.4,SNR=119						
KDAK				S	S	07 16 08.6	-13
	0.2nm,0.3s,baz=342,slow=20,SNR=4.5						
KDAK	**Kodiak Island**	**16.55**	**59**	*e*P	**P**	**07 13 15.7**	**-2.2**
	61nm,0.6s						
KDAK				S	S	07 16 08.6	-13
KDAK	**Kodiak Island**	**16.55**	**59**	*i* P	**P**	**07 13 15.3**	**-2.6**
RSO	**Redoubt South**	**17.07**	**50**	*e*P	**Pn**	**07 13 26.2**	**+1.7**
HOM	**Homer**	**17.39**	**53**	*e*P	**P**	**07 13 26.2**	**-0.8**
	176nm,1.1s						
CNPM	**China Poot**	**17.56**	**54**	*e*P	**P**	**07 13 29.0**	**0.0**
	85nm,1.2s						
SPU	**Mount Spurr**	**17.61**	**48**	*e*P	**Pn**	**07 13 31.5**	**+0.6**
BRLK	**Bradley Lake**	**17.79**	**53**	*e*P	**P**	**07 13 31.9**	**+0.4**
	36nm,0.6s						
RDOG	**Red Dog Mine**	**17.96**	**21**	*e*P	**Pn**	**07 13 36.7**	**+1.9**
	21nm,0.7s						
MA2	**Magadan**	**18.03**	**306**	⇓*e*P	**P**	**07 13 33.4**	**-0.7**
SKT	**Skwentna**	**18.12**	**46**	*e*P	**Pn**	**07 13 37.2**	**+0.5**
	216nm,0.8s						
PPLA	**Purkeypile**	**18.18**	**43**	*e*P	**Pn**	**07 13 37.8**	**+0.2**
	82nm,0.6s						
SUA	**Susitna One**	**18.30**	**48**	*e*P	**Pn**	**07 13 38.8**	**-0.3**
	49nm,0.8s						
CAST	**Castle Rocks**	**18.44**	**41**	*e*P	**Pn**	**07 13 40.6**	**+0.1**
	62nm,0.8s						
RC01	**Rabbit Creek A**	**18.66**	**49**	*e*P	**Pn**	**07 13 42.1**	**-1.1**
	25nm,0.9s						
KTH	**Kantishna Hill**	**18.96**	**42**	*e*P	**Pn**	**07 13 46.3**	**-0.5**
	248nm,1.0s						
PMR	**Palmer**	**19.08**	**48**	*e*P	**P**	**07 13 44.7**	**-0.7**
	26nm,0.7s						
PMR	**Palmer**	**19.08**	**48**	*e*P	**P**	**07 13 44.7**	**-0.7**
PMR				pmax	pmax		
	comp=Z,27nm,0.7s						
BPAW	**Bear Paw Mtn.**	**19.17**	**40**	*e*P	**Pn**	**07 13 48.4**	**-0.6**
	comp=Z,57nm,0.7s						
TRF	**Thorofare Moun**	**19.19**	**42**	*e*P	**Pn**	**07 13 48.4**	**-1.1**
	comp=Z,64nm,0.6s						
TRF				*e*PcP	**PcP**	**07 18 02.4**	**-0.7**
GHO	**Glory Hole Cre**	**19.22**	**48**	*e*P	**P**	**07 13 48.2**	**+1.1**
	comp=Z,42nm,0.5s						
SML	**Sawmill**	**19.50**	**48**	*e*P	**P**	**07 13 50.1**	**0.0**
	comp=Z,47nm,0.8s						
SML	**Sawmill**	**19.50**	**48**	*e*P	**P**	**07 13 50.1**	**0.0**
SML				pmax	pmax		
	comp=Z,47nm,0.8s						
MLY	**Manley**	**19.68**	**38**	*e*P	**Pn**	**07 13 54.0**	**-1.0**
	comp=Z,42nm,0.8s						
BWN	**Browne**	**19.80**	**41**	*e*P	**Pn**	**07 13 55.6**	**-0.9**
	comp=Z,93nm,0.6s						
MCK	**McKinley**	**19.85**	**42**	*e*P	**P**	**07 13 53.8**	**0.0**
	comp=Z,52nm,1.0s						
MCK	**McKinley**	**19.85**	**42**	*e*P	**P**	**07 13 53.8**	**0.0**
MCK				pmax	pmax		
	comp=Z,52nm,1.0s						
GLI	**Glacier Island**	**19.87**	**51**	*e*P	**P**	**07 13 53.6**	**-0.4**
	comp=Z,84nm,0.6s						
SCM	**Sheep Creek Mo**	**19.97**	**48**	*e*P	**P**	**07 13 55.5**	**+0.4**
	comp=Z,164nm,0.7s						
SCM	**Sheep Creek Mo**	**19.97**	**48**	*e*P	**P**	**07 13 55.5**	**+0.4**
SCM				pmax	pmax		
	comp=Z,165nm,0.7s						
MID	**Middleton Isla**	**20.01**	**55**	*e*P	**P**	**07 13 56.0**	**+0.5**
	comp=Z,111nm,1.0s						
MID	**Middleton Isla**	**20.01**	**55**	*e*P	**P**	**07 13 56.0**	**+0.5**
MID				pmax	pmax		
	comp=Z,111nm,1.0s						
FID	**Port Fidalgo**	**20.14**	**52**	*e*P	**P**	**07 13 56.4**	**-0.5**
	comp=Z,125nm,1.0s						
DHY	**Denali Highway**	**20.30**	**45**	*e*P	**P**	**07 13 59.3**	**+0.6**
	comp=Z,128nm,0.6s						
EYAK	**Cordova Ski Ar**	**20.46**	**52**	*e*P	**P**	**07 13 60.0**	**-0.3**
	comp=Z,42nm,0.9s						
WRH	**Wood River Hil**	**20.47**	**41**	*e*P	**P**	**07 14 00.1**	**-0.3**
	comp=Z,23nm,0.6s						
WRH				*e*PcP	**PcP**	**07 18 04.8**	**-0.3**
DIV	**Divide**	**20.55**	**51**	*e*P	**P**	**07 14 01.1**	**-0.2**
	comp=Z,51nm,0.6s						
KLU	**Klutina**	**20.55**	**50**	*e*P	**P**	**07 14 02.0**	**+0.6**
	comp=Z,39nm,0.7s						
MDM	**Murphy Dome**	**20.61**	**39**	*e*P	**P**	**07 14 02.5**	**+0.7**
	comp=Z,81nm,0.8s						
CCB	**Clear Creek Bu**	**20.65**	**40**	*e*P	**P**	**07 14 01.9**	**-0.4**
	comp=Z,31nm,1.0s						
COLA	**College**	**20.72**	**40**	*e*P	**P**	**07 14 03.6**	**+0.6**
	comp=Z,64nm,0.6s						
COLA	**College**	**20.72**	**40**	*e*P	**P**	**07 14 03.6**	**+0.6**
COLA				pmax	pmax		
	comp=Z,64nm,0.6s						
COLD	**Coldfoot**	**20.95**	**32**	*e*P	**P**	**07 14 07.1**	**+1.6**
	comp=Z,28nm,1.1s						
RAGM	**Ragged Mountai**	**20.96**	**53**	*e*P	**P**	**07 14 02.2**	**-3.5**
	comp=Z,60nm,1.0s						
IL1	**Eielson Array**	**21.07**	**40**	*e*P	**P**	**07 14 05.5**	**-1.3**
IL1				*e*PcP	**PcP**	**07 18 06.2**	**-0.1**
ILAR	**Eielson Array**	**21.07**	**40**	P	**P**	**07 14 05.1**	**-1.6**
	comp=Z,7.4nm,0.5s,baz=242,slow=9.6,SNR=61						
ILAR				ScP	**ScP**	**07 21 25.6**	**-2.3**
	comp=Z,2.0nm,0.7s,baz=288,slow=3.3,SNR=19						
ILAR				P3KPbc		07 48 00.7	
	comp=Z,0.2nm,1.0s,baz=116,slow=2.1,SNR=4.2						

ILB	Eielson Array	21.07	40	*e*P	P	07 14 05.1	-1.6
BMRM	Bremner River	21.08	51	*e*P	P	07 14 07.0	0.0
	comp=Z,59nm,0.8s						
PAX	Paxson	21.10	46	*e*P	P	07 14 08.1	+0.9
	comp=Z,34nm,0.8s						
PAX	Paxson	21.10	46	*e*P	P	07 14 08.1	+0.9
PAX				pmax	pmax		
	comp=Z,34nm,0.8s						
HARP	HAARP	21.10	47	*e*P	P	07 14 07.7	+0.5
	comp=Z,186nm,1.1s						
RIDG	Independ'e Rid	21.58	44	*e*P	P	07 14 11.8	-0.5
	comp=Z,21nm,0.5s						
DOT	Dot Lake	21.89	44	*e*P	P	07 14 15.3	-0.2
	comp=Z,44nm,0.8s						
TOLK	Toolik Lake Re	21.92	30	P	P	07 14 16.6	+0.8
	baz=236,SNR=25						
TOLK	Toolik Lake Re	21.92	30	*e*P	P	07 14 16.8	+1.0
	comp=Z,28nm,0.6s						
SCRK	Sand Creek	22.01	43	*e*P	P	07 14 16.2	-0.6
	comp=Z,55nm,0.8s						
BALM	Baldy	22.18	52	*e*P	P	07 14 18.1	-0.4
	comp=Z,21nm,0.9s						
BALM	Baldy	22.18	52	*e*P	P	07 14 18.1	-0.4
BALM				pmax	pmax		
	comp=Z,21nm,0.9s						
KUR	Kuril'sk	22.31	265	*e*P	P	07 14 20.6	+0.8
FYU	Fort Yukon	22.39	37	*e*P	P	07 14 21.4	+1.2
	comp=Z,101nm,0.8s						
TYV	Tymovskoe	23.26	282	*e*P	P	07 14 30.3	+1.8
TYV				pmax	pmax		
	comp=Z,21nm,1.0s						
EGAK	Eagle	23.41	42	*e*P	P	07 14 30.8	+1.2
	comp=Z,106nm,0.8s						
DAWY	Dawson	24.00	44	*e*P	P	07 14 36.0	+0.8
	comp=Z,72nm,0.8s						
YSS	Yuzh-Sakhalins	24.66	273	*e*P	P	07 14 42.7	+1.5
YSS				pmax	pmax		
	comp=Z,20nm,1.4s						
SKAG	Skagway	25.63	56	*e*P	P	07 14 50.7	+0.9
	comp=Z,8.2nm,0.6s						
WHY	Whitehorse	25.81	53	*e*P	P	07 14 52.4	+0.8
	comp=Z,5.6nm,0.7s						
SIT	Sitka	25.86	61	*e*P	P	07 14 54.6	+2.7
	comp=Z,4.4nm,0.8s						
SIT	Sitka	25.86	61	*e*P	P	07 14 54.6	+2.7
SIT				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ASAJ	Asahikawa	26.12	267	P	P	07 14 54.9	+0.5
	comp=Z,18nm,0.8s,baz=36,slow=5.5,SNR=14						
ASAJ				LR	LR	07 26 02.5	
	comp=Z,94nm,20.6s,baz=32,slow=38						
ASAJ	Asahikawa	26.12	267	*e*P	P	07 14 55.0	+0.5
	comp=Z,16nm,0.8s						
ASAJ	Asahikawa	26.12	267	P	P	07 14 54.9	+0.5
ASAJ				pmax	pmax		
	comp=Z,16nm,0.8s						
ASAJ				MLR	MLR		
	comp=Z,94nm,20.6s						
JIS	Juneau Island	26.21	58	*e*P	P	07 14 55.7	+0.6
	comp=Z,10nm,0.8s						
ERM	Erimo	26.92	263	*e*P	P	07 15 02.9	+1.3
	comp=Z,12nm,0.6s						
ERM	Erimo	26.92	263	*e*P	P	07 15 02.9	+1.3
ERM				pmax	pmax		
	comp=Z,13nm,0.6s						
INK	Inuvik	27.22	36	P	P	07 15 05.1	+1.2
	comp=Z,21nm,0.5s,baz=255,slow=5.5,SNR=62						
INK				ScP	ScP	07 21 42.7	-2.1
	comp=Z,2.9nm,0.9s,baz=236,slow=3.6,SNR=5.6						
INK	Inuvik	27.22	36	*e*P	P	07 15 05.1	+1.2
	comp=Z,26nm,0.6s						
INK				ScP	ScP	07 21 42.7	-2.1
INK	Inuvik	27.22	36	*e*P	P	07 15 05.1	+1.2
INK				pmax	pmax		
	comp=Z,26nm,0.6s						
DLBC	Dease Lake	28.47	57	P	P	07 15 16.2	+0.9
	comp=Z,3.3nm,0.8s,baz=280,slow=9.3,SNR=7.8						
DLBC	Dease Lake	28.47	57	*e*P	P	07 15 16.6	+1.3
	comp=Z,4.1nm,0.8s						
TIXI	Tiksi	29.70	330⇑	*e*P	P	07 15 26.2	+0.3
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KLR	Kul'dur	30.41	284	P	P	07 15 32.5	+0.1
	comp=Z,3.3nm,0.5s,baz=71,slow=7.4,SNR=34						
KLR	Kul'dur	30.41	284	*d i*P	P	07 15 32.3	-0.1
USRK	Ussuriysk Ar.	32.61	275	P	P	07 15 51.2	-0.6
	comp=Z,9.8nm,0.6s,baz=59,slow=10						
USRK				PcP	PcP	07 18 34.6	+0.6
	baz=56,slow=2.0						
MJAR	Matsushiro Arr	33.31	259	P	P	07 15 58.7	+0.7
	comp=Z,9.2nm,0.6s,baz=44,slow=6.3,SNR=30						
MAJO	Matsushiro	33.32	259	*e*P	P	07 15 58.9	+0.9
	comp=Z,23nm,0.8s						
MAJO	Matsushiro	33.32	259	*d i*P	P	07 15 58.6	+0.6
MAJO				*i* *PP	pP	07 16 33.0	+1.6
MAJO				pmax	pmax		
	comp=Z,22nm,1.0s						
MAT	Matsushiro	33.32	259	P	P	07 15 58.7	+0.7
MJB9	Matsu-Tunnel	33.32	259	*e*P	P	07 15 59.1	+1.1
	comp=Z,24nm,0.8s						
H11N2	WAKE ISLAND Hy	33.95	203	T	T	07 53 31.3	
	baz=18,slow=76,SNR=26						
H11N3	WAKE ISLAND Hy	33.96	203	T	T	07 53 21.7	
	baz=18,slow=76,SNR=35						
H11N1	WAKE ISLAND Hy	33.97	203	T	T	07 53 29.4	
	baz=18,slow=76,SNR=24						
YKW3	Yellowknife Ar	35.15	47	*e*P	P	07 16 13.9	+0.5
	comp=Z,18nm,0.7s						
YKA	Yellowknife Ar	35.17	47	P	P	07 16 14.1	+0.5
	comp=Z,13nm,0.6s,baz=280,slow=7.9,SNR=122						
YKA				ScP	ScP	07 22 09.4	-2.1
	comp=Z,3.3nm,0.8s,baz=293,slow=3.2,SNR=20						
H11S1	WAKE ISLAND Hy	35.17	203	T	T	07 54 18.1	
	baz=22						
H11S2	WAKE ISLAND Hy	35.19	203	T	T	07 53 47.4	
	baz=22,slow=74						
H11S3	WAKE ISLAND Hy	35.19	203	T	T	07 54 25.0	
	baz=22,slow=74						
A04D	Lummi Island	35.72	72	P	P	07 16 20.8	+2.3
	baz=297						
E03A	Lebam	36.26	76	*e*P	P	07 16 24.0	+1.0
	comp=Z,24nm,0.9s						
B05A	Bryant	36.30	73	P	P	07 16 23.8	+0.5
	baz=298,SNR=5.6						
CN2	Changchun	36.82	279	*e*P	P	07 16 30.8	+2.9
F04D	Rainier, OR	36.82	76	P	P	07 16 29.0	+1.1
	baz=300						
D05A	Enumclaw	36.88	74	*e*P	P	07 16 30.4	+2.0
	comp=Z,23nm,0.9s						
G03D	McMinnville, O	37.12	78	P	P	07 16 31.3	+0.9
	baz=301						
LON	Longmire	37.20	75	*e*P	P	07 16 32.2	+1.0
	comp=Z,10nm,0.6s						
LON	Longmire	37.20	75	*e*P	P	07 16 32.2	+1.0
LON				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LTY	Liberty	37.62	73	*e*P	P	07 16 35.0	+0.3
	comp=Z,7.6nm,0.9s						
CBIJ	Chichi jima	37.85	244	P	P	07 16 37.3	+0.7
JCJ	Chichijima	37.85	244	P	P	07 16 37.3	+0.7
	comp=Z,31nm,0.5s,baz=302,slow=19,SNR=7.1						
B08A	Colville Reser	37.87	71	*e*P	P	07 16 36.8	+0.1
	comp=Z,10nm,0.8s						
I03D	Drain, OR	37.88	80	P	P	07 16 38.3	+1.6
	baz=303						
H04A	Detroit Lake	38.05	78	*e*P	P	07 16 39.3	+1.1
	comp=Z,17nm,0.8s						
G05D	Wamic, OR	38.28	76	P	P	07 16 41.1	+1.0
	baz=302						
I04A	Tendick Farm,	38.40	79	P	P	07 16 42.1	+1.0
	baz=303,SNR=8.7						
L02D	Cave Junction,	38.59	82	P	P	07 16 44.0	+1.3
	baz=304						
HUMO	Hull Mountain	38.73	81	*e*P	P	07 16 45.8	+1.9
	comp=Z,10nm,0.8s						
HAWA	Hanford	38.74	74	*e*P	P	07 16 44.5	+0.6
	comp=Z,20nm,0.9s						
I05D	Terrebonne, OR	38.75	78	P	P	07 16 45.2	+1.1
	baz=302						
D08A	Wollman Farm,	38.76	73	*e*P	P	07 16 43.7	-0.3
	comp=Z,6.6nm,0.8s						
C09A	Chrisman Ranch	38.76	71	*e*P	P	07 16 44.4	+0.3
	comp=Z,9.1nm,0.8s						
J04D	Umpqua Nationa	38.89	80	P	P	07 16 46.9	+1.5
	baz=304,SNR=8.2						
E08A	Dider Farm, El	38.97	73	*e*P	P	07 16 46.4	+0.6
	comp=Z,9.3nm,0.9s						
KSRS	Korea Array	39.03	269	P	P	07 16 47.5	+1.1
	comp=Z,9.3nm,0.7s,baz=57,slow=8.1,SNR=29						
KSRS				PcP	PcP	07 18 53.9	+0.7
	comp=Z,1.0nm,0.5s,baz=44,slow=2.4,SNR=4.1						
KS01	Wonju Array Si	39.04	269	*e*P	P	07 16 47.2	+0.7
KSAR	Wonju Array Be	39.06	269	P	P	07 16 47.5	+0.8
KSAR				PcP	PcP	07 18 53.9	+0.6
KSAR	Wonju Array Be	39.06	269	P	P	07 16 47.5	+0.8
KSAR						07 18 53.9	
KHMM	Horse Mountain	39.25	84	*e*P	P	07 16 50.9	+2.4
	comp=Z,19nm,0.8s						
PINE	Pine Mountain	39.29	78	*e*P	P	07 16 49.8	+1.0
	comp=Z,5.5nm,0.8s						
PINE				*e*PcP	PcP	07 18 54.7	+0.6
RES	Resolute Bay	39.33	25	P	P	07 16 47.0	-1.5
	comp=Z,4.5nm,0.6s,baz=306,slow=16,SNR=4.4						
RES	Resolute Bay	39.33	25	*e*P	P	07 16 49.5	+1.0
	comp=Z,7.7nm,0.8s						
RES	Resolute Bay	39.33	25	*e*P	P	07 16 49.5	+1.0
RES				pmax	pmax		
	comp=Z,8.0nm,0.8s						
YBH	Yreka Blue Hor	39.38	82	P	P	07 16 51.7	+2.3
	comp=Z,24nm,0.9s,baz=328,slow=7.1,SNR=51						
YBH	Yreka Blue Hor	39.38	82	*e*P	P	07 16 51.6	+2.3
	comp=Z,21nm,0.8s						
J05D	Fort Rock, OR	39.39	79	P	P	07 16 51.2	+1.6
	baz=304,SNR=13						
K04D	Chiloquin, OR	39.45	80	P	P	07 16 51.2	+1.2
	baz=304						
M02C	Callahan	39.49	82	P	P	07 16 52.4	+2.1
	baz=305						
VSP	Spence Mountai	39.49	81	*e*pP	pP	07 17 22.6	-2.1
E09A	Wood Farm, Sta	39.49	73	*e*P	P	07 16 50.7	+0.5
	comp=Z,15nm,1.1s						
KMRM	Mail Ridge	39.65	85	*e*P	P	07 16 54.1	+2.5
	comp=Z,32nm,1.2s						
G08A	Pilot Rock	39.66	75	*e*P	P	07 16 52.2	+0.4
	comp=Z,4.4nm,0.8s						
N02D	Trinity Center	39.82	83	P	P	07 16 55.3	+2.2
	baz=306,SNR=5.5						
M04C	Macdoel	39.88	81	P	P	07 16 55.3	+1.7
	baz=305,SNR=17						
K05A	Summer Lake	39.91	79	*e*P	P	07 16 55.7	+1.8
	comp=Z,18nm,0.8s						
I07A	Izee	39.99	77	*e*P	P	07 16 55.5	+1.0
	comp=Z,5.8nm,0.7s						
JNU	Nakatsue	40.07	262	P	P	07 16 56.1	+1.0
	comp=Z,15nm,0.5s,baz=28,slow=1.6,SNR=13						
JNU	Nakatsue	40.07	262	*e*P	P	07 16 56.2	+1.0
	comp=Z,18nm,0.6s						
WDC	Whiskeytown Da	40.15	83	*e*P	P	07 16 57.2	+1.5
	comp=Z,15nm,1.0s						
WDC	Whiskeytown Da	40.15	83	*e*P	P	07 16 57.2	+1.5
WDC				pmax	pmax		
	comp=Z,15nm,1.0s						
F10A	Beach Ranch, E	40.32	73	*e*P	P	07 16 57.0	-0.2
	comp=Z,6.5nm,1.0s						
WALA	Waterton Lakes	40.64	67	*e*P	P	07 16 59.6	-0.2
	comp=Z,18nm,0.9s						
MOD	Modoc Plateau	40.74	80	*e*P	P	07 17 02.2	+1.5
	comp=Z,19nm,0.7s						
O03D	Paynes Creek	40.78	83	P	P	07 17 02.1	+1.2
	baz=306,SNR=13						
HOPS	Hopland Field	40.79	86	*e*P	P	07 17 02.8	+1.9
	comp=Z,87nm,1.4s						
BMO	Blue Mountains	40.88	75	*e*P	P	07 17 01.8	0.0
	comp=Z,11nm,0.8s						
BMO	Blue Mountains	40.88	75	*e*P	P	07 17 01.8	0.0
BMO				pmax	pmax		
	comp=Z,11nm,0.8s						
J08A	Circle Bar Ran	41.02	77	*e*P	P	07 17 03.9	+1.0
	comp=Z,6.3nm,0.6s						
JTMT	Jette	41.10	69	*e*P	P	07 17 03.5	-0.1
	comp=Z,26nm,1.5s						
ORV	Oroville	41.41	84	*e*P	P	07 17 07.3	+1.4
	comp=Z,8.3nm,0.8s						
ORV	Oroville	41.41	84	*e*P	P	07 17 07.4	+1.4
ORV				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MSO	Missoula	41.79	70	P	P	07 17 08.6	-0.5
	baz=302,SNR=16						
MSO	Missoula	41.79	70	*e*P	P	07 17 08.9	-0.2
	comp=Z,11nm,0.8s						
BEKR	Beckworth	41.92	83	*e*P	P	07 17 11.6	+1.2
	comp=Z,17nm,1.1s						
AFDM	Forest Hills D	42.10	84	*e*P	P	07 17 12.6	+0.9
	comp=Z,16nm,1.3s						
MFID	Camas Ranch	42.57	75	*e*P	P	07 17 16.1	+0.6
	comp=Z,7.1nm,0.7s						
PAHR	Pah Rah Range	42.61	82	*e*P	P	07 17 17.3	+1.4
	comp=Z,25nm,0.9s						
VCNR	Virginia City	42.70	83	*e*P	P	07 17 18.4	+1.6
	comp=Z,23nm,0.9s						
PNTR	Pine Nut	42.86	83	*e*P	P	07 17 19.8	+1.8
	comp=Z,42nm,0.8s						
CMB	Columbia Colle	43.03	85	*e*P	P	07 17 20.6	+1.4
	comp=Z,17nm,1.3s						
CMB	Columbia Colle	43.03	85	*e*P	P	07 17 20.6	+1.4
CMB				pmax	pmax		
	comp=Z,17nm,1.3s						
HRY	Holter Researc	43.07	69	*e*P	P	07 17 19.2	-0.3
YERR	Yerington	43.14	83	*e*P	P	07 17 21.7	+1.4
	comp=Z,22nm,0.9s						
SAO	San Andreas Ge	43.18	87	*e*P	P	07 17 22.9	+2.6
	comp=Z,11nm,1.0s						
SAO	San Andreas Ge	43.18	87	*e*P	P	07 17 23.0	+2.6
SAO				pmax	pmax		
	comp=Z,11nm,1.0s						
LRM	Limekiln Ridge	43.20	70	*e*P	P	07 17 20.4	-0.3
WAKR	Walker	43.32	84	*e*P	P	07 17 23.5	+1.8
	comp=Z,19nm,0.6s						
HLID	Hailey	43.33	74	P	P	07 17 21.8	+0.1
	baz=305,SNR=27						
HLID	Hailey	43.33	74	*e*P	P	07 17 22.0	+0.3
	comp=Z,11nm,0.8s						
DLMT	Dillon	43.37	71	*e*P	P	07 17 21.7	-0.3
	comp=Z,7.7nm,1.3s						
BMN	Battle Mountai	43.49	80	*e*P	P	07 17 23.8	+0.8
	comp=Z,23nm,0.8s						
BMN	Battle Mountai	43.49	80	*e*P	P	07 17 23.8	+0.8
BMN				pmax	pmax		
	comp=Z,23nm,0.8s						
MCMT	McKenzie Canyo	43.53	72	*e*P	P	07 17 23.1	-0.2
EGMT	Eagleton	43.54	66	P	P	07 17 22.3	-0.9
	baz=302,SNR=11						
EGMT	Eagleton	43.54	66	*e*P	P	07 17 22.6	-0.5
	comp=Z,13nm,0.8s						
KVN	Kaiserville	43.80	82	*e*P	P	07 17 26.8	+1.3
	comp=Z,12nm,0.6s						
BOZ	Bozeman (W)	43.80	70	P	P	07 17 25.0	-0.4
	baz=304,SNR=50						
BOZ	Bozeman (W)	43.80	70	*e*P	P	07 17 25.2	-0.2
	comp=Z,21nm,0.7s						
BOZ	Bozeman (W)	43.80	70	*e*P	P	07 17 25.2	-0.2
BOZ				pmax	pmax		
	comp=Z,21nm,0.7s						
RYN	Ryan	43.80	83	*e*P	P	07 17 26.9	+1.4
	comp=Z,19nm,0.6s						
PMPB	Monarch Peak	43.94	87	*e*P	P	07 17 27.7	+1.3
	comp=Z,12nm,0.7s						
NV01	Mina Array Sit	44.06	83	*e*P	P	07 17 29.1	+1.5
NVAR	Mina Array Bea	44.06	83	P	P	07 17 28.9	+1.3
	comp=Z,14nm,0.6s,baz=297,slow=7.5,SNR=68						
NVAR				ScP	ScP	07 22 45.7	-1.0
	comp=Z,0.9nm,0.6s,baz=294,slow=5.1,SNR=7.7						
MDPB	Devils Postpil	44.09	84	*e*P	P	07 17 29.7	+1.8
	comp=Z,16nm,0.7s						
OMMB	Old Mammoth Mi	44.15	84	*e*P	P	07 17 30.5	+2.0
	comp=Z,7.6nm,0.6s						
NV11	Mina Array Sit	44.15	83	*e*P	P	07 17 29.7	+1.5
	comp=Z,1.0nm,0.8s						
QLMT	Earthquake Lak	44.35	71	*e*P	P	07 17 29.8	-0.1
YHB	Horse Butte	44.54	71	*e*P	P	07 17 31.4	+0.1
	comp=Z,31nm,0.8s						
PAGB	Antelope Grade	44.59	87	*e*P	P	07 17 33.5	+1.9
	comp=Z,22nm,0.5s						
BJI	Beijing	44.64	281⇓	*e*P	P	07 17 32.6	+0.7
BJI				pP	pP	07 18 02.3	-4.5
BJI				pmax	pmax		
	comp=Z,22nm,0.8s						
YMR	Madison River	44.72	71	*e*P	P	07 17 33.1	+0.3
	comp=Z,17nm,0.8s						
GCMT	Greycliff	44.83	69	*e*P	P	07 17 33.8	+0.3
YFT	Old Faithful	44.92	71	*e*P	P	07 17 35.8	+1.4
	comp=Z,21nm,0.7s						
TIN	Tinemaha, Big	44.98	84	P	P	07 17 36.1	+1.3
	baz=310						
YPP	Pitchstone Pla	45.04	71	*e*P	P	07 17 36.2	+0.8
	comp=Z,5.8nm,0.8s						
H17A	Grant Village	45.10	71	P	P	07 17 37.1	+1.3
	baz=305,SNR=19						
H17A	Grant Village	45.10	71	*e*P	P	07 17 37.2	+1.3
	comp=Z,17nm,0.8s						
IMW	Indian Meadow	45.18	72	*e*P	P	07 17 37.0	+0.5
	comp=Z,9.2nm,0.8s						
FLWY	Flagg Ranch	45.21	72	*e*P	P	07 17 37.8	+1.2
	comp=Z,20nm,0.6s						
VES	Vestal, Richgr	45.23	86	P	P	07 17 37.4	+0.7
	baz=310,SNR=12						
FXWY	Fox Creek	45.28	72	*e*P	P	07 17 37.4	+0.1
	comp=Z,4.7nm,1.1s						
HVU	Hansel Valley	45.35	75	*e*P	P	07 17 38.5	+0.8
	comp=Z,12nm,0.7s						
HVU	Hansel Valley	45.35	75	*e*P	P	07 17 38.5	+0.8
HVU				pmax	pmax		
	comp=Z,13nm,0.7s						
MOOW	Moose Ponds	45.38	72	*e*P	P	07 17 38.0	0.0
	comp=Z,3.7nm,0.8s						
ULN	Ulaanbaatar	45.40	295	*e*P	P	07 17 38.6	+0.6
	comp=Z,2.6nm,0.5s						
ULN	Ulaanbaatar	45.40	295	*e*P	P	07 17 38.6	+0.6
ULN				pmax	pmax		
	comp=Z,3.0nm,0.5s						
TPAW	Teton Pass	45.41	72	*e*P	P	07 17 38.7	+0.4
	comp=Z,4.5nm,0.7s						
RLMT	Red Lodge	45.44	69	P	P	07 17 38.4	-0.1
	baz=305,SNR=20						
RLMT	Red Lodge	45.44	69	*e*P	P	07 17 38.6	+0.1
	comp=Z,17nm,0.7s						
CWC	Cottonwood Cre	45.46	85	P	P	07 17 39.7	+1.0
	baz=310						
GRAC	Grapevine Rang	45.54	84	P	P	07 17 40.4	+1.2
	baz=310						
LOHW	Long Hollow	45.55	72	*e*P	P	07 17 39.3	0.0
	comp=Z,4.9nm,0.8s						
SNOW	Snow King Moun	45.55	72	*e*P	P	07 17 38.6	-0.8
	comp=Z,3.6nm,0.8s						
REDW	Red Top Meadow	45.55	72	*e*P	P	07 17 41.1	+1.8
	comp=Z,3.6nm,0.9s						
BGU	Big Grassy Mou	45.72	77	*e*P	P	07 17 41.0	+0.4
	comp=Z,5.2nm,0.8s						
ISA	Isabella, Lake	45.73	86	P	P	07 17 41.0	+0.4
	baz=311						
ISA	Isabella, Lake	45.73	86	*e*P	P	07 17 41.0	+0.4
	comp=Z,6.8nm,1.1s						
ISA	Isabella, Lake	45.73	86	*e*P	P	07 17 41.0	+0.4
ISA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
AHID	Auburn Hatcher	45.76	73	*e*P	P	07 17 40.8	-0.2
	comp=Z,18nm,1.3s						
SBC	Santa Barbara	45.77	88	P	P	07 17 41.4	+0.5
	baz=312						
SONA1	Songino Array	45.77	295	*e*P	P	07 17 41.4	+0.5
SONA1				*e*PcP	PcP	07 19 16.0	+0.3
R11A	Troy Canyon, C	45.77	81	P	P	07 17 41.8	+0.7
	baz=309,SNR=45						
R11A	Troy Canyon, C	45.77	81	*e*P	P	07 17 42.0	+0.9
	comp=Z,22nm,1.0s						
SONM	Songino Array	45.78	295	P	P	07 17 41.2	+0.2
	comp=Z,2.0nm,0.5s,baz=60,slow=7.0,SNR=14						
SONM				PcP	PcP	07 19 15.9	+0.1
	comp=Z,3.6nm,0.7s,baz=60,slow=1.7,SNR=12						
SONM				ScP	ScP	07 22 51.7	-1.9
	comp=Z,1.6nm,0.9s,baz=54,slow=3.1,SNR=5.4						
SPUT	South Promonto	45.83	76	*e*P	P	07 17 42.7	+1.2
	comp=Z,19nm,1.0s						
DAC	Darwin (Calif)	45.87	85	*e*P	P	07 17 42.6	+0.7
	comp=Z,5.5nm,0.7s						
MPMC	Manual Prospec	46.08	85	P	P	07 17 44.4	+0.9
	baz=310,SNR=12						
JOW	Kunigami	46.13	257	P	P	07 17 44.4	+0.6
	comp=Z,4.1nm,0.3s,baz=122,slow=19,SNR=3.4						
HWUT	Hardware Ranch	46.18	75	*e*P	P	07 17 44.5	+0.3
	comp=Z,6.3nm,0.8s						
FURC	Furnace Creek,	46.19	84	P	P	07 17 45.2	+1.1
	baz=310,SNR=19						
TPNV	Topopah Spring	46.26	83	P	P	07 17 46.0	+1.1
	baz=310,SNR=28						
TPNV	Topopah Spring	46.26	83	*e*P	P	07 17 46.2	+1.3
	comp=Z,32nm,0.8s						
OSI	Osito Audit: C	46.26	87	P	P	07 17 45.6	+0.7
	baz=311						
LAO	LASA Array	46.28	66	P	P	07 17 44.8	0.0
	baz=305,SNR=7.3						
LAO	LASA Array	46.28	66	*e*P	P	07 17 45.0	+0.2
	comp=Z,14nm,0.9s						
DUG	Dugway, Tooele	46.30	77	P	P	07 17 45.9	+0.8
	baz=308,SNR=19						
DUG	Dugway, Tooele	46.30	77	*e*P	P	07 17 46.0	+0.8
	comp=Z,32nm,1.2s						
DUG	Dugway, Tooele	46.30	77	*e*P	P	07 17 46.0	+0.9
DUG				pmax	pmax		
	comp=Z,32nm,1.2s						
LRMC	Laurel Mtn Rad	46.33	86	P	P	07 17 46.2	+0.8
	baz=311						
DGMT	Dagmar	46.39	63	P	P	07 17 44.9	-0.7
	baz=304						
DGMT	Dagmar	46.39	63	*e*P	P	07 17 45.0	-0.5
	comp=Z,11nm,0.8s						
BLG	Laguna Peak, P	46.39	88	P	P	07 17 46.3	+0.5
	baz=312						
EDW2	Edwards Air Fo	46.54	86	P	P	07 17 47.4	+0.5
	baz=311						
TCUT	Toone Canyon	46.57	75	*e*P	P	07 17 48.2	+0.9
	comp=Z,14nm,0.7s						
CTU	Camp Tracy	46.63	76	*e*P	P	07 17 48.0	+0.3
	comp=Z,5.5nm,0.7s						
BW06	Boulder Array	46.66	72	P	P	07 17 47.9	-0.1
	baz=307,SNR=35						
BW06	Boulder Array	46.66	72	*e*P	P	07 17 47.9	-0.1
	comp=Z,18nm,0.8s						
PD31	Pinedale Array	46.66	72	*e*P	P	07 17 47.9	-0.2
PDAR	Pinedale Array	46.66	72	P	P	07 17 47.9	-0.2
	comp=Z,14nm,0.7s,baz=300,slow=3.9,SNR=172						
PDAR				pP	pP	07 18 26.6	+3.3
	comp=Z,2.4nm,0.6s,baz=307,slow=4.2,SNR=2.4						
PDAR				ScP	ScP	07 22 53.8	-3.7
	comp=Z,0.6nm,0.5s,baz=288,slow=0.5,SNR=6.7						
PSUT	Pine Spring	46.71	80	*e*P	P	07 17 49.3	+0.9
	comp=Z,19nm,0.8s						
JLU	Jordanelle	46.86	76	*e*P	P	07 17 50.6	+0.9
	comp=Z,7.8nm,0.8s						
NLU	North Lily Min	46.89	77	*e*P	P	07 17 49.7	-0.1
	comp=Z,13nm,0.9s						
HHC	Hu-ho-hao-te	46.91	285	*e*P	P	07 17 50.1	+0.2
HHC				sP	sP	07 18 40.3	-2.5
HHC				PP	PP	07 19 39.5	-2.1
HHC				S	S	07 24 25.8	-2.8
HHC				ScS	ScS	07 27 26.3	-1.2
HHC				pmax	pmax		
	comp=Z,30nm,1.1s						
HHC				pmax	pmax		
	comp=Z,230nm,5.5s						
SHOC	Shoshone, Teco	46.92	84	P	P	07 17 50.7	+0.8
	baz=311,SNR=6.7						
MWC	Mount Wilson	46.93	87	*e*P	P	07 17 50.7	+0.5
	comp=Z,12nm,0.8s						
MWC	Mount Wilson	46.93	87	*e*P	P	07 17 50.7	+0.5
MWC				pmax	pmax		
	comp=Z,12nm,0.8s						
GSC	Goldstone, Bar	46.99	85	P	P	07 17 51.3	+0.8
	baz=311,SNR=25						
GSC	Goldstone, Bar	46.99	85	*e*P	P	07 17 51.5	+1.0
	comp=Z,20nm,0.5s						
GSC	Goldstone, Bar	46.99	85	*e*P	P	07 17 51.5	+1.0
GSC				pmax	pmax		
	comp=Z,20nm,0.5s						
MPU	Maple Canyon	47.12	77	*e*P	P	07 17 52.3	+0.7
	comp=Z,3.3nm,0.7s						
BFSC	Mount Baldy Ra	47.17	87	P	P	07 17 52.6	+0.7
	baz=312,SNR=5.2						
SHPR	Sheep Range	47.21	83	*e*P	P	07 17 53.2	+0.9
	comp=Z,3.9nm,0.6s						
CIS	Catalina Islan	47.27	88	P	P	07 17 53.1	+0.5
	baz=312						
TUQ	Turquoise Moun	47.44	84	P	P	07 17 54.5	+0.4
	baz=311						
HEC	Hector,Ludlow	47.59	85	P	P	07 17 55.8	+0.6
	baz=311						
BBRC	Big Bear Solar	47.61	86	P	P	07 17 56.4	+0.9
	baz=312						
CCUT	Cedar City	47.63	80	*e*P	P	07 17 56.7	+1.1
	comp=Z,8.9nm,0.6s						
MSU	Marysvale	47.74	79	*e*P	P	07 17 57.6	+1.2
MSU	Marysvale	47.74	79	*e*P	P	07 17 57.6	+1.2

SZCU	Shurtz Canyon	47.77	80	*e*P	P	07 17 57.4	+0.7
	comp=Z,9.9nm,1.2s						
TMUT	Trail Mountain	47.82	77	*e*P	P	07 17 58.1	+0.9
	comp=Z,19nm,0.9s						
MURC	Murrieta	47.88	87	P	P	07 17 58.0	+0.7
	baz=312						
P17A	Butcher Ranch,	47.99	77	*e*P	P	07 17 58.1	-0.2
	comp=Z,15nm,1.2s						
MTPU	Mount Pierson	48.03	79	*e*P	P	07 18 00.0	+1.2
	comp=Z,12nm,0.9s						
GMRC	Granite Mounta	48.04	85	P	P	07 17 59.3	+0.7
	baz=312,SNR=16						
LCMT	Little Creek M	48.05	81	*e*P	P	07 17 58.5	-0.2
	comp=Z,17nm,0.9s						
LDFC	Landfair	48.18	84	*e*P	P	07 18 00.4	+0.7
	comp=Z,21nm,0.8s						
NJ2	Nanjing	48.19	270	*e*P	P	07 17 58.8	-0.9
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
P18A	Preston Nutter	48.19	76	*e*P	P	07 18 00.6	+0.6
	comp=Z,5.8nm,0.6s						
KNB	Kanab	48.31	81	*e*P	P	07 18 01.8	+1.1
	comp=Z,16nm,0.6s						
FRD	Ford Ranch, An	48.32	87	P	P	07 18 01.7	+0.9
	baz=312,SNR=5.8						
PFO	Pinyon Flats O	48.33	87	P	P	07 18 01.2	+0.3
	baz=312						
PFO	Pinyon Flats O	48.33	87	*e*P	P	07 18 01.5	+0.6
	comp=Z,7.7nm,1.3s						
PFO	Pinyon Flats O	48.33	87	*e*P	P	07 18 01.5	+0.6
PFO				pmax	pmax		
	comp=Z,8.0nm,1.3s						
XPFO	Piæon Flat	48.33	87	*e*P	P	07 18 01.5	+0.6
	comp=Z,7.7nm,1.3s						
PKCU	Pink Cliffs	48.34	80	*e*P	P	07 18 02.6	+1.4
	comp=Z,18nm,1.0s						
BELC	Belle Mtn. Jos	48.35	86	P	P	07 18 01.4	+0.3
	baz=312,SNR=10						
SRU	San Rafael Swe	48.35	77	*e*P	P	07 18 01.7	+0.6
	comp=Z,16nm,0.6s						
SRU	San Rafael Swe	48.35	77	*e*P	P	07 18 01.7	+0.6
SRU				pmax	pmax		
	comp=Z,16nm,0.6s						
109C	Camp Elliot, M	48.42	88	P	P	07 18 01.5	+0.1
	baz=313						
K22A	Casper	48.51	71	P	P	07 18 02.0	-0.1
	baz=308,SNR=7.7						
K22A	Casper	48.51	71	*e*P	P	07 18 02.1	-0.1
	comp=Z,8.3nm,0.8s						
NEE2	Needles Airpor	48.69	84	P	P	07 18 03.8	+0.3
	baz=312						
IRM	Iron Mountain	48.77	85	P	P	07 18 04.8	+0.7
	baz=312,SNR=8.1						
BAR	Barrett	48.83	88	*e*P	P	07 18 05.6	+1.0
	comp=Z,12nm,1.0s						
MONP2	Monument Peak	48.84	87	P	P	07 18 04.8	0.0
	baz=313						
BC3	Big Chuckawall	48.92	86	P	P	07 18 05.4	+0.1
	baz=312						
KBS	Kingsbay	49.04	357	*e*P	P	07 18 07.0	+1.5
	comp=Z,11nm,0.9s						
KBS				*e*PcP	PcP	07 19 27.3	+0.6
KBS	Kingsbay	49.04	357	*e*P	P	07 18 07.0	+1.5
KBS				*e*		07 19 27.3	
KBS				pmax	pmax		
	comp=Z,11nm,0.9s						
RSSD	Black Hills	49.04	68	P	P	07 18 05.4	-0.9
	baz=307						
RSSD	Black Hills	49.04	68	*e*P	P	07 18 05.7	-0.6
	comp=Z,3.9nm,0.8s						
RSSD	Black Hills	49.04	68	*e*P	P	07 18 05.7	-0.6
RSSD				pmax	pmax		
	comp=Z,4.0nm,0.8s						
O20A	White River Ci	49.07	74	P	P	07 18 06.3	-0.2
	baz=309,SNR=20						
O20A	White River Ci	49.07	74	*e*P	P	07 18 06.5	0.0
	comp=Z,15nm,0.6s						
SWSC	Sam W. Stewart	49.19	87	P	P	07 18 07.4	+0.2
	baz=313						
IKP	In-Ko-Pah, Jac	49.20	87	P	P	07 18 07.8	+0.4
	baz=313						
MDND	Maddock	49.25	61	P	P	07 18 07.1	-0.5
	baz=306						
MDND	Maddock	49.25	61	*e*P	P	07 18 07.7	+0.1
	comp=Z,38nm,0.9s						
PDMCI	Parker Dam,Lak	49.29	84	P	P	07 18 08.0	0.0
	baz=312						
Y12C	Blythe	49.43	85	P	P	07 18 09.6	+0.6
	baz=312,SNR=10						
Y12C	Blythe	49.43	85	*e*P	P	07 18 10.1	+1.1
	comp=Z,13nm,0.7s						
PV09	Paradox Valley	49.58	77	*e*P	P	07 18 11.2	+0.6
SPA0	Spitsbergen Ar	49.60	356	*e*P	P	07 18 10.3	+0.5
SPITS	Spitsbergen Ar	49.60	356	P	P	07 18 10.3	+0.5
	comp=Z,6.2nm,0.4s,baz=14,slow=10,SNR=40						
PV21	Cone Mtn., Par	49.63	76	*e*P	P	07 18 11.2	+0.4
	comp=Z,26nm,1.4s						
PV23	Carpenter Ridg	49.68	76	*e*P	P	07 18 11.3	+0.1
	comp=Z,23nm,1.3s						
GLA	Glamis	49.71	86	P	P	07 18 11.8	+0.5
	baz=313						
GLA	Glamis	49.71	86	*e*P	P	07 18 12.4	+1.1
	comp=Z,15nm,0.9s						
GLA	Glamis	49.71	86	P	P	07 18 12.4	+1.1
GLA				pmax	pmax		
	comp=Z,15nm,1.0s						
PV10	Paradox Valley	49.71	77	*e*P	P	07 18 12.5	+1.0
PV14	Lion Creek, Pa	49.73	77	*e*P	P	07 18 11.5	-0.1
	comp=Z,7.2nm,0.8s						
PV22	Blue Mesa, Par	49.76	76	*e*P	P	07 18 11.9	+0.1
	comp=Z,12nm,1.0s						
PV20	West Nyswonger	49.78	77	*e*P	P	07 18 11.7	-0.2
	comp=Z,9.2nm,0.5s						
ULM	Lac du Bonnet	49.79	57	P	P	07 18 11.5	-0.1
	comp=Z,4.2nm,0.5s,baz=284,slow=5.1,SNR=7.4						
ULM	Lac du Bonnet	49.79	57	*e*P	P	07 18 10.5	-1.1
	comp=Z,7.1nm,0.6s						
PV19	Morning Glory	49.79	77	*e*P	P	07 18 12.3	+0.2
	comp=Z,12nm,0.5s						
PV17	East Wray Mesa	49.82	77	*e*P	P	07 18 12.8	+0.5
	comp=Z,19nm,0.6s						
PV16	Nyswonger Mesa	49.83	77	*e*P	P	07 18 12.8	+0.4
	comp=Z,8.6nm,0.6s						
PV11	David Mesa, Pa	49.86	77	*e*P	P	07 18 12.8	+0.3
	comp=Z,25nm,0.5s						
PV05	Paradox Valley	49.87	77	*e*P	P	07 18 12.6	-0.1
PV18	Skein Mesa, Pa	49.88	77	*e*P	P	07 18 12.9	+0.2
	comp=Z,34nm,1.3s						
PV12	Saucer Basin,	49.89	76	*e*P	P	07 18 13.3	+0.5
	comp=Z,25nm,1.3s						
PV03	Paradox Valley	49.91	77	*e*P	P	07 18 13.2	+0.3
N23A	Red Feather La	49.94	72	P	P	07 18 13.0	-0.2
	baz=309,SNR=7.1						
N23A	Red Feather La	49.94	72	*e*P	P	07 18 13.3	+0.1
	comp=Z,3.6nm,0.6s						
PV13	Radium Mtn., P	49.99	77	*e*P	P	07 18 13.8	+0.3
	comp=Z,75nm,1.3s						
PV02	Paradox Valley	50.00	77	*e*P	P	07 18 13.9	+0.3
	comp=Z,40nm,1.3s						
PV01	Paradox Valley	50.15	76	*e*P	P	07 18 14.9	+0.1
WUAZ	Wupatki	50.17	81	P	P	07 18 15.8	+0.9
	baz=311,SNR=15						
WUAZ	Wupatki	50.17	81	*e*P	P	07 18 15.8	+0.9
	comp=Z,16nm,0.6s						
SMCO	Snowmass	50.43	74	*e*P	P	07 18 16.9	-0.1
	comp=Z,3.0nm,0.8s						
MVCO	Mesa Verde	50.80	77	P	P	07 18 19.8	+0.2
	baz=311,SNR=10.0						
MVCO	Mesa Verde	50.80	77	*e*P	P	07 18 19.8	+0.2
	comp=Z,7.1nm,0.6s						
A33A	Warroad	50.83	58	P	P	07 18 18.6	-0.9
	baz=307,SNR=8.2						
ISCO	Idaho Springs	50.84	73	P	P	07 18 19.8	-0.2
	baz=310,SNR=7.0						
ISCO	Idaho Springs	50.84	73	*e*P	P	07 18 20.3	+0.3
	comp=Z,5.6nm,1.1s						
ISCO	Idaho Springs	50.84	73	*e*P	P	07 18 20.3	+0.3
ISCO				pmax	pmax		
	comp=Z,6.0nm,1.1s						
AGMN	Agassiz Nation	50.98	59	P	P	07 18 19.3	-1.2
	baz=308,SNR=6.0						
AGMN	Agassiz Nation	50.98	59	*e*P	P	07 18 19.8	-0.7
	comp=Z,10nm,1.0s						
C33A	Trail	51.36	59	P	P	07 18 22.1	-1.3
	baz=308						
W18A	Petrified Fore	51.44	80	P	P	07 18 24.8	+0.5
	baz=312						
W18A	Petrified Fore	51.44	80	*e*P	P	07 18 25.1	+0.7
	comp=Z,18nm,0.8s						
S22A	4UR Ranch, Cre	51.45	76	P	P	07 18 25.2	+0.7
	baz=311						
S22A	4UR Ranch, Cre	51.45	76	*e*P	P	07 18 25.4	+0.8
	comp=Z,3.2nm,0.9s						
B34A	Aery, Baudette	51.50	58	P	P	07 18 23.4	-1.0
	baz=308,SNR=10						
Q24A	Divide	51.65	73	P	P	07 18 25.7	-0.4
	baz=310						
Q24A	Divide	51.65	73	*e*P	P	07 18 26.5	+0.5
	comp=Z,2.9nm,0.8s						
214A	Organ Pipe Nat	51.70	85	P	P	07 18 26.8	+0.6
	baz=314,SNR=7.9						
SUSD	Miller	51.70	64	P	P	07 18 24.7	-1.3
	baz=309						
C34A	RKJ Ranch, Bem	51.88	59	P	P	07 18 26.1	-1.2
	baz=308						
G32A	Webster	51.99	63	P	P	07 18 26.7	-1.4
	baz=309						
G32A	Webster	51.99	63	*e*P	P	07 18 28.3	+0.2
	comp=Z,22nm,1.0s						
B35A	Bob, Littlefor	52.06	58	P	P	07 18 27.2	-1.3
	baz=308,SNR=5.5						
B35A	Bob, Littlefor	52.06	58	*e*P	P	07 18 27.9	-0.6
	comp=Z,10nm,0.8s						
OGNE	Ogallala	52.19	70	P	P	07 18 29.2	-0.5
	baz=310						
OGNE	Ogallala	52.19	70	*e*P	P	07 18 29.8	+0.1
	comp=Z,9.9nm,0.8s						
SDCO	Great Sand Dun	52.24	75	P	P	07 18 30.9	+0.5
	baz=311,SNR=11						
SDCO	Great Sand Dun	52.24	75	*e*P	P	07 18 30.9	+0.5
	comp=Z,7.7nm,1.1s						
C35A	Jirik Farms, M	52.34	58	P	P	07 18 29.5	-1.2
	baz=309,SNR=6.1						
D35A	Remer	52.69	59	P	P	07 18 32.3	-0.9
	baz=309,SNR=6.6						
TUC	Tucson	52.70	84	P	P	07 18 34.3	+0.7
	baz=313						
TUC	Tucson	52.70	84	*e*P	P	07 18 34.6	+1.0
	comp=Z,8.2nm,0.9s						
TUC	Tucson	52.70	84	*e*P	P	07 18 34.6	+1.0
TUC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SUMG	Summit	52.73	14	*e*P	P	07 18 34.8	+1.2
	comp=Z,4.7nm,0.8s						
SUMG	Summit	52.73	14	*e*P	P	07 18 34.8	+1.2
SUMG				pmax	pmax		
	comp=Z,5.0nm,0.8s						
E35A	Pequot Lakes	52.84	60	P	P	07 18 33.4	-0.9
	baz=309						
F34A	Alexandria	52.87	61	P	P	07 18 33.6	-0.9
	baz=309						
C36A	Pine Crest Far	52.90	58	P	P	07 18 33.8	-1.0
	baz=309,SNR=5.1						
YULB	Yu-li	52.90	261	*e*P	P	07 18 35.0	0.0
	comp=Z,19nm,1.3s						
XAN	Xi'an	52.93	280	P	P	07 18 34.4	-0.8
XAN				pmax	pmax		
	comp=Z,18nm,0.8s						
XAN				pmax	pmax		
	comp=Z,91nm,3.7s						
G34A	Benson	53.02	62	P	P	07 18 34.3	-1.4
	baz=310						
ZALV	Zalesovo Beam	53.09	313	PcP	PcP	07 19 42.0	-0.1
	comp=Z,2.6nm,0.6s,baz=31,slow=3.3,SNR=5.6						
D36A	Goodland	53.10	58	P	P	07 18 35.1	-1.2
	baz=309						
D36A	Goodland	53.10	58	*e*P	P	07 18 35.6	-0.6
	comp=Z,7.3nm,0.8s						
KSCO	Kaye Shedlock'	53.10	72	P	P	07 18 36.7	+0.1
	baz=311						
KSCO	Kaye Shedlock'	53.10	72	*e*P	P	07 18 36.6	+0.1
	comp=Z,14nm,0.8s						
F35A	Swanville	53.20	60	P	P	07 18 35.8	-1.1
	baz=310,SNR=6.1						
C37A	Embarrass	53.26	57	P	P	07 18 36.5	-0.9
	baz=310,SNR=5.6						
T25A	Trinidad	53.29	75	P	P	07 18 38.1	+0.1
	baz=312,SNR=5.9						
T25A	Trinidad	53.29	75	*e*P	P	07 18 38.9	+0.9
	comp=Z,20nm,1.2s						
ECSD	EROS Data Cent	53.45	64	P	P	07 18 37.4	-1.5
	baz=310,SNR=9.0						
ECSD	EROS Data Cent	53.45	64	*e*P	P	07 18 37.4	-1.5
	comp=Z,4.4nm,0.6s						
E36A	McGregor	53.47	59	P	P	07 18 38.3	-0.6
	baz=310,SNR=5.7						
EYMN	Ely	53.48	57	P	P	07 18 38.2	-0.7
	baz=310						
EYMN	Ely	53.48	57	*e*P	P	07 18 38.8	-0.2
	comp=Z,14nm,0.8s						
D37A	Cotton	53.50	58	P	P	07 18 38.2	-1.0
	baz=310						
TASM	ASL Pad, Albuq	53.54	78	P	P	07 18 40.0	+0.2
	baz=312,SNR=5.4						
ANMO	Albuquerque	53.54	78	P	P	07 18 40.5	+0.7
	comp=Z,2.4nm,0.9s,baz=303,slow=10,SNR=9.6						
ANMO	Albuquerque	53.54	78	P	P	07 18 39.9	+0.1
	baz=312						
ANMO	Albuquerque	53.54	78	*e*P	P	07 18 39.0	-0.8
	comp=Z,3.2nm,1.0s						
TASL	Snake Pit, Alb	53.54	78	P	P	07 18 40.1	+0.2
	baz=312,SNR=5.5						
G35A	Watkins	53.65	61	P	P	07 18 39.3	-1.0
	baz=310						
G35A	Watkins	53.65	61	*e*P	P	07 18 39.6	-0.6
	comp=Z,5.2nm,0.6s						
C38A	Sawbill Land.	53.74	57	P	P	07 18 40.0	-0.8
	baz=310						
F36A	Milaca	53.75	60	P	P	07 18 40.0	-1.0
	baz=310						
F36A	Milaca	53.75	60	*e*P	P	07 18 40.7	-0.3
	comp=Z,5.2nm,1.0s						
H35A	Sunnyside Ranc	53.80	62	P	P	07 18 40.3	-1.1
	baz=310,SNR=5.2						
G36A	St. Michael	54.04	61	P	P	07 18 42.0	-1.1
	baz=310						
BGNE	Belgrade	54.11	67	P	P	07 18 42.8	-0.8
	baz=311						
E38A	The Farm, Brul	54.31	58	P	P	07 18 44.1	-0.9
	baz=310,SNR=5.7						
E38A	The Farm, Brul	54.31	58	*e*P	P	07 18 44.1	-0.9
	comp=Z,18nm,0.6s						
F37A	Hinrichs Farm,	54.32	59	P	P	07 18 44.2	-0.9
	baz=310,SNR=5.5						
H36A	Jessenland, He	54.37	61	P	P	07 18 45.1	-0.4
	baz=311,SNR=7.0						
121A	Cookes Peak, D	54.38	81	P	P	07 18 46.7	+0.7
	baz=314						
SPMN	Marine on St.	54.55	60	P	P	07 18 46.0	-0.8
	baz=311						
SPMN	Marine on St.	54.55	60	*e*P	P	07 18 45.7	-1.1
	comp=Z,5.5nm,0.6s						
F38A	Pierce - Schro	54.56	59	P	P	07 18 46.6	-0.3
	baz=311,SNR=20						
LZH	Lanzhou	54.60	285	*e*P	P	07 18 48.4	+0.9
LZH				pP	pP	07 19 19.8	-4.0
LZH				sP	sP	07 19 36.4	-4.7
LZH				PP	PP	07 20 48.9	-2.4
LZH				*e*S	S	07 26 14.3	-0.5
LZH				SS	SS	07 30 02.9	+3.6
LZH				pmax	pmax		
	comp=Z,100nm,1.2s						
LZH				pmax	pmax		
	comp=Z,250nm,4.3s						
DGZ	Jazzator, Alta	54.61	307⇓	*e*P	P	07 18 47.4	+0.1
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.0s						
I36A	Fitzsimmons Fa	54.69	62	P	P	07 18 46.7	-1.1
	baz=311						
C40A	Isle Royale Na	54.70	56	P	P	07 18 47.1	-0.6
	baz=311						
GTA	Gaotai	54.74	291	P	P	07 18 49.0	+0.6
GTA				pP	pP	07 19 25.5	+0.8
GTA				sP	sP	07 19 41.3	-0.7
GTA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
H37A	Dierke Farm, C	54.91	61	P	P	07 18 48.8	-0.6
	baz=311						
CBKS	Cedar Bluff	54.92	70	P	P	07 18 49.2	-0.4
	baz=312						
J36A	Seneca 1, Swea	54.97	63	P	P	07 18 48.4	-1.4
	baz=311						
J36A	Seneca 1, Swea	54.97	63	*e*P	P	07 18 49.1	-0.7
	comp=Z,9.7nm,0.9s						
E39A	Mellen	54.98	58	P	P	07 18 48.7	-1.2
	baz=311						
I37A	Lemond, Waseca	55.03	61	P	P	07 18 49.7	-0.6
	baz=311,SNR=6.3						
I37A	Lemond, Waseca	55.03	61	*e*P	P	07 18 49.9	-0.4
	comp=Z,17nm,1.0s						
G38A	Ridgeland	55.09	60	P	P	07 18 49.7	-1.0
	baz=311,SNR=7.7						
F39A	Loretta	55.10	58	P	P	07 18 50.1	-0.6
	baz=311,SNR=18						
ENH	Enshi	55.19	276	*e*P	P	07 18 51.7	0.0
	comp=Z,20nm,0.6s						
H38A	Maiden Rock	55.19	60	P	P	07 18 50.8	-0.6
	baz=311,SNR=6.9						
E40A	Wakefield	55.28	57	P	P	07 18 51.7	-0.3
	baz=311,SNR=11						
K36A	Gilmore City	55.36	63	P	P	07 18 51.5	-1.1
	baz=311						
G39A	Holcombe	55.38	59	P	P	07 18 51.9	-0.8
	baz=311,SNR=6.6						
J37A	Redenius Farm,	55.41	62	P	P	07 18 52.1	-0.9
	baz=311						
F40A	Park Falls	55.51	58	P	P	07 18 52.9	-0.8
	baz=311,SNR=8.7						
D41A	Chassel	55.56	56	P	P	07 18 53.0	-1.0
	baz=311						
D41A	Chassel	55.56	56	*e*P	P	07 18 53.8	-0.2
	comp=Z,30nm,1.3s						
I38A	Scanlan Farm,	55.59	61	P	P	07 18 53.3	-0.9
	baz=311						
H39A	Augusta	55.72	60	P	P	07 18 54.4	-0.8
	baz=312						
K37A	Belmond	55.73	63	P	P	07 18 54.1	-1.1
	baz=312						
E41A	Kenton	55.75	57	P	P	07 18 54.6	-0.7
	baz=312,SNR=7.3						
COWI	Conover	55.90	57	*e*P	P	07 18 55.9	-0.6
	comp=Z,11nm,0.5s						
G40A	Rib Lake	55.90	59	P	P	07 18 55.7	-0.7
	baz=312,SNR=5.6						
G40A	Rib Lake	55.90	59	*e*P	P	07 18 56.1	-0.4
	comp=Z,6.9nm,0.6s						
M36A	Felix, Anita	55.96	65	P	P	07 18 56.0	-0.9
	baz=312						
J38A	Wedel Dairy, R	55.99	62	P	P	07 18 56.2	-0.9
	baz=312,SNR=5.7						
L37A	Phoenix Point,	56.09	63	P	P	07 18 56.9	-0.9
	baz=312,SNR=8.6						
I39A	Houston	56.15	61	P	P	07 18 57.3	-0.9
	baz=312						
I39A	Houston	56.15	61	*e*P	P	07 18 58.2	0.0
	comp=Z,13nm,0.8s						
F41A	Three Lakes	56.16	57	P	P	07 18 57.9	-0.4
	baz=312,SNR=10						
F41A	Three Lakes	56.16	57	*e*P	P	07 18 58.0	-0.4
	comp=Z,17nm,0.6s						
H40A	Chili	56.24	59	P	P	07 18 58.3	-0.6
	baz=312,SNR=6.3						
K38A	Parkersburg	56.28	62	P	P	07 18 58.0	-1.1
	baz=312						
N36A	Muff Farm, Cla	56.30	65	P	P	07 18 58.7	-0.7
	baz=312						
E42A	Champion	56.31	56	P	P	07 18 58.9	-0.5
	baz=312						
J39A	Decorah	56.40	61	P	P	07 18 58.8	-1.1
	baz=312,SNR=8.4						
M37A	Trindle Farm,	56.41	64	P	P	07 18 59.6	-0.5
	baz=312,SNR=5.9						
MSTX	Muleshoe	56.42	76	P	P	07 19 00.4	-0.1
	baz=314,SNR=11						
MSTX	Muleshoe	56.42	76	*e*P	P	07 19 00.6	+0.1
	comp=Z,14nm,0.6s						
MNTX	Cornudas Mount	56.42	80	P	P	07 19 00.9	+0.6
	baz=314,SNR=27						
MNTX	Cornudas Mount	56.42	80	*e*P	P	07 19 01.3	+0.9
	comp=Z,11nm,0.8s						
AMTX	Amarillo	56.44	75	P	P	07 19 00.5	0.0
	baz=313						
AMTX	Amarillo	56.44	75	*e*P	P	07 19 00.7	+0.1
	comp=Z,10nm,0.5s						
G41A	Antigo	56.48	58	P	P	07 18 60.0	-0.5
	baz=312						
L38A	Oak Wood Farm,	56.52	63	P	P	07 18 60.0	-0.9
	baz=312,SNR=11						
KSU1	Kansas State U	56.53	68	P	P	07 19 00.0	-0.9
	baz=313						
KSU1	Kansas State U	56.53	68	*e*P	P	07 19 00.3	-0.6
	comp=Z,10.0nm,0.7s						
SCIA	State Center	56.53	63	P	P	07 19 00.1	-0.9
	baz=312						
I40A	Norwalk	56.61	60	P	P	07 19 00.2	-1.2
	baz=312						
H41A	Junction City	56.63	59	P	P	07 19 00.9	-0.8
	baz=312						
K39A	Oelwein	56.72	62	P	P	07 19 00.9	-1.4
	baz=312,SNR=5.8						
N37A	Lee Faris, Mou	56.76	65	P	P	07 19 01.9	-0.6
	baz=312,SNR=7.3						
N37A	Lee Faris, Mou	56.76	65	*e*P	P	07 19 02.9	+0.3
	comp=Z,38nm,1.0s						
E43A	Lone Tree Farm	56.82	56	P	P	07 19 02.6	-0.3
	baz=312,SNR=6.1						
E43A	Lone Tree Farm	56.82	56	*e*P	P	07 19 02.8	-0.1
	comp=Z,18nm,0.5s						
G42A	Mountain	56.85	58	P	P	07 19 02.6	-0.5
	baz=312,SNR=8.2						
G42A	Mountain	56.85	58	*e*P	P	07 19 03.0	-0.1
	comp=Z,32nm,1.2s						
J40A	Soldiers Grove	56.88	60	P	P	07 19 02.2	-1.1
	baz=312						
M38A	Pleasantville	56.88	64	P	P	07 19 02.5	-0.9
	baz=312,SNR=6.2						
I41A	Arkdale	56.89	59	P	P	07 19 02.6	-0.9
	baz=312						
I41A	Arkdale	56.89	59	*e*P	P	07 19 03.1	-0.4
	comp=Z,28nm,1.4s						
L39A	Vinton	57.05	62	P	P	07 19 03.7	-0.9
	baz=312,SNR=9.3						
F43A	Flat Rock, Esc	57.10	56	P	P	07 19 04.1	-0.7
	baz=313						
K40A	Colesburg	57.13	61	P	P	07 19 04.0	-1.1
	baz=313						
O37A	Wolven Farm, M	57.20	65	P	P	07 19 04.7	-1.0
	baz=313						
G43A	Wallace	57.22	57	P	P	07 19 04.8	-1.0
	baz=313						
G43A	Wallace	57.22	57	*e*P	P	07 19 05.6	-0.2
	comp=Z,7.1nm,0.6s						
ARCES	ARCESS Array B	57.27	350	P	P	07 19 05.3	-0.4
	comp=Z,1.1nm,0.5s,baz=26,slow=7.9,SNR=14						
ARCES				PcP	PcP	07 19 57.6	-0.5
	comp=Z,2.2nm,0.6s,baz=5.2,slow=4.0,SNR=5.1						
N38A	Joes South For	57.28	64	P	P	07 19 05.2	-1.0
	baz=313						
J41A	Loganville	57.28	60	P	P	07 19 05.2	-1.0
	baz=313,SNR=5.6						
H42A	Shiocton	57.29	58	P	P	07 19 05.6	-0.6
	baz=313						
H42A	Shiocton	57.29	58	*e*P	P	07 19 05.8	-0.5
	comp=Z,24nm,1.4s						
M39A	Webster	57.40	63	P	P	07 19 06.1	-1.0
	baz=313,SNR=13						
JFWS	Jewell Farm	57.47	61	P	P	07 19 06.3	-1.2
	baz=313,SNR=5.9						
JFWS	Jewell Farm	57.47	61	*e*P	P	07 19 06.9	-0.6
	comp=Z,14nm,0.6s						
JFWS	Jewell Farm	57.47	61	*e*P	P	07 19 06.9	-0.6
JFWS				pmax	pmax		
	comp=Z,14nm,0.6s						
P37A	Lathrop	57.48	66	P	P	07 19 06.3	-1.3
	baz=313,SNR=7.9						
I42A	Draeger Farm,	57.51	59	P	P	07 19 07.2	-0.6
	baz=313						
I42A	Draeger Farm,	57.51	59	*e*P	P	07 19 07.5	-0.3
	comp=Z,26nm,1.3s						
L40A	Anamosa	57.52	62	P	P	07 19 06.7	-1.2
	baz=313						
O38A	Galt	57.60	65	P	P	07 19 07.4	-1.1
	baz=313,SNR=8.5						
N39A	Derby Farms, D	57.63	64	P	P	07 19 07.7	-0.9
	baz=313,SNR=8.4						
N39A	Derby Farms, D	57.63	64	*e*P	P	07 19 08.2	-0.5
	comp=Z,33nm,1.1s						
K41A	Shullsburg	57.65	61	P	P	07 19 07.8	-0.9
	baz=313,SNR=14						
H43A	Windswept, Lux	57.72	58	P	P	07 19 08.7	-0.5
	baz=313						
H43A	Windswept, Lux	57.72	58	*e*P	P	07 19 09.0	-0.2
	comp=Z,26nm,1.1s						
E45A	Wooded Hills,	57.75	55	P	P	07 19 09.3	-0.1

	baz=313						
J42A	Columbus	57.79	60	P	P	07 19 09.1	-0.7
	baz=313						
M40A	Post Highland	57.81	63	P	P	07 19 08.8	-1.1
	baz=313,SNR=5.8						
L41A	Preston	57.91	61	P	P	07 19 09.3	-1.3
	baz=313,SNR=6.6						
Q37A	Longview Farm,	57.91	67	P	P	07 19 08.8	-1.8
	baz=313						
P38A	Dawn	57.91	65	P	P	07 19 09.5	-1.2
	baz=313,SNR=8.8						
P38A	Dawn	57.91	65	*e*P	P	07 19 09.6	-1.1
	comp=Z,25nm,1.2s						
I43A	Langenfeld Bro	57.92	59	P	P	07 19 10.1	-0.6
	baz=313,SNR=9.2						
K42A	Prairie Point,	58.04	60	P	P	07 19 10.5	-1.1
	baz=313,SNR=8.3						
F45A	CMU Biological	58.05	55	P	P	07 19 10.5	-1.0
	baz=313						
KURK	Kurchatov	58.08	313	*e*P	P	07 19 10.8	-0.9
	comp=Z,5.2nm,0.7s						
KURK				pP	pP	07 19 50.8	+2.5
KURK				ScP	ScP	07 23 42.9	-3.6
KURK	Kurchatov	58.08	313	*de*P	P	07 19 10.6	-1.0
KURK				pmax	pmax		
	comp=Z,5.0nm,0.7s						
J43A	Natural Harves	58.12	59	P	P	07 19 10.8	-1.3
	baz=313						
N40A	Mertquake, Sal	58.13	63	P	P	07 19 11.3	-0.8
	baz=313						
KURBB	Kurchatov Arra	58.19	313	P	P	07 19 11.5	-0.9
	comp=Z,4.4nm,0.6s,baz=43,slow=6.7,SNR=50						
KURBB				pP	pP	07 19 50.8	+1.7
	comp=Z,1.6nm,0.7s,baz=43,slow=6.9,SNR=3.5						
KURBB				ScP	ScP	07 23 42.9	-4.1
	comp=Z,0.4nm,0.4s,baz=42,slow=5.1,SNR=5.0						
CD2	Chengdu	58.24	281	*e*P	P	07 19 11.5	-1.6
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
WMOK	Wichita Mounta	58.26	73	P	P	07 19 12.8	-0.4
	baz=314						
WMOK	Wichita Mounta	58.26	73	*e*P	P	07 19 13.3	+0.1
	comp=Z,4.4nm,0.7s						
Q38A	Cooks Store, C	58.32	66	P	P	07 19 11.9	-1.6
	baz=314,SNR=6.6						
M41A	Milan	58.36	62	P	P	07 19 12.7	-1.1
	baz=313,SNR=6.7						
F46A	Macinaw City C	58.37	55	P	P	07 19 12.9	-0.8
	baz=314						
L42A	Oliver, Polo	58.40	61	P	P	07 19 12.8	-1.2
	baz=313,SNR=5.5						
L42A	Oliver, Polo	58.40	61	*e*P	P	07 19 13.1	-1.0
	comp=Z,30nm,1.4s						
WMQ	Urumqi	58.44	302	P	P	07 19 17.4	+3.0
WMQ				pP	pP	07 19 51.3	+0.2
WMQ				pmax	pmax		
	comp=Z,29nm,0.6s						
WMQ				pmax	pmax		
	comp=Z,180nm,4.7s						
WMQ				LR	LR		
	comp=Z,1µm,16.5s						
WMQ				LR	LR		
	comp=Z,1µm,17.5s						
WMQ				LR	LR		
	comp=Z,1µm,18.5s						
P39B	Salisbury	58.44	65	P	P	07 19 13.2	-1.1
	baz=314,SNR=12						
O40A	La Belle	58.49	64	P	P	07 19 13.8	-0.9
	baz=314,SNR=16						
Q39A	Willow Grove F	58.62	66	P	P	07 19 14.2	-1.4
	baz=314,SNR=27						
K43A	Burlington	58.64	60	P	P	07 19 14.4	-1.3
	baz=314						
K43A	Burlington	58.64	60	*e*P	P	07 19 15.0	-0.7
	comp=Z,21nm,0.6s						
N41A	Harden Midland	58.65	63	P	P	07 19 14.8	-1.0
	baz=314,SNR=6.0						
N41A	Harden Midland	58.65	63	*e*P	P	07 19 15.2	-0.6
	comp=Z,22nm,0.5s						
L43A	Garden Prairie	58.78	60	P	P	07 19 15.3	-1.3
	baz=314						
P40A	Paris	58.81	65	P	P	07 19 15.9	-1.0
	baz=314,SNR=17						
P40A	Paris	58.81	65	*e*P	P	07 19 16.1	-0.8
	comp=Z,25nm,0.5s						
LPIG	La Paz	58.84	90	P	P	07 19 17.0	-0.3
	comp=Z,19nm,1.1s,baz=247,slow=7.4,SNR=2.1						
N42A	Yates City	59.02	62	P	P	07 19 17.4	-0.9
	baz=314						
O41A	Passleys Farm,	59.05	63	P	P	07 19 17.6	-0.9
	baz=314,SNR=13						
S38A	Stockton	59.08	67	P	P	07 19 16.9	-1.9
	baz=314,SNR=24						
R39A	Chumby, Stover	59.09	66	P	P	07 19 16.8	-2.0
	baz=314						
MK31	Makanchi Array	59.11	308	*e*P	P	07 19 17.5	-1.4
MK31	Makanchi Array	59.11	308	*e*P	P	07 19 17.5	-1.4
MKAR	Makanchi Array	59.11	308	P	P	07 19 17.6	-1.3
	comp=Z,3.2nm,0.3s,baz=47,slow=6.3,SNR=68						
MKAR	Makanchi Array	59.11	308	*e*P	P	07 19 17.6	-1.3
	comp=Z,54nm,0.3s						
MK01	Makanchi Array	59.12	308	*e*P	P	07 19 17.6	-1.4
TX31	Lajitas Ar. Si	59.14	81	*e*P	P	07 19 19.9	+0.5
TXAR	Lajitas Array	59.14	81	P	P	07 19 19.9	+0.4
	comp=Z,12nm,0.7s,baz=299,slow=4.8,SNR=176						
TXAR				pP	pP	07 19 58.9	+2.7
	comp=Z,1.9nm,0.7s,baz=297,slow=4.0,SNR=2.7						
TXAR				ScP	ScP	07 23 49.6	-2.1
	comp=Z,0.4nm,0.7s,baz=298,slow=3.8,SNR=4.2						
Q40A	Laux Farm, Aux	59.16	65	P	P	07 19 18.1	-1.2
	baz=314,SNR=6.2						
M43A	Waltham Townsh	59.18	61	P	P	07 19 18.3	-1.1
	baz=314						
TUL1	Leonard	59.19	70	P	P	07 19 18.9	-0.7
	baz=314						
L44A	Lake County Fo	59.23	60	P	P	07 19 18.9	-0.8
	baz=314						
ABTX	Abilene, Hawle	59.23	75	P	P	07 19 19.8	-0.1
	baz=315						
ABTX	Abilene, Hawle	59.23	75	*e*P	P	07 19 20.5	+0.6
	comp=Z,20nm,1.4s						
MAKZ	Makanchi	59.25	308	*e*P	P	07 19 20.0	+0.2
	comp=Z,4.9nm,0.4s						
MAKZ	Makanchi	59.25	308	*e*P	P	07 19 20.0	+0.2
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.4s						
P41A	Barry, Barry	59.25	64	P	P	07 19 19.0	-0.9
	baz=314,SNR=6.9						
T38A	Diamond	59.27	68	P	P	07 19 18.6	-1.5
	baz=314,SNR=5.4						
S39A	Bolivar	59.37	67	P	P	07 19 18.6	-2.2
	baz=314						
S39A	Bolivar	59.37	67	*e*P	P	07 19 18.7	-2.1
	comp=Z,2.7nm,0.7s						
N43A	Stutzman Famil	59.41	62	P	P	07 19 19.9	-1.1
	baz=314						
O42A	Bath	59.43	63	P	P	07 19 20.1	-1.0
	baz=314						
R40A	Maddies Statio	59.55	66	P	P	07 19 20.2	-1.7
	baz=314,SNR=23						
R40A	Maddies Statio	59.55	66	*e*P	P	07 19 20.1	-1.9
	comp=Z,15nm,0.5s						
GYA	Guiyang	59.65	275	P	P	07 19 23.0	0.0
GYA				pP	pP	07 19 58.5	-1.4
GYA				PP	PP	07 21 39.3	+3.1
GYA				S	S	07 27 20.4	-0.5
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
Q41A	Truxton	59.66	65	P	P	07 19 21.7	-1.1
	baz=314,SNR=9.7						
M44A	Midewin, Midew	59.71	61	P	P	07 19 22.4	-0.6
	baz=314,SNR=8.0						
M44A	Midewin, Midew	59.71	61	*e*P	P	07 19 22.8	-0.2
	comp=Z,26nm,0.5s						
P42A	Winchester	59.71	63	P	P	07 19 22.1	-1.0
	baz=314,SNR=5.2						
P42A	Winchester	59.71	63	*e*P	P	07 19 22.3	-0.8
	comp=Z,8.8nm,0.6s						
T39A	Clever	59.80	68	P	P	07 19 22.1	-1.7
	baz=314,SNR=9.1						
S40A	Lebanon	59.90	66	P	P	07 19 22.5	-1.8
	baz=314						
BVAR	Borovoye Array	59.94	319	P	P	07 19 23.8	-0.6
	comp=Z,5.2nm,0.5s,baz=52,slow=6.0,SNR=33						
BVAR				pP	pP	07 20 02.3	+1.0
	comp=Z,2.5nm,0.7s,baz=54,slow=7.3,SNR=4.3						
BVAR				PcP	PcP	07 20 08.2	-0.8
	comp=Z,2.0nm,0.3s,baz=61,slow=4.4,SNR=5.5						
BVAR				ScP	ScP	07 23 51.2	-3.5
	comp=Z,0.6nm,0.5s,baz=15,slow=6.0,SNR=3.8						
BRVK	Borovoye	59.96	319	*e*P	P	07 19 24.3	-0.3
	comp=Z,4.7nm,0.6s						
BRVK	Borovoye	59.96	319	*d i*P	P	07 19 23.8	-0.7
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
HHAR	Hobbs	60.00	69	*e*P	P	07 19 24.1	-1.0
	comp=Z,8.6nm,0.5s						
R41A	Rosebud	60.04	65	P	P	07 19 23.9	-1.4
	baz=314,SNR=9.1						
N44A	Piper City	60.07	61	P	P	07 19 24.9	-0.6
	baz=314						
Q42A	Golden Eagle	60.08	64	P	P	07 19 25.0	-0.6
	baz=314,SNR=20						
P43A	Skaggs, Pawnee	60.13	63	P	P	07 19 24.8	-1.1
	baz=314,SNR=6.6						
M45A	Boilermakers S	60.13	60	P	P	07 19 24.0	-1.9
	baz=314						
U39A	Green Forest	60.19	68	P	P	07 19 24.9	-1.5
	baz=315,SNR=8.0						
T40A	Mansfield	60.20	67	P	P	07 19 24.7	-1.8
	baz=315,SNR=7.1						
CCM	Cathedral Cave	60.28	65	P	P	07 19 26.1	-0.9
	baz=315						
CCM	Cathedral Cave	60.28	65	*e*P	P	07 19 26.8	-0.2
	comp=Z,6.6nm,0.6s						
CCM	Cathedral Cave	60.28	65	*e*P	P	07 19 26.8	-0.2
CCM				pmax	pmax		
	comp=Z,7.0nm,0.6s						
S41A	Jillco Farms,	60.33	66	P	P	07 19 25.7	-1.6
	baz=315,SNR=34						
O44A	Mansfield	60.34	62	P	P	07 19 26.4	-1.0
	baz=315,SNR=5.6						
N45A	Kentland	60.37	61	P	P	07 19 27.1	-0.4
	baz=315						
R42A	Luebbering	60.38	65	P	P	07 19 26.4	-1.2
	baz=315,SNR=9.2						
V39A	Pettigrew	60.48	69	P	P	07 19 27.3	-1.1
	baz=315						
Q43A	New Douglas	60.52	64	P	P	07 19 27.8	-0.8
	baz=315,SNR=6.2						
U40A	Yellville	60.57	68	P	P	07 19 27.5	-1.5
	baz=315,SNR=13						
M46A	Old House Fiel	60.59	60	P	P	07 19 28.2	-0.9
	baz=315						
M46A	Old House Fiel	60.59	60	*e*P	P	07 19 28.8	-0.2
	comp=Z,18nm,1.1s						
JCT	Junction City	60.66	77	P	P	07 19 29.3	-0.4
	baz=316						
JCT	Junction City	60.66	77	*e*P	P	07 19 29.4	-0.3
	comp=Z,5.6nm,0.6s						
JCT	Junction City	60.66	77	*e*P	P	07 19 29.4	-0.3
JCT				pmax	pmax		
	comp=Z,6.0nm,0.6s						
O45A	Potomac	60.68	61	P	P	07 19 29.3	-0.3
	baz=315,SNR=29						
T41A	Mountain View	60.70	66	P	P	07 19 28.2	-1.7
	baz=315,SNR=6.9						
S42A	Caledonia	60.74	65	P	P	07 19 28.9	-1.2
	baz=315,SNR=24						
P44A	Sand Creek, Wi	60.74	63	P	P	07 19 29.4	-0.7
	baz=315						
N46A	Monticello	60.75	60	P	P	07 19 29.2	-0.9
	baz=315						
FVM	French Village	60.79	65	*e*P	P	07 19 30.7	+0.2
	comp=Z,8.3nm,0.5s						
FVM	French Village	60.79	65	*e*P	P	07 19 30.7	+0.2
FVM				pmax	pmax		
	comp=Z,8.0nm,0.5s						
W39A	Magazine	60.86	69	P	P	07 19 30.2	-0.7
	baz=315,SNR=9.1						
W39A	Magazine	60.86	69	*e*P	P	07 19 30.5	-0.4
	comp=Z,7.4nm,0.6s						
R43A	Red Bud	60.86	64	P	P	07 19 29.6	-1.3
	baz=315						
Q44A	Meyer Farm, Va	60.92	63	P	P	07 19 30.4	-0.9
	baz=315						
SFIN	Lafayette	60.92	61	P	P	07 19 30.9	-0.4
	baz=315,SNR=18						
SFIN	Lafayette	60.92	61	*e*P	P	07 19 31.1	-0.2
	comp=Z,22nm,0.5s						
V40A	Witts Springs	60.98	68	P	P	07 19 30.5	-1.3
	baz=315,SNR=15						
V40A	Witts Springs	60.98	68	*e*P	P	07 19 30.7	-1.1
	comp=Z,14nm,0.7s						
WHTX	Lake Whitney,	60.98	74	P	P	07 19 31.7	-0.1
	baz=316						
WHTX	Lake Whitney,	60.98	74	*e*P	P	07 19 32.4	+0.6
	comp=Z,8.8nm,0.6s						
PRGR	Permogore	61.00	337	*e*P	P	07 19 31.1	-0.3
PRGR				pmax	pmax		
	comp=Z,23nm,0.6s						
T42A	Van Buren	61.09	66	P	P	07 19 30.6	-1.9
	baz=315,SNR=9.9						
T42A	Van Buren	61.09	66	*e*P	P	07 19 30.7	-1.7
	comp=Z,6.6nm,0.4s						
U41A	Viola	61.11	67	P	P	07 19 31.3	-1.4
	baz=315,SNR=12						
X39A	Fountain Ranch	61.15	70	P	P	07 19 32.7	-0.2
	baz=315,SNR=20						
P45A	Graceland, Par	61.18	62	P	P	07 19 32.3	-0.7
	baz=315						
P45A	Graceland, Par	61.18	62	*e*P	P	07 19 32.5	-0.5
	comp=Z,8.0nm,0.6s						
L48A	N Adams	61.23	58	P	P	07 19 32.7	-0.6
	baz=315						
W40A	Ferguson Farm,	61.27	69	P	P	07 19 33.1	-0.6
	baz=315,SNR=16						
W40A	Ferguson Farm,	61.27	69	*e*P	P	07 19 33.3	-0.4
	comp=Z,22nm,0.6s						
S43A	Fulton Ridge,	61.28	65	P	P	07 19 32.5	-1.2
	baz=315,SNR=7.2						
R44A	Waltonville	61.35	64	P	P	07 19 33.1	-1.1
	baz=315						
V41A	Mountainview	61.37	68	P	P	07 19 33.0	-1.4
	baz=315,SNR=18						
AAM	Ann Arbor	61.38	57	P	P	07 19 33.5	-0.8
	baz=316						
Q45A	Warren Harvey,	61.40	63	P	P	07 19 33.8	-0.7
	baz=315,SNR=6.2						
P46A	Rosedale	61.41	62	P	P	07 19 33.8	-0.7
	baz=315						
MIAR	Mount Ida	61.44	70	P	P	07 19 34.6	-0.2
	baz=315,SNR=15						
MIAR	Mount Ida	61.44	70	*e*P	P	07 19 35.0	+0.2
	comp=Z,13nm,0.6s						
MIAR	Mount Ida	61.44	70	*e*P	P	07 19 35.0	+0.2
MIAR				pmax	pmax		
	comp=Z,13nm,0.6s						
L49A	Milan	61.46	57	P	P	07 19 34.6	-0.3
	baz=316						
U42A	Revenden	61.49	67	P	P	07 19 33.5	-1.7
	baz=315,SNR=5.1						
T43A	Greenville	61.51	65	P	P	07 19 34.1	-1.2
	baz=315,SNR=19						
O47A	Sheridan	61.52	60	P	P	07 19 34.1	-1.2
	baz=315,SNR=15						
OLIL	Olney	61.55	63	*e*P	P	07 19 34.7	-0.8
	comp=Z,14nm,0.6s						
PBMO	Poplar Bluff	61.65	66	*e*P	P	07 19 35.2	-1.0
	comp=Z,9.9nm,0.6s						
WHAR	Wooly Hollow	61.65	68	*e*P	P	07 19 35.3	-0.9
	comp=Z,7.9nm,0.5s						
ARU	Arti	61.66	328	*e*P	P	07 19 35.5	-0.4
	comp=Z,11nm,0.5s						
ARU	Arti	61.66	328	*d i*P	P	07 19 35.6	-0.4
ARU				*PP	pP	07 20 12.7	-0.4
ARU				S	S	07 27 47.4	+2.0
ARU				pmax	pmax		
	comp=Z,7.0nm,0.6s						
W41B	Gary Mavity, V	61.76	68	P	P	07 19 36.1	-0.9
	baz=315,SNR=13						
W41B	Gary Mavity, V	61.76	68	*e*P	P	07 19 36.0	-0.9
	comp=Z,13nm,0.6s						
R45A	Skylar, Fairfi	61.76	63	P	P	07 19 36.0	-0.9
	baz=315,SNR=5.9						
435B	Jarrell	61.77	75	P	P	07 19 36.4	-0.7
	baz=316						
V42A	Cord	61.80	67	P	P	07 19 35.7	-1.5
	baz=315						
M49A	Liberty Center	61.80	58	P	P	07 19 36.5	-0.7
	baz=316						
SADO	Sadowa	61.87	53	*e*P	P	07 19 37.4	-0.2
	comp=Z,16nm,1.3s						
X40A	Basin Creek Fa	61.91	69	P	P	07 19 37.4	-0.6
	baz=316						
X40A	Basin Creek Fa	61.91	69	*e*P	P	07 19 38.2	+0.2
	comp=Z,4.3nm,0.6s						
U43A	Rector	61.95	66	P	P	07 19 37.1	-1.1
	baz=316						
UALR	University of	61.99	69	*e*P	P	07 19 38.8	+0.3
	comp=Z,7.2nm,0.6s						
Y40A	Okolona	61.99	70	P	P	07 19 37.9	-0.6
	baz=316						
P47A	Martinsville	62.01	61	P	P	07 19 37.8	-0.8
	baz=316,SNR=33						
O48A	Farmland	62.05	60	P	P	07 19 37.6	-1.3
	baz=316,SNR=11						
X41A	Kaden, Bauxite	62.09	69	P	P	07 19 38.6	-0.5
	baz=316						
BLO	Bloomington	62.09	61	*e*P	P	07 19 38.8	-0.4
	comp=Z,9.5nm,0.6s						
BLO	Bloomington	62.09	61	*e*P	P	07 19 38.8	-0.4
BLO				pmax	pmax		
	comp=Z,10.0nm,0.6s						
W42A	Bald Knob	62.10	68	P	P	07 19 38.4	-0.8
	baz=316						
Q47A	Bedord North L	62.32	62	P	P	07 19 39.7	-0.9
	baz=316						
USIN	University of	62.34	63	*e*P	P	07 19 40.5	-0.2
	comp=Z,26nm,0.5s						
M50A	Fremont	62.34	58	P	P	07 19 40.1	-0.6
	baz=316						
Z40A	Long Farm, Mag	62.46	71	P	P	07 19 41.8	+0.1
	baz=316,SNR=5.0						
Y41A	Eaglette Beard	62.47	70	P	P	07 19 41.4	-0.4
	baz=316,SNR=8.0						
P48A	Milroy	62.48	61	P	P	07 19 40.5	-1.2
	baz=316,SNR=16						
S46A	Don Dixon Farm	62.51	63	P	P	07 19 41.0	-0.9
	baz=316						
O49A	Covington	62.54	59	P	P	07 19 41.5	-0.5
	baz=316						
U44B	Burton Farm, H	62.57	65	P	P	07 19 41.9	-0.4
	baz=316						
V44A	Blytheville	62.63	66	P	P	07 19 42.2	-0.5
	baz=316						
Q48A	North Vernon	62.70	61	P	P	07 19 42.3	-0.8
	baz=316,SNR=6.2						
R47A	Wooly Knot Far	62.72	62	P	P	07 19 42.5	-0.8
	baz=316						
N50A	Nevada	62.74	58	P	P	07 19 42.8	-0.6
	baz=316						
NATX	Nacogdoches	62.80	73	P	P	07 19 43.6	-0.3
	baz=316						
NATX	Nacogdoches	62.80	73	*e*P	P	07 19 44.2	+0.2
	comp=Z,14nm,0.6s						
140A	Cam and Jess,	62.80	71	P	P	07 19 43.1	-0.9
	baz=316						
P49A	Miami Univ. Ec	62.81	60	P	P	07 19 42.6	-1.2
	baz=316,SNR=5.3						
T46A	Princeton	62.87	64	P	P	07 19 44.0	-0.4
	baz=316,SNR=7.7						
U45A	Rockin P Farm,	62.89	65	P	P	07 19 43.9	-0.5
	baz=316						
WCI	Wyandotte Cave	62.90	62	P	P	07 19 43.7	-0.8
	baz=316						
WCI	Wyandotte Cave	62.90	62	*e*P	P	07 19 44.3	-0.2
	comp=Z,6.1nm,0.6s						
WCI	Wyandotte Cave	62.90	62	*e*P	P	07 19 44.3	-0.2
WCI				pmax	pmax		
	comp=Z,6.0nm,0.6s						
CCAR	Cane Creek	62.93	69	*e*P	P	07 19 45.3	+0.5
	comp=Z,20nm,0.6s						
O50A	Cable	62.95	59	P	P	07 19 44.2	-0.6
	baz=316,SNR=22						
PDGK	Podgornoye	62.98	306	P	P	07 19 45.4	+0.3
PDGK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
Y42A	Garnett, Star	62.98	69	P	P	07 19 44.7	-0.3
	baz=316						
TRQ	Mont Tremblant	62.99	49	*e*P	P	07 19 45.3	+0.3
X43A	Marvell	63.01	68	P	P	07 19 44.6	-0.7
	baz=316						
KMI	Kunming	63.03	277	P	P	07 19 46.4	+0.6
KMI				pmax	pmax		
	comp=Z,16nm,1.1s						
S47A	Hartford	63.03	63	P	P	07 19 44.8	-0.6
	baz=316						
KLMR	Klimovskoe	63.08	340	*e*P	P	07 19 44.4	-0.9
KLMR				pmax	pmax		
	comp=Z,15nm,1.2s						
KLMR	Klimovskoe	63.08	340	*e*P	P	07 19 44.5	-0.9
KLMR				AMP		07 19 45.5	
	comp=Z,15nm,1.2s						
Q49A	Aurora	63.09	61	P	P	07 19 44.9	-0.8
	baz=316						
ACSO	Alum Creek Sta	63.22	58	P	P	07 19 45.6	-0.9
	baz=316						
ACSO	Alum Creek Sta	63.22	58	*e*P	P	07 19 46.4	-0.2
	comp=Z,8.8nm,0.6s						
P50A	Jamestown	63.24	59	P	P	07 19 46.1	-0.6
	baz=316,SNR=6.4						
Z42A	Norrel Spur, H	63.29	70	P	P	07 19 46.8	-0.3
	baz=316						
T47A	Sharon Grove	63.35	63	P	P	07 19 47.0	-0.4
	baz=316,SNR=9.2						
T47A	Sharon Grove	63.35	63	*e*P	P	07 19 47.2	-0.3
	comp=Z,12nm,0.6s						
HKT	Hockley	63.42	75	*e*P	P	07 19 49.0	+1.0
	comp=Z,2.7nm,0.8s						
Y43A	Makayla and Ka	63.42	68	P	P	07 19 47.5	-0.5
	baz=316						
S48A	Wiedeman Farm,	63.44	62	P	P	07 19 47.4	-0.6
	baz=316						
X44A	Crenshaw	63.44	67	P	P	07 19 47.7	-0.4
	baz=316						
R49A	Shelbyville	63.46	61	P	P	07 19 47.6	-0.5
	baz=316						
W45A	Hickory Valley	63.51	66	P	P	07 19 48.2	-0.4
	baz=316						
WVT	Waverly	63.57	65	P	P	07 19 48.4	-0.5
	baz=316						
WVT	Waverly	63.57	65	*e*P	P	07 19 48.5	-0.4
	comp=Z,3.8nm,0.7s						
WVT	Waverly	63.57	65	*e*P	P	07 19 48.5	-0.4
WVT				pmax	pmax		
	comp=Z,4.0nm,0.7s						
241A	Mo Tay, Goldon	63.63	71	P	P	07 19 49.5	+0.1
	baz=316						
241A	Mo Tay, Goldon	63.63	71	*e*P	P	07 19 50.3	+0.9
	comp=Z,20nm,0.6s						
U47A	Clarksville	63.64	64	P	P	07 19 48.9	-0.5
	baz=316						
V46A	Holladay	63.65	65	P	P	07 19 48.7	-0.7
	baz=316,SNR=5.8						
T48A	Bowling Green	63.65	63	P	P	07 19 49.1	-0.3
	baz=316						
Q50A	Georgetown	63.70	60	P	P	07 19 49.5	-0.2
	baz=317,SNR=6.9						
S49A	Springfield	63.77	62	P	P	07 19 49.6	-0.6
	baz=317,SNR=12						
Y44A	Strider, Charl	63.79	68	P	P	07 19 49.8	-0.6
	baz=316						
OXF	Oxford	63.85	67	P	P	07 19 50.4	-0.3
	baz=316,SNR=12						
OXF	Oxford	63.85	67	*e*P	P	07 19 50.5	-0.3
	comp=Z,38nm,0.6s						
OXF	Oxford	63.85	67	*e*P	P	07 19 50.5	-0.3
OXF				pmax	pmax		
	comp=Z,38nm,0.6s						
Q51A	Peebles	63.91	60	P	P	07 19 50.7	-0.4
	baz=317,SNR=21						
R50A	Paris	63.92	61	P	P	07 19 50.7	-0.5
	baz=317						
X45A	UM Field Stati	63.92	67	P	P	07 19 50.3	-1.0
	baz=316,SNR=11						
V47A	Nunnelly	63.96	65	P	P	07 19 50.6	-0.9
	baz=316,SNR=6.2						
MMNY	Mt. Morris Dam	63.98	53	*e*P	P	07 19 51.4	-0.1
	comp=Z,10nm,0.8s						
W46A	Michie	63.98	66	P	P	07 19 50.8	-0.8
	baz=316						
341A	Kurthwood	63.99	72	P	P	07 19 51.8	+0.2
	baz=317,SNR=7.9						
341A	Kurthwood	63.99	72	*e*P	P	07 19 51.9	+0.2
	comp=Z,16nm,0.6s						
M54A	Oil Creek Stat	64.00	55	P	P	07 19 51.0	-0.7
	baz=317						
M54A	Oil Creek Stat	64.00	55	*e*P	P	07 19 51.5	-0.2
	comp=Z,10.0nm,1.2s						
U48A	Cassie Pea, Po	64.01	63	P	P	07 19 51.4	-0.4
	baz=317,SNR=16						
143A	Socs Landing,	64.02	70	P	P	07 19 52.0	+0.1
	baz=316						

143A	Socs Landing,	64.02	70	*e*P	P	07 19 52.2	+0.3
	comp=Z,13nm,0.4s						
242A	Grayson	64.05	71	P	P	07 19 51.9	-0.2
	baz=317						
T49A	Edmonton	64.13	62	P	P	07 19 52.0	-0.6
	baz=317,SNR=12						
T49A	Edmonton	64.13	62	*e*P	P	07 19 52.6	0.0
	comp=Z,9.7nm,0.6s						
Z44A	Pea Ridge, Bel	64.16	69	P	P	07 19 52.2	-0.7
	baz=317						
LONY	Lake Ozonia	64.18	50	P	P	07 19 52.0	-0.8
	baz=318						
LONY	Lake Ozonia	64.18	50	*e*P	P	07 19 51.5	-1.3
	comp=Z,9.3nm,1.3s						
N54A	Moraine State	64.24	56	P	P	07 19 52.6	-0.6
	baz=317,SNR=6.9						
N54A	Moraine State	64.24	56	*e*P	P	07 19 52.8	-0.4
	comp=Z,12nm,0.6s						
Y45A	Yeager Farm, C	64.24	67	P	P	07 19 52.9	-0.5
	baz=317						
PLAL	Pickwick Lake	64.26	66	*e*P	P	07 19 52.8	-0.7
	comp=Z,11nm,0.6s						
X46A	Booneville	64.29	66	P	P	07 19 52.8	-0.8
	baz=317,SNR=6.2						
R51A	Hillsboro	64.31	60	P	P	07 19 53.5	-0.3
	baz=317,SNR=19						
S50A	Richmond	64.32	61	P	P	07 19 53.2	-0.6
	baz=317,SNR=5.1						
W47A	Westpoint	64.34	65	P	P	07 19 53.1	-0.8
	baz=317,SNR=9.7						
441A	DeRidder	64.40	72	P	P	07 19 53.3	-1.1
	baz=317						
V48A	Smith Brothers	64.41	64	P	P	07 19 53.6	-0.8
	baz=317,SNR=6.1						
V48A	Smith Brothers	64.41	64	*e*P	P	07 19 54.0	-0.5
	comp=Z,5.4nm,0.8s						
U49A	Red Boiling Sp	64.42	63	P	P	07 19 53.8	-0.7
	baz=317,SNR=12						
342A	Flagon Creek P	64.45	71	P	P	07 19 54.2	-0.6
	baz=317						
342A	Flagon Creek P	64.45	71	*e*P	P	07 19 54.6	-0.1
	comp=Z,10nm,0.8s						
Z45A	Winona	64.52	68	P	P	07 19 54.5	-0.6
	baz=317						
T50A	Nancy	64.57	62	P	P	07 19 54.9	-0.5
	baz=317,SNR=13						
243A	Waterproof	64.57	70	P	P	07 19 55.3	-0.2
	baz=317						
ZAIG	Zacatecas	64.60	85	*e*P	P	07 19 55.8	-0.4
	comp=Z,7.3nm,1.0s						
Y46A	Houston	64.62	67	P	P	07 19 55.3	-0.5
	baz=317,SNR=13						
144A	Alexander Plac	64.64	69	P	P	07 19 55.8	-0.1
	baz=317						
X47A	Russelville	64.72	66	P	P	07 19 55.2	-1.3
	baz=317,SNR=6.0						
R52A	Catlettsburg	64.78	60	P	P	07 19 56.1	-0.7
	baz=317						
S51A	Beattyville	64.79	61	P	P	07 19 56.1	-0.7
	baz=317,SNR=5.4						
S51A	Beattyville	64.79	61	*e*P	P	07 19 56.3	-0.6
	comp=Z,8.7nm,0.6s						
W48A	Pulaski	64.79	65	P	P	07 19 56.3	-0.6
	baz=317,SNR=12						
NCB	Newcomb	64.83	50	*e*P	P	07 19 56.7	-0.4
	comp=Z,7.2nm,1.4s						
442A	Mamou	64.87	72	P	P	07 19 56.6	-0.9
	baz=317						
V49A	McMinnville	64.90	64	P	P	07 19 56.9	-0.7
	baz=317,SNR=12						
244A	Avery, Jackson	64.92	70	P	P	07 19 57.8	0.0
	baz=317,SNR=7.9						
LNIG	Linares	64.92	81	*e*P	P	07 19 58.0	+0.1
	comp=Z,3.3nm,0.7s						
FIA1	FINESS Array S	64.94	347	*e*P	P	07 19 56.7	-0.7
FINES	FINESS Array B	64.94	347	P	P	07 19 56.3	-1.0
	comp=Z,3.3nm,0.8s,baz=28,slow=8.6,SNR=6.4						
FINES				pP	pP	07 20 35.0	+0.2
	comp=Z,5.4nm,1.0s,baz=330,slow=11,SNR=3.2						
FINES	FINESS Array B	64.94	347	*i* P	P	07 19 56.9	-0.5
FINES				pmax	pmax		
	comp=Z,3.0nm,0.8s						
U50A	Jamestown	65.01	62	P	P	07 19 57.8	-0.6
	baz=317,SNR=5.3						
S52A	Salyersville	65.04	60	P	P	07 19 58.0	-0.5
	baz=317,SNR=6.2						
Z46A	Louisville	65.08	68	P	P	07 19 58.6	-0.2
	baz=317						
T51A	Gray	65.09	61	P	P	07 19 58.2	-0.7
	baz=317						
W49A	Belvidere	65.17	64	P	P	07 19 58.6	-0.8
	baz=317,SNR=6.0						
Y47A	UCPARC, Winfie	65.18	66	P	P	07 19 58.4	-1.0
	baz=317,SNR=6.1						
X48A	Hartselle	65.23	65	P	P	07 19 58.4	-1.3
	baz=317,SNR=5.2						
X48A	Hartselle	65.23	65	*e*P	P	07 19 58.7	-1.0
	comp=Z,7.4nm,0.4s						
VT1	Waterbury	65.25	49	*e*P	P	07 19 59.3	-0.5
	comp=Z,5.3nm,0.8s						
MCWV	Mont Chateau	65.28	57	P	P	07 19 59.4	-0.5
	baz=318						
MCWV	Mont Chateau	65.28	57	*e*P	P	07 19 59.5	-0.5
	comp=Z,4.8nm,0.9s						
SWET	Sewanee	65.29	64	*e*P	P	07 19 59.5	-0.7
	comp=Z,9.3nm,0.5s						
BINY	Binghamton	65.32	53	P	P	07 19 59.8	-0.4
	baz=319						
BINY	Binghamton	65.32	53	*e*P	P	07 20 00.1	-0.2
	comp=Z,10nm,0.6s						
344A	Westbrook Farm	65.32	70	P	P	07 20 00.6	+0.2
	baz=317						
245A	Little AP, Sta	65.38	69	P	P	07 20 00.4	-0.3
	baz=317						
V50A	Pikevile	65.41	63	P	P	07 20 00.3	-0.7
	baz=317,SNR=5.4						
146A	Union	65.42	68	P	P	07 20 00.8	-0.2
	baz=317,SNR=11						
146A	Union	65.42	68	*e*P	P	07 20 01.2	+0.3
	comp=Z,42nm,0.6s						
O56A	Blue Knob Stat	65.48	56	P	P	07 20 00.5	-0.8
	baz=318						
U51A	La Follette	65.49	62	P	P	07 20 00.7	-0.7
	baz=317,SNR=5.6						
T52A	Hallie	65.51	61	P	P	07 20 01.2	-0.3
	baz=318						
SSPA	Standing Stone	65.55	55	P	P	07 20 01.1	-0.6
	baz=318						
SSPA	Standing Stone	65.55	55	*e*P	P	07 20 01.3	-0.4
	comp=Z,4.6nm,0.6s						
Y48A	Jasper	65.55	66	P	P	07 20 01.1	-0.7
	baz=317						
Z47A	Carrollton	65.57	67	P	P	07 20 01.2	-0.7
	baz=317,SNR=18						
PQI	Presque Isle	65.58	45	*e*P	P	07 20 01.3	-0.5
	comp=Z,12nm,1.3s						
X49A	Woodville	65.59	65	P	P	07 20 01.2	-0.8
	baz=317,SNR=9.5						
TZTN	Tazewell	65.62	62	P	P	07 20 01.6	-0.7
	baz=318						
TZTN	Tazewell	65.62	62	*e*P	P	07 20 02.2	0.0
	comp=Z,4.9nm,0.6s						
W50A	Signal Mountai	65.64	64	P	P	07 20 01.6	-0.8
	baz=317,SNR=6.8						
W50A	Signal Mountai	65.64	64	*e*P	P	07 20 02.1	-0.3
	comp=Z,9.3nm,0.6s						
LBNH	Lisbon	65.71	49	P	P	07 20 02.0	-0.7
	baz=320						
LBNH	Lisbon	65.71	49	*e*P	P	07 20 02.6	-0.1
	comp=Z,9.1nm,1.1s						
LBNH	Lisbon	65.71	49	*e*P	P	07 20 02.6	-0.1
LBNH				pmax	pmax		
	comp=Z,9.0nm,1.1s						
V51A	Loudon	65.73	63	P	P	07 20 02.1	-0.9
	baz=318,SNR=5.9						
V51A	Loudon	65.73	63	*e*P	P	07 20 02.0	-0.9
	comp=Z,7.3nm,0.6s						
Z48A	Northport	65.73	67	P	P	07 20 01.9	-1.0
	baz=317,SNR=11						
U52A	Thorn Hill	65.83	62	P	P	07 20 03.1	-0.6
	baz=318						
147A	Livingston	65.84	68	P	P	07 20 03.1	-0.6
	baz=317						
147A	Livingston	65.84	68	*e*P	P	07 20 03.6	-0.1
	comp=Z,15nm,0.6s						
CPCT	Cooper Cave	65.89	63	*e*P	P	07 20 03.1	-0.9
	comp=Z,6.9nm,0.5s						
KSPA	Keystone Colle	65.91	53	*e*P	P	07 20 04.9	+0.9
	comp=Z,15nm,1.5s						
AAK	Ala-Archa	65.93	309	*e*P	P	07 20 04.0	-0.3
	comp=Z,3.4nm,0.7s						
AAK	Ala-Archa	65.93	309	*e*P	P	07 20 04.0	-0.3
AAK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
W51A	Cleveland	65.98	63	P	P	07 20 03.7	-0.8
	baz=318,SNR=5.7						
X50B	Fort Payne	66.00	64	P	P	07 20 03.7	-1.0
	baz=318,SNR=9.2						
Y49A	Blount Mountai	66.02	65	P	P	07 20 03.8	-1.1
	baz=318						
Y49A	Blount Mountai	66.02	65	*e*P	P	07 20 03.9	-1.0
	comp=Z,3.8nm,0.8s						
346A	Big Creek Wild	66.10	69	P	P	07 20 04.8	-0.5
	baz=317						
247A	Quitman	66.10	68	P	P	07 20 04.8	-0.5
	baz=317						
V52A	Sevierville	66.11	62	P	P	07 20 04.8	-0.6
	baz=318						
V52A	Sevierville	66.11	62	*e*P	P	07 20 05.0	-0.4
	comp=Z,3.7nm,0.6s						
TKL	Tuckaleechee C	66.15	62	P	P	07 20 04.7	-1.0
	comp=Z,3.6nm,0.6s,baz=240,slow=8.1,SNR=12						
TKL	Tuckaleechee C	66.15	62	*e*P	P	07 20 05.2	-0.5
	comp=Z,4.4nm,0.6s						
TKL	Tuckaleechee C	66.15	62	*e*P	P	07 20 05.2	-0.5
TKL				pmax	pmax		
	comp=Z,4.0nm,0.6s						
U53A	Fall Branch	66.28	61	P	P	07 20 05.8	-0.7
	baz=318						
LRAL	Lakeview Retre	66.30	66	P	P	07 20 05.6	-0.9
	baz=318						
LRAL	Lakeview Retre	66.30	66	*e*P	P	07 20 05.7	-0.9
	comp=Z,3.7nm,0.7s						
X51A	Calhoun	66.36	64	P	P	07 20 05.9	-1.1
	baz=318						
X51A	Calhoun	66.36	64	*e*P	P	07 20 07.0	0.0
	comp=Z,17nm,1.5s						
Y50A	Piedmont	66.37	65	P	P	07 20 06.1	-1.0
	baz=318,SNR=5.4						
N59A	State Game Lan	66.39	53	P	P	07 20 06.7	-0.4
	baz=319,SNR=6.1						
N59A	State Game Lan	66.39	53	*e*P	P	07 20 07.1	0.0
	comp=Z,9.3nm,0.6s						
Z49A	Columbiana	66.44	66	P	P	07 20 06.4	-1.1
	baz=318,SNR=6.8						
W52A	Murphy	66.48	63	P	P	07 20 06.8	-1.1
	baz=318						
W52A	Murphy	66.48	63	*e*P	P	07 20 07.3	-0.5
	comp=Z,6.8nm,0.4s						
248A	Dixon Mills	66.57	68	P	P	07 20 07.6	-0.7
	baz=318						
446A	Poplarville	66.60	70	P	P	07 20 07.7	-0.9
	baz=318						
347A	Saraland	66.62	69	P	P	07 20 08.8	+0.2
	baz=318						
LSA	Lhasa	66.63	289	*e*P	P	07 20 11.2	+1.8
	comp=Z,13nm,0.6s						
LSA	Lhasa	66.63	289	P	P	07 20 11.0	+1.7
LSA				pmax	pmax		
	comp=Z,26nm,0.8s						
NC204	NORSAR Array S	66.65	354	*e*P	P	07 20 09.1	+0.6
V53A	Saluda	66.67	62	P	P	07 20 08.4	-0.6
	baz=318,SNR=5.3						
V53A	Saluda	66.67	62	*e*P	P	07 20 08.8	-0.1
	comp=Z,5.9nm,0.5s						
NC303	NORSAR Array S	66.67	354	*e*P	P	07 20 10.2	+1.7
149A	Jones	66.74	67	P	P	07 20 08.4	-1.0
	baz=318,SNR=6.3						
AKTO	Aktyubinsk	66.74	324	P	P	07 20 09.0	-0.1
	comp=Z,4.9nm,0.5s,baz=64,slow=11,SNR=13						
Z50A	Ashland	66.74	66	P	P	07 20 08.3	-1.1
	baz=318,SNR=12						
Z50A	Ashland	66.74	66	*e*P	P	07 20 08.4	-1.1
	comp=Z,10nm,0.6s						
Y51A	Rockmart	66.74	64	P	P	07 20 08.2	-1.2
	baz=318,SNR=5.3						
NC405	NORSAR Array S	66.76	354	*e*P	P	07 20 09.9	+0.8
BLA	Blacksburg	66.80	59	P	P	07 20 09.1	-0.7
	baz=318						
BLA	Blacksburg	66.80	59	*e*P	P	07 20 10.2	+0.3
	comp=Z,8.8nm,0.6s						
BLA	Blacksburg	66.80	59	P	P	07 20 10.1	+0.3
BLA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MVL	Millersville	66.80	54	*e*P	P	07 20 09.4	-0.3
	comp=Z,6.3nm,0.7s						
LUPA	Lehigh Univers	66.83	53	*e*P	P	07 20 09.8	-0.1
NB201	NORSAR Array S	66.85	354	*e*P	P	07 20 10.1	+0.5
W53A	Cullowhee	66.85	62	P	P	07 20 09.4	-0.8
	baz=318						
NB2	NORSAR Subarra	66.86	354	P	P	07 20 09.8	0.0
	comp=Z,4.5nm,1.0s,baz=9.5,slow=6.9						
NOA	NORSAR Array B	66.86	354	P	P	07 20 09.2	-0.6
	comp=Z,0.5nm,0.5s,baz=238,slow=4.2,SNR=10						
X52A	Dahlonega	66.87	63	P	P	07 20 09.6	-0.6
	baz=318						
348A	Jackson	66.98	68	P	P	07 20 10.8	-0.1
	baz=318						
ABKAR	Akbulak array	66.99	322	*e*P	P	07 20 10.3	-0.4
MNAS	Manas	66.99	310	P	P	07 20 11.0	-0.1
SDMD	Soldier's Deli	67.00	55	*e*P	P	07 20 11.9	+0.9
	comp=Z,2.3nm,0.5s						
447A	Lucedale	67.01	69	P	P	07 20 11.1	0.0
	baz=318						
447A	Lucedale	67.01	69	*e*P	P	07 20 11.7	+0.6
	comp=Z,72nm,1.5s						
249A	Camden	67.01	67	P	P	07 20 10.6	-0.5
	baz=318						
BG3	Lake Jocassee	67.11	62	*e*P	P	07 20 11.8	+0.1
	comp=Z,6.0nm,0.5s						
NC602	NORSAR Array S	67.14	354	*e*P	P	07 20 12.1	+0.6
150A	Eclectic	67.16	66	P	P	07 20 11.3	-0.7
	baz=318						
BRNJ	Basking Ridge	67.16	53	*e*P	P	07 20 12.2	+0.3
	comp=Z,8.8nm,0.6s						
PAL	Palisades	67.24	52	P	P	07 20 11.8	-0.7
	baz=320						
PAL	Palisades	67.24	52	*e*P	P	07 20 12.5	+0.1
	comp=Z,33nm,1.4s						
PAL	Palisades	67.24	52	*e*P	P	07 20 12.5	+0.1
PAL				pmax	pmax		
	comp=Z,33nm,1.4s						
X53A	Estanollee	67.27	63	P	P	07 20 12.0	-0.7
	baz=318,SNR=5.2						
PSUB	Penn St. - Bra	67.30	54	*e*P	P	07 20 13.7	+0.9
	comp=Z,8.9nm,1.4s						
Y52A	Lilburn	67.32	64	P	P	07 20 12.3	-0.8
	baz=318						
Y52A	Lilburn	67.32	64	*e*P	P	07 20 12.8	-0.3
	comp=Z,7.2nm,0.6s						
IP04	Greensprings	67.35	57	*e*P	P	07 20 13.9	+0.7
	comp=Z,3.7nm,0.7s						
EMMW	East Machias	67.36	46	*e*P	P	07 20 12.9	-0.2
	comp=Z,32nm,1.3s						
WES	Weston	67.42	50	*e*P	P	07 20 12.7	-0.8
	comp=Z,6.0nm,0.8s						
WES	Weston	67.42	50	*e*P	P	07 20 12.7	-0.8
WES				pmax	pmax		
	comp=Z,6.0nm,0.8s						
349A	Repton	67.43	68	P	P	07 20 13.3	-0.5
	baz=318						
KK31	Karatay Array	67.45	312	*e*P	P	07 20 13.2	-0.5
KK31	Karatay Array	67.45	312	*e*P	P	07 20 13.2	-0.5
KKAR	Karatay Array	67.45	312	*e*P	P	07 20 13.2	-0.5
KKAR	Karatay Array	67.45	312	*e*P	P	07 20 13.2	-0.5
IP03	Louisa	67.45	57	*e*P	P	07 20 14.0	+0.2
	comp=Z,7.4nm,1.3s						
250A	Grady	67.49	67	P	P	07 20 13.4	-0.8
	baz=318						
250A	Grady	67.49	67	*e*P	P	07 20 13.8	-0.3
	comp=Z,12nm,0.6s						
IP07	Quail	67.52	57	*e*P	P	07 20 14.4	+0.2
	comp=Z,11nm,0.5s						
IP06	Yanceyville	67.53	57	*e*P	P	07 20 14.4	+0.1
	comp=Z,4.7nm,0.8s						
IP01	Cuckoo	67.55	57	*e*P	P	07 20 14.7	+0.3
	comp=Z,4.7nm,0.9s						
KSH	Kashi	67.58	306	P	P	07 20 18.1	+3.3
KSH				*e*PcP	PcP	07 20 43.1	+2.3
KSH				sP	sP	07 21 07.3	-2.2
KSH				PcS		07 24 48.1	
KSH				S	S	07 28 59.8	+1.1
KSH				ScS	SKiKP	07 29 55.9	+0.2
KSH				SS	SS	07 33 25.3	+3.8
KSH				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KSH				pmax	pmax		
	comp=Z,120nm,4.6s						
HFS	Hagfors	67.59	353	P	P	07 20 14.1	-0.2
	comp=Z,1.7nm,0.4s,baz=37,slow=7.4,SNR=15						
Y53A	Monroe	67.59	63	P	P	07 20 14.0	-0.8
	baz=318,SNR=7.2						
151A	Opelika	67.61	66	P	P	07 20 14.1	-0.9
	baz=318						
Z52A	Williamson	67.63	65	P	P	07 20 14.0	-1.1
	baz=318,SNR=5.6						
BRAL	Brewton	67.65	68	P	P	07 20 14.2	-1.0
	baz=318						
BRAL	Brewton	67.65	68	*e*P	P	07 20 16.2	+1.1
	comp=Z,19nm,0.6s						
BRYW	Bryant College	67.67	50	*e*P	P	07 20 14.9	-0.3
	comp=Z,8.2nm,0.9s						
IP05	Hopewell Churc	67.72	57	*e*P	P	07 20 15.2	-0.3
	comp=Z,7.8nm,1.1s						
PAULI	Pauline	67.84	62	*e*P	P	07 20 16.9	+0.6
	comp=Z,8.9nm,1.3s						
152A	Waverly Hall	67.85	65	P	P	07 20 15.5	-0.9
	baz=318						
449A	Pace	67.86	68	P	P	07 20 16.5	0.0
	baz=318						
KMSC	Kings Mountain	67.86	61	P	P	07 20 16.0	-0.5
	baz=319,SNR=6.6						
KMSC	Kings Mountain	67.86	61	*e*P	P	07 20 16.2	-0.3
	comp=Z,8.8nm,0.8s						
350A	Dozier	67.87	67	P	P	07 20 15.9	-0.6
	baz=318						
251A	Midway	67.89	66	P	P	07 20 15.3	-1.4
	baz=318						
GOGA	Godfrey	67.99	64	P	P	07 20 16.2	-1.0
	baz=318						
GOGA	Godfrey	67.99	64	*e*P	P	07 20 16.3	-1.0
	comp=Z,5.5nm,1.0s						
GOGA	Godfrey	67.99	64	*e*P	P	07 20 16.3	-1.0
GOGA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NCAT	North Carolina	67.99	59	*e*P	P	07 20 16.9	-0.3
	comp=Z,4.1nm,0.5s						
Z53A	Monticello	68.03	64	P	P	07 20 16.5	-1.1
	baz=318,SNR=13						
Y54A	Tignall	68.08	63	P	P	07 20 17.2	-0.6
	baz=319,SNR=12						
FAKI	Fak Fak	68.13	233	*e*P	P	07 20 18.5	+0.3
	comp=Z,42nm,0.7s						
153A	Fort Valley	68.36	65	P	P	07 20 18.5	-1.1
	baz=318						
SKNT	Sakolnakorn	68.36	270	P	P	07 20 20.0	+0.2
351A	Pinckard	68.39	67	P	P	07 20 19.1	-0.6
	baz=318						
SFK	Sufi-Kurgan	68.42	308	P	P	07 20 22.8	+2.7
SFK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
Z54A	Sparta	68.47	63	P	P	07 20 19.4	-0.9
	baz=319,SNR=5.3						
JSC	Jenkinsville	68.55	62	*e*P	P	07 20 20.7	0.0
	comp=Z,15nm,0.5s						
JSC	Jenkinsville	68.55	62	*e*P	P	07 20 20.7	0.0
JSC				pmax	pmax		
	comp=Z,15nm,0.5s						
352A	Blakely	68.62	66	P	P	07 20 20.3	-0.9
	baz=318						
253A	Americus	68.63	65	P	P	07 20 20.7	-0.6
	baz=319						
154A	Montrose	68.79	64	P	P	07 20 21.3	-0.9
	baz=319						
154A	Montrose	68.79	64	*e*P	P	07 20 21.4	-0.8
	comp=Z,12nm,0.6s						
Z55A	Blythe	68.87	63	P	P	07 20 22.2	-0.5
	baz=319						
OBN	Obninsk	68.97	339⇓	*e*P	P	07 20 23.1	+0.2
OBN				pmax	pmax		
	comp=Z,9.0nm,0.4s						
PAYA	Payao	69.09	275	P	P	07 20 25.3	+1.0
353A	Camilla	69.12	66	P	P	07 20 24.0	-0.3
	baz=319						
155A	Kite	69.14	64	P	P	07 20 23.7	-0.7
	baz=319						
254A	Abbeville	69.19	65	P	P	07 20 23.7	-1.0
	baz=319						
SHL	Shillong	69.27	285	*e*P	P	07 20 25.6	+0.1
	comp=Z,70nm,1.3s						
SHL	Shillong	69.27	285	*e*P	P	07 20 25.6	+0.1
SHL				pmax	pmax		
	comp=Z,70nm,1.3s						
453A	Whigham	69.43	66	P	P	07 20 25.6	-0.6
	baz=319						
453A	Whigham	69.43	66	*e*P	P	07 20 25.7	-0.6
	comp=Z,68nm,1.5s						
255A	Hazlehurst	69.66	64	P	P	07 20 26.8	-0.7
	baz=319						
255A	Hazlehurst	69.66	64	*e*P	P	07 20 27.4	-0.2
	comp=Z,12nm,0.6s						
355A	Pearson	69.89	65	P	P	07 20 28.3	-0.7
	baz=319						
NHSC	New Hope	70.02	62	P	P	07 20 29.0	-0.8
	baz=320						
NHSC	New Hope	70.02	62	*e*P	P	07 20 30.4	+0.6
	comp=Z,20nm,0.9s						
CMMT	Chiang Mai	70.07	275	P	P	07 20 31.2	+0.9
	comp=Z,9.9nm,1.2s						
RGRS	Roger Stewart	70.17	62	*e*P	P	07 20 32.0	+1.4
	comp=Z,370nm,0.4s						
455A	Stateville	70.25	65	P	P	07 20 30.5	-0.7
	baz=319						
356A	Blackshear	70.31	64	P	P	07 20 30.9	-0.6
	baz=319						
CMAR	Chiang Mai Arr	70.34	275	P	P	07 20 32.2	+0.3
	comp=Z,8.4nm,0.6s,baz=27,slow=7.0,SNR=30						
CM01	Chiang Mai Arr	70.36	275	*e*P	P	07 20 32.4	+0.4
TAPN	Taplejung	70.39	289	*e*P	P	07 20 33.7	+1.2
	comp=Z,10nm,0.3s						
PBKT	Sadao Pong	70.53	272	P	P	07 20 33.8	+0.8
	comp=Z,18nm,0.8s						
456A	Hilliard	70.82	65	P	P	07 20 34.0	-0.7
	baz=320						
456A	Hilliard	70.82	65	*e*P	P	07 20 34.9	+0.3
	comp=Z,75nm,1.4s						
GUN	Gumba	71.03	291	*e*P	P	07 20 37.0	+0.6
	comp=Z,92nm,0.3s						
JIRN	Jiri	71.04	291	*e*P	P	07 20 37.0	+0.5
	comp=Z,39nm,0.4s						
VRH	Novokhopyorsk	71.26	334	*e*P	P	07 20 35.5	-1.5
VRH				pmax	pmax		
	comp=Z,10.0nm,0.7s						
RAMN	Ramite	71.34	290	*e*P	P	07 20 38.4	+0.3
	comp=Z,40nm,0.4s						
KKN	Kakani	71.46	291	*e*P	P	07 20 39.3	+0.5
	comp=Z,17nm,0.4s						
557A	Orange Park	71.52	65	P	P	07 20 38.3	-0.6
	baz=320						
PKIN	Phulchoki	71.56	291	*e*P	P	07 20 39.9	+0.4
	comp=Z,11nm,0.4s						
GKN	Gorkha	71.67	292	*e*P	P	07 20 40.2	+0.2
	comp=Z,16nm,0.4s						
DMN	Daman	71.70	291	*e*P	P	07 20 40.6	+0.3
	comp=Z,10nm,0.4s						
DANN	Dangsing	71.90	293	*e*P	P	07 20 41.9	+0.3
	comp=Z,18nm,0.5s						
VSR	Storozhevoye	71.93	335	*e*P	P	07 20 39.9	-1.0
VSR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
VORD	Divnogorie	72.12	335	*e*P	P	07 20 41.7	-0.4
VORD				pmax	pmax		
	comp=Z,8.0nm,0.7s						
KOLN	Koldanda	72.44	293	*e*P	P	07 20 44.4	-0.2
	comp=Z,7.6nm,0.4s						
PYUN	Piuthan	72.53	293	*e*P	P	07 20 45.2	0.0
EKA	Eskdalemuir Ar	72.89	2	P	P	07 20 47.4	+0.8
	comp=Z,1.4nm,0.6s,baz=358,slow=4.5,SNR=5.7						
EKA				pP	pP	07 21 25.7	+0.9
	comp=Z,1.7nm,0.6s,baz=10,slow=4.3,SNR=3.2						
DWPF	Disney Wildern	73.15	66	*e*P	P	07 20 49.2	+0.6
	comp=Z,21nm,0.8s						
COEN	Coen	73.19	218	*e*P	P	07 20 49.0	+0.2
	comp=Z,6.5nm,0.8s						
NIL	Nilore	73.50	304	*e*P	P	07 20 51.8	+1.2
	comp=Z,10nm,0.6s						
NIL	Nilore	73.50	304	*e*P	P	07 20 51.8	+1.2
NIL				pmax	pmax		
	comp=Z,10.0nm,0.6s						
AKASG	Malin Array Be	74.67	341	P	P	07 20 56.5	-0.5
	comp=Z,5.8nm,0.4s,baz=20,slow=6.5,SNR=13						
AKASG				pP	pP	07 21 35.7	+0.3
	comp=Z,2.5nm,0.5s,baz=20,slow=5.9,SNR=4.1						

AKBB	Malin Array Si	74.67	341	eP	P	07 20 56.7	-0.3
	comp=Z,9.4nm,0.5s						
AKBB	Malin Array Si	74.67	341	eP	P	07 20 56.7	-0.3
AKBB				pmax	pmax		
	comp=Z,9.0nm,0.5s						
KIEV	Kiev	74.67	341	eP	P	07 20 56.7	-0.3
	comp=Z,9.3nm,0.5s						
KIEV	Kiev	74.67	341	deP	P	07 20 56.4	-0.6
KIEV				i *PP	pP	07 21 35.4	-0.1
KIEV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SBUM	Sibu	74.68	254	eP	P	07 20 56.1	-1.4
	comp=Z,12nm,0.4s						
AK11	Malin Array Si	74.70	341	eP	P	07 20 56.2	-1.0
DZM	Mont Dzumac	74.84	193	P	P	07 21 00.4	+2.1
	comp=Z,14nm,1.0s,baz=46,slow=16,SNR=5.1						
CLL	Collm	76.40	352	eP	P	07 21 12.0	+5.2
MTN	Manton Dam	77.29	229	eP	P	07 21 12.4	+0.2
	comp=Z,40nm,0.6s						
KIV	Kislovodsk	77.54	330	i P	P	07 21 14.0	+0.5
KIV				i		07 21 28.4	
KIV				e*PP	pP	07 21 47.5	-4.7
KIV				i		07 24 16.4	
KIV				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NCK	Nalchik	77.67	329	⇑eP	P	07 21 13.7	-0.4
NCK				pmax	pmax		
	comp=Z,10.0nm,0.7s						
KBZ	Khabaz	77.67	330	P	P	07 21 14.1	0.0
	comp=Z,2.3nm,0.7s,baz=302,slow=4.7,SNR=4.8						
CTA	Charters Tower	77.76	213	P	P	07 21 15.8	+1.1
	comp=Z,2.8nm,0.6s,baz=72,slow=6.4,SNR=3.2						
NEY	Neytrino	78.16	330	⇑eP	P	07 21 17.3	+0.2
NEY				pmax	pmax		
	comp=Z,2.0nm,1.4s						
BUR08	Bucovina Ar. S	78.36	343	eP	P	07 21 18.7	+0.7
BUR04	Bucovina Ar. S	78.38	343	eP	P	07 21 19.0	+1.0
BURAR	Bucovina Array	78.38	343	⇑iP	P	07 21 19.3	+1.2
GERES	GERESS Array B	78.77	351	P	P	07 21 19.9	-0.3
	comp=Z,0.8nm,0.4s,baz=36,slow=7.1,SNR=4.9						
GEA0	GERESS Array S	78.78	351	eP	P	07 21 20.5	+0.3
BIZ	Bicaz	78.87	342	⇓iP	P	07 21 21.9	+1.3
MLR	Muntele Rosu	80.29	342	P	P	07 21 28.6	+0.1
	comp=Z,6.6nm,0.6s,baz=0.0,slow=6.1,SNR=6.0						
MLR	Muntele Rosu	80.29	342	eP	P	07 21 30.2	+1.7
	comp=Z,7.0nm,0.7s						
MLR	Muntele Rosu	80.29	342	eP	P	07 21 30.2	+1.7
MLR				pmax	pmax		
	comp=Z,7.0nm,0.7s						
VOIR		80.51	343	P	P	07 21 32.5	+2.9
VOIR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
KBA	Koelnbreinsper	80.56	351	eP	P	07 21 30.7	+0.8
	comp=Z,8.4nm,0.5s						
ARR	Arges	80.66	343	⇓iP	P	07 21 31.7	+1.3
SOKA	Soboth	80.78	350	eP	P	07 21 32.8	+1.8
	comp=Z,1.7nm,0.5s						
OBKA	Obir	81.00	350	eP	P	07 21 33.0	+0.8
	comp=Z,2.6nm,0.4s						
EIDS	Eidsvold	81.26	206	eP	P	07 21 34.7	+1.2
	comp=Z,44nm,1.5s						
FUORN	Ofenpass-Fuorn	81.28	353	eP	P	07 21 35.0	+1.1
	comp=Z,8.8nm,1.4s						
WRAB	Tennant Creek	82.11	223	eP	P	07 21 38.2	+0.1
	comp=Z,22nm,1.2s						
WRAB	Tennant Creek	82.11	223	deP	P	07 21 37.9	-0.2
WRAB				pmax	pmax		
	comp=Z,18nm,1.2s						
WB2	Warramunga Arr	82.12	223	eP	P	07 21 38.1	0.0
	comp=Z,16nm,1.0s						
WRA	Warramunga Arr	82.13	223	P	P	07 21 37.9	-0.2
	comp=Z,11nm,0.5s,baz=33,slow=5.9,SNR=30						
WRA	Warramunga Arr	82.13	223	i P	P	07 21 38.0	-0.2
WRA				pmax	pmax		
	comp=Z,13nm,0.5s						
WC3	Warramunga Arr	82.13	223	eP	P	07 21 38.2	0.0
	comp=Z,12nm,0.6s						
PSI	Prapat	82.45	265	eP	P	07 21 40.7	+0.4
	comp=Z,25nm,0.7s						
PSI	Prapat	82.45	265	eP	P	07 21 40.7	+0.4
PSI				pmax	pmax		
	comp=Z,25nm,0.7s						
DIVS	Divibare	82.67	346	eP	P	07 21 41.6	+0.7
	comp=Z,11nm,0.9s						
BRTR	Keskin Array B	84.03	335	P	P	07 21 47.9	-0.1
	comp=Z,2.1nm,0.8s,baz=36,slow=2.9,SNR=9.3						
BRTR				pP	pP	07 22 27.8	+0.5
	comp=Z,1.2nm,0.9s,baz=289,slow=3.8,SNR=2.0						
BRTR	Keskin Array B	84.03	335	ceP	P	07 21 48.0	-0.1
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
FITZ	Fitzroy Crossi	84.44	231	eP	P	07 21 51.1	+1.0
	comp=Z,18nm,1.3s						
GSI	Gunungsitoli	84.45	265	eP	P	07 21 51.0	+0.7
	comp=Z,54nm,1.3s						
AS01	Alice Springs	85.60	222	eP	P	07 21 56.1	+0.4
AS31	Alice Springs	85.62	222	eP	P	07 21 56.6	+0.7
	comp=Z,2.5nm,0.8s						
ASAR	Alice Springs	85.62	222	P	P	07 21 56.4	+0.5
	comp=Z,5.5nm,0.7s,baz=29,slow=4.7,SNR=26						
ARMA	Armidale	85.92	204	eP	P	07 21 59.2	+2.0
	comp=Z,49nm,1.4s						
TIP	Timpagrande	87.95	347	eP	P	07 22 07.0	-0.2
	comp=Z,30nm,1.4s						
ESDC	Sonseca Array	88.52	3	P	P	07 22 09.4	-0.5
	comp=Z,0.2nm,0.3s,baz=355,slow=3.1,SNR=5.0						
CSS	Mathiatis	88.59	333	eP	P	07 22 10.8	+0.6
	comp=Z,7.1nm,1.0s						
MBWA	Marble Bar	89.94	234	eP	P	07 22 16.1	-0.4
	comp=Z,11nm,0.8s						
STKA	Stephens Creek	90.22	212	P	P	07 22 17.1	-0.4
	comp=Z,6.6nm,0.7s,baz=359,slow=8.8,SNR=11						
STKA	Stephens Creek	90.22	212	eP	P	07 22 17.3	-0.2
	comp=Z,2.0nm,0.9s						
STKA	Stephens Creek	90.22	212	eP	P	07 22 17.3	-0.2
STKA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
BKZ	Black Stump Fm	90.95	183	eP	P	07 22 19.8	-1.0
	comp=Z,49nm,1.4s						
CAN	Canberra	91.25	205	eP	P	07 22 24.0	+1.7
	comp=Z,26nm,1.5s						
CAN	Canberra	91.25	205	eP	P	07 22 24.0	+1.7
CAN				pmax	pmax		
	comp=Z,26nm,1.5s						
KEST	Kesra	92.17	353	P	P	07 22 25.3	-1.6
	comp=Z,3.1nm,0.5s,baz=6.3,slow=9.2,SNR=2.7						
KEST	Kesra	92.17	353	eP	P	07 22 26.8	-0.1
	comp=Z,20nm,1.4s						
FORT	Forrest	94.31	223	eP	P	07 22 37.6	+1.2
	comp=Z,42nm,1.4s						
MDT	Midelt	95.33	4	P	P	07 22 40.8	-0.8
	comp=Z,0.6nm,0.4s,baz=315,slow=5.7,SNR=3.5						
TORD	Torodi Ar. Bea	115.00	358	PKP	PKPdf	07 27 55.5	-2.2
	comp=Z,0.3nm,0.4s,baz=180,slow=14						
DBIC	Dimbokro	121.29	6	PKP	PKPdf	07 28 08.9	-0.9
	comp=Z,1.5nm,0.4s,baz=357,slow=2.4,SNR=8.0						
DBIC	Dimbokro	121.29	6	ePKPdf	PKPdf	07 28 08.8	-1.0
CPUP	Villa Florida	130.11	82	PKP	PKPdf	07 28 25.9	-0.2
	comp=Z,0.9nm,0.6s,baz=201,slow=3.2,SNR=4.1						
CPUP				SKPbc	SKPab	07 31 32.4	-1.6
	comp=Z,1.8nm,0.5s,baz=280,slow=4.2,SNR=11						
PLCA	Paso Flores	131.76	106	PKP	PKPdf	07 28 29.6	+0.6
	comp=Z,2.3nm,0.5s,baz=334,slow=2.8,SNR=17						
PLCA				SKPbc	SKPbc	07 31 39.6	-0.2
	comp=Z,3.9nm,0.6s,baz=314,slow=4.1,SNR=17						
PLCA	Paso Flores	131.76	106	ePKIKP	PKPdf	07 28 29.7	+0.7
TRQA	Tornquist	135.25	97	ePKPdf	PKPdf	07 28 35.5	-0.1
TRQA	Tornquist	135.25	97	ePKIKP	PKPdf	07 28 35.5	-0.1
QSPA	South Pole Qui	141.86	180	PKhKP	PKPpre	07 28 42.5	
	comp=Z,3.0nm,0.6s,baz=11,slow=0.6,SNR=13						
QSPA				SKPbc	SKPbc	07 32 09.0	-0.1
	comp=Z,1.5nm,0.6s,baz=356,slow=1.8,SNR=4.7						
QSPA	South Pole Qui	141.86	180	ePKPdf	PKPpre	07 28 42.0	
QSPA				SKPbc	SKPbc	07 32 09.0	-0.1
TSUM	Tsumeb	144.46	331	PKP	PKPab	07 28 51.0	-0.6
	comp=Z,4.8nm,0.7s,baz=358,slow=5.8,SNR=11						
TSUM	Tsumeb	144.46	331	ePKPdf	PKPab	07 28 51.6	0.0
EFI	East Falkland	144.86	113	ePKPbc	PKPbc	07 28 51.8	-0.2
EFI	East Falkland	144.86	113	ePKIKP	PKPbc	07 28 51.8	-0.2
PMSA	Palmer Station	145.68	137	PKPbc	PKPdf	07 28 53.0	-0.3
	comp=Z,12nm,0.8s,baz=311,slow=9.3,SNR=2.6						
MAW	Mawson	146.69	218	PKPbc	PKPbc	07 28 57.2	+0.3
	comp=Z,17nm,0.7s,baz=73,slow=3.8,SNR=31						
LBTB	Lobatse	146.78	315	ePKPbc	PKPbc	07 28 58.9	+0.2
LBTB	Lobatse	146.78	315	ePKP2	PKPbc	07 28 58.9	+0.2
BOSA	Boshof	150.04	312	PKPbc	PKPbc	07 29 06.9	-0.2
	comp=Z,5.7nm,0.5s,baz=22,slow=2.9,SNR=25						
BOSA	Boshof	150.04	312	ePKPbc	PKPbc	07 29 06.7	-0.4
VNA3	Neumayer Olymp	160.28	171	PKP	PKPab	07 29 55.9	0.0
SNAA	Sanae	160.32	177	PKP	PKPab	07 29 57.1	+1.0
VNA1	Neumayer--Stat	160.99	171	PKP	PKPab	07 29 59.2	+0.3

MAN 23 07:10:43.1,9°.63N×122°.04E,h16^{km},mb4.3,ML3.1,MS2.9, 1C,Negros

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUIM	Jordan	1.13	28	eP	Pn	07 11 00.0	-4.2
GUIM				eS	Sb	07 11 13.4	-5.3
CUYO	Cuyo Island	1.58	320	eP	Pn	07 11 10.4	-0.1
CUYO				eS	Sn	07 11 30.7	+0.1
TBP	Tagbilaran	1.79	88	eP	Pn	07 11 12.3	-1.1
RCP	Roxas	2.04	20	⇑eP	Pn	07 11 18.1	+1.3
RCP				eS	Sn	07 11 42.8	+0.8
PAGZ	Pagadian	2.21	143	eP	Pn	07 11 19.7	+0.6
PAGZ				eS	Sg	07 11 52.5	-1.7
MSLP	Maasin	2.82	79	eP	Pn	07 11 28.1	+0.5
MSLP				eS	Sn	07 12 02.9	+1.7

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*IDC **23** 07:12:52.2±1.2,0°.29S×132°.78E,h0^{km},mb4.1/6, mb1 4.2/7,mb1mx3.8/56,mbtmp4.1/7,ML4.2/1,Error ellipse: s-maj=67.7km s-min=15.8km az=73.0*

*ISCJB **23** 07:12:55.6±0.8,0°.23S±0°.07×132°.61E±0°.06,h33^{km}, mb4.0/6,Error ellipse: s-maj=10.2km s-min=8.3km az=172.1*

*DJA **23** 07:12:56.5±2.2,0°S±12°×13°3E±°,h35^{km}±45^{km},M4.9/6, mb5.5/1,MLv4.6/6*

ISC 23 07:12:57.3±1.0,**0°.23S**±0°.09×**132°.58E**±0°.06,**h35^{km},n16, σ1§33**/16,**mb4.1**/6,**Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SWI	Sorong	1.46	245	P	Pn	07 13 20.6	-0.6
SWI				S	Sn	07 13 39.1	0.0
RKPI	Ransiki, Papua	2.04	129	P	Pn	07 13 29.3	+0.1
FAKI	Fak Fak	2.69	187	P	Pn	07 13 38.1	0.0
FAKI				S	Sn	07 14 10.2	+0.7
KMPI	Kaimana, Papua	3.59	162	P	Pn	07 13 50.9	+0.4
BAKI	Biak	3.65	105	P	Pn	07 13 50.9	-0.5
BNDI	Bandanaira	5.03	212	P	Pn	07 14 10.1	-0.2
WRA	Warramunga Arr	19.67	175	P	P	07 17 22.5	-0.9
	0.8nm,0.3s,baz=354,slow=11,SNR=38						
WRA				S	S	07 20 48.7	-15
	0.1nm,0.3s,baz=356,slow=22,SNR=6.1						
ASAR	Alice Springs	23.33	177	P	P	07 18 01.6	-0.9
	4.5nm,0.6s,baz=348,slow=10,SNR=41						
ASAR				S	S	07 22 16.5	+3.5
	0.9nm,0.9s,baz=4.1,slow=27,SNR=2.4						
CTA	Charters Tower	23.85	147	P	P	07 18 06.2	-1.3
	4.1nm,0.7s,baz=322,slow=8.5,SNR=4.3						
STKA	Stephens Creek	32.61	166	P	P	07 19 24.4	-1.3
	1.3nm,0.3s,baz=335,slow=11,SNR=5.5						
H11N1	WAKE ISLAND Hy	39.03	57	T	T	08 01 39.6	
	baz=242,slow=75,SNR=25						
H11N2	WAKE ISLAND Hy	39.04	57	T	T	08 01 40.4	
	baz=242,slow=75,SNR=26						
H11N3	WAKE ISLAND Hy	39.05	57	T	T	08 01 40.8	
	baz=242,slow=75,SNR=24						
MKAR	Makanchi Array	64.15	324	P	P	07 23 29.7	+1.4
	1.2nm,0.7s,baz=112,slow=8.7,SNR=7.1						
KURBB	Kurchatov Arra	68.23	326	P	P	07 23 55.8	+1.5
	0.8nm,0.6s,baz=123,slow=5.7,SNR=8.1						
VNDA	Vanda	78.83	174	P	P	07 24 56.0	-0.2
	0.6nm,0.7s,baz=312,slow=6.3,SNR=5.8						

IDC 23 07:34:42.5±0.9,**15°.33S**×**178°.34W,h0^{km},mb3.7**/9, **mb1 4.0**/9,**mb1mx3.8**/46,**mbtmp3.7**/9,**MS3.6**/21, **Ms1 3.6**/21,**ms1mx3.5**/48,**Error ellipse: s-maj=35.5km s-min=25.4km az=132.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	15.89	243	LR	LR	07 43 44.2	
	comp=Z,337nm,19.8s,baz=40,slow=34						
RAR	Rarotonga	18.56	111	LR	LR	07 43 38.1	
	comp=Z,213nm,20.8s,baz=279,slow=29						
HNR	Honiara	22.00	283	LR	LR	07 47 02.4	
	comp=Z,405nm,21.6s,baz=120,slow=34						
PPT	Papeete	27.66	99	LR	LR	07 48 02.1	
	comp=Z,142nm,21.9s,baz=298,slow=29						
PMG	Port Moresby	34.19	276	LR	LR	07 53 11.2	
	comp=Z,138nm,21.6s,baz=92,slow=32						
STKA	Stephens Creek	39.98	238	LR	LR	07 56 46.1	
	comp=Z,70nm,20.9s,baz=31,slow=33						
ASAR	Alice Springs	45.61	252	P	P	07 43 05.6	+0.6
	0.8nm,0.9s,baz=84,slow=8.4,SNR=8.5						
DAV	Davao City (W)	59.86	288	LR	LR	08 09 43.5	
	comp=Z,48nm,18.3s,baz=322,slow=35						
NWAO	Narrogin (SRO)	60.50	241	LR	LR	08 10 02.6	
	comp=Z,63nm,18.9s,baz=254,slow=35						
VNDA	Vanda	63.00	185	P	P	07 45 10.4	-0.4
	1.1nm,0.9s,baz=13,slow=2.8,SNR=4.4						
MJAR	Matsushiro Arr	65.91	323	P	P	07 45 28.3	-2.1
	0.8nm,0.3s,baz=158,slow=7.5,SNR=2.3						
JNU	Nakatsue	68.35	316	LR	LR	08 10 48.2	
	comp=Z,40nm,20.1s,baz=302,slow=32						
ASAJ	Asahikawa	69.07	331	LR	LR	08 13 02.6	
	comp=Z,89nm,18.4s,baz=162,slow=33						
PETK	Petropavlovsk-	71.22	345	P	P	07 46 03.9	+0.6
	1.5nm,0.6s,baz=168,slow=7.4						
PETK				LR	LR	08 10 14.6	
	comp=Z,32nm,21.9s,baz=266,slow=30						
KSRS	Korea Array	72.84	318	LR	LR	08 12 44.2	
	comp=Z,45nm,21.2s,baz=154,slow=31						
YBH	Yreka Blue Hor	76.50	39	LR	LR	08 12 05.6	
	comp=Z,44nm,19.3s,baz=290,slow=29						
LPIG	La Paz	77.10	60	LR	LR	08 11 42.5	
	comp=Z,64nm,19.7s,baz=223,slow=29						
NVAR	Mina Array Bea	77.53	44	P	P	07 46 41.5	+0.8
	0.7nm,0.7s,baz=232,slow=6.8,SNR=4.9						
KLR	Kul’dur	77.95	329	LR	LR	08 17 16.5	
	comp=Z,7.0nm,19.3s,baz=168,slow=33						
H02S1	DAWSON INLET T	78.80	26	T	T	09 13 25.9	
ILAR	Eielson Array	83.38	13	P	P	07 47 11.5	+0.3
	0.5nm,1.0s,baz=231,slow=5.7,SNR=2.7						
ANMO	Albuquerque	84.45	52	P	P	07 47 16.7	-0.9
	0.2nm,0.3s,baz=284,slow=4.2,SNR=1.5						
ANMO				LR	LR	08 16 27.7	
	comp=Z,48nm,20.4s,baz=268,slow=30						
TXAR	Lajitas Array	84.57	58	P	P	07 47 17.2	-1.0
	0.9nm,1.1s,baz=235,slow=3.2,SNR=3.5						
TXAR				LR	LR	08 17 10.5	
	comp=Z,52nm,20.0s,baz=0.0,slow=30						
PDAR	Pinedale Array	85.44	44	P	P	07 47 23.6	+1.0
	0.7nm,1.0s,baz=248,slow=14,SNR=4.3						
PDAR				LR	LR	08 19 05.3	
	comp=Z,24nm,18.6s,baz=344,slow=31						
CMAR	Chiang Mai Arr	88.09	290	LR	LR	08 24 18.9	
	comp=Z,25nm,20.3s,baz=255,slow=34						
YKA	Yellowknife Ar	91.97	25	LR	LR	08 23 15.9	
	comp=Z,6.6nm,19.2s,baz=272,slow=32						
ULM	Lac du Bonnet	96.90	40	LR	LR	08 24 54.4	
	comp=Z,40nm,19.8s,baz=304,slow=31						

MAN 23 07:54:12.6,6°.75N×126°.22E,h36^{km},mb4.5,ML3.4,MS3.2, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MATI	Mati	0.20	10	eP	Pn	07 54 20.8	-0.7
MATI				eS	Sn	07 54 26.9	-2.9
DDMP	Don Marcelino,	0.82	218	eP	Pn	07 54 27.5	-0.2
DDMP				eS	Sn	07 54 39.8	+1.2
BUKP	Musuan	1.61	314	eP	Pn	07 54 39.0	+0.5
BUKP				eS	Sn	07 54 58.9	+0.9
SKMP	Bagumbayan, Su	1.68	262	eP	Pn	07 54 40.3	+0.7
SKMP				eS	Sn	07 54 57.7	-2.2

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*ISCJB **23** 07:55:47.4±0.7,26°.20S±0°.08×179°.8E±0°.1,h475^{km}, mb3.6/10,Error ellipse: s-maj=14.9km s-min=11.1km az=175.3*

*IDC **23** 07:55:50.8±1.9,26°.19S×179°.79E,h507^{km}±21^{km}, mb3.2/10,mb1 3.5/12,mb1mx3.3/42,mbtmp4.2/12,Error ellipse: s-maj=16.6km s-min=12.9km az=1.0*

ISC 23 07:55:47.8±0.7,**26°.17S**±0°.10×**179°.9E**±0°.1,**h475^{km},n20, σ1§54**/23,**mb3.8**/10,**South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	12.28	190	P	P	07 58 31.2	+1.9
	2.1nm,0.3s,baz=286,slow=2.0,SNR=15						
URZ				S	S	08 00 39.9	-2.6
	0.5nm,0.3s,baz=59,slow=12,SNR=5.0						
DZM	Mont Dzumac	12.93	286	P	P	07 58 39.2	+2.6
	1.0nm,0.3s,baz=120,slow=15,SNR=10.0						
CTA	Charters Tower	31.45	274	P	P	08 01 30.0	+0.6
	5.5nm,0.6s,baz=100,slow=11,SNR=7.7						
STKA	Stephens Creek	33.84	251	P	P	08 01 50.5	+0.9
	0.5nm,0.3s,baz=78,slow=9.3,SNR=5.0						
ASAR	Alice Springs	41.61	263	P	P	08 02 53.8	+0.3
	3.5nm,0.8s,baz=92,slow=7.4,SNR=28						
ASAR				S	S	08 08 33.6	-1.2
	0.5nm,0.8s,baz=110,slow=16,SNR=3.0						
WRA	Warramunga Arr	42.20	269	P	P	08 02 58.0	-0.1
	1.7nm,0.4s,baz=103,slow=7.8,SNR=23						
WRA				S	S	08 08 40.2	-3.1
	0.3nm,0.7s,baz=112,slow=15,SNR=3.2						
VNDA	Vanda	52.12	185	P	P	08 04 11.5	-0.8
	1.1nm,0.7s,baz=268,slow=17,SNR=8.7						
QSPA	South Pole Qui	63.92	180	P	P	08 05 34.5	+1.5
	2.3nm,0.9s,baz=353,slow=2.8,SNR=6.4						
MJAR	Matsushiro Arr	73.71	326	P	P	08 06 30.9	-1.6
	1.6nm,0.5s,baz=177,slow=6.4,SNR=6.7						
KSRS	Korea Array	79.92	320	P	P	08 07 06.7	+0.2
	2.3nm,0.7s,baz=146,slow=5.4,SNR=7.7						
NVAR	Mina Array Bea	86.45	44	P	P	08 07 40.0	+0.5
	0.3nm,0.5s,baz=232,slow=7.3,SNR=4.1						
TXAR	Lajitas Array	91.72	58	P	P	08 08 05.1	+1.0
	0.2nm,0.9s,baz=209,slow=9.5,SNR=4.3						
MKAR	Makanchi Array	113.59	312	PKiKP	PKiKP	08 13 29.6	-1.7
	0.1nm,0.4s,baz=93,slow=7.2,SNR=2.2						
KURBB	Kurchatov Arra	116.80	316	PKP	PKPdf	08 13 35.7	-1.5
	0.1nm,0.3s,baz=115,slow=2.4,SNR=5.0						
NOA	NORSAR Array B	144.29	351	PKP	PKPdf	08 14 27.2	-1.3
	2.2nm,0.7s,baz=20,slow=2.6,SNR=5.7						
HFS	Hagfors	144.74	348	PKP	PKPab	08 14 28.7	-1.2
	0.9nm,0.3s,baz=44,slow=3.4,SNR=13						
AKASG	Malin Array Be	146.79	325	PKPbc	PKPbc	08 14 35.1	-0.5
	0.8nm,0.4s,baz=40,slow=3.6,SNR=5.0						
ASF	Jabal al Asfar	147.24	289	PKPbc	PKPbc	08 14 38.2	+0.6
	1.5nm,0.6s,baz=111,slow=6.9,SNR=3.0						
MMAI	Mount Meron Ar	148.47	291	PKPbc	PKPbc	08 14 39.1	-1.6
	1.3nm,0.4s,baz=52,slow=9.3,SNR=3.2						
BRTR	Keskin Array B	148.81	304	PKPbc	PKPbc	08 14 41.6	+0.2
	0.4nm,0.5s,baz=182,slow=3.8,SNR=2.4						

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*IDC **23** 08:08:07.3±1.6,22°.39S×173°.13E,h0^{km},mb4.0/7, mb1 4.1/8,mb1mx3.9/44,mbtmp4.0/8,ML3.3/1,MS3.7/17, Ms1 3.7/17,ms1mx3.5/42,Error ellipse: s-maj=36.0km s-min=25.8km az=29.0*

*ISCJB **23** 08:08:11.9±0.6,22°.49S±0°.07×173°.09E±0°.07,h44^{km}, mb4.5/17,MS3.7/14,Error ellipse: s-maj=10.9km s-min=8.1km az=32.8*

*NEIC **23** 08:08:14.8±1.9,22°.43S×173°.08E,h54^{km}±17^{km},mb4.5/18, Error ellipse: s-maj=13.6km s-min=9.4km az=55.0*

ISC 23 08:08:13.7±0.7,**22°.4S**±0°.1×**173°.16E**±0°.08,**h44^{km},n52, σ1§33**/37,**mb4.6**/17,**MS3.8**/14,**1C-1D,Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	6.23	272	Pn	Pn	08 09 42.3	-1.0
	0.7nm,0.3s,baz=83,slow=17,SNR=16						
DZM				Sn	Sn	08 10 51.2	-2.1
	0.6nm,0.3s,baz=114,slow=19,SNR=3.6						
DZM	Mont Dzumac	6.23	272	ePn	Pn	08 09 43.6	+0.3
	10nm,0.2s						
DZM				eSn	Sn	08 10 54.0	+0.7
	13nm,0.3s						
DZM				eLR	LR	08 11 12.8	
	843nm,22.9s						
DZM	Mont Dzumac	6.23	272	ePn	Pn	08 09 43.4	+0.1
DZM				eSn	Sn	08 10 54.3	+0.9
HIZ	Hauiti	16.09	175	ePn	P	08 11 59.5	-0.1
	50nm,1.0s						
URZ	Urewera	16.13	169	LR	LR	08 15 57.5	
	comp=Z,216nm,21.0s,baz=355,slow=29						
AFI	Afiamalu	16.62	62	LR	LR	08 17 23.4	
	comp=Z,221nm,18.7s,baz=151,slow=33						
HNR	Honiara	18.11	313	LR	LR	08 18 14.4	
	comp=Z,177nm,19.4s,baz=140,slow=34						
BFZ	Birch Farm	18.38	173	eP	P	08 12 24.1	-0.7
	38nm,0.9s						
SNZO	South Karori	18.86	176	eP	P	08 12 30.5	+0.4
	102nm,1.0s						
THZ	Tophouse	19.27	181	eP	P	08 12 34.8	+0.1
	8.4nm,0.8s						
LTZ	Lake Taylor	20.30	182	eP	P	08 12 45.8	-0.2
	47nm,1.2s						
ARMA	Armidale	20.83	243	eP	P	08 12 51.2	-0.7
	14nm,1.1s						
OXZ	Oxford	20.85	182	eP	P	08 12 50.5	-1.3
	16nm,0.8s						
RPZ	Rata Peaks	21.29	184	P	P	08 12 56.3	-0.2
	8.6nm,0.8s,baz=2.1,slow=10,SNR=2.4						
RPZ				LR	LR	08 19 36.5	
	comp=Z,402nm,18.6s,baz=9.0,slow=32						
RPZ	Rata Peaks	21.29	184	eP	P	08 12 57.2	+0.7
	7.1nm,0.8s						
KNTN	Kanton	24.44	39	eP	P	08 13 28.6	0.0
	86nm,1.1s						
RAR	Rarotonga	25.14	92	LR	LR	08 23 34.4	
	comp=Z,77nm,18.1s,baz=217,slow=37						
STKA	Stephens Creek	29.53	245	P	P	08 14 14.4	+0.2
	2.0nm,0.7s,baz=60,slow=8.1,SNR=4.0						
STKA				LR	LR	08 24 25.4	
	comp=Z,155nm,21.1s,baz=47,slow=33						
STKA	Stephens Creek	29.53	245	eP	P	08 14 12.5	-1.7
	1.8nm,1.1s						
BBOO	Buckleboo	34.31	244	eP	P	08 14 59.7	+3.6
	12nm,0.9s						
PPT2	Papeete2	35.28	89	eLR	LR	08 24 34.9	
	185nm,26.8s						
PPT	Papeete	35.29	89	LR	LR	08 25 31.3	
	comp=Z,100nm,20.8s,baz=294,slow=30						
AS01	Alice Springs	36.03	260	eP	P	08 15 14.9	+3.8
ASAR	Alice Springs	36.07	260	P	P	08 15 10.8	-0.6
	0.8nm,0.7s,baz=86,slow=8.6,SNR=15						
WB2	Warramunga Arr	36.21	267	eP	P	08 15 12.3	-0.3
	2.6nm,0.9s						
WR1	Warramunga Arr	36.22	267	eP	P	08 15 10.9	-1.8
	2.9nm,1.0s						
WRA	Warramunga Arr	36.22	267	P	P	08 15 10.9	-1.8
	0.5nm,0.6s,baz=103,slow=8.3,SNR=12						
FORT	Forrest	40.95	248	eP	P	08 15 54.5	+2.2
	35nm,0.8s						
H11S2	WAKE ISLAND Hy	41.16	351	T	T	09 00 09.6	
	baz=171,slow=76,SNR=21						
H11S3	WAKE ISLAND Hy	41.17	351	T	T	09 00 08.5	
	baz=171,slow=76,SNR=17						
H11S1	WAKE ISLAND Hy	41.18	351	T	T	09 00 10.7	
	baz=171,slow=76,SNR=20						
TAOE	Nuku Hiva Isla	46.75	81	eLR	LR	08 29 50.4	
	122nm,24.0s						
NWAO	Narrogin (SRO)	50.12	245	LR	LR	08 36 18.7	
	comp=Z,134nm,20.9s,baz=322,slow=34						
VNDA	Vanda	55.41	183	P	P	08 17 43.0	-0.1
	0.9nm,0.9s,baz=0.8,slow=8.6,SNR=2.7						
VNDA				LR	LR	08 37 20.0	
	comp=Z,84nm,21.2s,baz=24,slow=32						
VNDA	Vanda	55.41	183	eP	P	08 17 43.2	+0.1
	1.9nm,1.1s						
SBA	Scott Base	55.55	182	eP	P	08 17 45.5	+1.3
	10nm,1.1s						
JHJ	Hachijo jima 2	63.77	329	LR	LR	08 46 38.2	
	comp=Z,15nm,18.0s,baz=98,slow=36						
QSPA	South Pole Qui	67.64	180	LR	LR	08 43 34.9	
	comp=Z,52nm,20.9s,baz=244,slow=31						
QSPA	South Pole Qui	67.64	180	eP	P	08 19 05.7	-0.3
	7.0nm,0.9s						
MNAI	Manna	70.06	274	eP	P	08 19 20.3	-1.4
	240nm,1.0s						
PETK	Petropavlovsk-	76.42	350	LR	LR	08 46 59.0	
	comp=Z,33nm,20.9s,baz=150,slow=30						
NIKH	Nikolski High	76.70	11	eP	P	08 20 00.2	+0.3
	33nm,1.1s						
MAW	Mawson	76.85	202	P	P	08 20 00.8	+0.2
	5.0nm,0.8s,baz=131,slow=9.1,SNR=6.2						
MAW				LR	LR	08 48 23.2	
	comp=Z,91nm,20.6s,baz=244,slow=31						
LHMI	Lhok Sumawe	79.33	280	eP	P	08 20 16.4	+1.0

	91nm,0.9s						
SYO	Syowa Base	82.86	195	⇓eP	P	08 20 32.4	-0.8
SYO	Syowa Base	82.86	195	⇑ePcP	PcP	08 20 36.6	-1.3
YBH	Yreka Blue Hor	87.10	42	LR	LR	08 54 05.3	
	comp=Z,66nm,18.5s,baz=276,slow=32						
NVAR	Mina Array Bea	88.22	47	LR	LR	08 55 42.5	
	comp=Z,28nm,18.5s,baz=18,slow=32						
ILAR	Eielson Array	92.23	16	P	P	08 21 18.6	+0.3
	0.4nm,1.0s,baz=234,slow=7.1,SNR=4.2						
ANMO	Albuquerque	95.13	54	LR	LR	08 57 47.6	
	comp=Z,29nm,18.1s,baz=232,slow=31						
PDAR	Pinedale Array	96.13	46	LR	LR	08 57 55.6	
	comp=Z,33nm,19.2s,baz=338,slow=31						
LBNH	Lisbon	122.95	51	ePKPdf	PKPdf	08 27 04.6	-0.6

DJA 23 08:26:26.8±0.6**,0°N**±4°×**12°3E**±°**,h150**^{km}±7^{km}**,M3.6**/6**,**
MLv3.6/6**,Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUWI	Luwuk	1.15	198	P	Pn	08 26 53.5	+0.6
LUWI				S	Sn	08 27 13.8	+0.9
MRSI	Marisa	1.25	289	P	Pn	08 26 54.3	+0.5
MRSI				S	Sn	08 27 10.5	-4.0
APSI	Ampana	1.76	237	P	Pn	08 26 58.8	-0.4
MPSI	Mapaga	3.23	275	P	Pn	08 27 17.6	+0.5
SANI	Sanana	3.55	126	P	Pn	08 27 20.2	-1.1
LBMI	Labuha	4.43	99	P	Pn	08 27 33.6	+0.8

MEX 23 08:27:12.9±44.0**,24°.96N**×**99°.02W,h20**^{km}±999^{km}**,MD3.6,**
Central Mexico

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LNIG	Linares	0.41	262	eP	Pb	08 27 20.6	-0.7
	baz=248,slow=12						
LNIG				eS	Sb	08 27 25.2	-1.9

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*ISN **23** 08:31:37.1±0.9, 33°.13N×48°.76E, h2^{km}±14^{km}, ML4.1*
*ISCJB **23** 08:31:38.2±0.2, 32°.93N±0°.02×48°.73E±0°.02, h10^{km}, mb4.3/53, Error ellipse: s-maj=3.1km s-min=2.8km az=32.6*
*SGS **23** 08:31:38.1, 33°.55N×49°.04E, h20^{km}*
*DSN **23** 08:31:38.6±0.0, 33°.09N×48°.77E, h10^{km}, mb4.6/1, Error ellipse: s-maj=0.0km s-min=0.0km az=0.0*
*IDC **23** 08:31:38.2±0.7, 33°.11N×48°.80E, h0^{km}, mb4.1/22, mb1 4.2/26, mb1mx4.0/60, mbtmp4.1/26, ML3.8/4, MS3.2/7, Ms1 3.2/7, ms1mx2.8/55, Error ellipse: s-maj=16.6km s-min=12.9km az=175.0*
*TEH **23** 08:31:39.1, 33°.13N×48°.78E, h7^{km}, ML4.1*
*CSEM **23** 08:31:40.3±0.1, 33°.05N×48°.70E, h10^{km}, mb4.5/34, Error ellipse: s-maj=5.1km s-min=3.9km az=23.0*
*MOS **23** 08:31:41.4±1.2, 33°.07N×48°.81E, h33^{km}, mb4.5/18, Error ellipse: s-maj=9.7km s-min=6.3km az=103.2*
*NEIC **23** 08:31:41.6±0.0, 33°.16N×48°.87E, h14^{km}, mb4.5/27, ML4.0(THR), MN4.1(TEH), After THR.*
*THR **23** 08:31:42.0±1.0, 33°.13N×48°.91E, h15^{km}±9^{km}, ML3.9*
ISC 23 08:31:39.9±0.4**,33°.10N**±0°.03×**48°.78E**±0°.03**,h10**^{km}**,n258,**
σ**1^{s}64**/259**,mb4.4**/51**,9C-11D,Western Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IKFM	Kafar-mosalman	0.89	299	ePg	Pg	08 31 56.3	-0.7
IKFM				e		08 32 17.3	
	comp=E,99nm,0.3s						
IKFM				e		08 32 18.9	
	comp=Z,99nm,0.2s						
IKFM				e		08 32 19.1	
	comp=N,99nm,0.1s						
SHGR	Shooshtar-Gavs	0.99	179	ePg	Pn	08 32 01.1	+1.3
SHGR				IAML		08 32 24.3	
	comp=N,3μm,0.5s						
SHGR	Shooshtar-Gavs	0.99	179	ePg	Pn	08 32 01.2	+1.3
SHGR	Shooshtar-Gavs	0.99	179	ePg	Pn	08 32 01.2	+1.3
HSAM	Samen	1.12	352	ePg	Pg	08 32 00.5	-0.9
HSAM				e		08 32 17.9	
	comp=N,99nm,0.1s						
HSAM				e		08 32 18.9	
	comp=E,99nm,0.2s						
IKOM	Komasi	1.50	316	e		08 32 41.3	
	comp=Z,99nm,0.4s						
IKOM				ePn	Pn	08 32 07.3	+0.2
IBZA	Bozab	1.56	331	e		08 32 34.6	
	comp=Z,99nm,0.5s						
IBZA				ePn	Pb	08 32 09.2	+0.1
AHWZ	Ahwaz	1.77	184	ePn	Pg	08 32 14.6	+0.7
AHWZ				e		08 32 43.8	
	comp=E,99nm,0.3s						
AHWZ				e		08 32 46.0	
	comp=N,99nm,0.3s						
ASAO	Ashtian	1.78	35	ePg	Pb	08 32 12.5	-0.3
ASAO				IAML		08 32 42.6	
	comp=E,2μm,0.6s						
ASAO	Ashtian	1.78	35	ePg	Pb	08 32 12.5	-0.3
ASAO	Ashtian	1.78	35	ePg	Pb	08 32 12.5	-0.3
IPIR	Pirpir	1.83	103	ePn	Pb	08 32 13.9	+0.3
IPIR				e		08 32 43.0	
	comp=Z,19μm,0.3s						
IPIR				e		08 32 44.3	
	comp=E,31μm,0.3s						
IPIR				e		08 32 52.0	
	comp=N,26μm,0.2s						
IPIR	Pirpir	1.83	103	ePn	Pb	08 32 13.9	+0.3
KCHF	Cheshme Sefid,	1.86	309	ePn	Pb	08 32 14.3	+0.1
KCHF				e		08 32 50.1	
	comp=Z,99nm,0.2s						
KCHF	Cheshme Sefid,	1.86	309	ePn	Pb	08 32 14.3	+0.1
ZNGN	Zangian	2.01	119	ePn	Pb	08 32 16.7	0.0
ZNGN				e		08 32 51.6	
	comp=N,99nm,0.4s						
ZNGN				e		08 32 55.5	
	comp=E,99nm,0.3s						
ZNGN				e		08 32 55.9	
	comp=Z,99nm,0.3s						
ZNGN	Zangian	2.01	119	ePn	Pb	08 32 16.7	0.0
ROKH	ROKH	2.05	111	ePn	Pb	08 32 17.4	+0.1
ROKH				e		08 32 49.1	
	comp=Z,99nm,0.4s						
ROKH				e		08 32 50.8	
	comp=N,99nm,0.3s						
ROKH				e		08 32 52.6	
	comp=E,99nm,0.5s						
ROKH	ROKH	2.05	111	ePn	Pb	08 32 17.4	+0.1
IVIS	Veis	2.15	312	ePn	Pb	08 32 18.0	-0.9
IVIS				e		08 32 57.0	
	comp=E,10μm,0.2s						
IVIS				e		08 32 58.7	
	comp=Z,8μm,0.2s						
IVIS				e		08 33 08.1	
	comp=N,20μm,0.4s						
IVIS	Veis	2.15	312	ePn	Pb	08 32 18.0	-0.9
HKZM	Kohzaman	2.27	3	ePn	Pb	08 32 20.9	-0.3
HKZM				e		08 32 57.9	
	comp=Z,99nm,0.3s						
HKZM	Kohzaman	2.27	3	ePn	Pb	08 32 20.9	-0.3
IKLH	Kolahrood	2.36	84	ePn	Pb	08 32 21.8	-0.8
IKLH	Kolahrood	2.36	84	ePn	Pb	08 32 22.1	-0.5
IKLH				e		08 32 58.6	
	comp=N,17μm,0.3s						
IKLH				e		08 32 59.7	
	comp=Z,8μm,0.3s						
IKLH				e		08 32 59.9	
	comp=E,16μm,0.5s						
IKLH	Kolahrood	2.36	84	ePn	Pb	08 32 21.8	-0.8
ILIN	Lien	2.36	321	ePn	Pb	08 32 21.5	-1.2
ILIN				e		08 33 00.9	
	comp=E,11μm,0.2s						
ILIN				e		08 33 13.5	
	comp=Z,8μm,0.3s						
ILIN	Lien	2.36	321	ePn	Pb	08 32 21.5	-1.2
IRAZ	Razeghan	2.49	22	ePn	Pb	08 32 24.5	-0.3
IRAZ				e		08 33 05.6	
	comp=E,18μm,0.4s						
IRAZ				e		08 33 05.7	
	comp=Z,12μm,0.3s						
IRAZ				e		08 33 11.5	
	comp=N,9μm,0.3s						
IRAZ	Razeghan	2.49	22	ePn	Pb	08 32 24.5	-0.3
GHVR	GHOM	2.51	56	IAML		08 33 04.4	
	comp=N,576nm,0.5s						
GHVR				IAML		08 33 06.7	
	comp=E,859nm,0.6s						
QABG	Abgarm-Qazvin	2.68	14	ePn	Pb	08 32 25.9	-2.3
QABG				e		08 33 08.8	
	comp=N,99nm,0.5s						
QABG				e		08 33 13.1	
	comp=E,99nm,0.5s						
QABG				e		08 33 30.9	
	comp=Z,99nm,1.4s						
QABG	Abgarm-Qazvin	2.68	14	ePn	Pb	08 32 25.9	-2.3
IGAR	Gharneh	2.84	103	ePn	Pn	08 32 27.9	+2.4
IGAR				e		08 33 16.7	
	comp=N,8μm,0.2s						
IGAR				e		08 33 19.1	
	comp=Z,7μm,0.3s						
IZEF	Zefreh	2.99	93	ePn	Pn	08 32 29.9	+2.3
IZEF	Zefreh	2.99	93	ePn	Pn	08 32 30.3	+2.7
IZEF				e		08 33 23.2	
	comp=Z,6μm,0.5s						
IZEF				e		08 33 29.2	
	comp=N,4μm,0.3s						
IZEF				e		08 33 29.8	
	comp=E,6μm,0.3s						
IZEF	Zefreh	2.99	93	ePn	Pn	08 32 29.9	+2.3
IMHD	Mahdasht	3.01	31	ePn	Pb	08 32 30.9	-2.8
IMHD				e		08 33 17.1	
	comp=E,8μm,0.2s						
IMHD				e		08 33 26.0	
	comp=N,12μm,0.3s						
IMHD				e		08 33 26.0	
	comp=Z,4μm,0.4s						
IMHD	Mahdasht	3.01	31	ePn	Pb	08 32 30.9	-2.8
NSR	Nassriya	3.06	228	ePn	Pn	08 32 28.0	-0.3
	SNR=4.0						
NSR				eSn	Sn	08 33 04.0	-1.0
	SNR=4.0						
ISFB	Sefidab	3.14	66	ePn	Pn	08 32 31.7	+2.1
ISFB				e		08 33 26.8	
	comp=Z,3μm,0.3s						
ISFB				e		08 33 30.6	
	comp=N,4μm,0.4s						
ISFB				e		08 33 32.1	
	comp=E,3μm,0.3s						
ISFB	Sefidab	3.14	66	ePn	Pn	08 32 31.7	+2.1
KLNJ	Kolanjah	3.17	130	ePn	Pn	08 32 31.9	+1.7
KLNJ				e		08 33 32.6	
	comp=N,99nm,0.3s						
KLNJ				e		08 33 34.5	
	comp=E,99nm,0.4s						
KLNJ				e		08 33 53.7	
	comp=Z,99nm,0.4s						
KLNJ	Kolanjah	3.17	130	ePn	Pn	08 32 31.9	+1.7
THKV	Tehran--Karaj	3.30	31	ePn	Pn	08 32 35.0	+3.2
IRAM	Ramesheh	3.31	112	ePn	Pn	08 32 33.5	+1.5
IRAM				e		08 33 35.3	
	comp=Z,4μm,0.4s						
IRAM				e		08 33 37.3	
	comp=E,5μm,0.5s						
IRAM				e		08 33 37.5	
	comp=N,3μm,0.3s						
IRAM	Ramesheh	3.31	112	ePn	Pn	08 32 33.5	+1.5
NASN	Na'in	3.40	94	ePn	Pn	08 32 35.6	+2.3
NASN	Na'in	3.40	94	ePn	Pn	08 32 35.6	+2.3
NASN	Na'in	3.40	94	ePn	Pn	08 32 35.6	+2.3
CHTH	Charan	3.41	34	ePn	Pn	08 32 36.0	+2.6
IGZV	Ghazvin	3.48	19	ePn	Pn	08 32 36.2	+1.8
IGZV				e		08 32 53.4	
	comp=Z,2μm,0.3s						
IGZV				e		08 33 36.5	
	comp=E,7μm,0.2s						
IGZV				e		08 33 42.7	
	comp=N,4μm,0.3s						
IGZV	Ghazvin	3.48	19	ePn	Pn	08 32 36.2	+1.8
DAMV	Damavand	3.65	45	ePn	Pn	08 32 39.0	+2.3
DAMV	Damavand	3.65	45	ePn	Pn	08 32 39.0	+2.3
DAMV	Damavand	3.65	45	ePn	Pn	08 32 39.0	+2.3
IDMV	Damavand	3.65	47	ePn	Pn	08 32 39.5	+2.7
IDMV				e		08 32 50.5	
	comp=Z,3μm,0.3s						
IDMV				e		08 33 43.2	
	comp=N,6μm,0.3s						
IDMV				e		08 33 46.4	
	comp=E,5μm,0.4s						
IDMV	Damavand	3.65	47	ePn	Pn	08 32 39.5	+2.7
QALM	Alamut, Qazvin	3.66	24	ePn	Pn	08 32 40.2	+3.4
QALM				e		08 33 39.7	
	comp=E,99nm,0.4s						
QALM				e		08 33 47.3	
	comp=Z,99nm,0.4s						
QALM				e		08 33 52.1	
	comp=N,99nm,0.5s						
QALM	Alamut, Qazvin	3.66	24	ePn	Pn	08 32 40.2	+3.4
IAFJ	Afjeh	3.66	41	ePn	Pn	08 32 39.6	+2.7
IAFJ				e		08 33 46.4	
	comp=N,9μm,0.3s						
IAFJ				e		08 33 50.4	
	comp=Z,5μm,0.3s						
IAFJ	Afjeh	3.66	41	ePn	Pn	08 32 39.6	+2.7
BHD	Baghdad	3.69	274	ePn	Pn	08 32 37.0	0.0
	SNR=4.0						
BHD				eSn	Sn	08 33 20.0	-0.6
	SNR=42						
ILAS	Lasjerd	4.14	56	ePn	Pn	08 32 45.0	+1.5
ILAS				e		08 34 12.5	
	comp=E,3μm,0.3s						
ILAS	Lasjerd	4.14	56	ePn	Pn	08 32 45.0	+1.5
IFIR	Firoozkooh	4.15	51	ePn	Pn	08 32 46.3	+2.7
IFIR				e		08 33 56.9	
	comp=E,3μm,0.3s						
IFIR				e		08 33 59.0	
	comp=N,2μm,0.4s						
IFIR	Firoozkooh	4.15	51	ePn	Pn	08 32 46.3	+2.7
ANAR	Anarak	4.15	87	ePn	Pn	08 32 45.2	+1.7
ANAR				e		08 33 56.8	
	comp=N,99nm,0.4s						
ANAR	Anarak	4.15	87	ePn	Pn	08 32 45.2	+1.7
IPRN	Peran	4.29	42	ePn	Pn	08 32 49.6	+4.2
IPRN				e		08 33 11.9	
	comp=Z,4μm,0.4s						
IPRN				e		08 34 04.9	
	comp=E,6μm,0.3s						
IPRN				e		08 34 10.9	
	comp=N,9μm,0.3s						
IALA	Alasht	4.46	47	ePn	Pn	08 32 52.1	+4.2
IALA				e		08 33 12.2	
	comp=Z,3μm,0.3s						
IALA				e		08 34 15.6	
	comp=E,5μm,0.3s						
IALA	Alasht	4.46	47	ePn	Pn	08 32 52.1	+4.2
ISHM	Shahmirzad	4.60	53	ePn	Pn	08 32 52.1	+2.3
ISHM				e		08 33 09.4	
	comp=Z,4μm,0.2s						
IBST	Bostanabad	4.84	342	ePn	Pn	08 32 55.4	+2.4
IBST				e		08 33 15.4	
	comp=N,527nm,0.3s						
IBST				e		08 33 16.2	
	comp=Z,592nm,0.4s						
IBST				e		08 33 16.3	
	comp=E,411nm,0.3s						
IBST	Bostanabad	4.84	342	ePn	Pn	08 32 55.4	+2.4
IANJ	Anjilo	4.86	60	ePn	Pn	08 32 54.6	+1.3
IANJ	Anjilo	4.86	60	ePn	Pn	08 32 54.6	+1.3
YZKH	Yazd	4.95	97	eP	Pn	08 32 56.3	+1.9
IKIA	Kiasar	5.09	51	ePn	Pn	08 33 00.5	+4.0
IKIA				e		08 34 32.3	
	comp=E,1μm,0.5s						
IKIA				e		08 34 34.0	
	comp=N,1μm,0.4s						
IKIA				e		08 34 39.1	
	comp=Z,2μm,0.7s						
IKIA	Kiasar	5.09	51	ePn	Pn	08 33 00.5	+4.0
ISRV	Sarvestan	5.25	134	ePn	Pn	08 33 01.0	+2.3
ISRV				e		08 34 07.8	
	comp=Z,1μm,0.2s						
ISRV				e		08 34 09.0	
	comp=E,2μm,0.2s						
ISRV				e		08 34 20.8	
	comp=N,2μm,0.2s						
ISRV	Sarvestan	5.25	134	ePn	Pn	08 33 01.0	+2.3
GRMI	Germi	5.74	353	ePn	Pn	08 33 08.4	+3.1
GRMI	Germi	5.74	353	ePn	Pn	08 33 08.2	+2.9
GRMI	Germi	5.74	353	ePn	Pn	08 33 08.2	+2.9
ISHB	Shabestar	5.78	334	e		08 33 42.1	
	comp=Z,435nm,0.3s						
ISHB				e		08 33 44.3	
	comp=E,707nm,0.3s						
ISHB				e		08 35 09.0	
	comp=N,1μm,0.5s						
RTB	Rutbah	7.11	272	ePn	Pn	08 33 24.0	-0.1
	SNR=4.0						
RTB				eSn	Sn	08 34 43.0	-2.0
	SNR=4.0						
BOQSS		7.23	176	S	Sn	08 34 46.9	-0.8
MRVT	Maraveh tapeh	7.50	51	ePn	Pn	08 33 31.8	+2.4
GNI	Garni	7.75	336	Pg	Pb	08 33 56.8	+2.5
	comp=N,2.5nm,0.3s,baz=264,slow=18,SNR=3.0						
GNI				Lg	Lg	08 35 47.2	
	comp=N,1.5nm,0.3s,baz=164,slow=19,SNR=1.5						
GNI				LR	LR	08 36 53.0	
	comp=N,204nm,21.0s,baz=154,slow=41						
GNI	Garni	7.75	336	ePn	Pn	08 33 35.9	+3.0
GNI				Pg	Pb	08 33 56.9	+2.5
GNI				Lg	Lg	08 35 47.2	
GNI	Garni	7.75	336	eP	Pn	08 33 35.9	+3.0
GNI	Garni	7.75	336	eP	Pn	08 33 35.9	+3.0
GEYT	Alibeck	9.01	55	LR	LR	08 36 49.6	
	comp=N,37nm,19.9s,baz=250,slow=35						
GYA0B	ALIBECK ARRAY	9.01	55	ePn	Pn	08 33 48.7	-1.3
TBLG	Delisi	9.19	341	ePn	Pn	08 33 51.8	-0.8
TBLG	Delisi	9.19	341	eP	Pn	08 33 51.8	-0.8
TBLG	Delisi	9.19	341	eP	Pn	08 33 51.8	-0.8
BTHS		9.20	168	P	Pn	08 33 52.3	-0.4
BTHS				S	Sn	08 35 32.5	-3.9
SHME	Shamm	9.51	136	P	Pn	08 33 55.8	-1.2
SHME	Shamm	9.51	136	ePn	Pn	08 33 54.1	-2.9
BANOM	Banah	9.70	136	i P	Pn	08 33 58.8	-0.8
	SNR=14						
BANOM	Banah	9.70	136	P	Pn	08 33 58.8	-0.8
	SNR=14						
RAYN	Ar Rayn	9.97	198	ePn	Pn	08 34 02.7	-0.6
RAYN				eSn	Sn	08 35 54.0	-1.3
RAYN	Ar Rayn	9.97	198	i P	Pn	08 34 01.8	-1.5
	SNR=52						
RAYN	Ar Rayn	9.97	198	eP	Pn	08 34 02.7	-0.6
RAYN				e		08 35 54.0	
RAYN	Ar Rayn	9.97	198	eP	Pn	08 34 02.7	-0.6
RAYN				eS	Sn	08 35 54.0	-1.3
MSFE	Esma-Masafi	10.05	138	P	Pn	08 34 02.7	-1.7
MSFE	Esma-Masafi	10.05	138	ePn	Pn	08 34 03.0	-1.4
ASF	Jabal al Asfar	10.06	268	Pn	Pn	08 34 05.0	+0.4
	comp=N,1.3nm,0.3s,baz=43,slow=8.8,SNR=19						
ASF	Jabal al Asfar	10.06	268	eP	Pn	08 34 05.0	+0.4
MDH	Madha	10.18	138	P	Pn	08 34 04.5	-1.6
ASUD	Al Ashush, Dub	10.21	144	i P	Pn	08 34 04.8	-1.7
	SNR=13						
ASUD	Al Ashush, Dub	10.21	144	ePn	Pn	08 34 07.0	+0.5
ASUD	Al Ashush, Dub	10.21	144	ePn	Pn	08 34 07.0	+0.5
UOSS	Minazif	10.40	139	ePn	Pn	08 34 07.8	-1.4
UOSS				eSn	Sn	08 36 01.1	-4.7
UOSS	Minazif	10.40	139	P	Pn	08 34 07.4	-1.7
HATD	Hatta, Dubai	10.46	140	P	Pn	08 34 08.7	-1.2
HATD	Hatta, Dubai	10.46	140	ePn	Pn	08 34 09.5	-0.5
HATD	Hatta, Dubai	10.46	140	ePn	Pn	08 34 09.5	-0.5
ASHO	Ashiyiah	10.53	141	P	Pn	08 34 10.1	-0.9
ASHO	Ashiyiah	10.53	141	P	Pn	08 34 10.1	-0.9
MZR	Muzera	10.88	156	i P	Pn	08 34 15.2	-0.6
	SNR=6.7						
ALNE	Al Ain	10.89	144	ePn	Pn	08 34 15.3	-0.6
ALNE	Al Ain	10.89	144	ePn	Pn	08 34 15.3	-0.6
EIL	Elat	12.30	258	Pn	Pn	08 34 40.9	+5.7
	comp=N,1.1nm,0.3s,baz=122,slow=8.7,SNR=6.3						
WSAR	Wadi Sarin	13.11	136	Pn	Pn	08 34 44.3	-1.9
	comp=N,1.7nm,0.3s,baz=322,slow=11,SNR=13						
BR101	Keskin Array S	13.86	303	ePn	P	08 35 00.8	-4.2
BRTR	Keskin Array B	13.86	303	Pn	P	08 35 00.8	-4.2
	comp=N,0.1nm,0.3s,baz=119,slow=12,SNR=3.1						
BRTR	Keskin Array B	13.86	303	ceP	P	08 35 05.5	+0.6
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
AKTK	Aktyubinsk	18.61	19	eP	P	08 35 55.7	-1.7
AKTO	Aktyubinsk	18.61	19	P	P	08 35 55.7	-1.7
	comp=Z,0.2nm,0.3s,baz=204,slow=10,SNR=9.6						
VRH	Novokhopyorsk	18.81	346	eP	P	08 35 59.4	-0.1
VRH				pmax	pmax		
	comp=Z,10.0nm,0.4s						
VRH	Novokhopyorsk	18.81	346	eP	P	08 35 59.4	-0.1
	comp=Z,10.0nm,0.4s						
VSR	Storozhevoye	19.42	342	eP	Pn	08 36 10.2	+2.8
VSR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ALN	Alexandroupoli	19.72	300	eP	Pn	08 36 11.1	+0.1
	comp=Z,12nm,0.9s						
ALN	Alexandroupoli	19.72	300	eP	Pn	08 36 11.1	+0.1
ALN				pmax	pmax		
	comp=Z,12nm,0.9s						
ALN	Alexandroupoli	19.72	300	eP	Pn	08 36 11.1	+0.1
	comp=Z,12nm,0.9s						
KK31	Karatay Array	19.75	53	eP	Pn	08 36 11.9	+0.5
KK31	Karatay Array	19.75	53	eP	Pn	08 36 11.9	+0.5
KKAR	Karatay Array	19.75	53	eP	Pn	08 36 12.2	+0.8
KKAR	Karatay Array	19.75	53	eP	Pn	08 36 12.2	+0.8
NIL	Nilore	20.44	82	eP	P	08 36 18.1	+0.6
	comp=Z,28nm,1.0s						
NIL	Nilore	20.44	82	eP	P	08 36 18.1	+0.6
NIL				pmax	pmax		
	comp=Z,28nm,1.0s						
NIL	Nilore	20.44	82	eP	P	08 36 18.1	+0.6
	comp=Z,28nm,1.0s						
LPSR	Galich'ya Gora	20.75	343	eP	P	08 36 20.3	-0.3
LPSR				pmax	pmax		
	comp=Z,20nm,0.9s						
LPSR	Galich'ya Gora	20.75	343	eP	P	08 36 20.3	-0.3
	comp=Z,20nm,0.9s						
VRI	Vrincioaia	21.18	313	⇓iP	P	08 36 26.6	+1.2
VRI	Vrincioaia	21.18	313	P	P	08 36 25.4	0.0
VRI				pmax	pmax		
	comp=Z,110nm,1.2s						
VRI	Vrincioaia	21.18	313	P	P	08 36 25.4	0.0
	comp=Z,110nm,1.2s						
PLOR	Plostina	21.22	313	⇑iP	P	08 36 27.1	+1.3
PLOR	Plostina	21.22	313	⇑iP	P	08 36 27.1	+1.3
MLR	Muntele Rosu	21.49	312	P	P	08 36 31.0	+2.2
	comp=Z,9.5nm,0.9s,baz=188,slow=3.7,SNR=7.6						
MLR	Muntele Rosu	21.49	312	⇑iP	P	08 36 33.3	+4.5
MLR	Muntele Rosu	21.49	312	eP	P	08 36 30.5	+1.7
	comp=Z,11nm,0.8s						
MLR	Muntele Rosu	21.49	312	eP	P	08 36 30.5	+1.7
MLR				pmax	pmax		
	comp=Z,11nm,0.8s						
MLR	Muntele Rosu	21.49	312	eP	P	08 36 30.5	+1.7
	comp=Z,11nm,0.8s						
TESR	Tescani	21.55	315	⇓iP	P	08 36 30.0	+0.7
TESR	Tescani	21.55	315	⇓iP	P	08 36 30.0	+0.7
VOIR		22.03	311	⇓iP	P	08 36 36.0	+1.4
VOIR		22.03	311	P	P	08 36 35.4	+0.8
VOIR				pmax	pmax		
	comp=Z,18nm,1.0s						
VOIR		22.03	311	P	P	08 36 35.4	+0.8
	comp=Z,18nm,1.0s						
BIZ	Bicaz	22.09	315	⇓iP	P	08 36 35.4	+0.3
BIZ	Bicaz	22.09	315	⇓iP	P	08 36 35.4	+0.3
AGG	Agios Georgios	22.14	293	eP	P	08 36 36.9	+1.1
	comp=Z,29nm,1.1s						
AGG	Agios Georgios	22.14	293	eP	P	08 36 36.9	+1.1
AGG				pmax	pmax		
	comp=Z,29nm,1.1s						
AGG	Agios Georgios	22.14	293	eP	P	08 36 36.9	+1.1
	comp=Z,29nm,1.1s						
ARR	Arges	22.26	310	⇓iP	P	08 36 38.6	+1.5
ARR	Arges	22.26	310	⇓iP	P	08 36 38.6	+1.5
ITM	Ithomi	22.30	288	eP	P	08 36 36.9	-0.6
	comp=Z,14nm,0.8s						
ITM	Ithomi	22.30	288	eP	P	08 36 36.9	-0.6
	comp=Z,14nm,0.8s						
AAK	Ala-Archa	22.35	57	LR	LR	08 47 00.6	
	comp=Z,79nm,19.9s,baz=258,slow=41						
GRG	Griva	22.41	298	eP	P	08 36 39.3	+0.6
GRG				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GRG	Griva	22.41	298	eP	P	08 36 39.3	+0.6
	comp=Z,8.0nm,1.0s						
AKASG	Malin Array Be	22.71	327	P	P	08 36 42.1	+0.5
	comp=Z,1.7nm,0.7s,baz=131,slow=9.0,SNR=6.1						
AKBB	Malin Array Si	22.71	327	eP	P	08 36 42.1	+0.5
	comp=Z,4.4nm,0.6s						
AKBB	Malin Array Si	22.71	327	eP	P	08 36 42.2	+0.5
AKBB				pmax	pmax		
	comp=Z,4.0nm,0.6s						
AKBB	Malin Array Si	22.71	327	eP	P	08 36 42.2	+0.5
	comp=Z,4.4nm,0.6s						

BURAR	Bucovina Array	22.95	316	⇑iP	P	08 36 49.5	+5.1
BUR04	Bucovina Ar. S	22.96	316	eP	P	08 36 44.4	0.0
BUR08	Bucovina Ar. S	22.98	316	eP	P	08 36 43.9	-0.8
DRGR		24.08	312	⇓iP	P	08 36 56.3	+0.8
DRGR		24.08	312	⇓iP	P	08 36 56.3	+0.8
ARU	Arti	24.29	13	P	P	08 36 57.3	+0.1
	comp=Z,4.4nm,0.2s,baz=233,slow=10,SNR=3.9						
BRVK	Borovoye	25.21	31	eP	P	08 37 06.3	+0.7
	comp=Z,7.1nm,0.9s						
BRVK	Borovoye	25.21	31	ceP	P	08 37 05.8	+0.2
BRVK				pmax	pmax		
	comp=Z,12nm,1.3s						
BRVK	Borovoye	25.21	31	eP	P	08 37 06.3	+0.7
	comp=Z,7.1nm,0.9s						
BVAR	Borovoye Array	25.23	31	P	P	08 37 06.4	+0.6
	comp=Z,5.0nm,0.6s,baz=224,slow=8.1,SNR=31						
BVAR				LR	LR	08 49 15.6	
	comp=Z,63nm,18.6s,baz=255,slow=42						
KWP	Kalwaria Pacla	25.42	318	eP	P	08 37 07.8	+0.2
	comp=Z,139nm,0.5s						
KWP	Kalwaria Pacla	25.42	318	eP	P	08 37 07.8	+0.2
KWP				pmax	pmax		
	comp=Z,139nm,0.5s						
TIP	Timpagrande	26.47	292	eP	P	08 37 18.7	+1.4
	comp=Z,6.9nm,0.9s						
TIP	Timpagrande	26.47	292	eP	P	08 37 18.7	+1.4
	comp=Z,6.9nm,0.9s						
NIE	Niedzica	26.69	316	P	P	08 37 19.1	0.0
NIE				pmax	pmax		
	comp=Z,3.0nm,1.2s						
KURBB	Kurchatov Arra	27.97	42	P	P	08 37 31.6	+1.1
	comp=Z,1.3nm,0.7s,baz=246,slow=9.7,SNR=4.3						
KURK	Kurchatov	28.06	42	eP	P	08 37 31.6	+0.3
KURK	Kurchatov	28.06	42	eP	P	08 37 31.6	+0.3
MK32	Makanchi Array	28.86	52	eP	P	08 37 39.6	+1.0
MKAR	Makanchi Array	28.86	52	P	P	08 37 39.6	+1.0
	comp=Z,1.6nm,0.7s,baz=251,slow=9.0,SNR=7.2						
MKAR	Makanchi Array	28.86	52	ceP	P	08 37 41.0	+2.4
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
FIA0	FINESS Array S	31.92	339	eP	P	08 38 04.5	-0.9
FIA0	FINESS Array S	31.92	339	eP	P	08 38 04.5	-0.9
FINES	FINESS Array B	31.92	339	P	P	08 38 04.5	-0.9
	comp=Z,3.7nm,0.9s,baz=153,slow=9.4,SNR=4.2						
FINES	FINESS Array B	31.92	339	ceP	P	08 38 06.5	+1.1
FINES				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ZAA0	Zalesovo Array	32.90	40	eP	P	08 38 14.9	+0.8
	comp=Z,4.7nm,0.9s						
ZALV	Zalesovo Beam	32.90	40	P	P	08 38 13.3	-0.7
	comp=Z,3.7nm,0.7s,baz=263,slow=8.8,SNR=8.2						
ZALV				LR	LR	08 53 19.3	
	comp=Z,44nm,18.3s,baz=238,slow=40						
ZALV	Zalesovo Beam	32.90	40	eP	P	08 38 14.3	+0.3
ZALV	Zalesovo Beam	32.90	40	eP	P	08 38 14.3	+0.3
ZAA1	Zalesovo Array	32.90	40	eP	P	08 38 13.3	-0.7
HFS	Hagfors	35.48	330	P	P	08 38 35.8	-0.5
	comp=Z,2.2nm,0.3s,baz=131,slow=8.4,SNR=36						
NB2	NORSAR Subarra	37.00	330	P	P	08 38 47.4	-2.0
	comp=Z,10nm,1.4s,baz=124,slow=8.6						
NB200	NORSAR Array S	37.00	330	eP	P	08 38 48.7	-0.7
NOA	NORSAR Array B	37.00	330	P	P	08 38 48.7	-0.7
	comp=Z,1.4nm,0.8s,baz=125,slow=8.5,SNR=2.8						
NOA				LR	LR	08 54 57.7	
	comp=Z,42nm,18.3s,baz=125,slow=38						
EKA	Eskdalemuir Ar	42.12	318	P	P	08 39 31.2	-0.8
	comp=Z,1.5nm,0.8s,baz=98,slow=9.4,SNR=2.7						
ESDC	Sonseca Array	42.45	294	P	P	08 39 35.0	-0.1
	comp=Z,0.3nm,0.4s,baz=90,slow=8.1,SNR=2.9						
SONA0	Songino Array	45.21	53	eP	P	08 39 57.5	+0.2
SONM	Songino Array	45.21	53	P	P	08 39 57.5	+0.2
	comp=Z,0.9nm,0.9s,baz=251,slow=8.7,SNR=3.7						
ULN	Ulaanbaatar	45.65	53	⇓eP	P	08 40 01.6	+0.9
ULN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CM31	Chiang Mai Arr	47.04	95	eP	P	08 40 11.3	-0.6
CMAR	Chiang Mai Arr	47.04	95	P	P	08 40 11.3	-0.6
	comp=Z,0.8nm,0.3s,baz=291,slow=8.2,SNR=3.1						
TOA1	Torodi Ar. Sit	47.19	257	eP	P	08 40 12.4	-0.6
TOA0	Torodi Ar. Sit	47.19	257	eP	P	08 40 14.1	+1.1
	comp=Z,9.4nm,1.0s						
TORD	Torodi Ar. Bea	47.19	257	P	P	08 40 12.4	-0.6
	comp=Z,5.8nm,0.9s,baz=64,slow=6.6						
SPA0	Spitsbergen Ar	47.31	351	eP	P	08 40 13.4	+0.2
SPITS	Spitsbergen Ar	47.31	351	P	P	08 40 13.3	0.0
	comp=Z,1.4nm,0.4s,baz=193,slow=2.5,SNR=5.1						
PBKT	Sadao Pong	49.65	96	eP	P	08 40 31.6	-0.3
	comp=Z,4.7nm,1.2s						
KOWA	Kowa	51.19	262	P	P	08 40 44.2	+0.5
	comp=Z,3.1nm,0.5s,baz=56,slow=6.0,SNR=8.8						
KOWA	Kowa	51.19	262	eP	P	08 40 44.3	+0.7
	comp=Z,2.6nm,1.0s						
KULM	Kulim	55.54	108	eP	P	08 41 14.4	-1.3
	comp=Z,4.7nm,0.9s						
DBIC	Dimbokro	56.15	254	P	P	08 41 22.7	+2.7
	comp=Z,3.7nm,0.8s,baz=34,slow=8.3,SNR=3.7						
LBTB	Lobatse	61.87	204	eP	P	08 42 01.6	+2.0
	comp=Z,4.9nm,1.1s						
LBTB	Lobatse	61.87	204	eP	P	08 42 01.6	+2.0
LBTB				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KS15	Wonju Array Si	62.91	61	eP	P	08 42 06.4	-0.1
KSAR	Wonju Array Be	62.91	61	P	P	08 42 05.6	-0.8
KSAR	Wonju Array Be	62.91	61	P	P	08 42 05.6	-0.8
KSRS	Korea Array	62.94	61	P	P	08 42 05.6	-1.0
	comp=Z,0.6nm,0.3s,baz=285,slow=7.1,SNR=6.1						
KSRS				LR	LR	09 13 10.4	
	comp=Z,16nm,21.5s,baz=160,slow=40						
USRK	Ussuriysk Ar.	63.32	53	P	P	08 42 07.6	-1.5
	comp=Z,1.3nm,0.5s,baz=290,slow=5.8						
BOSA	Boshof	65.31	203	P	P	08 42 22.8	+0.5
	comp=Z,4.5nm,0.9s,baz=2.1,slow=7.1,SNR=4.8						
TOLK	Toolik Lake Re	77.65	7	eP	P	08 43 36.7	+0.5
	comp=Z,7.3nm,0.8s						
INK	Inuvik	78.89	1	eP	P	08 43 42.2	-0.7
	comp=Z,3.0nm,1.1s						
INK	Inuvik	78.89	1	eP	P	08 43 42.2	-0.7
INK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
COLD	Coldfoot	78.95	7	eP	P	08 43 43.7	+0.4
	comp=Z,4.1nm,1.0s						
IL1	Eielson Array	81.68	7	eP	P	08 43 57.8	-0.3
ILAR	Eielson Array	81.68	7	P	P	08 43 57.4	-0.7
	comp=Z,1.4nm,0.9s,baz=328,slow=3.6,SNR=12						
BPAW	Bear Paw Mtn.	81.87	9	eP	P	08 43 59.3	+0.2
	comp=Z,5.8nm,1.0s						
EGAK	Eagle	82.13	4	eP	P	08 44 00.5	+0.1
	comp=Z,4.5nm,1.0s						
CAST	Castle Rocks	82.38	9	eP	P	08 44 01.9	+0.1
	comp=Z,6.0nm,1.0s						
TRF	Thorofare Moun	82.58	9	eP	P	08 44 03.8	+0.8
	comp=Z,6.3nm,1.1s						
DAWY	Dawson	82.94	4	eP	P	08 44 04.8	0.0
	comp=Z,2.5nm,1.0s						
YKA	Yellowknife Ar	83.80	352	P	P	08 44 08.1	-1.0
	comp=Z,1.1nm,0.8s,baz=8.4,slow=5.3,SNR=11						
YKA	Yellowknife Ar	83.80	352	ceP	P	08 44 08.3	-0.8
YKA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
PMR	Palmer	84.53	8	eP	P	08 44 12.3	-0.4
	comp=Z,10nm,1.2s						
PMR	Palmer	84.53	8	eP	P	08 44 12.4	-0.4
PMR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CNPM	China Poot	86.23	10	eP	P	08 44 20.9	-0.5
	comp=Z,11nm,0.9s						
KDAK	Kodiak Island	87.69	11	eP	P	08 44 28.6	+0.1
	comp=Z,4.1nm,0.8s						
KDAK	Kodiak Island	87.69	11	eP	P	08 44 28.6	+0.1
KDAK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
I39A	Houston	95.28	332	eP	P	08 45 04.2	+0.1
	comp=Z,3.5nm,1.0s						
WR1	Warramunga Arr	97.08	109	eP	Pdif	08 45 12.9	+0.2
	comp=Z,3.3nm,0.9s						
WRA	Warramunga Arr	97.08	109	P	Pdif	08 45 12.9	+0.2
	comp=Z,0.3nm,0.8s,baz=322,slow=4.3,SNR=2.6						

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*NNC **23** 08:33:21.8±1.2, 53°.54N×87°.67E, h0^{km}, mb3.6, mpv3.3, Error ellipse: s-maj=10.9km s-min=5.6km az=42.0, Suspected Mining explosion.*

IDC 23 08:33:20.8±3.1**, 53°.43N×87°.75E, h0^{km}, mb1 3.2**/2**, mb1mx3.0**/68**, mbtmp3.2**/2**, ML2.7**/2**, 5C-4D, Error ellipse: s-maj=29.6km s-min=16.0km az=56.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	ZALESOVO INFRA	1.82	288	i		08 44 20.0	
	baz=110,slow=334,SNR=4.0						
ZAA0	Zalesovo Array	1.82	288	⇓P	Pn	08 33 52.8	-0.4
	3.1nm,0.3s						
ZAA0				⇑S	Sn	08 34 16.6	-0.3
	14nm,0.8s						
ZALV	Zalesovo Beam	1.82	288	Pg	Pn	08 33 52.4	-0.9
	2.5nm,0.3s,baz=103,slow=14,SNR=18						
ZALV				Lg	Lg	08 34 18.1	
	5.3nm,0.3s,baz=94,slow=28,SNR=10						
KURK	Kurchatov	6.25	248	⇓Pn	Pn	08 34 55.4	+1.2
	3.6nm,1.1s						
KURK				⇑Lg	Lg	08 36 40.5	
	5.1nm,0.7s						
KURBB	Kurchatov Arra	6.35	247	Pn	Pn	08 34 56.5	+1.1
	0.1nm,0.3s,baz=62,slow=14,SNR=12						
KURBB				Lg	Lg	08 36 43.6	
	0.1nm,0.3s,baz=64,slow=31,SNR=6.9						
KURBB	Kurchatov Arra	6.35	247	⇑Pn	Pn	08 34 56.4	+0.9
	3.6nm,0.7s						
KURBB				⇑Sn	Sn	08 36 09.9	+1.4
	3.2nm,0.6s						
KURBB				⇓Lg	Lg	08 36 44.2	
	12nm,0.8s						
MK31	Makanchi Array	7.51	210	⇑Pn	Pn	08 35 14.2	+2.7
	1.1nm,0.6s,baz=26,slow=12,SNR=8.1						
MK31				⇓Lg	Lg	08 37 24.3	
	2.6nm,0.7s,baz=35,slow=28,SNR=3.6						
MKAR	Makanchi Array	7.51	210	Pn	Pn	08 35 12.2	+0.7
	0.2nm,0.3s,baz=22,slow=10,SNR=7.4						
MKAR				Lg	Lg	08 37 22.4	
	0.1nm,0.3s,baz=29,slow=30,SNR=6.0						

IDC 23 08:37:34.0±1.8**, 3°.07S×152°.17E, h0^{km}, mb3.8**/3**, mb1 4.1**/3**, mb1mx3.5**/45**, mbtmp3.8**/3**, MS3.2**/4**, Ms1 3.2**/4**, ms1mx2.8**/41**, Error ellipse: s-maj=129.5km s-min=25.1km az=124.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	18.07	337	LR	LR	08 48 10.4	
	comp=Z,29nm,18.5s,baz=135,slow=35						
DZM	Mont Dzumac	23.42	145	LR	LR	08 49 35.6	
	comp=Z,121nm,20.4s,baz=316,slow=31						
WRA	Warramunga Arr	24.17	225	P	P	08 42 53.0	+0.7
	2.9nm,0.7s,baz=51,slow=10,SNR=23						
H11S3	WAKE ISLAND Hy	25.76	33	T	T	09 09 53.2	
	baz=210,slow=76,SNR=41						
H11S2	WAKE ISLAND Hy	25.77	33	T	T	09 09 49.2	
	baz=210,slow=76,SNR=40						
H11S1	WAKE ISLAND Hy	25.78	33	T	T	09 09 50.1	
	baz=210,slow=76,SNR=41						
ASAR	Alice Springs	27.04	219	P	P	08 43 18.6	+0.4
	0.5nm,0.6s,baz=57,slow=8.8,SNR=13						
KSRS	Korea Array	46.19	333	LR	LR	09 02 30.9	
	comp=Z,11nm,21.8s,baz=175,slow=32						
ILAR	Eielson Array	80.81	22	P	P	08 49 48.0	-1.3
	0.9nm,0.8s,baz=252,slow=4.6,SNR=10						
ARU	Arti	94.54	326	LR	LR	09 34 57.3	
	comp=Z,31nm,19.6s,baz=159,slow=36						
TORD	Torodi Ar. Bea	149.15	291	PKPbc	PKPbc	08 57 25.7	+0.2
	baz=45,slow=0.7						

MEX 23 08:55:00.2±1.1**, 17°.75N×100°.90W, h10^{km}**±14^{km}**, MD3.8, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ZIIG	Zihuatanejo	0.56	255	eP	Pg	08 55 09.2	-1.9
ZIIG				eS	Sg	08 55 18.1	-0.3
ARIG	Puente Sto Nin	0.74	45	eP	Pg	08 55 13.6	-1.0
ARIG				i S	Sg	08 55 21.6	-2.8
MEIG	Mezcala	1.23	82	eP	Pn	08 55 19.5	-4.1
MEIG				i S	Sb	08 55 35.2	-4.4
PLIG	Platanillo	1.47	64	eP	Pn	08 55 23.4	-3.5
PLIG				i S	Sn	08 55 41.3	-5.0
YAIG	Yautepec	2.06	57	i P	Pn	08 55 31.2	-3.9
YAIG				eS	Sn	08 55 56.4	-4.5

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*NEIC **23** 08:57:44.8±0.0, 40°.39N×125°.38W, h27^{km}, MW3.5(BRK), After NCEDC.*

ISC 23 08:57:42.9±2.0**, 40°.41N**±0°.04×**125°.32W**±0°.08**, h12^{km}**±11^{km}**, n73, σ1^{s}57**/87**, Off coast of northern California**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KJJM	Johnny Jack Ri	0.79	101	ePg	Pb	08 57 59.1	+0.4
KSMM	Slide Mountain	0.90	104	ePg	Pg	08 58 00.5	+0.1
JCC	Jacoby Creek,	1.06	67	ePg	Pg	08 58 03.0	-0.5
JCC				eSg	Sg	08 58 16.5	-0.8
KCRM	Chalk Rock	1.15	89	ePn	Pg	08 58 04.7	-0.3
KMRM	Mail Ridge	1.25	98	ePn	Pn	08 58 06.2	-0.1
KMRM				eSn	Sb	08 58 23.0	+0.4
KHMM	Horse Mountain	1.30	68	ePn	Pn	08 58 06.8	-0.3
KHMM				eSg	Sb	08 58 24.2	+0.1
KCSM	Cold Springs	1.39	84	ePn	Pn	08 58 08.4	+0.1
KCPM	Cahto Peak	1.52	118	ePn	Pn	08 58 09.8	-0.3
KIPM	Iron Peak	1.53	112	ePn	Pn	08 58 10.2	0.0
KKPM	Kettenpom Peak	1.54	99	ePn	Pn	08 58 09.7	-0.7
KFPM	Farley Peak	1.65	117	ePn	Pn	08 58 11.6	-0.2
GTC	Three Chop Rid	1.69	126	ePn	Pn	08 58 11.5	-0.9
KBNM	Bluenose Ridge	1.71	107	ePn	Pn	08 58 13.3	+0.6
GNAM	Navarro Ridge	1.77	132	ePn	Pn	08 58 12.0	-1.5
KRKM	Rackout Spring	1.85	116	ePn	Pn	08 58 14.7	+0.1
GHOM	Hamilton Openi	1.93	134	ePn	Pn	08 58 15.9	+0.2
LGPM	Granite Peak	1.96	74	ePn	Pn	08 58 16.1	-0.1
KBO	Bosley Butte	1.98	24	ePn	Pn	08 58 15.5	-1.0
N02D	Trinity Center	2.07	73	P	Pn	08 58 17.2	-0.4
	baz=255,SNR=386						
N02D				S	Sn	08 58 42.0	-1.3
	baz=255						
M02C	Callahan	2.11	61	P	Pn	08 58 17.6	-0.7
	baz=243,SNR=176						
M02C				S	Sn	08 58 42.5	-2.0
	baz=243						
WDC	Whiskeytown Da	2.13	84	ePn	Pn	08 58 18.2	-0.1
WDC				eSn	Sn	08 58 45.0	+0.3
L02D	Cave Junction,	2.18	36	P	Pn	08 58 18.5	-0.5
	baz=218						
L02D				S	Sn	08 58 43.7	-2.2
	baz=218						
HOPS	Hopland Field	2.24	128	ePn	Pn	08 58 20.0	+0.2
HOPS				eSn	Sn	08 58 46.6	-0.8
GHLM	Highland Sprin	2.24	127	ePn	Pn	08 58 20.4	+0.4
YBH	Yreka Blue Hor	2.38	55	ePn	Pn	08 58 22.3	+0.4
GMKM	Mount Konoctai	2.42	125	ePn	Pn	08 58 23.5	+1.0
GACM	Adobe Creek	2.44	128	ePn	Pn	08 58 23.4	+0.7
SKG	Skaggs Springs	2.47	133	ePn	Pn	08 58 23.2	+0.2
GDXM	Geysers	2.52	128	ePn	Pn	08 58 25.2	+1.4
LGBM	Gray Butte	2.55	67	ePn	Pn	08 58 25.2	+0.8
KEBM	Edson Butte	2.57	16	ePn	Pn	08 58 24.2	-0.4
NMCNC	Mill Creek, So	2.60	133	ePn	Pn	08 58 25.1	+0.3
B040	Montague	2.61	56	ePn	Pn	08 58 26.6	+1.5
LMPM	Military Pass	2.62	65	ePn	Pn	08 58 26.6	+1.2
O03D	Paynes Creek	2.69	91	P	Pn	08 58 26.2	+0.1
	baz=273,SNR=156						
O03D				S	Sn	08 58 57.6	-1.1
	baz=273						
O03D	Paynes Creek	2.69	91	ePn	Pn	08 58 26.5	+0.3
HUMO	Hull Mountain	2.83	38	ePn	Pn	08 58 28.6	+0.6
LRDM	Redding Peak	2.95	88	ePn	Pn	08 58 30.9	+1.2
MCCM	Marconi Confer	2.95	139	ePn	Pn	08 58 29.6	0.0
M04C	Macdoel	2.97	61	P	Pn	08 58 30.7	+0.7
	baz=244,SNR=18						
LBCM	Butte Creek Ri	3.05	81	ePn	Pn	08 58 32.6	+1.4
DBO	Dodson Butte	3.12	29	ePn	Pn	08 58 32.8	+0.6
K04D	Chiloquin, OR	3.48	49	P	Pn	08 58 37.7	+0.7
	baz=232,SNR=10.0						
I03D	Drain, OR	3.60	23	P	Pn	08 58 39.1	+0.5
	baz=205,SNR=133						
I03D				S	Sn	08 59 19.2	-1.9
	baz=205						
AFDM	Forest Hills D	3.66	112	ePn	Pn	08 58 41.0	+1.5
J04D	Umpqua Nationa	3.71	39	P	Pn	08 58 41.3	+1.0
	baz=222						
BEKR	Beckworth	3.84	96	ePn	Pn	08 58 45.0	+2.9
BEKR				eSn	Sn	08 59 30.0	+2.8
IND	Independence	3.99	102	ePn	Pn	08 58 43.4	-0.8
I04A	Tendick Farm,	4.02	32	P	Pn	08 58 46.4	+2.0
	baz=214,SNR=15						
K05A	Summer Lake	4.05	54	ePn	Pn	08 58 46.8	+1.9
MOD	Modoc Plateau	4.07	67	ePn	Pn	08 58 45.9	+0.7
J05D	Fort Rock, OR	4.19	45	P	Pn	08 58 48.8	+1.9
	baz=228,SNR=39						
IRO	Indian Ridge	4.26	31	ePn	Pn	08 58 49.9	+2.1
COR	Corvallis	4.43	19	ePn	Pn	08 58 51.7	+1.6
VCNR	Virginia City	4.50	102	ePn	Pn	08 58 52.5	+1.3
CMB	Columbia Colle	4.50	120	ePn	Pn	08 58 53.3	+2.2
PNTR	Pine Nut	4.60	105	ePn	Pn	08 58 56.3	+3.7
PAHR	Pah Rah Range	4.61	97	ePn	Pn	08 58 52.5	-0.1
PINE	Pine Mountain	4.70	42	ePn	Pn	08 58 56.4	+2.5
SAO	San Andreas Ge	4.74	139	ePn	Pn	08 58 54.8	+0.6
H04A	Detroit Lake	4.86	27	ePn	Pn	08 58 57.4	+1.5
YERR	Yerington	4.90	105	ePn	Pn	08 58 59.2	+2.5
I05D	Terrebonne, OR	4.91	36	P	Pn	08 58 58.6	+1.9
	baz=218,SNR=7.6						
WVOR	Wild Horse Val	5.42	66	ePn	Pn	08 59 04.4	+0.7
MDPB	Devils Postpil	5.59	118	ePn	Pn	08 59 09.5	+3.2
OMMB	Old Mammoth Mi	5.66	118	ePn	Pn	08 59 10.2	+3.1
G05D	Wamic, OR	5.66	30	P	Pn	08 59 09.0	+2.1
	baz=213,SNR=5.4						
KVN	Kaiserville	5.73	101	ePn	Pn	08 59 09.5	+1.5
BENR	Benton	5.90	115	ePn	Pn	08 59 15.3	+4.8
BENR				ePg	Pb	08 59 28.6	+2.7
BENR				eSn	Sn	09 00 19.8	+1.6
BENR				eSg	Sb	09 00 31.1	-5.5
J08A	Circle Bar Ran	5.90	58	ePn	Pn	08 59 11.7	+1.4
G06A	Carlson Farm,	5.93	34	ePn	Pn	08 59 13.8	+3.2
MLNR	Milner Canyon	6.12	115	ePn	Pn	08 59 12.6	-0.8
MLNR				ePg	Pb	08 59 28.5	-1.1
BMO	Blue Mountains	7.39	50	ePn	Pn	08 59 33.6	+2.9

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*NNC **23** 09:35:31.9±0.4, 42°.65N×75°.70E, h0^{km}, mb3.2, mpv2.7, Error ellipse: s-maj=2.8km s-min=1.2km az=119.0*

*SOME **23** 09:35:32.6, 42°.72N×75°.67E, h5^{km}*

ISC 23 09:35:32.5±1.1**, 42°.69N**±0°.03×**75°.68E**±0°.02**, h9^{km}**±12^{km}**, n23, σ0^{s}76**/35**, 8C-6D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TKM2	Tokmak 2	0.24	346	⇓P	Pg	09 35 37.4	-0.1
	14nm,0.5s						
TKM2				⇑S	Sg	09 35 41.4	+0.5
	41nm,0.3s						
TKM2	Tokmak 2	0.24	346	⇑P	Pg	09 35 37.6	0.0
	27nm,0.1s,SNR=41						
KST	Kastek	0.41	30	eP	Pg	09 35 40.6	-0.1
	38nm,0.2s						
KST				eS	Sg	09 35 46.5	+0.3
	37nm,0.2s						
KBK	Karagaybulak	0.54	267	⇑P	Pg	09 35 43.4	+0.4
	20nm,0.1s,SNR=15						
DGS	Degeres	0.56	7	eP	Pg	09 35 43.3	-0.2
	7.6nm,0.1s						
DGS				eS	Sg	09 35 50.3	-0.5
	11nm,0.2s						
ULHL	Ulahol	0.61	136	P	Pg	09 35 44.2	-0.1
	21nm,0.2s,SNR=106						
KZA	Kyzart	0.69	208	⇑P	Pg	09 35 46.1	+0.3
	19nm,0.2s,SNR=24						
MTBS	Maitube	0.71	51	eP	Pg	09 35 46.0	-0.2
	6.1nm,0.2s						
MTBS				eS	Sg	09 35 55.3	-0.2
	13nm,0.2s						
CHMS	Chumysh	0.75	295	⇑P	Pg	09 35 46.6	-0.4
	2.8nm,0.2s,SNR=8.5						
AAK	Ala-Archa	0.87	267	⇑P	Pg	09 35 49.2	-0.2
	2.2nm,0.3s						
AAK				⇓S	Sb	09 36 01.5	-0.4
	2.9nm,0.3s						
TNSS	Tian-Shan	1.00	69	eP	Pg	09 35 51.5	-0.2
	13nm,0.3s						
TNSS				eS	Sg	09 36 04.7	0.0
	14nm,0.4s						
USP	Ospenovka	1.04	304	P	Pg	09 35 52.1	-0.4
	5.0nm,0.2s,SNR=8.7						
MDOK	Medeo	1.11	64	eP	Pg	09 35 53.6	-0.3
	6.9nm,0.2s						
MDOK				eS	Sb	09 36 08.6	-0.2
	5.2nm,0.6s						
KTBS	Karatobe	1.26	35	eP	Pg	09 35 56.0	-0.7
	5.1nm,0.2s						
KTBS				eS	Sg	09 36 12.4	-0.7
	4.4nm,0.2s						
KUU	Kurty	1.30	22	eP	Pg	09 35 56.5	-1.0
	2.8nm,0.3s						
KUU				eS	Sg	09 36 13.3	-1.1
	3.1nm,0.3s						
EKS2	Erkin-Say	1.40	270	⇓P	Pb	09 35 59.6	+0.7
	12nm,0.1s,SNR=43						
AML	Almayashu	1.57	250	P	Pb	09 36 02.1	+0.1
	SNR=9.6						
MRKS	Merke	1.81	273	eP	Pb	09 36 06.0	+0.2
	22nm,0.2s						
MRKS				eS	Sg	09 36 30.2	-0.4
	9.9nm,0.2s						
ARXS	Arharly	2.19	45	eP	Pb	09 36 12.3	0.0
	2.9nm,0.2s						
ARXS				eS	Sb	09 36 41.0	+1.5
	6.0nm,0.3s						
MNAS	Manas	2.35	266	⇑Pg	Pb	09 36 14.9	-0.3
	2.4nm,0.4s						
MNAS				⇓Lg	Lg	09 36 48.0	
	2.5nm,0.5s						
BTLS	Baital	2.63	334	eP	Pb	09 36 20.4	+0.6
	2.7nm,0.2s						
BTLS				eS	Sb	09 36 54.8	+2.5
	2.9nm,0.6s						
PDGK	Podgornoye	2.87	76	⇓Pg	Pb	09 36 23.8	-0.1
	3.8nm,0.7s						
PDGK				⇓Lg	Lg	09 37 03.9	
	3.9nm,0.5s						
KK31	Karatay Array	3.82	278	Pg	Pg	09 36 43.6	-2.0
	0.7nm,0.3s,baz=90,slow=15,SNR=14						
KK31				⇑Lg	Lg	09 37 32.3	
	0.3nm,0.3s,baz=90,slow=27,SNR=3.6						

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*ISCJB **23** 09:39:36.9±0.5, 38°.80N±0°.03×30°.37E±0°.03, h6^{km}±5^{km}, Error ellipse: s-maj=4.6km s-min=3.6km az=29.7*

*DDA **23** 09:39:36.6, 38°.79N×30°.36E, h7^{km}, Ml2.5*

*CSEM **23** 09:39:36.8±0.1, 38°.80N×30°.40E, h10^{km}, ML2.5, Error ellipse: s-maj=3.1km s-min=2.5km az=22.0*

*ISK **23** 09:39:36.5, 38°.82N×30°.39E, h10^{km}, ML2.0/7*

ISC 23 09:39:36.8±1.1**, 38°.80N**±0°.02×**30°.39E**±0°.02**, h10^{km}**±10^{km}**, n41, σ0^{s}54**/56**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOLV	Bolvadin	0.45	100	i P	Pb	09 39 46.1	-0.8
BOLV				i S	Sb	09 39 52.8	-0.8
BOLV	Bolvadin	0.45	100	P	Pb	09 39 46.1	-0.8
BOLV				S	Sb	09 39 52.8	-0.8
KZIL	AFYON_Kizioren	0.57	200	i P	Pg	09 39 47.5	-0.5
KZIL				i S	Sg	09 39 56.2	+0.7
KZIL	AFYON_Kizioren	0.57	200	P	Pg	09 39 47.5	-0.5
KZIL				S	Sg	09 39 56.2	+0.7
GDZ	Gediz	0.76	293	i P	Pn	09 39 53.3	-0.5
GDZ	Gediz	0.76	293	P	Pn	09 39 53.3	-0.5
ESKT	Eskisehir	0.81	26	i P	Pb	09 39 52.8	-0.2
ESKT				i S	Sn	09 40 05.8	-0.6
SEYT	Eskypehyr	0.81	26	P	Pb	09 39 52.8	-0.2
KHAL	Karahalli	0.82	239	i P	Pg	09 39 52.0	-0.6
KHAL	Karahalli	0.82	239	P	Pg	09 39 52.0	-0.6
BAGO	Egridir - ISPA	0.87	159	i P	Pb	09 39 54.3	+0.3
BAGO				i S	Sb	09 40 06.5	+0.8
SHAP	Saphane-Kutahy	0.94	284	PG	Pb	09 39 54.9	-0.3
SHAP				SG	Sb	09 40 08.1	+0.4
SHAP	Saphane-Kutahy	0.94	284	ePg	Pb	09 39 54.9	-0.3
SHAP				eSg	Sb	09 40 08.1	+0.4
TVSB	Tavsanli	0.97	312	PG	Pg	09 39 55.4	-0.1
TVSB				SG	Sb	09 40 09.3	+0.6
TVSB	Tavsanli	0.97	312	ePg	Pg	09 39 55.4	-0.1
TVSB				eSg	Sb	09 40 09.3	+0.6
ISP	Isparta	0.98	174	PG	Pn	09 39 56.2	-0.5
ISP	Isparta	0.98	174	ePg	Pn	09 39 56.2	-0.5
BORA	Eskisehir	1.08	3	PG	Pg	09 39 57.3	-0.3
BORA	Eskisehir	1.08	3	ePg	Pg	09 39 57.3	-0.3
AUSIV	SIVRIHISAR	1.10	54	PN	Pb	09 39 57.7	-0.3
AUSIV	SIVRIHISAR	1.10	54	ePn	Pb	09 39 57.7	-0.3
KIZT	Kizilcal	1.17	86	PN	Pn	09 39 59.2	-0.1

KIZT	Kizilcal	1.17	86	*e*Pn	Pn	09 39 59.2	-0.1
DOGA	KONYA_Doganhis	1.22	124	*i* P	Pb	09 39 59.4	-0.7
DOGA				*i* S	Sn	09 40 17.5	+0.8
DOGA	KONYA_Doganhis	1.22	124	P	Pb	09 39 59.4	-0.7
DOGA				S	Sn	09 40 17.5	+0.8
DEMI	Demirci	1.33	281	*i* P	Pb	09 40 01.5	-0.3
DEMI				*i* S	Sg	09 40 19.6	+0.1
DEMI	Demirci	1.33	281	P	Pb	09 40 01.5	-0.3
DEMI				S	Sg	09 40 19.6	+0.1
AUMIH	MIHALICIK	1.36	38	PN	Pn	09 40 01.9	-0.2
AUMIH	MIHALICIK	1.36	38	*e*Pn	Pn	09 40 01.9	-0.2
KDHN	Kadinhani	1.38	101	*i* P	Pn	09 40 01.9	-0.4
KDHN				*i* S	Sg	09 40 23.1	+1.8
KDHN	Kadinhani	1.38	101	P	Pn	09 40 01.9	-0.4
SUTC	Sutluce-Ispart	1.41	160	PN	Pb	09 40 03.2	0.0
SUTC	Sutluce-Ispart	1.41	160	*e*Pn	Pb	09 40 03.2	0.0
CAVI	Cavuskoy	1.46	343	PN	Pn	09 40 03.4	+0.1
CAVI	Cavuskoy	1.46	343	*e*Pn	Pn	09 40 03.4	+0.1
MANT	Manisa	1.47	258	*i* P	Pb	09 40 04.0	-0.3
MANT	Manisa	1.47	258	P	Pb	09 40 04.0	-0.3
GULT	Gulveren	1.63	3	PN	Pn	09 40 05.7	0.0
GULT	Gulveren	1.63	3	*e*Pn	Pn	09 40 05.7	0.0
KONT	Konya--Tatoy	1.77	118	PN	Pn	09 40 07.9	+0.4
KONT	Konya--Tatoy	1.77	118	*e*Pn	Pn	09 40 07.9	+0.4

DDA ***23*** *09:41:45.6, 41°.02N×43°.88E, h7^{km}, Ml3.0*
ATA ***23*** *09:41:45.2±2.3, 41°.01N×43°.84E, h18^{km}±25^{km}, ML3.1, MW2.9*
ISCJB ***23*** *09:41:46.4±0.7, 41°.01N±0°.02×43°.88E±0°.03, h3^{km}±5^{km}, Error ellipse: s-maj=4.3km s-min=3.7km az=20.3*
CSEM ***23*** *09:41:46.5±0.1, 41°.02N×43°.87E, h2^{km}, ML2.5, Error ellipse: s-maj=2.7km s-min=2.0km az=133.0*
TIF ***23*** *09:41:46.8, 41°.07N×43°.88E, h26^{km}±1^{km}*
ISC 23 09:41:46.5±0.9**, 41°.01N**±0°.02×**43°.86E**±0°.02**, h17**^{km}±7^{km}**, n36, σ0^{s}.58**/69**, 1D, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BGD	Bogdanovka	0.32	322	P	Pg	09 41 53.3	0.0
BGD				S	Sg	09 41 58.6	+0.5
BGD	Bogdanovka	0.32	322	P	Pg	09 41 53.3	0.0
BGD				S	Sg	09 41 58.6	+0.5
EAK	Akyaka	0.38	210	*i* P	Pg	09 41 54.0	-0.3
EAK				IAML		09 42 06.6	
	comp=Z,182nm,0.5s						
EAK	Akyaka	0.38	210	*i* P	Pg	09 41 54.0	-0.3
EAK				*i* S	Sg	09 41 59.8	+0.1
EAK	Akyaka	0.38	210	P	Pg	09 41 54.0	-0.3
EAK				S	Sg	09 41 59.8	+0.1
AKH	Akhalkalaki	0.48	326	P	Pg	09 41 56.0	-0.3
AKH				S	Sg	09 42 02.7	-0.1
AKH	Akhalkalaki	0.48	326	P	Pg	09 41 56.0	-0.3
AKH				S	Sg	09 42 02.7	-0.1
DIGO	Kars	0.70	212	*e*P	Pb	09 42 00.1	-0.3
DIGO				*e*S	Sb	09 42 09.2	-0.7
DIGO				IAML		09 42 11.6	
	comp=Z,75nm,0.2s						
DIGO	Kars	0.70	212	*i* P	Pb	09 42 00.1	-0.3
DIGO				*i* S	Sb	09 42 09.4	-0.5
DIGO	Kars	0.70	212	P	Pb	09 42 00.1	-0.3
DIGO				S	Sb	09 42 09.4	-0.5
TBLG	Delisi	0.98	43	*e*P	Pb	09 42 04.6	-0.4
TBLG				*e*S	Sg	09 42 18.1	-0.3
TBLG				IAML		09 42 18.6	
	comp=Z,26nm,0.3s						
TBLG	Delisi	0.98	43	P	Pb	09 42 05.0	-0.1
TBLG				S	Sg	09 42 18.2	-0.2
TBLG	Delisi	0.98	43	P	Pb	09 42 04.9	-0.1
TBLG				S	Sg	09 42 18.0	-0.3
EPOS	Posof	0.98	300	*e*P	Pb	09 42 04.8	-0.4
EPOS				*e*S	Sb	09 42 18.1	+0.2
EPOS				IAML		09 42 20.3	
	comp=Z,17nm,0.2s						
EPOS	Posof	0.98	300	*i* P	Pb	09 42 05.2	0.0
EPOS				*i* S	Sb	09 42 18.1	+0.2
EPOS	Posof	0.98	300	P	Pb	09 42 05.2	0.0
EPOS				S	Sb	09 42 18.1	+0.2
IGDI	IGDIR	1.16	171	*e*P	Pn	09 42 07.5	-0.6
IGDI				*e*S	Sn	09 42 23.4	-0.1
IGDI	IGDIR	1.16	171	*i* P	Pn	09 42 07.8	-0.3
IGDI				*i* S	Sn	09 42 23.5	0.0
DGRG	David-gareji	1.23	69	*e*P	Pn	09 42 08.2	-0.8
DGRG				*e*S	Sg	09 42 28.2	+2.0
DGRG	David-gareji	1.23	69	P	Pg	09 42 10.0	-0.2
DGRG				S	Sg	09 42 27.8	+1.6
DGRG	David-gareji	1.23	69	P	Pg	09 42 10.0	-0.2
DGRG				S	Sg	09 42 25.5	-0.7
ARTV	Artvin	1.47	277	*i* P	Pb	09 42 13.9	+0.4
ARTV				*i* S	Sb	09 42 32.9	+0.9
ARTV	Artvin	1.47	277	P	Pb	09 42 13.9	+0.4
ARTV				S	Sb	09 42 32.9	+0.9
DAGI	Agillar	1.47	273	*i* P	Pb	09 42 13.6	+0.2
DAGI				*i* S	Sb	09 42 32.9	+0.9
EATA	Eleskirt	1.55	223	⇓*e*P	Pb	09 42 15.8	+0.8
EATA	Eleskirt	1.55	223	*i* P	Pb	09 42 15.6	+0.6
EATA				*i* S	Sg	09 42 37.1	+0.5
EATA	Eleskirt	1.55	223	P	Pb	09 42 15.6	+0.6
EATA				S	Sg	09 42 37.1	+0.5
DDEM	Demirkent	1.60	266	*i* P	Pg	09 42 17.2	-0.1
DDEM				*i* S	Sg	09 42 38.7	+0.6
DDEM	Demirkent	1.60	266	P	Pg	09 42 17.2	-0.1
DDEM				S	Sg	09 42 38.7	+0.6
ONI	Oni	1.60	349	P	Pb	09 42 15.6	-0.2
ONI				S	Sg	09 42 37.8	-0.4
ONI	Oni	1.60	349	P	Pb	09 42 15.6	-0.2
ONI				S	Sg	09 42 37.8	-0.4
DBAD	Bademkaya	1.64	271	*i* P	Pb	09 42 16.8	+0.5
DBAD				*i* S	Sg	09 42 38.7	-0.5
DBAD	Bademkaya	1.64	271	P	Pb	09 42 16.8	+0.5
DBAD				S	Sg	09 42 38.7	-0.5
DBOC	Borcka	1.69	282	*i* P	Pb	09 42 16.9	-0.2
DBOC				*i* S	Sb	09 42 39.0	+0.9
DBOC	Borcka	1.69	282	P	Pb	09 42 16.9	-0.2
DBOC				S	Sb	09 42 39.0	+0.9
DDFL	Dedoflistskaro	1.76	75	P	Pg	09 42 21.6	+1.2

NNC 23 10:00:46.1±6.2**, 36°.76N**×**69°.19E, h0**^{km}**, mb3.7, mpv3.3, 4C-2D, Error ellipse: s-maj=47.4km s-min=43.4km az=179.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	4.69	45	⇑Pn	Pn	10 01 57.6	-0.7
	5.5nm,0.6s						
SFK				⇓Sn	Sn	10 02 54.8	+1.2
	15nm,0.4s						
MNAS	Manas	6.26	23	⇓Pn	Pn	10 02 20.1	+0.2
	1.0nm,0.3s						
MNAS				⇑Sn	Sn	10 03 32.8	+0.6
	6.7nm,0.6s						
KK31	Karatay Array	6.41	9	⇑Pn	Pn	10 02 23.2	+1.4
	0.5nm,0.3s,baz=197,slow=14,SNR=4.6						
KK31				⇑Sn	Sn	10 03 37.3	+1.6
	0.7nm,0.2s,baz=196,slow=25,SNR=7.7						

TIR ***23*** *10:09:44.2, 41°.25N×20°.89E, h6^{km}, Md2.3/2*
SKO 23 10:09:44.2, 41°.23N×**20°.88E, h19**^{km}**, M1.3, ML1.7, Albania**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHR	Ohrid	0.13	207	*i* Pg	Pg	10 09 48.4	-0.1
OHR				*i* Sg	Sg	10 09 51.2	-0.1
OHR				*e*Lg	Lg	10 09 51.3	
	comp=N,286nm,0.3s						
OHR				*e*Lg	Lg	10 09 51.4	
	comp=E,335nm,0.3s						
OHR	Ohrid	0.13	207	*i* Pg	Pg	10 09 48.4	-0.1
OHR				*i* Sg	Sg	10 09 51.2	-0.1
OHR				*e*Lg	Lg	10 09 51.3	
	comp=N,286nm,0.3s						
OHR				*e*Lg	Lg	10 09 51.4	
	comp=E,335nm,0.3s						
KRUS	Krusevo	0.31	63	*i* Pg	Pg	10 09 51.0	-0.1
KRUS				*i* Sg	Sg	10 09 55.7	-0.1
KRUS	Krusevo	0.31	63	*i* Pg	Pg	10 09 51.0	-0.1
KRUS				*i* Sg	Sg	10 09 55.7	-0.1
PHP	Peshkopia	0.56	324	*i* PG	Pb	10 09 55.0	-0.3
PHP				*i* SG	Sg	10 10 03.8	+0.7
SKO	Skopje	0.85	29	*i* Pg	Pn	10 10 01.5	+0.3
SKO				*i* Sg	Sg	10 10 12.0	-0.2
SKO	Skopje	0.85	29	*i* Pg	Pn	10 10 01.5	+0.3
SKO				*i* Sg	Sg	10 10 12.0	-0.2
STIP	Stip	1.09	64	*i* Pg	Pg	10 10 08.0	+2.8
STIP				*i* Sg	Sg	10 10 25.6	+6.1
STIP	Stip	1.09	64	*i* Pg	Pg	10 10 08.0	+2.8
STIP				*i* Sg	Sg	10 10 25.6	+6.1
VAY	Valandovo	1.28	85	*e*Pg	Pg	10 10 08.6	-0.3
VAY				*e*Sg	Sg	10 10 26.9	+1.3
VAY				*e*Lg	Lg	10 10 28.6	
	comp=E,9.6nm,0.5s						
VAY				*e*Lg	Lg	10 10 28.9	
	comp=N,15nm,0.8s						
VAY	Valandovo	1.28	85	*e*Pg	Pg	10 10 08.6	-0.3
VAY				*e*Sg	Sg	10 10 26.9	+1.3
VAY				*e*Lg	Lg	10 10 28.6	
	comp=E,9.6nm,0.5s						
VAY				*e*Lg	Lg	10 10 28.9	
	comp=N,15nm,0.8s						

IDC ***23*** *10:12:38.1±0.5, 21°.82S×175°.04W, h0^{km}, mb4.3/17, mb1 4.4/17, mb1mx4.3/46, mbtmp4.3/17, MS3.9/26, Ms1 3.9/26, ms1mx3.8/45, Error ellipse: s-maj=20.5km s-min=15.4km az=114.0*
NEIC ***23*** *10:12:39.8±0.2, 21°.77S×175°.09W, h10^{km}, mb4.9/18, Error ellipse: s-maj=10.1km s-min=7.1km az=126.0*
GCMT ***23*** *10:12:39.8±0.3, 22°.08S×174°.39W, h30^{km}, MW5.0/71, Moment Tensor Solution. s35,c47; s71,c92; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.31±.18; M$_{\theta\theta}$-0.28±.12; M$_{\phi\phi}$-3.03±.11; M$_{r\theta}$0.67±.21; M$_{\theta\phi}$-0.86±.07; M$_{\phi r}$1.51±.13; Best double couple: M$_{0}$3.68400×10^{16} NP1:ϕ_s20.00000°, δ58.00000°, λ94.00000°. NP2: ϕ_s193.00000°, δ32.00000°, λ84.00000°. Principal axes: T 3.7070, Plg76.0000°, Azm301.0000°; N -0.0500, Plg3.0000°, Azm198.0000°; P -3.6610, Plg13.0000°, Azm107.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISCJB ***23*** *10:12:41.7±0.3, 21°.82S±0°.07×175°.13W±0°.08, h33^{km}, mb4.5/33, MS4.0/24 Error ellipse: s-maj=12.2km s-min=8.0km az=40.2*
ISC 23 10:12:43.4±0.5**, 21°.75S**±0°.09×**175°.1W**±0°.1**, h33**^{km}**, n115, σ1^{s}.40**/89**, mb4.7**/33**, MS4.0**/24**, 1C, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	8.42	23	Pn	Pn	10 14 37.3	-5.9
	7.3nm,0.3s,baz=22,slow=7.2,SNR=12						
AFI				Sn	Sn	10 16 05.2	-12
	8.0nm,0.3s,baz=58,slow=20,SNR=3.8						
AFI	Afiamalu	8.42	23	*e*Pn	Pn	10 14 37.3	-5.9
AFI				*e*		10 14 39.5	
AFI				Sn	Sn	10 16 05.2	-12
FUNA	Funafuti	14.25	336	*e*Pn	Pn	10 16 00.6	-2.3
RAR	Rarotonga	14.29	91	Pn	Pn	10 15 52.2	-11
	1.6nm,0.3s,baz=271,slow=11,SNR=7.1						
RAR				Sn	Sn	10 18 12.0	-29
	0.6nm,0.3s,baz=81,slow=16,SNR=2.9						
RAR				LR	LR	10 22 13.9	
	comp=Z,318nm,18.0s,baz=246,slow=40						
DZM	Mont Dzumac	17.12	266	P	P	10 16 43.6	+1.8
	0.3nm,0.3s,baz=74,slow=20,SNR=3.3						
DZM				LR	LR	10 21 44.6	
	comp=Z,523nm,19.4s,baz=106,slow=32						
DZM	Mont Dzumac	17.12	266	*e*P	P	10 16 42.0	+0.2
	72nm,1.0s						
DZM				*e*LR	LR	10 20 47.6	
	1μm,22.1s						
DZM	Mont Dzumac	17.12	266	*e*Pn	P	10 16 45.7	+3.9
	19nm,0.9s						
TBI	Tubuai	23.73	99	*e*LR	LR	10 23 29.6	
	748nm,28.0s						
TBI	Tubuai	23.73	99	*e*T	T	10 42 06.4	
	8.2nm,0.4s						
OXZ	Oxford	24.03	203	*e*P	P	10 17 54.5	-0.8
OXZ				*e*pP	P	10 17 54.6	-0.7
PAE	Paea	24.36	85	*e*T	T	10 42 37.6	
	17nm,0.4s						
PPT2	Papeete2	24.38	85	*e*S	S	10 21 53.2	-23
	202nm,26.1s						
PPT2				*e*LQ	LQ	10 22 30.2	
	650nm,27.2s						
PPT2				*e*LR	LR	10 23 33.2	
	857nm,25.8s						
PPT2	Papeete2	24.38	85	*e*T	T	10 42 38.7	
	14nm,0.4s						
PPT	Papeete	24.39	85	LR	LR	10 25 00.1	
	comp=Z,317nm,20.9s,baz=274,slow=30						
TIAR	Tiarei	24.61	85	*e*T	T	10 42 54.4	
	2.7nm,0.4s						
TVO	Taravao	24.64	85	*e*T	T	10 42 57.7	
	2.9nm,0.4s						
RPZ	Rata Peaks	24.73	204	P	P	10 18 01.4	-0.3
	6.5nm,0.5s,baz=199,slow=9.7,SNR=6.3						
PMOR	Pomariorio Ree	26.66	80	*e*T	T	10 45 23.3	
	2.6nm,0.4s						
HNR	Honiara	26.92	293	LR	LR	10 27 28.9	
	comp=Z,254nm,21.4s,baz=152,slow=33						
TAOE	Nuku Hiva Isla	35.98	75	*e*S	S	10 25 04.1	-14
	116nm,24.7s						
TAOE				*e*LR	LR	10 29 01.9	
	460nm,26.8s						
CTA	Charters Tower	36.07	265	P	P	10 19 42.5	+0.3
	6.3nm,0.5s,baz=88,slow=11,SNR=10						
RKT	Rikitea	37.04	100	*e*LR	LR	10 29 29.0	
	599nm,29.2s						
RKT	Rikitea	37.04	100	*e*T	T	10 58 44.3	
	6.8nm,0.4s						
AS01	Alice Springs	46.83	257	*e*P	P	10 21 09.0	-1.5
AS31	Alice Springs	46.87	257	*e*P	P	10 21 10.0	-0.8
	1.7nm,0.9s						
ASAR	Alice Springs	46.87	257	P	P	10 21 09.6	-1.3
	4.3nm,0.7s,baz=93,slow=6.5,SNR=54						
ASAR				LR	LR	10 40 52.4	
	comp=Z,401nm,18.3s,baz=102,slow=36						
WB2	Warramunga Arr	47.10	263	*e*P	P	10 21 11.3	-1.3
WB2				*e*P	P	10 21 11.8	-0.8
WRAB	Tennant Creek	47.10	263	*e*P	P	10 21 14.2	+1.6
	9.1nm,0.9s						
WR1	Warramunga Arr	47.11	263	*e*P	P	10 21 11.4	-1.2
	11nm,0.8s						
WRA	Warramunga Arr	47.11	263	P	P	10 21 11.4	-1.2
	8.3nm,0.9s,baz=100,slow=8.2,SNR=30						
FORT	Forrest	51.29	247	*e*P	P	10 21 43.3	-1.2
	32nm,0.6s						
GUMO	Guam	52.68	308	LR	LR	10 41 59.2	
	comp=Z,93nm,20.9s,baz=146,slow=33						
VNDA	Vanda	56.92	186	P	P	10 22 24.3	-0.6
	0.2nm,0.3s,baz=338,slow=8.3,SNR=2.5						
VNDA				LR	LR	10 45 49.6	
	comp=Z,56nm,18.9s,baz=10,slow=35						
RPN	Rapa Nui	59.53	109	LR	LR	10 44 40.9	
	comp=Z,117nm,19.5s,baz=257,slow=32						
CASY	Casey	64.00	206	*e*P	P	10 23 14.4	+1.2
	9.9nm,0.9s						
DAV	Davao City (W)	64.80	289	LR	LR	10 50 26.9	
	comp=Z,109nm,18.3s,baz=132,slow=35						
QSPA	South Pole Qui	68.32	180	P	P	10 23 41.4	+0.2
	6.7nm,0.9s,baz=28,slow=2.9,SNR=16						
QSPA				LR	LR	10 49 44.5	
	comp=Z,109nm,20.1s,baz=38,slow=33						
QSPA	South Pole Qui	68.32	180	*e*P	P	10 23 41.4	+0.2
QSPA				*e*P	P	10 23 41.7	+0.5
MJAR	Matsushiro Arr	72.83	322	P	P	10 24 08.3	-0.6
	2.0nm,0.6s,baz=164,slow=5.6,SNR=8.8						
MAJO	Matsushiro	72.83	322	*e*P	P	10 24 08.3	-0.6
JOW	Kunigami	73.04	309	LR	LR	10 53 38.1	
	comp=Z,57nm,19.3s,baz=131,slow=34						
ASAJ	Asahikawa	76.13	330	P	P	10 24 28.7	+0.8
	7.3nm,0.6s,baz=205,slow=6.5,SNR=16						
ASAJ	Asahikawa	76.13	330	*e*P	P	10 24 30.2	+2.3
	8.5nm,0.7s						
LPIG	La Paz	77.75	58	LR	LR	10 52 28.5	
	comp=Z,141nm,18.4s,baz=206,slow=31						
PETK	Petropavlovsk-	78.20	344	P	P	10 24 40.1	+0.8
	9.7nm,0.8s,baz=122,slow=7.8						
PETK	Petropavlovsk-	78.20	344	*e*P	P	10 24 39.6	+0.3
PEA1	Petropavlovsk-	78.20	344	*e*P	P	10 24 40.1	+0.8
YSS	Yuzh-Sakhalins	78.24	332	*e*P	P	10 24 41.1	+1.5
	22nm,1.0s						
PMSA	Palmer Station	79.06	156	LR	LR	10 54 12.2	
	comp=Z,62nm,20.4s,baz=200,slow=32						
YBH	Yreka Blue Hor	79.62	37	P	P	10 24 46.9	-0.5
	1.7nm,0.8s,baz=169,slow=5.2,SNR=4.1						
YBH				LR	LR	10 53 58.1	
	comp=Z,48nm,18.7s,baz=239,slow=31						
KSRS	Korea Array	79.62	317	P	P	10 24 49.2	+1.8
	1.0nm,0.8s,baz=121,slow=6.7,SNR=5.2						
KS15	Wonju Array Si	79.64	317	*e*P	P	10 24 49.2	+1.7
KSAR	Wonju Array Be	79.64	317	P	P	10 24 49.2	+1.7
NV01	Mina Array Sit	80.11	42	*e*P	P	10 24 50.1	-0.2
NVAR	Mina Array Bea	80.11	42	P	P	10 24 50.7	+0.3
	0.7nm,0.6s,baz=217,slow=8.6,SNR=6.0						
NVAR				LR	LR	10 54 21.4	
	comp=Z,117nm,19.1s,baz=104,slow=31						
MOD	Modoc Plateau	81.09	38	*e*P	P	10 24 59.4	+4.0
	3.7nm,0.8s						
MAW	Mawson	81.29	199	P	P	10 24 54.8	-1.2
	3.2nm,0.7s,baz=130,slow=3.3,SNR=6.4						
MAW				LR	LR	11 00 45.1	
	comp=Z,100nm,18.9s,baz=66,slow=36						
MAW	Mawson	81.29	199	*e*P	P	10 24 56.8	+0.9
	1.6nm,1.0s						
MTPU	Mount Pierson	83.80	45	*e*P	P	10 25 09.0	-0.9
	10nm,1.0s						
G08A	Pilot Rock	84.00	36	*e*P	P	10 25 11.2	+0.7
	8.1nm,0.9s						
KLR	Kul'dur	84.99	328	P	P	10 25 16.2	+1.0
	0.2nm,0.7s,baz=299,slow=0.1,SNR=8.4						
LTX	Lajitas	85.48	56	*e*P	P	10 25 17.1	-1.2
TXAR	Lajitas Array	85.48	56	P	P	10 25 17.1	-1.2
	1.7nm,1.3s,baz=185,slow=8.1,SNR=3.4						
TXAR				LR	LR	10 57 13.2	
	comp=Z,65nm,19.0s,baz=0.0,slow=31						
ANMO	Albuquerque	86.11	50	LR	LR	10 57 05.0	
	comp=Z,86nm,19.0s,baz=252,slow=31						
ANMO	Albuquerque	86.11	50	*e*P	P	10 25 21.6	+0.2
	5.0nm,1.0s						
PLCA	Paso Flores	86.45	133	LR	LR	10 54 59.4	
	comp=Z,67nm,21.1s,baz=246,slow=29						
SNAA	Sanae	86.67	178	LR	LR	10 59 45.8	
	comp=Z,91nm,20.7s,baz=200,slow=33						
VNA3	Neumayer Olymp	86.70	175	P	P	10 25 22.5	-1.0
CAST	Castle Rocks	86.80	10	*e*P	P	10 25 23.1	-0.8
TRF	Thorofare Moun	87.13	11	*e*P	P	10 25 25.6	-0.1
	9.3nm,1.0s						
VNA1	Neumayer--Stat	87.38	176	P	P	10 25 25.5	-1.4
PD31	Pinedale Array	88.05	42	*e*P	P	10 25 30.0	-0.7
PDAR	Pinedale Array	88.05	42	P	P	10 25 30.0	-0.7
	0.3nm,0.7s,baz=219,slow=1.9,SNR=3.5						
PDAR				LR	LR	11 00 02.4	
	comp=Z,73nm,18.8s,baz=274,slow=32						
WRH	Wood River Hil	88.46	11	*e*P	P	10 25 32.2	+0.4
	8.6nm,1.0s						
CCB	Clear Creek Bu	88.68	11	*e*P	P	10 25 32.8	0.0
	4.7nm,0.9s						
IL1	Eielson Array	88.96	12	*e*P	P	10 25 32.8	-1.4
ILAR	Eielson Array	88.96	12	P	P	10 25 33.1	-1.1
	0.6nm,0.7s,baz=231,slow=5.1,SNR=8.4						
ILAR				LR	LR	10 58 27.5	
	comp=Z,33nm,20.8s,baz=212,slow=31						
ILB	Eielson Array	88.96	12	*e*P	P	10 25 33.1	-1.1
DAWY	Dawson	89.94	15	*e*P	P	10 25 39.9	+1.1
	4.2nm,0.8s						
EGAK	Eagle	90.14	14	*e*P	P	10 25 40.6	+0.9
	4.7nm,1.0s						
CM01	Chiang Mai Arr	93.05	288	*e*P	P	10 25 50.0	-4.2
NNA	Nana	93.14	104	LR	LR	10 57 53.4	
	comp=Z,92nm,21.5s,baz=244,slow=29						
JTS	JuntasAbangare	93.89	81	LR	LR	10 57 57.6	
	comp=Z,40nm,21.3s,baz=350,slow=29						
YKA	Yellowknife Ar	96.53	24	P	P	10 26 08.9	-0.3
	0.3nm,0.7s,baz=220,slow=5.7,SNR=3.0						
YKA				LR	LR	11 02 19.6	
	comp=Z,6.6nm,21.6s,baz=240,slow=31						
YKB5	Yellowknife Ar	96.53	24	*e*P	P	10 26 08.9	-0.2
LPAZ	La Paz	99.09	112	LR	LR	11 04 52.6	
	comp=Z,64nm,18.2s,baz=244,slow=32						
MK32	Makanchi Array	114.02	313	*e*PKiKP	PKPdf	10 31 17.6	-1.5
MKAR	Makanchi Array	114.02	313	PKP	PKPdf	10 31 17.6	-1.5
	0.4nm,0.7s,baz=56,slow=2.2,SNR=4.5						
ARA0	ARCESS Array S	130.61	351	*e*PKPdf	PKPdf	10 31 53.9	+3.7
ARCES	ARCESS Array B	130.61	351	PKP	PKPdf	10 31 53.9	+3.7
	3.7nm,0.9s,baz=18,slow=1.5,SNR=5.5						
FIA0	FINESS Array S	137.70	345	*e*PKPdf	PKPdf	10 32 05.4	+1.8
FINES	FINESS Array B	137.70	345	PKP	PKPdf	10 32 05.4	+1.8
	2.1nm,0.8s,baz=98,slow=4.2,SNR=3.6						
HFS	Hagfors	141.15	353	PKhKP	PKPpre	10 32 04.3	
	2.2nm,0.8s,baz=35,slow=5.5,SNR=3.3						
AKASG	Malin Array Be	145.39	333	PKPbc	PKPbc	10 32 17.3	-0.4
	7.6nm,0.5s,baz=41,slow=4.3,SNR=48						
AKBB	Malin Array Si	145.39	333	*e*PKPdf	PKPbc	10 32 17.6	0.0
KIEV	Kiev	145.40	333	*e*PKPdf	PKPbc	10 32 17.6	-0.1
AK11	Malin Array Si	145.43	333	*e*PKPdf	PKPab	10 32 17.9	-0.1
EKA	Eskdalemuir Ar	145.93	8	PKPbc	PKPab	10 32 19.6	-0.1
	1.2nm,0.6s,baz=347,slow=2.9,SNR=4.3						
BUR04	Bucovina Ar. S	149.44	332	*e*PKPbc	PKPbc	10 32 30.2	+1.0
BR101	Keskin Array S	149.67	313	*e*PKPbc	PKPbc	10 32 30.1	0.0
BR131	Keskin Array S	149.67	313	*e*PKPbc	PKPbc	10 32 30.7	+0.6
BRTR	Keskin Array B	149.67	313	PKPbc	PKPbc	10 32 30.1	0.0
	5.2nm,0.8s,baz=126,slow=2.1,SNR=24						
ASF	Jabal al Asfar	149.75	297	PKPbc	PKPbc	10 32 31.7	+1.3
	3.2nm,0.7s,baz=92,slow=1.5,SNR=6.8						
CLL	Collm	149.83	350	⇑*i*PKPbc	PKPbc	10 32 30.3	+0.4
	comp=Z,11nm,0.9s						
CLL				*i* pPKPbc	PKPab	10 32 33.2	-2.1
CLL				*i* PKPab	pPKPdf	10 32 37.2	+1.3
BRG	Berggiesshubel	150.08	348	*e*PKP	PKPbc	10 32 30.8	+0.3
	comp=Z,15nm,1.2s						
ANTO	Ankara	150.18	314	*e*PKPbc	PKPbc	10 32 32.4	+1.2
MORC	Moravsky Berou	150.29	343	*e*PKPbc	PKPbc	10 32 31.9	+0.8
MLR	Muntele Rosu	150.71	329	*e*PKPbc	PKPbc	10 32 33.4	+1.1
MMAI	Mount Meron Ar	150.78	299	PKPbc	PKPbc	10 32 34.2	+1.4
	comp=Z,5.9nm,0.7s,baz=85,slow=3.0,SNR=6.9						
VYHS	Vyhne	151.08	341	*e*PKP	PKPab	10 32 38.2	-2.4
GEC2	GERESS Array S	152.07	348	*e*PKPbc	PKPbc	10 32 35.9	+0.5
GERES	GERESS Array B	152.07	348	PKPbc	PKPbc	10 32 35.9	+0.5
	comp=Z,0.9nm,0.7s,baz=69,slow=7.4,SNR=4.4						
GEA0	GERESS Array S	152.07	348	*e*PKPbc	PKPbc	10 32 35.5	+0.1
TORD	Torodi Ar. Bea	170.92	160	PKPab	PKPab	10 34 06.8	-0.6
	baz=203,slow=3.0						
TOA1	Torodi Ar. Sit	170.92	160	*e*PKPab	PKPab	10 34 06.8	-0.7

IDC ***23*** *10:13:17.4±0.7, 60°.28N×146°.56W, h0^{km}, mb3.8/12, mb1 4.0/17, mb1mx3.8/80, mbtmp3.8/17, ML3.6/5, MS1.9/1, Ms1 1.9/1, ms1mx1.9/70, Error ellipse: s-maj=14.4km s-min=11.6km az=42.0*
ISCJB ***23*** *10:13:18.1±0.4, 60°.25N±0°.02×146°.62W±0°.03, h22^{km}±3^{km}, mb3.8/12, Error ellipse: s-maj=4.2km s-min=2.7km az=13.9*
NEIC ***23*** *10:13:18.9±0.0, 60°.28N×146°.56W, h4^{km}, ML3.7(AEIC), After AEIC.*
ISC 23 10:13:18.6±1.0**, 60°.27N**±0°.03×**146°.61W**±0°.03**, h12**^{km}±6^{km}**, n127, σ0^{s}.95**/137**, mb3.9**/12**, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HIN	Hinchinbrook I	0.14	23	P	Pg	10 13 22.2	+0.1
HIN				S	Sg	10 13 24.9	+0.3
FID	Port Fidalgo	0.49	8	P	Pg	10 13 27.8	-0.5
FID				S	Sg	10 13 34.3	-0.5
EYAK	Cordova Ski Ar	0.51	56	P	Pg	10 13 28.1	-0.6
EYAK				S	Sg	10 13 36.4	+0.9
GLI	Glacier Island	0.66	339	P	Pg	10 13 31.3	-0.2
GLI				S	Sg	10 13 40.9	+0.8
JPK	Jack Peak	0.79	1	P	Pb	10 13 33.2	-1.1
VMT	TAPS Tl Valdez	0.83	8	P	Pb	10 13 33.8	-1.2
MID	Middleton Isla	0.85	171	P	Pb	10 13 35.4	0.0
DIV	Divide	0.96	25	P	Pb	10 13 35.7	-1.5
RAGM	Ragged Mountai	0.97	82	P	Pb	10 13 36.1	-1.3
RAGM				S	Sg	10 13 51.4	+1.4
GOAT	Goat Mountain	0.99	71	P	Pb	10 13 36.8	-0.9
GOAT				S	Sg	10 13 52.0	+1.5
KAIM	Kayak Island	1.15	106	P	Pn	10 13 39.2	-1.3
HMT	Hamilton	1.17	86	P	Pn	10 13 39.5	-1.4
HMT				S	Sn	10 13 56.9	+0.1
BMRM	Bremner River	1.22	54	P	Pn	10 13 40.0	-1.5
KLU	Klutina	1.28	15	P	Pn	10 13 40.9	-1.5
KLU				S	Sb	10 13 59.0	0.0
NICHA	Nichawak Mount	1.32	90	P	Pn	10 13 41.5	-1.4
PTE	Portage	1.33	298	P	Pn	10 13 42.5	-0.5
PS12	TAPS Pump St12	1.41	30	P	Pn	10 13 43.0	-1.2
SUCK	Suckling Hills	1.43	97	P	Pn	10 13 43.9	-0.6

BERG	Berg Lake	1.45	84	P	Pn	10 13 43.7	-1.0
BERG				S	Sn	10 14 04.0	+0.3
KNK	Knik Glacier	1.46	323	P	Pn	10 13 44.9	0.0
SCM	Sheep Creek Mo	1.61	348	P	Pn	10 13 46.7	-0.3
GRIN	Grindle Hills	1.64	88	P	Pn	10 13 45.9	-1.5
KHIT	Khitrov Hills	1.68	83	P	Pn	10 13 46.2	-1.7
RC01	Rabbit Creek A	1.75	300	P	Pn	10 13 48.4	-0.3
SML	Sawmill	1.76	332	P	Pn	10 13 49.2	+0.2
GLB	Gilahina Butte	1.81	48	P	Pn	10 13 48.8	-0.9
SLKM	Skilak Lake	1.81	279	P	Pn	10 13 49.2	-0.5
PMR	Palmer	1.81	318	P	Pn	10 13 49.8	+0.2
VRDI	Verde Repeater	1.83	57	P	Pn	10 13 49.1	-1.0
GHO	Glory Hole Cre	1.88	324	P	Pn	10 13 51.3	+0.6
PS11	TAPS Pump St11	1.90	16	P	Pn	10 13 51.6	+0.7
TGL	Tana Glacier	1.93	74	P	Pn	10 13 50.2	-1.2
KULT	Kultieth River	1.94	89	P	Pn	10 13 49.9	-1.6
FIB	Fire Island	1.97	299	P	Pn	10 13 52.7	+0.9
BARK	Barkley Ridge	2.05	84	P	Pn	10 13 51.8	-1.3
MCARA	McCarthy VSAT	2.08	56	P	Pn	10 13 52.6	-0.8
ISLE	Juniper Island	2.15	79	P	Pn	10 13 53.0	-1.4
KIAG	Kiagna River	2.20	71	P	Pn	10 13 53.9	-1.3
PTPK	Patty Peak	2.24	64	P	Pn	10 13 55.0	-0.7
BALM	Baldy	2.24	68	P	Pn	10 13 54.5	-1.1
BAGL	Bagley Icefiel	2.26	82	P	Pn	10 13 54.5	-1.2
HARP	HAARP	2.26	17	P	Pn	10 13 56.1	+0.3
MESA	MESA	2.33	90	P	Pn	10 13 55.7	-1.2
SUA	Susitna One	2.35	303	P	Pn	10 13 56.5	-0.7
CNPM	China Poot	2.45	254	P	Pn	10 13 57.7	-0.7
BARN	Barnard Glacie	2.56	70	P	Pn	10 13 59.2	-1.0
RKAV	Rock Avalanche	2.62	87	P	Pn	10 14 00.7	-0.3
CTGM	Chitina Glacie	2.69	73	P	Pn	10 14 00.9	-1.0
TABL	Table Mountain	2.72	84	P	Pn	10 14 01.9	-0.4
CHX	Chaix Hills	2.75	92	P	Pn	10 14 02.2	-0.5
PAX	Paxson	2.77	11	P	Pn	10 14 02.9	0.0
DHY	Denali Highway	2.84	353	P	Pn	10 14 04.2	+0.3
SPCG	Spurr Capps Gl	2.84	294	P	Pn	10 14 03.3	-0.7
SPCP	Crater Peak Br	2.90	293	P	Pn	10 14 04.3	-0.4
SAMH	Samovar Hills	2.92	90	P	Pn	10 14 04.5	-0.4
SKT	Skwentna	2.94	308	P	Pn	10 14 04.5	-0.7
HUR	Hurricane	3.08	333	P	Pn	10 14 07.8	+0.8
RDJH	Redoubt Jeurge	3.09	279	P	Pn	10 14 06.4	-0.9
RDWB	Redoubt West	3.10	277	P	Pn	10 14 06.3	-1.2
PS10	TAPS Pump St10	3.19	7	P	Pn	10 14 08.9	+0.3
YUK2	White River	3.19	59	P	Pn	10 14 09.0	+0.3
YUK1	Sand Pete Hill	3.50	55	P	Pn	10 14 13.2	+0.2
BVCY	Beaver Creek	3.51	50	P	Pn	10 14 13.1	+0.1
RIDG	Independ’e Rid	3.58	13	P	Pn	10 14 14.8	+0.7
DOT	Dot Lake	3.60	18	P	Pn	10 14 15.0	+0.8
BCA3	Beaver Creek A	3.63	37	P	Pn	10 14 14.7	0.0
TRF	Thorofare Moun	3.64	333	P	Pn	10 14 15.2	+0.3
MCK	McKinley	3.65	344	P	Pn	10 14 15.8	+0.9
PNL	Peninsula	3.68	96	P	Pn	10 14 13.6	-1.7
CDD	Cape Douglas	3.82	252	P	Pn	10 14 18.1	+0.9
KTH	Kantishna Hill	3.88	330	P	Pn	10 14 18.8	+0.7
SCRK	Sand Creek	3.92	17	P	Pn	10 14 18.5	-0.2
KDAK	Kodiak Island	3.97	234	Pn	Pn	10 14 18.4	-0.8
	4.3nm,0.3s,baz=70,slow=12,SNR=168						
KDAK				Sn	Sn	10 15 02.5	-3.0
	5.3nm,0.3s,baz=176,slow=18,SNR=8.5						
KDAK	Kodiak Island	3.97	234	P	Pn	10 14 19.2	0.0
YUK4	Talbot Arm	4.05	71	P	Pn	10 14 20.9	+0.4
CAST	Castle Rocks	4.09	323	P	Pn	10 14 21.3	+0.3
YUK6	Outpost Mounta	4.12	77	P	Pn	10 14 21.3	-0.3
HDA	Harding Lake	4.16	358	P	Pn	10 14 22.5	+0.6
WRH	Wood River Hil	4.28	351	P	Pn	10 14 23.5	0.0
PS08	TAPS Pump Stn8	4.29	359	P	Pn	10 14 23.1	-0.6
BPAW	Bear Paw Mtn.	4.36	334	P	Pn	10 14 24.5	-0.1
CCB	Clear Creek Bu	4.43	353	P	Pn	10 14 25.1	-0.5
NEA	Nenana	4.47	346	P	Pn	10 14 25.9	-0.3
CHUM	Lake Minchumin	4.51	326	P	Pn	10 14 26.9	+0.2
ILAR	Eielson Array	4.52	359	Pn	Pn	10 14 25.9	-1.0
	3.8nm,0.3s,baz=193,slow=14,SNR=154						
ILAR				Lg	Lg	10 15 31.2	
	5.9nm,0.3s,baz=185,slow=21,SNR=6.6						
ILB	Eielson Array	4.52	359	P	Pn	10 14 25.9	-1.0
HYT	Haines Junctio	4.53	79	P	Pn	10 14 27.2	+0.1
OHAK	Old Harbor	4.63	232	P	Pn	10 14 25.9	-2.3
COLA	College	4.66	353	P	Pn	10 14 28.3	-0.4
KAKN	Katmai Knife C	4.76	249	P	Pn	10 14 30.7	+0.4
MDM	Murphy Dome	4.77	352	P	Pn	10 14 29.8	-0.5
KABU	Katmai Buttres	4.88	250	P	Pn	10 14 33.3	+1.4
CAHL	Cahill	4.99	247	P	Pn	10 14 33.6	+0.2
DAWY	Dawson	5.09	38	*e*Pn	Pn	10 14 34.8	0.0
	20nm,0.5s						
MLY	Manley	5.14	340	P	Pn	10 14 35.6	+0.1
EGAK	Eagle	5.18	27	P	Pn	10 14 36.0	+0.1
TT01	Tatalina	5.21	305	P	Pn	10 14 34.8	-1.6
PLBC	Pleasant Camp	5.23	94	P	Pn	10 14 36.0	-0.6
PRP	Porcupine Dome	5.29	5	P	Pn	10 14 37.1	-0.5
SKAG	Skagway	5.74	93	P	Pn	10 14 43.0	-0.6
WHY	Whitehorse	5.82	81	P	Pn	10 14 44.2	-0.5
BESE	Bessie Mountai	6.24	101	P	Pn	10 14 49.6	-0.8
GCSA	Galena City Sc	6.54	318	P	Pn	10 14 54.2	-0.2
JIS	Juneau Island	6.58	102	P	Pn	10 14 54.0	-1.1
SIT	Sitka	6.71	114	P	Pn	10 14 55.2	-1.6
COLD	Coldfoot	7.17	349	P	Pn	10 15 02.8	-0.3
BM3	Burnt Mountain	7.24	6	P	Pn	10 15 03.3	-0.8
TOLK	Toolik Lake Re	8.50	353	P	Pn	10 15 22.1	+0.6
CRAG	Craig	8.64	118	P	Pn	10 15 20.9	-2.5
DLBC	Dease Lake	8.67	95	Pn	Pn	10 15 23.2	-0.6
	1.5nm,0.3s,baz=284,slow=7.9,SNR=29						
DLBC	Dease Lake	8.67	95	P	Pn	10 15 22.7	-1.1
INK	Inuvik	9.85	30	Pn	Pn	10 15 40.1	+0.4
	0.2nm,0.3s,baz=216,slow=16,SNR=11						
INK				Lg	Lg	10 18 31.9	
	0.1nm,0.3s,baz=210,slow=7.8,SNR=4.5						
YKA	Yellowknife Ar	15.41	68	Pn	Pn	10 16 54.3	-1.2
	0.1nm,0.3s,baz=274,slow=9.8,SNR=5.8						
YKA				LR	LR	10 23 10.8	
	comp=Z,4.4nm,18.6s,baz=265,slow=39						
YBH	Yreka Blue Hor	23.65	131	P	P	10 18 32.0	+2.3
	2.4nm,0.9s,baz=340,slow=5.4,SNR=5.3						
NVAR	Mina Array Bea	28.20	128	P	P	10 19 12.7	+1.5
	0.7nm,0.7s,baz=309,slow=8.7,SNR=5.7						
PDAR	Pinedale Array	28.42	111	P	P	10 19 13.6	+0.5
	0.3nm,0.5s,baz=314,slow=4.4,SNR=7.2						
TXAR	Lajitas Array	42.17	118	P	P	10 21 12.2	+1.2
	0.3nm,0.6s,baz=324,slow=6.2,SNR=4.9						
TKL	Tuckaleechee C	46.49	93	P	P	10 21 45.8	+0.3
	2.0nm,0.6s,baz=108,slow=3.7,SNR=5.8						
ARCES	ARCESS Array B	50.37	4	P	P	10 22 13.9	-0.9
	2.6nm,0.8s,baz=2.5,slow=8.1,SNR=4.7						
KSRS	Korea Array	56.20	287	P	P	10 22 58.8	+0.7
	1.0nm,0.6s,baz=46,slow=6.3,SNR=3.7						
KSAR	Wonju Array Be	56.23	287	P	P	10 22 58.8	+0.4
SONM	Songino Array	57.15	310	P	P	10 23 06.4	+1.5
	1.5nm,0.8s,baz=54,slow=7.9,SNR=4.3						
EKA	Eskdalemuir Ar	61.14	23	P	P	10 23 32.7	+0.5
	1.3nm,0.6s,baz=354,slow=5.8,SNR=3.6						
MKAR	Makanchi Array	66.12	326	P	P	10 24 04.2	-1.2
	0.3nm,0.4s,baz=47,slow=7.1,SNR=4.5						
AKASG	Malin Array Be	69.33	3	P	P	10 24 25.0	-0.5
	0.2nm,0.3s,baz=8.8,slow=6.7,SNR=3.5						
ESDC	Sonseca Array	75.79	29	P	P	10 25 04.5	+0.3
	0.8nm,0.5s,baz=343,slow=5.5,SNR=6.1						
QSPA	South Pole Qui	150.07	180	PKPbc	PKPbc	10 33 06.8	-0.6
	2.7nm,0.8s,baz=204,slow=0.9,SNR=6.7						

IDC 23 10:21:09.2±1.8, 6°.76S×155°.45E, h0km, mb3.6/4, mb1 3.9/4, mb1mx3.5/45, mbtmp3.6/4, Error ellipse: s-maj=65.3km s-min=30.8km az=128.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.32	235	P	P	10 26 29.3	+0.4
	0.7nm,0.5s,baz=58,slow=9.7,SNR=8.4						
WRA				PcP	PcP	10 30 09.1	+0.2
	0.2nm,0.5s,baz=64,slow=2.4,SNR=6.1						
ASAR	Alice Springs	26.66	229	P	P	10 26 48.9	-1.2
	0.2nm,0.4s,baz=57,slow=9.5,SNR=4.4						
H11S3	WAKE ISLAND Hy	27.44	24	T	T	10 55 29.5	
	baz=203,slow=75,SNR=29						
H11S2	WAKE ISLAND Hy	27.44	24	T	T	10 55 30.6	
	baz=203,slow=75,SNR=30						
H11S1	WAKE ISLAND Hy	27.45	24	T	T	10 55 31.9	
	baz=203,slow=75,SNR=17						
CMAR	Chiang Mai Arr	61.09	295	P	P	10 31 26.2	+0.6
	1.9nm,0.8s,baz=123,slow=5.0,SNR=7.0						
ILAR	Eielson Array	82.99	21	P	P	10 33 35.4	-0.6
	0.3nm,0.6s,baz=241,slow=5.2,SNR=5.1						

DJA 23 10:28:48.8±1.8, 0°S±3°×12°3E±°, h18km±18km, M3.6/8, MLv3.6/8, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUWI	Luwuk	1.00	207	P	Pn	10 29 07.9	0.0
KMSI	Cibinong	1.04	46	P	Pb	10 29 08.2	-0.1
KMSI				S	Sg	10 29 22.8	+0.1
MRSI	Marisa	1.43	296	P	Pn	10 29 13.6	-0.3
APSI	Ampana	1.75	244	P	Pn	10 29 18.7	+0.4
SANI	Sanana	3.34	124	P	Pn	10 29 39.8	-0.4
MPSI	Mapaga	3.37	278	P	Pn	10 29 40.7	+0.2
LBMI	Labuha	4.30	96	P	Pn	10 29 53.2	-0.2

JMA 23 10:38:32.6±0.1, 35°.39N×138°.73E, h16km±2km, M0.2, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYN	Shimob	0.19	305	S	Sg	10 38 40.5	+0.2

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*BJI **23** 10:44:44.1, 47°.30N×153°.67E, h59km, mb4.7/29, mB4.9/22, Ms4.3/14, Ms7 4.1/11*
*SKHL **23** 10:44:45.7±0.0, 47°.18N×153°.57E, h63km±4km, mb5.1/1, Ms3.7/1, msh4.2/1*
*MOS **23** 10:44:45.6±1.1, 47°.22N×153°.40E, h64km, mb4.8/24, Error ellipse: s-maj=8.1km s-min=5.4km az=60.9*
*ISCJB **23** 10:44:45.0±0.5, 47°.28N±0°.03×153°.40E±0°.04, h57km±4km, mb4.6/118, MS3.6/19, Error ellipse: s-maj=6.3km s-min=2.8km az=149.7*
*NEIC **23** 10:44:47.6±0.3, 47°.28N×153°.30E, h64km±2km, mb4.6/90, Error ellipse: s-maj=4.3km s-min=2.0km az=153.0*
*IDC **23** 10:44:48.8±2.2, 47°.34N×153°.30E, h75km±20km, mb4.0/27, mb1 4.3/32, mb1mx4.1/73, mbtmp4.4/32, MS3.5/20, Ms1 3.5/20, ms1mx3.3/60, Error ellipse: s-maj=14.4km s-min=9.7km az=148.0*

ISC 23 10:44:45.6±0.4, 47°.19N±0°.05×153°.58E±0°.04, h49km±2km, h49km:pP-P, n592, σ1^{s}27/627, mb4.6/118, MS3.8/21, 8C-8D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril’s	3.87	25	*e*P	Pn	10 45 43.0	+0.5
SKR				AMB	AMB	10 45 46.0	
	418nm,0.5s						
SKR				*e*S	Sn	10 46 26.0	-0.7
SKR				A	A	10 46 31.0	
	836nm,0.5s						
SKR				A	A	10 46 31.0	
	102nm,0.5s						
SKR				AMS	AMS	10 47 45.0	
	400nm,12.0s						
SKR	Severo-Kuril’s	3.87	25	*e*PN	Pn	10 45 43.7	+1.2
SKR				*e*S	Sn	10 46 25.5	-1.2
SKR				pmax	pmax		
	comp=Z,418nm,0.5s						
SKR				smax	smax		
	comp=E,1µm,0.5s						
SKR				smax	smax		
	comp=N,836nm,0.5s						
KUR	Kuril’sk	4.42	246	*i* P	Pn	10 45 51.0	+0.9
KUR				AMB	AMB	10 45 58.0	
	comp=N,93nm,0.3s						
KUR				AMB	AMB	10 45 58.0	
	comp=N,142nm,0.3s						
KUR				AMB	AMB	10 45 58.0	
	comp=N,222nm,0.3s						
KUR				*e*S	Sn	10 46 40.0	-0.3
KUR				A	A	10 46 54.0	
	comp=N,305nm,0.7s						
KUR				A	A	10 46 54.0	
	comp=N,643nm,0.7s						
KUR				AMS	AMS	10 47 31.0	
	comp=N,499nm,15.0s						
KUR	Kuril’sk	4.42	246	*de*PN	Pn	10 45 51.9	+1.8
KUR				*i* S	Sn	10 46 41.0	+0.7
KUR				pmax	pmax		
	comp=E,164nm,0.3s						
KUR				pmax	pmax		
	comp=N,72nm,0.4s						
KUR				pmax	pmax		
	comp=Z,773nm,0.9s						
KUR				smax	smax		
	comp=E,2µm,1.7s						
KUR				smax	smax		
	comp=N,2µm,2.1s						
KUR				smax	smax		
	comp=N,890nm,0.6s						
KUR				smax	smax		
	comp=E,306nm,0.3s						
PAU	Pauzhetka	4.77	25	*e*P	Pn	10 45 54.6	-0.2
PAU				AMB	AMB	10 45 55.3	
	comp=E,152nm,0.7s						
PAU				*e*S	Sn	10 46 47.6	-1.2
PAU				A	A	10 46 51.2	
	comp=E,135nm,0.3s						
SHO	Shikotan	5.79	237	*e*P	Pn	10 46 08.0	-0.8
SHO				AMB	AMB	10 46 22.0	
	comp=E,26nm,0.3s						
SHO				AMB	AMB	10 46 22.0	
	comp=E,83nm,0.3s						
SHO				AMB	AMB	10 46 22.0	
	comp=E,139nm,0.3s						
SHO				*e*S	Sn	10 47 11.0	-2.9
SHO				A	A	10 47 30.0	
	comp=E,162nm,0.6s						
SHO				A	A	10 47 30.0	
	comp=E,522nm,0.6s						
SHO	Shikotan	5.79	237	*e*PN	Pn	10 46 08.0	-0.8
SHO				pmax	pmax		
	comp=E,83nm,0.3s						
SHO				pmax	pmax		
	comp=Z,139nm,0.3s						
SHO				pmax	pmax		
	comp=N,26nm,0.2s						
YUK	Yuzh-Kuril’sk	6.27	243	*e*P	Pn	10 46 16.0	+0.6
YUK				AMB	AMB	10 46 21.0	
	comp=N,83nm,0.2s						
YUK				AMB	AMB	10 46 21.0	
	comp=N,88nm,0.2s						
YUK				AMB	AMB	10 46 21.0	
	comp=N,293nm,0.2s						
YUK				*e*S	Sn	10 47 24.0	-1.6
YUK				A	A	10 47 45.0	
	comp=N,345nm,0.7s						
YUK				A	A	10 47 45.0	
	comp=N,340nm,0.7s						
YUK				AMS	AMS	10 48 44.0	
	comp=N,318nm,13.0s						
YUK	Yuzh-Kuril’sk	6.27	243	PN	Pn	10 46 16.4	+1.0
YUK				*e*S	Sn	10 47 24.5	-1.1
YUK				pmax	pmax		
	comp=N,83nm,0.2s						
YUK				pmax	pmax		
	comp=E,88nm,0.2s						
YUK				pmax	pmax		
	comp=Z,293nm,0.2s						
YUK				smax	smax		
	comp=N,345nm,0.6s						
YUK				smax	smax		
	comp=E,678nm,0.7s						
YUK				MLR	MLR		
	comp=Z,318nm,13.0s						
LAGR	Lagunnoye	6.30	243	*e*P	Pn	10 46 18.0	+2.2
LAGR	Lagunnoye	6.30	243	*e*PN	Pn	10 46 18.4	+2.6
GRPR	Tuman	6.34	243	*e*P	Pn	10 46 17.0	+0.6
GRPR	Tuman	6.34	243	*e*PN	Pn	10 46 17.5	+1.1
PEA0B	Petropavlovsk-	6.49	23	*e*Pn	Pn	10 46 19.9	+1.6
PETK	Petropavlovsk-	6.49	23	P	Pn	10 46 19.5	+1.1
	baz=184,slow=12						
PEA1	Petropavlovsk-	6.49	22	*e*Pn	Pn	10 46 19.4	+1.0
GLVR	Golovnino	6.64	242	*e*P	Pn	10 46 19.0	-1.4
GLVR	Golovnino	6.64	242	*e*PN	Pn	10 46 19.0	-1.4
PET	Petropavlovsk	6.69	27	*e*P	Pn	10 46 21.5	+0.4
PET				AMB	AMB	10 46 29.6	
	comp=Z,50nm,0.7s						
PET				*e*S	Sn	10 47 31.1	-4.7
PET	Petropavlovsk	6.69	27	*e*Pn	Pn	10 46 22.9	+1.9
PET	Petropavlovsk	6.69	27	*e*PN	Pn	10 46 23.1	+2.0
PET				pmax	pmax		
	comp=Z,59nm,0.7s						
PET				MLR	MLR		
	comp=Z,200nm,20.0s						
YSS	Yuzh-Sakhalins	7.40	272	*e*P	Pn	10 46 33.8	+2.9
YSS				AMB	AMB	10 46 37.4	
	comp=Z,70nm,0.6s						
YSS				AMS	AMS	10 49 21.0	
	comp=Z,300nm,14.0s						
YSS				AMS	AMS	10 49 21.0	
	comp=Z,400nm,14.0s						
YSS	Yuzh-Sakhalins	7.40	272	*e*Pn	Pn	10 46 31.5	+0.6
YSS	Yuzh-Sakhalins	7.40	272	⇑*e*PN	Pn	10 46 33.8	+2.9
YSS				pmax	pmax		
	comp=Z,70nm,0.6s						
YSS				MLR	MLR		
	comp=Z,400nm,14.0s						
YSS				MLR	MLR		
	comp=E,300nm,15.0s						
JMP	Maruseppu	7.84	250	P	Pn	10 46 38.2	+1.2
UGL	Uglegorsk	7.94	288	*e*P	Pn	10 46 40.0	+1.8
UGL				AMB	AMB	10 46 43.5	
	comp=E,80nm,1.0s						
TYV	Tymovskoe	8.07	301	*e*P	Pn	10 46 40.8	+0.8
TYV				AMB	AMB	10 46 44.3	
	comp=E,100nm,2.0s						
TYV				AMB	AMB	10 46 44.4	
	comp=E,30nm,1.0s						
TYV				*e*S	Sn	10 48 05.8	-3.9
TYV				A	A	10 48 10.5	
	comp=E,200nm,7.5s						
TYV				A	A	10 48 10.7	
	comp=E,101nm,0.7s						
TYV	Tymovskoe	8.07	301	*e*PN	Pn	10 46 42.0	+2.0
TYV				pmax	pmax		
	comp=Z,200nm,1.9s						
TYV				pmax	pmax		
	comp=Z,35nm,1.0s						
ASAJ	Asahikawa	8.29	252	P	Pn	10 46 45.5	+2.4
	comp=Z,7.7nm,0.3s,baz=81,slow=18,SNR=35						
ASAJ	Asahikawa	8.29	252	*e*Pn	Pn	10 46 44.4	+1.3
ASAJ	Asahikawa	8.29	252	P	Pn	10 46 45.2	+2.1
JWK2	Keihoku	8.31	261	P	Pn	10 46 48.6	+5.2
JEM	Erimo	9.06	239	P	Pn	10 46 53.0	-0.6
ERM	Erimo	9.06	239	*e*Pn	Pn	10 46 53.5	-0.1
ERM	Erimo	9.06	239	*ce*PN	Pn	10 46 52.8	-0.8
JSH	Shimam	10.62	250	P	Pn	10 47 16.3	+1.3
JOT	Ohata	10.69	242	P	Pn	10 47 12.5	-3.5
JTM	Tenmabayashi	11.05	239	P	Pn	10 47 17.4	-3.5
JOM	Ohasama	11.81	234	P	Pn	10 47 26.6	-4.6
MA2	Magadan	12.52	353	P	Pn	10 47 41.3	+0.5
	comp=Z,5.8nm,0.3s,baz=173,slow=11,SNR=27						
MA2				LR	LR	10 52 44.3	
	comp=Z,111nm,18.2s,baz=148,slow=38						
MA2	Magadan	12.52	353	*e*P	Pn	10 47 41.7	+0.9
MA2	Magadan	12.52	353	*e*Pn	Pn	10 47 40.5	-0.3
MA2	Magadan	12.52	353	*i* PN	Pn	10 47 41.7	+0.9
MA2				pmax	pmax		
	comp=Z,70nm,2.5s						
JYA	Atsumi	13.30	235	P	Pn	10 47 47.3	-4.2
SMY	Shemya	14.30	60	*e*Pn	Pn	10 48 06.0	+1.0
SMY				*e*Sn	Sn	10 50 35.7	-6.3
SMY	Shemya	14.30	60	*e*P	Pn	10 48 06.0	+1.0
SMY				*e*		10 50 35.7	
JSD	Sado	14.50	236	P	Pn	10 48 06.4	-1.4
KLR	Kul’dur	14.69	286	P	P	10 48 13.2	-2.2
	comp=Z,0.0nm,0.3s,baz=99,slow=14,SNR=18						
KLR	Kul’dur	14.69	286	*i* P	P	10 48 12.9	-2.5
USA0B	Ussuriysk Arra	15.38	267	*e*Pn	Pn	10 48 18.5	-0.6
	comp=Z,27nm,0.7s						
USRK	Ussuriysk Ar.	15.38	267	P	Pn	10 48 20.3	+1.2
	baz=74,slow=14						
MJB9	Matsu-Tunnel	15.60	233	*e*Pn	Pn	10 48 20.7	-1.5
	comp=Z,15nm,0.5s						
MAJO	Matsushiro	15.60	233	*e*P	Pn	10 48 20.6	-1.5
MAJO	Matsushiro	15.60	233	*e*Pn	Pn	10 48 20.7	-1.5
	comp=Z,15nm,0.5s						
MAJO	Matsushiro	15.60	233	⇓*e*P	Pn	10 48 20.6	-1.5
MAT	Matsushiro	15.60	233	P	Pn	10 48 23.0	+0.9
MJAR	Matsushiro Arr	15.60	233	P	Pn	10 48 22.2	+0.1
	comp=Z,0.5nm,0.3s,baz=31,slow=12,SNR=14						
JGN	Niukaw	16.33	234	P	P	10 48 33.0	-0.6
MDJ	Mudanjiang	16.88	270	P	Pn	10 48 36.5	-1.7
MDJ				pmax	pmax		
	comp=Z,44nm,0.9s						
MDJ				pmax	pmax		
	comp=Z,140nm,5.4s						
MDJ	Mudanjiang	16.88	270	*e*Pn	Pn	10 48 37.3	-0.9
	comp=Z,28nm,0.8s						
INU	Inuyama	17.14	232	*e*Pn	Pn	10 48 39.3	-2.1
	comp=Z,14nm,1.1s						
JHJ	Hachijo jima 2	17.53	222	LR	LR	10 57 01.9	
	comp=Z,48nm,19.4s,baz=97,slow=42						
ZEA	Zeya	17.93	301	*e*P	P	10 48 52.0	+0.8
ZEA				pmax	pmax		
	comp=Z,20nm,0.8s						
JWT	Wachi	18.07	235	P	P	10 48 52.8	0.0
JAD	Aida	19.02	237	P	P	10 49 01.6	-1.6
JHS	Saijyo	19.59	239	P	P	10 49 09.8	+0.3
YAK	Yakutsk	20.13	326	LR	LR	10 56 15.1	
	comp=Z,148nm,21.3s,baz=94,slow=34						
YAK	Yakutsk	20.13	326	*e*P	Pn	10 49 17.7	+0.4
YAK	Yakutsk	20.13	326	*e*P	P	10 49 15.0	0.0
	comp=Z,80nm,0.7s						
YAK	Yakutsk	20.13	326	*e*P	Pn	10 49 17.6	+0.3
YAK				*e*		10 49 35.9	
YAK				*e*S	Sn	10 53 00.5	-2.2
YAK				*e*SS	SnSn	10 53 24.6	+7.0
YAK				pmax	pmax		
	comp=Z,21nm,0.9s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,36nm,1.0s						
YAK				pmax	pmax		
	comp=E,65nm,1.6s						
YAK				smax	smax		
	comp=N,67nm,2.8s						
YAK				smax	smax		
	comp=E,73nm,2.5s						
YAK				MLR	MLR		
	comp=Z,71nm,17.0s						
YAK				MLR	MLR		
	comp=N,61nm,16.0s						
KSRS	Korea Array	21.24	252	P	P	10 49 27.1	-0.2
	comp=N,7.1nm,0.7s,baz=57,slow=9.9,SNR=20						
KSRS				LR	LR	10 57 21.7	
	comp=N,62nm,19.7s,baz=86,slow=36						
KS01	Wonju Array Si	21.24	252	*e*P	P	10 49 27.0	-0.3
KS15	Wonju Array Si	21.27	252	*e*P	P	10 49 26.8	-0.8
KSAR	Wonju Array Be	21.27	252	P	P	10 49 27.1	-0.5
KSAR	Wonju Array Be	21.27	252	P	P	10 49 27.1	-0.5
JNU	Nakatsue	22.22	239	P	P	10 49 39.6	+1.7
	comp=N,4.3nm,0.7s,baz=243,slow=4.5,SNR=3.6						
JNU				LR	LR	10 58 13.5	
	comp=N,116nm,18.4s,baz=122,slow=36						
JNU	Nakatsue	22.22	239	*e*P	P	10 49 38.5	+0.6
	comp=N,12nm,0.7s						
TIXI	Tiksi	27.14	343	P	P	10 50 25.1	+1.6
	comp=N,4.4nm,0.3s,baz=311,slow=9.3,SNR=9.1						
BJI	Beijing	27.81	269	⇑*e*P	P	10 50 33.0	+3.2
BJI				sP	sP	10 50 51.3	+2.9
BJI				pmax	pmax		
	comp=N,9.0nm,0.6s						
H11N2	WAKE ISLAND Hy	29.47	154	T	T	11 22 30.5	
	baz=341,slow=76,SNR=982						
H11N1	WAKE ISLAND Hy	29.48	154	T	T	11 22 33.4	
	baz=341,slow=76,SNR=685						
H11N3	WAKE ISLAND Hy	29.48	154	T	T	11 22 43.8	
	baz=341,slow=76,SNR=479						
NJ2	Nanjing	30.43	253	*e*P	P	10 50 53.8	+0.6
NJ2				pmax	pmax		
	comp=N,21nm,0.6s						
H11S1	WAKE ISLAND Hy	30.57	155	T	T	11 24 05.8	
	baz=342,slow=76,SNR=5072						
H11S3	WAKE ISLAND Hy	30.57	155	T	T	11 24 04.5	
	baz=342,slow=76,SNR=4813						
H11S2	WAKE ISLAND Hy	30.58	155	T	T	11 24 05.2	
	baz=342,slow=76,SNR=3682						
HHC	Hu-ho-hao-te	30.59	274	*e*P	P	10 50 55.6	+1.0
HHC				pP	pP	10 51 10.0	+2.6
HHC				PP	PnPn	10 51 55.9	+0.7
HHC				S	S	10 55 55.1	+2.0
HHC				sS	sS	10 56 17.9	+3.2
HHC				SS	SnSn	10 57 37.6	+4.2
HHC				pmax	pmax		
	comp=N,18nm,1.0s						

HHC				pmax	pmax		
	comp=N,100nm,5.9s						
HHC				LR	LR		
	comp=N,180nm,12.9s						
HHC				LR	LR		
	comp=N,230nm,12.2s						
HHC				LR	LR		
	comp=N,160nm,14.7s						
ULN	Ulaanbaatar	31.06	289⇑	eP	P	10 50 56.6	-2.2
ULN				pmax	pmax		
	comp=Z,1.0nm,1.0s						
SONA0	Songino Array	31.49	289	eP	P	10 51 01.4	-1.2
SONM	Songino Array	31.49	289	P	P	10 51 01.4	-1.2
	comp=Z,1.0nm,0.6s,baz=73,slow=9.7,SNR=5.9						
SVW2	Sparrevohn	31.95	45	eP	P	10 51 08.1	+1.8
TLY	Talaya	32.27	297⇓	eP	P	10 51 11.2	+2.0
TLY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
RSO	Redoubt South	33.33	47	eP	P	10 51 19.9	+1.3
KDAK	Kodiak Island	33.58	51	P	P	10 51 20.7	+0.3
	comp=Z,23nm,0.7s,baz=303,slow=1.9,SNR=49						
KDAK	Kodiak Island	33.58	51	eP	P	10 51 20.6	+0.1
KDAK	Kodiak Island	33.58	51	eP	P	10 51 20.9	+0.4
	comp=Z,21nm,0.8s						
KDAK	Kodiak Island	33.58	51	eP	P	10 51 20.9	+0.4
KDAK				pmax	pmax		
	comp=Z,21nm,0.8s						
PPLA	Purkeypile	33.62	42	eP	P	10 51 22.7	+1.6
	comp=Z,35nm,1.6s						
SKT	Skwentna	33.91	44	eP	P	10 51 24.5	+1.1
	comp=Z,7.3nm,0.9s						
BPAW	Bear Paw Mtn.	34.21	40	eP	P	10 51 27.4	+1.4
	comp=Z,3.7nm,1.0s						
COLD	Coldfoot	34.79	35	eP	P	10 51 32.1	+1.2
	comp=Z,4.9nm,0.6s						
TOLK	Toolik Lake Re	35.20	32	P	P	10 51 35.7	+1.1
	baz=262,SNR=5.4						
TOLK	Toolik Lake Re	35.20	32	eP	P	10 51 35.3	+0.8
	comp=Z,5.8nm,0.6s						
SML	Sawmill	35.43	44	eP	P	10 51 37.7	+1.2
	comp=Z,33nm,0.9s						
SML	Sawmill	35.43	44	eP	P	10 51 37.7	+1.2
SML				pmax	pmax		
	comp=Z,33nm,0.9s						
MDM	Murphy Dome	35.43	39	eP	P	10 51 37.8	+1.3
	comp=Z,4.7nm,0.8s						
COLA	College	35.59	39	eP	P	10 51 39.0	+1.2
	comp=Z,13nm,0.8s						
COLA	College	35.59	39	eP	P	10 51 39.0	+1.2
COLA				pmax	pmax		
	comp=Z,13nm,0.8s						
CCB	Clear Creek Bu	35.61	39	eP	P	10 51 39.3	+1.3
	comp=Z,3.5nm,0.6s						
DHY	Denali Highway	35.82	42	eP	P	10 51 40.9	+0.9
	comp=Z,7.7nm,1.1s						
XAN	Xi’an	35.88	265	P	P	10 51 41.5	+0.8
XAN				pmax	pmax		
	comp=Z,9.0nm,0.7s						
XAN				pmax	pmax		
	comp=Z,350nm,4.3s						
SCM	Sheep Creek Mo	35.90	44	eP	P	10 51 41.9	+1.2
	comp=Z,31nm,1.5s						
SCM	Sheep Creek Mo	35.90	44	eP	P	10 51 41.9	+1.2
SCM				pmax	pmax		
	comp=Z,31nm,1.5s						
ILAR	Eielson Array	36.00	39	P	P	10 51 42.1	+0.8
	comp=Z,0.8nm,0.4s,baz=261,slow=7.9,SNR=20						
ILB	Eielson Array	36.00	39	eP	P	10 51 42.0	+0.7
IL1	Eielson Array	36.00	39	eP	P	10 51 41.7	+0.3
KLU	Klutina	36.60	44	eP	P	10 51 47.9	+1.3
	comp=Z,13nm,1.1s						
FYU	Fort Yukon	36.70	36	eP	P	10 51 48.9	+1.6
	comp=Z,10nm,0.8s						
RIDG	Independ’e Rid	36.93	41	eP	P	10 51 50.4	+1.1
	comp=Z,9.2nm,1.1s						
SCRK	Sand Creek	37.29	40	eP	P	10 51 53.1	+0.6
	comp=Z,19nm,1.9s						
BMRM	Bremner River	37.29	45	eP	P	10 51 53.8	+1.3
	comp=Z,15nm,1.0s						
CRQM	Cirque	38.03	45	eP	P	10 52 00.4	+1.6
	comp=Z,24nm,0.8s						
LZH	Lanzhou	38.20	272	eP	P	10 52 02.6	+2.1
LZH				pP	sP	10 52 17.3	-2.0
LZH				sP	pP	10 52 24.8	+11
LZH				pmax	pmax		
	comp=Z,21nm,1.0s						
EGAK	Eagle	38.45	39	eP	P	10 52 03.0	+0.9
	comp=Z,9.7nm,1.1s						
DAWY	Dawson	39.29	40	eP	P	10 52 10.8	+1.5
	comp=Z,5.2nm,1.3s						
INK	Inuvik	41.11	33	P	P	10 52 25.7	+1.7
	comp=Z,3.5nm,0.6s,baz=284,slow=3.4,SNR=15						
INK	Inuvik	41.11	33	eP	P	10 52 25.1	+1.1
	comp=Z,4.6nm,0.8s						
WHY	Whitehorse	42.02	44	eP	P	10 52 31.8	0.0
	comp=Z,4.6nm,0.8s						
ZAA1	Zalesovo Array	42.61	306	eP	P	10 52 36.1	-0.4
ZALV	Zalesovo Beam	42.62	306	P	P	10 52 36.1	-0.5
	comp=Z,1.6nm,0.5s,baz=67,slow=6.6,SNR=4.3						
JIS	Juneau Island	42.94	48	eP	P	10 52 41.0	+1.8
	comp=Z,8.9nm,0.8s						
DLBC	Dease Lake	45.05	46	eP	P	10 52 58.2	+2.0
	comp=Z,5.6nm,0.8s						
WMQ	Urumqi	45.07	291	P	P	10 52 58.5	+2.0
WMQ				LR	LR		
	comp=Z,210nm,18.7s						
WMQ				LR	LR		
	comp=Z,260nm,24.5s						
MK31	Makanchi Array	47.03	297	eP	P	10 53 10.6	-1.2
MK31	Makanchi Array	47.03	297	eP	P	10 53 10.6	-1.2
MK32	Makanchi Array	47.03	297	eP	P	10 53 09.7	-2.1
MKAR	Makanchi Array	47.03	297	P	P	10 53 09.7	-2.1
	comp=Z,1.0nm,0.5s,baz=68,slow=6.0,SNR=15						
MKAR	Makanchi Array	47.03	297	eP	P	10 53 10.3	-1.5
	comp=Z,13nm,0.4s						
MKAR	Makanchi Array	47.03	297	i P	P	10 53 11.5	-0.3
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
MK01	Makanchi Array	47.03	297	eP	P	10 53 10.4	-1.5
KURK	Kurchatov	47.39	303	eP	P	10 53 13.4	-1.1
KURK	Kurchatov	47.39	303	eP	P	10 53 12.7	-1.8
KURK				eP	P	10 53 13.1	-1.4
KURK	Kurchatov	47.39	303	eP	P	10 53 12.7	-1.8
KURBB	Kurchatov Arra	47.48	303	P	P	10 53 12.7	-2.6
	comp=Z,2.9nm,0.6s,baz=68,slow=8.4,SNR=16						
YKW3	Yellowknife Ar	50.34	37	eP	P	10 53 38.1	+1.2
	comp=Z,6.8nm,0.9s						
YKA	Yellowknife Ar	50.38	37	P	P	10 53 38.3	+1.1
	comp=Z,5.6nm,0.7s,baz=295,slow=7.0,SNR=35						
YKA	Yellowknife Ar	50.38	37	eP	P	10 53 38.2	+1.0
YKA	Yellowknife Ar	50.38	37	i P	P	10 53 38.2	+1.0
YKA				pmax	pmax		
	comp=Z,6.0nm,0.7s						
LSA	Lhasa	50.57	273	eP	P	10 53 39.5	-0.3
	comp=Z,8.3nm,0.6s						
BVAR	Borovoye Array	50.83	309	P	P	10 53 40.0	-0.8
	comp=Z,2.3nm,0.6s,baz=65,slow=6.8,SNR=11						
BVAR	Borovoye Array	50.83	309	P	P	10 53 40.0	-0.8
BVAR	Borovoye Array	50.83	309	P	P	10 53 40.0	-0.8
BRVK	Borovoye	50.87	309	eP	P	10 53 40.8	-0.3
BRVK	Borovoye	50.87	309	eP	P	10 53 40.4	-0.7
	comp=Z,3.9nm,0.7s						
BRVK	Borovoye	50.87	309	eP	P	10 53 40.4	-0.7
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
PAYA	Payao	51.53	256	P	P	10 53 48.6	+2.1
	comp=Z,3.1nm,0.7s,comp=Z,295nm						
UTTA	Uttaradit	52.23	254	P	P	10 53 53.6	+1.9
	comp=Z,2.6nm,0.7s						
SPITS	Spitsbergen Ar	52.24	350	LR	LR	11 16 28.1	
	comp=Z,45nm,20.4s,baz=240,slow=36						
CMMT	Chiang Mai	52.53	257	P	P	10 53 55.5	+1.6
	comp=Z,9.3nm,0.7s						
CHTO	Chiang Mai	52.53	257	eP	P	10 53 53.6	-0.3
	comp=Z,6.7nm,0.8s						
CHTO	Chiang Mai	52.53	257	eP	P	10 53 53.6	-0.3
CHTO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
SHL	Shillong	52.70	269	eP	P	10 53 53.6	-1.7
	comp=Z,18nm,0.9s						
SHL	Shillong	52.70	269	eP	P	10 53 53.6	-1.7
SHL				pmax	pmax		
	comp=Z,18nm,0.9s						
CMAR	Chiang Mai Arr	52.79	256	P	P	10 53 55.6	-0.2
	comp=Z,1.9nm,0.3s,baz=35,slow=7.6,SNR=8.1						
CMAR				LR	LR	11 15 48.2	
	comp=Z,28nm,21.6s,baz=170,slow=35						
B05A	Bryant	53.90	55	P	P	10 54 04.2	+0.7
	baz=303						
KSH	Kashi	54.78	292	eP	P	10 54 14.0	+3.7
KSH				ePcP	PcP	10 55 15.8	+3.6
BRDH	Bariadhala	54.78	266	LR	LR	11 18 49.8	
	comp=Z,94nm,18.4s,baz=60,slow=37						
ARU	Arti	54.91	317	eP	P	10 54 10.4	-0.4
ARU	Arti	54.91	317	eP	P	10 54 09.9	-0.8
	comp=Z,4.7nm,0.7s						
ARU	Arti	54.91	317c	iP	P	10 54 08.2	-2.6
ARU				*PP	pP	10 54 21.3	-3.1
ARU						10 55 09.9	
ARU						10 56 09.1	
ARU				S	S	11 01 45.0	-3.3
ARU				SS	SS	11 05 26.4	-5.1
ARU				pmax	pmax		
	comp=Z,4.0nm,0.6s						
JIRN	Jiri	55.23	275	eP	P	10 54 13.1	-0.9
	comp=Z,32nm,0.4s						
GUN	Gumba	55.28	275	eP	P	10 54 13.8	-0.5
	comp=Z,13nm,0.4s						
RAMN	Ramite	55.41	274	eP	P	10 54 14.3	-0.8
	comp=Z,22nm,0.6s						
DMN	Daman	56.00	275	eP	P	10 54 18.7	-0.7
	comp=Z,5.6nm,0.4s						
GKN	Gorkha	56.07	276	eP	P	10 54 19.1	-0.6
	comp=Z,27nm,0.8s						
I04A	Tendick Farm,	56.22	60	P	P	10 54 21.9	+1.4
	baz=306						
DANN	Dangsing	56.44	277	eP	P	10 54 22.7	+0.1
	comp=Z,33nm,0.6s						
I05D	Terrebonne, OR	56.54	59	P	P	10 54 24.4	+1.6
	baz=306						
J04D	Umpqua Nationa	56.72	60	P	P	10 54 25.0	+0.7
	baz=306						
KOLN	Koldanda	56.92	276	eP	P	10 54 25.3	-0.6
	comp=Z,16nm,0.6s						
PINE	Pine Mountain	57.09	59	eP	P	10 54 28.7	+1.8
	comp=Z,7.1nm,0.9s						
PYUN	Piuthan	57.12	277	eP	P	10 54 27.5	+0.2
J05D	Fort Rock, OR	57.22	60	P	P	10 54 29.3	+1.7
	baz=306						
YBH	Yreka Blue Hor	57.25	62	LR	LR	11 15 20.6	
	comp=Z,21nm,21.8s,baz=291,slow=32						
M02C	Callahan	57.37	63	P	P	10 54 30.6	+1.9
	baz=307						
ARA0	ARCESS Array S	57.54	341	eP	P	10 54 29.0	-0.4
ARCES	ARCESS Array B	57.54	341	P	P	10 54 29.0	-0.4
	comp=Z,1.6nm,0.6s,baz=38,slow=8.0,SNR=4.8						
ARCES	ARCESS Array B	57.54	341	P	P	10 54 29.0	-0.4
N02D	Trinity Center	57.70	63	P	P	10 54 32.9	+1.8
	baz=307						
M04C	Macdoel	57.74	62	P	P	10 54 32.9	+1.5
	baz=307						
WALA	Waterton Lakes	57.91	51	eP	P	10 54 33.8	+1.4
	comp=Z,6.6nm,0.8s						
JTMT	Jette	58.50	52	eP	P	10 54 38.1	+1.6
	comp=Z,3.3nm,0.7s						
BMO	Blue Mountains	58.56	56	eP	P	10 54 38.7	+1.7
	comp=Z,3.0nm,0.8s						
BMO	Blue Mountains	58.56	56	eP	P	10 54 38.7	+1.7
BMO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MOD	Modoc Plateau	58.59	61	eP	P	10 54 39.2	+1.9
	comp=Z,3.9nm,0.8s						
O03D	Paynes Creek	58.66	63	P	P	10 54 39.1	+1.4
	baz=308						
AKTO	Aktyubinsk	58.67	312	LR	LR	11 21 37.7	
	comp=Z,83nm,18.8s,baz=62,slow=38						
MSO	Missoula	59.24	53	P	P	10 54 42.8	+1.1
	baz=308,SNR=6.5						
MSO	Missoula	59.24	53	eP	P	10 54 43.1	+1.4
	comp=Z,12nm,1.4s						
WVOR	Wild Horse Val	59.25	59	eP	P	10 54 43.7	+1.8
	comp=Z,4.3nm,0.8s						
WVOR	Wild Horse Val	59.25	59	eP	P	10 54 43.7	+1.8
WVOR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
NIL	Nilore	60.07	288	eP	P	10 54 47.1	-0.4
	comp=Z,14nm,1.1s						
NIL	Nilore	60.07	288	eP	P	10 54 47.1	-0.4
NIL				pmax	pmax		
	comp=Z,14nm,1.1s						
FFC	Flin Flon	60.19	40	eP	P	10 54 48.0	0.0
	comp=Z,7.5nm,0.9s						
FFC	Flin Flon	60.19	40	eP	P	10 54 48.0	0.0
FFC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
SUMG	Summit	60.24	4	eP	P	10 54 48.4	-0.1
	comp=Z,26nm,0.9s						
SUMG	Summit	60.24	4	i P	P	10 54 48.4	-0.1
	comp=Z,24nm,0.9s						
LRM	Limekiln Ridge	60.67	53	eP	P	10 54 53.2	+1.5
LRM				epP	pP	10 55 06.7	+1.2
EGMT	Eagleton	60.73	50	P	P	10 54 52.8	+1.0
	baz=309,SNR=5.2						
EGMT	Eagleton	60.73	50	eP	P	10 54 53.4	+1.5
	comp=Z,10nm,1.1s						
PNTR	Pine Nut	60.74	63	eP	P	10 54 54.1	+1.8
	comp=Z,5.2nm,0.6s						
HLID	Hailey	60.99	56	P	P	10 54 55.3	+1.4
	baz=309						
HLID	Hailey	60.99	56	eP	P	10 54 55.3	+1.4
HLID				epP	pP	10 55 09.2	+1.6
BOZ	Bozeman (W)	61.26	53	P	P	10 54 57.2	+1.6
	baz=310,SNR=8.8						
BOZ	Bozeman (W)	61.26	53	eP	P	10 54 57.1	+1.6
	comp=Z,12nm,1.4s						
BOZ	Bozeman (W)	61.26	53	eP	P	10 54 57.1	+1.6
BOZ				pmax	pmax		
	comp=Z,12nm,1.4s						
BMN	Battle Mountai	61.33	60	eP	P	10 54 57.9	+1.8
	comp=Z,4.7nm,0.6s						
BMN				epP	pP	10 55 11.6	+1.7
BMN	Battle Mountai	61.33	60	eP	P	10 54 57.9	+1.8
BMN				e*PP	pP	10 55 11.6	+1.7
BMN				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KVN	Kaiserville	61.67	62	eP	P	10 54 60.0	+1.5
	comp=Z,4.1nm,1.0s						
KVN				epP	pP	10 55 14.3	+2.0
KVN	Kaiserville	61.67	62	eP	P	10 55 00.0	+1.5
KVN				e*PP	pP	10 55 14.3	+2.0
KVN				pmax	pmax		
	comp=Z,4.0nm,1.0s						
RYN	Ryan	61.69	63	eP	P	10 55 00.1	+1.5
	comp=Z,2.6nm,0.8s						
RYN				epP	sP	10 55 16.8	-1.2
NV01	Mina Array Sit	61.94	63	eP	P	10 55 01.9	+1.5
NVAR	Mina Array Bea	61.94	63	P	P	10 55 01.9	+1.5
	comp=Z,2.4nm,0.7s,baz=298,slow=7.5,SNR=18						
YHB	Horse Butte	62.04	53	eP	P	10 55 02.8	+1.9
	comp=Z,4.7nm,0.9s						
MLAC	Mammoth, Mammo	62.13	64	P	P	10 55 02.6	+0.9
	baz=310						
GCMT	Greycliff	62.20	52	eP	P	10 55 02.3	+0.5
H17A	Grant Village	62.60	53	P	P	10 55 07.6	+2.8
	baz=310						
H17A	Grant Village	62.60	53	eP	P	10 55 06.4	+1.7
	comp=Z,6.6nm,1.2s						
H17A				epP	sP	10 55 23.9	-0.3
IMW	Indian Meadow	62.73	54	eP	P	10 55 07.4	+1.8
	comp=Z,3.0nm,1.0s						
FXWY	Fox Creek	62.84	54	eP	P	10 55 08.0	+1.7
	comp=Z,4.2nm,1.3s						
RLMT	Red Lodge	62.84	52	P	P	10 55 07.8	+1.5
	baz=311						
RLMT	Red Lodge	62.84	52	eP	P	10 55 08.4	+2.1
	comp=Z,5.6nm,1.0s						
MOOW	Moose Ponds	62.93	54	eP	P	10 55 08.9	+2.0
	comp=Z,8.2nm,1.6s						
TPAW	Teton Pass	62.98	54	eP	P	10 55 09.3	+2.0
	comp=Z,5.4nm,0.9s						
SNOW	Snow King Moun	63.11	54	eP	P	10 55 10.1	+1.9
	comp=Z,6.0nm,1.1s						
REDW	Red Top Meadow	63.12	54	eP	P	10 55 09.9	+1.8
	comp=Z,5.7nm,0.9s						
VES	Vestal, Richgr	63.12	65	P	P	10 55 08.7	+0.8
	baz=310						
DGMT	Dagmar	63.27	47	P	P	10 55 09.6	+0.8
	baz=312						
DGMT	Dagmar	63.27	47	eP	P	10 55 09.8	+1.0
	comp=Z,11nm,0.7s						
PKM	Mcpherson Peak	63.28	67	P	P	10 55 10.9	+1.6
	baz=311						
CWC	Cottonwood Cre	63.35	64	P	P	10 55 11.0	+1.3
	baz=311						
LAO	LASA Array	63.42	49	P	P	10 55 11.3	+1.4
	baz=312,SNR=5.4						
LAO	LASA Array	63.42	49	eP	P	10 55 10.9	+1.0
	comp=Z,12nm,0.9s						
LAO				epP	sP	10 55 28.6	-0.7
R11A	Troy Canyon, C	63.63	61	P	P	10 55 12.8	+1.2
	baz=311,SNR=6.0						
R11A	Troy Canyon, C	63.63	61	eP	P	10 55 12.9	+1.3
R11A				epP	sP	10 55 28.8	-2.2
FIA0	FINESS Array S	63.78	335	eP	P	10 55 10.6	-1.3
FIA0	FINESS Array S	63.78	335	eP	P	10 55 10.6	-1.3
FINES	FINESS Array B	63.78	335	P	P	10 55 10.6	-1.3
	comp=Z,3.1nm,0.4s,baz=38,slow=5.9,SNR=20						
FINES				LR	LR	11 24 47.7	
	comp=Z,73nm,19.0s,baz=30,slow=38						
HWUT	Hardware Ranch	63.86	56	eP	P	10 55 14.7	+1.7
	comp=Z,11nm,1.5s						
MPMC	Manual Prospec	63.96	64	P	P	10 55 15.1	+1.3
	baz=311						
SCZ2	Santa Cruz Isl	63.97	67	P	P	10 55 14.6	+0.9
	baz=311						
DUG	Dugway, Tooele	64.07	58	P	P	10 55 15.8	+1.5
	baz=311,SNR=5.1						
DUG	Dugway, Tooele	64.07	58	eP	P	10 55 15.9	+1.5
DUG				epP	pP	10 55 29.5	+1.3
DUG	Dugway, Tooele	64.07	58	eP	P	10 55 15.9	+1.6
DUG				e*PP	pP	10 55 29.5	+1.3
FURC	Furnace Creek,	64.08	64	P	P	10 55 15.8	+1.6
	baz=311,SNR=5.8						
TPNV	Topopah Spring	64.14	63	P	P	10 55 16.3	+1.3
	baz=311						
BW06	Boulder Array	64.23	54	P	P	10 55 16.4	+0.9
	baz=312,SNR=6.0						
BW06	Boulder Array	64.23	54	eP	P	10 55 16.5	+1.1
	comp=Z,4.3nm,1.0s						
PD31	Pinedale Array	64.23	54	eP	P	10 55 16.4	+0.9
PDAR	Pinedale Array	64.23	54	P	P	10 55 16.6	+1.2
	comp=Z,1.9nm,0.7s,baz=286,slow=1.5,SNR=24						
PDAR	Pinedale Array	64.23	54	eP	P	10 55 16.3	+0.9
EDW2	Edwards Air Fo	64.42	66	P	P	10 55 17.8	+1.2
	baz=311						
NLU	North Lily Min	64.65	58	epP	pP	10 55 38.1	+6.0
GSC	Goldstone, Bar	64.88	65	P	P	10 55 20.6	+1.0
	baz=311						
BFSC	Mount Baldy Ra	65.05	66	P	P	10 55 21.6	+0.8
	baz=312						
CIS	Catalina Islan	65.13	67	P	P	10 55 23.1	+1.9
	baz=312						
TUQ	Turquoise Moun	65.33	64	P	P	10 55 23.7	+1.1
	baz=312						
HEC	Hector,Ludlow	65.48	65	P	P	10 55 24.8	+1.3
	baz=312						
CCUT	Cedar City	65.48	61	eP	P	10 55 25.3	+1.5
	comp=Z,2.2nm,0.8s						
BBRC	Big Bear Solar	65.49	66	P	P	10 55 25.0	+1.1
	baz=312						
TMUT	Trail Mountain	65.59	58	eP	P	10 55 26.0	+1.5
TMUT				epP	sP	10 55 41.9	-2.1
MURC	Murrieta	65.76	66	P	P	10 55 26.4	+1.1
	baz=312						
LCMT	Little Creek M	65.91	61	eP	P	10 55 27.9	+1.5
	comp=Z,4.7nm,0.8s						
LCMT				epP	pP	10 55 41.6	+1.3
P18A	Preston Nutter	65.92	57	eP	P	10 55 28.1	+1.5
P18A				epP	sP	10 55 44.0	-2.2
GMRC	Granite Mounta	65.92	64	P	P	10 55 27.2	+0.7
	baz=312						
MDND	Maddock	65.94	45	P	P	10 55 27.2	+1.0
	baz=315						
MDND	Maddock	65.94	45	eP	P	10 55 27.4	+1.2
	comp=Z,16nm,0.7s						
K22A	Casper	65.97	53	P	P	10 55 27.7	+1.0
	baz=313						
ULM	Lac du Bonnet	65.98	41	P	P	10 55 25.6	-0.8
	comp=Z,2.6nm,0.8s,baz=342,slow=3.2,SNR=3.0						
SRU	San Rafael Swe	66.11	58	eP	P	10 55 29.3	+1.6
	comp=Z,5.8nm,0.7s						
SRU	San Rafael Swe	66.11	58	eP	P	10 55 29.3	+1.6
SRU				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KNB	Kanab	66.16	61	eP	P	10 55 30.0	+2.0
	comp=Z,4.3nm,0.9s						
KNB				epP	pP	10 55 43.8	+1.9
FRD	Ford Ranch, An	66.20	66	P	P	10 55 29.1	+0.9
	baz=312						
BELC	Belle Mtn. Jos	66.24	65	P	P	10 55 29.6	+1.1
	baz=312						
RSSD	Black Hills	66.29	50	P	P	10 55 29.5	+0.7
	baz=314						
RSSD	Black Hills	66.29	50	eP	P	10 55 29.5	+0.7
	comp=Z,9.8nm,1.1s						
RSSD	Black Hills	66.29	50	eP	P	10 55 29.5	+0.7
RSSD				pmax	pmax		
	comp=Z,10.0nm,1.1s						
GEYT	Alibeck	66.65	301	LR	LR	11 26 41.2	
	comp=Z,58nm,19.2s,baz=215,slow=38						
IRM	Iron Mountain	66.66	65	P	P	10 55 32.2	+1.1
	baz=312						
MONP2	Monument Peak	66.71	66	P	P	10 55 32.3	+0.7
	baz=312						
BC3	Big Chuckawall	66.81	65	P	P	10 55 33.0	+0.9
	baz=312						
IKP	In-Ko-Pah, Jac	67.07	66	P	P	10 55 34.5	+0.7
	baz=312						
A33A	Warroad	67.14	42	P	P	10 55 33.9	0.0
	baz=317						
PDMCI	Parker Dam,Lak	67.18	64	P	P	10 55 35.3	+1.1
	baz=313						
Y12C	Blythe	67.31	64	P	P	10 55 36.1	+0.9
	baz=313						
PV09	Paradox Valley	67.32	58	eP	P	10 55 36.6	+1.1
PV21	Cone Mtn., Par	67.37	57	eP	P	10 55 36.9	+1.1
PV21				epP	pP	10 55 50.9	+1.2
AGMN	Agassiz Nation	67.39	43	P	P	10 55 35.4	0.0
	baz=316						
PV14	Lion Creek, Pa	67.47	58	eP	P	10 55 37.5	+1.1
PV14				epP	sP	10 55 53.8	-2.2
PV22	Blue Mesa, Par	67.50	57	eP	P	10 55 37.7	+1.2
	comp=Z,5.4nm,0.9s						
PV17	East Wray Mesa	67.57	58	eP	P	10 55 38.3	+1.3
PV17				epP	pP	10 55 51.5	+0.6
PV16	Nyswonger Mesa	67.58	58	eP	P	10 55 37.9	+0.9
	comp=Z,12nm,1.3s						
PV18	Skein Mesa, Pa	67.62	58	eP	P	10 55 38.6	+1.3
PV18				epP	pP	10 55 52.1	+0.8
PV12	Saucer Basin,	67.64	57	eP	P	10 55 39.0	+1.6
	comp=Z,12nm,1.3s						
PV03	Paradox Valley	67.65	58	eP	P	10 55 38.4	+0.8
PV13	Radium Mtn., P	67.73	58	eP	P	10 55 39.2	+1.1
PV13				epP	pP	10 55 52.8	+0.8
C33A	Trail	67.82	43	P	P	10 55 38.7	+0.5
	baz=317						
NB2	NORSAR Subarra	67.91	341	P	P	10 55 37.5	-1.1
	comp=Z,1.9nm,0.5s,baz=26,slow=6.5						
NB2	NORSAR Subarra	67.91	341	P	P	10 55 40.0	+1.4
NOA	NORSAR Array B	67.91	341	P	P	10 55 37.9	-0.7
	comp=Z,3.6nm,0.7s,baz=26,slow=6.3,SNR=12						
NOA				LR	LR	11 28 21.1	
	comp=Z,32nm,19.4s,baz=295,slow=39						
WUAZ	Wupatki	68.03	61	P	P	10 55 40.0	+0.1
	baz=313						
SMCO	Snowmass	68.09	56	eP	P	10 55 41.7	+1.2
SMCO				epP	pP	10 55 54.2	-0.3
HFS	Hagfors	68.16	340	P	P	10 55 39.2	-0.8
	comp=Z,6.8nm,0.5s,baz=47,slow=6.3,SNR=36						
C34A	RKJ Ranch, Bem	68.30	43	P	P	10 55 41.4	+0.3
	baz=317						
B35A	Bob, Littlefor	68.32	41	P	P	10 55 40.9	-0.3
	baz=318						
BORG	Borgarnes	68.33	358	LR	LR	11 27 11.6	
	comp=Z,44nm,18.8s,baz=314,slow=37						
ISCO	Idaho Springs	68.42	54	P	P	10 55 43.4	+0.9
	baz=314						
ISCO	Idaho Springs	68.42	54	eP	P	10 55 43.6	+1.2
	comp=Z,2.8nm,0.8s						
ISCO	Idaho Springs	68.42	54	eP	P	10 55 43.7	+1.2
ISCO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MVCO	Mesa Verde	68.57	58	P	P	10 55 44.4	+1.0
	baz=314						
C35A	Jirik Farms, M	68.69	42	P	P	10 55 43.5	-0.1
	baz=318						
G32A	Webster	68.81	46	P	P	10 55 45.3	+0.9
	baz=316						
WR1	Warramunga Arr	69.03	199	eP	P	10 55 45.8	-0.2

	comp=Z,5.3nm,0.8s						
WRA	Warramunga Arr	69.04	199	P	P	10 55 45.8	-0.2
	comp=Z,2.4nm,0.6s,baz=18,slow=6.7,SNR=25						
D35A	Remer	69.11	43	P	P	10 55 46.8	+0.6
	baz=318						
S22A	4UR Ranch, Cre	69.16	57	P	P	10 55 48.1	+1.0
	baz=314						
Q24A	Divide	69.26	55	P	P	10 55 48.5	+0.8
	baz=315						
D36A	Goodland	69.45	42	P	P	10 55 48.9	+0.6
	baz=318						
C37A	Embarrass	69.48	41	P	P	10 55 48.3	-0.2
	baz=319						
F34A	Alexandria	69.49	44	P	P	10 55 49.4	+0.8
	baz=318						
OGNE	Ogallala	69.57	52	P	P	10 55 49.9	+0.6
	baz=316						
OGNE	Ogallala	69.57	52	*e*P	P	10 55 50.4	+1.1
OGNE				*e*pP	pP	10 56 03.8	+0.6
214A	Organ Pipe Nat	69.59	65	P	P	10 55 50.4	+1.0
	baz=314						
G34A	Benson	69.72	45	P	P	10 55 50.1	+0.2
	baz=318						
F35A	Swanville	69.77	44	P	P	10 55 50.6	+0.3
	baz=318						
D37A	Cotton	69.80	42	P	P	10 55 50.9	+0.5
	baz=319						
E36A	McGregor	69.90	43	P	P	10 55 51.1	0.0
	baz=318,SNR=5.1						
SDCO	Great Sand Dun	69.91	56	P	P	10 55 52.1	+0.4
	baz=315						
F36A	Milaca	70.26	43	P	P	10 55 53.1	-0.2
	baz=318						
ECSD	EROS Data Cent	70.35	46	P	P	10 55 54.1	+0.2
	baz=317,SNR=11						
ECSD	EROS Data Cent	70.35	46	*e*P	P	10 55 54.5	+0.6
	comp=Z,8.2nm,0.8s						
H35A	Sunnyside Ranc	70.50	45	P	P	10 55 55.4	+0.6
	baz=318,SNR=7.2						
TUC	Tucson	70.59	63	P	P	10 55 56.9	+1.3
	baz=314						
E38A	The Farm, Brul	70.61	42	P	P	10 55 55.1	-0.4
	baz=319						
KIV	Kislovodsk	70.72	314	*e*P	P	10 55 57.3	+1.0
KIV	Kislovodsk	70.72	314⇑	*e*P	P	10 55 57.3	+1.0
KIV				*i*		10 56 13.6	
KIV				*i*		10 58 29.7	
KIV				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KIV				MLR	MLR		
	comp=Z,75nm,17.0s						
F38A	Pierce - Schro	70.95	42	P	P	10 55 58.0	+0.5
	baz=319,SNR=5.8						
T25A	Trinidad	70.96	56	P	P	10 55 58.7	+0.8
	baz=315						
T25A	Trinidad	70.96	56	*e*P	P	10 55 58.9	+0.9
T25A				*e*pP	sP	10 56 17.1	-0.5
H36A	Jessenland, He	71.03	44	P	P	10 55 59.1	+1.1
	baz=318						
SPMN	Marine on St.	71.07	43	P	P	10 55 59.2	+1.0
	baz=319						
E39A	Mellen	71.23	41	P	P	10 55 59.2	0.0
	baz=320						
BGNE	Belgrade	71.27	49	P	P	10 55 59.7	+0.1
	baz=317						
TASM	ASL Pad, Albuq	71.33	59	P	P	10 56 01.2	+1.0
	baz=315						
ANMO	Albuquerque	71.33	59	LR	LR	11 24 59.2	
	comp=Z,14nm,21.2s,baz=292,slow=34						
ANMO	Albuquerque	71.33	59	P	P	10 56 01.3	+1.1
	baz=315						
ANMO	Albuquerque	71.33	59	*e*P	P	10 56 01.5	+1.3
	comp=Z,2.1nm,0.9s						
ANMO	Albuquerque	71.33	59⇓	*e*P	P	10 56 01.7	+1.5
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.2s						
TASL	Snake Pit, Alb	71.33	59	P	P	10 56 01.3	+1.1
	baz=315						
AKASG	Malin Array Be	71.36	326	P	P	10 55 58.1	-1.7
	comp=Z,3.3nm,0.4s,baz=35,slow=6.2,SNR=11						
I36A	Fitzsimmons Fa	71.40	45	P	P	10 56 00.4	+0.1
	baz=319						
F39A	Loretta	71.42	42	P	P	10 56 00.7	+0.3
	baz=320						
E40A	Wakefield	71.47	41	P	P	10 56 01.1	+0.4
	baz=320						
H37A	Dierke Farm, C	71.50	44	P	P	10 56 01.4	+0.5
	baz=319						
G38A	Ridgeland	71.56	43	P	P	10 56 01.4	+0.3
	baz=320						
I37A	Lemond, Waseca	71.70	44	P	P	10 56 02.4	+0.4
	baz=319,SNR=7.2						
I37A	Lemond, Waseca	71.70	44	*e*P	P	10 56 03.0	+1.0
	comp=Z,26nm,0.7s						
I37A				*e*pP	PcP	10 56 19.1	-1.9
J36A	Seneca 1, Swea	71.76	45	P	P	10 56 02.9	+0.4
	baz=319						
F40A	Park Falls	71.78	41	P	P	10 56 02.5	0.0
	baz=320						
E41A	Kenton	71.87	40	P	P	10 56 03.1	+0.1
	baz=321						
J37A	Redenius Farm,	72.15	45	P	P	10 56 05.4	+0.5
	baz=319						
I38A	Scanlan Farm,	72.19	44	P	P	10 56 05.2	+0.2
	baz=320						
H39A	Augusta	72.19	43	P	P	10 56 05.3	+0.3
	baz=320						
K36A	Gilmore City	72.22	46	P	P	10 56 05.2	0.0
	baz=319						
G40A	Rib Lake	72.24	42	P	P	10 56 05.4	+0.1
	baz=320						
121A	Cookes Peak, D	72.24	61	P	P	10 56 06.8	+1.1
	baz=315						
E42A	Champion	72.36	40	P	P	10 56 06.0	0.0
	baz=321						
F41A	Three Lakes	72.37	41	P	P	10 56 06.0	0.0
	baz=321						
GNI	Garni	72.49	310	LR	LR	11 31 19.7	
	comp=Z,66nm,19.0s,baz=53,slow=39						
K37A	Belmond	72.52	45	P	P	10 56 07.1	+0.1
	baz=319						
H40A	Chili	72.65	42	P	P	10 56 07.9	+0.1
	baz=320						
I39A	Houston	72.71	43	P	P	10 56 07.6	-0.5
	baz=320						
I39A	Houston	72.71	43	*e*P	P	10 56 08.1	0.0
	comp=Z,11nm,0.8s						
AS01	Alice Springs	72.72	199	*e*P	P	10 56 08.9	+0.6
AS31	Alice Springs	72.73	199	*e*P	P	10 56 09.2	+1.0
	comp=Z,1.7nm,0.6s						
ASAR	Alice Springs	72.73	199	P	P	10 56 09.3	+1.0
	comp=Z,5.5nm,0.7s,baz=9.5,slow=5.4,SNR=89						
M36A	Felix, Anita	72.93	47	P	P	10 56 09.4	0.0
	baz=319						
L37A	Phoenix Point,	72.95	46	P	P	10 56 09.3	-0.2
	baz=319,SNR=5.4						
H41A	Junction City	72.99	42	P	P	10 56 09.7	0.0
	baz=321						
J39A	Decorah	73.02	44	P	P	10 56 09.5	-0.5
	baz=320						
E44A	Grand Marais A	73.06	38	P	P	10 56 10.3	+0.2
	baz=322						
L38A	Oak Wood Farm,	73.32	45	P	P	10 56 12.2	+0.5
	baz=320						
G43A	Wallace	73.37	40	P	P	10 56 12.1	+0.1
	baz=322						
SCIA	State Center	73.38	46	P	P	10 56 12.2	+0.2
	baz=319						
SCIA	State Center	73.38	46	*e*P	P	10 56 12.9	+0.9
	comp=Z,27nm,0.9s						
SCIA				*e*pP	PcP	10 56 29.2	+1.1
K39A	Oelwein	73.41	44	P	P	10 56 12.2	0.0
	baz=320						
J40A	Soldiers Grove	73.42	43	P	P	10 56 11.9	-0.5
	baz=320						
M38A	Pleasantville	73.75	46	P	P	10 56 14.2	-0.1
	baz=320						
K40A	Colesburg	73.77	44	P	P	10 56 14.0	-0.4
	baz=320						
L39A	Vinton	73.80	45	P	P	10 56 14.4	-0.2
	baz=320,SNR=6.4						
I42A	Draeger Farm,	73.89	42	P	P	10 56 15.2	+0.1
	baz=321						
JFWS	Jewell Farm	74.03	43	P	P	10 56 15.7	-0.2
	baz=321						
AMTX	Amarillo	74.11	56	P	P	10 56 17.2	+0.6
	baz=317						
AMTX	Amarillo	74.11	56	*e*P	P	10 56 17.3	+0.6
AMTX				*e*PcP	PcP	10 56 31.7	+0.2
MSTX	Muleshoe	74.15	57	P	P	10 56 16.9	0.0
	baz=317						
MSTX	Muleshoe	74.15	57	*e*P	P	10 56 18.4	+1.5
	comp=Z,14nm,1.5s						
M39A	Webster	74.21	45	P	P	10 56 17.0	+0.1
	baz=320						
L40A	Anamosa	74.22	44	P	P	10 56 17.1	+0.1
	baz=320						
J42A	Columbus	74.23	42	P	P	10 56 16.2	-0.8
	baz=321						
K41A	Shullsburg	74.23	44	P	P	10 56 16.8	-0.3
	baz=321						
MNTX	Cornudas Mount	74.27	60	P	P	10 56 17.7	+0.2
	baz=316						
N39A	Derby Farms, D	74.50	46	P	P	10 56 18.5	-0.2
	baz=320						
K42A	Prairie Point,	74.55	43	P	P	10 56 19.3	+0.4
	baz=321						
L41A	Preston	74.55	44	P	P	10 56 18.4	-0.6
	baz=321						
P37A	Lathrop	74.56	48	P	P	10 56 18.7	-0.3
	baz=319						
M40A	Post Highland	74.58	45	P	P	10 56 19.1	0.0
	baz=320						
O38A	Galt	74.60	47	P	P	10 56 19.0	-0.2
	baz=320						
P38A	Dawn	74.95	47	P	P	10 56 20.7	-0.5
	baz=320						
N40A	Mertquake, Sal	74.95	45	P	P	10 56 21.3	+0.1
	baz=320						
L42A	Oliver, Polo	75.00	44	P	P	10 56 21.2	-0.3
	baz=321						
M41A	Milan	75.07	44	P	P	10 56 21.9	0.0
	baz=321						
BUR08	Bucovina Ar. S	75.38	327	*e*P	P	10 56 22.9	-0.9
O40A	La Belle	75.39	46	P	P	10 56 23.6	-0.2
	baz=320						
BUR04	Bucovina Ar. S	75.40	327	*e*P	P	10 56 22.9	-1.0
BURAR	Bucovina Array	75.40	327⇑	*i*P	P	10 56 22.9	-0.9
Q38A	Cooks Store, C	75.41	48	P	P	10 56 23.6	-0.3
	baz=320						
P39B	Salisbury	75.44	47	P	P	10 56 23.7	-0.4
	baz=320						
BIZ	Bicaz	75.62	326⇓	*i*P	P	10 56 24.6	-0.4
Q39A	Willow Grove F	75.67	48	P	P	10 56 25.3	-0.1
	baz=320						
P40A	Paris	75.76	47	P	P	10 56 25.9	0.0
	baz=320						
P40A	Paris	75.76	47	*e*P	P	10 56 26.5	+0.6
P40A				*e*pP	pP	10 56 42.4	+2.3
M43A	Waltham Townsh	75.78	43	P	P	10 56 25.5	-0.5
	baz=322						
WMOK	Wichita Mounta	75.84	54	P	P	10 56 26.8	+0.3
	baz=318						
WMOK	Wichita Mounta	75.84	54	*e*P	P	10 56 27.2	+0.8
WMOK				*e*pP	pP	10 56 42.9	+2.3
WMOK	Wichita Mounta	75.84	54	*e*P	P	10 56 27.3	+0.8
WMOK				*e**PP	pP	10 56 42.9	+2.3
R38A	Fenwick Farm,	75.85	49	P	P	10 56 26.1	-0.4
	baz=320						
O41A	Passleys Farm,	75.88	46	P	P	10 56 26.3	-0.2
	baz=321						
TRPA	Tarpa	75.94	329⇓	*i*P	P	10 56 26.5	-0.3
EKA	Eskdalemuir Ar	75.99	347	P	P	10 56 25.6	-1.3
	comp=Z,0.4nm,0.3s,baz=20,slow=5.3,SNR=3.1						
P41A	Barry, Barry	76.13	46	P	P	10 56 28.0	0.0
	baz=321						
CLL	Collm	76.20	336	*e*P	P	10 56 27.0	-1.2
	comp=Z,8.0nm,1.0s						
CLL				*i* pP	pP	10 56 42.9	+0.5
CLL	Collm	76.20	336	*e*P	P	10 56 27.0	-1.2
CLL				*i* *PP	pP	10 56 42.9	+0.5
CLL				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MORC	Moravsky Berou	76.20	332⇓	*i*P	P	10 56 28.2	-0.1
S38A	Stockton	76.27	49	P	P	10 56 28.9	0.0
	baz=320						
T38A	Diamond	76.52	50	P	P	10 56 29.8	-0.5
	baz=320,SNR=6.5						
R40A	Maddies Statio	76.60	48	P	P	10 56 30.3	-0.4
	baz=321						
R40A	Maddies Statio	76.60	48	*e*P	P	10 56 30.6	-0.1
R40A				*e*pP	pP	10 56 47.1	+2.2
Q41A	Truxton	76.61	46	P	P	10 56 30.8	+0.1
	baz=321						
MLR	Muntele Rosu	76.89	325	P	P	10 56 32.1	-0.3
	comp=Z,3.2nm,0.5s,baz=138,slow=12,SNR=4.6						
MLR				LR	LR	11 33 25.1	
	comp=Z,49nm,19.6s,baz=41,slow=38						
MLR	Muntele Rosu	76.89	325⇓	*i*P	P	10 56 32.1	-0.3
MLR	Muntele Rosu	76.89	325	*e*P	P	10 56 32.1	-0.3
	comp=Z,6.0nm,0.9s						
MLR	Muntele Rosu	76.89	325	*e*P	P	10 56 32.1	-0.3
MLR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
TX31	Lajitas Ar. Si	76.99	61	*e*P	P	10 56 34.0	+0.8
TX31				*e*P	P	10 56 34.4	+1.1
LTX	Lajitas	77.00	61	*e*P	P	10 56 34.2	+1.0
LTX	Lajitas	77.00	61	*e*P	P	10 56 34.2	+1.0
TXAR	Lajitas Array	77.00	61	P	P	10 56 34.2	+1.0
	comp=Z,3.0nm,0.7s,baz=299,slow=5.2,SNR=44						
T39A	Clever	77.00	49	P	P	10 56 32.9	-0.2
	baz=320						
S40A	Lebanon	77.01	48	P	P	10 56 32.6	-0.5
	baz=320						
HHAR	Hobbs	77.28	50	*e*P	P	10 56 34.5	-0.1
HHAR				*e*pP	pP	10 56 51.1	+2.3
VOIR		77.28	326⇑	*i*P	P	10 56 34.7	+0.2
O45A	Potomac	77.29	43	P	P	10 56 34.2	-0.3
	baz=322						
CCM	Cathedral Cave	77.29	47	P	P	10 56 35.0	+0.4
	baz=321						
T40A	Mansfield	77.35	48	P	P	10 56 34.3	-0.6
	baz=321						
S41A	Jillco Farms,	77.40	48	P	P	10 56 34.7	-0.5
	baz=321						
L48A	N Adams	77.44	40	P	P	10 56 35.1	-0.2
	baz=324						
U39A	Green Forest	77.44	50	P	P	10 56 35.2	-0.3
	baz=320,SNR=7.6						
P44A	Sand Creek, Wi	77.48	45	P	P	10 56 35.3	-0.3
	baz=322						
S42A	Caledonia	77.74	47	P	P	10 56 36.6	-0.5
	baz=321						
V39A	Pettigrew	77.77	50	P	P	10 56 36.8	-0.6
	baz=320						
R43A	Red Bud	77.77	46	P	P	10 56 36.8	-0.5
	baz=322						
U40A	Yellville	77.78	49	P	P	10 56 37.3	-0.2
	baz=321,SNR=5.7						
T41A	Mountain View	77.81	48	P	P	10 56 36.7	-0.9
	baz=321						
P45A	Graceland, Par	77.85	44	P	P	10 56 37.1	-0.6
	baz=323						
KHC	Kasperske Hory	77.98	334	*e*P	P	10 56 37.3	-1.0
KHC				AMS	AMS	10 56 50.0	
KHC	Kasperske Hory	77.98	334	*e*P	P	10 56 37.3	-1.0
P46A	Rosedale	78.03	44	P	P	10 56 37.9	-0.7
	baz=323						
Q45A	Warren Harvey,	78.15	45	P	P	10 56 39.7	+0.3
	baz=322						
T42A	Van Buren	78.16	48	P	P	10 56 39.1	-0.4
	baz=321						
W39A	Magazine	78.19	51	P	P	10 56 39.4	-0.3
	baz=320						
GEC2	GERESS Array S	78.20	334	*e*P	P	10 56 39.0	-0.6
	comp=Z,25nm,2.0s						
GERES	GERESS Array B	78.20	334	P	P	10 56 39.0	-0.6
	comp=Z,0.4nm,0.3s,baz=26,slow=9.8,SNR=2.7						
GERES	GERESS Array B	78.20	334	P	P	10 56 39.0	-0.6
GERES				pmax	pmax		
	comp=Z,1.0nm,0.8s						
V40A	Witts Springs	78.22	50	P	P	10 56 39.3	-0.6
	baz=321						
U41A	Viola	78.27	49	P	P	10 56 40.1	-0.1
	baz=321						
BR101	Keskin Array S	78.29	317	*e*P	P	10 56 38.5	-1.8
BRTR	Keskin Array B	78.29	317	P	P	10 56 38.5	-1.8
	comp=Z,1.1nm,0.8s,baz=70,slow=1.4,SNR=5.0						
BRTR	Keskin Array B	78.29	317	*i* P	P	10 56 39.9	-0.4
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
JCT	Junction City	78.42	58	P	P	10 56 40.5	-0.6
	baz=318						
O48A	Farmland	78.47	42	P	P	10 56 40.6	-0.5
	baz=324						
R45A	Skylar, Fairfi	78.56	45	P	P	10 56 41.3	-0.4
	baz=322						
P47A	Martinsville	78.57	43	P	P	10 56 41.5	-0.2
	baz=323						
V41A	Mountainview	78.58	49	P	P	10 56 41.1	-0.8
	baz=321						
MIAR	Mount Ida	78.80	51	P	P	10 56 42.9	-0.1
	baz=320						
MIAR	Mount Ida	78.80	51	*e*P	P	10 56 43.2	+0.2
MIAR				*e*pP	sP	10 57 01.5	-1.3
MIAR	Mount Ida	78.80	51	*e*P	P	10 56 43.2	+0.2
MIAR				*e**PP	sP	10 57 01.5	-1.3
O49A	Covington	78.90	41	P	P	10 56 43.1	-0.3
	baz=324						
WHAR	Wooly Hollow	78.90	50	*e*P	P	10 56 43.7	+0.2
	comp=Z,7.0nm,1.0s						
S45A	Carrier Mills	78.90	46	P	P	10 56 43.5	0.0
	baz=322						
N50A	Nevada	78.95	40	P	P	10 56 43.5	-0.3
	baz=325						
V42A	Cord	78.96	49	P	P	10 56 43.6	-0.3
	baz=321						
W41B	Gary Mavity, V	79.01	50	P	P	10 56 43.8	-0.4
	baz=321						
PARMO	Parma	79.12	47	*e*P	P	10 56 45.3	+0.6
PARMO				*e*pP	sP	10 57 02.6	-1.9
X40A	Basin Creek Fa	79.23	50	P	P	10 56 45.0	-0.3
	baz=321						
O50A	Cable	79.25	41	P	P	10 56 45.2	-0.2
	baz=325						
Q48A	North Vernon	79.27	43	P	P	10 56 45.2	-0.3
	baz=324						
R47A	Wooly Knot Far	79.40	44	P	P	10 56 46.3	+0.1
	baz=323						
V43A	Jonesboro	79.41	48	P	P	10 56 46.2	-0.1
	baz=322						
ACSO	Alum Creek Sta	79.47	41	P	P	10 56 46.1	-0.5
	baz=325						
T46A	Princeton	79.74	46	P	P	10 56 48.5	+0.4
	baz=323,SNR=5.2						
M54A	Oil Creek Stat	79.84	38	*e*P	P	10 56 48.6	-0.1
M54A				*e*pP	pP	10 57 02.8	-0.1
H06N1	SOCORRO T-PHAS	79.98	73	T	T	12 24 39.2	
	SNR=4.1						
S48A	Wiedeman Farm,	80.13	44	P	P	10 56 50.1	-0.1
	baz=324						
Q50A	Georgetown	80.14	42	P	P	10 56 50.0	-0.3
	baz=325						
N54A	Moraine State	80.16	38	P	P	10 56 50.5	+0.1
	baz=326						
T47A	Sharon Grove	80.17	45	P	P	10 56 50.4	0.0
	baz=323						
Q51A	Peebles	80.28	41	P	P	10 56 50.8	-0.2
	baz=325						
NATX	Nacogdoches	80.34	53	P	P	10 56 52.3	+0.9
	baz=320						
S49A	Springfield	80.39	43	P	P	10 56 51.6	0.0
	baz=324						
T48A	Bowling Green	80.41	45	P	P	10 56 51.7	0.0
	baz=324						
WVT	Waverly	80.50	46	P	P	10 56 52.3	+0.1
	baz=323						
U47A	Clarksville	80.51	46	P	P	10 56 52.5	+0.2
	baz=323						
V46A	Holladay	80.61	47	P	P	10 56 52.9	0.0
	baz=323						
R51A	Hillsboro	80.77	42	P	P	10 56 53.6	0.0
	baz=325						
U48A	Cassie Pea, Po	80.82	45	P	P	10 56 54.3	+0.3
	baz=324						
T49A	Edmonton	80.83	44	P	P	10 56 54.0	+0.1
	baz=324						
TAOE	Nuku Hiva Isla	80.83	114	*e*LR	LR	11 22 15.2	
	comp=Z,75nm,27.1s						
V47A	Nunnelly	80.89	46	P	P	10 56 54.3	0.0
	baz=323						
OXF	Oxford	80.98	48	P	P	10 56 54.5	-0.3
	baz=322						
Y44A	Strider, Charl	81.00	49	P	P	10 56 54.8	-0.2
	baz=322						
PMOR	Pomariorio Ree	81.02	123	*e*T	T	12 26 03.3	
	comp=Z,5.6nm,0.2s						
241A	Mo Tay, Goldon	81.09	52	P	P	10 56 55.6	+0.2
	baz=321						
R52A	Catlettsburg	81.16	41	P	P	10 56 55.8	+0.1
	baz=325						
U49A	Red Boiling Sp	81.18	45	P	P	10 56 55.6	-0.2
	baz=324						
T50A	Nancy	81.22	44	P	P	10 56 56.0	0.0
	baz=324						
V48A	Smith Brothers	81.30	46	P	P	10 56 56.4	-0.1
	baz=324						
SSPA	Standing Stone	81.31	37	P	P	10 56 55.9	-0.6
	baz=328						
O56A	Blue Knob Stat	81.33	38	P	P	10 56 56.6	0.0
	baz=327						
Y45A	Yeager Farm, C	81.42	49	P	P	10 56 57.5	+0.3
	baz=322						
T51A	Gray	81.68	43	P	P	10 56 58.7	+0.1
	baz=325						
U50A	Jamestown	81.71	44	P	P	10 56 58.8	+0.1
	baz=324						
V49A	McMinnville	81.72	45	P	P	10 56 58.3	-0.4
	baz=324						
W48A	Pulaski	81.72	46	P	P	10 56 58.4	-0.4
	baz=324						
Y46A	Houston	81.76	48	P	P	10 56 58.8	-0.1
	baz=323						
X47A	Russelville	81.76	47	P	P	10 56 58.4	-0.6
	baz=323						
N59A	State Game Lan	81.92	36	P	P	10 56 59.3	-0.4
	baz=329						
W49A	Belvidere	82.07	46	P	P	10 57 00.1	-0.5
	baz=324						
U51A	La Follette	82.13	43	P	P	10 57 00.4	-0.5
	baz=325						
SWET	Sewanee	82.15	45	*e*P	P	10 57 01.2	+0.1
	comp=Z,7.8nm,0.8s						
SWET				*e*pP	pP	10 57 17.5	+2.2
PPT	Papeete	82.16	126	LR	LR	11 24 16.3	
	comp=Z,53nm,20.8s,baz=320,slow=29						
PPT2	Papeete2	82.17	126	*e*LR	LR	11 22 54.7	
	comp=Z,75nm,24.0s						
V50A	Pikevile	82.19	45	P	P	10 57 01.1	0.0
	baz=324						
TZTN	Tazewell	82.21	43	P	P	10 57 01.0	-0.3
	baz=325						
X48A	Hartselle	82.22	47	P	P	10 57 00.9	-0.4
	baz=324						
Y47A	UCPARC, Winfie	82.25	47	P	P	10 57 01.0	-0.5
	baz=323						
TIAR	Tiarei	82.28	126	*e*T	T	12 27 37.3	
	comp=Z,1.6nm,0.2s						
U52A	Thorn Hill	82.42	43	P	P	10 57 02.1	-0.3
	baz=325						
W50A	Signal Mountai	82.46	45	P	P	10 57 02.3	-0.3
	baz=324						
Y48A	Jasper	82.58	47	P	P	10 57 03.2	-0.1
	baz=323						
Z47A	Carrollton	82.70	48	P	P	10 57 03.5	-0.3
	baz=323						
V52A	Sevierville	82.76	43	P	P	10 57 04.1	0.0
	baz=325						
MMAI	Mount Meron Ar	82.76	312	LR	LR	11 38 56.6	
	comp=Z,67nm,19.0s,baz=160,slow=39						
W51A	Cleveland	82.76	45	P	P	10 57 03.8	-0.4
	baz=324						
U53A	Fall Branch	82.81	43	P	P	10 57 04.4	0.0
	baz=326						
Z48A	Northport	82.82	48	P	P	10 57 04.7	+0.2
	baz=323						
TKL	Tuckaleechee C	82.83	44	LR	LR	11 37 20.0	
	comp=Z,20nm,19.2s,baz=349,slow=38						
X50B	Fort Payne	82.90	46	P	P	10 57 05.0	+0.1
	baz=324						
147A	Livingston	83.02	49	P	P	10 57 06.0	+0.5
	baz=323						
BLA	Blacksburg	83.08	41	P	P	10 57 06.5	+0.6
	baz=327						
Y50A	Piedmont	83.31	46	P	P	10 57 07.4	+0.3
	baz=324						
247A	Quitman	83.33	49	P	P	10 57 08.3	+1.1
	baz=323						
Y51A	Rockmart	83.64	46	P	P	10 57 08.7	0.0
	baz=324						
Z50A	Ashland	83.73	47	P	P	10 57 09.1	-0.1
	baz=324,SNR=5.9						
Z50A	Ashland	83.73	47	*e*P	P	10 57 09.6	+0.3

	comp=Z,8.9nm,0.9s						
Z50A				*e*pP	**pP**	**10 57 25.2**	**+1.6**
149A	**Jones**	**83.83**	**48**	P	**P**	**10 57 09.8**	**+0.1**
	baz=324						
X53A	**Estanollee**	**83.99**	**44**	P	**P**	**10 57 10.6**	**+0.1**
	baz=325						
Y52A	**Lilburn**	**84.15**	**45**	P	**P**	**10 57 11.0**	**-0.4**
	baz=325						
249A	**Camden**	**84.16**	**48**	P	**P**	**10 57 11.2**	**-0.2**
	baz=324						
RAYN	**Ar Rayn**	**84.49**	**299**	*e*P	**P**	**10 57 12.4**	**-0.9**
RAYN				*e*pP	**pP**	**10 57 27.4**	**-0.3**
RAYN	**Ar Rayn**	**84.49**	**299**	*e*P	**P**	**10 57 12.4**	**-0.9**
RAYN				*e**PP	**pP**	**10 57 27.4**	**-0.3**
Z52A	**Williamson**	**84.53**	**46**	P	**P**	**10 57 13.2**	**0.0**
	baz=325						
250A	**Grady**	**84.59**	**48**	P	**P**	**10 57 13.7**	**+0.2**
	baz=324						
GOGA	**Godfrey**	**84.80**	**45**	P	**P**	**10 57 14.5**	**-0.1**
	baz=325						
Y54A	**Tignall**	**84.81**	**44**	P	**P**	**10 57 15.2**	**+0.6**
	baz=326,SNR=8.9						
Z53A	**Monticello**	**84.86**	**45**	P	**P**	**10 57 14.9**	**0.0**
	baz=325						
254A	**Abbeville**	**86.09**	**46**	P	**P**	**10 57 21.4**	**+0.4**
	baz=325						
TBI	**Tubuai**	**86.93**	**130**	*e*T	T	12 33 26.1	
	comp=Z,7.1nm,0.3s						
556A	**Lake Butler**	**88.11**	**46**	P	**P**	**10 57 30.7**	**-0.2**
	baz=326						
PLCA	**Paso Flores**	**147.92**	**95**	PKPbc	**PKPbc**	**11 04 25.2**	**+0.3**
	comp=Z,3.4nm,0.9s,baz=10,slow=3.3,SNR=5.1						
CPUP	**Villa Florida**	**147.97**	**60**	PKPbc	**PKPbc**	**11 04 25.0**	**-0.3**
	comp=Z,2.3nm,0.6s,baz=317,slow=3.2,SNR=7.1						
CPUP	**Villa Florida**	**147.97**	**60**	*e*PKP2	**PKPbc**	**11 04 25.0**	**-0.3**
VNA3	**Neumayer Olymp**	**154.59**	**193**	PKP	**PKPab**	**11 04 54.1**	**-0.2**
VNA1	**Neumayer--Stat**	**154.90**	**194**	PKP	**PKPab**	**11 04 56.0**	**+0.5**

IDC 23 10:45:51.9±2.1, 3°.52S×152°.98E, h0^{km}, mb3.7/3, mb1 4.0/3, mb1mx3.4/49, mbtmp3.7/3, MS3.0/1, Ms1 3.0/1, ms1mx2.5/42, Error ellipse: s-maj=158.7km s-min=29.4km az=126.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**9.08**	**131**	LR	LR	10 51 16.1	
	comp=Z,103nm,20.4s,baz=236,slow=36						
WRA	**Warramunga Arr**	**24.43**	**227**	P	P	10 51 12.2	-0.5
	1.6nm,0.6s,baz=52,slow=9.9,SNR=15						
ASAR	**Alice Springs**	**27.22**	**221**	P	P	10 51 38.6	+0.8
	0.4nm,0.6s,baz=55,slow=8.9,SNR=9.5						
ILAR	**Eielson Array**	**80.91**	**22**	P	P	10 58 07.5	-0.3
	0.5nm,0.8s,baz=241,slow=5.6,SNR=4.9						

CASC 23 10:48:02.0±1.9, 11°.46N×85°.97W, h145^{km}±12^{km}, MD4.1, 1C, Nicaragua

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CONN	**Concepcion**	**0.36**	**74**	*e*P	Pn	10 48 22.1	-0.1
MGAN	**Managua**	**0.73**	**339**	*e*P	Pn	10 48 24.1	-0.1
XAVN	**Gruta Xavier**	**0.76**	**333**	*e*P	Pn	10 48 24.3	-0.1
APYN	**Apoyeque**	**0.85**	**334**	*e*P	Pn	10 48 25.1	0.0
APYN				*e*S	Sn	10 48 45.1	+2.4
COPN	**Copaltepe**	**0.94**	**320**	*e*P	Pn	10 48 25.5	-0.3
BOAB	**BOACO BROADBAN**	**1.02**	**17**	*e*P	Pn	10 48 26.3	-0.2
MESS	**Mesas**	**1.05**	**133**	⇑*e*P	Pn	10 48 27.2	+0.4
MESS				*e*S	Sn	10 48 46.3	+0.6
MOMN	**Momotombo**	**1.09**	**330**	*e*P	Pn	10 48 26.9	-0.3
CNGN	**Cerro Negro**	**1.25**	**326**	*e*P	Pn	10 48 28.6	-0.1
VCR	**Vista de Mar**	**1.37**	**166**	*e*P	Pn	10 48 30.5	+0.5
MATN	**Matagalpa**	**1.46**	**2**	*e*P	Pn	10 48 30.0	-0.8
JTS	**JuntasAbangare**	**1.54**	**139**	*e*P	Pn	10 48 31.9	+0.2
JTS				*e*S	Sn	10 48 53.5	-0.8
ESTN	**Estel**	**1.67**	**347**	*e*P	Pn	10 48 33.7	+0.5
ESPN	**Las Esperanzas**	**1.79**	**66**	*e*P	Pn	10 48 34.7	+0.3
SRA1	**San Ramˆ‡n**	**2.01**	**133**	*e*P	Pn	10 48 38.7	+1.7
SRA1				*e*S	Sn	10 49 05.1	+1.1
RCON	**San Juan de Ri**	**2.02**	**355**	*e*P	Pn	10 48 37.6	+0.4
CGA2	**Cerro Gallo 2**	**2.06**	**134**	*e*P	Pn	10 48 38.8	+1.1
CGA2				*e*S	Sn	10 49 06.3	+1.1
URSC	**Urasca**	**2.70**	**127**	*e*P	Pn	10 48 46.7	+1.1
URSC				*e*S	Sn	10 49 22.3	+3.2

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*ISCJB **23** 10:57:49.5±1.1, 10°.6S±0°.1×161°.5E±0°.1, h61^{km}, mb3.3/4, Error ellipse: s-maj=20.8km s-min=10.6km az=142.9*

*IDC **23** 10:57:51.6±2.8, 10°.62S×161°.46E, h67^{km}±22^{km}, mb3.2/4, mb1 3.6/6, mb1mx3.4/46, mbtmp3.8/6, Error ellipse: s-maj=27.6km s-min=17.9km az=70.0*

ISC 23 10:57:51.1±1.2, 10°.6S±0°.1×161°.5E±0°.1, h61^{km}, n8, σ1^{s}30/10, mb3.2/4, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	**Honiara**	**1.88**	**307**	P	**Pn**	**10 58 20.3**	**-0.7**
	169nm,0.3s,baz=117,slow=0.8,SNR=61						
HNR				S	**Sn**	**10 58 45.3**	**+1.6**
	380nm,0.3s,baz=145,slow=6.7,SNR=15						
HNR	**Honiara**	**1.88**	**307**	*e*P	**Pn**	**10 58 19.0**	**-2.0**
HNR				*e*S	**Sn**	**10 58 45.0**	**+1.3**
DZM	**Mont Dzumac**	**12.38**	**158**	P	**Pn**	**11 00 45.1**	**+0.4**
	0.8nm,0.3s,baz=27,slow=8.6,SNR=23						
CTA	**Charters Tower**	**17.44**	**235**	P	**P**	**11 01 51.9**	**+1.1**
	0.6nm,0.3s,baz=68,slow=12,SNR=7.0						
WRA	**Warramunga Arr**	**27.74**	**247**	P	**P**	**11 03 33.5**	**-0.7**
	0.5nm,0.7s,baz=78,slow=9.3,SNR=6.0						
ASAR	**Alice Springs**	**29.31**	**240**	P	**P**	**11 03 47.2**	**-0.9**
	0.3nm,0.8s,baz=65,slow=9.9,SNR=6.2						
SONM	**Songino Array**	**75.85**	**325**	P	**P**	**11 09 30.8**	**-0.2**
	0.3nm,0.4s,baz=126,slow=7.3,SNR=2.8						
ILAR	**Eielson Array**	**84.45**	**20**	P	**P**	**11 10 17.3**	**+0.6**
	0.1nm,0.4s,baz=232,slow=4.4,SNR=3.4						

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*ISCJB **23** 10:59:10.6±0.4, 39°.09N±0°.03×29°.12E±0°.03, h9^{km}±3^{km}, Error ellipse: s-maj=4.8km s-min=4.1km az=167.9*

*CSEM **23** 10:59:10.6±0.1, 39°.11N×29°.12E, h5^{km}, ML2.1, Error ellipse: s-maj=2.0km s-min=1.7km az=140.0*

*DDA **23** 10:59:10.2, 39°.12N×29°.12E, h9^{km}, Ml2.5*

*ISK **23** 10:59:10.4, 39°.11N×29°.12E, h5^{km}, ML2.1/10*

ISC 23 10:59:10.7±0.9, 39°.11N±0°.02×29°.12E±0°.02, h9^{km}±5^{km}, n39, σ0^{s}38/53, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SMAA	**Simav-Kutahya**	**0.10**	**266**	PG	**Pg**	**10 59 13.3**	**-0.1**
SMAA				SG	**Sg**	**10 59 15.4**	**+0.1**
SMAA	**Simav-Kutahya**	**0.10**	**266**	*e*Pg	**Pg**	**10 59 13.3**	**-0.1**
SMAA				*e*Sg	**Sg**	**10 59 15.4**	**+0.1**
SIMA	**Simav-Kutahya**	**0.11**	**257**	PG	**Pg**	**10 59 13.3**	**-0.1**
SIMA				SG	**Sg**	**10 59 15.4**	**+0.1**
SIMA	**Simav-Kutahya**	**0.11**	**257**	*e*Pg	**Pg**	**10 59 13.3**	**-0.1**
SIMA				*e*Sg	**Sg**	**10 59 15.4**	**+0.1**
SHAP	**Saphane-Kutahy**	**0.12**	**136**	PG	**Pg**	**10 59 13.4**	**-0.2**
SHAP				SG	**Sg**	**10 59 15.7**	**+0.1**
SHAP	**Saphane-Kutahy**	**0.12**	**136**	*e*Pg	**Pg**	**10 59 13.4**	**-0.2**
SHAP				*e*Sg	**Sg**	**10 59 15.7**	**+0.1**
GDZ	**Gediz**	**0.28**	**94**	*i* P	**Pg**	**10 59 16.2**	**-0.3**
GDZ				*i* S	**Sg**	**10 59 20.4**	**+0.1**
GDZ	**Gediz**	**0.28**	**94**	P	**Pg**	**10 59 16.2**	**-0.3**
DEMI	**Demirci**	**0.32**	**258**	*i* P	**Pg**	**10 59 16.9**	**-0.2**
DEMI				*i* S	**Sg**	**10 59 21.5**	**+0.2**
DEMI	**Demirci**	**0.32**	**258**	P	**Pg**	**10 59 16.9**	**-0.2**
DEMI				S	**Sg**	**10 59 21.5**	**+0.2**
TVSB	**Tavsanli**	**0.43**	**38**	PG	**Pg**	**10 59 19.2**	**-0.1**
TVSB	**Tavsanli**	**0.43**	**38**	*e*Pg	**Pg**	**10 59 19.2**	**-0.1**
KULA	**Kula-Manisa**	**0.69**	**211**	PG	**Pg**	**10 59 24.2**	**+0.1**
KULA	**Kula-Manisa**	**0.69**	**211**	*e*Pg	**Pg**	**10 59 24.2**	**+0.1**
DURS	**Dursunbey**	**0.70**	**315**	*i* P	**Pg**	**10 59 23.9**	**-0.3**
DURS	**Dursunbey**	**0.70**	**315**	P	**Pg**	**10 59 24.0**	**-0.3**
MANT	**Manisa**	**0.75**	**215**	*i* P	**Pg**	**10 59 24.8**	**-0.5**
MANT				*i* S	**Sg**	**10 59 34.7**	**-0.4**
MANT	**Manisa**	**0.75**	**215**	P	**Pg**	**10 59 24.8**	**-0.5**
MANT				S	**Sg**	**10 59 34.7**	**-0.4**
KUTH	**Kutahya**	**0.76**	**67**	PG	**Pg**	**10 59 25.4**	**0.0**
KUTH	**Kutahya**	**0.76**	**67**	*e*Pg	**Pg**	**10 59 25.4**	**0.0**
KHAL	**Karahalli**	**0.79**	**158**	*i* P	**Pg**	**10 59 25.9**	**-0.1**
KHAL				*i* S	**Sg**	**10 59 36.4**	**0.0**
KHAL	**Karahalli**	**0.79**	**158**	P	**Pg**	**10 59 25.9**	**-0.1**
KHAL				S	**Sg**	**10 59 36.4**	**0.0**
BALB	**Balikesir**	**1.09**	**299**	PN	**Pn**	**10 59 32.2**	**0.0**
BALB	**Balikesir**	**1.09**	**299**	*e*Pn	**Pn**	**10 59 32.2**	**0.0**
IGD	**Bursa**	**1.16**	**3**	*i* P	**Pb**	**10 59 32.2**	**-0.6**
IGD				*i* S	**Sg**	**10 59 47.9**	**-0.1**
CAVI	**Cavuskoy**	**1.23**	**27**	PN	**Pg**	**10 59 34.1**	**-0.2**
CAVI	**Cavuskoy**	**1.23**	**27**	*e*Pn	**Pg**	**10 59 34.1**	**-0.2**
BORA	**Eskisehir**	**1.29**	**53**	PN	**Pb**	**10 59 35.1**	**-0.1**
BORA	**Eskisehir**	**1.29**	**53**	*e*Pn	**Pb**	**10 59 35.1**	**-0.1**
YLV	**Yalova**	**1.47**	**8**	PN	**Pb**	**10 59 38.1**	**-0.2**
YLV	**Yalova**	**1.47**	**8**	*e*Pn	**Pb**	**10 59 38.1**	**-0.2**
AYDB	**Zeytinkoy-Aydi**	**1.50**	**220**	PN	**Pb**	**10 59 38.8**	**-0.1**
AYDB	**Zeytinkoy-Aydi**	**1.50**	**220**	*e*Pn	**Pb**	**10 59 38.8**	**-0.1**
SBT5	**Esenkoy-Cinarc**	**1.53**	**353**	PN	**Pb**	**10 59 38.9**	**-0.3**
SBT5	**Esenkoy-Cinarc**	**1.53**	**353**	*e*Pn	**Pb**	**10 59 38.9**	**-0.3**
GULT	**Gulveren**	**1.71**	**39**	PN	**Pb**	**10 59 41.3**	**-1.0**
GULT	**Gulveren**	**1.71**	**39**	*e*Pn	**Pb**	**10 59 41.3**	**-1.0**
CTKS	**Kestanelik-??a**	**2.18**	**348**	PN	**Pn**	**10 59 48.2**	**+1.2**
CTKS	**Kestanelik-??a**	**2.18**	**348**	*e*Pn	**Pn**	**10 59 48.2**	**+1.2**

MEX 23 11:10:02.8±0.6, 16°.43N×98°.40W, h14^{km}±5^{km}, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.27**	**99**	*e*P	Pg	11 10 07.9	-0.7
PNIG				*i* S	Sg	11 10 12.3	-0.1
TLIG	**Tlapa**	**1.13**	**352**	*e*P	Pb	11 10 20.7	-3.6
TLIG				*i* S	Sb	11 10 35.0	-4.0
VHO	**Vista Hermosa**	**1.72**	**68**	*e*P	Pn	11 10 29.3	-3.3
VHO				*i* S	Sn	11 10 49.9	-4.7
CAIG	**El Cayaco**	**1.89**	**289**	*e*P	Pn	11 10 31.2	-3.4
CAIG				*e*S	Sn	11 10 52.9	-5.4

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*NIED **23** 11:16:00, 44°.00N×148°.20E, h74^{km}, Mw3.7 Best double couple: $M_0$4.71000×10^{14} NP1:ϕ_s129.00000°, δ47.00000°, λ-31.00000°. NP2:ϕ_s240.00000°, δ68.00000°, λ-133.00000°.*

*ISCJB **23** 11:16:19.8±0.5, 44°.45N±0°.04×148°.34E±0°.06, h102^{km}±3^{km}, mb4.1/32, Error ellipse: s-maj=8.7km s-min=5.2km az=43.0*

*MOS **23** 11:16:20.1±0.9, 44°.55N×148°.35E, h102^{km}, mb4.3/15, Error ellipse: s-maj=9.2km s-min=7.7km az=108.5*

*JMA **23** 11:16:20.2±0.3, 44°.05N×148°.20E, h0^{km}, M4.0*

*IDC **23** 11:16:21.1±2.4, 44°.54N×148°.29E, h93^{km}±21^{km}, mb3.8/20, mb1 3.9/22, mb1mx3.7/66, mbtmp4.1/22, MS2.9/3, Ms1 2.9/3, ms1mx2.4/63, Error ellipse: s-maj=16.9km s-min=13.6km az=140.0*

*NEIC **23** 11:16:21.8±0.7, 44°.56N×148°.34E, h100^{km}±6^{km}, mb4.2/8, Error ellipse: s-maj=8.4km s-min=5.4km az=147.0*

*SKHL **23** 11:16:21.0±0.7, 44°.58N×148°.24E, h104^{km}±3^{km}, mb4.6/7, msh5.2/6*

ISC 23 11:16:20.2±0.8, 44°.46N±0°.05×148°.34E±0°.06, h91^{km}±5^{km}, n117, σ1^{s}49/140, mb4.1/32, 7C-9D, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.85**	**337**	*i* P	**Pn**	**11 16 39.0**	**+0.8**
KUR				AMB	AMB	11 16 40.0	
	540nm,0.3s						
KUR				AMB	AMB	11 16 40.0	
	142nm,0.3s						
KUR				*i* S	**Sn**	**11 16 53.0**	**+1.3**
KUR				A	A	11 16 55.0	
	235nm,0.3s						
KUR				A	A	11 16 55.0	
	272nm,0.3s						
KUR	**Kuril'sk**	**0.85**	**337**	*d i*PN	**Pn**	**11 16 39.4**	**+1.2**
KUR				*i* S	**Sn**	**11 16 53.8**	**+2.1**
KUR				pmax	pmax		
	comp=N,506nm,0.3s						
KUR				pmax	pmax		
	comp=Z,3μm,0.3s						
KUR				pmax	pmax		
	comp=E,207nm,0.1s						
KUR				smax	smax		
	comp=N,4μm,0.4s						
KUR				smax	smax		
	comp=E,1μm,0.5s						
SHO	**Shikotan**	**1.23**	**242**	*i* P	**Pn**	**11 16 43.0**	**+0.4**
SHO				AMB	AMB	11 16 46.0	
	comp=E,34nm,0.3s						
SHO				AMB	AMB	11 16 46.0	
	comp=E,42nm,0.3s						
SHO				AMB	AMB	11 16 46.0	
	comp=E,100nm,0.3s						
SHO				*i* S	**Sn**	**11 16 59.0**	**-0.5**
SHO				A	A	11 17 00.0	
	comp=E,330nm,0.4s						
SHO				A	A	11 17 00.0	
	comp=E,354nm,0.4s						
SHO	**Shikotan**	**1.23**	**242**	*d i*PN	**Pn**	**11 16 43.8**	**+1.2**
SHO				*i* S	**Sn**	**11 16 59.5**	**0.0**
SHO				pmax	pmax		
	comp=N,34nm,0.3s						
SHO				pmax	pmax		
	comp=Z,97nm,0.3s						
SHO				pmax	pmax		
	comp=E,42nm,0.4s						
SHO				smax	smax		
	comp=N,673nm,0.4s						
SHO				smax	smax		
	comp=E,744nm,0.4s						
YUK	**Yuzh-Kuril'sk**	**1.83**	**258**	*i* P	**Pn**	**11 16 51.0**	**+0.9**
YUK				AMB	AMB	11 16 52.0	
	comp=E,56nm,0.2s						
YUK				AMB	AMB	11 16 52.0	
	comp=E,70nm,0.2s						
YUK				AMB	AMB	11 16 52.0	
	comp=E,253nm,0.2s						
YUK				*e*S	**Sn**	**11 17 13.0**	**+0.1**
YUK				A	A	11 17 19.0	
	comp=E,903nm,0.5s						
YUK				A	A	11 17 19.0	
	comp=E,635nm,0.5s						
YUK	**Yuzh-Kuril'sk**	**1.83**	**258**	*d i*PN	**Pn**	**11 16 51.2**	**+1.1**
YUK				*e*S	**Sn**	**11 17 13.5**	**+0.6**
YUK				pmax	pmax		
	comp=Z,253nm,0.2s						
YUK				pmax	pmax		
	comp=N,56nm,0.1s						
YUK				pmax	pmax		
	comp=E,70nm,0.1s						
YUK				smax	smax		
	comp=N,903nm,0.5s						
YUK				smax	smax		
	comp=E,635nm,0.5s						
LAGR	**Lagunnoye**	**1.88**	**259**	*i* P	**Pn**	**11 16 52.0**	**+1.3**
LAGR				AMB	AMB	11 16 53.0	
	comp=E,122nm,0.2s						
LAGR				AMB	AMB	11 16 53.0	
	comp=E,72nm,0.2s						
LAGR				AMB	AMB	11 16 53.0	
	comp=E,34nm,0.2s						
LAGR				*e*S	**Sn**	**11 17 14.0**	**0.0**
LAGR				A	A	11 17 19.0	
	comp=E,146nm,0.4s						
LAGR				A	A	11 17 19.0	
	comp=E,410nm,0.4s						
LAGR	**Lagunnoye**	**1.88**	**259**	*c i*PN	**Pn**	**11 16 52.2**	**+1.5**
LAGR				*e*S	**Sn**	**11 17 14.6**	**+0.6**
LAGR				pmax	pmax		
	comp=Z,343nm,0.1s						
LAGR				pmax	pmax		
	comp=E,72nm,0.2s						
LAGR				smax	smax		
	comp=N,1μm,0.4s						
LAGR				smax	smax		
	comp=E,829nm,0.3s						
GRPR	**Tuman**	**1.90**	**257**	*e*P	**Pn**	**11 16 52.0**	**+0.9**
GRPR				AMB	AMB	11 16 52.0	
	comp=E,48nm,0.2s						
GRPR				AMB	AMB	11 16 52.0	
	comp=E,40nm,0.2s						
GRPR				AMB	AMB	11 16 52.0	
	comp=E,121nm,0.2s						
GRPR				*e*S	**Sn**	**11 17 16.0**	**+1.5**
GRPR				A	A	11 17 19.0	
	comp=E,888nm,0.4s						
GRPR				A	A	11 17 19.0	
	comp=E,666nm,0.4s						
GRPR	**Tuman**	**1.90**	**257**	*e*PN	**Pn**	**11 16 52.2**	**+1.1**
GRPR				S	**Sn**	**11 17 16.1**	**+1.5**
GRPR				pmax	pmax		
	comp=E,40nm,0.2s						
GRPR				pmax	pmax		
	comp=Z,121nm,0.2s						
GRPR				pmax	pmax		
	comp=N,48nm,0.1s						
GRPR				smax	smax		
	comp=E,666nm,0.4s						
GRPR				smax	smax		
	comp=N,888nm,0.3s						
GLVR	**Golovnino**	**2.15**	**252**	*i* P	**Pn**	**11 16 55.0**	**+0.7**
GLVR				AMB	AMB	11 16 56.0	
	comp=N,164nm,0.3s						
GLVR				*e*S	**Sn**	**11 17 21.0**	**+0.5**
GLVR				A	A	11 17 26.0	
	comp=N,116nm,0.5s						
GLVR				A	A	11 17 26.0	
	comp=N,220nm,0.5s						
GLVR	**Golovnino**	**2.15**	**252**	*c i*PN	**Pn**	**11 16 55.7**	**+1.4**
GLVR				*e*S	**Sn**	**11 17 21.4**	**+0.9**
GLVR				pmax	pmax		
	comp=Z,164nm,0.1s						
GLVR				smax	smax		
	comp=E,443nm,0.4s						
GLVR				smax	smax		
	comp=N,1μm,0.5s						
NEM2	**Nemuro 2**	**2.17**	**241**	P	**Pn**	**11 16 54.6**	**0.0**
NEM2				*e*S	**Sn**	**11 17 19.7**	**-1.1**
JRA	**Rausu**	**2.37**	**259**	P	**Pn**	**11 16 59.3**	**+2.1**
JRA				*e*S	**Sn**	**11 17 28.1**	**+2.5**
JNK	**Nakash**	**2.75**	**253**	P	**Pn**	**11 17 03.9**	**+1.6**
JNK				*e*S	**Sn**	**11 17 36.4**	**+1.7**
JAK	**Akkeshi**	**3.01**	**242**	P	**Pn**	**11 17 06.3**	**+0.4**
JAK				*e*S	**Sn**	**11 17 40.2**	**-0.9**
JTKR	**Abashiri--Toko**	**3.22**	**263**	P	**Pn**	**11 17 10.7**	**+2.1**
JAR	**Ashorobuto**	**3.50**	**252**	P	**Pn**	**11 17 14.6**	**+2.2**
JAR				*e*S	**Sn**	**11 17 53.9**	**+1.1**
JCH	**Churui**	**4.06**	**245**	P	**Pn**	**11 17 21.4**	**+1.4**
JCH				*e*S	**Sn**	**11 18 05.9**	**-0.4**
JKK2	**Kamakawa 2**	**4.06**	**264**	P	**Pn**	**11 17 22.8**	**+2.8**
ASAJ	**Asahikawa**	**4.13**	**267**	P	**Pn**	**11 17 23.5**	**+2.5**
	comp=N,1.3nm,0.3s,baz=57,slow=18,SNR=15						
ERM	**Erimo**	**4.50**	**239**	*e*P	**Pn**	**11 17 28.6**	**+2.6**
ERM	**Erimo**	**4.50**	**239**	*e*Pn	**Pn**	**11 17 29.1**	**+3.1**
ERM	**Erimo**	**4.50**	**239**	*ce*PN	**Pn**	**11 17 28.6**	**+2.6**
JNBK	**Urakawa-nobuka**	**4.61**	**244**	P	**Pn**	**11 17 28.0**	**+0.5**
YSS	**Yuzh-Sakhalins**	**4.64**	**305**	*e*P	**Pn**	**11 17 28.4**	**+0.6**
YSS				AMB	AMB	11 17 31.7	
	comp=N,10.0nm,0.3s						
YSS	**Yuzh-Sakhalins**	**4.64**	**305**	*e*Pn	**Pn**	**11 17 30.3**	**+2.5**
YSS				*e*Sn	**Sn**	**11 18 23.8**	**+3.4**
YSS	**Yuzh-Sakhalins**	**4.64**	**305**	*e*PN	**Pn**	**11 17 30.7**	**+2.9**
YSS				*e*S	**Sn**	**11 18 21.3**	**+0.9**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.3s						
YSS				smax	smax		
	comp=N,40nm,1.3s						
YSS				smax	smax		
	comp=E,40nm,1.5s						
JKB	**Kayabe**	**5.92**	**247**	P	**Pn**	**11 17 46.0**	**+0.7**
JKB				*e*S	**Sn**	**11 18 49.1**	**-2.7**
JOT	**Ohata**	**6.17**	**243**	P	**Pn**	**11 17 48.5**	**-0.1**
JOT				*e*S	**Sn**	**11 18 53.7**	**-4.0**
TYV	**Tymovskoe**	**7.47**	**331**	*e*P	**Pn**	**11 18 03.3**	**-3.0**
TYV	**Tymovskoe**	**7.47**	**331**	*e*PN	**Pn**	**11 18 03.3**	**-3.0**
TYV				pmax	pmax		
	comp=Z,100nm,2.6s						
TYV				pmax	pmax		
	comp=Z,11nm,1.6s						
PETK	**Petropavlovsk-**	**10.63**	**32**	P	**Pn**	**11 18 49.0**	**-0.3**
	baz=182,slow=12						
PETK	**Petropavlovsk-**	**10.63**	**32**	*e*P	**Pn**	**11 18 48.7**	**-0.7**
PEA1	**Petropavlovsk-**	**10.63**	**32**	*e*Pn	**Pn**	**11 18 49.0**	**-0.4**
MJAR	**Matsushiro Arr**	**11.03**	**228**	LR	LR	11 23 35.0	
	comp=Z,26nm,18.8s,baz=55,slow=39						
KLR	**Kul'dur**	**12.31**	**299**	P	**Pn**	**11 19 11.4**	**-0.7**
	comp=Z,0.0nm,0.3s,baz=119,slow=17,SNR=2.5						
MA2	**Magadan**	**15.22**	**5**	P	**Pn**	**11 19 49.3**	**-0.5**
	comp=Z,0.7nm,0.3s,baz=170,slow=6.1,SNR=5.4						
MA2				LR	LR	11 24 47.1	
	comp=Z,22nm,19.8s,baz=134,slow=33						
MA2	**Magadan**	**15.22**	**5**	*e*P	**Pn**	**11 19 48.6**	**-1.2**
MA2	**Magadan**	**15.22**	**5**	⇑*e*P	**Pn**	**11 19 48.7**	**-1.1**
YAK	**Yakutsk**	**20.71**	**335**	P	**P**	**11 20 50.6**	**-2.2**
	comp=Z,3.4nm,0.3s,baz=221,slow=19,SNR=4.6						
YAK	**Yakutsk**	**20.71**	**335**	*e*P	**P**	**11 20 50.9**	**-1.9**
	comp=Z,43nm,0.9s						
YAK	**Yakutsk**	**20.71**	**335**	*e*P	**P**	**11 20 50.4**	**-2.4**
YAK				*e*S	**S**	**11 24 33.9**	**-4.8**
YAK				*e**SS	**sS**	**11 25 07.1**	**-0.9**
YAK				*e*		11 25 08.7	
YAK				pmax	pmax		
	comp=Z,31nm,0.9s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,5.0nm,0.9s						
YAK				smax	smax		
	comp=E,102nm,2.6s						
YAK				smax	smax		
	comp=N,87nm,2.8s						
ULN	**Ulaanbaatar**	**28.55**	**292**	*e*P	**P**	**11 22 08.1**	**+0.7**
ULN	**Ulaanbaatar**	**28.55**	**292**	*e*P	**P**	**11 22 07.7**	**+0.3**
	comp=N,2.8nm,0.7s						
ULN	**Ulaanbaatar**	**28.55**	**292**	⇑*e*P	**P**	**11 22 08.1**	**+0.7**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
TIXI	**Tiksi**	**28.85**	**347**	P	**P**	**11 22 07.3**	**-2.3**
	comp=Z,1.7nm,0.4s,baz=140,slow=6.8,SNR=4.9						
TIXI	**Tiksi**	**28.85**	**347**	*e*P	**P**	**11 22 08.3**	**-1.2**
TIXI	**Tiksi**	**28.85**	**347**	⇓*e*P	**P**	**11 22 08.3**	**-1.2**
TIXI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
SONA1	**Songino Array**	**28.99**	**292**	*e*P	**P**	**11 22 12.0**	**+0.7**
SONA0	**Songino Array**	**29.00**	**292**	*e*P	**P**	**11 22 12.3**	**+1.0**
SONM	**Songino Array**	**29.00**	**292**	P	**P**	**11 22 12.3**	**+1.0**
	comp=Z,2.0nm,0.5s,baz=82,slow=8.5,SNR=13						
H11N2	**WAKE ISLAND Hy**	**29.10**	**142**	T	T	11 53 15.9	
	baz=333,slow=76,SNR=226						
H11N1	**WAKE ISLAND Hy**	**29.11**	**142**	T	T	11 53 14.8	
	baz=333,slow=76,SNR=197						
H11N3	**WAKE ISLAND Hy**	**29.12**	**142**	T	T	11 53 15.9	
	baz=333,slow=76,SNR=225						
H11S1	**WAKE ISLAND Hy**	**30.10**	**143**	T	T	11 54 31.4	
	baz=335,slow=76,SNR=131						
H11S3	**WAKE ISLAND Hy**	**30.10**	**143**	T	T	11 54 33.8	
	baz=335,slow=76,SNR=67						
H11S2	**WAKE ISLAND Hy**	**30.11**	**143**	T	T	11 54 32.9	
	baz=335,slow=76,SNR=57						
TOLK	**Toolik Lake Re**	**39.45**	**31**	*e*P	**P**	**11 23 42.9**	**+1.9**
	comp=Z,1.9nm,0.8s						
IL1	**Eielson Array**	**40.41**	**37**	*e*P	**P**	**11 23 49.2**	**+0.2**
ILAR	**Eielson Array**	**40.41**	**37**	P	**P**	**11 23 49.6**	**+0.6**
	comp=Z,1.2nm,0.8s,baz=273,slow=7.9,SNR=13						
ILB	**Eielson Array**	**40.41**	**37**	*e*P	**P**	**11 23 49.6**	**+0.6**
DGZ	**Jazzator, Alta**	**40.81**	**300**	⇑*e*P	**P**	**11 23 54.3**	**+1.7**
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ZAA1	**Zalesovo Array**	**41.26**	**307**	*e*P	**P**	**11 23 55.9**	**-0.1**
ZALV	**Zalesovo Beam**	**41.26**	**307**	P	**P**	**11 23 55.9**	**-0.1**
	comp=Z,1.0nm,0.5s,baz=85,slow=7.7,SNR=2.5						
MK31	**Makanchi Array**	**45.02**	**297**	*e*P	**P**	**11 24 26.8**	**+0.3**
MK31	**Makanchi Array**	**45.02**	**297**	*e*P	**P**	**11 24 26.8**	**+0.3**
MK32	**Makanchi Array**	**45.02**	**297**	*e*P	**P**	**11 24 27.1**	**+0.6**
MK32				*e*PcP	**PcP**	**11 26 06.3**	**+0.4**
MK32				*e*		11 43 04.3	
MKAR	**Makanchi Array**	**45.02**	**297**	P	**P**	**11 24 27.1**	**+0.6**
	comp=Z,5.3nm,0.6s,baz=77,slow=8.3,SNR=30						
MKAR				PcP	**PcP**	**11 26 06.3**	**+0.4**
	comp=Z,0.4nm,0.6s,baz=85,slow=4.1,SNR=2.8						
MKAR				LR	LR	11 43 04.3	
	comp=Z,44nm,18.3s,baz=202,slow=36						
MKAR	**Makanchi Array**	**45.02**	**297**	*e*P	**P**	**11 24 26.8**	**+0.3**
	comp=Z,50nm,0.6s						
MKAR				PcP	**PcP**	**11 26 06.3**	**+0.4**
MK01	**Makanchi Array**	**45.02**	**297**	*e*P	**P**	**11 24 27.0**	**+0.5**
MAKZ	**Makanchi**	**45.21**	**298**	*e*P	**P**	**11 24 28.9**	**+0.9**
	comp=Z,6.0nm,0.7s						
MAKZ	**Makanchi**	**45.21**	**298**	*e*P	**P**	**11 24 28.9**	**+0.9**
MAKZ				pmax	pmax		
	comp=Z,6.0nm,0.7s						
INK	**Inuvik**	**45.36**	**31**	P	**P**	**11 24 29.6**	**+0.8**
	comp=Z,1.9nm,0.3s,baz=294,slow=8.4,SNR=44						
INK	**Inuvik**	**45.36**	**31**	*e*P	**P**	**11 24 29.6**	**+0.8**

	comp=Z,3.2nm,0.6s						
INK	Inuvik	45.36	31	eP	P	11 24 29.6	+0.8
INK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KURK	Kurchatov	45.85	304	eP	P	11 24 31.8	-1.1
KURK	Kurchatov	45.85	304	eP	P	11 24 33.0	+0.1
KURK	Kurchatov	45.85	304	eP	P	11 24 33.0	+0.1
KURBB	Kurchatov Arra	45.93	304	P	P	11 24 33.0	-0.6
	comp=Z,1.4nm,0.4s,baz=74,slow=9.0,SNR=12						
BRVK	Borovoye	49.76	309	eP	P	11 25 02.5	-0.6
BRVK	Borovoye	49.76	309	⇓eP	P	11 25 02.5	-0.6
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KK31	Karatay Array	54.14	298	eP	P	11 25 36.2	+0.4
KK31	Karatay Array	54.14	298	eP	P	11 25 36.2	+0.4
KKAR	Karatay Array	54.14	298	eP	P	11 25 36.2	+0.4
KKAR	Karatay Array	54.14	298	eP	P	11 25 36.2	+0.4
ARU	Arti	54.42	317	d iP	P	11 25 35.2	-2.3
ARU						11 26 37.2	
ARU				S	S	11 33 04.8	-4.0
ARU				SS	SKiKP	11 36 43.2	+5.5
ARU				pmax	pmax		
	comp=Z,14nm,2.5s						
YKA	Yellowknife Ar	54.74	34	P	P	11 25 40.1	+0.3
	comp=Z,0.5nm,0.5s,baz=301,slow=7.3,SNR=11						
YKB5	Yellowknife Ar	54.74	34	eP	P	11 25 40.1	+0.3
ABKAR	Akbulak array	57.29	309	eP	P	11 25 58.3	+0.2
ABKAR				eS	S	11 33 48.6	+1.6
ARA0	ARCESS Array S	58.88	340	eP	P	11 26 08.2	-0.8
ARCES	ARCESS Array B	58.88	340	P	P	11 26 08.2	-0.8
	comp=Z,1.8nm,0.8s,baz=37,slow=9.1,SNR=3.7						
FIA0	FINESS Array S	64.63	333	eP	P	11 26 47.3	-0.3
FIA0	FINESS Array S	64.63	333	eP	P	11 26 47.3	-0.3
FINES	FINESS Array B	64.63	333	P	P	11 26 47.3	-0.3
	comp=Z,5.0nm,0.5s,baz=36,slow=8.4,SNR=30						
WR1	Warramunga Arr	65.35	194	eP	P	11 26 52.7	0.0
	comp=Z,3.1nm,1.1s						
WRA	Warramunga Arr	65.35	194	P	P	11 26 52.7	0.0
	comp=Z,0.8nm,1.0s,baz=11,slow=6.7,SNR=3.4						
AS31	Alice Springs	69.06	194	eP	P	11 27 16.9	+0.7
	comp=Z,1.0nm,1.0s						
ASAR	Alice Springs	69.06	194	P	P	11 27 16.9	+0.7
	comp=Z,0.3nm,0.9s,baz=9.8,slow=6.0,SNR=3.7						
NOA	NORSAR Array B	69.25	339	P	P	11 27 17.3	+0.4
	comp=Z,0.9nm,0.4s,baz=31,slow=6.7,SNR=13						
HFS	Hagfors	69.37	338	P	P	11 27 17.5	-0.2
	comp=Z,1.6nm,0.4s,baz=64,slow=6.6,SNR=11						
NCK	Nalchik	69.75	311	⇓eP	P	11 27 21.5	+1.2
NCK				pmax	pmax		
	comp=Z,23nm,0.6s						
KIV	Kislovodsk	69.93	312	eP	P	11 27 21.9	+0.4
KIV	Kislovodsk	69.93	312	i P	P	11 27 21.9	+0.4
KIV				i		11 29 57.3	
KIV				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KBZ	Khabaz	69.97	312	P	P	11 27 22.8	+1.3
	comp=Z,4.2nm,0.8s,baz=22,slow=5.2,SNR=7.9						
NEY	Neytrino	70.39	312	⇑eP	P	11 27 24.7	+0.3
NEY				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKASG	Malin Array Be	71.51	324	P	P	11 27 30.4	-0.4
	comp=Z,1.3nm,0.5s,baz=38,slow=6.3,SNR=7.6						
AKASG	Malin Array Be	71.51	324	i P	P	11 27 30.7	-0.1
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.7s						
AKBB	Malin Array Si	71.51	324	eP	P	11 27 30.4	-0.4
	comp=Z,3.9nm,0.9s						
AKBB	Malin Array Si	71.51	324	eP	P	11 27 30.5	-0.4
AKBB				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KIEV	Kiev	71.53	324	eP	P	11 27 30.9	0.0
KIEV	Kiev	71.53	324	⇓eP	P	11 27 30.9	0.0
KIEV				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ANMO	Albuquerque	75.90	55	⇓eP	P	11 27 57.8	+0.8
ANMO				pmax	pmax		
	comp=Z,10.0nm,3.7s						
CLL	Collm	77.08	333	eP	P	11 28 01.0	-2.1
EKA	Eskdalemuir Ar	77.69	344	P	P	11 28 06.4	-0.1
	comp=Z,0.4nm,0.4s,baz=24,slow=5.4,SNR=2.1						
ASF	Jabal al Asfar	81.50	307	P	P	11 28 28.7	+1.1
	comp=Z,1.5nm,0.3s,baz=104,slow=4.2,SNR=2.4						
TXAR	Lajitas Array	81.55	57	P	P	11 28 29.1	+1.1
	comp=Z,0.1nm,0.5s,baz=320,slow=9.5,SNR=3.2						

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*ISCJB **23** 11:31:59.6±0.2, 23°.98N±0°.01×121°.78E±0°.02, h27^{km}±2^{km},*
Error ellipse: s-maj=2.8km s-min=1.9km az=42.7
*JMA **23** 11:31:59.3±0.1, 23°.96N×121°.74E, h30^{km}±1^{km}, M2.9*
*TAP **23** 11:31:59.9, 24°.01N×121°.69E, h33^{km}, ML3.7, B*
ISC 23 11:31:59.9±0.9**, 23°.99N**±0°.02×**121°.72E**±0°.02**, h32**^{km}±5^{km}**,**
n101, σ0^s.75/153**, 7C-22D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HWA	Hwalien	0.11	266	⇑iP	Pb	11 32 06.0	+0.4
	baz=245						
HWA				S	Sb	11 32 10.4	+1.0
	baz=245						
ENLB	Shoufeng	0.14	234	⇑P	Pn	11 32 05.7	-0.1
	baz=219						
ENLB				S	Sb	11 32 10.5	+0.7
	baz=219						
TWD	Chiawan	0.15	310	⇑iP	Pn	11 32 05.8	-0.1
	baz=312						
TWD				i S	Sb	11 32 10.1	+0.1
	baz=312						
NACB	Ninganchiao	0.22	328	⇑P	Pb	11 32 06.3	-0.3
	baz=331						
NACB				S	Sb	11 32 10.8	-0.4
	baz=331						
ESL	Shilin	0.31	237	⇑iP	Pb	11 32 07.6	-0.1
	baz=237						
EGFH	Guangfu	0.41	221	eP	Pn	11 32 09.2	-0.4
	baz=225						
ENA	Nanau	0.44	2	⇓P	Pb	11 32 09.0	-0.6
	baz=14						
NANB	Nanao	0.44	3	⇓P	Pb	11 32 08.9	-0.6
	baz=15						
NANB				eS	Sb	11 32 15.6	-0.6
	baz=15						
WHF	Hehuan Shan	0.45	291	⇓iP	Pb	11 32 09.5	-0.5
	baz=283						
WHF				S	Sb	11 32 16.1	-0.8
	baz=283						
ENAH	Nanao	0.47	10	eP	Pb	11 32 09.4	-0.6
	baz=13						
CHGB	Renai	0.51	279	⇓P	Pb	11 32 10.5	-0.2
	baz=270						
CHGB				S	Sb	11 32 17.8	-0.3
	baz=270						
NNSB	Datong	0.54	325	⇓P	Pb	11 32 10.8	-0.4
	baz=320						
NNSB				S	Sb	11 32 18.1	-0.8
	baz=320						
NNS	Nan Shan	0.55	325	⇓iP	Pb	11 32 10.9	-0.5
	baz=321						
NNS				S	Sb	11 32 18.5	-0.8
	baz=321						
HGSD	Ruisui	0.56	209	⇓P	Pn	11 32 11.9	+0.3
	baz=216						
HGSD				eS	Sn	11 32 21.7	+1.9
	baz=216						
TWT	Tachien	0.57	298	⇓P	Pn	11 32 11.5	-0.3
	baz=296						
TWT				S	Sb	11 32 19.1	-0.6
	baz=296						
TDCB	Techi	0.58	298	⇓P	Pb	11 32 11.6	-0.3
	baz=291						
TDCB				S	Sb	11 32 19.2	-0.8
	baz=291						
EHY	Hungye	0.60	218	eP	Pb	11 32 11.2	-0.9
	baz=214						
TWC	Suao	0.63	11	P	Pb	11 32 12.0	-0.6
	baz=14						
ENTT	Nioudou	0.67	348	⇓P	Pb	11 32 12.5	-0.7
	baz=350						
EOS1	EOS1	0.67	33	eP	Pb	11 32 14.2	+1.0
	baz=52						
EOS1				eS	Sn	11 32 24.6	+2.1
	baz=52						
YULB	Yu-li	0.71	213	eP	Pn	11 32 12.6	-1.0
	baz=220						
SSLB	Suanglung	0.73	255	⇓P	Pb	11 32 13.8	-0.4
	baz=256						
SSLB				eS	Sb	11 32 22.8	-1.2
	baz=256						
TWE	Neicheng	0.73	356	⇓P	Pn	11 32 13.6	-0.4
	baz=353						
TWF1	Yuli	0.74	212	eP	Pn	11 32 13.2	-0.9
	baz=219						
YHNB	Yeheng	0.75	335	⇓P	Pn	11 32 14.0	-0.3
	baz=337						
YHNB				S	Sb	11 32 23.5	-1.1
	baz=337						
SMLT	Sun Moon Lake	0.76	262	⇓iP	Pb	11 32 14.4	-0.3
	baz=260						
SMLT				S	Sb	11 32 24.1	-0.8
	baz=260						
NSK	Sanguang	0.76	334	⇓iP	Pn	11 32 14.2	-0.3
	baz=336						
NSK				i S	Sb	11 32 23.9	-1.1
	baz=336						
TYC	Yuchr	0.80	264	⇓P	Pb	11 32 14.9	-0.4
	baz=262						
TYC				S	Sn	11 32 24.9	-0.7
	baz=262						
YUS	Yu-Shan	0.86	235	eP	Pb	11 32 16.6	-0.1
	baz=222						
YUS				eS	Sn	11 32 27.3	-0.6
	baz=222						
NTC	Toucheng	0.87	6	eP	Pb	11 32 16.1	-0.4
	baz=9.0						
FULB	Fuli	0.88	207	eP	Pn	11 32 16.0	0.0
	baz=216						
EGS		0.88	13	eP	Pb	11 32 16.4	-0.3
	baz=16						
LIOB	Emei	0.92	316	⇓P	Pb	11 32 17.6	+0.2
	baz=323						
NSTT	Nanjuang	0.92	315	⇓iP	Pb	11 32 17.4	+0.1
	baz=315						
NSTT				S	Sb	11 32 29.0	-0.3
	baz=315						
WJS	Zhushan	0.92	260	eP	Pb	11 32 17.6	+0.2
	baz=258						
CHKT	Chengkung	0.94	200	eP	Pn	11 32 16.8	0.0
	baz=185						
WNT	Mingjian	0.95	264	⇓P	Pb	11 32 18.3	+0.3
	baz=261						
WNT				eS	Sb	11 32 30.9	+0.6
	baz=261						
NSY	Sanyi	0.98	296	⇓P	Pb	11 32 18.7	+0.4
	baz=296						
TIPB	Shuangxi	0.99	6	P	Pn	11 32 17.7	+0.2
	baz=357						
TIPB				eS	Sb	11 32 31.2	-0.1
	baz=357						
TATO	Taipei	1.01	348	eP	Pn	11 32 17.8	0.0
	baz=350						
TATO				eS	Sn	11 32 29.9	-0.9
	baz=350						
NMLH	Miaoli	1.01	303	⇑P	Pb	11 32 19.3	+0.4
	baz=303						
NMLH				eS	Sb	11 32 33.2	+1.3
	baz=303						
ELDTW	Lidau	1.02	219	eP	Pn	11 32 17.7	-0.4
	baz=208						
CHN5	Tsauling	1.03	248	⇓P	Pb	11 32 19.3	+0.1
	baz=234						
CHN5				S	Sb	11 32 33.2	+0.6
	baz=234						
PTSB	Yuanli	1.04	297	eP	Pb	11 32 19.3	0.0
	baz=296						
PTSB				eS	Sb	11 32 33.7	+1.1
	baz=296						
SBCB	Hsinchu	1.05	320	eP	Pb	11 32 19.1	-0.4
	baz=321						
SBCB				eS	Sb	11 32 33.3	+0.3
	baz=321						
TWB1	Santiao Chiao	1.05	13	eP	Pb	11 32 18.8	-0.7
	baz=16						
HSN	Hsinchu	1.06	320	eP	Pb	11 32 19.1	-0.6
	baz=323						
HSN				eS	Sb	11 32 33.9	+0.5
	baz=323						
TAP1	Taipei	1.06	350	eP	Pn	11 32 18.7	+0.1
	baz=352						
TAP1				S	Sb	11 32 32.8	-0.6
	baz=352						
WCHH	Zhanghua	1.07	275	eP	Pb	11 32 20.2	+0.4
	baz=273						
NWF	Wu-fen Shan	1.08	3	eP	Pb	11 32 20.0	-0.2
	baz=353						
NWF				eS	Sb	11 32 34.6	+0.6
	baz=353						
WFSB	Wu-fen Shan	1.08	3	eP	Pb	11 32 19.9	-0.2
	baz=353						
WFSB				eS	Sb	11 32 34.6	+0.7
	baz=353						
NCUH	Zhongli	1.09	334	eP	Pb	11 32 19.7	-0.6
	baz=335						
NCUH				eS	Sb	11 32 35.4	+1.2
	baz=335						
NCU	National Centr	1.09	334	P	Pb	11 32 19.9	-0.4
	baz=335						
NCU				eS	Sb	11 32 34.6	+0.3
	baz=335						
WGK	Gukeng	1.10	255	eP	Pb	11 32 19.5	-0.9
	baz=252						
WDLH	Douliu	1.12	255	eP	Pb	11 32 20.3	-0.5
	baz=253						
TWS1	Kuangyinshan	1.15	346	eP	Pb	11 32 20.3	-0.9
	baz=358						
TWS1				eS	Sb	11 32 35.4	-0.3
	baz=358						
YM10	YM10	1.17	353	eP	Pn	11 32 20.2	0.0
	baz=355						
YM04	YM04	1.18	352	eP	Pn	11 32 19.8	-0.4
	baz=353						
YM11	YM11	1.18	354	eP	Pn	11 32 20.6	+0.3
	baz=356						
YM07	YM07	1.19	356	eP	Pn	11 32 20.1	-0.1
	baz=342						
NTST	Danshui	1.20	348	eP	Pb	11 32 21.9	-0.1
	baz=350						
YM08	YM08	1.20	354	eP	Pn	11 32 19.7	-0.7
	baz=342						
STYT	Tauyuan	1.21	227	⇓P	Pb	11 32 21.8	-0.4
	baz=220						
STYT				S	Sb	11 32 37.1	-0.4
	baz=220						
JYNG	Yonagunijimaku	1.21	67	P	Pn	11 32 20.6	+0.1
JYNG				eS	Sn	11 32 36.2	+0.4
TPUB	Ta-pu	1.21	236	eP	Pb	11 32 22.3	0.0
	baz=226						
TPUB				eS	Sb	11 32 38.5	+0.9
	baz=226						
RLNB	Erlin	1.25	266	P	Pb	11 32 22.7	-0.1
	baz=277						
RLNB				eS	Sb	11 32 39.5	+0.9
	baz=277						
WTP	Ta-pu	1.25	234	⇑P	Pb	11 32 22.9	-0.1
	baz=232						
WTP				eS	Sb	11 32 39.6	+0.7
	baz=232						
YOJ	Yonaguni jima	1.27	68	P	Pn	11 32 21.2	-0.1
	baz=69						
YOJ				eS	Sn	11 32 37.3	0.0
	baz=69						
YOJ	Yonaguni jima	1.27	68	P	Pn	11 32 21.7	+0.4
YOJ				eS	Sn	11 32 37.6	+0.3
CHY	Chiayi	1.28	248	eP	Pb	11 32 23.6	+0.1
	baz=246						
TWH	Lutao	1.29	190	eP	Pn	11 32 20.6	-1.0
	baz=180						
TWH				eS	Sn	11 32 36.6	-1.1
	baz=180						
TWY	Chenhua	1.29	355	eP	Pb	11 32 24.2	+0.6
	baz=344						
TWGBT	Beinan	1.30	207	eP	Pn	11 32 20.2	-1.7
	baz=193						
TWG	Pinlang	1.30	207	eP	Pn	11 32 20.5	-1.3
	baz=193						
WTCT	Ta-ch'eng	1.32	265	eP	Pb	11 32 23.7	-0.4
	baz=275						
WTCT				S	Sb	11 32 41.8	+1.0
	baz=275						
TWK	Hsinying	1.34	238	eP	Pb	11 32 24.0	-0.5
	baz=225						
TWK				eS	Sb	11 32 41.5	+0.3
	baz=225						
CHN1	Nanshi	1.35	234	eP	Pb	11 32 24.2	-0.5
	baz=233						
CHN1				eS	Sb	11 32 43.2	+1.6
	baz=233						
SGST	Jiashian	1.38	230	eP	Pb	11 32 24.7	-0.4
	baz=228						
SGST				eS	Sb	11 32 43.1	+0.7
	baz=228						
SLGT	Liugui	1.40	225	eP	Pb	11 32 25.6	+0.2
	baz=223						
WLGB	Puzi	1.40	249	eP	Pb	11 32 24.9	-0.5
	baz=234						
WLGB				eS	Sb	11 32 44.8	+1.9
	baz=234						
WSF	Szhu	1.42	256	eP	Pb	11 32 25.2	-0.5
	baz=254						
WSF				eS	Sb	11 32 44.8	+1.4
	baz=254						
CHN8	Yiju	1.52	246	eP	Pb	11 32 26.2	-1.3
	baz=243						
ECL	Taimali	1.55	207	eP	Pn	11 32 25.2	0.0
	baz=196						
SSD	Sandimen	1.59	219	eP	Pb	11 32 27.6	-1.0
	baz=218						
MASBT	Mashibuluo	1.69	216	eP	Pn	11 32 28.5	+1.3
	baz=215						
IRIF	Iriomote-Funau	1.87	79	P	Pn	11 32 29.9	+0.3
IRIF				eS	Sn	11 32 52.8	+0.8
SCZT	Fangliau	1.90	212	eP	Pb	11 32 31.8	-2.0
	baz=212						
LAY	Lan-yu	1.94	185	eP	Pn	11 32 29.2	-1.4
	baz=182						
PHUB	P'eng-hu	2.02	257	eP	Pn	11 32 32.5	+0.7
	baz=255						
PNG	Penghu	2.03	259	eP	Pn	11 32 32.5	+0.7
	baz=256						
JKRS	Kuro-shima	2.11	83	P	Pn	11 32 33.7	+0.9
JKRS				eS	Sn	11 32 59.0	+1.1
VCHM	Qimei	2.24	250	eP	Pn	11 32 36.7	+2.0
	baz=236						
JIJ	Ishigaki jima	2.24	80	P	Pn	11 32 34.9	+0.1
JIJ				eS	Sn	11 33 00.6	-0.7
VWUC	VWUC	2.30	296	eP	Pn	11 32 35.1	-0.4
	baz=295						
JISG	Ishigakijimahi	2.44	75	P	Pn	11 32 37.5	+0.1
JISG				S	Sn	11 33 05.3	-0.8
MATB	Ma-tsu	2.69	324	eP	Pn	11 32 40.5	-0.4
	baz=322						
JTJ	Tarama	2.80	76	eS	Sn	11 33 14.6	-0.4
KNM	Kinmen	3.03	279	eP	Pn	11 32 47.1	+1.5
	baz=276						
KNMB	Chin-men Tao	3.08	280	eP	Pn	11 32 46.0	-0.3
	baz=277						
JIRB	Irabujima	3.26	74	S	Sn	11 33 26.5	+0.2
JIKM	Ikemajima	3.35	73	eS	Sn	11 33 29.2	+0.6

IDC 23 11:57:21.7±2.4**, 10°.57S**×**123°.61E, h0**^{km}**, mb3.7**/1**,**
mb1 3.6/3**, mb1mx3.3**/52**, mbtmp3.4**/3**, ML3.3**/2**, Error**
ellipse: s-maj=231.3km s-min=33.1km az=53.0, Timor
region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	13.92	133	Pn	Pn	12 00 39.8	-0.7
	0.2nm,0.3s,baz=311,slow=15,SNR=17						
WRA				Sn	Sn	12 03 07.4	-8.4
	0.4nm,0.3s,baz=308,slow=24,SNR=11						
ASAR	Alice Springs	16.31	144	Pn	Pn	12 01 13.0	+0.7
	0.1nm,0.3s,baz=317,slow=12,SNR=8.7						
ASAR				Sn	Sn	12 04 10.5	-3.6
	0.1nm,0.3s,baz=310,slow=21,SNR=5.4						
MKAR	Makanchi Array	67.98	331	P	P	12 08 22.7	0.0
	0.6nm,0.6s,baz=135,slow=6.7,SNR=5.2						

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*NNC **23** 12:10:21.8±2.0, 35°.88N×68°.76E, h0^{km}, mb4.9, mpv4.7,*
Error ellipse: s-maj=14.3km s-min=12.5km az=22.0
*MOS **23** 12:10:27.3±1.3, 36°.16N×69°.39E, h33^{km}, mb4.6/17, Error*
ellipse: s-maj=7.5km s-min=4.5km az=78.0
*IDC **23** 12:10:27.5±0.7, 35°.99N×69°.40E, h0^{km}, mb4.2/22,*
mb1 4.4/28, mb1mx4.2/73, mbtmp4.3/28, ML4.1/6, MS3.2/9,
Ms1 3.2/9, ms1mx2.8/63, Error ellipse: s-maj=15.4km
s-min=11.7km az=12.0
*ISCJB **23** 12:10:28.0±0.2, 36°.06N±0°.02×69°.37E±0°.03, h10^{km},*
mb4.4/56, MS3.3/8, Error ellipse: s-maj=3.8km
s-min=2.7km az=160.8
*BJI **23** 12:10:29.0, 36°.19N×69°.38E, h9^{km}, mb4.6/27, mB4.7/19,*
ML4.4/1, Ms4.0/10, Ms7 3.7/7
*NEIC **23** 12:10:29.6±0.3, 36°.07N×69°.41E, h10^{km}, mb4.6/25, Error*
ellipse: s-maj=6.4km s-min=5.0km az=166.0
ISC 23 12:10:29.4±0.4**, 36°.03N**±0°.04×**69°.29E**±0°.04**, h10**^{km}**, n196,**
σ2^s.15/223**, mb4.5**/56**, MS3.3**/8**, 16C-14D, Hindu Kush**
region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	Kabul	1.50	188	ePn	Pn	12 10 57.3	+0.8
KBL				eSn	Sn	12 11 17.2	+0.9
KBL	Kabul	1.50	188	ePN	Pn	12 10 57.3	+0.8
KBL				e		12 11 17.2	
DZET	Dzherino	2.80	353	⇑Pn	Pn	12 11 07.8	-6.6
	145nm,0.7s						
DZET				Sn	Sn	12 11 47.1	-1.1
	422nm,0.5s						
DZET	Dzherino	2.80	353	PN	Pn	12 11 07.8	-6.5
DZET				S	Sn	12 11 47.1	-1.1
DZET				pmax	pmax		
	comp=Z,145nm,0.7s						
DZET				smax	smax		
	comp=N,422nm,0.5s						
CEP	Cherat	3.08	135	P	Pb	12 11 23.1	-1.3
CEP				S	Sg	12 12 09.0	+0.6
CEP	Cherat	3.08	135	P	Sg	12 12 09.3	+0.9
THW	Thamme Wali	3.81	147	P	Pb	12 11 32.7	-4.1
NIL	Nilore	4.03	125	ePn	Pb	12 11 35.8	-4.8
NIL	Nilore	4.03	125	ePN	Pb	12 11 35.8	-4.8
CHCP	Chirah Chowk	4.04	125	P	Pb	12 11 35.5	-5.1
SARP	Sargodha	4.97	145	⇑P	Pn	12 11 47.7	+3.6
SFK	Sufi-Kurgan	5.19	39	⇓Pn	Pn	12 11 46.5	-0.8
	comp=N,36nm,0.4s						
SFK				⇓Sn	Sn	12 12 52.5	+5.2
	comp=N,83nm,0.5s						
SFK	Sufi-Kurgan	5.19	39	PN	Pn	12 11 46.5	-0.8
SFK				pmax	pmax		
	comp=Z,36nm,0.4s						
KSH	Kashi	6.34	55	P	Pn	12 12 01.1	-1.9
KSH				sP	Pb	12 12 06.8	-13
KSH				S	Sn	12 13 09.8	-5.7
KSH				pmax	pmax		
	comp=Z,120nm,0.5s						
KSH				smax	smax		
	comp=N,390nm,0.7s						
KSH				smax	smax		
	comp=E,360nm,0.6s						
MNAS	Manas	6.92	20	⇑Pn	Pn	12 12 09.3	-1.7
	comp=E,20nm,0.4s						
MNAS				⇑Sn	Sn	12 13 31.2	+1.5
	comp=E,54nm,0.5s						
MNAS	Manas	6.92	20	PN	Pn	12 12 09.3	-1.7
MNAS				S	Sn	12 13 31.2	+1.5
MNAS				pmax	pmax		
	comp=Z,20nm,0.4s						
MNAS				smax	smax		
	comp=N,54nm,0.5s						
DHRM	DHARAMSHALA	6.93	121	eP	Pn	12 12 14.2	+3.0
DHRM				eS	Sn	12 13 32.5	+2.3
DHRM				IAML		12 13 35.4	
	comp=N,432nm,0.8s						
DHRM				IAML		12 13 36.9	
	comp=E,511nm,0.8s						
AML	Almayashu	6.99	28	P	Pn	12 12 13.1	+0.8
	SNR=113						
KK31	Karatay Array	7.13	7	⇑Pn	Pn	12 12 11.4	-2.4
	comp=E,26nm,0.6s,baz=193,slow=13,SNR=241						
KK31				⇓Sn	Sn	12 13 34.5	-0.3
	comp=E,9.9nm,0.4s,baz=190,slow=21,SNR=4.2						
KK31				⇑Lg	Lg	12 14 13.6	
	comp=E,38nm,0.7s,baz=163,slow=31,SNR=3.8						
KK31	Karatay Array	7.13	7	ePn	Pn	12 12 14.8	+1.0
KK31	Karatay Array	7.13	7	ePN	Pn	12 12 14.8	+1.0
KKAR	Karatay Array	7.13	7	ePn	Pn	12 12 14.8	+1.0
KKAR	Karatay Array	7.13	7	ePN	Pn	12 12 14.8	+1.0
EKS2	Erkin-Say	7.48	26	P	Pn	12 12 19.7	+1.0
	SNR=30						
KZA	Kyzart	7.62	36	P	Pn	12 12 22.1	+1.2
	SNR=26						

AAK	**Ala-Archa**	**7.74**	**30**	Pn	**Pn**	**12 12 21.4**	**-0.8**
	comp=E,7.7nm,0.3s,baz=167,slow=3.5,SNR=21						
AAK				Sn	**Sn**	**12 13 48.3**	**-1.7**
	comp=E,1.8nm,0.3s,baz=175,slow=11,SNR=3.1						
AAK				LR	LR	12 15 56.7	
	comp=E,89nm,18.8s,baz=198,slow=43						
AAK	**Ala-Archa**	**7.74**	**30**	⇓Pn	**Pn**	**12 12 20.7**	**-1.5**
	comp=E,34nm,0.6s						
AAK				⇑Sn	**Sn**	**12 13 53.2**	**+3.2**
	comp=E,29nm,0.6s						
AAK				⇓Lg	Lg	12 14 36.0	
	comp=E,38nm,1.1s						
AAK	**Ala-Archa**	**7.74**	**30**	P	**Pn**	**12 12 23.7**	**+1.5**
	SNR=17						
AAK	**Ala-Archa**	**7.74**	**30**	*e*Pn	**Pn**	**12 12 21.4**	**-0.8**
AAK				*e*Pn	**Pn**	**12 12 23.3**	**+1.1**
AAK				*e*Sn	**Sn**	**12 13 48.3**	**-1.7**
FRU1	**Bishkek**	**7.93**	**30**	*e*Pn	**Pn**	**12 12 24.8**	**0.0**
FRU1	**Bishkek**	**7.93**	**30**	*e*P	**Pn**	**12 12 24.8**	**0.0**
KBK	**Karagaybulak**	**7.94**	**32**	P	**Pn**	**12 12 27.0**	**+1.9**
	SNR=11						
FRU	**Bishkek**	**7.95**	**30**	*e*P	**Pn**	**12 12 27.0**	**+2.0**
FRU				*e*S	**Sn**	**12 13 58.0**	**+3.0**
FRU				pmax	pmax		
	comp=E,240nm,1.6s						
CHMS	**Chumysh**	**8.14**	**30**	P	**Pn**	**12 12 28.7**	**+1.0**
	SNR=30						
SMLA	**Simla**	**8.19**	**124**	*e*P	**Pn**	**12 12 30.5**	**+2.2**
SMLA				*e*S	**Sn**	**12 14 01.2**	**+0.3**
SMLA				IAML		12 14 06.4	
	comp=E,277nm,1.0s						
SMLA				IAML		12 14 09.6	
	comp=N,219nm,0.2s						
ULHL	**Ulahol**	**8.23**	**39**	P	**Pn**	**12 12 30.2**	**+1.1**
	SNR=11						
USP	**Ospenovka**	**8.27**	**27**	P	**Pn**	**12 12 29.9**	**+0.5**
	SNR=15						
TKM2	**Tokmak 2**	**8.44**	**33**	⇑Pn	**Pn**	**12 12 32.5**	**+0.6**
	comp=N,12nm,0.5s						
TKM2				⇓Sn	**Sn**	**12 14 11.2**	**+3.9**
	comp=N,3.6nm,0.4s						
TKM2	**Tokmak 2**	**8.44**	**33**	P	**Pn**	**12 12 32.7**	**+0.8**
	SNR=29						
TKM2	**Tokmak 2**	**8.44**	**33**	P	**Pn**	**12 12 32.5**	**+0.6**
TKM2				S	**Sn**	**12 14 11.2**	**+3.9**
TKM2				pmax	pmax		
	comp=Z,13nm,0.5s						
TKM2				smax	smax		
	comp=N,4.0nm,0.4s						
KDJ	**Kajisay**	**8.65**	**43**	*e*Pn	**Pn**	**12 12 34.6**	**-0.1**
KDJ	**Kajisay**	**8.65**	**43**	*e*P	**Pn**	**12 12 34.6**	**-0.1**
KKR	**Kurukshetra**	**8.75**	**132**	*e*x	**Sn**	**12 14 07.9**	**-6.9**
GEYT	**Alibeck**	**9.14**	**285**	Pn	**Pn**	**12 12 39.8**	**-1.6**
	comp=N,2.6nm,0.3s,baz=86,slow=12,SNR=14						
GEYT				Sn	**Sn**	**12 14 21.6**	**-2.7**
	comp=N,1.8nm,0.3s,baz=214,slow=47,SNR=6.5						
GYA0B	**ALIBECK ARRAY**	**9.14**	**285**	*e*Pn	**Pn**	**12 12 41.2**	**-0.1**
DDI	**Dehra Dun**	**9.29**	**125**	*e*P	**Pn**	**12 12 44.3**	**+0.8**
DDI				*e*S	**Sn**	**12 14 23.9**	**-4.3**
PRZ	**Przheval'sk**	**9.56**	**45**	*e*Pn	**Pn**	**12 12 47.3**	**0.0**
PRZ	**Przheval'sk**	**9.56**	**45**	*e*P	**Pn**	**12 12 47.3**	**0.0**
KHET	**Khetri**	**9.67**	**143**	*e*P	**Pn**	**12 12 49.1**	**+0.5**
KHET				*e*S	**Sn**	**12 14 31.8**	**-5.5**
JOSI	**Joshimath**	**10.18**	**119**	*e*P	**Pn**	**12 12 58.4**	**+2.5**
JOSI				*e*S	**Sn**	**12 14 46.6**	**-3.6**
JOSI				IAML		12 15 17.0	
	comp=E,179nm,1.0s						
PYUN	**Piuthan**	**14.04**	**120**	*e*P	**Pn**	**12 13 46.6**	**-2.1**
	comp=E,58nm,0.6s						
PYUN				*e*S	**Sn**	**12 16 18.0**	**-6.7**
MAKZ	**Makanchi**	**14.36**	**37**	*e*Pn	**Pn**	**12 13 50.8**	**-1.9**
MAKZ	**Makanchi**	**14.36**	**37**	*e*P	**Pn**	**12 13 50.8**	**-1.9**
DANN	**Dangsing**	**14.44**	**118**	*e*P	**Pn**	**12 13 52.4**	**-1.8**
	comp=E,68nm,0.5s						
MK01	**Makanchi Array**	**14.49**	**38**	*e*Pn	**Pn**	**12 13 51.9**	**-2.7**
MK31	**Makanchi Array**	**14.50**	**38**	*e*Pn	**Pn**	**12 13 52.5**	**-2.2**
MK31	**Makanchi Array**	**14.50**	**38**	*e*P	**Pn**	**12 13 52.5**	**-2.2**
MK32	**Makanchi Array**	**14.50**	**38**	*e*Pn	**Pn**	**12 13 52.7**	**-2.0**
MK32				*e*Sn	**Sn**	**12 16 37.7**	**+2.3**
MKAR	**Makanchi Array**	**14.50**	**38**	Pn	**Pn**	**12 13 52.7**	**-2.0**
	comp=E,0.4nm,0.3s,baz=219,slow=15,SNR=20						
MKAR				Sn	**Sn**	**12 16 37.7**	**+2.3**
	comp=E,0.9nm,0.3s,baz=171,slow=29,SNR=8.8						
BHPL	**Bhopal**	**14.57**	**149**	*e*P	**Pn**	**12 13 55.2**	**-0.5**
KOLN	**Koldanda**	**14.67**	**120**	*e*P	**Pn**	**12 13 55.0**	**-2.3**
	comp=E,26nm,0.4s						
AB31	**Akbulak array**	**14.88**	**336**	⇓Pn	Pn	12 13 54.1	-5.7
	comp=E,11nm,0.6s,baz=151,slow=12,SNR=151						
AB31				⇑Sn	**Sn**	**12 16 38.4**	**-6.2**
	comp=E,4.7nm,0.5s,baz=153,slow=22,SNR=11						
AB31	**Akbulak array**	**14.88**	**336**	P	Pn	12 13 54.5	-5.3
AB31				S	**Sn**	**12 16 38.4**	**-6.2**
AB31				pmax	pmax		
	comp=Z,11nm,0.6s						
AB31				smax	smax		
	comp=N,5.0nm,0.5s						
ABKAR	**Akbulak array**	**14.88**	**336**	*e*Pn	**Pn**	**12 13 56.5**	**-3.3**
GKN	**Gorkha**	**15.27**	**117**	*e*P	**Pn**	**12 14 02.9**	**-2.4**
	comp=N,123nm,0.7s						
DMN	**Daman**	**15.84**	**118**	*e*P	**Pn**	**12 14 10.0**	**-2.7**
	comp=N,72nm,0.5s						
KKN	**Kakani**	**15.86**	**117**	*e*P	**Pn**	**12 14 10.1**	**-2.9**
	comp=N,51nm,0.5s						
KURBB	**Kurchatov Arra**	**16.04**	**22**	Pn	**Pn**	**12 14 11.5**	**-3.5**
	comp=N,0.1nm,0.3s,baz=212,slow=10,SNR=7.7						
PKIN	**Phulchoki**	**16.07**	**117**	*e*P	**Pn**	**12 14 13.9**	**-1.8**
	comp=N,95nm,0.6s						
WMQ	**Urumqi**	**16.10**	**55**	P	**P**	**12 14 19.9**	**+0.6**
WMQ				pP	sP	12 14 22.4	-1.0
WMQ				sP	pP	12 14 26.0	+3.9
WMQ				pmax	pmax		
	comp=N,30nm,0.9s						
WMQ				pmax	pmax		
	comp=N,190nm,5.3s						
KURK	**Kurchatov**	**16.15**	**22**	*e*Pn	**Pn**	**12 14 11.5**	**-4.9**
KURK				*e*Pn	**P**	**12 14 15.3**	**-4.3**
KURK	**Kurchatov**	**16.15**	**22**	*de*P	**P**	**12 14 18.7**	**-0.9**
KURK				pmax	pmax		
	comp=Z,58nm,1.0s						
GUN	**Gumba**	**16.23**	**115**	*e*P	**Pn**	**12 14 15.9**	**-1.9**
	comp=Z,52nm,0.5s						
AKTO	**Aktyubinsk**	**16.55**	**334**	Pn	**Pn**	**12 14 20.1**	**-1.3**
	comp=Z,0.9nm,0.3s,baz=138,slow=15,SNR=18						
AKTO				LR	LR	12 21 20.2	
	comp=Z,63nm,18.2s,baz=144,slow=39						
AKTO	**Aktyubinsk**	**16.55**	**334**	⇑Pn	**Pn**	**12 14 15.7**	**-5.8**
	comp=Z,21nm,0.9s						
AKTO				⇓Sn	**Sn**	**12 17 19.5**	**-5.6**
	comp=Z,12nm,0.8s						
AKTO	**Aktyubinsk**	**16.55**	**334**	P	**Pn**	**12 14 15.7**	**-5.8**
AKTO				S	**Sn**	**12 17 19.5**	**-5.6**
AKTO				pmax	pmax		
	comp=Z,21nm,1.0s						
AKTO				smax	smax		
	comp=N,120nm,0.9s						
JIRN	**Jiri**	**16.59**	**115**	*e*P	**Pn**	**12 14 20.4**	**-2.2**
	comp=N,124nm,0.5s						
BVAR	**Borovoye Array**	**17.01**	**2**	P	**Pn**	**12 14 26.1**	**-1.2**
	comp=N,1.6nm,0.3s,baz=168,slow=11,SNR=12						
BRVK	**Borovoye**	**17.04**	**2**	*e*Pn	**Pn**	**12 14 27.2**	**-0.5**
	comp=N,9.7nm,0.6s						
BRVK	**Borovoye**	**17.04**	**2**	*de*P	**Pn**	**12 14 27.9**	**+0.2**
BRVK				pmax	pmax		
	comp=Z,63nm,1.7s						
RAMN	**Ramite**	**17.30**	**117**	*e*P	**Pn**	**12 14 30.3**	**-1.0**
	comp=Z,67nm,0.6s						
ODAN	**Odare**	**17.93**	**116**	*e*P	**Pn**	**12 14 38.2**	**-0.9**
	comp=Z,76nm,0.7s						
GTK	**Tadong**	**18.57**	**112**	*e*P	**Pn**	**12 14 47.3**	**+0.5**
BOK	**Bokaro**	**18.83**	**126**	*e*P	**Pn**	**12 14 50.6**	**+0.7**
DGZ	**Jazzator, Alta**	**19.00**	**38**	*e*P	**P**	**12 14 49.3**	**-2.0**
LSA	**Lhasa**	**19.40**	**103**	P	**Pn**	**12 14 59.8**	**+2.5**
LSA				pmax	pmax		
	comp=Z,11nm,0.6s						
LSA	**Lhasa**	**19.40**	**103**	*e*P	**Pn**	**12 14 59.5**	**+2.2**
	comp=Z,28nm,0.7s						
LSA	**Lhasa**	**19.40**	**103**	*e*P	**Pn**	**12 14 59.5**	**+2.2**
LSA				pmax	pmax		
	comp=Z,28nm,0.7s						
GNI	**Garni**	**19.73**	**289**	LR	LR	12 23 33.7	
	comp=Z,32nm,19.1s,baz=64,slow=40						
GNI	**Garni**	**19.73**	**289**	*e*P	**P**	**12 15 00.7**	**+1.3**
	comp=Z,10nm,0.7s						
GNI	**Garni**	**19.73**	**289**	*ce*P	**Pn**	**12 15 03.1**	**+2.3**
GNI				pmax	pmax		
	comp=Z,54nm,1.3s						
HYB	**Hyderabad**	**20.28**	**154**	*i* P	Pn	12 15 08.0	+0.7
HYB	**Hyderabad**	**20.28**	**154**	*e*P	**P**	**12 15 06.2**	**+0.8**
AKH	**Akhalkalaki**	**20.80**	**293**	*e*P	**P**	**12 15 11.4**	**+0.5**
	comp=Z,7.7nm,0.9s						
AKH	**Akhalkalaki**	**20.80**	**293**	*e*P	**P**	**12 15 11.4**	**+0.5**
AKH				pmax	pmax		
	comp=Z,8.0nm,0.9s						
TURI	**Tura**	**20.84**	**114**	*e*P	**P**	**12 15 11.9**	**+0.5**
ZAA0	**Zalesovo Array**	**20.93**	**26**	*e*P	**P**	**12 15 11.3**	**-0.8**
	comp=Z,17nm,0.6s						
ZALV	**Zalesovo Beam**	**20.93**	**26**	P	**P**	**12 15 11.3**	**-0.8**
	comp=Z,19nm,0.5s,baz=216,slow=9.4,SNR=23						
ZAA1	**Zalesovo Array**	**20.94**	**26**	*e*P	**P**	**12 15 11.3**	**-0.9**
NVS	**Novosibirsk**	**21.13**	**23**	*e*P	**P**	**12 15 13.7**	**-0.5**
NVS				pmax	pmax		
	comp=Z,14nm,0.8s						
NVS				pmax	pmax		
	comp=N,11nm,0.8s						
NVS				pmax	pmax		
	comp=E,4.0nm,0.8s						
BWNR	**Bhubaneshwar**	**21.34**	**133**	*e*P	**P**	**12 15 18.0**	**+1.2**
GUWA	**GUWAHATI**	**21.50**	**111**	*e*P	**P**	**12 15 19.6**	**+1.2**
KBZ	**Khabaz**	**21.60**	**299**	P	**P**	**12 15 20.7**	**+1.4**
	comp=E,4.1nm,0.8s,baz=129,slow=6.7,SNR=7.2						
KBZ				LR	LR	12 25 53.6	
	comp=E,44nm,19.3s,baz=43,slow=43						
SVE	**Sverdlovsk**	**21.61**	**347**	⇓*e*P	**P**	**12 15 21.5**	**+2.2**
SVE				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ARU	**Arti**	**21.66**	**344**	P	**P**	**12 15 20.4**	**+0.5**
	comp=Z,13nm,0.6s,baz=150,slow=4.9,SNR=9.2						
ARU	**Arti**	**21.66**	**344**	*e*P	**P**	**12 15 19.9**	**0.0**
	comp=Z,18nm,0.7s						
ARU	**Arti**	**21.66**	**344**	*c i*P	**P**	**12 15 22.1**	**+2.2**
ARU						12 15 43.5	
ARU				S	**S**	**12 19 21.7**	**+2.1**
ARU				SS	**SnSn**	**12 19 45.2**	**+1.6**
ARU				pmax	pmax		
	comp=Z,20nm,0.8s						
KVAR	**Kislovodsk Arr**	**21.79**	**299**	LR	LR	12 26 39.9	
	comp=Z,43nm,18.2s,baz=330,slow=44						
SHL	**Shillong**	**21.99**	**112**	*e*P	**P**	**12 15 24.8**	**+0.9**
	comp=Z,55nm,0.6s						
SHL	**Shillong**	**21.99**	**112**	*e*P	**P**	**12 15 24.1**	**+0.2**
SHL				*e*P	**P**	**12 15 25.0**	**+1.1**
SHL	**Shillong**	**21.99**	**112**	*e*P	**P**	**12 15 24.8**	**+0.9**
SHL				pmax	pmax		
	comp=Z,55nm,0.6s						
TEZP	**TEZPUR**	**22.12**	**108**	*e*P	**P**	**12 15 24.8**	**-0.3**
ZIRO	**ZIRO**	**22.49**	**105**	*e*P	**P**	**12 15 29.4**	**+0.1**
HVS	**Khovu-Aksy**	**23.11**	**42**	⇑*e*P	**P**	**12 15 36.9**	**+1.5**
HVS				pmax	pmax		
	comp=Z,24nm,0.7s						
MOKO	**MOKOCHONG**	**23.60**	**107**	*e*P	**P**	**12 15 41.0**	**+0.4**
IMP	**Imphal**	**23.95**	**111**	*e*P	**P**	**12 15 43.9**	**0.0**
GTA	**Gaotai**	**24.33**	**73**	*e*P	**P**	**12 15 48.9**	**+1.5**
GTA				pP	sP	12 15 54.6	+2.9
GTA				sP	pP	12 15 57.5	+7.0
GTA				S	**S**	**12 20 06.3**	**-0.3**
GTA				pmax	pmax		
	comp=Z,12nm,0.8s						
GTA				pmax	pmax		
	comp=Z,77nm,5.2s						
GTA				LR	LR		
	comp=Z,160nm,16.5s						
GTA				LR	LR		
	comp=Z,190nm,15.1s						
GTA				LR	LR		
	comp=Z,160nm,14.8s						
VSR	**Storozhevoye**	**26.33**	**315**	*e*P	**P**	**12 16 06.7**	**+1.4**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MOY	**Mondy**	**27.42**	**45**	*e*P	P	12 16 04.7	-11
LZH	**Lanzhou**	**27.85**	**80**	*e*P	**P**	**12 16 21.6**	**+2.2**
LZH				pP	sP	12 16 24.9	+1.2
LZH				sP	pP	12 16 27.5	+5.1
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
ILGA	**Ilgaz**	**28.14**	**291**	*e*P	**P**	**12 16 22.2**	**+0.3**
	comp=Z,10nm,1.1s						
BR101	**Keskin Array S**	**28.26**	**288**	*e*P	**P**	**12 16 26.4**	**+3.4**
BRTR	**Keskin Array B**	**28.26**	**288**	P	**P**	**12 16 26.4**	**+3.4**
	comp=Z,1.1nm,1.0s,baz=99,slow=7.9,SNR=5.8						
TLY	**Talaya**	**28.97**	**47**	LR	LR	12 28 24.0	
	comp=Z,39nm,18.3s,baz=222,slow=37						
OBN	**Obninsk**	**29.41**	**321**	⇑*e*P	**P**	**12 16 36.8**	**+4.1**
OBN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SONA0	**Songino Array**	**29.74**	**55**	*e*P	**P**	**12 16 36.2**	**+0.3**
SONM	**Songino Array**	**29.74**	**55**	P	**P**	**12 16 36.2**	**+0.3**
	comp=Z,2.6nm,0.9s,baz=266,slow=9.1,SNR=9.7						
SONA1	**Songino Array**	**29.75**	**55**	*e*P	**P**	**12 16 36.2**	**+0.1**
ULN	**Ulaanbaatar**	**30.18**	**55**	⇓*e*P	**P**	**12 16 41.6**	**+1.7**
ULN				pmax	pmax		
	comp=Z,7.0nm,2.5s						
CMAR	**Chiang Mai Arr**	**31.47**	**116**	P	**P**	**12 16 51.6**	**+0.3**
	comp=Z,1.9nm,0.6s,baz=294,slow=8.2,SNR=9.0						
CMAR				LR	LR	12 33 04.1	
	comp=Z,28nm,19.2s,baz=235,slow=43						
AKASG	**Malin Array Be**	**32.17**	**310**	P	**P**	**12 16 58.2**	**+1.0**
	comp=Z,3.8nm,0.6s,baz=83,slow=7.4,SNR=12						
AKBB	**Malin Array Si**	**32.17**	**310**	*e*P	**P**	**12 16 57.4**	**+0.2**
	comp=Z,4.6nm,0.8s						
AKBB	**Malin Array Si**	**32.17**	**310**	*e*P	**P**	**12 16 57.4**	**+0.2**
AKBB				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KIEV	**Kiev**	**32.18**	**310**	⇑*e*P	**P**	**12 16 58.4**	**+1.1**
KIEV				pmax	pmax		
	comp=Z,13nm,1.7s						
GYA	**Guiyang**	**33.18**	**96**	*e*P	**P**	**12 17 08.9**	**+2.5**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
HHC	**Hu-ho-hao-te**	**33.23**	**69**	*e*P	**P**	**12 17 08.4**	**+1.7**
HHC				S	**S**	**12 22 24.8**	**-1.9**
HHC				sS	sS	12 22 39.0	+7.3
HHC				SS	**SnSn**	**12 24 28.8**	**+2.6**
HHC				pmax	pmax		
	comp=Z,23nm,1.0s						
HHC				pmax	pmax		
	comp=Z,220nm,5.6s						
HHC				LR	LR		
	comp=Z,220nm,12.0s						
HHC				LR	LR		
	comp=Z,210nm,10.9s						
HHC				LR	LR		
	comp=Z,99nm,12.7s						
MLR	**Muntele Rosu**	**33.81**	**300**	P	**P**	**12 17 13.7**	**+2.0**
	comp=Z,5.5nm,0.8s,baz=135,slow=7.1,SNR=4.4						
MLR	**Muntele Rosu**	**33.81**	**300**	*e*P	**P**	**12 17 13.7**	**+2.0**
	comp=Z,8.5nm,0.9s						
MLR	**Muntele Rosu**	**33.81**	**300**	*e*P	**P**	**12 17 13.7**	**+2.0**
MLR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
PBKT	**Sadao Pong**	**34.16**	**116**	*e*P	**P**	**12 17 16.1**	**+1.2**
	comp=Z,4.7nm,0.8s						
BOD	**Bodaibo**	**36.59**	**39**	*e*P	**P**	**12 17 34.7**	**-0.7**
BOD				pmax	pmax		
	comp=Z,10.0nm,1.0s						
FIA0	**FINESS Array S**	**37.11**	**327**	*e*P	**P**	**12 17 40.0**	**+0.2**
FIA0	**FINESS Array S**	**37.11**	**327**	*e*P	**P**	**12 17 40.0**	**+0.2**
FINES	**FINESS Array B**	**37.11**	**327**	P	**P**	**12 17 40.0**	**+0.2**
	comp=Z,4.0nm,0.7s,baz=106,slow=12,SNR=8.5						
FINES	**FINESS Array B**	**37.11**	**327**	P	**P**	**12 17 40.0**	**+0.2**
NJ2	**Nanjing**	**40.91**	**81**	*e*P	**P**	**12 18 11.8**	**-0.2**
NJ2				pmax	pmax		
	comp=Z,21nm,0.5s						
ARA0	**ARCESS Array S**	**41.06**	**338**	*e*P	**P**	**12 18 13.3**	**+0.6**
ARCES	**ARCESS Array B**	**41.06**	**338**	P	**P**	**12 18 13.3**	**+0.6**
	comp=Z,3.5nm,0.7s,baz=118,slow=7.0,SNR=10.0						
HFS	**Hagfors**	**42.59**	**322**	P	**P**	**12 18 25.7**	**+0.4**
	comp=Z,7.7nm,0.6s,baz=94,slow=10,SNR=15						
CN2	**Changchun**	**43.05**	**62**	*e*P	**P**	**12 18 26.8**	**-2.5**
NB2	**NORSAR Subarra**	**43.93**	**323**	P	**P**	**12 18 35.7**	**-0.5**
	comp=Z,2.2nm,0.5s,baz=98,slow=7.9						
NB2	**NORSAR Subarra**	**43.93**	**323**	P	**P**	**12 18 37.7**	**+1.5**
NOA	**NORSAR Array B**	**43.93**	**323**	P	**P**	**12 18 35.7**	**-0.5**
	comp=Z,2.9nm,0.5s,baz=99,slow=8.0,SNR=12						
YAK	**Yakutsk**	**45.15**	**35**	*e*P	**P**	**12 18 46.8**	**+1.0**
YAK				pmax	pmax		
	comp=Z,16nm,1.0s						
KSAR	**Wonju Array Be**	**46.32**	**70**	P	**P**	**12 18 54.2**	**-1.2**
KSAR	**Wonju Array Be**	**46.32**	**70**	P	**P**	**12 18 54.2**	**-1.2**
KSRS	**Korea Array**	**46.34**	**70**	P	**P**	**12 18 54.2**	**-1.4**
	comp=Z,1.7nm,0.6s,baz=275,slow=6.9,SNR=8.7						
KLR	**Kul'dur**	**46.54**	**53**	P	**P**	**12 18 56.3**	**-0.7**
	comp=Z,0.2nm,0.5s,baz=283,slow=10,SNR=5.6						
KLR	**Kul'dur**	**46.54**	**53**	⇓*e*P	**P**	**12 18 57.2**	**+0.2**
TIXI	**Tiksi**	**46.73**	**22**	P	**P**	**12 18 58.0**	**-0.2**
	comp=Z,5.8nm,0.6s,baz=270,slow=4.5,SNR=6.2						
TIXI	**Tiksi**	**46.73**	**22**	*e*P	**P**	**12 18 57.9**	**-0.3**
	comp=Z,9.0nm,1.0s						
TIXI				*e*P	**P**	**12 18 58.0**	**-0.2**
TIXI	**Tiksi**	**46.73**	**22**	⇑*e*P	**P**	**12 18 57.8**	**-0.3**
TIXI				pmax	pmax		
	comp=Z,7.0nm,0.8s						
SPITS	**Spitsbergen Ar**	**47.64**	**347**	P	**P**	**12 19 08.6**	**+3.3**
	comp=Z,4.8nm,0.6s,baz=117,slow=14,SNR=3.8						
KEST	**Kesra**	**47.87**	**288**	P	**P**	**12 19 10.4**	**+2.8**
	comp=Z,2.5nm,0.5s,baz=20,slow=3.0,SNR=4.3						
KEST	**Kesra**	**47.87**	**288**	*e*P	**P**	**12 19 09.9**	**+2.3**
	comp=Z,9.9nm,1.1s						
EKA	**Eskdalemuir Ar**	**51.66**	**316**	P	**P**	**12 19 37.3**	**+1.2**
	comp=Z,4.2nm,0.9s,baz=85,slow=9.3,SNR=5.0						
YSS	**Yuzh-Sakhalins**	**54.22**	**54**	⇓*i*P	**P**	**12 19 55.3**	**+0.1**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MAJO	**Matsushiro**	**54.41**	**68**	*e*P	**P**	**12 19 56.4**	**-0.4**
MAJO	**Matsushiro**	**54.41**	**68**	*e*P	**P**	**12 19 56.4**	**-0.4**
MJAR	**Matsushiro Arr**	**54.41**	**68**	P	**P**	**12 19 56.4**	**-0.4**
	comp=Z,0.7nm,0.6s,baz=292,slow=8.0,SNR=4.0						
ASAJ	**Asahikawa**	**54.98**	**57**	P	**P**	**12 20 00.1**	**-0.6**
	comp=Z,1.9nm,0.7s,baz=262,slow=13,SNR=4.1						
ASAJ				LR	LR	12 44 33.7	
	comp=Z,39nm,18.3s,baz=198,slow=37						
ESDC	**Sonseca Array**	**56.45**	**298**	P	**P**	**12 20 14.2**	**+2.7**
	comp=Z,0.4nm,0.2s,baz=52,slow=8.5,SNR=4.6						
DAV	**Davao City (W)**	**58.80**	**105**	LR	LR	12 47 21.2	
	comp=Z,51nm,18.3s,baz=300,slow=38						
TOA1	**Torodi Ar. Sit**	**64.32**	**268**	*e*P	**P**	**12 21 03.9**	**-1.6**
TORD	**Torodi Ar. Bea**	**64.32**	**268**	P	**P**	**12 21 03.9**	**-1.6**
	comp=Z,66nm,0.6s,baz=34,slow=6.5						
TOLK	**Toolik Lake Re**	**71.72**	**14**	*e*P	**P**	**12 21 51.8**	**+0.5**
	comp=Z,6.3nm,0.6s						
COLD	**Coldfoot**	**72.79**	**15**	*e*P	**P**	**12 21 58.8**	**+1.1**
	comp=Z,5.6nm,1.0s						
INK	**Inuvik**	**74.58**	**9**	P	**P**	**12 22 08.1**	**0.0**
	comp=Z,2.9nm,0.6s,baz=351,slow=7.6,SNR=9.1						
INK	**Inuvik**	**74.58**	**9**	*e*P	**P**	**12 22 08.1**	**0.0**
	comp=Z,4.5nm,0.9s						
INK	**Inuvik**	**74.58**	**9**	*e*P	**P**	**12 22 08.1**	**0.0**
INK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BPAW	**Bear Paw Mtn.**	**75.26**	**17**	*e*P	**P**	**12 22 10.5**	**-1.7**
	comp=Z,5.2nm,1.0s						
IL1	**Eielson Array**	**75.60**	**15**	*e*P	**P**	**12 22 12.5**	**-1.6**
ILAR	**Eielson Array**	**75.60**	**15**	P	**P**	**12 22 13.5**	**-0.6**
	comp=Z,1.9nm,0.9s,baz=322,slow=4.3,SNR=15						
ILB	**Eielson Array**	**75.60**	**15**	*e*P	**P**	**12 22 13.5**	**-0.6**
HDA	**Harding Lake**	**75.91**	**15**	*e*P	**P**	**12 22 16.0**	**+0.2**
	comp=Z,16nm,1.1s						
SKT	**Skwentna**	**76.91**	**18**	*e*P	**P**	**12 22 20.7**	**-0.9**
	comp=Z,10nm,1.2s						
SKT				*e*S	**S**	**12 32 10.8**	**+1.5**
DAWY	**Dawson**	**77.69**	**12**	*e*P	**P**	**12 22 26.1**	**+0.1**
	comp=Z,4.6nm,1.1s						
SML	**Sawmill**	**77.85**	**17**	*e*P	**P**	**12 22 26.6**	**-0.3**
	comp=Z,18nm,1.0s						
SML	**Sawmill**	**77.85**	**17**	*e*P	**P**	**12 22 26.6**	**-0.3**
SML				pmax	pmax		
	comp=Z,18nm,1.0s						
KLU	**Klutina**	**78.69**	**16**	*e*P	**P**	**12 22 31.9**	**+0.3**
	comp=Z,5.6nm,0.8s						
YKA	**Yellowknife Ar**	**81.77**	**2**	P	**P**	**12 22 47.6**	**-0.4**
	comp=Z,1.0nm,0.6s,baz=350,slow=5.4,SNR=12						
WRA	**Warramunga Arr**	**82.93**	**121**	P	**P**	**12 22 53.4**	**-1.3**
	comp=Z,0.3nm,0.6s,baz=332,slow=5.3,SNR=16						
WR1	**Warramunga Arr**	**82.93**	**121**	*e*P	**P**	**12 22 53.4**	**-1.3**
	comp=Z,5.4nm,1.0s						
DLBC	**Dease Lake**	**84.51**	**10**	P	**P**	**12 23 02.0**	**-0.4**
	comp=Z,1.7nm,0.8s,baz=307,slow=6.5,SNR=4.1						
AS31	**Alice Springs**	**85.13**	**124**	*e*P	**P**	**12 23 04.7**	**-1.2**
	comp=Z,0.7nm,0.8s						
ASAR	**Alice Springs**	**85.13**	**124**	P	**P**	**12 23 04.7**	**-1.2**
	comp=Z,0.6nm,0.5s,baz=313,slow=4.8,SNR=18						

BJI ***23*** *12:11:02.2, 51.°83N×173.°23W, h64^{km}, mb4.7/12, mB5.0/6, Ms4.5/5, Ms7 4.3/2*

MOS ***23*** *12:11:03.8±0.9, 52.°08N×173.°77W, h51^{km}, mb4.8/35, Error ellipse: s-maj=10.6km s-min=6.7km az=140.2*

IDC ***23*** *12:11:05.6±2.3, 52.°06N×173.°77W, h54^{km}±19^{km}, mb4.0/26, mb1 4.2/27, mb1mx3.9/84, mbtmp4.3/27, ML5.0/1, MS3.2/18, Ms1 3.2/18, ms1mx2.9/75, Error ellipse: s-maj=19.5km s-min=8.6km az=173.0*

ISCJB ***23*** *12:11:06.5±0.3, 52.°17N±0.°04×173.°85W±0.°03, h85^{km}±2^{km}, mb4.6/207, Error ellipse: s-maj=6.4km s-min=2.6km az=166.6*

NEIC ***23*** *12:11:07.2±0.2, 52.°05N×173.°84W, h72^{km}±2^{km}, mb4.7/215, ML4.6(AEIC), Error ellipse: s-maj=4.4km s-min=1.8km az=164.0*

ISC 23 12:11:06.4±0.8**, 52.°00N**±0.°09×**173.°73W**±0.°04**, h63**^{km}±5^{km}**,**
n758, σ0.^{s}99/769**, mb4.7**/208**, 6C-3D, Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
ATKA	**Atka Island**	**0.36**	**306**	*e*Pn	**Pn**	**12 11 16.7**	**-0.6**
ATKA				*e*Sn	**Sn**	**12 11 24.7**	**-0.4**
KOFP	**Korovin Flat P**	**0.36**	**321**	*e*Pn	**Pn**	**12 11 18.6**	**+1.2**
KOKL	**Mount Kliuchef**	**0.44**	**318**	*e*Pn	**Pn**	**12 11 19.4**	**+1.3**
KOWE	**Korovin West**	**0.49**	**319**	*e*Pn	**Pn**	**12 11 20.4**	**+1.8**
GSIG	**Igitkin Island**	**1.36**	**270**	P	**Pn**	**12 11 30.3**	**+1.0**
GSTR	**Great Sitkin T**	**1.44**	**275**	*e*Pn	**Pn**	**12 11 30.3**	**-0.1**
GSTD	**Great Sitkin T**	**1.50**	**273**	*e*Pn	**Pn**	**12 11 30.3**	**-0.8**
GSCK	**Great Sitkin C**	**1.51**	**272**	*e*Pn	**Pn**	**12 11 30.1**	**-1.1**
ETKA	**Kagalaska Isla**	**1.67**	**266**	*e*Pn	**Pn**	**12 11 31.9**	**-1.5**
ADAG	**Mount Adagdak**	**1.78**	**271**	*e*Pn	**Pn**	**12 11 34.6**	**-0.3**
KIKV	**Kanaga Island**	**2.13**	**268**	*e*Pn	**Pn**	**12 11 39.2**	**-0.5**
KICM	**Kanaga Island**	**2.15**	**269**	*e*Pn	**Pn**	**12 11 39.6**	**-0.3**
TAPA	**Tanaga Point A**	**2.54**	**268**	*e*Pn	**Pn**	**12 11 44.7**	**-0.5**
TAFP	**Tanaga Falls P**	**2.64**	**270**	*e*Pn	**Pn**	**12 11 47.1**	**+0.6**
TAFP				*e*Sn	**Sn**	**12 12 19.5**	**+2.1**
TASE	**Tanaga Southea**	**2.67**	**268**	*e*Pn	**Pn**	**12 11 47.5**	**+0.5**
GAEA	**Gareloi East**	**3.12**	**268**	*e*Pn	**Pn**	**12 11 53.7**	**+0.6**
GALAA	**Gareloi Lava P**	**3.14**	**268**	*e*Pn	**Pn**	**12 11 53.0**	**-0.3**
NIKH	**Nikolski High**	**3.14**	**70**	*e*Pn	**Pn**	**12 11 53.6**	**+0.3**
NIKH				*e*Sn	**Sn**	**12 12 30.7**	**+1.2**
OKSO	**Okmok South**	**3.65**	**66**	*e*Pn	**Pn**	**12 12 01.5**	**+1.1**
OKSO				*e*Sn	**Sn**	**12 12 45.3**	**+3.1**
CERAA	**Semis' Rag'd T**	**4.08**	**271**	P	**Pn**	**12 12 06.3**	**+0.1**
CEAP	**Semis' Anvil P**	**4.14**	**273**	P	**Pn**	**12 12 08.0**	**+1.0**
AMKA	**Amchitka**	**4.38**	**265**	*e*Pn	**Pn**	**12 12 09.9**	**-0.5**
MCIR	**Makushin Cirqu**	**4.57**	**62**	*e*Pn	**Pn**	**12 12 14.7**	**+1.7**
MTBL	**Makushin Table**	**4.69**	**62**	*e*Pn	**Pn**	**12 12 16.3**	**+1.6**
UNV	**Unalaska Valle**	**4.75**	**64**	*e*Pn	**Pn**	**12 12 16.3**	**+1.0**
UNV				*e*Sn	**Sn**	**12 13 13.8**	**+4.9**
LSPA	**Little Sitkin**	**4.76**	**273**	P	**Pn**	**12 12 16.3**	**+0.7**
LSNW	**Little Sitkin**	**4.79**	**273**	P	**Pn**	**12 12 16.2**	**+0.2**
AKRB	**Akutan Reef Bi**	**5.09**	**62**	*e*Pn	**Pn**	**12 12 21.7**	**+1.7**
AKMO	**Akutan Morgan**	**5.11**	**63**	*e*Pn	**Pn**	**12 12 21.5**	**+1.2**
ZRO	**Akutan Zero**	**5.12**	**63**	*e*Pn	**Pn**	**12 12 22.0**	**+1.5**
AKGG	**Akutan Green G**	**5.16**	**62**	P	**Pn**	**12 12 22.4**	**+1.4**
AKLV	**Akutan Long Va**	**5.16**	**62**	*e*Pn	**Pn**	**12 12 22.5**	**+1.5**
AHB	**Akutan Harbor**	**5.22**	**63**	P	**Pn**	**12 12 22.9**	**+1.1**
AKUT	**Akutan**	**5.25**	**63**	*e*Pn	**Pn**	**12 12 24.4**	**+2.2**
AKSA	**Akutan Strait**	**5.29**	**63**	*e*Pn	**Pn**	**12 12 23.7**	**+0.9**
SPIA	**Saint Paul Isl**	**5.57**	**20**	*e*Pn	**Pn**	**12 12 28.9**	**+2.3**
WESE	**West Dahl East**	**6.02**	**62**	*e*Pn	**Pn**	**12 12 34.9**	**+2.1**
SSBA	**Shishaldin**	**6.38**	**60**	P	**Pn**	**12 12 39.2**	**+1.4**
FALS	**False Pass**	**6.79**	**61**	*e*Pn	**Pn**	**12 12 44.9**	**+1.6**
SMY	**Shemya**	**7.49**	**280**	*e*Pn	**Pn**	**12 12 51.8**	**-1.1**
SMY	**Shemya**	**7.49**	**280**	*e*P	**Pn**	**12 12 51.8**	**-1.1**
SDPT	**Sand Point**	**8.55**	**62**	*e*Pn	**Pn**	**12 13 07.2**	**-0.1**
CHGN	**Chignik**	**9.96**	**58**	*e*Pn	**Pn**	**12 13 27.4**	**+0.9**
GAMB	**Gambell**	**11.86**	**4**	*e*Pn	**Pn**	**12 13 52.3**	**-0.1**
OHAK	**Old Harbor**	**12.93**	**58**	*e*Pn	**Pn**	**12 14 04.3**	**-2.7**
KDAK	**Kodiak Island**	**13.45**	**56**	P	**Pn**	**12 14 10.2**	**-3.8**
	1.2nm,0.3s,baz=226,slow=7.1,SNR=32						
KDAK				S	**Sn**	**12 16 36.9**	**-4.6**
	0.2nm,0.3s,baz=253,slow=18,SNR=2.4						
KDAK				LR	LR	12 20 20.1	
	comp=Z,261nm,19.5s,baz=249,slow=41						
KDAK	**Kodiak Island**	**13.45**	**56**	*e*Pn	**Pn**	**12 14 12.9**	**-1.1**
KDAK				*e*P	P	12 14 13.7	-7.6
KDAK				S	**Sn**	**12 16 36.9**	**-4.6**
KDAK	**Kodiak Island**	**13.45**	**56**	*i* P	**Pn**	**12 14 11.4**	**-2.6**
SVW2	**Sparrevohn**	**13.49**	**40**	*e*Pn	**Pn**	**12 14 16.4**	**+1.7**
RSO	**Redoubt South**	**14.36**	**46**	*e*Pn	**Pn**	**12 14 26.9**	**+0.6**

CNPM	China Poot	14.68	50	ePn	Pn	12 14 31.1	+0.8
BRLK	Bradley Lake	14.93	50	ePn	Pn	12 14 34.7	+1.1
SPU	Mount Spurr	15.00	44	ePn	Pn	12 14 35.2	+0.8
SKT	Skwentna	15.61	42	ePn	P	12 14 44.3	-0.9
	9.3nm,0.7s						
PPLA	Purkeypile	15.83	38	ePn	P	12 14 48.1	+0.2
	11nm,0.6s						
RC01	Rabbit Creek A	15.97	46	ePn	P	12 14 48.4	-0.8
	15nm,1.2s						
CAST	Castle Rocks	16.16	37	ePn	P	12 14 51.4	0.0
	13nm,0.7s						
PMR	Palmer	16.44	45	ePn	Pn	12 14 52.8	+0.1
	32nm,1.8s						
PMR	Palmer	16.44	45	eP	Pn	12 14 52.8	+0.1
PMR				pmax	pmax		
	comp=Z,32nm,1.8s						
GHO	Glory Hole Cre	16.61	44	ePn	Pn	12 14 55.1	+0.2
	comp=Z,18nm,0.4s						
KTH	Kantishna Hill	16.67	37	ePn	P	12 14 57.7	+0.6
	comp=Z,21nm,0.8s						
TRF	Thorofare Moun	16.86	38	ePn	P	12 14 59.8	+0.5
	comp=Z,11nm,0.9s						
SML	Sawmill	16.88	45	ePn	Pn	12 14 58.2	0.0
	comp=Z,11nm,0.8s						
SML	Sawmill	16.88	45	eP	Pn	12 14 58.2	0.0
SML				pmax	pmax		
	comp=Z,11nm,0.8s						
BPAW	Bear Paw Mtn.	16.95	36	ePn	P	12 15 01.3	+1.2
	comp=Z,22nm,0.9s						
GLI	Glacier Island	17.09	48	ePn	Pn	12 14 59.2	-1.5
	comp=Z,24nm,1.3s						
SCM	Sheep Creek Mo	17.32	45	ePn	Pn	12 15 03.3	-0.4
	comp=Z,27nm,0.6s						
SCM	Sheep Creek Mo	17.32	45	eP	Pn	12 15 03.3	-0.4
SCM				pmax	pmax		
	comp=Z,27nm,0.6s						
FID	Port Fidalgo	17.33	49	ePn	Pn	12 15 02.0	-1.8
	comp=Z,16nm,0.5s						
PEA1	Petropavlovsk-	17.37	285	ePn	P	12 15 06.3	+1.5
PETK	Petropavlovsk-	17.37	285	P	P	12 15 06.3	+1.5
	baz=91,slow=16						
PETK				LR	LR	12 21 37.1	
	comp=Z,48nm,18.3s,baz=67,slow=36						
PETK	Petropavlovsk-	17.37	285	ePn	Pn	12 15 02.1	-2.2
MCK	McKinley	17.52	38	ePn	P	12 15 06.3	-0.1
	comp=Z,13nm,0.6s						
MCK	McKinley	17.52	38	eP	P	12 15 06.3	-0.1
MCK				pmax	pmax		
	comp=Z,13nm,0.6s						
BWN	Browne	17.55	37	ePn	P	12 15 07.4	+0.8
	comp=Z,27nm,0.8s						
MLY	Manley	17.59	33	ePn	P	12 15 08.5	+1.3
	comp=Z,24nm,0.9s						
DIV	Divide	17.78	48	eP	Pn	12 15 08.9	-0.4
	comp=Z,7.2nm,0.6s						
DHY	Denali Highway	17.82	41	eP	P	12 15 09.7	-0.2
	comp=Z,8.3nm,0.7s						
KLU	Klutina	17.83	47	eP	P	12 15 09.0	-0.8
	comp=Z,8.7nm,0.7s						
RAGM	Ragged Mountai	18.08	51	eP	Pn	12 15 13.0	+0.1
	comp=Z,18nm,0.8s						
WRH	Wood River Hil	18.22	37	eP	P	12 15 13.7	-0.3
	comp=Z,20nm,1.2s						
BMRM	Bremner River	18.27	49	eP	Pn	12 15 15.6	+0.3
	comp=Z,13nm,0.9s						
CCB	Clear Creek Bu	18.41	37	eP	P	12 15 15.4	-0.8
	comp=Z,23nm,0.5s						
MDM	Murphy Dome	18.43	35	eP	P	12 15 16.2	-0.1
	comp=Z,7.8nm,0.5s						
HARP	HAARP	18.49	45	eP	P	12 15 17.1	+0.1
	comp=Z,34nm,0.4s						
COLA	College	18.52	36	eP	Pn	12 15 17.7	-0.4
	comp=Z,9.8nm,0.8s						
COLA	College	18.52	36	eP	Pn	12 15 17.7	-0.4
COLA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PAX	Paxson	18.57	43	eP	Pn	12 15 18.4	-0.5
	comp=Z,6.6nm,0.6s						
PAX	Paxson	18.57	43	eP	Pn	12 15 18.4	-0.5
PAX				pmax	pmax		
	comp=Z,7.0nm,0.6s						
HDA	Harding Lake	18.61	38	eP	P	12 15 18.2	-0.1
	comp=Z,43nm,0.4s						
IL1	Eielson Array	18.82	37	eP	P	12 15 19.1	-1.5
ILAR	Eielson Array	18.82	37	P	P	12 15 18.9	-1.6
	comp=Z,4.2nm,0.3s,baz=250,slow=10.0,SNR=162						
ILAR				PcP	PcP	12 19 44.4	-0.4
	comp=Z,0.1nm,0.3s,baz=281,slow=3.7,SNR=5.2						
ILAR	Eielson Array	18.82	37	P	P	12 15 19.0	-1.6
ILB	Eielson Array	18.82	37	eP	P	12 15 19.0	-1.6
ILB				ePcP	PcP	12 19 44.4	-0.4
CRQM	Cirque	18.91	50	eP	Pn	12 15 22.7	-0.4
	comp=Z,36nm,1.5s						
RIDG	Independ'e Rid	19.14	41	eP	P	12 15 23.9	-0.3
	comp=Z,29nm,0.4s						
COLD	Coldfoot	19.15	28	eP	Pn	12 15 26.0	+0.3
	comp=Z,8.6nm,1.0s						
BALM	Baldy	19.35	50	eP	P	12 15 25.7	-0.9
	comp=Z,9.2nm,0.8s						
BALM	Baldy	19.35	50	eP	P	12 15 25.7	-0.9
BALM				pmax	pmax		
	comp=Z,9.0nm,0.8s						
DOT	Dot Lake	19.42	42	eP	P	12 15 27.4	+0.2
	comp=Z,30nm,0.5s						
SCRK	Sand Creek	19.58	41	eP	P	12 15 28.3	-0.7
	comp=Z,39nm,0.9s						
TOLK	Toolik Lake Re	20.28	26	P	P	12 15 36.2	-0.4
	baz=227,SNR=22						
TOLK	Toolik Lake Re	20.28	26	eP	Pn	12 15 38.0	-1.0
	comp=Z,22nm,0.6s						
FYU	Fort Yukon	20.33	33	eP	P	12 15 38.1	+1.0
	comp=Z,9.7nm,0.5s						
EGAK	Eagle	21.03	40	eP	P	12 15 44.3	-0.2
	comp=Z,53nm,0.8s						
MA2	Magadan	21.14	305	LR	LR	12 23 45.6	
	comp=Z,69nm,19.1s,baz=102,slow=36						
MA2	Magadan	21.14	305⇑	eP	P	12 15 45.7	-0.1
DAWY	Dawson	21.50	43	eP	P	12 15 49.6	-0.1
	comp=Z,11nm,0.6s						
SKAG	Skagway	22.60	56	eP	P	12 16 01.3	-0.1
	comp=Z,6.0nm,0.6s						
SIT	Sitka	22.63	62	eP	P	12 16 02.7	+1.0
	comp=Z,14nm,0.8s						
SIT	Sitka	22.63	62	eP	P	12 16 02.7	+1.0
SIT				pmax	pmax		
	comp=Z,14nm,0.8s						
BESE	Bessie Mountai	22.83	58	eP	P	12 16 04.8	+0.9
	comp=Z,6.8nm,0.8s						
JIS	Juneau Island	23.08	59	eP	P	12 16 06.8	+0.5
	comp=Z,6.6nm,0.7s						
CRAG	Craig	24.02	66	eP	P	12 16 16.9	+1.9
	comp=Z,16nm,0.7s						
WRAK	Wrangell Islan	24.32	63	eP	P	12 16 18.1	+0.3
	comp=Z,25nm,0.8s						
INK	Inuvik	25.15	34	P	P	12 16 25.0	-0.2
	comp=Z,4.2nm,0.5s,baz=238,slow=6.9,SNR=28						
INK				PcP	PcP	12 19 57.8	+0.6
	comp=Z,2.5nm,0.6s,baz=17,slow=2.4,SNR=5.7						
INK	Inuvik	25.15	34	eP	P	12 16 24.7	-0.5
	comp=Z,26nm,1.5s						
INK				ePcP	PcP	12 19 57.8	+0.6
DLBC	Dease Lake	25.37	58	P	P	12 16 28.6	+1.2
	comp=Z,7.9nm,0.9s,baz=232,slow=7.4,SNR=16						
DLBC	Dease Lake	25.37	58	eP	P	12 16 28.6	+1.2
	comp=Z,7.4nm,0.8s						
KUR	Kuril'sk	26.04	270⇑	eP	P	12 16 33.5	+0.1
BBB	Bella Bella	27.67	71	LR	LR	12 25 49.3	
	comp=Z,33nm,18.6s,baz=90,slow=32						
YSS	Yuzh-Sakhalins	28.39	277	eP	P	12 16 57.7	+3.2
ASAJ	Asahikawa	29.85	272	P	P	12 17 08.1	+0.6
	comp=Z,9.4nm,0.8s,baz=37,slow=2.8,SNR=14						
ASAJ				LR	LR	12 27 40.6	
	comp=Z,24nm,21.2s,baz=10,slow=33						
ASAJ	Asahikawa	29.85	272	eP	P	12 17 02.5	-5.0
	comp=Z,11nm,0.9s						
ASAJ				P	P	12 17 08.1	+0.6
ERM	Erimo	30.64	268	deP	P	12 17 15.3	+0.9
YAK	Yakutsk	31.39	311	LR	LR	12 29 47.3	
	comp=Z,68nm,20.5s,baz=93,slow=36						
TIXI	Tiksi	31.68	329	ScP	ScP	12 23 50.6	-0.3
	comp=Z,7.7nm,0.9s,baz=0.0,slow=1.2,SNR=6.7						
TIXI				LR	LR	12 31 21.7	
	comp=Z,42nm,20.1s,baz=230,slow=38						
LLLB	Lillooet	31.88	72	eP	P	12 17 26.7	+1.3
	comp=Z,10nm,0.6s						
YKA	Yellowknife Ar	32.49	48	P	P	12 17 29.5	-1.0
	comp=Z,1.0nm,0.6s,baz=274,slow=9.0,SNR=18						

YKA				PcP	PcP	12 20 16.6	+0.8
	comp=Z,2.0nm,0.4s,baz=284,slow=3.2,SNR=33						
YKA				ScP	ScP	12 23 55.0	+1.1
	comp=Z,1.0nm,0.8s,baz=285,slow=3.2,SNR=7.4						
YKA				LR	LR	12 30 56.8	
	comp=Z,11nm,21.0s,baz=326,slow=37						
YKB5	Yellowknife Ar	32.49	48	eP	P	12 17 29.6	-1.0
YKB5				ePcP	PcP	12 20 16.6	+0.8
B05A	Bryant	32.73	76	P	P	12 17 33.9	+1.2
	baz=296,SNR=7.1						
HTW	Haystack Looko	33.14	76	epP	pP	12 17 49.5	-2.4
D05A	Enumclaw	33.29	77	eP	P	12 17 36.8	-0.8
	comp=Z,18nm,0.8s						
LON	Longmire	33.60	78	eP	P	12 17 41.8	+1.4
	comp=Z,3.8nm,0.8s						
LON	Longmire	33.60	78	eP	P	12 17 41.8	+1.4
LON				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KLR	Kul'dur	34.03	287	P	P	12 17 43.2	-0.8
	comp=Z,0.1nm,0.5s,baz=63,slow=9.2,SNR=6.6						
KLR	Kul'dur	34.03	287⇓	eP	P	12 17 43.9	-0.1
I03D	Drain, OR	34.20	84	P	P	12 17 46.4	+0.8
	baz=302						
B08A	Colville Reser	34.34	74	eP	P	12 17 48.1	+1.3
	comp=Z,22nm,0.6s						
H04A	Detroit Lake	34.40	81	eP	P	12 17 48.3	+1.0
	comp=Z,6.9nm,0.6s						
G05D	Wamic, OR	34.64	80	P	P	12 17 49.6	+0.2
	baz=301						
I04A	Tendick Farm,	34.73	83	P	P	12 17 50.0	-0.2
	baz=302						
L02D	Cave Junction,	34.88	86	P	P	12 17 53.0	+1.4
	baz=304						
I05D	Terrebonne, OR	35.10	81	P	P	12 17 54.2	+0.9
	baz=302						
J04D	Umpqua Nationa	35.21	83	P	P	12 17 56.0	+1.4
	baz=303						
C09A	Chrisman Ranch	35.23	74	eP	P	12 17 55.3	+0.9
	comp=Z,16nm,0.8s						
DPW	Davenport	35.24	74	epP	pP	12 18 08.7	-1.4
H11N2	WAKE ISLAND Hy	35.59	212	T	T	12 56 15.2	
	baz=21,slow=76,SNR=652						
H11N3	WAKE ISLAND Hy	35.60	212	T	T	12 56 15.8	
	baz=21,slow=76,SNR=823						
H11N1	WAKE ISLAND Hy	35.61	212	T	T	12 56 16.6	
	baz=21,slow=76,SNR=717						
BUOR	Burton Butte	35.65	85	ePcP	PcP	12 20 24.7	-0.8
YBH	Yreka Blue Hor	35.67	86	P	P	12 17 59.5	+1.1
	comp=Z,3.2nm,0.6s,baz=325,slow=6.6,SNR=10						
YBH				LR	LR	12 29 10.6	
	comp=Z,43nm,19.9s,baz=330,slow=30						
J05D	Fort Rock, OR	35.72	83	P	P	12 18 00.3	+1.5
	baz=303						
E09A	Wood Farm, Sta	35.92	76	eP	P	12 18 01.5	+1.1
	comp=Z,22nm,1.4s						
N02D	Trinity Center	36.11	87	P	P	12 18 03.9	+1.8
	baz=306						
M04C	Macdoel	36.18	85	P	P	12 18 03.9	+1.1
	baz=305						
K05A	Summer Lake	36.24	83	eP	P	12 18 05.2	+1.9
	comp=Z,10nm,0.8s						
USRK	Ussuriysk Ar.	36.33	280	P	P	12 18 03.5	-0.3
	comp=Z,1.7nm,0.5s,baz=63,slow=12						
USRK				LR	LR	12 34 34.9	
	comp=Z,29nm,18.2s,baz=4.9,slow=39						
H11S1	WAKE ISLAND Hy	36.80	212	T	T	12 57 24.7	
	baz=20,slow=76,SNR=1494						
H11S2	WAKE ISLAND Hy	36.81	212	T	T	12 57 23.3	
	baz=20,slow=76,SNR=515						
H11S3	WAKE ISLAND Hy	36.81	212	T	T	12 57 19.7	
	baz=20,slow=76,SNR=362						
MJAR	Matsushiro Arr	36.99	265	P	P	12 18 09.2	-0.5
	comp=Z,1.1nm,0.5s,baz=15,slow=5.5,SNR=6.3						
MJAR				LR	LR	12 31 18.9	
	comp=Z,33nm,21.8s,baz=265,slow=33						
MAJO	Matsushiro	37.00	265	eP	P	12 18 09.2	-0.5
MAJO	Matsushiro	37.00	265⇓	eP	P	12 18 10.1	+0.5
MAJO				i *PP	pP	12 18 25.7	+0.4
MAJO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MAT	Matsushiro	37.00	265	P	P	12 18 09.6	0.0
MOD	Modoc Plateau	37.06	84	eP	P	12 18 11.7	+1.4
	comp=Z,4.4nm,0.9s						
O03D	Paynes Creek	37.07	87	P	P	12 18 11.2	+0.9
	baz=306						
WALA	Waterton Lakes	37.20	70	eP	P	12 18 12.3	+0.9
	comp=Z,6.7nm,0.7s						
J08A	Circle Bar Ran	37.37	81	eP	P	12 18 14.1	+1.2
	comp=Z,4.5nm,0.5s						
JTMT	Jette	37.62	72	eP	P	12 18 15.7	+0.7
	comp=Z,8.2nm,0.7s						
WVOR	Wild Horse Val	37.78	82	eP	P	12 18 17.6	+1.2
	comp=Z,5.7nm,0.8s						
WVOR	Wild Horse Val	37.78	82	eP	P	12 18 17.6	+1.2
WVOR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BEKR	Beckworth	38.21	87	eP	P	12 18 20.9	+0.9
	comp=Z,3.2nm,0.8s						
MSO	Missoula	38.27	73	P	P	12 18 20.6	+0.2
	baz=301,SNR=15						
MSO	Missoula	38.27	73	eP	P	12 18 20.9	+0.4
	comp=Z,10nm,0.8s						
JHJ	Hachijo jima 2	38.31	259	LR	LR	12 34 19.3	
	comp=Z,11nm,19.4s,baz=122,slow=36						
PAHR	Pah Rah Range	38.91	86	eP	P	12 18 26.7	+0.9
	comp=Z,7.6nm,0.7s						
MFID	Camas Ranch	38.95	79	eP	P	12 18 27.1	+1.0
	comp=Z,3.6nm,0.9s						
VCNR	Virginia City	38.99	87	eP	P	12 18 27.9	+1.3
	comp=Z,7.6nm,1.0s						
PNTR	Pine Nut	39.15	87	eP	P	12 18 29.5	+1.5
	comp=Z,14nm,0.8s						
YERR	Yerington	39.43	87	eP	P	12 18 31.5	+1.2
	comp=Z,6.9nm,0.9s						
HRY	Holter Researc	39.58	72	eP	P	12 18 32.1	+0.7
WAKR	Walker	39.60	88	eP	P	12 18 33.3	+1.6
	comp=Z,6.7nm,0.7s						
LRM	Limekiln Ridge	39.68	74	eP	P	12 18 32.9	+0.6
HLID	Hailey	39.73	78	P	P	12 18 33.4	+0.7
	baz=304,SNR=9.4						
HLID	Hailey	39.73	78	eP	P	12 18 33.5	+0.7
	comp=Z,6.4nm,1.1s						
BMN	Battle Mountai	39.81	84	eP	P	12 18 34.1	+0.8
	comp=Z,3.6nm,0.8s						
BMN	Battle Mountai	39.81	84	eP	P	12 18 34.1	+0.8
BMN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
DLMT	Dillon	39.84	75	eP	P	12 18 33.9	+0.3
	comp=Z,2.6nm,0.8s						
MCMT	McKenzie Canyo	39.97	75	eP	P	12 18 35.3	+0.5
RYN	Ryan	40.09	87	eP	P	12 18 36.6	+0.9
	comp=Z,7.1nm,1.0s						
KVN	Kaiserville	40.10	86	eP	P	12 18 36.9	+1.1
	comp=Z,6.1nm,1.2s						
KVN	Kaiserville	40.10	86	eP	P	12 18 36.9	+1.1
KVN				pmax	pmax		
	comp=Z,6.0nm,1.2s						
EGMT	Eagleton	40.12	69	P	P	12 18 35.8	+0.1
	baz=301,SNR=8.1						
EGMT	Eagleton	40.12	69	eP	P	12 18 36.1	+0.4
	comp=Z,10.0nm,0.6s						
BOZ	Bozeman (W)	40.29	74	P	P	12 18 37.6	+0.3
	baz=302,SNR=30						
BOZ	Bozeman (W)	40.29	74	eP	P	12 18 37.6	+0.3
	comp=Z,14nm,0.6s						
BOZ	Bozeman (W)	40.29	74	eP	P	12 18 37.6	+0.3
BOZ				pmax	pmax		
	comp=Z,14nm,0.6s						
NV01	Mina Array Sit	40.35	87	eP	P	12 18 38.8	+0.8
NV01				ePcP	PcP	12 20 40.9	+0.8
NVAR	Mina Array Bea	40.35	87	P	P	12 18 39.0	+1.1
	comp=Z,3.4nm,0.7s,baz=295,slow=7.8,SNR=27						
NVAR				PcP	PcP	12 20 41.1	+0.9
	comp=Z,1.3nm,0.7s,baz=281,slow=2.4,SNR=6.5						
MDPB	Devils Postpil	40.37	89	eP	P	12 18 39.5	+1.4
	comp=Z,6.6nm,0.8s						
OMMB	Old Mammoth Mi	40.43	89	eP	P	12 18 40.2	+1.5
	comp=Z,6.3nm,1.1s						
CN2	Changchun	40.51	283	eP	P	12 18 42.4	+3.5
QLMT	Earthquake Lak	40.82	75	eP	P	12 18 42.6	+0.8
YHB	Horse Butte	41.00	74	eP	P	12 18 44.2	+0.9
	comp=Z,13nm,0.8s						
YMR	Madison River	41.19	74	eP	P	12 18 45.7	+1.0
	comp=Z,110nm,0.4s						
GCMT	Greycliff	41.34	72	eP	P	12 18 46.6	+0.7
YFT	Old Faithful	41.38	75	eP	P	12 18 46.3	-0.1
	comp=Z,8.1nm,0.9s						

YPP	Pitchstone Pla	41.50	75	eP	P	12 18 48.6	+1.1
	comp=Z,3.8nm,1.1s						
H17A	Grant Village	41.57	75	P	P	12 18 49.6	+1.6
	baz=304,SNR=9.9						
H17A	Grant Village	41.57	75	eP	P	12 18 49.7	+1.8
	comp=Z,32nm,1.4s						
IMW	Indian Meadow	41.63	75	eP	P	12 18 49.7	+1.2
	comp=Z,8.1nm,0.9s						
FLWY	Flagg Ranch	41.67	75	eP	P	12 18 49.5	+0.8
	comp=Z,8.0nm,0.6s						
PKM	Mcpherson Peak	41.68	92	P	P	12 18 49.7	+0.8
	baz=312						
FXWY	Fox Creek	41.72	76	eP	P	12 18 50.0	+0.8
	comp=Z,11nm,1.8s						
HVU	Hansel Valley	41.73	79	eP	P	12 18 50.2	+1.0
	comp=Z,4.5nm,0.6s						
HVU	Hansel Valley	41.73	79	eP	P	12 18 50.2	+1.0
HVU				pmax	pmax		
	comp=Z,5.0nm,0.6s						
CWC	Cottonwood Cre	41.74	89	P	P	12 18 50.2	+0.9
	baz=310						
MOOW	Moose Ponds	41.83	75	eP	P	12 18 50.8	+0.8
	comp=Z,4.1nm,1.1s						
TPAW	Teton Pass	41.85	76	eP	P	12 18 51.1	+0.8
	comp=Z,2.9nm,0.8s						
RLMT	Red Lodge	41.94	73	P	P	12 18 51.6	+0.7
	baz=304,SNR=19						
RLMT	Red Lodge	41.94	73	eP	P	12 18 51.7	+0.7
	comp=Z,20nm,0.9s						
REDW	Red Top Meadow	41.98	76	eP	P	12 18 51.9	+0.6
	comp=Z,7.7nm,1.2s						
ISA	Isabella, Lake	42.00	91	P	P	12 18 51.4	+0.1
	baz=311						
ISA	Isabella, Lake	42.00	91	eP	P	12 18 51.6	+0.3
	comp=Z,8.1nm,1.4s						
ISA	Isabella, Lake	42.00	91	eP	P	12 18 51.6	+0.3
ISA				pmax	pmax		
	comp=Z,8.0nm,1.4s						
R11A	Troy Canyon, C	42.08	85	P	P	12 18 52.6	+0.5
	baz=309,SNR=18						
R11A	Troy Canyon, C	42.08	85	eP	P	12 18 52.4	+0.3
	comp=Z,6.3nm,1.0s						
BGU	Big Grassy Mou	42.08	80	eP	P	12 18 53.2	+1.1
	comp=Z,6.3nm,1.2s						
DAC	Darwin (Calif)	42.15	89	eP	P	12 18 53.6	+0.9
	comp=Z,7.4nm,1.3s						
DAC	Darwin (Calif)	42.15	89	eP	P	12 18 53.6	+0.9
DAC				pmax	pmax		
	comp=Z,7.0nm,1.3s						
MPMC	Manual Prospec	42.35	89	P	P	12 18 54.9	+0.6
	baz=310						
FURC	Furnace Creek,	42.48	88	P	P	12 18 55.9	+0.9
	baz=310,SNR=5.7						
TPNV	Topopah Spring	42.55	87	P	P	12 18 56.8	+1.0
	baz=310,SNR=16						
TPNV	Topopah Spring	42.55	87	eP	P	12 18 56.9	+1.0
	comp=Z,11nm,0.8s						
TPNV	Topopah Spring	42.55	87	eP	P	12 18 56.9	+1.0
TPNV				pmax	pmax		
	comp=Z,11nm,0.8s						
HWUT	Hardware Ranch	42.57	79	eP	P	12 18 56.7	+0.7
	comp=Z,9.4nm,1.4s						
DUG	Dugway, Tooele	42.65	81	P	P	12 18 57.3	+0.7
	baz=307,SNR=8.3						
DUG	Dugway, Tooele	42.65	81	eP	P	12 18 57.6	+0.9
	comp=Z,9.1nm,1.0s						
DUG	Dugway, Tooele	42.65	81	eP	P	12 18 57.6	+0.9
DUG				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KSRS	Korea Array	42.77	274	P	P	12 18 58.3	+0.9
	comp=Z,3.4nm,0.8s,baz=57,slow=7.9,SNR=12						
KSRS				LR	LR	12 39 46.3	
	comp=Z,20nm,18.3s,baz=50,slow=40						
KSRS	Korea Array	42.77	274	P	P	12 18 58.3	+0.9
KSRS				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KSRS				MLR	MLR		
	comp=Z,20nm,18.3s						
KS01	Wonju Array Si	42.77	274	eP	P	12 18 57.4	0.0
KS15	Wonju Array Si	42.80	274	eP	P	12 18 56.5	-1.1
KSAR	Wonju Array Be	42.80	274	P	P	12 18 58.3	+0.6
KSAR	Wonju Array Be	42.80	274	P	P	12 18 58.3	+0.6
EDW2	Edwards Air Fo	42.81	91	P	P	12 18 58.9	+1.1
	baz=311						
LAO	LASA Array	42.87	69	P	P	12 18 58.9	+0.6
	baz=303,SNR=7.0						
LAO	LASA Array	42.87	69	eP	P	12 18 59.1	+0.8
	comp=Z,14nm,0.9s						
PSUT	Pine Spring	43.03	84	eP	P	12 19 00.8	+1.0
	comp=Z,6.1nm,0.8s						
DGMT	Dagmar	43.07	66	P	P	12 19 00.0	+0.2
	baz=302						
BW06	Boulder Array	43.10	76	P	P	12 19 00.6	+0.3
	baz=306,SNR=26						
BW06	Boulder Array	43.10	76	eP	P	12 19 00.8	+0.4
	comp=Z,17nm,1.0s						
PD31	Pinedale Array	43.10	76	eP	P	12 19 00.8	+0.4
PDAR	Pinedale Array	43.10	76	P	P	12 19 00.8	+0.4
	comp=Z,6.7nm,0.5s,baz=296,slow=3.2,SNR=86						
PDAR	Pinedale Array	43.10	76	eP	P	12 19 00.5	+0.2
MWC	Mount Wilson	43.20	92	eP	P	12 19 02.4	+1.2
	comp=Z,9.1nm,1.0s						
SHOC	Shoshone, Teco	43.20	89	P	P	12 19 02.4	+1.3
	baz=311						
JLU	Jordanelle	43.24	80	eP	P	12 19 02.2	+0.7
	comp=Z,32nm,1.9s						
NLU	North Lily Min	43.25	81	eP	P	12 19 02.6	+1.1
	comp=Z,4.7nm,0.8s						
GSC	Goldstone, Bar	43.27	90	P	P	12 19 02.3	+0.7
	baz=311,SNR=9.5						
GSC	Goldstone, Bar	43.27	90	eP	P	12 19 02.4	+0.7
	comp=Z,13nm,1.0s						
GSC	Goldstone, Bar	43.27	90	eP	P	12 19 02.4	+0.8
GSC				pmax	pmax		
	comp=Z,13nm,1.0s						
BFSC	Mount Baldy Ra	43.44	91	P	P	12 19 03.7	+0.7
	baz=312						
MPU	Maple Canyon	43.48	81	eP	P	12 19 04.1	+0.7
	comp=Z,4.1nm,0.8s						
SHPR	Sheep Range	43.50	87	eP	P	12 19 04.5	+1.0
	comp=Z,1.9nm,0.9s						
TUQ	Turquoise Moun	43.72	89	P	P	12 19 05.6	+0.2
	baz=311						
JNU	Nakatsue	43.77	267	P	P	12 19 05.2	-0.4
	comp=Z,7.1nm,0.9s,baz=37,slow=9.0,SNR=4.3						
JNU				LR	LR	12 35 24.5	
	comp=Z,34nm,22.0s,baz=132,slow=33						
JNU	Nakatsue	43.77	267	eP	P	12 19 05.2	-0.4
	comp=Z,22nm,1.4s						
TJN	Taejon	43.80	273⇑	eP	P	12 19 06.0	+0.3
BBRC	Big Bear Solar	43.88	91	P	P	12 19 07.3	+0.6
	baz=312						
CCUT	Cedar City	43.95	85	eP	P	12 19 08.0	+0.7
	comp=Z,3.2nm,0.8s						
MSU	Marysvale	44.07	83	eP	P	12 19 09.2	+1.1
MSU	Marysvale	44.07	83	eP	P	12 19 09.3	+1.1
SZCU	Shurtz Canyon	44.09	84	eP	P	12 19 09.3	+1.0
	comp=Z,2.4nm,0.9s						
MURC	Murrieta	44.15	92	P	P	12 19 09.2	+0.5
	baz=312						
TMUT	Trail Mountain	44.18	81	eP	P	12 19 10.4	+1.3
	comp=Z,8.6nm,0.7s						
GMRC	Granite Mounta	44.31	89	P	P	12 19 10.7	+0.6
	baz=312,SNR=5.6						
P17A	Butcher Ranch,	44.36	81	eP	P	12 19 11.1	+0.7
	comp=Z,4.8nm,0.8s						
LCMT	Little Creek M	44.36	85	eP	P	12 19 11.4	+0.9
	comp=Z,6.2nm,0.8s						
LDFC	Landfair	44.46	89	eP	P	12 19 11.2	0.0
	comp=Z,11nm,0.7s						
P18A	Preston Nutter	44.56	80	eP	P	12 19 13.2	+1.0
	comp=Z,6.1nm,1.0s						
FRD	Ford Ranch, An	44.59	91	P	P	12 19 12.7	+0.5
	baz=312						
PFO	Pinyon Flats O	44.60	91	P	P	12 19 12.6	+0.2
	baz=312						
KNB	Kanab	44.62	85	eP	P	12 19 13.6	+1.1
	comp=Z,4.9nm,0.8s						
KNB	Kanab	44.62	85	eP	P	12 19 13.6	+1.1
KNB				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BELC	Belle Mtn. Jos	44.62	90	P	P	12 19 12.5	0.0
	baz=312						
PKCU	Pink Cliffs	44.66	84	eP	P	12 19 14.6	+1.5
	comp=Z,4.9nm,0.9s						
109C	Camp Elliot, M	44.69	92	P	P	12 19 13.3	+0.4
	baz=313						

SRU	San Rafael Swe	44.71	81	*e*P	P	12 19 14.3	+1.0
	comp=Z,7.0nm,0.7s						
SRU	San Rafael Swe	44.71	81	*e*P	P	12 19 14.3	+1.0
SRU				pmax	pmax		
	comp=Z,7.0nm,0.7s						
NEE2	Needles Airpor	44.97	88	P	P	12 19 15.4	+0.3
	baz=312						
K22A	Casper	44.98	74	P	P	12 19 15.0	-0.4
	baz=306,SNR=6.2						
K22A	Casper	44.98	74	*e*P	P	12 19 15.2	-0.1
	comp=Z,13nm,1.0s						
IRM	Iron Mountain	45.05	90	P	P	12 19 16.1	+0.3
	baz=312						
MONP2	Monument Peak	45.11	92	P	P	12 19 17.1	+0.6
	baz=313						
BC3	Big Chuckawall	45.19	90	P	P	12 19 16.9	-0.1
	baz=312						
IKP	In-Ko-Pah, Jac	45.46	92	P	P	12 19 19.8	+0.7
	baz=313						
O20A	White River Ci	45.47	78	P	P	12 19 19.4	+0.2
	baz=308,SNR=15						
O20A	White River Ci	45.47	78	*e*P	P	12 19 19.6	+0.2
	comp=Z,15nm,1.0s						
PDMCI	Parker Dam,Lak	45.57	89	P	P	12 19 20.2	+0.3
	baz=312						
RSSD	Black Hills	45.59	71	P	P	12 19 19.7	-0.5
	baz=306						
RSSD	Black Hills	45.59	71	*e*P	P	12 19 20.4	+0.2
	comp=Z,4.5nm,0.7s						
RSSD	Black Hills	45.59	71	*e*P	P	12 19 20.4	+0.2
RSSD				pmax	pmax		
	comp=Z,5.0nm,0.7s						
Y12C	Blythe	45.70	89	P	P	12 19 21.3	+0.4
	baz=312						
Y12C	Blythe	45.70	89	*e*P	P	12 19 21.5	+0.6
	comp=Z,7.1nm,0.9s						
PV09	Paradox Valley	45.94	80	*e*P	P	12 19 23.7	+0.6
GLA	Glamis	45.98	90	P	P	12 19 23.6	+0.4
	baz=313						
MDND	Maddock	45.98	64	P	P	12 19 23.2	+0.2
	baz=304						
MDND	Maddock	45.98	64	*e*P	P	12 19 23.5	+0.5
	comp=Z,58nm,1.3s						
PV21	Cone Mtn., Par	46.00	80	*e*P	P	12 19 23.8	+0.3
	comp=Z,6.6nm,0.9s						
PV23	Carpenter Ridg	46.05	80	*e*P	P	12 19 24.3	+0.4
	comp=Z,6.3nm,0.8s						
PV14	Lion Creek, Pa	46.09	81	*e*P	P	12 19 24.3	+0.1
	comp=Z,4.3nm,0.7s						
PV22	Blue Mesa, Par	46.13	80	*e*P	P	12 19 25.0	+0.5
	comp=Z,5.1nm,0.8s						
PV19	Morning Glory	46.15	81	*e*P	P	12 19 24.9	+0.2
	comp=Z,5.5nm,0.8s						
PV17	East Wray Mesa	46.19	81	*e*P	P	12 19 25.5	+0.5
	comp=Z,10nm,0.8s						
PV16	Nyswonger Mesa	46.19	81	*e*P	P	12 19 25.5	+0.5
	comp=Z,6.5nm,0.8s						
PV11	David Mesa, Pa	46.23	81	*e*P	P	12 19 25.9	+0.6
	comp=Z,14nm,0.7s						
PV18	Skein Mesa, Pa	46.24	81	*e*P	P	12 19 25.9	+0.5
	comp=Z,7.4nm,0.8s						
PV12	Saucer Basin,	46.26	80	*e*P	P	12 19 26.1	+0.5
	comp=Z,13nm,1.0s						
PV03	Paradox Valley	46.27	81	*e*P	P	12 19 25.7	+0.1
PV13	Radium Mtn., P	46.35	81	*e*P	P	12 19 26.7	+0.4
	comp=Z,17nm,0.8s						
PV02	Paradox Valley	46.37	81	*e*P	P	12 19 27.0	+0.6
	comp=Z,13nm,0.9s						
N23A	Red Feather La	46.39	76	P	P	12 19 26.8	+0.3
	baz=308,SNR=5.9						
N23A	Red Feather La	46.39	76	*e*P	P	12 19 27.1	+0.5
	comp=Z,13nm,1.2s						
WUAZ	Wupatki	46.48	85	P	P	12 19 27.9	+0.7
	baz=311,SNR=9.4						
WUAZ	Wupatki	46.48	85	*e*P	P	12 19 28.1	+0.9
	comp=Z,8.2nm,0.8s						
ULM	Lac du Bonnet	46.67	60	P	P	12 19 27.6	-0.7
	comp=Z,7.7nm,0.5s,baz=308,slow=7.7,SNR=12						
ULM				PcP	PcP	12 21 01.0	0.0
	comp=Z,4.4nm,0.9s,baz=333,slow=9.8,SNR=3.2						
SMCO	Snowmass	46.83	78	*e*P	P	12 19 30.5	+0.3
	comp=Z,7.0nm,1.5s						
MVCO	Mesa Verde	47.15	81	P	P	12 19 32.7	+0.2
	baz=310						
ISCO	Idaho Springs	47.26	77	P	P	12 19 34.0	+0.6
	baz=309						
ISCO	Idaho Springs	47.26	77	*e*P	P	12 19 34.2	+0.8
	comp=Z,10nm,1.5s						
ISCO	Idaho Springs	47.26	77	*e*P	P	12 19 34.2	+0.8
ISCO				pmax	pmax		
	comp=Z,10.0nm,1.5s						
A33A	Warroad	47.68	61	P	P	12 19 35.7	-0.5
	baz=305,SNR=5.7						
W18A	Petrified Fore	47.75	84	P	P	12 19 37.8	+0.6
	baz=312						
AGMN	Agassiz Nation	47.79	62	P	P	12 19 36.3	-0.7
	baz=306,SNR=9.6						
AGMN	Agassiz Nation	47.79	62	*e*P	P	12 19 36.5	-0.6
	comp=Z,25nm,1.1s						
S22A	4UR Ranch, Cre	47.82	80	P	P	12 19 38.6	+0.8
	baz=310,SNR=6.4						
S22A	4UR Ranch, Cre	47.82	80	*e*P	P	12 19 39.0	+1.2
	comp=Z,9.9nm,1.5s						
214A	Organ Pipe Nat	47.98	90	P	P	12 19 38.8	+0.1
	baz=314						
SUSD	Miller	48.34	68	P	P	12 19 41.0	-0.3
	baz=307						
B34A	Aery, Baudette	48.34	61	P	P	12 19 40.5	-0.8
	baz=306,SNR=18						
SDCO	Great Sand Dun	48.63	79	P	P	12 19 44.5	+0.6
	baz=310,SNR=7.4						
SDCO	Great Sand Dun	48.63	79	*e*P	P	12 19 44.6	+0.6
	comp=Z,2.9nm,0.8s						
G32A	Webster	48.67	66	P	P	12 19 43.7	-0.3
	baz=307						
OGNE	Ogallala	48.68	73	P	P	12 19 44.2	+0.1
	baz=309						
ULN	Ulaanbaatar	48.78	298⇑	*e*P	P	12 19 44.8	-0.1
ULN				pmax	pmax		
	comp=Z,1.0nm,0.8s						
B35A	Bob, Littlefor	48.91	61	P	P	12 19 44.8	-0.8
	baz=306,SNR=7.5						
B35A	Bob, Littlefor	48.91	61	*e*P	P	12 19 44.9	-0.8
	comp=Z,13nm,0.7s						
TUC	Tucson	48.99	88	P	P	12 19 47.0	+0.5
	baz=313						
TUC	Tucson	48.99	88	*e*P	P	12 19 47.2	+0.7
	comp=Z,5.6nm,1.0s						
TUC	Tucson	48.99	88	*e*P	P	12 19 47.2	+0.7
TUC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SONA0	Songino Array	49.16	299	*e*P	P	12 19 47.9	+0.1
SONM	Songino Array	49.16	299	P	P	12 19 47.8	+0.1
	comp=Z,0.7nm,0.7s,baz=32,slow=8.5,SNR=3.5						
SONM				ScP	ScP	12 25 00.4	+0.9
	comp=Z,1.6nm,0.7s,baz=78,slow=3.3,SNR=8.5						
SONM				LR	LR	12 42 03.7	
	comp=Z,46nm,18.1s,baz=66,slow=38						
C35A	Jirik Farms, M	49.17	61	P	P	12 19 46.6	-1.1
	baz=307,SNR=8.9						
E34A	Wadena	49.22	63	P	P	12 19 47.3	-0.8
	baz=307						
D35A	Remer	49.49	62	P	P	12 19 49.5	-0.7
	baz=307,SNR=7.2						
KSCO	Kaye Shedlock'	49.55	76	P	P	12 19 51.3	+0.5
	baz=310						
KSCO	Kaye Shedlock'	49.55	76	*e*P	P	12 19 50.6	-0.3
	comp=Z,31nm,1.3s						
F34A	Alexandria	49.60	64	P	P	12 19 50.0	-1.0
	baz=308						
E35A	Pequot Lakes	49.62	63	P	P	12 19 50.5	-0.6
	baz=307,SNR=5.5						
T25A	Trinidad	49.68	79	P	P	12 19 52.6	+0.6
	baz=311,SNR=6.4						
T25A	Trinidad	49.68	79	*e*P	P	12 19 52.5	+0.6
	comp=Z,13nm,1.0s						
G34A	Benson	49.73	65	P	P	12 19 51.7	-0.3
	baz=308						
C36A	Pine Crest Far	49.75	61	P	P	12 19 51.3	-0.8
	baz=307,SNR=8.6						
TASM	ASL Pad, Albuq	49.88	82	P	P	12 19 53.5	0.0
	baz=312						
ANMO	Albuquerque	49.88	82	P	P	12 19 52.7	-0.8
	comp=Z,0.3nm,0.3s,baz=295,slow=6.9,SNR=4.8						
ANMO				PcP	PcP	12 21 13.1	0.0
	comp=Z,1.5nm,0.9s,baz=253,slow=3.1,SNR=3.9						
ANMO	Albuquerque	49.88	82	P	P	12 19 53.8	+0.3
	baz=312						
ANMO	Albuquerque	49.88	82	*e*P	P	12 19 53.6	+0.2
	comp=Z,11nm,1.9s						
ANMO				*e*PcP	PcP	12 21 13.1	0.0
ANMO	Albuquerque	49.88	82	*e*P	P	12 19 53.6	+0.2
ANMO				*e*		12 21 13.1	
ANMO				pmax	pmax		
	comp=Z,11nm,1.9s						
TASL	Snake Pit, Alb	49.88	82	P	P	12 19 53.7	+0.2
	baz=312						
D36A	Goodland	49.92	62	P	P	12 19 52.4	-1.0
	baz=307						
SPITS	Spitsbergen Ar	49.94	357	LR	LR	12 40 37.4	
	comp=Z,37nm,18.6s,baz=270,slow=36						
F35A	Swanville	49.95	64	P	P	12 19 52.8	-0.8
	baz=308,SNR=6.3						
ECSD	EROS Data Cent	50.10	67	P	P	12 19 53.8	-1.0
	baz=308,SNR=7.4						
ECSD	EROS Data Cent	50.10	67	*e*P	P	12 19 54.0	-0.9
	comp=Z,6.1nm,0.8s						
C37A	Embarrass	50.12	60	P	P	12 19 54.0	-0.9
	baz=307,SNR=6.3						
E36A	McGregor	50.27	62	P	P	12 19 55.4	-0.6
	baz=308,SNR=5.3						
D37A	Cotton	50.33	61	P	P	12 19 55.5	-1.0
	baz=308						
EYMN	Ely	50.36	60	P	P	12 19 55.8	-0.9
	baz=308						
EYMN	Ely	50.36	60	*e*P	P	12 19 56.2	-0.4
	comp=Z,8.6nm,0.7s						
G35A	Watkins	50.39	64	P	P	12 19 56.1	-0.8
	baz=308						
H35A	Sunnyside Ranc	50.52	65	P	P	12 19 57.1	-0.8
	baz=308						
HHC	Hu-ho-hao-te	50.52	289	*e*P	P	12 19 57.8	-0.3
HHC				sP	sP	12 20 19.8	-1.8
HHC				S	S	12 27 07.3	-0.2
HHC				pmax	pmax		
	comp=Z,29nm,1.1s						
HHC				pmax	pmax		
	comp=Z,87nm,4.7s						
HHC				LR	LR		
	comp=Z,160nm,14.5s						
HHC				LR	LR		
	comp=Z,140nm,14.3s						
F36A	Milaca	50.52	63	P	P	12 19 56.9	-1.0
	baz=308,SNR=5.7						
F36A	Milaca	50.52	63	*e*P	P	12 19 57.2	-0.7
	comp=Z,5.2nm,0.6s						
C38A	Sawbill Land.	50.61	60	P	P	12 19 57.5	-1.1
	baz=308						
121A	Cookes Peak, D	50.69	86	P	P	12 19 59.8	+0.3
	baz=313						
G36A	St. Michael	50.79	64	P	P	12 19 59.5	-0.4
	baz=308						
FRB	Frobisher Bay	50.80	34	P	P	12 19 58.3	-1.5
	comp=Z,2.5nm,0.4s,baz=299,slow=13,SNR=3.9						
H36A	Jessenland, He	51.09	65	P	P	12 20 02.1	-0.2
	baz=309						
F37A	Hinrichs Farm,	51.10	63	P	P	12 20 01.6	-0.7
	baz=308						
E38A	The Farm, Brul	51.14	61	P	P	12 20 01.4	-1.2
	baz=308						
E38A	The Farm, Brul	51.14	61	*e*P	P	12 20 01.8	-0.8
	comp=Z,17nm,0.6s						
SPMN	Marine on St.	51.32	63	P	P	12 20 03.2	-0.7
	baz=309						
F38A	Pierce - Schro	51.37	62	P	P	12 20 04.0	-0.3
	baz=309,SNR=10						
CBKS	Cedar Bluff	51.40	74	P	P	12 20 04.7	0.0
	baz=311						
CBKS	Cedar Bluff	51.40	74	*e*P	P	12 20 04.5	-0.2
	comp=Z,20nm,1.0s						
CBKS	Cedar Bluff	51.40	74	*e*P	P	12 20 04.5	-0.2
CBKS				pmax	pmax		
	comp=Z,20nm,1.0s						
J36A	Seneca 1, Swea	51.65	66	P	P	12 20 05.7	-0.7
	baz=309						
J36A	Seneca 1, Swea	51.65	66	*e*P	P	12 20 05.9	-0.5
	comp=Z,7.1nm,0.6s						
I37A	Lemond, Waseca	51.74	65	P	P	12 20 06.8	-0.4
	baz=309,SNR=6.4						
I37A	Lemond, Waseca	51.74	65	*e*P	P	12 20 07.0	-0.1
	comp=Z,24nm,0.8s						
E39A	Mellen	51.83	61	P	P	12 20 06.6	-1.1
	baz=309						
G38A	Ridgeland	51.88	63	P	P	12 20 07.1	-1.0
	baz=309						
F39A	Loretta	51.92	62	P	P	12 20 07.8	-0.6
	baz=309						
NJ2	Nanjing	51.93	275	*e*P	P	12 20 08.1	-0.5
NJ2				pmax	pmax		
	comp=Z,12nm,0.7s						
H38A	Maiden Rock	51.95	64	P	P	12 20 08.1	-0.5
	baz=309						
K36A	Gilmore City	52.02	67	P	P	12 20 08.3	-0.9
	baz=310,SNR=6.8						
J37A	Redenius Farm,	52.10	66	P	P	12 20 09.1	-0.7
	baz=310,SNR=8.1						
E40A	Wakefield	52.14	61	P	P	12 20 09.5	-0.5
	baz=309,SNR=6.4						
G39A	Holcombe	52.18	62	P	P	12 20 09.3	-1.0
	baz=309						
F40A	Park Falls	52.35	61	P	P	12 20 10.8	-0.8
	baz=309,SNR=6.3						
K37A	Belmond	52.40	66	P	P	12 20 11.0	-1.0
	baz=310,SNR=5.6						
H39A	Augusta	52.50	63	P	P	12 20 12.2	-0.5
	baz=310						
M36A	Felix, Anita	52.58	68	P	P	12 20 12.8	-0.6
	baz=310						
E41A	Kenton	52.63	60	P	P	12 20 13.1	-0.6
	baz=309						
J38A	Wedel Dairy, R	52.70	65	P	P	12 20 13.4	-0.8
	baz=310						
G40A	Rib Lake	52.72	62	P	P	12 20 13.5	-0.8
	baz=310						
G40A	Rib Lake	52.72	62	*e*P	P	12 20 13.9	-0.4
	comp=Z,9.9nm,0.8s						
MNTX	Cornudas Mount	52.74	85	P	P	12 20 15.2	+0.6
	baz=314,SNR=13						
MNTX	Cornudas Mount	52.74	85	*e*P	P	12 20 15.3	+0.6
	comp=Z,14nm,1.4s						
L37A	Phoenix Point,	52.75	67	P	P	12 20 13.8	-0.7
	baz=310,SNR=9.3						
MSTX	Muleshoe	52.78	81	P	P	12 20 15.0	-0.1
	baz=313						
MSTX	Muleshoe	52.78	81	*e*P	P	12 20 15.5	+0.4
	comp=Z,5.4nm,0.8s						
I39A	Houston	52.89	64	P	P	12 20 14.6	-1.0
	baz=310						
I39A	Houston	52.89	64	*e*P	P	12 20 14.8	-0.8
	comp=Z,12nm,0.6s						
K38A	Parkersburg	52.97	66	P	P	12 20 15.6	-0.6
	baz=310						
F41A	Three Lakes	53.01	61	P	P	12 20 16.0	-0.5
	baz=310,SNR=7.0						
F41A	Three Lakes	53.01	61	*e*P	P	12 20 16.1	-0.4
	comp=Z,16nm,0.8s						
H40A	Chili	53.03	63	P	P	12 20 15.8	-0.8
	baz=310						
M37A	Trindle Farm,	53.04	68	P	P	12 20 16.5	-0.3
	baz=311						
J39A	Decorah	53.12	65	P	P	12 20 16.1	-1.3
	baz=310,SNR=8.7						
L38A	Oak Wood Farm,	53.19	66	P	P	12 20 17.0	-0.8
	baz=310,SNR=9.7						
SCIA	State Center	53.20	67	P	P	12 20 17.4	-0.4
	baz=311						
E42A	Champion	53.21	59	P	P	12 20 17.4	-0.6
	baz=310						
N37A	Lee Faris, Mou	53.37	69	P	P	12 20 18.8	-0.4
	baz=311						
N37A	Lee Faris, Mou	53.37	69	*e*P	P	12 20 19.4	+0.2
	comp=Z,41nm,0.9s						
H41A	Junction City	53.43	62	P	P	12 20 18.8	-0.8
	baz=310						
H41A	Junction City	53.43	62	*e*P	P	12 20 19.2	-0.4
	comp=Z,14nm,1.0s						
M38A	Pleasantville	53.52	67	P	P	12 20 19.7	-0.6
	baz=311						
J40A	Soldiers Grove	53.62	64	P	P	12 20 19.8	-1.2
	baz=310						
I41A	Arkdale	53.67	63	P	P	12 20 20.7	-0.7
	baz=310						
I41A	Arkdale	53.67	63	*e*P	P	12 20 20.9	-0.5
	comp=Z,34nm,1.3s						
G42A	Mountain	53.70	61	P	P	12 20 20.5	-1.0
	baz=310						
E43A	Lone Tree Farm	53.73	59	P	P	12 20 21.2	-0.5
	baz=310,SNR=5.4						
E43A	Lone Tree Farm	53.73	59	*e*P	P	12 20 21.3	-0.5
	comp=Z,25nm,0.7s						
L39A	Vinton	53.74	66	P	P	12 20 20.9	-1.0
	baz=311						
O37A	Wolven Farm, M	53.80	69	P	P	12 20 21.7	-0.6
	baz=311,SNR=7.0						
SFJD	Kangerlussuaq	53.84	24	LR	LR	12 46 21.1	
	comp=Z,32nm,18.2s,baz=344,slow=39						
K40A	Colesburg	53.85	65	P	P	12 20 21.4	-1.3
	baz=311						
N38A	Joes South For	53.91	68	P	P	12 20 22.4	-0.7
	baz=311						
F43A	Flat Rock, Esc	53.99	60	P	P	12 20 22.9	-0.7
	baz=310						
J41A	Loganville	54.05	64	P	P	12 20 23.0	-1.1
	baz=311,SNR=9.3						
P37A	Lathrop	54.06	70	P	P	12 20 23.2	-1.1
	baz=312,SNR=7.4						
M39A	Webster	54.07	67	P	P	12 20 23.6	-0.7
	baz=311,SNR=9.8						
G43A	Wallace	54.09	60	P	P	12 20 23.5	-0.8
	baz=311						
E44A	Grand Marais A	54.14	58	P	P	12 20 23.2	-1.5
	baz=310						
JFWS	Jewell Farm	54.21	64	P	P	12 20 24.1	-1.2
	baz=311						
O38A	Galt	54.21	69	P	P	12 20 24.6	-0.8
	baz=312						
L40A	Anamosa	54.22	66	P	P	12 20 24.3	-1.1
	baz=311						
N39A	Derby Farms, D	54.27	67	P	P	12 20 24.9	-0.9
	baz=311,SNR=8.2						
N39A	Derby Farms, D	54.27	67	*e*P	P	12 20 25.1	-0.6
	comp=Z,28nm,0.9s						
F44A	Big Bay de Noc	54.30	59	P	P	12 20 25.0	-0.8
	baz=311						
I42A	Draeger Farm,	54.31	62	P	P	12 20 25.1	-0.9
	baz=311						
K41A	Shullsburg	54.38	64	P	P	12 20 25.4	-1.1
	baz=311						
M40A	Post Highland	54.49	66	P	P	12 20 26.1	-1.2
	baz=311						
P38A	Dawn	54.51	69	P	P	12 20 26.4	-1.1
	baz=312						
H43A	Windswept, Lux	54.55	61	P	P	12 20 27.0	-0.8
	baz=311						
J42A	Columbus	54.57	63	P	P	12 20 26.5	-1.4
	baz=311						
L41A	Preston	54.62	65	P	P	12 20 26.9	-1.4
	baz=311						
O39A	Kirksville	54.66	68	P	P	12 20 27.7	-0.8
	baz=312						
WMOK	Wichita Mounta	54.68	77	P	P	12 20 28.5	-0.3
	baz=313						
WMOK	Wichita Mounta	54.68	77	*e*P	P	12 20 29.0	+0.1
	comp=Z,7.9nm,1.1s						
WMOK	Wichita Mounta	54.68	77	*e*P	P	12 20 29.0	+0.1
WMOK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
E45A	Wooded Hills,	54.70	58	P	P	12 20 28.1	-0.7
	baz=311						
I43A	Langenfeld Bro	54.73	62	P	P	12 20 28.2	-0.9
	baz=311						
Q38A	Cooks Store, C	54.90	70	P	P	12 20 28.8	-1.5
	baz=312						
J43A	Natural Harves	54.91	63	P	P	12 20 29.1	-1.3
	baz=311						
F45A	CMU Biological	54.97	59	P	P	12 20 29.8	-0.9
	baz=311						
P39B	Salisbury	55.05	69	P	P	12 20 30.2	-1.2
	baz=312,SNR=6.5						
L42A	Oliver, Polo	55.13	65	P	P	12 20 30.4	-1.6
	baz=312						
O40A	La Belle	55.13	68	P	P	12 20 31.0	-1.0
	baz=312,SNR=10						
Q39A	Willow Grove F	55.22	69	P	P	12 20 31.3	-1.3
	baz=312,SNR=11						
R38A	Fenwick Farm,	55.25	71	P	P	12 20 30.9	-2.0
	baz=312						
N41A	Harden Midland	55.32	67	P	P	12 20 32.1	-1.2
	baz=312						
P40A	Paris	55.43	68	P	P	12 20 33.1	-1.0
	baz=312,SNR=15						
P40A	Paris	55.43	68	*e*P	P	12 20 33.3	-0.8
	comp=Z,26nm,0.6s						
TX31	Lajitas Ar. Si	55.44	85	*e*P	P	12 20 34.5	0.0
TX31				*e*P	P	12 20 34.7	+0.2
LTX	Lajitas	55.45	85	*e*P	P	12 20 34.6	+0.1
LTX	Lajitas	55.45	85	*e*P	P	12 20 34.6	+0.1
TXAR	Lajitas Array	55.45	85	P	P	12 20 34.6	+0.1
	comp=Z,4.8nm,0.6s,baz=302,slow=5.5,SNR=69						
TXAR				PcP	PcP	12 21 34.5	+0.4
	comp=Z,1.3nm,0.8s,baz=258,slow=2.7,SNR=3.9						
ABTX	Abilene, Hawle	55.61	80	P	P	12 20 35.3	-0.3
	baz=314						
ABTX	Abilene, Hawle	55.61	80	*e*P	P	12 20 36.0	+0.5
	comp=Z,6.8nm,0.8s						
S38A	Stockton	55.62	71	P	P	12 20 33.7	-1.8
	baz=313,SNR=8.8						
O41A	Passleys Farm,	55.70	67	P	P	12 20 34.8	-1.2
	baz=312,SNR=6.2						
Q40A	Laux Farm, Aux	55.77	69	P	P	12 20 35.5	-1.1
	baz=312,SNR=6.3						
T38A	Diamond	55.80	72	P	P	12 20 35.5	-1.3
	baz=313						
P41A	Barry, Barry	55.90	68	P	P	12 20 36.3	-1.1
	baz=312						
M43A	Waltham Townsh	55.91	65	P	P	12 20 36.2	-1.3
	baz=312						
S39A	Bolivar	55.92	71	P	P	12 20 35.4	-2.3
	baz=313,SNR=5.1						
S39A	Bolivar	55.92	71	*e*P	P	12 20 35.6	-2.1
	comp=Z,4.4nm,0.8s						
O42A	Bath	56.10	67	P	P	12 20 37.9	-1.1
	baz=312						
R40A	Maddies Statio	56.13	70	P	P	12 20 37.2	-2.0
	baz=313,SNR=9.7						
R40A	Maddies Statio	56.13	70	*e*P	P	12 20 37.4	-1.8
	comp=Z,10nm,0.6s						
Q41A	Truxton	56.28	68	P	P	12 20 38.9	-1.3
	baz=313,SNR=5.2						
T39A	Clever	56.34	71	P	P	12 20 39.2	-1.6
	baz=313						
P42A	Winchester	56.37	67	P	P	12 20 39.6	-1.2
	baz=313						
R41A	Rosebud	56.64	69	P	P	12 20 41.1	-1.7
	baz=313						
Q42A	Golden Eagle	56.71	68	P	P	12 20 42.4	-0.9
	baz=313,SNR=7.8						
U39A	Green Forest	56.72	72	P	P	12 20 42.0	-1.4
	baz=313						
T40A	Mansfield	56.76	71	P	P	12 20 41.8	-1.9
	baz=313,SNR=6.0						
P43A	Skaggs, Pawnee	56.80	67	P	P	12 20 42.6	-1.2
	baz=313						
N44A	Piper City	56.80	65	P	P	12 20 42.7	-1.2
	baz=313						
CCM	Cathedral Cave	56.88	69	P	P	12 20 43.4	-1.1
	baz=313						
CCM	Cathedral Cave	56.88	69	*e*P	P	12 20 44.0	-0.5
	comp=Z,6.3nm,1.1s						
CCM	Cathedral Cave	56.88	69	*e*P	P	12 20 44.0	-0.5
CCM				pmax	pmax		
	comp=Z,6.0nm,1.1s						
S41A	Jillco Farms,	56.91	70	P	P	12 20 42.9	-1.8
	baz=313,SNR=13						
R42A	Luebbering	56.99	69	P	P	12 20 43.9	-1.4
	baz=313						
V39A	Pettigrew	57.00	73	P	P	12 20 44.3	-1.2
	baz=314						
JCT	Junction City	57.01	81	P	P	12 20 44.6	-1.0
	baz=315						
JCT	Junction City	57.01	81	*e*P	P	12 20 45.2	-0.3
	comp=Z,6.3nm,0.6s						
JCT	Junction City	57.01	81	*e*P	P	12 20 45.3	-0.3
JCT				pmax	pmax		
	comp=Z,6.0nm,0.6s						
U40A	Yellville	57.11	72	P	P	12 20 44.6	-1.6
	baz=314,SNR=6.4						
N45A	Kentland	57.11	64	P	P	12 20 44.9	-1.1
	baz=313						
Q43A	New Douglas	57.17	67	P	P	12 20 45.7	-0.8
	baz=313						
S42A	Caledonia	57.34	69	P	P	12 20 46.1	-1.6
	baz=313,SNR=6.9						
W39A	Magazine	57.36	73	P	P	12 20 47.2	-0.7

	baz=314,SNR=5.7						
W39A	Magazine	57.36	73	*e*P	P	12 20 47.4	-0.5
	comp=Z,23nm,1.6s						
WHTX	Lake Whitney,	57.38	79	P	P	12 20 47.9	-0.2
	baz=315						
O45A	Potomac	57.40	65	P	P	12 20 47.1	-0.9
	baz=313,SNR=6.3						
FVM	French Village	57.41	69	*e*P	P	12 20 47.8	-0.4
	comp=Z,11nm,0.7s						
FVM	French Village	57.41	69	*e*P	P	12 20 47.8	-0.4
FVM				pmax	pmax		
	comp=Z,11nm,0.7s						
P44A	Sand Creek, Wi	57.42	66	P	P	12 20 47.6	-0.7
	baz=313,SNR=8.6						
R43A	Red Bud	57.49	68	P	P	12 20 47.4	-1.4
	baz=313						
V40A	Witts Springs	57.50	72	P	P	12 20 47.6	-1.3
	baz=314,SNR=6.3						
V40A	Witts Springs	57.50	72	*e*P	P	12 20 47.9	-1.1
	comp=Z,7.4nm,0.6s						
Q44A	Meyer Farm, Va	57.58	67	P	P	12 20 48.4	-1.0
	baz=313						
X39A	Fountain Ranch	57.63	74	P	P	12 20 49.7	-0.2
	baz=314,SNR=8.4						
SFIN	Lafayette	57.66	65	P	P	12 20 49.2	-0.8
	baz=313						
SFIN	Lafayette	57.66	65	*e*P	P	12 20 49.5	-0.4
	comp=Z,12nm,0.6s						
U41A	Viola	57.66	71	P	P	12 20 48.5	-1.6
	baz=314						
T42A	Van Buren	57.67	70	P	P	12 20 47.9	-2.2
	baz=314,SNR=5.2						
T42A	Van Buren	57.67	70	*e*P	P	12 20 48.3	-1.8
	comp=Z,4.6nm,0.6s						
W40A	Ferguson Farm,	57.78	73	P	P	12 20 50.2	-0.6
	baz=314						
W40A	Ferguson Farm,	57.78	73	*e*P	P	12 20 50.7	-0.2
	comp=Z,13nm,0.8s						
P45A	Graceland, Par	57.88	66	P	P	12 20 49.7	-1.7
	baz=314						
S43A	Fulton Ridge,	57.89	69	P	P	12 20 50.4	-1.2
	baz=314,SNR=11						
V41A	Mountainview	57.91	72	P	P	12 20 50.2	-1.5
	baz=314,SNR=6.1						
MIAR	Mount Ida	57.93	74	P	P	12 20 51.5	-0.4
	baz=314,SNR=10						
MIAR	Mount Ida	57.93	74	*e*P	P	12 20 52.0	+0.1
	comp=Z,16nm,1.0s						
MIAR	Mount Ida	57.93	74	*e*P	P	12 20 52.0	+0.1
MIAR				pmax	pmax		
	comp=Z,16nm,1.0s						
KLBO	Killbear Provi	57.95	56	P	P	12 20 51.1	-0.8
	baz=314						
ARA0	ARCESS Array S	57.97	352	*e*P	P	12 20 51.5	-0.2
ARA0				*e*PcP	PcP	12 21 41.1	-2.0
ARCES	ARCESS Array B	57.97	352	P	P	12 20 51.5	-0.2
	comp=Z,3.6nm,1.0s,baz=23,slow=6.6,SNR=5.1						
ARCES				PcP	PcP	12 21 41.1	-2.0
	comp=Z,3.3nm,0.9s,baz=340,slow=5.1,SNR=3.6						
R44A	Waltonville	58.00	68	P	P	12 20 51.0	-1.3
	baz=314						
U42A	Revenden	58.06	71	P	P	12 20 50.9	-1.9
	baz=314						
Q45A	Warren Harvey,	58.08	66	P	P	12 20 52.0	-0.9
	baz=314,SNR=7.7						
T43A	Greenville	58.10	69	P	P	12 20 51.9	-1.2
	baz=314,SNR=18						
P46A	Rosedale	58.12	65	P	P	12 20 51.6	-1.6
	baz=314						
BASO	Ashfield	58.12	58	P	P	12 20 53.5	+0.4
	baz=314						
LZH	Lanzhou	58.20	289	*e*P	P	12 20 58.5	+4.5
LZH				pP	sP	12 21 14.6	-3.2
LZH				sP	pP	12 21 21.1	+10
LZH				pmax	pmax		
	comp=Z,16nm,1.2s						
OLIL	Olney	58.22	67	*e*P	P	12 20 53.3	-0.6
	comp=Z,20nm,0.6s						
O47A	Sheridan	58.27	64	P	P	12 20 52.8	-1.5
	baz=314,SNR=6.1						
S44A	Carbondale	58.28	68	P	P	12 20 53.1	-1.2
	baz=314						
W41B	Gary Mavity, V	58.28	72	P	P	12 20 53.3	-1.0
	baz=314						
W41B	Gary Mavity, V	58.28	72	*e*P	P	12 20 53.6	-0.7
	comp=Z,6.9nm,1.0s						
L49A	Milan	58.30	61	P	P	12 20 53.3	-1.1
	baz=314						
BUKO	Buck Lake	58.31	56	P	P	12 20 53.9	-0.5
	baz=314						
X40A	Basin Creek Fa	58.41	73	P	P	12 20 54.3	-0.9
	baz=314						
R45A	Skylar, Fairfi	58.42	67	P	P	12 20 54.4	-0.9
	baz=314,SNR=8.0						
Y40A	Okolona	58.48	74	P	P	12 20 54.9	-0.8
	baz=315						
T44A	Benton	58.51	69	P	P	12 20 54.9	-0.9
	baz=314						
CLWO	Collingwood	58.53	57	P	P	12 20 56.4	+0.4
	baz=314						
M49A	Liberty Center	58.63	62	P	P	12 20 56.1	-0.6
	baz=314						
S45A	Carrier Mills	58.68	68	P	P	12 20 55.9	-1.2
	baz=314						
P47A	Martinsville	58.73	65	P	P	12 20 56.3	-1.1
	baz=314,SNR=9.1						
O48A	Farmland	58.82	63	P	P	12 20 56.6	-1.4
	baz=314,SNR=8.6						
ELFO	Elginfield	58.87	59	P	P	12 20 58.7	+0.4
	baz=314						
SADO	Sadowa	58.91	56	P	P	12 20 58.1	-0.5
	comp=Z,7.5nm,0.4s,baz=344,slow=6.7,SNR=8.8						
SADO	Sadowa	58.91	56	*e*P	P	12 20 58.1	-0.5
	comp=Z,7.3nm,0.6s						
R46A	Gibon Southern	58.91	67	P	P	12 20 57.8	-1.0
	baz=314						
Q47A	Bedord North L	59.03	65	P	P	12 20 58.5	-1.0
	baz=314						
P48A	Milroy	59.22	64	P	P	12 20 59.5	-1.4
	baz=314						
PEMO	Pembroke	59.23	54	P	P	12 21 00.3	-0.5
	baz=315						
BANO	Bancroft	59.35	55	P	P	12 21 01.9	+0.2
	baz=315						
R47A	Wooly Knot Far	59.41	66	P	P	12 21 01.2	-1.0
	baz=314						
Q48A	North Vernon	59.42	65	P	P	12 21 01.0	-1.2
	baz=314						
T46A	Princeton	59.51	68	P	P	12 21 02.1	-0.8
	baz=314						
P49A	Miami Univ. Ec	59.56	64	P	P	12 21 02.2	-1.0
	baz=314						
N50A	Nevada	59.57	62	P	P	12 21 02.7	-0.5
	baz=314						
WCI	Wyandotte Cave	59.59	66	P	P	12 21 02.4	-1.0
	baz=314						
WCI	Wyandotte Cave	59.59	66	*e*P	P	12 21 02.2	-1.2
	comp=Z,15nm,0.8s						
WCI	Wyandotte Cave	59.59	66	*e*P	P	12 21 02.2	-1.2
WCI				pmax	pmax		
	comp=Z,15nm,0.8s						
S47A	Hartford	59.70	67	P	P	12 21 03.6	-0.6
	baz=315						
R48A	Northridge Ran	59.71	65	P	P	12 21 03.7	-0.5
	baz=314						
O50A	Cable	59.74	63	P	P	12 21 03.6	-0.8
	baz=314						
DRWO	Darlington Wes	59.74	57	P	P	12 21 04.4	+0.1
	baz=315						
HKT	Hockley	59.80	79⇑	*e*P	P	12 21 06.6	+1.7
HKT				pmax	pmax		
	comp=Z,18nm,1.1s						
V45A	Humboldt	59.81	70	P	P	12 21 04.7	-0.2
	baz=315						
Q49A	Aurora	59.83	64	P	P	12 21 04.2	-0.9
	baz=315						
DELO	Deloro Mine	59.86	55	P	P	12 21 04.3	-0.9
	baz=315						
WLVO	Wesleyville	59.88	56	P	P	12 21 05.5	+0.2
	baz=315						
T47A	Sharon Grove	60.00	67	P	P	12 21 05.7	-0.5
	baz=315,SNR=5.7						
T47A	Sharon Grove	60.00	67	*e*P	P	12 21 05.6	-0.5
	comp=Z,16nm,0.8s						
P50A	Jamestown	60.02	63	P	P	12 21 05.3	-1.0
	baz=315						
ACSO	Alum Creek Sta	60.03	62	P	P	12 21 05.5	-0.9
	baz=315						
S48A	Wiedeman Farm,	60.12	66	P	P	12 21 06.3	-0.8
	baz=315						
WVT	Waverly	60.19	69	P	P	12 21 06.7	-0.8
	baz=315						
WVT	Waverly	60.19	69	*e*P	P	12 21 06.9	-0.6
	comp=Z,4.6nm,0.6s						
WVT	Waverly	60.19	69	*e*P	P	12 21 06.9	-0.6
WVT				pmax	pmax		
	comp=Z,5.0nm,0.6s						
V46A	Holladay	60.25	69	P	P	12 21 07.2	-0.7
	baz=315						
T48A	Bowling Green	60.32	67	P	P	12 21 07.6	-0.8
	baz=315						
MEDO	Medina	60.38	57	P	P	12 21 08.8	+0.1
	baz=315						
OXF	Oxford	60.41	71	P	P	12 21 08.5	-0.5
	baz=315,SNR=6.7						
OXF	Oxford	60.41	71	*e*P	P	12 21 08.8	-0.2
	comp=Z,28nm,0.9s						
OXF	Oxford	60.41	71	*e*P	P	12 21 08.8	-0.2
OXF				pmax	pmax		
	comp=Z,28nm,0.9s						
ALFO	Alfred	60.44	53	P	P	12 21 07.7	-1.4
	baz=316						
Q50A	Georgetown	60.46	64	P	P	12 21 08.7	-0.6
	baz=315						
S49A	Springfield	60.47	66	P	P	12 21 08.7	-0.7
	baz=315						
143A	Socs Landing,	60.51	74	P	P	12 21 09.7	0.0
	baz=316						
ALLY	Alegheny Colle	60.57	59	*e*P	P	12 21 10.4	+0.4
	comp=Z,30nm,0.6s						
V47A	Nunnelly	60.58	69	P	P	12 21 09.5	-0.6
	baz=315						
U48A	Cassie Pea, Po	60.66	67	P	P	12 21 10.3	-0.5
	baz=315,SNR=8.2						
R50A	Paris	60.66	65	P	P	12 21 10.1	-0.6
	baz=315						
Q51A	Peebles	60.68	63	P	P	12 21 10.4	-0.4
	baz=315						
T49A	Edmonton	60.81	66	P	P	12 21 11.1	-0.7
	baz=315,SNR=5.6						
T49A	Edmonton	60.81	66	*e*P	P	12 21 11.2	-0.5
	comp=Z,8.0nm,0.5s						
T49A				*e*S	S	12 29 22.4	-1.8
KURK	Kurchatov	60.82	316	*e*P	P	12 21 12.3	+0.7
KURK	Kurchatov	60.82	316	*e*P	P	12 21 12.3	+0.7
PLAL	Pickwick Lake	60.85	70	*e*P	P	12 21 11.3	-0.7
	comp=Z,10nm,0.6s						
X46A	Booneville	60.86	70	P	P	12 21 11.2	-0.9
	baz=315						
M54A	Oil Creek Stat	60.92	59	P	P	12 21 12.1	-0.4
	baz=315						
M54A	Oil Creek Stat	60.92	59	*e*P	P	12 21 12.3	-0.2
	comp=Z,14nm,0.9s						
KURBB	Kurchatov Arra	60.93	316	P	P	12 21 12.3	0.0
	comp=Z,0.5nm,0.6s,baz=51,slow=7.3,SNR=3.3						
W47A	Westpoint	60.94	69	P	P	12 21 11.8	-0.9
	baz=315						
V48A	Smith Brothers	61.04	68	P	P	12 21 12.7	-0.7
	baz=315						
S50A	Richmond	61.04	65	P	P	12 21 12.8	-0.5
	baz=315						
R51A	Hillsboro	61.06	64	P	P	12 21 13.4	-0.1
	baz=315,SNR=20						
U49A	Red Boiling Sp	61.09	67	P	P	12 21 12.9	-0.7
	baz=315						
N54A	Moraine State	61.13	60	P	P	12 21 13.3	-0.6
	baz=315						
Y46A	Houston	61.17	71	P	P	12 21 13.4	-0.8
	baz=316						
T50A	Nancy	61.26	66	P	P	12 21 13.8	-1.0
	baz=315						
LONY	Lake Ozonia	61.31	53	P	P	12 21 13.4	-1.6
	baz=316						
W48A	Pulaski	61.40	69	P	P	12 21 15.0	-0.7
	baz=316,SNR=7.2						
S51A	Beattyville	61.52	65	P	P	12 21 15.9	-0.7
	baz=316						
V49A	McMinnville	61.55	68	P	P	12 21 15.9	-0.8
	baz=316						
R52A	Catlettsburg	61.55	63	P	P	12 21 16.0	-0.8
	baz=316						
WMQ	Urumqi	61.60	306	P	P	12 21 19.3	+2.2
WMQ				LR	LR		
	comp=Z,100nm,19.5s						
WMQ				LR	LR		
	comp=Z,140nm,20.9s						
U50A	Jamestown	61.69	66	P	P	12 21 16.8	-0.9
	baz=316						
Y47A	UCPARC, Winfie	61.75	70	P	P	12 21 17.4	-0.7
	baz=316						
W49A	Belvidere	61.80	68	P	P	12 21 17.5	-1.0
	baz=316						
T51A	Gray	61.80	65	P	P	12 21 17.9	-0.6
	baz=316,SNR=7.1						
X48A	Hartselle	61.82	69	P	P	12 21 17.3	-1.3
	baz=316						
X48A	Hartselle	61.82	69	*e*P	P	12 21 17.8	-0.9
	comp=Z,11nm,1.2s						
245A	Little AP, Sta	61.88	73	P	P	12 21 18.9	-0.1
	baz=316						
146A	Union	61.94	72	P	P	12 21 19.2	-0.3
	baz=316						
MK32	Makanchi Array	62.07	311	*e*P	P	12 21 19.4	-0.8
MKAR	Makanchi Array	62.07	311	P	P	12 21 19.4	-0.8
	comp=Z,0.2nm,0.4s,baz=32,slow=6.3,SNR=4.0						
MKAR	Makanchi Array	62.07	311	*i* P	P	12 21 20.7	+0.6
V50A	Pikevile	62.07	67	P	P	12 21 19.3	-1.0
	baz=316,SNR=5.0						
Z47A	Carrollton	62.12	71	P	P	12 21 19.6	-1.1
	baz=316						
Y48A	Jasper	62.14	70	P	P	12 21 19.4	-1.3
	baz=316						
MCWV	Mont Chateau	62.14	61	P	P	12 21 20.2	-0.5
	baz=316						
U51A	La Follette	62.18	66	P	P	12 21 20.2	-0.8
	baz=316						
X49A	Woodville	62.20	69	P	P	12 21 20.2	-0.9
	baz=316,SNR=5.1						
T52A	Hallie	62.24	65	P	P	12 21 21.2	-0.2
	baz=316						
W50A	Signal Mountai	62.29	68	P	P	12 21 20.8	-1.0
	baz=316						
W50A	Signal Mountai	62.29	68	*e*P	P	12 21 20.9	-0.8
	comp=Z,12nm,0.5s						
Z48A	Northport	62.30	71	P	P	12 21 20.9	-0.9
	baz=316						
TZTN	Tazewell	62.33	65	P	P	12 21 21.7	-0.3
	baz=316						
TZTN	Tazewell	62.33	65	*e*P	P	12 21 22.1	+0.1
	comp=Z,7.2nm,0.8s						
BINY	Binghamton	62.35	56	P	P	12 21 22.0	0.0
	baz=316,SNR=10						
BINY	Binghamton	62.35	56	*e*P	P	12 21 22.3	+0.3
	comp=Z,30nm,0.8s						
147A	Livingston	62.38	72	P	P	12 21 21.7	-0.7
	baz=316						
O56A	Blue Knob Stat	62.39	59	P	P	12 21 21.8	-0.6
	baz=316						
O56A	Blue Knob Stat	62.39	59	*e*P	P	12 21 22.2	-0.2
	comp=Z,7.0nm,0.8s						
BVAR	Borovoye Array	62.40	322	P	P	12 21 22.3	+0.1
	comp=Z,0.8nm,0.5s,baz=52,slow=9.3,SNR=2.9						
V51A	Loudon	62.40	67	P	P	12 21 21.6	-0.9
	baz=316						
V51A	Loudon	62.40	67	*e*P	P	12 21 21.9	-0.6
	comp=Z,8.2nm,0.5s						
SSPA	Standing Stone	62.48	59	P	P	12 21 22.4	-0.6
	baz=316						
SSPA	Standing Stone	62.48	59	*e*P	P	12 21 21.8	-1.2
	comp=Z,85nm,0.8s						
U52A	Thorn Hill	62.54	65	P	P	12 21 23.0	-0.4
	baz=316						
CPCT	Cooper Cave	62.56	67	*e*P	P	12 21 23.0	-0.5
	comp=Z,15nm,1.5s						
X50B	Fort Payne	62.62	68	P	P	12 21 23.1	-0.9
	baz=316						
W51A	Cleveland	62.63	67	P	P	12 21 23.1	-0.9
	baz=316						
V52A	Sevierville	62.80	66	P	P	12 21 24.7	-0.5
	baz=316						
V52A	Sevierville	62.80	66	*e*P	P	12 21 24.8	-0.4
	comp=Z,7.4nm,0.7s						
TKL	Tuckaleechee C	62.83	66	P	P	12 21 24.8	-0.6
	comp=Z,3.9nm,0.5s,baz=360,slow=3.0,SNR=8.6						
TKL	Tuckaleechee C	62.83	66	*e*P	P	12 21 25.0	-0.4
	comp=Z,26nm,1.5s						
TKL	Tuckaleechee C	62.83	66	*e*P	P	12 21 25.0	-0.4
TKL				pmax	pmax		
	comp=Z,27nm,1.5s						
LRAL	Lakeview Retre	62.87	70	P	P	12 21 24.7	-0.9
	baz=316						
LBNH	Lisbon	62.90	52	P	P	12 21 24.5	-1.2
	baz=317						
KSPA	Keystone Colle	62.92	57	*e*P	P	12 21 25.9	0.0
	comp=Z,18nm,0.5s						
Y50A	Piedmont	62.98	69	P	P	12 21 25.3	-1.1
	baz=316						
U53A	Fall Branch	63.00	65	P	P	12 21 26.0	-0.5
	baz=316						
X51A	Calhoun	63.00	68	P	P	12 21 25.2	-1.3
	baz=316						
Z49A	Columbiana	63.02	70	P	P	12 21 25.4	-1.2
	baz=316						
W52A	Murphy	63.15	67	P	P	12 21 26.5	-1.0
	baz=316						
149A	Jones	63.30	71	P	P	12 21 27.5	-1.0
	baz=316						
Z50A	Ashland	63.33	70	P	P	12 21 27.6	-1.0
	baz=316,SNR=7.8						
Z50A	Ashland	63.33	70	*e*P	P	12 21 27.7	-1.0
	comp=Z,11nm,0.8s						
Y51A	Rockmart	63.36	68	P	P	12 21 27.8	-1.1
	baz=316						
GYA	Guiyang	63.37	279	*e*P	P	12 21 30.3	+1.1
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
V53A	Saluda	63.37	66	P	P	12 21 28.6	-0.4
	baz=316						
V53A	Saluda	63.37	66	*e*P	P	12 21 28.8	-0.1
	comp=Z,6.5nm,0.6s						
N59A	State Game Lan	63.39	57	P	P	12 21 28.9	-0.1
	baz=317,SNR=5.5						
N59A	State Game Lan	63.39	57	*e*P	P	12 21 29.1	+0.2
	comp=Z,18nm,0.6s						
X52A	Dahlonega	63.52	67	P	P	12 21 29.4	-0.6
	baz=316,SNR=7.5						
W53A	Cullowhee	63.53	66	P	P	12 21 29.8	-0.4
	baz=316						
BLA	Blacksburg	63.59	63	P	P	12 21 30.2	-0.2
	baz=317						
150A	Eclectic	63.74	70	P	P	12 21 30.9	-0.5
	baz=317						
BG3	Lake Jocassee	63.79	66	*e*P	P	12 21 31.8	+0.1
	comp=Z,9.1nm,0.8s						
LUPA	Lehigh Univers	63.83	57	*e*P	P	12 21 32.3	+0.5
X53A	Estanollee	63.94	67	P	P	12 21 32.3	-0.3
	baz=317						
Y52A	Lilburn	63.96	68	P	P	12 21 32.1	-0.7
	baz=317						
BRNJ	Basking Ridge	64.18	57	*e*P	P	12 21 34.2	+0.1
	comp=Z,23nm,0.6s						
151A	Opelika	64.20	70	P	P	12 21 33.3	-1.1
	baz=317						
IP04	Greensprings	64.22	61	*e*P	P	12 21 35.2	+0.8
	comp=Z,14nm,1.0s						
Y53A	Monroe	64.24	68	P	P	12 21 33.8	-0.9
	baz=317						
Z52A	Williamson	64.25	69	P	P	12 21 33.5	-1.2
	baz=317						
PAL	Palisades	64.28	56	P	P	12 21 34.4	-0.4
	baz=318						
IP03	Louisa	64.31	61	*e*P	P	12 21 35.7	+0.7
	comp=Z,31nm,1.3s						
IP07	Quail	64.38	61	*e*P	P	12 21 35.9	+0.4
	comp=Z,21nm,0.8s						
IP06	Yanceyville	64.39	61	*e*P	P	12 21 36.0	+0.4
	comp=Z,15nm,0.7s						
IP01	Cuckoo	64.41	61	*e*P	P	12 21 35.5	-0.2
	comp=Z,6.9nm,0.8s						
152A	Waverly Hall	64.45	69	P	P	12 21 34.4	-1.6
	baz=317						
152A	Waverly Hall	64.45	69	*e*P	P	12 21 35.0	-1.0
	comp=Z,7.1nm,0.8s						
KMSC	Kings Mountain	64.58	65	P	P	12 21 36.1	-0.7
	baz=317,SNR=5.4						
KMSC	Kings Mountain	64.58	65	*e*P	P	12 21 36.2	-0.7
	comp=Z,14nm,0.7s						
IP05	Hopewell Churc	64.59	61	*e*P	P	12 21 37.0	+0.2
	comp=Z,15nm,0.8s						
GOGA	Godfrey	64.63	68	P	P	12 21 36.1	-1.1
	baz=317,SNR=6.0						
GOGA	Godfrey	64.63	68	*e*P	P	12 21 36.3	-0.9
	comp=Z,8.4nm,0.8s						
GOGA	Godfrey	64.63	68	*e*P	P	12 21 36.3	-0.9
GOGA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
Z53A	Monticello	64.67	68	P	P	12 21 36.3	-1.1
	baz=317,SNR=8.8						
HODGE	Hodges	64.72	66	*e*P	P	12 21 37.3	-0.5
	comp=Z,8.8nm,0.9s						
Y54A	Tignall	64.75	67	P	P	12 21 37.4	-0.6
	baz=317,SNR=7.3						
252A	Lumpkin	64.93	70	P	P	12 21 38.0	-1.1
	baz=317						
Z54A	Sparta	65.12	67	P	P	12 21 39.4	-0.9
	baz=317,SNR=8.7						
JSC	Jenkinsville	65.25	66	*e*P	P	12 21 40.9	-0.3
	comp=Z,13nm,0.5s						
JSC	Jenkinsville	65.25	66	*e*P	P	12 21 40.9	-0.3
JSC				pmax	pmax		
	comp=Z,13nm,0.5s						
154A	Montrose	65.42	68	P	P	12 21 40.8	-1.5
	baz=317						
155A	Kite	65.78	68	P	P	12 21 43.8	-0.9
	baz=318						
HFS	Hagfors	68.06	356	P	P	12 21 58.0	-0.7
	comp=Z,1.5nm,0.7s,baz=351,slow=2.0,SNR=5.9						
HFS	Hagfors	68.06	356	P	P	12 21 58.0	-0.7
959A	Okeechobee	70.49	70	P	P	12 22 13.3	-0.8
	baz=319						
CMAR	Chiang Mai Arr	74.06	280	P	P	12 22 35.2	-0.4
	comp=Z,2.0nm,0.8s,baz=26,slow=7.5,SNR=8.8						
CMAR				LR	LR	12 58 44.9	
	comp=Z,12nm,18.2s,baz=290,slow=39						
KIV	Kislovodsk	79.38	334⇑	*e*P	P	12 23 06.4	+1.1
KIV				*i*		12 23 17.6	
KIV				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WR1	Warramunga Arr	84.71	228	*e*P	P	12 23 32.3	-1.0
	comp=Z,34nm,1.9s						
WRA	Warramunga Arr	84.71	228	P	P	12 23 32.3	-1.0
	comp=Z,0.4nm,0.5s,baz=33,slow=5.9,SNR=3.5						
ASAR	Alice Springs	88.14	227	P	P	12 23 50.0	-0.1
	comp=Z,1.2nm,0.7s,baz=26,slow=4.7,SNR=18						
ASAR	Alice Springs	88.14	227	P	P	12 23 50.0	-0.1
TOA1	Torodi Ar. Sit	115.00	5	*e*PKiKP	PKiKP	12 29 39.8	-0.5
TORD	Torodi Ar. Bea	115.01	5	PKP	PKPdf	12 29 39.8	-0.5
	comp=Z,64nm,0.6s,baz=350,slow=4.0						
DBIC	Dimbokro	120.79	13	PKP	PKPdf	12 29 50.8	-0.6
	comp=Z,1.2nm,0.4s,baz=333,slow=3.4,SNR=6.8						
VNDA	Vanda	130.14	187	SKPab	SKPab	12 33 24.4	0.0
	comp=Z,1.2nm,0.8s,baz=338,slow=4.4,SNR=6.4						
MAW	Mawson	148.91	218	PKPbc	PKPbc	12 30 44.0	-1.4
	comp=Z,2.0nm,0.6s,baz=36,slow=9.8,SNR=4.6						
BOSA	Boshof	152.68	321	PKPbc	PKPbc	12 30 56.0	+0.3
	comp=Z,3.1nm,0.5s,baz=15,slow=1.8,SNR=9.3						

IDC ***23*** *12:16:50.2±0.8, 49.°45N×28.°53W, h0^{km}, mb3.8/12, mb1 4.0/14, mb1mx3.7/81, mbtmp3.8/14, ML4.2/1, MS3.7/39, Ms1 3.7/39, ms1mx3.5/64, Error ellipse: s-maj=26.1km s-min=14.8km az=17.0*

ISCJB ***23*** *12:16:51.6±0.3, 49.°50N±0.°09×28.°49W±0.°06, h17^{km}, mb4.4/48, MS3.6/39, Error ellipse: s-maj=13.3km s-min=5.5km az=6.6*

NEIC ***23*** *12:16:52.4±0.3, 49.°48N×28.°51W, h10^{km}, mb4.5/37, Error ellipse: s-maj=11.7km s-min=4.8km az=187.0*

ISC 23 12:16:53.4±0.6, **49.°5N**±0.°1×**28.°48W**±0.°08, **h17^{km}, n109,** σ**1.^{s}08**/75, **mb4.4**/48, **MS3.6**/39, **Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EKA	Eskdalemuir Ar	16.48	59	Pn	Pn	12 20 43.1	-0.4
	baz=256,slow=8.6,SNR=4.1						
PAB	San Pablo	19.79	111	*e*P	Pn	12 21 25.2	+0.9
	7.7nm,1.1s						
ESDC	Sonseca Array	19.94	110	P	Pn	12 21 25.1	-1.0
	baz=304,slow=9.7,SNR=6.8						
ESDC				LR	LR	12 27 27.1	
	comp=Z,260nm,20.0s,baz=305,slow=32						
SFJD	Kangerlussuaq	20.87	335	LR	LR	12 27 53.5	

	comp=Z,231nm,20.4s,baz=138,slow=32						
ECH	Echery	23.36	79	*e*P	P	12 22 00.6	-0.1
	5.5nm,1.0s						
JMIC	Jan Mayen	23.51	16	LR	LR	12 28 04.5	
	comp=Z,62nm,19.6s,baz=248,slow=29						
SCHQ	Schefferville	23.92	298	LR	LR	12 29 52.6	
	comp=Z,161nm,18.8s,baz=92,slow=33						
MDT	Midelt	24.33	124	P	P	12 22 09.8	-0.4
	2.6nm,0.7s,baz=338,slow=9.7,SNR=5.6						
MDT				LR	LR	12 29 46.3	
	comp=Z,79nm,21.6s,baz=348,slow=32						
NOA	NORSAR Array B	24.99	47	LR	LR	12 31 08.5	
	comp=Z,135nm,18.1s,baz=255,slow=34						
TUE	Stuetta	25.33	82	*e*P	P	12 22 22.3	+3.0
	11nm,1.0s						
DAVOX	Davos/Dischmat	25.56	81	LR	LR	12 32 04.4	
	comp=Z,317nm,18.3s,baz=264,slow=36						
FRB	Frobisher Bay	25.73	319	LR	LR	12 30 04.3	
	comp=Z,138nm,18.4s,baz=71,slow=31						
HFS	Hagfors	26.09	50	LR	LR	12 30 58.8	
	comp=Z,118nm,19.1s,baz=265,slow=32						
GERES	GERESS Array B	27.34	75	LR	LR	12 32 42.4	
	comp=Z,247nm,19.7s,baz=289,slow=35						
VRAC	Vranov	29.01	73	LR	LR	12 34 03.7	
	comp=Z,234nm,18.2s,baz=290,slow=36						
KEST	Kesra	30.69	102	LR	LR	12 34 24.2	
	comp=Z,100nm,19.3s,baz=234,slow=34						
BUR04	Bucovina Ar. S	34.97	72	*e*P	P	12 23 45.8	+1.4
AKASG	Malin Array Be	36.24	65	P	P	12 23 54.0	-1.1
	0.2nm,0.3s,baz=272,slow=10,SNR=5.2						
AKASG				LR	LR	12 39 25.4	
	comp=Z,163nm,18.4s,baz=0.0,slow=37						
AKBB	Malin Array Si	36.24	65	*e*P	P	12 23 54.0	-1.1
	3.7nm,1.0s						
MLR	Muntele Rosu	36.33	75	LR	LR	12 38 19.6	
	comp=Z,139nm,20.7s,baz=332,slow=36						
KOWA	Kowa	40.21	142	LR	LR	12 39 06.2	
	comp=Z,112nm,20.7s,baz=38,slow=33						
TKL	Tuckaleechee C	42.07	272	LR	LR	12 42 03.3	
	comp=Z,144nm,18.3s,baz=49,slow=36						
ULM	Lac du Bonnet	42.09	298	LR	LR	12 39 59.5	
	comp=Z,94nm,21.2s,baz=85,slow=33						
CPCT	Cooper Cave	42.68	273	*e*P	P	12 24 52.2	+3.2
	7.4nm,1.1s						
TOA1	Torodi Ar. Sit	43.88	135	*e*P	P	12 24 58.0	-0.9
TORD	Torodi Ar. Bea	43.89	135	P	P	12 24 58.0	-0.9
	49nm,0.5s,baz=338,slow=11						
TORD				LR	LR	12 41 26.6	
	comp=Z,150nm,21.7s,baz=325,slow=34						
BRTR	Keskin Array B	44.13	78	LR	LR	12 44 10.2	
	comp=Z,40nm,19.4s,baz=282,slow=37						
UTMT	University of	44.97	277	*e*P	P	12 25 12.9	+5.5
	251nm,0.4s						
CCM	Cathedral Cave	45.50	280	*e*P	P	12 25 12.2	+0.6
	3.8nm,0.8s						
T42A	Van Buren	46.00	279	*e*P	P	12 25 15.1	-0.5
	3.8nm,0.9s						
YKA	Yellowknife Ar	46.24	320	P	P	12 25 15.5	-1.5
	1.5nm,1.0s,baz=65,slow=7.9,SNR=8.2						
YKA				LR	LR	12 41 55.8	
	comp=Z,7.3nm,22.0s,baz=76,slow=33						
YKB5	Yellowknife Ar	46.24	320	*e*P	P	12 25 15.6	-1.5
DBIC	Dimbokro	47.06	147	LR	LR	12 42 36.3	
	comp=Z,111nm,21.9s,baz=321,slow=33						
Z45A	Winona	47.33	274	*e*P	P	12 25 23.9	-2.1
	50nm,0.3s						
KBZ	Khabaz	47.70	68	LR	LR	12 45 34.6	
	comp=Z,79nm,20.7s,baz=313,slow=36						
V40A	Witts Springs	47.85	279	*e*P	P	12 25 29.7	-0.4
	6.3nm,1.0s						
LAO	LASA Array	49.83	298	*e*P	P	12 25 46.0	+0.8
	8.3nm,1.0s						
GNI	Garni	50.87	71	LR	LR	12 48 42.7	
	comp=Z,41nm,20.1s,baz=318,slow=38						
GCMT	Greycliff	52.31	299	*e*P	P	12 26 04.1	+0.1
K22A	Casper	52.32	294	*e*P	P	12 26 03.6	-0.5
	9.7nm,1.1s						
AKTO	Aktyubinsk	52.55	54	LR	LR	12 48 21.9	
	comp=Z,43nm,18.7s,baz=313,slow=36						
WALA	Waterton Lakes	52.77	305	*e*P	P	12 26 07.0	-0.3
	3.6nm,0.8s						
N23A	Red Feather La	53.02	292	*e*P	P	12 26 10.0	+0.6
	6.3nm,0.9s						
BW06	Boulder Array	54.04	296	*e*P	P	12 26 15.8	-1.1
	3.2nm,0.9s						
PD31	Pinedale Array	54.04	296	*e*P	P	12 26 15.8	-1.1
PDAR	Pinedale Array	54.04	296	P	P	12 26 15.6	-1.2
	1.4nm,0.8s,baz=55,slow=8.1,SNR=12						
PDAR				LR	LR	12 47 26.7	
	comp=Z,88nm,18.8s,baz=76,slow=34						
PDAR	Pinedale Array	54.04	296	*e*P	P	12 26 15.2	-1.6
MOOW	Moose Ponds	54.14	298	*e*P	P	12 26 17.8	+0.3
	2.6nm,1.1s						
FXWY	Fox Creek	54.37	298	*e*P	P	12 26 19.0	-0.2
	3.0nm,1.1s						
T25A	Trinidad	54.38	288	*e*P	P	12 26 20.0	+0.6
	6.1nm,1.1s						
REDW	Red Top Meadow	54.43	297	*e*P	P	12 26 20.1	+0.4
	5.4nm,1.1s						
DLBC	Dease Lake	54.84	321	P	P	12 26 21.4	-0.8
	1.4nm,0.8s,baz=73,slow=12,SNR=2.5						
DLBC	Dease Lake	54.84	321	*e*P	P	12 26 21.4	-0.8
	2.7nm,1.1s						
PV12	Saucer Basin,	56.34	291	*e*P	P	12 26 34.0	+0.5
	8.9nm,1.1s						
P18A	Preston Nutter	56.39	293	*e*P	P	12 26 34.4	+0.5
	4.1nm,1.0s						
PV11	David Mesa, Pa	56.40	291	*e*P	P	12 26 34.8	+0.9
	5.5nm,0.8s						
PV03	Paradox Valley	56.41	291	*e*P	P	12 26 34.8	+0.8
PV16	Nyswonger Mesa	56.42	291	*e*P	P	12 26 34.4	+0.3
	4.8nm,0.9s						
PV14	Lion Creek, Pa	56.44	292	*e*P	P	12 26 34.6	+0.3
	6.1nm,0.8s						
PV18	Skein Mesa, Pa	56.45	291	*e*P	P	12 26 35.1	+0.8
	7.5nm,1.0s						
PV13	Radium Mtn., P	56.45	291	*e*P	P	12 26 35.9	+1.6
	3.8nm,1.2s						
PV19	Morning Glory	56.46	291	*e*P	P	12 26 34.5	+0.1
	7.4nm,1.2s						
PV17	East Wray Mesa	56.46	291	*e*P	P	12 26 34.7	+0.4
	7.6nm,0.9s						
IL1	Eielson Array	56.52	333	*e*P	P	12 26 33.6	-0.4
ILAR	Eielson Array	56.52	333	P	P	12 26 34.0	-0.1
	0.7nm,0.9s,baz=40,slow=5.9,SNR=6.7						
ILAR				LR	LR	12 49 42.9	
	comp=Z,46nm,19.1s,baz=96,slow=35						
ILB	Eielson Array	56.52	333	*e*P	P	12 26 34.0	-0.1
SRU	San Rafael Swe	56.88	293	*e*P	P	12 26 37.1	-0.2
	3.4nm,0.9s						
ANMO	Albuquerque	57.06	287	P	P	12 26 39.3	+0.7
	0.6nm,0.5s,baz=63,slow=7.4,SNR=3.9						
ANMO				LR	LR	12 50 14.9	
	comp=Z,111nm,18.7s,baz=52,slow=35						
ANMO	Albuquerque	57.06	287	*e*P	P	12 26 39.4	+0.7
	1.9nm,1.0s						
BVAR	Borovoye Array	57.10	45	P	P	12 26 37.9	-0.4
	0.7nm,0.5s,baz=340,slow=6.5,SNR=3.7						
DUG	Dugway, Tooele	57.55	295	*e*P	P	12 26 42.2	+0.2
	4.9nm,1.0s						
MSU	Marysvale	58.25	294	*e*P	P	12 26 47.2	+0.2
ROSC	El Rosal	58.91	237	LR	LR	12 47 58.4	
	comp=Z,38nm,21.5s,baz=95,slow=32						
LTX	Lajitas	59.00	280	*e*P	P	12 26 51.6	-0.5
TXAR	Lajitas Array	59.00	280	P	P	12 26 51.6	-0.5
	0.5nm,0.7s,baz=60,slow=6.6,SNR=8.7						
TXAR				LR	LR	12 50 39.5	
	comp=Z,174nm,21.8s,baz=0.0,slow=34						
SZCU	Shurtz Canyon	59.40	293	*e*P	P	12 26 55.0	+0.1
	4.4nm,1.1s						
H10S1	ASCENSION HYDR	59.41	164	T	T	13 31 04.5	
	baz=350,slow=75,SNR=9.5						
H10S3	ASCENSION HYDR	59.42	164	T	T	13 31 02.0	
	baz=350,slow=75,SNR=7.1						
H10S2	ASCENSION HYDR	59.43	164	T	T	13 31 12.8	
	baz=350,slow=75,SNR=9.1						
WVOR	Wild Horse Val	59.46	301	*e*P	P	12 26 55.8	+0.6
	3.0nm,0.8s						
CCUT	Cedar City	59.59	293	*e*P	P	12 26 56.9	+0.6
	3.0nm,1.1s						
KNB	Kanab	59.62	293	*e*P	P	12 26 56.5	0.0
	4.7nm,1.1s						
GEYT	Alibeck	60.36	65	LR	LR	12 56 17.4	
	comp=Z,37nm,18.4s,baz=225,slow=39						
JTS	JuntasAbangare	60.72	250	LR	LR	12 48 50.5	
	comp=Z,17nm,18.9s,baz=68,slow=32						
KVN	Kaiserville	61.39	298	*e*P	P	12 27 08.8	+0.3
	4.1nm,1.1s						
NVAR	Mina Array Bea	61.92	297	LR	LR	12 52 28.7	
	comp=Z,58nm,18.6s,baz=284,slow=35						
YBH	Yreka Blue Hor	62.19	302	LR	LR	12 52 48.1	
	comp=Z,61nm,18.4s,baz=30,slow=35						
KURK	Kurchatov	62.41	43	*e*P	P	12 27 15.2	+0.3
KURBB	Kurchatov Arra	62.44	43	P	P	12 27 15.2	+0.1
	0.4nm,0.4s,baz=321,slow=7.3,SNR=6.7						
GSC	Goldstone, Bar	63.16	294	*e*P	P	12 27 21.0	+0.7
	4.4nm,0.9s						
SFJWR	San Luis Fatjo	64.52	298	*e*P	P	12 27 32.5	+3.3
AAK	Ala-Archa	66.21	52	LR	LR	12 55 15.5	
	comp=Z,50nm,18.0s,baz=324,slow=35						
LPIG	La Paz	66.89	280	LR	LR	12 57 14.7	
	comp=Z,99nm,18.5s,baz=30,slow=36						
MK31	Makanchi Array	66.94	44	*e*P	P	12 27 44.7	+0.1
MK32	Makanchi Array	66.94	44	*e*P	P	12 27 44.3	-0.3
MKAR	Makanchi Array	66.94	44	P	P	12 27 44.3	-0.3
	0.9nm,0.7s,baz=333,slow=5.8,SNR=9.4						
MKAR				LR	LR	12 56 14.0	
	comp=Z,77nm,20.4s,baz=306,slow=35						
MKAR	Makanchi Array	66.94	44	*e*P	P	12 27 44.7	+0.1
	8.2nm,0.6s						
MK01	Makanchi Array	66.96	44	*e*P	P	12 27 44.8	0.0
NNA	Nana	74.47	229	LR	LR	12 59 36.5	
	comp=Z,16nm,20.3s,baz=346,slow=34						
SONA1	Songino Array	75.52	30	*e*P	P	12 28 39.6	+3.0
SONA0	Songino Array	75.53	30	*e*P	P	12 28 37.6	+1.0
SONM	Songino Array	75.53	30	P	P	12 28 37.6	+1.0
	0.3nm,0.3s,baz=343,slow=4.5,SNR=3.6						
TSUM	Tsumeb	79.63	136	LR	LR	13 03 28.3	
	comp=Z,18nm,18.6s,baz=334,slow=35						
BOSA	Boshof	91.25	135	LR	LR	13 10 40.5	
	comp=Z,39nm,18.4s,baz=14,slow=35						
CMAR	Chiang Mai Arr	97.92	50	LR	LR	13 18 21.8	
	comp=Z,20nm,18.9s,baz=260,slow=38						
WR1	Warramunga Arr	147.49	31	*e*PKPdf	PKPbc	12 36 34.8	-1.6
WRA	Warramunga Arr	147.49	31	PKPbc	PKPbc	12 36 34.8	-1.6
	0.5nm,1.0s,baz=334,slow=2.7,SNR=4.6						
AS31	Alice Springs	150.77	35	*e*PKPbc	PKPbc	12 36 43.8	-0.8
ASAR	Alice Springs	150.77	35	PKPbc	PKPbc	12 36 43.8	-0.8
	0.8nm,0.7s,baz=349,slow=2.1,SNR=14						

MAN 23 12:22:22.9, 18°.03N×121°.40E, h8km, mb4.6, ML3.5, MS3.4, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APYP	Conner	0.23	221	*e*P	Pg	12 22 28.8	+1.3
APYP				*e*S	Sg	12 22 32.9	+2.3
CVP	Callao Caves	0.52	129	*i* P	Pg	12 22 33.2	+0.2
CVP				*e*S	Sg	12 22 39.2	-0.6
ABRA	Dolores	0.76	240	*e*P	Pg	12 22 37.1	-0.4
ABRA				*e*S	Sg	12 22 47.3	-0.2
CAUP	Cauayan	1.16	160	*e*P	Pg	12 22 45.1	0.0
CAUP				*e*S	Sn	12 23 02.7	+1.3

ISCJB ***23*** *13:09:16.3±0.8, 43°.99N±0°.04×8°.38E±0°.05, h13km±3km, Error ellipse: s-maj=6.5km s-min=6.0km az=140.0*

CSEM ***23*** *13:09:16.5±0.2, 44°.01N×8°.43E, h15km, ML2.6/9, Error ellipse: s-maj=4.0km s-min=3.7km az=71.0*

GEN ***23*** *13:09:17.3, 44°.03N×8°.44E, h2km, ML1.9*

ROM ***23*** *13:09:17.2±0.3, 44°.04N±0°.01×8°.39E±0°.01, h7km, ML2.2/4*

LDG ***23*** *13:09:17.0±0.1, 44°.00N×8°.45E, h4km, Md2.5/2, Ml2.6/10, Error ellipse: s-maj=2.3km s-min=2.0km az=1.0*

ISC 23 13:09:15.6±1.4, 43°.97N±0°.03×8°.43E±0°.04, h14km±10km, n45, σ0.65/69, Corsica

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FINB	Finale Ligure	0.22	339	P	Pb	13 09 21.0	-0.4
FINB				AML	AML		
	comp=E,2720μm,0.4s						
FINB				AML	AML		
	comp=N,52μm,0.6s						
RORO	Rocca Rossa	0.30	298	P	Pb	13 09 22.7	-0.1
RORO	Rocca Rossa	0.30	298	P	Pb	13 09 22.7	-0.1
IMI	Imperia	0.40	261	P	Pb	13 09 25.2	+0.8
GBOS	Grotte di Boss	0.51	302	P	Pb	13 09 26.4	+0.1
NEGI	Seborga	0.54	257	P	Pn	13 09 28.0	-1.0
NEGI	Seborga	0.54	257	P	Pn	13 09 28.3	-0.7
NEGI				AML	AML		
	comp=E,230μm,0.4s						
NEGI				AML	AML		
	comp=N,414μm,0.8s						
PCP	Piancastagn	0.57	8	P	Pb	13 09 27.5	0.0
PCP	Piancastagn	0.57	8	P	Pb	13 09 27.4	-0.1
SAOF	Saorge	0.63	272	P	Pn	13 09 29.9	-0.3
SAOF				AML	AML		
	comp=E,230μm,0.3s						
SAOF				AML	AML		
	comp=N,200μm,0.4s						
SAOF				AML	AML		
	comp=E,230μm,0.3s						
SAOF				AML	AML		
	comp=N,200μm,0.4s						
SAOF				AML	AML		
	comp=E,230μm,0.3s						
SAOF				AML	AML		
	comp=N,200μm,0.4s						
SBF	Sospel	0.73	262	*e*Pg	Pn	13 09 31.0	-0.6
SBF	Sospel	0.73	262	*e*Pn	Pn	13 09 32.8	+1.2
SBF				*e*Sg	Sb	13 09 40.9	+0.9
	comp=N,248nm,0.3s						
SBF	Sospel	0.73	262	*e*Pg	Pn	13 09 31.0	-0.6
SBF	Sospel	0.73	262	*e*Pn	Pn	13 09 32.8	+1.2
SBF				*e*Sg	Sb	13 09 40.9	+0.9
	comp=N,124nm,0.3s						
ENR	Entracque	0.77	290	P	Pn	13 09 31.6	-0.6
ENR	Entracque	0.77	290	P	Pn	13 09 31.6	-0.6
ENR				AML	AML		
	comp=E,128μm,0.3s						
ENR				AML	AML		
	comp=N,208μm,0.7s						
STV	Sant Anna di V	0.84	289	P	Pn	13 09 33.2	0.0
STV	Sant Anna di V	0.84	289	P	Pn	13 09 33.2	0.0
STV				AML	AML		
	comp=E,144μm,0.3s						
STV				AML	AML		
	comp=N,120μm,0.7s						
STV				AML	AML		
	comp=E,144μm,0.3s						
STV				AML	AML		
	comp=N,120μm,0.7s						
STV				AML	AML		
	comp=E,144μm,0.3s						
STV				AML	AML		
	comp=N,120μm,0.7s						
PZZ	Stroppo	1.09	300	P	Pn	13 09 36.8	+0.2
PZZ	Stroppo	1.09	300	P	Pn	13 09 36.8	+0.2
PZZ				AML	AML		
	comp=E,194μm,1.2s						
PZZ				AML	AML		
	comp=N,262μm,0.4s						
PZZ				AML	AML		
	comp=N,262μm,0.4s						
PZZ				AML	AML		
	comp=E,194μm,1.2s						
BHB	Bricherasio	1.21	316	P	Pb	13 09 38.2	0.0
BHB				AML	AML		
	comp=E,76μm,0.7s						
BHB				AML	AML		
	comp=N,83μm,0.4s						
BHB				AML	AML		
	comp=N,83μm,0.4s						
BHB				AML	AML		
	comp=E,76μm,0.7s						
FRF	La Foret Royal	1.36	253	*e*Pn	Pg	13 09 41.4	-0.3
FRF				*e*Sn	Sb	13 09 58.5	+0.5
	comp=E,6.7nm,0.2s						
FRF	La Foret Royal	1.36	253	*e*Pn	Pg	13 09 41.4	-0.3
FRF				*e*Sn	Sb	13 09 58.5	+0.5
	comp=E,3.3nm,0.2s						
MBDF	Montbardon	1.41	303	*e*Pn	Pb	13 09 42.1	+0.3
MBDF				*e*Sn	Sb	13 10 00.0	+0.3
MBDF				*e*Sg	Sg	13 10 01.4	+0.3
	comp=E,17nm,0.3s						
MBDF	Montbardon	1.41	303	*e*Pn	Pb	13 09 42.1	+0.3
MBDF				*e*Sn	Sb	13 10 00.0	+0.3
MBDF				*e*Sg	Sg	13 10 01.4	+0.3
	comp=E,8.7nm,0.3s						
PGF	Pioggiola	1.48	164	*e*Pn	Pb	13 09 42.7	-0.3
PGF				*e*Sn	Sn	13 10 01.2	+0.1
	comp=E,6.7nm,0.3s						
PGF	Pioggiola	1.48	164	*e*Pn	Pb	13 09 42.7	-0.3
PGF				*e*Sn	Sn	13 10 01.2	+0.1
	comp=E,3.3nm,0.3s						
LMR	La Mourre	1.54	246	*e*Pg	Pb	13 09 43.2	-0.6
LMR				*e*Sn	Sn	13 10 02.5	+0.2
	comp=E,7.0nm,0.2s						
LMR	La Mourre	1.54	246	*e*Pg	Pb	13 09 43.2	-0.6
LMR				*e*Sn	Sn	13 10 02.5	+0.2
	comp=E,3.5nm,0.2s						
LPL	La Plagne	1.96	322	*e*Pn	Pn	13 09 48.7	0.0
LPL	La Plagne	1.96	322	*e*Pn	Pn	13 09 48.7	0.0
ORIF	Oris-en-Rattie	2.06	298	*e*Pn	Pn	13 09 50.7	+0.8
ORIF	Oris-en-Rattie	2.06	298	*e*Pg	Pg	13 09 55.0	-0.1
ORIF				*e*Sn	Sn	13 10 15.9	+0.5
	comp=E,10.0nm,0.4s						
ORIF	Oris-en-Rattie	2.06	298	*e*Pn	Pn	13 09 50.7	+0.8
ORIF	Oris-en-Rattie	2.06	298	*e*Pg	Pg	13 09 55.0	-0.1
ORIF				*e*Sn	Sn	13 10 15.9	+0.5
	comp=E,5.0nm,0.4s						
SMRF	Simiane la Rot	2.06	271	*e*Pn	Pb	13 09 51.6	-1.3
SMRF	Simiane la Rot	2.06	271	*e*Pg	Pg	13 09 55.3	+0.1
SMRF				*e*Sn	Sn	13 10 15.4	0.0
SMRF				*e*Sg	Sg	13 10 21.8	-0.1
	comp=E,10nm,0.2s						
SMRF	Simiane la Rot	2.06	271	*e*Pn	Pb	13 09 51.6	-1.3
SMRF	Simiane la Rot	2.06	271	*e*Pg	Pg	13 09 55.3	+0.1
SMRF				*e*Sn	Sn	13 10 15.4	0.0
SMRF				*e*Sg	Sg	13 10 21.8	-0.1
	comp=E,5.2nm,0.2s						
VIVF	Saint-Julien-l	2.84	289	*e*Pn	Pn	13 10 01.3	+0.8
VIVF	Saint-Julien-l	2.84	289	*e*Pg	Pg	13 10 10.5	+0.6
VIVF				*e*Sn	Sn	13 10 33.6	-0.9
VIVF				*e*Sg	Sg	13 10 46.2	-0.5
	comp=E,3.4nm,0.4s						
VIVF	Saint-Julien-l	2.84	289	*e*Pn	Pn	13 10 01.3	+0.8
VIVF	Saint-Julien-l	2.84	289	*e*Pg	Pg	13 10 10.5	+0.6
VIVF				*e*Sn	Sn	13 10 33.6	-0.9
VIVF				*e*Sg	Sg	13 10 46.2	-0.5
	comp=E,1.7nm,0.4s						
LOR	Lormes	4.60	317	*e*Pn	Pn	13 10 25.3	+0.6
LOR				*e*Sn	Sn	13 11 16.0	-1.9
	comp=E,2.6nm,0.4s						
LOR	Lormes	4.60	317	*e*Pn	Pn	13 10 25.3	+0.6
LOR				*e*Sn	Sn	13 11 16.0	-1.9
	comp=E,1.3nm,0.4s						

IDC 23 13:46:45.8±1.8, 8°.02S×124°.22E, h0km, mb3.4/1, mb1 3.6/3, mb1mx3.3/47, mbtmp3.4/3, ML2.9/2, Error ellipse: s-maj=142.5km s-min=27.9km az=57.0, Timor region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.38	141	Pn	Pn	13 50 23.6	-0.7
	0.1nm,0.3s,baz=316,slow=13,SNR=6.7						
WRA				Sn	Sn	13 53 15.4	-0.1
	0.0nm,0.3s,baz=318,slow=24,SNR=4.1						
ASAR	Alice Springs	18.12	150	P	P	13 50 59.5	0.0
	0.0nm,0.3s,baz=321,slow=10,SNR=4.2						
MKAR	Makanchi Array	66.08	330	P	P	13 57 34.7	0.0
	0.4nm,0.8s,baz=134,slow=8.3,SNR=2.9						

IDC 23 13:58:19.8±478.0, 46°.78N×46°.04E, h0km, Error ellipse: s-maj=206.5km s-min=144.0km az=178.0, Ukraine-Moldova-Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I31KZ	AKTYUBINSK INF	8.74	61	*i*		14 56 50.0	
	baz=248,slow=310,SNR=1.4						
I43RU	DUBNA INFRASON	11.35	335	*i*		15 12 34.2	
	baz=142,slow=384						
I26DE	FREYUNG INFRAS	21.72	287	*i*		16 08 40.0	
	baz=81,slow=297,SNR=0.3						

MAN 23 14:07:17.3, 8°.41N×125°.69E, h1km, mb4.7, ML3.6, MS3.6, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BUTP	Butuan	0.56	354	*e*P	Pg	14 07 28.3	+0.2
BUTP				*e*S	Sn	14 07 40.7	-1.7
BIPH	Bislig	0.70	108	⇑ *i*P	Pg	14 07 23.7	-7.1
BIPH				*i* S	Sg	14 07 31.7	-8.3
BUKP	Musuan	0.81	230	*e*P	Pg	14 07 31.4	-1.4
BUKP				*e*S	Sn	14 07 48.8	+0.3
CGP	Cagayan de Oro	0.98	273	⇑ *e*P	Pg	14 07 36.1	-0.1
CGP				*i* S	Sn	14 07 53.1	+0.3
DDMP	Don Marcelino,	2.29	179	*e*P	Pn	14 07 50.7	-5.5
PAGZ	Pagadian	2.35	256	*e*P	Pn	14 07 57.5	+0.5
PAGZ				*e*S	Sg	14 08 35.1	+2.4
CNP	Catarman	4.20	346	*e*P	Pn	14 08 24.8	+2.3

IDC 23 14:08:05.7±5.5, 0°.89N×99°.33E, h0km, mb3.4/3, mb1 3.7/3, mb1mx3.3/59, mbtmp3.4/3, MS3.0/1, Ms1 3.0/1, ms1mx2.4/39, Error ellipse: s-maj=286.2km s-min=27.2km az=54.0, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	40.08	123	P	P	14 15 43.2	-0.1
	1.3nm,0.3s,baz=302,slow=8.7,SNR=33						
ASAR	Alice Springs	41.53	128	P	P	14 15 55.0	-0.2
	0.1nm,0.3s,baz=296,slow=7.4,SNR=5.3						
MKAR	Makanchi Array	48.08	344	P	P	14 16 47.1	0.0
	0.1nm,0.4s,baz=160,slow=6.8,SNR=2.5						
ASAJ	Asahikawa	57.65	36	LR	LR	14 43 05.0	
	comp=Z,11nm,18.2s,baz=160,slow=36						

WEL 23 14:36:59.3, 45°S±2°×16°7E±°, h59km±6km, ML3.6/12, South Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DCZ	Deep Cove	0.14	143	P	Pn	14 37 09.0	+0.6
DCZ				S	Sn	14 37 15.7	+0.9
MLZ	Mavora Lakes	0.77	92	P	Pn	14 37 15.1	+0.8
MLZ				S	Sn	14 37 26.9	+1.5
WHZ	Wether Hill Ro	0.84	130	P	Pn	14 37 16.3	+1.0
WHZ				S	Sn	14 37 28.6	+1.6
PYZ	Puysegur Point	0.85	196	P	Pn	14 37 16.1	+0.7
PYZ				S	Sn	14 37 28.1	+0.9
MSZ	Milford Sound	0.93	44	P	Pn	14 37 17.0	+0.7
WKZ	Wanaka	1.50	70	P	Pn	14 37 25.0	+1.0
WKZ				S	Sn	14 37 43.5	+0.9
EAZ	Earnscleugh	1.61	87	P	Pn	14 37 26.4	+1.0
EAZ				S	Sn	14 37 45.1	-0.1
APZ	The Paps	1.63	156	P	Pn	14 37 26.6	+0.9
JCZ	Jackson Bay	1.79	45	P	Pn	14 37 27.6	-0.3
TUZ	Tuapeka	1.92	109	P	Pn	14 37 30.2	+0.5
LBZ	Lake Benmore	2.44	68	P	Pn	14 37 36.2	-0.6
HHSZ	Highcliff Hill	2.56	103	P	Pn	14 37 39.0	+0.7
ODZ	Otahua Downs	2.57	84	P	Pn	14 37 38.3	-0.3
FOZ	Fox Glacier	2.70	49	P	Pn	14 37 39.0	-1.2
RPZ	Rata Peaks	3.31	62	P	Pn	14 37 47.2	-1.4
WVZ	Waitaha Valley	3.50	51	P	Pn	14 37 49.9	-1.4
OXZ	Oxford	4.12	62	P	Pn	14 37 57.1	-2.7
INZ	Inchbonnie	4.12	52	P	Pn	14 37 58.3	-1.4
MQZ	McQueen's Vall	4.34	70	P	Pn	14 38 00.9	-1.8
OKCZ	Okains Bay	4.61	71	P	Pn	14 38 05.3	-1.1
DSZ	Denniston Nort	5.00	46	P	Pn	14 38 10.2	-1.6
THZ	Tophouse	5.57	52	P	Pn	14 38 19.6	-0.1

MAN 23 14:41:16.3, 8°.40N×125°.93E, h27km, mb4.8, ML3.7, MS3.6, 1C-1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	Bislig	0.47	117	⇑ *i*P	Pb	14 41 26.1	-0.2
BIPH				*i* S	Sb	14 41 33.2	+0.3
BUTP	Butuan	0.65	331	*e*P	Pn	14 41 29.9	+0.2
BUTP				*e*S	Sn	14 41 45.2	+6.2
BUKP	Musuan	1.01	239	*e*P	Pn	14 41 33.7	-1.0
BUKP				*e*S	Sn	14 41 50.6	+2.6
CGP	Cagayan de Oro	1.23	273	⇓ *e*P	Pn	14 41 37.2	-0.6
CGP				*e*S	Sn	14 41 53.9	+0.4
MATI	Mati	1.48	167	*e*P	Pn	14 41 40.5	-0.7
MATI				*e*S	Sb	14 42 01.1	-0.5

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKMP	Bagumbayan, Su	2.32	217	eP	Pb	14 41 56.4	-1.1

IDC 23 14:50:58.2±1.8, 4°.51S×149°.29E, h0km, mb3.4/3, mb1 3.7/4, mb1mx3.4/44, mbtmp3.5/4, ML1.5/1, Error ellipse: s-maj=130.9km s-min=24.0km az=119.0, Bismarck Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	5.30	203	Pn	Pn	14 52 20.2	+1.5
	1.1nm,0.3s,baz=255,slow=18,SNR=4.8						
PMG				Sn	Sn	14 53 21.2	+0.6
	1.2nm,0.3s,baz=48,slow=18,SNR=3.6						
WRA	Warramunga Arr	21.15	222	P	P	14 55 45.3	+0.2
	2.1nm,0.8s,baz=47,slow=11,SNR=7.9						
ASAR	Alice Springs	24.15	216	P	P	14 56 15.6	-0.7
	0.4nm,0.4s,baz=54,slow=9.3,SNR=9.2						
ILAR	Eielson Array	83.23	23	P	P	15 03 26.3	+0.1
	0.3nm,0.9s,baz=244,slow=5.7,SNR=3.2						

IDC 23 15:06:22.6±1.6, 1°.89N×125°.43E, h0km, mb3.4/4, mb1 3.6/4, mb1mx3.3/51, mbtmp3.4/4, Error ellipse: s-maj=186.0km s-min=20.4km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.39	158	P	P	15 11 33.0	-0.4
	0.8nm,0.5s,baz=337,slow=11,SNR=22						
ASAR	Alice Springs	26.71	163	P	P	15 12 04.2	+0.3
	0.2nm,0.4s,baz=345,slow=8.2,SNR=12						
MKAR	Makanchi Array	58.34	326	P	P	15 16 19.8	+0.1
	0.2nm,0.4s,baz=120,slow=8.2,SNR=3.9						
KURBB	Kurchatov Arra	62.59	328	P	P	15 16 48.4	-0.2
	0.3nm,0.5s,baz=132,slow=6.3,SNR=4.4						

ISK 23 15:09:05.9, 39°.78N×32°.56E, h3km, ML2.1/5
ISCJB 23 15:09:06.6±0.6, 39°.75N±0°.03×32°.55E±0°.04, h8km±5km, Error ellipse: s-maj=5.3km s-min=4.8km az=168.9
CSEM 23 15:09:06.6±0.1, 39°.77N×32°.56E, h5km, ML2.1, Error ellipse: s-maj=2.8km s-min=2.4km az=155.0
DDA 23 15:09:07.1, 39°.75N×32°.65E, h7km, Ml2.6
ISC 23 15:09:07.2±1.0, 39°.76N±0°.02×32°.59E±0°.03, h8km±9km, n30, σ0s.57/44, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LOD	Lodumlu	0.19	46	PG	Pg	15 09 10.7	-0.4
LOD				SG	Sg	15 09 14.0	+0.2
LOD	Lodumlu	0.19	46	ePg	Pg	15 09 10.7	-0.4
LOD				eSg	Sg	15 09 14.0	+0.2
ANTO	Ankara	0.20	55	PG	Pg	15 09 10.9	-0.3
ANTO				SG	Sg	15 09 14.4	+0.4
ANTO	Ankara	0.20	55	ePg	Pg	15 09 10.9	-0.3
ANTO				eSg	Sg	15 09 14.4	+0.4
BBAL	Bala	0.47	117	i P	Pg	15 09 16.0	-0.2
BBAL				i S	Sb	15 09 24.0	-0.7
BBAL	Bala	0.47	117	P	Pg	15 09 16.0	-0.2
BBAL				S	Sb	15 09 24.0	-0.7
AFSR	Af¯ar-Bala (A	0.48	129	PG	Pg	15 09 16.5	-0.1
AFSR				SG	Sb	15 09 24.9	-0.4
AFSR	Af¯ar-Bala (A	0.48	129	ePg	Pg	15 09 16.5	-0.1
AFSR				eSg	Sb	15 09 24.9	-0.4
KKUL	Konya-Kulu	0.64	156	i P	Pg	15 09 18.9	-0.5
KKUL				i S	Sg	15 09 28.1	+0.2
KKUL	Konya-Kulu	0.64	156	P	Pg	15 09 19.0	-0.5
KKUL				S	Sg	15 09 28.1	+0.2
CMDR	Camlidere-ANKA	0.74	353	i P	Pg	15 09 21.1	-0.4
CMDR				i S	Sb	15 09 33.6	+0.9
CMDR	Camlidere-ANKA	0.74	353	P	Pg	15 09 21.1	-0.4
CMDR				S	Sb	15 09 33.6	+0.9
AUMIH	MIHALICIK	0.86	278	PG	Pg	15 09 22.8	-0.9
AUMIH	MIHALICIK	0.86	278	ePg	Pg	15 09 22.8	-0.9
AUSIV	SIVRIHISAR	0.87	249	PG	Pg	15 09 23.3	-0.6
AUSIV	SIVRIHISAR	0.87	249	ePg	Pg	15 09 23.3	-0.6
KAMT	Kaman	0.95	114	PG	Pg	15 09 25.4	-0.1
KAMT	Kaman	0.95	114	ePg	Pg	15 09 25.4	-0.1
ELDT	Eldivan	0.97	41	i P	Pg	15 09 24.7	-1.2
ELDT	Eldivan	0.97	41	P	Pg	15 09 24.7	-1.2
KIZT	Kizilcal	1.03	212	PG	Pg	15 09 26.7	-0.3
KIZT	Kizilcal	1.03	212	ePg	Pg	15 09 26.7	-0.3
CDAG	Cicekdag	1.38	95	i P	Pn	15 09 32.8	0.0
CDAG				i S	Sb	15 09 50.6	-0.6
CDAG	Cicekdag	1.38	95	P	Pn	15 09 32.8	0.0
CDAG				S	Sb	15 09 50.6	-0.6
CORM	Corum	1.63	74	PN	Pn	15 09 36.6	+0.4
CORM	Corum	1.63	74	ePn	Pn	15 09 36.6	+0.4
KONT	Konya--Tatoy	1.82	186	PN	Pn	15 09 39.3	+0.6
KONT	Konya--Tatoy	1.82	186	ePn	Pn	15 09 39.3	+0.6
YOZ	Yozgat	2.11	92	PN	Pn	15 09 43.6	+0.7
YOZ	Yozgat	2.11	92	ePn	Pn	15 09 43.6	+0.7

KRSC 23 15:19:29.8±1.6, 48°.35N×156°.68E, h16km±30km, ML3.7, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.36	351	eP	Pn	15 20 07.7	-0.1
SKR				eS	Sn	15 20 37.4	+1.0
PAU	Pauzhetka	3.12	2	eP	Pn	15 20 20.8	+2.6
PAU				eS	Sn	15 20 58.7	+3.6
KDTR	Khodutka, Kamc	3.57	14	eP	Pb	15 20 28.6	-3.9
KDTR				eS	Sb	15 21 11.4	-4.2
ASAK	Asacha	4.11	10	eP	Pn	15 20 36.2	+4.3
MTVR	Mutnovka	4.24	13	eP	Pn	15 20 37.8	+4.0
RUS	Russkaya	4.25	15	eP	Pn	15 20 37.7	+3.9
RUS				eS	Sn	15 21 28.3	+5.3
KRMR	Karymshinskiy	4.58	11	eP	Pn	15 20 41.7	+3.5
APC	Apacha	4.59	4	eP	Pn	15 20 42.2	+3.8
PET	Petropavlovsk	4.84	14	eP	Pn	15 20 46.5	+4.6
PET				eS	Sn	15 21 43.1	+5.6
UGLR	Uglovaya	5.05	15	eP	Pn	15 20 48.9	+4.1
AVH	Avacha	5.09	14	eP	Pn	15 20 50.2	+4.8
SMAR	Somma	5.10	14	eP	Pn	15 20 50.9	+5.3
SDLR	Sedlovina	5.12	15	eP	Pn	15 20 50.1	+4.2
SPN	Mys Shipunski	5.20	23	eP	Pn	15 20 51.4	+4.5
SPN				eS	Sn	15 21 52.4	+5.9
GNL	Ganaly	5.41	8	eP	Pn	15 20 54.7	+4.9
MKZ	Mys Kozlova	6.96	25	eP	Pn	15 21 14.7	+3.7
KBTR	Krutoberegovo	8.72	23	eP	Pn	15 21 40.7	+5.7

DJA 23 15:21:55.9±0.5, 2°S±4°×10°2E±°, h152km±6km, M3.7/10, MLv3.7/10, Southern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KRJI	Kerinci	0.47	295	P	Pn	15 22 19.4	+1.9
KRJI				S	Sn	15 22 36.9	+3.1
MASI	Maura Aman, Be	0.92	158	P	Pn	15 22 21.3	+1.1
PPSI	Pulau Pagai	1.94	256	P	Pn	15 22 30.8	+0.4
MNAI	Manna	2.32	153	P	Pn	15 22 34.2	-0.7
MNAI				S	Sn	15 23 06.2	+1.2
BKNI	Bangkinang	2.73	342	P	Pn	15 22 39.6	-0.5
PMBI	Palembang	2.95	102	P	Pn	15 22 42.1	-0.6
SISI	Saibi	2.96	289	P	Pn	15 22 43.5	+0.7
MDSI	Maura Dua	3.16	134	P	Pn	15 22 45.2	-0.2
DSRI	Dabo	3.23	56	P	Pn	15 22 47.2	+0.9
LWLI	Liwa	3.47	141	P	Pn	15 22 49.8	+0.3
PBSI	Pulau Batu	4.24	302	P	Pn	15 22 58.5	-0.8

ISCJB 23 15:22:15.0±0.8, 13°.63S±0°.08×167°.2E±0°.2, h200km, mb3.8/13, Error ellipse: s-maj=22.9km s-min=10.8km az=178.9
IDC 23 15:22:16.6±2.5, 13°.74S×167°.23E, h202km±21km, mb3.6/13, mb1 3.7/14, mb1mx3.4/51, mbtmp4.1/14, Error ellipse: s-maj=21.2km s-min=13.8km az=84.0
ISC 23 15:22:16.0±0.8, 13°.66S±0°.08×167°.3E±0°.2, h200km, n15, σ1s.06/20, mb4.0/13, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	8.41	186	P	Pn	15 24 14.6	-0.1
	3.1nm,0.3s,baz=344,slow=6.2,SNR=14						
DZM				S	Sn	15 25 50.9	+1.6
	1.4nm,0.3s,baz=270,slow=20,SNR=3.5						
CTA	Charters Tower	21.14	250	P	P	15 26 45.1	-0.5
	1.8nm,0.5s,baz=80,slow=14,SNR=5.1						
STKA	Stephens Creek	29.73	228	P	P	15 28 04.0	+0.2
	1.8nm,0.5s,baz=45,slow=9.4,SNR=9.5						
WRA	Warramunga Arr	32.15	254	P	P	15 28 23.7	-1.4
	0.7nm,0.5s,baz=86,slow=9.5,SNR=26						
WRA				PcP	PcP	15 31 08.9	-0.4
	1.5nm,1.0s,baz=88,slow=3.1,SNR=6.1						
ASAR	Alice Springs	33.12	248	P	P	15 28 31.9	-1.6
	1.9nm,0.5s,baz=74,slow=9.4,SNR=112						
ASAR				PcP	PcP	15 31 11.6	-0.4
	1.4nm,1.0s,baz=79,slow=4.7,SNR=5.4						
ASAR				ScP	ScP	15 34 38.7	+1.4
	0.9nm,0.9s,baz=106,slow=2.7,SNR=4.3						
JNU	Nakatsue	58.09	324	P	P	15 31 48.9	+0.3
	1.6nm,0.6s,baz=286,slow=20,SNR=3.9						
ASAJ	Asahikawa	61.76	340	P	P	15 32 15.1	+1.8
	2.2nm,0.6s,baz=223,slow=8.2,SNR=8.9						
VNDA	Vanda	63.93	181	P	P	15 32 26.8	-0.3
	0.8nm,0.6s,baz=333,slow=5.3,SNR=4.5						
CMAR	Chiang Mai Arr	74.57	294	P	P	15 33 34.3	+0.8
	1.7nm,0.7s,baz=125,slow=3.6,SNR=7.3						
QSPA	South Pole Qui	76.36	180	P	P	15 33 42.7	-0.3
	4.9nm,0.9s,baz=42,slow=1.1,SNR=15						
SONM	Songino Array	81.67	323	P	P	15 34 13.0	+0.9
	0.3nm,0.4s,baz=134,slow=6.4,SNR=5.8						
MAW	Mawson	82.89	202	P	P	15 34 18.0	+0.1
	2.2nm,0.6s,baz=102,slow=6.1,SNR=3.5						
ILAR	Eielson Array	85.50	18	P	P	15 34 30.3	-0.7
	0.3nm,0.6s,baz=243,slow=4.0,SNR=3.7						
ILAR				pP	pP	15 35 17.9	-2.0
	0.9nm,0.9s,baz=228,slow=6.3,SNR=7.4						
MKAR	Makanchi Array	96.47	316	P	P	15 35 22.7	+0.1
	0.5nm,0.6s,baz=90,slow=7.4,SNR=7.2						
ARCES	ARCESS Array B	119.23	346	PKP	PKPdf	15 40 40.4	-0.3
	1.7nm,0.9s,baz=22,slow=1.3,SNR=3.9						

IDC 23 15:23:24.1±435.0, 47°.72N×47°.33E, h0km, Error ellipse: s-maj=182.1km s-min=143.2km az=177.0, Ukraine-Moldova-Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I31KZ	AKTYUBINSK INF	7.53	65	i		16 10 25.0	
	baz=253,slow=315,SNR=2.6						
I43RU	DUBNA INFRASON	10.93	329	i		16 28 10.0	
	baz=143,slow=326,SNR=0.6						
I26DE	FREYUNG INFRAS	22.30	285	i		17 41 20.0	
	baz=81,slow=306,SNR=0.7						

IDC 23 15:32:23.8±1.6, 35°.65N×141°.51E, h0km, mb3.3/3, mb1 3.5/7, mb1mx3.3/68, mbtmp3.6/7, ML3.4/4, MS2.4/1, Ms1 2.4/1, ms1mx1.9/29, Error ellipse: s-maj=44.7km s-min=20.6km az=75.0
ISCJB 23 15:32:25.0±0.8, 35°.60N±0°.05×141°.62E±0°.08, h25km, mb3.2/3, Error ellipse: s-maj=9.5km s-min=6.6km az=160.6
JMA 23 15:32:27.1±0.2, 35°.62N×141°.44E, h18km±2km, M3.0
ISC 23 15:32:26.3±1.2, 35°.57N±0°.07×141°.55E±0°.09, h25km, n24, σ1s.80/21, mb3.3/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.58	283	P	Pb	15 32 36.6	-1.2
CHOJ				S	Sb	15 32 43.5	-2.2
JIHU	Itakohorinouch	0.92	296	P	Pb	15 32 43.0	-0.6
BSO1	Boso 1	1.03	207	P	Pn	15 32 45.9	+1.3
KTR	Katsuura	1.09	248	P	Pn	15 32 46.6	+0.6
JCN	Nagara	1.11	263	P	Pn	15 32 46.9	+0.7
BSO3	Boso 3	1.15	228	P	Pn	15 32 47.0	+0.5
BSO4	Boso 4	1.15	240	P	Pn	15 32 47.0	+0.3
JYT	Yasato	1.28	301	P	Pn	15 32 47.7	-0.9
JHO	Hitachi	1.31	323	P	Pn	15 32 48.7	-0.3
JHJ	Hachijo jima 2	2.85	211	Pn	Pn	15 33 11.1	+0.9
	6.3nm,0.3s,baz=166,slow=22,SNR=9.4						
JHJ				Sn	Sn	15 33 43.9	+0.2
	15nm,0.3s,baz=59,slow=21,SNR=5.7						
MJAR	Matsushiro Arr	2.88	291	Pn	Pn	15 33 11.7	+1.2
	1.3nm,0.3s,baz=110,slow=6.6,SNR=20						
MAT	Matsushiro	2.88	291	P	Pn	15 33 13.6	+3.0
MAT				S	Sn	15 33 46.0	+1.6
JCJ	Chichijima	8.47	176	Pn	Pn	15 34 26.8	-0.6
	2.5nm,0.3s,baz=127,slow=20,SNR=3.5						
JCJ				Sn	Sn	15 35 57.6	-4.5
	baz=286,slow=20						
ASAJ	Asahikawa	8.57	5	Pn	Pn	15 34 28.9	+0.2
	0.8nm,0.3s,baz=224,slow=10,SNR=13						
JNU	Nakatsue	9.16	258	LR	LR	15 38 15.6	
	comp=Z,22nm,20.1s,baz=303,slow=38						
H11N2	WAKE ISLAND Hy	27.33	119	T	T	16 07 08.9	
	baz=311,slow=75,SNR=61						
H11N1	WAKE ISLAND Hy	27.34	119	T	T	16 07 09.7	
	baz=311,slow=75,SNR=79						
H11N3	WAKE ISLAND Hy	27.35	119	T	T	16 07 06.7	
	baz=311,slow=75,SNR=83						
H11S1	WAKE ISLAND Hy	28.00	121	T	T	16 07 55.6	
	baz=312,slow=76,SNR=64						
H11S3	WAKE ISLAND Hy	28.00	121	T	T	16 07 55.1	
	baz=312,slow=76,SNR=54						
H11S2	WAKE ISLAND Hy	28.01	121	T	T	16 07 54.8	
	baz=312,slow=76,SNR=52						
KURBB	Kurchatov Arra	47.00	309	P	P	15 40 54.3	-0.9
	0.3nm,0.4s,baz=85,slow=7.9,SNR=4.2						
WRA	Warramunga Arr	55.63	188	P	P	15 42 01.5	+1.3
	0.1nm,0.3s,baz=3.4,slow=7.8,SNR=11						
ASAR	Alice Springs	59.36	188	P	P	15 42 29.7	+3.3
	0.1nm,0.8s,baz=20,slow=11,SNR=4.0						

IDC 23 15:50:12.3±10.0, 3°.63N×127°.67E, h0km, mb3.6/3, mb1 3.8/3, mb1mx3.3/53, mbtmp3.6/3, Error ellipse: s-maj=169.4km s-min=140.6km az=156.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.33	165	P	P	15 55 32.5	+0.5
	0.9nm,0.3s,baz=344,slow=10,SNR=36						
ASAR	Alice Springs	27.81	168	P	P	15 56 04.0	+0.5
	0.2nm,0.5s,baz=351,slow=8.0,SNR=9.3						
STKA	Stephens Creek	37.72	160	P	P	15 57 28.7	-1.2
	0.6nm,0.4s,baz=339,slow=8.6,SNR=6.0						

IDC 23 16:01:01.5±1.5, 56°.26S×26°.19W, h0km, mb4.0/2, mb1 4.1/2, mb1mx3.6/33, mbtmp4.0/2, Error ellipse: s-maj=75.2km s-min=34.6km az=64.0
NEIC 23 16:01:09.2±2.7, 56°.28S×26°.32W, h56km±22km, mb4.4/2, Error ellipse: s-maj=33.3km s-min=11.9km az=49.0
ISC 23 16:01:06.3±1.3, 56°.5S±0°.2×26°.6W±0°.2, h10km, n16, σ2s.02/10, South Sandwich Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOPE	Hope Point	6.04	288	ePn	Pn	16 02 37.0	+1.4
SNAA	Sanae	18.18	156	eP	P	16 05 18.9	+0.1
	6.3nm,1.3s						
EFI	East Falkland	18.95	272	eP	P	16 05 27.9	+0.6
	287nm,1.6s						
QSPA	South Pole Qui	33.72	180	P	P	16 07 46.5	-1.0
	1.4nm,0.7s,baz=190,slow=5.8,SNR=5.7						
H10S2	ASCENSION HYDR	48.37	16	T	T	17 02 21.2	
	baz=189,slow=75,SNR=14						
H10S3	ASCENSION HYDR	48.38	16	T	T	17 02 21.5	
	baz=189,slow=75,SNR=12						
H10S1	ASCENSION HYDR	48.39	16	T	T	17 02 23.0	
	baz=189,slow=75,SNR=12						
H10N1	ASCENSION HYDR	49.49	16	T	T	17 03 44.5	
	baz=191						
H10N3	ASCENSION HYDR	49.49	16	T	T	17 03 44.7	
	baz=191						
H10N2	ASCENSION HYDR	49.51	16	T	T	17 03 45.1	
	baz=191						
LPAZ	La Paz	50.90	305	P	P	16 10 05.5	-2.8
	0.8nm,0.4s,baz=164,slow=7.4,SNR=5.4						
LPAZ	La Paz	50.90	305	eP	P	16 10 05.2	-3.0
SONA0	Songino Array	150.45	87	ePKPbc	PKPdf	16 20 53.3	+1.4
SONM	Songino Array	150.45	87	PKPbc	PKPdf	16 20 53.3	+1.4
	0.4nm,0.5s,baz=222,slow=1.9,SNR=2.9						
IL1	Eielson Array	150.66	311	ePKPbc	PKPdf	16 20 52.8	+1.3
ILAR	Eielson Array	150.66	311	PKPbc	PKPdf	16 20 53.2	+1.7
	0.5nm,0.7s,baz=106,slow=1.3,SNR=6.3						

ISCJB 23 16:03:07.5±0.7, 13°.16S±0°.08×167°.1E±0°.2, h200km, mb3.8/12, Error ellipse: s-maj=23.3km s-min=11.4km az=6.1
IDC 23 16:03:09.4±2.1, 13°.24S×167°.22E, h206km±18km, mb3.7/12, mb1 3.7/13, mb1mx3.5/48, mbtmp4.2/13, MS3.0/3, Ms1 3.0/3, ms1mx2.6/42, Error ellipse: s-maj=21.1km s-min=12.7km az=102.0
ISC 23 16:03:09.0±0.7, 13°.19S±0°.08×167°.2E±0°.2, h200km, n20, σ0s.90/26, mb4.0/12, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	8.00	297	LR	LR	16 08 28.2	
	comp=Z,59nm,18.8s,baz=182,slow=40						
DZM	Mont Dzumac	8.86	184	P	Pn	16 05 13.2	-0.4
	0.3nm,0.3s,baz=345,slow=20,SNR=2.7						
DZM				S	Sn	16 06 54.9	+1.8
	0.5nm,0.3s,baz=331,slow=19,SNR=2.2						
STKA	Stephens Creek	29.93	227	P	P	16 08 59.0	+0.5
	1.6nm,0.6s,baz=61,slow=10.0,SNR=8.6						
STKA				PcP	PcP	16 11 55.5	-0.6
	1.9nm,1.0s,baz=104,slow=5.4,SNR=5.3						
WRA	Warramunga Arr	32.13	254	P	P	16 09 17.2	-0.7
	0.4nm,0.6s,baz=86,slow=9.3,SNR=7.7						
WRA				pP	pP	16 09 58.9	-0.1
	0.9nm,0.7s,baz=85,slow=9.3,SNR=3.9						
WRA				PcP	PcP	16 12 01.8	-0.5
	0.4nm,0.8s,baz=93,slow=7.2,SNR=4.3						
WRA				ScP	ScP	16 15 26.3	-0.7
	0.6nm,0.8s,baz=74,slow=4.0,SNR=3.6						
ASAR	Alice Springs	33.15	247	P	P	16 09 26.4	-0.5
	0.9nm,0.5s,baz=71,slow=10,SNR=26						
ASAR				PcP	PcP	16 12 04.3	-0.8
	0.6nm,0.6s,baz=67,slow=3.1,SNR=7.4						
ASAR				ScP	ScP	16 15 29.3	-1.1
	0.9nm,0.8s,baz=79,slow=3.2,SNR=8.0						
JHJ	Hachijo jima 2	52.95	331	LR	LR	16 34 12.5	
	comp=Z,7.2nm,19.2s,baz=70,slow=35						
ASAJ	Asahikawa	61.27	340	P	P	16 13 03.4	+0.4
	3.6nm,0.6s,baz=74,slow=7.1,SNR=12						
VNDA	Vanda	64.39	181	P	P	16 13 22.7	-0.5
	0.6nm,0.6s,baz=358,slow=6.6,SNR=6.0						
PETK	Petropavlovsk-	66.53	354	P	P	16 13 38.1	+1.0
	1.8nm,0.6s,baz=147,slow=4.8						
CMAR	Chiang Mai Arr	74.24	294	P	P	16 14 25.6	+1.0
	0.9nm,0.7s,baz=136,slow=4.4,SNR=7.7						
QSPA	South Pole Qui	76.83	180	P	P	16 14 38.3	-0.3
	1.9nm,0.6s,baz=343,slow=0.8,SNR=9.1						
KDAK	Kodiak Island	78.07	21	P	P	16 14 45.1	-0.1
	2.6nm,0.6s,baz=213,slow=4.4,SNR=5.2						
KDAK				LR	LR	16 44 47.7	
	comp=Z,24nm,18.4s,baz=238,slow=32						
SONM	Songino Array	81.20	323	P	P	16 15 02.9	+0.3
	0.7nm,0.5s,baz=145,slow=5.4,SNR=4.5						
ILAR	Eielson Array	85.10	18	P	P	16 15 20.6	-1.3
	2.3nm,0.6s,baz=240,slow=5.0,SNR=31						
ILAR				pP	pP	16 16 12.8	+1.8
	0.9nm,0.7s,baz=231,slow=6.2,SNR=5.0						
MKAR	Makanchi Array	96.02	317	P	P	16 16 13.4	-0.2
	1.0nm,0.5s,baz=87,slow=6.4,SNR=15						
ARCES	ARCESS Array B	118.74	346	PKP	PKPdf	16 21 31.6	-1.1
	1.0nm,0.4s,baz=71,slow=2.3,SNR=10						
FINES	FINESS Array B	124.26	339	PKP	PKPdf	16 21 42.5	-1.0
	1.6nm,0.8s,baz=40,slow=7.3,SNR=3.2						
GERES	GERESS Array B	138.23	334	PKP	PKPdf	16 22 11.7	+1.2
	0.3nm,0.6s,baz=322,slow=4.1,SNR=3.8						
KEST	Kesra	149.95	322	PKPbc	PKPbc	16 22 36.2	0.0
	5.7nm,0.7s,baz=343,slow=1.6,SNR=5.2						
ESDC	Sonseca Array	152.48	345	PKPbc	PKPbc	16 22 41.5	-0.3
	0.2nm,0.3s,baz=23,slow=2.3,SNR=5.7						

IDC 23 16:21:32.1±1.6, 2°.18N×97°.98E, h0km, mb3.8/7, mb1 3.8/8, mb1mx3.5/67, mbtmp3.7/8, ML3.6/1, Error ellipse: s-maj=80.6km s-min=18.3km az=57.0
ISCJB 23 16:21:38.3±0.4, 2°.08N±0°.03×97°.76E±0°.04, h69km±5km, mb3.8/9, Error ellipse: s-maj=7.6km s-min=4.6km az=162.8
NEIC 23 16:21:39.8±0.7, 2°.05N×97°.83E, h65km±6km, mb4.1/2, Error ellipse: s-maj=9.7km s-min=7.7km az=84.0
DJA 23 16:21:39.1±0.6, 2°N±2°×9°8E±°, h33km±10km, M3.6/13, MLv3.6/13
ISC 23 16:21:39.0±0.9, 2°.09N±0°.03×97°.75E±0°.05, h57km±10km, n29, σ1s.11/39, mb3.8/9, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSI	Gunungsitoli	0.80	193	P	Pn	16 21 54.4	+0.1
GSI				S	Sn	16 22 05.5	0.0
GSI	Gunungsitoli	0.80	193	ePn	Pn	16 21 55.2	+0.9
TPTI		1.30	334	P	Pn	16 22 01.1	+0.2
TPTI				S	Sn	16 22 18.3	+1.1
PSI	Prapat	1.37	59	ePn	Pn	16 22 01.1	-0.8
KCSI	Kotacane, Aceh	1.43	1	P	Pn	16 22 03.6	+1.0
KCSI				S	Sn	16 22 20.6	+0.2
SNSI	Sinabang, Aceh	1.46	283	P	Pn	16 22 02.9	-0.1
SNSI				S	Sn	16 22 21.7	+0.6
TSI	Tuntungan	1.62	30	P	Pn	16 22 05.7	+0.4
TSI				S	Sn	16 22 26.7	+1.6
PBSI	Pulau Batu	2.19	166	P	Pn	16 22 13.7	+0.7
PBSI				S	Sn	16 22 40.2	+1.2
MNSI	Mandailing Nat	2.23	125	P	Pn	16 22 14.4	+0.8
MLSI	Meulaboh, Aceh	2.55	328	P	Pn	16 22 19.2	+1.3
MLSI				S	Sn	16 22 48.0	+0.2
LHMI	Lhok Sumawe	3.22	346	P	Pn	16 22 26.6	-0.5
LHMI				S	Sn	16 23 05.7	+1.4
SISI	Saibi	3.65	158	P	Pn	16 22 32.5	-0.4
IPM	Ipoh	4.04	54	ePn	Pn	16 22 39.2	+0.8
KULM	Kulim	4.30	42	ePn	Pn	16 22 42.4	+0.5
MYKOM	Kota Tinggi	6.10	93	ePn	Pn	16 23 07.5	+0.8
CMAR	Chiang Mai Arr	16.31	4	Pn	Pn	16 25 20.1	-4.3
	0.1nm,0.3s,baz=192,slow=10,SNR=2.9						
WR1	Warramunga Arr	42.05	123	eP	P	16 29 24.9	-0.5
	26nm,1.9s						
WR1				ePcP	PcP	16 31 20.4	+0.8
WRA	Warramunga Arr	42.05	123	P	P	16 29 24.9	-0.5
	0.3nm,0.4s,baz=306,slow=8.8,SNR=16						
WRA				PcP	PcP	16 31 20.4	+0.8
	0.5nm,1.1s,baz=318,slow=2.7,SNR=3.8						
AS31	Alice Springs	43.50	128	eP	P	16 29 35.7	-1.4
	1.3nm,1.3s						
ASAR	Alice Springs	43.50	128	P	P	16 29 36.4	-0.7
	0.3nm,0.7s,baz=298,slow=7.6,SNR=9.9						
SONA0	Songino Array	46.18	8	eP	P	16 29 57.3	-0.8
SONM	Songino Array	46.18	8	P	P	16 29 57.3	-0.8
	0.5nm,0.5s,baz=184,slow=11,SNR=3.5						
MK32	Makanchi Array	46.52	345	eP	P	16 30 01.8	+1.1
MKAR	Makanchi Array	46.52	345	P	P	16 30 01.8	+1.1
	0.5nm,0.4s,baz=156,slow=8.4,SNR=15						
ZALV	Zalesovo Beam	52.78	350	P	P	16 30 48.7	+0.6
	1.3nm,0.3s,baz=168,slow=6.4,SNR=6.2						
ZAA1	Zalesovo Array	52.78	350	eP	P	16 30 48.7	+0.6
BVAR	Borovoye Array	55.60	340	P	P	16 31 09.1	+0.3
	0.8nm,0.5s,baz=143,slow=10,SNR=4.8						
FIA0	FINESS Array S	79.47	332	eP	P	16 33 40.0	+0.8
FINES	FINESS Array B	79.47	332	P	P	16 33 40.0	+0.8
	2.4nm,0.8s,baz=119,slow=8.6,SNR=3.4						

IDC 23 16:28:23.8±4.3, 19°.01S×168°.43E, h0km, mb4.0/4, mb1 4.0/5, mb1mx3.6/47, mbtmp3.9/5, ML3.2/1, Error ellipse: s-maj=96.4km s-min=32.7km az=108.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.57	211	Pn	Pn	16 29 20.8	+0.3
	1.9nm,0.3s,baz=32,slow=19,SNR=29						
DZM				Sn	Sn	16 30 03.4	-0.1
	8.1nm,0.3s,baz=131,slow=22,SNR=11						
STKA	Stephens Creek	27.32	237	P	P	16 34 09.0	-1.4
	1.5nm,0.9s,baz=55,slow=12,SNR=2.5						
WRA	Warramunga Arr	32.12	263	P	P	16 34 53.3	+0.2
	0.9nm,1.0s,baz=88,slow=8.4,SNR=5.0						
ASAR	Alice Springs	32.44	256	P	P	16 34 56.8	+0.9
	2.4nm,0.8s,baz=80,slow=8.6,SNR=36						
SONM	Songino Array	86.58	323	P	P	16 41 09.1	+0.1
	1.2nm,0.9s,baz=141,slow=5.8,SNR=3.8						

NORS 23 16:33:51.9±0.0, 42°.34N×42°.99E, h8km
AZER 23 16:33:51.3±0.0, 42°.21N×42°.78E, h24km±4km, ml3.1/7, Error ellipse: s-maj=8.8km s-min=4.8km az=226.0

*ISK **23** 16:33:51.6, 42°.32N×42°.95E, h2^{km}, ML3.0/3*
*DDA **23** 16:33:51.4, 42°.36N×43°.02E, h18^{km}, Ml3.4*
*MOS **23** 16:33:52.3±0.0, 42°.32N×43°.08E, h1^{km}, MPVA3.7*
*MOS **23** 16:33:52.3±1.0, 42°.34N×43°.07E, h7^{km}, mb4.0/1, Error ellipse: s-maj=8.0km s-min=5.2km az=89.9*
*CSEM **23** 16:33:52.3±0.1, 42°.35N×43°.00E, h2^{km}, ML3.0, Error ellipse: s-maj=3.1km s-min=2.4km az=98.0*
*TIF **23** 16:33:52.5, 42°.35N×43°.16E, h8^{km}±2^{km}*
ISC 23 16:33:52.3±1.1, **42°.33N**±0°.01×**43°.03E**±0°.02, **h4**^{km}±9^{km}, **n119**, σ1^{s}.**14**/211, **22C-12D, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONI	Oni	0.41	50	P	Pg	16 33 59.4	-0.8
ONI				S	Sg	16 34 05.0	-0.5
ONI	Oni	0.41	50	⇑iPG	Pg	16 33 59.4	-0.8
ONI				i S	Sg	16 34 05.0	-0.5
ONI	Oni	0.41	50	i Pg	Pg	16 33 59.4	-0.8
ONI				eSg	Sg	16 34 05.0	-0.5
DIGR	Digorskoe uzhe	0.70	35	ePG	Pg	16 34 05.2	-0.6
DIGR				eS	Sg	16 34 15.6	+0.7
DIGR	Digorskoe uzhe	0.70	35	ePg	Pg	16 34 05.2	-0.6
DIGR				eSg	Sg	16 34 15.6	+0.7
DIGR	Digorskoe uzhe	0.70	35	i Pg	Pg	16 34 05.0	-0.7
DIGR				eSg	Sg	16 34 15.4	+0.5
ZEI	Tsey	0.79	54	ePG	Pg	16 34 07.5	0.0
ZEI				eS	Sb	16 34 18.9	-1.1
ZEI	Tsey	0.79	54	ePg	Pg	16 34 07.5	0.0
ZEI				eSg	Sb	16 34 18.9	-1.1
ZEI	Tsey	0.79	54	ePg	Pg	16 34 07.4	0.0
ZEI				eSg	Sb	16 34 18.8	-1.2
EPOS	Posof	0.86	195	i P	Pg	16 34 08.7	-0.1
EPOS				i S	Sb	16 34 21.6	-0.2
EPOS	Posof	0.86	195	P	Pg	16 34 08.6	-0.1
EPOS				S	Sb	16 34 21.6	-0.2
NEY	Neytrino	0.95	346	i PG	Pg	16 34 09.7	-0.8
NEY				i S	Sg	16 34 22.2	-0.6
NEY				pmax	pmax		
	comp=Z,89nm,0.8s						
NEY	Neytrino	0.95	346	i Pg	Pg	16 34 09.7	-0.8
	comp=Z,89nm,0.8s						
NEY				i Sg	Sg	16 34 22.2	-0.6
NEY	Neytrino	0.95	346	i Pg	Pg	16 34 09.6	-0.8
NEY				eSg	Sg	16 34 22.6	-0.2
AKH	Akhalkalaki	0.98	159	PG	Pg	16 34 11.6	+0.4
AKH				SG	Sb	16 34 26.1	+0.7
AKH	Akhalkalaki	0.98	159	P	Pg	16 34 10.9	-0.3
AKH				S	Sb	16 34 25.5	+0.1
AKH	Akhalkalaki	0.98	159	⇓iPG	Pg	16 34 10.9	-0.3
AKH				eS	Sb	16 34 25.5	+0.1
AKH	Akhalkalaki	0.98	159	P	Pg	16 34 10.9	-0.3
AKH	Akhalkalaki	0.98	159	ePg	Pg	16 34 11.6	+0.4
AKH				S	Sb	16 34 25.5	+0.1
AKH				eSg	Sb	16 34 26.1	+0.7
AKH	Akhalkalaki	0.98	159	i Pg	Pg	16 34 10.9	-0.3
AKH				eSg	Sb	16 34 25.5	+0.1
LACR	Lac	1.06	62	ePg	Pg	16 34 12.0	-0.7
LACR				eSg	Sb	16 34 27.1	-0.6
KORR	Kora	1.07	45	ePG	Pg	16 34 12.5	-0.5
KORR				eS	Sb	16 34 28.0	0.0
KORR	Kora	1.07	45	ePg	Pg	16 34 12.5	-0.5
KORR				eSg	Sb	16 34 28.0	0.0
KORR	Kora	1.07	45	ePg	Pg	16 34 12.0	-0.9
KORR				eSg	Sb	16 34 27.5	-0.5
BGD	Bogdanovka	1.15	158	P	Pg	16 34 13.7	-0.6
BGD				S	Sb	16 34 30.6	+0.4
BGD	Bogdanovka	1.15	158	P	Pg	16 34 13.7	-0.6
BGD				S	Sb	16 34 30.6	+0.4
NCK	Nalchik	1.24	19	ePG	Pg	16 34 16.7	+0.6
NCK				eS	Sn	16 34 36.0	+2.3
NCK				pmax	pmax		
	comp=Z,39nm,0.2s						
NCK	Nalchik	1.24	19	ePg	Pg	16 34 16.7	+0.6
	comp=Z,39nm,0.2s						
NCK				eSg	Sn	16 34 36.0	+2.3
NCK	Nalchik	1.24	19	ePg	Pg	16 34 16.6	+0.6
NCK				eSg	Sn	16 34 33.2	-0.5
ARNR	Ardon	1.25	47	ePG	Pg	16 34 16.5	+0.1
ARNR				eS	Sn	16 34 33.3	-0.8
ARNR	Ardon	1.25	47	ePg	Pg	16 34 16.5	+0.1
ARNR				eSg	Sn	16 34 33.3	-0.8
ARNR	Ardon	1.25	47	ePg	Pg	16 34 16.4	+0.1
ARNR				eSg	Sn	16 34 33.3	-0.8
DUS	Dusheti	1.27	100	P	Pn	16 34 15.9	-1.0
DUS	Dusheti	1.27	100	ePG	Pn	16 34 15.9	-1.0
DUS	Dusheti	1.27	100	P	Pn	16 34 15.9	-1.0
DUS	Dusheti	1.27	100	ePg	Pn	16 34 15.9	-1.0
STDR	Stavd-Durt	1.29	36	ePG	Pg	16 34 17.5	+0.5
STDR				eS	Sn	16 34 36.2	+1.3
STDR	Stavd-Durt	1.29	36	ePg	Pg	16 34 17.5	+0.5
STDR				eSg	Sn	16 34 36.2	+1.3
STDR	Stavd-Durt	1.29	36	ePg	Pg	16 34 17.6	+0.5
STDR				eSg	Sn	16 34 35.9	+1.0
BCA	Borcka	1.37	230	PN	Pn	16 34 17.6	-0.7
BCA				SN	Sg	16 34 36.8	+0.3
BCA	Borcka	1.37	230	ePn	Pn	16 34 17.6	-0.7
TBLG	Delisi	1.41	115	P	Pn	16 34 17.6	-1.2
TBLG				S	Sn	16 34 36.8	-1.0
TBLG	Delisi	1.41	115	⇓iPG	Pn	16 34 17.6	-1.2
TBLG				eS	Sn	16 34 36.8	-1.0
TBLG	Delisi	1.41	115	i Pg	Pn	16 34 17.6	-1.2
TBLG				S	Sn	16 34 36.8	-1.0
TBLG	Delisi	1.41	115	i Pg	Pn	16 34 17.6	-1.2
TBLG				eSg	Sn	16 34 36.8	-1.0
ARTV	Artvin	1.41	216	i P	Pn	16 34 18.4	-0.7
ARTV				i S	Sg	16 34 39.7	+2.1
ARTV	Artvin	1.41	216	P	Pn	16 34 18.4	-0.7
ARTV				S	Sg	16 34 39.7	+2.1
DOMR	Dombai	1.41	313	ePG	Pb	16 34 18.5	-0.9
DOMR	Dombai	1.41	313	ePg	Pb	16 34 18.5	-0.9
DOMR	Dombai	1.41	313	ePg	Pg	16 34 19.6	+0.2
DOMR				eSg	Sg	16 34 38.9	+1.1
DBOC	Borcka	1.42	226	i P	Pn	16 34 18.4	-0.5
DBOC				i S	Sg	16 34 38.3	+0.5
DBOC	Borcka	1.42	226	P	Pn	16 34 18.4	-0.5
DBOC				S	Sg	16 34 38.3	+0.5
SHA1	Shidzhatmaz	1.43	349	ePG	Pb	16 34 19.1	-0.7
SHA1				eS	Sg	16 34 38.8	+0.4
SHA1	Shidzhatmaz	1.43	349	ePg	Pb	16 34 19.1	-0.7
SHA1				eSg	Sg	16 34 38.8	+0.4
SHA1	Shidzhatmaz	1.43	349	ePg	Pb	16 34 18.9	-0.9
SHA1				eSg	Sg	16 34 38.4	0.0
SEAG	Tbilisi Sea	1.44	113	P	Pb	16 34 19.7	0.0
SEAG				S	Sg	16 34 39.5	+1.0
SEAG	Tbilisi Sea	1.44	113	P	Pb	16 34 19.7	0.0
SEAG				S	Sg	16 34 39.5	+1.0
DAGI	Agillar	1.50	214	i P	Pb	16 34 20.2	-0.7
DAGI				i S	Sg	16 34 41.1	+0.4
KBTC	Kuba-Taba	1.51	10	⇓iPG	Pg	16 34 22.6	+1.3
KBTC				eS	Sg	16 34 45.0	+4.1
KBTC	Kuba-Taba	1.51	10	i Pg	Pg	16 34 22.6	+1.3
KBTC				eSg	Sg	16 34 45.0	+4.1
KBTC	Kuba-Taba	1.51	10	ePg	Pg	16 34 21.1	-0.3
KBTC				eSg	Sg	16 34 41.5	+0.6
KIV	Kislovodsk	1.64	351	c iPN	Pb	16 34 22.9	-0.4
KIV				i S	Sb	16 34 43.3	-1.1
KIV				pmax	pmax		
	comp=Z,67nm,1.0s						
KIV	Kislovodsk	1.64	351	i Pn	Pb	16 34 22.9	-0.4
	comp=Z,67nm,1.0s						
KIV				i Sg	Sb	16 34 43.3	-1.1
KIV	Kislovodsk	1.64	351	i Pg	Pg	16 34 23.3	-0.6
KIV				eSg	Sg	16 34 45.8	+0.6
DBAD	Bademkaya	1.65	218	i P	Pn	16 34 22.3	+0.1
DBAD				i S	Sg	16 34 45.4	+0.1
DBAD	Bademkaya	1.65	218	P	Pn	16 34 22.3	+0.1
DBAD				S	Sg	16 34 45.4	+0.1
BEYR	Belyy Ugol+	1.69	355	ePN	Pb	16 34 23.1	-0.9
BEYR				eS	Sg	16 34 47.2	+0.6
BEYR	Belyy Ugol+	1.69	355	ePn	Pb	16 34 23.1	-0.9
BEYR				eSg	Sg	16 34 47.2	+0.6
BEYR	Belyy Ugol+	1.69	355	ePg	Pb	16 34 23.1	-0.9
BEYR				eSg	Sg	16 34 47.2	+0.6
PRTR	Priterechnaya	1.69	32	ePg	Pg	16 34 25.7	+0.9
PRTR				eSg	Sg	16 34 49.5	+2.8
EAK	Akyaka	1.70	165	i P	Pn	16 34 23.3	+0.3
EAK				i S	Sb	16 34 45.9	-0.1
EAK	Akyaka	1.70	165	P	Pn	16 34 23.3	+0.3
EAK				S	Sb	16 34 45.9	-0.1
KARS	Kars	1.70	179	PN	Pn	16 34 23.3	+0.3
KARS	Kars	1.70	179	ePn	Pn	16 34 23.3	+0.3
DDEM	Demirkent	1.73	214	i P	Pb	16 34 23.8	-0.9
DDEM				i S	Sg	16 34 47.5	-0.3
DDEM	Demirkent	1.73	214	P	Pb	16 34 23.8	-0.9
DDEM				S	Sg	16 34 47.5	-0.3
ARXR	Arkhyz	1.78	314	i Pg	Pg	16 34 26.0	-0.5
ARXR				i Sg	Sg	16 34 51.2	+1.6
DIGO	Kars	1.93	172	i P	Pb	16 34 27.5	-0.8
DIGO				i S	Sb	16 34 53.6	+0.8
DIGO	Kars	1.93	172	P	Pb	16 34 27.5	-0.8
DIGO				S	Sb	16 34 53.6	+0.8
DGRG	David-gareji	1.96	116	P	Pb	16 34 27.8	-0.8
DGRG				S	Sb	16 34 53.4	0.0
DGRG	David-gareji	1.96	116	⇑iPN	Pb	16 34 27.8	-0.8
DGRG				eS	Sb	16 34 53.4	0.0
DGRG	David-gareji	1.96	116	P	Pb	16 34 27.7	-0.9
DGRG				S	Sb	16 34 53.4	0.0
DGRG	David-gareji	1.96	116	ePg	Pb	16 34 27.8	-0.8
DGRG				eSg	Sb	16 34 53.4	0.0
QZX	Qazax, Azerbai	2.17	125	⇑P	Pn	16 34 29.9	+0.6
QZX				⇑S	Sb	16 34 59.2	-0.1
QZX	Qazax, Azerbai	2.17	125	⇑P	Pn	16 34 29.9	+0.6
QZX				⇑S	Sb	16 34 59.2	-0.1
GROC	Groznyy	2.22	66	ePN	Pb	16 34 31.0	-2.0
GROC	Groznyy	2.22	66	ePn	Pb	16 34 31.0	-2.0
GROC	Groznyy	2.22	66	i Pg	Pn	16 34 30.6	+0.7
GROC				eSg	Sb	16 35 00.0	-0.7
RPOR	Krasnaya Polya	2.45	305	ePn	Pb	16 34 36.8	-0.1
RPOR				eSn	Sb	16 35 08.0	+0.6
DDFL	Dedoflistskaro	2.47	110	P	Pb	16 34 38.2	+0.8
GNI	Garni	2.53	149	dePN	Pb	16 34 38.6	+0.1
GNI	Garni	2.53	149	ePn	Pb	16 34 38.6	+0.1
GDB	GEDABAY	2.60	127	⇑P	Pn	16 34 36.6	+1.2
GDB				⇓S	Sb	16 35 11.3	-0.7
GDB	GEDABAY	2.60	127	⇑P	Pn	16 34 36.6	+1.2
GDB				⇓S	Sb	16 35 11.3	-0.7
GOF	Gofitskoye	2.73	0	ePN	Pg	16 34 47.5	+2.9
GOF				eS	Sg	16 35 23.0	+3.1
GOF				pmax	pmax		
	comp=Z,50nm,0.9s						
GOF				smax	smax		
	comp=N,60nm,0.6s						
GOF	Gofitskoye	2.73	0	eSg	Sg	16 35 23.0	+3.1
	comp=N,60nm,0.6s						
SOC	Sochi	2.74	298	ePN	Pn	16 34 38.3	+1.3
SOC				e		16 35 13.8	
SOC				pmax	pmax		
	comp=Z,13nm,0.5s						
SOC				pmax	pmax		
	comp=E,44nm,0.7s						
SOC	Sochi	2.74	298	ePn	Pn	16 34 38.3	+1.3
	comp=E,13nm,0.5s						
SOC				eSn	Sb	16 35 13.8	-1.9
SOC	Sochi	2.74	298	ePn	Pb	16 34 39.3	-2.5
SOC				eSn	Sb	16 35 13.2	-2.5
AGRB	Hanur-Agry	2.75	181	PN	Pn	16 34 38.1	+0.6
AGRB	Hanur-Agry	2.75	181	ePn	Pn	16 34 38.1	+0.6
ZKTA	Zakatala	2.77	103	⇑P	Pn	16 34 38.9	+1.4
ZKTA				⇓S	Sb	16 35 16.4	-0.3
BAYT	Ayd˜–ntepe-Bay	2.91	229	PN	Pn	16 34 39.6	0.0
BAYT	Ayd˜–ntepe-Bay	2.91	229	ePn	Pn	16 34 39.6	0.0
GANJ	Ganja	2.99	123	⇓P	Pn	16 34 41.6	+1.0
GANJ				⇑S	Sb	16 35 21.1	-2.0
GANJ	Ganja	2.99	123	⇓P	Pn	16 34 41.6	+1.0
GANJ				⇑S	Sb	16 35 21.1	-2.0
SEKA	Sheki	3.31	108	⇑P	Pn	16 34 47.0	+1.9
SEKA				⇑S	Sb	16 35 29.6	-2.8
SEKA	Sheki	3.31	108	⇑P	Pn	16 34 47.0	+1.9
SEKA				⇑S	Sb	16 35 29.6	-2.8
MAK	Makhachkala	3.36	78	⇓ePN	Pn	16 34 45.4	-0.2
MAK	Makhachkala	3.36	78	ePn	Pn	16 34 45.4	-0.2
AKT	Akhty	3.61	102	ePN	Pn	16 34 48.0	-1.2
AKT				e		16 35 00.3	
AKT				eS	Sn	16 35 31.9	-0.4
AKT				pmax	pmax		
	comp=Z,4.0nm,0.3s						
AKT				smax	smax		
	comp=E,19nm,0.4s						
AKT				smax	smax		
	comp=E,7µm,0.4s						
AKT				smax	smax		
	comp=E,22nm,0.5s						
AKT	Akhty	3.61	102	ePn	Pn	16 34 48.0	-1.2
	comp=E,4.0nm,0.3s						
AKT				eSn	Sn	16 35 31.9	-0.4
XNQ	Khinaliq	3.99	105	⇓P	Pn	16 34 56.7	+2.1
XNQ				⇑S	Sn	16 35 45.1	+3.2
XNQ	Khinaliq	3.99	105	⇓P	Pn	16 34 56.7	+2.1
XNQ				⇑S	Sn	16 35 45.1	+3.2
KIEV	Kiev	12.66	316	⇑eP	Pn	16 36 54.0	+1.0
ARU	Arti	17.30	30	⇑eP	Pn	16 37 54.3	-0.3
ARU				pmax	pmax		
	comp=Z,1.0nm,0.9s						
VSU	Vasula	19.11	333	⇑eP	Pn	16 38 15.9	-0.9
BRVK	Borovoye	21.12	50	⇑eP	P	16 38 38.4	+0.5
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KURK	Kurchatov	25.68	59	i P	P	16 39 21.0	-2.2

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*NIED **23** 16:34:00, 42°.90N×144°.00E, h92^{km}, Mw3.5 Best double couple: M$_0$2.01000×10^{14} NP1:ϕ_s19.00000°, δ13.00000°, λ172.00000°. NP2:ϕ_s116.00000°, δ88.00000°, λ78.00000°.*
*ISCJB **23** 16:34:06.2±0.4, 42°.92N±0°.04×144°.04E±0°.04, h103^{km}±3^{km}, mb3.4/9, Error ellipse: s-maj=6.8km s-min=3.9km az=153.8*
*JMA **23** 16:34:07.3±0.1, 42°.95N×144°.02E, h97^{km}±1^{km}, M3.5*
JMA Felt I J1.
*SKHL **23** 16:34:07.3±0.8, 42°.93N×143°.83E, h53^{km}±7^{km}, mb4.3/7*
*IDC **23** 16:34:08.1±1.9, 42°.95N×143°.98E, h105^{km}±16^{km}, mb3.2/9, mb1 3.4/11, mb1mx3.2/65, mbtmp3.5/11, Error ellipse: s-maj=22.7km s-min=16.9km az=112.0*
ISC 23 16:34:07.2±0.7, **42°.93N**±0°.05×**144°.03E**±0°.03, **h99**^{km}±5^{km}, **n39**, σ0^{s}.**70**/53, **mb3.3**/9, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOB	Onbets	0.15	259	P	Pn	16 34 21.4	+0.4
JOB				eS	Sn	16 34 31.7	+0.3
JAR	Ashorobuto	0.41	332	P	Pn	16 34 22.2	0.0
JAR				eS	Sn	16 34 33.1	-0.4
JAK	Akkeshi	0.49	82	P	Pn	16 34 22.7	0.0
JAK				eS	Sn	16 34 33.9	-0.5
JCH	Churui	0.59	238	P	Pn	16 34 23.5	0.0
JCH				eS	Sn	16 34 35.2	-0.4
JNK	Nakash	0.82	37	P	Pn	16 34 25.4	-0.3
JNK				eS	Sn	16 34 39.4	-0.1
JTKR	Abashiri--Toko	1.04	355	P	Pn	16 34 28.2	+0.3
JTKR				eS	Sn	16 34 43.6	0.0
JFR	Furan	1.08	283	P	Pn	16 34 28.1	-0.3
JFR				eS	Sn	16 34 43.9	-0.5
JEM	Erimo	1.12	216	P	Pn	16 34 28.7	-0.1
JNBK	Urakawa-nobuka	1.15	236	P	Pn	16 34 28.9	-0.2
JNBK				eS	Sn	16 34 45.4	-0.3
JMP	Maruseppu	1.18	336	P	Pn	16 34 29.6	0.0
JMP				eS	Sn	16 34 45.8	-0.7
JBT2	Biratori 2	1.24	263	P	Pn	16 34 30.1	0.0
JRA	Rausu	1.28	38	P	Pn	16 34 31.1	+0.4
JRA				eS	Sn	16 34 49.7	+1.3
NEM2	Nemuro 2	1.32	70	P	Pn	16 34 30.7	-0.5
NEM2				eS	Sn	16 34 47.7	-1.7
JKK2	Kamakawa 2	1.33	316	P	Pn	16 34 31.6	+0.3
JKK2				eS	Sn	16 34 49.1	-0.4
GLVR	Golovnino	1.35	53	eP	Pn	16 34 32.0	+0.5
GLVR				AMB	AMB	16 34 36.0	
	198nm,0.3s						
GLVR				AMB	AMB	16 34 36.0	
	170nm,0.3s						
GLVR				AMB	AMB	16 34 36.0	
	267nm,0.3s						
GLVR				i S	Sn	16 34 50.0	+0.1
GLVR				A	A	16 34 57.0	
	175nm,0.3s						
GLVR				A	A	16 34 57.0	
	879nm,0.3s						
ASAJ	Asahikawa	1.58	319	P	Pn	16 34 35.1	+0.8
	6.0nm,0.3s,baz=150,slow=13,SNR=78						
ASAJ				S	Sn	16 34 55.6	+0.7
	9.8nm,0.3s,baz=146,slow=15,SNR=15						
GRPR	Tuman	1.65	49	eP	Pn	16 34 35.0	-0.2
GRPR				AMB	AMB	16 34 38.0	
	230nm,0.4s						
GRPR				AMB	AMB	16 34 38.0	
	287nm,0.4s						
GRPR				AMB	AMB	16 34 38.0	
	225nm,0.4s						
GRPR				i S	Sn	16 34 56.0	-0.6
GRPR				A	A	16 34 58.0	
	260nm,0.3s						
GRPR				A	A	16 34 58.0	
	224nm,0.3s						
LAGR	Lagunnoye	1.70	48	i P	Pn	16 34 36.0	+0.2
LAGR				AMB	AMB	16 34 36.0	
	21nm,0.4s						
LAGR				AMB	AMB	16 34 36.0	
	22nm,0.4s						
LAGR				AMB	AMB	16 34 36.0	
	50nm,0.4s						
LAGR				i S	Sn	16 34 58.0	+0.4
LAGR				A	A	16 35 02.0	
	169nm,0.3s						
LAGR				A	A	16 35 02.0	
	135nm,0.3s						
YUK	Yuzh-Kuril’sk	1.73	50	eP	Pn	16 34 36.0	-0.2
YUK				AMB	AMB	16 34 37.0	
	115nm,0.4s						
YUK				AMB	AMB	16 34 37.0	
	127nm,0.4s						
YUK				AMB	AMB	16 34 37.0	
	451nm,0.4s						
YUK				i S	Sn	16 34 58.0	-0.3
YUK				A	A	16 35 00.0	
	198nm,0.4s						
YUK				A	A	16 35 00.0	
	144nm,0.4s						
SHO	Shikotan	2.25	64	i P	Pn	16 34 43.0	+0.2
SHO				AMB	AMB	16 34 44.0	
	12nm,0.2s						
SHO				AMB	AMB	16 34 44.0	
	53nm,0.2s						
SHO				i S	Sn	16 35 09.0	-1.1
SHO				A	A	16 35 11.0	
	897nm,0.4s						
SHO				A	A	16 35 11.0	
	107nm,0.4s						
KUR	Kuril’sk	3.60	49	eP	Pn	16 35 02.0	+1.2
KUR				AMB	AMB	16 35 04.0	
	8.0nm,0.4s						
KUR				AMB	AMB	16 35 04.0	
	9.0nm,0.4s						
KUR				AMB	AMB	16 35 04.0	
	17nm,0.4s						
KUR				i S	Sn	16 35 43.0	+0.7
KUR				A	A	16 35 53.0	
	55nm,0.5s						
KUR				A	A	16 35 53.0	
	68nm,0.5s						
YSS	Yuzh-Sakhalins	4.12	348	eP	Pn	16 35 08.0	+0.1
YSS				AMB	AMB	16 35 09.0	
	6.0nm,0.5s						
YSS				eS	Sn	16 35 52.1	-3.0
MJAR	Matsushiro Arr	7.80	217	P	Pn	16 35 58.8	+0.9
	0.2nm,0.3s,baz=32,slow=13,SNR=3.6						
PETK	Petropavlovsk-	13.66	37	P	Pn	16 37 15.9	-0.6
	baz=218,slow=9.1						
SONM	Songino Array	26.70	294	P	P	16 39 37.1	0.0
	0.6nm,0.6s,baz=82,slow=8.4,SNR=4.2						
H11N2	WAKE ISLAND Hy	30.09	133	T	T	17 11 32.9	
	baz=326,slow=75,SNR=81						
H11N1	WAKE ISLAND Hy	30.10	133	T	T	17 11 32.8	
	baz=326,slow=75,SNR=80						
H11N3	WAKE ISLAND Hy	30.11	133	T	T	17 11 35.3	
	baz=326,slow=75,SNR=86						
H11S1	WAKE ISLAND Hy	30.99	135	T	T	17 12 41.1	
	baz=328,slow=76,SNR=143						
H11S3	WAKE ISLAND Hy	31.00	135	T	T	17 12 41.9	
	baz=328,slow=76,SNR=135						
H11S2	WAKE ISLAND Hy	31.01	135	T	T	17 12 42.3	
	baz=328,slow=76,SNR=72						
MKAR	Makanchi Array	42.94	297	P	P	16 41 55.9	-0.3
	0.2nm,0.4s,baz=79,slow=10,SNR=4.2						
ILAR	Eielson Array	43.48	36	P	P	16 42 00.7	+0.4
	0.8nm,0.3s,baz=258,slow=5.6,SNR=10						
YKA	Yellowknife Ar	57.73	33	P	P	16 43 47.2	0.0
	0.2nm,0.6s,baz=302,slow=7.3,SNR=2.9						
WRA	Warramunga Arr	63.19	190	P	P	16 44 24.1	-0.7
	0.3nm,0.8s,baz=6.5,slow=6.9,SNR=3.4						
FINES	FINESS Array B	64.55	332	P	P	16 44 33.0	-0.2
	2.8nm,0.9s,baz=88,slow=3.3,SNR=4.4						
ASAR	Alice Springs	66.92	190	P	P	16 44 49.9	+1.0
	0.2nm,0.7s,baz=5.1,slow=7.1,SNR=3.5						
PDAR	Pinedale Array	72.16	48	P	P	16 45 21.6	+0.2
	0.4nm,0.5s,baz=273,slow=2.7,SNR=3.5						
TXAR	Lajitas Array	84.98	54	P	P	16 46 32.4	+0.6
	0.1nm,0.5s,baz=325,slow=4.6,SNR=2.8						

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*NIED **23** 16:52:00, 42°.00N×142°.60E, h65^{km}, Mw3.8 Best double couple: M$_0$5.23000×10^{14} NP1:ϕ_s278.00000°, δ3.00000°, λ114.00000°. NP2:ϕ_s74.00000°, δ87.00000°, λ89.00000°.*
*ISCJB **23** 16:52:51.7±0.5, 41°.99N±0°.05×142°.56E±0°.05, h71^{km}±3^{km}, mb3.8/11, Error ellipse: s-maj=8.6km s-min=5.9km az=149.2*
*JMA **23** 16:52:52.8±0.2, 42°.02N×142°.58E, h62^{km}±2^{km}, M3.6 Broadband fault plane solution: P waves. NP1: ϕ_s256.00000°, δ85.00000°, λ-83.00000°. NP2:ϕ_s17.00000°, δ9.00000°, λ-149.00000°. Principal axes: T Plg40.0000°, Azm339.0000°; N Plg7.0000°, Azm75.0000°; P Plg49.0000°, Azm174.0000°;*
JMA Felt I J1.
*IDC **23** 16:52:53.6±1.8, 42°.05N×142°.58E, h73^{km}±15^{km}, mb3.5/11, mb1 3.6/15, mb1mx3.4/63, mbtmp3.8/15, MS2.6/4, Ms1 2.6/4, ms1mx2.4/55 Error ellipse: s-maj=22.4km s-min=13.3km az=99.0*
ISC 23 16:52:52.3±0.8, **41°.98N**±0°.05×**142°.54E**±0°.04, **h62**^{km}±7^{km}, **n38**, σ1^{s}.**12**/38, **mb3.9**/11, **2C-8D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNBK	Urakawa-nobuka	0.34	28	⇓P	Pn	16 53 02.9	0.0
JNBK				eS	Sn	16 53 10.9	+0.2
JSHD	Hidakashinhida	0.43	353	P	Pn	16 53 04.1	+0.4
JEM	Erimo	0.46	85	⇑P	Pn	16 53 04.4	+0.4
JEM				eS	Sn	16 53 12.9	+0.3
JTHR	Tokachihiroo	0.65	61	P	Pn	16 53 06.1	+0.1
JBT2	Biratori 2	0.81	351	⇓P	Pn	16 53 08.0	0.0
JBT2				eS	Sn	16 53 19.7	+0.2
JCH	Churui	0.88	44	⇓P	Pn	16 53 08.8	-0.1
JCH				eS	Sn	16 53 21.3	+0.2
JKB	Kayabe	1.13	266	⇓P	Pn	16 53 12.7	+0.7
JKB				eS	Sn	16 53 27.5	+0.8
JEW	Eniwo	1.18	317	⇓P	Pn	16 53 13.2	+0.5
JFR	Furan	1.18	2	⇓P	Pn	16 53 12.7	-0.1
JNB	Noboribetsu	1.22	294	⇓P	Pn	16 53 13.1	-0.1
JOT	Ohata	1.27	242	⇑P	Pn	16 53 14.7	+0.9
JOB	Onbets	1.33	46	⇓P	Pn	16 53 15.8	+1.1
JOB				eS	Sn	16 53 32.8	+1.2
JAB	Ashibetsu	1.54	351	P	Pn	16 53 18.1	+0.6
JAR	Ashorobuto	1.60	34	P	Pn	16 53 18.3	0.0
JYM2	Yakumo 2	1.62	276	P	Pn	16 53 19.2	+0.6
ASAJ	Asahikawa	2.13	1	P	Pn	16 53 26.8	+1.2
	59nm,0.3s,baz=201,slow=11,SNR=478						
ASAJ				S	Sn	16 53 51.0	+0.1
	22nm,0.3s,baz=180,slow=19,SNR=11						
ASAJ				LR	LR	16 54 31.1	
	comp=Z,105nm,21.9s,baz=168,slow=47						
MJAR	Matsushiro Arr	6.38	213	P	Pn	16 54 26.6	+2.9
	0.9nm,0.3s,baz=32,slow=12,SNR=8.0						
MJAR				LR	LR	16 57 29.8	
	comp=Z,30nm,18.7s,baz=340,slow=43						
USRK	Ussuriysk Ar.	8.03	290	P	Pn	16 54 49.5	+3.4
	baz=96,slow=15						
KSRS	Korea Array	12.12	253	P	P	16 55 49.3	-3.3
	0.2nm,0.3s,baz=64,slow=14,SNR=4.2						
PETK	Petropavlovsk-	15.09	37	P	Pn	16 56 21.9	+0.3
	baz=214,slow=11						
SONM	Songino Array	26.09	295	P	P	16 58 19.8	-0.3
	0.5nm,0.5s,baz=56,slow=8.1,SNR=3.2						
GUMO	Guam	28.36	175	LR	LR	17 09 06.7	
	comp=Z,14nm,21.8s,baz=111,slow=34						
H11N2	WAKE ISLAND Hy	30.29	130	T	T	17 30 36.5	
	baz=323,slow=75,SNR=54						
H11N1	WAKE ISLAND Hy	30.30	130	T	T	17 30 35.7	
	baz=323,slow=75,SNR=77						
H11N3	WAKE ISLAND Hy	30.31	130	T	T	17 30 36.2	

	baz=323,slow=75,SNR=63						
H11S1	**WAKE ISLAND Hy**	**31.15**	**131**	T	T	17 31 42.7	
	baz=325,slow=76,SNR=70						
H11S3	**WAKE ISLAND Hy**	**31.16**	**131**	T	T	17 31 43.1	
	baz=325,slow=76,SNR=62						
H11S2	**WAKE ISLAND Hy**	**31.17**	**131**	T	T	17 31 44.1	
	baz=325,slow=76,SNR=57						
ZALV	**Zalesovo Beam**	**39.38**	**308**	P	**P**	**17 00 16.3**	**+0.8**
	0.6nm,0.4s,baz=95,slow=8.8,SNR=3.5						
ZALV				LR	LR	17 18 11.2	
	comp=Z,20nm,19.0s,baz=4.0,slow=39						
MKAR	**Makanchi Array**	**42.40**	**298**	P	**P**	**17 00 40.3**	**-0.1**
	0.3nm,0.6s,baz=84,slow=10,SNR=3.4						
KURBB	**Kurchatov Arra**	**43.79**	**304**	P	**P**	**17 00 51.4**	**-0.2**
	1.2nm,0.5s,baz=76,slow=8.8,SNR=11						
ILAR	**Eielson Array**	**44.90**	**35**	P	**P**	**17 01 00.8**	**+0.6**
	0.4nm,0.6s,baz=272,slow=9.8,SNR=4.2						
BVAR	**Borovoye Array**	**48.00**	**309**	P	**P**	**17 01 25.5**	**+0.9**
	0.7nm,0.3s,baz=90,slow=7.2,SNR=9.6						
SPITS	**Spitsbergen Ar**	**55.85**	**348**	P	**P**	**17 02 23.5**	**+0.8**
	4.4nm,0.8s,baz=70,slow=12,SNR=2.9						
WRA	**Warramunga Arr**	**62.08**	**189**	P	**P**	**17 03 06.6**	**+0.3**
	0.7nm,0.5s,baz=6.8,slow=6.9,SNR=6.6						
FINES	**FINESS Array B**	**64.86**	**332**	P	**P**	**17 03 22.9**	**-1.4**
	3.2nm,0.9s,baz=119,slow=6.7,SNR=4.8						
ASAR	**Alice Springs**	**65.80**	**189**	P	**P**	**17 03 31.1**	**+0.3**
	0.3nm,0.5s,baz=0.4,slow=7.2,SNR=6.1						
HFS	**Hagfors**	**69.95**	**335**	P	**P**	**17 03 56.2**	**-0.3**
	1.3nm,0.6s,baz=54,slow=7.3,SNR=9.6						

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*ISCJB **23** 16:59:18.9±0.7, 21°.66S±0°.04×68°.6W±0°.1, h133^{km}±9^{km}, mb4.6/2, Error ellipse: s-maj=18.6km s-min=5.6km az=4.5*

*GUC **23** 16:59:18.8±0.6, 21°.63S×68°.62W, h130^{km}±4^{km}, ML3.4*

*IDC **23** 16:59:21.5±7.4, 21°.50S×67°.99W, h130^{km}±52^{km}, mb3.8/1, mb1 3.7/3, mb1mx3.2/38, mbtmp4.0/3, Error ellipse: s-maj=80.7km s-min=33.4km az=4.0*

ISC 23 16:59:19.0±1.0**, 21°.64S**±0°.05×**68°.5W**±0°.1**, h123**^{km}±10^{km}**, n19, σ0^{s}.90**/32**, 6C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.72**	**258**	⇑*i*P	**Pn**	**16 59 39.3**	**+0.2**
PB09				*e*S	**Sn**	**16 59 54.7**	**+0.5**
PB09				IAML		16 59 58.1	
	comp=N,561nm,0.3s						
PB01	**IPOC Station P**	**1.11**	**302**	⇑*i*P	**Pn**	**16 59 42.5**	**-0.1**
PB01				*e*S	**Sn**	**17 00 00.0**	**-0.3**
PB01				IAML		17 00 01.5	
	comp=E,777nm,0.2s						
PB03	**IPOC Station P**	**1.25**	**251**	⇑*i*P	**Pn**	**16 59 43.9**	**-0.1**
PB03				*e*S	**Sn**	**17 00 02.7**	**-0.3**
PB03				IAML		17 00 03.5	
	comp=N,682nm,0.3s						
PB07	**IPOC Station P**	**1.31**	**266**	⇑*i*P	**Pn**	**16 59 44.6**	**-0.1**
PB07				*e*S	**Sn**	**17 00 03.6**	**-0.6**
PB07				IAML		17 00 04.9	
	comp=N,621nm,0.4s						
PB02	**IPOC Station P**	**1.36**	**284**	⇑*i*P	**Pn**	**16 59 45.1**	**-0.1**
PB02				*e*S	**Sn**	**17 00 04.1**	**-0.8**
PB02				IAML		17 00 10.2	
	comp=E,639nm,0.2s						
PB02				IAML		17 00 12.1	
	comp=E,667nm,0.2s						
PB06	**IPOC Station P**	**1.46**	**224**	⇑*i*P	**Pn**	**16 59 46.4**	**0.0**
PB06				*e*S	**Sn**	**17 00 06.4**	**-0.8**
PB06				IAML		17 00 08.7	
	comp=E,946nm,0.2s						
PB08	**IPOC Station P**	**1.62**	**337**	*e*P	**Pn**	**16 59 49.2**	**+0.7**
PB08				*i* P	**Pn**	**16 59 49.2**	**+0.7**
PB08				*e*S	**Sn**	**17 00 11.9**	**+1.0**
PB08				IAML		17 00 12.3	
	comp=E,219nm,0.8s						
PB04	**IPOC Station P**	**1.69**	**246**	*e*P	**Pn**	**16 59 48.8**	**-0.3**
PB04				*e*S	**Sn**	**17 00 11.8**	**-0.2**
PB04				IAML		17 00 19.2	
	comp=E,675nm,0.2s						
PB15	**IPOC Station P**	**1.81**	**210**	*e*P	**Pn**	**16 59 50.7**	**+0.2**
PB15				*i* S	**Sn**	**17 00 15.1**	**+0.6**
PB05	**IPOC Station P**	**2.00**	**233**	*e*P	**Pn**	**16 59 52.5**	**-0.2**
PB05				*i* S	**Sn**	**17 00 18.0**	**-0.4**
PB05				IAML		17 00 26.5	
	comp=E,318nm,0.4s						
PB11	**IPOC Station P**	**2.17**	**329**	*e*P	**Pn**	**16 59 54.9**	**0.0**
PB11				*e*S	**Sn**	**17 00 22.2**	**-0.2**
PB11				IAML		17 00 24.4	
	comp=N,452nm,0.3s						
MNMC	**Minye Minye**	**2.71**	**337**	*e*P	**Pn**	**17 00 02.4**	**+0.5**
MNMC				IAML		17 00 40.4	
	comp=N,277nm,0.3s						
GO02	**Mina Guanaco**	**3.65**	**196**	*e*P	**Pn**	**17 00 14.1**	**-0.1**
GO02				*e*S	**Sn**	**17 00 56.6**	**-0.4**
LPAZ	**La Paz**	**5.34**	**4**	P	**Pn**	**17 00 38.5**	**+1.3**
	comp=N,0.6nm,0.3s,baz=178,slow=9.6,SNR=15						
SIV	**San Ignacio**	**8.99**	**53**	P	**Pn**	**17 01 22.2**	**-3.7**
	comp=N,3.3nm,0.3s,baz=240,slow=11,SNR=52						
SIV				S	Sn	17 02 56.0	-9.5
	baz=298,slow=5.6,SNR=3.4						
TORD	**Torodi Ar. Bea**	**77.03**	**70**	P	**P**	**17 10 58.2**	**-0.8**
	comp=N,63nm,0.7s,baz=250,slow=5.0						
YKA	**Yellowknife Ar**	**91.46**	**340**	P	**P**	**17 12 11.8**	**+0.9**
	comp=N,0.7nm,0.6s,baz=135,slow=4.6,SNR=7.7						
WRA	**Warramunga Arr**	**133.03**	**210**	PKP	**PKPdf**	**17 18 21.2**	**+0.4**
	comp=N,0.7nm,1.0s,baz=150,slow=1.7,SNR=2.7						
MKAR	**Makanchi Array**	**145.51**	**36**	PKPbc	**PKPab**	**17 18 43.8**	**+0.5**
	comp=N,0.2nm,0.5s,baz=322,slow=3.9,SNR=3.9						

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*NIED **23** 17:09:00, 35°.80N×140°.90E, h8^{km}, Mw3.4 Best double couple: M$_0$1.27000×10^{14} NP1:φ$_s$30.00000°, δ32.00000°, λ-61.00000°. NP2:φ$_s$177.00000°, δ62.00000°, λ-107.00000°.*

*IDC **23** 17:09:45.7±1.8, 35°.96N×141°.15E, h0^{km}, mb3.2/3, mb1 3.2/5, mb1mx3.1/60, mbtmp3.1/5, ML2.8/2, Error ellipse: s-maj=39.0km s-min=25.9km az=61.0*

*ISCJB **23** 17:09:48.1±1.0, 35°.77N±0°.04×141°.05E±0°.08, h23^{km}±5^{km}, mb3.2/3, Error ellipse: s-maj=11.2km s-min=6.3km az=169.4*

*JMA **23** 17:09:49.8±0.1, 35°.75N×140°.88E, h12^{km}±1^{km}, M3.5*

JMA Felt I J1.

ISC 23 17:09:48.3±1.2**, 35°.78N**±0°.04×**140°.99E**±0°.07**, h16**^{km}±6^{km}**, n20, σ1^{s}.00**/21**, mb3.4**/3**, 3C-1D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	**Chosi**	**0.13**	**235**	⇓P	**Pg**	**17 09 52.1**	**+0.1**
CHOJ				S	**Sg**	**17 09 53.6**	**-0.7**
JIHU	**Itakohorinouch**	**0.42**	**297**	P	**Pb**	**17 09 57.8**	**+0.5**
JHYU	**Hitachinakayam**	**0.65**	**330**	P	**Pg**	**17 10 02.4**	**+1.4**
JHYU				S	**Sg**	**17 10 10.9**	**+1.2**
JCN	**Nagara**	**0.73**	**241**	⇑P	**Pb**	**17 10 03.4**	**+0.7**
JCN				*e*S	**Sn**	**17 10 13.9**	**-1.0**
JYT	**Yasato**	**0.78**	**305**	⇑P	**Pg**	**17 10 03.5**	**-0.1**
JYT				S	**Sg**	**17 10 13.0**	**-0.9**
JHO	**Hitachi**	**0.90**	**338**	⇑P	**Pg**	**17 10 06.0**	**+0.3**
JHO				S	**Sg**	**17 10 17.7**	**+0.2**
BSO3	**Boso 3**	**1.05**	**202**	P	**Pb**	**17 10 08.7**	**+0.8**
BSO1	**Boso 1**	**1.12**	**180**	P	**Pb**	**17 10 09.2**	**+0.2**
MJAR	**Matsushiro Arr**	**2.37**	**290**	Pn	**Pn**	**17 10 26.9**	**+0.3**
	2.1nm,0.3s,baz=101,slow=6.9,SNR=22						
MJAR				Sn	**Sb**	**17 10 58.2**	**-1.5**
	2.0nm,0.3s,baz=112,slow=8.2,SNR=5.5						
MAT	**Matsushiro**	**2.38**	**290**	P	**Pn**	**17 10 27.2**	**+0.5**
MAT				S	**Sn**	**17 10 55.6**	**+0.1**
ASAJ	**Asahikawa**	**8.42**	**8**	Pn	**Pn**	**17 11 47.8**	**-1.9**
	0.1nm,0.3s,baz=174,slow=18,SNR=2.8						
H11N2	**WAKE ISLAND Hy**	**27.83**	**118**	T	T	17 44 33.4	
	baz=311,slow=75,SNR=77						
H11N1	**WAKE ISLAND Hy**	**27.84**	**118**	T	T	17 44 33.2	
	baz=311,slow=75,SNR=70						
H11N3	**WAKE ISLAND Hy**	**27.85**	**118**	T	T	17 44 34.0	
	baz=311,slow=75,SNR=76						
H11S1	**WAKE ISLAND Hy**	**28.50**	**120**	T	T	17 45 24.7	
	baz=312,slow=76,SNR=74						
H11S3	**WAKE ISLAND Hy**	**28.50**	**120**	T	T	17 45 25.4	
	baz=312,slow=76,SNR=69						
H11S2	**WAKE ISLAND Hy**	**28.51**	**120**	T	T	17 45 24.5	
	baz=312,slow=76,SNR=55						
MKAR	**Makanchi Array**	**44.51**	**303**	P	**P**	**17 17 58.1**	**-0.9**
	0.1nm,0.4s,baz=93,slow=8.7,SNR=2.7						
KURBB	**Kurchatov Arra**	**46.51**	**309**	P	**P**	**17 18 14.4**	**-0.4**
	0.2nm,0.4s,baz=84,slow=7.9,SNR=2.9						
WRA	**Warramunga Arr**	**55.77**	**188**	P	**P**	**17 19 26.1**	**+1.5**
	0.3nm,0.8s,baz=23,slow=6.8,SNR=3.4						

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*MAN **23** 17:34:40.6, 15°.01N×119°.77E, h20^{km}, mb5.1, ML4.0, MS4.1*

*IDC **23** 17:34:44.9±1.5, 14°.92N×119°.89E, h81^{km}±16^{km}, mb3.5/15, mb1 3.6/15, mb1mx3.4/63, mbtmp3.8/15, MS3.1/4, Ms1 3.2/4, ms1mx2.7/38, Error ellipse: s-maj=24.6km s-min=14.3km az=68.0*

ISC 23 17:34:39.8±1.5**, 15°.00N**±0°.03×**119°.64E**±0°.07**, h30**^{km}±11^{km}**, n36, σ2^{s}.10**/41**, mb4.0**/14**, 5C, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCZP	**Santa Cruz**	**0.82**	**19**	*e*P	**Pn**	**17 34 54.9**	**-0.3**
SCZP				*e*S	**Sb**	**17 35 06.4**	**+0.1**
LUBP	**Lubang**	**1.39**	**155**	*e*P	**Pn**	**17 35 03.3**	**+0.3**
LUBP				*e*S	**Sb**	**17 35 28.7**	**+6.3**
BOLP	**Bolinao**	**1.40**	**11**	*e*P	**Pn**	**17 35 03.8**	**+0.5**
QVPH	**Quezon City--P**	**1.42**	**104**	*e*P	**Pn**	**17 35 04.0**	**+0.5**
QVPH				*e*S	**Sb**	**17 35 25.0**	**+1.7**
PCPH	**Palayan**	**1.52**	**68**	⇑*i*P	**Pn**	**17 35 04.1**	**-0.7**
PCPH				*e*S	Sn	17 35 13.3	-10
TGY	**Tagaytay City**	**1.54**	**125**	P	**Pb**	**17 35 06.6**	**-1.1**
	327nm,0.3s,baz=292,slow=2.5,SNR=25						
TGY				S	**Sn**	**17 35 25.2**	**+1.0**
	375nm,0.3s,baz=223,slow=18,SNR=5.7						
TGY	**Tagaytay City**	**1.54**	**125**	⇑*i*P	**Pb**	**17 35 06.5**	**-1.2**
TGY				*i* S	**Sn**	**17 35 24.1**	**-0.1**
PGP	**Puerto Galera**	**1.96**	**139**	⇑*i*P	**Pn**	**17 35 11.2**	**+0.3**
PGP				*i* S	**Sn**	**17 35 35.8**	**+1.3**
LQP	**Lukban**	**2.04**	**115**	⇑*e*P	**Pn**	**17 35 13.9**	**+1.7**
BOAC	**Boac**	**2.63**	**125**	*e*P	**Pn**	**17 35 21.4**	**+1.3**
ABRA	**Dolores**	**2.83**	**21**	*e*P	**Pn**	**17 35 25.7**	**+2.7**
ABRA				*e*S	**Sb**	**17 36 04.4**	**+0.4**
CAUP	**Cauayan**	**2.86**	**47**	*e*P	**Pn**	**17 35 26.3**	**+2.9**
SJMP	**San Jose**	**2.90**	**150**	*e*P	**Pn**	**17 35 26.8**	**+2.8**
SJMP				*e*S	**Sb**	**17 36 02.9**	**-3.1**
GQP	**Guinayangan**	**2.93**	**111**	⇑*e*P	Pb	17 35 36.4	+5.1
GQP				*e*S	Sb	17 36 17.8	+11
BUSP	**Coron**	**3.02**	**170**	*e*P	**Pn**	**17 35 27.2**	**+1.6**
BUSP				*e*S	**Sb**	**17 36 04.9**	**-4.6**
APYP	**Conner**	**3.24**	**28**	*e*P	**Pn**	**17 35 32.0**	**+3.4**
APYP				*e*S	**Sb**	**17 36 12.9**	**-2.8**
OTRP	**Odiongan**	**3.50**	**138**	*e*P	**Pn**	**17 35 34.9**	**+2.8**
PVCP	**Virac**	**4.59**	**107**	*e*P	**Pn**	**17 35 48.1**	**+0.9**
DAV	**Davao City (W)**	**9.80**	**143**	LR	LR	17 41 35.0	
	comp=Z,184nm,18.1s,baz=316,slow=43						
CMAR	**Chiang Mai Arr**	**20.11**	**283**	P	Pn	17 39 14.7	+1.4
	0.9nm,0.8s,baz=104,slow=10,SNR=5.9						
CMAR				LR	LR	17 47 20.0	
	comp=Z,36nm,19.2s,baz=220,slow=37						
JNU	**Nakatsue**	**20.73**	**28**	LR	LR	17 47 46.6	
	comp=Z,26nm,18.1s,baz=136,slow=38						
KSRS	**Korea Array**	**23.55**	**17**	P	**P**	**17 39 47.1**	**-0.5**
	0.6nm,0.7s,baz=190,slow=10,SNR=3.9						
ASAJ	**Asahikawa**	**34.99**	**29**	P	**P**	**17 41 28.9**	**-0.5**
	1.6nm,0.7s,baz=241,slow=17,SNR=4.2						
KLR	**Kul'dur**	**35.55**	**14**	P	**P**	**17 41 34.4**	**+0.2**
	0.1nm,0.6s,baz=228,slow=3.4,SNR=5.2						
WRA	**Warramunga Arr**	**37.61**	**157**	P	**P**	**17 41 49.8**	**-2.2**
	1.9nm,0.3s,baz=330,slow=10,SNR=40						
ASAR	**Alice Springs**	**40.88**	**160**	P	**P**	**17 42 17.9**	**-1.3**
	1.5nm,0.4s,baz=336,slow=7.3,SNR=44						
MKAR	**Makanchi Array**	**44.38**	**323**	P	**P**	**17 42 50.5**	**+3.0**
	0.1nm,0.4s,baz=116,slow=9.8,SNR=2.8						
AAK	**Ala-Archa**	**47.43**	**315**	LR	LR	18 05 00.0	
	comp=Z,40nm,18.7s,baz=142,slow=38						
ZALV	**Zalesovo Beam**	**47.44**	**333**	P	**P**	**17 43 10.5**	**-0.9**
	1.3nm,0.7s,baz=142,slow=7.3,SNR=3.4						
KURBB	**Kurchatov Arra**	**48.55**	**326**	P	**P**	**17 43 21.1**	**+1.0**
	0.5nm,0.8s,baz=121,slow=7.5,SNR=3.8						
ARCES	**ARCESS Array B**	**77.51**	**339**	P	**P**	**17 46 31.4**	**-0.8**
	0.9nm,0.6s,baz=69,slow=7.9,SNR=4.4						
SPITS	**Spitsbergen Ar**	**78.12**	**348**	P	**P**	**17 46 36.4**	**+0.9**
	2.4nm,0.6s,baz=36,slow=7.5,SNR=3.7						
FINES	**FINESS Array B**	**78.66**	**331**	P	**P**	**17 46 40.2**	**+1.5**
	1.0nm,0.6s,baz=84,slow=5.9,SNR=6.8						
HFS	**Hagfors**	**84.85**	**331**	P	**P**	**17 47 10.7**	**-0.6**
	1.3nm,0.8s,baz=72,slow=15,SNR=4.1						
NOA	**NORSAR Array B**	**85.64**	**332**	P	**P**	**17 47 15.7**	**+0.3**
	0.7nm,0.7s,baz=70,slow=6.9,SNR=3.3						
YKA	**Yellowknife Ar**	**91.97**	**22**	P	**P**	**17 47 43.8**	**-1.6**
	0.4nm,0.7s,baz=310,slow=4.6,SNR=5.1						

IDC 23 17:35:04.3±1.1**, 3°.09N**×**128°.29E, h0**^{km}**, mb3.4**/6**, mb1 3.6**/6**, mb1mx3.3**/56**, mbtmp3.4**/6**, Error ellipse: s-maj=67.4km s-min=19.1km az=74.0, North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.65**	**166**	P	P	17 40 17.5	0.0
	0.3nm,0.3s,baz=345,slow=10.0,SNR=17						
ASAR	**Alice Springs**	**27.15**	**169**	P	P	17 40 49.1	-0.4
	0.2nm,0.5s,baz=347,slow=7.4,SNR=12						
MJAR	**Matsushiro Arr**	**34.53**	**14**	P	P	17 41 54.4	-0.1
	0.6nm,0.6s,baz=185,slow=8.2,SNR=2.7						
MKAR	**Makanchi Array**	**58.97**	**325**	P	P	17 45 06.1	+0.4
	0.2nm,0.5s,baz=116,slow=8.8,SNR=4.6						
KURBB	**Kurchatov Arra**	**63.12**	**327**	P	P	17 45 34.0	+0.2
	0.3nm,0.5s,baz=126,slow=5.5,SNR=4.2						
BVAR	**Borovoye Array**	**68.70**	**327**	P	P	17 46 09.4	-0.3
	0.2nm,0.4s,baz=105,slow=5.9,SNR=2.2						

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*IDC **23** 17:42:00.2±3.7, 41°.24N×113°.09W, h0^{km}, mb1 2.7/1, mb1mx2.6/60, mbtmp2.3/1, ML3.0/1, Error ellipse: s-maj=133.3km s-min=26.6km az=149.0*

*NEIC **23** 17:42:01.3±1.1, 41°.00N×112°.78W, h0^{km}, ML1.8, Error ellipse: s-maj=19.8km s-min=13.2km az=110.0, Suspected Mining explosion.*

NEIC 66 km [41 miles] NW of Tooele.

ISC 23 17:41:58.9±1.4**, 41°.27N**±0°.05×**112°.95W**±0°.08**, h0**^{km}**, n8, σ1^{s}.21**/7**, Utah**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUG	**Dugway, Tooele**	**1.08**	**175**	*e*Pn	**Pg**	**17 42 19.9**	**+0.3**
HWUT	**Hardware Ranch**	**1.09**	**72**	*e*Pn	**Pn**	**17 42 22.5**	**+0.8**
AHID	**Auburn Hatcher**	**2.03**	**42**	*e*Pn	**Pg**	**17 42 38.1**	**+0.3**
HLID	**Hailey**	**2.53**	**335**	*e*Pn	**Pg**	**17 42 47.9**	**+0.4**
BW06	**Boulder Array**	**2.93**	**58**	*e*Pn	**Pb**	**17 42 50.2**	**-2.0**
PDAR	**Pinedale Array**	**2.93**	**58**	Pn	**Pb**	**17 42 51.8**	**-0.5**
	0.2nm,0.3s,baz=225,slow=12,SNR=4.8						
PDAR				Pg	**Pg**	**17 42 56.0**	**+0.8**
	1.4nm,0.3s,baz=217,slow=16,SNR=10						
PDAR				Lg	Lg	17 43 36.0	
	1.6nm,0.3s,baz=218,slow=21,SNR=8.0						
I56US	**NEWPORT INFRAS**	**7.59**	**338**	*i*		18 26 00.0	
	baz=159,slow=320,SNR=1.5						
I57US	**PINON FLAT INF**	**8.14**	**201**	*i*		18 29 40.0	
	baz=19,slow=311,SNR=1.9						

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*IDC **23** 17:43:28.6±1.6, 17°.79S×178°.58W, h550^{km}±18^{km}, mb3.6/19, mb1 3.8/21, mb1mx3.6/44, mbtmp4.5/21, Error ellipse: s-maj=12.7km s-min=10.0km az=139.0*

*ISCJB **23** 17:43:30.1±0.4, 17°.82S±0°.09×178°.70W±0°.10, h579^{km}, mb4.1/20, Error ellipse: s-maj=13.8km s-min=10.6km az=42.6*

ISC 23 17:43:31.0±0.4**, 17°.8S**±0°.1×**178°.7W**±0°.1**, h579**^{km}**, n82, σ0^{s}.81**/83**, mb4.1**/20**, 5C-7D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.68**	**61**	P	P	17 45 20.8	-5.9
	6.6nm,0.3s,baz=250,slow=15,SNR=5.2						
AFI				S	S	17 46 41.6	-20
	3.6nm,0.3s,baz=228,slow=15,SNR=3.4						
DZM	**Mont Dzumac**	**14.63**	**251**	P	**P**	**17 46 35.0**	**-1.3**
	1.4nm,0.3s,baz=89,slow=19,SNR=8.2						
URZ	**Urewera**	**20.70**	**189**	P	**P**	**17 47 32.3**	**+0.5**
	29nm,1.2s,baz=350,slow=12,SNR=4.4						
CTA	**Charters Tower**	**33.22**	**260**	P	**P**	**17 49 21.4**	**0.0**
	5.1nm,0.6s,baz=86,slow=11,SNR=8.5						
STKA	**Stephens Creek**	**38.46**	**241**	P	**P**	**17 50 05.2**	**+0.8**
	16nm,0.5s,baz=90,slow=10.0,SNR=57						
WRA	**Warramunga Arr**	**44.41**	**259**	P	**P**	**17 50 51.0**	**-0.5**
	4.9nm,0.5s,baz=92,slow=7.0,SNR=94						
WRA				PcP	**PcP**	**17 52 23.0**	**+0.4**
	1.7nm,0.4s,baz=92,slow=3.5,SNR=9.8						
ASAR	**Alice Springs**	**44.58**	**254**	P	**P**	**17 50 53.0**	**+0.2**
	64nm,0.5s,baz=89,slow=7.8,SNR=1999						
ASAR				PcP	**PcP**	**17 52 23.4**	**+0.2**
	2.8nm,0.4s,baz=102,slow=3.8,SNR=8.6						
NWAO	**Narrogin (SRO)**	**59.04**	**242**	P	**P**	**17 52 36.3**	**-0.1**
	9.1nm,0.7s,baz=7.5,slow=7.4,SNR=4.5						
VNDA	**Vanda**	**60.51**	**185**	P	**P**	**17 52 46.0**	**+0.6**
	0.7nm,0.5s,baz=354,slow=8.7,SNR=6.1						
RPN	**Rapa Nui**	**64.05**	**112**	P	**P**	**17 53 07.4**	**-1.7**
	64nm,0.6s,baz=173,slow=8.1,SNR=3.0						
MJAR	**Matsushiro Arr**	**67.69**	**323**	P	**P**	**17 53 31.3**	**-0.1**
	0.7nm,0.4s,baz=175,slow=6.7,SNR=3.9						
QSPA	**South Pole Qui**	**72.24**	**180**	P	**P**	**17 53 58.3**	**+0.2**
	11nm,0.8s,baz=34,slow=3.6,SNR=30						
PETK	**Petropavlovsk-**	**73.53**	**345**	P	**P**	**17 54 05.5**	**+0.1**
	1.5nm,0.7s,baz=140,slow=8.3						
KSRS	**Korea Array**	**74.47**	**318**	P	**P**	**17 54 11.5**	**+0.5**
	0.4nm,0.6s,baz=115,slow=5.1,SNR=3.6						
YBH	**Yreka Blue Hor**	**78.61**	**39**	P	**P**	**17 54 34.4**	**+0.7**
	2.0nm,0.6s,baz=180,slow=4.0,SNR=4.3						
NVAR	**Mina Array Bea**	**79.53**	**44**	P	**P**	**17 54 39.7**	**+0.9**
	2.3nm,0.8s,baz=221,slow=8.8,SNR=13						
MAW	**Mawson**	**83.86**	**200**	P	**P**	**17 55 00.7**	**+0.6**
	5.6nm,0.5s,baz=165,slow=3.1,SNR=11						
ILAR	**Eielson Array**	**85.85**	**13**	P	**P**	**17 55 08.6**	**-1.0**
	0.9nm,0.4s,baz=219,slow=5.3,SNR=15						
TXAR	**Lajitas Array**	**86.15**	**58**	P	**P**	**17 55 13.5**	**+1.5**
	3.4nm,0.8s,baz=220,slow=6.1,SNR=37						
PDAR	**Pinedale Array**	**87.45**	**44**	P	**P**	**17 55 18.4**	**+0.4**
	2.0nm,0.6s,baz=217,slow=3.5,SNR=17						
CMAR	**Chiang Mai Arr**	**88.63**	**290**	P	**P**	**17 55 24.1**	**+0.5**
	1.0nm,0.4s,baz=108,slow=2.9,SNR=11						
SNAA	**Sanae**	**90.69**	**179**	P	**P**	**17 55 31.9**	**-0.5**
SNAA	**Sanae**	**90.69**	**179**	P	**P**	**17 55 31.6**	**-0.7**
	3.5nm,0.5s,baz=203,slow=12,SNR=12						
VNA3	**Neumayer Olymp**	**90.84**	**176**	P	**P**	**17 55 32.8**	**-0.2**
VNA1	**Neumayer--Stat**	**91.51**	**177**	P	**P**	**17 55 36.5**	**+0.5**
YKA	**Yellowknife Ar**	**94.35**	**25**	P	**P**	**17 55 48.8**	**-0.2**
	0.5nm,0.6s,baz=246,slow=4.3,SNR=5.1						
MKAR	**Makanchi Array**	**108.90**	**314**	PKiKP	**PKiKP**	**18 00 54.4**	**-0.8**
	0.8nm,0.5s,baz=26,slow=1.4,SNR=18						
KURBB	**Kurchatov Arra**	**111.65**	**318**	PKiKP	**PKiKP**	**18 00 58.4**	**-1.8**
	1.0nm,0.6s,baz=106,slow=1.8,SNR=9.3						
BVAR	**Borovoye Array**	**116.62**	**321**	PKP	**PKPdf**	**18 01 09.2**	**-0.5**
	2.2nm,0.4s,baz=127,slow=1.8,SNR=21						
ARU	**Arti**	**122.64**	**326**	PKP	**PKPdf**	**18 01 20.9**	**-0.3**
	3.2nm,0.4s,baz=60,slow=3.4,SNR=7.4						
AKTO	**Aktyubinsk**	**124.64**	**319**	PKP	**PKPdf**	**18 01 25.4**	**+0.1**
	2.0nm,0.7s,baz=54,slow=7.0,SNR=4.7						
ARCES	**ARCESS Array B**	**126.18**	**350**	PKP	**PKPdf**	**18 01 27.8**	**+0.2**
	2.3nm,0.6s,baz=27,slow=1.4,SNR=11						
FINES	**FINESS Array B**	**133.03**	**344**	PKP	**PKPdf**	**18 01 40.4**	**-0.4**
	1.4nm,0.6s,baz=118,slow=2.7,SNR=6.0						
NOA	**NORSAR Array B**	**136.26**	**353**	PKP	**PKPdf**	**18 01 48.0**	**+1.1**
	1.0nm,0.8s,baz=18,slow=4.4,SNR=3.0						
AKASG	**Malin Array Be**	**140.37**	**332**	PKP	**PKPdf**	**18 01 56.7**	**+2.0**
	1.0nm,0.3s,baz=44,slow=3.2,SNR=5.2						
BURAR	**Bucovina Array**	**144.42**	**332**	⇓*i*P	**PKPab**	**18 02 03.7**	**+1.0**
BIZ	**Bicaz**	**144.51**	**330**	⇓*i*P	**PKPab**	**18 02 03.4**	**+0.5**
BRTR	**Keskin Array B**	**144.55**	**315**	PKP	PKPbc	18 02 03.1	+0.3
	4.6nm,0.8s,baz=112,slow=2.0,SNR=24						
TESR	**Tescani**	**144.56**	**329**	⇓*i*P	**PKPab**	**18 02 02.8**	**-0.3**
ASF	**Jabal al Asfar**	**144.92**	**301**	PKP	PKPbc	18 02 04.1	0.0
	2.6nm,0.7s,baz=82,slow=5.0,SNR=5.6						
CRVS	**Cervenica-Dubn**	**144.96**	**337**	*e*	**PKPab**	**18 02 04.2**	**-0.4**
ANTO	**Ankara**	**145.04**	**315**	⇑*i*P	**PKPab**	**18 02 04.9**	**-0.4**
TRPA	**Tarpa**	**145.16**	**335**	⇑*i*P	**PKPbc**	**18 02 04.5**	**+0.3**
CLL	**Collm**	**145.32**	**347**	⇓*i*PKPbc	**PKPbc**	**18 02 05.1**	**+0.5**
	comp=Z,14nm,1.1s						
UPC	**Upice**	**145.34**	**343**	*e*PKP	**PKPab**	**18 02 05.7**	**-0.3**
DPC	**Dobruska-Polom**	**145.39**	**343**	*e*PKP	**PKPab**	**18 02 05.7**	**-0.6**
DPC				*e*PKP	**PKPbc**	**18 02 05.9**	**+1.0**
BRG	**Berggiesshubel**	**145.52**	**346**	*e*PKP	**PKPbc**	**18 02 05.3**	**+0.1**
	comp=Z,7.4nm,1.2s						
MORC	**Moravsky Berou**	**145.55**	**341**	*e*PKP	**PKPbc**	**18 02 05.9**	**+0.5**
DOPR	**Dopca**	**145.56**	**330**	⇑*i*P	**PKPab**	**18 02 06.9**	**-0.1**
MLR	**Muntele Rosu**	**145.63**	**329**	PKPbc	**PKPbc**	**18 02 05.4**	**-0.5**
	comp=Z,4.5nm,0.8s,baz=138,slow=8.5,SNR=4.7						
PVCC	**Panska Ves**	**145.69**	**345**	*e*PKP	**PKPbc**	**18 02 06.4**	**+0.7**
MMAI	**Mount Meron Ar**	**145.89**	**303**	PKPbc	**PKPbc**	**18 02 07.5**	**+0.6**
	comp=Z,5.8nm,0.5s,baz=72,slow=5.4,SNR=21						
VOIR		**146.11**	**329**	⇑*i*P	**PKPbc**	**18 02 07.7**	**+0.6**
DRGR		**146.15**	**333**	⇓*i*P	**PKPbc**	**18 02 07.9**	**+0.7**
PRU	**Pruhonice**	**146.19**	**345**	*e*PKP	**PKPbc**	**18 02 07.5**	**+0.4**
PRU				*e*x	x	18 02 10.3	
GOPC	**GO Pecny, Ondr**	**146.20**	**344**	*e*PKP	**PKPbc**	**18 02 07.6**	**+0.5**
VYHS	**Vyhne**	**146.25**	**339**	*e*	**PKPbc**	**18 02 08.3**	**+1.0**
VRAC	**Vranov**	**146.25**	**342**	*e*PKP	**PKPbc**	**18 02 07.6**	**+0.3**
JAVC	**Velka Javorina**	**146.32**	**340**	*e*PKP	**PKPab**	**18 02 09.3**	**-0.7**
ARR	**Arges**	**146.36**	**330**	⇓*i*P	**PKPbc**	**18 02 08.9**	**+1.1**
KRUC	**Moravsky**	**146.53**	**342**	*e*PKP	**PKPbc**	**18 02 08.6**	**+0.6**
KHC	**Kasperske Hory**	**147.23**	**345**	*e*PKP	**PKPbc**	**18 02 10.6**	**+0.6**
KHC				*e*x	x	18 02 13.3	
GERES	**GERESS Array B**	**147.46**	**345**	PKPbc	**PKPbc**	**18 02 11.1**	**+0.5**
	comp=Z,5.0nm,0.5s,baz=23,slow=2.9,SNR=34						
CONA	**Conrad Observa**	**147.70**	**342**	*e*PKPbc	**PKPbc**	**18 02 11.8**	**+0.5**
	comp=Z,4.1nm,0.6s						
HERR	**Herculane**	**147.76**	**331**	⇓*i*P	**PKPbc**	**18 02 11.5**	**+0.1**
MOA	**Molln**	**148.23**	**343**	*e*PKPbc	**PKPbc**	**18 02 13.8**	**+1.3**
	comp=Z,4.5nm,0.8s						
ARSA	**Arzberg**	**148.41**	**341**	*e*PKPdf	**PKPdf**	**18 02 10.0**	**+1.3**
	comp=Z,6.4nm,1.2s						
SOKA	**Soboth**	**149.07**	**342**	*e*PKPbc	**PKPbc**	**18 02 14.2**	**-0.5**
	comp=Z,5.2nm,1.1s						
VTS	**Vitosha**	**149.08**	**328**	⇑*i*P	**PKPbc**	**18 02 15.6**	**+0.7**
KBA	**Koelnbreinsper**	**149.19**	**344**	*e*PKPbc	**PKPbc**	**18 02 14.8**	**-0.3**
	comp=Z,3.4nm,0.4s						
OBKA	**Obir**	**149.37**	**342**	*e*PKPbc	**PKPbc**	**18 02 16.2**	**+0.8**
	comp=Z,16nm,1.5s						
WATA	**Walderalm**	**149.38**	**346**	*e*PKPbc	**PKPbc**	**18 02 16.7**	**+1.2**
	comp=Z,4.0nm,0.5s						
RETA	**Reutte**	**149.41**	**347**	*e*PKPbc	**PKPbc**	**18 02 15.7**	**+0.2**
	comp=Z,2.5nm,0.6s						
WTTA	**Wattenberg**	**149.44**	**346**	*e*PKPbc	**PKPbc**	**18 02 16.0**	**+0.4**
	comp=Z,13nm,0.7s						
MOTA	**Moosalm**	**149.48**	**347**	*e*PKPbc	**PKPbc**	**18 02 15.1**	**-0.7**
	comp=Z,2.3nm,0.4s						
MYKA	**Terra Mystica**	**149.52**	**343**	*e*PKPbc	**PKPbc**	**18 02 14.8**	**-1.0**
	comp=Z,6.0nm,0.6s						
ABTA	**Abfaltersbach**	**149.71**	**345**	*e*PKPbc	**PKPbc**	**18 02 15.5**	**-0.7**
	comp=Z,8.8nm,0.6s						
DAVA	**Damuels**	**149.78**	**348**	PKPbc	**PKPbc**	**18 02 16.3**	**-0.2**
	comp=Z,5.5nm,0.8s						
FETA	**Feichten**	**149.86**	**347**	*e*PKPbc	**PKPbc**	**18 02 17.3**	**+0.6**
	comp=Z,5.8nm,0.7s						
DAVOX	**Davos/Dischmat**	**150.27**	**348**	PKPbc	**PKPbc**	**18 02 18.3**	**+0.6**
	comp=Z,11nm,0.6s,baz=102,slow=7.6,SNR=24						
ESDC	**Sonseca Array**	**157.74**	**11**	PKPab	**PKPab**	**18 02 55.7**	**-2.7**
	comp=Z,0.3nm,0.5s,baz=358,slow=4.0,SNR=2.8						
TORD	**Torodi Ar. Bea**	**175.34**	**184**	PKP	**PKPdf**	**18 02 34.7**	**-1.3**
	comp=Z,59nm,0.6s,baz=131,slow=7.3						
TORD				PKPab	**PKPab**	**18 04 15.2**	**-1.3**
	baz=180,slow=4.3						

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*ISCJB **23** 17:49:24.2±0.3, 5°.39S±0°.04×146°.85E±0°.05, h123^{km}, mb4.3/25, Error ellipse: s-maj=7.5km s-min=5.6km az=166.9*

*IDC **23** 17:49:27.1±1.5, 5°.48S×146°.65E, h140^{km}±15^{km}, mb4.0/22, mb1 4.2/26, mb1mx4.1/45, mbtmp4.5/26, MS3.3/4, Ms1 3.3/4, ms1mx2.7/45, Error ellipse: s-maj=18.5km s-min=9.6km az=82.0*

*NEIC **23** 17:49:28.2±1.1, 5°.46S×146°.66E, h148^{km}±12^{km}, mb4.8/6, Error ellipse: s-maj=10.9km s-min=7.5km az=91.0*

*DJA **23** 17:49:35.4±0.6, 6°S±3°×14°6E±°, h103^{km}±7^{km}, M5.1/21, mB5.3/7, mb4.9/21, MLv5.5/3, Mw(mB)4.7/7*

ISC 23 17:49:26.2±0.4**, 5°.44S**±0°.05×**146°.67E**±0°.06**, h123**^{km}**, n56, σ2^{s}.20**/61**, mb4.4**/25**, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	**3.97**	**173**	P	**Pn**	**17 50 26.2**	**+0.7**
	84nm,0.3s,baz=350,slow=8.4,SNR=406						
PMG				S	**Sn**	**17 51 10.9**	**-0.6**
	113nm,0.3s,baz=58,slow=20,SNR=20						
JAY	**Jayapura**	**6.62**	**296**	P	**Pn**	**17 51 03.8**	**+2.6**
JAY				S	**Sn**	**17 52 13.5**	**-1.8**
GENI	**Genyem**	**7.07**	**293**	P	**Pn**	**17 51 09.7**	**+2.4**
GENI				S	**Sn**	**17 52 25.3**	**-1.0**
SRPI	**Serui, Papua**	**10.99**	**288**	P	**Pn**	**17 52 03.4**	**+3.3**
SRPI				S	**Sn**	**17 53 59.3**	**-2.0**
RKPI	**Ransiki, Papua**	**13.06**	**287**	P	**Pn**	**17 52 30.6**	**+3.3**
HNR	**Honiara**	**13.75**	**108**	P	**Pn**	**17 52 37.7**	**+1.5**
	2.3nm,0.3s,baz=352,slow=17,SNR=6.8						
HNR	**Honiara**	**13.75**	**108**	P	**Pn**	**17 52 37.7**	**+1.5**

	631nm,0.8s						
CTA	**Charters Tower**	14.57	182	P	P	17 52 53.1	+3.4
	3.4nm,0.3s,baz=0.4,slow=14,SNR=39						
CTAO	**Charters Tower**	14.57	182	*e*P	P	17 52 52.7	+3.1
	210nm,0.7s						
FAKI	**Fak Fak**	14.60	279	P	Pn	17 52 48.7	+1.7
SAUI	**Saumlaki**	15.47	260	P	Pn	17 52 59.5	+1.5
SWI	**Sorong**	16.04	286	P	P	17 53 08.0	+2.0
BNDI	**Bandanaira**	16.73	272	P	P	17 53 16.8	+3.2
MSAI	**Masohi**	17.81	276	P	Pn	17 53 29.3	+2.8
AAI	**Ambon**	18.50	275	P	Pn	17 53 37.5	+2.8
WRAB	**Tennant Creek**	18.74	219	*e*P	P	17 53 36.4	+0.7
	28nm,0.6s						
WRA	**Warramunga Arr**	18.76	219	P	P	17 53 36.8	+0.9
	3.8nm,0.3s,baz=40,slow=12,SNR=73						
WRA				S	S	17 56 56.4	-6.6
	0.1nm,0.3s,baz=43,slow=20,SNR=3.7						
GUMO	**Guam**	18.99	355	P	P	17 53 39.7	+1.4
	4.3nm,0.3s,baz=180,slow=10,SNR=5.9						
NLAI	**Namlea**	19.64	276	P	Pn	17 53 50.3	+2.3
LBMI	**Labuha**	19.72	283	P	Pn	17 53 51.1	+2.0
SANI	**Sanana**	20.91	278	P	Pn	17 54 04.0	+1.1
ASAR	**Alice Springs**	21.90	213	P	P	17 54 10.2	+0.5
	9.9nm,0.5s,baz=46,slow=8.0,SNR=58						
ASAR				S	S	17 57 57.8	-6.1
	1.1nm,1.1s,baz=31,slow=22,SNR=2.8						
ASAR				LR	LR	18 03 26.5	
	comp=Z,150nm,18.2s,baz=38,slow=38						
SOEI	**Soe**	22.61	258	P	P	17 54 20.0	+2.9
KMSI	**Cibinong**	23.43	284	P	P	17 54 30.1	+5.4
DZM	**Mont Dzumac**	25.29	133	P	P	17 54 41.2	-0.3
	12nm,0.7s,baz=284,slow=7.3,SNR=9.1						
DZM				LR	LR	18 03 50.4	
	comp=Z,56nm,20.8s,baz=303,slow=34						
STKA	**Stephens Creek**	26.73	190	P	P	17 54 54.0	-0.3
	0.9nm,0.4s,baz=343,slow=7.7,SNR=3.2						
STKA				LR	LR	18 05 42.0	
	comp=Z,70nm,18.9s,baz=21,slow=36						
JOW	**Kunigami**	36.69	332	P	P	17 56 20.9	-0.6
	16nm,0.7s,baz=135,slow=5.7,SNR=5.3						
JNU	**Nakatsue**	41.17	340	P	P	17 56 57.9	-0.8
	13nm,0.9s,baz=132,slow=5.3,SNR=11						
MJAR	**Matsushiro Arr**	42.50	350	P	P	17 57 08.7	-0.8
	1.9nm,0.8s,baz=183,slow=8.9,SNR=9.7						
MAJO	**Matsushiro**	42.51	350	*e*P	P	17 57 08.1	-1.4
	3.6nm,0.6s						
KSRS	**Korea Array**	46.11	339	P	P	17 57 38.1	0.0
	7.2nm,0.9s,baz=156,slow=9.2,SNR=27						
KSAR	**Wonju Array Be**	46.12	339	P	P	17 57 38.1	-0.1
ASAJ	**Asahikawa**	49.46	356	P	P	17 58 04.8	+0.9
	3.9nm,0.6s,baz=180,slow=6.1,SNR=11						
ASAJ				LR	LR	18 18 25.1	
	comp=Z,15nm,20.2s,baz=148,slow=35						
USRK	**Ussuriysk Ar.**	51.15	346	P	P	17 58 15.4	-1.2
	3.6nm,0.5s,baz=194,slow=7.0						
CMAR	**Chiang Mai Arr**	52.70	298	P	P	17 58 28.1	-0.5
	1.0nm,0.6s,baz=108,slow=5.6,SNR=6.9						
BJT	**Baijiatuau**	53.24	331	*e*P	P	17 58 32.1	-0.1
PETK	**Petropavlovsk-**	59.07	8	P	P	17 59 12.5	-0.8
	7.7nm,0.8s,baz=145,slow=5.3						
HIA	**Hailar**	59.31	340	*e*P	P	17 59 14.4	-0.7
ULN	**Ulaanbaatar**	63.46	331	*e*P	P	17 59 43.4	+0.1
	6.9nm,0.7s						
LSA	**Lhasa**	63.64	307	*e*P	P	17 59 44.8	-0.3
SONM	**Songino Array**	63.76	331	P	P	17 59 45.1	-0.1
	3.3nm,0.7s,baz=154,slow=6.6,SNR=21						
VNDA	**Vanda**	72.49	177	P	P	18 00 38.5	-0.5
	1.4nm,0.5s,baz=333,slow=7.9,SNR=11						
MKAR	**Makanchi Array**	76.86	320	P	P	18 01 03.8	-1.0
	0.7nm,0.5s,baz=97,slow=8.5,SNR=11						
ZALV	**Zalesovo Beam**	78.36	328	P	P	18 01 11.0	-1.9
	1.9nm,0.5s,baz=116,slow=6.4,SNR=6.8						
KURK	**Kurchatov**	80.56	323	P	P	18 01 23.1	-1.8
KURBB	**Kurchatov Arra**	80.59	323	P	P	18 01 23.1	-2.0
	0.5nm,0.6s,baz=108,slow=5.3,SNR=4.8						
MAW	**Mawson**	82.64	203	P	P	18 01 34.4	-1.1
	2.6nm,0.6s,baz=124,slow=9.4,SNR=4.8						
QSPA	**South Pole Qui**	84.53	180	P	P	18 01 44.0	-1.4
	1.8nm,0.6s,baz=332,slow=12,SNR=9.3						
QSPA	**South Pole Qui**	84.53	180	P	P	18 01 44.0	-1.4
ILAR	**Eielson Array**	85.10	23	P	P	18 01 46.2	-1.8
	6.1nm,0.8s,baz=254,slow=5.1,SNR=38						
BVAR	**Borovoye Array**	86.12	324	P	P	18 01 51.2	-2.2
	1.5nm,0.6s,baz=90,slow=4.6,SNR=9.3						
EGAK	**Eagle**	87.39	24	*e*P	P	18 01 58.9	-0.4
	4.0nm,1.0s						
NVAR	**Mina Array Bea**	97.28	52	P	P	18 02 46.0	+0.1
	0.5nm,0.6s,baz=272,slow=4.3,SNR=4.7						
YKA	**Yellowknife Ar**	98.83	28	P	P	18 02 51.6	-0.3
	1.4nm,1.2s,baz=281,slow=4.3,SNR=4.0						
TORD	**Torodi Ar. Bea**	144.63	285	PKP	PKPab	18 08 45.2	-3.1
	76nm,0.5s,baz=78,slow=4.1						
KOWA	**Kowa**	149.79	290	PKPbc	PKPdf	18 08 59.0	+1.0
	1.3nm,0.4s,baz=90,slow=3.0,SNR=3.0						

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*IDC **23** 17:55:45.6±6.5, 35°.93N×69°.21E, h0^{km}, mb3.4/3, mb1 3.6/5, mb1mx3.3/61, mbtmp3.4/5, ML3.2/2, Error ellipse: s-maj=197.9km s-min=25.8km az=100.0*

*NNC **23** 17:56:17.7±6.0, 37°.09N×70°.42E, h0^{km}, mb3.9, mpv3.5, Error ellipse: s-maj=45.5km s-min=37.7km az=178.0*

ISC 23 17:55:48.8±1.8**, 36°.0N**±0°.1×**69°.6E**±0°.2**, h10^{km}, n8, σ3^{s}.21**/11**, 3C-3D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	5.05	36	⇓Pn	Pb	17 57 17.5	0.0
	7.5nm,0.3s						
SFK				⇑Sn	Sn	17 58 03.8	+0.5
	19nm,0.4s						
MNAS	**Manas**	6.86	18	⇑Pn	Pb	17 57 42.9	-5.3
	4.2nm,0.5s						
MNAS				⇑Sn	Sn	17 58 49.1	+1.2
	21nm,0.5s						
KK31	**Karatay Array**	7.14	5	⇓Pn	Pb	17 57 49.0	-3.9
	0.6nm,0.2s,baz=185,slow=13						
KK31				⇓Sn	Sn	17 58 59.5	+4.9
	3.3nm,0.4s,baz=186,slow=21						
AAK	**Ala-Archa**	7.63	28	Pn	Pn	17 57 43.8	+3.5
	0.4nm,0.3s,baz=231,slow=7.9,SNR=2.1						
AAK				Sn	Sn	17 59 01.6	-5.3
	0.2nm,0.3s,baz=209,slow=19,SNR=3.1						
MKAR	**Makanchi Array**	14.36	37	Pn	Pn	17 59 12.5	+0.3
	0.1nm,0.3s,baz=229,slow=15,SNR=3.7						
ZALV	**Zalesovo Beam**	20.85	26	P	P	18 00 30.4	-0.2
	0.6nm,0.4s,baz=219,slow=8.5,SNR=3.0						
WRA	**Warramunga Arr**	82.66	121	P	P	18 08 12.3	-0.5
	0.4nm,1.0s,baz=323,slow=4.9,SNR=4.8						
ASAR	**Alice Springs**	84.87	124	P	P	18 08 24.1	+0.1
	0.2nm,0.6s,baz=316,slow=5.1,SNR=6.8						

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*ISCJB **23** 17:59:08.9±0.5, 37°.61N±0°.02×36°.34E±0°.03, h1^{km}±5^{km}, Error ellipse: s-maj=4.6km s-min=3.9km az=143.2*

*CSEM **23** 17:59:08.9±0.1, 37°.59N×36°.33E, h5^{km}, ML2.7, Error ellipse: s-maj=3.9km s-min=3.2km az=11.0*

*DDA **23** 17:59:08.6, 37°.62N×36°.33E, h5^{km}, Ml2.7*

*ISK **23** 17:59:08.6, 37°.61N×36°.39E, h5^{km}, ML2.1/8*

ISC 23 17:59:08.9±0.8**, 37°.59N**±0°.03×**36°.35E**±0°.02**, h4^{km}**±5^{km}**, n29, σ0^{s}.45**/45**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANDN	**Andirin**	0.01	179	*i* P	Pg	17 59 09.8	-0.1
ANDN				*i* S	Sg	17 59 10.8	+0.2
ANDN	**Andirin**	0.01	179	P	Pg	17 59 09.8	-0.1
ANDN				S	Sg	17 59 10.8	+0.2
SAIM	**ADANA**	0.44	332	*i* P	Pg	17 59 17.5	+0.1
SAIM				*i* S	Sg	17 59 23.8	+0.7
SAIM	**ADANA**	0.44	332	P	Pg	17 59 17.5	+0.1
SAIM				S	Sg	17 59 23.8	+0.7
KMRS	**Kahramanmaras**	0.45	101	PG	Pg	17 59 17.5	-0.1
KMRS				SG	Sg	17 59 23.4	0.0
KMRS	**Kahramanmaras**	0.45	101	*e*Pg	Pg	17 59 17.5	-0.1
KMRS				*e*Sg	Sg	17 59 23.4	0.0
GAZ	**Gaziantep**	0.81	121	PG	Pg	17 59 24.3	-0.1
GAZ	**Gaziantep**	0.81	121	*e*Pg	Pg	17 59 24.3	-0.1
SARI	**SarD1z-Kayseri**	0.81	4	PG	Pg	17 59 24.5	-0.1
SARI				SG	Sb	17 59 36.0	-1.2
YAHY	**KAYSERI_Yahyal**	0.93	303	*i* P	Pg	17 59 26.1	-0.5
YAHY				*i* S	Sg	17 59 38.7	0.0
YAHY	**KAYSERI_Yahyal**	0.93	303	P	Pg	17 59 26.1	-0.5
YAHY				S	Sg	17 59 38.7	0.0
ELBS	**KAHRAMANMARAS**	0.96	40	*i* P	Pb	17 59 27.7	-0.5
ELBS				*i* S	Sb	17 59 41.7	+0.4
ELBS	**KAHRAMANMARAS**	0.96	40	P	Pb	17 59 27.7	-0.5
ELBS				S	Sb	17 59 41.7	+0.4
KUZU	**Kuzuini**	1.00	144	*i* P	Pb	17 59 28.8	-0.1
KUZU				*i* S	Sn	17 59 44.0	-0.4
KUZU	**Kuzuini**	1.00	144	P	Pb	17 59 28.8	-0.1
KARA	**Karaisali**	1.08	253	PN	Pg	17 59 29.4	-0.2
KARA	**Karaisali**	1.08	253	*e*Pn	Pg	17 59 29.4	-0.2
TAHT	**Tahtakopru-Hat**	1.22	186	PN	Pn	17 59 32.8	+0.1
TAHT	**Tahtakopru-Hat**	1.22	186	*e*Pn	Pn	17 59 32.8	+0.1
GULE	**Gulek**	1.29	257	*i* P	Pb	17 59 33.5	-0.3
GULE				*i* S	Sn	17 59 52.6	+1.1
GULE	**Gulek**	1.29	257	P	Pb	17 59 33.5	-0.3
GULE				S	Sn	17 59 52.6	+1.1
DARE	**Darende-Malaty**	1.33	42	PN	Pn	17 59 33.8	-0.5
DARE	**Darende-Malaty**	1.33	42	*e*Pn	Pn	17 59 33.8	-0.5
AKCD	**Akcadag**	1.43	60	*i* P	Pg	17 59 36.5	+0.1
AKCD				*i* S	Sn	17 59 55.6	+0.5
AKCD	**Akcadag**	1.43	60	P	Pg	17 59 36.5	+0.1
AKCD				S	Sn	17 59 55.6	+0.5
YAYL	**Yayladag**	1.57	187	PN	Pb	17 59 38.0	-0.5
YAYL	**Yayladag**	1.57	187	*e*Pn	Pb	17 59 38.0	-0.5
URFA	**Urfa**	1.98	94	PN	Pn	17 59 43.3	+0.1
URFA	**Urfa**	1.98	94	*e*Pn	Pn	17 59 43.3	+0.1

DDA 23 17:59:40.1, 39°.12N×29°.14E, h7^{km}, Ml2.0, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GDZ	**Gediz**	0.26	97	*i* P	Pg	17 59 45.6	+0.3
GDZ				*i* S	Sg	17 59 50.0	+1.0

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*ISK **23** 18:16:51.8, 38°.61N×43°.16E, h19^{km}, ML2.3/4*

*ISCJB **23** 18:16:53.6±0.5, 38°.65N±0°.03×43°.16E±0°.03, h10^{km}±5^{km}, Error ellipse: s-maj=5.1km s-min=4.5km az=157.2*

*CSEM **23** 18:16:53.0±0.2, 38°.65N×43°.15E, h10^{km}, ML2.3, Error ellipse: s-maj=4.1km s-min=3.9km az=74.0*

*DDA **23** 18:16:53.2, 38°.67N×43°.16E, h7^{km}, Ml2.7*

ISC 23 18:16:53.3±0.9**, 38°.65N**±0°.02×**43°.15E**±0°.03**, h13^{km}**±8^{km}**, n25, σ0^{s}.48**/42**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VANB	**Van**	0.19	107	PG	Pg	18 16 57.5	-0.2
VANB				SG	Sg	18 17 01.4	+0.7
VANB	**Van**	0.19	107	*e*Pg	Pg	18 16 57.5	-0.2
VANB				*e*Sg	Sg	18 17 01.4	+0.7
TVAN	**Van**	0.23	122	*i* P	Pg	18 16 57.5	-0.9
TVAN				*i* S	Sg	18 17 01.8	-0.1
TVAN	**Van**	0.23	122	P	Pg	18 16 57.5	-0.9
TVAN				S	Sg	18 17 01.8	-0.1
GEVA	**Gevas**	0.35	193	*i* P	Pg	18 17 00.1	-0.3
GEVA				*i* S	Sb	18 17 06.8	-0.1
GEVA	**Gevas**	0.35	193	P	Pg	18 17 00.1	-0.3
GEVA				S	Sb	18 17 06.8	-0.1
ADCV	**BITLIS_Adilcev**	0.37	295	*i* P	Pg	18 17 01.1	+0.3
ADCV				*i* S	Sb	18 17 08.1	+0.4
ADCV	**BITLIS_Adilcev**	0.37	295	P	Pg	18 17 01.1	+0.3
ADCV				S	Sb	18 17 08.1	+0.4
VMUR	**Van-Muradiye**	0.47	44	*i* P	Pg	18 17 02.6	0.0
VMUR				*i* S	Sb	18 17 10.9	+0.4
VMUR	**Van-Muradiye**	0.47	44	P	Pg	18 17 02.6	0.0
VMUR				S	Sb	18 17 10.9	+0.4
CLDR	**Caldiran**	0.77	50	PG	Pg	18 17 07.7	-0.6
CLDR				SG	Sb	18 17 19.6	+0.4
CLDR	**Caldiran**	0.77	50	*i* P	Pg	18 17 07.7	-0.6
CLDR				*i* S	Sb	18 17 19.4	+0.2
CLDR	**Caldiran**	0.77	50	P	Pg	18 17 07.7	-0.6
CLDR				S	Sb	18 17 19.4	+0.2
TUTA	**Tutak**	0.80	341	*i* P	Pg	18 17 08.1	-0.7
TUTA				*i* S	Sb	18 17 19.8	-0.1
TUTA	**Tutak**	0.80	341	P	Pg	18 17 08.1	-0.7
TUTA				S	Sb	18 17 19.8	-0.1
GURO	**Guroymak-BITLI**	0.89	264	PG	Pg	18 17 09.5	-0.9
GURO	**Guroymak-BITLI**	0.89	264	*e*Pg	Pg	18 17 09.5	-0.9
AGRB	**Hanur-Agry**	0.93	352	PG	Pg	18 17 10.9	-0.4
AGRB	**Hanur-Agry**	0.93	352	*e*Pg	Pg	18 17 10.9	-0.4
SRTM	**Siirt_Merkez**	1.17	236	*i* P	Pn	18 17 15.6	+0.1
SRTM	**Siirt_Merkez**	1.17	236	P	Pn	18 17 15.6	+0.1
HAKT	**HAKKARI**	1.18	158	*i* P	Pg	18 17 16.2	+0.3
HAKT	**HAKKARI**	1.18	158	P	Pg	18 17 16.2	+0.3
EATA	**Eleskirt**	1.31	337	*i* P	Pn	18 17 17.5	-0.2
EATA				*i* S	Sg	18 17 36.2	+0.4
EATA	**Eleskirt**	1.31	337	P	Pn	18 17 17.5	-0.2
EATA				S	Sg	18 17 36.2	+0.4

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*ISCJB **23** 18:22:16.6±0.8, 21°.98N±0°.08×144°.0E±0°.3, h150^{km}, mb3.8/13, Error ellipse: s-maj=35.9km s-min=10.1km az=169.6*

*IDC **23** 18:22:16.7±1.0, 21°.98N×144°.10E, h135^{km}±7^{km}, mb3.5/14, mb1 3.7/16, mb1mx3.4/71, mbtmp4.0/16, Error ellipse: s-maj=29.0km s-min=10.6km az=78.0*

ISC 23 18:22:18.2±0.7**, 22°.08N**±0°.09×**143°.9E**±0°.3**, h150^{km}, n25, σ1^{s}.58**/25**, mb3.9**/13**, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	**Chichijima**	5.24	343	P	Pn	18 23 33.7	-1.2
	33nm,0.3s,baz=222,slow=4.1,SNR=28						
JCJ				S	Sn	18 24 30.8	-3.9
	baz=107,slow=20						
MJAR	**Matsushiro Arr**	15.25	342	P	Pn	18 25 46.2	+0.5
	0.5nm,0.3s,baz=165,slow=8.0,SNR=7.2						
KSRS	**Korea Array**	20.64	321	P	Pn	18 26 50.1	+0.1
	2.2nm,0.5s,baz=148,slow=8.2,SNR=14						
H11N1	**WAKE ISLAND Hy**	21.57	92	T	T	18 49 16.6	
	baz=274						
H11N2	**WAKE ISLAND Hy**	21.57	92	T	T	18 49 12.7	
	baz=274						
H11N3	**WAKE ISLAND Hy**	21.59	92	T	T	18 49 13.8	
	baz=274						
H11S3	**WAKE ISLAND Hy**	21.63	95	T	T	18 49 19.2	
	baz=276						
H11S1	**WAKE ISLAND Hy**	21.64	95	T	T	18 49 20.9	
	baz=276						
H11S2	**WAKE ISLAND Hy**	21.65	95	T	T	18 49 19.2	
	baz=276						
KLR	**Kul'dur**	28.77	343	P	P	18 28 03.6	+2.0
	0.0nm,0.4s,baz=164,slow=8.5,SNR=5.9						
SONM	**Songino Array**	39.50	320	P	P	18 29 35.8	+1.6
	0.4nm,0.5s,baz=138,slow=8.9,SNR=2.8						
CTA	**Charters Tower**	41.97	177	P	P	18 29 54.0	-0.5
	6.0nm,1.0s,baz=9.5,slow=6.1,SNR=3.7						
WRA	**Warramunga Arr**	42.80	193	P	P	18 30 00.9	-0.3
	0.7nm,0.3s,baz=12,slow=8.2,SNR=63						
WRA				PcP	PcP	18 31 50.9	+1.0
	0.5nm,0.5s,baz=2.8,slow=3.4,SNR=4.8						
ASAR	**Alice Springs**	46.51	193	P	P	18 30 29.8	-0.8
	0.4nm,0.5s,baz=8.9,slow=8.5,SNR=17						
ASAR				PcP	PcP	18 32 03.4	+0.7
	0.3nm,1.0s,baz=22,slow=3.1,SNR=4.4						
STKA	**Stephens Creek**	53.70	182	P	P	18 31 23.0	-1.6
	1.4nm,0.5s,baz=4.7,slow=8.5,SNR=7.0						
ZALV	**Zalesovo Beam**	54.35	321	P	P	18 31 29.3	+0.2
	0.9nm,0.5s,baz=101,slow=7.5,SNR=2.6						
MKAR	**Makanchi Array**	54.96	312	P	P	18 31 35.4	+1.7
	0.6nm,0.7s,baz=93,slow=7.3,SNR=6.5						
MKAR				pP	pP	18 32 06.5	-2.0
	0.5nm,0.6s,baz=83,slow=9.9,SNR=3.3						
MKAR				PcP	PcP	18 32 34.5	+0.8
	0.3nm,0.5s,baz=72,slow=7.8,SNR=4.9						
KURBB	**Kurchatov Arra**	57.73	317	P	P	18 31 54.4	+1.2
	2.1nm,0.5s,baz=92,slow=7.5,SNR=21						
KURBB				pP	pP	18 32 26.6	-1.6
	1.1nm,0.6s,baz=94,slow=7.7,SNR=3.2						
BVAR	**Borovoye Array**	62.84	319	P	P	18 32 29.2	+1.3
	1.9nm,0.5s,baz=95,slow=7.2,SNR=14						
BVAR				pP	pP	18 33 01.6	-1.9
	1.0nm,0.5s,baz=91,slow=7.0,SNR=4.0						
YKA	**Yellowknife Ar**	75.79	28	P	P	18 33 48.2	+0.9
	0.3nm,0.5s,baz=296,slow=6.4,SNR=3.6						
ARCES	**ARCESS Array B**	78.78	342	P	P	18 34 04.7	+0.8
	1.9nm,0.9s,baz=46,slow=8.7,SNR=4.6						
KBZ	**Khabaz**	82.61	314	P	P	18 34 26.6	+1.9
	0.9nm,0.4s,baz=87,slow=9.1,SNR=4.1						
FINES	**FINESS Array B**	83.14	335	P	P	18 34 27.4	+0.3
	2.5nm,0.8s,baz=89,slow=5.0,SNR=6.5						
PLCA	**Paso Flores**	145.48	131	PKPbc	PKPdf	18 41 36.7	-1.9
	2.0nm,0.7s,baz=242,slow=5.5,SNR=4.1						
LPAZ	**La Paz**	149.21	85	PKPbc	PKPbc	18 41 49.9	-0.7
	1.1nm,0.6s,baz=16,slow=6.6,SNR=4.9						

TAP 23 18:26:34.7, 24°.08N×121°.67E, h18^{km}, ML1.8, D, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TWD	**Chiawan**	0.07	272	*e*P	Pg	18 26 37.8	-0.3
	baz=273						
TWD				*e*S	Sg	18 26 40.4	-0.1
	baz=273						
NACB	**Ninganchiao**	0.12	325	*i* P	Pg	18 26 38.5	-0.1
	baz=325						
NACB				*i* S	Sg	18 26 41.2	0.0
	baz=325						
ENA	**Nanau**	0.35	11	*e*S	Sg	18 26 47.5	+0.2
	baz=12						
NANB	**Nanao**	0.36	12	*e*P	Pg	18 26 42.1	-0.1
	baz=12						
NANB				*e*S	Sg	18 26 47.4	+0.1
	baz=12						

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*IDC **23** 18:32:25.9±0.6, 39°.10N×68°.25E, h0^{km}, mb4.0/19, mb1 4.1/30, mb1mx3.9/75, mbtmp4.0/30, ML3.5/10, MS3.5/17, Ms1 3.5/17, ms1mx3.1/66, Error ellipse: s-maj=13.6km s-min=8.6km az=169.0*

*ISCJB **23** 18:32:26.0±0.2, 39°.24N±0°.03×68°.23E±0°.03, h10^{km}, mb4.1/28, MS3.5/12, Error ellipse: s-maj=3.9km s-min=3.5km az=21.8*

*NNC **23** 18:32:28.4±1.1, 39°.39N×68°.04E, h0^{km}, mb4.8, mpv4.5, Error ellipse: s-maj=12.7km s-min=7.3km az=163.0*

*BJI **23** 18:32:28.4, 39°.65N×68°.17E, h12^{km}, mb4.4/13, mB4.9/9, ML4.4/1, Ms4.0/2, Ms7 3.7/2*

*MOS **23** 18:32:29.0±1.4, 39°.39N×68°.26E, h23^{km}, mb4.4/8, Error ellipse: s-maj=6.9km s-min=5.5km az=78.2*

*NEIC **23** 18:32:31.6±1.3, 39°.31N×68°.28E, h36^{km}±11^{km}, mb4.4/3, Error ellipse: s-maj=11.8km s-min=6.2km az=180.0*

ISC 23 18:32:28.1±0.4**, 39°.32N**±0°.04×**68°.18E**±0°.04**, h10^{km}, n117, σ2^{s}.07**/126**, mb4.1**/28**, MS3.6**/12**, 11C-20D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TAS	**Tashkent**	2.18	22	⇓Pn	Pb	18 33 07.5	-0.1
	284nm,0.5s						
TAS				⇓Lg	Lg	18 33 38.6	
	3μm,0.6s						
TAS	**Tashkent**	2.18	22	PN	Pb	18 33 07.5	-0.1
TAS				pmax	pmax		
	comp=Z,284nm,0.5s						
SFK	**Sufi-Kurgan**	4.17	79	⇓Pn	Pn	18 33 35.3	+3.4
	comp=Z,73nm,0.8s						
SFK				⇓Lg	Lg	18 34 43.6	
	comp=Z,154nm,0.6s						
SFK	**Sufi-Kurgan**	4.17	79	PN	Pn	18 33 35.3	+3.4
SFK				pmax	pmax		
	comp=Z,73nm,0.8s						
KK31	**Karatay Array**	4.17	24	⇑Pn	Pn	18 33 33.1	+1.3
	comp=Z,4.8nm,0.3s,baz=210,slow=17,SNR=254						
KK31				⇑Pg	Pb	18 33 44.6	+3.1
	comp=Z,46nm,0.6s,baz=212,slow=14,SNR=24						
KK31				⇑Lg	Lg	18 34 39.9	
	comp=Z,195nm,0.6s,baz=209,slow=27,SNR=7.1						
KK31	**Karatay Array**	4.17	24	PN	Pn	18 33 33.5	+1.7
KK31				pmax	pmax		
	comp=Z,5.0nm,0.4s						
MNAS	**Manas**	4.55	45	⇓Pn	Pn	18 33 38.4	+1.2
	comp=Z,60nm,0.5s						
MNAS				⇑Lg	Lg	18 34 54.4	
	comp=Z,258nm,1.2s						
MNAS	**Manas**	4.55	45	PN	Pn	18 33 38.4	+1.2
MNAS				pmax	pmax		
	comp=Z,60nm,0.5s						
KBL	**Kabul**	4.82	172	PN	Pn	18 33 43.9	+3.0
AML	**Almayashu**	5.04	54	P	Pn	18 33 45.3	+1.1
	SNR=145						
EKS2	**Erkin-Say**	5.39	50	P	Pn	18 33 50.1	+1.4
	SNR=130						
AAK	**Ala-Archa**	5.81	53	Pn	Pn	18 33 56.0	+1.5
	comp=Z,19nm,0.3s,baz=209,slow=7.1,SNR=46						
AAK				Sn	Sn	18 35 03.6	+2.3
	comp=Z,3.3nm,0.3s,baz=204,slow=19,SNR=2.7						
AAK	**Ala-Archa**	5.81	53	⇓Pn	Pn	18 33 55.9	+1.3
	comp=Z,63nm,0.8s						
AAK				⇓Sn	Sn	18 35 04.0	+2.7
	comp=Z,145nm,0.9s						
AAK				⇓Lg	Lg	18 35 32.6	
	comp=Z,181nm,0.8s						
AAK	**Ala-Archa**	5.81	53	P	Pn	18 33 56.1	+1.5
	SNR=55						
FRU	**Bishkek**	6.00	52	*e*PN	Pn	18 33 57.0	+0.1
FRU				*i*		18 34 18.0	
FRU				*i*		18 34 27.0	
FRU				*i* S	Sn	18 35 07.0	+1.4
FRU				pmax	pmax		
	comp=Z,80nm,1.6s						
FRU				smax	smax		
	comp=E,340nm,1.6s						
KZA	**Kyzart**	6.04	61	P	Pn	18 33 59.9	+2.1
	SNR=46						
KSH	**Kashi**	6.04	86	Pn	Pn	18 33 55.4	-2.2
KSH				Sn	Sn	18 34 59.0	-7.8
KBK	**Karagaybulak**	6.11	55	P	Pn	18 34 00.7	+2.1
	SNR=23						
CHMS	**Chumysh**	6.17	51	P	Pn	18 34 00.2	+0.9
	SNR=57						
USP	**Ospenovka**	6.18	48	P	Pn	18 33 59.8	+0.4
	SNR=12						
CEP	**Cherat**	6.25	150	P	Pn	18 34 03.1	+2.6
CEP				S	Sn	18 35 12.0	-0.1
CEP	**Cherat**	6.25	150	P	Sn	18 35 11.6	-0.5
TKM2	**Tokmak 2**	6.65	55	⇓Pn	Pn	18 34 07.3	+1.2
	comp=E,17nm,0.6s						
TKM2				⇓Sn	Sn	18 35 24.7	+2.6
	comp=E,44nm,0.8s						
TKM2				⇓Lg	Lg	18 36 00.1	
	comp=E,60nm,0.8s						
TKM2	**Tokmak 2**	6.65	55	P	Pn	18 34 07.3	+1.2
	SNR=64						
TKM2	**Tokmak 2**	6.65	55	PN	Pn	18 34 07.3	+1.2
TKM2				S	Sn	18 35 24.7	+2.6
TKM2				pmax	pmax		
	comp=Z,17nm,0.6s						
TKM2				smax	smax		
	comp=N,44nm,0.9s						
ULHL	**Ulahol**	6.78	62	P	Pn	18 34 10.9	+3.1
	SNR=14						
CHCP	**Chirah Chowk**	6.98	143	P	Pn	18 34 12.3	+1.9
NIL	**Nilore**	6.98	143	*e*P	Pn	18 34 11.8	+1.4
	comp=N,151nm,0.9s						
NIL	**Nilore**	6.98	143	*e*PN	Pn	18 34 11.8	+1.4
NIL				pmax	pmax		
	comp=Z,151nm,0.9s						
THW	**Thamme Wali**	7.12	155	P	Pn	18 34 13.6	+1.2
AAA	**Alma-Ata**	7.64	57	*e*P	Pn	18 34 21.9	+2.4
AAA				pmax	pmax		
	comp=Z,25nm,0.4s						
ASHT	**Ashkhabad**	7.79	263	P	Pn	18 34 26.6	+5.1
ASHT				pmax	pmax		
	comp=Z,62nm,0.5s						
GEYT	**Alibeck**	8.00	263	Pn	Pn	18 34 25.2	+0.7
	comp=Z,1.6nm,0.3s,baz=68,slow=12,SNR=18						
GEYT				Sn	Sn	18 35 53.6	-1.3
	comp=Z,19nm,0.3s,baz=108,slow=19,SNR=10						
GYA0B	**ALIBECK ARRAY**	8.00	263	⇑Pn	Pn	18 34 27.2	+2.7
	comp=Z,20nm,0.5s						
GYA0B				⇓Sn	Sn	18 35 53.1	-1.9
	comp=Z,365nm,0.6s						
GYA0B				⇓Lg	Lg	18 36 40.3	
	comp=Z,248nm,0.7s						
PDGK	**Podgornoye**	9.40	61	P	Pn	18 34 43.9	+0.2
PDGK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
DHRM	**DHARAMSHALA**	9.65	134	*e*P	Pn	18 34 45.3	-2.0
DHRM				*e*S	Sn	18 36 24.1	-12
SMLA	**Simla**	10.98	135	*e*P	Pn	18 35 04.7	-0.6
SMLA				*e*S	Sn	18 36 56.6	-12
AB31	**Akbulak array**	11.55	332	⇑Pn	Pn	18 35 12.2	-0.7
	comp=Z,11nm,0.5s,baz=169,slow=11,SNR=211						
AB31				⇑Sn	Sn	18 37 20.6	-1.2
	comp=Z,16nm,0.6s,baz=153,slow=23,SNR=5.4						
AB31				⇓Lg	Lg	18 38 32.5	
	comp=Z,25nm,0.8s,baz=156,slow=27,SNR=3.7						
AB31	**Akbulak array**	11.55	332	P	Pn	18 35 12.2	-0.7
AB31				S	Sn	18 37 20.6	-1.2
AB31				pmax	pmax		
	comp=Z,11nm,0.5s						

AB31				smax	smax		
	comp=N,16nm,0.6s						
DDI	**Dehra Dun**	**12.09**	**135**	*e*P	**Pn**	**18 35 20.1**	**-0.4**
DDI				*e*S	Sn	18 37 22.0	-13
DDI				IAML		18 37 34.1	
	comp=N,113nm,0.9s						
DDI				IAML		18 37 35.1	
	comp=E,39nm,0.3s						
MK31	**Makanchi Array**	**12.72**	**49**	Pn	**Pn**	**18 35 28.7**	**-0.4**
	comp=E,4.0nm,0.6s,baz=239,slow=20,SNR=28						
MK31				⇓Lg	Lg	18 39 14.3	
	comp=E,28nm,1.0s						
MKAR	**Makanchi Array**	**12.72**	**49**	Pn	**Pn**	**18 35 28.9**	**-0.2**
	comp=E,0.6nm,0.3s,baz=242,slow=15,SNR=24						
MKAR				Lg	Lg	18 39 10.0	
	comp=E,0.2nm,0.3s,baz=229,slow=30,SNR=4.1						
MKAR				LR	LR	18 40 51.3	
	comp=E,217nm,18.5s,baz=218,slow=39						
JOSI	**Joshimath**	**12.78**	**130**	*e*P	**Pn**	**18 35 29.8**	**-0.3**
JOSI				*e*x	x	18 37 32.9	
JOSI				IAML		18 37 58.4	
	comp=N,509nm,1.0s						
JOSI				IAML		18 38 07.3	
	comp=E,88nm,0.9s						
KHET	**Khetri**	**12.88**	**148**	*e*P	Pn	18 35 26.9	-4.4
KHET				*e*S	Sn	18 37 38.8	-16
KUDL	**Kundal**	**13.11**	**146**	*e*P	**Pn**	**18 35 32.5**	**-1.8**
KUDL				*e*S	Sn	18 37 46.0	-14
KUDL				IAML		18 37 59.9	
	comp=E,5.2nm,0.8s						
KUDL				IAML		18 38 06.0	
	comp=N,4.2nm,0.5s						
AKTO	**Aktyubinsk**	**13.23**	**330**	Pn	**Pn**	**18 35 36.6**	**+0.7**
	comp=N,0.8nm,0.3s,baz=153,slow=15,SNR=21						
AKTO				Sn	**Sn**	**18 37 57.2**	**-5.8**
	comp=N,1.1nm,0.3s,baz=150,slow=20,SNR=3.9						
AKTO				Lg	Lg	18 39 30.1	
	comp=N,0.3nm,0.3s,baz=171,slow=19,SNR=2.6						
AKTO				LR	LR	18 40 18.1	
	comp=N,60nm,19.1s,baz=142,slow=35						
AKTO	**Aktyubinsk**	**13.23**	**330**	⇑Pn	**Pn**	**18 35 35.9**	**0.0**
	comp=N,18nm,1.0s						
AKTO				⇑Sn	**Sn**	**18 38 01.1**	**-1.9**
	comp=N,48nm,1.1s						
AKTO				⇓Lg	Lg	18 39 25.6	
	comp=N,106nm,1.5s						
KURBB	**Kurchatov Arra**	**13.45**	**29**	Pn	**Pn**	**18 35 36.7**	**-2.2**
	comp=N,0.1nm,0.3s,baz=219,slow=12,SNR=5.6						
KURBB				Lg	Lg	18 39 35.0	
	comp=N,0.1nm,0.3s,baz=218,slow=28,SNR=9.4						
KURK	**Kurchatov**	**13.56**	**29**	Pn	**Pn**	**18 35 36.7**	**-3.7**
KURK				Lg	Lg	18 39 35.0	
KURK	**Kurchatov**	**13.56**	**29**	P	**Pn**	**18 35 36.7**	**-3.7**
BVA0	**Borovoye Array**	**13.79**	**6**	⇓Pn	**Pn**	**18 35 42.7**	**-0.9**
	comp=N,8.8nm,0.7s,baz=192,slow=12,SNR=20						
BVA0				⇓Lg	Lg	18 39 43.2	
	comp=N,63nm,1.4s						
BVAR	**Borovoye Array**	**13.79**	**6**	Pn	**Pn**	**18 35 41.9**	**-1.7**
	comp=N,0.5nm,0.3s,baz=183,slow=14,SNR=9.8						
BVAR				LR	LR	18 41 40.4	
	comp=N,213nm,20.0s,baz=190,slow=40						
BRVK	**Borovoye**	**13.82**	**5**	⇓Pn	**Pn**	**18 35 43.2**	**-0.6**
	comp=N,17nm,0.9s						
BRVK				⇓Lg	Lg	18 39 43.4	
	comp=N,66nm,1.4s						
BRVK	**Borovoye**	**13.82**	**5**	*e*P	**Pn**	**18 35 42.1**	**-1.8**
	comp=N,47nm,0.9s						
BRVK	**Borovoye**	**13.82**	**5**	*ce*P	**Pn**	**18 35 42.3**	**-1.6**
BRVK				pmax	pmax		
	comp=Z,7.0nm,1.3s						
AKT	**Akhty**	**15.73**	**284**	*e*P	**P**	**18 36 13.2**	**-0.6**
AKT				*e*S	**Sn**	**18 38 56.4**	**-7.8**
AKT				pmax	pmax		
	comp=Z,11nm,0.7s						
AKT				smax	smax		
	comp=E,9.0nm,0.4s						
AKT				smax	smax		
	comp=N,28nm,0.6s						
PYUN	**Piuthan**	**16.62**	**128**	*e*P	**Pn**	**18 36 16.2**	**-5.2**
DANN	**Dangsing**	**16.92**	**126**	*e*P	**Pn**	**18 36 22.4**	**-2.9**
	comp=N,26nm,0.5s						
KOLN	**Koldanda**	**17.23**	**127**	*e*P	**Pn**	**18 36 25.3**	**-3.8**
	comp=N,21nm,0.6s						
GKN	**Gorkha**	**17.72**	**125**	*e*P	**Pn**	**18 36 31.7**	**-3.4**
	comp=N,54nm,1.0s						
GNI	**Garni**	**18.04**	**280**	P	**P**	**18 36 39.2**	**-0.2**
	comp=N,0.9nm,0.3s,baz=48,slow=16,SNR=2.7						
ARU	**Arti**	**18.26**	**343**	P	**P**	**18 36 42.0**	**+0.4**
	comp=N,0.0nm,0.3s,baz=158,slow=4.7,SNR=10						
ARU				S	Sn	18 39 52.4	-13
	comp=N,0.0nm,0.3s,baz=108,slow=19,SNR=5.6						
ARU				LR	LR	18 44 36.8	
	comp=N,129nm,19.6s,baz=144,slow=40						
ARU	**Arti**	**18.26**	**343**	*c i*P	**P**	**18 36 44.4**	**+2.8**
ARU				S	**Sn**	**18 39 58.4**	**-6.8**
ARU				pmax	pmax		
	comp=Z,10.0nm,0.8s						
ARU				MLR	MLR		
	comp=Z,230nm,15.0s						
KKN	**Kakani**	**18.28**	**124**	*e*P	**P**	**18 36 39.9**	**-2.3**
	comp=Z,40nm,1.0s						
DMN	**Daman**	**18.29**	**125**	*e*P	**P**	**18 36 39.2**	**-3.2**
	comp=Z,22nm,0.7s						
ZALV	**Zalesovo Beam**	**18.49**	**32**	P	**P**	**18 36 43.7**	**-0.4**
	comp=Z,1.0nm,0.3s,baz=231,slow=9.4,SNR=13						
ZALV				LR	LR	18 44 09.4	
	comp=Z,130nm,18.4s,baz=251,slow=38						
PKIN	**Phulchoki**	**18.50**	**124**	*e*P	**P**	**18 36 42.2**	**-2.5**
	comp=Z,18nm,0.5s						
NVS	**Novosibirsk**	**18.54**	**28**	*e*P	**P**	**18 36 44.1**	**-0.5**
NVS				pmax	pmax		
	comp=N,13nm,1.1s						
NVS				pmax	pmax		
	comp=E,7.0nm,1.1s						
NVS				pmax	pmax		
	comp=Z,18nm,1.1s						
GUN	**Gumba**	**18.59**	**122**	*e*P	**P**	**18 36 43.7**	**-2.0**
	comp=Z,48nm,0.8s						
JIRN	**Jiri**	**18.96**	**122**	*e*P	**P**	**18 36 48.8**	**-1.0**
	comp=Z,70nm,0.9s						
KBZ	**Khabaz**	**19.41**	**291**	P	**Pn**	**18 36 54.5**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=112,slow=8.2,SNR=3.9						
KVAR	**Kislovodsk Arr**	**19.57**	**292**	P	**Pn**	**18 36 58.1**	**+0.6**
	baz=105,slow=12,SNR=4.9						
KIV	**Kislovodsk**	**19.58**	**292**	*e*P	**Pn**	**18 36 58.7**	**+1.1**
	comp=Z,16nm,0.6s						
KIV	**Kislovodsk**	**19.58**	**292**	*i* P	**Pn**	**18 36 58.1**	**+0.5**
KIV				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KIV				MLR	MLR		
	comp=Z,54nm,18.0s						
RAMN	**Ramite**	**19.70**	**123**	*e*P	**P**	**18 36 56.5**	**-1.4**
	comp=Z,32nm,0.6s						
ODAN	**Odare**	**20.28**	**122**	*e*P	**P**	**18 37 05.2**	**+1.0**
	comp=Z,20nm,0.7s						
LSA	**Lhasa**	**21.17**	**110**	*e*P	**P**	**18 37 16.0**	**+2.0**
	comp=Z,24nm,1.1s						
LSA	**Lhasa**	**21.17**	**110**	*e*P	**P**	**18 37 16.0**	**+2.0**
LSA				pmax	pmax		
	comp=Z,24nm,1.1s						
VRH	**Novokhopyorsk**	**21.96**	**311**	*e*P	**P**	**18 37 24.7**	**+2.9**
VRH				pmax	pmax		
	comp=Z,20nm,0.8s						
VORD	**Divnogorie**	**23.31**	**309**	*e*P	**P**	**18 37 38.9**	**+2.9**
VORD				pmax	pmax		
	comp=Z,3.0nm,0.5s						
VSR	**Storozhevoye**	**23.47**	**310**	*e*P	**P**	**18 37 38.4**	**+0.8**
VSR				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SHL	**Shillong**	**24.16**	**118**	P	**P**	**18 37 44.8**	**+0.1**
SHL				pmax	pmax		
	comp=Z,16nm,1.0s						
GTA	**Gaotai**	**24.39**	**80**	*e*P	**P**	**18 37 46.4**	**-0.3**
GTA				pP	pP	18 37 50.8	+1.1
GTA				sP	sP	18 37 53.4	+2.4
RAYN	**Ar Rayn**	**24.85**	**237**	*e*P	**P**	**18 37 53.1**	**+2.3**
	comp=Z,4.6nm,0.8s						
RAYN	**Ar Rayn**	**24.85**	**237**	*e*P	**P**	**18 37 53.1**	**+2.3**
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MOY	**Mondy**	**25.87**	**51**	*e*P	**P**	**18 37 56.5**	**-3.4**
BRTR	**Keskin Array B**	**26.55**	**282**	P	**P**	**18 38 06.3**	**+0.1**
	comp=Z,0.6nm,0.9s,baz=75,slow=11,SNR=2.7						
ZAK	**Zakamensk**	**26.99**	**54**	*e*P	**P**	**18 38 09.4**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.8s						
SONM	**Songino Array**	**28.72**	**60**	P	**P**	**18 38 25.1**	**-0.4**
	comp=Z,0.4nm,0.5s,baz=280,slow=8.6,SNR=3.1						
SONM				LR	LR	18 51 21.0	
	comp=Z,118nm,18.2s,baz=276,slow=39						
ISK	**Istanbul-Kandi**	**29.77**	**286**	P	**P**	**18 38 37.6**	**+2.8**
CMAR	**Chiang Mai Arr**	**33.77**	**119**	P	**P**	**18 39 09.4**	**-0.7**
	comp=Z,1.3nm,0.9s,baz=304,slow=8.4,SNR=8.2						
CMAR				PcP	**PcP**	**18 41 50.0**	**+0.5**
	comp=Z,0.6nm,0.4s,baz=321,slow=3.9,SNR=4.3						
CMAR				LR	LR	18 55 01.7	
	comp=Z,48nm,20.9s,baz=263,slow=40						
PALK	**Pallekele**	**33.84**	**157**	LR	LR	18 53 51.0	
	comp=Z,138nm,18.6s,baz=303,slow=38						
FINES	**FINESS Array B**	**33.90**	**325**	P	**P**	**18 39 12.2**	**+1.4**
	comp=Z,2.5nm,0.7s,baz=113,slow=11,SNR=8.5						
ARCES	**ARCESS Array B**	**37.69**	**337**	P	**P**	**18 39 44.4**	**+1.2**
	comp=Z,1.3nm,0.7s,baz=108,slow=7.8,SNR=6.1						
HFS	**Hagfors**	**39.48**	**320**	P	**P**	**18 39 58.6**	**+0.3**
	comp=Z,2.7nm,0.5s,baz=113,slow=11,SNR=4.5						
HFS				LR	LR	18 57 52.5	
	comp=Z,77nm,18.3s,baz=63,slow=38						
NB2	**NORSAR Subarra**	**40.79**	**321**	P	**P**	**18 40 09.5**	**+0.2**
	comp=Z,2.3nm,0.7s,baz=95,slow=8.6						
NOA	**NORSAR Array B**	**40.79**	**321**	P	**P**	**18 40 09.6**	**+0.4**
	comp=Z,1.3nm,0.8s,baz=96,slow=8.2,SNR=5.2						
NOA				LR	LR	18 58 31.0	
	comp=Z,42nm,18.1s,baz=295,slow=38						
YAK	**Yakutsk**	**43.02**	**37**	P	**P**	**18 40 26.5**	**-0.9**
	comp=Z,1.5nm,0.3s,baz=332,slow=15,SNR=3.0						
TIXI	**Tiksi**	**44.04**	**23**	LR	LR	19 00 27.8	
	comp=Z,82nm,18.6s,baz=226,slow=38						
SPITS	**Spitsbergen Ar**	**44.24**	**347**	P	**P**	**18 40 38.5**	**+1.5**
	comp=Z,16nm,1.2s,baz=96,slow=15,SNR=4.7						
SPITS				LR	LR	19 01 04.5	
	comp=Z,47nm,18.4s,baz=265,slow=39						
KSAR	**Wonju Array Be**	**46.09**	**73**	P	**P**	**18 40 52.4**	**+0.1**
KSAR	**Wonju Array Be**	**46.09**	**73**	P	**P**	**18 40 52.4**	**+0.1**
KSRS	**Korea Array**	**46.11**	**73**	P	**P**	**18 40 52.4**	**-0.1**
	comp=Z,0.9nm,0.5s,baz=300,slow=6.6,SNR=5.8						
EKA	**Eskdalemuir Ar**	**48.72**	**314**	P	**P**	**18 41 12.7**	**+0.2**
	comp=Z,0.7nm,0.6s,baz=88,slow=9.3,SNR=3.4						
JNU	**Nakatsue**	**50.07**	**77**	P	**P**	**18 41 21.1**	**-2.1**
	comp=Z,4.0nm,0.9s,baz=333,slow=4.5,SNR=2.8						
JNU				LR	LR	19 04 07.4	
	comp=Z,52nm,18.1s,baz=302,slow=38						
ASAJ	**Asahikawa**	**53.99**	**59**	LR	LR	19 06 38.7	
	comp=Z,50nm,18.2s,baz=260,slow=38						
MJAR	**Matsushiro Arr**	**54.02**	**69**	P	**P**	**18 41 50.6**	**-2.0**
	comp=Z,1.0nm,0.7s,baz=280,slow=10,SNR=5.8						
MJAR				LR	LR	19 07 02.7	
	comp=Z,22nm,19.1s,baz=255,slow=38						
ESDC	**Sonseca Array**	**54.21**	**295**	P	**P**	**18 41 54.5**	**+0.6**
	comp=Z,0.5nm,0.6s,baz=55,slow=7.1,SNR=3.7						
DAV	**Davao City (W)**	**60.53**	**106**	LR	LR	19 10 58.7	
	comp=Z,40nm,18.3s,baz=324,slow=38						
TORD	**Torodi Ar. Bea**	**63.63**	**266**	P	**P**	**18 42 58.4**	**-1.3**
	comp=Z,52nm,0.6s,baz=69,slow=5.4						
KOWA	**Kowa**	**67.25**	**270**	P	**P**	**18 43 22.8**	**-0.3**
	comp=Z,2.5nm,0.7s,baz=45,slow=8.6,SNR=4.6						
INK	**Inuvik**	**71.46**	**8**	P	**P**	**18 43 46.7**	**-1.5**
	comp=Z,2.5nm,0.8s,baz=13,slow=4.0,SNR=3.4						
ILAR	**Eielson Array**	**72.66**	**15**	P	**P**	**18 43 55.4**	**-0.1**
	comp=Z,1.3nm,0.9s,baz=316,slow=5.2,SNR=10						
YKA	**Yellowknife Ar**	**78.51**	**1**	P	**P**	**18 44 29.6**	**+0.6**
	comp=Z,0.9nm,0.7s,baz=351,slow=5.8,SNR=10						
WRA	**Warramunga Arr**	**85.35**	**120**	P	**P**	**18 45 04.7**	**-0.9**
	comp=Z,1.2nm,1.0s,baz=325,slow=4.8,SNR=7.9						
ASAR	**Alice Springs**	**87.68**	**123**	P	**P**	**18 45 16.4**	**-0.6**
	comp=Z,0.8nm,0.8s,baz=325,slow=6.6,SNR=5.4						
ULM	**Lac du Bonnet**	**89.71**	**350**	LR	LR	19 30 21.5	
	comp=Z,31nm,19.7s,baz=266,slow=39						

IDC 23 18:48:42.5±3.0**, 6°.44S×151°.87E, h0^{km}, mb3.5**/2**, mb1 3.8**/3**, mb1mx3.3**/44**, mbtmp3.6**/3**, ML1.4**/1**, Error ellipse: s-maj=118.6km s-min=42.6km az=128.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.52**	**237**	Pn	Pn	18 50 05.5	-0.4
	0.8nm,0.3s,baz=58,slow=13,SNR=4.4						
PMG				Sn	Sn	18 51 03.5	-6.6
	0.6nm,0.3s,baz=42,slow=18,SNR=2.6						
WRA	**Warramunga Arr**	**21.68**	**230**	P	P	18 53 35.1	0.0
	0.7nm,0.5s,baz=57,slow=11,SNR=16						
ASAR	**Alice Springs**	**24.32**	**223**	P	P	18 54 02.5	+0.4
	0.9nm,0.5s,baz=56,slow=9.2,SNR=41						
TORD	**Torodi Ar. Bea**	**149.88**	**285**	PKPbc	PKPbc	19 08 35.2	-0.7
	baz=64,slow=3.4						

IDC 23 18:58:15.5±3.7**, 4°.36N×93°.72E, h0^{km}, mb3.4**/4**, mb1 3.5**/4**, mb1mx3.2**/64**, mbtmp3.4**/4**, Error ellipse: s-maj=138.6km s-min=27.9km az=58.0, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H08S3	**Diego Garcia H**	**24.31**	**241**	T	T	19 29 06.5	
	baz=56						
H08S2	**Diego Garcia H**	**24.31**	**241**	T	T	19 29 07.1	
	baz=56						
H08S1	**Diego Carcia H**	**24.33**	**241**	T	T	19 29 07.6	
	baz=56						
MKAR	**Makanchi Array**	**43.42**	**349**	P	P	19 06 19.4	-0.6
	0.6nm,0.7s,baz=165,slow=8.6,SNR=5.1						
H01W3	**Cape Leeuwin H**	**43.51**	**155**	T	T	19 53 54.0	
	baz=331						
H01W2	**Cape Leeuwin H**	**43.52**	**155**	T	T	19 53 51.1	
	baz=331						
H01W1	**Cape Leeuwin H**	**43.52**	**155**	T	T	19 53 50.0	
	baz=331						
SONM	**Songino Array**	**44.66**	**12**	P	P	19 06 30.4	+0.3
	0.5nm,0.6s,baz=190,slow=9.3,SNR=3.3						
WRA	**Warramunga Arr**	**46.65**	**123**	P	P	19 06 45.9	-0.2
	0.2nm,0.6s,baz=304,slow=8.9,SNR=4.0						
KURBB	**Kurchatov Arra**	**47.84**	**347**	P	P	19 06 54.9	-0.1
	0.2nm,0.5s,baz=172,slow=7.1,SNR=4.8						

ISCJB ***23*** *19:04:41.8±0.6, 2°.6N±0°.1×128°.1E±0°.3, h51^{km}, mb4.1/11, Error ellipse: s-maj=38.8km s-min=12.1km az=167.2*

IDC ***23*** *19:04:52.7±10.0, 2°.52N×128°.17E, h141^{km}±104^{km}, mb3.7/11, mb1 3.8/11, mb1mx3.4/54, mbtmp4.1/11, Error ellipse: s-maj=41.6km s-min=14.6km az=83.0*

ISC 23 19:04:43.3±0.8**, 2°.6N**±0°.1×**128°.0E**±0°.3**, h51^{km}, n17, σ1^{s}.38**/12**, mb4.1**/11**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**23.21**	**165**	P	**P**	**19 09 46.4**	**+0.3**
	2.5nm,0.3s,baz=346,slow=11,SNR=99						
ASAR	**Alice Springs**	**26.69**	**168**	P	**P**	**19 10 18.0**	**+0.1**
	0.5nm,0.5s,baz=357,slow=8.4,SNR=9.7						
KSRS	**Korea Array**	**34.73**	**360**	P	**P**	**19 11 29.7**	**+1.1**
	0.4nm,0.3s,baz=178,slow=11,SNR=3.5						
MJAR	**Matsushiro Arr**	**35.11**	**14**	P	**P**	**19 11 31.0**	**-0.9**
	0.9nm,0.6s,baz=187,slow=10,SNR=6.4						
STKA	**Stephens Creek**	**36.59**	**160**	P	**P**	**19 11 45.1**	**+0.5**
	5.1nm,0.3s,baz=346,slow=7.8,SNR=35						
H11S3	**WAKE ISLAND Hy**	**41.06**	**65**	T	T	19 56 12.5	
	baz=252						
H11S2	**WAKE ISLAND Hy**	**41.08**	**65**	T	T	19 56 06.5	
	baz=252						
H11S1	**WAKE ISLAND Hy**	**41.08**	**65**	T	T	19 56 09.6	
	baz=252						
H11N1	**WAKE ISLAND Hy**	**41.63**	**63**	T	T	19 56 48.4	
	baz=250						
H11N2	**WAKE ISLAND Hy**	**41.64**	**63**	T	T	19 56 49.4	
	baz=250						
H11N3	**WAKE ISLAND Hy**	**41.65**	**63**	T	T	19 56 50.3	
	baz=250						
SONM	**Songino Array**	**48.81**	**341**	P	**P**	**19 13 24.7**	**+1.0**
	0.6nm,0.5s,baz=151,slow=7.4,SNR=5.6						
PETK	**Petropavlovsk-**	**56.05**	**21**	P	**P**	**19 14 17.5**	**+0.6**
	3.0nm,0.8s,baz=223,slow=5.9						
MKAR	**Makanchi Array**	**59.24**	**325**	P	**P**	**19 14 40.9**	**+1.3**
	0.8nm,0.3s,baz=112,slow=8.0,SNR=18						
MKAR				PcP	**PcP**	**19 15 24.4**	**-3.1**
	0.5nm,0.7s,baz=100,slow=5.8,SNR=3.6						
KURBB	**Kurchatov Arra**	**63.41**	**327**	P	**P**	**19 15 07.9**	**+0.3**
	1.5nm,0.6s,baz=128,slow=6.0,SNR=14						
BVAR	**Borovoye Array**	**68.99**	**327**	P	**P**	**19 15 43.5**	**+0.1**
	0.9nm,0.8s,baz=111,slow=8.2,SNR=4.9						
ARCES	**ARCESS Array B**	**91.98**	**340**	P	**P**	**19 17 44.8**	**-1.4**
	1.7nm,0.9s,baz=74,slow=6.7,SNR=4.1						

ISCJB ***23*** *19:14:17.4±1.1, 6°.2S±0°.2×151°.2E±0°.2, h43^{km}, mb3.7/6, Error ellipse: s-maj=38.0km s-min=11.6km az=39.3*

IDC ***23*** *19:14:23.9±5.6, 6°.19S×150°.92E, h84^{km}±46^{km}, mb3.5/6, mb1 3.7/7, mb1mx3.4/41, mbtmp3.9/7, ML1.8/1, MS2.7/1, Ms1 2.7/1, ms1mx2.3/29, Error ellipse: s-maj=52.0km s-min=28.3km az=105.0*

ISC 23 19:14:18.9±1.4**, 6°.2S**±0°.2×**151°.2E**±0°.3**, h43^{km}, n9,** σ**1^{s}.10**/9**, mb3.8**/6**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**5.16**	**231**	P	**Pn**	**19 15 34.7**	**+1.1**
	2.5nm,0.3s,baz=38,slow=12,SNR=10.0						
PMG				S	**Sn**	**19 16 32.1**	**+0.2**
	2.0nm,0.3s,baz=179,slow=21,SNR=2.6						
HNR	**Honiara**	**9.25**	**111**	LR	LR	19 19 14.3	
	comp=Z,46nm,21.6s,baz=240,slow=30						
WRA	**Warramunga Arr**	**21.37**	**229**	P	**P**	**19 19 02.3**	**-0.6**
	3.5nm,0.7s,baz=52,slow=11,SNR=37						
ASAR	**Alice Springs**	**24.10**	**222**	P	**P**	**19 19 29.9**	**-0.8**
	2.0nm,0.5s,baz=56,slow=9.2,SNR=42						
STKA	**Stephens Creek**	**27.13**	**198**	P	**P**	**19 19 57.4**	**-0.7**
	2.3nm,0.9s,baz=27,slow=11,SNR=4.6						
MKAR	**Makanchi Array**	**80.30**	**319**	P	**P**	**19 26 24.8**	**-0.7**
	0.2nm,0.7s,baz=110,slow=6.7,SNR=2.5						
KURBB	**Kurchatov Arra**	**83.88**	**322**	P	**P**	**19 26 43.3**	**-0.8**
	0.3nm,0.4s,baz=105,slow=3.4,SNR=4.8						
ILAR	**Eielson Array**	**84.00**	**22**	P	**P**	**19 26 46.0**	**+1.6**
	0.4nm,0.6s,baz=254,slow=5.5,SNR=4.1						
TORD	**Torodi Ar. Bea**	**149.18**	**285**	PKPbc	**PKPbc**	**19 34 02.9**	**-0.9**
	baz=90,slow=2.9						

IDC 23 19:25:26.6±8.5**, 18°.63S×170°.51E, h279^{km}**±47^{km}**, mb3.4**/4**, mb1 3.5**/5**, mb1mx3.1**/42**, mbtmp4.0**/5**, Error ellipse: s-maj=101.7km s-min=80.0km az=113.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**5.13**	**227**	P	Pn	19 26 45.0	0.0
	2.4nm,0.3s,baz=45,slow=18,SNR=17						
DZM				S	S	19 27 48.1	+0.3
	0.7nm,0.3s,baz=77,slow=20,SNR=1.0						
CTA	**Charters Tower**	**22.93**	**262**	P	P	19 30 07.0	+0.1
	5.5nm,0.9s,baz=77,slow=15,SNR=2.6						
STKA	**Stephens Creek**	**29.19**	**238**	P	P	19 31 02.8	0.0
	1.3nm,0.7s,baz=82,slow=14,SNR=3.3						
WRA	**Warramunga Arr**	**34.13**	**262**	P	P	19 31 45.2	-0.7
	0.5nm,0.7s,baz=96,slow=8.6,SNR=17						
ASAR	**Alice Springs**	**34.45**	**255**	P	P	19 31 49.0	+0.4
	2.1nm,0.3s,baz=83,slow=8.6,SNR=40						

DJA 23 19:32:26.4±2.2**, 8°S**±5°×**10°7E**±°**, h18^{km}**±21^{km}**, M3.9**/14**, MLv3.9**/14**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKJI	**Sukabumi**	**1.19**	**326**	P	Pn	19 32 48.2	+0.1
SKJI				S	Sb	19 33 03.4	0.0
LEM	**Lembang**	**1.22**	**18**	P	Pn	19 32 47.7	-1.0
LEM				S	Sn	19 33 05.1	+0.3
CMJI	**Cimerak**	**1.22**	**80**	P	Pb	19 32 48.9	-0.1
DBJI	**Dramaga**	**1.50**	**342**	P	Pn	19 32 52.3	-0.2
KPJI	**Karang Pucung**	**1.81**	**69**	P	Pn	19 32 56.6	-0.1
TNG	**Tangerang**	**1.90**	**342**	P	Pn	19 32 58.4	+0.5
CGJI	**Cibinong**	**2.05**	**312**	P	Pn	19 32 59.9	-0.1
SBJI	**Serang**	**2.15**	**329**	P	Pn	19 33 01.9	+0.5
BLSI	**Bandar Lampung**	**3.27**	**323**	P	Pn	19 33 16.8	0.0
SMRI	**Semarang**	**3.32**	**74**	P	Pn	19 33 17.5	0.0
KASI	**Kota Agung**	**3.66**	**312**	P	Pn	19 33 22.3	+0.2
WOJI	**Wonogiri, Jawa**	**3.66**	**88**	P	Pn	19 33 21.6	-0.6
KLI	**Kotabumi**	**3.90**	**323**	P	Pn	19 33 25.7	+0.2
PCJI	**Pacitan**	**3.91**	**93**	P	Pn	19 33 25.8	+0.2
LWLI	**Liwa**	**4.32**	**313**	P	Pn	19 33 30.7	-0.6

MAN 23 19:36:45.9, 10°.98N×124°.64E, h33^{km}, mb3.6, ML2.3, MS1.8, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OCLP	**Ormoc**	**0.08**	**335**	*e*P	Pb	19 36 52.6	+1.0
OCLP				*e*S	Sb	19 36 55.5	+0.1
PLP	**Palo**	**0.38**	**61**	⇓*e*P	Pn	19 36 55.4	+0.3
PLP				*i* S	Sb	19 37 00.8	+0.1
BESP	**Borongan**	**1.00**	**51**	*e*P	Pn	19 37 03.8	+0.3
BESP				*e*S	Sn	19 37 16.8	+0.4
CNP	**Catarman**	**1.52**	**1**	*e*P	Pb	19 37 12.6	-0.9
CNP				*e*S	Sn	19 37 29.8	+0.3

ISCJB ***23*** *19:36:57.6±0.6, 13°.17N±0°.06×89°.60W±0°.04, h67^{km}±4^{km}, mb4.1/19, Error ellipse: s-maj=11.1km s-min=4.2km az=34.4*

CASC ***23*** *19:36:57.9±1.6, 13°.12N×89°.62W, h32^{km}±4^{km}, ML4.2, mb4.2(NEIC)*

NEIC ***23*** *19:36:57.8±1.0, 13°.33N×89°.63W, h40^{km}±7^{km}, mb4.2/12, MD4.4(SNET), Error ellipse: s-maj=21.9km s-min=9.2km az=209.0*

NEIC Felt [III] at San Salvador.

IDC ***23*** *19:37:03.6±3.0, 13°.55N×88°.97W, h95^{km}±27^{km}, mb3.6/7, mb1 3.9/8, mb1mx3.6/45, mbtmp4.0/8, MS3.3/15, Ms1 3.3/15, ms1mx3.0/50, Error ellipse: s-maj=46.9km s-min=19.8km az=43.0*

ISC 23 19:36:57.9±1.3**, 13°.17N**±0°.09×**89°.62W**±0°.07**, h57^{km}**±9^{km}**, n78,** σ**1^{s}.30**/82**, mb4.2**/19**, MS3.3**/13**, 1C-3D, El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SONS	**Sonsonate**	**0.58**	**351**	*e*P	**Pn**	**19 37 10.2**	**-0.5**
SONS				*e*S	**Sn**	**19 37 19.4**	**-0.5**
SONS				IAML		19 37 22.9	
	comp=Z,10µm,0.3s						
COLS	**Colinas**	**0.59**	**32**	*e*P	**Pn**	**19 37 10.5**	**-0.3**
AIES	**Las Flores**	**0.62**	**62**	*e*P	**Pn**	**19 37 10.5**	**-0.6**
AIES				*e*S	**Sn**	**19 37 19.8**	**-0.9**
SNET	**Serv Nac Est T**	**0.64**	**36**	*i* P	**Pn**	**19 37 11.1**	**-0.4**
SNET				*e*S	**Sn**	**19 37 21.5**	**+0.2**
SNET				IAML		19 37 22.6	
	comp=Z,18µm,0.3s						
BOQS	**Boqueron**	**0.66**	**30**	⇑*i*P	**Pn**	**19 37 11.6**	**-0.2**
BOQS				IAML		19 37 26.5	
	comp=Z,3µm,0.5s						
SBLS	**San Blas**	**0.67**	**360**	⇓*i*P	**Pn**	**19 37 11.9**	**0.0**
CEDA	**San Andres**	**0.67**	**19**	*e*P	**Pn**	**19 37 11.8**	**0.0**
CEDA				*e*S	**Sn**	**19 37 22.5**	**+0.7**
CEDA				IAML		19 37 26.5	
	comp=Z,12µm,0.3s						
UTEC	**San Salvador**	**0.67**	**37**	*e*P	**Pn**	**19 37 11.7**	**-0.1**
UTEC				*e*S	**Sn**	**19 37 22.4**	**+0.5**
UTEC				IAML		19 37 23.5	
	comp=Z,23µm,0.2s						
UESS	**San Salvador**	**0.68**	**37**	*e*P	**Pn**	**19 37 11.8**	**0.0**
UESS				*e*S	**Sn**	**19 37 22.8**	**+0.9**
UESS				IAML		19 37 23.9	
	comp=Z,18µm,0.2s						
OPAM	**San Salvador**	**0.68**	**37**	*e*P	**Pn**	**19 37 11.8**	**-0.1**
OPAM				*e*S	**Sn**	**19 37 22.7**	**+0.6**
OPAM				IAML		19 37 25.1	
	comp=Z,16µm,0.2s						
SNJE	**San Jose**	**0.70**	**1**	*i* P	**Pn**	**19 37 12.3**	**0.0**
CUSC	**San Salvador**	**0.70**	**37**	*e*P	**Pn**	**19 37 12.1**	**-0.1**
CUSC				*e*S	**Sn**	**19 37 23.2**	**+0.6**
UDBS	**Soyapango**	**0.72**	**39**	*e*P	**Pn**	**19 37 12.2**	**-0.1**
UDBS				*e*S	**Sn**	**19 37 23.5**	**+0.7**
RTR	**El Retiro**	**0.73**	**358**	*e*P	**Pn**	**19 37 12.7**	**+0.1**
LFU	**La Fuente**	**0.76**	**40**	⇓*i*P	**Pn**	**19 37 13.0**	**+0.1**
LBRS	**Las Brisas**	**0.80**	**45**	⇓*i*P	**Pn**	**19 37 13.6**	**+0.2**
UESV	**Ojushtada**	**0.84**	**75**	*e*P	**Pn**	**19 37 15.1**	**+1.3**
UESV				*e*S	**Sn**	**19 37 28.3**	**+2.9**
TECA	**Tecapa**	**1.14**	**73**	*e*P	**Pn**	**19 37 17.4**	**-0.5**
MTO3	**Montecristo**	**1.25**	**12**	*e*P	**Pn**	**19 37 20.2**	**+0.8**
IXG	**Ixpaco**	**1.29**	**321**	*e*P	**Pn**	**19 37 19.9**	**0.0**
LCY	**Lacayo**	**1.32**	**79**	*e*P	**Pn**	**19 37 20.5**	**+0.3**
VSM	**San Miguel**	**1.34**	**79**	*e*P	**Pn**	**19 37 21.0**	**+0.4**
LCND	**La Caˆ–ada**	**1.69**	**85**	*e*P	**Pn**	**19 37 25.4**	**+0.3**
LCND				*e*S	**Sn**	**19 37 46.4**	**+0.6**
LCND				IAML		19 37 52.9	
	comp=Z,7µm,0.3s						

CNCH	Conchagua	1.74	86	*e*P	Pn	19 37 28.0	+2.0
CNCH				*e*S	Sn	19 37 48.9	+1.6
CSGN	Cosiguina Volc	2.02	95	*e*Pn	Pn	19 37 30.4	+0.7
CSGN	Cosiguina Volc	2.02	95	*e*P	Pn	19 37 29.9	+0.2
TGUH	Tegucigalpa,Un	2.45	68	*e*Pn	Pn	19 37 35.8	+0.3
CRIN	San Cristobal	2.55	100	*e*P	Pn	19 37 38.5	+1.6
CRIN				*e*S	Sn	19 38 05.6	-1.2
CNGN	Cerro Negro	2.93	103	*e*P	Pn	19 37 42.8	+0.7
CNGN				*e*S	Sn	19 38 14.5	-1.6
CNGN				IAML		19 38 14.9	
	comp=N,129nm,0.4s						
MOMN	Momotombo	3.10	104	*e*P	Pn	19 37 43.4	-1.0
COPN	Copaltepe	3.11	108	*e*P	Pn	19 37 45.4	+0.8
ESTN	Estel	3.17	91	*e*Pn	Pn	19 37 45.4	0.0
MATN	Matagalpa	3.61	93	*e*P	Pn	19 37 51.0	-0.5
CCIG	Comitan	3.94	322	*e*Pn	Pn	19 37 53.5	-2.6
ESPN	Las Esperanzas	5.28	100	*e*P	Pn	19 38 14.3	0.0
JTS	JuntasAbangare	5.39	122	P	Pn	19 38 17.4	+1.6
	comp=N,4.1nm,0.3s,baz=358,slow=21,SNR=11						
JTS				S	Sn	19 39 12.1	-4.5
	comp=N,1.9nm,0.3s,baz=21,slow=24,SNR=1.8						
JTS				LR	LR	19 40 40.1	
	comp=N,141nm,21.0s,baz=5.5,slow=42						
JTS	JuntasAbangare	5.39	122	*e*P	Pn	19 38 17.4	+1.6
CMIG	Matias Romero	6.41	308	P	Pn	19 38 33.7	+4.0
	comp=N,2.4nm,0.3s,baz=112,slow=11,SNR=30						
CMIG				S	Sn	19 39 42.6	+1.0
	comp=N,5.4nm,0.3s,baz=49,slow=17,SNR=4.9						
CMIG				LR	LR	19 41 31.5	
	comp=N,203nm,21.9s,baz=96,slow=40						
TX31	Lajitas Ar. Si	20.71	323	*e*P	P	19 41 31.9	-1.7
TXAR	Lajitas Array	20.71	323	P	Pn	19 41 37.3	+0.8
	comp=N,3.9nm,0.6s,baz=144,slow=11,SNR=46						
TXAR				PcP	PcP	19 45 44.0	+2.2
	comp=N,0.2nm,0.5s,baz=116,slow=4.1,SNR=3.4						
TXAR				LR	LR	19 50 54.3	
	comp=N,30nm,18.7s,baz=0.0,slow=40						
SWET	Sewanee	22.21	8	*e*P	P	19 41 49.6	-0.1
	comp=N,6.6nm,0.8s						
V48A	Smith Brothers	22.62	6	*e*P	P	19 41 51.5	-2.5
	comp=N,4.4nm,0.9s						
V40A	Witts Springs	22.73	353	*e*P	P	19 41 57.5	+2.3
	comp=N,5.1nm,0.6s						
WVT	Waverly	22.92	4	*e*P	P	19 41 55.9	-1.3
	comp=N,4.0nm,1.0s						
TKL	Tuckaleechee C	23.01	12	LR	LR	19 51 41.7	
	comp=N,62nm,21.0s,baz=198,slow=39						
WMOK	Wichita Mounta	23.03	340	*e*P	P	19 41 58.0	-0.2
	comp=N,8.2nm,1.3s						
ATAH	Atahualpa	23.05	150	LR	LR	19 49 33.3	
	comp=N,85nm,21.7s,baz=11,slow=32						
SJG	San Juan	23.12	75	LR	LR	19 51 34.6	
	comp=N,76nm,19.7s,baz=121,slow=39						
MNTX	Cornudas Mount	23.45	324	*e*P	P	19 42 04.0	+1.7
	comp=N,7.5nm,1.6s						
T47A	Sharon Grove	23.83	5	*e*P	P	19 42 04.2	-1.5
	comp=N,11nm,0.9s						
T49A	Edmonton	24.12	8	*e*P	P	19 42 07.3	-1.1
	comp=N,5.8nm,0.6s						
S39A	Bolivar	24.65	353	*e*P	P	19 42 13.8	+0.7
	comp=N,6.7nm,0.6s						
CCM	Cathedral Cave	24.83	357	*e*P	P	19 42 16.6	+1.7
	comp=N,7.7nm,0.9s						
PDAR	Pinedale Array	34.17	333	P	P	19 43 39.2	+1.2
	comp=N,0.2nm,0.3s,baz=131,slow=9.7,SNR=3.3						
PDAR				PcP	PcP	19 46 14.0	+0.1
	comp=N,0.4nm,0.5s,baz=144,slow=6.3,SNR=4.3						
PDAR				LR	LR	19 58 57.6	
	comp=N,50nm,19.3s,baz=130,slow=38						
SAML	Samuel	34.23	129	*e*P	P	19 43 39.1	+0.6
	comp=N,2.7nm,0.8s						
ORC	Owens River	35.54	318	*e*pP	pP	19 44 00.9	-3.5
NV01	Mina Array Sit	35.78	320	*e*P	P	19 43 55.2	+3.2
NV01				*e*PcP	PcP	19 46 21.0	+2.2
NVAR	Mina Array Bea	35.78	320	P	P	19 43 55.5	+3.6
	comp=N,2.4nm,0.7s,baz=132,slow=8.8,SNR=19						
NVAR				PcP	PcP	19 46 20.6	+1.8
	comp=N,0.8nm,0.6s,baz=126,slow=4.6,SNR=7.7						
NVAR				LR	LR	20 00 12.4	
	comp=N,53nm,21.8s,baz=261,slow=39						
MINS	Minaret Summit	35.81	318	*e*PcP	PcP	19 46 21.3	+2.3
LPAZ	La Paz	36.16	143	LR	LR	19 57 34.9	
	comp=N,48nm,19.5s,baz=337,slow=34						
ULM	Lac du Bonnet	37.33	353	LR	LR	20 01 16.0	
	comp=N,65nm,18.2s,baz=7.5,slow=39						
MAC	Mark West Spri	38.72	317	*e*pP	pP	19 44 28.6	-2.6
O03D	Paynes Creek	39.07	320	*e*pP	pP	19 44 34.9	+0.7
YBH	Yreka Blue Hor	40.46	321	LR	LR	20 02 16.1	
	comp=N,44nm,19.7s,baz=158,slow=37						
GLK	Glacier Lake	42.79	327	*e*P	P	19 44 52.3	+2.2
WPW	White Pass	42.85	328	*e*P	P	19 44 52.3	+1.7
SCHQ	Schefferville	45.24	18	P	P	19 45 08.1	-1.4
	comp=N,3.7nm,0.5s,baz=216,slow=8.7,SNR=3.2						
SCHQ				LR	LR	20 03 39.6	
	comp=N,41nm,18.9s,baz=262,slow=36						
YKA	Yellowknife Ar	52.38	346	P	P	19 46 03.8	-0.2
	comp=N,1.6nm,0.5s,baz=131,slow=7.9,SNR=25						
YKW3	Yellowknife Ar	52.45	346	*e*P	P	19 46 03.9	-0.6
	comp=N,4.9nm,1.0s						
FRB	Frobisher Bay	52.63	12	LR	LR	20 08 42.1	
	comp=N,60nm,21.6s,baz=199,slow=36						
SFJD	Kangerlussuaq	59.63	17	LR	LR	20 13 03.3	
	comp=N,17nm,20.0s,baz=223,slow=37						
INK	Inuvik	61.90	343	LR	LR	20 17 12.7	
	comp=N,28nm,18.6s,baz=84,slow=39						
ILAR	Eielson Array	64.52	336	P	P	19 47 28.1	-0.5
	comp=N,0.4nm,0.8s,baz=130,slow=4.6,SNR=4.7						
ARCES	ARCESS Array B	86.19	19	P	P	19 49 31.2	-1.6
	comp=N,1.3nm,0.9s,baz=282,slow=6.1,SNR=3.8						
TORD	Torodi Ar. Bea	88.32	77	P	P	19 49 41.8	-2.3
	comp=N,80nm,0.7s,baz=299,slow=6.5						
SONM	Songino Array	117.62	348	PKP	PKPdf	19 55 37.8	-0.1
	comp=N,0.3nm,0.6s,baz=36,slow=0.7,SNR=2.5						
MKAR	Makanchi Array	119.88	6	PKP	PKPdf	19 55 41.4	-0.7
	comp=N,0.2nm,0.4s,baz=352,slow=2.3,SNR=3.5						
CMAR	Chiang Mai Arr	147.46	345	PKPbc	PKPbc	19 56 35.8	-0.7
	comp=N,2.7nm,0.6s,baz=340,slow=3.7,SNR=24						

IDC 23 19:38:07.4±3.0,**6°.72S**×**151°.87E**,**h0**^{km},**mb3.3**/2, **mb1 3.6**/3,**mb1mx3.3**/44,**mbtmp3.4**/3,**ML1.3**/1,**MS4.0**/1, **Ms1 4.0**/1,**ms1mx2.6**/23,**Error ellipse: s-maj=121.1km s-min=43.0km az=129.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	5.37	240	Pn	Pn	19 39 29.8	+1.0
	0.6nm,0.3s,baz=20,slow=17,SNR=1.7						
PMG				Sn	Sn	19 40 26.4	-5.0
	0.5nm,0.3s,baz=351,slow=15,SNR=1.6						
WRA	Warramunga Arr	21.50	231	P	P	19 42 57.6	-0.4
	1.0nm,0.7s,baz=57,slow=11,SNR=9.7						
ASAR	Alice Springs	24.12	224	P	P	19 43 25.2	+0.1
	0.5nm,0.5s,baz=56,slow=9.3,SNR=14						
AFI	Afiamalu	36.44	104	LR	LR	19 58 57.8	
	comp=Z,240nm,19.8s,baz=154,slow=34						
TORD	Torodi Ar. Bea	149.96	285	PKPbc	PKPbc	19 58 00.4	-0.5
	baz=78,slow=3.7						

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*ISCJB **23** 19:45:28.1±1.6, 1°.7N±0°.1×120°.60E±0°.07, h10^{km}, mb3.6/4, Error ellipse: s-maj=17.6km s-min=8.5km az=163.9*

*DJA **23** 19:45:33.3±0.7, 1°N±4°×12°1E±°, h10^{km}±5^{km}, M4.2/11, mb4.5/1, MLv4.0/11*

*IDC **23** 19:45:35.3±1.6, 1°.09N×121°.59E, h0^{km}, mb3.6/4, mb1 3.8/4, mb1mx3.4/57, mbtmp3.6/4, Error ellipse: s-maj=192.4km s-min=27.0km az=61.0*

ISC 23 19:45:29.4±2.1,**1°.7N**±0°.2×**120°.60E**±0°.07,**h10**^{km},**n12**, σ**1^{s}30**/13,**mb3.7**/4,**Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MPSI	Mapaga	1.49	208	P	Pn	19 45 57.0	+0.7
MPSI				S	Sn	19 46 16.3	+0.6
MRSI	Marisa	1.78	131	P	Pn	19 46 01.2	+0.9
MRSI				S	Sn	19 46 22.4	-0.6
PCI	Palu	2.66	197	P	Pn	19 46 13.5	+1.1
APSI	Ampana	2.76	158	P	Pn	19 46 15.1	+1.3
LUWI	Luwuk	3.45	141	P	Pn	19 46 24.5	+1.2
KMSI	Cibinong	3.55	108	P	Pn	19 46 26.5	+1.9
BKB	Balikpapan	4.70	232	P	Pn	19 46 41.6	+1.1
TTSI	Tana Toraja	4.74	189	P	Pn	19 46 42.2	+1.2
WRA	Warramunga Arr	25.35	149	P	P	19 50 55.2	-1.7
	3.5nm,0.6s,baz=327,slow=10,SNR=46						
ASAR	Alice Springs	28.30	154	P	P	19 51 23.0	-0.5
	0.7nm,0.5s,baz=342,slow=15,SNR=12						
STKA	Stephens Creek	38.84	151	P	P	19 52 53.9	-1.0
	0.7nm,0.4s,baz=348,slow=6.6,SNR=5.5						
MKAR	Makanchi Array	55.96	329	P	P	19 55 22.3	+14
	0.1nm,0.4s,baz=126,slow=9.8,SNR=1.9						

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*IDC **23** 19:47:09.5±0.5, 30°.42S×177°.39W, h0^{km}, mb4.7/17, mb1 4.8/19, mb1mx4.6/46, mbtmp4.7/19, ML3.8/2, MS4.0/32, Ms1 4.0/32, ms1mx3.9/46, Error ellipse: s-maj=18.3km s-min=13.0km az=72.0*

*BJI **23** 19:47:09.1, 30°.23S×177°.17W, h8^{km}, mb5.4/22, mB5.6/15, Ms5.0/6, Ms7 4.7/6*

*ISCJB **23** 19:47:12.5±0.4, 30°.95S±0°.04×177°.44W±0°.08, h33^{km}, mb5.0/37, MS4.1/32, Error ellipse: s-maj=10.3km s-min=5.4km az=20.5*

*NEIC **23** 19:47:14.1±0.3, 30°.83S×177°.47W, h35^{km}, mb5.0/27, Error ellipse: s-maj=11.1km s-min=6.3km az=119.0*

*MOS **23** 19:47:14.4±1.0, 30°.45S×177°.61W, h35^{km}, mb5.3/10, Error ellipse: s-maj=14.3km s-min=12.3km az=102.5*

*GCMT **23** 19:47:14.1±0.6, 30°.34S×177°.24W, h29^{km}, MW5.0/48, Moment Tensor Solution. s38,c46; s48,c66; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$3.22±.24; M$_{\theta\theta}$-1.25±.17; M$_{\phi\phi}$-1.97±.14; M$_{r\theta}$-0.52±.30; M$_{\theta\phi}$-1.78±.12; M$_{\phi r}$1.19±.20; Best double couple: M$_0$3.56900×10^{16} NP1:ϕ_s21.00000°,δ53.00000°,λ67.00000°. NP2: ϕ_s237.00000°,δ43.00000°,λ117.00000°. Principal axes: T 3.6560, Plg71.0000°, Azm233.0000°; N -0.1750, Plg18.0000°, Azm36.0000°; P -3.4810, Plg5.0000°, Azm128.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 23 19:47:14.5±0.4,**30°.64S**±0°.05×**177°.49W**±0°.08,**h33**^{km}, **n236**,σ**1^{s}78**/215,**mb5.1**/37,**MS4.0**/32,**9C-6D,Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.43	345	Pn	Pn	19 47 35.3	-2.8
	9µm,0.3s,baz=185,slow=3.6,SNR=79						
RAO				Sn	Sn	19 47 52.2	-3.6
	10µm,0.3s,baz=100,slow=22,SNR=29						
URZ	Urewera	8.81	209	Pn	Pn	19 49 15.9	-3.5
	4.5nm,0.3s,baz=281,slow=4.2,SNR=17						
URZ				Sn	Sn	19 50 53.9	-3.7
	7.1nm,0.3s,baz=67,slow=17,SNR=2.7						
URZ	Urewera	8.81	209	*e*Pn	Pn	19 49 15.5	-4.0
URZ				Sn	Sn	19 50 53.9	-3.7
BKZ	Black Stump Fm	9.84	209	*e*Pn	Pn	19 49 29.2	-4.4
BFZ	Birch Farm	11.24	205	*e*Pn	Pn	19 49 46.4	-6.3
THZ	Tophouse	13.53	212	*e*Pn	Pn	19 50 22.5	-1.6
KHZ	Kahutara	13.78	209	*e*Pn	Pn	19 50 18.8	-8.6
LTZ	Lake Taylor	14.62	211	*e*Pn	Pn	19 50 34.0	-5.0
OXZ	Oxford	15.16	210	*e*Pn	Pn	19 50 41.7	-4.4
	76nm,1.0s						
MQZ	McQueen's Vall	15.21	208	*e*Pn	Pn	19 50 41.2	-5.5
	20nm,0.8s						
RPZ	Rata Peaks	15.91	212	Pn	Pn	19 50 50.1	-5.7
	1.7nm,0.3s,baz=97,slow=16,SNR=6.2						
RPZ				Sn	Sn	19 53 35.8	-15
	1.6nm,0.3s,baz=302,slow=11,SNR=1.7						
RPZ	Rata Peaks	15.91	212	*e*Pn	Pn	19 50 50.1	-5.7
	146nm,1.8s						
RPZ				Sn	Sn	19 53 35.9	-15
FOZ	Fox Glacier	16.35	215	*e*Pn	Pn	19 50 56.7	-4.8
	130nm,1.7s						
DZM	Mont Dzumac	16.73	297	Pn	Pn	19 51 03.6	-2.8
	0.1nm,0.3s,baz=110,slow=15,SNR=1.8						
DZM				LR	LR	19 56 32.1	
	comp=Z,2µm,18.2s,baz=124,slow=34						
DZM	Mont Dzumac	16.73	297	*e*P	P	19 51 12.0	+3.6
	132nm,1.4s						
DZM				*e*LQ	LQ	19 54 26.4	
	762nm,25.5s						
DZM				*e*LR	LR	19 55 09.4	
	1µm,23.2s						
DZM	Mont Dzumac	16.73	297	*e*Pn	Pn	19 51 04.3	-2.2
	84nm,1.4s						
LBZ	Lake Benmore	16.82	212	*e*Pn	Pn	19 51 01.9	-5.5
	62nm,1.3s						
ODZ	Otahua Downs	17.14	210	*e*Pn	Pn	19 51 08.1	-3.2
	34nm,0.7s						
AFI	Afiamalu	17.46	19	P	Pn	19 51 12.5	-3.1
	1.8nm,0.3s,baz=290,slow=23,SNR=1.8						
AFI				S	Sn	19 54 11.0	-18
	1.6nm,0.3s,baz=212,slow=20,SNR=1.3						
AFI	Afiamalu	17.46	19	*e*Pn	Pn	19 51 14.8	-0.8
	53nm,0.8s						
AFI				S	Sn	19 54 11.1	-18
AFI	Afiamalu	17.46	19	*e*P	Pn	19 51 14.8	-0.8
AFI				pmax	pmax		
	comp=Z,53nm,0.8s						
WKZ	Wanaka	17.70	213	*e*Pn	Pn	19 51 14.0	-4.3
	comp=Z,226nm,1.9s						
RAR	Rarotonga	18.47	64	LR	LR	19 58 00.1	
	comp=Z,193nm,19.4s,baz=254,slow=36						
MLZ	Mavora Lakes	18.53	213	*e*P	P	19 51 24.8	-3.3
	comp=Z,288nm,2.0s						
WHZ	Wether Hill Ro	19.00	213	*e*P	P	19 51 29.6	-3.6
	comp=Z,207nm,1.9s						
DCZ	Deep Cove	19.07	215	*e*P	P	19 51 29.6	-4.4
	comp=Z,54nm,1.3s						
TBI	Tubuai	25.96	81	*e*LQ	LQ	19 57 44.1	
	comp=Z,745nm,27.0s						
TBI				*e*LR	LR	19 59 05.6	
	comp=Z,710nm,28.2s,baz=237						
TBI	Tubuai	25.96	81	*e*T	T	20 20 02.0	
	comp=Z,19nm,0.3s						
ARMA	Armidale	26.57	263	P	P	19 52 52.8	+3.2
	baz=28,SNR=8.6						
MGCD	Mangrove Creek	26.73	256	P	P	19 52 54.8	+3.8
	baz=28,SNR=13						
CNB	Canberra Magne	28.12	252	P	P	19 53 05.7	+2.2
	baz=30,SNR=6.1						
EIDS	Eidsvold	28.19	273	P	P	19 53 06.0	+1.9
	baz=30,SNR=12						
EIDS	Eidsvold	28.19	273	*e*P	P	19 53 04.2	+0.1
	comp=Z,80nm,1.5s						
MILA	Mila	28.34	248	P	P	19 53 08.4	+3.0
	baz=30,SNR=5.8						
PAE	Paea	28.46	69	*e*T	T	20 22 43.4	
	comp=Z,11nm,0.3s						
PPT2	Papeete2	28.50	69	*e*LQ	LQ	19 58 40.6	
	comp=Z,432nm,24.5s						
PPT2				*e*LR	LR	20 00 12.0	
	comp=Z,557nm,26.2s,baz=229						
PPT	Papeete	28.52	69	LR	LR	20 01 20.4	
	comp=Z,171nm,21.8s,baz=238,slow=30						
YNG	Young	28.94	254	P	P	19 53 13.3	+2.6
	baz=30,SNR=6.3						
HNR	Honiara	29.79	310	LR	LR	20 03 19.9	
	comp=Z,216nm,19.9s,baz=160,slow=33						
RMQ	Roma	29.87	269	P	P	19 53 22.2	+3.2
	baz=31,SNR=28						
MOO	Moorlands	30.52	237	P	P	19 53 26.7	+2.1
	baz=32,SNR=3.9						
TOO	Toolangi	31.28	247	P	P	19 53 33.2	+1.9
	baz=33,SNR=10						
VAH	Vaihoa	31.35	67	*e*T	T	20 26 15.6	
	comp=Z,21nm,0.2s						
CMSA	Cobar Meteorol	31.45	259	P	P	19 53 35.5	+2.5
	baz=33,SNR=28						
QLP	Quilpie	33.74	267	P	P	19 53 54.5	+1.5
	baz=35,SNR=19						
ARPS	Mount Arapiles	34.20	249	P	P	19 53 59.2	+2.3
	baz=36,SNR=7.7						
CTA	Charters Tower	34.27	279	P	P	19 53 59.2	+1.5
	comp=Z,34nm,0.4s,baz=101,slow=10,SNR=38						
CTA				LR	LR	20 06 38.8	
	comp=Z,884nm,21.0s,baz=120,slow=34						
CTAO	Charters Tower	34.27	279	*e*P	P	19 53 59.0	+1.2
	comp=Z,39nm,0.6s						
CTAO	Charters Tower	34.27	279	*e*P	P	19 53 59.0	+1.2
CTAO				pmax	pmax		
	comp=Z,39nm,0.6s						
STKA	Stephens Creek	34.86	257	P	P	19 54 04.7	+2.0
	comp=Z,60nm,0.7s,baz=99,slow=11,SNR=99						
STKA				LR	LR	20 07 18.8	
	comp=Z,465nm,18.8s,baz=64,slow=35						
STKA	Stephens Creek	34.86	257	P	P	19 54 04.6	+2.0
	baz=36,SNR=125						
STKA	Stephens Creek	34.86	257	*e*P	P	19 54 04.6	+2.0
	comp=Z,13nm,0.8s						
STKA	Stephens Creek	34.86	257	*e*P	P	19 54 04.6	+2.0
STKA				pmax	pmax		
	comp=Z,13nm,0.8s						
MTSU	Mount Surprise	36.77	281	P	P	19 54 21.5	+2.2
	baz=38,SNR=30						
HTT	Hallett	36.86	254	P	P	19 54 21.6	+1.7
	baz=38,SNR=31						
PMG	Port Moresby	39.11	295	P	P	19 54 39.1	+0.2
	comp=Z,9.0nm,0.9s,baz=135,slow=17,SNR=2.3						
PMG				LR	LR	20 08 24.7	
	comp=Z,270nm,18.1s,baz=116,slow=33						
BBOO	Buckleboo	39.33	254	P	P	19 54 41.6	+1.0
	baz=41,SNR=18						
BBOO	Buckleboo	39.33	254	*e*P	P	19 54 41.1	+0.5
	comp=Z,35nm,0.8s						
COEN	Coen	39.76	286	P	P	19 54 46.2	+1.8
	baz=41,SNR=8.4						
QIS	Mount Isa	39.77	274	P	P	19 54 46.3	+1.8
	baz=41,SNR=13						
TAOE	Nuku Hiva Isla	41.00	66	*e*LR	LR	20 05 57.0	
	comp=Z,327nm,26.2s						
AS01	Alice Springs	43.50	267	*e*P	P	19 55 14.4	-0.5
AS31	Alice Springs	43.54	267	*e*P	P	19 55 14.2	-1.1
	comp=Z,5.9nm,0.6s						
ASAR	Alice Springs	43.54	267	P	P	19 55 14.9	-0.4
	comp=Z,15nm,0.5s,baz=102,slow=7.0,SNR=77						
ASAR				PcP	PcP	19 57 02.9	+0.1
	comp=Z,3.5nm,0.6s,baz=126,slow=3.8,SNR=5.3						
ASAR				ScP	ScP	20 00 55.0	+3.2
	comp=Z,2.4nm,0.7s,baz=113,slow=4.1,SNR=8.7						
ASAR				LR	LR	20 13 02.7	
	comp=Z,704nm,18.3s,baz=108,slow=36						
WC3	Warramunga Arr	44.52	272	P	P	19 55 22.7	-0.4
	baz=46						
WB2	Warramunga Arr	44.54	272	*e*P	P	19 55 22.7	-0.7
	comp=Z,43nm,0.8s						
WRAB	Tennant Creek	44.54	272	*e*P	P	19 55 21.2	-2.2
	comp=Z,42nm,0.8s						
WRAB	Tennant Creek	44.54	272⇑	*e*P	P	19 55 22.6	-0.8
WRAB				pmax	pmax		
	comp=Z,68nm,1.3s						
WRA	Warramunga Arr	44.55	272	P	P	19 55 22.8	-0.6
	comp=Z,36nm,0.7s,baz=111,slow=8.1,SNR=237						
WRA				PcP	PcP	19 57 06.5	+0.2
	comp=Z,3.3nm,0.7s,baz=119,slow=3.3,SNR=2.9						
WRA				ScP	ScP	20 00 59.1	+3.2
	comp=Z,2.0nm,0.9s,baz=110,slow=4.0,SNR=4.9						
FORT	Forrest	46.41	255	P	P	19 55 37.9	-0.1
	baz=48,SNR=20						
FORT	Forrest	46.41	255	*e*P	P	19 55 37.7	-0.4
	comp=Z,42nm,1.0s						
WRKA	Warakurna	47.89	263	P	P	19 55 48.7	-1.0
	baz=49,SNR=9.6						
VNDA	Vanda	47.90	186	P	P	19 55 50.2	+1.2
	comp=Z,1.0nm,0.6s,baz=4.4,slow=6.6,SNR=5.5						
VNDA				LR	LR	20 13 34.6	
	comp=Z,99nm,19.5s,baz=30,slow=33						
KNRA	Kununurra	51.16	274	P	P	19 56 15.1	+0.5
	baz=53,SNR=6.4						
KMBL	Kambalda	51.38	253	P	P	19 56 15.0	-1.1
	baz=53,SNR=6.0						
FITZ	Fitzroy Crossi	52.80	270	P	P	19 56 26.5	-0.4
	baz=54,SNR=11						
FITZ	Fitzroy Crossi	52.80	270	*e*P	P	19 56 26.6	-0.2
	comp=Z,14nm,0.8s						
KLBR	Kellerberrin	54.69	251	P	P	19 56 39.8	-0.8
	baz=56,SNR=8.7						
NWAO	Narrogin (SRO)	54.73	249	LR	LR	20 17 48.0	
	comp=Z,208nm,18.9s,baz=308,slow=34						
KIP	Kipapa	55.04	22⇑	*e*P	P	19 56 40.4	-2.6
KIP				pmax	pmax		
	comp=Z,241nm,1.1s						
CASY	Casey	55.14	208	*e*P	P	19 56 43.9	+0.7
	comp=Z,23nm,0.7s						
MEEK	Meekatharra	55.56	257	P	P	19 56 45.9	-1.0
	baz=57,SNR=6.4						
BLDU	Ballidu	55.84	252	P	P	19 56 48.0	-0.8
	baz=57,SNR=5.9						
MORW	Morawa	56.89	253	P	P	19 56 55.7	-0.6
	baz=58,SNR=6.2						
GUMO	Guam	56.96	315	LR	LR	20 18 34.6	
	comp=Z,99nm,20.3s,baz=142,slow=33						
QSPA	South Pole Qui	59.47	180	P	P	19 57 16.7	+2.7
	comp=Z,14nm,0.9s,baz=302,slow=0.3,SNR=25						
MIR	Mirnyy	62.11	207	*e*P	P	19 57 35.0	+3.3
MIR				pmax	pmax		
	comp=Z,54nm,1.5s						
PMSA	Palmer Station	71.86	156	LR	LR	20 23 21.2	
	comp=Z,136nm,19.0s,baz=224,slow=30						
MAW	Mawson	72.24	200	P	P	19 58 38.0	+2.1
	comp=Z,1.7nm,0.5s,baz=105,slow=9.6,SNR=4.7						
MAW				LR	LR	20 29 42.2	
	comp=Z,174nm,19.5s,baz=62,slow=35						
JHJ	Hachijo jima 2	75.19	324	LR	LR	20 29 42.9	
	comp=Z,30nm,18.1s,baz=138,slow=34						
SYO	Syowa Base	76.98	193⇓	*e*pP	P	19 59 04.0	+0.6
SYO	Syowa Base	76.98	193⇑	*e*PKiKP	PKiKP	20 04 45.0	-0.1
JOW	Kunigami	77.15	312	P	P	19 59 04.0	-0.9
	comp=Z,7.9nm,0.8s,baz=124,slow=11,SNR=3.0						
JOW				LR	LR	20 28 35.8	
	comp=Z,70nm,21.6s,baz=111,slow=32						
SNAA	Sanae	77.90	178	P	P	19 59 09.9	+1.3
SNAA	Sanae	77.90	178	*e*P	P	19 59 08.3	-0.3
VNA3	Neumayer Olymp	78.04	176	P	P	19 59 10.2	+0.9
MJAR	Matsushiro Arr	78.69	325	P	P	19 59 12.3	-1.0
	comp=Z,1.7nm,0.7s,baz=167,slow=6.0,SNR=6.1						
MJAR				LR	LR	20 28 51.1	
	comp=Z,30nm,21.7s,baz=280,slow=32						
VNA1	Neumayer--Stat	78.70	176	P	P	19 59 13.8	+0.9
JNU	Nakatsue	80.03	318	LR	LR	20 28 58.4	
	comp=Z,56nm,21.8s,baz=126,slow=31						
PLCA	Paso Flores	82.02	133	P	P	19 59 32.5	+1.0
	comp=Z,4.7nm,1.1s,baz=225,slow=17,SNR=1.4						
PLCA				LR	LR	20 26 55.1	
	comp=Z,74nm,21.8s,baz=284,slow=29						
ASAJ	Asahikawa	82.86	332	P	P	19 59 35.5	+0.2
	comp=Z,7.0nm,0.8s,baz=213,slow=6.3,SNR=9.7						
ASAJ				LR	LR	20 33 11.4	
	comp=Z,79nm,18.8s,baz=169,slow=33						
ASAJ	Asahikawa	82.86	332	*e*P	P	19 59 35.9	+0.6
	comp=Z,11nm,1.0s						
LPIG	La Paz	84.28	58	LR	LR	20 31 17.3	
	comp=Z,96nm,18.0s,baz=230,slow=32						
KSRS	Korea Array	84.82	319	P	P	19 59 45.5	0.0
	comp=Z,2.5nm,0.9s,baz=142,slow=6.4,SNR=7.4						
KSRS				LR	LR	20 36 51.2	
	comp=Z,34nm,18.0s,baz=146,slow=35						
KSAR	Wonju Array Be	84.83	319	P	P	19 59 45.5	-0.1
YSS	Yuzh-Sakhalins	85.16	334	*e*P	P	19 59 47.3	+0.4
	comp=Z,27nm,0.9s						
YSS	Yuzh-Sakhalins	85.16	334	*e*P	P	19 59 47.6	+0.7
YSS				pmax	pmax		
	comp=Z,25nm,0.9s						
PETK	Petropavlovsk-	86.15	345	P	P	19 59 51.3	-0.5
	comp=Z,6.4nm,0.7s,baz=121,slow=6.4						
PETK				LR	LR	20 32 47.0	
	comp=Z,51nm,21.6s,baz=145,slow=32						
ISA	Isabella, Lake	86.16	44	*e*P	P	19 59 52.9	+0.6
	comp=Z,11nm,1.4s						
ISA	Isabella, Lake	86.16	44	P	P	19 59 52.9	+0.6
ISA				pmax	pmax		
	comp=Z,11nm,1.4s						
NJ2	Nanjing	86.74	310	*e*P	P	19 59 56.3	+1.1
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
USRK	Ussuriysk Ar.	87.61	326	P	P	19 59 58.9	-0.2
	comp=Z,4.8nm,0.7s,baz=147,slow=2.9						
YBH	Yreka Blue Hor	87.95	38	LR	LR	20 31 11.7	
	comp=Z,68nm,21.7s,baz=215,slow=30						
NV01	Mina Array Sit	88.11	42	*e*P	P	20 00 01.3	-0.7
NVAR	Mina Array Bea	88.11	42	P	P	20 00 01.5	-0.4
	comp=Z,0.7nm,0.6s,baz=214,slow=7.8,SNR=7.1						
NVAR				LR	LR	20 33 51.7	
	comp=Z,146nm,18.4s,baz=114,slow=32						
TPNV	Topopah Spring	88.35	45	*e*P	P	20 00 03.1	+0.1
	comp=Z,28nm,2.0s						
TPNV	Topopah Spring	88.35	45	*e*P	P	20 00 03.1	+0.1
TPNV				pmax	pmax		
	comp=Z,28nm,2.0s						
TUC	Tucson	88.92	51	*e*P	P	20 00 03.2	-2.5
	comp=Z,2.2nm,0.8s						
TUC	Tucson	88.92	51	*e*P	P	20 00 03.2	-2.5
TUC				pmax	pmax		
	comp=Z,2.0nm,0.8s						
CN2	Changchun	90.60	323	*e*P	P	20 00 14.0	+0.8
GRNR	Gornyy	90.70	333	*e*P	P	20 00 17.1	+3.6
KLR	Kul'dur	91.47	329⇑	*e*P	P	20 00 17.1	0.0
GYA	Guiyang	92.05	300	*e*P	P	20 00 22.0	+1.5
GYA				PP	PP	20 04 04.6	+3.7

GYA				SKS	SKSac	20 10 54.3	+2.9
GYA				S	ScS	20 11 23.4	+0.4
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,6.2s						
TXAR	Lajitas Array	92.14	57	LR	LR	20 35 02.7	
	comp=Z,55nm,18.5s,baz=0.0,slow=31						
NNA	Nana	92.93	106	LR	LR	20 31 49.3	
	comp=Z,54nm,21.4s,baz=218,slow=29						
ANMO	Albuquerque	93.38	51	LR	LR	20 39 51.2	
	comp=Z,71nm,18.1s,baz=244,slow=34						
BJI	Beijing	93.41	315	⇓eP	P	20 00 26.8	+0.6
BJI				pmax	pmax		
	comp=Z,7.0nm,0.7s						
CMAR	Chiang Mai Arr	93.90	289	P	P	20 00 29.9	+0.8
	comp=Z,0.8nm,0.7s,baz=137,slow=3.7,SNR=4.9						
CMAR				LR	LR	20 46 58.7	
	comp=Z,28nm,18.1s,baz=155,slow=38						
XAN	Xi’an	94.61	307	P	P	20 00 31.1	-0.9
XAN				pmax	pmax		
	comp=Z,7.0nm,1.4s						
XAN				pmax	pmax		
	comp=Z,220nm,4.2s						
PDAR	Pinedale Array	96.00	43	LR	LR	20 38 55.6	
	comp=Z,108nm,18.2s,baz=258,slow=32						
HHC	Hu-ho-hao-te	96.72	314	eP	P	20 00 43.4	+1.8
HHC				S	S	20 12 06.1	+5.3
HHC				sS	sS	20 12 16.8	-1.6
HHC				pmax	pmax		
	comp=Z,8.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,130nm,5.0s						
HHC				LR	LR		
	comp=Z,140nm,15.1s						
HHC				LR	LR		
	comp=Z,190nm,16.1s						
HHC				LR	LR		
	comp=Z,140nm,13.3s						
JTS	JuntasAbangare	97.33	82	LR	LR	20 35 08.8	
	comp=Z,55nm,19.5s,baz=294,slow=30						
LPAZ	La Paz	97.64	114	LR	LR	20 35 31.3	
	comp=Z,26nm,21.5s,baz=231,slow=30						
LZH	Lanzhou	99.22	306	eP	Pdif	20 00 52.3	-0.7
LZH				pP	pP	20 00 57.4	-6.2
LZH				sP	sP	20 01 00.3	-7.1
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
CPUP	Villa Florida	99.49	128	LR	LR	20 37 58.1	
	comp=Z,44nm,19.7s,baz=222,slow=31						
YAK	Yakutsk	101.64	337	⇑eP	Pdif	20 01 01.1	-1.7
PLAL	Pickwick Lake	106.39	59	ePdif	Pdif	20 01 24.9	+0.3
WVT	Waverly	107.07	58	ePdif	Pdif	20 01 28.1	+0.4
WVT	Waverly	107.07	58	eP	Pdif	20 01 28.1	+0.4
V53A	Saluda	110.58	60	ePdif	Pdif	20 01 41.7	-1.7
WMQ	Urumqi	113.72	308	PKP	PKiKP	20 05 49.9	+0.4
WMQ				LR	LR		
	comp=Z,96nm,18.1s						
WMQ				LR	LR		
	comp=Z,120nm,22.1s						
WMQ				LR	LR		
	comp=Z,91nm,26.3s						
BOSA	Boshof	117.21	202	PKP	PKPdf	20 05 58.1	+1.2
	comp=Z,1.8nm,1.0s,baz=151,slow=3.7,SNR=2.0						
MK01	Makanchi Array	118.25	310	ePKPdf	PKPdf	20 05 56.7	-1.3
MK31	Makanchi Array	118.27	310	ePKPdf	PKPdf	20 05 56.9	-1.1
MK31	Makanchi Array	118.27	310	ePKIKP	PKPdf	20 05 56.9	-1.1
MKAR	Makanchi Array	118.27	310	PKP	PKPdf	20 05 57.2	-0.9
	comp=Z,0.6nm,0.5s,baz=232,slow=2.3,SNR=16						
MKAR	Makanchi Array	118.27	310	ePKPdf	PKPdf	20 05 57.3	-0.8
MAKZ	Makanchi	118.48	310	ePKPdf	PKPdf	20 05 59.5	+1.1
ZALV	Zalesovo Beam	118.50	318	PKP	PKPdf	20 05 57.1	-1.1
	comp=Z,1.4nm,0.7s,baz=81,slow=4.5,SNR=3.0						
NVS	Novosibirsk	119.61	319	ePKIKP	PKPdf	20 05 58.3	-2.0
KSH	Kashi	120.74	300	ePKP	PKPdf	20 06 04.3	+1.1
KURK	Kurchatov	121.53	314	ePKPdf	PKPdf	20 06 03.0	-1.1
KURK	Kurchatov	121.53	314	⇓iPKIKP	PKPdf	20 06 03.5	-0.6
KURK				pmax	pmax		
	comp=Z,78nm,2.5s						
KURBB	Kurchatov Arra	121.57	313	PKP	PKPdf	20 06 03.4	-0.8
	comp=Z,2.1nm,0.6s,baz=106,slow=1.8,SNR=20						
KK31	Karatay Array	125.58	303	ePKPdf	PKPdf	20 06 12.2	0.0
KK31	Karatay Array	125.58	303	ePKIKP	PKPdf	20 06 12.2	0.0
KKAR	Karatay Array	125.58	303	ePKPdf	PKPdf	20 06 12.2	0.0
KKAR	Karatay Array	125.58	303	ePKIKP	PKPdf	20 06 12.2	0.0
BVAR	Borovoye Array	126.89	316	PKP	PKPdf	20 06 14.0	-0.4
	comp=Z,3.0nm,0.5s,baz=90,slow=2.0,SNR=20						
BVAR	Borovoye Array	126.89	316	PKIKP	PKPdf	20 06 14.0	-0.4
BRVK	Borovoye	126.95	316	d iPKIKP	PKPdf	20 06 14.3	-0.2
BRVK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ARU	Arti	133.56	321	ePKPdf	PKPdf	20 06 27.7	+0.8
ARU	Arti	133.56	321	i PKIKP	PKPdf	20 06 27.5	+0.6
ARU						20 08 53.6	
ARU				SS	SS	20 26 31.2	-7.9
GEYT	Alibeck	134.06	295	PKhKP	PKPpre	20 06 24.3	
	comp=Z,0.5nm,0.7s,baz=98,slow=6.0,SNR=2.3						
GEYT				SKPbc	SKPab	20 09 57.0	-1.2
	comp=Z,1.7nm,0.9s,baz=164,slow=1.1,SNR=5.5						
AKTO	Aktyubinsk	134.59	312	PKP	PKPdf	20 06 28.7	-0.3
	comp=Z,1.2nm,0.6s,baz=40,slow=3.7,SNR=4.4						
ARCES	ARCESS Array B	138.92	348	PKhKP	PKPpre	20 06 28.7	
	comp=Z,1.0nm,0.6s,baz=42,slow=2.4,SNR=8.5						
VRH	Novokhopyorsk	144.52	317	ePKHKP	PKPpre	20 06 43.6	
VRH				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GNI	Garni	144.57	297	PKP	PKPbc	20 06 46.7	+0.2
	comp=Z,5.0nm,0.7s,baz=32,slow=9.5,SNR=3.7						
GNI	Garni	144.57	297	d iPKIKP	PKPbc	20 06 47.0	+0.5
GNI				pmax	pmax		
	comp=Z,35nm,1.3s						
ZEI	Tsey	145.01	302	i PKIKP	PKPbc	20 06 46.6	-1.2
ZEI				pmax	pmax		
	comp=Z,11nm,0.4s						
NCK	Nalchik	145.14	303	⇑iPKIKP	PKPdf	20 06 48.5	+0.1
GOF	Gofitskoye	145.29	306	⇑iPKIKP	PKPdf	20 06 48.6	0.0
GOF				pmax	pmax		
	comp=Z,50nm,0.7s						
AKH	Akhalkalaki	145.45	300	ePKPbc	PKPab	20 06 50.3	+0.8
AKH	Akhalkalaki	145.45	300	PKIKP	PKPab	20 06 50.3	+0.8
FIA1	FINESS Array S	145.52	340	ePKPdf	PKPdf	20 06 47.5	-0.9
FIA1				ePKPdf	PKPbc	20 06 47.9	-0.6
FINES	FINESS Array B	145.52	340	PKPbc	PKPdf	20 06 47.0	-1.4
	comp=Z,26nm,0.6s,baz=87,slow=2.3,SNR=84						
LPSR	Galich’ya Gora	145.58	320	ePKIKP	PKPdf	20 06 48.4	-0.4
LPSR				pmax	pmax		
	comp=Z,60nm,0.9s						
KBZ	Khabaz	145.61	304	PKPbc	PKPbc	20 06 49.5	+0.1
	comp=Z,9.5nm,0.8s,baz=138,slow=1.7,SNR=14						
OBN	Obninsk	145.62	325	ePKPdf	PKPbc	20 06 48.8	-0.3
OBN	Obninsk	145.62	325	c iPKIKP	PKPdf	20 06 48.5	-0.3
OBN				eSS	SS	20 29 02.8	+2.5
OBN				pmax	pmax		
	comp=Z,70nm,1.0s						
KIV	Kislovodsk	145.73	304	ePKPdf	PKPbc	20 06 49.9	-0.1
KIV	Kislovodsk	145.73	304	i PKP2	PKPbc	20 06 49.7	-0.2
KIV				i		20 10 12.9	
KIV				pmax	pmax		
	comp=Z,16nm,1.1s						
NEY	Neytrino	145.81	303	d iPKP2	PKPab	20 06 51.0	+0.2
VSR	Storozhevoye	146.01	318	ePKIKP	PKPdf	20 06 49.4	-0.2
VSR				pmax	pmax		
	comp=Z,70nm,0.8s						
VORD	Divnogorie	146.03	317	ePKP2	PKPdf	20 06 49.7	+0.1
VORD				pmax	pmax		
	comp=Z,30nm,0.7s						
VSU	Vasula	147.62	336	c iPKP2	PKPbc	20 06 54.3	-0.5
NC303	NORSAR Array S	148.85	352	ePKPbc	PKPbc	20 06 57.9	-0.1
NB2	NORSAR Subarra	149.05	352	PKP	PKPbc	20 06 57.6	-0.9
	comp=Z,2.6nm,0.6s,baz=13,slow=2.6						
NOA	NORSAR Array B	149.05	352	PKPbc	PKPbc	20 06 57.9	-0.6
	comp=Z,5.5nm,0.8s,baz=14,slow=4.2,SNR=16						
NOA				SKP		20 10 28.7	
	comp=Z,0.5nm,0.7s,baz=56,slow=2.1,SNR=2.6						
ANN	Anapa	149.23	307	ePKP2	PKPbc	20 06 59.1	-0.3
ANN				pmax	pmax		
	comp=Z,63nm,1.0s						
HFS	Hagfors	149.56	349	PKPbc	PKPbc	20 06 58.9	-0.9
	comp=Z,8.2nm,0.7s,baz=58,slow=3.6,SNR=18						
IDID	Didziasalis	149.93	332	eP	PKPbc	20 07 00.5	-0.2
IDID				IAmb	IAmb	20 07 10.2	
	comp=Z,8.6nm,1.1s						
ISAL	Salakas	149.99	333	eP	PKPbc	20 07 00.7	-0.3
ISAL				IAmb	IAmb	20 07 10.5	
	comp=Z,10nm,1.0s						
IIGN	Ignalina	150.11	333	eP	PKPbc	20 07 01.1	-0.1
IIGN				IAmb	IAmb	20 07 07.6	
	comp=Z,11nm,1.1s						
NACGM	Naroch	150.20	331	e	PKPbc	20 07 02.0	+0.5
AKASG	Malin Array Be	151.76	323	PKPbc	PKPbc	20 07 04.8	-0.5
	comp=Z,7.9nm,0.4s,baz=49,slow=2.9,SNR=38						
AKBB	Malin Array Si	151.76	323	ePKPbc	PKPbc	20 07 04.8	-0.4
AKBB	Malin Array Si	151.76	323	ePKIKP	PKPbc	20 07 04.8	-0.4
KIEV	Kiev	151.77	323	ePKPbc	PKPbc	20 07 04.8	-0.5
KIEV	Kiev	151.77	323	ePKIKP	PKPbc	20 07 04.8	-0.5
AK11	Malin Array Si	151.80	323	ePKPbc	PKPbc	20 07 04.9	-0.4
MMAI	Mount Meron Ar	152.02	284	PKPbc	PKPbc	20 07 07.4	+0.8
	comp=Z,3.2nm,0.4s,baz=86,slow=4.5,SNR=28						
SUW	Suwalki	152.29	333	ePKPbc	PKPbc	20 07 05.5	-0.8
SUW	Suwalki	152.29	333	ePKIKP	PKPbc	20 07 05.6	-0.8
BR131	Keskin Array S	153.10	298	ePKPbc	PKPbc	20 07 08.8	-0.1
BRTR	Keskin Array B	153.10	298	PKPbc	PKPbc	20 07 08.5	-0.3
	comp=Z,2.0nm,0.6s,baz=131,slow=3.8,SNR=12						
CSS	Mathiatis	153.80	288	ePKPbc	PKPbc	20 07 11.3	+1.0
LVV	L’vov	154.92	326	ePKIKP	PKPdf	20 07 03.6	+0.1
EKA	Eskdalemuir Ar	154.99	8	PKPab	PKPab	20 07 27.2	-0.5
	comp=Z,1.1nm,0.6s,baz=335,slow=3.2,SNR=3.3						
DBIC	Dimbokro	155.17	162	PKPab	PKPab	20 07 29.7	+0.2
	comp=Z,9.2nm,1.2s,baz=127,slow=3.4,SNR=4.5						
CRVS	Cervenica-Dubn	156.77	327	ePKP2	PKPab	20 07 35.2	-0.4
CRVS	Cervenica-Dubn	156.77	327	ePKP	PKPab	20 07 35.2	-0.4
DPC	Dobruska-Polom	157.75	336	ePKPAB	PKPab	20 07 40.5	+0.7
DPC	Dobruska-Polom	157.75	336	ePKP2	PKPab	20 07 40.5	+0.7
CLL	Collm	157.93	342	epPKPab	pPKPab	20 07 49.0	-2.0
	comp=Z,5.0nm,1.0s						
CLL	Collm	157.93	342	ePKP2	pPKPab	20 07 49.0	-2.0
CLL				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BRG	Berggiesshubel	158.06	340	ePKP	PKPab	20 07 39.6	-1.5
	comp=Z,7.0nm,1.3s						
BRG	Berggiesshubel	158.06	340	ePKP2	PKPab	20 07 39.6	-1.5
BRG				pmax	pmax		
	comp=Z,7.0nm,1.3s						
VYHS	Vyhne	158.26	330	ePKP2	PKPab	20 07 41.8	-0.2
VYHS	Vyhne	158.26	330	ePKP	PKPab	20 07 41.8	-0.2
VTS	Vitosha	159.61	312	ePKPab	PKPab	20 07 48.5	+0.2
VTS	Vitosha	159.61	312	ePKP2	PKPab	20 07 48.5	+0.2
KHC	Kasperske Hory	159.71	339	ePKPAB	PKPab	20 07 48.5	+0.2
KHC	Kasperske Hory	159.71	339	ePKPab	PKPab	20 07 48.6	+0.2
KHC	Kasperske Hory	159.71	339	ePKP2	PKPab	20 07 48.6	+0.2
GERES	GERESS Array B	159.92	338	PKPab	PKPab	20 07 48.8	-0.6
	comp=Z,1.0nm,0.7s,baz=50,slow=2.1,SNR=5.7						
CONA	Conrad Observa	159.93	333	ePKPab	PKPab	20 07 47.8	-1.6
	comp=Z,2.8nm,0.8s						
SOKA	Soboth	161.28	332	ePKPab	PKPab	20 07 54.5	-0.8
	comp=Z,10nm,1.5s						
WATA	Walderalm	161.92	340	ePKPab	PKPab	20 07 59.1	+1.0
	comp=Z,6.1nm,0.8s						
RETA	Reutte	162.02	342	ePKPab	PKPab	20 07 58.7	+0.2
	comp=Z,3.4nm,0.9s						
MOTA	Moosalm	162.05	341	ePKPab	PKPab	20 07 58.3	-0.4
	comp=Z,3.5nm,0.9s						
ABTA	Abfaltersbach	162.15	337	ePKPab	PKPab	20 07 58.4	-0.7
	comp=Z,8.3nm,1.1s						
DAVA	Damuels	162.43	343	ePKPab	PKPab	20 07 59.7	-0.7
	comp=Z,5.1nm,0.9s						
FETA	Feichten	162.45	341	ePKPab	PKPab	20 07 59.2	-1.3
	comp=Z,6.9nm,1.3s						
TORD	Torodi Ar. Bea	162.58	177	PKPab	PKPab	20 08 01.8	+0.3
	baz=183,slow=4.3						
DAVOX	Davos/Dischmat	162.90	343	PKPab	PKPab	20 08 02.6	+0.1
	comp=Z,2.2nm,0.5s,baz=236,slow=3.6,SNR=5.7						

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*ISCJB **23** 19:52:07.8±0.4, 5°.35S±0°.05×129°.42E±0°.05, h250^{km}, mb3.5/3, Error ellipse: s-maj=8.1km s-min=5.6km az=150.4*

*DJA **23** 19:52:08.9±0.3, 5°S±3°×12°9E±°, h239^{km}±4^{km}, M4.2/16, mB4.8/1, mb4.0/6, MLv4.3/16, Mw(mB)4.0/1*

*IDC **23** 19:52:14.7±5.8, 6°.72S×126°.43E, h284^{km}±58^{km}, mb3.3/3, mb1 3.6/4, mb1mx3.0/50, mbtmp4.0/4, Error ellipse: s-maj=87.5km s-min=13.5km az=66.0*

ISC 23 19:52:08.0±0.9, **5°.35S**±0°.07×**129°.42E**±0°.08, **h250**^{km}**, n19,** σ**1**^{s}**.21**/23, **mb3.5**/3, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.96	30	P	Pn	19 52 42.6	-0.2
BNDI				S	S	19 53 08.4	-1.8
MSAI	Masohi	2.05	346	P	Pn	19 52 51.0	0.0
AAI	Ambon	2.06	324	P	Pn	19 52 51.6	+0.6
AAI				S	S	19 53 24.1	-0.8
NLAI	Namlea	3.12	312	P	Pn	19 53 01.6	-0.2
NLAI				S	S	19 53 45.1	+0.6
SAUI	Saumlaki	3.21	145	P	Pn	19 53 03.5	+0.7
SAUI				S	S	19 53 47.3	+1.1
FAKI	Fak Fak	3.72	50	P	Pn	19 53 08.8	+0.3
KMPI	Kaimana, Papua	4.59	69	P	Pn	19 53 20.0	+1.2
SANI	Sanana	4.74	314	P	Pn	19 53 20.7	0.0
SWI	Sorong	4.82	22	P	Pn	19 53 21.7	0.0
LBMI	Labuha	5.06	338	P	Pn	19 53 25.1	+0.5
RKPI	Ransiki, Papua	6.09	51	P	Pn	19 53 38.1	+0.8
TNTI	Ternate	6.42	341	P	Pn	19 53 42.0	+0.6
SOEI	Soe	6.72	229	P	Pn	19 53 46.7	+1.4
KDI	Kendari	6.92	281	P	Pn	19 53 47.8	+0.1
	21nm,0.9s,0.1nm						
BATI	Baumata	7.47	229	P	Pn	19 53 55.3	+0.7
ASAR	Alice Springs	18.71	167	P	P	19 56 09.0	+0.6
	0.8nm,0.3s,baz=349,slow=12,SNR=12						
ASAR				S	S	19 59 23.9	-4.1
	0.1nm,0.3s,baz=348,slow=21,SNR=6.4						
MKAR	Makanchi Array	66.54	327	P	P	20 02 31.8	+0.5
	0.4nm,0.4s,baz=115,slow=8.1,SNR=8.9						
KURBB	Kurchatov Arra	70.81	328	P	P	20 02 57.7	+0.3
	0.4nm,0.4s,baz=122,slow=5.1,SNR=4.1						
ILAR	Eielson Array	92.11	25	P	P	20 05 03.9	+15
	0.7nm,0.8s,baz=257,slow=5.0,SNR=4.4						

IDC 23 19:55:27.9±2.9, **30°.49S**×**177°.34W, h0**^{km}**, mb3.7**/3, **mb1 3.9**/3, **mb1mx3.6**/44, **mbtmp3.7**/3, **Error ellipse: s-maj=56.2km s-min=27.6km az=98.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.33	338	Pn	Pb	19 55 54.3	+0.5
	248nm,0.3s,baz=156,slow=20,SNR=2.4						
RAO				Sn	Sn	19 56 12.8	+0.6
	303nm,0.3s,baz=102,slow=22,SNR=2.4						
STKA	Stephens Creek	35.01	257	P	P	20 02 22.5	+0.2
	1.3nm,0.7s,baz=99,slow=17,SNR=2.0						
ASAR	Alice Springs	43.67	267	P	P	20 03 34.9	+0.1
	0.4nm,0.5s,baz=102,slow=7.3,SNR=7.0						
WRA	Warramunga Arr	44.67	272	P	P	20 03 42.1	-0.7
	0.6nm,0.4s,baz=110,slow=8.1,SNR=12						
FINES	FINESS Array B	145.42	340	PKPbc	PKPbc	20 15 06.2	-0.9
	1.5nm,0.7s,baz=50,slow=2.2,SNR=5.0						

DJA 23 20:00:04.0±1.0, **8°S**±5°×**10°7E**±°, **h30**^{km}±13^{km}, **M3.9**/13, **MLv3.9**/13, **Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LEM	Lembang	1.09	18	P	Pn	20 00 23.3	-0.1
LEM				S	Sn	20 00 37.8	+0.2
SKJI	Sukabumi	1.11	320	P	Pn	20 00 23.9	+0.3
SKJI				S	Sn	20 00 37.9	0.0
CMJI	Cimerak	1.17	86	P	Pn	20 00 24.2	-0.1
CMJI				S	Sn	20 00 38.5	-0.8
DBJI	Dramaga	1.41	338	P	Pn	20 00 27.4	-0.2
DBJI				S	Sb	20 00 46.2	-1.0
KPJI	Karang Pucung	1.73	72	P	Pn	20 00 32.1	0.0
KPJI				S	Sn	20 00 53.4	+0.3
TNG	Tangerang	1.80	340	P	Pn	20 00 33.1	+0.1
TNG				S	Sn	20 00 55.8	+1.0
CGJI	Cibinong	2.00	308	P	Pn	20 00 35.3	-0.5
SBJI	Serang	2.07	327	P	Pn	20 00 37.6	+0.8
BLSI	Bandar Lampung	3.20	321	P	Pn	20 00 52.2	-0.1
UGM	Wanagama	3.22	91	P	Pn	20 00 52.9	+0.3
UGM				S	Sn	20 01 27.7	-2.4
SMRI	Semarang	3.25	76	P	Pn	20 00 54.0	+1.0
SMRI				S	Sn	20 01 31.2	+0.5
KASI	Kota Agung	3.61	310	P	Pn	20 00 57.8	-0.1
WOJI	Wonogiri, Jawa	3.62	90	P	Pn	20 00 58.1	0.0
PCJI	Pacitan	3.88	95	P	Pn	20 01 02.0	+0.3

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*CSEM **23** 20:02:51.1, 31°.12N×6°.93W, h13^{km}, ML1.6*

CNRM 23 20:02:51.1, 31°.12N×6°.93W, h13^{km}**, ML1.6, Morocco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OUK	Oukaimeden	0.81	277	P	Pg	20 03 05.8	-1.0
OUK				S	Sb	20 03 19.1	+1.0
CZD	Col de Zad	2.49	40	P	Pn	20 03 32.2	+0.6
MDT	Midelt	2.60	49	P	Pn	20 03 32.4	-0.5

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*ISCJB **23** 20:17:18.8±0.4, 24°.70N±0°.02×122°.36E±0°.01, h7^{km}±2^{km}, Error ellipse: s-maj=3.5km s-min=2.1km az=7.9*

*TAP **23** 20:17:18.7, 24°.71N×122°.33E, h10^{km}, ML2.6, C*

*JMA **23** 20:17:19.8, 24°.63N×122°.29E, h35^{km}±4^{km}, M2.2*

ISC 23 20:17:18.7±0.9, **24°.71N**±0°.03×**122°.36E**±0°.02, **h16**^{km}±7^{km}**, n51,** σ**0**^{s}**.52**/96, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1	0.26	234	i P	Pg	20 17 24.3	-0.1
	baz=224						
EOS1				i S	Sg	20 17 28.7	+0.5
	baz=224						
EGS		0.41	290	i P	Pg	20 17 27.0	-0.1
	baz=290						
EGS				i S	Sb	20 17 33.2	-0.6
	baz=290						
TWB1	Santiao Chiao	0.45	312	P	Pb	20 17 27.9	-0.4
	baz=304						
TWC	Suao	0.48	259	i P	Pg	20 17 27.7	-0.6
	baz=266						
TWC				i S	Sg	20 17 34.8	+0.1
	baz=266						
NTC	Toucheng	0.51	287	i P	Pg	20 17 28.4	-0.4
	baz=287						
NTC				i S	Sb	20 17 36.5	+0.2
	baz=287						
TIPB	Shuangxi	0.56	299	i P	Pg	20 17 29.6	-0.2
	baz=299						
TIPB				i S	Sb	20 17 37.6	-0.3
	baz=299						
ENAH	Nanao	0.56	243	P	Pg	20 17 29.2	-0.6
	baz=251						
ENAH				S	Sg	20 17 37.5	+0.1
	baz=251						
JYNG	Yonagunijimaku	0.59	115	P	Pn	20 17 31.8	-0.6
JYNG				eS	Sn	20 17 41.4	-0.3
NANB	Nanao	0.62	244	P	Pg	20 17 30.4	-0.6
	baz=252						
NANB				S	Sg	20 17 39.1	-0.1
	baz=252						
ENA	Nanau	0.63	244	P	Pg	20 17 30.4	-0.7
	baz=252						
ENA				S	Sg	20 17 39.4	0.0
	baz=252						
TWE	Neicheng	0.63	272	P	Pg	20 17 30.1	-1.0
	baz=263						
TWE				S	Sg	20 17 39.5	0.0
	baz=263						
YOJ	Yonaguni jima	0.64	112	eP	Pn	20 17 32.5	-0.6
	baz=103						
YOJ				eS	Sn	20 17 42.3	-0.7
	baz=103						
YOJ	Yonaguni jima	0.64	112	P	Pn	20 17 32.7	-0.4
YOJ				eS	Sn	20 17 42.4	-0.6
NWF	Wu-fen Shan	0.64	305	eP	Pn	20 17 32.7	-0.6
	baz=305						
NWF				eS	Sb	20 17 41.2	+0.9
	baz=305						
WFSB	Wu-fen Shan	0.64	305	eP	Pn	20 17 32.6	-0.5
	baz=305						
WFSB				eS	Sb	20 17 41.3	+1.0
	baz=305						
ENTT	Nioudou	0.73	265	eP	Pg	20 17 32.5	-0.4
	baz=263						
ENTT				eS	Sg	20 17 42.7	+0.1
	baz=263						
TWA	Mucha	0.76	291	eP	Pg	20 17 33.2	-0.3
	baz=282						
NWLT	Wulai	0.78	275	eP	Pg	20 17 33.6	-0.4
	baz=274						
NWLT				eS	Sb	20 17 44.7	+0.2
	baz=274						
YM07	YM07	0.82	305	P	Pn	20 17 35.2	-0.4
	baz=305						
YM07				eS	Sn	20 17 46.8	-0.8
	baz=305						
TATO	Taipei	0.84	289	eP	Pb	20 17 34.8	-0.1
	baz=281						
TATO				eS	Sg	20 17 46.9	+0.8
	baz=281						
YM11	YM11	0.85	303	eP	Pn	20 17 36.0	-0.1
	baz=302						
YM08	YM08	0.85	305	eP	Pg	20 17 35.4	+0.1
	baz=305						
YM08				eS	Sg	20 17 46.8	+0.3
	baz=305						
YM10	YM10	0.85	302	eP	Pb	20 17 35.0	-0.2
	baz=302						
YM10				eS	Sg	20 17 47.1	+0.5
	baz=302						
YM04	YM04	0.87	301	eP	Pg	20 17 35.9	+0.2
	baz=301						
YM04				eS	Sg	20 17 47.8	+0.6
	baz=301						
NACB	Ninganchiao	0.88	233	P	Pb	20 17 34.6	-0.9
	baz=231						
NACB				S	Sb	20 17 47.5	+0.5
	baz=231						
YHNB	Yeheng	0.90	268	P	Pb	20 17 35.5	-0.5
	baz=266						
YHNB				S	Sb	20 17 47.5	-0.2
	baz=266						
NSK	Sanguang	0.91	268	P	Pb	20 17 35.8	-0.4
	baz=267						
NSK				S	Sg	20 17 48.9	+0.4
	baz=267						
NNSB	Datong	0.93	253	eP	Pb	20 17 36.2	-0.4
	baz=251						
NNSB				eS	Sb	20 17 48.7	-0.1
	baz=251						
NNSH	Datong	0.93	253	P	Pb	20 17 36.0	-0.6
	baz=251						
NNSH				S	Sb	20 17 48.8	0.0
	baz=251						
TWD	Chiawan	0.94	228	eP	Pb	20 17 36.5	0.0
	baz=232						
NNS	Nan Shan	0.94	254	P	Pb	20 17 36.6	-0.1
	baz=252						
NNS				S	Sb	20 17 49.1	+0.1
	baz=252						
WHF	Hehuan Shan	1.14	241	eP	Pb	20 17 39.9	-0.5
	baz=238						
WHF				eS	Sb	20 17 55.6	+0.4
	baz=238						
TWT	Tachien	1.17	248	eP	Pb	20 17 41.1	+0.4
	baz=245						
TWT				eS	Sg	20 17 57.3	+0.6
	baz=245						
TDCB	Techi	1.19	248	eP	Pb	20 17 41.1	+0.2
	baz=246						
TDCB				eS	Sb	20 17 56.6	+0.5
	baz=246						
LIOB	Emei	1.23	268	eP	Pb	20 17 41.6	+0.1
	baz=258						
LIOB				eS	Sg	20 17 58.8	+0.4
	baz=258						
ESL	Shilin	1.23	224	eP	Pb	20 17 42.0	+0.5
	baz=220						
NSTT	Nanjuang	1.24	267	eP	Pg	20 17 42.8	+0.1
	baz=255						
NSTT				eS	Sg	20 17 59.1	+0.2
	baz=255						
CHGB	Renai	1.26	240	eP	Pn	20 17 42.0	+0.1
	baz=237						
CHGB				eS	Sn	20 17 59.3	+0.7
	baz=237						
IRIF	Iriomote-Funau	1.30	106	P	Pb	20 17 42.6	-0.2
IRIF				eS	Sg	20 18 00.6	-0.1
HATJ	Hateruma jima	1.47	116	P	Pb	20 17 45.5	-0.1
HATJ				eS	Sn	20 18 03.5	+0.1
HGSD	Ruisui	1.48	216	eP	Pn	20 17 44.9	+0.2
	baz=198						
SMLT	Sun Moon Lake	1.56	239	eP	Pb	20 17 47.8	+0.4
	baz=236						
SMLT				eS	Sg	20 18 08.6	-0.7

	baz=236						
JKRS	Kuro-shima	1.57	107	P	Pb	20 17 47.0	-0.4
JKRS				eS	Sb	20 18 07.6	+0.5
SSLB	Suanglung	1.58	235	eP	Pb	20 17 47.5	0.0
	baz=239						
SSLB				eS	Sb	20 18 08.1	+0.8
	baz=239						
TYC	Yuchr	1.59	240	eP	Pb	20 17 48.1	+0.4
	baz=237						
TYC				eS	Sb	20 18 08.6	+1.1
	baz=237						
YULB	Yu-li	1.63	217	eP	Pn	20 17 46.7	0.0
	baz=212						
YULB				eS	Sn	20 18 07.2	-0.3
	baz=212						
JIJ	Ishigaki jima	1.66	101	P	Pn	20 17 47.7	+0.5
JIJ				eS	Sn	20 18 08.8	+0.7
JISG	Ishigakijimahi	1.78	93	P	Pn	20 17 49.8	+1.0
JISG				S	Sb	20 18 13.2	+0.2
FULB	Fuli	1.79	213	eP	Pn	20 17 49.0	0.0
	baz=194						
FULB				eS	Sb	20 18 13.5	+0.1
	baz=194						
ALS	Alishan	1.85	230	eP	Pb	20 17 52.3	-0.1
	baz=209						
ALS				eS	Sb	20 18 17.4	+1.9
	baz=209						
CHN5	Tsauling	1.89	235	eP	Pb	20 17 53.3	+0.4
	baz=213						
CHN5				eS	Sg	20 18 18.6	-1.1
	baz=213						

NIED ***23*** *20:19:00, 42°.30N×142°.50E, h50^{km}, Mw3.6 Best double couple: M$_0$2.72000×10^{14} NP1:φ$_s$296.00000°, δ73.00000°, λ-13.00000°. NP2:φ$_s$29.00000°, δ78.00000°, λ-162.00000°.*

ISCJB ***23*** *20:19:08.5±0.5, 42°.26N±0°.04×142°.56E±0°.05, h69^{km}±4^{km}, mb3.6/5, Error ellipse: s-maj=6.3km s-min=5.6km az=157.9*

JMA ***23*** *20:19:09.2±0.2, 42°.28N×142°.59E, h63^{km}±2^{km}, M3.8 Broadband fault plane solution: P waves. NP1: φ$_s$295.00000°, δ79.00000°, λ-14.00000°. NP2:φ$_s$28.00000°, δ76.00000°, λ-169.00000°. Principal axes: T Plg2.0000°, Azm342.0000°; N Plg72.0000°, Azm78.0000°; P Plg18.0000°, Azm251.0000°;*

JMA Felt I J1.

IDC ***23*** *20:19:10.7±2.0, 42°.34N×142°.35E, h68^{km}±20^{km}, mb3.4/5, mb1 3.4/6, mb1mx3.1/61, mbtmp3.6/6 Error ellipse: s-maj=37.0km s-min=16.0km az=92.0*

ISC 23 20:19:09.5±0.9**, 42°.28N**±0°.04×**142°.55E**±0°.04**, h61**^{km}±6^{km}**, n28,** σ**0**^{s}**.66**/33**, mb3.7**/5**, 4C-8D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSHD	Hidakashinhida	0.15	334	P	Pn	20 19 18.7	-0.1
JSHD				eS	Sn	20 19 26.7	+1.1
JNBK	Urakawa-nobuka	0.15	89	⇓P	Pn	20 19 18.5	-0.3
JNBK				eS	Sn	20 19 25.5	-0.1
JBT2	Biratori 2	0.52	345	⇑P	Pn	20 19 21.5	-0.2
JBT2				eS	Sn	20 19 31.0	+0.3
JEM	Erimo	0.52	120	⇓P	Pn	20 19 21.8	+0.1
JEM				eS	Sn	20 19 31.4	+0.7
JTHR	Tokachihiroo	0.56	88	P	Pn	20 19 22.1	0.0
JTHR				eS	Sn	20 19 31.4	+0.1
JCH	Churui	0.69	60	⇓P	Pn	20 19 23.5	-0.1
JCH				eS	Sn	20 19 34.1	+0.1
JFR	Furan	0.89	2	⇑P	Pn	20 19 25.8	-0.3
JEW	Eniwo	0.99	305	⇑P	Pn	20 19 27.9	+0.5
JEW				eS	Sn	20 19 41.8	+1.1
JOB	Onbets	1.14	56	⇓P	Pn	20 19 29.8	+0.5
JNB	Noboribetsu	1.14	280	⇓P	Pn	20 19 28.8	-0.5
JNB				eS	Sn	20 19 43.5	-0.6
JKB	Kayabe	1.20	251	⇓P	Pn	20 19 29.8	-0.3
JAB	Ashibetsu	1.25	349	⇑P	Pn	20 19 31.2	+0.4
JAB				eS	Sn	20 19 48.3	+1.5
JAR	Ashorobuto	1.36	41	⇓P	Pn	20 19 32.0	-0.3
JAR				eS	Sn	20 19 48.8	-0.5
JOT	Ohata	1.44	232	⇓P	Pn	20 19 33.0	-0.3
JOT				eS	Sn	20 19 51.2	0.0
ASAJ	Asahikawa	1.84	1	P	Pn	20 19 39.6	+0.9
	86nm,0.3s,baz=207,slow=11,SNR=589						
ASAJ				S	Sn	20 20 01.1	+0.2
	15nm,0.3s,baz=139,slow=13,SNR=4.2						
ASAJ				LR	LR	20 20 43.5	
	comp=Z,52nm,19.7s,baz=178,slow=52						
MJAR	Matsushiro Arr	6.64	212	P	Pn	20 20 46.0	+1.5
	0.3nm,0.3s,baz=39,slow=18,SNR=3.1						
KSRS	Korea Array	12.23	252	P	P	20 22 05.8	-5.3
	0.8nm,0.3s,baz=63,slow=14,SNR=12						
H11N2	WAKE ISLAND Hy	30.47	130	T	T	20 58 59.5	
	baz=322,slow=75,SNR=4.0						
H11N1	WAKE ISLAND Hy	30.48	130	T	T	20 58 30.6	
	baz=322,slow=75,SNR=14						
H11N3	WAKE ISLAND Hy	30.49	130	T	T	20 59 00.9	
	baz=322,slow=75,SNR=5.4						
H11S1	WAKE ISLAND Hy	31.34	132	T	T	20 59 04.7	
	baz=323,slow=76,SNR=4.9						
H11S3	WAKE ISLAND Hy	31.35	132	T	T	20 59 05.7	
	baz=323,slow=76,SNR=3.5						
H11S2	WAKE ISLAND Hy	31.36	132	T	T	20 59 06.0	
	baz=323,slow=76,SNR=5.3						
ZALV	Zalesovo Beam	39.21	308	P	P	20 26 30.9	-0.5
	0.8nm,0.4s,baz=67,slow=8.0,SNR=3.5						
MKAR	Makanchi Array	42.27	298	P	P	20 26 55.8	-1.0
	0.2nm,0.6s,baz=75,slow=7.8,SNR=2.5						
KURBB	Kurchatov Arra	43.63	304	P	P	20 27 07.2	-0.4
	0.7nm,0.5s,baz=77,slow=9.0,SNR=6.5						
WRA	Warramunga Arr	62.37	189	P	P	20 29 26.1	+0.4
	0.1nm,0.3s,baz=6.3,slow=7.7,SNR=12						
HFS	Hagfors	69.68	335	P	P	20 30 11.8	-0.4
	1.3nm,0.5s,baz=47,slow=6.3,SNR=5.6						

NNC 23 20:47:12.3±13.0**, 37°.14N**×**70°.50E, h0**^{km}**, mb3.9, mpv3.5, 4C-1D, Error ellipse: s-maj=104.2km s-min=84.5km az=178.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.71	38	⇑Pn	Pn	20 48 10.5	-0.6
	2.2nm,0.3s						
SFK				⇑Sn	Sn	20 48 55.5	-0.2
	3.3nm,0.3s						
MNAS	Manas	5.56	15	⇓Pn	Pn	20 48 37.9	+1.5
	1.8nm,0.4s						
MNAS				⇑Sn	Sn	20 49 42.5	+1.4
	2.1nm,0.3s						
KK31	Karatay Array	5.96	0	Pn	Pn	20 48 44.0	+2.1
	4.1nm,0.3s,baz=182,slow=13,SNR=221						
KK31				⇑Sn	Sn	20 49 53.4	+2.7
	1.1nm,0.4s,baz=191,slow=26,SNR=5.8						

ISCJB ***23*** *20:57:34.6±0.5, 9°.79N±0°.09×57°.14E±0°.07, h13^{km}, mb4.2/37, MS3.8/35, Error ellipse: s-maj=13.0km s-min=9.0km az=17.5*

IDC ***23*** *20:57:34.4±0.6, 9°.81N×57°.13E, h0^{km}, mb4.1/25, mb1 4.2/26, mb1mx4.1/62, mbtmp4.1/26, ML4.2/1, MS3.7/37, Ms1 3.7/37, ms1mx3.6/56, Error ellipse: s-maj=16.9km s-min=14.0km az=24.0*

NEIC ***23*** *20:57:35.9±0.4, 9°.79N×57°.14E, h10^{km}, mb4.0/1, Error ellipse: s-maj=10.5km s-min=7.8km az=196.0*

GCMT ***23*** *20:57:35.9±0.4, 10°.09N×56°.92E, h24^{km}±1^{km}, MW4.9/65, Moment Tensor Solution. s15,c17; s65,c83; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.56±.21; M$_{\theta\theta}$1.57±.13; M$_{\phi\phi}$0.99±.13; M$_{r\theta}$1.14±.13; M$_{\theta\phi}$-0.53±.06; M$_{\phi r}$0.42±.16; Best double couple: M$_0$2.48300×10^{16} NP1:φ$_s$282.00000°, δ57.00000°, λ-105.00000°. NP2: φ$_s$129.00000°, δ36.00000°, λ-68.00000°. Principal axes: T 2.0370, Plg11.0000°, Azm23.0000°; N 0.8980, Plg13.0000°, Azm291.0000°; P -2.9280, Plg73.0000°, Azm152.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

CSEM ***23*** *20:57:36.3±0.3, 9°.82N×57°.15E, h10^{km}, mb4.6/9 Error ellipse: s-maj=13.1km s-min=8.9km az=18.0*

BJI ***23*** *20:57:39.0, 10°.30N×56°.70E, h33^{km}, mb4.6/7, mB5.1/3*

ISC 23 20:57:37.0±0.6**, 9°.9N**±0°.1×**57°.21E**±0°.08**, h13**^{km}**, n79,** σ**1**^{s}**.51**/60**, mb4.3**/38**, MS3.8**/35**, 4C-4D, Carlsberg Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WSAR	Wadi Sarin	13.35	6	LR	LR	21 05 13.3	
	comp=Z,896nm,18.9s,baz=201,slow=34						
ATD	Arta Tunnel	14.21	278	Pn	Pn	21 00 55.4	-2.8
	1.0nm,0.3s,baz=90,slow=20,SNR=2.5						
ATD				LR	LR	21 05 34.6	
	comp=Z,138nm,21.6s,baz=113,slow=34						
RAYN	Ar Rayn	17.58	322	eP	P	21 01 43.0	+0.1
	8.2nm,0.7s						
H08N2	Diego Garcia H	21.17	139	T	T	21 24 03.6	
	baz=319,slow=76,SNR=94						
H08N3	Diego Garcia H	21.18	139	T	T	21 24 01.4	
	baz=319,slow=76,SNR=72						
H08N1	Diego Carcia H	21.19	139	T	T	21 24 05.2	
	baz=319,slow=76,SNR=90						
LODK	Lodwar	22.62	255	i P	P	21 02 40.3	+2.4
LODK				i P	P	21 02 41.9	+4.0
LODK				i P	P	21 02 42.2	+4.3
LODK				e		21 02 48.0	
	baz=71,slow=12						
LODK	Lodwar	22.62	255	eP	P	21 02 41.1	+3.2
LODK				eP	P	21 02 41.4	+3.5
LODK				eP	P	21 02 42.6	+4.6
LODK				e		21 02 51.6	
	baz=78,slow=14						
KMBO	Kilima Mbogo	22.68	242	P	P	21 02 55.1	+16
	2.0nm,0.6s,baz=69,slow=14,SNR=7.3						
PALK	Pallekele	23.37	95	LR	LR	21 09 36.6	
	comp=Z,180nm,20.7s,baz=298,slow=31						
GEYT	Alibeck	27.93	2	P	P	21 03 27.5	+0.4
	0.2nm,0.4s,baz=163,slow=10,SNR=3.3						
GEYT				LR	LR	21 15 58.4	
	comp=Z,82nm,18.3s,baz=245,slow=39						
EIL	Elat	28.64	317	LR	LR	21 14 47.0	
	comp=Z,214nm,18.9s,baz=66,slow=36						
OPO	Ambohidratompo	29.96	199	LR	LR	21 13 18.8	
	comp=Z,269nm,19.4s,baz=2.0,slow=32						
MMAI	Mount Meron Ar	30.56	322	P	P	21 03 52.2	+1.7
	1.2nm,0.4s,baz=126,slow=9.1,SNR=5.7						
MMAI				PcP	PcP	21 06 51.3	+2.0
	0.6nm,0.6s,baz=131,slow=4.0,SNR=2.5						
MMAI				LR	LR	21 16 19.1	
	comp=Z,198nm,18.7s,baz=130,slow=37						
GNI	Garni	32.11	342	LR	LR	21 18 34.6	
	comp=Z,180nm,19.6s,baz=132,slow=39						
BRDH	Bariadhala	35.31	65	LR	LR	21 19 04.6	
	comp=Z,190nm,18.4s,baz=254,slow=36						
KBZ	Khabaz	35.94	342	P	P	21 04 37.5	+0.3
	2.4nm,0.8s,baz=156,slow=10,SNR=4.6						
KBZ				LR	LR	21 20 45.2	
	comp=Z,182nm,21.2s,baz=160,slow=39						
BRTR	Keskin Array B	36.38	329	P	P	21 04 40.1	-1.1
	0.6nm,0.5s,baz=156,slow=9.2,SNR=5.9						
BRTR				LR	LR	21 20 56.2	
	comp=Z,77nm,18.5s,baz=116,slow=38						
LSZ	Lusaka	38.10	229	P	P	21 04 55.5	-0.6
	1.3nm,0.4s,baz=51,slow=7.4,SNR=5.9						
AKTO	Aktyubinsk	40.43	1	P	P	21 05 15.4	+0.5
	1.7nm,0.5s,baz=168,slow=9.6,SNR=4.9						
CMAR	Chiang Mai Arr	41.27	73	P	P	21 05 22.9	+0.6
	0.7nm,0.3s,baz=264,slow=9.4,SNR=7.7						
CMAR				LR	LR	21 22 46.3	
	comp=Z,22nm,18.2s,baz=250,slow=37						
MKAR	Makanchi Array	42.51	26	P	P	21 05 33.1	+0.9
	2.1nm,0.7s,baz=216,slow=8.9,SNR=21						
MKAR				PcP	PcP	21 07 24.7	0.0
	0.7nm,0.8s,baz=212,slow=1.7,SNR=3.4						
MKAR				LR	LR	21 23 57.1	
	comp=Z,109nm,21.4s,baz=238,slow=37						
KURBB	Kurchatov Arra	44.26	19	P	P	21 05 46.3	+0.2
	1.0nm,0.9s,baz=202,slow=9.8,SNR=9.3						
BVAR	Borovoye Array	44.32	11	P	P	21 05 47.0	+0.4
	0.6nm,0.8s,baz=196,slow=9.8,SNR=3.0						
BVAR				PcP	PP	21 07 30.1	+0.1
	0.5nm,0.6s,baz=197,slow=4.5,SNR=4.4						
BVAR				LR	LR	21 26 26.9	
	comp=Z,80nm,19.3s,baz=222,slow=39						
BVAR	Borovoye Array	44.32	11	P	P	21 05 47.0	+0.4
PLOR	Plostina	44.36	329	⇑iP	P	21 05 49.5	+2.4
KURK	Kurchatov	44.37	19	P	P	21 05 46.4	-0.7
MLR	Muntele Rosu	44.47	329	P	P	21 05 47.4	-0.6
	2.3nm,0.8s,baz=137,slow=18,SNR=3.7						
MLR				LR	LR	21 25 30.0	
	comp=Z,89nm,21.1s,baz=91,slow=38						
TESR	Tescani	44.82	330	⇓iP	P	21 05 51.6	+0.9
VOIR		44.89	328	⇓iP	P	21 05 51.4	0.0
ARR	Arges	45.06	328	⇑iP	P	21 05 53.1	+0.3
PRAR	RASCA	45.62	331	⇓iP	P	21 05 57.3	+0.2
BURAR	Bucovina Array	46.29	330	⇓iP	P	21 06 03.3	+0.8
AKASG	Malin Array Be	46.77	336	P	P	21 06 05.5	-0.5
	0.6nm,0.6s,baz=136,slow=7.3,SNR=4.8						
AKASG				LR	LR	21 28 06.2	
	comp=Z,44nm,19.3s,baz=345,slow=39						
TRPA	Tarpa	47.97	329	⇑iP	P	21 06 15.8	+0.4
TRPA	Tarpa	47.97	329	⇑iP	P	21 06 15.8	+0.4
TSUM	Tsumeb	48.59	233	LR	LR	21 25 56.0	
	comp=Z,140nm,21.7s,baz=40,slow=35						
BOSA	Boshof	49.17	218	LR	LR	21 24 42.3	
	comp=Z,198nm,21.2s,baz=42,slow=33						
ZALV	Zalesovo Beam	49.18	21	P	P	21 06 24.8	+0.1
	5.9nm,0.8s,baz=234,slow=8.1,SNR=13						
ZALV				LR	LR	21 28 17.1	
	comp=Z,64nm,19.3s,baz=250,slow=37						
KEST	Kesra	50.43	308	LR	LR	21 30 14.9	
	comp=Z,86nm,19.1s,baz=240,slow=39						
SOKA	Soboth	51.21	324	epP	P	21 06 47.4	+7.1
	9.2nm,1.7s						
OBKA	Obir	51.41	323	P	P	21 06 42.1	+0.3
	6.7nm,1.1s						
CONA	Conrad Observa	51.41	325	eP	P	21 06 41.8	0.0
	8.0nm,1.4s						
MYKA	Terra Mystica	52.01	323	eP	P	21 06 45.3	-0.9
	8.9nm,1.0s						
MOA	Molln	52.27	325	eP	P	21 06 48.0	-0.2
	7.5nm,1.1s						
WATA	Walderalm	53.58	323	eP	P	21 07 00.1	+2.1
	3.4nm,0.4s						
MOTA	Moosalm	53.87	323	eP	P	21 06 58.7	-1.3
	5.2nm,0.7s						
FETA	Feichten	53.94	322	eP	P	21 07 00.6	-0.1
	4.7nm,1.0s						
RETA	Reutte	54.14	323	eP	P	21 07 01.2	-0.8
	3.6nm,0.7s						
DAVOX	Davos/Dischmat	54.35	322	P	P	21 07 03.2	-0.5
	3.4nm,0.7s,baz=146,slow=15,SNR=4.9						
DAVOX				LR	LR	21 31 54.9	
	comp=Z,59nm,18.4s,baz=90,slow=38						
TORD	Torodi Ar. Bea	54.41	279	P	P	21 07 03.1	-1.2
	72nm,0.6s,baz=84,slow=6.7						
TORD				PcP	PcP	21 08 07.2	-0.9
	baz=86,slow=4.3						
DAVA	Damuels	54.58	322	eP	P	21 07 03.8	-1.4
	8.0nm,0.7s						
SONM	Songino Array	55.95	38	P	P	21 07 15.3	+0.2
	1.0nm,0.6s,baz=230,slow=8.2,SNR=7.9						
SONM				LR	LR	21 33 10.4	
	comp=Z,60nm,18.5s,baz=258,slow=38						
FINES	FINESS Array B	56.30	343	P	P	21 07 16.4	-0.8
	3.1nm,1.0s,baz=134,slow=6.0,SNR=4.9						
FINES				LR	LR	21 33 34.3	
	comp=Z,131nm,18.8s,baz=115,slow=38						
HFS	Hagfors	59.65	336	P	P	21 07 39.5	-1.2
	1.6nm,0.6s,baz=142,slow=7.3,SNR=2.5						
HFS				LR	LR	21 35 53.1	
	comp=Z,105nm,19.8s,baz=160,slow=38						
MDT	Midelt	61.07	302	LR	LR	21 36 03.6	
	comp=Z,90nm,18.2s,baz=136,slow=38						
NOA	NORSAR Array B	61.17	336	LR	LR	21 36 50.0	
	comp=Z,94nm,18.9s,baz=170,slow=38						
ESDC	Sonseca Array	61.63	310	P	P	21 07 55.1	+0.3
	3.5nm,1.0s,baz=89,slow=6.1,SNR=13						
ARCES	ARCESS Array B	62.97	348	P	P	21 08 02.4	-0.6
	1.8nm,0.9s,baz=142,slow=4.6,SNR=4.7						
EKA	Eskdalemuir Ar	65.27	327	P	P	21 08 17.2	-1.2
	2.6nm,0.8s,baz=117,slow=7.2,SNR=5.1						
KSAR	Wonju Array Be	68.73	54	P	P	21 08 40.5	-0.3
KSRS	Korea Array	68.76	54	P	P	21 08 40.4	-0.5
	1.4nm,0.7s,baz=258,slow=5.8,SNR=3.7						
KSRS				LR	LR	21 40 14.0	
	comp=Z,39nm,19.5s,baz=269,slow=37						
H01W3	Cape Leeuwin H	69.82	133	T	T	22 24 54.9	
	baz=300,slow=75,SNR=5.1						
H01W2	Cape Leeuwin H	69.83	133	T	T	22 24 53.6	
	baz=300,slow=75,SNR=3.6						
H01W1	Cape Leeuwin H	69.84	133	T	T	22 24 49.4	
	baz=300,slow=75,SNR=3.7						
JNU	Nakatsue	71.02	58	LR	LR	21 40 45.1	
	comp=Z,41nm,18.3s,baz=307,slow=36						
NWAO	Narrogin (SRO)	71.23	130	P	P	21 08 55.0	-1.1
	10nm,0.9s,baz=37,slow=4.0,SNR=1.5						
SPITS	Spitsbergen Ar	71.30	352	LR	LR	21 43 38.7	
	comp=Z,57nm,19.8s,baz=75,slow=39						
USRK	Ussuriysk Ar.	72.27	47	LR	LR	21 41 12.8	
	comp=Z,54nm,21.5s,baz=245,slow=36						
MJAR	Matsushiro Arr	76.98	55	P	P	21 09 30.5	+0.7
	0.4nm,0.3s,baz=270,slow=4.9,SNR=3.7						
MJAR				LR	LR	21 46 17.3	
	comp=Z,21nm,18.7s,baz=195,slow=38						
MAW	Mawson	77.40	178	LR	LR	21 37 00.5	
	comp=Z,89nm,18.6s,baz=33,slow=31						
ASAJ	Asahikawa	79.90	47	LR	LR	21 45 54.6	
	comp=Z,32nm,19.9s,baz=312,slow=36						
WRA	Warramunga Arr	81.45	112	P	P	21 09 54.2	-0.3
	2.9nm,1.1s,baz=295,slow=4.5,SNR=14						
ASAR	Alice Springs	81.96	116	P	P	21 09 56.7	-0.5
	1.3nm,0.8s,baz=290,slow=4.9,SNR=12						
SFJD	Kangerlussuaq	87.81	338	LR	LR	21 52 52.9	
	comp=Z,22nm,19.3s,baz=57,slow=38						
PETK	Petropavlovsk-	88.40	36	P	P	21 10 28.4	-0.4
	1.6nm,0.9s,baz=286,slow=5.2						
PETK				LR	LR	21 53 59.8	
	comp=Z,49nm,18.3s,baz=288,slow=38						
SNAA	Sanae	90.35	196	LR	LR	21 43 38.2	
	comp=Z,36nm,19.2s,baz=326,slow=31						
QSPA	South Pole Qui	99.82	180	LR	LR	21 51 12.0	
	comp=Z,115nm,18.4s,baz=284,slow=32						
PDAR	Pinedale Array	126.22	348	PKP	PKPdf	21 16 40.2	+0.2
	0.3nm,0.7s,baz=25,slow=2.4,SNR=3.5						

IDC ***23*** *21:41:10.3±0.7, 2°.38N×118°.75E, h0^{km}, mb4.0/11, mb1 4.2/11, mb1mx3.8/59, mbtmp4.0/11, MS2.6/1, Ms1 2.6/1, ms1mx2.2/53, Error ellipse: s-maj=92.9km s-min=14.8km az=60.0*

ISCJB ***23*** *21:41:13.4±0.6, 2°.5N±0°.2×119°.0E±0°.4, h33^{km}, mb4.0/13, Error ellipse: s-maj=56.3km s-min=11.4km az=152.9*

NEIC ***23*** *21:41:15.6±0.6, 2°.44N×118°.90E, h35^{km}, mb4.2/1, Error ellipse: s-maj=75.9km s-min=12.1km az=60.0*

ISC 23 21:41:15.9±0.8**, 2°.4N**±0°.2×**118°.9E**±0°.4**, h35**^{km}**, n17,** σ**1**^{s}**.22**/17**, mb4.1**/13**, 2C, Celebes Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	8.08	55	LR	LR	21 46 58.3	
	comp=Z,40nm,18.5s,baz=190,slow=42						
WRA	Warramunga Arr	26.91	146	P	P	21 46 53.5	-0.5
	3.6nm,0.8s,baz=331,slow=9.6,SNR=31						
ASAR	Alice Springs	29.77	151	P	P	21 47 19.2	-0.2
	0.9nm,0.8s,baz=328,slow=7.9,SNR=8.1						
STKA	Stephens Creek	40.35	150	P	P	21 48 50.4	0.0
	5.1nm,0.8s,baz=327,slow=10,SNR=8.0						
GTA	Gaotai	40.70	337	eP	P	21 48 54.1	+0.8
GTA				pP	pP	21 48 58.3	-5.3
GTA				sP	sP	21 49 01.1	-6.7
GTA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SONM	Songino Array	46.50	348	P	P	21 49 40.7	+0.8
	comp=Z,0.6nm,0.7s,baz=166,slow=8.0,SNR=6.9						
MKAR	Makanchi Array	54.43	330	P	P	21 50 38.6	-1.2
	comp=Z,0.9nm,0.8s,baz=130,slow=8.8,SNR=13						
MKAR				PcP	PcP	21 51 41.7	-1.4
	comp=Z,0.9nm,0.7s,baz=142,slow=4.1,SNR=5.7						
ZALV	Zalesovo Beam	58.46	337	P	P	21 51 09.0	+0.9
	comp=Z,0.6nm,0.6s,baz=157,slow=7.8,SNR=2.5						
KURBB	Kurchatov Arra	58.85	331	P	P	21 51 09.6	-1.3
	comp=Z,1.2nm,0.7s,baz=134,slow=6.7,SNR=8.0						
KURK	Kurchatov	58.86	331	eP	P	21 51 09.8	-1.2
BVAR	Borovoye Array	64.32	330	P	P	21 51 46.7	-1.2
	comp=Z,2.0nm,0.7s,baz=138,slow=9.2,SNR=15						
BRVK	Borovoye	64.39	330	eP	P	21 51 47.0	-1.3
	comp=Z,1.1nm,0.5s						
AKTO	Aktyubinsk	69.92	323	P	P	21 52 22.1	-1.5
	comp=Z,0.9nm,0.4s,baz=90,slow=3.0,SNR=3.2						
KBZ	Khabaz	78.22	314	P	P	21 53 13.8	+1.7
	comp=Z,1.3nm,0.6s,baz=98,slow=7.1,SNR=5.0						
BRTR	Keskin Array B	84.81	309	P	P	21 53 47.7	+0.4
	comp=Z,0.7nm,0.6s,baz=86,slow=3.9,SNR=4.2						
SYO	Syowa Base	88.43	201	⇑eP	P	21 54 03.8	-0.2
SYO	Syowa Base	88.43	201	⇑ePcP	PcP	21 54 07.6	+1.9

IDC ***23*** *21:49:34.9±0.5, 28°.59S×176°.02W, h0^{km}, mb4.5/18, mb1 4.6/19, mb1mx4.5/41, mbtmp4.5/19, ML4.3/1, MS3.5/19, Ms1 3.6/19, ms1mx3.4/40, Error ellipse: s-maj=19.8km s-min=16.2km az=133.0*

ISCJB ***23*** *21:49:38.8±0.4, 28°.69S±0°.08×176°.1W±0°.1, h36^{km}, mb4.5/23, MS3.6/15, Error ellipse: s-maj=14.0km s-min=10.9km az=23.3*

NEIC ***23*** *21:49:39.9±0.4, 28°.68S×175°.90W, h35^{km}, mb4.3/4, Error ellipse: s-maj=14.2km s-min=10.2km az=147.0*

ISC 23 21:49:39.9±0.5**, 28°.77S**±0°.09×**175°.87W**±0°.09**, h36**^{km}**, n83,** σ**1**^{s}**.22**/73**, mb4.5**/23**, MS3.7**/15**, 2C, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.85	255	Pn	Pn	21 50 10.8	+1.6
	336nm,0.3s,baz=265,slow=23,SNR=2.6						
RAO				Sn	Sn	21 50 33.4	+2.1
	691nm,0.3s,baz=108,slow=21,SNR=6.6						
URZ	Urewera	11.12	210	Pn	Pn	21 52 09.9	-6.4
	0.4nm,0.3s,baz=16,slow=19,SNR=5.6						
URZ				Sn	Sn	21 54 14.3	-5.1
	7.0nm,0.3s,baz=229,slow=20,SNR=14						
URZ				LR	LR	21 56 11.8	
	comp=Z,105nm,19.1s,baz=14,slow=35						
RAR	Rarotonga	16.41	66	LR	LR	21 58 46.1	
	comp=Z,119nm,19.3s,baz=286,slow=34						
DZM	Mont Dzumac	17.30	289	P	P	21 53 41.4	+1.5
	1.1nm,0.3s,baz=105,slow=11,SNR=14						
DZM				LR	LR	21 59 15.7	
	comp=Z,317nm,19.2s,baz=78,slow=34						
DZM	Mont Dzumac	17.30	289	eP	P	21 53 41.6	+1.6
	38nm,0.8s						
DZM				eLR	LR	21 57 49.3	
	827nm,27.7s						
RPZ	Rata Peaks	18.23	212	P	P	21 53 50.2	+0.3
	1.0nm,0.3s,baz=3.5,slow=1.0,SNR=6.1						
RPZ				LR	LR	22 00 51.8	
	comp=Z,129nm,18.6s,baz=9.5,slow=37						
TBI	Tubuai	24.31	83	eLR	LR	22 00 31.9	
	412nm,31.0s						
PPT2	Papeete2	26.55	71	eLQ	LQ	22 00 18.1	
	319nm,25.0s						
PPT2				eLR	LR	22 01 36.6	
	340nm,29.2s						
PPT	Papeete	26.56	71	LR	LR	22 04 17.2	
	comp=Z,70nm,18.7s,baz=203,slow=33						
HNR	Honiara	29.76	305	LR	LR	22 06 59.0	
	comp=Z,151nm,18.1s,baz=156,slow=35						
CTA	Charters Tower	35.43	275	P	P	21 56 31.9	-1.0
	5.6nm,0.5s,baz=107,slow=10.0,SNR=13						
STKA	Stephens Creek	36.67	254	P	P	21 56 42.7	-0.7
	5.2nm,0.6s,baz=90,slow=9.7,SNR=20						
STKA				LR	LR	22 11 38.3	
	comp=Z,166nm,18.5s,baz=40,slow=36						
PMG	Port Moresby	39.66	292	LR	LR	22 10 04.4	
	comp=Z,114nm,20.2s,baz=122,slow=31						
ASAR	Alice Springs	45.08	264	P	P	21 57 50.6	-2.1
	4.1nm,0.6s,baz=96,slow=6.9,SNR=58						
ASAR				PcP	PcP	21 59 33.8	+0.7
	0.8nm,0.5s,baz=100,slow=4.4,SNR=3.7						
ASAR				LR	LR	22 15 02.9	
	comp=Z,156nm,19.9s,baz=103,slow=34						
WRAB	Tennant Creek	45.92	269	eP	P	21 57 57.1	-2.3
	2.9nm,0.4s						
WRA	Warramunga Arr	45.93	269	P	P	21 57 57.2	-2.3
	7.2nm,0.5s,baz=109,slow=7.9,SNR=100						
WRA				PcP	PcP	21 59 36.7	+0.6
	1.5nm,0.9s,baz=104,slow=3.4,SNR=4.1						
GUMO	Guam	56.69	313	LR	LR	22 23 01.9	
	comp=Z,25nm,18.1s,baz=158,slow=36						
CASY	Casey	57.44	207	eP	P	21 59 25.5	+0.8
	0.9nm,0.7s						
RPN	Rapa Nui	58.08	106	LR	LR	22 19 08.7	
	comp=Z,25nm,21.8s,baz=219,slow=30						
QSPA	South Pole Qui	61.33	180	P	P	21 59 53.7	+2.0
	4.5nm,0.8s,baz=47,slow=1.5,SNR=10						
QSPA	South Pole Qui	61.33	180	eP	P	21 59 53.5	+1.7
	2.1nm,0.5s						
CBIJ	Chichi jima	68.58	320	P	P	22 00 38.1	-1.1

JCJ	Chichijima	68.58	320	P	P	22 00 38.1	-1.1
	31nm,0.6s						
MAW	Mawson	74.47	200	P	P	22 01 16.3	+2.2
	4.6nm,0.6s,baz=135,slow=5.8,SNR=8.5						
MJAR	Matsushiro Arr	78.00	324	P	P	22 01 33.4	-1.2
	2.5nm,0.7s,baz=167,slow=6.0,SNR=9.1						
MJAR				LR	LR	22 29 30.0	
	comp=Z,14nm,21.2s,baz=250,slow=31						
SYO	Syowa Base	79.10	192	⇑eP	P	22 01 40.5	+0.3
SYO	Syowa Base	79.10	192	⇑ePcP	PcP	22 01 47.3	-1.2
JNU	Nakatsue	79.61	317	P	P	22 01 43.5	0.0
	2.8nm,0.6s,baz=138,slow=7.3,SNR=3.2						
SNAA	Sanae	79.71	178	LR	LR	22 35 30.4	
	comp=Z,39nm,18.7s,baz=210,slow=34						
VNA3	Neumayer Olymp	79.79	176	P	P	22 01 44.4	+0.4
VNA1	Neumayer--Stat	80.46	176	P	P	22 01 48.5	+1.0
ASAJ	Asahikawa	81.89	331	P	P	22 01 55.9	+0.5
	5.0nm,0.8s,baz=180,slow=10,SNR=5.9						
ASAJ				LR	LR	22 37 52.8	
	comp=Z,37nm,18.3s,baz=162,slow=36						
PLCA	Paso Flores	82.24	132	LR	LR	22 36 43.7	
	comp=Z,59nm,18.2s,baz=274,slow=34						
KSRS	Korea Array	84.34	318	P	P	22 02 08.8	+0.6
	1.0nm,0.4s,baz=140,slow=6.4,SNR=7.3						
KSRS				LR	LR	22 38 38.8	
	comp=Z,13nm,18.0s,baz=155,slow=35						
KSAR	Wonju Array Be	84.35	318	P	P	22 02 08.8	+0.5
PETK	Petropavlovsk-	84.73	344	P	P	22 02 09.7	-0.1
	7.7nm,0.7s,baz=115,slow=7.2						
NVAR	Mina Array Bea	85.79	42	P	P	22 02 16.2	+0.4
	3.7nm,0.9s,baz=223,slow=8.3,SNR=19						
TUC	Tucson	86.65	50	eP	P	22 02 20.7	+0.7
	0.8nm,0.6s						
USRK	Ussuriysk Ar.	86.86	325	P	P	22 02 20.5	0.0
	3.8nm,0.8s,baz=117,slow=1.9						
TXAR	Lajitas Array	89.95	56	P	P	22 02 35.9	+0.2
	1.8nm,1.0s,baz=208,slow=7.1,SNR=12						
KLR	Kul'dur	90.59	329	P	P	22 02 38.5	+0.4
	0.1nm,0.3s,baz=105,slow=3.5,SNR=5.1						
ANMO	Albuquerque	91.12	50	P	P	22 02 41.4	+0.2
	1.1nm,0.6s,baz=226,slow=7.2,SNR=4.1						
NNA	Nana	92.06	105	LR	LR	22 34 11.6	
	comp=Z,21nm,19.5s,baz=234,slow=29						
PDAR	Pinedale Array	93.69	43	P	P	22 02 52.6	-0.3
	0.2nm,0.4s,baz=224,slow=3.8,SNR=3.4						
PDAR				LR	LR	22 45 55.7	
	comp=Z,28nm,18.1s,baz=242,slow=36						
CMAR	Chiang Mai Arr	94.63	288	P	P	22 02 59.0	+1.5
	0.7nm,0.6s,baz=154,slow=4.1,SNR=4.0						
ILAR	Eielson Array	95.94	12	P	P	22 03 01.6	-0.8
	0.8nm,0.7s,baz=221,slow=6.2,SNR=7.2						
LPAZ	La Paz	97.09	113	LR	LR	22 36 22.4	
	comp=Z,23nm,21.0s,baz=188,slow=29						
MKAR	Makanchi Array	118.14	310	PKP	PKPdf	22 08 21.9	-0.9
	1.2nm,0.8s,baz=103,slow=1.2,SNR=9.6						
KURK	Kurchatov	121.25	314	PKP	PKPdf	22 08 27.9	-0.8
KURBB	Kurchatov Arra	121.30	314	PKP	PKPdf	22 08 27.9	-0.8
	1.5nm,0.7s,baz=106,slow=1.9,SNR=19						
BVAR	Borovoye Array	126.52	317	PKP	PKPdf	22 08 38.8	0.0
	1.7nm,0.7s,baz=122,slow=1.0,SNR=11						
AKTO	Aktyubinsk	134.35	314	PKP	PKPdf	22 08 54.3	+0.6
	1.1nm,0.6s,baz=124,slow=2.5,SNR=4.9						
ARCES	ARCESS Array B	137.37	349	PKP	PKPdf	22 08 58.1	-0.6
	1.8nm,0.9s,baz=90,slow=0.1,SNR=4.2						
FINES	FINESS Array B	144.21	342	PKhKP	PKPpre	22 09 08.4	
	8.0nm,0.6s,baz=67,slow=2.9,SNR=46						
GNI	Garni	144.92	300	PKP	PKPdf	22 09 13.4	0.0
	6.1nm,0.9s,baz=105,slow=2.0,SNR=4.0						
KBZ	Khabaz	145.69	306	PKPbc	PKPab	22 09 15.1	0.0
	3.4nm,0.7s,baz=235,slow=1.9,SNR=8.0						
NB2	NORSAR Subarra	147.39	354	PKP	PKPbc	22 09 18.2	-1.0
	comp=Z,1.2nm,0.6s,baz=21,slow=3.0						
NOA	NORSAR Array B	147.39	354	PKPbc	PKPbc	22 09 18.4	-0.8
	comp=Z,1.4nm,0.6s,baz=12,slow=4.5,SNR=7.4						
AKASG	Malin Array Be	151.06	326	PKPbc	PKPbc	22 09 28.2	-0.5
	comp=Z,9.4nm,0.6s,baz=44,slow=2.8,SNR=31						
KIEV	Kiev	151.07	326	ePKPbc	PKPbc	22 09 28.2	-0.6
MMAI	Mount Meron Ar	152.88	287	PKPbc	PKPbc	22 09 34.7	+1.1
	comp=Z,2.2nm,0.6s,baz=91,slow=7.5,SNR=11						
EKA	Eskdalemuir Ar	152.94	9	PKPbc	PKPbc	22 09 32.2	-0.6
	comp=Z,1.1nm,0.7s,baz=5.7,slow=0.8,SNR=4.0						
BRTR	Keskin Array B	153.38	302	PKPbc	PKPbc	22 09 34.9	+0.4
	comp=Z,0.8nm,0.5s,baz=123,slow=4.6,SNR=5.5						
CLL	Collm	156.52	346	i PKPab	PKPab	22 09 58.7	-0.8
	comp=Z,9.0nm,1.2s						
DPC	Dobruska-Polom	156.55	340	ePKPAB	PKPab	22 10 00.2	+0.5
KRLC	Kraliky	156.65	339	ePKPAB	PKPab	22 10 00.7	+0.5
BRG	Berggiesshubel	156.72	344	ePKP	PKPab	22 09 59.8	-0.5
	comp=Z,9.0nm,0.9s						
VYHS	Vyhne	157.28	334	ePKP	PKPab	22 10 02.0	-0.9
JAVC	Velka Javorina	157.40	336	ePKP	PKPab	22 10 04.4	+0.9
KRUC	Moravsky	157.66	338	ePKP	PKPab	22 10 04.3	-0.2
KHC	Kasperske Hory	158.42	343	ePKPAB	PKPab	22 10 07.5	-0.3
GERES	GERESS Array B	158.65	342	PKPab	PKPab	22 10 08.5	-0.4
	comp=Z,0.5nm,0.4s,baz=35,slow=4.9,SNR=5.8						
CONA	Conrad Observa	158.82	338	PKPab	PKPab	22 10 09.3	-0.3
	comp=Z,7.2nm,1.5s						
MOA	Molln	159.39	340	ePKPab	PKPab	22 10 12.8	+0.7
	comp=Z,7.7nm,1.4s						
ARSA	Arzberg	159.52	337	ePKPab	PKPab	22 10 10.5	-2.2
	comp=Z,3.4nm,0.9s						
SOKA	Soboth	160.19	337	ePKPab	PKPab	22 10 13.8	-1.8
	comp=Z,7.6nm,1.4s						
KBA	Koelnbreinsper	160.36	341	PKPab	PKPab	22 10 17.2	+0.7
	comp=Z,4.1nm,0.8s						
OBKA	Obir	160.50	338	PKPab	PKPab	22 10 15.3	-1.7
	comp=Z,8.9nm,1.0s						
RETA	Reutte	160.62	346	ePKPab	PKPab	22 10 16.8	-0.6
	comp=Z,6.6nm,1.4s						
MOTA	Moosalm	160.68	346	PKPab	PKPab	22 10 17.0	-0.8
	comp=Z,3.6nm,1.0s						
ABTA	Abfaltersbach	160.89	342	PKPab	PKPab	22 10 17.4	-1.3
	comp=Z,5.2nm,0.8s						
TORD	Torodi Ar. Bea	164.29	171	PKPab	PKPab	22 10 35.2	+1.0
	baz=188,slow=4.1						
ESDC	Sonseca Array	167.24	29	PKPab	PKPab	22 10 46.6	-0.2
	comp=Z,0.2nm,0.4s,baz=303,slow=5.5,SNR=3.7						

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*ISCJB **23** 21:54:20.6±0.6, 36°.2N±0°.1×137°.0E±0°.2, h300^{km}, mb3.3/2, Error ellipse: s-maj=24.4km s-min=9.0km az=29.7*
*IDC **23** 21:54:21.3±6.9, 35°.26N×136°.18E, h200^{km}±133^{km}, mb3.2/2, mb1 3.3/3, mb1mx2.7/62, mbtmp3.5/3, Error ellipse: s-maj=184.7km s-min=75.2km az=45.0*
*JMA **23** 21:54:22.4±0.1, 36°.20N×136°.94E, h282^{km}±2^{km}, M2.6*
ISC 23 21:54:21.5±1.2**, 36°.2N**±0°.1×**136°.9E**±0°.1**, h300**^{km}**, n13, σ1^{s}.77**/16**, Near west coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKG	Kaga	0.48	277	P	Pn	21 54 59.0	-1.0
MAT	Matsushiro	1.08	72	P	Pn	21 55 01.2	-1.0
MJAR	Matsushiro Arr	1.08	72	P	Pn	21 55 01.7	-0.6
	1.4nm,0.3s,baz=235,slow=16,SNR=15						
MJAR				S	S	21 55 32.0	-2.7
	baz=280,slow=15,SNR=4.8						
JSZ	Suzu	1.27	16	P	Pn	21 55 02.6	-0.6
JWT	Wachi	1.55	233	P	Pn	21 55 04.0	-1.0
JIE	Ise	1.83	186	P	Pn	21 55 06.5	-0.5
JIE				S	S	21 55 40.1	-3.2
JAG	Ashikaga	2.05	84	P	Pn	21 55 07.9	-0.7
JSD	Sado	2.10	30	P	Pn	21 55 08.8	-0.2
JSD				eS	S	21 55 45.0	-1.9
JWY	Kouya	2.28	209	P	Pn	21 55 10.2	-0.5
JNS	Sasagawa	2.49	49	P	Pn	21 55 12.1	-0.2
JAW	Awa shima	2.90	39	P	Pn	21 55 16.2	+0.1
WRA	Warramunga Arr	55.91	183	P	P	22 03 31.4	+2.5
	0.7nm,0.4s,baz=0.1,slow=7.6,SNR=18						
ASAR	Alice Springs	59.63	183	P	P	22 03 57.5	+3.0
	0.2nm,0.3s,baz=353,slow=5.2,SNR=4.9						

NNC 23 22:09:14.0±4.2**, 36°.27N**×**69°.55E, h0**^{km}**, mb4.1, mpv3.8, 6C-3D, Error ellipse: s-maj=38.4km s-min=28.8km az=145.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	4.87	39	⇓Pn	Pn	22 10 28.6	-0.2
	8.2nm,0.3s						
SFK				⇓Sn	Sn	22 11 27.5	+1.6
	6.8nm,0.2s						
MNAS	Manas	6.62	19	⇑Pn	Pn	22 10 54.0	+1.2
	2.5nm,0.4s						
MNAS				⇑Sn	Sn	22 12 10.4	+1.4
	4.3nm,0.5s						
KK31	Karatay Array	6.87	6	Pn	Pn	22 10 57.7	+1.7
	2.9nm,0.4s,baz=184,slow=12,SNR=149						
KK31				⇑Sn	Sn	22 12 17.3	+2.4
	0.7nm,0.2s,baz=192,slow=24,SNR=4.7						
AAK	Ala-Archa	7.42	30	⇑Pn	Pn	22 11 03.4	-0.4
	1.6nm,0.3s						
AAK				⇑Sn	Sn	22 12 27.8	-1.0
	7.7nm,0.7s						
TKM2	Tokmak 2	8.12	33	⇑Pn	Pn	22 11 11.5	-1.8
	1.7nm,0.5s						
TKM2				⇓Sn	Sn	22 12 46.5	+0.5
	1.8nm,0.7s						
AB31	Akbulak array	14.76	335	Pn	Pn	22 12 43.9	-0.1
	1.3nm,0.3s,baz=159,slow=12,SNR=61						

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*GUC **23** 22:43:17.4±0.5, 34°.31S×72°.17W, h34^{km}±2^{km}, ML3.5*
*SJA **23** 22:43:19.3±0.7, 34°.47S×72°.12W, h29^{km}±8^{km}, ML3.4, MW3.8*
ISC 23 22:43:16.6±1.7**, 34°.35S**±0°.05×**72°.2W**±0°.1**, h22**^{km}±8^{km}**, n16, σ0^{s}.82**/22**, 2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO05	HualaæØ	0.69	163	eP	Pn	22 43 30.9	-0.2
GO05				eS	Sb	22 43 40.1	+1.0
GO05	HualaæØ	0.69	163	⇓iP	Pb	22 43 30.5	+0.5
GO05				i S	Sb	22 43 40.1	+1.0
GO05				IAML		22 43 42.8	
	comp=E,2µm,0.3s						
NICH	Los Niches	1.02	130	eP	Pn	22 43 35.4	-0.2
NICH				eS	Sb	22 43 49.0	+0.5
ANTU	Antumapu	1.50	59	eP	Pn	22 43 43.0	+0.7
ANTU				i S	Sn	22 44 00.8	-0.5
ANTU				IAML		22 44 04.3	
	comp=N,853nm,0.4s						
CLCH	Cerro Calan	1.67	56	eP	Pn	22 43 45.1	+0.5
CLCH				i S	Sn	22 44 05.5	+0.2
CLCH				IAML		22 44 09.2	
	comp=E,1µm,0.9s						
ROC1	El Roble	1.68	36	eP	Pn	22 43 45.8	+0.9
ROCH	El Roble	1.69	36	eP	Pn	22 43 45.3	+0.3
ROCH				eS	Sn	22 44 06.2	+0.1
ROCH				IAML		22 44 14.2	
	comp=N,908nm,0.4s						
LMEL	Las Melosas	1.72	74	⇓iP	Pn	22 43 45.8	+0.5
LMEL				eS	Sn	22 44 07.2	+0.6
LMEL				IAML		22 44 10.2	
	comp=N,1µm,0.3s						
PEL	Peldehue	1.73	46	eP	Pn	22 43 46.5	+1.0
PEL				eS	Sn	22 44 06.0	-1.0
PEL				IAML		22 44 15.1	
	comp=N,740nm,0.6s						
FCH	Farellones	1.88	58	eP	Pn	22 43 48.0	+0.4
FCH				eS	Sn	22 44 11.4	+0.5
FCH				IAML		22 44 15.4	
	comp=N,598nm,0.3s						
CCHI	Chillan	2.25	178	eP	Pb	22 43 55.1	-1.4
CCHI	Chillan	2.25	178	IAML		22 44 31.8	
	comp=E,476nm,0.7s						
AAGR	Agrelo	3.07	67	eP	Pb	22 44 08.9	-1.6
AUSP	Uspallata	3.16	49	eP	Pb	22 44 11.6	-0.6
RTLS	Leoncito	3.51	44	IAML		22 45 11.7	
	comp=Z,78nm,0.6s						
ACAN	Cantantal	4.67	65	eP	Pn	22 44 31.1	+5.3

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*JMA **23** 22:47:37.7±0.2, 24°.63N×121°.89E, h78^{km}±3^{km}, M2.9*
*ISCJB **23** 22:47:38.3±0.4, 24°.69N±0°.02×121°.93E±0°.02, h74^{km}±3^{km}, Error ellipse: s-maj=3.1km s-min=2.5km az=148.4*
*TAP **23** 22:47:38.4, 24°.69N×121°.90E, h73^{km}, ML3.8, A*
ISC 23 22:47:38.6±1.3**, 24°.68N**±0°.03×**121°.93E**±0°.02**, h74**^{km}±6^{km}**, n81, σ0^{s}.63**/159**, 7C-1D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWC	Suao	0.10	223	i P	Pn	22 47 49.5	+0.2
	baz=201						
TWC				i S	Sn	22 47 57.4	+0.3
	baz=201						
EGS		0.16	2	i P	Pn	22 47 49.7	+0.2
	baz=16						
EGS				S	Sn	22 47 57.6	+0.1
	baz=16						
NTC	Toucheng	0.19	333	P	Pn	22 47 49.5	-0.1
	baz=339						
NTC				S	Sn	22 47 57.4	-0.3
	baz=339						
EOS1	EOS1	0.23	126	P	Pn	22 47 50.1	+0.4
	baz=123						
EOS1				S	Sn	22 47 58.7	+0.9
	baz=123						
TWE	Neicheng	0.24	279	⇑iP	Pn	22 47 50.1	+0.3
	baz=277						
TWE				i S	Sn	22 47 58.8	+0.7
	baz=277						
ENAH	Nanao	0.26	204	P	Pn	22 47 50.0	+0.1
	baz=197						
ENAH				S	Sn	22 47 58.5	+0.4
	baz=197						
NANB	Nanao	0.30	212	P	Pn	22 47 50.1	-0.1
	baz=206						
NANB				S	Sn	22 47 58.8	+0.1
	baz=206						
TIPB	Shuangxi	0.30	342	⇓P	Pn	22 47 50.3	0.0
	baz=346						
TIPB				S	Sn	22 47 58.5	-0.2
	baz=346						
ENA	Nanau	0.30	214	P	Pn	22 47 50.1	-0.1
	baz=206						
ENA				S	Sn	22 47 59.0	+0.3
	baz=206						
TWB1	Santiao Chiao	0.33	10	i P	Pn	22 47 50.3	0.0
	baz=16						
TWB1				i S	Sn	22 47 58.6	-0.4
	baz=16						
ENTT	Nioudou	0.33	263	P	Pn	22 47 50.5	+0.1
	baz=259						
ENTT				S	Sn	22 47 59.6	+0.5
	baz=259						
NWLT	Wulai	0.40	284	P	Pn	22 47 50.7	-0.2
	baz=283						
NWLT				eS	Sn	22 47 59.4	-0.6
	baz=283						
NWF	Wu-fen Shan	0.41	341	i P	Pn	22 47 51.1	0.0
	baz=344						
NWF				i S	Sn	22 47 59.9	-0.3
	baz=344						
WFSB	Wu-fen Shan	0.41	341	P	Pn	22 47 51.1	+0.1
	baz=344						
WFSB				S	Sn	22 48 00.1	0.0
	baz=344						
TATO	Taipei	0.49	306	P	Pn	22 47 51.5	-0.1
	baz=307						
TATO				S	Sn	22 48 01.2	-0.1
	baz=307						
YHNB	Yeheng	0.50	269	⇑P	Pn	22 47 51.6	-0.2
	baz=267						
YHNB				S	Sn	22 48 01.1	-0.5
	baz=267						
TAP1	Taipei	0.51	314	P	Pn	22 47 51.8	0.0
	baz=314						
TAP1				S	Sn	22 48 01.8	+0.3
	baz=314						
NSK	Sanguang	0.52	269	⇑iP	Pn	22 47 51.6	-0.3
	baz=267						
NSK				i S	Sn	22 48 01.1	-0.8
	baz=267						
NNSB	Datong	0.56	243	⇑iP	Pn	22 47 52.3	-0.1
	baz=240						
NNSB				S	Sn	22 48 02.4	-0.2
	baz=240						
NNSH	Datong	0.56	243	⇑P	Pn	22 47 52.4	0.0
	baz=240						
NNSH				S	Sn	22 48 02.2	-0.4
	baz=240						
NNS	Nan Shan	0.56	244	⇑iP	Pn	22 47 52.4	-0.1
	baz=241						
NNS				i S	Sn	22 48 02.5	-0.1
	baz=241						
YM07	YM07	0.56	331	P	Pn	22 47 52.4	0.0
	baz=332						
YM07				S	Sn	22 48 02.2	-0.4
	baz=332						
YM10	YM10	0.57	325	P	Pn	22 47 52.6	+0.1
	baz=326						
YM10				S	Sn	22 48 02.5	-0.4
	baz=326						
YM11	YM11	0.58	326	P	Pn	22 47 53.5	+1.0
	baz=328						
YM11				S	Sn	22 48 03.3	+0.4
	baz=328						
YM04	YM04	0.59	323	P	Pn	22 47 52.5	-0.1
	baz=324						
YM04				S	Sn	22 48 02.5	-0.5
	baz=324						
YM08	YM08	0.59	329	eP	Pn	22 47 52.5	-0.2
	baz=330						
YM08				eS	Sn	22 48 02.1	-0.8
	baz=330						
NACB	Ninganchiao	0.59	211	⇑P	Pn	22 47 51.6	-1.0
	baz=208						
NACB				S	Sn	22 48 02.9	-0.1
	baz=208						
YM03	YM03	0.61	325	eP	Pn	22 47 52.9	0.0
	baz=326						
YM03				eS	Sn	22 48 03.5	+0.1
	baz=326						
TWS1	Kuangyinshan	0.62	312	i P	Pn	22 47 53.0	+0.1
	baz=313						
TWS1				i S	Sn	22 48 04.1	+0.6
	baz=313						
WLTB	Daxi	0.64	286	P	Pn	22 47 53.0	0.0
	baz=285						
WLTB				S	Sn	22 48 04.0	+0.2
	baz=285						
NTST	Danshui	0.65	318	eP	Pn	22 47 53.3	+0.1
	baz=319						
NTST				eS	Sn	22 48 04.3	+0.4
	baz=319						
TWY	Chenhua	0.66	333	eP	Pn	22 47 53.5	+0.2
	baz=335						
TWY				eS	Sn	22 48 03.8	-0.5
	baz=335						
TWD	Chiawan	0.67	207	eP	Pn	22 47 52.6	-0.9
	baz=203						
TWD				eS	Sn	22 48 03.0	-1.4
	baz=203						
NCU	National Centr	0.73	293	P	Pn	22 47 54.0	-0.1
	baz=293						
NCU				i S	Sn	22 48 05.8	+0.3
	baz=293						
NCUH	Zhongli	0.73	293	eP	Pn	22 47 53.9	-0.2
	baz=293						
NCUH				eS	Sn	22 48 05.5	-0.1
	baz=293						
HWA	Hwalien	0.76	203	eP	Pn	22 47 54.4	0.0
	baz=199						
HWA				eS	Sn	22 48 07.0	+0.8
	baz=199						
TWT	Tachien	0.81	238	i P	Pn	22 47 55.7	+0.5
	baz=236						
TWT				i S	Sn	22 48 07.6	+0.2
	baz=236						
WHF	Hehuan Shan	0.81	228	P	Pn	22 47 55.2	-0.2
	baz=226						
WHF				S	Sn	22 48 07.1	-0.7
	baz=226						
TDCB	Techi	0.82	239	P	Pn	22 47 55.5	+0.2
	baz=236						
TDCB				S	Sn	22 48 07.6	-0.1
	baz=236						
LIOB	Emei	0.83	268	eP	Pn	22 47 55.0	-0.2
	baz=266						
LIOB				S	Sn	22 48 07.0	-0.6
	baz=266						
ENLB	Shoufeng	0.83	201	P	Pn	22 47 55.1	-0.2
	baz=198						
ENLB				S	Sn	22 48 08.7	+1.1
	baz=198						
NSTT	Nanjuang	0.84	267	eP	Pn	22 47 55.2	-0.2
	baz=265						
NSTT				eS	Sn	22 48 07.1	-0.8
	baz=265						
SBCB	Hsinchu	0.86	277	eP	Pn	22 47 55.6	0.0
	baz=276						
SBCB				eS	Sn	22 48 07.3	-0.9
	baz=276						
HSN	Hsinchu	0.88	278	eP	Pn	22 47 55.4	-0.4
	baz=279						
HSN				S	Sn	22 48 07.6	-0.9
	baz=279						
CHGB	Renai	0.93	228	P	Pn	22 47 56.7	+0.2
	baz=226						
CHGB				S	Sn	22 48 09.8	-0.1
	baz=226						
JYNG	Yonagunijimaku	0.96	104	P	Pn	22 47 56.6	-0.1
JYNG				S	Sn	22 48 09.7	-0.5
ESL	Shilin	0.98	208	eP	Pn	22 47 57.2	+0.2
	baz=205						
ESL				eS	Sn	22 48 10.7	0.0
	baz=205						
YOJ	Yonaguni jima	1.01	102	P	Pn	22 47 57.8	+0.4
	baz=102						
YOJ				S	Sn	22 48 11.9	+0.4
	baz=102						
YOJ	Yonaguni jima	1.01	102	P	Pn	22 47 57.2	-0.2
YOJ				eS	Sn	22 48 11.3	-0.1
NMLH	Miaoli	1.04	262	P	Pn	22 47 58.0	+0.2
	baz=261						
NMLH				S	Sn	22 48 11.6	-0.5
	baz=261						
NSY	Sanyi	1.09	256	i P	Pn	22 47 58.8	+0.3
	baz=254						
NSY				i S	Sn	22 48 13.5	+0.2
	baz=254						
EGFH	Guangfu	1.11	204	eP	Pn	22 47 57.4	-1.2
	baz=202						
EGFH				eS	Sn	22 48 13.4	-0.1
	baz=202						
PTSB	Yuanli	1.14	258	P	Pn	22 47 59.1	+0.2
	baz=257						
PTSB				S	Sn	22 48 14.0	-0.3
	baz=257						
SMLT	Sun Moon Lake	1.23	230	P	Pn	22 48 00.7	+0.4
	baz=228						
SMLT				S	Sn	22 48 17.4	+0.9
	baz=228						
TYC	Yuchr	1.25	232	eP	Pn	22 48 00.7	+0.4
	baz=230						
TYC				eS	Sn	22 48 16.7	0.0
	baz=230						
SSLB	Suanglung	1.26	225	eP	Pn	22 48 00.9	+0.3
	baz=223						
SSLB				eS	Sn	22 48 17.9	+0.9
	baz=223						
HGSD	Ruisui	1.27	201	P	Pn	22 48 00.4	-0.3
	baz=199						
HGSD				eS	Sn	22 48 17.5	+0.2
	baz=199						
WCHH	Zhanghua	1.39	245	eS	Sn	22 48 20.0	+0.2
	baz=243						
WNT	Mingjian	1.39	235	eP	Pn	22 48 01.9	-0.3
	baz=233						
WNT				eS	Sn	22 48 20.2	+0.2
	baz=233						
WJS	Zhushan	1.39	232	eP	Pn	22 48 03.6	+1.4
	baz=230						
WJS				S	Sn	22 48 20.1	+0.1
	baz=230						
YULB	Yu-li	1.41	204	eP	Pn	22 48 02.1	-0.4
	baz=202						
YULB				eS	Sn	22 48 20.9	+0.4
	baz=202						
TWF1	Yuli	1.45	204	eP	Pn	22 48 03.2	+0.2
	baz=202						
TWF1				eS	Sn	22 48 21.7	+0.4
	baz=202						
YUS	Yu-Shan	1.48	217	eP	Pn	22 48 04.0	+0.1
	baz=215						
YUS				eS	Sn	22 48 23.1	+0.1
	baz=215						
CHN5	Tsauling	1.57	227	eP	Pn	22 48 04.8	+0.1
	baz=225						
CHN5				eS	Sn	22 48 24.9	+0.5
	baz=225						
FULB	Fuli	1.59	201	eP	Pn	22 48 05.5	+0.6
	baz=200						
FULB				eS	Sn	22 48 24.7	0.0
	baz=200						
WGK	Gukeng	1.59	232	eS	Sn	22 48 25.5	+0.8
	baz=230						
RLNB	Erlin	1.63	241	eP	Pn	22 48 05.5	+0.1
	baz=240						

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res
RLNB				S	Sn	22 48 25.5	-0.2
	baz=240						
CHKT	**Chengkung**	1.66	198	*e*P	Pn	22 48 06.0	+0.3
	baz=196						
CHKT				*e*S	Sn	22 48 23.6	-2.7
	baz=196						
IRIF	**Iriomote-Funau**	1.68	102	P	Pn	22 48 05.8	-0.2
IRIF				S	Sn	22 48 26.3	-0.5
ELDTW	**Lidau**	1.70	209	*e*P	Pn	22 48 05.5	-1.0
	baz=208						
ELDTW				*e*S	Sn	22 48 27.7	+0.1
	baz=208						
WTCT	**Ta-ch'eng**	1.71	242	*e*P	Pn	22 48 07.0	+0.6
	baz=240						
WTCT				*e*S	Sn	22 48 26.6	-0.9
	baz=240						
TPUB	**Ta-pu**	1.82	221	*e*P	Pn	22 48 09.8	+1.9
	baz=219						
TPUB				*e*S	Sn	22 48 31.1	+0.9
	baz=219						
HATJ	**Hateruma jima**	1.82	110	*e*S	Sn	22 48 31.0	+0.8
STYT	**Tauyuan**	1.85	215	*e*P	Pn	22 48 09.5	+1.1
	baz=214						
STYT				*e*S	Sn	22 48 32.4	+1.3
	baz=214						
WTP	**Ta-pu**	1.87	220	*e*P	Pn	22 48 09.4	+0.8
	baz=218						
WTP				*e*S	Sn	22 48 31.9	+0.5
	baz=218						
TWK	**Hsinying**	1.93	223	*e*P	Pn	22 48 09.4	0.0
	baz=221						
TWK				*e*S	Sn	22 48 33.8	+1.0
	baz=221						
JKRS	**Kuro-shima**	1.95	103	P	Pn	22 48 10.2	+0.6
JKRS				*e*S	Sn	22 48 33.5	+0.3
CHN1	**Nanshi**	1.96	221	*e*P	Pn	22 48 10.0	+0.2
	baz=219						
CHN1				*e*S	Sn	22 48 34.4	+0.7
	baz=219						
TWG	**Pinlang**	2.01	203	*e*P	Pn	22 48 08.5	-2.0
	baz=201						
TWG				*e*S	Sn	22 48 31.8	-3.0
	baz=201						
JIJ	**Ishigaki jima**	2.04	99	P	Pn	22 48 10.8	-0.1
JIJ				*e*S	Sn	22 48 35.0	-0.5
JISG	**Ishigakijimahi**	2.17	92	P	Pn	22 48 12.8	+0.2
JISG				S	Sn	22 48 38.2	-0.4

IDC 23 22:55:09.7±1.3,**0°.71N×123°.94E,h0^{km},mb3.8**/5,**mb1 3.9**/5,**mb1mx3.6**/58,**mbtmp3.8**/5,**MS3.6**/1,**Ms1 3.6**/1,**ms1mx2.4**/48,**Error ellipse: s-maj=207.5km s-min=19.4km az=63.0,Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	22.91	154	P	P	23 00 13.5	-1.9
	1.1nm,0.3s,baz=330,slow=11,SNR=31						
ASAR	**Alice Springs**	26.09	159	P	P	23 00 47.0	+1.7
	0.4nm,0.3s,baz=343,slow=11,SNR=8.2						
BRDH	**Bariadhala**	38.25	307	LR	LR	23 19 12.6	
	comp=Z,85nm,18.9s,baz=105,slow=38						
MKAR	**Makanchi Array**	58.52	328	P	P	23 05 07.8	-0.1
	0.4nm,0.5s,baz=120,slow=8.6,SNR=6.9						
KURBB	**Kurchatov Arra**	62.83	329	P	P	23 05 36.8	-0.5
	0.3nm,0.2s,baz=129,slow=6.8,SNR=4.1						
BVAR	**Borovoye Array**	68.37	328	P	P	23 06 13.5	+0.5
	0.2nm,0.6s,baz=134,slow=6.2,SNR=2.3						

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*ISCJB **23** 22:58:28.7±0.4,58°.25S±0°.07×24°.1W±0°.1,h10^{km},mb4.6/23,MS3.9/20,Error ellipse: s-maj=10.1km s-min=7.6km az=28.0*

*IDC **23** 22:58:29.3±0.6,58°.19S×24°.16W,h0^{km},mb4.5/13,mb1 4.6/15,mb1mx4.3/37,mbtmp4.5/15,ML4.9/2,MS3.8/22,Ms1 3.8/22,ms1mx3.8/30,Error ellipse: s-maj=20.6km s-min=15.5km az=168.0*

*NEIC **23** 22:58:33.1±3.6,58°.18S×24°.11W,h26^{km}±25^{km},mb4.8/19,Error ellipse: s-maj=13.3km s-min=8.3km az=192.0*

*GCMT **23** 22:58:33.1±0.5,58°.49S×23°.94W,h25^{km}±2^{km},MW4.9/73,Moment Tensor Solution. s18,c19; s73,c97; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.51±.20; $M_{\theta\theta}$-3.08±.18; $M_{\phi\phi}$2.57±.16; $M_{r\theta}$-0.55±.39; $M_{\theta\phi}$0.52±.14; $M_{\phi r}$1.07±.34; Best double couple: $M_0$3.14000×10^{16} NP1:ϕ_s318.00000°,δ82.00000°,λ156.00000°. NP2: ϕ_s52.00000°,δ67.00000°,λ9.00000°. Principal axes: T 3.0370, Plg22.0000°, Azm273.0000°; N 0.2090, Plg65.0000°, Azm120.0000°; P -3.2440, Plg10.0000°, Azm7.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*BJI **23** 22:58:35.1,58°.20S×24°.10W,h26^{km},Ms4.8/1,Ms7 4.6/1*

ISC 23 22:58:31.1±0.4,**58°.19S**±0°.09×**24°.13W**±0°.08,**h10^{km},n68,σ1^{s}.33**/52,**mb4.7**/23,**MS3.9**/21,**1C,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HOPE	**Hope Point**	7.92	294	*e*Pn	**Pn**	**23 00 27.4**	**+1.3**
VNA1	**Neumayer--Stat**	14.18	158	P	**Pn**	**23 01 50.0**	**-1.7**
VNA3	**Neumayer Olymp**	14.41	161	P	**Pn**	**23 01 52.4**	**-2.5**
VNA3				S	Sn	23 04 19.9	-15
SNAA	**Sanae**	16.10	156	P	**Pn**	**23 02 15.0**	**-2.3**
SNAA				S	Sn	23 05 02.0	-14
SNAA	**Sanae**	16.10	156	Pn	**Pn**	**23 02 15.1**	**-2.1**
	3.8nm,0.3s,baz=326,slow=17,SNR=60						
SNAA				Sn	Sn	23 05 01.1	-14
	1.0nm,0.3s,baz=349,slow=23,SNR=6.1						
SNAA				LR	LR	23 06 48.0	
	comp=Z,350nm,22.0s,baz=344,slow=31						
SNAA	**Sanae**	16.10	156	*e*Pn	**Pn**	**23 02 15.7**	**-1.5**
	40nm,0.9s						
SNAA				*e*Sn	Sn	23 05 01.8	-14
PMSA	**Palmer Station**	19.87	234	P	**Pn**	**23 03 02.8**	**-0.8**
	3.4nm,0.3s,baz=73,slow=5.0,SNR=5.7						
PMSA				LR	LR	23 09 05.2	
	comp=Z,588nm,19.9s,baz=79,slow=32						
PMSA	**Palmer Station**	19.87	234	*e*P	**Pn**	**23 03 04.5**	**+0.9**
	91nm,1.2s						
EFI	**East Falkland**	20.39	274	*e*P	Pn	23 03 08.8	-1.1
	214nm,1.5s						
USHA	**Ushuaia**	24.34	259	P	**P**	**23 03 47.8**	**-0.9**
	12nm,0.7s,baz=42,slow=6.0,SNR=6.8						
USHA				LR	LR	23 10 13.9	
	comp=Z,504nm,20.6s,baz=94,slow=29						
GO09	**Cerro Castillo**	28.15	263	*e*P	**P**	**23 04 24.0**	**+0.8**
	232nm,2.0s						
SYO	**Syowa Base**	28.87	138⇑	*e*X	**P**	**23 04 30.0**	**+0.7**
TRQA	**Tornquist**	31.70	293	*e*P	**P**	**23 04 53.8**	**-0.9**
	26nm,1.7s						
QSPA	**South Pole Qui**	32.05	180	LR	LR	23 17 04.1	
	comp=Z,258nm,20.6s,baz=189,slow=35						
PLCA	**Paso Flores**	34.02	280	P	**P**	**23 05 14.1**	**-1.0**
	21nm,0.9s,baz=172,slow=6.4,SNR=41						
PLCA				LR	LR	23 17 53.2	
	comp=Z,204nm,18.7s,baz=148,slow=34						
PLCA	**Paso Flores**	34.02	280	*e*P	**P**	**23 05 14.0**	**-1.0**
	32nm,1.1s						
GO05	**HualaæØ**	39.06	285	*e*P	**P**	**23 05 57.7**	**-0.3**
	20nm,1.4s						
CPUP	**Villa Florida**	39.47	309	P	**P**	**23 06 00.5**	**-1.0**
	6.1nm,0.8s,baz=149,slow=8.1,SNR=9.2						
CPUP	**Villa Florida**	39.47	309	*e*P	**P**	**23 06 00.3**	**-1.1**
	5.5nm,0.9s						
GO04	**Tololo Observa**	42.36	291	*e*P	**P**	**23 06 24.6**	**-1.0**
	74nm,1.6s						
VNDA	**Vanda**	44.49	182	P	**P**	**23 06 41.6**	**-0.3**
	1.0nm,0.6s,baz=170,slow=5.1,SNR=7.7						
VNDA				LR	LR	23 24 29.2	
	comp=Z,111nm,19.8s,baz=170,slow=35						
VNDA	**Vanda**	44.49	182	*e*P	**P**	**23 06 45.6**	**+3.7**
	14nm,1.8s						
BOSA	**Boshof**	44.99	71	P	**P**	**23 06 44.8**	**-1.8**
	5.1nm,1.0s,baz=209,slow=8.6,SNR=7.8						
BOSA				LR	LR	23 21 10.1	
	comp=Z,192nm,20.6s,baz=204,slow=30						
GO02	**Mina Guanaco**	45.95	296	*e*P	**P**	**23 06 53.0**	**-1.4**
	14nm,1.1s						
LBTB	**Lobatse**	48.14	68	P	**P**	**23 07 11.4**	**+0.1**
	3.7nm,0.7s,baz=178,slow=9.9,SNR=6.2						
LBTB	**Lobatse**	48.14	68	*e*P	**P**	**23 07 11.4**	**+0.1**
	18nm,1.4s						
TSUM	**Tsumeb**	49.39	56	LR	LR	23 23 39.7	
	comp=Z,64nm,20.2s,baz=216,slow=31						
TSUM	**Tsumeb**	49.39	56	*e*P	**P**	**23 07 20.4**	**-0.5**
	16nm,1.4s						
PB01	**IPOC Station P**	49.42	299	*e*P	**P**	**23 07 19.9**	**-1.3**
	5.2nm,0.7s						
H10S2	**ASCENSION HYDR**	49.66	12	T	T	00 01 06.7	
	baz=186,slow=75,SNR=9.7						
H10S3	**ASCENSION HYDR**	49.66	12	T	T	00 01 04.7	
	baz=186,slow=75,SNR=7.5						
H10S1	**ASCENSION HYDR**	49.68	12	T	T	00 01 08.0	
	baz=186,slow=75,SNR=8.5						
PB11	**IPOC Station P**	50.61	300	*e*P	**P**	**23 07 29.4**	**-0.9**
	5.8nm,0.8s						
MNMC	**Minye Minye**	51.13	300	*e*P	**P**	**23 07 33.3**	**-1.0**
	10nm,0.6s						
LPAZ	**La Paz**	52.96	303	P	**P**	**23 07 47.6**	**-0.8**
	7.1nm,0.7s,baz=166,slow=5.5,SNR=24						
LPAZ				LR	LR	23 31 34.2	
	comp=Z,35nm,19.0s,baz=142,slow=38						
LPAZ	**La Paz**	52.96	303	*e*P	**P**	**23 07 47.7**	**-0.7**
	6.1nm,0.8s						
SAML	**Samuel**	57.49	312	*e*P	**P**	**23 08 19.7**	**-0.6**
	10nm,0.8s						
LSZ	**Lusaka**	57.69	65	P	**P**	**23 08 21.6**	**-0.3**
	2.8nm,0.8s,baz=212,slow=5.3,SNR=6.2						
LSZ	**Lusaka**	57.69	65	*e*P	**P**	**23 08 22.0**	**+0.1**
	15nm,1.6s						
NNA	**Nana**	60.73	297	LR	LR	23 33 25.6	
	comp=Z,74nm,21.6s,baz=144,slow=34						
OPO	**Ambohidratompo**	64.57	84	LR	LR	23 33 18.7	
	comp=Z,65nm,18.6s,baz=182,slow=32						
RPN	**Rapa Nui**	64.90	259	LR	LR	23 32 19.1	
	comp=Z,54nm,20.8s,baz=180,slow=31						
DBIC	**Dimbokro**	66.50	21	P	**P**	**23 09 20.9**	**+0.1**
	10.0nm,1.0s,baz=177,slow=6.6,SNR=8.2						
DBIC				LR	LR	23 32 10.7	
	comp=Z,41nm,18.1s,baz=147,slow=30						
TOA0	**Torodi Ar. Sit**	74.18	26	*e*P	**P**	**23 10 07.0**	**-0.7**
TORD	**Torodi Ar. Bea**	74.18	26	P	**P**	**23 10 07.9**	**+0.2**
	2.8nm,0.7s						
TORD				LR	LR	23 35 28.7	
	comp=Z,72nm,21.8s,baz=350,slow=30						
KOWA	**Kowa**	74.30	20	P	**P**	**23 10 09.3**	**+1.0**
	1.1nm,0.5s,baz=182,slow=4.6,SNR=4.8						
KOWA				LR	LR	23 36 47.9	
	comp=Z,65nm,19.9s,baz=214,slow=31						
ROSC	**El Rosal**	74.53	307	LR	LR	23 44 49.2	
	comp=Z,36nm,19.6s,baz=150,slow=37						
PCRV	**Puerto La Cruz**	75.67	319	P	**P**	**23 10 17.5**	**+1.1**
	9.2nm,0.7s,baz=143,slow=5.1,SNR=2.7						
JTS	**JuntasAbangare**	84.06	300	LR	LR	23 50 40.0	
	comp=Z,17nm,20.3s,baz=180,slow=37						
ATD	**Arta Tunnel**	88.02	64	LR	LR	23 48 41.3	
	comp=Z,94nm,19.2s,baz=189,slow=34						
STKA	**Stephens Creek**	89.48	168	LR	LR	23 49 13.4	
	comp=Z,108nm,19.7s,baz=204,slow=34						
MDT	**Midelt**	92.13	16	LR	LR	23 46 37.0	
	comp=Z,65nm,21.2s,baz=189,slow=31						
PPT2	**Papeete2**	92.19	231	*e*LR	LR	23 41 27.3	
	123nm,22.2s						
PPT	**Papeete**	92.21	231	LR	LR	23 44 19.3	
	comp=Z,66nm,18.1s,baz=180,slow=30						
ASAR	**Alice Springs**	96.42	160	P	**P**	**23 12 01.8**	**+1.4**
	0.3nm,0.8s,baz=198,slow=5.8,SNR=3.0						
ASAR				LR	LR	23 54 10.6	
	comp=Z,57nm,18.1s,baz=201,slow=35						
FINES	**FINESS Array B**	125.52	27	PKP	**PKPdf**	**23 17 29.9**	**-1.0**
	1.6nm,0.9s,baz=191,slow=2.8,SNR=2.7						
KSH	**Kashi**	127.55	74	PKP	**PKPdf**	**23 17 38.1**	**+2.4**
ARCES	**ARCESS Array B**	132.33	21	PKP	**PKPdf**	**23 17 44.0**	**+0.3**
	2.8nm,1.0s,baz=209,slow=1.7,SNR=3.3						
CD2	**Chengdu**	135.49	105	PKP	**PKPdf**	**23 17 50.0**	**-0.9**
WMQ	**Urumqi**	136.70	78	PKP	**PKPdf**	**23 17 54.3**	**+1.6**
WMQ				LR	LR		
	comp=N,110nm,20.1s						
WMQ				LR	LR		
	comp=Z,78nm,15.1s						
YKA	**Yellowknife Ar**	138.88	315	PKP	**PKPdf**	**23 17 54.4**	**-1.6**
	1.8nm,0.8s,baz=114,slow=2.1,SNR=4.8						
LZH	**Lanzhou**	139.59	100	*e*PKP	**PKPdf**	**23 18 00.6**	**+2.2**
LZH				sPKP		23 18 12.3	
NJ2	**Nanjing**	143.81	120	*e*PKP	**PKPdf**	**23 18 08.0**	**+2.1**
HHC	**Hu-ho-hao-te**	147.16	102	*e*PKPbc	**PKPbc**	**23 18 13.8**	**+0.1**
INK	**Inuvik**	148.52	318	PKPbc	**PKPbc**	**23 18 14.8**	**-1.5**
	3.2nm,0.8s,baz=64,slow=2.2,SNR=2.3						
SONM	**Songino Array**	149.17	88	PKPbc	**PKPbc**	**23 18 18.1**	**-0.7**
	0.6nm,0.5s,baz=253,slow=3.4,SNR=5.4						
DAWY	**Dawson**	149.45	309	*e*PKPbc	**PKPbc**	**23 18 18.5**	**-0.4**
ILAR	**Eielson Array**	152.77	308	PKPbc	**PKPbc**	**23 18 25.7**	**-0.9**
	2.6nm,0.9s,baz=147,slow=2.3,SNR=9.1						

MAN 23 22:59:46.0,10°.84N×124°.87E,h32^{km},mb3.5,ML2.2,MS1.6,1C,Leyte

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OCLP	**Ormoc**	0.33	309	*e*P	Pn	22 59 55.8	+1.1
OCLP				*e*S	Sn	23 00 01.9	+1.5
PLP	**Palo**	0.34	18⇑	*i*P	Pn	22 59 55.8	+1.0
PLP				*i* S	Sn	23 00 02.1	+1.5
MSLP	**Maasin**	0.70	181	*e*P	Pn	22 59 59.7	-0.1
MSLP				*e*S	Sn	23 00 11.1	+1.6

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*ATH **23** 23:07:14.6,34°.83N×24°.15E,h30^{km}±1^{km},ML2.5/3,Error ellipse: s-maj=2.6km s-min=1.4km az=205.0*

*CSEM **23** 23:07:15.8±0.2,34°.86N×24°.16E,h20^{km},ML2.6,Error ellipse: s-maj=5.1km s-min=3.7km az=26.0*

*THE **23** 23:07:15.2,34°.84N×24°.11E,h28^{km}±1^{km},ML2.6/4,Error ellipse: s-maj=2.5km s-min=0.8km az=218.0*

ISC 23 23:07:15.9±1.2,**34°.86N**±0°.07×**24°.18E**±0°.05,**h25^{km}**±9^{km},**n22,σ0^{s}.57**/35,**Crete**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GVDS	**Gavdos**	0.07	254	P	**Pb**	**23 07 20.0**	**-0.3**
GVDS				S	**Sb**	**23 07 23.2**	**-0.1**
GVDS	**Gavdos**	0.07	254	P	**Pb**	**23 07 20.0**	**-0.3**
GVDS				S	**Sb**	**23 07 23.2**	**-0.1**
GVD	**Gavdhos**	0.08	252	P	**Pb**	**23 07 19.8**	**-0.5**
GVD				S	**Sb**	**23 07 24.3**	**+1.0**
GVD				AML	AML	23 07 25.0	
	comp=E,5549μm,0.1s						
GVD				AML	AML	23 07 25.1	
	comp=N,6610μm,0.1s						
GVD	**Gavdhos**	0.08	252	P	**Pb**	**23 07 19.8**	**-0.5**
GVD				S	**Sb**	**23 07 23.6**	**+0.3**
GVD	**Gavdhos**	0.08	252	P	**Pb**	**23 07 19.8**	**-0.5**
GVD				S	**Sb**	**23 07 23.6**	**+0.3**
VAM	**Vamos**	0.54	2	P	**Pb**	**23 07 26.1**	**-0.8**
VAM	**Vamos**	0.54	2	P	**Pb**	**23 07 26.4**	**-0.4**
VAM				S	**Sb**	**23 07 35.2**	**+1.0**
VAM	**Vamos**	0.54	2	P	**Pb**	**23 07 26.4**	**-0.4**
VAM				S	**Sb**	**23 07 35.2**	**+1.0**
SIVA	**Sivas**	0.54	73	P	**Pb**	**23 07 26.1**	**-0.7**
SIVA				S	**Sn**	**23 07 36.1**	**-0.3**
SIVA				AML	AML	23 07 37.1	
	comp=N,719μm,0.3s						
SIVA				AML	AML	23 07 40.5	
	comp=E,1120μm,0.4s						
SIVA	**Sivas**	0.54	73	P	**Pb**	**23 07 26.4**	**-0.4**
SIVA				S	**Sn**	**23 07 36.0**	**-0.3**
SIVA	**Sivas**	0.54	73	P	**Pb**	**23 07 26.4**	**-0.4**
SIVA				S	**Sn**	**23 07 35.7**	**-0.7**
IMMV	**Iera Moni Meta**	0.62	345	P	**Pb**	**23 07 27.9**	**-0.2**
IMMV				S	**Sn**	**23 07 37.4**	**-0.8**
IMMV				AML	AML	23 07 39.2	
	comp=E,505μm,0.3s						
IMMV				AML	AML	23 07 41.4	
	comp=N,418μm,0.3s						
IMMV	**Iera Moni Meta**	0.62	345	P	**Pb**	**23 07 27.6**	**-0.4**
IMMV				S	**Sb**	**23 07 36.1**	**-0.2**
IMMV	**Iera Moni Meta**	0.62	345	P	**Pb**	**23 07 27.6**	**-0.4**
IMMV				S	**Sb**	**23 07 36.1**	**-0.2**
LAST	**Lasithi**	1.11	74	P	**Pb**	**23 07 36.9**	**+0.5**
LAST	**Lasithi**	1.11	74	P	**Pb**	**23 07 36.5**	**+0.1**
ANKY	**Antikythira Is**	1.23	325	P	**Pb**	**23 07 38.0**	**-0.5**
ANKY	**Antikythira Is**	1.23	325	P	**Pb**	**23 07 37.9**	**-0.5**
NPS	**Neapolis**	1.25	71	P	**Pn**	**23 07 37.8**	**+0.1**
NPS	**Neapolis**	1.25	71	P	**Pb**	**23 07 38.0**	**-0.7**
VLI	**Veliai**	2.11	332	P	**Pn**	**23 07 50.5**	**+0.9**
VLI	**Veliai**	2.11	332	P	**Pn**	**23 07 50.3**	**+0.7**

IDC 23 23:11:51.0±8.0,**6°.94S×149°.32E,h74^{km}**±57^{km},**mb2.9**/1,**mb1 3.2**/3,**mb1mx3.0**/42,**mbtmp3.3**/3,**ML2.8**/2,**Error ellipse: s-maj=117.9km s-min=55.8km az=123.0,New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	3.25	221	P	Pn	23 12 39.7	0.0
	10nm,0.3s,baz=16,slow=10,SNR=9.5						
PMG				S	Sn	23 13 18.3	+1.1
	6.9nm,0.3s,baz=19,slow=18,SNR=4.6						
WRA	**Warramunga Arr**	19.45	227	P	P	23 16 10.4	-1.5
	0.1nm,0.3s,baz=52,slow=11,SNR=5.7						
ASAR	**Alice Springs**	22.26	220	P	P	23 16 41.9	-0.4
	0.6nm,0.6s,baz=53,slow=9.3,SNR=7.4						
TORD	**Torodi Ar. Bea**	147.55	284	PKPbc	PKPbc	23 31 27.9	-0.1
	baz=93,slow=3.5						

MAN 23 23:18:06.0,12°.09N×121°.96E,h11^{km},mb4.1,ML2.9,MS2.6,1C,Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OTRP	**Odiongan**	0.28	13	*e*P	Pg	23 18 12.2	+0.5
OTRP				*e*S	Sb	23 18 17.2	-0.5
SJMP	**San Jose**	0.90	294	*e*P	Pg	23 18 22.3	-1.0
SJMP				*e*S	Sg	23 18 34.5	-0.5
RCP	**Roxas**	0.94	124⇑	*e*P	Pg	23 18 24.0	0.0
RCP				*e*S	Sn	23 18 38.7	+0.2
BOAC	**Boac**	1.36	355	*e*P	Pn	23 18 30.3	-0.7
BOAC				*e*S	Sn	23 18 49.3	+0.2
CUYO	**Cuyo Island**	1.54	217	*e*P	Pn	23 18 30.7	-2.7
GUIM	**Jordan**	1.58	157	*e*P	Pn	23 18 32.6	-1.4
GUIM				*e*S	Sg	23 18 58.9	+1.9
BUSP	**Coron**	1.72	267	*e*P	Pn	23 18 35.4	-0.4
BUSP				*e*S	Sb	23 18 58.7	-0.5
LUBP	**Lubang**	2.33	315	*e*P	Pn	23 18 45.5	+1.2

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*ISCJB **23** 23:25:23.0±0.5,2°.05N±0°.04×125°.97E±0°.05,h35^{km},mb4.2/13,Error ellipse: s-maj=7.8km s-min=5.5km az=145.4*

*DJA **23** 23:25:24.3±0.4,2°N±4°×12°6E±°,h10^{km},M4.4/15,mB4.9/4,mb4.6/10,MLv4.4/15,Mw(mB)4.2/4*

*IDC **23** 23:25:28.6±4.3,1°.49N×126°.07E,h102^{km}±38^{km},mb3.7/12,mb1 3.8/12,mb1mx3.6/46,mbtmp4.1/12,Error ellipse: s-maj=34.0km s-min=11.3km az=67.0*

ISC 23 23:25:23.6±0.7,**1°.97N**±0°.07×**126°.01E**±0°.06,**h35^{km},n31,σ2^{s}.83**/30,**mb4.2**/13,**Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	**Ternate**	1.81	131	P	**Pn**	**23 25 54.3**	**+2.1**
TNTI				S	**Sn**	**23 26 18.2**	**+4.3**
KMSI	**Cibinong**	2.45	236	P	**Pn**	**23 26 02.4**	**+1.3**
LBMI	**Labuha**	2.99	150	P	**Pn**	**23 26 09.7**	**+1.2**
LBMI				S	**Sn**	**23 26 47.6**	**+4.5**
SANI	**Sanana**	3.99	180	P	**Pn**	**23 26 24.3**	**+2.0**
SANI				S	**Sn**	**23 27 10.1**	**+2.3**
MRSI	**Marisa**	4.32	250	P	**Pn**	**23 26 29.7**	**+2.8**
LUWI	**Luwuk**	4.40	227	P	**Pn**	**23 26 29.4**	**+1.5**
APSI	**Ampana**	5.21	237	P	**Pn**	**23 26 41.4**	**+2.4**
	175nm,0.6s,3μm1.1nm						
NLAI	**Namlea**	5.29	168	P	**Pn**	**23 26 42.4**	**+2.3**
AAI	**Ambon**	6.03	159	P	**Pn**	**23 26 52.8**	**+2.5**
MSAI	**Masohi**	6.03	151	P	**Pn**	**23 26 51.9**	**+1.5**
MPSI	**Mapaga**	6.32	255	P	**Pn**	**23 26 57.2**	**+2.9**
	20nm,1.1s,496nm0.1nm						
PCI	**Palu**	6.79	245	P	**Pn**	**23 27 03.1**	**+2.2**
	61nm,0.9s,0.2nm						
TTSI	**Tana Toraja**	7.94	231	P	**Pn**	**23 27 19.0**	**+2.5**
SPSI	**Sidrap Palu**	8.58	227	P	**Pn**	**23 27 27.5**	**+2.2**
WRA	**Warramunga Arr**	23.26	160	P	**P**	**23 30 21.8**	**-6.3**
	3.3nm,0.4s,baz=338,slow=10,SNR=121						
WRA				S	S	23 34 24.4	-14
	0.7nm,0.8s,baz=336,slow=17,SNR=3.8						
ASAR	**Alice Springs**	26.61	164	P	**P**	**23 30 53.6**	**-5.3**
	1.3nm,0.4s,baz=346,slow=12,SNR=15						
MJAR	**Matsushiro Arr**	36.21	17	P	**P**	**23 32 24.9**	**+1.8**
	3.1nm,0.9s,baz=195,slow=9.6,SNR=7.5						
STKA	**Stephens Creek**	36.77	158	P	P	23 32 23.0	-4.9
	1.4nm,0.5s,baz=323,slow=11,SNR=3.8						
H11S3	**WAKE ISLAND Hy**	43.12	65	T	T	00 20 27.8	
	baz=253,slow=75,SNR=10.0						
H11S2	**WAKE ISLAND Hy**	43.13	65	T	T	00 20 25.2	
	baz=253,slow=75,SNR=12						
H11S1	**WAKE ISLAND Hy**	43.13	65	T	T	00 20 29.1	
	baz=253,slow=75,SNR=4.2						
SONM	**Songino Array**	48.74	342	P	**P**	**23 34 07.4**	**+2.4**
	0.4nm,0.5s,baz=157,slow=7.8,SNR=3.7						
MKAR	**Makanchi Array**	58.60	326	P	**P**	**23 35 16.6**	**-0.4**
	1.0nm,0.5s,baz=119,slow=7.9,SNR=17						
ZALV	**Zalesovo Beam**	61.83	334	P	**P**	**23 35 39.1**	**+0.1**
	0.4nm,0.3s,baz=129,slow=11,SNR=3.1						
KURBB	**Kurchatov Arra**	62.84	328	P	**P**	**23 35 45.9**	**+0.1**
	0.5nm,0.2s,baz=134,slow=6.7,SNR=9.0						
BVAR	**Borovoye Array**	68.40	328	P	**P**	**23 36 21.5**	**-0.2**
	0.5nm,0.6s,baz=120,slow=7.2,SNR=4.2						
AKTO	**Aktyubinsk**	74.59	322	P	**P**	**23 37 00.1**	**+1.1**
	1.1nm,0.5s,baz=114,slow=8.4,SNR=4.0						
RAR	**Rarotonga**	76.04	112	P	**P**	**23 37 04.8**	**-3.1**
	17nm,0.8s,baz=98,slow=8.7,SNR=3.0						
OPO	**Ambohidratompo**	80.03	251	P	**P**	**23 37 28.0**	**-2.4**
	2.0nm,0.5s,baz=74,slow=5.7,SNR=4.7						
FINES	**FINESS Array B**	93.03	332	P	**P**	**23 38 34.2**	**+0.9**
	2.9nm,1.1s,baz=17,slow=2.6,SNR=4.3						
TORD	**Torodi Ar. Bea**	122.76	287	PKP	**PKPdf**	**23 44 13.5**	**-3.3**
	89nm,0.7s,baz=86,slow=2.5						

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*ROM **23** 23:26:02.4±0.2,44°.834N±0°.006×11°.38E±0°.01,h8^{km},ML2.6/7*

*CSEM **23** 23:26:08.0±0.7,44°.99N×11°.37E,h2^{km},ML2.3/10,Error ellipse: s-maj=10.0km s-min=7.9km az=11.0*

*PRU **23** 23:26:10.3,45°.09N×11°.23E,h18^{km}*

ISC 23 23:26:05.2±0.9,**44°.82N**±0°.03×**11°.25E**±0°.03,**h13^{km}**±4^{km},**n52,σ1^{s}.58**/86,**3C-1D,Northern Italy**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
T0800	**Massa Finalese**	0.03	353	*i* P	**Pg**	**23 26 06.8**	**-0.8**
T0800				S	**Sg**	**23 26 09.5**	**+0.1**
T0800				AML	AML		
	comp=E,12200μm,0.2s						
T0800				AML	AML		
	comp=N,11600μm,0.2s						
T0800				AML	AML		
	comp=E,11700μm,0.2s						
T0800				AML	AML		
	comp=N,11950μm,0.3s						
T0800				AML	AML		
	comp=N,11600μm,0.2s						
T0800				AML	AML		
	comp=N,11950μm,0.3s						
T0800				AML	AML		
	comp=E,11700μm,0.2s						
T0800				AML	AML		
	comp=E,12200μm,0.2s						
T0802	**SanFelice sul**	0.08	320	P	**Pg**	**23 26 07.6**	**-0.4**
T0802				S	**Sg**	**23 26 10.9**	**+0.9**
T0802				AML	AML		
	comp=E,3765μm,0.3s						
T0802				AML	AML		
	comp=N,2280μm,1.6s						
T0802				AML	AML		
	comp=N,2280μm,1.6s						
T0802				AML	AML		
	comp=E,3765μm,0.3s						
T0803	**Dosso, Cento (**	0.08	125	P	**Pg**	**23 26 06.8**	**-1.3**
T0803				S	**Sg**	**23 26 09.5**	**-0.6**
RAVA	**Ravarino**	0.11	238	P	**Pg**	**23 26 09.2**	**+0.8**
RAVA				AML	AML		
	comp=E,2285μm,0.4s						
RAVA				AML	AML		
	comp=N,2800μm,0.3s						
RAVA				AML	AML		
	comp=E,2285μm,0.4s						
RAVA				AML	AML		
	comp=N,2800μm,0.3s						
T0805	**Bondeno (FE)**	0.12	25	P	**Pg**	**23 26 07.2**	**-1.2**
T0805				S	**Sg**	**23 26 10.2**	**-0.5**
T0805				AML	AML		
	comp=E,6765μm,1.5s						
T0805				AML	AML		
	comp=N,6050μm,1.1s						

T0805				AML	AML		
	comp=E,6765µm,1.5s						
T0805				AML	AML		
	comp=N,6050µm,1.1s						
SERM	Sermide	0.20	9	P	Pg	23 26 09.1	-0.6
SERM				AML	AML		
	comp=E,452µm,0.3s						
SERM				AML	AML		
	comp=N,847µm,0.5s						
SERM				AML	AML		
	comp=N,847µm,0.5s						
SERM				AML	AML		
	comp=E,452µm,0.3s						
FIU	Minerbio Fiu	0.24	136	P	Pg	23 26 08.2	-2.2
FIU				AML	AML		
	comp=E,960µm,0.4s						
FIU				AML	AML		
	comp=N,1088µm,0.9s						
FIU				AML	AML		
	comp=E,960µm,0.4s						
FIU				AML	AML		
	comp=N,1088µm,0.9s						
NDIM	Novi di Modena	0.26	286	P	Pg	23 26 11.6	+0.8
ZCCA	Zocca	0.50	203	P	Pn	23 26 17.5	-0.7
ROVR	Roverˆ¤ Verone	0.84	351	P	Pg	23 26 21.2	-0.4
BALD	Monte Baldo	0.92	341	ePg	Pn	23 26 23.2	-0.8
BALD				eSg	Sn	23 26 36.6	-0.6
BALD	Monte Baldo	0.92	341	ePg	Pn	23 26 23.2	-0.8
BALD				eSg	Sn	23 26 36.6	-0.6
SALO	Salr	0.95	328	P	Pn	23 26 23.9	-0.4
MAGA	Magasa	1.06	336	P	Pn	23 26 25.2	-0.6
DOSS	Dosso del Somm	1.07	358	⇑ePg	Pg	23 26 24.6	-1.3
DOSS				eSg	Sg	23 26 38.8	-1.0
DOSS	Dosso del Somm	1.07	358	ePg	Pg	23 26 24.6	-1.3
DOSS				eSg	Sg	23 26 38.8	-1.0
PANI	Panarotta	1.24	3	⇑ePg	Pn	23 26 27.9	-0.5
PANI				eSg	Sb	23 26 44.6	+0.1
PANI	Panarotta	1.24	3	ePg	Pn	23 26 27.9	-0.5
PANI				eSg	Sb	23 26 44.6	+0.1
RNI	Roncone	1.25	339	⇓ePg	Pg	23 26 28.7	-0.6
RNI				eSg	Sn	23 26 46.8	+1.5
RNI	Roncone	1.25	339	ePg	Pg	23 26 28.7	-0.6
RNI				eSg	Sn	23 26 46.8	+1.5
MSSA	Maissana	1.34	249	P	Pg	23 26 32.2	+1.2
CSNT	Castellina Chi	1.34	179	P	Pg	23 26 30.2	-0.9
MABI	Malga Bissina	1.34	337	P	Pg	23 26 30.2	-0.9
OZOL	Ozolo	1.60	355	⇑ePg	Pb	23 26 34.1	-0.5
OZOL				eSg	Sg	23 26 56.4	-0.2
OZOL	Ozolo	1.60	355	ePg	Pb	23 26 34.1	-0.5
OZOL				eSg	Sg	23 26 56.4	-0.2
CARE	Lago del Cares	1.66	347	ePg	Pb	23 26 35.2	-0.6
CARE	Lago del Cares	1.66	347	ePg	Pb	23 26 35.2	-0.6
APPI	Appiano	1.66	359	P	Pn	23 26 34.2	+0.1
ABSI	Aberstueckl	1.91	1	P	Pn	23 26 37.7	0.0
ABSI				AML	AML		
	comp=E,118µm,1.4s						
ABSI				AML	AML		
	comp=N,84µm,1.0s						
ABSI				AML	AML		
	comp=E,118µm,1.4s						
ABSI				AML	AML		
	comp=N,84µm,1.0s						
ABTA	Abfaltersbach	2.12	24	ePn	Pb	23 26 42.5	-1.1
	comp=N,0.6nm,0.2s						
ABTA				Sg	Sb	23 27 10.6	+0.7
	comp=N,1.6nm,0.3s						
ABTA	Abfaltersbach	2.12	24	Pn	Pb	23 26 42.5	-1.1
	comp=N,0.6nm,0.2s						
ABTA				Sg	Sb	23 27 10.6	+0.7
	comp=N,1.6nm,0.3s						
FETA	Feichten	2.24	351	ePn	Pb	23 26 45.6	+0.1
	comp=N,0.3nm,0.1s						
FETA				Sg	Sb	23 27 14.1	+0.9
	comp=N,1.5nm,0.2s						
FETA	Feichten	2.24	351	Pn	Pb	23 26 45.6	+0.1
	comp=N,0.3nm,0.1s						
FETA				Sg	Sb	23 27 14.1	+0.9
	comp=N,1.5nm,0.2s						
WTTA	Wattenberg	2.46	6	eSg	Sb	23 27 22.3	+2.5
	comp=N,7.0nm,0.3s						
WTTA	Wattenberg	2.46	6	Sg	Sb	23 27 22.3	+2.5
	comp=N,7.0nm,0.3s						
MYKA	Terra Mystica	2.47	42	ePn	Pn	23 26 46.2	+1.0
	comp=N,0.5nm,0.2s						
MYKA				Sg	Sb	23 27 21.6	+1.8
	comp=N,0.7nm,0.2s						
MYKA	Terra Mystica	2.47	42	Pn	Pn	23 26 46.2	+1.0
	comp=N,0.5nm,0.2s						
MYKA				Sg	Sb	23 27 21.6	+1.8
	comp=N,0.7nm,0.2s						
WATA	Walderalm	2.53	5	Pn	Pb	23 26 49.0	-1.6
	comp=N,1.4nm,0.2s						
WATA				eSg	Sb	23 27 23.2	+1.6
	comp=N,1.0nm,0.2s						
WATA	Walderalm	2.53	5	Pn	Pb	23 26 49.0	-1.6
	comp=N,1.4nm,0.2s						
WATA				Sg	Sb	23 27 23.2	+1.6
	comp=N,1.0nm,0.2s						
MOTA	Moosalm	2.53	358	Pn	Pn	23 26 48.0	+1.8
	comp=N,0.7nm,0.2s						
MOTA				Sg	Sb	23 27 23.2	+1.5
	comp=N,2.4nm,0.3s						
MOTA	Moosalm	2.53	358	Pn	Pn	23 26 48.0	+1.8
	comp=N,0.7nm,0.2s						
MOTA				Sg	Sb	23 27 23.2	+1.5
	comp=N,2.4nm,0.3s						
DAVA	Damuels	2.65	339	ePn	Pb	23 26 51.3	-1.3
	comp=N,0.4nm,0.1s						
DAVA				Sg	Sb	23 27 25.7	+0.6
	comp=N,3.4nm,0.5s						
DAVA	Damuels	2.65	339	Pn	Pb	23 26 51.3	-1.3
	comp=N,0.4nm,0.1s						
DAVA				Sg	Sb	23 27 25.7	+0.6
	comp=N,3.4nm,0.5s						
KBA	Koelnbreinsper	2.69	32	Pn	Pn	23 26 51.3	+2.9
	comp=N,1.5nm,0.4s						
KBA				Sg	Sb	23 27 28.7	+2.4
	comp=N,2.0nm,0.4s						
KBA	Koelnbreinsper	2.69	32	Pn	Pn	23 26 51.3	+2.9
	comp=N,1.5nm,0.4s						
KBA				Sg	Sb	23 27 28.7	+2.4
	comp=N,2.0nm,0.4s						
RETA	Reutte	2.69	353	ePn	Pn	23 26 50.0	+1.7
	comp=N,0.7nm,0.2s						
RETA				eSg	Sb	23 27 28.4	+2.1
	comp=N,0.2nm,0.1s						
RETA	Reutte	2.69	353	Pn	Pn	23 26 50.0	+1.7
	comp=N,0.7nm,0.2s						
RETA				Sg	Sb	23 27 28.4	+2.1
	comp=N,0.2nm,0.1s						
OBKA	Obir	2.87	53	ePg	Pb	23 26 55.6	-0.6
	comp=N,0.5nm,0.1s						
OBKA				Sg	Sb	23 27 34.7	+3.5
	comp=N,2.1nm,0.3s						
OBKA	Obir	2.87	53	Pg	Pb	23 26 55.6	-0.6
	comp=N,0.5nm,0.1s						
OBKA				Sg	Sb	23 27 34.7	+3.5
	comp=N,2.1nm,0.3s						
SOKA	Soboth	3.24	54	Pg	Pb	23 27 02.8	+0.3
	comp=N,0.3nm,0.2s						
SOKA				Sg	Sb	23 27 45.6	+3.7
	comp=N,0.6nm,0.3s						
SOKA	Soboth	3.24	54	Pg	Pb	23 27 02.8	+0.3
	comp=N,0.3nm,0.2s						
SOKA				Sg	Sb	23 27 45.6	+3.7
	comp=N,0.6nm,0.3s						
KHC	Kasperske Hory	4.60	19	eSN	Sn	23 28 04.4	-3.3
KHC				eSG	Sg	23 28 28.9	-4.0

*IDC **23** 23:31:18.4±1.6, 5°.04S×128°.52E, h0^{km}, mb3.3/2, mb1 3.8/4, mb1mx3.5/47, mbtmp3.6/4, ML3.7/2, MS3.7/1, Ms1 3.7/1, ms1mx2.4/22, Error ellipse: s-maj=135.4km s-min=25.9km az=70.0*

*ISCJB **23** 23:31:33.3±0.5, 4°.65S±0°.05×130°.00E±0°.05, h200^{km}, mb3.1/2, Error ellipse: s-maj=7.5km s-min=5.4km az=135.2*

*DJA **23** 23:31:34.9±0.4, 5°S±2°×13°0E±°, h174^{km}±4^{km}, M4.3/13, mb4.3/4, MLv4.3/13*

ISC 23 23:31:34.5±0.8, **4°.75S**±0°.06×**130°.01E**±0°.05, **h200**^{km}, **n17**, σ**2.^{s}43**/23, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	0.25	336	P	Pn	23 31 59.5	-1.4
BNDI				S	Sn	23 32 16.8	-4.6
MSAI	Masohi	1.77	322	P	Pn	23 32 08.7	-2.0
MSAI				S	Sn	23 32 35.1	-3.7
AAI	Ambon	2.10	300	P	Pn	23 32 12.7	-1.3
AAI				S	Sn	23 32 41.6	-3.1
FAKI	Fak Fak	2.88	51	P	Pn	23 32 21.8	-1.0
FAKI				S	Sn	23 32 57.8	-2.7
NLAI	Namlea	3.27	297	P	Pn	23 32 26.8	-0.5
NLAI				S	Sn	23 33 07.3	-1.3
SAUI	Saumlaki	3.46	158	P	Pn	23 32 29.9	+0.3
SAUI				S	Sn	23 33 12.9	+0.1
KMPI	Kaimana, Papua	3.84	74	P	Pn	23 32 33.6	-0.7
SWI	Sorong	4.06	18	P	Pn	23 32 35.8	-1.3
LBMI	Labuha	4.79	328	P	Pn	23 32 45.5	-0.8
SANI	Sanana	4.83	304	P	Pn	23 32 45.8	-0.9
RKPI	Ransiki, Papua	5.26	52	P	Pn	23 32 51.3	-1.0
TNTI	Ternate	6.09	334	P	Pn	23 33 01.9	-1.0
WRA	Warramunga Arr	15.68	165	Pn	P	23 35 01.9	-3.0
	0.2nm,0.3s,baz=341,slow=13,SNR=8.1						
WRA				Sn	S	23 37 45.6	-13
	0.7nm,0.3s,baz=333,slow=24,SNR=9.1						
ASAR	Alice Springs	19.18	169	P	Pn	23 35 44.9	-1.5
	0.5nm,0.3s,baz=342,slow=9.4,SNR=30						
ASAR				S	S	23 39 09.0	-0.7
	0.2nm,0.3s,baz=346,slow=25,SNR=6.4						
BRDH	Bariadhala	46.36	308	LR	LR	00 00 46.8	
	comp=Z,72nm,18.0s,baz=242,slow=39						
SONM	Songino Array	56.33	341	P	P	23 40 59.3	+4.6
	0.2nm,0.4s,baz=142,slow=7.3,SNR=2.2						
MKAR	Makanchi Array	66.37	326	P	P	23 42 05.9	+4.1
	0.2nm,0.4s,baz=127,slow=9.4,SNR=3.4						

NNC 23 23:47:34.5±2.1, **37°.60N**×**71°.40E**, **h0**^{km}, **mb3.8**, **mpv3.4**, **5C-3D**, **Error ellipse: s-maj=16.5km s-min=14.1km az=158.0**, **Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	2.91	34	⇑Pn	Pn	23 48 22.5	+0.2
	10nm,0.3s						
SFK				⇓Sn	Sn	23 48 59.8	+1.6
	11nm,0.2s						
MNAS	Manas	4.95	9	⇑Pn	Pn	23 48 50.4	+0.1
	4.0nm,0.4s						
MNAS				⇓Sn	Sn	23 49 49.2	+0.9
	16nm,0.7s						
KK31	Karatay Array	5.54	353	⇑Pn	Pn	23 48 59.0	+0.8
	0.5nm,0.2s,baz=176,slow=14,SNR=38						
KK31				⇑Sn	Sn	23 50 04.2	+1.6
	10nm,0.5s,baz=173,slow=24,SNR=22						
AAK	Ala-Archa	5.56	24	⇓Pn	Pn	23 48 57.3	-1.3
	1.4nm,0.3s						
AAK				⇑Sn	Sn	23 50 03.3	0.0
	6.2nm,0.7s						

*GUC **23** 23:52:29.9±0.6, 33°.69S×70°.12W, h10^{km}±2^{km}, ML2.8*

*SJA **23** 23:52:30.7±0.9, 33°.71S×70°.14W, h10^{km}, ML2.2, MW2.7*

ISC 23 23:52:30.6±1.0, **33°.68S**±0°.05×**70°.18W**±0°.05, **h9**^{km}±12^{km}, **n12**, σ**0.^{s}69**/22, **1D**, **Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LMEL	Las Melosas	0.17	188	⇓iP	Pg	23 52 34.4	+0.2
LMEL				i S	Sg	23 52 37.0	+0.2
LMEL				IAML		23 52 37.2	
	comp=N,11µm,0.1s						
FCH	Farellones	0.37	345	eP	Pb	23 52 39.0	-0.5
FCH				eS	Sb	23 52 44.7	-0.8
FCH				IAML		23 52 45.5	
	comp=E,2µm,0.2s						
ANTU	Antumapu	0.40	286	eP	Pb	23 52 39.6	-0.3
ANTU				eS	Sb	23 52 47.1	+1.0
CLCH	Cerro Calan	0.42	313	eP	Pb	23 52 39.9	-0.3
CLCH				eS	Sb	23 52 47.0	+0.3
CLCH				IAML		23 52 48.2	
	comp=N,1µm,0.3s						
PEL	Peldehue	0.69	322	eP	Pb	23 52 44.7	0.0
PEL				eS	Sb	23 52 55.6	+1.2
PEL				IAML		23 52 56.3	
	comp=N,266nm,0.3s						
ROC1	El Roble	1.00	315	eP	Pb	23 52 50.7	+0.5
ROC1				eS	Sn	23 53 05.5	+0.1
ROCH	El Roble	1.00	315	eP	Pb	23 52 50.6	+0.4
ROCH				eS	Sn	23 53 05.3	0.0
ROCH				IAML		23 53 07.5	
	comp=N,281nm,0.1s						
AAGR	Agrelo	1.28	63	eP	Pg	23 52 54.5	-0.5
AAGR				eS	Sn	23 53 12.6	+0.5
ASAL	Salagasta	1.57	46	eP	Pg	23 53 00.4	-0.2
ASAL				eS	Sg	23 53 22.1	+1.1
AUSP	Uspallata	1.60	25	eP	Pg	23 53 00.6	-0.7
GO05	HualaæØ	1.96	227	eP	Pb	23 53 06.1	-0.5
GO05				eS	Sg	23 53 32.7	-1.0
GO05				IAML		23 53 34.9	
	comp=N,124nm,0.3s						
RTLS	Leoncito	2.02	22	eP	Pg	23 53 08.6	-0.8
RTLS				IAML		23 53 39.2	
	comp=Z,18nm,0.6s						

GUC 23 23:59:14.8±0.8, **21°.36S**×**69°.81W**, **h82**^{km}±3^{km}, **ML3.5**, **7C-6D**, **Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB02	IPOC Station P	0.09	297	⇓iP	Pn	23 59 27.1	+0.5
PB02				i S	Sn	23 59 35.7	+0.4
PB02				IAML		23 59 36.3	
	comp=E,7µm,0.1s						
PB07	IPOC Station P	0.37	191	⇓iP	Pn	23 59 28.5	+0.5
PB07				i S	Sn	23 59 38.1	+0.4
PB07				IAML		23 59 38.7	
	comp=N,4µm,0.3s						
PB01	IPOC Station P	0.44	44	⇓iP	Pn	23 59 28.9	+0.5
PB01				i S	Sn	23 59 39.0	+0.7
PB01				IAML		23 59 40.8	
	comp=E,6µm,0.2s						
PB09	IPOC Station P	0.69	129	⇓iP	Pn	23 59 32.0	+1.3
PB09				i S	Sn	23 59 44.4	+2.0
PB09				IAML		23 59 44.8	
	comp=E,3µm,0.3s						
PB03	IPOC Station P	0.69	175	⇓iP	Pn	23 59 31.3	+0.6
PB03				IAML		23 59 44.6	
	comp=N,1µm,0.2s						
PB04	IPOC Station P	1.02	198	⇑iP	Pn	23 59 34.5	+0.1
PB04				i S	Sn	23 59 49.2	+0.3
PB04				IAML		23 59 49.7	
	comp=N,2µm,0.2s						
PB06	IPOC Station P	1.36	171	⇑iP	Pn	23 59 38.9	+0.4
PB06				IAML		23 59 58.8	
	comp=E,707nm,0.2s						
PB08	IPOC Station P	1.36	27	⇑iP	Pn	23 59 39.7	+0.9
PB08				i S	Sn	23 59 58.0	+1.2
PB08				IAML		23 59 58.8	
	comp=N,2µm,0.2s						
PB05	IPOC Station P	1.53	194	⇑iP	Pn	23 59 40.6	-0.1
PB11	IPOC Station P	1.60	5	⇑iP	Pn	23 59 41.6	-0.1
PSGC	Pisagua	1.78	351	⇓iP	Pn	23 59 43.1	-0.9
MNMC	Minye Minye	2.23	5	⇑iP	Pn	23 59 50.2	+0.1
PB10	IPOC Station P	2.25	198	⇑iP	Pn	23 59 49.2	-0.9

*NEIC **24** 00:07:30.2±0.0, 16°.32N×98°.06W, h18^{km}, MD4.0(MEX), After MEX.*

MEX 24 00:07:29.6±0.4, **16°.28N**×**98°.11W**, **h21**^{km}±3^{km}, **MD3.8**, **Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.11	354	i P	Pb	00 07 32.7	-3.5
PNIG				i S	Sb	00 07 35.6	-5.2
PNIG	Pinotepa	0.11	354	i P	Pb	00 07 32.7	-3.5
PNIG				i S	Sb	00 07 35.6	-5.2
TLIG	Tlapa	1.35	341	eP	Pn	00 07 50.5	-2.8
TLIG				eS	Sn	00 08 06.4	-4.3
TLIG	Tlapa	1.35	341	eP	Pn	00 07 50.5	-2.8
TLIG				eS	Sn	00 08 06.4	-4.3
VHO	Vista Hermosa	1.54	59	eP	Pn	00 07 53.1	-3.0
VHO				i S	Sn	00 08 11.9	-3.6
VHO	Vista Hermosa	1.54	59	eP	Pn	00 07 53.1	-3.0
VHO				eS	Sn	00 08 11.4	-4.1
CAIG	El Cayaco	2.20	291	i P	Pn	00 08 02.9	-2.0
CAIG				i S	Sn	00 08 28.3	-3.2
CAIG	El Cayaco	2.20	291	eP	Pn	00 08 06.2	+1.3
CAIG				eS	Sb	00 08 35.9	+0.4
ARIG	Puente Sto Nin	2.92	313	eP	Pn	00 08 12.8	-2.1
ARIG				i S	Sn	00 08 46.0	-3.2
ARIG	Puente Sto Nin	2.92	313	eP	Pn	00 08 16.5	+1.7
ARIG				eS	Sb	00 08 53.8	-2.4

NEIC 24 00:20:52.3±0.0, **51°.06N**×**178°.45W**, **h26**^{km}, **ML3.7**(AEIC), **After AEIC.**, **Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GALAA	Gareloi Lava P	0.73	344	P	Pb	00 21 05.6	-0.8
GAEA	Gareloi East	0.75	346	P	Pb	00 21 06.8	+0.1
TAFL	Tanaga Flats	0.78	26	P	Pb	00 21 06.5	-0.8
TASE	Tanaga Southea	0.82	18	P	Pn	00 21 08.1	-0.1
TAPA	Tanaga Point A	0.86	27	P	Pb	00 21 07.6	-1.0
TAFP	Tanaga Falls P	0.89	19	P	Pb	00 21 08.9	-0.2
TAFP				S	Sb	00 21 20.0	-0.7
KIKV	Kanaga Island	1.15	44	P	Pn	00 21 12.0	-0.7
KIKV				S	Sn	00 21 27.1	-0.5
KICM	Kanaga Island	1.17	42	P	Pn	00 21 12.5	-0.4
CERAA	Semis’ Rag’d T	1.44	307	P	Pn	00 21 16.8	0.0
AMKA	Amchitka	1.45	284	P	Pn	00 21 15.7	-1.1
AMKA				S	Sn	00 21 35.0	0.0
ADAG	Mount Adagdak	1.48	51	P	Pn	00 21 17.4	+0.1
CERB	Semis’ Cerberu	1.49	307	P	Pn	00 21 17.3	0.0
CERB				S	Sn	00 21 36.0	+0.2
ETKA	Kagalaska Isla	1.51	57	P	Pn	00 21 17.0	-0.7
CEAP	Semis’ Anvil P	1.55	308	P	Pn	00 21 18.4	+0.1
GSCK	Great Sitkin C	1.72	55	P	Pn	00 21 21.0	+0.5
GSSP	Great Sitkin S	1.76	53	P	Pn	00 21 21.9	+0.9
LSSA	Little Sitkin	2.10	296	P	Pn	00 21 26.1	+0.3
LSNW	Little Sitkin	2.10	297	P	Pn	00 21 26.7	+0.9
NIKH	Nikolski High	6.23	68	P	Pn	00 22 23.8	+1.4
NIKH				S	Sn	00 23 35.3	+2.6

*IDC **24** 00:34:22.2±1.4, 11°.35S×163°.38E, h0^{km}, mb3.8/6, mb1 4.0/7, mb1mx3.8/42, mbtmp3.8/7, ML4.3/1, MS3.1/7, Ms1 3.1/7, ms1mx2.8/44, Error ellipse: s-maj=40.7km s-min=25.3km az=156.0*

*ISCJB **24** 00:34:25.4±0.9, 11°.5S±0°.1×163°.34E±0°.10, h33^{km}, mb3.7/6, MS3.1/5, Error ellipse: s-maj=22.5km s-min=9.8km az=27.4*

ISC 24 00:34:27.2±1.2, **11°.4S**±0°.2×**163°.4E**±0°.1, **h35**^{km}, **n20**, σ**1.^{s}36**/10, **mb3.8**/6, **MS3.2**/5, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	3.90	300	Pn	Pn	00 35 24.3	-0.4
	22nm,0.3s,baz=189,slow=3.7,SNR=9.0						
HNR				Sn	Sn	00 36 10.3	+1.1
	32nm,0.3s,baz=93,slow=22,SNR=7.2						
HNR				LR	LR	00 37 13.0	
	comp=Z,132nm,20.1s,baz=162,slow=44						
HNR	Honiara	3.90	300	eP	Pn	00 35 22.0	-2.7
HNR				eS	Sn	00 36 11.0	+1.7
DZM	Mont Dzumac	11.00	165	LR	LR	00 39 56.1	
	comp=Z,62nm,20.8s,baz=47,slow=30						
STKA	Stephens Creek	28.60	221	LR	LR	00 50 58.3	
	comp=Z,88nm,18.2s,baz=32,slow=35						
WRA	Warramunga Arr	29.17	249	P	P	00 40 25.5	-0.1
	0.5nm,0.5s,baz=80,slow=9.0,SNR=9.4						
H11S2	WAKE ISLAND Hy	29.89	6	T	T	01 11 36.9	
	baz=188,slow=76,SNR=8.3						
H11S3	WAKE ISLAND Hy	29.90	6	T	T	01 11 39.0	
	baz=188,slow=76,SNR=8.9						
H11S1	WAKE ISLAND Hy	29.91	6	T	T	01 11 36.8	
	baz=188,slow=76,SNR=6.5						
ASAR	Alice Springs	30.55	243	P	P	00 40 38.4	+0.6
	0.7nm,0.7s,baz=73,slow=9.4,SNR=6.3						
GUMO	Guam	30.88	323	LR	LR	00 51 45.0	
	comp=Z,25nm,21.0s,baz=114,slow=34						
H11N1	WAKE ISLAND Hy	31.12	6	T	T	01 13 14.7	
	baz=188,slow=74						
H11N3	WAKE ISLAND Hy	31.13	6	T	T	01 13 04.3	
	baz=188,slow=74						
H11N2	WAKE ISLAND Hy	31.14	6	T	T	01 13 17.4	
	baz=188						
ASAJ	Asahikawa	58.40	343	LR	LR	01 05 08.1	
	comp=Z,20nm,21.7s,baz=82,slow=32						
KSRS	Korea Array	58.89	327	LR	LR	01 06 23.7	
	comp=Z,13nm,20.0s,baz=175,slow=33						
VNDA	Vanda	66.10	180	LR	LR	01 12 43.6	
	comp=Z,16nm,18.4s,baz=340,slow=35						
SONM	Songino Array	77.60	325	P	P	00 46 20.2	+0.2
	0.5nm,0.3s,baz=142,slow=7.3,SNR=1.9						
ILAR	Eielson Array	84.61	19	P	P	00 46 56.6	-0.1
	0.5nm,0.9s,baz=230,slow=5.6,SNR=4.1						
NVAR	Mina Array Bea	88.05	50	P	P	00 47 15.4	+0.9
	0.3nm,0.3s,baz=262,slow=4.5,SNR=2.8						
MKAR	Makanchi Array	92.20	317	P	P	00 47 32.9	-0.6
	0.3nm,0.7s,baz=90,slow=4.3,SNR=2.7						

IDC 24 00:43:06.9±3.0, **11°.45S**×**163°.64E**, **h0**^{km}, **mb3.6**/4, **mb1 3.8**/5, **mb1mx3.6**/43, **mbtmp3.8**/5, **ML4.4**/1, **MS3.0**/2, **Ms1 3.0**/2, **ms1mx2.6**/42, **Error ellipse: s-maj=70.2km s-min=37.6km az=118.0**, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	4.15	299	Pn	Pn	00 44 11.5	0.0
	21nm,0.3s,baz=155,slow=6.4,SNR=7.9						
HNR				Sn	Sn	00 44 56.9	-3.9
	30nm,0.3s,baz=180,slow=20,SNR=4.0						
HNR				LR	LR	00 46 06.9	
	comp=Z,160nm,18.3s,baz=150,slow=43						
HNR	Honiara	4.15	299	P	Pn	00 44 10.0	-1.5
HNR				S	Sn	00 44 54.0	-6.8
DZM	Mont Dzumac	10.90	166	LR	LR	00 49 26.1	
	comp=Z,110nm,21.9s,baz=328,slow=35						
WRA	Warramunga Arr	29.41	250	P	P	00 49 12.2	-0.1
	0.3nm,0.6s,baz=80,slow=9.1,SNR=4.2						
H11S2	WAKE ISLAND Hy	29.91	6	T	T	01 20 18.3	
	baz=188,slow=76,SNR=14						
H11S3	WAKE ISLAND Hy	29.91	6	T	T	01 20 16.7	
	baz=188,slow=76,SNR=11						
H11S1	WAKE ISLAND Hy	29.92	6	T	T	01 20 19.2	
	baz=188,slow=76,SNR=9.9						
ASAR	Alice Springs	30.77	243	P	P	00 49 24.4	+0.1
	0.4nm,0.8s,baz=76,slow=9.6,SNR=5.1						
H11N1	WAKE ISLAND Hy	31.13	6	T	T	01 21 48.8	
	baz=188,slow=76,SNR=5.8						
H11N3	WAKE ISLAND Hy	31.14	6	T	T	01 21 51.4	
	baz=188,slow=76,SNR=6.4						
H11N2	WAKE ISLAND Hy	31.15	6	T	T	01 21 51.7	
	baz=188,slow=76,SNR=4.5						
SONM	Songino Array	77.78	325	P	P	00 55 06.2	+0.1
	0.3nm,0.5s,baz=113,slow=2.2,SNR=2.6						
MKAR	Makanchi Array	92.41	317	P	P	00 56 19.5	-0.1
	0.3nm,0.8s,baz=104,slow=4.6,SNR=2.5						

*IDC **24** 00:51:59.4±0.9, 37°.30S×179°.87E, h0^{km}, mb4.3/4, mb1 4.5/5, mb1mx4.0/41, mbtmp4.3/5, ML4.0/1, MS3.5/2, Ms1 3.5/2, ms1mx2.7/39, Error ellipse: s-maj=32.3km s-min=26.4km az=156.0*

*NEIC **24** 00:52:03.6±4.4, 37°.34S×179°.83E, h27^{km}±29^{km}, mb4.5/6, Error ellipse: s-maj=14.8km s-min=14.2km az=80.0*

ISC 24 00:52:03.8±0.7, **37°.7S**±0°.1×**179°.73E**±0°.09, **h29**^{km}, **n56**, σ**2.^{s}02**/59, **mb4.5**/10, **Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	2.14	254	Pn	Pb	00 52 40.3	-1.7
	36nm,0.3s,baz=216,slow=0.8,SNR=97						
URZ				Sn	Sb	00 53 09.2	+1.0
	148nm,0.3s,baz=232,slow=18,SNR=25						
WHHZ	Waihua	2.39	234	P	Sn	00 53 15.7	+6.3
PRHZ	Porangahau	3.52	222	P	Pn	00 52 55.9	-0.7
DVHZ	Dannevirke	3.80	226	P	Pn	00 53 00.3	-0.2
BFZ	Birch Farm	4.02	221	P	Pn	00 53 01.7	-1.8
PRWZ	Pori Road	4.08	225	P	Pn	00 53 04.3	0.0
TIWZ	Tintock	4.28	223	P	Pn	00 53 06.1	-0.9
MRZ	Mangatainoka R	4.37	226	P	Pn	00 53 07.7	-0.6
TMWZ	Te Maipa	4.52	220	P	Pn	00 53 08.2	-2.1
HOWZ	Holdsworth Sta	4.57	224	P	Pn	00 53 09.2	-1.8
OGWZ	Otaki Gorge	4.71	227	P	Pn	00 53 12.6	-0.4

MTW	Mount Morrison	4.76	222	P	Pn	00 53 11.3	-2.2
TRWZ	Traveller	4.83	219	P	Pn	00 53 12.9	-1.8
KIW	Kapiti Island	4.89	228	P	Pn	00 53 14.8	-0.6
PAWZ	Paruwai Farm	4.96	221	P	Pn	00 53 14.1	-2.2
CAW	Cannon Point	4.96	225	P	Pn	00 53 14.8	-1.5
MSWZ	Moikau Station	5.07	222	P	Pn	00 53 14.9	-3.0
PLWZ	Palliser	5.18	220	P	Pn	00 53 16.5	-3.0
BHW	Baring Head	5.27	224	P	Pn	00 53 19.0	-1.6
TCW	Tory Channel	5.48	229	P	Pn	00 53 22.5	-1.0
TUWZ	Tuamarina	5.82	228	P	Pn	00 53 26.7	-1.4
BSWZ	Blackbirch Sta	6.04	227	P	Pn	00 53 29.3	-1.8
THZ	Tophouse	6.64	230	P	Pn	00 53 37.8	-1.7
KHZ	Kahutara	6.69	223	P	Pn	00 53 37.5	-2.5
LTZ	Lake Taylor	7.63	226	P	Pn	00 53 51.7	-1.4
OKCZ	Okains Bay	7.86	218	P	Pn	00 53 53.8	-2.4
AKCZ	Akaroa Harbour	8.04	218	P	Pn	00 53 57.0	-1.7
MQZ	McQueen's Vall	8.05	220	P	Pn	00 53 55.8	-3.0
OXZ	Oxford	8.11	224	P	Pn	00 53 57.5	-2.1
WVZ	Waitaha Valley	8.71	229	P	Pn	00 54 07.0	-0.7
RPZ	Rata Peaks	8.91	225	Pn	Pn	00 54 08.4	-2.2
	1.7nm,0.3s,baz=83,slow=4.1,SNR=8.4						
RPZ				Sn	Sn	00 55 43.6	-6.4
	3.9nm,0.3s,baz=12,slow=21,SNR=14						
RPZ	Rata Peaks	8.91	225	P	Pn	00 54 10.4	-0.2
RPZ				P	Pn	00 54 10.4	-0.2
LBZ	Lake Benmore	9.82	224	P	Pn	00 54 23.2	+0.1
ODZ	Otahua Downs	10.02	220	P	Pn	00 54 22.9	-2.8
DZM	Mont Dzumac	19.34	320	LR	LR	01 02 16.1	
	comp=Z,183nm,20.4s,baz=154,slow=32						
AFI	Afiamalu	24.88	20	P	P	00 57 20.6	-3.6
	9.6nm,0.9s						
STKA	Stephens Creek	31.70	269	LR	LR	01 10 03.5	
	comp=Z,69nm,18.2s,baz=42,slow=34						
CTAO	Charters Tower	33.93	292	P	P	00 58 44.3	-0.3
	12nm,0.7s						
ASAR	Alice Springs	41.42	276	P	P	00 59 48.2	+0.3
	6.9nm,0.7s,baz=120,slow=8.1,SNR=55						
ASAR				PcP	PcP	01 01 45.2	-0.4
	0.7nm,0.7s,baz=116,slow=4.2,SNR=4.4						
WRAB	Tennant Creek	43.07	281	*e*P	P	01 00 01.2	-0.1
	1.3nm,0.5s						
WRA	Warramunga Arr	43.07	281	P	P	01 00 01.2	-0.2
	3.4nm,0.4s,baz=120,slow=7.8,SNR=82						
WRA				PcP	PcP	01 01 51.5	+0.4
	1.2nm,0.8s,baz=123,slow=3.3,SNR=4.6						
QSPA	South Pole Qui	52.42	180	P	P	01 01 16.7	+3.2
	1.0nm,0.6s,baz=254,slow=5.5,SNR=4.3						
QSPA	South Pole Qui	52.42	180	*e*P	P	01 01 16.0	+2.6
	1.6nm,0.4s						
MBWA	Marble Bar	53.94	270	P	P	01 01 25.4	+0.4
	3.4nm,0.5s						
COCO	West Island	77.08	265	P	P	01 03 55.7	+1.1
	53nm,0.5s						
EFI	East Falkland	77.68	147	P	P	01 03 59.5	+2.0
	29nm,1.0s						
KSRS	Korea Array	88.77	321	P	P	01 04 55.0	+0.4
	1.2nm,0.7s,baz=141,slow=5.5,SNR=4.5						
KSAR	Wonju Array Be	88.78	321	P	P	01 04 55.0	+0.3
MKAR	Makanchi Array	120.87	307	PKP	PKPdf	01 10 51.8	-1.0
	0.3nm,0.6s,baz=119,slow=1.8,SNR=3.1						
KURK	Kurchatov	124.56	311	PKP	PKPdf	01 10 58.8	-0.9
KURBB	Kurchatov Arra	124.59	311	PKP	PKPdf	01 10 58.8	-0.9
	0.6nm,0.6s,baz=126,slow=2.7,SNR=5.8						
ARCES	ARCESS Array B	145.22	344	PKP	PKPbc	01 11 36.9	-0.3
	1.7nm,0.5s,baz=37,slow=3.4,SNR=19						
KBZ	Khabaz	147.02	294	PKPbc	PKPdf	01 11 42.2	+1.0
	2.2nm,0.9s,baz=125,slow=4.2,SNR=5.0						
MMAI	Mount Meron Ar	150.65	272	PKPbc	PKPbc	01 11 54.4	+1.2
	0.6nm,0.4s,baz=91,slow=5.8,SNR=5.0						
FINES	FINESS Array B	151.12	334	PKPbc	PKPbc	01 11 51.8	-1.4
	4.6nm,0.9s,baz=1.9,slow=5.7,SNR=10						
GERES	GERESS Array B	164.94	322	PKPab	PKPab	01 13 00.7	-0.5
	0.6nm,0.8s,baz=29,slow=4.5,SNR=2.7						

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*CSEM **24** 01:08:49.5±0.3, 36°.95N×27°.77E, h1^{km}, ML2.6, Error ellipse: s-maj=6.3km s-min=5.2km az=17.0, Suspected Mining explosion.*

*DDA **24** 01:08:50.6, 37°.00N×27°.63E, h7^{km}, Ml2.6, Suspected Mining explosion.*

*ISK **24** 01:08:50.4, 37°.03N×27°.62E, h4^{km}, ML1.9/4*

*ISCJB **24** 01:08:51.2±0.5, 37°.02N±0°.03×27°.64E±0°.04, h0^{km}, Error ellipse: s-maj=4.8km s-min=3.7km az=166.1*

ISC 24 01:08:49.2±0.8**, 37°.05N**±0°.03×**27°.78E**±0°.02**, h0**^{km}**, n22, σ0ˢ.91**/36**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLSB	Milas	0.25	359	PG	Pb	01 08 56.9	+2.9
BDRM	Kayabasi	0.27	274	*i* P	Pg	01 08 54.4	0.0
BDRM				*i* S	Sg	01 08 56.9	-1.0
BDRM	Kayabasi	0.27	274	P	Pg	01 08 54.4	0.0
BDRM				S	Sg	01 08 56.9	-1.0
DAT	Datca	0.35	207	PG	Pg	01 08 56.1	+0.1
DAT	Datca	0.35	207	*i* P	Pg	01 08 55.8	-0.2
DAT				*i* S	Sg	01 09 01.1	+0.4
DAT	Datca	0.35	207	P	Pg	01 08 55.8	-0.2
DAT				S	Sg	01 09 01.0	+0.4
BODT	Bodrum	0.38	273	PG	Pg	01 08 56.1	-0.3
BODT				SG	Sg	01 09 00.4	-0.9
BODT	Bodrum	0.38	273	*i* Pg	Pg	01 08 56.1	-0.3
BODT				*i* Sg	Sg	01 09 00.4	-0.9
YER	Yerkesik	0.41	77	PG	Pn	01 09 02.2	-0.3
AYDN	Tasoluk	0.62	7	*i* P	Pb	01 09 04.1	+1.1
AYDN				*i* S	Sb	01 09 13.5	+1.2
AYDN	Tasoluk	0.62	7	P	Pb	01 09 04.1	+1.1
AYDN				S	Sb	01 09 13.5	+1.2
TURN	Turunc	0.68	104	PG	Pg	01 09 01.9	-0.4
TURN				SG	Sg	01 09 09.8	-1.3
TURN	Turunc	0.68	104	*i* P	Pg	01 09 01.8	-0.4
TURN				*i* S	Sg	01 09 09.5	-1.6
TURN	Turunc	0.68	104	*e*Pg	Pg	01 09 01.9	-0.4
TURN				S	Sg	01 09 09.5	-1.6
GCAM	G?zelcaml?	0.79	326	PG	Pb	01 09 05.9	+0.1
GCAM	G?zelcaml?	0.79	326	*i* P	Pn	01 09 06.7	-0.9
GCAM				*i* S	Sb	01 09 16.8	-0.2
GCAM	G?zelcaml?	0.79	326	*e*Pg	Pb	01 09 05.9	+0.1
GCAM	G?zelcaml?	0.79	326	P	Pn	01 09 06.7	-0.9
GCAM				S	Sb	01 09 16.8	-0.2
ARG	Arkhangelos	0.87	161	PG	Pn	01 09 08.7	-0.1
ARG				SG	Sn	01 09 22.2	0.0
ARG	Arkhangelos	0.87	161	*e*Pg	Pn	01 09 08.7	-0.1
AYDB	Zeytinkoy-Aydi	0.90	6	PG	Pn	01 09 08.9	-0.4
AYDB	Zeytinkoy-Aydi	0.90	6	*e*Pg	Pn	01 09 08.9	-0.4

MEX 24 01:09:57.2±0.7**, 17°.86N**×**101°.61W, h43**^{km}±8^{km}**, MD3.9, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.29	152	*e*P	Pn	01 10 03.7	-1.9
ZIIG				*i* S	Sn	01 10 10.1	-1.3
ARIG	Puente Sto Nin	1.27	71	*e*P	Pn	01 10 16.4	-2.2
ARIG				*i* S	Sn	01 10 32.3	-2.1
CAIG	El Cayaco	1.51	122	*e*P	Pn	01 10 20.4	-1.4
CAIG				*i* S	Sn	01 10 37.7	-2.7
MMIG	Aquila	1.71	285	*e*P	Pn	01 10 23.2	-1.3
MMIG				*e*S	Sn	01 10 42.9	-2.3
TLIG	Tlapa	2.91	95	*e*P	Pn	01 10 40.5	-0.7
TLIG				*i* S	Sn	01 11 13.2	-1.9

MEX 24 01:16:30.9±41.0**, 25°.12N**×**99°.24W, h20**^{km}±999^{km}**, MD3.5, Northern Mexico**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LNIG	Linares	0.30	223	*e*P	Pb	01 16 36.6	-1.0
	baz=245,slow=14						
LNIG				*e*S	Sb	01 16 40.5	-1.6

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*ISCJB **24** 01:32:59.9±0.8, 0°.35S±0°.02×77°.52W±0°.03, h2^{km}±5^{km}, mb3.3/2, Error ellipse: s-maj=5.7km s-min=2.7km az=12.9*

*IGQ **24** 01:33:00.9±0.3, 0°S±1°×7°8W±°, h12^{km}, MLv4.0/9*

*IDC **24** 01:33:11.6±2.5, 1°.31S×77°.95W, h128^{km}±29^{km}, mb2.9/2, mb1 3.1/5, mb1mx3.0/49, mbtmp3.4/5, MS2.6/2, Ms1 2.6/2, ms1mx2.4/9, Error ellipse: s-maj=33.2km s-min=17.3km az=89.0*

ISC 24 01:32:59.9±1.1**, 0°.37S**±0°.02×**77°.46W**±0°.04**, h19**^{km}±3^{km}**, n60, σ1ˢ.24**/75**, 1D, Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CONE	Cono NE Rev Vo	0.35	328	P	Pg	01 33 06.6	-1.0
CAYA	Cayambe	0.69	309	P	Pb	01 33 12.3	-1.3
ARDO	Archidona, Ten	0.71	209	P	Pb	01 33 13.4	-0.4
ARDO				S	Sb	01 33 22.9	-0.3
ANTG	Antisana-Guama	0.81	260	P	Pb	01 33 14.7	-1.1
ANTG				S	Sb	01 33 25.0	-1.5
COV1	Cotopaxi Volc	0.93	252	P	Pg	01 33 19.3	+1.0
YAHU	Yahuarcocha	0.95	320	P	Pb	01 33 17.1	-1.0
YAHU				S	Sb	01 33 29.2	-1.3
AIB2	Ibarra (Univer	0.96	317	P	Pb	01 33 17.3	-0.8
AIB2				S	Sb	01 33 29.7	-0.8
IMBA	Imbabura, San	0.98	311	P	Pb	01 33 18.2	-0.3
VC1	Cotopaxi 1	0.98	254	P	Pb	01 33 18.4	-0.3
BTAM	Cotopaxi Volca	0.99	252	P	Pb	01 33 18.6	-0.2
PITA	Cotopaxi Volc	0.99	259	P	Pb	01 33 18.2	-0.7
BVC2	Cotopaxi Volca	1.00	253	P	Pb	01 33 18.8	-0.2
BREF	Cotopaxi Volca	1.03	253	P	Pb	01 33 19.4	-0.1
BREF				S	Sb	01 33 32.7	-0.2
NAS2	Nasa	1.05	255	P	Pb	01 33 19.6	-0.2
BMOR	Cotopaxi Volca	1.06	250	P	Pb	01 33 19.7	-0.5
BMOR				S	Sb	01 33 32.6	-1.3
BNAS	Cotopaxi Volca	1.07	254	P	Pb	01 33 21.2	+1.1
COTA	Cotacachi	1.12	308	P	Pb	01 33 21.2	+0.1
CUIC	Cuicocha-Domo	1.12	306	P	Pb	01 33 20.6	-0.4
URCU	Urcuqui	1.13	315	P	Pb	01 33 20.8	-0.3
URCU				S	Sb	01 33 36.1	+0.5
YANA	Yana	1.14	282	P	Pb	01 33 20.7	-0.6
GGPC	Guagua Pichinc	1.16	279	P	Pb	01 33 21.1	-0.5
PISA	Pisayambo	1.16	233	P	Pb	01 33 21.2	-0.5
PIS1	Pisayambo	1.16	233	P	Pb	01 33 21.2	-0.5
PIS1				S	Sb	01 33 36.7	+0.3
OTAV	Otavalo	1.16	301	⇓*i*P	Pb	01 33 20.8	-0.9
OTAV				*e*S	Sb	01 33 35.0	-1.5
OTAV	Otavalo	1.16	301	P	Pb	01 33 20.8	-0.9
OTAV				S	Sb	01 33 35.3	-1.2
ATUL	Tulcˆ¡n	1.16	347	P	Pn	01 33 21.6	+0.1
ATUL				S	Sb	01 33 36.3	-0.1
NINA	Atacazo Ninahu	1.16	269	P	Pg	01 33 24.4	+1.8
APUY	Puyo	1.21	206	P	Pn	01 33 22.8	+0.8
APUY				S	Sg	01 33 40.1	+0.7
PAST	Pastocalle	1.23	255	P	Pn	01 33 23.2	+0.6
PUYO	Puyo, Santa Ro	1.25	207	P	Pn	01 33 23.6	+1.0
ILLI	Illinizas Sur	1.32	255	P	Pb	01 33 25.1	+0.8
CMBC	Cumbal	1.35	344	*e*P	Pn	01 33 25.0	+0.8
BRUN	Tungurahua Vol	1.42	222	P	Pn	01 33 25.4	+0.4
RUN5	Runtun	1.42	223	P	Pn	01 33 25.7	+0.6
BULB	Ulba Tungurahu	1.43	222	P	Pn	01 33 25.7	+0.5
POND	Pondoa	1.45	224	P	Pn	01 33 25.8	+0.4
POND				S	Sn	01 33 44.4	+0.4
JUI6	Juive	1.46	224	P	Pn	01 33 25.7	+0.1
RETU	Refugio	1.46	223	P	Pn	01 33 26.1	+0.3
LITE1	Lita	1.47	322	P	Pn	01 33 26.2	+0.7
LITE1				S	Sn	01 33 45.0	+0.7
BBIL	Ulba Tungurahu	1.49	224	P	Pn	01 33 26.9	+0.9
BPAT	Tungurahua Vol	1.49	221	P	Pn	01 33 27.4	+1.2
BMAS	Trigal station	1.52	222	P	Pb	01 33 28.9	+1.1
CPAS1	Pasto	1.55	5	*e*P	Pn	01 33 28.3	+1.4
CPAS1	Pasto	1.55	5	*e*S	Sn	01 33 48.7	+1.9
GCUF	Volcan Galeras	1.59	4	*e*P	Pn	01 33 29.2	+1.7
GCUF				*e*S	Sn	01 33 50.4	+2.7
GCUF				*i*		01 33 52.8	
	comp=Z,712nm,0.5s						
CPAS2	Pasto	1.59	7	*e*P	Pn	01 33 29.9	+2.5
CPAS2	Pasto	1.59	7	*e*S	Sb	01 33 50.7	+1.9
CPAS2				IAML		01 33 55.4	
	comp=Z,1μm,0.4s						
RIOE1	Riobamba	1.80	220	P	Pn	01 33 32.2	+1.8
QUEV	Quevedo	1.96	250	P	Pb	01 33 35.1	+0.1
CRUC	La Cruz	1.99	15	*e*P	Pn	01 33 35.1	+2.2
CRUC				*i*		01 34 06.5	
	comp=Z,572nm,0.5s						
MAG1	Magdalena	2.33	277	P	Pb	01 33 41.7	+0.2
SOTA	Rioblanco	2.62	19	*e*P	Pn	01 33 44.7	+2.9
MILO	Milagro-Astudi	2.83	228	P	Pb	01 33 49.5	-0.4
ROSC	El Rosal	6.05	31	P	Pg	01 34 54.4	-1.5
	comp=Z,1.8nm,0.3s,baz=252,slow=20,SNR=3.6						
ROSC				S	Sg	01 36 12.8	-1.5
	comp=Z,2.5nm,0.3s,baz=12,slow=20,SNR=4.0						
ATAH	Atahualpa	6.79	188	P	Pn	01 34 35.8	-3.2
	comp=Z,0.5nm,0.3s,baz=0.0,slow=9.1,SNR=1.7						
ATAH				S	Sn	01 35 56.3	+0.3
	comp=Z,0.5nm,0.3s,baz=110,slow=12,SNR=2.4						
ATAH				LR	LR	01 37 05.0	
	comp=Z,29nm,20.5s,baz=311,slow=40						
JTS	JuntasAbangare	12.95	325	LR	LR	01 41 07.6	
	comp=Z,42nm,18.2s,baz=222,slow=35						
LPAZ	La Paz	18.30	150	P	Pn	01 37 10.0	-3.5
	comp=Z,0.0nm,0.3s,baz=331,slow=12,SNR=1.7						
SIV	San Ignacio	22.41	135	P	P	01 37 57.2	-0.5
	comp=Z,0.2nm,0.5s,baz=329,slow=12,SNR=1.8						
NVAR	Mina Array Bea	53.83	320	P	P	01 42 24.4	+2.4
	comp=Z,0.9nm,0.8s,baz=136,slow=7.0,SNR=5.2						
WRA	Warramunga Arr	142.88	235	PKP	PKPdf	01 52 30.4	-2.9
	comp=Z,0.4nm,0.7s,baz=113,slow=2.1,SNR=3.6						

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*DDA **24** 01:43:25.4, 38°.80N×27°.79E, h16^{km}, Ml2.5*

*ISK **24** 01:43:25.8, 38°.80N×27°.79E, h13^{km}±5^{km}, ML2.3/2*

*ISCJB **24** 01:43:26.1±0.5, 38°.78N±0°.03×27°.81E±0°.04, h10^{km}±4^{km}, Error ellipse: s-maj=6.1km s-min=4.1km az=32.9*

*CSEM **24** 01:43:26.0±0.1, 38°.80N×27°.79E, h12^{km}, ML2.5, Error ellipse: s-maj=2.7km s-min=2.2km az=121.0*

ISC 24 01:43:26.0±0.9**, 38°.80N**±0°.03×**27°.79E**±0°.03**, h14**^{km}±6^{km}**, n21, σ0ˢ.35**/36**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKHS	Akhisar	0.09	14	*i* P	Pg	01 43 28.8	-0.2
AKHS				*i* S	Sg	01 43 31.2	+0.2
AKHS	Akhisar	0.09	14	P	Pg	01 43 28.8	-0.2
AKHS				S	Sg	01 43 31.2	+0.2
MANT	Manisa	0.68	117	*i* P	Pb	01 43 39.7	0.0
MANT				*i* S	Sg	01 43 48.2	0.0
MANT	Manisa	0.68	117	P	Pb	01 43 39.7	0.0
MANT				S	Sg	01 43 48.2	0.0
BLCB	Balcova	0.71	235	PG	Pb	01 43 40.2	0.0
BLCB				SG	Sb	01 43 50.6	+0.7
BLCB	Balcova	0.71	235	*e*Pg	Pb	01 43 40.2	0.0
BLCB				*e*Sg	Sb	01 43 50.6	+0.7
KULA	Kula-Manisa	0.74	112	PG	Pb	01 43 40.5	-0.2
KULA	Kula-Manisa	0.74	112	*e*Pg	Pb	01 43 40.5	-0.2
DEMI	Demirci	0.77	71	*i* P	Pb	01 43 40.8	-0.4
DEMI				*i* S	Sg	01 43 50.8	-0.1
DEMI	Demirci	0.77	71	P	Pb	01 43 40.8	-0.4
DEMI				S	Sg	01 43 50.8	-0.1
AYDB	Zeytinkoy-Aydi	0.85	174	PG	Pb	01 43 42.7	0.0
AYDB	Zeytinkoy-Aydi	0.85	174	*e*Pg	Pb	01 43 42.7	0.0
BALY	Balya	0.95	352	*i* P	Pg	01 43 44.0	-0.4
BALY				*i* S	Sb	01 43 56.8	0.0
BALY	Balya	0.95	352	P	Pg	01 43 44.0	-0.4
BALY				S	Sb	01 43 56.8	0.0
DURS	Dursunbey	0.96	33	*i* P	Pb	01 43 44.6	0.0
DURS				*i* S	Sb	01 43 57.9	+0.7
DURS	Dursunbey	0.96	33	P	Pb	01 43 44.6	0.0
DURS				S	Sb	01 43 57.9	+0.7
SIMA	Simav-Kutahya	0.97	73	PG	Pg	01 43 44.9	+0.1
SIMA	Simav-Kutahya	0.97	73	*e*Pg	Pg	01 43 44.9	+0.1
DGB	˜zmir	1.03	224	*i* P	Pb	01 43 45.3	-0.3
DGB				*i* S	Sg	01 43 59.2	0.0
AYDN	Tasoluk	1.14	176	*i* P	Pb	01 43 46.8	-0.6
AYDN				*i* S	Sb	01 44 02.2	+0.1
AYDN	Tasoluk	1.14	176	P	Pb	01 43 46.8	-0.6
AYDN				S	Sb	01 44 02.2	+0.1

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*IDC **24** 01:46:08.3±0.7, 43°.99N×39°.52E, h0^{km}, mb3.4/2, mb1 3.5/8, mb1mx3.3/59, mbtmp3.5/8, ML3.2/6, MS2.0/1, Ms1 2.0/1, ms1mx1.7/38, Error ellipse: s-maj=14.0km s-min=7.6km az=173.0*

*ISCJB **24** 01:46:09.2±0.5, 44°.06N±0°.03×39°.50E±0°.03, h1^{km}±4^{km}, mb3.4/2, Error ellipse: s-maj=6.3km s-min=3.1km az=28.4*

*MOS **24** 01:46:09.8±0.0, 44°.09N×39°.58E, h6^{km}, MPVA4.2*

*CSEM **24** 01:46:09.6, 44°.10N×39°.48E, h15^{km}, mb4.0*

*MOS **24** 01:46:09.6±2.6, 44°.10N×39°.48E, h15^{km}, mb4.0/1, Error ellipse: s-maj=12.6km s-min=8.3km az=43.0*

ISC 24 01:46:09.4±1.0**, 44°.16N**±0°.03×**39°.63E**±0°.02**, h11**^{km}±8^{km}**, n44, σ1ˢ.19**/77**, 1C-4D, Western Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOC	Sochi	0.58	174	⇓*i*PG	Pg	01 46 20.3	-0.4
SOC				*e*S	Sg	01 46 28.7	+0.4
SOC	Sochi	0.58	174	*i* Pg	Pg	01 46 20.3	-0.4
SOC				*e*Sg	Sg	01 46 28.7	+0.4
SOC	Sochi	0.58	174	*i* Pg	Pg	01 46 20.3	-0.4
SOC				*i* Sg	Sg	01 46 28.6	+0.2
RPOR	Krasnaya Polya	0.65	135	⇑*e*PG	Pg	01 46 21.7	-0.3
RPOR				*e*S	Sg	01 46 31.3	+0.7
RPOR	Krasnaya Polya	0.65	135	*e*Pg	Pg	01 46 21.7	-0.3
RPOR				*e*Sg	Sg	01 46 31.3	+0.7
RPOR	Krasnaya Polya	0.65	135	*i* Pg	Pg	01 46 21.7	-0.3
RPOR				*e*Sg	Sg	01 46 31.8	+1.2
KGUR	Krasnodar	0.96	334	*e*Pg	Pn	01 46 29.3	+0.6
KGUR				*e*Sg	Sn	01 46 43.3	+0.9
VOZR	Vozrozhdenie	1.08	292	⇓*i*PG	Pn	01 46 31.5	+1.1
VOZR				*e*S	Sn	01 46 46.6	+1.2
VOZR	Vozrozhdenie	1.08	292	*i* Pg	Pn	01 46 31.5	+1.1
VOZR				*e*Sg	Sn	01 46 46.6	+1.2
VOZR	Vozrozhdenie	1.08	292	*e*Pg	Pn	01 46 31.4	+0.9
VOZR				*e*Sg	Sn	01 46 47.5	+2.1
ARXR	Arkhyz	1.33	116	*i* Pg	Pn	01 46 34.3	+0.3
ARXR				*e*Sg	Sg	01 46 55.2	+3.0
ERBR	Yeremizino-Bor	1.67	21	*i* Pg	Pg	01 46 41.6	+0.2
ERBR				*e*Sg	Sg	01 47 05.5	+2.5
DOMR	Dombai	1.69	120	*e*Pg	Pn	01 46 40.0	+1.2
DOMR				*e*Sg	Sb	01 47 03.7	+2.0
ANN	Anapa	1.70	293	*e*PN	Pb	01 46 40.8	+0.2
ANN				*e*		01 47 04.1	
ANN				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ANN				smax	smax		
	comp=N,89nm,0.4s						
ANN				smax	smax		
	comp=N,49nm,0.4s						
ANN	Anapa	1.70	293	*e*Pn	Pb	01 46 40.8	+0.2
	comp=N,10.0nm,0.5s						
ANN				*e*Sg	Sg	01 47 04.1	+0.1
	comp=N,49nm,0.4s						
ANN	Anapa	1.70	293	*e*Pg	Pg	01 46 41.9	-0.1
ANN				*e*Sg	Sg	01 47 04.0	0.0
NVNR	Nevinnomyssk	1.73	74	*e*Pg	Pg	01 46 42.5	-0.1
NVNR				*e*Sg	Sg	01 47 06.4	+1.4
KIV	Kislovodsk	2.21	94	*d i*PN	Pb	01 46 48.9	-0.5
KIV				*e*		01 46 51.8	
KIV				*e*		01 46 54.5	
KIV				*e*S	Sb	01 47 17.9	+1.1
KIV				*e*SS	SnSn	01 47 24.8	+0.6
KIV				pmax	pmax		
	comp=Z,56nm,0.7s						
KIV				pmax	pmax		
	comp=Z,191nm,1.3s						
KIV				smax	smax		
	comp=E,48nm,0.6s						
KIV				smax	smax		
	comp=E,77nm,0.6s						
KIV	Kislovodsk	2.21	94	*i* Pn	Pb	01 46 48.9	-0.5
	comp=E,56nm,0.7s						
KIV	Kislovodsk	2.21	94	*e*Pg	Pg	01 46 51.8	0.0
	comp=E,191nm,1.3s						
KIV				*e*Sn	Sb	01 47 17.9	+1.1
KIV				*e*Sb	SnSn	01 47 24.8	+0.6
KIV	Kislovodsk	2.21	94	*i* Pn	Pb	01 46 48.4	-1.0
KIV				*e*Sn	Sb	01 47 18.4	+1.7
KVAR	Kislovodsk Arr	2.22	94	Pn	Pb	01 46 48.8	-0.7
	baz=276,slow=13,SNR=38						
KVAR				LR	LR	01 47 15.4	
	comp=E,28nm,18.3s,baz=118,slow=29						
KVAR				Sn	Sg	01 47 19.1	-1.6
	baz=34,slow=15,SNR=8.2						
SHA1	Shidzhatmaz	2.23	100	*i* Pn	Pb	01 46 49.3	-0.4
SHA1				*e*Sn	Sb	01 47 17.8	+0.4
BEYR	Belyy Ugol+	2.30	93	*e*Pn	Pb	01 46 49.8	-1.1
BEYR				*e*Sn	Sb	01 47 20.1	+0.8
KBZ	Khabaz	2.40	99	Pn	Pb	01 46 52.0	-0.4
	comp=E,4.5nm,0.3s,baz=270,slow=15,SNR=67						
KBZ				Sn	Sg	01 47 24.9	-1.5
	comp=E,4.4nm,0.3s,baz=342,slow=23,SNR=6.7						
NEY	Neytrino	2.42	111	*i* Pn	Pb	01 46 53.1	+0.1
NEY				*e*Sn	Sb	01 47 22.6	-0.2
GOF	Gofitskoye	2.60	69	*e*PN	Pb	01 46 55.6	-0.3
GOF				*e*S	Sg	01 47 31.8	-1.0
GOF				pmax	pmax		
	comp=Z,30nm,0.5s						
GOF				smax	smax		
	comp=N,130nm,0.8s						
GOF	Gofitskoye	2.60	69	*e*Pn	Pb	01 46 55.6	-0.3
	comp=N,30nm,0.5s						
GOF				*e*Sn	Sg	01 47 31.8	-1.0
	comp=N,130nm,0.8s						
GOF	Gofitskoye	2.60	69	*e*Pn	Pg	01 46 57.6	-1.5
GOF				*e*Sn	Sg	01 47 30.2	-2.5
KBTC	Kuba-Taba	2.75	96	*e*Pn	Pb	01 46 57.7	-0.8
KBTC				*e*Sn	Sb	01 47 31.1	-1.1
PRTR	Priterechnaya	3.38	95	*e*Pn	Pb	01 47 06.2	-3.1
PRTR				*e*Sn	Sn	01 47 46.3	+4.2
SUDU	Sudak	3.39	284	*e*PN	Pn	01 47 02.8	+0.7
SUDU				*e*S	Sn	01 47 41.4	-0.9
SUDU	Sudak	3.39	284	*e*Pn	Pn	01 47 02.8	+0.7
SUDU				*e*Sn	Sn	01 47 41.4	-0.9
ZEI	Tsey	3.40	112	*e*PN	Pb	01 47 09.9	+0.2
ZEI				pmax	pmax		
	comp=Z,17nm,0.6s						
ZEI	Tsey	3.40	112	*e*Pn	Pb	01 47 09.9	+0.2
	comp=Z,17nm,0.6s						
SEV	Sevastopol'	4.29	277	*e*PN	Pn	01 47 15.5	+1.0
SEV	Sevastopol'	4.29	277	*e*Pn	Pn	01 47 15.5	+1.0
BRTR	Keskin Array B	6.29	227	Pn	Pn	01 47 42.6	+0.5
	comp=Z,0.2nm,0.3s,baz=38,slow=11,SNR=5.9						
BRTR				Sn	Sn	01 48 52.0	-2.1
	comp=Z,0.1nm,0.3s,baz=105,slow=26,SNR=2.7						
AKASG	Malin Array Be	9.61	317	Pn	Pn	01 48 27.5	0.0
	comp=Z,1.2nm,0.3s,baz=118,slow=11,SNR=3.4						
OBN	Obninsk	11.14	351	⇓*e*P	Pn	01 48 55.6	+7.2
OBN				S	Sn	01 51 04.0	+11
OBN				pmax	pmax		
	comp=Z,7.0nm,0.5s						
AKTO	Aktyubinsk	13.95	57	Pn	Pn	01 49 25.8	-1.0
	comp=Z,0.3nm,0.3s,baz=267,slow=11,SNR=6.4						
FINES	FINESS Array B	19.08	340	P	Pn	01 50 31.8	-0.6
	comp=Z,0.1nm,0.3s,baz=150,slow=14,SNR=3.8						
HFS	Hagfors	22.33	325	P	P	01 51 06.8	0.0
	comp=Z,1.7nm,0.7s,baz=134,slow=13,SNR=5.1						
TORD	Torodi Ar. Bea	44.78	238	P	P	01 54 21.8	-1.2
	comp=Z,0.2nm,0.7s,baz=43,slow=6.2						

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*ISCJB **24** 01:50:50.8±0.7, 19°.20S±0°.06×69°.2W±0°.1, h145^{km}±6^{km}, mb4.2/2, Error ellipse: s-maj=17.4km s-min=9.5km az=6.7*

*GUC **24** 01:50:52.0±0.7, 19°.24S×69°.21W, h135^{km}±6^{km}, ML3.6*

*IDC **24** 01:50:55.3±7.5, 19°.05S×68°.72W, h149^{km}±98^{km}, mb4.1/2, mb1 4.0/3, mb1mx3.2/39, mbtmp4.4/3, Error ellipse: s-maj=287.9km s-min=79.2km az=110.0*

ISC 24 01:50:51.7±1.0**, 19°.19S**±0°.06×**69°.2W**±0°.1**, h138**^{km}±9^{km}**, n10, σ0ˢ.41**/17**, 6C, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNMC	Minye Minye	0.42	278	⇑*i*P	Pn	01 51 11.5	-0.1
MNMC				*e*S	Sn	01 51 26.7	+0.1
MNMC				IAML		01 51 30.2	
	comp=E,3μm,0.3s						
PB11	IPOC Station P	0.73	220	⇑*i*P	Pn	01 51 13.6	+0.2
PB11				*e*S	Sn	01 51 29.7	-0.1
PB11				IAML		01 51 31.4	
	comp=E,4μm,0.2s						
PB16	IPOC Station P	0.92	339	⇑*i*P	Pn	01 51 15.5	+0.2
PB16				*e*S	Sn	01 51 32.7	-0.4
PB16				IAML		01 51 34.0	
	comp=N,1μm,0.5s						
PB08	IPOC Station P	0.94	180	⇑*i*P	Pn	01 51 15.7	+0.4
PB08				*e*S	Sn	01 51 33.2	0.0
PSGC	Pisagua	0.99	246	⇑*i*P	Pn	01 51 15.7	+0.3
PSGC				*e*S	Sn	01 51 33.1	-0.3
PSGC				IAML		01 51 34.2	
	comp=N,940nm,0.2s						
PB12	IPOC Station P	1.25	297	⇑*i*P	Pn	01 51 18.1	+0.3
PB12				*e*S	Sn	01 51 37.9	+0.2
PB12				IAML		01 51 39.0	
	comp=E,1μm,0.6s						
LPAZ	La Paz	3.05	19	P	Pn	01 51 40.8	+0.9

```
      comp=E,12nm,0.3s,baz=195,slow=8.0,SNR=324
LPAZ                              S       Sn        01 52 16.3  -0.7
      comp=E,0.2nm,0.3s,baz=293,slow=24,SNR=6.0
DBIC  Dimbokro          68.32  74 P       P         02 01 38.2  -0.4
      comp=E,8.3nm,0.9s,baz=255,slow=8.2,SNR=6.2
KOWA  Kowa              72.33  67 P       P         02 02 02.8  -0.1
      comp=E,1.7nm,0.6s,baz=262,slow=9.1,SNR=5.4
TORD  Torodi Ar. Bea    76.81  71 P       P         02 02 28.8   0.0
      comp=E,114nm,0.7s,baz=250,slow=5.0
```

IDC ***24*** *01:58:55.9±1.3, 27°.84N×52°.06E, h0^{km}, mb3.9/10, mb1 3.9/12, mb1mx3.6/59, mbtmp3.9/12, ML4.0/3, Error ellipse: s-maj=27.3km s-min=18.6km az=155.0*

TEH ***24*** *01:58:58.0, 27°.88N×52°.11E, h21^{km}, ML3.5*

ISCJB ***24*** *01:58:58.5±0.4, 27°.80N±0°.03×52°.13E±0°.04, h26^{km}, mb4.0/11, Error ellipse: s-maj=5.5km s-min=3.1km az=145.5*

CSEM ***24*** *01:59:00.5±0.4, 27°.82N×52°.17E, h20^{km}, ML3.5, Error ellipse: s-maj=10.6km s-min=4.4km az=64.0*

OMAN ***24*** *01:59:01.8±1.2, 27°.70N×52°.27E, h20^{km}, Error ellipse: s-maj=26.7km s-min=9.3km az=43.0*

DSN ***24*** *01:59:03.5±1.0, 27°.73N×52°.44E, h15^{km}, ML3.6/8, Error ellipse: s-maj=23.1km s-min=7.8km az=22.0*

ISC 24 01:58:59.5±0.7**, 27°.84N**±0°.05×**52°.13E**±0°.04**, h26^{km}, n82, σ1^{s}48**/95**, mb3.9**/11**, Southern Iran**

```
Code  Station Name        Δ°  AZ°   Phase ID          Time     Res
                                  Op      ISC       h  m  s    ISC
GHIR  Ghir-Karzin        0.88  59 ePg     Pb        01 59 15.0  -1.2
GHIR  Ghir-Karzin        0.88  59 ePg     Pb        01 59 15.0  -1.2
GHIR                              eSg     Sb        01 59 26.7  -0.9
AHBU  AHRAM              1.26 324 ePg     Pb        01 59 22.6   0.0
AHBU                              eSg     Sb        01 59 39.1  +0.7
JHRM  Jahrom             1.44  62 ePn     Pb        01 59 27.1  +1.4
JHRM                              e                 01 59 56.4
      comp=Z,99nm,0.2s
JHRM                              e                 01 59 56.6
      comp=N,99nm,0.3s
JHRM                              e                 01 59 59.3
      comp=E,99nm,0.2s
JHRM  Jahrom             1.44  62 ePn     Pb        01 59 27.1  +1.4
ISRV  Sarvestan          1.76  29 ePn     Pb        01 59 30.9  -0.5
ISRV                              e                 02 00 04.6
      comp=Z,5μm,0.3s
ISRV                              e                 02 00 07.2
      comp=E,12μm,0.3s
ISRV                              e                 02 00 07.3
      comp=N,13μm,0.4s
ISRV  Sarvestan          1.76  29 ePn     Pb        01 59 30.9  -0.5
SLWS                     3.31 204 P       Pn        01 59 51.7  +2.1
GENO  Geno               3.61  96 ePn     Pn        01 59 56.2  +2.2
GENO                              e                 02 00 45.4
      comp=E,99nm,0.1s
GENO                              e                 02 00 56.2
      comp=N,99nm,0.1s
GENO                              e                 02 01 21.1
      comp=Z,99nm,0.3s
GENO  Geno               3.61  96 ePn     Pn        01 59 56.2  +2.2
BTHS                     3.95 197 P       Pn        02 00 00.0  +1.6
IRAM  Ramesheh           3.96   3 ePn     Pn        01 59 59.6  +0.8
IRAM                              e                 02 00 20.8
      comp=Z,358nm,0.3s
IRAM                              e                 02 01 09.9
      comp=E,313nm,0.2s
IRAM                              e                 02 01 11.9
      comp=N,465nm,0.3s
IRAM  Ramesheh           3.96   3 ePn     Pn        01 59 59.6  +0.8
SHME  Shamm              4.00 116 P       Pn        02 00 00.1  +0.9
SHME  Shamm              4.00 116 P       Pn        01 59 59.8  +0.7
IBRJ  Brojen             4.12 350 ePn     Pn        02 00 01.1   0.0
IBRJ                              e                 02 00 57.4
      comp=E,272nm,0.2s
IBRJ                              e                 02 01 13.2
      comp=N,251nm,0.3s
IBRJ                              e                 02 01 17.9
      comp=Z,221nm,0.3s
IMEH  Mehriz             4.15  31 e                 02 00 05.5
      comp=Z,1μm,0.1s
IMEH                              ePn     Pn        02 00 04.0  +2.6
IMEH                              e                 02 00 08.4
      comp=N,755nm,0.2s
NIAN  Nian               4.18  93 ePn     Pn        02 00 03.5  +1.9
NIAN                              e                 02 00 56.5
      comp=E,99nm,0.2s
NIAN                              e                 02 00 56.8
      comp=Z,99nm,0.2s
NIAN                              e                 02 01 02.4
      comp=N,99nm,0.1s
NIAN  Nian               4.18  93 ePn     Pn        02 00 03.5  +1.9
BANOM Banah              4.18 116 i P     Pn        02 00 03.0  +1.3
      SNR=7.3
BANOM                             S       Sn        02 00 49.4  -0.4
BANOM Banah              4.18 116 P       Pn        02 00 03.0  +1.3
      SNR=7.3
BANOM                             S       Sn        02 00 49.4  -0.4
NAZ   Nazwa, Dubai       4.25 131 P       Pn        02 00 06.1  +3.5
      SNR=8.2
NAZ                               S       Sn        02 00 49.8  -1.6
NAZ   Nazwa, Dubai       4.25 131 i P     Pn        02 00 04.7  +2.1
      SNR=8.0
NAZ   Nazwa, Dubai       4.25 131 P       Pn        02 00 04.7  +2.1
      SNR=8.0
NAZ                               S       Sn        02 00 49.8  -1.6
ISAD  Sadrabad           4.28  18 e                 02 00 06.5
      comp=Z,484nm,0.1s
ISAD                              ePn     Pn        02 00 05.5  +2.3
ISAD                              e                 02 00 23.6
      comp=N,538nm,0.2s
ASUD  Al Ashush, Dub     4.30 137 P       Pn        02 00 06.0  +2.7
      SNR=17
ASUD                              S       Sn        02 00 53.3  +0.7
ASUD  Al Ashush, Dub     4.30 137 i P     Pn        02 00 06.0  +2.7
      SNR=17
ASUD  Al Ashush, Dub     4.30 137 P       Pn        02 00 06.0  +2.7
      SNR=17
ASUD                              S       Sn        02 00 53.3  +0.7
MSFE  Esma-Masafi        4.37 123 P       Pn        02 00 05.8  +1.5
MSFE                              S       Sn        02 00 53.6  -0.8
MSFE  Esma-Masafi        4.37 123 P       Pn        02 00 04.4  +0.1
MSFE                              S       Sn        02 00 54.7  +0.3
NGRK  Negar Kerman       4.42  65 ePn     Pn        02 00 06.5  +1.3
NGRK                              e                 02 01 02.6
      comp=Z,99nm,0.1s
NGRK                              e                 02 01 02.9
      comp=N,99nm,0.1s
NGRK  Negar Kerman       4.42  65 ePn     Pn        02 00 06.5  +1.3
MDH   Madha              4.51 123 P       Pn        02 00 07.3  +1.2
MDH   Madha              4.51 123 P       Pn        02 00 07.3  +1.2
MDH                               S       Sn        02 00 57.5  -0.2
IGAR  Gharneh            4.55 359 e                 02 00 10.7
      comp=Z,341nm,0.1s
IGAR                              ePn     Pn        02 00 09.0  +2.1
IGAR                              e                 02 01 03.9
      comp=N,517nm,0.3s
KHGB  Koh Gabri          4.57  55 e                 02 00 09.3
      comp=Z,99nm,0.1s
KHGB                              ePn     Pn        02 00 09.1  +2.0
KHGB                              e                 02 01 05.3
      comp=E,99nm,0.2s
KHGB                              e                 02 01 44.7
      comp=N,99nm,0.4s
KHGB  Koh Gabri          4.57  55 ePn     Pn        02 00 09.1  +2.0
KRBR  Kerman             4.59  61 ePn     Pn        02 00 07.5  +0.1
KRBR  Kerman             4.59  61 ePn     Pn        02 00 07.5  +0.1
UOSS  Minazif            4.65 127 P       Pn        02 00 09.1  +1.0
UOSS  Minazif            4.65 127 i P     Pn        02 00 08.8  +0.7
      SNR=15
UOSS  Minazif            4.65 127 P       Pn        02 00 09.1  +1.0
HATD  Hatta, Dubai       4.68 129 P       Pn        02 00 08.0  -0.5
HATD  Hatta, Dubai       4.68 129 P       Pn        02 00 08.8  +0.3
HATD  Hatta, Dubai       4.68 129 P       Pn        02 00 08.8  +0.3
ASHO  Ashiyiah           4.72 131 P       Pn        02 00 10.8  +1.7
      SNR=6.9
ASHO  Ashiyiah           4.72 131 i P     Pn        02 00 10.5  +1.4
      SNR=38
ASHO  Ashiyiah           4.72 131 P       Pn        02 00 10.5  +1.4
      SNR=38
ICHK  Chekchek           4.81  24 ePn     Pn        02 00 12.6  +2.1
ICHK                              e                 02 00 12.9
      comp=N,480nm,0.1s
ICHK                              e                 02 00 12.9
      comp=Z,1μm,0.1s
ICHK  Chekchek           4.81  24 ePn     Pn        02 00 12.6  +2.1
IZEF  Zefreh             5.04   2 ePn     Pn        02 00 14.5  +0.8
IZEF                              e                 02 00 19.8
      comp=Z,131nm,0.1s
IZEF                              e                 02 01 16.1
      comp=N,126nm,0.1s
IZEF                              e                 02 01 24.3
      comp=E,126nm,0.2s
IZEF  Zefreh             5.04   2 ePn     Pn        02 00 14.5  +0.8
CHMN  Cheshme madani     5.15  66 ePn     Pn        02 00 17.4  +2.1
CHMN                              e                 02 00 20.4
      comp=Z,99nm,0.1s
CHMN                              e                 02 01 24.2
      comp=N,99nm,0.3s
CHMN                              e                 02 01 25.0
      comp=E,99nm,0.2s
CHMN  Cheshme madani     5.15  66 ePn     Pn        02 00 17.4  +2.1
IKLH  Kolahrood          5.48 355 ePn     Pn        02 00 20.6  +0.9
IKLH                              e                 02 00 23.0
      comp=Z,184nm,0.2s
IKLH                              e                 02 01 30.1
      comp=N,183nm,0.1s
IKLH                              e                 02 01 30.5
      comp=E,184nm,0.2s
IKLH  Kolahrood          5.48 355 ePn     Pn        02 00 20.6  +0.9
ANAR  Anarak             5.51  14 ePn     Pn        02 00 20.9  +0.9
ANAR                              e                 02 00 37.1
      comp=Z,99nm,0.1s
ANAR                              e                 02 00 48.0
      comp=N,99nm,0.3s
ANAR  Anarak             5.51  14 ePn     Pn        02 00 20.9  +0.9
HOQ   Hoqain             6.31 131 P       Pn        02 00 32.5  +1.6
HOQ                               S       Sn        02 01 40.3  -1.8
HOQ   Hoqain             6.31 131 P       Pn        02 00 32.5  +1.6
SMDO  Samad              7.16 130 P       Pn        02 00 42.3  -0.4
SMDO  Samad              7.16 130 P       Pn        02 00 42.3  -0.4
TKDS  Koohdasht(Taba     7.18  36 ePn     Pn        02 00 43.7  +0.8
TKDS                              e                 02 00 48.7
      comp=Z,99nm,0.2s
TKDS  Koohdasht(Taba     7.18  36 ePn     Pn        02 00 43.7  +0.8
TNSJ  Nastanj            7.21  31 ePn     Pn        02 00 45.4  +2.0
TNSJ                              e                 02 00 59.8
      comp=Z,99nm,0.2s
TNSJ  Nastanj            7.21  31 ePn     Pn        02 00 45.4  +2.0
WSAR  Wadi Sarin         7.45 127 Pn      Pn        02 00 47.0  +0.5
      comp=Z,1.6nm,0.3s,baz=292,slow=6.1,SNR=22
WSAR                              Sn      Sn        02 02 08.0  -2.1
      comp=Z,0.6nm,0.3s,baz=102,slow=20,SNR=3.2
MHTO  MHTO               8.65 141 P       Pn        02 01 04.0  +1.0
      SNR=15
GEYT  Alibeck           11.25  25 Pn      Pn        02 01 37.8  -0.8
      comp=Z,0.2nm,0.3s,baz=54,slow=49,SNR=3.6
KBZ   Khabaz            17.52 337 P       Pn        02 02 57.4  -4.4
      comp=Z,0.1nm,0.3s,baz=200,slow=15,SNR=2.4
BRTR  Keskin Array B    19.37 312 P       Pn        02 03 24.2  -0.4
      comp=Z,4.3nm,0.3s,baz=127,slow=13,SNR=2.8
AKTO  Aktyubinsk        23.01  10 P       P         02 04 02.7  +0.5
      comp=Z,1.2nm,0.5s,baz=183,slow=9.5,SNR=3.2
BVAR  Borovoye Array    28.57  23 P       P         02 04 52.8  -0.4
      comp=Z,0.4nm,0.3s,baz=218,slow=6.8,SNR=4.1
MKAR  Makanchi Array    30.28  43 P       P         02 05 09.1  +0.7
      comp=Z,0.8nm,0.8s,baz=227,slow=6.4,SNR=4.6
KURBB Kurchatov Arra    30.30  34 P       P         02 05 09.8  +1.2
      comp=Z,0.8nm,0.8s,baz=233,slow=9.0,SNR=8.1
ZALV  Zalesovo Beam     35.39  33 P       P         02 05 53.3  +0.4
      comp=Z,1.7nm,0.4s,baz=236,slow=11,SNR=4.5
FINES FINESS Array B    37.85 340 P       P         02 06 13.7   0.0
      comp=Z,2.3nm,0.7s,baz=149,slow=6.5,SNR=8.1
HFS   Hagfors           41.47 332 P       P         02 06 44.1  +0.2
      comp=Z,1.7nm,0.3s,baz=128,slow=9.3,SNR=23
NOA   NORSAR Array B    42.99 332 P       P         02 06 55.9  -0.5
      comp=Z,0.5nm,0.6s,baz=122,slow=8.4,SNR=3.8
ARCES ARCESS Array B    44.50 347 P       P         02 07 08.7  +0.3
      comp=Z,1.7nm,0.9s,baz=118,slow=7.5,SNR=4.7
TORD  Torodi Ar. Bea    49.12 263 P       P         02 07 44.2  -1.0
      comp=Z,55nm,0.4s,baz=69,slow=7.5
KOWA  Kowa              53.60 268 P       P         02 08 19.2  +0.3
      comp=Z,1.3nm,0.6s,baz=59,slow=7.9,SNR=5.7
```

IDC ***24*** *02:01:36.1±1.0, 10°.85N×125°.68E, h0^{km}, mb3.8/6, mb1 3.9/6, mb1mx3.6/57, mbtmp3.8/6, MS2.9/7, Ms1 2.9/7, ms1mx2.7/52, Error ellipse: s-maj=66.0km s-min=20.7km az=70.0*

MAN ***24*** *02:01:39.7, 10°.78N×125°.55E, h2^{km}, mb4.7, ML3.6, MS3.5*

ISC 24 02:01:38.7±1.5**, 10°.80N**±0°.04×**125°.57E**±0°.07**, h8**^{km}±10^{km}**, n23, σ2^{s}25**/25**, mb3.7**/6**, MS2.5**/5**, 1C-1D, Leyte**

```
Code  Station Name        Δ°  AZ°   Phase ID          Time     Res
                                  Op      ISC       h  m  s    ISC
PLP   Palo               0.68 302⇑eP      Pb        02 01 53.4  +0.6
PLP                               eS      Sn        02 02 06.4  +0.9
BESP  Borongan           0.81 351 eP      Pb        02 01 55.8  +0.8
BESP                              eS      Sb        02 02 07.2  +1.1
MSLP  Maasin             0.96 227 eP      Pn        02 01 59.2  +0.8
MSLP                              eS      Sn        02 02 12.5  +0.3
OCLP  Ormoc              0.97 285 eP      Pg        02 01 55.6  -1.8
OCLP                              eS      Sn        02 02 20.0  +7.3
SCPH  Surigao            1.01 184 eP      Pg        02 01 58.5  +0.3
SCPH                              eS      Sg        02 02 11.0  -0.3
BUTP  Butuan             1.82 178 eP      Pb        02 02 12.4  +0.2
BUTP                              eS      Sg        02 02 39.2  +2.0
CNP   Catarman           1.92 333 eP      Pn        02 02 12.8  +1.1
CNP                               eS      Sb        02 02 39.8  +1.7
RCP   Roxas              2.87 286⇓eP      Pb        02 02 28.6  -1.6
BUKP  Musuan             2.94 190 eP      Pn        02 02 27.7  +1.9
BUKP                              eS      Sn        02 03 04.4  +3.0
PVCP  Virac              3.10 334 eP      Pn        02 02 31.0  +2.9
PVCP                              eS      Sb        02 03 12.3   0.0
DAV   Davao City (W)     3.70 180 LR      LR        02 04 28.1
      comp=Z,191nm,19.4s,baz=348,slow=46
JOW   Kunigami          16.15   9 LR      LR        02 10 38.4
      comp=Z,61nm,19.6s,baz=114,slow=34
JNU   Nakatsue          22.75  12 LR      LR        02 15 08.0
      comp=Z,21nm,20.8s,baz=303,slow=36
KSRS  Korea Array       26.63   4 LR      LR        02 16 58.2
      comp=Z,16nm,21.1s,baz=228,slow=35
CMAR  Chiang Mai Arr    26.84 290 LR      LR        02 17 59.2
      comp=Z,11nm,19.3s,baz=120,slow=36
MJAR  Matsushiro Arr    28.07  22 LR      LR        02 19 55.7
      comp=Z,12nm,18.0s,baz=270,slow=39
WRA   Warramunga Arr    31.74 164 P       P         02 08 01.9  -1.6
      0.5nm,0.6s,baz=344,slow=9.3,SNR=7.0
ASAR  Alice Springs     35.21 167 P       P         02 08 32.9  -0.8
      0.3nm,0.3s,baz=347,slow=6.7,SNR=3.4
MKAR  Makanchi Array    51.19 323 P       P         02 10 42.5  -0.1
      0.7nm,0.7s,baz=120,slow=8.4,SNR=8.9
KURBB Kurchatov Arra    55.25 325 P       P         02 11 10.2  -2.2
      0.7nm,0.7s,baz=128,slow=7.0,SNR=5.5
ILAR  Eielson Array     79.27  26 P       P         02 13 43.0  -1.5
      0.1nm,0.7s,baz=244,slow=4.7,SNR=4.1
FINES FINESS Array B    85.10 332 P       P         02 14 13.1  -1.9
      3.1nm,0.9s,baz=53,slow=5.1,SNR=4.1
NOA   NORSAR Array B    91.98 334 LR      LR        03 02 32.2
      comp=Z,16nm,18.2s,baz=275,slow=40
```

KRSC 24 02:14:50.3±2.1**, 49°.28N×157°.23E, h7**^{km}±43^{km}**, ML3.8, East of Kuril Islands**

```
Code  Station Name        Δ°  AZ°   Phase ID          Time     Res
                                  Op      ISC       h  m  s    ISC
SKR   Severo-Kuril's     1.58 333 eP      Pn        02 15 16.9  -1.8
SKR                               eS      Sn        02 15 38.3  -1.0
PAU   Pauzhetka          2.21 353 eP      Pb        02 15 29.1  -1.4
PAU                               eS      Sb        02 15 57.5  -0.5
KDTR  Khodutka, Kamc     2.59  12 eP      Pb        02 15 35.7  -1.3
KDTR                              eS      Sb        02 16 08.6  -0.4
ASAK  Asacha             3.14   8 eP      Pb        02 15 43.9  -2.5
RUS   Russkaya           3.26  14 eP      Pn        02 15 44.4  +2.6
RUS                               eS      Sb        02 16 24.9  -3.4
MTVR  Mutnovka           3.27  10 eP      Pn        02 15 44.2  +2.2
MTVR                              eS      Sn        02 16 24.1  +2.9
KRMR  Karymshinskiy      3.60   9 eP      Pn        02 15 50.2  +3.7
KRMR                              eS      Sb        02 16 34.6  -3.5
UGLR  Uglovaya           4.06  14 eP      Pn        02 15 57.5  +4.6
AVH   Avacha             4.10  13 eP      Pb        02 15 58.2  -4.6
SMAR  Somma              4.11  13 eP      Pn        02 15 58.2  +4.5
NLC   Nalytchevo         4.12  18 eS      Sn        02 16 45.0  +3.1
SDLR  Sedlovina          4.14  14 eP      Pn        02 15 57.8  +3.8
KRX   Arik               4.18  12 P       Pn        02 15 57.5  +2.9
SPN   Mys Shipunski      4.21  24 eP      Pn        02 15 58.9  +4.1
SPN                               eS      Sn        02 16 49.0  +4.8
GNL   Ganaly             4.45   6 eP      Pn        02 16 02.9  +4.7
MKZ   Mys Kozlova        5.97  26 eP      Pn        02 16 23.4  +4.4
KBTR  Krutoberegovo      7.72  24 eP      Pn        02 16 48.4  +5.4
```

ISCJB ***24*** *02:27:38.9±1.1, 18°.41N±0°.09×145°.9E±0°.4, h150^{km}, mb3.5/5, Error ellipse: s-maj=54.2km s-min=10.7km az=6.6*

IDC ***24*** *02:27:44.2±2.5, 18°.14N×145°.83E, h188^{km}±24^{km}, mb3.2/5, mb1 3.5/6, mb1mx3.1/56, mbtmp3.8/6, Error ellipse: s-maj=47.8km s-min=18.8km az=101.0*

ISC 24 02:27:40.6±1.2**, 18°.4N**±0°.1×**145°.8E**±0°.4**, h150^{km}, n12, σ1^{s}91**/7**, mb3.5**/5**, Mariana Islands**

```
Code  Station Name        Δ°  AZ°   Phase ID          Time     Res
                                  Op      ISC       h  m  s    ISC
GUMO  Guam               4.83 191 P       Pn        02 28 51.8   0.0
      11nm,0.3s,baz=9.6,slow=18,SNR=4.6
GUMO                              S       Sn        02 29 49.6  +2.3
      5.2nm,0.3s,baz=196,slow=22,SNR=1.0
H11S3 WAKE ISLAND Hy    19.81  86 T       T         02 52 12.3
      baz=265,slow=75,SNR=9.0
H11S1 WAKE ISLAND Hy    19.82  86 T       T         02 52 09.6
      baz=265,slow=75,SNR=7.6
H11S2 WAKE ISLAND Hy    19.82  86 T       T         02 52 09.8
      baz=265,slow=75,SNR=10
H11N1 WAKE ISLAND Hy    19.97  83 T       T         02 52 31.5
      baz=265,slow=74,SNR=26
H11N2 WAKE ISLAND Hy    19.98  83 T       T         02 52 30.9
      baz=265,slow=74,SNR=23
H11N3 WAKE ISLAND Hy    19.99  83 T       T         02 52 33.2
      baz=265,slow=74,SNR=24
WRA   Warramunga Arr    39.69 197 P       P         02 34 56.2  -2.1
      0.8nm,0.4s,baz=19,slow=8.3,SNR=23
ASAR  Alice Springs     43.35 196 P       P         02 35 26.2  -1.9
      0.3nm,0.4s,baz=17,slow=7.2,SNR=6.9
KURBB Kurchatov Arra    61.65 318 P       P         02 37 43.2  +0.8
      0.3nm,0.5s,baz=92,slow=8.0,SNR=4.6
ILAR  Eielson Array     63.90  26 P       P         02 37 58.0  +0.8
      0.2nm,0.7s,baz=255,slow=5.7,SNR=3.4
FINES FINESS Array B    87.24 335 P       P         02 40 09.7  -0.2
      2.1nm,1.0s,baz=72,slow=4.5,SNR=3.7
```

MAN 24 02:36:03.8, 10°.82N×125°.54E, h1^{km}, mb4.4, ML3.3, MS3.0, 1C, Leyte

```
Code  Station Name        Δ°  AZ°   Phase ID          Time     Res
                                  Op      ISC       h  m  s    ISC
PLP   Palo               0.64 302⇑eP      Pg        02 36 15.9  -0.2
PLP                               eS      Sg        02 36 25.0  +0.6
BESP  Borongan           0.78 353 eP      Pg        02 36 18.5  -0.2
BESP                              eS      Sb        02 36 31.9  +0.7
MSLP  Maasin             0.95 224 eP      Pg        02 36 22.4  +0.3
MSLP                              eS      Sb        02 36 35.9  -0.4
SCPH  Surigao            1.04 183 eP      Pb        02 36 24.6  +0.1
CNP   Catarman           1.88 333 eP      Pn        02 36 37.6  +0.5
CNP                               eS      Sb        02 37 02.9  -0.1
```

TRN 24 02:54:53.8, 14°.98N×61°.18W, h178^{km}, MD3.6, 6C-1D, Windward Islands

```
Code  Station Name        Δ°  AZ°   Phase ID          Time     Res
                                  Op      ISC       h  m  s    ISC
BAMF  Morne Balai        0.17 171 eP      Pn        02 55 18.6  +0.9
PCM   Pelee Case Pet     0.17 191 eP      Pn        02 55 18.0  +0.5
PCM   Pelee Case Pet     0.17 191⇑eP      Pn        02 55 18.3  +0.7
CXM   Morne La Croix     0.17 177 eP      Pn        02 55 18.8  +1.1
PML   Morne Lenard       0.20 182 eP      Pn        02 55 18.3  +0.6
FDF   Fort de France     0.25 174 eP      Pn        02 55 18.3  +0.5
FDF                               eS      Sn        02 55 36.7  +0.6
DSTT  Stowe              0.29 335 eP      Pn        02 55 19.5  +1.8
DSHT  Scott's Head       0.30 320 eP      Pn        02 55 19.3  +1.5
DBCT  Belle View Cho     0.33 330 eP      Pn        02 55 19.4  +1.5
DPMT  Pointe Michel      0.34 325 eP      Pn        02 55 18.9  +1.0
DLPL  La Plaine          0.35 349 eP      Pn        02 55 18.5  +0.6
DLPL                              eS      Sn        02 55 37.3  +0.6
MDN   Morne-Daniel       0.39 328 eP      Pn        02 55 19.7  +1.7
ZAM   Aeronautique       0.43 161⇑eP      Pn        02 55 19.1  +0.9
LPMF  Morne Lapointe     0.45 153 eP      Pn        02 55 19.0  +0.8
TRMF  Trois Ilets        0.46 165 eP      Pn        02 55 19.2  +0.9
BIM   Bigot              0.47 167⇑iP      Pn        02 55 19.1  +0.7
BIM                               eS      Sn        02 55 37.8  +0.5
MVM   Montagne Vaucl     0.51 147 eP      Pn        02 55 19.6  +1.0
BBL   Barber's Block     0.61 332⇑iP      Pn        02 55 19.7  +0.7
MGG   Marie-Galante      0.94 352⇓iP      Pn        02 55 21.9  +0.9
MGG                               eS      Sn        02 55 43.2  +1.2
TBG   Guadaloupe-3       0.97 332⇑iP      Pn        02 55 21.8  +0.7
TBG                               eS      Sn        02 55 42.8  +0.4
SLB   Belfond            1.16 173 eP      Pn        02 55 23.4  +0.7
SLB                               eS      Sn        02 55 45.8  +0.7
MCLT  Moule a Chique     1.29 170 eP      Pn        02 55 24.0  +0.3
MCLT  Moule a Chique     1.29 170 eS      Sn        02 55 47.5  +0.6
SEG   Port Louis         1.45 347⇑iP      Pn        02 55 26.4  +1.3
SVV   Soufriere Volc     1.66 181 eP      Pn        02 55 28.3  +1.0
SVV                               eS      Sn        02 55 53.5  +0.3
SVB   Belmont            1.70 182 eP      Pn        02 55 28.7  +1.0
SVB                               eS      Sn        02 55 53.5  -0.5
MLYT  Lee's Yard         1.98 331 eP      Pn        02 55 32.0  +1.4
MLYT                              eS      Sn        02 55 59.5  +0.2
BPA   Boggy Peak         2.15 342 eP      Pn        02 55 33.5  +1.0
BPA   Boggy Peak         2.15 342 eS      Sn        02 56 01.9  -0.7
BBGH  Gun Hill           2.41 139 eP      Pn        02 55 36.6  +1.2
BBGH                              eS      Sn        02 56 08.0  +0.2
NEV   Hard Times         2.53 328 eP      Pn        02 55 37.7  +1.0
NEV                               eS      Sn        02 56 10.1  -0.1
NVRH  Round Hill, Ne     2.58 328 eP      Pn        02 55 38.8  +1.4
ANWB  Willy Bob          2.73 348 eP      Pn        02 55 39.9  +0.7
ANWB  Willy Bob          2.73 348 eS      Sn        02 56 13.6  -1.0
GRGR  Grenville          2.87 189 e       Pn        02 55 42.1  +1.2
GRGR  Grenville          2.87 189 eP      Pn        02 55 42.4  +1.5
GRGR                              eS      Sn        02 56 17.5   0.0
SABA  Saba               3.29 323 eP      Pn        02 55 45.9  -0.1
SABA                              eS      Sn        02 56 26.0  -0.7
SMRT  St. Maarten        3.55 329 eP      Pn        02 55 50.7  +1.5
TOSP  Speyside           3.71 170 eP      Pn        02 55 51.9  +0.6
TOSP                              eS      Sn        02 56 34.4  -1.9
```

IDC ***24*** *02:57:33.4±0.9, 11°.05S×163°.20E, h0^{km}, mb4.1/9, mb1 4.3/10, mb1mx4.0/45, mbtmp4.1/10, ML3.6/1, MS3.5/10, Ms1 3.5/10, ms1mx3.2/38, Error ellipse: s-maj=30.3km s-min=20.5km az=102.0*

ISCJB ***24*** *02:57:35.9±0.4, 11°.17S±0°.07×163°.34E±0°.06, h31^{km}, mb4.6/21, MS3.6/7, Error ellipse: s-maj=10.0km s-min=8.8km az=167.2*

NEIC ***24*** *02:57:38.6±1.4, 11°.13S×163°.37E, h39^{km}±13^{km}, mb4.8/13, Error ellipse: s-maj=11.6km s-min=9.6km az=148.0*

ISC 24 02:57:38.1±0.6**, 11°.09S**±0°.09×**163°.30E**±0°.07**, h31^{km}, n47, σ1^{s}35**/38**, mb4.5**/21**, MS3.8**/7**, Bougainville-Solomon Islands region**

```
Code  Station Name        Δ°  AZ°   Phase ID          Time     Res
                                  Op      ISC       h  m  s    ISC
HNR   Honiara            3.69 296 Pn      Pn        02 58 34.3  +1.3
      32nm,0.3s,baz=166,slow=7.0,SNR=16
HNR                               Sn      Sn        02 59 17.4  +1.9
      37nm,0.3s,baz=230,slow=19,SNR=9.1
HNR                               LR      LR        02 59 59.7
      comp=Z,509nm,18.2s,baz=150,slow=41
HNR   Honiara            3.69 296 eP      Pn        02 58 33.0   0.0
HNR                               eS      Sb        02 59 23.0  -3.9
HNR   Honiara            3.69 296 ePn     Pn        02 58 34.8  +1.7
HNR                               eSn     Sn        02 59 16.2  +0.8
DZM   Mont Dzumac       11.33 165 Pn      Pn        03 00 16.8  -1.2
      0.4nm,0.3s,baz=319,slow=18,SNR=6.1
DZM                               LR      LR        03 03 09.5
      comp=Z,272nm,20.9s,baz=0.5,slow=30
PMG   Port Moresby      15.97 275 LR      LR        03 07 07.7
      comp=Z,261nm,21.0s,baz=108,slow=36
CTAO  Charters Tower    18.69 239 eP      Pn        03 01 55.7  +1.2
      38nm,1.5s
STKA  Stephens Creek    28.80 221 LR      LR        03 14 20.6
      comp=Z,251nm,18.2s,baz=23,slow=35
WB2   Warramunga Arr    29.21 249 eP      P         03 03 37.0  -0.3
      14nm,1.5s
WR1   Warramunga Arr    29.22 249 eP      P         03 03 36.4  -1.0
      6.0nm,1.0s
WRA   Warramunga Arr    29.22 249 P       P         03 03 36.4  -1.0
      1.3nm,0.7s,baz=79,slow=9.0,SNR=10
H11S2 WAKE ISLAND Hy    29.58   7 T       T         03 34 42.5
      baz=188,slow=76,SNR=23
H11S3 WAKE ISLAND Hy    29.58   7 T       T         03 34 42.8
```

	baz=188,slow=76,SNR=15						
H11S1	WAKE ISLAND Hy	29.60	7	T	T	03 34 42.1	
	baz=188,slow=76,SNR=16						
WAKE	Wake Island	30.36	6	eP	P	03 03 48.6	+1.4
	232nm,1.5s						
AS01	Alice Springs	30.60	242	eP	P	03 03 49.8	+0.2
ASAR	Alice Springs	30.64	242	P	P	03 03 48.4	-1.5
	1.9nm,0.7s,baz=68,slow=9.7,SNR=13						
H11N1	WAKE ISLAND Hy	30.81	7	T	T	03 36 13.1	
	baz=188,slow=76,SNR=8.3						
H11N3	WAKE ISLAND Hy	30.82	7	T	T	03 36 14.1	
	baz=188,slow=76,SNR=8.9						
H11N2	WAKE ISLAND Hy	30.83	7	T	T	03 36 14.9	
	baz=188,slow=76,SNR=9.2						
KIP	Kipapa	49.87	50	eP	P	03 06 26.5	-2.4
	26nm,1.0s						
JCUZ	Jacuzzi	50.95	54	eP	P	03 06 35.0	-2.2
	204nm,0.6s						
SBUM	Sibu	52.56	282	eP	P	03 06 48.5	-0.7
	24nm,0.8s						
ASAJ	Asahikawa	58.08	343	P	P	03 07 28.5	+0.2
	8.8nm,0.9s,baz=160,slow=14,SNR=6.4						
ASAJ	Asahikawa	58.08	343	eP	P	03 07 28.9	+0.5
	7.7nm,0.8s						
USRK	Ussuriysk Ar.	61.94	335	P	P	03 07 55.4	+0.6
	3.2nm,0.9s,baz=165,slow=6.0						
VNDA	Vanda	66.42	180	P	P	03 08 25.4	+1.6
	1.5nm,0.9s,baz=1.3,slow=7.6,SNR=6.8						
VNDA				LR	LR	03 33 08.9	
	comp=Z,21nm,20.5s,baz=358,slow=32						
SONA0	Songino Array	77.30	325	eP	P	03 09 29.6	-0.2
SONM	Songino Array	77.30	325	P	P	03 09 29.6	-0.2
	1.3nm,0.8s,baz=138,slow=4.7,SNR=7.5						
SONA1	Songino Array	77.30	325	eP	P	03 09 29.4	-0.3
GTA	Gaotai	77.37	315	eP	P	03 09 30.8	+0.5
GTA				pP	pP	03 09 36.0	-4.1
GTA				sP	PcP	03 09 38.8	-2.0
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SHL	Shillong	78.43	299	eP	P	03 09 37.7	+1.1
	comp=Z,23nm,0.4s						
SVW2	Sparrevohn	78.92	19	eP	P	03 09 37.4	-0.8
	comp=Z,7.4nm,1.2s						
MAW	Mawson	83.78	202	LR	LR	03 44 16.3	
	comp=Z,37nm,18.4s,baz=64,slow=34						
HDA	Harding Lake	84.07	19	eP	P	03 10 05.2	-0.2
	comp=Z,4.3nm,1.0s						
ILAR	Eielson Array	84.33	19	P	P	03 10 05.7	-1.0
	comp=Z,0.9nm,1.1s,baz=237,slow=7.1,SNR=6.0						
ILAR				LR	LR	03 42 46.8	
	comp=Z,41nm,19.4s,baz=272,slow=32						
ILB	Eielson Array	84.33	19	eP	P	03 10 05.7	-1.0
BGH	Bear Gulch	84.52	50	eP	P	03 10 11.4	+3.1
EGAK	Eagle	86.25	21	eP	P	03 10 16.7	+0.3
	comp=Z,5.3nm,1.0s						
NV01	Mina Array Sit	87.89	50	eP	P	03 10 25.4	+0.2
NVAR	Mina Array Bea	87.89	50	P	P	03 10 25.4	+0.2
	comp=Z,0.7nm,0.7s,baz=212,slow=6.5,SNR=6.0						
MK01	Makanchi Array	91.91	317	eP	P	03 10 42.7	-0.9
MK32	Makanchi Array	91.92	317	eP	P	03 10 43.0	-0.6
MKAR	Makanchi Array	91.92	317	P	P	03 10 43.0	-0.6
	comp=Z,0.5nm,0.6s,baz=96,slow=6.7,SNR=6.6						
HLID	Hailey	92.03	46	eP	P	03 10 45.0	+0.6
	comp=Z,4.3nm,1.4s						
YKA	Yellowknife Ar	96.11	28	LR	LR	03 50 43.5	
	comp=Z,5.5nm,18.4s,baz=259,slow=33						
SNAA	Sanae	96.91	184	LR	LR	03 52 05.3	
	comp=Z,39nm,20.0s,baz=138,slow=34						
TXAR	Lajitas Array	97.96	62	LR	LR	03 49 36.5	
	comp=Z,18nm,19.4s,baz=0.0,slow=32						

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*DDA **24** 03:02:43.7, 37°.01N×27°.62E, h7^{km}, Ml2.5, Suspected Mining explosion.*

*ISK **24** 03:02:43.3, 36°.99N×27°.62E, h14^{km}, ML2.2/5*

*CSEM **24** 03:02:44.2±0.1, 36°.99N×27°.63E, h1^{km}, ML2.5, Error ellipse: s-maj=2.4km s-min=2.1km az=97.0, Suspected Mining explosion.*

ISC 24 03:02:42.6±1.0**, 36°.97N**±0°.02×**27°.70E**±0°.02**, h8**^{km}±9^{km}**, n26, σ1^s.61**/49**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BDRM	Kayabasi	0.22	295	iP	Pg	03 02 47.5	+0.4
BDRM				iS	Sg	03 02 50.0	-0.1
BDRM	Kayabasi	0.22	295	P	Pg	03 02 47.5	+0.4
BDRM				S	Sg	03 02 50.0	-0.1
DAT	Datca	0.26	202	PG	Pg	03 02 49.2	+1.5
DAT				SG	Sb	03 02 53.6	-0.7
DAT	Datca	0.26	202	iP	Pg	03 02 49.3	+1.5
DAT				iS	Sb	03 02 54.2	-0.1
DAT	Datca	0.26	202	P	Pg	03 02 49.3	+1.5
DAT				eSg	Sb	03 02 53.6	-0.7
DAT				S	Sb	03 02 54.2	-0.1
BODT	Bodrum	0.32	287	PG	Pg	03 02 49.2	+0.2
BODT				SG	Sb	03 02 53.4	-2.7
BODT	Bodrum	0.32	287	ePg	Pg	03 02 49.2	+0.2
BODT				eSg	Sb	03 02 53.4	-2.7
MLSB	Milas	0.33	11	PG	Pg	03 02 50.4	+1.3
MLSB				SG	Sb	03 02 55.5	-0.8
MLSB	Milas	0.33	11	ePg	Pg	03 02 50.4	+1.3
MLSB				eSg	Sb	03 02 55.5	-0.8
YER	Yerkesik	0.50	71	PG	Pg	03 02 54.5	+2.3
YER				SG	Sb	03 03 02.7	+1.6
YER	Yerkesik	0.50	71	ePg	Pg	03 02 54.5	+2.3
YER				eSg	Sb	03 03 02.7	+1.6
AYDN	Tasoluk	0.70	12	iP	Pb	03 02 57.3	+0.1
AYDN				iS	Sb	03 03 07.5	+0.4
AYDN	Tasoluk	0.70	12	P	Pb	03 02 57.3	+0.1
AYDN				S	Sb	03 03 07.5	+0.4
TURN	Turunc	0.73	97	PG	Pg	03 02 54.3	-2.4
TURN				SG	Sg	03 03 02.7	-3.5
TURN	Turunc	0.73	97	iP	Pg	03 02 54.2	-2.5
TURN				iS	Sg	03 03 02.4	-3.9
TURN	Turunc	0.73	97	ePg	Pg	03 02 54.3	-2.4
TURN				S	Sg	03 03 02.4	-3.9
GCAM	G?zelcaml?	0.82	333	PG	Pb	03 02 58.8	-0.3
GCAM				SG	Sb	03 03 10.3	0.0
GCAM	G?zelcaml?	0.82	333	iP	Pb	03 02 59.0	0.0
GCAM				iS	Sb	03 03 10.0	-0.3
GCAM	G?zelcaml?	0.82	333	P	Pb	03 02 59.0	0.0
GCAM				S	Sb	03 03 10.0	-0.3
ARG	Arkhangelos	0.83	155	PG	Pb	03 03 00.5	+1.2
ARG	Arkhangelos	0.83	155	ePg	Pb	03 03 00.5	+1.2
AYDB	Zeytinkoy-Aydi	0.99	9	PG	Pb	03 03 02.5	+0.4
AYDB	Zeytinkoy-Aydi	0.99	9	ePg	Pb	03 03 02.5	+0.4
TAVA	DENIZLI_Tavas	1.09	63	iP	Pn	03 03 06.2	+1.9
TAVA				iS	Sn	03 03 20.9	+1.3
TAVA	DENIZLI_Tavas	1.09	63	P	Pn	03 03 06.2	+1.9
TAVA				S	Sn	03 03 20.9	+1.3
DGB	˜zmir	1.26	329	iP	Pn	03 03 06.0	-0.6
DGB				iS	Sn	03 03 22.9	-0.7

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*ISCJB **24** 03:02:57.5±0.5, 7°.60N±0°.02×126°.68E±0°.04, h75^{km}±4^{km}, mb4.5/90, Error ellipse: s-maj=5.9km s-min=3.5km az=172.5*

*MAN **24** 03:02:57.1, 7°.58N×126°.58E, h14^{km}, mb5.5, ML4.5, MS4.7*

*BJI **24** 03:02:58.7, 7°.70N×126°.70E, h69^{km}, mb4.7/29, mB5.0/19, Ms4.4/8, Ms7 4.1/8*

*NEIC **24** 03:02:59.9±0.9, 7°.59N×126°.57E, h84^{km}±8^{km}, mb4.7/58, Error ellipse: s-maj=6.4km s-min=5.2km az=86.0*

NEIC Felt [III PIVS] at Compostela and Mati.

*IDC **24** 03:03:00.4±1.0, 7°.63N×126°.61E, h89^{km}±9^{km}, mb4.2/27, mb1 4.3/28, mb1mx4.1/59, mbtmp4.6/28, MS3.5/19, Ms1 3.5/19, ms1mx3.3/48, Error ellipse: s-maj=14.8km s-min=10.7km az=89.0*

*DJA **24** 03:03:00.6±0.5, 8°N±4°×12°7E±°, h10^{km}, M5.0/18, mb4.8/18, mB5.3/5, MLv5.3/3, Mw(mB)4.7/5*

ISC 24 03:02:58.6±0.6**, 7°.57N**±0°.03×**126°.74E**±0°.05**, h70**^{km}±5^{km}**, n211, σ1^s.80**/214**, mb4.6**/89**, 7C-3D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	Bislig	0.71	328⇓	iP	Pn	03 03 09.9	-3.8
BIPH				iS	Sn	03 03 18.7	-6.2
MATI	Mati	0.78	218	eP	Pn	03 03 11.9	-2.7
MATI				eS	Sn	03 03 22.6	-3.7
DAV	Davao City (W)	1.25	247	P	Pn	03 03 19.8	-0.6
	432nm,0.3s,baz=55,slow=2.8,SNR=130						
DAV				S	Sn	03 03 38.5	+1.8
	651nm,0.3s,baz=247,slow=22,SNR=20						
DMPH	Davao City--Mi	1.31	248⇑	eP	Pn	03 03 15.9	-5.3
DMPH				iS	Sn	03 03 39.4	+1.2
BUKP	Musuan	1.69	281	eP	Pn	03 03 24.7	-1.5
BUKP				eS	Sn	03 03 44.9	-2.2
BUTP	Butuan	1.77	322	eP	Pn	03 03 26.9	-0.4
BUTP				eS	Sn	03 03 51.9	+2.9
DDMP	Don Marcelino,	1.78	215	eP	Pn	03 03 26.3	-1.1
DDMP				eS	Sn	03 03 48.8	-0.3
CGP	Cagayan de Oro	2.21	294⇑	eP	Pn	03 03 31.8	-1.3
CGP				iS	Sn	03 03 57.9	-1.5
GSPH	General Santos	2.31	230⇑	iP	Pn	03 03 33.3	-1.4
GSPH				iS	Sn	03 03 58.3	-3.8
SKMP	Bagumbayan, Su	2.42	244	eP	Pn	03 03 33.0	-3.0
SKMP				eS	Sn	03 04 03.3	-1.3
CTBH	Cotabato--PC H	2.50	262⇑	eP	Pn	03 03 35.4	-1.6
CTBH				iS	Sn	03 04 04.5	-1.9
SCPH	Surigao	2.52	331	eP	Pn	03 03 37.4	+0.1
SCPH				eS	Sn	03 04 09.5	+2.5
MSLP	Maasin	3.15	324	eP	Pn	03 03 44.2	-1.8
MSLP				eS	Sn	03 04 26.1	+3.7
PAGZ	Pagadian	3.34	275	eP	Pn	03 03 47.1	-1.4
PAGZ				eS	Sn	03 03 58.8	-28
TBP	Tagbilaran	3.54	307	eP	Pn	03 03 50.2	-1.0
LLP	Lapu-Lapu	3.87	315⇓	eP	Pn	03 03 55.2	-0.4
LLP				eS	Sn	03 04 43.6	+3.7
PLP	Palo	3.97	334⇑	eP	Pn	03 03 55.7	-1.5
PLP				iS	Sn	03 04 49.7	+7.2
OCLP	Ormoc	4.04	329	eP	Pn	03 04 00.4	+2.2
OCLP				eS	Sn	03 04 45.5	+1.2
CNP	Catarman	5.32	338	eP	Pn	03 04 12.6	-2.9
CNP				eS	Sn	03 05 22.3	+6.9
RCP	Roxas	5.59	315⇑	eP	Pn	03 04 19.4	+0.2
TNTI	Ternate	6.78	175	P	Pn	03 04 42.0	+6.4
TNTI				S	Sn	03 06 04.5	+13
TNTI	Ternate	6.78	175	ePn	Pn	03 04 40.0	+4.4
TNTI				eSn	Sn	03 05 51.5	0.0
LBMI	Labuha	8.19	175	P	Pn	03 05 01.7	+6.8
MRSI	Marisa	8.52	214	P	Pn	03 05 06.6	+7.3
MYLDM	Lahad Datu	8.53	254	ePn	Pn	03 05 03.8	+4.3
TGY	Tagaytay City	8.63	319	P	Pn	03 05 03.8	+2.9
	65nm,0.3s,baz=355,slow=5.6,SNR=1.7						
LUWI	Luwuk	9.43	205	P	Pn	03 05 18.2	+6.5
LUWI	Luwuk	9.43	205	ePn	Pn	03 05 15.1	+3.4
LUWI				eSn	Sn	03 07 00.7	+4.4
APSI	Ampana	9.84	211	P	Pn	03 05 24.2	+6.8
FAKI	Fak Fak	11.78	152	ePn	Pn	03 05 44.4	+0.4
FAKI				eSn	Sn	03 07 41.6	-12
TTSI	Tana Toraja	12.61	213	P	P	03 06 02.7	-1.3
SPSI	Sidrap Palu	13.40	211	P	P	03 06 13.4	+0.5
SBUM	Sibu	15.33	251	ePn	Pn	03 06 32.1	+1.1
	49nm,0.9s						
EDFI	Ende, Flores	16.98	197	P	P	03 07 00.8	+8.1
KSM	Kuching	17.46	250	ePn	P	03 06 58.4	+0.5
	20nm,0.8s						
BATI	Baumata	17.93	190	P	Pn	03 07 12.5	+9.2
PLAI	Plampang	18.58	209	P	Pn	03 07 20.2	+9.0
GUMO	Guam	18.79	70	LR	LR	03 16 26.3	
	comp=Z,35nm,18.0s,baz=222,slow=43						
JOW	Kunigami	19.21	4	P	Pn	03 07 18.8	+0.2
	3.7nm,0.3s,baz=219,slow=9.5,SNR=12						
JOW				LR	LR	03 13 59.1	
	comp=Z,94nm,20.6s,baz=122,slow=34						
JOW	Kunigami	19.21	4	eP	Pn	03 07 18.8	+0.2
	61nm,0.9s						
MTN	Manton Dam	20.75	168	P	P	03 07 35.0	+1.3
	baz=21,SNR=5.6						
MTN	Manton Dam	20.75	168	eP	P	03 07 35.2	+1.4
	26nm,0.9s						
KDU	Kakadu	20.92	164	P	P	03 07 36.4	+0.8
	baz=21,SNR=25						
KPJI	Karang Pucung	23.12	231	P	P	03 08 09.1	+10
KNRA	Kununurra	23.19	175	P	P	03 08 00.4	+0.9
	baz=23,SNR=9.3						
SKNT	Sakolnakorn	24.09	295	P	P	03 08 08.4	+0.5
	14nm,0.9s						
PMBI	Palembang	24.27	245	P	P	03 08 08.1	-1.4
CBIJ	Chichi jima	24.33	35	eP	P	03 08 08.3	-1.6
	59nm,0.9s						
JCJ	Chichijima	24.33	35	P	P	03 08 09.8	-0.1
	26nm,0.6s,baz=274,slow=17						
JCJ				LR	LR	03 16 04.1	
	comp=Z,39nm,19.9s,baz=188,slow=32						
KHON	Khomkaen	24.94	293	P	P	03 08 16.7	+1.1
	22nm,0.8s						
SRAK	Srakaew	25.07	287	P	P	03 08 15.6	-1.2
	29nm,1.3s						
NONG	Nongkai	25.22	297	P	P	03 08 19.2	+1.1
	0.4nm,0.6s,135nm						
NJ2	Nanjing	25.44	344	eP	P	03 08 22.3	+2.4
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
MDSI	Maura Dua	25.50	243	P	P	03 08 30.8	+10
JNU	Nakatsue	25.71	8	P	P	03 08 20.9	-1.5
	18nm,0.8s,baz=175,slow=2.5,SNR=15						
JNU				LR	LR	03 17 41.6	
	comp=Z,64nm,20.9s,baz=124,slow=34						
JNU	Nakatsue	25.71	8	eP	P	03 08 21.1	-1.4
	24nm,1.0s						
NAYO	Nakonayok	25.82	287	P	P	03 08 26.6	+3.0
	0.5nm,0.9s,14nm						
PBKT	Sadao Pong	26.71	292	eP	P	03 08 32.5	+0.9
	23nm,0.9s						
PBKT	Sadao Pong	26.71	292	eP	P	03 08 32.5	+0.9
	23nm,0.9s						
PBKT	Sadao Pong	26.71	292	P	P	03 08 34.7	+3.1
	30nm,0.9s						
GYA	Guiyang	26.78	317	eP	P	03 08 33.8	+1.5
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
COEN	Coen	26.90	143	P	P	03 08 36.0	+2.7
	baz=27						
COEN	Coen	26.90	143	eP	P	03 08 33.5	+0.1
	37nm,1.4s						
PHET	Kaeng Krachan	27.19	283	P	P	03 08 40.8	+4.9
	10nm,0.8s						
PHIT	Phitsanulok	27.39	293	P	P	03 08 42.0	+4.3
	34nm,0.9s						
UTTA	Uttaradit	27.44	294	P	P	03 08 42.1	+4.0
	5.1nm,0.9s						
JHJ	Hachijo jima 2	28.15	24	LR	LR	03 18 22.5	
	comp=Z,76nm,21.8s,baz=259,slow=33						
WB7	Warramunga Arr	28.26	165	P	P	03 08 45.3	-0.1
	baz=28						
WRAB	Tennant Creek	28.34	165	eP	P	03 08 46.3	+0.2
	5.6nm,0.8s						
WR1	Warramunga Arr	28.35	165	eP	P	03 08 45.8	-0.3
	10nm,1.1s						
WRA	Warramunga Arr	28.35	165	P	P	03 08 45.8	-0.3
	2.3nm,0.5s,baz=348,slow=9.6,SNR=18						
WB2	Warramunga Arr	28.35	165	eP	P	03 08 46.5	+0.3
	12nm,1.2s						
PAYA	Payao	28.59	297	P	P	03 08 50.6	+2.2
	6.5nm,0.8s						
KMI	Kunming	28.80	310	P	P	03 08 50.8	+0.3
KMI				pmax	pmax		
	comp=Z,13nm,0.9s						
CM31	Chiang Mai Arr	29.11	295	eP	P	03 08 51.7	-1.3
CMAR	Chiang Mai Arr	29.11	295	P	P	03 08 51.7	-1.3
	1.3nm,0.6s,baz=124,slow=8.2,SNR=8.1						
CMAR				LR	LR	03 20 39.9	
	comp=Z,149nm,19.6s,baz=126,slow=37						
INU	Inuyama	29.21	17	eP	P	03 08 53.6	-0.1
	16nm,0.7s						
MBWA	Marble Bar	29.37	193	eP	P	03 08 53.4	-1.8
	21nm,1.3s						
GSI	Gunungsitoli	29.72	259	eP	P	03 08 55.5	-2.9
	66nm,0.8s						
KS15	Wonju Array Si	29.75	2	eP	P	03 08 58.2	-0.2
KSAR	Wonju Array Be	29.75	2	P	P	03 08 58.2	-0.2
KSRS	Korea Array	29.77	2	P	P	03 08 58.2	-0.3
	4.5nm,0.7s,baz=178,slow=9.9,SNR=13						
KSRS				LR	LR	03 23 38.2	
	comp=Z,48nm,18.0s,baz=182,slow=42						
MAJO	Matsushiro	30.68	18	eP	P	03 09 05.6	-1.1
	6.9nm,0.7s						
MAT	Matsushiro	30.68	18	P	P	03 09 05.5	-1.2
MAT				eS	S	03 14 03.0	-1.3
MJAR	Matsushiro Arr	30.68	18	P	P	03 09 05.2	-1.4
	5.3nm,0.7s,baz=198,slow=10.0,SNR=21						
MJAR				LR	LR	03 20 02.7	
	comp=Z,56nm,21.5s,baz=225,slow=33						
MJB9	Matsu-Tunnel	30.68	18	eP	P	03 09 05.7	-1.0
	7.1nm,0.7s						
QIS	Mount Isa	30.68	156	P	P	03 09 07.8	+0.9
	baz=31,SNR=28						
MTSU	Mount Surprise	30.88	146	P	P	03 09 10.6	+2.0
	baz=31,SNR=8.4						
AS31	Alice Springs	31.83	167	eP	P	03 09 17.1	+0.1
	1.9nm,0.9s						
AS31				ePcP	PcP	03 12 07.2	+0.6
ASAR	Alice Springs	31.83	167	P	P	03 09 17.1	+0.2
	2.2nm,0.6s,baz=355,slow=7.9,SNR=23						
ASAR				PcP	PcP	03 12 07.2	+0.6
	2.0nm,0.6s,baz=351,slow=2.9,SNR=7.6						
BJI	Beijing	33.69	345⇓	eP	P	03 09 35.8	+2.9
BJI				pP	pP	03 09 50.3	+0.4
BJI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MEEK	Meekatharra	34.91	193	P	P	03 09 43.8	+0.1
	baz=35,SNR=5.6						
LZH	Lanzhou	35.26	327	eP	P	03 09 48.3	+1.5
LZH				pP	pP	03 10 07.3	+3.4
LZH				sP	sP	03 10 13.3	+1.2
LZH				pmax	pmax		
	comp=Z,21nm,1.0s						
LZH				pmax	pmax		
	comp=Z,89nm,4.3s						
LZH				LR	LR		
	comp=N,470nm,12.8s						
LZH				LR	LR		
	comp=E,490nm,14.1s						
LZH				LR	LR		
	comp=Z,480nm,16.6s						
HHC	Hu-ho-hao-te	35.79	340	eP	P	03 09 52.8	+1.5
HHC				pmax	pmax		
	comp=Z,19nm,0.9s						
HHC				pmax	pmax		
	comp=Z,160nm,5.8s						
USA0B	Ussuriysk Arra	36.77	6	eP	P	03 09 59.6	+0.2
	23nm,0.8s						
USRK	Ussuriysk Ar.	36.77	6	P	P	03 09 59.5	+0.1
	24nm,0.8s,baz=192,slow=8.5						
BRDH	Bariadhala	36.93	298	LR	LR	03 25 24.5	
	comp=Z,138nm,19.7s,baz=116,slow=36						
ERM	Erimo	37.25	20	eP	P	03 10 05.1	+1.6
	17nm,0.9s						
QLP	Quilpie	37.96	154	P	P	03 10 10.0	+0.4
	baz=38,SNR=6.3						
FORT	Forrest	38.15	178	P	P	03 10 12.0	+0.8
	baz=38,SNR=13						
ASAJ	Asahikawa	38.95	18	P	P	03 10 18.9	+1.2
	10nm,0.5s,baz=232,slow=14,SNR=19						
ASAJ	Asahikawa	38.95	18	eP	P	03 10 18.8	+1.0
	15nm,0.7s						
KMBL	Kambalda	39.00	187	P	P	03 10 19.2	+0.9
	baz=39,SNR=7.5						
BLDU	Ballidu	39.17	194	P	P	03 10 19.8	+0.1
	baz=39,SNR=7.2						
GTA	Gaotai	39.86	327	eP	P	03 10 23.1	-2.5
GTA				pP	pP	03 10 40.6	-2.3
GTA				sP	sP	03 10 51.0	-0.1
GTA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
KLBR	Kellerberrin	39.88	192	P	P	03 10 26.6	+0.9
	baz=40,SNR=6.0						
H11S3	WAKE ISLAND Hy	40.31	70	T	T	03 53 49.9	
	baz=258,slow=13						
H11S1	WAKE ISLAND Hy	40.33	70	T	T	03 53 46.8	
	baz=258,slow=13						
H11S2	WAKE ISLAND Hy	40.33	70	T	T	03 53 53.2	
	baz=258,slow=13						
H11N1	WAKE ISLAND Hy	40.73	69	T	T	03 54 33.7	
	baz=264,slow=75,SNR=67						
H11N2	WAKE ISLAND Hy	40.74	69	T	T	03 54 33.4	
	baz=264,slow=75,SNR=46						
H11N3	WAKE ISLAND Hy	40.75	69	T	T	03 54 34.5	
	baz=264,slow=75,SNR=67						
BBOO	Buckleboo	41.13	168	P	P	03 10 36.8	+0.8
	baz=41,SNR=29						
STKA	Stephens Creek	41.72	161	P	P	03 10 41.4	+0.6
	7.4nm,0.6s,baz=332,slow=8.6,SNR=16						
STKA				LR	LR	03 32 38.1	
	comp=Z,65nm,18.4s,baz=15,slow=42						
STKA	Stephens Creek	41.72	161	P	P	03 10 41.6	+0.9
	baz=42,SNR=7.7						
STKA	Stephens Creek	41.72	161	eP	P	03 10 41.7	+0.9
	1.5nm,0.6s						
HTT	Hallett	42.39	165	P	P	03 10 47.5	+1.3
	baz=43,SNR=7.0						
CMSA	Cobar Meteorol	42.91	156	P	P	03 10 51.1	+0.7
	baz=43						
RKGY	Rocky Gully	42.96	192	P	P	03 10 50.6	-0.2
	baz=43						
ARPS	Mount Arapiles	46.33	163	P	P	03 11 18.9	+1.3
	baz=47,SNR=7.0						
CAN	Canberra	47.55	155	P	P	03 11 29.6	+2.4
	baz=48						
CNB	Canberra Magne	47.70	155	P	P	03 11 30.4	+2.0
	baz=48,SNR=5.1						
DZM	Mont Dzumac	48.81	128	LR	LR	03 32 59.6	
	comp=Z,59nm,18.2s,baz=272,slow=37						
WMQ	Urumqi	49.63	323	P	P	03 11 44.4	+1.2
WMQ				pP	pP	03 12 04.0	+3.0
WMQ				sP	sP	03 12 13.3	+4.3
WMQ				LR	LR		
	comp=N,180nm,29.3s						
WMQ				LR	LR		
	comp=E,140nm,29.3s						
WMQ				LR	LR		
	comp=Z,190nm,29.3s						
PETK	Petropavlovsk-	51.90	23	eP	P	03 12 01.2	+1.2
MK01	Makanchi Array	54.43	324	eP	P	03 12 17.3	-1.4
MK31	Makanchi Array	54.45	324	eP	P	03 12 17.6	-1.3
MK32	Makanchi Array	54.45	324	eP	P	03 12 17.6	-1.2
MK32				ePcP	PcP	03 13 21.5	-0.2
MKAR	Makanchi Array	54.45	324	P	P	03 12 17.6	-1.3
	6.9nm,0.7s,baz=123,slow=7.9,SNR=28						
MKAR				PcP	PcP	03 13 21.5	-0.2
	4.5nm,0.7s,baz=94,slow=4.3,SNR=6.4						
MKAR				LR	LR	03 36 14.3	
	comp=Z,37nm,19.1s,baz=84,slow=37						
MKAR	Makanchi Array	54.45	324	eP	P	03 12 17.6	-1.3
	45nm,0.6s						
MAKZ	Makanchi	54.64	324	eP	P	03 12 18.9	-1.4
	4.7nm,0.7s						
MA2	Magadan	55.00	15	P	P	03 12 22.4	-0.2
	14nm,0.6s,baz=185,slow=12,SNR=6.6						
MA2	Magadan	55.00	15	eP	P	03 12 23.6	+1.0
	17nm,0.8s						
NIL	Nilore	55.65	306	eP	P	03 12 27.1	-0.6
	20nm,0.9s						
ZALV	Zalesovo Beam	57.20	332	P	P	03 12 36.1	-2.2
	1.8nm,0.6s,baz=124,slow=6.3,SNR=5.2						
ZALV	Zalesovo Beam	57.20	332	eP	P	03 12 37.6	-0.8
ZAA1	Zalesovo Array	57.21	332	eP	P	03 12 36.1	-2.3
KURK	Kurchatov	58.55	326	eP	P	03 12 46.2	-1.6
KURK				epP	pP	03 13 06.3	+0.2
KURBB	Kurchatov Arra	58.55	326	P	P	03 12 46.2	-1.6
	5.0nm,0.7s,baz=125,slow=6.3,SNR=54						
KURBB				pP	pP	03 13 06.3	+0.2
	3.3nm,0.7s,baz=125,slow=6.5,SNR=4.6						
KK31	Karatay Array	60.48	316	eP	P	03 13 00.5	-0.8
KKAR	Karatay Array	60.48	316	eP	P	03 13 00.5	-0.9
BVAR	Borovoye Array	64.14	326	P	P	03 13 24.4	-1.2
	2.3nm,0.6s,baz=119,slow=8.9,SNR=14						
BRVK	Borovoye	64.21	326	eP	P	03 13 24.7	-1.4
	3.9nm,0.7s						
AFI	Afiamalu	64.64	109	LR	LR	03 36 15.7	
	comp=Z,50nm,21.2s,baz=34,slow=31						
WSAR	Wadi Sarin	66.96	292	P	P	03 13 42.1	-2.3
	8.8nm,1.0s,baz=156,slow=2.6,SNR=4.2						
ABKAR	Akbulak array	69.22	320	eP	P	03 13 56.2	-1.8
ABKAR				epP	pP	03 14 18.2	+1.5
UNV	Unalaska Valle	70.29	35	eP	P	03 14 04.3	-0.2
	22nm,0.8s						
AKTO	Aktyubinsk	70.69	321	P	P	03 14 05.8	-1.2
	1.6nm,0.5s,baz=118,slow=12,SNR=8.7						
AKTO				LR	LR	03 47 20.8	
	comp=Z,99nm,19.0s,baz=103,slow=38						
ARU	Arti	71.72	327	P	P	03 14 11.3	-1.8
	3.2nm,0.3s,baz=117,slow=7.5,SNR=6.0						
ARU	Arti	71.72	327	eP	P	03 14 10.8	-2.3
	4.7nm,0.5s						
CHGN	Chignik	75.34	34	eP	P	03 14 34.5	+0.2
	16nm,0.9s						
SVW2	Sparrevohn	77.46	29	eP	P	03 14 47.8	+1.5
	5.8nm,1.0s						
KDAK	Kodiak Island	78.66	33	eP	P	03 14 54.2	+1.2
	18nm,0.8s						
RAYN	Ar Rayn	79.01	292	eP	P	03 14 54.3	-1.4
	11nm,0.8s						

GNI	Garni	79.06	309	LR	LR	03 53 47.4	
	comp=Z,22nm,19.1s,baz=64,slow=39						
CAST	Castle Rocks	79.32	27	eP	P	03 14 57.5	+1.0
	7.4nm,0.7s						
SKT	Skwentna	79.47	28	eP	P	03 14 57.5	+0.2
	5.8nm,0.8s						
SUA	Susitna One	79.82	29	eP	P	03 14 59.4	+0.1
	16nm,0.8s						
BPAW	Bear Paw Mtn.	79.86	26	eP	P	03 15 00.1	+0.7
MLY	Manley	80.02	25	eP	P	03 15 01.4	+1.1
	6.3nm,0.8s						
TRF	Thorofare Moun	80.13	27	eP	P	03 14 59.9	-1.2
	8.4nm,0.8s						
COLD	Coldfoot	80.37	23	eP	P	03 15 03.5	+1.5
	5.8nm,1.1s						
PMR	Palmer	80.59	29	eP	P	03 15 03.2	-0.1
	9.1nm,0.8s						
MCK	McKinley	80.74	27	eP	P	03 15 04.6	+0.4
	19nm,0.8s						
SML	Sawmill	80.98	29	eP	P	03 15 05.9	+0.4
	12nm,0.8s						
MDM	Murphy Dome	81.08	25	eP	P	03 15 06.1	+0.2
	5.3nm,0.8s						
WRH	Wood River Hil	81.13	26	eP	P	03 15 06.8	+0.6
	5.3nm,0.8s						
CCB	Clear Creek Bu	81.26	26	eP	P	03 15 06.7	-0.1
	8.1nm,1.3s						
DHY	Denali Highway	81.44	27	eP	P	03 15 09.0	+1.0
	3.1nm,0.7s						
SCM	Sheep Creek Mo	81.45	29	eP	P	03 15 08.9	+0.9
	8.6nm,0.8s						
GLI	Glacier Island	81.57	30	eP	P	03 15 09.7	+1.1
	6.5nm,0.7s						
HDA	Harding Lake	81.63	26	eP	P	03 15 08.4	-0.4
	6.0nm,0.7s						
IL1	Eielson Array	81.66	26	eP	P	03 15 07.6	-1.3
ILAR	Eielson Array	81.66	26	P	P	03 15 08.1	-0.9
	4.1nm,0.9s,baz=236,slow=5.7,SNR=43						
ILB	Eielson Array	81.66	26	eP	P	03 15 08.1	-0.9
FID	Port Fidalgo	81.87	30	eP	P	03 15 11.1	+0.9
	6.9nm,0.9s						
KLMR	Klimovskoe	82.09	330	eP	P	03 15 10.7	-0.5
KLMR				AMP		03 15 12.6	
	comp=Z,7.0nm,0.7s						
DIV	Divide	82.21	29	eP	P	03 15 13.4	+1.4
	comp=Z,8.4nm,0.8s						
RIDG	Independ'e Rid	82.56	27	eP	P	03 15 13.9	+0.1
	comp=Z,12nm,0.8s						
BMRM	Bremner River	82.78	29	eP	P	03 15 16.1	+1.2
CRQM	Cirque	83.51	30	eP	P	03 15 20.3	+1.4
	comp=Z,11nm,1.0s						
EGAK	Eagle	84.11	25	eP	P	03 15 22.3	+0.6
	comp=Z,8.6nm,0.8s						
DAWY	Dawson	84.94	26	eP	P	03 15 27.2	+1.3
	comp=Z,5.8nm,0.8s						
ASF	Jabal al Asfar	85.89	302	P	P	03 15 31.1	-0.3
	comp=Z,3.7nm,0.9s,baz=68,slow=5.4,SNR=5.9						
INK	Inuvik	86.61	22	P	P	03 15 34.0	0.0
	baz=304,slow=1.7						
INK	Inuvik	86.61	22	eP	P	03 15 34.0	0.0
	comp=Z,3.0nm,0.8s						
SPITS	Spitsbergen Ar	86.74	349	LR	LR	04 01 15.1	
	comp=Z,27nm,18.2s,baz=185,slow=40						
ARA0	ARCESS Array S	86.87	340	eP	P	03 15 33.7	-1.6
ARCES	ARCESS Array B	86.87	340	P	P	03 15 33.7	-1.6
	comp=Z,2.5nm,0.8s,baz=53,slow=8.1,SNR=4.8						
MMAI	Mount Meron Ar	87.04	303	P	P	03 15 36.7	-0.3
	comp=Z,0.8nm,0.3s,baz=79,slow=7.5,SNR=5.8						
WHY	Whitehorse	87.55	29	eP	P	03 15 40.0	+1.2
	comp=Z,5.0nm,0.8s						
BR101	Keskin Array S	87.59	310	eP	P	03 15 37.9	-1.7
BR131	Keskin Array S	87.59	310	eP	P	03 15 38.0	-1.7
BRTR	Keskin Array B	87.59	310	P	P	03 15 37.9	-1.7
	comp=Z,1.7nm,0.7s,baz=105,slow=4.6,SNR=9.7						
BRTR				LR	LR	03 59 14.1	
	comp=Z,17nm,18.4s,baz=86,slow=39						
FIA0	FINESS Array S	88.47	332	eP	P	03 15 41.1	-2.0
FINES	FINESS Array B	88.47	332	P	P	03 15 41.1	-2.0
	comp=Z,1.9nm,0.6s,baz=90,slow=6.3,SNR=8.1						
AKASG	Malin Array Be	88.94	321	P	P	03 15 44.2	-1.3
	comp=Z,0.5nm,0.4s,baz=72,slow=4.6,SNR=5.4						
AKBB	Malin Array Si	88.94	321	eP	P	03 15 44.2	-1.3
	comp=Z,7.4nm,1.3s						
MLR	Muntele Rosu	92.15	316	LR	LR	04 03 21.0	
	comp=Z,66nm,18.2s,baz=85,slow=39						
NOA	NORSAR Array B	95.37	334	LR	LR	04 04 07.2	
	comp=Z,23nm,20.8s,baz=325,slow=38						
SYO	Syowa Base	95.99	201	⇑eX	P	03 16 16.0	-1.5
YKA	Yellowknife Ar	96.02	24	P	P	03 16 17.9	0.0
	comp=Z,2.2nm,0.7s,baz=299,slow=4.6,SNR=13						
YKB5	Yellowknife Ar	96.02	24	eP	P	03 16 17.9	0.0
GEC2	GERESS Array S	99.09	322	eP	Pdif	03 16 31.8	-0.5
	comp=Z,3.3nm,1.3s						
GERES	GERESS Array B	99.09	322	P	Pdif	03 16 31.8	-0.5
	comp=Z,0.5nm,0.8s,baz=72,slow=4.4,SNR=3.5						
TXAR	Lajitas Array	119.20	50	PKP	PKPdf	03 21 41.4	+0.9
	comp=Z,0.5nm,0.7s,baz=304,slow=0.3,SNR=6.9						
S39A	Bolivar	121.48	37	ePKPdf	PKPdf	03 21 44.5	-0.1
TORD	Torodi Ar. Bea	121.66	290	PKP	PKPdf	03 21 44.8	-0.7
	comp=Z,97nm,0.8s,baz=20,slow=4.6						
TOA1	Torodi Ar. Sit	121.67	290	ePKPdf	PKPdf	03 21 44.8	-0.7
V40A	Witts Springs	123.03	38	ePKPdf	PKPdf	03 21 48.0	+0.4
LPAZ	La Paz	163.08	122	PKP	PKPdf	03 22 55.6	+0.8
	comp=Z,1.0nm,0.8s,baz=205,slow=4.1,SNR=5.0						
LPAZ				PKPab	PKPab	03 23 47.5	+2.6
	comp=Z,1.6nm,0.8s,baz=232,slow=2.9,SNR=6.3						

MEX 24 03:07:32.0±11.0**, 24°.94N×99°.67W, h20^{km}**±999^{km}**, MD3.6, Central Mexico**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LNIG	Linares	0.19	102	eP	Pb	03 07 35.6	-1.4
	baz=241,slow=10						
LNIG				iS	Sb	03 07 40.2	-0.3

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*DDA **24** 03:10:08.6, 37°.01N×27°.63E, h7^{km}, Ml2.7, Suspected Mining explosion.*
*ISK **24** 03:10:08.7, 37°.01N×27°.62E, h10^{km}, ML2.4/8*
*ISCJB **24** 03:10:09.1±0.4, 37°.01N±0°.02×27°.63E±0°.03, h0^{km}, Error ellipse: s-maj=3.5km s-min=3.1km az=174.8*
*CSEM **24** 03:10:09.3±0.1, 37°.01N×27°.63E, h1^{km}, ML2.7, Error ellipse: s-maj=3.0km s-min=2.3km az=90.0, Suspected Mining explosion.*
ISC 24 03:10:08.2±0.8**, 37°.03N**±0°.02×**27°.73E**±0°.02**, h0^{km}, n32, σ1ˢ.36**/55**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BDRM	Kayabasi	0.23	280	iP	Pg	03 10 12.4	-0.2
BDRM				iS	Sg	03 10 15.1	-0.5
BDRM	Kayabasi	0.23	280	P	Pg	03 10 12.4	-0.2
BDRM				S	Sg	03 10 15.1	-0.5
MLSB	Milas	0.27	8	PG	Pg	03 10 15.2	+1.8
MLSB				SG	Sg	03 10 20.3	+3.3
MLSB	Milas	0.27	8	ePg	Pg	03 10 15.2	+1.8
MLSB				eSg	Sg	03 10 20.3	+3.3
DATC	Datca-Mugla	0.27	191	PG	Pg	03 10 14.4	+1.0
DATC	Datca-Mugla	0.27	191	ePg	Pg	03 10 14.4	+1.0
DAT	Datca	0.32	202	PG	Pg	03 10 14.7	+0.4
DAT				SG	Sg	03 10 19.6	+1.1
DAT	Datca	0.32	202	iP	Pg	03 10 14.1	-0.2
DAT				iS	Sg	03 10 19.1	+0.6
DAT	Datca	0.32	202	P	Pg	03 10 14.1	-0.2
DAT	Datca	0.32	202	ePg	Pg	03 10 14.7	+0.4
DAT				S	Sg	03 10 19.1	+0.6
BODT	Bodrum	0.34	276	PG	Pg	03 10 14.1	-0.5
BODT				SG	Sg	03 10 18.4	-0.6
BODT	Bodrum	0.34	276	ePg	Pg	03 10 14.1	-0.5
BODT				eSg	Sg	03 10 18.4	-0.6
YER	Yerkesik	0.46	76	PG	Pb	03 10 19.9	+0.7
YER				SG	Sb	03 10 27.9	+1.3
YER	Yerkesik	0.46	76	ePg	Pb	03 10 19.9	+0.7
YER				eSg	Sb	03 10 27.9	+1.3
AYDN	Tasoluk	0.65	11	iP	Pb	03 10 22.3	-0.1
AYDN				iS	Sb	03 10 31.6	-0.4
AYDN	Tasoluk	0.65	11	P	Pb	03 10 22.3	-0.1
AYDN				S	Sb	03 10 31.6	-0.4
TURN	Turunc	0.72	102	PG	Pg	03 10 20.3	-1.7
TURN				SG	Sg	03 10 28.1	-3.2
TURN	Turunc	0.72	102	iP	Pg	03 10 19.2	-2.7
TURN				iS	Sg	03 10 27.4	-3.9
TURN	Turunc	0.72	102	ePg	Pg	03 10 20.3	-1.7
GCAM	G?zelcaml?	0.78	330	PG	Pb	03 10 23.9	-0.7
GCAM	G?zelcaml?	0.78	330	iP	Pb	03 10 24.7	+0.1
GCAM				iS	Sb	03 10 34.5	-1.3
GCAM	G?zelcaml?	0.78	330	ePg	Pb	03 10 23.9	-0.7
GCAM	G?zelcaml?	0.78	330	P	Pb	03 10 24.7	+0.1
GCAM				S	Sb	03 10 34.5	-1.3
ARG	Arkhangelos	0.87	158	PG	Pb	03 10 26.9	+0.7
ARG				SG	Sb	03 10 38.8	+0.4
ARG	Arkhangelos	0.87	158	ePg	Pb	03 10 26.9	+0.7
ARG				eSg	Sb	03 10 38.8	+0.4
AYDB	Zeytinkoy-Aydi	0.93	8	PG	Pb	03 10 27.4	+0.1
AYDB				SG	Sn	03 10 41.1	-1.6
AYDB	Zeytinkoy-Aydi	0.93	8	ePg	Pb	03 10 27.4	+0.1
AYDB				eSg	Sn	03 10 41.1	-1.6
TAVA	DENIZLI_Tavas	1.04	65	iP	Pn	03 10 30.0	-0.2
TAVA				iS	Sn	03 10 46.8	+1.3
TAVA	DENIZLI_Tavas	1.04	65	P	Pn	03 10 30.0	-0.2
TAVA				S	Sn	03 10 46.8	+1.3
FETY	Fethiye	1.16	109	PN	Pn	03 10 32.6	+0.9
FETY	Fethiye	1.16	109	ePn	Pn	03 10 32.6	+0.9
DGB	˜zmir	1.22	327	iP	Pg	03 10 30.6	-1.1

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*IDC **24** 03:10:17.8±0.8, 37°.55N×92°.23E, h0^{km}, mb3.8/8, mb1 3.9/10, mb1mx3.7/70, mbtmp3.7/10, ML4.0/1, Error ellipse: s-maj=40.8km s-min=17.2km az=46.0*
*BJI **24** 03:10:19.7, 37°.57N×92°.30E, h5^{km}, ML3.6/7*
*NEIC **24** 03:10:19.2±0.4, 37°.71N×92°.38E, h10^{km}, mb4.2/5, Error ellipse: s-maj=15.4km s-min=7.6km az=220.0*
ISC 24 03:10:19.8±0.8**, 37°.6N**±0°.1×**92°.0E**±0°.1**, h10^{km}, n27, σ2ˢ.02**/31**, mb4.0**/12**, Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GTA	Gaotai	6.40	71	eP	Pn	03 11 57.3	+3.1
GTA				pP	Pb	03 12 00.4	-11
GTA				sP	Pg	03 12 03.1	-19
GTA				pmax	pmax		
	comp=Z,5.0nm,0.7s						
WMQ	Urumqi	7.01	334	Pn	Pn	03 12 05.8	+3.3
WMQ				Sn	Sn	03 13 24.0	+1.7
WMQ				smax	smax		
	comp=Z,140nm,0.7s						
WMQ				smax	smax		
	comp=Z,120nm,0.9s						
MK31	Makanchi Array	11.65	325	ePn	Pn	03 13 06.8	+0.8
MK31				eSn	Sn	03 15 13.7	-2.4
MK32	Makanchi Array	11.65	325	ePn	Pn	03 13 06.7	+0.6
MK32				eSn	Sn	03 15 12.4	-3.7
MKAR	Makanchi Array	11.65	325	Pn	Pn	03 13 06.7	+0.7
	comp=Z,0.9nm,0.3s,baz=135,slow=13,SNR=11						
MKAR				Sn	Sn	03 15 12.4	-3.7
	comp=Z,0.5nm,0.3s,baz=139,slow=26,SNR=5.6						
MKAR	Makanchi Array	11.65	325	ePn	Pn	03 13 06.8	+0.7
MKAR				eSn	Sn	03 15 13.7	-2.4
KURBB	Kurchatov Arra	16.17	328	Pn	Pn	03 14 05.0	-1.9
	baz=134,slow=13,SNR=2.1						
KURK	Kurchatov	16.20	328	ePn	Pn	03 14 05.0	-2.3
BJT	Baijiatuau	18.99	75	eP	P	03 14 36.6	-4.8
	comp=Z,8.9nm,1.1s						
BR101	Keskin Array S	44.91	292	eP	P	03 18 36.7	+1.9
BRTR	Keskin Array B	44.91	292	P	P	03 18 36.7	+1.9
	comp=Z,1.0nm,0.5s,baz=111,slow=9.4,SNR=5.0						
FIA0	FINESS Array S	46.47	323	eP	P	03 18 47.1	+0.4
FINES	FINESS Array B	46.47	323	P	P	03 18 47.1	+0.4
	comp=Z,1.4nm,0.7s,baz=104,slow=8.0,SNR=5.0						
NOA	NORSAR Array B	53.64	323	P	P	03 19 40.8	-0.3
	comp=Z,0.4nm,0.5s,baz=77,slow=7.2,SNR=2.5						
GEC2	GERESS Array S	55.75	309	eP	P	03 19 58.1	+1.4
	comp=Z,2.9nm,1.3s						
GERES	GERESS Array B	55.75	309	P	P	03 19 58.1	+1.4
	comp=Z,0.2nm,0.3s,baz=64,slow=5.6,SNR=3.1						
DAVOX	Davos/Dischmat	58.91	307	P	P	03 20 19.6	+0.5
	comp=Z,1.8nm,0.5s,baz=104,slow=8.3,SNR=5.7						
ILAR	Eielson Array	68.09	23	P	P	03 21 18.7	-0.7
	comp=Z,0.4nm,0.8s,baz=302,slow=5.9,SNR=6.5						
ILB	Eielson Array	68.09	23	eP	P	03 21 18.7	-0.7
WR1	Warramunga Arr	69.75	138	eP	P	03 21 29.1	-1.1
	comp=Z,7.0nm,1.1s						
WRA	Warramunga Arr	69.75	138	P	P	03 21 29.1	-1.1
	comp=Z,0.5nm,0.6s,baz=333,slow=6.4,SNR=7.1						
AS31	Alice Springs	72.59	140	eP	P	03 21 46.1	-1.2
	comp=Z,1.0nm,0.9s						
ASAR	Alice Springs	72.59	140	P	P	03 21 46.1	-1.2
	comp=Z,0.6nm,0.6s,baz=335,slow=6.9,SNR=7.5						
TOA1	Torodi Ar. Sit	82.33	281	eP	P	03 22 42.0	-0.1
TORD	Torodi Ar. Bea	82.33	281	P	P	03 22 42.0	-0.1
	comp=Z,73nm,0.7s,baz=42,slow=4.5						
TORD	Torodi Ar. Bea	82.33	281	P	P	03 22 42.0	-0.1
PAHR	Pah Rah Range	97.84	24	eP	P	03 23 52.0	-3.8
	comp=Z,3.4nm,1.4s						

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*NNC **24** 03:25:27.2±1.9, 45°.01N×82°.43E, h0^{km}, mb2.9, mpv2.6, Error ellipse: s-maj=25.7km s-min=6.4km az=109.0*
*SOME **24** 03:25:28.2, 45°.05N×82°.57E, h25^{km}*
ISC 24 03:25:27.2±1.6**, 45°.05N**±0°.05×**82°.56E**±0°.08**, h10^{km}, n21, σ2ˢ.53**/41**, 3C-3D, Kazakhstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MK31	Makanchi Array	1.75	354	⇓Pn	Pb	03 25 59.5	+0.1
	2.0nm,0.3s,baz=170,slow=17,SNR=89						
MK31				⇓Sn	Sb	03 26 23.3	+1.8
	22nm,0.5s,baz=178,slow=25,SNR=30						
MAKZ	Makanchi	1.80	347	⇑Pn	Pb	03 26 00.2	-0.1
	1.3nm,0.3s						
MAKZ				⇑Sn	Sb	03 26 25.0	+2.1
	9.6nm,0.4s						
DJR	Jarkent	2.10	251	eP	Pb	03 26 05.3	-0.2
	2.5nm,0.1s						
DJR				eS	Sb	03 26 31.6	0.0
	9.3nm,0.6s						
KTMS	Ketmen	2.26	225	eP	Pb	03 26 07.9	-0.3
	5.5nm,0.4s						
KTMS				eS	Sb	03 26 36.5	+0.3
	36nm,0.4s						
KAPS	Kapalarasan	2.28	277	eP	Pb	03 26 08.6	+0.2
	11nm,0.2s						
KAPS				eS	Sb	03 26 37.7	+1.0
	20nm,0.4s						
PDGK	Podgornoye	2.80	233	⇓Pg	Pb	03 26 16.9	-0.5
	3.0nm,0.7s						
PDGK				⇑Lg	Lg	03 26 51.8	
	26nm,1.0s						
SHLS	Shalkode	2.93	231	eP	Pn	03 26 15.9	+2.0
	7.6nm,0.2s						
SHLS				eS	Sn	03 26 49.8	+0.5
	50nm,0.4s						
TDK	Taldyqorghan	2.95	270	eP	Pb	03 26 20.5	+0.7
	72nm,0.3s						
TDK				eS	Sb	03 26 57.5	+1.7
	21nm,0.2s						
UZB	Uzynbulak	3.18	234	eP	Pb	03 26 23.7	-0.2
	1.0nm,0.1s						
UZB				eS	Sb	03 27 03.2	+0.4
	7.7nm,0.2s						
KPKS	Kokpek	3.21	242	eP	Pb	03 26 24.1	-0.2
	2.9nm,0.1s						
KPKS				eS	Sb	03 27 03.9	+0.5
	29nm,0.4s						
ARXS	Arharly	3.48	258	eP	Pb	03 26 28.9	-0.1
	3.1nm,0.2s						
ARXS				eS	Sb	03 27 12.2	+0.9
	12nm,0.2s						
KURS	Kuram	3.52	245	eP	Pb	03 26 30.0	+0.4
	2.8nm,0.5s						
KURS				eS	Sb	03 27 14.6	+2.1
	6.5nm,0.7s						
CHKK	Chushkaly	4.17	255	eP	Pb	03 26 41.4	+0.8
CHKK				eS	Sb	03 27 33.5	+2.5
	2.7nm,0.3s						
KOTS	Kotyrbulak	4.32	247	eP	Pb	03 26 45.5	+2.1
	1.6nm,0.2s						
KOTS				eS	Sb	03 27 40.5	+4.9
	19nm,0.4s						
MDOK	Medeo	4.40	246	eP	Pb	03 26 46.7	+2.1
	1.3nm,0.3s						
MDOK				eS	Sb	03 27 42.6	+4.9
	5.4nm,0.5s						
KTBS	Karatobe	4.42	254	eP	Pb	03 26 46.3	+1.3
	0.2nm,0.2s						
KTBS				eS	Sb	03 27 42.3	+3.9
	7.1nm,0.4s						
TNSS	Tian-Shan	4.52	245	eP	Pb	03 26 48.8	+1.9
	1.7nm,0.4s						
TNSS				eS	Sb	03 27 46.7	+5.2
	3.8nm,0.3s						
KUU	Kurty	4.60	258	eP	Pb	03 26 49.0	+1.0
	1.0nm,0.3s						
KUU				eS	Sb	03 27 46.3	+2.8
	6.3nm,0.3s						
MTBS	Maitube	4.82	249	eP	Pb	03 26 54.0	+2.3
	5.4nm,0.1s						
MTBS				eS	Sb	03 27 55.1	+5.3
	8.3nm,0.2s						
KST	Kastek	5.16	249	eP	Pg	03 27 02.4	-3.7
	2.3nm,0.4s						
KST				eS	Sg	03 28 09.8	-3.1
	3.5nm,0.5s						
DGS	Degeres	5.21	252	eP	Pb	03 27 01.5	+3.0
	1.7nm,0.3s						
DGS				eS	Sg	03 28 08.6	-5.8
	4.9nm,0.4s						

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*ISCJB **24** 03:31:22.9±1.0, 34°.80N±0°.04×141°.59E±0°.09, h27^{km}, mb3.5/2, Error ellipse: s-maj=10.4km s-min=6.1km az=169.4*
*JMA **24** 03:31:22.0±0.2, 34°.72N×141°.61E, h52^{km}±2^{km}, M2.5*
*IDC **24** 03:31:22.1±2.5, 34°.72N×141°.61E, h0^{km}, mb3.4/2, mb1 3.4/4, mb1mx3.2/59, mbtmp3.2/4, ML2.7/2, MS1.9/1, Ms1 1.9/1, ms1mx1.8/30, Error ellipse: s-maj=44.1km s-min=32.3km az=59.0*
ISC 24 03:31:24.3±1.4**, 34°.81N**±0°.05×**141°.4E**±0°.1**, h27^{km}, n13, σ2ˢ.06**/15**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	0.38	246	P	Pn	03 31 33.7	+0.2
BSO3	Boso 3	0.74	270	P	Pb	03 31 39.0	+0.7
BSO3				S	Sn	03 31 50.8	+1.9
CHOJ	Chosi	1.00	334	S	Sb	03 31 57.2	+1.5
JIM2	Oshima 3	1.63	267	P	Pn	03 31 51.0	-0.2
JOD2	Odawara 2	1.96	284	P	Pn	03 31 56.8	+1.1
JHJ	Hachijo jima 2	2.16	219	Pn	Pb	03 32 00.9	-1.7
	5.4nm,0.3s,baz=270,slow=20,SNR=4.8						
JHJ				Sn	Sb	03 32 26.5	-2.4
	8.8nm,0.3s,baz=128,slow=22,SNR=2.6						
JAG	Ashikaga	2.27	316	P	Pb	03 32 01.2	-3.3
JRY	Ryogami san	2.37	301	P	Pn	03 32 02.5	+1.0
JFT	Otama	2.84	343	S	Sn	03 32 42.3	+1.1
MJAR	Matsushiro Arr	3.12	305	Pn	Pb	03 32 14.9	-4.2
	0.7nm,0.3s,baz=130,slow=9.9,SNR=7.0						
MJAR				LR	LR	03 33 45.8	
	comp=Z,19nm,21.1s,baz=160,slow=44						
JCJ	Chichijima	7.72	175	Pn	Pn	03 33 15.1	+0.2
	4.1nm,0.3s,baz=281,slow=19,SNR=4.5						
WRA	Warramunga Arr	54.86	188	P	P	03 40 53.6	+1.3
	0.3nm,0.5s,baz=5.8,slow=7.7,SNR=6.7						
ASAR	Alice Springs	58.59	188	P	P	03 41 20.1	+1.3
	0.3nm,0.6s,baz=0.7,slow=7.7,SNR=3.0						

MEX 24 04:19:30.8±0.3**, 15°.81N×93°.86W, h86^{km}**±6^{km}**, MD3.8, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.62	100	eP	Pn	04 19 44.9	-1.3
PCIG				eS	Sn	04 19 56.1	-1.6
TGIG		1.19	36	eP	Pn	04 19 51.5	-1.2
TGIG				iS	Sn	04 20 07.3	-1.7
CCIG	Comitan	1.72	74	eP	Pn	04 19 58.2	-1.2
CCIG				iS	Sn	04 20 19.5	-1.6

MAN 24 04:24:33.6, 9°.49N×122°.29E, h35^{km}, mb4.3, ML3.2, MS2.9, 1C, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIM	Jordan	1.17	15	eP	Pn	04 24 51.2	-2.3
GUIM				eS	Sn	04 25 05.8	-2.6
TBP	Tagbilaran	1.57	82	eP	Pn	04 24 58.7	-0.4
CUYO	Cuyo Island	1.84	317	eP	Pn	04 25 03.5	+0.7
CUYO				eS	Sn	04 25 25.1	+0.2
PAGZ	Pagadian	1.96	146	eP	Pn	04 25 05.2	+0.8
PAGZ				eS	Sn	04 25 28.2	+0.5
RCP	Roxas	2.11	12	⇑eP	Pn	04 25 07.5	+1.0
RCP				eS	Sn	04 25 31.9	+0.3

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*SOME **24** 04:25:35.2, 44°.65N×82°.33E, h20^{km}*
*NNC **24** 04:25:37.1±0.6, 44°.71N×82°.28E, h0^{km}, mb2.8, mpv2.4, Error ellipse: s-maj=11.4km s-min=2.5km az=106.0*
*ISCJB **24** 04:25:38.7±1.3, 44°.60N±0°.06×82°.4E±0°.1, h33^{km}, Error ellipse: s-maj=14.0km s-min=5.2km az=27.5*
ISC 24 04:25:40.4±2.0**, 44°.63N**±0°.07×**82°.4E**±0°.1**, h35^{km}, n9, σ2ˢ.00**/17**, 4C-3D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJR	Jarkent	1.87	262	⇓iP	Pn	04 26 08.0	-1.9
	3.5nm,0.2s						
DJR				⇑iS	Sn	04 26 31.5	-0.8
	2.6nm,0.3s						
KTMS	Ketmen	1.87	232	eP	Pn	04 26 08.6	-1.4
	3.7nm,0.1s						
KTMS				eS	Sn	04 26 32.5	0.0
	11nm,0.4s						
MK31	Makanchi Array	2.17	359	⇑Pn	Pn	04 26 13.1	-0.9
	1.0nm,0.2s,baz=182,slow=14,SNR=30						
MK31				⇑Sn	Sn	04 26 40.9	+1.3
	0.6nm,0.2s,baz=182,slow=26,SNR=14						
MAKZ	Makanchi	2.20	353	⇓Pn	Pn	04 26 13.7	-0.7
	1.2nm,0.5s						
MAKZ				⇑Sn	Sn	04 26 41.6	+1.2
	2.5nm,0.5s						
KAPS	Kapalarasan	2.23	288	eP	Pn	04 26 13.9	-1.0
	1.6nm,0.1s						
KAPS				eS	Sn	04 26 41.5	+0.2
	2.6nm,0.2s						
PDGK	Podgornoye	2.45	239	⇓Pn	Pn	04 26 18.4	+0.5
	0.4nm,0.2s						
SHLS	Shalkode	2.56	236	eP	Pn	04 26 16.9	-2.6
	8.9nm,0.2s						
SHLS				eS	Sn	04 26 46.8	-2.7
	13nm,0.4s						
UZB	Uzynbulak	2.83	240	eP	Pn	04 26 24.7	+1.4
	1.3nm,0.2s						
UZB				eS	Sn	04 27 00.4	+4.1
	1.4nm,0.2s						
KPKS	Kokpek	2.90	248	eP	Pn	04 26 24.9	+0.8
	4.2nm,0.1s						
KPKS				eS	Sn	04 27 00.9	+3.1
	7.3nm,0.4s						

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*ISCJB **24** 04:28:44.9±0.7, 40°.05N±0°.04×31°.79E±0°.04, h0^{km}, Error ellipse: s-maj=6.1km s-min=4.3km az=169.2*
*ISK **24** 04:28:44.8, 40°.14N×31°.82E, h8^{km}, ML2.6/3*
*CSEM **24** 04:28:45.2±0.3, 40°.12N×31°.79E, h1^{km}, ML2.3, Error ellipse: s-maj=6.8km s-min=5.1km az=172.0, Suspected Mining explosion.*
*DDA **24** 04:29:39.0, 40°.12N×31°.77E, h6^{km}, Ml2.3, Suspected Mining explosion.*
ISC 24 04:28:44.4±0.9**, 40°.04N**±0°.04×**31°.79E**±0°.03**, h0^{km}, n22, σ0ˢ.49**/35**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUMIH	MIHALICIK	0.29	234	PG	Pb	04 28 52.7	0.0
AUMIH				SG	Sb	04 28 58.2	+0.1
AUMIH	MIHALICIK	0.29	234	iP	Pb	04 28 52.7	0.0
AUMIH				iS	Sb	04 28 58.7	+0.6
AUMIH	MIHALICIK	0.29	234	P	Pb	04 28 52.7	0.0
AUMIH				eSg	Sb	04 28 58.2	+0.1
MDUB	Mudurnu	0.63	314	PG	Pg	04 28 56.5	+0.1
MDUB				SG	Sg	04 29 05.2	+0.6
MDUB	Mudurnu	0.63	314	ePg	Pg	04 28 56.5	+0.1
MDUB				eSg	Sg	04 29 05.2	+0.6
CMDR	Camlidere-ANKA	0.69	49	iP	Pg	04 28 58.2	+0.6
CMDR				iS	Sb	04 29 08.8	-0.8
CMDR	Camlidere-ANKA	0.69	49	P	Pg	04 28 58.2	+0.6
ANTO	Ankara	0.79	102	PG	Pb	04 29 00.7	-0.3
ANTO	Ankara	0.79	102	ePg	Pb	04 29 00.7	-0.3
BTAS	Taskesti	0.81	311	iP	Pg	04 28 59.6	-0.2

BTAS				*i* S	Sb	04 29 12.0	-0.8
BORA	Eskisehir	1.04	262	PN	Pn	04 29 05.9	-0.5
BORA				SN	Sn	04 29 21.7	0.0
BORA	Eskisehir	1.04	262	*i* P	Pg	04 29 04.3	-0.1
BORA				*i* S	Sb	04 29 19.7	+0.1
BORA	Eskisehir	1.04	262	P	Pg	04 29 04.3	-0.1
BORA	Eskisehir	1.04	262	*e*Pn	Pn	04 29 05.9	-0.5
BORA				S	Sb	04 29 19.7	+0.1
BORA				*e*Sn	Sn	04 29 21.7	0.0
GULT	Gulveren	1.05	292	PG	Pg	04 29 04.8	+0.2
GULT	Gulveren	1.05	292	*e*Pg	Pg	04 29 04.8	+0.2
SAHE	Sakarya_HENDEK	1.08	319	*i* P	Pg	04 29 05.2	0.0
SAHE				*i* S	Sn	04 29 22.4	-0.2
SAHE	Sakarya_HENDEK	1.08	319	P	Pg	04 29 05.2	0.0
GEYV	SAKARYA_Geyve	1.23	292	*i* P	Pb	04 29 08.5	0.0
GEYV				*i* S	Sn	04 29 27.8	+1.7
GEYV	SAKARYA_Geyve	1.23	292	P	Pb	04 29 08.5	0.0
TVSB	Tavsanli	1.89	253	PN	Pb	04 29 19.1	-0.8
TVSB	Tavsanli	1.89	253	*e*Pn	Pb	04 29 19.1	-0.8

MEX 24 04:35:36.9±0.3**, 18°.46N×102°.90W, h89**^{km}±9^{km}**, MD3.7, Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMIG	Aquila	0.46	248	*i* P	Pn	04 35 49.9	-1.3
MMIG				*e*S	Sn	04 36 00.1	-1.7
ZIIG	Zihuatanejo	1.61	122	*e*P	Pn	04 36 02.9	-1.1
ZIIG				*e*S	Sn	04 36 22.8	-1.7
ARIG	Puente Sto Nin	2.43	94	*e*P	Pn	04 36 14.0	-0.8
ARIG				*i* S	Sn	04 36 42.0	-1.9

*ISCJB **24** 04:46:44.6±0.3, 51°.61N±0°.02×16°.03E±0°.03, h0^{km}, Error ellipse: s-maj=3.1km s-min=2.4km az=168.3*
*CSEM **24** 04:46:46.4±0.1, 51°.60N×15°.99E, h2^{km}, ML3.0/12, Error ellipse: s-maj=3.9km s-min=2.2km az=89.0*
*PRU **24** 04:46:48.1, 51°.56N×16°.00E, h0^{km}*
*VIE **24** 04:46:49.5±0.4, 51°.37N×15°.94E, h0^{km}, mb2.4/3, ml2.6/6, Error ellipse: s-maj=3.3km s-min=2.5km az=156.0 80 km WNW of Wroclaw Suspected Mining induced.*
*UPP **24** 04:46:51.0±2.9, 51°.78N×15°.25E, h9^{km}, ML1.5*
ISC 24 04:46:45.7±0.8**, 51°.65N**±0°.03×**16°.02E**±0°.02**, h0**^{km}**, n61, σ1^{s}.12**/104**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.82	168	*e*Pg	Pb	04 47 02.3	-0.6
KSP				*e*Sg	Sg	04 47 12.5	+0.4
UPC	Upice	1.14	180	*e*PG	Pb	04 47 08.1	-0.2
UPC				*e*SG	Sg	04 47 22.9	+0.6
UPC	Upice	1.14	180	Pg	Pb	04 47 08.1	-0.2
UPC				Sg	Sg	04 47 22.9	+0.6
DPC	Dobruska-Polom	1.31	171	*e*PG	Pg	04 47 11.1	+0.2
DPC				*e*SG	Sg	04 47 27.3	-0.5
	comp=Z,28nm,0.5s						
DPC	Dobruska-Polom	1.31	171	Pg	Pg	04 47 11.1	+0.2
DPC				Sg	Sg	04 47 27.3	-0.5
	28nm,0.5s						
PVCC	Panska Ves	1.44	220	*e*PG	Pb	04 47 14.1	+0.6
PVCC				*e*SG	Sb	04 47 32.3	-0.1
	comp=Z,87nm,0.4s						
PVCC	Panska Ves	1.44	220	Pg	Pb	04 47 14.1	+0.6
PVCC				Sg	Sb	04 47 32.3	-0.1
	87nm,0.4s						
BRG	Berggiesshubel	1.52	240	PG	Pg	04 47 15.3	+0.5
BRG				SG	Sn	04 47 35.3	+0.8
	73nm,0.4s						
KRLC	Kraliky	1.65	163	*e*PG	Pn	04 47 16.4	+0.5
KRLC				*e*SG	Sb	04 47 38.2	-0.1
	comp=Z,11nm,0.4s						
KRLC	Kraliky	1.65	163	Pg	Pn	04 47 16.4	+0.5
KRLC				Sg	Sb	04 47 38.2	-0.1
	11nm,0.4s						
GOPC	GO Pecny, Ondr	1.90	205	*e*PG	Pg	04 47 22.1	-0.1
GOPC				*e*SG	Sb	04 47 45.7	+0.1
	comp=Z,18nm,0.6s						
GOPC	GO Pecny, Ondr	1.90	205	Pg	Pg	04 47 22.1	-0.1
GOPC				Sg	Sb	04 47 45.7	+0.1
	18nm,0.6s						
PRU	Pruhonice	1.91	210	*e*PN	Pn	04 47 19.6	+0.1
PRU				*e*PG	Pb	04 47 21.6	+0.3
PRU				*e*SG	Sb	04 47 46.1	+0.4
	comp=Z,20nm,0.5s						
PRU	Pruhonice	1.91	210	Pn	Pn	04 47 19.6	+0.1
CLL	Collm	1.92	261	*e*Pn	Pn	04 47 20.0	+0.4
	comp=Z,10.0nm,0.6s						
CLL				*e*Pg	Pg	04 47 23.0	+0.6
CLL				*i*		04 47 26.6	
CLL				*e*		04 47 43.0	
CLL				*e*Sg	Sg	04 47 48.0	+0.8
	comp=Z,15nm,0.5s						
CLL				Lm	MLR	06 23 00.0	
	comp=Z,200nm,18.5s						
MORC	Moravsky Berou	2.11	152	*e*Pn	Pn	04 47 22.5	+0.2
MORC				*e*Sg	Sb	04 47 52.2	+0.6
MORC	Moravsky Berou	2.11	152	*e*PN	Pn	04 47 22.5	+0.2
MORC				*e*SG	Sb	04 47 52.2	+0.6
OKC	Ostrava-Krasne	2.26	142	*e*PG	Pg	04 47 28.9	-0.1
OKC				*e*SG	Sg	04 47 58.1	-0.2
	comp=Z,29nm,0.7s						
OKC	Ostrava-Krasne	2.26	142	Pg	Pg	04 47 28.9	-0.1
OKC				Sg	Sg	04 47 58.1	-0.2
	comp=Z,29nm,0.7s						
VRAC	Vranov	2.37	171	*e*Pn	Pn	04 47 26.7	+0.8
VRAC				*e*Sg	Sb	04 48 00.0	+1.0
VRAC	Vranov	2.37	171	*e*PN	Pn	04 47 26.7	+0.8
VRAC				*e*SG	Sb	04 48 00.0	+1.0
KRUC	Moravsky	2.60	174	*e*Pn	Pn	04 47 30.1	+1.1
KRUC				*e*Sg	Sg	04 48 08.1	-1.1
KRUC	Moravsky	2.60	174	*e*PN	Pn	04 47 30.1	+1.1
KRUC				*e*SG	Sg	04 48 08.1	-1.1
NKC	Novy Kostel	2.66	239	*e*PN	Pn	04 47 31.0	+1.1
NKC				*e*PG	Pg	04 47 36.9	+0.1
NKC				*e*SG	Sg	04 48 11.1	-0.2
	comp=Z,38nm,0.8s						
NKC	Novy Kostel	2.66	239	Pn	Pn	04 47 31.0	+1.1
OJC	Ojcow	2.79	119	*e*Pg	Pg	04 47 40.0	+0.9
OJC				*e*Sg	Sg	04 48 15.8	+0.6
OJC	Ojcow	2.79	119	*e*Pg	Pg	04 47 40.0	+0.9
OJC				*e*Sg	Sg	04 48 15.8	+0.6
KHC	Kasperske Hory	2.96	213	*e*PN	Pn	04 47 34.9	+0.9
KHC				*e*PG	Pb	04 47 40.7	+1.3
KHC				*e*SN	Sn	04 48 10.5	+0.2
KHC				*e*SG	Sg	04 48 19.6	-1.2
	comp=Z,6.8nm,0.4s						
KHC	Kasperske Hory	2.96	213	Pn	Pn	04 47 34.9	+0.9
JAVC	Velka Javorina	2.98	159	*e*Pn	Pn	04 47 35.6	+1.2
JAVC				*e*Sg	Sg	04 48 20.1	-1.5
JAVC	Velka Javorina	2.98	159	*e*PN	Pn	04 47 35.6	+1.2
JAVC				*e*SG	Sg	04 48 20.1	-1.5
MODS	Modra-Piesok	3.38	166	*e*SG	Sg	04 48 32.0	-2.1
MODS				*e*LG	Lg	04 48 38.5	
BSD	Bornholm Skovb	3.54	350	*i* P	Pn	04 47 42.7	+0.8
BSD				*i* S	Sn	04 48 23.9	-0.4
BSD	Bornholm Skovb	3.54	350	*i* P	Pn	04 47 42.7	+0.8
	SNR=56						
BSD				*i* S	Sn	04 48 23.9	-0.4
CONA	Conrad Observa	3.72	182	*e*Pn	Pn	04 47 43.8	-0.7
	comp=Z,0.3nm,0.2s						
CONA				Sg	Sg	04 48 43.3	-2.0
	comp=Z,3.3nm,0.3s						
CONA	Conrad Observa	3.72	182	Pn	Pn	04 47 43.8	-0.7
	comp=Z,0.3nm,0.2s						
CONA				Sg	Sg	04 48 43.3	-2.0
	comp=Z,3.3nm,0.3s						
MOA	Molln	3.97	197	*i* Pn	Pn	04 47 48.6	+0.8
	comp=Z,1.9nm,0.3s						
MOA				Sg	Sg	04 48 50.6	-2.5
	comp=Z,1.0nm,0.2s						
MOA	Molln	3.97	197	Pn	Pn	04 47 48.6	+0.8
	comp=Z,1.9nm,0.3s						
MOA				Sg	Sg	04 48 50.6	-2.5
	comp=Z,1.0nm,0.2s						
LUNU	Lund	4.28	340	P	Pn	04 47 52.3	+0.3
LUNU	Lund	4.28	340	P	Pn	04 47 52.3	+0.3
ARSA	Arzberg	4.41	184	*e*Sg	Sg	04 49 06.5	-0.9
	comp=Z,1.4nm,0.3s						
ARSA	Arzberg	4.41	184	Sg	Sg	04 49 06.5	-0.9
	comp=Z,1.4nm,0.3s						
BLEU	Blekinge	4.67	359	P	Pn	04 47 58.6	+1.2
BLEU	Blekinge	4.67	359	P	Pn	04 47 58.6	+1.2
BJUU	Bjuv	4.78	339	P	Pn	04 47 58.5	-0.4
BJUU				S	Sn	04 48 50.5	-4.3
BJUU	Bjuv	4.78	339	P	Pn	04 47 58.5	-0.4
KBA	Koelnbreinsper	4.89	202	*e*Pn	Pn	04 48 00.9	+0.2
	comp=Z,0.6nm,0.3s						
KBA				Sg	Sg	04 49 22.6	-0.3
	comp=Z,1.6nm,0.3s						
KBA	Koelnbreinsper	4.89	202	Pn	Pn	04 48 00.9	+0.2
	comp=Z,0.6nm,0.3s						
KBA				Sg	Sg	04 49 22.6	-0.3
	comp=Z,1.6nm,0.3s						
DEL	Delary	5.00	346	P	Pn	04 48 02.1	+0.2
DEL				S	Sn	04 48 56.0	-4.2
DEL	Delary	5.00	346	P	Pn	04 48 02.1	+0.2
VXJU	Vaexsjoe	5.32	354	P	Pn	04 48 07.5	+1.1
VXJU	Vaexsjoe	5.32	354	P	Pn	04 48 07.5	+1.1
OSKU	Oskarshamn	5.56	0	P	Pn	04 48 11.2	+1.6
OSKU	Oskarshamn	5.56	0	P	Pn	04 48 11.2	+1.6
BYXU	Byxelkrok	5.69	5	P	Pn	04 48 13.5	+2.2
BYXU	Byxelkrok	5.69	5	P	Pn	04 48 13.5	+2.2
EKSU	Eksjoe	5.95	356	P	Pn	04 48 16.1	+1.0
EKSU	Eksjoe	5.95	356	P	Pn	04 48 16.1	+1.0
VSTU	Vaestervik	6.04	3	S	Sn	04 49 24.5	-1.3
VIKU	Vikbolandet	6.88	3	P	Pn	04 48 29.2	+1.4
VIKU	Vikbolandet	6.88	3	P	Pn	04 48 29.2	+1.4

*ISCJB **24** 04:53:42.5±1.5, 21°.56N±0°.09×143°.2E±0°.5, h311^{km}, mb3.4/7, Error ellipse: s-maj=66.3km s-min=11.1km az=176.5*
*IDC **24** 04:53:43.5±2.0, 21°.60N×143°.14E, h305^{km}±20^{km}, mb3.1/8, mb1 3.2/9, mb1mx3.0/61, mbtmp3.8/9, Error ellipse: s-maj=67.7km s-min=13.2km az=82.0*
ISC 24 04:53:44.0±1.9**, 21°.6N**±0°.1×**143°.1E**±0°.6**, h311**^{km}**, n9, σ0^{s}.80**/10**, mb3.5**/7**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	5.53	351	P	Pn	04 55 08.7	+0.7
	5.3nm,0.3s,baz=288,slow=19,SNR=7.2						
JCJ				S	S	04 56 14.2	-1.5
	2.5nm,0.3s,baz=287,slow=19,SNR=3.6						
KSRS	Korea Array	20.55	324	P	P	04 57 59.8	+0.1
	1.4nm,0.6s,baz=146,slow=9.3,SNR=6.7						
KLR	Kul'dur	29.01	345	P	P	04 59 16.2	+0.6
	0.2nm,0.5s,baz=161,slow=7.2,SNR=9.4						
WRA	Warramunga Arr	42.19	192	P	P	05 01 07.3	+0.1
	0.7nm,0.6s,baz=12,slow=8.1,SNR=14						
ASAR	Alice Springs	45.89	192	P	P	05 01 35.6	-0.8
	0.2nm,0.6s,baz=9.3,slow=8.6,SNR=3.1						
KURBB	Kurchatov Arra	57.55	317	P	P	05 03 01.8	+0.2
	0.7nm,0.4s,baz=93,slow=7.3,SNR=9.5						
BVAR	Borovoye Array	62.70	320	P	P	05 03 36.6	+0.3
	1.1nm,0.3s,baz=86,slow=7.4,SNR=6.0						
ARCES	ARCESS Array B	78.98	341	P	P	05 05 13.4	+0.1
	1.6nm,0.8s,baz=48,slow=4.0,SNR=3.7						
FINES	FINESS Array B	83.23	334	P	P	05 05 35.0	-0.7
	1.5nm,0.8s,baz=46,slow=6.0,SNR=3.5						

*NEIC **24** 05:11:38.9±0.0, 18°.01N×67°.09W, h7^{km}, MD3.7(RSPR), After RSPR.*
NEIC Felt [IV] at Cabo Rojo and [II] at San German.
RSPR 24 05:11:38.9, 18°.01N×67°.09W, h7^{km}**, MD3.7**/13**, 21C-15D, Mona Passage**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CRPR	Cabo Rojo, PR	0.02	268	⇑*e*P	Pg	05 11 40.4	+0.1
CRPR				*e*S	Sg	05 11 41.3	+0.1
CRPR	Cabo Rojo, PR	0.02	268	⇑*e*P	Pg	05 11 40.4	+0.1
LSP	Las Mesas	0.17	1	⇓*e*P	Pg	05 11 42.8	+0.4
LSP	Las Mesas	0.17	1	*e*S	Sg	05 11 46.1	+1.3
LSP	Las Mesas	0.17	1	⇓*e*P	Pg	05 11 42.8	+0.4
LSP				*e*S	Sg	05 11 46.1	+1.3
MPR	Mayaguez	0.21	346	⇑*e*P	Pg	05 11 43.5	+0.3
MPR	Mayaguez	0.21	346	⇑*e*P	Pg	05 11 43.5	+0.4
MPR				*e*S	Sg	05 11 47.6	+1.5
MPR	Mayaguez	0.21	346	⇑*e*P	Pg	05 11 43.5	+0.3
AGPR	Aguadilla, PR	0.46	357	⇑*e*P	Pg	05 11 48.0	+0.2
AGPR	Aguadilla, PR	0.46	357	*e*S	Sg	05 11 54.7	+0.8
AGPR	Aguadilla, PR	0.46	357	⇑*e*P	Pg	05 11 48.0	+0.2
AGPR				*e*S	Sg	05 11 54.7	+0.8
OBIP	Obispado Ponce	0.46	86	⇑*e*P	Pg	05 11 47.8	-0.1
OBIP	Obispado Ponce	0.46	86	*e*S	Sg	05 11 54.8	+0.9
OBIP	Obispado Ponce	0.46	86	⇑*e*P	Pg	05 11 47.8	-0.1
OBIP				*e*S	Sg	05 11 54.8	+0.9
AOPR	Arecibo Observ	0.46	43	⇓*e*P	Pg	05 11 48.0	0.0
AOPR				*e*S	Sg	05 11 54.4	+0.4
AOPR	Arecibo Observ	0.46	43	⇓*e*P	Pg	05 11 48.0	0.0
AOPR	Arecibo Observ	0.46	43	⇓*e*P	Pg	05 11 48.0	0.0
AOPR				*e*S	Sg	05 11 54.2	+0.2
CELP	Cerrillos	0.49	82	⇓*e*P	Pg	05 11 48.6	+0.2
CELP	Cerrillos	0.49	82	⇓*e*P	Pg	05 11 48.6	+0.2
IDE	Isla Desecheo	0.53	316	⇓*e*P	Pg	05 11 49.0	-0.2
IDE	Isla Desecheo	0.53	316	*e*S	Sg	05 11 56.5	+0.4
IDE	Isla Desecheo	0.53	316	⇓*e*P	Pg	05 11 49.0	-0.2
IDE				*e*S	Sg	05 11 56.5	+0.4
EMPR	Esperanza - Ma	0.71	49	⇓*e*P	Pg	05 11 52.7	+0.1
EMPR	Esperanza - Ma	0.71	49	*e*S	Sb	05 12 03.1	-0.4
EMPR	Esperanza - Ma	0.71	49	⇓*e*P	Pg	05 11 52.7	+0.1
EMPR				*e*S	Sb	05 12 03.1	-0.4
SJG	San Juan	0.90	83	⇑*e*P	Pg	05 11 55.2	-1.0
SJG	San Juan	0.90	83	⇑*e*P	Pg	05 11 55.2	-1.0
HUMP	Col San Antoni	1.19	83	⇑*e*P	Pg	05 12 00.1	-1.6
HUMP	Col San Antoni	1.19	83	*e*S	Sb	05 12 17.6	+0.3
HUMP	Col San Antoni	1.19	83	⇑*e*P	Pg	05 12 00.5	-1.2
HUMP	Col San Antoni	1.19	83	⇑*e*P	Pg	05 12 00.1	-1.6
HUMP				⇑*e*P	Pb	05 12 00.5	-1.2
HUMP				*e*S	Sb	05 12 17.6	+0.3
CBYP	Canovanas	1.20	77	⇓*e*P	Pg	05 12 00.3	-1.7
CBYP	Canovanas	1.20	77	⇓*e*P	Pg	05 12 00.3	-1.7
MTP	Monte Pirata	1.46	86	*e*S	Sb	05 12 25.4	+0.1
MTP	Monte Pirata	1.46	86	⇑*e*P	Pn	05 12 04.9	-0.8
MTP	Monte Pirata	1.46	86	⇑*e*P	Pn	05 12 04.9	-0.8
MTP				*e*S	Sb	05 12 25.4	+0.1
STVI	Saint Thomas	2.06	80	⇑*e*P	Pb	05 12 15.6	-1.0
STVI	Saint Thomas	2.06	80	⇑*e*P	Pb	05 12 15.6	-1.0
CDVI	St. Croix	2.23	96	⇓*e*P	Pn	05 12 14.5	-1.7
CDVI	St. Croix	2.23	96	⇓*e*P	Pn	05 12 14.5	-1.7
ABVI	Anegada Island	2.71	74	⇑*e*P	Pn	05 12 23.5	+0.6
ABVI				*e*S	Sn	05 12 56.1	+0.1
ABV	Anegada	2.71	74	⇑*e*P	Pn	05 12 23.5	+0.6
ABV	Anegada	2.71	74	*e*S	Sn	05 12 56.1	+0.1

*SOME **24** 05:16:08.4, 44°.88N×82°.78E, h20^{km}*
*NNC **24** 05:16:08.3±3.0, 44°.81N×82°.68E, h0^{km}, mb2.7, mpv2.3, Error ellipse: s-maj=34.0km s-min=14.8km az=108.0*
ISC 24 05:16:08.1±2.6**, 44°.88N**±0°.07×**82°.8E**±0°.1**, h10**^{km}**, n8, σ1^{s}.32**/14**, 4C-3D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MK31	Makanchi Array	1.94	350	⇑Pn	Pb	05 16 43.7	+0.1
	0.4nm,0.2s,baz=163,slow=15,SNR=108						
MK31				⇑Sn	Sg	05 17 09.8	-0.8
	0.4nm,0.2s,baz=166,slow=28,SNR=13						
MAKZ	Makanchi	2.01	344	⇓Pn	Pb	05 16 44.5	-0.2
	0.8nm,0.3s						
MAKZ				⇓Sn	Sg	05 17 11.7	-0.9
	1.2nm,0.5s						
DJR	Jarkent	2.20	257	*e*P	Pb	05 16 48.1	0.0
	0.7nm,0.2s						
DJR				*e*S	Sg	05 17 16.6	-2.2
	1.7nm,0.2s						
KTMS	Ketmen	2.26	231	*e*P	Pb	05 16 49.2	+0.2
	1.0nm,0.1s						
KTMS				*e*S	Sg	05 17 18.6	-1.9
	6.4nm,0.2s						
KAPS	Kapalarasan	2.45	281	⇑*i*P	Pb	05 16 52.2	-0.2
	0.9nm,0.2s						
KAPS				⇓*i*S	Sb	05 17 23.7	+1.0
	3.8nm,0.2s						
PDGK	Podgornoye	2.83	238	⇑Lg	Lg	05 17 34.1	
	1.7nm,0.6s						
KPKS	Kokpek	3.26	246	*e*P	Pb	05 17 06.2	0.0
	1.6nm,0.3s						
KPKS				*e*S	Sb	05 17 47.9	+1.9
	3.9nm,0.2s						
ARXS	Arharly	3.60	261	*e*P	Pb	05 17 12.0	+0.1
	1.0nm,0.2s						
ARXS				*e*S	Sb	05 17 57.7	+2.1
	1.9nm,0.2s						

*IDC **24** 05:25:25.7±0.6, 16°.37N×98°.11W, h0^{km}, mb4.6/24, mb1 4.8/27, mb1mx4.6/45, mbtmp4.6/27, ML4.2/3, MS4.4/34, Ms1 4.4/34, ms1mx4.3/45, Error ellipse: s-maj=21.5km s-min=12.7km az=59.0*
*MOS **24** 05:25:27.8±0.8, 16°.43N×98°.01W, h21^{km}, mb5.3/60, Error ellipse: s-maj=8.9km s-min=4.4km az=92.9*
*MEX **24** 05:25:28.7±0.5, 16°.26N×98°.31W, h6^{km}±2^{km}, MD5.0*
*GCMT **24** 05:25:28.7±0.3, 16°.57N×98°.07W, h18^{km}±1^{km}, MW5.2/80, Moment Tensor Solution. s54,c75; s80,c126; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}3.23±.16; $M_{\theta\theta}$-2.78±.11; $M_{\phi\phi}$-0.44±.10; $M_{r\theta}$4.04±.33; $M_{\theta\phi}$0.62±.07; $M_{\phi r}$-4.25±.38; Best double couple: $M_0$6.58300×10^{16} NP1: ϕ_s132.00000°, δ77.00000°, λ100.00000°. NP2: ϕ_s273.00000°, δ16.00000°, λ52.00000°. Principal axes: T 7.0370, Plg57.0000°, Azm55.0000°; N -0.9070, Plg10.0000°, Azm309.0000°; P -6.1280, Plg31.0000°, Azm213.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*NEIC **24** 05:25:28.7±0.0, 16°.27N×98°.31W, h5^{km}, mb5.2/297, MD5.0(MEX), After MEX.*
NEIC Felt [V] at Pinotepa Nacional and [II] at Mexico. Also felt at Acapulco, Acatzingo, Arcelia, Cacahuatepec, Chilapa, Chilpancingo, Cholula, Coacalco, Cuautlancingo, Naucalpan, Nezahualcoyotl, Oaxaca, Tehuacan and Tultitlan.
*ISCJB **24** 05:25:28.4±0.5, 16°.59N±0°.02×97°.98W±0°.01, h18^{km}±3^{km}, mb5.1/351, MS4.4/34, Error ellipse: s-maj=3.3km s-min=2.3km az=16.9*
ISC 24 05:25:27.5±1.1**, 16°.36N**±0°.04×**98°.28W**±0°.03**, h12**^{km}±6^{km}**, n1158, σ1^{s}.58**/1166**, mb5.2**/354**, MS4.4**/34**, 8C-1D, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.15	77	*e*P	Pb	05 25 32.6	+0.3
PNIG				*i* S	Sg	05 25 35.7	+2.2
PNIG	Pinotepa	0.15	77	*e*Pg	Pb	05 25 32.6	+0.3
PNIG				*e*Sg	Sg	05 25 35.7	+2.2
TLIG	Tlapa	1.23	347	*e*P	Pn	05 25 50.4	-0.3
TLIG				*e*S	Sb	05 26 06.1	-0.6
TLIG	Tlapa	1.23	347	*e*Pn	Pn	05 25 49.7	-1.0
TLIG				*e*Sn	Sg	05 26 06.6	-0.7
HMTT	Tlapaneco	1.46	349	*e*P	Pn	05 25 52.5	-1.3
HMTT				*i* S	Sn	05 26 12.1	-0.8
ACX	Acapulco	1.60	289	*e*P	Pn	05 25 54.0	-1.7
ACX				*i* S	Sn	05 26 14.3	-2.0
ACP2	Acapulco	1.63	289	*i* P	Pn	05 25 54.7	-1.3
ACP2				*i* S	Sn	05 26 14.2	-2.8
VHO	Vista Hermosa	1.64	64	*e*P	Pn	05 25 56.0	-0.5
VHO				*e*S	Sn	05 26 16.3	-1.3
VHO	Vista Hermosa	1.64	64	*e*Pn	Pn	05 25 56.0	-0.5
VHO				*e*Sn	Sn	05 26 16.3	-1.3
CAIG	El Cayaco	2.03	290	*e*P	Pn	05 26 00.0	-1.6
CAIG				*e*S	Sn	05 26 24.8	-2.1
CAIG	El Cayaco	2.03	290	*e*Pn	Pn	05 26 00.0	-1.6
CAIG				*e*Sn	Sn	05 26 24.8	-2.1
HUIG	Huatulco	2.17	105	*e*P	Pn	05 26 01.9	-1.6
HUIG				*i* S	Sn	05 26 27.4	-2.9
TPIG	Tehuac#an	2.23	23	*e*P	Pn	05 26 05.1	+0.6
TPIG				*i* S	Sn	05 26 32.4	+0.4
YAIG	Yautepec	2.60	343	*e*P	Pn	05 26 10.3	+0.7
YAIG				*i* S	Sn	05 26 41.4	+0.1
ARIG	Puente Sto Nin	2.75	314	*e*P	Pn	05 26 12.0	+0.4
ARIG				*i* S	Sn	05 26 44.1	-0.7
UNM	Universidad Na	3.08	344	*e*P	Pn	05 26 17.2	+0.9
UNM				*i* S	Sn	05 26 53.9	+0.7
ZIIG	Zihuatanejo	3.29	293	*e*P	Pn	05 26 18.0	-1.0
ZIIG				*i* S	Sn	05 26 57.0	-1.2
CMIG	Matias Romero	3.33	77	Pn	Pn	05 26 18.3	-1.2
	34nm,0.3s,baz=243,slow=11,SNR=715						
CMIG				Lg	Lg	05 27 13.5	
	382nm,0.3s,baz=256,slow=20,SNR=15						
LVIG	Laguna Verde	3.79	28	*e*Pn	Pn	05 26 23.6	-2.1
MOIG	Morelia	4.31	320	*e*Pn	Pn	05 26 35.7	+2.5
MOIG				*e*Sn	Sn	05 27 23.2	-0.4
PCIG		4.91	97	*e*P	Pn	05 26 40.3	-0.8
PCIG				*i* S	Sn	05 27 36.9	-1.0
IGIG	Irapuato, Guan	5.24	327	*e*P	Pn	05 26 45.8	-0.2
IGIG				*i* S	Sn	05 27 46.8	+0.3
CCIG	Comitan	5.89	90	*e*Pn	Pn	05 26 54.2	-0.8
CCIG				*e*Sn	Sn	05 28 04.5	+1.9
ZAIG	Zacatecas	7.55	328	*e*Pn	Pn	05 27 18.9	+1.1
LNIG	Linares	8.57	353	*e*Pn	Pn	05 27 31.6	+0.1
MYIG	MØrida	9.29	59	*e*Pn	Pn	05 27 39.4	-2.0
TGUH	Tegucigalpa,Un	10.86	101	*e*Pn	Pn	05 28 03.8	+0.9
833A	Chaparral WMA,	11.95	355	P	Pn	05 28 19.6	+1.7
	baz=175,SNR=62						
833A	Chaparral WMA,	11.95	355	*e*Pn	Pn	05 28 20.0	+2.2
ESTN	Estel	11.96	104	*e*Pn	Pn	05 28 19.9	+1.8
HPIG		12.56	328	*e*Pn	Pn	05 28 28.8	+2.3
BOAB	BOACO BROADBAN	12.82	106	*e*Pn	Pn	05 28 31.4	+1.7
SLBS	Sierra La Lagu	13.16	305	*e*Pn	Pn	05 28 36.1	+1.6
LPIG	La Paz	13.66	306	LR	LR	05 33 36.1	
	comp=Z,1μm,18.1s,baz=122,slow=36						
HKT	Hockley	13.71	9	*e*Pn	Pn	05 28 43.7	+1.9
HKT	Hockley	13.71	9	*e*P	Pn	05 28 43.7	+1.9
LTX	Lajitas	13.83	340	*e*Pn	Pn	05 28 45.5	+1.8
LTX	Lajitas	13.83	340	*e*P	Pn	05 28 45.5	+1.8
TX31	Lajitas Ar. Si	13.83	340	*e*Pn	Pn	05 28 45.8	+2.2
TXAR	Lajitas Array	13.83	340	Pn	Pn	05 28 45.5	+1.8
	0.1nm,0.3s,baz=160,slow=12,SNR=52						
TXAR				Lg	Lg	05 32 55.5	
	0.2nm,0.3s,baz=157,slow=32,SNR=5.2						
TXAR				LR	LR	05 34 56.5	
	comp=Z,3μm,18.8s,baz=0.0,slow=41						
JCT	Junction City	14.13	355	P	Pn	05 28 48.0	+0.4
	baz=174,SNR=12						
JCT	Junction City	14.13	355	*e*Pn	Pn	05 28 48.6	+1.0
JCT	Junction City	14.13	355	*e*P	Pn	05 28 48.6	+1.0
ESPN	Las Esperanzas	14.16	105	*e*Pn	Pn	05 28 49.1	+1.0
JTS	JuntasAbangare	14.29	113	Pn	Pn	05 28 52.0	+2.1
	1.6nm,0.3s,baz=332,slow=7.7,SNR=10						
435B	Jarrell	14.37	2	P	Pn	05 28 50.7	-0.2
	baz=183						
435B	Jarrell	14.37	2	*e*Pn	Pn	05 28 51.6	+0.7
543A	St. Martinvill	14.88	22	*e*Pn	Pn	05 28 56.6	-1.2
441A	DeRidder	15.06	17	P	Pn	05 28 58.8	-1.5
	baz=199						
544A	White Castle	15.16	24	P	Pn	05 29 03.4	+1.8
	baz=207						
HDC	Heredia	15.16	113	*e*Pn	Pn	05 29 02.4	+0.6
	478nm,1.7s						
442A	Mamou	15.25	19	P	Pn	05 29 01.0	-1.8
	baz=202						
WHTX	Lake Whitney,	15.58	3	P	Pn	05 29 06.3	-0.8
	baz=183,SNR=55						
WHTX	Lake Whitney,	15.58	3	*e*Pn	Pn	05 29 07.7	+0.6
	273nm,1.1s						
341A	Kurthwood	15.62	16	P	Pn	05 29 07.0	-0.6
	baz=198,SNR=9.7						
341A	Kurthwood	15.62	16	*e*Pn	Pn	05 29 06.2	-1.4
	227nm,1.4s						
NATX	Nacogdoches	15.68	11	P	Pn	05 29 07.1	-1.3
	baz=193,SNR=7.9						
NATX	Nacogdoches	15.68	11	*e*Pn	Pn	05 29 09.1	+0.7
	274nm,1.0s						
444A	Pine Grove	15.86	24	P	Pn	05 29 07.6	-3.2
	baz=207						
342A	Flagon Creek P	15.90	19	P	Pn	05 29 07.6	-3.6
	baz=201,SNR=5.8						
342A	Flagon Creek P	15.90	19	*e*Pn	Pn	05 29 11.1	-0.2
	109nm,0.9s						
445A	Amite	16.04	25	P	Pn	05 29 09.2	-3.8
	baz=208						
343A	Vidalia	16.05	21	P	Pn	05 29 10.3	-2.9
	baz=204,SNR=7.8						
240A	Hunter Patters	16.14	14	*e*Pn	Pn	05 29 13.2	-1.1
	164nm,1.1s						
ABTX	Abilene, Hawle	16.24	356	P	Pn	05 29 15.0	-0.7
	baz=175,SNR=128						
ABTX	Abilene, Hawle	16.24	356	*e*Pn	Pn	05 29 15.3	-0.3
	490nm,1.3s						
241A	Mo Tay, Goldon	16.34	16	P	Pn	05 29 13.2	-3.7
	baz=198,SNR=6.6						
241A	Mo Tay, Goldon	16.34	16	*e*Pn	Pn	05 29 14.8	-2.1
	525nm,1.8s						

446A	Poplarville baz=211	16.51	28	P	Pn	05 29 15.9	-3.2
344A	Westbrook Farm baz=206,SNR=7.8	16.52	23	P	Pn	05 29 16.3	-3.0
344A	Westbrook Farm 517nm,1.8s	16.52	23	*e*Pn	Pn	05 29 18.5	-0.7
MNTX	Cornudas Mount baz=156,SNR=69	16.58	338	P	Pn	05 29 20.8	+0.7
MNTX	Cornudas Mount 28nm,0.9s	16.58	338	*e*Pn	Pn	05 29 21.1	+1.0
242A	Grayson baz=201	16.59	18	P	Pn	05 29 16.8	-3.3
243A	Waterproof baz=203	16.64	21	P	Pn	05 29 18.1	-2.6
345A	Thompson Farm, baz=208	16.67	25	P	Pn	05 29 18.9	-2.2
140A	Cam and Jess, baz=196,SNR=8.8	16.76	14	P	Pn	05 29 23.0	+0.7
140A	Cam and Jess, 503nm,1.3s	16.76	14	*e*Pn	Pn	05 29 22.6	+0.4
447A	Lucedale baz=213	16.85	30	P	Pn	05 29 19.9	-3.4
447A	Lucedale 76nm,0.8s	16.85	30	*e*Pn	Pn	05 29 23.3	0.0
141A	Papa Simpson, baz=198	16.89	16	P	Pn	05 29 24.1	+0.2
SRIG	Santa Rosalia 92nm,1.7s	16.93	312	*e*Pn	P	05 29 25.6	-0.7
346A	Big Creek Wild baz=210,SNR=6.1	16.98	27	P	Pn	05 29 21.9	-3.1
346A	Big Creek Wild 180nm,1.1s	16.98	27	*e*Pn	Pn	05 29 24.2	-0.8
346A				*e*Sn	Sn	05 32 37.7	+4.0
244A	Avery, Jackson baz=206,SNR=10	17.07	22	P	Pn	05 29 23.2	-2.9
142A	Monroe baz=201	17.11	18	P	Pn	05 29 23.4	-3.2
HSIG	 57nm,1.2s	17.17	319	*e*Pn	P	05 29 30.1	+1.0
VBMS	Vicksburg baz=206	17.29	23	P	Pn	05 29 25.7	-3.1
VBMS	Vicksburg 478nm,1.4s	17.29	23	*e*Pn	Pn	05 29 27.5	-1.4
448A	Bay Minette baz=215	17.34	31	P	Pn	05 29 26.5	-3.1
245A	Little AP, Sta baz=208,SNR=6.2	17.36	25	P	Pn	05 29 26.7	-3.0
Z40A	Long Farm, Mag baz=196,SNR=31	17.39	14	P	Pn	05 29 27.0	-3.1
347A	Saraland baz=213,SNR=7.6	17.41	29	P	Pn	05 29 27.8	-2.5
143A	Socs Landing, baz=202,SNR=12	17.42	20	P	Pn	05 29 27.2	-3.4
143A	Socs Landing, 185nm,1.0s	17.42	20	*e*Pn	Pn	05 29 29.4	-1.1
Z41A	Richland Creek baz=198,SNR=12	17.54	15	P	Pn	05 29 27.8	-4.1
Z41A	Richland Creek 572nm,1.4s	17.54	15	*e*Pn	Pn	05 29 30.4	-1.5
449A	Pace baz=217	17.54	33	P	Pn	05 29 28.2	-3.8
144A	Alexander Plac baz=205	17.69	22	P	Pn	05 29 32.7	-1.2
348A	Jackson baz=214	17.72	30	P	Pn	05 29 31.9	-2.3
348A	Jackson 182nm,1.4s	17.72	30	*e*Pn	Pn	05 29 32.7	-1.5
Z42A	Norrel Spur, H baz=200,SNR=7.9	17.79	18	P	Pn	05 29 32.9	-2.2
145A	Houston Renfro baz=207	17.86	24	P	Pn	05 29 33.1	-2.8
450A	Crestview baz=219	17.91	35	P	Pn	05 29 33.1	-3.5
247A	Quitman baz=211,SNR=6.2	17.92	28	P	Pn	05 29 33.9	-2.9
Z43A	Armstrong Fami baz=202	17.94	19	P	Pn	05 29 34.6	-2.3
BRAL	Brewton baz=217	17.95	33	P	Pn	05 29 34.4	-2.7
BRAL	Brewton 199nm,1.4s	17.95	33	*e*Pn	Pn	05 29 36.4	-0.6
MSTX	Muleshoe baz=166,SNR=42	18.00	348	P	Pn	05 29 37.2	-0.6
MSTX	Muleshoe 145nm,1.1s	18.00	348	*e*Pn	Pn	05 29 37.4	-0.4
349A	Repton baz=216,SNR=7.2	18.02	32	P	Pn	05 29 34.9	-3.0
Y40A	Okolona baz=196,SNR=18	18.14	13	P	Pn	05 29 37.1	-2.3
Y41A	Eaglette Beard baz=198,SNR=13	18.18	15	P	Pn	05 29 37.7	-2.1
146A	Union baz=209	18.23	26	P	Pn	05 29 37.4	-3.2
146A	Union 257nm,1.2s	18.23	26	*e*Pn	Pn	05 29 39.2	-1.3
121A	Cookes Peak, D baz=150,SNR=29	18.27	334	P	P	05 29 42.9	+1.6
Z44A	Pea Ridge, Bel baz=205	18.27	21	P	Pn	05 29 37.9	-3.1
WMOK	Wichita Mounta baz=179,SNR=20	18.31	359	P	Pn	05 29 40.1	-1.3
WMOK	Wichita Mounta 60nm,1.0s	18.31	359	*e*Pn	Pn	05 29 40.2	-1.3
WMOK	Wichita Mounta	18.31	359	*e*P	Pn	05 29 40.2	-1.3
WMOK	 comp=Z,60nm,1.0s			pmax	pmax		
248A	Dixon Mills baz=214,SNR=12	18.36	30	P	Pn	05 29 39.8	-2.2
Y42A	Garnett, Star baz=200	18.36	17	P	Pn	05 29 39.4	-2.7
CCAR	Cane Creek comp=Z,458nm,1.6s	18.44	17	*e*P	P	05 29 42.5	-0.5
X39A	Fountain Ranch baz=193,SNR=30	18.46	11	P	P	05 29 40.7	-2.5
350A	Dozier baz=218,SNR=7.2	18.52	34	P	P	05 29 41.0	-2.9
059Z	Ave Maria baz=241	18.54	55	P	P	05 29 41.1	-3.1
249A	Camden baz=216,SNR=11	18.56	31	P	P	05 29 41.8	-2.6
MIAR	Mount Ida baz=194,SNR=109	18.60	12	P	P	05 29 42.3	-2.5
MIAR	Mount Ida comp=Z,245nm,1.1s	18.60	12	*e*P	P	05 29 43.0	-1.7
MIAR	Mount Ida	18.60	12	*e*P	P	05 29 43.0	-1.7
MIAR	 comp=Z,245nm,1.1s			pmax	pmax		
147A	Livingston baz=211,SNR=7.2	18.60	27	P	P	05 29 42.4	-2.4
147A	Livingston comp=Z,423nm,1.5s	18.60	27	*e*P	P	05 29 44.6	-0.1
147A				*e*Sn	S	05 33 20.3	+3.6
058A	Arcadia baz=238	18.62	52	P	P	05 29 40.9	-4.1
Z45A	Winona baz=206	18.63	23	P	P	05 29 42.7	-2.4
Z45A	Winona comp=Z,572nm,1.5s	18.63	23	*e*P	P	05 29 43.9	-1.1
Y43A	Makayla and Ka baz=202,SNR=7.6	18.69	19	P	P	05 29 43.9	-1.8
AMTX	Amarillo baz=170	18.70	351	P	P	05 29 45.1	-0.9
AMTX	Amarillo comp=Z,157nm,1.1s	18.70	351	*e*P	Pn	05 29 46.1	-0.2
X40A	Basin Creek Fa baz=196,SNR=15	18.70	14	P	P	05 29 43.1	-2.8
X40A	Basin Creek Fa comp=Z,114nm,1.4s	18.70	14	*e*P	P	05 29 44.4	-1.5
553A	Crawfordville baz=226	18.71	40	P	P	05 29 42.3	-3.8
452A	Marianna baz=222	18.74	37	P	P	05 29 41.7	-4.6
061Z	Ochoppi baz=243	18.74	57	P	P	05 29 42.7	-3.7
Z46A	Louisville baz=209,SNR=9.5	18.76	25	P	P	05 29 44.5	-2.0
X41A	Kaden, Bauxite baz=197,SNR=14	18.79	15	P	P	05 29 43.7	-3.1
351A	Pinckard baz=220,SNR=7.5	18.81	36	P	P	05 29 43.9	-3.2
148A	Greensboro baz=213	18.89	29	P	P	05 29 45.5	-2.5
Y44A	Strider, Charl baz=204	18.97	21	P	P	05 29 47.6	-1.2
250A	Grady baz=218	19.00	33	P	P	05 29 47.8	-1.3
250A	Grady comp=Z,62nm,0.8s	19.00	33	*e*P	P	05 29 48.5	-0.7
655A	Horseshoe Beac baz=230	19.02	44	P	P	05 29 46.8	-2.6
X42A	Stuttgart baz=200	19.08	17	P	P	05 29 48.7	-1.3
059A	Moore Haven baz=240	19.08	54	P	P	05 29 48.0	-2.1
UALR	University of comp=Z,87nm,0.9s	19.10	15	*e*P	P	05 29 49.5	-0.7
554A	Perry baz=227	19.11	42	P	P	05 29 48.4	-2.0
Y45A	Yeager Farm, C baz=206,SNR=19	19.12	23	P	P	05 29 48.9	-1.7
Z47A	Carrollton baz=211,SNR=15	19.14	27	P	P	05 29 48.6	-2.1
W39A	Magazine baz=193,SNR=51	19.19	11	P	P	05 29 49.6	-1.6
W39A	Magazine comp=Z,81nm,0.8s	19.19	11	*e*P	P	05 29 50.6	-0.6
149A	Jones baz=215,SNR=18	19.23	31	P	P	05 29 48.9	-2.8
453A	Whigham baz=224	19.25	39	P	P	05 29 50.1	-1.9
453A	Whigham comp=Z,296nm,1.8s	19.25	39	*e*P	P	05 29 51.3	-0.7
X43A	Marvell baz=202,SNR=13	19.26	19	P	P	05 29 50.8	-1.2
X43A	Marvell comp=Z,692nm,1.8s	19.26	19	*e*P	P	05 29 51.6	-0.4
Y22D	IRIS PASSCAL I baz=154	19.28	338	P	Pn	05 29 54.0	+0.6
Y22D	IRIS PASSCAL I comp=Z,100nm,0.8s	19.28	338	*e*P	Pn	05 29 53.5	+0.1
Y22E	IRIS PASSCAL I baz=154	19.28	338	P	Pn	05 29 53.7	+0.3
W40A	Ferguson Farm, baz=195,SNR=16	19.33	13	P	P	05 29 51.7	-1.0
W40A	Ferguson Farm, comp=Z,146nm,1.1s	19.33	13	*e*P	P	05 29 52.5	-0.3
352A	Blakely baz=222,SNR=5.9	19.35	37	P	P	05 29 50.1	-2.9
352A	Blakely comp=Z,78nm,0.9s	19.35	37	*e*P	P	05 29 52.5	-0.5
Y46A	Houston baz=208,SNR=31	19.40	24	P	P	05 29 52.4	-1.1
656A	Willston baz=231	19.41	45	P	P	05 29 50.8	-3.0
656A	Willston comp=Z,65nm,0.9s	19.41	45	*e*P	P	05 29 52.5	-1.2
DWPF	Disney Wildern baz=236	19.46	50	P	P	05 29 52.6	-1.7
DWPF	Disney Wildern comp=Z,212nm,1.4s	19.46	50	*e*P	P	05 29 53.4	-0.9
757A	Oxford baz=233	19.48	47	P	P	05 29 53.2	-1.2
X44A	Crenshaw baz=204,SNR=6.0	19.48	20	P	P	05 29 52.7	-1.7
LRAL	Lakeview Retre baz=214,SNR=19	19.48	30	P	P	05 29 52.7	-1.8
LRAL	Lakeview Retre comp=Z,66nm,1.3s	19.48	30	*e*P	P	05 29 53.9	-0.6
W41B	Gary Mavity, V baz=198,SNR=12	19.50	15	P	P	05 29 53.5	-1.1
W41B	Gary Mavity, V comp=Z,78nm,1.0s	19.50	15	*e*P	P	05 29 53.9	-0.7
Z48A	Northport baz=212,SNR=17	19.51	28	P	P	05 29 53.5	-1.2
TUC	Tucson baz=142	19.52	327	P	Pn	05 29 57.2	+1.0
TUC	Tucson comp=Z,44nm,1.0s	19.52	327	*e*P	Pn	05 29 57.1	+0.9
TUC	Tucson	19.52	327	P	Pn	05 29 57.4	+1.2
TUC	 comp=Z,47nm,1.5s			pmax	pmax		
251A	Midway baz=220,SNR=16	19.54	34	P	P	05 29 53.0	-2.1
959A	Okeechobee baz=239	19.57	52	P	P	05 29 53.2	-2.2
858A	St. Cloud baz=236	19.57	50	P	P	05 29 52.5	-2.9
454A	Quitman baz=226	19.58	41	P	P	05 29 53.9	-1.6
TUL1	Leonard baz=187,SNR=65	19.60	6	P	P	05 29 54.9	-0.8
TUL1	Leonard comp=Z,526nm,1.5s	19.60	6	*e*P	P	05 29 54.8	-0.8
WHAR	Wooly Hollow comp=Z,358nm,1.8s	19.60	15	*e*P	P	05 29 55.1	-0.6
555A	McAlpin baz=229	19.60	43	P	P	05 29 53.6	-2.2
150A	Eclectic baz=217,SNR=15	19.62	32	P	P	05 29 54.0	-2.0
353A	Camilla baz=224	19.66	38	P	P	05 29 55.3	-1.1
X45A	UM Field Stati baz=206,SNR=12	19.68	22	P	P	05 29 54.7	-1.9
060A	Indiantown baz=241	19.72	54	P	P	05 29 54.5	-2.6
OXF	Oxford baz=206,SNR=11	19.75	22	P	P	05 29 55.5	-1.9
OXF	Oxford comp=Z,180nm,1.1s	19.75	22	*e*P	P	05 29 56.8	-0.6
OXF	Oxford	19.75	22	*e*P	P	05 29 56.8	-0.6
OXF	 comp=Z,180nm,1.1s			pmax	pmax		
W42A	Bald Knob baz=199	19.78	17	P	P	05 29 56.8	-0.8
859A	Kempfer Cattle baz=237	19.83	51	P	P	05 29 55.7	-2.6
Y47A	UCPARC, Winfie baz=211,SNR=20	19.83	26	P	P	05 29 56.2	-2.0
V39A	Pettigrew baz=193,SNR=159	19.84	11	P	P	05 29 57.7	-0.7
Z49A	Columbiana baz=215,SNR=21	19.84	30	P	P	05 29 57.1	-1.2
252A	Lumpkin baz=221,SNR=6.2	19.84	36	P	P	05 29 56.6	-1.8
W43A	Forest City baz=202	19.84	19	P	P	05 29 57.2	-1.1
MTDJ	Mount Denham comp=Z,140nm,1.2s	19.89	82	*e*P	P	05 29 59.0	-0.1
556A	Lake Butler baz=230	19.90	44	P	P	05 29 56.3	-2.7
TASL	Snake Pit, Alb baz=157,SNR=106	19.91	340	P	Pn	05 30 00.7	-0.3
ANMO	Albuquerque comp=Z,1.3nm,0.3s,baz=145,slow=12,SNR=138	19.91	340	P	Pn	05 30 00.9	0.0
ANMO	 comp=Z,1µm,19.4s,baz=157,slow=40			LR	LR	05 38 53.7	
ANMO	Albuquerque baz=157	19.91	340	P	Pn	05 30 00.6	-0.4
ANMO	Albuquerque comp=Z,55nm,1.0s	19.91	340	*e*P	Pn	05 30 00.9	0.0
ANMO	Albuquerque	19.91	340	*e*P	Pn	05 30 00.9	0.0
ANMO	 comp=Z,55nm,1.0s			pmax	pmax		
TASM	ASL Pad, Albuq baz=157,SNR=98	19.91	340	P	Pn	05 30 00.1	-0.8
151A	Opelika baz=219,SNR=28	19.92	34	P	P	05 29 57.5	-1.7
V40A	Witts Springs baz=195,SNR=53	19.97	13	P	P	05 29 58.8	-1.0
V40A	Witts Springs comp=Z,120nm,0.9s	19.97	13	*e*P	P	05 29 58.9	-0.9
455A	Stateville baz=227,SNR=5.1	19.98	42	P	P	05 29 57.7	-2.2
657A	Interlachen baz=232	20.01	46	P	P	05 29 57.4	-2.8
X46A	Booneville baz=208,SNR=22	20.10	24	P	P	05 30 00.4	-0.8
V41A	Mountainview baz=197,SNR=54	20.10	15	P	P	05 29 59.8	-1.4
TIGA	Tifton baz=225	20.11	39	P	P	05 29 59.5	-1.8
TIGA	Tifton	20.11	39	*e*P	P	05 29 59.7	-1.6
TIGA				*e*Pn	Pn	05 30 02.1	-1.0
758A	Lake Helen baz=235	20.11	48	P	P	05 29 59.7	-1.6
Y48A	Jasper baz=212,SNR=13	20.14	28	P	P	05 30 00.4	-1.2
W44A	Shelby Farms P baz=204	20.18	20	P	P	05 30 00.7	-1.3
Z50A	Ashland baz=216,SNR=31	20.19	31	P	P	05 30 00.8	-1.4
Z50A	Ashland comp=Z,47nm,0.8s	20.19	31	*e*P	P	05 30 01.5	-0.7
HHAR	Hobbs comp=Z,76nm,1.0s	20.21	10	*e*P	P	05 30 01.3	-1.1
253A	Americus baz=222	20.23	37	P	P	05 30 00.8	-1.9
253A	Americus comp=Z,72nm,0.6s	20.23	37	*e*P	P	05 30 01.5	-1.1
HBAR	Harrisburg comp=Z,222nm,1.2s	20.29	18	*e*P	P	05 30 02.7	-0.5
V42A	Cord baz=199,SNR=26	20.32	16	P	P	05 30 01.9	-1.7
658A	Bunnell baz=234	20.33	47	P	P	05 30 02.7	-1.1
152A	Waverly Hall baz=220,SNR=21	20.36	35	P	P	05 30 02.3	-1.7
152A	Waverly Hall comp=Z,35nm,0.6s	20.36	35	*e*P	P	05 30 03.2	-0.8
X47A	Russelville baz=210,SNR=37	20.36	25	P	P	05 30 02.5	-1.4
557A	Orange Park baz=232	20.36	45	P	P	05 30 03.5	-0.5
214A	Organ Pipe Nat baz=137,SNR=47	20.39	322	P	Pn	05 30 05.9	-0.5
U39A	Green Forest baz=193,SNR=86	20.39	11	P	P	05 30 03.1	-1.3
W45A	Hickory Valley baz=206,SNR=12	20.41	22	P	P	05 30 02.4	-2.2
Y49A	Blount Mountai baz=214,SNR=15	20.44	29	P	P	05 30 03.3	-1.6
Y49A	Blount Mountai comp=Z,213nm,1.8s	20.44	29	*e*P	P	05 30 03.9	-1.0
U40A	Yellville baz=195,SNR=84	20.49	13	P	P	05 30 04.7	-0.7
355A	Pearson baz=227	20.49	41	P	P	05 30 03.6	-1.9
456A	Hilliard baz=230	20.61	43	P	P	05 30 05.4	-1.5
456A	Hilliard comp=Z,188nm,1.0s	20.61	43	*e*P	P	05 30 05.3	-1.5
Z51A	Franklin baz=218	20.62	33	P	P	05 30 04.9	-1.9
254A	Abbeville baz=224,SNR=9.7	20.64	39	P	P	05 30 04.2	-2.9
X48A	Hartselle baz=212,SNR=27	20.65	27	P	P	05 30 05.1	-2.0
X48A	Hartselle comp=Z,73nm,1.0s	20.65	27	*e*P	P	05 30 05.7	-1.4
PLAL	Pickwick Lake comp=Z,100nm,0.9s	20.67	24	*e*P	P	05 30 06.0	-1.4
W46A	Michie baz=208,SNR=9.3	20.69	24	P	P	05 30 05.6	-1.9
U41A	Viola baz=197,SNR=49	20.69	15	P	P	05 30 06.3	-1.4
V44A	Blytheville baz=203	20.78	20	P	P	05 30 07.0	-1.5
Y50A	Piedmont baz=216,SNR=7.6	20.79	31	P	P	05 30 07.1	-1.6
153A	Fort Valley baz=222	20.84	36	P	P	05 30 06.9	-2.3
457A	Yulee baz=231	20.86	44	P	P	05 30 06.0	-3.4
GNAR	Gosnell comp=Z,997nm,1.4s	20.87	19	*e*P	P	05 30 10.2	+0.7
U42A	Revenden baz=199,SNR=80	20.87	16	P	P	05 30 08.2	-1.3
T38A	Diamond baz=191,SNR=64	20.90	9	P	P	05 30 08.2	-1.6
Z52A	Williamson baz=220,SNR=17	20.92	34	P	P	05 30 07.7	-2.3
356A	Blackshear baz=228	20.94	42	P	P	05 30 08.4	-1.9
V45A	Humboldt baz=206,SNR=6.8	21.02	22	P	P	05 30 09.5	-1.6
X49A	Woodville baz=214,SNR=25	21.02	28	P	P	05 30 09.5	-1.6
T39A	Clever baz=193,SNR=64	21.04	11	P	P	05 30 10.0	-1.3
HALT	Halls comp=Z,264nm,1.1s	21.04	21	*e*P	P	05 30 10.9	-0.5
W47A	Westpoint baz=210,SNR=54	21.10	25	P	P	05 30 10.4	-1.6
U43A	Rector baz=201,SNR=12	21.12	18	P	P	05 30 10.6	-1.6
255A	Hazlehurst comp=Z,82nm,0.7s	21.13	40	*e*P	P	05 30 10.8	-1.5
Y51A	Rockmart baz=217,SNR=24	21.13	32	P	P	05 30 10.9	-1.5
154A	Montrose baz=224,SNR=7.8	21.23	38	P	P	05 30 11.3	-2.1
154A	Montrose comp=Z,154nm,0.9s	21.23	38	*e*P	P	05 30 12.5	-0.9
W48A	Pulaski baz=211,SNR=36	21.28	26	P	P	05 30 12.6	-1.3
X50B	Fort Payne baz=215,SNR=24	21.29	30	P	P	05 30 12.6	-1.6
W18A	Petrified Fore baz=149,SNR=44	21.31	333	P	P	05 30 16.8	+2.3
W18A	Petrified Fore comp=Z,71nm,1.0s	21.31	333	*e*P	P	05 30 16.5	+1.9
T40A	Mansfield baz=195	21.33	13	P	P	05 30 13.7	-0.8
V46A	Holladay baz=208,SNR=76	21.38	23	P	P	05 30 12.9	-2.1
GLAT	Glass comp=Z,416nm,1.3s	21.38	20	*e*P	P	05 30 13.8	-1.3
T41A	Mountain View baz=197,SNR=78	21.40	14	P	P	05 30 14.1	-1.2
T25A	Trinidad baz=164,SNR=159	21.40	346	P	P	05 30 16.9	+1.4
T25A	Trinidad comp=Z,183nm,1.0s	21.40	346	*e*P	P	05 30 16.7	+1.2
357A	Townsend baz=229	21.42	43	P	P	05 30 12.9	-2.5
U44B	Burton Farm, H baz=204	21.43	20	P	P	05 30 14.2	-1.3
Z53A	Monticello baz=222,SNR=30	21.45	36	P	P	05 30 14.0	-1.8
U44A	Portageville baz=203	21.47	19	P	P	05 30 14.4	-1.5
PBMO	Poplar Bluff comp=Z,121nm,0.8s	21.50	17	*e*P	P	05 30 15.3	-1.0
256A	Glennville baz=227	21.53	41	P	P	05 30 13.7	-2.9
S38A	Stockton baz=192,SNR=69	21.54	9	P	P	05 30 15.0	-1.7
T42A	Van Buren baz=199,SNR=84	21.55	16	P	P	05 30 15.2	-1.7
T42A	Van Buren comp=Z,265nm,1.4s	21.55	16	*e*P	P	05 30 15.4	-1.4
W49A	Belvidere baz=213,SNR=50	21.55	28	P	P	05 30 15.5	-1.5
UTMT	University of comp=Z,519nm,1.0s	21.59	21	*e*P	P	05 30 16.4	-0.9
PARMO	Parma comp=Z,301nm,1.0s	21.59	19	*e*P	P	05 30 16.3	-1.0
GOGA	Godfrey baz=222,SNR=29	21.61	35	P	P	05 30 15.8	-1.6
GOGA	Godfrey comp=Z,73nm,0.8s	21.61	35	*e*P	P	05 30 15.9	-1.6
GOGA	Godfrey	21.61	35	*e*P	P	05 30 15.9	-1.6
GOGA	 comp=Z,73nm,0.8s			pmax	pmax		
155A	Kite baz=225,SNR=10	21.61	39	P	P	05 30 15.5	-2.0
Y52A	Lilburn baz=220,SNR=26	21.62	34	P	P	05 30 15.8	-1.9
Y52A	Lilburn comp=Z,120nm,1.0s	21.62	34	*e*P	P	05 30 16.2	-1.5
Y52A				*e*S	S	05 34 19.7	+2.6
U45A	Rockin P Farm, baz=205,SNR=31	21.63	21	P	P	05 30 15.9	-1.9
V47A	Nunnelly baz=209,SNR=66	21.63	24	P	P	05 30 16.0	-1.7
S39A	Bolivar baz=193,SNR=62	21.70	11	P	P	05 30 16.9	-1.5
S39A	Bolivar comp=Z,154nm,1.3s	21.70	11	*e*P	P	05 30 17.0	-1.5
S40A	Lebanon baz=195,SNR=126	21.76	12	P	P	05 30 17.8	-1.3
X51A	Calhoun baz=217,SNR=14	21.76	31	P	P	05 30 17.5	-1.7
X51A	Calhoun comp=Z,66nm,0.8s	21.76	31	*e*P	P	05 30 17.9	-1.3
WVT	Waverly baz=208	21.78	23	P	P	05 30 17.3	-1.9
WVT	Waverly comp=Z,144nm,0.9s	21.78	23	*e*P	P	05 30 17.4	-1.9
WVT	Waverly	21.78	23	*e*P	P	05 30 17.4	-1.9
WVT	 comp=Z,144nm,0.9s			pmax	pmax		
SWET	Sewanee comp=Z,84nm,0.9s	21.78	28	*e*P	P	05 30 18.3	-1.2

T43A	**Greenville**	**21.82**	**17**	P	**P**	**05 30 18.3**	**-1.5**
	baz=201,SNR=33						
Z54A	**Sparta**	**21.83**	**37**	P	**P**	**05 30 17.9**	**-2.0**
	baz=223,SNR=46						
V48A	**Smith Brothers**	**21.84**	**26**	P	**P**	**05 30 18.4**	**-1.5**
	baz=211						
V48A	**Smith Brothers**	**21.84**	**26**	*e*P	**P**	**05 30 18.7**	**-1.3**
	comp=Z,119nm,1.0s						
U46A	**Springville**	**21.85**	**22**	P	**P**	**05 30 17.9**	**-2.1**
	baz=207,SNR=30						
Y53A	**Monroe**	**21.88**	**35**	P	**P**	**05 30 18.3**	**-2.0**
	baz=221,SNR=43						
S41A	**Jillco Farms,**	**21.92**	**14**	P	**P**	**05 30 19.4**	**-1.4**
	baz=197,SNR=100						
T44A	**Benton**	**22.03**	**19**	P	**P**	**05 30 20.4**	**-1.6**
	baz=203,SNR=17						
W50A	**Signal Mountai**	**22.06**	**29**	P	**P**	**05 30 20.6**	**-1.8**
	baz=215,SNR=50						
W50A	**Signal Mountai**	**22.06**	**29**	*e*P	**P**	**05 30 21.1**	**-1.2**
	comp=Z,96nm,0.9s						
R38A	**Fenwick Farm,**	**22.08**	**9**	P	**P**	**05 30 20.3**	**-2.2**
	baz=191,SNR=46						
Z55A	**Blythe**	**22.23**	**38**	P	**P**	**05 30 22.1**	**-2.1**
	baz=225						
SDCO	**Great Sand Dun**	**22.24**	**345**	P	**P**	**05 30 25.2**	**+0.6**
	baz=162,SNR=65						
SDCO	**Great Sand Dun**	**22.24**	**345**	*e*P	**P**	**05 30 24.8**	**+0.3**
	comp=Z,46nm,1.0s						
V49A	**McMinnville**	**22.26**	**27**	P	**P**	**05 30 22.4**	**-2.1**
	baz=213,SNR=46						
U47A	**Clarksville**	**22.26**	**24**	P	**P**	**05 30 22.5**	**-2.0**
	baz=209,SNR=49						
T45A	**Paducah**	**22.28**	**21**	P	**P**	**05 30 22.8**	**-1.9**
	baz=205						
T45A	**Paducah**	**22.28**	**21**	*e*P	**P**	**05 30 23.6**	**-1.0**
	comp=Z,105nm,0.6s						
X52A	**Dahlonega**	**22.28**	**33**	P	**P**	**05 30 22.5**	**-2.3**
	baz=219,SNR=20						
W51A	**Cleveland**	**22.29**	**30**	P	**P**	**05 30 22.6**	**-2.2**
	baz=216,SNR=15						
GTBY	**Guantanamo Bay**	**22.29**	**77**	*e*P	**P**	**05 30 24.3**	**-0.7**
	comp=Z,121nm,1.0s						
S42A	**Caledonia**	**22.33**	**16**	P	**P**	**05 30 22.9**	**-2.3**
	baz=199,SNR=70						
S43A	**Fulton Ridge,**	**22.34**	**17**	P	**P**	**05 30 22.8**	**-2.5**
	baz=201,SNR=17						
R39A	**Chumby, Stover**	**22.35**	**11**	P	**P**	**05 30 23.5**	**-1.9**
	baz=193,SNR=101						
GLA	**Glamis**	**22.36**	**321**	P	**P**	**05 30 27.8**	**+2.1**
	baz=134,SNR=29						
GLA	**Glamis**	**22.36**	**321**	*e*P	**P**	**05 30 27.7**	**+2.1**
	comp=Z,66nm,1.0s						
Y54A	**Tignall**	**22.38**	**36**	P	**P**	**05 30 23.3**	**-2.5**
	baz=222,SNR=53						
WUAZ	**Wupatki**	**22.38**	**331**	P	**P**	**05 30 28.5**	**+2.5**
	baz=146,SNR=56						
WUAZ	**Wupatki**	**22.38**	**331**	*e*P	**P**	**05 30 28.4**	**+2.5**
	comp=Z,164nm,1.1s						
CBKS	**Cedar Bluff**	**22.41**	**357**	P	**P**	**05 30 24.6**	**-1.5**
	baz=176,SNR=13						
CBKS	**Cedar Bluff**	**22.41**	**357**	*e*P	**P**	**05 30 26.5**	**+0.4**
	comp=Z,276nm,1.1s						
R40A	**Maddies Statio**	**22.48**	**12**	P	**P**	**05 30 25.0**	**-1.8**
	baz=195,SNR=73						
R40A	**Maddies Statio**	**22.48**	**12**	*e*P	**P**	**05 30 25.3**	**-1.5**
	comp=Z,78nm,0.8s						
CCM	**Cathedral Cave**	**22.48**	**15**	P	**P**	**05 30 25.8**	**-1.1**
	baz=198						
CCM	**Cathedral Cave**	**22.48**	**15**	*e*P	**P**	**05 30 26.0**	**-0.8**
	comp=Z,191nm,1.0s						
CCM	**Cathedral Cave**	**22.48**	**15**	*e*P	**P**	**05 30 26.0**	**-0.8**
CCM				pmax	pmax		
	comp=Z,191nm,1.0s						
X53A	**Estanollee**	**22.52**	**34**	P	**P**	**05 30 25.2**	**-2.0**
	baz=220,SNR=22						
V50A	**Pikevile**	**22.54**	**29**	P	**P**	**05 30 25.7**	**-1.8**
	baz=215,SNR=53						
T46A	**Princeton**	**22.56**	**22**	P	**P**	**05 30 25.8**	**-1.9**
	baz=207,SNR=34						
S22A	**4UR Ranch, Cre**	**22.60**	**342**	P	**P**	**05 30 29.3**	**+0.8**
	baz=158,SNR=129						
S22A	**4UR Ranch, Cre**	**22.60**	**342**	*e*P	**P**	**05 30 29.8**	**+1.4**
U48A	**Cassie Pea, Po**	**22.62**	**25**	P	**P**	**05 30 26.1**	**-2.2**
	baz=210,SNR=43						
FVM	**French Village**	**22.63**	**16**	*e*P	**P**	**05 30 27.3**	**-1.1**
	comp=Z,63nm,0.9s						
FVM	**French Village**	**22.63**	**16**	*e*P	**P**	**05 30 27.3**	**-1.1**
FVM				pmax	pmax		
	comp=Z,63nm,0.9s						
CPCT	**Cooper Cave**	**22.64**	**30**	*e*P	**P**	**05 30 27.1**	**-1.4**
	comp=Z,105nm,1.0s						
W52A	**Murphy**	**22.65**	**32**	P	**P**	**05 30 26.9**	**-1.8**
	baz=218,SNR=15						
W52A	**Murphy**	**22.65**	**32**	*e*P	**P**	**05 30 27.3**	**-1.4**
	comp=Z,106nm,0.9s						
MVCO	**Mesa Verde**	**22.66**	**338**	P	**P**	**05 30 29.9**	**+1.0**
	baz=154,SNR=69						
MVCO	**Mesa Verde**	**22.66**	**338**	*e*P	**P**	**05 30 30.0**	**+1.0**
	comp=Z,164nm,1.2s						
Y12C	**Blythe**	**22.67**	**323**	P	**P**	**05 30 30.0**	**+1.1**
	baz=136,SNR=20						
Y12C	**Blythe**	**22.67**	**323**	*e*P	**P**	**05 30 30.3**	**+1.4**
	comp=Z,33nm,0.9s						
R41A	**Rosebud**	**22.68**	**14**	P	**P**	**05 30 27.0**	**-2.0**
	baz=197,SNR=38						
Q37A	**Longview Farm,**	**22.68**	**8**	P	**P**	**05 30 28.6**	**-0.4**
	baz=190,SNR=10						
S44A	**Carbondale**	**22.70**	**19**	P	**P**	**05 30 27.1**	**-2.0**
	baz=203,SNR=18						
KSU1	**Kansas State U**	**22.70**	**3**	P	**P**	**05 30 27.3**	**-1.9**
	baz=184,SNR=21						
KSU1	**Kansas State U**	**22.70**	**3**	*e*P	**P**	**05 30 27.9**	**-1.3**
	comp=Z,66nm,0.9s						
SIUC	**Southern Illin**	**22.73**	**19**	*e*P	**P**	**05 30 29.3**	**-0.1**
	comp=Z,268nm,1.3s						
T47A	**Sharon Grove**	**22.81**	**24**	P	**P**	**05 30 28.3**	**-1.9**
	baz=208,SNR=68						
T47A	**Sharon Grove**	**22.81**	**24**	*e*P	**P**	**05 30 28.8**	**-1.5**
	comp=Z,136nm,0.9s						
R42A	**Luebbering**	**22.81**	**15**	P	**P**	**05 30 27.7**	**-2.6**
	baz=199,SNR=21						
PDMCI	**Parker Dam,Lak**	**22.86**	**324**	P	**P**	**05 30 31.3**	**+0.5**
	baz=138,SNR=17						
Q38A	**Cooks Store, C**	**22.89**	**9**	P	**P**	**05 30 28.9**	**-2.2**
	baz=192,SNR=29						
SWSC	**Sam W. Stewart**	**22.89**	**319**	P	**P**	**05 30 32.9**	**+1.7**
	baz=132,SNR=6.9						
IKP	**In-Ko-Pah, Jac**	**22.89**	**318**	P	**P**	**05 30 31.2**	**-0.1**
	baz=131						
KSCO	**Kaye Shedlock'**	**22.89**	**351**	P	**P**	**05 30 31.1**	**-0.1**
	baz=169,SNR=30						
KSCO	**Kaye Shedlock'**	**22.89**	**351**	*e*P	**P**	**05 30 31.6**	**+0.3**
	comp=Z,144nm,1.0s						
HODGE	**Hodges**	**22.89**	**36**	*e*P	**P**	**05 30 30.3**	**-0.9**
	comp=Z,26nm,1.1s						
S45A	**Carrier Mills**	**22.90**	**20**	P	**P**	**05 30 29.4**	**-1.8**
	baz=204,SNR=24						
U49A	**Red Boiling Sp**	**22.94**	**27**	P	**P**	**05 30 29.8**	**-1.9**
	baz=212,SNR=48						
V51A	**Loudon**	**23.00**	**30**	P	**P**	**05 30 30.1**	**-2.3**
	baz=216,SNR=41						
V51A	**Loudon**	**23.00**	**30**	*e*P	**P**	**05 30 30.8**	**-1.6**
	comp=Z,91nm,0.9s						
R43A	**Red Bud**	**23.04**	**17**	P	**P**	**05 30 31.6**	**-1.1**
	baz=201,SNR=46						
Q39A	**Willow Grove F**	**23.07**	**11**	P	**P**	**05 30 31.0**	**-2.1**
	baz=193,SNR=36						
BG3	**Lake Jocassee**	**23.09**	**34**	*e*P	**P**	**05 30 32.0**	**-1.3**
	comp=Z,70nm,1.1s						
W53A	**Cullowhee**	**23.10**	**33**	P	**P**	**05 30 31.5**	**-2.0**
	baz=219,SNR=17						
BC3	**Big Chuckawall**	**23.16**	**321**	P	**P**	**05 30 36.0**	**+1.9**
	baz=134,SNR=24						
TKL	**Tuckaleechee C**	**23.17**	**31**	P	**P**	**05 30 32.8**	**-1.3**
	comp=Z,29nm,0.8s,baz=190,slow=8.7,SNR=20						
TKL				LR	LR	05 43 09.8	
	comp=Z,289nm,18.9s,baz=206,slow=46						
TKL	**Tuckaleechee C**	**23.17**	**31**	*e*P	**P**	**05 30 32.7**	**-1.4**
	comp=Z,177nm,1.5s						
TKL	**Tuckaleechee C**	**23.17**	**31**	*e*P	**P**	**05 30 32.7**	**-1.4**
TKL				pmax	pmax		
	comp=Z,177nm,1.5s						
T48A	**Bowling Green**	**23.19**	**25**	P	**P**	**05 30 32.5**	**-1.8**
	baz=210,SNR=61						
Q40A	**Laux Farm, Aux**	**23.20**	**12**	P	**P**	**05 30 31.9**	**-2.4**
	baz=195,SNR=34						
S46A	**Don Dixon Farm**	**23.20**	**22**	P	**P**	**05 30 32.3**	**-2.0**
	baz=206,SNR=5.5						
RGRS	**Roger Stewart**	**23.21**	**41**	*e*P	**P**	**05 30 33.4**	**-1.1**
	comp=Z,652nm,0.7s						
MONP2	**Monument Peak**	**23.24**	**318**	P	**P**	**05 30 36.0**	**+0.9**
	baz=131,SNR=15						
R44A	**Waltonville**	**23.26**	**19**	P	**P**	**05 30 33.8**	**-1.1**
	baz=203,SNR=44						
BAR	**Barrett**	**23.27**	**318**	*e*P	**P**	**05 30 35.8**	**+0.6**
	comp=Z,21nm,1.1s						
U50A	**Jamestown**	**23.27**	**28**	P	**P**	**05 30 33.2**	**-1.9**
	baz=214,SNR=36						
SLM	**Saint Louis**	**23.29**	**16**	*e*P	**P**	**05 30 34.0**	**-1.2**
	comp=Z,143nm,1.2s						
SLM	**Saint Louis**	**23.29**	**16**	*e*P	**P**	**05 30 34.0**	**-1.2**
SLM				pmax	pmax		
	comp=Z,143nm,1.2s						
Q24A	**Divide**	**23.31**	**346**	P	**P**	**05 30 36.3**	**+0.4**
	baz=163,SNR=33						
Q24A	**Divide**	**23.31**	**346**	*e*P	**P**	**05 30 36.4**	**+0.6**
	comp=Z,64nm,1.0s						
IRM	**Iron Mountain**	**23.32**	**323**	P	**P**	**05 30 37.7**	**+2.0**
	baz=136,SNR=21						
CSU	**Charleston Sou**	**23.34**	**42**	*e*P	**P**	**05 30 36.1**	**+0.3**
Q41A	**Truxton**	**23.34**	**14**	P	**P**	**05 30 33.4**	**-2.3**
	baz=197,SNR=59						
NHSC	**New Hope**	**23.35**	**41**	P	**P**	**05 30 35.4**	**-0.5**
	baz=229,SNR=14						
NHSC	**New Hope**	**23.35**	**41**	*e*P	**P**	**05 30 35.2**	**-0.8**
	comp=Z,600nm,1.1s						
SJCC	**San Jacinto, C**	**23.38**	**103**	*e*P	**P**	**05 30 35.2**	**-1.2**
P37A	**Lathrop**	**23.40**	**8**	P	**P**	**05 30 34.2**	**-2.1**
	baz=190,SNR=33						
V52A	**Sevierville**	**23.40**	**31**	P	**P**	**05 30 34.5**	**-1.9**
	baz=218,SNR=22						
V52A	**Sevierville**	**23.40**	**31**	*e*P	**P**	**05 30 35.1**	**-1.4**
	comp=Z,48nm,0.9s						
S47A	**Hartford**	**23.43**	**23**	P	**P**	**05 30 34.1**	**-2.5**
	baz=208,SNR=25						
NEE2	**Needles Airpor**	**23.46**	**324**	P	**P**	**05 30 37.1**	**+0.1**
	baz=138						
USIN	**University of**	**23.47**	**21**	*e*P	**P**	**05 30 36.5**	**-0.5**
	comp=Z,218nm,1.0s						
Q42A	**Golden Eagle**	**23.47**	**15**	P	**P**	**05 30 35.1**	**-1.9**
	baz=199,SNR=48						
JSC	**Jenkinsville**	**23.50**	**37**	*e*P	**P**	**05 30 35.9**	**-1.5**
	comp=Z,51nm,0.8s						
PV01	**Paradox Valley**	**23.51**	**339**	*e*P	**P**	**05 30 39.3**	**+1.5**
P39B	**Salisbury**	**23.54**	**11**	P	**P**	**05 30 36.7**	**-1.0**
	baz=193,SNR=25						
T49A	**Edmonton**	**23.54**	**26**	P	**P**	**05 30 36.0**	**-1.8**
	baz=212,SNR=24						
T49A	**Edmonton**	**23.54**	**26**	*e*P	**P**	**05 30 36.2**	**-1.6**
	comp=Z,37nm,0.8s						
P38A	**Dawn**	**23.55**	**9**	P	**P**	**05 30 36.5**	**-1.3**
	baz=191,SNR=17						
P38A	**Dawn**	**23.55**	**9**	*e*P	**P**	**05 30 36.6**	**-1.3**
	comp=Z,75nm,0.8s						
R45A	**Skylar, Fairfi**	**23.55**	**20**	P	**P**	**05 30 36.5**	**-1.4**
	baz=205,SNR=29						
PAULI	**Pauline**	**23.57**	**36**	*e*P	**P**	**05 30 37.2**	**-0.8**
	comp=Z,36nm,1.1s						
PV13	**Radium Mtn., P**	**23.62**	**339**	*e*P	**P**	**05 30 40.0**	**+1.2**
	comp=Z,78nm,0.9s						
U51A	**La Follette**	**23.63**	**30**	P	**P**	**05 30 36.8**	**-1.8**
	baz=216,SNR=18						
PV02	**Paradox Valley**	**23.63**	**339**	*e*P	**P**	**05 30 40.1**	**+1.2**
	comp=Z,78nm,1.1s						
PV05	**Paradox Valley**	**23.64**	**338**	*e*P	**P**	**05 30 40.0**	**+0.9**
V53A	**Saluda**	**23.67**	**33**	P	**P**	**05 30 37.8**	**-1.3**
	baz=219,SNR=12						
V53A	**Saluda**	**23.67**	**33**	*e*P	**P**	**05 30 38.3**	**-0.8**
	comp=Z,90nm,1.3s						
109C	**Camp Elliot, M**	**23.68**	**317**	P	**P**	**05 30 40.5**	**+1.4**
	baz=130,SNR=5.1						
CPE	**Camp Elliot**	**23.68**	**317**	*e*P	**P**	**05 30 40.7**	**+1.5**
PV03	**Paradox Valley**	**23.71**	**339**	*e*P	**P**	**05 30 40.7**	**+1.0**
P40A	**Paris**	**23.72**	**12**	P	**P**	**05 30 37.2**	**-2.2**
	baz=195,SNR=87						
P40A	**Paris**	**23.72**	**12**	*e*P	**P**	**05 30 37.5**	**-2.0**
	comp=Z,159nm,0.8s						
Q43A	**New Douglas**	**23.72**	**17**	P	**P**	**05 30 37.1**	**-2.4**
	baz=201,SNR=23						
BELC	**Belle Mtn. Jos**	**23.72**	**321**	P	**P**	**05 30 34.0**	**-5.8**
	baz=134,SNR=45						
PV18	**Skein Mesa, Pa**	**23.73**	**339**	*e*P	**P**	**05 30 40.9**	**+1.1**
	comp=Z,51nm,0.8s						
XPFO	**Piæon Flat**	**23.74**	**320**	*e*P	**P**	**05 30 34.7**	**-5.2**
	comp=Z,39nm,0.6s						
PFO	**Pinyon Flats O**	**23.74**	**320**	P	**P**	**05 30 34.7**	**-5.2**
	baz=132,SNR=40						
PFO	**Pinyon Flats O**	**23.74**	**320**	*e*P	**P**	**05 30 34.7**	**-5.2**
	comp=Z,39nm,0.6s						
PFO	**Pinyon Flats O**	**23.74**	**320**	*e*P	**P**	**05 30 34.7**	**-5.2**
PFO				pmax	pmax		
	comp=Z,39nm,0.6s						
R46A	**Gibon Southern**	**23.74**	**21**	P	**P**	**05 30 37.9**	**-1.8**
	baz=206,SNR=15						
FRD	**Ford Ranch, An**	**23.75**	**319**	P	**P**	**05 30 37.6**	**-2.4**
	baz=132,SNR=17						
PV12	**Saucer Basin,**	**23.75**	**339**	*e*P	**P**	**05 30 41.5**	**+1.4**
	comp=Z,57nm,0.8s						
PV11	**David Mesa, Pa**	**23.76**	**339**	*e*P	**P**	**05 30 41.2**	**+1.1**
	comp=Z,51nm,0.8s						
PV17	**East Wray Mesa**	**23.77**	**339**	*e*P	**P**	**05 30 41.4**	**+1.1**
	comp=Z,50nm,1.0s						
T50A	**Nancy**	**23.77**	**27**	P	**P**	**05 30 38.2**	**-1.9**
	baz=213,SNR=27						
PV16	**Nyswonger Mesa**	**23.79**	**339**	*e*P	**P**	**05 30 41.6**	**+1.2**
	comp=Z,56nm,1.1s						
S48A	**Wiedeman Farm,**	**23.80**	**25**	P	**P**	**05 30 38.5**	**-1.8**
	baz=210,SNR=15						
PV19	**Morning Glory**	**23.81**	**339**	*e*P	**P**	**05 30 42.0**	**+1.4**
	comp=Z,68nm,1.2s						
PV20	**West Nyswonger**	**23.83**	**339**	*e*P	**P**	**05 30 41.9**	**+1.0**
	comp=Z,36nm,0.8s						
PV14	**Lion Creek, Pa**	**23.88**	**339**	*e*P	**P**	**05 30 42.4**	**+1.1**
	comp=Z,73nm,1.2s						
Q44A	**Meyer Farm, Va**	**23.88**	**18**	P	**P**	**05 30 39.1**	**-2.0**
	baz=202,SNR=16						
PV10	**Paradox Valley**	**23.89**	**339**	*e*P	**P**	**05 30 42.0**	**+0.5**
PV22	**Blue Mesa, Par**	**23.95**	**339**	*e*P	**P**	**05 30 43.3**	**+1.4**
	comp=Z,129nm,1.2s						
PV23	**Carpenter Ridg**	**23.95**	**339**	*e*P	**P**	**05 30 43.2**	**+1.2**
	comp=Z,72nm,0.9s						
U52A	**Thorn Hill**	**23.95**	**31**	P	**P**	**05 30 40.2**	**-1.5**
	baz=217,SNR=21						
LDFC	**Landfair**	**23.97**	**324**	*e*P	**P**	**05 30 44.9**	**+2.9**
	comp=Z,80nm,1.0s						
SMCO	**Snowmass**	**23.98**	**343**	*e*P	**P**	**05 30 43.5**	**+1.1**
	comp=Z,163nm,1.4s						
TZTN	**Tazewell**	**23.98**	**30**	P	**P**	**05 30 40.9**	**-1.1**
	baz=217,SNR=18						
TZTN	**Tazewell**	**23.98**	**30**	*e*P	**P**	**05 30 41.5**	**-0.6**
	comp=Z,46nm,1.0s						
O37A	**Wolven Farm, M**	**23.99**	**8**	P	**P**	**05 30 40.9**	**-1.2**
	baz=190,SNR=16						
OLIL	**Olney**	**24.01**	**20**	*e*P	**P**	**05 30 40.9**	**-1.4**
	comp=Z,84nm,0.9s						
PV09	**Paradox Valley**	**24.03**	**339**	*e*P	**P**	**05 30 44.0**	**+1.2**
PV21	**Cone Mtn., Par**	**24.03**	**339**	*e*P	**P**	**05 30 44.1**	**+1.4**
	comp=Z,51nm,0.9s						
O38A	**Galt**	**24.04**	**9**	P	**P**	**05 30 41.4**	**-1.1**
	baz=191,SNR=49						
GMRC	**Granite Mounta**	**24.07**	**323**	P	**P**	**05 30 45.0**	**+1.9**
	baz=136,SNR=29						
P41A	**Barry, Barry**	**24.07**	**14**	P	**P**	**05 30 40.9**	**-1.9**
	baz=197,SNR=27						
KMSC	**Kings Mountain**	**24.07**	**36**	P	**P**	**05 30 41.5**	**-1.4**
	baz=223,SNR=11						
KMSC	**Kings Mountain**	**24.07**	**36**	*e*P	**P**	**05 30 42.1**	**-0.8**
	comp=Z,56nm,0.9s						
T51A	**Gray**	**24.13**	**29**	P	**P**	**05 30 42.3**	**-1.1**
	baz=215,SNR=15						
Q45A	**Warren Harvey,**	**24.14**	**20**	P	**P**	**05 30 42.2**	**-1.3**
	baz=204,SNR=19						
P42A	**Winchester**	**24.16**	**15**	P	**P**	**05 30 42.0**	**-1.6**
	baz=199,SNR=69						
P42A	**Winchester**	**24.16**	**15**	*e*P	**P**	**05 30 42.4**	**-1.2**
	comp=Z,162nm,0.9s						
R47A	**Wooly Knot Far**	**24.17**	**23**	P	**P**	**05 30 42.5**	**-1.2**
	baz=208,SNR=82						
MURC	**Murrieta**	**24.20**	**319**	P	**P**	**05 30 43.0**	**-1.1**
	baz=131						
WCI	**Wyandotte Cave**	**24.20**	**24**	P	**P**	**05 30 42.7**	**-1.3**
	baz=209						
WCI	**Wyandotte Cave**	**24.20**	**24**	*e*P	**P**	**05 30 43.2**	**-0.9**
	comp=Z,144nm,0.9s						
WCI	**Wyandotte Cave**	**24.20**	**24**	*e*P	**P**	**05 30 43.2**	**-0.9**
WCI				pmax	pmax		
	comp=Z,144nm,0.9s						
ISCO	**Idaho Springs**	**24.22**	**346**	P	**P**	**05 30 45.8**	**+1.2**
	baz=163,SNR=164						
ISCO	**Idaho Springs**	**24.22**	**346**	*e*P	**P**	**05 30 45.8**	**+1.2**
	comp=Z,102nm,0.8s						
ISCO	**Idaho Springs**	**24.22**	**346**	*e*P	**P**	**05 30 45.8**	**+1.2**
ISCO				pmax	pmax		
	comp=Z,102nm,0.8s						
S49A	**Springfield**	**24.22**	**26**	P	**P**	**05 30 42.7**	**-1.5**
	baz=212,SNR=28						
O40A	**La Belle**	**24.32**	**12**	P	**P**	**05 30 43.6**	**-1.6**
	baz=195,SNR=57						
U53A	**Fall Branch**	**24.32**	**32**	P	**P**	**05 30 43.6**	**-1.6**
	baz=219						
O39A	**Kirksville**	**24.33**	**11**	P	**P**	**05 30 44.5**	**-0.6**
	baz=193,SNR=33						
PKCU	**Pink Cliffs**	**24.39**	**332**	*e*P	**P**	**05 30 48.5**	**+2.3**
	comp=Z,182nm,1.2s						
P43A	**Skaggs, Pawnee**	**24.42**	**17**	P	**P**	**05 30 44.9**	**-1.2**
	baz=201,SNR=16						
HELC	**Santa Helena**	**24.46**	**112**	*e*P	**P**	**05 30 49.1**	**+2.1**
	comp=Z,70nm,1.3s						
HELC	**Santa Helena**	**24.46**	**112**	*e*P	**P**	**05 30 50.5**	**+3.4**
BBRC	**Big Bear Solar**	**24.46**	**320**	P	**P**	**05 30 39.9**	**-6.9**
	baz=132						
LCMT	**Little Creek M**	**24.47**	**330**	*e*P	**P**	**05 30 48.4**	**+1.7**
	comp=Z,23nm,0.8s						
HEC	**Hector,Ludlow**	**24.50**	**322**	P	**P**	**05 30 45.6**	**-1.3**
	baz=134						
S50A	**Richmond**	**24.52**	**27**	P	**P**	**05 30 46.2**	**-0.7**
	baz=214,SNR=24						
R48A	**Northridge Ran**	**24.52**	**24**	P	**P**	**05 30 46.1**	**-0.9**
	baz=210,SNR=34						
P44A	**Sand Creek, Wi**	**24.52**	**18**	P	**P**	**05 30 46.0**	**-0.9**
	baz=203,SNR=20						
Q46A	**CEJHS Indians,**	**24.52**	**21**	P	**P**	**05 30 45.7**	**-1.2**
	baz=206						
O41A	**Passleys Farm,**	**24.53**	**14**	P	**P**	**05 30 45.6**	**-1.5**
	baz=197,SNR=65						
N36A	**Muff Farm, Cla**	**24.54**	**6**	P	**P**	**05 30 45.9**	**-1.2**
	baz=188,SNR=13						
N37A	**Lee Faris, Mou**	**24.57**	**7**	P	**P**	**05 30 46.3**	**-1.1**
	baz=189,SNR=20						
N37A	**Lee Faris, Mou**	**24.57**	**7**	*e*P	**P**	**05 30 47.0**	**-0.4**
	comp=Z,71nm,0.8s						
TUQ	**Turquoise Moun**	**24.68**	**324**	P	**P**	**05 30 50.5**	**+1.9**
	baz=136,SNR=33						
SCI2	**San Clemente I**	**24.69**	**316**	P	**P**	**05 30 49.5**	**+1.0**
	baz=128						
R49A	**Shelbyville**	**24.70**	**25**	P	**P**	**05 30 47.6**	**-1.0**
	baz=211,SNR=37						
T52A	**Hallie**	**24.70**	**30**	P	**P**	**05 30 47.8**	**-0.8**
	baz=217,SNR=8.2						
OGNE	**Ogallala**	**24.71**	**353**	P	**P**	**05 30 49.6**	**+0.8**
	baz=172,SNR=14						
OGNE	**Ogallala**	**24.71**	**353**	*e*P	**P**	**05 30 49.7**	**+0.9**
	comp=Z,214nm,1.1s						
N38A	**Joes South For**	**24.74**	**9**	P	**P**	**05 30 48.4**	**-0.5**
	baz=192,SNR=59						
Q47A	**Bedord North L**	**24.77**	**22**	P	**P**	**05 30 48.4**	**-0.8**
	baz=208,SNR=27						
O42A	**Bath**	**24.80**	**15**	P	**P**	**05 30 48.1**	**-1.3**
	baz=199,SNR=6.1						
YOTC	**Yotoco, Valle**	**24.80**	**117**	*e*P	**P**	**05 30 56.5**	**+6.6**
S51A	**Beattyville**	**24.84**	**29**	P	**P**	**05 30 49.0**	**-1.0**
	baz=215,SNR=37						
S51A	**Beattyville**	**24.84**	**29**	*e*P	**P**	**05 30 49.4**	**-0.5**
	comp=Z,119nm,0.9s						
P45A	**Graceland, Par**	**24.85**	**20**	P	**P**	**05 30 48.9**	**-0.9**
	baz=205,SNR=9.6						
P45A	**Graceland, Par**	**24.85**	**20**	*e*P	**P**	**05 30 49.0**	**-0.9**
	comp=Z,71nm,1.1s						
CIS	**Catalina Islan**	**24.86**	**317**	P	**P**	**05 30 51.8**	**+1.6**
	baz=128						
SZCU	**Shurtz Canyon**	**24.87**	**331**	*e*P	**P**	**05 30 52.7**	**+2.3**
	comp=Z,81nm,1.4s						
BFSC	**Mount Baldy Ra**	**24.90**	**319**	P	**P**	**05 30 49.3**	**-1.4**
	baz=131,SNR=5.7						
N39A	**Derby Farms, D**	**24.94**	**10**	P	**P**	**05 30 50.0**	**-0.8**
	baz=193,SNR=36						
N39A	**Derby Farms, D**	**24.94**	**10**	*e*P	**P**	**05 30 50.4**	**-0.4**
	comp=Z,129nm,0.8s						
BLO	**Bloomington**	**24.95**	**22**	*e*P	**P**	**05 30 50.2**	**-0.6**
	comp=Z,244nm,1.5s						
BLO	**Bloomington**	**24.95**	**22**	*e*P	**P**	**05 30 50.2**	**-0.6**
BLO				pmax	pmax		
	comp=Z,244nm,1.5s						
CCUT	**Cedar City**	**24.96**	**331**	*e*P	**P**	**05 30 52.8**	**+1.6**
	comp=Z,14nm,0.8s						
BGNE	**Belgrade**	**24.96**	**0**	P	**P**	**05 30 50.8**	**-0.2**
	baz=180						
BGNE	**Belgrade**	**24.96**	**0**	*e*P	**P**	**05 30 51.1**	**+0.1**
	comp=Z,117nm,1.0s						
FMP	**Fort Macarthur**	**24.97**	**317**	P	**P**	**05 30 51.7**	**+0.7**
	baz=129						
GUYC	**Guyana, Colomb**	**25.02**	**114**	*e*P	**P**	**05 30 53.8**	**+1.6**
Q48A	**North Vernon**	**25.03**	**24**	P	**P**	**05 30 50.6**	**-0.9**
	baz=209,SNR=37						
R50A	**Paris**	**25.05**	**27**	P	**P**	**05 30 50.6**	**-1.1**
	baz=213,SNR=24						
SHPR	**Sheep Range**	**25.05**	**326**	*e*P	**P**	**05 30 53.9**	**+1.9**
	comp=Z,20nm,0.9s						
SRU	**San Rafael Swe**	**25.07**	**337**	*e*P	**P**	**05 30 53.5**	**+1.3**
	comp=Z,60nm,0.8s						
SRU	**San Rafael Swe**	**25.07**	**337**	*e*P	**P**	**05 30 53.5**	**+1.3**
SRU				pmax	pmax		
	comp=Z,60nm,0.8s						
O43A	**Sugar Creek Fa**	**25.08**	**16**	P	**P**	**05 30 50.8**	**-1.3**
	baz=201						
GSC	**Goldstone, Bar**	**25.10**	**322**	*e*P	**P**	**05 30 54.4**	**+2.1**
	comp=Z,35nm,1.1s						
GSC	**Goldstone, Bar**	**25.10**	**322**	*e*P	**P**	**05 30 54.4**	**+2.1**
GSC				pmax	pmax		
	comp=Z,35nm,1.1s						
N41A	**Harden Midland**	**25.10**	**13**	P	**P**	**05 30 51.2**	**-1.0**
	baz=197,SNR=8.3						
N41A	**Harden Midland**	**25.10**	**13**	*e*P	**P**	**05 30 51.8**	**-0.4**
	comp=Z,90nm,0.9s						
P46A	**Rosedale**	**25.11**	**20**	P	**P**	**05 30 51.5**	**-0.8**
	baz=206,SNR=14						
N40A	**Mertquake, Sal**	**25.12**	**12**	P	**P**	**05 30 51.4**	**-0.9**
	baz=195,SNR=27						
S52A	**Salyersville**	**25.12**	**29**	P	**P**	**05 30 51.4**	**-1.0**
	baz=216,SNR=31						
MWC	**Mount Wilson**	**25.14**	**319**	*e*P	**P**	**05 30 55.0**	**+2.1**
	comp=Z,68nm,1.4s						
MWC	**Mount Wilson**	**25.14**	**319**	*e*P	**P**	**05 30 55.0**	**+2.1**
MWC				pmax	pmax		
	comp=Z,68nm,1.4s						
M36A	**Felix, Anita**	**25.19**	**6**	P	**P**	**05 30 52.5**	**-0.5**
	baz=188,SNR=15						
O44A	**Mansfield**	**25.20**	**18**	P	**P**	**05 30 52.3**	**-0.8**
	baz=202,SNR=11						
SHOC	**Shoshone, Teco**	**25.21**	**324**	P	**P**	**05 30 54.8**	**+1.5**
	baz=136,SNR=6.7						
M37A	**Trindle Farm,**	**25.22**	**7**	P	**P**	**05 30 53.1**	**-0.2**
	baz=190,SNR=56						
MSU	**Marysvale**	**25.22**	**334**	*e*P	**P**	**05 30 55.1**	**+1.5**
MSU	**Marysvale**	**25.22**	**334**	*e*P	**P**	**05 30 55.1**	**+1.5**
O20A	**White River Ci**	**25.23**	**342**	P	**P**	**05 30 55.2**	**+1.6**
	baz=157,SNR=109						
O20A	**White River Ci**	**25.23**	**342**	*e*P	**P**	**05 30 55.2**	**+1.6**
	comp=Z,144nm,1.0s						
PTBC	**PUERTO BERRIO,**	**25.27**	**110**	*e*P	**P**	**05 30 53.8**	**-0.2**
OTAV	**Otavalo**	**25.27**	**127**	*e*P	**P**	**05 30 56.0**	**+1.5**
	comp=Z,10nm,1.0s						
OTAV	**Otavalo**	**25.27**	**127**	*e*P	**P**	**05 30 56.5**	**+2.0**
OTAV	**Otavalo**	**25.27**	**127**	P	**P**	**05 30 57.2**	**+2.7**
OTAV				pmax	pmax		
	comp=Z,11nm,1.4s						
P47A	**Martinsville**	**25.32**	**22**	P	**P**	**05 30 53.2**	**-0.9**
	baz=208,SNR=11						
NORC	**Norcasia**	**25.33**	**112**	*e*P	**P**	**05 30 54.5**	**-0.1**
N23A	**Red Feather La**	**25.34**	**346**	P	**P**	**05 30 55.8**	**+1.2**
	baz=163,SNR=72						
N23A	**Red Feather La**	**25.34**	**346**	*e*P	**P**	**05 30 56.0**	**+1.3**
	comp=Z,98nm,1.0s						
DECC	**Green Verdugo**	**25.34**	**318**	P	**P**	**05 30 56.6**	**+2.1**
	baz=130						
HDIL	**Hopedale**	**25.34**	**16**	*e*P	**P**	**05 30 54.1**	**-0.3**
	comp=Z,110nm,1.0s						
M38A	**Pleasantville**	**25.35**	**9**	P	**P**	**05 30 53.8**	**-0.6**
	baz=191,SNR=88						
R51A	**Hillsboro**	**25.39**	**28**	P	**P**	**05 30 54.0**	**-0.9**
	baz=214,SNR=66						
N42A	**Yates City**	**25.41**	**15**	P	**P**	**05 30 54.2**	**-0.8**
	baz=199,SNR=25						
TCRU	**Three Creeks R**	**25.42**	**333**	*e*P	**P**	**05 30 57.5**	**+2.1**

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      comp=Z,25nm,0.8s
Q49A  Aurora            25.42  25  P     P      05 30 54.2 -0.9
      baz=211,SNR=32
P18A  Preston Nutter    25.43 338  eP    P      05 30 57.0 +1.5
      comp=Z,135nm,1.1s
P17A  Butcher Ranch,    25.47 337  eP    P      05 30 57.2 +1.4
      comp=Z,54nm,1.0s
TMUT  Trail Mountain    25.50 336  eP    P      05 30 57.9 +1.7
      comp=Z,48nm,1.0s
SNCC  San Nicolas Is    25.51 315  P     P      05 30 57.1 +1.1
      baz=126
O45A  Potomac           25.51  19  P     P      05 30 55.5 -0.4
      baz=204,SNR=28
EDW2  Edwards Air Fo    25.53 320  P     P      05 30 57.8 +1.5
      baz=132,SNR=15
M39A  Webster           25.58  11  P     P      05 30 55.6 -0.9
      baz=194,SNR=45
P48A  Milroy            25.61  23  P     P      05 30 55.2 -1.6
      baz=210,SNR=24
PHWY  Pilot Hill        25.62 347  eP    P      05 30 58.2 +1.0
      comp=Z,48nm,1.0s
NCAT  North Carolina    25.63  36  eP    P      05 30 56.3 -0.7
      comp=Z,133nm,1.0s
CRUC  La Cruz           25.63 123  eP    P      05 30 59.1 +1.5
M40A  Post Highland     25.63  12  P     P      05 30 56.4 -0.7
      baz=195,SNR=43
Q50A  Georgetown        25.67  26  P     P      05 30 56.3 -1.1
      baz=213,SNR=62
BLG   Laguna Peak, P    25.72 317  P     P      05 30 59.3 +1.4
      baz=129,SNR=6.4
N43A  Stutzman Famil    25.73  16  P     P      05 30 57.3 -0.5
      baz=200,SNR=6.6
MARP  Paez Belalcaza    25.74 119  eP    P      05 30 59.1 +0.6
M41A  Milan             25.81  13  P     P      05 30 57.9 -0.7
      baz=197,SNR=12
OSI   Osito Audit: C    25.82 319  P     P      05 30 59.5 +0.7
      baz=130
OSI   Osito Audit: C    25.82 319  eP    P      05 31 00.4 +1.5
      comp=Z,26nm,0.8s
SFIN  Lafayette         25.83  20  P     P      05 30 58.0 -0.7
      baz=205,SNR=17
SFIN  Lafayette         25.83  20  eP    P      05 30 58.3 -0.5
      comp=Z,81nm,0.9s
SCIA  State Center      25.83   9  P     P      05 30 58.3 -0.5
      baz=191,SNR=45
SCIA  State Center      25.83   9  eP    P      05 30 58.4 -0.4
      comp=Z,230nm,0.8s
L36A  Harm Buss Farm    25.84   6  P     P      05 30 58.2 -0.7
      baz=188,SNR=6.8
R52A  Catlettsburg      25.85  29  P     P      05 30 57.8 -1.3
      baz=216,SNR=9.0
N44A  Piper City        25.89  18  P     P      05 30 58.7 -0.6
      baz=203,SNR=24
P49A  Miami Univ. Ec    25.95  24  P     P      05 30 58.7 -1.1
      baz=211,SNR=97
FURC  Furnace Creek,    25.95 324  P     P      05 31 01.3 +1.4
      baz=136
TPNV  Topopah Spring    25.96 326  P     P      05 31 02.4 +2.2
      baz=138
TPNV  Topopah Spring    25.96 326  eP    P      05 31 02.2 +2.0
      comp=Z,61nm,1.1s
L37A  Phoenix Point,    25.97   8  P     P      05 30 59.3 -0.7
      baz=190,SNR=12
PSUT  Pine Spring       25.98 331  eP    P      05 31 02.2 +1.7
      comp=Z,32nm,1.0s
O47A  Sheridan          26.01  21  P     P      05 30 59.2 -1.3
      baz=207,SNR=41
MPMC  Manual Prospec    26.02 323  P     P      05 31 02.5 +1.7
      baz=134,SNR=30
SCZ2  Santa Cruz Isl    26.02 316  P     P      05 31 01.8 +1.1
      baz=128
M42A  Sheffield         26.07  15  P     P      05 31 00.4 -0.6
      baz=199,SNR=28
BLA   Blacksburg        26.09  34  P     P      05 31 00.3 -1.0
      baz=222,SNR=12
BLA   Blacksburg        26.09  34  eP    P      05 31 00.7 -0.6
      comp=Z,63nm,0.8s
BLA   Blacksburg        26.09  34  eP    P      05 31 00.7 -0.6
BLA                                 pmax  pmax
      comp=Z,63nm,0.8s
Q51A  Peebles           26.09  27  P     P      05 31 00.2 -1.0
      baz=214,SNR=30
L38A  Oak Wood Farm,    26.10   9  P     P      05 31 00.4 -0.8
      baz=192,SNR=41
N45A  Kentland          26.12  19  P     P      05 31 00.4 -1.1
      baz=204,SNR=13
ROSC  El Rosal          26.14 113  P     P      05 31 05.4 +3.1
      comp=Z,2.1nm,0.6s,baz=36,slow=9.5,SNR=12
ROSC  El Rosal          26.14 113  eP    P      05 31 03.9 +1.6
      comp=Z,52nm,1.4s
ARVC  Arvin             26.21 319  P     P      05 31 04.2 +1.9
      baz=131,SNR=8.3
DAC   Darwin (Calif)    26.24 323  eP    P      05 31 02.0 -0.8
      comp=Z,32nm,1.3s
DAC   Darwin (Calif)    26.24 323  eP    P      05 31 02.0 -0.8
DAC                                 pmax  pmax
      comp=Z,32nm,1.3s
L39A  Vinton            26.24  11  P     P      05 31 01.2 -1.2
      baz=194,SNR=12
M43A  Waltham Townsh    26.25  16  P     P      05 31 02.0 -0.6
      baz=200,SNR=33
MPU   Maple Canyon      26.28 336  eP    P      05 31 04.5 +1.3
      comp=Z,28nm,0.8s
L40A  Anamosa           26.32  12  P     P      05 31 02.2 -1.1
      baz=195,SNR=25
L40A  Anamosa           26.32  12  eP    P      05 31 02.7 -0.6
      comp=Z,99nm,0.9s
ISA   Isabella, Lake    26.34 321  P     P      05 31 05.6 +1.9
      baz=132,SNR=20
ISA   Isabella, Lake    26.34 321  eP    P      05 31 05.7 +2.1
      comp=Z,18nm,0.8s
ISA   Isabella, Lake    26.34 321  eP    P      05 31 05.7 +2.1
ISA                                 pmax  pmax
      comp=Z,18nm,0.8s
SBC   Santa Barbara     26.35 317  P     P      05 31 04.5 +1.0
      baz=128
P50A  Jamestown         26.39  26  P     P      05 31 02.6 -1.2
      baz=213,SNR=16
RWWY  Rawlins           26.39 345  eP    P      05 31 04.1 -0.1
      comp=Z,66nm,1.0s
K36A  Gilmore City      26.40   6  P     P      05 31 03.1 -0.8
      baz=188,SNR=15
NLU   North Lily Min    26.40 336  eP    P      05 31 05.9 +1.6
      comp=Z,43nm,0.8s
O48A  Farmland          26.40  23  P     P      05 31 02.7 -1.3
      baz=209,SNR=52
BARC  Barichara         26.41 109  eP    P      05 31 04.5 -0.1
N46A  Monticello        26.41  20  P     P      05 31 03.3 -0.8
      baz=206,SNR=16
M44A  Midewin, Midew    26.46  17  P     P      05 31 03.8 -0.7
      baz=202,SNR=36
M44A  Midewin, Midew    26.46  17  eP    P      05 31 04.1 -0.4
      comp=Z,127nm,0.8s
L41A  Preston           26.49  13  P     P      05 31 03.9 -0.8
      baz=197,SNR=38
PAMC  Pamplona, Colo    26.56 107  eP    P      05 31 07.1 +0.9
L42A  Oliver, Polo      26.61  14  P     P      05 31 05.0 -0.9
      baz=199,SNR=30
L42A  Oliver, Polo      26.61  14  eP    P      05 31 05.2 -0.7
      comp=Z,163nm,0.9s
GRAC  Grapevine Rang    26.61 324  P     P      05 31 07.5 +1.5
      baz=136
K37A  Belmond           26.62   8  P     P      05 31 04.7 -1.2
      baz=190,SNR=96
K38A  Parkersburg       26.62   9  P     P      05 31 04.9 -1.0
      baz=192,SNR=14
K38A  Parkersburg       26.62   9  eP    P      05 31 04.6 -1.3
      comp=Z,76nm,0.8s
CWC   Cottonwood Cre    26.63 322  P     P      05 31 07.5 +1.2
      baz=134
O49A  Covington         26.66  24  P     P      05 31 05.2 -1.2
      baz=211,SNR=33
R11A  Troy Canyon, C    26.67 329  P     P      05 31 08.6 +1.9
      baz=141,SNR=21
R11A  Troy Canyon, C    26.67 329  eP    P      05 31 08.6 +1.9
      comp=Z,21nm,1.0s
PKM   Mcpherson Peak    26.69 318  P     P      05 31 08.2 +1.3
      baz=129,SNR=5.1
M45A  Boilermakers S    26.70  19  P     P      05 31 06.2 -0.4
      baz=204,SNR=13
JLU   Jordanelle        26.72 337  eP    P      05 31 08.4 +1.2
      comp=Z,18nm,1.1s
CHIC  Chingaza          26.76 113  eP    P      05 31 13.8 +5.8
RUSC  La Rusia          26.78 110  eP    P      05 31 09.5 +1.2
      comp=Z,16nm,1.0s
RUSC  La Rusia          26.78 110  eP    P      05 31 08.4 +0.2
K39A  Oelwein           26.82  10  P     P      05 31 06.4 -1.3
      baz=194,SNR=35
VES   Vestal, Richgr    26.83 320  P     P      05 31 09.2 +1.2
      baz=131
DUG   Dugway, Tooele    26.90 335  P     P      05 31 10.7 +2.0
      baz=148,SNR=33
DUG   Dugway, Tooele    26.90 335  eP    P      05 31 10.7 +2.0
      comp=Z,36nm,0.9s
DUG   Dugway, Tooele    26.90 335  eP    P      05 31 10.7 +2.0
DUG                                 pmax  pmax
      comp=Z,36nm,0.9s
O50A  Cable             26.91  25  P     P      05 31 07.4 -1.2
      baz=212,SNR=24
CTU   Camp Tracy        26.91 337  eP    P      05 31 10.2 +1.3
      comp=Z,19nm,1.0s
K40A  Colesburg         26.95  12  P     P      05 31 08.0 -1.0
      baz=195,SNR=21
M46A  Old House Fiel    27.00  20  P     P      05 31 08.6 -0.9
      baz=206,SNR=17
M46A  Old House Fiel    27.00  20  eP    P      05 31 08.5 -0.9
      comp=Z,102nm,1.0s
L43A  Garden Prairie    27.01  16  P     P      05 31 08.7 -0.7
      baz=200,SNR=11
VILC  Villavicencio,    27.03 114  eP    P      05 31 15.8 +5.7
K41A  Shullsburg        27.04  13  P     P      05 31 08.5 -1.2
      baz=197,SNR=14
SMMC  Simmler           27.07 318  P     P      05 31 12.0 +1.9
      baz=129,SNR=11
J36A  Seneca 1, Swea    27.09   6  P     P      05 31 09.2 -1.0
      baz=188,SNR=89
J36A  Seneca 1, Swea    27.09   6  eP    P      05 31 09.2 -1.0
      comp=Z,206nm,0.8s
K22A  Casper            27.14 347  P     P      05 31 11.8 +1.0
      baz=163,SNR=24
K22A  Casper            27.14 347  eP    P      05 31 11.8 +1.0
      comp=Z,86nm,1.1s
TIN   Tinemaha, Big     27.14 323  P     P      05 31 11.1 +0.2
      baz=134
TCUT  Toone Canyon      27.16 338  eP    P      05 31 12.8 +1.7
      comp=Z,99nm,1.0s
J37A  Redenius Farm,    27.16   8  P     P      05 31 09.7 -1.1
      baz=190,SNR=28
L44A  Lake County Fo    27.23  17  P     P      05 31 11.0 -0.4
      baz=202,SNR=12
ACSO  Alum Creek Sta    27.25  26  P     P      05 31 10.5 -1.1
      baz=213,SNR=13
ACSO  Alum Creek Sta    27.25  26  eP    P      05 31 10.5 -1.1
      comp=Z,72nm,0.9s
ECSD  EROS Data Cent    27.32   3  P     P      05 31 11.5 -0.8
      baz=184,SNR=22
ECSD  EROS Data Cent    27.32   3  eP    P      05 31 11.6 -0.8
      comp=Z,32nm,1.0s
J38A  Wedel Dairy, R    27.32   9  P     P      05 31 10.9 -1.4
      baz=192,SNR=22
JFWS  Jewell Farm       27.34  13  P     P      05 31 11.5 -0.9
      baz=197,SNR=18
JFWS  Jewell Farm       27.34  13  eP    P      05 31 11.7 -0.8
      comp=Z,62nm,0.9s
JFWS  Jewell Farm       27.34  13  eP    P      05 31 11.7 -0.8
JFWS                                pmax  pmax
      comp=Z,62nm,0.9s
K42A  Prairie Point,    27.42  14  P     P      05 31 12.2 -1.0
      baz=199,SNR=16
J39A  Decorah           27.47  10  P     P      05 31 11.9 -1.6
      baz=194,SNR=10
PAGB  Antelope Grade    27.49 319  eP    P      05 31 17.1 +3.2
      comp=Z,12nm,0.8s
K43A  Burlington        27.60  16  P     P      05 31 14.0 -0.8
      baz=201,SNR=7.2
K43A  Burlington        27.60  16  eP    P      05 31 14.2 -0.6
      comp=Z,72nm,1.0s
BGU   Big Grassy Mou    27.61 335  eP    P      05 31 16.3 +1.2
      comp=Z,31nm,1.1s
N50A  Nevada            27.63  25  P     P      05 31 13.6 -1.4
      baz=213,SNR=9.3
M48A  Edgerton          27.64  22  P     P      05 31 13.3 -1.7
      baz=209
HWUT  Hardware Ranch    27.64 338  eP    P      05 31 16.8 +1.4
      comp=Z,26nm,0.8s
J40A  Soldiers Grove    27.70  12  P     P      05 31 14.7 -1.0
      baz=196,SNR=12
TAMC  Tame, Arauca      27.74 108  eP    P      05 31 16.4 +0.1
I36A  Fitzsimmons Fa    27.81   7  P     P      05 31 15.3 -1.2
      baz=189,SNR=19
J41A  Loganville        27.82  13  P     P      05 31 16.0 -0.7
      baz=197,SNR=20
I37A  Lemond, Waseca    27.88   8  P     P      05 31 16.0 -1.2
      baz=190,SNR=12
I37A  Lemond, Waseca    27.88   8  eP    P      05 31 15.5 -1.7
      comp=Z,40nm,0.8s
MLAC  Mammoth, Mammo27.89 323  P     P      05 31 17.1 -0.6
      baz=134
M49A  Liberty Center    27.90  23  P     P      05 31 15.9 -1.6
      baz=210,SNR=8.1
IP07  Quail             27.91  36  eP    P      05 31 17.9 +0.3
      comp=Z,19nm,0.9s
IP06  Yanceyville       27.95  36  eP    P      05 31 16.8 -1.1
      comp=Z,32nm,1.1s
SDV   Santo Domingo     27.95 102  eP    P      05 31 18.9 +0.5
      comp=Z,32nm,0.9s
SDV   Santo Domingo     27.95 102  eP    P      05 31 17.1 -1.3
URVA  University of     27.95  37  eP    P      05 31 17.8 -0.2
OMMB  Old Mammoth Mi    27.97 323  eP    P      05 31 20.5 +2.0
      comp=Z,15nm,1.2s
J42A  Columbus          27.98  14  P     P      05 31 17.5 -0.7
      baz=199,SNR=11
IP03  Louisa            27.99  36  eP    P      05 31 17.6 -0.7
      comp=Z,27nm,1.0s
I39A  Houston           28.00  10  P     P      05 31 17.3 -1.0
      baz=194,SNR=15
I39A  Houston           28.00  10  eP    P      05 31 17.5 -0.8
      comp=Z,183nm,1.5s
SUSD  Miller            28.00 359  P     P      05 31 17.9 -0.4
      baz=179
IP01  Cuckoo            28.01  36  eP    P      05 31 17.8 -0.7
      comp=Z,28nm,0.9s
MDPB  Devils Postpil    28.03 323  eP    P      05 31 21.2 +2.2
      comp=Z,19nm,1.0s
BW06  Boulder Array     28.03 342  P     P      05 31 19.8 +0.8
      baz=157,SNR=38
BW06  Boulder Array     28.03 342  eP    P      05 31 19.7 +0.8
      comp=Z,21nm,0.9s
PD31  Pinedale Array    28.03 342  eP    P      05 31 19.6 +0.6
PD31                               ePcP  PcP    05 34 33.1 -0.5
PDAR  Pinedale Array    28.03 342  P     P      05 31 19.8 +0.8
      comp=Z,8.8nm,0.7s,baz=135,slow=10.0,SNR=88
PDAR                                PcP   PcP   05 34 33.1 -0.5
      comp=Z,1.4nm,0.7s,baz=106,slow=5.2,SNR=3.6
PDAR                                LR    LR    05 43 43.1
      comp=Z,953nm,20.0s,baz=170,slow=39
I38A  Scanlan Farm,     28.05   9  P     P      05 31 17.5 -1.2
      baz=192,SNR=26
NV11  Mina Array Sit    28.08 325  eP    P      05 31 21.7 +2.4
      comp=Z,2.2nm,1.0s
RSSD  Black Hills       28.10 351  P     P      05 31 20.2 +0.7
      baz=168
RSSD  Black Hills       28.10 351  eP    P      05 31 19.9 +0.4
      comp=Z,10.0nm,0.8s
RSSD  Black Hills       28.10 351  eP    P      05 31 19.9 +0.4
RSSD                                pmax  pmax
      comp=Z,10.0nm,0.8s
L48A  N Adams           28.14  22  P     P      05 31 18.2 -1.4
      baz=209
CVRD  Centerville Ro    28.14  36  eP    P      05 31 20.8 +1.1
      comp=Z,27nm,1.1s
NV01  Mina Array Sit    28.16 325  eP    P      05 31 21.7 +1.7
NVAR  Mina Array Bea    28.16 325  P     P      05 31 22.5 +2.4
      comp=Z,20nm,0.9s,baz=150,slow=9.8,SNR=108
NVAR                                LR    LR    05 43 05.5
      comp=Z,701nm,18.0s,baz=222,slow=38
I40A  Norwalk           28.20  12  P     P      05 31 19.2 -1.0
      baz=196,SNR=6.2
M50A  Fremont           28.21  25  P     P      05 31 18.6 -1.6
      baz=212
J43A  Natural Harves    28.21  15  P     P      05 31 19.4 -0.8
      baz=200,SNR=6.6
MCWV  Mont Chateau      28.23  31  P     P      05 31 19.8 -0.7
      baz=220,SNR=5.2
MCWV  Mont Chateau      28.23  31  eP    P      05 31 20.1 -0.3
      comp=Z,56nm,1.2s
HVU   Hansel Valley     28.24 337  eP    P      05 31 22.4 +1.8
      comp=Z,37nm,1.0s
HVU   Hansel Valley     28.24 337  eP    P      05 31 22.5 +1.8
HVU                                 pmax  pmax
      comp=Z,37nm,1.0s
PTRD  Partlow Road      28.28  36  eP    P      05 31 19.7 -1.2
      comp=Z,28nm,1.1s
H36A  Jessenland, He    28.37   7  P     P      05 31 20.7 -0.9
      baz=189,SNR=11
H35A  Sunnyside Ranc    28.40   5  P     P      05 31 20.5 -1.4
      baz=187,SNR=13
RYN   Ryan              28.42 325  eP    P      05 31 24.2 +1.9
      comp=Z,46nm,1.6s
CBN   Corbin Frederi    28.48  36  P     P      05 31 21.7 -1.0
      baz=226
CBN   Corbin Frederi    28.48  36  eP    P      05 31 22.0 -0.7
      comp=Z,28nm,0.8s
KVN   Kaiserville       28.50 326  eP    P      05 31 25.1 +2.1
      comp=Z,32nm,1.3s
H37A  Dierke Farm, C    28.50   8  P     P      05 31 21.7 -1.1
      baz=191
AHID  Auburn Hatcher    28.51 340  eP    P      05 31 24.6 +1.4
      comp=Z,25nm,0.9s
I41A  Arkdale           28.52  13  P     P      05 31 22.2 -0.7
      baz=197,SNR=12
I41A  Arkdale           28.52  13  eP    P      05 31 22.2 -0.7
      comp=Z,45nm,0.8s
L49A  Milan             28.53  23  P     P      05 31 21.6 -1.4
      baz=210
I42A  Draeger Farm,     28.57  14  P     P      05 31 22.7 -0.7
      baz=199,SNR=6.1
I42A  Draeger Farm,     28.57  14  eP    P      05 31 22.7 -0.7
      comp=Z,34nm,0.9s
H38A  Maiden Rock       28.68   9  P     P      05 31 23.7 -0.7
      baz=192,SNR=11
AAM   Ann Arbor         28.74  23  P     P      05 31 23.1 -1.8
      baz=210
AAM   Ann Arbor         28.74  23  eP    P      05 31 24.1 -0.8
      comp=Z,55nm,0.8s
AAM   Ann Arbor         28.74  23  eP    P      05 31 24.1 -0.8
AAM                                 pmax  pmax
      comp=Z,55nm,0.8s
I43A  Langenfeld Bro    28.75  15  P     P      05 31 24.4 -0.7
      baz=200,SNR=5.8
G32A  Webster           28.82   1  P     P      05 31 24.4 -1.2
      baz=182
G32A  Webster           28.82   1  eP    P      05 31 25.4 -0.2
      comp=Z,113nm,1.0s
WAKR  Walker            28.84 324  eP    P      05 31 28.6 +2.5
      comp=Z,17nm,1.2s
H39A  Augusta           28.84  10  P     P      05 31 25.2 -0.6
      baz=194,SNR=15
G34A  Benson            28.88   4  P     P      05 31 25.0 -1.1
      baz=185,SNR=5.1
G35A  Watkins           28.95   6  P     P      05 31 25.4 -1.3
      baz=188
G35A  Watkins           28.95   6  eP    P      05 31 26.0 -0.7
      comp=Z,25nm,0.5s
H40A  Chili             28.95  12  P     P      05 31 26.0 -0.8
      baz=196,SNR=20
REDW  Red Top Meadow    28.97 341  eP    P      05 31 28.6 +1.3
      comp=Z,79nm,1.5s
SNOW  Snow King Moun    29.03 341  eP    P      05 31 29.2 +1.4
      comp=Z,35nm,0.8s
G36A  St. Michael       29.04   7  P     P      05 31 26.3 -1.2
      baz=189
CMB   Columbia Colle    29.07 322  eP    P      05 31 29.6 +1.6
      comp=Z,7.2nm,1.0s
CMB   Columbia Colle    29.07 322  eP    P      05 31 29.6 +1.6
CMB                                 pmax  pmax
      comp=Z,7.0nm,1.0s
YERR  Yerington         29.07 325  eP    P      05 31 30.3 +2.2
      comp=Z,14nm,1.1s
BMN   Battle Mountai    29.08 329  eP    P      05 31 30.2 +2.0
      comp=Z,13nm,0.9s
BMN   Battle Mountai    29.08 329  eP    P      05 31 30.2 +2.0
BMN                                 pmax  pmax
      comp=Z,13nm,0.9s
H41A  Junction City     29.10  13  P     P      05 31 27.2 -0.8
      baz=197,SNR=17
H41A  Junction City     29.10  13  eP    P      05 31 27.8 -0.3
      comp=Z,53nm,0.8s
TPAW  Teton Pass        29.12 341  eP    P      05 31 30.0 +1.5
      comp=Z,27nm,0.9s
LOHW  Long Hollow       29.12 341  eP    P      05 31 29.9 +1.3
      comp=Z,26nm,0.8s
SPMN  Marine on St.     29.14   8  P     P      05 31 27.5 -0.9
      baz=191,SNR=24
SPMN  Marine on St.     29.14   8  eP    P      05 31 27.7 -0.7
      comp=Z,53nm,0.8s
N54A  Moraine State     29.18  29  P     P      05 31 27.7 -1.1
      baz=218
N54A  Moraine State     29.18  29  eP    P      05 31 28.0 -0.8
      comp=Z,47nm,1.4s
G38A  Ridgeland         29.23   9  P     P      05 31 28.2 -1.0
      baz=193,SNR=7.2
H42A  Shiocton          29.25  14  P     P      05 31 28.4 -0.9
      baz=199,SNR=5.1
H42A  Shiocton          29.25  14  eP    P      05 31 29.1 -0.3
      comp=Z,28nm,0.8s
FXWY  Fox Creek         29.27 341  eP    P      05 31 31.1 +1.2
      comp=Z,13nm,0.9s
MOOW  Moose Ponds       29.29 341  eP    P      05 31 31.1 +1.1
      comp=Z,12nm,0.8s
O56A  Blue Knob Stat    29.34  32  P     P      05 31 29.3 -1.0
      baz=221
O56A  Blue Knob Stat    29.34  32  eP    P      05 31 29.9 -0.5
      comp=Z,22nm,0.9s
PNTR  Pine Nut          29.34 325  eP    P      05 31 33.0 +2.4
      comp=Z,20nm,0.9s
H43A  Windswept, Lux    29.40  15  P     P      05 31 29.8 -1.0
      baz=201
G39A  Holcombe          29.45  10  P     P      05 31 30.4 -0.8
      baz=194,SNR=14
F34A  Alexandria        29.46   4  P     P      05 31 29.9 -1.3
      baz=186,SNR=6.2
IMW   Indian Meadow     29.48 341  eP    P      05 31 33.0 +1.2
      comp=Z,10nm,0.8s
VCNR  Virginia City     29.51 325  eP    P      05 31 33.6 +1.5
      comp=Z,9.8nm,1.0s
F35A  Swanville         29.57   5  P     P      05 31 31.1 -1.2
      baz=187,SNR=6.5
FLWY  Flagg Ranch       29.57 342  eP    P      05 31 33.9 +1.3
      comp=Z,21nm,0.9s
G40A  Rib Lake          29.61  12  P     P      05 31 31.7 -0.9
      baz=196,SNR=16
G40A  Rib Lake          29.61  12  eP    P      05 31 31.9 -0.7
      comp=Z,51nm,0.9s
RUBR  Rubicon Trail     29.62 324  eP    P      05 31 34.2 +1.2
      comp=Z,43nm,1.0s
SDMD  Soldier’s Deli    29.62  35  eP    P      05 31 32.7 -0.1
      comp=Z,8.8nm,1.0s
ALLY  Alegheny Colle    29.65  28  eP    P      05 31 32.1 -0.9
      comp=Z,36nm,0.8s
PAHR  Pah Rah Range     29.66 326  eP    P      05 31 34.9 +1.7
      comp=Z,18nm,1.3s
F37A  Hinrichs Farm,    29.66   8  P     P      05 31 32.3 -0.7
      baz=191,SNR=10
F36A  Milaca            29.68   7  P     P      05 31 32.0 -1.3
      baz=189,SNR=30
F36A  Milaca            29.68   7  eP    P      05 31 32.2 -1.0
      comp=Z,28nm,0.8s
M54A  Oil Creek Stat    29.76  29  P     P      05 31 33.0 -1.0
      baz=218
M54A  Oil Creek Stat    29.76  29  eP    P      05 31 33.4 -0.6
      comp=Z,26nm,0.8s
G41A  Antigo            29.76  13  P     P      05 31 32.9 -1.1
      baz=198,SNR=15
YPP   Pitchstone Pla    29.78 342  eP    P      05 31 35.3 +0.8
      comp=Z,14nm,1.2s
H17A  Grant Village     29.82 342  P     P      05 31 36.9 +2.1
      baz=156
H17A  Grant Village     29.82 342  eP    P      05 31 36.0 +1.2
      comp=Z,16nm,1.2s
YFT   Old Faithful      29.95 342  eP    P      05 31 37.0 +1.1
      comp=Z,12nm,0.9s
SSPA  Standing Stone    29.95  32  P     P      05 31 34.7 -1.1
      baz=222
SSPA  Standing Stone    29.95  32  eP    P      05 31 35.0 -0.8
      comp=Z,43nm,1.4s
G42A  Mountain          29.96  14  P     P      05 31 34.8 -0.9
      baz=199,SNR=8.8
G42A  Mountain          29.96  14  eP    P      05 31 35.2 -0.5
      comp=Z,46nm,0.8s
F38A  Pierce - Schro    29.99   9  P     P      05 31 35.1 -0.9
      baz=192,SNR=14
AFDM  Forest Hills D    30.02 323  eP    P      05 31 37.3 +1.0
      comp=Z,10nm,1.3s
ERPA  Erie              30.09  28  P     P      05 31 35.4 -1.6
      baz=217
F39A  Loretta           30.11  10  P     P      05 31 35.8 -1.2
      baz=194,SNR=8.0
RLMT  Red Lodge         30.13 344  P     P      05 31 38.4 +0.9
      baz=159,SNR=25
RLMT  Red Lodge         30.13 344  eP    P      05 31 38.5 +1.1
      comp=Z,38nm,0.9s
G43A  Wallace           30.15  15  P     P      05 31 36.3 -1.2
      baz=200,SNR=5.5
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G43A	Wallace	30.15	15	eP	P	05 31 36.9	-0.5
	comp=Z,35nm,0.9s						
E34A	Wadena	30.18	4	P	P	05 31 36.7	-0.9
	baz=186,SNR=12						
F40A	Park Falls	30.25	11	P	P	05 31 37.6	-0.7
	baz=196,SNR=45						
E35A	Pequot Lakes	30.28	5	P	P	05 31 37.9	-0.7
	baz=187,SNR=39						
F41A	Three Lakes	30.28	13	P	P	05 31 37.5	-1.1
	baz=198						
F41A	Three Lakes	30.28	13	eP	P	05 31 37.9	-0.7
	comp=Z,14nm,0.9s						
BEKR	Beckworth	30.30	325	eP	P	05 31 41.4	+2.3
	comp=Z,16nm,0.9s						
YHB	Horse Butte	30.33	342	eP	P	05 31 40.4	+1.1
	comp=Z,8.6nm,0.9s						
E36A	McGregor	30.36	7	P	P	05 31 38.4	-0.9
	baz=190,SNR=12						
HLID	Hailey	30.39	336	P	P	05 31 41.0	+1.3
	baz=148,SNR=28						
HLID	Hailey	30.39	336	eP	P	05 31 41.1	+1.3
	comp=Z,13nm,0.8s						
QLMT	Earthquake Lak	30.47	341	eP	P	05 31 41.3	+0.8
E37A	Wrenshall	30.51	8	P	P	05 31 39.7	-0.9
	baz=191						
F42A	Maple Grove Fa	30.52	14	P	P	05 31 39.1	-1.5
	baz=199						
E39A	Mellen	30.61	11	P	P	05 31 40.8	-0.7
	baz=195,SNR=22						
COWI	Conover	30.62	13	eP	P	05 31 41.1	-0.4
	comp=Z,24nm,0.8s						
E38A	The Farm, Brul	30.67	9	P	P	05 31 41.0	-1.0
	baz=193,SNR=20						
E38A	The Farm, Brul	30.67	9	eP	P	05 31 41.1	-1.0
	comp=Z,54nm,1.2s						
SJG	San Juan	30.71	82	eP	P	05 31 41.2	-1.5
	comp=Z,31nm,0.9s						
SJG	San Juan	30.71	82	eP	P	05 31 41.2	-1.5
SJG				pmax	pmax		
	comp=Z,31nm,0.9s						
E40A	Wakefield	30.80	11	P	P	05 31 42.6	-0.6
	baz=196,SNR=29						
F43A	Flat Rock, Esc	30.82	15	P	P	05 31 42.2	-1.1
	baz=201,SNR=14						
MFID	Camas Ranch	30.83	335	eP	P	05 31 45.5	+1.9
	comp=Z,32nm,1.4s						
D35A	Remer	30.83	6	P	P	05 31 42.4	-1.0
	baz=188,SNR=24						
GCMT	Greycliff	30.86	344	eP	P	05 31 44.7	+0.9
MCMT	McKenzie Canyo	30.93	340	eP	P	05 31 46.9	+2.3
LAO	LASA Array	30.96	349	P	P	05 31 44.6	0.0
	baz=165						
CBYP	Canovanas	30.99	82	eP	P	05 31 44.2	-1.0
	comp=Z,41nm,1.0s						
E41A	Kenton	31.00	13	P	P	05 31 43.8	-1.1
	baz=198,SNR=7.9						
D36A	Goodland	31.02	7	P	P	05 31 44.0	-1.1
	baz=190,SNR=23						
D36A	Goodland	31.02	7	eP	P	05 31 44.0	-1.1
	comp=Z,38nm,0.8s						
D37A	Cotton	31.09	8	P	P	05 31 44.7	-1.0
	baz=191,SNR=18						
F45A	CMU Biological	31.13	17	P	P	05 31 44.9	-1.1
	baz=204						
F44A	Big Bay de Noc	31.15	16	P	P	05 31 45.1	-1.1
	baz=202,SNR=12						
E42A	Champion	31.20	14	P	P	05 31 45.6	-1.0
	baz=199,SNR=11						
BOZ	Bozeman (W)	31.23	342	P	P	05 31 48.6	+1.6
	baz=155,SNR=19						
BOZ	Bozeman (W)	31.23	342	eP	P	05 31 48.7	+1.6
	comp=Z,25nm,1.3s						
BOZ	Bozeman (W)	31.23	342	eP	P	05 31 48.7	+1.6
BOZ				pmax	pmax		
	comp=Z,25nm,1.3s						
LUPA	Lehigh Univers	31.26	35	eP	P	05 31 46.9	-0.4
	comp=Z,1.1nm,0.8s						
N59A	State Game Lan	31.27	34	P	P	05 31 45.8	-1.6
	baz=225						
MTP	Monte Pirata	31.28	82	eP	P	05 31 46.7	-1.0
	comp=Z,103nm,1.0s						
WVOR	Wild Horse Val	31.30	330	eP	P	05 31 49.1	+1.4
	comp=Z,39nm,1.0s						
WVOR	Wild Horse Val	31.30	330	eP	P	05 31 49.1	+1.4
WVOR				pmax	pmax		
	comp=Z,39nm,1.0s						
DLMT	Dillon	31.32	340	eP	P	05 31 50.0	+2.1
	comp=Z,43nm,0.9s						
C34A	RKJ Ranch, Bem	31.33	4	P	P	05 31 46.6	-1.2
	baz=186,SNR=11						
E43A	Lone Tree Farm	31.37	15	P	P	05 31 47.2	-1.0
	baz=201,SNR=16						
E43A	Lone Tree Farm	31.37	15	eP	P	05 31 47.5	-0.6
	comp=Z,59nm,0.8s						
C33A	Trail	31.38	3	P	P	05 31 46.8	-1.4
	baz=185,SNR=8.5						
O03D	Paynes Creek	31.40	324	P	P	05 31 48.8	+0.2
	baz=133						
MDND	Maddock	31.42	358	P	P	05 31 48.7	+0.1
	baz=178,SNR=29						
MDND	Maddock	31.42	358	eP	P	05 31 49.0	+0.4
	comp=Z,171nm,0.9s						
F46A	Macinaw City C	31.43	18	P	P	05 31 47.9	-0.8
	baz=205,SNR=5.3						
C35A	Jirik Farms, M	31.45	6	P	P	05 31 47.7	-1.2
	baz=188,SNR=31						
MMNY	Mt. Morris Dam	31.53	29	eP	P	05 31 48.6	-1.0
	comp=Z,42nm,1.0s						
C36A	Pine Crest Far	31.63	7	P	P	05 31 49.4	-1.0
	baz=190						
D41A	Chassel	31.66	13	P	P	05 31 50.1	-0.6
	baz=198,SNR=16						
D41A	Chassel	31.66	13	eP	P	05 31 50.1	-0.6
	comp=Z,106nm,0.9s						
LRM	Limekiln Ridge	31.68	341	eP	P	05 31 52.8	+1.6
C37A	Embarrass	31.68	8	P	P	05 31 49.6	-1.3
	baz=191,SNR=5.4						
MOD	Modoc Plateau	31.72	328	eP	P	05 31 53.3	+1.8
	comp=Z,22nm,0.8s						
BRNJ	Basking Ridge	31.76	36	eP	P	05 31 51.5	-0.2
	comp=Z,51nm,0.9s						
C38A	Sawbill Land.	31.80	9	P	P	05 31 50.4	-1.6
	baz=193,SNR=8.1						
E45A	Wooded Hills,	31.84	17	P	P	05 31 51.7	-0.6
	baz=204,SNR=5.2						
E44A	Grand Marais A	31.88	16	P	P	05 31 51.2	-1.4
	baz=203						
E44A	Grand Marais A	31.88	16	eP	P	05 31 52.8	+0.2
	comp=Z,98nm,0.9s						
AGMN	Agassiz Nation	31.91	3	P	P	05 31 52.4	-0.5
	baz=184,SNR=43						
AGMN	Agassiz Nation	31.91	3	eP	P	05 31 52.4	-0.5
	comp=Z,65nm,0.8s						
J08A	Circle Bar Ran	31.93	332	eP	P	05 31 55.1	+1.8
	comp=Z,59nm,0.8s						
EYMN	Ely	31.99	9	P	P	05 31 52.5	-1.2
	baz=192,SNR=12						
EYMN	Ely	31.99	9	eP	P	05 31 52.9	-0.7
	comp=Z,19nm,0.8s						
BINY	Binghamton	32.07	32	P	P	05 31 53.5	-0.9
	baz=223,SNR=6.5						
BINY	Binghamton	32.07	32	eP	P	05 31 54.0	-0.4
	comp=Z,44nm,1.1s						
B35A	Bob, Littlefor	32.13	6	P	P	05 31 53.8	-1.1
	baz=188,SNR=23						
B35A	Bob, Littlefor	32.13	6	eP	P	05 31 53.7	-1.1
	comp=Z,36nm,0.8s						
B34A	Aery, Baudette	32.18	5	P	P	05 31 54.3	-1.0
	baz=187,SNR=20						
HRY	Holter Researc	32.30	342	eP	P	05 31 57.8	+1.3
PAL	Palisades	32.35	36	P	P	05 31 55.5	-1.3
	baz=228						
PAL	Palisades	32.35	36	eP	P	05 31 56.7	-0.1
	comp=Z,54nm,1.0s						
PAL	Palisades	32.35	36	eP	P	05 31 56.7	-0.1
PAL				pmax	pmax		
	comp=Z,54nm,1.0s						
C40A	Isle Royale Na	32.35	11	P	P	05 31 55.9	-0.9
	baz=196,SNR=7.9						
C40A	Isle Royale Na	32.35	11	eP	P	05 31 56.4	-0.4
	comp=Z,64nm,1.0s						
N02D	Trinity Center	32.36	324	P	P	05 31 57.8	+0.7
	baz=132						
DGMT	Dagmar	32.39	353	P	P	05 31 57.8	+0.7
	baz=170,SNR=9.4						
DGMT	Dagmar	32.39	353	eP	P	05 31 57.8	+0.7
	comp=Z,40nm,0.8s						
M04C	Macdoel	32.44	326	P	P	05 31 59.2	+1.4
	baz=135						
A33A	Warroad	32.58	4	P	P	05 31 58.1	-0.7
	baz=185,SNR=24						
SADO	Sadowa	32.59	26	eP	P	05 31 57.5	-1.4
	comp=Z,27nm,1.0s						
BMO	Blue Mountains	32.62	335	eP	P	05 31 60.0	+0.7
	comp=Z,14nm,1.0s						
BMO	Blue Mountains	32.62	335	eP	P	05 32 00.0	+0.7
BMO				pmax	pmax		
	comp=Z,14nm,1.0s						
K05A	Summer Lake	32.62	328	eP	P	05 32 01.5	+2.0
	comp=Z,14nm,0.9s						
M02C	Callahan	32.73	325	P	P	05 32 01.4	+1.2
	baz=133						
YBH	Yreka Blue Hor	32.88	325	P	P	05 32 00.7	-0.9
	comp=Z,4.9nm,0.9s,baz=154,slow=7.3,SNR=5.0						
YBH				LR	LR	05 47 37.1	
	comp=Z,872nm,18.1s,baz=152,slow=40						
EGMT	Eagleton	32.96	346	P	P	05 32 03.1	+0.8
	baz=160,SNR=10						
EGMT	Eagleton	32.96	346	eP	P	05 32 03.3	+1.1
	comp=Z,128nm,1.8s						
I07A	Izee	32.97	331	eP	P	05 32 03.8	+1.5
	comp=Z,15nm,0.8s						
K04D	Chiloquin, OR	32.99	327	P	P	05 32 03.8	+1.2
	baz=136						
MSO	Missoula	33.05	340	P	P	05 32 04.0	+0.9
	baz=152,SNR=17						
MSO	Missoula	33.05	340	eP	P	05 32 04.1	+1.0
	comp=Z,12nm,0.9s						
J05D	Fort Rock, OR	33.20	329	P	P	05 32 05.5	+1.0
	baz=137						
PINE	Pine Mountain	33.43	330	eP	P	05 32 07.8	+1.3
	comp=Z,13nm,0.8s						
F10A	Beach Ranch, E	33.51	336	eP	P	05 32 08.0	+1.0
	comp=Z,33nm,0.9s						
J04D	Umpqua Nationa	33.61	328	P	P	05 32 09.3	+1.2
	baz=136,SNR=5.2						
L02D	Cave Junction,	33.66	325	P	P	05 32 09.1	+0.8
	baz=132						
G08A	Pilot Rock	33.67	333	eP	P	05 32 09.8	+1.3
	comp=Z,24nm,0.8s						
ULM	Lac du Bonnet	33.86	3	P	P	05 32 08.7	-1.2
	comp=Z,24nm,0.9s,baz=179,slow=11,SNR=22						
ULM				LR	LR	05 46 41.5	
	comp=Z,410nm,19.8s,baz=177,slow=38						
ULM	Lac du Bonnet	33.86	3	eP	P	05 32 09.2	-0.7
	comp=Z,32nm,1.0s						
ULM	Lac du Bonnet	33.86	3	eP	P	05 32 09.2	-0.7
ULM				pmax	pmax		
	comp=Z,32nm,1.0s						
JTMT	Jette	33.97	341	eP	P	05 32 12.3	+1.3
	comp=Z,37nm,1.5s						
I05D	Terrebonne, OR	34.03	330	P	P	05 32 13.0	+1.4
	baz=138,SNR=7.9						
QUA2	Belchertown	34.07	35	eP	P	05 32 12.9	+1.1
	comp=Z,26nm,0.9s						
I04A	Tendick Farm,	34.16	328	P	P	05 32 13.0	+0.3
	baz=136						
NCB	Newcomb	34.24	32	eP	P	05 32 15.5	+2.2
	comp=Z,12nm,0.9s						
E09A	Wood Farm, Sta	34.31	335	eP	P	05 32 14.5	+0.6
	comp=Z,16nm,0.9s						
G06A	Carlson Farm,	34.37	332	eP	P	05 32 15.7	+1.2
	comp=Z,58nm,1.8s						
LONY	Lake Ozonia	34.54	30	P	P	05 32 14.3	-1.6
	baz=223						
LONY	Lake Ozonia	34.54	30	eP	P	05 32 15.5	-0.4
	comp=Z,19nm,0.9s						
I03D	Drain, OR	34.57	327	P	P	05 32 16.7	+0.5
	baz=134						
HRV	Adam Dziewonsk	34.66	36	P	P	05 32 15.8	-1.1
	baz=229						
G05D	Wamic, OR	34.69	331	P	P	05 32 18.4	+1.2
	baz=139						
H04A	Detroit Lake	34.69	329	eP	P	05 32 18.8	+1.6
	comp=Z,58nm,1.0s						
WALA	Waterton Lakes	35.02	342	eP	P	05 32 21.3	+1.2
	comp=Z,22nm,0.8s						
D08A	Wollman Farm,	35.07	335	eP	P	05 32 20.9	+0.5
	comp=Z,6.9nm,0.9s						
NNA	Nana	35.25	142	LR	LR	05 44 10.1	
	comp=Z,403nm,19.1s,baz=330,slow=32						
C09A	Chrisman Ranch	35.42	337	eP	P	05 32 24.9	+1.5
	comp=Z,23nm,0.8s						
G03D	McMinnville, O	35.60	329	P	P	05 32 26.7	+1.7
	baz=136						
LBNH	Lisbon	35.62	33	P	P	05 32 24.8	-0.3
	baz=227						
TRQ	Mont Tremblant	35.74	29	eP	P	05 32 25.6	-0.7
LTY	Liberty	35.95	334	eP	P	05 32 29.6	+1.5
	comp=Z,69nm,1.4s						
LON	Longmire	36.05	332	eP	P	05 32 30.7	+1.7
	comp=Z,20nm,0.8s						
LON	Longmire	36.05	332	eP	P	05 32 30.7	+1.7
LON				pmax	pmax		
	comp=Z,20nm,0.8s						
F04D	Rainier, OR	36.11	330	P	P	05 32 31.2	+1.8
	baz=137						
B08A	Colville Reser	36.28	336	eP	P	05 32 31.9	+1.0
	comp=Z,25nm,1.2s						
D05A	Enumclaw	36.47	333	eP	P	05 32 34.4	+2.0
	comp=Z,48nm,0.8s						
C06D	Leavenworth	36.56	334	P	P	05 32 34.2	+0.9
	baz=142						
E03A	Lebam	36.71	330	eP	P	05 32 36.1	+1.6
	comp=Z,48nm,0.9s						
B06A	Marblemount	37.28	334	eP	P	05 32 40.5	+1.2
	comp=Z,24nm,0.9s						
B05A	Bryant	37.34	334	P	P	05 32 40.3	+0.5
	baz=140						
NLWA	Neilton Lookou	37.47	331	eP	P	05 32 43.3	+2.3
	comp=Z,84nm,1.4s						
PKME	Peaks-Kenny Pk	37.70	34	P	P	05 32 42.2	-0.7
	baz=229						
A04D	Lummi Island	37.95	334	P	P	05 32 46.1	+1.2
	baz=140,SNR=10						
FFC	Flin Flon	38.40	357	eP	P	05 32 48.7	0.0
	comp=Z,59nm,0.8s						
FFC	Flin Flon	38.40	357	eP	P	05 32 48.7	0.0
FFC				pmax	pmax		
	comp=Z,59nm,0.8s						
LLLB	Lillooet	39.08	336	eP	P	05 32 55.9	+1.3
	comp=Z,30nm,0.9s						
PTGA	Pitinga	41.44	111	P	P	05 33 13.9	-0.6
	comp=Z,2.0nm,0.3s,baz=313,slow=9.1,SNR=7.6						
PTGA	Pitinga	41.44	111	eP	P	05 33 14.4	-0.1
	comp=Z,17nm,1.4s						
SAML	Samuel	42.88	123	eP	P	05 33 24.6	-1.6
	comp=Z,5.3nm,1.0s						
SAML	Samuel	42.88	123	eP	P	05 33 24.6	-1.6
SAML				pmax	pmax		
	comp=Z,5.0nm,1.0s						
LPAZ	La Paz	44.01	136	P	P	05 33 34.8	-1.2
	comp=Z,1.1nm,0.8s,baz=359,slow=8.9,SNR=5.6						
LPAZ				LR	LR	05 49 58.5	
	comp=Z,346nm,21.7s,baz=316,slow=34						
LPAZ	La Paz	44.01	136	eP	P	05 33 35.6	-0.3
LPAZ				epP	P	05 33 36.1	+0.2
LPAZ	La Paz	44.01	136	eP	P	05 33 35.6	-0.3
RPN	Rapa Nui	44.54	194	LR	LR	05 47 45.1	
	comp=Z,322nm,21.3s,baz=44,slow=30						
MNMC	Minye Minye	45.16	140	eP	P	05 33 44.7	-0.1
	comp=Z,24nm,1.2s						
SCHQ	Schefferville	45.40	25	P	P	05 33 45.0	-0.9
	comp=Z,29nm,0.9s,baz=226,slow=4.7,SNR=11						
SCHQ				LR	LR	05 55 32.8	
	comp=Z,586nm,18.4s,baz=240,slow=40						
SCHQ	Schefferville	45.40	25	eP	P	05 33 45.5	-0.4
	comp=Z,38nm,1.0s						
DIB	Dawson Inlet,	45.47	332	eP	P	05 33 48.5	+2.0
	comp=Z,29nm,1.1s						
PB11	IPOC Station P	45.60	141	eP	P	05 33 48.6	+0.5
	comp=Z,26nm,0.9s						
YKA	Yellowknife Ar	47.49	350	P	P	05 34 01.8	-0.4
	comp=Z,12nm,0.9s,baz=158,slow=7.5,SNR=37						
YKA				LR	LR	05 54 38.7	
	comp=Z,28nm,19.9s,baz=161,slow=37						
YKB5	Yellowknife Ar	47.49	350	eP	P	05 34 01.2	-1.0
YKW3	Yellowknife Ar	47.56	350	eP	P	05 34 02.4	-0.3
	comp=Z,12nm,0.8s						
DLBC	Dease Lake	48.13	338	eP	P	05 34 09.9	+2.6
	comp=Z,35nm,1.1s						
TAOE	Nuku Hiva Isla	48.42	242	eS	S	05 41 14.7	+3.6
	comp=Z,208nm,24.4s						
TAOE				eLR	LR	05 47 45.0	
	comp=Z,797nm,24.6s,baz=55						
TAOE	Nuku Hiva Isla	48.42	242	eT	T	06 25 30.7	
	comp=Z,91nm,0.2s						
GO02	Mina Guanaco	49.85	145	eP	P	05 34 22.9	+1.8
	comp=Z,18nm,1.1s						
WHY	Whitehorse	51.45	338	eP	P	05 34 34.6	+2.0
	comp=Z,16nm,1.2s						
RKT	Rikitea	53.17	223	eS	S	05 42 23.7	+7.1
	comp=Z,319nm,28.8s						
RKT				eLR	LR	05 50 17.2	
	comp=Z,979nm,30.8s,baz=37						
RKT	Rikitea	53.17	223	eT	T	06 31 27.7	
	comp=Z,32nm,0.3s						
RAGM	Ragged Mountai	55.13	334	eP	P	05 35 01.0	+1.4
	comp=Z,22nm,1.1s						
DAWY	Dawson	55.29	339	eP	P	05 35 01.2	+0.5
	comp=Z,9.3nm,0.9s						
BMRM	Bremner River	55.41	335	eP	P	05 35 03.8	+2.1
	comp=Z,22nm,1.0s						
EYAK	Cordova Ski Ar	55.66	334	eP	P	05 35 05.3	+1.9
	comp=Z,15nm,0.9s						
DIV	Divide	55.98	334	eP	P	05 35 07.6	+1.9
	comp=Z,28nm,1.1s						
FID	Port Fidalgo	56.08	334	eP	P	05 35 08.3	+1.9
	comp=Z,40nm,0.9s						
KLU	Klutina	56.23	335	eP	P	05 35 09.4	+1.9
	comp=Z,28nm,1.1s						
EGAK	Eagle	56.34	339	eP	P	05 35 08.6	+0.5
	comp=Z,17nm,0.8s						
GLI	Glacier Island	56.40	334	eP	P	05 35 09.7	+1.0
	comp=Z,17nm,0.8s						
HARP	HAARP	56.41	336	eP	P	05 35 10.2	+1.4
	comp=Z,43nm,0.9s						
INK	Inuvik	56.54	345	eP	P	05 35 09.8	+0.3
	comp=Z,35nm,0.8s						
INK	Inuvik	56.54	345	eP	P	05 35 09.8	+0.3
INK				pmax	pmax		
	comp=Z,35nm,0.8s						
SCRK	Sand Creek	56.84	338	eP	P	05 35 13.2	+1.3
	comp=Z,20nm,0.9s						
SCM	Sheep Creek Mo	56.98	335	eP	P	05 35 14.3	+1.4
	comp=Z,17nm,1.2s						
SCM	Sheep Creek Mo	56.98	335	eP	P	05 35 14.3	+1.4
SCM				pmax	pmax		
	comp=Z,17nm,1.2s						
RIDG	Independ’e Rid	57.02	337	eP	P	05 35 14.5	+1.4
	comp=Z,55nm,1.0s						
SML	Sawmill	57.38	334	eP	P	05 35 17.0	+1.3
	comp=Z,33nm,1.2s						
SML	Sawmill	57.38	334	eP	P	05 35 17.0	+1.3
SML				pmax	pmax		
	comp=Z,33nm,1.2s						
BRLK	Bradley Lake	57.56	332	eP	P	05 35 18.4	+1.5
	comp=Z,30nm,0.8s						
GHO	Glory Hole Cre	57.61	334	eP	P	05 35 18.5	+1.2
	comp=Z,35nm,0.8s						
PMR	Palmer	57.61	334	eP	P	05 35 17.8	+0.6
PMR	Palmer	57.61	334	eP	P	05 35 17.8	+0.6
CNPM	China Poot	57.62	331	eP	P	05 35 18.2	+0.9
	comp=Z,86nm,2.0s						
DHY	Denali Highway	57.63	336	eP	P	05 35 18.0	+0.5
	comp=Z,10nm,0.9s						
SII	Sitkinak Islan	57.92	327	eP	P	05 35 19.8	+0.3
	comp=Z,37nm,0.8s						
PMOR	Pomariorio Ree	58.06	240	eT	T	06 37 33.9	
	comp=Z,6.9nm,0.2s						
HDA	Harding Lake	58.17	337	eP	P	05 35 21.6	+0.5
	comp=Z,20nm,0.8s						
CPUP	Villa Florida	58.18	136	P	P	05 35 20.4	-1.3
	comp=Z,1.8nm,0.7s,baz=313,slow=8.4,SNR=5.0						
CPUP				LR	LR	05 59 34.1	
	comp=Z,143nm,18.7s,baz=326,slow=35						
CPUP	Villa Florida	58.18	136	eP	P	05 35 20.4	-1.3
	comp=Z,14nm,1.4s						
CPUP	Villa Florida	58.18	136	eP	P	05 35 20.4	-1.3
CPUP				pmax	pmax		
	comp=Z,14nm,1.4s						
SUA	Susitna One	58.24	333	eP	P	05 35 22.9	+1.1
	comp=Z,51nm,0.8s						
NRS	Narsarsuaq	58.27	27	i P	P	05 35 21.3	-0.5
	comp=Z,26nm,0.9s						
NRS	Narsarsuaq	58.27	27	i P	P	05 35 21.3	-0.5
NRS				pmax	pmax		
	comp=Z,26nm,0.9s						
IL1	Eielson Array	58.34	338	eP	P	05 35 22.0	-0.2
ILAR	Eielson Array	58.34	338	P	P	05 35 22.8	+0.5
	comp=Z,12nm,0.9s,baz=134,slow=5.0,SNR=104						
ILAR				LR	LR	06 03 06.6	
	comp=Z,677nm,18.4s,baz=131,slow=39						
ILB	Eielson Array	58.34	338	eP	P	05 35 22.9	+0.6
MCK	McKinley	58.57	336	eP	P	05 35 24.9	+0.9
	comp=Z,28nm,0.8s						
MCK	McKinley	58.57	336	eP	P	05 35 24.9	+0.9
MCK				pmax	pmax		
	comp=Z,28nm,0.8s						
CCB	Clear Creek Bu	58.61	337	eP	P	05 35 24.3	+0.1
	comp=Z,8.2nm,0.8s						
WRH	Wood River Hil	58.62	337	eP	P	05 35 24.9	+0.6
	comp=Z,12nm,1.0s						
COLA	College	58.74	338	eP	P	05 35 26.0	+0.9
	comp=Z,24nm,1.0s						
COLA	College	58.74	338	eP	P	05 35 26.0	+0.9
COLA				pmax	pmax		
	comp=Z,25nm,1.0s						
SKT	Skwentna	58.80	334	eP	P	05 35 26.6	+1.0
	comp=Z,32nm,0.8s						
BDFB	Brasilia	58.92	120	eP	P	05 35 27.3	+0.1
	comp=Z,16nm,0.8s						
BDFB	Brasilia	58.92	120	eP	P	05 35 27.3	+0.1
BDFB				pmax	pmax		
	comp=Z,16nm,0.8s						
TRF	Thorofare Moun	58.96	336	eP	P	05 35 27.7	+0.8
	comp=Z,68nm,0.8s						
BWN	Browne	58.99	337	eP	P	05 35 27.5	+0.7
	comp=Z,107nm,0.8s						
SFJD	Kangerlussuaq	59.23	20	P	P	05 35 28.4	0.0
	comp=Z,24nm,0.9s,baz=247,slow=9.4,SNR=7.3						
SFJD				LR	LR	06 03 32.8	
	comp=Z,339nm,19.4s,baz=210,slow=39						
SFJD	Kangerlussuaq	59.23	20	eP	P	05 35 28.4	0.0
SFJD				eP	P	05 35 28.6	+0.2
PPLA	Purkeypile	59.48	335	eP	P	05 35 31.5	+1.1
	comp=Z,58nm,1.4s						
BPAW	Bear Paw Mtn.	59.54	336	eP	P	05 35 31.2	+0.5
	comp=Z,17nm,0.8s						
CAST	Castle Rocks	59.67	335	eP	P	05 35 31.7	+0.2
	comp=Z,43nm,0.9s						
MLY	Manley	59.89	337	eP	P	05 35 33.8	+0.7
	comp=Z,27nm,0.8s						
CHGN	Chignik	60.08	326	eP	P	05 35 34.8	+0.4
	comp=Z,16nm,1.0s						
SVW2	Sparrevohn	60.23	332	eP	P	05 35 34.9	-0.5
	comp=Z,24nm,0.8s						
TIAR	Tiarei	60.56	238	eT	T	06 40 41.8	
	comp=Z,2.0nm,0.2s						
PPT	Papeete	60.75	239	LR	LR	05 54 50.4	
	comp=Z,244nm,18.6s,baz=66,slow=29						
PPT2	Papeete2	60.76	239	eS	S	05 43 59.6	+2.5
	comp=Z,147nm,25.8s						
PPT2				eLR	LR	05 53 28.0	
	comp=Z,521nm,25.2s,baz=51						
COLD	Coldfoot	60.77	339	eP	P	05 35 40.3	+1.3
	comp=Z,11nm,0.9s						
TOLK	Toolik Lake Re	61.29	341	P	P	05 35 43.2	+0.6
	baz=121,SNR=7.4						
TOLK	Toolik Lake Re	61.29	341	eP	P	05 35 43.5	+0.9
	comp=Z,12nm,0.8s						
PLCA	Paso Flores	62.37	156	P	P	05 35 50.1	-0.1
	comp=Z,3.3nm,1.0s,baz=8.3,slow=8.3,SNR=4.4						
PLCA				LR	LR	05 57 29.3	
	comp=Z,349nm,18.7s,baz=350,slow=31						
PLCA	Paso Flores	62.37	156	eP	P	05 35 50.1	-0.1
	comp=Z,31nm,1.2s						
PLCA	Paso Flores	62.37	156	eP	P	05 35 50.1	-0.1
PLCA				pmax	pmax		
	comp=Z,31nm,1.2s						
KULLO	Kullorsuaq	62.39	11	⇑iP	P	05 35 49.6	-0.2
	comp=Z,31nm,0.9s						
KULLO	Kullorsuaq	62.39	11	⇑iP	P	05 35 49.6	-0.2
KULLO				pmax	pmax		
	comp=Z,31nm,0.9s						
FALS	False Pass	62.50	324	eP	P	05 35 51.4	+0.5
	comp=Z,63nm,0.7s						
ANGG	Ammassalik, Gr	63.25	24	eP	P	05 35 55.2	-0.5
	comp=Z,56nm,1.2s						
TBI	Tubuai	63.72	233	eLR	LR	05 55 01.1	
	comp=Z,686nm,27.5s						
TBI	Tubuai	63.72	233	eT	T	06 44 42.4	
	comp=Z,46nm,0.2s						
UNV	Unalaska Valle	64.12	322	eP	P	05 36 02.7	+1.1

	comp=Z,39nm,1.0s						
SUMG	Summit	65.65	17	*e*P	P	05 36 11.5	-0.3
	comp=Z,79nm,0.8s						
SUMG	Summit	65.65	17	*i* P	P	05 36 11.8	0.0
	comp=Z,64nm,0.8s						
SUMG	Summit	65.65	17	*i* P	P	05 36 11.8	0.0
SUMG				pmax	pmax		
	comp=Z,64nm,0.8s						
BORG	Borgarnes	69.77	26	LR	LR	06 09 03.6	
	comp=Z,86nm,18.8s,baz=291,slow=38						
RAR	Rarotonga	70.93	240	LR	LR	05 59 30.5	
	comp=Z,230nm,18.4s,baz=66,slow=29						
DAG	Danmarks Havn	71.81	14	⇑*i*P	P	05 36 48.8	-0.8
	comp=Z,25nm,0.8s						
DAG	Danmarks Havn	71.81	14	⇑*i*P	P	05 36 48.8	-0.8
DAG				pmax	pmax		
	comp=Z,25nm,0.8s						
PMOZ	Porto Moniz, M	73.96	60	*e*LR	LR	06 00 55.7	
	comp=Z,433nm,22.0s						
KBS	Kingsbay	77.85	11	*e*P	P	05 37 26.4	+1.8
	comp=Z,38nm,1.1s						
KBS	Kingsbay	77.85	11	*e*P	P	05 37 26.4	+1.8
KBS				pmax	pmax		
	comp=Z,38nm,1.1s						
AFI	Afiamalu	78.59	252	LR	LR	06 03 46.1	
	comp=Z,147nm,18.2s,baz=84,slow=29						
SPA0	Spitsbergen Ar	78.97	11	*e*P	P	05 37 30.9	+0.2
SPITS	Spitsbergen Ar	78.97	11	P	P	05 37 31.0	+0.2
	comp=Z,8.5nm,0.8s,baz=352,slow=2.9,SNR=4.3						
SPITS				LR	LR	06 14 00.1	
	comp=Z,380nm,21.3s,baz=350,slow=37						
SPITS	Spitsbergen Ar	78.97	11	P	P	05 37 31.0	+0.2
PGAV	Gavieira, Arco	79.26	49	*e*LR	LR	06 13 02.8	
	comp=Z,158nm,16.0s						
EKA	Eskdalemuir Ar	79.58	35	P	P	05 37 33.8	-0.7
	comp=Z,5.4nm,0.8s,baz=293,slow=3.8,SNR=14						
EKA				LR	LR	06 11 14.2	
	comp=Z,218nm,21.6s,baz=305,slow=35						
PNCL	Nicolau / Gran	79.90	53	*e*P	P	05 37 38.2	+1.6
	comp=Z,25nm,1.4s						
PMTG	Montargil	79.92	52	*e*P	P	05 37 36.2	-0.5
	comp=Z,41nm,1.3s						
MTE	Manteigas	80.13	51	*e*P	P	05 37 37.6	-0.3
	comp=Z,44nm,1.2s						
MTE	Manteigas	80.13	51	*e*LR	LR	06 04 49.0	
	comp=Z,240nm,16.0s						
EVO	Evora	80.20	53	*e*P	P	05 37 37.9	-0.3
	comp=Z,57nm,1.6s						
PCBR	Castelo Branco	80.31	51	*e*P	P	05 37 38.9	+0.1
	comp=Z,44nm,1.3s						
MVO	Moncorvo	80.34	50	*e*LR	LR	06 04 19.2	
	comp=Z,138nm,16.0s						
PMRV	Marv??o	80.47	52	*e*P	P	05 37 39.3	-0.4
	comp=Z,34nm,1.4s						
PMRV	Marv??o	80.47	52	*e*LR	LR	06 04 40.4	
	comp=Z,231nm,20.0s						
PVAQ	Vaqueiros	80.69	54	*e*LR	LR	06 04 26.7	
	comp=Z,167nm,18.0s						
ROSF	Rostrenen	81.22	42	*e*P	P	05 37 42.0	-1.5
ROSF				pmax	pmax		
	comp=Z,12nm,1.1s						
PAB	San Pablo	82.72	51	*e*P	P	05 37 51.4	-0.3
	comp=Z,17nm,1.2s						
PAB	San Pablo	82.72	51	*e*P	P	05 37 51.4	-0.3
PAB				pmax	pmax		
	comp=Z,17nm,1.2s						
GRR	Gorron	82.76	42	*e*P	P	05 37 50.4	-1.2
GRR				pmax	pmax		
	comp=Z,9.0nm,0.9s						
FLN	La Foliniere	82.89	41	*e*P	P	05 37 51.2	-1.0
FLN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
ESDC	Sonseca Array	82.98	51	P	P	05 37 52.4	-0.5
	comp=Z,2.4nm,0.8s,baz=299,slow=4.8,SNR=14						
ESDC				LR	LR	06 10 26.1	
	comp=Z,162nm,21.7s,baz=270,slow=33						
ES19	SONSECA Array	83.02	51	*e*P	P	05 37 52.9	-0.3
LDF	La Druitiere	83.17	41	*e*P	P	05 37 52.6	-1.1
LDF				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MDT	Midelt	84.30	58	P	P	05 37 59.8	-0.2
	comp=Z,4.9nm,1.0s,baz=329,slow=5.6,SNR=7.8						
MDT				LR	LR	06 11 07.4	
	comp=Z,201nm,20.6s,baz=308,slow=33						
ETSF	Etsaut	84.54	47	*e*P	P	05 38 01.4	+0.5
ETSF				pmax	pmax		
	comp=Z,5.0nm,0.8s						
NB2	NORSAR Subarra	84.92	27	P	P	05 38 03.5	+1.1
	comp=Z,2.2nm,0.8s,baz=297,slow=5.3						
NOA	NORSAR Array B	84.92	27	P	P	05 38 02.8	+0.4
	comp=Z,4.6nm,0.9s,baz=301,slow=5.0,SNR=9.2						
NOA				LR	LR	06 17 54.9	
	comp=Z,77nm,19.5s,baz=280,slow=37						
PMSA	Palmer Station	85.00	166	LR	LR	06 08 00.1	
	comp=Z,144nm,18.7s,baz=318,slow=30						
EPF	Esparros	85.13	47	*e*P	P	05 38 04.0	+0.1
EPF				pmax	pmax		
	comp=Z,12nm,1.2s						
RJF	Les Rejaudoux	85.23	44	*e*P	P	05 38 03.1	-1.2
RJF				pmax	pmax		
	comp=Z,35nm,1.6s						
PEA1	Petropavlovsk-	85.23	324	*e*P	P	05 38 05.6	+1.5
UCC	Uccle	85.23	38	⇑P	P	05 38 03.9	-0.2
PETK	Petropavlovsk-	85.24	324	P	P	05 38 05.6	+1.5
	comp=Z,5.5nm,0.5s,baz=64,slow=9.9						
TCF	Toulx Ste Croi	85.38	43	*e*P	P	05 38 03.7	-1.3
TCF				pmax	pmax		
	comp=Z,13nm,1.0s						
BAIF	Baives	85.40	39	*e*P	P	05 38 04.1	-0.9
BAIF				pmax	pmax		
	comp=Z,15nm,1.2s						
DOU	Dourbes	85.62	39	⇑P	P	05 38 05.8	-0.2
BGF	Bois d'Agland	85.71	43	*e*P	P	05 38 05.2	-1.4
BGF				pmax	pmax		
	comp=Z,22nm,1.2s						
CAF	Calviac	85.72	44	*e*P	P	05 38 06.9	+0.1
CAF				pmax	pmax		
	comp=Z,12nm,1.3s						
ARA0	ARCESS Array S	85.74	17	*e*P	P	05 38 05.8	-0.5
ARCES	ARCESS Array B	85.74	17	P	P	05 38 05.8	-0.5
	comp=Z,9.6nm,0.8s,baz=305,slow=4.3,SNR=18						
ARCES	ARCESS Array B	85.74	17	*e*P	P	05 38 05.5	-0.8
ARCES	ARCESS Array B	85.74	17	*e*P	P	05 38 05.5	-0.8
BCLA	Clavier	85.93	39	⇑P	P	05 38 07.0	-0.6
	comp=Z,10nm,1.3s						
AVF	Avril sur Loir	85.96	42	*e*P	P	05 38 06.1	-1.7
AVF				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SSF	Saint Saulge	85.97	42	*e*P	P	05 38 06.4	-1.5
SSF				pmax	pmax		
	comp=Z,15nm,1.2s						
MEM	Membach	86.28	38	⇓P	P	05 38 09.9	+0.5
	comp=Z,9.4nm,1.1s						
MTLF	Montolieu	86.34	46	*e*P	P	05 38 08.6	-1.2
MTLF				pmax	pmax		
	comp=Z,12nm,1.1s						
HFS	Hagfors	86.41	28	P	P	05 38 09.4	-0.4
	comp=Z,3.5nm,0.8s,baz=330,slow=5.5,SNR=4.1						
HFS				LR	LR	06 17 24.2	
	comp=Z,104nm,20.1s,baz=295,slow=36						
HAU	Haudompre	87.44	41	*e*P	P	05 38 14.0	-1.1
HAU				pmax	pmax		
	comp=Z,6.0nm,0.7s						
VIVF	Saint-Julien-l	87.49	44	*e*P	P	05 38 12.1	-3.3
VIVF				pmax	pmax		
	comp=Z,16nm,1.8s						
CDF	Champ du Feu	87.87	40	*e*P	P	05 38 12.9	-4.3
CDF				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KOWA	Kowa	89.97	75	LR	LR	06 16 27.3	
	comp=Z,152nm,19.1s,baz=226,slow=34						
DAVOX	Davos/Dischmat	90.13	41	LR	LR	06 21 10.2	
	comp=Z,168nm,18.8s,baz=292,slow=37						
FIA0	FINESS Array S	90.85	23	*e*P	P	05 38 29.7	-1.1
FIA0	FINESS Array S	90.85	23	*e*P	P	05 38 29.7	-1.1
FINES	FINESS Array B	90.85	23	P	P	05 38 29.7	-1.1
	comp=Z,5.4nm,0.9s,baz=333,slow=7.8,SNR=9.0						
FINES				LR	LR	06 20 28.7	
	comp=Z,327nm,21.3s,baz=295,slow=36						
DBIC	Dimbokro	91.41	83	LR	LR	06 14 31.5	
	comp=Z,116nm,21.8s,baz=268,slow=32						
PRU	Pruhonice	91.52	37	AMS	AMS	06 25 50.0	
	comp=Z,300nm,20.9s						
GEC2	GERESS Array S	91.56	38	*e*P	P	05 38 33.6	-0.9
	comp=Z,6.9nm,1.3s						
GEC2	GERESS Array S	91.56	38	*e*P	P	05 38 33.6	-0.9
GEC2				pmax	pmax		
	comp=Z,7.0nm,1.3s						
GERES	GERESS Array B	91.56	38	P	P	05 38 33.6	-0.9
	comp=Z,0.3nm,0.5s,baz=318,slow=1.3,SNR=4.5						
GERES				LR	LR	06 20 09.5	
	comp=Z,234nm,19.9s,baz=283,slow=36						
TOA1	Torodi Ar. Sit	95.66	75	*e*P	P	05 38 52.0	-1.9
TORD	Torodi Ar. Bea	95.66	75	P	P	05 38 52.0	-1.9
	comp=Z,1.1nm,0.9s,baz=275,slow=4.0						
TORD				LR	LR	06 18 37.8	
	comp=Z,298nm,21.9s,baz=315,slow=33						
YSS	Yuzh-Sakhalins	96.58	323	*e*P	P	05 38 58.5	+1.1
AKASG	Malin Array Be	98.95	31	LR	LR	06 23 37.9	
	comp=Z,136nm,21.2s,baz=300,slow=35						
DZM	Mont Dzumac	100.75	250	*e*LR	LR	06 12 21.9	
	comp=Z,264nm,21.6s						
KURK	Kurchatov	113.16	2	*e*PKiKP	PKiKP	05 44 04.7	-0.4
KURK	Kurchatov	113.16	2	*e*PKIKP	PKiKP	05 44 04.7	-0.4
KURBB	Kurchatov Arra	113.25	2	PKiKP	PKiKP	05 44 04.7	-0.5
	comp=Z,0.5nm,0.7s,baz=346,slow=2.6,SNR=5.5						
BJI	Beijing	115.37	331	PKP	PKPdf	05 44 06.8	-2.8
HHC	Hu-ho-hao-te	116.70	335	*e*PKP	PKPdf	05 44 13.5	+1.2
HHC				PP	PP	05 45 20.9	+1.9
HHC				PKS	PKSdf	05 47 44.5	-4.6
HHC				SS	SS	06 01 28.1	+3.5
HHC				AMB	AMB		
	comp=Z,76nm,8.9s						
MK32	Makanchi Array	117.14	360	*e*PKPdf	PKPdf	05 44 11.4	-1.4
MKAR	Makanchi Array	117.14	360	PKP	PKPdf	05 44 11.4	-1.4
	comp=Z,0.4nm,0.7s,baz=28,slow=3.4,SNR=3.0						
WMQ	Urumqi	119.87	355	PKP	PKPdf	05 44 20.0	+1.7
WMQ				LR	LR		
	comp=Z,170nm,23.7s						
WMQ				LR	LR		
	comp=Z,270nm,23.7s						
NJ2	Nanjing	120.14	324	*e*PKP	PKPdf	05 44 20.0	+1.0
SYO	Syowa Base	121.17	164	⇑*e*Pdiff	Pdif	05 40 47.0	+0.7
WHN	Wuhan	123.78	326	PKP	PKPdf	05 44 23.6	-2.4
LZH	Lanzhou	123.80	338	*e*PKP	PKPdf	05 44 24.8	-1.4
LZH				sPKP		05 44 36.1	
LZH				PP	PP	05 46 09.8	+2.1
LZH				SKS	SKSdf	05 51 34.8	-3.6
LZH				SS	SS	06 02 53.4	-2.3
LZH				AMB	AMB		
	comp=Z,210nm,5.4s						
KSH	Kashi	124.16	5	*e*PKP	PKPdf	05 44 29.4	+2.7
KSH				PP	PP	05 46 18.1	+8.3
BOSA	Boshof	126.84	114	PKP	PKPdf	05 44 31.6	-0.5
	comp=Z,3.2nm,0.8s,baz=211,slow=1.2,SNR=6.9						
MAW	Mawson	127.35	171	PKP	PKPdf	05 44 32.0	+0.4
	comp=Z,3.5nm,0.8s,baz=257,slow=6.7,SNR=5.8						
CD2	Chengdu	128.45	336	PKP	PKPdf	05 44 34.5	-0.5
WB2	Warramunga Arr	130.03	258	*e*PKPdf	PKPdf	05 44 38.1	-0.1
WR1	Warramunga Arr	130.04	258	*e*PKPdf	PKPdf	05 44 38.2	0.0
WRA	Warramunga Arr	130.04	258	PKP	PKPdf	05 44 38.2	0.0
	comp=Z,1.8nm,0.8s,baz=79,slow=2.1,SNR=14						
AS01	Alice Springs	130.61	253	*e*PKPdf	PKPdf	05 44 38.5	-0.7
ASAR	Alice Springs	130.65	253	PKP	PKPdf	05 44 39.0	-0.3
	comp=Z,1.0nm,0.7s,baz=103,slow=2.3,SNR=9.9						
GYA	Guiyang	131.02	330	*e*Pdif	Pdif	05 41 31.0	-0.4
GYA				PKP	PKiKP	05 44 41.4	+0.3
GYA				PP	PP	05 47 00.5	+4.9
GYA				AMB	AMB		
	comp=Z,100nm,7.8s						
CMAR	Chiang Mai Arr	141.47	333	PKP	PKPdf	05 44 57.5	-2.0
	comp=Z,2.0nm,0.8s,baz=343,slow=4.6,SNR=4.8						
CM01	Chiang Mai Arr	141.50	333	*e*PKPdf	PKPdf	05 44 58.3	-1.3
HYB	Hyderabad	146.29	5	*i* PKP	PKPdf	05 45 08.0	0.0
KSM	Kuching	146.68	299	*e*PKPdf	PKPdf	05 45 08.5	-0.2
OPO	Ambohidratompo	147.01	99	PKPbc	PKPbc	05 45 11.6	+0.3
	comp=Z,16nm,0.7s,baz=244,slow=2.3,SNR=16						

MEX 24 05:44:23.1±0.6, 16°.25N×98°.27W, h5^{km}, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.19	43	*i* P	Pg	05 44 26.4	-0.5
PNIG				*i* S	Sg	05 44 29.4	-0.1
TLIG	Tlapa	1.34	348	*i* P	Pn	05 44 44.5	-4.1
TLIG				*e*S	Sg	05 45 01.2	-4.9
VHO	Vista Hermosa	1.68	61	*e*P	Pn	05 44 49.9	-3.4
VHO				*i* S	Sn	05 45 10.7	-4.7

GUC 24 05:51:01.6±0.5, 24°.16S×67°.50W, h219^{km}±14^{km}, ML3.7, 2C, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO02	Mina Guanaco	2.15	242	⇑*i*P	Pn	05 51 44.8	+1.4
GO02				*e*S	S	05 52 18.1	+2.4
GO02				IAML		05 52 18.7	
	comp=N,184nm,0.3s						
PB06	IPOC Station P	2.39	307	*e*P	Pn	05 51 47.6	+1.8
PB06				*e*S	S	05 52 22.1	+2.1
PB06				IAML		05 52 24.6	
	comp=N,209nm,0.0s						
PB05	IPOC Station P	2.80	297	*e*P	Pn	05 51 52.4	+2.2
PB05				*e*S	S	05 52 30.1	+2.2
PB09	IPOC Station P	2.85	325	*e*P	Pn	05 51 52.8	+2.0
PB09				*e*S	S	05 52 31.4	+2.3
PB10	IPOC Station P	2.87	282	*e*P	Pn	05 51 53.5	+2.7
PB03	IPOC Station P	2.95	315	⇑*i*P	Pn	05 51 53.8	+1.9
PB03				*i* S	S	05 52 32.6	+1.4
PB03				IAML		05 52 35.7	
	comp=E,134nm,0.2s						
PB07	IPOC Station P	3.27	317	*e*P	Pn	05 51 57.4	+1.7
PB07				*e*S	S	05 52 39.1	+1.3

IDC 24 06:00:46.2±1.7, 7°.90S×145°.32E, h0^{km}, mb3.3/1, mb1 3.4/4, mb1mx3.3/44, mbtmp3.2/4, ML3.0/2, MS3.9/1, Ms1 3.9/1, ms1mx2.7/20, Error ellipse: s-maj=41.6km s-min=30.9km az=59.0, Near south coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	2.35	130	Pn	Pn	06 01 26.1	0.0
	2.7nm,0.3s,baz=319,slow=9.3,SNR=3.3						
PMG				Sn	Sg	06 02 12.9	+11
	4.1nm,0.3s,baz=139,slow=20,SNR=4.9						
WRA	Warramunga Arr	16.01	221	Pn	Pn	06 04 34.8	+1.8
	0.1nm,0.3s,baz=40,slow=12,SNR=4.5						
ASAR	Alice Springs	19.12	214	P	P	06 05 10.1	-0.9
	0.1nm,0.3s,baz=37,slow=11,SNR=3.9						
DZM	Mont Dzumac	24.75	127	LR	LR	06 15 23.9	
	comp=Z,281nm,19.1s,baz=100,slow=36						
MKAR	Makanchi Array	77.91	321	P	P	06 12 46.2	+0.1
	0.3nm,0.7s,baz=102,slow=6.1,SNR=3.5						

IDC ***24*** *06:05:35.3±0.7, 56°.33N×153°.07W, h0^{km}, mb4.2/25, mb1 4.4/27, mb1mx4.2/72, mbtmp4.2/27, ML4.1/2, MS3.5/7, Ms1 3.5/7, ms1mx3.0/71, Error ellipse: s-maj=18.6km s-min=12.7km az=23.0*

ISCJB ***24*** *06:05:36.9±0.4, 56°.38N±0°.04×152°.75W±0°.04, h22^{km}, mb4.2/30, MS3.5/5, Error ellipse: s-maj=5.1km s-min=3.4km az=170.7*

NEIC ***24*** *06:05:39.1±0.0, 56°.22N×152°.93W, h4^{km}, mb4.3/4, ML4.0(AEIC), After AEIC.*

ISC 24 06:05:38.4±0.5, 56°.35N±0°.06×152°.94W±0°.04, h22^{km}, n127, σ1^{s}26/124, mb4.4/30, MS3.6/5, 1C, Kodiak Island region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SII	Sitkinak Islan	0.72	288	P	Pb	06 05 51.9	-0.4
SII				S	Sn	06 06 03.4	-0.3
OHAK	Old Harbor	0.90	348	P	Pb	06 05 54.5	-0.7
KDAK	Kodiak Island	1.46	7	Pn	Pn	06 06 03.3	0.0
	171nm,0.3s,baz=164,slow=5.6,SNR=1013						
KDAK				Sn	Sn	06 06 21.8	+0.2
	149nm,0.3s,baz=190,slow=19,SNR=18						
KDAK				LR	LR	06 06 46.7	
	comp=Z,698nm,19.2s,baz=10,slow=48						
KDAK	Kodiak Island	1.46	7	P	Pn	06 06 03.1	-0.2
KDAK				S	Sn	06 06 21.7	0.0
CAHL	Cahill	2.14	324	P	Pn	06 06 12.7	-0.1
MGLS	Mageik Landsli	2.16	327	P	Pn	06 06 13.1	0.0
PLK3	Peulik 3	2.27	308	P	Pn	06 06 14.7	+0.2
KAKN	Katmai Knife C	2.27	330	P	Pn	06 06 15.0	+0.4
KAWH	Katmai	2.28	335	P	Pn	06 06 15.1	+0.4
KABU	Katmai Buttres	2.31	328	P	Pn	06 06 15.6	+0.4
PLK1	Peulik 1	2.48	308	P	Pn	06 06 17.4	0.0
CDD	Cape Douglas	2.62	352	P	Pn	06 06 20.8	+1.4
ANNE	Aniakchak Nort	2.89	284	P	Pn	06 06 22.1	-0.9
MCNL	McNeil River	2.95	346	P	Pn	06 06 25.1	+1.3
AUI	Augustine Isla	3.01	355	P	Pn	06 06 25.7	+1.1
AUW	Augustine West	3.05	355	P	Pn	06 06 26.7	+1.5
CNPM	China Poot	3.32	15	P	Pn	06 06 29.3	+0.4
CNPM				S	Sn	06 07 05.3	-2.3
HOM	Homer	3.39	11	P	Pn	06 06 30.9	+1.0
VNHG	Veniaminof 1	3.47	271	P	Pn	06 06 30.9	-0.2
BRLK	Bradley Lake	3.60	17	P	Pn	06 06 32.5	-0.3
VNFG	Veniaminof 2	3.68	272	P	Pn	06 06 33.5	-0.5
RDWB	Redoubt West	4.16	1	P	Pn	06 06 41.1	+0.6
RDJH	Redoubt Jeurge	4.26	1	P	Pn	06 06 42.5	+0.6
SDPT	Sand Point	4.37	260	P	Pn	06 06 41.4	-1.9
SDPT				S	Sn	06 07 29.1	-4.2
MID	Middleton Isla	4.69	46	P	Pn	06 06 47.3	-0.4
SPCP	Crater Peak Br	4.95	4	P	Pn	06 06 52.2	+0.7
SVW2	Sparrevohn	4.96	345	P	Pn	06 06 52.1	+0.6
SPCG	Spurr Capps Gl	4.99	5	P	Pn	06 06 52.1	+0.2
RC01	Rabbit Creek A	5.04	18	P	Pn	06 06 52.3	-0.3
SUA	Susitna One	5.26	12	P	Pn	06 06 55.4	-0.2
DT1	Dutton Round H	5.42	261	P	Pn	06 06 55.4	-2.4
EYAK	Cordova Ski Ar	5.66	39	P	Pn	06 06 59.8	-1.2
SKT	Skwentna	5.70	7	P	Pn	06 07 01.7	+0.1
JPK	Jack Peak	5.76	32	P	Pn	06 07 01.6	-0.9
KAIM	Kayak Island	5.77	48	P	Pn	06 07 01.8	-0.7
KAIM				S	Sn	06 08 06.2	-1.7
GHO	Glory Hole Cre	5.82	19	P	Pn	06 07 02.8	-0.5
RAGM	Ragged Mountai	5.94	44	P	Pn	06 07 03.9	-1.0
SML	Sawmill	5.97	22	P	Pn	06 07 04.8	-0.6
GOAT	Goat Mountain	6.05	42	P	Pn	06 07 05.5	-1.0
DIV	Divide	6.08	35	P	Pn	06 07 05.8	-1.0
FALS	False Pass	6.12	260	P	Pn	06 07 04.1	-3.3
NICHA	Nichawak Mount	6.13	47	P	Pn	06 07 06.4	-1.1
SCM	Sheep Creek Mo	6.22	25	P	Pn	06 07 08.6	-0.1
KLU	Klutina	6.31	32	P	Pn	06 07 09.9	-0.1
BMRM	Bremner River	6.35	40	P	Pn	06 07 09.7	-0.9
PPLA	Purkeypile	6.58	3	P	Pn	06 07 13.4	-0.4
KULT	Kultieth River	6.65	50	P	Pn	06 07 13.9	-0.9
KULT				S	Sn	06 08 25.3	-4.5
TT01	Tatalina	6.76	348	P	Pn	06 07 16.8	+0.6
BARK	Barkley Ridge	6.83	49	P	Pn	06 07 16.5	-0.7
WESE	West Dahl East	6.89	259	P	Pn	06 07 16.4	-1.6
VRDI	Verde Repeater	6.94	41	P	Pn	06 07 17.9	-1.0
GLB	Gilahina Butte	6.96	39	P	Pn	06 07 18.7	-0.2
ISLE	Juniper Island	7.00	48	P	Pn	06 07 18.4	-1.2
BAGL	Bagley Icefiel	7.05	49	P	Pn	06 07 19.4	-0.7
CAST	Castle Rocks	7.11	3	P	Pn	06 07 21.4	+0.5
KIAG	Kiagna River	7.18	46	P	Pn	06 07 21.3	-0.7
BALM	Baldy	7.25	45	P	Pn	06 07 22.8	-0.1
TRF	Thorofare Moun	7.25	9	P	Pn	06 07 23.1	0.0
CHX	Chaix Hills	7.27	54	P	Pn	06 07 22.4	-0.8
PTPK	Patty Peak	7.29	44	P	Pn	06 07 23.5	-0.1
KTH	Kantishna Hill	7.30	7	P	Pn	06 07 23.9	+0.3
DHY	Denali Highway	7.31	20	P	Pn	06 07 23.7	-0.1
GRNC	Granite Creek	7.32	48	P	Pn	06 07 23.3	-0.7
BARN	Barnard Glacie	7.54	47	P	Pn	06 07 25.5	-1.4
BPAW	Bear Paw Mtn.	7.84	6	P	Pn	06 07 30.5	-0.5
UNV	Unalaska Valle	8.17	258	P	Pn	06 07 32.2	-3.3
MTBL	Makushin Table	8.22	259	P	Pn	06 07 33.4	-2.9
YUK2	White River	8.27	44	P	Pn	06 07 36.8	-0.2
MSW	Makushin Switc	8.30	259	P	Pn	06 07 34.6	-2.6
RIDG	Independ'e Rid	8.45	25	P	Pn	06 07 39.4	+0.1
WRH	Wood River Hil	8.50	14	P	Pn	06 07 39.3	-0.6
BCA3	Beaver Creek A	8.78	35	P	Pn	06 07 43.6	-0.2
YUK4	Talbot Arm	8.94	50	P	Pn	06 07 44.8	-1.4
ILAR	Eielson Array	8.96	17	Pn	Pn	06 07 46.1	-0.1
	1.0nm,0.3s,baz=202,slow=14,SNR=40						
ILAR				Sn	Sn	06 09 22.3	-4.0
	1.0nm,0.3s,baz=204,slow=24,SNR=5.1						
ILB	Eielson Array	8.96	17	P	Pn	06 07 46.0	-0.3
SIT	Sitka	9.71	78	P	Pn	06 07 54.0	-2.6
EGAK	Eagle	10.23	29	*e*Pn	Pn	06 08 04.7	+1.0
	6.8nm,0.8s						
DAWY	Dawson	10.24	35	*e*Pn	Pn	06 08 04.2	+0.3
	2.5nm,0.6s						
H02N1	VAN INLET T-PH	12.16	96	T	T	06 20 47.0	
H02S1	DAWSON INLET T	12.22	96	T	T	06 20 51.4	
	SNR=14						
DLBC	Dease Lake	12.52	71	Pn	Pn	06 08 36.5	+1.5
	0.5nm,0.3s,baz=183,slow=6.1,SNR=5.2						
DLBC				LR	LR	06 12 56.1	
	comp=Z,269nm,18.9s,baz=256,slow=35						
INK	Inuvik	14.91	29	Pn	Pn	06 09 08.8	+1.5
	0.8nm,0.3s,baz=223,slow=11,SNR=11						
INK	Inuvik	14.91	29	Pn	Pn	06 09 08.8	+1.5
INK				*e*Pn	P	06 09 09.1	-3.8
BBB	Bella Bella	15.05	96	LR	LR	06 13 56.9	
	comp=Z,114nm,18.4s,baz=296,slow=33						
YKA	Yellowknife Ar	20.20	57	P	P	06 10 11.9	+0.7
	3.6nm,0.7s,baz=268,slow=11,SNR=16						
YBH	Yreka Blue Hor	24.36	114	P	P	06 10 55.8	+1.1
	1.8nm,0.7s,baz=328,slow=7.2,SNR=6.2						
YBH				LR	LR	06 18 25.1	
	comp=Z,69nm,18.4s,baz=340,slow=32						
WVOR	Wild Horse Val	25.98	108	*e*P	P	06 11 10.9	+1.5
	4.6nm,0.7s						
NVAR	Mina Array Bea	29.08	113	P	P	06 11 38.3	+1.1
	1.5nm,0.7s,baz=310,slow=6.6,SNR=16						
PDAR	Pinedale Array	30.68	98	P	P	06 11 52.2	+0.8
	0.8nm,0.5s,baz=303,slow=4.7,SNR=14						
ULM	Lac du Bonnet	33.77	76	LR	LR	06 25 53.0	
	comp=Z,98nm,18.4s,baz=69,slow=36						
AGMN	Agassiz Nation	34.87	79	*e*P	P	06 12 28.7	+1.0
	4.4nm,0.8s						
EYMN	Ely	37.45	76	*e*P	P	06 12 50.7	+1.0
	4.1nm,0.8s						
ANMO	Albuquerque	37.94	104	LR	LR	06 28 54.3	
	comp=Z,44nm,18.3s,baz=10,slow=37						
ASAJ	Asahikawa	41.49	281	P	P	06 13 23.1	-0.3
	3.3nm,0.4s,baz=120,slow=8.1,SNR=7.5						
SUMG	Summit	43.73	23	*i* P	P	06 13 43.0	+1.2
	20nm,0.8s						
TXAR	Lajitas Array	43.77	107	P	P	06 13 42.9	+0.7
	0.5nm,0.7s,baz=307,slow=6.4,SNR=8.8						
TXAR				LR	LR	06 31 22.6	
	comp=Z,72nm,18.0s,baz=0.0,slow=35						
DAG	Danmarks Havn	44.04	14	⇑*i*P	P	06 13 44.3	+0.6
	11nm,0.8s						
JCT	Junction City	44.96	102	*e*P	P	06 13 52.9	+1.2
	6.0nm,0.9s						
SPITS	Spitsbergen Ar	45.57	3	P	P	06 13 56.4	+0.5
	7.0nm,0.8s,baz=356,slow=12,SNR=6.5						
H11N2	WAKE ISLAND Hy	47.19	236	T	T	07 04 55.8	
	baz=30,slow=76,SNR=13						
H11N3	WAKE ISLAND Hy	47.20	236	T	T	07 04 55.5	
	baz=30,slow=76,SNR=14						
H11N1	WAKE ISLAND Hy	47.21	236	T	T	07 04 56.4	
	baz=30,slow=76,SNR=17						
H11S1	WAKE ISLAND Hy	48.34	235	T	T	07 06 14.8	
	baz=29,slow=76,SNR=19						
H11S2	WAKE ISLAND Hy	48.36	235	T	T	07 06 21.2	
	baz=29,slow=76,SNR=22						
H11S3	WAKE ISLAND Hy	48.36	235	T	T	07 06 21.6	
	baz=29,slow=76,SNR=18						
TKL	Tuckaleechee C	49.96	84	LR	LR	06 35 42.4	
	comp=Z,105nm,18.6s,baz=356,slow=36						
KSRS	Korea Array	54.09	285	P	P	06 15 00.9	-0.2
	1.4nm,0.7s,baz=35,slow=8.0,SNR=7.3						
KSAR	Wonju Array Be	54.12	285	P	P	06 15 00.9	-0.4
ARCES	ARCESS Array B	54.42	1	P	P	06 15 03.2	+0.1
	2.9nm,0.6s,baz=3.5,slow=7.9,SNR=17						
SONM	Songino Array	57.02	308	P	P	06 15 23.0	+0.8
	4.9nm,0.7s,baz=45,slow=6.7,SNR=28						
ZALV	Zalesovo Beam	60.37	325	P	P	06 15 45.8	+0.6
	7.2nm,0.7s,baz=33,slow=6.8,SNR=19						
NB2	NORSAR Subarra	62.29	9	P	P	06 15 58.8	+0.6
	comp=Z,1.2nm,0.7s,baz=351,slow=6.9						
NOA	NORSAR Array B	62.29	9	P	P	06 15 58.4	+0.3
	comp=Z,1.8nm,0.7s,baz=350,slow=6.7,SNR=8.0						
FINES	FINESS Array B	62.55	1	P	P	06 16 00.4	+0.6
	comp=Z,0.7nm,0.6s,baz=339,slow=10,SNR=5.2						
HFS	Hagfors	63.38	7	P	P	06 16 05.9	+0.5
	comp=Z,3.8nm,0.8s,baz=358,slow=5.0,SNR=4.6						
KURK	Kurchatov	65.09	327	P	P	06 16 17.7	+1.0
KURBB	Kurchatov Arra	65.20	327	P	P	06 16 17.7	+0.3
	comp=Z,3.0nm,0.7s,baz=30,slow=6.9,SNR=21						
BVAR	Borovoye Array	65.33	333	P	P	06 16 18.3	0.0
	comp=Z,5.9nm,0.7s,baz=29,slow=6.6,SNR=29						
EKA	Eskdalemuir Ar	66.00	18	P	P	06 16 23.0	+0.6
	comp=Z,0.7nm,0.5s,baz=331,slow=5.7,SNR=4.2						

MKAR	Makanchi Array	67.33	322	P	P	06 16 31.4	+0.2
	comp=Z,1.8nm,0.6s,baz=44,slow=7.1,SNR=22						
AKTO	Aktyubinsk	70.53	340	P	P	06 16 51.3	+0.3
	comp=Z,3.4nm,0.6s,baz=49,slow=7.9,SNR=11						
AKASG	Malin Array Be	73.31	359	P	P	06 17 07.5	-0.1
	comp=Z,2.4nm,0.6s,baz=1.7,slow=5.8,SNR=11						
GERES	GERESS Array B	74.59	9	P	P	06 17 16.4	+1.2
	comp=Z,1.0nm,0.5s,baz=354,slow=4.0,SNR=7.5						
KBZ	Khabaz	79.41	348	P	P	06 17 43.4	+1.1
	comp=Z,2.9nm,0.9s,baz=350,slow=5.9,SNR=5.4						
ESDC	Sonseca Array	80.80	24	P	P	06 17 50.7	+0.7
	comp=Z,0.4nm,0.4s,baz=342,slow=5.0,SNR=6.9						
BRTR	Keskin Array B	84.13	355	P	P	06 18 07.8	+0.3
	comp=Z,1.9nm,0.7s,baz=22,slow=4.0,SNR=7.0						
CMAR	Chiang Mai Arr	84.43	295	P	P	06 18 09.2	+0.1
	comp=Z,1.2nm,0.4s,baz=4.6,slow=6.5,SNR=6.6						

*SOME **24** 06:43:07.6, 44°.67N×82°.27E, h15^{km}*

*NNC **24** 06:43:10.7±2.1, 44°.74N×82°.13E, h0^{km}, mb3.5, mpv3.0, Error ellipse: s-maj=29.9km s-min=4.6km az=118.0*

ISC 24 06:43:06.9±2.2, **44°.68N**±0°.05×**82°.21E**±0°.08, **h11**^{km}±16^{km}, **n15**, σ**2^{s}.54**/29, **4C-3D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DJR	Jarkent	1.77	260	⇓iP	Pb	06 43 39.7	+0.4
	5.2nm,0.4s						
DJR				⇓iS	Sb	06 44 03.2	+1.7
	14nm,0.4s						
KTMS	Ketmen	1.82	228	eP	Pb	06 43 41.8	+1.5
	2.9nm,0.1s						
KTMS				eS	Sg	06 44 06.5	+1.1
	35nm,0.4s						
KAPS	Kapalarasan	2.12	288	eP	Pb	06 43 46.3	+1.0
	4.6nm,0.2s						
KAPS				eS	Sb	06 44 14.1	+2.5
	13nm,0.3s						
MK31	Makanchi Array	2.12	1	⇓Pn	Pb	06 43 46.3	+1.0
	6.4nm,0.3s,baz=192,slow=16,SNR=91						
MK31				⇑Sn	Sg	06 44 14.3	-0.7
	3.5nm,0.3s,baz=188,slow=30,SNR=26						
MAKZ	Makanchi	2.14	356	⇑Pn	Pb	06 43 46.3	+0.6
	2.7nm,0.3s						
MAKZ				⇑Sn	Sb	06 44 14.3	+2.1
	22nm,0.5s						
PDGK	Podgornoye	2.38	237	⇑Sn	Sb	06 44 22.0	+2.7
	26nm,0.6s						
SHLS	Shalkode	2.50	234	eP	Pn	06 43 46.0	-1.7
SHLS				eS	Sn	06 44 13.5	-4.7
TDK	Taldyqorghan	2.73	278	eP	Pb	06 43 56.4	+0.7
	43nm,0.2s						
TDK				eS	Sb	06 44 31.5	+2.3
	40nm,0.3s						
UZB	Uzynbulak	2.77	238	eP	Pb	06 43 57.0	+0.5
	2.9nm,0.3s						
UZB				eS	Sb	06 44 32.9	+2.5
	6.6nm,0.2s						
KPKS	Kokpek	2.81	246	eP	Pb	06 43 57.6	+0.3
	8.8nm,0.2s						
KPKS				eS	Sb	06 44 34.1	+2.3
	38nm,0.3s						
KURS	Kuram	3.15	249	eP	Pb	06 44 04.1	+1.3
	2.4nm,0.3s						
KURS				eS	Sb	06 44 45.2	+4.0
	2.4nm,0.2s						
CHKK	Chushkaly	3.84	259	eP	Pb	06 44 16.2	+1.5
	1.9nm,0.3s						
CHKK				eS	Sb	06 45 05.6	+4.4
	7.1nm,0.2s						
MDOK	Medeo	4.03	250	eP	Pb	06 44 20.5	+2.6
	2.5nm,0.4s						
MDOK				eS	Sg	06 45 13.2	-2.9
	4.0nm,0.4s						
TNSS	Tian-Shan	4.14	249	eP	Pb	06 44 22.9	+2.8
	2.0nm,0.3s						
TNSS				eS	Sg	06 45 16.9	-3.0
	3.9nm,0.0s						
KUU	Kurty	4.29	262	eP	Pb	06 44 25.2	+2.9
	1.2nm,0.2s						
KUU				eS	Sg	06 45 21.1	-3.4
	3.6nm,0.3s						

*ISCJB **24** 06:50:04.8±0.4, 31°.70N±0°.01×50°.93E±0°.01, h11^{km}±2^{km}, mb5.1/268, MS4.2/63, Error ellipse: s-maj=2.6km s-min=1.6km az=28.6*

*IDC **24** 06:50:04.4±0.4, 31°.79N×50°.91E, h0^{km}, mb4.9/39, mb1 5.0/47, mb1mx4.9/61, mbtmp4.9/47, ML4.5/6, MS4.1/45, Ms1 4.1/45, ms1mx4.1/54, Error ellipse: s-maj=10.3km s-min=8.9km az=165.0*

*GII **24** 06:50:04.7±0.0, 31°.79N×50°.97E, h2^{km}*

*BJI **24** 06:50:04.5, 31°.70N×50°.90E, h10^{km}, mb5.0/57, mB5.2/37, Ms4.8/46, Ms7 4.5/42*

*TEH **24** 06:50:05.1, 31°.84N×51°.02E, h10^{km}, ML5.0*

*MOS **24** 06:50:05.5±1.8, 31°.67N×51°.10E, h22^{km}, mb5.3/86, MS4.2/16, Error ellipse: s-maj=4.6km s-min=2.8km az=117.4*

*CSEM **24** 06:50:06.6±0.1, 31°.77N×50°.94E, h10^{km}, mb5.2/99, Error ellipse: s-maj=3.1km s-min=2.0km az=32.0*

*GCMT **24** 06:50:06.0±0.3, 31°.72N×50°.92E, h18^{km}, MW5.0/80, Moment Tensor Solution. s34,c41; s80,c139; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.89±.15; $M_{\theta\theta}$-3.42±.10; $M_{\phi\phi}$0.53±.10; $M_{r\theta}$-1.09±.21; $M_{\theta\phi}$-0.15±.07; $M_{\phi r}$-0.81±.31; Best double couple: $M_0$3.45800×10^{16} NP1:ϕ_s253.00000°, δ57.00000°, λ72.00000°. NP2: ϕ_s104.00000°, δ37.00000°, λ115.00000°. Principal axes: T 3.2930, Plg72.0000°, Azm119.0000°; N 0.3330, Plg15.0000°, Azm263.0000°; P -3.6230, Plg10.0000°, Azm356.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **24** 06:50:06.0±0.2, 31°.71N×50°.96E, h10^{km}, mb5.2/117, ML4.8(THR), MN5.1(TEH) Error ellipse: s-maj=4.0km s-min=2.6km az=187.0*

*DSN **24** 06:50:07.5±0.3, 31°.58N×50°.80E, h15^{km}, mb5.0/3, ML4.7/11, Error ellipse: s-maj=8.3km s-min=3.7km az=52.0*

*OMAN **24** 06:50:09.3±0.5, 31°.68N×51°.08E, h10^{km}, Error ellipse: s-maj=11.4km s-min=4.0km az=66.0*

ISC 24 06:50:05.7±0.6, **31°.75N**±0°.02×**50°.94E**±0°.02, **h6**^{km}±3^{km}, **n1226**, σ**1^{s}.66**/1282, **mb5.2**/298, **MS4.2**/63, **61C-40D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IBRJ	Brojen	0.32	60	Pg	Pg	06 50 10.1	-1.9
IBRJ	Brojen	0.32	60	ePg	Pg	06 50 10.0	-1.9
IBRJ				e		06 50 16.4	
	comp=Z,93µm,0.2s						
IBRJ				e		06 50 18.1	
	comp=E,1297µm,0.1s						
IBRJ				e		06 50 18.2	
	comp=N,1424µm,0.1s						
ZNGN	Zangian	0.37	349	ePg	Pg	06 50 11.0	-2.0
ZNGN				eSg	Sg	06 50 15.7	-2.2
ZNGN				e		06 50 18.3	
	comp=Z,99nm,0.2s						
ZNGN				e		06 50 18.6	
	comp=E,99nm,0.4s						
ZNGN				e		06 50 18.8	
	comp=N,99nm,0.4s						
ROKH	ROKH	0.60	8	ePg	Pg	06 50 14.9	-2.3
ROKH				eSg	Sg	06 50 22.1	-3.0
ROKH				e		06 50 28.0	
	comp=N,99nm,0.3s						
ROKH				e		06 50 30.0	
	comp=E,99nm,0.6s						
ROKH				e		06 50 30.1	
	comp=Z,99nm,0.7s						
IGAR	Gharneh	1.14	55	ePg	Pg	06 50 25.3	-2.3
IGAR				e		06 50 42.9	
	comp=N,31µm,0.1s						
IGAR				e		06 50 47.3	
	comp=Z,39µm,0.4s						
IRAM	Ramesheh	1.23	87	ePg	Pg	06 50 26.7	-2.6
IRAM				e		06 50 53.9	
	comp=Z,11µm,0.3s						
IRAM				e		06 50 55.6	
	comp=E,15µm,0.4s						
IRAM				e		06 50 56.7	
	comp=N,28µm,0.4s						
IZEF	Zefreh	1.64	46	ePn	Pn	06 50 33.7	-1.6
IZEF				e		06 51 04.5	
	comp=N,1µm,0.3s						
IZEF				e		06 51 04.5	
	comp=E,67µm,0.4s						
IZEF				e		06 51 11.7	
	comp=Z,79µm,0.3s						
IKLH	Kolahrood	1.65	19	ePn	Pn	06 50 33.8	-1.7
IKLH				e		06 51 04.3	
	comp=N,29µm,0.2s						
IKLH				e		06 51 05.9	
	comp=E,47µm,0.5s						
IKLH				e		06 51 10.1	
	comp=Z,100µm,0.5s						
SHGR	Shooshtar-Gavs	1.85	282	ePg	Pg	06 50 41.1	0.0
SHGR	Shooshtar-Gavs	1.85	282	ePg	Pg	06 50 41.1	0.0
NASN	Na'in	1.90	56	ePg	Pb	06 50 40.6	-0.3
NASN	Na'in	1.90	56	ePg	Pb	06 50 40.6	-0.3
AHWZ	Ahwaz	2.00	258	ePn	Pg	06 50 43.5	-0.6
AHWZ				e		06 51 31.9	
	comp=E,99nm,0.6s						
AHWZ				e		06 51 47.1	
	comp=N,99nm,0.5s						
AHWZ				e		06 52 03.4	
	comp=Z,99nm,0.8s						
KHMZ	Khomeyn	2.15	338	ePn	Pb	06 50 44.4	-0.7
KHMZ	Khomeyn	2.15	338	ePn	Pb	06 50 44.4	-0.7
ISAD	Sadrabad	2.34	85	ePn	Pb	06 50 47.3	-1.2
ISAD				e		06 51 28.2	
	comp=N,80µm,0.4s						
ISAD				e		06 51 29.7	
	comp=Z,75µm,0.7s						
ISAD				e		06 51 32.4	
	comp=E,89µm,0.5s						
ISAD	Sadrabad	2.34	85	ePn	Pb	06 50 47.3	-1.2
SHI	Shiraz	2.50	147	ePn	Pb	06 50 49.2	-1.9
SHI				e		06 52 01.9	
	comp=Z,47µm,0.9s						
SHI	Shiraz	2.50	147	ePn	Pb	06 50 49.2	-1.9
IPAR	Pars	2.63	136	ePn	Pb	06 50 51.6	-1.8
IPAR				e		06 51 41.0	
	comp=E,66µm,0.5s						
IPAR				e		06 51 44.8	
	comp=Z,43µm,0.5s						
IPAR				e		06 51 47.0	
	comp=N,90µm,0.5s						
IPAR	Pars	2.63	136	ePn	Pb	06 50 51.6	-1.8
GHVR	GHOM	2.74	6	ePn	Pb	06 50 53.0	-2.1
GHVR	GHOM	2.74	6	ePn	Pb	06 50 53.0	-2.1
ANAR	Anarak	2.76	58	ePn	Pb	06 50 53.1	-2.4
ANAR				e		06 51 37.8	
	comp=E,99nm,0.4s						
ANAR				e		06 51 41.0	
	comp=Z,99nm,0.4s						
ANAR	Anarak	2.76	58	ePn	Pb	06 50 53.1	-2.4
AHBU	AHRAM	2.90	174	ePn	Pb	06 50 55.1	-2.6
ICHK	Chekchek	2.99	80	ePn	Pn	06 50 53.1	-0.7
ICHK				e		06 51 57.0	
	comp=E,32µm,0.4s						
ICHK				e		06 51 57.4	
	comp=N,49µm,0.6s						
ICHK				e		06 51 58.3	
	comp=Z,37µm,0.4s						
ISRV	Sarvestan	3.02	141	ePn	Pn	06 50 56.9	+2.6
ISRV				e		06 52 04.5	
	comp=Z,33µm,0.8s						
ISRV				e		06 52 05.5	
	comp=E,976nm,0.7s						
ISRV				e		06 52 27.6	
	comp=N,67µm,0.7s						
ISRV	Sarvestan	3.02	141	ePn	Pn	06 50 56.9	+2.6
HSAM	Samen	3.14	322	ePn	Pn	06 50 57.6	+1.7
HSAM				e		06 52 02.1	
	comp=N,99nm,0.5s						
HSAM				e		06 52 23.0	
	comp=E,99nm,1.3s						
HSAM	Samen	3.14	322	ePn	Pn	06 50 57.6	+1.7
IKFM	Kafar-mosalman	3.15	305	ePn	Pn	06 50 56.6	+0.8
IKFM				e		06 51 58.8	
	comp=E,99nm,1.0s						
IKFM				e		06 52 02.6	
	comp=N,99nm,0.9s						
IKFM				e		06 52 03.5	
	comp=Z,99nm,0.6s						
IKFM	Kafar-mosalman	3.15	305	ePn	Pn	06 50 56.6	+0.8
IMEH	Mehriz	3.16	96	e		06 51 59.5	
	comp=N,32µm,0.6s						
IMEH				e		06 52 01.7	
	comp=Z,22µm,0.6s						
IRAZ	Razeghan	3.74	347	ePn	Pn	06 51 04.9	+0.8
IRAZ				e		06 52 17.3	
	comp=N,43µm,0.5s						
IRAZ				e		06 52 17.4	
	comp=E,86µm,0.6s						
IRAZ				e		06 52 21.4	
	comp=Z,50µm,0.5s						
IRAZ	Razeghan	3.74	347	ePn	Pn	06 51 04.9	+0.8
IBZA	Bozab	3.74	317	ePn	Pn	06 51 05.6	+1.4
IBZA				e		06 52 42.6	
	comp=Z,99nm,2.0s						
IBZA	Bozab	3.74	317	ePn	Pn	06 51 05.6	+1.4
IKOM	Komasi	3.76	311	Pn	Pn	06 51 05.1	+0.8
IKOM	Komasi	3.76	311	ePn	Pn	06 51 05.7	+1.4
IKOM				e		06 53 02.4	
	comp=Z,99nm,1.7s						
IKOM	Komasi	3.76	311	Pn	Pn	06 51 05.1	+0.8
GHIR	Ghir-Karzin	3.88	152	ePn	Pn	06 51 07.1	+1.0
GHIR	Ghir-Karzin	3.88	152	ePn	Pn	06 51 07.1	+1.0
IDMV	Damavand	3.92	13	ePn	Pn	06 51 07.9	+1.2
IDMV				e		06 52 22.1	
	comp=N,41µm,0.4s						
IDMV				e		06 52 39.6	
	comp=E,36µm,0.6s						
IDMV				e		06 52 41.9	
	comp=Z,23µm,0.4s						
IDMV	Damavand	3.92	13	ePn	Pn	06 51 07.9	+1.2
IMHD	Mahdasht	3.93	357	e		06 51 16.4	
	comp=Z,34µm,0.4s						
IMHD				ePn	Pn	06 51 08.1	+1.5
IMHD				e		06 52 19.1	
	comp=E,47µm,0.6s						
IMHD				e		06 52 21.4	
	comp=N,48µm,0.3s						
JHRM	Jahrom	3.96	144	e		06 51 43.1	
	comp=Z,99nm,0.0s						
JHRM				ePn	Pn	06 51 07.9	+0.8
JHRM				e		06 51 44.6	
	comp=N,99nm,0.4s						
JHRM				e		06 52 29.1	
	comp=E,99nm,0.3s						
HKZM	Kohzaman	3.99	335	ePn	Pn	06 51 08.7	+1.0
HKZM				e		06 52 19.9	
	comp=N,99nm,0.4s						
HKZM				e		06 52 24.2	
	comp=Z,99nm,0.5s						
HKZM				e		06 52 28.1	
	comp=E,99nm,0.4s						
HKZM	Kohzaman	3.99	335	ePn	Pn	06 51 08.7	+1.0
ILAS	Lasjerd	3.99	24	e		06 52 32.1	
	comp=E,36µm,0.5s						
QABG	Abgarm-Qazvin	4.10	344	ePn	Pn	06 51 11.6	+2.4
QABG				e		06 52 25.9	
	comp=N,99nm,0.7s						
QABG				e		06 52 26.1	
	comp=E,99nm,0.7s						
QABG				e		06 52 54.5	
	comp=Z,99nm,2.6s						
QABG	Abgarm-Qazvin	4.10	344	ePn	Pn	06 51 11.6	+2.4
KCHF	Cheshme Sefid,	4.13	309	ePn	Pn	06 51 10.2	+0.7
KCHF				e		06 52 40.6	
	comp=Z,99nm,1.0s						
KCHF	Cheshme Sefid,	4.13	309	ePn	Pn	06 51 10.2	+0.7
IAFJ	Afjeh	4.14	9	ePn	Pn	06 51 11.6	+1.8
IAFJ				e		06 51 28.6	
	comp=Z,23µm,0.3s						
IAFJ				e		06 51 30.1	
	comp=N,45µm,0.4s						
IAFJ	Afjeh	4.14	9	ePn	Pn	06 51 11.6	+1.8
IFIR	Firoozkooh	4.16	21	ePn	Pn	06 51 12.1	+2.1
IFIR				e		06 51 37.3	
	comp=Z,4µm,0.2s						
IFIR				e		06 52 31.2	
	comp=E,41µm,0.6s						
IFIR				e		06 52 41.0	
	comp=N,18µm,0.4s						
IFIR	Firoozkooh	4.16	21	ePn	Pn	06 51 12.1	+2.1
IVIS	Veis	4.41	310	ePn	Pn	06 51 14.0	+0.8
IVIS				e		06 52 41.5	
	comp=N,33µm,0.5s						
IVIS				e		06 52 50.0	
	comp=E,14µm,0.5s						
IVIS				e		06 52 53.9	
	comp=Z,32µm,0.6s						
IVIS	Veis	4.41	310	ePn	Pn	06 51 14.0	+0.8
IANJ	Anjilo	4.46	33	ePn	Pn	06 51 15.8	+1.7
IANJ				e		06 52 43.6	
	comp=Z,13µm,0.5s						
IANJ	Anjilo	4.46	33	ePn	Pn	06 51 15.8	+1.7
ISHM	Shahmirzad	4.49	25	ePn	Pn	06 51 16.3	+1.7
ISHM				e		06 52 39.7	
	comp=Z,23µm,0.4s						
ILIN	Lien	4.59	315	ePn	Pn	06 51 18.1	+2.3
ILIN				e		06 52 13.6	
	comp=E,19µm,0.4s						
ILIN				e		06 52 52.2	
	comp=Z,19µm,0.4s						
ILIN	Lien	4.59	315	ePn	Pn	06 51 18.1	+2.3
IALA	Alasht	4.59	19	ePn	Pn	06 51 19.0	+3.1
IALA				e		06 52 42.5	
	comp=Z,27µm,0.7s						
IALA				e		06 52 46.8	
	comp=E,48µm,0.4s						
IALA	Alasht	4.59	19	ePn	Pn	06 51 19.0	+3.1
IPRN	Peran	4.63	14	ePn	Pn	06 51 19.8	+3.6
IPRN				e		06 51 36.4	
	comp=E,31µm,0.4s						
IPRN				e		06 51 38.8	
	comp=Z,23µm,0.4s						
IPRN				e		06 52 53.4	
	comp=N,46µm,0.5s						
IGZV	Ghazvin	4.66	353	ePn	Pn	06 51 17.6	+0.8
IGZV				e		06 51 35.6	
	comp=Z,19µm,0.3s						
IGZV				e		06 52 50.7	
	comp=E,28µm,0.4s						
IGZV				e		06 52 59.1	
	comp=N,36µm,0.5s						
IGZV	Ghazvin	4.66	353	ePn	Pn	06 51 17.6	+0.8
KHGB	Koh Gabri	4.95	105	e		06 53 22.7	
	comp=N,99nm,1.6s						
KHGB				e		06 53 24.1	
	comp=E,99nm,2.1s						
KHGB				e		06 53 24.6	
	comp=Z,99nm,1.8s						
IKIA	Kiasar	4.99	26	e		06 52 52.5	
	comp=N,11µm,0.5s						
IKIA				e		06 53 09.2	
	comp=E,14µm,0.4s						
IKIA				e		06 53 17.0	
	comp=Z,9µm,0.6s						
TPRV	Parvadeh(Tabas	5.03	74	ePn	Pn	06 51 22.7	+1.0
TPRV	Parvadeh(Tabas	5.03	74	ePn	Pn	06 51 22.7	+1.0
TNSJ	Nastanj	5.26	64	ePn	Pn	06 51 25.2	+0.3
TNSJ				e		06 53 03.1	
	comp=Z,99nm,0.5s						
TNSJ	Nastanj	5.26	64	ePn	Pn	06 51 25.2	+0.3
TVBK	TV Kerman	5.31	108	ePn	Pn	06 51 28.3	+2.5
TVBK				e		06 53 21.2	
	comp=N,99nm,0.2s						
TVBK				e		06 53 35.3	
	comp=E,99nm,0.6s						
TVBK				e		06 53 36.6	
	comp=Z,99nm,0.6s						
TVBK	TV Kerman	5.31	108	ePn	Pn	06 51 28.3	+2.5
KRBR	Kerman	5.31	108	ePn	Pn	06 51 28.1	+2.3
KRBR	Kerman	5.31	108	eP	Pn	06 51 28.1	+2.3
IGLO	Ghaloghah	5.31	26	ePn	Pn	06 51 29.4	+3.7
IGLO				e		06 53 16.9	
	comp=Z,18µm,0.5s						
IGLO				e		06 53 17.6	
	comp=E,50µm,0.5s						
IGLO				e		06 53 18.5	
	comp=N,36µm,0.5s						
NGRK	Negar Kerman	5.41	111	ePn	Pn	06 51 30.5	+3.2
NGRK				e		06 53 51.6	
	comp=E,99nm,0.9s						
NGRK				e		06 53 55.5	
	comp=N,99nm,1.1s						
NGRK				e		06 54 10.8	
	comp=Z,99nm,1.8s						
NGRK	Negar Kerman	5.41	111	ePn	Pn	06 51 30.5	+3.2
TKDS	Koohdasht(Taba	5.54	69	ePn	Pn	06 51 28.7	0.0
TKDS				e		06 54 19.4	
	comp=Z,99nm,2.4s						
TKDS	Koohdasht(Taba	5.54	69	ePn	Pn	06 51 28.7	0.0
CHMN	Cheshme madani	5.98	107	e		06 53 50.7	
	comp=N,99nm,1.2s						
CHMN				e		06 54 01.8	
	comp=E,99nm,1.2s						
CHMN				e		06 54 08.9	
	comp=Z,99nm,2.1s						
GENO	Geno	6.29	132	ePn	Pn	06 51 39.7	+0.5
GENO				e		06 54 03.0	
	comp=E,99nm,1.2s						
GENO				e		06 54 07.8	
	comp=Z,99nm,1.5s						
GENO				e		06 54 30.9	
	comp=N,99nm,2.2s						
GENO	Geno	6.29	132	ePn	Pn	06 51 39.7	+0.5
NIAN	Nian	6.62	128	ePn	Pn	06 51 44.4	+0.9
NIAN				e		06 54 21.6	
	comp=E,99nm,2.1s						
NIAN				e		06 54 21.8	
	comp=N,99nm,1.7s						
NIAN				e		06 55 22.1	
	comp=Z,99nm,2.3s						
NIAN	Nian	6.62	128	ePn	Pn	06 51 44.4	+0.9
IBST	Bostanabad	6.80	332	ePn	Pn	06 51 47.0	+0.8
IBST				e		06 52 17.1	
	comp=N,3µm,0.5s						
IBST				e		06 52 17.6	
	comp=E,2µm,0.4s						
IBST				e		06 52 23.2	
	comp=Z,2µm,0.4s						
IBST	Bostanabad	6.80	332	ePn	Pn	06 51 47.0	+0.8
SHME	Shamm	7.29	140	i P	Pn	06 51 52.6	-0.1
	SNR=9.2						
SHME	Shamm	7.29	140	ePn	Pn	06 51 52.9	+0.2
SHME	Shamm	7.29	140	S	Sn	06 53 16.1	+0.3
KHSK	Kohestak	7.30	131	ePn	Pn	06 51 54.2	+1.3
KHSK	Kohestak	7.30	131	ePn	Pn	06 51 54.2	+1.3
UMQ	Umm Al-Quwin	7.46	145	i P	Pn	06 51 55.4	+0.2
	SNR=12						
BANOM	Banah	7.47	140	P	Pn	06 51 58.7	+3.4
	SNR=12						
BANOM				S	Sn	06 53 20.4	0.0
BANOM	Banah	7.47	140	i P	Pn	06 51 55.1	-0.2
	SNR=46						
BANOM	Banah	7.47	140	P	Pn	06 51 55.1	-0.2
	SNR=46						
BANOM				S	Sn	06 53 20.4	0.0
ITBZ	Tabriz	7.56	330	e		06 54 21.2	
	comp=N,2µm,0.6s						
ITBZ				e		06 54 35.6	
	comp=Z,2µm,0.6s						
ITBZ				e		06 55 21.7	
	comp=E,2µm,0.6s						
ISHB	Shabestar	7.84	328	e		06 53 12.2	
	comp=Z,1µm,0.4s						
ISHB				e		06 54 34.5	
	comp=N,3µm,0.5s						
ISHB				e		06 54 34.6	
	comp=E,3µm,0.5s						
MSFE	Esma-Masafi	7.85	143	i P	Pn	06 52 00.6	+0.1
	SNR=92						
MSFE	Esma-Masafi	7.85	143	ePn	Pn	06 52 00.8	+0.3
MSFE	Esma-Masafi	7.85	143	ePn	Pn	06 52 00.8	+0.3
MSFE	Esma-Masafi	7.85	143	P	Pn	06 52 01.5	+1.0
	SNR=38						
MSFE				S	Sn	06 53 30.4	+0.7
ISFR	Sfrayin	7.87	46	e		06 52 18.6	
	comp=Z,4µm,0.3s						
ISFR				ePn	Pn	06 52 03.7	+2.7
NAZ	Nazwa, Dubai	7.92	147	P	Pn	06 52 04.0	+2.6
	SNR=37						
NAZ				S	Sn	06 53 32.8	+1.5
NAZ	Nazwa, Dubai	7.92	147	i P	Pn	06 52 02.0	+0.7
	SNR=61						
NAZ	Nazwa, Dubai	7.92	147	ePn	Pn	06 52 02.1	+0.7
NAZ	Nazwa, Dubai	7.92	147	ePn	Pn	06 52 02.1	+0.7
NAZ				S	Sn	06 53 32.8	+1.5
MDH	Madha	7.97	142	i P	Pn	06 52 02.0	-0.1

	SNR=67						
MDH	Madha	7.97	142	P	Pn	06 52 03.0	+0.9
	SNR=30						
MDH				S	Sn	06 53 33.7	+1.1
AJN	Ajban	8.00	152	*i* P	Pn	06 52 03.3	+0.7
	SNR=9.2						
ASUD	Al Ashush, Dub	8.09	150	P	Pn	06 52 08.0	+4.3
	SNR=18						
ASUD				S	Sn	06 53 37.9	+2.4
ASUD	Al Ashush, Dub	8.09	150	*i* P	Pn	06 52 04.6	+1.0
	SNR=57						
ASUD	Al Ashush, Dub	8.09	150	*e*Pn	Pn	06 52 05.2	+1.5
ASUD	Al Ashush, Dub	8.09	150	P	Pn	06 52 04.6	+1.0
	SNR=57						
ASUD	Al Ashush, Dub	8.09	150	*e*Pn	Pn	06 52 05.2	+1.5
ASUD				S	Sn	06 53 37.9	+2.4
CUKT	Cukurca	8.16	314	*e*P	Sn	06 53 34.7	-2.7
UOSS	Minazif	8.21	144	*e*Pn	Pn	06 52 05.1	-0.4
UOSS	Minazif	8.21	144	*i* P	Pn	06 52 04.6	-0.8
	SNR=92						
UOSS	Minazif	8.21	144	P	Pn	06 52 04.6	-0.8
	SNR=92						
UOSS	Minazif	8.21	144	*e*Pn	Pn	06 52 05.1	-0.4
IMOG	Moghan	8.22	56	*e*Pn	Pn	06 52 06.9	+1.1
IMOG				*e*		06 54 53.6	
	comp=Z,941nm,0.6s						
IMOG				*e*		06 55 11.7	
	comp=E,1µm,0.5s						
IMOG				*e*		06 55 28.8	
	comp=N,2µm,0.5s						
IMOG	Moghan	8.22	56	*e*Pn	Pn	06 52 06.9	+1.1
HATD	Hatta, Dubai	8.28	145	P	Pn	06 52 09.0	+2.6
	SNR=26						
HATD				S	Sn	06 53 41.9	+1.7
HATD	Hatta, Dubai	8.28	145	*i* P	Pn	06 52 06.5	+0.1
	SNR=53						
HATD	Hatta, Dubai	8.28	145	*e*Pn	Pn	06 52 06.8	+0.5
HATD	Hatta, Dubai	8.28	145	P	Pn	06 52 06.5	+0.1
	SNR=53						
HATD	Hatta, Dubai	8.28	145	*e*Pn	Pn	06 52 06.8	+0.5
HATD				S	Sn	06 53 41.9	+1.7
ASHO	Ashiyiah	8.36	146	P	Pn	06 52 08.2	+0.7
	SNR=56						
ASHO	Ashiyiah	8.36	146	*i* P	Pn	06 52 07.3	-0.2
	SNR=119						
ASHO	Ashiyiah	8.36	146	P	Pn	06 52 08.2	+0.7
	SNR=56						
ISRO	Mashad	8.41	55	*e*		06 54 56.6	
	comp=N,34µm,1.0s						
ISRO				*e*		06 55 12.9	
	comp=Z,29µm,1.5s						
ISRO				*e*		06 55 20.8	
	comp=E,7µm,1.8s						
GEYT	Alibeck	8.53	42	Pn	Pn	06 52 11.7	+1.9
	comp=E,2.3nm,0.3s,baz=252,slow=15,SNR=12						
GEYT				Lg	Lg	06 54 46.9	
	comp=E,1.8nm,0.3s,baz=6.8,slow=29,SNR=2.4						
GYA0B	ALIBECK ARRAY	8.53	42	*e*Pn	Pn	06 52 10.5	+0.8
GYA0B	ALIBECK ARRAY	8.53	42	*e*Pn	Pn	06 52 10.5	+0.8
ALNE	Al Ain	8.77	150	*i* P	Pn	06 52 12.5	-0.6
	SNR=22						
ALNE	Al Ain	8.77	150	*e*Pn	Pn	06 52 13.2	+0.2
ALNE	Al Ain	8.77	150	*e*Pn	Pn	06 52 13.2	+0.2
IMYA	Miami	8.87	56	*e*Pn	Pn	06 52 16.3	+1.7
IMYA				*e*		06 55 17.2	
	comp=Z,3µm,0.7s						
IMYA				*e*		06 55 29.3	
	comp=N,5µm,0.6s						
IMYA				*e*		06 55 33.2	
	comp=E,7µm,0.8s						
IMYA	Miami	8.87	56	*e*Pn	Pn	06 52 16.3	+1.7
MZR	Muzera	9.00	165	*i* P	Pn	06 52 16.0	-0.2
	SNR=18						
CLDR	Caldiran	9.33	324	*e*P	Pn	06 52 19.9	-1.0
RAYN	Ar Rayn	9.51	212	*e*Pn	Pn	06 52 21.5	-1.7
RAYN	Ar Rayn	9.51	212	*i* P	Pn	06 52 21.5	-1.7
	SNR=134						
RAYN	Ar Rayn	9.51	212	*e*P	Pn	06 52 21.5	-1.7
RAYN	Ar Rayn	9.51	212	*e*P	Pn	06 52 21.5	-1.7
ARQ	Araqi	9.74	148	P	Pn	06 52 30.0	+3.6
	SNR=29						
GNI	Garni	9.77	331	Pn	Pn	06 52 30.9	+4.1
	comp=E,1.1nm,0.3s,baz=345,slow=0.1,SNR=12						
GNI				Lg	Lg	06 55 21.9	
	comp=E,0.8nm,0.3s,baz=66,slow=19,SNR=1.7						
GNI	Garni	9.77	331	*e*Pn	Pn	06 52 28.4	+1.6
GNI				Lg	Lg	06 55 21.9	
GNI	Garni	9.77	331	P	Pn	06 52 31.5	+4.7
	SNR=6.8						
GNI	Garni	9.77	331	*i* P	Pn	06 52 30.2	+3.4
	SNR=7.6						
GNI	Garni	9.77	331	*i* P	Pn	06 52 28.9	+2.1
GNI	Garni	9.77	331	*e*Pn	Pn	06 52 28.4	+1.6
GNI	Garni	9.77	331	*i* P	Pn	06 52 28.9	+2.1
GNI				Lg	Lg	06 55 21.9	
HOQ	Hoqain	9.90	144	P	Pn	06 52 32.0	+3.4
	SNR=23						
HOQ	Hoqain	9.90	144	*e*Pn	Pn	06 52 29.9	+1.3
HOQ	Hoqain	9.90	144	*e*Pn	Pn	06 52 29.9	+1.3
HOQ	Hoqain	9.90	144	P	Pn	06 52 32.0	+3.4
	SNR=23						
GURO	Guroymak-BITLI	9.95	315	*e*P	Pn	06 52 36.2	+6.8
AKT	Akhty	10.04	346	*e*P	Pn	06 52 33.2	+2.6
AKT				*e*S	Sn	06 54 26.7	+3.1
AKT				pmax	pmax		
	comp=Z,15nm,0.5s						
AKT				smax	smax		
	comp=N,14nm,0.8s						
AKT				smax	smax		
	comp=E,10.0nm,0.5s						
AKT	Akhty	10.04	346	*e*P	Pn	06 52 33.2	+2.6
	comp=E,14nm,0.8s						
AKT				*e*S	Sn	06 54 26.7	+3.1
BIDO	Bidbid	10.38	140	P	Pn	06 52 37.0	+1.8
	SNR=8.6						
BIDO	Bidbid	10.38	140	*e*Pn	Pn	06 52 35.0	-0.1
BIDO	Bidbid	10.38	140	*e*Pn	Pn	06 52 35.0	-0.1
BIDO	Bidbid	10.38	140	P	Pn	06 52 37.0	+1.8
	SNR=8.6						
DDFL	Dedoflistskaro	10.42	340	P	Pn	06 52 43.5	+7.8
BSY	Bisya	10.56	147	P	Pn	06 52 41.0	+3.5
	SNR=55						
BSYO	Bisya	10.59	147	P	Pn	06 52 41.0	+3.0
	SNR=55						
DGRG	David-gareji	10.66	337	P	Pn	06 52 48.0	+9.1
DGRG				S	Pn	06 52 37.7	-1.2
SMDO	Samad	10.71	142	P	Pn	06 52 42.0	+2.2
	SNR=23						
SMDO	Samad	10.71	142	P	Pn	06 52 42.0	+2.2
	SNR=23						
WSAR	Wadi Sarin	10.88	139	Pn	Pn	06 52 40.9	-1.2
	comp=E,3.8nm,0.3s,baz=356,slow=10,SNR=29						
WSAR				Sn	Sn	06 54 40.0	-4.2
	comp=E,2.4nm,0.3s,baz=284,slow=18,SNR=4.1						
TBLG	Delisi	11.13	335	P	Pn	06 52 49.4	+4.1
TBLG				S	Pn	06 52 44.0	-1.3
TBLG	Delisi	11.13	335	*e*Pn	Pn	06 52 46.5	+1.2
TBLG	Delisi	11.13	335	*e*P	Pn	06 52 46.5	+1.2
TBLG	Delisi	11.13	335	*e*P	Pn	06 52 46.5	+1.2
BGD	Bogdanovka	11.17	330	P	Pn	06 52 48.4	+2.2
JMDO	Jabal Madar	11.31	144	P	Pn	06 52 52.0	+4.0
	SNR=12						
AKH	Akhalkalaki	11.34	330	*e*Pn	Pn	06 52 49.9	+1.5
AKH	Akhalkalaki	11.34	330	*e*P	Pn	06 52 49.9	+1.5
AKH	Akhalkalaki	11.34	330	*e*Pn	Pn	06 52 49.8	+1.5
DUS	Dusheti	11.46	336	P	Pn	06 52 54.2	+4.3
DUS	Dusheti	11.46	336	*e*P	Pn	06 52 54.2	+4.3
DUS	Dusheti	11.46	336	*e*P	Pn	06 52 54.2	+4.3
MAK	Makhachkala	11.52	347	*e*P	Pn	06 52 50.4	-0.2
MAK				*e*S	Sn	06 55 00.2	+0.7
MAK				pmax	pmax		
	comp=Z,142nm,0.8s						
MAK				MLR	MLR		
	comp=Z,599nm,16.0s						
MAK	Makhachkala	11.52	347	*e*P	Pn	06 52 50.4	-0.2
	comp=Z,142nm,0.8s						
MAK				*e*S	Sn	06 55 00.2	+0.7
	comp=Z,599nm,16.0s						
ASF	Jabal al Asfar	11.93	276	Pn	Pn	06 52 54.2	-2.2
	comp=Z,5.3nm,0.3s,baz=54,slow=8.7,SNR=70						
ASF				Sn	Sn	06 54 59.9	-10
	comp=Z,0.7nm,0.3s,baz=312,slow=18,SNR=7.1						
ASF				Lg	Lg	06 56 45.1	
	baz=240,slow=20,SNR=3.5						
ASF				LR	LR	06 58 60.0	
	comp=Z,1µm,21.0s,baz=48,slow=45						
JLN	Jalan Bani Buh	12.18	140	P	Pn	06 53 00.0	+0.2
	SNR=5.6						
ONI	Oni	12.35	333	P	Pn	06 53 05.8	+3.8
ONI	Oni	12.35	333	*e*P	Pn	06 53 05.9	+3.8
ZEI	Tsey	12.35	335	*e*P	Pn	06 53 07.3	+5.1
ZEI				pmax	pmax		
	comp=Z,28nm,0.8s						
MHTO	MHTO	12.43	148	P	Pn	06 53 04.0	+0.8
	SNR=36						
KSHT	Keshet	12.85	279	Pn	Pn	06 53 08.4	-0.5
NATI	Neve Ativ	12.92	281	Pn	Pn	06 53 08.6	-1.2
KSDI	Kefar Szold	12.98	280	Pn	Pn	06 53 10.1	-0.6
NCK	Nalchik	13.08	336	*i* P	Pn	06 53 15.5	+3.5
NCK				pmax	pmax		
	comp=Z,42nm,0.3s						
NCK	Nalchik	13.08	336	*i* P	Pn	06 53 15.5	+3.5
	comp=Z,42nm,0.3s						
HMDT	Nahal Hemdat	13.09	276	Pn	Pn	06 53 11.2	-1.0
MMLI	Mount Malkishu	13.18	277	Pn	Pn	06 53 12.8	-0.6
NEY	Neytrino	13.19	333	*i* P	Pn	06 53 18.0	+4.4
NEY	Neytrino	13.19	333	*i* P	Pn	06 53 18.0	+4.4
MMA0B	Mount Meron ar	13.19	280	Pn	Pn	06 53 13.1	-0.5
MMAI	Mount Meron Ar	13.19	280	Pn	Pn	06 53 13.9	+0.3
	comp=Z,3.8nm,0.3s,baz=98,slow=18,SNR=6.3						
MMAI				Sn	Sn	06 55 34.8	-5.9
	comp=Z,1.5nm,0.3s,baz=100,slow=16,SNR=2.3						
MMAI				LR	LR	06 59 50.1	
	comp=Z,873nm,18.7s,baz=80,slow=44						
DSI	Dead Sea	13.26	273	Pn	Pn	06 53 14.2	-0.2
MZDA	Masada	13.30	272	Pn	Pn	06 53 14.9	0.0
BLGI	Bet Lehem HaGe	13.37	278	Pn	Pn	06 53 15.6	-0.3
SLTI	Sal'it	13.50	276	Pn	Pn	06 53 17.3	-0.5
KBZ	Khabaz	13.53	334	Pn	Pn	06 53 21.6	+3.5
	comp=Z,0.1nm,0.3s,baz=156,slow=11,SNR=17						
ZFRI	Zfri	13.55	269	Pn	Pn	06 53 18.3	-0.1
PRNI	Paran	13.73	268	Pn	Pn	06 53 20.3	-0.7
HRFI	Mount Harif	13.76	267	Pn	Pn	06 53 21.3	-0.1
KVAR	Kislovodsk Arr	13.80	334	Pn	Pn	06 53 25.3	+3.3
	baz=110,slow=9.1,SNR=26						
KIV	Kislovodsk	13.81	334	*e*Pn	Pn	06 53 25.3	+3.4
KIV	Kislovodsk	13.81	334	P	Pn	06 53 25.8	+3.9
	SNR=22						
KIV	Kislovodsk	13.81	334	*i* P	Pn	06 53 25.5	+3.5
	SNR=16						
KIV	Kislovodsk	13.81	334	*d i*P	Pn	06 53 25.2	+3.2
KIV				*e*S	Sn	06 56 06.9	+11
KIV				pmax	pmax		
	comp=Z,93nm,1.6s						
KIV				MLR	MLR		
	comp=Z,393nm,19.0s						
KIV	Kislovodsk	13.81	334	*i* P	Pn	06 53 25.2	+3.2
	comp=Z,393nm,19.0s						
KIV				*e*S	Sn	06 56 06.9	+11
RMNI	Mount Ramon	13.90	269	Pn	Pn	06 53 23.1	-0.2
EIL	Elat	13.91	266	Pn	Pn	06 53 25.5	+2.1
	comp=Z,1.4nm,0.3s,baz=16,slow=9.0,SNR=11						
EIL				Lg	Lg	06 57 48.8	
	comp=Z,0.7nm,0.3s,baz=325,slow=18,SNR=3.1						
EIL				LR	LR	07 00 20.2	
	comp=Z,900nm,18.1s,baz=72,slow=44						
EIL	Elat	13.91	266	Pn	Pn	06 53 23.2	-0.2
MBRI	Mt Berech	13.92	266	Pn	Pn	06 53 21.3	-2.2
WHFO	Wadi Hawf	14.01	169	P	Pn	06 53 26.0	+1.1
	SNR=9.2						
WHFO	Wadi Hawf	14.01	169	P	Pn	06 53 26.0	+1.1
	SNR=9.2						
GOF	Gofitskoye	14.64	337	*e*P	Pn	06 53 34.9	+1.6
GOF				pmax	pmax		
	comp=Z,50nm,0.7s						
GOF	Gofitskoye	14.64	337	*e*P	Pn	06 53 34.9	+1.6
	comp=Z,50nm,0.7s						
SOC	Sochi	14.76	326	*e*P	Pn	06 53 35.9	+1.0
SOC				MLR	MLR		
	comp=Z,1µm,17.0s						
SOC	Sochi	14.76	326	*e*P	Pn	06 53 35.9	+1.0
	comp=Z,1µm,17.0s						
NIG	Nigde	14.81	300	*e*P	Pn	06 53 37.1	+1.2
CSS	Mathiatis	15.06	287	*e*P	Pn	06 53 41.5	+2.5
CSS	Mathiatis	15.06	287	*e*P	Pn	06 53 39.5	+0.5
CSS	Mathiatis	15.06	287	*e*Pn	Pn	06 53 41.0	+2.0
	comp=Z,68nm,0.7s						
CSS	Mathiatis	15.06	287	P	Pn	06 53 40.5	+1.5
CSS	Mathiatis	15.06	287	*e*Pn	Pn	06 53 41.0	+2.0
	comp=Z,68nm,0.7s						
GULN	MERSIN_Gulnar	15.09	292	*i* P	Pn	06 53 40.8	+1.4
KVT	Kavak	15.16	312	*e*P	P	06 53 43.9	-1.7
KVT	Kavak	15.16	312	*e*P	P	06 53 43.9	-1.7
SZAC	Souni	15.40	286	P	Pn	06 53 45.8	+2.2
KBL	Kabul	15.42	75	*e*Pn	P	06 53 47.5	-1.2
	comp=Z,68nm,1.0s						
KBL	Kabul	15.42	75	*e*P	P	06 53 47.5	-1.2
KBL				pmax	pmax		
	comp=Z,68nm,1.0s						
KBL	Kabul	15.42	75	*e*P	P	06 53 47.5	-1.2
	comp=Z,68nm,1.0s						
ALFC	Alefka	15.68	287	P	Pn	06 53 48.8	+1.6
PPCY	Paphos	15.85	286	P	P	06 53 53.4	+0.2
DIKM	Dikmen	15.97	313	*e*P	P	06 53 56.9	+2.4
GAZI	Gazipasa	16.07	291	*i* P	Pn	06 53 53.5	+1.2
GAZI	Gazipasa	16.07	291	P	Pn	06 53 53.5	+1.2
BR101	Keskin Array S	16.12	304	*e*Pn	Pn	06 53 53.2	+0.2
BR101	Keskin Array S	16.12	304	*e*Pn	Pn	06 53 53.2	+0.2
BR131	Keskin Array S	16.12	304	*e*Pn	Pn	06 53 54.5	+1.5
BR131	Keskin Array S	16.12	304	*e*Pn	Pn	06 53 54.5	+1.5
BRTR	Keskin Array B	16.12	304	Pn	Pn	06 53 53.2	+0.2
	comp=Z,3.3nm,0.3s,baz=122,slow=11,SNR=57						
BRTR				LR	LR	07 01 21.2	
	comp=Z,1µm,18.3s,baz=110,slow=42						
BRTR	Keskin Array B	16.12	304	*i* P	P	06 53 56.4	0.0
BRTR				pmax	pmax		
	comp=Z,49nm,0.8s						
BRTR	Keskin Array B	16.12	304	*i* P	P	06 53 56.4	0.0
	comp=Z,49nm,0.8s						
AFSR	Af¯ar-Bala (A	16.42	303	*e*P	P	06 54 02.3	+2.7
AFSR	Af¯ar-Bala (A	16.42	303	*e*P	P	06 54 00.6	+1.0
LADK	Ladik-KONYA	16.51	298	*e*P	P	06 54 04.3	+3.6
LADK	Ladik-KONYA	16.51	298	*e*P	P	06 54 02.8	+2.1
ILGA	Ilgaz	16.66	309	*e*Pn	P	06 54 01.9	-0.5
	comp=Z,160nm,1.2s						
ILGA	Ilgaz	16.66	309	*e*Pn	P	06 54 01.9	-0.5
	comp=Z,160nm,1.2s						
ANN	Anapa	16.77	325	*e*P	P	06 54 02.4	-0.9
ANN				*e*S	Sn	06 57 12.2	+4.8
ANN				pmax	pmax		
	comp=Z,75nm,1.1s						
ANN				MLR	MLR		
	comp=Z,2µm,24.0s						
ANN	Anapa	16.77	325	*e*P	P	06 54 02.4	-0.9
	comp=Z,75nm,1.1s						
ANN				*e*S	Sn	06 57 12.2	+4.8
	comp=Z,2µm,24.0s						
KEPZ	Antalya-Kepez	16.77	293	*i* P	P	06 54 04.7	+1.3
KEPZ	Antalya-Kepez	16.77	293	P	P	06 54 04.7	+1.3
ANTO	Ankara	16.78	304	*e*P	P	06 54 06.6	+3.0
ANTO	Ankara	16.78	304	*e*P	P	06 54 04.3	+0.7
ANTO	Ankara	16.78	304	⇑*i*P	P	06 54 02.8	-0.8
ANTO	Ankara	16.78	304	*e*Pn	P	06 54 04.0	+0.4
	comp=Z,108nm,0.8s						
ANTO	Ankara	16.78	304	P	P	06 54 05.7	+2.1
	SNR=24						
ANTO	Ankara	16.78	304	*e*P	P	06 54 04.0	+0.4
ANTO				pmax	pmax		
	comp=Z,108nm,0.8s						
ANTO	Ankara	16.78	304	*e*P	P	06 54 04.0	+0.4
	comp=Z,108nm,0.8s						
BR231	Keskin MP Arra	16.78	304	*e*Pn	P	06 54 03.6	-0.1
BR231	Keskin MP Arra	16.78	304	*e*Pn	P	06 54 03.6	-0.1
KDHN	Kadinhani	16.80	299	*i* P	P	06 54 05.0	+1.2
KDHN	Kadinhani	16.80	299	P	P	06 54 05.0	+1.2
TAS	Tashkent	17.54	52	*e*P	P	06 54 14.8	+2.8
BAGO	Egridir - ISPA	17.65	296	*i* P	P	06 54 14.6	+1.3
BOLV	Bolvadin	17.73	299	*i* P	P	06 54 15.9	+1.7
BOLV	Bolvadin	17.73	299	P	P	06 54 15.9	+1.7
KORT	Korkueli	17.77	293	*i* P	P	06 54 14.4	-0.2
KORT	Korkueli	17.77	293	P	P	06 54 14.4	-0.2
ESKT	Eskisehir	18.05	301	*i* P	P	06 54 20.3	+2.6
SEYT	Eskypehyr	18.05	301	P	P	06 54 20.3	+2.6
AKAS	Kas	18.24	290	*i* P	P	06 54 20.1	+0.3
AKAS	Kas	18.24	290	P	P	06 54 20.1	+0.3
KSL	Kastellorizon	18.24	290	P	Pn	06 54 19.2	-0.3
KSL	Kastellorizon	18.24	290	P	Pn	06 54 19.2	-0.3
KSL	Kastellorizon	18.24	290	P	Pn	06 54 19.2	-0.3
BDHA	Al Bayda'	18.37	197	*i* P	Pn	06 54 16.0	-5.3
IUG	Iuzhnay	18.41	50	*e*P	P	06 54 22.6	+0.9
	comp=Z,24nm,1.2s						
IUG				LR	LR	07 02 41.2	
	comp=Z,255nm,14.1s						
GOLH	Golhisar	18.44	293	*i* P	Pn	06 54 23.5	+1.5
GOLH	Golhisar	18.44	293	P	Pn	06 54 23.5	+1.5
SIM	Simferopol'	18.60	320	*e*P	Pn	06 54 24.8	+1.1
SIM				*e*S	Sn	06 57 51.0	-0.8
SIM				pmax	pmax		
	comp=Z,76nm,0.9s						
SIM				MLR	MLR		
	comp=Z,400nm,15.6s						
SIM	Simferopol'	18.60	320	*e*P	Pn	06 54 24.8	+1.1
	comp=Z,76nm,0.9s						
SIM				*e*S	Sn	06 57 51.0	-0.8
	comp=Z,400nm,15.6s						
FETY	Fethiye	18.71	291	P	Pn	06 54 26.2	+1.0
FETY	Fethiye	18.71	291	P	Pn	06 54 26.2	+1.0
FETY	Fethiye	18.71	291	P	Pn	06 54 26.2	+1.0
KHAL	Karahalli	18.74	297	*i* P	Pn	06 54 26.5	+0.9
KHAL	Karahalli	18.74	297	P	Pn	06 54 26.5	+0.9
AB31	Akbulak array	18.75	19	*i* P	P	06 54 25.4	+0.2
AB31				pmax	pmax		
	comp=Z,13nm,0.7s						
AB31	Akbulak array	18.75	19	*i* P	P	06 54 25.4	+0.2
	comp=Z,13nm,0.7s						
ABKAR	Akbulak array	18.75	19	*e*P	P	06 54 25.1	-0.2
ABKAR	Akbulak array	18.75	19	*e*P	P	06 54 25.0	-0.2
NIL	Nilore	18.87	78	*e*P	Pn	06 54 28.0	+0.8
	comp=Z,84nm,1.0s						
NIL	Nilore	18.87	78	*e*P	Pn	06 54 28.0	+0.8
NIL				pmax	pmax		
	comp=Z,84nm,1.0s						
NIL	Nilore	18.87	78	*e*P	Pn	06 54 28.0	+0.8
	comp=Z,84nm,1.0s						
TAVA	DENIZLI_Tavas	18.99	293	*i* P	P	06 54 28.0	0.0
TAVA	DENIZLI_Tavas	18.99	293	P	P	06 54 28.0	0.0
DALY	Dalyan (Mu˜la	19.08	291	*i* P	P	06 54 28.0	-0.9
DALY	Dalyan (Mu˜la	19.08	291	P	P	06 54 28.0	-0.9
TURN	Turunc	19.13	292	*i* P	Pn	06 54 32.5	+2.3
KK31	Karatay Array	19.19	48	*e*P	Pn	06 54 31.0	+0.1
KK31	Karatay Array	19.19	48	*i* P	Pn	06 54 30.8	-0.1
KK31				pmax	pmax		
	comp=Z,37nm,1.1s						
KK31	Karatay Array	19.19	48	*i* P	Pn	06 54 30.8	-0.1
	comp=Z,37nm,1.1s						
KKAR	Karatay Array	19.19	48	*e*P	Pn	06 54 31.0	+0.1
KKAR	Karatay Array	19.19	48	*e*P	Pn	06 54 31.0	+0.1
KKAR	Karatay Array	19.19	48	*e*P	Pn	06 54 31.0	+0.1
AKTK	Aktyubinsk	19.39	14	P	P	06 54 32.8	+0.6
AKTO	Aktyubinsk	19.39	14	P	P	06 54 32.8	+0.6
	comp=Z,1.0nm,0.3s,baz=203,slow=13,SNR=57						
AKTO				LR	LR	07 03 50.9	
	comp=Z,1µm,20.9s,baz=182,slow=43						
MANT	Manisa	19.48	296	*i* P	P	06 54 33.8	+0.3
MANT	Manisa	19.48	296	*e*P	Pn	06 54 34.9	+0.2
MANT	Manisa	19.48	296	P	P	06 54 33.8	+0.3
DEMI	Demirci	19.49	298	*i* P	Pn	06 54 35.2	+0.5
DEMI	Demirci	19.49	298	P	Pn	06 54 35.2	+0.5
DURS	Dursunbey	19.82	299	*i* P	Pn	06 54 38.2	-0.5
DURS	Dursunbey	19.82	299	P	Pn	06 54 38.2	-0.5
AYDN	Tasoluk	19.83	294	*i* P	Pn	06 54 38.6	-0.1
AYDN	Tasoluk	19.83	294	P	Pn	06 54 38.6	-0.1
DAT	Datca	19.92	291	*i* P	Pn	06 54 42.0	+2.2
SFK	Sufi-Kurgan	20.02	59	P	Pn	06 54 42.7	+1.6
SFK				pmax	pmax		
	comp=Z,66nm,0.9s						
SFK	Sufi-Kurgan	20.02	59	P	Pn	06 54 42.7	+1.6
	comp=Z,66nm,0.9s						
AKHS	Akhisar	20.13	297	*i* P	Pn	06 54 41.4	-0.9
AKHS	Akhisar	20.13	297	P	Pn	06 54 41.4	-0.9
KARP	Karpathos	20.14	287	*e*P	Pn	06 54 41.8	-0.6
	comp=Z,125nm,0.9s						
KARP	Karpathos	20.14	287	P	P	06 54 41.2	+0.7
KARP	Karpathos	20.14	287	P	P	06 54 41.2	+0.7
BODT	Bodrum	20.18	292	P	P	06 54 40.0	-1.0
BODT	Bodrum	20.18	292	P	P	06 54 40.0	-1.0
BODT	Bodrum	20.18	292	P	P	06 54 40.0	-1.0
MNAS	Manas	20.21	52	P	Pn	06 54 45.7	+2.5
MNAS				pmax	pmax		
	comp=Z,58nm,1.0s						
MNAS	Manas	20.21	52	P	Pn	06 54 45.7	+2.5
	comp=Z,58nm,1.0s						
STEP	BALIKESIR_Sava	20.33	298	*i* P	P	06 54 42.6	0.0
STEP	BALIKESIR_Sava	20.33	298	P	P	06 54 42.6	0.0
GCAM	G?zelcaml?	20.34	293	*i* P	Pn	06 54 44.8	+0.1
GCAM	G?zelcaml?	20.34	293	P	Pn	06 54 44.8	+0.1
BALY	Balya	20.50	299	*i* P	P	06 54 45.0	+0.6
BALY	Balya	20.50	299	P	P	06 54 45.0	+0.6
VRH	Novokhopyorsk	20.59	343	*e*P	P	06 54 45.4	+0.2
VRH				pmax	pmax		
	comp=Z,140nm,0.6s						
VRH	Novokhopyorsk	20.59	343	*e*P	P	06 54 45.4	+0.2
	comp=Z,140nm,0.6s						
SMG	Samos	20.65	293	P	P	06 54 45.6	-0.5
SMG	Samos	20.65	293	P	P	06 54 45.6	-0.5
SMG	Samos	20.65	293	P	P	06 54 45.6	-0.5
AML	Almayashu	20.87	54	P	Pn	06 54 50.7	-0.6
	SNR=23						
ZKR	Zakros	20.89	286	P	Pn	06 54 50.8	-0.3
ZKR	Zakros	20.89	286	P	Pn	06 54 50.8	-0.3
ZKR	Zakros	20.89	286	P	Pn	06 54 50.8	-0.3
URLA	Izmir	20.96	295	*i* P	Pn	06 54 51.6	-0.3
URLA	Izmir	20.96	295	P	Pn	06 54 51.6	-0.3
VORD	Divnogorie	21.04	339	*e*P	P	06 54 49.3	-0.8
VORD				pmax	pmax		
	comp=Z,70nm,0.8s						
VORD	Divnogorie	21.04	339	*e*P	P	06 54 49.3	-0.8
	comp=Z,70nm,0.8s						
EKS2	Erkin-Say	21.14	53	P	P	06 54 53.5	+2.1
	SNR=20						
VSR	Storozhevoye	21.30	339	*e*P	P	06 54 51.7	-1.2
VSR				*e*S	S	06 58 44.9	-4.9
VSR				pmax	pmax		
	comp=Z,60nm,0.9s						
VSR				smax	smax		
	comp=N,250nm,1.3s						
VSR	Storozhevoye	21.30	339	*e*P	P	06 54 51.7	-1.2
	comp=N,60nm,0.9s						
VSR				*e*S	S	06 58 44.9	-4.9
	comp=N,250nm,1.3s						
ANAF	Anafi Island	21.33	289	P	P	06 54 52.7	-0.7
ANAF	Anafi Island	21.33	289	P	P	06 54 52.7	-0.7
CHOS	Chios island	21.38	295	P	P	06 54 54.2	+0.2
CHOS	Chios island	21.38	295	P	P	06 54 54.2	+0.2
CHOS	Chios island	21.38	295	P	P	06 54 54.2	+0.2
NPS	Neapolis	21.39	286	P	P	06 54 54.6	+0.6
NPS	Neapolis	21.39	286	P	P	06 54 54.6	+0.6
NPS	Neapolis	21.39	286	P	P	06 54 54.6	+0.6
NPS	Neapolis	21.39	286	P	P	06 54 54.6	+0.6
ATD	Arta Tunnel	21.47	202	P	P	06 54 56.7	+1.7
	comp=N,71nm,1.0s,baz=65,slow=3.9,SNR=13						
ATD				LR	LR	07 03 52.8	
	comp=N,742nm,20.9s,baz=14,slow=38						
ATD	Arta Tunnel	21.47	202	*e*P	P	06 54 55.0	0.0
	comp=N,125nm,1.1s						
LAST	Lasithi	21.49	286	P	P	06 54 55.7	+0.5
LAST	Lasithi	21.49	286	P	P	06 54 55.7	+0.5
LAST	Lasithi	21.49	286	P	P	06 54 55.7	+0.5
DHRM	DHARAMSHALA	21.50	82	*e*P	P	06 54 56.5	+1.0
SANT	Santorini	21.58	289	⇑*i*P	P	06 54 56.2	+0.1
SANT	Santorini	21.58	289	*e*P	P	06 54 55.4	-0.7
	comp=N,456nm,1.3s						
SANT	Santorini	21.58	289	⇑*i*P	P	06 54 56.2	+0.1
APE	Apeiranthos	21.59	291	⇓*i*P	P	06 54 56.4	+0.1
APE	Apeiranthos	21.59	291	*i* P	P	06 54 55.2	-1.1
APE				pmax	pmax		
	comp=Z,18nm,0.6s						
APE	Apeiranthos	21.59	291	⇓*i*P	P	06 54 56.4	+0.1
AAK	Ala-Archa	21.61	53	P	P	06 54 57.6	+1.0
	comp=Z,34nm,1.0s,baz=225,slow=6.5,SNR=22						
AAK				LR	LR	07 04 26.9	
	comp=Z,526nm,20.5s,baz=254,slow=40						
AAK	Ala-Archa	21.61	53	P	P	06 54 58.4	+1.8
	SNR=14						
AAK	Ala-Archa	21.61	53	*e*P	P	06 54 57.6	+1.0
AAK				*e*P	P	06 54 57.8	+1.2
AAK	Ala-Archa	21.61	53	P	P	06 54 59.4	+2.8
	SNR=34						
AAK	Ala-Archa	21.61	53	*i* P	P	06 54 58.0	+1.4
	SNR=16						
AAK	Ala-Archa	21.61	53	*i* P	P	06 54 58.2	+1.6
AAK				pmax	pmax		
	comp=Z,41nm,0.9s						

THR5	Thira Island,	21.67	289	P	P	06 54 56.3	-0.8
THR5	Thira Island,	21.67	289	P	P	06 54 56.3	-0.8
VORR	Voronezh	21.69	340	*e*P	P	06 54 55.0	-2.1
VORR				pmax	pmax		
	comp=Z,500nm,1.2s						
VORR	Voronezh	21.69	340	*e*P	P	06 54 55.0	-2.1
	comp=Z,500nm,1.2s						
TIRR	Tirgusor	21.71	312	⇑*i*P	P	06 54 57.5	+0.1
TIRR	Tirgusor	21.71	312	*e*P	P	06 54 57.4	+0.1
	comp=Z,115nm,1.0s						
TIRR	Tirgusor	21.71	312	⇑*i*P	P	06 54 57.5	+0.1
KSH	Kashi	21.73	62	P	P	06 54 55.4	-2.4
KSH				pP	pP	06 54 59.3	-0.2
KSH				PP	PnPn	06 55 18.8	+0.3
KSH				S	S	06 58 47.0	-12
KSH				SS	SnSn	06 59 21.6	-1.1
KSH				pmax	pmax		
	comp=Z,140nm,0.9s						
KSH				LR	LR		
	comp=Z,2µm,16.2s						
KSH				LR	LR		
	comp=Z,980nm,12.0s						
FRU	Bishkek	21.77	53	*e*P	P	06 55 02.0	+3.9
FRU				*e*		06 55 09.0	
FRU				*e*		06 55 17.0	
FRU				pmax	pmax		
	comp=Z,100nm,1.3s						
FRU	Bishkek	21.77	53	*e*P	P	06 55 02.0	+3.9
	comp=Z,100nm,1.3s						
FRU1	Bishkek	21.77	53	*e*P	P	06 54 58.3	+0.1
	comp=Z,137nm,1.1s						
FRU1	Bishkek	21.77	53	*e*P	P	06 54 58.3	+0.1
	comp=Z,137nm,1.1s						
TLCR		21.82	314	⇑*i*P	P	06 54 58.7	+0.2
TLCR		21.82	314	⇑*i*P	P	06 54 58.7	+0.2
PRD	Provadia	21.82	308	*e*P	P	06 55 03.0	+4.4
USP	Ospenovka	21.86	52	P	P	06 55 02.8	+3.7
	SNR=35						
CHMS	Chumysh	21.93	52	P	P	06 55 03.9	+4.1
	SNR=43						
KBK	Karagaybulak	21.93	53	P	P	06 55 05.1	+5.1
	SNR=8.4						
KZA	Kyzart	21.93	55	P	P	06 55 04.7	+4.5
	SNR=20						
ALN	Alexandroupoli	21.98	301	*e*P	P	06 54 57.3	-3.0
	comp=Z,47nm,0.8s						
ALN	Alexandroupoli	21.98	301	P	P	06 54 55.6	-4.7
ALN	Alexandroupoli	21.98	301	*e*P	P	06 54 57.3	-3.0
ALN				pmax	pmax		
	comp=Z,47nm,0.8s						
ALN	Alexandroupoli	21.98	301	*e*P	P	06 54 57.3	-3.0
	comp=Z,47nm,0.8s						
JMB	Yambol	22.10	306	*e*P	P	06 55 13.0	+11
HARR	Harsova	22.12	312	⇑*i*P	P	06 55 02.7	+0.9
HARR	Harsova	22.12	312	⇑*i*P	P	06 55 02.7	+0.9
CFR	Carcaliu	22.23	314	⇑*i*P	P	06 55 03.2	+0.3
CFR	Carcaliu	22.23	314	⇑*i*P	P	06 55 03.2	+0.3
BTLS	Baital	22.36	47	*e*P	P	06 55 04.6	+0.2
	comp=Z,16nm,1.0s						
BTLS				LR	LR	07 04 50.0	
	comp=Z,385nm,13.0s						
SMLA	Simla	22.37	85	*e*P	P	06 55 04.6	0.0
SMLA				IAmb	IAmb	06 55 11.2	
	comp=Z,223nm,0.8s						
RDO	Rodhopi	22.41	302	P	P	06 55 05.7	+0.7
RDO	Rodhopi	22.41	302	P	P	06 55 05.7	+0.7
RDO	Rodhopi	22.41	302	P	P	06 55 05.7	+0.7
TKM2	Tokmak 2	22.47	53	P	P	06 55 09.1	+3.2
	SNR=62						
TKM2	Tokmak 2	22.47	53	P	P	06 55 07.2	+1.4
TKM2				pmax	pmax		
	comp=Z,96nm,1.2s						
TKM2	Tokmak 2	22.47	53	P	P	06 55 07.2	+1.4
	comp=Z,96nm,1.2s						
VAM	Vamos	22.55	287	P	P	06 55 07.6	+1.1
VAM	Vamos	22.55	287	P	P	06 55 07.6	+1.1
VAM	Vamos	22.55	287	P	P	06 55 07.6	+1.1
VAM	Vamos	22.55	287	P	P	06 55 07.6	+1.1
LPSR	Galich'ya Gora	22.60	341	*e*P	P	06 55 06.1	-0.7
LPSR				*e*S	S	06 59 11.2	-3.4
LPSR				pmax	pmax		
	comp=Z,100nm,0.8s						
LPSR				smax	smax		
	comp=N,130nm,1.4s						
LPSR	Galich'ya Gora	22.60	341	*e*P	P	06 55 06.1	-0.7
	comp=N,100nm,0.8s						
LPSR				*e*S	S	06 59 11.2	-3.4
	comp=N,130nm,1.4s						
GVDS	Gavdos	22.63	285	P	P	06 55 08.7	+1.4
GVDS	Gavdos	22.63	285	P	P	06 55 08.7	+1.4
KDZ	Kurdzhali	22.65	303	*e*P	P	06 55 09.0	+1.5
ULHL	Ulahol	22.68	55	P	P	06 55 10.0	+1.9
	SNR=52						
DIM	Dimitrovgrad	22.69	304	*e*P	P	06 55 13.0	+5.1
KIS	Kishinev	22.78	318	*i* P	P	06 55 09.0	+0.2
	comp=N,500nm,1.2s						
KIS				*i* sP	sP	06 55 29.0	+18
KIS	Kishinev	22.78	318	*e*PP	PP	06 55 40.0	
KIS	Kishinev	22.78	318	*e*PPP	PPP	06 55 51.0	
KIS				*i* S	S	06 59 16.0	-2.1
KIS				*e*SS	SnSn	07 00 07.0	+19
KIS				*e*L	L	07 03 52.0	
KIS	Kishinev	22.78	318	⇑*i*P	P	06 55 09.0	+0.2
KIS				*i*		06 55 16.0	
KIS				*e*		06 55 40.0	
KIS				*e*PPP	PPP	06 55 51.0	
KIS				*e*S	S	06 59 16.0	-2.1
KIS				*e*SS	SnSn	07 00 07.0	+19
KIS	Kishinev	22.78	318	*i* P	P	06 55 09.0	+0.2
KIS				*e*S	S	06 59 16.0	-2.1
LEOM	Leova	22.82	317	⇓*i*P	P	06 55 10.9	+1.6
LEOM	Leova	22.82	317	⇓*i*P	P	06 55 10.9	+1.6
SZH	Strazhica	22.84	307	*e*P	P	06 55 10.0	+0.6
NDI	New Delhi	22.90	91	*e*P	P	06 55 08.5	-1.7
RZN	Rozhen	23.16	303	*e*P	P	06 55 15.0	+2.0
AOS	Alonnisos	23.19	296	P	P	06 55 13.0	-0.2
AOS	Alonnisos	23.19	296	P	P	06 55 13.0	-0.2
AOS	Alonnisos	23.19	296	P	P	06 55 13.0	-0.2
ISR	Istrita	23.20	312	⇑*i*P	P	06 55 14.9	+1.7
ISR	Istrita	23.20	312	⇑*i*P	P	06 55 14.9	+1.7
DDI	Dehra Dun	23.26	86	*e*P	P	06 55 14.6	+0.5
PLD	Plovdiv	23.30	304	*e*P	P	06 55 15.0	+0.8
KUU	Kurty	23.34	52	⇑*i*P	P	06 55 16.1	+1.5
	comp=N,26nm,0.8s						
KUU				*e*S	S	06 59 31.0	+3.2
VRI	Vrincioaia	23.43	314	⇑*i*P	P	06 55 16.7	+1.2
VRI	Vrincioaia	23.43	314	⇑*i*P	P	06 55 16.7	+1.2
DID	Didima	23.46	292	P	P	06 55 14.8	-1.1
DID	Didima	23.46	292	P	P	06 55 14.8	-1.1
DID	Didima	23.46	292	P	P	06 55 14.8	-1.1
PLOR	Plostina	23.47	314	⇓*i*P	P	06 55 16.4	+0.4
PLOR	Plostina	23.47	314	⇓*i*P	P	06 55 16.4	+0.4
AAA	Alma-Ata	23.48	54	*e*P	P	06 55 23.2	+7.1
AAA				pmax	pmax		
	comp=Z,300nm,3.4s						
AAA				MLR	MLR		
	comp=Z,400nm,8.0s						
MDOK	Medeo	23.55	54	*i* P	P	06 55 18.3	+1.4
	comp=Z,236nm,0.9s						
MDOK				*e*S	S	06 59 34.5	+3.0
MDOK				LR	LR	07 06 16.9	
	comp=Z,294nm,10.7s						
IAS	Iasi	23.61	317	⇑*i*P	P	06 55 17.9	+0.7
IAS	Iasi	23.61	317	⇑*i*P	P	06 55 17.9	+0.7
VLI	Veliai	23.63	290	P	P	06 55 15.6	-2.0
VLI	Veliai	23.63	290	P	P	06 55 15.6	-2.0
VLI	Veliai	23.63	290	P	P	06 55 15.6	-2.0
SORM	Soroca	23.69	320	⇓*i*P	P	06 55 17.2	-0.8
SORM	Soroca	23.69	320	⇓*i*P	P	06 55 17.2	-0.8
NEO	Neokhori	23.72	296	P	P	06 55 20.3	+1.8
NEO	Neokhori	23.72	296	P	P	06 55 20.3	+1.8
NEO	Neokhori	23.72	296	P	P	06 55 20.3	+1.8
MLR	Muntele Rosu	23.74	312	P	P	06 55 21.1	+2.3
	comp=Z,49nm,0.7s,baz=99,slow=5.9,SNR=22						
MLR	Muntele Rosu	23.74	312	⇑*i*P	P	06 55 20.9	+2.2
MLR	Muntele Rosu	23.74	312	*e*P	P	06 55 20.8	+2.0
	comp=Z,78nm,0.8s						
MLR	Muntele Rosu	23.74	312	*e*P	P	06 55 20.8	+2.0
MLR				pmax	pmax		
	comp=Z,78nm,0.8s						
MLR	Muntele Rosu	23.74	312	*e*P	P	06 55 20.8	+2.0
	comp=Z,78nm,0.8s						
TESR	Tescani	23.79	315	⇑*i*P	P	06 55 19.4	+0.3
TESR	Tescani	23.79	315	⇑*i*P	P	06 55 19.4	+0.3
PGB	Panagyurishte	23.81	304	*e*P	P	06 55 20.0	+0.6
MMB	Musomiste	23.85	302	*e*P	P	06 55 21.0	+1.3
AXAR	Agios Charalam	24.07	295	P	P	06 55 24.0	+2.2
AXAR	Agios Charalam	24.07	295	P	P	06 55 24.0	+2.2
AXAR	Agios Charalam	24.07	295	P	P	06 55 24.0	+2.2
VLX	Vlachokerasia	24.13	291	P	P	06 55 20.8	-1.6
VLX	Vlachokerasia	24.13	291	P	P	06 55 20.8	-1.6
VLX	Vlachokerasia	24.13	291	P	P	06 55 20.8	-1.6
GUR	Goura	24.21	293	P	P	06 55 23.0	-0.2
GUR	Goura	24.21	293	P	P	06 55 23.0	-0.2
GUR	Goura	24.21	293	P	P	06 55 23.0	-0.2
PRZ	Przheval'sk	24.28	56	*e*P	P	06 55 24.6	+0.7
	comp=Z,118nm,0.9s						
PRZ	Przheval'sk	24.28	56	*e*P	P	06 55 24.6	+0.7
PRZ				pmax	pmax		
	comp=Z,118nm,0.9s						
PRZ	Przheval'sk	24.28	56	*e*P	P	06 55 24.6	+0.7
	comp=Z,118nm,0.9s						
VOIR		24.29	312	⇑*i*P	P	06 55 24.9	+1.1
VOIR		24.29	312	⇑*i*P	P	06 55 24.9	+1.1
DOPR	Dopca	24.30	313	⇓*i*P	P	06 55 24.7	+0.8
DOPR	Dopca	24.30	313	⇓*i*P	P	06 55 24.7	+0.8
BIZ	Bicaz	24.33	316	⇓*i*P	P	06 55 24.9	+0.8
BIZ	Bicaz	24.33	316	⇓*i*P	P	06 55 24.9	+0.8
AGG	Agios Georgios	24.36	295	*e*P	P	06 55 24.6	+0.1
	comp=Z,392nm,1.4s						
AGG	Agios Georgios	24.36	295	P	P	06 55 24.0	-0.5
AGG	Agios Georgios	24.36	295	*e*P	P	06 55 24.6	+0.1
AGG				pmax	pmax		
	comp=Z,393nm,1.4s						
AGG	Agios Georgios	24.36	295	*e*P	P	06 55 24.6	+0.1
	comp=Z,393nm,1.4s						
MPEP	Malo Peshtene	24.37	306	*e*P	P	06 55 26.0	+1.5
KLV	Kalavryta, Ach	24.37	293	P	P	06 55 24.3	-0.4
KLV	Kalavryta, Ach	24.37	293	P	P	06 55 24.3	-0.4
KLV	Kalavryta, Ach	24.37	293	P	P	06 55 24.3	-0.4
BRZS	Berezniki	24.39	35	*e*P	P	06 55 25.2	+0.6
	comp=Z,29nm,1.2s						
BRZS				*e*S	S	06 59 47.0	+2.6
KKB	Krupnik	24.39	302	*e*P	P	06 55 24.7	0.0
LIT	Litokhoron	24.42	298	*e*P	P	06 55 25.3	+0.3
	comp=Z,40nm,0.7s						
LIT	Litokhoron	24.42	298	P	P	06 55 25.4	+0.4
LIT	Litokhoron	24.42	298	*e*P	P	06 55 25.3	+0.3
LIT				pmax	pmax		
	comp=Z,40nm,0.7s						
LIT	Litokhoron	24.42	298	*e*P	P	06 55 25.3	+0.3
	comp=Z,40nm,0.7s						
KALE	Kalithea	24.42	294	P	P	06 55 25.1	0.0
KALE	Kalithea	24.42	294	P	P	06 55 25.1	0.0
KALE	Kalithea	24.42	294	P	P	06 55 25.1	0.0
SATY	Saty	24.46	55	*e*P	P	06 55 26.9	+1.4
	comp=Z,41nm,0.9s						
SATY				*e*S	S	06 59 49.1	+3.2
PRAR	RASCA	24.47	317	⇑*i*P	P	06 55 25.5	+0.1
PRAR	RASCA	24.47	317	⇑*i*P	P	06 55 25.5	+0.1
TRIZ	Trizonia	24.47	294	P	P	06 55 26.1	+0.7
TRIZ	Trizonia	24.47	294	P	P	06 55 26.1	+0.7
ITM	Ithomi	24.47	291	*e*P	P	06 55 25.4	0.0
	comp=Z,67nm,0.6s						
ITM	Ithomi	24.47	291	P	P	06 55 25.1	-0.4
ITM	Ithomi	24.47	291	*e*P	P	06 55 25.5	0.0
	comp=Z,67nm,0.6s						
SERG	Sergoula	24.49	294	P	P	06 55 25.4	-0.3
SERG	Sergoula	24.49	294	P	P	06 55 25.4	-0.3
VTS	Vitosha	24.50	304	⇓*i*P	P	06 55 26.4	+0.5
VTS	Vitosha	24.50	304	*e*P	P	06 55 26.1	+0.2
	comp=Z,31nm,1.0s						
VTS	Vitosha	24.50	304	*e*P	P	06 55 26.7	+0.8
VTS	Vitosha	24.50	304	P	P	06 55 25.6	-0.3
VTS	Vitosha	24.50	304	*e*P	P	06 55 26.1	+0.2
VTS				pmax	pmax		
	comp=Z,31nm,1.0s						
VTS	Vitosha	24.50	304	*e*P	P	06 55 26.1	+0.2
	comp=Z,31nm,1.0s						
POO	Poona	24.50	117	*e*P	P	06 55 25.5	-0.4
POO				IAmb	IAmb	06 55 30.9	
	comp=Z,25nm,1.3s						
POO	Poona	24.50	117	*e*P	P	06 55 25.0	-1.0
ZHN	Zhinishke	24.51	55	*e*P	P	06 55 27.5	+1.6
	comp=Z,54nm,0.9s						
ZHN				*e*S	S	06 59 50.3	+3.5
ARR	Arges	24.52	311	⇓*i*P	P	06 55 26.8	+0.8
ARR	Arges	24.52	311	⇓*i*P	P	06 55 26.8	+0.8
LAKA	Lakka	24.53	293	P	P	06 55 26.7	+0.7
LAKA	Lakka	24.53	293	P	P	06 55 26.7	+0.7
LAKA	Lakka	24.53	293	P	P	06 55 26.7	+0.7
ANX	Ano Chora	24.62	294	P	P	06 55 26.6	-0.3
ANX	Ano Chora	24.62	294	P	P	06 55 26.6	-0.3
GRG	Griva	24.66	300	P	P	06 55 27.4	+0.2
GRG	Griva	24.66	300	P	P	06 55 27.4	+0.2
GRG	Griva	24.66	300	P	P	06 55 27.4	+0.2
GRG	Griva	24.66	300	P	P	06 55 27.4	+0.2
THL	Klokotos Trika	24.68	296	P	P	06 55 24.7	-2.7
DRO	Drossia	24.71	293	P	P	06 55 28.0	+0.3
DRO	Drossia	24.71	293	P	P	06 55 28.0	+0.3
KPKS	Kokpek	24.78	54	⇑*i*P	P	06 55 29.4	+1.1
	comp=Z,82nm,1.0s						
KPKS				*e*S	S	06 59 53.8	+2.7
KPKS				LR	LR	07 07 26.2	
	comp=Z,98nm,9.6s						
AKASG	Malin Array Be	24.84	326	P	P	06 55 28.2	-0.4
	comp=Z,51nm,0.7s,baz=132,slow=8.8,SNR=110						
AKASG				S	S	06 59 48.3	-3.4
	comp=Z,5.5nm,1.0s,baz=137,slow=16,SNR=6.2						
AKASG				LR	LR	07 06 54.5	
	comp=Z,439nm,20.5s,baz=110,slow=41						
AKBB	Malin Array Si	24.84	326	*e*P	P	06 55 28.2	-0.5
	comp=Z,329nm,1.4s						
AKBB				*e*S	S	06 59 50.0	-1.6
AKBB	Malin Array Si	24.84	326	*e*P	P	06 55 28.2	-0.5
AKBB				*e*S	S	06 59 50.1	-1.6
AKBB				pmax	pmax		
	comp=Z,329nm,1.4s						
AKBB	Malin Array Si	24.84	326	*e*P	P	06 55 28.2	-0.5
	comp=Z,329nm,1.4s						
AKBB				*e*S	S	06 59 50.1	-1.6
KIEV	Kiev	24.85	326	*e*P	P	06 55 28.3	-0.4
	comp=Z,290nm,1.3s						
KIEV				*e*S	S	06 59 50.0	-1.8
KIEV	Kiev	24.85	326	*i* P	P	06 55 28.5	-0.2
	SNR=9.6						
KIEV	Kiev	24.85	326	*d* *i*P	P	06 55 28.4	-0.3
KIEV				pmax	pmax		
	comp=Z,267nm,1.4s						
AK11	Malin Array Si	24.85	326	*e*P	P	06 55 28.2	-0.5
AK11	Malin Array Si	24.85	326	*e*P	P	06 55 28.2	-0.5
RLS	Riolos of Patr	24.91	293	P	P	06 55 28.3	-1.1
RLS	Riolos of Patr	24.91	293	P	P	06 55 28.3	-1.1
RLS	Riolos of Patr	24.91	293	P	P	06 55 28.3	-1.1
UZB	Uzynbulak	24.91	55	⇑*i*P	P	06 55 31.0	+1.4
	comp=Z,42nm,1.0s						
PVO	Paravola	24.93	294	P	P	06 55 30.7	+1.1
PVO	Paravola	24.93	294	P	P	06 55 30.7	+1.1
BHPL	Bhopal	24.93	103	*e*P	P	06 55 30.8	+1.0
BHPL				IAmb	IAmb	06 55 36.0	
	comp=Z,113nm,1.6s						
LOT	Lotru	25.11	311	⇓*i*P	P	06 55 31.7	+0.4
LOT	Lotru	25.11	311	⇓*i*P	P	06 55 31.7	+0.4
TDK	Taldyqorghan	25.13	50	*e*P	P	06 55 32.5	+1.1
	comp=Z,72nm,1.0s						
TDK				LR	LR	07 06 36.0	
	comp=Z,1µm,13.8s						
SRE	Strehaia	25.18	309	⇓*i*P	P	06 55 33.4	+1.6
SRE	Strehaia	25.18	309	P	P	06 55 33.4	+1.6
SRE	Strehaia	25.18	309	P	P	06 55 33.4	+1.6
BURAR	Bucovina Array	25.19	316	⇑*i*P	P	06 55 32.9	+0.9
BURAR	Bucovina Array	25.19	316	P	P	06 55 32.9	+0.9
BURAR	Bucovina Array	25.19	316	⇑*i*P	P	06 55 32.9	+0.9
PDO	Prodromos	25.19	294	P	P	06 55 32.4	+0.4
PDO	Prodromos	25.19	294	P	P	06 55 32.4	+0.4
BUR04	Bucovina Ar. S	25.19	316	*e*P	P	06 55 32.1	0.0
BUR08	Bucovina Ar. S	25.21	316	*e*P	P	06 55 32.4	+0.2
SHLS	Shalkode	25.22	55	*e*P	P	06 55 36.4	+4.0
	comp=Z,48nm,1.0s						
SHLS				LR	LR	07 06 48.1	
	comp=Z,192nm,12.8s						
ARU	Arti	25.24	10	P	P	06 55 33.2	+0.9
	comp=Z,22nm,0.9s,baz=193,slow=5.1,SNR=21						
ARU				LR	LR	07 07 39.3	
	comp=Z,1µm,20.1s,baz=190,slow=42						
ARU	Arti	25.24	10	*e*P	P	06 55 33.1	+0.9
	comp=Z,59nm,0.9s						
ARU	Arti	25.24	10	*c* *i*P	P	06 55 33.5	+1.3
ARU						06 56 08.6	
ARU				S	S	07 00 02.8	+4.8
ARU				SS	SnSn	07 00 53.8	+5.6
ARU				pmax	pmax		
	comp=Z,37nm,1.0s						
ARU				MLR	MLR		
	comp=Z,1µm,24.0s						
FNA	Florina	25.39	299	*e*P	P	06 55 35.2	+1.4
	comp=Z,49nm,0.9s						
FNA	Florina	25.39	299	P	P	06 55 34.2	+0.4
FNA	Florina	25.39	299	P	P	06 55 36.5	+2.7
FNA	Florina	25.39	299	P	P	06 55 34.2	+0.4
ARCR	ARCALIA	25.45	315	⇑*i*P	P	06 55 34.7	+0.5
ARCR	ARCALIA	25.45	315	⇑*i*P	P	06 55 34.7	+0.5
OBN	Obninsk	25.48	341	*e*P	P	06 55 35.5	+1.1
	comp=Z,152nm,0.7s						
OBN	Obninsk	25.48	341	*de*P	P	06 55 34.2	-0.1
OBN				e*SP	sP	06 55 38.7	+1.8
OBN				*e*		06 56 09.4	
OBN				pmax	pmax		
	comp=Z,174nm,0.8s						
OBN				MLR	MLR		
	comp=Z,429nm,17.0s						
OBN	Obninsk	25.48	341	*e*P	P	06 55 34.2	-0.1
	comp=Z,174nm,0.8s						
BRVK	Borovoye	25.48	28	*e*P	P	06 55 35.5	+1.0
	comp=Z,44nm,0.9s						
BRVK	Borovoye	25.48	28	P	P	06 55 36.7	+2.3
	SNR=23						
BRVK	Borovoye	25.48	28	*ce*P	P	06 55 34.4	-0.1
BRVK				pmax	pmax		
	comp=Z,64nm,1.3s						
BRVK	Borovoye	25.48	28	*e*P	P	06 55 35.5	+1.0
	comp=Z,44nm,0.9s						
BVAR	Borovoye Array	25.50	28	P	P	06 55 35.2	+0.6
	comp=Z,32nm,0.8s,baz=221,slow=9.9,SNR=77						
BVAR				LR	LR	07 07 18.6	
	comp=Z,558nm,20.1s,baz=216,slow=41						
BARS	Barje	25.55	304	*e*P	P	06 55 36.8	+1.6
ZAGS	Zajecar	25.55	306	*e*P	P	06 55 36.2	+1.0
EVGI	Lefkada island	25.60	294	P	P	06 55 34.4	-1.3
EVGI	Lefkada island	25.60	294	P	P	06 55 34.4	-1.3
VLS	Valsamata	25.61	293	P	P	06 55 34.5	-1.3
VLS	Valsamata	25.61	293	P	P	06 55 34.5	-1.3
VLS	Valsamata	25.61	293	P	P	06 55 34.5	-1.3
VLS	Valsamata	25.61	293	P	P	06 55 34.5	-1.3
LKD2	Lefkada island	25.62	294	P	P	06 55 34.8	-1.1
LKD2	Lefkada island	25.62	294	P	P	06 55 34.8	-1.1
LKD2	Lefkada island	25.62	294	P	P	06 55 34.8	-1.1
MOS	Moscow	25.74	343	*e*P	P	06 55 39.6	+2.8
MOS				*e*		06 55 49.3	
MOS				*e*		06 56 20.0	
MOS				*e*S	S	07 00 13.3	+7.4
MOS				*e*SS	SnSn	07 01 23.0	+22
MOS				pmax	pmax		
	comp=Z,141nm,0.8s						
MOS				pmax	pmax		
	comp=Z,115nm,0.6s						
MOS				pmax	pmax		
	comp=N,109nm,0.9s						
MOS				pmax	pmax		
	comp=N,127nm,0.9s						
CJR	Cluj-Napoca	25.75	313	⇓*i*P	P	06 55 39.1	+2.1
CJR	Cluj-Napoca	25.75	313	*e*P	P	06 55 39.1	+2.1
CJR	Cluj-Napoca	25.75	313	*e*P	P	06 55 39.1	+2.1
HERR	Herculane	25.78	309	⇓*i*P	P	06 55 39.1	+1.8
HERR	Herculane	25.78	309	⇓*i*P	P	06 55 39.1	+1.8
DEV	Deva	25.84	311	⇓*i*P	P	06 55 37.9	+0.1
DEV	Deva	25.84	311	P	P	06 55 37.8	0.0
DEV	Deva	25.84	311	⇓*i*P	P	06 55 37.9	+0.1
BOVS	Bovan	25.86	306	⇑*i*P	P	06 55 39.0	+1.0
OHR	Ohrid	25.88	300	P	P	06 55 40.8	+2.5
OHR	Ohrid	25.88	300	P	P	06 55 40.8	+2.5
SVE	Sverdlovsk	25.96	12	⇑*e*P	P	06 55 40.7	+2.0
SVE				pmax	pmax		
	comp=Z,36nm,1.0s						
IGT	Igoumenitsa	25.96	296	P	P	06 55 40.8	+1.8
IGT	Igoumenitsa	25.96	296	P	P	06 55 40.8	+1.8
SGD	Sagiada	26.05	296	P	P	06 55 40.5	+0.7
SGD	Sagiada	26.05	296	P	P	06 55 40.5	+0.7
SELS	Selova	26.15	304	⇑*i*P	P	06 55 41.2	+0.5
MDVR	Moldovita	26.22	308	⇑*i*P	P	06 55 41.6	+0.3
MDVR	Moldovita	26.22	308	⇑*i*P	P	06 55 41.6	+0.3
BMR	Baia Mare	26.24	315	⇓*i*P	P	06 55 43.0	+1.6
BMR	Baia Mare	26.24	315	⇓*i*P	P	06 55 43.0	+1.6
SRN	Sarande	26.27	297	P	P	06 55 40.3	-1.4
SRN	Sarande	26.27	297	P	P	06 55 40.3	-1.4
SRN	Sarande	26.27	297	P	P	06 55 40.3	-1.4
SVIS	Svilajnac	26.39	307	*e*P	P	06 55 43.4	+0.6
BZS	Buzias	26.57	310	⇓*i*P	P	06 55 45.0	+0.6
BZS	Buzias	26.57	310	P	P	06 55 45.0	+0.6
BZS	Buzias	26.57	310	P	P	06 55 45.0	+0.6
GRUS	Gruza	26.62	306	⇑*i*P	P	06 55 44.0	-0.9
IVAS	Ivanjica	26.92	305	*e*P	P	06 55 48.3	+0.6
TRUS	Trudelj	26.93	306	⇑*i*P	P	06 55 48.7	+1.0
LVV	L'vov	26.99	320	*e*P	P	06 55 49.1	+0.9
LVV				*e*S	S	07 00 19.3	-6.6
LVV				MLR	MLR		
	comp=E,200nm,16.0s						
LVV				MLR	MLR		
	comp=N,100nm,14.0s						
LVV				MLR	MLR		
	comp=Z,200nm,16.0s						
LVV	L'vov	26.99	320	*e*P	P	06 55 49.1	+0.9
TRPA	Tarpa	27.02	315	⇓*i*P	P	06 55 50.2	+1.8
TRPA	Tarpa	27.02	315	⇑*e*P	P	06 55 50.8	+2.4
TRPA	Tarpa	27.02	315	⇓*i*P	P	06 55 50.2	+1.8
LTVH	L^'tav^'rtes,	27.08	314	⇓*e*P	P	06 55 53.1	+4.1
DIVS	Divibare	27.18	306	*e*P	P	06 55 50.7	+0.7
	comp=Z,27nm,1.1s						
DIVS	Divibare	27.18	306	*e*P	P	06 55 50.7	+0.7
	comp=Z,27nm,1.1s						
PDG	Podgorica	27.28	302	⇓*i*P	P	06 55 52.4	+1.6
PDG	Podgorica	27.28	302	⇓*i*P	P	06 55 52.4	+1.6
TTG	Podgorica	27.28	302	*e*P	P	06 55 51.7	+0.9
	comp=Z,45nm,1.1s						
TTG	Podgorica	27.28	302	*e*P	P	06 55 51.7	+0.9
TTG				pmax	pmax		
	comp=Z,45nm,1.1s						
TTG	Podgorica	27.28	302	*e*P	P	06 55 51.7	+0.9
	comp=Z,45nm,1.1s						
BBLS	Lazići	27.52	305	⇑*i*P	P	06 55 53.2	+0.1
FGSL	Fruska Gora	27.62	308	*e*P	P	06 55 54.4	+0.5
TEKS	Tekeris	27.63	307	⇑*i*P	P	06 55 54.1	+0.2
KWP	Kalwaria Pacla	27.64	318	*e*P	P	06 55 55.0	+1.0
KWP	Kalwaria Pacla	27.64	318	*e*P	P	06 55 54.7	+0.7
	comp=Z,1µm,0.9s						
KWP	Kalwaria Pacla	27.64	318	*e*P	P	06 55 54.7	+0.7
KURBB	Kurchatov Arra	27.79	39	P	P	06 55 56.1	+0.8
	comp=Z,21nm,0.9s,baz=241,slow=9.2,SNR=46						
KURBB				PcP	PcP	06 59 10.7	-0.8
	comp=Z,3.3nm,0.9s,baz=233,slow=2.6,SNR=4.0						
KURK	Kurchatov	27.89	39	*e*P	P	06 55 56.1	-0.1
KURK				*e*P	P	06 55 57.1	+0.9
KURK				*e*PcP	PcP	06 59 10.7	-1.0
KURK	Kurchatov	27.89	39	P	P	06 55 57.5	+1.3
	SNR=19						
KURK	Kurchatov	27.89	39	*ce*P	P	06 55 56.9	+0.7
KURK				pmax	pmax		
	comp=Z,46nm,1.0s						
KURK	Kurchatov	27.89	39	*e*P	P	06 55 56.9	+0.7
	comp=Z,46nm,1.0s						
PYUN	Piuthan	27.96	89	*e*P	P	06 55 57.6	+0.3
	comp=Z,99nm,0.9s						
CRVS	Cervenica-Dubn	28.01	316	*e*P	P	06 55 58.6	+1.3
CRVS				pmax	pmax		
	comp=Z,69nm,1.0s						
CRVS	Cervenica-Dubn	28.01	316	*e*P	P	06 55 58.6	+1.3
CRVS	Cervenica-Dubn	28.01	316	*e*P	P	06 55 58.6	+1.3
	comp=Z,69nm,1.0s						
MAKZ	Makanchi	28.12	49	*e*P	P	06 55 59.3	+1.0
	comp=Z,25nm,1.1s						
MAKZ	Makanchi	28.12	49	*e*P	P	06 55 59.3	+1.0
MAKZ				pmax	pmax		
	comp=Z,25nm,1.1s						
MAKZ	Makanchi	28.12	49	*e*P	P	06 55 59.3	+1.0
	comp=Z,25nm,1.1s						
MK01	Makanchi Array	28.31	49	*e*P	P	06 56 00.7	+0.6
MK31	Makanchi Array	28.31	49	*e*P	P	06 56 00.7	+0.6
MK31	Makanchi Array	28.31	49	*e*P	P	06 56 00.7	+0.6
MK31	Makanchi Array	28.31	49	*e*P	P	06 56 00.7	+0.6

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MK32   Makanchi Array    28.31  49 eP     P      06 56 00.8 +0.7
MK32   Makanchi Array    28.31  49 eP     P      06 56 00.8 +0.7
MKAR   Makanchi Array    28.31  49  P     P      06 56 00.8 +0.7
       comp=Z,27nm,0.9s,baz=247,slow=5.2,SNR=82
MKAR                                LR    LR     07 08 09.8
       comp=Z,445nm,20.0s,baz=251,slow=38
MKAR   Makanchi Array    28.31  49 eP     P      06 56 00.7 +0.7
       comp=Z,142nm,0.8s
MKAR   Makanchi Array    28.31  49  P     P      06 56 00.8 +0.7
MKAR                                pmax  pmax
       comp=Z,28nm,0.9s
MKAR                                MLR   MLR
       comp=Z,445nm,20.0s
MKAR   Makanchi Array    28.31  49 eP     P      06 56 00.7 +0.7
       comp=Z,142nm,0.8s
KECS   Kecovo            28.41 315 eP     P      06 56 03.1 +2.2
KECS   Kecovo            28.41 315 eP     P      06 56 03.0 +2.2
KECS   Kecovo            28.41 315 eP     P      06 56 03.1 +2.2
PSZ    Piszkesteto       28.54 313⇓iP     P      06 56 04.3 +2.2
PSZ    Piszkesteto       28.54 313 eP     P      06 56 03.3 +1.2
       comp=Z,30nm,1.0s
PSZ    Piszkesteto       28.54 313 eP     P      06 56 03.3 +1.2
PSZ                                 pmax  pmax
       comp=Z,30nm,1.0s
PSZ    Piszkesteto       28.54 313 eP     P      06 56 03.3 +1.2
       comp=Z,30nm,1.0s
DANN   Dangsing          28.55  88 eP     P      06 56 03.4 +0.7
       comp=Z,152nm,0.8s
KOLN   Koldanda          28.57  90 eP     P      06 56 02.9 +0.1
       comp=Z,29nm,1.0s
SEM    Semipalatinsk     28.63  41 eP     P      06 56 04.1 +1.1
       comp=Z,18nm,0.9s
TIP    Timpagrande       28.68 295 eP     P      06 56 06.2 +2.7
       comp=Z,53nm,1.2s
TIP    Timpagrande       28.68 295 eP     P      06 56 06.2 +2.7
       comp=Z,53nm,1.2s
MORH   Mˆ‡rˆ¡gy, Hung    28.73 309⇓eP     P      06 56 04.5 +0.8
HYB    Hyderabad         28.78 113 i P    P      06 56 05.0 +0.5
HYB    Hyderabad         28.78 113 eP     P      06 56 03.8 -0.7
HYB                                 IAmb  IAmb   06 56 05.5
       comp=Z,24nm,0.7s
NACGM  Naroch            28.78 331 e      P      06 56 02.0 -2.1
GRI    Girifalco         28.92 294  P     P      06 56 08.5 +2.9
GRI                                 pmax  pmax
       comp=Z,2.0nm,0.8s
GRI    Girifalco         28.92 294  P     P      06 56 08.5 +2.9
       comp=Z,2.0nm,0.8s
NIE    Niedzica          28.92 317 eP     P      06 56 06.7 +1.2
NIE    Niedzica          28.92 317 eP     P      06 56 06.7 +1.2
IDID   Didziasalis       29.09 331 eP     P      06 56 07.3 +0.5
IDID                                IAmb  IAmb   06 56 08.5
       comp=Z,28nm,0.9s
IDID   Didziasalis       29.09 331 eP     P      06 56 07.3 +0.5
       SNR=28
LANS   Liptovska Anna    29.30 316 eP     P      06 56 10.5 +1.7
LANS   Liptovska Anna    29.30 316 eP     P      06 56 10.5 +1.7
LANS   Liptovska Anna    29.30 316 eP     P      06 56 10.5 +1.7
IIGN   Ignalina          29.32 331 eP     P      06 56 09.4 +0.5
IIGN                                IAmb  IAmb   06 56 11.6
       comp=Z,57nm,0.9s
CSKK   Csˆ‡kako          29.36 312⇓eP     P      06 56 09.7 +0.4
GKN    Gorkha            29.39  89 eP     P      06 56 10.1 +0.1
       comp=Z,95nm,1.1s
VYHS   Vyhne             29.42 314 eP     P      06 56 10.5 +0.7
VYHS                                pmax  pmax
       comp=Z,6.0nm,0.8s
VYHS   Vyhne             29.42 314 eP     P      06 56 10.5 +0.7
VYHS   Vyhne             29.42 314 eP     P      06 56 10.5 +0.7
       comp=Z,6.0nm,0.8s
ISAL   Salakas           29.52 331 eP     P      06 56 11.1 +0.5
ISAL                                IAmb  IAmb   06 56 12.5
       comp=Z,49nm,0.9s
OJC    Ojcow             29.57 318 eP     P      06 56 11.3 +0.2
OJC    Ojcow             29.57 318 eP     P      06 56 11.6 +0.4
       comp=Z,90nm,1.0s
OJC    Ojcow             29.57 318 eP     P      06 56 11.6 +0.4
OJC                                 pmax  pmax
       comp=Z,90nm,1.0s
OJC    Ojcow             29.57 318 eP     P      06 56 11.6 +0.4
       comp=Z,90nm,1.0s
IZAR   Zarasai           29.59 331 eP     P      06 56 11.8 +0.5
IZAR                                IAmb  IAmb   06 56 13.2
       comp=Z,42nm,0.7s
BEL    Belsk             29.80 321 eP     P      06 56 12.7 -0.4
BEL    Belsk             29.80 321  P     P      06 56 15.9 +2.8
BEL                                 pmax  pmax
       comp=Z,167nm,1.0s
SUW    Suwalki           29.81 326 eP     P      06 56 12.8 -0.3
SUW    Suwalki           29.81 326 eP     P      06 56 13.1 -0.1
       comp=Z,418nm,1.1s
SUW    Suwalki           29.81 326 eP     P      06 56 13.1 -0.1
SUW                                 pmax  pmax
       comp=Z,418nm,1.1s
DMN    Daman             29.90  89 eP     P      06 56 14.8 +0.2
       comp=Z,133nm,1.1s
KKN    Kakani            30.00  89 eP     P      06 56 15.8 +0.4
       comp=Z,139nm,0.9s
KLMR   Klimovskoe        30.07 349 eP     P      06 56 14.4 -0.9
KLMR                               eS     S      07 01 15.7 +1.8
KLMR                                pmax  pmax
       comp=Z,67nm,1.2s
KLMR   Klimovskoe        30.07 349 eP     P      06 56 14.5 -0.9
KLMR                                AMP          06 56 20.2
       comp=Z,67nm,1.2s
KLMR                               eS     S      07 01 15.8 +1.8
KLMR                                LQ    LQ     07 06 44.0
KLMR                                LR    LR     07 08 17.8
PRGR   Permogore         30.09 355 eP     P      06 56 15.4 -0.2
PRGR                                pmax  pmax
       comp=Z,20nm,0.6s
PKIN   Phulchoki         30.15  89 eP     P      06 56 16.9  0.0
       comp=Z,38nm,0.7s
ZSN    Zaisan            30.19  49 eP     P      06 56 17.4 +0.7
       comp=Z,2.0nm,1.0s
ZSN                                 LR    LR     07 09 40.3
       comp=Z,100nm,11.0s
JAVC   Velka Javorina    30.27 314 eP     P      06 56 19.3 +1.9
JAVC   Velka Javorina    30.27 314 eP     P      06 56 19.3 +1.9
MODS   Modra-Piesok      30.34 313 eP     P      06 56 18.9 +0.9
MODS                                pmax  pmax
       comp=Z,39nm,1.8s
MODS   Modra-Piesok      30.34 313 eP     P      06 56 18.9 +0.9
OKC    Ostrava-Krasne    30.37 316 eP     P      06 56 18.6 +0.4
OKC    Ostrava-Krasne    30.37 316 eP     P      06 56 18.6 +0.4
VAE    Valguarnera       30.47 291  P     P      06 56 20.6 +1.3
       comp=Z,9.3nm,0.4s,baz=85,slow=7.9,SNR=2.1
VAE                                 LR    LR     07 11 27.0
       comp=Z,153nm,18.1s,baz=83,slow=42
GUN    Gumba             30.47  88 eP     P      06 56 20.4 +0.6
       comp=Z,104nm,0.8s
SOP    Sopron            30.56 311⇓eP     P      06 56 22.5 +2.6
SOP    Sopron            30.56 311  P     P      06 56 23.4 +3.5
SOP                                 pmax  pmax
       comp=Z,38nm,0.8s
SOP    Sopron            30.56 311  P     P      06 56 23.4 +3.5
       comp=Z,38nm,0.8s
MORC   Moravsky Berou    30.70 316⇑iP     P      06 56 21.9 +0.7
MORC   Moravsky Berou    30.70 316 eP     P      06 56 21.2 -0.1
       comp=Z,30nm,0.9s
MORC   Moravsky Berou    30.70 316 eP     P      06 56 21.2 -0.1
MORC                                pmax  pmax
       comp=Z,30nm,0.9s
MORC   Moravsky Berou    30.70 316 eP     P      06 56 21.2 -0.1
       comp=Z,30nm,0.9s
MORC   Moravsky Berou    30.70 316 eP     P      06 56 21.1 -0.1
BOJS   Bojanci           30.80 307 eP     P      06 56 22.4 +0.3
BOJS   Bojanci           30.80 307 eP     P      06 56 22.4 +0.3
JIRN   Jiri              30.81  88 eP     P      06 56 23.2 +0.4
       comp=Z,130nm,0.8s
CONA   Conrad Observa    31.08 312  pP    P      06 56 26.5 +1.9
       comp=Z,18nm,1.2s,SNR=5.9
CONA   Conrad Observa    31.08 312  P     P      06 56 26.5 +1.9
       comp=Z,18nm,1.2s,SNR=5.9
ARSA   Arzberg           31.09 310 eP     P      06 56 25.8 +1.1
       comp=Z,4.2nm,0.6s
ARSA   Arzberg           31.09 310  P     P      06 56 25.8 +1.1
       comp=Z,4.2nm,0.6s
VRAC   Vranov            31.09 314  LR    LR     07 11 05.5
       comp=Z,440nm,19.1s,baz=120,slow=41
VRAC   Vranov            31.09 314⇓iP     P      06 56 25.0 +0.3
VRAC   Vranov            31.09 314 eP     P      06 56 25.3 +0.6
KRUC   Moravsky          31.13 314 eP     P      06 56 25.5 +0.6
VISS   Visnje            31.16 307 i P    P      06 56 26.6 +1.3
VISS   Visnje            31.16 307 i P    P      06 56 26.5 +1.3
WMQ    Urumqi            31.20  57  P     P      06 56 26.9 +1.2
WMQ                                 PP    PnPn   06 57 24.3 -3.0
WMQ                                 S     S      07 01 35.3 +3.0
WMQ                                 PcS   PcS    07 02 58.9 -5.7
WMQ                                 SS    SnSn   07 03 21.1 +7.2
WMQ                                 pmax  pmax
       comp=Z,67nm,1.1s
WMQ                                 pmax  pmax
       comp=Z,370nm,3.8s
WMQ                                 LR    LR
       comp=Z,1µm,18.3s
WMQ                                 LR    LR
       comp=Z,750nm,20.1s
WMQ                                 LR    LR
       comp=Z,770nm,20.1s
SOKA   Soboth            31.25 309 epP    P      06 56 28.4 +2.3
       comp=Z,11nm,1.1s
SOKA   Soboth            31.25 309  P     P      06 56 28.4 +2.3
       comp=Z,11nm,1.1s
VSU    Vasula            31.36 336ceP     P      06 56 26.2 -0.6
VSU                                 pmax  pmax
       comp=Z,190nm,0.8s
RAMN   Ramite            31.36  90 eP     P      06 56 27.3 -0.2
       comp=Z,132nm,0.9s
OBKA   Obir              31.53 308 eP     P      06 56 32.2 +3.6
       comp=Z,23nm,1.1s
DPC    Dobruska-Polom    31.65 316 eP     P      06 56 29.0 -0.6
DPC                                 AMS   AMS    07 11 00.0
       comp=Z,500nm,19.9s
DPC    Dobruska-Polom    31.65 316 eP     P      06 56 29.0 -0.6
DPC                                 MLR   MLR
       comp=Z,500nm,19.9s
DPC    Dobruska-Polom    31.65 316 eP     P      06 56 29.0 -0.6
       comp=Z,500nm,19.9s
JAVS   Javornik          31.70 307 eP     P      06 56 29.8 -0.4
JAVS   Javornik          31.70 307 eP     P      06 56 29.8 -0.4
BOK    Bokaro            31.82  96 eP     P      06 56 31.4 +0.1
BOK                                 IAmb  IAmb   06 56 32.4
       comp=Z,36nm,1.2s
KSP    Ksiaz             31.86 317 eP     P      06 56 32.4 +1.0
KSP    Ksiaz             31.86 317 eP     P      06 56 32.4 +1.0
KSP    Ksiaz             31.86 317 eP     P      06 56 32.4 +1.0
UPC    Upice             31.89 316  AMS   AMS    07 11 20.0
       comp=Z,500nm,20.5s
ODAN   Odare             32.06  89 eP     P      06 56 33.5 -0.2
       comp=Z,77nm,1.2s
MOA    Molln             32.08 311 eP     P      06 56 33.9 +0.6
       comp=Z,19nm,0.8s,SNR=16
MOA    Molln             32.08 311  P     P      06 56 33.9 +0.6
       comp=Z,19nm,0.8s,SNR=16
MYKA   Terra Mystica     32.16 308 eP     P      06 56 35.1 +0.9
       comp=Z,13nm,1.0s
MYKA   Terra Mystica     32.16 308  P     P      06 56 35.1 +0.9
       comp=Z,13nm,1.0s
GKP    Gorka Klasztor    32.39 322 eP     P      06 56 36.7 +0.8
GKP    Gorka Klasztor    32.39 322 eP     P      06 56 36.7 +0.8
GOPC   GO Pecny, Ondr    32.41 315  AMS   AMS    07 11 20.0
       comp=Z,400nm,12.0s
NVS    Novosibirsk       32.46  35⇑iP     P      06 56 38.6 +2.0
NVS                                i             06 59 23.3
NVS                                 pmax  pmax
       comp=N,8.0nm,1.1s
NVS                                 pmax  pmax
       comp=Z,23nm,1.1s
NVS                                 pmax  pmax
       comp=E,6.0nm,0.9s
NVS    Novosibirsk       32.46  35 i P    P      06 56 38.6 +2.0
NVS    Novosibirsk       32.46  35 i PcP  PcP    06 59 23.3 -0.2
KBA    Koelnbreinsper    32.47 309  pP    pP     06 56 38.1 -0.8
       comp=E,30nm,0.8s,SNR=14
KBA    Koelnbreinsper    32.47 309  P     P      06 56 38.8 +1.8
DGZ    Jazzator, Alta    32.55  46 i P    P      06 56 39.0 +1.4
DGZ                                 pmax  pmax
       comp=Z,15nm,1.1s
PRU    Pruhonice         32.58 315  AMS   AMS    07 12 50.0
       comp=Z,400nm,18.3s
PRU    Pruhonice         32.58 315  P     P      06 56 42.1 +4.4
PRU                                 pmax  pmax
       comp=Z,4.0nm,0.9s
GEA0   GERESS Array S    32.73 312 eP     P      06 56 39.1  0.0
GEA0   GERESS Array S    32.73 312 eP     P      06 56 39.1  0.0
GEC2   GERESS Array S    32.73 312 eP     P      06 56 39.1 -0.1
       comp=Z,10.0nm,0.8s
GEC2                               ePcP   PcP    06 59 23.4 -1.1
GEC2   GERESS Array S    32.73 312 eP     P      06 56 39.1 -0.1
GEC2                               e             06 59 23.4
GEC2                                pmax  pmax
       comp=Z,10.0nm,0.8s
GEC2   GERESS Array S    32.73 312 eP     P      06 56 39.1 -0.1
       comp=Z,10.0nm,0.8s
GERES  GERESS Array B    32.73 312  P     P      06 56 38.7 -0.5
       comp=Z,6.0nm,0.8s,baz=106,slow=10,SNR=20
GERES                               PcP   PcP    06 59 23.4 -1.1
       comp=Z,2.0nm,0.8s,baz=108,slow=3.2,SNR=4.5
GERES                               LR    LR     07 12 06.3
       comp=Z,242nm,18.8s,baz=107,slow=40
PVCC   Panska Ves        32.76 316  AMS   AMS    07 11 30.0
       comp=Z,600nm,19.9s
ZAA0   Zalesovo Array    32.81  37 eP     P      06 56 39.8 +0.2
       comp=Z,49nm,1.3s
ZALV   Zalesovo Beam     32.81  37  P     P      06 56 39.5 -0.1
       comp=Z,13nm,0.5s,baz=249,slow=9.3,SNR=41
ZALV                                PcP   PcP    06 59 22.8 -1.7
       comp=Z,6.2nm,0.8s,baz=230,slow=3.9,SNR=4.1
ZALV                                LR    LR     07 11 51.6
       comp=Z,442nm,19.2s,baz=228,slow=40
ZAA1   Zalesovo Array    32.81  37 eP     P      06 56 39.5 -0.1
ZAA1                               ePcP   PcP    06 59 22.8 -1.7
KHC    Kasperske Hory    32.90 313 eP     P      06 56 41.6 +1.1
KHC                                ex     x      06 56 48.5
KHC                                ex     x      06 57 00.0
KHC    Kasperske Hory    32.90 313 eP     P      06 56 41.6 +1.1
       comp=Z,6.9nm,1.0s
KHC    Kasperske Hory    32.90 313 eP     P      06 56 41.6 +1.1
KHC                                 pmax  pmax
       comp=Z,7.0nm,1.0s
ABTA   Abfaltersbach     32.95 308 eP     P      06 56 41.0  0.0
       comp=Z,22nm,0.8s,SNR=6.1
ABTA                               eS     S      07 01 57.2 -2.3
       comp=Z,11nm,1.2s
ABTA   Abfaltersbach     32.95 308  P     P      06 56 41.0  0.0
       comp=Z,22nm,0.8s,SNR=6.1
ABTA                                S     S      07 01 57.2 -2.3
       comp=Z,11nm,1.2s
GTK    Tadong            32.96  88 eP     P      06 56 41.8 +0.4
GTK                                 IAmb  IAmb   06 56 48.3
       comp=Z,29nm,0.3s
BRG    Berggiesshubel    33.25 316 eP     P      06 56 44.5 +0.9
       comp=Z,22nm,1.1s
BRG                                 S     S      07 02 09.0 +5.1
       comp=N,614nm,17.7s
       comp=E,281nm,10.1s
       comp=Z,813nm,18.7s
BRG    Berggiesshubel    33.25 316 eP     P      06 56 44.5 +0.9
BRG                                 S     S      07 02 09.0 +5.1
BRG                                 pmax  pmax
       comp=Z,22nm,1.1s
BRG                                 MLR   MLR
       comp=N,614nm,17.7s
BRG                                 MLR   MLR
       comp=E,281nm,10.1s
BRG                                 MLR   MLR
       comp=Z,813nm,18.7s
BRG    Berggiesshubel    33.25 316 eP     P      06 56 44.5 +0.9
       comp=Z,22nm,1.1s
WTTA   Wattenberg        33.65 309 eP     P      06 56 47.6 +0.3
       comp=Z,35nm,1.1s,SNR=6.9
WTTA                               eS     S      07 02 09.7 -0.9
       comp=Z,33nm,1.0s
WTTA   Wattenberg        33.65 309  P     P      06 56 47.6 +0.3
       comp=Z,35nm,1.1s,SNR=6.9
WTTA                                S     S      07 02 09.7 -0.9
       comp=Z,33nm,1.0s
WATA   Walderalm         33.71 309 epP    P      06 56 49.0 +1.3
       comp=Z,50nm,1.1s,SNR=6.2
WATA                               eS     S      07 02 10.7 -0.6
       comp=Z,4.3nm,0.5s
WATA   Walderalm         33.71 309  P     P      06 56 49.0 +1.3
       comp=Z,50nm,1.1s,SNR=6.2
WATA                                S     S      07 02 10.7 -0.6
       comp=Z,4.3nm,0.5s
BDI    Bagni Di Lucca    33.79 303  P     P      06 56 49.3 +0.9
BDI    Bagni Di Lucca    33.79 303  P     P      06 56 49.3 +0.9
FIA0   FINESS Array S    33.83 339 eP     P      06 56 47.3 -1.1
FIA0   FINESS Array S    33.83 339 eP     P      06 56 47.3 -1.1
FIA1   FINESS Array S    33.83 339 eP     P      06 56 47.8 -0.6
FIA1                               eP     P      06 56 48.2 -0.2
FINES  FINESS Array B    33.83 339  P     P      06 56 47.3 -1.1
       comp=Z,23nm,1.0s,baz=107,slow=6.6,SNR=22
FINES                               LR    LR     07 11 58.9
       comp=Z,484nm,19.2s,baz=148,slow=39
FINES  FINESS Array B    33.83 339 i P    P      06 56 47.7 -0.7
FINES                               pmax  pmax
       comp=Z,22nm,1.0s
NKC    Novy Kostel       33.94 314  AMS   AMS    07 12 30.0
       comp=Z,500nm,23.5s
VLC    Villacollemand    33.96 303 eP     P      06 56 51.3 +1.5
       comp=Z,368nm,0.8s
VLC    Villacollemand    33.96 303 eP     P      06 56 51.3 +1.5
       comp=Z,368nm,0.8s
CLL    Collm             33.96 316 i P    P      06 56 50.3 +0.6
       comp=Z,38nm,1.0s
CLL                                i pP   sP     06 56 53.0 +0.7
CLL                                i             06 56 59.4
CLL                                eS     S      07 02 13.0 -1.9
CLL                                e             07 02 50.0
CLL                                eSS    SS     07 04 36.0 -5.4
CLL                                 Lm    MLR    07 12 00.0
       comp=N,400nm,19.8s
CLL                                 Lm    MLR    07 12 00.0
       comp=E,400nm,18.4s
CLL                                 Lm    MLR    07 12 00.0
       comp=Z,400nm,19.2s
CLL    Collm             33.96 316 eP     P      06 56 50.2 +0.5
       comp=Z,28nm,0.9s
CLL    Collm             33.96 316 i P    P      06 56 50.3 +0.6
CLL                                i             06 56 53.0
CLL                                eS     S      07 02 13.0 -1.9
CLL                                 pmax  pmax
       comp=Z,10.0nm,1.0s
CLL                                 MLR   MLR
       comp=Z,400nm,19.2s
MOTA   Moosalm           34.02 309 eP     P      06 56 49.8 -0.7
       comp=Z,51nm,0.9s,SNR=10
MOTA                               eS     S      07 02 13.5 -2.7
       comp=Z,22nm,0.9s
MOTA   Moosalm           34.02 309  P     P      06 56 49.8 -0.7
       comp=Z,51nm,0.9s,SNR=10
MOTA                                S     S      07 02 13.5 -2.7
       comp=Z,22nm,0.9s
FUR    Furstenfeldbru    34.10 310  P     P      06 56 55.7 +4.7
FUR                                 pmax  pmax
       comp=Z,57nm,0.7s
FUR    Furstenfeldbru    34.10 310  P     P      06 56 55.7 +4.7
       comp=Z,57nm,0.7s
FETA   Feichten          34.20 308 eP     P      06 56 52.4 +0.3
       comp=Z,42nm,0.9s,SNR=16
FETA                               eS     S      07 02 15.7 -3.4
       comp=Z,17nm,1.0s
RETA   Reutte            34.28 309 eP     P      06 56 51.4 -1.2
       comp=Z,12nm,0.6s
RETA                               eS     S      07 02 17.4 -2.7
       comp=Z,23nm,1.0s
RETA   Reutte            34.28 309  P     P      06 56 51.4 -1.2
       comp=Z,12nm,0.6s
RETA                                S     S      07 02 17.4 -2.7
       comp=Z,23nm,1.0s
FUORN  Ofenpass-Fuorn    34.44 307 eP     P      06 56 54.5 +0.3
       comp=Z,12nm,0.8s
FUORN                              eS     S      07 02 23.1 +0.2
FUORN  Ofenpass-Fuorn    34.44 307 eP     P      06 56 54.5 +0.3
       comp=Z,12nm,0.8s
FUORN                              eS     S      07 02 23.1 +0.2
BSD    Bornholm Skovb    34.46 323 i P    P      06 56 52.0 -2.0
       comp=Z,197nm,0.8s
BSD    Bornholm Skovb    34.46 323 i P    P      06 56 52.0 -2.0
BSD                                 pmax  pmax
       comp=Z,200nm,0.8s
LSA    Lhasa             34.49  83 eP     P      06 56 55.8 +0.6
       comp=Z,16nm,0.9s
LSA    Lhasa             34.49  83 eP     P      06 56 55.8 +0.6
       comp=Z,16nm,0.9s
KEST   Kesra             34.63 288  P     P      06 56 57.0 +1.2
       comp=Z,9.4nm,0.7s,baz=256,slow=3.1,SNR=7.0
KEST   Kesra             34.63 288 eP     P      06 56 56.7 +0.9
       comp=Z,26nm,1.1s
KEST   Kesra             34.63 288 eP     P      06 56 56.7 +0.9
       comp=Z,26nm,1.1s
DAVOX  Davos/Dischmat    34.73 308  P     P      06 56 54.7 -2.0
       comp=Z,15nm,0.7s,baz=131,slow=9.3,SNR=12
DAVOX                               LR    LR     07 12 13.0
       comp=Z,288nm,21.1s,baz=94,slow=38
DAVA   Damuels           34.82 308 eP     P      06 56 56.1 -1.3
       comp=Z,26nm,0.5s,SNR=16
TUE    Stuetta           35.03 307 eP     P      06 56 59.7 +0.4
       comp=Z,15nm,0.9s
TUE    Stuetta           35.03 307 eP     P      06 56 59.7 +0.4
       comp=Z,15nm,0.9s
RGN    Rugen             35.04 322 eP     P      06 56 58.9  0.0
       comp=Z,203nm,0.9s
THTN   Thala             35.18 288 eP     P      06 57 02.3 +1.7
       comp=Z,64nm,1.0s
THTN   Thala             35.18 288 eP     P      06 57 02.3 +1.7
       comp=Z,64nm,1.0s
KMBO   Kilima Mbogo      35.18 204  LR    LR     07 12 03.1
       comp=Z,221nm,20.1s,baz=20,slow=38
GUWA   GUWAHATI          35.93  88 eP     P      06 57 06.6 -0.4
GUWA                                IAmb  IAmb   06 57 07.6
       comp=Z,23nm,0.7s
LLD    Lille Linde       35.95 322 i P    P      06 57 07.3 +0.5
       comp=Z,156nm,1.0s
LLD                                i             06 57 20.4
LLD    Lille Linde       35.95 322 i P    P      06 57 07.3 +0.5
LLD                                i             06 57 20.4
LLD                                 pmax  pmax
       comp=Z,160nm,1.0s
SAOF   Saorge            35.97 302 eP     P      06 57 09.9 +2.7
SAOF   Saorge            35.97 302 eP     P      06 57 09.9 +2.7
COP    Copenhagen        35.98 323 i P    P      06 57 07.2 +0.1
       comp=Z,197nm,1.0s
COP    Copenhagen        35.98 323 i P    P      06 57 07.2 +0.1
COP                                 pmax  pmax
       comp=Z,200nm,1.0s
SBF    Sospel            36.04 302 eP     P      06 57 07.4 -0.5
SBF                                 pmax  pmax
       comp=Z,76nm,1.1s
SBF    Sospel            36.04 302 eP     P      06 57 07.4 -0.5
       comp=Z,76nm,1.1s
VAF    Ylistaro          36.09 339 eP     P      06 57 09.4 +1.5
VAF                                 pmax  pmax
       comp=Z,26nm,1.1s
SHL    Shillong          36.30  89 eP     P      06 57 09.9 -0.4
       comp=Z,51nm,0.9s
SHL    Shillong          36.30  89 eP     P      06 57 08.7 -1.7
SHL    Shillong          36.30  89 ex     P      06 57 10.0 -0.4
SHL    Shillong          36.30  89 eP     P      06 57 09.9 -0.4
SHL                                 pmax  pmax
       comp=Z,51nm,0.9s
SENIN  Lac Senin/Sane    36.41 306 eP     P      06 57 10.8 -0.4
       comp=Z,14nm,0.8s
SENIN                              eS     S      07 02 50.2 -3.0
MSF    Maaselka          36.68 345 eP     P      06 57 13.4 +0.5
MSF                                 pmax  pmax
       comp=Z,48nm,1.2s
BNI    Bardonecchia      36.69 304 eP     P      06 57 11.9 -1.6
       comp=Z,50nm,0.7s
BNI                                eS     S      07 03 00.3 +3.0
BNI    Bardonecchia      36.69 304 eP     P      06 57 11.9 -1.6
BNI                                eS     S      07 03 00.3 +3.0
BNI                                 pmax  pmax
       comp=Z,50nm,0.7s
BNI    Bardonecchia      36.69 304 eP     P      06 57 11.9 -1.6
       comp=Z,50nm,0.7s
BNI                                eS     S      07 03 00.3 +3.0
LPL    La Plagne         36.70 305 eP     P      06 57 12.7 -1.0
LPL                                 pmax  pmax
       comp=Z,34nm,0.8s
TEZP   TEZPUR            36.74  87 eP     P      06 57 13.1 -0.8
OUL    Oulu              36.74 343 eP     P      06 57 12.7 -0.7
OUL                                 pmax  pmax
       comp=Z,25nm,1.2s
CDF    Champ du Feu      36.76 310 eP     P      06 57 13.5 -0.5
CDF                                 pmax  pmax
       comp=Z,5.0nm,0.7s
CDF    Champ du Feu      36.76 310 eP     P      06 57 13.5 -0.5
       comp=Z,5.0nm,0.7s
HVS    Khovu-Aksy        36.80  46 i P    P      06 57 15.5 +1.2
HVS                                 pmax  pmax
       comp=Z,15nm,0.6s
ECH    Echery            36.80 309 eP     P      06 57 12.4 -1.8
       comp=Z,18nm,1.1s
ECH    Echery            36.80 309 eP     P      06 57 12.4 -1.8
ECH                                 pmax  pmax
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            comp=Z,18nm,1.1s
PALK  Pallekele          36.92 125   LR     LR       07 13 28.7
            comp=Z,412nm,19.9s,baz=298,slow=38
PALK  Pallekele          36.92 125  eP      P        06 57 16.0 +0.5
            comp=Z,60nm,1.4s
PALK  Pallekele          36.92 125  eP      P        06 57 16.0 +0.5
PALK                                 pmax   pmax
            comp=Z,60nm,1.4s
HINF  Hinteralfeld       36.94 309   P      P        06 57 16.9 +1.5
HINF                                 pmax   pmax
            comp=Z,6.0nm,0.7s
CABF  La Chapelle        37.28 307  eP      P        06 57 17.6  -0.8
CABF                                 pmax   pmax
            comp=Z,43nm,0.8s
CABF  La Chapelle        37.28 307  eP      P        06 57 17.6  -0.8
            comp=Z,43nm,0.8s
HAU   Haudompre          37.30 309  eP      P        06 57 19.3 +0.8
HAU                                  pmax   pmax
            comp=Z,6.0nm,0.6s
HAU   Haudompre          37.30 309  eP      P        06 57 19.3 +0.8
            comp=Z,6.0nm,0.6s
APA   Apatity            37.31 349⇑iP      P        06 57 17.7  -0.6
APA                                 i                06 58 53.0
APA                                 i                06 59 38.0
APA                                 i S     S        07 03 01.0  -4.9
APA                                 i SS    SnSn     07 05 34.0  -7.3
APA                                  pmax   pmax
            comp=Z,17nm,0.8s
APA                                  MLR    MLR
            comp=Z,500nm,13.0s
ITAN  ITANAGAR           37.36  86  eP      P        06 57 20.1 +0.8
ITAN                                 IAmb   IAmb     06 57 22.6
            comp=Z,64nm,0.7s
MBAR  Mbarara            37.44 215  eP      P        06 57 21.0 +0.9
            comp=Z,28nm,1.0s
HFS   Hagfors            37.55 330   P      P        06 57 19.6  -0.8
            comp=Z,121nm,0.9s,baz=128,slow=9.3,SNR=78
HFS                                  LR     LR       07 13 59.3
            comp=Z,443nm,21.7s,baz=130,slow=38
WLF   Walferdange        37.73 312  ⇑P      P        06 57 21.9  -0.1
WLF   Walferdange        37.73 312  eP      P        06 57 21.5  -0.5
            comp=Z,17nm,0.9s
WLF   Walferdange        37.73 312  eP      P        06 57 21.5  -0.5
WLF                                  pmax   pmax
            comp=Z,17nm,0.9s
JORH  JORHAT             37.94  86  eP      P        06 57 22.1  -2.0
MUD   Monsted U'grnd     37.97 323  i P     P        06 57 24.4 +0.5
            comp=Z,138nm,0.9s
MUD   Monsted U'grnd     37.97 323  i P     P        06 57 24.4 +0.5
MUD                                  pmax   pmax
            comp=Z,140nm,0.9s
MEM   Membach            38.01 313  ⇑XP     sP       06 57 28.4 +1.4
VIVF  Saint-Julien-l     38.09 304  eP      P        06 57 23.8  -1.4
VIVF                                 pmax   pmax
            comp=Z,14nm,1.2s
STRU  Stroemstad         38.10 328  eP      P        06 57 25.4 +0.3
DIBR  DIBRUGARH          38.28  85  ex      P        06 57 30.4 +3.5
IMP   Imphal             38.30  89  eP      P        06 57 27.8 +0.5
IMP                                  IAmb   IAmb     06 57 29.4
            comp=Z,30nm,0.8s
SAIH  SAIHA              38.35  93  eP      P        06 57 26.9  -0.9
BCLA  Clavier            38.41 313  ⇑P      P        06 57 28.6 +0.8
GIVF  Givet              38.65 312  eP      P        06 57 29.4  -0.4
GIVF                                 pmax   pmax
            comp=Z,17nm,0.8s
GIVF  Givet              38.65 312  eP      P        06 57 29.4  -0.4
            comp=Z,17nm,0.8s
OSL   Oslo               38.74 329  eP      P        06 57 29.9  -0.5
OSL                                  IAmb   IAmb     06 57 31.6
            comp=Z,224nm,0.7s
NC602 NORSAR Array S     38.78 330  eP      P        06 57 29.9  -0.9
DOU   Dourbes            38.80 312  ⇑P      P        06 57 30.0  -1.0
            comp=Z,8.6nm,0.9s
SMF   Signal de Mont     38.82 306  eP      P        06 57 30.0  -1.3
SMF                                  pmax   pmax
            comp=Z,40nm,0.8s
SMF   Signal de Mont     38.82 306  eP      P        06 57 30.0  -1.3
            comp=Z,40nm,0.8s
NC405 NORSAR Array S     38.90 331  eP      P        06 57 30.7  -1.0
HOMB  Homborsund         39.02 326  eP      P        06 57 33.6 +0.8
NB201 NORSAR Array S     39.04 330  eP      P        06 57 31.8  -1.2
SNF   Seneffe            39.07 313  ⇓P      P        06 57 33.0  -0.3
NB2   NORSAR Subarra     39.07 330   P      P        06 57 31.6  -1.6
            comp=Z,78nm,1.1s,baz=120,slow=8.6
NB2   NORSAR Subarra     39.07 330   P      P        06 57 31.6  -1.6
            baz=120,slow=8.6
NOA   NORSAR Array B     39.07 330   P      P        06 57 31.4  -1.8
            comp=Z,32nm,0.8s,baz=121,slow=8.3,SNR=67
NOA                                  S      S        07 03 33.9 +1.1
            comp=Z,3.0nm,0.9s,baz=117,slow=13,SNR=4.0
NOA                                  LR     LR       07 14 45.1
            comp=Z,451nm,20.9s,baz=125,slow=38
NC303 NORSAR Array S     39.10 331  eP      P        06 57 32.6  -0.9
KONO  Kongsberg          39.11 328  eP      P        06 57 32.5  -1.0
            comp=Z,136nm,1.1s
KONO  Kongsberg          39.11 328ceP      P        06 57 32.2  -1.3
KONO                                 pmax   pmax
            comp=Z,148nm,1.3s
KONO  Kongsberg          39.11 328  eP      P        06 57 32.5  -1.0
KONO                                 IAmb   IAmb     06 57 34.3
            comp=Z,88nm,0.8s
LKP   Lekhapani          39.11  85  eP      P        06 57 33.8  -0.1
NAO01 NORSAR Array S     39.11 330  eP      P        06 57 32.8  -0.8
NAO01 NORSAR Array S     39.11 330  eP      P        06 57 32.6  -0.9
NAO01                                IAmb   IAmb     06 57 34.2
            comp=Z,115nm,0.9s
AVF   Avril sur Loir     39.17 307  eP      P        06 57 32.0  -2.2
AVF                                  pmax   pmax
            comp=Z,19nm,0.8s
NBO00 NORSAR Array S     39.25 330  eP      P        06 57 33.9  -0.8
NC204 NORSAR Array S     39.38 331  eP      P        06 57 35.0  -0.9
SNART Snartemo           39.68 325  eP      P        06 57 39.0 +0.8
TCF   Toulx Ste Croi     39.91 306  eP      P        06 57 39.6  -0.9
TCF                                  pmax   pmax
            comp=Z,14nm,0.9s
HEF   Hetta              39.94 345  eP      P        06 57 40.9 +0.6
CAF   Calviac            39.95 304  eP      P        06 57 39.8  -1.0
CAF                                  pmax   pmax
            comp=Z,14nm,1.1s
CAF   Calviac            39.95 304  eP      P        06 57 39.8  -1.0
            comp=Z,14nm,1.1s
GTA   Gaotai             40.08  65  ⇑P      P        06 57 43.3 +1.3
GTA                                  pP     sP       06 57 50.4 +5.8
GTA                                  sP     pP       06 57 54.8  +11
GTA                                  S      S        07 03 47.9  -0.7
GTA                                  sS     sS       07 03 56.1 +4.4
GTA                                  SS     SS       07 06 35.6   -10
GTA                                  pmax   pmax
            comp=Z,27nm,1.2s
GTA                                  pmax   pmax
            comp=Z,170nm,5.5s
GTA                                  LR     LR
            comp=Z,530nm,19.9s
GTA                                  LR     LR
            comp=Z,300nm,20.3s
GTA                                  LR     LR
            comp=Z,330nm,19.2s
KEV   Kevo               40.36 347  eP      P        06 57 43.6  -0.2
            comp=Z,33nm,1.0s
KEV   Kevo               40.36 347  eP      P        06 57 43.6  -0.2
KEV                                  pmax   pmax
            comp=Z,33nm,1.0s
DOMB  Dombas             40.46 331  eP      P        06 57 45.5 +0.8
DOMB                                 IAmb   IAmb     06 57 45.9
            comp=Z,59nm,1.1s
ARA0  ARCESS Array S     40.46 347  eP      P        06 57 44.2  -0.5
ARCES ARCESS Array B     40.46 347   P      P        06 57 44.2  -0.5
            comp=Z,21nm,1.0s,baz=140,slow=4.7,SNR=21
BLS5  Blasjo             40.46 326  eP      P        06 57 45.8 +0.9
BLS5                                 IAmb   IAmb     06 57 46.9
            comp=Z,141nm,1.1s
KTK1  Kautokeino         40.51 345  eP      P        06 57 44.9  -0.2
ODD1  Odda               40.58 327  eP      P        06 57 46.2 +0.4
ODD1                                 IAmb   IAmb     06 57 49.3
            comp=Z,167nm,0.9s
NSS   Namsos             40.66 335  eP      P        06 57 50.7 +4.4
NSS                                  IAmb   IAmb     06 57 51.6
            comp=Z,34nm,1.1s
MOR8  Moi Rana           40.82 338  eP      P        06 57 45.3  -2.3
KMY   Karmoy             40.96 326  eP      P        06 57 49.1 +0.3
KIF   Kilpisjarvi        41.06 344  eP      P        06 57 50.9 +1.3
TAM   Tamanrasset        41.10 269  eP      P        06 57 51.3 +0.6
            comp=Z,14nm,1.0s
TAM   Tamanrasset        41.10 269  eP      P        06 57 51.3 +0.6
TAM                                  pmax   pmax
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            comp=Z,14nm,1.0s
HYA   Hoyanger           41.29 329  eP      P        06 57 52.8 +1.3
HYA                                  IAmb   IAmb     06 57 53.3
            comp=Z,24nm,0.7s
MOL   Molde              41.34 331  eP      P        06 57 52.3 +0.4
BER   Bergen             41.36 328  eP      P        06 57 53.4 +1.3
BER   Bergen             41.36 328  eP      P        06 57 52.2 +0.1
BER                                  IAmb   IAmb     06 57 53.9
            comp=Z,62nm,0.7s
MOY   Mondy              41.38  46  eP      P        06 57 54.6 +2.0
MOY                                  pmax   pmax
            comp=Z,45nm,1.5s
AKN   Aaknes             41.38 330  eP      P        06 57 53.5 +1.1
ASK   Askoy              41.46 328  eP      P        06 57 53.0 +0.1
ASK                                  IAmb   IAmb     06 57 56.6
            comp=Z,73nm,1.1s
HAMF  Hammerfest         41.73 347  eP      P        06 57 56.3 +1.2
HAMF                                 IAmb   IAmb     06 57 56.7
            comp=Z,39nm,1.0s
SUE   Sulen              41.88 328  eP      P        06 57 56.6 +0.2
TRO   Tromso             41.97 344  eP      P        06 57 58.0 +1.0
TRO                                  IAmb   IAmb     06 57 58.2
            comp=Z,54nm,1.2s
SJPF  Ste Jean           42.33 301  eP      P        06 57 59.7  -0.7
SJPF                                 pmax   pmax
            comp=Z,14nm,1.1s
SJPF  Ste Jean           42.33 301  eP      P        06 57 59.7  -0.7
            comp=Z,14nm,1.1s
TLY   Talaya             43.01  47  eP      P        06 58 07.8 +1.9
            comp=Z,14nm,1.1s
TLY   Talaya             43.01  47   P      P        06 58 08.1 +2.3
            SNR=13
TLY   Talaya             43.01  47  eP      P        06 58 07.0 +1.2
TLY                                  pmax   pmax
            comp=Z,20nm,1.5s
TLY                                  MLR    MLR
            comp=Z,389nm,14.0s
IRK   Irkutsk            43.47  46  eP      P        06 58 09.1  -0.3
IRK                                  pmax   pmax
            comp=Z,66nm,1.4s
EDMD  Edmundbyers        43.58 318  eP      P        06 58 11.0 +0.7
EDMD                                 IAmb   IAmb     06 58 14.4
            comp=Z,21nm,0.7s
LZH   Lanzhou            43.67  69  eP      P        06 58 12.6 +1.1
LZH                                  pP     sP       06 58 16.4 +2.2
LZH                                  sP     pP       06 58 18.4 +5.0
LZH                                  PP     PP       06 59 55.8 +2.8
LZH                                  PcP    PcP      07 00 00.6 +1.9
LZH                                  pmax   pmax
            comp=Z,89nm,1.1s
LZH                                  pmax   pmax
            comp=Z,440nm,5.4s
LZH                                  LR     LR
            comp=Z,1µm,13.5s
LZH                                  LR     LR
            comp=Z,910nm,13.0s
LZH                                  LR     LR
            comp=Z,2µm,17.6s
HLM1  Long Mynd          43.79 315  eP      P        06 58 11.9  -0.2
HLM1                                 IAmb   IAmb     06 58 15.6
            comp=Z,18nm,1.0s
MCH1  Michaelchurch      43.81 314  eP      P        06 58 11.8  -0.3
MCH1                                 IAmb   IAmb     06 58 12.4
            comp=Z,92nm,1.6s
ESY   Stoneypath         44.13 319  eP      P        06 58 14.2  -0.5
DRUM  Mains of Drumt     44.25 321  eP      P        06 58 15.6  -0.1
DRUM                                 IAmb   IAmb     06 58 17.8
            comp=Z,66nm,1.0s
EKA   Eskdalemuir Ar     44.34 319   P      P        06 58 14.9  -1.5
            comp=Z,18nm,0.8s,baz=102,slow=8.2,SNR=16
EKA                                  LR     LR       07 20 31.1
            comp=Z,230nm,20.1s,baz=65,slow=41
ESK   Eskdalemuir        44.36 318  eP      P        06 58 16.7 +0.1
            comp=Z,26nm,1.1s
ESK   Eskdalemuir        44.36 318  eP      P        06 58 17.1 +0.5
ESK                                  IAmb   IAmb     06 58 19.7
            comp=Z,15nm,0.8s
ESK   Eskdalemuir        44.36 318  eP      P        06 58 16.7 +0.1
ESK                                  pmax   pmax
            comp=Z,26nm,1.1s
EDI   Edinburgh          44.45 319  eP      P        06 58 17.9 +0.6
EDU   Dundee             44.46 320  eP      P        06 58 17.8 +0.4
SONA0 Songino Array      44.57  52  eP      P        06 58 19.3 +0.8
SONA0                               ePcP    PcP      07 00 00.9  -0.6
SONM  Songino Array      44.57  52   P      P        06 58 19.3 +0.8
            comp=Z,11nm,1.1s,baz=269,slow=8.3,SNR=28
SONM                                 PcP    PcP      07 00 00.9  -0.6
            comp=Z,3.3nm,0.8s,baz=248,slow=1.6,SNR=3.6
SONM                                 LR     LR       07 18 15.7
            comp=Z,270nm,18.6s,baz=270,slow=38
SONA1 Songino Array      44.57  52  eP      P        06 58 19.1 +0.5
MME1  Meikle Cairn       44.58 321  eP      P        06 58 18.3   0.0
ES19  SONSECA Array      44.63 296  eP      P        06 58 18.8  -0.2
ES19  SONSECA Array      44.63 296  eP      P        06 58 18.8  -0.2
ESDC  Sonseca Array      44.68 296   P      P        06 58 18.9  -0.5
            comp=Z,10nm,0.9s,baz=70,slow=7.7,SNR=28
ESLA  Sonseca Array      44.68 296  eP      P        06 58 19.3  -0.1
            comp=Z,38nm,1.4s
ESLA  Sonseca Array      44.68 296  eP      P        06 58 19.3  -0.1
            comp=Z,38nm,1.4s
CD2   Chengdu            44.75  77  eP      P        06 58 19.0  -1.1
CD2                                  pmax   pmax
            comp=Z,10.0nm,0.5s
CHTO  Chiang Mai         44.95  95  eP      P        06 58 21.5  -0.3
            comp=Z,13nm,0.9s
CHTO  Chiang Mai         44.95  95  eP      P        06 58 21.5  -0.3
CHTO                                 pmax   pmax
            comp=Z,13nm,0.9s
CHTO  Chiang Mai         44.95  95   P      P        06 58 21.8 +0.1
            comp=Z,91nm,1.6s
CMMT  Chiang Mai         44.95  95   P      P        06 58 21.8   0.0
            comp=Z,20nm,1.5s,comp=Z,699nm
PAB   San Pablo          44.99 296  eP      P        06 58 22.2 +0.2
            comp=Z,47nm,1.4s
PAB   San Pablo          44.99 296  eP      P        06 58 22.2 +0.2
PAB                                  pmax   pmax
            comp=Z,47nm,1.4s
PAB   San Pablo          44.99 296  eP      P        06 58 22.2 +0.2
            comp=Z,47nm,1.4s
INVG  Invergeldie, C     45.01 320  eP      P        06 58 21.5  -0.2
INVG                                 IAmb   IAmb     06 58 25.2
            comp=Z,39nm,0.8s
ULN   Ulaanbaatar        45.01  52  eP      P        06 58 22.5 +0.5
            comp=Z,34nm,1.1s
ULN   Ulaanbaatar        45.01  52   P      P        06 58 23.0 +0.9
            SNR=17
ULN   Ulaanbaatar        45.01  52c iP      P        06 58 22.4 +0.3
ULN                                  pmax   pmax
            comp=Z,32nm,1.0s
CM31  Chiang Mai Arr     45.10  95  eP      P        06 58 22.6  -0.4
CM31                                ePcP    PcP      07 00 03.8 +0.1
CMAR  Chiang Mai Arr     45.10  95   P      P        06 58 22.6  -0.4
            comp=Z,4.0nm,0.8s,baz=293,slow=8.1,SNR=17
CMAR                                 PcP    PcP      07 00 03.8 +0.1
            comp=Z,4.5nm,0.9s,baz=283,slow=5.3,SNR=5.9
CMAR                                 LR     LR       07 20 03.6
            comp=Z,158nm,21.9s,baz=273,slow=40
EAB   Aberfoyle          45.13 320  eP      P        06 58 23.2 +0.5
CM01  Chiang Mai Arr     45.13  95  eP      P        06 58 22.6  -0.6
LAMP  Lampang            45.66  95   P      P        06 58 32.0 +4.6
            comp=Z,3.3nm,0.8s
KMI   Kunming            45.68  85   P      P        06 58 27.6  -0.2
KMI                                  pP     sP       06 58 31.5 +1.1
KMI                                  pmax   pmax
            comp=Z,32nm,0.8s
CLGH  Cloghs, Cushen     45.98 318  eP      P        06 58 30.6 +1.2
UMPA  Umpang Tak         46.07  98   P      P        06 58 37.0 +6.3
            comp=Z,11nm,1.2s,comp=Z,1µm
PBRG  Braganca           46.50 299  eP      P        06 58 34.5 +0.7
MDT   Midelt             46.51 287   P      P        06 58 34.0  -0.1
            comp=Z,4.8nm,0.8s,baz=94,slow=11,SNR=5.0
MDT                                  LR     LR       07 21 24.1
            comp=Z,80nm,20.2s,baz=75,slow=40
MDT   Midelt             46.51 287  eP      P        06 58 34.0  -0.1
UTTA  Uttaradit          46.79  95   P      P        06 58 36.8 +0.5
            comp=Z,4.7nm,0.8s
MVO   Moncorvo           46.80 299  eP      P        06 58 37.2 +1.0
            comp=Z,35nm,1.4s
PHIT  Phitsanulok        46.93  96   P      P        06 58 39.6 +2.2
            comp=Z,14nm,1.0s
MTE   Manteigas          47.30 298  eP      P        06 58 41.6 +1.5
            comp=Z,83nm,1.2s
MTE   Manteigas          47.30 298  eP      P        06 58 40.3 +0.2
            comp=Z,32nm,0.9s
MTE   Manteigas          47.30 298  eP      P        06 58 40.3 +0.2
            comp=Z,32nm,0.9s
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PVRL  Vila Real          47.30 299  eP      P        06 58 40.2 +0.2
            comp=Z,46nm,1.3s
PVRL  Vila Real          47.30 299  eP      P        06 58 40.2 +0.2
PCBR  Castelo Branco     47.33 297  eP      P        06 58 40.4 +0.1
            comp=Z,126nm,1.1s
PCBR  Castelo Branco     47.33 297  eP      P        06 58 40.4 +0.1
PMRV  Marv??o            47.34 296  eP      P        06 58 41.4 +1.1
            comp=Z,43nm,1.2s
PMRV  Marv??o            47.34 296  eP      P        06 58 41.4 +1.1
POLO  Lamas de Olo       47.34 299  eP      P        06 58 41.0 +0.5
            comp=Z,18nm,2.9s
PCAB  Cabril             47.47 299  eP      P        06 58 42.3 +0.9
            comp=Z,46nm,1.4s
PCAB  Cabril             47.47 299  eP      P        06 58 42.3 +0.9
PVIS  Viseu              47.51 298  eP      P        06 58 43.2 +1.5
            comp=Z,69nm,1.5s
PVIS  Viseu              47.51 298  eP      P        06 58 43.2 +1.5
PESTR Estremoz           47.59 296  eP      P        06 58 42.8 +0.5
            comp=Z,51nm,1.5s
PESTR Estremoz           47.59 296  eP      P        06 58 41.5  -0.8
            comp=Z,30nm,1.4s
PESTR Estremoz           47.59 296  eP      P        06 58 42.8 +0.5
PGAV  Gavieira, Arco     47.61 300  eP      P        06 58 43.9 +1.3
            comp=Z,69nm,1.3s
PBKT  Sadao Pong         47.68  96  eP      P        06 58 43.1  -0.2
            comp=Z,22nm,1.0s
PBKT  Sadao Pong         47.68  96   P      P        06 58 43.5 +0.3
            comp=Z,25nm,1.1s,comp=Z,958nm
PBEJ  Beja               47.95 295  eP      P        06 58 46.5 +1.4
            comp=Z,72nm,1.2s
PBEJ  Beja               47.95 295  eP      P        06 58 46.5 +1.4
PVAQ  Vaqueiros          47.96 294  eP      P        06 58 45.6 +0.4
            comp=Z,63nm,1.6s
PVAQ  Vaqueiros          47.96 294  eP      P        06 58 45.6 +0.4
EVO   Evora              47.97 295  eP      P        06 58 45.4 +0.1
            comp=Z,41nm,1.4s
EVO   Evora              47.97 295  eP      P        06 58 45.4 +0.1
PMTG  Montargil          48.04 296  eP      P        06 58 46.3 +0.6
            comp=Z,43nm,1.3s
PMTG  Montargil          48.04 296  eP      P        06 58 46.3 +0.6
PCAS  Casmilo, Conde     48.07 297  eP      P        06 58 47.9 +1.9
            comp=Z,66nm,1.4s
PCAS  Casmilo, Conde     48.07 297  eP      P        06 58 47.9 +1.9
XAN   Xi'an              48.18  71   P      P        06 58 46.9  -0.1
XAN                                  pP     sP       06 58 53.6 +4.0
XAN                                  sP     pP       06 58 55.9 +7.0
XAN                                  pmax   pmax
            comp=Z,25nm,0.9s
XAN                                  pmax   pmax
            comp=Z,220nm,3.6s
MESJ  Messejana          48.26 294  eP      P        06 58 47.2  -0.3
MESJ                                 AMb    AMB      06 58 51.9
            comp=Z,49nm,1.7s
MESJ  Messejana          48.26 294  eP      P        06 58 48.4 +0.9
            comp=Z,49nm,1.6s
MESJ  Messejana          48.26 294  eP      P        06 58 47.2  -0.3
MESJ  Messejana          48.26 294  eP      P        06 58 47.2  -0.3
PNCL  Nicolau / Gran     48.45 295  eP      P        06 58 50.7 +1.8
            comp=Z,59nm,1.4s
PNCL  Nicolau / Gran     48.45 295  eP      P        06 58 50.7 +1.8
GYA   Guiyang            48.54  81⇑iP      P        06 58 49.9   0.0
GYA                                  PP     PP       07 00 43.3 +0.6
GYA                                  S      S        07 05 50.0  -2.0
GYA                                  SS     SS       07 09 15.4  -6.4
GYA                                  pmax   pmax
            comp=Z,20nm,1.0s
GYA                                  pmax   pmax
            comp=Z,130nm,5.4s
GYA                                  LR     LR
            comp=Z,540nm,17.9s
GYA                                  LR     LR
            comp=Z,520nm,18.0s
GYA                                  LR     LR
            comp=Z,550nm,18.2s
TOA0  Torodi Ar. Sit     48.69 259  eP      P        06 58 49.1  -2.0
TOA0                                eP      P        06 58 50.8  -0.3
TOA1  Torodi Ar. Sit     48.69 259  eP      P        06 58 50.0  -1.1
TORD  Torodi Ar. Bea     48.69 259   P      P        06 58 50.0  -1.1
            comp=Z,69nm,1.0s,baz=41,slow=7.0
TORD                                 LR     LR       07 22 17.2
            comp=Z,122nm,19.8s,baz=350,slow=40
HHC   Hu-ho-hao-te       48.84  61  eP      P        06 58 52.8 +0.8
HHC                                  sP     sP       06 59 03.8 +9.1
HHC                                  PP     PP       07 00 48.3 +3.2
HHC                                  S      S        07 05 55.3  -0.6
HHC                                  sS     sS       07 06 01.4 +2.4
HHC                                  ScS    ScS      07 08 43.3  -2.0
HHC                                  pmax   pmax
            comp=Z,44nm,1.1s
HHC                                  pmax   pmax
            comp=Z,200nm,5.8s
HHC                                  LR     LR
            comp=Z,390nm,13.7s
HHC                                  LR     LR
            comp=Z,400nm,12.6s
HHC                                  LR     LR
            comp=Z,310nm,14.5s
NONG  Nongkai            48.85  93   P      P        06 58 54.1 +1.8
            comp=Z,0.3nm,1.0s
SPA0  Spitsbergen Ar     48.92 351  eP      P        06 58 51.8  -0.2
SPA0  Spitsbergen Ar     48.92 351  eP      P        06 58 52.0   0.0
SPITS Spitsbergen Ar     48.92 351   P      P        06 58 51.4  -0.6
            comp=Z,12nm,0.6s,baz=108,slow=4.5,SNR=19
SPITS                                LR     LR       07 23 47.9
            comp=Z,260nm,18.9s,baz=195,slow=41
NAYO  Nakonayok          49.06  99   P      P        06 58 56.5 +2.6
            comp=Z,0.4nm,1.1s
BOD   Bodaibo            49.54  39  eP      P        06 58 56.4  -0.6
BOD                                  pmax   pmax
            comp=Z,72nm,1.6s
SRAK  Srakaew            49.82  99   P      P        06 59 05.3 +5.6
            comp=Z,55nm,0.9s,comp=Z,703nm
SKNT  Sakolnakorn        50.05  94   P      P        06 59 03.4 +1.9
            comp=Z,8.8nm,2.9s
KBS   Kingsbay           50.07 351  eP      P        06 59 01.3 +0.5
            comp=Z,31nm,1.1s
KBS   Kingsbay           50.07 351  eP      P        06 59 01.3 +0.5
KBS                                  pmax   pmax
            comp=Z,31nm,1.1s
KBS   Kingsbay           50.07 351  eP      P        06 59 00.9 +0.1
OPO   Ambohidratompo     50.16 185   P      P        06 59 02.7 +0.4
            comp=Z,23nm,1.1s,baz=10,slow=8.4,SNR=8.5
OPO                                  LR     LR       07 20 48.4
            comp=Z,335nm,19.1s,baz=12,slow=37
ABPO  Ambohimpanom       50.60 185  eP      P        06 59 06.3 +0.6
            comp=Z,39nm,1.0s
ABPO  Ambohimpanom       50.60 185  eP      P        06 59 06.3 +0.6
ABPO                                 pmax   pmax
            comp=Z,39nm,1.0s
LSZ   Lusaka             51.60 208  eP      P        06 59 14.0 +0.8
            comp=Z,26nm,1.1s
LSZ   Lusaka             51.60 208  eP      P        06 59 14.0 +0.8
LSZ                                  pmax   pmax
            comp=Z,26nm,1.1s
KCSI  Kotacane, Aceh     52.14 113   P      P        06 59 18.7 +1.5
BJI   Beijing            52.45  62   P      P        06 59 19.3 +0.2
BJI                                  pmax   pmax
            comp=Z,33nm,0.9s
BJT   Baijiatuau         52.45  62  eP      P        06 59 19.9 +0.7
            comp=Z,22nm,0.9s
BJT   Baijiatuau         52.45  62  eP      P        06 59 19.9 +0.7
BJT                                  pmax   pmax
            comp=Z,22nm,0.9s
BJT   Baijiatuau         52.45  62  eP      P        06 59 19.9 +0.7
            comp=Z,22nm,0.9s
KOWA  Kowa               52.84 264   P      P        06 59 22.0  -0.4
            comp=Z,30nm,0.8s,baz=57,slow=9.5,SNR=34
KOWA                                 LR     LR       07 25 29.2
            comp=Z,128nm,18.1s,baz=40,slow=40
KOWA  Kowa               52.84 264  eP      P        06 59 22.0  -0.4
KOWA                                eP      P        06 59 22.1  -0.2
PSI   Prapat             53.49 113  eP      P        06 59 25.0  -2.3
            comp=Z,54nm,1.5s
PSI   Prapat             53.49 113  eP      P        06 59 25.0  -2.3
PSI                                  pmax   pmax
            comp=Z,54nm,1.5s
WHN   Wuhan              53.58  73   P      P        06 59 27.9 +0.3
TIA   Tai'an             54.11  66   P      P        06 59 31.8 +0.3
TIA                                  pmax   pmax
            comp=Z,36nm,0.9s
IPM   Ipoh               54.16 109  eP      P        06 59 30.7  -1.4
            comp=Z,45nm,1.1s
BORG  Borgarnes          54.24 330   LR     LR       07 24 23.5
            comp=Z,196nm,19.4s,baz=108,slow=38
DAG   Danmarks Havn      54.69 345  i P     P        06 59 33.9  -1.1
            comp=Z,23nm,1.2s
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DAG	**Danmarks Havn**	**54.69**	**345**	*i* P	**P**	**06 59 33.9**	**-1.1**
DAG				pmax	pmax		
	comp=Z,23nm,1.2s						
TIXI	**Tiksi**	**56.42**	**22**	P	**P**	**06 59 47.5**	**0.0**
	comp=Z,13nm,0.9s,baz=284,slow=0.7,SNR=4.9						
TIXI	**Tiksi**	**56.42**	**22**	*ce*P	**P**	**06 59 47.9**	**+0.4**
TIXI				pmax	pmax		
	comp=Z,18nm,1.7s						
NJ2	**Nanjing**	**56.73**	**70**	*e*P	**P**	**06 59 48.8**	**-1.6**
NJ2				pmax	pmax		
	comp=Z,6.0nm,0.7s						
DL2	**Dalian**	**56.81**	**62**	P	**P**	**06 59 51.4**	**+0.5**
DL2				*e*S	**S**	**07 07 49.0**	**+4.4**
DL2				pmax	pmax		
	comp=Z,56nm,0.8s						
DL2				LR	LR		
	comp=Z,380nm,15.0s						
DL2				LR	LR		
	comp=Z,260nm,17.3s						
DL2				LR	LR		
	comp=Z,310nm,18.8s						
ZEA	**Zeya**	**57.25**	**43**	*e*P	**P**	**06 59 55.2**	**+1.5**
ZEA				pmax	pmax		
	comp=Z,29nm,1.0s						
ZEA				MLR	MLR		
	comp=E,400nm,12.0s						
ZEA				MLR	MLR		
	comp=Z,500nm,12.0s						
YAK	**Yakutsk**	**57.30**	**33**	*e*P	**P**	**06 59 55.3**	**+1.4**
	comp=Z,40nm,0.9s						
YAK	**Yakutsk**	**57.30**	**33**	*e*P	**P**	**06 59 55.3**	**+1.4**
YAK				pmax	pmax		
	comp=Z,39nm,0.9s						
DBIC	**Dimbokro**	**57.58**	**257**	P	**P**	**06 59 56.2**	**-0.3**
	comp=Z,34nm,0.8s,baz=35,slow=9.1,SNR=21						
DBIC				LR	LR	07 27 43.0	
	comp=Z,112nm,18.6s,baz=34,slow=39						
DBIC	**Dimbokro**	**57.58**	**257**	*e*P	**P**	**06 59 56.6**	**0.0**
	comp=Z,51nm,1.0s						
DBIC	**Dimbokro**	**57.58**	**257**	*e*P	**P**	**06 59 56.6**	**0.0**
DBIC				pmax	pmax		
	comp=Z,51nm,1.0s						
KIC	**Kosan Boka**	**57.65**	**256**	*e*P	**P**	**06 59 56.7**	**-0.4**
	comp=Z,126nm,0.9s						
TIC	**Toumodi**	**57.73**	**257**	*e*P	**P**	**06 59 56.1**	**-1.6**
LIC	**Lamto**	**57.97**	**256**	*e*P	**P**	**06 59 58.7**	**-0.6**
	comp=Z,188nm,0.9s						
CN2	**Changchun**	**58.27**	**55**	*e*P	**P**	**07 00 00.9**	**-0.2**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,310nm,14.0s						
CN2				LR	LR		
	comp=Z,340nm,14.0s						
CN2				LR	LR		
	comp=Z,400nm,14.0s						
KRJI	**Kerinci**	**58.52**	**115**	P	**P**	**07 00 04.0**	**+0.7**
MASI	**Maura Aman, Be**	**59.78**	**116**	P	**P**	**07 00 12.9**	**+0.9**
SUMG	**Summit**	**59.86**	**340**	*e*P	**P**	**07 00 11.2**	**-1.0**
	comp=Z,129nm,1.0s						
SUMG	**Summit**	**59.86**	**340**	*i* P	**P**	**07 00 12.4**	**+0.3**
	comp=Z,154nm,1.1s						
SUMG	**Summit**	**59.86**	**340**	*i* P	**P**	**07 00 12.4**	**+0.3**
SUMG				pmax	pmax		
	comp=Z,150nm,1.1s						
TSUM	**Tsumeb**	**59.92**	**217**	P	**P**	**07 00 13.2**	**+0.4**
	comp=Z,18nm,1.1s,baz=41,slow=6.2,SNR=13						
TSUM				LR	LR	07 27 51.6	
	comp=Z,230nm,18.7s,baz=143,slow=38						
TSUM	**Tsumeb**	**59.92**	**217**	*e*P	**P**	**07 00 13.2**	**+0.4**
TSUM				*e*P	**P**	**07 00 13.3**	**+0.4**
KLR	**Kul'dur**	**61.01**	**48**	P	**P**	**07 00 18.8**	**-1.1**
	comp=Z,1.0nm,1.1s,baz=286,slow=10,SNR=12						
KLR	**Kul'dur**	**61.01**	**48**	*i* P	**P**	**07 00 19.7**	**-0.2**
LBTB	**Lobatse**	**61.42**	**206**	*e*P	**P**	**07 00 23.8**	**+0.8**
	comp=Z,46nm,0.9s						
LBTB	**Lobatse**	**61.42**	**206**	*e*P	**P**	**07 00 23.8**	**+0.8**
LBTB				pmax	pmax		
	comp=Z,47nm,0.9s						
YHNB	**Yeheng**	**61.52**	**77**	*e*P	**P**	**07 00 24.7**	**+0.9**
	comp=Z,82nm,1.3s						
TJN	**Taejon**	**61.93**	**63**	*ce*P	**P**	**07 00 25.1**	**-1.2**
TJN	**Taejon**	**61.93**	**63**	*e*P	**P**	**07 00 25.1**	**-1.2**
KS01	**Wonju Array Si**	**61.95**	**61**	*e*P	**P**	**07 00 25.8**	**-0.6**
KS15	**Wonju Array Si**	**61.95**	**61**	*e*P	**P**	**07 00 26.4**	**-0.1**
KS15	**Wonju Array Si**	**61.95**	**61**	*e*P	**P**	**07 00 26.4**	**-0.1**
KSAR	**Wonju Array Be**	**61.95**	**61**	P	**P**	**07 00 26.0**	**-0.4**
KSAR	**Wonju Array Be**	**61.95**	**61**	P	**P**	**07 00 26.0**	**-0.4**
KSAR	**Wonju Array Be**	**61.95**	**61**	P	**P**	**07 00 26.0**	**-0.4**
KSRS	**Korea Array**	**61.98**	**61**	P	**P**	**07 00 26.0**	**-0.6**
	comp=Z,26nm,0.8s,baz=282,slow=6.9,SNR=66						
KSRS				LR	LR	07 28 39.8	
	comp=Z,153nm,19.8s,baz=292,slow=37						
MDSI	**Maura Dua**	**62.12**	**115**	P	**P**	**07 00 28.8**	**+1.0**
LWLI	**Liwa**	**62.37**	**116**	P	**P**	**07 00 33.0**	**+3.4**
MSHR	**Mys Shultsa**	**62.62**	**55**	*ce*P	**P**	**07 00 30.4**	**-0.4**
USRK	**Ussuriysk Ar.**	**62.67**	**53**	P	**P**	**07 00 29.3**	**-1.9**
	comp=Z,12nm,1.0s,baz=296,slow=4.6						
USRK				LR	LR	07 29 49.1	
	comp=Z,224nm,18.1s,baz=284,slow=38						
WIN	**Windhoek**	**62.98**	**215**	P	**P**	**07 00 36.5**	**+2.9**
WIN				pmax	pmax		
	comp=Z,36nm,1.0s						
KASI	**Kota Agung**	**63.02**	**116**	P	**P**	**07 00 37.8**	**+4.0**
TPI	**Tanjungpandan**	**63.77**	**111**	P	**P**	**07 00 35.4**	**-3.4**
BOSA	**Boshof**	**64.82**	**205**	P	**P**	**07 00 45.7**	**+0.3**
	comp=Z,36nm,0.9s,baz=19,slow=6.3,SNR=43						
BOSA				LR	LR	07 29 38.9	
	comp=Z,228nm,19.9s,baz=32,slow=37						
SFJD	**Kangerlussuaq**	**65.51**	**335**	LR	LR	07 30 36.5	
	comp=Z,178nm,18.6s,baz=64,slow=37						
SFJD	**Kangerlussuaq**	**65.51**	**335**	P	**P**	**07 00 50.6**	**+1.2**
SFJD				pmax	pmax		
	comp=Z,25nm,2.5s						
JNU	**Nakatsue**	**65.81**	**65**	P	**P**	**07 00 52.3**	**+0.2**
	comp=Z,17nm,0.9s,baz=45,slow=4.7,SNR=10						
JNU				LR	LR	07 32 28.7	
	comp=Z,122nm,19.4s,baz=304,slow=39						
JNU	**Nakatsue**	**65.81**	**65**	*e*P	**P**	**07 00 52.4**	**+0.4**
	comp=Z,21nm,1.0s						
JNU	**Nakatsue**	**65.81**	**65**	*e*P	**P**	**07 00 52.4**	**+0.4**
	comp=Z,21nm,1.0s						
TYV	**Tymovskoe**	**67.11**	**43**	*e*P	**P**	**07 00 56.7**	**-3.2**
TYV				pmax	pmax		
	comp=Z,200nm,6.4s						
TYV				pmax	pmax		
	comp=Z,12nm,0.9s						
MA2	**Magadan**	**67.87**	**33**	*e*P	**P**	**07 01 05.6**	**+1.0**
MA2	**Magadan**	**67.87**	**33**	*e*P	**P**	**07 01 05.6**	**+1.0**
YSS	**Yuzh-Sakhalins**	**68.72**	**47**	*e*P	**P**	**07 01 08.5**	**-1.6**
YSS				*e*		07 01 22.8	
YSS				*e*		07 01 36.1	
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
YSS				MLR	MLR		
	comp=Z,300nm,16.0s						
ASAJ	**Asahikawa**	**69.79**	**50**	LR	LR	07 34 30.5	
	comp=Z,368nm,18.0s,baz=318,slow=38						
SUR	**Sutherland**	**69.86**	**207**	*e*P	**P**	**07 01 18.3**	**+0.9**
	comp=Z,31nm,1.0s						
MJB9	**Matsu-Tunnel**	**69.93**	**59**	*e*P	**P**	**07 01 17.8**	**-0.1**
	comp=Z,12nm,0.9s						
MAJO	**Matsushiro**	**69.93**	**59**	*e*P	**P**	**07 01 17.3**	**-0.6**
	comp=Z,12nm,0.9s						
MAJO	**Matsushiro**	**69.93**	**59**	*e*P	**P**	**07 01 17.3**	**-0.6**
MAJO				pmax	pmax		
	comp=Z,12nm,0.9s						
MAT	**Matsushiro**	**69.93**	**59**	P	**P**	**07 01 17.1**	**-0.8**
MJAR	**Matsushiro Arr**	**69.93**	**59**	P	**P**	**07 01 17.3**	**-0.6**
	comp=Z,3.9nm,0.9s,baz=291,slow=9.5,SNR=14						
MJAR				LR	LR	07 32 43.6	
	comp=Z,109nm,20.6s,baz=275,slow=37						
KBKI	**Kotabaru**	**70.95**	**106**	P	P	07 01 29.4	+5.1
MPSI	**Mapaga**	**72.01**	**101**	P	P	07 01 38.2	+7.5
DAV	**Davao City (W)**	**73.26**	**92**	LR	LR	07 38 29.2	
	comp=Z,53nm,19.5s,baz=343,slow=40						
PETK	**Petropavlovsk-**	**74.35**	**37**	LR	LR	07 37 35.3	
	comp=Z,175nm,18.3s,baz=297,slow=38						
JCJ	**Chichijima**	**77.25**	**66**	LR	LR	07 40 25.7	
	comp=Z,3µm,20.0s,baz=268,slow=39						
SCHQ	**Schefferville**	**78.61**	**329**	P	**P**	**07 02 06.2**	**-1.9**
	comp=Z,12nm,0.8s,baz=49,slow=7.1,SNR=9.2						
SCHQ				LR	LR	07 39 20.2	
	comp=Z,78nm,18.1s,baz=36,slow=38						
SCHQ	**Schefferville**	**78.61**	**329**	*e*P	**P**	**07 02 07.1**	**-1.0**
	comp=Z,18nm,1.0s						
TOLK	**Toolik Lake Re**	**78.76**	**8**	P	**P**	**07 02 08.6**	**-0.1**
	baz=342						
TOLK	**Toolik Lake Re**	**78.76**	**8**	*e*P	**P**	**07 02 09.1**	**+0.3**
	comp=Z,22nm,1.0s						
COLD	**Coldfoot**	**80.03**	**8**	*e*P	**P**	**07 02 15.8**	**+0.1**
	comp=Z,14nm,1.0s						
INK	**Inuvik**	**80.19**	**2**	*e*P	**P**	**07 02 16.0**	**-0.4**
	comp=Z,8.7nm,0.9s						
INK	**Inuvik**	**80.19**	**2**	*e*P	**P**	**07 02 16.0**	**-0.4**
INK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
FYU	**Fort Yukon**	**81.21**	**6**	*e*P	**P**	**07 02 22.8**	**+0.8**
	comp=Z,56nm,1.6s						
SOEI	**Soe**	**81.21**	**107**	P	**P**	**07 02 25.8**	**+2.8**
	comp=Z,61nm,1.0s						
MLY	**Manley**	**82.06**	**9**	*e*P	**P**	**07 02 25.8**	**-0.7**
	comp=Z,33nm,1.6s						
MDM	**Murphy Dome**	**82.45**	**8**	*e*P	**P**	**07 02 28.4**	**-0.2**
	comp=Z,35nm,1.3s						
MDM				*e*S	**S**	**07 12 49.3**	**+4.1**
COLA	**College**	**82.58**	**8**	*e*P	**P**	**07 02 29.0**	**-0.2**
	comp=Z,14nm,0.9s						
IL1	**Eielson Array**	**82.79**	**8**	*e*P	**P**	**07 02 28.7**	**-1.6**
ILAR	**Eielson Array**	**82.79**	**8**	P	**P**	**07 02 28.9**	**-1.4**
	comp=Z,2.7nm,0.8s,baz=330,slow=3.6,SNR=28						
ILAR				LR	LR	07 43 20.9	
	comp=Z,72nm,20.5s,baz=336,slow=39						
ILB	**Eielson Array**	**82.79**	**8**	*e*P	**P**	**07 02 28.8**	**-1.5**
CCB	**Clear Creek Bu**	**82.80**	**8**	*e*P	**P**	**07 02 29.8**	**-0.6**
	comp=Z,21nm,1.9s						
BPAW	**Bear Paw Mtn.**	**82.91**	**10**	*e*P	**P**	**07 02 30.5**	**-0.5**
	comp=Z,67nm,1.6s						
WRH	**Wood River Hil**	**82.94**	**8**	*e*P	**P**	**07 02 30.0**	**-1.1**
	comp=Z,10nm,1.2s						
EGAK	**Eagle**	**83.32**	**5**	*e*P	**P**	**07 02 32.6**	**-0.5**
	comp=Z,20nm,1.0s						
CAST	**Castle Rocks**	**83.40**	**10**	*e*P	**P**	**07 02 33.1**	**-0.4**
	comp=Z,70nm,1.7s						
MCK	**McKinley**	**83.54**	**9**	*e*P	**P**	**07 02 34.0**	**-0.3**
	comp=Z,34nm,1.4s						
MCK	**McKinley**	**83.54**	**9**	*e*P	**P**	**07 02 34.0**	**-0.3**
MCK				pmax	pmax		
	comp=Z,34nm,1.4s						
TRF	**Thorofare Moun**	**83.63**	**9**	*e*P	**P**	**07 02 35.0**	**+0.1**
	comp=Z,35nm,1.6s						
SCRK	**Sand Creek**	**83.86**	**7**	*e*P	**P**	**07 02 35.8**	**-0.2**
	comp=Z,24nm,1.2s						
PPLA	**Purkeypile**	**83.88**	**10**	*e*P	**P**	**07 02 34.9**	**-1.2**
	comp=Z,18nm,1.3s						
RIDG	**Independ'e Rid**	**84.01**	**7**	*e*P	**P**	**07 02 36.1**	**-0.6**
	comp=Z,16nm,1.1s						
DAWY	**Dawson**	**84.16**	**5**	*e*P	**P**	**07 02 37.0**	**-0.5**
	comp=Z,16nm,1.1s						
DHY	**Denali Highway**	**84.37**	**8**	*e*P	**P**	**07 02 37.8**	**-0.8**
	comp=Z,9.2nm,1.2s						
SKT	**Skwentna**	**84.84**	**10**	*e*P	**P**	**07 02 41.6**	**+0.7**
	comp=Z,15nm,1.1s						
SVW2	**Sparrevohn**	**84.98**	**13**	*e*P	**P**	**07 02 41.7**	**+0.1**
	comp=Z,13nm,1.2s						
HARP	**HAARP**	**85.28**	**7**	*e*P	**P**	**07 02 42.6**	**-0.5**
YKW3	**Yellowknife Ar**	**85.30**	**353**	*e*P	**P**	**07 02 42.2**	**-0.9**
	comp=Z,10nm,1.1s						
YKA	**Yellowknife Ar**	**85.36**	**353**	P	**P**	**07 02 42.2**	**-1.2**
	comp=Z,4.2nm,0.8s,baz=8.1,slow=5.2,SNR=19						
YKA				LR	LR	07 47 12.1	
	comp=Z,5.1nm,19.0s,baz=12,slow=40						
YKB5	**Yellowknife Ar**	**85.36**	**353**	*e*P	**P**	**07 02 42.2**	**-1.2**
GHO	**Glory Hole Cre**	**85.42**	**9**	*e*P	**P**	**07 02 42.8**	**-1.1**
	comp=Z,39nm,1.3s						
SUA	**Susitna One**	**85.46**	**10**	*e*P	**P**	**07 02 43.7**	**-0.4**
	comp=Z,36nm,1.1s						
SML	**Sawmill**	**85.47**	**9**	*e*P	**P**	**07 02 43.6**	**-0.5**
	comp=Z,29nm,1.0s						
PMR	**Palmer**	**85.57**	**9**	*e*P	**P**	**07 02 43.3**	**-1.1**
	comp=Z,35nm,1.4s						
PMR	**Palmer**	**85.57**	**9**	*e*P	**P**	**07 02 43.3**	**-1.1**
PMR				pmax	pmax		
	comp=Z,35nm,1.4s						
SCM	**Sheep Creek Mo**	**85.58**	**9**	*e*P	**P**	**07 02 44.8**	**+0.1**
	comp=Z,24nm,1.1s						
SCM	**Sheep Creek Mo**	**85.58**	**9**	*e*P	**P**	**07 02 44.8**	**+0.1**
SCM				pmax	pmax		
	comp=Z,24nm,1.1s						
KLU	**Klutina**	**86.08**	**8**	*e*P	**P**	**07 02 47.4**	**+0.3**
	comp=Z,37nm,1.0s						
GUMO	**Guam**	**86.25**	**76**	LR	LR	07 45 12.7	
	comp=Z,34nm,20.0s,baz=288,slow=38						
DIV	**Divide**	**86.45**	**8**	*e*P	**P**	**07 02 49.0**	**0.0**
	comp=Z,45nm,1.4s						
GLI	**Glacier Island**	**86.53**	**9**	*e*P	**P**	**07 02 48.0**	**-1.3**
	comp=Z,12nm,1.0s						
FID	**Port Fidalgo**	**86.73**	**8**	*e*P	**P**	**07 02 48.8**	**-1.5**
	comp=Z,11nm,0.9s						
BMRM	**Bremner River**	**86.74**	**8**	*e*P	**P**	**07 02 50.4**	**-0.1**
	comp=Z,18nm,1.1s						
BRLK	**Bradley Lake**	**87.05**	**11**	*e*P	**P**	**07 02 51.1**	**-0.8**
	comp=Z,38nm,1.2s						
CRQM	**Cirque**	**87.11**	**7**	*e*P	**P**	**07 02 51.6**	**-0.7**
	comp=Z,25nm,1.3s						
CNPM	**China Poot**	**87.22**	**11**	*e*P	**P**	**07 02 51.8**	**-1.0**
	comp=Z,19nm,0.9s						
RAGM	**Ragged Mountai**	**87.30**	**8**	*e*P	**P**	**07 02 53.6**	**+0.5**
	comp=Z,43nm,1.2s						
KDAK	**Kodiak Island**	**88.64**	**12**	*i* P	**P**	**07 03 02.3**	**+2.9**
LONY	**Lake Ozonia**	**89.25**	**324**	*e*P	**P**	**07 03 02.8**	**+0.2**
	comp=Z,11nm,1.0s						
DLBC	**Dease Lake**	**90.15**	**1**	*e*P	**P**	**07 03 06.8**	**+0.1**
	comp=Z,13nm,1.3s						
ULM	**Lac du Bonnet**	**93.22**	**339**	P	**P**	**07 03 18.9**	**-2.0**
	comp=Z,2.0nm,0.6s,baz=17,slow=6.7,SNR=3.2						
SSPA	**Standing Stone**	**93.83**	**324**	P	**P**	**07 03 23.8**	**-0.2**
	baz=42						
B35A	**Bob, Littlefor**	**94.20**	**337**	P	**P**	**07 03 23.2**	**-2.3**
	baz=30						
A33A	**Warroad**	**94.23**	**338**	P	**P**	**07 03 23.8**	**-1.8**
	baz=28						
C36A	**Pine Crest Far**	**94.43**	**336**	P	**P**	**07 03 26.1**	**-0.5**
	baz=30						
E40A	**Wakefield**	**94.50**	**334**	P	**P**	**07 03 24.5**	**-2.4**
	baz=33						
E39A	**Mellen**	**94.80**	**334**	P	**P**	**07 03 26.5**	**-1.8**
	baz=32						
WR1	**Warramunga Arr**	**94.90**	**110**	*e*P	**P**	**07 03 27.4**	**-1.7**
	comp=Z,34nm,1.8s						
WRA	**Warramunga Arr**	**94.90**	**110**	P	**P**	**07 03 27.4**	**-1.7**
	comp=Z,3.3nm,0.9s,baz=315,slow=4.0,SNR=18						
AGMN	**Agassiz Nation**	**94.94**	**338**	P	**P**	**07 03 27.6**	**-1.3**
	baz=28						
C33A	**Trail**	**95.39**	**338**	P	**P**	**07 03 30.0**	**-0.9**
	baz=28						
AS31	**Alice Springs**	**96.51**	**114**	*e*P	**P**	**07 03 35.2**	**-1.2**
	comp=Z,4.2nm,1.6s						
ASAR	**Alice Springs**	**96.51**	**114**	P	**P**	**07 03 35.2**	**-1.2**
	comp=Z,0.9nm,1.0s,baz=307,slow=4.6,SNR=4.1						
SYO	**Syowa Base**	**100.81**	**184**	⇑*e*pPdiff	pPdif	07 03 58.6	+2.1
TXAR	**Lajitas Array**	**114.63**	**336**	PKP	PKPdf	07 08 47.5	+0.1
	comp=Z,0.5nm,0.9s,baz=11,slow=0.9,SNR=3.9						
QSPA	**South Pole Qui**	**121.59**	**180**	*e*PKPdf	**PKPdf**	**07 08 58.7**	**-0.8**
LPAZ	**La Paz**	**122.92**	**270**	PKP	**PKPdf**	**07 09 03.3**	**-0.9**
	comp=Z,1.5nm,0.7s,baz=318,slow=3.0,SNR=5.8						
LPAZ	**La Paz**	**122.92**	**270**	*e*PKPdf	**PKPdf**	**07 09 03.6**	**-0.6**
LPAZ	**La Paz**	**122.92**	**270**	*e*PKIKP	**PKPdf**	**07 09 03.6**	**-0.6**
VNDA	**Vanda**	**125.26**	**166**	PKP	**PKPdf**	**07 09 05.3**	**-0.8**
	comp=Z,0.8nm,0.8s,baz=277,slow=4.2,SNR=3.7						
PLCA	**Paso Flores**	**132.73**	**242**	PKP	**PKPdf**	**07 09 22.1**	**+0.6**
	comp=Z,1.3nm,0.6s,baz=3.4,slow=13,SNR=3.3						

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*SOME **24** 06:50:30.2, 44°.73N×81°.35E, h25^{km}*

*NNC **24** 06:50:31.7±0.8, 44°.92N×81°.16E, h0^{km}, mb2.6, mpv2.2, Error ellipse: s-maj=29.0km s-min=2.5km az=118.0*

ISC 24 06:50:28.1±1.8**, 44°.81N**±0°.06×**81°.37E**±0°.07**, h2**^{km}±18^{km}**, n9, σ0**^{s}**.72**/18**, 5C-2D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJR	**Jarkent**	**1.22**	**248**	*e*P	**Pg**	**06 50 51.3**	**-0.3**
	1.0nm,0.1s						
DJR				*e*S	**Sg**	**06 51 07.0**	**-0.4**
	1.6nm,0.2s						
KAPS	**Kapalarasan**	**1.50**	**289**	⇓*i*P	**Pg**	**06 50 57.1**	**+0.2**
	1.7nm,0.3s						
KAPS				⇑*i*S	**Sg**	**06 51 16.9**	**+0.7**
	5.9nm,0.3s						
PDGK	**Podgornoye**	**2.00**	**223**	⇓Pn	**Pb**	**06 51 05.9**	**+0.5**
	1.4nm,0.3s						
PDGK				⇑Sn	**Sg**	**06 51 33.7**	**+1.2**
	3.0nm,0.4s						
MAKZ	**Makanchi**	**2.04**	**12**	⇑Pn	**Pb**	**06 51 06.6**	**+0.7**
	1.4nm,0.8s						
MAKZ				⇑Sn	**Sg**	**06 51 32.9**	**-0.8**
	0.6nm,0.3s						
MK31	**Makanchi Array**	**2.09**	**18**	Pn	**Pb**	**06 51 07.0**	**+0.4**
	0.3nm,0.3s,baz=206,slow=13,SNR=28						
MK31				⇑Sn	**Sg**	**06 51 34.5**	**-0.6**
	0.9nm,0.4s,baz=206,slow=24,SNR=15						
KPKS	**Kokpek**	**2.35**	**236**	*e*P	**Pb**	**06 51 11.0**	**-0.3**
	7.6nm,0.1s						
KPKS				*e*S	**Sb**	**06 51 40.8**	**0.0**
	11nm,0.2s						
UZB	**Uzynbulak**	**2.37**	**226**	*e*P	**Pb**	**06 51 11.0**	**-0.6**
	2.7nm,0.2s						
UZB				*e*S	**Sb**	**06 51 41.0**	**-0.5**
	2.2nm,0.2s						
ARXS	**Arharly**	**2.60**	**258**	*e*P	**Pb**	**06 51 14.6**	**-0.9**
	1.8nm,0.2s						
ARXS				*e*S	**Sb**	**06 51 47.2**	**-0.7**
	5.1nm,0.2s						
CHKK	**Chushkaly**	**3.28**	**255**	*e*P	**Pb**	**06 51 27.2**	**+0.1**
CHKK				*e*S	**Sb**	**06 52 08.6**	**+1.1**
	3.3nm,0.2s						

VIE 24 06:53:03.9±0.3**, 49°.10N**×**11°.32E, h0**^{km}**, mb2.0**/2**, ml2.3**/9**, Error ellipse: s-maj=2.5km s-min=1.7km az=91.0 36 km NNW of Altmuehltal Suspected Mining explosion., Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RETA	**Reutte**	**1.65**	**193**	*e*Sn	Sg	06 53 56.8	-0.1
	21nm,0.6s						
MOTA	**Moosalm**	**1.76**	**185**	Sn	Sg	06 54 00.1	-0.3
	8.2nm,0.6s						
WATA	**Walderalm**	**1.77**	**174**	*e*Sn	Sg	06 54 00.9	+0.2
	3.3nm,0.2s						
WTTA	**Wattenberg**	**1.85**	**173**	Pn	Pb	06 53 37.9	-0.7
	3.3nm,0.5s						
WTTA				Sn	Sb	06 54 02.1	-0.2
	7.0nm,0.4s						
FETA	**Feichten**	**2.11**	**191**	Sn	Sb	06 54 09.7	-0.3
	1.8nm,0.4s						
MOA	**Molln**	**2.32**	**121**	*e*Pn	Pn	06 53 43.7	+0.3
	0.4nm,0.2s						
MOA				*e*Sn	Sn	06 54 12.8	+0.2
	2.0nm,0.3s						
KBA	**Koelnbreinsper**	**2.43**	**145**	Sn	Sb	06 54 17.7	-1.5
	0.9nm,0.2s						
BRG	**Berggiesshubel**	**2.46**	**43**	SG	Sg	06 54 23.1	+0.4
	6.9nm,0.5s						
ABTA	**Abfaltersbach**	**2.48**	**161**	Sn	Sn	06 54 15.9	-0.8
	1.6nm,0.2s						
CONA	**Conrad Observa**	**3.24**	**109**	Pg	Pg	06 54 05.2	-0.7
	1.3nm,0.4s						
CONA				*i* Sn	Sn	06 54 36.7	+1.4
	0.4nm,0.1s						

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*ISCJB **24** 06:56:33.9±0.2, 31°.67N±0°.02×50°.95E±0°.02, h10^{km}, mb4.5/70, Error ellipse: s-maj=3.4km s-min=2.7km az=29.8*

*TEH **24** 06:56:33.8, 31°.82N×51°.03E, h10^{km}, ML4.2*

*IDC **24** 06:56:34.4±0.7, 31°.77N×50°.86E, h0^{km}, mb4.3/20, mb1 4.3/27, mb1mx4.2/63, mbtmp4.3/27, ML4.0/7, MS3.8/1, Ms1 3.8/1, ms1mx2.9/56, Error ellipse: s-maj=16.4km s-min=12.5km az=161.0*

*NEIC **24** 06:56:35.4±0.3, 31°.75N×50°.93E, h10^{km}, mb4.7/27, ML4.1(THR), MN4.2(TEH), Error ellipse: s-maj=6.4km s-min=4.1km az=181.0*

*BJI **24** 06:56:35.1, 31°.80N×50°.90E, h10^{km}, mb4.5/23, mB4.9/15, Ms4.6/9, Ms7 4.3/5*

*THR **24** 06:56:35.8±0.3, 31°.75N×51°.00E, h17^{km}±2^{km}, ML4.1*

*DSN **24** 06:56:35.8±0.6, 31°.70N×50°.82E, h15^{km}, mb4.9/1, ML4.0/3, Error ellipse: s-maj=11.2km s-min=5.9km az=44.0*

*CSEM **24** 06:56:35.8±0.1, 31°.71N×50°.85E, h10^{km}, mb4.6/47, Error ellipse: s-maj=4.4km s-min=3.3km az=35.0*

*MOS **24** 06:56:38.7±1.6, 31°.73N×50°.91E, h47^{km}, mb4.7/36, Error ellipse: s-maj=7.3km s-min=4.9km az=115.8*

ISC 24 06:56:35.3±0.7**, 31°.79N**±0°.03×**50°.97E**±0°.02**, h9**^{km}±4^{km}**, n322, σ1**^{s}**.81**/345**, mb4.5**/70**, 16C-10D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IBRJ	**Brojen**	**0.28**	**65**	Pg	**Pg**	**06 56 38.6**	**-2.4**
IBRJ	**Brojen**	**0.28**	**65**	*e*Pg	**Pg**	**06 56 38.6**	**-2.4**
IBRJ				*e*Sg	**Sg**	**06 56 43.8**	**-1.0**
IBRJ				*e*		06 56 44.0	
	comp=N,9µm,0.2s						
IBRJ				*e*		06 56 44.4	
	comp=Z,96µm,0.1s						
IBRJ				*e*		06 56 46.0	
	comp=E,57µm,0.1s						
ZNGN	**Zangian**	**0.34**	**344**	*e*Pg	**Pg**	**06 56 39.4**	**-2.8**
ZNGN				*e*		06 56 45.4	
	comp=N,99nm,0.2s						
ZNGN				*e*		06 56 45.6	
	comp=E,99nm,0.2s						
ZNGN				*e*		06 56 47.0	
	comp=Z,99nm,0.3s						
ROKH	**ROKH**	**0.56**	**6**	*e*Pg	**Pg**	**06 56 43.4**	**-2.8**
ROKH				*e*Sg	**Sg**	**06 56 52.1**	**-1.5**
ROKH				*e*		06 56 53.8	
	comp=N,99nm,0.2s						
ROKH				*e*		06 56 54.5	
	comp=E,99nm,0.2s						
ROKH				*e*		06 56 55.3	
	comp=Z,99nm,0.3s						
IGAR	**Gharneh**	**1.10**	**56**	*e*Pg	**Pg**	**06 56 53.9**	**-2.5**
IGAR				*e*		06 57 12.7	
	comp=N,76µm,0.1s						
IGAR				*e*		06 57 14.7	
	comp=Z,49µm,0.2s						
IRAM	**Ramesheh**	**1.21**	**89**	*e*Pg	**Pb**	**06 56 56.1**	**-2.3**
IRAM				*e*		06 57 18.8	
	comp=Z,17µm,0.2s						
IRAM				*e*		06 57 25.7	
	comp=E,27µm,0.3s						
IRAM				*e*		06 57 28.1	
	comp=N,31µm,0.3s						
IZEF	**Zefreh**	**1.60**	**46**	*e*		06 57 12.5	
	comp=Z,13µm,0.2s						
IZEF				*e*Pn	**Pn**	**06 57 02.8**	**-1.1**
IZEF				*e*		06 57 31.6	
	comp=N,19µm,0.4s						
IZEF				*e*		06 57 32.0	
	comp=E,22µm,0.3s						
IKLH	**Kolahrood**	**1.61**	**19**	Pn	**Pn**	**06 57 02.5**	**-1.6**
IKLH	**Kolahrood**	**1.61**	**19**	*e*Pn	**Pn**	**06 57 02.6**	**-1.6**
IKLH				*e*		06 57 29.1	
	comp=E,50µm,0.2s						
IKLH				*e*		06 57 31.1	
	comp=Z,26µm,0.2s						
IKLH				*e*		06 57 32.4	
	comp=N,70µm,0.3s						
IKLH	**Kolahrood**	**1.61**	**19**	Pn	**Pn**	**06 57 02.5**	**-1.6**
NASN	**Na'in**	**1.86**	**57**	*e*Pg	**Pb**	**06 57 09.9**	**+0.3**
NASN	**Na'in**	**1.86**	**57**	*e*Pg	**Pb**	**06 57 09.9**	**+0.3**
NASN	**Na'in**	**1.86**	**57**	*e*Pg	**Pb**	**06 57 09.9**	**+0.3**
SHGR	**Shooshtar-Gavs**	**1.87**	**280**	*e*Pg	**Pg**	**06 57 10.5**	**-0.6**
SHGR				IAML		06 57 50.2	
	comp=E,2µm,0.6s						
SHGR				IAML		06 57 55.8	
	comp=N,2µm,0.5s						
SHGR	**Shooshtar-Gavs**	**1.87**	**280**	*e*Pg	**Pg**	**06 57 10.5**	**-0.6**
SHGR	**Shooshtar-Gavs**	**1.87**	**280**	*e*Pg	**Pg**	**06 57 10.5**	**-0.6**
KHMZ	**Khomeyn**	**2.12**	**337**	*e*Pn	**Pb**	**06 57 13.3**	**-0.7**
KHMZ				*e*Sg	**Sg**	**06 57 44.0**	**+0.5**
KHMZ				IAML		06 57 47.9	
	comp=E,1µm,0.4s						
KHMZ				IAML		06 57 49.3	
	comp=N,946nm,0.5s						
KHMZ	**Khomeyn**	**2.12**	**337**	*e*Pn	**Pb**	**06 57 13.3**	**-0.7**
KHMZ	**Khomeyn**	**2.12**	**337**	*e*Pn	**Pb**	**06 57 13.3**	**-0.7**
ISAD	**Sadrabad**	**2.32**	**86**	*e*Pn	**Pb**	**06 57 16.6**	**-0.8**
ISAD				*e*		06 57 23.2	
	comp=Z,11µm,0.3s						
ISAD				*e*		06 58 01.3	

	comp=E,15µm,0.4s						
ISAD				e		06 58 03.5	
	comp=N,19µm,0.4s						
ISAD	Sadrabad	2.32	86	ePn	Pb	06 57 16.6	-0.8
SHI	Shiraz	2.52	148	ePn	Pn	06 57 17.4	+0.8
SHI				e		06 58 35.5	
	comp=Z,7µm,0.4s						
SHI	Shiraz	2.52	148	ePn	Pn	06 57 17.4	+0.8
IPAR	Pars	2.64	137	ePn	Pb	06 57 22.8	-0.1
IPAR				e		06 58 16.9	
	comp=Z,7µm,0.5s						
IPAR				e		06 58 34.6	
	comp=E,7µm,0.5s						
IPAR				e		06 58 36.3	
	comp=N,14µm,0.5s						
ANAR	Anarak	2.72	58	ePn	Pb	06 57 23.5	-0.7
ANAR				e		06 58 12.7	
	comp=Z,99nm,0.4s						
ANAR	Anarak	2.72	58	ePn	Pb	06 57 23.5	-0.7
ASAO	Ashtian	2.86	344	ePn	Pn	06 57 23.7	+2.4
ASAO	Ashtian	2.86	344	ePn	Pn	06 57 23.7	+2.4
ASAO	Ashtian	2.86	344	ePn	Pn	06 57 23.7	+2.4
ICHK	Chekchek	2.96	80	ePn	Pn	06 57 25.0	+2.4
ICHK				e		06 58 10.9	
	comp=E,5µm,0.3s						
ICHK				e		06 58 26.4	
	comp=Z,6µm,0.3s						
ICHK				e		06 58 34.3	
	comp=N,5µm,0.3s						
ICHK	Chekchek	2.96	80	ePn	Pn	06 57 25.0	+2.4
ISRV	Sarvestan	3.03	142	ePn	Pn	06 57 26.5	+2.8
ISRV				e		06 58 29.3	
	comp=N,11µm,0.4s						
ISRV				e		06 58 38.5	
	comp=Z,6µm,0.4s						
ISRV				e		06 58 42.6	
	comp=E,7µm,0.3s						
ISRV	Sarvestan	3.03	142	ePn	Pn	06 57 26.5	+2.8
HSAM	Samen	3.13	321	ePn	Pn	06 57 26.6	+1.6
HSAM				e		06 58 21.6	
	comp=N,99nm,0.6s						
HSAM				e		06 58 55.6	
	comp=E,99nm,1.5s						
HSAM	Samen	3.13	321	ePn	Pn	06 57 26.6	+1.6
IMEH	Mehriz	3.14	96	ePn	Pb	06 57 28.4	-3.0
IMEH				e		06 58 31.1	
	comp=N,8µm,0.4s						
IMEH				e		06 58 35.5	
	comp=Z,2µm,0.3s						
IMEH	Mehriz	3.14	96	ePn	Pb	06 57 28.4	-3.0
IKFM	Kafar-mosalman	3.15	304	ePn	Pn	06 57 26.3	+1.3
IKFM				e		06 58 30.9	
	comp=E,99nm,0.5s						
IKFM				e		06 58 35.0	
	comp=N,99nm,0.5s						
IKFM				e		06 58 41.2	
	comp=Z,99nm,0.8s						
IKFM	Kafar-mosalman	3.15	304	ePn	Pn	06 57 26.3	+1.3
IRAZ	Razeghan	3.71	347	ePn	Pn	06 57 34.7	+1.8
IRAZ				e		06 58 44.8	
	comp=N,5µm,0.4s						
IRAZ				e		06 58 45.6	
	comp=E,13µm,0.3s						
IRAZ				e		06 58 46.6	
	comp=Z,10µm,0.4s						
IRAZ	Razeghan	3.71	347	ePn	Pn	06 57 34.7	+1.8
IDMV	Damavand	3.88	13	ePn	Pn	06 57 38.9	+3.5
IDMV				e		06 58 50.9	
	comp=Z,3µm,0.3s						
IDMV				e		06 58 51.8	
	comp=N,5µm,0.4s						
IDMV				e		06 58 55.8	
	comp=E,5µm,0.3s						
IDMV	Damavand	3.88	13	ePn	Pn	06 57 38.9	+3.5
IMHD	Mahdasht	3.89	356	ePn	Pn	06 57 36.5	+1.1
IMHD				e		06 57 45.2	
	comp=Z,5µm,0.3s						
IMHD				e		06 57 52.1	
	comp=N,6µm,0.2s						
IMHD				e		06 58 47.9	
	comp=E,6µm,0.3s						
IMHD	Mahdasht	3.89	356	ePn	Pn	06 57 36.5	+1.1
GHIR	Ghir-Karzin	3.91	153	ePn	Pn	06 57 36.5	+0.9
GHIR	Ghir-Karzin	3.91	153	ePn	Pn	06 57 36.5	+0.9
GHIR	Ghir-Karzin	3.91	153	ePn	Pn	06 57 36.5	+0.9
ILAS	Lasjerd	3.95	24	ePn	Pn	06 57 38.7	+2.4
ILAS				e		06 58 55.6	
	comp=E,6µm,0.4s						
ILAS	Lasjerd	3.95	24	ePn	Pn	06 57 38.7	+2.4
HKZM	Kohzaman	3.97	335	ePn	Pn	06 57 37.4	+0.8
HKZM				e		06 58 51.6	
	comp=Z,99nm,0.5s						
HKZM				e		06 58 56.9	
	comp=E,99nm,0.3s						
HKZM				e		06 59 06.2	
	comp=N,99nm,0.4s						
HKZM	Kohzaman	3.97	335	ePn	Pn	06 57 37.4	+0.8
IAFJ	Afjeh	4.10	9	ePn	Pn	06 57 41.4	+2.9
IAFJ				e		06 58 04.3	
	comp=N,7µm,0.3s						
IAFJ				e		06 58 58.3	
	comp=Z,3µm,0.2s						
IAFJ	Afjeh	4.10	9	ePn	Pn	06 57 41.4	+2.9
IFIR	Firoozkooh	4.12	21	ePn	Pn	06 57 40.7	+2.1
IFIR				e		06 58 00.3	
	comp=Z,1µm,0.2s						
IFIR				e		06 58 58.3	
	comp=N,3µm,0.5s						
IFIR				e		06 59 06.6	
	comp=E,2µm,0.3s						
IFIR	Firoozkooh	4.12	21	ePn	Pn	06 57 40.7	+2.1
KCHF	Cheshme Sefid,	4.12	308	ePn	Pn	06 57 39.3	+0.7
KCHF				e		06 57 53.5	
	comp=Z,99nm,0.4s						
KCHF	Cheshme Sefid,	4.12	308	ePn	Pn	06 57 39.3	+0.7
IVIS	Veis	4.40	309	ePn	Pn	06 57 44.2	+1.9
IVIS				e		06 59 05.3	
	comp=N,3µm,0.4s						
IVIS				e		06 59 16.0	
	comp=Z,2µm,0.3s						
IVIS				e		06 59 21.2	
	comp=E,2µm,0.3s						
IVIS	Veis	4.40	309	ePn	Pn	06 57 44.2	+1.9
IANJ	Anjilo	4.42	33	ePn	Pn	06 57 44.2	+1.5
IANJ				e		06 59 12.1	
	comp=Z,3µm,0.5s						
IANJ	Anjilo	4.42	33	ePn	Pn	06 57 44.2	+1.5
ISHM	Shahmirzad	4.45	25	ePn	Pn	06 57 44.9	+1.7
ISHM				e		06 58 24.2	
	comp=Z,3µm,0.3s						
IALA	Alasht	4.55	19	ePn	Pn	06 57 47.4	+2.8
IALA				e		06 59 11.1	
	comp=E,6µm,0.4s						
IALA				e		06 59 23.1	
	comp=Z,2µm,0.3s						
IALA	Alasht	4.55	19	ePn	Pn	06 57 47.4	+2.8
IPRN	Peran	4.58	14	ePn	Pn	06 57 49.3	+4.4
IPRN				e		06 58 19.4	
	comp=Z,4µm,0.3s						
IPRN				e		06 59 13.1	
	comp=E,7µm,0.4s						
IPRN				e		06 59 16.4	
	comp=N,8µm,0.3s						
IGZV	Ghazvin	4.63	353	ePn	Pn	06 57 45.8	+0.2
IGZV				e		06 58 10.2	
	comp=Z,3µm,0.3s						
IGZV				e		06 59 16.2	
	comp=E,4µm,0.3s						
IGZV				e		06 59 17.9	
	comp=N,5µm,0.4s						
IGZV	Ghazvin	4.63	353	ePn	Pn	06 57 45.8	+0.2
IKIA	Kiasar	4.95	26	ePn	Pn	06 57 55.0	+5.0
IKIA				e		06 59 29.4	
	comp=Z,1µm,0.3s						
IKIA				e		06 59 31.0	
	comp=E,2µm,0.3s						
IKIA				e		06 59 37.1	
	comp=N,2µm,0.4s						
IKIA	Kiasar	4.95	26	ePn	Pn	06 57 55.0	+5.0
TNSJ	Nastanj	5.22	64	ePn	Pn	06 57 58.1	+4.5
TNSJ				e		06 59 41.2	
	comp=Z,99nm,0.4s						
TNSJ	Nastanj	5.22	64	ePn	Pn	06 57 58.1	+4.5
IGLO	Ghaloghah	5.27	26	ePn	Pn	06 57 58.4	+4.1
IGLO				e		06 58 29.6	
	comp=E,8µm,0.5s						
IGLO				e		06 58 32.4	
	comp=Z,2µm,0.3s						
IGLO				e		06 58 35.6	
	comp=N,8µm,0.5s						
SHME	Shamm	7.30	140	P	Pn	06 58 22.8	+0.7
BANOM	Banah	7.48	140	P	Pn	06 58 25.5	+0.9
BANOM	Banah	7.48	140	P	Pn	06 58 25.5	+0.9
MSFE	Esma-Masafi	7.87	143	i P	Pn	06 58 29.2	-0.7
	SNR=6.0						
MSFE	Esma-Masafi	7.87	143	ePn	Pn	06 58 29.3	-0.6
MSFE	Esma-Masafi	7.87	143	ePn	Pn	06 58 29.3	-0.6
NAZ	Nazwa, Dubai	7.94	147	P	Pn	06 58 31.6	+0.8
NAZ	Nazwa, Dubai	7.94	147	P	Pn	06 58 31.6	+0.8
MDH	Madha	7.99	143	i P	Pn	06 58 30.9	-0.6
	SNR=9.4						
MDH	Madha	7.99	143	P	Pn	06 58 30.9	-0.6
	SNR=9.4						
ASUD	Al Ashush, Dub	8.11	151	i P	Pn	06 58 34.2	+1.0
	SNR=15						
ASUD	Al Ashush, Dub	8.11	151	ePn	Pn	06 58 34.7	+1.5
ASUD	Al Ashush, Dub	8.11	151	P	Pn	06 58 34.2	+1.0
	SNR=15						
ASUD	Al Ashush, Dub	8.11	151	ePn	Pn	06 58 34.7	+1.5
UOSS	Minazif	8.23	145	ePn	Pn	06 58 34.3	-0.5
UOSS				eSn	Sn	07 00 07.6	-0.4
UOSS	Minazif	8.23	145	P	Pn	06 58 34.4	-0.5
UOSS	Minazif	8.23	145	P	Pn	06 58 34.4	-0.5
UOSS				eSn	Sn	07 00 07.6	-0.4
HATD	Hatta, Dubai	8.30	145	ePn	Pn	06 58 34.2	-1.6
HATD	Hatta, Dubai	8.30	145	ePn	Pn	06 58 34.2	-1.6
ASHO	Ashiyiah	8.38	146	P	Pn	06 58 36.3	-0.7
ASHO	Ashiyiah	8.38	146	P	Pn	06 58 36.3	-0.7
GEYT	Alibeck	8.49	42	Pn	Pn	06 58 41.4	+3.0
	comp=N,1.3nm,0.3s,baz=233,slow=16,SNR=2.8						
GYA0B	ALIBECK ARRAY	8.49	42	ePn	Pn	06 58 38.3	-0.1
GYA0B	ALIBECK ARRAY	8.49	42	ePn	Pn	06 58 38.3	-0.1
ALNE	Al Ain	8.79	150	P	Pn	06 58 42.0	-0.6
RAYN	Ar Rayn	9.55	212	ePn	Pn	06 58 52.3	-0.7
RAYN	Ar Rayn	9.55	212	P	Pn	06 58 51.3	-1.8
RAYN	Ar Rayn	9.55	212	eP	Pn	06 58 52.3	-0.7
RAYN	Ar Rayn	9.55	212	P	Pn	06 58 51.3	-1.8
RAYN	Ar Rayn	9.55	212	ePn	Pn	06 58 52.3	-0.7
GNI	Garni	9.74	331	LR	LR	07 03 13.3	
	comp=N,559nm,20.8s,baz=100,slow=41						
KARS	Kars	10.87	326	eP	Pn	06 59 15.6	+4.4
KARS	Kars	10.87	326	eP	Pn	06 59 15.6	+4.4
WSAR	Wadi Sarin	10.90	140	Pn	Pn	06 59 10.8	-0.6
	comp=N,1.9nm,0.3s,baz=333,slow=14,SNR=8.4						
WSAR				Sn	Sn	07 01 09.0	-4.5
	comp=N,0.4nm,0.3s,baz=139,slow=20,SNR=2.7						
ASF	Jabal al Asfar	11.95	276	Pn	Pn	06 59 24.0	-1.9
	comp=N,1.8nm,0.3s,baz=36,slow=8.7,SNR=7.4						
ASF				Sn	Sn	07 01 32.1	-7.4
	comp=N,0.6nm,0.3s,baz=270,slow=20,SNR=2.7						
ZEI	Tsey	12.33	335	eP	Pn	06 59 39.5	+8.4
MMAI	Mount Meron Ar	13.21	279	Pn	Pn	06 59 42.5	-0.6
	comp=N,2.2nm,0.3s,baz=95,slow=16,SNR=2.5						
KBZ	Khabaz	13.51	334	Pn	Pn	06 59 50.6	+3.6
	comp=N,0.1nm,0.3s,baz=153,slow=9.0,SNR=3.1						
KVAR	Kislovodsk Arr	13.78	334	Pn	Pn	06 59 52.2	+1.4
	baz=152,slow=15,SNR=2.4						
KIV	Kislovodsk	13.78	334	ePn	Pn	06 59 48.8	-2.1
KIV	Kislovodsk	13.78	334	⇑eP	Pn	06 59 50.7	-0.2
KIV				pmax	pmax		
	comp=Z,24nm,0.9s						
KIV				MLR	MLR		
	comp=Z,203nm,16.0s						
KIV	Kislovodsk	13.78	334	ePn	Pn	06 59 48.8	-2.1
KIV	Kislovodsk	13.78	334	eP	Pn	06 59 50.7	-0.2
	comp=Z,203nm,16.0s						
SOC	Sochi	14.74	326	eP	P	07 00 07.7	-2.3
SOC				e		07 02 45.1	
SOC	Sochi	14.74	326	eP	P	07 00 07.7	-2.3
SOC				eS	Sn	07 02 45.1	-2.3
CSS	Mathiatis	15.07	287	ePn	Pn	07 00 07.1	-1.3
	comp=Z,52nm,1.7s						
CSS	Mathiatis	15.07	287	ePn	Pn	07 00 07.1	-1.3
	comp=Z,52nm,1.7s						
KBL	Kabul	15.39	75	ePn	Pn	07 00 13.4	+0.6
	comp=Z,31nm,1.7s						
KBL	Kabul	15.39	75	eP	Pn	07 00 13.4	+0.6
KBL				pmax	pmax		
	comp=Z,31nm,1.7s						
KBL	Kabul	15.39	75	ePn	Pn	07 00 13.4	+0.6
	comp=Z,31nm,1.7s						
BR101	Keskin Array S	16.12	304	ePn	Pn	07 00 22.7	+0.5
BR101	Keskin Array S	16.12	304	ePn	Pn	07 00 22.7	+0.5
BR131	Keskin Array S	16.12	304	ePn	Pn	07 00 22.8	+0.5
BR131	Keskin Array S	16.12	304	ePn	Pn	07 00 22.8	+0.5
BRTR	Keskin Array B	16.12	304	Pn	Pn	07 00 22.7	+0.5
	comp=Z,0.7nm,0.3s,baz=125,slow=12,SNR=12						
ILGA	Ilgaz	16.66	309	ePn	Pn	07 00 30.3	+1.2
	comp=Z,30nm,1.2s						
ILGA	Ilgaz	16.66	309	ePn	Pn	07 00 30.3	+1.2
	comp=Z,30nm,1.2s						
ANN	Anapa	16.75	325	eP	Pn	07 00 27.9	-2.1
ANN				pmax	pmax		
	comp=Z,37nm,1.2s						
ANN	Anapa	16.75	325	eP	Pn	07 00 27.9	-2.1
	comp=Z,37nm,1.2s						
ANTO	Ankara	16.78	304	ePn	Pn	07 00 31.1	+0.6
	comp=Z,16nm,0.8s						
ANTO	Ankara	16.78	304	eP	Pn	07 00 31.1	+0.6
ANTO				pmax	pmax		
	comp=Z,16nm,0.8s						
ANTO	Ankara	16.78	304	ePn	Pn	07 00 31.1	+0.6
	comp=Z,16nm,0.8s						
ABKAR	Akbulak array	18.71	19	eP	Pn	07 00 54.1	-0.2
ABKAR	Akbulak array	18.71	19	eP	Pn	07 00 54.1	-0.2
NIL	Nilore	18.84	78	eP	Pn	07 00 56.5	+0.5
	comp=Z,24nm,1.2s						
NIL	Nilore	18.84	78	eP	Pn	07 00 56.5	+0.5
NIL				pmax	pmax		
	comp=Z,24nm,1.2s						
NIL	Nilore	18.84	78	eP	Pn	07 00 56.5	+0.5
	comp=Z,24nm,1.2s						
KK31	Karatay Array	19.14	48	eP	Pn	07 01 00.3	+0.7
KK31	Karatay Array	19.14	48	eP	Pn	07 01 00.3	+0.7
KK31	Karatay Array	19.14	48	eP	Pn	07 01 00.3	+0.7
KKAR	Karatay Array	19.14	48	eP	Pn	07 01 00.2	+0.6
KKAR	Karatay Array	19.14	48	eP	Pn	07 01 00.2	+0.6
KKAR	Karatay Array	19.14	48	eP	Pn	07 01 00.2	+0.6
AKTK	Aktyubinsk	19.35	14	P	Pn	07 01 02.2	+0.2
AKTO	Aktyubinsk	19.35	14	P	Pn	07 01 02.2	+0.2
	comp=Z,0.5nm,0.3s,baz=211,slow=5.9,SNR=6.9						
MANT	Manisa	19.48	296	eP	P	07 01 02.8	+0.1
	comp=Z,48nm,0.9s						
MANT	Manisa	19.48	296	eP	P	07 01 02.8	+0.1
	comp=Z,48nm,0.9s						
VSR	Storozhevoye	21.28	339	i P	P	07 01 20.3	-1.5
VSR				pmax	pmax		
	comp=Z,26nm,0.8s						
VSR	Storozhevoye	21.28	339	i P	P	07 01 20.3	-1.5
	comp=Z,26nm,0.8s						
AAK	Ala-Archa	21.57	53	i P	P	07 01 28.8	+3.5
AAK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
AAK	Ala-Archa	21.57	53	i P	P	07 01 28.8	+3.5
	comp=Z,8.0nm,1.0s						
SANT	Santorini	21.59	289	⇑iP	P	07 01 23.7	-1.7
SANT	Santorini	21.59	289	eP	P	07 01 25.3	-0.1
	comp=Z,49nm,1.1s						
SANT	Santorini	21.59	289	eP	P	07 01 25.3	-0.1
	comp=Z,49nm,1.1s						
APE	Apeiranthos	21.60	291	i P	P	07 01 23.9	-1.6
APE				pmax	pmax		
	comp=Z,19nm,0.9s						
APE	Apeiranthos	21.60	291	i P	P	07 01 23.9	-1.6
	comp=Z,19nm,0.9s						
KSH	Kashi	21.69	62	eP	P	07 01 25.5	-1.0
KSH				sP	sP	07 01 31.9	+1.5
KSH				PP	PnPn	07 01 49.3	+2.1
KSH				S	S	07 05 16.9	-10
KSH				SS	SnSn	07 05 51.8	+1.0
KSH				pmax	pmax		
	comp=Z,21nm,0.9s						
KSH				pmax	pmax		
	comp=Z,190nm,5.1s						
KSH				LR	LR		
	comp=Z,340nm,9.1s						
KSH				LR	LR		
	comp=Z,380nm,7.5s						
VRI	Vrincioaia	23.42	314	⇓iP	P	07 01 45.7	+1.1
PLOR	Plostina	23.46	314	⇓iP	P	07 01 46.1	+1.1
MLR	Muntele Rosu	23.73	312	P	P	07 01 50.7	+2.9
	comp=Z,20nm,0.8s,baz=201,slow=6.8,SNR=13						
MLR	Muntele Rosu	23.73	312	⇑iP	P	07 01 50.1	+2.3
MLR	Muntele Rosu	23.73	312	eP	P	07 01 49.0	+1.2
	comp=Z,21nm,0.8s						
MLR				eSn	Sn	07 06 31.4	+6.9
MLR	Muntele Rosu	23.73	312	eP	P	07 01 49.0	+1.2
MLR				pmax	pmax		
	comp=Z,21nm,0.8s						
MLR	Muntele Rosu	23.73	312	eP	P	07 01 49.0	+1.2
	comp=Z,21nm,0.8s						
MLR				eSn	Sn	07 06 31.4	+6.9
TESR	Tescani	23.78	315	⇓iP	P	07 01 49.8	+1.7
VOIR		24.28	312	⇑iP	P	07 01 54.8	+1.9
DOPR	Dopca	24.30	313	⇑iP	P	07 01 54.4	+1.4
BIZ	Bicaz	24.32	316	⇑iP	P	07 01 54.2	+1.1
AGG	Agios Georgios	24.36	295	eP	P	07 01 53.8	+0.1
	comp=Z,44nm,1.1s						
AGG	Agios Georgios	24.36	295	eP	P	07 01 53.8	+0.1
AGG				pmax	pmax		
	comp=Z,44nm,1.1s						
AGG	Agios Georgios	24.36	295	eP	P	07 01 53.8	+0.1
	comp=Z,44nm,1.1s						
ARR	Arges	24.52	311	⇓iP	P	07 01 55.8	+0.8
AKASG	Malin Array Be	24.82	326	P	P	07 01 56.7	-0.9
	comp=Z,1.6nm,0.3s,baz=133,slow=9.0,SNR=15						
AKASG	Malin Array Be	24.82	326	i P	P	07 01 58.0	+0.4
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.3s						
AKASG	Malin Array Be	24.82	326	i P	P	07 01 58.0	+0.4
	comp=Z,2.0nm,0.3s						
AKBB	Malin Array Si	24.82	326	eP	P	07 01 57.1	-0.5
	comp=Z,48nm,1.4s						
AKBB	Malin Array Si	24.82	326	eP	P	07 01 57.2	-0.5
AKBB				pmax	pmax		
	comp=Z,48nm,1.4s						
AKBB	Malin Array Si	24.82	326	eP	P	07 01 57.2	-0.5
	comp=Z,48nm,1.4s						
KIEV	Kiev	24.83	326	eP	P	07 01 57.1	-0.5
	comp=Z,42nm,1.3s						
KIEV	Kiev	24.83	326	P	P	07 01 57.2	-0.5
KIEV	Kiev	24.83	326	i P	P	07 01 56.6	-1.1
KIEV				pmax	pmax		
	comp=Z,39nm,1.4s						
KIEV	Kiev	24.83	326	P	P	07 01 57.2	-0.5
AK11	Malin Array Si	24.84	326	eP	P	07 01 58.2	+0.4
AK11	Malin Array Si	24.84	326	eP	P	07 01 58.2	+0.4
LOT	Lotru	25.11	311	⇑iP	P	07 02 02.2	+1.8
BURAR	Bucovina Array	25.18	316	⇓iP	P	07 02 02.1	+1.1
BURAR	Bucovina Array	25.18	316	P	P	07 02 04.3	+3.3
BUR04	Bucovina Ar. S	25.18	316	eP	P	07 02 01.7	+0.7
BUR04	Bucovina Ar. S	25.18	316	eP	P	07 02 01.7	+0.7
ARU	Arti	25.20	10	d iP	P	07 02 03.4	+2.5
ARU				S	S	07 06 30.6	+4.5
ARU				SS	SnSn	07 07 20.6	+4.3
ARU				pmax	pmax		
	comp=Z,8.0nm,1.0s						
BUR08	Bucovina Ar. S	25.20	316	eP	P	07 02 02.3	+1.1
BUR08	Bucovina Ar. S	25.20	316	eP	P	07 02 02.3	+1.1
BRVK	Borovoye	25.44	28	eP	P	07 02 04.3	+1.1
	comp=Z,21nm,1.1s						
BRVK	Borovoye	25.44	28	ceP	P	07 02 05.9	+2.7
BRVK				pmax	pmax		
	comp=Z,22nm,1.3s						
OBN	Obninsk	25.45	341	⇓eP	P	07 02 04.1	+0.9
OBN				e		07 02 40.1	
OBN				e		07 02 53.8	
OBN				eS	S	07 06 29.3	-0.7
OBN				pmax	pmax		
	comp=Z,17nm,1.0s						
OBN				MLR	MLR		
	comp=Z,335nm,19.0s						
OBN	Obninsk	25.45	341	eP	P	07 02 04.1	+0.9
	comp=Z,17nm,1.0s						
OBN				eS	S	07 06 29.3	-0.7
	comp=Z,335nm,19.0s						
BVAR	Borovoye Array	25.46	28	P	P	07 02 04.8	+1.5
	comp=Z,12nm,1.0s,baz=212,slow=8.0,SNR=19						
MDVR	Moldovita	26.21	308	⇓iP	P	07 02 10.5	+0.1
DRGR		26.32	313	⇓iP	P	07 02 13.5	+2.1
TRPA	Tarpa	27.01	315	⇓iP	P	07 02 19.6	+2.2
KURBB	Kurchatov Arra	27.75	39	P	P	07 02 26.6	+2.5
	comp=Z,3.6nm,0.8s,baz=241,slow=9.3,SNR=8.7						
KURBB				PcP	PcP	07 05 41.4	+1.0
	comp=Z,0.2nm,0.3s,baz=239,slow=3.0,SNR=3.3						
KURK	Kurchatov	27.85	39	eP	P	07 02 26.4	+1.5
	comp=Z,8.6nm,1.0s						
KURK				ePcP	PcP	07 05 41.4	+0.7
KURK	Kurchatov	27.85	39	ceP	P	07 02 27.2	+2.3
KURK				pmax	pmax		
	comp=Z,9.0nm,1.3s						
KURK	Kurchatov	27.85	39	eP	P	07 02 26.4	+1.5
	comp=Z,8.6nm,1.0s						
CRVS	Cervenica-Dubn	28.00	316	eP	P	07 02 28.7	+2.4
CRVS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
CRVS	Cervenica-Dubn	28.00	316	eP	P	07 02 28.7	+2.4
CRVS	Cervenica-Dubn	28.00	316	eP	P	07 02 28.7	+2.4
	comp=Z,10.0nm,1.1s						
MK01	Makanchi Array	28.27	49	eP	P	07 02 30.3	+1.5
MK01	Makanchi Array	28.27	49	eP	P	07 02 30.3	+1.5
MK31	Makanchi Array	28.27	49	⇑Pn	P	07 02 26.3	-2.5
	comp=Z,0.4nm,0.2s,baz=194,slow=16,SNR=19						
MK31				⇑Lg	Lg	07 02 54.2	
	comp=Z,0.3nm,0.2s,baz=181,slow=26,SNR=16						
MK31	Makanchi Array	28.27	49	eP	P	07 02 26.9	-1.8
MK31	Makanchi Array	28.27	49	eP	P	07 02 27.0	-1.8
MK31	Makanchi Array	28.27	49	eP	P	07 02 27.0	-1.8
MK32	Makanchi Array	28.27	49	eP	P	07 02 30.9	+2.2
MK32				ePcP	PcP	07 05 42.7	+0.8
MK32	Makanchi Array	28.27	49	eP	P	07 02 31.0	+2.2
MKAR	Makanchi Array	28.27	49	P	P	07 02 30.9	+2.1
	comp=Z,4.9nm,0.9s,baz=248,slow=6.4,SNR=9.0						
MKAR				PcP	PcP	07 05 42.7	+0.8
	comp=Z,0.6nm,0.9s,baz=243,slow=2.3,SNR=3.6						
MKAR	Makanchi Array	28.27	49	eP	P	07 02 26.9	-1.9
	comp=Z,29nm,0.8s						
MKAR				PcP	PcP	07 05 42.7	+0.8
MKAR	Makanchi Array	28.27	49	ceP	P	07 02 31.2	+2.4
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MKAR	Makanchi Array	28.27	49	eP	P	07 02 31.2	+2.4
	comp=Z,5.0nm,0.9s						
OJC	Ojcow	29.56	318	eP	P	07 02 40.8	+0.6
	comp=Z,13nm,0.7s						
OJC	Ojcow	29.56	318	eP	P	07 02 40.8	+0.6
OJC				pmax	pmax		
	comp=Z,13nm,0.7s						
SUW	Suwalki	29.79	326	eP	P	07 02 42.7	+0.5
	comp=Z,78nm,1.1s						
SUW	Suwalki	29.79	326	eP	P	07 02 42.7	+0.5
SUW				pmax	pmax		
	comp=Z,78nm,1.1s						
KLMR	Klimovskoe	30.04	349	eP	P	07 02 42.0	-2.2
KLMR				pmax	pmax		
	comp=Z,12nm,1.1s						
KLMR	Klimovskoe	30.04	349	eP	P	07 02 42.0	-2.2
KLMR				AMP		07 02 56.9	
	comp=Z,12nm,1.1s						
JAVC	Velka Javorina	30.26	314	ePG	P	07 02 44.4	-2.1
MORC	Moravsky Berou	30.69	316	⇑iP	P	07 02 50.4	+0.1
MORC	Moravsky Berou	30.69	316	eP	P	07 02 50.6	+0.4
	comp=Z,5.2nm,0.7s						
MORC	Moravsky Berou	30.69	316	P	P	07 02 52.4	+2.1
MORC	Moravsky Berou	30.69	316	ePG	P	07 02 50.7	+0.4
WMQ	Urumqi	31.16	57	P	P	07 02 57.6	+3.1
WMQ				pP	sP	07 03 02.0	+3.5
WMQ				sP	pP	07 03 04.6	+7.3
WMQ				LR	LR		
	comp=Z,360nm,21.1s						
WMQ				LR	LR		
	comp=Z,180nm,27.3s						
DPC	Dobruska-Polom	31.64	316	eP	P	07 02 59.4	+0.8
DPC	Dobruska-Polom	31.64	316	eP	P	07 02 59.4	+0.8
DPC	Dobruska-Polom	31.64	316	eP	P	07 02 59.4	+0.8
NVS	Novosibirsk	32.42	35	⇑iP	P	07 03 06.9	+1.6
NVS				e		07 08 26.4	
NVS				pmax	pmax		
	comp=Z,12nm,1.2s						
NVS				pmax	pmax		
	comp=N,8.0nm,1.3s						
NVS				pmax	pmax		
	comp=E,9.0nm,1.3s						
DGZ	Jazzator, Alta	32.50	46	i P	P	07 03 07.6	+1.3
DGZ				pmax	pmax		

	comp=Z,3.0nm,1.1s						
GEA0	GERESS Array S	32.72	312	*e*P	P	07 03 07.2	-1.0
GEC2	GERESS Array S	32.73	312	*e*P	P	07 03 07.8	-0.4
	comp=Z,3.6nm,0.8s						
GEC2				*e*PcP	PcP	07 05 54.9	+1.3
GEC2	GERESS Array S	32.73	312	*e*P	P	07 03 07.8	-0.4
	comp=Z,3.6nm,0.8s						
GERES	GERESS Array B	32.73	312	P	P	07 03 07.8	-0.4
	comp=Z,1.0nm,0.4s,baz=109,slow=8.0,SNR=6.9						
GERES				PcP	PcP	07 05 54.9	+1.3
	comp=Z,0.2nm,0.3s,baz=101,slow=9.1,SNR=2.8						
ZAA0	Zalesovo Array	32.77	37	*e*P	P	07 03 09.2	+0.8
	comp=Z,11nm,1.2s						
ZALV	Zalesovo Beam	32.77	37	P	P	07 03 09.3	+1.0
	comp=Z,5.7nm,0.9s,baz=252,slow=7.6,SNR=7.9						
ZALV	Zalesovo Beam	32.77	37	*e*P	P	07 03 07.1	-1.2
ZAA1	Zalesovo Array	32.77	37	*e*P	P	07 03 09.3	+1.0
KHC	Kasperske Hory	32.89	313	*e*P	P	07 03 10.1	+0.5
KHC	Kasperske Hory	32.89	313	*e*P	P	07 03 10.1	+0.5
BRG	Berggiesshubel	33.24	316	*e*P	P	07 03 13.9	+1.3
	comp=Z,3.7nm,0.8s						
BRG	Berggiesshubel	33.24	316	*e*P	P	07 03 13.9	+1.3
BRG				pmax	pmax		
	comp=Z,4.0nm,0.8s						
FIA0	FINESS Array S	33.80	339	*e*P	P	07 03 16.7	-0.6
FIA0	FINESS Array S	33.80	339	*e*P	P	07 03 16.7	-0.6
FINES	FINESS Array B	33.80	339	P	P	07 03 16.7	-0.6
	comp=Z,2.4nm,0.4s,baz=146,slow=11,SNR=15						
FINES	FINESS Array B	33.80	339	*i* P	P	07 03 17.7	+0.4
FINES				pmax	pmax		
	comp=Z,2.0nm,0.4s						
CLL	Collm	33.95	316	*e*P	P	07 03 19.0	+0.3
	comp=Z,6.0nm,1.1s						
CLL				*e*pP	sP	07 03 23.0	+0.3
CLL	Collm	33.95	316	*e*P	P	07 03 19.0	+0.3
CLL				pmax	pmax		
	comp=Z,38nm,1.1s						
CLL	Collm	33.95	316	*e*P	P	07 03 19.0	+0.3
	comp=Z,38nm,1.1s						
LPG	La Plagne	36.68	305	*e*P	P	07 03 46.0	+3.3
LPG				pmax	pmax		
	comp=Z,8.0nm,0.7s						
LPG	La Plagne	36.68	305	*e*P	P	07 03 46.0	+3.3
	comp=Z,8.0nm,0.7s						
BNI	Bardonecchia	36.69	304	*e*P	P	07 03 41.3	-1.3
	comp=Z,8.8nm,0.8s						
BNI	Bardonecchia	36.69	304	*e*P	P	07 03 41.3	-1.3
BNI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BNI	Bardonecchia	36.69	304	*e*P	P	07 03 41.3	-1.3
	comp=Z,8.8nm,0.8s						
CDF	Champ du Feu	36.76	310	*e*P	P	07 03 42.1	-0.9
CDF				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CABF	La Chapelle	37.27	307	*e*P	P	07 03 47.0	-0.5
CABF				pmax	pmax		
	comp=Z,9.0nm,0.8s						
HFS	Hagfors	37.53	330	P	P	07 03 49.8	+0.5
	comp=Z,15nm,0.5s,baz=122,slow=10,SNR=55						
BCLA	Clavier	38.40	313	⇑AP	P	07 03 59.5	+2.7
GIVF	Givet	38.65	312	*e*P	P	07 04 00.6	+1.7
SMF	Signal de Mont	38.82	306	*e*P	P	07 03 59.0	-1.4
SMF				pmax	pmax		
	comp=Z,7.0nm,0.7s						
NC405	NORSAR Array S	38.88	331	*e*P	P	07 04 01.0	+0.3
NB2	NORSAR Subarra	39.05	330	P	P	07 04 00.9	-1.3
	comp=Z,15nm,1.0s,baz=122,slow=8.6						
NB2	NORSAR Subarra	39.05	330	P	P	07 03 59.5	-2.7
NOA	NORSAR Array B	39.05	330	P	P	07 04 01.9	-0.3
	comp=Z,4.0nm,0.6s,baz=121,slow=8.3,SNR=14						
SSF	Saint Saulge	39.09	307	*e*P	P	07 04 04.1	+1.5
SSF				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AVF	Avril sur Loir	39.16	307	*e*P	P	07 04 05.5	+2.2
AVF				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TCF	Toulx Ste Croi	39.91	306	*e*P	P	07 04 10.1	+0.5
TCF				pmax	pmax		
	comp=Z,7.0nm,1.3s						
TCF	Toulx Ste Croi	39.91	306	*e*P	P	07 04 10.1	+0.5
	comp=Z,7.0nm,1.3s						
GTA	Gaotai	40.04	65	P	P	07 04 13.4	+2.6
GTA				pP	sP	07 04 18.5	+3.7
GTA				sP	pP	07 04 21.3	+7.6
GTA				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ARA0	ARCESS Array S	40.43	347	*e*P	P	07 04 14.3	+0.8
ARCES	ARCESS Array B	40.43	347	P	P	07 04 14.3	+0.8
	comp=Z,4.9nm,1.0s,baz=161,slow=7.7,SNR=5.7						
LDF	La Druitiere	41.66	309	*e*P	P	07 04 24.3	+0.4
LDF				pmax	pmax		
	comp=Z,3.0nm,0.6s						
LDF	La Druitiere	41.66	309	*e*P	P	07 04 24.3	+0.4
	comp=Z,3.0nm,0.6s						
GRR	Gorron	42.13	309	*e*P	P	07 04 29.0	+1.3
GRR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
TLY	Talaya	42.97	47	*i* P	P	07 04 37.9	+3.3
TLY				pmax	pmax		
	comp=Z,3.0nm,1.2s						
SGMF	Saint Gilles	43.25	308	*e*P	P	07 04 38.8	+1.9
SGMF				pmax	pmax		
	comp=Z,4.0nm,0.6s						
LZH	Lanzhou	43.64	69	*e*P	P	07 04 39.4	-1.0
LZH				pP	pP	07 04 43.3	0.0
LZH				sP	sP	07 04 46.3	+1.9
LZH				pmax	pmax		
	comp=Z,13nm,1.3s						
QUIF	Quistinic	43.65	308	*e*P	P	07 04 40.5	+0.4
QUIF				pmax	pmax		
	comp=Z,4.0nm,0.5s						
ROSF	Rostrenen	43.74	308	*e*P	P	07 04 42.0	+1.2
ROSF				pmax	pmax		
	comp=Z,10.0nm,0.9s						
DGAR	Diego Garcia	44.06	149	*i* P	P	07 04 46.8	+3.2
EKA	Eskdalemuir Ar	44.33	318	P	P	07 04 45.6	+0.2
	comp=Z,0.7nm,0.3s,baz=100,slow=8.7,SNR=6.8						
SONA0	Songino Array	44.52	52	*e*P	P	07 04 50.0	+2.7
SONA0				*e*PcP	PP	07 06 30.8	-0.2
SONM	Songino Array	44.52	52	P	P	07 04 50.0	+2.7
	comp=Z,1.2nm,0.6s,baz=261,slow=8.5,SNR=6.7						
SONM				PcP	PP	07 06 30.8	-0.2
	comp=Z,0.6nm,0.6s,baz=245,slow=3.0,SNR=3.1						
SONA1	Songino Array	44.53	52	*e*P	P	07 04 48.9	+1.6
ES19	SONSECA Array	44.63	296	*e*P	P	07 04 47.9	-0.3
ES19	SONSECA Array	44.63	296	*e*P	P	07 04 47.9	-0.3
ESDC	Sonseca Array	44.68	296	P	P	07 04 50.0	+1.5
	comp=Z,0.3nm,0.4s,baz=72,slow=7.1,SNR=5.1						
CD2	Chengdu	44.72	77	*e*P	P	07 04 49.5	+0.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ULN	Ulaanbaatar	44.97	52	*e*P	P	07 04 51.8	+1.0
	comp=Z,4.1nm,0.7s						
ULN	Ulaanbaatar	44.97	52	*ce*P	P	07 04 54.1	+3.3
ULN				pmax	pmax		
	comp=Z,7.0nm,1.3s						
XAN	Xi'an	48.14	71	P	P	07 05 16.6	+0.8
XAN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,86nm,5.4s						
TOA1	Torodi Ar. Sit	48.72	259	*e*P	P	07 05 19.9	-0.5
TOA0	Torodi Ar. Sit	48.72	259	*e*P	P	07 05 19.2	-1.2
TORD	Torodi Ar. Bea	48.72	259	P	P	07 05 19.9	-0.5
	comp=Z,4.8nm,0.8s,baz=54,slow=7.3						
HHC	Hu-ho-hao-te	48.80	61	*e*P	P	07 05 19.8	-1.1
HHC				sP	sP	07 05 28.0	+3.1
HHC				S	S	07 12 19.3	-4.8
HHC				ScS	ScS	07 15 08.3	-5.4
HHC				pmax	pmax		
	comp=Z,21nm,1.0s						
HHC				pmax	pmax		
	comp=Z,130nm,5.9s						
HHC				LR	LR		
	comp=Z,220nm,12.8s						
HHC				LR	LR		
	comp=Z,190nm,13.5s						
SPA0	Spitsbergen Ar	48.89	351	*e*P	P	07 05 21.1	+0.2
SPITS	Spitsbergen Ar	48.89	351	P	P	07 05 21.1	+0.2
	comp=Z,2.5nm,0.5s,baz=126,slow=5.9,SNR=7.9						
KOWA	Kowa	52.86	264	P	P	07 05 52.6	+1.0
	comp=Z,5.3nm,0.7s,baz=66,slow=9.9,SNR=9.1						
KOWA	Kowa	52.86	264	*e*P	P	07 05 51.9	+0.3
	comp=Z,7.9nm,0.8s						
NJ2	Nanjing	56.70	70	*e*P	P	07 06 19.5	+0.2
NJ2				pmax	pmax		
	comp=Z,15nm,0.5s						
DBIC	Dimbokro	57.61	257	P	P	07 06 27.4	+1.5
	comp=Z,7.1nm,0.8s,baz=48,slow=4.2,SNR=4.9						
KSAR	Wonju Array Be	61.92	61	P	P	07 06 54.7	-0.6
KSAR	Wonju Array Be	61.92	61	P	P	07 06 54.7	-0.6
KSAR	Wonju Array Be	61.92	61	P	P	07 06 54.7	-0.6
KSRS	Korea Array	61.94	61	P	P	07 06 54.7	-0.7
	comp=Z,2.2nm,0.4s,baz=285,slow=8.4,SNR=12						
BOSA	Boshof	64.86	205	P	P	07 07 14.3	-0.6
	comp=Z,3.5nm,0.8s,baz=14,slow=8.6,SNR=7.9						
MJB9	Matsu-Tunnel	69.89	59	*e*P	P	07 07 48.4	+1.7
	comp=Z,6.5nm,0.5s						
MAJO	Matsushiro	69.89	59	*e*P	P	07 07 46.8	+0.1
	comp=Z,7.0nm,0.4s						
MAJO	Matsushiro	69.89	59	*e*P	P	07 07 46.8	+0.1
MAJO				pmax	pmax		
	comp=Z,7.0nm,0.4s						
ILAR	Eielson Array	82.75	8	P	P	07 08 58.6	-0.6
	comp=Z,0.4nm,0.7s,baz=324,slow=4.9,SNR=4.1						
BPAW	Bear Paw Mtn.	82.87	10	*e*P	P	07 09 00.5	+0.6
	comp=Z,5.8nm,1.2s						
CAST	Castle Rocks	83.36	10	*e*P	P	07 09 03.1	+0.7
	comp=Z,3.9nm,1.0s						
SCRK	Sand Creek	83.83	7	*e*P	P	07 09 06.2	+1.2
	comp=Z,14nm,2.0s						

IDC 24 06:59:09.8±3.1, 30°.29S×177°.39W, h0km, mb3.7/2, mb1 4.0/3, mb1mx3.6/40, mbtmp3.8/3, ML3.1/1, Error ellipse: s-maj=67.1km s-min=25.1km az=100.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	1.13	336	Pn	Pb	06 59 31.8	-0.3
	172nm,0.3s,baz=102,slow=20,SNR=5.4						
RAO				Sn	Sg	06 59 43.7	-2.4
	240nm,0.3s,baz=95,slow=19,SNR=5.1						
URZ	Urewera	9.16	208	Pn	Pn	07 01 21.2	-1.9
	0.2nm,0.3s,baz=86,slow=12,SNR=2.4						
URZ				Sn	Sn	07 03 06.3	-0.6
	0.8nm,0.3s,baz=39,slow=22,SNR=6.8						
ASAR	Alice Springs	43.64	267	P	P	07 07 16.9	+0.5
	0.4nm,0.6s,baz=104,slow=7.7,SNR=4.3						
WRA	Warramunga Arr	44.62	272	P	P	07 07 24.5	+0.3
	0.7nm,0.4s,baz=110,slow=8.1,SNR=20						
FINES	FINESS Array B	145.22	340	PKPbc	PKPbc	07 18 47.8	-0.5
	1.3nm,0.6s,baz=132,slow=2.1,SNR=5.3						

NNC 24 07:06:36.5±1.7, 37°.07N×70°.51E, h0km, mb3.7, mpv3.3, 3C-2D, Error ellipse: s-maj=13.1km s-min=12.1km az=173.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.76	38	⇓P	Pn	07 07 35.7	-0.2
	2.5nm,0.4s						
SFK				⇑S	Sn	07 08 22.4	+1.3
	9.4nm,0.5s						
MNAS	Manas	5.63	15	⇑P	Pn	07 08 01.7	+0.2
	1.5nm,0.4s						
MNAS				⇓S	Sn	07 09 08.3	+1.4
	3.8nm,0.4s						
KK31	Karatay Array	6.03	0	⇑P	Pn	07 08 07.4	+0.5
	1.0nm,0.3s,baz=193,slow=18,SNR=23						
KK31				S	Sn	07 09 17.5	+0.9
	1.6nm,0.5s,baz=183,slow=20,SNR=7.9						

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*IDC **24** 07:29:33.1±1.9, 8°.30S×120°.26E, h0km, mb3.9/5, mb1 4.0/6, mb1mx3.6/53, mbtmp3.9/6, ML4.0/1, Error ellipse: s-maj=152.2km s-min=23.3km az=55.0*

*NEIC **24** 07:29:38.8±0.4, 8°.18S×120°.54E, h35km, mb4.2/8, Error ellipse: s-maj=13.9km s-min=6.3km az=49.0*

NEIC Felt [III] at Ruteng.

*DJA **24** 07:29:38.3±0.3, 8°S±3°×12°1E±°, h10km, M4.2/8, MLv4.2/8*

ISC 24 07:29:38.2±1.4, 8°.21S±0°.05×120°.54E±0°.04, h29km±11km, n39, σ1ˢ.55/44, mb4.3/9, Flores region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EDFI	Ende, Flores	1.26	115	P	Pn	07 30 01.3	+1.3
EDFI				S	Sb	07 30 20.0	+2.6
MMRI	Maumere	1.73	104	P	Pn	07 30 08.7	+2.3
MMRI				S	Sb	07 30 31.8	+0.9
MMRI	Maumere	1.73	104	*e*Pn	Pn	07 30 07.7	+1.3
MMRI				*e*Sn	Sb	07 30 33.3	+2.4
WBSI	Waikabubak, Su	1.82	218	P	Pb	07 30 09.9	-1.0
WBSI				S	Sb	07 30 33.7	+0.3
BASI	Baing, Sumba	2.00	179	P	Pn	07 30 11.4	+1.3
BASI				S	Sb	07 30 37.9	-0.5
PLAI	Plampang	2.80	257	P	Pn	07 30 23.0	+1.9
BKSI	Bulukumba	2.90	352	P	Pn	07 30 23.8	+1.4
TWSI	Taliwang, Sumb	3.65	261	P	Pn	07 30 35.4	+2.6
SOEI	Soe	3.99	113	P	Pn	07 30 40.1	+2.5
SOEI	Soe	3.99	113	*e*Pn	Pb	07 30 44.4	-3.6
JAGI	Jajag, Banyuwa	6.32	267	*e*Pn	Pn	07 31 11.0	+1.4
MBWA	Marble Bar	12.90	183	*e*Pn	Pn	07 32 39.3	-0.4
SBUM	Sibu	13.45	322	*e*Pn	Pn	07 32 46.9	-0.4
WR1	Warramunga Arr	17.74	133	*e*Pn	Pn	07 33 42.8	-0.4
	4.9nm,1.0s						
WR1				*e*Sn	Sn	07 36 50.4	-10
WRA	Warramunga Arr	17.74	133	P	Pn	07 33 42.8	-0.4
	0.5nm,0.3s,baz=306,slow=13,SNR=34						
WRA				S	Sn	07 36 50.4	-10
	0.1nm,0.3s,baz=300,slow=23,SNR=4.9						
WRAB	Tennant Creek	17.74	133	*e*Pn	Pn	07 33 43.3	0.0
	7.7nm,1.4s						
WB2	Warramunga Arr	17.75	133	*e*Pn	P	07 33 47.2	+3.2
AS31	Alice Springs	20.01	142	*e*P	P	07 34 10.0	+1.2
	2.2nm,0.8s						
ASAR	Alice Springs	20.01	142	P	P	07 34 09.2	+0.4
	3.5nm,0.5s,baz=322,slow=11,SNR=26						
AS01	Alice Springs	20.04	142	*e*P	P	07 34 10.4	+1.3
COEN	Coen	22.93	106	*e*P	P	07 34 40.1	-0.1
	11nm,1.2s						
FORT	Forrest	23.53	164	*e*P	P	07 34 46.5	+0.5
	33nm,0.9s						
KULM	Kulim	23.94	303	*e*P	P	07 34 49.9	-0.2
	12nm,1.2s						
BBOO	Buckleboo	28.39	152	*e*P	P	07 35 30.1	-0.1
	26nm,1.4s						
SONA0	Songino Array	57.19	349	*e*P	P	07 39 23.6	+1.0
SONM	Songino Array	57.19	349	P	P	07 39 23.6	+1.0
	0.8nm,0.7s,baz=168,slow=8.4,SNR=4.8						
MK01	Makanchi Array	64.44	332	*e*P	P	07 40 12.2	+0.3
MK31	Makanchi Array	64.46	332	*e*P	P	07 40 12.3	+0.2
MK32	Makanchi Array	64.46	332	*e*P	P	07 40 11.9	-0.2
MKAR	Makanchi Array	64.46	332	P	P	07 40 11.9	-0.2
	0.3nm,0.5s,baz=156,slow=7.7,SNR=4.8						
ZALV	Zalesovo Beam	68.86	338	P	P	07 40 38.5	-1.4
	1.2nm,0.4s,baz=159,slow=7.5,SNR=3.8						
ZALV	Zalesovo Beam	68.86	338	*e*P	P	07 40 39.9	0.0
ZAA1	Zalesovo Array	68.86	338	*e*P	P	07 40 38.5	-1.4
KURBB	Kurchatov Arra	68.95	333	P	P	07 40 38.5	-2.0
	0.2nm,0.3s,baz=141,slow=6.0,SNR=3.3						
KURK	Kurchatov	68.97	333	*e*P	P	07 40 38.5	-2.2
GHO	Glory Hole Cre	97.42	29	*e*P	P	07 43 09.3	+0.3
	4.0nm,0.7s						
TZTN	Tazewell	144.28	34	*e*PKPdf	PKPab	07 49 09.2	-0.6
LRAL	Lakeview Retre	144.52	42	*e*PKPdf	PKPab	07 49 10.1	-0.7
HUMP	Col San Antoni	168.33	32	*e*PKPdf	PKPdf	07 49 40.6	-2.5

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*CSEM **24** 08:10:17.4, 34°.07N×35°.69E, h0km, ML2.9*

GRAL 24 08:10:17.4±0.3, 34°.07N×35°.69E, h0km±22km, MD2.9, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BHL	Bhannes	0.16	189	*e*P	Pg	08 10 20.3	-0.2
BHL				*e*S	Sg	08 10 22.5	-0.1
BHL	Bhannes	0.16	189	*e*P	Pg	08 10 20.3	-0.2
BHL				*e*S	Sg	08 10 22.5	-0.1
HWQ	Hawqa	0.30	46	*e*P	Pg	08 10 22.9	-0.4
HWQ				*e*S	Sg	08 10 26.9	-0.2
HWQ	Hawqa	0.30	46	*e*P	Pg	08 10 22.9	-0.3
HWQ				*e*S	Sg	08 10 26.9	-0.3
DQRL	Deir Qamar	0.37	195	*e*P	Pg	08 10 24.2	-0.3
DQRL	Deir Qamar	0.37	195	*e*P	Pg	08 10 24.2	-0.3
SHBL	Chebaa	0.72	176	*e*P	Pg	08 10 30.3	-0.8
SHBL				*e*S	Sg	08 10 39.9	-0.6
SHBL	Chebaa	0.72	176	*e*P	Pg	08 10 30.3	-0.8
SHBL				*e*S	Sg	08 10 39.9	-0.5

IDC 24 08:11:50.3±38.0, 13°.48S×167°.37E, h0km, mb3.8/3, mb1 4.0/4, mb1mx3.6/44, mbtmp3.9/4, ML3.8/1, Error ellipse: s-maj=654.0km s-min=52.3km az=59.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	8.59	186	Pn	Pn	08 13 55.1	-0.9
	1.0nm,0.3s,baz=204,slow=20,SNR=8.5						
DZM				Sn	Sn	08 15 21.1	-13
	baz=330,slow=20,SNR=1.8						
STKA	Stephens Creek	29.88	228	P	P	08 18 00.3	+0.5
	3.3nm,1.0s,baz=74,slow=7.4,SNR=3.1						
WRA	Warramunga Arr	32.24	254	P	P	08 18 20.6	-0.2
	0.5nm,0.7s,baz=85,slow=9.5,SNR=6.6						
ASAR	Alice Springs	33.22	247	P	P	08 18 29.1	-0.2
	0.7nm,0.5s,baz=73,slow=9.3,SNR=15						

IDC 24 08:21:25.3±3.9, 4°.11S×152°.41E, h0km, mb3.5/2, mb1 3.8/2, mb1mx3.3/47, mbtmp3.6/2, Error ellipse: s-maj=194.0km s-min=46.4km az=120.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	7.41	224	Sn	Sn	08 24 45.6	+6.1
	3.0nm,0.3s,baz=232,slow=19,SNR=3.5						
WRA	Warramunga Arr	23.62	227	P	P	08 26 39.6	+1.3
	1.2nm,0.5s,baz=53,slow=10,SNR=6.5						
ASAR	Alice Springs	26.40	221	P	P	08 27 03.2	-0.6
	0.5nm,0.7s,baz=56,slow=9.1,SNR=6.3						
TORD	Torodi Ar. Bea	149.72	289	PKPbc	PKPbc	08 41 17.4	-0.9
	baz=80,slow=1.4						

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*THE **24** 08:25:17.1, 36°.87N×26°.67E, h3km±2km, ML2.3/4, Error ellipse: s-maj=2.9km s-min=0.4km az=108.0*

*ATH **24** 08:25:17.4, 36°.94N×26°.61E, h30km±1km, ML2.3/2, Error ellipse: s-maj=2.4km s-min=1.1km az=120.0*

*CSEM **24** 08:25:18.2±0.2, 36°.94N×26°.66E, h19km, ML2.5, Error ellipse: s-maj=4.1km s-min=2.6km az=168.0*

*ISCJB **24** 08:25:18.3±0.5, 36°.91N±0°.04×26°.66E±0°.03, h28km±5km, Error ellipse: s-maj=6.7km s-min=4.2km az=163.6*

*ISK **24** 08:25:18.3, 37°.02N×26°.70E, h14km, ML2.5/9*

*DDA **24** 08:25:22.1, 37°.08N×26°.94E, h7km, Ml2.5*

ISC 24 08:25:17.5±0.9, 36°.92N±0°.03×26°.67E±0°.02, h17km±8km, n46, σ1ˢ.03/66, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NISR	Nisiros	0.48	129	P	Pb	08 25 28.5	+1.1
NISR	Nisiros	0.48	129	P	Pb	08 25 28.6	+1.2
BODT	Bodrum	0.53	74	PG	Pg	08 25 28.5	+0.4
BODT				SG	Sg	08 25 35.8	+0.5
BODT	Bodrum	0.53	74	P	Pg	08 25 28.0	-0.1
BODT				S	Sb	08 25 36.1	+0.3
BODT	Bodrum	0.53	74	P	Pg	08 25 28.0	-0.1
BODT	Bodrum	0.53	74	*e*Pg	Pg	08 25 28.5	+0.4
BODT				*e*Sg	Sg	08 25 35.8	+0.5
AMGA	Amorgos Island	0.63	263	P	Pg	08 25 29.6	-0.3
AMGA				S	Sg	08 25 38.2	-0.1
AMGA	Amorgos Island	0.63	263	P	Pg	08 25 29.5	-0.3
AMGA				S	Sg	08 25 38.6	+0.3
AMGA	Amorgos Island	0.63	263	P	Pg	08 25 29.6	-0.3
AMGA				S	Sg	08 25 38.6	+0.3
BDRM	Kayabasi	0.64	76	*i* P	Pb	08 25 31.1	+1.0
BDRM	Kayabasi	0.64	76	P	Pb	08 25 31.1	+1.0
DAT	Datca	0.75	104	PG	Pb	08 25 33.3	+1.1
DAT				SG	Sb	08 25 44.4	+2.2
DAT	Datca	0.75	104	*i* P	Pb	08 25 33.3	+1.1
DAT	Datca	0.75	104	P	Pb	08 25 33.3	+1.1
DAT				*e*Sg	Sb	08 25 44.4	+2.2
SMG	Samos	0.80	9	P	Pg	08 25 32.5	-0.6
SMG				S	Sn	08 25 45.3	-0.3
SMG				AML	AML	08 25 47.4	
	comp=E,449µm,0.3s						
SMG				AML	AML	08 25 48.9	
	comp=N,425µm,0.3s						
SMG	Samos	0.80	9	P	Pg	08 25 33.1	-0.1
SMG				S	Sn	08 25 45.7	+0.1
SMG	Samos	0.80	9	P	Pg	08 25 33.1	-0.1
SMG				S	Sb	08 25 44.7	+1.1
GCAM	G?zelcaml?	0.90	30	PG	Pb	08 25 34.5	-0.2
GCAM				SG	Sg	08 25 46.4	-0.6
GCAM	G?zelcaml?	0.90	30	*i* P	Pg	08 25 35.4	+0.3
GCAM	G?zelcaml?	0.90	30	*e*Pg	Pb	08 25 34.5	-0.2
GCAM	G?zelcaml?	0.90	30	P	Pg	08 25 35.4	+0.3
GCAM				*e*Sg	Sg	08 25 46.4	-0.6
ANAF	Anafi Island	0.91	233	P	Pb	08 25 35.2	+0.4
ANAF				S	Sb	08 25 47.9	+1.2
ANAF	Anafi Island	0.91	233	P	Pb	08 25 33.9	-0.9
ANAF				S	Sb	08 25 47.3	+0.6
ANAF	Anafi Island	0.91	233	P	Pb	08 25 35.1	+0.3
ANAF				S	Sb	08 25 47.3	+0.6
APE	Apeiranthos	0.93	280	PG	Pn	08 25 37.1	+1.4
APE	Apeiranthos	0.93	280	P	Pb	08 25 34.9	-0.2
APE				S	Sb	08 25 47.2	+0.2
APE				AML	AML	08 25 50.4	
	comp=E,271µm,0.2s						
APE				AML	AML	08 25 50.9	
	comp=N,486µm,0.5s						
APE	Apeiranthos	0.93	280	P	Pb	08 25 35.3	+0.2
APE				S	Sn	08 25 49.3	+0.7
APE	Apeiranthos	0.93	280	P	Pb	08 25 35.3	+0.2
APE	Apeiranthos	0.93	280	*e*Pg	Pn	08 25 37.1	+1.4
APE				S	Sb	08 25 47.3	+0.2
MLSB	Milas	0.96	66	PG	Pb	08 25 35.9	+0.2
MLSB	Milas	0.96	66	*e*Pg	Pb	08 25 35.9	+0.2
DGB	˜zmir	1.15	8	*i* P	Pg	08 25 39.8	+0.1
AYDN	Tasoluk	1.22	52	*i* P	Pb	08 25 40.9	+0.8
AYDN	Tasoluk	1.22	52	P	Pb	08 25 40.9	+0.8
AYDB	Zeytinkoy-Aydi	1.42	43	PN	Pn	08 25 42.9	+0.3
AYDB	Zeytinkoy-Aydi	1.42	43	*e*Pn	Pn	08 25 42.9	+0.3
URLA	Izmir	1.44	358	PN	Pn	08 25 43.3	+0.4
URLA	Izmir	1.44	358	*i* P	Pn	08 25 42.5	-0.3
URLA	Izmir	1.44	358	P	Pn	08 25 42.5	-0.3
URLA	Izmir	1.44	358	*e*Pn	Pn	08 25 43.3	+0.4
BLCB	Balcova	1.50	11	PN	Pn	08 25 43.9	+0.4
BLCB	Balcova	1.50	11	*e*Pn	Pn	08 25 43.9	+0.4
CHOS	Chios island	1.55	342	P	Pn	08 25 44.4	+0.1
CHOS	Chios island	1.55	342	P	Pn	08 25 44.4	+0.1
TURN	Turunc	1.55	91	PN	Pn	08 25 42.0	-2.3
TURN				SN	Sn	08 25 59.2	-4.7
TURN	Turunc	1.55	91	*e*Pn	Pn	08 25 42.0	-2.3

IDC 24 08:30:08.8±2.3, 19°.04N×145°.33E, h240km±22km, mb3.4/5, mb1 3.6/7, mb1mx3.1/62, mbtmp4.1/7, Error ellipse: s-maj=42.3km s-min=15.0km az=89.0, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	5.43	185	P	Pn	08 31 29.1	-0.7
	3.4nm,0.3s,baz=156,slow=19,SNR=3.2						
GUMO				S	S	08 32 29.1	-5.1
	4.9nm,0.3s,baz=328,slow=12,SNR=2.5						
JCJ	Chichijima	8.53	341	P	Pn	08 32 09.4	+0.6
	baz=252,slow=20						
JCJ				S	S	08 33 40.1	-5.3
	2.7nm,0.3s,baz=287,slow=19,SNR=4.0						
WRA	Warramunga Arr	40.21	196	P	P	08 37 22.4	+0.1
	1.7nm,0.4s,baz=19,slow=9.1,SNR=59						
ASAR	Alice Springs	43.88	195	P	P	08 37 51.9	-0.1
	1.2nm,0.6s,baz=15,slow=7.7,SNR=22						
BVAR	Borovoye Array	65.99	320	P	P	08 40 29.7	+0.2
	0.5nm,0.5s,baz=87,slow=11,SNR=3.0						
NVAR	Mina Array Bea	83.21	52	P	P	08 42 09.2	+0.3
	0.4nm,0.8s,baz=269,slow=3.6,SNR=3.3						
FINES	FINESS Array B	86.43	335	P	P	08 42 22.7	-1.3
	0.7nm,0.4s,baz=49,slow=5.8,SNR=4.8						

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*ISCJB **24** 08:45:40.7±0.5, 37°.16N±0°.04×27°.89E±0°.04, h0km, Error ellipse: s-maj=5.6km s-min=4.2km az=13.7*

*DDA **24** 08:45:40.4, 37°.15N×27°.88E, h7km, Ml2.5, Suspected Mining explosion.*

CSEM ***24*** *08:45:40.9±0.1, 37°.16N×27°.88E, h1^{km}, ML2.5, Error ellipse: s-maj=2.3km s-min=2.1km az=38.0, Suspected Mining explosion.*
ISK ***24*** *08:45:40.4, 37°.17N×27°.88E, h5^{km}, ML2.5/6, Suspected Mining explosion.*
ISC 24 08:45:38.5±0.9, **37°.05N**±0°.04×**27°.89E**±0°.02, **h0^{km}, n29,** σ**0^{s}.70**/35, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLSB	Milas	0.26	340	PG	Pg	08 45 44.1	+0.6
MLSB				SG	Sg	08 45 46.8	-0.1
MLSB	Milas	0.26	340	*e*Pg	Pg	08 45 44.1	+0.6
MLSB				*e*Sg	Sg	08 45 46.8	-0.1
YER	Yerkesik	0.33	75	PG	Pb	08 45 47.4	+0.1
YER				SG	Sb	08 45 52.5	-0.6
YER	Yerkesik	0.33	75	*e*Pg	Pb	08 45 47.4	+0.1
YER				*e*Sg	Sb	08 45 52.5	-0.6
BDRM	Kayabasi	0.35	273	*i* P	Pb	08 45 47.6	-0.1
BDRM	Kayabasi	0.35	273	P	Pb	08 45 47.6	-0.1
DAT	Datca	0.40	218	PG	Pn	08 45 50.8	-0.9
DAT	Datca	0.40	218	*i* P	Pn	08 45 50.2	-1.4
DAT	Datca	0.40	218	P	Pn	08 45 50.2	-1.4
DAT	Datca	0.40	218	*e*Pg	Pn	08 45 50.8	-0.9
BODT	Bodrum	0.46	272	PG	Pb	08 45 49.7	+0.2
BODT				SG	Sb	08 45 57.2	+0.3
BODT	Bodrum	0.46	272	*e*Pg	Pb	08 45 49.7	+0.2
BODT				*e*Sg	Sb	08 45 57.2	+0.3
TURN	Turunc	0.60	107	PG	Pg	08 45 50.4	+0.4
TURN	Turunc	0.60	107	*i* P	Pg	08 45 49.6	-0.3
TURN	Turunc	0.60	107	P	Pg	08 45 49.6	-0.3
AYDN	Tasoluk	0.61	359	*i* P	Pg	08 45 50.7	+0.5
AYDN	Tasoluk	0.61	359	P	Pg	08 45 50.7	+0.5
DALY	Dalyan (Mu˜la	0.66	110	PG	Pn	08 45 54.8	-0.2
DALY	Dalyan (Mu˜la	0.66	110	*e*Pg	Pn	08 45 54.8	-0.2
GCAM	G?zelcaml?	0.83	322	PG	Pb	08 45 55.4	-0.4
GCAM	G?zelcaml?	0.83	322	*i* P	Pg	08 45 54.8	+0.3
GCAM	G?zelcaml?	0.83	322	P	Pg	08 45 54.8	+0.3
GCAM	G?zelcaml?	0.83	322	*e*Pg	Pb	08 45 55.4	-0.4
ARG	Arkhangelos	0.85	167	PG	Pn	08 45 59.5	+1.8
ARG	Arkhangelos	0.85	167	*e*Pg	Pn	08 45 59.5	+1.8
AYDB	Zeytinkoy-Aydi	0.90	0	PG	Pg	08 45 56.0	+0.3
AYDB	Zeytinkoy-Aydi	0.90	0	*e*Pg	Pg	08 45 56.0	+0.3
TAVA	DENIZLI_Tavas	0.92	63	*i* P	Pb	08 45 57.3	-0.1
TAVA	DENIZLI_Tavas	0.92	63	P	Pb	08 45 57.3	-0.1

IDC ***24*** *08:52:52.9±1.8, 1°.08S×127°.73E, h0^{km}, mb3.5/3, mb1 3.5/4, mb1mx3.3/46, mbtmp3.4/4, ML3.4/1, Error ellipse: s-maj=160.9km s-min=22.2km az=67.0*
ISCJB ***24*** *08:52:56.0±0.8, 1°.01S±0°.05×127°.76E±0°.08, h31^{km}, mb3.5/3, Error ellipse: s-maj=11.3km s-min=6.5km az=166.1*
DJA ***24*** *08:52:55.9±0.4, 1°S±2°×12°8E±°, h10^{km}, M3.4/7, MLv3.4/7*
ISC 24 08:52:57.1±1.1, **0°.98S**±0°.05×**127°.70E**±0°.09, **h31^{km}, n9,** σ**0^{s}.89**/12, **mb3.6**/3, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LBMI	Labuha	0.39	329	P	Pn	08 53 06.0	-0.7
LBMI				S	Sn	08 53 12.6	-0.4
SANI	Sanana	2.02	238	P	Pn	08 53 28.8	-0.2
SANI				S	Sn	08 53 53.7	+0.5
NLAI	Namlea	2.33	195	P	Pn	08 53 32.8	-0.5
NLAI				S	Sn	08 54 00.6	-0.3
MSAI	Masohi	2.66	152	P	Pn	08 53 38.1	+0.2
AAI	Ambon	2.74	170	P	Pn	08 53 38.8	-0.2
WRA	Warramunga Arr	19.94	161	P	P	08 57 25.3	-1.4
	0.1nm,0.3s,baz=340,slow=12,SNR=12						
ASAR	Alice Springs	23.35	166	P	P	08 58 02.2	-0.8
	0.7nm,0.6s,baz=347,slow=12,SNR=15						
MKAR	Makanchi Array	61.97	326	P	P	09 03 15.5	+1.3
	0.2nm,0.4s,baz=123,slow=7.5,SNR=4.8						
KURBB	Kurchatov Arra	66.21	328	P	P	09 03 43.1	+1.2
	0.3nm,0.5s,baz=122,slow=6.0,SNR=3.4						

IDC 24 09:06:43.2±4.4, **1°.64N×89°.20E, h0^{km}, mb3.7**/3, **mb1 3.8**/4, **mb1mx3.4**/62, **mbtmp3.8**/4, **ML3.6**/1, **MS3.1**/2, **Ms1 3.1**/2, **ms1mx2.5**/63, **Error ellipse: s-maj=94.5km s-min=54.0km az=14.0, North Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	Pallekele	10.15	304	Pn	Pn	09 09 09.7	-0.7
	0.5nm,0.3s,baz=296,slow=14,SNR=2.3						
PALK				Sn	Sn	09 10 50.0	-15
	3.0nm,0.3s,baz=291,slow=1.0,SNR=7.6						
H08S2	Diego Garcia H	19.05	241	T	T	09 31 49.8	
	baz=58,slow=74,SNR=3.9						
H08S3	Diego Garcia H	19.05	241	T	T	09 31 50.3	
	baz=58,slow=74,SNR=6.7						
H08S1	Diego Carcia H	19.07	241	T	T	09 31 52.5	
	baz=58,slow=74,SNR=5.7						
H01W3	Cape Leeuwin H	43.20	150	T	T	10 01 44.9	
	baz=325,slow=74,SNR=7.3						
H01W2	Cape Leeuwin H	43.21	150	T	T	10 01 49.6	
	baz=325,slow=74,SNR=7.2						
H01W1	Cape Leeuwin H	43.21	150	T	T	10 01 46.7	
	baz=325,slow=74,SNR=7.9						
MKAR	Makanchi Array	45.38	353	P	P	09 15 03.5	+0.1
	0.5nm,0.7s,baz=168,slow=8.7,SNR=5.2						
ATD	Arta Tunnel	47.02	284	LR	LR	09 32 00.1	
	comp=Z,18nm,19.0s,baz=251,slow=32						
SONM	Songino Array	48.37	15	P	P	09 15 26.2	-0.7
	1.1nm,0.6s,baz=198,slow=8.7,SNR=5.9						
KURBB	Kurchatov Arra	49.64	351	P	P	09 15 36.8	+0.4
	0.6nm,0.7s,baz=175,slow=7.5,SNR=5.6						
ZALV	Zalesovo Beam	52.26	357	LR	LR	09 40 03.5	
	comp=Z,23nm,18.1s,baz=234,slow=38						
TXAR	Lajitas Array	146.83	21	PKPbc	PKPbc	09 26 27.5	-0.8
	0.2nm,0.5s,baz=332,slow=1.8,SNR=3.9						

KRAR ***24*** *09:22:50.7±0.2, 53°.59N×87°.88E, M2.1, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*
NNC 24 09:22:50.2±5.1, **53°.41N×88°.13E, h5^{km}**±27^{km}, **mb3.7, mpv3.3, 9C-1D, Error ellipse: s-maj=36.8km s-min=17.7km az=81.0, Suspected Mining explosion., Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	2.04	287	⇑P	Pn	09 23 24.2	-0.9
	9.1nm,0.6s						
ZAA0				⇑S	Sn	09 23 52.1	+1.2
	29nm,0.6s						
KURK	Kurchatov	6.45	249	⇑Sn	Sn	09 25 40.2	+0.5
	2.4nm,0.7s						
KURK				⇑Lg	Lg	09 26 15.6	
	5.3nm,0.7s						
KURBB	Kurchatov Arra	6.55	249	⇑Pn	Pn	09 24 28.7	+1.7
	2.2nm,0.5s,baz=65,slow=14						
KURBB				⇓Sn	Sn	09 25 41.7	-0.3
	6.4nm,0.6s						
KURBB				⇑Lg	Lg	09 26 19.6	
	11nm,0.7s,baz=64,slow=31						
MK31	Makanchi Array	7.61	212	⇑Sn	Sn	09 26 11.6	+3.4
	0.6nm,0.6s						
MK31				⇑Lg	Lg	09 26 52.4	
	1.2nm,0.6s,baz=40,slow=35,SNR=4.9						
MAKZ	Makanchi	7.70	213	⇑Lg	Lg	09 26 54.0	
	1.7nm,0.7s						

IDC 24 09:26:15.6±2.4, **16°.97S×174°.89W, h182^{km}**±36^{km}, **mb3.9**/4, **mb1 4.0**/5, **mb1mx3.4**/43, **mbtmp4.4**/5, **Error ellipse: s-maj=45.0km s-min=28.5km az=122.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	4.27	45	P	Pn	09 27 21.5	+1.2
	25nm,0.3s,baz=194,slow=3.4,SNR=50						
AFI				S	Sn	09 28 10.8	-0.2
	62nm,0.3s,baz=29,slow=23,SNR=16						
URZ	Urewera	22.35	197	P	P	09 30 58.4	-0.1
	13nm,1.0s,baz=231,slow=3.6,SNR=6.5						
STKA	Stephens Creek	42.03	241	P	P	09 33 49.1	-0.2
	2.4nm,0.5s,baz=72,slow=9.6,SNR=15						
WRA	Warramunga Arr	48.11	258	P	P	09 34 36.9	-0.5
	1.2nm,0.6s,baz=96,slow=7.3,SNR=30						
WRA				PcP	PcP	09 36 01.9	-0.3
	0.2nm,0.5s,baz=88,slow=1.8,SNR=2.5						
ASAR	Alice Springs	48.28	253	P	P	09 34 39.0	+0.3
	9.0nm,0.7s,baz=87,slow=8.6,SNR=128						
ASAR				PcP	PcP	09 36 02.7	-0.1
	0.4nm,0.7s,baz=95,slow=3.7,SNR=4.2						

IDC 24 09:37:52.2±3.0, **5°.01S×133°.51E, h0^{km}, mb3.4**/1, **mb1 3.6**/3, **mb1mx3.3**/42, **mbtmp3.4**/3, **ML3.4**/2, **Error ellipse: s-maj=141.6km s-min=14.8km az=82.0, Aru Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	14.86	177	Pn	Pn	09 41 23.8	0.0
	0.1nm,0.3s,baz=355,slow=13,SNR=11						
WRA				Sn	Sn	09 44 08.7	-0.7
	0.1nm,0.3s,baz=358,slow=23,SNR=7.2						
ASAR	Alice Springs	18.55	179	P	Pn	09 42 12.3	+1.5
	0.2nm,0.3s,baz=359,slow=13,SNR=12						
ASAR				S	Sn	09 45 39.9	+0.9
	0.0nm,0.3s,baz=0.3,slow=28,SNR=3.6						
MKAR	Makanchi Array	68.55	325	P	P	09 48 56.6	-0.2
	0.4nm,0.9s,baz=113,slow=8.1,SNR=2.9						

ISCJB ***24*** *09:40:16.6±0.8, 51°.41N±0°.04×16°.14E±0°.04, h0^{km}, Error ellipse: s-maj=5.8km s-min=3.1km az=19.0*
CSEM ***24*** *09:40:17.7±0.5, 51°.43N×16°.11E, h2^{km}, ML3.2/7, Mw2.5, Error ellipse: s-maj=7.7km s-min=4.4km az=1.0*
PRU ***24*** *09:40:18.9, 51°.42N×16°.12E, h0^{km}*
WAR ***24*** *09:40:23.1, 51°.01N×15°.83E, h1^{km}, Mw2.5*
ISC 24 09:40:17.7±1.1, **51°.45N**±0°.05×**16°.13E**±0°.03, **h0^{km}, n36,** σ**0^{s}.65**/63, **Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.62	170	*e*Pg	Pg	09 40 29.7	+0.1
KSP				*e*Sg	Sg	09 40 37.6	0.0
KSP	Ksiaz	0.62	170	*e*Pg	Pg	09 40 29.7	+0.1
KSP				*e*Sg	Sg	09 40 37.6	0.0
KSP	Ksiaz	0.62	170	*e*Pg	Pg	09 40 29.7	+0.1
KSP				*e*Sg	Sg	09 40 37.6	0.0
UPC	Upice	0.95	184	*e*PG	Pg	09 40 36.0	+0.1
UPC				*e*SG	Sg	09 40 48.2	0.0
	comp=Z,48nm,0.4s						
UPC	Upice	0.95	184	Pg	Pg	09 40 36.0	+0.1
UPC				Sg	Sg	09 40 48.2	0.0
	48nm,0.4s						
DPC	Dobruska-Polom	1.11	174	*e*PG	Pg	09 40 38.6	-0.4
DPC				*e*SG	Sg	09 40 53.5	+0.1
	comp=Z,32nm,0.6s						
DPC	Dobruska-Polom	1.11	174	Pg	Pg	09 40 38.6	-0.4
DPC				Sg	Sg	09 40 53.5	+0.1
	32nm,0.6s						
PVCC	Panska Ves	1.35	227	*e*PG	Pb	09 40 43.5	-0.4
PVCC				*e*SG	Sb	09 41 01.6	-0.1
	comp=Z,79nm,0.2s						
PVCC	Panska Ves	1.35	227	Pg	Pb	09 40 43.5	-0.4
PVCC				Sg	Sb	09 41 01.6	-0.1
	79nm,0.2s						
KRLC	Kraliky	1.44	163	*e*PG	Pg	09 40 45.0	-0.3
KRLC	Kraliky	1.44	163	Pg	Pg	09 40 45.0	-0.3
BRG	Berggiesshubel	1.49	248	PG	Pg	09 40 46.3	+0.1
BRG				SG	Sn	09 41 06.7	+0.8
	32nm,0.6s						
GOPC	GO Pecny, Ondr	1.76	209	*e*PG	Pb	09 40 50.8	-0.1
GOPC	GO Pecny, Ondr	1.76	209	Pg	Pb	09 40 50.8	-0.1
PRU	Pruhonice	1.78	215	*e*PG	Pb	09 40 50.3	-0.9
PRU				*e*SG	Sb	09 41 14.5	+0.5
	comp=Z,28nm,0.4s						
PRU	Pruhonice	1.78	215	Pg	Pb	09 40 50.3	-0.9
PRU				Sg	Sb	09 41 14.5	+0.5
	28nm,0.4s						
MORC	Moravsky Berou	1.91	151	*e*Pn	Pn	09 40 50.6	-0.9
MORC				*e*Sg	Sn	09 41 16.5	+0.3
MORC	Moravsky Berou	1.91	151	*e*PN	Pn	09 40 50.6	-0.9
MORC				*e*SG	Sn	09 41 16.5	+0.3
CLL	Collm	1.96	267	*e*Pg	Pg	09 40 55.0	-0.3
CLL				*e*Sg	Sg	09 41 22.0	+1.3
	comp=Z,13nm,0.3s						
OKC	Ostrava-Krasne	2.07	141	*e*SG	Sb	09 41 22.2	-0.1
	comp=Z,11nm,0.4s						
OKC	Ostrava-Krasne	2.07	141	Sg	Sb	09 41 22.2	-0.1
	comp=Z,11nm,0.4s						
VRAC	Vranov	2.17	172	*e*Pn	Pn	09 40 54.6	-0.5
VRAC				*e*Sg	Sb	09 41 25.6	+0.4
VRAC	Vranov	2.17	172	*e*PN	Pn	09 40 54.6	-0.5
VRAC				*e*SG	Sb	09 41 25.6	+0.4
KRUC	Moravsky	2.40	176	*e*Pn	Pn	09 40 59.5	+1.3
KRUC				*e*Sg	Sg	09 41 33.7	-1.1
KRUC	Moravsky	2.40	176	*e*PN	Pn	09 40 59.5	+1.3
KRUC				*e*SG	Sg	09 41 33.7	-1.1
NKC	Novy Kostel	2.63	244	*e*SG	Sg	09 41 42.1	-0.1
	comp=Z,28nm,0.3s						
NKC	Novy Kostel	2.63	244	Sg	Sg	09 41 42.1	-0.1
	comp=Z,28nm,0.3s						
OJC	Ojcow	2.64	117	*e*Pg	Pg	09 41 07.7	-0.5
OJC				*e*Sg	Sg	09 41 42.6	+0.3
OJC	Ojcow	2.64	117	*e*Pg	Pg	09 41 07.7	-0.5
OJC				*e*Sg	Sg	09 41 42.6	+0.3
OJC	Ojcow	2.64	117	*e*Pg	Pg	09 41 07.7	-0.5
OJC				*e*Sg	Sg	09 41 42.6	+0.3
JAVC	Velka Javorina	2.78	158	*e*Pn	Pn	09 41 03.7	+0.2
JAVC				*e*Sg	Sg	09 41 48.3	+1.3
JAVC	Velka Javorina	2.78	158	*e*PN	Pn	09 41 03.7	+0.2
JAVC				*e*SG	Sg	09 41 48.3	+1.3
KHC	Kasperske Hory	2.84	216	*e*PN	Pn	09 41 04.3	-0.1
KHC				*e*PG	Pb	09 41 10.4	+1.1
KHC				*e*SN	Sn	09 41 38.6	-0.7
KHC				*e*SG	Sg	09 41 46.9	-2.1
	comp=Z,6.1nm,0.4s						
KHC	Kasperske Hory	2.84	216	Pn	Pn	09 41 04.3	-0.1
MODS	Modra-Piesok	3.17	166	*e*SG	Sg	09 42 00.4	+0.8
MODS				*e*LG	Lg	09 42 10.7	
MODS	Modra-Piesok	3.17	166	*e*Sg	Sg	09 42 00.4	+0.8

IDC 24 09:53:11.2±1.9, **7°.85S×124°.57E, h0^{km}, mb4.2**/1, **mb1 3.7**/3, **mb1mx3.3**/54, **mbtmp3.6**/3, **ML2.9**/2, **Error ellipse: s-maj=160.4km s-min=28.2km az=60.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.30	143	Pn	Pn	09 56 49.1	+0.3
	0.1nm,0.3s,baz=324,slow=14,SNR=3.7						
WRA				Sn	Sn	09 59 37.6	-1.5
	0.0nm,0.3s,baz=320,slow=25,SNR=2.6						
ASAR	Alice Springs	18.10	151	P	P	09 57 24.7	0.0
	0.0nm,0.3s,baz=323,slow=12,SNR=4.0						
ZALV	Zalesovo Beam	70.07	336	P	P	10 04 25.0	0.0
	0.9nm,0.3s,baz=136,slow=7.7,SNR=2.6						

IDC 24 09:56:11.6±3.6, **5°.64S×150°.59E, h0^{km}, mb3.4**/2, **mb1 3.8**/2, **mb1mx3.3**/42, **mbtmp3.5**/2, **Error ellipse: s-maj=139.3km s-min=47.6km az=116.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	5.05	222	Sn	Sn	09 58 26.4	-1.4
	1.6nm,0.3s,baz=69,slow=17,SNR=3.1						
WRA	Warramunga Arr	21.26	227	P	P	10 00 59.6	+0.1
	1.5nm,0.6s,baz=52,slow=10,SNR=9.9						
ASAR	Alice Springs	24.07	220	P	P	10 01 28.7	-0.2
	0.5nm,0.5s,baz=56,slow=9.1,SNR=12						
TORD	Torodi Ar. Bea	148.45	286	PKPbc	PKPbc	10 16 00.8	-0.5
	baz=61,slow=3.6						

IDC 24 10:00:00.5±0.6, **29°.33S×178°.41W, h140^{km}**±9^{km}, **mb3.2**/2, **mb1 3.5**/3, **mb1mx3.1**/39, **mbtmp3.8**/3, **Error ellipse: s-maj=33.8km s-min=23.7km az=116.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.44	79	P	Pn	10 00 20.6	+0.3
	250nm,0.3s,baz=194,slow=19,SNR=7.5						
RAO				S	Sn	10 00 36.9	+1.4
	782nm,0.3s,baz=119,slow=22,SNR=16						
URZ	Urewera	9.65	202	P	Pn	10 02 14.4	-1.4
	0.1nm,0.3s,baz=343,slow=19,SNR=3.5						
URZ				S	Sn	10 04 02.7	+0.2
	2.7nm,0.3s,baz=219,slow=22,SNR=13						
ASAR	Alice Springs	42.82	266	P	P	10 07 44.8	0.0
	0.3nm,0.4s,baz=99,slow=6.6,SNR=9.6						
WRA	Warramunga Arr	43.71	271	P	P	10 07 52.0	+0.2
	0.3nm,0.3s,baz=110,slow=7.9,SNR=15						
AKASG	Malin Array Be	150.24	324	PKPbc	PKPbc	10 19 33.6	-1.0
	0.6nm,0.3s,baz=48,slow=3.1,SNR=3.1						
TORD	Torodi Ar. Bea	163.89	180	PKPab	PKPab	10 20 41.0	+0.3
	baz=183,slow=4.6						

IDC 24 10:02:46.6±605.0, **51°.21N×114°.06E, h0^{km}, Error ellipse: s-maj=217.3km s-min=132.1km az=56.0, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I34MN	SONGINO INFRAS	6.04	239	*i*		10 39 50.0	
	baz=54,slow=315,SNR=1.0						
I45RU	USSURIYSK INFR	13.94	113	*i*		11 32 10.0	
	baz=307,slow=312,SNR=5.8						
I30JP	ISUMI INFRASON	24.68	120	*i*		12 47 20.4	
	baz=321,slow=291,SNR=6.1						

NIED ***24*** *10:28:00, 45°.80N×151°.60E, h17^{km}, Mw4.0 Best double couple: M$_0$1.02000×10^{15} NP1:ϕ$_s$246.00000°, δ63.00000°, λ-175.00000°. NP2:ϕ$_s$154.00000°, δ86.00000°, λ-27.00000°.*
ISCJB ***24*** *10:28:03.3±0.4, 45°.41N±0°.05×151°.74E±0°.05, h30^{km}, mb4.0/29, MS3.5/15, Error ellipse: s-maj=8.1km s-min=3.0km az=148.2*
JMA ***24*** *10:28:04.0±0.9, 45°.81N×151°.60E, h30^{km}, M4.7*
MOS ***24*** *10:28:04.9±1.0, 45°.45N×151°.76E, h42^{km}, mb4.5/5, Error ellipse: s-maj=8.7km s-min=7.2km az=135.3*
SKHL ***24*** *10:28:05.5±0.1, 45°.30N×151°.84E, h54^{km}±6^{km}, mb4.2/8*
NEIC ***24*** *10:28:06.1±0.6, 45°.46N×151°.63E, h35^{km}±5^{km}, mb5.0/3, Error ellipse: s-maj=8.9km s-min=4.4km az=142.0*
IDC ***24*** *10:28:08.3±2.7, 45°.56N×151°.54E, h52^{km}±24^{km}, mb3.5/17, mb1 3.7/21, mb1mx3.6/68, mbtmp3.8/21, ML3.8/2, MS3.3/21, Ms1 3.3/21, ms1mx3.1/63, Error ellipse: s-maj=19.7km s-min=13.3km az=156.0*
ISC 24 10:28:05.3±0.6, **45°.34N**±0°.07×**151°.78E**±0°.06, **h30^{km}, n135,** σ**1^{s}.30**/137, **mb4.0**/29, **MS3.6**/15, **4C-3D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.76	269	*i* P	Pn	10 28 48.0	+0.5
KUR				AMB	AMB	10 28 50.0	
	72nm,0.3s						
KUR				AMB	AMB	10 28 50.0	
	37nm,0.3s						
KUR				AMB	AMB	10 28 50.0	
	21nm,0.3s						
KUR				*i* S	Sn	10 29 19.8	0.0
KUR				A	A	10 29 26.7	
	108nm,0.5s						
KUR				A	A	10 29 26.7	
	296nm,0.5s						
KUR	Kuril'sk	2.76	269*d*	*i*PN	Pn	10 28 48.1	+0.5
KUR				*i* S	Sn	10 29 19.8	0.0
KUR				pmax	pmax		
	comp=Z,211nm,0.4s						
KUR				pmax	pmax		
	comp=N,72nm,0.3s						
KUR				pmax	pmax		
	comp=E,37nm,0.3s						
KUR				smax	smax		
	comp=N,1µm,0.5s						
KUR				smax	smax		
	comp=E,296nm,0.4s						
SHO	Shikotan	3.83	249	*i* P	Pn	10 29 02.0	-0.2
SHO				AMB	AMB	10 29 06.0	
	comp=E,31nm,0.3s						
SHO				AMB	AMB	10 29 06.0	
	comp=E,44nm,0.3s						
SHO				AMB	AMB	10 29 06.0	
	comp=E,10.0nm,0.3s						
SHO				*e*S	Sn	10 29 45.8	-0.3
SHO				A	A	10 29 57.5	
	comp=E,64nm,0.5s						
SHO				A	A	10 29 57.5	
	comp=E,236nm,0.5s						
SHO	Shikotan	3.83	249*c*	*i*PN	Pn	10 29 02.6	+0.4
SHO				*e*S	Sn	10 29 45.8	-0.3
SHO				pmax	pmax		
	comp=N,31nm,0.3s						
SHO				pmax	pmax		
	comp=E,44nm,0.3s						
SHO				pmax	pmax		
	comp=Z,100nm,0.3s						
SHO				smax	smax		
	comp=E,236nm,0.5s						
SHO				smax	smax		
	comp=N,64nm,0.3s						
YUK	Yuzh-Kuril'sk	4.42	255	*i* P	Pn	10 29 11.0	+0.8
YUK				AMB	AMB	10 29 15.0	
	comp=N,103nm,0.4s						
YUK				AMB	AMB	10 29 15.0	
	comp=N,77nm,0.4s						
YUK				AMB	AMB	10 29 15.0	
	comp=N,21nm,0.4s						
YUK				*e*S	Sn	10 30 00.2	-0.4
YUK				A	A	10 30 11.6	
	comp=N,38nm,0.5s						
YUK				A	A	10 30 11.6	
	comp=N,59nm,0.5s						
YUK	Yuzh-Kuril'sk	4.42	255*c*	*i*PN	Pn	10 29 11.9	+1.7
YUK				*e*S	Sn	10 30 02.2	+1.6
YUK				pmax	pmax		
	comp=N,103nm,0.4s						
YUK				pmax	pmax		
	comp=Z,209nm,0.4s						
YUK				pmax	pmax		
	comp=E,77nm,0.3s						
YUK				smax	smax		
	comp=N,380nm,0.6s						
YUK				smax	smax		
	comp=E,591nm,0.5s						
LAGR	Lagunnoye	4.46	255	*e*P	Pn	10 29 12.0	+1.1
LAGR				AMB	AMB	10 29 21.0	
	comp=E,159nm,0.4s						
LAGR				AMB	AMB	10 29 21.0	
	comp=E,263nm,0.4s						
LAGR				AMB	AMB	10 29 21.0	
	comp=E,20nm,0.4s						
LAGR				*e*S	Sn	10 30 02.0	+0.3
LAGR				A	A	10 30 19.0	
	comp=E,68nm,0.5s						
LAGR				A	A	10 30 19.0	
	comp=E,23nm,0.5s						
LAGR	Lagunnoye	4.46	255	*e*PN	Pn	10 29 12.8	+1.9
LAGR				*e*S	Sn	10 30 03.8	+2.1
LAGR				pmax	pmax		
	comp=E,263nm,0.4s						
LAGR				pmax	pmax		
	comp=Z,196nm,0.4s						
LAGR				pmax	pmax		
	comp=N,159nm,0.3s						
LAGR				smax	smax		
	comp=N,684nm,0.4s						
LAGR				smax	smax		
	comp=E,228nm,0.5s						
GRPR	Tuman	4.49	255	*e*P	Pn	10 29 12.0	+0.7
GRPR				AMB	AMB	10 29 22.0	
	comp=E,139nm,0.4s						
GRPR				AMB	AMB	10 29 22.0	
	comp=E,82nm,0.4s						
GRPR				AMB	AMB	10 29 22.0	
	comp=E,22nm,0.4s						
GRPR				*e*S	Sn	10 30 03.0	+0.5
GRPR				A	A	10 30 09.0	
	comp=E,95nm,0.5s						
GRPR				A	A	10 30 09.0	
	comp=E,28nm,0.5s						
GRPR	Tuman	4.49	255	*e*PN	Pn	10 29 12.9	+1.6
GRPR				*e*S	Sn	10 30 03.8	+1.3
GRPR				pmax	pmax		
	comp=E,82nm,0.4s						
GRPR				pmax	pmax		
	comp=Z,216nm,0.4s						

GRPR				pmax	pmax		
	comp=N,139nm,0.5s						
GRPR				smax	smax		
	comp=E,276nm,0.5s						
GRPR				smax	smax		
	comp=N,95nm,0.3s						
GLVR	**Golovnino**	**4.75**	**253**	*e*P	**Pn**	**10 29 16.0**	**+1.1**
GLVR				AMB	AMB	10 29 31.0	
	comp=N,313nm,0.5s						
GLVR				AMB	AMB	10 29 31.0	
	comp=N,138nm,0.5s						
GLVR				AMB	AMB	10 29 31.0	
	comp=N,15nm,0.5s						
GLVR				*e*S	**Sn**	**10 30 09.5**	**+0.6**
GLVR				A	A	10 30 16.0	
	comp=N,17nm,0.5s						
GLVR				A	A	10 30 16.0	
	comp=N,30nm,0.5s						
GLVR	**Golovnino**	**4.75**	**253**	*e*PN	**Pn**	**10 29 16.8**	**+1.9**
GLVR				*e*S	**Sn**	**10 30 11.1**	**+2.2**
GLVR				pmax	pmax		
	comp=Z,145nm,0.5s						
GLVR				pmax	pmax		
	comp=N,313nm,0.4s						
GLVR				pmax	pmax		
	comp=E,138nm,0.3s						
GLVR				smax	smax		
	comp=E,299nm,0.5s						
GLVR				smax	smax		
	comp=N,168nm,0.2s						
NEM2	**Nemuro 2**	**4.76**	**248**	P	**Pn**	**10 29 13.7**	**-1.2**
NEM2				*e*S	**Sn**	**10 30 06.0**	**-3.0**
JRA	**Rausu**	**4.95**	**256**	P	**Pn**	**10 29 18.3**	**+0.7**
JNK	**Nakash**	**5.35**	**253**	P	**Pn**	**10 29 23.0**	**-0.1**
JAK	**Akkeshi**	**5.61**	**248**	*e*S	**Sn**	**10 30 26.1**	**-3.8**
JTKR	**Abashiri--Toko**	**5.78**	**259**	P	**Pn**	**10 29 29.8**	**+0.8**
SKR	**Severo-Kuril's**	**6.08**	**27**	*e*P	**Pn**	**10 29 33.1**	**0.0**
SKR				*e*S	**Sn**	**10 30 40.0**	**-1.7**
SKR				A	A	10 30 50.6	
	comp=N,87nm,0.7s						
SKR				A	A	10 30 50.6	
	comp=N,77nm,0.7s						
SKR	**Severo-Kuril's**	**6.08**	**27**	*e*PN	**Pn**	**10 29 33.1**	**0.0**
SKR				*e*S	**Sn**	**10 30 43.8**	**+2.1**
SKR				smax	smax		
	comp=E,78nm,0.7s						
SKR				smax	smax		
	comp=N,88nm,0.7s						
JAR	**Ashorobuto**	**6.10**	**253**	P	**Pn**	**10 29 34.1**	**+0.7**
JAR				*e*S	**Sn**	**10 30 41.4**	**-0.7**
JMP	**Maruseppu**	**6.15**	**260**	P	**Pn**	**10 29 35.0**	**+0.9**
JOB	**Onbets**	**6.21**	**250**	P	**Pn**	**10 29 34.8**	**-0.1**
YSS	**Yuzh-Sakhalins**	**6.47**	**288**	*e*P	**Pn**	**10 29 41.0**	**+2.5**
YSS				AMB	AMB	10 29 42.7	
	comp=N,20nm,0.5s						
YSS				*e*S	**Sn**	**10 30 50.1**	**-1.2**
YSS	**Yuzh-Sakhalins**	**6.47**	**288**	*e*Pn	**Pn**	**10 29 37.3**	**-1.2**
YSS	**Yuzh-Sakhalins**	**6.47**	**288**	⇓*e*PN	**Pn**	**10 29 41.0**	**+2.5**
YSS				*e*S	**Sn**	**10 30 53.1**	**+1.8**
YSS				pmax	pmax		
	comp=Z,20nm,0.5s						
YSS				pmax	pmax		
	comp=N,20nm,0.4s						
YSS				smax	smax		
	comp=E,30nm,0.7s						
YSS				MLR	MLR		
	comp=Z,400nm,16.0s						
JKK2	**Kamakawa 2**	**6.61**	**260**	P	**Pn**	**10 29 41.7**	**+1.3**
ASAJ	**Asahikawa**	**6.65**	**263**	P	**Pn**	**10 29 42.7**	**+1.8**
	comp=Z,2.1nm,0.3s,baz=83,slow=25,SNR=24						
ASAJ				LR	LR	10 32 28.5	
	comp=Z,332nm,18.6s,baz=23,slow=40						
ASAJ	**Asahikawa**	**6.65**	**263**	*e*Pn	**Pn**	**10 29 42.0**	**+1.0**
ASAJ	**Asahikawa**	**6.65**	**263**	P	**Pn**	**10 29 42.8**	**+1.8**
JCH	**Churui**	**6.65**	**249**	P	**Pn**	**10 29 40.5**	**-0.5**
MYR	**Moyori**	**6.86**	**247**	*e*P	**Pn**	**10 29 43.1**	**-0.7**
MYR				*e*S	**Sn**	**10 30 56.8**	**-4.0**
ERM	**Erimo**	**7.08**	**245**	*e*P	**Pn**	**10 29 47.6**	**+0.8**
ERM	**Erimo**	**7.08**	**245**	*e*Pn	**Pn**	**10 29 48.3**	**+1.5**
ERM	**Erimo**	**7.08**	**245**	*ce*PN	**Pn**	**10 29 47.6**	**+0.8**
ERM				pmax	pmax		
	comp=Z,16nm,0.6s						
TYV	**Tymovskoe**	**8.23**	**315**	*e*P	**Pn**	**10 30 03.6**	**+1.0**
TYV				AMB	AMB	10 30 05.1	
	comp=Z,9.0nm,0.8s						
TYV	**Tymovskoe**	**8.23**	**315**	*e*PN	**Pn**	**10 30 03.6**	**+1.0**
TYV				pmax	pmax		
	comp=Z,9.0nm,0.8s						
JNB	**Noboribetsu**	**8.27**	**253**	P	**Pn**	**10 30 04.1**	**+1.0**
JKB	**Kayabe**	**8.53**	**250**	P	**Pn**	**10 30 05.6**	**-1.0**
PEA0B	**Petropavlovsk-**	**8.68**	**24**	*e*Pn	**Pn**	**10 30 07.5**	**-1.2**
PETK	**Petropavlovsk-**	**8.68**	**24**	P	**Pn**	**10 30 08.3**	**-0.5**
	baz=162,slow=26						
PETK	**Petropavlovsk-**	**8.68**	**24**	*e*Pn	**Pn**	**10 30 08.0**	**-0.8**
PEA1	**Petropavlovsk-**	**8.69**	**24**	*e*Pn	**Pn**	**10 30 08.3**	**-0.6**
JYM2	**Yakumo 2**	**8.87**	**253**	P	**Pn**	**10 30 11.6**	**+0.3**
PET	**Petropavlovsk**	**8.91**	**28**	*e*Pn	**Pn**	**10 30 11.8**	**0.0**
PET	**Petropavlovsk**	**8.91**	**28**	*e*PN	**Pn**	**10 30 11.8**	**0.0**
MJA0	**Matsu Arr-Jizo**	**13.47**	**234**	*e*P	**P**	**10 31 25.4**	**+2.1**
MAJO	**Matsushiro**	**13.49**	**234**	*e*P	**Pn**	**10 31 14.8**	**+0.1**
MAJO	**Matsushiro**	**13.49**	**234**	*e*Pn	**Pn**	**10 31 13.2**	**-1.5**
MAJO				*e*		10 31 14.7	
MAJO	**Matsushiro**	**13.49**	**234**	*i* P	**Pn**	**10 31 14.8**	**+0.1**
MJAR	**Matsushiro Arr**	**13.49**	**234**	P	**Pn**	**10 31 13.2**	**-1.5**
	comp=Z,0.2nm,0.3s,baz=71,slow=14,SNR=4.6						
MJAR				LR	LR	10 37 45.9	
	comp=Z,40nm,19.1s,baz=80,slow=43						
MJB9	**Matsu-Tunnel**	**13.49**	**234**	*e*Pn	**Pn**	**10 31 14.5**	**-0.2**
USA0B	**Ussuriysk Arra**	**14.11**	**272**	*e*Pn	**Pn**	**10 31 20.8**	**-2.1**
USRK	**Ussuriysk Ar.**	**14.11**	**272**	P	**Pn**	**10 31 21.6**	**-1.4**
	baz=308,slow=23						
USRK				LR	LR	10 36 48.6	
	comp=Z,128nm,19.2s,baz=45,slow=37						
KLR	**Kul'dur**	**14.13**	**293**	P	**Pn**	**10 31 22.2**	**-1.1**
	comp=Z,0.0nm,0.3s,baz=150,slow=8.1,SNR=2.4						
KLR				LR	LR	10 37 04.4	
	comp=Z,16nm,20.0s,baz=103,slow=39						
KLR	**Kul'dur**	**14.13**	**293**	*e*P	**Pn**	**10 31 24.1**	**+0.8**
KLR	**Kul'dur**	**14.13**	**293**	*i* P	**Pn**	**10 31 24.2**	**+0.9**
MA2	**Magadan**	**14.27**	**358**	LR	LR	10 36 36.1	
	comp=Z,78nm,18.5s,baz=194,slow=36						
JHJ	**Hachijo jima 2**	**15.32**	**221**	LR	LR	10 41 18.9	
	comp=Z,37nm,18.1s,baz=48,slow=52						
KSRS	**Korea Array**	**19.50**	**255**	P	**P**	**10 32 30.4**	**+0.4**
	comp=Z,0.2nm,0.3s,baz=66,slow=11,SNR=7.0						
KSRS				LR	LR	10 39 28.8	
	comp=Z,42nm,19.5s,baz=50,slow=35						
KSRS	**Korea Array**	**19.50**	**255**	*e*P	**Pn**	**10 32 30.8**	**-0.5**
KSAR	**Wonju Array Be**	**19.54**	**255**	P	**P**	**10 32 30.4**	**+0.1**
KSAR	**Wonju Array Be**	**19.54**	**255**	P	**P**	**10 32 30.4**	**+0.1**
JNU	**Nakatsue**	**20.20**	**240**	LR	LR	10 41 06.3	
	comp=Z,74nm,20.1s,baz=124,slow=39						
YAK	**Yakutsk**	**21.05**	**330**	LR	LR	10 40 47.6	
	comp=Z,44nm,19.0s,baz=82,slow=36						
SPIA	**Saint Paul Isl**	**26.19**	**49**	*e*P	**P**	**10 33 37.0**	**+0.1**
	comp=Z,97nm,1.1s						
H11N2	**WAKE ISLAND Hy**	**28.44**	**149**	T	T	11 04 41.4	
	baz=337,slow=75,SNR=66						
H11N1	**WAKE ISLAND Hy**	**28.46**	**149**	T	T	11 05 06.8	
	baz=337,slow=75,SNR=36						
H11N3	**WAKE ISLAND Hy**	**28.46**	**149**	T	T	11 04 45.1	
	baz=337,slow=75,SNR=40						
H11S1	**WAKE ISLAND Hy**	**29.50**	**150**	T	T	11 06 51.3	
	baz=338,slow=76,SNR=50						
H11S3	**WAKE ISLAND Hy**	**29.51**	**150**	T	T	11 07 04.4	
	baz=338,slow=76,SNR=30						
H11S2	**WAKE ISLAND Hy**	**29.52**	**150**	T	T	11 07 01.2	
	baz=338,slow=76,SNR=3.3						
ULN	**Ulaanbaatar**	**30.51**	**291**	*e*P	**P**	**10 34 16.1**	**+0.3**
ULN	**Ulaanbaatar**	**30.51**	**291**	*ce*P	**P**	**10 34 16.1**	**+0.3**
ULN				pmax	pmax		
	comp=Z,4.0nm,1.7s						
SONA0	**Songino Array**	**30.95**	**291**	*e*P	**P**	**10 34 19.0**	**-0.6**
SONM	**Songino Array**	**30.95**	**291**	P	**P**	**10 34 19.0**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=59,slow=12,SNR=3.6						
SONM				LR	LR	10 47 39.0	
	comp=Z,93nm,18.6s,baz=70,slow=38						
GUMO	**Guam**	**32.19**	**193**	LR	LR	10 48 31.3	
	comp=Z,30nm,18.4s,baz=14,slow=38						
XAN	**Xi'an**	**34.48**	**266**	P	**P**	**10 34 54.4**	**+3.9**
XAN				pmax	pmax		
	comp=Z,6.0nm,1.0s						
XAN				pmax	pmax		
	comp=Z,97nm,4.0s						
KDAK	**Kodiak Island**	**35.72**	**49**	*i* P	**P**	**10 35 01.4**	**+0.5**
LZH	**Lanzhou**	**37.01**	**273**	*e*P	**P**	**10 35 13.6**	**+1.2**
LZH				pP	sP	10 35 26.1	+1.2
LZH				sP	pP	10 35 30.5	+9.3
LZH				pmax	pmax		
	comp=Z,27nm,1.0s						
ILAR	**Eielson Array**	**38.23**	**37**	P	**P**	**10 35 21.8**	**-0.4**
	comp=Z,0.3nm,0.8s,baz=264,slow=7.2,SNR=3.4						
ILB	**Eielson Array**	**38.23**	**37**	*e*P	**P**	**10 35 21.8**	**-0.4**
HVS	**Khovu-Aksy**	**38.23**	**300**	*e*P	**P**	**10 35 22.8**	**+0.4**
HVS	**Khovu-Aksy**	**38.23**	**300**	*i* P	**P**	**10 35 22.8**	**+0.4**
HVS				pmax	pmax		
	comp=Z,7.0nm,0.6s						
GTA	**Gaotai**	**38.28**	**280**	*e*P	**P**	**10 35 23.8**	**+0.7**
GTA				pP	pP	10 35 27.8	-4.1
GTA				sP	sP	10 35 30.8	-4.7
GTA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ZALV	**Zalesovo Beam**	**42.69**	**307**	LR	LR	10 54 09.8	
	comp=Z,68nm,18.0s,baz=74,slow=37						
INK	**Inuvik**	**43.34**	**32**	P	**P**	**10 36 04.7**	**+0.5**
	comp=Z,1.5nm,1.0s,baz=280,slow=6.1,SNR=2.5						
MK32	**Makanchi Array**	**46.77**	**298**	*e*P	**P**	**10 36 30.6**	**-1.2**
MKAR	**Makanchi Array**	**46.77**	**298**	P	**P**	**10 36 30.6**	**-1.2**
	comp=Z,0.6nm,0.5s,baz=75,slow=7.3,SNR=7.6						
MKAR				LR	LR	10 57 09.7	
	comp=Z,119nm,18.1s,baz=74,slow=37						
KURK	**Kurchatov**	**47.38**	**304**	*e*P	**P**	**10 36 35.5**	**-0.9**
KURK	**Kurchatov**	**47.38**	**304**	*e*P	**P**	**10 36 35.5**	**-0.9**
KURBB	**Kurchatov Arra**	**47.47**	**304**	P	**P**	**10 36 35.5**	**-1.6**
	comp=Z,0.7nm,0.4s,baz=73,slow=8.6,SNR=4.1						
BVAR	**Borovoye Array**	**51.04**	**310**	LR	LR	11 00 21.4	
	comp=Z,64nm,19.1s,baz=68,slow=38						
BRVK	**Borovoye**	**51.08**	**310**	*e*P	**P**	**10 37 06.6**	**+1.9**
BRVK	**Borovoye**	**51.08**	**310**	*i* P	**P**	**10 37 06.6**	**+1.9**
BRVK				pmax	pmax		
	comp=Z,1.0nm,1.0s						
CMAR	**Chiang Mai Arr**	**51.13**	**256**	LR	LR	10 59 50.8	
	comp=Z,27nm,20.0s,baz=198,slow=37						
YKA	**Yellowknife Ar**	**52.61**	**36**	P	**P**	**10 37 15.3**	**-0.6**
	comp=Z,0.4nm,0.7s,baz=299,slow=7.5,SNR=2.5						
YKA				LR	LR	11 02 39.3	
	comp=Z,4.7nm,18.2s,baz=258,slow=39						
KK31	**Karatay Array**	**55.87**	**299**	*e*P	**P**	**10 37 39.3**	**-0.7**
KK31	**Karatay Array**	**55.87**	**299**	*e*P	**P**	**10 37 39.3**	**-0.7**
KKAR	**Karatay Array**	**55.87**	**299**	*e*P	**P**	**10 37 39.3**	**-0.6**
KKAR	**Karatay Array**	**55.87**	**299**	*e*P	**P**	**10 37 39.3**	**-0.6**
ABKAR	**Akbulak array**	**58.62**	**310**	*e*P	**P**	**10 37 58.4**	**-0.8**
AKTO	**Aktyubinsk**	**58.97**	**312**	LR	LR	11 06 02.1	
	comp=Z,93nm,18.0s,baz=34,slow=39						
NIL	**Nilore**	**59.47**	**288**	*e*P	**P**	**10 38 05.5**	**+0.1**
	comp=Z,12nm,0.9s						
NIL	**Nilore**	**59.47**	**288**	*e*P	**P**	**10 38 05.5**	**+0.1**
NIL				pmax	pmax		
	comp=Z,12nm,0.9s						
SUMG	**Summit**	**62.17**	**3**	*i* P	**P**	**10 38 23.2**	**-0.4**
SUMG	**Summit**	**62.17**	**3**	*e*P	**P**	**10 38 23.2**	**-0.4**
NV01	**Mina Array Sit**	**63.92**	**61**	*e*P	**P**	**10 38 36.6**	**+1.0**
NVAR	**Mina Array Bea**	**63.92**	**61**	P	**P**	**10 38 36.6**	**+1.0**
	comp=Z,0.7nm,0.7s,baz=292,slow=7.1,SNR=7.5						
FIA0	**FINESS Array S**	**64.91**	**334**	*e*P	**P**	**10 38 39.5**	**-1.9**
FIA0	**FINESS Array S**	**64.91**	**334**	*e*P	**P**	**10 38 39.5**	**-1.9**
FINES	**FINESS Array B**	**64.91**	**334**	P	**P**	**10 38 39.5**	**-1.9**
	comp=Z,2.0nm,0.6s,baz=20,slow=6.1,SNR=7.3						
FINES	**FINESS Array B**	**64.91**	**334**	*e*P	**P**	**10 38 40.0**	**-1.4**
FINES	**FINESS Array B**	**64.91**	**334**	*e*P	**P**	**10 38 40.0**	**-1.4**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.6s						
PDAR	**Pinedale Array**	**66.33**	**53**	P	**P**	**10 38 52.8**	**+1.5**
	comp=Z,0.1nm,0.3s,baz=321,slow=5.7,SNR=2.7						
GEYT	**Alibeck**	**66.52**	**301**	P	**P**	**10 38 51.8**	**-0.5**
	comp=Z,2.6nm,0.3s,baz=60,slow=7.3,SNR=1.8						
WR1	**Warramunga Arr**	**66.88**	**198**	*e*P	**P**	**10 38 54.7**	**+0.2**
	comp=Z,3.3nm,1.0s						
WRA	**Warramunga Arr**	**66.88**	**198**	P	**P**	**10 38 54.7**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=15,slow=6.6,SNR=5.1						
WRA	**Warramunga Arr**	**66.88**	**198**	*e*P	**P**	**10 38 56.5**	**+2.0**
WRA	**Warramunga Arr**	**66.88**	**198**	*e*P	**P**	**10 38 56.6**	**+2.0**
NB2	**NORSAR Subarra**	**69.25**	**341**	P	**P**	**10 39 07.4**	**-1.6**
	comp=Z,0.5nm,0.5s,baz=28,slow=6.5						
NOA	**NORSAR Array B**	**69.25**	**341**	P	**P**	**10 39 07.1**	**-1.9**
	comp=Z,1.8nm,0.8s,baz=28,slow=6.4,SNR=5.8						
NOA	**NORSAR Array B**	**69.25**	**341**	*e*P	**P**	**10 39 08.4**	**-0.6**
NOA	**NORSAR Array B**	**69.25**	**341**	*e*P	**P**	**10 39 08.4**	**-0.6**
NOA				pmax	pmax		
	comp=Z,1.0nm,0.6s						
HFS	**Hagfors**	**69.44**	**339**	P	**P**	**10 39 08.4**	**-1.8**
	comp=Z,3.8nm,0.7s,baz=54,slow=7.3,SNR=14						
ASAR	**Alice Springs**	**70.58**	**197**	P	**P**	**10 39 19.1**	**+1.6**
	comp=Z,0.3nm,0.6s,baz=11,slow=5.4,SNR=5.3						
KIV	**Kislovodsk**	**71.11**	**314**	*e*P	**P**	**10 39 20.9**	**+0.1**
KIV	**Kislovodsk**	**71.11**	**314**	*de*P	**P**	**10 39 21.8**	**+1.0**
KIV				*e**SP	**sP**	**10 39 35.0**	**+1.3**
KIV				pmax	pmax		
	comp=Z,8.0nm,0.5s						
KIV				MLR	MLR		
	comp=Z,61nm,16.0s						
KBZ	**Khabaz**	**71.16**	**314**	P	**P**	**10 39 19.1**	**-1.8**
	comp=Z,6.2nm,0.8s,baz=36,slow=3.8,SNR=15						
KBZ				LR	LR	11 14 10.8	
	comp=Z,50nm,18.7s,baz=34,slow=39						
AKASG	**Malin Array Be**	**72.19**	**326**	P	**P**	**10 39 25.9**	**-1.1**
	comp=Z,1.2nm,0.5s,baz=33,slow=6.8,SNR=5.3						
AKASG				LR	LR	11 12 54.0	
	comp=Z,32nm,19.9s,baz=330,slow=37						
GNI	**Garni**	**72.73**	**310**	LR	LR	11 13 39.4	
	comp=Z,44nm,20.1s,baz=13,slow=38						
CLL	**Collm**	**77.35**	**335**	*i* pP	pP	10 40 09.4	+3.0
EKA	**Eskdalemuir Ar**	**77.48**	**346**	P	**P**	**10 39 56.6**	**-0.9**
	comp=Z,0.4nm,0.4s,baz=358,slow=7.1,SNR=3.8						
TXAR	**Lajitas Array**	**79.00**	**59**	P	**P**	**10 40 06.7**	**+0.1**
	comp=Z,0.1nm,0.5s,baz=316,slow=6.3,SNR=3.6						
GERES	**GERESS Array B**	**79.30**	**333**	P	**P**	**10 40 06.5**	**-1.4**
	comp=Z,0.4nm,0.5s,baz=30,slow=6.7,SNR=2.8						
MMAI	**Mount Meron Ar**	**83.04**	**311**	LR	LR	11 21 44.0	
	comp=Z,47nm,18.4s,baz=350,slow=39						

MEX 24 10:29:08.7±0.3, 15°.09N×91°.83W, h170^{km}±10^{km}, MD4.0, Mexico-Guatemala border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CCIG	**Comitan**	**1.22**	**346**	*e*P	Pn	10 29 36.2	-1.2
CCIG				*e*S	Sn	10 29 57.4	-2.3
PCIG		**1.47**	**295**	*e*P	Pn	10 29 38.1	-1.4
PCIG				*e*S	Sn	10 30 01.4	-1.9
TGIG		**2.09**	**324**	*e*P	Pn	10 29 44.5	-1.7
TGIG				*e*S	Sn	10 30 13.2	-2.0

IDC 24 10:47:31.7±57.0, 13°.97S×165°.83E, h0^{km}, mb4.2/3, mb1 4.4/3, mb1mx3.7/44, mbtmp4.2/3, Error ellipse: s-maj=962.7km s-min=100.7km az=63.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	**28.45**	**227**	P	P	10 53 28.6	+0.1
	2.0nm,0.5s,baz=47,slow=7.7,SNR=11						
WRA	**Warramunga Arr**	**30.67**	**254**	P	P	10 53 48.4	+0.1
	1.2nm,0.5s,baz=85,slow=8.9,SNR=28						
ASAR	**Alice Springs**	**31.65**	**248**	P	P	10 53 56.7	-0.3
	2.6nm,0.6s,baz=78,slow=9.1,SNR=61						

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*NIC **24** 10:56:25.4±0.3, 35°.81N×31°.48E, h10^{km}, ML3.3*
*DDA **24** 10:56:29.8, 35°.54N×31°.63E, h21^{km}, Ml3.3*
*CSEM **24** 10:56:31.4±0.4, 35°.50N×31°.73E, h2^{km}, ML3.1, Error ellipse: s-maj=10.2km s-min=5.0km az=37.0*
*ISK **24** 10:56:31.2, 35°.57N×31°.79E, h5^{km}, ML3.1/21*

ISC 24 10:56:31.8±1.1, 35°.56N±0°.03×31°.66E±0°.03, h28^{km}±12^{km}, n77, σ2^{s}.39/107, Cyprus region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AKMC	**Akamas**	**0.77**	**134**	P	**Pb**	**10 56 44.6**	**-2.0**
	baz=318						
AKMC	**Akamas**	**0.77**	**134**	P	**Pb**	**10 56 44.6**	**-2.0**
GAZI	**Gazipasa**	**0.86**	**38**	PG	**Pb**	**10 56 47.2**	**-1.0**
GAZI	**Gazipasa**	**0.86**	**38**	*i* P	**Pb**	**10 56 47.0**	**-1.2**
GAZI				*i* S	**Sb**	**10 56 57.3**	**-2.0**
GAZI	**Gazipasa**	**0.86**	**38**	*e*Pg	**Pb**	**10 56 47.2**	**-1.0**
GAZI				S	**Sb**	**10 56 57.3**	**-2.0**
ALFC	**Alefka**	**0.87**	**117**	P	**Pb**	**10 56 46.5**	**-1.8**
	baz=305						
ALFC				S	**Sn**	**10 57 02.0**	**+2.1**
PPCY	**Paphos**	**0.88**	**140**	P	**Pn**	**10 56 47.5**	**-0.7**
	baz=322						
LEF	**Lefka**	**1.10**	**113**	PG	**Pb**	**10 56 51.3**	**-0.9**
LEF				SG	**Sn**	**10 57 05.8**	**+0.3**
LEF	**Lefka**	**1.10**	**113**	P	**Pn**	**10 56 50.4**	**-0.9**
LEF	**Lefka**	**1.10**	**113**	*e*Pg	**Pb**	**10 56 51.3**	**-0.9**
LEF				*e*Sg	**Sn**	**10 57 05.8**	**+0.3**
LEF				S	**Sb**	**10 57 07.0**	**+0.9**
AKDN	**Akdeniz- K˜–br**	**1.10**	**103**	PG	**Pb**	**10 56 51.5**	**-0.7**
AKDN	**Akdeniz- K˜–br**	**1.10**	**103**	*e*Pg	**Pb**	**10 56 51.5**	**-0.7**
TEKE	**Tekeli-Mersin**	**1.32**	**63**	PN	**Pb**	**10 56 55.1**	**-0.8**
TEKE	**Tekeli-Mersin**	**1.32**	**63**	*e*Pn	**Pb**	**10 56 55.1**	**-0.8**
MAMC	**Mammari**	**1.33**	**107**	P	**Pn**	**10 56 52.6**	**-1.9**
	baz=294						
MAMC	**Mammari**	**1.33**	**107**	P	**Pn**	**10 56 52.6**	**-1.9**
KEPZ	**Antalya-Kepez**	**1.34**	**358**	*i* P	**Pn**	**10 56 53.5**	**-1.2**
KEPZ				*i* S	**Sn**	**10 57 11.0**	**-0.5**
KEPZ	**Antalya-Kepez**	**1.34**	**358**	P	**Pn**	**10 56 53.5**	**-1.2**
KEPZ				S	**Sn**	**10 57 11.0**	**-0.5**
CSS	**Mathiatis**	**1.49**	**113**	PN	**Pb**	**10 56 57.9**	**-1.0**
CSS				SN	**Sb**	**10 57 19.2**	**+1.8**
CSS	**Mathiatis**	**1.49**	**113**	P	**Pn**	**10 56 55.7**	**-1.0**
	baz=299						
CSS	**Mathiatis**	**1.49**	**113**	P	**Pn**	**10 56 55.7**	**-1.0**
CSS	**Mathiatis**	**1.49**	**113**	*e*Pn	**Pb**	**10 56 57.9**	**-1.0**
CSS				*e*Sn	**Sb**	**10 57 19.2**	**+1.8**
GULN	**MERSIN_Gulnar**	**1.65**	**67**	*i* P	**Pb**	**10 57 00.5**	**-1.1**
GULN				*i* S	**Sb**	**10 57 24.6**	**+2.6**
GULN	**MERSIN_Gulnar**	**1.65**	**67**	P	**Pb**	**10 57 00.5**	**-1.1**
GULN				S	**Sb**	**10 57 24.6**	**+2.6**
IKL	**Isikli**	**1.78**	**67**	PN	**Pb**	**10 57 02.4**	**-1.3**
IKL	**Isikli**	**1.78**	**67**	*e*Pn	**Pb**	**10 57 02.4**	**-1.3**
KORT	**Korkueli**	**1.78**	**324**	PN	**Pb**	**10 57 04.9**	**+1.0**
KORT	**Korkueli**	**1.78**	**324**	*i* P	**Pb**	**10 57 02.4**	**-1.6**
KORT				*i* S	**Sb**	**10 57 32.2**	**+6.3**
KORT	**Korkueli**	**1.78**	**324**	P	**Pb**	**10 57 02.3**	**-1.6**
KORT	**Korkueli**	**1.78**	**324**	*e*Pn	**Pb**	**10 57 04.9**	**+1.0**
KORT				S	**Sb**	**10 57 32.2**	**+6.3**
AKAS	**Kas**	**1.80**	**293**	PN	**Pb**	**10 57 05.8**	**+1.7**
AKAS	**Kas**	**1.80**	**293**	*e*Pn	**Pb**	**10 57 05.8**	**+1.7**
ELL	**Elmali**	**1.85**	**310**	PN	**Pb**	**10 57 06.4**	**+1.4**
ELL	**Elmali**	**1.85**	**310**	*e*Pn	**Pb**	**10 57 06.4**	**+1.4**
KEBE	**Keben-Mersin**	**1.89**	**61**	PN	**Pb**	**10 57 04.7**	**-0.9**
KEBE	**Keben-Mersin**	**1.89**	**61**	*e*Pn	**Pb**	**10 57 04.7**	**-0.9**
SUTC	**Sutluce-Ispart**	**1.98**	**345**	PN	**Pb**	**10 57 07.8**	**+0.5**
SUTC	**Sutluce-Ispart**	**1.98**	**345**	*e*Pn	**Pb**	**10 57 07.8**	**+0.5**
EREN	**Erenkoy**	**2.05**	**90**	PN	**Pb**	**10 57 06.8**	**-1.5**
EREN	**Erenkoy**	**2.05**	**90**	*e*Pn	**Pb**	**10 57 06.8**	**-1.5**
KIZK	**Mersin**	**2.21**	**65**	PN	**Pb**	**10 57 09.2**	**-1.9**
KIZK	**Mersin**	**2.21**	**65**	*i* P	**Pb**	**10 57 09.3**	**-1.8**
KIZK				*i* S	**Sb**	**10 57 38.4**	**+0.3**
KIZK	**Mersin**	**2.21**	**65**	P	**Pb**	**10 57 09.4**	**-1.8**
KIZK				S	**Sb**	**10 57 38.4**	**+0.3**
KMER	**Konya-Meram**	**2.28**	**14**	*i* P	**Pb**	**10 57 10.3**	**-2.0**
KMER				*i* S	**Sb**	**10 57 44.8**	**+4.8**
KMER	**Konya-Meram**	**2.28**	**14**	P	**Pb**	**10 57 10.3**	**-2.0**
KMER				S	**Sb**	**10 57 44.8**	**+4.8**
ISP	**Isparta**	**2.44**	**338**	PN	**Pb**	**10 57 14.5**	**-0.5**
ISP	**Isparta**	**2.44**	**338**	*e*Pn	**Pb**	**10 57 14.5**	**-0.5**
KONT	**Konya--Tatoy**	**2.45**	**13**	PN	**Pb**	**10 57 13.6**	**-1.5**
KONT	**Konya--Tatoy**	**2.45**	**13**	*i* P	**Pb**	**10 57 12.2**	**-3.0**
KONT				*i* S	**Sb**	**10 57 48.5**	**+3.6**
KONT	**Konya--Tatoy**	**2.45**	**13**	*e*Pn	**Pb**	**10 57 13.6**	**-1.5**
BAGO	**Egridir - ISPA**	**2.52**	**344**	*i* P	**Pb**	**10 57 13.2**	**-3.3**
BAGO				*i* S	**Sb**	**10 57 45.6**	**-1.5**
DOGA	**KONYA_Doganhis**	**2.54**	**0**	*i* P	**Pn**	**10 57 11.8**	**+0.5**
DOGA				*i* S	**Sb**	**10 57 45.8**	**-1.9**
DOGA	**KONYA_Doganhis**	**2.54**	**0**	P	**Pn**	**10 57 11.8**	**+0.5**
DOGA				S	**Sb**	**10 57 45.8**	**-1.9**
MERS	**Mersin**	**2.66**	**60**	PN	**Pb**	**10 57 15.5**	**-3.2**
MERS	**Mersin**	**2.66**	**60**	*e*Pn	**Pb**	**10 57 15.5**	**-3.2**
LADK	**Ladik-KONYA**	**2.69**	**12**	PN	**Pb**	**10 57 17.5**	**-1.9**
LADK	**Ladik-KONYA**	**2.69**	**12**	*e*Pn	**Pb**	**10 57 17.5**	**-1.9**
KERG	**Konya-Eregli**	**2.71**	**46**	*i* P	**Pb**	**10 57 16.9**	**-2.9**
KERG				*i* S	**Sb**	**10 57 53.9**	**+1.2**
KERG	**Konya-Eregli**	**2.71**	**46**	P	**Pb**	**10 57 16.9**	**-2.9**
KERG				S	**Sb**	**10 57 53.9**	**+1.2**
DALY	**Dalyan (Mu˜la**	**2.73**	**298**	*i* P	**Pn**	**10 57 10.9**	**-2.8**
DALY				*i* S	**Sn**	**10 57 40.5**	**-5.4**
DALY	**Dalyan (Mu˜la**	**2.73**	**298**	P	**Pn**	**10 57 10.9**	**-2.8**
DALY				S	**Sn**	**10 57 40.5**	**-5.4**
KDHN	**Kadinhani**	**2.98**	**7**	*i* P	**Pn**	**10 57 19.7**	**+2.5**
KDHN	**Kadinhani**	**2.98**	**7**	P	**Pn**	**10 57 19.7**	**+2.5**
SULT	**Sultanhani-AKS**	**3.02**	**29**	PN	**Pb**	**10 57 21.9**	**-3.1**
SULT	**Sultanhani-AKS**	**3.02**	**29**	*e*Pn	**Pb**	**10 57 21.9**	**-3.1**
GULE	**Gulek**	**3.05**	**55**	*i* P	**Pb**	**10 57 21.7**	**-3.7**
GULE				*i* S	**Sb**	**10 58 02.6**	**+0.4**
GULE	**Gulek**	**3.05**	**55**	P	**Pb**	**10 57 21.7**	**-3.7**
GULE				S	**Sb**	**10 58 02.6**	**+0.4**
KARA	**Karaisali**	**3.22**	**57**	PN	**Pb**	**10 57 23.9**	**-4.4**
KARA	**Karaisali**	**3.22**	**57**	*e*Pn	**Pb**	**10 57 23.9**	**-4.4**
YURE	**YUREGIR**	**3.45**	**67**	PN	**Pn**	**10 57 26.7**	**+3.0**
YURE	**YUREGIR**	**3.45**	**67**	*e*Pn	**Pn**	**10 57 26.7**	**+3.0**
YAYL	**Yayladag**	**3.65**	**81**	PN	**Pn**	**10 57 29.5**	**+3.1**
YAYL	**Yayladag**	**3.65**	**81**	*i* P	**Pn**	**10 57 27.9**	**+1.5**
YAYL				*i* S	**Sn**	**10 58 11.7**	**+3.1**
YAYL	**Yayladag**	**3.65**	**81**	P	**Pn**	**10 57 27.9**	**+1.5**
YAYL	**Yayladag**	**3.65**	**81**	*e*Pn	**Pn**	**10 57 29.5**	**+3.1**
YAYL				S	**Sn**	**10 58 11.7**	**+3.1**
TAHT	**Tahtakopru-Hat**	**3.76**	**76**	PN	**Pn**	**10 57 31.3**	**+3.4**
TAHT	**Tahtakopru-Hat**	**3.76**	**76**	*e*Pn	**Pn**	**10 57 31.3**	**+3.4**

MEX 24 10:59:24.6±0.6, 18°.11N×97°.64W, h62^{km}±6^{km}, MD3.7, Central Mexico

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TPIG	**Tehuac#an**	**0.41**	**41**	*i* P	Pn	10 59 34.6	-1.5
TPIG				*e*S	Sn	10 59 42.6	-1.8
TLIG	**Tlapa**	**1.03**	**239**	*i* P	Pn	10 59 41.8	-1.5
TLIG				*i* S	Sn	10 59 55.8	-1.3
PPM	**Popocatepetl**	**1.33**	**316**	*e*P	Pn	10 59 45.4	-2.2
PPM				*i* S	Sn	11 00 03.5	-1.3
VHO	**Vista Hermosa**	**1.34**	**140**	*e*P	Pn	10 59 46.1	-1.3
VHO				*e*S	Sn	11 00 02.9	-1.6

MEX 24 11:03:49.1±0.3, 24°.80N×99°.68W, h20^{km}±94^{km}, MD3.5, Central Mexico

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LNIG	**Linares**	**0.22**	**65**	*e*P	Pb	11 03 53.6	-1.0
	baz=245,slow=11						
LNIG				*e*S	Sb	11 03 57.1	-1.2

IDC 24 11:09:08.3±2.3, 3°.49N×127°.12E, h0^{km}, mb3.2/3, mb1 3.4/3, mb1mx3.2/49, mbtmp3.2/3, Error ellipse: s-maj=170.5km s-min=28.9km az=66.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**24.34**	**163**	P	P	11 14 27.3	-0.8
	0.2nm,0.5s,baz=343,slow=10,SNR=8.0						
ASAR	**Alice Springs**	**27.79**	**167**	P	P	11 15 00.1	+0.8
	0.3nm,0.7s,baz=349,slow=7.2,SNR=6.6						
MKAR	**Makanchi Array**	**57.97**	**325**	P	P	11 19 02.7	-0.1
	0.1nm,0.4s,baz=123,slow=7.7,SNR=2.8						

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*ISCJB **24** 11:46:51.7±0.8, 56°.9S±0°.1×140°.6W±0°.3, h10^{km}, mb4.1/6, MS3.8/16, Error ellipse: s-maj=22.4km s-min=16.2km az=7.9*
*IDC **24** 11:46:51.8±1.0, 56°.86S×140°.62W, h0^{km}, mb4.1/6, mb1 4.2/6, mb1mx4.0/33, mbtmp4.1/6, MS3.8/16, Ms1 3.8/16, ms1mx3.6/29, Error ellipse: s-maj=30.8km s-min=25.2km az=151.0*

ISC 24 11:46:53.3±0.8, 56°.9S±0°.1×140°.5W±0°.2, h10^{km}, n41, σ0^{s}.73/14, mb4.4/6, MS3.8/16, Pacific-Antarctic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
VNDA	**Vanda**	**28.39**	**203**	P	**P**	**11 52 47.5**	**+0.4**
	0.3nm,0.7s,baz=101,slow=10,SNR=2.6						
VNDA				LR	LR	12 01 02.5	
	comp=Z,133nm,18.3s,baz=82,slow=30						
QSPA	**South Pole Qui**	**33.27**	**180**	P	**P**	**11 53 31.4**	**+0.9**
	9.8nm,1.0s,baz=72,slow=3.7,SNR=20						
QSPA				LR	LR	12 05 23.4	

	comp=Z,224nm,18.1s,baz=72,slow=33						
RKT	Rikitea	33.97	9	*e*LQ	LQ	12 01 19.8	
	287nm,27.2s						
RKT				*e*LR	LR	12 02 44.4	
	336nm,25.5s						
RKT	Rikitea	33.97	9	*e*T	T	12 29 18.6	
	3.2nm,0.4s						
TBI	Tubuai	34.13	345	*e*LR	LR	12 02 34.6	
	430nm,28.2s,baz=178						
TBI	Tubuai	34.13	345	*e*T	T	12 29 27.8	
	9.8nm,0.3s						
PMSA	Palmer Station	35.88	135	LR	LR	12 03 44.9	
	comp=Z,206nm,20.6s,baz=239,slow=28						
RPN	Rapa Nui	37.09	50	LR	LR	12 04 35.6	
	comp=Z,40nm,18.6s,baz=167,slow=29						
RAR	Rarotonga	38.35	330	LR	LR	12 07 41.5	
	comp=Z,112nm,18.2s,baz=152,slow=33						
PPT2	Papeete2	39.82	346	*e*LR	LR	12 05 09.7	
	448nm,28.0s						
PPT	Papeete	39.84	346	LR	LR	12 07 07.9	
	comp=Z,135nm,20.6s,baz=140,slow=31						
VAH	Vaihoa	41.92	350	*e*T	T	12 39 11.8	
	16nm,0.3s						
PLCA	Paso Flores	46.66	101	P	P	11 55 20.9	-0.9
	3.1nm,0.9s,baz=280,slow=9.0,SNR=3.6						
PLCA				LR	LR	12 10 31.9	
	comp=Z,79nm,18.3s,baz=243,slow=30						
VNA3	Neumayer Olymp	47.56	161	P	P	11 55 28.0	-0.2
TAOE	Nuku Hiva Isla	47.91	0	*e*S	S	12 02 29.6	+0.6
	52nm,26.4s						
TAOE				*e*LR	LR	12 09 05.6	
	241nm,27.7s						
VNA2	Neumayer--Watz	48.24	161	P	P	11 55 33.5	0.0
VNA1	Neumayer--Stat	48.31	161	P	P	11 55 34.0	0.0
SNAA	Sanae	48.35	163	P	P	11 55 34.3	-0.2
SNAA	Sanae	48.35	163	P	P	11 55 33.8	-0.6
	3.2nm,0.5s,baz=225,slow=9.5,SNR=49						
SNAA				LR	LR	12 15 11.0	
	comp=Z,78nm,18.4s,baz=290,slow=35						
AFI	Afiamalu	49.06	318	LR	LR	12 10 56.2	
	comp=Z,86nm,21.1s,baz=114,slow=30						
DZM	Mont Dzumac	51.80	289	*e*LR	LR	12 10 11.3	
	129nm,24.7s						
NNA	Nana	65.75	74	LR	LR	12 19 26.5	
	comp=Z,73nm,18.2s,baz=199,slow=30						
LPAZ	La Paz	66.89	84	P	P	11 57 47.2	+0.9
	2.3nm,0.8s,baz=192,slow=4.1,SNR=6.7						
LPAZ				LR	LR	12 19 17.5	
	comp=Z,88nm,20.8s,baz=209,slow=29						
ASAR	Alice Springs	68.14	260	P	P	11 57 52.7	-0.7
	0.5nm,0.9s,baz=146,slow=6.5,SNR=5.8						
H01W1	Cape Leeuwin H	69.11	238	T	T	13 14 00.7	
	baz=144,slow=75,SNR=45						
H01W2	Cape Leeuwin H	69.11	238	T	T	13 13 54.6	
	baz=144,slow=75,SNR=46						
H01W3	Cape Leeuwin H	69.12	238	T	T	13 13 53.5	
	baz=144,slow=75,SNR=54						
JTS	JuntasAbangare	80.96	55	LR	LR	12 28 48.5	
	comp=Z,20nm,18.9s,baz=230,slow=31						
TXAR	Lajitas Array	91.36	32	LR	LR	12 32 36.0	
	comp=Z,30nm,18.5s,baz=0.0,slow=30						
BOSA	Boshof	93.99	167	LR	LR	12 38 10.1	
	comp=Z,51nm,19.9s,baz=201,slow=33						
NVAR	Mina Array Bea	96.79	17	LR	LR	12 33 55.6	
	comp=Z,49nm,21.5s,baz=126,slow=29						
YBH	Yreka Blue Hor	99.39	13	LR	LR	12 35 48.8	
	comp=Z,49nm,19.5s,baz=188,slow=30						
H10S3	ASCENSION HYDR	100.86	125	T	T	13 53 34.0	
	baz=207,slow=75,SNR=11						
H10S2	ASCENSION HYDR	100.86	125	T	T	13 53 33.9	
	baz=207,slow=75,SNR=9.8						
H10S1	ASCENSION HYDR	100.87	125	T	T	13 53 28.3	
	baz=207,slow=75,SNR=8.3						
H10N3	ASCENSION HYDR	101.91	125	T	T	13 54 54.7	
	baz=206,slow=75,SNR=8.4						
H10N1	ASCENSION HYDR	101.92	125	T	T	13 54 58.6	
	baz=206,slow=75,SNR=8.8						
H10N2	ASCENSION HYDR	101.93	125	T	T	13 54 54.5	
	baz=206,slow=75,SNR=8.2						
ILAR	Eielson Array	121.43	357	PKP	PKPdf	12 05 45.8	+0.6
	0.4nm,0.7s,baz=204,slow=2.0,SNR=5.6						
ESDC	Sonseca Array	147.04	103	PKPbc	PKPab	12 06 36.0	-1.0
	0.5nm,0.4s,baz=204,slow=2.8,SNR=5.3						
MKAR	Makanchi Array	152.14	267	PKPbc	PKPbc	12 06 47.3	-0.7
	0.4nm,0.8s,baz=96,slow=4.3,SNR=3.1						

IDC 24 11:55:04.7±11.0**,7°.42S×129°.35E,h160**^{km}±123^{km}**, mb3.4**/5**,mb1 3.6**/7**,mb1mx3.3**/43**,mbtmp4.0**/7**,ML4.2**/2**, Error ellipse: s-maj=99.4km s-min=45.9km az=47.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.36	159	P	Pn	11 58 06.7	-1.5
	1.2nm,0.3s,baz=324,slow=15,SNR=43						
WRA				S	Sn	12 00 27.7	-8.7
	3.3nm,0.3s,baz=334,slow=23,SNR=11						
ASAR	Alice Springs	16.74	165	P	Pn	11 58 51.4	+1.4
	1.1nm,0.3s,baz=337,slow=10,SNR=66						
ASAR				S	S	12 01 49.0	-6.7
	0.7nm,0.3s,baz=341,slow=22,SNR=7.8						
CMAR	Chiang Mai Arr	39.51	311	P	P	12 02 20.0	0.0
	1.8nm,0.8s,baz=135,slow=6.9,SNR=7.0						
SONM	Songino Array	58.63	342	P	P	12 04 46.1	+1.0
	0.4nm,0.5s,baz=156,slow=5.1,SNR=2.8						
MKAR	Makanchi Array	68.22	327	P	P	12 05 48.2	+0.3
	0.7nm,0.5s,baz=120,slow=7.8,SNR=7.3						
ZALV	Zalesovo Beam	71.67	334	P	P	12 06 07.2	-1.6
	0.7nm,0.3s,baz=145,slow=5.3,SNR=2.3						
KURBB	Kurchatov Arra	72.53	329	P	P	12 06 14.2	+0.2
	0.5nm,0.5s,baz=127,slow=4.8,SNR=6.0						

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*NIED **24** 12:08:00,40°.40N×142°.20E,h56^{km},Mw3.6 Best double couple: $M_0$2.77000×10^{14} NP1:ϕ_s167.00000°,δ38.00000°, λ30.00000°. NP2:ϕ_s53.00000°,δ72.00000°,λ124.00000°.*

JMA 24 12:08:10.9±0.1**,40°.35N×142°.19E,h45**^{km}±1^{km}**,M3.7, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTH	Tanohata	0.48	211	P	Pn	12 08 21.6	0.0
JTH				S	Sn	12 08 28.9	-0.3
JANG	Nango	0.52	273	P	Pn	12 08 22.0	-0.1
JANG				S	Sn	12 08 29.8	-0.2
JKZ	Kuzumaki	0.75	241	P	Pn	12 08 25.5	+0.3
JKZ				S	Sn	12 08 35.7	+0.1
JARK	Aomorirokkasho	0.91	317	P	Pn	12 08 26.9	-0.3
JARK				S	Sn	12 08 38.5	-0.7
JTM	Tenmabayashi	0.96	297	P	Pn	12 08 27.5	-0.5
JTM				*e*S	Sn	12 08 40.3	-0.2
JOM	Ohasama	1.11	219	P	Pn	12 08 30.3	+0.2
JOM				S	Sn	12 08 44.5	+0.2
JAH	Hinai	1.20	263	P	Pn	12 08 31.5	+0.3
JAH				S	Sn	12 08 46.4	+0.1
JOT	Ohata	1.35	320	P	Pn	12 08 32.6	-0.6
JRG	Rokugo	1.53	232	P	Pn	12 08 36.6	+0.8

KRSC 24 12:09:36.1±1.5**,50°.50N×157°.68E,h80**^{km}±24^{km}**,ML3.7, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.01	281	*e*P	Pn	12 09 55.5	+0.3
SKR				*e*S	Sn	12 10 09.4	-0.1
PAU	Pauzhetka	1.11	331	*e*P	Pn	12 09 58.0	+1.5
PAU				*e*S	Sn	12 10 13.5	+1.7
KDTR	Khodutka, Kamc	1.34	11	*e*P	Pn	12 10 01.1	+1.8
KDTR				*e*S	Sn	12 10 18.7	+2.0
MIPR	Malaya Ipel'ka	1.87	342	*e*P	Pn	12 10 08.7	+2.4
ASAK	Asacha	1.89	4	*e*P	Pn	12 10 08.9	+2.3
ASAK				*e*S	Sn	12 10 32.9	+3.1
RUS	Russkaya	2.01	15	*e*P	Pn	12 10 09.7	+1.7
RUS				*e*S	Sn	12 10 34.1	+1.7
MTVR	Mutnovka	2.01	9	*e*P	Pn	12 10 10.7	+2.4
MTVR				*e*S	Sn	12 10 35.4	+2.6
KRMR	Karymshinskiy	2.35	7	*e*P	Pn	12 10 15.1	+2.5
KRMR				*e*S	Sn	12 10 43.4	+2.8
APC	Apacha	2.45	353	*e*P	Pn	12 10 16.3	+2.3
PET	Petropavlovsk	2.60	13	*e*P	Pn	12 10 18.3	+2.3
PET				*e*S	Sn	12 10 48.8	+2.2
DALK	Dalny	2.62	14	*e*P	Pn	12 10 18.7	+2.4
DALK				*e*S	Sn	12 10 49.4	+2.3
UGLR	Uglovaya	2.81	14	*e*P	Pn	12 10 21.4	+2.5
AVH	Avacha	2.85	13	*e*P	Pn	12 10 22.8	+3.4
SMAR	Somma	2.86	14	*e*P	Pn	12 10 23.3	+3.7
NLC	Nalytchevo	2.87	20	*e*S	Sn	12 10 52.9	-0.2
SDLR	Sedlovina	2.88	15	*e*P	Pn	12 10 22.4	+2.5
KRX	Arik	2.93	11	*e*P	Pn	12 10 23.3	+2.8
SPN	Mys Shipunski	2.98	28	*e*P	Pn	12 10 23.6	+2.5
SPN				*e*S	Sn	12 10 57.8	+1.9
GNL	Ganaly	3.21	3	*e*P	Pn	12 10 26.9	+2.6
MKZ	Mys Kozlova	4.76	30	*e*P	Pn	12 10 46.8	+1.6
KBTR	Krutoberegovo	6.50	26	*e*P	Pn	12 11 11.1	+2.2

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*ISCJB **24** 12:18:42.6±0.6,36°.98N±0°.05×27°.62E±0°.06,h12^{km}±10^{km}, Error ellipse: s-maj=9.8km s-min=5.5km az=138.2*

*CSEM **24** 12:18:42.6±0.2,36°.98N×27°.61E,h10^{km},ML2.7,Error ellipse: s-maj=5.2km s-min=4.0km az=64.0*

*DDA **24** 12:18:42.2,36°.97N×27°.64E,h7^{km},Ml2.7*

*ISK **24** 12:18:42.0,36°.95N×27°.58E,h19^{km}±1^{km},ML2.7/6*

ISC 24 12:18:42.2±1.0**,36°.95N**±0°.02×**27°.63E**±0°.03**,h18**^{km}±3^{km}**, n31,**σ1^s**22**/34**,Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDRM	Kayabasi	0.19	307	*i* P	Pb	12 18 46.2	-0.6
BDRM	Kayabasi	0.19	307	P	Pb	12 18 46.2	-0.6
DATC	Datca-Mugla	0.19	173	PG	Pg	12 18 47.2	+0.1
DATC				SG	Sg	12 18 51.4	+1.1
DATC	Datca-Mugla	0.19	173	*e*Pg	Pg	12 18 47.2	+0.1
DATC				*e*Sg	Sg	12 18 51.4	+1.1
DAT	Datca	0.23	191	PG	Pb	12 18 47.6	-0.1
DAT	Datca	0.23	191	*i* P	Pb	12 18 47.6	-0.1
DAT	Datca	0.23	191	P	Pb	12 18 47.6	-0.1
BODT	Bodrum	0.28	293	PG	Pg	12 18 47.9	-0.6
BODT				SG	Sb	12 18 52.4	-0.6
BODT	Bodrum	0.28	293	*i* Pg	Pg	12 18 47.9	-0.6
BODT				*e*Sg	Sb	12 18 52.4	-0.6
MLSB	Milas	0.36	19	PG	Pg	12 18 50.3	+0.4
MLSB	Milas	0.36	19	*e*Pg	Pg	12 18 50.3	+0.4
MRSB	Marmaris-Mugla	0.51	117	PG	Pg	12 18 53.4	+0.9
MRSB	Marmaris-Mugla	0.51	117	*e*Pg	Pg	12 18 53.4	+0.9
YER	Yerkesik	0.55	70	PG	Pg	12 18 54.3	+1.0
YER	Yerkesik	0.55	70	*e*Pg	Pg	12 18 54.3	+1.0
AYDN	Tasoluk	0.73	16	*i* P	Pb	12 18 56.1	-0.5
AYDN	Tasoluk	0.73	16	P	Pb	12 18 56.1	-0.5
TURN	Turunc	0.78	95	PG	Pb	12 18 53.2	-4.1
TURN	Turunc	0.78	95	*i* P	Pb	12 18 52.4	-5.0
TURN	Turunc	0.78	95	*e*Pg	Pb	12 18 53.2	-4.1
GCAM	G?zelcaml?	0.81	337	PG	Pg	12 18 58.5	+0.4
GCAM	G?zelcaml?	0.81	337	*i* P	Pg	12 18 58.5	+0.4
GCAM	G?zelcaml?	0.81	337	P	Pg	12 18 58.5	+0.4
DALY	Dalyan (Mu˜la	0.83	99	PG	Pn	12 18 59.7	+0.7
DALY	Dalyan (Mu˜la	0.83	99	*e*Pg	Pn	12 18 59.7	+0.7
ARG	Arkhangelos	0.83	151	PG	Pn	12 18 59.1	0.0
ARG	Arkhangelos	0.83	151	*e*Pg	Pn	12 18 59.1	0.0
AYDB	Zeytinkoy-Aydi	1.01	12	PG	Pb	12 19 00.9	-0.5
AYDB	Zeytinkoy-Aydi	1.01	12	*e*Pg	Pb	12 19 00.9	-0.5
TAVA	DENIZLI_Tavas	1.15	63	*i* P	Pb	12 19 04.0	+0.4
TAVA	DENIZLI_Tavas	1.15	63	P	Pb	12 19 04.0	+0.4

NDI 24 12:24:25.7±2.4**,26°.19N×92°.21E,h35**^{km}±8^{km}**,ML3.3, Northeastern India**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GUWA	GUWAHATI	0.46	271	*e*P	Pn	12 24 36.3	+0.5
GUWA				*e*S	Sn	12 24 43.2	+0.4
TEZP	TEZPUR	0.68	51	*e*P	Pn	12 24 39.0	+0.1
TEZP				*e*S	Sn	12 24 48.4	+0.2
TEZP				IAML		12 24 48.7	
	comp=N,3μm,0.2s						
TEZP				IAML		12 24 48.7	
	comp=E,2μm,0.2s						
SHL	Shillong	0.68	205	*e*P	Pn	12 24 40.7	+1.7
SHL				*e*S	Sn	12 24 49.8	+1.2
SILR	SILCHAR	1.50	159	*e*S	Sn	12 25 08.6	+0.2
ITAN	ITANAGAR	1.66	55	*e*P	Pn	12 24 52.8	+0.5
ITAN				*e*x	x	12 25 23.9	
ITAN				IAML		12 25 31.1	
	comp=N,806nm,0.3s						
ITAN				IAML		12 25 31.3	
	comp=E,1μm,0.3s						
TURI	Tura	1.80	250	*e*P	Pn	12 24 55.4	+1.1
TURI				*e*x	x	12 25 09.7	
TURI				IAML		12 25 33.3	
	comp=N,145nm,0.3s						
TURI				IAML		12 25 33.8	
	comp=E,167nm,0.1s						
JORH	JORHAT	1.91	73	*e*S	Sn	12 25 19.5	+0.9
SAIH	SAIHA	3.75	169	*e*P	Pn	12 25 22.0	+0.8
SAIH				*e*S	Sn	12 25 59.6	-4.6
SAIH				IAML		12 26 10.2	
	comp=E,22nm,0.4s						
SAIH				IAML		12 26 10.3	
	comp=N,17nm,0.2s						

MAN 24 12:46:44.7,11°.84N×124°.14E,h24^{km}**,mb4.6,ML3.4, MS3.3,2C,Leyte**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CNP	Catarman	0.84	37	*e*P	Pb	12 46 60.0	-0.7
CNP				*e*S	Sn	12 47 14.0	+1.3
OCLP	Ormoc	0.91	150	*e*P	Pb	12 47 01.8	0.0
OCLP				*e*S	Sn	12 47 15.4	+1.0
PLP	Palo	1.06	129⇑	*e*P	Pb	12 47 05.2	+0.8
PLP				*e*S	Sn	12 47 22.8	+4.7
BESP	Borongan	1.29	100	*e*P	Pn	12 47 07.0	-0.2
BESP				*e*S	Sn	12 47 23.6	-0.3
RCP	Roxas	1.40	259⇑	*e*P	Pn	12 47 08.6	-0.1
RCP				*e*S	Sb	12 47 27.5	0.0
MSLP	Maasin	1.84	157	*e*P	Pb	12 47 18.3	+0.6
MSLP				*e*S	Sb	12 47 43.0	+2.8
GUIM	Jordan	1.94	232	*e*P	Pn	12 47 15.6	-0.7
GUIM				*e*S	Sn	12 47 41.2	+1.3

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*NIED **24** 12:52:00,39°.20N×142°.40E,h32^{km},Mw4.0 Best double couple: $M_0$1.11000×10^{15} NP1:ϕ_s327.00000°,δ29.00000°, λ-119.00000°. NP2:ϕ_s179.00000°,δ65.00000°, λ-75.00000°.*

*IDC **24** 12:52:12.4±0.6,39°.13N×142°.60E,h0^{km},mb4.0/20, mb1 4.1/26,mb1mx4.0/67,mbtmp4.0/26,ML3.8/5,MS3.2/9, Ms1 3.2/9,ms1mx2.8/61,Error ellipse: s-maj=15.5km s-min=12.9km az=122.0*

*ISCJB **24** 12:52:13.9±0.7,39°.17N±0°.03×142°.60E±0°.04,h19^{km}±4^{km}, mb4.1/33,MS3.4/4,Error ellipse: s-maj=5.6km s-min=3.4km az=42.2*

*MOS **24** 12:52:15.8±1.1,39°.18N×142°.62E,h38^{km},mb4.3/14,Error ellipse: s-maj=9.4km s-min=5.9km az=83.8*

*JMA **24** 12:52:17.1±0.1,39°.21N×142°.41E,h34^{km}±1^{km},M4.2*

JMA Felt II J1.

*NEIC **24** 12:52:19.5±0.7,39°.14N×142°.48E,h50^{km}±6^{km},mb4.4/9, Error ellipse: s-maj=8.3km s-min=5.6km az=124.0*

NEIC Recorded [2 JMA] in Iwate.

ISC 24 12:52:16.9±0.9**,39°.18N**±0°.04×**142°.53E**±0°.05**,h28**^{km}±5^{km}**, n101,**σ1^s**91**/121**,mb4.2**/33**,MS3.4**/4**,10C-2D,Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MIYJ	Miyakonagasawa	0.68	306	P	Pb	12 52 28.7	-1.5
MIYJ				S	Sb	12 52 36.7	-2.6
OFUJ	Ofunato	0.68	262	P	Pb	12 52 28.8	-1.4
OFUJ				S	Sb	12 52 36.9	-2.4
JTH	Tanohata	0.92	326	P	Pn	12 52 32.4	-1.5
JTH				S	Sn	12 52 43.8	-2.3
JOM	Ohasama	1.00	287	P	Pn	12 52 33.7	-1.4
JOM				S	Sn	12 52 45.6	-2.7
JMK	Ichinoseki	1.05	258	P	Pn	12 52 34.3	-1.4
JMK				S	Sn	12 52 46.8	-2.5
JIO	Ouri	1.18	232	P	Pn	12 52 36.0	-1.4
JIO				S	Sn	12 52 49.9	-2.6
JKZ	Kuzumaki	1.23	311	P	Pn	12 52 37.5	-0.7
JKZ				S	Sn	12 52 52.1	-1.8
JANG	Nango	1.43	327	P	Pn	12 52 40.3	-0.6
JANG				S	Sn	12 52 57.5	-1.2
JRG	Rokugo	1.49	279	P	Pn	12 52 41.7	0.0
JRG				*e*S	Sn	12 52 59.8	-0.4
ERM	Erimo	2.87	9	*e*Pn	Pn	12 53 02.0	+1.3
ERM	Erimo	2.87	9	*i* P	Pn	12 53 01.4	+0.7
MJAR	Matsushiro Arr	4.32	234	Pn	Pn	12 53 21.3	+0.6
	7.0nm,0.3s,baz=43,slow=11,SNR=103						
MJAR				Sn	Sn	12 54 13.2	+3.1
	baz=54,slow=28,SNR=2.8						
MJAR				LR	LR	12 55 13.1	
	comp=Z,287nm,18.3s,baz=50,slow=42						
MAJO	Matsushiro	4.32	234	*e*Pn	Pn	12 53 22.8	+2.1
MAJO				*e*Sn	Sn	12 54 13.2	+3.1
MAJO	Matsushiro	4.32	234*c*	*i*P	Pn	12 53 22.9	+2.2
MAT	Matsushiro	4.32	234	P	Pn	12 53 22.5	+1.8
MAT				S	Sn	12 54 10.7	+0.6
MJB9	Matsu-Tunnel	4.32	234	*e*Pn	Pn	12 53 22.9	+2.2
ASAJ	Asahikawa	4.93	1	Pn	Pn	12 53 30.1	+1.0
	4.0nm,0.3s,baz=213,slow=12,SNR=33						
ASAJ				Sn	Sn	12 54 27.4	+2.3
	2.4nm,0.3s,baz=258,slow=19,SNR=2.8						
GLVR	Golovnino	5.08	25*c*	*i*P	Pn	12 53 30.9	-0.1
GLVR				*i* S	Sn	12 54 25.5	-3.2
GLVR				pmax	pmax		
	comp=N,10.0nm,0.1s						
GLVR				pmax	pmax		
	comp=E,36nm,0.1s						
GLVR				pmax	pmax		
	comp=Z,86nm,0.1s						
GLVR				smax	smax		
	comp=N,485nm,0.3s						
GLVR				smax	smax		
	comp=E,603nm,0.3s						
GRPR	Tuman	5.39	26⇑	*i*P	Pn	12 53 35.3	0.0
GRPR				*i* S	Sn	12 54 31.9	-4.4
GRPR				pmax	pmax		
	comp=Z,117nm,0.3s						
GRPR				pmax	pmax		
	comp=N,42nm,0.2s						
GRPR				pmax	pmax		
	comp=E,40nm,0.2s						
GRPR				smax	smax		
	comp=N,316nm,0.2s						
GRPR				smax	smax		
	comp=E,535nm,0.2s						
LAGR	Lagunnoye	5.45	26⇓	*i*P	Pn	12 53 35.9	-0.2
LAGR				*i* S	Sn	12 54 34.8	-3.0
LAGR				pmax	pmax		
	comp=Z,157nm,0.2s						
LAGR				pmax	pmax		
	comp=E,69nm,0.6s						
LAGR				pmax	pmax		
	comp=N,50nm,0.3s						
LAGR				smax	smax		
	comp=N,428nm,0.3s						
LAGR				smax	smax		
	comp=E,601nm,0.3s						
YUK	Yuzh-Kuril'sk	5.45	26*c*	*i*P	Pn	12 53 35.7	-0.5
YUK				*i* S	Sn	12 54 34.1	-3.9
YUK				pmax	pmax		
	comp=Z,105nm,0.2s						
YUK				pmax	pmax		
	comp=N,20nm,0.1s						
YUK				pmax	pmax		
	comp=E,55nm,0.3s						
YUK				smax	smax		
	comp=N,193nm,0.3s						
YUK				smax	smax		
	comp=E,32nm,0.3s						
SHO	Shikotan	5.69	33*c*	*i*P	Pn	12 53 38.9	-0.5
SHO				*i* S	Sn	12 54 38.6	-5.1
SHO				pmax	pmax		
	comp=Z,17nm,0.2s						
SHO				pmax	pmax		
	comp=N,6.0nm,0.1s						
SHO				pmax	pmax		
	comp=E,14nm,0.3s						
SHO				smax	smax		
	comp=N,57nm,0.2s						
SHO				smax	smax		
	comp=E,153nm,0.3s						
INU	Inuyama	5.83	231	*e*Pn	Pn	12 53 43.1	+1.7
JHJ	Hachijo jima 2	6.45	201	Pn	Pn	12 53 48.9	-1.0
	comp=E,6.6nm,0.3s,baz=306,slow=20,SNR=13						
JHJ				Sn	Sn	12 54 58.6	-3.9
	comp=E,7.1nm,0.3s,baz=90,slow=19,SNR=3.0						
JHJ				LR	LR	12 56 30.1	
	comp=E,86nm,18.5s,baz=104,slow=40						
KUR	Kuril'sk	7.23	31*c*	*i*P	Pn	12 54 00.6	0.0
KUR				*i* S	Sn	12 55 17.8	-3.8
KUR				pmax	pmax		
	comp=Z,23nm,0.4s						
KUR				pmax	pmax		
	comp=N,8.0nm,0.3s						
KUR				pmax	pmax		
	comp=E,13nm,0.3s						
YSS	Yuzh-Sakhalins	7.77	1	*e*P	Pn	12 54 08.1	+0.1
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YSS				MLR	MLR		
	comp=Z,100nm,13.0s						
MSHR	Mys Shultsa	9.26	295*c*	*e*P	Pn	12 54 31.6	+3.2
USA0B	Ussuriysk Arra	9.34	306	*e*Pn	Pn	12 54 32.7	+3.1
USRK	Ussuriysk Ar.	9.34	306	Pn	Pn	12 54 30.2	+0.7
	baz=111,slow=14						
USRK				LR	LR	12 57 59.0	
	comp=Z,128nm,18.8s,baz=120,slow=37						
MDJ	Mudanjiang	11.06	304	*e*Pn	Pn	12 54 56.6	+3.5
JNU	Nakatsue	11.19	241	Pn	Pn	12 54 54.0	-0.9
	comp=Z,0.4nm,0.3s,baz=82,slow=14,SNR=4.2						
JNU				LR	LR	12 59 31.0	
	comp=Z,96nm,18.8s,baz=300,slow=39						
KSRS	Korea Array	11.61	266	Pn	Pn	12 55 02.1	+1.6
	comp=Z,0.3nm,0.3s,baz=80,slow=14,SNR=6.7						
KSRS				Sn	Sn	12 57 14.8	+5.6
	comp=Z,0.2nm,0.3s,baz=76,slow=22,SNR=3.1						
KSRS				LR	LR	12 59 05.9	
	comp=Z,97nm,18.8s,baz=93,slow=35						
KS15	Wonju Array Si	11.64	266	*e*Pn	Pn	12 55 02.1	+1.1
KS15				*e*Sn	Sn	12 57 14.8	+4.8
KSAR	Wonju Array Be	11.64	266	Pn	Pn	12 55 02.1	+1.1
KSAR				Sn	Sn	12 57 14.8	+4.8
KSAR	Wonju Array Be	11.64	266	P	Pn	12 55 02.2	+1.1
KSAR						12 57 14.8	
KLR	Kul'dur	12.66	326	Pn	Pn	12 55 15.8	+0.8
	comp=Z,0.0nm,0.3s,baz=133,slow=19,SNR=2.1						
KLR				LR	LR	12 59 56.8	
	comp=Z,6.7nm,20.4s,baz=158,slow=36						
KLR	Kul'dur	12.66	326	*i* P	Pn	12 55 18.2	+3.2
PETK	Petropavlovsk-	17.39	32	LR	LR	13 03 17.3	
	comp=Z,54nm,18.4s,baz=170,slow=38						
MA2	Magadan	21.07	12	*i* P	P	12 56 56.7	-1.9
MA2				pmax	pmax		
	comp=Z,35nm,1.5s						
YAK	Yakutsk	24.20	345	*i* P	P	12 57 30.0	-0.6
YAK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SONA0	Songino Array	27.39	300	*e*P	P	12 57 59.9	0.0
SONM	Songino Array	27.39	300	P	P	12 57 59.8	0.0
	comp=Z,0.5nm,0.4s,baz=100,slow=7.2,SNR=3.4						
SONM				LR	LR	13 09 10.1	
	comp=Z,51nm,18.5s,baz=99,slow=37						
H11N2	WAKE ISLAND Hy	28.59	126	T	T	13 28 34.2	
	baz=318,slow=75,SNR=1340						
H11N1	WAKE ISLAND Hy	28.59	126	T	T	13 28 35.7	
	baz=318,slow=75,SNR=1138						
H11N3	WAKE ISLAND Hy	28.60	126	T	T	13 28 35.5	
	baz=318,slow=75,SNR=884						
H11S1	WAKE ISLAND Hy	29.38	128	T	T	13 29 35.0	
	baz=319,slow=76,SNR=106						
H11S3	WAKE ISLAND Hy	29.38	128	T	T	13 29 34.5	
	baz=319,slow=76,SNR=107						
H11S2	WAKE ISLAND Hy	29.39	128	T	T	13 29 36.0	
	baz=319,slow=76,SNR=80						
TLY	Talaya	29.65	308	*e*P	P	12 58 19.2	-0.6
TLY				pmax	pmax		
	comp=Z,2.0nm,0.6s						
TLY				MLR	MLR		
	comp=Z,72nm,15.0s						
HVS	Khovu-Aksy	35.81	306	*i* P	P	12 59 13.8	+0.1
HVS				pmax	pmax		
	comp=Z,8.0nm,0.9s						
DGZ	Jazzator, Alta	39.89	304	*i* P	P	12 59 48.0	-0.2
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ZAA1	Zalesovo Array	41.15	311	*e*P	P	13 00 00.0	+1.6
ZALV	Zalesovo Beam	41.15	311	P	P	13 00 00.0	+1.6
	comp=Z,2.2nm,0.4s,baz=85,slow=7.8,SNR=1.1						

CM31	Chiang Mai Arr	42.91	254	eP	P	13 00 13.1	-0.1
CMAR	Chiang Mai Arr	42.91	254	P	P	13 00 13.1	-0.1
	comp=Z,0.4nm,0.5s,baz=44,slow=8.1,SNR=3.4						
SVW2	Sparrevohn	43.29	39	eP	P	13 00 18.4	+2.7
	comp=Z,5.5nm,1.2s						
MK01	Makanchi Array	43.76	300	eP	P	13 00 18.8	-0.9
MK31	Makanchi Array	43.76	300	eP	P	13 00 19.8	0.0
MK31	Makanchi Array	43.76	300	eP	P	13 00 19.8	0.0
MK32	Makanchi Array	43.76	300	eP	P	13 00 19.4	-0.3
MKAR	Makanchi Array	43.76	300	P	P	13 00 19.5	-0.3
	comp=Z,1.9nm,0.9s,baz=87,slow=8.7,SNR=10						
MKAR	Makanchi Array	43.76	300	eP	P	13 00 19.8	0.0
	comp=Z,10nm,0.6s						
MKAR	Makanchi Array	43.76	300	ceP	P	13 00 20.0	+0.2
MKAR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KURK	Kurchatov	45.33	307	eP	P	13 00 31.7	-0.5
	comp=Z,5.5nm,1.0s						
KURK				eP	P	13 00 32.1	-0.1
KURK	Kurchatov	45.33	307	ceP	P	13 00 30.4	-1.8
KURK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KURBB	Kurchatov Arra	45.41	306	P	P	13 00 32.1	-0.7
	comp=Z,1.3nm,0.3s,baz=81,slow=8.4,SNR=14						
BRDH	Bariadhala	46.05	265	LR	LR	13 23 33.1	
	comp=Z,74nm,18.3s,baz=238,slow=41						
GHO	Glory Hole Cre	46.47	38	eP	P	13 00 42.9	+1.7
	comp=Z,4.7nm,1.0s						
MDM	Murphy Dome	46.63	33	eP	P	13 00 44.6	+2.2
MDM				epP	sP	13 00 56.7	+2.4
MDM				ePcP	PcP	13 02 17.7	+1.9
IL1	Eielson Array	47.22	33	eP	P	13 00 47.5	+0.7
ILAR	Eielson Array	47.22	33	P	P	13 00 48.0	+1.2
	comp=Z,2.0nm,0.6s,baz=262,slow=5.9,SNR=46						
ILB	Eielson Array	47.22	33	eP	P	13 00 48.1	+1.3
SCRK	Sand Creek	48.53	34	eP	P	13 00 58.6	+1.4
	comp=Z,4.2nm,0.6s						
BVAR	Borovoye Array	49.80	311	P	P	13 01 07.5	+0.6
	comp=Z,0.8nm,0.4s,baz=72,slow=9.4,SNR=3.5						
INK	Inuvik	52.08	28	P	P	13 01 25.4	+1.6
	comp=Z,1.2nm,0.5s,baz=283,slow=6.7,SNR=7.7						
INK	Inuvik	52.08	28	eP	P	13 01 25.3	+1.6
	comp=Z,4.8nm,1.1s						
ARU	Arti	55.35	318	d iP	P	13 01 48.4	+0.5
ARU				S	S	13 09 33.2	+3.1
ARU				SS	SS	13 13 10.2	-3.9
ARU				pmax	pmax		
	comp=Z,5.0nm,1.7s						
ABKAR	Akbulak array	57.24	309	eP	P	13 02 01.2	-0.3
AKTO	Aktyubinsk	57.91	311	P	P	13 02 06.9	+0.7
	comp=Z,0.4nm,0.4s,baz=27,slow=9.0,SNR=2.0						
WR1	Warramunga Arr	59.31	189	eP	P	13 02 15.3	-0.8
	comp=Z,3.4nm,0.6s						
WRA	Warramunga Arr	59.31	189	P	P	13 02 15.3	-0.8
	comp=Z,3.4nm,0.6s,baz=6.4,slow=7.1,SNR=71						
AS31	Alice Springs	63.04	189	eP	P	13 02 41.0	-0.4
	comp=Z,1.0nm,0.9s						
ASAR	Alice Springs	63.04	189	P	P	13 02 41.0	-0.4
	comp=Z,1.4nm,0.7s,baz=9.6,slow=6.4,SNR=16						
ASAR	Alice Springs	63.04	189	P	P	13 02 41.0	-0.4
GEYT	Alibeck	63.58	299	P	P	13 02 46.0	+1.0
	comp=Z,1.1nm,0.4s,baz=290,slow=4.2,SNR=5.1						
FIA0	FINESS Array S	67.33	332	eP	P	13 03 08.1	-0.7
FIA0	FINESS Array S	67.33	332	eP	P	13 03 08.1	-0.7
FINES	FINESS Array B	67.33	332	P	P	13 03 08.1	-0.7
	comp=Z,2.0nm,0.9s,baz=74,slow=8.3,SNR=3.8						
FINES	FINESS Array B	67.33	332	i P	P	13 03 09.0	+0.2
FINES				pmax	pmax		
	comp=Z,2.0nm,0.9s						
HFS	Hagfors	72.49	336	P	P	13 03 39.9	-0.6
	comp=Z,1.4nm,0.8s,baz=65,slow=8.1,SNR=3.1						
HFS				LR	LR	13 37 09.7	
	comp=Z,22nm,21.6s,baz=350,slow=37						
NOA	NORSAR Array B	72.55	337	P	P	13 03 39.9	-1.1
	comp=Z,0.4nm,0.6s,baz=36,slow=6.1,SNR=2.3						
NV01	Mina Array Sit	73.01	54	eP	P	13 03 44.1	-0.2
NVAR	Mina Array Bea	73.01	54	P	P	13 03 44.1	-0.2
	comp=Z,0.6nm,0.7s,baz=296,slow=6.5,SNR=6.2						
AKASG	Malin Array Be	73.14	322	P	P	13 03 43.8	-0.7
	comp=Z,0.5nm,0.3s,baz=44,slow=6.1,SNR=4.5						
AKASG	Malin Array Be	73.14	322	ceP	P	13 03 44.5	0.0
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKBB	Malin Array Si	73.14	322	eP	P	13 03 43.8	-0.7
	comp=Z,3.0nm,0.6s						
AKBB	Malin Array Si	73.14	322	eP	P	13 03 43.8	-0.7
AKBB				pmax	pmax		
	comp=Z,3.0nm,0.6s						
PD31	Pinedale Array	75.54	46	eP	P	13 03 58.1	-0.9
PDAR	Pinedale Array	75.54	46	P	P	13 03 58.1	-0.9
	comp=Z,0.6nm,0.7s,baz=259,slow=1.5,SNR=5.7						
MMAI	Mount Meron Ar	81.44	306	P	P	13 04 30.8	-0.6
	comp=Z,0.6nm,0.3s,baz=20,slow=4.7,SNR=1.9						
TXAR	Lajitas Array	88.12	53	P	P	13 05 05.7	+0.5
	comp=Z,0.2nm,0.6s,baz=291,slow=2.9,SNR=4.3						

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*IDC **24** 12:58:28.7±1.1, 5°.65N×128°.54E, h0^{km}, mb3.9/7, mb1 4.0/8, mb1mx3.7/53, mbtmp4.0/8, ML4.5/1, MS2.6/1, Ms1 2.6/1, ms1mx2.2/49, Error ellipse: s-maj=67.9km s-min=15.9km az=66.0*

*MAN **24** 12:58:38.4, 4°.93N×126°.84E, h27^{km}, mb5.2, ML4.2, MS4.3*

ISC 24 12:58:35.8±2.5**, 4°.80N**±0°.10×**126°.9E**±0°.1**, h26**^{km}±17^{km}**,**
n15, σ**1^{s}94**/19**, mb4.0**/7**, 1C-1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	1.75	318	eP	Pn	12 59 04.6	+0.2
DDMP				eS	Sn	12 59 25.4	-0.4
MATI	Mati	2.22	344	eP	Pn	12 59 11.1	+0.2
MATI				eS	Sn	12 59 38.0	+0.4
GSPH	General Santos	2.32	304	⇓iP	Pn	12 59 12.4	+0.1
GSPH				i S	Sn	12 59 38.9	-1.2
DAV	Davao City (W)	2.61	330	Pn	Pb	12 59 20.7	-1.2
	56nm,0.3s,baz=34,slow=12,SNR=3.4						
DAV				Sn	Sb	12 59 53.8	+0.4
	106nm,0.3s,baz=274,slow=22,SNR=4.3						
DAV				LR	LR	13 00 18.0	
	comp=Z,100nm,21.4s,baz=99,slow=34						
DMPH	Davao City--Mi	2.65	329	⇑eP	Pn	12 59 18.0	+1.1
SKMP	Bagumbayan, Su	2.89	306	eP	Pn	12 59 20.9	+0.7
SKMP				eS	Sn	12 59 55.0	+0.9
BUKP	Musuan	3.56	329	eP	Pn	12 59 31.9	+2.6
BUKP				eS	Sn	13 00 14.3	+3.7
PAGZ	Pagadian	4.62	311	eP	Pn	12 59 47.8	+3.9
PAGZ				eS	Sn	13 00 10.0	-27
WRA	Warramunga Arr	25.66	164	P	P	13 04 03.6	0.0
	2.4nm,0.6s,baz=352,slow=8.8,SNR=13						
ASAR	Alice Springs	29.11	167	P	P	13 04 36.8	+2.3
	0.3nm,0.5s,baz=352,slow=7.4,SNR=7.0						
STKA	Stephens Creek	39.07	160	P	P	13 05 59.4	-1.3
	2.1nm,0.6s,baz=326,slow=9.7,SNR=6.0						
SONM	Songino Array	46.34	341	P	P	13 06 56.1	-3.7
	0.7nm,0.5s,baz=151,slow=8.4,SNR=2.5						
MKAR	Makanchi Array	56.78	325	P	P	13 08 15.0	-2.6
	0.7nm,0.4s,baz=123,slow=7.7,SNR=10						
KURBB	Kurchatov Arra	60.93	327	P	P	13 08 45.3	-1.1
	1.6nm,0.8s,baz=125,slow=6.6,SNR=14						
BVAR	Borovoye Array	66.52	327	P	P	13 09 21.8	-1.4
	0.8nm,0.5s,baz=130,slow=4.5,SNR=5.0						

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*GEN **24** 13:10:04.7, 44°.46N×6°.95E, h5^{km}, ML2.7*

*ROM **24** 13:10:04.6±0.2, 44°.469N±0°.008×7°.01E±0°.01, h10^{km}, ML2.7/12*

*ISCJB **24** 13:10:04.1±0.2, 44°.48N±0°.01×6°.95E±0°.02, h12^{km}±2^{km}, Error ellipse: s-maj=2.7km s-min=1.9km az=154.9*

*CSEM **24** 13:10:04.4±0.1, 44°.49N×6°.98E, h5^{km}, ML3.1/26, Error ellipse: s-maj=2.4km s-min=1.6km az=65.0*

*LDG **24** 13:10:05.3±0.1, 44°.46N×7°.01E, h2^{km}, Md3.3/2, Ml3.2/28, Error ellipse: s-maj=1.5km s-min=1.1km az=65.0*

*STR **24** 13:10:05.1±0.3, 44°N±2°×°±°, h5^{km}, M3.0/11, MLv3.0/11*

ISC 24 13:10:04.5±0.8**, 44°.47N**±0°.01×**6°.99E**±0°.02**, h13**^{km}±5^{km}**,**
n124, σ**1^{s}06**/210**, France**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PZZ	Stroppo	0.10	69	P	Pg	13 10 07.5	-0.1
PZZ	Stroppo	0.10	69	P	Pg	13 10 07.5	-0.1
PZZ				AML	AML		
	comp=E,58500µm,0.3s						
PZZ				AML	AML		
	comp=N,36650µm,0.6s						
PZZ				AML	AML		
	comp=E,58500µm,0.3s						
PZZ				AML	AML		
	comp=N,36650µm,0.6s						
PZZ				AML	AML		
	comp=E,58500µm,0.3s						
PZZ				AML	AML		
	comp=N,36650µm,0.6s						
SURF	Saint Ours	0.13	274	Pg	Pg	13 10 07.3	-0.8
SURF	Saint Ours	0.13	274	Pg	Pg	13 10 07.3	-0.8
SURF				Sg	Sg	13 10 09.4	-1.2
ISO	Isola	0.29	171	Pg	Pg	13 10 10.4	-0.2
ISO	Isola	0.29	171	Pg	Pg	13 10 10.4	-0.2
ISO				Sg	Sg	13 10 14.1	-0.6
MBDF	Montbardon	0.30	329	ePg	Pg	13 10 10.6	-0.2
MBDF				eSg	Sg	13 10 15.7	+0.7
MBDF	Montbardon	0.30	329	ePg	Pg	13 10 10.6	-0.2
MBDF				eSg	Sg	13 10 15.7	+0.7
OGAG	Argentiere	0.32	267	Pg	Pb	13 10 13.6	+1.4
OGAG				Sg	Sb	13 10 20.3	+2.9
STV	Sant Anna di V	0.33	133	P	Pg	13 10 11.1	-0.2
STV	Sant Anna di V	0.33	133	P	Pg	13 10 11.8	+0.5
STV				S	Sg	13 10 16.1	+0.2
STV				AML	AML		
	comp=E,1590µm,0.7s						
STV				AML	AML		
	comp=N,1840µm,0.4s						
STV				AML	AML		
	comp=E,1590µm,0.7s						
STV				AML	AML		
	comp=N,1840µm,0.4s						
STV				AML	AML		
	comp=E,1590µm,0.7s						
STV				AML	AML		
	comp=N,1840µm,0.4s						
ENR	Entracque	0.40	128	P	Pg	13 10 12.2	-0.3
ENR	Entracque	0.40	128	P	Pg	13 10 12.2	-0.3
ENR				AML	AML		
	comp=E,60µm,1.3s						
ENR				AML	AML		
	comp=N,1995µm,0.6s						
BHB	Bricherasio	0.42	28	P	Pg	13 10 13.0	+0.1
BHB	Bricherasio	0.42	28	P	Pg	13 10 13.5	+0.6
BHB				S	Sg	13 10 18.6	+0.1
BHB				AML	AML		
	comp=E,1830µm,0.4s						
BHB				AML	AML		
	comp=N,956µm,0.5s						
BHB				AML	AML		
	comp=E,1830µm,0.4s						
BHB				AML	AML		
	comp=N,956µm,0.5s						
BHB				AML	AML		
	comp=E,1830µm,0.4s						
BHB				AML	AML		
	comp=N,956µm,0.5s						
RRL	Rocca Remolon	0.47	343	P	Pg	13 10 14.0	+0.1
RRL	Rocca Remolon	0.47	343	P	Pg	13 10 14.0	+0.1
RRL				S	Sb	13 10 21.9	+0.1
RRL				AML	AML		
	comp=E,756µm,0.9s						
RRL				AML	AML		
	comp=N,854µm,0.5s						
RRL				AML	AML		
	comp=N,854µm,0.5s						
RRL				AML	AML		
	comp=E,756µm,0.9s						
MVIF	Mont Vial	0.59	168	Pg	Pg	13 10 16.0	0.0
MVIF	Mont Vial	0.59	168	Pg	Pg	13 10 16.0	0.0
MVIF				Sg	Sb	13 10 24.7	-0.3
OGDI	Digne	0.61	234	Pg	Pb	13 10 18.1	+1.0
BNI	Bardonecchia	0.62	339	P	Pg	13 10 16.3	-0.4
BNI				S	Sb	13 10 25.9	-0.1
BNI				AML	AML		
	comp=E,315µm,0.3s						
BNI				AML	AML		
	comp=N,234µm,0.9s						
BNI				AML	AML		
	comp=N,234µm,0.9s						
BNI				AML	AML		
	comp=E,315µm,0.3s						
LUCF	Luceram	0.63	156	Pg	Pg	13 10 17.2	+0.3
LUCF	Luceram	0.63	156	Pg	Pg	13 10 17.2	+0.3
LUCF				Sg	Sg	13 10 25.8	+0.5
SAOF	Saorge	0.63	140	P	Pg	13 10 16.9	0.0
SAOF				AML	AML		
	comp=E,1395µm,1.0s						
SAOF				AML	AML		
	comp=N,1144µm,0.5s						
SAOF				AML	AML		
	comp=E,1395µm,1.0s						
SAOF				AML	AML		
	comp=N,1144µm,0.5s						
SAOF				AML	AML		
	comp=E,1395µm,1.0s						
SAOF				AML	AML		
	comp=N,1144µm,0.5s						
SAOF				AML	AML		
	comp=E,1395µm,1.0s						
SAOF				AML	AML		
	comp=N,1144µm,0.5s						
GBOS	Grotte di Boss	0.65	110	P	Pg	13 10 17.2	-0.1
SBF	Sospel	0.69	152	ePg	Pg	13 10 17.8	-0.1
SBF				eSg	Sg	13 10 25.7	-1.3
	comp=N,562nm,0.4s						
SBF	Sospel	0.69	152	ePg	Pg	13 10 17.8	-0.1
SBF				eSg	Sg	13 10 25.7	-1.3
	comp=N,281nm,0.4s						
RSP	Reno Superiore	0.70	16	P	Pg	13 10 18.3	+0.1
RSP	Reno Superiore	0.70	16	P	Pg	13 10 18.3	+0.1
RSP				S	Sg	13 10 27.7	+0.2
RSP				AML	AML		
	comp=E,768µm,0.3s						
RSP				AML	AML		
	comp=N,555µm,0.4s						
RSP				AML	AML		
	comp=E,768µm,0.3s						
RSP				AML	AML		
	comp=N,555µm,0.4s						
RSP				AML	AML		
	comp=E,768µm,0.3s						
RSP				AML	AML		
	comp=N,555µm,0.4s						
CALF	Calern	0.72	184	Pg	Pg	13 10 18.6	0.0
CALF	Calern	0.72	184	Pg	Pg	13 10 18.6	0.0
CALF				Sg	Sb	13 10 28.4	-0.4
REVF	Revere	0.78	159	Pg	Pb	13 10 20.1	+0.1
REVF	Revere	0.78	159	Pg	Pb	13 10 20.1	+0.1
REVF				Sg	Sb	13 10 31.1	+0.6
MON	Monaco	0.81	157	Pg	Pb	13 10 20.5	+0.1
MON	Monaco	0.81	157	Pg	Pb	13 10 20.5	+0.1
NEGI	Seborga	0.81	140	P	Pg	13 10 20.2	0.0
RORO	Rocca Rossa	0.85	115	P	Pg	13 10 20.9	-0.1
RORO	Rocca Rossa	0.85	115	P	Pg	13 10 21.0	-0.1
RORO				AML	AML		
	comp=E,655µm,0.1s						
RORO				AML	AML		
	comp=N,95µm,0.9s						
IMI	Imperia	0.86	131	P	Pg	13 10 20.8	-0.3
IMI	Imperia	0.86	131	P	Pg	13 10 20.9	-0.3
IMI				S	Sb	13 10 33.1	+0.3
MONC	Moncucco Torin	0.90	48	AML	AML		
	comp=E,1022µm,0.5s						
MONC				AML	AML		
	comp=E,1022µm,0.5s						
MONC				AML	AML		
	comp=N,1172µm,0.5s						
MONC				AML	AML		
	comp=N,1172µm,0.5s						
ORIF	Oris-en-Rattie	0.91	300	ePg	Pg	13 10 21.6	-0.5
ORIF				eSg	Sg	13 10 33.7	-0.3
	comp=N,191nm,0.3s						
ORIF	Oris-en-Rattie	0.91	300	Pg	Pg	13 10 21.7	-0.5
ORIF	Oris-en-Rattie	0.91	300	ePg	Pg	13 10 21.6	-0.5
ORIF				eSg	Sg	13 10 33.7	-0.3
	comp=N,96nm,0.3s						
ORIF	Oris-en-Rattie	0.91	300	P	Pg	13 10 21.6	-0.5
ORIF				S	Sb	13 10 34.4	+0.2
ORIF				AML	AML		
	comp=E,346µm,0.4s						
ORIF				AML	AML		
	comp=N,336µm,0.4s						
ORIF				AML	AML		
	comp=N,336µm,0.4s						
ORIF				AML	AML		
	comp=E,346µm,0.4s						
EILF	Villa Eilenroc	0.93	174	Pg	Pb	13 10 22.7	+0.2
EILF	Villa Eilenroc	0.93	174	Pg	Pb	13 10 22.7	+0.2
FRF	La Foret Royal	0.94	195	ePg	Pg	13 10 22.3	-0.5
FRF				eSg	Sg	13 10 34.1	-1.0
	comp=E,508nm,0.3s						
FRF	La Foret Royal	0.94	195	ePg	Pg	13 10 22.3	-0.5
FRF				eSg	Sg	13 10 34.1	-1.0
	comp=E,254nm,0.3s						
QLNO	Quiliano	0.98	98	P	Pg	13 10 23.6	+0.1
QLNO				AML	AML		
	comp=E,755µm,0.5s						
QLNO				AML	AML		
	comp=N,538µm,0.4s						
QLNO				AML	AML		
	comp=N,538µm,0.4s						
QLNO				AML	AML		
	comp=E,755µm,0.5s						
MLYF	Mely	1.00	242	Pg	Pb	13 10 24.2	+0.4
MLYF	Mely	1.00	242	Pg	Pb	13 10 24.2	+0.4
LPG	La Plagne	1.04	351	ePg	Pg	13 10 24.3	-0.3
LPG				eSn	Sn	13 10 40.1	+0.5
LPG	La Plagne	1.04	351	ePg	Pg	13 10 24.3	-0.3
LPL	La Plagne	1.06	350	ePg	Pg	13 10 24.7	-0.3
LPL				eSg	Sb	13 10 39.4	+0.7
	comp=E,131nm,0.4s						
LPL	La Plagne	1.06	350	ePg	Pg	13 10 24.7	-0.3
PCP	Piancastagn	1.11	86	P	Pg	13 10 25.8	-0.2
SMRF	Simiane la Rot	1.13	244	ePn	Pn	13 10 26.7	+0.6
SMRF	Simiane la Rot	1.13	244	eP	Pn	13 10 27.9	+1.8
SMRF				eSg	Sn	13 10 41.5	0.0
	comp=E,263nm,0.5s						
SMRF	Simiane la Rot	1.13	244	ePn	Pn	13 10 26.7	+0.6
SMRF	Simiane la Rot	1.13	244	eP	Pn	13 10 27.9	+1.8
SMRF				eSg	Sn	13 10 41.5	0.0
	comp=E,132nm,0.5s						
BSTF	la Bastide-des	1.13	239	Pg	Pn	13 10 27.9	+1.8
BSTF				Sg	Sn	13 10 43.9	+2.4
LMR	La Mourre	1.19	197	ePg	Pb	13 10 27.1	+0.2
LMR				eSg	Sg	13 10 42.2	-0.7
	comp=E,428nm,0.2s						
LMR	La Mourre	1.19	197	ePg	Pb	13 10 27.1	+0.2
LMR				eSg	Sg	13 10 42.2	-0.7
	comp=E,214nm,0.2s						
CIRO	Champorcher	1.20	20	P	Pg	13 10 26.3	-1.4
CIRO				AML	AML		
	comp=E,170µm,0.9s						
CIRO				AML	AML		
	comp=N,152µm,0.4s						
CIRO				AML	AML		
	comp=N,152µm,0.4s						
CIRO				AML	AML		
	comp=E,170µm,0.9s						
RSL	Roselend	1.24	348	Pg	Pn	13 10 28.3	+0.5
RSL	Roselend	1.24	348	Pg	Pn	13 10 28.3	+0.5
MRGE	Morge	1.30	2	P	Pn	13 10 29.0	+0.5
REMY	Saint-Rhˆ'my-e	1.37	5	P	Pb	13 10 30.6	+0.4
REMY				AML	AML		
	comp=E,308µm,0.5s						
REMY				AML	AML		
	comp=N,386µm,0.7s						
REMY				AML	AML		
	comp=E,308µm,0.5s						
REMY				AML	AML		
	comp=N,386µm,0.7s						
VIVF	Saint-Julien-l	1.70	284	ePn	Pb	13 10 35.2	-0.4
VIVF				eSn	Sn	13 10 55.5	0.0
	comp=N,8.4nm,0.2s						
VIVF				eSg	Sg	13 10 59.5	+0.4
	comp=N,42nm,0.4s						
VIVF	Saint-Julien-l	1.70	284	ePn	Pb	13 10 35.2	-0.4
VIVF				eSn	Sn	13 10 55.5	0.0
	comp=N,4.2nm,0.2s						
VIVF				eSg	Sg	13 10 59.5	+0.4
	comp=N,21nm,0.4s						
MMK	Mattmark	1.72	23	P	Pn	13 10 35.4	+1.0
OG35	Corcelles	1.86	328	Pg	Pb	13 10 39.3	+0.8
OG35	Corcelles	1.86	328	Pg	Pb	13 10 39.3	+0.8
CABF	La Chapelle	2.23	344	eP	Pb	13 10 44.3	-0.4
CABF	La Chapelle	2.23	344	ePg	Pg	13 10 47.4	+0.1
CABF				eSn	Sn	13 11 08.5	-0.2
CABF				eSg	Sg	13 11 15.7	-0.5
	comp=N,62nm,0.8s						
CABF	La Chapelle	2.23	344	eP	Pb	13 10 44.3	-0.4
CABF	La Chapelle	2.23	344	ePg	Pg	13 10 47.4	+0.1
CABF				eSn	Sn	13 11 08.5	-0.2
CABF				eSg	Sg	13 11 15.7	-0.5
	comp=N,31nm,0.8s						
LASF	Ste Croix	2.29	261	ePn	Pn	13 10 42.4	+0.5
LASF				eSn	Sn	13 11 09.5	-0.4
LASF				eSg	Sg	13 11 17.8	-0.1
	comp=N,11nm,0.3s						
LASF	Ste Croix	2.29	261	ePn	Pn	13 10 42.4	+0.5
LASF				eSn	Sn	13 11 09.5	-0.4
LASF				eSg	Sg	13 11 17.8	-0.1
	comp=N,5.4nm,0.3s						
PGF	Pioggiola	2.42	142	ePn	Pn	13 10 44.3	+0.5
PGF				eSn	Sn	13 11 11.5	-1.8
	comp=N,52nm,0.3s						
PGF	Pioggiola	2.42	142	ePn	Pn	13 10 44.3	+0.5
PGF				eSn	Sn	13 11 11.5	-1.8
	comp=N,26nm,0.3s						
PGF	Pioggiola	2.42	142	P	Pn	13 10 44.4	+0.5
SMPL	Sampolo	2.91	144	P	Pn	13 10 51.9	+1.4
SMF	Signal de Mont	3.10	316	ePn	Pn	13 10 53.7	+0.6
SMF				eSn	Sn	13 11 30.5	+0.5
SMF				eSg	Sg	13 11 43.5	-0.6
	comp=N,21nm,0.4s						
SMF	Signal de Mont	3.10	316	ePn	Pn	13 10 53.7	+0.6
SMF				eSn	Sn	13 11 30.5	+0.5
SMF				eSg	Sg	13 11 43.5	-0.6
	comp=N,10nm,0.4s						
HINF	Hinteralfeld	3.35	358	ePn	Pn	13 10 57.8	+1.2
HINF	Hinteralfeld	3.35	358	ePg	Pg	13 11 07.5	-1.1
HINF				eSn	Sn	13 11 36.0	-0.2
HINF				eSg	Sg	13 11 51.2	-0.8
	comp=N,9.4nm,0.5s						
HINF	Hinteralfeld	3.35	358	ePn	Pn	13 10 57.8	+1.2
HINF	Hinteralfeld	3.35	358	ePg	Pg	13 11 07.5	-1.1
HINF				eSn	Sn	13 11 36.0	-0.2
HINF				eSg	Sg	13 11 51.2	-0.8
	comp=N,4.7nm,0.5s						
AVF	Avril sur Loir	3.45	314	ePn	Pn	13 11 00.4	+2.5
AVF				eSn	Sn	13 11 38.7	+0.1
	comp=N,4.3nm,0.3s						
AVF				eSg	Sg	13 11 54.1	-1.1
	comp=N,19nm,0.5s						
AVF	Avril sur Loir	3.45	314	ePn	Pn	13 11 00.4	+2.5
AVF				eSn	Sn	13 11 38.7	+0.1
	comp=N,2.2nm,0.3s						
AVF				eSg	Sg	13 11 54.1	-1.1
	comp=N,9.6nm,0.5s						
CAF	Calviac	3.54	279	ePn	Pn	13 11 00.6	+1.4
CAF				eSn	Sn	13 11 39.0	-1.9
	comp=N,7.8nm,0.4s						
CAF				eSg	Sg	13 11 57.0	-1.2
	comp=N,6.7nm,0.5s						
CAF	Calviac	3.54	279	ePn	Pn	13 11 00.6	+1.4
CAF				eSn	Sn	13 11 39.0	-1.9
	comp=N,3.9nm,0.4s						
CAF				eSg	Sg	13 11 57.0	-1.2
	comp=N,3.3nm,0.5s						
LOR	Lormes	3.55	323	ePn	Pn	13 11 00.0	+0.7
	baz=145						
LOR				eSn	Sn	13 11 41.1	0.0
	comp=N,8.1nm,0.3s,baz=158						
LOR				eSg	Sg	13 11 57.4	-1.1
	comp=N,14nm,0.4s,baz=154						
LOR	Lormes	3.55	323	ePn	Pn	13 11 00.0	+0.7
LOR				eSn	Sn	13 11 41.1	0.0
	comp=N,4.1nm,0.3s						
LOR				eSg	Sg	13 11 57.4	-1.1
	comp=N,7.0nm,0.4s						
SSF	Saint Saulge	3.56	318	ePn	Pn	13 10 59.9	+0.5
SSF				eSn	Sn	13 11 40.4	-0.9
SSF				eSg	Sg	13 11 57.6	-1.1
	comp=N,17nm,0.4s						
SSF	Saint Saulge	3.56	318	ePn	Pn	13 10 59.9	+0.5
SSF				eSn	Sn	13 11 40.4	-0.9
SSF				eSg	Sg	13 11 57.6	-1.1
	comp=N,8.4nm,0.4s						
HAU	Haudompre	3.56	353	ePn	Pn	13 11 00.8	+1.3
HAU	Haudompre	3.56	353	ePg	Pg	13 11 11.9	-0.8
HAU				eSn	Sn	13 11 40.2	-1.3
HAU	Haudompre	3.56	353	ePn	Pn	13 11 00.8	+1.3

HAU	Haudompre	3.56	353	ePg	Pg	13 11 11.9	-0.8
HAU				eSn	Sn	13 11 40.2	-1.3
BGF	Bois d'Agland	3.58	307	ePn	Pn	13 11 01.6	+1.9
BGF	Bois d'Agland	3.58	307	ePg	Pg	13 11 12.0	-1.1
BGF				eSg	Sg	13 11 57.9	-1.6
	comp=N,46nm,0.5s						
BGF	Bois d'Agland	3.58	307	ePn	Pn	13 11 01.6	+1.9
BGF	Bois d'Agland	3.58	307	ePg	Pg	13 11 12.0	-1.1
BGF				eSg	Sg	13 11 57.9	-1.6
	comp=N,23nm,0.5s						
MTLF	Montolieu	3.63	254	ePn	Pn	13 11 01.2	+0.8
MTLF	Montolieu	3.63	254	ePg	Pg	13 11 12.2	-1.8
MTLF				eSn	Sn	13 11 41.6	-1.5
	comp=N,3.0nm,0.3s						
MTLF				eSg	Sg	13 11 59.7	-1.3
	comp=N,6.1nm,0.4s						
MTLF	Montolieu	3.63	254	ePn	Pn	13 11 01.2	+0.8
MTLF	Montolieu	3.63	254	ePg	Pg	13 11 12.2	-1.8
MTLF				eSn	Sn	13 11 41.6	-1.5
	comp=N,1.5nm,0.3s						
MTLF				eSg	Sg	13 11 59.7	-1.3
	comp=N,3.0nm,0.4s						
TCF	Toulx Ste Croi	3.83	300	ePn	Pn	13 11 05.0	+1.9
TCF				eSn	Sn	13 11 48.3	+0.3
TCF				eSg	Sg	13 12 06.0	-1.3
	comp=N,11nm,0.5s						
TCF	Toulx Ste Croi	3.83	300	ePn	Pn	13 11 05.0	+1.9
TCF				eSn	Sn	13 11 48.3	+0.3
TCF				eSg	Sg	13 12 06.0	-1.3
	comp=N,5.7nm,0.5s						
CDF	Champ du Feu	3.95	3	ePn	Pn	13 11 06.6	+1.8
CDF				eSn	Sn	13 11 49.1	-1.9
	comp=N,3.5nm,0.2s						
CDF	Champ du Feu	3.95	3	ePn	Pn	13 11 06.6	+1.8
CDF				eSn	Sn	13 11 49.1	-1.9
	comp=N,1.8nm,0.2s						
SFTF	Sexfontaines	3.97	341	ePn	Pn	13 11 05.1	0.0
	baz=156						
SFTF	Sexfontaines	3.97	341	ePg	Pg	13 11 19.4	-1.2
	baz=145						
SFTF				eSn	Sn	13 11 50.3	-1.2
SFTF				eSg	Sg	13 12 10.4	-1.6
	comp=N,8.4nm,0.3s,baz=163						
SFTF	Sexfontaines	3.97	341	ePn	Pn	13 11 05.1	0.0
SFTF	Sexfontaines	3.97	341	ePg	Pg	13 11 19.4	-1.2
SFTF				eSn	Sn	13 11 50.3	-1.2
SFTF				eSg	Sg	13 12 10.4	-1.6
	comp=N,4.2nm,0.3s						
RJF	Les Rejaudoux	3.98	284	ePn	Pn	13 11 07.2	+2.0
RJF	Les Rejaudoux	3.98	284	ePn	Pn	13 11 07.2	+2.0
PAGF	Fort de Pagny	4.18	348	ePn	Pn	13 11 08.8	+0.9
	baz=171						
PAGF				eSn	Sn	13 11 54.8	-1.7
	comp=N,25nm,0.5s,baz=158						
PAGF	Fort de Pagny	4.18	348	ePn	Pn	13 11 08.8	+0.9
PAGF				eSn	Sn	13 11 54.8	-1.7
	comp=N,13nm,0.5s						
ETSF	Etsaut	5.70	257	eP	Pn	13 11 32.8	+3.9
GIVF	Givet	5.82	346	eP	Pn	13 11 35.0	+4.5

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*NIED **24** 13:13:00, 39°.20N×142°.40E, h44^{km}, Mw3.5 Best double couple: M$_0$2.33000×10^{14} NP1:φ$_s$332.00000°, δ36.00000°, λ-103.00000°. NP2:φ$_s$168.00000°, δ55.00000°, λ-81.00000°.*

JMA 24 13:13:47.4±0.1**, 39°.22N×142°.39E, h34**^{km}±1^{km}**, M3.6, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MIYJ	Miyakonagasawa	0.57	309	P	Pn	13 13 58.8	-0.2
MIYJ				eS	Sb	13 14 06.7	-0.5
OFUJ	Ofunato	0.58	256	P	Pn	13 13 58.9	-0.2
OFUJ				S	Sb	13 14 06.9	-0.5
JTH	Tanohata	0.82	331	P	Pn	13 14 02.6	0.0
JTH				eS	Sn	13 14 13.4	-0.2
JOM	Ohasama	0.89	287	P	Pn	13 14 03.8	+0.3
JOM				eS	Sn	13 14 15.4	+0.3
JMK	Ichinoseki	0.95	254	P	Pn	13 14 04.4	+0.1
JMK				eS	Sn	13 14 16.9	+0.3
JIO	Ouri	1.12	227	P	Pn	13 14 06.3	-0.3
JIO				eS	Sn	13 14 20.0	-0.8
JKZ	Kuzumaki	1.12	313	P	Pb	13 14 07.6	-0.7
JKZ				eS	Sn	13 14 21.8	+0.8
JANG	Nango	1.33	330	P	Pn	13 14 10.3	+0.7
JANG				eS	Sn	13 14 27.3	+1.1
JRG	Rokugo	1.37	278	P	Pn	13 14 11.1	+0.9
JRG				eS	Sb	13 14 29.8	0.0
MAT	Matsushiro	4.25	232	P	Pn	13 14 54.2	+4.4
MAT				S	Sn	13 15 42.8	+4.5

IDC 24 13:17:23.2±999.0**, 47°.31N×46°.74E, h0**^{km}**, Error ellipse: s-maj=428.6km s-min=195.7km az=133.0, Ukraine-Moldova-Southwestern Russia region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I43RU	DUBNA INFRASON	1.09	332	i		14 29 40.0	
	baz=143,slow=325,SNR=1.6						
I26DE	FREYUNG INFRAS	22.02	286	i		15 32 30.0	
	baz=82,slow=306,SNR=3.7						
I48TN	KESRA INFRASON	29.99	261	i		16 19 10.0	
	baz=52,slow=310,SNR=0.4						

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*BJI **24** 13:43:13.5, 6°.71S×126°.96E, h467^{km}, mb4.8/63, mB4.5/33*

*MOS **24** 13:43:17.2±0.9, 6°.45S×126°.56E, h474^{km}, mb4.7/29, Error ellipse: s-maj=15.4km s-min=6.3km az=103.8*

*ISCJB **24** 13:43:17.2±0.2, 6°.47S±0°.03×126°.67E±0°.03, h478^{km}±2^{km}, mb4.6/102, Error ellipse: s-maj=4.6km s-min=4.2km az=173.9*

*NEIC **24** 13:43:17.4±0.3, 6°.47S×126°.62E, h470^{km}±3^{km}, mb4.8/56, Error ellipse: s-maj=5.4km s-min=3.6km az=69.0*

*DJA **24** 13:43:18.7±0.1, 7°S±2°×12°7E±°, h456^{km}±2^{km}, M4.6/53, mB5.1/32, mb4.9/53, MLv5.5/29, Mw(mB)4.4/32*

*IDC **24** 13:43:18.4±1.3, 6°.47S×126°.66E, h476^{km}±14^{km}, mb4.2/24, mb1 4.2/27, mb1mx4.0/49, mbtmp5.0/27, Error ellipse: s-maj=15.1km s-min=7.1km az=76.0*

ISC 24 13:43:18.1±0.5**, 6°.47S**±0°.04×**126°.60E**±0°.06**, h475**^{km}±5^{km}**, n271, σ1^{s}37**/293**, mb4.7**/101**, 10C-9D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAI	Ambon	3.19	30	P	P	13 44 27.6	-0.9
AAI				S	S	13 45 24.4	-1.3
AAI	Ambon	3.19	30	P	P	13 44 28.0	-0.5
NLAI	Namlea	3.25	9	P	P	13 44 27.6	-1.4
NLAI				S	S	13 45 25.0	-1.4
BNDI	Bandanaira	3.82	60	P	P	13 44 33.0	-0.4
BNDI				S	S	13 45 34.0	-0.6
MSAI	Masohi	3.88	37	P	P	13 44 32.8	-1.1
SOEI	Soe	4.00	215	P	P	13 44 34.2	-0.8
SOEI	Soe	4.00	215	eP	P	13 44 34.6	-0.4
SANI	Sanana	4.43	352	P	P	13 44 37.3	-1.4
KDI	Kendari	4.68	302	P	P	13 44 42.9	+2.0
BATI	Baumata	4.71	218	P	P	13 44 41.1	-0.1
MMRI	Maumere	4.83	243	P	P	13 44 41.2	-1.0
MMRI	Maumere	4.83	243	eP	P	13 44 40.6	-1.6
SAUI	Saumlaki	4.90	108	P	P	13 44 42.0	-0.9
SAUI	Saumlaki	4.90	108	eP	P	13 44 41.7	-1.2
EDFI	Ende, Flores	5.37	245	P	P	13 44 45.9	-1.4
	216nm,0.6s,2µm1.2nm						
LBMI	Labuha	5.86	9	P	P	13 44 52.4	+0.3
	772nm,0.9s,7µm2.4nm						
BKSI	Bulukumba	6.54	280	P	P	13 45 00.2	+1.4
	30nm,0.6s,349nm0.1nm						
LUWI	Luwuk	6.61	325	P	P	13 45 01.2	+1.7
	117nm,0.7s,4µm0.5nm						
LUWI	Luwuk	6.61	325	eP	P	13 44 56.8	-2.7
FAKI	Fak Fak	6.64	58	P	P	13 44 59.6	-0.3
	1µm,0.7s,22µm4.9nm						
FAKI	Fak Fak	6.64	58	eP	P	13 44 58.4	-1.5
WSI	Waingapu	7.00	243	P	P	13 45 03.3	-0.2
	488nm,0.6s,10µm21nm						
BASI	Baing, Sumba	7.03	238	P	P	13 45 02.4	-1.3
TNTI	Ternate	7.23	6	P	P	13 45 05.7	-0.3
	300nm,0.8s,3µm1.1nm						
TNTI	Ternate	7.23	6	eP	P	13 45 05.2	-0.7
SPSI	Sidrap Palu	7.24	290	P	P	13 45 07.0	+1.0
SWI	Sorong	7.26	40	P	P	13 45 06.6	+0.4
	2µm,0.7s,14µm5.3nm						
APSI	Ampana	7.41	318	P	P	13 45 10.0	+2.2
	69nm,0.8s,600nm0.2nm						
KMSI	Cibinong	7.47	339	P	P	13 45 10.9	+2.5
	427nm,0.8s,3µm2.9nm						
TTSI	Tana Toraja	7.56	296	P	P	13 45 13.4	+4.0
	64nm,0.8s,686nm0.2nm						
KMPI	Kaimana, Papua	7.61	69	P	P	13 45 10.9	+1.1
	700nm,1.0s,12µm3.2nm						
MTN	Manton Dam	7.75	145	eP	P	13 45 10.7	-0.6
WBSI	Waikabubak, Su	7.80	246	P	P	13 45 10.8	-1.1
	105nm,0.6s,2µm4.1nm						
MRSI	Marisa	8.32	326	P	P	13 45 18.3	+0.9
	155nm,0.6s,2µm0.6nm						
PCI	Palu	8.72	309	P	P	13 45 25.4	+3.8
	165nm,0.9s,1µm0.5nm						
PCI	Palu	8.72	309	P	P	13 45 25.4	+3.8
PCI				pmax	pmax		
	comp=Z,165nm,0.9s						
RKPI	Ransiki, Papua	9.02	57	P	P	13 45 26.0	+1.1
	comp=Z,879nm,0.7s,comp=Z,23µm						
PLAI	Plampang	9.05	254	P	P	13 45 23.4	-1.8
	comp=Z,92nm,0.7s,comp=Z,1µm						
MPSI	Mapaga	9.51	315	P	P	13 45 32.7	+2.6
	comp=Z,37nm,0.5s,comp=Z,2µm						
SRPI	Serui, Papua	10.64	65	P	P	13 45 47.4	+5.1
	comp=Z,454nm,0.6s						
BAKI	Biak	10.84	61	P	P	13 45 49.8	+5.4
	comp=Z,639nm,1.1s,comp=Z,6µm						
SRBI	Singaraja	11.41	261	P	P	13 45 52.2	+1.7
	comp=Z,78nm,1.5s						
JAGI	Jajag, Banyuwa	12.50	260	P	P	13 46 06.8	+4.6
JAGI	Jajag, Banyuwa	12.50	260	eP	P	13 46 00.8	-1.4
DDMP	Don Marcelino,	12.52	356	eP	P	13 46 02.1	-0.3
MTKI	Muara Teweh, K	12.90	295	P	P	13 46 08.0	+1.5
	comp=Z,52nm,0.4s						
BLJI	Banyuglugur	12.97	264	P	P	13 46 09.1	+1.9
	comp=Z,119nm,1.0s,comp=Z,2µm						
GMJI	Gumukmas	13.17	261	P	P	13 46 09.4	+0.1
	comp=Z,60nm,0.9s						
MATI	Mati	13.33	359	eS	P	13 46 11.7	+0.6
DAV	Davao City (W)	13.49	356	P	P	13 46 13.0	+0.2
	comp=Z,93nm,0.3s,baz=171,slow=18,SNR=6.1						
DAV				S	S	13 48 38.5	+1.6
	comp=Z,65nm,0.3s,baz=225,slow=20,SNR=3.5						
DAV	Davao City (W)	13.49	356	eP	P	13 46 12.4	-0.4
DAV				S	S	13 48 38.5	+1.6
DMPH	Davao City--Mi	13.51	355	eS	P	13 46 15.0	+2.0
MYLDM	Lahad Datu	14.12	325	eP	P	13 46 21.5	+2.1
BUKP	Musuan	14.34	354	eP	P	13 46 21.6	-0.2
PAGZ	Pagadian	14.58	347	eP	P	13 46 23.8	-0.6
PWJI	Pagerwojo	14.76	263	P	P	13 46 29.8	+3.5
	comp=Z,52nm,0.6s						
WRAB	Tennant Creek	15.36	151	eP	P	13 46 31.6	-0.9
	comp=Z,25nm,0.5s						
WRAB	Tennant Creek	15.36	151	ceP	P	13 46 31.7	-0.8
WRAB				pmax	pmax		
	comp=Z,35nm,1.3s						
WRA	Warramunga Arr	15.36	151	P	P	13 46 31.9	-0.7
	comp=Z,5.2nm,0.3s,baz=336,slow=9.7,SNR=222						
WRA				S	S	13 49 10.9	-2.3
	comp=Z,3.0nm,0.3s,baz=323,slow=18,SNR=6.7						
WRA	Warramunga Arr	15.36	151	i P	P	13 46 31.7	-0.9
WRA				pmax	pmax		
	comp=Z,16nm,0.4s						
WB2	Warramunga Arr	15.37	151	eP	P	13 46 31.5	-1.1
PCJI	Pacitan	15.39	263	P	P	13 46 37.0	+4.1
	comp=Z,151nm,0.8s						
WOJI	Wonogiri, Jawa	15.61	264	P	P	13 46 38.5	+3.2
	comp=Z,46nm,0.7s						
UGM	Wanagama	16.01	264	eP	P	13 46 39.4	-0.2
	comp=Z,816nm,2.0s						
MBWA	Marble Bar	16.05	204	eP	P	13 46 38.7	-1.1
	comp=Z,38nm,0.8s						
SMRI	Semarang	16.06	267	eP	P	13 46 38.0	-2.0
	comp=Z,86nm,0.6s						
KKM	Kota Kinabalu	16.18	320	eP	P	13 46 41.7	+0.2
	comp=Z,362nm,1.4s						
STKI	Sintang	16.43	293	P	P	13 46 47.5	+3.6
	comp=Z,91nm,0.9s,comp=Z,11µm						
SBUM	Sibu	16.87	301	eP	P	13 46 48.4	-0.2
	comp=Z,35nm,0.7s						
KPJI	Karang Pucung	17.56	266	P	P	13 46 55.9	+0.3
	comp=Z,177nm,0.9s						
COEN	Coen	17.92	116	eP	P	13 46 57.9	-1.2
	comp=Z,24nm,1.4s						
CMJI	Cimerak	18.06	265	P	P	13 47 00.4	0.0
	comp=Z,457nm,0.9s,comp=Z,3µm						
KSM	Kuching	18.07	295	eP	P	13 46 59.8	-0.8
	comp=Z,104nm,0.7s						
AS31	Alice Springs	18.48	158	eP	P	13 47 04.0	-0.3
	comp=Z,16nm,0.8s						
ASAR	Alice Springs	18.48	158	P	P	13 47 04.2	-0.2
	comp=Z,7.8nm,0.3s,baz=342,slow=16,SNR=177						
ASAR				S	S	13 50 09.9	+0.9
	comp=Z,1.1nm,0.3s,baz=335,slow=18,SNR=16						
AS01	Alice Springs	18.50	158	eP	P	13 47 04.1	-0.3
CGJI	Cibinong	20.77	268	P	P	13 47 26.8	+1.6
	comp=Z,82nm,0.9s						
MDSI	Maura Dua	22.40	274	P	P	13 47 43.7	+3.7
	comp=Z,8.9nm,0.8s,comp=Z,503nm						
FORT	Forrest	24.22	177	eP	P	13 47 56.0	-0.1
	comp=Z,72nm,0.7s						
BBOO	Buckleboo	27.65	163	eP	P	13 48 26.2	-0.2
	comp=Z,33nm,0.6s						
MNSI	Mandailing Nat	27.92	284	P	P	13 48 31.5	+2.5
	comp=Z,45nm,0.9s						
STKA	Stephens Creek	28.90	153	P	P	13 48 37.5	+0.1
	comp=Z,14nm,0.5s,baz=326,slow=9.7,SNR=20						
STKA	Stephens Creek	28.90	153	eP	P	13 48 37.5	+0.1
	comp=Z,4.6nm,0.6s						
STKA	Stephens Creek	28.90	153	eP	P	13 48 37.5	+0.1
STKA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
UBPT	Khong Chiam	30.09	316	P	P	13 48 49.7	+1.8
	comp=Z,25nm,0.9s						
TPUB	Ta-pu	30.16	349	eP	P	13 48 47.1	-1.3
	comp=Z,52nm,0.8s						
SKNT	Sakolnakorn	32.29	316	P	P	13 49 07.9	+1.1
	comp=Z,16nm,0.9s						
NAYO	Nakonayok	32.49	310	P	P	13 49 10.5	+2.0
	comp=Z,0.5nm,0.9s,comp=Z,340nm						
KHON	Khomkaen	32.67	314	P	P	13 49 11.6	+1.6
	comp=Z,16nm,0.8s						
JOW	Kunigami	33.14	3	P	P	13 49 13.9	-0.1
	comp=Z,19nm,0.5s,baz=153,slow=12,SNR=7.0						
JOW	Kunigami	33.14	3	eP	P	13 49 13.8	-0.1
	comp=Z,60nm,1.2s						
NONG	Nongkai	33.62	317	P	P	13 49 19.3	+1.2
	comp=Z,0.5nm,1.0s						
PBKT	Sadao Pong	34.16	312	eP	P	13 49 23.2	+0.5
	comp=Z,8.6nm,0.8s						
PBKT	Sadao Pong	34.16	312	P	P	13 49 24.6	+1.9
	comp=Z,12nm,0.8s,comp=Z,1µm						
PHIT	Phitsanulok	34.96	313	P	P	13 49 31.5	+2.1
	comp=Z,47nm,0.8s,comp=Z,530nm						
UTTA	Uttaradit	35.22	313	P	P	13 49 32.6	+1.0
	comp=Z,17nm,0.8s,comp=Z,142nm						
CAN	Canberra	35.34	147	eP	P	13 49 33.8	+1.3
	comp=Z,39nm,1.3s						
CAN	Canberra	35.34	147	eP	P	13 49 33.8	+1.3
CAN				pmax	pmax		
	comp=Z,39nm,1.3s						
UMPA	Umpang Tak	35.51	310	P	P	13 49 35.9	+1.8
	comp=Z,12nm,0.9s,comp=Z,419nm						
LAMP	Lampang	36.39	314	P	P	13 49 42.5	+1.1
	comp=Z,17nm,0.7s,comp=Z,152nm						
CBIJ	Chichi jima	36.62	24	P	P	13 49 41.3	-1.8
JCJ	Chichijima	36.62	24	P	P	13 49 41.3	-1.8
	comp=Z,31nm,0.3s,baz=80,slow=19,SNR=13						
CM01	Chiang Mai Arr	36.81	313	eP	P	13 49 44.5	-0.4
CM31	Chiang Mai Arr	36.85	313	eP	P	13 49 44.1	-1.0
CMAR	Chiang Mai Arr	36.85	313	P	P	13 49 45.9	+0.7
	comp=Z,17nm,0.7s,baz=142,slow=6.9,SNR=62						
CMAR				ScP	S	13 54 55.4	+0.3
	comp=Z,3.4nm,0.8s,baz=166,slow=3.2,SNR=13						
CMMT	Chiang Mai	37.07	313	P	P	13 49 47.8	+0.8
	comp=Z,42nm,0.9s						
CHTO	Chiang Mai	37.07	313	eP	P	13 49 47.2	+0.2
	comp=Z,26nm,0.8s						
CHTO	Chiang Mai	37.07	313	eP	P	13 49 47.2	+0.2
CHTO				pmax	pmax		
	comp=Z,26nm,0.8s						
CHTO	Chiang Mai	37.07	313	P	P	13 49 47.9	+0.9
	comp=Z,188nm,0.9s						
GYA	Guiyang	38.02	330	eP	P	13 49 56.0	+1.2
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
WHN	Wuhan	38.63	343	⇑P	P	13 50 00.8	+1.2
WHN				pmax	pmax		
	comp=Z,120nm,0.8s						
NJ2	Nanjing	39.01	350	eP	P	13 50 03.3	+0.6
NJ2				pmax	pmax		
	comp=Z,75nm,0.7s						
KMI	Kunming	39.05	324	P	P	13 50 04.8	+1.4
KMI				pmax	pmax		
	comp=Z,35nm,0.5s						
JNU	Nakatsue	39.58	6	P	P	13 50 07.2	-0.2
	comp=Z,15nm,0.8s,baz=173,slow=5.9,SNR=17						
JNU	Nakatsue	39.58	6	eP	P	13 50 06.6	-0.8
	comp=Z,23nm,0.9s						
ENH	Enshi	40.05	337	eP	P	13 50 10.9	-0.3
	comp=Z,34nm,0.8s						
TJN	Taejon	42.63	1	d iP	P	13 50 32.1	+0.6
INU	Inuyama	42.74	13	eP	P	13 50 30.9	-1.5
	comp=Z,23nm,1.3s						
CD2	Chengdu	43.12	331	eP	P	13 50 36.5	+0.9
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
TIA	Tai'an	43.38	349	P	P	13 50 36.8	-0.6
TIA				pmax	pmax		
	comp=Z,28nm,0.8s						
XAN	Xi'an	43.63	339	P	P	13 50 38.9	-0.6
XAN				pmax	pmax		
	comp=Z,39nm,0.8s						
XAN				pmax	pmax		
	comp=Z,150nm,4.2s						
KS15	Wonju Array Si	43.70	1	eP	P	13 50 40.5	+0.6
KSAR	Wonju Array Be	43.70	1	P	P	13 50 40.9	+1.0
KSAR				PcP	PcP	13 52 17.7	+0.9
KSAR	Wonju Array Be	43.70	1	P	P	13 50 40.9	+1.0
KSAR						13 52 17.7	
KSRS	Korea Array	43.71	2	P	P	13 50 40.9	+0.9
	comp=Z,14nm,0.9s,baz=177,slow=9.3,SNR=73						
KSRS				PcP	PcP	13 52 17.7	+0.9
	comp=Z,3.6nm,0.8s,baz=196,slow=3.4,SNR=11						
KS01	Wonju Array Si	43.73	1	eP	P	13 50 40.0	-0.2
KS01				ePcP	PcP	13 52 17.5	+0.6
MAJO	Matsushiro	44.15	13	eP	P	13 50 42.7	-0.8
	comp=Z,34nm,0.8s						
MAJO	Matsushiro	44.15	13	d iP	P	13 50 42.9	-0.6
MAJO				pmax	pmax		
	comp=Z,36nm,0.8s						
MAT	Matsushiro	44.15	13	P	P	13 50 42.8	-0.7
MJAR	Matsushiro Arr	44.15	13	P	P	13 50 42.9	-0.6
	comp=Z,25nm,0.7s,baz=195,slow=9.4,SNR=67						
MJAR				PcP	PcP	13 52 18.5	+0.1
	comp=Z,2.3nm,0.8s,baz=198,slow=4.1,SNR=5.1						
MJAR				ScP	ScP	13 55 24.1	-0.6
	comp=Z,1.6nm,0.9s,baz=200,slow=3.5,SNR=6.7						
MJB9	Matsu-Tunnel	44.15	13	eP	P	13 50 42.6	-0.9
	comp=Z,34nm,0.8s						
BJT	Baijiatuau	47.25	349	eP	P	13 51 06.7	-0.4
	comp=Z,30nm,1.0s						
BJT	Baijiatuau	47.25	349	eP	P	13 51 06.7	-0.4
BJT				pmax	pmax		
	comp=Z,30nm,1.0s						
BJI	Beijing	47.27	349	⇓eP	P	13 51 07.3	0.0
BJI				pP	pP	13 52 36.4	-1.7
BJI				pmax	pmax		
	comp=Z,38nm,0.9s						
LZH	Lanzhou	47.42	335	eP	P	13 51 09.3	+0.6
LZH				pP	pP	13 52 36.4	-3.3
LZH				pmax	pmax		
	comp=Z,78nm,1.2s						
LZH				pmax	pmax		
	comp=Z,330nm,5.2s						
PALK	Pallekele	47.78	286	i P	P	13 51 08.0	-3.7
MSHR	Mys Shultsa	48.99	4	d iP	P	13 51 21.0	+0.8
HHC	Hu-ho-hao-te	49.07	345	eP	P	13 51 20.8	-0.2
HHC				S	S	13 57 49.3	-0.6
HHC				pmax	pmax		
	comp=Z,55nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,5.9s						
LSA	Lhasa	49.52	318	P	P	13 51 26.1	+1.2
LSA				pmax	pmax		
	comp=Z,27nm,0.7s						
LSA	Lhasa	49.52	318	eP	P	13 51 25.9	+0.9
	comp=Z,36nm,0.6s						
LSA	Lhasa	49.52	318	eP	P	13 51 25.9	+0.9
LSA				pmax	pmax		
	comp=Z,36nm,0.6s						
CN2	Changchun	50.05	359	eP	P	13 51 27.9	-0.1
ODAN	Odare	50.39	313	eP	P	13 51 31.5	+0.4
	comp=Z,77nm,0.5s						
ERM	Erimo	50.57	16	ceP	P	13 51 32.6	+0.8
ERM				pmax	pmax		
	comp=Z,26nm,1.8s						
USRK	Ussuriysk Ar.	50.67	5	P	P	13 51 32.4	-0.1
	comp=Z,27nm,0.7s,baz=191,slow=7.4						
MDJ	Mudanjiang	50.92	3	eP	P	13 51 35.1	+0.7
	comp=Z,52nm,1.1s						
RAMN	Ramite	51.02	312	eP	P	13 51 36.4	+0.7
	comp=Z,164nm,0.6s						
JIRN	Jiri	51.72	313	eP	P	13 51 41.4	+0.4
	comp=Z,89nm,0.7s						
GTA	Gaotai	51.94	334	⇓P	P	13 51 43.0	+0.9
GTA				PcP	PcP	13 52 48.5	+1.7
GTA				pP	pP	13 53 17.8	+2.5
GTA				sP	sP	13 54 07.5	0.0
GTA				ScP	ScP	13 56 00.1	+2.2
GTA				pmax	pmax		
	comp=Z,57nm,1.0s						
GUN	Gumba	52.09	313	eP	P	13 51 43.9	+0.3
	comp=Z,131nm,0.6s						
PKIN	Phulchoki	52.26	312	eP	P	13 51 44.7	0.0
	comp=Z,50nm,0.5s						
ASAJ	Asahikawa	52.38	15	P	P	13 51 45.6	+0.6
	comp=Z,20nm,0.8s,baz=227,slow=8.0,SNR=32						
ASAJ	Asahikawa	52.38	15	eP	P	13 51 44.9	-0.1
	comp=Z,26nm,0.8s						
KKN	Kakani	52.46	312	eP	P	13 51 46.4	+0.2
	comp=Z,45nm,0.6s						
DMN	Daman	52.49	312	eP	P	13 51 46.7	+0.3
	comp=Z,54nm,0.6s						
GKN	Gorkha	53.05	312	eP	P	13 51 50.6	+0.3
	comp=Z,87nm,0.3s						
KOLN	Koldanda	53.69	311	eP	P	13 51 55.4	+0.5
	comp=Z,67nm,0.5s						
DANN	Dangsing	53.89	312	eP	P	13 51 56.7	+0.3
	comp=Z,77nm,0.6s						
PYUN	Piuthan	54.32	311	eP	P	13 51 59.9	+0.5
	comp=Z,149nm,0.8s						
KUR	Kuril'sk	54.89	18	⇑eP	P	13 52 05.1	+2.3
YSS	Yuzh-Sakhalins	55.09	13	eP	P	13 52 04.7	+0.5
	comp=Z,13nm,0.7s						
YSS	Yuzh-Sakhalins	55.09	13	eP	P	13 52 04.5	+0.4
YSS				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KLR	Kul'dur	55.65	4	d iP	P	13 52 08.0	0.0
ULN	Ulaanbaatar	56.78	344	eP	P	13 52 16.7	+0.5
	comp=Z,36nm,0.9s						
ULN	Ulaanbaatar	56.78	344	d iP	P	13 52 17.1	+1.0
ULN				pmax	pmax		
	comp=Z,35nm,1.0s						
SONM	Songino Array	56.93	344	P	P	13 52 18.0	+0.9
	comp=Z,18nm,0.7s,baz=162,slow=7.9,SNR=101						
SONM				PcP	PcP	13 53 05.6	-0.3
	comp=Z,2.8nm,0.9s,baz=172,slow=4.4,SNR=2.0						
SONM				ScP	ScP	13 56 18.4	-1.2
	comp=Z,2.2nm,1.0s,baz=142,slow=3.5,SNR=5.3						
SONA1	Songino Array	56.94	344	eP	P	13 52 17.8	+0.6
GRNR	Gornyy	57.64	7	eP	P	13 52 24.9	+3.1
GRNR				pmax	pmax		
	comp=Z,52nm,1.0s						
TYV	Tymovskoe	58.76	12	eP	P	13 52 30.7	+1.3
TYV				pmax	pmax		
	comp=Z,14nm,0.7s						
ZEA	Zeya	59.98	0	eP	P	13 52 38.6	+1.1
ZEA				pmax	pmax		
	comp=Z,46nm,1.4s						
ZAK	Zakamensk	60.12	343	eP	P	13 52 38.8	+0.2
ZAK				pmax	pmax		
	comp=Z,9.0nm,1.1s						
CASY	Casey	60.75	187	eP	P	13 52 42.7	+0.3
	comp=Z,11nm,0.8s						
WMQ	Urumqi	61.15	329	P	P	13 52 46.8	+1.2
WMQ				pP	pP	13 54 24.0	+1.1
WMQ				sP	sP	13 55 13.0	-0.9
WMQ				pmax	pmax		
	comp=Z,110nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,34nm,3.7s						

TLY	Talaya	61.18	344	eP	P	13 52 46.5	+1.0
	comp=Z,12nm,0.8s						
TLY	Talaya	61.18	344	eP	P	13 52 47.1	+1.6
TLY				pmax	pmax		
	comp=Z,15nm,1.0s						
MOY	Mondy	61.93	342	eP	P	13 52 51.9	+1.3
MOY				pmax	pmax		
	comp=Z,35nm,1.5s						
HVS	Khovu-Aksy	63.98	338	i P	P	13 53 04.3	+0.5
HVS				pmax	pmax		
	comp=Z,20nm,0.8s						
NIL	Nilore	64.33	312	eP	P	13 53 05.3	-1.0
	comp=Z,17nm,0.6s						
NIL	Nilore	64.33	312	eP	P	13 53 05.4	-1.0
NIL				pmax	pmax		
	comp=Z,17nm,0.6s						
BOD	Bodaibo	64.88	353	eP	P	13 53 08.9	-0.4
BOD				pmax	pmax		
	comp=Z,28nm,1.2s						
PEA0B	Petropavlovsk-	64.93	20	eP	P	13 53 11.0	+1.2
	comp=Z,32nm,0.7s						
PETK	Petropavlovsk-	64.93	20	P	P	13 53 11.1	+1.4
	comp=Z,27nm,0.7s,baz=193,slow=5.9						
PETK	Petropavlovsk-	64.93	20	eP	P	13 53 10.8	+1.1
PETK	Petropavlovsk-	64.93	20	eP	P	13 53 10.8	+1.1
KSH	Kashi	65.37	319	P	P	13 53 14.0	+1.0
KSH				ePcP	PcP	13 53 40.8	+0.3
KSH				pP	pP	13 54 54.8	+2.9
KSH				S	S	14 01 14.4	-5.0
KSH				pmax	pmax		
	comp=Z,13nm,0.7s						
KSH				pmax	pmax		
	comp=Z,110nm,4.8s						
DGZ	Jazzator, Alta	65.47	333⇑	iP	P	13 53 13.8	+0.4
DGZ				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MK01	Makanchi Array	65.95	328	eP	P	13 53 16.7	+0.4
MK31	Makanchi Array	65.97	328	eP	P	13 53 16.8	+0.4
MK31	Makanchi Array	65.97	328	eP	P	13 53 16.8	+0.4
MKAR	Makanchi Array	65.97	328	P	P	13 53 17.1	+0.7
	comp=Z,12nm,0.5s,baz=129,slow=7.9,SNR=134						
MKAR	Makanchi Array	65.97	328	eP	P	13 53 16.8	+0.4
	comp=Z,110nm,0.6s						
MKAR	Makanchi Array	65.97	328	eP	P	13 53 16.8	+0.4
MKAR				pmax	pmax		
	comp=Z,110nm,0.6s						
MAKZ	Makanchi	66.14	328	eP	P	13 53 17.7	+0.2
	comp=Z,14nm,0.9s						
MAKZ	Makanchi	66.14	328	eP	P	13 53 17.7	+0.2
MAKZ				pmax	pmax		
	comp=Z,14nm,0.9s						
KBL	Kabul	67.86	311	eP	P	13 53 28.9	+0.3
	comp=Z,8.9nm,0.9s						
KBL	Kabul	67.86	311	eP	P	13 53 28.9	+0.3
KBL				pmax	pmax		
	comp=Z,9.0nm,0.9s						
AAK	Ala-Archa	67.98	321	eP	P	13 53 29.9	+0.7
	comp=Z,11nm,0.8s						
AAK	Ala-Archa	67.98	321	c iP	P	13 53 30.5	+1.3
AAK				pmax	pmax		
	comp=Z,12nm,0.8s						
YAK	Yakutsk	68.34	2	eP	P	13 53 30.9	+0.2
	comp=Z,75nm,0.7s						
YAK	Yakutsk	68.34	2	i P	P	13 53 31.2	+0.5
YAK				pmax	pmax		
	comp=Z,72nm,0.7s						
MA2	Magadan	68.59	13⇑	eP	P	13 53 34.0	+1.7
MA2				pmax	pmax		
	comp=Z,35nm,1.0s						
ZAA0	Zalesovo Array	69.65	335	eP	P	13 53 38.2	-0.5
	comp=Z,42nm,0.7s						
ZALV	Zalesovo Beam	69.65	335	P	P	13 53 38.7	0.0
	comp=Z,33nm,0.5s,baz=129,slow=4.6,SNR=18						
KURBB	Kurchatov Arra	70.33	330	P	P	13 53 43.4	+0.5
	comp=Z,33nm,0.8s,baz=132,slow=5.0,SNR=263						
KURK	Kurchatov	70.34	330	eP	P	13 53 43.3	+0.4
	comp=Z,56nm,0.8s						
KURK	Kurchatov	70.34	330	d iP	P	13 53 43.1	+0.2
KURK				pmax	pmax		
	comp=Z,47nm,0.9s						
NVS	Novosibirsk	70.94	335⇑	iP	P	13 53 46.8	+0.4
NVS				eS	S	14 02 17.5	-5.8
NVS				pmax	pmax		
	comp=Z,41nm,1.1s						
NVS				pmax	pmax		
	comp=N,22nm,1.0s						
NVS				pmax	pmax		
	comp=E,19nm,1.0s						
NVS				smax	smax		
	comp=N,6.0nm,1.3s						
NVS				smax	smax		
	comp=E,8.0nm,1.3s						
WSAR	Wadi Sarin	72.60	297	P	P	13 53 57.4	+0.5
	comp=E,3.1nm,0.7s,baz=63,slow=4.5,SNR=2.7						
VNDA	Vanda	73.39	172	P	P	13 54 00.2	-0.1
	comp=E,2.7nm,0.7s,baz=318,slow=6.4,SNR=24						
VNDA	Vanda	73.39	172	eP	P	13 54 00.4	0.0
	comp=E,41nm,1.1s						
VNDA	Vanda	73.39	172	eP	P	13 54 00.4	0.0
VNDA				pmax	pmax		
	comp=Z,41nm,1.1s						
BVAR	Borovoye Array	75.84	329	P	P	13 54 15.0	+0.4
	comp=Z,20nm,0.9s,baz=131,slow=6.1,SNR=95						
BVAR	Borovoye Array	75.84	329	P	P	13 54 15.0	+0.4
BRVK	Borovoye	75.91	329	eP	P	13 54 15.3	+0.4
	comp=Z,32nm,1.0s						
BRVK	Borovoye	75.91	329	d iP	P	13 54 15.5	+0.5
BRVK				pmax	pmax		
	comp=Z,28nm,1.0s						
GEYT	Alibeck	77.31	311	P	P	13 54 22.7	-0.4
	comp=Z,1.0nm,0.4s,baz=72,slow=4.8,SNR=6.3						
OPO	Ambohidratompo	77.96	252	P	P	13 54 27.4	+0.2
	comp=Z,3.9nm,0.7s,baz=74,slow=7.4,SNR=3.3						
TIXI	Tiksi	77.97	1	eP	P	13 54 25.6	-0.3
	comp=Z,26nm,1.1s						
TIXI	Tiksi	77.97	1	c iP	P	13 54 26.6	+0.7
TIXI				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ABKAR	Akbulak array	80.01	322	eP	P	13 54 37.1	-0.2
AKTO	Aktyubinsk	81.60	323	P	P	13 54 45.9	+0.3
	comp=Z,10nm,0.8s,baz=101,slow=7.2,SNR=20						
SVE	Sverdlovsk	82.59	330	eP	P	13 54 51.0	+0.7
SVE				pmax	pmax		
	comp=Z,16nm,0.6s						
ARU	Arti	83.49	329	eP	P	13 54 54.9	0.0
	comp=Z,20nm,1.1s						
ARU	Arti	83.49	329	c iP	P	13 54 55.3	+0.4
ARU				S	S	14 04 32.0	-4.3
ARU				SS	SS	14 10 12.1	-3.7
ARU				pmax	pmax		
	comp=Z,33nm,1.7s						
QSPA	South Pole Qui	83.50	180	P	P	13 54 54.5	-0.5
	comp=Z,3.7nm,0.5s,baz=168,slow=0.9,SNR=17						
QSPA	South Pole Qui	83.50	180	eP	P	13 54 54.9	-0.1
	comp=Z,28nm,0.6s						
RAYN	Ar Rayn	84.45	294	eP	P	13 55 01.1	+0.6
	comp=Z,7.1nm,0.9s						
RAYN	Ar Rayn	84.45	294	eP	P	13 55 01.1	+0.6
RAYN				pmax	pmax		
	comp=Z,7.0nm,0.9s						
SDPT	Sand Point	85.71	33	eP	P	13 55 05.8	0.0
	comp=Z,34nm,1.0s						
SVW2	Sparrevohn	89.77	28	eP	P	13 55 24.1	-0.8
	comp=Z,7.1nm,1.3s						
KDAK	Kodiak Island	90.55	32	i P	P	13 55 29.0	+0.6
SKT	Skwentna	91.85	28	eP	P	13 55 32.9	-1.6
	comp=Z,5.1nm,1.0s						
SUA	Susitna One	92.13	28	eP	P	13 55 35.1	-0.8
	comp=Z,9.1nm,0.9s						
RC01	Rabbit Creek A	92.55	29	eP	P	13 55 37.2	-0.4
	comp=Z,6.6nm,0.8s						
PMR	Palmer	92.92	28	eP	P	13 55 38.5	-0.8
PMR	Palmer	92.92	28	eP	P	13 55 38.5	-0.8
COLD	Coldfoot	93.28	23	eP	P	13 55 41.0	+0.1
	comp=Z,4.3nm,0.8s						
SML	Sawmill	93.32	28	eP	P	13 55 40.8	-0.4
	comp=Z,12nm,1.0s						
SML	Sawmill	93.32	28	eP	P	13 55 40.8	-0.4
SML				pmax	pmax		
	comp=Z,12nm,1.0s						
TOLK	Toolik Lake Re	93.73	21	eP	P	13 55 43.1	+0.2
	comp=Z,5.0nm,0.8s						
WRH	Wood River Hil	93.77	26	eP	P	13 55 41.9	-1.2
	comp=Z,8.3nm,0.9s						
SCM	Sheep Creek Mo	93.80	28	eP	P	13 55 43.5	+0.1
	comp=Z,7.1nm,0.6s						
SCM	Sheep Creek Mo	93.80	28	eP	P	13 55 43.5	+0.1
SCM				pmax	pmax		
	comp=Z,7.0nm,0.6s						
CCB	Clear Creek Bu	93.91	25	eP	P	13 55 42.4	-1.3
	comp=Z,7.1nm,0.7s						
HDA	Harding Lake	94.25	26	eP	P	13 55 43.8	-1.5
	comp=Z,6.3nm,0.8s						
ILAR	Eielson Array	94.32	25	P	P	13 55 44.0	-1.6
	comp=Z,1.4nm,0.9s,baz=257,slow=4.9,SNR=12						
ILAR	Eielson Array	94.32	25	P	P	13 55 44.0	-1.6
SNAA	Sanae	95.37	194	P	P	13 55 50.6	+0.2
	comp=Z,1.0nm,0.8s,baz=68,slow=3.7,SNR=4.2						
ARCES	ARCESS Array B	99.91	339	P	Pdif	13 56 09.7	-0.9
	comp=Z,3.9nm,0.8s,baz=68,slow=8.0,SNR=7.2						
SPITS	Spitsbergen Ar	100.39	349	P	Pdif	13 56 10.8	-1.8
	comp=Z,7.9nm,0.9s,baz=25,slow=3.8,SNR=2.9						
FINES	FINESS Array B	100.68	331	P	Pdif	13 56 12.4	-1.8
	comp=Z,1.6nm,0.9s,baz=132,slow=2.1,SNR=3.2						
HFS	Hagfors	106.89	331	Pdiff	Pdif	13 56 40.2	-1.7
	comp=Z,7.3nm,1.2s,baz=100,slow=7.5,SNR=4.3						
HLID	Hailey	115.27	45	ePKPdf	PKPdf	14 01 05.2	-0.2
BOZ	Bozeman (W)	116.56	42	ePKPdf	PKPdf	14 01 08.5	+0.7
BOZ	Bozeman (W)	116.56	42	ePKIKP	PKPdf	14 01 08.5	+0.7
PDAR	Pinedale Array	118.90	44	PKP	PKPdf	14 01 12.6	0.0
	comp=Z,0.4nm,0.7s,baz=129,slow=2.1,SNR=4.0						
MNTX	Cornudas Mount	125.47	56	ePKPdf	PKPdf	14 01 26.0	+0.8
TXAR	Lajitas Array	127.53	58	PKP	PKPdf	14 01 29.5	+0.2
	comp=Z,0.3nm,0.6s,baz=336,slow=4.0,SNR=3.0						
SHEL	Horse Pasture	127.83	244	i PKIKP	PKPdf	14 01 35.0	+4.9
JCT	Junction City	130.40	55	ePKPdf	PKPdf	14 01 36.0	+1.4
JCT	Junction City	130.40	55	ePKIKP	PKPdf	14 01 36.0	+1.4
PLCA	Paso Flores	130.45	163	SKPbc	SKPbc	14 04 13.3	-0.1
	comp=Z,6.5nm,1.1s,baz=247,slow=7.7,SNR=4.1						
SCHQ	Schefferville	130.58	10	SKPbc	SKPbc	14 04 11.8	-1.4
	comp=Z,4.5nm,0.6s,baz=324,slow=7.0,SNR=4.2						
KOWA	Kowa	130.87	284	SKPbc	SKPbc	14 04 15.3	-0.2
	comp=Z,5.6nm,0.8s,baz=112,slow=3.9,SNR=8.4						
DBIC	Dimbokro	131.79	273	SKPbc	SKPbc	14 04 18.7	-0.1
	comp=Z,5.2nm,0.9s,baz=66,slow=0.4,SNR=3.3						
CPUP	Villa Florida	147.17	173	PKPbc	PKPbc	14 02 08.2	+0.2
	comp=Z,3.9nm,0.6s,baz=198,slow=3.5,SNR=9.0						
CPUP	Villa Florida	147.17	173	ePKPbc	PKPbc	14 02 07.5	-0.5
CPUP	Villa Florida	147.17	173	ePKP2	PKPbc	14 02 07.5	-0.5
JTS	JuntasAbangare	148.57	81	PKPbc	PKPbc	14 02 10.9	-1.0
	comp=Z,5.9nm,0.6s,baz=253,slow=11,SNR=4.6						
LPAZ	La Paz	153.10	147	PKPab	PKPab	14 02 37.8	+1.2
	comp=Z,1.7nm,0.6s,baz=221,slow=2.6,SNR=6.0						
MPR	Mayaguez	162.23	48	ePKPab	PKPab	14 03 16.6	+1.0

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*IDC **24** 13:45:22.2±0.5, 16°.28S×173°.37W, h0^{km}, mb4.5/22, mb1 4.6/23, mb1mx4.5/45, mbtmp4.5/23, ML3.9/1, MS3.8/30, Ms1 3.8/30, ms1mx3.8/42, Error ellipse: s-maj=18.1km s-min=13.2km az=128.0*

*ISCJB **24** 13:45:27.1±0.3, 16°.23S±0°.07×173°.48W±0°.06, h45^{km}, mb4.6/83, MS3.9/26, Error ellipse: s-maj=11.1km s-min=6.8km az=141.4*

*NEIC **24** 13:45:28.8±0.2, 16°.24S×173°.41W, mb4.6/61, Error ellipse: s-maj=8.0km s-min=4.7km az=139.0*

*BJI **24** 13:45:28.7, 16°.26S×173°.64W, h47^{km}, mb5.0/13, mB5.1/8, Ms4.6/3, Ms7 4.5/3*

ISC 24 13:45:28.6±0.6, **16°.10S**±0°.08×**173°.34W**±0°.09, **h44**^{km}±4^{km}, **h44^{km}:pP-P, n211,** σ1ˢ.**19**/195, **mb4.6**/83, **MS3.9**/26, **11C-12D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	2.65	35	Pn	Pn	13 46 05.9	-3.0
	61nm,0.3s,baz=202,slow=2.5,SNR=92						
AFI				Sn	Sn	13 46 35.5	-4.4
	318nm,0.3s,baz=218,slow=22,SNR=12						
AFI				LR	LR	13 47 18.9	
	comp=Z,513nm,20.6s,baz=226,slow=41						
KNTN	Kanton	13.34	7	ePn	Pn	13 48 35.6	+0.2
RAO	Raoul Island	13.75	197	LR	LR	13 52 27.9	
	comp=Z,2µm,21.1s,baz=91,slow=31						
RAR	Rarotonga	13.83	114	Pn	Pn	13 48 34.8	-7.2
	6.1nm,0.3s,baz=106,slow=1.4,SNR=9.9						
RAR				Sn	Sn	13 50 58.1	-16
	1.0nm,0.3s,baz=311,slow=20,SNR=2.3						
RAR				LR	LR	13 52 37.8	
	comp=Z,527nm,20.8s,baz=287,slow=32						
DZM	Mont Dzumac	20.00	250	P	P	13 49 57.5	-0.3
	0.3nm,0.3s,baz=85,slow=17,SNR=4.9						
DZM				LR	LR	13 56 33.1	
	comp=Z,522nm,20.1s,baz=70,slow=34						
DZM	Mont Dzumac	20.00	250	eP	Pn	13 50 01.9	+2.1
	69nm,0.9s						
DZM				eLR	LR	13 54 58.9	
	957nm,25.4s						
DZM	Mont Dzumac	20.00	250	P	P	13 49 57.5	-0.3
	32nm,0.7s						
PAE	Paea	22.79	97	eT	T	14 13 35.9	
	7.4nm,0.4s						
PPT	Papeete	22.79	97	LR	LR	13 56 45.1	
	comp=Z,254nm,21.1s,baz=296,slow=30						
PPT2	Papeete2	22.79	97	eLR	LR	13 55 52.0	
	688nm,25.0s,baz=265						
PPT2	Papeete2	22.79	97	eT	T	14 13 36.7	
	8.7nm,0.4s						
TIAR	Tiarei	23.01	97	eT	T	14 13 52.2	
	5.0nm,0.4s						
TVO	Taravao	23.10	98	eT	T	14 13 59.6	
	2.3nm,0.3s						
TBI	Tubuai	23.59	112	eLR	LR	13 56 05.0	
	952nm,27.2s,baz=287						
TBI	Tubuai	23.59	112	eT	T	14 14 37.5	
	19nm,0.4s						
URZ	Urewera	23.62	199	P	P	13 50 32.0	-3.7
	9.4nm,0.6s,baz=12,slow=2.9,SNR=11						
PMOR	Pomariorio Ree	24.54	91	eT	T	14 15 45.5	
	8.0nm,0.4s						
VAH	Vaihoa	24.77	92	eT	T	14 16 02.7	
	10nm,0.3s						
HNR	Honiara	26.86	281	LR	LR	14 00 14.4	
	comp=Z,1µm,21.0s,baz=135,slow=33						
RPZ	Rata Peaks	30.56	203	P	P	13 51 36.6	-1.5
	4.2nm,0.6s,baz=45,slow=4.3,SNR=2.1						
TAOE	Nuku Hiva Isla	33.16	81	eLR	LR	14 00 36.1	
	391nm,26.3s,baz=265						
TAOE	Nuku Hiva Isla	33.16	81	eT	T	14 26 29.9	
	38nm,0.2s						
RKT	Rikitea	36.73	107	eLR	LR	14 02 13.2	
	628nm,26.8s						
RKT	Rikitea	36.73	107	eT	T	14 31 03.0	
	7.4nm,0.3s						
PMG	Port Moresby	39.04	275	P	P	13 52 49.8	-1.7
	14nm,0.9s,baz=116,slow=9.0,SNR=2.5						
PMG				LR	LR	14 07 00.5	
	comp=Z,226nm,19.7s,baz=70,slow=33						
H11S2	WAKE ISLAND Hy	39.59	329	T	T	14 34 58.0	
	baz=149						
H11S3	WAKE ISLAND Hy	39.60	329	T	T	14 34 39.7	
	baz=149						
H11S1	WAKE ISLAND Hy	39.61	329	T	T	14 34 54.1	
	baz=149						
H11N3	WAKE ISLAND Hy	40.54	331	T	T	14 35 58.1	
	baz=162						
H11N1	WAKE ISLAND Hy	40.55	331	T	T	14 36 21.5	
	baz=162						
H11N2	WAKE ISLAND Hy	40.56	331	T	T	14 35 56.9	
	baz=162						
STKA	Stephens Creek	43.74	241	P	P	13 53 27.6	-2.4
	11nm,0.8s,baz=84,slow=9.3,SNR=8.2						
STKA	Stephens Creek	43.74	241	eP	P	13 53 27.5	-2.4
	2.7nm,0.8s						
WRA	Warramunga Arr	49.74	257	P	P	13 54 15.3	-1.8
	4.3nm,0.8s,baz=92,slow=6.6,SNR=5.4						
WRA				PcP	PcP	13 55 38.1	+0.4
	2.0nm,0.9s,baz=92,slow=3.6,SNR=2.9						
ASAR	Alice Springs	49.95	252	P	P	13 54 16.9	-1.7
	18nm,0.7s,baz=85,slow=8.5,SNR=26						
ASAR				PcP	PcP	13 55 39.0	+0.5
	2.3nm,0.9s,baz=99,slow=4.9,SNR=2.7						
GUMO	Guam	50.76	303	LR	LR	14 13 54.1	
	comp=Z,48nm,18.6s,baz=120,slow=34						
RPN	Rapa Nui	59.97	112	LR	LR	14 14 09.1	
	comp=Z,75nm,18.5s,baz=200,slow=29						
SOEI	Soe	60.95	268	eP	P	13 55 37.3	-0.7
	44nm,0.8s						
SOEI				epP	pP	13 55 48.9	-1.6
VNDA	Vanda	62.69	186	eP	P	13 55 49.8	+1.3
	41nm,1.1s						
DAV	Davao City (W)	64.68	286	LR	LR	14 23 06.6	
	comp=Z,73nm,18.2s,baz=136,slow=35						
MJAR	Matsushiro Arr	69.50	320	P	P	13 56 33.1	+0.3
	0.8nm,0.5s,baz=157,slow=6.9,SNR=4.0						
MJAR				LR	LR	14 21 30.5	
	comp=Z,70nm,22.0s,baz=115,slow=31						
ASAJ	Asahikawa	72.16	328	P	P	13 56 51.0	+2.3
	12nm,0.7s,baz=207,slow=4.5,SNR=31						
ASAJ				LR	LR	14 23 04.1	
	comp=Z,36nm,21.5s,baz=168,slow=31						
ASAJ	Asahikawa	72.16	328	eP	P	13 56 50.9	+2.1
	14nm,0.7s						
JNU	Nakatsue	72.31	313	P	P	13 56 50.6	+0.6
	5.0nm,0.7s,baz=210,slow=8.1,SNR=2.7						
JNU				LR	LR	14 22 58.3	
	comp=Z,53nm,20.2s,baz=123,slow=31						
CMB	Columbia Colle	73.25	41	eP	P	13 56 56.5	+1.1
	7.6nm,1.2s						
PETK	Petropavlovsk-	73.31	342	P	P	13 56 56.0	+0.6
	9.9nm,0.7s,baz=124,slow=7.7						
PETK				LR	LR	14 23 21.4	
	comp=Z,26nm,21.6s,baz=137,slow=31						
PETK	Petropavlovsk-	73.31	342	eP	P	13 56 57.0	+1.6
LPIG	La Paz	73.36	58	LR	LR	14 20 34.2	
	comp=Z,80nm,20.7s,baz=215,slow=29						
MDPB	Devils Postpil	73.85	42	eP	P	13 57 00.1	+0.9
	4.2nm,0.8s						
OMMB	Old Mammoth Mi	73.89	42	eP	P	13 56 59.5	-0.1
	8.8nm,1.5s						
QSPA	South Pole Qui	73.95	180	P	P	13 56 58.7	-0.5
	2.7nm,0.6s,baz=61,slow=3.5,SNR=9.0						
QSPA				LR	LR	14 23 21.2	
	comp=Z,58nm,21.8s,baz=42,slow=31						
QSPA	South Pole Qui	73.95	180	eP	P	13 56 58.7	-0.5
	28nm,0.6s						
DAC	Darwin (Calif)	74.05	44	eP	P	13 56 59.6	-0.8
	3.6nm,1.0s						
YSS	Yuzh-Sakhalins	74.11	330	eP	P	13 57 01.8	+1.5
	15nm,0.8s						
YBH	Yreka Blue Hor	74.12	37	P	P	13 57 01.4	+0.9
	3.5nm,0.6s,baz=191,slow=5.7,SNR=10.0						
YBH				LR	LR	14 20 47.3	
	comp=Z,69nm,21.4s,baz=236,slow=29						
WAKR	Walker	74.13	41	eP	P	13 57 02.1	+1.3
	33nm,1.9s						
PNTR	Pine Nut	74.37	41	eP	P	13 57 03.5	+1.2
	7.0nm,0.8s						
RYN	Ryan	74.78	42	eP	P	13 57 05.4	+0.9
	4.7nm,0.8s						
NV01	Mina Array Sit	74.81	42	eP	P	13 57 05.3	+0.6
NVAR	Mina Array Bea	74.81	42	P	P	13 57 05.5	+0.7
	3.0nm,0.8s,baz=228,slow=9.9,SNR=24						
NVAR				LR	LR	14 22 30.2	
	comp=Z,80nm,20.5s,baz=106,slow=30						
NV11	Mina Array Sit	74.90	42	eP	P	13 57 06.5	+1.2
	0.4nm,1.0s						
KVN	Kaiserville	75.30	41	eP	P	13 57 07.9	+0.4
	3.2nm,0.8s						
TPNV	Topopah Spring	75.32	44	eP	P	13 57 08.6	+1.0
	5.3nm,0.9s						
MOD	Modoc Plateau	75.63	38	eP	P	13 57 10.2	+0.9
	6.6nm,0.8s						
PINE	Pine Mountain	76.43	36	eP	P	13 57 15.1	+1.3
	12nm,0.9s						
R11A	Troy Canyon, C	76.53	43	eP	P	13 57 15.1	+0.5
	4.7nm,1.2s						
KSRS	Korea Array	76.69	316	P	P	13 57 15.4	+0.1
	0.9nm,0.9s,baz=113,slow=6.0,SNR=3.3						
KSRS				LR	LR	14 25 35.9	
	comp=Z,39nm,20.3s,baz=138,slow=31						
KSAR	Wonju Array Be	76.71	316	P	P	13 57 15.4	0.0
TUC	Tucson	76.79	51	eP	P	13 57 15.6	-0.4
	3.7nm,0.8s						
WVOR	Wild Horse Val	76.94	38	eP	P	13 57 17.9	+1.2
	5.5nm,1.0s						
CCUT	Cedar City	77.58	45	eP	P	13 57 22.2	+1.6
	7.2nm,1.3s						
J08A	Circle Bar Ran	77.59	38	eP	P	13 57 21.3	+1.0
	7.2nm,1.1s						
PSUT	Pine Spring	77.77	44	eP	P	13 57 22.5	+0.9
	4.9nm,0.8s						
SZCU	Shurtz Canyon	77.79	45	eP	P	13 57 23.4	+1.7
	6.1nm,1.0s						
PKCU	Pink Cliffs	78.25	45	eP	P	13 57 26.4	+2.0
	9.2nm,0.9s						
G08A	Pilot Rock	78.46	36	eP	P	13 57 26.4	+1.2
	6.6nm,1.0s						
MSU	Marysvale	78.88	44	eP	P	13 57 29.5	+1.8
BMO	Blue Mountains	79.15	37	eP	P	13 57 29.9	+1.0
	4.0nm,1.0s						
MFID	Camas Ranch	79.19	39	eP	P	13 57 30.1	+0.9
	4.8nm,1.0s						
DUG	Dugway, Tooele	79.33	43	P	P	13 57 31.2	+1.1
	2.9nm,0.9s						
SUA	Susitna One	79.37	11	eP	P	13 57 29.6	-0.1
	7.1nm,0.7s						
GLI	Glacier Island	79.55	13	eP	P	13 57 31.0	+0.4
	12nm,0.8s						
SKT	Skwentna	79.72	10	eP	P	13 57 32.0	+0.5
	8.9nm,1.6s						
PMR	Palmer	79.79	11	eP	P	13 57 32.5	+0.7
F10A	Beach Ranch, E	79.85	36	eP	P	13 57 33.3	+0.7
	5.7nm,0.8s						
TMUT	Trail Mountain	79.93	44	eP	P	13 57 35.1	+1.5
	6.7nm,0.8s						
GHO	Glory Hole Cre	80.00	12	eP	P	13 57 34.3	+1.3
	8.4nm,0.7s						
HLID	Hailey	80.13	39	eP	P	13 57 34.1	-0.2
HLID				epP	pP	13 57 48.8	+1.4
BMRM	Bremner River	80.18	14	eP	P	13 57 34.6	+0.6
	13nm,0.8s						
HVU	Hansel Valley	80.19	41	eP	P	13 57 35.7	+1.0
HVU				epP	pP	13 57 48.8	+1.1
SRU	San Rafael Swe	80.30	45	eP	P	13 57 36.6	+1.2
	8.5nm,1.4s						
KLU	Klutina	80.35	13	eP	P	13 57 35.5	+0.5
	6.1nm,0.8s						
SCM	Sheep Creek Mo	80.37	12	eP	P	13 57 35.9	+0.9
	7.1nm,0.6s						
SCM				epP	pP	13 57 49.2	+1.1
MNTX	Cornudas Mount	80.60	53	eP	P	13 57 37.4	+0.5
MNTX				epP	pP	13 57 51.2	+1.2
NJ2	Nanjing	80.63	307	eP	P	13 57 37.6	+0.6
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
TCUT	Toone Canyon	80.72	42	eP	P	13 57 38.3	+0.6
TCUT				epP	pP	13 57 51.8	+1.1
PV09	Paradox Valley	80.95	46	eP	P	13 57 40.2	+1.2
PV09				epP	pP	13 57 53.3	+1.3
TX31	Lajitas Ar. Si	80.95	56	eP	P	13 57 38.3	-0.7
TX31				epP	pP	13 57 53.1	+1.2
TXAR	Lajitas Array	80.95	56	P	P	13 57 39.3	+0.4
	0.3nm,0.5s,baz=229,slow=5.8,SNR=5.1						
TXAR				LR	LR	14 26 19.9	
	comp=Z,42nm,19.8s,baz=0.0,slow=30						
PV14	Lion Creek, Pa	80.96	46	eP	P	13 57 38.4	-0.6
	5.0nm,0.8s						
PV23	Carpenter Ridg	81.01	46	eP	P	13 57 38.8	-0.5
	6.7nm,0.8s						
PV21	Cone Mtn., Par	81.09	46	eP	P	13 57 40.3	+0.6
PV21				epP	pP	13 57 53.8	+1.2
PV12	Saucer Basin,	81.09	46	eP	P	13 57 40.5	+0.8
PV12				epP	pP	13 57 54.0	+1.3
ANMO	Albuquerque	81.21	50	P	P	13 57 40.1	-0.2
	1.5nm,0.6s,baz=263,slow=7.5,SNR=6.0						
ANMO				LR	LR	14 27 40.1	
	comp=Z,49nm,18.8s,baz=250,slow=31						
ANMO	Albuquerque	81.21	50	eP	P	13 57 40.4	+0.1
	4.4nm,1.2s						
TRF	Thorofare Moun	81.30	10	eP	P	13 57 40.3	+0.2
	5.2nm,0.7s						
MCMT	McKenzie Canyo	81.76	39	eP	P	13 57 44.2	+1.1
MCK	McKinley	81.80	11	eP	P	13 57 43.3	+0.7
	10nm,0.7s						
DLMT	Dillon	82.20	38	eP	P	13 57 45.5	+0.2
	5.2nm,1.0s						
S22A	4UR Ranch, Cre	82.20	47	eP	P	13 57 46.6	+1.0
	8.8nm,0.9s						
FXWY	Fox Creek	82.26	40	eP	P	13 57 46.6	+0.9
	6.1nm,1.4s						
IMW	Indian Meadow	82.44	40	eP	P	13 57 47.8	+1.0
IMW				epP	pP	13 58 00.4	+0.6
WRH	Wood River Hil	82.62	11	eP	P	13 57 47.3	+0.5
	8.3nm,0.9s						
FLWY	Flagg Ranch	82.69	40	eP	P	13 57 49.1	+1.2
	10.0nm,1.0s						
BW06	Boulder Array	82.75	42	eP	P	13 57 48.7	+0.5
BW06				epP	pP	13 58 01.8	+0.5
PD31	Pinedale Array	82.75	42	eP	P	13 57 48.7	+0.5
PD31				epP	pP	13 58 01.6	+0.2

PDAR	Pinedale Array	82.75	42	P	P	13 57 48.9	+0.6
	3.5nm,0.7s,baz=206,slow=3.4,SNR=45						
PDAR				LR	LR	14 29 03.4	
	comp=Z,54nm,18.6s,baz=260,slow=32						
PDAR	Pinedale Array	82.75	42	eP	P	13 57 48.5	+0.2
PDAR				epP	pP	13 58 01.9	+0.5
SMCO	Snowmass	82.75	46	eP	P	13 57 49.5	+0.9
	16nm,1.4s						
HDA	Harding Lake	82.78	11	eP	P	13 57 48.1	+0.5
	6.3nm,0.8s						
CCB	Clear Creek Bu	82.83	11	eP	P	13 57 48.4	+0.5
	7.1nm,0.7s						
BOZ	Bozeman (W)	82.90	39	eP	P	13 57 50.0	+1.1
	5.6nm,1.1s						
SCRK	Sand Creek	82.98	13	eP	P	13 57 49.7	+0.8
SCRK				epP	pP	13 58 03.0	+1.2
COLA	College	83.03	11	eP	P	13 57 49.3	+0.4
	10nm,0.8s						
MDM	Murphy Dome	83.05	10	eP	P	13 57 49.4	+0.3
	16nm,1.4s						
IL1	Eielson Array	83.12	11	eP	P	13 57 49.8	+0.4
ILAR	Eielson Array	83.12	11	P	P	13 57 50.1	+0.7
	1.5nm,0.6s,baz=230,slow=6.4,SNR=35						
ILB	Eielson Array	83.12	11	eP	P	13 57 49.8	+0.4
SDCO	Great Sand Dun	83.14	48	eP	P	13 57 51.4	+0.9
	4.1nm,1.1s						
HRY	Holter Researc	83.36	38	eP	P	13 57 52.2	+0.9
PMSA	Palmer Station	83.52	156	P	P	13 57 51.8	+0.2
	25nm,1.2s,baz=146,slow=3.6,SNR=2.2						
RWWY	Rawlins	83.76	44	eP	P	13 57 53.0	-0.6
	9.4nm,1.0s						
DAWY	Dawson	84.08	14	eP	P	13 57 55.8	+1.3
	5.7nm,0.8s						
RLMT	Red Lodge	84.09	40	eP	P	13 57 56.1	+1.0
	5.2nm,0.8s						
N23A	Red Feather La	84.24	45	eP	P	13 57 56.1	+0.1
	5.7nm,1.0s						
EGAK	Eagle	84.28	13	eP	P	13 57 56.1	+0.8
	3.6nm,0.9s						
PLCA	Paso Flores	89.00	132	LR	LR	14 29 08.4	
	comp=Z,94nm,20.8s,baz=250,slow=30						
HHC	Hu-ho-hao-te	89.54	313	eP	P	13 58 23.8	+2.2
HHC				pmax	pmax		
	comp=Z,26nm,1.2s						
HHC				pmax	pmax		
	comp=Z,75nm,5.7s						
JTS	JuntasAbangare	91.28	80	LR	LR	14 28 39.8	
	comp=Z,56nm,21.1s,baz=350,slow=28						
SYO	Syowa Base	91.93	191	⇓eX	P	13 58 35.0	+2.9
SNAA	Sanae	92.21	177	P	P	13 58 32.0	-1.5
	2.5nm,0.9s,baz=191,slow=10,SNR=6.4						
SNAA				LR	LR	14 36 25.6	
	comp=Z,38nm,19.6s,baz=192,slow=33						
NNA	Nana	92.84	103	LR	LR	14 32 11.5	
	comp=Z,23nm,18.6s,baz=208,slow=30						
CM01	Chiang Mai Arr	92.86	288	eP	P	13 58 36.9	-0.6
CMAR	Chiang Mai Arr	92.89	288	P	P	13 58 37.6	+0.1
	1.7nm,0.9s,baz=101,slow=2.3,SNR=7.6						
CMAR				LR	LR	14 35 50.6	
	comp=Z,37nm,21.1s,baz=132,slow=33						
LZH	Lanzhou	93.68	306	eP	P	13 58 38.9	-2.1
LZH				pP	pP	13 58 51.9	-2.3
LZH				sP	sP	13 58 56.8	-2.3
LZH				pmax	pmax		
	comp=Z,19nm,1.2s						
ULM	Lac du Bonnet	94.44	39	LR	LR	14 35 05.3	
	comp=Z,53nm,19.3s,baz=293,slow=32						
SONM	Songino Array	95.40	318	P	P	13 58 49.5	+0.9
	0.5nm,0.8s,baz=108,slow=3.2,SNR=3.6						
SONM				LR	LR	14 36 36.0	
	comp=Z,40nm,21.4s,baz=118,slow=32						
LPAZ	La Paz	99.52	110	LR	LR	14 34 51.3	
	comp=Z,50nm,20.9s,baz=240,slow=30						
MKAR	Makanchi Array	111.35	314	PKiKP	PKiKP	14 03 56.7	-1.3
	0.3nm,0.5s,baz=88,slow=1.5,SNR=4.9						
ARCES	ARCESS Array B	125.30	352	PKP	PKPdf	14 04 24.4	+0.4
	0.8nm,0.7s,baz=352,slow=2.7,SNR=6.6						
OJC	Ojcow	144.34	345	ePKP	PKPbc	14 04 58.6	+0.3
KSP	Ksiaz	144.49	349	ePKP	PKPdf	14 05 01.1	+0.9
CLL	Collm	144.51	353	ePKPpre	PKPpre	14 04 57.0	
CLL				i PKPdf	PKPdf	14 05 00.2	0.0
	comp=Z,6.0nm,0.9s						
CLL				epPKPdf	pPKPdf	14 05 13.0	-0.8
BRG	Berggiesshubel	144.82	352	ePKP	PKPdf	14 05 00.8	0.0
	comp=Z,2.3nm,0.7s						
DPC	Dobruska-Polom	144.95	349	ePKP	PKPdf	14 05 02.5	+1.4
DPC				epPKP	pPKPdf	14 05 15.5	+0.8
NIE	Niedzica	144.96	344	ePKP	PKPdf	14 05 01.8	+0.8
BURAR	Bucovina Array	145.03	338	⇓iP	PKPdf	14 05 02.8	+1.4
OKC	Ostrava-Krasne	145.08	347	ePKP	PKPdf	14 05 02.5	+1.3
CRVS	Cervenica-Dubn	145.12	343	ePKP	PKPdf	14 05 02.1	+0.8
KRLC	Kraliky	145.13	349	ePKP	PKPdf	14 05 02.8	+1.4
KRLC				epPKP	pPKPdf	14 05 15.8	+0.8
MORC	Moravsky Berou	145.26	348	⇑iP	PKPdf	14 05 02.9	+1.3
MORC	Moravsky Berou	145.26	348	ePG		13 59 27.1	
MORC	Moravsky Berou	145.26	348	ePKP	PKPdf	14 05 02.6	+1.0
BIZ	Bicaz	145.27	336	⇓iP	PKPdf	14 05 03.0	+1.3
BEBN	Eben Emael	145.38	1	⇑PKP	PKPdf	14 05 01.7	0.0
TESR	Tescani	145.41	335	⇑iP	PKPab	14 05 02.9	+0.8
LANS	Liptovska Anna	145.42	345	ePKP	PKPab	14 05 04.1	+2.0
TRPA	Tarpa	145.49	341	⇑iP	PKPab	14 05 03.5	+1.2
TLCR		145.53	332	⇓iP	PKPab	14 05 03.7	+1.2
MEM	Membach	145.57	1	⇓PKP	PKPdf	14 04 57.5	-4.5
BMR	Baia Mare	145.58	340	⇓iP	PKPdf	14 05 00.9	-1.2
PRU	Pruhonice	145.60	351	ePKP	PKPab	14 05 03.7	+1.1
GOPC	GO Pecny, Ondr	145.63	351	ePKP	PKPab	14 05 04.2	+1.4
BCLA	Clavier	145.75	2	⇑PKP	PKPdf	14 05 00.1	-2.2
CFR	Carcaliu	145.84	333	⇓iP	PKPab	14 05 04.7	+1.0
VRI	Vrincioaia	145.90	335	⇑iP	PKPab	14 05 04.1	+0.2
VRAC	Vranov	145.90	348	ePG		13 59 14.1	
VRAC				eSG		13 59 25.0	
VRAC	Vranov	145.90	348	ePKP	PKPab	14 05 04.7	+0.9
DOU	Dourbes	146.05	2	⇓PKP	PKPab	14 05 04.5	+0.2
JAVC	Velka Javorina	146.11	347	ePKP	PKPab	14 05 06.3	+1.6
KRUC	Moravsky	146.18	348	ePG		13 59 08.9	
KRUC				eSG		13 59 16.4	
KRUC	Moravsky	146.18	348	ePKP	PKPab	14 05 05.4	+0.6
VYHS	Vyhne	146.18	345	ePKP	PKPab	14 05 06.0	+1.1
DOPR	Dopca	146.35	336	⇓iP	PKPab	14 05 06.4	+0.7
MLR	Muntele Rosu	146.52	335	PKPbc	PKPab	14 05 06.8	+0.3
	comp=Z,10.0nm,0.8s,baz=180,slow=4.0,SNR=11						
MLR	Muntele Rosu	146.52	335	⇓iP	PKPab	14 05 07.1	+0.6
KHC	Kasperske Hory	146.57	352	ePKP	PKPab	14 05 07.1	+0.7
KHC				epPKP	pPKPab	14 05 20.1	+0.3
DRGR		146.61	340	⇑iP	PKPab	14 05 06.4	-0.3
MODS	Modra-Piesok	146.65	347	ePKP	PKPab	14 05 07.5	+0.8
BRTR	Keskin Array B	146.73	320	PKPbc	PKPab	14 05 07.8	+0.2
	comp=Z,11nm,0.8s,baz=111,slow=2.3,SNR=48						
GERES	GERESS Array B	146.84	351	PKPbc	PKPab	14 05 07.0	-0.6
	comp=Z,3.2nm,0.7s,baz=11,slow=2.7,SNR=14						
VOIR		146.92	336	⇑iP	PKPab	14 05 08.5	+0.5
ARR	Arges	147.14	336	⇓iP	PKPab	14 05 09.7	+0.9
CONA	Conrad Observa	147.36	348	ePKPab	PKPab	14 05 09.1	-0.5
	comp=Z,8.3nm,0.8s						
MOA	Molln	147.72	350	ePKPab	PKPbc	14 05 09.5	+0.9
	comp=Z,6.5nm,0.9s						
BFO	Black Forest	147.83	358	ePKPbc	PKPab	14 05 10.3	-1.1
BZS	Buzias	148.01	340	⇑iP	PKPbc	14 05 10.6	+1.2
ARSA	Arzberg	148.08	349	ePKiKP	PKiKP	14 05 10.5	-0.9
	comp=Z,7.0nm,1.2s						
HERR	Herculane	148.38	338	⇓iP	PKPbc	14 05 11.4	+1.0
RETA	Reutte	148.52	355	ePKiKP	PKPbc	14 05 11.4	+0.6
	comp=Z,11nm,1.4s						
KBA	Koelnbreinsper	148.61	351	ePKiKP	PKPbc	14 05 12.0	+0.8
	comp=Z,1.5nm,0.5s						
MOTA	Moosalm	148.63	354	ePKiKP	PKPbc	14 05 12.0	+0.8
	comp=Z,11nm,1.3s						
WTTA	Wattenberg	148.65	353	ePKiKP	PKiKP	14 05 12.1	-0.7
	comp=Z,3.4nm,0.5s						
MDVR	Moldovita	148.71	339	⇑iP	PKPab	14 05 16.3	+1.3
SOKA	Soboth	148.72	349	ePKPdf	PKPdf	14 05 07.0	-0.5
	comp=Z,8.1nm,1.5s						
DAVA	Damuels	148.79	356	ePKPbc	PKPbc	14 05 11.1	-0.5
	comp=Z,2.2nm,0.6s						
FETA	Feichten	148.98	355	ePKiKP	PKiKP	14 05 13.9	+0.4
	comp=Z,7.3nm,1.0s						
MMAI	Mount Meron Ar	149.04	308	PKPbc	PKPbc	14 05 14.2	+1.6
	comp=Z,3.2nm,0.6s,baz=108,slow=3.2,SNR=6.0						
ABTA	Abfaltersbach	149.05	352	ePKPbc	PKPbc	14 05 12.3	+0.1
	comp=Z,4.6nm,0.6s						
DAVOX	Davos/Dischmat	149.29	356	PKPbc	PKPbc	14 05 13.9	+1.0
	comp=Z,5.6nm,0.5s,baz=318,slow=16,SNR=9.0						
VTS	Vitosha	150.03	335	⇑iP	PKPbc	14 05 16.1	+1.3

IDC 24 13:51:11.9±46.0**, 15°.95S**×**174°.32W, h0km, mb4.1**/3**, mb1 4.3**/3**, mb1mx3.7**/44**, mbtmp4.1**/3**, Error ellipse: s-maj=887.0km s-min=179.8km az=78.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	42.99	240	P	P	13 59 12.6	-0.6
	4.3nm,0.8s,baz=90,slow=9.1,SNR=3.8						
WRA	Warramunga Arr	48.85	257	P	P	13 59 59.5	-0.2
	0.4nm,0.5s,baz=90,slow=8.1,SNR=9.2						
ASAR	Alice Springs	49.10	252	P	P	14 00 01.8	+0.3
	2.4nm,0.4s,baz=88,slow=8.1,SNR=42						

*IDC **24** 13:52:28.4±0.9, 65°.73S×134°.14E, h0km, mb4.4/8, mb1 4.6/9, mb1mx4.4/37, mbtmp4.5/9, ML4.9/1, MS3.9/8, Ms1 3.9/8, ms1mx3.5/34, Error ellipse: s-maj=43.2km s-min=13.9km az=88.0*

*NEIC **24** 13:52:29.6±0.6, 65°.82S×133°.75E, h10km, mb4.7/2, Error ellipse: s-maj=20.7km s-min=14.0km az=85.0*

ISC 24 13:52:28.9±0.7**, 65°.82S**±0°.08×**134°.3E**±0°.1**, h10km, n38, σ2ˢ.48**/28**, mb4.5**/9**, MS4.0**/7**, South of Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CASY	Casey	9.66	256	ePn	Pn	13 54 43.1	-4.6
	270nm,0.7s						
VNDA	Vanda	14.34	156	Pn	Pn	13 55 51.9	+0.3
	5.0nm,0.3s,baz=310,slow=13,SNR=109						
VNDA				Sn	Sn	13 58 25.1	-5.2
	2.4nm,0.3s,baz=51,slow=22,SNR=3.3						
VNDA				LR	LR	14 01 50.6	
	comp=Z,805nm,18.6s,baz=320,slow=39						
SBA	Scott Base	15.38	155	ePn	Pn	13 56 02.1	-3.5
	40nm,0.8s						
TAU	Tasmania Unive	24.07	24	P	P	13 57 39.8	-4.3
QSPA	South Pole Qui	24.25	180	P	P	13 57 47.2	+1.4
	13nm,1.0s,baz=150,slow=4.4,SNR=8.4						
QSPA				S	S	14 02 10.7	+6.5
	4.2nm,0.8s,baz=354,slow=19,SNR=2.9						
QSPA				LR	LR	14 07 51.1	
	comp=Z,226nm,19.9s,baz=0.0,slow=38						
H01W2	Cape Leeuwin H	33.20	329	T	T	14 33 11.8	
	baz=165,slow=75,SNR=252						
H01W1	Cape Leeuwin H	33.20	329	T	T	14 33 10.4	
	baz=165,slow=75,SNR=274						
H01W3	Cape Leeuwin H	33.21	329	T	T	14 33 12.8	
	baz=165,slow=75,SNR=276						
SNAA	Sanae	39.75	200	P	P	14 00 02.4	+1.3
SNAA	Sanae	39.75	200	P	P	14 00 02.4	+1.3
	4.6nm,0.3s,baz=285,slow=8.7,SNR=90						
SNAA				LR	LR	14 17 13.3	
	comp=Z,186nm,18.3s,baz=144,slow=37						
VNA3	Neumayer Olymp	41.02	197	P	P	14 00 12.7	+1.1
VNA1	Neumayer--Stat	41.40	198	P	P	14 00 15.7	+1.0
ASAR	Alice Springs	42.15	359	P	P	14 00 22.2	+0.9
	4.5nm,0.7s,baz=176,slow=8.9,SNR=29						
WRA	Warramunga Arr	45.85	0	P	P	14 00 51.3	+0.3
	7.4nm,0.9s,baz=186,slow=6.7,SNR=36						
WRAB	Tennant Creek	45.86	0	eP	P	14 00 50.1	-1.0
	7.8nm,0.8s						
PMSA	Palmer Station	49.02	170	LR	LR	14 24 22.4	
	comp=Z,241nm,19.0s,baz=227,slow=39						
PMG	Port Moresby	57.03	15	LR	LR	14 24 44.1	
	comp=Z,105nm,19.2s,baz=195,slow=34						
PPT	Papeete	68.43	85	LR	LR	14 26 37.0	
	comp=Z,52nm,21.8s,baz=145,slow=30						
BOSA	Boshof	71.59	241	P	P	14 03 49.9	-0.3
	2.5nm,0.8s,baz=157,slow=4.5,SNR=4.3						
H08S2	Diego Garcia H	71.74	293	T	T	15 21 42.4	
	baz=156,slow=76,SNR=5.3						
H08S1	Diego Carcia H	71.75	293	T	T	15 21 42.4	
	baz=156,slow=76,SNR=11						
H08S3	Diego Garcia H	71.76	293	T	T	15 21 42.4	
	baz=156,slow=76,SNR=11						
PLCA	Paso Flores	72.05	160	P	P	14 03 53.5	+0.8
	4.1nm,0.9s,baz=198,slow=3.2,SNR=5.1						
GUMO	Guam	79.57	10	LR	LR	14 39 38.9	
	comp=Z,32nm,18.2s,baz=193,slow=36						
TSUM	Tsumeb	82.94	238	P	P	14 04 56.1	+2.1
	1.1nm,0.3s,baz=135,slow=7.1,SNR=3.1						
CMAR	Chiang Mai Arr	88.16	327	P	P	14 05 21.8	+2.2
	0.4nm,0.4s,baz=208,slow=5.2,SNR=4.1						
JHJ	Hachijo jima 2	98.71	5	LR	LR	14 46 06.3	
	comp=Z,46nm,18.5s,baz=256,slow=33						
ILAR	Eielson Array	142.09	43	PKhKP	PKPpre	14 11 56.2	
	0.2nm,0.7s,baz=244,slow=3.9,SNR=3.4						
MOA	Molln	144.33	270	PKPdf	PKPdf	14 12 03.5	-0.4
	5.1nm,0.7s						
ECSD	EROS Data Cent	144.68	103	ePKPdf	PKPdf	14 12 05.6	+1.0
ESDC	Sonseca Array	144.76	243	PKP	PKPdf	14 12 04.7	-0.2
	1.7nm,0.9s,baz=165,slow=1.5,SNR=8.1						
FETA	Feichten	145.13	266	ePKPdf	PKPdf	14 12 06.5	+1.0
	10nm,1.4s						
MOTA	Moosalm	145.24	266	ePKPbc	PKPdf	14 12 06.0	+0.3
	10nm,0.8s						
GERES	GERESS Array B	145.35	270	PKPbc	PKPbc	14 12 04.4	-1.2
	5.4nm,0.9s,baz=116,slow=6.1,SNR=19						
RETA	Reutte	145.49	266	PKPab	PKPdf	14 12 08.3	+2.4
	2.1nm,0.5s						
DAVA	Damuels	145.69	265	PKPab	PKPab	14 12 08.6	+1.3
	11nm,1.3s						
BFO	Black Forest	147.16	265	ePKPbc	PKPbc	14 12 11.2	+0.2
CLL	Collm	147.53	273	ePKPbc	PKPab	14 12 13.0	-1.0

*ISCJB **24** 14:12:41.8±0.5, 39°.77N±0°.03×34°.38E±0°.04, h0km, Error ellipse: s-maj=4.8km s-min=3.3km az=43.6*

*CSEM **24** 14:12:41.7±0.2, 39°.76N×34°.37E, h1km, ML2.9, Error ellipse: s-maj=5.4km s-min=3.7km az=138.0, Suspected Mining explosion.*

*DDA **24** 14:12:41.5, 39°.78N×34°.39E, h7km, Ml2.9, Suspected Mining explosion.*

*ISK **24** 14:12:41.4, 39°.75N×34°.40E, h12km, ML2.5/1*

ISC 24 14:12:40.9±0.9**, 39°.80N**±0°.03×**34°.42E**±0°.03**, h0km, n20, σ0ˢ.63**/35**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CDAG	Cicekdag	0.18	193	i P	Pg	14 12 45.0	+0.7
CDAG				i S	Sg	14 12 47.8	+1.2
CDAG	Cicekdag	0.18	193	P	Pg	14 12 45.0	+0.7
CDAG				S	Sg	14 12 47.8	+1.2
CORM	Corum	0.41	22	PG	Pb	14 12 51.1	-0.1
CORM				SG	Sb	14 12 58.1	0.0
CORM	Corum	0.41	22	ePg	Pb	14 12 51.1	-0.1
CORM				eSg	Sb	14 12 58.1	0.0
COAL	Corum-Alaca	0.63	43	i P	Pb	14 12 54.4	-0.5
COAL				i S	Sb	14 13 05.3	+1.0
COAL	Corum-Alaca	0.63	43	P	Pb	14 12 54.4	-0.5
COAL				S	Sb	14 13 05.3	+1.0
KAMT	Kaman	0.70	232	PG	Pg	14 12 54.4	+0.1
KAMT				SG	Sg	14 13 04.2	+0.9
KAMT	Kaman	0.70	232	ePg	Pg	14 12 54.4	+0.1
KAMT				eSg	Sg	14 13 04.2	+0.9
YOZ	Yozgat	0.71	102	PG	Pb	14 12 55.6	-0.7
YOZ				SG	Sb	14 13 06.0	-0.6
YOZ	Yozgat	0.71	102	ePg	Pb	14 12 55.6	-0.7
YOZ				eSg	Sb	14 13 06.0	-0.6
BBAL	Bala	1.04	256	i P	Pg	14 13 00.7	-0.1
BBAL				i S	Sb	14 13 15.6	-0.4
BBAL	Bala	1.04	256	P	Pg	14 13 00.7	-0.1
BBAL				S	Sb	14 13 15.6	-0.4
AVNS	Nevsehir-Avano	1.04	161	i P	Pb	14 13 01.6	-0.3
AVNS				i S	Sb	14 13 16.1	-0.1
AVNS	Nevsehir-Avano	1.04	161	P	Pb	14 13 01.6	-0.3
AVNS				S	Sb	14 13 16.1	-0.1
AKSY	AKSARAY - Alti	1.26	204	i P	Pg	14 13 04.6	-0.4
AKSY				i S	Sn	14 13 24.5	+1.0
AKSY	AKSARAY - Alti	1.26	204	P	Pg	14 13 04.6	-0.4
ANTO	Ankara	1.26	274	PN	Pg	14 13 04.9	-0.1
ANTO	Ankara	1.26	274	ePn	Pg	14 13 04.9	-0.1
SULT	Sultanhani-AKS	1.75	204	PN	Pn	14 13 11.7	-0.9
SULT	Sultanhani-AKS	1.75	204	ePn	Pn	14 13 11.7	-0.9

*IDC **24** 14:56:24.7±0.8, 2°.27N×123°.67E, h0km, mb3.7/6, mb1 3.9/6, mb1mx3.5/52, mbtmp3.7/6, MS2.6/4, Ms1 2.7/4, ms1mx2.4/48, Error ellipse: s-maj=79.7km s-min=18.4km az=67.0*

*DJA **24** 14:56:26.9±0.7, 2°N±5°×12°3E±°, h10km, M4.5/7, mB5.0/1, mb5.1/1, MLv4.2/7, Mw(mB)4.3/1*

*ISCJB **24** 14:56:27.7±0.7, 1°.94N±0°.06×122°.78E±0°.06, h33km, mb3.7/6, MS2.6/3, Error ellipse: s-maj=9.1km s-min=8.0km az=170.6*

ISC 24 14:56:29.6±0.8**, 2°.00N**±0°.07×**122°.81E**±0°.07**, h35km, n17, σ1ˢ.98**/20**, mb3.7**/6**, MS2.5**/3**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MRSI	Marisa	1.74	210	P	Pn	14 56 55.6	-1.8
MRSI				S	Sn	14 57 16.0	-2.4
KMSI	Cibinong	1.84	140	P	Pn	14 56 57.8	-0.8
KMSI				S	Sn	14 57 18.6	-2.1
LUWI	Luwuk	3.02	181	P	Pn	14 57 13.6	-1.3
LUWI				S	Sn	14 57 54.0	+4.1
APSI	Ampana	3.12	202	P	Pn	14 57 15.7	-0.5
APSI				S	Sn	14 57 55.8	+3.6
MPSI	Mapaga	3.35	240	P	Pn	14 57 17.2	-2.2
PCI	Palu	4.14	226	P	Pn	14 57 28.6	-1.8
DAV	Davao City (W)	5.74	29	LR	LR	15 00 38.0	
	comp=Z,54nm,18.5s,baz=168,slow=49						
TTSI	Tana Toraja	5.83	211	P	Pn	14 57 52.3	-1.4
WRA	Warramunga Arr	24.57	153	P	P	15 01 45.9	-0.6
	7.1nm,0.8s,baz=338,slow=10,SNR=50						
WRA				PcP	PcP	15 05 24.2	+0.1
	0.3nm,0.9s,baz=334,slow=1.8,SNR=3.9						
ASAR	Alice Springs	27.70	158	P	P	15 02 14.6	-0.2
	0.5nm,0.7s,baz=329,slow=7.7,SNR=11						
ASAR				PcP	PcP	15 05 31.5	+0.2
	0.5nm,0.6s,baz=346,slow=2.6,SNR=8.1						
CMAR	Chiang Mai Arr	28.55	307	LR	LR	15 15 01.1	
	comp=Z,13nm,18.5s,baz=205,slow=38						
JHJ	Hachijo jima 2	34.81	25	LR	LR	15 18 24.0	
	comp=Z,9.2nm,18.7s,baz=172,slow=39						
KSRS	Korea Array	35.60	7	LR	LR	15 18 57.8	
	comp=Z,12nm,19.2s,baz=230,slow=38						
SONM	Songino Array	47.82	345	P	P	15 05 05.3	+1.4
	1.2nm,0.7s,baz=162,slow=8.9,SNR=5.7						
MKAR	Makanchi Array	56.83	328	P	P	15 06 12.4	+1.8
	0.3nm,0.6s,baz=116,slow=8.4,SNR=5.2						
MKAR				PcP	PcP	15 07 06.3	+0.3
	0.8nm,0.6s,baz=138,slow=3.8,SNR=7.0						
KURBB	Kurchatov Arra	61.15	329	P	P	15 06 41.9	+1.4
	0.4nm,0.4s,baz=122,slow=5.8,SNR=4.6						
ILAR	Eielson Array	88.34	25	P	P	15 09 15.5	-2.0
	0.2nm,0.7s,baz=255,slow=5.6,SNR=4.2						

*TAP **24** 15:04:47.7, 24°.85N×121°.98E, h12km, ML3.3, B*

*IDC **24** 15:04:47.9±1.7, 24°.37N×120°.82E, h0km, mb3.7/2, mb1 3.8/3, mb1mx3.1/57, mbtmp3.6/3, Error ellipse: s-maj=92.1km s-min=28.3km az=76.0*

*JMA **24** 15:04:48.6, 24°.84N×121°.91E, h33km, M2.7*

ISC 24 15:04:48.3±0.8**, 24°.83N**±0°.02×**121°.96E**±0°.02**, h11km**±5km**, n81, σ0ˢ.90**/103**, 14C, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGS		0.02	297	P	Pg	15 04 50.0	-0.3
	baz=253						
EGS				eS	Sg	15 04 51.9	+0.4
	baz=253						
NTC	Toucheng	0.12	280	P	Pg	15 04 51.4	+0.2
	baz=279						
NTC				eS	Sg	15 04 54.1	+0.8
	baz=279						
TWB1	Santiao Chiao	0.18	10	⇑iP	Pg	15 04 51.5	-0.6
	baz=4.0						
TWB1				S	Sg	15 04 53.9	-0.9
	baz=4.0						
TIPB	Shuangxi	0.18	319	⇑iP	Pb	15 04 52.4	-1.3
	baz=303						
TIPB				eS	Sg	15 04 55.2	+0.3
	baz=303						
TWC	Suao	0.24	203	⇑iP	Pg	15 04 53.5	+0.1
	baz=208						
TWC				S	Sg	15 04 56.8	+0.1
	baz=208						
NWF	Wu-fen Shan	0.28	326	⇑iP	Pb	15 04 54.4	-1.1
	baz=314						
NWF				eS	Sb	15 04 59.3	-1.0
	baz=314						
WFSB	Wu-fen Shan	0.28	326	⇑eP	Pb	15 04 54.4	-1.0
	baz=314						
WFSB				eS	Sb	15 04 59.5	-0.7
	baz=314						
TWE	Neicheng	0.28	247	P	Pb	15 04 54.4	-1.0
	baz=236						
TWE				eS	Sb	15 04 59.0	-1.2
	baz=236						
SLBB	Yuanshan	0.30	255	⇑iP	Pb	15 04 54.8	-0.9
	baz=252						
EOS1	EOS1	0.33	151	⇑P	Pg	15 04 55.1	+0.3
	baz=158						
TWA	Mucha	0.37	293	P	Pb	15 04 56.0	-0.8
	baz=281						
TWA				eS	Sb	15 05 01.8	-0.9
	baz=281						
ENTT	Nioudou	0.40	241	P	Pb	15 04 56.6	-0.9
	baz=240						
ENAH	Nanao	0.41	199	eP	Pg	15 04 56.4	+0.1
	baz=208						
ENAH				eS	Sb	15 05 02.2	-1.5
	baz=208						
NWLT	Wulai	0.41	262	P	Pb	15 04 56.7	-1.0
	baz=259						
NWLT				eS	Sb	15 05 03.2	-0.9
	baz=259						
TAP1	Taipei	0.44	298	⇑eP	Pb	15 04 58.0	-0.1
	baz=292						
TAP1				eS	Sb	15 05 04.7	-0.1
	baz=292						
NANB	Nanao	0.45	205	eP	Pg	15 04 57.0	-0.1
	baz=212						
NANB				eS	Sb	15 05 04.0	-0.9
	baz=212						
TATO	Taipei	0.45	288	⇑P	Pb	15 04 57.7	-0.5
	baz=275						
TATO				eS	Sb	15 05 04.0	-1.0
	baz=275						
ENA	Nanau	0.45	206	P	Pg	15 04 57.0	-0.1
	baz=209						
YM07	YM07	0.46	318	⇑eP	Pb	15 04 57.9	-0.5
	baz=314						
TAP	Taipei	0.46	297	eP	Pb	15 04 58.3	-0.1
	baz=292						
TAP				eS	Sb	15 05 04.9	-0.2
	baz=292						
YM11	YM11	0.48	314	⇑eP	Pn	15 04 59.4	-1.8
	baz=309						
YM10	YM10	0.48	312	⇑eP	Pb	15 04 58.5	-0.3
	baz=308						
YM08	YM08	0.48	317	⇑eP	Pb	15 04 58.2	-0.7
	baz=313						
YM04	YM04	0.49	310	P	Pb	15 04 58.7	-0.4
	baz=306						
YM03	YM03	0.51	312	P	Pb	15 04 58.8	-0.6
	baz=300						
TWY	Chenhua	0.55	324	P	Pb	15 04 59.6	-0.3
	baz=320						
YHNB	Yeheng	0.55	253	⇑eP	Pb	15 04 59.1	-0.9
	baz=259						
TWS1	Kuangyinshan	0.56	299	P	Pn	15 05 00.4	-1.8
	baz=295						
NTST	Danshui	0.56	306	P	Pn	15 05 00.5	-1.8
	baz=302						
NSK	Sanguang	0.56	254	P	Pb	15 04 59.3	-1.0
	baz=260						
WLTB	Daxi	0.64	272	eP	Pn	15 05 02.1	-1.2
	baz=269						
NNS	Nan Shan	0.66	234	eP	Pb	15 05 01.4	-0.5
	baz=233						
NNSB	Datong	0.66	232	eP	Pb	15 05 01.5	-0.4
	baz=226						
NNSH	Datong	0.66	232	eP	Pb	15 05 01.6	-0.3
	baz=229						
NCU	National Centr	0.71	281	eS	Sn	15 05 13.7	-1.6
	baz=272						
NCUH	Zhongli	0.71	281	eP	Pn	15 05 03.7	-0.7
	baz=278						
NACB	Ninganchiao	0.73	207	eP	Pb	15 05 02.6	-0.6
	baz=211						
NACB				eS	Sb	15 05 13.2	0.0
	baz=211						
PCYT	Pengchaiyu	0.80	8	P	Pb	15 05 03.8	-0.4
	baz=8.0						
TWD	Chiawan	0.82	204	P	Pb	15 05 04.1	-0.5

	baz=208						
TWD				*e*S	Sb	15 05 15.4	-0.2
	baz=208						
LIOB	Emei	0.87	258	*e*P	Pn	15 05 06.0	-0.6
	baz=249						
SBCB	Hsinchu	0.88	267	*e*P	Pn	15 05 06.5	-0.2
	baz=282						
SBCB				*e*S	Sn	15 05 20.4	+0.8
	baz=282						
NSTT	Nanjuang	0.89	257	*e*P	Pn	15 05 06.5	-0.3
	baz=255						
NSTT				*e*S	Sn	15 05 19.1	-0.7
	baz=255						
TDCB	Techi	0.93	232	*e*P	Pn	15 05 06.4	-1.0
	baz=225						
WHF	Hehuan Shan	0.93	223	*e*P	Pn	15 05 06.7	-1.1
	baz=216						
JYNG	Yonagunijimaku	0.98	113	P	Pb	15 05 06.6	-0.7
JYNG				*e*S	Sg	15 05 19.7	-0.2
YOJ	Yonaguni jima	1.03	111	*e*P	Pb	15 05 06.9	-1.2
	baz=114						
YOJ	Yonaguni jima	1.03	111	P	Pb	15 05 07.5	-0.7
YOJ				*e*S	Sb	15 05 20.9	-0.8
CHGB	Renai	1.05	223	*e*P	Pn	15 05 08.2	-1.0
	baz=218						
NMLH	Miaoli	1.10	255	*e*P	Pn	15 05 10.6	+1.0
	baz=271						
ESL	Shilin	1.12	205	P	Pg	15 05 09.2	-0.6
	baz=209						
PTSB	Yuanli	1.20	252	*e*P	Pg	15 05 12.3	+0.9
	baz=267						
SMLT	Sun Moon Lake	1.35	226	P	Pg	15 05 14.2	-0.1
	baz=218						
TYC	Yuchr	1.36	227	*e*P	Pg	15 05 14.4	-0.1
	baz=218						
SSLB	Suanglung	1.39	221	*e*P	Pg	15 05 14.4	-0.5
	baz=222						
HGSD	Ruisui	1.42	200	*e*P	Pg	15 05 16.0	+0.4
	baz=218						
EHY	Hungye	1.44	204	*e*P	Pg	15 05 15.0	-1.0
	baz=208						
WJS	Zhushan	1.51	228	*e*P	Pg	15 05 18.4	+1.2
	baz=220						
YULB	Yu-li	1.56	203	*e*P	Pg	15 05 17.3	-0.8
	baz=207						
TWF1	Yuli	1.59	202	*e*P	Pb	15 05 17.6	-0.2
	baz=207						
YUS	Yu-Shan	1.62	215	*e*P	Pg	15 05 19.3	-0.2
	baz=221						
ALS	Alishan	1.69	219	*e*P	Pg	15 05 20.4	-0.3
	baz=208						
IRIF	Iriomote-Funau	1.69	107	P	Pn	15 05 17.0	-0.8
CHN5	Tsauling	1.70	224	*e*P	Pg	15 05 21.1	+0.3
	baz=222						
WDLH	Douliu	1.72	229	*e*P	Pg	15 05 22.0	+0.6
	baz=245						
FULB	Fuli	1.74	200	*e*P	Pb	15 05 20.1	-0.2
	baz=215						
ELDTW	Lidau	1.85	208	*e*P	Pg	15 05 22.8	-1.0
	baz=212						
HATJ	Hateruma jima	1.86	114	*e*S	Sn	15 05 41.9	-1.6
TPUB	Ta-pu	1.95	219	*e*P	Pg	15 05 25.2	-0.5
	baz=221						
JKRS	Kuro-shima	1.96	107	P	Pn	15 05 21.3	-0.3
STYT	Tauyuan	1.99	214	*e*P	Pg	15 05 26.0	-0.5
	baz=206						
WTP	Ta-pu	2.00	218	*e*P	Pg	15 05 25.7	-1.0
	baz=220						
JIJ	Ishigaki jima	2.05	103	P	Pn	15 05 22.0	-0.7
JIJ				*e*S	Sn	15 05 48.3	0.0
TWK	Hsinying	2.06	221	*e*P	Pg	15 05 26.5	-1.3
	baz=223						
CHN1	Nanshi	2.10	219	*e*P	Pg	15 05 27.1	-1.4
	baz=221						
SGST	Jiashian	2.15	216	*e*P	Pg	15 05 28.0	-1.5
	baz=206						
JISG	Ishigakijimahi	2.16	96	P	Pn	15 05 24.7	+0.5
SSD	Sandimen	2.41	211	*e*P	Pb	15 05 31.8	+0.2
	baz=215						
MASBT	Mashibuluo	2.52	209	*e*P	Pb	15 05 32.5	-1.2
	baz=214						
KSRS	Korea Array	13.57	21	Pn	P	15 08 13.4	+3.6
	baz=204,slow=11,SNR=5.0						
SONM	Songino Array	26.05	336	P	P	15 10 23.0	+1.2
	0.6nm,0.3s,baz=149,slow=6.4,SNR=6.2						
WRA	Warramunga Arr	46.11	164	P	P	15 13 12.8	0.0
	0.7nm,0.7s,baz=346,slow=8.6,SNR=5.5						

MEX 24 15:11:09.7±0.3**, 15°.47N×93°.38W, h86**^{km}±4^{km}**, MD3.8,**
Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCIG		0.28	33	*e*P	Pn	15 11 21.2	-1.4
PCIG				*e*S	Sn	15 11 30.5	-1.7
TGIG		1.32	11	*i* P	Pn	15 11 32.0	-1.2
TGIG				*e*S	Sn	15 11 49.0	-1.8
CCIG	Comitan	1.44	56	*e*P	Pn	15 11 33.4	-1.3
CCIG				*e*S	Sn	15 11 52.0	-1.6

ISCJB ***24*** *15:15:57.8±0.7, 13°.06S±0°.06×167°.0E±0°.2, h250*^{km}*, mb3.8/11, Error ellipse: s-maj=24.9km s-min=9.0km az=0.4*
IDC ***24*** *15:15:59.5±3.0, 13°.20S×167°.08E, h258*^{km}*±29*^{km}*, mb3.6/11, mb1 3.7/12, mb1mx3.5/44, mbtmp4.1/12, Error ellipse: s-maj=22.0km s-min=16.0km az=102.0*
ISC 24 15:15:58.9±0.8**, 13°.15S**±0°.08×**167°.1E**±0°.2**, h250**^{km}**, n16,**
σ0^{s}89/19**, mb4.0**/11**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DZM	Mont Dzumac	8.89	184	P	Pn	15 18 05.2	+1.7
	0.3nm,0.3s,baz=320,slow=20,SNR=7.5						
DZM				S	S	15 19 43.3	-1.0
	0.3nm,0.3s,baz=300,slow=20,SNR=2.2						
WRA	Warramunga Arr	32.05	253	P	P	15 22 01.9	-0.8
	1.0nm,0.6s,baz=84,slow=8.8,SNR=24						
WRA				PcP	PcP	15 24 45.7	-0.3
	0.2nm,0.5s,baz=84,slow=3.6,SNR=3.3						
ASAR	Alice Springs	33.08	247	P	P	15 22 10.8	-0.8
	1.5nm,0.3s,baz=72,slow=10.0,SNR=58						
ASAR				PcP	PcP	15 24 48.7	-0.2
	0.5nm,0.6s,baz=63,slow=2.4,SNR=7.2						
MJAR	Matsushiro Arr	56.42	332	P	P	15 25 13.8	-0.9
	0.9nm,0.7s,baz=171,slow=8.2,SNR=6.2						
ASAJ	Asahikawa	61.20	340	P	P	15 25 48.1	+0.8
	2.4nm,0.5s,baz=0.0,slow=0.0,SNR=8.5						
PETK	Petropavlovsk-	66.48	354	P	P	15 26 22.1	+0.6
	2.4nm,0.7s,baz=135,slow=9.3						
CMAR	Chiang Mai Arr	74.14	294	P	P	15 27 09.4	+1.0
	1.0nm,0.7s,baz=131,slow=4.3,SNR=7.4						
QSPA	South Pole Qui	76.87	180	P	P	15 27 22.9	-0.4
	2.7nm,0.7s,baz=240,slow=4.0,SNR=9.3						
KDAK	Kodiak Island	78.06	21	P	P	15 27 29.2	-0.4
	0.8nm,0.5s,baz=321,slow=13,SNR=4.1						
SONM	Songino Array	81.12	324	P	P	15 27 47.4	+0.9
	0.5nm,0.6s,baz=133,slow=6.3,SNR=3.9						
ILAR	Eielson Array	85.09	18	P	P	15 28 04.8	-1.4
	2.1nm,0.6s,baz=239,slow=5.2,SNR=31						
MKAR	Makanchi Array	95.93	317	P	P	15 28 57.6	+0.2
	0.7nm,0.6s,baz=90,slow=6.3,SNR=10						
ARCES	ARCESS Array B	118.68	346	PKP	PKPdf	15 34 15.9	-0.7
	1.9nm,0.5s,baz=86,slow=2.1,SNR=14						
FINES	FINESS Array B	124.19	339	PKP	PKPdf	15 34 27.2	-0.1
	1.5nm,0.8s,baz=27,slow=4.7,SNR=7.1						
HFS	Hagfors	129.16	343	PKP	PKPdf	15 34 35.9	-1.0
	1.4nm,0.8s,baz=66,slow=1.7,SNR=4.1						
ESDC	Sonseca Array	152.42	345	PKPbc	PKPbc	15 35 26.0	+0.3
	0.4nm,0.5s,baz=7.1,slow=2.4,SNR=5.8						

CSEM ***24*** *15:29:11.4±0.1, 46°.32N×13°.59E, h5*^{km}*, ML2.7/26, Error ellipse: s-maj=2.3km s-min=1.5km az=24.0*
VIE ***24*** *15:29:11.5±0.2, 46°.33N×13°.61E, h5*^{km}*±3*^{km}*, mb1.7/8, ml2.2/14, Error ellipse: s-maj=1.8km s-min=1.1km az=82.0 5 km ESE of Bovec*
LJU ***24*** *15:29:11.4, 46°.32N×13°.59E, h9*^{km}*, ML2.0*
ROM ***24*** *15:29:11.2±0.1, 46°.328N±0°.004×13°.548E±0°.009, h10*^{km}*, ML2.2/7*
ISCJB ***24*** *15:29:11.1±0.2, 46°.33N±0°.01×13°.59E±0°.02, h6*^{km}*±3*^{km}*, Error ellipse: s-maj=2.6km s-min=1.7km az=26.2*
PRU ***24*** *15:29:14.8, 46°.43N×13°.63E, h0*^{km}
ISC 24 15:29:12.0±0.8**, 46°.32N**±0°.01×**13°.59E**±0°.01**, h8**^{km}±5^{km}**,**
n119, σ0^{s}96/178**, 4C-13D, Austria**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ROBS	Robic	0.09	220	⇓*i*Pg	Pg	15 29 13.8	-0.4
ROBS				*i* Sg	Sg	15 29 15.3	-0.4
	comp=Z,542nm,0.1s						
ROBS	Robic	0.09	220	Pg	Pg	15 29 13.8	-0.4
ROBS				*i* Sg	Sg	15 29 15.3	-0.4
	comp=Z,542nm,0.1s						
PRED	Cave del Predi	0.13	351	⇓*e*Pg	Pg	15 29 14.3	-0.6
PRED				*e*Sg	Pg	15 29 16.6	+1.7
PRED	Cave del Predi	0.13	351	*e*P	Pg	15 29 14.3	-0.6
PRED	Cave del Predi	0.13	351	*e*Pg	Pg	15 29 16.6	+1.7
CADS	Cadrg	0.13	131	⇓*i*Pg	Pg	15 29 14.5	-0.4
CADS				*i* Sg	Sg	15 29 16.8	0.0
	comp=Z,138nm,0.0s						
CADS	Cadrg	0.13	131	⇓*i*Pg	Pg	15 29 14.5	-0.4
CADS				*i* Sg	Sg	15 29 16.8	0.0
	comp=Z,138nm,0.0s						
DRE	Drenchia	0.15	166	⇓*e*Pg	Pg	15 29 14.7	-0.4
DRE	Drenchia	0.15	166	*e*Pg	Pg	15 29 14.7	-0.4
PTCC	Patocco-Chiusa	0.19	299	P	Pg	15 29 15.2	-0.6
PTCC				AML	AML		
	comp=E,600μm,0.6s						
PTCC				AML	AML		
	comp=N,732μm,0.5s						
PTCC				AML	AML		
	comp=E,600μm,0.6s						
PTCC				AML	AML		
	comp=N,732μm,0.5s						
PTCC				AML	AML		
	comp=N,732μm,0.5s						
PTCC				AML	AML		
	comp=E,600μm,0.6s						
VINO	Villanova	0.22	255	⇑*e*Pg	Pg	15 29 16.1	-0.4
VINO				*e*Sg	Pg	15 29 19.8	+3.3
VINO	Villanova	0.22	255	*e*P	Pg	15 29 16.1	-0.4
VINO	Villanova	0.22	255	*e*Pg	Pg	15 29 19.8	+3.3
VINO	Villanova	0.22	255	P	Pg	15 29 16.7	+0.2
VINO				AML	AML		
	comp=E,776μm,0.3s						
VINO				AML	AML		
	comp=N,1435μm,0.2s						
VINO				AML	AML		
	comp=E,776μm,0.3s						
VINO				AML	AML		
	comp=N,1435μm,0.2s						
VINO				AML	AML		
	comp=N,1435μm,0.2s						
VINO				AML	AML		
	comp=E,776μm,0.3s						
COLI	Coloredo	0.23	220	⇓*e*Pg	Pg	15 29 16.5	-0.2
COLI				*e*Sg	Pg	15 29 20.6	+3.9
COLI	Coloredo	0.23	220	*e*P	Pg	15 29 16.5	-0.2
COLI	Coloredo	0.23	220	*e*Pg	Pg	15 29 20.6	+3.9
ACOM	Acomizza, Ital	0.24	347	⇓*e*Pg	Pg	15 29 16.5	-0.4
ACOM				*e*Sg	Sg	15 29 20.8	+0.6
ACOM	Acomizza, Ital	0.24	347	*e*P	Pg	15 29 16.5	-0.4
ACOM	Acomizza, Ital	0.24	347	*e*Pg	Pg	15 29 20.8	+3.9
ACOM	Acomizza, Ital	0.24	347	P	Pg	15 29 16.4	-0.4
ACOM				AML	AML		
	comp=E,1540μm,0.7s						
ACOM				AML	AML		
	comp=N,920μm,1.2s						
ACOM				AML	AML		
	comp=E,1540μm,0.7s						
ACOM				AML	AML		
	comp=N,920μm,1.2s						
ACOM				AML	AML		
	comp=N,920μm,1.2s						
ACOM				AML	AML		
	comp=E,1540μm,0.7s						
BAD	Bernadia	0.26	252	⇑*e*Pg	Pg	15 29 16.5	-0.6
BAD	Bernadia	0.26	252	*e*Pg	Pg	15 29 16.5	-0.6
GORS	Gorjuse	0.28	89	*i* Pg	Pg	15 29 17.1	-0.4
GORS				*i* Sg	Sg	15 29 21.9	+0.6
	comp=Z,231nm,0.1s						
GORS	Gorjuse	0.28	89	*i* Pg	Pg	15 29 17.1	-0.4
GORS				*i* Sg	Sg	15 29 21.9	+0.6
	comp=Z,231nm,0.1s						
MYKA	Terra Mystica	0.32	6	*e*Pg	Pg	15 29 17.9	-0.4
	comp=Z,5.7nm,0.1s,SNR=24						
MYKA				*e*Sg	Sg	15 29 22.2	-0.3
	comp=Z,33nm,0.1s						
MYKA	Terra Mystica	0.32	6	Pg	Pg	15 29 17.9	-0.4
	comp=Z,5.7nm,0.1s,SNR=24						
MYKA				Sg	Sg	15 29 22.2	-0.3
	comp=Z,33nm,0.1s						
GEPF	Gemona	0.32	263	P	Pg	15 29 17.6	-0.6
GEPF				AML	AML		
	comp=E,440μm,0.6s						
GEPF				AML	AML		
	comp=N,576μm,0.2s						
GEPF				AML	AML		
	comp=E,440μm,0.6s						
GEPF				AML	AML		
	comp=N,576μm,0.2s						
GEPF				AML	AML		
	comp=E,440μm,0.6s						
GEPF				AML	AML		
	comp=N,576μm,0.2s						
SABO	M.te Sabotino	0.34	179	⇓*e*Pg	Pg	15 29 18.4	-0.2
SABO	M.te Sabotino	0.34	179	*e*Pg	Pg	15 29 18.4	-0.2
SABO	M.te Sabotino	0.34	179	P	Pg	15 29 18.3	-0.2
SABO				AML	AML		
	comp=E,1124μm,0.7s						
SABO				AML	AML		
	comp=N,634μm,0.1s						
SABO				AML	AML		
	comp=N,634μm,0.1s						
SABO				AML	AML		
	comp=E,1124μm,0.7s						
BUA	Buia	0.34	254	⇓*e*Pg	Pg	15 29 18.2	-0.5
BUA	Buia	0.34	254	*e*Pg	Pg	15 29 18.2	-0.5
BOO	Bordano	0.34	271	Pg	Pg	15 29 17.8	-0.9
BOO	Bordano	0.34	271	Pg	Pg	15 29 17.8	-0.9
VOJS	Vojsko	0.35	145	⇓*i*Pg	Pg	15 29 18.3	-0.5
VOJS				*i* Sg	Sg	15 29 24.1	+0.7
	comp=Z,43nm,0.1s						
VOJS	Vojsko	0.35	145	⇓*i*Pg	Pg	15 29 18.3	-0.5
VOJS				*i* Sg	Sg	15 29 24.1	+0.7
	comp=Z,43nm,0.1s						
PLRO	Paularo	0.39	307	⇑*e*Pg	Pg	15 29 19.2	-0.4
PLRO	Paularo	0.39	307	*e*Pg	Pg	15 29 19.2	-0.4
FUSE	Fusea	0.42	284	*e*Pg	Pg	15 29 19.7	-0.5
FUSE	Fusea	0.42	284	*e*Pg	Pg	15 29 19.7	-0.5
MPRI	Monte Prat	0.43	260	⇑*e*Pg	Pg	15 29 19.6	-0.7
MPRI	Monte Prat	0.43	260	*e*Pg	Pg	15 29 19.6	-0.7
ZOU	Zoufplan	0.49	300	⇓*e*Pg	Pg	15 29 21.1	-0.4
ZOU	Zoufplan	0.49	300	⇓*e*Pg	Pg	15 29 21.2	-0.4
ZOU	Zoufplan	0.49	300	*e*Pg	Pg	15 29 21.1	-0.4
CLUD	Cludinico	0.51	286	*e*Pg	Pg	15 29 21.4	-0.5
CLUD	Cludinico	0.51	286	*e*Pg	Pg	15 29 21.4	-0.5
CRNS	Crni Vrh	0.52	117	*e*Pg	Pg	15 29 21.2	-0.8
CRNS				*i* Sg	Sg	15 29 29.4	+0.5
	comp=Z,48nm,0.1s						
CRNS	Crni Vrh	0.52	117	*e*Pg	Pg	15 29 21.2	-0.8
CRNS				*i* Sg	Sg	15 29 29.4	+0.5
	comp=Z,48nm,0.1s						
JAVS	Javornik	0.53	142	*i* Pg	Pg	15 29 21.4	-0.8
JAVS				*i* Sg	Sg	15 29 30.2	+0.9
	comp=Z,26nm,0.1s						
JAVS	Javornik	0.53	142	*i* Pg	Pg	15 29 21.5	-0.8
JAVS				*i* Sg	Sg	15 29 30.2	+0.9
	comp=Z,26nm,0.1s						
MOZS	Mozjanca	0.59	92	*i* Pg	Pg	15 29 23.2	-0.2
MOZS				*i* Sg	Sb	15 29 32.3	-0.8
	comp=Z,19nm,0.1s						
MOZS	Mozjanca	0.59	92	*i* Pg	Pg	15 29 23.2	-0.2
MOZS				*i* Sg	Sb	15 29 32.3	-0.8
	comp=Z,19nm,0.1s						
STAL	STALIGIAL	0.61	265	P	Pg	15 29 22.4	-1.5
TRI	Trieste	0.62	169	*e*Pg	Pg	15 29 22.7	-1.2
TRI	Trieste	0.62	169	*e*Pg	Pg	15 29 22.7	-1.2
TRI	Trieste	0.62	169	AML	AML		
	comp=N,89μm,0.3s						
TRI				AML	AML		
	comp=E,95μm,0.3s						
TRI				AML	AML		
	comp=N,89μm,0.3s						
TRI				AML	AML		
	comp=E,95μm,0.3s						
OBKA	Obir	0.69	73	Pg	Pg	15 29 24.0	-1.3
	comp=E,0.3nm,0.1s						
OBKA				*e*Sg	Sg	15 29 33.5	-0.8
	SNR=9.6						
OBKA	Obir	0.69	73	Pg	Pg	15 29 24.0	-1.3
	comp=E,0.3nm,0.1s						
OBKA				Sg	Sg	15 29 33.5	-0.8
	SNR=9.6						
GBAS	Gorenja Brezov	0.70	122	*i* Pg	Pg	15 29 24.5	-1.0
GBAS				*e*Sg	Sb	15 29 36.0	-0.4
	comp=Z,17nm,0.1s						
GBAS	Gorenja Brezov	0.70	122	*i* Pg	Pg	15 29 24.5	-1.0
GBAS				*e*Sg	Sb	15 29 36.0	-0.4
	comp=Z,17nm,0.1s						
LJU	Ljubljana	0.70	112	*i* Pg	Pg	15 29 25.2	-0.3
LJU				*i* Sg	Sb	15 29 36.1	-0.3
	comp=Z,18nm,0.1s						
LJU	Ljubljana	0.70	112	*i* Pg	Pg	15 29 25.2	-0.3
LJU				*i* Sg	Sb	15 29 36.1	-0.3
	comp=Z,18nm,0.1s						
LJU	Ljubljana	0.70	112	AML	AML		
	comp=E,332μm,1.4s						
LJU				AML	AML		
	comp=E,332μm,1.4s						
LJU				AML	AML		
	comp=N,402μm,0.6s						
LJU				AML	AML		
	comp=N,402μm,0.6s						
MLNI	Malnisio	0.70	257	*e*Pg	Pg	15 29 24.7	-0.8
MLNI	Malnisio	0.70	257	*e*Pg	Pg	15 29 24.7	-0.8
KBA	Koelnbreinsper	0.78	347	*e*Pg	Pg	15 29 26.7	-0.4
	comp=N,3.8nm,0.2s						
KBA				Sg	Sg	15 29 36.6	-0.7
	comp=N,12nm,0.2s						
KBA	Koelnbreinsper	0.78	347	Pg	Pg	15 29 26.7	-0.4
	comp=N,3.8nm,0.2s						
KBA				Sg	Sg	15 29 36.6	-0.7
	comp=N,12nm,0.2s						
VNDS	Vrh nad Dolski	0.80	105	*i* Pg	Pg	15 29 26.9	-0.4
VNDS				*e*Sg	Sb	15 29 38.2	-0.9
	comp=Z,23nm,0.2s						
VNDS	Vrh nad Dolski	0.80	105	*i* Pg	Pg	15 29 26.9	-0.4
VNDS				*e*Sg	Sb	15 29 38.2	-0.9
	comp=Z,23nm,0.2s						
CEY	Cerknica	0.82	135	*i* Pg	Pg	15 29 26.2	-1.5
	comp=Z,12nm,0.1s						
CEY	Cerknica	0.82	135	*i* Pg	Pg	15 29 26.2	-1.5
	comp=Z,12nm,0.1s						
SKDS	Skadanscina	0.82	159	*i* Pg	Pg	15 29 26.3	-1.5
SKDS	Skadanscina	0.82	159	*i* Pg	Pg	15 29 26.3	-1.5
CAE	Caneva	0.86	249	*e*Pg	Pb	15 29 28.6	-0.7
CAE	Caneva	0.86	249	*e*Pg	Pb	15 29 28.6	-0.7
ABTA	Abfaltersbach	0.86	300	*e*Pg	Pg	15 29 28.1	-0.5
	comp=Z,0.4nm,0.1s						
ABTA				Sg	Sb	15 29 40.2	-0.9
	comp=Z,5.6nm,0.2s,SNR=5.0						
ABTA	Abfaltersbach	0.86	300	Pg	Pg	15 29 28.1	-0.5
	comp=Z,0.4nm,0.1s						
ABTA				Sg	Sb	15 29 40.2	-0.9
	comp=Z,5.6nm,0.2s,SNR=5.0						
KNDS	Knezji Dol	0.96	145	*i* Pg	Pg	15 29 28.9	-1.5
KNDS	Knezji Dol	0.96	145	*i* Pg	Pg	15 29 28.9	-1.5
VISS	Visnje	1.01	120	*i* Pg	Pb	15 29 31.3	-0.4
VISS				*i* Sg	Sb	15 29 45.9	+0.8
	comp=Z,12nm,0.1s						
VISS	Visnje	1.01	120	*i* Pg	Pb	15 29 31.3	-0.4
VISS				*i* Sg	Sb	15 29 45.9	+0.8
	comp=Z,12nm,0.1s						
PDKS	Podkum	1.01	104	*i* Pg	Pg	15 29 30.8	-0.5
PDKS				*i* Sg	Sb	15 29 45.6	+0.4
	comp=Z,14nm,0.1s						
PDKS	Podkum	1.01	104	*i* Pg	Pg	15 29 30.8	-0.5
PDKS				*i* Sg	Sb	15 29 45.6	+0.4
	comp=Z,14nm,0.1s						
SOKA	Soboth	1.06	69	Pg	Pg	15 29 31.1	-1.2
	comp=Z,1.5nm,0.2s						
SOKA				Sg	Sg	15 29 45.2	-0.9
	comp=Z,2.8nm,0.2s						
SOKA	Soboth	1.06	69	Pg	Pg	15 29 31.1	-1.2
	comp=Z,1.5nm,0.2s						
SOKA				Sg	Sg	15 29 45.2	-0.9
	comp=Z,2.8nm,0.2s						
VARN	Col Varnada, M	1.08	253	*e*Pg	Pb	15 29 32.9	-0.1
VARN	Col Varnada, M	1.08	253	*e*Pg	Pb	15 29 32.9	-0.1
GBRS	Gornja Briga	1.16	132	*i* Pg	Pb	15 29 34.1	-0.1
	comp=Z,9.0nm,0.1s						
GBRS	Gornja Briga	1.16	132	*i* Pg	Pb	15 29 34.1	-0.1
	comp=Z,9.0nm,0.1s						
LEGS	Legarje	1.25	106	*i* Pg	Pn	15 29 36.0	+0.1
LEGS				*i* Sg	Sn	15 29 53.9	+1.0
LEGS	Legarje	1.25	106	*i* Pg	Pn	15 29 36.0	+0.1
LEGS				*i* Sg	Sn	15 29 53.9	+1.0
CGRP	Cima Grappa	1.32	251	*e*Pg	Pb	15 29 36.9	-0.3
CGRP	Cima Grappa	1.32	251	*e*Pg	Pb	15 29 36.9	-0.3
CRES	Cresnjev	1.39	110	*e*Pg	Pb	15 29 37.7	-0.5
CRES				*i* Sg	Sn	15 29 58.2	+2.0
	comp=Z,9.0nm,0.2s						
CRES	Cresnjev	1.39	110	*e*Pg	Pb	15 29 37.7	-0.5
CRES				*i* Sg	Sn	15 29 58.2	+2.0
	comp=Z,9.0nm,0.2s						
BOJS	Bojanci	1.41	124	*e*Pg	Pn	15 29 38.0	0.0
BOJS				*i* Sg	Sg	15 29 57.7	+0.3
	comp=Z,8.0nm,0.1s						
BOJS	Bojanci	1.41	124	*e*Pg	Pn	15 29 38.0	0.0
BOJS				*i* Sg	Sg	15 29 57.7	+0.3
	comp=Z,8.0nm,0.1s						
GOLS	Golise	1.44	101	*i* Pg	Pb	15 29 38.7	-0.5
GOLS				*i* Sg	Sg	15 29 59.3	+0.9
	comp=Z,11nm,0.1s						
GOLS	Golise	1.44	101	*i* Pg	Pb	15 29 38.7	-0.5
GOLS				*i* Sg	Sg	15 29 59.3	+0.9
	comp=Z,11nm,0.1s						
OZLJ	Ozalj	1.48	117	Sn	Sg	15 30 00.6	+1.0
GCIS	Gornji Cirnik	1.48	107	*i* Pg	Pb	15 29 39.5	-0.3
GCIS				*e*Sg	Sg	15 30 00.8	+1.1
	comp=Z,7.0nm,0.2s						
GCIS	Gornji Cirnik	1.48	107	*i* Pg	Pb	15 29 39.5	-0.3
GCIS				*e*Sg	Sg	15 30 00.8	+1.1
	comp=Z,7.0nm,0.2s						
MOA	Molln	1.60	16	Pg	Pg	15 29 42.5	-0.2
	comp=Z,1.0nm,0.2s						
MOA				Sg	Sg	15 30 04.3	+0.8
	comp=Z,7.0nm,0.5s						
MOA	Molln	1.60	16	Pg	Pg	15 29 42.5	-0.2
	comp=Z,1.0nm,0.2s						
MOA				Sg	Sg	15 30 04.3	+0.8
	comp=Z,7.0nm,0.5s						
ARSA	Arzberg	1.62	54	Pg	Pg	15 29 42.2	-0.9
	comp=Z,1.4nm,0.2s						
ARSA				Sg	Sb	15 30 02.9	0.0
	comp=Z,2.3nm,0.2s						
ARSA	Arzberg	1.62	54	Pg	Pg	15 29 42.2	-0.9
	comp=Z,1.4nm,0.2s						
ARSA				Sg	Sb	15 30 02.9	0.0
	comp=Z,2.3nm,0.2s						
WTTA	Wattenberg	1.65	306	Pn	Pn	15 29 40.1	-1.3
	comp=Z,2.0nm,0.2s						
WTTA				Sg	Sg	15 30 04.9	0.0
	comp=Z,7.0nm,0.4s						
WTTA	Wattenberg	1.65	306	Pn	Pn	15 29 40.1	-1.3
	comp=Z,2.0nm,0.2s						
WTTA				Sg	Sg	15 30 04.9	0.0
	comp=Z,7.0nm,0.4s						
WATA	Walderalm	1.72	307	Pg	Pg	15 29 45.3	+0.3
	comp=Z,3.8nm,0.2s						
WATA	Walderalm	1.72	307	Pg	Pg	15 29 45.3	+0.3
	comp=Z,3.8nm,0.2s						
NVLJ	Novalja	1.97	152	*e*Pn	Pb	15 29 46.8	-1.3
NVLJ				Sn	Sb	15 30 12.6	-0.2
MOTA	Moosalm	2.00	302	Pg	Pg	15 29 48.9	-1.4
	comp=Z,1.6nm,0.2s						
MOTA				Sg	Sg	15 30 16.2	+0.1
	comp=Z,9.3nm,0.7s						
MOTA	Moosalm	2.00	302	Pg	Pg	15 29 48.9	-1.4
	comp=Z,1.6nm,0.2s						
MOTA				Sg	Sg	15 30 16.2	+0.1
	comp=Z,9.3nm,0.7s						
FETA	Feichten	2.10	291	Pg	Pg	15 29 50.7	-1.4
	comp=Z,0.7nm,0.2s						
FETA				Sg	Sg	15 30 20.5	+1.2
	comp=Z,1.9nm,0.4s						
FETA	Feichten	2.10	291	Pg	Pg	15 29 50.7	-1.4
	comp=Z,0.7nm,0.2s						
FETA				Sg	Sg	15 30 20.5	+1.2
	comp=Z,1.9nm,0.4s						
KHC	Kasperske Hory	2.82	360	*e*PN	Pn	15 29 58.6	+1.2
KHC				*e*PG	Pb	15 30 03.1	+0.5
KHC				*e*SN	Sn	15 30 33.5	+1.9

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KHC				*e*SG	Sg	15 30 41.4	-1.1
	comp=Z,3.2nm,0.5s						
KHC	Kasperske Hory	2.82	360	Pn	Pn	15 29 58.6	+1.2

*IDC **24** 15:50:03.9±1.2, 28°.71N×101°.94E, h0^{km}, mb3.5/5, mb1 3.6/6, mb1mx3.4/63, mbtmp3.4/6, ML3.7/1, MS3.3/1, Ms1 3.2/1, ms1mx2.4/48, Error ellipse: s-maj=42.1km s-min=20.8km az=61.0*

*BJI **24** 15:50:08.6, 29°.08N×102°.38E, h10^{km}, ML3.5/9, Ms7 3.0/1*

ISC 24 15:50:07.4±0.9**, 29°.07N**±0°.05×**102°.44E**±0°.10**, h10**^{km}**, n11, σ2^s.05**/13**, mb3.5**/5**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CD2	Chengdu	2.16	32	Pg	Pb	15 50 47.5	+0.9
CD2				Sg	Sb	15 51 13.8	+0.3
CD2				smax	smax		
	comp=N,2µm,0.6s						
KMI	Kunming	3.94	176	Pg	Pg	15 51 22.8	-0.2
KMI				Sg	Sg	15 52 15.8	+1.7
KMI				smax	smax		
	comp=N,47nm,0.9s						
KMI				smax	smax		
	comp=E,72nm,1.1s						
XAN	Xi'an	7.42	47	Pn	Pn	15 51 51.5	-4.3
XAN				Pg	Pg	15 52 25.3	-4.2
XAN				Sn	Sn	15 53 18.4	-1.7
XAN				Sg	Sg	15 54 04.4	-1.2
XAN				smax	smax		
	comp=N,87nm,1.0s						
XAN				smax	smax		
	comp=E,97nm,1.1s						
WMQ	Urumqi	18.86	325	*e*P	Pn	15 54 29.4	+1.2
SONM	Songino Array	18.98	8	P	P	15 54 30.6	+1.5
	comp=E,0.2nm,0.3s,baz=191,slow=11,SNR=3.5						
KSRS	Korea Array	22.84	62	P	P	15 55 14.7	+4.0
	comp=E,0.7nm,0.7s,baz=252,slow=11,SNR=4.1						
MKAR	Makanchi Array	23.67	324	P	P	15 55 18.0	-1.0
	comp=E,0.3nm,0.7s,baz=123,slow=8.8,SNR=5.0						
KURBB	Kurchatov Arra	28.06	327	P	P	15 55 57.1	-1.7
	comp=E,0.5nm,0.2s,baz=136,slow=9.3,SNR=4.4						
KBZ	Khabaz	49.10	304	LR	LR	16 24 23.5	
	comp=E,35nm,20.1s,baz=257,slow=42						
WRA	Warramunga Arr	57.64	144	P	P	15 59 55.8	-2.2
	comp=E,0.9nm,0.8s,baz=328,slow=8.6,SNR=11						
ASAR	Alice Springs	60.55	147	P	P	16 00 15.8	-2.3
	comp=E,0.2nm,0.5s,baz=333,slow=7.4,SNR=5.0						

MAN 24 15:52:54.6, 11°.15N×125°.74E, h25^{km}, mb4.5, ML3.3, MS3.1, 1D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	Borongan	0.54	326	*e*P	Pn	15 53 06.8	+0.1
BESP				*e*S	Sn	15 53 16.0	+1.1
PLP	Palo	0.75	271	⇓*i*P	Pb	15 53 08.5	-0.5
PLP				*e*S	Sb	15 53 18.2	-0.6
OCLP	Ormoc	1.12	265	*e*P	Pn	15 53 14.3	-0.3
OCLP				*e*S	Sb	15 53 29.8	+0.5
MSLP	Maasin	1.33	221	*e*P	Pn	15 53 17.9	+0.3
MSLP				*e*S	Sb	15 53 35.6	0.0
CNP	Catarman	1.71	322	*e*P	Pn	15 53 22.5	-0.4
CNP				*e*S	Sn	15 53 44.9	+0.9

*ISCJB **24** 16:00:38.3±0.9, 39°.11N±0°.07×29°.00E±0°.05, h14^{km}±4^{km}, Error ellipse: s-maj=12.6km s-min=5.4km az=165.8*

*CSEM **24** 16:00:38.2±0.2, 39°.13N×28°.96E, h12^{km}, ML1.6, Error ellipse: s-maj=6.5km s-min=3.2km az=151.0*

*ISK **24** 16:00:38.7, 39°.12N×29°.03E, h10^{km}, ML1.6/2*

*DDA **24** 16:00:38.4, 39°.11N×29°.01E, h7^{km}, Ml2.9*

ISC 24 16:00:37.2±1.1**, 39°.16N**±0°.07×**28°.99E**±0°.04**, h17**^{km}±4^{km}**, n16, σ0^s.53**/28**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMAA	Simav-Kutahya	0.06	186	PG	Pg	16 00 40.9	+0.5
SMAA				SG	Sg	16 00 42.6	+0.1
SMAA	Simav-Kutahya	0.06	186	*e*Pg	Pg	16 00 40.9	+0.5
SMAA				*e*Sg	Sg	16 00 42.6	+0.1
SIMA	Simav-Kutahya	0.07	184	PG	Pg	16 00 40.9	+0.3
SIMA				SG	Sb	16 00 42.4	-0.4
SIMA	Simav-Kutahya	0.07	184	*e*Pg	Pg	16 00 40.9	+0.3
SIMA				*e*Sg	Sb	16 00 42.4	-0.4
SHAP	Saphane-Kutahy	0.23	126	PG	Pb	16 00 43.1	+0.2
SHAP				SG	Sg	16 00 46.1	0.0
SHAP	Saphane-Kutahy	0.23	126	*e*Pg	Pb	16 00 43.1	+0.2
SHAP				*e*Sg	Sg	16 00 46.1	0.0
DEMI	Demirci	0.24	242	*i* P	Pg	16 00 42.8	+0.1
DEMI				*i* S	Sb	16 00 48.0	+0.8
DEMI	Demirci	0.24	242	P	Pg	16 00 42.8	+0.1
DEMI				S	Sb	16 00 48.0	+0.8
GDZ	Gediz	0.39	100	*i* P	Pb	16 00 46.4	+0.7
GDZ				*i* S	Sb	16 00 51.6	+0.1
GDZ	Gediz	0.39	100	P	Pb	16 00 46.4	+0.7
GDZ				S	Sb	16 00 51.6	+0.1
TVSB	Tavsanli	0.47	51	PG	Pn	16 00 48.4	-0.9
TVSB	Tavsanli	0.47	51	*e*Pg	Pn	16 00 48.4	-0.9
KULA	Kula-Manisa	0.69	202	PG	Pn	16 00 52.1	-0.2
KULA	Kula-Manisa	0.69	202	*e*Pg	Pn	16 00 52.1	-0.2
MANT	Manisa	0.74	207	*i* P	Pb	16 00 51.9	0.0
MANT				*i* S	Sb	16 01 00.9	-0.9
MANT	Manisa	0.74	207	P	Pb	16 00 51.9	0.0
MANT				S	Sb	16 01 00.9	-0.9

*CSEM **24** 16:01:05.1±0.2, 37°.45N×26°.96E, h19^{km}, ML2.1, Error ellipse: s-maj=4.8km s-min=2.6km az=80.0*

ISK 24 16:01:04.8, 37°.46N×26°.97E, h16^{km}±2^{km}**, ML2.1**/3**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GCAM	G?zelcaml?	0.32	41	PG	Pb	16 01 12.3	+0.1
GCAM				SG	Sb	16 01 17.8	+0.6
GCAM	G?zelcaml?	0.32	41	*i* P	Pb	16 01 12.2	-0.1
GCAM				*i* S	Sb	16 01 17.6	+0.4
GCAM	G?zelcaml?	0.32	41	*e*Pg	Pb	16 01 12.3	+0.1
GCAM				S	Sb	16 01 17.6	+0.4
BODT	Bodrum	0.48	145	PG	Pb	16 01 14.8	0.0
BODT				SG	Sb	16 01 21.9	+0.3
BODT	Bodrum	0.48	145	*e*Pg	Pb	16 01 14.8	0.0
BODT				*e*Sg	Sb	16 01 21.9	+0.3
DGB	˜zmir	0.60	354	*i* P	Pg	16 01 16.6	-0.1
DGB				*i* S	Sn	16 01 27.3	-0.7
AYDN	Tasoluk	0.75	74	*i* P	Pb	16 01 19.9	+0.3
AYDN				*i* S	Sb	16 01 30.5	+0.8
AYDN	Tasoluk	0.75	74	P	Pb	16 01 19.9	+0.3
DAT	Datca	0.87	146	PG	Pn	16 01 22.4	-0.1
DAT	Datca	0.87	146	*e*Pg	Pn	16 01 22.4	-0.1
AYDB	Zeytinkoy-Aydi	0.88	56	PG	Pg	16 01 22.2	+0.2
AYDB				SG	Sn	16 01 35.0	-0.2
AYDB	Zeytinkoy-Aydi	0.88	56	*e*Pg	Pg	16 01 22.2	+0.2
AYDB				*e*Sg	Sn	16 01 35.0	-0.2
URLA	Izmir	0.95	342	PG	Pn	16 01 23.7	+0.2
URLA				SG	Sn	16 01 37.1	+0.3
URLA	Izmir	0.95	342	*i* P	Pb	16 01 21.7	-1.2
URLA				*i* S	Sg	16 01 36.0	+0.2
URLA	Izmir	0.95	342	*e*Pg	Pn	16 01 23.7	+0.2
URLA				*e*Sg	Sn	16 01 37.1	+0.3
URLA	Izmir	0.95	342	S	Sg	16 01 36.0	+0.3

IDC 24 16:01:25.9±2.5**, 9°.94S**×**121°.88E, h0**^{km}**, mb3.6**/2**, mb1 3.8**/4**, mb1mx3.5**/47**, mbtmp3.6**/4**, ML3.5**/2**, Error ellipse: s-maj=175.2km s-min=29.5km az=55.0, Savu Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.60	131	Pn	Pn	16 05 06.9	-0.5
	0.2nm,0.3s,baz=311,slow=15,SNR=20						
WRA				Sn	Sn	16 07 49.8	-11
	0.1nm,0.3s,baz=302,slow=24,SNR=4.4						
ASAR	Alice Springs	17.84	141	P	P	16 05 36.3	-0.3
	0.2nm,0.3s,baz=327,slow=14,SNR=27						
ASAR				S	Sn	16 08 41.4	-14
	0.1nm,0.3s,baz=314,slow=23,SNR=4.8						
SONM	Songino Array	59.14	348	P	P	16 11 29.9	+1.4
	0.3nm,0.4s,baz=164,slow=5.7,SNR=1.6						
MKAR	Makanchi Array	66.61	332	P	P	16 12 17.1	-1.1
	0.4nm,0.6s,baz=135,slow=7.1,SNR=5.0						

NNC 24 16:05:36.9±3.5**, 38°.06N**×**71°.66E, h13**^{km}±92^{km}**, mb3.6, mpv3.2, 4C-1D, Error ellipse: s-maj=97.6km s-min=14.0km az=18.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	2.42	36	⇑P	Pn	16 06 16.2	-0.2
	1.0nm,0.2s						
SFK				⇑S	Sn	16 06 47.2	+1.2
	18nm,0.2s						
MNAS	Manas	4.47	8	⇓P	Pn	16 06 44.6	+0.1
	1.8nm,0.3s						
MNAS				⇑S	Sn	16 07 36.9	+0.5
	12nm,0.6s						
KK31	Karatay Array	5.11	350	P	Pn	16 06 54.3	+1.1
	3.6nm,0.3s,baz=165,slow=12,SNR=40						
KK31				⇑S	Sn	16 07 53.3	+1.2
	1.2nm,0.2s,baz=170,slow=23,SNR=13						
AB31	Akbulak array	14.02	327	P	Pn	16 08 52.3	-2.8
	0.3nm,0.2s,baz=129,slow=14,SNR=7.8						

*ISN **24** 16:22:34.1±0.5, 32°.77N×47°.95E, h12^{km}±7^{km}, ML3.0*

*CSEM **24** 16:22:37.1±0.5, 32°.77N×47°.63E, h10^{km}, ML3.0, Error ellipse: s-maj=15.2km s-min=10.7km az=9.0*

TEH 24 16:22:37.1, 32°.78N×47°.78E, h26^{km}**, ML3.2, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IKFM	Kafar-mosalman	0.74	5	*e*Pg	Pn	16 22 51.9	0.0
IKFM				*e*		16 23 03.1	
	comp=E,99nm,0.2s						
IKFM				*e*		16 23 06.1	
	comp=Z,99nm,0.2s						
IKFM				*e*		16 23 08.1	
	comp=N,99nm,0.1s						
SHGR	Shooshtar-Gavs	1.10	128	*e*Pg	Pb	16 23 00.5	+3.1
SHGR	Shooshtar-Gavs	1.10	128	*e*Pg	Pb	16 23 00.5	+3.1
SHGR				*e*Sg	Sb	16 23 15.4	+4.1
IKOM	Komasi	1.41	351	*e*		16 23 27.4	
	comp=Z,99nm,0.1s						
IKOM				*e*Pg	Pb	16 23 04.8	+2.0
HSAM	Samen	1.58	26	*e*		16 23 07.5	
	comp=N,99nm,0.1s						
HSAM				*e*Pn	Pb	16 23 07.1	+1.2
IBZA	Bozab	1.68	2	*e*		16 23 36.6	
	comp=Z,99nm,0.1s						
IBZA				*e*Pn	Pb	16 23 09.2	+1.6
KHMZ	Khomeyn	2.06	62	*e*Pn	Pb	16 23 13.8	-0.2
KHMZ	Khomeyn	2.06	62	*e*Pg	Pb	16 23 13.8	-0.2
KHMZ				*e*Sg	Sb	16 23 39.8	+0.5
NSR	Nassriya	2.25	219	*e*Pn	Pn	16 23 13.0	+0.4
	SNR=47						
NSR				*e*Sn	Sb	16 23 42.0	-2.4
	SNR=4.0						
HAGD	Aghdareh	2.33	29	*e*Pn	Pb	16 23 17.4	-1.1
HAGD				*e*		16 23 18.0	
	comp=N,99nm,0.0s						
HAGD				*e*		16 23 19.0	
	comp=Z,99nm,0.1s						
HAGD				*e*		16 23 19.1	
	comp=E,99nm,0.0s						
ASAO	Ashtian	2.57	46	*e*Pn	Pb	16 23 20.5	-2.2
ASAO	Ashtian	2.57	46	*e*Pn	Pb	16 23 20.5	-2.2
ZNGN	Zangian	2.69	104	*e*Pn	Pn	16 23 21.5	+2.6
ZNGN				*e*		16 23 29.2	
	comp=N,99nm,0.2s						
ZNGN				*e*		16 23 30.3	
	comp=E,99nm,0.2s						
ZNGN				*e*		16 24 04.0	
	comp=Z,99nm,0.3s						
HKZM	Kohzaman	2.75	20	*e*Pn	Pb	16 23 24.3	-1.5
HKZM				*e*		16 23 25.1	
	comp=E,99nm,0.1s						
HKZM				*e*		16 23 25.1	
	comp=N,99nm,0.1s						
HKZM				*e*		16 24 08.0	
	comp=Z,99nm,0.2s						
ROKH	ROKH	2.79	98	*e*Pn	Pn	16 23 22.3	+2.1
ROKH				*e*		16 23 32.2	
	comp=Z,99nm,0.1s						
ROKH				*e*		16 24 05.7	
	comp=N,99nm,0.2s						
ROKH				*e*		16 24 09.8	
	comp=E,99nm,0.2s						
IBRJ	Brojen	3.08	106	*e*Pn	Pn	16 23 26.2	+1.9
IBRJ				*e*		16 23 36.2	
	comp=Z,278nm,0.1s						
IBRJ				*e*		16 24 09.9	
	comp=E,450nm,0.3s						
IBRJ				*e*		16 24 10.5	
	comp=N,469nm,0.2s						
IRAZ	Razeghan	3.17	34	*e*Pn	Pn	16 23 28.6	+3.1
IRAZ				*e*		16 23 30.3	
	comp=Z,1µm,0.1s						
IKLH	Kolahrood	3.24	79	*e*Pn	Pb	16 23 30.3	-3.7
IKLH				*e*		16 23 42.0	
	comp=Z,378nm,0.1s						
IKLH				*e*		16 24 17.4	
	comp=E,460nm,0.1s						
IKLH				*e*		16 24 26.4	
	comp=N,619nm,0.3s						
QABG	Abgarm-Qazvin	3.28	27	*e*Pn	Pb	16 23 31.7	-3.0
GHVR	GHOM	3.39	59	*e*Pn	Pn	16 23 31.2	+2.8
GHVR	GHOM	3.39	59	*e*Pn	Pn	16 23 31.2	+2.8
IGAR	Gharneh	3.62	95	*e*Pn	Pn	16 23 33.8	+2.1
IGAR				*e*		16 23 37.9	
	comp=Z,357nm,0.1s						
IMHD	Mahdasht	3.76	39	*e*Pn	Pn	16 23 36.5	+3.0
IMHD				*e*		16 23 39.2	
	comp=Z,398nm,0.1s						
IMHD				*e*		16 23 39.6	
	comp=N,687nm,0.1s						
IZEF	Zefreh	3.83	87	*e*Pn	Pn	16 23 37.7	+3.0
IZEF				*e*		16 23 39.3	
	comp=Z,148nm,0.1s						
IZEF				*e*		16 24 35.2	
	comp=E,135nm,0.2s						
IZEF				*e*		16 24 38.7	
	comp=N,153nm,0.2s						
IRAM	Ramesheh	4.02	103	*e*Pn	Pn	16 23 38.9	+1.7
IRAM				*e*		16 23 56.7	
	comp=E,122nm,0.1s						
IRAM				*e*		16 24 40.0	
	comp=N,154nm,0.2s						
IRAM				*e*		16 24 54.0	
	comp=Z,128nm,0.3s						
IGZV	Ghazvin	4.12	29	*e*Pn	Pn	16 23 41.0	+2.4
IGZV				*e*		16 23 41.9	
	comp=Z,496nm,0.1s						
IGZV				*e*		16 25 01.2	
	comp=E,344nm,0.0s						
IGZV				*e*		16 25 01.9	
	comp=N,339nm,0.1s						
IDMV	Damavand	4.50	51	*e*Pn	Pn	16 23 46.1	+2.3
IDMV				*e*		16 23 46.9	
	comp=Z,868nm,0.1s						
IDMV				*e*		16 23 47.3	
	comp=E,769nm,0.1s						
IDMV				*e*		16 23 48.0	
	comp=N,640nm,0.1s						
IFIR	Firoozkooh	5.01	54	*e*Pn	Pn	16 23 53.5	+2.6
IFIR				*e*		16 23 54.2	
	comp=Z,717nm,0.1s						
IFIR				*e*		16 23 54.2	
	comp=N,695nm,0.1s						
IFIR				*e*		16 23 55.8	
	comp=E,361nm,0.1s						
ANAR	Anarak	5.02	84	*e*		16 25 20.8	
	comp=Z,99nm,0.2s						

*ISK **24** 16:50:41.6, 38°.05N×35°.56E, h5^{km}, ML2.1/5*

*CSEM **24** 16:50:42.9±0.2, 38°.03N×35°.63E, h5^{km}, ML2.6, Error ellipse: s-maj=5.8km s-min=4.4km az=151.0*

*ISCJB **24** 16:50:43.1±0.6, 38°.02N±0°.04×35°.62E±0°.03, h3^{km}±6^{km}, Error ellipse: s-maj=6.8km s-min=4.1km az=164.1*

*DDA **24** 16:50:43.2, 38°.00N×35°.64E, h7^{km}, Ml2.6*

ISC 24 16:50:43.1±1.2**, 38°.01N**±0°.03×**35°.64E**±0°.02**, h4**^{km}±11^{km}**, n22, σ0^s.87**/35**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YAHY	KAYSERI_Yahyal	0.23	291	*i* P	Pg	16 50 47.5	-0.2
YAHY				*i* S	Sg	16 50 52.3	+1.6
YAHY	KAYSERI_Yahyal	0.23	291	P	Pg	16 50 47.5	-0.2
YAHY				S	Sg	16 50 52.3	+1.6
SAIM	ADANA	0.35	96	*i* P	Pg	16 50 50.0	+0.1
SAIM				*i* S	Sb	16 50 56.5	-1.5
SAIM	ADANA	0.35	96	P	Pg	16 50 50.0	+0.1
SAIM				S	Sb	16 50 56.5	-1.5
ANDN	Andirin	0.71	127	*i* P	Pg	16 50 56.5	-0.2
ANDN	Andirin	0.71	127	P	Pg	16 50 56.5	-0.2
SARI	SarD1z-Kayseri	0.73	57	PG	Pg	16 50 57.3	+0.2
SARI				SG	Sb	16 51 08.9	0.0
BNN	Bunyan	0.85	11	PG	Pg	16 50 58.9	-0.6
BNN	Bunyan	0.85	11	*e*Pg	Pg	16 50 58.9	-0.6
KARA	Karaisali	0.88	212	PG	Pg	16 50 59.3	-0.7
KARA				SG	Sb	16 51 12.9	-0.3
KARA	Karaisali	0.88	212	*e*Pg	Pg	16 50 59.3	-0.7
KARA				*e*Sg	Sb	16 51 12.9	-0.3
GULE	Gulek	1.00	224	*i* P	Pg	16 51 01.5	-0.8
GULE				*i* S	Sb	16 51 16.4	-0.3
GULE	Gulek	1.00	224	P	Pg	16 51 01.5	-0.8
GULE				S	Sb	16 51 16.4	-0.3
KMRS	Kahramanmaras	1.12	116	PN	Pn	16 51 05.6	0.0
KMRS				SN	Sn	16 51 23.2	+1.7
KMRS	Kahramanmaras	1.12	116	*e*Pn	Pn	16 51 05.6	0.0
KMRS				*e*Sn	Sn	16 51 23.2	+1.7
KERG	Konya-Eregli	1.34	244	*i* P	Pg	16 51 09.6	+0.8
KERG				*i* S	Sg	16 51 25.2	-1.1
KERG	Konya-Eregli	1.34	244	P	Pg	16 51 09.6	+0.8
KERG				S	Sg	16 51 25.2	-1.1
MERS	Mersin	1.45	218	PN	Pn	16 51 10.0	-0.2
MERS	Mersin	1.45	218	*e*Pn	Pn	16 51 10.0	-0.2
YOZ	Yozgat	1.65	351	PN	Pn	16 51 12.1	-0.9
YOZ	Yozgat	1.65	351	*e*Pn	Pn	16 51 12.1	-0.9
KIZK	Mersin	1.94	218	PN	Pn	16 51 17.0	+0.1

MAN 24 17:01:42.8, 16°.48N×120°.43E, h1^{km}**, mb4.8, ML3.8, MS3.7, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOLP	Bolinao	0.50	259	*e*P	Pg	17 01 52.7	+0.2
BOLP				*e*S	Sb	17 02 01.6	-0.7
ABRA	Dolores	1.19	13	*e*P	Pn	17 02 06.6	-0.1
ABRA				*e*S	Sn	17 02 24.0	+0.5
APYP	Conner	1.58	30	*e*P	Pn	17 02 11.2	-0.7
APYP				*e*S	Sn	17 02 30.6	-2.4

*NIED **24** 17:04:00, 37°.80N×142°.20E, h35^{km}, Mw4.0 Best double couple: M$_0$1.25000×10^{15} NP1:φ$_s$264.00000°, δ58.00000°, λ3.00000°. NP2:φ$_s$172.00000°, δ87.00000°, λ148.00000°.*

*IDC **24** 17:04:48.8±1.6, 37°.85N×142°.65E, h0^{km}, mb3.7/8, mb1 3.9/13, mb1mx3.7/63, mbtmp3.9/13, ML3.7/3, MS2.8/7, Ms1 2.8/7, ms1mx2.6/61, Error ellipse: s-maj=37.5km s-min=17.8km az=71.0*

*ISCJB **24** 17:04:51.1±0.4, 37°.78N±0°.03×142°.36E±0°.04, h21^{km}, mb4.1/16, MS3.8/3, Error ellipse: s-maj=5.1km s-min=3.8km az=29.7*

*MOS **24** 17:04:52.0±0.8, 37°.72N×142°.56E, h37^{km}, mb4.4/7, Error ellipse: s-maj=11.5km s-min=8.2km az=88.2*

*JMA **24** 17:04:53.7±0.2, 37°.80N×142°.16E, h36^{km}±3^{km}, M4.0*

*BJI **24** 17:04:53.0, 37°.49N×142°.60E, h44^{km}, mb4.5/19, mB4.7/9, Ms4.2/5, Ms7 4.0/4*

*NEIC **24** 17:04:55.2±0.7, 37°.72N×142°.44E, h43^{km}±7^{km}, mb4.5/3, Error ellipse: s-maj=11.0km s-min=6.3km az=107.0*

ISC 24 17:04:52.2±0.6**, 37°.75N**±0°.04×**142°.42E**±0°.05**, h21**^{km}**, n76, σ2^s.43**/87**, mb4.2**/16**, MS3.9**/3**, 3C-5D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIO	Ouri	1.10	310	P	Pn	17 05 10.5	-1.8
JIO				*e*S	Sb	17 05 21.8	-4.4
JFK	Kawauchi	1.29	253	P	Pn	17 05 13.1	-1.8
JFK				*e*S	Sn	17 05 26.7	-4.8
JMM	Marumori	1.29	275	P	Pn	17 05 12.9	-2.1
JMM				*e*S	Sn	17 05 26.1	-5.5
JOU	Okura	1.51	294	P	Pn	17 05 16.7	-1.3
JMK	Ichinoseki	1.52	322	P	Pn	17 05 17.0	-1.1
JFT	Otama	1.67	263	P	Pn	17 05 19.4	-0.8
JFT				*e*S	Sn	17 05 38.1	-2.9
JYS	Shirataka	1.92	285	P	Pn	17 05 22.4	-1.2
JOM	Ohasama	1.93	333	P	Pn	17 05 23.3	-0.5
JOM				*e*S	Sn	17 05 45.0	-2.4
JYK	Kaneyama	1.99	306	P	Pn	17 05 23.6	-1.0
JRG	Rokugo	2.16	320	P	Pn	17 05 26.5	-0.4
JFY	Yanaizu	2.18	262	P	Pn	17 05 26.8	-0.5
JFY				*e*S	Sn	17 05 51.2	-2.5
JYA	Atsumi	2.29	292	P	Pn	17 05 27.7	-1.0
MJAR	Matsushiro Arr	3.57	252	Pn	Pn	17 05 48.8	+2.5
	4.1nm,0.3s,baz=318,slow=22,SNR=32						
MJAR				Sn	Sn	17 06 27.8	-0.2
	5.1nm,0.3s,baz=122,slow=14,SNR=6.2						
MJAR				LR	LR	17 07 14.0	
	comp=Z,166nm,19.6s,baz=85,slow=39						
MAJO	Matsushiro	3.58	252	*e*Pn	Pn	17 05 48.0	+1.7
MAJO	Matsushiro	3.58	252	*d* *i*P	Pn	17 05 47.7	+1.3
MAT	Matsushiro	3.58	252	P	Pn	17 05 48.6	+2.2
MAT				S	Sn	17 06 25.6	-2.4
MJB9	Matsu-Tunnel	3.58	252	*e*Pn	Pn	17 05 48.3	+1.9
ERM	Erimo	4.29	7	*e*Pn	Pn	17 05 57.9	+1.6
ERM	Erimo	4.29	7	*d* *i*P	Pn	17 05 57.2	+1.0
INU	Inuyama	4.97	243	*e*Pn	Pn	17 06 07.5	+2.0
JHJ2	Mitsune	5.09	205	*e*Pn	Pn	17 06 07.5	+0.3
JHJ	Hachijo jima 2	5.10	206	Pn	Pn	17 06 08.5	+1.2
	35nm,0.3s,baz=327,slow=14,SNR=44						
JHJ				Sn	Sn	17 07 03.0	-2.6
	26nm,0.3s,baz=260,slow=23,SNR=5.9						
JHJ				LR	LR	17 08 24.8	
	comp=Z,103nm,19.0s,baz=87,slow=41						
ASAJ	Asahikawa	6.36	1	Pn	Pn	17 06 26.3	+1.7
	1.0nm,0.3s,baz=226,slow=9.8,SNR=14						
ASAJ				Sn	Sn	17 07 35.5	-1.1
	0.8nm,0.3s,baz=342,slow=19,SNR=3.5						
ASAJ	Asahikawa	6.36	1	*e*Pn	Pn	17 06 26.9	+2.3
YUK	Yuzh-Kuril'sk	6.79	21	*d* *i*P	Pn	17 06 32.1	+1.6
YUK				*i* S	Sn	17 07 43.6	-3.6
YUK				pmax	pmax		
	comp=N,29nm,0.3s						
YUK				pmax	pmax		
	comp=E,13nm,0.3s						
YUK				pmax	pmax		
	comp=Z,44nm,0.3s						
SHO	Shikotan	6.96	27	*d* *i*P	Pn	17 06 33.4	+0.5
SHO				*i* S	Sn	17 07 46.6	-4.8
SHO				pmax	pmax		
	comp=E,8.0nm,0.4s						
SHO				pmax	pmax		
	comp=Z,16nm,0.4s						
SHO				pmax	pmax		
	comp=N,6.0nm,0.2s						
KUR	Kuril'sk	8.52	27	*c* *i*P	Pn	17 06 55.4	+1.2
KUR				*i* S	Sn	17 08 24.6	-4.9
KUR				pmax	pmax		
	comp=Z,11nm,0.8s						
KUR				pmax	pmax		
	comp=N,7.0nm,0.9s						
YSS	Yuzh-Sakhalins	9.20	1	*e*Pn	Pn	17 07 05.5	+1.9
YSS	Yuzh-Sakhalins	9.20	1	⇓*e*P	Pn	17 07 05.4	+1.9
YSS				*e*S	Sn	17 08 46.0	-0.3
YSS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
YSS				smax	smax		
	comp=N,10.0nm,0.9s						
MSHR	Mys Shultsa	9.87	303	*i* P	Pn	17 07 14.8	+2.0
USA0B	Ussuriysk Arra	10.18	313	*e*Pn	Pn	17 07 20.1	+3.2
USRK	Ussuriysk Ar.	10.18	313	Pn	Pn	17 07 20.8	+3.9
	baz=116,slow=13						
JNU	Nakatsue	10.48	247	Pn	Pn	17 07 23.4	+2.2
	comp=N,0.3nm,0.3s,baz=119,slow=7.1,SNR=6.2						
JNU				LR	LR	17 11 54.3	
	comp=N,79nm,18.1s,baz=122,slow=40						
JNU	Nakatsue	10.48	247	*e*Pn	Pn	17 07 23.8	+2.6
CBIJ	Chichi jima	10.63	181	*e*Pn	Pn	17 07 24.3	+1.1
JCJ	Chichijima	10.63	181	Pn	Pn	17 07 24.6	+1.4
	baz=270,slow=19						

JCJ				Sn	Sn	17 09 13.0	-8.6
	comp=N,0.8nm,0.3s,baz=279,slow=19,SNR=2.8						
KSRS	Korea Array	11.51	273	Pn	Pn	17 07 37.7	+2.6
	baz=78,slow=14,SNR=3.1						
KSRS				LR	LR	17 11 14.4	
	comp=N,63nm,19.7s,baz=107,slow=33						
KLR	Kul'dur	13.82	329	LR	LR	17 13 11.1	
	comp=N,4.7nm,18.7s,baz=148,slow=36						
SKR	Severo-Kuril's	16.20	33	eP	Pn	17 08 32.9	-5.4
SKR				pmax	pmax		
	comp=Z,37nm,1.2s						
SKR				pmax	pmax		
	comp=Z,200nm,4.3s						
SKR				MLR	MLR		
	comp=Z,200nm,16.0s						
SKR				MLR	MLR		
	comp=Z,100nm,16.0s						
PETK	Petropavlovsk-	18.66	30	LR	LR	17 15 46.5	
	comp=Z,29nm,19.6s,baz=296,slow=36						
NJ2	Nanjing	20.12	261	eP	P	17 09 25.0	+0.3
NJ2				pmax	pmax		
	comp=Z,18nm,0.5s						
BJI	Beijing	20.53	285⇑	eP	P	17 09 28.4	-0.6
BJI				pmax	pmax		
	comp=Z,9.0nm,0.4s						
HHC	Hu-ho-hao-te	24.02	287	eP	P	17 10 03.8	-1.8
HHC				PP	PnPn	17 10 38.9	+4.5
HHC				S	S	17 14 16.4	-5.1
HHC				pmax	pmax		
	comp=Z,18nm,1.0s						
HHC				pmax	pmax		
	comp=Z,80nm,6.3s						
H11N2	WAKE ISLAND Hy	27.85	123	T	T	17 39 55.8	
	baz=316,slow=75,SNR=199						
H11N1	WAKE ISLAND Hy	27.86	123	T	T	17 39 56.6	
	baz=316,slow=75,SNR=122						
H11N3	WAKE ISLAND Hy	27.87	123	T	T	17 40 00.9	
	baz=316,slow=75,SNR=124						
SONA1	Songino Array	28.06	303	eP	P	17 10 42.0	-0.1
SONM	Songino Array	28.06	303	P	P	17 10 43.5	+1.4
	comp=Z,0.5nm,0.6s,baz=97,slow=7.3,SNR=4.8						
H11S1	WAKE ISLAND Hy	28.60	125	T	T	17 41 07.5	
	baz=317,slow=76,SNR=74						
H11S3	WAKE ISLAND Hy	28.60	125	T	T	17 41 10.6	
	baz=317,slow=76,SNR=78						
H11S2	WAKE ISLAND Hy	28.62	125	T	T	17 41 08.7	
	baz=317,slow=76,SNR=65						
LZH	Lanzhou	30.74	279	eP	P	17 11 08.8	+2.8
LZH				pP	sP	17 11 18.8	+3.8
LZH				sP	pP	17 11 22.5	+10
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
LZH				pmax	pmax		
	comp=Z,67nm,4.5s						
LZH				LR	LR		
	comp=Z,400nm,10.8s						
LZH				LR	LR		
	comp=Z,430nm,10.8s						
LZH				LR	LR		
	comp=Z,470nm,13.8s						
GYA	Guiyang	32.13	260	eP	P	17 11 20.0	+1.7
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
DGZ	Jazzator, Alta	40.63	305	i P	P	17 12 31.6	+1.0
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.9s						
WMQ	Urumqi	41.23	296	P	P	17 12 37.8	+2.2
WMQ				LR	LR		
	comp=Z,21nm,17.9s						
WMQ				LR	LR		
	comp=Z,110nm,14.1s						
ZALV	Zalesovo Beam	42.03	312	P	P	17 12 41.8	0.0
	comp=Z,0.6nm,0.4s,baz=105,slow=9.1,SNR=2.9						
ZALV				LR	LR	17 31 12.2	
	comp=Z,37nm,18.3s,baz=64,slow=38						
CMAR	Chiang Mai Arr	42.45	255	P	P	17 12 46.3	+0.6
	comp=Z,0.4nm,0.4s,baz=51,slow=7.1,SNR=3.7						
MK01	Makanchi Array	44.42	302	eP	P	17 13 02.3	+1.0
MK31	Makanchi Array	44.42	302	eP	P	17 13 01.7	+0.4
MK31	Makanchi Array	44.42	302	eP	P	17 13 01.7	+0.4
MKAR	Makanchi Array	44.42	302	P	P	17 13 02.0	+0.8
	comp=Z,0.9nm,0.9s,baz=88,slow=7.4,SNR=4.1						
MKAR	Makanchi Array	44.42	302	eP	P	17 13 02.1	+0.8
	comp=Z,13nm,0.6s						
MKAR	Makanchi Array	44.42	302	eP	P	17 13 02.1	+0.8
MKAR				pmax	pmax		
	comp=Z,13nm,0.6s						
MAKZ	Makanchi	44.63	302	eP	P	17 13 04.0	+1.0
	comp=Z,8.8nm,1.6s						
MAKZ	Makanchi	44.63	302	eP	P	17 13 04.0	+1.0
MAKZ				pmax	pmax		
	comp=Z,9.0nm,1.6s						
KURK	Kurchatov	46.12	308	eP	P	17 13 14.7	0.0
	comp=Z,5.5nm,0.8s						
KURK	Kurchatov	46.12	308	eP	P	17 13 14.7	0.0
KURK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KURBB	Kurchatov Arra	46.19	308	P	P	17 13 15.4	+0.2
	comp=Z,1.3nm,0.5s,baz=82,slow=8.2,SNR=9.2						
BVAR	Borovoye Array	50.68	312	P	P	17 13 50.7	+0.9
	comp=Z,0.3nm,0.5s,baz=63,slow=10.0,SNR=3.1						
ARU	Arti	56.35	318c	iP	P	17 14 32.0	+0.6
ARU						17 15 23.9	
ARU						17 16 36.1	
ARU				S	S	17 22 22.1	+1.7
ARU				SS	SS	17 26 02.4	-4.4
ARU				pmax	pmax		
	comp=Z,9.0nm,2.5s						
WRAB	Tennant Creek	57.88	189	i P	P	17 14 40.3	-2.2
WRAB				pmax	pmax		
	comp=Z,5.0nm,1.1s						
WRA	Warramunga Arr	57.89	189	P	P	17 14 43.2	+0.7
	comp=Z,1.2nm,0.6s,baz=6.1,slow=7.1,SNR=23						
ABKAR	Akbulak array	58.09	310	eP	P	17 14 42.3	-1.5
AS01	Alice Springs	61.61	189	eP	P	17 15 09.1	+0.9
ASAR	Alice Springs	61.62	189	P	P	17 15 09.3	+1.1
	comp=Z,0.5nm,0.9s,baz=7.9,slow=10.0,SNR=6.2						
LAB	Little Aspen B	69.39	52	eP	P	17 15 59.7	+1.1

IDC 24 17:12:56.1±3.2**, 21°.60N**×**142°.25E, h207**^{km}±58^{km}**, mb2.9**/5**, mb1 3.1**/8**, mb1mx2.8**/64**, mbtmp3.8**/8**, Error ellipse: s-maj=125.2km s-min=16.7km az=75.0, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JCJ	Chichijima	5.47	359	P	Pn	17 14 17.3	+0.6
	baz=276,slow=19						
JCJ				S	S	17 15 16.4	-3.8
	11nm,0.3s,baz=294,slow=20,SNR=2.5						
JHJ	Hachijo jima 2	11.68	350	P	Pn	17 15 35.6	-1.1
	2.8nm,0.3s,baz=60,slow=20,SNR=1.4						
MJAR	Matsushiro Arr	15.30	348	P	Pn	17 16 20.2	-1.4
	0.5nm,0.3s,baz=169,slow=11,SNR=5.2						
KSRS	Korea Array	20.08	325	P	P	17 17 14.2	+0.3
	0.4nm,0.5s,baz=144,slow=8.0,SNR=5.0						
SONM	Songino Array	38.86	321	P	P	17 20 00.9	-0.5
	0.2nm,0.4s,baz=123,slow=7.4,SNR=2.0						
WRA	Warramunga Arr	42.00	191	P	P	17 20 27.3	0.0
	0.6nm,0.5s,baz=10,slow=8.0,SNR=12						
ASAR	Alice Springs	45.72	191	P	P	17 20 56.2	-0.5
	0.2nm,0.5s,baz=12,slow=7.4,SNR=7.6						
BVAR	Borovoye Array	62.18	320	P	P	17 22 56.1	+0.6
	0.5nm,0.3s,baz=95,slow=9.6,SNR=2.6						

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*ISCJB **24** 17:22:23.4±0.9, 11°.26N±0°.07×126°.42E±0°.06, h10^{km}, mb3.6/4, Error ellipse: s-maj=10.2km s-min=7.2km az=31.2*

*IDC **24** 17:22:23.6±1.4, 11°.23N×126°.39E, h0^{km}, mb3.6/4, mb1 3.7/4, mb1mx3.3/57, mbtmp3.6/4, Error ellipse: s-maj=116.3km s-min=21.4km az=67.0*

*MAN **24** 17:22:24.3, 11°.28N×126°.27E, h1^{km}, mb4.9, ML3.8, MS3.7*

ISC 24 17:22:25.3±1.1**, 11°.28N**±0°.06×**126°.23E**±0°.07**, h10**^{km}**, n11, σ0**^{s}.**87**/16**, mb3.5**/4**, 1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	Borongan	0.84	293	eP	Pg	17 22 41.5	0.0
BESP				eS	Sn	17 22 56.8	+1.3
PLP	Palo	1.23	265⇓	iP	Pn	17 22 48.2	-0.3
PLP				i S	Sn	17 23 05.4	+0.2
OCLP	Ormoc	1.60	262	eP	Pg	17 22 55.9	-0.2
OCLP				eS	Sg	17 23 16.9	0.0
MSLP	Maasin	1.76	230	eP	Pb	17 22 57.4	-0.3
MSLP				eS	Sg	17 23 21.0	-1.0
CNP	Catarman	1.96	309	eP	Pn	17 22 50.8	-7.9
CNP				eS	Sg	17 23 27.8	-0.6
BUKP	Musuan	3.57	199	eP	Pn	17 23 21.9	+1.0
BUKP				eS	Sb	17 24 13.1	+1.0
WRA	Warramunga Arr	32.04	166	P	P	17 28 51.0	-1.3
	0.3nm,0.6s,baz=345,slow=9.3,SNR=6.6						
ASAR	Alice Springs	35.53	168	P	P	17 29 22.2	-0.5
	0.2nm,0.4s,baz=351,slow=7.1,SNR=16						
MKAR	Makanchi Array	51.20	322	P	P	17 31 29.9	+0.9
	0.6nm,0.6s,baz=119,slow=8.0,SNR=8.6						
KURBB	Kurchatov Arra	55.23	325	P	P	17 31 59.4	+0.9
	0.8nm,0.5s,baz=128,slow=6.9,SNR=6.1						
TXAR	Lajitas Array	117.20	49	PKP	PKPdf	17 41 10.8	-0.9
	0.1nm,0.5s,baz=302,slow=2.0,SNR=1.4						

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*NIED **24** 17:28:00, 36°.70N×142°.10E, h20^{km}, Mw4.2 Best double couple: $M_0$2.01000×10^{15} NP1:ϕ_s212.00000°, δ14.00000°, λ96.00000°. NP2:ϕ_s26.00000°, δ76.00000°, λ89.00000°.*

*ISCJB **24** 17:28:03.8±1.1, 36°.66N±0°.03×142°.25E±0°.03, h15^{km}±7^{km}, mb4.3/41, MS3.5/10, Error ellipse: s-maj=5.1km s-min=4.2km az=148.1*

*NEIC **24** 17:28:04.5±2.3, 36°.67N×142°.20E, h6^{km}±14^{km}, mb4.7/15, Error ellipse: s-maj=7.5km s-min=5.4km az=110.0*

*IDC **24** 17:28:04.2±0.7, 36°.66N×142°.09E, h0^{km}, mb4.0/17, mb1 4.1/21, mb1mx4.0/63, mbtmp4.1/21, ML4.1/4, MS3.2/14, Ms1 3.3/14, ms1mx3.0/62, Error ellipse: s-maj=19.1km s-min=14.8km az=88.0*

*BJI **24** 17:28:05.7, 36°.69N×141°.93E, h16^{km}, mb4.5/16, mB4.7/4, Ms4.0/4, Ms7 3.8/4*

*JMA **24** 17:28:05.7±0.3, 36°.70N×142°.12E, h22^{km}±4^{km}, M4.2*

*MOS **24** 17:28:08.4±0.8, 36°.96N×142°.11E, h32^{km}, mb4.7/16, Error ellipse: s-maj=8.5km s-min=6.2km az=112.9*

ISC 24 17:28:07.2±0.8**, 36°.65N**±0°.04×**142°.22E**±0°.05**, h25**^{km}±5^{km}**, n142, σ1**^{s}.**88**/156**, mb4.3**/41**, MS3.7**/10**, 6C-4D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	1.23	292	P	Pn	17 28 26.1	-2.7
JFK	Kawauchi	1.29	304	P	Pn	17 28 27.0	-2.7
JHO	Hitachi	1.33	269	P	Pn	17 28 27.7	-2.5
JHO				eS	Sn	17 28 44.7	-2.4
JHYU	Hitachinakayam	1.35	257	P	Pn	17 28 28.7	-1.8
JHYU				eS	Sn	17 28 45.3	-2.3
JFFD	Fukushimafurud	1.40	289	P	Pn	17 28 28.4	-2.8
JMM	Marumori	1.66	317	P	Pn	17 28 32.8	-2.0
JMM				eS	Sn	17 28 53.5	-1.8
JFT	Otama	1.74	300	P	Pn	17 28 34.5	-1.3
JFT				eS	Sn	17 28 55.6	-1.6
JIO	Ouri	1.93	339	P	Pn	17 28 37.2	-1.2
JOU	Okura	2.11	325	P	Pn	17 28 40.2	-0.8
JOU				eS	Sn	17 29 06.0	-0.5
JFY	Yanaizu	2.15	291	P	Pn	17 28 40.4	-1.1
JFY				eS	Sn	17 29 07.7	+0.3
BSO1	Boso 1	2.23	207	P	Pn	17 28 42.4	+0.3
JAG	Ashikaga	2.24	265	P	Pn	17 28 41.3	-1.4
MJAR	Matsushiro Arr	3.23	269	Pn	Pn	17 28 56.2	-0.1
	18nm,0.3s,baz=98,slow=8.6,SNR=278						
MJAR				Sn	Sn	17 29 33.4	-0.6
	8.4nm,0.3s,baz=106,slow=12,SNR=7.6						
MJAR				LR	LR	17 30 22.7	
	comp=Z,558nm,18.2s,baz=120,slow=45						
MAJO	Matsushiro	3.23	269	ePn	Pn	17 28 56.7	+0.3
MAJO				eSn	Sn	17 29 33.4	-0.6
MAJO	Matsushiro	3.23	269c	iP	Pn	17 28 57.0	+0.6
MAT	Matsushiro	3.23	269	P	Pn	17 28 56.8	+0.4
MAT				eS	Sn	17 29 32.9	-1.2
MJB9	Matsu-Tunnel	3.23	269	ePn	Pn	17 28 56.7	+0.3
JHJ2	Mitsune	4.05	210	ePn	Pn	17 29 06.9	-0.6
JHJ2				eSn	Sn	17 29 50.8	-3.3
JHJ	Hachijo jima 2	4.05	210	Pn	Pn	17 29 07.5	-0.1
	21nm,0.3s,baz=334,slow=18,SNR=38						
JHJ				Sn	Sn	17 29 50.7	-3.6
	84nm,0.3s,baz=238,slow=23,SNR=16						
JHJ				LR	LR	17 30 40.4	
	comp=Z,69nm,20.5s,baz=315,slow=39						
INU	Inuyama	4.42	254	ePn	Pn	17 29 13.2	+0.6
ERM	Erimo	5.41	7	ePn	Pn	17 29 24.9	-1.3
ERM				eSn	Sn	17 30 25.9	-1.7
ERM	Erimo	5.41	7	eP	Pn	17 29 24.9	-1.3
ERM				e		17 30 25.9	
ASAJ	Asahikawa	7.46	2	Pn	Pn	17 29 54.0	-0.4
	3.0nm,0.3s,baz=215,slow=11,SNR=30						
ASAJ				Sn	Sn	17 31 14.5	-3.7
	0.8nm,0.3s,baz=52,slow=19,SNR=2.6						
YUK	Yuzh-Kuril'sk	7.88	20	eP	Pn	17 29 59.9	-0.2
YUK				eS	Sn	17 31 20.3	-8.2
YUK				pmax	pmax		
	comp=Z,36nm,0.5s						
YUK				pmax	pmax		
	comp=E,34nm,0.4s						
YUK				pmax	pmax		
	comp=N,26nm,0.3s						
SHO	Shikotan	8.02	25	eP	Pn	17 30 02.0	-0.1
SHO				eS	Sn	17 31 24.1	-7.9
SHO				pmax	pmax		
	comp=Z,10.0nm,0.4s						
SHO				pmax	pmax		
	comp=E,3.0nm,0.5s						
SHO				pmax	pmax		
	comp=N,6.0nm,0.3s						
CBIJ	Chichi jima	9.53	180	ePn	Pn	17 30 21.6	-1.2
CBIJ				eSn	Sn	17 32 00.2	-8.9
JCJ	Chichijima	9.53	180	Pn	Pn	17 30 21.1	-1.7
	comp=N,6.5nm,0.3s,baz=296,slow=18,SNR=14						
JCJ				Sn	Sn	17 31 60.0	-9.1
	comp=N,5.2nm,0.3s,baz=286,slow=20,SNR=4.9						
KUR	Kuril'sk	9.58	25	eP	Pn	17 30 21.9	-1.5
KUR				eS	Sn	17 32 03.8	-6.3
KUR				pmax	pmax		
	comp=E,8.0nm,0.3s						
KUR				pmax	pmax		
	comp=Z,11nm,0.3s						
KUR				smax	smax		
	comp=E,27nm,0.6s						
KUR				smax	smax		
	comp=N,26nm,0.4s						
JNU	Nakatsue	9.96	253	Pn	Pn	17 30 29.9	+1.2
	comp=N,0.3nm,0.3s,baz=355,slow=1.1,SNR=4.1						
JNU	Nakatsue	9.96	253	ePn	Pn	17 30 29.6	+0.9
YSS	Yuzh-Sakhalins	10.30	2	ePn	Pn	17 30 31.3	-2.0
YSS	Yuzh-Sakhalins	10.30	2	eP	Pn	17 30 32.2	-1.1
YSS				eS	Sn	17 32 22.3	-5.6
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YSS				MLR	MLR		
	comp=Z,600nm,14.0s						
YSS				MLR	MLR		
	comp=E,200nm,16.0s						
MSHR	Mys Shultsa	10.38	308	i P	Pn	17 30 35.1	+0.6
USRK	Ussuriysk Ar.	10.84	317	Pn	Pn	17 30 42.7	+2.0
	baz=125,slow=14						
USRK				LR	LR	17 34 30.9	
	comp=E,221nm,19.9s,baz=125,slow=36						
USA0B	Ussuriysk Arra	10.84	317	ePn	Pn	17 30 37.6	-3.1
KSRS	Korea Array	11.46	278	Pn	Pn	17 30 52.0	+2.9
	comp=E,0.2nm,0.3s,baz=91,slow=13,SNR=12						
KSRS				LR	LR	17 35 12.0	
	comp=E,236nm,18.1s,baz=89,slow=38						
KS01	Wonju Array Si	11.48	278	ePn	Pn	17 30 47.9	-1.6
KS15	Wonju Array Si	11.49	278	ePn	Pn	17 30 50.9	+1.3
KSAR	Wonju Array Be	11.49	278	Pn	Pn	17 30 52.0	+2.5
KSAR	Wonju Array Be	11.49	278	P	Pn	17 30 52.1	+2.5
TJN	Taejon	11.96	273c	eP	Pn	17 30 58.3	+2.2
KLR	Kul'dur	14.71	332	Pn	Pn	17 31 32.4	-1.1
	comp=E,0.0nm,0.3s,baz=182,slow=10,SNR=2.5						
KLR				LR	LR	17 37 04.9	
	comp=E,14nm,19.0s,baz=146,slow=37						
GRNR	Gornyy	14.71	345	eP	P	17 31 42.8	+3.3
JOW	Kunigami	15.37	234	LR	LR	17 37 34.5	
	comp=E,76nm,20.0s,baz=150,slow=37						
PETK	Petropavlovsk-	19.70	29	LR	LR	17 40 18.1	
	comp=E,38nm,20.2s,baz=203,slow=37						
ZEA	Zeya	20.01	333	eP	P	17 32 38.2	+0.4
NACB	Ninganchiao	21.65	241	eP	P	17 32 54.5	-1.4
	comp=E,123nm,1.8s						
TPUB	Ta-pu	22.89	240	eP	P	17 33 06.1	-2.9
	comp=E,128nm,1.8s						
MA2	Magadan	23.60	11	LR	LR	17 43 37.2	
	comp=E,20nm,18.2s,baz=172,slow=40						
WHN	Wuhan	23.95	263⇓	P	P	17 33 18.8	-0.7
YAK	Yakutsk	26.59	347	P	P	17 33 41.4	-1.7
	comp=E,1.7nm,0.5s,baz=164,slow=18,SNR=3.1						
YAK				LR	LR	17 44 31.4	
	comp=E,82nm,18.2s,baz=96,slow=37						
YAK	Yakutsk	26.59	347	eP	P	17 33 41.6	-1.5
	comp=E,21nm,0.9s						
YAK	Yakutsk	26.59	347	eP	P	17 33 41.6	-1.5
YAK				pmax	pmax		
	comp=Z,21nm,0.9s						
H11N2	WAKE ISLAND Hy	27.39	121	T	T	18 02 54.7	
	baz=313,slow=75,SNR=28						
H11N1	WAKE ISLAND Hy	27.40	121	T	T	18 02 48.5	
	baz=313,slow=75,SNR=22						
H11N3	WAKE ISLAND Hy	27.41	121	T	T	18 02 50.8	
	baz=313,slow=75,SNR=19						
SMY	Shemya	27.49	44	eP	P	17 33 50.9	-0.3
SMY	Shemya	27.49	44	eP	P	17 33 50.9	-0.3
ENH	Enshi	27.95	266	eP	P	17 33 55.0	-0.8
	comp=Z,16nm,0.8s						
ULN	Ulaanbaatar	28.11	305	eP	P	17 33 56.7	-0.4
	comp=Z,3.8nm,0.9s						
ULN	Ulaanbaatar	28.11	305c	eP	P	17 33 56.8	-0.3
ULN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
H11S1	WAKE ISLAND Hy	28.11	123	T	T	18 03 31.6	
	baz=315,slow=74						
H11S3	WAKE ISLAND Hy	28.11	123	T	T	18 03 58.8	
	baz=315,slow=74						
H11S2	WAKE ISLAND Hy	28.12	123	T	T	18 04 19.5	
	baz=315						
SONA1	Songino Array	28.53	304	eP	P	17 34 00.3	-0.6
SONA0	Songino Array	28.54	304	eP	P	17 34 00.8	0.0
SONM	Songino Array	28.54	304	P	P	17 34 00.8	0.0
	comp=Z,5.7nm,0.8s,baz=105,slow=9.2,SNR=27						
SONM				LR	LR	17 45 22.1	
	comp=Z,60nm,18.4s,baz=128,slow=36						
ZAK	Zakamensk	31.01	309	eP	P	17 34 21.9	-0.9
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
CD2	Chengdu	32.33	271	eP	P	17 34 33.5	-0.9
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
GTA	Gaotai	33.30	288	eP	P	17 34 43.0	+0.1
GTA				pP	pP	17 34 46.3	-4.1
GTA				sP	sP	17 34 49.0	-4.4
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
DGZ	Jazzator, Alta	41.14	306⇓	eP	P	17 35 49.6	+0.2
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
WMQ	Urumqi	41.59	297	P	P	17 35 52.3	-0.7
WMQ				LR	LR		
	comp=Z,79nm,18.5s						
WMQ				LR	LR		
	comp=Z,140nm,22.9s						
WMQ				LR	LR		
	comp=Z,130nm,18.5s						
CHTO	Chiang Mai	41.83	257	eP	P	17 35 55.4	+0.2
	comp=Z,25nm,2.0s						
CHTO	Chiang Mai	41.83	257	eP	P	17 35 55.4	+0.2
CHTO				pmax	pmax		
	comp=Z,25nm,2.0s						
CM31	Chiang Mai Arr	42.03	256	eP	P	17 35 57.0	+0.2
CMAR	Chiang Mai Arr	42.03	256	P	P	17 35 57.2	+0.4
	comp=Z,0.7nm,0.7s,baz=44,slow=7.8,SNR=6.9						
CMAR	Chiang Mai Arr	42.03	256c	eP	P	17 35 57.5	+0.7
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
CM01	Chiang Mai Arr	42.04	256	eP	P	17 35 55.9	-1.0
ZAA1	Zalesovo Array	42.65	313	eP	P	17 36 01.4	0.0
ZAA1				ePcP	PcP	17 37 53.2	+0.2
ZAA0	Zalesovo Array	42.65	313	eP	P	17 36 01.0	-0.5
	comp=Z,3.3nm,0.8s						
ZALV	Zalesovo Beam	42.65	313	P	P	17 36 01.4	0.0
	comp=Z,3.5nm,0.8s,baz=96,slow=7.4,SNR=12						
ZALV				PcP	PcP	17 37 53.2	+0.2
	comp=Z,0.8nm,0.6s,baz=104,slow=3.0,SNR=2.7						
ZALV	Zalesovo Beam	42.65	313	eP	P	17 36 00.8	-0.6
ZALV				PcP	PcP	17 37 53.2	+0.2
ZALV	Zalesovo Beam	42.65	313	eP	P	17 36 00.8	-0.6
ZALV						17 37 53.2	
MK01	Makanchi Array	44.87	303	eP	P	17 36 18.6	-0.8
MK31	Makanchi Array	44.87	303	eP	P	17 36 18.9	-0.6
MK31	Makanchi Array	44.87	303	eP	P	17 36 18.9	-0.6
MK32	Makanchi Array	44.87	303	eP	P	17 36 19.2	-0.2
MKAR	Makanchi Array	44.87	303	P	P	17 36 19.2	-0.2
	comp=Z,3.0nm,1.0s,baz=90,slow=10,SNR=17						
MKAR	Makanchi Array	44.87	303	eP	P	17 36 19.3	-0.2
	comp=Z,14nm,0.8s						
MKAR	Makanchi Array	44.87	303	eP	P	17 36 19.3	-0.2
MKAR				pmax	pmax		
	comp=Z,14nm,0.8s						
MAKZ	Makanchi	45.08	303	eP	P	17 36 21.1	0.0
	comp=Z,2.1nm,0.8s						
MAKZ	Makanchi	45.08	303	eP	P	17 36 21.1	0.0
MAKZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KURK	Kurchatov	46.68	308	eP	P	17 36 33.0	-0.6
	comp=Z,7.4nm,1.0s						
KURK	Kurchatov	46.68	308c	eP	P	17 36 32.7	-0.9
KURK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KURBB	Kurchatov Arra	46.75	308	P	P	17 36 33.5	-0.6
	comp=Z,1.3nm,0.4s,baz=83,slow=8.3,SNR=26						
JOHN	Johnston Islan	46.91	102	eP	P	17 36 36.7	+0.9
	comp=Z,135nm,0.9s						
PDGK	Podgornoye	47.53	298	P	P	17 36 40.2	-0.3
PDGK				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ILAR	Eielson Array	49.47	32	P	P	17 36 56.3	+1.3
	comp=Z,0.4nm,0.6s,baz=269,slow=7.2,SNR=3.5						
ILB	Eielson Array	49.47	32	eP	P	17 36 56.1	+1.1
IL1	Eielson Array	49.47	32	eP	P	17 36 59.6	+4.6
BVAR	Borovoye Array	51.31	313	P	P	17 37 09.0	-0.1
	comp=Z,1.0nm,0.7s,baz=94,slow=7.9,SNR=3.8						
MNAS	Manas	52.69	299	P	P	17 37 20.6	+0.9
MNAS				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SFK	Sufi-Kurgan	52.78	296	P	P	17 37 21.7	+1.2
SFK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
WR1	Warramunga Arr	56.78	189	eP	P	17 37 49.8	+0.6
	comp=Z,38nm,1.9s						
WRA	Warramunga Arr	56.78	189	P	P	17 37 49.8	+0.6
	comp=Z,0.7nm,0.8s,baz=7.1,slow=7.4,SNR=11						
WRA	Warramunga Arr	56.78	189	i P	P	17 37 50.0	+0.8
WRA				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ARU	Arti	57.08	319	eP	P	17 37 50.5	-0.5
	comp=Z,6.9nm,1.2s						
ARU	Arti	57.08	319c	iP	P	17 37 50.6	-0.4
ARU						17 39 54.8	
ARU				S	S	17 45 46.7	+2.6
ARU				SS	SS	17 49 29.4	-3.0
ARU				pmax	pmax		
	comp=Z,7.0nm,1.2s						
ABKAR	Akbulak array	58.68	311	eP	P	17 38 01.6	-0.8
AKTO	Aktyubinsk	59.41	312	P	P	17 38 07.8	+0.3
	comp=Z,1.7nm,0.7s,baz=68,slow=12,SNR=5.9						
AS31	Alice Springs	60.50	189	eP	P	17 38 13.0	-2.2
	comp=Z,1.6nm,1.0s						
ASAR	Alice Springs	60.50	189	P	P	17 38 15.9	+0.7
	comp=Z,0.7nm,0.8s,baz=8.3,slow=8.2,SNR=8.8						
SPA0	Spitsbergen Ar	61.02	349	eP	P	17 38 18.7	+0.6
SPITS	Spitsbergen Ar	61.02	349	LR	LR	18 05 55.8	
	comp=Z,26nm,18.0s,baz=215,slow=37						
MCW	Mount Constitu	66.48	46	eP	P	17 38 58.8	+4.3
MCW	Mount Constitu	66.48	46	eP	P	17 38 58.8	+4.3
OBN	Obninsk	68.79	324⇓	eP	P	17 39 12.1	+3.2
OBN				e*SP	pP	17 39 17.9	+1.1
OBN						17 39 37.0	
OBN				eS	S	17 48 07.8	-2.9
OBN				SSS	SSS	17 55 40.0	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.4s						
OBN				MLR	MLR		
	comp=Z,53nm,16.0s						
FIA0	FINESS Array S	69.45	333	eP	P	17 39 13.8	+0.9
FIA0	FINESS Array S	69.45	333	eP	P	17 39 13.8	+0.9
FINES	FINESS Array B	69.45	333	P	P	17 39 13.7	+0.9
	comp=Z,1.4nm,0.7s,baz=50,slow=7.4,SNR=3.9						
KBZ	Khabaz	71.64	311	P	P	17 39 27.4	+0.8
	comp=Z,2.2nm,0.8s,baz=155,slow=2.8,SNR=5.2						

KIV	Kislovodsk	71.65	311⇓	eP	P	17 39 28.3	+1.6
KIV				e*SP	sP	17 39 37.9	+0.2
KIV						17 39 46.0	
KIV				S	S	17 48 47.0	+2.2
KIV				eSSS	SSS	17 56 26.3	
KIV				pmax	pmax		
	comp=Z,7.0nm,0.9s						
KIV				MLR	MLR		
	comp=Z,41nm,14.0s						
NB2	NORSAR Subarra	74.79	338	P	P	17 39 45.2	+0.3
	comp=Z,0.5nm,0.6s,baz=38,slow=5.9						
NOA	NORSAR Array B	74.79	338	P	P	17 39 45.9	+1.0
	comp=Z,1.0nm,0.7s,baz=39,slow=5.8,SNR=4.1						
NOA				LR	LR	18 15 01.4	
	comp=Z,40nm,21.6s,baz=30,slow=38						
AKASG	Malin Array Be	75.00	323	P	P	17 39 46.2	0.0
	comp=Z,1.7nm,0.6s,baz=48,slow=5.9,SNR=8.9						
AKBB	Malin Array Si	75.00	323	eP	P	17 39 45.1	-1.1
	comp=Z,3.6nm,0.8s						
AKBB	Malin Array Si	75.00	323	eP	P	17 39 45.1	-1.1
AKBB				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ULM	Lac du Bonnet	79.46	34	P	P	17 40 13.7	+2.3
	comp=Z,1.9nm,0.7s,baz=326,slow=3.6,SNR=1.9						
BR101	Keskin Array S	79.59	312	eP	P	17 40 13.7	+1.3
BRTR	Keskin Array B	79.59	312	P	P	17 40 13.7	+1.3
	comp=Z,0.9nm,0.9s,baz=29,slow=3.3,SNR=4.5						
MLR	Muntele Rosu	80.09	320	LR	LR	18 16 38.0	
	comp=Z,49nm,19.0s,baz=33,slow=36						
CLL	Collm	81.75	331	i P	P	17 40 23.7	+0.2
	comp=Z,3.0nm,0.7s						
CLL	Collm	81.75	331	i P	P	17 40 23.7	+0.2
CLL				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KHC	Kasperske Hory	83.21	329	eP	P	17 40 31.5	+0.3
KHC	Kasperske Hory	83.21	329	eP	P	17 40 31.5	+0.3
GEC2	GERESS Array S	83.38	329	eP	P	17 40 31.4	-0.7
	comp=Z,11nm,1.7s						
GEC2	GERESS Array S	83.38	329	eP	P	17 40 31.5	-0.7
GEC2				pmax	pmax		
	comp=Z,11nm,1.7s						
GERES	GERESS Array B	83.38	329	P	P	17 40 32.5	+0.3
	comp=Z,0.4nm,0.6s,baz=57,slow=3.6,SNR=3.1						
PPT	Papeete	83.88	117	LR	LR	18 13 19.9	
	comp=Z,32nm,19.4s,baz=178,slow=32						
LPAZ	La Paz	146.32	61	PKPbc	PKPbc	17 47 47.5	+0.6
	comp=Z,0.4nm,0.4s,baz=31,slow=5.9,SNR=4.0						
LPAZ	La Paz	146.32	61	ePKPdf	PKPbc	17 47 46.8	-0.1
LPAZ	La Paz	146.32	61	ePKP2	PKPbc	17 47 46.8	-0.1

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*IDC **24** 17:49:53.7±0.8, 11.°03N×124.°98E, h0^{km}, mb3.9/13, mb1 4.1/13, mb1mx3.8/52, mbtmp3.9/13, MS3.3/17, Ms1 3.4/17, ms1mx3.2/47, Error ellipse: s-maj=48.5km s-min=14.8km az=68.0*

*MAN **24** 17:49:54.0, 11.°06N×124.°64E, h1^{km}, mb4.9, ML3.8, MS3.9*

*ISCJB **24** 17:49:55.3±0.5, 11.°01N±0.°02×124.°75E±0.°03, h17^{km}±4^{km}, mb4.4/33, MS3.4/14, Error ellipse: s-maj=4.9km s-min=3.9km az=10.3*

*NEIC **24** 17:50:02.0±0.9, 11.°02N×124.°92E, h61^{km}±8^{km}, mb4.6/23, Error ellipse: s-maj=10.5km s-min=5.1km az=77.0*

NEIC Felt [IV PIVS] at Kananga and Ormoc; [III PIVS] at Carigara, Pastrana and Tacloban; [II PIVS] at Palo and Tolosa.

ISC 24 17:49:54.7±1.2, 11.°01N±0.°03×124.°75E±0.°03, h3^{km}±8^{km}, n94, σ1.^{s}85/89, mb4.4/33, MS3.3/14, 3C-3D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OCLP	Ormoc	0.15	287	eP	Pg	17 49 57.4	-0.3
OCLP				eS	Sg	17 49 58.8	-0.8
PLP	Palo	0.27	55⇓	eP	Pg	17 50 01.0	+1.0
PLP				i S	Sb	17 50 05.8	-1.6
MSLP	Maasin	0.88	173	eP	Pb	17 50 12.6	0.0
MSLP				eS	Sn	17 50 27.7	+0.5
BESP	Borongan	0.89	49	eP	Pg	17 50 10.6	-1.3
BESP				eS	Sb	17 50 24.8	-0.4
LLP	Lapu-Lapu	1.03	228⇑	eP	Pg	17 50 13.5	-1.1
LLP				eS	Sb	17 50 30.5	+1.2
CNP	Catarman	1.50	357	eP	Pn	17 50 20.2	-2.2
CNP				eS	Sn	17 50 41.3	-1.2
TBP	Tagbilaran	1.57	214	eP	Pn	17 50 23.2	-0.4
MMPH	Masbate	1.74	321	eP	Pn	17 50 24.6	-1.2
MMPH				eS	Sn	17 50 45.5	-3.1
RCP	Roxas	2.04	286⇑	eP	Pn	17 50 29.4	-0.6
GUIM	Jordan	2.16	260	eP	Pn	17 50 30.4	-1.3
GUIM				eS	Sn	17 50 56.1	-2.8
BUTP	Butuan	2.20	157	eP	Pn	17 50 33.2	+0.9
BUTP				eS	Sn	17 50 57.5	-2.5
SNPH	Sibulan	2.23	222⇓	eP	Pn	17 50 32.5	-0.1
SNPH				eS	Sg	17 51 06.0	-0.4
PVCP	Virac	2.64	347	eP	Pn	17 50 37.9	-0.4
PVCP				eS	Sn	17 50 59.5	-11
JAP	San Jose, Anti	2.77	265⇓	eP	Pb	17 50 43.7	-1.2
DCPH	Dipolog City	2.78	210⇑	eP	Pn	17 50 40.9	+0.8
OTRP	Odiongan	2.99	297	eP	Pn	17 50 44.9	+1.7
OTRP				eS	Sn	17 50 52.1	-27
BUKP	Musuan	3.12	174	eP	Pn	17 50 46.5	+1.6
BUKP				eS	Sn	17 51 14.5	-8.3
PAGZ	Pagadian	3.42	203	eP	Pn	17 50 49.2	+0.2
PAGZ				eS	Sn	17 51 07.9	-22
CUYO	Cuyo Island	3.67	268	eP	Pn	17 50 51.6	-0.8
CUYO				eS	Sn	17 51 30.5	-5.8
DAV	Davao City (W)	4.00	168	Pn	Pb	17 51 03.1	-2.7
	baz=329,slow=12,SNR=3.6						
DAV	Davao City (W)	4.00	168	ePn	Pb	17 51 02.4	-3.5
TGY	Tagaytay City	4.83	310	LR	LR	17 53 11.6	
	comp=Z,241nm,20.2s,baz=178,slow=40						
MYLDM	Lahad Datu	8.47	227	ePn	Pn	17 52 01.4	+2.9
YULB	Yu-li	12.75	345	ePn	Pn	17 52 60.0	+2.9
TPUB	Ta-pu	12.84	343	ePn	Pn	17 53 01.7	+3.3
SSLB	Suanglung	13.21	345	ePn	Pn	17 53 08.5	+5.1
SBUM	Sibu	15.06	237	ePn	P	17 53 35.8	+1.6
	11nm,1.1s						
JOW	Kunigami	16.09	11	LR	LR	17 58 48.7	
	comp=Z,171nm,21.4s,baz=190,slow=33						
JOW	Kunigami	16.09	11	ePn	P	17 53 44.4	-1.0
	30nm,1.0s						
GUMO	Guam	19.82	80	LR	LR	18 00 39.8	
	comp=Z,36nm,21.4s,baz=252,slow=33						
SOEI	Soe	20.63	181	eP	Pn	17 54 41.3	+3.4
	42nm,1.4s						
JAGI	Jajag, Banyuwa	22.04	209	eP	P	17 54 56.7	+5.9
	102nm,1.4s						
JNU	Nakatsue	22.72	13	LR	LR	18 03 11.1	
	comp=Z,61nm,21.9s,baz=127,slow=35						
MTN	Manton Dam	24.53	165	eP	P	17 55 16.9	+1.1
	13nm,1.1s						
JHJ	Hachijo jima 2	25.98	30	LR	LR	18 03 51.5	
	comp=Z,68nm,21.2s,baz=288,slow=32						
CMAR	Chiang Mai Arr	26.01	290	P	P	17 55 30.8	+1.5
	0.3nm,0.3s,baz=96,slow=9.2,SNR=4.6						
CMAR				LR	LR	18 05 50.2	
	comp=Z,21nm,18.3s,baz=134,slow=36						
KS15	Wonju Array Si	26.47	6	eP	P	17 55 33.4	+0.2
KSAR	Wonju Array Be	26.47	6	P	P	17 55 33.0	-0.2
KSRS	Korea Array	26.48	6	P	P	17 55 33.0	-0.3
	0.5nm,0.6s,baz=180,slow=11,SNR=3.1						
KSRS				LR	LR	18 05 17.9	
	comp=Z,89nm,21.5s,baz=202,slow=35						
MJAR	Matsushiro Arr	28.18	23	LR	LR	18 05 12.5	
	comp=Z,94nm,21.6s,baz=215,slow=33						
PBA	Port Blair	31.38	274	eP	P	17 56 19.6	+2.4
	213nm,1.4s						
WRAB	Tennant Creek	32.17	163	eP	P	17 56 24.2	+0.2
	35nm,1.8s						
WR1	Warramunga Arr	32.17	163	eP	P	17 56 21.6	-2.5
	17nm,1.5s						
WRA	Warramunga Arr	32.17	163	P	P	17 56 21.5	-2.5
	1.0nm,1.1s,baz=344,slow=9.5,SNR=6.3						
WB2	Warramunga Arr	32.18	163	eP	P	17 56 22.9	-1.2
USRK	Ussuriysk Ar.	33.66	9	LR	LR	18 09 51.8	
	comp=Z,50nm,21.0s,baz=216,slow=36						
AS31	Alice Springs	35.60	165	eP	P	17 56 53.9	+0.1
	1.6nm,0.9s						
ASAR	Alice Springs	35.61	165	P	P	17 56 53.5	-0.4
	2.2nm,0.6s,baz=341,slow=7.0,SNR=23						
AS01	Alice Springs	35.62	165	eP	P	17 56 53.8	-0.2
ASAJ	Asahikawa	36.41	22	LR	LR	18 11 45.1	
	comp=Z,44nm,21.0s,baz=204,slow=36						
YSS	Yuzh-Sakhalins	38.93	20	eP	P	17 57 21.8	0.0
	12nm,1.3s						
ULN	Ulaanbaatar	39.64	341	eP	P	17 57 27.8	-0.1
	4.9nm,1.1s						
SONA0	Songino Array	39.82	341	eP	P	17 57 29.0	-0.4
SONM	Songino Array	39.82	341	P	P	17 57 29.0	-0.4
	1.6nm,0.8s,baz=165,slow=6.0,SNR=9.3						
SONM				LR	LR	18 14 10.2	
	comp=Z,74nm,19.5s,baz=152,slow=36						
SONA1	Songino Array	39.83	341	eP	P	17 57 28.8	-0.8
HNR	Honiara	40.47	119	LR	LR	18 13 21.0	
	comp=Z,35nm,19.2s,baz=194,slow=35						
FORT	Forrest	41.67	176	eP	P	17 57 45.1	+0.4
	59nm,1.2s						
PALK	Pallekele	43.62	269	eP	P	17 58 02.2	+1.3
	29nm,1.2s						
TLY	Talaya	44.05	341	eP	P	17 58 05.0	+1.2
	5.1nm,0.7s						
BBOO	Buckleboo	44.89	166	eP	P	17 58 10.2	-0.6
	63nm,1.4s						
STKA	Stephens Creek	45.59	160	P	P	17 58 15.6	-0.7
	3.4nm,0.8s,baz=326,slow=11,SNR=3.3						
STKA	Stephens Creek	45.59	160	eP	P	17 58 16.6	+0.3
	9.2nm,1.7s						
TARA	Tarawa	48.77	98	eP	P	17 58 40.0	-1.5
	139nm,1.4s						
PETK	Petropavlovsk-	49.60	26	LR	LR	18 17 24.7	
	comp=Z,50nm,21.6s,baz=229,slow=33						
MK01	Makanchi Array	50.52	323	eP	P	17 58 53.8	-0.6
MK31	Makanchi Array	50.54	323	eP	P	17 58 55.5	+1.0
MK32	Makanchi Array	50.54	323	eP	P	17 58 54.5	-0.1
MKAR	Makanchi Array	50.54	323	P	P	17 58 54.5	-0.1
	1.0nm,0.8s,baz=125,slow=8.5,SNR=8.5						
MKAR	Makanchi Array	50.54	323	eP	P	17 58 55.4	+0.9
	6.3nm,0.8s						
MAKZ	Makanchi	50.73	323	eP	P	17 58 57.0	+1.0
	6.8nm,1.5s						
ZAA0	Zalesovo Array	53.27	332	eP	P	17 59 15.9	+1.3
	3.2nm,1.2s						
ZALV	Zalesovo Beam	53.27	332	P	P	17 59 14.7	0.0
	1.1nm,0.7s,baz=123,slow=5.3,SNR=5.1						
ZAA1	Zalesovo Array	53.27	332	eP	P	17 59 14.7	0.0
KURK	Kurchatov	54.62	326	eP	P	17 59 24.5	-0.1
KURBB	Kurchatov Arra	54.62	326	P	P	17 59 24.5	-0.1
	2.5nm,1.1s,baz=126,slow=7.0,SNR=5.4						
KBL	Kabul	55.69	304	eP	P	17 59 32.6	-0.3
	4.4nm,0.4s						
KK31	Karatay Array	56.67	315	eP	P	17 59 40.6	+1.0
KKAR	Karatay Array	56.67	315	eP	P	17 59 40.6	+1.0
BRVK	Borovoye	60.29	326	eP	P	18 00 04.9	+0.3
	7.4nm,1.4s						
GEYT	Alibeck	64.91	307	LR	LR	18 32 54.5	
	comp=Z,39nm,18.4s,baz=230,slow=40						
ABKAR	Akbulak array	65.34	319	eP	P	18 00 37.7	-0.7
AKTO	Aktyubinsk	66.81	320	P	P	18 00 48.4	+0.7
	1.1nm,0.3s,baz=117,slow=9.0,SNR=2.0						
ARU	Arti	67.79	327	eP	P	18 00 53.4	-0.5
	5.7nm,1.1s						
MCK	McKinley	78.58	27	eP	P	18 01 54.8	-2.8
	4.9nm,0.5s						
ARA0	ARCESS Array S	82.98	340	eP	P	18 02 20.2	-0.8
ARCES	ARCESS Array B	82.98	340	P	P	18 02 20.2	-0.8
	1.6nm,0.7s,baz=58,slow=3.6,SNR=8.1						
SPITS	Spitsbergen Ar	83.00	349	LR	LR	18 42 12.6	
	comp=Z,44nm,21.6s,baz=40,slow=38						
BRTR	Keskin Array B	83.91	309	LR	LR	18 43 21.8	
	comp=Z,16nm,18.0s,baz=86,slow=38						
AKASG	Malin Array Be	85.05	321	P	P	18 02 33.3	+1.4
	0.3nm,0.4s,baz=66,slow=4.6,SNR=1.8						
AKBB	Malin Array Si	85.05	321	eP	P	18 02 33.3	+1.4
	21nm,1.9s						
VNDA	Vanda	90.85	172	P	P	18 02 58.9	-0.2
	1.2nm,0.9s,baz=302,slow=4.3,SNR=6.7						
VNDA	Vanda	90.85	172	eP	P	18 02 58.7	-0.4
NOA	NORSAR Array B	91.44	333	LR	LR	18 46 22.1	
	comp=Z,36nm,18.1s,baz=0.0,slow=37						
MBW	Mount Baker	96.61	38	eP	P	18 03 27.9	+1.4

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*IDC **24** 17:50:31.0±1.6, 46.°72N×27.°43W, h0^{km}, mb3.5/3, mb1 3.7/4, mb1mx3.3/64, mbtmp3.5/4, ML4.6/1, MS3.3/2, Ms1 3.3/2, ms1mx2.5/70, Error ellipse: s-maj=47.4km s-min=29.6km az=37.0*

*ISCJB **24** 17:50:32.1±0.6, 46.°8N±0.°1×27.°4W±0.°1, h19^{km}, mb4.4/7, MS3.2/2, Error ellipse: s-maj=18.8km s-min=11.2km az=9.5*

*CSEM **24** 17:50:32.6, 46.°73N×27.°44W, h10^{km}, mb4.7/3*

*NEIC **24** 17:50:32.6±0.5, 46.°73N×27.°44W, h10^{km}, mb4.7/3, Error ellipse: s-maj=16.2km s-min=9.3km az=190.0*

ISC 24 17:50:34.0±0.8, 46.°8N±0.°2×27.°4W±0.°1, h19^{km}, n22, σ0.^{s}83/17, mb4.4/7, Northern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ESDC	Sonseca Array	18.45	104	P	Pn	17 54 49.5	+0.8
	0.4nm,0.3s,baz=299,slow=13,SNR=7.5						
NC403	NORSAR Array S	26.61	43	eP	P	17 56 12.4	+1.5
NC404	NORSAR Array S	26.61	43	eP	P	17 56 09.9	-0.9
GERES	GERESS Array B	27.46	70	LR	LR	18 05 55.1	
	comp=Z,32nm,19.9s,baz=298,slow=34						
PAL	Palisades	33.61	277	eP	P	17 57 13.7	+0.8
	15nm,0.8s						
TOA1	Torodi Ar. Sit	41.46	134	eP	P	17 58 19.0	-0.6
TORD	Torodi Ar. Bea	41.47	134	P	P	17 58 19.0	-0.7
	853nm,1.0s,baz=337,slow=6.9						
TORD	Torodi Ar. Bea	41.47	134	P	P	17 58 19.0	-0.7
V40A	Witts Springs	49.05	282	eP	P	17 59 19.9	+0.2
	9.5nm,1.3s						
WMOK	Wichita Mounta	53.65	284	eP	P	17 59 53.7	-0.5
	3.4nm,0.8s						
PD31	Pinedale Array	55.92	298	eP	P	18 00 10.1	-0.7
PDAR	Pinedale Array	55.92	298	P	P	18 00 11.0	+0.2
	0.3nm,0.6s,baz=71,slow=5.8,SNR=1.4						
H10S1	ASCENSION HYDR	56.60	165	T	T	19 01 14.0	
	baz=353						
H10S3	ASCENSION HYDR	56.61	165	T	T	19 01 14.6	
	baz=353						
H10S2	ASCENSION HYDR	56.62	165	T	T	19 01 16.4	
	baz=353						
CRQM	Cirque	60.92	330	eP	P	18 00 44.2	-1.2
	42nm,0.4s						
KURK	Kurchatov	63.91	43	eP	P	18 01 05.0	-0.3
KURBB	Kurchatov Arra	63.93	43	P	P	18 01 05.0	-0.4
	0.2nm,0.3s,baz=313,slow=7.5,SNR=2.7						
KDAK	Kodiak Island	66.36	331	LR	LR	18 30 12.6	
	comp=Z,34nm,19.1s,baz=238,slow=36						
BBGB	Big Mountain B	66.69	299	eP	P	18 01 24.4	+0.8
MK32	Makanchi Array	68.39	44	eP	P	18 01 34.7	+0.6
MKAR	Makanchi Array	68.39	44	P	P	18 01 34.7	+0.6
	0.3nm,0.7s,baz=297,slow=6.3,SNR=3.9						

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*IDC **24** 18:02:53.4±1.8, 4.°43N×92.°26E, h0^{km}, mb3.7/8, mb1 3.8/8, mb1mx3.5/61, mbtmp3.7/8, Error ellipse: s-maj=77.5km s-min=21.4km az=56.0*

ISC 24 18:02:58.6±1.2, 4.°5N±0.°2×92.°3E±0.°1, h35^{km}, n11, σ0.^{s}83/11, mb3.8/9, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PALK	Pallekele	11.86	284	Sn	Sn	18 07 56.1	-0.4
	1.1nm,0.3s,baz=121,slow=12,SNR=6.1						
CMAR	Chiang Mai Arr	15.34	25	Pn	P	18 06 36.5	-0.4
	0.0nm,0.3s,baz=228,slow=14,SNR=2.9						
MKAR	Makanchi Array	43.03	350	P	P	18 10 55.9	+1.1
	1.0nm,0.6s,baz=167,slow=8.6,SNR=12						
SONM	Songino Array	44.86	13	P	P	18 11 08.5	-1.1
	0.3nm,0.6s,baz=209,slow=8.3,SNR=2.8						
KURBB	Kurchatov Arra	47.42	348	P	P	18 11 30.4	+0.9
	0.6nm,0.4s,baz=166,slow=6.0,SNR=4.5						
WRA	Warramunga Arr	47.92	122	P	P	18 11 34.2	+0.2
	0.9nm,0.7s,baz=302,slow=8.8,SNR=5.8						
ASAR	Alice Springs	49.27	127	P	P	18 11 44.0	-0.4
	0.6nm,1.1s,baz=306,slow=7.3,SNR=3.6						
ZALV	Zalesovo Beam	49.69	354	P	P	18 11 47.1	+0.1
	1.0nm,0.4s,baz=168,slow=6.8,SNR=5.7						
BVAR	Borovoye Array	51.64	343	P	P	18 12 01.6	-0.1
	0.7nm,0.6s,baz=159,slow=9.3,SNR=4.9						
GERES	GERESS Array B	79.13	319	P	P	18 14 59.3	-0.5
	0.2nm,0.3s,baz=108,slow=6.4,SNR=3.1						
SPITS	Spitsbergen Ar	82.76	348	P	P	18 15 19.8	+1.3
	17nm,1.1s,baz=131,slow=12,SNR=3.1						

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*ISCJB **24** 18:03:32.7±0.6, 31.°22S±0.°04×68.°09W±0.°06, h108^{km}±6^{km}, Error ellipse: s-maj=8.3km s-min=5.8km az=160.7*

*GUC **24** 18:03:32.2±0.4, 31.°23S×68.°19W, h140^{km}, ML3.6*

*SJA **24** 18:03:32.8±0.6, 31.°24S×68.°15W, h104^{km}±2^{km}, ML3.3, MW3.7*

ISC 24 18:03:33.3±1.5, 31.°23S±0.°04×68.°09W±0.°05, h104^{km}±8^{km}, n25, σ0.^{s}49/31, 1C-1D, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTLL	Cerro Villicun	0.34	253	eP	Pn	18 03 48.4	-0.3
RTLL				eS	Sn	18 04 00.5	+0.3
RTLL				IAML		18 04 00.6	
	comp=Z,927nm,0.3s						
AMOG	MOGNA	0.45	310	eP	Pn	18 03 49.5	+0.2
AMOG				eS	Sn	18 04 01.2	-0.1
SJA	San Juan	0.50	234	eP	Pn	18 03 49.7	+0.1
SJA				AMPG		18 03 50.0	
	comp=Z,7µm,0.3s						
SJA				eS	Sn	18 04 01.4	-0.4
SJA				IAML		18 04 02.9	
	comp=Z,586nm,0.2s						
ZON	Zonda	0.59	238	eP	Pn	18 03 50.1	-0.2
ZON				IAML		18 04 03.5	
	comp=Z,454nm,0.2s						
RTCV	Cerro Valdivia	0.74	211	eP	Pn	18 03 51.4	-0.2
RTLS	Leoncito	1.18	241	eP	Pn	18 03 56.8	+0.5
RTLS				IAML		18 04 16.2	
	comp=Z,182nm,0.4s						
ACAN	Cantantal	1.29	144	eP	Pn	18 03 58.0	+0.7
ACDV	Cuesta del Vie	1.38	320	eP	Pn	18 03 58.7	+0.2
ACDV				IAML		18 03 59.0	
	comp=Z,392nm,0.1s						
AUSP	Uspallata	1.48	228	eP	Pn	18 04 00.3	+0.4
ASAL	Salagasta	1.50	205	eP	Pn	18 04 00.0	+0.2
AROD	Rodeo	1.60	311	eP	Pn	18 04 01.6	+0.3
ARCO	CERRO ARCO	1.76	204	eP	Pn	18 04 03.4	+0.3
ARCO				IAML		18 04 29.5	
	comp=Z,259nm,0.3s						
AGUA	GUANDACOL	1.77	349	eP	Pn	18 04 04.0	+0.8
AAGR	Agrelo	1.95	199	eP	Pn	18 04 05.9	+0.4
MRA	San Martin	2.34	121	eP	Pn	18 04 10.7	+0.1
MRA				IAML		18 04 40.4	
	comp=Z,280nm,0.4s						
VCA	Vinchina	2.49	358	eP	Pn	18 04 13.2	+0.7
VCA				IAML		18 04 13.4	
	comp=Z,210nm,0.5s						
GO04	Tololo Observa	2.56	294⇓	iP	Pn	18 04 13.9	+0.3
GO04				i S	Sn	18 04 45.5	+1.0
TLL	Tololo Astrono	2.57	294	eP	Pn	18 04 13.9	+0.3
TLL				IAML		18 04 47.1	
	comp=E,321nm,0.3s						
FCH	Farellones	2.80	221	eP	Pn	18 04 16.9	+0.1
FCH				IAML		18 04 56.2	
	comp=E,57nm,0.2s						
TCA	Tanti	2.99	93	eP	Pn	18 04 18.9	-0.2
TCA				IAML		18 04 54.2	
	comp=Z,70nm,0.6s						
ROCH	El Roble	3.03	234	eP	Pn	18 04 19.6	-0.1
ROCH				i S	Sn	18 04 54.8	-0.6
ROCH				IAML		18 04 59.1	
	comp=N,129nm,0.3s						
LMEL	Las Melosas	3.16	214	eP	Pn	18 04 21.6	+0.1
LMEL				IAML		18 05 12.0	
	comp=N,51nm,0.2s						
LCO	Las Campanas	3.17	314⇑	iP	Pn	18 04 21.6	0.0
LCO				i S	Sn	18 04 58.9	+0.1
LCO				IAML		18 05 02.5	
	comp=E,152nm,0.6s						
CYA	Choya	3.42	36	IAML		18 05 02.0	
	comp=Z,39nm,0.5s						
GO03	Copiap	4.08	332	eP	Pn	18 04 33.0	-0.6
GO03				i S	Sn	18 05 19.2	-1.3
GO03				IAML		18 05 22.6	
	comp=N,51nm,0.2s						

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*ATH **24** 18:06:33.3, 41.°28N×19.°95E, h20^{km}±2^{km}, ML2.9/5, Error ellipse: s-maj=3.4km s-min=1.6km az=151.0*

*CSEM **24** 18:06:35.9±0.1, 41.°13N×20.°05E, h5^{km}, ML2.9, Error ellipse: s-maj=3.1km s-min=1.8km az=65.0*

*BEO **24** 18:06:35.0±0.7, 41.°02N×20.°01E, h13^{km}±3^{km}, ML2.9/11*

*SKO **24** 18:06:35.9, 41.°12N×20.°02E, h12^{km}, M2.5, ML2.9*

*THE **24** 18:06:36.3, 41.°16N×20.°06E, h4^{km}±1^{km}, ML2.7/8, Error ellipse: s-maj=1.9km s-min=0.9km az=77.0*

*PDG **24** 18:06:36.7±0.7, 41.°18N×20.°04E, h16^{km}±1^{km}, ML3.1/14, Error ellipse: s-maj=0.7km s-min=1.0km az=0.0*

*TIR **24** 18:06:36.5, 41.°15N×20.°13E, h6^{km}, Md3.0/7*

*ISCJB **24** 18:06:37.2±0.4, 41.°13N±0.°01×20.°06E±0.°02, h20^{km}±4^{km}, Error ellipse: s-maj=3.1km s-min=2.2km az=148.4*

ISC 24 18:06:36.5±1.0, 41.°16N±0.°01×20.°06E±0.°02, h14^{km}±8^{km}, n177, σ1.^{s}07/266, 26C-9D, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHR	Ohrid	0.56	95	i Pg	Pg	18 06 46.8	-0.8
OHR				i Sg	Sb	18 06 55.8	-0.3
OHR				eLg	Lg	18 06 56.1	
	comp=N,1µm,0.8s						
OHR				eLg	Lg	18 06 57.3	
	comp=E,709nm,0.6s						
PHP	Peshkopia	0.60	29	P	Pg	18 06 47.8	-0.5
PHP	Peshkopia	0.60	29	i Pg	Pg	18 06 47.8	-0.5
PHP				i Sg	Sb	18 06 57.5	+0.3
PHP	Peshkopia	0.60	29	i PG	Pg	18 06 47.8	-0.5
PHP				i SG	Sb	18 06 57.5	+0.3
KBN	Korca	0.77	134	P	Pg	18 06 51.0	-0.4
KBN				S	Sb	18 07 02.8	+0.7
KBN	Korca	0.77	134	i Pg	Pg	18 06 51.0	-0.4
KBN				S	Sb	18 07 02.8	+0.7
KBN	Korca	0.77	134	i PG	Pg	18 06 51.0	-0.4
KBN				i SG	Sb	18 07 02.9	+0.7
VLO	Vlora	0.81	212	i Pg	Pb	18 06 52.4	+0.1
VLO				i Sg	Sn	18 07 06.3	+1.0
VLO	Vlora	0.81	212	i PG	Pb	18 06 52.4	+0.1
VLO				i SG	Sn	18 07 06.3	+1.0
PUK	Puka	0.89	352	i Pg	Pb	18 06 53.8	0.0
PUK				i Sg	Sn	18 07 08.0	+0.5
PUK	Puka	0.89	352	i PG	Pb	18 06 53.8	0.0
PUK				i SG	Sn	18 07 08.0	+0.5
KRUS	Krusevo	0.92	77	i Pg	Pg	18 06 53.0	-1.3
KRUS				i Sg	Sb	18 07 06.7	+0.1
ULC	Ulcinj	1.01	323⇓	iPg	Pg	18 06 55.4	-0.5
ULC				eSg	Sn	18 07 10.5	+0.2
ULC	Ulcinj	1.01	323⇓	iPg	Pg	18 06 55.4	-0.5
ULC	Ulcinj	1.01	323	P	Pn	18 06 56.2	-0.1
ULC				eSg	Sn	18 07 10.5	+0.2
NEST	Nestorio	1.06	134	P	Pb	18 06 56.0	-0.7
NEST				S	Sn	18 07 12.3	+0.6
NEST				AML	AML	18 07 15.9	
	comp=N,948µm,0.3s						
NEST				AML	AML	18 07 16.6	
	comp=E,1412µm,0.3s						
NEST	Nestorio	1.06	134	P	Pb	18 06 56.0	-0.7
NEST				S	Sn	18 07 12.1	+0.4
NEST	Nestorio	1.06	134	P	Pb	18 06 56.0	-0.7
NEST				S	Sn	18 07 12.1	+0.4
FNA	Florina	1.07	110	P	Pb	18 06 55.8	-1.0
FNA				S	Sn	18 07 11.2	-0.6
FNA				AML	AML	18 07 13.9	
	comp=N,1865µm,0.5s						
FNA				AML	AML	18 07 15.6	
	comp=E,1393µm,0.6s						
FNA	Florina	1.07	110	P	Pb	18 06 55.7	-1.1
FNA				S	Sn	18 07 11.7	-0.1
FNA	Florina	1.07	110	P	Pb	18 06 55.8	-1.0
FNA				S	Sn	18 07 11.7	-0.1
PRZK	Prizren	1.18	26	P	Pg	18 07 05.0	+5.9
PRZK				S	Sb	18 07 08.2	-5.6
BCI	Bajram Curri	1.21	0	i Pn	Pg	18 07 00.1	+0.4
BCI				i Sn	Sn	18 07 19.6	+4.4
BCI	Bajram Curri	1.21	0	i PN	Pg	18 07 00.1	+0.4
BCI				i SN	Sn	18 07 19.6	+4.4
DRME	Dracevica, Mon	1.22	328⇑	iPg	Pg	18 06 59.4	-0.5
DRME				eSg	Sn	18 07 17.7	+2.3
DRME	Dracevica, Mon	1.22	328⇑	iPg	Pg	18 06 59.4	-0.5
DRME				eSg	Sn	18 07 17.7	+2.3
PENT	Pentalofos	1.27	139	P	Pb	18 07 00.2	0.0
PENT				S	Sg	18 07 20.1	+2.7
PENT				AML	AML	18 07 21.2	
	comp=N,587µm,0.4s						
PENT				AML	AML	18 07 23.1	
	comp=E,773µm,0.4s						
PENT	Pentalofos	1.27	139	P	Pb	18 07 00.0	-0.2
PENT	Pentalofos	1.27	139	P	Pb	18 07 00.0	-0.2

PENT				S	Sg	18 07 19.6	+2.2
SRN	Sarande	1.28	182	P	Pn	18 06 59.7	-0.2
SRN	Sarande	1.28	182	P	Pn	18 06 59.7	-0.2
SRN	Sarande	1.28	182	*i* Pn	Pg	18 07 00.6	-0.5
SRN				*i* Sn	Sg	18 07 21.3	+3.6
SRN	Sarande	1.28	182	*i* PN	Pg	18 07 00.6	-0.5
SRN				*i* SN	Sg	18 07 21.3	+3.6
SKO	Skopje	1.32	52	*e*Pg	Pb	18 07 00.8	-0.2
SKO				*e*Sg	Sg	18 07 20.3	+1.3
SKO	Skopje	1.32	52	P	Pn	18 07 00.5	0.0
SKO	Skopje	1.32	52	*i* Pg	Pb	18 07 00.9	-0.2
SKO				*i* Sg	Sg	18 07 19.2	+0.2
SKO	Skopje	1.32	52	P	Pn	18 07 00.5	0.0
SKO	Skopje	1.32	52	*e*Pg	Pb	18 07 00.8	-0.2
SKO				*e*Sg	Sg	18 07 20.3	+1.3
ZATK	Zatriq	1.36	18	P	Pg	18 07 02.2	-0.4
PDG	Podgorica	1.40	335	*e*Pg	Pb	18 07 02.4	0.0
PDG				*e*Sg	Sg	18 07 23.4	+1.7
PDG	Podgorica	1.40	335	⇑*i*P	Pb	18 07 02.6	+0.1
PDG	Podgorica	1.40	335	S	Sg	18 07 23.5	+1.7
PDG	Podgorica	1.40	335	P	Pb	18 07 02.5	0.0
PDG				S	Sg	18 07 22.3	+0.6
PDG	Podgorica	1.40	335	⇑*i*Pg	Pb	18 07 02.5	0.0
PDG				S	Sg	18 07 22.3	+0.6
PDG				*e*Sg	Sg	18 07 23.3	+1.6
TTG	Podgorica	1.40	335	⇑*i*Pg	Pb	18 07 02.5	0.0
TTG				*e*Sg	Sg	18 07 23.3	+1.6
BUM	Brajici-Budva	1.43	323	⇑*i*Pg	Pb	18 07 02.7	-0.3
BUM				*e*Sg	Sg	18 07 24.2	+1.5
BUM	Brajici-Budva	1.43	323	⇑*i*Pg	Pb	18 07 02.7	-0.3
BUM				*e*Sg	Sg	18 07 24.2	+1.5
PVY	Plav	1.44	357	⇑*i*Pg	Pb	18 07 03.1	0.0
PVY				*e*Sg	Sg	18 07 23.7	+0.9
PVY	Plav	1.44	357	⇑*i*Pg	Pb	18 07 03.1	0.0
PVY				*e*Sg	Sg	18 07 23.7	+0.9
KEK	Kerkira	1.46	188	P	Pn	18 07 00.9	-1.5
KEK				S	Sg	18 07 23.8	+0.4
KEK				AML	AML	18 07 29.2	
	comp=E,655µm,0.5s						
KEK				AML	AML	18 07 30.7	
	comp=N,551µm,0.6s						
KEK	Kerkira	1.46	188	P	Pn	18 07 01.6	-0.9
KEK				S	Sg	18 07 23.4	0.0
KEK	Kerkira	1.46	188	P	Pn	18 07 01.5	-0.9
KEK				S	Sg	18 07 23.4	0.0
PEJK	Peje	1.49	6	P	Pg	18 07 05.2	0.0
PEJK				S	Sn	18 07 09.9	-12
SGD	Sagiada	1.55	175	P	Pn	18 07 03.6	-0.1
SGD	Sagiada	1.55	175	P	Pn	18 07 03.5	-0.1
SGD	Sagiada	1.55	175	P	Pn	18 07 03.6	-0.1
KZN	Kozani	1.56	123	P	Pb	18 07 05.1	-0.1
KZN				S	Sg	18 07 26.6	-0.1
KZN				AML	AML	18 07 27.5	
	comp=E,423µm,0.4s						
KZN				AML	AML	18 07 31.4	
	comp=N,585µm,0.5s						
KZN	Kozani	1.56	123	P	Pb	18 07 04.4	-0.7
KZN				S	Sg	18 07 26.1	-0.5
KZN	Kozani	1.56	123	P	Pb	18 07 04.4	-0.7
KZN				S	Sg	18 07 26.1	-0.5
KPRO	Kipourio	1.56	140	P	Pg	18 07 05.7	-0.8
KPRO	Kipourio	1.56	140	P	Pb	18 07 04.9	-0.3
KPRO	Kipourio	1.56	140	P	Pb	18 07 04.8	-0.4
CEME	Cevo	1.63	329	⇑*i*Pn	Pn	18 07 05.3	+0.5
CEME				*e*Sn	Sg	18 07 28.5	-0.3
CEME	Cevo	1.63	329	⇑*i*Pn	Pn	18 07 05.3	+0.5
CEME				*e*Sn	Sg	18 07 28.5	-0.3
IGT	Igoumenitsa	1.64	172	P	Pn	18 07 04.3	-0.6
IGT	Igoumenitsa	1.64	172	P	Pn	18 07 04.8	-0.2
IGT				S	Sb	18 07 27.0	0.0
IGT	Igoumenitsa	1.64	172	P	Pn	18 07 04.7	-0.2
IGT				S	Sb	18 07 27.0	0.0
BEY	Berane	1.72	356	⇓*i*Pn	Pb	18 07 07.5	-0.4
BEY	Berane	1.72	356	P	Pg	18 07 08.7	-0.7
BEY				*e*Sn	Sg	18 07 30.5	-1.2
IVA	Berane	1.72	356	⇓*i*Pn	Pb	18 07 07.5	-0.4
IVA				*e*Sn	Sg	18 07 30.5	-1.2
HCY	Herceg Novi	1.74	318	⇑*i*Pn	Pn	18 07 06.5	+0.2
HCY				*e*Sn	Sg	18 07 31.0	-1.4
HCY	Herceg Novi	1.74	318	⇑*i*Pn	Pn	18 07 06.5	+0.2
HCY				*e*Sn	Sg	18 07 31.0	-1.4
KOME	Kolasin	1.74	347	⇓*i*Pn	Pb	18 07 07.9	-0.3
KOME				*e*Sn	Sg	18 07 31.7	-0.7
KOME	Kolasin	1.74	347	⇓*i*Pn	Pb	18 07 07.9	-0.3
KOME				*e*Sn	Sg	18 07 31.7	-0.7
GRG	Griva	1.79	96	P	Pn	18 07 06.5	-0.5
GRG	Griva	1.79	96	P	Pn	18 07 06.5	-0.5
GRG				S	Sb	18 07 31.5	+0.2
GRG	Griva	1.79	96	P	Pn	18 07 06.5	-0.5
GRG				S	Sb	18 07 31.5	+0.2
NKME	Niksic	1.80	333	⇑*i*Pn	Pn	18 07 07.3	+0.1
NKME				*e*Sn	Sb	18 07 32.4	+0.5
NKME	Niksic	1.80	333	⇑*i*Pn	Pn	18 07 07.3	+0.1
NKME				*e*Sn	Sb	18 07 32.4	+0.5
NKY	Niksic	1.83	335	⇑*i*Pn	Pn	18 07 08.4	+0.7
NKY				*e*Sn	Sb	18 07 33.4	+0.7
NKY	Niksic	1.83	335	⇑*i*Pn	Pn	18 07 08.4	+0.7
NKY				*e*Sn	Sb	18 07 33.4	+0.7
VAY	Valandovo	1.90	84	P	Pn	18 07 07.6	-0.9
VAY	Valandovo	1.90	84	*i* Pn	Pn	18 07 08.0	-0.6
VAY				*e*Lg	Lg	18 07 39.4	
	comp=N,91nm,0.9s						
VAY				*e*Lg	Lg	18 07 39.8	
	comp=E,62nm,0.7s						
VAY	Valandovo	1.90	84	P	Pn	18 07 07.6	-0.9
TREB	Trebinje	2.01	321	*e*Pn	Pn	18 07 09.7	-0.3
TREB				*e*Sn	Sn	18 07 35.4	+0.4
TREB	Trebinje	2.01	321	*e*Pn	Pn	18 07 09.7	-0.3
TREB				*e*Sn	Sn	18 07 35.4	+0.4
CGL1	Ceglie Messapi	2.02	256	*e*Pn	Pb	18 07 13.5	+0.5
FASA	Fasano	2.07	261	*e*Pn	Pb	18 07 13.7	-0.2
BRY	Bratogost	2.08	328	⇓*i*Pn	Pn	18 07 11.7	+0.6
BRY				*e*Sn	Sb	18 07 39.0	-0.7
BRY	Bratogost	2.08	328	⇓*i*Pn	Pn	18 07 11.7	+0.6
BRY				*e*Sn	Sb	18 07 39.0	-0.7
SJES	Sjenica	2.10	358	*e*Pn	Pn	18 07 12.3	+0.9
SJES				*e*Sn	Sb	18 07 40.1	-0.4
SJES	Sjenica	2.10	358	*e*Pn	Pn	18 07 12.3	+0.9
SJES				*e*Sn	Sb	18 07 40.1	-0.4
BARS	Barje	2.11	38	*e*Pn	Pn	18 07 12.7	+1.3
BARS				*e*Sn	Sb	18 07 39.3	-1.4
BARS	Barje	2.11	38	*e*Pn	Pn	18 07 12.7	+1.3
BARS				*e*Sn	Sb	18 07 39.3	-1.4
LIT	Litokhoron	2.13	119	P	Pn	18 07 12.1	+0.3
LIT	Litokhoron	2.13	119	P	Pn	18 07 11.9	+0.2
LIT	Litokhoron	2.13	119	P	Pn	18 07 12.0	+0.3
DSL	Palaion Diasel	2.17	158	P	Pn	18 07 12.8	+0.4
DSL	Palaion Diasel	2.17	158	P	Pn	18 07 12.7	+0.4
THL	Klokotos Trika	2.19	136	P	Pb	18 07 14.2	-1.7
THL	Klokotos Trika	2.19	136	P	Pn	18 07 13.3	+0.9
THL				S	Sb	18 07 41.4	-1.3
THL	Klokotos Trika	2.19	136	P	Pn	18 07 13.3	+0.9
THL				S	Sb	18 07 41.4	-1.3
SELS	Selova	2.21	21	*e*Pn	Pn	18 07 13.1	+0.4
UPM	Unac-Piva	2.21	338	*e*Pn	Pn	18 07 14.2	+1.2
UPM				*e*Sn	Sb	18 07 42.6	-1.2
UPM	Unac-Piva	2.21	338	*e*Pn	Pn	18 07 14.2	+1.2
UPM	Unac-Piva	2.21	338	P	Pb	18 07 15.1	-1.3
UPM				*e*Sn	Sb	18 07 42.6	-1.2
PLE	Pljevlja	2.23	347	⇑*i*Pn	Pn	18 07 14.4	+1.3
PLE				*e*Sn	Sb	18 07 42.7	-1.3
PLE	Pljevlja	2.23	347	⇑*i*Pn	Pn	18 07 14.4	+1.3
PLE				*e*Sn	Sb	18 07 42.7	-1.3
MASS	Massafra	2.27	258	*e*(Pn)	Pb	18 07 17.3	+0.1
KKB	Krupnik	2.38	72	*e*P	Pn	18 07 15.3	+0.2
BAI	Bari	2.40	270	*e*Pn	Pn	18 07 16.1	+0.8
LKD2	Lefkada island	2.41	169	P	Pn	18 07 14.1	-1.4
LKD2	Lefkada island	2.41	169	P	Pn	18 07 15.0	-0.6
IVAS	Ivanjica	2.42	2	*e*Pn	Pn	18 07 15.9	+0.2
IVAS				*e*Sn	Sb	18 07 47.8	-1.7
IVAS	Ivanjica	2.42	2	*e*Pn	Pn	18 07 15.9	+0.2
IVAS				*e*Sn	Sb	18 07 47.8	-1.7
STON	Ston	2.45	315	*e*Pn	Pn	18 07 15.3	-0.7
STON				*e*Sn	Sn	18 07 46.8	+1.0
STON	Ston	2.45	315	*e*Pn	Pn	18 07 15.1	-0.9
STON				Sn	Sn	18 07 44.8	-1.0
STON	Ston	2.45	315	*e*Pn	Pn	18 07 15.3	-0.7
STON				*e*Sn	Sn	18 07 46.8	+1.0
SG1	Sgolgore (BA)	2.58	264	*e*Pn	Pb	18 07 22.3	-0.2
MATE	Matera	2.59	260	⇑*i*P	Pn	18 07 18.6	+0.6
SRS	Serrai	2.67	90	P	Pn	18 07 18.4	-0.8
SRS	Serrai	2.67	90	P	Pn	18 07 18.5	-0.6
BBLS	Lazići	2.75	350	*e*Pn	Pn	18 07 20.5	+0.3
BBLS	Lazići	2.75	350	*e*Pn	Pn	18 07 20.5	+0.3
VTS	Vitosha	2.76	58	⇑*i*P	Pn	18 07 21.0	+0.6
VTS	Vitosha	2.76	58	S	Sn	18 07 54.4	+0.8
VTS	Vitosha	2.76	58	*e*P	Pn	18 07 20.8	+0.4
VTS	Vitosha	2.76	58	P	Pn	18 07 20.9	+0.5
VTS	Vitosha	2.76	58	P	Pn	18 07 20.9	+0.5
BOVS	Bovan	2.76	26	*e*Pn	Pn	18 07 21.0	+0.7
BOVS				*e*Sn	Sn	18 07 55.2	+1.7
BOVS	Bovan	2.76	26	*e*Pn	Pn	18 07 21.0	+0.7
BOVS				*e*Sn	Sn	18 07 55.2	+1.7
GRUS	Gruza	2.77	10	*e*Pn	Pn	18 07 21.8	+1.3
GRUS				*e*Sn	Sn	18 07 55.7	+2.0
GRUS	Gruza	2.77	10	*e*Pn	Pn	18 07 21.8	+1.3
GRUS				*e*Sn	Sn	18 07 55.7	+2.0
MMB	Musomiste	2.80	80	*e*P	Pn	18 07 21.6	+0.7
ZAPS	Zavoj	2.85	41	*e*Pn	Pn	18 07 23.0	+1.4
ZAPS				*e*Sn	Sn	18 07 56.9	+1.1
ZAPS	Zavoj	2.85	41	*e*Pn	Pn	18 07 23.0	+1.4
ZAPS				*e*Sn	Sn	18 07 56.9	+1.1
ANX	Ano Chora	2.94	150	P	Pn	18 07 24.1	+1.2
ANX	Ano Chora	2.94	150	P	Pn	18 07 24.1	+1.2
DIVS	Divibare	2.94	359	*e*Pn	Pn	18 07 24.3	+1.4
DIVS				*e*Sn	Sn	18 07 59.0	+1.0
DIVS	Divibare	2.94	359	*e*Pn	Pn	18 07 24.3	+1.4
DIVS				*e*Sn	Sn	18 07 59.0	+1.0
XOR	Xorichti	3.00	126	P	Pn	18 07 23.1	-0.5
XOR	Xorichti	3.00	126	P	Pn	18 07 23.6	0.0
PAIG	Paliouri	3.02	113	P	Pn	18 07 22.8	-1.1
PAIG	Paliouri	3.02	113	P	Pn	18 07 23.5	-0.4
TRUS	Trudelj	3.07	5	*e*Pn	Pn	18 07 25.5	+0.9
TRUS	Trudelj	3.07	5	*e*Pn	Pn	18 07 25.5	+0.9
ZAGS	Zajecar	3.10	31	*e*Pn	Pn	18 07 25.8	+0.8
ZAGS	Zajecar	3.10	31	*e*Pn	Pn	18 07 25.8	+0.8
MS1	Monte Sant'Ang	3.14	281	*e*Pn	Pn	18 07 24.5	-1.1
TIP	Timpagrande	3.21	233	P	Pn	18 07 24.9	-1.7
TIP	Timpagrande	3.21	233	⇑*i*P	Pn	18 07 25.7	-0.9
TIP	Timpagrande	3.21	233	P	Pn	18 07 25.1	-1.5
TEKS	Tekeris	3.41	354	*e*Pn	Pn	18 07 29.9	+0.6
TEKS	Tekeris	3.41	354	*e*Pn	Pn	18 07 29.9	+0.6
CUC	Castrocucco	3.43	252	P	Pn	18 07 29.6	0.0
CUC	Castrocucco	3.43	252	P	Pn	18 07 28.8	-0.8
KUBS	Kucevo	3.46	20	*e*Pn	Pn	18 07 29.1	-0.9
KUBS	Kucevo	3.46	20	*e*Pn	Pn	18 07 29.1	-0.9
RZN	Rozhen	3.54	80	*e*P	Pn	18 07 32.3	+1.0
THAS	Thassos island	3.58	97	P	Pn	18 07 31.3	-0.2
THAS	Thassos island	3.58	97	P	Pn	18 07 31.6	0.0
MDVR	Moldovita	3.82	18	⇑*i*P	Pn	18 07 35.2	+0.3
HERR	Herculane	4.10	24	⇓*i*P	Pn	18 07 40.3	+1.5
BZS	Buzias	4.60	14	⇑*i*P	Pn	18 07 45.5	-0.1
NVLJ	Novalja	5.11	313	*e*Pn	Pn	18 07 51.4	-1.1
NVLJ				Sn	Sn	18 08 48.4	-2.9
OZLJ	Ozalj	5.57	325	*i* Pn	Pn	18 07 59.0	+0.1
VOIR		5.62	39	⇑*i*P	Pn	18 08 00.8	+1.1
MLR	Muntele Rosu	6.10	43	⇑*i*P	Pn	18 08 07.1	+0.8
SOKA	Soboth	6.60	328	*e*Pn	Pn	18 08 12.7	-0.5
	comp=E,2.6nm,0.3s,SNR=4.9						
OBKA	Obir	6.67	325	*i* Pn	Pn	18 08 14.5	+0.4
	comp=E,2.2nm,0.2s						
ARSA	Arzberg	6.90	333	*e*Pn	Pn	18 08 17.4	+0.2
	comp=E,2.3nm,0.3s						
KBA	Koelnbreinsper	7.63	323	*e*Pn	Pn	18 08 26.3	-1.1
	comp=E,1.2nm,0.2s						
ABTA	Abfaltersbach	7.80	318	*e*Pn	Pn	18 08 28.4	-1.1
	comp=E,0.4nm,0.2s						
MOA	Molln	7.86	330	*e*Pn	Pn	18 08 31.8	+1.4
	comp=E,1.8nm,0.3s,SNR=5.7						
WTTA	Wattenberg	8.59	318	*e*Pn	Pn	18 08 41.9	+1.4
	comp=E,2.3nm,0.3s						
WATA	Walderalm	8.66	318	*e*Pn	Pn	18 08 42.0	+0.4
	comp=E,4.6nm,0.3s,SNR=5.7						
FETA	Feichten	8.90	314	*e*Pn	Pn	18 08 44.9	+0.1
	comp=E,0.7nm,0.4s						

MEX 24 18:23:56.0±0.6**, 24°.57N×99°.62W, h20**^{km}**, MD3.5, Central Mexico**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LNIG	Linares	0.35	23	*e*P	Pb	18 24 02.7	-0.9
	baz=203,slow=1.6						
LNIG				*i* S	Sb	18 24 07.2	-1.6

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*ISCJB **24** 18:31:44.6±0.7, 12°.70N±0°.06×88°.95W±0°.05, h53^{km}±7^{km}, mb3.7/6, MS3.2/9, Error ellipse: s-maj=12.4km s-min=3.8km az=35.3*

*CASC **24** 18:31:45.5±1.2, 12°.77N×88°.93W, h32^{km}±3^{km}, MD4.2, ML3.8*

*IDC **24** 18:31:47.1±2.0, 12°.84N×88°.75W, h60^{km}±28^{km}, mb3.5/6, mb1 3.9/8, mb1mx3.5/48, mbtmp3.8/8, ML3.7/2, MS3.2/10, Ms1 3.2/10, ms1mx3.0/39, Error ellipse: s-maj=85.9km s-min=13.1km az=36.0*

ISC 24 18:31:46.6±1.4**, 12°.76N**±0°.10×**88°.93W**±0°.07**, h58**^{km}±11^{km}**, n44, σ1**^{s}**.53**/52**, mb3.7**/6**, MS3.2**/9**, 1D, Off coast of central America**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
UESV	Ojushtada	0.64	12	*e*P	Pn	18 32 01.6	+1.6
UESV				*e*S	Sn	18 32 13.8	+4.0
UESV				IAML		18 32 20.1	
	comp=Z,3µm,0.5s						
SNVI	San Vicente	0.86	6	*e*P	Pn	18 32 01.6	-1.3
LFRS	El Faro	0.87	352	⇓*i*P	Pn	18 32 01.3	-1.8
LCY	Lacayo	0.91	43	*e*P	Pn	18 32 02.3	-1.2
PACA	Pacayal	0.93	40	*e*P	Pn	18 32 02.9	-0.8
VSM	San Miguel	0.93	44	*e*P	Pn	18 32 02.3	-1.5
SNET	Serv Nac Est T	0.97	343	*e*P	Pn	18 32 02.6	-1.7
SNET				*e*S	Sn	18 32 15.4	-1.9
SNET				IAML		18 32 19.6	
	comp=Z,5µm,0.2s						
COLS	Colinas	0.97	338	*e*P	Pn	18 32 02.8	-1.6
LBRS	Las Brisas	0.98	354	*e*P	Pn	18 32 03.2	-1.2
UDBS	Soyapango	0.99	347	*e*P	Pn	18 32 02.9	-1.6
UDBS				*e*S	Sn	18 32 15.9	-1.8
OPAM	San Salvador	0.99	345	*e*P	Pn	18 32 03.0	-1.5
OPAM				*e*S	Sn	18 32 15.8	-2.0
OPAM				IAML		18 32 16.9	
	comp=Z,3µm,0.3s						
CUSC	San Salvador	1.00	346	*e*P	Pn	18 32 03.1	-1.6
CUSC				*e*S	Sn	18 32 16.5	-1.6
CUSC				IAML		18 32 21.6	
	comp=Z,5µm,0.3s						
LFU	La Fuente	1.00	350	*e*P	Pn	18 32 03.3	-1.4
BOQS	Boqueron	1.03	341	*e*P	Pn	18 32 04.0	-1.2
BOQS				*e*S	Sn	18 32 18.8	-0.2
CEDA	San Andres	1.14	337	*e*P	Pn	18 32 05.3	-1.1
CEDA				*e*S	Sn	18 32 19.8	-1.4
LCND	La Caˆ–ada	1.15	61	*e*P	Pn	18 32 05.8	-0.8
LCND				*e*S	Sn	18 32 21.2	-0.3
LCND				IAML		18 32 26.0	
	comp=Z,5µm,0.3s						
SBLS	San Blas	1.27	328	*e*P	Pn	18 32 07.3	-1.1
SNJE	San Jose	1.29	329	*e*P	Pn	18 32 07.3	-1.2
RTR	El Retiro	1.33	329	*e*P	Pn	18 32 08.2	-1.0
UNIC	Santa Ana	1.37	334	*e*S	Sn	18 32 26.0	-0.8
LLGN	La Laguna	1.41	359	*e*P	Pn	18 32 09.4	-0.7
LLGN				*e*S	Sn	18 32 28.2	+0.4
LLGN				IAML		18 32 36.6	
	comp=Z,1µm,0.6s						
MTO3	Montecristo	1.69	346	*e*P	Pn	18 32 13.4	-0.6
MTO3				IAML		18 32 39.0	
	comp=Z,300nm,0.6s						
CRIN	San Cristobal	1.84	91	*e*P	Pn	18 32 14.1	-1.8
CRIN				*e*S	Sn	18 32 37.4	-0.7
CNGN	Cerro Negro	2.19	96	*e*P	Pn	18 32 19.6	-1.1
CNGN				*e*S	Sn	18 32 45.9	-0.9
CNGN				IAML		18 32 54.5	
	comp=E,500nm,0.6s						
COPN	Copaltepe	2.35	104	*e*P	Pn	18 32 21.6	-1.3
MOMN	Momotombo	2.36	98	*e*P	Pn	18 32 22.1	-0.9
RCON	San Juan de Ri	2.80	75	*e*P	Pn	18 32 28.5	-0.6
MATN	Matagalpa	2.94	86	*e*P	Pn	18 32 30.6	-0.3
BOAB	BOACO BROADBAN	3.20	95	*e*P	Pn	18 32 33.4	-1.1
JTS	JuntasAbangare	4.60	122	P	Pn	18 32 54.4	+0.7
	comp=E,3.0nm,0.3s,baz=0.2,slow=20,SNR=34						
JTS				S	Sn	18 33 43.8	-2.1
	comp=E,8.8nm,0.3s,baz=8.7,slow=20,SNR=4.2						
CMIG	Matias Romero	7.19	308	P	Pn	18 33 30.7	+1.6
	comp=E,1.3nm,0.3s,baz=98,slow=9.9,SNR=9.6						
CMIG				S	Sn	18 34 50.8	+1.4
	comp=E,1.2nm,0.3s,baz=125,slow=13,SNR=4.5						
CMIG				LR	LR	18 36 36.6	
	comp=E,137nm,20.8s,baz=156,slow=40						
TXAR	Lajitas Array	21.44	323	P	P	18 36 32.2	+2.1
	comp=E,3.0nm,0.6s,baz=143,slow=10,SNR=37						
TXAR				S	S	18 40 22.3	-2.7
	comp=E,0.2nm,0.6s,baz=158,slow=9.7,SNR=2.2						
TXAR				LR	LR	18 46 37.2	
	comp=E,27nm,19.6s,baz=0.0,slow=41						
TKL	Tuckaleechee C	23.27	11	LR	LR	18 45 18.9	
	comp=E,79nm,20.3s,baz=228,slow=35						
NNA	Nana	27.35	154	LR	LR	18 46 28.2	
	comp=E,39nm,20.3s,baz=246,slow=32						
PDAR	Pinedale Array	34.83	333	P	P	18 38 34.6	+2.3
	comp=E,0.3nm,0.6s,baz=125,slow=10,SNR=3.5						
PDAR				LR	LR	18 54 08.0	
	comp=E,25nm,18.9s,baz=232,slow=38						
LPAZ	La Paz	35.44	144	LR	LR	18 53 15.9	
	comp=E,74nm,19.0s,baz=290,slow=36						
NVAR	Mina Array Bea	36.53	320	P	P	18 38 47.8	+0.9
	comp=E,0.4nm,0.5s,baz=129,slow=8.6,SNR=2.9						
ULM	Lac du Bonnet	37.82	353	P	P	18 38 56.6	-0.7
	comp=E,4.4nm,0.8s,baz=163,slow=6.7,SNR=4.3						
ULM				LR	LR	18 56 58.3	
	comp=E,40nm,19.9s,baz=334,slow=40						
SIV	San Ignacio	39.69	135	LR	LR	18 54 41.3	
	comp=E,67nm,18.2s,baz=300,slow=35						
CPUP	Villa Florida	49.54	142	LR	LR	19 02 48.6	
	comp=E,39nm,20.0s,baz=223,slow=38						
BBB	Bella Bella	50.32	330	LR	LR	19 07 12.7	
	comp=E,32nm,18.1s,baz=201,slow=42						
YKA	Yellowknife Ar	52.95	345	P	P	18 40 56.1	-0.7
	comp=E,0.8nm,0.4s,baz=150,slow=6.9,SNR=6.9						
ILAR	Eielson Array	65.16	336	P	P	18 42 20.8	-0.5
	comp=E,0.2nm,0.5s,baz=138,slow=4.3,SNR=3.3						
CMAR	Chiang Mai Arr	148.03	346	PKPbc	PKPdf	18 51 25.7	+2.3
	comp=E,0.7nm,0.7s,baz=339,slow=3.7,SNR=4.3						

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*ISCJB **24** 19:06:25.5±0.4, 37°.68S±0°.04×179°.95W±0°.03, h10^{km}, mb5.1/22, Error ellipse: s-maj=5.6km s-min=3.4km az=152.8*

*NEIC **24** 19:06:26.1±2.3, 37°.78S×179°.91E, h5^{km}±14^{km}, mb5.0/15, ML4.4(WEL), Error ellipse: s-maj=9.1km s-min=6.4km az=122.0*

*IDC **24** 19:06:26.0±0.8, 37°.47S×179°.79E, h0^{km}, mb4.0/4, mb1 4.2/6, mb1mx3.9/38, mbtmp4.1/6, ML3.9/2, MS3.4/1, Ms1 3.4/1, ms1mx2.6/37, Error ellipse: s-maj=27.1km s-min=24.4km az=159.0*

*WEL **24** 19:06:28.1, 38°S±9°×18°0W±°, h33^{km}, ML4.5/30*

ISC 24 19:06:28.4±1.2**, 37°.87S**±0°.05×**179°.89E**±0°.05**, h19**^{km}±4^{km}**, n148, σ1**^{s}**.96**/184**, mb5.1**/22**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.17	272	P	Pb	19 06 50.8	+0.7
WMGZ				S	Sg	19 07 07.2	+0.7
MXZ	Matakaoa Point	1.29	283	*e*Pn	Pn	19 06 51.5	0.0
MXZ				*e*Sn	Sb	19 07 09.0	+0.6
MXZ	Matakaoa Point	1.29	283	P	Pn	19 06 51.7	+0.2
MXZ				S	Sn	19 07 08.1	-0.2
PUZ	Puketiti	1.31	260	P	Pb	19 06 53.0	+0.6
PUZ				S	Sb	19 07 10.0	+1.1
PKGZ	Pakihiroa	1.44	269	P	Pn	19 06 54.3	+0.7
PKGZ				S	Sb	19 07 14.0	+1.4
CNGZ	Carnagh Statio	1.47	245	P	Pb	19 06 56.6	+1.5
TWGZ	Tauwhareparae	1.54	258	P	Pb	19 06 56.6	+0.2
HAZ	Te Kaha	1.68	273	P	Pb	19 06 57.9	-0.7
TKGZ	Te Karaka	1.71	250	P	Pb	19 06 59.2	0.0
TKGZ				S	Sb	19 07 22.6	+2.3
RUGZ	Raukumara Rang	1.75	266	P	Pn	19 06 59.0	+1.0
RIGZ	Rimuhau	1.88	243	P	Pb	19 07 01.6	-0.5
RIGZ				S	Sb	19 07 26.5	+1.3
PRGZ	Paritu Road	1.90	236	P	Pb	19 07 02.5	0.0
MWZ	Matawai	1.92	255	P	Pn	19 07 01.4	+1.2
MWZ				S	Sb	19 07 26.6	0.0
MHGZ	Mahia Peninsul	2.02	230	P	Pb	19 07 04.1	-0.4
RAGZ	Rawiri	2.05	251	P	Pb	19 07 04.2	-0.9
RAGZ				S	Sb	19 07 30.3	0.0
KNZ	Kokohu	2.09	236	P	Pn	19 07 04.7	+2.3
SNGZ	Shannon Statio	2.21	245	P	Pn	19 07 06.5	+2.5
SNGZ				S	Sb	19 07 35.4	+0.7
URZ	Urewera	2.23	259	Pn	Pn	19 07 06.4	+2.1
	44nm,0.3s,baz=166,slow=1.5,SNR=118						
URZ				Sn	Sb	19 07 34.5	-0.9
	40nm,0.3s,baz=204,slow=23,SNR=9.2						
URZ	Urewera	2.23	259	*e*Pn	Pn	19 07 05.9	+1.5
URZ				*e*Sn	Sn	19 07 34.3	+2.9
URZ	Urewera	2.23	259	P	Pn	19 07 06.5	+2.1
URZ				S	Sb	19 07 34.6	-0.7
WHHZ	Waihua	2.41	239	P	Pn	19 07 09.6	+2.7
WHHZ				S	Sb	19 07 40.7	+0.1
RTZ	Ruatahuna	2.41	251	P	Pn	19 07 09.5	+2.5
RTZ				S	Sb	19 07 40.1	-0.6
RAHZ	Arahi	2.44	244	P	Pn	19 07 09.9	+2.6
RAHZ				P	Pn	19 07 09.9	+2.6
EDRZ	Edgecumbe	2.50	264	P	Pb	19 07 11.1	-1.7
MUGZ	Murupara	2.54	255	P	Pn	19 07 10.4	+1.9
MARZ	Manawahe	2.55	266	P	Pn	19 07 10.4	+1.7
MTHZ	Maungataniwha	2.59	247	P	Pn	19 07 11.6	+2.2
OPRZ	Ohinepanea	2.64	269	P	Pn	19 07 11.1	+1.0
ARHZ	Aropaoanui	2.67	238	P	Pn	19 07 13.0	+2.6
ARHZ				S	Sb	19 07 47.8	0.0
TARZ	Mount Tarawera	2.70	261	P	Pn	19 07 13.0	+2.0
RRRZ	Republican Roa	2.71	259	P	Pn	19 07 13.3	+2.4
RRRZ				S	Sn	19 07 45.5	+2.3
NMHZ	Naumai	2.72	242	P	Pn	19 07 13.8	+2.7
OMRZ	Omania	2.79	264	P	Pn	19 07 14.2	+2.0
HLRZ	Highlands Stat	2.82	261	P	Pn	19 07 15.0	+2.4
PRRZ	Plateau Road	2.83	256	P	Pn	19 07 14.8	+2.2
CKHZ	Cape Kidnapper	2.84	230	P	Pn	19 07 14.7	+2.0
TGRZ	Tauranga	2.88	272	P	Pn	19 07 14.2	+0.9
KARZ	Kaharoa	2.89	266	P	Pn	19 07 14.5	+1.0
HRRZ	Handcock Road	2.89	258	P	Pn	19 07 15.2	+1.6
MRHZ	Matea Rd	2.90	249	P	Pn	19 07 16.1	+2.5
HSRZ	Hossack Road	2.91	260	P	Pn	19 07 15.4	+1.7
MCHZ	McNeill Hill	2.96	237	P	Pn	19 07 16.8	+2.4
BKZ	Black Stump Fm	2.97	243	*e*Pn	Pn	19 07 16.7	+2.1
BKZ				*e*Sn	Sn	19 07 53.5	+3.9
BKZ	Black Stump Fm	2.97	243	P	Pn	19 07 16.6	+2.1
KAHZ	Kahuranaki	3.04	230	P	Pn	19 07 17.5	+1.9
KWHZ	Kaweka Forest	3.13	239	P	Pn	19 07 19.2	+2.3
PXZ	Pawanui	3.20	227	*e*Pn	Pn	19 07 19.1	+1.3
PXZ				*e*Sn	Sn	19 07 58.9	+3.5
PXZ				*e*Sg	Sb	19 08 06.1	+2.8
PXZ	Pawanui	3.20	227	P	Pn	19 07 19.0	+1.2
KUTZ	Kaahu Road	3.27	258	P	Pn	19 07 20.4	+1.7
KRHZ	Kereru	3.28	236	P	Pn	19 07 20.3	+1.5
BHHZ	Black Hill Sta	3.41	240	Pn	Pn	19 07 22.6	+1.9
BHHZ	Black Hill Sta	3.41	240	P	Pn	19 07 22.7	+2.1
TLZ	Tolley Road	3.47	261	P	Pn	19 07 23.5	+2.1
WPHZ	Waipukurau	3.47	230	Pn	Pn	19 07 22.8	+1.4
WPHZ	Waipukurau	3.47	230	P	Pn	19 07 23.0	+1.5
PRHZ	Porangahau	3.49	226	Pn	Pn	19 07 22.7	+1.0
PRHZ	Porangahau	3.49	226	P	Pn	19 07 22.8	+1.0
KUZ	Kuaotunu	3.51	287	*e*Pn	Pn	19 07 21.2	-0.7
KUZ	Kuaotunu	3.51	287	P	Pn	19 07 21.6	-0.3
PNHZ	Pukenui	3.53	234	Pn	Pn	19 07 23.7	+1.3
PNHZ	Pukenui	3.53	234	P	Pn	19 07 23.9	+1.6
KRVZ	Karewarewa	3.56	249	Pn	Pn	19 07 21.7	-1.0
OTVZ	Oturere	3.56	247	*e*Pn	Pn	19 07 25.3	+2.5
MOVZ	Moawhango	3.59	243	*e*Pn	Pn	19 07 25.2	+2.1
MOVZ	Moawhango	3.59	243	P	Pn	19 07 25.8	+2.7
WTVZ	West Tongariro	3.60	248	P	Pn	19 07 27.6	+4.3
WHVZ	Whangaehu Hut	3.66	246	P	Pn	19 07 27.5	+3.2
COVZ	Chateau Observ	3.66	247	P	Pn	19 07 27.9	+3.7
WNVZ	Wahianoa	3.67	245	*e*Pn	Pn	19 07 26.1	+1.8
FWVZ	Far West T-bar	3.67	246	P	Pn	19 07 27.0	+2.6
TRVZ	Turoa	3.69	246	P	Pn	19 07 27.6	+2.9
TSZ	Takapari Road	3.77	233	Pn	Pn	19 07 26.8	+1.2
TSZ	Takapari Road	3.77	233	P	Pn	19 07 26.7	+1.1
DVHZ	Dannevirke	3.78	229	Pn	Pn	19 07 26.6	+0.9
DVHZ	Dannevirke	3.78	229	P	Pn	19 07 26.5	+0.8
MKAZ	Moumakai	3.84	280	*e*Pn	Pn	19 07 26.4	-0.1
MKAZ	Moumakai	3.84	280	P	Pn	19 07 26.5	0.0
GRZ	Great Barrier	3.90	293	P	Pn	19 07 26.6	-0.7

BFZ	Birch Farm	3.99	224	ePn	Pn	19 07 28.2	-0.3
BFZ				eSn	Sn	19 08 14.3	-0.5
HIZ	Hauiti	4.02	259	ePn	Pn	19 07 31.0	+2.0
POWZ	Post Office Ro	4.08	231	Pn	Pn	19 07 31.1	+1.2
POWZ	Post Office Ro	4.08	231	P	Pn	19 07 31.2	+1.4
WAZ	Wanganui	4.27	242	Pn	Pn	19 07 36.3	+3.8
MRZ	Mangatainoka R	4.36	229	ePn	Pn	19 07 34.0	+0.4
HOWZ	Holdsworth Sta	4.55	227	Pn	Pn	19 07 36.5	+0.3
MTW	Mount Morrison	4.73	225	eSn	Sn	19 08 35.5	+2.5
MTW				eSg	Sb	19 08 39.3	-7.9
MSWZ	Moikau Station	5.04	224	Pn	Pn	19 07 42.0	-1.1
SNZO	South Karori	5.28	228	ePn	Pn	19 07 46.2	-0.1
SNZO				eSn	Sn	19 08 43.4	-3.2
OUZ	Omahuta	5.72	296	ePn	Pn	19 07 52.2	-0.1
TUWZ	Tuamarina	5.81	230	eSn	Sn	19 09 03.3	+3.7
QRZ	Quartz Range	6.43	240	ePn	Pn	19 08 01.3	-0.7
CTZ	Chatham Island	6.43	157	Pn	Pn	19 08 04.6	+2.5
THZ	Tophouse	6.64	232	ePn	Pn	19 08 04.0	-1.0
THZ				eSn	Sn	19 09 19.9	-0.3
KHZ	Kahutara	6.66	225	ePn	Pn	19 08 04.2	-1.0
KHZ				eSn	Sn	19 09 18.8	-1.7
LTZ	Lake Taylor	7.62	227	ePn	Pn	19 08 16.3	-2.1
LTZ				eSn	Sn	19 09 41.6	-2.6
MQZ	McQueen’s Vall	8.01	221	ePn	Pn	19 08 22.9	-0.8
MQZ				eSn	Sn	19 09 47.8	-6.0
OXZ	Oxford	8.09	225	ePn	Pn	19 08 23.5	-1.3
OXZ				eSn	Sn	19 09 50.5	-5.2
RPZ	Rata Peaks	8.89	226	Pn	Pn	19 08 36.6	+0.7
	0.8nm,0.3s,baz=281,slow=0.7,SNR=6.3						
RPZ				Sn	Sn	19 10 10.1	-5.3
	9.0nm,0.3s,baz=13,slow=19,SNR=15						
RPZ	Rata Peaks	8.89	226	ePn	Pn	19 08 32.2	-3.6
RPZ				eSn	Sn	19 10 10.1	-5.3
FOZ	Fox Glacier	9.52	230	ePn	Pn	19 08 40.7	-3.7
FOZ				eSn	Sn	19 10 27.8	-3.0
LBZ	Lake Benmore	9.80	225	ePn	Pn	19 08 47.2	-1.0
LBZ				eSn	Sn	19 10 34.1	-3.6
ODZ	Otahua Downs	9.97	221	ePn	Pn	19 08 48.9	-1.8
ODZ				eSn	Sn	19 10 37.8	-4.2
WKZ	Wanaka	10.73	226	ePn	Pn	19 08 59.0	-2.0
TUZ	Tuapeka	11.12	220	Pn	Pn	19 09 06.7	+0.4
MLZ	Mavora Lakes	11.56	226	ePn	Pn	19 09 11.6	-0.8
WHZ	Wether Hill Ro	11.97	224	ePn	Pn	19 09 16.6	-1.4
DCZ	Deep Cove	12.17	227	ePn	Pn	19 09 17.6	-3.1
LHI	Lord Howe Isla	18.25	284	ePn	Pn	19 10 38.2	-2.3
	126nm,1.1s						
DZM	Mont Dzumac	19.55	320	LR	LR	19 16 28.1	
	comp=Z,107nm,19.1s,baz=104,slow=31						
STKA	Stephens Creek	31.82	269	eP	P	19 12 52.5	+0.5
	7.7nm,1.7s						
PPTF	Pamatai, Papee	33.51	61	eP	P	19 13 06.8	-0.1
	344nm,1.7s						
PPT	Papeete	33.52	61	eP	P	19 13 06.9	0.0
HNR	Honiara	33.53	322	eP	P	19 13 07.1	0.0
	36nm,0.9s						
TARA	Tarawa	39.55	349	eP	P	19 13 57.6	-0.8
	139nm,1.4s						
COEN	Coen	40.32	296	eP	P	19 14 04.0	-0.8
	47nm,1.5s						
AS01	Alice Springs	41.53	276	eP	P	19 14 13.6	-1.2
AS31	Alice Springs	41.57	276	eP	P	19 14 14.3	-0.8
	1.4nm,0.5s						
AS31				ePcP	PcP	19 16 11.6	-0.7
ASAR	Alice Springs	41.57	276	P	P	19 14 14.3	-0.8
	3.3nm,0.6s,baz=122,slow=7.9,SNR=62						
ASAR				PcP	PcP	19 16 11.6	-0.7
	0.6nm,0.6s,baz=125,slow=4.0,SNR=4.3						
FORT	Forrest	42.93	263	eP	P	19 14 26.4	+0.3
	64nm,1.2s						
WB2	Warramunga Arr	43.22	281	eP	P	19 14 27.1	-1.5
	37nm,1.9s						
WRAB	Tennant Creek	43.23	281	eP	P	19 14 27.4	-1.1
	26nm,1.7s						
WR1	Warramunga Arr	43.23	281	eP	P	19 14 27.3	-1.3
	40nm,1.9s						
WR1				ePcP	PcP	19 16 17.6	-0.1
WRA	Warramunga Arr	43.23	281	P	P	19 14 27.3	-1.4
	1.7nm,0.5s,baz=123,slow=7.0,SNR=48						
WRA				PcP	PcP	19 16 17.6	-0.1
	0.6nm,1.0s,baz=115,slow=3.1,SNR=4.9						
XMAS	Kiritimati	44.91	33	eP	P	19 14 42.4	+0.4
	432nm,1.9s						
CASY	Casey	47.79	211	eP	P	19 15 06.2	+2.1
	20nm,1.8s						
PATS	Pohnpei	48.81	331	eP	P	19 15 12.3	-0.2
	254nm,1.5s						
NWAO	Narrogin (SRO)	50.48	256	eP	P	19 15 25.0	-0.2
	145nm,1.8s						
QSPA	South Pole Qui	52.26	180	P	P	19 15 42.6	+4.4
	1.6nm,0.8s,baz=50,slow=4.7,SNR=4.1						
QSPA	South Pole Qui	52.26	180	eP	P	19 15 40.9	+2.7
	18nm,1.7s						
SAUI	Saumlaki	52.93	291	eP	P	19 15 43.3	-0.4
	575nm,1.2s						
JOHN	Johnston Islan	55.21	12	eP	P	19 15 59.3	-0.8
	194nm,1.0s						
FAKI	Fak Fak	55.70	297	eP	P	19 16 02.4	-1.5
	89nm,1.4s						
SOEI	Soe	57.09	284	eP	P	19 16 12.8	-1.1
	45nm,1.1s						
SNAA	Sanae	70.75	179	P	P	19 17 45.5	+2.6
	0.6nm,0.9s,baz=208,slow=14,SNR=4.3						
SNAA	Sanae	70.75	179	eP	P	19 17 43.5	+0.6
	8.9nm,1.5s						
BCGM	Cienega Road	91.95	43	eP	P	19 19 34.1	-1.4
VSP	Spence Mountai	95.78	39	eP	P	19 19 56.4	+3.2
KURK	Kurchatov	124.76	311	ePKPdf	PKPdf	19 25 25.8	-0.5
KURBB	Kurchatov Arra	124.79	311	PKP	PKPdf	19 25 25.8	-0.5
	0.6nm,0.7s,baz=98,slow=1.5,SNR=5.6						
BVAR	Borovoye Array	130.30	312	PKP	PKPdf	19 25 36.4	-0.3
	0.5nm,0.6s,baz=71,slow=6.2,SNR=3.3						
ARA0	ARCESS Array S	145.41	344	ePKPbc	PKPab	19 26 03.5	-0.7
ARCES	ARCESS Array B	145.41	344	PKPbc	PKPab	19 26 03.5	-0.7
	4.0nm,0.7s,baz=14,slow=2.5,SNR=19						
KBZ	Khabaz	147.21	294	PKPbc	PKPbc	19 26 08.8	-1.2
	2.6nm,1.0s,baz=209,slow=5.0,SNR=4.5						
MMAI	Mount Meron Ar	150.78	271	PKPbc	PKPbc	19 26 20.8	+1.2
	0.5nm,0.4s,baz=75,slow=7.6,SNR=3.4						
FIA0	FINESS Array S	151.32	334	ePKPbc	PKPbc	19 26 19.5	-0.3
FINES	FINESS Array B	151.32	334	PKPbc	PKPbc	19 26 19.5	-0.3
	2.6nm,0.6s,baz=20,slow=6.1,SNR=14						
BR101	Keskin Array S	153.72	285	ePKPbc	PKPbc	19 26 26.5	+0.4
BRTR	Keskin Array B	153.72	285	PKPbc	PKPbc	19 26 26.5	+0.4
	0.4nm,0.4s,baz=132,slow=2.1,SNR=2.7						

ISCJB ***24*** *19:13:24.9±1.1, 51°.42N±0°.05×16°.18E±0°.05, h0^{km}, Error ellipse: s-maj=7.2km s-min=3.6km az=29.4*
CSEM ***24*** *19:13:25.5±0.5, 51°.46N×16°.20E, h2^{km}, ML2.8/5, Error ellipse: s-maj=7.8km s-min=4.7km az=15.0*
PRU ***24*** *19:13:27.0, 51°.43N×16°.19E, h0^{km}*
ISC 24 19:13:25.4±1.6**, 51°.45N**±0°.07×**16°.24E**±0°.04**, h0**^{km}**, n25, σ0^{s}.58**/45**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.61	177	ePg	Pb	19 13 38.3	-0.7
KSP				eSg	Sg	19 13 46.5	+1.6
UPC	Upice	0.96	189	ePG	Pb	19 13 44.8	-0.1
UPC				eSG	Sg	19 13 57.0	+0.9
	comp=Z,17nm,0.3s						
UPC	Upice	0.96	189	Pg	Pb	19 13 44.8	-0.1
UPC				Sg	Sg	19 13 57.0	+0.9
	17nm,0.3s						
DPC	Dobruska-Polom	1.10	177	ePG	Pb	19 13 47.2	-0.2
DPC				eSG	Sb	19 14 02.2	-0.1
	comp=Z,6.7nm,0.4s						
DPC	Dobruska-Polom	1.10	177	Pg	Pb	19 13 47.2	-0.2
DPC				Sg	Sb	19 14 02.2	-0.1
	6.7nm,0.4s						
PVCC	Panska Ves	1.41	229	ePG	Pb	19 13 53.1	+0.6
PVCC				eSG	Sb	19 14 11.3	+0.4
	comp=Z,26nm,0.2s						
PVCC	Panska Ves	1.41	229	Pg	Pb	19 13 53.1	+0.6
PVCC				Sg	Sb	19 14 11.3	+0.4
	26nm,0.2s						
KRLC	Kraliky	1.42	166	ePG	Pb	19 13 53.1	+0.3
KRLC				eSG	Sg	19 14 11.2	+0.2
KRLC	Kraliky	1.42	166	Pg	Pb	19 13 53.1	+0.3
KRLC				Sg	Sg	19 14 11.2	+0.2
BRG	Berggiesshubel	1.56	249	PG	Pg	19 13 55.8	+0.5
BRG				SG	Sb	19 14 15.6	+0.2
	7.2nm,0.4s						
GOPC	GO Pecny, Ondr	1.80	212	ePG	Pg	19 13 59.7	-0.1
GOPC				eSG	Sb	19 14 22.6	+0.4
GOPC	GO Pecny, Ondr	1.80	212	Pg	Pg	19 13 59.7	-0.1
GOPC				Sg	Sb	19 14 22.6	+0.4
PRU	Pruhonice	1.82	217	ePG	Pb	19 13 59.7	+0.1
PRU				eSG	Sb	19 14 23.3	+0.4
	comp=Z,4.5nm,0.2s						
PRU	Pruhonice	1.82	217	Pg	Pb	19 13 59.7	+0.1
PRU				Sg	Sb	19 14 23.3	+0.4
	4.5nm,0.2s						
MORC	Moravsky Berou	1.87	153	ePn	Pn	19 13 58.6	-0.1
MORC				eSg	Sg	19 14 25.4	0.0
MORC	Moravsky Berou	1.87	153	ePN	Pn	19 13 58.6	-0.1
MORC				eSG	Sg	19 14 25.4	0.0
OKC	Ostrava-Krasne	2.02	142	eSG	Sg	19 14 30.9	+0.6
OKC	Ostrava-Krasne	2.02	142	Sg	Sg	19 14 30.9	+0.6
CLL	Collm	2.04	267	ePg	Pg	19 14 04.0	-0.4
CLL				eSg	Sg	19 14 31.0	+0.2
VRAC	Vranov	2.16	174	eSg	Sg	19 14 35.0	+0.3
VRAC	Vranov	2.16	174	eSG	Sg	19 14 35.0	+0.3
KRUC	Moravsky	2.39	178	eSg	Sg	19 14 43.0	+0.7
KRUC	Moravsky	2.39	178	eSG	Sg	19 14 43.0	+0.7
KHC	Kasperske Hory	2.88	217	ePN	Pn	19 14 12.4	-0.2
KHC				ePG	Pg	19 14 19.4	-1.2
KHC				eSN	Sn	19 14 47.5	-0.5
KHC				eSG	Sg	19 14 56.3	-1.7
	comp=Z,2.6nm,0.4s						
KHC	Kasperske Hory	2.88	217	Pn	Pn	19 14 12.4	-0.2

MAN 24 19:21:22.7, 9°.98N×122°.25E, h28^{km}, mb4.4, ML3.3, MS3.0, 1D, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIM	Jordan	0.72	27	eP	Pb	19 21 36.3	-0.5
GUIM				eS	Sn	19 21 48.0	+0.8
SNPH	Sibulan	1.16	123	⇓iP	Pn	19 21 43.0	-0.1
SNPH				i S	Sn	19 21 57.6	-0.5
CUYO	Cuyo Island	1.49	306	eP	Pn	19 21 48.0	+0.3
CUYO				eS	Sn	19 22 06.3	+0.1
BUSP	Coron	2.85	315	eP	Pn	19 22 07.3	+1.0
BUSP				eS	Sn	19 22 37.1	-2.6

IDC 24 19:22:20.8±17.0**, 5°.67S×103°.72E, h108**^{km}±159^{km}**, mb3.1**/4**, mb1 3.2**/4**, mb1mx2.9**/54**, mbtmp3.5**/4**, Error ellipse: s-maj=618.6km s-min=28.5km az=48.0, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	32.97	118	P	P	19 28 45.2	-0.4
	0.3nm,0.8s,baz=286,slow=8.8,SNR=2.7						
MKAR	Makanchi Array	55.58	342	P	P	19 31 45.4	+0.2
	0.3nm,0.5s,baz=154,slow=8.8,SNR=8.9						
KURBB	Kurchatov Arra	60.13	342	P	P	19 32 16.9	+0.1
	0.2nm,0.7s,baz=153,slow=8.3,SNR=2.9						
ZALV	Zalesovo Beam	61.48	347	P	P	19 32 25.1	-0.8
	0.5nm,0.4s,baz=160,slow=4.7,SNR=4.7						
TXAR	Lajitas Array	145.02	44	PKPbc	PKPbc	19 41 45.4	-0.4
	0.2nm,0.5s,baz=293,slow=2.5,SNR=4.1						

TIR ***24*** *19:26:22.6, 41°.40N×21°.01E, h6^{km}, Md2.2/4*
ATH ***24*** *19:26:23.9, 41°.38N×20°.99E, h17^{km}±1^{km}, ML2.0/4, Error ellipse: s-maj=3.2km s-min=1.7km az=129.0*
CSEM ***24*** *19:26:24.9±0.2, 41°.32N×20°.96E, h2^{km}, ML2.2, Error ellipse: s-maj=7.1km s-min=4.3km az=72.0*
SKO ***24*** *19:26:24.1, 41°.28N×20°.91E, h15^{km}, M1.5, ML1.8*
BEO ***24*** *19:26:25.2±0.6, 41°.30N×20°.95E, h0^{km}, ML2.0/4*
ISC 24 19:26:24.5±0.9**, 41°.33N**±0°.02×**20°.93E**±0°.02**, h10**^{km}±8^{km}**, n54, σ0^{s}.86**/90**, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHR	Ohrid	0.24	204	i Pg	Pg	19 26 28.7	-0.6
OHR				i Sg	Sg	19 26 32.7	0.0
OHR				eLg	Lg	19 26 32.8	
	comp=N,188nm,0.3s						
OHR				eLg	Lg	19 26 32.8	
	comp=E,299nm,0.4s						
KRUS	Krusevo	0.24	80	i Pg	Pg	19 26 30.0	+0.5
KRUS				i Sg	Sg	19 26 34.1	+1.2
PHP	Peshkopia	0.51	314	i Pg	Pg	19 26 33.0	-1.4
	baz=4.0						
PHP				i Sg	Sg	19 26 40.8	-0.3
	baz=4.0						
PHP	Peshkopia	0.51	314	i PG	Pg	19 26 33.0	-1.4
PHP				i SG	Sg	19 26 40.8	-0.3
FNA	Florina	0.64	148	P	Pg	19 26 36.0	-0.9
FNA				S	Sb	19 26 46.4	-0.5
FNA				AML	AML	19 26 46.6	
	comp=E,646µm,0.2s						
FNA				AML	AML	19 26 46.6	
	comp=N,473µm,0.3s						
FNA	Florina	0.64	148	P	Pg	19 26 36.4	-0.5
FNA				S	Sb	19 26 46.2	-0.7
KBN	Korca	0.71	189	i Pg	Pb	19 26 38.8	-0.2
	baz=93						
KBN	Korca	0.71	189	i PG	Pb	19 26 38.9	-0.2
KBN				i SG	Sb	19 26 50.2	+1.3
SKO	Skopje	0.75	31	ePg	Pb	19 26 39.3	-0.3
SKO				eSg	Sb	19 26 49.1	-0.8
SKO	Skopje	0.75	31	i Pg	Pb	19 26 39.6	0.0
SKO				i Sg	Sb	19 26 49.5	-0.4
SKO	Skopje	0.75	31	ePg	Pb	19 26 39.3	-0.3
	baz=3.0						
SKO				eSg	Sb	19 26 49.1	-0.8
	baz=5.0						
NEST	Nestorio	0.92	174	P	Pg	19 26 40.6	-1.5
NEST				S	Sn	19 26 56.2	-0.6
NEST				AML	AML	19 26 59.7	
	comp=E,167µm,0.2s						
NEST				AML	AML	19 27 01.1	
	comp=N,113µm,0.2s						
NEST	Nestorio	0.92	174	P	Pg	19 26 41.4	-0.7
NEST				S	Sn	19 26 55.9	-1.0
PUK	Puka	1.05	313	i Sg	Sg	19 26 59.0	+0.6
	baz=8.0						
PUK	Puka	1.05	313	i PG	Pg	19 26 42.8	-1.9
PUK				i SG	Sg	19 26 59.0	+0.6
PENT	Pentalofos	1.14	172	P	Pb	19 26 46.0	-0.4
PENT				S	Sb	19 27 01.0	-0.3
PENT	Pentalofos	1.14	172	P	Pb	19 26 46.2	-0.2
PENT				S	Sb	19 27 01.8	+0.5
GRG	Griva	1.17	108	P	Pn	19 26 47.3	+0.3
GRG	Griva	1.17	108	P	Pb	19 26 46.5	-0.4
KZN	Kozani	1.21	148	P	Pn	19 26 48.2	+0.7
KZN				S	Sn	19 27 04.8	+0.9
KZN				AML	AML	19 27 09.6	
	comp=N,87µm,0.4s						
KZN				AML	AML	19 27 10.1	
	comp=E,75µm,0.3s						
KZN	Kozani	1.21	148	P	Pn	19 26 47.7	+0.2
KZN				S	Sn	19 27 04.4	+0.5
VAY	Valandovo	1.24	90	ePg	Pn	19 26 47.6	-0.2
VAY				eSg	Sn	19 27 04.1	-0.5
VAY	Valandovo	1.24	90	ePg	Pn	19 26 49.2	+1.3
VAY				i Sg	Sn	19 27 05.5	+0.9
VAY				eLg	Lg	19 27 06.2	
	comp=N,17nm,0.8s						
VAY				eLg	Lg	19 27 06.4	
	comp=E,13nm,0.6s						
VAY	Valandovo	1.24	90	ePg	Pn	19 26 47.6	-0.2
	baz=4.0						
VAY				eSg	Sn	19 27 04.1	-0.5
	baz=1.0						
KPRO	Kipourio	1.41	166	P	Pg	19 26 50.9	-0.7
KPRO				S	Sg	19 27 11.7	+1.9
KPRO				AML	AML	19 27 18.5	
	comp=E,80µm,0.5s						
KPRO				AML	AML	19 27 25.1	
	comp=N,76µm,0.9s						
KPRO	Kipourio	1.41	166	P	Pg	19 26 51.0	-0.5
KPRO				S	Sg	19 27 11.4	+1.5
KNT	Kendrikon	1.50	96	P	Pg	19 26 52.5	-0.7
KNT				S	Sn	19 27 09.5	-1.5
KNT	Kendrikon	1.50	96	P	Pb	19 26 51.9	-0.4
KNT				S	Sn	19 27 10.4	-0.6
PDG	Podgorica	1.66	312	ePn	Pb	19 26 55.5	+0.3
PDG				eSn	Sg	19 27 19.1	+1.1
PDG	Podgorica	1.66	312	ePn	Pb	19 26 55.5	+0.3
	baz=3.0						
PDG				eSn	Sg	19 27 19.1	+1.1
	baz=6.0						
LIT	Litokhoron	1.71	135	P	Pb	19 26 55.2	-0.7
LIT	Litokhoron	1.71	135	P	Pb	19 26 55.2	-0.7
SGD	Sagiada	1.79	197	P	Pb	19 26 57.5	+0.1
SGD	Sagiada	1.79	197	P	Pb	19 26 57.3	-0.1
KEK	Kerkira	1.83	208	P	Pn	19 26 56.1	+0.1
KEK	Kerkira	1.83	208	P	Pn	19 26 56.9	+0.9
IGT	Igoumenitsa	1.85	194	P	Pb	19 26 57.5	-0.9
IGT				S	Sg	19 27 24.7	+0.8
IGT	Igoumenitsa	1.85	194	P	Pb	19 26 57.7	-0.7
IGT				S	Sg	19 27 23.8	-0.1
SELS	Selova	1.90	4	ePn	Pb	19 26 58.6	-0.6
THL	Klokotos Trika	1.95	154	P	Pb	19 26 59.5	-0.5
THL				S	Sb	19 27 23.9	-0.5
THL	Klokotos Trika	1.95	154	P	Pb	19 26 59.2	-0.8
THL				S	Sb	19 27 24.1	-0.3
SJES	Sjenica	2.06	340	ePn	Pn	19 27 00.7	+1.5
SJES				eSn	Sb	19 27 28.7	+1.0
SJES	Sjenica	2.06	340	ePn	Pn	19 27 00.7	+1.5
	baz=6.0						
SJES				eSn	Sb	19 27 28.7	+1.0
	baz=6.0						
DSL	Palaion Diasel	2.20	177	P	Pb	19 27 04.2	-0.1
DSL	Palaion Diasel	2.20	177	P	Pb	19 27 03.4	-0.9
IVAS	Ivanjica	2.32	346	ePn	Pb	19 27 05.8	-0.6
IVAS				eSn	Sb	19 27 34.9	-0.2
IVAS	Ivanjica	2.32	346	ePn	Pb	19 27 05.8	-0.6
	baz=8.0						
IVAS				eSn	Sb	19 27 34.9	-0.2
	baz=3.0						
ZAPS	Zavoj	2.32	33	ePn	Pb	19 27 05.4	-1.0
AGG	Agios Georgios	2.54	155	P	Pn	19 27 05.5	-0.3
AGG				S	Sn	19 27 37.3	+0.4
AGG	Agios Georgios	2.54	155	P	Pn	19 27 06.4	+0.6
AGG				S	Sn	19 27 38.1	+1.2
GRUS	Gruza	2.56	357	ePn	Pn	19 27 07.5	+1.4
GRUS	Gruza	2.56	357	ePn	Pn	19 27 07.5	+1.4
BBLS	Lazići	2.77	337	ePn	Pn	19 27 10.5	+1.5
BBLS	Lazići	2.77	337	ePn	Pn	19 27 10.5	+1.5
	baz=8.0						

SKHL ***24*** *19:36:47.1±0.2, 47°.04N×153°.74E, h35^{km}±1^{km}, mb4.4/5*
IDC ***24*** *19:36:56.4±1.6, 49°.01N×151°.19E, h0^{km}, mb3.6/5, mb1 3.7/7, mb1mx3.4/68, mbtmp3.6/7, ML3.6/1, MS2.4/3, Ms1 2.4/3, ms1mx2.2/61, Error ellipse: s-maj=44.3km s-min=23.2km az=150.0*
ISC 24 19:36:51.4±2.1**, 47°.7N**±0°.3×**152°.8E**±0°.3**, h35**^{km}**, n19, σ2^{s}.07**/14**, mb3.8**/4**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril’s	3.73	34	eP	Pn	19 37 46.0	-0.5
SKR				AMB	AMB	19 37 49.0	
	60nm,0.7s						
SKR				eS	Sn	19 38 30.0	+0.8
SKR				A	A	19 38 43.0	
	132nm,0.5s						
SKR				A	A	19 38 43.0	
	138nm,0.5s						
KUR	Kuril’sk	4.18	237	i P	Pn	19 37 55.0	+2.3
KUR				AMB	AMB	19 37 59.0	
	28nm,0.4s						
KUR				AMB	AMB	19 37 59.0	
	20nm,0.4s						
KUR				AMB	AMB	19 37 59.0	
	50nm,0.4s						
KUR				i S	Sn	19 38 44.0	+3.7
KUR				A	A	19 39 01.0	
	84nm,0.5s						
KUR				A	A	19 39 01.0	
	52nm,0.5s						
PAU	Pauzhetka	4.63	33	eP	Pn	19 38 00.5	+1.8
PAU				AMB	AMB	19 38 23.3	
	15nm,0.4s						
PAU				eS	Sn	19 38 53.2	+2.0
PAU				A	A	19 38 54.4	
	260nm,0.8s						
SHO	Shikotan	5.63	230	i P	Pn	19 38 11.0	-1.6
SHO				AMB	AMB	19 38 24.0	
	13nm,0.3s						
SHO				AMB	AMB	19 38 24.0	
	8.0nm,0.3s						
SHO				AMB	AMB	19 38 24.0	
	21nm,0.3s						
SHO				i S	Sn	19 39 14.0	-2.1
SHO				A	A	19 39 33.0	
	26nm,0.5s						
SHO				A	A	19 39 33.0	
	39nm,0.5s						
YUK	Yuzh-Kuril’sk	6.05	236	i P	Pn	19 38 19.0	+0.7
YUK				AMB	AMB	19 38 29.0	
	1.0nm,0.2s						
YUK				AMB	AMB	19 38 29.0	
	32nm,0.2s						
YUK				AMB	AMB	19 38 29.0	
	8.0nm,0.2s						
YUK				i S	Sn	19 39 28.0	+1.8
YUK				A	A	19 39 43.0	
	51nm,0.5s						
YUK				A	A	19 39 43.0	
	62nm,0.5s						
PETK	Petropavlovsk-	6.30	28	Pn	Pn	19 38 23.6	+1.9
	baz=182,slow=12						
PETK				LR	LR	19 41 04.6	
	comp=Z,30nm,18.6s,baz=32,slow=43						
ASAJ	Asahikawa	7.95	247	Pn	Pn	19 38 50.9	+6.5
	0.9nm,0.3s,baz=53,slow=10,SNR=14						
ASAJ				LR	LR	19 41 32.3	
	comp=Z,28nm,18.5s,baz=34,slow=36						
MJAR	Matsushiro Arr	15.48	230	LR	LR	19 46 44.3	
	comp=Z,12nm,18.7s,baz=80,slow=38						
KSRS	Korea Array	20.89	250	P	Pn	19 41 33.8	+0.7
	0.5nm,0.4s,baz=57,slow=10,SNR=2.9						
H11N2	WAKE ISLAND Hy	30.11	153	T	T	20 14 25.1	
	baz=341,slow=76,SNR=152						
H11N1	WAKE ISLAND Hy	30.13	153	T	T	20 14 44.5	
	baz=341,slow=76,SNR=158						
H11N3	WAKE ISLAND Hy	30.13	153	T	T	20 14 45.2	
	baz=341,slow=76,SNR=113						
H11S1	WAKE ISLAND Hy	31.20	154	T	T	20 16 07.4	
	baz=342,slow=76,SNR=196						
H11S3	WAKE ISLAND Hy	31.21	154	T	T	20 16 08.1	
	baz=342,slow=76,SNR=197						
H11S2	WAKE ISLAND Hy	31.22	154	T	T	20 16 08.8	
	baz=342,slow=76,SNR=194						
KURBB	Kurchatov Arra	46.79	303	P	P	19 45 15.3	-1.9
	0.1nm,0.2s,baz=70,slow=8.0,SNR=3.5						
FINES	FINESS Array B	63.14	334	P	P	19 47 14.3	-0.8
	2.4nm,1.0s,baz=32,slow=8.2,SNR=4.7						
HFS	Hagfors	67.55	339	P	P	19 47 42.4	-1.2
	0.6nm,0.3s,baz=46,slow=4.2,SNR=10.0						
TXAR	Lajitas Array	77.23	61	P	P	19 48 54.2	+12
	0.3nm,0.6s,baz=297,slow=4.0,SNR=2.8						

ISK ***24*** *19:41:19.1, 38°.69N×43°.14E, h9^{km}, ML2.6/4*
CSEM ***24*** *19:41:20.1±0.3, 38°.66N×43°.18E, h10^{km}, ML2.6, Error ellipse: s-maj=5.6km s-min=5.3km az=109.0*
DDA ***24*** *19:41:20.3, 38°.68N×43°.21E, h7^{km}, Ml2.6*
ISC 24 19:41:20.6±0.9**, 38°.69N**±0°.02×**43°.17E**±0°.02**, h10**^{km}±7^{km}**, n28, σ1^{s}.47**/53**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	Van	0.20	118	PG	Pg	19 41 24.9	+0.1
VANB				SG	Sg	19 41 29.5	+1.8
VANB	Van	0.20	118	ePg	Pg	19 41 24.9	+0.1
VANB				eSg	Sg	19 41 29.5	+1.8
ADCV	BITLIS_Adilcev	0.37	289	i P	Pg	19 41 28.1	+0.2
ADCV				i S	Sb	19 41 35.0	-0.2
ADCV	BITLIS_Adilcev	0.37	289	P	Pg	19 41 28.1	+0.2
ADCV				S	Sb	19 41 35.0	-0.2
GEVA	Gevas	0.38	193	i P	Pg	19 41 27.2	-1.0
GEVA				i S	Sb	19 41 35.2	-0.4
GEVA	Gevas	0.38	193	P	Pg	19 41 27.2	-1.0
GEVA				S	Sb	19 41 35.2	-0.4
VMUR	Van-Muradiye	0.44	46	i P	Pg	19 41 29.3	+0.1
VMUR				i S	Sb	19 41 37.7	+0.5
VMUR	Van-Muradiye	0.44	46	P	Pg	19 41 29.3	+0.1
VMUR				S	Sb	19 41 37.7	+0.5
CLDR	Caldiran	0.74	52	PG	Pg	19 41 34.1	-0.9
CLDR				SG	Sb	19 41 45.1	-0.9

CLDR	**Caldiran**	**0.74**	**52**	*i* P	**Pg**	**19 41 34.6**	**-0.3**
CLDR				*i* S	**Sn**	**19 41 48.7**	**-0.1**
CLDR	**Caldiran**	**0.74**	**52**	*e*Pg	**Pg**	**19 41 34.1**	**-0.9**
CLDR	**Caldiran**	**0.74**	**52**	P	**Pg**	**19 41 34.6**	**-0.3**
CLDR				*e*Sg	**Sb**	**19 41 45.1**	**-0.9**
CLDR				S	**Sn**	**19 41 48.7**	**-0.1**
TUTA	**Tutak**	**0.77**	**339**	*i* P	**Pg**	**19 41 35.1**	**-0.3**
TUTA				*i* S	**Sb**	**19 41 46.1**	**-0.6**
TUTA	**Tutak**	**0.77**	**339**	P	**Pg**	**19 41 35.1**	**-0.3**
TUTA				S	**Sb**	**19 41 46.1**	**-0.6**
AGRB	**Hanur-Agry**	**0.90**	**351**	PG	**Pg**	**19 41 36.7**	**-1.2**
AGRB				SG	**Sg**	**19 41 49.3**	**-0.4**
AGRB	**Hanur-Agry**	**0.90**	**351**	*e*Pg	**Pg**	**19 41 36.7**	**-1.2**
AGRB				*e*Sg	**Sg**	**19 41 49.3**	**-0.4**
GURO	**Guroymak-BITLI**	**0.90**	**262**	PG	**Pg**	**19 41 36.4**	**-1.5**
GURO				SG	**Sg**	**19 41 49.0**	**-0.6**
GURO	**Guroymak-BITLI**	**0.90**	**262**	*e*Pg	**Pg**	**19 41 36.4**	**-1.5**
GURO				*e*Sg	**Sg**	**19 41 49.0**	**-0.6**
EKAR	**Karacoban**	**1.03**	**304**	*i* P	**Pn**	**19 41 43.0**	**+1.7**
EKAR				*i* S	**Sn**	**19 42 01.8**	**+5.9**
EKAR	**Karacoban**	**1.03**	**304**	P	**Pn**	**19 41 43.0**	**+1.7**
SRTM	**Siirt_Merkez**	**1.20**	**235**	*i* P	**Pg**	**19 41 43.5**	**-0.1**
SRTM				*i* S	**Sn**	**19 42 01.8**	**+1.9**
SRTM	**Siirt_Merkez**	**1.20**	**235**	P	**Pg**	**19 41 43.5**	**-0.1**
SRTM				S	**Sn**	**19 42 01.8**	**+1.9**
HAKT	**HAKKARI**	**1.21**	**159**	*i* P	**Pb**	**19 41 41.3**	**-2.3**
HAKT				*i* S	**Sn**	**19 42 03.6**	**+3.4**
HAKT	**HAKKARI**	**1.21**	**159**	P	**Pb**	**19 41 41.3**	**-2.3**
HAKT				S	**Sn**	**19 42 03.6**	**+3.4**
EATA	**Eleskirt**	**1.29**	**336**	*i* P	**Pg**	**19 41 45.5**	**+0.2**
EATA				*i* S	**Sn**	**19 42 02.3**	**0.0**
EATA	**Eleskirt**	**1.29**	**336**	P	**Pg**	**19 41 45.5**	**+0.2**
EATA				S	**Sn**	**19 42 02.3**	**0.0**
CUKT	**Cukurca**	**1.48**	**166**	PN	**Pn**	**19 41 46.9**	**-0.4**
CUKT	**Cukurca**	**1.48**	**166**	*e*Pn	**Pn**	**19 41 46.9**	**-0.4**

IDC ***24*** *19:41:37.8±4.7, 12.°08S×166.°68E, h117^{km}±38^{km}, mb3.9/14, mb1 4.0/15, mb1mx3.8/46, mbtmp4.3/15, Error ellipse: s-maj=29.9km s-min=14.1km az=94.0*

ISCJB ***24*** *19:41:40.3±0.3, 12.°07S±0.°05×166.°46E±0.°07, h150^{km}, mb4.8/41, Error ellipse: s-maj=9.5km s-min=6.3km az=163.1*

NEIC ***24*** *19:41:42.5±0.3, 12.°04S×166.°42E, mb5.1/25, Error ellipse: s-maj=8.1km s-min=6.4km az=73.0*

ISC 24 19:41:42.4±0.4**, 12.°04S**±0.°07×**166.°39E**±0.°08**, h150**^{km}**, n70, σ1.^{s}09**/78**, mb4.8**/41**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**6.84**	**292**	P	**Pn**	**19 43 19.7**	**-0.7**
	4.2nm,0.3s,baz=252,slow=19,SNR=2.2						
DZM	**Mont Dzumac**	**9.98**	**180**	*e*Pn	**Pn**	**19 44 00.6**	**-1.6**
CTAO	**Charters Tower**	**20.92**	**245**	*e*P	**P**	**19 46 15.4**	**+2.0**
	70nm,2.0s						
AFI	**Afiamalu**	**21.36**	**97**	*e*P	**P**	**19 46 19.6**	**+1.5**
	157nm,1.6s						
RAO	**Raoul Island**	**22.52**	**142**	*e*P	**P**	**19 46 30.9**	**+1.2**
	518nm,0.8s						
COEN	**Coen**	**22.70**	**263**	*e*P	**P**	**19 46 33.4**	**+1.8**
	39nm,1.4s						
ARMA	**Armidale**	**22.84**	**215**	*e*P	**P**	**19 46 34.6**	**+1.8**
	41nm,1.4s						
OUZ	**Omahuta**	**23.99**	**165**	*e*P	**P**	**19 46 44.7**	**+1.5**
	182nm,1.9s						
BKZ	**Black Stump Fm**	**28.47**	**163**	*e*P	**P**	**19 47 22.4**	**-1.0**
	47nm,1.4s						
BFZ	**Birch Farm**	**29.82**	**165**	*e*P	**P**	**19 47 33.7**	**-1.7**
	378nm,1.8s						
THZ	**Tophouse**	**30.16**	**170**	*e*P	**P**	**19 47 37.4**	**-0.9**
	103nm,1.6s						
STKA	**Stephens Creek**	**30.18**	**225**	P	**P**	**19 47 37.9**	**-0.7**
	3.8nm,0.8s,baz=62,slow=11,SNR=4.4						
STKA	**Stephens Creek**	**30.18**	**225**	*e*P	**P**	**19 47 37.3**	**-1.3**
	3.2nm,1.3s						
KHZ	**Kahutara**	**30.90**	**170**	*e*P	**P**	**19 47 43.1**	**-1.6**
	152nm,1.5s						
LTZ	**Lake Taylor**	**31.05**	**172**	*e*P	**P**	**19 47 45.7**	**-0.5**
	99nm,1.7s						
OXZ	**Oxford**	**31.56**	**172**	*e*P	**P**	**19 47 50.6**	**+0.1**
	123nm,1.9s						
WB2	**Warramunga Arr**	**31.74**	**252**	*e*P	**P**	**19 47 52.9**	**+0.4**
	29nm,1.9s						
WR1	**Warramunga Arr**	**31.75**	**252**	*e*P	**P**	**19 47 53.1**	**+0.5**
	16nm,1.4s						
WR1				*e*PcP	**PcP**	**19 50 40.4**	**-0.1**
WRA	**Warramunga Arr**	**31.75**	**252**	P	**P**	**19 47 53.1**	**+0.5**
	1.3nm,0.5s,baz=84,slow=9.1,SNR=22						
WRA				PcP	**PcP**	**19 50 40.4**	**-0.1**
	1.3nm,0.8s,baz=74,slow=3.4,SNR=7.6						
RPZ	**Rata Peaks**	**31.82**	**174**	*e*P	**P**	**19 47 52.6**	**-0.2**
	125nm,1.9s						
MQZ	**McQueen's Vall**	**32.02**	**171**	*e*P	**P**	**19 47 54.1**	**-0.4**
	236nm,1.7s						
LBZ	**Lake Benmore**	**32.40**	**175**	*e*P	**P**	**19 47 57.0**	**-0.9**
	117nm,1.8s						
WKZ	**Wanaka**	**32.75**	**177**	*e*P	**P**	**19 47 58.9**	**-2.2**
	223nm,2.0s						
AS01	**Alice Springs**	**32.89**	**245**	*e*P	**P**	**19 48 00.0**	**-2.5**
AS31	**Alice Springs**	**32.93**	**245**	*e*P	**P**	**19 48 01.8**	**-1.0**
	1.4nm,0.5s						
ASAR	**Alice Springs**	**32.93**	**245**	P	**P**	**19 48 03.0**	**+0.2**
	4.3nm,0.7s,baz=68,slow=9.8,SNR=57						
ASAR				PcP	**PcP**	**19 50 43.6**	**-0.2**
	1.0nm,0.7s,baz=75,slow=2.6,SNR=7.7						
GUMO	**Guam**	**33.22**	**319**	*e*P	**P**	**19 48 03.9**	**-1.4**
	200nm,1.5s						
MTN	**Manton Dam**	**34.42**	**265**	*e*P	**P**	**19 48 17.1**	**+1.3**
	30nm,1.7s						
BBOO	**Buckleboo**	**34.63**	**228**	*e*P	**P**	**19 48 18.3**	**+0.9**
	88nm,1.6s						
XMAS	**Kiritimati**	**38.56**	**71**	*e*P	**P**	**19 48 53.4**	**+2.4**
	180nm,1.4s						
FORT	**Forrest**	**40.00**	**236**	*e*P	**P**	**19 49 03.7**	**+1.0**
	39nm,0.9s						
LUWI	**Luwuk**	**44.61**	**281**	*e*P	**P**	**19 49 41.8**	**+1.6**
	25nm,0.8s						
MBWA	**Marble Bar**	**45.48**	**252**	*e*P	**P**	**19 49 48.3**	**+1.3**
	42nm,1.8s						
MLOA	**Mauna Loa Obse**	**48.87**	**50**	*e*P	**P**	**19 50 14.1**	**+0.4**
	291nm,1.5s						
MJAR	**Matsushiro Arr**	**55.14**	**332**	P	**P**	**19 50 58.7**	**-0.6**
	1.1nm,0.6s,baz=167,slow=9.0,SNR=5.9						
MAJO	**Matsushiro**	**55.14**	**332**	*e*P	**P**	**19 50 58.7**	**-0.6**
JNU	**Nakatsue**	**56.25**	**324**	P	**P**	**19 51 07.0**	**-0.3**
	3.3nm,0.7s,baz=164,slow=15,SNR=3.8						
JNU	**Nakatsue**	**56.25**	**324**	*e*P	**P**	**19 51 06.4**	**-0.9**
	44nm,2.0s						
ASAJ	**Asahikawa**	**59.93**	**340**	P	**P**	**19 51 33.2**	**+0.5**
	2.2nm,0.5s,baz=151,slow=19,SNR=9.8						
ASAJ	**Asahikawa**	**59.93**	**340**	*e*P	**P**	**19 51 32.0**	**-0.6**
	9.1nm,1.3s						
KSRS	**Korea Array**	**61.05**	**326**	P	**P**	**19 51 40.7**	**+0.3**
	1.3nm,0.7s,baz=128,slow=7.3,SNR=8.3						
KSAR	**Wonju Array Be**	**61.06**	**326**	P	**P**	**19 51 40.7**	**+0.2**
PETK	**Petropavlovsk-**	**65.31**	**354**	P	**P**	**19 52 08.2**	**+0.1**
	0.6nm,0.5s,baz=304,slow=47						
PEA1	**Petropavlovsk-**	**65.31**	**354**	*e*P	**P**	**19 52 08.2**	**0.0**
VNDA	**Vanda**	**65.52**	**181**	P	**P**	**19 52 08.7**	**-0.5**
	0.7nm,0.6s,baz=353,slow=6.0,SNR=7.5						
VNDA	**Vanda**	**65.52**	**181**	*e*P	**P**	**19 52 08.3**	**-0.9**
CM31	**Chiang Mai Arr**	**73.08**	**294**	*e*P	**P**	**19 52 57.4**	**+0.6**
CMAR	**Chiang Mai Arr**	**73.08**	**294**	P	**P**	**19 52 58.5**	**+1.7**
	1.5nm,0.6s,baz=125,slow=5.2,SNR=11						
QSPA	**South Pole Qui**	**77.97**	**180**	P	**P**	**19 53 23.0**	**-0.9**
	1.9nm,0.5s,baz=345,slow=2.0,SNR=12						
ULN	**Ulaanbaatar**	**79.47**	**324**	*e*P	**P**	**19 53 31.1**	**-1.3**
	3.9nm,0.7s						
SONA0	**Songino Array**	**79.83**	**324**	*e*P	**P**	**19 53 34.6**	**+0.3**
SONM	**Songino Array**	**79.83**	**324**	P	**P**	**19 53 34.6**	**+0.3**
	1.1nm,0.3s,baz=144,slow=5.9,SNR=18						
SONA1	**Songino Array**	**79.83**	**324**	*e*P	**P**	**19 53 34.2**	**-0.2**
ILAR	**Eielson Array**	**84.25**	**18**	P	**P**	**19 53 54.9**	**-1.9**
	1.3nm,0.6s,baz=231,slow=5.3,SNR=10						
ILB	**Eielson Array**	**84.25**	**18**	*e*P	**P**	**19 53 54.5**	**-2.3**
EMB	**Emerald Bay**	**85.03**	**49**	*e*P	**P**	**19 54 02.4**	**+0.8**
MK01	**Makanchi Array**	**94.66**	**317**	*e*P	**P**	**19 54 46.0**	**-0.5**
MK01				*e*pP	**pP**	**19 55 25.7**	**+1.1**
MK31	**Makanchi Array**	**94.67**	**317**	*e*P	**P**	**19 54 45.8**	**-0.7**
MK31				*e*pP	**pP**	**19 55 24.9**	**+0.3**
MK32	**Makanchi Array**	**94.67**	**317**	*e*P	**P**	**19 54 46.5**	**-0.1**
MKAR	**Makanchi Array**	**94.67**	**317**	P	**P**	**19 54 46.5**	**-0.1**
	2.6nm,0.6s,baz=91,slow=6.2,SNR=30						
MKAR	**Makanchi Array**	**94.67**	**317**	*e*P	**P**	**19 54 46.4**	**-0.2**
	17nm,0.6s						
MKAR				*e*pP	**pP**	**19 55 25.0**	**+0.4**
ARA0	**ARCESS Array S**	**117.45**	**346**	*e*PKPdf	**PKPdf**	**20 00 08.5**	**-1.3**
ARCES	**ARCESS Array B**	**117.45**	**346**	PKP	**PKPdf**	**20 00 08.5**	**-1.3**
	0.8nm,0.3s,baz=70,slow=2.0,SNR=39						
FIA0	**FINESS Array S**	**122.92**	**339**	*e*PKPdf	**PKPdf**	**20 00 19.0**	**-1.5**
FINES	**FINESS Array B**	**122.92**	**339**	PKP	**PKPdf**	**20 00 19.0**	**-1.5**
	0.7nm,0.6s,baz=129,slow=2.7,SNR=6.8						
CLL	**Collm**	**135.26**	**336**	*e*PKPdf	**PKPdf**	**20 00 44.0**	**-0.2**
KEST	**Kesra**	**148.58**	**322**	PKPbc	**PKPbc**	**20 01 12.1**	**-0.1**
	3.9nm,0.6s,baz=280,slow=3.0,SNR=6.2						
KEST	**Kesra**	**148.58**	**322**	*e*PKPbc	**PKPbc**	**20 01 12.0**	**-0.2**
ES19	**SONSECA Array**	**151.14**	**344**	*e*PKPbc	**PKPbc**	**20 01 17.7**	**-0.6**
ES19				*e*PKPab	**PKPab**	**20 01 26.0**	**-0.4**
ESDC	**Sonseca Array**	**151.18**	**344**	PKPbc	**PKPbc**	**20 01 17.9**	**-0.5**
	0.9nm,0.8s,baz=25,slow=3.3,SNR=6.5						
ESDC				PKPab	**PKPab**	**20 01 26.5**	**-0.1**
	0.6nm,0.5s,baz=12,slow=3.4,SNR=6.9						

IDC ***24*** *19:45:11.0±2.4, 17.°87N×102.°06W, h0^{km}, mb3.8/4, mb1 4.0/6, mb1mx3.7/53, mbtmp3.7/6, ML3.7/2, MS3.1/6, Ms1 3.1/6, ms1mx2.7/46, Error ellipse: s-maj=49.4km s-min=22.2km az=31.0*

ISCJB ***24*** *19:45:17.1±0.4, 18.°07N±0.°04×101.°85W±0.°03, h51^{km}±7^{km}, mb3.8/6, MS3.0/3, Error ellipse: s-maj=7.6km s-min=3.8km az=25.1*

NEIC ***24*** *19:45:19.5±0.0, 18.°07N×101.°86W, h24^{km}, mb4.1/4, MD4.1(MEX), After MEX.*

MEX ***24*** *19:45:19.6±0.5, 18.°08N×101.°85W, h24^{km}±11^{km}, MD4.1*

ISC 24 19:45:18.0±1.0**, 18.°07N**±0.°04×**101.°86W**±0.°03**, h42**^{km}±13^{km}**, n43, σ1.^{s}29**/58**, mb3.8**/6**, MS2.9**/3**, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	**0.60**	**141**	*e*P	**Pn**	**19 45 29.3**	**-0.8**
ZIIG				*i* S	**Sn**	**19 45 37.5**	**-1.1**
ZIIG	**Zihuatanejo**	**0.60**	**141**	*e*Pn	**Pn**	**19 45 29.3**	**-0.8**
MMIG	**Aquila**	**1.43**	**279**	*e*P	**Pn**	**19 45 41.1**	**-0.3**
MMIG				*e*S	**Sn**	**19 45 58.8**	**-0.2**
MMIG	**Aquila**	**1.43**	**279**	*e*Pn	**Pn**	**19 45 41.0**	**-0.3**
MMIG				*e*Sn	**Sn**	**19 45 58.6**	**-0.4**
ARIG	**Puente Sto Nin**	**1.46**	**81**	*e*P	**Pn**	**19 45 41.1**	**-0.7**
ARIG				*e*S	**Sn**	**19 45 58.7**	**-1.1**
ARIG	**Puente Sto Nin**	**1.46**	**81**	*e*P	**Pn**	**19 45 41.1**	**-0.7**
ARIG				*e*S	**Sn**	**19 45 58.7**	**-1.1**
MOIG	**Morelia**	**1.72**	**22**	*e*P	**Pn**	**19 45 45.7**	**-0.1**
MOIG				*e*S	**Sn**	**19 46 06.4**	**-0.2**
MOIG	**Morelia**	**1.72**	**22**	*e*Pn	**Pn**	**19 45 45.5**	**-0.2**
MOIG				*e*Sn	**Sn**	**19 46 01.8**	**-4.8**
CAIG	**El Cayaco**	**1.83**	**123**	*e*P	**Pn**	**19 45 47.0**	**+0.1**
CAIG				*i* S	**Sn**	**19 46 08.5**	**-0.4**
CAIG	**El Cayaco**	**1.83**	**123**	*e*Pn	**Pn**	**19 45 47.0**	**+0.1**
MEIG	**Mezcala**	**2.14**	**93**	*e*P	**Pn**	**19 45 51.7**	**+0.4**
MEIG				*e*S	**Sn**	**19 46 16.6**	**-0.1**
MEIG	**Mezcala**	**2.14**	**93**	*e*Pn	**Pn**	**19 45 51.7**	**+0.4**
ACP2	**Acapulco**	**2.23**	**122**	*i* P	**Pn**	**19 45 53.7**	**+1.2**
ACP2				*i* S	**Sn**	**19 46 19.3**	**+0.5**
ACX	**Acapulco**	**2.25**	**122**	*e*P	**Pn**	**19 45 53.1**	**+0.3**
ACX				*i* S	**Sn**	**19 46 18.8**	**-0.6**
ACX	**Acapulco**	**2.25**	**122**	*e*Pn	**Pn**	**19 45 53.1**	**+0.3**
PLIG	**Platanillo**	**2.27**	**81**	*e*P	**Pn**	**19 45 53.2**	**+0.2**
PLIG				*e*S	**Sn**	**19 46 19.6**	**-0.2**
PLIG	**Platanillo**	**2.27**	**81**	*e*Pn	**Pn**	**19 45 53.2**	**+0.2**
PLIG				*e*Sn	**Sn**	**19 46 19.6**	**-0.2**
SFJM	**Santa Fe**	**2.65**	**335**	*e*P	**Pn**	**19 45 59.2**	**+0.8**
SFJM				*i* S	**Sn**	**19 46 28.8**	**-0.6**
SFJM	**Santa Fe**	**2.65**	**335**	*e*Pn	**Pn**	**19 45 59.2**	**+0.8**
YAIG	**Yautepec**	**2.77**	**73**	*e*P	**Pn**	**19 46 00.1**	**+0.1**
YAIG				*e*S	**Sn**	**19 46 32.0**	**-0.3**
YAIG	**Yautepec**	**2.77**	**73**	*e*Pn	**Pn**	**19 46 00.1**	**+0.1**
UNM	**Universidad Na**	**2.84**	**63**	*e*Pn	**Pn**	**19 46 04.5**	**+3.5**
TLIG	**Tlapa**	**3.18**	**99**	*e*Pn	**Pn**	**19 46 06.3**	**+0.7**
CJM	**Chamela**	**3.33**	**296**	*e*P	**Pn**	**19 46 08.1**	**+0.5**
CJM				*e*S	**Sn**	**19 46 46.3**	**+0.4**
CJM	**Chamela**	**3.33**	**296**	*e*Pn	**Pn**	**19 46 08.1**	**+0.5**
ZAIG	**Zacatecas**	**4.72**	**352**	*e*Pn	**Pn**	**19 46 28.3**	**+1.3**
ZAIG				*e*Sn	Sn	19 47 42.4	+22
LVIG	**Laguna Verde**	**5.41**	**71**	*e*Pn	**Pn**	**19 46 36.6**	**+0.4**
CMIG	**Matias Romero**	**6.73**	**97**	Pn	**Pn**	**19 46 55.0**	**+0.8**
	2.2nm,0.3s,baz=270,slow=10,SNR=18						
CMIG				Sn	**Sn**	**19 48 09.7**	**+0.1**
	1.0nm,0.3s,baz=312,slow=19,SNR=3.2						
CMIG				Lg	Lg	19 48 48.4	
	2.5nm,0.3s,baz=344,slow=8.5,SNR=8.1						
CMIG				LR	LR	19 49 35.9	
	comp=Z,142nm,19.1s,baz=256,slow=38						
LNIG	**Linares**	**7.15**	**18**	*e*Pn	**Pn**	**19 47 00.3**	**+0.2**
SLBS	**Sierra La Lagu**	**9.39**	**308**	*e*Pn	**Pn**	**19 47 33.0**	**+2.0**
LTX	**Lajitas**	**11.33**	**352**	*e*Pn	**Pn**	**19 48 00.3**	**+2.8**
TXAR	**Lajitas Array**	**11.33**	**352**	Pn	**Pn**	**19 48 00.3**	**+2.8**
	0.1nm,0.3s,baz=171,slow=12,SNR=5.8						
TXAR				Lg	Lg	19 51 14.4	
	0.0nm,0.3s,baz=185,slow=28,SNR=2.9						
TXAR				LR	LR	19 52 50.9	
	comp=Z,90nm,18.0s,baz=0.0,slow=40						
TX31	**Lajitas Ar. Si**	**11.34**	**352**	*e*Pn	**Pn**	**19 47 58.3**	**+0.8**
ANMO	**Albuquerque**	**17.30**	**347**	LR	LR	19 56 01.7	
	comp=Z,42nm,20.6s,baz=224,slow=37						
V40A	**Witts Springs**	**19.40**	**23**	*e*P	**P**	**19 49 39.2**	**-1.3**
	15nm,0.6s						
SDCO	**Great Sand Dun**	**19.86**	**351**	*e*P	**P**	**19 49 46.5**	**+0.6**
	3.9nm,1.3s						
KNB	**Kanab**	**21.20**	**335**	*e*P	**P**	**19 50 01.9**	**+1.7**
	4.9nm,1.0s						
BGU	**Big Grassy Mou**	**24.72**	**339**	*e*P	**P**	**19 50 31.9**	**-3.6**
	12nm,1.5s						
NVAR	**Mina Array Bea**	**24.85**	**328**	P	**P**	**19 50 36.7**	**-0.1**
	1.7nm,0.7s,baz=141,slow=12,SNR=6.5						
NVAR				LR	LR	20 00 24.4	
	comp=Z,38nm,21.7s,baz=287,slow=37						
PDAR	**Pinedale Array**	**25.47**	**347**	P	**P**	**19 50 41.6**	**-0.7**
	0.3nm,0.5s,baz=167,slow=12,SNR=4.9						
PDAR				LR	LR	20 02 01.2	
	comp=Z,37nm,20.4s,baz=226,slow=39						
ULM	**Lac du Bonnet**	**32.46**	**7**	LR	LR	20 04 57.7	
	comp=Z,37nm,18.6s,baz=232,slow=36						
ILAR	**Eielson Array**	**55.48**	**338**	P	**P**	**19 54 47.9**	**-0.4**
	0.6nm,0.8s,baz=150,slow=5.2,SNR=4.7						
ARCES	**ARCESS Array B**	**85.09**	**16**	P	**P**	**19 57 49.2**	**+0.1**
	2.3nm,1.0s,baz=318,slow=6.6,SNR=2.8						

MEX 24 19:49:27.9±0.3**, 18.°50N**×**104.°64W, h16**^{km}±71^{km}**, MD3.6, Near coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CJM	**Chamela**	**1.06**	**339**	*i* P	Pb	19 49 44.3	-3.6
CJM				*i* S	Sb	19 49 57.1	-4.6
MMIG	**Aquila**	**1.25**	**100**	*e*P	Pn	19 49 46.8	-3.9
MMIG				*e*S	Sb	19 50 01.8	-5.1
ZIIG	**Zihuatanejo**	**3.15**	**106**	*i* P	Pn	19 50 14.1	-2.7
ARIG	**Puente Sto Nin**	**4.08**	**92**	*e*P	Pn	19 50 27.9	-1.9
ARIG				*i* S	Sn	19 51 13.4	-3.8

BEO ***24*** *19:50:21.3±0.7, 41.°03N×20.°04E, h5^{km}±3^{km}, ML2.4/5*

TIR ***24*** *19:50:22.4, 41.°13N×20.°13E, h6^{km}, Md2.7/5*

CSEM ***24*** *19:50:22.3±0.1, 41.°13N×20.°05E, h2^{km}, ML2.2, Error ellipse: s-maj=3.9km s-min=2.0km az=61.0*

SKO ***24*** *19:50:23.0, 41.°11N×20.°04E, h13^{km}, M2.0, ML2.4*

THE ***24*** *19:50:23.0, 41.°15N×20.°08E, h4^{km}±1^{km}, ML2.2/10, Error ellipse: s-maj=1.2km s-min=0.6km az=77.0*

PDG ***24*** *19:50:23.5±0.6, 41.°17N×20.°04E, h11^{km}±1^{km}, ML2.7/14, Error ellipse: s-maj=0.9km s-min=1.4km az=0.0*

ISC 24 19:50:22.6±1.0**, 41.°14N**±0.°01×**20.°05E**±0.°02**, h9**^{km}±9^{km}**, n115, σ1.^{s}04**/205**, 12C-10D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHR	**Ohrid**	**0.57**	**93**	*i* Pg	**Pg**	**19 50 33.8**	**+0.1**
OHR				*i* Sg	**Sb**	**19 50 42.3**	**-0.6**
OHR				*e*Lg	Lg	19 50 42.5	
	comp=N,333nm,0.7s						
OHR				*e*Lg	Lg	19 50 42.6	
	comp=E,217nm,0.6s						
PHP	**Peshkopia**	**0.62**	**28**	P	**Pg**	**19 50 34.3**	**-0.3**
PHP				S	**Sb**	**19 50 44.0**	**-0.5**
PHP	**Peshkopia**	**0.62**	**28**	*i* Pg	**Pg**	**19 50 34.4**	**-0.2**
PHP				*i* Sg	**Sb**	**19 50 43.9**	**-0.5**
PHP	**Peshkopia**	**0.62**	**28**	*i* PG	**Pg**	**19 50 34.4**	**-0.2**
PHP				*i* SG	**Sb**	**19 50 43.9**	**-0.5**
PHP	**Peshkopia**	**0.62**	**28**	*i* PG	**Pg**	**19 50 34.4**	**-0.2**
PHP				*i* SG	**Sb**	**19 50 43.9**	**-0.5**
KBN	**Korca**	**0.76**	**132**	P	**Pg**	**19 50 37.2**	**-0.1**
KBN				S	**Sb**	**19 50 48.6**	**+0.1**
KBN	**Korca**	**0.76**	**132**	*i* Pg	**Pg**	**19 50 37.0**	**-0.4**
KBN				S	**Sb**	**19 50 48.6**	**+0.1**
KBN	**Korca**	**0.76**	**132**	*i* PG	**Pg**	**19 50 37.0**	**-0.4**
KBN				*i* SG	**Sb**	**19 50 48.7**	**+0.1**
KBN	**Korca**	**0.76**	**132**	*i* PG	**Pg**	**19 50 37.0**	**-0.4**
KBN				*i* SG	**Sb**	**19 50 48.7**	**+0.1**
PUK	**Puka**	**0.91**	**353**	*i* Pg	**Pg**	**19 50 40.0**	**-0.1**
PUK				*i* Sg	**Sn**	**19 50 54.0**	**-0.9**
PUK	**Puka**	**0.91**	**353**	*i* PG	**Pg**	**19 50 40.0**	**-0.1**
PUK				*i* SG	**Sn**	**19 50 54.0**	**-0.9**
PUK	**Puka**	**0.91**	**353**	*i* PG	**Pg**	**19 50 40.0**	**-0.1**
PUK				*i* SG	**Sn**	**19 50 54.0**	**-0.9**
KRUS	**Krusevo**	**0.93**	**76**	*i* Pg	**Pg**	**19 50 39.6**	**-1.0**
KRUS				*i* Sg	**Sg**	**19 50 53.1**	**+0.3**
ULC	**Ulcinj**	**1.02**	**324**	⇑*i*Pg	**Pb**	**19 50 42.3**	**-0.1**
ULC				*e*Sg	**Sn**	**19 50 57.8**	**+0.3**
ULC	**Ulcinj**	**1.02**	**324**	⇑*i*Pg	**Pb**	**19 50 42.3**	**-0.1**
ULC				*e*Sg	**Sn**	**19 50 57.8**	**+0.3**
NEST	**Nestorio**	**1.05**	**133**	P	**Pg**	**19 50 42.4**	**-0.4**
NEST				S	**Sn**	**19 50 58.3**	**-0.1**
NEST	**Nestorio**	**1.05**	**133**	P	**Pg**	**19 50 42.4**	**-0.4**
NEST				S	**Sn**	**19 50 58.3**	**-0.1**
FNA	**Florina**	**1.07**	**109**	P	**Pg**	**19 50 42.6**	**-0.5**
FNA				S	**Sb**	**19 50 57.1**	**-0.2**
FNA	**Florina**	**1.07**	**109**	P	**Pg**	**19 50 42.6**	**-0.5**
FNA				S	**Sb**	**19 50 57.1**	**-0.2**
BCI	**Bajram Curri**	**1.22**	**1**	*i* Pn	**Pg**	**19 50 46.9**	**+0.8**
BCI				*i* Sn	**Sn**	**19 51 05.0**	**+2.5**
BCI	**Bajram Curri**	**1.22**	**1**	*i* PN	**Pg**	**19 50 46.9**	**+0.8**
BCI				*i* SN	**Sn**	**19 51 05.0**	**+2.5**
BCI	**Bajram Curri**	**1.22**	**1**	*i* PN	**Pg**	**19 50 46.9**	**+0.8**
BCI				*i* SN	**Sn**	**19 51 05.0**	**+2.5**
DRME	**Dracevica, Mon**	**1.23**	**329**	⇑*i*Pg	**Pn**	**19 50 45.8**	**-0.1**
DRME				*e*Sg	**Sn**	**19 51 05.0**	**+2.4**
DRME	**Dracevica, Mon**	**1.23**	**329**	⇑*i*Pg	**Pn**	**19 50 45.8**	**-0.1**
DRME				*e*Sg	**Sn**	**19 51 05.0**	**+2.4**
PENT	**Pentalofos**	**1.26**	**138**	P	**Pg**	**19 50 46.5**	**-0.3**
PENT				S	**Sn**	**19 51 04.8**	**+1.3**
PENT	**Pentalofos**	**1.26**	**138**	P	**Pg**	**19 50 46.5**	**-0.3**
PENT				S	**Sn**	**19 51 04.8**	**+1.3**
SRN	**Sarande**	**1.26**	**182**	P	**Pg**	**19 50 46.6**	**-0.2**
SRN				S	**Sn**	**19 51 05.1**	**+1.7**
SRN	**Sarande**	**1.26**	**182**	P	**Pg**	**19 50 46.6**	**-0.2**
SRN				*i* Sn	**Sn**	**19 51 06.2**	**+2.8**
SRN	**Sarande**	**1.26**	**182**	*i* PN	**Pg**	**19 50 46.6**	**-0.2**
SRN				*i* SN	**Sn**	**19 51 06.2**	**+2.8**
SRN	**Sarande**	**1.26**	**182**	*i* PN	**Pg**	**19 50 46.6**	**-0.2**
SRN				*i* SN	**Sn**	**19 51 06.2**	**+2.8**
SKO	**Skopje**	**1.33**	**51**	*e*Pg	**Pn**	**19 50 47.0**	**-0.4**
SKO				*e*Sg	**Sg**	**19 51 06.0**	**+0.4**
SKO	**Skopje**	**1.33**	**51**	P	**Pn**	**19 50 47.4**	**0.0**
SKO				S	**Sg**	**19 51 07.1**	**+1.5**
SKO	**Skopje**	**1.33**	**51**	*i* Pg	**Pn**	**19 50 47.4**	**0.0**
SKO				*i* Sg	**Sg**	**19 51 06.6**	**+1.0**
SKO	**Skopje**	**1.33**	**51**	*e*Pg	**Pn**	**19 50 47.0**	**-0.4**
SKO	**Skopje**	**1.33**	**51**	P	**Pn**	**19 50 47.4**	**0.0**
SKO				*e*Sg	**Sg**	**19 51 06.0**	**+0.4**
SKO				S	**Sg**	**19 51 07.1**	**+1.5**
PDG	**Podgorica**	**1.42**	**336**	*e*Pg	**Pb**	**19 50 48.8**	**-0.4**
PDG				*e*Sg	**Sg**	**19 51 08.6**	**+0.4**
PDG	**Podgorica**	**1.42**	**336**	P	**Pb**	**19 50 48.8**	**-0.4**
PDG				S	**Sg**	**19 51 09.0**	**+0.8**
PDG	**Podgorica**	**1.42**	**336**	P	**Pb**	**19 50 48.8**	**-0.4**
PDG	**Podgorica**	**1.42**	**336**	⇑*i*Pg	**Pb**	**19 50 49.1**	**-0.1**
PDG				*e*Sg	**Sg**	**19 51 08.6**	**+0.4**
PDG				S	**Sg**	**19 51 09.0**	**+0.8**
TTG	**Podgorica**	**1.42**	**336**	⇑*i*Pg	**Pb**	**19 50 49.1**	**-0.1**
TTG				*e*Sg	**Sg**	**19 51 11.2**	**+3.0**
KEK	**Kerkira**	**1.44**	**188**	P	**Pn**	**19 50 48.1**	**-0.7**
KEK				S	**Sg**	**19 51 09.5**	**+0.6**
KEK	**Kerkira**	**1.44**	**188**	P	**Pn**	**19 50 48.1**	**-0.7**
KEK				S	**Sg**	**19 51 09.5**	**+0.6**
BUM	**Brajici-Budva**	**1.45**	**324**	⇓*i*Pg	**Pb**	**19 50 49.3**	**-0.4**
BUM				*e*Sg	**Sg**	**19 51 11.8**	**+2.7**
BUM	**Brajici-Budva**	**1.45**	**324**	⇓*i*Pg	**Pb**	**19 50 49.3**	**-0.4**
BUM				*e*Sg	**Sg**	**19 51 11.8**	**+2.7**
PVY	**Plav**	**1.45**	**357**	⇓*i*Pg	**Pb**	**19 50 49.9**	**0.0**
PVY				*e*Sg	**Sg**	**19 51 11.7**	**+2.3**
PVY	**Plav**	**1.45**	**357**	⇓*i*Pg	**Pb**	**19 50 49.9**	**0.0**
PVY				*e*Sg	**Sg**	**19 51 11.7**	**+2.3**
SGD	**Sagiada**	**1.53**	**175**	P	**Pn**	**19 50 50.3**	**+0.2**
SGD	**Sagiada**	**1.53**	**175**	P	**Pn**	**19 50 50.3**	**+0.2**
KPRO	**Kipourio**	**1.55**	**139**	P	**Pb**	**19 50 51.3**	**-0.2**
KPRO				S	**Sg**	**19 51 12.3**	**-0.2**
KPRO	**Kipourio**	**1.55**	**139**	P	**Pb**	**19 50 51.3**	**-0.2**
KPRO				S	**Sg**	**19 51 12.3**	**-0.2**
KZN	**Kozani**	**1.55**	**122**	P	**Pn**	**19 50 50.2**	**-0.3**
KZN				S	**Sg**	**19 51 12.6**	**0.0**
KZN	**Kozani**	**1.55**	**122**	P	**Pn**	**19 50 50.2**	**-0.3**
KZN				S	**Sg**	**19 51 12.6**	**0.0**
IGT	**Igoumenitsa**	**1.62**	**172**	P	**Pn**	**19 50 51.3**	**0.0**
IGT				S	**Sg**	**19 51 14.3**	**-0.5**
IGT	**Igoumenitsa**	**1.62**	**172**	P	**Pn**	**19 50 51.3**	**0.0**
IGT				S	**Sg**	**19 51 14.3**	**-0.5**
CEME	**Cevo**	**1.64**	**329**	⇓*i*Pn	**Pn**	**19 50 52.1**	**+0.5**
CEME				*e*Sn	**Sg**	**19 51 16.5**	**+1.2**
CEME	**Cevo**	**1.64**	**329**	⇓*i*Pn	**Pn**	**19 50 52.1**	**+0.5**
CEME				*e*Sn	**Sg**	**19 51 16.5**	**+1.2**
BEY	**Berane**	**1.73**	**356**	*e*Sn	**Sg**	**19 51 18.4**	**+0.1**
IVA	**Berane**	**1.73**	**356**	⇑*i*Pn	**Pb**	**19 50 54.7**	**+0.1**
IVA				*e*Sn	**Sg**	**19 51 18.4**	**+0.1**
HCY	**Herceg Novi**	**1.75**	**319**	⇑*i*Pn	**Pn**	**19 50 53.7**	**+0.6**
HCY				*e*Sn	**Sg**	**19 51 18.5**	**-0.3**
HCY	**Herceg Novi**	**1.75**	**319**	⇑*i*Pn	**Pn**	**19 50 53.7**	**+0.6**
HCY				*e*Sn	**Sg**	**19 51 18.5**	**-0.3**
KOME	**Kolasin**	**1.75**	**347**	⇑*i*Pn	**Pb**	**19 50 54.4**	**-0.6**
KOME				*e*Sn	**Sg**	**19 51 19.2**	**+0.2**
GRG	**Griva**	**1.79**	**95**	P	**Pn**	**19 50 53.2**	**-0.5**
GRG				S	**Sb**	**19 51 17.8**	**-0.3**
GRG	**Griva**	**1.79**	**95**	P	**Pn**	**19 50 53.2**	**-0.5**
GRG				S	**Sb**	**19 51 17.8**	**-0.3**
NKME	**Niksic**	**1.82**	**334**	⇓*i*Pn	**Pn**	**19 50 54.6**	**+0.5**
NKME				*e*Sn	**Sg**	**19 51 20.7**	**-0.4**
NKY	**Niksic**	**1.85**	**335**	⇓*i*Pn	**Pn**	**19 50 55.3**	**+0.8**
NKY				*e*Sn	**Sg**	**19 51 21.2**	**-0.8**
VAY	**Valandovo**	**1.91**	**84**	*e*Pn	**Pn**	**19 50 54.4**	**-0.9**
VAY	**Valandovo**	**1.91**	**84**	*i* Pn	**Pn**	**19 50 54.4**	**-0.9**
VAY				*i* Sg	**Sg**	**19 51 24.0**	**-0.1**
VAY				*e*Lg	Lg	19 51 26.5	
	comp=E,25nm,0.8s						
VAY				*e*Lg	Lg	19 51 29.1	
	comp=N,23nm,0.8s						
VAY	**Valandovo**	**1.91**	**84**	*e*Pn	**Pn**	**19 50 54.4**	**-0.9**
TREB	**Trebinje**	**2.02**	**322**	*e*Pn	**Pn**	**19 50 56.2**	**-0.6**
TREB				*e*Sn	**Sb**	**19 51 24.1**	**-0.6**
TREB	**Trebinje**	**2.02**	**322**	*e*Pn	**Pn**	**19 50 56.2**	**-0.6**
TREB				*e*Sn	**Sb**	**19 51 24.1**	**-0.6**
BRY	**Bratogost**	**2.09**	**328**	⇑*i*Pn	**Pn**	**19 50 58.5**	**+0.6**
BRY				*e*Sn	**Sb**	**19 51 27.0**	**+0.2**
BRY	**Bratogost**	**2.09**	**328**	⇑*i*Pn	**Pn**	**19 50 58.5**	**+0.6**
BRY				*e*Sn	**Sb**	**19 51 27.0**	**+0.2**
SJES	**Sjenica**	**2.12**	**359**	*e*Pn	**Pn**	**19 50 59.5**	**+1.2**
SJES				*e*Sn	**Sb**	**19 51 27.2**	**-0.5**
BARS	**Barje**	**2.13**	**38**	*e*Pn	**Pn**	**19 50 58.8**	**+0.5**
BARS				*e*Sn	**Sb**	**19 51 26.4**	**-1.5**
BARS	**Barje**	**2.13**	**38**	*e*Pn	**Pn**	**19 50 58.8**	**+0.5**
BARS				*e*Sn	**Sb**	**19 51 26.4**	**-1.5**
KNT	**Kendrikon**	**2.15**	**89**	P	**Pn**	**19 50 58.2**	**-0.4**
KNT				S	**Sn**	**19 51 25.8**	**+0.4**
KNT	**Kendrikon**	**2.15**	**89**	P	**Pn**	**19 50 58.2**	**-0.4**
KNT				S	**Sn**	**19 51 25.8**	**+0.4**
THL	**Klokotos Trika**	**2.18**	**136**	P	**Pn**	**19 51 00.2**	**+1.2**
THL				S	**Sb**	**19 51 27.6**	**-1.6**
THL	**Klokotos Trika**	**2.18**	**136**	P	**Pn**	**19 51 00.2**	**+1.2**
THL				S	**Sb**	**19 51 27.6**	**-1.6**
SELS	**Selova**	**2.22**	**21**	*e*Pn	**Pn**	**19 50 59.8**	**+0.1**
UPM	**Unac-Piva**	**2.23**	**338**	*e*Pn	**Pn**	**19 51 00.9**	**+1.0**
UPM				*e*Sn	**Sb**	**19 51 30.5**	**-0.4**
UPM	**Unac-Piva**	**2.23**	**338**	*e*Pn	**Pn**	**19 51 00.9**	**+1.0**
UPM				*e*Sn	**Sb**	**19 51 30.5**	**-0.4**
PLE	**Pljevlja**	**2.24**	**348**	⇓*i*Pn	**Pb**	**19 51 01.6**	**-1.7**
PLE				*e*Sn	**Sb**	**19 51 30.7**	**-0.5**
PLE	**Pljevlja**	**2.24**	**348**	⇓*i*Pn	**Pb**	**19 51 01.6**	**-1.7**
PLE				*e*Sn	**Sb**	**19 51 30.7**	**-0.5**

IVAS	Ivanjica	2.43	2	ePn	Pn	19 51 04.0	+1.4
IVAS				eSn	Sb	19 51 34.7	-2.0
IVAS	Ivanjica	2.43	2	ePn	Pn	19 51 04.0	+1.4
IVAS				eSn	Sb	19 51 34.7	-2.0
STON	Ston	2.46	315	ePn	Pn	19 51 01.8	-1.0
STON				Sn	Sn	19 51 31.0	-1.9
STON	Ston	2.46	315	ePn	Pn	19 51 01.0	-1.8
EVR	Evrytania	2.60	148	P	Pn	19 51 05.8	+0.9
EVR				S	Sn	19 51 38.7	+2.1
EVR	Evrytania	2.60	148	P	Pn	19 51 05.8	+0.9
EVR				S	Sn	19 51 38.7	+2.1
SRS	Serrai	2.68	89	P	Pn	19 51 05.5	-0.4
SRS	Serrai	2.68	89	P	Pn	19 51 05.5	-0.4
PDO	Prodromos	2.69	161	P	Pn	19 51 05.8	-0.2
PDO	Prodromos	2.69	161	P	Pn	19 51 05.8	-0.2
AGG	Agios Georgios	2.75	140	P	Pn	19 51 08.1	+1.3
AGG				S	Sn	19 51 41.5	+1.3
AGG	Agios Georgios	2.75	140	P	Pn	19 51 08.1	+1.3
AGG				S	Sn	19 51 41.5	+1.3
BBLS	Lazići	2.76	350	ePn	Pn	19 51 06.8	-0.3
BBLS	Lazići	2.76	350	ePn	Pn	19 51 06.8	-0.3
VTS	Vitosha	2.77	57	ePn	Pn	19 51 07.4	+0.1
VTS				eSn	Sn	19 51 40.9	0.0
VTS	Vitosha	2.77	57	ePn	Pn	19 51 07.4	+0.1
VTS				eSn	Sn	19 51 40.9	0.0
BOVS	Bovan	2.78	26	ePn	Pn	19 51 07.6	+0.4
BOVS	Bovan	2.78	26	ePn	Pn	19 51 07.6	+0.4
GRUS	Gruza	2.79	10	ePn	Pn	19 51 07.4	0.0
GRUS	Gruza	2.79	10	ePn	Pn	19 51 07.4	0.0
ZAPS	Zavoj	2.87	41	ePn	Pn	19 51 08.9	+0.4
ZAPS				eSn	Sn	19 51 44.4	+1.2
ZAPS	Zavoj	2.87	41	ePn	Pn	19 51 08.9	+0.4
ZAPS				eSn	Sn	19 51 44.4	+1.2
DIVS	Divibare	2.96	359	ePn	Pn	19 51 10.9	+1.1
DIVS	Divibare	2.96	359	ePn	Pn	19 51 10.9	+1.1
XOR	Xorichti	2.99	125	P	Pn	19 51 10.4	+0.2
XOR	Xorichti	2.99	125	P	Pn	19 51 10.4	+0.2
HAPS	Han Pijesak,BI	3.05	345	ePn	Pn	19 51 09.9	-1.2
ZAGS	Zajecar	3.12	30	ePn	Pn	19 51 13.0	+1.1
ZAGS	Zajecar	3.12	30	ePn	Pn	19 51 13.0	+1.1
NVLJ	Novalja	5.12	314	ePn	Pn	19 51 38.3	-1.0
NVLJ				Sn	Sn	19 52 34.2	-4.3
CRES	Cresnjev	5.75	326	ePn	Pn	19 51 47.0	-1.1

MEX 24 20:04:26.4±0.3, 16°.28N×98°.28W, h5^{km}, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.19	54	i P	Pg	20 04 29.8	-0.4
PNIG				eS	Sg	20 04 32.7	+0.1
TLIG	Tlapa	1.30	348	eP	Pn	20 04 47.7	-3.7
TLIG				i S	Sg	20 05 04.0	-4.3

ISCJB ***24*** *20:06:59.4±0.5, 36°.49N±0°.04×69°.42E±0°.05, h100^{km}, mb4.4/9, Error ellipse: s-maj=6.9km s-min=5.0km az=147.6*

NEIC ***24*** *20:07:00.3±0.9, 36°.43N×69°.36E, h100^{km}±12^{km}, mb4.2/9, Error ellipse: s-maj=12.8km s-min=11.3km az=94.0*

IDC ***24*** *20:07:00.5±4.8, 36°.48N×69°.51E, h107^{km}±28^{km}, mb3.5/4, mb1 3.3/10, mb1mx3.0/64, mbtmp3.8/10, MS3.0/1, Ms1 3.0/1, ms1mx2.2/55, Error ellipse: s-maj=54.3km s-min=17.8km az=160.0*

BJI ***24*** *20:07:02.6, 36°.19N×69°.99E, h99^{km}, mb4.6/3, mB4.7/3*

NNC ***24*** *20:07:03.5±3.1, 36°.69N×69°.53E, h170^{km}±67^{km}, mb3.0, mpv3.9, Error ellipse: s-maj=34.2km s-min=21.9km az=60.0*

ISC 24 20:07:00.9±0.7, **36°.56N**±0°.06×**69°.44E**±0°.06, **h100^{km}, n50, σ1^{s}86**/60, **mb4.7**/9, **6C-4D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	2.04	189	ePn	Pn	20 07 33.1	-1.2
KBL				eSn	Sn	20 08 04.0	+4.3
NIL	Nilore	4.26	132	ePn	Pn	20 08 00.4	-3.3
NIL				eSn	Sn	20 08 41.6	-11
SFK	Sufi-Kurgan	4.70	42	⇑P	Pn	20 08 10.9	+1.2
	5.0nm,0.3s						
SFK				⇑S	Sn	20 09 05.5	+2.3
	18nm,0.5s						
KSH	Kashi	5.94	58	P	Pn	20 08 22.8	-3.6
KSH				sP		20 08 47.4	
KSH				S	Sn	20 09 24.8	-8.3
KSH				pmax	pmax		
	comp=Z,45nm,3.6s						
MNAS	Manas	6.37	21	⇓P	Pn	20 08 33.7	+1.4
	3.5nm,0.6s						
MNAS				⇓S	Sn	20 09 45.9	+2.2
	6.9nm,0.7s						
AML	Almayashu	6.46	29	P	Pn	20 08 34.8	+1.0
	SNR=35						
KK31	Karatay Array	6.58	7	P	Pn	20 08 36.8	+1.7
	2.2nm,0.3s,baz=199,slow=16,SNR=36						
KK31				⇑S	Sn	20 09 49.7	+1.1
	2.4nm,0.3s						
KK31	Karatay Array	6.58	7	ePn	Pn	20 08 37.0	+2.0
KKAR	Karatay Array	6.58	7	ePn	Pn	20 08 37.0	+2.0
EKS2	Erkin-Say	6.95	27	P	Pn	20 08 42.5	+2.3
	SNR=6.8						
KZA	Kyzart	7.11	37	P	Pn	20 08 42.9	+0.3
	SNR=7.0						
AAK	Ala-Archa	7.21	31	P	Pn	20 08 44.5	+0.8
	3.9nm,0.3s,baz=152,slow=6.4,SNR=11						
AAK				S	Sn	20 10 04.0	-0.1
	0.4nm,0.3s,baz=30,slow=20,SNR=4.0						
AAK	Ala-Archa	7.21	31	⇑P	Pn	20 08 45.0	+1.2
	4.6nm,0.4s						
AAK				⇑S	Sn	20 10 04.9	+0.8
	12nm,1.1s						
AAK	Ala-Archa	7.21	31	P	Pn	20 08 45.6	+1.9
	SNR=5.8						
AAK	Ala-Archa	7.21	31	ePn	Pn	20 08 45.4	+1.6
AAK				eSn	Sn	20 10 06.5	+2.4
FRU1	Bishkek	7.41	31	ePn	Pn	20 08 48.1	+1.8
KBK	Karagaybulak	7.42	33	P	Pn	20 08 48.2	+1.6
	SNR=5.4						
CHMS	Chumysh	7.62	31	P	Pn	20 08 50.2	+1.1
	SNR=15						
USP	Ospenovka	7.74	29	P	Pn	20 08 52.0	+1.2
	SNR=7.5						
TKM2	Tokmak 2	7.92	35	⇓P	Pn	20 08 53.6	+0.2
	9.6nm,0.7s						
TKM2				⇑S	Sn	20 10 20.0	-1.5
	3.0nm,0.8s						
TKM2	Tokmak 2	7.92	35	P	Pn	20 08 53.9	+0.4
	SNR=21						
GEYT	Alibeck	9.13	282	P	Pn	20 09 10.6	+0.8
	0.2nm,0.3s,baz=311,slow=30,SNR=3.8						
GEYT				S	Sn	20 10 51.4	+0.6
	0.6nm,0.3s,baz=192,slow=27,SNR=6.5						
GYA0B	ALIBECK ARRAY	9.13	282	ePn	Pn	20 09 09.0	-0.8
MAKZ	Makanchi	13.86	38	ePn	Pn	20 10 11.3	-1.6
MK01	Makanchi Array	13.99	39	ePn	Pn	20 10 13.7	-0.9
MK31	Makanchi Array	14.01	39	ePn	P	20 10 18.5	-1.0
MKAR	Makanchi Array	14.01	39	P	Pn	20 10 14.8	0.0
	0.1nm,0.3s,baz=215,slow=13,SNR=4.2						
MKAR	Makanchi Array	14.01	39	ePn	Pn	20 10 17.3	+2.5
AB31	Akbulak array	14.45	334	P	Pn	20 10 21.2	+0.7
	0.5nm,0.3s,baz=149,slow=13,SNR=29						
AB31				⇓S	Sn	20 12 54.8	-4.8
	1.2nm,0.5s,baz=153,slow=24,SNR=6.5						
ABKAR	Akbulak array	14.45	334	ePn	Pn	20 10 20.7	+0.2
ABKAR				eSn	Sn	20 12 54.2	-5.4
KURBB	Kurchatov Arra	15.50	22	P	Pn	20 10 34.0	+0.3
	0.1nm,0.3s,baz=205,slow=11,SNR=4.6						
KURK	Kurchatov	15.61	22	ePn	Pn	20 10 37.2	+2.1
	1.4nm,0.7s						
WMQ	Urumqi	15.70	57	P	P	20 10 38.9	+0.5
WMQ				LR	LR		
	comp=N,41nm,12.1s						
WMQ				LR	LR		
	comp=E,36nm,16.3s						
WMQ				LR	LR		
	comp=Z,36nm,13.7s						
AKTO	Aktyubinsk	16.13	333	P	P	20 10 43.5	+0.6
	0.3nm,0.3s,baz=141,slow=16,SNR=4.0						
AKTO				S	Sn	20 13 42.1	+2.1
	0.2nm,0.3s,baz=219,slow=18,SNR=4.0						
BVAR	Borovoye Array	16.48	2	P	Pn	20 10 47.2	+1.4
	0.5nm,0.3s,baz=167,slow=10,SNR=14						
BRVK	Borovoye	16.50	2	ePn	Pn	20 10 47.0	+0.8
	1.8nm,0.8s						
ZAA0	Zalesovo Array	20.40	27	eP	P	20 11 28.9	-0.7
	3.4nm,0.5s						
ZALV	Zalesovo Beam	20.40	27	P	P	20 11 28.8	-0.8
	4.3nm,0.5s,baz=223,slow=11,SNR=21						
AKH	Akhalkalaki	20.71	291	eP	P	20 11 30.8	-2.5
	2.6nm,0.6s						
ARU	Arti	21.19	343	P	P	20 11 38.8	+0.8
	1.0nm,0.5s,baz=184,slow=4.1,SNR=4.0						
ARU	Arti	21.19	343	eP	P	20 11 39.0	+0.9
	2.4nm,0.9s						
GTA	Gaotai	24.05	74	eP	P	20 12 15.9	+9.0
GTA				pP	pP	20 12 20.1	-8.2
GTA				sP	sP	20 12 22.9	-18
GTA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BRTR	Keskin Array B	28.22	287	LR	LR	20 27 47.3	
	comp=Z,29nm,20.8s,baz=243,slow=44						
HHC	Hu-ho-hao-te	32.92	69	eP	P	20 13 26.5	+0.8
HHC				pmax	pmax		
	comp=Z,14nm,1.0s						
HHC				pmax	pmax		
	comp=Z,78nm,5.2s						
ARCES	ARCESS Array B	40.61	338	P	P	20 14 30.5	0.0
	comp=Z,1.6nm,0.9s,baz=104,slow=7.7,SNR=2.9						
HFS	Hagfors	42.24	322	P	P	20 14 42.8	-1.0
	comp=Z,1.6nm,0.8s,baz=99,slow=4.8,SNR=3.0						
INU	Inuyama	53.65	70	eP	P	20 16 11.2	-0.9
	comp=Z,7.6nm,0.6s						
MJB9	Matsu-Tunnel	54.09	68	eP	P	20 16 17.4	+2.1
	comp=Z,9.7nm,0.5s						
MAJO	Matsushiro	54.09	68	eP	P	20 16 17.7	+2.3
	comp=Z,9.4nm,0.5s						
MYLDM	Lahad Datu	54.64	113	eP	P	20 16 19.6	+0.1
	comp=Z,27nm,1.4s						

MAN 24 20:17:46.6, 16°.24N×120°.48E, h22^{km}, mb4.7, ML3.6, MS3.5, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOLP	Bolinao	0.56	284	eP	Pn	20 17 58.7	-0.6
BOLP				eS	Sn	20 18 06.7	-1.2
SCZP	Santa Cruz	0.72	230	eP	Pb	20 18 00.6	+0.2
SCZP				eS	Sn	20 18 12.4	+0.7
BALP	Baler	1.17	115	eP	Pn	20 18 07.5	-0.1
BALP				eS	Sb	20 18 21.6	-1.1
ABRA	Dolores	1.42	9	eP	Pn	20 18 09.8	-1.2
ABRA				eS	Sb	20 18 34.1	+4.1
CAUP	Cauayan	1.47	61	eP	Pn	20 18 12.0	+0.3
CAUP				eS	Sb	20 18 45.5	+14
APYP	Conner	1.77	24	eP	Pn	20 18 17.0	+1.1
APYP				eS	Sn	20 18 38.4	+0.7

IDC ***24*** *20:19:36.6±0.6, 34°.89N×23°.32E, h0^{km}, mb4.3/25, mb1 4.2/36, mb1mx4.2/71, mbtmp4.2/36, ML3.9/10, MS3.5/22, Ms1 3.5/22, ms1mx3.3/60, Error ellipse: s-maj=14.4km s-min=12.0km az=177.0*

BJI ***24*** *20:19:38.1, 35°.08N×22°.92E, h31^{km}, mb4.7/31, mB5.0/17, Ms4.6/6, Ms7 4.3/6*

BEO ***24*** *20:19:39.8±0.9, 34°.96N×22°.85E, h0^{km}, ML4.2/2*

GII ***24*** *20:19:40.4±0.9, 34°.99N×23°.39E, h60^{km}*

ISCJB ***24*** *20:19:42.5±0.3, 34°.91N±0°.02×23°.35E±0°.02, h57^{km}±2^{km}, mb4.5/88, MS3.5/17, Error ellipse: s-maj=4.0km s-min=2.3km az=25.2*

THE ***24*** *20:19:42.8, 34°.85N×23°.24E, h17^{km}±3^{km}, ML4.1/9, Error ellipse: s-maj=3.7km s-min=0.8km az=212.0*

NEIC ***24*** *20:19:42.8±0.0, 34°.85N×23°.24E, h17^{km}, mb4.5/70, ML4.1(THE), After THE.*

MOS ***24*** *20:19:43.9±1.1, 35°.08N×23°.37E, h58^{km}, mb4.8/31, Error ellipse: s-maj=5.4km s-min=3.0km az=80.4*

CSEM ***24*** *20:19:43.7±0.2, 34°.91N×23°.32E, h53^{km}±1^{km}, mb4.7/54, Error ellipse: s-maj=4.3km s-min=2.4km az=26.0*

ATH ***24*** *20:19:43.8, 34°.97N×23°.35E, h41^{km}±2^{km}, ML4.1/7, Error ellipse: s-maj=5.3km s-min=1.5km az=38.0*

HLW ***24*** *20:19:46.2, 34°.53N×23°.94E, h9^{km}±26^{km}, Md4.1, Ml4.3*

DDA ***24*** *20:20:38.0, 33°.70N×28°.22E, h6^{km}, Ml4.0*

ISC 24 20:19:42.9±0.6, **34°.88N**±0°.04×**23°.36E**±0°.03, **h44^{km}**±5^{km}, **n760, σ1^{s}83**/841, **mb4.6**/88, **MS3.5**/17, **23C-14D, Crete**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GVD	Gavdhos	0.60	93	P	Pn	20 19 55.1	0.0
GVD				S	Sn	20 20 05.9	+2.1
GVD				AML	AML	20 20 13.6	
	comp=E,79783µm,0.4s						
GVD				AML	AML	20 20 13.8	
	comp=N,52688µm,0.4s						
GVD	Gavdhos	0.60	93	ePn	Pn	20 19 55.7	+0.6
GVD	Gavdhos	0.60	93	P	Pn	20 19 55.7	+0.6
GVD				S	Sn	20 20 06.1	+2.3
GVD	Gavdhos	0.60	93	P	Pn	20 19 56.0	+0.9
GVD				S	Sn	20 20 06.1	+2.3
GVDS	Gavdos	0.60	93	P	Pn	20 19 55.9	+0.8
GVDS				S	Sn	20 20 06.1	+2.3
GVDS	Gavdos	0.60	93	P	Pn	20 19 55.9	+0.8
GVDS				S	Sn	20 20 06.1	+2.3
IMMV	Iera Moni Meta	0.77	41	P	Pn	20 19 58.6	+1.2
IMMV				AML	AML	20 20 17.4	
	comp=E,31299µm,0.7s						
IMMV				AML	AML	20 20 18.4	
	comp=N,40638µm,0.6s						
IMMV	Iera Moni Meta	0.77	41	P	Pn	20 19 58.5	+1.1
IMMV				S	Sn	20 20 11.4	+3.5
IMMV	Iera Moni Meta	0.77	41	P	Pn	20 19 58.5	+1.1
IMMV				S	Sn	20 20 11.4	+3.5
CHAN	Chania	0.85	41	P	Pn	20 20 00.3	+1.8
CHAN	Chania	0.85	41	P	Pn	20 20 00.3	+1.8
VAM	Vamos	0.87	52	P	Pn	20 20 01.0	+2.3
VAM				AML	AML	20 20 18.9	
	comp=E,43551µm,1.1s						
VAM				AML	AML	20 20 19.0	
	comp=N,47019µm,0.7s						
VAM	Vamos	0.87	52	P	Pn	20 20 00.1	+1.4
VAM				S	Sn	20 20 14.4	+4.2
VAM	Vamos	0.87	52	P	Pn	20 20 00.1	+1.4
VAM				S	Sn	20 20 14.4	+4.2
VAM	Vamos	0.87	52	P	Pn	20 20 00.1	+1.4
VAM				S	Sn	20 20 14.4	+4.2
VAM	Vamos	0.87	52	P	Pn	20 20 00.1	+1.4
VAM				S	Sn	20 20 14.4	+4.2
ANKY	Antikythira Is	0.99	357	P	Pn	20 20 02.0	+1.6
ANKY				AML	AML	20 20 22.1	
	comp=N,21100µm,0.7s						
ANKY				AML	AML	20 20 23.0	
	comp=E,12567µm,0.7s						
ANKY	Antikythira Is	0.99	357	ePn	Pn	20 20 01.1	+0.7
ANKY	Antikythira Is	0.99	357	P	Pn	20 20 01.1	+0.7
ANKY				S	Sn	20 20 15.9	+2.7
ANKY	Antikythira Is	0.99	357	P	Pn	20 20 01.1	+0.7
ANKY				S	Sn	20 20 15.9	+2.7
TMBK	Timbaki Herakl	1.17	80	P	Pn	20 20 05.4	+2.6
TMBK	Timbaki Herakl	1.17	80	P	Pn	20 20 05.4	+2.6
SIVA	Sivas	1.20	83	P	Pn	20 20 05.9	+2.7
SIVA				S	Sn	20 20 21.2	+3.0
SIVA				AML	AML	20 20 43.1	
	comp=E,35312µm,0.7s						
SIVA				AML	AML	20 20 43.4	
	comp=N,25912µm,0.7s						
SIVA	Sivas	1.20	83	ePn	Pn	20 20 05.6	+2.4
SIVA	Sivas	1.20	83	P	Pn	20 20 05.6	+2.4
SIVA	Sivas	1.20	83	P	Pn	20 20 05.6	+2.4
SIVA				S	Sn	20 20 21.3	+3.0
KYTH	Kithira	1.41	350	P	Pn	20 20 07.5	+1.4
KYTH				AML	AML	20 20 46.5	
	comp=N,7218µm,1.2s						
KYTH				AML	AML	20 20 49.2	
	comp=E,6908µm,1.4s						
KYTH	Kithira	1.41	350	ePn	Pn	20 20 07.4	+1.2
KYTH	Kithira	1.41	350	P	Pn	20 20 07.4	+1.2
KTHR	Kythira	1.41	348	P	Pn	20 20 06.9	+0.7
KTHR	Kythira	1.41	348	P	Pn	20 20 06.9	+0.7
IACM	Heraklion	1.47	73	P	Pn	20 20 10.5	+3.6
IACM	Heraklion	1.47	73	P	Pn	20 20 09.7	+2.8
LAST	Lasithi	1.76	80	P	Pn	20 20 14.6	+3.6
LAST	Lasithi	1.76	80	ePn	Pn	20 20 13.7	+2.7
LAST	Lasithi	1.76	80	P	Pn	20 20 13.7	+2.7
LAST	Lasithi	1.76	80	P	Pn	20 20 13.7	+2.7
VLI	Veliai	1.87	349	P	Pn	20 20 13.4	+0.9
VLI				AML	AML	20 20 57.4	
	comp=N,4374µm,0.9s						
VLI				AML	AML	20 20 58.3	
	comp=E,4318µm,1.5s						
VLI	Veliai	1.87	349	ePn	Pn	20 20 13.7	+1.3
VLI				eSn	Sn	20 20 36.2	+1.4
VLI	Veliai	1.87	349	P	Pn	20 20 13.7	+1.3
VLI				S	Sn	20 20 36.2	+1.4
VLI	Veliai	1.87	349	P	Pn	20 20 13.5	+1.1
VLI				S	Sn	20 20 36.2	+1.4
NPS	Neapolis	1.89	78	P	Pn	20 20 16.6	+3.9
NPS	Neapolis	1.89	78	ePn	Pn	20 20 15.9	+3.2
NPS	Neapolis	1.89	78	P	Pn	20 20 15.9	+3.2
NPS	Neapolis	1.89	78	eP	Pn	20 20 15.9	+3.2
NPS	Neapolis	1.89	78	P	Pn	20 20 15.8	+3.1
MHLO	Agia Marina, M	2.00	25	P	Pn	20 20 14.4	+0.2
MHLO	Agia Marina, M	2.00	25	P	Pn	20 20 15.0	+0.8
MHLO	Agia Marina, M	2.00	25	P	Pn	20 20 15.0	+0.8
MHLA	Plaka, Milos I	2.05	24	P	Pn	20 20 15.6	+0.6
MHLA	Plaka, Milos I	2.05	24	P	Pn	20 20 16.0	+1.0
DYR	Agios Nikonas	2.06	336	P	Pn	20 20 16.3	+1.2
DYR	Agios Nikonas	2.06	336	P	Pn	20 20 17.1	+2.0
DYR	Agios Nikonas	2.06	336	P	Pn	20 20 16.3	+1.2
THR9	Santorini-Faro	2.20	47	P	Pn	20 20 18.0	+1.1
THR9	Santorini-Faro	2.20	47	P	Pn	20 20 18.0	+1.1
SAP1	Santorini-Akro	2.22	48	P	Pn	20 20 18.3	+1.1
SAP1	Santorini-Akro	2.22	48	P	Pn	20 20 18.3	+1.1
THR6	Thira Island,	2.22	48	P	Pn	20 20 18.6	+1.4
THR6	Thira Island,	2.22	48	P	Pn	20 20 18.8	+1.6
THR5	Thira Island,	2.23	46	P	Pn	20 20 18.1	+0.7
THR5	Thira Island,	2.23	46	P	Pn	20 20 18.3	+0.9
THR5	Thira Island,	2.23	46	P	Pn	20 20 18.3	+0.9
SAP3	Santorini-Thir	2.24	46	P	Pn	20 20 18.2	+0.7
SAP3	Santorini-Thir	2.24	46	P	Pn	20 20 18.2	+0.7
STAX	Taxiarchis Har	2.25	47	P	Pn	20 20 18.4	+0.7
STAX	Taxiarchis Har	2.25	47	P	Pn	20 20 18.4	+0.7
THR3	Thira Island,	2.26	47	ePn	Pn	20 20 18.7	+1.0
THR3	Thira Island,	2.26	47	P	Pn	20 20 18.7	+1.0
THR3	Thira Island,	2.26	47	P	Pn	20 20 18.7	+1.0
THT1	Athinios (Pele	2.26	48	P	Pn	20 20 18.4	+0.6
THT1	Athinios (Pele	2.26	48	P	Pn	20 20 18.4	+0.6
THT1	Athinios (Pele	2.26	48	P	Pn	20 20 19.0	+1.3
SANT	Santorini	2.27	48	eP	Pn	20 20 17.5	-0.4
SANT				eS	Sn	20 20 41.9	-2.8
SANT	Santorini	2.27	48	⇑iP	Pn	20 20 18.8	+0.9
SANT	Santorini	2.27	48	ePn	Pn	20 20 17.5	-0.4
SANT	Santorini	2.27	48	P	Pn	20 20 19.0	+1.1
SANT	Santorini	2.27	48	ePn	Pn	20 20 17.5	-0.4
SANT	Santorini	2.27	48	P	Pn	20 20 19.0	+1.1
THR7	Fira-Santorini	2.28	47	P	Pn	20 20 19.9	+1.8
THR7	Fira-Santorini	2.28	47	P	Pn	20 20 19.9	+1.8
THT2	Imerovigli	2.29	47	P	Pn	20 20 22.5	+4.3
THT2	Imerovigli	2.29	47	P	Pn	20 20 21.2	+3.0
CMBO	Columbo, Santo	2.30	46	P	Pn	20 20 19.5	+1.2
CMBO	Columbo, Santo	2.30	46	P	Pn	20 20 19.5	+1.2
THR2	Thira island,	2.30	47	ePn	Pn	20 20 20.9	+2.5
THR2	Thira island,	2.30	47	P	Pn	20 20 20.9	+2.5
THR2	Thira island,	2.30	47	P	Pn	20 20 20.9	+2.5
THR8	Santorini-Mono	2.30	48	P	Pn	20 20 18.7	+0.3
THR8	Santorini-Mono	2.30	48	P	Pn	20 20 19.2	+0.8
THR8	Santorini-Mono	2.30	48	P	Pn	20 20 19.5	+1.1
ZKR	Zakros	2.35	83	P	Pn	20 20 22.4	+3.3
ZKR	Zakros	2.35	83	ePn	Pn	20 20 22.0	+2.9
ZKR	Zakros	2.35	83	P	Pn	20 20 22.0	+2.9
ZKR	Zakros	2.35	83	P	Pn	20 20 22.0	+2.9
PYL	PYLOS	2.41	327	ePn	Pn	20 20 19.5	-0.3
PYL	PYLOS	2.41	327	P	Pn	20 20 19.5	-0.3
PYL	PYLOS	2.41	327	P	Pn	20 20 19.5	-0.3
ANAF	Anafi Island	2.46	52	P	Pn	20 20 21.4	+0.9
ANAF	Anafi Island	2.46	52	P	Pn	20 20 21.4	+0.9
KRND	KRANIDI	2.51	356	P	Pn	20 20 22.3	+1.1
KRND	KRANIDI	2.51	356	P	Pn	20 20 22.3	+1.1
ITM	Ithomi	2.58	334	eP	Pn	20 20 24.4	+2.3
ITM				eS	Sn	20 20 53.7	+1.5
ITM	Ithomi	2.58	334	P	Pn	20 20 21.9	-0.3
ITM	Ithomi	2.58	334	ePn	Pn	20 20 24.0	+1.9
ITM	Ithomi	2.58	334	P	Pn	20 20 22.8	+0.7
ITM	Ithomi	2.58	334	ePn	Pn	20 20 24.0	+1.9
VLX	Vlachokerasia	2.61	343	P	Pn	20 20 25.9	+3.2
VLX	Vlachokerasia	2.61	343	P	Pn	20 20 25.0	+2.3
DID	Didima	2.62	358	ePn	Pn	20 20 23.1	+0.3
DID				eSn	Sn	20 20 55.1	+1.6
DID	Didima	2.62	358	P	Pn	20 20 23.1	+0.3
DID				S	Sn	20 20 55.1	+1.6
DID	Didima	2.62	358	P	Pn	20 20 23.1	+0.3
DID				S	Sn	20 20 55.1	+1.6
TRIP	Tripoli	2.79	342	P	Pn	20 20 27.9	+2.7
TRIP	Tripoli	2.79	342	P	Pn	20 20 27.2	+2.1
APE	Apeiranthos	2.81	38	eP	Pn	20 20 24.6	-0.7
APE				eS	Sn	20 20 54.3	-3.7
APE	Apeiranthos	2.81	38	⇑iP	Pn	20 20 25.6	+0.2
APE	Apeiranthos	2.81	38	ePn	Pn	20 20 25.3	0.0
APE	Apeiranthos	2.81	38	P	Pn	20 20 25.3	0.0
APE	Apeiranthos	2.81	38	c iP	Pn	20 20 25.5	+0.2
APE	Apeiranthos	2.81	38	i P	Pn	20 20 25.5	+0.2
AMGA	Amorgos Island	2.83	46	P	Pn	20 20 26.1	+0.4
AMGA	Amorgos Island	2.83	46	P	Pn	20 20 26.1	+0.4
AMT	Artemida-Makis	2.97	334	P	Pn	20 20 29.1	+1.6
AMT	Artemida-Makis	2.97	334	P	Pn	20 20 29.1	+1.6
VLY	Voula,Athens	2.99	7	ePn	Pn	20 20 28.4	+0.6
VLY	Voula,Athens	2.99	7	P	Pn	20 20 28.4	+0.6
VLY	Voula,Athens	2.99	7	P	Pn	20 20 28.4	+0.6
ATHU	Athens Univers	3.10	6	ePn	Pn	20 20 29.5	+0.1
ATHU	Athens Univers	3.10	6	P	Pn	20 20 29.5	+0.1
ATHU	Athens Univers	3.10	6	P	Pn	20 20 29.5	+0.1
LTK	Loutraki	3.15	354	ePn	Pn	20 20 30.9	+0.8
LTK	Loutraki	3.15	354	P	Pn	20 20 30.9	+0.8
LTK	Loutraki	3.15	354	P	Pn	20 20 30.9	+0.8
KARP	Karpathos	3.18	77	eP	Pn	20 20 33.1	+2.6
KARP	Karpathos	3.18	77	P	Pn	20 20 32.4	+1.9
KARP	Karpathos	3.18	77	ePn	Pn	20 20 30.6	+0.1
KARP	Karpathos	3.18	77	ePn	Pn	20 20 30.6	+0.1
KARP	Karpathos	3.18	77	P	Pn	20 20 32.8	+2.3
PTL	Penteli	3.19	7	ePn	Pn	20 20 31.3	+0.7
PTL	Penteli	3.19	7	P	Pn	20 20 31.3	+0.7
PTL	Penteli	3.19	7	P	Pn	20 20 31.3	+0.7
DION	Dionisos Attik	3.23	8	P	Pn	20 20 31.0	-0.1
DION	Dionisos Attik	3.23	8	P	Pn	20 20 31.9	+0.8
KARY	Karystos	3.27	15	P	Pn	20 20 32.4	+0.8
KARY	Karystos	3.27	15	P	Pn	20 20 32.4	+0.8
KLV	Kalavryta, Ach	3.31	343	ePn	Pn	20 20 33.2	+1.0
KLV	Kalavryta, Ach	3.31	343	P	Pn	20 20 33.2	+1.0
KLV	Kalavryta, Ach	3.31	343	P	Pn	20 20 33.2	+1.0
DRO	Drossia	3.34	337	P	Pn	20 20 33.7	+1.0
DRO	Drossia	3.34	337	P	Pn	20 20 33.7	+1.0
LAKA	Lakka	3.54	342	ePn	Pn	20 20 35.9	+0.6
LAKA	Lakka	3.54	342	P	Pn	20 20 35.9	+0.6
LAKA	Lakka	3.54	342	P	Pn	20 20 35.9	+0.6
SERG	Sergoula	3.68	344	P	Pn	20 20 38.0	+0.6
SERG	Sergoula	3.68	344	P	Pn	20 20 38.5	+1.2
SLUM	Salum	3.72	155	P	Pn	20 20 37.6	-0.2
	baz=160						
SLUM				AMP		20 21 00.0	
	baz=160						
SLUM				S	Sn	20 21 14.2	-6.2
	baz=160						
SLUM	Salum	3.72	155	P	Pn	20 20 37.6	-0.2
EFP	Efpalio	3.73	342	P	Pn	20 20 38.5	+0.5
EFP	Efpalio	3.73	342	P	Pn	20 20 38.5	+0.5
LKR	Lokris	3.78	356	ePn	Pn	20 20 39.2	+0.6
LKR	Lokris	3.78	356	P	Pn	20 20 39.2	+0.6
LKR	Lokris	3.78	356	P	Pn	20 20 39.2	+0.6
BODT	Bodrum	3.87	55	eP	Pn	20 20 40.4	+0.4
ANX	Ano Chora	3.88	343	P	Pn	20 20 41.0	+0.8
ANX	Ano Chora	3.88	343	P	Pn	20 20 41.0	+0.8
DAT	Datca	3.89	60	eP	Pn	20 20 41.5	+1.2
DAT	Datca	3.89	60	i P	Pn	20 20 41.1	+0.8
DAT	Datca	3.89	60	P	Pn	20 20 41.1	+0.8
AXAR	Agios Charalam	3.92	352	ePn	Pn	20 20 43.6	+3.0
AXAR	Agios Charalam	3.92	352	P	Pn	20 20 43.6	+3.0
AXAR	Agios Charalam	3.92	352	P	Pn	20 20 43.6	+3.0
SMIA	Simia	4.00	358	P	Pn	20 20 42.4	+0.8
SMIA	Simia	4.00	358	P	Pn	20 20 42.4	+0.8
PVO	Paravola	4.01	339	P	Pn	20 20 42.9	+1.1
PVO	Paravola	4.01	339	P	Pn	20 20 42.9	+1.1
ARG	Arkhangelos	4.11	70	eP	Pn	20 20 46.4	+3.2
ARG	Arkhangelos	4.11	70	eS	Sn	20 21 30.3	+0.4
ARG	Arkhangelos	4.11	70	P	Pn	20 20 44.5	+1.4
ARG	Arkhangelos	4.11	70	ePn	Pn	20 20 44.7	+1.5
ARG	Arkhangelos	4.11	70	P	Pn	20 20 44.7	+1.5

ARG	Arkhangelos	4.11	70	*e*P	Pn	20 20 44.7	+1.5
ARG	Arkhangelos	4.11	70	P	Pn	20 20 44.7	+1.5
CHOS	Chios island	4.12	31	*e*P	Pn	20 20 42.9	-0.5
AGG	Agios Georgios	4.22	349	*e*P	Pn	20 20 46.2	+1.5
AGG	Agios Georgios	4.22	349	*e*Pn	Pn	20 20 44.9	+0.2
AGG				*e*Sn	Sn	20 21 34.4	+1.7
AGG	Agios Georgios	4.22	349	P	Pn	20 20 45.5	+0.8
AGG				S	Sn	20 21 34.4	+1.7
AGG	Agios Georgios	4.22	349	*e*P	Pn	20 20 44.9	+0.2
AGG				*e*		20 21 34.4	
AGG	Agios Georgios	4.22	349	*e*P	Pn	20 20 44.9	+0.2
AGG				S	Sn	20 21 34.4	+1.7
EVR	Evrytania	4.22	343	*e*Pn	Pn	20 20 46.9	+2.1
EVR	Evrytania	4.22	343	P	Pn	20 20 46.9	+2.1
EVR	Evrytania	4.22	343	P	Pn	20 20 46.9	+2.1
SKIA	Skiathos	4.28	1	P	Pn	20 20 46.1	+0.5
SKIA	Skiathos	4.28	1	P	Pn	20 20 46.1	+0.5
AOS	Alonnisos	4.30	5	*e*P	Pn	20 20 45.5	-0.4
AOS	Alonnisos	4.30	5	*e*Pn	Pn	20 20 46.1	+0.2
AOS	Alonnisos	4.30	5	P	Pn	20 20 46.1	+0.2
AOS	Alonnisos	4.30	5	P	Pn	20 20 46.1	+0.2
URLA	Izmir	4.34	36	*e*P	Pn	20 20 46.6	+0.2
XOR	Xorichti	4.48	358	*e*Pn	Pn	20 20 48.7	+0.4
XOR	Xorichti	4.48	358	P	Pn	20 20 48.7	+0.4
XOR	Xorichti	4.48	358	P	Pn	20 20 48.7	+0.4
YER	Yerkesik	4.58	59	*e*P	Pn	20 20 51.4	+1.7
AYDN	Tasoluk	4.59	51	*i* P	Pn	20 20 51.4	+1.6
AYDN	Tasoluk	4.59	51	P	Pn	20 20 51.4	+1.6
DSL	Palaion Diasel	4.62	338	*e*Pn	Pn	20 20 50.2	0.0
DSL	Palaion Diasel	4.62	338	P	Pn	20 20 50.2	0.0
DSL	Palaion Diasel	4.62	338	P	Pn	20 20 50.2	0.0
TURN	Turunc	4.70	63	*e*P	Pn	20 20 48.8	-2.4
TURN	Turunc	4.70	63	*i* P	Pn	20 20 48.8	-2.4
TURN				*i* S	Sn	20 21 39.3	-5.1
TURN	Turunc	4.70	63	P	Pn	20 20 48.8	-2.4
TURN				S	Sn	20 21 39.3	-5.1
DALY	Dalyan (Mu˜la	4.71	64	*e*P	Pn	20 20 53.6	+2.1
DALY	Dalyan (Mu˜la	4.71	64	*i* P	Pn	20 20 53.3	+1.8
DALY				*i* S	Sn	20 21 46.2	+1.4
DALY	Dalyan (Mu˜la	4.71	64	P	Pn	20 20 53.3	+1.8
DALY				S	Sn	20 21 46.2	+1.4
SIGR	SIGRI	4.76	24	*e*P	Pn	20 20 52.2	+0.1
AYDB	Zeytinkoy-Aydi	4.77	49	*e*P	Pn	20 20 53.5	+1.2
THL	Klokotos Trika	4.80	347	P	Pn	20 20 52.5	-0.2
THL	Klokotos Trika	4.80	347	P	Pn	20 20 52.5	-0.2
FETY	Fethiye	4.97	68	*e*P	Pn	20 20 57.0	+1.9
FETY	Fethiye	4.97	68	*e*Pn	Pn	20 20 56.1	+1.0
FETY	Fethiye	4.97	68	P	Pn	20 20 56.1	+1.0
FETY	Fethiye	4.97	68	P	Pn	20 20 56.1	+1.0
FETY				S	Sn	20 21 49.4	-1.9
PAIG	Paliouri	5.05	3	P	Pn	20 20 57.0	+1.0
PAIG	Paliouri	5.05	3	P	Pn	20 20 57.0	+1.0
JAN	Janina	5.17	338	P	Pn	20 21 00.1	+2.3
JAN	Janina	5.17	338	P	Pn	20 21 00.1	+2.3
TAVA	DENIZLI_Tavas	5.18	58	*i* P	Pn	20 21 00.7	+2.7
TAVA				*i* S	Sn	20 22 00.2	+3.7
TAVA	DENIZLI_Tavas	5.18	58	P	Pn	20 21 00.7	+2.7
TAVA				S	Sn	20 22 00.2	+3.7
IGT	Igoumenitsa	5.24	333	*e*Pn	Pn	20 20 56.5	-2.2
IGT				*e*Sn	Sn	20 21 52.3	-5.5
IGT	Igoumenitsa	5.24	333	P	Pn	20 21 00.5	+1.8
IGT	Igoumenitsa	5.24	333	*e*Pn	Pn	20 20 56.5	-2.2
IGT	Igoumenitsa	5.24	333	P	Pn	20 21 00.5	+1.8
LIT	Litokhoron	5.26	353	*e*Pn	Pn	20 20 58.1	-0.9
LIT	Litokhoron	5.26	353	P	Pn	20 20 58.6	-0.4
LIT	Litokhoron	5.26	353	*e*P	Pn	20 20 58.1	-0.9
LIT	Litokhoron	5.26	353	*e*Pn	Pn	20 20 58.1	-0.9
LIT	Litokhoron	5.26	353	P	Pn	20 20 58.6	-0.4
AKAS	Kas	5.27	73	*e*P	Pn	20 21 02.2	+3.0
AKAS	Kas	5.27	73	*i* P	Pn	20 21 00.7	+1.5
AKAS				*i* S	Sn	20 21 59.7	+1.0
AKAS	Kas	5.27	73	P	Pn	20 21 00.7	+1.5
AKAS				S	Sn	20 21 59.7	+1.0
OUR	Ouranopolis	5.47	5	P	Pn	20 21 02.3	+0.5
OUR	Ouranopolis	5.47	5	P	Pn	20 21 02.3	+0.5
MANT	Manisa	5.52	48	*i* P	Pn	20 21 03.1	+0.4
MANT	Manisa	5.52	48	*e*Pn	Pn	20 21 03.0	+0.3
MANT	Manisa	5.52	48	P	Pn	20 21 03.1	+0.4
GOLH	Golhisar	5.54	63	*i* P	Pn	20 21 05.3	+2.3
GOLH				*i* S	Sn	20 22 05.5	0.0
GOLH	Golhisar	5.54	63	P	Pn	20 21 05.3	+2.3
GOLH				S	Sn	20 22 05.5	0.0
KULA	Kula-Manisa	5.59	48	*e*P	Pn	20 21 04.9	+1.3
ELL	Elmali	5.64	69	*e*P	Pn	20 21 06.7	+2.4
SRN	Sarande	5.67	333	*i* PN	Pn	20 21 03.8	-0.8
SWA2		5.89	162	P	Pn	20 21 07.3	-0.3
	baz=165						
SWA2				S	Sn	20 22 04.3	-10
	baz=165						
SWA2		5.89	162	P	Pn	20 21 07.3	-0.3
SOH	Sokhos	5.93	360	P	Pn	20 21 09.6	+1.3
SOH				pmax	pmax		
	comp=Z,25nm,0.7s						
SOH	Sokhos	5.93	360	P	Pn	20 21 09.6	+1.3
	comp=Z,25nm,0.7s						
KHAL	Karahalli	6.04	53	*i* P	Pn	20 21 10.9	+1.2
KHAL	Karahalli	6.04	53	P	Pn	20 21 10.9	+1.2
KORT	Korkueli	6.05	67	*e*P	Pn	20 21 12.5	+2.5
KORT	Korkueli	6.05	67	*i* P	Pn	20 21 07.0	-3.0
KORT				*i* S	Sn	20 22 19.0	+1.0
KORT	Korkueli	6.05	67	P	Pn	20 21 07.0	-3.0
KORT				S	Sn	20 22 19.0	+1.0
KBN	Korca	6.09	341	*i* PN	Pn	20 21 10.6	+0.2
BRDR	BURDUR-Merkez	6.10	61	*i* P	Pn	20 21 10.9	+0.3
BRDR				*i* S	Sn	20 22 06.7	-12
BRDR	BURDUR-Merkez	6.10	61	P	Pn	20 21 10.9	+0.3
BRDR				S	Sn	20 22 06.7	-12
FNA	Florina	6.10	346	*e*Pn	Pn	20 21 08.5	-2.1
FNA				*e*Sn	Sn	20 22 15.0	-4.1
FNA	Florina	6.10	346	*e*Pn	Pn	20 21 09.2	-1.4
FNA	Florina	6.10	346	P	Pn	20 21 09.6	-1.0
FNA	Florina	6.10	346	*e*P	Pn	20 21 09.2	-1.4
FNA	Florina	6.10	346	*e*Pn	Pn	20 21 09.2	-1.4
FNA	Florina	6.10	346	P	Pn	20 21 09.6	-1.0
GRG	Griva	6.12	353	*e*P	Pn	20 21 10.3	-0.5
GRG				pmax	pmax		
	comp=Z,26nm,0.7s						
GRG	Griva	6.12	353	*e*P	Pn	20 21 10.3	-0.5
	comp=Z,26nm,0.7s						
SRS	Serrai	6.23	2	*e*Pn	Pn	20 21 11.7	-0.6
SRS	Serrai	6.23	2	P	Pn	20 21 12.9	+0.6
SRS				pmax	pmax		
	comp=Z,22nm,0.8s						
SRS	Serrai	6.23	2	*e*Pn	Pn	20 21 11.7	-0.6
SRS	Serrai	6.23	2	P	Pn	20 21 12.9	+0.6
	comp=Z,22nm,0.8s						
KNT	Kendrikon	6.29	357	P	Pn	20 21 14.0	+1.0
KNT	Kendrikon	6.29	357	P	Pn	20 21 14.0	+1.0
ALN	Alexandroupoli	6.37	19	*e*Pn	Pn	20 21 13.1	-1.1
ALN	Alexandroupoli	6.37	19	*e*P	Pn	20 21 13.1	-1.1
ALN	Alexandroupoli	6.37	19	*e*P	Pn	20 21 13.1	-1.1
VAY	Valandovo	6.46	355	*e*Pn	Pn	20 21 12.4	-3.1
VAY	Valandovo	6.46	355	*i* Pn	Pn	20 21 15.4	-0.1
VAY	Valandovo	6.46	355	P	Pn	20 21 18.3	+2.8
VAY	Valandovo	6.46	355	P	Pn	20 21 18.3	+2.8
ISP	Isparta	6.48	61	*e*Pn	Pn	20 21 16.4	+0.6
ISP	Isparta	6.48	61	*i* P	Pn	20 21 17.1	+1.3
ISP	Isparta	6.48	61	*e*Pn	Pn	20 21 16.4	+0.6
ISP	Isparta	6.48	61	*i* P	Pn	20 21 17.1	+1.3
OHR	Ohrid	6.54	343	*i* Pn	Pn	20 21 15.8	-0.9
OHR				*e*Sn	Sn	20 22 25.7	-4.3
TVSB	Tavsanli	6.67	45	*e*P	Pn	20 21 20.3	+1.8
KRUS	Krusevo	6.69	346	*i* Pn	Pn	20 21 17.8	-0.9
KRUS				*e*Sn	Sn	20 22 28.4	-5.3
MMB	Musomiste	6.71	2	*e*P	Pn	20 21 18.2	-0.7
TIP	Timpagrande	6.81	311	⇑*i*P	Pn	20 21 19.0	-1.3
TIP	Timpagrande	6.81	311	*e*Pn	Pn	20 21 18.4	-1.8
TIP	Timpagrande	6.81	311	*e*Pn	Pn	20 21 18.4	-1.8
RZN	Rozhen	6.88	8	*e*P	Pn	20 21 21.9	+0.5
KKB	Krupnik	6.98	358	*e*P	Pn	20 21 22.2	-0.4
KEPZ	Antalya-Kepez	6.99	71	*i* P	Pn	20 21 23.9	+1.1
KEPZ				*i* S	Sn	20 22 39.1	-1.8
KEPZ	Antalya-Kepez	6.99	71	P	Pn	20 21 23.9	+1.1
KEPZ				S	Sn	20 22 39.1	-1.8
PHP	Peshkopia	7.17	342	*i* PN	Pn	20 21 24.2	-1.1
SKO	Skopje	7.24	349	*e*Pn	Pn	20 21 24.4	-1.8
SKO	Skopje	7.24	349	*e*Pn	Pn	20 21 24.4	-1.8
WDD	Wied Dalam	7.29	280	*e*Pn	Pn	20 21 27.0	+0.2
WDD	Wied Dalam	7.29	280	*e*Pn	Pn	20 21 27.0	+0.2
PLD	Plovdiv	7.29	8	*e*Pn	Pn	20 21 27.1	+0.3
PLD	Plovdiv	7.29	8	*e*P	Pn	20 21 27.5	+0.7
PLD	Plovdiv	7.29	8	P	Pn	20 21 28.0	+1.2
PLD	Plovdiv	7.29	8	*e*Pn	Pn	20 21 27.1	+0.3
PLD	Plovdiv	7.29	8	P	Pn	20 21 28.0	+1.2
GAZI	Gazipasa	7.42	77	*i* P	Pn	20 21 27.8	-0.9
GAZI				*i* S	Sn	20 22 45.6	-6.0
GAZI	Gazipasa	7.42	77	P	Pn	20 21 27.8	-0.9
GAZI				S	Sn	20 22 45.6	-6.0
PUK	Puka	7.65	340	*i* PN	Pn	20 21 30.0	-1.9
VAE	Valguarnera	7.69	292	Pn	Pn	20 21 35.6	+3.2
	comp=Z,1.2nm,0.3s,baz=172,slow=18,SNR=3.0						
VAE				Sn	Sn	20 22 54.9	-3.2
	comp=Z,1.5nm,0.3s,baz=155,slow=17,SNR=2.9						
VTS	Vitosha	7.70	359	*e*Pn	Pn	20 21 30.9	-1.7
VTS	Vitosha	7.70	359	⇓*i*P	Pn	20 21 33.2	+0.6
VTS	Vitosha	7.70	359	*e*Pn	Pn	20 21 31.9	-0.7
VTS	Vitosha	7.70	359	*e*P	Pn	20 21 33.4	+0.8
VTS	Vitosha	7.70	359	*e*P	Pn	20 21 31.9	-0.7
VTS	Vitosha	7.70	359	*e*P	Pn	20 21 31.9	-0.7
CUC	Castrocucco	7.88	313	*e*Pn	Pn	20 21 33.7	-1.2
CUC	Castrocucco	7.88	313	*e*Pn	Pn	20 21 33.7	-1.2
BCI	Bajram Curri	7.91	342	*i* PN	Pn	20 21 33.9	-1.4
SG1	Sgolgore (BA)	7.96	320	*e*Pn	Pn	20 21 34.3	-1.7
SG1				Sn	Sn	20 22 54.8	-10
ERMK	Ermenek	7.96	74	*i* P	Pn	20 21 38.1	+1.9
ERMK				*i* S	Sn	20 23 02.4	-2.6
ERMK	Ermenek	7.96	74	P	Pn	20 21 38.1	+1.9
ERMK				S	Sn	20 23 02.4	-2.6
BARS	Barje	8.02	352	*e*Pn	Pn	20 21 33.4	-3.4
CSS	Mathiatis	8.19	87	*e*Pn	Pn	20 21 37.0	-2.2
CSS				*e*Sn	Sn	20 23 02.6	-7.8
CSS	Mathiatis	8.19	87	Pn	Pn	20 21 36.7	-2.5
CSS	Mathiatis	8.19	87	*e*Pn	Pn	20 21 37.0	-2.2
CSS				*e*Sn	Sn	20 23 02.6	-7.8
PDG	Podgorica	8.20	338	⇓*i*P	Pn	20 21 37.8	-1.4
TTG	Podgorica	8.20	338	*e*Pn	Pn	20 21 38.7	-0.5
TTG				*e*Sn	Sn	20 23 03.2	-7.2
TTG	Podgorica	8.20	338	*e*P	Pn	20 21 38.7	-0.5
TTG				*e*		20 23 03.3	
TTG	Podgorica	8.20	338	*e*P	Pn	20 21 38.7	-0.5
TTG				*e*Sn	Sn	20 23 03.2	-7.2
ZAPS	Zavoj	8.40	356	*e*Pn	Pn	20 21 40.5	-1.6
SELS	Selova	8.51	349	*e*Pn	Pn	20 21 41.5	-2.1
CLTB	Caltabellotta	8.63	291	*e*Pn	Pn	20 21 46.6	+1.3
CLTB	Caltabellotta	8.63	291	*e*Pn	Pn	20 21 46.6	+1.3
KOT	Kottamia	8.69	122	P	Pn	20 21 44.9	-1.2
	baz=122						
KOT	Kottamia	8.69	122	P	Pn	20 21 44.9	-1.2
TREB	Trebinje	8.75	335	*e*Pn	Pn	20 21 42.8	-4.0
SJES	Sjenica	8.78	344	*e*Pn	Pn	20 21 44.5	-2.8
SJES				*e*Sn	Sn	20 23 17.8	-7.1
HFRF	Wahat Farafira	8.79	150	P	Pn	20 21 46.2	-1.3
	baz=151						
BOVS	Bovan	8.84	352	*e*Pn	Pn	20 21 45.5	-2.5
HHAG	Hagoal	8.87	121	P	Pn	20 21 48.1	-0.4
	baz=121						
HHAG	Hagoal	8.87	121	P	Pn	20 21 48.1	-0.4
BR231	Keskin MP Arra	8.98	54	*e*Pn	Pn	20 21 52.6	+2.5
BR231	Keskin MP Arra	8.98	54	*e*Pn	Pn	20 21 52.6	+2.5
ANTO	Ankara	9.01	54	*e*Pn	Pn	20 21 51.2	+0.8
ANTO	Ankara	9.01	54	*e*P	Pn	20 21 51.2	+0.8
ANTO	Ankara	9.01	54	*e*P	Pn	20 21 51.2	+0.8
IVAS	Ivanjica	9.04	345	*e*Pn	Pn	20 21 47.5	-3.3
STON	Ston	9.12	333	*e*Pn	Pn	20 21 47.7	-4.1
STON				Sn	Sn	20 23 23.1	-10
GRUS	Gruza	9.23	348	*e*Pn	Pn	20 21 49.9	-3.5
BBLS	Lazići	9.48	342	*e*Pn	Pn	20 21 52.5	-4.4
BBLS				*e*Sn	Sn	20 23 33.2	-9.0
BR101	Keskin Array S	9.51	56	*e*Pn	Pn	20 21 58.2	+0.8
BR101				*e*Sn	Sn	20 23 38.4	-4.5
BR101	Keskin Array S	9.51	56	*e*Pn	Pn	20 21 58.2	+0.8
BR101				*e*Sn	Sn	20 23 38.4	-4.5
BR131	Keskin Array S	9.51	56	*e*Pn	Pn	20 21 58.7	+1.4
BR131	Keskin Array S	9.51	56	*e*Pn	Pn	20 21 58.7	+1.4
BRTR	Keskin Array B	9.51	56	Pn	Pn	20 21 58.2	+0.8
	comp=Z,0.4nm,0.3s,baz=246,slow=18,SNR=11						
BRTR				Sn	Sn	20 23 38.4	-4.5
	baz=211,slow=22,SNR=1.8						
BRTR	Keskin Array B	9.51	56	*i* P	Pn	20 22 01.7	+4.4
BRTR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
RSH		9.54	111	P	Pn	20 21 54.7	-3.0
	baz=110						
DIVS	Divibare	9.57	345	*e*Pn	Pn	20 21 54.2	-3.9
DIVS				*e*Sn	Sn	20 23 36.5	-7.8
DIVS	Divibare	9.57	345	*e*Pn	Pn	20 21 55.7	-2.4
DIVS				*e*Sn	Sn	20 23 33.3	-11
DIVS	Divibare	9.57	345	*e*Pn	Pn	20 21 55.7	-2.4
DIVS				*e*Sn	Sn	20 23 33.3	-11
TRUS	Trudelj	9.61	347	*e*Pn	Pn	20 21 54.4	-4.2
OFRI	‘Ofer	9.94	100	Pn	Pn	20 22 01.1	-2.0
MDVR	Moldovita	9.97	353	⇓*i*P	Pn	20 22 02.2	-1.4
HERR	Herculane	10.02	356	⇑*i*P	Pn	20 22 04.1	-0.1
KZIT	Kziot	10.09	110	Pn	Pn	20 22 02.6	-2.6
SLTI	Sal’it	10.09	102	Pn	Pn	20 22 03.1	-2.2
SLTI				Sn	Sn	20 23 49.5	-7.6
TEKS	Tekeris	10.10	344	*e*Pn	Pn	20 22 02.0	-3.3
MMAI	Mount Meron Ar	10.17	97	Pn	Pn	20 22 04.3	-2.2
	comp=Z,4.5nm,0.3s,baz=298,slow=12,SNR=23						
MMAI				Sn	Sn	20 23 53.2	-6.0
	comp=Z,3.9nm,0.3s,baz=276,slow=20,SNR=5.1						
ILGA	Ilgaz	10.23	50	*e*Pn	Pn	20 22 06.1	-1.2
ILGA	Ilgaz	10.23	50	*e*Pn	Pn	20 22 06.1	-1.2
AMAZ	Amatzia	10.24	106	Pn	Pn	20 22 05.5	-1.8
TIRR	Tirgusor	10.33	21	*e*Pn	Pn	20 22 08.8	+0.4
TIRR	Tirgusor	10.33	21	*e*P	Pn	20 22 08.8	+0.4
TIRR	Tirgusor	10.33	21	*e*P	Pn	20 22 08.8	+0.4
MMLI	Mount Malkishu	10.34	100	Pn	Pn	20 22 05.9	-2.8
MMLI				Sn	Sn	20 23 56.1	-7.1
KSDI	Kefar Szold	10.34	96	Pn	Pn	20 22 07.2	-1.5
NATI	Neve Ativ	10.39	95	Pn	Pn	20 22 07.2	-2.1
YTIR	Yattir	10.46	106	Pn	Pn	20 22 08.6	-1.8
HMDT	Nahal Hemdat	10.48	101	Pn	Pn	20 22 09.3	-1.3
KSHT	Keshet	10.51	97	Pn	Pn	20 22 09.8	-1.3
ARR	Arges	10.52	5	⇓*i*P	Pn	20 22 11.4	+0.3
DSI	Dead Sea	10.59	105	Pn	Pn	20 22 11.7	-0.4
FRGS	Fruska Gora	10.62	346	*e*Pn	Pn	20 22 08.6	-3.8
VOIR		10.63	6	⇓*i*P	Pn	20 22 12.5	-0.1
VOIR		10.63	6	P	Pn	20 22 14.3	+1.7
VOIR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
VOIR		10.63	6	P	Pn	20 22 14.3	+1.7
	comp=Z,7.0nm,1.0s						
MZDA	Masada	10.68	106	Pn	Pn	20 22 11.9	-1.3
MZDA				Sn	Sn	20 24 04.5	-6.8
MLR	Muntele Rosu	10.78	10	Pn	Pn	20 22 12.7	-2.1
	comp=Z,0.1nm,0.3s,baz=175,slow=13,SNR=2.3						
MLR				LR	LR	20 27 20.5	
	comp=Z,245nm,20.5s,baz=197,slow=43						
MLR	Muntele Rosu	10.78	10	⇑*i*P	Pn	20 22 14.8	+0.1
MLR	Muntele Rosu	10.78	10	*e*Pn	Pn	20 22 13.9	-0.8
MLR	Muntele Rosu	10.78	10	*e*P	Pn	20 22 13.9	-0.8
MLR	Muntele Rosu	10.78	10	*e*P	Pn	20 22 13.9	-0.8
AQU	L’Aquila	10.78	317	*e*Pn	Pn	20 22 12.2	-2.5
AQU	L’Aquila	10.78	317	*e*P	Pn	20 22 12.2	-2.5
AQU	L’Aquila	10.78	317	*e*P	Pn	20 22 12.2	-2.5
PRNI	Paran	10.80	111	Pn	Pn	20 22 13.3	-1.7
BZS	Buzias	10.81	353	⇑*i*P	Pn	20 22 13.8	-1.2
ZFRI	Zfri	10.84	110	Pn	Pn	20 22 13.1	-2.4
BLY	Banja Luka	10.94	336	*e*Pn	Pn	20 22 12.4	-4.3
BLY	Banja Luka	10.94	336	*e*Pn	Pn	20 22 15.1	-1.7
HRFI	Mount Harif	10.98	113	Pn	Pn	20 22 15.6	-1.8
MBRI	Mt Berech	11.00	114	Pn	Pn	20 22 16.0	-1.8
EIL	Elat	11.10	115	Pn	Pn	20 22 17.9	-1.1
	comp=Z,1.0nm,0.3s,baz=215,slow=2.9,SNR=21						
EIL				Sn	Sn	20 24 17.3	-4.4
	comp=Z,3.4nm,0.3s,baz=87,slow=23,SNR=7.5						
EIL	Elat	11.10	115	Pn	Pn	20 22 16.8	-2.2
DOPR	Dopca	11.18	7	⇓*i*P	Pn	20 22 20.6	+0.5
PLOR	Plostina	11.24	12	⇑*i*P	Pn	20 22 21.5	+0.5
VRI	Vrincioaia	11.27	12	⇓*i*P	Pn	20 22 22.5	+1.2
VRI	Vrincioaia	11.27	12	P	Pn	20 22 22.5	+1.2
VRI	Vrincioaia	11.27	12	P	Pn	20 22 22.5	+1.2
ASF	Jabal al Asfar	11.61	100	Pn	Pn	20 22 24.5	-1.6
	comp=Z,0.3nm,0.3s,baz=233,slow=12,SNR=3.1						
ASF				Sn	Sn	20 24 36.4	+2.0
	comp=Z,0.5nm,0.3s,baz=342,slow=20,SNR=3.6						
NVLJ	Novalja	11.67	329	Sn	Sn	20 24 25.0	-11
BIZ	Bicaz	12.23	9	⇑*i*P	Pn	20 22 35.1	+0.8
BOJS	Bojanci	12.28	332	*i* Pn	Pn	20 22 32.6	-2.5
BOJS				*i* Sn	Sn	20 24 38.0	-13
VISS	Visnje	12.69	332	*i* Pn	Pn	20 22 38.1	-2.6
VISS				*i* Sn	Sn	20 24 48.9	-12
BURAR	Bucovina Array	12.80	6	⇑*i*P	Pn	20 22 42.9	+0.6
BURAR	Bucovina Array	12.80	6	P	Pn	20 22 42.9	+0.6
BUR04	Bucovina Ar. S	12.80	6	*e*Pn	Pn	20 22 38.8	-3.5
BUR04	Bucovina Ar. S	12.80	6	*e*Pn	Pn	20 22 38.8	-3.5
BUR08	Bucovina Ar. S	12.83	6	*e*Pn	Pn	20 22 38.6	-4.1
BUR08	Bucovina Ar. S	12.83	6	*e*Pn	Pn	20 22 38.6	-4.1
JAVS	Javornik	13.08	330	*i* Pn	Pn	20 22 44.1	-1.9
JAVS				*i* Sn	Sn	20 24 59.3	-11
PSZ	Piszkesteto	13.28	350	*e*Pn	Pn	20 22 47.5	-1.4
PSZ	Piszkesteto	13.28	350	*e*P	Pn	20 22 47.5	-1.4
PSZ	Piszkesteto	13.28	350	*e*Pn	Pn	20 22 47.5	-1.4
SOKA	Soboth	13.36	334	Pn	Pn	20 22 50.1	+0.2
	comp=Z,2.7nm,0.9s						
SOKA	Soboth	13.36	334	Pn	Pn	20 22 50.1	+0.2
	comp=Z,2.7nm,0.9s						
OBKA	Obir	13.39	333	*e*Pn	Pn	20 22 50.5	+0.1
	comp=Z,2.8nm,0.8s						
OBKA	Obir	13.39	333	Pn	Pn	20 22 50.5	+0.1
	comp=Z,2.8nm,0.8s						
SORM	Soroca	13.76	14	⇑*i*P	Pn	20 22 55.4	+0.2
VYHS	Vyhne	14.02	347	*e*P	P	20 23 05.0	-0.6
VYHS	Vyhne	14.02	347	*e*PN	P	20 23 05.0	-0.6
VYHS	Vyhne	14.02	347	*e*P	P	20 23 05.0	-0.6
CONA	Conrad Observa	14.19	339	P	P	20 23 06.2	-1.5
	comp=Z,3.0nm,0.9s						
CONA	Conrad Observa	14.19	339	P	P	20 23 06.2	-1.5
	comp=Z,3.0nm,0.9s						
MODS	Modra-Piesok	14.22	343	*e*P	P	20 23 08.5	+0.5
MODS	Modra-Piesok	14.22	343	*e*PN	P	20 23 08.5	+0.5
MODS	Modra-Piesok	14.22	343	*e*P	P	20 23 08.5	+0.5
SMOL	Smolenice	14.32	344	P	P	20 23 09.0	0.0
SMOL	Smolenice	14.32	344	P	P	20 23 09.0	0.0
ABTA	Abfaltersbach	14.41	329	P	P	20 23 11.0	+0.9
	comp=Z,6.2nm,0.9s						
ABTA	Abfaltersbach	14.41	329	P	P	20 23 11.0	+0.9
	comp=Z,6.2nm,0.9s						
JAVC	Velka Javorina	14.59	345	*e*P	P	20 23 12.0	-0.1
JAVC	Velka Javorina	14.59	345	*e*P	P	20 23 12.0	-0.1
MOA	Molln	14.63	335	Pn	Pn	20 23 06.8	-0.2
	comp=Z,14nm,1.1s						
MOA	Molln	14.63	335	Pn	Pn	20 23 06.8	-0.2
	comp=Z,14nm,1.1s						
KRUC	Moravsky	15.08	342	*e*P	P	20 23 17.7	+0.2
KRUC	Moravsky	15.08	342	*e*P	P	20 23 17.7	+0.2
VRAC	Vranov	15.26	343	Pn	Pn	20 23 16.1	+0.8
	comp=Z,0.5nm,0.3s,baz=168,slow=8.0,SNR=9.3						
VRAC				LR	LR	20 30 21.2	
	comp=Z,258nm,20.8s,baz=170,slow=42						
VRAC	Vranov	15.26	343	⇑*i*P	Pn	20 23 15.6	+0.3
VRAC	Vranov	15.26	343	*e*P	P	20 23 19.3	-0.2
VRAC	Vranov	15.26	343	*e*P	P	20 23 19.3	-0.2
FUORN	Ofenpass-Fuorn	15.34	324	*e*Pn	Pn	20 23 18.1	+1.5
	comp=Z,11nm,0.8s						
FUORN	Ofenpass-Fuorn	15.34	324	*e*Pn	Pn	20 23 18.1	+1.5
	comp=Z,11nm,0.8s						
FETA	Feichten	15.41	326	*e*P	P	20 23 22.2	+0.9
	comp=Z,13nm,1.2s						
FETA	Feichten	15.41	326	P	P	20 23 22.2	+0.9
	comp=Z,13nm,1.2s						
MOTA	Moosalm	15.48	327	*e*P	P	20 23 22.2	+0.1
	comp=Z,5.8nm,1.0s						
MOTA	Moosalm	15.48	327	P	P	20 23 22.2	+0.1
	comp=Z,5.8nm,1.0s						
MORC	Moravsky Berou	15.49	346	⇑*i*P	Pn	20 23 18.7	+0.4
MORC	Moravsky Berou	15.49	346	*e*Pn	Pn	20 23 19.6	+1.3
	comp=Z,13nm,1.4s						
MORC	Moravsky Berou	15.49	346	*e*Pn	Pn	20 23 19.6	+1.3
	comp=Z,13nm,1.4s						
MORC	Moravsky Berou	15.49	346	*e*P	P	20 23 22.2	+0.1
MORC	Moravsky Berou	15.49	346	*e*P	P	20 23 22.2	+0.1
OJC	Ojcow	15.55	351	*e*Pn	P	20 23 21.0	-1.7
	comp=Z,14nm,1.2s						
OJC	Ojcow	15.55	351	*e*Pn	P	20 23 21.0	-1.7
	comp=Z,14nm,1.2s						
DAVOX	Davos/Dischmat	15.64	324	Pn	Pn	20 23 19.6	-0.8
	comp=Z,0.1nm,0.3s,baz=176,slow=19,SNR=1.7						
DAVOX				LR	LR	20 30 55.6	
	comp=Z,159nm,18.6s,baz=99,slow=44						
GEA0	GERESS Array S	15.68	336	*e*Pn	Pn	20 23 21.4	+0.7
GEA0	GERESS Array S	15.68	336	*e*Pn	Pn	20 23 21.4	+0.7
GEC2	GERESS Array S	15.68	336	*e*Pn	Pn	20 23 20.8	0.0
	comp=Z,6.9nm,0.9s						
GEC2	GERESS Array S	15.68	336	*e*P	Pn	20 23 20.8	0.0
GEC2				pmax	pmax		
	comp=Z,7.0nm,0.9s						
GEC2	GERESS Array S	15.68	336	*e*Pn	Pn	20 23 20.8	0.0
	comp=Z,6.9nm,0.9s						
GERES	GERESS Array B	15.68	336	Pn	Pn	20 23 19.2	-1.6
	comp=Z,0.3nm,0.3s,baz=166,slow=8.8,SNR=4.9						
GERES				LR	LR	20 30 54.7	
	comp=Z,235nm,21.3s,baz=126,slow=43						
TUE	Stuetta	15.69	322	*e*Pn	P	20 23 24.6	+0.1
	comp=Z,7.2nm,0.9s						
TUE	Stuetta	15.69	322	*e*Pn	P	20 23 24.6	+0.1
	comp=Z,7.2nm,0.9s						
RETA	Reutte	15.74	327	P	P	20 23 25.0	+0.1
	comp=Z,2.5nm,0.6s						
RETA	Reutte	15.74	327	P	P	20 23 25.0	+0.1
	comp=Z,2.5nm,0.6s						
KRLC	Kraliky	15.93	344	*e*P	P	20 23 26.8	-0.2
KRLC	Kraliky	15.93	344	*e*P	P	20 23 26.8	-0.2
KRLC	Kraliky	15.93	344	*e*P	P	20 23 26.8	-0.2
KHC	Kasperske Hory	15.97	336	*e*P	P	20 23 28.1	+0.7
KHC				*e*x	x	20 23 42.5	
KHC	Kasperske Hory	15.97	336	*e*Pn	Pn	20 23 25.5	+1.1
	comp=Z,9.0nm,1.1s						
KHC	Kasperske Hory	15.97	336	*e*P	Pn	20 23 25.5	+1.1
KHC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
KHC	Kasperske Hory	15.97	336	*e*P	Pn	20 23 25.5	+1.1
	comp=Z,9.0nm,1.1s						
DAVA	Damuels	16.00	325	Pn	Pn	20 23 25.1	+0.2
	comp=Z,5.6nm,0.7s						
DAVA	Damuels	16.00	325	Pn	Pn	20 23 25.1	+0.2
	comp=Z,5.6nm,0.7s						
WET	Wettzell	16.22	335	P	P	20 23 30.7	+0.6
WET				pmax	pmax		
	comp=Z,15nm,1.1s						
WET	Wettzell	16.22	335	P	P	20 23 30.7	+0.6
	comp=Z,15nm,1.1s						
GOPC	GO Pecny, Ondr	16.29	340	*e*P	P	20 23 30.8	-0.1
GOPC	GO Pecny, Ondr	16.29	340	*e*P	P	20 23 30.8	-0.1
GOPC	GO Pecny, Ondr	16.29	340	*e*P	P	20 23 30.8	-0.1
DPC	Dobruska-Polom	16.30	344	*e*P	P	20 23 31.5	+0.5
DPC				AMS	AMS	20 30 40.0	
	comp=Z,200nm,14.1s						
DPC	Dobruska-Polom	16.30	344	*e*P	P	20 23 31.5	+0.5
DPC				MLR	MLR		
	comp=Z,200nm,14.1s						
DPC	Dobruska-Polom	16.30	344	*e*P	P	20 23 31.5	+0.5
	comp=Z,200nm,14.1s						
AK11	Malin Array Si	16.35	13	*e*Pn	Pn	20 23 29.9	+0.8
AK11	Malin Array Si	16.35	13	*e*Pn	Pn	20 23 29.9	+0.8
KIEV	Kiev	16.37	13	*e*Pn	Pn	20 23 29.4	0.0
	comp=Z,6.9nm,0.7s						
KIEV	Kiev	16.37	13	*i* P	Pn	20 23 25.9	-3.5
KIEV	Kiev	16.37	13	*e*Pn	Pn	20 23 29.4	0.0
	comp=Z,6.9nm,0.7s						
AKASG	Malin Array Be	16.38	13	Pn	Pn	20 23 26.8	-2.7
	comp=Z,1.0nm,0.3s,baz=202,slow=11,SNR=6.7						
AKASG				LR	LR	20 30 38.3	
	comp=Z,110nm,18.3s,baz=215,slow=40						
AKASG	Malin Array Be	16.38	13	*ce*P	Pn	20 23 26.0	-3.5
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKBB	Malin Array Si	16.38	13	*e*Pn	Pn	20 23 29.0	-0.5
	comp=Z,7.4nm,0.8s						
AKBB	Malin Array Si	16.38	13	*e*P	Pn	20 23 29.0	-0.5
AKBB				pmax	pmax		
	comp=Z,7.0nm,0.8s						
AKBB	Malin Array Si	16.38	13	*e*Pn	Pn	20 23 29.0	-0.5
	comp=Z,7.4nm,0.8s						
PRU	Pruhonice	16.43	340	*e*P	P	20 23 31.6	-0.8
PRU	Pruhonice	16.43	340	*e*P	P	20 23 31.6	-0.8
PRU	Pruhonice	16.43	340	*e*P	P	20 23 31.6	-0.8
SENIN	Lac Senin/Sane	16.71	318	*e*Pn	Pn	20 23 33.5	-0.4
	comp=Z,19nm,1.7s						
SENIN	Lac Senin/Sane	16.71	318	*e*Pn	Pn	20 23 33.5	-0.4
	comp=Z,19nm,1.7s						
AKH	Akhalkalaki	17.11	62	*e*Pn	Pn	20 23 38.8	-0.1
	comp=Z,11nm,0.9s						
AKH	Akhalkalaki	17.11	62	*e*P	Pn	20 23 38.8	-0.1
AKH				pmax	pmax		

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      comp=Z,11nm,0.9s
AKH   Akhalkalaki      17.11  62   eP      Pn      20 23 38.8 -0.1
      comp=Z,11nm,0.9s
NEY   Neytrino         17.18  55   i P     P       20 23 40.6 -0.3
NEY                                 pmax   pmax
      comp=Z,5.0nm,0.9s
NEY   Neytrino         17.18  55   i P     P       20 23 40.6 -0.3
      comp=Z,5.0nm,0.9s
GRFO  Grafenberg       17.28 333   ePn     P       20 23 41.3 -0.5
      comp=Z,25nm,1.1s
GRFO  Grafenberg       17.28 333   eP      P       20 23 41.3 -0.5
GRFO                                pmax   pmax
      comp=Z,25nm,1.1s
GRFO  Grafenberg       17.28 333   eP      P       20 23 41.3 -0.5
      comp=Z,25nm,1.1s
GRA1  Grafenberg Arr   17.28 333    P      P       20 23 43.3 +1.4
      comp=Z,28nm,1.1s
GRF   Grafenberg Arr   17.28 333    P      P       20 23 43.3 +1.4
GRF                                 pmax   pmax
      comp=Z,28nm,1.1s
BRG   Berggiesshubel   17.39 340   eP      P       20 23 43.8 +0.8
      comp=Z,14nm,1.6s
BRG                                 S      Sn      20 26 53.0 -1.6
BRG   Berggiesshubel   17.39 340   eP      P       20 23 43.8 +0.8
BRG                                 S      Sn      20 26 53.0 -1.6
BRG                                 pmax   pmax
      comp=Z,14nm,1.6s
BRG   Berggiesshubel   17.39 340   eP      P       20 23 43.8 +0.8
      comp=Z,14nm,1.6s
STU   Stuttgart        17.40 327   ePn     P       20 23 43.0 -0.2
      comp=Z,12nm,0.6s
STU   Stuttgart        17.40 327   ePn     P       20 23 43.0 -0.2
      comp=Z,12nm,0.6s
KIV   Kislovodsk       17.43  53   ePn     P       20 23 43.8 +0.1
      comp=Z,30nm,1.0s
KIV   Kislovodsk       17.43  53ceP        P       20 23 43.9 +0.2
KIV                                 pmax   pmax
      comp=Z,40nm,1.3s
KIV                                 MLR    MLR
      comp=Z,72nm,18.0s
KIV   Kislovodsk       17.43  53   ePn     P       20 23 43.8 +0.1
      comp=Z,30nm,1.0s
KVAR  Kislovodsk Arr   17.44  53    P      Pn      20 23 43.3 +0.4
      baz=195,slow=3.4,SNR=12
KVAR                                LR     LR      20 32 15.7
      comp=Z,81nm,19.8s,baz=264,slow=44
BFO   Black Forest     17.48 325   ePn     Pn      20 23 42.6 -0.7
      comp=Z,4.4nm,0.9s
BFO   Black Forest     17.48 325   eP      Pn      20 23 42.6 -0.7
BFO                                 pmax   pmax
      comp=Z,4.0nm,0.9s
BFO   Black Forest     17.48 325   eP      Pn      20 23 42.6 -0.7
      comp=Z,4.0nm,0.9s
KBZ   Khabaz           17.48  54    P      P       20 23 44.9 +0.9
      comp=Z,0.3nm,0.3s,baz=237,slow=9.2,SNR=28
KBZ                                 LR     LR      20 31 56.6
      comp=Z,106nm,20.1s,baz=268,slow=42
GNI   Garni            17.75  66    P      Pn      20 23 46.6 -0.3
      comp=Z,0.3nm,0.3s,baz=242,slow=13,SNR=4.0
GNI                                 LR     LR      20 31 55.9
      comp=Z,258nm,18.4s,baz=262,slow=42
GNI   Garni            17.75  66   ePn     Pn      20 23 45.8 -1.0
      comp=Z,28nm,1.4s
GNI   Garni            17.75  66   i P     Pn      20 23 46.5 -0.3
GNI                                 pmax   pmax
      comp=Z,9.0nm,0.5s
GNI   Garni            17.75  66   ePn     Pn      20 23 45.8 -1.0
      comp=Z,28nm,1.4s
GNI   Garni            17.75  66   i P     Pn      20 23 46.5 -0.3
      comp=Z,9.0nm,0.5s
ZEI   Tsey             17.82  58   eP      P       20 23 48.3 +0.3
ZEI   Tsey             17.82  58   eP      P       20 23 48.3 +0.3
NCK   Nalchik          17.86  55⇓eP        P       20 23 49.3 +1.0
NCK                                 pmax   pmax
      comp=Z,28nm,1.2s
NCK   Nalchik          17.86  55   eP      P       20 23 49.3 +1.0
      comp=Z,28nm,1.2s
ECH   Echery           17.97 323   ePn     Pn      20 23 48.8 -0.5
      comp=Z,7.1nm,1.2s
ECH   Echery           17.97 323   eP      Pn      20 23 48.8 -0.5
ECH                                 pmax   pmax
      comp=Z,7.0nm,1.2s
ECH   Echery           17.97 323   eP      Pn      20 23 48.8 -0.5
      comp=Z,7.0nm,1.2s
CLL   Collm            18.05 339⇑iP        P       20 23 50.1 -0.2
      comp=Z,6.0nm,0.9s
CLL                                i sP    sP      20 24 07.5 +1.1
CLL   Collm            18.05 339   ePn     Pn      20 23 49.4 -0.9
      comp=Z,5.5nm,0.8s
CLL   Collm            18.05 339⇑iP        P       20 23 50.1 -0.2
CLL                                 pmax   pmax
      comp=Z,3.0nm,0.9s
CLL   Collm            18.05 339   ePn     Pn      20 23 49.4 -0.9
      comp=Z,5.5nm,0.8s
CLL   Collm            18.05 339   i P     P       20 23 50.1 -0.2
      comp=Z,3.0nm,0.9s
TBLG  Delisi           18.09  61   eP      Pn      20 23 52.1 +1.2
      comp=Z,13nm,0.8s
TBLG  Delisi           18.09  61   eP      Pn      20 23 52.1 +1.2
TBLG                                pmax   pmax
      comp=Z,13nm,0.8s
TBLG  Delisi           18.09  61   eP      Pn      20 23 52.1 +1.2
      comp=Z,13nm,0.8s
GOF   Gofitskoye       18.15  50   eP      Pn      20 23 51.8 +0.3
GOF                                 pmax   pmax
      comp=Z,30nm,0.7s
SUW   Suwalki          19.13 360   eP      P       20 24 00.6 -1.5
      comp=Z,31nm,1.0s
SUW   Suwalki          19.13 360   eP      P       20 24 00.6 -1.5
SUW                                 pmax   pmax
      comp=Z,31nm,1.0s
SUW   Suwalki          19.13 360   eP      P       20 24 00.6 -1.5
      comp=Z,31nm,1.0s
WLF   Walferdange      19.44 325   ⇓P      Pn      20 24 08.8 +1.9
WLF   Walferdange      19.44 325   eP      P       20 24 05.5 +0.1
      comp=Z,8.9nm,0.9s
WLF   Walferdange      19.44 325   eP      P       20 24 05.6 +0.1
WLF                                 pmax   pmax
      comp=Z,9.0nm,0.9s
TAM   Tamanrasset      19.69 237   eP      Pn      20 24 12.0 +1.6
      comp=Z,7.3nm,1.3s
TAM   Tamanrasset      19.69 237   eP      Pn      20 24 12.0 +1.6
TAM                                 pmax   pmax
      comp=Z,7.0nm,1.3s
TAM   Tamanrasset      19.69 237   eP      Pn      20 24 12.0 +1.6
      comp=Z,7.3nm,1.3s
VORD  Divnogorie       19.80  31   eP      P       20 24 10.1 +0.7
VORD                                pmax   pmax
      comp=Z,10.0nm,1.0s
VORD  Divnogorie       19.80  31   eP      P       20 24 10.1 +0.7
      comp=Z,10.0nm,1.0s
VSR   Storozhevoye     19.93  30   eP      P       20 24 09.4 -1.5
VSR                                 pmax   pmax
      comp=Z,4.0nm,0.4s
VSR   Storozhevoye     19.93  30   eP      P       20 24 09.4 -1.5
      comp=Z,4.0nm,0.4s
MEM   Membach          20.16 327   ⇑P      Pn      20 24 14.7 -0.8
AKT   Akhty            20.22  64   eP      P       20 24 15.1 +0.8
AKT                                e               20 24 32.8
AKT                                eS      Sn      20 28 03.2 -0.1
AKT                                eSS     SnSn    20 28 24.7 +6.6
AKT                                 pmax   pmax
      comp=Z,17nm,1.2s
AKT   Akhty            20.22  64   eP      P       20 24 15.1 +0.8
      comp=Z,17nm,1.2s
DOU   Dourbes          20.48 324   ⇑P      P       20 24 17.6 +0.8
RGN   Rugen            20.88 343   eP      P       20 24 20.2 -0.9
      comp=Z,32nm,0.7s
RGN   Rugen            20.88 343   eP      P       20 24 20.2 -0.9
      comp=Z,32nm,0.7s
LPSR  Galich'ya Gora   20.91  27   eP      P       20 24 20.2 -1.2
LPSR                                pmax   pmax
      comp=Z,10.0nm,0.8s
VRH   Novokhopyorsk    21.03  34   eP      P       20 24 20.9 -1.8
VRH                                 pmax   pmax
      comp=Z,10.0nm,0.5s
VRH   Novokhopyorsk    21.03  34   eP      P       20 24 20.9 -1.8
      comp=Z,10.0nm,0.5s
UCC   Uccle            21.05 325   eP      P       20 24 22.5 -0.5
      comp=Z,6.7nm,0.6s
UCC   Uccle            21.05 325   eP      P       20 24 22.5 -0.5
UCC                                 pmax   pmax
      comp=Z,7.0nm,0.6s
UCC   Uccle            21.05 325   eP      P       20 24 22.5 -0.5
      comp=Z,6.7nm,0.6s
BSD   Bornholm Skovb   21.07 346   i P     P       20 24 20.9 -2.2
      comp=Z,9.2nm,0.7s
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BSD   Bornholm Skovb   21.07 346   i P     P       20 24 20.9 -2.2
BSD                                 pmax   pmax
      comp=Z,9.0nm,0.7s
BSD   Bornholm Skovb   21.07 346   i P     P       20 24 20.9 -2.2
      comp=Z,9.0nm,0.7s
ES19  SONSECA Array    22.18 291   eP      P       20 24 33.3 -2.0
ES19  SONSECA Array    22.18 291   eP      P       20 24 33.3 -2.0
OBN   Obninsk          22.21  20   eP      P       20 24 33.9 -1.5
      comp=Z,25nm,0.8s
OBN   Obninsk          22.21  20deP        P       20 24 35.0 -0.4
OBN                                e*SP    pP      20 24 48.5 +2.4
OBN                                                20 24 58.0
OBN                                ePPP    PPP     20 25 09.0
OBN                                eS      S       20 28 38.0 +0.9
OBN                                eSS     SnSn    20 29 05.8 -0.7
OBN                                 pmax   pmax
      comp=Z,24nm,0.9s
OBN                                 MLR    MLR
      comp=Z,114nm,16.0s
ESDC  Sonseca Array    22.23 291    P      P       20 24 35.3 -0.5
      comp=Z,1.0nm,0.7s,baz=93,slow=11,SNR=6.5
ESLA  Sonseca Array    22.23 291   eP      P       20 24 36.3 +0.5
      comp=Z,17nm,1.6s
ESLA  Sonseca Array    22.23 291   eP      P       20 24 36.3 +0.5
      comp=Z,17nm,1.6s
RAYN  Ar Rayn          22.34 115   eP      P       20 24 38.3 +1.1
      comp=Z,5.5nm,1.1s
RAYN  Ar Rayn          22.34 115   eP      P       20 24 38.3 +1.1
RAYN                                pmax   pmax
      comp=Z,5.0nm,1.1s
PAB   San Pablo        22.52 290   eP      P       20 24 39.7 +0.8
      comp=Z,15nm,1.4s
PAB   San Pablo        22.52 290   eP      P       20 24 39.7 +0.8
PAB                                 pmax   pmax
      comp=Z,15nm,1.4s
PAB   San Pablo        22.52 290   eP      P       20 24 39.7 +0.8
      comp=Z,15nm,1.4s
MOS   Moscow           23.06  21   eP      P       20 24 44.5 +0.2
MOS                                e               20 24 54.7
MOS   Moscow           23.06  21   eP      P       20 24 44.5 +0.2
MDT   Midelt           23.30 273    LR     LR      20 35 09.9
      comp=Z,122nm,21.2s,baz=90,slow=40
HFS   Hagfors          26.04 349    P      P       20 25 10.5 -1.3
      comp=Z,3.7nm,0.5s,baz=156,slow=11,SNR=28
HFS                                 LR     LR      20 36 58.5
      comp=Z,142nm,20.6s,baz=178,slow=40
KONO  Kongsberg        26.38 344   eP      P       20 25 15.3 +0.5
      comp=Z,45nm,1.8s
KONO  Kongsberg        26.38 344   eP      P       20 25 15.3 +0.5
KONO                                pmax   pmax
      comp=Z,45nm,1.8s
FIA0  FINESS Array S   26.64   3   eP      P       20 25 15.5 -1.6
FIA0                               ePcP    PcP     20 28 40.4 +0.4
FIA0  FINESS Array S   26.64   3   eP      P       20 25 15.5 -1.6
FIA0                               e               20 28 40.4
FINES FINESS Array B   26.64   3    P      P       20 25 15.5 -1.6
      comp=Z,4.1nm,0.8s,baz=178,slow=7.8,SNR=9.3
FINES                               PcP    PcP     20 28 40.4 +0.4
      comp=Z,1.7nm,0.7s,baz=211,slow=4.9,SNR=4.7
FIA1  FINESS Array S   26.64   3   eP      P       20 25 15.4 -1.7
      comp=Z,15nm,1.1s
NC602 NORSAR Array S   26.98 347   eP      P       20 25 20.5 +0.3
NAO01 NORSAR Array S   27.20 347   eP      P       20 25 20.8 -1.4
NC405 NORSAR Array S   27.30 348   eP      P       20 25 21.4 -1.7
NB201 NORSAR Array S   27.31 347   eP      P       20 25 22.3 -0.9
NB2   NORSAR Subarra   27.32 347    P      P       20 25 21.9 -1.4
      comp=Z,0.7nm,0.6s,baz=156,slow=9.3
NOA   NORSAR Array B   27.32 347    P      P       20 25 22.2 -1.1
      comp=Z,0.8nm,0.5s,baz=150,slow=9.4,SNR=9.2
NOA                                 LR     LR      20 38 05.9
      comp=Z,84nm,19.9s,baz=170,slow=41
NBO00 NORSAR Array S   27.39 347   eP      P       20 25 23.4 -0.5
EKA   Eskdalemuir Ar   27.44 326    P      P       20 25 24.0 -0.4
      comp=Z,1.0nm,0.5s,baz=120,slow=8.7,SNR=11
EKA   Eskdalemuir Ar   27.44 326   eP      P       20 25 24.0 -0.4
ESK   Eskdalemuir      27.45 326   eP      P       20 25 24.0 -0.5
      comp=Z,54nm,1.9s
ESK   Eskdalemuir      27.45 326   eP      P       20 25 24.0 -0.5
ESK                                 pmax   pmax
      comp=Z,54nm,1.9s
NC303 NORSAR Array S   27.46 347   eP      P       20 25 23.8 -0.8
NC204 NORSAR Array S   27.62 347   eP      P       20 25 25.6 -0.4
DSB   Dublin           27.87 320   eP      P       20 25 28.1 -0.2
      comp=Z,26nm,1.3s
KLMR  Klimovskoe       28.00  17   eP      P       20 25 26.4 -2.9
KLMR                                pmax   pmax
      comp=Z,6.0nm,0.9s
KLMR  Klimovskoe       28.00  17   eP      P       20 25 26.4 -2.9
KLMR                                AMP            20 25 43.9
      comp=Z,6.0nm,0.9s
GEYT  Alibeck          28.04  74    P      P       20 25 29.8 -0.2
      comp=Z,0.9nm,0.6s,baz=324,slow=7.3,SNR=6.2
GYA0B ALIBECK ARRAY    28.04  74   eP      P       20 25 29.9 -0.1
      comp=Z,5.3nm,1.0s
GYA0B ALIBECK ARRAY    28.04  74   eP      P       20 25 30.0 -0.1
      comp=Z,5.3nm,1.0s
TOA1  Torodi Ar. Sit   29.19 228   eP      P       20 25 40.1 -0.3
TOA0  Torodi Ar. Sit   29.20 228   eP      P       20 25 39.7 -0.7
      comp=Z,11nm,1.4s
TORD  Torodi Ar. Bea   29.20 228    P      P       20 25 40.1 -0.3
      comp=Z,1.0nm,0.6s,baz=32,slow=9.4
ATD   Arta Tunnel      29.23 138   eP      P       20 25 41.9 +1.2
      comp=Z,33nm,1.3s
AKTO  Aktyubinsk       29.53  48    P      P       20 25 42.3 -0.7
      comp=Z,0.6nm,0.3s,baz=265,slow=11,SNR=3.9
AKTO                                LR     LR      20 41 36.7
      comp=Z,45nm,19.1s,baz=264,slow=45
UOSS  Minazif          30.02 100   eP      P       20 25 48.1 +0.4
      comp=Z,8.9nm,1.0s
UOSS  Minazif          30.02 100   eP      P       20 25 48.1 +0.4
      comp=Z,8.9nm,1.0s
PRGR  Permogore        30.29  21   eP      P       20 25 47.7 -1.9
PRGR                                pmax   pmax
      comp=Z,36nm,0.4s
ABKAR Akbulak array    30.39  51   eP      P       20 25 50.2 -0.5
KOWA  Kowa             31.93 237    P      P       20 26 04.0 -0.5
      comp=Z,1.4nm,0.7s,baz=255,slow=15,SNR=2.6
KOWA                                LR     LR      20 38 43.9
      comp=Z,50nm,20.4s,baz=38,slow=36
ARU   Arti             32.16  37   eP      P       20 26 05.1 -1.1
      comp=Z,11nm,1.1s
ARU   Arti             32.16  37d iP       P       20 26 04.9 -1.3
ARU                                                20 28 49.7
ARU                                 S      S       20 31 15.6 -0.1
ARU                                 pmax   pmax
      comp=Z,9.0nm,1.0s
SVE   Sverdlovsk       33.37  37⇑iP        P       20 26 16.3 -0.4
SVE                                 pmax   pmax
      comp=Z,17nm,1.1s
ARA0  ARCESS Array S   34.73   1   eP      P       20 26 26.8 -1.6
ARA0                               ePcP    PcP     20 29 01.1  0.0
ARCES ARCESS Array B   34.73   1    P      P       20 26 26.8 -1.6
      comp=Z,1.8nm,0.5s,baz=178,slow=9.4,SNR=18
ARCES                               PcP    PcP     20 29 01.1  0.0
      comp=Z,2.9nm,1.0s,baz=105,slow=2.1,SNR=3.2
KEV   Kevo             34.99   2   eP      P       20 26 29.3 -1.3
      comp=Z,53nm,1.7s
KEV   Kevo             34.99   2   eP      P       20 26 29.3 -1.3
KEV                                 pmax   pmax
      comp=Z,53nm,1.7s
KK31  Karatay Array    37.15  63   eP      P       20 26 49.8 +0.4
KK31  Karatay Array    37.15  63   eP      P       20 26 49.8 +0.4
KKAR  Karatay Array    37.15  63   eP      P       20 26 49.7 +0.3
KKAR  Karatay Array    37.15  63   eP      P       20 26 49.7 +0.3
KBL   Kabul            37.30  77   eP      P       20 26 51.7 +0.6
      comp=Z,8.1nm,1.4s
KBL   Kabul            37.30  77   eP      P       20 26 51.7 +0.6
KBL                                 pmax   pmax
      comp=Z,8.0nm,1.4s
KBL   Kabul            37.30  77   eP      P       20 26 51.7 +0.6
      comp=Z,8.1nm,1.4s
BRVK  Borovoye         37.55  46   eP      P       20 26 52.0 -0.7
      comp=Z,7.6nm,1.0s
BRVK  Borovoye         37.55  46⇓iP        P       20 26 52.8 +0.1
BRVK                                pmax   pmax
      comp=Z,8.0nm,1.1s
BVAR  Borovoye Array   37.61  46    P      P       20 26 52.8 -0.4
      comp=Z,2.9nm,0.8s,baz=258,slow=7.2,SNR=18
BVAR                                LR     LR      20 44 01.8
      comp=Z,44nm,19.7s,baz=242,slow=39
DBIC  Dimbokro         38.25 229    P      P       20 26 58.3 -0.6
      comp=Z,3.5nm,0.8s,baz=139,slow=15,SNR=2.7
DBIC                                LR     LR      20 42 39.1
      comp=Z,38nm,18.1s,baz=79,slow=36
DBIC  Dimbokro         38.25 229   eP      P       20 27 01.1 +2.1
      comp=Z,43nm,1.7s
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DBIC  Dimbokro         38.25 229   eP      P       20 27 01.1 +2.1
DBIC                                pmax   pmax
      comp=Z,43nm,1.7s
AAK   Ala-Archa        40.10  63   eP      P       20 27 15.0 +0.6
      comp=Z,14nm,1.3s
AAK   Ala-Archa        40.10  63d iP       P       20 27 15.9 +1.5
AAK                                 pmax   pmax
      comp=Z,13nm,1.4s
AAK   Ala-Archa        40.10  63   eP      P       20 27 15.0 +0.6
      comp=Z,14nm,1.3s
FRU   Bishkek          40.17  63   eP      P       20 27 16.0 +1.2
FRU1  Bishkek          40.18  63   eP      P       20 27 14.6 -0.4
      comp=Z,37nm,1.6s
FRU1  Bishkek          40.18  63   eP      P       20 27 14.6 -0.4
FRU1                                pmax   pmax
      comp=Z,37nm,1.6s
FRU1  Bishkek          40.18  63   eP      P       20 27 14.6 -0.4
      comp=Z,37nm,1.6s
NIL   Nilore           40.90  77   eP      P       20 27 22.2 +1.2
      comp=Z,17nm,1.0s
NIL   Nilore           40.90  77   eP      P       20 27 22.2 +1.2
NIL                                 pmax   pmax
      comp=Z,17nm,1.0s
NIL   Nilore           40.90  77   eP      P       20 27 22.2 +1.2
      comp=Z,17nm,1.0s
KSH   Kashi            41.67  68    P      P       20 27 27.0 -0.3
KSH                                 sP     pP      20 27 40.9 +1.5
KSH                                 PP     PP      20 29 06.3 +2.2
KSH                                ePcP    PcP     20 29 25.8 +2.4
KSH                                 S      S       20 33 37.8 -3.2
KSH                                 SS     SS      20 36 36.5  -11
KSH                                 pmax   pmax
      comp=Z,10.0nm,1.2s
KSH                                 pmax   pmax
      comp=Z,85nm,4.0s
KURBB Kurchatov Arra   42.44  51    P      P       20 27 33.2 -0.1
      comp=Z,7.2nm,0.6s,baz=275,slow=8.6,SNR=56
KURBB                               PcP    PcP     20 29 26.0 +0.4
      comp=Z,0.8nm,0.9s,baz=254,slow=4.9,SNR=3.8
KURK  Kurchatov        42.50  51   eP      P       20 27 33.0 -0.7
      comp=Z,12nm,1.1s
KURK                               ePcP    PcP     20 29 26.0 +0.2
KURK  Kurchatov        42.50  51ceP        P       20 27 33.3 -0.4
KURK                                pmax   pmax
      comp=Z,11nm,1.3s
PRZ   Przheval'sk      42.98  63   eP      P       20 27 38.8 +0.8
      comp=Z,11nm,1.1s
PRZ   Przheval'sk      42.98  63   eP      P       20 27 38.8 +0.8
PRZ                                 pmax   pmax
      comp=Z,11nm,1.1s
PRZ   Przheval'sk      42.98  63   eP      P       20 27 38.8 +0.8
      comp=Z,11nm,1.1s
SPA0  Spitsbergen Ar   43.51 358   eP      P       20 27 41.4 -0.2
SPITS Spitsbergen Ar   43.51 358    P      P       20 27 41.4 -0.2
      comp=Z,3.0nm,0.6s,baz=194,slow=5.3,SNR=3.7
SPITS                               LR     LR      20 47 54.8
      comp=Z,96nm,18.5s,baz=355,slow=39
KBS   Kingsbay         44.41 357   eP      P       20 27 49.0 +0.2
      comp=Z,23nm,1.3s
KBS   Kingsbay         44.41 357   eP      P       20 27 49.0 +0.2
KBS                                 pmax   pmax
      comp=Z,23nm,1.3s
MAKZ  Makanchi         44.94  56   eP      P       20 27 53.1 -0.4
      comp=Z,3.0nm,0.6s
MAKZ  Makanchi         44.94  56   eP      P       20 27 53.1 -0.4
MAKZ                                pmax   pmax
      comp=Z,3.0nm,0.6s
MK31  Makanchi Array   45.16  56   eP      P       20 27 55.4 +0.2
MK31                               ePcP    PcP     20 29 36.2 +1.3
MK31  Makanchi Array   45.16  56   eP      P       20 27 55.4 +0.2
MK31                               e               20 29 36.2
MK32  Makanchi Array   45.16  56   eP      P       20 27 55.4 +0.2
MKAR  Makanchi Array   45.16  56    P      P       20 27 55.4 +0.2
      comp=Z,3.6nm,0.3s,baz=266,slow=7.6,SNR=63
MKAR                                LR     LR      20 49 11.4
      comp=Z,39nm,18.2s,baz=236,slow=39
MKAR  Makanchi Array   45.16  56   eP      P       20 27 55.2  0.0
      comp=Z,50nm,0.6s
MKAR                               ePcP    PcP     20 29 36.2 +1.3
MKAR  Makanchi Array   45.16  56   eP      P       20 27 55.2  0.0
MKAR                               e               20 29 36.2
MKAR                                pmax   pmax
      comp=Z,50nm,0.6s
MK01  Makanchi Array   45.17  56   eP      P       20 27 55.2 -0.1
MK01                               ePcP    PcP     20 29 35.2 +0.2
NVS   Novosibirsk      45.33  45⇓iP        P       20 27 57.0 +0.7
NVS                                 pmax   pmax
      comp=E,10.0nm,1.0s
NVS                                 pmax   pmax
      comp=Z,19nm,1.0s
NVS                                 pmax   pmax
      comp=N,7.0nm,1.3s
ZAA0  Zalesovo Array   46.26  46   eP      P       20 28 02.7 -1.0
      comp=N,9.0nm,0.7s
ZAA1  Zalesovo Array   46.26  46   eP      P       20 28 03.0 -0.7
ZALV  Zalesovo Beam    46.26  46    P      P       20 28 03.0 -0.7
      comp=N,7.1nm,0.5s,baz=268,slow=9.2,SNR=31
ZALV  Zalesovo Beam    46.26  46   eP      P       20 28 02.9 -0.9
DGZ   Jazzator, Alta   48.21  52   i P     P       20 28 19.2  0.0
DGZ                                 pmax   pmax
      comp=Z,2.0nm,1.1s
WMQ   Urumqi           49.42  59    P      P       20 28 29.6 +1.2
WMQ                                 pP     pP      20 28 39.9 -0.8
WMQ                                 pmax   pmax
      comp=Z,28nm,1.3s
WMQ                                 pmax   pmax
      comp=Z,53nm,3.6s
WMQ                                 LR     LR
      comp=Z,78nm,21.1s
WMQ                                 LR     LR
      comp=Z,130nm,18.7s
WMQ                                 LR     LR
      comp=Z,89nm,19.9s
SFJD  Kangerlussuaq    52.22 331    LR     LR      20 52 23.2
      comp=Z,66nm,18.5s,baz=98,slow=38
TSUM  Tsumeb           54.06 187    LR     LR      20 53 14.5
      comp=Z,38nm,18.3s,baz=358,slow=37
TSUM  Tsumeb           54.06 187   eP      P       20 29 04.4 +1.2
      comp=Z,15nm,1.6s
MOY   Mondy            56.29  47   eP      P       20 29 19.9 +0.9
LSA   Lhasa            56.56  75   eP      P       20 29 22.1 +0.3
      comp=Z,6.4nm,1.0s
LSA   Lhasa            56.56  75   eP      P       20 29 22.1 +0.3
LSA                                 pmax   pmax
      comp=Z,6.0nm,1.0s
LSA   Lhasa            56.56  75   eP      P       20 29 22.0 +0.3
      comp=Z,6.4nm,1.0s
TLY   Talaya           57.87  46   eP      P       20 29 25.5 -4.6
TLY                                 pmax   pmax
      comp=Z,4.0nm,1.3s
ZAK   Zakamensk        58.03  48   eP      P       20 29 31.1 -0.3
ZAK                                 pmax   pmax
      comp=Z,6.0nm,1.1s
GTA   Gaotai           59.39  61   eP      P       20 29 41.8 +0.8
GTA                                 pP     pP      20 29 55.4 +1.8
GTA                                 sP     sP      20 30 00.0 +1.3
GTA                                 pmax   pmax
      comp=Z,3.0nm,1.3s
LBTB  Lobatse          59.60 178   eP      P       20 29 43.9 +1.5
      comp=Z,36nm,2.0s
LBTB  Lobatse          59.60 178   eP      P       20 29 43.9 +1.5
LBTB                                pmax   pmax
      comp=Z,36nm,2.0s
SONA0 Songino Array    60.80  50   eP      P       20 29 50.9 +0.3
SONM  Songino Array    60.80  50    P      P       20 29 50.9 +0.3
      comp=Z,4.5nm,0.8s,baz=287,slow=6.6,SNR=34
SONA1 Songino Array    60.80  50   eP      P       20 29 50.2 -0.4
ULN   Ulaanbaatar      61.20  50   eP      P       20 29 52.9 -0.4
      comp=Z,8.7nm,0.9s
ULN   Ulaanbaatar      61.20  50ceP        P       20 29 53.2 -0.1
ULN                                 pmax   pmax
      comp=Z,10.0nm,1.0s
BOSA  Boshof           63.17 178    LR     LR      21 01 02.1
      comp=Z,46nm,18.7s,baz=65,slow=39
BOSA  Boshof           63.17 178   eP      P       20 30 07.4 +0.9
      comp=Z,36nm,1.8s
BOSA  Boshof           63.17 178   eP      P       20 30 07.4 +0.9
BOSA                                pmax   pmax
      comp=Z,36nm,1.8s
LZH   Lanzhou          63.64  63   eP      P       20 30 11.4 +1.6
LZH                                 pP     pP      20 30 23.1 +0.6
LZH                                 sP     sP      20 30 26.3 -1.3
LZH                                 pmax   pmax
      comp=Z,22nm,1.1s
YAK   Yakutsk          66.85  29   eP      P       20 30 29.4 -0.4
      comp=Z,18nm,0.8s
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YAK	Yakutsk	66.85	29	eP	P	20 30 29.5	-0.4
YAK				pmax	pmax		
	comp=Z,18nm,0.8s						
SUR	Sutherland	66.95	182	eP	P	20 30 32.5	+1.6
	comp=Z,87nm,1.8s						
EMMW	East Machias	67.00	309	eP	P	20 30 32.0	+0.9
	comp=Z,57nm,1.3s						
HHC	Hu-ho-hao-te	67.02	55	eP	P	20 30 30.9	-0.6
HHC				sP	pP	20 30 44.5	+0.2
HHC				S	S	20 39 23.0	+1.0
HHC				sS	pS	20 39 38.3	+0.8
HHC				pmax	pmax		
	comp=Z,17nm,1.2s						
HHC				pmax	pmax		
	comp=Z,96nm,5.1s						
HHC				LR	LR		
	comp=Z,100nm,12.8s						
HHC				LR	LR		
	comp=Z,130nm,14.3s						
HHC				LR	LR		
	comp=Z,100nm,13.7s						
CHTO	Chiang Mai	67.89	82	eP	P	20 30 37.5	+0.3
	comp=Z,5.2nm,1.0s						
CHTO	Chiang Mai	67.89	82	eP	P	20 30 37.5	+0.3
CHTO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
CM31	Chiang Mai Arr	68.07	82	eP	P	20 30 38.1	-0.3
CMAR	Chiang Mai Arr	68.07	82	P	P	20 30 39.0	+0.7
	comp=Z,2.5nm,0.8s,baz=295,slow=7.5,SNR=13						
CM01	Chiang Mai Arr	68.10	82	eP	P	20 30 38.4	-0.1
HIA	Hailar	68.27	44	eP	P	20 30 40.2	+1.1
	comp=Z,12nm,0.5s						
HIA	Hailar	68.27	44	eP	P	20 30 40.3	+1.1
HIA				pmax	pmax		
	comp=Z,12nm,0.5s						
BBSR	BB Station	70.92	297	eP	P	20 30 56.2	+0.5
	comp=Z,118nm,1.6s						
KLR	Kul'dur	74.94	40	i P	P	20 31 19.7	+0.5
NJ2	Nanjing	76.48	60	eP	P	20 31 28.3	0.0
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
USRK	Ussuriysk Ar.	78.08	44	P	P	20 31 36.8	-0.3
	comp=Z,2.3nm,0.5s,baz=280,slow=5.5						
KS01	Wonju Array Si	79.59	52	eP	P	20 31 45.7	+0.2
KS15	Wonju Array Si	79.60	52	eP	P	20 31 43.9	-1.6
KSAR	Wonju Array Be	79.60	52	P	P	20 31 46.0	+0.5
KSAR	Wonju Array Be	79.60	52	P	P	20 31 46.1	+0.5
KSRS	Korea Array	79.62	52	P	P	20 31 46.0	+0.4
	comp=Z,2.2nm,0.7s,baz=305,slow=5.0,SNR=14						
KSRS				LR	LR	21 11 41.0	
	comp=Z,26nm,19.4s,baz=320,slow=39						
IL1	Eielson Array	80.38	356	eP	P	20 31 48.8	-0.5
ILAR	Eielson Array	80.38	356	P	P	20 31 50.5	+1.2
	comp=Z,0.9nm,0.9s,baz=1.8,slow=5.7,SNR=6.8						
ILB	Eielson Array	80.38	356	eP	P	20 31 49.6	+0.4
DAWY	Dawson	80.45	352	eP	P	20 31 50.5	+0.8
	comp=Z,3.3nm,0.8s						
HDA	Harding Lake	80.75	356	eP	P	20 31 51.4	+0.2
	comp=Z,26nm,1.8s						
WRH	Wood River Hil	80.75	356	eP	P	20 31 51.5	+0.3
	comp=Z,5.3nm,0.8s						
BPAW	Bear Paw Mtn.	81.25	357	eP	P	20 31 54.5	+0.5
	comp=Z,4.4nm,0.9s						
CAST	Castle Rocks	81.97	358	eP	P	20 31 58.0	+0.3
	comp=Z,4.2nm,0.9s						
YSS	Yuzh-Sakhalins	82.05	37	⇑eP	P	20 32 00.1	+1.7
YSS				pmax	pmax		
	comp=Z,10.0nm,1.2s						
DHY	Denali Highway	82.10	356	eP	P	20 31 58.8	+0.2
	comp=Z,5.0nm,0.8s						
SKT	Skwentna	83.39	358	eP	P	20 32 05.1	0.0
	comp=Z,4.9nm,0.9s						
GHO	Glory Hole Cre	83.49	356	eP	P	20 32 06.6	+0.8
	comp=Z,4.9nm,1.0s						
SUA	Susitna One	83.88	357	eP	P	20 32 08.5	+0.7
	comp=Z,5.8nm,1.0s						
ASAJ	Asahikawa	83.93	39	P	P	20 32 08.7	+0.5
	comp=Z,1.5nm,0.6s,baz=302,slow=13,SNR=3.6						
ASAJ	Asahikawa	83.93	39	eP	P	20 32 09.9	+1.6
	comp=Z,10nm,1.3s						
MAJO	Matsushiro	86.60	47	eP	P	20 32 23.0	+1.3
MAJO	Matsushiro	86.60	47	eP	P	20 32 23.0	+1.3
MJAR	Matsushiro Arr	86.60	47	P	P	20 32 23.0	+1.3
	comp=Z,1.8nm,0.8s,baz=300,slow=5.8,SNR=6.2						
KDAK	Kodiak Island	87.63	358	P	P	20 32 27.1	+0.9
	comp=Z,3.7nm,0.9s,baz=326,slow=6.7,SNR=4.0						
KDAK	Kodiak Island	87.63	358	eP	P	20 32 27.6	+1.3
	comp=Z,36nm,1.8s						
KDAK	Kodiak Island	87.63	358	eP	P	20 32 27.6	+1.3
KDAK				pmax	pmax		
	comp=Z,36nm,1.8s						
FLWY	Flagg Ranch	91.00	329	eP	P	20 32 42.0	-0.6
	comp=Z,5.3nm,0.6s						
PDAR	Pinedale Array	91.56	327	LR	LR	21 16 24.8	
	comp=Z,39nm,18.3s,baz=40,slow=37						
PV13	Radium Mtn., P	94.88	324	eP	P	20 33 01.3	+0.6
	comp=Z,8.3nm,1.3s						
ANMO	Albuquerque	96.20	321	P	P	20 33 06.8	+0.1
	comp=Z,0.6nm,0.3s,baz=52,slow=10,SNR=4.2						
ANMO	Albuquerque	96.20	321	eP	P	20 33 06.5	-0.3
	comp=Z,2.1nm,0.9s						
WR1	Warramunga Arr	118.03	96	ePKPdf	PKPdf	20 38 24.6	-0.7
WRA	Warramunga Arr	118.03	96	PKP	PKPdf	20 38 24.6	-0.7
	comp=Z,0.5nm,0.8s,baz=322,slow=1.3,SNR=10						
ASAR	Alice Springs	119.45	100	PKP	PKPdf	20 38 26.3	-1.7
	comp=Z,0.5nm,0.7s,baz=336,slow=2.0,SNR=4.6						

ROM 24 20:21:08.6±0.1**, 42°.825N**±0°.004×**12°.94E**±0°.01**, h11^{km}, ML1.2**/2**, Central Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NRCA	Norcia	0.13	86	P	Pg	20 21 12.4	+0.6
NRCA				S	Sg	20 21 14.7	+0.6
NRCA				AML	AML		
	comp=E,120µm,1.0s						
NRCA				AML	AML		
	comp=N,148µm,0.4s						
NRCA				AML	AML		
	comp=N,148µm,0.4s						
NRCA				AML	AML		
	comp=E,120µm,1.0s						
CESI	CESI - Serrava	0.18	353	P	Pb	20 21 13.3	-0.7
CESI				S	Sg	20 21 16.4	+1.0
LNSS	Leonessa	0.23	161	P	Pg	20 21 14.2	+0.6
LNSS				S	Sg	20 21 18.1	+1.3
FDMO	Fiordimonte	0.24	28	P	Pg	20 21 14.2	+0.6
FDMO				S	Sg	20 21 18.3	+1.4
FDMO				AML	AML		
	comp=E,95µm,0.3s						
FDMO				AML	AML		
	comp=N,103µm,0.1s						
FDMO				AML	AML		
	comp=N,103µm,0.1s						
FDMO				AML	AML		
	comp=E,95µm,0.3s						
ARRO	Arrone	0.28	207	P	Pg	20 21 14.6	+0.4
LAV9	Lanuvio	1.16	189	AML	AML		
	comp=N,878µm,0.4s						
LAV9				AML	AML		
	comp=E,641µm,0.1s						
LAV9				AML	AML		
	comp=N,878µm,0.4s						
LAV9				AML	AML		
	comp=E,641µm,0.1s						

*IDC **24** 20:21:10.7±2.8, 23°.72N×94°.55E, h103^{km}±30^{km}, mb3.3/5, mb1 3.4/7, mb1mx3.0/69, mbtmp3.7/7, MS3.2/1, Ms1 3.2/1, ms1mx2.4/36, Error ellipse: s-maj=29.0km s-min=15.1km az=46.0*

ISC 24 20:21:09.7±0.9**, 23°.9N**±0°.1×**94°.3E**±0°.1**, h96^{km}, n21, σ2^{s}21**/32**, mb3.6**/5**, 1D, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRDH	Bariadhala	2.75	245	P	Pn	20 21 54.6	+2.6
	33nm,0.3s,baz=288,slow=20,SNR=2.8						
BRDH				S	Sn	20 22 29.4	+4.9
	68nm,0.3s,baz=44,slow=24,SNR=17						
SHL	Shillong	2.81	308	⇓iPN	Pn	20 21 55.0	+2.0
CMAR	Chiang Mai Arr	6.88	141	P	Pn	20 22 46.3	-1.7
	0.2nm,0.3s,baz=313,slow=12,SNR=8.6						
TAPN	Taplejung	6.92	302	ePn	Pn	20 22 50.5	+1.7
TAPN				eSn	Sn	20 24 05.7	-0.5
	53nm,0.5s						
ODAN	Odare	6.96	297	ePn	Pn	20 22 50.4	+1.1
ODAN				eSn	Sn	20 24 05.4	-1.7
	107nm,0.4s						
RAMN	Ramite	7.65	295	ePn	Pn	20 22 59.9	+1.2
RAMN				eSn	Sn	20 24 21.8	-2.0
	34nm,0.3s						
JIRN	Jiri	8.27	299	ePn	Pn	20 23 08.5	+1.3
JIRN				eSn	Sn	20 24 37.6	-1.5
GUN	Gumba	8.62	300	ePn	Pn	20 23 13.1	+1.1
GUN				eSn	Sn	20 24 46.0	-1.7
	35nm,0.3s						
PKIN	Phulchoki	8.88	297	ePn	Pn	20 23 15.9	+0.5
PKIN				eSn	Sn	20 24 51.4	-2.4
	20nm,0.3s						
KKN	Kakani	9.05	298	ePn	Pn	20 23 18.6	+0.8
KKN				eSn	Sn	20 24 55.8	-2.3
	16nm,0.2s						
DMN	Daman	9.12	296	ePn	Pn	20 23 19.7	+0.9
GKN	Gorkha	9.66	297	ePn	Pn	20 23 26.6	+0.6
GKN				eSn	Sn	20 25 10.4	-2.4
	35nm,0.2s						
KOLN	Koldanda	10.43	294	ePn	Pn	20 23 36.6	+0.1
KOLN				eSn	Sn	20 25 27.4	-4.2
	20nm,0.3s						
DANN	Dangsing	10.51	297	ePn	Pn	20 23 38.5	+0.8
DANN				eSn	Sn	20 25 30.1	-3.5
	26nm,0.4s						
PYUN	Piuthan	11.05	295	ePn	Pn	20 23 45.2	+0.3
PYUN				eSn	Sn	20 25 42.4	-4.3
MKAR	Makanchi Array	24.85	340	P	P	20 26 24.9	+1.8
	1.7nm,0.5s,baz=149,slow=8.9,SNR=23						
KURBB	Kurchatov Arra	29.41	339	P	P	20 27 05.4	+1.6
	0.2nm,0.5s,baz=158,slow=4.9,SNR=3.4						
GEYT	Alibeck	33.88	303	LR	LR	20 42 58.5	
	comp=Z,39nm,21.0s,baz=350,slow=38						
WRA	Warramunga Arr	58.44	135	P	P	20 30 54.1	-1.7
	0.2nm,0.5s,baz=322,slow=7.4,SNR=5.2						
ASAR	Alice Springs	60.88	138	P	P	20 31 11.1	-1.4
	0.2nm,0.3s,baz=322,slow=7.3,SNR=3.2						
HFS	Hagfors	65.00	327	P	P	20 31 41.6	+2.3
	2.6nm,1.0s,baz=46,slow=4.2,SNR=2.5						

IDC 24 20:37:27.7±6.7**, 18°.25S**×**172°.88W, h0^{km}, mb3.8**/2**, mb1 4.1**/2**, mb1mx3.5**/45**, mbtmp3.8**/2**, Error ellipse: s-maj=330.6km s-min=58.9km az=145.0, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	49.74	259	P	P	20 46 22.5	+0.3
	0.4nm,0.3s,baz=96,slow=7.1,SNR=39						
ASAR	Alice Springs	49.76	254	P	P	20 46 21.9	-0.5
	1.0nm,0.5s,baz=94,slow=7.7,SNR=17						
BRTR	Keskin Array B	148.65	319	PKPbc	PKPbc	20 57 16.7	-0.6
	0.3nm,0.7s,baz=56,slow=3.4,SNR=2.7						

*IDC **24** 20:44:33.3±0.9, 13°.04N×144°.87E, h63^{km}±6^{km}, mb3.7/19, mb1 3.9/19, mb1mx3.7/56, mbtmp4.0/19, MS3.1/8, Ms1 3.1/8, ms1mx2.8/49, Error ellipse: s-maj=19.5km s-min=13.4km az=84.0*

ISC 24 20:44:32.6±0.6**, 12°.93N**±0°.09×**144°.9E**±0°.1**, h57^{km}, n34, σ1^{s}25**/28**, mb4.0**/20**, MS3.0**/8**, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	0.66	357	P	Pn	20 44 47.3	+1.1
	3µm,0.3s,baz=181,slow=14,SNR=1947						
GUMO				S	Sn	20 44 57.4	+1.3
	4µm,0.3s,baz=119,slow=19,SNR=27						
JHJ	Hachijo jima 2	20.64	348	LR	LR	20 56 03.0	
	comp=Z,73nm,21.6s,baz=136,slow=34						
JOW	Kunigami	20.85	314	LR	LR	20 55 47.4	
	comp=Z,38nm,20.4s,baz=344,slow=32						
H11S3	WAKE ISLAND Hy	21.67	72	T	T	21 12 00.4	
	baz=259,slow=75,SNR=22						
H11S1	WAKE ISLAND Hy	21.69	72	T	T	21 12 03.2	
	baz=259,slow=75,SNR=32						
H11S2	WAKE ISLAND Hy	21.69	72	T	T	21 12 06.3	
	baz=259,slow=75,SNR=18						
H11N1	WAKE ISLAND Hy	22.13	69	T	T	21 12 23.6	
	baz=257,slow=75,SNR=45						
H11N2	WAKE ISLAND Hy	22.14	69	T	T	21 12 32.8	
	baz=257,slow=75,SNR=13						
H11N3	WAKE ISLAND Hy	22.15	69	T	T	21 12 26.6	
	baz=257,slow=75,SNR=47						
JNU	Nakatsue	23.84	330	P	P	20 49 39.2	-1.4
	3.9nm,0.8s,baz=102,slow=3.2,SNR=4.0						
MJAR	Matsushiro Arr	24.27	347	P	P	20 49 41.7	-2.8
	1.5nm,0.8s,baz=171,slow=12,SNR=5.0						
MJAR				LR	LR	20 58 17.0	
	comp=Z,42nm,21.2s,baz=195,slow=34						
HNR	Honiara	26.77	145	LR	LR	21 00 41.8	
	comp=Z,50nm,18.1s,baz=224,slow=36						
KSRS	Korea Array	28.76	331	P	P	20 50 23.9	-0.9
	0.7nm,0.7s,baz=136,slow=9.5,SNR=4.2						
KSRS				LR	LR	21 01 49.6	
	comp=Z,18nm,18.1s,baz=120,slow=36						
ASAJ	Asahikawa	31.14	357	P	P	20 50 45.2	-0.7
	3.5nm,0.8s,baz=292,slow=11,SNR=4.8						
ASAJ				LR	LR	21 01 49.2	
	comp=Z,32nm,21.4s,baz=133,slow=33						
WRA	Warramunga Arr	34.28	198	P	P	20 51 13.5	0.0
	0.8nm,0.8s,baz=20,slow=9.8,SNR=6.9						
WRA				PcP	PcP	20 53 49.8	+0.8
	0.8nm,0.8s,baz=11,slow=3.4,SNR=4.7						
ASAR	Alice Springs	37.93	197	P	P	20 51 44.5	-0.3
	0.4nm,0.6s,baz=20,slow=11,SNR=5.9						
DZM	Mont Dzumac	40.70	149	P	P	20 52 08.1	+0.3
	3.2nm,0.6s,baz=90,slow=20,SNR=3.8						
CMAR	Chiang Mai Arr	44.50	283	P	P	20 52 39.8	+0.9
	0.4nm,0.5s,baz=94,slow=6.4,SNR=3.1						
CMAR				PcP	PP	20 54 22.3	-1.2
	0.4nm,0.8s,baz=108,slow=2.9,SNR=4.4						
CMAR				LR	LR	21 10 27.1	
	comp=Z,18nm,18.8s,baz=200,slow=35						
SONM	Songino Array	47.29	325	P	P	20 53 03.6	+3.1
	0.2nm,0.5s,baz=119,slow=5.1,SNR=2.4						
SONM				PcP	PcP	20 54 31.0	+0.1
	0.6nm,0.6s,baz=146,slow=2.6,SNR=3.7						
SONM				LR	LR	21 13 00.1	
	comp=Z,40nm,18.2s,baz=174,slow=36						
SEY	Seymchan	50.21	4	P	P	20 53 20.5	-2.0
	0.8nm,0.5s,baz=180,slow=6.1						
MKAR	Makanchi Array	61.99	316	P	P	20 54 46.7	-0.2
	0.3nm,0.5s,baz=96,slow=8.9,SNR=5.5						
KURBB	Kurchatov Arra	65.15	320	P	P	20 55 06.5	-1.1
	0.9nm,0.7s,baz=100,slow=6.0,SNR=11						
ILAR	Eielson Array	69.14	25	P	P	20 55 31.1	-1.6
	3.3nm,0.5s,baz=249,slow=5.9,SNR=34						
BVAR	Borovoye Array	70.47	322	P	P	20 55 40.6	-0.4
	0.5nm,0.3s,baz=90,slow=6.4,SNR=12						
YBH	Yreka Blue Hor	83.27	49	P	P	20 56 54.0	+0.5
	1.4nm,0.6s,baz=170,slow=6.1,SNR=3.7						
YKA	Yellowknife Ar	83.42	27	P	P	20 56 54.0	+0.3
	0.7nm,0.3s,baz=287,slow=5.4,SNR=3.1						
NVAR	Mina Array Bea	87.30	51	P	P	20 57 14.9	+1.1
	0.8nm,0.6s,baz=275,slow=5.3,SNR=6.5						
ARCES	ARCESS Array B	87.72	342	P	P	20 57 14.4	-0.4
	4.2nm,0.9s,baz=39,slow=7.9,SNR=7.4						
FINES	FINESS Array B	91.77	335	P	P	20 57 33.0	-1.0
	1.4nm,0.9s,baz=116,slow=4.4,SNR=5.2						
PDAR	Pinedale Array	92.40	45	P	P	20 57 37.5	-0.1
	0.2nm,0.5s,baz=256,slow=3.6,SNR=3.2						
TORD	Torodi Ar. Bea	135.27	304	PKP	PKPdf	21 03 46.3	-0.6
	0.5nm,0.8s,baz=26,slow=5.6						
PLCA	Paso Flores	138.42	138	PKP	PKPdf	21 03 52.5	+0.4
	1.2nm,0.7s,baz=180,slow=8.1,SNR=7.4						
DBIC	Dimbokro	144.20	301	PKP	PKPbc	21 04 01.1	-0.3
	2.7nm,0.7s,baz=53,slow=2.8,SNR=3.5						
LPAZ	La Paz	147.88	100	PKPbc	PKPbc	21 04 14.2	+1.1
	2.8nm,0.7s,baz=273,slow=3.8,SNR=15						

*NNC **24** 20:52:16.4±5.7, 39°.30N×71°.66E, h0^{km}, mb2.7, mpv2.4, Error ellipse: s-maj=45.7km s-min=19.9km az=19.0*

KRNET 24 20:52:09.7±0.1**, 39°.30N**×**71°.37E, h14^{km}, mb2.6, 13C-5D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	Karamyk	0.38	61	⇑iP	Pg	20 52 17.2	-0.2
	baz=61						
DRK				⇑iS	Sg	20 52 22.5	-0.2
	baz=61						
BTK	Batken	0.87	331	⇑iP	Pg	20 52 26.0	-0.6
	baz=31						
BTK				⇑iS	Sb	20 52 38.4	+0.2
	baz=31						
SFK	Sufi-Kurgan	1.79	66	⇑P	Pg	20 52 45.8	+1.7
	1.3nm,0.4s						
SFK				⇑S	Sg	20 53 07.3	-0.1
	7.0nm,0.4s						
SFK	Sufi-Kurgan	1.79	66	⇑iP	Pb	20 52 42.9	+0.5
	baz=66						
SFK				⇑iS	Sg	20 53 07.0	-0.4
	baz=66						
ARK	Arkit	2.54	10	⇑eP	Pb	20 52 53.6	-1.5
	baz=10.0						
ARK				⇑iS	Sb	20 53 25.4	-0.8
	baz=10.0						
MNAS	Manas	3.30	15	⇓P	Pb	20 53 06.2	-1.9
	1.1nm,0.7s						
MNAS				⇓S	Sb	20 53 50.4	+2.3
	2.8nm,0.6s						
MNAS	Manas	3.30	15	⇓iP	Pn	20 53 04.0	+3.0
	baz=15						
MNAS				⇓iS	Sn	20 53 43.8	+3.7
	baz=15						
AML	Almayashu	3.33	31	⇑iP	Pn	20 53 05.2	+3.4
	baz=31						
AML				⇑iS	Sb	20 53 46.0	-3.4
	baz=31						
KK31	Karatay Array	3.85	351	⇑P	Pb	20 53 20.3	+2.8
	0.3nm,0.3s,baz=163,slow=16						
KK31				⇓S	Sb	20 54 03.7	-0.4
	1.4nm,0.5s,baz=169,slow=23						

SOME 24 20:52:16.1, 42°.07N×80°.83E, h0^{km}, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHLS	Shalkode	1.49	318	eP	Pn	20 52 38.8	-5.4
	baz=56						
SHLS				eS	Sg	20 52 54.8	-9.1
	baz=56						
SHLS	Shalkode	1.49	318	eP	Pn	20 52 38.8	-5.4
	1.3nm,0.1s						
SHLS				eS	Sg	20 52 54.8	-9.1
	2.5nm,0.3s						
UZB	Uzynbulak	1.72	310	eP	Pb	20 52 48.8	+0.2
	baz=54						
UZB				eS	Sg	20 53 11.4	+0.1
	baz=54						
UZB	Uzynbulak	1.72	310	eP	Pb	20 52 48.8	+0.1
	1.3nm,0.4s						
UZB				eS	Sg	20 53 11.4	+0.1
	1.4nm,0.4s						
SATY	Saty	2.05	300	eP	Pb	20 52 54.7	+0.5
	2.1nm,0.3s						
SATY				eS	Sg	20 53 21.9	0.0
	3.9nm,0.1s						

*IDC **24** 21:02:01.4±0.7, 2°.99N×126°.78E, h0^{km}, mb3.9/14, mb1 4.0/14, mb1mx3.8/48, mbtmp3.9/14, MS3.0/3, Ms1 3.1/3, ms1mx2.5/49, Error ellipse: s-maj=39.5km s-min=14.8km az=75.0*

*ISCJB **24** 21:02:05.7±0.5, 3°.01N±0°.08×126°.8E±0°.2, h44^{km}, mb3.9/16, Error ellipse: s-maj=30.1km s-min=9.8km az=165.7*

*NEIC **24** 21:02:06.5±0.4, 3°.00N×126°.83E, h35^{km}, mb4.2/2, Error ellipse: s-maj=24.9km s-min=7.8km az=74.0*

ISC 24 21:02:07.4±0.8**, 3°.0N**±0°.1×**126°.9E**±0°.3**, h44^{km}, n20, σ0^{s}59**/19**, mb4.0**/16**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	20.68	58	LR	LR	21 13 14.7	
	comp=Z,22nm,21.2s,baz=190,slow=32						
WRAB	Tennant Creek	23.94	162	eP	P	21 07 17.8	+0.1
	3.8nm,0.6s						
WRA	Warramunga Arr	23.95	162	P	P	21 07 17.7	-0.1
	1.2nm,0.5s,baz=343,slow=9.8,SNR=21						
ASAR	Alice Springs	27.37	166	P	P	21 07 49.0	+0.2
	0.3nm,0.6s,baz=344,slow=6.7,SNR=6.5						
KSAR	Wonju Array Be	34.30	1	P	P	21 08 50.1	+0.5
KSRS	Korea Array	34.31	1	P	P	21 08 50.1	+0.4
	1.5nm,0.6s,baz=180,slow=10,SNR=5.7						
MJAR	Matsushiro Arr	34.99	16	P	P	21 08 54.8	-0.9
	1.5nm,0.8s,baz=179,slow=11,SNR=5.5						
MJAR				LR	LR	21 21 12.8	
	comp=Z,12nm,20.5s,baz=5.0,slow=33						
STKA	Stephens Creek	37.40	159	P	P	21 09 16.4	+0.1
	2.6nm,0.9s,baz=324,slow=8.4,SNR=4.8						
USRK	Ussuriysk Ar.	41.29	6	P	P	21 09 48.8	+0.3
	1.8nm,0.8s,baz=232,slow=7.1						
ASAJ	Asahikawa	43.26	17	P	P	21 10 05.0	+0.4
	1.9nm,0.8s,baz=209,slow=10,SNR=4.2						
SONM	Songino Array	48.03	342	P	P	21 10 43.2	+0.7
	1.0nm,0.7s,baz=152,slow=7.4,SNR=6.0						
SONM				PcP	PcP	21 12 10.5	+0.6
	0.6nm,0.7s,baz=159,slow=4.5,SNR=3.4						
MKAR	Makanchi Array	58.23	325	P	P	21 11 57.2	-0.2
	1.3nm,0.6s,baz=117,slow=7.8,SNR=17						
ZALV	Zalesovo Beam	61.30	333	P	P	21 12 18.7	+0.4
	0.4nm,0.5s,baz=116,slow=9.9,SNR=2.7						
KURBB	Kurchatov Arra	62.43	328	P	P	21 12 26.1	+0.2
	1.5nm,0.6s,baz=132,slow=6.4,SNR=11						
KURK	Kurchatov	62.43	328	P	P	21 12 26.1	+0.2
BVAR	Borovoye Array	68.01	327	P	P	21 13 01.5	-0.6
	0.6nm,0.6s,baz=154,slow=8.0,SNR=4.2						
AKTO	Aktyubinsk	74.32	322	P	P	21 13 40.8	+0.4
	1.1nm,0.5s,baz=117,slow=6.8,SNR=5.9						
ARU	Arti	75.63	328	eP	P	21 13 46.8	-0.9
	2.1nm,0.5s						
ARCES	ARCESS Array B	91.18	340	P	P	21 15 06.3	-1.2
	0.7nm,0.6s,baz=64,slow=5.6,SNR=4.9						
NOA	NORSAR Array B	99.50	334	LR	LR	22 03 19.2	
	comp=Z,31nm,18.0s,baz=290,slow=37						

*BJI **24** 21:25:01.7, 61°.70N×167°.55E, h10^{km}, mb4.6/35, mB4.9/23, Ms4.7/19, Ms7 4.4/15*

*IDC **24** 21:25:01.5±0.5, 61°.20N×167°.40E, h0^{km}, mb4.2/33, mb1 4.4/35, mb1mx4.3/73, mbtmp4.3/35, ML3.2/1, MS3.7/40, Ms1 3.7/40, ms1mx3.6/69, Error ellipse: s-maj=15.5km s-min=9.1km az=173.0*

*KRSC **24** 21:25:02.1±2.1, 61°.08N×167°.80E, h31^{km}±18^{km}, ML4.9*

*ISCJB **24** 21:25:02.6±0.9, 61°.32N±0°.03×167°.50E±0°.03, h17^{km}±6^{km}, mb4.6/208, MS3.8/50, Error ellipse: s-maj=5.1km s-min=2.4km az=168.4*

*MOS **24** 21:25:02.8±1.0, 61°.30N×167°.43E, h18^{km}, mb4.9/59, Error ellipse: s-maj=8.6km s-min=3.9km az=79.7*

*NEIC **24** 21:25:07.4±0.7, 61°.33N×167°.42E, h36^{km}±6^{km}, mb4.8/162, Error ellipse: s-maj=6.3km s-min=2.7km az=176.0*

*GCMT **24** 21:25:07.4±0.4, 61°.27N×167°.41E, h22^{km}±1^{km}, MW4.8/66, Moment Tensor Solution. s20,c25; s66,c98; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}1.72±.18; $M_{\theta\theta}$-0.01±.11; $M_{\phi\phi}$-1.71±.10; $M_{r\theta}$-0.34±.20; $M_{\theta\phi}$-0.56±.06; $M_{\phi r}$-0.50±.12; Best double couple: $M_0$1.89800×10^{16} NP1:ϕ_s203.00000°, δ54.00000°, λ97.00000°. NP2: ϕ_s10.00000°, δ36.00000°, λ80.00000°. Principal axes: T 1.8300, Plg79.0000°, Azm142.0000°; N 0.1360, Plg6.0000°, Azm18.0000°; P -1.9660, Plg9.0000°, Azm287.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 24 21:25:04.3±0.6**, 61°.24N**±0°.04×**167°.53E**±0°.04**, h16^{km}**±3^{km}**, n654, σ1^{s}32**/654**, mb4.7**/208**, MS3.8**/51**, 22C-20D, Eastern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TILK	Tilichiki	1.04	221	eP	Pb	21 25 21.1	-2.8
TILK				eS	Sb	21 25 35.7	-1.6
TILK	Tilichiki	1.04	221	PN	Pb	21 25 21.1	-2.8
TILK				S	Sb	21 25 35.7	-1.6
KMSK	Kamenskaya	1.38	334	eP	Pn	21 25 27.9	-1.0
KMSK				eS	Sb	21 25 47.1	-0.1
KMSK	Kamenskaya	1.38	334	PN	Pn	21 25 27.9	-1.0
KMSK				S	Sb	21 25 47.1	-0.1
OSSR	Ossora	2.99	230	eP	Pn	21 25 49.4	-1.5
OSSR				eS	Sn	21 26 25.0	-1.4
OSSR	Ossora	2.99	230	PN	Pn	21 25 49.4	-1.5
OSSR				S	Sn	21 26 25.0	-1.4

PALN	Palana	4.35	244	eP	Pn	21 26 11.2	+1.6
PALN	Palana	4.35	244	PN	Pn	21 26 11.2	+1.6
KBG	Krutoberegovo	5.59	209	eP	Pn	21 26 26.3	-0.4
KBG	Krutoberegovo	5.59	209	PN	Pn	21 26 26.3	-0.4
KBTR	Krutoberegovo	5.61	208	eP	Pn	21 26 26.1	-0.8
KBTR	Krutoberegovo	5.61	208	PN	Pn	21 26 26.1	-0.8
SMKR	Semkarok	5.62	217	eP	Pn	21 26 27.7	+0.5
SMKR	Semkarok	5.62	217	PN	Pn	21 26 27.7	+0.5
SRKR	Sorokina	5.65	218	eP	Pn	21 26 28.1	+0.5
SRKR	Sorokina	5.65	218	PN	Pn	21 26 28.1	+0.5
BDR	Baidarnaya	5.71	218	eP	Pn	21 26 28.6	+0.1
BDR	Baidarnaya	5.71	218	PN	Pn	21 26 28.6	+0.1
BKI	Bering	6.11	188	eP	Pn	21 26 32.1	-1.7
BKI				eS	Sn	21 27 38.7	-4.5
BKI	Bering	6.11	188	PN	Pn	21 26 32.1	-1.7
CIRR	Tsirk	6.23	218	eP	Pn	21 26 36.7	+1.0
CIRR	Tsirk	6.23	218	PN	Pn	21 26 36.7	+1.0
LGNR	Loginova	6.28	218	eP	Pn	21 26 37.8	+1.4
LGNR	Loginova	6.28	218	PN	Pn	21 26 37.8	+1.4
ZLN	Zelenaya	6.30	217	eP	Pn	21 26 38.2	+1.6
ZLN	Zelenaya	6.30	217	PN	Pn	21 26 38.2	+1.6
BZWR	Bezymyannyi-We	6.44	218	eP	Pn	21 26 40.7	+2.2
BZWR	Bezymyannyi-We	6.44	218	PN	Pn	21 26 40.7	+2.2
BZMR	Bezymyannaya	6.46	218	eP	Pn	21 26 41.2	+2.4
BZMR	Bezymyannaya	6.46	218	PN	Pn	21 26 41.2	+2.4
KIRR	Kirishev	6.49	218	eP	Pn	21 26 41.2	+2.0
KIRR	Kirishev	6.49	218	PN	Pn	21 26 41.2	+2.0
KMNR	Kamenistaya	6.69	218	eP	Pn	21 26 44.6	+2.7
KMNR	Kamenistaya	6.69	218	PN	Pn	21 26 44.6	+2.7
TUMD	Tumrok D	7.12	215	eP	Pn	21 26 49.5	+1.8
TUMR	Tumrok	7.12	216	eP	Pn	21 26 50.4	+2.5
TUMR	Tumrok	7.12	216	PN	Pn	21 26 49.5	+1.6
MKZ	Mys Kozlova	7.38	207	eP	Pn	21 26 51.8	+0.7
MKZ	Mys Kozlova	7.38	207	PN	Pn	21 26 51.8	+0.7
MA2	Magadan	8.46	266	Pn	Pn	21 27 04.6	-1.4
	9.1nm,0.3s,baz=140,slow=15,SNR=11						
MA2				Sn	Sn	21 28 40.8	-0.2
	9.7nm,0.3s,baz=163,slow=22,SNR=11						
MA2	Magadan	8.46	266	ePn	Pn	21 27 05.2	-0.9
MA2				eS	Sn	21 28 41.3	+0.3
MA2	Magadan	8.46	266	ePN	Pn	21 27 05.5	-0.5
MA2				pmax	pmax		
	comp=Z,62nm,1.0s						
GNL	Ganaly	9.15	219	eP	Pn	21 27 17.9	+2.3
GNL	Ganaly	9.15	219	PN	Pn	21 27 17.9	+2.3
PET	Petropavlovsk	9.53	214	ePn	Pn	21 27 24.1	+3.4
	comp=Z,6.4nm,0.5s						
PET	Petropavlovsk	9.53	214	ePN	Pn	21 27 24.4	+3.7
PET				pmax	pmax		
	comp=Z,37nm,1.2s						
PET				MLR	MLR		
	comp=Z,2µm,11.0s						
PET				MLR	MLR		
	comp=Z,2µm,14.0s						
PEA0B	Petropavlovsk-	9.73	218	ePn	Pn	21 27 29.9	+6.4
PETK	Petropavlovsk-	9.73	218	Pn	Pn	21 27 27.7	+4.2
	baz=61,slow=15						
PETK	Petropavlovsk-	9.73	218	ePn	Pn	21 27 26.1	+2.6
PETK	Petropavlovsk-	9.73	218	ePN	Pn	21 27 26.1	+2.6
SKR	Severo-Kuril's	12.34	216	ePN	Pn	21 28 01.5	+2.5
SKR				pmax	pmax		
	comp=Z,60nm,1.1s						
SKR				pmax	pmax		
	comp=Z,200nm,3.1s						
SKR				MLR	MLR		
	comp=Z,800nm,17.0s						
SKR				MLR	MLR		
	comp=Z,900nm,15.0s						
ATKA	Atka Island	13.47	124	ePn	Pn	21 28 10.7	-3.7
RDOG	Red Dog Mine	14.26	49	ePn	Pn	21 28 23.5	-1.8
NIKH	Nikolski High	15.19	112	ePn	P	21 28 44.0	+1.1
	comp=Z,58nm,0.8s						
NKL	Nikolayevsk	16.54	253	eP	P	21 29 00.5	+2.7
NKL				pmax	pmax		
	comp=Z,30nm,0.9s						
NKL				MLR	MLR		
	comp=N,500nm,14.0s						
NKL				MLR	MLR		
	comp=E,600nm,14.0s						
NKL				MLR	MLR		
	comp=Z,800nm,14.0s						
TYV	Tymovskoe	17.23	244	eP	Pn	21 29 04.1	+0.2
TYV				eS	Sn	21 32 16.1	+1.1
TYV				pmax	pmax		
	comp=Z,11nm,1.0s						
TYV				smax	smax		
	comp=N,6.0nm,0.6s						
TYV				smax	smax		
	comp=E,100nm,7.5s						
SVW2	Sparrevohn	17.65	74	ePn	P	21 29 12.2	+2.1
	comp=E,28nm,1.3s						
YAK	Yakutsk	17.84	289	P	Pn	21 29 11.8	+0.4
	comp=E,0.0nm,0.3s,baz=311,slow=19,SNR=3.3						
YAK	Yakutsk	17.84	289	⇓eP	Pn	21 29 11.3	-0.1
YAK				pmax	pmax		
	comp=Z,21nm,0.7s						
CHGN	Chignik	18.19	90	ePn	P	21 29 16.8	+0.8
	comp=Z,81nm,1.4s						
TIXI	Tiksi	18.23	321	P	P	21 29 20.8	+4.5
	comp=Z,0.5nm,0.3s,baz=104,slow=11,SNR=7.8						
TIXI				LR	LR	21 35 43.0	
	comp=Z,221nm,19.8s,baz=96,slow=35						
TIXI	Tiksi	18.23	321	iP	Pn	21 29 15.7	-0.5
CAST	Castle Rocks	18.66	66	eP	Pn	21 29 25.2	+3.6
	comp=Z,51nm,1.8s						
PPLA	Purkeypile	18.73	67	eP	Pn	21 29 26.3	+3.8
	comp=Z,76nm,1.5s						
MLY	Manley	18.97	60	eP	Pn	21 29 28.8	+3.5
	comp=Z,30nm,1.3s						
COLD	Coldfoot	19.00	54	eP	Pn	21 29 26.1	+0.6
	comp=Z,12nm,0.9s						
BPAW	Bear Paw Mtn.	19.01	63	eP	Pn	21 29 28.2	+2.4
	comp=Z,47nm,1.5s						
TOLK	Toolik Lake Re	19.23	49	P	P	21 29 27.7	+0.3
	baz=269						
SKT	Skwentna	19.26	70	eP	Pn	21 29 29.8	+1.0
	comp=Z,23nm,1.1s						
TRF	Thorofare Moun	19.45	65	eP	Pn	21 29 31.6	+0.4
	comp=Z,27nm,1.2s						
SUA	Susitna One	19.77	71	eP	Pn	21 29 35.1	+0.1
	comp=Z,123nm,1.6s						
MCK	McKinley	19.98	64	eP	Pn	21 29 37.9	+0.6
	comp=Z,61nm,1.5s						
MCK	McKinley	19.98	64	eP	Pn	21 29 37.9	+0.6
MCK				pmax	pmax		
	comp=Z,61nm,1.5s						
MDM	Murphy Dome	20.03	60	eP	Pn	21 29 37.5	-0.5
	comp=Z,38nm,1.3s						
GRNR	Gornyy	20.10	253	eP	Pn	21 29 39.5	+0.7
SII	Sitkinak Islan	20.11	86	eP	Pn	21 29 39.9	+1.0
	comp=Z,80nm,1.3s						
WRH	Wood River Hil	20.18	61	eP	Pn	21 29 39.3	-0.4
	comp=Z,50nm,1.1s						
YSS	Yuzh-Sakhalins	20.20	236	eP	Pn	21 29 43.0	+3.0
YSS				e		21 29 46.2	
YSS				eS	S	21 33 23.0	-1.1
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
YSS				MLR	MLR		
	comp=Z,300nm,15.0s						
COLA	College	20.21	60	eP	Pn	21 29 39.4	-0.5
	comp=Z,35nm,0.9s						
COLA	College	20.21	60	eP	Pn	21 29 39.4	-0.5
COLA				pmax	pmax		
	comp=Z,35nm,0.9s						
CNPM	China Poot	20.21	76	eP	Pn	21 29 39.6	-0.5
	comp=Z,17nm,1.0s						
OHAK	Old Harbor	20.22	84	eP	P	21 29 37.4	-0.8
CCB	Clear Creek Bu	20.27	61	eP	P	21 29 39.5	+0.8
	comp=Z,22nm,1.0s						
BRLK	Bradley Lake	20.29	76	eP	P	21 29 39.7	+0.7
	comp=Z,22nm,1.0s						
KDAK	Kodiak Island	20.30	82	P	P	21 29 37.7	-1.4
	comp=Z,7.5nm,0.8s,baz=311,slow=6.3,SNR=8.8						
KDAK				LR	LR	21 38 18.1	
	comp=Z,400nm,19.1s,baz=286,slow=39						
KDAK	Kodiak Island	20.30	82	eP	P	21 29 39.6	+0.5
	comp=Z,9.1nm,0.8s						
KDAK	Kodiak Island	20.30	82	P	P	21 29 37.7	-1.4
KDAK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KDAK				MLR	MLR		
	comp=Z,400nm,19.2s						
RC01	Rabbit Creek A	20.35	72	eP	P	21 29 40.4	+0.8
	comp=Z,23nm,1.0s						
PMR	Palmer	20.46	70	eP	Pn	21 29 43.3	+0.3
PMR	Palmer	20.46	70	eP	Pn	21 29 43.3	+0.3
IL1	Eielson Array	20.63	60	eP	P	21 29 42.3	-0.4
ILAR	Eielson Array	20.63	60	P	P	21 29 43.3	+0.6
	comp=Z,4.5nm,0.6s,baz=278,slow=11,SNR=27						
ILAR				LR	LR	21 37 49.8	
	comp=Z,232nm,18.1s,baz=294,slow=37						
ILB	Eielson Array	20.63	60	eP	P	21 29 43.6	+0.9
HDA	Harding Lake	20.68	61	eP	P	21 29 43.7	+0.5
	comp=Z,76nm,1.2s						
SML	Sawmill	20.76	69	eP	Pn	21 29 46.3	-0.2
	comp=Z,115nm,1.7s						
SML	Sawmill	20.76	69	eP	Pn	21 29 46.3	-0.2
SML				pmax	pmax		
	comp=Z,115nm,1.7s						
DHY	Denali Highway	20.82	65	eP	P	21 29 45.0	+0.2
	comp=Z,63nm,1.7s						
SCM	Sheep Creek Mo	21.20	68	eP	P	21 29 49.1	+0.2
	comp=Z,98nm,1.2s						
SCM	Sheep Creek Mo	21.20	68	eP	P	21 29 49.1	+0.2
SCM				pmax	pmax		
	comp=Z,98nm,1.2s						
GLI	Glacier Island	21.63	71	eP	P	21 29 53.0	-0.4
	comp=Z,43nm,1.0s						
PAX	Paxson	21.68	65	eP	P	21 29 53.0	-1.1
	comp=Z,27nm,1.2s						
PAX	Paxson	21.68	65	eP	P	21 29 53.0	-1.1
PAX				pmax	pmax		
	comp=Z,27nm,1.2s						
RIDG	Independ'e Rid	21.74	63	eP	P	21 29 53.8	-0.8
	comp=Z,41nm,1.0s						
KLU	Klutina	21.95	69	eP	P	21 29 57.4	+0.5
	comp=Z,61nm,1.1s						
FID	Port Fidalgo	21.96	71	eP	P	21 29 56.7	-0.3
	comp=Z,46nm,1.2s						
HARP	HAARP	21.99	66	eP	P	21 29 57.6	+0.3
	comp=Z,57nm,1.3s						
SCRK	Sand Creek	22.04	62	eP	P	21 29 56.9	-1.0
	comp=Z,23nm,1.0s						
DIV	Divide	22.14	70	eP	P	21 29 58.4	-0.6
	comp=Z,53nm,1.4s						
EYAK	Cordova Ski Ar	22.37	71	eP	P	21 30 00.7	-0.6
	comp=Z,58nm,1.3s						
ASAJ	Asahikawa	22.62	232	P	P	21 30 05.2	+1.1
	comp=Z,1.0nm,0.3s,baz=233,slow=20,SNR=3.1						
ASAJ				LR	LR	21 38 59.8	
	comp=Z,156nm,19.6s,baz=42,slow=37						
BMRM	Bremner River	22.73	69	eP	P	21 30 04.4	-0.9
	comp=Z,43nm,1.2s						
RAGM	Ragged Mountai	22.92	71	eP	P	21 30 09.3	+2.1
	comp=Z,87nm,1.3s						
EGAK	Eagle	23.02	59	eP	P	21 30 06.9	-1.3
	comp=Z,13nm,1.0s						
KLR	Kul'dur	23.34	255	P	P	21 30 12.1	+0.6
	comp=Z,1.6nm,1.0s,baz=48,slow=10.0,SNR=23						
KLR				LR	LR	21 40 24.8	
	comp=Z,15nm,18.8s,baz=40,slow=40						
KLR	Kul'dur	23.34	255	d iP	P	21 30 13.4	+1.9
DAWY	Dawson	23.96	60	eP	P	21 30 17.3	-0.1
	comp=Z,60nm,1.4s						
ERM	Erimo	24.22	229	ceP	P	21 30 22.2	+2.2
ERM				pmax	pmax		
	comp=Z,15nm,1.0s						
INK	Inuvik	25.14	49	P	P	21 30 28.7	+0.6
	comp=Z,18nm,0.9s,baz=282,slow=9.9,SNR=14						
INK	Inuvik	25.14	49	eP	P	21 30 28.3	+0.2
	comp=Z,27nm,1.0s						
INK	Inuvik	25.14	49	eP	P	21 30 28.3	+0.2
INK				pmax	pmax		
	comp=Z,27nm,1.0s						
BOD	Bodaibo	26.72	287	eP	P	21 30 37.3	-5.2
BOD				pmax	pmax		
	comp=Z,9.0nm,1.8s						
USRK	Ussuriysk Ar.	26.98	247	LR	LR	21 43 15.1	
	comp=Z,264nm,18.4s,baz=14,slow=41						
WHY	Whitehorse	27.20	65	eP	P	21 30 47.6	+0.7
	comp=Z,36nm,1.8s						
DLBC	Dease Lake	30.45	67	eP	P	21 31 17.8	+2.0
	comp=Z,10nm,1.1s						
MAJO	Matsushiro	30.85	230	eP	P	21 31 19.6	+0.1
	comp=Z,0.9nm,0.3s						
MAJO	Matsushiro	30.85	230	eP	P	21 31 19.6	+0.1
MAJO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MJAR	Matsushiro Arr	30.85	230	P	P	21 31 17.9	-1.6
	comp=Z,0.9nm,0.5s,baz=8.0,slow=8.1,SNR=11						
MJAR				LR	LR	21 44 45.2	
	comp=Z,99nm,18.9s,baz=10.0,slow=38						
JHJ	Hachijo jima 2	33.36	225	LR	LR	21 45 51.0	
	comp=Z,48nm,19.0s,baz=325,slow=38						
KSRS	Korea Array	34.25	244	P	P	21 31 48.5	-0.7
	comp=Z,1.8nm,0.9s,baz=22,slow=9.5,SNR=7.8						
KSRS				LR	LR	21 45 35.9	
	comp=Z,108nm,18.9s,baz=36,slow=36						
KSAR	Wonju Array Be	34.28	244	P	P	21 31 48.5	-0.9
KSAR	Wonju Array Be	34.28	244	P	P	21 31 48.5	-0.9
YKA	Yellowknife Ar	34.67	53	LR	LR	21 47 09.3	
	comp=Z,7.7nm,20.1s,baz=270,slow=38						
TLY	Talaya	35.17	284	⇑eP	P	21 31 56.8	-0.2
TLY				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ULN	Ulaanbaatar	36.14	277	iP	P	21 32 08.1	+2.6
ULN				pmax	pmax		
	comp=Z,1.0nm,1.2s						
ZAK	Zakamensk	36.20	283	eP	P	21 32 07.5	+1.5
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.3s						
MOY	Mondy	36.42	286	eP	P	21 32 11.4	+3.6
SONA1	Songino Array	36.46	277	eP	P	21 32 10.7	+2.4
SONA1				ePcP	PcP	21 34 31.9	+0.1
SONM	Songino Array	36.48	277	P	P	21 32 10.6	+2.2
	comp=Z,0.6nm,0.9s,baz=38,slow=7.3,SNR=6.4						
SONM				PcP	PcP	21 34 31.7	-0.1
	comp=Z,1.5nm,0.9s,baz=45,slow=2.8,SNR=5.2						
SONM				LR	LR	21 47 59.8	
	comp=Z,370nm,19.0s,baz=44,slow=38						
JNU	Nakatsue	36.71	237	LR	LR	21 46 07.5	
	comp=Z,156nm,21.8s,baz=134,slow=35						
BJI	Beijing	37.56	260	⇑eP	P	21 32 18.9	+1.5
BJI				pmax	pmax		
	comp=Z,8.0nm,1.3s						
BJI				LR	LR		
	comp=Z,440nm,14.9s						
BJI				LR	LR		
	comp=Z,370nm,14.1s						
LLLB	Lillooet	39.01	73	eP	P	21 32 30.0	+0.3
	comp=Z,10nm,1.0s						
HHC	Hu-ho-hao-te	39.14	265	eP	P	21 32 30.5	-0.4
HHC				S	S	21 38 30.3	+0.4
HHC				SS	SnSn	21 41 15.8	-6.4
HHC				pmax	pmax		
	comp=Z,16nm,1.0s						
HHC				pmax	pmax		
	comp=Z,99nm,6.1s						
HHC				LR	LR		
	comp=Z,340nm,11.3s						
HHC				LR	LR		
	comp=Z,340nm,13.6s						
HHC				LR	LR		
	comp=Z,380nm,13.6s						
SPITS	Spitsbergen Ar	39.73	351	P	P	21 32 35.1	-0.2
	comp=Z,8.5nm,0.9s,baz=23,slow=7.8,SNR=2.5						
SPITS				LR	LR	21 49 25.4	
	comp=Z,62nm,18.1s,baz=25,slow=37						
A04D	Lummi Island	39.95	75	P	P	21 32 37.7	+0.3
	baz=315						
B05A	Bryant	40.56	75	P	P	21 32 42.8	+0.3
	baz=316						
B08A	Colville Reser	41.78	73	eP	P	21 32 52.5	-0.1
	comp=Z,12nm,1.1s						
LTY	Liberty	41.95	75	eP	P	21 32 55.8	+1.7
	comp=Z,39nm,1.8s						
ZALV	Zalesovo Beam	42.08	299	P	P	21 32 53.5	-1.3
	comp=Z,0.8nm,0.6s,baz=66,slow=7.2,SNR=3.6						
ZALV				PcP	PcP	21 34 50.6	+1.3
	comp=Z,1.8nm,0.7s,baz=11,slow=2.9,SNR=5.6						
ZALV				LR	LR	21 51 08.7	
	comp=Z,152nm,21.2s,baz=68,slow=37						
ZALV	Zalesovo Beam	42.08	299	eP	P	21 32 57.0	+2.1
ZALV				PcP	PcP	21 34 50.6	+1.3
NVS	Novosibirsk	42.12	301	eP	P	21 32 51.7	-3.5
DAG	Danmarks Havn	42.18	2	iP	P	21 32 54.5	-1.0
	comp=Z,4.6nm,1.0s						
DAG	Danmarks Havn	42.18	2	iP	P	21 32 54.5	-1.0
DAG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NJ2	Nanjing	42.82	250	eP	P	21 33 01.8	+0.6
NJ2				pmax	pmax		
	comp=Z,15nm,0.8s						
NJ2				LR	LR		
	comp=Z,350nm,10.5s						
NJ2				LR	LR		
	comp=Z,560nm,11.9s						
D08A	Wollman Farm,	42.92	74	eP	P	21 33 02.5	+0.7
	comp=Z,54nm,1.9s						
HAWA	Hanford	43.12	75	eP	P	21 33 01.8	-1.6
	comp=Z,1.2nm,0.4s						
JOW	Kunigami	43.31	236	LR	LR	21 50 07.1	
	comp=Z,87nm,21.9s,baz=55,slow=35						
E09A	Wood Farm, Sta	43.68	74	eP	P	21 33 08.7	+0.7
	comp=Z,18nm,1.4s						
I04A	Tendick Farm,	43.69	80	P	P	21 33 08.0	-0.2
	baz=319						
WALA	Waterton Lakes	43.75	69	eP	P	21 33 08.9	+0.2
	comp=Z,25nm,1.3s						
DGZ	Jazzator, Alta	43.97	293	iP	P	21 33 10.3	-0.2
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
PINE	Pine Mountain	44.39	79	eP	P	21 33 15.6	+1.7
	comp=Z,26nm,1.4s						
F10A	Beach Ranch, E	44.51	74	eP	P	21 33 15.0	+0.3
	comp=Z,6.3nm,0.9s						
J05D	Fort Rock, OR	44.64	80	P	P	21 33 15.8	-0.1
	baz=320						
YBH	Yreka Blue Hor	45.12	82	P	P	21 33 20.5	+0.9
	comp=Z,3.5nm,0.8s,baz=337,slow=4.8,SNR=5.8						
YBH				LR	LR	21 50 15.8	
	comp=Z,95nm,20.6s,baz=313,slow=34						
SUMG	Summit	45.28	11	eP	P	21 33 21.1	+0.2
	comp=Z,20nm,1.1s						
SUMG	Summit	45.28	11	iP	P	21 33 21.0	+0.1
	comp=Z,20nm,1.1s						
SUMG	Summit	45.28	11	iP	P	21 33 21.0	+0.1
SUMG				pmax	pmax		
	comp=Z,20nm,1.1s						
BMO	Blue Mountains	45.31	75	eP	P	21 33 21.4	+0.3
	comp=Z,19nm,1.4s						
BMO	Blue Mountains	45.31	75	eP	P	21 33 21.4	+0.3
BMO				pmax	pmax		
	comp=Z,19nm,1.4s						
M02C	Callahan	45.31	83	P	P	21 33 21.3	+0.1
	baz=321						
MSO	Missoula	45.38	71	P	P	21 33 20.9	-0.8
	baz=318						
MSO	Missoula	45.38	71	eP	P	21 33 21.5	-0.2
	comp=Z,14nm,1.3s						
M04C	Macdoel	45.50	82	P	P	21 33 22.4	-0.2
	baz=320						
N02D	Trinity Center	45.70	83	P	P	21 33 24.1	-0.1
	baz=321						
XAN	Xi'an	45.82	261	P	P	21 33 26.8	+1.6
XAN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
XAN				pmax	pmax		
	comp=Z,70nm,3.5s						
GTA	Gaotai	45.93	274	eP	P	21 33 27.9	+1.8
GTA				pP	sP	21 33 32.3	-0.6
GTA				sP	pP	21 33 34.9	+3.9
GTA				S	S	21 40 13.0	+3.1
GTA				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,76nm,6.4s						
GTA				LR	LR		
	comp=Z,340nm,14.4s						
GTA				LR	LR		
	comp=Z,280nm,14.4s						
GTA				LR	LR		
	comp=Z,400nm,14.8s						
WDC	Whiskeytown Da	46.09	83	eP	P	21 33 28.0	+0.8
	comp=Z,33nm,1.8s						
WDC	Whiskeytown Da	46.09	83	eP	P	21 33 28.0	+0.8
WDC				pmax	pmax		
	comp=Z,33nm,1.8s						
MOD	Modoc Plateau	46.14	80	eP	P	21 33 28.1	+0.4
	comp=Z,7.2nm,1.0s						
EGMT	Eagleton	46.38	67	P	P	21 33 27.9	-1.6
	baz=319						
WVOR	Wild Horse Val	46.52	78	eP	P	21 33 32.1	+1.3
	comp=Z,15nm,1.4s						
LZH	Lanzhou	46.61	268	eP	P	21 33 33.1	+1.5
LZH				pP	pP	21 33 35.9	-0.6
LZH				sP	sP	21 33 37.4	-1.0
LZH				pmax	pmax		
	comp=Z,21nm,1.1s						
LZH				LR	LR		
	comp=Z,450nm,12.4s						
LZH				LR	LR		
	comp=Z,460nm,12.7s						
LZH				LR	LR		
	comp=Z,410nm,15.2s						
O03D	Paynes Creek	46.66	83	P	P	21 33 31.5	-0.4
	baz=321						
ARCES	ARCESS Array B	46.74	343	P	P	21 33 31.5	-0.5
	comp=Z,3.4nm,0.6s,baz=12,slow=6.2,SNR=8.2						
ARCES	ARCESS Array B	46.74	343	eP	P	21 33 29.7	-2.3
KURK	Kurchatov	47.04	300	eP	P	21 33 33.3	-1.2
	comp=Z,22nm,1.4s						
KURK	Kurchatov	47.04	300	eP	P	21 33 33.3	-1.2
KURK				pmax	pmax		
	comp=Z,22nm,1.4s						
MFID	Camas Ranch	47.09	75	eP	P	21 33 35.2	0.0
	comp=Z,16nm,1.3s						
DLMT	Dillon	47.10	71	eP	P	21 33 34.9	-0.4
	comp=Z,10nm,1.3s						
KURBB	Kurchatov Arra	47.15	300	P	P	21 33 34.5	-0.9
	comp=Z,8.2nm,1.0s,baz=46,slow=8.1,SNR=35						
APA	Apatity	47.23	338	⇑iP	P	21 33 23.7	-12
APA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BOZ	Bozeman (W)	47.37	70	P	P	21 33 36.9	-0.4
	baz=320						
BOZ	Bozeman (W)	47.37	70	eP	P	21 33 37.1	-0.2
	comp=Z,29nm,1.9s						
BOZ	Bozeman (W)	47.37	70	eP	P	21 33 37.1	-0.2
BOZ				pmax	pmax		
	comp=Z,29nm,1.9s						
MCMT	McKenzie Canyo	47.40	72	eP	P	21 33 40.2	+2.5
HLID	Hailey	47.64	74	P	P	21 33 39.5	-0.1
	baz=320						
HLID	Hailey	47.64	74	eP	P	21 33 39.4	-0.1
	comp=Z,2.7nm,0.7s						
HLID				ePcP	PcP	21 35 09.4	+0.5
GCMT	Greycliff	48.11	69	eP	P	21 33 47.2	+4.1
WMQ	Urumqi	48.26	287	P	P	21 33 44.6	+0.4
WMQ				pP	sP	21 33 51.8	+0.8
WMQ				sP	pP	21 33 54.4	+5.3
WMQ				pmax	pmax		
	comp=Z,21nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,230nm,5.5s						
WMQ				LR	LR		
	comp=Z,190nm,19.1s						
WMQ				LR	LR		
	comp=Z,140nm,20.3s						
WMQ				LR	LR		
	comp=Z,200nm,16.9s						
PAHR	Pah Rah Range	48.28	81	eP	P	21 33 44.4	-0.1
	comp=Z,9.1nm,1.2s						
MK31	Makanchi Array	48.43	294	eP	P	21 33 43.5	-1.9
MK31	Makanchi Array	48.43	294	eP	P	21 33 43.5	-1.9
MKAR	Makanchi Array	48.43	294	P	P	21 33 43.5	-1.9
	comp=Z,1.1nm,0.5s,baz=37,slow=6.6,SNR=20						
MKAR	Makanchi Array	48.43	294	eP	P	21 33 43.5	-1.9
	comp=Z,12nm,0.7s						
MKAR	Makanchi Array	48.43	294	eP	P	21 33 43.5	-1.9
MKAR				pmax	pmax		
	comp=Z,12nm,0.7s						
MK01	Makanchi Array	48.44	294	eP	P	21 33 43.6	-1.9
DGMT	Dagmar	48.47	63	P	P	21 33 45.7	0.0
	baz=320						
MAKZ	Makanchi	48.56	294	eP	P	21 33 45.4	-1.0
	comp=Z,8.0nm,1.3s						
MAKZ	Makanchi	48.56	294	eP	P	21 33 45.4	-1.0
MAKZ				pmax	pmax		
	comp=Z,8.0nm,1.3s						
BVAR	Borovoye Array	48.61	307	P	P	21 33 46.1	-0.5
	comp=Z,4.7nm,0.6s,baz=52,slow=6.9,SNR=21						
BVAR				LR	LR	21 55 23.6	
	comp=Z,93nm,19.0s,baz=38,slow=38						
BRVK	Borovoye	48.62	307	eP	P	21 33 46.1	-0.6
	comp=Z,16nm,1.2s						
BRVK	Borovoye	48.62	307	eP	P	21 33 46.2	-0.6
BRVK				pmax	pmax		

	comp=Z,16nm,1.2s						
PNTR	Pine Nut	48.66	82	*e*P	P	21 33 46.3	-1.3
	comp=Z,9.9nm,0.8s						
BMN	Battle Mountai	48.74	79	*e*P	P	21 33 48.3	+0.2
	comp=Z,8.3nm,1.3s						
BMN	Battle Mountai	48.74	79	*e*P	P	21 33 48.3	+0.2
BMN				pmax	pmax		
	comp=Z,8.0nm,1.3s						
RLMT	Red Lodge	48.80	69	P	P	21 33 48.5	0.0
	baz=321						
RLMT	Red Lodge	48.80	69	*e*P	P	21 33 49.5	+1.0
	comp=Z,17nm,1.1s						
YERR	Yerington	48.92	82	*e*P	P	21 33 49.8	+0.4
	comp=Z,10nm,1.1s						
FLWY	Flagg Ranch	48.95	71	*e*P	P	21 33 51.4	+1.7
	comp=Z,15nm,1.0s						
LAO	LASA Array	48.96	66	P	P	21 33 48.4	-1.1
	baz=320						
LAO	LASA Array	48.96	66	*e*P	P	21 33 50.1	+0.6
	comp=Z,21nm,1.3s						
IMW	Indian Meadow	48.99	71	*e*P	P	21 33 51.4	+1.4
	comp=Z,31nm,1.7s						
SFJD	Kangerlussuaq	49.05	19	LR	LR	21 57 45.4	
	comp=Z,74nm,18.0s,baz=336,slow=40						
FXWY	Fox Creek	49.15	72	*e*P	P	21 33 52.4	+1.1
	comp=Z,6.9nm,1.2s						
SVE	Sverdlovsk	49.17	316⇓	*e*P	P	21 33 51.1	+0.2
SVE				pmax	pmax		
	comp=Z,12nm,1.0s						
LOHW	Long Hollow	49.36	71	*e*P	P	21 33 53.4	+0.5
	comp=Z,7.4nm,1.1s						
KVN	Kaiserville	49.41	81	*e*P	P	21 33 54.1	+0.9
	comp=Z,5.3nm,1.0s						
KVN	Kaiserville	49.41	81	*e*P	P	21 33 54.1	+0.9
KVN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
REDW	Red Top Meadow	49.44	72	*e*P	P	21 33 53.7	+0.2
	comp=Z,5.9nm,1.0s						
RYN	Ryan	49.54	82	*e*P	P	21 33 55.1	+0.9
	comp=Z,13nm,1.4s						
PRGR	Permogore	49.69	328	*e*P	P	21 33 54.4	-0.4
PRGR				pmax	pmax		
	comp=Z,12nm,0.9s						
HVU	Hansel Valley	49.78	75	*e*P	P	21 33 56.4	+0.4
	comp=Z,30nm,1.8s						
HVU	Hansel Valley	49.78	75	*e*P	P	21 33 56.4	+0.4
HVU				pmax	pmax		
	comp=Z,30nm,1.8s						
NV01	Mina Array Sit	49.80	82	*e*P	P	21 33 56.7	+0.5
NVAR	Mina Array Bea	49.80	82	P	P	21 33 56.5	+0.3
	comp=Z,2.5nm,0.7s,baz=305,slow=7.0,SNR=16						
NVAR				PcP	PcP	21 35 17.0	+0.1
	comp=Z,1.3nm,0.8s,baz=294,slow=3.4,SNR=4.6						
NVAR				LR	LR	21 53 11.0	
	comp=Z,88nm,21.6s,baz=82,slow=34						
NV11	Mina Array Sit	49.87	81	*e*P	P	21 33 56.4	-0.3
	comp=Z,0.7nm,1.3s						
OMMB	Old Mammoth Mi	50.12	83	*e*P	P	21 33 59.6	+0.8
	comp=Z,12nm,1.2s						
ARU	Arti	50.18	317	*e*P	P	21 33 58.6	+0.1
	comp=Z,6.9nm,0.9s						
ARU	Arti	50.18	317	*c* *i*P	P	21 33 57.9	-0.7
ARU				S	S	21 41 07.8	-1.5
ARU				SS	SS	21 44 31.8	-10
ARU				pmax	pmax		
	comp=Z,12nm,1.2s						
GUMO	Guam	50.33	209	LR	LR	21 52 47.8	
	comp=Z,26nm,21.4s,baz=36,slow=33						
BGU	Big Grassy Mou	50.34	75	*e*P	P	21 34 00.0	-0.2
	comp=Z,3.2nm,1.1s						
HWUT	Hardware Ranch	50.48	74	*e*P	P	21 34 02.3	+1.0
	comp=Z,43nm,1.8s						
BW06	Boulder Array	50.50	71	P	P	21 34 02.0	+0.5
	baz=322						
BW06	Boulder Array	50.50	71	*e*P	P	21 34 01.8	+0.3
	comp=Z,5.3nm,0.8s						
PD31	Pinedale Array	50.50	71	*e*P	P	21 34 02.1	+0.6
PDAR	Pinedale Array	50.50	71	P	P	21 34 01.9	+0.3
	comp=Z,3.5nm,0.7s,baz=307,slow=3.1,SNR=34						
PDAR				PcP	PcP	21 35 18.6	-0.8
	comp=Z,0.6nm,0.7s,baz=298,slow=1.9,SNR=2.5						
PDAR				LR	LR	21 56 26.8	
	comp=Z,65nm,21.8s,baz=350,slow=37						
PDAR	Pinedale Array	50.50	71	*e*P	P	21 34 01.2	-0.3
PDAR				PcP	PcP	21 35 18.6	-0.8
ULM	Lac du Bonnet	50.55	56	P	P	21 34 00.3	-1.2
	comp=Z,5.1nm,0.7s,baz=335,slow=9.0,SNR=6.6						
ULM				LR	LR	21 56 41.0	
	comp=Z,62nm,19.6s,baz=75,slow=38						
ULM	Lac du Bonnet	50.55	56	*e*P	P	21 34 01.8	+0.3
	comp=Z,37nm,1.7s						
ULM	Lac du Bonnet	50.55	56	P	P	21 34 00.3	-1.2
ULM				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ULM				MLR	MLR		
	comp=Z,62nm,19.6s						
MDND	Maddock	50.91	60	P	P	21 34 03.5	-0.7
	baz=322						
DUG	Dugway, Tooele	51.01	76	P	P	21 34 04.4	-0.9
	baz=322						
DUG	Dugway, Tooele	51.01	76	*e*P	P	21 34 05.1	-0.2
	comp=Z,13nm,1.2s						
DUG	Dugway, Tooele	51.01	76	*e*P	P	21 34 05.1	-0.2
DUG				pmax	pmax		
	comp=Z,13nm,1.2s						
R11A	Troy Canyon, C	51.16	79	P	P	21 34 06.4	-0.1
	baz=323						
R11A	Troy Canyon, C	51.16	79	*e*P	P	21 34 06.8	+0.3
	comp=Z,6.0nm,1.5s						
CWC	Cottonwood Cre	51.50	83	P	P	21 34 09.0	0.0
	baz=324						
NLU	North Lily Min	51.55	75	*e*P	P	21 34 10.4	+1.0
	comp=Z,11nm,1.1s						
A33A	Warroad	51.78	56	P	P	21 34 10.9	+0.1
	baz=323						
PSUT	Pine Spring	51.84	78	*e*P	P	21 34 12.2	+0.7
	comp=Z,24nm,2.0s						
DAC	Darwin (Calif)	51.86	83	*e*P	P	21 34 12.6	+0.9
	comp=Z,5.5nm,1.0s						
DAC	Darwin (Calif)	51.86	83	P	P	21 34 12.6	+0.9
DAC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KLMR	Klimovskoe	51.87	331	*e*P	P	21 34 09.5	-1.7
KLMR				pmax	pmax		
	comp=Z,14nm,0.9s						
KLMR	Klimovskoe	51.87	331	*e*P	P	21 34 09.5	-1.7
KLMR				AMP		21 34 11.3	
	comp=Z,14nm,0.9s						
PKM	Mcpherson Peak	51.91	86	P	P	21 34 13.0	+0.8
	baz=324						
RSSD	Black Hills	51.92	66	*e*P	P	21 34 11.7	-0.4
	comp=Z,1.5nm,0.3s						
RSSD				*e*PcP	PcP	21 35 22.2	-2.4
RSSD	Black Hills	51.92	66	*e*P	P	21 34 11.7	-0.4
RSSD				*e*		21 35 22.2	
RSSD				pmax	pmax		
	comp=Z,2.0nm,0.3s						
ISA	Isabella, Lake	51.93	84	P	P	21 34 11.9	-0.3
	baz=324						
TPNV	Topopah Spring	51.97	81	P	P	21 34 12.5	0.0
	baz=324						
K22A	Casper	51.97	69	P	P	21 34 12.5	0.0
	baz=322						
K22A	Casper	51.97	69	*e*P	P	21 34 12.9	+0.4
	comp=Z,46nm,1.8s						
FURC	Furnace Creek,	52.06	82	P	P	21 34 13.7	+0.8
	baz=324						
MPMC	Manual Prospec	52.09	83	P	P	21 34 13.7	+0.2
	baz=324,SNR=7.1						
AGMN	Agassiz Nation	52.10	57	P	P	21 34 12.8	-0.3
	baz=323						
AGMN	Agassiz Nation	52.10	57	*e*P	P	21 34 13.0	-0.1
	comp=Z,12nm,1.3s						
PDGK	Podgornoye	52.37	293	P	P	21 34 17.4	+2.0
PDGK				pmax	pmax		
	comp=Z,7.0nm,1.2s						
B34A	Aery, Baudette	52.44	56	P	P	21 34 15.0	-0.6
	baz=323						
MSU	Marysvale	52.65	77	*e*P	P	21 34 18.8	+1.2
MSU	Marysvale	52.65	77	*e*P	P	21 34 18.8	+1.2
P18A	Preston Nutter	52.66	74	*e*P	P	21 34 18.3	+0.5
	comp=Z,8.3nm,1.3s						
CCUT	Cedar City	52.86	78	*e*P	P	21 34 20.8	+1.6
	comp=Z,7.7nm,1.1s						
B35A	Bob, Littlefor	52.91	56	P	P	21 34 19.0	-0.1
	baz=323						
B35A	Bob, Littlefor	52.91	56	*e*P	P	21 34 19.2	+0.1
	comp=Z,8.8nm,0.9s						
SRU	San Rafael Swe	52.94	75	*e*P	P	21 34 20.1	+0.3
	comp=Z,39nm,1.5s						
SRU	San Rafael Swe	52.94	75	*e*P	P	21 34 20.1	+0.3
SRU				pmax	pmax		
	comp=Z,39nm,1.5s						
GSC	Goldstone, Bar	53.02	83	P	P	21 34 20.9	+0.6
	baz=324						
GSC	Goldstone, Bar	53.02	83	*e*P	P	21 34 21.1	+0.9
	comp=Z,18nm,1.2s						
GSC	Goldstone, Bar	53.02	83	*e*P	P	21 34 21.1	+0.9
GSC				pmax	pmax		
	comp=Z,18nm,1.2s						
O20A	White River Ci	53.19	72	P	P	21 34 22.1	+0.6
	baz=323						
GYA	Guiyang	53.20	258	*e*P	P	21 34 23.3	+1.6
GYA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
MWC	Mount Wilson	53.30	85	*e*P	P	21 34 27.2	+4.9
	comp=Z,16nm,0.8s						
LCMT	Little Creek M	53.35	79	*e*P	P	21 34 24.7	+2.0
	comp=Z,7.9nm,1.2s						
SNCC	San Nicolas Is	53.38	87	P	P	21 34 23.9	+1.1
	baz=325						
BFSC	Mount Baldy Ra	53.48	84	P	P	21 34 24.5	+0.9
	baz=325						
KNB	Kanab	53.54	78	*e*P	P	21 34 24.7	+0.6
	comp=Z,14nm,1.3s						
KNB	Kanab	53.54	78	*e*P	P	21 34 24.7	+0.6
KNB				pmax	pmax		
	comp=Z,14nm,1.3s						
N23A	Red Feather La	53.63	70	P	P	21 34 24.1	-0.8
	baz=323						
N23A	Red Feather La	53.63	70	*e*P	P	21 34 25.0	+0.1
	comp=Z,6.3nm,1.0s						
HEC	Hector,Ludlow	53.63	83	P	P	21 34 25.4	+0.6
	baz=325						
C36A	Pine Crest Far	53.75	56	P	P	21 34 24.0	-1.3
	baz=324,SNR=5.8						
D35A	Remer	53.80	57	P	P	21 34 26.1	+0.4
	baz=324						
E34A	Wadena	53.80	58	P	P	21 34 26.2	+0.4
	baz=324						
G32A	Webster	53.85	61	P	P	21 34 27.0	+0.9
	baz=324						
GMRC	Granite Mounta	53.99	82	P	P	21 34 28.2	+0.8
	baz=325,SNR=9.1						
C37A	Embarrass	54.03	55	P	P	21 34 27.7	+0.3
	baz=324						
PV09	Paradox Valley	54.08	74	*e*P	P	21 34 27.8	-0.4
D36A	Goodland	54.09	56	P	P	21 34 27.7	-0.1
	baz=324						
D36A	Goodland	54.09	56	*e*P	P	21 34 28.0	+0.2
	comp=Z,9.2nm,0.8s						
PV21	Cone Mtn., Par	54.11	74	*e*P	P	21 34 29.9	+1.6
	comp=Z,5.5nm,0.9s						
EYMN	Ely	54.13	55	P	P	21 34 27.2	-0.9
	baz=324						
EYMN	Ely	54.13	55	*e*P	P	21 34 28.1	0.0
	comp=Z,12nm,1.1s						
FIA1	FINESS Array S	54.14	338	*e*P	P	21 34 26.1	-1.8
FINES	FINESS Array B	54.14	338	P	P	21 34 27.6	-0.3
	comp=Z,4.6nm,0.8s,baz=25,slow=5.0,SNR=9.5						
PV23	Carpenter Ridg	54.18	74	*e*P	P	21 34 29.4	+0.5
	comp=Z,8.2nm,0.9s						
PV22	Blue Mesa, Par	54.21	74	*e*P	P	21 34 29.9	+0.8
	comp=Z,16nm,1.2s						
PV16	Nyswonger Mesa	54.34	74	*e*P	P	21 34 30.9	+0.9
	comp=Z,15nm,1.2s						
PV11	David Mesa, Pa	54.37	74	*e*P	P	21 34 31.1	+1.0
	comp=Z,33nm,1.4s						
PV12	Saucer Basin,	54.38	74	*e*P	P	21 34 32.1	+1.8
	comp=Z,13nm,1.1s						
PV18	Skein Mesa, Pa	54.39	74	*e*P	P	21 34 31.3	+0.9
	comp=Z,16nm,1.2s						
D37A	Cotton	54.40	56	P	P	21 34 29.6	-0.5
	baz=324,SNR=6.5						
C38A	Sawbill Land.	54.40	55	P	P	21 34 29.7	-0.4
	baz=324						
PV03	Paradox Valley	54.41	74	*e*P	P	21 34 31.3	+0.7
PV13	Radium Mtn., P	54.50	74	*e*P	P	21 34 32.2	+1.0
	comp=Z,27nm,1.3s						
SMCO	Snowmass	54.54	72	*e*P	P	21 34 33.4	+1.7
	comp=Z,5.6nm,1.2s						
PFO	Pinyon Flats O	54.56	84	P	P	21 34 31.7	+0.2
	baz=325						
E36A	McGregor	54.58	57	P	P	21 34 31.5	+0.1
	baz=324						
FRD	Ford Ranch, An	54.59	84	P	P	21 34 31.7	0.0
	baz=325						
G34A	Benson	54.64	59	P	P	21 34 31.8	0.0
	baz=324						
ISCO	Idaho Springs	54.66	71	P	P	21 34 31.7	-0.8
	baz=324						
ISCO	Idaho Springs	54.66	71	*e*P	P	21 34 32.7	+0.3
	comp=Z,3.4nm,0.9s						
ISCO	Idaho Springs	54.66	71	*e*P	P	21 34 32.7	+0.3
ISCO				pmax	pmax		
	comp=Z,3.0nm,0.9s						
IRM	Iron Mountain	54.75	82	P	P	21 34 33.7	+0.9
	baz=325,SNR=17						
FRU	Bishkek	54.91	296	*e*P	P	21 34 37.0	+3.1
F36A	Milaca	55.00	57	P	P	21 34 34.4	-0.1
	baz=324						
F36A	Milaca	55.00	57	*e*P	P	21 34 34.6	+0.2
	comp=Z,6.6nm,0.8s						
PDMCI	Parker Dam,Lak	55.11	81	P	P	21 34 35.9	+0.5
	baz=325						
AAK	Ala-Archa	55.12	296	*e*P	P	21 34 35.1	-0.5
	comp=Z,8.6nm,1.1s						
AAK	Ala-Archa	55.12	296	*i* P	P	21 34 35.0	-0.5
AAK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
G35A	Watkins	55.13	59	*e*P	P	21 34 34.8	-0.6
	comp=Z,22nm,1.1s						
E38A	The Farm, Brul	55.19	56	P	P	21 34 35.5	-0.4
	baz=325						
AKTO	Aktyubinsk	55.28	313	P	P	21 34 34.8	-1.6
	comp=Z,2.9nm,0.8s,baz=356,slow=5.4,SNR=6.5						
AKTO				LR	LR	22 02 55.6	
	comp=Z,99nm,18.3s,baz=27,slow=41						
OGNE	Ogallala	55.35	67	P	P	21 34 37.2	+0.1
	baz=324						
Y12C	Blythe	55.38	82	P	P	21 34 38.5	+1.2
	baz=325						
Y12C	Blythe	55.38	82	*e*P	P	21 34 38.0	+0.7
	comp=Z,37nm,1.3s						
H35A	Sunnyside Ranc	55.41	59	P	P	21 34 37.4	0.0
	baz=325						
MVCO	Mesa Verde	55.42	75	P	P	21 34 38.5	+0.7
	baz=324						
G36A	St. Michael	55.42	58	P	P	21 34 37.7	+0.2
	baz=325						
WUAZ	Wupatki	55.44	78	P	P	21 34 38.6	+0.6
	baz=325						
WUAZ	Wupatki	55.44	78	*e*P	P	21 34 39.2	+1.2
	comp=Z,17nm,1.2s						
ECSD	EROS Data Cent	55.45	61	P	P	21 34 37.3	-0.4
	baz=324,SNR=7.7						
ECSD	EROS Data Cent	55.45	61	*e*P	P	21 34 37.9	+0.2
	comp=Z,12nm,1.1s						
ABKAR	Akbulak array	55.56	311	*e*P	P	21 34 38.4	-0.1
F38A	Pierce - Schro	55.59	56	P	P	21 34 38.7	0.0
	baz=325,SNR=7.5						
S22A	4UR Ranch, Cre	55.76	73	P	P	21 34 40.9	+0.5
	baz=325						
S22A	4UR Ranch, Cre	55.76	73	*e*P	P	21 34 41.2	+0.9
	comp=Z,13nm,1.4s						
E39A	Mellen	55.78	55	P	P	21 34 38.9	-1.1
	baz=325						
GLA	Glamis	55.80	83	P	P	21 34 41.2	+0.7
	baz=325						
GLA	Glamis	55.80	83	*e*P	P	21 34 41.8	+1.3
	comp=Z,19nm,1.2s						
GLA	Glamis	55.80	83	*e*P	P	21 34 41.8	+1.3
GLA				pmax	pmax		
	comp=Z,19nm,1.2s						
SPMN	Marine on St.	55.82	57	P	P	21 34 40.0	-0.3
	baz=325						
SPMN	Marine on St.	55.82	57	*e*P	P	21 34 40.2	-0.1
	comp=Z,16nm,1.1s						
E40A	Wakefield	55.98	55	P	P	21 34 41.3	-0.2
	baz=326						
D41A	Chassel	55.99	53	P	P	21 34 41.4	-0.2
	baz=326						
F39A	Loretta	56.01	56	P	P	21 34 41.2	-0.5
	baz=325,SNR=7.8						
G38A	Ridgeland	56.25	57	P	P	21 34 43.1	-0.3
	baz=325						
I36A	Fitzsimmons Fa	56.30	59	P	P	21 34 43.6	-0.2
	baz=325						
F40A	Park Falls	56.33	55	P	P	21 34 43.3	-0.6
	baz=326						
E41A	Kenton	56.33	54	P	P	21 34 43.3	-0.6
	baz=326						
SDCO	Great Sand Dun	56.37	72	P	P	21 34 44.1	-0.7
	baz=325						
SDCO	Great Sand Dun	56.37	72	*e*P	P	21 34 45.6	+0.9
	comp=Z,17nm,1.8s						
G39A	Holcombe	56.43	56	P	P	21 34 43.9	-0.8
	baz=326						
KK31	Karatay Array	56.45	299	*e*P	P	21 34 43.9	-1.0
KK31	Karatay Array	56.45	299	*e*P	P	21 34 43.9	-1.0
KKAR	Karatay Array	56.45	299	*e*P	P	21 34 43.9	-1.0
KKAR	Karatay Array	56.45	299	*e*P	P	21 34 43.9	-1.0
H38A	Maiden Rock	56.48	57	P	P	21 34 44.8	-0.3
	baz=325						
I37A	Lemond, Waseca	56.56	59	P	P	21 34 45.6	0.0
	baz=325						
I37A	Lemond, Waseca	56.56	59	*e*P	P	21 34 45.2	-0.4
	comp=Z,24nm,1.0s						
KSCO	Kaye Shedlock’	56.65	69	*e*P	P	21 34 47.4	+0.9
	comp=Z,22nm,1.3s						
NB2	NORSAR Subarra	56.70	346	P	P	21 34 45.4	-1.0
	comp=Z,2.0nm,0.8s,baz=15,slow=7.4						
NOA	NORSAR Array B	56.70	346	P	P	21 34 46.1	-0.4
	comp=Z,3.4nm,0.8s,baz=14,slow=7.3,SNR=6.4						
J36A	Seneca 1, Swea	56.73	60	P	P	21 34 47.4	+0.5
	baz=325						
J36A	Seneca 1, Swea	56.73	60	*e*P	P	21 34 47.5	+0.5
	comp=Z,38nm,1.2s						
E42A	Champion	56.77	53	P	P	21 34 45.7	-1.4
	baz=326						
G40A	Rib Lake	56.83	56	P	P	21 34 46.0	-1.6
	baz=326,SNR=6.0						
G40A	Rib Lake	56.83	56	*e*P	P	21 34 47.6	+0.1
	comp=Z,26nm,1.4s						
F41A	Three Lakes	56.88	54	P	P	21 34 46.5	-1.4
	baz=326						
I38A	Scanlan Farm,	56.98	58	P	P	21 34 48.6	0.0
	baz=326						
KSH	Kashi	57.01	293	*e*P	P	21 34 52.8	+3.8
KSH				sP	sP	21 34 59.9	+4.0
KSH				*e*PcP	PcP	21 35 47.3	+3.3
KSH				S	S	21 42 45.1	+2.5
KSH				ScS	ScS	21 44 36.8	-0.7
KSH				SS	SS	21 46 36.1	+5.6
KSH				pmax	pmax		
	comp=Z,11nm,1.3s						
KSH				pmax	pmax		
	comp=Z,87nm,4.1s						
KSH				LR	LR		
	comp=Z,160nm,9.0s						
KSH				LR	LR		
	comp=Z,100nm,10.4s						
J37A	Redenius Farm,	57.08	59	P	P	21 34 49.8	+0.5
	baz=326						
K36A	Gilmore City	57.26	60	P	P	21 34 49.9	-0.7
	baz=326						
HFS	Hagfors	57.28	345	P	P	21 34 49.6	-0.9
	comp=Z,3.3nm,0.8s,baz=25,slow=4.8,SNR=3.6						
HFS				LR	LR	22 00 46.7	
	comp=Z,47nm,18.0s,baz=12,slow=37						
H40A	Chili	57.29	56	P	P	21 34 50.7	-0.1
	baz=326						
T25A	Trinidad	57.37	72	P	P	21 34 51.9	+0.1
	baz=325						
I39A	Houston	57.47	57	P	P	21 34 51.5	-0.5
	baz=326						
K37A	Belmond	57.49	60	P	P	21 34 52.7	+0.5
	baz=326						
J38A	Wedel Dairy, R	57.52	58	P	P	21 34 52.4	0.0
	baz=326						
G42A	Mountain	57.55	54	P	P	21 34 52.3	-0.4
	baz=326						
H41A	Junction City	57.59	56	P	P	21 34 52.1	-0.8
	baz=326						
H41A	Junction City	57.59	56	*e*P	P	21 34 53.8	+0.8
	comp=Z,14nm,1.0s						
214A	Organ Pipe Nat	57.67	82	P	P	21 34 54.7	+1.0
	baz=326						
OBN	Obninsk	57.71	329⇓	*i*P	P	21 34 53.0	-0.5
OBN				*i* *PP	pP	21 34 56.0	-2.5
OBN				*SP	sP	21 35 01.0	+0.6
OBN				*e*		21 35 46.4	
OBN				*e*S	S	21 42 49.9	-1.2
OBN				*e*SSS	SSS	21 49 05.7	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,114nm,18.0s						
J39A	Decorah	57.82	58	P	P	21 34 53.6	-1.0
	baz=326						
G43A	Wallace	57.83	54	P	P	21 34 53.5	-1.1
	baz=327						
L37A	Phoenix Point,	57.97	60	P	P	21 34 54.5	-1.1
	baz=326						
CBKS	Cedar Bluff	58.11	67	P	P	21 34 57.1	+0.4
	baz=326						
TASM	ASL Pad, Albuq	58.22	75	P	P	21 34 57.9	+0.2
	baz=326,SNR=5.7						
ANMO	Albuquerque	58.22	75	P	P	21 34 58.5	+0.8
	comp=Z,4.1nm,1.0s,baz=297,slow=11,SNR=7.2						
ANMO				LR	LR	22 01 27.9	
	comp=Z,65nm,18.6s,baz=326,slow=38						
ANMO	Albuquerque	58.22	75	P	P	21 34 58.2	+0.5
	baz=326						
ANMO	Albuquerque	58.22	75	*e*P	P	21 34 58.2	+0.5
	comp=Z,6.6nm,1.1s						
ANMO	Albuquerque	58.22	75	*ce*P	P	21 34 57.9	+0.2
ANMO				pmax	pmax		
	comp=Z,8.0nm,1.3s						
TASL	Snake Pit, Alb	58.22	75	P	P	21 34 57.8	+0.1
	baz=326,SNR=5.6						
L38A	Oak Wood Farm,	58.29	60	P	P	21 34 57.6	-0.2
	baz=326						
TUC	Tucson	58.35	80	*e*P	P	21 35 00.2	+1.7
	comp=Z,5.6nm,1.3s						
TUC	Tucson	58.35	80	*e*P	P	21 35 00.2	+1.7
TUC				pmax	pmax		
	comp=Z,6.0nm,1.3s						
SCIA	State Center	58.38	60	P	P	21 34 58.8	+0.3
	baz=326						
H43A	Windswept, Lux	58.46	54	P	P	21 34 59.6	+0.6
	baz=327						
J41A	Loganville	58.48	57	P	P	21 34 58.9	-0.3
	baz=327						
I42A	Draeger Farm,	58.49	56	P	P	21 34 58.4	-0.8
	baz=327,SNR=5.1						
I42A	Draeger Farm,	58.49	56	*e*P	P	21 34 59.1	-0.1
	comp=Z,67nm,1.8s						
K40A	Colesburg	58.58	58	P	P	21 35 00.1	+0.2
	baz=326						
L39A	Vinton	58.70	59	P	P	21 34 59.6	-1.2
	baz=326						
JFWS	Jewell Farm	58.76	57	P	P	21 35 00.4	-0.7
	baz=327						
M38A	Pleasantville	58.79	60	P	P	21 35 01.4	+0.1
	baz=326						
I43A	Langenfeld Bro	58.80	55	P	P	21 35 01.3	-0.1
	baz=327						
J42A	Columbus	58.88	56	P	P	21 35 01.4	-0.5
	baz=327						
L40A	Anamosa	59.07	58	P	P	21 35 03.3	0.0
	baz=327						
M39A	Webster	59.17	59	P	P	21 35 02.1	-1.9
	baz=327						
K42A	Prairie Point,	59.24	57	P	P	21 35 02.8	-1.7
	baz=327						
N38A	Joes South For	59.29	61	P	P	21 35 04.9	+0.1
	baz=326						
L41A	Preston	59.36	58	P	P	21 35 05.5	+0.3
	baz=327						
LPSR	Galich’ya Gora	59.37	326	*e*P	P	21 35 04.2	-0.9
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.0s						
O37A	Wolven Farm, M	59.43	62	P	P	21 35 05.7	-0.1
	baz=326						
M40A	Post Highland	59.50	59	P	P	21 35 05.6	-0.7
	baz=327						
N39A	Derby Farms, D	59.53	60	P	P	21 35 06.1	-0.4
	baz=327						
N39A	Derby Farms, D	59.53	60	*e*P	P	21 35 07.0	+0.6
	comp=Z,17nm,1.1s						
121A	Cookes Peak, D	59.58	77	P	P	21 35 08.6	+1.4

	baz=326						
K43A	Burlington	59.71	56	P	P	21 35 06.7	-1.0
	baz=327						
P37A	Lathrop	59.82	62	P	P	21 35 08.2	-0.3
	baz=327						
VRH	Novokhopyorsk	59.85	324	eP	P	21 35 06.7	-1.8
VRH				pmax	pmax		
	comp=Z,7.0nm,0.7s						
N40A	Mertquake, Sal	59.91	59	P	P	21 35 08.7	-0.4
	baz=327						
L43A	Garden Prairie	59.98	56	P	P	21 35 09.8	+0.2
	baz=327						
P38A	Dawn	60.14	62	P	P	21 35 10.8	+0.1
	baz=327						
O40A	La Belle	60.42	60	P	P	21 35 12.7	+0.1
	baz=327						
AMTX	Amarillo	60.48	71	P	P	21 35 14.2	+1.0
	baz=326						
M43A	Waltham Townsh	60.52	57	P	P	21 35 12.3	-0.9
	baz=328						
VSR	Storozhevoye	60.55	326	eP	P	21 35 12.4	-0.9
VSR				pmax	pmax		
	comp=Z,7.0nm,0.8s						
P39B	Salisbury	60.58	61	P	P	21 35 13.8	+0.1
	baz=327						
Q38A	Cooks Store, C	60.66	62	P	P	21 35 13.4	-0.8
	baz=327						
MSTX	Muleshoe	60.73	72	P	P	21 35 14.6	-0.4
	baz=327						
MSTX	Muleshoe	60.73	72	eP	P	21 35 15.3	+0.3
	comp=Z,18nm,1.4s						
VORD	Divnogorie	60.74	325	eP	P	21 35 14.2	-0.4
VORD				pmax	pmax		
	comp=Z,6.0nm,1.3s						
O41A	Passleys Farm,	60.84	59	P	P	21 35 14.6	-0.9
	baz=327						
P40A	Paris	60.84	61	P	P	21 35 14.7	-0.8
	baz=327,SNR=6.8						
P40A	Paris	60.84	61	eP	P	21 35 15.2	-0.3
	comp=Z,20nm,1.1s						
Q39A	Willow Grove F	60.86	62	P	P	21 35 15.7	+0.2
	baz=327						
M44A	Midewin, Midew	60.94	56	P	P	21 35 15.4	-0.7
	baz=328						
P41A	Barry, Barry	61.14	60	P	P	21 35 16.9	-0.6
	baz=327						
R38A	Fenwick Farm,	61.18	63	P	P	21 35 17.3	-0.5
	baz=327						
O43A	Sugar Creek Fa	61.35	58	P	P	21 35 18.7	-0.2
	baz=328						
N44A	Piper City	61.40	57	P	P	21 35 18.8	-0.4
	baz=328						
MNTX	Cornudas Mount	61.41	76	P	P	21 35 19.2	-0.3
	baz=327,SNR=14						
MNTX	Cornudas Mount	61.41	76	eP	P	21 35 19.9	+0.5
	comp=Z,15nm,1.2s						
R39A	Chumby, Stover	61.44	62	P	P	21 35 18.7	-0.9
	baz=327,SNR=7.5						
SADO	Sadowa	61.45	48	LR	LR	22 02 44.4	
	comp=Z,49nm,18.7s,baz=154,slow=37						
P42A	Winchester	61.51	59	P	P	21 35 20.4	+0.3
	baz=328						
M46A	Old House Fiel	61.59	55	P	P	21 35 20.3	-0.3
	baz=328						
S38A	Stockton	61.64	63	P	P	21 35 20.4	-0.5
	baz=327						
Q41A	Truxton	61.67	60	P	P	21 35 21.0	-0.1
	baz=328						
R40A	Maddies Statio	61.79	62	P	P	21 35 21.6	-0.3
	baz=328						
R40A	Maddies Statio	61.79	62	eP	P	21 35 21.4	-0.5
	comp=Z,9.1nm,1.2s						
S39A	Bolivar	61.84	63	P	P	21 35 22.0	-0.3
	baz=327						
S39A	Bolivar	61.84	63	eP	P	21 35 21.3	-1.0
	comp=Z,17nm,1.5s						
L48A	N Adams	61.89	54	P	P	21 35 21.8	-0.8
	baz=329						
WMOK	Wichita Mounta	61.91	69	P	P	21 35 22.9	+0.1
	baz=327						
T38A	Diamond	61.98	64	P	P	21 35 22.9	-0.3
	baz=327						
O45A	Potomac	62.03	57	P	P	21 35 23.0	-0.4
	baz=328						
R41A	Rosebud	62.16	61	P	P	21 35 24.3	-0.1
	baz=328						
S40A	Lebanon	62.27	62	P	P	21 35 24.4	-0.8
	baz=328,SNR=5.6						
DAV	Davao City (W)	62.35	229	LR	LR	22 05 45.1	
	comp=Z,18nm,18.0s,baz=118,slow=39						
T39A	Clever	62.38	63	P	P	21 35 25.4	-0.5
	baz=328						
CCM	Cathedral Cave	62.42	61	P	P	21 35 25.8	-0.3
	baz=328						
R42A	Luebbering	62.42	60	P	P	21 35 25.6	-0.6
	baz=328						
M49A	Liberty Center	62.47	53	P	P	21 35 26.1	-0.3
	baz=329						
SKNT	Sakolnakorn	62.60	255	P	P	21 35 31.8	+4.2
	comp=Z,6.9nm,1.4s						
S41A	Jillco Farms,	62.60	62	P	P	21 35 26.1	-1.3
	baz=328,SNR=7.7						
P45A	Graceland, Par	62.63	57	P	P	21 35 26.9	-0.6
	baz=328						
HHAR	Hobbs	62.76	64	eP	P	21 35 27.8	-0.7
	comp=Z,7.7nm,0.8s						
FVM	French Village	62.83	60	eP	P	21 35 28.8	-0.1
	comp=Z,11nm,0.9s						
FVM	French Village	62.83	60	eP	P	21 35 28.8	-0.1
FVM				pmax	pmax		
	comp=Z,11nm,0.9s						
S42A	Caledonia	62.85	61	P	P	21 35 28.3	-0.8
	baz=328						
U39A	Green Forest	62.88	64	P	P	21 35 28.5	-0.7
	baz=328						
Q45A	Warren Harvey,	63.00	58	P	P	21 35 29.1	-0.9
	baz=328						
T41A	Mountain View	63.06	62	P	P	21 35 29.6	-0.8
	baz=328						
NIL	Nilore	63.09	291	eP	P	21 35 32.8	+2.1
	comp=Z,30nm,1.1s						
R44A	Waltonville	63.17	59	P	P	21 35 31.0	-0.1
	baz=328						
U40A	Yellville	63.17	63	P	P	21 35 30.7	-0.5
	baz=328						
LONY	Lake Ozonia	63.19	45	P	P	21 35 30.9	-0.3
	baz=332						
V39A	Pettigrew	63.26	64	P	P	21 35 30.5	-1.3
	baz=328,SNR=11						
ABTX	Abilene, Hawle	63.29	71	P	P	21 35 32.5	+0.5
	baz=328						
ABTX	Abilene, Hawle	63.29	71	eP	P	21 35 30.6	-1.5
	comp=Z,18nm,1.2s						
S43A	Fulton Ridge,	63.33	60	P	P	21 35 32.3	+0.2
	baz=328						
T42A	Van Buren	63.35	61	P	P	21 35 32.6	+0.2
	baz=328						
T42A	Van Buren	63.35	61	eP	P	21 35 30.5	-1.8
	comp=Z,10.0nm,1.2s						
UBPT	Khong Chiam	63.39	252	P	P	21 35 37.0	+4.2
AKASG	Malin Array Be	63.52	332	P	P	21 35 32.2	-1.0
	comp=Z,6.6nm,0.9s,baz=22,slow=6.3,SNR=13						
AKASG				LR	LR	22 06 46.1	
	comp=Z,38nm,19.6s,baz=25,slow=39						
AKASG	Malin Array Be	63.52	332	ceP	P	21 35 32.7	-0.6
AKASG				pmax	pmax		
	comp=Z,7.0nm,0.9s						
AKBB	Malin Array Si	63.52	332	eP	P	21 35 32.0	-1.2
	comp=Z,17nm,1.1s						
AKBB	Malin Array Si	63.52	332	eP	P	21 35 32.1	-1.2
AKBB				pmax	pmax		
	comp=Z,17nm,1.1s						
KIEV	Kiev	63.53	332	eP	P	21 35 32.5	-0.8
	comp=Z,15nm,1.1s						
KIEV	Kiev	63.53	332	eP	P	21 35 32.5	-0.8
KIEV				pmax	pmax		
	comp=Z,15nm,1.1s						
EKA	Eskdalemuir Ar	63.54	354	P	P	21 35 32.5	-0.8
	comp=Z,2.6nm,0.8s,baz=14,slow=6.0,SNR=10.0						
U41A	Viola	63.58	62	P	P	21 35 33.4	-0.5
	baz=328						
BRDH	Bariadhala	63.61	269	LR	LR	22 05 00.4	
	comp=Z,151nm,18.8s,baz=146,slow=38						
P48A	Milroy	63.62	56	P	P	21 35 33.4	-0.7
	baz=329						
V40A	Witts Springs	63.65	63	P	P	21 35 33.3	-1.1
	baz=328,SNR=8.0						
V40A	Witts Springs	63.65	63	eP	P	21 35 33.7	-0.7
	comp=Z,11nm,0.8s						
CMAR	Chiang Mai Arr	63.70	260	P	P	21 35 33.4	-1.5
	comp=Z,0.6nm,0.7s,baz=354,slow=5.6,SNR=4.0						
CMAR				LR	LR	22 07 45.2	
	comp=Z,56nm,18.0s,baz=12,slow=40						
CM01	Chiang Mai Arr	63.73	260	eP	P	21 35 33.3	-1.7
W39A	Magazine	63.74	65	P	P	21 35 34.8	-0.2
	baz=328						
W39A	Magazine	63.74	65	eP	P	21 35 34.5	-0.5
	comp=Z,18nm,1.4s						
O50A	Cable	63.75	54	P	P	21 35 34.7	-0.3
	baz=330						
P49A	Miami Univ. Ec	63.84	55	P	P	21 35 34.9	-0.7
	baz=329						
V41A	Mountainview	63.95	63	P	P	21 35 35.4	-1.0
	baz=328						
W40A	Ferguson Farm,	64.06	64	P	P	21 35 37.8	+0.8
	baz=328						
W40A	Ferguson Farm,	64.06	64	eP	P	21 35 36.2	-0.8
	comp=Z,13nm,0.6s						
P50A	Jamestown	64.14	54	P	P	21 35 37.0	-0.5
	baz=330						
X39A	Fountain Ranch	64.18	65	P	P	21 35 37.5	-0.4
	baz=328						
TX31	Lajitas Ar. Si	64.19	76	eP	P	21 35 38.3	+0.2
TXAR	Lajitas Array	64.19	76	P	P	21 35 38.8	+0.7
	comp=Z,2.6nm,0.9s,baz=318,slow=3.5,SNR=22						
TXAR				LR	LR	22 03 25.6	
	comp=Z,72nm,20.2s,baz=0.0,slow=36						
MIAR	Mount Ida	64.39	65	P	P	21 35 38.8	-0.4
	baz=328						
LBNH	Lisbon	64.42	43	P	P	21 35 38.5	-0.8
	baz=333						
W41B	Gary Mavity, V	64.43	63	P	P	21 35 39.5	+0.1
	baz=328						
W41B	Gary Mavity, V	64.43	63	eP	P	21 35 39.0	-0.5
	comp=Z,17nm,1.4s						
N54A	Moraine State	64.44	51	P	P	21 35 38.4	-1.1
	baz=330						
U44B	Burton Farm, H	64.68	60	P	P	21 35 38.6	-2.4
	baz=329						
X40A	Basin Creek Fa	64.76	64	P	P	21 35 41.2	-0.4
	baz=328						
JCT	Junction City	65.02	72	P	P	21 35 44.0	+0.5
	baz=328						
JCT	Junction City	65.02	72	eP	P	21 35 43.2	-0.3
	comp=Z,32nm,1.5s						
JCT	Junction City	65.02	72	eP	P	21 35 43.2	-0.3
JCT				pmax	pmax		
	comp=Z,32nm,1.5s						
R50A	Paris	65.07	56	P	P	21 35 42.7	-0.9
	baz=330						
R51A	Hillsboro	65.35	55	P	P	21 35 45.0	-0.4
	baz=330						
LPIG	La Paz	65.44	84	LR	LR	22 04 27.2	
	comp=Z,36nm,18.3s,baz=35,slow=36						
WVT	Waverly	65.49	59	P	P	21 35 46.8	+0.4
	baz=329						
WVT	Waverly	65.49	59	eP	P	21 35 45.4	-1.0
	comp=Z,18nm,1.4s						
WVT	Waverly	65.49	59	eP	P	21 35 45.4	-1.0
WVT				pmax	pmax		
	comp=Z,18nm,1.4s						
SSPA	Standing Stone	65.50	50	P	P	21 35 45.1	-1.3
	baz=331						
GEYT	Alibeck	65.88	305	P	P	21 35 47.2	-1.7
	comp=Z,2.8nm,0.9s,baz=284,slow=6.0,SNR=12						
GEYT				LR	LR	22 08 07.7	
	comp=Z,91nm,21.5s,baz=330,slow=39						
GYA0B	ALIBECK ARRAY	65.88	305	eP	P	21 35 49.2	+0.3
	comp=Z,13nm,1.2s						
OJC	Ojcow	65.92	338	eP	P	21 35 48.5	-0.4
	comp=Z,19nm,1.2s						
OJC	Ojcow	65.92	338	eP	P	21 35 48.5	-0.4
OJC				pmax	pmax		
	comp=Z,19nm,1.2s						
CLL	Collm	65.97	343	⇓iP	P	21 35 48.6	-0.6
	comp=Z,5.0nm,1.1s						
CLL				i Pmax		21 35 51.6	
	comp=Z,17nm,1.6s						
CLL	Collm	65.97	343	eP	P	21 35 48.8	-0.4
	comp=Z,14nm,1.4s						
CLL	Collm	65.97	343	eP	P	21 35 48.8	-0.4
CLL				pmax	pmax		
	comp=Z,14nm,1.4s						
KIV	Kislovodsk	66.06	320	⇑eP	P	21 35 49.8	-0.2
KIV				e*PP	pP	21 35 54.0	-1.1
KIV				*SP	sP	21 35 59.0	+2.0
KIV				e		21 36 22.7	
KIV				e		21 45 01.1	
KIV				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KIV				MLR	MLR		
	comp=Z,47nm,14.0s						
HRV	Adam Dziewonsk	66.08	44	P	P	21 35 49.6	-0.5
	baz=333						
SORM	Soroca	66.13	331	⇓iP	P	21 35 49.7	-0.6
SORM	Soroca	66.13	331	⇓P	P	21 35 49.7	-0.6
KBZ	Khabaz	66.19	319	P	P	21 35 51.1	+0.4
	comp=Z,6.5nm,1.0s,baz=306,slow=2.0,SNR=9.7						
KBZ				LR	LR	22 07 28.8	
	comp=Z,49nm,18.2s,baz=11,slow=38						
BRG	Berggiesshubel	66.25	342	eP	P	21 35 51.1	+0.1
	comp=Z,7.1nm,1.3s						
BRG	Berggiesshubel	66.25	342	eP	P	21 35 51.1	+0.1
BRG				pmax	pmax		
	comp=Z,7.0nm,1.3s						
DPC	Dobruska-Polom	66.39	340	eP	P	21 35 57.0	+5.0
DPC	Dobruska-Polom	66.39	340	eP	P	21 35 57.0	+5.0
AKT	Akhty	66.61	315	eP	P	21 35 53.5	-0.1
AKT				e		21 36 26.3	
AKT				e		21 38 25.2	
AKT				pmax	pmax		
	comp=Z,17nm,1.1s						
ZEI	Tsey	66.72	318	eP	P	21 35 53.6	-0.8
MORC	Moravsky Berou	66.74	339	⇓iP	P	21 35 54.6	+0.4
MORC	Moravsky Berou	66.74	339	eP	P	21 35 53.1	-1.2
	comp=Z,5.4nm,1.0s						
MORC	Moravsky Berou	66.74	339	eP	P	21 35 53.1	-1.2
MORC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MORC	Moravsky Berou	66.74	339	eP	P	21 35 54.4	+0.2
MOX	Moxa	66.81	344	P	P	21 35 56.5	+1.9
MOX				pmax	pmax		
	comp=Z,7.0nm,1.3s						
LANS	Liptovska Anna	67.00	338	eP	P	21 35 56.8	+0.9
LANS	Liptovska Anna	67.00	338	eP	P	21 35 56.8	+0.9
U52A	Thorn Hill	67.09	56	P	P	21 35 56.9	+0.3
	baz=330						
BUR08	Bucovina Ar. S	67.30	333	eP	P	21 35 57.4	-0.5
BUR04	Bucovina Ar. S	67.32	333	eP	P	21 35 57.4	-0.7
BURAR	Bucovina Array	67.32	333	⇑iP	P	21 35 58.4	+0.4
BURAR	Bucovina Array	67.32	333	⇑P	P	21 35 58.4	+0.4
VRAC	Vranov	67.35	340	⇓iP	P	21 35 58.0	-0.1
VRAC	Vranov	67.35	340	⇓P	P	21 35 58.0	-0.1
VRAC	Vranov	67.35	340	eP	P	21 35 57.7	-0.4
TRPA	Tarpa	67.39	335	⇓iP	P	21 35 59.1	+0.8
TBLG	Delisi	67.40	317	eP	P	21 35 58.6	+0.1
	comp=Z,16nm,1.2s						
TBLG	Delisi	67.40	317	eP	P	21 35 58.6	+0.1
TBLG				pmax	pmax		
	comp=Z,16nm,1.2s						
V52A	Sevierville	67.47	56	P	P	21 35 57.3	-1.8
	baz=330						
MEM	Membach	67.52	347	⇑P	P	21 35 59.6	+0.5
BLA	Blacksburg	67.54	53	P	P	21 35 58.7	-0.7
	baz=331						
TKL	Tuckaleechee C	67.56	57	LR	LR	22 07 20.3	
	comp=Z,66nm,18.9s,baz=18,slow=38						
JAVC	Velka Javorina	67.60	339	eP	P	21 36 00.7	+0.9
KRUC	Moravsky	67.62	340	eP	P	21 35 59.2	-0.6
VYHS	Vyhne	67.75	338	eP	P	21 36 00.4	-0.2
VYHS				pmax	pmax		
	comp=Z,8.0nm,1.5s						
VYHS	Vyhne	67.75	338	eP	P	21 36 00.4	-0.2
BIZ	Bicaz	67.77	333	⇑iP	P	21 36 01.1	+0.4
KHC	Kasperske Hory	68.00	342	eP	P	21 36 01.7	-0.5
KHC				ex	x	21 36 07.2	
KHC	Kasperske Hory	68.00	342	eP	P	21 36 01.8	-0.4
	comp=Z,8.3nm,1.9s						
KHC	Kasperske Hory	68.00	342	eP	P	21 36 01.7	-0.5
KHC				e		21 36 07.2	
TESR	Tescani	68.05	332	⇑iP	P	21 36 02.3	-0.2
DOU	Dourbes	68.17	348	⇑P	P	21 36 02.3	-0.9
GEC2	GERESS Array S	68.26	342	eP	P	21 36 04.2	+0.3
	comp=Z,3.4nm,1.0s						
GEC2	GERESS Array S	68.26	342	eP	P	21 36 04.3	+0.3
GEC2				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GERES	GERESS Array B	68.26	342	P	P	21 36 04.1	+0.1
	comp=Z,1.7nm,0.8s,baz=35,slow=4.9,SNR=12						
GEA0	GERESS Array S	68.27	342	eP	P	21 36 03.1	-0.8
WLF	Walferdange	68.44	347	⇓P	P	21 36 02.8	-2.1
VRI	Vrincioaia	68.64	332	⇓iP	P	21 36 06.9	+0.7
VRI	Vrincioaia	68.64	332	⇓P	P	21 36 06.9	+0.7
CONA	Conrad Observa	68.81	340	eP	P	21 36 07.8	+0.4
	comp=Z,7.6nm,1.2s						
GNI	Garni	68.81	316	LR	LR	22 11 20.0	
	comp=Z,52nm,18.4s,baz=18,slow=40						
CFR	Carcaliu	68.96	330	⇑iP	P	21 36 08.4	+0.2
CFR	Carcaliu	68.96	330	⇑P	P	21 36 08.4	+0.2
KMSC	Kings Mountain	68.99	55	P	P	21 36 07.2	-1.3
	baz=331						
MOA	Molln	69.15	341	eP	P	21 36 09.5	+0.1
	comp=Z,7.0nm,1.6s						
MLR	Muntele Rosu	69.17	332	P	P	21 36 11.3	+1.6
	comp=Z,4.2nm,0.8s,baz=45,slow=2.9,SNR=6.4						
MLR				LR	LR	22 08 00.0	
	comp=Z,48nm,19.1s,baz=58,slow=37						
MLR	Muntele Rosu	69.17	332	⇑iP	P	21 36 11.4	+1.6
MLR	Muntele Rosu	69.17	332	eP	P	21 36 11.3	+1.6
	comp=Z,15nm,1.4s						
MLR	Muntele Rosu	69.17	332	eP	P	21 36 11.3	+1.6
MLR				pmax	pmax		
	comp=Z,15nm,1.4s						
ISR	Istrita	69.39	332	⇑iP	P	21 36 13.9	+3.0
ISR	Istrita	69.39	332	⇑P	P	21 36 13.9	+3.0
VOIR		69.42	333	⇓iP	P	21 36 12.3	+1.1
VOIR		69.42	333	⇓P	P	21 36 12.3	+1.1
HARR	Harsova	69.47	330	⇓iP	P	21 36 07.0	-4.3
HARR	Harsova	69.47	330	⇓P	P	21 36 07.0	-4.3
ARSA	Arzberg	69.53	340	eP	P	21 36 12.0	+0.3
	comp=Z,4.9nm,1.1s						
ECH	Echery	69.76	346	eP	P	21 36 13.4	+0.3
	comp=Z,16nm,1.9s						
ECH	Echery	69.76	346	eP	P	21 36 13.4	+0.3
ECH				pmax	pmax		
	comp=Z,17nm,1.9s						
349A	Repton	69.87	62	P	P	21 36 14.4	+0.4
	baz=330						
BZS	Buzias	69.98	335	⇓iP	P	21 36 14.0	-0.5
BZS	Buzias	69.98	335	⇓P	P	21 36 14.0	-0.5
251A	Midway	69.98	60	P	P	21 36 14.3	-0.4
	baz=331						
KBA	Koelnbreinsper	70.04	342	eP	P	21 36 15.1	0.0
	comp=Z,8.9nm,1.6s						
Z54A	Sparta	70.05	57	P	P	21 36 14.6	-0.5
	baz=331						
MOTA	Moosalm	70.11	343	eP	P	21 36 15.8	+0.3
	comp=Z,7.1nm,1.4s						
WTTA	Wattenberg	70.11	343	P	P	21 36 14.8	-0.7
	comp=Z,8.6nm,1.5s						
SOKA	Soboth	70.16	340	eP	P	21 36 15.1	-0.7
	comp=Z,4.8nm,1.5s						
OBKA	Obir	70.41	341	eP	P	21 36 17.4	+0.1
	comp=Z,10nm,0.9s						
FETA	Feichten	70.48	343	eP	P	21 36 17.5	-0.2
	comp=Z,5.6nm,1.1s						
ABTA	Abfaltersbach	70.49	342	eP	P	21 36 17.9	+0.2
	comp=Z,7.5nm,1.1s						
HERR	Herculane	70.52	334	⇑iP	P	21 36 14.0	-3.8
DIVS	Divibare	71.76	336	eP	P	21 36 25.0	-0.5
	comp=Z,7.4nm,1.2s						
VTS	Vitosha	72.54	333	⇑iP	P	21 36 30.2	0.0
VTS	Vitosha	72.54	333	eP	P	21 36 33.5	+3.3
	comp=Z,3.3nm,0.8s						
VTS	Vitosha	72.54	333	⇑P	P	21 36 30.2	0.0
BRTR	Keskin Array B	72.63	324	P	P	21 36 31.3	+0.5
	comp=Z,1.4nm,1.0s,baz=111,slow=2.8,SNR=7.1						
BRTR				LR	LR	22 11 04.9	
	comp=Z,32nm,21.7s,baz=14,slow=38						
DWPF	Disney Wildern	75.12	59	P	P	21 36 45.7	+0.4
	baz=332						
060Z	West Palm Beac	76.98	59	P	P	21 36 56.9	+0.9
	baz=333						
062Z	Marathon	78.26	60	P	P	21 37 03.2	+0.1
	baz=333						
MMAI	Mount Meron Ar	78.34	320	P	P	21 37 03.3	-0.3
	comp=Z,3.0nm,0.9s,baz=315,slow=57,SNR=4.4						
MMAI				LR	LR	22 15 18.1	
	comp=Z,32nm,19.6s,baz=195,slow=38						
ES19	SONSECA Array	79.17	353	eP	P	21 37 08.2	+0.2
ESDC	Sonseca Array	79.20	353	P	P	21 37 08.1	-0.1
	comp=Z,1.5nm,0.9s,baz=358,slow=5.4,SNR=7.8						
VAE	Valguarnera	79.22	339	LR	LR	22 17 33.6	
	comp=Z,25nm,18.6s,baz=329,slow=40						
WRA	Warramunga Arr	85.18	211	P	P	21 37 38.0	-1.5
	comp=Z,2.6nm,1.1s,baz=18,slow=5.5,SNR=11						
WRA	Warramunga Arr	85.18	211	i P	P	21 37 41.5	+2.0
WRA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
JTS	JuntasAbangare	89.31	70	LR	LR	22 22 03.7	
	comp=Z,15nm,18.7s,baz=22,slow=38						
ATD	Arta Tunnel	95.50	306	LR	LR	22 26 58.9	
	comp=Z,61nm,19.4s,baz=356,slow=39						
QSPA	South Pole Qui	151.01	180	PKPbc	PKPbc	21 44 53.4	-1.3
	comp=Z,8.7nm,0.8s,baz=2.3,slow=0.8,SNR=21						
QSPA	South Pole Qui	151.01	180	ePKPbc	PKPbc	21 44 52.9	-1.8

ISCJB ***24*** *21:38:00.4±0.3, 24°.65N±0°.02×122°.33E±0°.02, h21^{km}±4^{km},*
Error ellipse: s-maj=3.5km s-min=2.9km az=6.8
JMA ***24*** *21:38:00.4±0.1, 24°.64N×122°.31E, h39^{km}±5^{km}, M2.6*
TAP ***24*** *21:38:00.2, 24°.65N×122°.28E, h18^{km}±1^{km}, ML3.0, C*
ISC 24 21:37:59.8±1.0, **24°.66N**±0°.03×**122°.34E**±0°.02, **h21**^{km}±2^{km},
n47, σ0^{s}.62/88, **1C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
EOS1	EOS1	0.23	240	P	Pb	21 38 05.4	-0.2
	baz=234						
EOS1				S	Sb	21 38 09.6	-0.1
	baz=234						
EGS		0.42	296	i P	Pb	21 38 07.5	-0.8
	baz=302						
EGS				S	Sb	21 38 14.4	+0.3
	baz=302						
TWC	Suao	0.45	264	i P	Pb	21 38 08.0	-0.9
	baz=264						
TWC				eS	Sb	21 38 15.4	+0.2
	baz=264						
TWB1	Santiao Chiao	0.47	317	eP	Pb	21 38 09.9	+0.5
	baz=324						
TWB1				i S	Sb	21 38 14.2	-1.7
	baz=324						
NTC	Toucheng	0.51	293	eP	Pb	21 38 09.3	-0.7
	baz=297						
NTC				S	Sb	21 38 17.4	+0.6
	baz=297						
ENAH	Nanao	0.53	247	eP	Pb	21 38 10.2	-0.2
	baz=245						
ENAH				eS	Sb	21 38 17.4	-0.2
	baz=245						
TIPB	Shuangxi	0.56	303	P	Pb	21 38 10.5	-0.6
	baz=308						
TIPB				eS	Sb	21 38 19.4	+0.7
	baz=308						
JYNG	Yonagunijimaku	0.59	111	P	Pn	21 38 12.2	-0.7
JYNG				eS	Sn	21 38 21.7	-0.2
NANB	Nanao	0.59	247	P	Pb	21 38 11.2	-0.3
	baz=245						
NANB				S	Sb	21 38 19.1	-0.3
	baz=245						
ENA	Nanau	0.59	247	eP	Pb	21 38 11.1	-0.5
	baz=245						
ENA				eS	Sb	21 38 19.5	-0.1
	baz=245						
TWE	Neicheng	0.62	276	i P	Pb	21 38 11.1	-0.8
	baz=277						
TWE				i S	Sb	21 38 19.6	-0.6
	baz=277						
YOJ	Yonaguni jima	0.64	108	P	Pn	21 38 13.2	-0.5
	baz=104						
YOJ				eS	Sn	21 38 24.3	+1.1
	baz=104						
YOJ	Yonaguni jima	0.64	108	P	Pn	21 38 13.2	-0.5
YOJ				eS	Sn	21 38 23.1	-0.1
NWF	Wu-fen Shan	0.65	309	i P	Pn	21 38 13.5	-0.5
	baz=313						
NWF				i S	Sb	21 38 22.2	+0.8
	baz=313						
WFSB	Wu-fen Shan	0.65	309	P	Pn	21 38 13.4	-0.4

	baz=313						
WFSB				S	Sb	21 38 22.2	+1.0
	baz=313						
ENTT	**Nioudou**	**0.71**	**268**	P	**Pb**	**21 38 13.2**	**-0.3**
	baz=269						
ENTT				*e*S	**Sb**	**21 38 22.1**	**-0.6**
	baz=269						
TWA	**Mucha**	**0.76**	**295**	*e*P	**Pb**	**21 38 14.5**	**+0.2**
	baz=297						
TWA				*e*S	**Sb**	**21 38 24.8**	**+0.5**
	baz=297						
NWLT	**Wulai**	**0.77**	**279**	P	**Pb**	**21 38 14.7**	**+0.1**
	baz=280						
NWLT				*e*S	**Sb**	**21 38 24.9**	**+0.3**
	baz=280						
YM07	**YM07**	**0.83**	**308**	P	**Pn**	**21 38 16.2**	**-0.2**
	baz=311						
YM07				S	**Sn**	**21 38 27.3**	**-0.8**
	baz=311						
NACB	**Ninganchiao**	**0.84**	**235**	*e*P	**Pb**	**21 38 15.6**	**0.0**
	baz=232						
NACB				*e*S	**Sb**	**21 38 26.3**	**-0.1**
	baz=232						
TATO	**Taipei**	**0.84**	**292**	*e*P	**Pb**	**21 38 15.9**	**+0.3**
	baz=294						
TATO				*e*S	**Sn**	**21 38 27.4**	**-0.7**
	baz=294						
YM11	**YM11**	**0.86**	**306**	*e*P	**Pn**	**21 38 16.8**	**0.0**
	baz=309						
YM11				*e*S	**Sn**	**21 38 28.5**	**-0.2**
	baz=309						
YM08	**YM08**	**0.86**	**308**	*e*P	**Pb**	**21 38 16.3**	**+0.2**
	baz=310						
YM08				*e*S	**Sn**	**21 38 28.1**	**-0.6**
	baz=310						
YM10	**YM10**	**0.86**	**305**	P	**Pn**	**21 38 16.7**	**-0.1**
	baz=307						
YM10				S	**Sn**	**21 38 28.6**	**-0.3**
	baz=307						
YHNB	**Yeheng**	**0.88**	**271**	*e*P	**Pb**	**21 38 16.2**	**-0.2**
	baz=271						
YHNB				*e*S	**Sb**	**21 38 27.5**	**-0.3**
	baz=271						
YM04	**YM04**	**0.88**	**304**	*e*P	**Pn**	**21 38 16.8**	**-0.2**
	baz=306						
YM04				*e*S	**Sb**	**21 38 28.4**	**+0.6**
	baz=306						
TWD	**Chiawan**	**0.89**	**230**	*e*P	**Pn**	**21 38 17.4**	**+0.2**
	baz=227						
TWD				*e*S	**Sb**	**21 38 28.6**	**+0.6**
	baz=227						
NSK	**Sanguang**	**0.90**	**271**	⇑*i*P	**Pn**	**21 38 16.9**	**-0.4**
	baz=271						
NSK				S	**Sb**	**21 38 27.9**	**-0.3**
	baz=271						
NNSH	**Datong**	**0.90**	**255**	*e*P	**Pn**	**21 38 17.2**	**-0.2**
	baz=255						
NNSH				*e*S	**Sn**	**21 38 29.2**	**-0.7**
	baz=255						
NNSB	**Datong**	**0.91**	**255**	*e*P	**Pb**	**21 38 16.6**	**-0.3**
	baz=255						
NNSB				*e*S	**Sn**	**21 38 29.1**	**-0.8**
	baz=255						
NNS	**Nan Shan**	**0.91**	**256**	*e*P	**Pn**	**21 38 17.3**	**-0.2**
	baz=255						
NNS				*e*S	**Sb**	**21 38 29.1**	**+0.4**
	baz=255						
TWY	**Chenhua**	**0.91**	**312**	S	**Sn**	**21 38 29.9**	**0.0**
	baz=315						
TWS1	**Kuangyinshan**	**0.95**	**298**	*e*P	**Pn**	**21 38 18.1**	**+0.2**
	baz=300						
TWS1				*e*S	**Sn**	**21 38 30.1**	**-0.7**
	baz=300						
WHF	**Hehuan Shan**	**1.11**	**243**	*e*P	**Pb**	**21 38 20.4**	**-0.1**
	baz=241						
WHF				*e*S	**Sb**	**21 38 34.2**	**-0.5**
	baz=241						
TWT	**Tachien**	**1.14**	**249**	*e*S	**Sn**	**21 38 35.8**	**+0.1**
	baz=248						
TDCB	**Techi**	**1.15**	**250**	*e*P	**Pb**	**21 38 21.1**	**0.0**
	baz=248						
TDCB				*e*S	**Sn**	**21 38 35.9**	**-0.3**
	baz=248						
ESL	**Shilin**	**1.18**	**225**	*e*P	**Pb**	**21 38 21.5**	**0.0**
	baz=222						
ESL				*e*S	**Sn**	**21 38 36.1**	**-0.6**
	baz=222						
LIOB	**Emei**	**1.21**	**270**	*e*P	**Pb**	**21 38 23.5**	**+1.6**
	baz=270						
LIOB				*e*S	**Sn**	**21 38 36.8**	**-0.5**
	baz=270						
NSTT	**Nanjuang**	**1.22**	**269**	*e*P	**Pb**	**21 38 23.8**	**+1.6**
	baz=269						
NSTT				*e*S	**Sb**	**21 38 39.3**	**+1.8**
	baz=269						
CHGB	**Renai**	**1.22**	**241**	*e*P	**Pb**	**21 38 23.4**	**+1.1**
	baz=239						
CHGB				*e*S	**Sb**	**21 38 38.9**	**+1.2**
	baz=239						
IRIF	**Iriomote-Funau**	**1.30**	**104**	P	**Pn**	**21 38 23.0**	**+0.2**
HATJ	**Hateruma jima**	**1.46**	**114**	P	**Pb**	**21 38 25.8**	**-0.5**
SSLB	**Suanglung**	**1.54**	**236**	*e*P	**Pn**	**21 38 26.5**	**+0.5**
	baz=234						
SSLB				*e*S	**Sn**	**21 38 45.7**	**+0.3**
	baz=234						
JKRS	**Kuro-shima**	**1.58**	**105**	P	**Pb**	**21 38 27.4**	**-0.8**
YULB	**Yu-li**	**1.58**	**217**	*e*P	**Pb**	**21 38 27.9**	**-0.5**
	baz=215						
YULB				*e*S	**Sn**	**21 38 46.3**	**-0.2**
	baz=215						
JIJ	**Ishigaki jima**	**1.67**	**100**	P	**Pn**	**21 38 28.1**	**+0.3**
JIJ				*e*S	**Sn**	**21 38 49.1**	**+0.6**
JISG	**Ishigakijimahi**	**1.79**	**92**	P	**Pn**	**21 38 30.1**	**+0.6**

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*ISCJB **24** 21:38:55.7±0.6, 40°.74N±0°.03×35°.24E±0°.05, h3^{km}±6^{km}, Error ellipse: s-maj=7.1km s-min=3.4km az=34.1*

*CSEM **24** 21:38:55.8±0.2, 40°.73N×35°.24E, h10^{km}, ML2.9, Error ellipse: s-maj=6.0km s-min=2.9km az=125.0*

*DDA **24** 21:38:55.4, 40°.77N×35°.13E, h8^{km}, Ml2.9*

*ISK **24** 21:38:55.1, 40°.73N×35°.27E, h5^{km}, ML2.2/4*

ISC 24 21:38:55.6±1.1, 40°.73N±0°.03×35°.26E±0°.04, h9^{km}±10^{km}, n22, σ0^{s}.50/40, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAVZ	**Havza**	**0.49**	**46**	*i*P	**Pb**	**21 39 06.1**	**-0.4**
HAVZ				*i*S	**Sb**	**21 39 14.4**	**+0.6**
HAVZ	**Havza**	**0.49**	**46**	P	**Pb**	**21 39 06.1**	**-0.4**
HAVZ				S	**Sb**	**21 39 14.4**	**+0.6**
COAL	**Corum-Alaca**	**0.52**	**203**	*i*P	**Pg**	**21 39 05.8**	**+0.1**
COAL				*i*S	**Sb**	**21 39 13.4**	**-1.2**
COAL	**Corum-Alaca**	**0.52**	**203**	P	**Pg**	**21 39 05.8**	**+0.1**
COAL				S	**Sb**	**21 39 13.4**	**-1.2**
KVT	**Kavak**	**0.69**	**60**	PG	**Pg**	**21 39 08.9**	**-0.2**
KVT				SG	**Sg**	**21 39 18.6**	**+0.4**
KVT	**Kavak**	**0.69**	**60**	*e*Pg	**Pg**	**21 39 08.9**	**-0.2**
KVT				*e*Sg	**Sg**	**21 39 18.6**	**+0.4**
CORM	**Corum**	**0.73**	**221**	PG	**Pg**	**21 39 09.5**	**-0.2**
CORM				SG	**Sb**	**21 39 20.7**	**0.0**
CORM	**Corum**	**0.73**	**221**	*e*Pg	**Pg**	**21 39 09.5**	**-0.2**
CORM				*e*Sg	**Sb**	**21 39 20.7**	**0.0**
DIKM	**Dikmen**	**0.92**	**0**	PG	**Pg**	**21 39 13.2**	**-0.1**
DIKM				SG	**Sb**	**21 39 26.3**	**+0.3**
DIKM	**Dikmen**	**0.92**	**0**	*e*Pg	**Pg**	**21 39 13.2**	**-0.1**
DIKM				*e*Sg	**Sb**	**21 39 26.3**	**+0.3**
SAMS	**Samsun-Alacam**	**0.95**	**48**	*i*P	**Pb**	**21 39 14.6**	**+0.4**
SAMS				*i*S	**Sn**	**21 39 28.8**	**+0.1**
SAMS	**Samsun-Alacam**	**0.95**	**48**	P	**Pb**	**21 39 14.6**	**+0.4**
SAMS				S	**Sn**	**21 39 28.8**	**+0.1**
ERBA	**Erbaa**	**1.14**	**92**	*i*P	**Pg**	**21 39 17.2**	**-0.4**
ERBA				*i*S	**Sg**	**21 39 32.5**	**+0.1**
ERBA	**Erbaa**	**1.14**	**92**	P	**Pg**	**21 39 17.2**	**-0.4**
ERBA				S	**Sg**	**21 39 32.5**	**+0.1**
SINO	**SINOP_Merkez**	**1.29**	**358**	*i*P	**Pn**	**21 39 19.0**	**-0.8**
SINO				*i*S	**Sn**	**21 39 37.0**	**-0.1**
SINO	**SINOP_Merkez**	**1.29**	**358**	P	**Pn**	**21 39 19.0**	**-0.8**
SINO				S	**Sn**	**21 39 37.0**	**-0.1**
SNOP	**Sinop**	**1.29**	**358**	PN	**Pg**	**21 39 20.2**	**-0.2**
SNOP	**Sinop**	**1.29**	**358**	*e*Pn	**Pg**	**21 39 20.2**	**-0.2**
CDAG	**Cicekdag**	**1.30**	**212**	*i*P	**Pn**	**21 39 19.5**	**-0.5**
CDAG				*i*S	**Sn**	**21 39 38.2**	**+0.7**
CDAG	**Cicekdag**	**1.30**	**212**	P	**Pn**	**21 39 19.5**	**-0.5**
CDAG				S	**Sn**	**21 39 38.2**	**+0.7**
KAMT	**Kaman**	**1.80**	**222**	PN	**Pn**	**21 39 27.7**	**+0.7**
KAMT	**Kaman**	**1.80**	**222**	*e*Pn	**Pn**	**21 39 27.7**	**+0.7**

KRSC 24 21:41:22.7±1.7, 49°.59N×156°.85E, h16^{km}±25^{km}, ML3.6, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.20**	**337**	*e*P	Pn	21 41 43.5	-1.2
SKR				*e*S	Sb	21 41 58.6	-1.6
PAU	**Pauzhetka**	**1.88**	**359**	*e*P	Pb	21 41 55.7	-1.0
PAU				*e*S	Sb	21 42 19.2	-0.8
KDTR	**Khodutka, Kamc**	**2.36**	**19**	*e*P	Pn	21 42 02.7	+2.0
KDTR				*e*S	Sb	21 42 32.7	-0.9
MIPR	**Malaya Ipel'ka**	**2.69**	**359**	*e*P	Pn	21 42 06.5	+1.1
RUS	**Russkaya**	**3.04**	**20**	*e*P	Pn	21 42 12.4	+2.3
RUS				*e*S	Sb	21 42 49.7	-3.5
UGLR	**Uglovaya**	**3.83**	**18**	*e*P	Pn	21 42 25.3	+4.2
AVH	**Avacha**	**3.87**	**17**	*e*P	Pb	21 42 26.3	-4.3
SDLR	**Sedlovina**	**3.91**	**18**	*e*P	Pb	21 42 27.1	-4.2
SPN	**Mys Shipunski**	**4.04**	**28**	*e*P	Pn	21 42 27.5	+3.7
SPN				*e*S	Sn	21 43 15.8	+5.0
GNL	**Ganaly**	**4.17**	**9**	*e*P	Pb	21 42 30.8	-4.9
MKZ	**Mys Kozlova**	**5.82**	**29**	*e*P	Pn	21 42 51.7	+3.5

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*ISCJB **24** 21:41:30.1±0.6, 50°.14N±0°.04×19°.15E±0°.03, h0^{km}, Error ellipse: s-maj=5.7km s-min=2.8km az=12.6*

*CSEM **24** 21:41:31.1±0.4, 50°.13N×19°.20E, h2^{km}, ML2.6/4, Error ellipse: s-maj=10.9km s-min=5.1km az=6.0*

*PRU **24** 21:41:31.9, 50°.13N×19°.22E, h0^{km}*

*WAR **24** 21:41:32.2, 50°.08N×19°.34E, h1^{km}, Mw2.3*

ISC 24 21:41:31.0±0.8, 50°.06N±0°.03×19°.22E±0°.02, h0^{km}, n32, σ0^{s}.67/56, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHZP	**Chorzow**	**0.27**	**328**	*e*Pg	**Pb**	**21 41 39.6**	**+0.8**
CHZP				*e*Sg	**Sb**	**21 41 44.8**	**+0.8**
CHZP	**Chorzow**	**0.27**	**328**	*e*Pg	**Pb**	**21 41 39.6**	**+0.8**
CHZP				*e*Sg	**Sb**	**21 41 44.8**	**+0.8**
OJC	**Ojcow**	**0.41**	**67**	*e*Pg	**Pg**	**21 41 38.4**	**-0.3**
OJC				*e*Sg	**Sg**	**21 41 43.4**	**-0.6**
OJC	**Ojcow**	**0.41**	**67**	*e*Pg	**Pg**	**21 41 38.4**	**-0.3**
OJC				*e*Sg	**Sg**	**21 41 43.4**	**-0.6**
OJC	**Ojcow**	**0.41**	**67**	*e*Pg	**Pg**	**21 41 38.4**	**-0.3**
OJC				*e*Sg	**Sg**	**21 41 43.4**	**-0.6**
OKC	**Ostrava-Krasne**	**0.73**	**252**	*e*PG	**Pb**	**21 41 47.1**	**+0.6**
OKC				*e*SG	**Sb**	**21 41 57.1**	**+0.1**
	comp=Z,33nm,0.9s						
OKC	**Ostrava-Krasne**	**0.73**	**252**	Pg	**Pb**	**21 41 47.1**	**+0.6**
OKC				Sg	**Sb**	**21 41 57.1**	**+0.1**
	33nm,0.9s						
LANS	**Liptovska Anna**	**0.93**	**170**	*e*PG	**Pb**	**21 41 50.4**	**+0.5**
LANS				*e*SG	**Sb**	**21 42 03.8**	**+1.0**
NIE	**Niedzica**	**0.95**	**132**	*e*Pg	**Pb**	**21 41 49.9**	**-0.4**
NIE				*e*Sg	**Sb**	**21 42 03.3**	**-0.2**
NIE	**Niedzica**	**0.95**	**132**	*e*Pg	**Pb**	**21 41 49.9**	**-0.4**
NIE				*e*Sg	**Sb**	**21 42 03.3**	**-0.2**
NIE	**Niedzica**	**0.95**	**132**	*e*Pg	**Pb**	**21 41 49.9**	**-0.4**
NIE				*e*Sg	**Sb**	**21 42 03.3**	**-0.2**
MORC	**Moravsky Berou**	**1.12**	**256**	*e*Pg	**Pn**	**21 41 54.1**	**+0.2**
MORC				*e*Sg	**Sn**	**21 42 10.4**	**+0.3**
MORC	**Moravsky Berou**	**1.12**	**256**	*e*PG	**Pn**	**21 41 54.1**	**+0.2**
MORC				*e*SG	**Sn**	**21 42 10.4**	**+0.3**
KRLC	**Kraliky**	**1.57**	**271**	*e*PG	**Pn**	**21 42 00.3**	**+0.2**
KRLC	**Kraliky**	**1.57**	**271**	Pg	**Pn**	**21 42 00.3**	**+0.2**
JAVC	**Velka Javorina**	**1.57**	**221**	*e*PN	**Pg**	**21 42 02.1**	**+1.1**
VYHS	**Vyhne**	**1.59**	**189**	*e*PG	**Pb**	**21 42 01.1**	**-0.1**
VYHS				*e*SG	**Sg**	**21 42 22.0**	**0.0**
VYHS				*e*LG	Lg	21 42 23.4	
VYHS	**Vyhne**	**1.59**	**189**	*e*Pg	**Pb**	**21 42 01.1**	**-0.1**
VYHS				*e*Sn	**Sg**	**21 42 22.0**	**0.0**
VRAC	**Vranov**	**1.86**	**247**	*e*Pn	**Pb**	**21 42 05.3**	**-0.6**
VRAC				*e*Sg	**Sg**	**21 42 31.5**	**+0.7**
VRAC	**Vranov**	**1.86**	**247**	*e*PN	**Pb**	**21 42 05.3**	**-0.6**
VRAC				*e*SG	**Sg**	**21 42 31.5**	**+0.7**
CRVS	**Cervenica-Dubn**	**1.87**	**128**	*e*PN	**Pg**	**21 42 06.7**	**0.0**
CRVS				*e*SN	**Sg**	**21 42 31.8**	**+0.9**
CRVS	**Cervenica-Dubn**	**1.87**	**128**	*e*Pn	**Pg**	**21 42 06.7**	**0.0**
CRVS				*e*Sn	**Sg**	**21 42 31.8**	**+0.9**
DPC	**Dobruska-Polom**	**1.88**	**280**	*e*PG	**Pb**	**21 42 06.4**	**+0.2**
DPC				*e*SG	**Sg**	**21 42 31.1**	**-0.3**
	comp=Z,11nm,0.6s						
DPC	**Dobruska-Polom**	**1.88**	**280**	Pg	**Pb**	**21 42 06.4**	**+0.2**
DPC				Sg	**Sg**	**21 42 31.1**	**-0.3**
	11nm,0.6s						
KRUC	**Moravsky**	**2.09**	**242**	*e*PN	**Pb**	**21 42 10.2**	**+0.4**
KRUC				*e*SG	**Sg**	**21 42 38.4**	**+0.3**
PRU	**Pruhonice**	**3.02**	**270**	*e*SG	**Sg**	**21 43 06.9**	**-0.9**
	comp=Z,2.5nm,0.5s						
PRU	**Pruhonice**	**3.02**	**270**	Sg	**Sg**	**21 43 06.9**	**-0.9**
	2.5nm,0.5s						
PVCC	**Panska Ves**	**3.02**	**281**	*e*SG	**Sg**	**21 43 08.2**	**+0.4**
	comp=Z,8.7nm,0.5s						
PVCC	**Panska Ves**	**3.02**	**281**	Sg	**Sg**	**21 43 08.2**	**+0.4**
	8.7nm,0.5s						
BRG	**Berggiesshubel**	**3.47**	**286**	SG	**Sg**	**21 43 22.1**	**-0.2**
	2.6nm,0.6s						
KHC	**Kasperske Hory**	**3.79**	**258**	*e*PG	**Pg**	**21 42 41.5**	**-2.0**
KHC				*e*SG	**Sg**	**21 43 31.4**	**-1.1**
KHC	**Kasperske Hory**	**3.79**	**258**	Pg	**Pg**	**21 42 41.5**	**-2.0**
KHC				Sg	**Sg**	**21 43 31.4**	**-1.1**

GUC 24 21:43:37.6±0.7, 23°.09S×68°.35W, h100^{km}, ML3.5, 4C-6D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB15	**IPOC Station P**	**1.04**	**263**	⇓*i*P	Pn	21 43 55.5	-3.3
PB15				*i*S	Sn	21 44 09.4	-5.2
PB06	**IPOC Station P**	**1.19**	**288**	⇓*i*P	Pn	21 43 58.2	-2.1
PB06				*i*S	Sn	21 44 14.1	-3.4
PB06				IAML		21 44 17.0	
	comp=N,382nm,0.3s						
PB09	**IPOC Station P**	**1.53**	**327**	⇑*i*P	Pn	21 44 05.1	+0.6
PB09				*i*S	Sn	21 44 25.9	+1.1
PB09				IAML		21 44 28.8	
	comp=E,300nm,0.5s						
PB03	**IPOC Station P**	**1.66**	**308**	⇑*i*P	Pn	21 44 06.8	+0.8
PB03				*i*S	Sn	21 44 28.7	+1.0
PB03				IAML		21 44 29.6	
	comp=N,372nm,0.3s						
PB05	**IPOC Station P**	**1.73**	**277**	⇓*i*P	Pn	21 44 07.4	+0.6
PB05				*i*S	Sn	21 44 30.0	+0.9
PB05				IAML		21 44 30.7	
	comp=E,877nm,0.4s						
PB04	**IPOC Station P**	**1.83**	**294**	⇓*i*P	Pn	21 44 09.1	+0.9
PB04				*i*S	Sn	21 44 33.3	+1.9
PB04				IAML		21 44 37.0	
	comp=N,692nm,0.2s						
PB07	**IPOC Station P**	**1.97**	**313**	⇑*i*P	Pn	21 44 12.4	+2.4
PB07				*i*S	Sn	21 44 37.3	+2.7
PB07				IAML		21 44 39.9	
	comp=E,778nm,0.4s						
ANCH	**Antofagasta**	**1.99**	**252**	⇓*i*P	Pn	21 44 57.7	+48
ANCH				*i*S	Sn	21 45 23.1	+48
PB10	**IPOC Station P**	**2.08**	**258**	⇓*i*P	Pn	21 44 12.9	+1.8
PB10				*i*S	Sn	21 44 38.5	+1.7
PB10				IAML		21 44 48.9	
	comp=N,262nm,0.5s						
PB02	**IPOC Station P**	**2.27**	**320**	⇑*i*P	Pn	21 44 17.7	+3.9
PB02				*i*S	Sn	21 44 46.8	+5.2
PB01	**IPOC Station P**	**2.29**	**332**	IAML		21 44 52.3	
	comp=E,329nm,0.6s						
GO02	**Mina Guanaco**	**2.36**	**209**	IAML		21 44 54.4	
	comp=E,586nm,0.4s						

IDC 24 21:44:35.5±1.8, 2°.99S×141°.42E, h0^{km}, mb3.4/2, mb1 3.8/3, mb1mx3.3/43, mbtmp3.5/3, ML3.6/1, Error ellipse: s-maj=291.3km s-min=29.4km az=111.0, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**18.21**	**202**	P	Pn	21 48 49.7	-0.3
	0.2nm,0.3s,baz=27,slow=12,SNR=13						
ASAR	**Alice Springs**	**21.81**	**199**	P	P	21 49 29.6	+0.2
	0.7nm,0.6s,baz=27,slow=9.9,SNR=7.7						
ILAR	**Eielson Array**	**84.97**	**24**	P	P	21 57 12.4	0.0
	0.4nm,0.7s,baz=266,slow=3.9,SNR=3.5						

KRSC 24 21:51:33.6±1.9, 49°.22N×157°.20E, h40^{km}±19^{km}, ML3.8, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	**Severo-Kuril's**	**1.62**	**335**	*e*P	Pn	21 51 59.3	-0.3
SKR				*e*S	Sn	21 52 19.3	+0.1
PAU	**Pauzhetka**	**2.26**	**354**	*e*P	Pn	21 52 11.2	+2.8
PAU				*e*S	Sn	21 52 38.2	+3.2
KDTR	**Khodutka, Kamc**	**2.65**	**12**	*e*P	Pn	21 52 17.3	+3.6
KDTR				*e*S	Sn	21 52 48.5	+4.0
MIPR	**Malaya Ipel'ka**	**3.07**	**355**	*e*P	Pn	21 52 21.9	+2.4
ASAK	**Asacha**	**3.19**	**8**	*e*P	Pn	21 52 24.2	+2.9
RUS	**Russkaya**	**3.32**	**14**	*e*P	Pn	21 52 26.3	+3.4
RUS				*e*S	Sn	21 53 05.5	+4.4
MTVR	**Mutnovka**	**3.32**	**10**	*e*P	Pn	21 52 26.9	+3.8
MTVR				*e*S	Sn	21 53 06.9	+5.5
KRMR	**Karymshinskiy**	**3.66**	**9**	*e*P	Pn	21 52 31.5	+3.9
KRMR				*e*S	Sn	21 53 14.9	+5.5
DALK	**Dalny**	**3.94**	**14**	*e*P	Pn	21 52 36.1	+4.7
DALK				*e*S	Sn	21 53 21.3	+5.0
UGLR	**Uglovaya**	**4.12**	**14**	*e*P	Pn	21 52 39.2	+5.2
AVH	**Avacha**	**4.16**	**13**	*e*P	Pn	21 52 40.0	+5.4
KOK	**Koryaka**	**4.17**	**12**	*e*P	Pn	21 52 39.5	+4.8
SDLR	**Sedlovina**	**4.20**	**14**	*e*P	Pn	21 52 39.4	+4.3
KRX	**Arik**	**4.24**	**12**	*e*P	Pn	21 52 40.5	+4.8
SPN	**Mys Shipunski**	**4.27**	**24**	*e*P	Pn	21 52 40.4	+4.5
SPN				*e*S	Sn	21 53 30.6	+6.2
GNL	**Ganaly**	**4.50**	**6**	*e*P	Pn	21 52 43.7	+4.4
MKZ	**Mys Kozlova**	**6.03**	**26**	*e*P	Pn	21 53 03.3	+3.2
TUMR	**Tumrok**	**6.33**	**15**	P	Pn	21 53 10.1	+5.7
KBTR	**Krutoberegovo**	**7.78**	**24**	*e*P	Pn	21 53 29.0	+4.9

GUC 24 22:07:14.2±0.4, 22°.86S×67°.03W, h274^{km}±10^{km}, ML3.9, 3C, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB15	**IPOC Station P**	**2.28**	**261**	*e*P	Pn	22 08 03.3	+1.9
PB15				*i*S	S	22 08 41.1	+2.3
PB15				IAML		22 08 44.8	
	comp=E,708nm,0.2s						
PB09	**IPOC Station P**	**2.31**	**297**	*e*P	Pn	22 08 04.4	+2.7
PB09				*e*S	S	22 08 41.4	+2.1
PB09				IAML		22 08 47.2	
	comp=E,68nm,0.2s						
PB06	**IPOC Station P**	**2.35**	**273**	*e*P	Pn	22 08 04.3	+2.2
PB06				*e*S	S	22 08 42.3	+2.3
PB06				IAML		22 08 44.7	
	comp=N,124nm,0.1s						
PB03	**IPOC Station P**	**2.65**	**287**	*e*P	Pn	22 08 07.4	+2.5
PB03				*e*S	S	22 08 47.7	+2.6
PB01	**IPOC Station P**	**2.92**	**308**	⇑*i*P	Pn	22 08 09.8	+2.4
PB01				*i*S	S	22 08 52.5	+2.6
PB05	**IPOC Station P**	**2.93**	**270**	*e*P	Pn	22 08 10.3	+2.7
PB05				*i*S	S	22 08 52.5	+2.4
PB04	**IPOC Station P**	**2.93**	**280**	⇑*i*P	Pn	22 08 10.9	+3.1
PB04				*i*S	S	22 08 52.6	+2.4
GO02	**Mina Guanaco**	**3.28**	**225**	*e*P	Pn	22 08 12.9	+1.5
GO02				*e*S	S	22 08 58.9	+2.0
PB08	**IPOC Station P**	**3.35**	**323**	⇑*i*P	Pn	22 08 15.0	+2.5
PB08				*i*S	S	22 09 01.8	+3.1

WEL 24 22:17:00.7, 38°S±7°×18°0W±°, h33^{km}, ML3.8/25, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**1.54**	**270**	P	Pn	22 17 26.2	+0.4
WMGZ				S	Sn	22 17 45.6	+1.0
MXZ	**Matakaoa Point**	**1.65**	**279**	P	Pn	22 17 27.4	0.0
MXZ				S	Sn	22 17 46.1	-1.2
PUZ	**Puketiti**	**1.67**	**261**	P	Pn	22 17 28.3	+0.5
PKGZ	**Pakihiroa**	**1.80**	**268**	P	Pn	22 17 29.8	+0.2
CNGZ	**Carnagh Statio**	**1.81**	**249**	P	Pb	22 17 31.8	-1.5
TWGZ	**Tauwhareparae**	**1.91**	**259**	P	Pn	22 17 32.0	+1.1
TWGZ				S	Sn	22 17 54.9	+1.1
HAZ	**Te Kaha**	**2.04**	**272**	P	Pn	22 17 33.4	+0.6
TKGZ	**Te Karaka**	**2.06**	**252**	P	Pn	22 17 34.6	+1.5
TKGZ				S	Sn	22 17 60.0	+2.3
RUGZ	**Raukumara Rang**	**2.12**	**266**	P	Pn	22 17 34.3	+0.3
PRGZ	**Paritu Road**	**2.22**	**240**	P	Pn	22 17 37.2	+1.9
MWZ	**Matawai**	**2.28**	**257**	P	Pn	22 17 36.9	+0.8
MWZ				S	Sn	22 18 03.9	+0.7
MHGZ	**Mahia Peninsul**	**2.32**	**235**	P	Pn	22 17 38.8	+2.1
MHGZ				S	Sb	22 18 08.1	-2.2
RAGZ	**Rawiri**	**2.41**	**253**	P	Pn	22 17 39.1	+1.2
KNZ	**Kokohu**	**2.41**	**240**	P	Pn	22 17 39.7	+1.9
KNZ				S	Sn	22 18 08.6	+2.4
SNGZ	**Shannon Statio**	**2.55**	**247**	P	Pn	22 17 41.5	+1.7
SNGZ				S	Sn	22 18 11.6	+1.9
URZ	**Urewera**	**2.59**	**260**	P	Pn	22 17 41.9	+1.5
URZ				S	Sn	22 18 11.5	+0.7
WHHZ	**Waihua**	**2.74**	**242**	P	Pn	22 17 45.0	+2.6
WHHZ				S	Sn	22 18 16.9	+2.5
RTZ	**Ruatahuna**	**2.77**	**253**	P	Pn	22 17 44.7	+1.9
RTZ				S	Sn	22 18 16.8	+1.7
RAHZ	**Arahi**	**2.78**	**246**	P	Pn	22 17 45.2	+2.2
RAHZ				S	Sn	22 18 18.0	+2.5
MUGZ	**Murupara**	**2.90**	**256**	P	Pn	22 17 45.8	+1.3
MTHZ	**Maungataniwha**	**2.94**	**249**	P	Pn	22 17 47.4	+2.2
ARHZ	**Aropaoanui**	**2.99**	**241**	P	Pn	22 17 48.6	+2.7
NMHZ	**Naumai**	**3.05**	**245**	P	Pn	22 17 48.6	+1.9
TARZ	**Mount Tarawera**	**3.06**	**261**	P	Pn	22 17 48.0	+1.0
MCHZ	**McNeill Hill**	**3.28**	**240**	P	Pn	22 17 51.6	+1.8
BKZ	**Black Stump Fm**	**3.31**	**245**	P	Pn	22 17 51.9	+1.7
KAHZ	**Kahuranaki**	**3.34**	**233**	P	Pn	22 17 52.8	+2.1
KWHZ	**Kaweka Forest**	**3.46**	**242**	P	Pn	22 17 54.1	+1.7
PXZ	**Pawanui**	**3.49**	**230**	P	Pn	22 17 53.7	+0.9
KRHZ	**Kereru**	**3.60**	**239**	P	Pn	22 17 55.6	+1.4
BHHZ	**Black Hill Sta**	**3.74**	**243**	P	Pn	22 17 57.8	+1.6
PNHZ	**Pukenui**	**3.85**	**236**	P	Pn	22 17 59.0	+1.3
MKAZ	**Moumakai**	**4.20**	**279**	P	Pn	22 18 02.4	0.0
HIZ	**Hauiti**	**4.38**	**260**	P	Pn	22 18 06.4	+1.4

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*NEIC **24** 22:21:13.4±0.0, 38°.65S×175°.27E, h229^{km}, ML4.0(WEL), After WEL.*

WEL 24 22:21:14.6, 39°S±3°×17°5E±°, h222^{km}±4^{km}, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWVZ	**Taurewa**	**0.36**	**167**	Pn	Pn	22 21 43.7	-0.2
TWVZ	**Taurewa**	**0.36**	**167**	P	Pn	22 21 43.8	-0.1
TWVZ				S	S	22 22 05.5	-1.5
TLZ	**Tolley Road**	**0.42**	**22**	P	Pn	22 21 44.0	-0.1
HIZ	**Hauiti**	**0.43**	**299**	Pn	Pn	22 21 43.6	-0.4
HIZ				Sn	S	22 22 05.8	-1.1
HIZ	**Hauiti**	**0.43**	**299**	P	Pn	22 21 43.7	-0.3
HIZ				S	S	22 22 05.8	-1.1
COVZ	**Chateau Observ**	**0.50**	**161**	P	Pn	22 21 44.4	0.0
COVZ				S	S	22 22 06.0	-1.7
OTVZ	**Oturere**	**0.51**	**150**	Pn	Pn	22 21 43.8	-0.6
OTVZ				Sn	S	22 22 07.0	-0.8
FWVZ	**Far West T-bar**	**0.56**	**162**	Pn	Pn	22 21 44.6	0.0
FWVZ	**Far West T-bar**	**0.56**	**162**	P	Pn	22 21 44.6	0.0
FWVZ				S	S	22 22 06.3	-2.0
PKVZ	**Pokaka**	**0.56**	**179**	P	Pn	22 21 44.4	-0.1
PKVZ				S	S	22 22 06.2	-1.8
WHVZ	**Whangaehu Hut**	**0.59**	**161**	Pn	Pn	22 21 44.8	0.0
WHVZ	**Whangaehu Hut**	**0.59**	**161**	P	Pn	22 21 44.9	+0.1
WHVZ				S	S	22 22 06.7	-1.8
TRVZ	**Turoa**	**0.60**	**164**	Pn	Pn	22 21 44.8	0.0
TRVZ	**Turoa**	**0.60**	**164**	P	Pn	22 21 44.8	0.0
TUVZ	**Tukino**	**0.60**	**156**	Pn	Pn	22 21 44.8	+0.1
TUVZ	**Tukino**	**0.60**	**156**	P	Pn	22 21 44.9	+0.1
VRZ	**Vera Road**	**0.60**	**228**	Pn	Pn	22 21 44.1	-0.4
VRZ	**Vera Road**	**0.60**	**228**	P	Pn	22 21 44.2	-0.4
WNVZ	**Wahianoa**	**0.64**	**161**	Pn	Pn	22 21 44.9	0.0
MTVZ	**Mangateitei**	**0.67**	**171**	Pn	Pn	22 21 44.9	0.0
MTVZ	**Mangateitei**	**0.67**	**171**	P	Pn	22 21 45.0	+0.1
MOVZ	**Moawhango**	**0.76**	**155**	Pn	Pn	22 21 45.0	-0.3
MOVZ	**Moawhango**	**0.76**	**155**	P	Pn	22 21 45.0	-0.3
MOVZ				S	S	22 22 06.5	-2.9
ALRZ	**Allen Road**	**0.81**	**79**	P	Pn	22 21 45.3	-0.2
ALRZ				S	S	22 22 08.5	-1.1
MRHZ	**Matea Rd**	**0.85**	**98**	P	Pn	22 21 45.4	-0.4
HLRZ	**Highlands Stat**	**0.93**	**60**	P	Pn	22 21 46.9	+0.6
BHHZ	**Black Hill Sta**	**0.95**	**144**	Pn	Pn	22 21 46.1	-0.2

BHHZ	Black Hill Sta	0.95	144	P	Pn	22 21 46.2	-0.2
KARZ	Kaharoa	1.00	46	P	Pn	22 21 46.6	-0.1
BKZ	Black Stump Fm	1.00	116	Pn	Pn	22 21 46.5	-0.1
BKZ	Black Stump Fm	1.00	116	P	Pn	22 21 46.6	-0.1
BKZ				S	S	22 22 09.6	-2.1
OMRZ	Omania	1.02	53	P	Pn	22 21 46.6	-0.2
WAZ	Wanganui	1.06	195	Pn	Pn	22 21 47.0	0.0
WAZ	Wanganui	1.06	195	P	Pn	22 21 47.0	0.0
WAZ				S	S	22 22 10.9	-1.5
KWHZ	Kaweka Forest	1.10	130	P	Pn	22 21 47.8	+0.5
MTHZ	Maungataniwha	1.18	97	P	Pn	22 21 47.9	0.0
NMHZ	Naumai	1.21	108	Pn	Pn	22 21 48.9	+0.8
NMHZ	Naumai	1.21	108	P	Pn	22 21 48.9	+0.8
KRHZ	Kereru	1.22	139	P	Pn	22 21 48.3	+0.2
MCHZ	McNeill Hill	1.28	125	Pn	Pn	22 21 49.4	+0.9
MCHZ	McNeill Hill	1.28	125	P	Pn	22 21 49.4	+1.0
MARZ	Manawahe	1.29	55	P	Pn	22 21 48.6	0.0
RTZ	Ruatahuna	1.29	86	P	Pn	22 21 48.5	-0.1
OPRZ	Ohinepanea	1.30	48	P	Pn	22 21 48.4	-0.3
PNHZ	Pukenui	1.36	151	Pn	Pn	22 21 49.2	+0.1
PNHZ	Pukenui	1.36	151	P	Pn	22 21 48.7	-0.5
RAHZ	Arahi	1.38	99	P	Pn	22 21 49.7	+0.4
ARHZ	Aropaoanui	1.40	113	Pn	Pn	22 21 50.0	+0.7
ARHZ	Aropaoanui	1.40	113	P	Pn	22 21 50.1	+0.7
TSZ	Takapari Road	1.42	160	Pn	Pn	22 21 49.5	0.0
TSZ	Takapari Road	1.42	160	P	Pn	22 21 49.6	+0.1
URZ	Urewera	1.47	72	Pn	Pn	22 21 49.2	-0.8
URZ	Urewera	1.47	72	P	Pn	22 21 49.2	-0.7
OHWZ	Ohakea	1.48	181	P	Pn	22 21 50.3	+0.4
WHHZ	Waihua	1.52	104	P	Pn	22 21 50.8	+0.4
SNGZ	Shannon Statio	1.57	93	Pn	Pn	22 21 51.0	+0.1
SNGZ	Shannon Statio	1.57	93	P	Pn	22 21 51.0	+0.2
WPHZ	Waipukurau	1.59	148	Pn	Pn	22 21 51.2	+0.3
WPHZ	Waipukurau	1.59	148	P	Pn	22 21 51.2	+0.2
KAHZ	Kahuranaki	1.60	132	Pn	Pn	22 21 51.7	+0.5
KAHZ	Kahuranaki	1.60	132	P	Pn	22 21 51.7	+0.6
CKHZ	Cape Kidnapper	1.65	125	Pn	Pn	22 21 52.0	+0.6
CKHZ	Cape Kidnapper	1.65	125	P	Pn	22 21 52.1	+0.7
RAGZ	Rawiri	1.65	83	Pn	Pn	22 21 51.4	-0.1
RAGZ	Rawiri	1.65	83	P	Pn	22 21 51.4	-0.1
POWZ	Post Office Ro	1.70	169	Pn	Pn	22 21 51.6	-0.3
POWZ	Post Office Ro	1.70	169	P	Pn	22 21 51.7	-0.2
DVHZ	Dannevirke	1.70	158	Pn	Pn	22 21 51.6	-0.3
DVHZ	Dannevirke	1.70	158	P	Pn	22 21 51.6	-0.3
PXZ	Pawanui	1.76	138	Pn	Pn	22 21 52.5	0.0
PXZ	Pawanui	1.76	138	P	Pn	22 21 52.5	+0.1
MWZ	Matawai	1.76	78	Pn	Pn	22 21 52.1	-0.5
PRHZ	Porangahau	1.84	147	Pn	Pn	22 21 53.2	0.0
PRHZ	Porangahau	1.84	147	P	Pn	22 21 53.2	+0.1
KNZ	Kokohu	1.85	100	Pn	Pn	22 21 53.4	+0.2
KNZ	Kokohu	1.85	100	P	Pn	22 21 53.4	+0.2
PRWZ	Pori Road	1.89	165	Pn	Pn	22 21 53.5	-0.2
PRWZ	Pori Road	1.89	165	P	Pn	22 21 53.5	-0.1
MRZ	Mangatainoka R	1.94	175	Pn	Pn	22 21 53.4	-0.7
MRZ	Mangatainoka R	1.94	175	P	Pn	22 21 53.5	-0.7
TKGZ	Te Karaka	1.99	83	Pn	Pn	22 21 54.9	+0.3
TKGZ	Te Karaka	1.99	83	P	Pn	22 21 54.7	+0.1
RUGZ	Raukumara Rang	1.99	68	P	Pn	22 21 53.5	-1.3
PRGZ	Paritu Road	2.00	97	P	Pn	22 21 54.9	+0.2
MHGZ	Mahia Peninsul	2.05	103	Pn	Pn	22 21 55.4	+0.2
MHGZ	Mahia Peninsul	2.05	103	P	Pn	22 21 55.6	+0.4
BFZ	Birch Farm	2.08	161	Pn	Pn	22 21 53.6	-1.8
BFZ	Birch Farm	2.08	161	P	Pn	22 21 54.9	-0.5
TIWZ	Tintock	2.09	168	P	Pn	22 21 55.0	-0.6
OGWZ	Otaki Gorge	2.10	183	Pn	Pn	22 21 55.0	-0.6
OGWZ	Otaki Gorge	2.10	183	P	Pn	22 21 55.0	-0.5
KIW	Kapiti Island	2.16	189	Pn	Pn	22 21 55.2	-1.1
KIW	Kapiti Island	2.16	189	P	Pn	22 21 55.2	-1.0
HOWZ	Holdsworth Sta	2.18	176	Pn	Pn	22 21 55.4	-1.0
HOWZ	Holdsworth Sta	2.18	176	P	Pn	22 21 55.4	-1.0
CNGZ	Carnagh Statio	2.26	85	P	Pn	22 21 57.8	+0.5
CAW	Cannon Point	2.39	185	Pn	Pn	22 21 57.6	-1.1
CAW	Cannon Point	2.39	185	P	Pn	22 21 57.6	-1.1
MTW	Mount Morrison	2.44	177	Pn	Pn	22 21 57.8	-1.3
MTW	Mount Morrison	2.44	177	P	Pn	22 21 57.9	-1.2
WMGZ	Waiomatatini S	2.59	71	P	Pn	22 22 00.4	-0.4
WEL	Wellington	2.59	189	Pn	Pn	22 21 59.6	-1.2
TCW	Tory Channel	2.61	198	Pn	Pn	22 21 59.9	-1.1
TCW	Tory Channel	2.61	198	P	Pn	22 21 59.9	-1.1
SNZO	South Karori	2.63	190	*e*Pn	Pn	22 21 59.8	-1.3
SNZO				*e*S	S	22 22 34.4	-3.1
PAWZ	Paruwai Farm	2.66	179	P	Pn	22 22 00.1	-1.4
TRWZ	Traveller	2.69	174	Pn	Pn	22 22 00.5	-1.3
TRWZ	Traveller	2.69	174	P	Pn	22 22 00.6	-1.2
MSWZ	Moikau Station	2.69	181	Pn	Pn	22 22 00.4	-1.5
MSWZ	Moikau Station	2.69	181	P	Pn	22 22 00.4	-1.4
BHW	Baring Head	2.71	187	P	Pn	22 22 00.5	-1.4
PLWZ	Palliser	2.84	181	Pn	Pn	22 22 01.9	-1.6
PLWZ	Palliser	2.84	181	P	Pn	22 22 02.0	-1.6
TUWZ	Tuamarina	2.91	201	Pn	Pn	22 22 02.8	-1.4
TUWZ	Tuamarina	2.91	201	P	Pn	22 22 02.7	-1.5
NNZ	Nelson	2.91	210	Pn	Pn	22 22 02.2	-2.0
NNZ	Nelson	2.91	210	P	Pn	22 22 02.3	-2.0
QRZ	Quartz Range	3.01	225	Pn	Pn	22 22 02.7	-2.7
QRZ	Quartz Range	3.01	225	P	Pn	22 22 02.7	-2.7
BSWZ	Blackbirch Sta	3.19	200	Pn	Pn	22 22 06.0	-1.4
BSWZ	Blackbirch Sta	3.19	200	P	Pn	22 22 06.1	-1.4
THZ	Tophouse	3.56	211	Pn	Pn	22 22 09.3	-2.5
THZ	Tophouse	3.56	211	P	Pn	22 22 09.4	-2.5
KHZ	Kahutara	3.93	200	P	Pn	22 22 14.4	-1.9
DSZ	Denniston Nort	4.05	221	Pn	Pn	22 22 14.6	-3.2
DSZ	Denniston Nort	4.05	221	P	Pn	22 22 14.6	-3.2
LTZ	Lake Taylor	4.67	209	Pn	Pn	22 22 22.7	-2.7
LTZ	Lake Taylor	4.67	209	P	Pn	22 22 21.9	-3.5
INZ	Inchbonnie	4.97	215	P	Pn	22 22 25.9	-3.2
EYCZ	Eyrewell	5.21	205	P	Pn	22 22 29.0	-2.9
OXZ	Oxford	5.23	207	Pn	Pn	22 22 28.8	-3.5
OXZ	Oxford	5.23	207	P	Pn	22 22 28.8	-3.5
OKCZ	Okains Bay	5.28	198	P	Pn	22 22 30.2	-2.8
MQZ	McQueen’s Vall	5.37	201	P	Pn	22 22 30.5	-3.5
AKCZ	Akaroa Harbour	5.46	199	P	Pn	22 22 31.8	-3.4
WVZ	Waitaha Valley	5.57	217	Pn	Pn	22 22 33.4	-3.2
WVZ	Waitaha Valley	5.57	217	P	Pn	22 22 33.4	-3.2
RPZ	Rata Peaks	5.94	212	Pn	Pn	22 22 37.6	-3.7
RPZ	Rata Peaks	5.94	212	P	Pn	22 22 37.7	-3.6
LBZ	Lake Benmore	6.85	213	Pn	Pn	22 22 49.0	-3.9
LBZ	Lake Benmore	6.85	213	P	Pn	22 22 49.0	-3.9
ODZ	Otahua Downs	7.22	207	Pn	Pn	22 22 54.7	-2.9
ODZ	Otahua Downs	7.22	207	P	Pn	22 22 54.8	-2.8

MEX 24 22:45:34.2±0.6, 15°.48N×93°.44W, h84^{km}±6^{km}, MD3.7, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.31	44	*e*P	Pn	22 45 45.5	-1.5
PCIG				*e*S	Sn	22 45 54.9	-1.5
THIG		1.27	116	*e*P	Pn	22 45 54.7	-2.0
THIG				*e*S	Sn	22 46 12.1	-1.6
TGIG		1.33	13	*e*P	Pn	22 45 56.5	-1.1
TGIG				*e*S	Sn	22 46 13.3	-1.8
CCIG	Comitan	1.49	57	*i* P	Pn	22 45 59.3	-0.4
CCIG				*i* S	Sn	22 46 16.8	-2.1

ISN ***24*** *22:53:30.1±0.8, 39°.35N×43°.56E, h0^{km}±55^{km}, ML4.4*

THR ***24*** *22:53:37.1±1.3, 38°.74N×43°.11E, h15^{km}±15^{km}, ML3.7*

IDC ***24*** *22:53:38.7±0.7, 38°.61N×43°.37E, h0^{km}, mb4.0/21, mb1 4.1/25, mb1mx4.0/62, mbtmp4.0/25, ML3.6/4, MS3.4/27, Ms1 3.4/27, ms1mx3.3/53, Error ellipse: s-maj=15.6km s-min=10.7km az=167.0*

AZER ***24*** *22:53:38.8±0.5, 38°.51N×42°.95E, h28^{km}±14^{km}, ml4.5/19, Error ellipse: s-maj=11.0km s-min=2.7km az=61.0*

ISCJB ***24*** *22:53:40.0±0.3, 38°.66N±0°.01×43°.39E±0°.01, h6^{km}±2^{km}, mb4.2/81, MS3.4/25, Error ellipse: s-maj=2.1km s-min=1.8km az=147.1*

DDA ***24*** *22:53:39.5, 38°.65N×43°.34E, h13^{km}, Ml4.3*

MOS ***24*** *22:53:39.2±1.6, 38°.55N×43°.45E, h9^{km}, mb4.5/42, Error ellipse: s-maj=5.6km s-min=3.4km az=99.5*

NEIC ***24*** *22:53:39.6±0.0, 38°.69N×43°.43E, h5^{km}, mb4.5/31, ML4.3(ISK), After ISK.*

ISK ***24*** *22:53:39.2, 38°.68N×43°.46E, h5^{km}, ML4.4/9*

CSEM ***24*** *22:53:40.3±0.1, 38°.70N×43°.36E, h2^{km}, mb4.4/50, Error ellipse: s-maj=2.6km s-min=2.5km az=14.0*

TEH ***24*** *22:53:40.3, 38°.73N×43°.39E, h10^{km}, ML3.8*

BJI ***24*** *22:53:40.0, 38°.70N×43°.40E, h6^{km}, mb4.6/22, mB4.8/14, Ms4.4/8, Ms7 4.1/4*

GII ***24*** *22:53:40.4±0.0, 38°.76N×43°.47E, h2^{km}*

ISC 24 22:53:41.5±0.7, 38°.66N±0°.01×43°.40E±0°.01, h12^{km}±4^{km}, n522, σ1§84/581, mb4.3/84, MS3.4/25, 57C-58D, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	Van	0.07	185	PG	Pg	22 53 43.6	-0.6
VANB				SG	Sg	22 53 46.5	+0.4
VANB	Van	0.07	185	*e*Pg	Pg	22 53 43.8	-0.4
VANB	Van	0.07	185	*e*Pg	Pg	22 53 43.8	-0.4
VANB	Van	0.07	185	*e*Pg	Pg	22 53 43.6	-0.6
VANB				*e*Sg	Sg	22 53 46.5	+0.4
VANT	Van	0.26	203	P	Pg	22 53 43.2	-3.9
VANT	Van	0.26	203	P	Pg	22 53 43.2	-3.9
VMUR	Van-Muradiye	0.35	23	⇓*i*P	Pg	22 53 47.5	-1.2
VMUR				*i* S	Sg	22 53 54.2	+0.7
VMUR	Van-Muradiye	0.35	23	P	Pg	22 53 47.5	-1.2
VMUR				S	Sg	22 53 54.2	+0.7
ERCV	ERCIS-VAN	0.36	353	PG	Pg	22 53 46.5	-2.3
ERCV				SG	Sg	22 53 53.1	-0.6
ERCV	ERCIS-VAN	0.36	353	*e*Pg	Pg	22 53 46.5	-2.3
ERCV				*e*Sg	Sg	22 53 53.1	-0.6
GEVA	Gevas	0.44	217	⇓*i*P	Pg	22 53 48.1	-2.1
GEVA				*i* S	Sg	22 53 52.7	-3.4
GEVA	Gevas	0.44	217	P	Pg	22 53 48.1	-2.1
GEVA				S	Sg	22 53 52.7	-3.4
ADCV	BITLIS_Adilcev	0.55	286	⇓*i*P	Pg	22 53 50.0	-2.2
ADCV				*i* S	Sg	22 53 58.3	-1.2
ADCV	BITLIS_Adilcev	0.55	286	P	Pg	22 53 50.0	-2.2
ADCV				S	Sg	22 53 58.3	-1.2
CLDR	Caldiran	0.63	40	PG	Pg	22 53 51.8	-2.0
CLDR				SG	Sg	22 54 00.8	-1.3
CLDR	Caldiran	0.63	40	⇑*i*P	Pg	22 53 52.3	-1.5
CLDR				*i* S	Sb	22 54 02.9	-0.5
CLDR	Caldiran	0.63	40	Pg	Pg	22 53 52.3	-1.5
CLDR				Sg	Sg	22 54 02.3	+0.2
CLDR	Caldiran	0.63	40	*e*Pg	Pg	22 53 52.3	-1.5
CLDR	Caldiran	0.63	40	P	Pg	22 53 52.3	-1.5
CLDR				Sg	Sg	22 54 02.3	+0.2
TUTA	Tutak	0.87	329	⇑*i*P	Pg	22 53 55.4	-2.9
TUTA				*i* S	Sg	22 54 06.4	-3.3
TUTA	Tutak	0.87	329	P	Pg	22 53 55.4	-2.9
TUTA				S	Sg	22 54 06.4	-3.3
DYDN	Diyadin	0.91	14	⇓*i*P	Pg	22 53 56.8	-2.3
DYDN				*i* S	Sg	22 54 09.8	-1.2
DYDN	Diyadin	0.91	14	P	Pg	22 53 56.8	-2.3
DYDN				S	Sg	22 54 09.8	-1.2
AGRB	Hanur-Agry	0.96	341	PG	Pg	22 53 57.3	-2.8
AGRB				SG	Sb	22 54 13.1	0.0
AGRB	Hanur-Agry	0.96	341	Pg	Pg	22 53 57.3	-2.8
AGRB	Hanur-Agry	0.96	341	*e*Pg	Pg	22 53 57.3	-2.8
AGRB	Hanur-Agry	0.96	341	*e*Pg	Pg	22 53 57.3	-2.8
AGRT	Agri	1.00	341	P	Pg	22 53 56.8	-4.0
AGRT	Agri	1.00	341	P	Pg	22 53 56.8	-4.0
HAKT	HAKKARI	1.13	167	⇓*i*P	Pb	22 54 00.7	-2.4
HAKT				*i* S	Sg	22 54 18.2	+0.2
HAKT	HAKKARI	1.13	167	P	Pb	22 54 00.7	-2.4
HAKT				S	Sg	22 54 18.2	+0.2
EKAR	Karacoban	1.20	300	⇓*i*P	Pb	22 54 02.0	-2.2
EKAR				*i* S	Sn	22 54 23.0	+2.4
EKAR	Karacoban	1.20	300	P	Pb	22 54 02.0	-2.2
MAKU	Maku	1.22	55	*e*Pn	Pn	22 54 04.4	-0.1
MAKU				*e*Sg	Sg	22 54 20.8	0.0
MAKU				IAML		22 54 26.2	
	comp=N,3μm,0.4s						
MAKU				IAML		22 54 27.9	
	comp=E,2μm,0.4s						
YOVA	Hakkari_Yˆ…kse	1.28	147	⇓*i*P	Pn	22 54 03.8	-1.6
YOVA				*i* S	Sg	22 54 23.5	+0.6
YOVA	Hakkari_Yˆ…kse	1.28	147	P	Pn	22 54 03.8	-1.6
YOVA				S	Sg	22 54 23.5	+0.6
IGDI	IGDIR	1.31	23	⇑*i*P	Pn	22 54 04.3	-1.5
IGDI				*i* S	Sg	22 54 26.2	+2.3
SRTM	Siirt_Merkez	1.34	240	⇓*i*P	Pn	22 54 04.0	-2.1
SRTM				*i* S	Sg	22 54 25.8	+1.1
SRTM	Siirt_Merkez	1.34	240	P	Pn	22 54 04.0	-2.1
SRTM				S	Sg	22 54 25.8	+1.1
SIRT	Sirnak	1.39	213	PN	Pn	22 54 06.3	-0.4
SIRT	Sirnak	1.39	213	*e*Pn	Pn	22 54 06.3	-0.4
EATA	Eleskirt	1.39	330	⇑*i*P	Pn	22 54 05.1	-1.9
EATA				*i* S	Sb	22 54 24.6	-0.8
EATA	Eleskirt	1.39	330	P	Pn	22 54 05.1	-1.9
EATA				S	Sb	22 54 24.6	-0.8
SIRN	S˜–rnak	1.40	214	⇓*i*P	Pn	22 54 05.1	-1.8
SIRN				*i* S	Sn	22 54 24.1	-1.3
SIRN	S˜–rnak	1.40	214	P	Pn	22 54 05.1	-1.8
SIRN				S	Sn	22 54 24.1	-1.3
CUKT	Cukurca	1.42	173	PN	Pn	22 54 06.7	-0.6
CUKT	Cukurca	1.42	173	⇓*i*P	Pn	22 54 06.1	-1.2
CUKT				*i* S	Sn	22 54 25.0	-1.0
CUKT	Cukurca	1.42	173	Pn	Pn	22 54 06.2	-1.1
CUKT	Cukurca	1.42	173	P	Pn	22 54 06.1	-1.2
CUKT	Cukurca	1.42	173	*e*Pn	Pn	22 54 06.7	-0.6
CUKT				S	Sn	22 54 25.0	-1.0
TASB	TASBURUN-IGDIR	1.47	26	PN	Pn	22 54 07.0	-0.9
TASB	TASBURUN-IGDIR	1.47	26	*e*Pn	Pn	22 54 07.6	-0.3
TASB	TASBURUN-IGDIR	1.47	26	*e*Pn	Pn	22 54 07.6	-0.3
HYR	Heyderabad	1.54	47	⇓P	Pn	22 54 08.7	-0.3
HYR				⇑S	Sg	22 54 33.6	+2.3
HYR	Heyderabad	1.54	47	⇓P	Pn	22 54 08.7	-0.3
HYR				⇑S	Sg	22 54 33.6	+2.3
VRTB	Varto-Mus	1.59	289	PN	Pn	22 54 09.2	-0.5
VRTB	Varto-Mus	1.59	289	⇓*i*P	Pn	22 54 08.2	-1.4
VRTB				*i* S	Sg	22 54 37.2	+4.4
VRTB	Varto-Mus	1.59	289	Pn	Pb	22 54 11.0	0.0
VRTB	Varto-Mus	1.59	289	P	Pn	22 54 08.2	-1.4
VRTB	Varto-Mus	1.59	289	*e*Pn	Pn	22 54 09.2	-0.5
NAX	Nakhchivan	1.71	72	⇑P	Pn	22 54 11.8	+0.6
NAX				⇑S	Sg	22 54 36.1	-0.6
NAX	Nakhchivan	1.71	72	⇑P	Pn	22 54 11.8	+0.6
NAX				⇑S	Sg	22 54 36.1	-0.6
DIGO	Kars	1.75	359	⇑*i*P	Pn	22 54 11.8	-0.1
DIGO				*i* S	Sg	22 54 40.5	+2.7
DIGO	Kars	1.75	359	P	Pn	22 54 11.8	-0.1
BNGL	BINGOL	1.78	280	⇑*i*P	Pn	22 54 12.0	-0.3
BNGL				*i* S	Sb	22 54 36.8	+0.3
ISHB	Shabestar	1.78	102	*e*Pn	Pn	22 54 12.9	+0.6
ISHB				*e*		22 54 18.2	
	comp=E,89μm,0.5s						
ISHB				*e*		22 54 23.2	
	comp=Z,25μm,0.2s						
ISHB				*e*		22 54 23.9	
	comp=N,44μm,0.2s						
HOMI	Horasan	1.80	320	⇑*i*P	Pn	22 54 12.1	-0.5
HOMI				*i* S	Sg	22 54 39.9	+0.4
SVAN	Silvan-Diyarba	1.80	254	PN	Pn	22 54 11.5	-0.9
SVAN	Silvan-Diyarba	1.80	254	⇓*i*P	Pn	22 54 11.7	-0.7
SVAN				*i* S	Sb	22 54 36.6	-0.4
SVAN	Silvan-Diyarba	1.80	254	Pn	Pn	22 54 12.0	-0.4
SVAN	Silvan-Diyarba	1.80	254	P	Pn	22 54 11.7	-0.7
SVAN	Silvan-Diyarba	1.80	254	Pn	Pn	22 54 12.0	-0.4
SVAN				S	Sb	22 54 36.6	-0.4
GNI	Garni	1.81	35	Pn	Pn	22 54 12.8	+0.1
	comp=N,146nm,0.3s,baz=241,slow=3.3,SNR=278						
GNI				Sn	Sg	22 54 41.9	+2.1
	comp=N,178nm,0.3s,baz=324,slow=23,SNR=9.6						
GNI	Garni	1.81	35	PN	Pn	22 54 12.2	-0.5
GNI	Garni	1.81	35	*e*Pn	Pn	22 54 12.9	+0.2
GNI				*e*S	Sn	22 54 31.9	-3.8
GNI	Garni	1.81	35	P	Pn	22 54 12.8	+0.1
	comp=N,146nm,0.3s						
GNI				*e*S	Sn	22 54 31.9	-3.8
SBZ	Shahbuz	1.83	66	⇑P	Pn	22 54 13.3	+0.4
SBZ	Shahbuz	1.83	66	⇑P	Pn	22 54 13.3	+0.4
SBZ				⇑S	Sg	22 54 43.0	+2.5
BTMN	Batman	1.84	246	⇓*i*P	Pn	22 54 12.4	-0.6
BTMN				*i* S	Sb	22 54 38.7	+0.4
BTMN	Batman	1.84	246	P	Pn	22 54 12.4	-0.6
BTMN				S	Sb	22 54 38.7	+0.4
KARS	Kars	1.98	353	PN	Pn	22 54 15.0	+0.1
KARS	Kars	1.98	353	Pn	Pn	22 54 15.0	+0.1
KARS	Kars	1.98	353	P	Pn	22 54 15.0	+0.1
KARS	Kars	1.98	353	*e*Pn	Pn	22 54 15.0	+0.1
ERZM	Erzurum	2.01	309	*i* P	Pn	22 54 15.2	-0.2
ERZM				*i* S	Sb	22 54 44.5	+1.4
ERZM	Erzurum	2.01	309	P	Pn	22 54 15.2	-0.2
EAK	Akyaka	2.03	5	⇑*i*P	Pn	22 54 16.4	+0.8
EAK				*i* S	Sg	22 54 49.1	+2.4
EAK	Akyaka	2.03	5	P	Pn	22 54 16.4	+0.8
ORD	Ordubad	2.05	82	⇓P	Pn	22 54 16.2	+0.4
ORD	Ordubad	2.05	82	⇓P	Pn	22 54 16.2	+0.4
ORD				⇓S	Sg	22 54 47.7	+0.4
SENK	Senkaya-Erzuru	2.06	337	PN	Pn	22 54 16.3	+0.2
SENK	Senkaya-Erzuru	2.06	337	*e*Pn	Pn	22 54 16.3	+0.2
ECAT	Cat-ERZURUM	2.11	297	⇑*i*P	Pn	22 54 16.2	-0.6
ECAT				*i* S	Sb	22 54 46.0	+0.1
ECAT	Cat-ERZURUM	2.11	297	P	Pn	22 54 16.2	-0.6
ECAT				S	Sb	22 54 46.0	+0.1
BNGB	Bingˆ¶l	2.15	280	PN	Pn	22 54 18.5	+1.2
BNGB	Bingˆ¶l	2.15	280	Pn	Pn	22 54 18.8	+1.6
BNGB	Bingˆ¶l	2.15	280	Pn	Pn	22 54 18.8	+1.6
BGOL	Bingol	2.15	280	⇑*i*P	Pn	22 54 17.0	-0.3
BGOL				*i* S	Sg	22 54 49.9	-0.8
BGOL	Bingol	2.15	280	P	Pn	22 54 17.0	-0.3
ITBZ	Tabriz	2.20	100	*e*Pn	Pn	22 54 18.6	+0.6
ITBZ				*e*		22 54 25.1	
	comp=Z,8μm,0.3s						
ITBZ				*e*		22 54 57.4	
	comp=E,6μm,0.3s						
ITBZ				*e*		22 55 18.2	
	comp=N,6μm,0.4s						
ITBZ	Tabriz	2.20	100	*e*Pn	Pn	22 54 18.6	+0.6
BINT	Bingol	2.28	276	*e*Pn	Pn	22 54 18.5	-0.6
YEDI	Yedisu-Bingol	2.35	290	PN	Pn	22 54 20.9	+0.8
YEDI	Yedisu-Bingol	2.35	290	Pn	Pn	22 54 21.9	+1.8
YEDI	Yedisu-Bingol	2.35	290	*e*Pn	Pn	22 54 20.9	+0.8
HANI	Diyarbakir_Han	2.36	265	*i* P	Pn	22 54 20.3	+0.1
HANI				*i* S	Sb	22 54 51.9	-1.3
HANI	Diyarbakir_Han	2.36	265	P	Pn	22 54 20.3	+0.1
HANI				S	Sb	22 54 51.9	-1.3
MARD	Mardin	2.47	238	⇓*i*P	Pn	22 54 20.7	-1.0
MARD				*i* S	Sn	22 54 49.9	-1.9
DDEM	Demirkent	2.56	331	⇑*i*P	Pn	22 54 22.6	-0.3
DDEM				*i* S	Sg	22 55 01.9	-1.9
DDEM	Demirkent	2.56	331	P	Pn	22 54 22.6	-0.3
BGD	Bogdanovka	2.60	3	P	Pn	22 54 24.3	+0.7
MAZI	Mazidag	2.62	244	PN	Pn	22 54 25.3	+1.5
MAZI	Mazidag	2.62	244	Pn	Pn	22 54 25.3	+1.5
MAZI	Mazidag	2.62	244	*e*Pn	Pn	22 54 25.3	+1.5
KOPT	Kop Dagi	2.62	302	*i* P	Pb	22 54 28.1	-0.5
KOPT				*i* S	Sg	22 55 12.3	+6.4
DYBB	Diyarbakir	2.66	256	PN	Pn	22 54 25.8	+1.6
DAGI	Agillar	2.67	335	*i* P	Pn	22 54 24.2	-0.2
DAGI				*i* S	Sb	22 54 59.4	-2.6
DIYA	Diyarbakir	2.68	255	*i* P	Pn	22 54 24.1	-0.5
DIYA	Diyarbakir	2.68	255	P	Pn	22 54 24.1	-0.5
DBAD	Bademkaya	2.69	331	*i* P	Pn	22 54 25.7	+0.9
DBAD				*i* S	Sg	22 55 07.2	-0.8
DBAD	Bademkaya	2.69	331	P	Pn	22 54 25.7	+0.9
AKH	Akhalkalaki	2.74	1	PN	Pn	22 54 26.3	+0.8
AKH	Akhalkalaki	2.74	1	P	Pn	22 54 26.1	+0.6
AKH	Akhalkalaki	2.74	1	*e*Pn	Pn	22 54 26.1	+0.6
AKH	Akhalkalaki	2.74	1	*e*P	Pn	22 54 26.1	+0.6
AKH	Akhalkalaki	2.74	1	*e*P	Pn	22 54 26.1	+0.6
GDB	GEDABAY	2.74	41	⇑P	Pn	22 54 25.5	0.0
GDB	GEDABAY	2.74	41	⇑P	Pn	22 54 25.5	0.0
ARTV	Artvin	2.76	336	*i* P	Pn	22 54 25.3	-0.5
ARTV				*i* S	Sg	22 55 11.8	+1.6
ARTV	Artvin	2.76	336	P	Pn	22 54 25.3	-0.5
QZX	Qazax, Azerbai	2.83	32	⇑P	Pn	22 54 26.4	-0.2
QZX				⇑S	Sb	22 55 04.1	-2.6
QZX	Qazax, Azerbai	2.83	32	⇑P	Pn	22 54 26.4	-0.2
QZX				⇑S	Sb	22 55 04.1	-2.6
IBST	Bostanabad	2.92	108	*e*Pn	Pn	22 54 28.9	+1.0
IBST				*e*		22 54 43.7	
	comp=Z,3μm,0.3s						
IBST				*e*		22 54 45.0	
	comp=N,3μm,0.4s						
IBST				*e*		22 55 24.0	
	comp=E,3μm,0.4s						
IBST	Bostanabad	2.92	108	*e*Pn	Pn	22 54 28.9	+1.0
GANJ	Ganja	3.00	48	⇓P	Pn	22 54 29.4	+0.5
GANJ				⇓S	Sb	22 55 09.5	-2.1
GANJ	Ganja	3.00	48	⇓P	Pn	22 54 29.4	+0.5
GANJ				⇓S	Sb	22 55 09.5	-2.1
ERZN	Erzincan	3.00	289	PN	Pn	22 54 30.7	+1.7
ERZN	Erzincan	3.00	289	Pn	Pn	22 54 31.1	+2.1
ERZN	Erzincan	3.00	289	Pn	Pn	22 54 31.1	+2.1
TNCL	Tunceli-Merkez	3.04	280	*i* P	Pb	22 54 33.6	-2.0
TNCL	Tunceli-Merkez	3.04	280	P	Pb	22 54 33.6	-2.0
BAYT	Ayd˜–ntepe-Bay	3.05	305	PN	Pn	22 54 31.7	+1.9
BAYT	Ayd˜–ntepe-Bay	3.05	305	Pn	Pn	22 54 31.7	+1.9
BAYT	Ayd˜–ntepe-Bay	3.05	305	*e*Pn	Pn	22 54 31.7	+1.9
BCA	Borcka	3.09	334	PN	Pn	22 54 29.7	-0.5
BCA	Borcka	3.09	334	Pn	Pn	22 54 30.8	+0.6
BCA	Borcka	3.09	334	*e*Pn	Pn	22 54 29.7	-0.5
PTK	Pertek	3.14	275	PN	Pn	22 54 32.6	+1.6
PTK	Pertek	3.14	275	Pn	Pb	22 54 34.2	-3.2
PTK	Pertek	3.14	275	*e*Pn	Pn	22 54 32.6	+1.6
DGRG	David-gareji	3.17	28	P	Pb	22 54 36.3	-1.5
DGRG				S	Sg	22 55 20.9	-2.4
DGRG	David-gareji	3.17	28	*e*P	Pb	22 54 36.3	-1.5
DGRG	David-gareji	3.17	28	P	Pb	22 54 36.2	-1.5
SVRC	Sivrice-ELAZID	3.22	266	PN	Pn	22 54 33.6	+1.5
SVRC	Sivrice-ELAZID	3.22	266	Pn	Pn	22 54 33.6	+1.5
SVRC	Sivrice-ELAZID	3.22	266	*e*Pn	Pn	22 54 33.6	+1.5
TBLG	Delisi	3.23	18	PN	Pn	22 54 32.6	+0.5
TBLG	Delisi	3.23	18	P	Pb	22 54 35.9	-2.9
TBLG	Delisi	3.23	18	*e*Pn	Pn	22 54 33.1	+1.0
TBLG	Delisi	3.23	18	*e*P	Pn	22 54 33.1	+1.0
TBLG	Delisi	3.23	18	*e*Pn	Pn	22 54 32.6	+0.5
TBLG	Delisi	3.23	18	*e*P	Pn	22 54 33.1	+1.0
SEAG	Tbilisi Sea	3.28	19	P	Pb	22 54 39.8	+0.2
EZC	Erzincan	3.32	290	*e*Pn	Pn	22 54 30.7	-2.8
BRDA	Brd	3.33	60	⇓P	Pn	22 54 34.1	+0.7
BRDA				⇑S	Sb	22 55 18.1	-3.0
BRDA	Brd	3.33	60	⇓P	Pn	22 54 34.1	+0.7
BRDA				⇑S	Sb	22 55 18.1	-3.0
DDFL	Dedoflistskaro	3.48	36	P	Pg	22 54 45.8	-2.3
GRMI	Germi	3.52	86	*e*Pn	Pn	22 54 35.6	-0.5
GRMI				*e*S	Sn	22 55 20.5	+2.8
GRMI				IAML		22 55 30.5	
	comp=E,55nm,0.6s						
GRMI				IAML		22 55 50.9	
	comp=N,83nm,0.7s						
KELT	Kelkit	3.53	296	*i* P	Pb	22 54 44.7	+0.6
MNGR	Mingechevir, A	3.54	52	⇑P	Pn	22 54 36.8	+0.6
MNGR				⇑S	Sb	22 55 22.5	-4.4
MNGR	Mingechevir, A	3.54	52	⇑P	Pn	22 54 36.8	+0.6
MNGR				⇑S	Sb	22 55 22.5	-4.4
DUS	Dusheti	3.56	16	P	Pb	22 54 41.2	-3.3
DUS				S	Sg	22 55 34.4	-1.6
DUS	Dusheti	3.56	16	*e*P	Pb	22 54 41.2	-3.3
DUS	Dusheti	3.56	16	*e*P	Pb	22 54 41.2	-3.3
MACK	Trabzon	3.60	310	*i* P	Pb	22 54 45.7	+0.5
KTUT	Trabzon	3.63	311	PN	Pn	22 54 39.5	+2.0
KTUT	Trabzon	3.63	311	Pn	Pn	22 54 40.0	+2.4
KTUT	Trabzon	3.63	311	Pn	Pn	22 54 40.0	+2.4
ZRD	Zardab	3.69	63	⇓P	Pn	22 54 39.1	+0.8
ZRD				⇓S	Sn	22 55 26.4	+4.7
ZRD	Zardab	3.69	63	⇓P	Pn	22 54 39.1	+0.8
ZRD				⇓S	Sn	22 55 26.4	+4.7
SANL	SANLIURFA_Merk	3.79	248	*i* P	Pn	22 54 39.8	0.0
SANL	SANLIURFA_Merk	3.79	248	P	Pn	22 54 39.8	0.0
URFA	Urfa	3.81	253	PN	Pn	22 54 42.4	+2.3
URFA	Urfa	3.81	253	Pn	Pn	22 54 43.0	+2.9
URFA	Urfa	3.81	253	Pn	Pn	22 54 43.0	+2.9
ZKTA	Zakatala	3.86	39	⇓P	Pn	22 54 41.4	+0.7
ZKTA				⇓S	Sn	22 55 30.3	+4.2
KEMA	Kemaliye	3.87	281	*i* P	Pb	22 54 50.4	+0.6
LRK	Lerik	3.87	89	⇓P	Pn	22 54 41.3	+0.3
LRK				⇓S	Sn	22 55 30.3	+3.9
LRK	Lerik	3.87	89	⇓P	Pn	22 54 41.3	+0.3
LRK				⇓S	Sn	22 55 30.3	+3.9
SEKA	Sheki	3.87	48	⇑P	Pn	22 54 42.3	+1.4
SEKA	Sheki	3.87	48	⇑P	Pn	22 54 42.3	+1.4
ONI	Oni	3.92	1	P	Pn	22 54 45.3	+3.7
ONI	Oni	3.92	1	*e*P	Pn	22 54 45.3	+3.7
GLBA	Clilabad	3.94	80	⇓P	Pn	22 54 42.3	+0.6
GLBA	Clilabad	3.94	80	⇓P	Pn	22 54 42.3	+0.6
KDMR	Kurdemir	4.08	64	⇑P	Pn	22 54 44.5	+0.8
KDMR	Kurdemir	4.08	64	⇑P	Pn	22 54 44.5	+0.8
SAAT	Saatly	4.08	71	⇑P	Pn	22 54 44.2	+0.5
SAAT	Saatly	4.08	71	⇑P	Pn	22 54 44.2	+0.5
QBL	Gabala	4.11	55	⇑P	Pn	22 54 45.1	+0.9
QBL	Gabala	4.11	55	⇑P	Pn	22 54 45.1	+0.9
ZEI	Tsey	4.14	5	*e*P	Pn	22 54 45.4	+0.7
ZEI				pmax	pmax		
	comp=Z,87nm,1.2s						
ASTR	Astara	4.23	90	⇑P	Pn	22 54 46.6	+0.9

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ASTR  Astara            4.23  90 ⇑P      Pn      22 54 46.6 +0.9
ESPY  Espiye-Giresun    4.24 303  PN     Pn      22 54 49.5 +3.5
IML   Ismayilli         4.26  59 ⇓P      Pn      22 54 47.1 +0.9
IML   Ismayilli         4.26  59 ⇓P      Pn      22 54 47.1 +0.9
SUSE  Susehri           4.31 293 i P     Pb      22 54 58.3 +1.1
AKCD  Akcadag           4.31 267 i P     Pn      22 54 48.1 +1.1
AKCD  Akcadag           4.31 267   P     Pn      22 54 48.2 +1.1
AKT   Akhty             4.35  48 eP      Pn      22 54 49.3 +1.7
AKT                              eS      Sn      22 55 38.6 +0.3
AKT                               pmax   pmax
      comp=Z,70nm,0.7s
AKT                               smax   smax
      comp=E,65nm,0.6s
AKT                               smax   smax
      comp=N,59nm,0.7s
AKT   Akhty             4.35  48 eP      Pn      22 54 49.3 +1.7
      comp=N,70nm,0.7s
AKT                              eS      Sn      22 55 38.6 +0.3
      comp=N,59nm,0.7s
NEY   Neytrino          4.61 354 i P     Pn      22 54 53.7 +2.6
NEY   Neytrino          4.61 354 i P     Pn      22 54 53.7 +2.6
ZNJK  Zanjan            4.64 114 ePn     Pn      22 54 52.3 +0.6
ILIN  Lien              4.71 141 ePn     Pb      22 54 59.1  -5.0
ILIN                             e               22 55 12.9
      comp=Z,1µm,0.3s
NCK   Nalchik           4.83   2 i P     Pn      22 54 57.3 +3.3
NCK   Nalchik           4.83   2 i P     Pn      22 54 57.3 +3.3
GROC  Groznyy           4.88  21 eP      Pn      22 54 53.9  -0.8
GROC                             eS      Sn      22 55 50.5  -0.7
GROC                              pmax   pmax
      comp=Z,27nm,1.1s
GROC                              smax   smax
      comp=N,164nm,1.4s
GROC                              smax   smax
      comp=N,433nm,1.4s
GROC  Groznyy           4.88  21 eP      Pn      22 54 53.9  -0.8
      comp=N,27nm,1.1s
GROC                             eS      Sn      22 55 50.5  -0.7
      comp=N,433nm,1.4s
KCHF  Cheshme Sefid,    5.27 145 ePn     Pn      22 55 04.3 +4.0
KCHF                             e               22 57 09.6
      comp=Z,99nm,0.9s
KCHF  Cheshme Sefid,    5.27 145 ePn     Pn      22 55 04.3 +4.0
MAK   Makhachkala       5.30  35 eP      Pn      22 54 59.7  -0.8
MAK                              eS      Sn      22 56 01.5   0.0
MAK                               pmax   pmax
      comp=Z,63nm,1.8s
MAK                               MLR    MLR
      comp=Z,707nm,12.0s
MAK   Makhachkala       5.30  35 eP      Pn      22 54 59.7  -0.8
      comp=Z,63nm,1.8s
MAK                              eS      Sn      22 56 01.5   0.0
      comp=Z,707nm,12.0s
KIV   Kislovodsk        5.31 354 ePn     Pn      22 54 58.8  -1.9
KIV                              ePg     Pg      22 55 22.5  -0.8
KIV                              eS      Sn      22 56 00.1  -1.8
KIV   Kislovodsk        5.31 354ceP      Pn      22 55 04.6 +3.9
KIV                               pmax   pmax
      comp=Z,4.0nm,0.7s
KIV                               MLR    MLR
      comp=Z,375nm,15.0s
KIV   Kislovodsk        5.31 354 ePn     Pn      22 54 58.8  -1.9
KIV   Kislovodsk        5.31 354 eP      Pn      22 55 04.6 +3.9
      comp=Z,375nm,15.0s
KVAR  Kislovodsk Arr    5.31 355  Pn     Pn      22 55 06.1 +5.4
      baz=284,slow=1.4,SNR=12
BHD   Baghdad           5.44 171 ePn     Pn      22 55 04.0 +1.6
      SNR=3.0
HKZM  Kohzaman          5.49 125 e               22 55 42.9
      comp=E,99nm,0.3s
HKZM                             ePn     Pn      22 55 07.7 +4.3
HKZM                             e               22 56 50.3
      comp=Z,99nm,0.5s
HKZM                             e               22 57 08.9
      comp=N,99nm,0.4s
IBZA  Bozab             5.51 138 ePn     Pn      22 55 10.6 +6.9
IBZA                             e               22 57 11.8
      comp=Z,99nm,1.1s
IKOM  Komasi            5.57 142 ePn     Pn      22 55 06.8 +2.4
IKOM                             e               22 57 27.8
      comp=Z,99nm,2.3s
IKOM  Komasi            5.57 142 ePn     Pn      22 55 06.8 +2.4
SOC   Sochi             5.65 332 eP      Pn      22 55 03.5  -1.7
SOC                              e               22 56 10.7
SOC                               pmax   pmax
      comp=Z,12nm,1.0s
SOC                               MLR    MLR
      comp=Z,313nm,11.0s
SOC   Sochi             5.65 332 eP      Pn      22 55 03.5  -1.7
      comp=Z,313nm,11.0s
SOC                              eS      Sn      22 56 10.7 +0.8
QABG  Abgarm-Qazvin     5.75 119 ePn     Pn      22 55 10.7 +3.8
QABG                             e               22 57 14.9
      comp=E,99nm,2.5s
QABG                             e               22 57 45.6
      comp=Z,99nm,3.4s
QABG                             e               22 57 55.8
      comp=N,99nm,3.4s
IGZV  Ghazvin           5.88 111 ePn     Pn      22 55 11.8 +3.2
IGZV                             e               22 55 42.6
      comp=N,721nm,0.4s
IGZV                             e               22 55 43.2
      comp=Z,612nm,0.3s
IGZV                             e               22 55 48.3
      comp=E,708nm,0.3s
IGZV  Ghazvin           5.88 111 ePn     Pn      22 55 11.8 +3.2
HAGD  Aghdareh          6.00 128 ePn     Pn      22 55 17.7 +7.4
HAGD                             e               22 56 19.5
      comp=Z,99nm,0.1s
HAGD                             e               22 57 18.8
      comp=E,99nm,0.4s
HAGD                             e               22 57 19.0
      comp=N,99nm,0.5s
HSAM  Samen             6.11 135 ePn     Pn      22 55 18.3 +6.4
HSAM                             e               22 57 26.2
      comp=E,99nm,0.9s
HSAM                             e               22 57 29.8
      comp=N,99nm,0.6s
RTB   Rutbah            6.16 205 ePn     Pn      22 55 14.0 +1.7
      SNR=3.0
IKFM  Kafar-mosalman    6.27 144 ePn     Pn      22 55 15.8 +2.1
IKFM                             e               22 57 20.7
      comp=E,99nm,0.8s
IKFM                             e               22 57 49.0
      comp=N,99nm,0.4s
IKFM                             e               22 57 51.4
      comp=Z,99nm,0.8s
IKFM  Kafar-mosalman    6.27 144 ePn     Pn      22 55 15.8 +2.1
GOF   Gofitskoye        6.39 358 eP      Pn      22 55 20.7 +5.2
GOF                               pmax   pmax
      comp=Z,10.0nm,0.7s
IMHD  Mahdasht          6.52 115 ePn     Pn      22 55 19.4 +2.0
IMHD                             e               22 55 24.2
      comp=E,217nm,0.1s
IMHD                             e               22 56 00.1
      comp=N,219nm,0.2s
IMHD                             e               22 56 03.0
      comp=Z,279nm,0.3s
IMHD  Mahdasht          6.52 115 ePn     Pn      22 55 19.4 +2.0
IAFJ  Afjeh             7.20 110 e               22 55 37.5
      comp=Z,258nm,0.2s
HWQ   Hawqa             7.43 236 eP      Pn      22 55 29.3  -0.5
IDMV  Damavand          7.55 111 ePn     Pn      22 55 36.7 +5.0
IDMV                             e               22 55 41.7
      comp=Z,388nm,0.6s
IDMV                             e               22 55 42.3
      comp=E,187nm,0.2s
IDMV                             e               22 57 00.5
      comp=N,210nm,0.4s
BR131 Keskin Array S    7.65 281 ePn     Pn      22 55 35.2 +2.3
BRTR  Keskin Array B    7.65 281  Pn     Pn      22 55 37.3 +4.4
      comp=N,0.1nm,0.3s,baz=104,slow=13,SNR=6.7
BRTR                              Lg     Lg      22 57 53.1
      comp=N,0.1nm,0.3s,baz=96,slow=26,SNR=2.4
BRTR  Keskin Array B    7.65 281c iP     Pn      22 55 39.2 +6.3
BRTR                              pmax   pmax
      comp=Z,2.0nm,0.8s
BHL   Bhannes           7.85 235 eP      Pn      22 55 37.5 +1.9
NSR   Nassriya          7.96 163 ePn     Pn      22 55 38.0 +1.0
      SNR=3.0
NSR                              eSn     Sn      22 57 08.8 +1.8
      SNR=39
IFIR  Firoozkooh        8.06 109 e               22 56 07.9
      comp=E,81nm,0.0s
IFIR                             e               22 57 28.3
      comp=N,107nm,0.0s
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SHBL  Chebaa            8.16 232 eP      Pn      22 55 40.9 +1.0
NATI  Neve Ativ         8.22 231  Pn     Pn      22 55 41.9 +1.3
KSDI  Kefar Szold       8.32 231  Pn     Pn      22 55 42.5 +0.6
ASF   Jabal al Asfar    8.37 221  Pn     Pn      22 55 40.6  -2.1
      comp=N,0.5nm,0.3s,baz=353,slow=15,SNR=6.1
ASF                               Lg     Lg      22 58 12.1
      comp=N,0.3nm,0.3s,baz=209,slow=19,SNR=2.9
KSHT  Keshet            8.37 230  Pn     Pn      22 55 44.3 +1.6
ISHM  Shahmirzad        8.39 107 ePn     Pn      22 55 31.2  -12
ISHM                             e               22 55 39.7
      comp=Z,160nm,0.3s
MMA0B Mount Meron ar    8.59 231  Pn     Pn      22 55 47.1 +1.3
MMAI  Mount Meron Ar    8.59 231  Pn     Pn      22 55 46.7 +1.0
      comp=Z,3.4nm,0.3s,baz=72,slow=16,SNR=17
MMAI                              Lg     Lg      22 58 09.6
      comp=Z,0.4nm,0.3s,baz=346,slow=24,SNR=2.3
MMAI                              LR     LR      22 59 27.5
      comp=Z,446nm,18.6s,baz=35,slow=41
HNTI  Hanita            8.69 233  Pn     Pn      22 55 48.2 +1.2
BLGI  Bet Lehem HaGe    8.92 231  Pn     Pn      22 55 51.4 +1.3
ZNGN  Zangian           8.93 135 e               22 56 49.4
      comp=E,99nm,0.5s
ZNGN                             e               22 57 01.0
      comp=Z,99nm,0.5s
ZNGN                             e               22 59 01.5
      comp=N,99nm,0.6s
MMLI  Mount Malkishu    8.99 229  Pn     Pn      22 55 52.1 +1.0
HMDT  Nahal Hemdat      9.06 227  Pn     Pn      22 55 52.8 +0.7
OFRI  ‘Ofer             9.12 231  Pn     Pn      22 55 54.5 +1.6
SLTI  Sal’it            9.35 229  Pn     Pn      22 55 56.8 +0.7
ANAR  Anarak           10.00 120 ePn     Pn      22 56 14.6  +10
ANAR                             e               22 56 15.3
      comp=E,99nm,0.3s
ANAR                             e               22 56 21.6
      comp=Z,99nm,0.4s
EIL   Elat             11.37 220  LR     LR      23 01 32.0
      comp=Z,415nm,18.1s,baz=56,slow=42
GEYT  Alibeck          11.59  89  Pn     Pn      22 56 25.9  -0.9
      comp=Z,0.1nm,0.3s,baz=246,slow=14,SNR=3.8
GYA0B ALIBECK ARRAY    11.59  89 ePn     Pn      22 56 26.3  -0.5
GYA0B ALIBECK ARRAY    11.59  89 ePn     Pn      22 56 26.3  -0.5
TNSJ  Nastanj          11.64 110 e       Pn      22 56 37.1  +10
      comp=Z,99nm,0.7s
VRH   Novokhopyorsk    12.59 355 eP      Pn      22 56 40.7 +0.4
VRH                               pmax   pmax
      comp=Z,8.0nm,0.5s
VORD  Divnogorie       12.64 348 eP      Pn      22 56 43.0 +2.0
VORD                              pmax   pmax
      comp=Z,9.0nm,1.0s
VORD  Divnogorie       12.64 348 eP      Pn      22 56 43.0 +2.0
      comp=Z,9.0nm,1.0s
VSR   Storozhevoye     12.90 348 eP      Pn      22 56 45.5 +0.9
VSR                               pmax   pmax
      comp=Z,6.0nm,0.5s
VSR   Storozhevoye     12.90 348 eP      Pn      22 56 45.5 +0.9
      comp=Z,6.0nm,0.5s
VORR  Voronezh         13.34 349 eP      Pn      22 56 53.0 +2.5
VORR                              pmax   pmax
      comp=Z,250nm,1.6s
VRI   Vrincioaia       14.27 306⇓iP      P       22 57 10.6   0.0
VRI   Vrincioaia       14.27 306 ⇓P      P       22 57 10.7 +0.1
LPSR  Galich’ya Gora   14.28 349 eP      Pn      22 57 03.1  -0.3
LPSR                              pmax   pmax
      comp=Z,30nm,1.0s
PLOR  Plostina         14.32 305⇑iP      P       22 57 11.0  -0.1
PLOR  Plostina         14.32 305 ⇑P      P       22 57 11.0  -0.1
SORM  Soroca           14.44 316⇓iP      Pn      22 57 08.8 +3.2
SORM  Soroca           14.44 316 ⇓P      Pn      22 57 08.8 +3.2
TESR  Tescani          14.60 308⇑iP      P       22 57 17.4 +3.2
MLR   Muntele Rosu     14.63 303  Pn     P       22 57 12.3  -2.4
      comp=Z,0.1nm,0.3s,baz=101,slow=22,SNR=3.5
MLR   Muntele Rosu     14.63 303⇑iP      P       22 57 15.6 +0.9
BIZ   Bicaz            15.13 309⇓iP      P       22 57 24.3 +4.2
DOPR  Dopca            15.17 305⇓iP      P       22 57 22.8 +2.2
RAYN  Ar Rayn          15.20 173 ePn     Pn      22 57 10.9  -5.2
      comp=Z,53nm,1.4s
RAYN                             eS      Sn      23 00 00.1  -4.3
RAYN  Ar Rayn          15.20 173 eP      Pn      22 57 10.9  -5.2
RAYN                             eS      Sn      23 00 00.1  -4.3
RAYN                              pmax   pmax
      comp=Z,53nm,1.4s
VOIR                   15.20 302⇑iP      P       22 57 23.5 +2.5
VOIR                   15.20 302 ⇑P      P       22 57 23.5 +2.5
SRS   Serrai           15.40 285  P      P       22 57 28.0 +4.8
ARR   Arges            15.46 302⇓iP      P       22 57 27.6 +3.8
AKASG Malin Array Be   15.66 325  Pn     Pn      22 57 21.2  -0.7
      comp=Z,1.0nm,0.3s,baz=130,slow=12,SNR=15
AKASG                             LR     LR      23 05 01.7
      comp=Z,77nm,19.6s,baz=90,slow=44
AKASG Malin Array Be   15.66 325 i P     P       22 57 24.1  -1.9
AKASG                             pmax   pmax
      comp=Z,5.0nm,0.7s
AKBB  Malin Array Si   15.66 325 ePn     Pn      22 57 21.8  -0.2
      comp=Z,12nm,1.0s
KIEV  Kiev             15.67 325 ePn     Pn      22 57 20.9  -1.0
      comp=Z,12nm,1.1s
KIEV  Kiev             15.67 325 eP      Pn      22 57 20.9  -1.0
KIEV                              pmax   pmax
      comp=Z,12nm,1.1s
KIEV  Kiev             15.67 325 ePn     Pn      22 57 20.9  -1.0
      comp=Z,12nm,1.1s
AKTO  Aktyubinsk       15.68  37  Pn     Pn      22 57 21.0  -1.2
      comp=Z,0.3nm,0.3s,baz=232,slow=14,SNR=9.1
AKTO                              LR     LR      23 03 55.7
      comp=Z,101nm,18.2s,baz=220,slow=39
VTS   Vitosha          15.82 291⇓iP      P       22 57 28.5 +0.6
VTS   Vitosha          15.82 291 ePn     P       22 57 27.1  -0.8
      comp=Z,21nm,1.4s
VTS   Vitosha          15.82 291 eP      P       22 57 27.1  -0.8
VTS                               pmax   pmax
      comp=Z,21nm,1.4s
VTS   Vitosha          15.82 291 eP      P       22 57 27.1  -0.8
      comp=Z,21nm,1.4s
ABKAR Akbulak array    15.90  43 ePn     Pn      22 57 24.9  -0.1
ABKAR Akbulak array    15.90  43 ePn     Pn      22 57 24.9  -0.1
BURAR Bucovina Array   15.97 310⇓iP      P       22 57 30.8 +1.2
BURAR Bucovina Array   15.97 310 ⇓P      P       22 57 30.8 +1.2
BUR04 Bucovina Ar. S   15.98 310 ePn     Pn      22 57 26.1   0.0
BUR04 Bucovina Ar. S   15.98 310 ePn     Pn      22 57 26.1   0.0
BUR08 Bucovina Ar. S   16.00 310 ePn     P       22 57 30.1 +0.2
HERR  Herculane        16.82 298⇑iP      P       22 57 41.3 +2.4
OBN   Obninsk          17.09 347 ePn     Pn      22 57 38.2  -1.8
      comp=Z,45nm,1.1s
OBN   Obninsk          17.09 347deP      Pn      22 57 39.6  -0.4
OBN                               S      Sn      23 00 46.0  -3.8
OBN                               pmax   pmax
      comp=Z,40nm,1.1s
OBN                               MLR    MLR
      comp=Z,92nm,13.0s
MSFE  Esma-Masafi      17.09 137 ePn     Pn      22 57 40.3  -0.1
MSFE  Esma-Masafi      17.09 137 ePn     Pn      22 57 40.3  -0.1
NAZ   Nazwa, Dubai     17.14 139 ePn     P       22 57 43.4 +0.9
NAZ   Nazwa, Dubai     17.14 139 ePn     P       22 57 43.4 +0.9
ASUD  Al Ashush, Dub   17.27 141 ePn     P       22 57 51.4 +7.5
MDVR  Moldovita        17.28 298⇓iP      P       22 57 45.6 +1.6
MDVR  Moldovita        17.28 298⇓iP      P       22 57 45.6 +1.6
UOSS  Minazif          17.45 138 ePn     P       22 57 45.7  -0.3
      comp=Z,15nm,0.9s
UOSS  Minazif          17.45 138 ePn     P       22 57 45.7  -0.3
      comp=Z,15nm,0.9s
HATD  Hatta, Dubai     17.51 138 ePn     P       22 57 47.0 +0.3
HATD  Hatta, Dubai     17.51 138 ePn     P       22 57 47.0 +0.3
TRPA  Tarpa            17.82 309⇓iP      P       22 57 53.0 +3.1
ALNE  Al Ain           17.95 141 ePn     P       22 57 53.6 +2.0
ALNE  Al Ain           17.95 141 ePn     P       22 57 53.6 +2.0
CRVS  Cervenica-Dubn   18.79 310 eP      Pn      22 58 04.9 +3.8
CRVS                              pmax   pmax
      comp=Z,15nm,1.4s
CRVS  Cervenica-Dubn   18.79 310 eP      Pn      22 58 04.9 +3.8
PSZ   Piszkesteto      19.39 306⇑iP      P       22 58 07.5 +0.3
PSZ   Piszkesteto      19.39 306 eP      Pn      22 58 08.5 +0.2
      comp=Z,19nm,1.3s
PSZ   Piszkesteto      19.39 306 ⇑P      P       22 58 07.5 +0.3
PSZ   Piszkesteto      19.39 306  P      P       22 58 07.5 +0.3
NIE   Niedzica         19.70 311 eP      Pn      22 58 11.8  -0.2
NIE   Niedzica         19.70 311 eP      Pn      22 58 11.8  -0.2
MORH  M^‡r^¡gy, Hung   19.71 300⇓eP      Pn      22 58 16.7 +4.5
IDID  Didziasalis      20.07 331 eP      P       22 58 14.4  -0.2
IDID                              IAmb   IAmb    22 58 21.8
      comp=Z,4.9nm,1.0s
WSAR  Wadi Sarin       20.13 135  P      P       22 58 14.8  -0.6
      comp=Z,5.5nm,0.9s,baz=4.1,slow=18,SNR=2.3
WSAR                              LR     LR      23 08 07.9
      comp=Z,118nm,18.2s,baz=315,slow=43
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VYHS  Vyhne            20.25 307 eP      Pn      22 58 18.4  -0.1
VYHS                              pmax   pmax
      comp=Z,13nm,1.5s
VYHS  Vyhne            20.25 307 eP      Pn      22 58 18.4  -0.1
VYHS  Vyhne            20.25 307 eP      Pn      22 58 18.4  -0.1
      comp=Z,13nm,1.5s
CSKK  Cs^‡kako         20.26 304⇓eP      P       22 58 17.5 +0.8
IIGN  Ignalina         20.30 331 eP      P       22 58 17.0 +0.1
IIGN                              IAmb   IAmb    22 58 26.0
      comp=Z,5.1nm,0.8s
ARU   Arti             20.43  25  P      P       22 58 17.9  -0.5
      comp=Z,9.5nm,0.4s,baz=231,slow=8.4,SNR=24
ARU                               LR     LR      23 08 06.1
      comp=Z,186nm,19.8s,baz=208,slow=42
ARU   Arti             20.43  25 eP      P       22 58 17.6  -0.7
      comp=Z,36nm,1.0s
ARU   Arti             20.43  25d iP     P       22 58 18.6 +0.2
ARU                               PPP    PPP     22 58 44.2
ARU                               S      Sn      23 02 08.6  -1.8
ARU                               SS     SnSn    23 02 25.0   0.0
ARU                               pmax   pmax
      comp=Z,44nm,1.2s
ISAL  Salakas          20.50 331 eP      P       22 58 19.1   0.0
ISAL                              IAmb   IAmb    22 58 24.3
      comp=Z,10.0nm,1.0s
IZAR  Zarasai          20.59 332 eP      P       22 58 20.0  -0.1
IZAR                              IAmb   IAmb    22 58 28.1
      comp=Z,9.1nm,0.7s
SUW   Suwalki          20.64 325 eP      Pn      22 58 21.8  -1.1
SUW   Suwalki          20.64 325 eP      P       22 58 20.5  -0.1
      comp=Z,74nm,0.8s
SUW   Suwalki          20.64 325 eP      Pn      22 58 21.8  -1.1
TIP   Timpagrande      20.71 280⇓iP      P       22 58 21.2  -0.5
TIP   Timpagrande      20.71 280⇓iP      P       22 58 21.2  -0.5
KK31  Karatay Array    20.93  69 eP      P       22 58 24.8 +0.8
KK31  Karatay Array    20.93  69 eP      P       22 58 24.8 +0.8
KKAR  Karatay Array    20.93  69 eP      P       22 58 24.8 +0.8
KKAR  Karatay Array    20.93  69 eP      P       22 58 24.8 +0.8
KBL   Kabul            20.97  93 eP      P       22 58 25.9 +1.2
      comp=Z,23nm,1.1s
KBL   Kabul            20.97  93 eP      P       22 58 25.9 +1.2
KBL                               pmax   pmax
      comp=Z,23nm,1.1s
KBL   Kabul            20.97  93 eP      P       22 58 25.9 +1.2
      comp=Z,23nm,1.1s
JAVC  Velka Javorina   21.10 307 eP      P       22 58 30.3 +4.5
MODS  Modra-Piesok     21.19 306 eP      P       22 58 29.6 +2.8
MODS                              pmax   pmax
      comp=Z,13nm,1.1s
MODS  Modra-Piesok     21.19 306 eP      P       22 58 29.6 +2.8
SVE   Sverdlovsk       21.44  26 eP      P       22 58 28.7  -0.6
SVE                               pmax   pmax
      comp=Z,40nm,1.5s
MORC  Moravsky Berou   21.49 310 eP      P       22 58 33.3 +3.3
VRAC  Vranov           21.91 308  P      P       22 58 35.3 +0.9
      comp=Z,2.7nm,0.9s,baz=96,slow=9.9,SNR=4.9
VRAC  Vranov           21.91 308⇑iP      P       22 58 34.0  -0.5
VRAC  Vranov           21.91 308 eP      P       22 58 37.6 +3.1
KRUC  Moravsky         21.96 307 eP      P       22 58 38.1 +3.1
CONA  Conrad Observa   21.98 304 epP     P       22 58 36.6 +1.3
      comp=Z,4.0nm,0.8s
CONA  Conrad Observa   21.98 304  P      P       22 58 36.6 +1.3
      comp=Z,4.0nm,0.8s
ARSA  Arzberg          22.04 302 eP      P       22 58 36.0 +0.1
      comp=Z,6.1nm,1.2s
ARSA  Arzberg          22.04 302  P      P       22 58 36.0 +0.1
      comp=Z,6.1nm,1.2s
KLMR  Klimovskoe       22.35 355 eP      P       22 58 37.6  -1.4
KLMR                              pmax   pmax
      comp=Z,62nm,1.0s
KLMR  Klimovskoe       22.35 355 eP      P       22 58 37.6  -1.4
KLMR                              AMP            22 58 43.3
      comp=Z,62nm,1.0s
DPC   Dobruska-Polom   22.43 310 eP      P       22 58 51.6  +11
VSU   Vasula           22.55 337ceP      P       22 58 41.6 +0.4
VSU                               pmax   pmax
      comp=Z,64nm,1.0s
MOA   Molln            23.00 303 eP      P       22 58 47.5 +1.4
      comp=Z,7.7nm,1.2s
PRGR  Permogore        23.04   3 eP      P       22 58 43.9  -2.4
PRGR                              pmax   pmax
      comp=Z,18nm,1.0s
SFK   Sufi-Kurgan      23.28  77  P      P       22 58 50.7 +1.5
SFK                               pmax   pmax
      comp=Z,4.0nm,0.9s
SFK   Sufi-Kurgan      23.28  77  P      P       22 58 50.7 +1.5
      comp=Z,4.0nm,0.9s
BRVK  Borovoye         23.43  43 eP      P       22 58 49.6  -0.8
      comp=Z,14nm,1.3s
BRVK  Borovoye         23.43  43 eP      P       22 58 49.6  -0.8
BRVK                              pmax   pmax
      comp=Z,14nm,1.3s
KBA   Koelnbreinsper   23.46 301 epP     P       22 58 54.0 +3.0
      comp=Z,9.5nm,1.2s
BVAR  Borovoye Array   23.48  43  P      P       22 58 50.9 +0.1
      comp=Z,1.2nm,0.6s,baz=245,slow=6.4,SNR=6.6
GEA0  GERESS Array S   23.60 305 eP      P       22 58 51.9  -0.3
GEA0  GERESS Array S   23.60 305 eP      P       22 58 51.9  -0.3
GERES GERESS Array B   23.60 305  P      P       22 58 52.0  -0.2
      comp=Z,0.9nm,0.7s,baz=106,slow=7.2,SNR=5.3
GERES                             LR     LR      23 10 44.9
      comp=Z,41nm,20.6s,baz=124,slow=44
KHC   Kasperske Hory   23.75 306 eP      P       22 58 55.3 +1.7
KHC   Kasperske Hory   23.75 306 eP      P       22 58 53.9 +0.3
      comp=Z,4.4nm,1.5s
KHC   Kasperske Hory   23.75 306 eP      P       22 58 53.9 +0.3
KHC                               pmax   pmax
      comp=Z,4.0nm,1.5s
AAK   Ala-Archa        23.85  70  LR     LR      23 09 44.0
      comp=Z,64nm,19.9s,baz=275,slow=40
AAK   Ala-Archa        23.85  70 eP      P       22 58 55.1 +0.3
      comp=Z,5.5nm,0.9s
AAK   Ala-Archa        23.85  70⇑eP      P       22 58 54.7  -0.1
AAK                               pmax   pmax
      comp=Z,13nm,2.1s
FRU   Bishkek          23.94  70 eP      P       22 58 55.0  -0.5
FRU   Bishkek          23.94  70 eP      P       22 58 55.0  -0.5
ABTA  Abfaltersbach    23.97 300 epP     P       22 58 58.8 +3.0
      comp=Z,7.1nm,1.2s
BRG   Berggiesshubel   24.04 310 eP      P       22 58 59.2 +3.0
      comp=Z,4.8nm,0.9s
BRG   Berggiesshubel   24.04 310 eP      P       22 58 59.2 +3.0
BRG                               pmax   pmax
      comp=Z,5.0nm,0.9s
WET   Wettzell         24.20 306  P      P       22 58 58.6 +0.8
WET                               pmax   pmax
      comp=Z,7.0nm,1.4s
NIL   Nilore           24.56  93 eP      P       22 59 01.3 +0.1
      comp=Z,25nm,0.9s
NIL   Nilore           24.56  93 eP      P       22 59 01.3 +0.1
NIL                               pmax   pmax
      comp=Z,25nm,0.9s
NIL   Nilore           24.56  93 eP      P       22 59 01.3 +0.1
      comp=Z,25nm,0.9s
WTTA  Wattenberg       24.64 301 eP      P       22 59 03.8 +1.8
      comp=Z,4.0nm,0.7s
CLL   Collm            24.74 311⇑iP      P       22 59 03.9 +1.3
      comp=Z,7.0nm,1.0s
CLL                              i               22 59 08.9
CLL                              i               22 59 12.9
CLL   Collm            24.74 311 eP      P       22 59 03.5 +0.9
      comp=Z,6.9nm,0.9s
CLL   Collm            24.74 311 eP      P       22 59 03.6 +0.9
CLL                               pmax   pmax
      comp=Z,7.0nm,0.9s
CLL   Collm            24.74 311 eP      P       22 59 03.5 +0.9
      comp=Z,6.9nm,0.9s
NKC   Novy Kostel      24.75 308  P      P       22 59 05.6 +2.8
NKC                               pmax   pmax
      comp=Z,3.0nm,1.0s
MOTA  Moosalm          25.01 301 eP      P       22 59 05.9 +0.5
      comp=Z,9.7nm,0.9s
FIA1  FINESS Array S   25.21 340 eP      P       22 59 06.8   0.0
FINES FINESS Array B   25.21 340  P      P       22 59 06.7   0.0
      comp=Z,7.3nm,0.9s,baz=102,slow=6.2,SNR=9.8
FINES                             LR     LR      23 10 17.3
      comp=Z,104nm,20.4s,baz=137,slow=40
FETA  Feichten         25.22 300 epP     P       22 59 11.5 +4.3
      comp=Z,10nm,1.3s
KSH   Kashi            25.23  78  P      P       22 59 06.8  -0.5
KSH                               sP     sP      22 59 13.6 +1.1
KSH                               PP     PnPn    22 59 42.9 +1.5
KSH                               pmax   pmax
      comp=Z,6.0nm,1.1s
RETA  Reutte           25.26 301 eP      P       22 59 09.5 +2.0
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	comp=Z,4.0nm,1.3s						
GRFO	**Grafenberg**	**25.38**	**306**	*e*P	**P**	**22 59 07.9**	**-0.6**
	comp=Z,29nm,1.3s						
GRFO	**Grafenberg**	**25.38**	**306**	*e*P	**P**	**22 59 07.9**	**-0.6**
GRFO				pmax	pmax		
	comp=Z,29nm,1.3s						
DAVOX	**Davos/Dischmat**	**25.77**	**299**	P	**P**	**22 59 11.7**	**-0.6**
	comp=Z,3.1nm,0.7s,baz=111,slow=12,SNR=5.5						
DAVA	**Damuels**	**25.83**	**300**	*e*P	**P**	**22 59 12.0**	**-0.8**
	comp=Z,6.7nm,1.3s						
PGF	**Pioggiola**	**26.29**	**290**	*e*P	**P**	**22 59 19.6**	**+2.7**
PGF				pmax	pmax		
	comp=Z,22nm,1.2s						
ATD	**Arta Tunnel**	**27.03**	**181**	LR	LR	23 10 35.1	
	comp=Z,108nm,19.9s,baz=242,slow=38						
SBF	**Sospel**	**27.38**	**293**	*e*P	**P**	**22 59 28.9**	**+2.2**
SBF				pmax	pmax		
	comp=Z,21nm,1.0s						
KURBB	**Kurchatov Arra**	**27.45**	**53**	P	**P**	**22 59 25.7**	**-1.4**
	comp=Z,2.2nm,0.5s,baz=265,slow=8.9,SNR=9.0						
KURK	**Kurchatov**	**27.52**	**53**	*e*P	**P**	**22 59 27.3**	**-0.5**
	comp=Z,7.4nm,1.0s						
KURK	**Kurchatov**	**27.52**	**53**	*e*P	**P**	**22 59 27.3**	**-0.5**
KURK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MBDF	**Montbardon**	**27.84**	**294**	*e*P	**P**	**22 59 34.1**	**+3.2**
MBDF				pmax	pmax		
	comp=Z,4.0nm,0.8s						
LPG	**La Plagne**	**27.86**	**296**	*e*P	**P**	**22 59 35.5**	**+4.3**
LPG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
LPL	**La Plagne**	**27.88**	**296**	*e*P	**P**	**22 59 34.0**	**+2.7**
LPL				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BNI	**Bardonecchia**	**27.91**	**295**	*e*P	**P**	**22 59 34.3**	**+2.8**
	comp=Z,7.6nm,1.1s						
BNI	**Bardonecchia**	**27.91**	**295**	*e*P	**P**	**22 59 34.3**	**+2.8**
BNI				pmax	pmax		
	comp=Z,8.0nm,1.1s						
CABF	**La Chapelle**	**28.36**	**298**	*e*P	**P**	**22 59 35.5**	**+0.1**
CABF				pmax	pmax		
	comp=Z,7.0nm,1.0s						
ORIF	**Oris-en-Rattie**	**28.48**	**295**	*e*P	**P**	**22 59 40.0**	**+3.5**
ORIF				pmax	pmax		
	comp=Z,5.0nm,1.1s						
HFS	**Hagfors**	**28.48**	**329**	P	**P**	**22 59 35.6**	**-0.6**
	comp=Z,4.5nm,0.7s,baz=126,slow=7.7,SNR=9.1						
HFS				LR	LR	23 13 10.9	
	comp=Z,74nm,19.2s,baz=126,slow=41						
VIVF	**Saint-Julien-l**	**29.34**	**295**	*e*P	**P**	**22 59 48.2**	**+4.2**
VIVF				pmax	pmax		
	comp=Z,2.0nm,0.9s						
MK31	**Makanchi Array**	**29.46**	**61**	*e*P	**P**	**22 59 44.9**	**-0.2**
MK31	**Makanchi Array**	**29.46**	**61**	*e*P	**P**	**22 59 44.9**	**-0.2**
MKAR	**Makanchi Array**	**29.46**	**61**	P	**P**	**22 59 45.5**	**+0.4**
	comp=Z,0.7nm,0.7s,baz=267,slow=7.4,SNR=6.8						
MKAR				LR	LR	23 13 26.3	
	comp=Z,52nm,19.9s,baz=260,slow=40						
MKAR	**Makanchi Array**	**29.46**	**61**	*e*P	**P**	**22 59 45.6**	**+0.6**
	comp=Z,13nm,0.9s						
MKAR	**Makanchi Array**	**29.46**	**61**	*i* P	**P**	**22 59 45.2**	**+0.1**
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MK01	**Makanchi Array**	**29.46**	**61**	*e*P	**P**	**22 59 44.0**	**-1.1**
SMF	**Signal de Mont**	**29.91**	**298**	*e*P	**P**	**22 59 50.6**	**+1.5**
SMF				pmax	pmax		
	comp=Z,4.0nm,1.0s						
SMF	**Signal de Mont**	**29.91**	**298**	*e*P	**P**	**22 59 50.6**	**+1.5**
	comp=Z,4.0nm,1.0s						
NB2	**NORSAR Subarra**	**30.00**	**329**	P	**P**	**22 59 49.6**	**-0.2**
	comp=Z,3.2nm,0.8s,baz=123,slow=9.3						
NOA	**NORSAR Array B**	**30.00**	**329**	P	**P**	**22 59 47.8**	**-2.0**
	comp=Z,0.6nm,0.6s,baz=125,slow=8.8,SNR=4.1						
NOA				LR	LR	23 11 59.8	
	comp=Z,57nm,19.9s,baz=125,slow=37						
AVF	**Avril sur Loir**	**30.25**	**299**	*e*P	**P**	**22 59 51.3**	**-0.7**
AVF				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TCF	**Toulx Ste Croi**	**31.04**	**298**	*e*P	**P**	**23 00 00.8**	**+1.7**
TCF				pmax	pmax		
	comp=Z,3.0nm,1.0s						
CAF	**Calviac**	**31.18**	**295**	*e*P	**P**	**23 00 02.2**	**+1.8**
CAF				pmax	pmax		
	comp=Z,3.0nm,1.0s						
RJF	**Les Rejaudoux**	**31.55**	**296**	*e*P	**P**	**23 00 02.8**	**-0.8**
RJF				pmax	pmax		
	comp=Z,6.0nm,1.3s						
ZALV	**Zalesovo Beam**	**31.91**	**48**	LR	LR	23 14 35.5	
	comp=Z,58nm,19.6s,baz=243,slow=39						
ARCES	**ARCESS Array B**	**32.39**	**348**	P	**P**	**23 00 09.4**	**-1.2**
	comp=Z,2.6nm,0.6s,baz=153,slow=8.2,SNR=16						
ARCES	**ARCESS Array B**	**32.39**	**348**	*e*P	**P**	**23 00 08.8**	**-1.9**
MFF	**Saint Martin d**	**32.66**	**298**	*e*P	**P**	**23 00 12.4**	**-0.9**
MFF				pmax	pmax		
	comp=Z,7.0nm,1.2s						
DGZ	**Jazzator, Alta**	**33.00**	**56**	*i* P	**P**	**23 00 16.8**	**+0.4**
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ETSF	**Etsaut**	**33.27**	**292**	*e*P	**P**	**23 00 21.4**	**+2.7**
ETSF				pmax	pmax		
	comp=Z,9.0nm,1.4s						
WMQ	**Urumqi**	**33.40**	**67**	P	**P**	**23 00 21.8**	**+1.9**
WMQ				LR	LR		
	comp=Z,160nm,19.3s						
WMQ				LR	LR		
	comp=Z,130nm,19.3s						
SGMF	**Saint Gilles**	**34.25**	**301**	*e*P	**P**	**23 00 26.5**	**-0.6**
SGMF				pmax	pmax		
	comp=Z,8.0nm,0.9s						
QUIF	**Quistinic**	**34.67**	**301**	*e*P	**P**	**23 00 29.2**	**-1.5**
QUIF				pmax	pmax		
	comp=Z,6.0nm,0.8s						
ROSF	**Rostrenen**	**34.73**	**302**	*e*P	**P**	**23 00 30.5**	**-0.7**
ROSF				pmax	pmax		
	comp=Z,13nm,1.2s						
EKA	**Eskdalemuir Ar**	**35.09**	**314**	P	**P**	**23 00 33.5**	**-0.9**
	comp=Z,4.1nm,0.7s,baz=108,slow=8.6,SNR=22						
ESK	**Eskdalemuir**	**35.12**	**314**	*e*P	**P**	**23 00 34.5**	**0.0**
	comp=Z,12nm,1.0s						
ESK	**Eskdalemuir**	**35.12**	**314**	*e*P	**P**	**23 00 34.5**	**0.0**
ESK				pmax	pmax		
	comp=Z,12nm,1.0s						
TAM	**Tamanrasset**	**35.91**	**255**	*e*P	**P**	**23 00 41.7**	**-0.2**
	comp=Z,4.9nm,0.9s						
TAM	**Tamanrasset**	**35.91**	**255**	*e*P	**P**	**23 00 41.7**	**-0.2**
TAM				pmax	pmax		
	comp=Z,5.0nm,0.9s						
TAM	**Tamanrasset**	**35.91**	**255**	*e*P	**P**	**23 00 41.7**	**-0.2**
	comp=Z,4.9nm,0.9s						
ES19	**SONSECA Array**	**36.34**	**287**	*e*P	**P**	**23 00 47.4**	**+2.0**
ES19	**SONSECA Array**	**36.34**	**287**	*e*P	**P**	**23 00 47.3**	**+2.0**
ESDC	**Sonseca Array**	**36.40**	**287**	P	**P**	**23 00 44.6**	**-1.2**
	comp=Z,1.7nm,0.7s,baz=63,slow=9.8,SNR=9.6						
LSA	**Lhasa**	**40.12**	**88**	*e*P	**P**	**23 01 18.2**	**+0.5**
	comp=Z,12nm,1.1s						
LSA	**Lhasa**	**40.12**	**88**	*e*P	**P**	**23 01 18.2**	**+0.5**
LSA				pmax	pmax		
	comp=Z,12nm,1.1s						
LSA	**Lhasa**	**40.12**	**88**	*e*P	**P**	**23 01 18.2**	**+0.5**
	comp=Z,12nm,1.1s						
GTA	**Gaotai**	**43.21**	**71**	*e*P	P	23 01 47.6	+5.1
GTA				pP	sP	23 01 52.3	+4.5
GTA				sP	pP	23 01 54.8	+8.5
GTA				pmax	pmax		
	comp=Z,4.0nm,1.5s						
GTA	**Gaotai**	**43.21**	**71**	*e*P	**P**	**23 01 43.3**	**+0.8**
GTA				pP	sP	23 01 47.8	0.0
GTA				sP	pP	23 01 50.3	+4.0
GTA				pmax	pmax		
	comp=Z,3.0nm,1.3s						
TOA0	**Torodi Ar. Sit**	**44.77**	**247**	*e*P	**P**	**23 01 51.8**	**-3.2**
TORD	**Torodi Ar. Bea**	**44.77**	**247**	P	**P**	**23 01 51.8**	**-3.3**
	comp=Z,3.9nm,1.1s,baz=58,slow=9.4						
SONM	**Songino Array**	**45.63**	**57**	LR	LR	23 23 41.0	
	comp=Z,41nm,19.3s,baz=274,slow=40						
PALK	**Pallekele**	**45.89**	**123**	LR	LR	23 22 50.2	
	comp=Z,60nm,19.9s,baz=306,slow=38						
ULN	**Ulaanbaatar**	**46.06**	**57**	*e*P	**P**	**23 02 05.5**	**+0.3**
	comp=Z,6.4nm,1.2s						
ULN	**Ulaanbaatar**	**46.06**	**57**	*e*P	**P**	**23 02 05.5**	**+0.3**
ULN				pmax	pmax		
	comp=Z,6.0nm,1.2s						
DAG	**Danmarks Havn**	**46.37**	**344**	P	**P**	**23 02 07.7**	**+0.7**
DAG				pmax	pmax		
	comp=Z,5.0nm,1.2s						
LZH	**Lanzhou**	**47.34**	**73**	*e*P	**P**	**23 02 16.5**	**+1.1**
LZH				pP	sP	23 02 21.0	+0.3
LZH				sP	pP	23 02 24.6	+5.4
LZH				pmax	pmax		
	comp=Z,13nm,1.0s						
KOWA	**Kowa**	**48.10**	**253**	P	**P**	**23 02 20.1**	**-1.1**
	comp=Z,5.9nm,0.7s,baz=45,slow=14,SNR=3.8						
KOWA				LR	LR	23 27 56.3	
	comp=Z,24nm,20.7s,baz=37,slow=43						
KOWA	**Kowa**	**48.10**	**253**	*e*P	**P**	**23 02 21.9**	**+0.7**
	comp=Z,19nm,1.4s						
HHC	**Hu-ho-hao-te**	**51.23**	**65**	*e*P	**P**	**23 02 48.6**	**+3.6**
HHC				sP	sP	23 02 57.0	+6.7
HHC				PP	**PP**	**23 04 49.3**	**+7.7**
HHC				S	**S**	**23 10 06.5**	**+3.2**
HHC				sS	sS	23 10 17.8	+8.2
HHC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,72nm,5.0s						
HHC				LR	LR		
	comp=Z,100nm,14.5s						
HHC				LR	LR		
	comp=Z,130nm,13.7s						
HHC				LR	LR		
	comp=Z,130nm,15.5s						
CHTO	**Chiang Mai**	**51.76**	**96**	*e*P	**P**	**23 02 47.8**	**-1.3**
	comp=Z,5.7nm,1.0s						
CHTO	**Chiang Mai**	**51.76**	**96**	*e*P	**P**	**23 02 47.8**	**-1.3**
CHTO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CHTO	**Chiang Mai**	**51.76**	**96**	*e*P	**P**	**23 02 47.8**	**-1.3**
	comp=Z,5.7nm,1.0s						
CMMT	**Chiang Mai**	**51.76**	**96**	P	P	23 02 54.0	+4.9
CMAR	**Chiang Mai Arr**	**51.96**	**96**	P	**P**	**23 02 49.7**	**-0.9**
	comp=Z,2.0nm,0.7s,baz=303,slow=8.2,SNR=6.3						
CMAR				LR	LR	23 29 27.8	
	comp=Z,26nm,20.3s,baz=265,slow=41						
XAN	**Xi'an**	**51.98**	**74**	P	P	23 02 55.4	+4.8
XAN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,130nm,4.1s						
DBIC	**Dimbokro**	**53.87**	**247**	LR	LR	23 31 12.3	
	comp=Z,30nm,20.2s,baz=41,slow=42						
KHON	**Khomkaen**	**56.20**	**96**	P	P	23 03 27.9	+6.3
NJ2	**Nanjing**	**60.30**	**71**	*e*P	**P**	**23 03 47.5**	**-2.5**
NJ2				pmax	pmax		
	comp=Z,12nm,0.5s						
TSUM	**Tsumeb**	**62.45**	**208**	LR	LR	23 30 12.6	
	comp=Z,40nm,20.1s,baz=14,slow=35						
KS01	**Wonju Array Si**	**64.11**	**62**	*e*P	**P**	**23 04 16.8**	**+1.3**
KSAR	**Wonju Array Be**	**64.12**	**62**	P	**P**	**23 04 15.1**	**-0.5**
KSAR	**Wonju Array Be**	**64.12**	**62**	P	**P**	**23 04 15.1**	**-0.5**
KSRS	**Korea Array**	**64.14**	**62**	P	**P**	**23 04 15.1**	**-0.6**
	comp=Z,0.6nm,0.5s,baz=298,slow=5.8,SNR=5.4						
KSRS				LR	LR	23 36 37.3	
	comp=Z,18nm,18.5s,baz=300,slow=40						
JNU	**Nakatsue**	**68.45**	**64**	LR	LR	23 36 19.9	
	comp=Z,24nm,18.6s,baz=302,slow=37						
BOSA	**Boshof**	**69.04**	**197**	P	**P**	**23 04 48.6**	**+1.6**
	comp=Z,1.8nm,0.6s,baz=335,slow=0.8,SNR=6.2						
ASAJ	**Asahikawa**	**70.03**	**49**	LR	LR	23 40 41.9	
	comp=Z,35nm,19.6s,baz=116,slow=40						
MJAR	**Matsushiro Arr**	**71.58**	**58**	P	**P**	**23 05 03.9**	**+1.3**
	comp=Z,0.3nm,0.4s,baz=293,slow=7.5,SNR=5.2						
MJAR				LR	LR	23 38 50.6	
	comp=Z,32nm,19.1s,baz=230,slow=38						
PETK	**Petropavlovsk-**	**72.41**	**35**	LR	LR	23 41 38.0	
	comp=Z,35nm,18.0s,baz=288,slow=40						
ILAR	**Eielson Array**	**76.58**	**5**	P	**P**	**23 05 30.6**	**-0.8**
	comp=Z,0.8nm,0.9s,baz=307,slow=3.3,SNR=2.4						
CAST	**Castle Rocks**	**77.51**	**7**	*e*P	**P**	**23 05 36.1**	**-0.5**
	comp=Z,6.8nm,0.8s						
YKA	**Yellowknife Ar**	**77.64**	**350**	P	**P**	**23 05 36.9**	**-0.4**
	comp=Z,1.8nm,0.8s,baz=17,slow=7.5,SNR=4.4						
SKT	**Skwentna**	**78.98**	**7**	*e*P	**P**	**23 05 44.0**	**-0.8**
	comp=Z,4.4nm,0.8s						
SML	**Sawmill**	**79.42**	**6**	*e*P	**P**	**23 05 46.5**	**-0.7**
	comp=Z,6.0nm,0.8s						
SML	**Sawmill**	**79.42**	**6**	*e*P	**P**	**23 05 46.5**	**-0.7**
SML				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SUA	**Susitna One**	**79.56**	**7**	*e*P	**P**	**23 05 48.0**	**-0.1**
	comp=Z,5.8nm,0.8s						
KLU	**Klutina**	**79.91**	**5**	*e*P	**P**	**23 05 50.1**	**+0.2**
	comp=Z,9.4nm,1.2s						
EGMT	**Eagleton**	**90.44**	**342**	*e*P	**P**	**23 06 44.4**	**+1.4**
	comp=Z,8.0nm,0.8s						
PDAR	**Pinedale Array**	**95.31**	**340**	LR	LR	23 51 42.0	
	comp=Z,30nm,18.7s,baz=48,slow=36						
YBH	**Yreka Blue Hor**	**98.99**	**350**	LR	LR	23 53 18.9	
	comp=Z,34nm,19.7s,baz=304,slow=36						

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*CSEM **24** 22:54:57.8±0.7, 49°.94N×18°.56E, h1^{km}, Error ellipse: s-maj=11.8km s-min=7.5km az=37.0*

PRU 24 22:54:58.5, 49°.86N×18°.54E, h0^{km}, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	**Ostrava-Krasne**	**0.26**	**265**	*e*PG	Pg	22 55 03.5	+0.1
OKC				*e*SG	Sg	22 55 07.1	+0.4
OKC	**Ostrava-Krasne**	**0.26**	**265**	Pg	Pg	22 55 03.5	+0.1
OKC				Sg	Sg	22 55 07.1	+0.4
MORC	**Moravsky Berou**	**0.65**	**263**	*e*Pg	Pg	22 55 10.7	-0.3
MORC				*e*Sg	Sg	22 55 19.3	-0.1
MORC	**Moravsky Berou**	**0.65**	**263**	*e*PG	Pg	22 55 10.7	-0.3
MORC				*e*SG	Sg	22 55 19.3	-0.1
KRLC	**Kraliky**	**1.16**	**281**	*e*SG	Sg	22 55 35.5	-0.1
KRLC	**Kraliky**	**1.16**	**281**	Sg	Sg	22 55 35.5	-0.1
DPC	**Dobruska-Polom**	**1.51**	**290**	*e*SG	Sg	22 55 45.8	-1.2
DPC	**Dobruska-Polom**	**1.51**	**290**	Sg	Sg	22 55 45.8	-1.2

GUC 24 23:05:21.7±0.5, 23°.86S×67°.61W, h253^{km}±11^{km}, ML4.0, 1C-2D, Chile-Argentina border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB06	**IPOC Station P**	**2.14**	**302**	⇑*i*P	Pn	23 06 07.5	+1.6
PB06				*e*S	S	23 06 42.4	+1.6
PB06				IAML		23 06 45.8	
	comp=N,323nm,0.1s						
GO02	**Mina Guanaco**	**2.22**	**234**	*e*P	Pn	23 06 05.2	-1.6
GO02				*e*S	S	23 06 40.2	-2.1
GO02				IAML		23 06 40.9	
	comp=E,602nm,0.5s						
PB09	**IPOC Station P**	**2.55**	**323**	⇓*i*P	Pn	23 06 12.2	+2.3
PB09				*e*S	S	23 06 50.5	+2.5
PB05	**IPOC Station P**	**2.59**	**292**	*e*P	Pn	23 06 12.1	+1.9
PB05				*e*S	S	23 06 50.6	+2.1
PB05				IAML		23 06 54.3	
	comp=N,102nm,0.2s						
PB14	**IPOC Station P**	**2.66**	**253**	*e*P	Pn	23 06 11.6	+0.5
PB14				*e*S	S	23 06 49.1	-1.1
PB03	**IPOC Station P**	**2.68**	**312**	*e*P	Pn	23 06 13.1	+1.9
PB03				*e*S	S	23 06 52.6	+2.3
PB03				IAML		23 06 56.6	
	comp=E,265nm,0.2s						
PB10	**IPOC Station P**	**2.73**	**277**	*e*P	Pn	23 06 13.7	+2.3
PB10				*e*S	S	23 06 52.9	+2.1
PB10				IAML		23 06 55.4	
	comp=N,124nm,0.4s						
PB04	**IPOC Station P**	**2.79**	**303**	*e*P	Pn	23 06 14.8	+2.4
PB04				*e*S	S	23 06 54.9	+2.4
PB07	**IPOC Station P**	**2.99**	**315**	*e*P	Pn	23 06 16.8	+2.3
PB07				*e*S	S	23 06 58.7	+2.4
PB02	**IPOC Station P**	**3.30**	**320**	⇓*i*P	Pn	23 06 20.0	+2.2
PB02				*e*S	S	23 07 04.5	+2.3

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*ISK **24** 23:16:16.8, 38°.71N×43°.30E, h5^{km}, ML2.1/1*

*ISCJB **24** 23:16:18.4±0.6, 38°.69N±0°.04×43°.33E±0°.04, h10^{km}±6^{km}, Error ellipse: s-maj=6.7km s-min=4.3km az=145.9*

*CSEM **24** 23:16:18.4±0.3, 38°.71N×43°.32E, h5^{km}, ML2.1, Error ellipse: s-maj=5.5km s-min=4.4km az=133.0*

*DDA **24** 23:16:18.4, 38°.69N×43°.34E, h7^{km}, Ml2.5*

ISC 24 23:16:18.7±1.1, 38°.70N±0°.03×43°.33E±0°.03, h14^{km}±8^{km}, n20, σ0^{s}.85/37, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VANB	**Van**	**0.11**	**154**	PG	**Pg**	**23 16 21.9**	**-0.3**
VANB	**Van**	**0.11**	**154**	*e*Pg	**Pg**	**23 16 21.9**	**-0.3**
VMUR	**Van-Muradiye**	**0.35**	**33**	*i* P	**Pg**	**23 16 25.3**	**-0.6**
VMUR				*i* S	**Sb**	**23 16 32.2**	**0.0**
VMUR	**Van-Muradiye**	**0.35**	**33**	P	**Pg**	**23 16 25.3**	**-0.6**
VMUR				S	**Sb**	**23 16 32.2**	**0.0**
GEVA	**Gevas**	**0.44**	**209**	*i* P	**Pg**	**23 16 26.2**	**-1.3**
GEVA				*i* S	**Sb**	**23 16 34.7**	**0.0**
GEVA	**Gevas**	**0.44**	**209**	P	**Pg**	**23 16 26.2**	**-1.3**
GEVA				S	**Sb**	**23 16 34.7**	**0.0**
ADCV	**BITLIS_Adilcev**	**0.48**	**283**	*i* P	**Pg**	**23 16 28.4**	**+0.1**
ADCV				*i* S	**Sb**	**23 16 36.9**	**+0.9**
ADCV	**BITLIS_Adilcev**	**0.48**	**283**	P	**Pg**	**23 16 28.4**	**+0.1**
ADCV				S	**Sb**	**23 16 36.9**	**+0.9**
CLDR	**Caldiran**	**0.64**	**46**	PG	**Pg**	**23 16 30.9**	**-0.4**
CLDR				SG	**Sg**	**23 16 40.2**	**+0.4**
CLDR	**Caldiran**	**0.64**	**46**	*i* P	**Pg**	**23 16 30.4**	**-0.9**
CLDR				*i* S	**Sb**	**23 16 40.8**	**+0.2**
CLDR	**Caldiran**	**0.64**	**46**	P	**Pg**	**23 16 30.4**	**-0.9**
CLDR	**Caldiran**	**0.64**	**46**	*e*Pg	**Pg**	**23 16 30.9**	**-0.4**
CLDR				*e*Sg	**Sg**	**23 16 40.2**	**+0.4**
TUTA	**Tutak**	**0.81**	**331**	*i* P	**Pg**	**23 16 33.6**	**-0.7**
TUTA				*i* S	**Sb**	**23 16 45.8**	**+0.3**
TUTA	**Tutak**	**0.81**	**331**	P	**Pg**	**23 16 33.7**	**-0.7**
TUTA				S	**Sb**	**23 16 45.8**	**+0.3**
AGRB	**Hanur-Agry**	**0.91**	**344**	PG	**Pg**	**23 16 34.9**	**-1.5**
AGRB				SG	**Sg**	**23 16 48.3**	**-0.1**
AGRB	**Hanur-Agry**	**0.91**	**344**	*e*Pg	**Pg**	**23 16 34.9**	**-1.5**
AGRB				*e*Sg	**Sg**	**23 16 48.3**	**-0.1**
GURO	**Guroymak-BITLI**	**1.02**	**262**	PG	**Pg**	**23 16 37.4**	**-1.1**
GURO				SG	**Sb**	**23 16 51.9**	**+0.3**
GURO	**Guroymak-BITLI**	**1.02**	**262**	*e*Pg	**Pg**	**23 16 37.4**	**-1.1**
GURO				*e*Sg	**Sb**	**23 16 51.9**	**+0.3**
EATA	**Eleskirt**	**1.33**	**331**	*i* P	**Pg**	**23 16 42.8**	**-1.5**
EATA				*i* S	**Sn**	**23 17 01.9**	**+1.2**
EATA	**Eleskirt**	**1.33**	**331**	P	**Pg**	**23 16 42.8**	**-1.5**
EATA				S	**Sn**	**23 17 02.0**	**+1.2**

CSEM 24 23:18:51.6, 67°.90N×20°.10E, h0^{km}, ML0.8, Mining explosion., Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.10**	**58**	P	Pg	23 18 56.5	+2.9
KUA				S	Sg	23 18 58.6	+3.7
KUA	**Kurravaara**	**0.10**	**58**	P	Pg	23 18 54.0	+0.4
KUA				S	Sg	23 18 56.1	+1.2
RATU	**Laukkuluspa**	**0.21**	**249**	P	Sg	23 18 58.1	-0.1
RATU	**Laukkuluspa**	**0.21**	**249**	P	Pg	23 18 55.6	0.0
RATU				S	Sg	23 18 58.1	-0.1
NIKU	**Nikkaluokta**	**0.41**	**266**	P	Pb	23 19 02.2	+0.6
NIKU	**Nikkaluokta**	**0.41**	**266**	P	Pg	23 18 59.7	+0.4
LANU	**Lannavaara**	**0.73**	**77**	P	Pg	23 19 04.5	-1.0
DUNU	**Dundret**	**0.80**	**167**	P	Pg	23 19 07.0	+0.1
DUNU	**Dundret**	**0.80**	**167**	P	Pg	23 19 07.1	+0.2
SALU	**Saltoluokta**	**0.80**	**230**	P	Pb	23 19 08.6	+0.2
SALU	**Saltoluokta**	**0.80**	**230**	P	Pg	23 19 06.3	-0.6
KIF	**Kilpisjarvi**	**1.14**	**13**	*e*P	Pn	23 19 18.4	+3.7
HEF	**Hetta**	**1.43**	**67**	*e*P	Pb	23 19 19.8	+0.8
PAJU	**Pajala**	**1.46**	**126**	P	Pn	23 19 18.9	-0.2

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*CSEM **24** 23:18:57.2, 67°.82N×20°.20E, h0^{km}, ML1.9, Mining explosion.*

UPP 24 23:18:57.2±0.1, 67°.82N×20°.20E, h0^{km}, ML1.9, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.14**	**22**	P	Pg	23 19 00.2	+0.3
	baz=194						
KUA				S	Sg	23 19 02.2	+0.5
KUA	**Kurravaara**	**0.14**	**22**	P	Pg	23 19 00.2	+0.3
KUA				S	Sg	23 19 02.2	+0.5
RATU	**Laukkuluspa**	**0.23**	**270**	P	Pg	23 19 01.8	+0.2
RATU	**Laukkuluspa**	**0.23**	**270**	P	Pg	23 19 01.8	+0.2
RATU	**Laukkuluspa**	**0.23**	**270**	S	Pg	23 19 01.5	-0.1
NIKU	**Nikkaluokta**	**0.44**	**276**	P	Pg	23 19 05.8	+0.1
NIKU	**Nikkaluokta**	**0.44**	**276**	P	Pg	23 19 05.8	+0.1
DUNU	**Dundret**	**0.72**	**168**	P	Pg	23 19 10.8	-0.2
DUNU				S	Sg	23 19 20.9	+0.7
DUNU	**Dundret**	**0.72**	**168**	P	Pg	23 19 10.8	-0.2
DUNU				S	Sg	23 19 20.9	+0.6

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*CSEM **24** 23:22:00.6±0.1, 67°.83N×20°.20E, h2^{km}, ML2.0, Error ellipse: s-maj=2.8km s-min=2.3km az=154.0, Mining explosion.*

*HEL **24** 23:22:00.7, 67°.79N×20°.34E, h0^{km}, ML1.8, Explosion*

UPP 24 23:22:00.7±0.4, 67°.83N×20°.20E, h0^{km}±2^{km}, ML2.0, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.13**	**24**	P	Pg	23 22 03.5	+0.2
KUA				S	Sg	23 22 05.4	+0.5
KUA	**Kurravaara**	**0.13**	**24**	*i* P	Pg	23 22 03.5	+0.2
KUA				*i* S	Sg	23 22 05.4	+0.5
KUA	**Kurravaara**	**0.13**	**24**	P	Pg	23 22 03.5	+0.3
KUA				S	Sg	23 22 05.4	+0.4
RATU	**Laukkuluspa**	**0.23**	**268**	P	Pg	23 22 05.3	+0.2
RATU				S	Sg	23 22 08.6	+0.5
RATU	**Laukkuluspa**	**0.23**	**268**	*i* P	Pg	23 22 05.3	+0.2
RATU				*i* S	Sg	23 22 08.6	+0.5
RATU	**Laukkuluspa**	**0.23**	**268**	P	Pg	23 22 05.3	+0.2
RATU				S	Sg	23 22 08.6	+0.6
NIKU	**Nikkaluokta**	**0.44**	**275**	P	Pg	23 22 09.2	+0.1
NIKU	**Nikkaluokta**	**0.44**	**275**	*i* P	Pg	23 22 09.2	+0.1
NIKU	**Nikkaluokta**	**0.44**	**275**	P	Pg	23 22 09.2	+0.1
LANU	**Lannavaara**	**0.71**	**71**	P	Pg	23 22 14.1	-0.2
LANU				S	Sg	23 22 24.1	+0.6
LANU	**Lannavaara**	**0.71**	**71**	*e*P	Pg	23 22 14.0	-0.3
LANU	**Lannavaara**	**0.71**	**71**	P	Pg	23 22 14.1	-0.2
LANU				S	Sg	23 22 24.1	+0.6
DUNU	**Dundret**	**0.73**	**168**	P	Pg	23 22 14.4	-0.3
DUNU	**Dundret**	**0.73**	**168**	*i* P	Pg	23 22 14.4	-0.3
DUNU	**Dundret**	**0.73**	**168**	P	Pg	23 22 14.4	-0.2
SALU	**Saltoluokta**	**0.79**	**236**	P	Pg	23 22 15.6	-0.3
SALU	**Saltoluokta**	**0.79**	**236**	*i* P	Pg	23 22 15.6	-0.3
SALU	**Saltoluokta**	**0.79**	**236**	P	Pg	23 22 15.6	-0.2
KIF	**Kilpisjarvi**	**1.20**	**11**	*e*PB	Pg	23 22 23.8	+0.2
KIF				MSG		23 22 39.1	
	comp=Z,11nm,0.2s						
KIF				*e*SB	Sb	23 22 39.9	-0.3
KIF	**Kilpisjarvi**	**1.20**	**11**	*e*Pb	Pg	23 22 23.8	+0.2
KIF				*e*Sb	Sb	23 22 39.8	-0.4
PAJU	**Pajala**	**1.39**	**124**	P	Pg	23 22 26.1	-1.2
PAJU	**Pajala**	**1.39**	**124**	*e*P	Pg	23 22 26.1	-1.2
PAJU	**Pajala**	**1.39**	**124**	P	Pg	23 22 26.1	-1.2
HEF	**Hetta**	**1.42**	**64**	*e*PG	Pn	23 22 26.8	-0.9
	baz=249						
HEF				MSG		23 22 42.7	
	comp=Z,7.8nm,0.2s						
ERTU	**Ertsjaerv**	**1.50**	**148**	P	Pn	23 22 28.7	-0.1
ERTU	**Ertsjaerv**	**1.50**	**148**	*e*P	Pn	23 22 28.7	-0.1
ERTU	**Ertsjaerv**	**1.50**	**148**	P	Pn	23 22 28.7	-0.1
SGF	**Sodankyl**	**2.45**	**96**	*e*PB	Pb	23 22 44.0	-1.6
SGF				*e*SG	Sb	23 23 16.2	-0.1
RNF	**Rovaniemi**	**2.58**	**116**	*e*PB	Pn	23 22 45.6	+2.0
RNF				*e*SG	Sb	23 23 19.1	-0.7
ARE0	**ARCESS Array S**	**2.59**	**46**	*e*PB	Pn	23 22 45.0	+1.3
	baz=230						
ARE0				*e*SB	Sn	23 23 17.8	+2.0
KEV	**Kevo**	**3.14**	**49**	*e*S	Sn	23 23 30.6	+1.3
KEV				MSG		23 23 32.4	
	comp=Z,1.9nm,0.2s						
KEV	**Kevo**	**3.14**	**49**	*e*S	Sn	23 23 30.6	+1.3

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*CSEM **24** 23:22:06.0, 67°.86N×20°.18E, h0^{km}, ML1.8, Mining explosion.*

UPP 24 23:22:06.0±0.1, 67°.86N×20°.18E, h0^{km}, ML1.8, Sweden

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUA	**Kurravaara**	**0.11**	**32**	P	Pg	23 22 08.4	+0.2
KUA				S	Sg	23 22 10.3	+0.6
KUA	**Kurravaara**	**0.11**	**32**	P	Pg	23 22 08.4	+0.2
KUA				S	Sg	23 22 10.3	+0.7
RATU	**Laukkuluspa**	**0.23**	**261**	P	Pg	23 22 10.5	+0.2
RATU				S	Sg	23 22 13.6	+0.4
RATU	**Laukkuluspa**	**0.23**	**261**	P	Pg	23 22 10.5	+0.2
RATU				S	Sg	23 22 13.6	+0.4

NIKU	Nikkaluokta	0.43	272	S	Sg	23 22 20.4	+0.6
NIKU	Nikkaluokta	0.43	272	S	Sg	23 22 20.4	+0.5
SALU	Saltoluokta	0.80	234	P	Pg	23 22 21.0	-0.3
SALU	Saltoluokta	0.80	234	P	Pg	23 22 21.0	-0.3

ISCJB 24 23:34:57.3±0.7,18.°6S±0.°2×177.°8W±0.°2,h600km,mb3.4/7, Error ellipse: s-maj=28.5km s-min=16.5km az=40.1
IDC 24 23:34:57.6±4.2,18.°49S×177.°67W,h588km±49km,mb3.0/8, mb1 3.4/8,mb1mx3.1/41,mbtmp3.9/8,Error ellipse: s-maj=26.8km s-min=20.0km az=169.0
ISC 24 23:34:58.4±0.7,18.°5S±0.°2×177.°7W±0.°2,h600km,n14, σ0.s65/16,mb3.5/7,1D,Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	Urewera	20.22	192	P	P	23 38 53.6	-0.4
	3.3nm,0.3s,baz=231,slow=2.2,SNR=6.5						
WRA	Warramunga Arr	45.16	260	P	P	23 42 23.4	+0.1
	1.7nm,0.6s,baz=97,slow=7.0,SNR=31						
WRA				PcP	PcP	23 43 51.1	+0.5
	0.5nm,0.6s,baz=90,slow=3.8,SNR=4.7						
ASAR	Alice Springs	45.25	255	P	P	23 42 24.6	+0.6
	2.2nm,0.5s,baz=92,slow=7.6,SNR=25						
ASAR				PcP	PcP	23 43 51.4	+0.4
	0.7nm,0.5s,baz=96,slow=3.7,SNR=6.1						
VNDA	Vanda	59.94	185	P	P	23 44 07.0	-0.3
	0.2nm,0.4s,baz=80,slow=11,SNR=4.3						
NVAR	Mina Array Bea	79.39	43	P	P	23 46 04.2	+0.5
	0.6nm,0.5s,baz=222,slow=10,SNR=5.4						
TXAR	Lajitas Array	85.76	57	P	P	23 46 37.1	+1.3
	1.0nm,0.7s,baz=220,slow=6.0,SNR=5.9						
ILAR	Eielson Array	86.30	13	P	P	23 46 36.0	-1.3
	0.4nm,0.4s,baz=203,slow=5.5,SNR=5.0						
PDAR	Pinedale Array	87.33	43	P	P	23 46 42.6	-0.4
	0.3nm,0.8s,baz=205,slow=4.0,SNR=2.3						
ARCES	ARCESS Array B	126.98	350	PKP	PKPdf	23 52 54.0	-0.5
	1.9nm,0.8s,baz=48,slow=1.3,SNR=5.7						
BRTR	Keskin Array B	145.63	315	PKPbc	PKPbc	23 53 31.4	-0.1
	0.8nm,0.6s,baz=151,slow=5.3,SNR=6.0						
CLL	Collm	146.15	348	⇓ *i* PKPbc	PKPbc	23 53 32.2	-0.1
	comp=Z,6.0nm,0.8s						
MMAI	Mount Meron Ar	146.98	303	PKPbc	PKPbc	23 53 35.7	+0.5
	comp=Z,0.5nm,0.4s,baz=97,slow=4.5,SNR=6.1						
GERES	GERESS Array B	148.32	346	PKPbc	PKPbc	23 53 38.0	-0.1
	comp=Z,0.7nm,0.6s,baz=44,slow=4.1,SNR=8.1						
DAVOX	Davos/Dischmat	151.08	349	PKPbc	PKPbc	23 53 44.5	-0.4
	comp=Z,2.9nm,0.5s,baz=270,slow=4.0,SNR=8.6						

CSEM 24 23:43:23.8±0.7,41.°26N×20.°01E,h2km,ML2.6,Error ellipse: s-maj=13.0km s-min=7.3km az=13.0
TIR 24 23:43:24.5,41.°37N×19.°94E,h6km,Md2.6/5
SKO 24 23:43:24.9,41.°31N×19.°81E,h0km,M1.8,ML2.2
BEO 24 23:43:24.5±0.6,41.°27N×19.°99E,h0km±3km,ML2.1/10
ISC 24 23:43:22.8±1.4,41.°26N±0.°04×19.°91E±0.°03,h1km±10km, n38,σ1.s14/67,Albania

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PHP	Peshkopia	0.58	43	*i* Pg	Pg	23 43 34.2	+0.2
PHP				*i* Sg	Sg	23 43 41.8	+0.2
PHP	Peshkopia	0.58	43	*i* PG	Pg	23 43 34.2	+0.2
PHP				*i* SG	Sg	23 43 41.8	+0.2
OHR	Ohrid	0.69	102	*i* Pg	Pn	23 43 38.4	-1.2
OHR				*i* Sg	Sn	23 43 49.9	-1.0
OHR				*e*Lg	Lg	23 43 53.7	
	comp=N,109nm,0.8s						
OHR				*e*Lg	Lg	23 43 53.8	
	comp=E,58nm,0.5s						
PUK	Puka	0.79	359	*i* Pg	Pg	23 43 37.5	-0.4
PUK				*i* Sg	Sg	23 43 48.5	+0.4
PUK	Puka	0.79	359	*i* PG	Pg	23 43 37.5	-0.4
PUK				*i* SG	Sg	23 43 48.5	+0.4
KBN	Korca	0.92	133	*i* PG	Pn	23 43 44.0	+1.2
KBN				*i* SG	Sn	23 43 58.7	+2.1
KRUS	Krusevo	1.01	83	*i* Pg	Pn	23 43 43.7	-0.5
KRUS				*i* Sg	Sn	23 43 59.4	+0.3
DRME	Dracevica, Mon	1.08	330	*e*Pn	Pg	23 43 42.4	-1.0
BCI	Bajram Curri	1.12	6	*i* Pg	Pb	23 43 43.4	-1.5
BCI				*i* Sg	Sg	23 43 59.1	+0.4
BCI	Bajram Curri	1.12	6	*i* PG	Pb	23 43 43.4	-1.5
BCI				*i* SG	Sg	23 43 59.1	+0.4
PDG	Podgorica	1.27	338	*e*Pg	Pn	23 43 46.4	-1.2
PDG				*e*Sg	Sg	23 44 05.2	+1.5
PDG	Podgorica	1.27	338	*e*Pn	Pn	23 43 45.6	-2.0
PDG	Podgorica	1.27	338	*e*Pg	Pn	23 43 46.4	-1.2
PDG				*e*Sg	Sg	23 44 05.2	+1.5
SKO	Skopje	1.35	57	*e*Pg	Pb	23 43 48.7	-0.2
SKO				*e*Sg	Sg	23 44 06.4	+0.2
SKO	Skopje	1.35	57	*e*Pg	Pg	23 43 50.3	+1.7
SKO				*e*Sg	Sg	23 44 07.2	+1.0
SKO	Skopje	1.35	57	*e*Pg	Pb	23 43 48.7	-0.2
SKO				*e*Sg	Sg	23 44 06.4	+0.2
HCY	Herceg Novi	1.59	319	*e*Pn	Pn	23 43 52.0	-0.1
TREB	Trebinje	1.87	322	*e*Pn	Pb	23 43 57.4	-0.3
TREB				*e*Sn	Sg	23 44 23.7	+0.9
TREB	Trebinje	1.87	322	*e*Pn	Pb	23 43 57.4	-0.3
TREB				*e*Sn	Sg	23 44 23.7	+0.9
BRY	Bratogost	1.94	329	*e*Pn	Pb	23 43 58.8	-0.1
VAY	Valandovo	2.00	87	*e*Pg	Pb	23 43 59.2	-0.8
VAY				*e*Sg	Sg	23 44 26.0	-1.2
VAY	Valandovo	2.00	87	*e*Pg	Pb	23 43 59.2	-0.8
VAY				*e*Sg	Sg	23 44 26.0	-1.2
SJES	Sjenica	2.00	1	*e*Pn	Pb	23 43 59.0	-1.1
SJES				*e*Sn	Sb	23 44 25.4	-0.2
SJES	Sjenica	2.00	1	*e*Pn	Pb	23 43 59.0	-1.1
SJES				*e*Sn	Sb	23 44 25.4	-0.2
SELS	Selova	2.16	24	*e*Pn	Pb	23 44 02.6	0.0
SELS				*e*Sn	Sn	23 44 27.4	+0.2
STON	Ston	2.31	315	*e*Pn	Pb	23 44 04.3	-0.8
STON				*e*Sn	Sb	23 44 33.5	-0.6
STON	Ston	2.31	315	*e*Pn	Pn	23 44 03.5	+1.6
STON				Sn	Sb	23 44 33.1	-1.0
STON	Ston	2.31	315	*e*Pn	Pb	23 44 04.3	-0.8
STON				*e*Sn	Sb	23 44 33.5	-0.6
IVAS	Ivanjica	2.33	4	*e*Pn	Pn	23 44 02.8	+0.6
IVAS	Ivanjica	2.33	4	*e*Pn	Pn	23 44 02.8	+0.6
BBLS	Lazići	2.64	352	*e*Pn	Pn	23 44 08.5	+2.0
BBLS				*e*Sn	Sb	23 44 41.3	-2.4
BBLS	Lazići	2.64	352	*e*Pn	Pn	23 44 08.5	+2.0
BBLS				*e*Sn	Sb	23 44 41.3	-2.4
BOVS	Bovan	2.72	29	*e*Sn	Pn	23 44 09.3	+1.7
BOVS	Bovan	2.72	29	*e*Pn	Sn	23 44 41.5	+0.4
DIVS	Divibare	2.84	1	*e*Pn	Pn	23 44 11.3	+2.0
DIVS				*e*Sn	Sn	23 44 45.4	+1.2
DIVS	Divibare	2.84	1	*e*Pn	Pn	23 44 11.3	+2.0
DIVS				*e*Sn	Sn	23 44 45.4	+1.2
HAPS	Han Pijesak,Bl	2.92	346	*e*Pn	Pb	23 44 13.9	-1.7
NVLJ	Novalja	4.96	313	*e*Pn	Pn	23 44 39.2	+0.9
NVLJ				Sn	Sn	23 45 36.5	+0.2

WEL 24 23:47:57.4,38°S±9°×18°0W±°,h33km,ML3.5/19,East of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	Waiomatatini S	1.54	270	P	Pn	23 48 22.8	+0.3
WMGZ				S	Sn	23 48 41.7	+0.4
MXZ	Matakaoa Point	1.65	279	P	Pn	23 48 24.1	0.0
PUZ	Puketiti	1.67	261	P	Pn	23 48 25.2	+0.7
PKGZ	Pakihiroa	1.80	268	P	Pn	23 48 26.5	+0.2
CNGZ	Carnagh Statio	1.81	249	P	Pb	23 48 28.4	-1.5
TWGZ	Tauwhareparae	1.91	259	P	Pn	23 48 28.8	+1.2
HAZ	Te Kaha	2.04	272	P	Pn	23 48 30.5	+1.0
TKGZ	Te Karaka	2.06	252	P	Pn	23 48 31.2	+1.4
TKGZ				S	Sn	23 48 56.2	+1.9
RUGZ	Raukumara Rang	2.12	266	P	Pn	23 48 31.0	+0.3
RIGZ	Rimuhau	2.21	246	P	Pn	23 48 33.4	+1.5
RIGZ				S	Sn	23 48 59.9	+1.7
PRGZ	Paritu Road	2.22	240	P	Pb	23 48 34.5	-2.5
MWZ	Matawai	2.28	257	P	Pn	23 48 33.5	+0.7
MWZ				S	Sn	23 49 00.8	+1.0
MHGZ	Mahia Peninsul	2.32	235	P	Pn	23 48 35.8	+2.4
MHGZ				S	Sb	23 49 04.8	-2.1
KNZ	Kokohu	2.41	240	P	Pn	23 48 36.4	+1.9
SNGZ	Shannon Statio	2.55	247	P	Pn	23 48 38.2	+1.7
URZ	Urewera	2.59	260	P	Pn	23 48 38.4	+1.4
URZ				S	Sn	23 49 08.1	+0.7
RTZ	Ruatahuna	2.77	253	P	Pn	23 48 41.4	+1.9
RAHZ	Arahi	2.78	246	P	Pn	23 48 41.7	+2.0
MUGZ	Murupara	2.90	256	P	Pn	23 48 42.5	+1.3
MTHZ	Maungataniwha	2.94	249	P	Pn	23 48 43.5	+1.6
MTHZ				S	Sn	23 49 17.7	+1.6
ARHZ	Aropaoanui	2.99	241	P	Pn	23 48 44.4	+1.8
MCHZ	McNeill Hill	3.28	240	P	Pn	23 48 48.5	+2.0
BKZ	Black Stump Fm	3.31	245	P	Pn	23 48 48.7	+1.8
KAHZ	Kahuranaki	3.34	233	P	Pn	23 48 49.4	+2.0
KWHZ	Kaweka Forest	3.46	242	P	Pn	23 48 50.7	+1.7
KRHZ	Kereru	3.60	239	P	Pn	23 48 52.4	+1.4

MAN 25 00:02:05.4,10.°10N×123.°24E,h1km,mb4.3,ML3.2,MS2.9, 2C-1D,Cebu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TBP	Tagbilaran	0.73	124	*e*P	Pb	00 02 20.3	-0.7
LLP	Lapu-Lapu	0.74	73	⇓ *e*P	Pg	00 02 19.4	-0.2
LLP				*i* S	Sg	00 02 29.3	0.0
GUIM	Jordan	0.83	309	*e*P	Pg	00 02 21.6	+0.3
GUIM				*e*S	Sb	00 02 33.5	-0.8
JAP	San Jose, Anti	1.43	297	⇑ *e*P	Pb	00 02 35.4	+2.6
RCP	Roxas	1.53	341	⇑ *e*P	Pn	00 02 33.8	0.0
RCP				*e*S	Sg	00 02 57.1	+2.5
MSLP	Maasin	1.59	89	*e*P	Pn	00 02 34.5	-0.3
MSLP				*e*S	Sg	00 02 57.0	+0.4
OCLP	Ormoc	1.64	55	*e*P	Pn	00 02 34.9	-0.5
OCLP				*e*S	Sb	00 02 57.8	+0.1
BUKP	Musuan	2.85	141	*e*P	Pn	00 02 52.4	+0.4
BUKP				*e*S	Sb	00 03 31.4	-1.1

CSEM 25 00:07:02.7,31.°68N×6.°40W,h1km,ML2.0
CNRM 25 00:07:02.7,31.°68N×6.°40W,h1km,ML2.0,Morocco

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OUK	Oukaimeden	1.34	250	P	Pb	00 07 28.7	-0.2
OUK				S	Sn	00 07 49.2	+1.6
CZD	Col de Zad	1.77	40	P	Pb	00 07 35.7	-0.4
CZD				S	Sg	00 07 59.2	-0.3
MDT	Midelt	1.89	53	P	Pn	00 07 37.1	+0.9
MDT				S	Sb	00 08 02.2	+0.1

IDC 25 00:23:44.5±2.1,2.°69N×96.°29E,h0km,mb3.7/7,mb1 3.8/7, mb1mx3.5/63,mbtmp3.7/7,Error ellipse: s-maj=73.6km s-min=20.2km az=58.0
ISCJB 25 00:23:45.7±1.4,2.°55N±0.°05×95.°88E±0.°06,h25km±9km, mb3.8/8,Error ellipse: s-maj=10.9km s-min=8.9km az=158.2
DJA 25 00:23:47.3±0.8,3°N±3°×9°6E±°,h10km,M4.1/8,mb4.4/2, MLv3.9/8
ISC 25 00:23:48.4±1.6,2.°61N±0.°05×96.°07E±0.°10,h31km±10km, n22,σ1.s16/20,mb3.9/8,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNSI	Sinabang, Aceh	0.33	128	P	Pb	00 23 55.8	-0.5
SNSI				S	Sn	00 24 00.8	-1.9
TPTI		1.28	60	P	Pn	00 24 10.5	+0.3
TPTI				S	Sb	00 24 29.6	+1.5
MLSI	Meulaboh, Aceh	1.68	11	P	Pn	00 24 16.4	+0.7
MLSI				S	Sb	00 24 38.5	-1.0
KCSI	Kotacane, Aceh	1.93	62	P	Pn	00 24 20.7	+1.6
KCSI				S	Sb	00 24 45.7	-0.8
GSI	Gunungsitoli	1.99	131	P	Pn	00 24 21.4	+1.5
GSI				S	Sb	00 24 48.0	-0.3
TSI	Tuntungan	2.64	70	P	Pb	00 24 41.1	+6.0
MNSI	Mandailing Nat	3.94	117	P	Pn	00 24 48.7	+1.8
CMAR	Chiang Mai Arr	16.00	10	Pn	Pn	00 27 32.8	+1.4
	0.2nm,0.3s,baz=200,slow=11,SNR=6.4						
H08S2	Diego Garcia H	25.63	246	T	T	00 55 35.3	
	baz=67						
H08S3	Diego Garcia H	25.64	246	T	T	00 55 41.0	
	baz=67						
H08S1	Diego Carcia H	25.65	246	T	T	00 55 42.9	
	baz=67						
H01W3	Cape Leeuwin H	40.97	157	T	T	01 14 48.3	
	baz=332,slow=76,SNR=15						
H01W2	Cape Leeuwin H	40.98	157	T	T	01 14 49.8	
	baz=332,slow=76,SNR=13						
H01W1	Cape Leeuwin H	40.99	157	T	T	01 14 49.5	
	baz=332,slow=76,SNR=15						
WRA	Warramunga Arr	43.74	123	P	P	00 31 50.6	-0.8
	1.0nm,1.1s,baz=301,slow=9.1,SNR=2.6						
ASAR	Alice Springs	45.14	127	P	P	00 32 02.3	-0.3
	0.4nm,0.8s,baz=305,slow=7.3,SNR=3.1						
KSRS	Korea Array	45.36	36	P	P	00 32 02.5	-1.5
	0.4nm,0.3s,baz=218,slow=7.6,SNR=3.4						
MKAR	Makanchi Array	45.62	347	P	P	00 32 06.3	+0.4
	1.1nm,0.6s,baz=162,slow=8.1,SNR=16						
SONM	Songino Array	45.93	10	P	P	00 32 08.8	+0.3
	1.2nm,0.8s,baz=187,slow=8.9,SNR=6.5						
KURBB	Kurchatov Arra	50.09	346	P	P	00 32 40.7	+0.3
	0.8nm,0.7s,baz=169,slow=7.1,SNR=12						
ZALV	Zalesovo Beam	52.00	352	P	P	00 32 55.2	+0.5
	1.7nm,0.6s,baz=176,slow=7.4,SNR=9.1						
BVAR	Borovoye Array	54.56	341	P	P	00 33 13.9	+0.3
	0.4nm,0.3s,baz=123,slow=10,SNR=3.1						

BJI 25 00:27:41.1,2.°43N×96.°13E,h23km,mb6.0/85,mB6.4/66, Ms6.7/94,Ms7 6.7/85
ISCJB 25 00:27:42.3±0.4,2.°63N±0.°02×96.°07E±0.°01,h16km±3km, mb5.9/399,MS6.4/274,Error ellipse: s-maj=2.8km s-min=2.0km az=28.9
IDC 25 00:27:43.5±1.0,2.°67N×96.°11E,h14km±6km,mb5.5/60, mb1 5.4/62,mb1mx5.4/65,mbtmp5.5/62,ML4.8/2,MS6.3/56, Ms1 6.3/56,ms1mx6.2/64,Error ellipse: s-maj=7.8km s-min=6.5km az=12.0
DJA 25 00:27:44.5±0.1,3°N±1°×9°6E±°,h10km,M6.2/96,mb5.9/96, mB6.4/88,MLv6.3/4,Mw(mB)6.1/88,Mwp6.2/36
NEIC 25 00:27:45.0±0.0,2.°16N×95.°83E,h17km,Moment Tensor Solution. s19 Moment tensor: Scale 10^{18}Nm; M_{rr}2.05; $M_{\theta\theta}$-1.34; $M_{\phi\phi}$-0.71; $M_{r\theta}$3.28; $M_{\theta\phi}$1.01; $M_{\phi r}$-3.70; Best double couple: $M_0$5.40000×10^{18} NP1:ϕ_s137.00000°, δ79.00000°,λ94.00000°. NP2:ϕ_s296.00000°,δ12.00000°, λ69.00000°. Principal axes: T 5.3800, Plg55.0000°, Azm53.0000°; N -0.0400, Plg4.0000°, Azm316.0000°; P -5.3300, Plg33.0000°, Azm223.0000°;
MOS 25 00:27:45.0±1.0,2.°65N×96.°10E,h38km,mb6.2/151, MS6.4/80 Error ellipse: s-maj=5.9km s-min=3.6km az=118.7
NEIC 25 00:27:45.3±0.1,2.°71N×96.°05E,h22km,mb5.9/184,ME6.2, MS6.5/166,MW6.3,MW6.4,Error ellipse: s-maj=3.9km s-min=2.8km az=205.0,Moment Tensor Solution. s95 Moment tensor: Scale 10^{18}Nm; M_{rr}1.62; $M_{\theta\theta}$-1.27; $M_{\phi\phi}$-0.35; $M_{r\theta}$2.93; $M_{\theta\phi}$0.53; $M_{\phi r}$-2.25; Best double couple: $M_0$4.00000×10^{18} NP1:ϕ_s126.00000°,δ79.00000°, λ94.00000°. NP2:ϕ_s286.00000°,δ12.00000°,λ70.00000°. Principal axes: T 4.0900, Plg56.0000°, Azm42.0000°; N -0.1700, Plg4.0000°, Azm305.0000°; P -3.9200, Plg34.0000°, Azm213.0000°; Broadband fault plane solution: P waves. NP1:ϕ_s305.00000°,δ10.00000°, λ90.00000°. NP2:ϕ_s125.00000°,δ80.00000°,λ90.00000°. Principal axes: T Plg55.0000°, Azm35.0000°; N Plg0.0000°, Azm0.0000°; P Plg35.0000°, Azm215.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.
NEIC Felt [IV] on Pulau Simeulue. Felt [III] at Banda Aceh, Sumatra. Also felt at Medan. Felt at Butterworth, Malaysia.
GCMT 25 00:27:45.3±0.1,2.°46N×95.°93E,h20km,MW6.4/146, Moment Tensor Solution. s146,c349; s142,c543; Duration: 3.s7 Moment tensor: Scale 10^{18}Nm; M_{rr}2.17±.01; $M_{\theta\theta}$-1.54±.01; $M_{\phi\phi}$-0.63±.01; $M_{r\theta}$2.50±.03; $M_{\theta\phi}$0.99±.01; $M_{\phi r}$-2.80±.03; Best double couple: $M_0$4.33700×10^{18} NP1:ϕ_s136.00000°,δ75.00000°, λ97.00000°. NP2:ϕ_s291.00000°,δ16.00000°,λ66.00000°. Principal axes: T 4.3910, Plg59.0000°, Azm55.0000°; N -0.1130, Plg7.0000°, Azm314.0000°; P -4.2820, Plg30.0000°, Azm220.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.
KLM 25 00:27:51.0,2.°79N×96.°05E,h69km,mb6.1
ISC 25 00:27:45.8±0.3,2.°63N±0.°02×96.°11E±0.°02,h29km±1km, h29km:pP-P,n2485,σ1.s73/2690,mb5.9/402,MS6.4/306, 111C-43D,Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNSI	Sinabang, Aceh	0.30	135	P	Pb	00 27 49.9	-3.3
SNSI				S	Sb	00 27 53.2	-5.0
TPTI		1.24	59	P	Pb	00 28 08.6	0.0
TPTI				S	Sb	00 28 27.4	+3.2
MLSI	Meulaboh, Aceh	1.66	10	P	Pb	00 28 14.6	-1.1
MLSI				S	Sb	00 28 37.8	+1.6
KCSI	Kotacane, Aceh	1.88	62	P	Pn	00 28 17.6	+1.5
KCSI				S	Sb	00 28 43.0	+0.3
GSI	Gunungsitoli	1.97	132	P	Pn	00 28 16.8	-0.5
GSI				S	Sn	00 28 42.2	+1.2
GSI	Gunungsitoli	1.97	132	*e*Pn	Pn	00 28 18.3	+1.0
TSI	Tuntungan	2.60	70	P	Pn	00 28 27.4	+1.4
TSI				S	Sb	00 29 00.3	-3.0
LHMI	Lhok Sumawe	2.72	18	P	Pn	00 28 29.6	+2.0
LHMI				S	Sb	00 29 04.4	-2.3
LHMI	Lhok Sumawe	2.72	18	*e*Pn	Pn	00 28 29.7	+2.0
PSI	Prapat	2.81	86	*e*Pn	Pn	00 28 30.6	+1.6
PSI	Prapat	2.81	86	*e*P	Pn	00 28 30.6	+1.6
BSI	Banda Aceh	2.96	344	P	Pn	00 28 31.6	+0.6
PBSI	Pulau Batu	3.43	141	P	Pn	00 28 36.5	-0.9
MNSI	Mandailing Nat	3.92	118	P	Pn	00 28 43.6	-0.5
CMBY	CAMPBELL BAY	4.87	334	*e*P	Pn	00 28 55.9	-1.3
CMBY				IAmb	IAmb	00 29 01.8	
	comp=Z,3µm,1.0s						
SISI	Saibi	4.93	143	P	Pn	00 28 57.6	-0.4
IPM	Ipoh	5.24	69	*e*Pn	Pn	00 29 04.3	+2.0
KULM	Kulim	5.25	60	*e*Pn	Pn	00 29 04.1	+1.7
BKNI	Bangkinang	5.43	115	P	Pn	00 29 05.5	+0.6
BKNI	Bangkinang	5.43	115	*e*Pn	Pn	00 29 06.4	+1.4
TRTT	Trang	6.29	34	P	Pn	00 29 17.7	+1.0
	comp=Z,832nm,1.1s,comp=Z,15µmcomp=Z,157µmcomp=Z,12nm						
KRAB	Krabi	6.35	29	P	Pn	00 29 18.9	+1.3
	comp=Z,2µm,0.6s,comp=Z,34µmcomp=Z,17nm						
SKLT	Songkhla	6.37	45	P	Pn	00 29 19.1	+1.3
	comp=Z,2µm,0.8s,comp=Z,40µmcomp=Z,523µmcomp=Z,37nm						
PPSI	Pulau Pagai	6.62	144	P	Pn	00 29 20.8	-0.5
KRJI	Kerinci	7.11	131	P	Pn	00 29 27.9	-0.2
MYKOM	Kota Tinggi	7.78	96	*e*Pn	Pn	00 29 38.3	+1.1
MASI	Maura Aman, Be	8.39	133	P	Pn	00 29 45.7	+0.1
TPRI	Tanjung Pinang	8.58	101	P	Pn	00 29 47.9	-0.3
MNAI	Manna	9.74	135	P	Pn	00 30 03.3	-0.9
MNAI	Manna	9.74	135	*e*Pn	Pn	00 30 03.5	-0.7
PMBI	Palembang	10.27	122	P	Pn	00 30 09.6	-1.7
	comp=Z,1µm,1.3s,comp=Z,73µmcomp=Z,80µm						
MDSI	Maura Dua	10.72	131	P	Pn	00 30 16.2	-1.3
	comp=Z,2µm,0.8s,comp=Z,17µm						
PHET	Kaeng Krachan	10.80	19	P	Pn	00 30 23.8	+5.2
	comp=Z,128nm,1.2s,comp=Z,1µm						
LWLI	Liwa	10.99	134	P	Pn	00 30 20.3	-1.0
	comp=Z,2µm,0.6s,comp=Z,23µm						
PATY	Pattaya	11.26	24	P	Pn	00 30 29.5	+4.5
	comp=Z,102nm,0.8s						
KLI	Kotabumi	11.47	130	P	Pn	00 30 27.8	-0.1
	comp=Z,1µm,1.1s,comp=Z,15µm						
KLI	Kotabumi	11.47	130	P	Pn	00 30 27.8	-0.1
KLI				pmax	pmax		
	comp=Z,1µm,1.0s						
KASI	Kota Agung	11.65	134	P	Pn	00 30 28.1	-2.2
	comp=Z,1µm,1.0s,comp=Z,10µmcomp=Z,47µm						
SRDT	SRDT	12.02	14	P	Pn	00 30 38.6	+3.2
	comp=Z,379nm,1.2s,comp=Z,13µm						
BLSI	Bandar Lampung	12.10	131	P	Pn	00 30 36.3	-0.1
	comp=Z,695nm,1.0s,comp=Z,8µmcomp=Z,40µm						
NAYO	Nakonayok	12.70	24	P	Pn	00 30 46.4	+1.7
	comp=Z,9.8nm,1.8s,comp=Z,447nm						
SRAK	Srakaew	12.74	27	P	P	00 30 51.9	-4.1
	comp=Z,2µm,0.6s,comp=Z,22µmcomp=Z,3µm						
SBJI	Serang	13.25	131	P	Pn	00 30 50.7	-1.5
	comp=Z,819nm,0.9s,comp=Z,13µm						
CGJI	Cibinong	13.26	134	P	Pn	00 30 48.0	-4.3
	comp=Z,330nm,1.5s,comp=Z,6µm						
UMPA	Umpang Tak	13.76	11	P	Pn	00 31 03.2	+4.0
	comp=Z,130nm,1.0s,comp=Z,1µm						
DBJI	Dramaga	14.00	131	P	Pn	00 31 00.1	-2.3
	comp=Z,493nm,2.2s						
SKJI	Sukabumi	14.15	133	P	Pn	00 31 03.9	-0.6
	comp=Z,505nm,0.8s,comp=Z,9µm						
KSM	Kuching	14.23	94	*e*Pn	Pn	00 31 07.4	+1.7
PBKT	Sadao Pong	14.66	19	*e*Pn	Pn	00 31 09.1	-2.3
PBKT	Sadao Pong	14.66	19	P	Pn	00 31 11.8	+0.4
	comp=Z,656nm,1.6s,comp=Z,19µm						
PHIT	Phitsanulok	15.08	16	P	Pn	00 31 18.9	+1.9
	comp=Z,955nm,0.9s,comp=Z,7µm						
KHON	Khomkaen	15.14	25	P	Pn	00 31 19.7	+1.8
	comp=Z,476nm,0.9s,comp=Z,3µm						
JCJI	Jatiwangi	15.14	127	P	P	00 31 21.0	-1.8
	comp=Z,868nm,1.4s,comp=Z,11µm						
STKI	Sintang	15.57	99	P	Pn	00 31 25.1	+1.6
	comp=Z,842nm,1.5s,comp=Z,23µmcomp=Z,71µm						
UBPT	Khong Chiam	15.60	36	P	Pn	00 31 25.0	+1.2
	comp=Z,1µm,1.2s,comp=Z,32µm						
UTTA	Uttaradit	15.64	16	P	Pn	00 31 24.9	+0.5
	comp=Z,182nm,0.9s,comp=Z,1µm						
CM01	Chiang Mai Arr	15.94	10	*e*Pn	Pn	00 31 26.9	-1.4
CM31	Chiang Mai Arr	15.98	10	*e*Pn	Pn	00 31 29.1	+0.4
CMAR	Chiang Mai Arr	15.98	10	Pn	Pn	00 31 27.4	-1.4
	comp=Z,1.5nm,0.3s,baz=196,slow=14,SNR=77						
CMAR				Sn	S	00 34 39.6	+1.2
	comp=Z,0.5nm,0.3s,baz=205,slow=21,SNR=2.5						
CMAR				LR	LR	00 38 27.6	
	comp=Z,160µm,19.5s,baz=198,slow=40						
CMAR	Chiang Mai Arr	15.98	10	*i* P	Pn	00 31 28.7	0.0
CMAR				pmax	pmax		
	comp=Z,43nm,0.8s						
PALK	Pallekele	16.03	287	Pn	Pn	00 31 28.8	-0.7
	comp=Z,2.5nm,0.3s,baz=116,slow=13,SNR=22						
PALK				Sn	Sn	00 34 13.4	-13
	comp=Z,21nm,0.3s,baz=116,slow=6.7,SNR=8.4						
PALK				LR	LR	00 37 05.9	
	comp=Z,209µm,20.1s,baz=119,slow=35						
PALK	Pallekele	16.03	287	*e*Pn	Pn	00 31 29.7	+0.3
	comp=Z,511nm,1.1s						
PALK				*e*Sn	Sn	00 34 10.4	-16
PALK	Pallekele	16.03	287	P	P	00 31 33.2	+0.6
	SNR=22						
PALK	Pallekele	16.03	287	*i* P	Pn	00 31 29.5	0.0
	SNR=26						
PALK	Pallekele	16.03	287	*i* P	P	00 31 33.8	+1.2
CMJI	Cimerak	16.07	130	P	Pn	00 31 28.4	-1.6
	comp=Z,236nm,1.1s,comp=Z,4µm						
SBUM	Sibu	16.09	90	*e*Pn	Pn	00 31 31.1	+0.9
	comp=Z,449nm,1.2s						
LAMP	Lampang	16.17	12	P	Pn	00 31 31.5	+0.3
	comp=Z,156nm,0.9s,comp=Z,1µm						
KPJI	Karang Pucung	16.17	128	P	Pn	00 31 29.9	-1.3
	comp=Z,292nm,0.6s,comp=Z,5µm						
SKNT	Sakolnakorn	16.22	28	P	Pn	00 31 31.6	-0.3
	comp=Z,298nm,1.3s,comp=Z,9µmcomp=Z,51µm						
CHTO	Chiang Mai	16.33	10	*e*Pn	Pn	00 31 32.5	-0.7
	comp=Z,321nm,1.0s						
CHTO	Chiang Mai	16.33	10	P	Pn	00 31 31.9	-1.3
	SNR=86						
CHTO	Chiang Mai	16.33	10	*e*P	Pn	00 31 32.5	-0.7
CHTO				pmax	pmax		
	comp=Z,321nm,1.0s						
CHTO	Chiang Mai	16.33	10	P	Pn	00 31 32.7	-0.5
	comp=Z,1µm,1.1s,comp=Z,69µmcomp=Z,590µm						
CMMT	Chiang Mai	16.33	10	P	Pn	00 31 32.6	-0.6
	comp=Z,297nm,1.7s,comp=Z,15µm						
PBKI	Pangkalan Bun	16.43	109	P	P	00 31 36.6	-0.5
	comp=Z,3µm,1.3s,comp=Z,33µmcomp=Z,62µm						
SMRI	Semarang	17.23	124	P	P	00 31 45.6	-0.3
	comp=Z,647nm,1.0s,comp=Z,12µm						
SMRI	Semarang	17.23	124	*e*Pn	Pn	00 31 45.2	+0.5
	comp=Z,615nm,1.0s						
UGM	Wanagama	17.78	126	P	P	00 31 52.6	+0.5
	comp=Z,624nm,1.3s,comp=Z,10µm						
UGM	Wanagama	17.78	126	*e*Pn	Pn	00 31 47.6	-3.9
	comp=Z,210nm,0.7s						
WOJI	Wonogiri, Jawa	18.07	125	P	Pn	00 31 54.1	-0.8
	comp=Z,239nm,1.3s,comp=Z,3µm						
NGJI	Ngawi	18.25	123	P	P	00 31 58.8	+1.6
	comp=Z,562nm,1.8s,comp=Z,12µm						
TBJI	Tambak Boyo	18.30	121	P	Pn	00 31 59.1	+1.4
	comp=Z,294nm,1.0s,comp=Z,7µmcomp=Z,24µm						
PCJI	Pacitan	18.48	126	P	Pn	00 32 10.3	+10
GRJI	Gresik	18.89	120	P	Pn	00 32 07.5	+2.6
	comp=Z,661nm,0.9s,comp=Z,5µm						
PWJI	Pagerwojo	18.89	124	P	Pn	00 32 05.4	+0.4
	comp=Z,293nm,1.3s,comp=Z,3µm						

MTKI	**Muara Teweh, K**	**19.11**	**100**	P	**Pn**	**00 32 07.8**	**+0.1**
	comp=Z,1µm,2.0s,comp=Z,26µmcomp=Z,98µm						
VIS	**Vishakhapatnam**	**19.55**	**321**	*i* P	**P**	**00 32 10.9**	**-0.5**
VIS				*i* x	x	00 35 39.3	
SKHT	**Srikalahasti**	**19.61**	**305**	*e*P	**P**	**00 32 11.4**	**-0.7**
SKHT				IAmb	IAmb	00 32 26.2	
	comp=Z,1µm,1.9s						
SKHT				IVMs_BB	IVMs_BB	00 38 55.3	
	comp=Z,43µm,20.6s						
CHLP	**Challavanipeta**	**19.71**	**324**	*e*P	**P**	**00 32 12.7**	**-0.5**
CHLP				IAmb	IAmb	00 32 20.9	
	comp=Z,420nm,1.0s						
CHLP				IVMs_BB	IVMs_BB	00 39 49.5	
	comp=Z,51µm,19.0s						
TRD	**Trivandrum**	**19.93**	**288**	*e*S	**Sn**	**00 36 00.3**	**-0.6**
SAIH	**SAIHA**	**19.98**	**352**	*e*P	**P**	**00 32 15.7**	**-0.5**
BWNR	**Bhubaneshwar**	**20.24**	**331**	*e*P	**P**	**00 32 18.4**	**-0.5**
BLJI	**Banyuglugur**	**20.26**	**121**	P	Pn	00 32 21.1	-0.2
	comp=Z,495nm,1.4s,comp=Z,8µm						
KKM	**Kota Kinabalu**	**20.33**	**80**	*e*P	**P**	**00 32 20.6**	**+0.5**
	comp=Z,2µm,1.5s						
KKM				LR	LR		
	comp=Z,42µm,22.0s						
KKM	**Kota Kinabalu**	**20.33**	**80**	P	Pn	00 32 22.0	-0.2
PVM	**Polavaram**	**20.34**	**317**	*e*P	Pn	00 32 21.3	-0.9
PVM				IAmb	IAmb	00 32 29.3	
	comp=Z,291nm,1.0s						
PVM				IVMs_BB	IVMs_BB	00 39 02.9	
	comp=Z,26µm,21.3s						
GMJI	**Gumukmas**	**20.40**	**122**	P	Pn	00 32 26.6	+3.7
BRDH	**Bariadhala**	**20.40**	**348**	P	**P**	**00 32 20.0**	**-0.6**
	comp=Z,345nm,0.6s,baz=201,slow=8.6,SNR=7.0						
BRDH				S	Sn	00 36 15.1	+3.1
	comp=Z,101nm,0.3s,baz=180,slow=20,SNR=1.9						
ADKI	**Addanki**	**20.62**	**311**	*e*P	**P**	**00 32 24.2**	**+1.1**
ADKI				IAmb	IAmb	00 32 35.2	
	comp=Z,763nm,1.3s						
ADKI				IVMs_BB	IVMs_BB	00 39 38.9	
	comp=Z,49µm,20.5s						
KBKI	**Kotabaru**	**20.89**	**106**	P	Pn	00 32 28.4	-0.3
	comp=Z,300nm,0.8s						
BELO	**BELONIA**	**20.99**	**348**	*e*P	**P**	**00 32 26.4**	**-0.6**
KDM	**Kudat**	**21.08**	**78**	P	**P**	**00 32 29.0**	**+0.9**
JAGI	**Jajag, Banyuwa**	**21.10**	**122**	P	**P**	**00 32 31.3**	**+3.0**
	comp=Z,271nm,0.9s,comp=Z,5µm						
JAGI	**Jajag, Banyuwa**	**21.10**	**122**	*e*P	**P**	**00 32 27.3**	**-1.0**
	comp=Z,211nm,0.9s						
JAGI				LR	LR		
	comp=Z,112µm,21.0s						
QIZ	**Qiongzhong**	**21.13**	**39**	P	**P**	**00 32 28.3**	**-0.3**
QIZ				pP	**pP**	**00 32 33.9**	**-2.4**
QIZ				sP	**sP**	**00 32 37.4**	**-2.6**
QIZ				S	**S**	**00 36 25.6**	**+3.3**
QIZ				sS	**sS**	**00 36 32.3**	**-2.4**
QIZ				LR	LR		
	comp=Z,183µm,16.7s						
QIZ				LR	LR		
	comp=Z,164µm,18.6s						
QIZ	**Qiongzhong**	**21.13**	**39**	*e*P	**P**	**00 32 29.2**	**+0.6**
	comp=Z,984nm,1.5s						
QIZ				LR	LR		
	comp=Z,187µm,19.0s						
BKB	**Balikpapan**	**21.14**	**100**	P	**P**	**00 32 31.4**	**+2.7**
	comp=Z,4µm,1.2s,comp=Z,53µmcomp=Z,136µm						
SMKI	**Samarinda**	**21.31**	**98**	P	**P**	**00 32 34.0**	**+3.4**
	comp=Z,963nm,1.2s,comp=Z,15µmcomp=Z,75µm						
NJS	**Nagarjunasagar**	**21.56**	**311**	*e*P	**P**	**00 32 33.9**	**+0.7**
NJS				IAmb	IAmb	00 32 44.6	
	comp=Z,657nm,1.0s						
NJS				IVMs_BB	IVMs_BB	00 39 55.0	
	comp=Z,39µm,22.6s						
SRLM	**Srisailam**	**21.60**	**309**	*e*P	**P**	**00 32 34.4**	**+0.7**
SRLM				IAmb	IAmb	00 32 44.6	
	comp=Z,668nm,1.1s						
SRLM				IVMs_BB	IVMs_BB	00 43 43.0	
	comp=Z,41µm,16.6s						
AGT	**Agartala**	**21.65**	**348**	*e*P	**P**	**00 32 33.4**	**-0.7**
AGT				IAmb	IAmb	00 32 37.7	
	comp=Z,296nm,0.7s						
SRBI	**Singaraja**	**21.82**	**119**	P	**P**	**00 32 38.7**	**+2.7**
	comp=Z,740nm,1.5s,comp=Z,9µmcomp=Z,24µm						
IGBI	**Denpasar**	**22.12**	**121**	P	**P**	**00 32 41.5**	**+2.2**
	comp=Z,170nm,1.4s,comp=Z,5µm						
SILR	**SILCHAR**	**22.26**	**352**	*e*P	**P**	**00 32 41.4**	**+0.8**
URV	**Uravakonda**	**22.26**	**304**	*e*P	**P**	**00 32 40.6**	**-0.2**
URV				IAmb	IAmb	00 32 49.1	
	comp=Z,249nm,0.9s						
URV				IVMs_BB	IVMs_BB	00 43 37.1	
	comp=Z,42µm,15.7s						
BATP	**Bataraza**	**22.43**	**73**	*e*P	**P**	**00 32 42.9**	**+0.3**
MYLDM	**Lahad Datu**	**22.48**	**83**	*e*P	**P**	**00 32 43.7**	**+0.6**
	comp=Z,1µm,1.1s						
MYLDM				LR	LR		
	comp=Z,77µm,18.0s						
HYB	**Hyderabad**	**22.66**	**312**	*i* P	**P**	**00 32 44.0**	**-1.0**
	comp=Z,560nm,1.0s						
HYB				*e*PP	**PnPn**	**00 33 08.0**	**-1.3**
HYB				*e*S	**S**	**00 36 52.0**	**+0.4**
HYB				LR	LR		
	comp=Z,80nm,22.0s						
HYB	**Hyderabad**	**22.66**	**312**	*e*P	**P**	**00 32 43.6**	**-1.4**
HYB				IAmb	IAmb	00 32 58.0	
	comp=Z,5µm,2.7s						
HYBB	**Hyderabad (bro**	**22.66**	**312**	*e*P	**P**	**00 32 43.6**	**-1.4**
HYBB				IAmb	IAmb	00 32 56.6	
	comp=Z,2µm,1.8s						
HYBB				IVMs_BB	IVMs_BB	00 40 49.2	
	comp=Z,41µm,21.4s						
RPR	**Rampur**	**23.05**	**316**	*e*P	**P**	**00 32 49.4**	**+0.4**
RPR				IAmb	IAmb	00 32 58.0	
	comp=Z,593nm,1.1s						
RPR				IVMs_BB	IVMs_BB	00 41 19.5	
	comp=Z,28µm,19.0s						
SHL	**Shillong**	**23.17**	**350**	*e*P	**P**	**00 32 46.9**	**-3.5**
	comp=Z,683nm,0.9s						
SHL				LR	LR		
	comp=Z,28µm,19.0s						
SHL	**Shillong**	**23.17**	**350**	*e*P	**P**	**00 32 48.1**	**-2.3**
SHL				IAmb	IAmb	00 32 52.3	
	comp=Z,372nm,1.0s						
SHL	**Shillong**	**23.17**	**350**	*e*P	**P**	**00 32 46.9**	**-3.5**
SHL				pmax	pmax		
	comp=Z,683nm,0.9s						
SHL				MLR	MLR		
	comp=Z,28µm,19.0s						
HMDM	**Hanimaadhoo**	**23.21**	**281**	*e*P	**P**	**00 32 52.6**	**+1.8**
	comp=Z,245nm,0.9s						
HMDM				LR	LR		
	comp=Z,56µm,20.0s						
BOK	**Bokaro**	**23.25**	**336**	*e*P	**P**	**00 32 50.0**	**-1.0**
KMI	**Kunming**	**23.26**	**15**	P	**P**	**00 32 51.5**	**+0.1**
KMI				pP	sP	00 33 02.0	-0.9
KMI				PP	**PnPn**	**00 33 24.3**	**+6.6**
KMI				S	**S**	**00 37 04.3**	**+2.2**
KMI				pmax	pmax		
	comp=Z,290nm,1.9s						
KMI				pmax	pmax		
	comp=Z,13µm,9.0s						
KMI				LR	LR		
	comp=Z,274µm,17.2s						
KMI				LR	LR		
	comp=Z,74µm,15.5s						
KMI				LR	LR		
	comp=Z,287µm,16.6s						
TWSI	**Taliwang, Sumb**	**23.59**	**119**	P	**P**	**00 32 53.3**	**-1.1**
	comp=Z,248nm,1.2s,comp=Z,5µm						
MNCI	**Minicoy**	**23.61**	**285**	PFAKE		00 33 00.0	+5.3
MNCI				LR	LR		
	comp=Z,101µm,20.0s						
SRSP	**Sriramsagar**	**23.77**	**314**	*e*P	**P**	**00 32 56.4**	**+0.3**
SRSP				IAmb	IAmb	00 33 05.6	
	comp=Z,745nm,1.3s						
SRSP				IVMs_BB	IVMs_BB	00 41 37.2	
	comp=Z,26µm,22.2s						
GUWA	**GUWAHATI**	**23.82**	**350**	*e*P	**P**	**00 32 55.0**	**-1.4**
GUWA				IAmb	IAmb	00 33 04.5	
	comp=Z,305nm,1.0s						
GUWA				IAMs_20	IAMs_20	00 49 46.0	
	comp=Z,32µm,17.5s						
MPSI	**Mapaga**	**23.89**	**95**	P	**P**	**00 32 57.8**	**+0.5**
	comp=Z,263nm,1.0s,comp=Z,7µmcomp=Z,56µm						
PCI	**Palu**	**23.98**	**98**	P	**P**	**00 32 58.7**	**+0.5**
	comp=Z,1µm,1.7s,comp=Z,23µmcomp=Z,80µm						
PCI	**Palu**	**23.98**	**98**	P	**P**	**00 32 58.7**	**+0.5**
PCI				pmax	pmax		
	comp=Z,1µm,1.7s						
JORH	**JORHAT**	**24.05**	**356**	*e*P	**P**	**00 32 58.5**	**-0.1**
TEZP	**TEZPUR**	**24.07**	**353**	*e*P	**P**	**00 32 57.9**	**-0.9**
TTSI	**Tana Toraja**	**24.36**	**103**	P	**P**	**00 33 02.8**	**+1.1**
	comp=Z,611nm,1.1s,comp=Z,14µmcomp=Z,46µm						
PLAI	**Plampang**	**24.41**	**118**	P	**P**	**00 33 01.0**	**-1.1**
	comp=Z,466nm,1.0s,comp=Z,7µmcomp=Z,31µm						
ITAN	**ITANAGAR**	**24.49**	**355**	*e*P	**P**	**00 33 01.9**	**-0.7**
SPSI	**Sidrap Palu**	**24.53**	**105**	P	**P**	**00 33 03.2**	**-0.1**
	comp=Z,171nm,0.9s,comp=Z,6µmcomp=Z,33µm						
NGP	**Nagpur**	**24.80**	**319**	*e*P	**P**	**00 33 07.0**	**+1.4**
NGP				⇑*i*x	x	00 33 11.4	
	comp=Z,365nm,1.2s						
NGP				*e*x	x	00 37 26.6	
NGP				IAMs_20	IAMs_20	01 16 21.7	
	comp=Z,5µm,9.8s						
KAPI	**Kappang**	**24.81**	**108**	PFAKE		00 33 20.0	+14
KAPI				LR	LR		
	comp=Z,87µm,19.0s						
BKSI	**Bulukumba**	**25.25**	**108**	P	**P**	**00 33 10.7**	**+0.9**
	comp=Z,467nm,1.0s,comp=Z,7µmcomp=Z,25µm						
ODAN	**Odare**	**25.51**	**342**	*e*P	**P**	**00 33 12.4**	**+0.2**
	comp=Z,1µm,0.9s						
GTK	**Tadong**	**25.59**	**344**	*e*P	**P**	**00 33 12.7**	**-0.2**
GTK				IAmb	IAmb	00 33 18.6	
	comp=Z,398nm,0.7s						
GTK				IAMs_20	IAMs_20	00 45 52.1	
	comp=Z,104µm,14.9s						
BUSP	**Coron**	**25.62**	**67**	*e*P	**P**	**00 33 13.7**	**+0.6**
DGAR	**Diego Garcia**	**25.63**	**247**	*e*P	**P**	**00 33 16.4**	**+3.3**
	comp=Z,899nm,1.4s						
DGAR				LR	LR		
	comp=Z,42µm,22.0s						
DGAR	**Diego Garcia**	**25.63**	**247**	*i* P	**P**	**00 33 15.1**	**+1.9**
H08S2	**Diego Garcia H**	**25.68**	**246**	T	T	00 59 36.6	
	baz=67,slow=74						
H08S3	**Diego Garcia H**	**25.68**	**246**	T	T	00 59 32.7	
	baz=67,slow=74						
H08S1	**Diego Carcia H**	**25.70**	**246**	T	T	00 59 37.8	
	baz=67,slow=74						
MCO	**Taipa Grande**	**25.75**	**40**	P	**P**	**00 33 15.0**	**+0.8**
APSI	**Ampana**	**25.77**	**98**	P	**P**	**00 33 15.6**	**+1.1**
	comp=Z,788nm,1.6s,comp=Z,11µmcomp=Z,36µm						
GYA	**Guiyang**	**25.77**	**22**	⇑*i*P	**P**	**00 33 13.9**	**-0.6**
GYA				pP	pP	00 33 22.6	-0.2
GYA				PP	**PnPn**	**00 33 58.0**	**+6.1**
GYA				PcP	**PcP**	**00 36 46.3**	**+2.3**
GYA				S	**S**	**00 37 45.4**	**+3.3**
GYA				sS	pS	00 37 53.3	+1.7
GYA				SS	**SnSn**	**00 38 48.0**	**+9.2**
GYA				ScP	**ScP**	**00 40 23.3**	**+1.5**
GYA				PcS	**PcS**	**00 40 25.5**	**+0.5**
GYA				pmax	pmax		
	comp=Z,160nm,1.2s						
GYA				pmax	pmax		
	comp=Z,11µm,14.9s						
GYA				LR	LR		
	comp=Z,167µm,14.9s						
GYA				LR	LR		
	comp=Z,84µm,14.6s						
GYA				LR	LR		
	comp=Z,244µm,15.3s						
RAMN	**Ramite**	**25.85**	**340**	*e*P	**P**	**00 33 16.3**	**+1.0**
	comp=Z,1µm,0.7s						
TAPN	**Taplejung**	**25.87**	**343**	*e*P	**P**	**00 33 15.9**	**+0.3**
	comp=Z,1µm,0.8s						
MRSI	**Marisa**	**25.91**	**94**	P	**P**	**00 33 15.8**	**+0.1**
	comp=Z,276nm,1.3s,comp=Z,7µmcomp=Z,36µm						
CUYO	**Cuyo Island**	**26.03**	**71**	*e*P	**P**	**00 33 17.2**	**+0.4**
WBSI	**Waikabubak, Su**	**26.20**	**118**	P	**P**	**00 33 16.0**	**-2.4**
	comp=Z,712nm,1.1s,comp=Z,6µmcomp=Z,95µm						
HKC	**Hong Kong Obse**	**26.27**	**40**	⇑P	**P**	**00 33 19.0**	**+0.1**
LUBP	**Lubang**	**26.28**	**64**	*e*P	**P**	**00 33 19.0**	**-0.1**
GZH	**Guangzhou**	**26.32**	**38**	⇑*i*P	**P**	**00 33 24.9**	**+5.6**
GZH				sP	**sP**	**00 33 35.1**	**+3.9**
GZH				PP	**PnPn**	**00 34 07.8**	**+8.6**
GZH				PcP	**PcP**	**00 36 45.8**	**+0.6**
GZH				S	S	00 38 01.5	+11
GZH				sS	sS	00 38 14.1	+10
GZH				LR	LR		
	comp=N,162µm,18.0s						
GZH				LR	LR		
	comp=E,106µm,18.2s						
H08N1	**Diego Carcia H**	**26.59**	**250**	P	**P**	**00 33 23.9**	**+2.3**
	baz=86,slow=6.1,SNR=16						
H08N2	**Diego Garcia H**	**26.60**	**250**	P	**P**	**00 33 23.4**	**+1.7**
	baz=86,slow=6.1,SNR=13						
H08N3	**Diego Garcia H**	**26.62**	**250**	P	**P**	**00 33 23.6**	**+1.8**
	baz=86,slow=6.1,SNR=12						
SJMP	**San Jose**	**26.62**	**67**	*e*P	**P**	**00 33 22.1**	**-0.1**
JIRN	**Jiri**	**26.64**	**340**	*e*P	**P**	**00 33 23.2**	**+0.6**
	comp=E,1µm,0.7s						
SCZP	**Santa Cruz**	**26.84**	**59**	*e*P	**P**	**00 33 21.1**	**-3.0**
PKIN	**Phulchoki**	**26.84**	**339**	*e*P	**P**	**00 33 24.5**	**+0.1**
	comp=E,1µm,1.2s						
JAP	**San Jose, Anti**	**26.88**	**71**	⇑*e*P	**P**	**00 33 28.7**	**+4.2**
LUWI	**Luwuk**	**26.90**	**97**	P	**P**	**00 33 25.7**	**+1.0**
	comp=E,975nm,1.8s,comp=E,16µmcomp=E,57µm						
LUWI	**Luwuk**	**26.90**	**97**	*e*P	**P**	**00 33 23.8**	**-0.9**
	comp=E,1µm,1.1s						
GUN	**Gumba**	**26.98**	**340**	*e*P	**P**	**00 33 26.3**	**+0.7**
	comp=E,2µm,0.8s						
DMN	**Daman**	**26.98**	**338**	*e*P	**P**	**00 33 25.9**	**+0.3**
	comp=E,1µm,0.8s						
WSI	**Waingapu**	**27.01**	**117**	P	P	00 33 38.3	+13
TGY	**Tagaytay City**	**27.04**	**64**	P	**P**	**00 33 26.5**	**+0.5**
	comp=E,1µm,1.0s,baz=277,slow=4.3,SNR=23						
TGY				S	S	00 38 21.7	+19
	comp=E,109nm,0.3s,baz=237,slow=17,SNR=2.5						
TGY				LR	LR	00 44 37.3	
	comp=E,42µm,19.1s,baz=233,slow=38						
KKN	**Kakani**	**27.08**	**339**	*e*P	**P**	**00 33 26.8**	**+0.4**
	comp=E,1µm,0.8s						
BOLP	**Bolinao**	**27.11**	**58**	*e*P	**P**	**00 33 26.9**	**+0.3**
KDI	**Kendari**	**27.29**	**104**	P	**P**	**00 33 28.9**	**+0.7**
	comp=E,190nm,1.6s,comp=E,6µm						
LSA	**Lhasa**	**27.34**	**351**	P	**P**	**00 33 29.3**	**+0.3**
LSA				S	**S**	**00 38 06.6**	**-0.8**
LSA				pmax	pmax		
	comp=E,190nm,1.6s						
LSA				pmax	pmax		
	comp=E,10µm,12.9s						
LSA				LR	LR		
	comp=E,25µm,24.3s						
LSA				LR	LR		
	comp=E,21µm,24.3s						
LSA				LR	LR		
	comp=E,82µm,21.3s						
LSA	**Lhasa**	**27.34**	**351**	*e*P	**P**	**00 33 29.3**	**+0.3**
	comp=E,512nm,0.9s						
LSA				LR	LR		
	comp=Z,13µm,19.0s						
LSA	**Lhasa**	**27.34**	**351**	*i* P	**P**	**00 33 29.0**	**+0.1**
	SNR=91						
LSA	**Lhasa**	**27.34**	**351**	*e*P	**P**	**00 33 29.3**	**+0.3**
LSA				pmax	pmax		
	comp=Z,512nm,0.9s						
LSA				MLR	MLR		
	comp=Z,13µm,19.0s						
BHPL	**Bhopal**	**27.34**	**320**	*e*P	**P**	**00 33 28.8**	**+0.2**
BHPL				IAmb	IAmb	00 33 36.3	
	comp=Z,300nm,1.2s						
QVPH	**Quezon City--P**	**27.36**	**63**	*e*P	**P**	**00 33 29.0**	**+0.2**
OTRP	**Odiongan**	**27.42**	**68**	*e*P	**P**	**00 33 30.3**	**+0.9**
GUIM	**Jordan**	**27.45**	**72**	*e*P	**P**	**00 33 29.5**	**-0.2**
BASI	**Baing, Sumba**	**27.50**	**118**	P	**P**	**00 33 30.7**	**+0.6**
	comp=Z,818nm,1.0s,comp=Z,15µm						
GKN	**Gorkha**	**27.51**	**338**	*e*P	**P**	**00 33 31.0**	**+0.8**
	comp=Z,2µm,0.9s						
LQP	**Lukban**	**27.58**	**64**	*e*P	**P**	**00 33 29.0**	**-2.0**
BOAC	**Boac**	**27.62**	**66**	*e*P	**P**	**00 33 31.2**	**0.0**
PAGZ	**Pagadian**	**27.64**	**78**	*e*P	**P**	**00 33 32.4**	**+1.1**
KOLN	**Koldanda**	**27.72**	**336**	*e*P	**P**	**00 33 32.9**	**+0.8**
	comp=Z,2µm,0.8s						
RCP	**Roxas**	**27.85**	**70**	⇑*e*P	**P**	**00 33 34.2**	**+0.9**
EDFI	**Ende, Flores**	**27.89**	**114**	P	**P**	**00 33 30.9**	**-2.8**
	comp=Z,168nm,1.7s,comp=Z,4µm						
KMSI	**Cibinong**	**27.93**	**94**	P	**P**	**00 33 40.6**	**+6.6**
DANN	**Dangsing**	**28.16**	**336**	*e*P	**P**	**00 33 36.9**	**+0.7**
	comp=Z,2µm,0.9s						
PYUN	**Piuthan**	**28.26**	**335**	*e*P	**P**	**00 33 37.6**	**+0.6**
	comp=Z,2µm,0.9s						
AUQP	**San Andres**	**28.34**	**67**	*e*P	**P**	**00 33 39.1**	**+1.5**
MMRI	**Maumere**	**28.35**	**114**	P	**P**	**00 33 36.0**	**-1.7**
	comp=Z,406nm,1.7s,comp=Z,8µmcomp=Z,21µm						
MMRI	**Maumere**	**28.35**	**114**	*e*P	**P**	**00 33 35.3**	**-2.4**
	comp=Z,997nm,1.5s						
MMRI				LR	LR		
	comp=Z,101µm,22.0s						
ABRA	**Dolores**	**28.38**	**57**	*e*P	**P**	**00 33 37.7**	**-0.3**
SKMP	**Bagumbayan, Su**	**28.60**	**81**	*e*P	**P**	**00 33 40.4**	**+0.5**
LLP	**Lapu-Lapu**	**28.69**	**73**	⇑*e*P	**P**	**00 33 41.7**	**+0.9**
APYP	**Conner**	**28.93**	**57**	*e*P	**P**	**00 33 42.7**	**-0.1**
CAUP	**Cauayan**	**29.00**	**59**	*e*P	**P**	**00 33 43.4**	**0.0**
CGP	**Cagayan de Oro**	**29.02**	**77**	*e*P	**P**	**00 33 45.5**	**+1.9**
CD2	**Chengdu**	**29.05**	**14**	⇑*i*P	**P**	**00 33 43.0**	**-0.7**
CD2				pP	pP	00 33 49.8	-2.3
CD2				sP	sP	00 33 52.6	-3.0
CD2				S	**S**	**00 38 34.8**	**+1.2**
CD2				sS	sS	00 38 46.1	-1.3
CD2				pmax	pmax		
	comp=Z,380nm,0.7s						
CD2				pmax	pmax		
	comp=Z,8µm,6.4s						
CD2				LR	LR		
	comp=Z,228µm,14.1s						
CD2				LR	LR		
	comp=Z,235µm,15.4s						
CD2				LR	LR		
	comp=Z,246µm,13.8s						
BUKP	**Musuan**	**29.29**	**79**	*e*P	**P**	**00 33 47.3**	**+1.2**
OCLP	**Ormoc**	**29.48**	**72**	*e*P	**P**	**00 33 48.4**	**+0.7**
MSLP	**Maasin**	**29.51**	**74**	*e*P	**P**	**00 33 48.1**	**+0.1**
DAV	**Davao City (W)**	**29.68**	**80**	P	**P**	**00 33 50.8**	**+1.2**
	comp=Z,149nm,0.5s,baz=328,slow=4.4,SNR=23						
DAV				S	**S**	**00 38 46.8**	**+2.9**
	comp=Z,204nm,0.4s,baz=30,slow=12,SNR=2.0						
DAV				LR	LR	00 49 19.5	
	comp=Z,17µm,18.9s,baz=222,slow=44						
DAV	**Davao City (W)**	**29.68**	**80**	⇑*i*P	**P**	**00 33 48.0**	**-1.6**
DDMP	**Don Marcelino,**	**29.71**	**82**	*e*P	**P**	**00 33 49.9**	**0.0**
PVCP	**Virac**	**29.78**	**67**	*e*P	**P**	**00 33 49.9**	**-0.5**
SGCP	**Mt. Cagua**	**29.78**	**57**	*e*P	**P**	**00 33 49.1**	**-1.2**
PLP	**Palo**	**29.86**	**72**	⇓*e*P	**P**	**00 33 51.2**	**+0.1**
BUTP	**Butuan**	**30.01**	**77**	*e*P	**P**	**00 33 53.4**	**+1.0**
BATI	**Baumata**	**30.25**	**115**	P	**P**	**00 33 53.1**	**-1.5**
	comp=Z,227nm,1.2s,comp=Z,3µmcomp=Z,10µm						
ENH	**Enshi**	**30.28**	**23**	*e*P	**P**	**00 33 53.7**	**-1.0**
	comp=Z,225nm,0.8s						
ENH				LR	LR		
	comp=Z,116µm,21.0s						
MATI	**Mati**	**30.34**	**81**	*e*P	**P**	**00 33 54.3**	**-1.1**
SOEI	**Soe**	**30.62**	**114**	P	**P**	**00 33 55.8**	**-2.2**
	comp=Z,443nm,1.4s,comp=Z,8µmcomp=Z,22µm						
SOEI	**Soe**	**30.62**	**114**	*e*P	**P**	**00 33 55.6**	**-2.4**
	comp=Z,763nm,1.2s						
SOEI				LR	LR		
	comp=Z,96µm,22.0s						
GIRL	**Giralia**	**30.72**	**146**	P	**P**	**00 33 59.2**	**+0.7**
	baz=31,SNR=4.6						
BBP	**Basco**	**30.81**	**53**	*e*P	**P**	**00 33 58.6**	**-0.8**
QZH	**Quanzhou**	**31.02**	**42**	⇑*i*P	**P**	**00 34 01.0**	**-0.2**
QZH				pmax	pmax		
	comp=Z,120nm,1.5s						
QZH				pmax	pmax		
	comp=Z,5µm,8.2s						
QZH				LR	LR		
	comp=Z,94µm,17.7s						
QZH				LR	LR		
	comp=Z,119µm,14.7s						
QZH				LR	LR		
	comp=Z,152µm,16.3s						
TNTI	**Ternate**	**31.30**	**93**	P	**P**	**00 34 05.0**	**+1.2**
	comp=Z,78nm,0.4s,comp=Z,2µm						
TPUB	**Ta-pu**	**31.40**	**47**	*e*P	**P**	**00 34 04.3**	**-0.4**
	comp=Z,114nm,1.2s						
TPUB				LR	LR		
	comp=Z,72µm,21.0s						
TWG	**Pinlang**	**31.44**	**48**	*e*P	**P**	**00 34 05.7**	**+0.7**
	comp=Z,2µm,1.4s						
TWG				LR	LR		
	comp=Z,254µm,20.0s						
NLAI	**Namlea**	**31.52**	**100**	P	**P**	**00 34 09.1**	**+3.3**
	comp=Z,237nm,1.1s,comp=Z,6µmcomp=Z,33µm						
LBMI	**Labuha**	**31.55**	**95**	P	**P**	**00 34 06.8**	**+0.8**
	comp=Z,982nm,1.9s,comp=Z,18µm						
SSLB	**Suanglung**	**31.93**	**47**	*e*P	**P**	**00 34 09.5**	**+0.2**
SSLB				*e*pP	**P**	**00 34 10.1**	**+0.8**
SSLB				LR	LR		
	comp=Z,73µm,18.0s						
YULB	**Yu-li**	**31.95**	**48**	*e*P	**P**	**00 34 10.7**	**+1.3**
	comp=Z,194nm,1.3s						
YULB				LR	LR		
	comp=Z,60µm,19.0s						
DDI	**Dehra Dun**	**32.42**	**330**	*e*P	**P**	**00 34 13.5**	**-0.1**
NACB	**Ninganchiao**	**32.63**	**47**	*e*P	**P**	**00 34 16.7**	**+1.3**
	comp=Z,73nm,0.8s						
NACB				LR	LR		
	comp=Z,90µm,20.0s						
AAI	**Ambon**	**32.67**	**101**	P	**P**	**00 34 16.7**	**+0.8**
	comp=Z,215nm,0.9s,comp=Z,6µmcomp=Z,37µm						
WHN	**Wuhan**	**32.70**	**30**	⇑*i*P	**P**	**00 34 15.6**	**-0.3**
WHN				sP	**pP**	**00 34 24.4**	**+0.1**
WHN				S	**S**	**00 39 31.8**	**+1.2**
WHN				pmax	pmax		
	comp=Z,750nm,1.5s						
WHN				pmax	pmax		
	comp=Z,7µm,8.6s						
WHN				LR	LR		
	comp=Z,195µm,12.4s						
WHN				LR	LR		
	comp=Z,203µm,12.9s						
WHN				LR	LR		
	comp=Z,412µm,13.9s						
YHNB	**Yeheng**	**32.78**	**46**	*e*P	**P**	**00 34 17.6**	**+0.8**
	comp=Z,153nm,1.2s						
YHNB				LR	LR		
	comp=Z,100µm,18.0s						
BHJ	**Bhuj**	**32.82**	**311**	*e*P	**P**	**00 34 15.9**	**-1.1**
TATO	**Taipei**	**33.04**	**46**	*e*P	**P**	**00 34 19.5**	**+0.5**
	comp=Z,198nm,1.1s						
TATO				LR	LR		
	comp=Z,74µm,18.0s						
MBWA	**Marble Bar**	**33.07**	**137**	*e*P	**P**	**00 34 19.5**	**+0.2**
	comp=Z,98nm,1.0s						
MBWA				LR	LR		
	comp=Z,39µm,20.0s						
MBWA	**Marble Bar**	**33.07**	**137**	P	**P**	**00 34 19.5**	**+0.2**
	SNR=7.9						
MSAI	**Masohi**	**33.33**	**100**	P	**P**	**00 34 26.3**	**+4.6**
	comp=Z,38nm,0.9s,comp=Z,1µm						
XAN	**Xi’an**	**33.46**	**20**	P	**P**	**00 34 21.4**	**-1.2**
XAN				pP	pP	00 34 27.8	-3.2
XAN				sP	sP	00 34 30.5	-4.0
XAN				PP	**PnPn**	**00 35 34.3**	**+0.1**
XAN				PcP	**PcP**	**00 37 05.8**	**+2.3**
XAN				S	**S**	**00 39 42.8**	**+0.2**
XAN				sS	pS	00 39 52.8	+0.6
XAN				SS	**SnSn**	**00 41 47.9**	**+2.0**
XAN				ScS	**ScS**	**00 44 41.6**	**-5.7**
XAN				pmax	pmax		
	comp=Z,290nm,1.6s						
XAN				pmax	pmax		
	comp=Z,6µm,8.7s						
XAN				LR	LR		
	comp=Z,111µm,16.9s						
XAN				LR	LR		
	comp=Z,111µm,14.1s						
XAN				LR	LR		
	comp=Z,159µm,15.5s						
SMLA	**Simla**	**33.52**	**330**	*e*P	**P**	**00 34 23.8**	**+0.7**
SMLA				IAmb	IAmb	00 34 29.0	
	comp=Z,174nm,0.6s						
YOJ	**Yonaguni jima**	**33.84**	**48**	PFAKE		00 34 40.0	+14
YOJ				LR	LR		
	comp=Z,67µm,20.0s						
LZH	**Lanzhou**	**34.06**	**11**	⇑P	**P**	**00 34 27.3**	**-0.6**
LZH				pP	pP	00 34 34.0	-2.3
LZH				sP	sP	00 34 36.8	-3.0
LZH				PP	**PnPn**	**00 35 41.8**	**0.0**
LZH				*e*S	**S**	**00 39 52.9**	**+1.0**
LZH				sS	sS	00 40 03.8	-2.0
LZH				SS	**SnSn**	**00 42 02.8**	**+2.4**
LZH				pmax	pmax		
	comp=Z,710nm,1.4s						
LZH				pmax	pmax		
	comp=Z,8µm,5.4s						
LZH				LR	LR		
	comp=Z,116µm,14.2s						
LZH				LR	LR		
	comp=Z,227µm,14.3s						
LZH				LR	LR		
	comp=Z,171µm,15.9s						

DHRM	DHARAMSHALA	34.86	330	eP	P	00 34 34.9	-0.1
DHRM				IAmb	IAmb	00 34 42.2	
SWI	Sorong	35.31	95	P	P	00 34 38.9	+0.1
	comp=Z,290nm,1.4s,comp=Z,6μm						
NJ2	Nanjing	36.26	34	eP	P	00 34 46.8	+0.1
NJ2				pP	pP	00 34 53.4	-1.8
NJ2				sP	sP	00 34 55.6	-3.0
NJ2				S	S	00 40 27.0	+1.5
NJ2				sS	sS	00 40 40.0	+0.5
NJ2				pmax	pmax		
	comp=Z,92nm,1.0s						
NJ2				pmax	pmax		
	comp=Z,6μm,11.7s						
NJ2				LR	LR		
	comp=Z,99μm,13.0s						
NJ2				LR	LR		
	comp=Z,119μm,14.1s						
NJ2				LR	LR		
	comp=Z,138μm,13.6s						
MEEK	Meekatharra	36.32	145	P	P	00 34 48.4	+1.1
	baz=36,SNR=9.4						
FAKI	Fak Fak	36.54	98	P	P	00 34 49.3	-0.1
	comp=Z,236nm,0.9s,comp=Z,7μmcomp=Z,31μm						
FAKI	Fak Fak	36.54	98	eP	P	00 34 48.6	-0.8
	comp=Z,560nm,1.3s						
FAKI				LR	LR		
	comp=Z,26μm,20.0s						
SAUI	Saumlaki	36.65	107	PFAKE		00 35 00.0	+10
SAUI				LR	LR		
	comp=Z,28μm,18.0s						
GTA	Gaotai	36.77	5	P	P	00 34 50.8	-0.3
GTA				pP	pP	00 34 57.0	-2.6
GTA				sP	sP	00 35 01.0	-2.1
GTA				PcP	PcP	00 37 12.6	-0.5
GTA				S	S	00 40 30.8	-2.6
GTA				ScP	ScP	00 41 00.4	+2.3
GTA				SS	SnSn	00 42 59.3	-6.7
GTA				ScS	ScS	00 45 04.8	-0.3
GTA				pmax	pmax		
	comp=Z,240nm,1.2s						
GTA				pmax	pmax		
	comp=Z,5μm,6.0s						
GTA				LR	LR		
	comp=Z,55μm,18.2s						
GTA				LR	LR		
	comp=Z,29μm,21.6s						
GTA				LR	LR		
	comp=Z,86μm,17.9s						
MORW	Morawa	36.85	150	P	P	00 34 53.0	+1.2
	baz=37,SNR=10						
SSE	Sheshan	36.91	37	P	P	00 34 52.8	+0.5
SSE				PP	PnPn	00 36 19.0	+2.0
SSE				S	S	00 40 37.8	+2.3
KNRA	Kununurra	37.06	120	P	P	00 34 52.7	-1.1
	baz=37,SNR=21						
NIL	Nilore	37.54	328	eP	P	00 34 57.0	-0.6
	comp=Z,729nm,0.8s						
NIL				LR	LR		
	comp=Z,49μm,21.0s						
NIL	Nilore	37.54	328	eP	P	00 34 57.0	-0.6
NIL				pmax	pmax		
	comp=Z,729nm,0.8s						
NIL				MLR	MLR		
	comp=Z,49μm,21.0s						
TIY	Taiyuan	38.00	21	eP	P	00 35 01.0	-0.5
TIY				PP	PnPn	00 36 32.1	+1.9
TIY				S	S	00 40 49.4	-2.7
TIY				pmax	pmax		
	comp=Z,140nm,1.0s						
TIY				pmax	pmax		
	comp=Z,3μm,7.1s						
TIY				LR	LR		
	comp=Z,161μm,15.4s						
TIY				LR	LR		
	comp=Z,111μm,14.6s						
TIY				LR	LR		
	comp=Z,206μm,15.5s						
MTN	Manton Dam	38.02	115	P	P	00 35 00.5	-1.4
	baz=38,SNR=44						
MTN	Manton Dam	38.02	115	eP	P	00 35 00.7	-1.2
	comp=Z,525nm,1.4s						
MTN				LR	LR		
	comp=Z,41μm,22.0s						
KMPI	Kaimana, Papua	38.09	99	P	P	00 35 05.5	+3.0
	comp=Z,931nm,0.8s,comp=Z,14μm						
RKPI	Ransiki, Papua	38.28	96	P	P	00 35 04.4	+0.3
	comp=Z,514nm,1.0s,comp=Z,10μm						
BLDU	Ballidu	38.45	151	P	P	00 35 07.0	+1.7
	baz=39,SNR=7.6						
PALU	Palau	38.49	82	P	P	00 35 05.1	-0.8
	baz=38,SNR=16						
TIA	Tai'an	38.65	28	P	P	00 35 06.4	-0.6
TIA				PP	PnPn	00 36 44.0	+6.0
TIA				S	S	00 40 40.5	-21
TIA				SS	SS	00 44 31.4	+38
TIA				pmax	pmax		
	comp=Z,150nm,1.8s						
TIA				pmax	pmax		
	comp=Z,6μm,14.4s						
TIA				LR	LR		
	comp=N,69μm,15.7s						
TIA				LR	LR		
	comp=E,106μm,15.7s						
TIA				LR	LR		
	comp=Z,130μm,16.7s						
TIA	Tai'an	38.65	28	P	P	00 35 06.8	-0.2
TIA				pmax	pmax		
	comp=Z,150nm,1.7s						
TIA				pmax	pmax		
	comp=Z,5μm,7.2s						
TIA				LR	LR		
	comp=Z,33μm,19.6s						
TIA				LR	LR		
	comp=Z,106μm,15.7s						
TIA				LR	LR		
	comp=Z,130μm,16.0s						
JOW	Kunigami	39.10	49	P	P	00 35 10.4	-0.4
	comp=Z,67nm,0.5s,baz=222,slow=6.8,SNR=23						
JOW				S	S	00 41 14.4	+5.5
	comp=Z,8.4nm,0.8s,baz=233,slow=20,SNR=4.0						
JOW	Kunigami	39.10	49	eP	P	00 35 11.6	+0.8
	comp=Z,81nm,0.7s						
JOW				S	S	00 41 14.4	+5.5
JOW				LR	LR		
	comp=Z,30μm,20.0s						
KDU	Kakadu	39.18	114	P	P	00 35 10.2	-1.5
	baz=39,SNR=33						
MUN	Mundaring	39.35	153	P	P	00 35 14.8	+2.0
	baz=40,SNR=10						
KLBR	Kellerberrin	39.77	151	P	P	00 35 18.6	+2.3
	baz=40,SNR=9.1						
SRPI	Serui, Papua	40.37	96	P	P	00 35 21.5	-0.1
	comp=Z,341nm,0.5s						
HHC	Hu-ho-hao-te	40.53	18	eP	P	00 35 23.6	+0.9
HHC				sP	sP	00 35 33.3	-1.4
HHC				PP	PnPn	00 36 59.9	-0.4
HHC				SS	SS	00 44 21.8	-8.7
HHC				pmax	pmax		
	comp=Z,410nm,1.6s						
HHC				pmax	pmax		
	comp=Z,4μm,5.4s						
HHC				LR	LR		
	comp=Z,128μm,15.1s						
HHC				LR	LR		
	comp=Z,69μm,14.7s						
HHC				LR	LR		
	comp=Z,80μm,14.7s						
KBL	Kabul	40.54	325	eP	P	00 35 23.2	+0.3
	comp=Z,83nm,0.8s						
KBL				LR	LR		
	comp=Z,62μm,21.0s						
KBL	Kabul	40.54	325	eP	P	00 35 23.2	+0.3
KBL				pmax	pmax		
	comp=Z,83nm,0.8s						
KBL				MLR	MLR		
	comp=Z,62μm,21.0s						
NWAO	Narrogin (SRO)	40.62	152	eP	P	00 35 24.1	+0.8
	comp=Z,193nm,1.0s						
NWAO				LR	LR		
	comp=Z,58μm,20.0s						
NWAO	Narrogin (SRO)	40.62	152	P	P	00 35 24.6	+1.3
	SNR=6.6						
NWAO	Narrogin (SRO)	40.62	152	eP	P	00 35 24.2	+0.8
NWAO				pmax	pmax		
	comp=Z,193nm,1.0s						
NWAO				MLR	MLR		
	comp=Z,58μm,20.0s						
H01W3	Cape Leeuwin H	40.97	157	T	T	01 18 48.5	
	baz=333,slow=76,SNR=8924						
H01W2	Cape Leeuwin H	40.98	157	T	T	01 18 46.6	
	baz=333,slow=76,SNR=8876						
H01W1	Cape Leeuwin H	40.99	157	T	T	01 18 49.7	
	baz=333,slow=76,SNR=4554						
KSH	Kashi	41.03	336	P	P	00 35 25.4	-1.5
KSH				PP	PnPn	00 37 04.3	-2.0
KSH				PcS	PcS	00 41 12.0	-5.6
KSH				S	S	00 41 31.3	-6.4
KSH				SS	SS	00 44 31.5	-9.1
KSH				pmax	pmax		
	comp=Z,180nm,0.9s						
KSH				pmax	pmax		
	comp=Z,4μm,4.3s						
KSH				LR	LR		
	comp=Z,22μm,16.3s						
KSH				LR	LR		
	comp=Z,43μm,18.3s						
KSH				LR	LR		
	comp=Z,44μm,21.2s						
WBK	Wadi Bani Khal	41.13	302	P	P	00 35 31.6	+3.8
	SNR=7.0						
MSEY	Mahe Island	41.24	260	eP	P	00 35 29.6	+0.8
	comp=Z,203nm,1.3s						
MSEY				LR	LR		
	comp=Z,55μm,20.0s						
MSEY	Mahe Island	41.24	260	iP	P	00 35 30.3	+1.5
	SNR=7.9						
MSEY	Mahe Island	41.24	260	eP	P	00 35 29.6	+0.8
MSEY				pmax	pmax		
	comp=Z,203nm,1.3s						
MSEY				MLR	MLR		
	comp=Z,55μm,20.0s						
BJT	Baijiatuau	41.43	23	eP	P	00 35 30.8	+0.9
	comp=Z,2μm,1.2s						
BJT				LR	LR		
	comp=Z,58μm,22.0s						
BJT	Baijiatuau	41.43	23	eP	P	00 35 30.8	+0.9
BJT				pmax	pmax		
	comp=Z,2μm,1.2s						
BJT				MLR	MLR		
	comp=Z,58μm,22.0s						
BJI	Beijing	41.45	23	P	P	00 35 31.0	+0.9
BJI				PP	PP	00 37 07.8	+1.6
BJI				S	S	00 41 46.3	+2.7
BJI				pmax	pmax		
	comp=Z,1μm,1.2s						
WRKA	Warakurna	41.60	133	P	P	00 35 31.4	-0.3
	baz=42,SNR=36						
WSAR	Wadi Sarin	41.67	303	P	P	00 35 32.9	+0.7
	comp=Z,28nm,0.9s,baz=140,slow=11,SNR=14						
WSAR				S	S	00 41 45.4	-2.0
	comp=Z,12nm,1.1s,baz=163,slow=14,SNR=2.7						
WSAR				LR	LR	00 53 28.5	
	comp=Z,36μm,18.2s,baz=124,slow=37						
WMQ	Urumqi	41.70	351	P	P	00 35 32.3	+0.1
WMQ				PP	PnPn	00 37 12.3	-1.6
WMQ				PcS	PcS	00 41 22.5	+2.6
WMQ				S	S	00 41 46.8	-0.5
WMQ				sS	sS	00 42 01.5	+0.1
WMQ				pmax	pmax		
	comp=Z,760nm,1.9s						
WMQ				pmax	pmax		
	comp=Z,880nm,3.6s						
WMQ				LR	LR		
	comp=Z,139μm,19.5s						
WMQ				LR	LR		
	comp=Z,102μm,22.1s						
WMQ				LR	LR		
	comp=Z,115μm,23.5s						
KMBL	Kambalda	41.76	146	P	P	00 35 33.9	+1.1
	baz=42,SNR=23						
RKGY	Rocky Gully	41.91	154	P	P	00 35 35.1	+1.1
	baz=42,SNR=7.9						
SMDO	Samad	42.09	302	P	P	00 35 39.7	+4.0
	SNR=9.8						
BIDO	Bidbid	42.20	303	P	P	00 35 40.0	+3.5
	SNR=39						
SFK	Sufi-Kurgan	42.49	334	P	P	00 35 39.7	+0.8
SFK				pmax	pmax		
	comp=Z,898nm,1.1s						
BSY	Bisya	42.69	301	P	P	00 35 44.6	+4.1
	SNR=13						
PRZ	Przheval'sk	42.73	341	eP	P	00 35 42.5	+1.7
	comp=Z,332nm,0.9s						
PRZ				LR	LR		
	comp=Z,51μm,22.0s						
PRZ	Przheval'sk	42.73	341	eP	P	00 35 42.5	+1.7
PRZ				pmax	pmax		
	comp=Z,332nm,0.9s						
PRZ				MLR	MLR		
	comp=Z,51μm,22.0s						
HOQ	Hoqain	42.91	302	P	P	00 35 46.3	+3.9
	SNR=23						
DL2	Dalian	42.96	30	P	P	00 35 42.6	+0.2
DL2				S	S	00 42 07.3	+1.4
DL2				pmax	pmax		
	comp=Z,320nm,0.9s						
DL2				pmax	pmax		
	comp=Z,6μm,7.0s						
DL2				LR	LR		
	comp=Z,38μm,13.6s						
DL2				LR	LR		
	comp=Z,64μm,15.1s						
DL2				LR	LR		
	comp=Z,68μm,18.7s						
SHLS	Shalkode	43.00	342⇑	iP	P	00 35 42.7	-0.1
	comp=Z,781nm,2.0s						
SHLS				iS	S	00 42 05.6	-1.1
SHLS				LR	LR	00 57 42.0	
	comp=Z,5μm,15.0s						
UZB	Uzynbulak	43.13	342⇑	iP	P	00 35 44.7	+0.8
	comp=Z,544nm,2.0s						
UZB				iS	S	00 42 09.2	+0.6
UZB				LR	LR	00 59 32.8	
	comp=Z,3μm,12.9s						
PDGK	Podgornoye	43.15	342	iP	P	00 35 44.5	+0.5
PDGK				pmax	pmax		
	comp=Z,594nm,1.1s						
SATY	Saty	43.24	341⇑	iP	P	00 35 45.7	+0.8
	comp=Z,1μm,2.1s						
SATY				iS	S	00 42 11.1	+0.8
SATY				LR	LR	00 58 56.3	
	comp=Z,4μm,12.5s						
ULHL	Ulahol	43.28	338	P	P	00 35 45.8	+0.5
	SNR=43						
ZHN	Zhinishe	43.33	341⇑	iP	P	00 35 46.5	+0.9
	comp=Z,377nm,1.9s						
ZHN				eS	S	00 42 12.4	+0.9
ARQ	Araqi	43.49	302	P	P	00 35 52.7	+5.7
	SNR=13						
KZA	Kyzart	43.50	337	P	P	00 35 48.1	+0.8
	SNR=60						
KPKS	Kokpek	43.52	342⇑	iP	P	00 35 47.6	+0.6
	comp=Z,794nm,2.0s						
KPKS				iS	S	00 42 14.8	+0.6
WRA	Warramunga Arr	43.71	123	P	P	00 35 48.0	-0.8
	comp=Z,82nm,0.9s,baz=302,slow=8.7,SNR=223						
WRA				ScP	ScP	00 41 26.0	+0.5
	comp=Z,14nm,1.3s,baz=302,slow=6.5,SNR=5.4						
WRA				S	S	00 42 15.8	-1.7
	comp=Z,16nm,1.2s,baz=293,slow=16,SNR=5.5						
WRA				LR	LR	00 54 09.7	
	comp=Z,55μm,21.9s,baz=280,slow=36						
WRA				PKPPKP	P'P'df	01 07 19.3	-20
	comp=Z,1.3nm,0.8s,baz=69,slow=3.2,SNR=4.6						
WRA				P4KPbc		01 13 46.2	
	comp=Z,0.7nm,0.8s,baz=312,slow=3.7,SNR=6.8						
WRA	Warramunga Arr	43.71	123	iP	P	00 35 48.0	-0.8
WRA				pmax	pmax		
	comp=Z,69nm,0.6s						
WRAB	Tennant Creek	43.72	123	eP	P	00 35 48.5	-0.3
	comp=Z,514nm,1.4s						
WRAB				LR	LR		
	comp=Z,47μm,21.0s						
WRAB	Tennant Creek	43.72	123c	iP	P	00 35 48.8	-0.1
WRAB				pmax	pmax		
	comp=Z,448nm,2.5s						
WRAB				MLR	MLR		
	comp=Z,73μm,22.0s						
WB2	Warramunga Arr	43.72	123	eP	P	00 35 52.9	+4.0
MDOK	Medeo	43.79	340	iP	P	00 35 50.2	+1.0
	comp=Z,10μm,1.9s						
MDOK				iS	S	00 42 19.4	+1.0
MDOK				LR	LR	00 58 23.9	
	comp=Z,14μm,13.9s						
AAA	Alma-Ata	43.88	340	iP	P	00 35 51.3	+1.4
	comp=Z,2μm,2.3s						
AAA				eS	S	00 42 21.0	+1.6
AAA				LR	LR	01 01 17.3	
	comp=Z,13μm,14.9s						
AAA	Alma-Ata	43.88	340	eP	P	00 35 51.5	+1.6
UCH	Uchtor	43.92	337	P	P	00 35 52.3	+1.6
	SNR=18						
TKM2	Tokmak 2	44.10	338	P	P	00 35 52.4	+0.6
	SNR=141						
TKM2	Tokmak 2	44.10	338	P	P	00 35 52.3	+0.5
TKM2				pmax	pmax		
	comp=Z,504nm,1.5s						
KBK	Karagaybulak	44.12	338	P	P	00 35 53.1	+1.2
	SNR=120						
AML	Almayashu	44.16	336	P	P	00 35 54.1	+1.5
	SNR=8.5						
MRIV	Mauritius Mete	44.19	237	eP	P	00 35 52.9	+0.2
	comp=Z,193nm,1.2s						
MRIV				LR	LR		
	comp=Z,42μm,19.0s						
TJN	Taejon	44.27	37c	iP	P	00 35 52.4	-0.6
AAK	Ala-Archa	44.27	337	P	P	00 35 53.7	+0.5
	comp=Z,29nm,0.7s,baz=146,slow=11,SNR=96						
AAK				S	S	00 42 26.2	+0.8
	comp=Z,13nm,0.9s,baz=85,slow=12,SNR=2.8						
AAK				LR	LR	00 58 49.7	
	comp=Z,43μm,18.4s,baz=139,slow=42						
AAK	Ala-Archa	44.27	337	P	P	00 35 55.1	+2.0
	SNR=36						
AAK	Ala-Archa	44.27	337	eP	P	00 35 54.2	+1.0
	comp=Z,178nm,0.9s						
AAK				S	S	00 42 26.2	+0.8
AAK	Ala-Archa	44.27	337	P	P	00 35 55.1	+2.0
	SNR=182						
AAK	Ala-Archa	44.27	337	iP	P	00 35 53.0	-0.2
	SNR=107						
AAK	Ala-Archa	44.27	337	eP	P	00 35 54.2	+1.0
AAK				S	S	00 42 26.2	+0.8
AAK				pmax	pmax		
	comp=Z,178nm,0.9s						
GENI	Genyem	44.35	96	P	P	00 35 54.3	+0.3
	comp=Z,369nm,1.4s,comp=Z,6μm						
UOSS	Minazif	44.38	304	eP	P	00 35 55.1	+1.0
	comp=Z,206nm,1.5s						
UOSS				LR	LR		
	comp=Z,17μm,20.0s						
UOSS	Minazif	44.38	304	iP	P	00 35 54.5	+0.4
	SNR=30						
HATD	Hatta, Dubai	44.39	303	P	P	00 35 57.0	+2.7
	SNR=60						
HATD	Hatta, Dubai	44.39	303	iP	P	00 35 54.7	+0.4
	SNR=48						
FRU	Bishkek	44.39	337⇑	eP	P	00 35 55.0	+1.0
FRU				eS	S	00 42 30.0	+3.1
FRU				pmax	pmax		
	comp=Z,3μm,2.3s						
FRU				smax	smax		
	comp=E,15μm,9.0s						
ASHO	Ashiyiah	44.40	303	P	P	00 35 57.7	+3.4
	SNR=35						
ASHO	Ashiyiah	44.40	303	iP	P	00 35 55.5	+1.2
	SNR=26						
MDH	Madha	44.44	304	iP	P	00 35 54.4	-0.2
	SNR=16						
CHMS	Chumysh	44.48	338	P	P	00 35 54.7	0.0
	SNR=42						
JNU	Nakatsue	44.49	43	P	P	00 35 53.9	-1.0
	comp=E,49nm,1.1s,baz=235,slow=3.9,SNR=14						
JNU				S	S	00 42 35.6	+7.1
	comp=E,5.1nm,1.0s,baz=147,slow=17,SNR=1.8						
JNU				LR	LR	00 56 47.7	
	comp=E,56μm,18.1s,baz=246,slow=39						
JNU	Nakatsue	44.49	43	eP	P	00 35 54.5	-0.3
	comp=E,93nm,1.0s						
JNU				S	S	00 42 35.6	+7.1
EKS2	Erkin-Say	44.58	336	P	P	00 35 58.1	+2.6
	SNR=7.7						
INCN	Inchon	44.59	35	eP	P	00 35 54.5	-1.1
	comp=E,138nm,1.3s						
INCN				LR	LR		
	comp=Z,148μm,19.0s						
INCN	Inchon	44.59	35	eP	P	00 35 54.5	-1.1
INCN				pmax	pmax		
	comp=Z,138nm,1.3s						
INCN				MLR	MLR		
	comp=Z,148μm,19.0s						
KUU	Kurty	44.68	340⇑	iP	P	00 35 56.3	+0.1
	comp=Z,1μm,2.3s						
KUU				iS	S	00 42 31.2	+0.2
KUU				LR	LR	00 58 36.9	
	comp=Z,11μm,14.7s						
BANOM	Banah	44.70	305	P	P	00 35 59.5	+2.8
	SNR=15						
BANOM	Banah	44.70	305	iP	P	00 35 57.0	+0.3
	SNR=16						
USP	Ospenovka	44.81	338	P	P	00 35 58.9	+1.7
	SNR=18						
NAZ	Nazwa, Dubai	44.85	303	P	P	00 35 60.0	+2.1
	SNR=39						
NAZ	Nazwa, Dubai	44.85	303	iP	P	00 35 58.9	+1.0
	SNR=24						
JAY	Jayapura	44.87	96	P	P	00 35 57.7	-0.5
	comp=Z,1μm,1.0s,comp=Z,22μm						
JAY	Jayapura	44.87	96	P	P	00 35 57.7	-0.5
JAY				pmax	pmax		
	comp=Z,63nm,1.0s						
MNAS	Manas	44.95	335	P	P	00 35 59.1	+0.5
MNAS				pmax	pmax		
	comp=Z,247nm,1.1s						
ASUD	Al Ashush, Dub	44.99	303	P	P	00 36 02.0	+3.0
	SNR=55						
ASUD	Al Ashush, Dub	44.99	303	iP	P	00 35 59.4	+0.5
	SNR=38						
FORT	Forrest	45.06	140	P	P	00 36 00.8	+1.4
	baz=45,SNR=31						
FORT	Forrest	45.06	140	eP	P	00 36 01.0	+1.6
	comp=Z,190nm,0.7s						
FORT				LR	LR		
	comp=Z,40μm,21.0s						
AS31	Alice Springs	45.12	128	eP	P	00 35 59.9	-0.2
	comp=Z,19nm,0.9s						
AS31				LR	LR		
	comp=Z,500nm,20.0s						
ASAR	Alice Springs	45.12	128	P	P	00 35 59.2	-0.9
	comp=Z,35nm,0.7s,baz=301,slow=7.8,SNR=158						
ASAR				PcP	PcP	00 37 42.7	+2.2
	comp=Z,21nm,0.8s,baz=288,slow=2.9,SNR=3.1						
ASAR				ScP	ScP	00 41 32.9	+1.6
	comp=Z,3.7nm,0.8s,baz=303,slow=4.8,SNR=3.3						
ASAR				S	S	00 42 35.0	-2.9
	comp=Z,4.5nm,1.0s,baz=309,slow=4.3,SNR=2.4						
ASAR				PKPPKP	P'P'df	01 07 06.0	-32
	comp=Z,0.9nm,0.8s,baz=77,slow=2.2,SNR=5.2						
AS01	Alice Springs	45.16	128	eP	P	00 35 59.2	-1.1
KS15	Wonju Array Si	45.29	36	eP	P	00 36 01.2	+0.1
KSAR	Wonju Array Be	45.29	36	P	P	00 36 00.3	-0.8
KSAR				PcP	PcP	00 37 42.5	+1.8
KSAR				ScP	ScP	00 41 32.9	+1.3
KSAR				S	S	00 42 43.0	+3.1
KSAR	Wonju Array Be	45.29	36	P	P	00 36 00.3	-0.8
KSAR						00 37 42.5	
KSAR				S	S	00 42 43.0	+3.1
KS01	Wonju Array Si	45.32	36	eP	P	00 35 59.2	-2.2
KSRS	Korea Array	45.32	36	P	P	00 36 00.3	-1.1
	comp=Z,37nm,0.7s,baz=228,slow=9.0,SNR=196						
KSRS				PcP	PcP	00 37 42.5	+1.7
	comp=Z,6.2nm,0.6s,baz=231,slow=3.5,SNR=3.1						
KSRS				ScP	ScP	00 41 32.9	+1.2
	comp=Z,7.1nm,1.0s,baz=213,slow=4.8,SNR=6.2						
KSRS				S	S	00 42 43.0	+2.6
	comp=Z,1.5nm,0.9s,baz=208,slow=3.6,SNR=2.6						
KSRS				LR	LR	00 56 44.6	
	comp=Z,99μm,19.6s,baz=228,slow=38						
TAS	Tashkent	45.47	332	P	P	00 36 03.2	+0.7
TAS				pmax	pmax		
	comp=Z,742nm,0.9s						
MK01	Makanchi Array	45.59	347	eP	P	00 36 01.8	-1.6
MK31	Makanchi Array	45.61	347	eP	P	00 36 03.5	-0.1
MK31	Makanchi Array	45.61	347	iP	P	00 36 03.6	0.0
MK31				pmax	pmax		
	comp=Z,778nm,1.0s						
MKAR	Makanchi Array	45.61	347	P	P	00 36 03.2	-0.3
	comp=Z,222nm,0.8s,baz=165,slow=7.4,SNR=626						
MKAR				S	S	00 42 41.9	-2.5
	comp=Z,2.5nm,1.1s,baz=126,slow=48,SNR=2.0						

MKAR				LR	LR	01 00 31.2	
	comp=Z,26µm,18.6s,baz=164,slow=43						
MKAR				PKPPKP	P'P'df	01 07 23.2	-12
	comp=Z,0.9nm,0.9s,baz=316,slow=3.3,SNR=3.9						
MKAR	**Makanchi Array**	**45.61**	**347**	*e*P	**P**	**00 36 03.5**	**-0.1**
	comp=Z,3µm,0.8s						
MKAR				S	**S**	**00 42 41.9**	**-2.5**
MKAR				P'P'		01 07 23.2	
MKAR	**Makanchi Array**	**45.61**	**347**	*e*P	**P**	**00 36 03.5**	**-0.1**
MKAR				S	**S**	**00 42 41.9**	**-2.5**
MKAR				pmax	pmax		
	comp=Z,3µm,0.8s						
MAKZ	**Makanchi**	**45.70**	**346**	*e*P	**P**	**00 36 04.0**	**-0.3**
	comp=Z,409nm,0.8s						
MAKZ				LR	LR		
	comp=Z,26µm,20.0s						
MAKZ	**Makanchi**	**45.70**	**346**	*e*P	**P**	**00 36 04.0**	**-0.3**
MAKZ				pmax	pmax		
	comp=Z,409nm,0.8s						
MAKZ				MLR	MLR		
	comp=Z,26µm,20.0s						
ZSN	**Zaisan**	**45.70**	**349**⇑	*i*P	**P**	**00 36 05.1**	**+0.8**
	comp=Z,291nm,2.2s						
ZSN				*i* S	**S**	**00 42 46.7**	**+1.1**
IUG	**Iuzhnay**	**45.76**	**333**⇑	*i*P	**P**	**00 36 05.7**	**+0.8**
	comp=Z,297nm,0.8s						
IUG				*i* S	**S**	**00 42 47.9**	**+1.1**
IUG				LR	LR	00 55 32.3	
	comp=Z,14µm,17.7s						
SONM	**Songino Array**	**45.90**	**10**	P	**P**	**00 36 05.7**	**-0.3**
	comp=Z,160nm,0.9s,baz=193,slow=7.2,SNR=278						
SONM				PcP	**PcP**	**00 37 44.2**	**+1.5**
	comp=Z,79nm,0.8s,baz=194,slow=3.3,SNR=6.3						
SONM				ScP	**ScP**	**00 41 34.5**	**+0.4**
	comp=Z,7.0nm,1.0s,baz=204,slow=3.2,SNR=3.4						
SONM				S	**S**	**00 42 46.8**	**-2.0**
	comp=Z,3.2nm,1.0s,baz=210,slow=2.0,SNR=2.1						
SONM				LR	LR	00 57 40.0	
	comp=Z,112µm,19.5s,baz=192,slow=39						
SONM				PKPPKP	P'P'df	01 07 22.3	-13
	comp=Z,1.1nm,0.8s,baz=228,slow=1.8,SNR=3.9						
SONA1	**Songino Array**	**45.92**	**10**	*e*P	**P**	**00 36 04.5**	**-1.6**
RER	**Riviere de l'E**	**46.04**	**237**	*e*P	**P**	**00 36 08.1**	**+0.6**
	comp=Z,372nm,0.9s						
RER				LR	LR		
	comp=Z,43µm,18.0s						
ULN	**Ulaanbaatar**	**46.05**	**10**	*e*P	**P**	**00 36 06.9**	**-0.3**
	comp=Z,170nm,0.8s						
ULN				LR	LR		
	comp=Z,101µm,18.0s						
ULN	**Ulaanbaatar**	**46.05**	**10**	P	**P**	**00 36 06.8**	**-0.3**
	SNR=221						
ULN	**Ulaanbaatar**	**46.05**	**10**	*e*P	**P**	**00 36 06.9**	**-0.3**
ULN				pmax	pmax		
	comp=Z,170nm,0.8s						
ULN				MLR	MLR		
	comp=Z,101µm,18.0s						
CHM	**Chimkent**	**46.09**	**333**⇑	*i*P	**P**	**00 36 08.6**	**+1.1**
	comp=Z,653nm,1.8s						
CHM				*e*S	**S**	**00 42 52.7**	**+1.3**
CHM				LR	LR	00 55 48.4	
	comp=Z,14µm,17.6s						
KK31	**Karatay Array**	**46.31**	**334**	*e*P	**P**	**00 36 09.4**	**+0.2**
KK31	**Karatay Array**	**46.31**	**334**	*i* P	**P**	**00 36 09.3**	**+0.2**
KK31				pmax	pmax		
	comp=Z,215nm,1.1s						
KKAR	**Karatay Array**	**46.31**	**334**	*e*P	**P**	**00 36 09.4**	**+0.3**
KKAR	**Karatay Array**	**46.31**	**334**	*e*P	**P**	**00 36 09.4**	**+0.3**
BTLS	**Baital**	**46.49**	**338**⇑	*i*P	**P**	**00 36 10.6**	**0.0**
	comp=Z,490nm,4.3s						
BTLS				*i* S	**S**	**00 42 57.1**	**+0.1**
BTLS				LR	LR	00 56 33.6	
	comp=Z,5µm,16.7s						
BRLS	**Borolday**	**46.55**	**333**	*i* S	**S**	**00 42 55.5**	**-2.4**
DGZ	**Jazzator, Alta**	**47.48**	**352**	*i* P	**P**	**00 36 19.0**	**+0.6**
DGZ				pmax	pmax		
	comp=Z,141nm,0.9s						
DGZ				MLR	MLR		
	comp=Z,22µm,17.2s						
ZAK	**Zakamensk**	**47.97**	**6**	*e*P	**P**	**00 36 21.3**	**-0.8**
ZAK				pmax	pmax		
	comp=Z,226nm,2.0s						
HVS	**Khovu-Aksy**	**48.38**	**358***d*	*i*P	**P**	**00 36 24.8**	**-0.4**
HVS				pmax	pmax		
	comp=Z,403nm,1.4s						
HVS				MLR	MLR		
	comp=Z,38µm,16.0s						
QIS	**Mount Isa**	**48.45**	**120**	P	**P**	**00 36 26.7**	**+0.5**
	baz=49,SNR=31						
CN2	**Changchun**	**48.55**	**28**⇑	*i*P	**P**	**00 36 25.8**	**-0.7**
CN2				*e*pP	sP	00 36 38.3	-0.4
CN2				*e*PP	**PP**	**00 38 18.8**	**-0.8**
CN2				*e*S	**S**	**00 43 23.3**	**-3.0**
CN2				SS	**SS**	**00 46 48.9**	**-7.8**
CN2				pmax	pmax		
	comp=Z,6µm,13.0s						
CN2				LR	LR		
	comp=Z,43µm,20.0s						
CN2				LR	LR		
	comp=Z,47µm,20.0s						
CN2				LR	LR		
	comp=Z,47µm,23.0s						
MOY	**Mondy**	**49.04**	**4**	*e*P	**P**	**00 36 30.2**	**-0.1**
MOY				pmax	pmax		
	comp=Z,435nm,2.6s						
ASHT	**Ashkhabad**	**49.27**	**320**	P	**P**	**00 36 33.4**	**+1.3**
ASHT				pmax	pmax		
	comp=Z,516nm,1.2s						
TLY	**Talaya**	**49.29**	**6**	*e*P	**P**	**00 36 32.7**	**+0.6**
	comp=Z,135nm,0.8s						
TLY				LR	LR		
	comp=Z,61µm,21.0s						
TLY	**Talaya**	**49.29**	**6**	P	**P**	**00 36 33.1**	**+0.9**
	SNR=85						
TLY	**Talaya**	**49.29**	**6***c*	*i*P	**P**	**00 36 32.6**	**+0.5**
TLY				*e*		00 38 28.6	
TLY				*e*PPP	PPP	00 39 27.4	
TLY				*e*S	**S**	**00 43 37.0**	**+0.4**
TLY				pmax	pmax		
	comp=Z,257nm,1.6s						
TLY				MLR	MLR		
	comp=Z,43µm,16.0s						
GUMO	**Guam**	**49.38**	**74**	P	**P**	**00 36 32.4**	**-1.0**
	comp=Z,49nm,0.4s,baz=326,slow=3.6,SNR=7.6						
GUMO				S	**S**	**00 43 32.8**	**-6.1**
	comp=Z,28nm,0.6s,baz=288,slow=19,SNR=2.0						
GUMO				LR	LR	00 56 18.5	
	comp=Z,20µm,21.6s,baz=257,slow=35						
GUMO	**Guam**	**49.38**	**74**	*e*P	**P**	**00 36 32.9**	**-0.5**
	comp=Z,634nm,1.4s						
GUMO				S	**S**	**00 43 32.8**	**-6.1**
GUMO	**Guam**	**49.38**	**74**	*e*P	**P**	**00 36 32.9**	**-0.5**
GUMO				S	**S**	**00 43 32.8**	**-6.1**
GUMO				pmax	pmax		
	comp=Z,634nm,1.4s						
GEYT	**Alibeck**	**49.43**	**320**	P	**P**	**00 36 32.4**	**-1.1**
	comp=Z,58nm,0.8s,baz=127,slow=7.1,SNR=129						
GEYT				PcP	**PcP**	**00 37 53.3**	**-2.2**
	comp=Z,27nm,1.0s,baz=145,slow=5.3,SNR=1.0						
GEYT				S	**S**	**00 43 36.9**	**-2.1**
	comp=Z,0.4nm,0.6s,baz=107,slow=29,SNR=2.1						
GEYT				LR	LR	00 59 22.0	
	comp=Z,45µm,21.3s,baz=205,slow=38						
GYA0B	**ALIBECK ARRAY**	**49.43**	**320**	*e*P	**P**	**00 36 33.5**	**0.0**
	comp=Z,319nm,0.8s						
GYA0B				LR	LR		
	comp=Z,42µm,20.0s						
SEM	**Semipalatinsk**	**49.47**	**347**⇑	*i*P	**P**	**00 36 33.3**	**-0.4**
	comp=Z,531nm,2.6s						
SEM				*i* S	**S**	**00 43 39.1**	**-0.4**
SEM				LR	LR	00 59 31.4	
	comp=Z,11µm,16.1s						
COEN	**Coen**	**49.48**	**111**	P	**P**	**00 36 34.0**	**-0.1**
	baz=50,SNR=20						
COEN	**Coen**	**49.48**	**111**	*e*P	**P**	**00 36 33.9**	**-0.2**
	comp=Z,124nm,1.0s						
COEN				LR	LR		
	comp=Z,28µm,22.0s						
IRK	**Irkutsk**	**49.92**	**7**	*e*P	**P**	**00 36 36.9**	**+0.1**
IRK				*e*S	**S**	**00 43 48.8**	**+3.6**
IRK				pmax	pmax		
	comp=Z,770nm,1.9s						
INU	**Inuyama**	**49.95**	**44**	*e*P	**P**	**00 36 37.3**	**-0.2**
	comp=Z,122nm,1.3s						
INU				LR	LR		
	comp=Z,55µm,18.0s						
KURBB	**Kurchatov Arra**	**50.08**	**345**	P	**P**	**00 36 37.8**	**-0.3**
	comp=Z,67nm,0.5s,baz=166,slow=6.8,SNR=203						
KURBB				ScP	**ScP**	**00 41 53.5**	**+2.0**
	comp=Z,4.9nm,0.9s,baz=167,slow=4.7,SNR=4.7						
KURBB				S	**S**	**00 43 46.0**	**-1.6**
	comp=Z,4.7nm,1.2s,baz=147,slow=16,SNR=3.4						
KURK	**Kurchatov**	**50.15**	**346**	*e*P	**P**	**00 36 38.5**	**-0.1**
KURK				ScP	**ScP**	**00 41 53.5**	**+1.8**
KURK				*e*S	**S**	**00 43 46.6**	**-1.8**
KURK				LR	LR		
	comp=Z,59µm,21.0s						
KURK	**Kurchatov**	**50.15**	**346**	P	**P**	**00 36 38.8**	**+0.2**
	SNR=186						
KURK	**Kurchatov**	**50.15**	**346**	*e*P	**P**	**00 36 38.5**	**-0.1**
KURK				*e*S	**S**	**00 43 46.6**	**-1.8**
KURK				MLR	MLR		
	comp=Z,59µm,21.0s						
CBIJ	**Chichi jima**	**50.33**	**57**	*e*P	**P**	**00 36 37.9**	**-2.5**
	comp=Z,212nm,0.7s						
CBIJ				S	**S**	**00 43 49.4**	**-2.3**
JCJ	**Chichijima**	**50.33**	**57**	S	**S**	**00 43 49.4**	**-2.3**
	baz=180,slow=18						
JCJ				LR	LR	00 55 55.6	
	comp=Z,26µm,21.8s,slow=34						
MSHR	**Mys Shultsa**	**50.60**	**33***c*	*i*P	**P**	**00 36 42.0**	**-0.2**
HIA	**Hailar**	**50.66**	**20**	*e*P	**P**	**00 36 42.4**	**-0.2**
	comp=Z,668nm,1.5s						
HIA				LR	LR		
	comp=Z,79µm,21.0s						
HIA	**Hailar**	**50.66**	**20**	*e*P	**P**	**00 36 42.4**	**-0.2**
HIA				pmax	pmax		
	comp=Z,668nm,1.5s						
HIA				MLR	MLR		
	comp=Z,79µm,21.0s						
JHJ	**Hachijo jima 2**	**50.87**	**48**	P	**P**	**00 36 42.7**	**-1.6**
	comp=Z,40nm,0.4s,baz=50,slow=19,SNR=2.8						
JHJ				PP	**PP**	**00 38 43.7**	**+2.8**
	comp=Z,17nm,0.3s,baz=233,slow=20,SNR=2.0						
JHJ				S	**S**	**00 44 00.6**	**+1.5**
	comp=Z,18nm,0.4s,baz=242,slow=19,SNR=1.7						
JHJ2	**Mitsune**	**50.89**	**48**	PFAKE		00 37 00.0	+15
JHJ2				LR	LR		
	comp=Z,21µm,22.0s						
MDJ	**Mudanjiang**	**51.18**	**30**	P	**P**	**00 36 44.0**	**-2.5**
MDJ				pP	pP	00 36 50.9	-4.3
MDJ				sP	sP	00 36 53.8	-4.8
MDJ				PP	**PP**	**00 38 42.0**	**-1.5**
MDJ				PcS	**PcS**	**00 41 55.5**	**-3.7**
MDJ				S	**S**	**00 44 04.5**	**+1.5**
MDJ				sS	sS	00 44 16.4	-1.0
MDJ				pmax	pmax		
	comp=Z,150nm,1.4s						
MDJ				pmax	pmax		
	comp=Z,6µm,7.8s						
MDJ				LR	LR		
	comp=Z,61µm,17.5s						
MDJ				LR	LR		
	comp=Z,58µm,19.1s						
MDJ				LR	LR		
	comp=Z,90µm,18.3s						
MDJ	**Mudanjiang**	**51.18**	**30**	*e*P	**P**	**00 36 46.9**	**+0.4**
	comp=Z,189nm,1.3s						
MDJ				LR	LR		
	comp=Z,63µm,20.0s						
BRZS	**Berezniki**	**51.21**	**341**	*i* P	**P**	**00 36 46.7**	**0.0**
	comp=Z,509nm,2.3s						
BRZS				*i* S	**S**	**00 44 03.5**	**+0.2**
BRZS				LR	LR	00 59 49.3	
	comp=Z,6µm,15.9s						
CIT	**Chita**	**51.34**	**14**	*e*P	**P**	**00 36 48.0**	**+0.4**
CIT				*e*		00 36 58.8	
CIT				*e*		00 37 04.5	
CIT				*e*		00 38 03.9	
CIT				*e*S	**S**	**00 44 06.6**	**+1.5**
CIT				pmax	pmax		
	comp=Z,464nm,1.1s						
MJB9	**Matsu-Tunnel**	**51.40**	**44**	*e*P	**P**	**00 36 48.1**	**-0.2**
	comp=Z,130nm,1.4s						
MJB9				LR	LR		
	comp=Z,40µm,19.0s						
MAJO	**Matsushiro**	**51.40**	**44**	*e*P	**P**	**00 36 48.0**	**-0.3**
	comp=Z,133nm,1.4s						
MAJO				*e*PcP	**PcP**	**00 38 02.7**	**0.0**
MAJO				LR	LR		
	comp=Z,37µm,19.0s						
MAJO	**Matsushiro**	**51.40**	**44***c*	*i*P	**P**	**00 36 47.0**	**-1.3**
MAJO				pmax	pmax		
	comp=Z,120nm,1.9s						
MAJO				MLR	MLR		
	comp=Z,34µm,17.0s						
MAT	**Matsushiro**	**51.40**	**44**	P	**P**	**00 36 47.2**	**-1.1**
MAT				S	**S**	**00 44 08.8**	**+2.5**
MJAR	**Matsushiro Arr**	**51.40**	**44**	P	**P**	**00 36 47.3**	**-1.0**
	comp=Z,4.4nm,0.7s,baz=231,slow=7.1,SNR=24						
MJAR				PcP	**PcP**	**00 38 01.1**	**-1.6**
	comp=Z,35nm,0.8s,baz=244,slow=5.6,SNR=5.0						
MJAR				ScP	**ScP**	**00 41 59.0**	**+1.5**
	comp=Z,0.9nm,0.4s,baz=243,slow=5.5,SNR=3.3						
MJAR				LR	LR	01 01 00.8	
	comp=Z,30µm,18.2s,baz=235,slow=39						
MANU	**Manus Island**	**51.45**	**95**	*e*P	**P**	**00 36 49.6**	**+0.6**
	comp=Z,142nm,1.1s						
BBOO	**Buckleboo**	**51.66**	**136**	P	**P**	**00 36 50.3**	**+0.1**
	baz=52,SNR=20						
BBOO	**Buckleboo**	**51.66**	**136**	*e*P	**P**	**00 36 50.6**	**+0.4**
	comp=Z,94nm,0.9s						
BBOO				LR	LR		
	comp=Z,28µm,21.0s						
MTSU	**Mount Surprise**	**51.76**	**115**	P	**P**	**00 36 51.7**	**+0.4**
	baz=52,SNR=54						
ZAA0	**Zalesovo Array**	**51.99**	**352**	*e*P	**P**	**00 36 52.1**	**-0.2**
	comp=Z,552nm,1.1s						
ZAA0				LR	LR		
	comp=Z,44µm,22.0s						
ZALV	**Zalesovo Beam**	**51.99**	**352**	P	**P**	**00 36 52.0**	**-0.4**
	comp=Z,211nm,0.5s,baz=180,slow=6.8,SNR=527						
ZALV				PcP	**PcP**	**00 38 02.8**	**-1.7**
	comp=Z,27nm,0.7s,baz=167,slow=7.3,SNR=1.4						
ZALV				PP	**PP**	**00 38 51.7**	**+1.0**
	comp=Z,42nm,1.0s,baz=174,slow=5.8,SNR=1.6						
ZALV				ScP	**ScP**	**00 42 00.7**	**+1.1**
	comp=Z,9.5nm,1.0s,baz=182,slow=7.2,SNR=2.7						
ZALV				S	**S**	**00 44 14.0**	**+0.2**
	comp=Z,3.3nm,0.8s,baz=160,slow=28,SNR=3.1						
ZALV				LR	LR	01 03 30.0	
	comp=Z,43µm,19.1s,baz=168,slow=41						
ZALV				PKPPKP	P'P'df	01 07 17.1	-10
	comp=Z,0.9nm,0.5s,baz=328,slow=1.9,SNR=3.7						
ZALV	**Zalesovo Beam**	**51.99**	**352**	*e*P	**P**	**00 36 50.6**	**-1.8**
ZALV				PcP	**PcP**	**00 38 02.8**	**-1.7**
ZALV				PP	**PP**	**00 38 51.7**	**+1.0**
ZALV				ScP	**ScP**	**00 42 00.7**	**+1.1**
ZALV				S	**S**	**00 44 14.0**	**+0.2**
ZALV				P'P'		01 07 17.1	
USRK	**Ussuriysk Ar.**	**52.14**	**32**	P	**P**	**00 36 53.3**	**-0.4**
	comp=Z,27nm,0.8s,baz=241,slow=5.9						
USRK				S	**S**	**00 44 16.8**	**+0.6**
	baz=234,slow=44						
USRK				LR	LR	01 01 15.3	
	comp=Z,64µm,19.1s,baz=223,slow=39						
PMG	**Port Moresby**	**52.24**	**104**	P	**P**	**00 36 54.6**	**-0.4**
	comp=Z,131nm,0.9s,baz=289,slow=6.6,SNR=15						
PMG				PP	**PP**	**00 38 59.5**	**+5.8**
	comp=Z,50nm,1.0s,baz=243,slow=9.0,SNR=1.2						
PMG				S	**S**	**00 44 14.5**	**-4.1**
	comp=Z,4.6nm,0.3s,baz=279,slow=15,SNR=1.8						
PMG				LR	LR	01 02 03.0	
	comp=Z,16µm,21.4s,baz=270,slow=39						
OPO	**Ambohidratompo**	**52.54**	**244**	P	**P**	**00 36 57.2**	**0.0**
	comp=Z,46nm,1.0s,baz=55,slow=8.0,SNR=22						
OPO				S	**S**	**00 44 24.8**	**+2.0**
	comp=Z,2.0nm,0.8s,baz=94,slow=19,SNR=1.8						
OPO				LR	LR	00 57 09.2	
	comp=Z,16µm,18.1s,baz=48,slow=34						
ABPO	**Ambohimpanom**	**52.64**	**244**	*e*P	**P**	**00 36 58.4**	**+0.4**
	comp=Z,280nm,1.4s						
ABPO				LR	LR		
	comp=Z,25µm,18.0s						
ABPO	**Ambohimpanom**	**52.64**	**244**	*e*P	**P**	**00 36 58.4**	**+0.4**
ABPO				pmax	pmax		
	comp=Z,280nm,1.4s						
ABPO				MLR	MLR		
	comp=Z,25µm,18.0s						
NVS	**Novosibirsk**	**53.10**	**351**⇑	*i*P	**P**	**00 37 00.2**	**-0.4**
NVS				*i* S	**S**	**00 44 29.4**	**+0.4**
NVS				pmax	pmax		
	comp=N,152nm,1.0s						
NVS				pmax	pmax		
	comp=E,172nm,1.0s						
NVS				pmax	pmax		
	comp=Z,282nm,1.0s						
NVS				smax	smax		
	comp=N,375nm,2.2s						
NVS				smax	smax		
	comp=E,236nm,2.2s						
RAYN	**Ar Rayn**	**53.13**	**298**	*e*P	**P**	**00 37 01.7**	**+0.2**
	comp=E,156nm,1.0s						
RAYN				LR	LR		
	comp=Z,130µm,20.0s						
RAYN	**Ar Rayn**	**53.13**	**298**	*i* P	**P**	**00 37 01.5**	**+0.1**
	SNR=21						
RAYN	**Ar Rayn**	**53.13**	**298**	*e*P	**P**	**00 37 01.7**	**+0.2**
RAYN				pmax	pmax		
	comp=Z,156nm,1.0s						
RAYN				MLR	MLR		
	comp=Z,130µm,20.0s						
ATD	**Arta Tunnel**	**53.51**	**282**	P	**P**	**00 37 05.7**	**+1.3**
	comp=Z,20nm,0.9s,baz=252,slow=20,SNR=4.3						
ATD				S	**S**	**00 44 37.6**	**+1.7**
	comp=Z,6.9nm,0.9s,baz=72,slow=20,SNR=1.9						
ATD				LR	LR	00 58 00.7	
	comp=Z,14µm,18.3s,baz=88,slow=34						
HTT	**Hallett**	**53.99**	**135**	P	**P**	**00 37 07.8**	**+0.2**
	baz=54,SNR=19						
CTAO	**Charters Tower**	**54.11**	**117**	*e*P	**P**	**00 37 09.2**	**+0.5**
	comp=Z,279nm,1.1s						
CTAO				LR	LR		
	comp=Z,28µm,19.0s						
CTAO	**Charters Tower**	**54.11**	**117**	*e*P	**P**	**00 37 09.2**	**+0.5**
CTAO				pmax	pmax		
	comp=Z,279nm,1.1s						
CTAO				MLR	MLR		
	comp=Z,28µm,19.0s						
BVAR	**Borovoye Array**	**54.56**	**341**	P	**P**	**00 37 10.6**	**-0.7**
	comp=Z,80nm,0.7s,baz=144,slow=7.8,SNR=184						
BVAR				PcP	**PcP**	**00 38 15.8**	**+1.5**
	comp=Z,31nm,0.8s,baz=178,slow=10,SNR=2.0						
BVAR				S	**S**	**00 44 45.0**	**-3.9**
	comp=Z,2.6nm,1.0s,baz=163,slow=10,SNR=2.0						
BRVK	**Borovoye**	**54.62**	**341**	*e*P	**P**	**00 37 11.3**	**-0.4**
BRVK				LR	LR		
	comp=Z,46µm,22.0s						
BRVK	**Borovoye**	**54.62**	**341**	P	**P**	**00 37 12.0**	**+0.3**
	SNR=105						
BRVK	**Borovoye**	**54.62**	**341***c*	*i*P	**P**	**00 37 11.1**	**-0.6**
BRVK				pmax	pmax		
	comp=Z,260nm,1.7s						
BRVK				MLR	MLR		
	comp=Z,42µm,21.0s						
QLP	**Quilpie**	**54.77**	**125**	P	**P**	**00 37 14.2**	**+0.9**
	baz=55,SNR=34						
STKA	**Stephens Creek**	**55.11**	**132**	P	**P**	**00 37 16.0**	**+0.3**
	comp=Z,45nm,0.8s,baz=303,slow=8.1,SNR=37						
STKA				S	**S**	**00 44 57.4**	**+0.4**
	comp=Z,2.0nm,0.8s,baz=0.0,slow=20,SNR=1.7						
STKA				LR	LR	01 03 14.0	
	comp=Z,26µm,20.5s,baz=301,slow=39						
STKA	**Stephens Creek**	**55.11**	**132**	P	**P**	**00 37 15.7**	**0.0**
	baz=55,SNR=17						
STKA	**Stephens Creek**	**55.11**	**132**	*e*P	**P**	**00 37 15.3**	**-0.4**
	comp=Z,24nm,1.0s						
STKA				S	**S**	**00 44 57.4**	**+0.4**
KLR	**Kul'dur**	**55.49**	**28**	P	**P**	**00 37 18.3**	**+0.2**
	baz=233,slow=8.6						
KLR				S	**S**	**00 45 01.1**	**-0.3**
	comp=Z,0.1nm,0.5s,baz=252,slow=13,SNR=2.0						
AB31	**Akbulak array**	**55.75**	**332**	*e*P	**P**	**00 37 20.0**	**0.0**
AB31				pmax	pmax		
	comp=Z,281nm,0.8s						
ABKAR	**Akbulak array**	**55.75**	**332**	*e*P	**P**	**00 37 19.7**	**-0.3**
PAF	**Port-aux-Franc**	**56.41**	**200**	PFAKE		00 37 40.0	+15
PAF				LR	LR		
	comp=Z,23µm,22.0s						
RABL	**Rabaul**	**56.42**	**97**	PFAKE		00 37 40.0	+15
RABL				LR	LR		
	comp=Z,8µm,22.0s						
ANKE	**Ethiopia-Afar**	**56.42**	**280**	*e*P	**P**	**00 37 27.5**	**+1.6**
ANKE				*i* S	**S**	**00 45 21.5**	**+5.7**
ANKE	**Ethiopia-Afar**	**56.42**	**280**	*e*P	**P**	**00 37 27.5**	**+1.6**
ANKE				*i* S	**S**	**00 45 21.5**	**+5.7**
ANKE	**Ethiopia-Afar**	**56.42**	**280**	*e*P	**P**	**00 37 27.5**	**+1.6**
ANKE				*i* S	**S**	**00 45 21.5**	**+5.7**
DESE	**Dese**	**56.62**	**282**	*i* P	P	00 37 37.7	+11
DESE				*i* S	**S**	**00 45 25.7**	**+7.5**
DESE	**Dese**	**56.62**	**282**	*i* P	P	00 37 37.7	+11
DESE				*i* S	**S**	**00 45 25.7**	**+7.5**
BOD	**Bodaibo**	**56.83**	**11**	*e*P	**P**	**00 37 27.8**	**+0.3**
BOD				pmax	pmax		
	comp=Z,375nm,1.9s						
ZEA	**Zeya**	**57.01**	**21***c*	*e*P	**P**	**00 37 29.0**	**+0.2**
ZEA				*e*		00 38 16.5	
ZEA				*e*		00 39 36.0	
ZEA				*e*S	**S**	**00 45 24.0**	**+2.6**
ZEA				*e*SS	**SS**	**00 49 16.0**	**+5.7**
ZEA				pmax	pmax		
	comp=N,190nm,1.8s						
ZEA				pmax	pmax		
	comp=E,180nm,1.8s						
ZEA				pmax	pmax		
	comp=Z,370nm,1.6s						
ZEA				pmax	pmax		
	comp=Z,7µm,15.0s						
ZEA				pmax	pmax		
	comp=E,2µm,16.0s						
ZEA				pmax	pmax		
	comp=N,3µm,15.0s						
ZEA				smax	smax		
	comp=E,4µm,16.0s						
ZEA				MLR	MLR		
	comp=E,80µm,15.0s						
AAE	**Adis Abeba**	**57.35**	**279**	*i* P	**P**	**00 37 33.5**	**+1.1**
AAE				*i* S	**S**	**00 45 35.3**	**+7.5**
AAE	**Adis Abeba**	**57.35**	**279**	*i* P	**P**	**00 37 33.5**	**+1.1**
AAE				*i* S	**S**	**00 45 35.3**	**+7.5**
AAE	**Adis Abeba**	**57.35**	**279**	*i* P	**P**	**00 37 33.5**	**+1.1**
AAE				*i* S	**S**	**00 45 35.3**	**+7.5**
AKTO	**Aktyubinsk**	**57.47**	**332**	P	**P**	**00 37 31.4**	**-0.9**
	comp=E,113nm,0.9s,baz=133,slow=8.5,SNR=136						
AKTO				S	**S**	**00 45 25.5**	**-2.2**
	comp=E,4.0nm,1.0s,baz=162,slow=19,SNR=5.8						
ERM	**Erimo**	**57.48**	**40**	*e*P	**P**	**00 37 33.2**	**+0.9**
	comp=E,70nm,1.2s						
ERM				LR	LR		
	comp=Z,37µm,21.0s						
ERM	**Erimo**	**57.48**	**40***d*	*i*P	**P**	**00 37 32.6**	**+0.2**
ERM				pmax	pmax		
	comp=Z,43nm,1.3s						
ERM				MLR	MLR		
	comp=Z,28µm,16.0s						
DILA	**Dilla**	**57.74**	**276**	*i* P	**P**	**00 37 32.6**	**-2.4**
DILA				*i* S	**S**	**00 45 31.4**	**-1.4**
ARPS	**Mount Arapiles**	**57.80**	**137**	P	**P**	**00 37 36.2**	**+1.4**
	baz=58,SNR=10						
CMSA	**Cobar Meteorol**	**58.04**	**130**	P	**P**	**00 37 36.9**	**+0.4**
	baz=58,SNR=112						
AKT	**Akhty**	**58.09**	**319**⇑	*i*P	**P**	**00 37 36.4**	**-0.5**
AKT				*e*		00 38 26.6	
AKT				*e*		00 39 50.4	
AKT				*e*S	**S**	**00 45 38.7**	**+2.3**
AKT				pmax	pmax		
	comp=Z,309nm,1.4s						
ASAJ	**Asahikawa**	**58.20**	**38**	P	**P**	**00 37 37.5**	**+0.1**
	comp=Z,39nm,0.8s,baz=250,slow=12,SNR=33						
ASAJ				S	**S**	**00 45 41.6**	**+4.3**
	comp=Z,1.4nm,0.3s,baz=128,slow=19,SNR=1.7						
ASAJ				LR	LR	01 02 48.0	
	comp=Z,30µm,20.9s,baz=244,slow=36						
ASAJ	**Asahikawa**	**58.20**	**38**	*e*P	**P**	**00 37 36.8**	**-0.6**
	comp=Z,216nm,1.5s						
ASAJ				S	**S**	**00 45 41.6**	**+4.3**
RMQ	**Roma**	**58.47**	**123**	P	**P**	**00 37 41.1**	**+1.5**
	baz=59,SNR=38						
GRNR	**Gornyy**	**58.74**	**29**	*e*P	**P**	**00 37 43.9**	**+2.8**
GRNR				pmax	pmax		
	comp=Z,1µm,2.0s						
MAK	**Makhachkala**	**58.95**	**320**	*e*P	**P**	**00 37 42.2**	**-0.5**
MAK				*e*S	**S**	**00 45 48.3**	**+1.1**
MAK				pmax	pmax		
	comp=Z,149nm,0.8s						
MAK				MLR	MLR		
	comp=Z,15µm,19.0s						
KMBO	**Kilima Mbogo**	**58.96**	**267**	P	P	00 38 01.6	+18

	comp=Z,47nm,0.9s,baz=66,slow=9.2,SNR=59						
KMBO				LR	LR	01 01 22.0	
	comp=Z,51µm,18.2s,baz=86,slow=34						
CUKT	**Cukurca**	**59.16**	**312**	*i* P	**P**	**00 37 43.3**	**-1.1**
GNI	**Garni**	**59.52**	**316**	P	**P**	**00 37 46.6**	**-0.2**
	comp=Z,70nm,1.0s,baz=151,slow=2.4,SNR=58						
GNI				S	**S**	**00 45 54.7**	**-0.3**
	comp=Z,1.9nm,0.7s,baz=164,slow=19,SNR=1.8						
GNI				LR	LR	01 06 57.8	
	comp=Z,12µm,19.0s,baz=106,slow=40						
GNI	**Garni**	**59.52**	**316**	*i* P	**P**	**00 37 47.6**	**+0.6**
GNI	**Garni**	**59.52**	**316**	*e*P	**P**	**00 37 47.4**	**+0.5**
	comp=Z,310nm,1.2s						
GNI				S	**S**	**00 45 54.8**	**-0.3**
GNI	**Garni**	**59.52**	**316**	P	**P**	**00 37 47.5**	**+0.6**
	SNR=60						
GNI	**Garni**	**59.52**	**316**	*i* P	**P**	**00 37 46.7**	**-0.2**
	SNR=31						
GNI	**Garni**	**59.52**	**316***c*	*i*P	**P**	**00 37 46.7**	**-0.2**
GNI				pmax	pmax		
	comp=Z,550nm,1.3s						
GNI				MLR	MLR		
	comp=Z,55µm,20.0s						
CLDR	**Caldiran**	**59.68**	**315**	*i* P	**P**	**00 37 48.2**	**+0.1**
TASB	**TASBURUN-IGDIR**	**59.80**	**316**	*i* P	**P**	**00 37 49.1**	**+0.4**
YSS	**Yuzh-Sakhalins**	**59.80**	**35**	*e*P	**P**	**00 37 49.0**	**+0.5**
	comp=Z,255nm,1.2s						
YSS				LR	LR		
	comp=Z,25µm,20.0s						
YSS	**Yuzh-Sakhalins**	**59.80**	**35**α	*i*P	**P**	**00 37 48.8**	**+0.3**
YSS				*e**SP	**sP**	**00 38 00.7**	**-0.1**
YSS				*e*		00 38 35.3	
YSS				*e*		00 40 00.2	
YSS				*e*S	**S**	**00 45 57.5**	**-0.6**
YSS				*e*PS	**PnS**	**00 46 14.0**	**+0.8**
YSS				*e*		00 47 33.8	
YSS				*e*SS	**SS**	**00 49 57.2**	**+2.7**
YSS				pmax	pmax		
	comp=Z,130nm,1.4s						
YSS				pmax	pmax		
	comp=E,80nm,1.7s						
YSS				pmax	pmax		
	comp=Z,6µm,14.0s						
YSS				pmax	pmax		
	comp=N,2µm,16.0s						
YSS				pmax	pmax		
	comp=E,3µm,14.0s						
YSS				MLR	MLR		
	comp=Z,30µm,16.0s						
YSS				MLR	MLR		
	comp=E,28µm,16.0s						
VANB	**Van**	**59.84**	**314**	*i* P	**P**	**00 37 48.7**	**-0.4**
EIDS	**Eidsvold**	**60.04**	**121**	P	**P**	**00 37 51.3**	**+0.7**
	baz=60,SNR=13						
EIDS	**Eidsvold**	**60.04**	**121**	*e*P	**P**	**00 37 49.5**	**-1.1**
	comp=E,181nm,1.4s						
EIDS				LR	LR		
	comp=Z,24µm,20.0s						
SIRT	**Sirnak**	**60.12**	**312**	*i* P	**P**	**00 37 50.5**	**-0.5**
GROC	**Groznyy**	**60.17**	**320**⇑	*i*P	**P**	**00 37 50.2**	**-0.9**
GROC				*e*		00 38 35.4	
GROC				*e*S	**S**	**00 46 01.7**	**-1.2**
GROC				pmax	pmax		
	comp=Z,350nm,1.2s						
TBLG	**Delisi**	**60.20**	**318**	*e*P	**P**	**00 37 51.8**	**+0.4**
TBLG	**Delisi**	**60.20**	**318**	*e*P	**P**	**00 37 51.8**	**+0.4**
AGRB	**Hanur-Agry**	**60.51**	**315**	*i* P	**P**	**00 37 54.1**	**+0.3**
LODK	**Lodwar**	**60.66**	**272**	*i* P	**P**	**00 37 55.6**	**+0.5**
LODK	**Lodwar**	**60.66**	**272**	*i* P	**P**	**00 37 55.9**	**+0.8**
LODK				*e*		00 38 00.9	
	baz=86,slow=9.3						
LODK				*e*Sg	**S**	**00 46 14.0**	**+3.6**
TOO	**Toolangi**	**60.72**	**136**	P	**P**	**00 37 56.6**	**+1.6**
	baz=61,SNR=28						
TOO	**Toolangi**	**60.72**	**136**	P	**P**	**00 37 56.8**	**+1.8**
TOO				pmax	pmax		
	comp=Z,118nm,1.0s						
GURO	**Guroymak-BITLI**	**60.81**	**313**	*i* P	**P**	**00 37 56.2**	**+0.5**
KARS	**Kars**	**60.87**	**316**	*i* P	**P**	**00 37 56.8**	**+0.6**
AKH	**Akhalkalaki**	**60.91**	**317**⇑	*i*P	**P**	**00 37 57.1**	**+0.7**
AKH	**Akhalkalaki**	**60.91**	**317**	*e*P	**P**	**00 37 56.5**	**+0.1**
	comp=Z,102nm,1.0s						
AKH				LR	LR		
	comp=Z,16µm,22.0s						
AKH	**Akhalkalaki**	**60.91**	**317**	*e*P	**P**	**00 37 56.5**	**+0.1**
AKH				pmax	pmax		
	comp=Z,102nm,1.0s						
AKH				MLR	MLR		
	comp=Z,16µm,22.0s						
SVE	**Sverdlovsk**	**60.97**	**339***d*	*i*P	**P**	**00 37 56.1**	**-0.2**
SVE				*e*		00 40 10.8	
SVE				*e*S	**S**	**00 46 11.3**	**-1.4**
SVE				*e*		00 47 40.8	
SVE				*e*SS	**SS**	**00 50 09.4**	**-3.1**
SVE				pmax	pmax		
	comp=Z,480nm,0.9s						
SVE				pmax	pmax		
	comp=Z,4µm,15.9s						
SVE				MLR	MLR		
	comp=Z,31µm,18.0s						
SVE				MLR	MLR		
	comp=N,21µm,18.0s						
SVE				MLR	MLR		
	comp=E,23µm,20.0s						
ZEI	**Tsey**	**61.22**	**318**	*e*P	**P**	**00 37 55.5**	**-3.1**
ZEI				*e*		00 40 13.4	
ZEI				*e*S	**S**	**00 46 15.5**	**-1.4**
ZEI				*e*SS	**SS**	**00 50 21.8**	**+4.4**
ZEI				pmax	pmax		
	comp=Z,137nm,1.1s						
SVAN	**Silvan-Diyarba**	**61.27**	**313**	*i* P	**P**	**00 37 58.5**	**-0.3**
YNG	**Young**	**61.29**	**132**	P	**P**	**00 37 59.8**	**+0.9**
	baz=61,SNR=47						
SENK	**Senkaya-Erzuru**	**61.35**	**316**	*i* P	**P**	**00 37 59.9**	**+0.4**
VRTB	**Varto-Mus**	**61.45**	**314**	*i* P	**P**	**00 38 00.8**	**+0.7**
ARU	**Arti**	**61.46**	**337**	P	**P**	**00 37 58.4**	**-1.1**
	comp=Z,120nm,0.7s,baz=134,slow=4.2,SNR=180						
ARU				S	**S**	**00 46 12.8**	**-6.1**
	comp=Z,3.6nm,0.8s,baz=279,slow=19,SNR=2.1						
ARU				LR	LR	01 09 18.6	
	comp=Z,34µm,18.1s,baz=136,slow=41						
ARU	**Arti**	**61.46**	**337**	*e*P	**P**	**00 37 58.5**	**-1.1**
	comp=Z,227nm,0.9s						
ARU				S	**S**	**00 46 12.8**	**-6.1**
ARU	**Arti**	**61.46**	**337***c*	*i*P	**P**	**00 37 58.8**	**-0.8**
ARU						00 38 37.1	
ARU						00 40 10.1	
ARU				*e*S	**S**	**00 46 18.5**	**-0.4**
ARU						00 47 41.5	
ARU				SS	**SS**	**00 50 12.5**	**-7.6**
ARU				SSS	SSS	00 53 04.6	
ARU				pmax	pmax		
	comp=Z,487nm,1.7s						
ARU				pmax	pmax		
	comp=Z,3µm,12.6s						
ARU				MLR	MLR		
	comp=Z,53µm,20.0s						
NCK	**Nalchik**	**61.73**	**319***c*	*i*P	**P**	**00 38 01.6**	**-0.1**
NCK				pmax	pmax		
	comp=Z,116nm,1.4s						
NCK				MLR	MLR		
	comp=Z,17µm,20.0s						
TYV	**Tymovskoe**	**61.93**	**31**	*e*P	**P**	**00 38 03.7**	**+0.9**
TYV				*e*S	**S**	**00 46 27.8**	**+2.8**
TYV				pmax	pmax		
	comp=Z,83nm,1.8s						
TYV				pmax	pmax		
	comp=Z,4µm,9.6s						
TYV				smax	smax		
	comp=N,12nm,1.8s						
TYV				smax	smax		
	comp=N,2µm,12.8s						
BNGB	**Bingˆ¶l**	**61.95**	**313**	*i* P	**P**	**00 38 03.7**	**+0.3**
KUR	**Kuril'sk**	**62.02**	**39***c*	*i*P	**P**	**00 38 03.8**	**+0.2**
KUR				*i*		00 38 36.8	
KUR				*i* S	**S**	**00 46 27.4**	**+1.0**
KUR				pmax	pmax		
	comp=Z,305nm,1.6s						
KUR				pmax	pmax		
	comp=E,68nm,2.0s						
KUR				pmax	pmax		
	comp=N,122nm,1.8s						
KUR				pmax	pmax		
	comp=Z,4µm,8.6s						
KUR				MLR	MLR		
	comp=N,9µm,14.0s						
KUR				MLR	MLR		
	comp=Z,19µm,14.0s						
KUR				MLR	MLR		
	comp=E,12µm,15.0s						
PATS	**Pohnpei**	**62.10**	**84**	P	**P**	**00 38 06.0**	**+1.3**
	baz=62,SNR=8.4						
PATS	**Pohnpei**	**62.10**	**84**	*e*P	**P**	**00 38 06.0**	**+1.3**
	comp=E,758nm,1.4s						
PATS				LR	LR		
	comp=Z,9µm,22.0s						
CAN	**Canberra**	**62.18**	**132**	*e*P	**P**	**00 38 05.8**	**+0.8**
	comp=Z,92nm,1.0s						
CAN				LR	LR		
	comp=Z,26µm,20.0s						
CAN	**Canberra**	**62.18**	**132**	*e*P	**P**	**00 38 05.8**	**+0.8**
CAN				pmax	pmax		
	comp=Z,92nm,1.0s						
CAN				MLR	MLR		
	comp=Z,26µm,20.0s						
NEY	**Neytrino**	**62.20**	**318***c*	*i*P	**P**	**00 38 05.7**	**+0.6**
NEY				pmax	pmax		
	comp=Z,19nm,0.7s						
BCA	**Borcka**	**62.21**	**316**	*i* P	**P**	**00 38 03.7**	**-1.3**
YEDI	**Yedisu-Bingol**	**62.21**	**314**	*i* P	**P**	**00 38 05.3**	**+0.1**
ARMA	**Armidale**	**62.25**	**126**	P	**P**	**00 38 07.3**	**+1.7**
	baz=62,SNR=18						
ARMA	**Armidale**	**62.25**	**126**	*e*P	**P**	**00 38 07.4**	**+1.8**
	comp=Z,143nm,1.1s						
ARMA				LR	LR		
	comp=Z,22µm,22.0s						
KBZ	**Khabaz**	**62.29**	**319**	P	**P**	**00 38 04.4**	**-1.0**
	comp=Z,53nm,0.8s,baz=115,slow=5.8,SNR=76						
KBZ				S	**S**	**00 46 25.0**	**-4.8**
	comp=Z,2.0nm,0.8s,baz=144,slow=14,SNR=1.5						
KBZ				PKP2bc		01 07 21.3	
	comp=Z,1.5nm,0.9s,baz=292,slow=19,SNR=3.0						
KBZ				LR	LR	01 09 07.3	
	comp=Z,12µm,20.1s,baz=117,slow=40						
NKL	**Nikolayevsk**	**62.29**	**29**	*i* P	**P**	**00 38 05.0**	**-0.2**
NKL				*e*		00 46 24.0	
NKL				pmax	pmax		
	comp=E,170nm,1.8s						
NKL				pmax	pmax		
	comp=Z,770nm,1.8s						
NKL				pmax	pmax		
	comp=N,2µm,12.0s						
NKL				pmax	pmax		
	comp=E,3µm,12.0s						
NKL				pmax	pmax		
	comp=Z,7µm,12.0s						
NKL				MLR	MLR		
	comp=N,32µm,14.0s						
NKL				MLR	MLR		
	comp=E,63µm,14.0s						
NKL				MLR	MLR		
	comp=Z,95µm,14.0s						
CNB	**Canberra Magne**	**62.45**	**132**	P	**P**	**00 38 07.6**	**+0.9**
	baz=63,SNR=14						
CRZF	**Crozet Islands**	**62.48**	**213**	PFAKE		00 38 20.0	+13
CRZF				LR	LR		
	comp=Z,24µm,20.0s						
KVAR	**Kislovodsk Arr**	**62.52**	**319**	LR	LR	01 09 01.5	
	comp=Z,11µm,19.9s,slow=40						
KIV	**Kislovodsk**	**62.52**	**319**	*e*P	**P**	**00 38 06.6**	**-0.6**
	comp=Z,319nm,1.1s						
KIV				LR	LR		
	comp=Z,15µm,21.0s						
KIV	**Kislovodsk**	**62.52**	**319**	P	**P**	**00 38 07.5**	**+0.4**
	SNR=76						
KIV	**Kislovodsk**	**62.52**	**319**	*i* P	**P**	**00 38 06.4**	**-0.8**
	SNR=57						
KIV	**Kislovodsk**	**62.52**	**319***c*	*i*P	**P**	**00 38 06.7**	**-0.4**
KIV				*e*		00 38 46.0	
KIV				*e*		00 40 22.8	
KIV				*e*PPP	PPP	00 42 01.2	
KIV				*e*S	**S**	**00 46 30.7**	**-2.4**
KIV				*e*SS	**SS**	**00 50 38.6**	**+1.1**
KIV				pmax	pmax		
	comp=Z,229nm,1.3s						
KIV				MLR	MLR		
	comp=Z,14µm,21.0s						
ASF	**Jabal al Asfar**	**62.76**	**305**	P	**P**	**00 38 09.7**	**+0.8**
	comp=Z,18nm,0.9s,baz=90,slow=2.0,SNR=34						
ASF				S	**S**	**00 46 37.1**	**+0.7**
	comp=Z,1.6nm,1.0s,baz=140,slow=18,SNR=1.8						
ASF				LR	LR	01 07 06.1	
	comp=Z,17µm,19.0s,baz=56,slow=38						
ASF				PKPPKP	**P'P'df**	**01 07 10.9**	**-2.2**
	comp=Z,0.7nm,0.3s,baz=40,slow=13,SNR=3.1						
GOF	**Gofitskoye**	**62.77**	**320**⇑	*i*P	**P**	**00 38 08.2**	**-0.5**
GOF				*e*S	**S**	**00 46 35.1**	**-0.8**
GOF				pmax	pmax		
	comp=Z,140nm,1.0s						
URFA	**Urfa**	**62.79**	**311**	*i* P	**P**	**00 38 09.6**	**+0.5**
PTK	**Pertek**	**62.85**	**313**	*i* P	**P**	**00 38 09.6**	**0.0**
ERZN	**Erzincan**	**62.86**	**314**	*i* P	**P**	**00 38 09.8**	**+0.3**
MGCD	**Mangrove Creek**	**62.90**	**130**	P	**P**	**00 38 11.5**	**+1.8**
	baz=63,SNR=6.5						
KTUT	**Trabzon**	**63.33**	**315**	*i* P	**P**	**00 38 12.5**	**+0.1**
EIL	**Elat**	**63.78**	**302**	LR	LR	01 05 55.1	
	comp=Z,34µm,19.5s,baz=98,slow=36						
EIL	**Elat**	**63.78**	**302**	*i* P	**P**	**00 38 16.3**	**+0.6**
GAZ	**Gaziantep**	**63.92**	**310**	*i* P	**P**	**00 38 17.4**	**+0.8**
RCY	**Rachaya**	**63.97**	**306**	*e*P	**P**	**00 38 18.9**	**+1.9**
SHBL	**Chebaa**	**64.00**	**306**	*e*P	**P**	**00 38 18.0**	**+0.8**
ESPY	**Espiye-Giresun**	**64.04**	**315**	*i* P	**P**	**00 38 17.3**	**+0.1**
DARE	**Darende-Malaty**	**64.16**	**312**	*i* P	**P**	**00 38 18.8**	**+0.7**
MMAI	**Mount Meron Ar**	**64.19**	**306**	P	**P**	**00 38 19.0**	**+0.6**
	comp=Z,35nm,0.8s,baz=99,slow=8.9,SNR=43						
MMAI				S	**S**	**00 46 57.3**	**+3.0**
	comp=Z,0.2nm,0.5s,baz=97,slow=30,SNR=2.2						
MMAI				LR	LR	01 08 14.1	
	comp=Z,24µm,19.1s,baz=125,slow=38						
BHL	**Bhannes**	**64.22**	**307**	*e*P	**P**	**00 38 19.2**	**+0.7**
DQRL	**Deir Qamar**	**64.23**	**306**	*e*P	**P**	**00 38 19.5**	**+0.8**
KMRS	**Kahramanmaras**	**64.26**	**311**	*i* P	**P**	**00 38 19.1**	**+0.4**
MOO	**Moorlands**	**64.28**	**140**	P	**P**	**00 38 20.6**	**+1.9**
	baz=64,SNR=4.3						
SOC	**Sochi**	**64.34**	**318***c*	*i*P	**P**	**00 38 18.1**	**-0.9**
SOC				*e**PP	**pP**	**00 38 27.5**	**-0.5**
SOC				*e*		00 40 38.2	
SOC				*e*S	**S**	**00 46 51.3**	**-4.2**
SOC				*e**SS	**sS**	**00 47 10.2**	**0.0**
SOC				*e*		00 48 08.8	
SOC				*e*SS	**SS**	**00 51 02.9**	**-2.8**
SOC				pmax	pmax		
	comp=Z,146nm,0.8s						
SOC				pmax	pmax		
	comp=Z,1µm,2.8s						
SOC				MLR	MLR		
	comp=Z,8µm,19.0s						
YAK	**Yakutsk**	**64.37**	**17**	P	**P**	**00 38 17.9**	**-0.9**
	comp=Z,18nm,0.4s,baz=302,slow=19,SNR=48						
YAK				S	**S**	**00 46 53.5**	**-1.6**
	comp=Z,4.4nm,0.4s,baz=128,slow=19,SNR=7.3						
YAK	**Yakutsk**	**64.37**	**17**	*e*P	**P**	**00 38 18.8**	**-0.1**
	comp=Z,755nm,0.9s						
YAK				S	**S**	**00 46 53.5**	**-1.6**
YAK				LR	LR		
	comp=Z,48µm,21.0s						
YAK	**Yakutsk**	**64.37**	**17***c*	*i*P	**P**	**00 38 18.2**	**-0.6**
YAK				*e**PP	**sP**	**00 38 30.6**	**-0.6**
YAK				*e*		00 38 54.6	
YAK				*e*		00 40 41.4	
YAK				*e*S	**S**	**00 46 53.6**	**-1.6**
YAK				*e**SS	**pS**	**00 47 07.5**	**+1.4**
YAK				*e*SS	**SS**	**00 51 04.2**	**-1.2**
YAK				pmax	pmax		
	comp=Z,254nm,0.9s						
YAK				pmax	pmax		
	comp=N,92nm,1.3s						
YAK				pmax	pmax		
	comp=E,133nm,1.4s						
YAK				pmax	pmax		
	comp=Z,71nm,1.0s						
YAK				pmax	pmax		
	comp=E,168nm,1.8s						
YAK				pmax	pmax		
	comp=N,167nm,2.0s						
YAK				smax	smax		
	comp=E,367nm,2.3s						
YAK				smax	smax		
	comp=N,781nm,2.8s						
YAK				MLR	MLR		
	comp=Z,80µm,14.0s						
YAK				MLR	MLR		
	comp=N,104µm,18.0s						
YAK				MLR	MLR		
	comp=E,16µm,14.0s						
TAHT	**Tahtakopru-Hat**	**64.48**	**309**	*i* P	**P**	**00 38 21.1**	**+1.0**
TAU	**Tasmania Unive**	**64.60**	**141**	*e*P	**P**	**00 38 21.9**	**+1.1**
	comp=E,176nm,1.4s						
TAU				LR	LR		
	comp=Z,17µm,20.0s						
TAU	**Tasmania Unive**	**64.60**	**141**	P	**P**	**00 38 22.4**	**+1.7**
TAU				pmax	pmax		
	comp=Z,180nm,1.3s						
HNR	**Honiara**	**64.71**	**102**	P	**P**	**00 38 20.9**	**-1.1**
	comp=Z,168nm,0.7s,baz=214,slow=11,SNR=12						
HNR				S	**S**	**00 46 58.5**	**-2.5**
	comp=Z,29nm,0.3s,baz=198,slow=19,SNR=2.0						
HNR				LR	LR	01 09 50.4	
	comp=Z,7µm,20.9s,baz=263,slow=39						
HNR	**Honiara**	**64.71**	**102**	*e*P	**P**	**00 38 20.0**	**-2.0**
HNR	**Honiara**	**64.71**	**102**	*e*P	**P**	**00 38 21.7**	**-0.3**
	comp=Z,317nm,0.9s						
HNR				S	**S**	**00 46 58.5**	**-2.5**
HNR	**Honiara**	**64.71**	**102**	*e*P	**P**	**00 38 21.7**	**-0.3**
HNR				S	**S**	**00 46 58.6**	**-2.5**
HNR				pmax	pmax		
	comp=Z,317nm,0.9s						
SARI	**SarD1z-Kayseri**	**64.90**	**311**	*i* P	**P**	**00 38 23.3**	**+0.3**
SVSK	**Karacayir**	**64.94**	**313**	*i* P	**P**	**00 38 23.7**	**+0.7**
TOKT	**Tokat**	**65.40**	**314**	*i* P	**P**	**00 38 26.2**	**+0.1**
BNN	**Bunyan**	**65.46**	**312**	*i* P	**P**	**00 38 26.6**	**0.0**
KARA	**Karaisali**	**65.60**	**310**	*i* P	**P**	**00 38 27.6**	**+0.2**
EREN	**Erenkoy**	**65.82**	**308**	*i* P	**P**	**00 38 28.5**	**-0.3**
MERS	**Mersin**	**65.90**	**309**	*i* P	**P**	**00 38 29.5**	**+0.1**
KVT	**Kavak**	**66.01**	**314**	*i* P	**P**	**00 38 30.2**	**+0.2**
ANN	**Anapa**	**66.32**	**318***c*	*i*P	**P**	**00 38 30.0**	**-1.8**
ANN				*i* *PP	**pP**	**00 38 39.8**	**-1.0**
ANN				*e*		00 40 57.0	
ANN				*e*PPP	PPP	00 42 32.9	
ANN				*i* S	**S**	**00 47 17.3**	**-2.4**
ANN				pmax	pmax		
	comp=Z,85nm,1.3s						
ANN				MLR	MLR		
	comp=Z,15µm,22.0s						
ANN				MLR	MLR		
	comp=N,28µm,22.0s						
ANN				MLR	MLR		
	comp=E,2µm,22.0s						
VRH	**Novokhopyorsk**	**66.34**	**326**	*e*P	**P**	**00 38 30.9**	**-0.9**
VRH				*e*S	**S**	**00 47 11.3**	**-8.4**
VRH				pmax	pmax		
	comp=Z,350nm,0.8s						
VRH				smax	smax		
	comp=E,920nm,2.6s						
VRH				MLR	MLR		
	comp=Z,30µm,21.0s						
CSS	**Mathiatis**	**66.34**	**307**	*i* P	**P**	**00 38 32.6**	**+0.4**
CSS	**Mathiatis**	**66.34**	**307**	P	**P**	**00 38 31.7**	**-0.5**
CSS				LR	LR		
	comp=Z,44µm,18.0s						
CSS	**Mathiatis**	**66.34**	**307**	P	**P**	**00 38 31.7**	**-0.5**
CSS	**Mathiatis**	**66.34**	**307**	P	**P**	**00 38 33.0**	**+0.8**
IKL	**Isikli**	**66.38**	**309**	*i* P	**P**	**00 38 32.1**	**-0.3**
KEBE	**Keben-Mersin**	**66.42**	**309**	*i* P	**P**	**00 38 33.6**	**+0.9**
AKKU	**Akkuyu-Mersin**	**66.47**	**308**	*i* P	**P**	**00 38 32.2**	**-0.8**
MAMC	**Mammari**	**66.48**	**307**	P	**P**	**00 38 34.6**	**+1.5**
SZAC	**Souni**	**66.65**	**307**	P	**P**	**00 38 35.1**	**+0.9**
LEF	**Lefka**	**66.73**	**307**	*i* P	**P**	**00 38 34.8**	**+0.1**
DIKM	**Dikmen**	**66.75**	**315**	*i* P	**P**	**00 38 34.4**	**-0.3**
CORM	**Corum**	**66.75**	**313**	*i* P	**P**	**00 38 34.4**	**-0.5**
TEKE	**Tekeli-Mersin**	**66.81**	**308**	*i* P	**P**	**00 38 34.5**	**-0.6**
SNOP	**Sinop**	**66.90**	**315**	*i* P	**P**	**00 38 35.5**	**-0.1**
ALFC	**Alefka**	**66.97**	**307**	P	**P**	**00 38 35.9**	**-0.4**
SULT	**Sultanhani-AKS**	**67.03**	**311**	*i* P	**P**	**00 38 37.0**	**+0.4**
ERMK	**Ermenek**	**67.09**	**309**	*i* P	**P**	**00 38 38.4**	**+1.2**
PPCY	**Paphos**	**67.11**	**307**	P	**P**	**00 38 35.9**	**-1.2**
AKMC	**Akamas**	**67.16**	**307**	P	**P**	**00 38 37.3**	**-0.1**
KAMT	**Kaman**	**67.20**	**312**	*i* P	**P**	**00 38 36.7**	**-1.0**
BR131	**Keskin Array S**	**67.35**	**312**	*e*P	**P**	**00 38 38.1**	**-0.7**
BRTR	**Keskin Array B**	**67.35**	**312**	P	**P**	**00 38 37.5**	**-1.2**
	comp=Z,18nm,0.8s,baz=131,slow=5.3,SNR=63						
BRTR				PKPPKP	**P'P'df**	**01 07 07.8**	**+2.6**
	comp=Z,1.6nm,1.1s,baz=316,slow=3.4,SNR=4.7						
BRTR				LR	LR	01 12 08.1	
	comp=Z,7µm,18.6s,baz=90,slow=40						
BRTR	**Keskin Array B**	**67.35**	**312**	*i* P	**P**	**00 38 38.4**	**-0.3**
BRTR				pmax	pmax		
	comp=Z,26nm,0.7s						
GAZI	**Gazipasa**	**67.45**	**308**	*i* P	**P**	**00 38 37.6**	**-1.7**
VORD	**Divnogorie**	**67.61**	**325**	*e*P	**P**	**00 38 39.0**	**-0.9**
VORD				pmax	pmax		
	comp=Z,140nm,0.8s						
CANT	**Cankiri**	**67.62**	**313**	*i* P	**P**	**00 38 40.6**	**+0.3**
AFSR	**Af¯ar-Bala (A**	**67.70**	**312**	*i* P	**P**	**00 38 40.4**	**-0.5**
VSR	**Storozhevoye**	**67.79**	**325**	*e*P	**P**	**00 38 39.7**	**-1.3**
VSR				*e*S	**S**	**00 47 29.4**	**-7.8**
VSR				pmax	pmax		
	comp=Z,180nm,0.8s						
VSR				smax	smax		
	comp=N,1µm,4.5s						
VSR				MLR	MLR		
	comp=Z,17µm,21.0s						
KMER	**Konya-Meram**	**67.79**	**310**	*i* P	**P**	**00 38 42.4**	**+0.8**
KONT	**Konya--Tatoy**	**67.84**	**310**	*i* P	**P**	**00 38 41.8**	**+0.1**
LADK	**Ladik-KONYA**	**67.90**	**310**	*i* P	**P**	**00 38 41.7**	**-0.5**
VORR	**Voronezh**	**67.96**	**326**	*e*P	**P**	**00 38 41.0**	**-1.1**
VORR				*e*S	**S**	**00 47 37.0**	**-2.2**
VORR				pmax	pmax		
	comp=Z,500nm,1.4s						
ANTO	**Ankara**	**68.02**	**312**	*e*P	**P**	**00 38 42.2**	**-0.7**
	comp=Z,1µm,1.5s						
ANTO				LR	LR		
	comp=Z,16µm,22.0s						
ANTO	**Ankara**	**68.02**	**312**	*e*P	**P**	**00 38 42.2**	**-0.7**
ANTO				pmax	pmax		
	comp=Z,1µm,1.5s						
ANTO				MLR	MLR		
	comp=Z,16µm,22.0s						
BR231	**Keskin MP Arra**	**68.03**	**312**	*e*P	**P**	**00 38 43.1**	**+0.2**
LOD	**Lodumlu**	**68.05**	**312**	*i* P	**P**	**00 38 42.4**	**-0.6**
KEPZ	**Antalya-Kepez**	**68.17**	**309**	*i* P	**P**	**00 38 43.7**	**-0.1**
LPSR	**Galich'ya Gora**	**68.51**	**327**	*e*P	**P**	**00 38 44.6**	**-0.9**
LPSR				*e*S	**S**	**00 47 41.3**	**-4.5**
LPSR				pmax	pmax		
	comp=Z,220nm,0.7s						
LPSR				smax	smax		
	comp=N,430nm,2.1s						
LPSR				MLR	MLR		
	comp=Z,12µm,19.0s						
SIM	**Simferopol'**	**68.58**	**318***c*	*i*P	**P**	**00 38 45.1**	**-1.1**
SIM				*i*		00 41 23.0	
SIM				*i* S	**S**	**00 47 43.1**	**-3.9**
SIM				*i* PS	**PnS**	**00 48 15.0**	**+1.6**
SIM				pmax	pmax		
	comp=Z,118nm,0.8s						
SIM				pmax	pmax		
	comp=Z,800nm,11.0s						
LHI	**Lord Howe Isla**	**68.64**	**125**	PFAKE		00 39 00.0	+13
LHI				LR	LR		
	comp=Z,30µm,22.0s						
SUTC	**Sutluce-Ispart**	**68.77**	**309**	*i* P	**P**	**00 38 46.4**	**-1.3**
MIR	**Mirnyy**	**69.05**	**181**⇑	*i*P	**P**	**00 38 52.0**	**+3.4**
MIR				*e*		00 39 16.0	
MIR				*e*		00 41 18.0	
MIR				*e*S	**S**	**00 47 58.0**	**+6.4**
MIR				*e*PS	**PnS**	**00 48 30.0**	**+11**
MIR				pmax	pmax		
	comp=Z,88nm,1.2s						
BAGO	**Egridir - ISPA**	**69.06**	**310**	*i* P	**P**	**00 38 49.8**	**+0.4**
BOLV	**Bolvadin**	**69.11**	**311**	*i* P	**P**	**00 38 49.9**	**+0.2**
KORT	**Korkueli**	**69.17**	**309**	*i* P	**P**	**00 38 49.9**	**-0.3**
ISP	**Isparta**	**69.22**	**310**	P	**P**	**00 38 49.0**	**-1.4**
ISP	**Isparta**	**69.22**	**310**	P	**P**	**00 38 49.0**	**-1.4**
ISP	**Isparta**	**69.22**	**310**	P	**P**	**00 38 49.0**	**-1.4**
SKR	**Severo-Kuril's**	**69.34**	**36***d*	*i*P	P	00 38 39.6	-11
SKR				*e*		00 39 15.1	
SKR				*e*PPP	PPP	00 42 58.1	
SKR				*e*S	**S**	**00 47 54.8**	**-0.8**
SKR				pmax	pmax		
	comp=Z,499nm,1.2s						
SKR				pmax	pmax		
	comp=Z,7µm,15.4s						
SKR				pmax	pmax		
	comp=Z,6µm,13.4s						
SKR				smax	smax		

	comp=N,4µm,16.2s						
SKR				smax	smax		
	comp=E,14µm,16.9s						
SKR				MLR	MLR		
	comp=Z,16µm,18.0s						
SKR				MLR	MLR		
	comp=Z,14µm,16.0s						
MDUB	Mudurnu	69.36	312	*i* P	P	00 38 50.8	-0.4
ELL	Elmali	69.46	308	*i* P	P	00 38 51.9	-0.1
LSZ	Lusaka	69.48	253	LR	LR	01 03 53.8	
	comp=Z,38µm,21.8s,baz=88,slow=31						
LSZ	Lusaka	69.48	253	*e*P	P	00 38 52.8	+0.3
	comp=Z,123nm,1.3s						
LSZ	Lusaka	69.48	253	P	P	00 38 52.8	+0.3
	SNR=33						
LSZ	Lusaka	69.48	253	*e*P	P	00 38 52.8	+0.3
LSZ				pmax	pmax		
	comp=Z,123nm,1.3s						
CASY	Casey	69.53	174	*e*P	P	00 38 51.7	+0.2
	comp=Z,135nm,1.1s						
CASY				LR	LR		
	comp=Z,22µm,18.0s						
AKAS	Kas	69.59	308	*i* P	P	00 38 53.3	+0.5
KSL	Kastellorizon	69.59	308	P	P	00 38 51.3	-1.3
KSL	Kastellorizon	69.59	308	P	P	00 38 51.3	-1.3
GOLH	Golhisar	69.84	309	*i* P	P	00 38 53.9	-0.4
PRGR	Permogore	69.91	337	⇑*i*P	P	00 38 53.1	-0.9
PRGR				*e*S	S	00 48 01.9	0.0
PRGR				pmax	pmax		
	comp=Z,335nm,0.7s						
SAUV	Serdivan-Sakar	70.07	313	*i* P	P	00 38 54.6	-0.8
SPNC	Sapanca-Adapaz	70.07	312	*i* P	P	00 38 54.6	-0.8
FETY	Fethiye	70.08	308	*i* P	P	00 38 54.2	-1.5
FETY	Fethiye	70.08	308	P	P	00 38 54.5	-1.2
FETY	Fethiye	70.08	308	P	P	00 38 54.5	-1.2
KHAL	Karahalli	70.14	310	*i* P	P	00 38 55.7	-0.4
CAVI	Cavuskoy	70.30	312	*i* P	P	00 38 54.6	-2.3
TVSB	Tavsanli	70.41	311	*i* P	P	00 38 57.3	-0.4
ADVT	Abdulvahap	70.43	312	*i* P	P	00 38 57.2	-0.4
DALY	Dalyan (Mu˜la	70.46	308	*i* P	P	00 38 57.3	-0.6
TURN	Turunc	70.51	308	*i* P	P	00 39 02.1	+3.9
MA2	Magadan	70.53	26	P	P	00 38 57.0	-0.9
	comp=Z,109nm,0.8s,baz=215,slow=5.3,SNR=26						
MA2				PP	PP	00 41 34.8	+0.5
	comp=Z,3.5nm,0.3s,baz=222,slow=15,SNR=2.0						
MA2	Magadan	70.53	26	*e*P	P	00 38 57.8	-0.1
	comp=Z,135nm,0.9s						
MA2				PP	PP	00 41 34.8	+0.5
MA2				LR	LR		
	comp=Z,34µm,20.0s						
MA2	Magadan	70.53	26	*i* P	P	00 38 58.5	+0.6
MA2				pmax	pmax		
	comp=Z,362nm,1.7s						
MOS	Moscow	70.56	329	*e*P	P	00 38 56.6	-1.5
MOS				*e*		00 39 18.6	
MOS				*e*		00 41 32.2	
MOS				*i* S	S	00 48 07.1	-2.6
MOS				*e*		00 48 56.4	
MOS				*e*SS	SS	00 52 42.1	+0.6
MOS				pmax	pmax		
	comp=Z,2µm,2.0s						
MOS				pmax	pmax		
	comp=Z,289nm,0.7s						
MOS				smax	smax		
	comp=N,3µm,4.9s						
MOS				smax	smax		
	comp=E,3µm,5.1s						
MOS				MLR	MLR		
	comp=Z,51µm,22.0s						
MOS				MLR	MLR		
	comp=E,32µm,21.0s						
HRT	Hereke	70.57	312	*i* P	P	00 38 57.8	-0.8
SILT	Sile	70.67	313	*i* P	P	00 38 58.9	-0.2
SIMA	Simav-Kutahya	70.69	311	*i* P	P	00 38 59.3	-0.1
YLV	Yalova	70.73	312	*i* P	P	00 38 59.0	-0.6
ARG	Arkhangelos	70.76	307	P	P	00 38 59.2	-0.5
ARG	Arkhangelos	70.76	307	P	P	00 38 59.2	-0.5
ARG	Arkhangelos	70.76	307	P	P	00 39 02.2	+2.5
ARG				pmax	pmax		
	comp=Z,171nm,1.2s						
WAKE	Wake Island	70.78	71	*e*P	P	00 39 00.4	+0.3
	comp=Z,345nm,1.4s						
WAKE				LR	LR		
	comp=Z,9µm,20.0s						
KULA	Kula-Manisa	70.81	310	*i* P	P	00 38 59.7	-0.4
YER	Yerkesik	70.81	308	*i* P	P	00 38 58.5	-1.7
YER	Yerkesik	70.81	308	P	P	00 38 58.8	-1.4
YER	Yerkesik	70.81	308	P	P	00 38 58.8	-1.4
YER	Yerkesik	70.81	308	P	P	00 38 58.8	-1.4
GEMT	Gemlik	70.83	312	*i* P	P	00 38 59.3	-0.8
OBN	Obninsk	70.84	328	*e*P	P	00 38 58.8	-1.1
	comp=Z,752nm,1.5s						
OBN				LR	LR		
	comp=Z,28µm,20.0s						
OBN	Obninsk	70.84	328*c*	*i*P	P	00 38 58.7	-1.1
OBN				*e*		00 39 18.6	
OBN				*e*PPP	PPP	00 43 18.8	
OBN				*e*S	S	00 48 08.5	-4.5
OBN				*e*SS	SS	00 52 39.4	-6.4
OBN				pmax	pmax		
	comp=Z,589nm,1.9s						
OBN				MLR	MLR		
	comp=Z,26µm,19.0s						
MANT	Manisa	70.88	310	*i* P	P	00 39 00.9	+0.1
MDNY	Mudanya-Bursa	71.05	312	*i* P	P	00 38 59.7	-1.7
KAVV	Kandilli-Istan	71.08	313	*i* P	P	00 39 00.5	-1.1
ISK	Istanbul-Kandi	71.08	313	*i* P	P	00 39 00.9	-0.7
SBT5	Esenkoy-Cinarc	71.11	312	*i* P	P	00 39 01.6	-0.1
KLYT	Kilyos	71.13	313	*i* P	P	00 39 00.9	-1.0
PEA0B	Petropavlovsk-	71.16	34	*e*P	P	00 39 02.1	+0.2
	comp=Z,80nm,1.2s						
PEA0B				LR	LR		
	comp=Z,28µm,20.0s						
PETK	Petropavlovsk-	71.16	34	P	P	00 39 01.4	-0.5
	comp=Z,16nm,0.8s,baz=186,slow=1.4						
PETK				LR	LR	01 13 26.2	
	comp=Z,24µm,18.4s,baz=254,slow=39						
PETK	Petropavlovsk-	71.16	34	*e*P	P	00 39 00.8	-1.1
AYDN	Tasoluk	71.23	309	*i* P	P	00 39 03.0	+0.3
MLSB	Milas	71.24	308	*i* P	P	00 39 02.5	-0.2
AYDB	Zeytinkoy-Aydi	71.28	309	*i* P	P	00 39 02.9	-0.2
DAT	Datca	71.29	308	*i* P	P	00 39 02.0	-1.1
KARP	Karpathos	71.40	307	*i* P	P	00 39 04.7	+1.0
KARP	Karpathos	71.40	307	*e*P	P	00 39 04.6	+0.9
	comp=Z,330nm,0.8s						
KARP				LR	LR		
	comp=Z,25µm,22.0s						
KCTX	Karacabey (Bur	71.42	312	*i* P	P	00 39 04.3	+0.6
CTKS	Kestanelik-??a	71.52	313	*i* P	P	00 39 02.4	-1.9
BODT	Bodrum	71.56	308	*i* P	P	00 39 04.4	-0.2
BODT	Bodrum	71.56	308	P	P	00 39 03.6	-1.0
BODT	Bodrum	71.56	308	P	P	00 39 03.6	-1.0
BALB	Balikesir	71.64	311	*i* P	P	00 39 04.8	-0.2
PET	Petropavlovsk	71.67	34	*e*P	P	00 39 04.0	-0.8
	comp=Z,148nm,1.1s						
PET				LR	LR		
	comp=Z,23µm,20.0s						
PET	Petropavlovsk	71.67	34α	*i*P	P	00 39 04.1	-0.8
PET				*e*PPP	PPP	00 43 25.2	
PET				*e*S	S	00 48 20.6	-2.1
PET				*e*PS	PnS	00 48 46.1	-8.2
PET				*e*SS	SS	00 53 03.3	+4.7
PET				pmax	pmax		
	comp=Z,145nm,1.2s						
PET				pmax	pmax		
	comp=Z,7µm,19.5s						
PET				MLR	MLR		
	comp=Z,26µm,20.0s						
CTYL	Yalikoy Yolu	71.74	313	*i* P	P	00 39 03.9	-1.6
SLVT	Silivri	71.74	313	*i* P	P	00 39 03.6	-2.0
EDC	Edincik	71.80	312	*i* P	P	00 39 05.2	-0.8
SBT3	Marmara-Eregli	71.84	312	*i* P	P	00 39 05.4	-0.6
TIXI	Tiksi	71.98	10	P	P	00 39 04.9	-1.5
	comp=Z,133nm,0.6s,baz=208,slow=3.7,SNR=96						
TIXI				S	S	00 48 22.9	-2.9
	comp=Z,2.6nm,0.6s,baz=197,slow=19,SNR=3.0						
TIXI	Tiksi	71.98	10	*e*P	P	00 39 05.2	-1.3
	comp=Z,241nm,1.0s						
TIXI				S	S	00 48 22.9	-2.9
TIXI				LR	LR		
	comp=Z,57µm,18.0s						
TIXI	Tiksi	71.98	10*c*	*i*P	P	00 39 05.5	-0.9
TIXI				pmax	pmax		
	comp=Z,516nm,1.7s						
TIXI				MLR	MLR		
	comp=Z,51µm,18.0s						
KLMR	Klimovskoe	72.00	335	*e*P	P	00 39 04.3	-2.5
KLMR				*e*S	S	00 48 23.8	-2.5
KLMR				*e*SS	SS	00 53 01.5	-1.9
KLMR				pmax	pmax		
	comp=Z,395nm,1.2s						
KLMR				MLR	MLR		
	comp=Z,23µm,22.0s						
KLMR	Klimovskoe	72.00	335	*e*P	P	00 39 04.3	-2.5
KLMR				AMP		00 39 19.2	
	comp=Z,395nm,1.2s						
KLMR				*e*S	S	00 48 23.8	-2.5
KLMR				*e*S	S	00 48 23.8	-2.5
KLMR				*e*SS	SS	00 53 01.6	-1.9
KLMR				*e*SS	SS	00 53 01.6	-1.9
KLMR				LQ	LQ	01 04 52.2	
KLMR				LQ	LQ	01 04 52.2	
KLMR				LR	LR	01 11 32.6	
KLMR				AMP		01 12 35.1	
	comp=Z,23µm,22.3s						
BLCB	Balcova	72.03	309	*i* P	P	00 39 07.6	+0.2
SMG	Samos	72.06	309	P	P	00 39 06.8	-0.8
SMG	Samos	72.06	309	P	P	00 39 06.8	-0.8
CRLT	Corlu	72.07	312	*i* P	P	00 39 07.3	-0.3
ZKR	Zakros	72.09	306	P	P	00 39 07.7	-0.1
ZKR	Zakros	72.09	306	P	P	00 39 07.7	-0.1
TLCR		72.25	317	⇑*i*P	P	00 39 09.0	+0.5
DKL	Dikili	72.26	310	*i* P	P	00 39 08.7	-0.1
PHSR	Pinarhisar	72.33	313	*i* P	P	00 39 09.1	0.0
TIRR	Tirgusor	72.35	316	⇓*i*P	P	00 39 09.5	+0.4
TIRR	Tirgusor	72.35	316	*e*P	P	00 39 08.7	-0.4
	comp=Z,160nm,1.0s						
TIRR				LR	LR		
	comp=Z,10µm,20.0s						
TIRR	Tirgusor	72.35	316	*e*P	P	00 39 08.7	-0.4
TIRR				pmax	pmax		
	comp=Z,160nm,1.0s						
TIRR				MLR	MLR		
	comp=Z,10µm,20.0s						
RKY	Sarkoy-Tekirda	72.39	312	*i* P	P	00 39 09.1	-0.5
NPS	Neapolis	72.60	306	P	P	00 39 10.6	-0.3
NPS	Neapolis	72.60	306	P	P	00 39 10.6	-0.3
NPS	Neapolis	72.60	306	P	P	00 39 10.6	-0.3
LPK	Lapseki	72.63	311	*i* P	P	00 39 11.3	+0.3
AMGA	Amorgos Island	72.64	308	P	P	00 39 09.9	-1.2
LAST	Lasithi	72.69	306	P	P	00 39 11.1	-0.4
LAST	Lasithi	72.69	306	P	P	00 39 11.1	-0.4
CFR	Carcaliu	72.71	317	⇑*i*P	P	00 39 11.5	+0.2
CFR	Carcaliu	72.71	317	P	P	00 39 11.5	+0.2
CFR				pmax	pmax		
	comp=Z,94nm,1.1s						
KIS	Kishinev	72.72	319	*e*P	P	00 39 10.0	-1.3
	comp=Z,300nm,1.6s						
KIS	Kishinev	72.72	319	*i* PcP	PcP	00 39 22.0	-6.6
KIS	Kishinev	72.72	319	*e*PP	PP	00 42 00.0	+6.7
KIS	Kishinev	72.72	319	⇑*i*P	P	00 39 11.4	+0.1
KIS	Kishinev	72.72	319	*e*P	P	00 39 10.0	-1.3
KIS				*i*		00 39 22.0	
KIS				*i*		00 39 27.0	
KIS				*e*		00 42 00.0	
KIS				*e*PPP	PPP	00 43 40.0	
KIS				*e*S	S	00 48 32.0	-3.0
KIS				*e*PS	PnS	00 49 03.0	-5.4
KIS				pmax	pmax		
	comp=Z,290nm,1.6s						
KIS				pmax	pmax		
	comp=Z,3µm,14.0s						
KIS				smax	smax		
	comp=Z,10µm,16.0s						
KIS				smax	smax		
	comp=E,3µm,8.0s						
HARR	Harsova	72.74	316	⇓*i*P	P	00 39 11.8	+0.3
HARR	Harsova	72.74	316	P	P	00 39 11.8	+0.3
PRD	Provadia	72.77	314	*i* P	P	00 39 10.8	-0.9
PRK	Paraskevi	72.78	310	P	P	00 39 10.7	-1.1
PRK	Paraskevi	72.78	310	P	P	00 39 10.7	-1.1
PRK	Paraskevi	72.78	310	P	P	00 39 10.7	-1.1
CHOS	Chios island	72.79	309	P	P	00 39 11.7	-0.3
CHOS	Chios island	72.79	309	P	P	00 39 11.7	-0.3
DZM	Mont Dzumac	72.85	114	*e*P	P	00 39 13.2	+0.5
	comp=E,378nm,1.6s						
DZM	Mont Dzumac	72.85	114	*e*PP	PP	00 41 57.6	+2.4
	comp=E,2µm,25.1s						
DZM				*e*S	S	00 48 34.6	-3.0
	comp=E,31µm,27.3s						
DZM				*e*SS	SS	00 53 18.3	0.0
	comp=E,16µm,26.8s						
DZM				*e*LR	LR	01 01 38.6	
	comp=E,43µm,26.2s						
DZM	Mont Dzumac	72.85	114	P	P	00 39 11.9	-0.8
	comp=E,34nm,0.8s,baz=291,slow=8.1,SNR=17						
DZM				S	S	00 48 38.9	+1.3
	comp=E,3.3nm,1.0s,baz=323,slow=20,SNR=2.7						
DZM				LR	LR	01 12 51.2	
	comp=E,19µm,21.7s,baz=285,slow=37						
DZM	Mont Dzumac	72.85	114	*e*P	P	00 39 13.7	+1.0
	comp=E,150nm,1.2s						
DZM				S	S	00 48 38.9	+1.3
GELI	Tayfur-Gelibol	72.85	311	*i* P	P	00 39 12.2	0.0
ERIK	Erikli-Kesan	72.88	312	*i* P	P	00 39 12.2	-0.2
SANT	Santorini	72.90	307	⇑*i*P	P	00 39 12.0	-0.7
SANT	Santorini	72.90	307	*e*P	P	00 39 12.2	-0.5
	comp=E,198nm,1.2s						
SANT				LR	LR		
	comp=Z,10µm,20.0s						
EDRB	Edirne	72.95	313	*i* P	P	00 39 12.8	0.0
LEOM	Leova	72.96	318	⇓*i*P	P	00 39 13.0	+0.2
LEOM	Leova	72.96	318	P	P	00 39 12.9	+0.2
CMBO	Columbo, Santo	72.96	307	P	P	00 39 12.2	-0.8
APE	Apeiranthos	72.96	308	*i* P	P	00 39 12.2	-0.9
APE	Apeiranthos	72.96	308	⇑*i*P	P	00 39 12.4	-0.7
APE	Apeiranthos	72.96	308	P	P	00 39 11.4	-1.7
APE	Apeiranthos	72.96	308	P	P	00 39 11.4	-1.7
APE	Apeiranthos	72.96	308*c*	*i*P	P	00 39 11.7	-1.4
APE				pmax	pmax		
	comp=Z,48nm,1.2s						
ENEZ	Enez	73.16	312	*i* P	P	00 39 12.6	-1.4
JMB	Yambol	73.19	314	*i* P	P	00 39 14.2	0.0
SIVA	Sivas	73.21	306	P	P	00 39 14.2	-0.3
SIVA	Sivas	73.21	306	P	P	00 39 14.2	-0.3
GADA	Gvkgeada	73.24	311	*i* P	P	00 39 14.6	0.0
GADA	Gvkgeada	73.24	311	P	P	00 39 13.8	-0.8
GADA	Gvkgeada	73.24	311	P	P	00 39 13.8	-0.8
ALN	Alexandroupoli	73.27	312	*e*P	P	00 39 14.7	0.0
	comp=Z,52nm,1.1s						
ALN				LR	LR		
	comp=Z,11µm,20.0s						
ALN	Alexandroupoli	73.27	312	P	P	00 39 13.6	-1.1
SORM	Soroca	73.32	320	⇑*i*P	P	00 39 14.7	-0.1
SORM	Soroca	73.32	320	P	P	00 39 14.5	-0.3
PGOR	Pogoanele	73.44	316	⇓*i*P	P	00 39 16.6	+1.0
AKASG	Malin Array Be	73.47	322	P	P	00 39 14.2	-1.5
	comp=Z,34nm,0.7s,baz=88,slow=5.1,SNR=93						
AKASG				PP	PP	00 41 57.7	-1.9
	comp=Z,5.4nm,0.6s,baz=90,slow=8.3,SNR=4.3						
AKASG				S	S	00 48 37.8	-5.6
	comp=Z,0.2nm,0.3s,baz=116,slow=8.4,SNR=2.6						
AKASG				LR	LR	01 14 47.5	
	comp=Z,11µm,21.6s,baz=105,slow=38						
AKASG	Malin Array Be	73.47	322	*i* P	P	00 39 14.3	-1.4
AKASG				pmax	pmax		
	comp=Z,58nm,0.6s						
AKBB	Malin Array Si	73.47	322	*e*P	P	00 39 14.4	-1.3
	comp=Z,185nm,1.0s						
AKBB				LR	LR		
	comp=Z,17µm,20.0s						
KIEV	Kiev	73.48	322	*e*P	P	00 39 14.3	-1.3
	comp=Z,165nm,1.0s						
KIEV				LR	LR		
	comp=Z,16µm,20.0s						
KIEV	Kiev	73.48	322	*i* P	P	00 39 14.6	-1.1
	SNR=14						
KIEV	Kiev	73.48	322	*e*P	P	00 39 14.4	-1.3
KIEV				pmax	pmax		
	comp=Z,165nm,1.0s						
KIEV				MLR	MLR		
	comp=Z,16µm,20.0s						
AK11	Malin Array Si	73.50	322	*e*P	P	00 39 15.4	-0.4
LBTB	Lobatse	73.55	243	*e*P	P	00 39 16.9	+0.1
	comp=Z,219nm,1.3s						
LBTB	Lobatse	73.55	243	*e*P	P	00 39 16.9	+0.1
LBTB				pmax	pmax		
	comp=Z,219nm,1.3s						
IAS	Iasi	73.59	319	⇓*i*P	P	00 39 17.0	+0.5
RDO	Rodhopi	73.69	312	P	P	00 39 16.2	-1.0
RDO	Rodhopi	73.69	312	P	P	00 39 16.2	-1.0
LIA	Limnos Island	73.73	311	P	P	00 39 15.8	-1.6
LIA	Limnos Island	73.73	311	P	P	00 39 15.8	-1.6
VAM	Vamos	73.76	306	P	P	00 39 17.8	+0.1
VAM	Vamos	73.76	306	P	P	00 39 17.8	+0.1
VAM	Vamos	73.76	306	P	P	00 39 17.8	+0.1
MHLO	Agia Marina, M	73.80	307	P	P	00 39 16.7	-1.2
ISR	Istrita	73.80	316	⇑*i*P	P	00 39 17.4	-0.4
SERI	Serifos	73.80	308	P	P	00 39 15.5	-2.5
SZH	Strazhica	73.83	314	*i* P	P	00 39 17.1	-0.9
VRI	Vrincioaia	73.84	317	⇓*i*P	P	00 39 19.0	+1.0
VRI	Vrincioaia	73.84	317	P	P	00 39 18.6	+0.6
VRI				pmax	pmax		
	comp=Z,2µm,1.1s						
DIM	Dimitrovgrad	73.87	313	*i* P	P	00 39 18.3	+0.1
KDZ	Kurdzhali	73.88	313	*i* P	P	00 39 17.6	-0.7
PLOR	Plostina	73.89	317	⇓*i*P	P	00 39 19.3	+1.0
PLOR	Plostina	73.89	317	P	P	00 39 19.3	+1.0
CHAN	Chania	73.91	306	P	P	00 39 19.7	+1.1
IMMV	Iera Moni Meta	73.95	306	P	P	00 39 18.3	-0.5
KARY	Karystos	73.98	309	P	P	00 39 18.0	-1.0
TESR	Tescani	74.04	318	⇑*i*P	P	00 39 19.6	+0.5
PLAR	PLOIESTI	74.11	316	⇓*i*P	P	00 39 20.6	+1.1
THAS	Thassos island	74.20	311	P	P	00 39 18.5	-1.7
PVL	Pavlikeni	74.25	314	*i* P	P	00 39 20.3	-0.1
MLR	Muntele Rosu	74.29	317	P	P	00 39 19.6	-1.2
	comp=Z,138nm,1.1s,baz=128,slow=3.2,SNR=70						
MLR				S	S	00 48 50.8	-2.3
	comp=Z,4.1nm,0.8s,baz=121,slow=13,SNR=3.4						
MLR				LR	LR	01 16 43.3	
	comp=Z,13µm,20.5s,baz=81,slow=40						
MLR	Muntele Rosu	74.29	317	⇓*i*P	P	00 39 22.0	+1.2
MLR	Muntele Rosu	74.29	317	*e*P	P	00 39 20.6	-0.2
	comp=Z,339nm,1.2s						
MLR				S	S	00 48 50.9	-2.3
ZIMR		74.31	315	⇑*i*P	P	00 39 21.1	+0.4
RZN	Rozhen	74.40	313	*i* P	P	00 39 20.0	-1.6
PTL	Penteli	74.43	309	P	P	00 39 20.0	-1.6
PTL	Penteli	74.43	309	P	P	00 39 20.0	-1.6
VLY	Voula,Athens	74.45	308	P	P	00 39 19.3	-2.4
VLY	Voula,Athens	74.45	308	P	P	00 39 19.3	-2.4
ATHU	Athens Univers	74.48	309	P	P	00 39 20.0	-1.9
ATHU	Athens Univers	74.48	309	P	P	00 39 20.0	-1.9
PLD	Plovdiv	74.49	313	*i* P	P	00 39 20.5	-1.4
PLD	Plovdiv	74.49	313	*i* P	P	00 39 20.4	-1.4
BIZ	Bicaz	74.50	318	⇑*i*P	P	00 39 22.4	+0.6
PRAR	RASCA	74.52	319	⇓*i*P	P	00 39 22.1	+0.2
ATH	Athens Observa	74.53	309	P	P	00 39 20.3	-1.9
ATH	Athens Observa	74.53	309	P	P	00 39 20.3	-1.9
BOSA	Boshof	74.55	240	P	P	00 39 21.1	-1.5
	comp=Z,20nm,0.8s,baz=89,slow=6.1,SNR=31						
BOSA				S	S	00 48 53.0	-3.7
	comp=Z,1.8nm,0.9s,baz=112,slow=19,SNR=2.2						
BOSA				LR	LR	01 09 26.2	
	comp=Z,30µm,18.3s,baz=52,slow=34						
BOSA	Boshof	74.55	240	*e*P	P	00 39 22.7	+0.1
	comp=Z,106nm,1.0s						
BOSA				S	S	00 48 53.0	-3.7
ANKY	Antikythira Is	74.55	306	P	P	00 39 22.0	-0.3
ANKY	Antikythira Is	74.55	306	P	P	00 39 22.0	-0.3
AOS	Alonnisos	74.60	310	P	P	00 39 21.0	-1.5
AOS	Alonnisos	74.60	310	P	P	00 39 21.0	-1.5
OUR	Ouranopolis	74.71	311	P	P	00 39 20.2	-2.9
OUR	Ouranopolis	74.71	311	P	P	00 39 20.2	-2.9
OUR	Ouranopolis	74.71	311	P	P	00 39 20.2	-2.9
DOPR	Dopca	74.77	317	⇑*i*P	P	00 39 24.1	+0.7
GOLR		74.83	316	⇑*i*P	P	00 39 24.5	+0.7
DID	Didima	74.84	308	P	P	00 39 21.1	-2.9
DID	Didima	74.84	308	P	P	00 39 21.1	-2.9
PAIG	Paliouri	74.87	311	P	P	00 39 22.6	-1.5
PAIG	Paliouri	74.87	311	P	P	00 39 22.6	-1.5
PAIG	Paliouri	74.87	311	P	P	00 39 24.0	-0.1
KRND	KRANIDI	74.89	308	P	P	00 39 21.5	-2.8
VOIR		74.89	316	⇓*i*P	P	00 39 24.4	+0.2
PGB	Panagyurishte	74.96	313	*i* P	P	00 39 23.6	-1.1
VLI	Veliai	74.96	307	P	P	00 39 22.8	-1.9
VLI	Veliai	74.96	307	P	P	00 39 22.8	-1.9
NVR	Nevrokopi	74.97	312	P	P	00 39 23.5	-1.2
NVR	Nevrokopi	74.97	312	P	P	00 39 23.5	-1.2
SMIA	Simia	75.07	309	P	P	00 39 23.3	-2.0
MMB	Musomiste	75.11	312	*i* P	P	00 39 24.3	-1.2
NEO	Neokhori	75.12	310	P	P	00 39 22.8	-2.8
NEO	Neokhori	75.12	310	P	P	00 39 22.8	-2.8
PLG	Polygyros	75.12	311	P	P	00 39 23.8	-1.8
PLG	Polygyros	75.12	311	P	P	00 39 23.8	-1.8
SRS	Serrai	75.14	312	P	P	00 39 23.0	-2.6
SRS	Serrai	75.14	312	P	P	00 39 23.0	-2.6
SRS	Serrai	75.14	312	P	P	00 39 24.9	-0.7
SRS				pmax	pmax		
	comp=Z,90nm,1.1s						
ARR	Arges	75.17	316	⇓*i*P	P	00 39 25.6	-0.2
LKR	Lokris	75.19	309	P	P	00 39 23.5	-2.5
LKR	Lokris	75.19	309	P	P	00 39 23.5	-2.5
BURAR	Bucovina Array	75.24	319	⇑*i*P	P	00 39 27.1	+0.9
BURAR	Bucovina Array	75.24	319	P	P	00 39 27.1	+0.9
BUR04	Bucovina Ar. S	75.25	319	*e*P	P	00 39 25.7	-0.5
BUR08	Bucovina Ar. S	75.26	319	*e*P	P	00 39 26.4	+0.1
SOH	Sokhos	75.26	311	P	P	00 39 24.5	-1.9
SOH	Sokhos	75.26	311	P	P	00 39 24.5	-1.9
SOH	Sokhos	75.26	311	P	P	00 39 25.9	-0.5
SOH				pmax	pmax		
	comp=Z,53nm,1.4s						
MICGM	Minsk	75.34	326	⇓*i*P	P	00 39 26.0	-0.5
MICGM				PM		00 39 28.0	
	comp=Z,0.7nm,1.5s						
MICGM				*e*PP	PP	00 42 12.0	-3.4
MICGM				*e*PPP	PPP	00 44 00.0	
MICGM				*e*S	S	00 49 01.0	-3.2
MICGM				*e*SS	SS	00 54 10.0	+15
MICGM				*e*SSS	SSS	00 57 06.0	
MICGM				*e*LQ	LQ	01 07 30.0	
MICGM				LQM		01 09 14.0	
	comp=E,6.0nm,26.0s						
MICGM				*e*LR	LR	01 12 10.0	
MICGM				LRM	MLR	01 16 43.0	
	comp=Z,29nm,20.0s						
MICGM				LRM	MLR	01 16 56.0	
	comp=E,9.9nm,20.0s						
MICGM				LRM	MLR	01 16 58.0	
	comp=N,11nm,22.0s						
MNK	Minsk	75.34	326	⇓*i*P	P	00 39 26.0	-0.5
MNK				*e*		00 42 12.0	
MNK				*e*		00 44 00.0	
MNK				*e*S	S	00 49 01.0	-3.2
MNK				*e*		00 57 06.0	
MNK				pmax	pmax		
	comp=Z,650nm,1.5s						
HORT	Hortiatis	75.42	311	P	P	00 39 25.3	-2.1
HORT	Hortiatis	75.42	311	P	P	00 39 25.3	-2.1
DYR	Agios Nikonas	75.45	307	P	P	00 39 25.9	-1.6
AXAR	Agios Charalam	75.47	309	P	P	00 39 27.1	-0.5
AXAR	Agios Charalam	75.47	309	P	P	00 39 27.1	-0.5
VLX	Vlachokerasia	75.50	308	P	P	00 39 25.9	-2.0
VLX	Vlachokerasia	75.50	308	P	P	00 39 25.9	-2.0
THE	Thessaloniki	75.53	311	P	P	00 39 26.3	-1.5
THE	Thessaloniki	75.53	311	P	P	00 39 26.3	-1.5
THE	Thessaloniki	75.53	311	P	P	00 39 26.3	-1.5
GUR	Goura	75.60	308	P	P	00 39 26.7	-1.8
GUR	Goura	75.60	308	P	P	00 39 26.7	-1.8
TRIP	Tripoli	75.60	308	P	P	00 39 26.1	-2.4
KKB	Krupnik	75.64	312	*i* P	P	00 39 27.1	-1.4
KNT	Kendrikon	75.66	312	P	P	00 39 26.8	-1.8
KNT	Kendrikon	75.66	312	P	P	00 39 26.8	-1.8
KNT	Kendrikon	75.66	312	P	P	00 39 26.8	-1.8
VTS	Vitosha	75.67	313	⇑*i*P	P	00 39 28.6	-0.2
VTS	Vitosha	75.67	313	*e*P	P	00 39 28.2	-0.6
	comp=Z,100nm,1.3s						
VTS	Vitosha	75.67	313	*i* P	P	00 39 27.2	-1.6
VTS	Vitosha	75.67	313	P	P	00 39 27.4	-1.4
ARCR	ARCALIA	75.70	318	⇑*i*P	P	00 39 30.1	+1.3
PUL	Pulkovo	75.73	332	⇑*i*P	P	00 39 29.9	+1.3
PUL				pmax	pmax		
	comp=Z,213nm,0.7s						
PUL				MLR	MLR		
	comp=Z,29µm,20.0s						
AGG	Agios Georgios	75.77	309	*e*P	P	00 39 27.8	-1.5
	comp=Z,96nm,0.8s						
AGG	Agios Georgios	75.77	309	P	P	00 39 25.7	-3.6
KLV	Kalavryta, Ach	75.77	308	P	P	00 39 27.5	-1.9

KLV	Kalavryta, Ach	75.77	308	P	P	00 39 27.5	-1.9
LOT	Lotru	75.78	316	⇓*i*P	P	00 39 29.5	+0.1
LIT	Litokhoron	75.80	311	*e*P	P	00 39 28.7	-0.8
	comp=Z,82nm,0.9s						
LIT	Litokhoron	75.80	311	P	P	00 39 26.6	-2.9
LIT	Litokhoron	75.80	311	P	P	00 39 28.7	-0.8
LIT				pmax	pmax		
	comp=Z,82nm,0.9s						
ITM	Ithomi	75.83	308	*e*P	P	00 39 29.4	-0.3
	comp=Z,66nm,0.8s						
ITM	Ithomi	75.83	308	P	P	00 39 28.3	-1.4
TRIZ	Trizonia	75.87	309	P	P	00 39 27.6	-2.3
SERG	Sergoula	75.89	309	P	P	00 39 28.1	-1.9
LAKA	Lakka	75.93	309	P	P	00 39 28.5	-1.8
LAKA	Lakka	75.93	309	P	P	00 39 28.5	-1.8
VAY	Valandovo	75.93	312	P	P	00 39 27.3	-2.8
VAY	Valandovo	75.93	312	P	P	00 39 27.3	-2.8
VAY	Valandovo	75.93	312	*i* P	P	00 39 28.9	-1.2
VAY	Valandovo	75.93	312	P	P	00 39 27.3	-2.8
PYL	PYLOS	75.94	307	P	P	00 39 28.0	-2.3
PYL	PYLOS	75.94	307	P	P	00 39 28.0	-2.3
GRG	Griva	76.00	311	P	P	00 39 28.5	-2.1
GRG	Griva	76.00	311	P	P	00 39 28.5	-2.1
GRG	Griva	76.00	311	P	P	00 39 28.5	-2.1
EFP	Efpalio	76.01	309	P	P	00 39 28.9	-1.8
ANX	Ano Chora	76.02	309	P	P	00 39 29.1	-1.8
AMT	Artemida-Makis	76.05	308	P	P	00 39 29.1	-1.8
NACGM	Naroch	76.06	326	*e*P	P	00 39 30.0	-0.6
NACGM				PM		00 39 32.0	
	comp=Z,0.8nm,1.0s						
NACGM				*e*S	S	00 49 08.0	-4.2
NACGM				*e*PS	PnS	00 49 46.0	-5.7
NACGM				*e*SS	SS	00 53 26.0	-40
NACGM				*e*SSS	SSS	00 57 26.0	
NACGM				*e*LQ	LQ	01 05 40.0	
NACGM				*e*LR	LR	01 08 46.0	
NACGM				LRM	MLR	01 17 08.0	
	comp=Z,8.0nm,22.0s						
THL	Klokotos Trika	76.09	310	P	P	00 39 27.0	-4.1
DRO	Drossia	76.10	308	P	P	00 39 30.3	-0.9
CJR	Cluj-Napoca	76.14	317	⇓*i*P	P	00 39 32.5	+1.2
EVR	Evrytania	76.15	309	P	P	00 39 29.6	-2.0
EVR	Evrytania	76.15	309	P	P	00 39 29.6	-2.0
IDID	Didziasalis	76.20	327	*e*P	P	00 39 31.2	-0.1
IDID				IAmb	IAmb	00 39 39.9	
	comp=Z,112nm,1.0s						
RLS	Riolos of Patr	76.31	308	P	P	00 39 31.4	-0.9
RLS	Riolos of Patr	76.31	308	P	P	00 39 31.4	-0.9
KZN	Kozani	76.38	311	P	P	00 39 30.2	-2.6
KZN	Kozani	76.38	311	P	P	00 39 30.2	-2.6
KZN	Kozani	76.38	311	P	P	00 39 30.2	-2.6
BMR	Baia Mare	76.39	318	⇑*i*P	P	00 39 33.7	+1.0
DEV	Deva	76.46	317	⇓*i*P	P	00 39 34.0	+0.9
LVV	L’vov	76.48	321	*i* P	P	00 39 33.1	0.0
LVV				*i*		00 42 26.4	
LVV				*i* S	S	00 49 15.9	-1.1
LVV				*e*SS	SS	00 54 12.8	+0.7
LVV				*e*SSS	SSS	00 57 28.5	
LVV				pmax	pmax		
	comp=Z,700nm,1.5s						
IIGN	Ignalina	76.50	327	*e*P	P	00 39 33.0	-0.1
IIGN				IAmb	IAmb	00 39 42.5	
	comp=Z,134nm,1.1s						
IZAR	Zarasai	76.59	327	*e*P	P	00 39 33.4	-0.1
IZAR				IAmb	IAmb	00 39 42.0	
	comp=Z,74nm,0.8s						
PDO	Prodromos	76.60	309	P	P	00 39 32.5	-1.5
ISAL	Salakas	76.61	327	*e*P	P	00 39 33.5	-0.2
ISAL				IAmb	IAmb	00 39 56.9	
	comp=Z,115nm,1.1s						
HERR	Herculane	76.62	315	⇓*i*P	P	00 39 34.1	+0.1
FNA	Florina	76.74	311	*e*P	P	00 39 33.7	-1.1
	comp=Z,27nm,0.9s						
FNA	Florina	76.74	311	P	P	00 39 32.5	-2.4
FNA	Florina	76.74	311	*e*P	P	00 39 33.7	-1.1
FNA				pmax	pmax		
	comp=Z,27nm,0.9s						
DRGR		76.75	317	⇓*i*P	P	00 39 35.9	+1.1
TARA	Tarawa	76.77	89	*e*P	P	00 39 36.9	+1.4
	comp=Z,263nm,1.4s						
TARA				LR	LR		
	comp=Z,488nm,21.0s						
KFL	Anninata	76.84	308	P	P	00 39 33.7	-1.7
SKO	Skopje	76.86	312	*i* P	P	00 39 34.4	-1.1
KRUS	Krusevo	76.92	312	*i* P	P	00 39 34.7	-1.2
NEST	Nestorio	76.94	311	P	P	00 39 34.0	-2.0
JAN	Janina	76.99	310	P	P	00 39 35.0	-1.2
JAN	Janina	76.99	310	P	P	00 39 35.0	-1.2
VLS	Valsamata	77.01	308	P	P	00 39 34.3	-2.0
VLS	Valsamata	77.01	308	P	P	00 39 34.3	-2.0
EVGI	Lefkada island	77.01	309	P	P	00 39 35.6	-0.7
LKD2	Lefkada island	77.03	309	P	P	00 39 34.5	-2.0
LKD2	Lefkada island	77.03	309	P	P	00 39 34.5	-2.0
FSK	Fiskardo	77.06	309	P	P	00 39 34.2	-2.4
VSU	Vasula	77.08	330	*c* *i*P	P	00 39 35.6	-0.6
VSU				pmax	pmax		
	comp=Z,265nm,0.6s						
VSU				MLR	MLR		
	comp=Z,43µm,20.0s						
MDVR	Moldovita	77.10	315	⇑*i*P	P	00 39 36.7	-0.1
TRPA	Tarpa	77.11	319	⇑*i*P	P	00 39 37.5	+0.8
TRPA	Tarpa	77.11	319	⇑*e*P	P	00 39 37.1	+0.4
KBN	Korca	77.16	311	P	P	00 39 34.2	-3.1
KBN	Korca	77.16	311	P	P	00 39 34.2	-3.1
KBN	Korca	77.16	311	P	P	00 39 34.2	-3.1
OHR	Ohrid	77.22	311	*i* P	P	00 39 36.2	-1.3
OHR	Ohrid	77.22	311	P	P	00 39 37.6	+0.1
KWP	Kalwaria Pacla	77.28	320	*e*P	P	00 39 37.9	+0.2
KWP				*e*S	S	00 49 23.3	-2.5
KWP				LMZ	LR	01 18 47.4	
	comp=Z,11µm,21.8s						
KWP	Kalwaria Pacla	77.28	320	*e*P	P	00 39 37.7	0.0
	comp=Z,3µm,1.3s						
KWP	Kalwaria Pacla	77.28	320	*e*P	P	00 39 37.9	+0.2
KWP				*e*S	S	00 49 23.3	-2.5
KWP				MLR	MLR		
	comp=Z,11µm,21.8s						
UZH	Uzhgorod	77.36	319	*e*P	P	00 39 38.0	-0.1
UZH				*e*S	S	00 49 24.0	-2.6
IGT	Igoumenitsa	77.37	310	P	P	00 39 36.4	-2.0
IGT	Igoumenitsa	77.37	310	P	P	00 39 36.4	-2.0
IGT	Igoumenitsa	77.37	310	P	P	00 39 37.9	-0.5
SGD	Sagiada	77.46	310	P	P	00 39 37.1	-1.7
PHP	Peshkopia	77.56	312	P	P	00 39 37.3	-2.2
PHP	Peshkopia	77.56	312	P	P	00 39 37.3	-2.2
PHP	Peshkopia	77.56	312	P	P	00 39 37.3	-2.2
BANR	Banloc	77.60	316	⇑*i*P	P	00 39 39.5	+0.1
SRN	Sarande	77.67	310	P	P	00 39 38.0	-2.0
SRN	Sarande	77.67	310	P	P	00 39 38.0	-2.0
KEK	Kerkira	77.80	310	P	P	00 39 39.0	-1.8
KEK	Kerkira	77.80	310	P	P	00 39 39.0	-1.8
SUW	Suwalki	77.89	325	*e*P	P	00 39 39.9	-1.0
SUW				*e*S	S	00 49 27.1	-5.0
SUW				LMZ	LR	01 18 44.5	
	comp=Z,13µm,21.3s						
SUW	Suwalki	77.89	325	*e*P	P	00 39 40.4	-0.5
	comp=Z,615nm,1.0s						
SUW	Suwalki	77.89	325	*e*P	P	00 39 40.4	-0.5
SUW				pmax	pmax		
	comp=Z,615nm,1.0s						
CRVS	Cervenica-Dubn	77.95	319	*e*P	P	00 39 41.5	+0.1
CRVS				pmax	pmax		
	comp=Z,625nm,2.0s						
CRVS	Cervenica-Dubn	77.95	319	*e*P	P	00 39 41.5	+0.1
CRVS				*e*S	S	00 49 28.3	-4.8
CRVS				*e*L	L	01 19 54.1	
PVY	Plav	78.04	313	*e*P	P	00 39 40.3	-1.9
IVA	Berane	78.12	313	⇑*i*P	P	00 39 40.8	-1.8
DIVS	Divibare	78.22	314	*e*P	P	00 39 43.3	+0.2
	comp=Z,91nm,1.3s						
FIA1	FINESS Array S	78.24	333	*e*P	P	00 39 42.4	-0.3
FINES	FINESS Array B	78.24	333	P	P	00 39 41.8	-0.9
	comp=Z,75nm,0.7s,baz=48,slow=8.9,SNR=126						
FINES				S	S	00 49 32.7	-2.9
	comp=Z,2.1nm,0.9s,baz=117,slow=24,SNR=2.8						
FINES				LR	LR	01 18 44.6	
	comp=Z,29µm,21.9s,baz=113,slow=39						
FINES	FINESS Array B	78.24	333	*i* P	P	00 39 42.2	-0.5
FINES				pmax	pmax		
	comp=Z,73nm,0.7s						
MSF	Maaselka	78.39	337	*e*P	P	00 39 43.6	+0.1
MSF				pmax	pmax		
	comp=Z,179nm,0.9s						
KOME	Kolasin	78.40	313	⇓*i*P	P	00 39 42.8	-1.3
ULC	Ulcinj	78.49	312	⇓*i*P	P	00 39 42.4	-2.1
KECS	Kecovo	78.52	319	*e*P	P	00 39 44.9	+0.3
KECS				pmax	pmax		
	comp=Z,50nm,1.0s						
KECS	Kecovo	78.52	319	*e*P	P	00 39 44.9	+0.3
PDG	Podgorica	78.53	313	⇑*i*P	P	00 39 44.4	-0.3
PDG	Podgorica	78.53	313	P	P	00 39 42.8	-1.9
TTG	Podgorica	78.53	313	⇓*i*P	P	00 39 42.8	-1.9
TTG	Podgorica	78.53	313	*e*P	P	00 39 43.3	-1.4
	comp=Z,66nm,0.7s						
TTG	Podgorica	78.53	313	*e*P	P	00 39 43.3	-1.4
TTG				pmax	pmax		
	comp=Z,66nm,0.7s						
PLE	Pljevlja	78.55	314	⇓*i*P	P	00 39 44.1	-0.9
DRME	Dracevica, Mon	78.56	312	⇓*i*P	P	00 39 43.5	-1.4
DCZ	Deep Cove	78.69	137	*e*P	P	00 39 47.0	+1.5
	comp=Z,92nm,1.3s						
NKY	Niksic	78.77	313	⇓*i*P	P	00 39 44.9	-1.3
BUM	Brajici-Budva	78.79	312	⇓*i*P	P	00 39 44.6	-1.6
NIE	Niedzica	78.79	320	*e*P	P	00 39 46.4	+0.3
NIE				*i* S	S	00 49 40.9	-1.2
NIE				LMZ	LR	01 17 43.1	
	comp=Z,9µm,22.6s						
NIE	Niedzica	78.79	320	*e*P	P	00 39 46.4	+0.3
NIE				*i* S	S	00 49 40.9	-1.2
NIE				MLR	MLR		
	comp=Z,9µm,22.6s						
CEME	Cevo	78.80	313	⇓*i*P	P	00 39 44.5	-1.8
NKME	Niksic	78.80	313	⇓*i*P	P	00 39 44.7	-1.6
PSZ	Piszkesteto	78.83	318	⇑*i*P	P	00 39 47.0	+0.7
PSZ	Piszkesteto	78.83	318	⇑*e*P	P	00 39 46.2	-0.1
PSZ	Piszkesteto	78.83	318	*e*P	P	00 39 46.2	-0.1
	comp=Z,159nm,0.9s						
PSZ	Piszkesteto	78.83	318	*e*P	P	00 39 46.2	-0.1
PSZ				pmax	pmax		
	comp=Z,159nm,0.9s						
UPM	Unac-Piva	78.88	313	⇓*i*P	P	00 39 45.3	-1.6
BEL	Belsk	78.89	322	*e*P	P	00 39 46.8	+0.3
BEL				*e*S	S	00 49 40.1	-2.8
BEL				LMZ	LR	01 19 20.6	
	comp=Z,16µm,21.7s						
BEL	Belsk	78.89	322	*e*P	P	00 39 46.8	+0.3
BEL				*e*S	S	00 49 40.1	-2.8
BEL				MLR	MLR		
	comp=Z,16µm,21.7s						
SUR	Sutherland	79.03	236	*e*P	P	00 39 49.2	+1.3
	comp=Z,189nm,1.1s						
SUR				LR	LR		
	comp=Z,48µm,19.0s						
SUR	Sutherland	79.03	236	P	P	00 39 54.9	+6.9
	SNR=5.9						
HCY	Herceg Novi	79.10	313	⇓*i*P	P	00 39 46.2	-1.6
BRY	Bratogost	79.11	313	⇓*i*P	P	00 39 46.5	-1.6
OJC	Ojcow	79.24	321	*e*P	P	00 39 48.2	-0.2
OJC				*i* S	S	00 49 44.5	-2.3
OJC				LMZ	LR	01 17 51.0	
OJC	Ojcow	79.24	321	*e*P	P	00 39 49.0	+0.5
	comp=Z,107nm,1.0s						
OJC	Ojcow	79.24	321	⇑*e*P	P	00 39 48.3	-0.2
OJC				*i* S	S	00 49 44.5	-2.3
OJC				MLR	MLR		
	comp=Z,10µm,24.9s						
LANS	Liptovska Anna	79.29	319	*e*P	P	00 39 49.4	+0.6
LANS	Liptovska Anna	79.29	319	*e*P	P	00 39 49.4	+0.6
MLZ	Mavora Lakes	79.32	137	*e*P	P	00 39 50.8	+1.8
	comp=Z,49nm,1.2s						
BUD	Budapest	79.35	318	⇑*e*P	P	00 39 48.7	-0.4
BUD	Budapest	79.35	318	P	P	00 39 50.1	+1.0
BUD				pmax	pmax		
	comp=Z,63nm,1.7s						
OUL	Oulu	79.37	336	P	P	00 39 49.2	+0.4
OUL				pmax	pmax		
	comp=Z,121nm,1.5s						
MORH	Mˆ‡rˆ¡gy, Hung	79.44	316	⇑*e*P	P	00 39 48.9	-0.7
VYHS	Vyhne	79.61	319	*e*P	P	00 39 50.3	-0.2
VYHS				pmax	pmax		
	comp=Z,97nm,1.4s						
VYHS	Vyhne	79.61	319	*e*P	P	00 39 50.3	-0.2
VYHS				*e*S	S	00 49 49.3	-1.5
VYHS				*e*L	L	01 20 58.6	
CGL1	Ceglie Messapi	79.67	311	*e*P	P	00 39 52.6	+1.6
FASA	Fasano	79.78	311	*e*P	P	00 39 51.6	0.0
TAR1	Taranto	79.80	311	*e*P	P	00 39 50.9	-0.8
CSKK	Csˆ‡kako	79.85	318	⇓*e*P	P	00 39 52.6	+0.8
MASS	Massafra	79.92	311	*e*P	P	00 39 51.7	-0.7
TSUM	Tsumeb	80.04	250	P	P	00 39 53.8	+0.2
	comp=Z,16nm,0.9s,baz=79,slow=6.1,SNR=23						
TSUM				S	S	00 49 53.2	-3.5
	comp=Z,1.6nm,0.8s,baz=24,slow=12,SNR=1.7						
TSUM				LR	LR	01 13 24.0	
	comp=Z,17µm,18.1s,baz=76,slow=34						
TSUM	Tsumeb	80.04	250	*e*P	P	00 39 54.6	+1.0
	comp=Z,79nm,1.3s						
TSUM				S	S	00 49 53.2	-3.5
TIP	Timpagrande	80.09	309	⇑*i*P	P	00 39 53.9	+0.4
TIP	Timpagrande	80.09	309	*e*P	P	00 39 53.8	+0.4
	comp=Z,223nm,1.5s						
TIP	Timpagrande	80.09	309	P	P	00 39 52.8	-0.6
BAI	Bari	80.16	311	*e*P	P	00 39 53.5	-0.1
VAF	Ylistaro	80.20	334	P	P	00 39 54.1	+0.8
VAF				pmax	pmax		
	comp=Z,229nm,1.4s						
OKC	Ostrava-Krasne	80.24	320	*e*P	P	00 39 54.7	+0.8
OKC				*e*S	S	00 49 56.4	-0.9
OKC				AMS	AMS	01 25 10.0	
	comp=Z,9µm,16.4s						
OKC	Ostrava-Krasne	80.24	320	*e*P	P	00 39 54.7	+0.8
OKC				*e*S	S	00 49 56.4	-0.9
OKC				MLR	MLR		
	comp=Z,9µm,16.4s						
RAC	Raciborz	80.24	320	*e*P	P	00 39 54.2	+0.3
RAC				*e*S	S	00 49 56.5	-0.8
MATE	Matera	80.25	311	⇑*i*P	P	00 39 54.5	+0.4
BLY	Banja Luka	80.29	315	⇑*i*P	P	00 39 54.2	-0.1
BLY	Banja Luka	80.29	315	*e*P	P	00 39 53.8	-0.4
	comp=Z,124nm,0.9s						
SG1	Sgolgore (BA)	80.29	311	*e*P	P	00 39 54.7	+0.3
KEV	Kevo	80.41	341	*e*P	P	00 39 54.2	-0.1
	comp=Z,108nm,1.0s						
KEV				LR	LR		
	comp=Z,50µm,20.0s						
KEV	Kevo	80.41	341	*e*P	P	00 39 54.3	-0.1
KEV				pmax	pmax		
	comp=Z,108nm,1.0s						
KEV				MLR	MLR		
	comp=Z,50µm,20.0s						
JAVC	Velka Javorina	80.42	319	*e*P	P	00 39 55.4	+0.4
JAVC	Velka Javorina	80.42	319	*e*S	S	00 50 00.1	+0.6
LBZ	Lake Benmore	80.51	136	*e*P	P	00 39 55.7	+0.3
	comp=Z,131nm,1.4s						
SMOL	Smolenice	80.54	319	*e*P	P	00 39 55.5	-0.1
SMOL	Smolenice	80.54	319	*e*P	P	00 39 55.5	-0.1
MORC	Moravsky Berou	80.62	320	⇑*i*P	P	00 39 56.9	+0.9
MORC	Moravsky Berou	80.62	320	*e*P	P	00 39 55.9	-0.1
	comp=Z,178nm,1.3s						
MORC	Moravsky Berou	80.62	320	*e*P	P	00 39 55.9	-0.1
MORC				pmax	pmax		
	comp=Z,179nm,1.3s						
MORC	Moravsky Berou	80.62	320	*e*P	P	00 39 55.6	-0.4
MORC	Moravsky Berou	80.62	320	*e*S	S	00 50 00.4	-1.0
MODS	Modra-Piesok	80.62	318	*e*P	P	00 39 56.0	0.0
MODS				pmax	pmax		
	comp=Z,253nm,1.4s						
MODS	Modra-Piesok	80.62	318	*e*P	P	00 39 56.0	0.0
MODS	Modra-Piesok	80.62	318	*e*S	S	00 50 00.8	-0.7
MODS				*e*L	L	01 21 35.4	
SMY	Shemya	80.64	37	*e*P	P	00 39 56.6	+0.7
	comp=Z,239nm,0.7s						
SMY	Shemya	80.64	37	*e*P	P	00 39 56.6	+0.7
SMY				pmax	pmax		
	comp=Z,239nm,0.7s						
CEL	Celeste	80.69	308	*e*P	P	00 39 58.5	+1.8
	comp=Z,117nm,0.9s						
BEHE	Becsehely	80.75	317	⇑*e*P	P	00 39 56.8	+0.1
ARCES	ARCESS Array B	80.84	340	P	P	00 39 56.5	-0.2
	comp=Z,51nm,0.9s,baz=91,slow=4.9,SNR=58						
ARCES				S	S	00 49 59.7	-3.2
	comp=Z,1.0nm,0.8s,baz=65,slow=13,SNR=2.3						
ARCES	ARCESS Array B	80.84	340	*e*P	P	00 39 56.9	+0.2
ARCES				S	S	00 49 59.7	-3.2
WIN	Windhoek	80.87	247	P	P	00 39 59.6	+1.5
WIN				pmax	pmax		
	comp=Z,59nm,1.4s						
CUC	Castrocucco	80.88	310	*e*P	P	00 39 57.7	+0.1
	comp=Z,53nm,0.7s						
MS1	Monte Sant’Ang	80.92	312	*e*P	P	00 39 57.6	-0.2
RPZ	Rata Peaks	80.98	135	P	P	00 39 58.3	+0.3
	comp=Z,64nm,0.7s,baz=270,slow=3.8,SNR=19						
RPZ	Rata Peaks	80.98	135	*e*P	P	00 39 58.5	+0.5
	comp=Z,118nm,1.1s						
SYO	Syowa Base	81.02	198	⇓*i*P	P	00 39 58.4	+0.8
SYO	Syowa Base	81.02	198	⇓*i*X		00 40 02.3	
SOP	Sopron	81.03	318	⇑*e*P	P	00 39 57.9	-0.3
SOP	Sopron	81.03	318	P	P	00 39 58.8	+0.6
SOP				pmax	pmax		
	comp=Z,82nm,1.5s						
KOGS	Kog	81.11	316	*i* P	P	00 39 58.1	-0.5
KOGS				*i* S	S	00 50 03.4	-3.2
KRLC	Kraliky	81.14	320	*e*P	P	00 40 00.1	+1.3
KRLC				*e*S	S	00 50 07.1	+0.2
KRLC	Kraliky	81.14	320	*e*P	P	00 40 00.1	+1.3
KRLC				*e*S	S	00 50 07.1	+0.2
HEF	Hetta	81.16	339	*e*P	P	00 39 57.9	-0.6
HEF				IVmB_BB		00 39 59.3	
	comp=Z,4µm,1.6s						
HEF				IVMsB		01 18 24.9	
	comp=Z,13µm,13.7s						
HEF				IVMsB		01 18 25.2	
	comp=Z,13µm,20.6s						
VRAC	Vranov	81.18	319	⇑*i*P	P	00 39 59.6	+0.6
VRAC	Vranov	81.18	319	P	P	00 39 59.6	+0.6
VRAC	Vranov	81.18	319	*e*P	P	00 39 58.9	-0.1
VRAC	Vranov	81.18	319	*e*S	S	00 50 05.4	-1.8
ZAG	Zagreb	81.24	316	P	P	00 40 01.3	+2.0
ZAG				pmax	pmax		
	comp=Z,435nm,1.0s						
GKP	Gorka Klasztor	81.25	323	*e*P	P	00 39 58.9	-0.3
GKP				*e*S	S	00 50 05.2	-2.4
GKP				LMZ	LR	01 16 59.5	
	comp=Z,16µm,24.8s						
GKP	Gorka Klasztor	81.25	323	P	P	00 40 00.1	+0.9
GKP				pmax	pmax		
	comp=Z,116nm,1.3s						
KRUC	Moravsky	81.28	319	*e*P	P	00 39 59.2	-0.3
KTK1	Kautokeino	81.46	340	*e*P	P	00 39 60.0	-0.1
DPC	Dobruska-Polom	81.47	320	*e*P	P	00 40 01.9	+1.4
DPC				*e*x	x	00 43 15.2	
DPC				*e*S	S	00 50 09.9	-0.3
DPC				AMS	AMS	01 26 00.0	
	comp=Z,12µm,16.9s						
DPC	Dobruska-Polom	81.47	320	*e*P	P	00 40 01.9	+1.4
DPC				*e*S	S	00 50 09.9	-0.3
DPC				MLR	MLR		
	comp=Z,12µm,16.9s						
CONA	Conrad Observa	81.52	318	*i* P	P	00 40 00.6	-0.2
	comp=Z,36nm,1.0s,SNR=29						
KSP	Ksiaz	81.54	321	*e*P	P	00 40 01.2	+0.4
KSP				*e*S	S	00 50 09.7	-1.2
KSP				LMZ	LR	01 16 40.0	
	comp=Z,10µm,25.5s						
KSP	Ksiaz	81.54	321	*e*P	P	00 40 01.2	+0.4
KSP				*e*S	S	00 50 09.7	-1.2
KSP				MLR	MLR		
	comp=Z,10µm,25.5s						
OXZ	Oxford	81.60	134	*e*P	P	00 40 03.1	+1.8
	comp=Z,50nm,0.7s						
GROS	Grobnik	81.63	316	*i* P	P	00 40 00.8	-0.6
GROS				*e*S	S	00 50 08.5	-3.6
WDD	Wied Dalam	81.65	306	*e*P	P	00 40 04.2	+2.5
	comp=Z,108nm,0.8s						
UPC	Upice	81.68	321	*e*P	P	00 40 02.8	+1.2
UPC				*e*S	S	00 50 11.7	-0.7
UPC				AMS	AMS	01 25 40.0	
	comp=Z,10µm,17.1s						
UPC	Upice	81.68	321	*e*P	P	00 40 02.8	+1.2
UPC				*e*S	S	00 50 11.7	-0.7
UPC				MLR	MLR		
	comp=Z,10µm,17.1s						
ARSA	Arzberg	81.69	317	*e*P	P	00 40 01.4	-0.3
	comp=Z,93nm,1.2s,SNR=51						
BOJS	Bojanci	81.72	315	*i* P	P	00 40 01.5	-0.3
BOJS				*e*PP	PP	00 43 11.5	+2.6
BOJS				*i* S	S	00 50 08.7	-4.3
HAMF	Hammerfest	81.75	341	*e*P	P	00 40 01.1	-0.3
HAMF				IVmBB		00 40 02.7	
	comp=Z,3µm,1.5s						
VAE	Valguarnera	81.82	307	P	P	00 40 04.3	+1.7
	comp=Z,21nm,0.8s,baz=94,slow=6.5,SNR=8.2						
THZ	Tophouse	81.92	133	*e*P	P	00 40 03.8	+0.7
	comp=Z,217nm,1.4s						
SOKA	Soboth	81.97	317	*e*P	P	00 40 03.2	-0.1
	comp=Z,151nm,1.3s,SNR=69						
LJU	Ljubljana	82.27	316	*e*P	P	00 40 04.6	-0.2
LJU				*e*PP	PP	00 43 16.9	+3.5
LJU				*i* S	S	00 50 15.1	-3.5
OBKA	Obir	82.29	316	*e*P	P	00 40 04.8	-0.2
	comp=Z,73nm,1.2s,SNR=28						
KIF	Kilpisjarvi	82.31	339	IVMsB		01 21 58.0	
	comp=Z,17µm,16.5s						
GOPC	GO Pecny, Ondr	82.41	320	*e*P	P	00 40 05.6	+0.2
GOPC				*e*PP	PP	00 43 19.6	+5.1
GOPC				*e*S	S	00 50 19.4	-0.5
GOPC				AMS	AMS	01 25 00.0	
	comp=Z,8µm,18.4s						
GOPC	GO Pecny, Ondr	82.41	320	*e*P	P	00 40 05.6	+0.2
GOPC				*e*		00 43 19.6	
GOPC				*e*S	S	00 50 19.4	-0.5
GOPC				MLR	MLR		
	comp=Z,8µm,18.4s						
PRU	Pruhonice	82.57	320	*e*P	P	00 40 07.3	+1.1
PRU				*e*PP	PP	00 43 19.7	+3.9
PRU				*e*S	S	00 50 21.7	+0.2
PRU				AMS	AMS	01 22 50.0	
	comp=Z,9µm,18.0s						
PRU	Pruhonice	82.57	320	*e*P	P	00 40 07.3	+1.1
PRU				*e*		00 43 19.7	
PRU				*e*S	S	00 50 21.7	+0.2
PRU				MLR	MLR		
	comp=Z,9µm,18.0s						
MOA	Molln	82.58	318	*e*P	P	00 40 05.6	-0.8
	comp=Z,81nm,1.7s,SNR=36						
PVCC	Panska Ves	82.60	320	*e*P	P	00 40 07.8	+1.4
PVCC				*e*PP	PP	00 43 16.6	+0.6
PVCC				*e*S	S	00 50 22.1	+0.3
PVCC				AMS	AMS	01 25 50.0	
	comp=Z,15µm,21.7s						
PVCC	Panska Ves	82.60	320	*e*P	P	00 40 07.8	+1.4
PVCC				*e*		00 43 16.6	
PVCC				*e*S	S	00 50 22.1	+0.3
PVCC				MLR	MLR		
	comp=Z,15µm,21.7s						
PRA	Prague	82.65	320	*e*P	P	00 40 07.7	+1.1
PRA				*e*PP	PP	00 43 21.1	+4.7
PRA				*e*S	S	00 50 22.9	+0.6
PRA				AMS	AMS	01 23 10.0	
	comp=Z,10µm,18.3s						
PRA	Prague	82.65	320	*e*P	P	00 40 07.7	+1.1
PRA				*e*		00 43 21.1	
PRA				*e*S	S	00 50 22.9	+0.6
PRA				MLR	MLR		
	comp=Z,10µm,18.3s						
CLTB	Caltabellotta	82.77	307	*e*P	P	00 40 07.1	-0.6
	comp=Z,109nm,1.1s						
TRI	Trieste	82.78	316	*e*P	P	00 40 07.3	-0.1
	comp=Z,47nm,0.9s						
TRI	Trieste	82.78	316	*e*P	P	00 40 07.3	-0.1
TRI				pmax	pmax		
	comp=Z,47nm,0.9s						
BSD	Bornholm Skovb	82.81	325	⇑*i*P	P	00 40 06.7	-0.7
	comp=Z,82nm,0.8s						
BSD	Bornholm Skovb	82.81	325	⇑*i*P	P	00 40 06.7	-0.7
BSD				pmax	pmax		
	comp=Z,82nm,0.8s						
CADS	Cadrg	82.83	316	*i* P	P	00 40 07.1	-0.7
CADS				*e*S	S	00 50 21.5	-2.9
HIZ	Hauiti	82.83	129	*e*P	P	00 40 09.5	+1.6
	comp=Z,250nm,1.4s						
AQU	L’Aquila	82.85	312	*e*P	P	00 40 07.8	-0.1
	comp=Z,440nm,1.5s						
AQU	L’Aquila	82.85	312	*e*P	P	00 40 07.8	-0.1
AQU				pmax	pmax		
	comp=Z,440nm,1.5s						
MYKA	Terra Mystica	82.92	316	*e*P	P	00 40 07.8	-0.4
	comp=Z,57nm,0.9s,SNR=31						
BRG	Berggiesshubel	83.02	321	*e*P	P	00 40 08.3	-0.3
	comp=Z,214nm,1.8s						

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BRG                               i PCP     PcP       00 40 14.7 +1.4
      comp=Z,215nm,1.9s
BRG                                 PP      PP        00 43 15.0 -4.5
BRG                                 S       S         00 50 25.0 -1.1
BRG                                 SS      SS        00 55 41.0 -9.0
      comp=N,13µm,17.7s
      comp=E,9µm,20.8s
      comp=Z,10µm,19.4s
BRG   Berggiesshubel   83.02 321  eP        P         00 40 08.3 -0.3
BRG                               i                   00 40 14.6
BRG                                                   00 43 15.0
BRG                                 S       S         00 50 25.0 -1.1
BRG                                 pmax    pmax
      comp=Z,214nm,1.8s
BRG                                 MLR     MLR
      comp=E,13µm,20.8s
BRG                                 MLR     MLR
      comp=Z,9µm,19.4s
GEA0  GERESS Array S   83.03 319  eP        P         00 40 07.7 -1.1
GEC2  GERESS Array S   83.03 319  eP        P         00 40 08.9 +0.1
      comp=Z,249nm,1.4s
GERES GERESS Array B   83.03 319    P       P         00 40 08.6 -0.2
      comp=Z,39nm,0.8s,baz=94,slow=3.3,SNR=145
GERES                               S       S         00 50 24.9 -1.5
      comp=Z,0.5nm,0.8s,baz=101,slow=10,SNR=3.3
GERES                               LR      LR        01 20 58.2
      comp=Z,7µm,21.1s,baz=82,slow=38
TRO   Tromso           83.10 340  eP        P         00 40 08.3 -0.2
TRO                                 IVmB_BB           00 40 12.9
      comp=Z,1µm,1.0s
TRO                                 IVMs_BB IVMs_BB   01 22 23.2
      comp=Z,14µm,18.8s
KHC   Kasperske Hory   83.13 319  eP        P         00 40 09.8 +0.6
KHC                               ex        x         00 43 28.6
KHC                               eS        S         00 50 26.0 -1.4
KHC                                 AMS     AMS       01 26 20.0
      comp=Z,11µm,19.0s
KHC   Kasperske Hory   83.13 319  eP        P         00 40 08.2 -1.1
      comp=Z,19nm,0.9s
KHC   Kasperske Hory   83.13 319  eP        P         00 40 09.8 +0.6
KHC                               e                   00 43 28.6
KHC                               eS        S         00 50 26.0 -1.4
KHC                                 MLR     MLR
      comp=Z,11µm,19.0s
KBA   Koelnbreinsper   83.16 317  eP        P         00 40 08.4 -1.2
      comp=Z,35nm,0.8s,SNR=16
KBA   Koelnbreinsper   83.16 317    P       P         00 40 09.8 +0.2
KBA                                 pmax    pmax
      comp=Z,83nm,0.8s
SNZO  South Karori     83.17 132    PFAKE             00 40 20.0  +11
SNZO                                LR      LR
      comp=Z,22µm,20.0s
FUNA  Funafuti         83.56  99    PFAKE             00 40 20.0 +8.0
FUNA                                LR      LR
      comp=Z,9µm,19.0s
WET   Wettzell         83.59 319    P       P         00 40 11.8 +0.2
WET                                 pmax    pmax
      comp=Z,78nm,1.5s
CLL   Collm            83.65 321⥣iP        P         00 40 11.0 -0.8
      comp=Z,86nm,1.5s
CLL                               ePmax               00 40 16.0
CLL                               i sP      pP        00 40 21.6 +0.7
CLL                               i                   00 40 28.5
CLL                               e                   00 40 41.0
CLL                               ePP       PP        00 43 27.0 +2.4
      comp=Z,46nm,1.3s
CLL                               ePPP      PPP       00 45 24.0
CLL                               ePPPP               00 46 48.0
CLL                               eS        S         00 50 31.0 -1.3
CLL                               ePPS      PPS       00 51 48.0
CLL                               eSS       SS        00 56 04.0 +4.9
CLL                               eSSS      SSS       00 59 31.0
CLL                               eSSSS               01 02 15.0
CLL                                 LmV               01 25 00.0
      comp=Z,12µm,21.3s
CLL                                 Lmax              01 26 00.0
CLL   Collm            83.65 321  eP        P         00 40 11.3 -0.4
      comp=Z,77nm,1.2s
CLL   Collm            83.65 321⥣iP        P         00 40 11.0 -0.8
CLL                               i                   00 40 21.6
CLL                               i                   00 40 28.5
CLL                               eS        S         00 50 31.0 -1.3
CLL                                 pmax    pmax
      comp=Z,7.0nm,1.5s
CLL                                 MLR     MLR
      comp=Z,12µm,21.3s
RGN   Rugen            83.68 324  eP        P         00 40 13.3 +1.5
      comp=Z,65nm,1.0s
ABTA  Abfaltersbach    83.71 317  eP        P         00 40 11.3 -1.0
      comp=Z,63nm,1.2s,SNR=28
NKC   Novy Kostel      83.93 320  ePP       PP        00 43 35.8 +8.8
NKC                               eS        S         00 50 36.5 +1.1
NKC                                 AMS     AMS       01 23 50.0
      comp=Z,12µm,21.7s
NKC   Novy Kostel      83.93 320    P       P         00 40 14.1 +0.8
HFS   Hagfors          83.95 330    P       P         00 40 11.8 -1.3
      comp=Z,58nm,0.9s,baz=96,slow=7.4,SNR=46
HFS                                 PP      PP        00 43 24.5 -2.3
      comp=Z,38nm,1.0s,baz=91,slow=8.6,SNR=5.2
HFS                                 LR      LR        01 22 46.8
      comp=Z,21µm,18.9s,baz=92,slow=39
BJO   Bjornoya         84.00 345  eP        P         00 40 13.8 +0.8
STEI  Steigen          84.14 338  eP        P         00 40 14.1 +0.2
STEI                                IVmB_BB           00 40 16.3
      comp=Z,2µm,1.3s
BKZ   Black Stump Fm   84.19 130  eP        P         00 40 14.9  0.0
      comp=Z,69nm,0.9s
MOR8  Moi Rana         84.24 336  eP        P         00 40 14.7 +0.2
MOR8                                IVmB_BB           00 40 20.5
      comp=Z,2µm,1.3s
COP   Copenhagen       84.27 326  i P       P         00 40 15.0 +0.2
      comp=Z,41nm,0.7s
COP                               i                   00 40 36.4
COP   Copenhagen       84.27 326  i P       P         00 40 15.0 +0.2
COP                                 pmax    pmax
      comp=Z,41nm,0.7s
WTTA  Wattenberg       84.33 317  i P       P         00 40 14.5 -1.1
      comp=Z,50nm,0.8s,SNR=22
WATA  Walderalm        84.37 317  eP        P         00 40 15.1 -0.6
      comp=Z,41nm,0.7s,SNR=50
GRC1  Grafenberg Arr   84.47 319    P       P         00 40 16.7 +0.6
MOX   Moxa             84.48 320    P       P         00 40 16.4 +0.3
MOX                                 pmax    pmax
      comp=Z,60nm,1.5s
URZ   Urewera          84.55 129    P       P         00 40 15.0 -1.6
      comp=Z,14nm,0.6s,baz=178,slow=4.8,SNR=14
URZ   Urewera          84.55 129  eP        P         00 40 16.7 +0.1
      comp=Z,174nm,1.5s
FUR   Furstenfeldbru   84.61 318    P       P         00 40 17.9 +1.1
FUR                                 pmax    pmax
      comp=Z,97nm,1.6s
MOTA  Moosalm          84.69 317  eP        P         00 40 16.2 -1.2
      comp=Z,35nm,0.8s,SNR=59
GRF   Grafenberg Arr   84.70 319    P       P         00 40 18.0 +0.8
GRF                                 pmax    pmax
      comp=Z,118nm,0.8s
GRFO  Grafenberg       84.70 319  eP        P         00 40 17.8 +0.6
      comp=Z,81nm,0.9s
GRFO  Grafenberg       84.70 319  eP        P         00 40 17.8 +0.6
GRFO                                pmax    pmax
      comp=Z,81nm,0.9s
LOF   Lofoten          84.80 338  eP        P         00 40 17.7 +0.5
LOF                               eP        PcP       00 40 18.6 -2.0
LOF                                 IVMsB             01 21 38.2
      comp=Z,4µm,5.1s
KONS  Konsvik          84.80 336  eP        P         00 40 18.6 +1.3
KONS                                IVmB_BB           00 40 20.3
      comp=Z,1µm,1.1s
RETA  Reutte           84.93 317  eP        P         00 40 17.6 -0.8
      comp=Z,54nm,0.6s,SNR=69
FETA  Feichten         84.94 317  eP        P         00 40 18.1 -0.6
      comp=Z,47nm,0.8s,SNR=38
NC405 NORSAR Array S   85.00 331  eP        P         00 40 18.9 +0.4
NC602 NORSAR Array S   85.06 331  eP        P         00 40 18.6 -0.1
VLC   Villacollemand   85.11 314  eP        P         00 40 19.2 -0.2
      comp=Z,38nm,0.9s
NSS   Namsos           85.12 334  eP        P         00 40 18.2 -0.7
NSS                                 IVmB_BB           00 40 19.8
      comp=Z,2µm,1.3s
STRU  Stroemstad       85.15 329  eP        P         00 40 20.5 +1.3
NC303 NORSAR Array S   85.17 331  eP        P         00 40 19.7 +0.4
NB201 NORSAR Array S   85.20 331  eP        P         00 40 19.8 +0.3
NB2   NORSAR Subarra   85.24 331    P       P         00 40 19.1 -0.6
      comp=Z,400nm,2.0s,baz=92,slow=5.6
NB2   NORSAR Subarra   85.24 331    P       P         00 40 19.1 -0.6
      baz=92,slow=5.6
NOA   NORSAR Array B   85.24 331    P       P         00 40 18.5 -1.2
      comp=Z,24nm,0.9s,baz=98,slow=5.4,SNR=57
NOA                                 PP      PP        00 43 39.4 +2.0
      comp=Z,6.7nm,0.9s,baz=85,slow=8.9,SNR=3.6
NOA                                 LR      LR        01 21 49.3
      comp=Z,20µm,21.3s,baz=95,slow=38
FUORN Ofenpass-Fuorn   85.25 316  eP        P         00 40 20.8 +0.5
      comp=Z,121nm,1.0s
FUORN                             eS        S         00 50 51.1 +2.0
HSPB  Hornsund (broa   85.33 347  eP        P         00 40 19.6 -0.2
HSPB                              e                   00 43 40.8
HSPB                              eS        S         00 50 46.8 -1.5
HSPB                              eSS       SS        00 56 30.6 +7.7
HSPB  Hornsund (broa   85.33 347⥣iP        P         00 40 19.5 -0.3
SPA0  Spitsbergen Ar   85.34 348  eP        P         00 40 20.6 +0.7
SPA0  Spitsbergen Ar   85.34 348  eP        P         00 40 19.0 -0.8
SPA0                                IVmB_BB           00 40 31.5
      comp=Z,2µm,1.3s
SPA0                                IVMs_BB IVMs_BB   01 22 54.7
      comp=Z,15µm,21.2s
SPITS Spitsbergen Ar   85.34 348    P       P         00 40 19.1 -0.8
      comp=Z,34nm,0.6s,baz=110,slow=8.3,SNR=16
SPITS                               PP      PP        00 43 42.3 +4.5
      comp=Z,29nm,1.0s,baz=110,slow=12,SNR=3.2
SPITS                               LR      LR        01 23 36.3
      comp=Z,48µm,21.4s,baz=150,slow=39
NAO01 NORSAR Array S   85.39 331  eP        P         00 40 20.8 +0.4
NAO01 NORSAR Array S   85.39 331  eP        P         00 40 20.2 -0.2
NAO01                               IVmB_BB           00 40 32.8
      comp=Z,8µm,2.9s
NAO01                               IVMs_BB IVMs_BB   01 21 37.1
      comp=Z,76µm,20.1s
OSL   Oslo             85.43 330  eP        P         00 40 21.5 +1.0
OSL                                 IVmB_BB           00 40 21.6
      comp=Z,3µm,2.3s
OSL                               eP        PcP       00 40 23.2 -0.3
NBO00 NORSAR Array S   85.45 331  eP        P         00 40 21.1 +0.4
NC204 NORSAR Array S   85.47 331  eP        P         00 40 21.4 +0.6
DAVOX Davos/Dischmat   85.52 317    P       P         00 40 21.2 -0.4
      comp=Z,80nm,0.6s,baz=102,slow=6.8,SNR=101
DAVOX                               S       S         00 50 46.4 -5.2
      comp=Z,1.5nm,0.8s,baz=180,slow=20,SNR=2.5
DAVOX                               LR      LR        01 26 40.4
      comp=Z,7µm,18.7s,baz=68,slow=41
DAVA  Damuels          85.52 317  eP        P         00 40 21.0 -0.6
      comp=Z,102nm,1.0s,SNR=49
MIDW  Midway           85.70  62    PFAKE             00 40 30.0 +7.4
MIDW                                LR      LR
      comp=Z,9µm,21.0s
TBLU  Trondheim        85.80 333  eP        P         00 40 23.1 +0.7
KEST  Kesra            85.85 305    P       P         00 40 23.9 +0.6
      comp=Z,43nm,0.8s,baz=22,slow=0.5,SNR=36
KEST                                S       S         00 50 48.2 -6.9
      comp=Z,2.0nm,0.8s,baz=105,slow=12,SNR=2.1
KEST                                LR      LR        01 23 28.0
      comp=Z,8µm,19.1s,baz=46,slow=39
KEST  Kesra            85.85 305  eP        P         00 40 24.9 +1.6
      comp=Z,267nm,1.4s
KEST                                S       S         00 50 48.2 -6.9
TUE   Stuetta          85.88 316  eP        P         00 40 23.7 +0.3
      comp=Z,48nm,0.9s
TUE                               eS        S         00 50 55.6 +0.3
KONO  Kongsberg        85.98 329  eP        P         00 40 24.0 +0.7
      comp=Z,209nm,1.3s
KONO  Kongsberg        85.98 329c iP        P         00 40 23.0 -0.3
KONO                                pmax    pmax
      comp=Z,248nm,1.7s
KONO  Kongsberg        85.98 329⥣iP        P         00 40 23.1 -0.3
KONO                                IVmB_BB           00 40 30.2
      comp=Z,2µm,3.0s
STU   Stuttgart        86.00 319  eP        P         00 40 23.5 -0.2
      comp=Z,54nm,0.7s
STU   Stuttgart        86.00 319  eP        P         00 40 23.5 -0.2
STU                                 pmax    pmax
      comp=Z,54nm,0.7s
PGF   Pioggiola        86.11 312    P       P         00 40 24.7 +0.2
MUD   Monsted U'grnd   86.13 326  i P       P         00 40 24.6 +0.5
      comp=Z,73nm,0.9s
MUD   Monsted U'grnd   86.13 326  i P       P         00 40 24.6 +0.5
MUD                                 pmax    pmax
      comp=Z,73nm,0.9s
DOMB  Dombas           86.31 332  eP        P         00 40 25.3 +0.3
DOMB                                IVmBB             00 40 26.0
      comp=Z,1µm,2.2s
KBS   Kingsbay         86.31 349  eP        P         00 40 24.7 +0.1
      comp=Z,101nm,1.1s
KBS                                 LR      LR
      comp=Z,28µm,19.0s
KBS   Kingsbay         86.31 349  eP        P         00 40 24.7 +0.1
KBS                                 pmax    pmax
      comp=Z,101nm,1.1s
KBS                                 MLR     MLR
      comp=Z,28µm,19.0s
KBS   Kingsbay         86.31 349  eP        P         00 40 24.0 -0.6
KBS                                 IVmB_BB           00 40 25.1
      comp=Z,574nm,1.6s
KBS                                 IVMsB             01 23 48.5
      comp=Z,8µm,18.6s
THTN  Thala            86.39 305  eP        P         00 40 27.7 +1.7
      comp=Z,158nm,1.3s
SLE   Schleitheim      86.47 318    P       P         00 40 26.7 +0.6
SLE                                 pmax    pmax
      comp=Z,40nm,1.7s
HOMB  Homborsund       86.52 328  eP        P         00 40 26.5 +0.5
HOMB                                IVmBB             00 40 27.2
      comp=Z,2µm,1.9s
BFO   Black Forest     86.58 318  eP        P         00 40 26.8 +0.2
      comp=Z,48nm,0.7s
BFO                                 LR      LR
      comp=Z,374nm,20.0s
BFO   Black Forest     86.58 318  i P       P         00 40 26.6  0.0
LANF  Langenberg       86.92 319    P       P         00 40 28.1 -0.1
MOL   Molde            87.02 332  eP        P         00 40 29.6 +1.2
SAOF  Saorge           87.15 314    P       P         00 40 30.1 +0.6
SAOF                                pmax    pmax
      comp=Z,43nm,0.7s
SNART Snartemo         87.20 328  eP        P         00 40 31.2 +1.9
SNART                               IVmB_BB           00 40 36.0
      comp=Z,574nm,1.9s
SNART                               IVMsB             01 24 20.6
      comp=Z,4µm,20.6s
SNART                               IVMsB             01 29 14.0
      comp=Z,3µm,19.7s
SBF   Sospel           87.24 314  eP        P         00 40 28.8 -1.2
CDF   Champ du Feu     87.28 318  eP        P         00 40 28.5 -1.6
CDF                                 pmax    pmax
      comp=Z,23nm,0.8s
AKN   Aaknes           87.28 332  eP        P         00 40 31.7 +2.0
AKN                                 IVmB_BB           00 40 38.0
      comp=Z,3µm,1.1s
AKN                                 IVMsB             01 25 26.7
      comp=Z,6µm,20.8s
SENIN Lac Senin/Sane   87.30 316  eP        P         00 40 30.8 +0.4
      comp=Z,64nm,0.8s
SENIN                             eS        S         00 51 10.8 +1.7
ABSA  Djebel Ababsia   87.36 306    P       P         00 40 32.2 +1.4
ECH   Echery           87.36 318  eP        P         00 40 30.3 -0.1
      comp=Z,41nm,1.0s
CMAH  Djebel Manchou   87.40 306    P       P         00 40 32.2 +1.3
VNDA  Vanda            87.43 169    P       P         00 40 30.4 +0.3
      comp=Z,6.5nm,0.8s,baz=306,slow=4.8,SNR=30
VNDA                                S       SKSac     00 50 51.5 -3.9
      comp=Z,1.1nm,1.1s,baz=270,slow=3.0,SNR=1.9
VNDA                                PKKPbc  PKKPbc    00 58 20.8 -2.3
      comp=Z,2.0nm,0.8s,baz=36,slow=0.7,SNR=9.3
VNDA                                PKPPKP  P'P'df    01 06 26.6 +0.3
      comp=Z,1.2nm,0.8s,baz=149,slow=2.3,SNR=5.3
VNDA                                LR      LR        01 16 58.5
      comp=Z,18µm,18.2s,baz=307,slow=34
VNDA  Vanda            87.43 169  eP        P         00 40 30.2 +0.2
      comp=Z,27nm,1.0s
VNDA                                S       SKSac     00 50 51.5 -3.9
VNDA                                PKKPbc  PKKPbc    00 58 20.8 -2.3
VNDA                                P'P'              01 06 26.6
ODD1  Odda             87.49 330  eP        P         00 40 32.2 +1.4
WTSB  Winterswijk      87.53 322  eP        P         00 40 31.1 +0.1
      comp=Z,468nm,2.0s
BLS5  Blasjo           87.58 329  eP        P         00 40 32.5 +1.3
BLS5                                IVmB_BB           00 40 38.6
      comp=Z,2µm,1.4s
BLS5                                IVMsB             01 27 03.7
      comp=Z,7µm,18.3s
WIT   Witteveen        87.59 323    P       P         00 40 33.8 +2.5
WIT                                 pmax    pmax
      comp=Z,685nm,1.2s
HYA   Hoyanger         87.68 331  eP        P         00 40 33.6 +2.1
HYA                                 IVmB_BB           00 40 38.6
      comp=Z,2µm,2.6s
LPG   La Plagne        87.70 315  eP        P         00 40 31.3 -1.1
LPG                                 pmax    pmax
      comp=Z,61nm,0.8s
LPL   La Plagne        87.71 315  eP        P         00 40 31.3 -1.1
LPL                                 pmax    pmax
      comp=Z,65nm,0.8s
RAO   Raoul Island     87.75 119    PFAKE             00 40 40.0 +7.4
RAO                                 LR      LR
      comp=Z,10µm,20.0s
BNI   Bardonecchia     87.76 315  eP        P         00 40 32.4 -0.1
      comp=Z,36nm,0.9s
BNI                               eS        S         00 51 18.9 +5.6
BNI   Bardonecchia     87.76 315  eP        P         00 40 32.4 -0.1
BNI                               eS        S         00 51 18.9 +5.6
BNI                                 pmax    pmax
      comp=Z,36nm,0.9s
CAEH  'Ain El Ouahch   87.85 307    P       P         00 40 33.4 +0.4
HAU   Haudompre        87.91 318  eP        P         00 40 31.6 -1.4
HAU                                 pmax    pmax
      comp=Z,57nm,0.7s
CKFL  Kef-Lekhel       87.97 306    P       P         00 40 34.9 +1.2
WLF   Walferdange      87.99 319  ⥣P        P         00 40 34.3 +1.0
      comp=Z,61nm,1.5s
WLF   Walferdange      87.99 319  eP        P         00 40 33.7 +0.4
      comp=Z,106nm,1.2s
WLF   Walferdange      87.99 319  eP        P         00 40 33.7 +0.4
WLF                                 pmax    pmax
      comp=Z,106nm,1.2s
MEM   Membach          88.06 320  ⥥P        P         00 40 34.4 +0.7
      comp=Z,34nm,0.9s
MEM   Membach          88.06 320  eP        P         00 40 34.3 +0.7
MEM                                 pmax    pmax
      comp=Z,66nm,0.9s
HGN   Heimansgroeve    88.10 321  eP        P         00 40 33.5 -0.3
      comp=Z,174nm,1.7s
HGN   Heimansgroeve    88.10 321  eS        S         00 51 17.9 +1.9
HGN   Heimansgroeve    88.10 321  eL        L         01 27 15.3
      comp=Z,9µm,21.0s
BER   Bergen           88.12 330  eP        P         00 40 32.8 -0.9
CABF  La Chapelle      88.13 316  eP        P         00 40 33.3 -0.9
CABF                                pmax    pmax
      comp=Z,29nm,0.7s
CASM  Ain Smara        88.16 306    P       P         00 40 35.9 +1.4
ASK   Askoy            88.19 330  eP        P         00 40 35.4 +1.5
KMY   Karmoy           88.21 329  eP        P         00 40 35.0 +0.9
CTEI  Djebel Teioual   88.23 306    P       P         00 40 36.5 +1.5
BEBN  Eben Emael       88.26 321  ⥣P        P         00 40 32.8 -1.8
ORIF  Oris-en-Rattie   88.33 315  eP        P         00 40 34.5 -0.7
ORIF                                pmax    pmax
      comp=Z,137nm,1.7s
SUE   Sulen            88.38 331  eP        P         00 40 36.2 +1.4
BCLA  Clavier          88.51 320  ⥥P        P         00 40 36.5 +0.7
      comp=Z,34nm,2.0s
SBA   Scott Base       88.53 168  eP        P         00 40 36.6 +1.3
      comp=Z,36nm,1.0s
SBA                                 LR      LR
      comp=Z,12µm,19.0s
SBA   Scott Base       88.53 168  eP        P         00 40 36.6 +1.3
SBA                                 pmax    pmax
      comp=Z,36nm,1.0s
SBA                                 MLR     MLR
      comp=Z,12µm,19.0s
GAMB  Gambell          88.64  26  eP        P         00 40 36.9 +0.9
      comp=Z,138nm,1.2s
DFRA  Djebel Bou Aff   88.64 306    P       P         00 40 38.8 +1.9
GIVF  Givet            88.83 320  eP        P         00 40 36.5 -0.8
GIVF                                pmax    pmax
      comp=Z,45nm,1.1s
CKHR  Kef el Ahmar     88.96 306    P       P         00 40 41.9 +3.5
DOU   Dourbes          88.98 320  ⥣P        P         00 40 37.8 -0.2
      comp=Z,27nm,1.1s
UCC   Uccle            89.09 321  ⥣P        P         00 40 38.2 -0.3
UCC   Uccle            89.09 321  eP        P         00 40 39.2 +0.7
      comp=Z,73nm,1.3s
UCC   Uccle            89.09 321  eP        P         00 40 39.2 +0.7
UCC                                 pmax    pmax
      comp=Z,73nm,1.3s
SNF   Seneffe          89.16 320  ⥥P        P         00 40 39.7 +0.9
      comp=Z,77nm,0.8s
VIVF  Saint-Julien-l   89.19 315  eP        P         00 40 39.6 +0.4
VIVF                                pmax    pmax
      comp=Z,79nm,1.7s
BAIF  Baives           89.23 320  eP        P         00 40 38.7 -0.5
BAIF                                pmax    pmax
      comp=Z,68nm,0.8s
TAM   Tamanrasset      89.54 293  eP        P         00 40 42.8 +1.4
      comp=Z,80nm,1.2s
TAM   Tamanrasset      89.54 293  eP        P         00 40 42.8 +1.4
TAM                                 pmax    pmax
      comp=Z,80nm,1.2s
AVF   Avril sur Loir   90.00 317  eP        P         00 40 41.9 -0.9
NVL   N'lazarevskaya   90.57 199  eP        P         00 40 47.7 +2.8
NVL                               e*PP      sP        00 40 57.9 +0.4
NVL                               e                   00 44 18.4
NVL                               eS        SKSac     00 51 14.8 +0.6
NVL                               eSP       SPn       00 52 49.3 +4.4
NVL                               ePS       PnS       00 52 52.3 +3.1
NVL                                 pmax    pmax
      comp=Z,64nm,1.2s
NVL                                 MLR     MLR
      comp=Z,11µm,16.0s
TCF   Toulx Ste Croi   90.82 316  eP        P         00 40 46.1 -0.6
TCF                                 pmax    pmax
      comp=Z,105nm,1.7s
NIKH  Nikolski High    90.96  37  eP        P         00 40 47.6 +0.4
      comp=Z,131nm,0.8s
EMHD  Djebel Mahouad   91.02 306    P       P         00 40 50.0 +2.0
CAF   Calviac          91.03 315  eP        P         00 40 48.0 +0.2
CAF                                 pmax    pmax
      comp=Z,138nm,1.9s
MTLF  Montolieu        91.05 313  eP        P         00 40 48.7 +0.9
MTLF                                pmax    pmax
      comp=Z,63nm,1.3s
ELSH  Elham, Standar   91.10 321  eP        P         00 40 47.9  0.0
ELSH                                IAmb    IAmb      00 40 50.5
      comp=Z,157nm,0.8s
ELSH                                IAMs_20 IAMs_20   01 31 13.2
      comp=Z,17µm,19.2s
WACR  West Acre        91.26 323  eP        P         00 40 49.7 +1.1
WACR                                IAMs_20 IAMs_20   01 23 41.4
      comp=Z,15µm,22.7s
RJF   Les Rejaudoux    91.39 315  eP        P         00 40 49.0 -0.4
RDOG  Red Dog Mine     91.68  22  eP        P         00 40 51.2 +0.9
      comp=Z,76nm,1.1s
LMK   Market Rasen     91.75 324  eP        P         00 40 51.1 +0.3
LMK                                 IAMs_20 IAMs_20   01 26 51.3
      comp=Z,17µm,21.1s
GDLE  Glaisdale, N Y   91.92 325  eP        P         00 40 52.6 +1.0
GDLE                                IAMs_20 IAMs_20   01 27 53.5
      comp=Z,14µm,20.1s
LDF   La Druitiere     92.18 319  eP        P         00 40 52.2 -0.7
LDF                                 pmax    pmax
      comp=Z,64nm,0.8s
UNV   Unalaska Valle   92.26  36  eP        P         00 40 56.0 +2.9
      comp=Z,62nm,0.8s
JMIC  Jan Mayen        92.27 341  eP        P         00 40 54.7 +1.9
FLN   La Foliniere     92.39 319  eP        P         00 40 53.2 -0.7
FLN                                 pmax    pmax
      comp=Z,59nm,0.8s
CWF   Charnwood Fore   92.42 323  eP        P         00 40 53.8 -0.1
CWF                                 IAMs_20 IAMs_20   01 29 33.3
      comp=Z,16µm,20.1s
HPK   Haverah Park     92.45 324  eP        P         00 40 54.8 +0.8
HPK                                 IAMs_20 IAMs_20   01 27 31.3
      comp=Z,13µm,21.4s
DRUM  Mains of Drumt   92.51 327  eP        P         00 40 56.3 +2.0
EDMD  Edmundbyers      92.53 325  eP        P         00 40 54.5 +0.1
EDMD                                IAMs_20 IAMs_20   01 27 26.9
      comp=Z,14µm,19.8s
BUW   Bucklebury Wes   92.55 322  eP        P         00 40 55.0 +0.5
EBR   Ebro Roquetas    92.56 311    P       P         00 40 58.6 +3.8
EBR                                 pmax    pmax
      comp=Z,202nm,0.9s
QSPA  South Pole Qui   92.56 180    P       P         00 40 53.9 -0.6
      comp=Z,6.3nm,0.7s,baz=319,slow=1.5,SNR=18
QSPA                                PP      PP        00 44 29.4 -6.4
      comp=Z,7.7nm,1.1s,baz=254,slow=7.4,SNR=2.5
QSPA                                S       SKSac     00 51 19.1 -6.8
      comp=Z,1.4nm,0.9s,baz=299,slow=6.6,SNR=3.8
QSPA                                SS      SS        00 58 05.9 -2.5
      comp=Z,5.9nm,0.9s,baz=305,slow=4.3,SNR=6.9
QSPA                                PKPPKP  P'P'df    01 06 15.0 -2.0
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	comp=Z,1.8nm,0.8s,baz=170,slow=0.4,SNR=4.5						
QSPA				LR	LR	01 17 49.3	
	comp=Z,30µm,19.4s,baz=312,slow=32						
QSPA	**South Pole Qui**	**92.56**	**180**	*e*P	**P**	**00 40 54.5**	**+0.1**
	comp=Z,102nm,0.8s						
QSPA				PP	**PP**	**00 44 29.4**	**-6.4**
QSPA				S	**SKSac**	**00 51 19.1**	**-6.8**
QSPA				SS	**SS**	**00 58 06.0**	**-2.5**
QSPA				P'P'		01 06 15.1	
LBWR	**Ladybower, Pea**	**92.58**	**324**	*e*P	**P**	**00 40 55.2**	**+0.5**
LBWR				IAMs_20	IAMs_20	01 27 26.8	
	comp=Z,15µm,20.9s						
AKUT	**Akutan**	**92.65**	**36**	*e*P	**P**	**00 40 55.1**	**+0.1**
	comp=Z,147nm,0.8s						
AFI	**Afiamalu**	**92.67**	**104**	LR	LR	01 24 26.3	
	comp=Z,4µm,20.9s,baz=271,slow=37						
AFI	**Afiamalu**	**92.67**	**104**	PFAKE		00 41 10.0	+14
AFI				LR	LR		
	comp=Z,90µm,21.0s						
GRR	**Gorron**	**92.69**	**319**	*e*P	**P**	**00 40 54.7**	**-0.6**
GRR				pmax	pmax		
	comp=Z,46nm,0.9s						
ESY	**Stoneypath**	**92.73**	**326**	*e*P	**P**	**00 40 55.8**	**+0.4**
SWN1	**Swindon**	**92.89**	**322**	IAMs_20	IAMs_20	01 28 33.9	
	comp=Z,14µm,19.1s						
STNC	**Stoke**	**92.92**	**323**	IAMs_20	IAMs_20	01 27 37.8	
	comp=Z,13µm,21.2s						
DAG	**Danmarks Havn**	**92.99**	**348**⇑	*i*P	**P**	**00 40 55.0**	**-1.1**
	comp=Z,48nm,1.0s						
DAG				*i*		00 44 39.2	
DAG	**Danmarks Havn**	**92.99**	**348**⇑	*i*P	**P**	**00 40 55.0**	**-1.1**
DAG				*i*		00 44 39.2	
DAG				pmax	pmax		
	comp=Z,48nm,1.0s						
EDI	**Edinburgh**	**93.05**	**326**	*e*P	**P**	**00 40 57.2**	**+0.4**
EDI				IAMs_20	IAMs_20	01 28 52.4	
	comp=Z,15µm,18.3s						
STRD	**Stroud**	**93.08**	**322**	*e*P	**P**	**00 40 57.5**	**+0.6**
STRD				IAMs_20	IAMs_20	01 28 35.5	
	comp=Z,13µm,20.9s						
ETSF	**Etsaut**	**93.12**	**313**	*e*P	**P**	**00 40 57.3**	**-0.2**
ETSF				pmax	pmax		
	comp=Z,36nm,0.7s						
EKA	**Eskdalemuir Ar**	**93.13**	**326**	P	**P**	**00 40 57.1**	**-0.1**
	comp=Z,19nm,0.7s,baz=98,slow=5.0,SNR=73						
EKA				PP	**PP**	**00 44 37.0**	**-3.3**
	comp=Z,10nm,0.9s,baz=82,slow=7.4,SNR=4.4						
ESK	**Eskdalemuir**	**93.16**	**326**	*e*P	**P**	**00 40 58.2**	**+0.9**
	comp=Z,80nm,1.3s						
ESK				LR	LR		
	comp=Z,15µm,19.0s						
ESK	**Eskdalemuir**	**93.16**	**326**	*e*P	**P**	**00 40 57.9**	**+0.7**
ESK				IAMs_20	IAMs_20	01 34 09.8	
	comp=Z,15µm,18.3s						
ESK	**Eskdalemuir**	**93.16**	**326**	*e*P	**P**	**00 40 58.2**	**+0.9**
ESK				pmax	pmax		
	comp=Z,80nm,1.3s						
ESK				MLR	MLR		
	comp=Z,15µm,19.0s						
BHH	**Howats Hill**	**93.20**	**325**	*e*P	**P**	**00 40 57.6**	**+0.1**
KESW	**Keswick, Cumbr**	**93.22**	**325**	*e*P	**P**	**00 40 54.7**	**-2.9**
KESW				IAMs_20	IAMs_20	01 28 29.2	
	comp=Z,15µm,20.1s						
HLM1	**Long Mynd**	**93.41**	**323**	*e*P	**P**	**00 40 58.3**	**-0.2**
HLM1				IAMs_20	IAMs_20	01 25 07.8	
	comp=Z,12µm,22.4s						
JOHN	**Johnston Islan**	**93.42**	**73**	PFAKE		00 41 10.0	+11
JOHN				LR	LR		
	comp=Z,542nm,21.0s						
JSA	**Saint Aubin**	**93.44**	**319**	*e*P	**P**	**00 40 58.7**	**0.0**
JSA				IAMs_20	IAMs_20	01 32 12.1	
	comp=Z,10µm,19.0s						
MONM	**Monmouth**	**93.46**	**322**	IAMs_20	IAMs_20	01 28 45.6	
	comp=Z,14µm,22.3s						
HGH	**Gray Hill**	**93.49**	**322**	*e*P	**P**	**00 40 58.7**	**-0.2**
FOEL	**Foel Wylfa**	**93.54**	**323**	*e*P	**P**	**00 40 60.0**	**+0.8**
FOEL				IAMs_20	IAMs_20	01 28 06.2	
	comp=Z,14µm,21.9s						
MCH1	**Michaelchurch**	**93.56**	**322**	*e*P	**P**	**00 40 58.9**	**-0.3**
MCH1				IAMs_20	IAMs_20	01 29 59.8	
	comp=Z,14µm,20.4s						
SJPF	**Ste Jean**	**93.58**	**313**	*e*P	**P**	**00 41 00.8**	**+1.3**
SJPF				pmax	pmax		
	comp=Z,63nm,1.3s						
EAB	**Aberfoyle**	**93.64**	**327**	*e*P	**P**	**00 41 00.3**	**+0.8**
TOA0	**Torodi Ar. Sit**	**93.71**	**283**	*e*P	**P**	**00 40 59.6**	**-1.0**
TORD	**Torodi Ar. Bea**	**93.71**	**283**	P	**P**	**00 40 59.8**	**-0.8**
	comp=Z,9.5nm,0.9s,baz=92,slow=4.6						
TORD				PP	**PP**	**00 44 53.7**	**+7.6**
	baz=104,slow=6.1						
TORD				S	**SKSac**	**00 51 31.5**	**-2.5**
	baz=357,slow=8.7						
TORD				LR	LR	01 23 31.0	
	comp=Z,17µm,18.1s,baz=40,slow=36						
LLW	**Llanuwychllyn**	**93.82**	**323**	*e*P	**P**	**00 40 59.8**	**-0.6**
SGMF	**Saint Gilles**	**93.83**	**319**	*e*P	**P**	**00 41 01.1**	**+0.6**
SGMF				pmax	pmax		
	comp=Z,66nm,1.4s						
WPM1	**Penmaenmawr**	**93.90**	**324**	*e*P	**P**	**00 41 01.1**	**+0.4**
GAL1	**Galloway**	**94.09**	**325**	IAMs_20	IAMs_20	01 28 00.5	
	comp=Z,7µm,21.1s						
WME	**Myndd Eilian**	**94.11**	**324**	*e*P	**P**	**00 41 02.4**	**+0.7**
KPL	**Plockton**	**94.14**	**328**	*e*P	**P**	**00 41 01.6**	**-0.1**
KPL				IAMs_20	IAMs_20	01 27 48.7	
	comp=Z,18µm,19.0s						
WLF1	**Llynfaes**	**94.19**	**324**	*e*P	**P**	**00 41 02.5**	**+0.5**
WLF1				IAMs_20	IAMs_20	01 28 24.2	
	comp=Z,33µm,20.8s						
WIM	**Isle of Man**	**94.20**	**325**	*e*P	**P**	**00 41 02.4**	**+0.3**
WPS	**Cemaes, Angles**	**94.23**	**324**	IAMs_20	IAMs_20	01 28 24.4	
	comp=Z,14µm,21.4s						
QUIF	**Quistinic**	**94.28**	**318**	*e*P	**P**	**00 41 03.5**	**+0.9**
QUIF				pmax	pmax		
	comp=Z,67nm,1.6s						
ROSF	**Rostrenen**	**94.29**	**319**	*e*P	**P**	**00 41 03.5**	**+0.8**
ROSF				pmax	pmax		
	comp=Z,46nm,1.3s						
YRC	**Rhoscolyn**	**94.30**	**324**	*e*P	**P**	**00 41 02.9**	**+0.4**
SNAA	**Sanae**	**95.30**	**198**	P	**P**	**00 41 07.2**	**+0.4**
SNAA	**Sanae**	**95.30**	**198**	P	**P**	**00 41 07.4**	**+0.6**
	comp=Z,3.9nm,1.2s,baz=121,slow=5.9,SNR=3.9						
SNAA				PP	**PP**	**00 44 54.4**	**-2.7**
	comp=Z,1.8nm,0.9s,baz=127,slow=14,SNR=2.3						
SNAA				S	**SKSac**	**00 51 36.3**	**-4.2**
	comp=Z,1.5nm,1.1s,baz=267,slow=18,SNR=3.5						
SNAA				PKKPbc	**PKKPdf**	**00 57 59.2**	**-3.6**
	comp=Z,4.5nm,0.8s,baz=230,slow=1.7,SNR=16						
SNAA				LR	LR	01 16 02.0	
	comp=Z,5µm,21.8s,baz=95,slow=30						
SNAA	**Sanae**	**95.30**	**198**	*e*P	**P**	**00 41 09.9**	**+3.1**
	comp=Z,6.5nm,1.1s						
SNAA				PP	**PP**	**00 44 54.4**	**-2.7**
SNAA				S	**SKSac**	**00 51 36.3**	**-4.2**
SNAA				PKKPbc	**PKKPdf**	**00 57 59.2**	**-3.6**
SDPT	**Sand Point**	**95.45**	**34**	*e*P	**P**	**00 41 07.6**	**-0.2**
	comp=Z,102nm,0.8s						
ES19	**SONSECA Array**	**96.03**	**310**	*e*P	**P**	**00 41 11.7**	**+0.8**
ESDC	**Sonseca Array**	**96.08**	**310**	P	**P**	**00 41 11.3**	**+0.2**
	comp=Z,4.0nm,0.7s,baz=57,slow=4.0,SNR=28						
ESDC				PP	**PP**	**00 45 01.5**	**-2.5**
	comp=Z,1.2nm,0.8s,baz=80,slow=5.7,SNR=4.3						
ESDC				LR	LR	01 27 35.5	
	comp=Z,8µm,20.8s,baz=110,slow=37						
ESLA	**Sonseca Array**	**96.08**	**310**	*e*P	**P**	**00 41 11.9**	**+0.8**
	comp=Z,30nm,1.2s						
TOLK	**Toolik Lake Re**	**96.22**	**20**	P	**P**	**00 41 11.4**	**+0.3**
	baz=294						
TOLK	**Toolik Lake Re**	**96.22**	**20**	*e*P	**P**	**00 41 12.2**	**+1.1**
	comp=Z,29nm,0.8s						
CHGN	**Chignik**	**96.36**	**33**	*e*P	**P**	**00 41 10.6**	**-1.3**
	comp=Z,38nm,1.0s						
PAB	**San Pablo**	**96.39**	**310**	*e*P	**P**	**00 41 12.8**	**+0.2**
	comp=Z,28nm,1.2s						
PAB				LR	LR		
	comp=Z,12µm,21.0s						
PAB	**San Pablo**	**96.39**	**310**	*e*P	**P**	**00 41 12.8**	**+0.2**
PAB				pmax	pmax		
	comp=Z,28nm,1.2s						
PAB				MLR	MLR		
	comp=Z,12µm,21.0s						
SVW2	**Sparrevohn**	**96.47**	**28**	*e*P	**P**	**00 41 13.6**	**+1.2**
	comp=Z,88nm,1.4s						
COLD	**Coldfoot**	**96.56**	**21**	*e*P	**P**	**00 41 13.1**	**+0.5**
	comp=Z,40nm,1.3s						
MLY	**Manley**	**97.21**	**23**	*e*P	Pdif	00 41 15.9	+0.1
	comp=Z,35nm,1.1s						
VNA1	**Neumayer--Stat**	**97.21**	**199**	P	Pdif	00 41 16.5	+1.0
CAST	**Castle Rocks**	**97.26**	**25**	*e*P	Pdif	00 41 16.2	+0.2
	comp=Z,119nm,1.4s						
PPLA	**Purkeypile**	**97.40**	**25**	*e*P	Pdif	00 41 17.4	+0.6
	comp=Z,35nm,1.0s						
BPAW	**Bear Paw Mtn.**	**97.46**	**24**	*e*P	Pdif	00 41 16.9	0.0
	comp=Z,73nm,0.8s						
VNA3	**Neumayer Olymp**	**97.52**	**198**	P	**P**	**00 41 16.7**	**-0.2**
MDT	**Midelt**	**97.58**	**303**	PP	PP	00 45 15.2	-0.7
	comp=Z,8.2nm,1.0s,baz=100,slow=12,SNR=5.1						
MDT				LR	LR	01 30 30.8	
	comp=Z,13µm,18.2s,baz=102,slow=39						
PBRG	**Braganca**	**97.81**	**313**	*e*P	Pdif	00 41 19.3	+0.3
PBRG	**Braganca**	**97.81**	**313**	*e*S	**S**	**00 52 47.8**	**+4.5**
PBRG				*e*SS	SS	00 59 36.3	+12
VAL	**Valentia**	**97.96**	**323**	*e*P	Pdif	00 41 19.4	+0.2
TRF	**Thorofare Moun**	**98.00**	**25**	*e*P	Pdif	00 41 19.9	+0.4
	comp=Z,36nm,1.1s						
SKT	**Skwentna**	**98.01**	**26**	*e*P	**P**	**00 41 19.2**	**-0.1**
	comp=Z,48nm,1.0s						
MVO	**Moncorvo**	**98.14**	**312**	*e*P	Pdif	00 41 20.9	+0.4
MVO	**Moncorvo**	**98.14**	**312**	*e*PP	PP	00 45 19.8	0.0
MVO				*e*S	**S**	**00 52 48.4**	**+2.2**
MVO				*e*SS	SS	00 59 42.5	+14
MVO	**Moncorvo**	**98.14**	**312**	*e*LR	LR	01 24 49.3	
	comp=Z,10µm,20.0s						
MDM	**Murphy Dome**	**98.22**	**23**	*e*P	**P**	**00 41 19.0**	**-1.1**
	comp=Z,32nm,1.2s						
MCK	**McKinley**	**98.44**	**24**	*e*P	Pdif	00 41 21.2	0.0
	comp=Z,97nm,1.4s						
WRH	**Wood River Hil**	**98.48**	**23**	*e*P	**P**	**00 41 21.0**	**-0.3**
	comp=Z,15nm,1.2s						
CCB	**Clear Creek Bu**	**98.51**	**23**	*e*P	**P**	**00 41 20.9**	**-0.5**
	comp=Z,10nm,1.3s						
SUA	**Susitna One**	**98.55**	**27**	*e*P	**P**	**00 41 21.8**	**0.0**
	comp=Z,69nm,0.9s						
POLO	**Lamas de Olo**	**98.67**	**312**	*e*P	Pdif	00 41 27.8	+5.0
POLO	**Lamas de Olo**	**98.67**	**312**	*e*PP	PP	00 45 24.9	+1.1
POLO				*e*S	**S**	**00 52 51.1**	**+0.4**
POLO				*e*SS	**SS**	**00 59 44.6**	**+8.2**
MTE	**Manteigas**	**98.67**	**311**	*e*P	Pdif	00 41 25.0	+2.2
MTE	**Manteigas**	**98.67**	**311**	*e*PP	PP	00 45 24.9	+1.1
MTE				*e*S	**S**	**00 52 53.8**	**+3.1**
MTE				*e*SS	**SS**	**00 59 46.8**	**+10**
MTE	**Manteigas**	**98.67**	**311**	*e*LR	LR	01 18 56.8	
	comp=Z,8µm,20.0s						
PBAR	**Barrancos**	**98.69**	**309**	*e*P	Pdif	00 41 23.4	+0.5
PBAR	**Barrancos**	**98.69**	**309**	*e*PP	PP	00 45 27.3	+3.3
PCBR	**Castelo Branco**	**98.72**	**311**	*e*P	Pdif	00 41 23.8	+0.8
PCBR	**Castelo Branco**	**98.72**	**311**	*e*PP	PP	00 45 20.5	-3.7
PMRV	**Marv??o**	**98.73**	**310**	*e*P	Pdif	00 41 23.2	+0.1
PMRV	**Marv??o**	**98.73**	**310**	*e*PP	PP	00 45 25.5	+1.2
PMRV				*e*S	**S**	**00 52 52.4**	**+1.2**
PMRV				*e*SS	**SS**	**00 59 42.1**	**+4.8**
PMRV	**Marv??o**	**98.73**	**310**	*e*LR	LR	01 21 50.8	
	comp=Z,8µm,20.0s						
PCAB	**Cabril**	**98.77**	**313**	*e*P	Pdif	00 41 24.3	+1.1
OHAK	**Old Harbor**	**98.80**	**31**	*e*P	**P**	**00 41 22.4**	**-0.5**
IL1	**Eielson Array**	**98.82**	**23**	*e*P	**P**	**00 41 20.4**	**-2.4**
ILAR	**Eielson Array**	**98.82**	**23**	P	**P**	**00 41 20.9**	**-1.9**
	comp=Z,2.3nm,0.6s,baz=288,slow=4.5,SNR=19						
ILAR				PP	**PP**	**00 45 24.5**	**+0.5**
	comp=Z,10nm,1.0s,baz=304,slow=7.3,SNR=6.8						
ILAR				PKKPbc	**PKKPbc**	**00 57 50.6**	**-2.3**
	comp=Z,1.6nm,0.8s,baz=145,slow=2.7,SNR=8.9						
ILAR				LR	LR	01 31 07.8	
	comp=Z,13µm,19.1s,baz=314,slow=38						
ILB	**Eielson Array**	**98.82**	**23**	*e*P	**P**	**00 41 22.2**	**-0.7**
PGAV	**Gavieira, Arco**	**98.90**	**313**	*e*P	**P**	**00 41 21.6**	**-2.3**
PGAV	**Gavieira, Arco**	**98.90**	**313**	*e*PP	PP	00 45 31.5	+5.9
PGAV				*e*S	**S**	**00 52 54.9**	**+2.2**
PGAV				*e*SS	SS	00 59 51.0	+11
PGAV	**Gavieira, Arco**	**98.90**	**313**	*e*LR	LR	01 21 29.9	
	comp=Z,7µm,16.0s						
HDA	**Harding Lake**	**98.95**	**23**	*e*P	**P**	**00 41 22.7**	**-0.8**
	comp=Z,12nm,0.9s						
KDAK	**Kodiak Island**	**98.98**	**30**	P	**P**	**00 41 23.4**	**-0.3**
	comp=Z,24nm,0.6s,baz=272,slow=3.0,SNR=30						
KDAK				PP	**PP**	**00 45 22.8**	**-2.6**
	comp=Z,4.4nm,0.9s,baz=292,slow=12,SNR=3.4						
KDAK				S	**SKSac**	**00 52 01.0**	**+1.2**
	comp=Z,3.7nm,1.1s,baz=343,slow=20,SNR=5.3						
PESTR	**Estremoz**	**98.99**	**310**	*e*P	Pdif	00 41 24.8	+0.6
PESTR	**Estremoz**	**98.99**	**310**	*e*PP	PP	00 45 26.8	+0.5
PESTR				*e*S	**S**	**00 52 55.7**	**+2.3**
PESTR				*e*SS	**SS**	**00 59 49.4**	**+8.5**
BORG	**Borgarnes**	**99.00**	**337**	LR	LR	01 30 56.5	
	comp=Z,10µm,19.1s,baz=73,slow=38						
BORG	**Borgarnes**	**99.00**	**337**	PFAKE		00 41 30.0	+6.4
BORG				LR	LR		
	comp=Z,195µm,20.0s						
BRLK	**Bradley Lake**	**99.11**	**28**	*e*P	**Pdif**	**00 41 24.2**	**-0.1**
	comp=Z,65nm,0.9s						
KOWA	**Kowa**	**99.14**	**285**	P	**Pdif**	**00 41 25.4**	**0.0**
	comp=Z,5.2nm,0.7s,baz=69,slow=3.9,SNR=5.8						
KOWA				LR	LR	01 26 46.9	
	comp=Z,19µm,18.1s,baz=86,slow=36						
KOWA	**Kowa**	**99.14**	**285**	*e*P	**Pdif**	**00 41 27.2**	**+1.9**
	comp=Z,12nm,0.8s						
RC01	**Rabbit Creek A**	**99.14**	**27**	*e*P	**Pdif**	**00 41 24.6**	**+0.2**
	comp=Z,76nm,1.2s						
PMR	**Palmer**	**99.21**	**26**	*e*P	**Pdif**	**00 41 24.1**	**-0.5**
	comp=Z,57nm,1.4s						
GHO	**Glory Hole Cre**	**99.23**	**26**	*e*P	**Pdif**	**00 41 25.5**	**+0.7**
	comp=Z,30nm,1.1s						
DHY	**Denali Highway**	**99.35**	**24**	*e*P	**Pdif**	**00 41 25.6**	**+0.2**
	comp=Z,12nm,0.8s						
COI	**Coimbra**	**99.36**	**311**	*e*PP	PP	00 45 36.1	+7.1
PVAQ	**Vaqueiros**	**99.36**	**308**	*e*P	**Pdif**	**00 41 26.7**	**+0.8**
PVAQ	**Vaqueiros**	**99.36**	**308**	*e*PP	PP	00 45 32.1	+3.0
PVAQ	**Vaqueiros**	**99.36**	**308**	*e*SS	SS	00 59 55.3	+9.2
PVAQ	**Vaqueiros**	**99.36**	**308**	*e*LR	LR	01 21 46.1	
	comp=Z,12µm,22.0s						
PBEJ	**Beja**	**99.36**	**309**	*e*P	**Pdif**	**00 41 27.6**	**+1.7**
PBEJ	**Beja**	**99.36**	**309**	*e*PP	PP	00 45 29.6	+0.5
EVO	**Evora**	**99.38**	**310**	*e*P	**Pdif**	**00 41 22.8**	**-3.1**
EVO	**Evora**	**99.38**	**310**	*e*PP	PP	00 45 22.6	-6.6
PMTG	**Montargil**	**99.44**	**310**	*e*PP	PP	00 45 30.5	+0.9
PMTG				*e*S	**S**	**00 52 56.2**	**-0.9**
PMTG				*e*SS	**SS**	**00 59 53.8**	**+6.7**
PCAS	**Casmilo, Conde**	**99.45**	**311**	*e*P	**Pdif**	**00 41 20.0**	**-6.2**
PCAS	**Casmilo, Conde**	**99.45**	**311**	*e*PP	PP	00 45 36.6	+6.9
PCAS				*e*S	**S**	**00 52 58.3**	**+1.1**
PCAS				*e*SS	**SS**	**00 59 50.5**	**+3.3**
PTOM	**Tomar**	**99.47**	**311**	*e*P	**Pdif**	**00 41 27.0**	**+0.7**
SML	**Sawmill**	**99.47**	**26**	*e*P	**Pdif**	**00 41 23.0**	**-2.9**
	comp=Z,52nm,0.9s						
SML	**Sawmill**	**99.47**	**26**	*e*P	**Pdif**	**00 41 23.0**	**-2.9**
SML				pmax	pmax		
	comp=Z,52nm,0.9s						
PBDV	**Barranco-do-Ve**	**99.56**	**308**	*e*P	**Pdif**	**00 41 27.4**	**+0.6**
PBDV	**Barranco-do-Ve**	**99.56**	**308**	*e*PP	PP	00 45 30.5	-0.1
PBDV				*e*S	**S**	**00 53 00.3**	**+2.1**
PBDV				*e*SS	**SS**	**00 59 59.4**	**+11**
PCVE	**Castro Verde**	**99.57**	**309**	*e*P	**Pdif**	**00 41 27.5**	**+0.7**
PCVE	**Castro Verde**	**99.57**	**309**	*e*PP	PP	00 45 30.6	-0.1
PCVE				*e*S	**S**	**00 53 03.0**	**+4.7**
PCVE				*e*SS	SS	01 00 04.6	+16
SUMG	**Summit**	**99.66**	**347**	*e*Pdif	**Pdif**	**00 41 27.6**	**+0.7**
	comp=Z,88nm,1.3s						
SUMG	**Summit**	**99.66**	**347**	*i* P	**Pdif**	**00 41 27.4**	**+0.5**
	comp=Z,97nm,1.3s						
SUMG	**Summit**	**99.66**	**347**	*i* P	**Pdif**	**00 41 27.4**	**+0.5**
SUMG				pmax	pmax		
	comp=Z,97nm,1.3s						
MESJ	**Messejana**	**99.67**	**309**	*e*P	**Pdif**	**00 41 27.1**	**-0.2**
MESJ				*e*PP	**PP**	**00 45 31.1**	**-0.3**
MESJ				AMS	AMS	01 28 53.0	
	comp=Z,12µm,21.1s						
MESJ	**Messejana**	**99.67**	**309**	*e*P	**Pdif**	**00 41 33.7**	**+6.5**
MESJ	**Messejana**	**99.67**	**309**	*e*PP	PP	00 45 32.0	+0.6
MESJ	**Messejana**	**99.67**	**309**	*e*P	**Pdif**	**00 41 27.0**	**-0.2**
MESJ				*e*		00 45 31.1	
ALMR	**Almeirim**	**99.69**	**310**	*e*P	**Pdif**	**00 41 27.2**	**-0.1**
ALMR				*e*PP	**PP**	**00 45 31.1**	**-0.5**
ALMR				AMS	AMS	01 37 48.2	
	comp=E,7µm,22.6s						
ALMR	**Almeirim**	**99.69**	**310**	*e*P	**Pdif**	**00 41 28.6**	**+1.3**
ALMR	**Almeirim**	**99.69**	**310**	*e*PP	PP	00 45 32.4	+0.9
ALMR	**Almeirim**	**99.69**	**310**	*e*P	**Pdif**	**00 41 27.2**	**-0.1**
ALMR				*e*		00 45 31.0	
PNCL	**Nicolau / Gran**	**99.86**	**309**	*e*P	**Pdif**	**00 41 32.6**	**+4.5**
PNCL	**Nicolau / Gran**	**99.86**	**309**	*e*PP	PP	00 45 32.9	+0.1
PNCL				*e*S	**S**	**00 53 01.4**	**+0.7**
PNCL				*e*SS	**SS**	**00 59 58.7**	**+5.7**
RIDG	**Independ'e Rid**	**100.08**	**23**	*e*Pdif	**Pdif**	**00 41 28.4**	**-0.1**
MORF	**Marmelete**	**100.11**	**308**	*e*P	**Pdif**	**00 41 29.0**	**-0.3**
MORF				*e*PP	**PP**	**00 45 34.7**	**-0.2**
MORF				*e*SKS		00 52 09.1	
MORF				AMS	AMS	01 28 57.4	
	comp=E,9µm,23.9s						
MORF	**Marmelete**	**100.11**	**308**	*e*P	**Pdif**	**00 41 30.5**	**+1.2**
MORF	**Marmelete**	**100.11**	**308**	*e*PP	PP	00 45 34.3	-0.6
MORF				*e*S	**Sdif**	**00 53 03.6**	**+0.7**
MORF				*e*SS	**SS**	**00 59 58.6**	**+2.0**
MORF	**Marmelete**	**100.11**	**308**	*e*P	**Pdif**	**00 41 29.0**	**-0.3**
MORF				*e*		00 45 34.6	
MORF				*e*		00 52 09.0	
PTEO	**Sao Teotonio**	**100.12**	**309**	*e*P	**Pdif**	**00 41 29.8**	**+0.6**
LIS	**Lisbon**	**100.22**	**310**	*e*P	**Pdif**	**00 41 29.4**	**-0.2**
LIS				*e*PP	**PP**	**00 45 35.3**	**-0.2**
LIS				AMS	AMS	01 31 05.6	
	comp=E,10µm,17.1s						
LIS	**Lisbon**	**100.22**	**310**	*e*P	**Pdif**	**00 41 29.4**	**-0.2**
LIS				*e*		00 45 35.2	
PMST	**Lisbon--Monsan**	**100.24**	**310**	*e*P	**Pdif**	**00 41 30.6**	**+0.9**
PMST	**Lisbon--Monsan**	**100.24**	**310**	*e*PP	PP	00 45 41.4	+5.7
PMAFR	**Mafra**	**100.27**	**310**	*e*P	**Pdif**	**00 41 31.4**	**+1.5**
PMAFR	**Mafra**	**100.27**	**310**	*e*PP	PP	00 45 36.2	+0.2
PMAFR				*e*S	**Sdif**	**00 53 02.2**	**-1.9**
PMAFR				*e*SS	**SS**	**01 00 03.5**	**+4.8**
PFVI	**Vila Bisbo**	**100.28**	**308**	*e*P	**Pdif**	**00 41 31.1**	**+1.1**
PFVI	**Vila Bisbo**	**100.28**	**308**	*e*PP	PP	00 45 35.7	-0.4
PFVI				*e*S	**Sdif**	**00 53 01.2**	**-3.0**
PFVI				*e*SS	**SS**	**01 00 03.6**	**+4.7**
SCRK	**Sand Creek**	**100.30**	**23**	*e*Pdif	**Pdif**	**00 41 30.7**	**+1.1**
KIC	**Kosan Boka**	**100.48**	**277**	*e*PKIKP	**Pdif**	**00 41 32.1**	**+0.7**
	comp=E,107nm,1.5s						
HARP	**HAARP**	**100.56**	**25**	*e*Pdif	**Pdif**	**00 41 32.1**	**+1.4**
DBIC	**Dimbokro**	**100.58**	**277**	P	**Pdif**	**00 41 30.7**	**-1.1**
	comp=E,10nm,1.3s,baz=93,slow=17,SNR=2.3						
TIC	**Toumodi**	**100.74**	**277**	*e*PKIKP	**Pdif**	**00 41 32.7**	**+0.2**
LIC	**Lamto**	**100.78**	**277**	*e*PKIKP	**Pdif**	**00 41 32.7**	**0.0**
	comp=E,54nm,1.3s						
EGAK	**Eagle**	**100.97**	**22**	*e*Pdif	**Pdif**	**00 41 32.6**	**+0.2**
EGAK				*e*PP	**PP**	**00 45 39.5**	**-0.9**
EGAK				LR	LR		
	comp=Z,32µm,20.0s						
KULLO	**Kullorsuaq**	**101.24**	**353**⇑	*i*P	**Pdif**	**00 41 33.0**	**-0.4**
	comp=Z,30nm,1.0s						
KULLO	**Kullorsuaq**	**101.24**	**353**⇑	*i*P	**Pdif**	**00 41 33.0**	**-0.4**
KULLO				pmax	pmax		
	comp=Z,31nm,1.0s						
INK	**Inuvik**	**101.44**	**17**	P	**Pdif**	**00 41 34.3**	**-0.1**
	comp=Z,6.9nm,0.8s,baz=317,slow=5.0,SNR=9.8						
INK				PP	**PP**	**00 45 43.2**	**-0.5**
	comp=Z,18nm,1.2s,baz=302,slow=8.9,SNR=8.2						
INK				S	**SKSac**	**00 52 09.9**	**-1.6**
	comp=Z,1.5nm,0.6s,baz=132,slow=31,SNR=7.1						
INK	**Inuvik**	**101.44**	**17**	*e*Pdif	**Pdif**	**00 41 33.9**	**-0.5**
INK				*e*PP	**PP**	**00 45 43.1**	**-0.7**
INK				S	**SKSac**	**00 52 09.9**	**-1.6**
BMRM	**Bremner River**	**101.46**	**26**	*e*Pdif	**Pdif**	**00 41 35.7**	**+1.0**
DAWY	**Dawson**	**102.00**	**22**	*e*Pdif	**Pdif**	**00 41 37.7**	**+0.6**
SHEL	**Horse Pasture**	**102.11**	**254**	PFAKE		00 41 50.0	+11
SHEL				LR	LR		
	comp=Z,6µm,21.0s						
RES	**Resolute Bay**	**102.52**	**3**	Pdiff	**Pdif**	**00 41 39.1**	**+0.1**
	comp=Z,9.1nm,0.8s,baz=347,slow=8.0,SNR=2.9						
RES				PP	**PP**	**00 45 48.9**	**-2.7**
	comp=Z,5.5nm,0.8s,baz=338,slow=10.0,SNR=2.3						
RES				S	**SKSac**	**00 52 16.6**	**+0.1**
	comp=Z,6.9nm,0.9s,baz=42,slow=14,SNR=2.7						
KIP	**Kipapa**	**103.77**	**67**	PFAKE		00 42 00.0	+14
KIP				LR	LR		
	comp=Z,14µm,20.0s						
RAR	**Rarotonga**	**104.11**	**111**	Pdiff	**Pdif**	**00 41 46.6**	**-0.7**
	comp=Z,33nm,1.0s,baz=260,slow=18,SNR=2.8						
RAR	**Rarotonga**	**104.11**	**111**	Pdif	**Pdif**	**00 41 46.6**	**-0.7**
RAR				LR	LR		
	comp=Z,6µm,20.0s						
RAR	**Rarotonga**	**104.11**	**111**	P	**Pdif**	**00 41 46.6**	**-0.7**
RAR				MLR	MLR		
	comp=Z,6µm,20.0s						
WHY	**Whitehorse**	**105.67**	**23**	*e*Pdif	**Pdif**	**00 41 55.3**	**+1.7**
POHA	**Pohakuloa**	**106.32**	**69**	PFAKE		00 46 20.0	
POHA				LR	LR		
	comp=Z,7µm,20.0s						
SFJD	**Kangerlussuaq**	**106.64**	**347**	PP	PP	00 46 14.2	-8.2
	comp=Z,9.1nm,0.6s,baz=80,slow=2.6,SNR=4.7						
SFJD	**Kangerlussuaq**	**106.64**	**347**	*e*PKP	**PKiKP**	**00 46 09.2**	**+1.2**
SFJD				PP	PP	00 46 14.2	-8.2
SFJD				LR	LR		
	comp=Z,18µm,21.0s						
FUL	**Funchal**	**107.75**	**305**	*e*PP	PP	00 46 40.9	+9.0
PMOZ	**Porto Moniz, M**	**107.95**	**306**	*e*PP	PP	00 46 34.2	+0.7
PMOZ	**Porto Moniz, M**	**107.95**	**306**	*e*SS	SS	01 01 47.7	+3.0
PMOZ	**Porto Moniz, M**	**107.95**	**306**	*e*LR	LR	01 27 12.3	
	comp=Z,7µm,16.0s						
DLBC	**Dease Lake**	**108.99**	**24**	PP	PP	00 46 40.4	+0.5
	comp=Z,9.0nm,1.0s,baz=300,slow=7.9,SNR=9.0						
DLBC	**Dease Lake**	**108.99**	**24**	*e*PKP	**PKiKP**	**00 46 13.1**	**+0.4**
DLBC				PP	**PP**	**00 46 40.4**	**+0.5**
WRAK	**Wrangell Islan**	**109.29**	**26**	PFAKE		00 46 30.0	
WRAK				LR	LR		
	comp=Z,14µm,21.0s						
ASCN	**Ascension**	**110.63**	**263**	PFAKE		00 46 30.0	
ASCN				LR	LR		
	comp=Z,9µm,19.0s						
YKA	**Yellowknife Ar**	**111.00**	**15**	Pdiff	**Pdif**	**00 42 17.0**	**-0.1**
	comp=Z,0.6nm,0.7s,baz=325,slow=3.0,SNR=2.6						
YKA				PKiKP	**PKiKP**	**00 46 16.7**	**+0.5**
	comp=Z,1.1nm,0.5s,baz=358,slow=2.1,SNR=8.2						
YKA				PP	**PP**	**00 46 47.7**	**-6.4**
	comp=Z,4.9nm,0.8s,baz=329,slow=7.3,SNR=6.2						
YKA				PKKPbc	**PKKPbc**	**00 57 12.6**	**-3.3**
	comp=Z,1.0nm,0.7s,baz=146,slow=3.4,SNR=4.4						
YKA				PKKPab	**PKKPab**	**00 57 25.0**	**+0.3**
	comp=Z,2.6nm,0.8s,baz=140,slow=2.9,SNR=6.6						
YKA				SS	SS	01 02 28.8	+5.7
	comp=Z,0.3nm,0.4s,baz=250,slow=12,SNR=4.4						
CMLA	**Cha da Macela**	**112.80**	**313**	PFAKE		00 46 30.0	
CMLA				LR	LR		
	comp=Z,7µm,20.0s						
TBI	**Tubuai**	**113.43**	**114**	*e*Pdif	**Pdif**	**00 42 28.7**	**0.0**
	comp=Z,411nm,27.0s						
TBI	**Tubuai**	**113.43**	**114**	*e*PP	PP	00 47 10.1	-3.1
	comp=Z,2µm,26.2s						
TBI				*e*Sdif	Sdif	00 54 58.0	+3.7
	comp=Z,5µm,29.5s						
TBI	**Tubuai**	**113.43**	**114**	*e*PS	PS	00 56 45.6	-4.3
	comp=Z,3µm,27.8s						
TBI				*e*SS	SS	01 03 04.2	+5.7
	comp=Z,8µm,28.8s						
TBI	**Tubuai**	**113.43**	**114**	*e*LQ	LQ	01 15 35.7	
	comp=Z,19µm,39.0s						
TBI				*e*LR	LR	01 20 26.3	
	comp=Z,17µm,24.5s						
PPT2	**Papeete2**	**113.95**	**108**	*e*Pdif	**Pdif**	**00 42 31.9**	**+0.7**
	comp=Z,569nm,25.8s						
PPT2	**Papeete2**	**113.95**	**108**	*e*PP	PP	00 47 21.2	+4.0
	comp=Z,2µm,24.8s						
PPT2				*e*Sdif	Sdif	00 55 00.0	+0.9
	comp=Z,6µm,27.5s						
PPT2	**Papeete2**	**113.95**	**108**	*e*PS	PS	00 56 51.0	-4.1
	comp=Z,7µm,25.0s						
PPT2				*e*SS	SS	01 03 19.6	+14
	comp=Z,7µm,30.8s						
PPT2	**Papeete2**	**113.95**	**108**	*e*LR	LR	01 20 41.8	
	comp=Z,18µm,25.0s						
HOPE	**Hope Point**	**115.68**	**209**	PFAKE		00 46 40.0	+15
HOPE				LR	LR		
	comp=Z,7µm,20.0s						
PMSA	**Palmer Station**	**116.35**	**189**	PFAKE		00 46 40.0	+14
PMSA				LR	LR		
	comp=Z,11µm,22.0s						
LLLB	**Lillooet**	**117.81**	**26**	*e*PKPdf	**PKPdf**	**00 46 29.8**	**+0.1**
A04D	**Lummi Island**	**118.77**	**28**	P	**PKPdf**	**00 46 31.8**	**+0.3**
	baz=315						
NLWA	**Neilton Lookou**	**119.12**	**30**	*e*PKPdf	**PKPdf**	**00 46 32.7**	**+0.3**
NLWA				LR	LR		
	comp=Z,9µm,19.0s						
B05A	**Bryant**	**119.38**	**28**	P	**PKPdf**	**00 46 32.9**	**+0.2**
	baz=315						
B06A	**Marblemount**	**119.49**	**28**	*e*PKPdf	**PKPdf**	**00 46 33.8**	**+0.9**
D05A	**Enumclaw**	**120.19**	**29**	*e*PKPdf	**PKPdf**	**00 46 35.9**	**+1.6**
F04D	**Rainier, OR**	**120.45**	**31**	P	**PKPdf**	**00 46 34.8**	**0.0**
	baz=313						
B08A	**Colville Reser**	**120.59**	**27**	*e*PKPdf	**PKPdf**	**00 46 35.1**	**0.0**

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LTY  Liberty          120.78  28 ePKPdf  PKPdf   00 46 35.8 +0.2
G03D McMinnville, O   120.91  32  P      PKPdf   00 46 35.5 -0.3
     baz=313
SCHQ Schefferville    121.03 349  PKP    PKPdf   00 46 36.4 +0.6
     comp=Z,17nm,0.7s,baz=4.7,slow=4.9,SNR=4.8
SCHQ                              PP     PP      00 48 05.9 +1.6
     comp=Z,22nm,1.0s,baz=26,slow=6.0,SNR=5.8
SCHQ Schefferville    121.03 349 ePKPdf  PKPdf   00 46 37.5 +1.8
SCHQ                              PP     PP      00 48 05.9 +1.6
C09A Chrisman Ranch   121.48  27 ePKPdf  PKPdf   00 46 37.9 +1.0
D08A Wollman Farm,    121.74  27 ePKPdf  PKPdf   00 46 38.0 +0.7
H04A Detroit Lake     121.83  31 ePKPdf  PKPdf   00 46 38.5 +0.9
I03D Drain, OR        121.88  33  P      PKPdf   00 46 37.9 +0.3
     baz=312,SNR=9.1
G05D Wamic, OR        121.89  30  P      PKPdf   00 46 37.8 +0.1
     baz=315
HAWA Hanford          121.94  28 ePKPdf  PKPdf   00 46 38.7 +1.0
HAWA                              LR     LR
     comp=Z,12µm,20.0s
E08A Dider Farm, El   122.09  28 ePKPdf  PKPdf   00 46 39.1 +1.2
G06A Carlson Farm,    122.23  30 ePKPdf  PKPdf   00 46 39.2 +0.8
I04A Tendick Farm,    122.32  32  P      PKPdf   00 46 38.2 -0.4
     baz=313,SNR=12
WALA Waterton Lakes   122.32  23 ePKPdf  PKPdf   00 46 39.6 +1.1
E09A Wood Farm, Sta   122.50  27 ePKPdf  PKPdf   00 46 39.4 +0.6
I05D Terrebonne, OR   122.50  31  P      PKPdf   00 46 38.3 -0.7
     baz=314,SNR=9.5
L02D Cave Junction,   122.75  34  P      PKPdf   00 46 39.2 -0.2
     baz=311
HUMO Hull Mountain    122.81  34 ePKPdf  PKPdf   00 46 40.7 +1.2
J04D Umpqua Nationa   122.85  33  P      PKPdf   00 46 39.1 -0.8
     baz=313,SNR=15
G08A Pilot Rock       123.02  29 ePKPdf  PKPdf   00 46 40.8 +0.8
PINE Pine Mountain    123.09  31 ePKPdf  PKPdf   00 46 41.7 +1.4
JTMT Jette            123.23  24 ePKPdf  PKPdf   00 46 40.8 +0.5
J05D Fort Rock, OR    123.29  32  P      PKPdf   00 46 40.6  0.0
     baz=314,SNR=17
F10A Beach Ranch, E   123.33  27 ePKPdf  PKPdf   00 46 40.9 +0.4
K04D Chiloquin, OR    123.46  33  P      PKPdf   00 46 40.6 -0.3
     baz=313
KHMM Horse Mountain   123.50  36 ePKPdf  PKPdf   00 46 43.0 +1.9
YBH  Yreka Blue Hor   123.53  34  PKP    PKPdf   00 46 41.1  0.0
     comp=Z,5.9nm,0.7s,baz=9.0,slow=2.4,SNR=10
YBH                               PP     PP      00 48 23.5 +1.4
     comp=Z,2.9nm,0.9s,baz=281,slow=19,SNR=1.5
YBH  Yreka Blue Hor   123.53  34 ePKPdf  PKPdf   00 46 42.3 +1.2
YBH                               PP     PP      00 48 23.5 +1.4
I07A Izee             123.62  30 ePKPdf  PKPdf   00 46 42.4 +1.2
M02C Callahan         123.67  35  P      PKPdf   00 46 41.7 +0.4
     baz=311,SNR=18
TAOE Nuku Hiva Isla   123.73  99 ePP     PP      00 48 14.4  -11
     comp=Z,2µm,25.6s
TAOE Nuku Hiva Isla   123.73  99 ePS     PS      00 58 22.3 -1.1
     comp=Z,3µm,26.9s
TAOE                             eSS     SS      01 05 09.3 -3.4
     comp=Z,8µm,27.3s
TAOE Nuku Hiva Isla   123.73  99 eLR     LR      01 25 15.4
     comp=Z,12µm,25.4s
K05A Summer Lake      123.86  32 ePKPdf  PKPdf   00 46 43.1 +1.3
KMRM Mail Ridge       123.93  36 ePKPdf  PKPdf   00 46 43.9 +2.0
M04C Macdoel          123.98  34  P      PKPdf   00 46 41.7 -0.3
     baz=312,SNR=13
N02D Trinity Center   124.03  35  P      PKPdf   00 46 41.9 -0.1
     baz=311,SNR=15
MSO  Missoula         124.10  25  P      PKPdf   00 46 41.4 -0.6
     baz=323
MSO  Missoula         124.10  25 ePKPdf  PKPdf   00 46 41.9 -0.2
BMO  Blue Mountains   124.13  28 ePKPdf  PKPdf   00 46 41.8 -0.3
BMO                              ePP     PP      00 48 25.3 -0.6
BMO                               LR     LR
     comp=Z,12µm,20.0s
BMO  Blue Mountains   124.13  28 ePKIKP  PKPdf   00 46 41.8 -0.3
BMO                              e               00 48 25.3
BMO                               MLR    MLR
     comp=Z,12µm,20.0s
WDC  Whiskeytown Da   124.38  35 ePKPdf  PKPdf   00 46 43.5 +0.9
WDC  Whiskeytown Da   124.38  35 ePKIKP  PKPdf   00 46 43.5 +0.9
J08A Circle Bar Ran   124.66  30 ePKPdf  PKPdf   00 46 44.2 +1.0
EGMT Eagleton         124.73  21  P      PKPdf   00 46 42.8 -0.3
     baz=328
EGMT Eagleton         124.73  21 ePKPdf  PKPdf   00 46 43.6 +0.5
EGMT                              LR     LR
     comp=Z,22µm,20.0s
MOD  Modoc Plateau    124.74  33 ePKPdf  PKPdf   00 46 44.5 +1.1
O03D Paynes Creek     125.00  35  P      PKPdf   00 46 43.4 -0.5
     baz=312
HRY  Holter Researc   125.05  23 ePKPdf  PKPdf   00 46 44.3 +0.5
HOPS Hopland Field    125.09  37 ePKPdf  PKPdf   00 46 45.9 +1.9
WVOR Wild Horse Val   125.25  31 ePKPdf  PKPdf   00 46 44.6 +0.2
WVOR                              LR     LR
     comp=Z,10µm,21.0s
WVOR Wild Horse Val   125.25  31 ePKIKP  PKPdf   00 46 44.6 +0.2
WVOR                              MLR    MLR
     comp=Z,10µm,21.0s
LRM  Limekiln Ridge   125.52  24 ePKPpre PKPpre  00 46 35.5
LRM                              ePKPdf  PKiKP   00 46 45.1 -0.2
ORV  Oroville         125.66  36 ePKPdf  PKPdf   00 46 47.0 +1.9
DLMT Dillon           125.83  25 ePKPdf  PKPdf   00 46 46.3 +0.9
MFID Camas Ranch      125.92  28 ePKPdf  PKPdf   00 46 45.8 +0.2
BOZ  Bozeman (W)      126.04  24  P      PKPdf   00 46 45.1 -0.7
     baz=325
BOZ  Bozeman (W)      126.04  24 ePKPdf  PKPdf   00 46 46.5 +0.7
BOZ                               LR     LR
     comp=Z,16µm,20.0s
BEKR Beckworth        126.10  34 ePKPdf  PKPdf   00 46 47.0 +0.8
DGMT Dagmar           126.12  17  P      PKPdf   00 46 45.5 -0.2
     baz=335
DGMT Dagmar           126.12  17 ePKPdf  PKPdf   00 46 46.5 +0.8
DGMT                             ePP     PP      00 48 40.1 +1.3
MCMT McKenzie Canyo   126.16  25 ePKPdf  PKPdf   00 46 47.0 +0.8
ULM  Lac du Bonnet    126.33  10  PKP    PKPdf   00 46 44.1 -1.9
     comp=Z,42nm,0.8s,baz=351,slow=3.1,SNR=46
ULM                               PP     PP      00 48 38.3 -1.7
     comp=Z,16nm,0.9s,baz=315,slow=4.9,SNR=2.9
ULM  Lac du Bonnet    126.33  10 ePKPdf  PKPdf   00 46 45.8 -0.2
ULM                               PP     PP      00 48 38.3 -1.7
AFDM Forest Hills D   126.37  36 ePKPdf  PKPdf   00 46 47.3 +0.8
HLID Hailey           126.46  27  P      PKPdf   00 46 46.3 -0.5
     baz=321
HLID Hailey           126.46  27 ePKPdf  PKPdf   00 46 47.8 +1.1
HLID                              LR     LR
     comp=Z,15µm,22.0s
RKT  Rikitea          126.55 117 ePP     PP      00 48 39.7 -3.6
     comp=Z,848nm,24.5s
RKT  Rikitea          126.55 117 ePS     PS      00 58 42.6 -4.9
     comp=Z,4µm,26.2s
RKT                              eSS     SS      01 05 55.7 +8.6
     comp=Z,9µm,29.8s
RKT  Rikitea          126.55 117 eLQ     LQ      01 21 07.4
     comp=Z,8µm,35.0s
RKT                              eLR     LR      01 26 34.0
     comp=Z,9µm,26.0s
EFI  East Falkland    126.55 200  PFAKE          00 47 00.0  +14
EFI                               LR     LR
     comp=Z,11µm,21.0s
GCMT Greycliff        126.65  22 ePKPdf  PKPdf   00 46 47.7 +0.7
QLMT Earthquake Lak   126.75  24 ePKPdf  PKPdf   00 46 48.7 +1.5
PAHR Pah Rah Range    126.76  34 ePKPdf  PKPdf   00 46 48.1 +0.8
VCNR Virginia City    126.89  35 ePKPdf  PKPdf   00 46 49.1 +1.4
YHB  Horse Butte      126.91  24 ePKPdf  PKPdf   00 46 49.9 +2.3
PNTR Pine Nut         127.06  35 ePKPdf  PKPdf   00 46 49.4 +1.3
LAO  LASA Array       127.09  19  P      PKPdf   00 46 47.9 +0.3
     baz=332
LAO  LASA Array       127.09  19 ePKPdf  PKPdf   00 46 48.6 +0.9
LAO                               LR     LR
     comp=Z,21µm,21.0s
CMB  Columbia Colle   127.32  36 ePKPdf  PKPdf   00 46 48.9 +0.6
YERR Yerington        127.34  35 ePKPdf  PKPdf   00 46 49.8 +1.2
RLMT Red Lodge        127.36  22  P      PKPdf   00 46 48.6 +0.1
     baz=328
RLMT Red Lodge        127.36  22 ePKPdf  PKPdf   00 46 48.8 +0.4
RLMT                             ePP     PP      00 48 46.7 -0.7
RLMT                              LR     LR
     comp=Z,27µm,19.0s
BMN  Battle Mountai   127.42  32 ePKPdf  PKPdf   00 46 48.4 -0.2
H17A Grant Village    127.45  24  P      PKPdf   00 46 50.2 +1.5
     baz=326
SAO  San Andreas Ge   127.50  38 ePKPdf  PKPdf   00 46 51.4 +2.7
SAO  San Andreas Ge   127.50  38  PKIKP  PKPdf   00 46 51.3 +2.7
A33A Warroad          127.68  10  P      PKPdf   00 46 48.1 -0.6
     baz=346
MDND Maddock          127.89  13  P      PKPdf   00 46 48.5 -0.6
     baz=340
MDND Maddock          127.89  13 ePKPdf  PKPdf   00 46 49.9 +0.8
MOOW Moose Ponds      127.92  25 ePKPdf  PKPdf   00 46 50.6 +1.0
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KVN  Kaiserville      127.93  34 ePKPdf  PKPdf   00 46 50.8 +1.1
RYN  Ryan             127.99  34 ePKPdf  PKPdf   00 46 50.8 +1.1
LOHW Long Hollow      128.09  25 ePKPdf  PKPdf   00 46 49.8 -0.1
SNOW Snow King Moun   128.15  25 ePKPdf  PKPdf   00 46 51.4 +1.4
REDW Red Top Meadow   128.19  25 ePKPdf  PKPdf   00 46 51.0 +0.9
AGMN Agassiz Nation   128.22  10  P      PKPdf   00 46 48.8 -0.9
     baz=345
AGMN Agassiz Nation   128.22  10 ePKPdf  PKPdf   00 46 49.5 -0.2
AGMN                              LR     LR
     comp=Z,24µm,22.0s
B34A Aery, Baudette   128.24   9  P      PKPdf   00 46 48.8 -1.0
     baz=346
NVAR Mina Array Bea   128.25  34  PKhKP  PKPpre  00 46 47.0
     comp=Z,6.8nm,1.0s,baz=244,slow=1.6,SNR=4.8
NVAR                              PKP    PKiKP   00 46 50.7 -0.3
     comp=Z,15nm,0.7s,baz=270,slow=2.4,SNR=47
NVAR                              PP     PP      00 48 54.1 +0.4
     comp=Z,3.1nm,0.9s,baz=285,slow=4.3,SNR=1.8
NV11 Mina Array Sit   128.33  34 ePKPdf  PKPdf   00 46 51.7 +1.3
MINS Minaret Summit   128.35  36 ePKPdf  PKPdf   00 46 51.0 +0.3
MDPB Devils Postpil   128.35  36 ePKPdf  PKPdf   00 46 51.8 +1.1
OMMB Old Mammoth Mi   128.41  36 ePKPdf  PKPdf   00 46 52.1 +1.3
B35A Bob, Littlefor   128.50   8  P      PKPdf   00 46 49.5 -0.7
     baz=348
B35A Bob, Littlefor   128.50   8 ePKPdf  PKPdf   00 46 50.3 +0.1
AHID Auburn Hatcher   128.57  26 ePKPdf  PKPdf   00 46 51.2 +0.4
AHID                             ePP     PP      00 48 56.5 +1.1
AHID                              LR     LR
     comp=Z,19µm,19.0s
HVU  Hansel Valley    128.61  28 ePKPdf  PKPdf   00 46 53.0 +2.1
C33A Trail            128.76  10  P      PKPdf   00 46 49.8 -0.9
     baz=345
PAGB Antelope Grade   128.91  38 ePKPdf  PKPdf   00 46 53.0 +1.6
PQI  Presque Isle     128.95 346 ePKPdf  PKPdf   00 46 51.8 +0.7
C34A RKJ Ranch, Bem   129.01  10  P      PKPdf   00 46 50.2 -1.0
     baz=346
C35A Jirik Farms, M   129.11   9  P      PKPdf   00 46 50.4 -1.0
     baz=347
BGU  Big Grassy Mou   129.16  28 ePKPdf  PKPdf   00 46 52.8 +0.9
EYMN Ely              129.20   7  P      PKPdf   00 46 51.1 -0.5
     baz=350
EYMN Ely              129.20   7 ePP     PP      00 48 56.0 -2.9
EYMN                              LR     LR
     comp=Z,14µm,20.0s
BW06 Boulder Array    129.22  24  P      PKPdf   00 46 51.5 -0.6
     baz=326
BW06 Boulder Array    129.22  24 ePKPdf  PKPdf   00 46 51.7 -0.4
BW06                              LR     LR
     comp=Z,23µm,20.0s
C36A Pine Crest Far   129.22   8  P      PKPdf   00 46 51.1 -0.5
     baz=349
PD31 Pinedale Array   129.22  24 ePKPpre PKPpre  00 46 43.6
PDAR Pinedale Array   129.22  24  PKP    PKPdf   00 46 52.0 -0.1
     comp=Z,5.2nm,0.5s,baz=331,slow=1.1,SNR=33
PDAR                              PP     PP      00 48 59.7 +0.1
     comp=Z,2.0nm,0.8s,baz=298,slow=4.7,SNR=1.9
PDAR                              PKKP   PKKPdf  00 57 01.6 +3.0
     comp=Z,0.3nm,0.3s,baz=190,slow=2.6,SNR=6.0
PDAR Pinedale Array   129.22  24 ePKPpre PKPpre  00 46 40.8
PDAR                              PKP    PKPdf   00 46 52.0 -0.1
PDAR                              PP     PP      00 48 59.7 +0.1
PDAR                              PKKP   PKKPdf  00 57 01.6 +3.0
TIN  Tinemaha, Big    129.24  36  P      PKPdf   00 46 52.4 +0.3
     baz=314
HWUT Hardware Ranch   129.30  27 ePKPdf  PKPdf   00 46 52.8 +0.6
HWUT                             ePP     PP      00 48 57.7 -2.5
HWUT                              LR     LR
     comp=Z,12µm,19.0s
C37A Embarrass        129.33   7  P      PKPdf   00 46 51.3 -0.5
     baz=349
SMMC Simmler          129.34  39  P      PKPdf   00 46 52.0 -0.3
     baz=311
C38A Sawbill Land.    129.45   6  P      PKPdf   00 46 51.3 -0.8
     baz=351
C40A Isle Royale Na   129.46   5  P      PKPdf   00 46 51.5 -0.5
     baz=353
C40A Isle Royale Na   129.46   5 ePKPdf  PKPdf   00 46 52.4 +0.3
VES  Vestal, Richgr   129.55  37  P      PKPdf   00 46 51.8 -0.8
     baz=312
D35A Remer            129.70   9  P      PKPdf   00 46 51.8 -0.8
     baz=347
PKM  Mcpherson Peak   129.72  39  P      PKPdf   00 46 54.0 +0.7
     baz=311
D36A Goodland         129.74   8  P      PKPdf   00 46 51.8 -0.8
     baz=348
D36A Goodland         129.74   8 ePKPdf  PKPdf   00 46 53.4 +0.7
CWC  Cottonwood Cre   129.75  36  P      PKPdf   00 46 53.6 +0.4
     baz=313
TCUT Toone Canyon     129.76  27 ePKPdf  PKPdf   00 46 54.6 +1.4
GRAC Grapevine Rang   129.78  35  P      PKPdf   00 46 53.7 +0.6
     baz=314
R11A Troy Canyon, C   129.81  33  P      PKPdf   00 46 53.7 +0.5
     baz=317,SNR=53
R11A Troy Canyon, C   129.81  33 ePKPpre PKPpre  00 46 43.8
DUG  Dugway, Tooele   129.83  29  P      PKPdf   00 46 53.5 +0.3
     baz=321
DUG  Dugway, Tooele   129.83  29 ePKPdf  PKPdf   00 46 54.5 +1.2
DUG                               LR     LR
     comp=Z,9µm,20.0s
DUG  Dugway, Tooele   129.83  29  PKIKP  PKPdf   00 46 54.4 +1.2
D37A Cotton           129.86   8  P      PKPdf   00 46 52.5 -0.3
     baz=349
CTU  Camp Tracy       129.94  28 ePKPdf  PKPdf   00 46 54.8 +1.4
ISA  Isabella, Lake   130.04  37  P      PKPdf   00 46 53.7  0.0
     baz=312
ISA  Isabella, Lake   130.04  37 ePKPdf  PKPdf   00 46 55.0 +1.3
ISA  Isabella, Lake   130.04  37  PKIKP  PKPdf   00 46 54.9 +1.3
E34A Wadena           130.06  10  P      PKPdf   00 46 52.8 -0.5
     baz=345
RSSD Black Hills      130.08  19  P      PKPdf   00 46 53.6 -0.1
     baz=334
RSSD Black Hills      130.08  19 ePKPdf  PKPdf   00 46 53.8 +0.1
DAC  Darwin (Calif)   130.15  36 ePKPdf  PKPdf   00 46 54.6 +0.6
JLU  Jordanelle       130.15  27 ePKPdf  PKPdf   00 46 55.6 +1.6
E35A Pequot Lakes     130.15   9  P      PKPdf   00 46 52.9 -0.6
     baz=346
D41A Chassel          130.35   4  P      PKPdf   00 46 54.0 +0.2
     baz=354
D41A Chassel          130.35   4 ePKPdf  PKPdf   00 46 54.4 +0.6
MPMC Manual Prospec   130.36  36  P      PKPdf   00 46 54.9 +0.5
     baz=314
NLU  North Lily Min   130.37  28 ePKPdf  PKPdf   00 46 55.6 +1.2
E36A McGregor         130.37   8  P      PKPdf   00 46 53.4 -0.5
     baz=348
SCZ2 Santa Cruz Isl   130.41  40  P      PKPdf   00 46 53.9 -0.4
     baz=310
FURC Furnace Creek,   130.44  35  P      PKPdf   00 46 54.7 +0.5
     baz=315
E37A Wrenshall        130.44   8  P      PKPdf   00 46 53.5 -0.4
     baz=349
TPNV Topopah Spring   130.45  34  P      PKPdf   00 46 54.7 +0.2
     baz=316
TPNV Topopah Spring   130.45  34 ePKPdf  PKPdf   00 46 54.7 +0.2
K22A Casper           130.50  22  P      PKPdf   00 46 53.8 -0.7
     baz=330
K22A Casper           130.50  22 ePKPdf  PKPdf   00 46 54.5  0.0
E38A The Farm, Brul   130.51   7  P      PKPdf   00 46 53.7 -0.5
     baz=350
E38A The Farm, Brul   130.51   7 ePKPdf  PKPdf   00 46 55.1 +1.0
MPU  Maple Canyon     130.53  28 ePKPdf  PKPdf   00 46 56.5 +1.9
GO09 Cerro Castillo   130.56 190 ePKPdf  PKPdf   00 46 54.5 +0.5
PKME Peaks-Kenny Pk   130.58 346  P      PKPdf   00 46 54.2  0.0
     baz=19
PKME Peaks-Kenny Pk   130.58 346 ePKPdf  PKPdf   00 46 54.6 +0.3
PKME                              LR     LR
     comp=Z,14µm,19.0s
PSUT Pine Spring      130.58  31 ePKPpre PKPpre  00 46 49.7
F35A Swanville        130.80  10  P      PKPdf   00 46 54.1 -0.6
     baz=346
G32A Webster          130.81  13  P      PKPdf   00 46 54.2 -0.5
     baz=342
E39A Mellen           130.85   6  P      PKPdf   00 46 54.3 -0.5
     baz=351
E40A Wakefield        130.85   5  P      PKPdf   00 46 54.8  0.0
     baz=352
EDW2 Edwards Air Fo   130.85  38  P      PKPdf   00 46 56.0 +0.8
     baz=312
E41A Kenton           130.91   5  P      PKPdf   00 46 54.5 -0.3
     baz=353
E44A Grand Marais A   130.93   2  P      PKPdf   00 46 54.6 -0.3
     baz=357
E44A Grand Marais A   130.93   2 ePKPdf  PKPdf   00 46 56.8 +1.9
F36A Milaca           130.97   9  P      PKPdf   00 46 54.6 -0.4
     baz=347
F36A Milaca           130.97   9 ePKPpre PKPpre  00 46 47.8
E42A Champion         131.03   4  P      PKPdf   00 46 54.6 -0.5
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     baz=355
RWWY Rawlins          131.07  23 ePKPdf  PKPdf   00 46 54.9 -0.7
F38A Pierce - Schro   131.11   7  P      PKPdf   00 46 55.3  0.0
     baz=350
E43A Lone Tree Farm   131.13   3  P      PKPdf   00 46 54.7 -0.6
     baz=356
E43A Lone Tree Farm   131.13   3 ePKPdf  PKPdf   00 46 55.6 +0.4
SHOC Shoshone, Teco   131.17  35  P      PKPdf   00 46 56.1 +0.3
     baz=315
G34A Benson           131.21  11  P      PKPdf   00 46 55.0 -0.5
     baz=344
PASC Pasadena Art C   131.21  38 ePKPdf  PKPdf   00 46 57.3 +1.5
E45A Wooded Hills,    131.22   1  P      PKPdf   00 46 55.5  0.0
     baz=358
F37A Hinrichs Farm,   131.24   8  P      PKPdf   00 46 55.1 -0.4
     baz=348
SUSD Miller           131.24  14  P      PKPdf   00 46 55.1 -0.4
     baz=340
MWC  Mount Wilson     131.25  38 ePKPdf  PKPdf   00 46 54.6 -1.6
COWI Conover          131.26   5 ePKPpre PKPpre  00 46 48.8
COWI                             ePKPdf  PKiKP   00 46 56.2 -0.3
COWI                              LR     LR
     comp=Z,20µm,21.0s
F39A Loretta          131.27   7  P      PKPdf   00 46 55.1 -0.5
     baz=351
GSC  Goldstone, Bar   131.28  36  P      PKPdf   00 46 56.6 +0.6
     baz=314
GSC  Goldstone, Bar   131.28  36 ePKPdf  PKPdf   00 46 56.2 +0.2
TMUT Trail Mountain   131.30  28 ePKPdf  PKPdf   00 46 56.0 -0.2
WVL  Waterville       131.32 346 ePKPdf  PKPdf   00 46 56.8 +1.1
F40A Park Falls       131.35   6  P      PKPdf   00 46 55.4 -0.4
     baz=352
SHPR Sheep Range      131.38  34 ePKPdf  PKPdf   00 46 55.4 -0.9
P17A Butcher Ranch,   131.38  28 ePKPdf  PKPdf   00 46 57.9 +1.7
G35A Watkins          131.44  10  P      PKPdf   00 46 55.6 -0.3
     baz=346
G35A Watkins          131.44  10 ePKPpre PKPpre  00 46 49.9
FMP  Fort Macarthur   131.44  39  P      PKPdf   00 46 56.2  0.0
     baz=311
MSU  Marysvale        131.44  30 ePKPdf  PKPdf   00 46 57.6 +1.2
RRX  Edison Barstow   131.46  37  P      PKPdf   00 46 56.2  0.0
     baz=314
G36A St. Michael      131.55   9  P      PKPdf   00 46 55.7 -0.4
     baz=347
F44A Big Bay de Noc   131.56   2  P      PKPdf   00 46 55.6 -0.5
     baz=357
CIS  Catalina Islan   131.57  39  P      PKPdf   00 46 56.8 +0.3
     baz=311
CCUT Cedar City       131.57  32 ePKPdf  PKPdf   00 46 58.5 +1.8
F41A Three Lakes      131.62   5  P      PKPdf   00 46 56.0 -0.3
     baz=353
F41A Three Lakes      131.62   5 ePKPpre PKPpre  00 46 48.3
F43A Flat Rock, Esc   131.66   3  P      PKPdf   00 46 55.8 -0.5
     baz=356
SZCU Shurtz Canyon    131.68  31 ePKPdf  PKPdf   00 46 56.6 -0.3
SPMN Marine on St.    131.70   8  P      PKPdf   00 46 55.6 -0.8
     baz=348
SPMN Marine on St.    131.70   8 ePKPdf  PKPdf   00 46 57.4 +1.0
TUQ  Turquoise Moun   131.70  35  P      PKPdf   00 46 57.2 +0.3
     baz=315
SRU  San Rafael Swe   131.77  28 ePKPdf  PKPdf   00 46 57.1 +0.2
F46A Macinaw City C   131.81   1  P      PKPdf   00 46 56.3 -0.2
     baz=359
G39A Holcombe         131.86   7  P      PKPdf   00 46 56.1 -0.6
     baz=350
FRNY Flat Rock        131.86 350 ePKPdf  PKPdf   00 46 57.5 +0.8
F45A CMU Biological   131.88   2  P      PKPdf   00 46 56.6 -0.1
     baz=358
H35A Sunnyside Ranc   131.88  10  P      PKPdf   00 46 56.8 +0.1
     baz=345
HEC  Hector,Ludlow    131.88  36  P      PKPdf   00 46 57.9 +0.7
     baz=314
G38A Ridgeland        131.89   8  P      PKPdf   00 46 56.0 -0.8
     baz=349
BBRC Big Bear Solar   131.92  37  P      PKPdf   00 46 57.1 -0.3
     baz=313
O20A White River Ci   131.95  25  P      PKPdf   00 46 56.7 -0.6
     baz=327
O20A White River Ci   131.95  25 ePKPdf  PKPdf   00 46 57.8 +0.5
G40A Rib Lake         131.99   6  P      PKPdf   00 46 56.4 -0.5
     baz=352
G40A Rib Lake         131.99   6 ePKPpre PKPpre  00 46 49.4
LCMT Little Creek M   132.04  32 ePKPpre PKPpre  00 46 48.4
LBNH Lisbon           132.13 348  P      PKPdf   00 46 56.3 -1.0
     baz=16
G41A Antigo           132.14   5  P      PKPdf   00 46 56.6 -0.7
     baz=353
H36A Jessenland, He   132.16  10  P      PKPdf   00 46 57.4 +0.1
     baz=347
PLVO Plevna           132.16 353 ePKPdf  PKPdf   00 46 58.6 +1.3
G42A Mountain         132.17   4  P      PKPdf   00 46 57.1 -0.1
     baz=354
G42A Mountain         132.17   4 ePKPpre PKPpre  00 46 50.1
PKCU Pink Cliffs      132.20  31 ePKPdf  PKPdf   00 46 60.0 +1.9
MURC Murrieta         132.20  38  P      PKPdf   00 46 58.0 +0.3
     baz=312
G43A Wallace          132.21   4  P      PKPdf   00 46 57.0 -0.4
     baz=355
G43A Wallace          132.21   4 ePKPdf  PKPdf   00 46 58.0 +0.6
LONY Lake Ozonia      132.23 351  P      PKPdf   00 46 57.4  0.0
     baz=13
LONY Lake Ozonia      132.23 351 ePKPdf  PKPdf   00 46 58.8 +1.3
LONY                              LR     LR
     comp=Z,15µm,22.0s
N23A Red Feather La   132.24  23  P      PKPdf   00 46 57.6 -0.3
     baz=330
GMRC Granite Mounta   132.31  36  P      PKPdf   00 46 58.9 +0.9
     baz=315
H37A Dierke Farm, C   132.31   9  P      PKPdf   00 46 57.2 -0.4
     baz=348
H38A Maiden Rock      132.31   8  P      PKPdf   00 46 57.2 -0.4
     baz=349
H39A Augusta          132.44   7  P      PKPdf   00 46 57.4 -0.4
     baz=350
ECSD EROS Data Cent   132.45  12  P      PKPdf   00 46 57.8 -0.1
     baz=343
ECSD EROS Data Cent   132.45  12 ePKPpre PKPpre  00 46 46.8
ECSD                             ePKPdf  PKPdf   00 46 57.4 -0.5
ECSD                             ePP     PP      00 49 18.3 -1.7
ECSD                              LR     LR
     comp=Z,22µm,20.0s
H40A Chili            132.60   6  P      PKPdf   00 46 57.8 -0.3
     baz=351
SADO Sadowa           132.62 355  PKP    PKPdf   00 46 56.1 -2.1
     comp=Z,22nm,0.7s,baz=336,slow=2.5,SNR=17
SADO Sadowa           132.62 355 ePKPdf  PKPdf   00 46 58.6 +0.4
FRD  Ford Ranch, An   132.64  38  P      PKPdf   00 46 59.4 +0.8
     baz=313
PFO  Pinyon Flats O   132.65  38  P      PKPdf   00 46 59.2 +0.5
     baz=313
PFO  Pinyon Flats O   132.65  38 ePKPpre PKPpre  00 46 51.2
PFO                              ePKPdf  PKiKP   00 46 59.3 -0.5
PFO                               LR     LR
     comp=Z,7µm,20.0s
BELC Belle Mtn. Jos   132.66  37  P      PKPdf   00 46 59.5 +0.7
     baz=314
I36A Fitzsimmons Fa   132.68  10  P      PKPdf   00 46 57.8 -0.4
     baz=346
H41A Junction City    132.69   6  P      PKPdf   00 46 57.9 -0.4
     baz=352
H41A Junction City    132.69   6 ePKPdf  PKPdf   00 46 58.5 +0.2
HNH  Hanover          132.71 349 ePKPdf  PKPdf   00 47 00.1 +1.8
109C Camp Elliot, M   132.73  39  P      PKPdf   00 46 58.9 +0.2
     baz=312
I37A Lemond, Waseca   132.79   9  P      PKPdf   00 46 58.3 -0.2
     baz=347
I37A Lemond, Waseca   132.79   9 ePKPpre PKPpre  00 46 49.5
NCB  Newcomb          132.81 350 ePKPdf  PKPdf   00 46 59.8 +1.3
H42A Shiocton         132.89   5  P      PKPdf   00 46 58.2 -0.4
     baz=354
H42A Shiocton         132.89   5 ePKPdf  PKPdf   00 46 58.8 +0.2
PV09 Paradox Valley   132.90  27 ePKPdf  PKPdf   00 47 00.4 +1.1
I38A Scanlan Farm,    132.93   8  P      PKPdf   00 46 57.8 -1.0
     baz=349
NEE2 Needles Airpor   132.93  35  P      PKPdf   00 46 59.2 +0.2
     baz=316
H43A Windswept, Lux   132.99   4  P      PKPdf   00 46 58.2 -0.7
     baz=355
H43A Windswept, Lux   132.99   4 ePKPdf  PKPdf   00 47 00.5 +1.7
PV23 Carpenter Ridg   133.00  27 ePKPdf  PKPdf   00 47 00.6 +1.2
IRM  Iron Mountain    133.06  36  P      PKPdf   00 47 00.4 +1.1
     baz=315
PV14 Lion Creek, Pa   133.06  27 ePKPdf  PKPdf   00 46 59.7 +0.2
BAR  Barrett          133.14  39 ePKPdf  PKPdf   00 47 00.4 +0.8
PV16 Nyswonger Mesa   133.16  27 ePKPpre PKPpre  00 46 51.9
MONP2 Monument Peak   133.16  38  P      PKPdf   00 47 00.4 +0.6
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	baz=313						
PV17	East Wray Mesa	133.16	27	*e*PKPdf	PKPdf	00 47 00.9	+1.3
I41A	Arkdale	133.22	6	P	PKPdf	00 46 58.2	-1.1
	baz=352						
I41A	Arkdale	133.22	6	*e*PKPdf	PKPdf	00 47 00.4	+1.1
I39A	Houston	133.22	8	P	PKPdf	00 46 58.4	-1.0
	baz=350						
I39A	Houston	133.22	8	*e*PKPpre	PKPpre	00 46 50.6	
BC3	Big Chuckawall	133.22	37	P	PKPdf	00 47 00.6	+0.9
	baz=314						
PV03	Paradox Valley	133.23	27	*e*PKPpre	PKPpre	00 46 51.1	
ACCN	Adirondack Com	133.28	350	*e*PKPdf	PKPdf	00 47 01.9	+2.4
SMCO	Snowmass	133.29	25	*e*PKPpre	PKPpre	00 46 52.1	
J36A	Seneca 1, Swea	133.29	10	P	PKPdf	00 46 58.7	-0.7
	baz=346						
J36A	Seneca 1, Swea	133.29	10	*e*PKPpre	PKPpre	00 46 51.0	
I40A	Norwalk	133.30	7	P	PKPdf	00 46 58.3	-1.2
	baz=351						
ISCO	Idaho Springs	133.31	23	P	PKPdf	00 46 59.5	-0.5
	baz=330						
ISCO	Idaho Springs	133.31	23	*e*PKPpre	PKPpre	00 46 47.6	
ISCO				*e*PKPdf	PKPdf	00 46 59.8	-0.2
ISCO				*e*PP	PP	00 49 25.5	-0.6
ISCO				LR	LR		
	comp=Z,16µm,19.0s						
ISCO	Idaho Springs	133.31	23	*e*PKHKP	PKPpre	00 46 47.6	
ISCO				*e*		00 46 59.8	
ISCO				*e*		00 49 25.5	
ISCO				MLR	MLR		
	comp=Z,16µm,19.0s						
PV02	Paradox Valley	133.32	27	*e*PKPpre	PKPpre	00 46 49.5	
PV13	Radium Mtn., P	133.32	27	*e*PKPpre	PKPpre	00 46 53.0	
J37A	Redenius Farm,	133.45	10	P	PKPdf	00 46 59.4	-0.4
	baz=347						
I42A	Draeger Farm,	133.47	5	P	PKPdf	00 46 59.1	-0.7
	baz=353						
I42A	Draeger Farm,	133.47	5	*e*PKPpre	PKPpre	00 46 51.6	
SWSC	Sam W. Stewart	133.50	38	P	PKPdf	00 47 00.2	0.0
	baz=314						
IKP	In-Ko-Pah, Jac	133.51	38	P	PKPdf	00 47 00.8	+0.5
	baz=313						
I43A	Langenfeld Bro	133.54	4	P	PKPdf	00 46 59.1	-0.8
	baz=354						
OGNE	Ogallala	133.58	19	P	PKPdf	00 46 59.4	-0.8
	baz=335						
OGNE	Ogallala	133.58	19	*e*PKPpre	PKPpre	00 46 51.0	
OGNE				*e*PKPdf	PKiKP	00 47 01.3	-0.2
OGNE				*e*PP	PP	00 49 21.4	-6.1
OGNE				LR	LR		
	comp=Z,23µm,20.0s						
J38A	Wedel Dairy, R	133.62	9	P	PKPdf	00 46 59.0	-1.1
	baz=348						
J39A	Decorah	133.71	8	P	PKPdf	00 46 59.0	-1.2
	baz=349						
Y12C	Blythe	133.71	36	P	PKPdf	00 47 01.3	+0.8
	baz=316						
Y12C	Blythe	133.71	36	*e*PKPdf	PKPdf	00 47 00.2	-0.3
HRV	Adam Dziewonsk	133.71	347	P	PKPdf	00 47 00.2	-0.1
	baz=17						
J40A	Soldiers Grove	133.77	7	P	PKPdf	00 46 59.1	-1.2
	baz=351						
J41A	Loganville	133.89	6	P	PKPdf	00 46 59.2	-1.3
	baz=352						
K36A	Gilmore City	133.94	11	P	PKPdf	00 47 00.1	-0.6
	baz=345						
K37A	Belmond	133.97	10	P	PKPdf	00 46 59.7	-1.0
	baz=347						
GLA	Glamis	134.02	37	P	PKPdf	00 47 02.0	+0.8
	baz=315						
GLA	Glamis	134.02	37	*e*PKPdf	PKPdf	00 47 03.0	+1.8
GLA	Glamis	134.02	37	PKIKP	PKPdf	00 47 02.9	+1.8
J43A	Natural Harves	134.02	5	P	PKPdf	00 47 00.3	-0.5
	baz=354						
J42A	Columbus	134.02	5	P	PKPdf	00 46 60.0	-0.9
	baz=353						
WUAZ	Wupatki	134.16	32	P	PKPdf	00 47 02.7	+1.1
	baz=320,SNR=6.5						
WUAZ	Wupatki	134.16	32	*e*PKPdf	PKPdf	00 47 01.7	+0.2
WUAZ				LR	LR		
	comp=Z,11µm,19.0s						
Q24A	Divide	134.21	23	P	PKPdf	00 47 00.8	-0.9
	baz=330						
K38A	Parkersburg	134.23	9	P	PKPdf	00 47 00.4	-0.9
	baz=348						
K38A	Parkersburg	134.23	9	*e*PKPpre	PKPpre	00 46 47.1	
MVCO	Mesa Verde	134.24	28	P	PKPdf	00 47 02.0	+0.3
	baz=325						
MVCO	Mesa Verde	134.24	28	*e*PKPdf	PKPdf	00 47 02.4	+0.6
MVCO				LR	LR		
	comp=Z,11µm,19.0s						
BGNE	Belgrade	134.29	15	P	PKPdf	00 47 01.0	-0.5
	baz=340						
BGNE	Belgrade	134.29	15	*e*PKPdf	PKPdf	00 47 01.8	+0.3
K39A	Oelwein	134.30	8	P	PKPdf	00 47 00.3	-1.1
	baz=349						
JFWS	Jewell Farm	134.31	7	P	PKPdf	00 47 00.3	-1.1
	baz=351						
JFWS	Jewell Farm	134.31	7	*e*PKPpre	PKPpre	00 46 53.9	
JFWS				*e*PKPdf	PKPdf	00 47 00.8	-0.6
JFWS				*e*PP	PP	00 49 26.8	-5.0
JFWS				LR	LR		
	comp=Z,22µm,22.0s						
JFWS	Jewell Farm	134.31	7	*e*PKIKP	PKPdf	00 46 53.9	-7.5
JFWS				*e*		00 47 00.8	
JFWS				MLR	MLR		
	comp=Z,22µm,22.0s						
K40A	Colesburg	134.41	7	P	PKPdf	00 47 00.7	-0.9
	baz=350						
L36A	Harm Buss Farm	134.42	11	P	PKPdf	00 47 00.7	-0.9
	baz=345						
MMNY	Mt. Morris Dam	134.53	354	*e*PKPdf	PKPdf	00 47 04.5	+2.7
K42A	Prairie Point,	134.54	6	P	PKPdf	00 47 00.6	-1.2
	baz=352						
S22A	4UR Ranch, Cre	134.55	26	P	PKPdf	00 47 02.6	+0.2
	baz=327						
S22A	4UR Ranch, Cre	134.55	26	*e*PKPpre	PKPpre	00 46 53.3	
L37A	Phoenix Point,	134.57	10	P	PKPdf	00 47 01.1	-0.8
	baz=346						
K41A	Shullsburg	134.60	7	P	PKPdf	00 47 01.1	-0.9
	baz=351						
L38A	Oak Wood Farm,	134.69	9	P	PKPdf	00 47 01.5	-0.7
	baz=347						
K43A	Burlington	134.70	5	P	PKPdf	00 47 01.6	-0.5
	baz=354						
K43A	Burlington	134.70	5	*e*PKPdf	PKPdf	00 47 05.0	+2.9
BINY	Binghamton	134.81	352	P	PKPdf	00 47 02.3	0.0
	baz=11						
BINY	Binghamton	134.81	352	*e*PKPdf	PKPdf	00 47 03.6	+1.2
BINY				*e*PP	PP	00 49 35.3	+0.4
BINY				LR	LR		
	comp=Z,14µm,22.0s						
L39A	Vinton	134.86	9	P	PKPdf	00 47 01.4	-1.0
	baz=349						
SCIA	State Center	134.87	10	P	PKPdf	00 47 01.7	-0.8
	baz=347						
SCIA	State Center	134.87	10	*e*PKPdf	PKPdf	00 47 02.7	+0.2
SCIA				LR	LR		
	comp=Z,22µm,21.0s						
M36A	Felix, Anita	135.02	12	P	PKPdf	00 47 01.8	-1.0
	baz=345						
L40A	Anamosa	135.03	8	P	PKPdf	00 47 01.2	-1.5
	baz=350						
L40A	Anamosa	135.03	8	*e*PKPpre	PKPpre	00 46 56.1	
L41A	Preston	135.11	7	P	PKPdf	00 47 01.9	-1.0
	baz=351						
SDCO	Great Sand Dun	135.11	24	P	PKPdf	00 47 03.4	-0.1
	baz=329						
SDCO	Great Sand Dun	135.11	24	*e*PKPpre	PKPpre	00 46 53.3	
SDCO				*e*PP	PP	00 49 35.1	-2.5
SDCO				LR	LR		
	comp=Z,14µm,20.0s						
KSCO	Kaye Shedlock’	135.11	21	P	PKPdf	00 47 02.5	-0.7
	baz=333						
L43A	Garden Prairie	135.18	5	P	PKPdf	00 47 01.8	-1.3
	baz=353						
M37A	Trindle Farm,	135.21	11	P	PKPdf	00 47 02.2	-0.9
	baz=346						
L44A	Lake County Fo	135.26	4	P	PKPdf	00 47 02.1	-1.0
	baz=354						
L42A	Oliver, Polo	135.27	6	P	PKPdf	00 47 02.4	-0.8
	baz=352						
L42A	Oliver, Polo	135.27	6	*e*PKPdf	PKPdf	00 47 03.2	0.0
AAM	Ann Arbor	135.28	360	PFAKE		00 47 20.0	+17
AAM				LR	LR		
	comp=Z,18µm,19.0s						
W18A	Petrified Fore	135.31	31	P	PKPdf	00 47 04.1	+0.4
	baz=322						
ERPA	Erie	135.33	356	P	PKPdf	00 47 02.9	-0.4
	baz=5.6						
M38A	Pleasantville	135.35	10	P	PKPdf	00 47 02.6	-0.8
	baz=347						
KSPA	Keystone Colle	135.41	351	*e*PKPdf	PKPdf	00 47 05.0	+1.6
M39A	Webster	135.46	9	P	PKPdf	00 47 02.8	-0.8
	baz=348						
L49A	Milan	135.47	360	P	PKPdf	00 47 02.6	-1.0
	baz=0.3						
N36A	Muff Farm, Cla	135.60	12	P	PKPdf	00 47 03.5	-0.4
	baz=344						
M40A	Post Highland	135.63	8	P	PKPdf	00 47 03.0	-0.9
	baz=349						
PAL	Palisades	135.63	349	P	PKPdf	00 47 03.6	-0.2
	baz=14						
L48A	N Adams	135.64	1	P	PKPdf	00 47 03.4	-0.6
	baz=359						
ODNJ	Ogdensburg	135.68	350	*e*PKPdf	PKPdf	00 47 05.1	+1.1
M41A	Milan	135.79	7	P	PKPdf	00 47 02.9	-1.3
	baz=351						
M42A	Sheffield	135.80	6	P	PKPdf	00 47 03.3	-0.9
	baz=352						
N37A	Lee Faris, Mou	135.81	11	P	PKPdf	00 47 03.7	-0.6
	baz=345						
M43A	Waltham Townsh	135.90	5	P	PKPdf	00 47 04.0	-0.4
	baz=353						
M54A	Oil Creek Stat	135.91	355	P	PKPdf	00 47 04.2	-0.2
	baz=6.1						
M54A	Oil Creek Stat	135.91	355	*e*PKPdf	PKPdf	00 47 06.0	+1.6
N38A	Joes South For	135.95	10	P	PKPdf	00 47 03.4	-1.1
	baz=347						
214A	Organ Pipe Nat	136.00	36	P	PKPdf	00 47 05.0	+0.1
	baz=316						
N39A	Derby Farms, D	136.00	9	P	PKPdf	00 47 03.6	-1.0
	baz=348						
N39A	Derby Farms, D	136.00	9	*e*PKPpre	PKPpre	00 46 53.6	
M44A	Midewin, Midew	136.03	5	P	PKPdf	00 47 04.3	-0.3
	baz=354						
M44A	Midewin, Midew	136.03	5	*e*PKPdf	PKPdf	00 47 06.6	+2.0
N59A	State Game Lan	136.04	351	P	PKPdf	00 47 04.7	0.0
	baz=12						
N59A	State Game Lan	136.04	351	*e*PKPdf	PKPdf	00 47 07.2	+2.5
T25A	Trinidad	136.08	24	P	PKPdf	00 47 05.3	+0.1
	baz=330						
T25A	Trinidad	136.08	24	*e*PKPpre	PKPpre	00 46 55.1	
M45A	Boilermakers S	136.09	4	P	PKPdf	00 47 04.4	-0.3
	baz=355						
M48A	Edgerton	136.09	1	P	PKPdf	00 47 03.9	-0.8
	baz=359						
M46A	Old House Fiel	136.12	3	P	PKPdf	00 47 04.2	-0.6
	baz=357						
N40A	Mertquake, Sal	136.13	8	P	PKPdf	00 47 03.6	-1.2
	baz=349						
M50A	Fremont	136.17	359	P	PKPdf	00 47 04.0	-0.9
	baz=1.3						
CBKS	Cedar Bluff	136.25	18	P	PKPdf	00 47 04.4	-0.8
	baz=337						
CBKS	Cedar Bluff	136.25	18	*e*PKPdf	PKPdf	00 47 05.5	+0.3
CBKS				LR	LR		
	comp=Z,19µm,19.0s						
N43A	Stutzman Famil	136.38	6	P	PKPdf	00 47 04.5	-0.8
	baz=352						
O37A	Wolven Farm, M	136.39	11	P	PKPdf	00 47 04.9	-0.5
	baz=345						
N42A	Yates City	136.39	7	P	PKPdf	00 47 04.4	-1.0
	baz=351						
N41A	Harden Midland	136.41	8	P	PKPdf	00 47 04.1	-1.2
	baz=350						
N54A	Moraine State	136.47	356	P	PKPdf	00 47 05.0	-0.5
	baz=5.7						
N54A	Moraine State	136.47	356	*e*PKPdf	PKPdf	00 47 08.0	+2.5
O38A	Galt	136.56	11	P	PKPdf	00 47 04.2	-1.5
	baz=346						
O39A	Kirksville	136.60	10	P	PKPdf	00 47 04.6	-1.1
	baz=348						
SSPA	Standing Stone	136.60	353	P	PKPdf	00 47 05.5	-0.3
	baz=8.8						
SSPA	Standing Stone	136.60	353	*e*PKPdf	PKPdf	00 47 05.4	-0.3
SSPA				*e*PP	PP	00 49 44.8	-1.4
N45A	Kentland	136.61	4	P	PKPdf	00 47 05.4	-0.3
	baz=355						
N46A	Monticello	136.61	3	P	PKPdf	00 47 05.4	-0.3
	baz=356						
N44A	Piper City	136.61	5	P	PKPdf	00 47 05.0	-0.7
	baz=354						
N50A	Nevada	136.81	359	P	PKPdf	00 47 05.6	-0.5
	baz=1.2						
O40A	La Belle	136.84	9	P	PKPdf	00 47 05.1	-1.1
	baz=348						
PAGS	Pennsylvania G	136.85	352	*e*PKPdf	PKPdf	00 47 08.0	+1.8
KSU1	Kansas State U	136.86	15	P	PKPdf	00 47 05.3	-0.9
	baz=341						
KSU1	Kansas State U	136.86	15	*e*PKPpre	PKPpre	00 46 57.6	
KSU1				*e*PKPdf	PKPdf	00 47 06.4	+0.1
KSU1				LR	LR		
	comp=Z,24µm,20.0s						
TUC	Tucson	136.90	34	P	PKPdf	00 47 06.8	+0.2
	baz=319						
TUC	Tucson	136.90	34	*e*PKPpre	PKPpre	00 46 56.7	
TUC				*e*PKPdf	PKPdf	00 47 07.5	+0.8
TUC				LR	LR		
	comp=Z,13µm,22.0s						
TUC	Tucson	136.90	34	*e*PKHKP	PKPpre	00 46 56.7	
TUC				*e*		00 47 07.5	
TUC				MLR	MLR		
	comp=Z,13µm,22.0s						
P37A	Lathrop	136.91	12	P	PKPdf	00 47 05.3	-1.0
	baz=345						
PSUB	Penn St. - Bra	136.95	350	*e*PKPdf	PKPdf	00 47 06.5	+0.1
O41A	Passleys Farm,	136.99	8	P	PKPdf	00 47 05.1	-1.4
	baz=350						
O43A	Sugar Creek Fa	137.01	6	P	PKPdf	00 47 05.7	-0.7
	baz=352						
O42A	Bath	137.01	7	P	PKPdf	00 47 05.5	-1.0
	baz=351						
MVL	Millersville	137.02	351	*e*PKPdf	PKPdf	00 47 08.8	+2.3
P38A	Dawn	137.03	11	P	PKPdf	00 47 06.0	-0.5
	baz=346						
P38A	Dawn	137.03	11	*e*PKPpre	PKPpre	00 46 56.2	
O56A	Blue Knob Stat	137.04	354	P	PKPdf	00 47 06.3	-0.3
	baz=7.9						
O56A	Blue Knob Stat	137.04	354	*e*PKPdf	PKPdf	00 47 07.3	+0.7
TASM	ASL Pad, Albuq	137.04	28	P	PKPdf	00 47 07.6	+0.6
	baz=326,SNR=6.0						
ANMO	Albuquerque	137.04	28	PKhKP	PKPpre	00 46 57.8	
	comp=Z,3.5nm,0.8s,baz=301,slow=8.1,SNR=8.3						
ANMO				PKP	PKPdf	00 47 07.5	+0.5
	comp=Z,23nm,0.8s,baz=239,slow=2.7,SNR=17						
ANMO				PP	PP	00 49 49.5	-0.2
	comp=Z,2.8nm,0.9s,baz=21,slow=3.1,SNR=2.5						
ANMO	Albuquerque	137.04	28	P	PKPdf	00 47 07.4	+0.5
	baz=326						
ANMO	Albuquerque	137.04	28	*e*PKPpre	PKPpre	00 46 59.8	
ANMO				*e*PKPdf	PKPdf	00 47 07.2	+0.3
ANMO				PP	PP	00 49 49.5	-0.2
ANMO				LR	LR		
	comp=Z,21µm,19.0s						
TASL	Snake Pit, Alb	137.04	28	P	PKPdf	00 47 07.6	+0.6
	baz=326,SNR=6.0						
SFIN	Lafayette	137.10	4	P	PKPdf	00 47 06.2	-0.5
	baz=355						
SFIN	Lafayette	137.10	4	*e*PKPdf	PKPdf	00 47 06.8	+0.1
O45A	Potomac	137.19	4	P	PKPdf	00 47 06.4	-0.4
	baz=354						
O44A	Mansfield	137.22	5	P	PKPdf	00 47 06.3	-0.6
	baz=353						
O47A	Sheridan	137.29	3	P	PKPdf	00 47 05.8	-1.2
	baz=357						
P39B	Salisbury	137.31	10	P	PKPdf	00 47 06.2	-0.9
	baz=347						
O48A	Farmland	137.31	1	P	PKPdf	00 47 06.3	-0.7
	baz=358						
ACSO	Alum Creek Sta	137.34	359	P	PKPdf	00 47 06.6	-0.5
	baz=1.4						
ACSO	Alum Creek Sta	137.34	359	*e*PKPpre	PKPpre	00 47 00.2	
ACSO				*e*PKPdf	PKPdf	00 47 07.4	+0.3
ACSO				LR	LR		
	comp=Z,17µm,21.0s						
P40A	Paris	137.38	9	P	PKPdf	00 47 06.7	-0.5
	baz=348						
P40A	Paris	137.38	9	*e*PKPpre	PKPpre	00 46 58.4	
O49A	Covington	137.39	1	P	PKPdf	00 47 06.5	-0.7
	baz=359						
P41A	Barry, Barry	137.39	8	P	PKPdf	00 47 06.5	-0.8
	baz=350						
O50A	Cable	137.43	360	P	PKPdf	00 47 06.8	-0.5
	baz=0.5						
Y22D	IRIS PASSCAL I	137.54	29	P	PKPdf	00 47 07.9	0.0
	baz=325						
Y22E	IRIS PASSCAL I	137.54	29	P	PKPdf	00 47 07.9	0.0
	baz=325						
Q37A	Longview Farm,	137.57	12	P	PKPdf	00 47 06.5	-1.0
	baz=344						
P42A	Winchester	137.58	7	P	PKPdf	00 47 06.8	-0.8
	baz=351						
P42A	Winchester	137.58	7	*e*PKPpre	PKPpre	00 46 58.9	
P43A	Skaggs, Pawnee	137.62	6	P	PKPdf	00 47 07.1	-0.5
	baz=352						
Q38A	Cooks Store, C	137.66	11	P	PKPdf	00 47 07.2	-0.5
	baz=346						
SDMD	Soldier’s Deli	137.67	352	*e*PKPdf	PKPdf	00 47 10.2	+2.4
Q39A	Willow Grove F	137.70	11	P	PKPdf	00 47 07.0	-0.8
	baz=347						
MCWV	Mont Chateau	137.76	355	P	PKPdf	00 47 07.8	-0.1
	baz=6.1						
P46A	Rosedale	137.85	4	P	PKPdf	00 47 07.7	-0.4
	baz=355						
P44A	Sand Creek, Wi	137.89	5	P	PKPdf	00 47 07.7	-0.4
	baz=353						
Q40A	Laux Farm, Aux	137.90	10	P	PKPdf	00 47 07.4	-0.8
	baz=348						
P45A	Graceland, Par	137.90	4	P	PKPdf	00 47 07.4	-0.8
	baz=354						
P45A	Graceland, Par	137.90	4	*e*PKPpre	PKPpre	00 47 03.4	
P50A	Jamestown	137.97	360	P	PKPdf	00 47 07.3	-1.0
	baz=0.2						
P47A	Martinsville	138.04	3	P	PKPdf	00 47 07.6	-0.8
	baz=357						
P49A	Miami Univ. Ec	138.04	1	P	PKPdf	00 47 07.4	-1.0
	baz=359						
Q41A	Truxton	138.08	9	P	PKPdf	00 47 07.9	-0.5
	baz=349						
P48A	Milroy	138.10	2	P	PKPdf	00 47 07.9	-0.7
	baz=358						
Q42A	Golden Eagle	138.22	8	P	PKPdf	00 47 08.3	-0.4
	baz=350						
Q43A	New Douglas	138.29	7	P	PKPdf	00 47 08.5	-0.4
	baz=351						
BLO	Bloomington	138.34	3	*e*PKPdf	PKPdf	00 47 10.0	+1.0
BLO	Bloomington	138.34	3	PKIKP	PKPdf	00 47 10.0	+1.0
121A	Cookes Peak, D	138.34	31	P	PKPdf	00 47 09.7	+0.3
	baz=323						
R38A	Fenwick Farm,	138.35	12	P	PKPdf	00 47 08.2	-0.8
	baz=345						
R39A	Chumby, Stover	138.40	11	P	PKPdf	00 47 08.6	-0.5
	baz=346						
Q44A	Meyer Farm, Va	138.41	6	P	PKPdf	00 47 08.8	-0.3
	baz=352						
Q46A	CEJHS Indians,	138.43	4	P	PKPdf	00 47 08.7	-0.4
	baz=355						
Q45A	Warren Harvey,	138.50	5	P	PKPdf	00 47 08.8	-0.4
	baz=354						
Q51A	Peebles	138.55	359	P	PKPdf	00 47 08.8	-0.6
	baz=0.9						
R40A	Maddies Statio	138.56	10	P	PKPdf	00 47 08.9	-0.5
	baz=348						
R40A	Maddies Statio	138.56	10	*e*PKPpre	PKPpre	00 47 01.2	
Q49A	Aurora	138.56	1	P	PKPdf	00 47 08.7	-0.7
	baz=359						
Q47A	Bedord North L	138.58	3	P	PKPdf	00 47 09.2	-0.2
	baz=356						
Q48A	North Vernon	138.62	2	P	PKPdf	00 47 09.1	-0.4
	baz=357						
R41A	Rosebud	138.70	9	P	PKPdf	00 47 09.1	-0.6
	baz=349						
Q50A	Georgetown	138.74	0	P	PKPdf	00 47 08.5	-1.2
	baz=360						
R42A	Luebbering	138.80	8	P	PKPdf	00 47 09.3	-0.6
	baz=350						
S38A	Stockton	138.88	12	P	PKPdf	00 47 09.3	-0.7
	baz=345						
VAO	Valinhos	138.90	237	*e*P	PKPdf	00 47 11.3	+0.8
VAO				*i*		00 47 13.2	
VAO				*i*		00 47 18.6	
VAO				*i*		00 47 22.0	
VAO				*i*		00 47 31.0	
R43A	Red Bud	138.92	7	P	PKPdf	00 47 09.7	-0.3
	baz=351						
CBN	Corbin Frederi	138.93	352	P	PKPdf	00 47 09.8	-0.3
	baz=10.0						
CBN	Corbin Frederi	138.93	352	PFAKE		00 47 20.0	+10
CBN				LR	LR		
	comp=Z,19µm,19.0s						
S39A	Bolivar	138.94	11	P	PKPdf	00 47 09.8	-0.4
	baz=346						
S39A	Bolivar	138.94	11	*e*PKPpre	PKPpre	00 46 59.7	
CCM	Cathedral Cave	138.95	9	P	PKPdf	00 47 10.0	-0.1
	baz=349						
CCM	Cathedral Cave	138.95	9	*e*PKPpre	PKPpre	00 47 02.7	
CCM				*e*PKPdf	PKPdf	00 47 11.0	+0.9
CCM	Cathedral Cave	138.95	9	*e*PKHKP	PKPpre	00 47 02.7	
CCM				*e*		00 47 11.0	
SPB	Sao Paulo	139.04	236	*e*PKPdf	PKPdf	00 47 12.0	+1.3
R44A	Waltonville	139.05	6	P	PKPdf	00 47 10.2	-0.1
	baz=352						
R45A	Skylar, Fairfi	139.08	5	P	PKPdf	00 47 10.3	-0.1
	baz=353						
AMTX	Amarillo	139.12	23	P	PKPdf	00 47 10.6	-0.1
	baz=332						
R48A	Northridge Ran	139.14	2	P	PKPdf	00 47 10.0	-0.5
	baz=357						
FVM	French Village	139.14	8	*e*PKPpre	PKPpre	00 47 05.5	
S40A	Lebanon	139.19	10	P	PKPdf	00 47 09.8	-0.8
	baz=347						
R47A	Wooly Knot Far	139.21	3	P	PKPdf	00 47 10.1	-0.5
	baz=356						
R52A	Catlettsburg	139.23	359	P	PKPdf	00 47 10.2	-0.5
	baz=2.0						
R46A	Gibon Southern	139.23	4	P	PKPdf	00 47 10.3	-0.3
	baz=355						
R49A	Shelbyville	139.27	2	P	PKPdf	00 47 10.0	-0.7
	baz=358						
R51A	Hillsboro	139.28	360	P	PKPdf	00 47 09.8	-0.9
	baz=0.6						
WCI	Wyandotte Cave	139.29	3	P	PKPdf	00 47 09.9	-0.8
	baz=356						
WCI	Wyandotte Cave	139.29	3	*e*PKPpre	PKPpre	00 47 03.5	
WCI				*e*PKPdf	PKPdf	00 47 10.9	+0.1
R50A	Paris	139.29	1	P	PKPdf	00 47 10.1	-0.7
	baz=359						
S42A	Caledonia	139.30	8	P	PKPdf	00 47 10.0	-0.7
	baz=350						
S41A	Jillco Farms,	139.33	10	P	PKPdf	00 47 10.3	-0.5
	baz=348						
T38A	Diamond	139.37	13	P	PKPdf	00 47 10.4	-0.5
	baz=344						
TRQA	Tornquist	139.43	207	*e*PKPpre	PKPpre	00 47 03.0	
TRQA				*e*PKPdf	PKPdf	00 47 11.7	+0.7
TRQA				LR	LR		
	comp=Z,12µm,21.0s						
TRQA	Tornquist	139.43	207	*e*PKHKP	PKPpre	00 47 03.0	
TRQA				*e*		00 47 11.7	
TRQA				MLR	MLR		
	comp=Z,12µm,21.0s						
MSTX	Muleshoe	139.48	24	P	PKPdf	00 47 11.4	0.0
	baz=330,SNR=16						
MSTX	Muleshoe	139.48	24	*e*PKPpre	PKPpre	00 47 04.8	
SIUC	Southern Illin	139.56	7	*e*PKPdf	PKPdf	00 47 12.5	+1.3
S44A	Carbondale	139.58	7	P	PKPdf	00 47 11.0	-0.2
	baz=352						
T39A	Clever	139.58	12	P	PKPdf	00 47 10.8	-0.5
	baz=346						
S43A	Fulton Ridge,	139.60	8	P	PKPdf	00 47 10.8	-0.5
	baz=351						
S45A	Carrier Mills	139.66	6	P	PKPdf	00 47 11.3	-0.1
	baz=353						
S46A	Don Dixon Farm	139.74	5	P	PKPdf	00 47 11.3	-0.2
	baz=354						
S49A	Springfield	139.77	2	P	PKPdf	00 47 10.8	-0.9
	baz=358						
LPA	La Plata	139.83	214	*ce*PDIFF	Pdif	00 44 25.0	-0.9
LPA				PP	PP	00 50 10.0	+3.1
LPA				SKIKP		00 50 43.0	
LPA				pPKS		00 51 06.0	
LPA				SKIKS		00 54 26.0	
T41A	Mountain View	139.86	10	P	PKPdf	00 47 11.3	-0.5
	baz=348						
S48A	Wiedeman Farm,	139.87	3	P	PKPdf	00 47 11.3	-0.5
	baz=357						
S47A	Hartford	139.89	4	P	PKPdf	00 47 11.2	-0.6
	baz=356						
S52A	Salyersville	139.89	359	P	PKPdf	00 47 11.5	-0.4
	baz=1.4						

S50A	Richmond	139.90	1	P	PKPdf	00 47 11.5	-0.4
	baz=359						
S51A	Beattyville	139.94	360	P	PKPdf	00 47 11.8	-0.1
	baz=0.6						
S51A	Beattyville	139.94	360	ePKPpre	PKPpre	00 47 04.6	
T42A	Van Buren	139.98	9	P	PKPdf	00 47 11.8	-0.3
	baz=349						
T42A	Van Buren	139.98	9	ePKPpre	PKPpre	00 47 03.3	
T43A	Greenville	140.05	8	P	PKPdf	00 47 11.9	-0.3
	baz=350						
PMNB	Patos De Minas	140.07	244	eP	PKPdf	00 47 10.4	-2.4
PMNB				i		00 47 12.5	
PMNB				i		00 47 14.7	
PMNB				i		00 47 19.6	
PMNB				i		00 47 36.3	
PMNB				i		00 47 54.0	
CPSB	Cacapava Do Su	140.08	223	eP	PKPdf	00 47 06.7	-5.7
CPSB				i		00 47 06.9	
CPSB				i		00 47 13.3	
CPSB				i		00 47 26.5	
CPSB				i		00 47 39.2	
TUL1	Leonard	140.08	15	P	PKPdf	00 47 12.2	-0.1
	baz=342						
TUL1	Leonard	140.08	15	ePKPpre	PKPpre	00 47 04.0	
T44A	Benton	140.14	7	P	PKPdf	00 47 12.2	-0.1
	baz=351						
HHAR	Hobbs	140.17	13	ePKPpre	PKPpre	00 47 04.5	
U39A	Green Forest	140.17	12	P	PKPdf	00 47 11.7	-0.7
	baz=345						
PLCA	Paso Flores	140.20	196	PKhKP	PKPpre	00 47 06.0	
	comp=Z,2.3nm,0.7s,baz=202,slow=0.5,SNR=6.8						
PLCA	Paso Flores	140.20	196	PKPpre	PKPpre	00 47 06.0	
PLCA				ePKPdf	PKPdf	00 47 13.3	+0.9
MNTX	Cornudas Mount	140.22	29	P	PKPdf	00 47 12.7	+0.1
	baz=325						
MNTX	Cornudas Mount	140.22	29	ePKPpre	PKPpre	00 47 06.6	
MNTX				ePKPdf	PKPdf	00 47 12.8	+0.1
MNTX				LR	LR		
	comp=Z,20µm,20.0s						
BLA	Blacksburg	140.24	356	P	PKPdf	00 47 12.5	-0.1
	baz=5.5						
BLA	Blacksburg	140.24	356	ePKPdf	PKPdf	00 47 12.3	-0.3
BLA				LR	LR		
	comp=Z,17µm,20.0s						
BLA	Blacksburg	140.24	356	PKIKP	PKPdf	00 47 13.1	+0.5
WMOK	Wichita Mounta	140.29	19	P	PKPdf	00 47 12.4	-0.3
	baz=336						
WMOK	Wichita Mounta	140.29	19	ePKPpre	PKPpre	00 47 04.9	
WMOK				LR	LR		
	comp=Z,18µm,20.0s						
WMOK	Wichita Mounta	140.29	19	ePKHKP	PKPpre	00 47 04.9	
WMOK				MLR	MLR		
	comp=Z,18µm,20.0s						
T45A	Paducah	140.31	6	P	PKPdf	00 47 12.2	-0.4
	baz=353						
U40A	Yellville	140.33	11	P	PKPdf	00 47 12.3	-0.4
	baz=346						
T46A	Princeton	140.36	5	P	PKPdf	00 47 12.6	-0.1
	baz=354						
T48A	Bowling Green	140.40	3	P	PKPdf	00 47 12.5	-0.3
	baz=356						
T49A	Edmonton	140.44	2	P	PKPdf	00 47 12.5	-0.4
	baz=358						
T52A	Hallie	140.46	359	P	PKPdf	00 47 12.5	-0.4
	baz=1.5						
T47A	Sharon Grove	140.47	4	P	PKPdf	00 47 12.8	-0.2
	baz=355						
T47A	Sharon Grove	140.47	4	ePKPpre	PKPpre	00 47 06.9	
U41A	Viola	140.51	10	P	PKPdf	00 47 12.8	-0.2
	baz=348						
PARMO	Parma	140.53	7	ePKPdf	PKPdf	00 47 13.9	+0.9
T50A	Nancy	140.55	1	P	PKPdf	00 47 12.8	-0.3
	baz=359						
T51A	Gray	140.61	0	P	PKPdf	00 47 13.2	0.0
U42A	Revenden	140.62	9	P	PKPdf	00 47 12.9	-0.3
	baz=349						
V39A	Pettigrew	140.66	13	P	PKPdf	00 47 12.9	-0.5
	baz=345						
U44A	Portageville	140.70	7	P	PKPdf	00 47 13.2	-0.2
	baz=351						
BBSR	BB Station	140.72	334	PFAKE		00 47 30.0	+17
BBSR				LR	LR		
	comp=Z,8µm,22.0s						
U43A	Rector	140.73	8	P	PKPdf	00 47 12.9	-0.5
	baz=350						
V40A	Witts Springs	140.87	12	P	PKPdf	00 47 13.5	-0.3
	baz=346						
V40A	Witts Springs	140.87	12	ePKPpre	PKPpre	00 47 07.2	
U44B	Burton Farm, H	140.90	7	P	PKPdf	00 47 14.2	+0.4
	baz=352						
U45A	Rockin P Farm,	140.96	6	P	PKPdf	00 47 13.8	0.0
	baz=352						
U48A	Cassie Pea, Po	140.99	3	P	PKPdf	00 47 13.3	-0.6
	baz=356						
U47A	Clarksville	141.00	4	P	PKPdf	00 47 13.1	-0.8
	baz=355						
U46A	Springville	141.01	6	P	PKPdf	00 47 13.2	-0.7
	baz=353						
V41A	Mountainview	141.01	11	P	PKPdf	00 47 12.9	-1.1
	baz=347						
U49A	Red Boiling Sp	141.02	2	P	PKPdf	00 47 13.3	-0.7
	baz=357						
TZTN	Tazewell	141.03	360	P	PKPdf	00 47 13.7	-0.3
	baz=0.6						
TZTN	Tazewell	141.03	360	ePKPpre	PKPpre	00 47 09.1	
V42A	Cord	141.13	10	P	PKPdf	00 47 13.7	-0.4
	baz=348						
U50A	Jamestown	141.15	1	P	PKPdf	00 47 13.8	-0.5
	baz=359						
U52A	Thorn Hill	141.18	359	P	PKPdf	00 47 14.2	-0.1
	baz=0.9						
U53A	Fall Branch	141.19	358	P	PKPdf	00 47 13.8	-0.5
	baz=2.2						
U51A	La Follette	141.20	0	P	PKPdf	00 47 13.7	-0.6
	baz=360						
W39A	Magazine	141.25	13	P	PKPdf	00 47 13.7	-0.7
	baz=344						
W39A	Magazine	141.25	13	ePKPpre	PKPpre	00 47 09.1	
WVT	Waverly	141.27	5	P	PKPdf	00 47 13.8	-0.6
	baz=354						
WVT	Waverly	141.27	5	ePKPpre	PKPpre	00 47 09.4	
V43A	Jonesboro	141.28	9	P	PKPdf	00 47 14.2	-0.2
	baz=350						
NCAT	North Carolina	141.30	355	ePKPdf	PKPdf	00 47 13.3	-1.2
V44A	Blytheville	141.34	8	P	PKPdf	00 47 14.4	-0.1
	baz=350						
W40A	Ferguson Farm,	141.41	12	P	PKPdf	00 47 14.6	-0.1
	baz=345						
W40A	Ferguson Farm,	141.41	12	ePKPpre	PKPpre	00 47 09.6	
WHAR	Wooly Hollow	141.47	11	ePKPpre	PKPpre	00 47 09.6	
V45A	Humboldt	141.54	7	P	PKPdf	00 47 13.9	-0.9
	baz=352						
W41B	Gary Mavity, V	141.59	11	P	PKPdf	00 47 14.2	-0.8
	baz=347						
W41B	Gary Mavity, V	141.59	11	ePKPpre	PKPpre	00 47 09.9	
V47A	Nunnelly	141.60	5	P	PKPdf	00 47 14.3	-0.7
	baz=354						
W42A	Bald Knob	141.63	10	P	PKPdf	00 47 14.7	-0.3
	baz=348						
V52A	Sevierville	141.73	360	P	PKPdf	00 47 14.7	-0.6
	baz=0.6						
V52A	Sevierville	141.73	360	ePKPpre	PKPpre	00 47 11.4	
V48A	Smith Brothers	141.74	4	P	PKPdf	00 47 14.3	-1.0
	baz=355						
V48A	Smith Brothers	141.74	4	ePKPpre	PKPpre	00 47 09.7	
V49A	McMinnville	141.76	3	P	PKPdf	00 47 14.6	-0.7
	baz=357						
V51A	Loudon	141.77	1	P	PKPdf	00 47 15.0	-0.3
	baz=359						
X39A	Fountain Ranch	141.83	14	P	PKPdf	00 47 15.6	+0.1
	baz=344						
V50A	Pikevile	141.89	2	P	PKPdf	00 47 14.9	-0.6
	baz=358						
V53A	Saluda	141.89	359	P	PKPdf	00 47 15.2	-0.4
	baz=1.8						
ABTX	Abilene, Hawle	141.90	22	P	PKPdf	00 47 15.9	+0.2
	baz=334,SNR=25						
ABTX	Abilene, Hawle	141.90	22	ePKPpre	PKPpre	00 47 10.5	
TKL	Tuckaleechee C	141.92	360	PKhKP	PKPpre	00 47 09.1	
	comp=Z,8.7nm,0.9s,baz=124,slow=4.4,SNR=11						
TKL				PKP	PKPdf	00 47 13.7	-1.9
	comp=Z,14nm,0.8s,baz=14,slow=3.5,SNR=8.7						
TKL				PP	PP	00 50 17.6	-1.4
	comp=Z,15nm,0.9s,baz=31,slow=5.9,SNR=3.5						
TKL	Tuckaleechee C	141.92	360	ePKPpre	PKPpre	00 47 11.8	
TKL				PP	PP	00 50 17.6	-1.4
MIAR	Mount Ida	141.92	13	P	PKPdf	00 47 15.7	+0.1
	baz=344						
MIAR	Mount Ida	141.92	13	ePKPpre	PKPpre	00 47 10.8	
MIAR				LR	LR		
	comp=Z,23µm,21.0s						
W43A	Forest City	141.94	9	P	PKPdf	00 47 15.2	-0.5
	baz=349						
UALR	University of	141.96	11	ePKPpre	PKPpre	00 47 11.6	
W44A	Shelby Farms P	142.02	8	P	PKPdf	00 47 15.2	-0.6
	baz=350						
W45A	Hickory Valley	142.09	7	P	PKPdf	00 47 15.4	-0.5
	baz=352						
CPCT	Cooper Cave	142.12	1	ePKPpre	PKPpre	00 47 11.3	
W47A	Westpoint	142.16	5	P	PKPdf	00 47 15.4	-0.6
	baz=354						
W46A	Michie	142.20	6	P	PKPdf	00 47 15.6	-0.5
	baz=353						
SWET	Sewanee	142.31	3	ePKPpre	PKPpre	00 47 12.1	
X42A	Stuttgart	142.31	10	P	PKPdf	00 47 16.4	+0.1
	baz=348						
W48A	Pulaski	142.33	4	P	PKPdf	00 47 15.8	-0.5
	baz=355						
BDFB	Brasilia	142.38	248	PKP	PKPdf	00 47 14.3	-2.7
	comp=Z,6.9nm,0.8s,baz=24,slow=0.9,SNR=9.3						
PLAL	Pickwick Lake	142.38	6	ePKPpre	PKPpre	00 47 11.9	
OXF	Oxford	142.70	8	ePKPpre	PKPpre	00 47 12.5	
PAULI	Pauline	142.70	357	ePKPdf	PKPdf	00 47 17.2	+0.2
TX31	Lajitas Ar. Si	143.00	29	ePKPpre	PKPpre	00 47 14.1	
X48A	Hartselle	143.00	4	ePKPpre	PKPpre	00 47 13.4	
TXAR	Lajitas Array	143.00	29	PKP	PKPdf	00 47 14.7	-3.1
	comp=Z,12nm,0.8s,baz=270,slow=0.9,SNR=47						
TXAR				PP	PP	00 50 26.5	+0.2
	comp=Z,2.0nm,0.8s,baz=18,slow=3.2,SNR=3.0						
LPIG	La Paz	143.04	43	PKP	PKPbc	00 47 16.2	+1.6
	comp=Z,16nm,0.3s,baz=55,slow=9.1,SNR=7.0						
X53A	Estanollee	143.06	359	P	PKPab	00 47 12.6	-0.3
	baz=1.1						
X50B	Fort Payne	143.07	2	P	PKPab	00 47 12.0	-1.0
	baz=357						
Y44A	Strider, Charl	143.12	9	P	PKPab	00 47 13.2	0.0
	baz=350						
Z40A	Long Farm, Mag	143.19	13	P	PKPab	00 47 14.0	+0.6
	baz=344						
JSC	Jenkinsville	143.21	356	ePKPdf	PKPdf	00 47 16.8	-1.1
JSC	Jenkinsville	143.21	356	ePKIKP	PKPdf	00 47 16.8	-1.1
WHTX	Lake Whitney,	143.24	19	P	PKPab	00 47 12.1	-1.6
	baz=337,SNR=14						
HODGE	Hodges	143.31	358	ePKPdf	PKPdf	00 47 18.3	+0.3
Y45A	Yeager Farm, C	143.31	8	P	PKPab	00 47 14.3	+0.3
	baz=351						
Z41A	Richland Creek	143.33	13	P	PKPab	00 47 14.4	+0.4
	baz=345						
Y46A	Houston	143.39	7	P	PKPab	00 47 13.3	-0.9
	baz=352						
Y47A	UCPARC, Winfie	143.48	6	P	PKPab	00 47 14.1	-0.5
	baz=354						
Z42A	Norrel Spur, H	143.49	11	P	PKPab	00 47 15.1	+0.4
	baz=347						
Y48A	Jasper	143.53	5	P	PKPab	00 47 13.5	-1.2
	baz=355						
SLBS	Sierra La Lagu	143.57	43	ePKPdf	PKPdf	00 47 17.6	-1.3
Y49A	Blount Mountai	143.63	4	P	PKPab	00 47 14.3	-0.9
	baz=356						
Y49A	Blount Mountai	143.63	4	ePKPpre	PKPpre	00 47 15.9	
Y50A	Piedmont	143.64	3	P	PKPab	00 47 14.7	-0.5
	baz=357						
Y51A	Rockmart	143.65	2	P	PKPab	00 47 15.3	0.0
	baz=358						
Z43A	Armstrong Fami	143.69	10	P	PKPab	00 47 15.5	+0.1
	baz=348						
Y54A	Tignall	143.69	358	P	PKPab	00 47 14.5	-0.9
	baz=2.1,SNR=12						
Y52A	Lilburn	143.71	0	P	PKPbc	00 47 15.9	-0.3
	baz=360,SNR=16						
Y52A	Lilburn	143.71	0	ePKPpre	PKPpre	00 47 16.4	
Y53A	Monroe	143.71	360	P	PKPab	00 47 15.3	-0.2
	baz=0.6,SNR=9.8						
JCT	Junction City	143.74	24	P	PKPab	00 47 15.3	-0.5
	baz=333						
JCT	Junction City	143.74	24	ePKPdf	PKPdf	00 47 18.3	-0.7
JCT				LR	LR		
	comp=Z,14µm,20.0s						
140A	Cam and Jess,	143.75	14	P	PKPbc	00 47 16.2	-0.2
	baz=344,SNR=12						
140A	Cam and Jess,	143.75	14	ePKPdf	PKPdf	00 47 17.9	-1.0
Z44A	Pea Ridge, Bel	143.76	9	P	PKPbc	00 47 16.1	-0.2
	baz=349						
Z45A	Winona	143.78	8	P	PKPab	00 47 15.7	-0.1
	baz=350						
Z45A	Winona	143.78	8	ePKPdf	PKPdf	00 47 19.7	+0.8
HPIG		143.87	34	ePKPdf	PKPdf	00 47 18.6	-1.0
141A	Papa Simpson,	143.94	13	P	PKPbc	00 47 17.0	0.0
	baz=345,SNR=12						
Z48A	Northport	144.03	5	P	PKPab	00 47 15.5	-1.2
	baz=354,SNR=26						
Z46A	Louisville	144.06	7	P	PKPab	00 47 16.3	-0.5
	baz=352						
143A	Socs Landing,	144.15	11	P	PKPbc	00 47 17.5	-0.1
	baz=347,SNR=11						
Z47A	Carrollton	144.15	6	P	PKPab	00 47 16.5	-0.7
	baz=353,SNR=41						
GOGA	Godfrey	144.16	359	P	PKPab	00 47 16.8	-0.4
	baz=0.8,SNR=17						
GOGA	Godfrey	144.16	359	ePKPdf	PKPbc	00 47 18.1	+0.6
GOGA				LR	LR		
	comp=Z,24µm,21.0s						
GOGA	Godfrey	144.16	359	ePKIKP	PKPbc	00 47 18.1	+0.5
GOGA				MLR	MLR		
	comp=Z,24µm,21.0s						
142A	Monroe	144.19	12	P	PKPbc	00 47 17.7	-0.1
	baz=346,SNR=14						
Z51A	Franklin	144.23	2	P	PKPab	00 47 16.8	-0.7
	baz=358,SNR=6.0						
Z50A	Ashland	144.26	3	P	PKPab	00 47 16.8	-0.8
	baz=357						
240A	Hunter Patters	144.27	14	P	PKPab	00 47 17.5	-0.2
	baz=343,SNR=19						
Z49A	Columbiana	144.29	4	P	PKPab	00 47 16.9	-0.8
	baz=356,SNR=51						
Z53A	Monticello	144.29	360	P	PKPab	00 47 16.9	-0.7
	baz=0.7,SNR=23						
NHSC	New Hope	144.29	355	P	PKPab	00 47 17.6	-0.1
	baz=6.4,SNR=5.3						
NHSC	New Hope	144.29	355	ePKPdf	PKPdf	00 47 19.0	-0.8
NHSC				LR	LR		
	comp=Z,21µm,22.0s						
435B	Jarrell	144.30	20	P	PKPab	00 47 17.5	-0.4
	baz=336						
NATX	Nacogdoches	144.30	16	P	PKPab	00 47 17.9	+0.1
	baz=342,SNR=29						
NATX	Nacogdoches	144.30	16	ePKPdf	PKPbc	00 47 18.1	0.0
NATX				LR	LR		
	comp=Z,18µm,19.0s						
Z55A	Blythe	144.31	357	P	PKPab	00 47 17.6	-0.1
	baz=3.1						
Z54A	Sparta	144.32	358	P	PKPab	00 47 17.0	-0.7
	baz=1.9,SNR=23						
Z52A	Williamson	144.38	1	P	PKPab	00 47 17.9	-0.1
	baz=359,SNR=41						
144A	Alexander Plac	144.39	9	P	PKPbc	00 47 18.7	+0.4
	baz=349,SNR=9.1						
CSU	Charleston Sou	144.40	354	ePKPdf	PKPdf	00 47 20.2	+0.2
LRAL	Lakeview Retre	144.41	4	P	PKPab	00 47 17.6	-0.5
	baz=355,SNR=36						
LRAL	Lakeview Retre	144.41	4	ePKPdf	PKPab	00 47 18.0	-0.1
RGRS	Roger Stewart	144.49	355	ePKPdf	PKPdf	00 47 19.5	-0.6
241A	Mo Tay, Goldon	144.49	13	P	PKPbc	00 47 18.9	+0.2
	baz=345,SNR=34						
145A	Houston Renfro	144.50	9	P	PKPbc	00 47 19.0	+0.3
	baz=350,SNR=34						
146A	Union	144.59	8	P	PKPbc	00 47 19.1	+0.1
	baz=351,SNR=59						
242A	Grayson	144.62	12	P	PKPbc	00 47 19.3	+0.2
	baz=346,SNR=75						
SUCO	SUCO	144.64	208	eP	PKPab	00 47 18.5	-0.6
147A	Livingston	144.65	6	P	PKPab	00 47 18.6	-0.4
	baz=353,SNR=41						
147A	Livingston	144.65	6	ePKPdf	PKPbc	00 47 19.4	+0.3
148A	Greensboro	144.75	5	P	PKPab	00 47 18.6	-0.7
	baz=354,SNR=26						
VBMS	Vicksburg	144.78	10	P	PKPbc	00 47 19.7	+0.1
	baz=349,SNR=15						
VBMS	Vicksburg	144.78	10	ePKPdf	PKPdf	00 47 20.9	+0.2
156A	Sylvania	144.84	356	P	PKPab	00 47 19.6	-0.1
	baz=4.2,SNR=9.9						
149A	Jones	144.86	4	P	PKPab	00 47 19.0	-0.8
	baz=355,SNR=60						
152A	Waverly Hall	144.89	1	P	PKPab	00 47 19.5	-0.4
	baz=359,SNR=84						
152A	Waverly Hall	144.89	1	ePKPdf	PKPbc	00 47 20.3	+0.3
150A	Eclectic	144.90	3	P	PKPab	00 47 19.1	-0.8
	baz=356,SNR=51						
153A	Fort Valley	144.92	360	P	PKPab	00 47 19.5	-0.5
	baz=0.2,SNR=14						
155A	Kite	144.92	358	P	PKPab	00 47 19.9	-0.1
	baz=2.6,SNR=22						
244A	Avery, Jackson	144.92	10	P	PKPbc	00 47 20.3	+0.2
	baz=348,SNR=19						
243A	Waterproof	144.93	11	P	PKPbc	00 47 20.3	+0.2
	baz=347,SNR=40						
154A	Montrose	144.95	359	P	PKPab	00 47 19.7	-0.4
	baz=1.5,SNR=20						
154A	Montrose	144.95	359	ePKPdf	PKPdf	00 47 20.9	-0.1
151A	Opelika	145.01	2	P	PKPab	00 47 19.7	-0.6
	baz=358,SNR=127						
245A	Little AP, Sta	145.06	9	P	PKPab	00 47 20.8	+0.3
	baz=350,SNR=100						
341A	Kurthwood	145.09	14	P	PKPdf	00 47 21.0	-0.2
	baz=344,SNR=92						
341A	Kurthwood	145.09	14	ePKPbc	PKPdf	00 47 21.6	+0.3
246A	Jackson Lee, B	145.19	8	P	PKPdf	00 47 21.4	0.0
	baz=351,SNR=19						
247A	Quitman	145.22	7	P	PKPdf	00 47 21.6	+0.1
	baz=352,SNR=76						
342A	Flagon Creek P	145.25	13	P	PKPdf	00 47 21.9	+0.4
	baz=345,SNR=71						
342A	Flagon Creek P	145.25	13	ePKPbc	PKPdf	00 47 22.2	+0.7
248A	Dixon Mills	145.28	6	P	PKPbc	00 47 21.2	0.0
	baz=353,SNR=58						
CPUP	Villa Florida	145.28	225	PKPbc	PKPbc	00 47 20.9	-0.5
	comp=Z,28nm,0.7s,baz=108,slow=2.9,SNR=49						
CPUP	Villa Florida	145.28	225	ePKPbc	PKPbc	00 47 21.1	-0.3
CPUP	Villa Florida	145.28	225	eP	PKPdf	00 47 22.1	+0.4
CPUP	Villa Florida	145.28	225	eP	PKPbc	00 47 21.2	-0.3
251A	Midway	145.44	2	P	PKPdf	00 47 21.8	-0.1
	baz=358,SNR=379						
249A	Camden	145.45	5	P	PKPab	00 47 22.0	+0.1
	baz=354,SNR=227						
257A	Skidaway Islan	145.48	356	P	PKPbc	00 47 21.8	-0.1
	baz=5.1						
257A	Skidaway Islan	145.48	356	ePKPdf	PKPab	00 47 23.8	+1.8
343A	Vidalia	145.49	12	P	PKPab	00 47 22.6	+0.5
	baz=346,SNR=31						
344A	Westbrook Farm	145.49	10	P	PKPab	00 47 22.5	+0.4
	baz=348,SNR=59						
344A	Westbrook Farm	145.49	10	ePKPdf	PKPab	00 47 22.7	+0.5
253A	Americus	145.50	0	P	PKPbc	00 47 21.9	-0.1
	baz=360,SNR=74						
253A	Americus	145.50	0	ePKPdf	PKPab	00 47 22.6	+0.5
250A	Grady	145.51	4	P	PKPdf	00 47 21.9	0.0
	baz=356,SNR=119						
250A	Grady	145.51	4	ePKPdf	PKPdf	00 47 22.0	0.0
256A	Glennville	145.53	357	P	PKPbc	00 47 22.0	0.0
	baz=3.6,SNR=18						
RPN	Rapa Nui	145.55	137	PKPbc	PKPab	00 47 22.7	+0.2
	comp=Z,123nm,0.7s,baz=185,slow=4.3,SNR=5.7						
252A	Lumpkin	145.56	1	P	PKPbc	00 47 22.2	0.0
	baz=359,SNR=193						
255A	Hazlehurst	145.61	358	P	PKPdf	00 47 22.2	0.0
	baz=2.6,SNR=52						
255A	Hazlehurst	145.61	358	ePKPdf	PKPab	00 47 23.1	+0.6
254A	Abbeville	145.61	359	P	PKPbc	00 47 22.4	+0.1
	baz=1.2,SNR=92						
441A	DeRidder	145.65	14	P	PKPab	00 47 23.4	+0.7
	baz=344,SNR=30						
HKT	Hockley	145.65	19	ePKPbc	PKPbc	00 47 22.5	+0.1
HKT	Hockley	145.65	19	ePKP2	PKPbc	00 47 22.5	+0.1
345A	Thompson Farm,	145.75	9	P	PKPab	00 47 23.2	+0.1
	baz=349,SNR=17						
346A	Big Creek Wild	145.76	8	P	PKPab	00 47 23.1	-0.1
	baz=350,SNR=58						
346A	Big Creek Wild	145.76	8	ePKPdf	PKPab	00 47 23.9	+0.8
MRA	San Martin	145.79	208	eP	PKPab	00 47 24.3	+0.9
833A	Chaparral WMA,	145.81	25	P	PKPab	00 47 23.5	+0.1
	baz=332						
833A	Chaparral WMA,	145.81	25	ePKPdf	PKPab	00 47 24.1	+0.6
442A	Mamou	145.86	13	P	PKPab	00 47 23.9	+0.4
	baz=345,SNR=8.1						
347A	Saraland	145.87	7	P	PKPab	00 47 23.6	0.0
	baz=352,SNR=119						
GO05	HualaæØ	145.91	198	ePKPdf	PKPdf	00 47 22.7	+0.1
348A	Jackson	145.94	6	P	PKPab	00 47 23.6	-0.2
	baz=353,SNR=27						
348A	Jackson	145.94	6	ePKPdf	PKPab	00 47 24.7	+0.9
443A	Delano Plantat	145.95	12	P	PKPab	00 47 23.9	+0.1
	baz=346,SNR=8.0						
350A	Dozier	146.06	4	P	PKPab	00 47 24.1	-0.2
	baz=356,SNR=12						
357A	Townsend	146.06	356	P	PKPbc	00 47 23.9	+0.2
	baz=4.4						
349A	Repton	146.07	5	P	PKPab	00 47 24.2	-0.1
	baz=354,SNR=44						
352A	Blakely	146.07	2	P	PKPbc	00 47 24.0	+0.2
	baz=358,SNR=32						
352A	Blakely	146.07	2	ePKPdf	PKPab	00 47 24.2	-0.1
AVIZ	Vizcacheras	146.11	203	eP	PKPab	00 47 24.6	+0.1
TIGA	Tifton	146.12	360	P	PKPbc	00 47 23.8	-0.1
	baz=0.7,SNR=53						
TCA	Tanti	146.13	210	eP	PKPab	00 47 24.4	-0.3
356A	Blackshear	146.20	357	P	PKPbc	00 47 23.9	-0.2
	baz=3.3,SNR=28						
355A	Pearson	146.21	358	P	PKPab	00 47 24.7	-0.1
	baz=2.0,SNR=34						
444A	Pine Grove	146.21	11	P	PKPab	00 47 24.8	0.0
	baz=348,SNR=16						
353A	Camilla	146.21	1	P	PKPbc	00 47 24.3	+0.1
	baz=360,SNR=48						
351A	Pinckard	146.25	3	P	PKPbc	00 47 24.6	+0.3
	baz=357,SNR=42						
BRAL	Brewton	146.26	5	P	PKPab	00 47 25.5	+0.5
	baz=354,SNR=31						
BRAL	Brewton	146.26	5	ePKPbc	PKPab	00 47 25.1	+0.1
BRAL				LR	LR		
	comp=Z,15µm,20.0s						
445A	Amite	146.26	10	P	PKPab	00 47 25.1	+0.1
	baz=348,SNR=14						
541A	Lake Charles	146.31	15	P	PKPab	00 47 25.8	+0.6
	baz=343,SNR=6.0						
446A	Poplarville	146.36	9	P	PKPab	00 47 25.5	+0.1
	baz=350,SNR=8.9						
542A	Morse	146.40	14	P	PKPab	00 47 26.3	+0.7
	baz=344						
LMEL	Las Melosas	146.41	201	eP	PKPbc	00 47 24.6	-0.4
448A	Bay Minette	146.42	6	P	PKPab	00 47 26.0	+0.4
	baz=353,SNR=16						
447A	Lucedale	146.46	7	P	PKPab	00 47 25.6	-0.1
	baz=352,SNR=24						
AAGR	Agrelo	146.57	203	eP	PKPbc	00 47 25.8	+0.5
ACAN	Cantantal	146.59	206	eP	PKPbc	00 47 25.2	-0.1
543A	St. Martinvill	146.59	13	P	PKPab	00 47 26.9	+0.6
	baz=346						
449A	Pace	146.65	5	P	PKPab	00 47 26.6	+0.1
	baz=354,SNR=9.6						
450A	Crestview	146.66	4	P	PKPab	00 47 26.4	-0.2
	baz=355						
452A	Marianna	146.69	2	P	PKPbc	00 47 26.0	+0.5
	baz=358,SNR=9.7						
453A	Whigham	146.71	1	P	PKPab	00 47 26.5	-0.3
	baz=359,SNR=30						
453A	Whigham	146.71	1	ePKPdf	PKPbc	00 47 26.1	+0.5
544A	White Castle	146.72	12	P	PKPab	00 47 27.2	+0.4
	baz=347						
456A	Hilliard	146.79	357	P	PKPab	00 47 26.6	-0.4
	baz=3.5						
455A	Stateville	146.81	359	P	PKPbc	00 47 26.5	+0.6
	baz=1.7						
ARCO	CERRO ARCO	146.83	203	eP	PKPbc	00 47 26.1	0.0
454A	Quitman	146.84	360	P	PKPbc	00 47 26.6	+0.5
	baz=0.6						
546A	Slidell	146.85	9	P	PKPab	00 47 27.5	+0.2
	baz=350,SNR=11						
457A	Yulee	146.87	356	P	PKPab	00 47 26.7	-0.6
	baz=4.3						
451A	Vernon	146.90	3	P	PKPab	00 47 27.2	-0.3
	baz=357,SNR=19						
545A	Edgard	146.91	11	P	PKPab	00 47 27.8	+0.2
	baz=348						
FCH	Farellones	146.91	201	eP	PKPbc	00 47 27.0	+0.4
CLCH	Cerro Calan	146.94	201	eP	PKPbc	00 47 26.1	-0.2
ASAL	Salagasta	147.01	204	eP	PKPab	00 47 27.4	-0.6
KVTX	Kingsville	147.11	23	ePKPbc	PKPab	00 47 28.5	+0.1
KVTX				LR	LR		
	comp=Z,14µm,19.0s						
PEL	Peldehue	147.22	201	ePKPdf	PKPbc	00 47 27.4	+0.3

PEL	Peldehue	147.22	201	ePKP2	PKPbc	00 47 27.4	+0.3
553A	Crawfordville	147.37	1	P	PKPbc	00 47 27.9	+0.4
	baz=359						
552A	Lynn Haven	147.40	2	P	PKPbc	00 47 28.5	+0.9
	baz=358,SNR=12						
555A	McAlpin	147.43	359	P	PKPbc	00 47 28.5	+0.8
	baz=1.8						
555A	McAlpin	147.43	359	ePKPdf	PKPbc	00 47 27.8	+0.1
645A	Chauvin	147.46	11	P	PKPab	00 47 29.3	-0.4
	baz=348						
646A	Port Sulphur	147.47	10	P	PKPab	00 47 29.2	-0.6
	baz=349						
554A	Perry	147.47	360	P	PKPbc	00 47 28.3	+0.5
	baz=0.5						
557A	Orange Park	147.48	357	P	PKPbc	00 47 28.6	+0.8
	baz=4.1						
ROC1	El Roble	147.48	200	eP	PKPdf	00 47 25.5	-0.1
RTCV	Cerro Valdivia	147.52	205	eP	PKPbc	00 47 27.6	-0.4
556A	Lake Butler	147.53	358	P	PKPbc	00 47 28.6	+0.6
	baz=2.9						
AUSP	Uspallata	147.55	203	eP	PKPbc	00 47 28.3	-0.1
RTLS	Leoncito	147.89	204	eP	PKPbc	00 47 28.5	-0.9
657A	Interlachen	147.91	357	P	PKPbc	00 47 29.3	+0.3
	baz=3.9						
658A	Bunnell	148.03	356	P	PKPbc	00 47 29.4	0.0
	baz=5.1						
658A	Bunnell	148.03	356	ePKPdf	PKPbc	00 47 28.6	-0.7
655A	Horseshoe Beac	148.04	359	P	PKPbc	00 47 29.9	+0.5
	baz=1.3						
656A	Willston	148.16	358	P	PKPbc	00 47 30.3	+0.6
	baz=2.7						
656A	Willston	148.16	358	ePKPdf	PKPdf	00 47 27.6	+1.1
AMOG	MOGNA	148.30	206	eP	PKPbc	00 47 29.9	-0.3
758A	Lake Helen	148.49	355	P	PKPbc	00 47 30.9	+0.3
	baz=5.2						
757A	Oxford	148.56	357	P	PKPbc	00 47 31.0	+0.2
	baz=3.6						
LNIG	Linares	148.74	28	ePKPdf	PKPdf	00 47 27.5	0.0
ZAIG	Zacatecas	148.87	35	ePKPdf	PKPdf	00 47 29.7	+1.5
CYA	Choya	149.07	212	eP	PKPbc	00 47 31.6	-0.6
ACDV	Cuesta del Vie	149.23	206	eP	PKPbc	00 47 33.9	+1.2
858A	St. Cloud	149.24	356	P	PKPbc	00 47 32.5	-0.1
	baz=5.0						
DWPF	Disney Wildern	149.35	356	P	PKPbc	00 47 32.6	-0.2
	baz=4.9						
859A	Kempfer Cattle	149.36	355	P	PKPbc	00 47 33.0	+0.2
	baz=6.0						
AROD	Rodeo	149.39	205	eP	PKPdf	00 47 29.6	+0.7
AGUA	GUANDACOL	149.54	207	eP	PKPdf	00 47 30.1	+1.2
957A	Wimauma	149.84	357	P	PKPbc	00 47 34.1	+0.1
	baz=3.4						
957A	Wimauma	149.84	357	ePKPdf	PKPbc	00 47 31.7	-2.3
959A	Okeechobee	149.88	355	P	PKPbc	00 47 34.2	+0.1
	baz=6.1						
958A	Wauchula	149.89	356	P	PKPbc	00 47 34.5	+0.3
	baz=4.3						
GO04	Tololo Observa	149.92	203	ePKPbc	PKPbc	00 47 35.2	+0.7
GO04	Tololo Observa	149.92	203	eP	PKPdf	00 47 30.9	+1.2
VCA	Vinchina	150.04	208	eP	PKPdf	00 47 31.4	+1.6
AHML	Horco Molle	150.11	215	eP	PKPdf	00 47 30.2	+0.4
ANWB	Willy Bob	150.31	314	ePKPbc	PKPbc	00 47 35.4	+0.1
ANWB				LR	LR		
	comp=Z,9µm,20.0s						
ANWB	Willy Bob	150.31	314	e	PKPbc	00 47 34.6	-0.8
060A	Indiantown	150.32	354	P	PKPbc	00 47 35.6	+0.5
	baz=7.2						
060A	Indiantown	150.32	354	ePKPbc	PKPbc	00 47 36.9	+1.7
058A	Arcadia	150.42	356	P	PKPbc	00 47 35.7	+0.2
	baz=4.3						
059A	Moore Haven	150.46	355	P	PKPbc	00 47 35.9	+0.3
	baz=5.7						
059A	Moore Haven	150.46	355	ePKPbc	PKPbc	00 47 36.5	+0.9
DEG	La Desirade	150.62	311	e	PKPbc	00 47 37.0	+0.8
LCO	Las Campanas	150.91	204	ePKPbc	PKPbc	00 47 37.5	+0.6
LCO				ePKPab	PKPab	00 47 44.2	+0.1
LCO				LR	LR		
	comp=Z,11µm,19.0s						
LCO	Las Campanas	150.91	204	ePKIKP	PKPbc	00 47 37.5	+0.6
LCO				e		00 47 44.2	
LCO				MLR	MLR		
	comp=Z,11µm,19.0s						
060Z	West Palm Beac	150.96	354	P	PKPbc	00 47 37.1	+0.4
	baz=7.0						
SMRT	St. Maarten	150.97	316	ePKPdf	PKPdf	00 47 34.0	+2.7
SMRT	St. Maarten	150.97	316	e	PKPbc	00 47 37.8	+0.8
MGG	Marie-Galante	151.06	310	e	PKPbc	00 47 37.9	+0.7
059Z	Ave Maria	151.11	355	P	PKPbc	00 47 37.5	+0.4
	baz=5.2						
GDHS	Morne Mazeau,	151.18	311	ePKPbc	PKPbc	00 47 38.0	+0.4
MLYT	Lee's Yard	151.21	313	e	PKPbc	00 47 35.2	-2.4
BBGH	Gun Hill	151.21	304	PFAKE		00 47 40.0	+2.4
BBGH				LR	LR		
	comp=Z,12µm,20.0s						
NEV	Hard Times	151.22	314	e	PKPbc	00 47 36.7	-0.9
TBG	Guadaloupe-3	151.35	311	e	PKPbc	00 47 39.2	+1.4
ABVI	Anegada Island	151.35	319	ePKPbc	PKPbc	00 47 39.3	+1.5
SABA	Saba	151.38	315	ePKPbc	PKPbc	00 47 40.0	+2.0
SABA	Saba	151.38	315	e	PKPdf	00 47 27.9	-4.0
BBL	Barber's Block	151.41	310	e	PKPdf	00 47 33.5	+1.5
061Z	Ochoppi	151.53	354	P	PKPbc	00 47 37.9	-0.2
	baz=6.3						
061Z	Ochoppi	151.53	354	ePKPbc	PKPbc	00 47 39.1	+1.0
CXM	Morne La Croix	151.60	308	eP	PKPdf	00 47 33.2	+0.8
FDF	Fort de France	151.63	308	ePKPbc	PKPbc	00 47 38.4	-0.2
FDF	Fort de France	151.63	308	eP	PKPdf	00 47 34.9	+2.5
FDF	Fort de France	151.63	308	e	PKPbc	00 47 37.5	-1.1
FDF	Fort de France	151.63	308	ePKIKP	PKPbc	00 47 38.4	-0.2
PCM	Pelee Case Pet	151.63	308	eP	PKPbc	00 47 39.6	+1.0
BIM	Bigot	151.69	308	eP	PKPbc	00 47 39.4	+0.7
STVI	Saint Thomas	152.03	319	ePKPbc	PKPbc	00 47 40.3	+0.9
MOIG	Morelia	152.07	37	ePKPdf	PKPdf	00 47 35.8	+2.6
SVB	Belmont	152.54	306	ePKPbc	PKPbc	00 47 41.8	+1.2
MTP	Monte Pirata	152.61	319	ePKPdf	PKPdf	00 47 35.2	+1.5
062Z	Marathon	152.67	354	P	PKPbc	00 47 40.1	-0.6
	baz=6.3						
CBYP	Canovanas	152.68	320	ePKPbc	PKPbc	00 47 41.1	+0.1
HUMP	Col San Antoni	152.77	320	ePKPdf	PKPdf	00 47 35.6	+1.7
HJA	Humahuaca	152.81	220	eP	PKPdf	00 47 35.6	+1.2
GRTK	Grand Turk	152.96	333	ePKPbc	PKPbc	00 47 42.7	+1.3
GRTK				LR	LR		
	comp=Z,14µm,22.0s						
SJG	San Juan	152.98	320	PP	PP	00 51 22.9	-2.0
	comp=Z,4.1nm,0.5s,baz=101,slow=10,SNR=2.2						
SJG	San Juan	152.98	320	ePKPbc	PKPbc	00 47 42.7	+1.2
SJG				PP	PP	00 51 22.9	-2.0
SJG				LR	LR		
	comp=Z,12µm,21.0s						
SJG	San Juan	152.98	320	eP	PKPdf	00 47 35.6	+1.4
OBIP	Obispado Ponce	153.32	321	ePKPdf	PKPdf	00 47 36.4	+1.7
GRSS	Sisters	153.36	304	e	PKPbc	00 47 46.3	+3.9
AGP	Aguadilla	153.38	322	ePKPab	PKPab	00 47 56.2	+1.8
ICMP	Isla Caja de M	153.39	321	ePKPbc	PKPbc	00 47 43.6	+1.2
GRHS	Sauteurs	153.42	304	e	PKPbc	00 47 46.3	+3.8
GRGR	Grenville	153.48	304	PFAKE		00 47 50.0	-5.0
GRGR				LR	LR		
	comp=Z,7µm,22.0s						
GRGR	Grenville	153.48	304	e	PKPbc	00 47 43.8	+1.0
MPR	Mayaguez	153.52	322	epPKPdf	PKPbc	00 47 42.6	-0.1
YJA	Yavi	153.61	221	eP	PKPdf	00 47 36.8	+1.2
CRPR	Cabo Rojo, PR	153.66	322	ePKPbc	PKPbc	00 47 43.8	+0.8
GO02	Mina Guanaco	153.70	210	ePKPbc	PKPbc	00 47 43.9	+0.5
SIV	San Ignacio	153.91	238	PKP	PKPdf	00 47 35.3	-0.3
	comp=Z,4.2nm,0.8s,baz=116,slow=3.1,SNR=18						
SIV				PKPbc	PKiKP	00 47 44.0	+0.3
	comp=Z,13nm,0.9s,baz=119,slow=5.0,SNR=14						
SIV				PP	PP	00 51 37.2	+6.2
	comp=Z,2.9nm,1.0s,baz=107,slow=9.0,SNR=3.0						
LVIG	Laguna Verde	154.61	28	ePKPab	PKPab	00 48 00.7	+1.2
TLIG	Tlapa	155.26	35	ePKPdf	PKPdf	00 47 39.2	+1.6
GTBY	Guantanamo Bay	155.99	339	PFAKE		00 47 50.0	+12
GTBY				LR	LR		
	comp=Z,11µm,21.0s						
PTGA	Pitinga	156.01	274	PKP	PKPdf	00 47 38.6	0.0
	comp=Z,9.0nm,0.8s,baz=93,slow=3.2,SNR=16						
PTGA				PP	PP	00 51 48.0	+4.5
	comp=Z,4.1nm,0.8s,baz=80,slow=12,SNR=2.4						
PTGA	Pitinga	156.01	274	PKP	PKPdf	00 47 38.6	0.0
PTGA				PP	PP	00 51 48.0	+4.5
PTGA				LR	LR		
	comp=Z,13µm,19.0s						
PCRV	Puerto La Cruz	156.99	304	PKP	PKPdf	00 47 38.7	-1.2
	comp=Z,8.9nm,0.8s,baz=5.8,slow=19,SNR=2.1						
PCRV				PP	PP	00 51 51.9	+3.7
	comp=Z,7.1nm,0.9s,baz=182,slow=14,SNR=1.9						
CMIG	Matias Romero	157.60	29	PKP	PKPdf	00 47 40.1	-0.4
	comp=Z,5.4nm,0.8s,baz=199,slow=3.0,SNR=7.1						
CMIG				PKPab	PKPab	00 48 12.9	+0.6
	comp=Z,45nm,0.8s,baz=324,slow=2.4,SNR=18						
CMIG				PP	PP	00 51 49.3	-1.0
	comp=Z,1.5nm,0.7s,baz=350,slow=6.1,SNR=2.6						
PB11	IPOC Station P	158.01	218	ePKPdf	PKPdf	00 47 41.9	+0.8
PB11	IPOC Station P	158.01	218	⇑iP	PKPdf	00 47 37.6	-3.6
MTDJ	Mount Denham	158.35	343	PFAKE		00 47 50.0	+8.4
MTDJ				LR	LR		
	comp=Z,12µm,22.0s						
MNMC	Minye Minye	158.44	219	ePKPdf	PKPdf	00 47 42.8	+1.0
MNMCX	Minye Minye	158.44	219	⇑iP	PKPdf	00 47 41.0	-0.9
SAML	Samuel	158.47	252	ePKPdf	PKPdf	00 47 41.4	-0.3
SAML				ePKPab	PKPab	00 48 16.1	-0.4
SAML				LR	LR		
	comp=Z,12µm,20.0s						
SAML	Samuel	158.47	252	ePKIKP	PKPdf	00 47 41.4	-0.3
SAML				e		00 48 16.1	
SAML				MLR	MLR		
	comp=Z,12µm,20.0s						
PB16	IPOC Station P	158.97	221	⇑iP	PKPdf	00 47 43.3	+0.4
PB12	IPOC Station P	159.29	219	⇓iP	PKPdf	00 47 43.4	+0.8
LPAZ	La Paz	159.39	228	PKP	PKPdf	00 47 43.7	+0.3
	comp=Z,10nm,0.8s,baz=76,slow=3.6,SNR=33						
LPAZ				PKPab	PKPab	00 48 23.1	+2.1
	comp=Z,21nm,1.0s,baz=118,slow=6.0,SNR=3.9						
LPAZ	La Paz	159.39	228	ePKPdf	PKPdf	00 47 44.2	+0.7
LPAZ				PKPab	PKPab	00 48 23.1	+2.1
CCIG	Comitan	159.52	23	ePKPab	PKPab	00 48 21.4	+0.5
URIC	Uribia, Colomb	161.49	320	eP	PKPdf	00 47 43.5	-1.6
SDV	Santo Domingo	162.53	311	PKP	PKPdf	00 47 45.4	-1.0
	comp=Z,4.3nm,0.3s,baz=65,slow=4.2,SNR=7.3						
SDV				PKPab	PKPab	00 48 34.3	0.0
	comp=Z,13nm,0.7s,baz=342,slow=4.6,SNR=4.6						
SDV				PP	PP	00 52 20.5	+2.5
	comp=Z,5.3nm,0.5s,baz=349,slow=5.2,SNR=3.3						
SDV	Santo Domingo	162.53	311	ePKPdf	PKPdf	00 47 46.2	-0.2
SDV				ePKPab	PKPab	00 48 34.9	+0.6
SDV				PP	PP	00 52 20.5	+2.5
SDV				LR	LR		
	comp=Z,14µm,20.0s						
SDV	Santo Domingo	162.53	311	eP	PKPdf	00 47 45.7	-0.7
ESTN	Estel	164.18	9	ePKPab	PKPab	00 48 41.6	+0.5
SJCC	San Jacinto, C	164.83	325	eP	PKPdf	00 47 47.6	-0.8
OCAC	Ocana	164.91	316	eP	PKPdf	00 47 48.6	0.0
TAMC	Tame, Arauca	164.94	307	eP	PKPdf	00 47 45.2	-3.2
PAMC	Pamplona, Colo	165.08	312	eP	PKPdf	00 47 49.3	+0.2
ESPN	Las Esperanzas	165.27	2	ePKPab	PKPab	00 48 46.2	+0.5
BARC	Barichara	165.93	311	eP	PKPdf	00 47 48.6	-0.9
BRRC	Barranca, Sant	165.98	314	eP	PKPdf	00 47 48.6	-0.7
MOTC	Monteria, Cord	166.02	324	eP	PKPdf	00 47 49.2	-0.1
YOPC	Yopal, Colombi	166.07	305	eP	PKPdf	00 47 47.6	-1.9
RUSC	La Rusia	166.29	308	ePKPdf	PKPdf	00 47 49.5	-0.7
RUSC	La Rusia	166.29	308	eP	PKPdf	00 47 49.3	-0.8
ZARC	Zaragoza, Cauc	166.50	318	eP	PKPdf	00 47 48.8	-0.9
PTBC	PUERTO BERRIO,	166.90	314	eP	PKPdf	00 47 49.3	-0.7
JTS	JuntasAbangare	167.12	5	PFAKE		00 48 00.0	+10
JTS				LR	LR		
	comp=Z,11µm,20.0s						
CHIC	Chingaza	167.55	305	eP	PKPpre	00 47 43.5	
BCIP	Isla Barro Col	167.61	341	PFAKE		00 48 00.0	+10
BCIP				LR	LR		
	comp=Z,13µm,21.0s						
UPA	Univ. de Panam	167.68	339	eP	PKPpre	00 47 41.3	
DBBC	Dabeiba	167.73	321	eP	PKPdf	00 47 51.4	+0.7
VILC	Villavicencio,	167.81	303	eP	PKPdf	00 47 49.9	-0.9
NORC	Norcasia	167.86	312	eP	PKPdf	00 47 50.0	-0.8
HELC	Santa Helena	167.90	316	ePKPdf	PKPdf	00 47 50.0	-1.2
HELC				ePKPab	PKPab	00 49 00.1	+2.0
HELC	Santa Helena	167.90	316	eP	PKPdf	00 47 50.7	-0.5
ROSC	El Rosal	167.90	308	PKP	PKPdf	00 47 51.0	-0.3
	comp=Z,16nm,0.9s,baz=95,slow=4.3,SNR=17						
ROSC	El Rosal	167.90	308	ePKPdf	PKPdf	00 47 51.7	+0.5
ROSC	El Rosal	167.90	308	eP	PKPdf	00 47 50.7	-0.5
NNA	Nana	168.37	217	PKP	PKPdf	00 47 50.6	-0.5
	comp=Z,12nm,0.7s,baz=296,slow=4.1,SNR=4.3						
NNA				PP	PP	00 52 45.0	-2.7
	comp=Z,2.5nm,0.3s,baz=195,slow=20,SNR=2.3						
NNA	Nana	168.37	217	PKP	PKPdf	00 47 50.6	-0.5
NNA				PP	PP	00 52 45.0	-2.7
NNA				LR	LR		
	comp=Z,7µm,20.0s						
NNA	Nana	168.37	217	PKIKP	PKPdf	00 47 50.6	-0.5
NNA						00 52 45.0	
NNA				MLR	MLR		
	comp=Z,7µm,20.0s						
SJAC	San Juan de Ar	168.47	300	eP	PKPdf	00 47 50.0	-1.3
TOLC	Tolima	168.84	310	eP	PKPpre	00 47 39.9	
ANIL	Santa Ana	168.96	310	eP	PKPdf	00 47 50.7	-1.1
PLMC	San Jos˜' del	169.34	315	eP	PKPdf	00 47 49.3	-2.5
YOTC	Yotoco, Valle	170.00	311	eP	PKPdf	00 47 48.8	-3.5
BETC	Betania	170.04	302	eP	PKPdf	00 47 51.4	-0.8
MARP	Paez Belalcaza	170.39	304	eP	PKPdf	00 47 50.6	-2.1
HORQ	Saladito	170.54	310	eP	PKPdf	00 47 52.8	0.0
PCON	Cinco Dias	171.04	303	eP	PKPdf	00 47 53.4	+0.1
POPC	Popayan, Colom	171.15	305	eP	PKPdf	00 47 51.4	-1.6
CRUC	La Cruz	171.91	301	eP	PKPdf	00 47 52.8	-0.7
GRGC	Isla de Gorgon	172.00	314	eP	PKPpre	00 47 45.8	
GCUF	Volcan Galeras	172.42	300	eP	PKPdf	00 47 52.6	-1.3
ATAH	Atahualpa	172.93	231	PKP	PKPdf	00 47 55.1	+1.1
	comp=Z,7.6nm,0.8s,baz=333,slow=0.4,SNR=14						
ATAH				PKPab	PKPab	00 49 24.2	+3.7
	comp=Z,8.7nm,1.0s,baz=113,slow=15,SNR=1.8						
ATAH				PP	PP	00 53 08.8	-2.8
	comp=Z,3.0nm,0.5s,baz=62,slow=17,SNR=2.2						
CMBC	Cumbal	172.98	300	eP	PKPpre	00 47 46.5	
PAYG	Puerto Ayora	173.32	73	PFAKE		00 48 00.0	+6.3
PAYG				LR	LR		
	comp=Z,11µm,19.0s						
OTAV	Otavalo	173.87	298	ePKPdf	PKPdf	00 47 54.8	+0.4
OTAV				ePKPab	PKPab	00 49 26.1	+1.3
OTAV				LR	LR		
	comp=Z,14µm,19.0s						
OTAV	Otavalo	173.87	298	eP	PKPdf	00 47 53.0	-1.4
OTAV	Otavalo	173.87	298	ePKIKP	PKPdf	00 47 54.8	+0.4
OTAV				MLR	MLR		
	comp=Z,14µm,19.0s						

ISCJB ***25*** *00:40:02.8±0.6, 33.°78S±0.°04×178.°9W±0.°1, h10^{km}, mb4.4/7, Error ellipse: s-maj=14.8km s-min=4.0km az=18.3*

IDC ***25*** *00:40:02.5±0.8, 33.°70S×178.°85W, h0^{km}, mb4.5/5, mb1 4.6/8, mb1mx4.1/47, mbtmp4.5/8, ML3.9/3, Error ellipse: s-maj=30.0km s-min=23.3km az=99.0*

WEL ***25*** *00:40:02.6±0.7, 34°S±6°×17°9W±1°4, h12^{km}, ML5.1/18*

NEIC ***25*** *00:40:04.9±2.6, 33.°75S×178.°88W, h15^{km}±15^{km}, mb4.3/2, Error ellipse: s-maj=10.8km s-min=6.5km az=102.0*

ISC 25 00:40:03.4±0.6**, 33.°80S**±0.°06×**178.°7W**±0.°1**, h10**^{km}**, n67,** σ1^{s}**51**/81**, mb4.6**/7**, 1C-2D, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MXZ	Matakaoa Point	4.49	212	P	Pn	00 41 12.1	+0.6
MXZ				S	Sn	00 42 03.1	-0.6
GLKZ	Green Lake	4.57	8	P	Pn	00 41 08.1	-4.4
GLKZ				S	Sn	00 42 00.1	-5.6
RAO	Raoul Island	4.58	8	ePn	Pn	00 41 13.6	+0.9
WMGZ	Waiomatatini S	4.66	210	P	Pn	00 41 15.3	+1.5
WMGZ				S	Sn	00 42 09.0	+1.1
PKGZ	Pakihiroa	4.86	212	P	Pn	00 41 15.7	-0.9
PKGZ				S	Sn	00 42 12.5	-0.5
HAZ	Te Kaha	4.89	215	P	Pn	00 41 18.5	+1.5
HAZ				S	Sn	00 42 15.5	+1.9
PUZ	Puketiti	4.94	209	P	Pn	00 41 17.4	-0.2
PUZ				S	Sn	00 42 13.8	-1.1
RUGZ	Raukumara Rang	5.11	214	P	Pn	00 41 20.1	+0.1
TWGZ	Tauwhareparae	5.15	211	P	Pn	00 41 21.6	+1.1
TWGZ				S	Sn	00 42 20.6	+0.6
CNGZ	Carnagh Statio	5.32	208	P	Pn	00 41 22.9	+0.1
CNGZ				S	Sn	00 42 25.0	+0.9
TKGZ	Te Karaka	5.42	210	P	Pn	00 41 25.1	+0.9
TKGZ				S	Sn	00 42 26.3	-0.4
MWZ	Matawai	5.48	213	P	Pn	00 41 25.8	+0.8
OPRZ	Ohinepanea	5.60	223	P	Pn	00 41 26.9	+0.2
OPRZ				S	Sn	00 42 30.6	-0.5
URZ	Urewera	5.62	216	Pn	Pn	00 41 27.0	+0.1
	11nm,0.3s,baz=97,slow=7.6,SNR=51						
URZ				Sn	Sn	00 42 29.2	-2.2
	16nm,0.3s,baz=0.0,slow=11,SNR=11						
URZ	Urewera	5.62	216	ePn	Pn	00 41 26.7	-0.1
URZ				eSn	Sn	00 42 24.8	-6.7
URZ	Urewera	5.62	216	P	Pn	00 41 27.1	+0.3
URZ				S	Sn	00 42 30.0	-1.4
RAGZ	Rawiri	5.66	213	P	Pn	00 41 28.3	+0.7
PRGZ	Paritu Road	5.82	208	P	Pn	00 41 30.2	+0.4
PRGZ				S	Sn	00 42 34.3	-2.3
SNGZ	Shannon Statio	5.93	212	P	Pn	00 41 31.8	+0.6
SNGZ				S	Sn	00 42 39.0	-0.2
MUGZ	Murupara	5.95	217	P	Pn	00 41 31.5	0.0
MUGZ				S	Sn	00 42 37.6	-2.2
RTZ	Ruatahuna	5.96	215	P	Pn	00 41 31.7	0.0
KNZ	Kokohu	5.99	208	P	Pn	00 41 30.0	-2.0
MHGZ	Mahia Peninsul	6.01	206	P	Pn	00 41 33.2	+0.8
RAHZ	Arahi	6.15	213	P	Pn	00 41 34.5	+0.2
OUZ	Omahuta	6.54	255	P	Pn	00 41 42.9	+3.2
BKZ	Black Stump Fm	6.62	215	ePn	Pn	00 41 41.0	+0.2
RPZ	Rata Peaks	12.73	216	Pn	Pn	00 43 03.6	-0.8
	0.5nm,0.3s,baz=353,slow=14,SNR=2.3						
RPZ				Sn	Sn	00 45 10.8	-15
	0.8nm,0.3s,baz=18,slow=20,SNR=5.0						
DZM	Mont Dzumac	17.57	308	P	Pn	00 44 07.5	-1.0
	0.2nm,0.3s,baz=120,slow=20,SNR=2.4						
CTAO	Charters Tower	33.95	285	eP	P	00 46 46.3	-0.7
AS31	Alice Springs	42.48	271	eP	P	00 47 58.5	-0.5
	2.3nm,0.8s						
ASAR	Alice Springs	42.48	271	P	P	00 47 58.5	-0.4
	7.1nm,0.8s,baz=112,slow=7.4,SNR=26						
WB2	Warramunga Arr	43.77	276	eP	P	00 48 08.8	-0.5
WRAB	Tennant Creek	43.77	276	eP	P	00 48 08.1	-1.3
	7.1nm,0.7s						
WRA	Warramunga Arr	43.78	276	P	P	00 48 08.4	-1.0
	9.0nm,0.8s,baz=118,slow=7.3,SNR=25						
QSPA	South Pole Qui	56.32	180	P	P	00 49 46.6	+2.4
	6.3nm,1.1s,baz=71,slow=1.3,SNR=4.4						
SYO	Syowa Base	73.69	193	⇓eX	P	00 51 33.8	-3.0
SYO	Syowa Base	73.69	193	⇓epP	pP	00 51 41.0	+0.9
SYO	Syowa Base	73.69	193	⇑ePcP	PcP	00 51 52.0	-0.6
CNIC	Niles Canyon	88.47	42	eP	P	00 52 55.5	-0.3
PETK	Petropavlovsk-	88.96	346	P	P	00 52 58.4	+0.7
	2.0nm,0.4s,baz=139,slow=9.6						
PEA1	Petropavlovsk-	88.96	346	eP	P	00 52 58.4	+0.7
USRK	Ussuriysk Ar.	89.68	327	P	P	00 53 02.3	+1.0
	0.9nm,0.5s,baz=91,slow=8.6						
KURK	Kurchatov	122.95	312	ePKPdf	PKPdf	00 58 58.7	-0.6
KURBB	Kurchatov Arra	122.98	312	PKP	PKPdf	00 58 58.7	-0.7
	1.7nm,0.8s,baz=105,slow=2.0,SNR=8.8						
BVAR	Borovoye Array	128.40	314	PKP	PKPdf	00 59 09.5	-0.2
	1.4nm,0.7s,baz=117,slow=1.4,SNR=3.5						
ARU	Arti	135.30	318	ePKPdf	PKPdf	00 59 23.0	+0.3
ARA0	ARCESS Array S	141.77	347	ePKPdf	PKPdf	00 59 35.0	+0.8
ARCES	ARCESS Array B	141.77	347	PKP	PKPdf	00 59 35.0	+0.8
	1.0nm,0.7s,baz=66,slow=4.4,SNR=3.1						
KBZ	Khabaz	146.42	300	PKPbc	PKPdf	00 59 44.1	+1.1
	3.0nm,0.9s,baz=151,slow=2.0,SNR=4.0						
FIA1	FINESS Array S	148.10	338	ePKPdf	PKPdf	00 59 47.4	+2.2
FIA0	FINESS Array S	148.10	338	ePKPbc	PKPdf	00 59 47.8	+2.6
FINES	FINESS Array B	148.10	338	PKPbc	PKPdf	00 59 47.8	+2.6
	8.4nm,0.8s,baz=64,slow=4.4,SNR=12						
ASF	Jabal al Asfar	150.21	277	PKPbc	PKPbc	00 59 55.0	+0.1
	2.0nm,0.8s,baz=68,slow=3.5,SNR=5.4						
EIL	Elat	151.19	271	PKPbc	PKPbc	00 59 58.1	+1.0
	6.1nm,0.9s,baz=353,slow=7.7,SNR=4.3						
MMAI	Mount Meron Ar	151.62	278	PKPbc	PKPbc	00 59 58.2	0.0
	9.1nm,0.9s,baz=60,slow=4.0,SNR=13						
NB2	NORSAR Subarra	152.00	350	PKP	PKPbc	00 59 58.4	+0.4
	comp=Z,0.9nm,0.7s,baz=16,slow=2.6						
NB200	NORSAR Array S	152.00	350	ePKPbc	PKPbc	00 59 58.5	+0.4
NOA	NORSAR Array B	152.00	350	PKPbc	PKPbc	00 59 58.5	+0.4
	comp=Z,1.1nm,0.7s,baz=14,slow=4.1,SNR=6.0						
HFS	Hagfors	152.43	347	PKPbc	PKPbc	00 59 59.3	+0.4
	comp=Z,2.2nm,0.7s,baz=70,slow=1.7,SNR=4.7						
BR101	Keskin Array S	153.54	292	ePKPbc	PKPbc	01 00 01.9	-0.4
BRTR	Keskin Array B	153.54	292	PKPbc	PKPbc	01 00 01.9	-0.4
	comp=Z,1.2nm,0.7s,baz=110,slow=3.6,SNR=6.2						
AKASG	Malin Array Be	153.55	318	PKPbc	PKPbc	01 00 01.8	0.0
	comp=Z,2.6nm,0.8s,baz=55,slow=2.2,SNR=5.7						
AK11	Malin Array Si	153.60	318	ePKPbc	PKPbc	01 00 02.4	+0.6
TORD	Torodi Ar. Bea	159.44	181	PKPab	PKPab	01 00 41.4	+1.1
	baz=169,slow=2.9						
TOA1	Torodi Ar. Sit	159.44	181	ePKPab	PKPab	01 00 41.4	+1.1
CLL	Collm	160.55	338	ePKPab	PKPab	01 00 43.0	-1.3
GERES	GERESS Array B	162.37	332	PKPab	PKPab	01 00 52.6	+0.1
	comp=Z,0.2nm,0.4s,baz=323,slow=2.9,SNR=3.1						

IDC ***25*** *00:40:13.2±1.4, 2.°58N×96.°10E, h0^{km}, mb4.2/11, mb1 4.2/11, mb1mx3.8/71, mbtmp4.2/11, Error ellipse: s-maj=44.6km s-min=25.3km az=48.0*

NEIC ***25*** *00:40:15.3±2.8, 2.°57N×96.°08E, h15^{km}±17^{km}, mb4.5/2, Error ellipse: s-maj=9.6km s-min=6.9km az=217.0*

DJA ***25*** *00:40:15.2±0.6, 2°N±3°×9°6E±°, h10^{km}, M4.7/12, mb4.7/6, MLv4.7/12*

ISC 25 00:40:15.4±2.1**, 2.°59N**±0.°06×**96.°05E**±0.°07**, h15**^{km}±13^{km}**, n51,** σ1^{s}**01**/53**, mb4.2**/14**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNSI	Sinabang, Aceh	0.33	122	P	Pn	00 40 24.3	-1.4
SNSI				S	Sb	00 40 28.9	+0.7
TPTI		1.32	59	P	Pg	00 40 40.1	-0.6
TPTI				S	Sg	00 41 01.2	+3.3
MLSI	Meulaboh, Aceh	1.71	12	P	Pb	00 40 46.1	-0.4
MLSI				S	Sg	00 41 10.3	-0.1
KCSI	Kotacane, Aceh	1.96	62	P	Pb	00 40 50.3	-0.5
KCSI				S	Sg	00 41 17.2	-1.2
GSI	Gunungsitoli	1.99	130	ePn	Pn	00 40 47.5	-1.0
TSI	Tuntungan	2.67	70	P	Pn	00 40 59.5	+1.5
TSI				S	Sb	00 41 34.8	-0.9
LHMI	Lhok Sumawe	2.77	19	P	Pn	00 41 01.3	+2.0
LHMI				S	Sb	00 41 37.0	-1.6
LHMI	Lhok Sumawe	2.77	19	ePn	Pn	00 40 58.5	-0.9
PSI	Prapat	2.88	86	ePn	Pn	00 41 01.5	+0.5
MNSI	Mandailing Nat	3.95	117	P	Pn	00 41 17.1	+1.5
KULM	Kulim	5.32	60	ePn	Pn	00 41 33.9	-0.5
BKNI	Bangkinang	5.47	114	P	Pn	00 41 39.0	+2.5
	97nm,0.5s,1.2nm						
MDSI	Maura Dua	10.74	131	P	Pn	00 42 48.3	-0.5
PALK	Pallekele	15.98	287	ePn	Pn	00 44 00.0	+0.1
CMAR	Chiang Mai Arr	16.03	10	Pn	P	00 44 03.4	-0.5
	0.4nm,0.3s,baz=198,slow=12,SNR=8.5						
H08S2	Diego Garcia H	25.60	246	T	T	01 12 05.7	
	baz=67,slow=74,SNR=13						
H08S3	Diego Garcia H	25.60	246	T	T	01 12 05.8	
	baz=67,slow=74,SNR=12						
H08S1	Diego Carcia H	25.62	246	T	T	01 12 06.9	
	baz=67,slow=74,SNR=16						
NIL	Nilore	37.54	328	eP	P	00 47 29.1	0.0
H01W3	Cape Leeuwin H	40.96	157	T	T	01 31 15.4	
	baz=332,slow=76,SNR=16						
H01W2	Cape Leeuwin H	40.97	157	T	T	01 31 17.7	
	baz=332,slow=76,SNR=15						
H01W1	Cape Leeuwin H	40.98	157	T	T	01 31 21.7	
	baz=332,slow=76,SNR=16						
BJT	Baijiatuau	41.49	24	eP	P	00 48 02.6	+0.6
	9.6nm,0.6s						
ASAR	Alice Springs	45.15	127	P	P	00 48 31.8	-0.1
	0.7nm,0.5s,baz=301,slow=8.2,SNR=5.4						
KSAR	Wonju Array Be	45.36	36	P	P	00 48 32.1	-1.1
KSRS	Korea Array	45.39	36	P	P	00 48 32.1	-1.3
	1.7nm,0.7s,baz=225,slow=9.0,SNR=6.1						
MK01	Makanchi Array	45.61	347	eP	P	00 48 35.5	+0.3
MK31	Makanchi Array	45.63	347	eP	P	00 48 36.0	+0.7
MK32	Makanchi Array	45.63	347	eP	P	00 48 35.8	+0.4
MKAR	Makanchi Array	45.63	347	P	P	00 48 35.8	+0.4
	3.5nm,0.5s,baz=157,slow=9.2,SNR=46						
SONA0	Songino Array	45.95	10	eP	P	00 48 38.3	+0.3
SONA0				ePcP	PcP	00 50 15.4	+0.7
SONM	Songino Array	45.95	10	P	P	00 48 38.3	+0.3
	3.2nm,0.7s,baz=189,slow=9.6,SNR=9.1						
SONM				PcP	PcP	00 50 15.4	+0.7
	1.5nm,0.7s,baz=166,slow=2.7,SNR=4.1						
SONA1	Songino Array	45.97	10	eP	P	00 48 37.4	-0.7
ULN	Ulaanbaatar	46.10	10	eP	P	00 48 38.4	-0.7
	2.9nm,0.8s						
GEYT	Alibeck	49.42	320	P	P	00 49 05.3	+0.4
	1.8nm,0.8s,baz=125,slow=7.7,SNR=4.8						
KURBB	Kurchatov Arra	50.11	346	P	P	00 49 10.9	+1.0
	1.5nm,0.5s,baz=169,slow=6.7,SNR=7.7						
KURK	Kurchatov	50.17	346	eP	P	00 49 10.9	+0.5
ZAA0	Zalesovo Array	52.02	352	eP	P	00 49 24.1	-0.1
	8.1nm,1.0s						
ZALV	Zalesovo Beam	52.02	352	P	P	00 49 24.6	+0.4
	4.2nm,0.4s,baz=170,slow=6.9,SNR=17						
ZALV	Zalesovo Beam	52.02	352	eP	P	00 49 24.1	-0.1

ZAA1	**Zalesovo Array**	**52.03**	**352**	*e*P	**P**	**00 49 24.6**	**+0.4**
BVAR	**Borovoye Array**	**54.57**	**341**	P	**P**	**00 49 42.6**	**-0.5**
	1.4nm,0.7s,baz=130,slow=7.8,SNR=4.7						
ABKAR	**Akbulak array**	**55.76**	**332**	*e*P	**P**	**00 49 51.8**	**+0.1**
GNI	**Garni**	**59.50**	**316**	*e*P	**P**	**00 50 19.5**	**+1.1**
FIA0	**FINESS Array S**	**78.25**	**333**	*e*P	**P**	**00 52 14.5**	**+0.2**
FINES	**FINESS Array B**	**78.25**	**333**	P	**P**	**00 52 14.5**	**+0.2**
	2.4nm,0.9s,baz=120,slow=8.2,SNR=3.0						
ARA0	**ARCESS Array S**	**80.85**	**340**	*e*P	**P**	**00 52 28.4**	**-0.1**
ARCES	**ARCESS Array B**	**80.85**	**340**	P	**P**	**00 52 28.4**	**-0.1**
	2.8nm,1.0s,baz=98,slow=5.6,SNR=3.4						
GERES	**GERESS Array B**	**83.02**	**319**	P	**P**	**00 52 40.6**	**+0.2**
	0.6nm,0.8s,baz=81,slow=6.3,SNR=3.8						
SSPA	**Standing Stone**	**136.63**	**353**	*e*PKPdf	**PKPdf**	**00 59 35.8**	**-1.8**
LRAL	**Lakeview Retre**	**144.46**	**4**	*e*PKPdf	**PKPdf**	**00 59 52.0**	**+0.1**

IDC ***25*** *00:46:49.8±1.5, 2°.74N×96°.21E, h0^{km}, mb3.7/9, mb1 3.7/9, mb1mx3.5/69, mbtmp3.7/9, Error ellipse: s-maj=49.2km s-min=19.3km az=54.0*

ISCJB ***25*** *00:46:50.3±0.8, 2°.50N±0°.06×95°.89E±0°.05, h25^{km}, mb3.8/9, Error ellipse: s-maj=8.9km s-min=6.9km az=29.3*

DJA ***25*** *00:46:51.4±0.8, 3°N±3°×9°6E±°, h10^{km}, M4.5/3, mb4.4/1, MLv4.5/3*

ISC 25 00:46:52.7±0.9**, 2°.63N**±0°.05×**96°.03E**±0°.08**, h25^{km}, n22, σ1^{s}15**/20**, mb3.8**/9**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNSI	**Sinabang, Aceh**	**0.37**	**127**	P	**Pb**	**00 46 59.6**	**-1.1**
SNSI				S	**Sb**	**00 47 05.3**	**-0.9**
TPTI		**1.30**	**61**	P	**Pb**	**00 47 16.1**	**-0.4**
TPTI				S	**Sb**	**00 47 35.2**	**+2.4**
MLSI	**Meulaboh, Aceh**	**1.67**	**13**	P	**Pb**	**00 47 21.1**	**-1.6**
MLSI				S	**Sb**	**00 47 43.4**	**+0.2**
KCSI	**Kotacane, Aceh**	**1.95**	**63**	P	**Pb**	**00 47 25.4**	**-2.1**
KCSI				S	**Sb**	**00 47 51.0**	**-0.4**
TSI	**Tuntungan**	**2.67**	**71**	P	**Pn**	**00 47 35.2**	**+1.1**
MNSI	**Mandailing Nat**	**3.99**	**117**	P	**Pn**	**00 47 53.4**	**+1.2**
CMAR	**Chiang Mai Arr**	**15.98**	**10**	Pn	**P**	**00 50 38.4**	**-1.0**
	baz=195,slow=11,SNR=5.1						
H08S2	**Diego Garcia H**	**25.61**	**246**	T	T	01 18 31.5	
	baz=67,slow=75,SNR=27						
H08S3	**Diego Garcia H**	**25.61**	**246**	T	T	01 18 31.6	
	baz=67,slow=75,SNR=20						
H08S1	**Diego Carcia H**	**25.63**	**246**	T	T	01 18 32.8	
	baz=67,slow=75,SNR=24						
H01W3	**Cape Leeuwin H**	**41.01**	**157**	T	T	01 37 56.9	
	baz=332,slow=76,SNR=28						
H01W2	**Cape Leeuwin H**	**41.02**	**157**	T	T	01 37 59.0	
	baz=332,slow=76,SNR=26						
H01W1	**Cape Leeuwin H**	**41.02**	**157**	T	T	01 38 00.9	
	baz=332,slow=76,SNR=27						
WRA	**Warramunga Arr**	**43.78**	**123**	P	**P**	**00 54 56.4**	**-0.3**
	0.7nm,0.7s,baz=300,slow=9.2,SNR=5.1						
ASAR	**Alice Springs**	**45.19**	**127**	P	**P**	**00 55 08.5**	**+0.6**
	0.2nm,0.5s,baz=305,slow=8.3,SNR=2.3						
KSRS	**Korea Array**	**45.36**	**36**	P	**P**	**00 55 08.0**	**-1.0**
	0.5nm,0.4s,baz=226,slow=10,SNR=4.7						
MKAR	**Makanchi Array**	**45.59**	**347**	P	**P**	**00 55 10.7**	**0.0**
	1.1nm,0.5s,baz=154,slow=9.3,SNR=15						
SONM	**Songino Array**	**45.91**	**10**	P	**P**	**00 55 13.2**	**-0.2**
	1.4nm,0.6s,baz=193,slow=11,SNR=7.3						
GEYT	**Alibeck**	**49.37**	**320**	P	**P**	**00 55 41.9**	**+1.6**
	0.5nm,0.5s,baz=142,slow=7.3,SNR=2.4						
KURBB	**Kurchatov Arra**	**50.06**	**346**	P	**P**	**00 55 45.5**	**+0.2**
	1.1nm,0.6s,baz=167,slow=6.9,SNR=8.2						
ZALV	**Zalesovo Beam**	**51.98**	**352**	P	**P**	**00 55 59.6**	**0.0**
	1.9nm,0.5s,baz=180,slow=6.6,SNR=7.6						
KLR	**Kul'dur**	**55.52**	**28**	P	**P**	**00 56 25.9**	**+0.3**
	0.1nm,0.4s,baz=259,slow=10,SNR=3.0						

IDC ***25*** *00:48:31.8±1.0, 2°.54N×96°.05E, h0^{km}, mb4.0/15, mb1 4.1/15, mb1mx3.8/65, mbtmp4.0/15, Error ellipse: s-maj=34.3km s-min=18.0km az=45.0*

NEIC ***25*** *00:48:34.4±4.2, 2°.45N×96°.02E, h18^{km}±25^{km}, mb4.4/8, Error ellipse: s-maj=12.6km s-min=6.1km az=57.0*

DJA ***25*** *00:48:36.7±0.6, 3°N±3°×9°6E±°, h11^{km}±3^{km}, M4.4/12, MLv4.4/12*

ISC 25 00:48:31.9±1.6**, 2°.38N**±0°.04×**96°.01E**±0°.05**, h5^{km}**±9^{km}**, n63, σ1^{s}08**/68**, mb4.2**/24**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNSI	**Sinabang, Aceh**	**0.32**	**85**	P	**Pn**	**00 48 42.6**	**-0.6**
SNSI				S	**Sb**	**00 48 46.9**	**+1.4**
TPTI		**1.46**	**53**	P	**Pg**	**00 49 00.0**	**+0.1**
TPTI				S	**Sb**	**00 49 18.2**	**-0.3**
GSI	**Gunungsitoli**	**1.89**	**124**	P	**Pg**	**00 49 09.0**	**+0.8**
GSI				S	**Sg**	**00 49 33.6**	**+0.8**
GSI	**Gunungsitoli**	**1.89**	**124**	*e*Pn	**Pn**	**00 49 03.8**	**-1.1**
MLSI	**Meulaboh, Aceh**	**1.92**	**12**	P	**Pb**	**00 49 06.8**	**-0.6**
MLSI				S	**Sn**	**00 49 29.5**	**-0.3**
KCSI	**Kotacane, Aceh**	**2.09**	**57**	P	**Pb**	**00 49 09.3**	**-1.1**
KCSI				S	**Sn**	**00 49 33.8**	**-0.4**
TSI	**Tuntungan**	**2.78**	**66**	P	**Pn**	**00 49 19.0**	**+1.8**
TSI				S	**Sn**	**00 49 51.4**	**+0.2**
PSI	**Prapat**	**2.94**	**82**	*e*Pn	**Pn**	**00 49 21.0**	**+1.5**
LHMI	**Lhok Sumawe**	**2.98**	**18**	P	**Pn**	**00 49 20.8**	**+0.9**
LHMI	**Lhok Sumawe**	**2.98**	**18**	*e*Pn	**Pn**	**00 49 20.1**	**+0.1**
BSI	**Banda Aceh**	**3.18**	**347**	P	**Pn**	**00 49 24.8**	**+2.1**
PBSI	**Pulau Batu**	**3.31**	**137**	P	**Pb**	**00 49 29.0**	**-2.3**
MNSI	**Mandailing Nat**	**3.90**	**114**	P	**Pn**	**00 49 36.1**	**+3.6**
IPM	**Ipoh**	**5.42**	**67**	*e*Pn	**Pn**	**00 49 54.4**	**+0.9**
KULM	**Kulim**	**5.46**	**58**	*e*Pn	**Pn**	**00 49 55.5**	**+1.5**
SKLT	**Songkhla**	**6.61**	**44**	P	Pn	00 50 16.9	+7.0
	31nm,0.9s,0.4nm						
KHON	**Khomkaen**	**15.40**	**25**	P	**P**	**00 52 16.8**	**+1.9**
CMAR	**Chiang Mai Arr**	**16.23**	**10**	Pn	**P**	**00 52 22.8**	**-1.4**
	0.2nm,0.3s,baz=195,slow=11,SNR=9.8						
CHTO	**Chiang Mai**	**16.58**	**10**	*e*Pn	**Pn**	**00 52 24.9**	**-0.5**
QIZ	**Qiongzhong**	**21.38**	**38**	*e*P	**P**	**00 53 19.8**	**-0.8**
	21nm,0.9s						
H08S2	**Diego Garcia H**	**25.49**	**247**	T	T	01 20 30.8	
	baz=67,slow=74,SNR=10						
H08S3	**Diego Garcia H**	**25.49**	**247**	T	T	01 20 33.1	
	baz=67,slow=74,SNR=14						
H08S1	**Diego Carcia H**	**25.51**	**247**	T	T	01 20 40.9	
	baz=67,slow=74,SNR=14						
NIL	**Nilore**	**37.70**	**328**	*e*P	**P**	**00 55 48.6**	**0.0**
H01W3	**Cape Leeuwin H**	**40.78**	**157**	T	T	01 39 36.1	
	baz=333,slow=76,SNR=84						
H01W2	**Cape Leeuwin H**	**40.80**	**157**	T	T	01 39 37.2	
	baz=333,slow=76,SNR=84						
H01W1	**Cape Leeuwin H**	**40.80**	**157**	T	T	01 39 37.4	
	baz=333,slow=76,SNR=79						
BJT	**Baijiatuau**	**41.69**	**23**	*e*P	**P**	**00 56 22.1**	**+0.3**
	5.9nm,0.4s						
WRA	**Warramunga Arr**	**43.66**	**122**	P	**P**	**00 56 39.5**	**+1.4**
	1.0nm,0.8s,baz=302,slow=9.0,SNR=5.7						
WRAB	**Tennant Creek**	**43.67**	**122**	*e*P	**P**	**00 56 39.4**	**+1.3**
	3.9nm,0.7s						
AAK	**Ala-Archa**	**44.46**	**337**	P	**P**	**00 56 44.0**	**-0.3**
	2.5nm,0.3s,baz=142,slow=17,SNR=3.3						
AS31	**Alice Springs**	**45.05**	**127**	*e*P	**P**	**00 56 50.0**	**+0.9**
	2.9nm,1.4s						
ASAR	**Alice Springs**	**45.05**	**127**	P	**P**	**00 56 50.0**	**+0.9**
	0.6nm,0.7s,baz=294,slow=7.3,SNR=6.2						
KS15	**Wonju Array Si**	**45.55**	**36**	*e*P	**P**	**00 56 51.5**	**-1.4**
KSAR	**Wonju Array Be**	**45.55**	**36**	P	**P**	**00 56 51.5**	**-1.4**
KSRS	**Korea Array**	**45.58**	**36**	P	**P**	**00 56 51.5**	**-1.6**
	2.0nm,0.9s,baz=234,slow=9.0,SNR=9.8						
MK01	**Makanchi Array**	**45.80**	**347**	*e*P	**P**	**00 56 54.6**	**-0.2**
MK31	**Makanchi Array**	**45.83**	**347**	*e*P	**P**	**00 56 55.1**	**+0.1**
MK32	**Makanchi Array**	**45.83**	**347**	*e*P	**P**	**00 56 54.7**	**-0.2**
MKAR	**Makanchi Array**	**45.83**	**347**	P	**P**	**00 56 54.7**	**-0.2**
	3.6nm,0.7s,baz=157,slow=8.7,SNR=22						
MAKZ	**Makanchi**	**45.91**	**347**	*e*P	**P**	**00 56 55.8**	**+0.1**
	8.8nm,1.0s						
SONA0	**Songino Array**	**46.16**	**10**	*e*P	**P**	**00 56 56.9**	**-0.8**
SONA0				*e*PcP	**PcP**	**00 58 34.4**	**+0.7**
SONM	**Songino Array**	**46.16**	**10**	P	**P**	**00 56 56.9**	**-0.8**
	3.0nm,0.8s,baz=188,slow=9.2,SNR=14						
SONM				PcP	**PcP**	**00 58 34.4**	**+0.7**
	1.1nm,0.7s,baz=194,slow=3.9,SNR=4.4						
SONA1	**Songino Array**	**46.17**	**10**	*e*P	**P**	**00 56 57.2**	**-0.7**
TLY	**Talaya**	**49.55**	**6**	*e*P	**P**	**00 57 23.3**	**-0.5**
	1.7nm,0.6s						
GEYT	**Alibeck**	**49.55**	**320**	P	**P**	**00 57 24.4**	**+0.3**
	0.6nm,0.6s,baz=124,slow=6.9,SNR=4.2						
KURBB	**Kurchatov Arra**	**50.30**	**346**	P	**P**	**00 57 29.0**	**-0.4**
	1.8nm,0.6s,baz=167,slow=7.1,SNR=16						
KURK	**Kurchatov**	**50.36**	**346**	*e*P	**P**	**00 57 29.8**	**-0.2**
ZAA0	**Zalesovo Array**	**52.22**	**352**	*e*P	**P**	**00 57 43.7**	**-0.1**
	4.7nm,0.6s						
ZALV	**Zalesovo Beam**	**52.22**	**352**	P	**P**	**00 57 43.5**	**-0.3**
	4.7nm,0.6s,baz=181,slow=6.4,SNR=19						
ZALV				PcP	**PcP**	**00 58 53.7**	**-1.7**
	0.9nm,0.6s,baz=176,slow=2.5,SNR=2.2						
ZALV				ScP	**ScP**	**01 02 54.4**	**+1.0**
	0.3nm,0.4s,baz=184,slow=4.3,SNR=2.5						
ZAA1	**Zalesovo Array**	**52.23**	**352**	*e*P	**P**	**00 57 43.5**	**-0.3**
ZAA1				*e*PcP	**PcP**	**00 58 53.7**	**-1.7**
ZAA1				*e*ScP	**ScP**	**01 02 54.4**	**+1.0**
RAYN	**Ar Rayn**	**53.16**	**298**	*e*P	**P**	**00 57 52.6**	**+1.2**
	1.2nm,0.7s						
BVAR	**Borovoye Array**	**54.76**	**341**	P	**P**	**00 58 02.0**	**-0.6**
	1.6nm,0.8s,baz=146,slow=8.0,SNR=7.3						
BRVK	**Borovoye**	**54.82**	**341**	*e*P	**P**	**00 58 02.2**	**-0.8**
KLR	**Kul'dur**	**55.75**	**28**	P	**P**	**00 58 09.5**	**-0.2**
	0.1nm,0.7s,baz=254,slow=9.4,SNR=3.4						
ABKAR	**Akbulak array**	**55.92**	**332**	*e*P	**P**	**00 58 11.4**	**+0.4**
AKTO	**Aktyubinsk**	**57.64**	**332**	P	**P**	**00 58 22.7**	**-0.5**
	1.6nm,0.8s,baz=133,slow=9.0,SNR=4.8						
ARU	**Arti**	**61.65**	**337**	P	**P**	**00 58 50.0**	**-0.7**
	0.9nm,0.4s,baz=98,slow=2.2,SNR=5.1						
BR101	**Keskin Array S**	**67.45**	**312**	*e*P	**P**	**00 59 28.9**	**-0.2**
BRTR	**Keskin Array B**	**67.45**	**312**	P	**P**	**00 59 28.9**	**-0.3**
	0.3nm,0.7s,baz=104,slow=6.1,SNR=2.5						
GERES	**GERESS Array B**	**83.15**	**319**	P	**P**	**01 01 00.4**	**+1.1**
	0.1nm,0.3s,baz=87,slow=5.2,SNR=4.4						
HFS	**Hagfors**	**84.11**	**330**	P	**P**	**01 01 03.0**	**-0.9**
	2.6nm,1.0s,baz=72,slow=9.5,SNR=2.2						
TXAR	**Lajitas Array**	**143.26**	**29**	PKP	**PKPdf**	**01 08 09.2**	**+0.8**
	0.5nm,1.0s,baz=305,slow=3.2,SNR=2.8						

IDC 25 00:59:46.4±3.9**, 5°.65S**×**130°.88E, h0^{km}, mb3.7**/1**, mb1 3.5**/3**, mb1mx3.3**/43**, mbtmp3.3**/3**, ML3.2**/2**, Error ellipse: s-maj=295.1km s-min=31.6km az=72.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.61**	**167**	Pn	Pn	01 03 15.0	+0.5
	0.1nm,0.3s,baz=346,slow=14,SNR=12						
WRA				Sn	Sn	01 05 49.2	-8.0
	0.1nm,0.3s,baz=353,slow=24,SNR=5.0						
ASAR	**Alice Springs**	**18.15**	**171**	P	Pn	01 03 59.7	-0.4
	0.1nm,0.3s,baz=352,slow=12,SNR=3.3						
MKAR	**Makanchi Array**	**67.59**	**326**	P	P	01 10 44.9	0.0
	0.2nm,0.3s,baz=118,slow=7.3,SNR=5.2						

ISK ***25*** *01:05:06.8, 38°.68N×43°.30E, h5^{km}, ML2.2/3*

CSEM ***25*** *01:05:07.8±0.2, 38°.72N×43°.29E, h15^{km}, ML2.2, Error ellipse: s-maj=5.8km s-min=4.0km az=114.0*

ISCJB ***25*** *01:05:08.2±0.6, 38°.71N±0°.03×43°.28E±0°.05, h11^{km}±7^{km}, Error ellipse: s-maj=7.7km s-min=4.5km az=33.0*

DDA ***25*** *01:05:08.3, 38°.73N×43°.26E, h7^{km}, Ml2.5*

ISC 25 01:05:07.8±1.6**, 38°.72N**±0°.02×**43°.28E**±0°.03**, h2^{km}**±14^{km}**, n18, σ0^{s}90**/31**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VANB	**Van**	**0.15**	**147**	PG	**Pg**	**01 05 11.6**	**+0.8**
VANB	**Van**	**0.15**	**147**	*e*Pg	**Pg**	**01 05 11.6**	**+0.8**
ERCV	**ERCIS-VAN**	**0.30**	**8**	PG	**Pg**	**01 05 13.9**	**+0.3**
ERCV				SG	**Sb**	**01 05 20.2**	**-1.3**
ERCV	**ERCIS-VAN**	**0.30**	**8**	*e*Pg	**Pg**	**01 05 13.9**	**+0.3**
ERCV				*e*Sg	**Sb**	**01 05 20.2**	**-1.3**
VMUR	**Van-Muradiye**	**0.35**	**40**	*i* P	**Pg**	**01 05 15.1**	**+0.6**
VMUR				*i* S	**Sb**	**01 05 21.8**	**-1.1**
VMUR	**Van-Muradiye**	**0.35**	**40**	P	**Pg**	**01 05 15.1**	**+0.6**
VMUR				S	**Sb**	**01 05 21.8**	**-1.1**
GEVA	**Gevas**	**0.45**	**203**	*i* P	**Pg**	**01 05 16.1**	**-0.2**
GEVA				*i* S	**Sb**	**01 05 24.9**	**-0.8**
GEVA	**Gevas**	**0.45**	**203**	P	**Pg**	**01 05 16.1**	**-0.2**
GEVA				S	**Sb**	**01 05 24.9**	**-0.8**
CLDR	**Caldiran**	**0.65**	**50**	PG	**Pg**	**01 05 20.5**	**+0.3**
CLDR				SG	**Sb**	**01 05 30.6**	**-1.0**
CLDR	**Caldiran**	**0.65**	**50**	*e*Pg	**Pg**	**01 05 20.5**	**+0.3**
CLDR				*e*Sg	**Sb**	**01 05 30.6**	**-1.0**
TUTA	**Tutak**	**0.77**	**332**	*i* P	**Pg**	**01 05 23.1**	**+0.6**
TUTA				*i* S	**Sb**	**01 05 34.6**	**-0.5**
TUTA	**Tutak**	**0.77**	**332**	P	**Pg**	**01 05 23.1**	**+0.6**
TUTA				S	**Sb**	**01 05 34.6**	**-0.5**
GURO	**Guroymak-BITLI**	**0.99**	**260**	PG	**Pg**	**01 05 26.9**	**+0.1**
GURO				SG	**Sb**	**01 05 41.3**	**-0.1**
GURO	**Guroymak-BITLI**	**0.99**	**260**	*e*Pg	**Pg**	**01 05 26.9**	**+0.1**
GURO				*e*Sg	**Sb**	**01 05 41.3**	**-0.1**
EATA	**Eleskirt**	**1.29**	**332**	*i* P	**Pg**	**01 05 32.0**	**-0.6**
EATA				*i* S	**Sn**	**01 05 54.0**	**+2.8**
EATA	**Eleskirt**	**1.29**	**332**	P	**Pg**	**01 05 32.0**	**-0.6**
CUKT	**Cukurca**	**1.50**	**170**	PN	**Pn**	**01 05 35.2**	**-0.6**
CUKT	**Cukurca**	**1.50**	**170**	*e*Pn	**Pn**	**01 05 35.2**	**-0.6**

ISK ***25*** *01:21:23.3, 38°.68N×43°.26E, h3^{km}±1^{km}, ML2.2/4*

ISCJB ***25*** *01:21:24.7±0.6, 38°.69N±0°.03×43°.28E±0°.07, h4^{km}±8^{km}, Error ellipse: s-maj=8.7km s-min=4.8km az=10.4*

DDA ***25*** *01:21:24.4, 38°.70N×43°.32E, h7^{km}, Ml2.6*

CSEM ***25*** *01:21:24.3±0.3, 38°.68N×43°.26E, h2^{km}, ML2.2, Error ellipse: s-maj=7.0km s-min=5.2km az=94.0*

ISC 25 01:21:24.8±1.0**, 38°.69N**±0°.03×**43°.27E**±0°.04**, h9^{km}**±9^{km}**, n18, σ0^{s}78**/28**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VANB	**Van**	**0.13**	**133**	PG	**Pg**	**01 21 28.1**	**+0.2**
VANB	**Van**	**0.13**	**133**	*e*Pg	**Pg**	**01 21 28.1**	**+0.2**
ERCV	**ERCIS-VAN**	**0.34**	**9**	PG	**Pg**	**01 21 30.5**	**-1.1**
ERCV				SG	**Sg**	**01 21 36.6**	**+0.4**
ERCV	**ERCIS-VAN**	**0.34**	**9**	*e*Pg	**Pg**	**01 21 30.5**	**-1.1**
ERCV				*e*Sg	**Sg**	**01 21 36.6**	**+0.4**
VMUR	**Van-Muradiye**	**0.39**	**38**	*i* P	**Pg**	**01 21 30.7**	**-1.8**
VMUR				*i* S	**Sg**	**01 21 37.8**	**+0.2**
VMUR	**Van-Muradiye**	**0.39**	**38**	P	**Pg**	**01 21 30.7**	**-1.8**
VMUR				S	**Sg**	**01 21 37.8**	**+0.2**
GEVA	**Gevas**	**0.41**	**204**	*i* P	**Pg**	**01 21 32.1**	**-0.8**
GEVA				*i* S	**Sb**	**01 21 40.6**	**0.0**
GEVA	**Gevas**	**0.41**	**204**	P	**Pg**	**01 21 32.1**	**-0.8**
GEVA				S	**Sb**	**01 21 40.6**	**0.0**
CLDR	**Caldiran**	**0.68**	**48**	PG	**Pg**	**01 21 38.3**	**+0.2**
CLDR	**Caldiran**	**0.68**	**48**	*e*Pg	**Pg**	**01 21 38.3**	**+0.2**
TUTA	**Tutak**	**0.80**	**334**	*i* P	**Pg**	**01 21 39.7**	**-0.5**
TUTA				*i* S	**Sg**	**01 21 51.2**	**+0.5**
TUTA	**Tutak**	**0.80**	**334**	P	**Pg**	**01 21 39.7**	**-0.5**
TUTA				S	**Sg**	**01 21 51.2**	**+0.5**
GURO	**Guroymak-BITLI**	**0.98**	**262**	PG	**Pg**	**01 21 42.9**	**-0.7**
GURO	**Guroymak-BITLI**	**0.98**	**262**	*e*Pg	**Pg**	**01 21 42.9**	**-0.7**
EATA	**Eleskirt**	**1.32**	**333**	*i* P	**Pg**	**01 21 51.0**	**+0.8**
EATA				*i* S	**Sn**	**01 22 08.0**	**+0.4**
EATA	**Eleskirt**	**1.32**	**333**	P	**Pg**	**01 21 51.0**	**+0.8**
EATA				S	**Sn**	**01 22 08.0**	**+0.4**
CUKT	**Cukurca**	**1.46**	**169**	PN	**Pn**	**01 21 51.3**	**-0.1**
CUKT	**Cukurca**	**1.46**	**169**	*e*Pn	**Pn**	**01 21 51.3**	**-0.1**

BJI ***25*** *01:31:36.1, 36°.87N×140°.84E, h108^{km}, mb4.7/12, mB5.2/3*

ISCJB ***25*** *01:31:38.7±0.3, 36°.78N±0°.03×140°.55E±0°.04, h115^{km}±1^{km}, mb4.2/48, Error ellipse: s-maj=5.1km s-min=4.1km az=26.2*

IDC ***25*** *01:31:40.0±0.5, 36°.78N×140°.52E, h109^{km}±4^{km}, mb3.8/24, mb1 3.9/28, mb1mx3.8/67, mbtmp4.1/28, Error ellipse: s-maj=8.8km s-min=7.4km az=144.0*

NEIC ***25*** *01:31:39.3±0.4, 36°.83N×140°.59E, h103^{km}±4^{km}, mb4.5/11, Error ellipse: s-maj=5.3km s-min=4.4km az=91.0*

MOS ***25*** *01:31:39.0±1.4, 37°.00N×140°.51E, h113^{km}, mb4.5/17, Error ellipse: s-maj=9.2km s-min=6.1km az=117.0*

JMA ***25*** *01:31:40.7±0.1, 36°.79N×140°.49E, h105^{km}±1^{km}, M4.0 Broadband fault plane solution: P waves. NP1: ϕ_s227.00000°, δ73.00000°, λ-61.00000°. NP2: ϕ_s345.00000°, δ34.00000°, λ-147.00000°. Principal axes: T Plg22.0000°, Azm295.0000°; N Plg28.0000°, Azm37.0000°; P Plg53.0000°, Azm172.0000°;*

JMA Felt II J1.

ISC 25 01:31:39.3±0.4**, 36°.77N**±0°.04×**140°.62E**±0°.05**, h109^{km}**±3^{km}**, h109^{km}:pP-P, n138, σ1^{s}62**/168**, mb4.2**/48**, 3C-12D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHO	**Hitachi**	**0.16**	**194**	⇓P	**Pn**	**01 31 55.6**	**+1.0**
JHO				S	**Sn**	**01 32 06.5**	**+0.6**
JFFD	**Fukushimafurud**	**0.32**	**352**	P	**Pn**	**01 31 56.0**	**+0.9**
JFFD				S	**Sn**	**01 32 07.1**	**+0.1**
ONAJ	**Iwakimizuishiy**	**0.36**	**24**	⇓P	**Pn**	**01 31 56.6**	**+1.2**
ONAJ				S	**Sn**	**01 32 08.4**	**+1.0**
JFK	**Kawauchi**	**0.63**	**19**	⇓P	**Pn**	**01 31 58.2**	**+1.1**
JFK				S	**Sn**	**01 32 11.0**	**+0.6**
JFT	**Otama**	**0.78**	**343**	⇓P	**Pn**	**01 31 59.0**	**+0.7**
JFT				S	**Sn**	**01 32 12.9**	**+0.3**
JFY	**Yanaizu**	**0.97**	**311**	⇓P	**Pn**	**01 32 00.5**	**+0.4**
JFY				S	**Sn**	**01 32 15.2**	**-0.6**
JAG	**Ashikaga**	**1.00**	**250**	⇓P	**Pn**	**01 32 00.8**	**+0.4**
JAG				S	**Sn**	**01 32 15.5**	**-0.8**
JKT	**Katashina**	**1.10**	**270**	⇓P	**Pn**	**01 32 01.9**	**+0.3**
JKT				S	**Sn**	**01 32 18.4**	**0.0**
JMM	**Marumori**	**1.10**	**7**	⇓P	**Pn**	**01 32 02.2**	**+0.7**
JMM				S	**Sn**	**01 32 17.8**	**-0.5**
JHK	**Hiroka**	**1.37**	**291**	⇓P	**Pn**	**01 32 04.7**	**+0.2**
JHK				S	**Sn**	**01 32 22.7**	**-0.9**
JNS	**Sasagawa**	**1.47**	**316**	⇓P	**Pn**	**01 32 05.7**	**0.0**
JNS				S	**Sn**	**01 32 24.2**	**-1.6**
MJAR	**Matsushiro Arr**	**1.95**	**264**	P	**Pn**	**01 32 11.7**	**0.0**
	34nm,0.3s,baz=76,slow=9.0,SNR=312						
MJAR				S	**Sn**	**01 32 35.0**	**-1.3**
	22nm,0.3s,baz=83,slow=21,SNR=14						
MAJO	**Matsushiro**	**1.95**	**264**	*e*Pn	**Pn**	**01 32 12.2**	**+0.5**
MAJO				*e*Sn	**Sn**	**01 32 35.1**	**-1.2**
MAJO	**Matsushiro**	**1.95**	**264**	*c* *i*P	**Pn**	**01 32 12.1**	**+0.5**
MAT	**Matsushiro**	**1.95**	**264**	P	**Pn**	**01 32 12.1**	**+0.4**
MAT				S	**Sn**	**01 32 34.1**	**-2.3**
MJB9	**Matsu-Tunnel**	**1.95**	**264**	*e*Pn	**Pn**	**01 32 12.2**	**+0.5**
MJB9				*e*Sn	**Sn**	**01 32 35.6**	**-0.8**
INU	**Inuyama**	**3.24**	**245**	*e*Pn	**Pn**	**01 32 28.7**	**+0.2**
INU				*e*Sn	**Sn**	**01 33 06.1**	**-0.4**
JHJ	**Hachijo jima 2**	**3.71**	**191**	P	**Pn**	**01 32 35.9**	**+1.2**
	30nm,0.3s,baz=138,slow=23,SNR=12						
JHJ				S	**Sn**	**01 33 17.0**	**-0.6**
	112nm,0.3s,baz=49,slow=24,SNR=18						
JHJ2	**Mitsune**	**3.71**	**190**	*e*Pn	**Pn**	**01 32 35.2**	**+0.5**
JHJ2				*e*Sn	**Sn**	**01 33 17.5**	**-0.1**
ERM	**Erimo**	**5.59**	**20**	*e*Pn	**Pn**	**01 32 59.2**	**-0.9**
ERM				*e*Sn	**Sn**	**01 33 58.4**	**-4.7**
ERM	**Erimo**	**5.59**	**20**	*i* P	**Pn**	**01 32 58.9**	**-1.2**
ASAJ	**Asahikawa**	**7.49**	**11**	P	**Pn**	**01 33 24.3**	**-1.5**
	1.5nm,0.3s,baz=226,slow=18,SNR=6.3						
ASAJ				S	**Sn**	**01 34 42.6**	**-6.5**
	1.4nm,0.3s,baz=264,slow=33,SNR=2.4						
JNU	**Nakatsue**	**8.78**	**248**	P	**Pn**	**01 33 44.1**	**+0.7**
	1.1nm,0.3s,baz=48,slow=11,SNR=16						
MSHR	**Mys Shultsa**	**9.32**	**311**	*i* P	**Pn**	**01 33 49.2**	**-1.3**
CBIJ	**Chichi jima**	**9.74**	**172**	*e*Pn	**Pn**	**01 33 54.6**	**-1.8**
CBIJ				*e*Sn	**Sn**	**01 35 36.6**	**-7.3**
JCJ	**Chichijima**	**9.74**	**172**	P	**Pn**	**01 33 54.6**	**-1.8**
	13nm,0.3s,baz=342,slow=20,SNR=12						
JCJ				S	Sn	01 35 32.4	-12
	5.9nm,0.3s,baz=278,slow=20,SNR=2.2						
USRK	**Ussuriysk Ar.**	**9.91**	**321**	P	**Pn**	**01 33 58.4**	**-0.2**
	baz=136,slow=12						
USA0B	**Ussuriysk Arra**	**9.91**	**321**	*e*Pn	**Pn**	**01 33 57.5**	**-1.0**
KSRS	**Korea Array**	**10.16**	**278**	P	**Pn**	**01 34 03.6**	**+1.5**
	0.5nm,0.3s,baz=92,slow=14,SNR=57						
KS15	**Wonju Array Si**	**10.19**	**278**	*e*Pn	**Pn**	**01 34 03.2**	**+0.7**
KSAR	**Wonju Array Be**	**10.19**	**278**	P	**Pn**	**01 34 03.6**	**+1.1**
KSAR	**Wonju Array Be**	**10.19**	**278**	P	**Pn**	**01 34 03.6**	**+1.1**
YSS	**Yuzh-Sakhalins**	**10.30**	**8**	⇑*e*P	**Pn**	**01 34 02.2**	**-1.7**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.5s						
TJN	**Taejon**	**10.67**	**272**	*i* P	**Pn**	**01 34 05.5**	**-3.4**
KLR	**Kul'dur**	**14.03**	**335**	P	**Pn**	**01 34 50.5**	**-2.6**
	comp=Z,0.0nm,0.3s,baz=138,slow=11,SNR=7.3						
KLR				S	**Sn**	**01 37 29.4**	**+1.8**
	comp=Z,0.0nm,0.3s,baz=347,slow=17,SNR=1.7						
KLR	**Kul'dur**	**14.03**	**335**	*i* P	**Pn**	**01 34 49.4**	**-3.7**
TYV	**Tymovskoe**	**14.16**	**5**	*e*P	**P**	**01 34 58.5**	**-0.4**
TYV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ZEA	**Zeya**	**19.34**	**336**	*e*P	**Pn**	**01 35 59.1**	**+0.9**
ZEA				pmax	pmax		
	comp=Z,35nm,1.0s						
MA2	**Magadan**	**23.75**	**13**	*i* P	**P**	**01 36 36.8**	**-4.5**
MA2				pmax	pmax		
	comp=Z,18nm,1.1s						
XAN	**Xi'an**	**25.92**	**273**	P	P	01 37 15.3	+14
XAN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
YAK	**Yakutsk**	**26.19**	**348**	*i* P	**P**	**01 36 59.5**	**-3.9**
YAK				pmax	pmax		
	comp=Z,17nm,0.8s						
ENH	**Enshi**	**26.67**	**265**	*e*P	**P**	**01 37 07.8**	**-0.4**
	comp=Z,13nm,0.8s						
ULN	**Ulaanbaatar**	**26.98**	**305**	*e*P	**P**	**01 37 10.4**	**-0.4**
	comp=Z,4.5nm,0.7s						
ULN	**Ulaanbaatar**	**26.98**	**305**	*i* P	**P**	**01 37 08.3**	**-2.5**
ULN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
SONA1	**Songino Array**	**27.40**	**305**	*e*P	**P**	**01 37 14.1**	**-0.6**
SONA0	**Songino Array**	**27.41**	**305**	*e*P	**P**	**01 37 13.6**	**-1.0**
SONM	**Songino Array**	**27.41**	**305**	P	**P**	**01 37 13.6**	**-1.0**
	comp=Z,4.3nm,0.6s,baz=108,slow=9.0,SNR=29						
BOD	**Bodaibo**	**27.42**	**329**	*e*P	**P**	**01 37 14.2**	**-0.2**
BOD				pmax	pmax		
	comp=Z,11nm,0.8s						
H11N2	**WAKE ISLAND Hy**	**28.57**	**119**	T	T	02 07 44.2	
	baz=313,slow=75,SNR=56						
H11N1	**WAKE ISLAND Hy**	**28.58**	**119**	T	T	02 07 44.6	
	baz=313,slow=75,SNR=69						
H11N3	**WAKE ISLAND Hy**	**28.59**	**119**	T	T	02 07 45.4	
	baz=313,slow=75,SNR=72						
H11S1	**WAKE ISLAND Hy**	**29.26**	**121**	T	T	02 08 30.2	
	baz=315,slow=76,SNR=83						
H11S3	**WAKE ISLAND Hy**	**29.26**	**121**	T	T	02 08 36.7	
	baz=315,slow=76,SNR=71						
H11S2	**WAKE ISLAND Hy**	**29.28**	**121**	T	T	02 08 35.6	
	baz=315,slow=76,SNR=48						
DGZ	**Jazzator, Alta**	**40.03**	**306**	*i* P	**P**	**01 39 02.2**	**-1.4**
DGZ				pmax	pmax		
	comp=Z,11nm,0.9s						
CM31	**Chiang Mai Arr**	**40.81**	**255**	*e*P	**P**	**01 39 10.5**	**+0.3**
CMAR	**Chiang Mai Arr**	**40.81**	**255**	P	**P**	**01 39 10.5**	**+0.3**
	comp=Z,0.9nm,0.3s,baz=37,slow=8.0,SNR=4.2						
ZAA1	**Zalesovo Array**	**41.62**	**313**	*e*P	**P**	**01 39 16.6**	**+0.1**
ZALV	**Zalesovo Beam**	**41.62**	**313**	P	**P**	**01 39 16.6**	**+0.1**
	comp=Z,5.6nm,0.4s,baz=93,slow=6.2,SNR=26						
ZALV	**Zalesovo Beam**	**41.62**	**313**	*e*P	**P**	**01 39 16.0**	**-0.4**
NVS	**Novosibirsk**	**42.56**	**314**	*e*P	**P**	**01 39 23.8**	**-0.2**
MK01	**Makanchi Array**	**43.72**	**302**	*e*P	**P**	**01 39 33.3**	**-0.2**
MK31	**Makanchi Array**	**43.72**	**302**	*e*P	**P**	**01 39 33.7**	**+0.2**
MK31	**Makanchi Array**	**43.72**	**302**	*e*P	**P**	**01 39 33.7**	**+0.2**
MK32	**Makanchi Array**	**43.72**	**302**	*e*P	**P**	**01 39 33.4**	**-0.1**
MKAR	**Makanchi Array**	**43.72**	**302**	P	**P**	**01 39 33.4**	**-0.1**
	comp=Z,3.6nm,0.6s,baz=86,slow=9.9,SNR=38						
MKAR	**Makanchi Array**	**43.72**	**302**	*e*P	**P**	**01 39 33.7**	**+0.2**
	comp=Z,40nm,0.6s						
MKAR	**Makanchi Array**	**43.72**	**302**	*e*P	**P**	**01 39 33.7**	**+0.2**
MKAR				pmax	pmax		
	comp=Z,40nm,0.6s						
KURK	**Kurchatov**	**45.59**	**308**	*e*P	**P**	**01 39 48.0**	**-0.3**
	comp=Z,14nm,0.8s						
KURK				pP	**pP**	**01 40 13.8**	**+0.2**
KURK	**Kurchatov**	**45.59**	**308**	*i* P	**P**	**01 39 45.6**	**-2.7**
KURK				pmax	pmax		
	comp=Z,11nm,0.8s						
KURBB	**Kurchatov Arra**	**45.66**	**308**	P	**P**	**01 39 48.7**	**-0.1**
	comp=Z,7.7nm,0.6s,baz=84,slow=8.0,SNR=71						
KURBB				pP	**pP**	**01 40 13.8**	**-0.4**
	comp=Z,3.9nm,0.8s,baz=84,slow=8.0,SNR=3.6						
PDGK	**Podgornoye**	**46.33**	**298**	P	**P**	**01 39 54.2**	**-0.2**
PDGK				pmax	pmax		
	comp=Z,21nm,0.9s						
KDAK	**Kodiak Island**	**47.72**	**42**	P	**P**	**01 40 04.1**	**-0.6**
	comp=Z,1.8nm,0.8s,baz=273,slow=9.7,SNR=3.3						
KDAK				pP	**pP**	**01 40 31.8**	**+1.5**
	comp=Z,3.4nm,0.7s,baz=256,slow=3.8,SNR=3.4						
AAK	**Ala-Archa**	**50.05**	**298**	*i* P	**P**	**01 40 20.2**	**-2.8**
AAK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
ILAR	**Eielson Array**	**50.06**	**32**	P	**P**	**01 40 23.3**	**+0.8**
	comp=Z,0.4nm,0.7s,baz=276,slow=8.1,SNR=3.6						
ILAR				pP	**pP**	**01 40 49.2**	**+0.9**
	comp=Z,1.4nm,0.7s,baz=275,slow=6.3,SNR=11						
ILB	**Eielson Array**	**50.06**	**32**	*e*P	**P**	**01 40 23.3**	**+0.8**

BVAR	**Borovoye Array**	**50.28**	**312**	P	**P**	**01 40 24.4**	**0.0**
	comp=Z,2.0nm,0.5s,baz=85,slow=6.9,SNR=14						
BRVK	**Borovoye**	**50.33**	**312**	*i* P	**P**	**01 40 20.9**	**-3.9**
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
MNAS	**Manas**	**51.50**	**299**	P	**P**	**01 40 34.7**	**+0.8**
SFK	**Sufi-Kurgan**	**51.57**	**295**	P	**P**	**01 40 35.4**	**+0.8**
KK31	**Karatay Array**	**52.70**	**300**	*e*P	**P**	**01 40 43.4**	**+0.8**
KK31	**Karatay Array**	**52.70**	**300**	*e*P	**P**	**01 40 43.4**	**+0.8**
KKAR	**Karatay Array**	**52.70**	**300**	*e*P	**P**	**01 40 43.4**	**+0.8**
KKAR	**Karatay Array**	**52.70**	**300**	*e*P	**P**	**01 40 43.4**	**+0.8**
ARU	**Arti**	**56.13**	**318**	*e*P	**P**	**01 41 07.3**	**+0.1**
	comp=Z,11nm,0.9s						
ARU	**Arti**	**56.13**	**318***c*	*i*P	**P**	**01 41 07.1**	**-0.1**
ARU						01 41 57.5	
ARU				S	**S**	**01 48 51.1**	**+3.5**
ARU				SS	**SS**	**01 52 36.9**	**+2.0**
ARU				pmax	pmax		
	comp=Z,11nm,0.8s						
WRAB	**Tennant Creek**	**56.71**	**187**	*e*P	**P**	**01 41 12.4**	**+0.8**
	comp=Z,9.3nm,0.8s						
WRAB	**Tennant Creek**	**56.71**	**187**	*i* P	**P**	**01 41 09.7**	**-1.9**
WRAB				pmax	pmax		
	comp=Z,6.0nm,0.7s						
WB2	**Warramunga Arr**	**56.72**	**187**	*e*P	**P**	**01 41 12.3**	**+0.7**
WR1	**Warramunga Arr**	**56.72**	**187**	*e*P	**P**	**01 41 12.3**	**+0.7**
	comp=Z,12nm,0.6s						
WRA	**Warramunga Arr**	**56.72**	**187**	P	**P**	**01 41 12.3**	**+0.7**
	comp=Z,12nm,0.6s,baz=4.6,slow=7.4,SNR=202						
KBL	**Kabul**	**56.91**	**291**	P	**P**	**01 41 12.6**	**-0.7**
ABKAR	**Akbulak array**	**57.62**	**310**	*e*P	**P**	**01 41 17.7**	**-0.1**
AKTO	**Aktyubinsk**	**58.38**	**312**	P	**P**	**01 41 23.1**	**+0.1**
	comp=Z,1.2nm,0.6s,baz=88,slow=11,SNR=5.7						
AS01	**Alice Springs**	**60.44**	**187**	*e*P	**P**	**01 41 38.3**	**+0.9**
AS31	**Alice Springs**	**60.44**	**187**	*e*P	**P**	**01 41 38.6**	**+1.1**
	comp=Z,1.2nm,0.5s						
ASAR	**Alice Springs**	**60.44**	**187**	P	**P**	**01 41 38.6**	**+1.1**
	comp=Z,2.1nm,0.6s,baz=14,slow=5.8,SNR=16						
GEYT	**Alibeck**	**63.40**	**299**	P	**P**	**01 41 58.5**	**+1.2**
	comp=Z,0.6nm,0.6s,baz=51,slow=4.6,SNR=2.9						
ARA0	**ARCESS Array S**	**64.02**	**339**	*e*P	**P**	**01 42 00.9**	**+0.1**
ARCES	**ARCESS Array B**	**64.02**	**339**	P	**P**	**01 42 00.9**	**+0.1**
	comp=Z,0.5nm,0.4s,baz=53,slow=8.1,SNR=9.2						
OBN	**Obninsk**	**67.92**	**323**	*e*P	**P**	**01 42 22.9**	**-3.1**
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
STKA	**Stephens Creek**	**68.30**	**179**	P	**P**	**01 42 30.0**	**+1.5**
	comp=Z,2.9nm,0.8s,baz=323,slow=12,SNR=3.1						
STKA	**Stephens Creek**	**68.30**	**179**	*e*P	**P**	**01 42 30.0**	**+1.5**
	comp=Z,2.2nm,1.3s						
STKA	**Stephens Creek**	**68.30**	**179**	*e*P	**P**	**01 42 30.0**	**+1.5**
STKA				pmax	pmax		
	comp=Z,2.0nm,1.3s						
VSR	**Storozhevoye**	**68.71**	**319**	*i* P	**P**	**01 42 28.9**	**-2.1**
VSR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
FIA0	**FINESS Array S**	**68.75**	**332**	*e*P	**P**	**01 42 31.2**	**+0.2**
FIA0	**FINESS Array S**	**68.75**	**332**	*e*P	**P**	**01 42 31.2**	**+0.2**
FINES	**FINESS Array B**	**68.75**	**332**	P	**P**	**01 42 31.2**	**+0.2**
	comp=Z,1.7nm,0.7s,baz=49,slow=6.4,SNR=9.8						
FINES				pP	**pP**	**01 42 57.6**	**-0.6**
	comp=Z,2.5nm,0.8s,baz=44,slow=6.3,SNR=2.6						
VSU	**Vasula**	**70.36**	**329**	*i* P	**P**	**01 42 36.3**	**-4.6**
VSU				pmax	pmax		
	comp=Z,28nm,1.1s						
KBZ	**Khabaz**	**70.59**	**310**	P	**P**	**01 42 43.5**	**+0.9**
	comp=Z,1.9nm,0.7s,baz=41,slow=4.8,SNR=5.6						
KIV	**Kislovodsk**	**70.59**	**311**	*e*P	**P**	**01 42 38.1**	**-4.7**
KIV				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HFS	**Hagfors**	**74.06**	**335**	P	**P**	**01 43 02.7**	**-0.3**
	comp=Z,1.0nm,0.5s,baz=60,slow=6.8,SNR=11						
AKASG	**Malin Array Be**	**74.11**	**322**	P	**P**	**01 43 03.4**	**-0.1**
	comp=Z,1.2nm,0.4s,baz=46,slow=6.1,SNR=6.8						
AKBB	**Malin Array Si**	**74.11**	**322**	*e*P	**P**	**01 43 03.4**	**-0.1**
	comp=Z,3.0nm,0.8s						
AKBB	**Malin Array Si**	**74.11**	**322**	*e*P	**P**	**01 43 03.4**	**-0.1**
AKBB				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KIEV	**Kiev**	**74.12**	**322**	*i* P	**P**	**01 43 00.4**	**-3.1**
KIEV				pmax	pmax		
	comp=Z,2.0nm,1.0s						
NB2	**NORSAR Subarra**	**74.18**	**337**	P	**P**	**01 43 04.0**	**+0.3**
	comp=Z,0.6nm,0.5s,baz=42,slow=5.9						
NB2	**NORSAR Subarra**	**74.18**	**337**	P	**P**	**01 43 04.0**	**+0.3**
NOA	**NORSAR Array B**	**74.18**	**337**	P	**P**	**01 43 04.1**	**+0.3**
	comp=Z,1.4nm,0.7s,baz=40,slow=5.8,SNR=7.4						
MINS	**Minaret Summit**	**75.62**	**54**	*e*P	**P**	**01 43 15.8**	**+3.0**
NV01	**Mina Array Sit**	**75.66**	**53**	*e*P	**P**	**01 43 14.2**	**+1.3**
NVAR	**Mina Array Bea**	**75.66**	**53**	P	**P**	**01 43 14.2**	**+1.3**
	comp=Z,0.3nm,0.6s,baz=319,slow=5.4,SNR=7.3						
NVAR				pP	**pP**	**01 43 42.3**	**+1.8**
	comp=Z,0.5nm,0.7s,baz=293,slow=4.3,SNR=2.8						
BUR04	**Bucovina Ar. S**	**78.12**	**321**	*e*P	**P**	**01 43 26.8**	**+0.4**
PD31	**Pinedale Array**	**78.31**	**45**	*e*P	**P**	**01 43 27.9**	**+0.3**
PDAR	**Pinedale Array**	**78.31**	**45**	P	**P**	**01 43 27.9**	**+0.3**
	comp=Z,0.4nm,0.7s,baz=129,slow=2.1,SNR=4.8						
PDAR				pP	**pP**	**01 43 57.0**	**+1.5**
	comp=Z,0.4nm,0.7s,baz=291,slow=1.3,SNR=2.9						
BR101	**Keskin Array S**	**78.55**	**311**	*e*P	**P**	**01 43 29.8**	**+0.8**
BRTR	**Keskin Array B**	**78.55**	**311**	P	**P**	**01 43 29.8**	**+0.8**
	comp=Z,0.6nm,0.7s,baz=130,slow=3.9,SNR=3.6						
BRTR				pP	**pP**	**01 43 57.0**	**+0.2**
	comp=Z,0.8nm,0.8s,baz=77,slow=5.3,SNR=3.4						
MDND	**Maddock**	**80.10**	**36**	*e*P	**P**	**01 43 37.1**	**+0.1**
	comp=Z,88nm,0.6s						
CLL	**Collm**	**81.00**	**330**	⇓*i*P	**P**	**01 43 42.4**	**+0.6**
	comp=Z,3.0nm,0.9s						
CLL				*i* pP	**pP**	**01 44 09.5**	**-0.2**
CLL				*e*PP	**PP**	**01 46 48.0**	**+0.8**
CLL	**Collm**	**81.00**	**330**	⇓*i*P	**P**	**01 43 42.4**	**+0.6**
CLL				*i* *PP	**pP**	**01 44 09.5**	**-0.2**
CLL				pmax	pmax		
	comp=Z,86nm,0.9s						
GEC2	**GERESS Array S**	**82.60**	**328**	*e*P	**P**	**01 43 50.8**	**+0.5**
	comp=Z,2.6nm,1.3s						
GEC2	**GERESS Array S**	**82.60**	**328**	*e*P	**P**	**01 43 50.8**	**+0.5**
GEC2				pmax	pmax		
	comp=Z,3.0nm,1.3s						
GERES	**GERESS Array B**	**82.60**	**328**	P	**P**	**01 43 50.8**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=43,slow=6.0,SNR=5.7						
GERES				pP	**pP**	**01 44 17.9**	**-0.5**
	comp=Z,0.7nm,0.9s,baz=27,slow=6.6,SNR=3.3						
EKA	**Eskdalemuir Ar**	**83.16**	**340**	P	**P**	**01 43 54.0**	**+1.0**
	comp=Z,0.3nm,0.4s,baz=27,slow=4.8,SNR=3.0						
EKA	**Eskdalemuir Ar**	**83.16**	**340**	*e*P	**P**	**01 43 54.0**	**+1.0**
LTX	**Lajitas**	**90.79**	**52**	*e*P	**P**	**01 44 32.6**	**+2.0**
LTX	**Lajitas**	**90.79**	**52**	*e*P	**P**	**01 44 32.6**	**+2.0**
TXAR	**Lajitas Array**	**90.79**	**52**	P	**P**	**01 44 32.6**	**+2.0**
	comp=Z,0.5nm,0.6s,baz=295,slow=3.0,SNR=8.1						
TXAR				pP	**pP**	**01 45 00.4**	**+1.4**
	comp=Z,0.4nm,0.7s,baz=287,slow=3.4,SNR=4.3						

IDC 25 01:33:22.3±8.9**, 0°.02S×94°.31E, h0km, mb3.7**/5**, mb1 3.8**/5**, mb1mx3.4**/64**, mbtmp3.7**/5**, Error ellipse: s-maj=220.1km s-min=82.5km az=135.0, Southwest of Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	**Makanchi Array**	**47.80**	**349**	P	P	01 42 01.0	-0.5
	0.3nm,0.4s,baz=179,slow=8.0,SNR=3.6						
SONM	**Songino Array**	**48.81**	**11**	P	P	01 42 09.0	-0.4
	0.3nm,0.6s,baz=188,slow=9.5,SNR=1.8						
KURBB	**Kurchatov Arra**	**52.22**	**347**	P	P	01 42 34.7	-0.2
	0.4nm,0.7s,baz=172,slow=7.2,SNR=3.8						
ZALV	**Zalesovo Beam**	**54.36**	**353**	P	P	01 42 51.3	+0.6
	1.3nm,0.4s,baz=166,slow=7.8,SNR=4.9						
GERES	**GERESS Array B**	**83.83**	**319**	P	P	01 45 53.9	0.0
	0.5nm,0.6s,baz=101,slow=5.2,SNR=5.2						

JMA 25 01:35:01.9±0.1**, 39°.21N×142°.40E, h33km**±1km**, M3.7, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MIYJ	**Miyakonagasawa**	**0.58**	**309**	P	Pb	01 35 13.4	-0.4
MIYJ				S	Sb	01 35 21.4	-0.5
OFUJ	**Ofunato**	**0.58**	**257**	P	Pb	01 35 13.6	-0.2
OFUJ				S	Sb	01 35 21.6	-0.4
JTH	**Tanohata**	**0.84**	**331**	P	Pn	01 35 17.4	0.0
JTH				S	Sn	01 35 28.6	0.0
JOM	**Ohasama**	**0.90**	**287**	P	Pn	01 35 18.5	+0.3
JOM				S	Sb	01 35 30.4	-0.3
JMK	**Ichinoseki**	**0.95**	**255**	P	Pn	01 35 19.1	+0.1
JMK				S	Sn	01 35 31.6	+0.2
JIO	**Ouri**	**1.11**	**228**	P	Pn	01 35 20.8	-0.4
JIO				S	Sn	01 35 34.7	-0.7
JKZ	**Kuzumaki**	**1.13**	**313**	P	Pn	01 35 22.2	+0.7
JKZ				S	Sb	01 35 36.8	-0.6
JANG	**Nango**	**1.35**	**330**	P	Pn	01 35 24.9	+0.5
JANG				S	Sn	01 35 42.2	+1.0
JRG	**Rokugo**	**1.38**	**278**	P	Pb	01 35 26.4	-0.8
JRG				S	Sb	01 35 45.0	+0.5

IDC 25 01:38:54.8±5.5**, 16°.40S×173°.36W, h0km, mb3.8**/2**, mb1 4.0**/2**, mb1mx3.4**/47**, mbtmp3.8**/2**, Error ellipse: s-maj=331.0km s-min=38.3km az=3.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**49.66**	**258**	P	P	01 47 47.9	-0.9
	0.2nm,0.4s,baz=95,slow=7.8,SNR=7.9						
ASAR	**Alice Springs**	**49.84**	**253**	P	P	01 47 50.8	+0.6
	1.8nm,0.5s,baz=88,slow=8.2,SNR=24						
TORD	**Torodi Ar. Bea**	**174.22**	**123**	PKPab	PKPab	02 00 38.8	-0.5
	baz=211,slow=4.1						

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*IDC **25** 01:44:49.3±6.4, 5°.94N×127°.16E, h59km±52km, mb3.7/7, mb1 3.8/7, mb1mx3.4/54, mbtmp4.0/7, MS4.5/1, Ms1 4.5/1, ms1mx3.7/48, Error ellipse: s-maj=98.0km s-min=14.4km az=62.0*

*NEIC **25** 01:44:49.5±1.7, 5°.90N×127°.12E, h64km±16km, mb4.5/14, Error ellipse: s-maj=18.6km s-min=7.2km az=70.0*

*MAN **25** 01:44:49.0, 5°.58N×126°.64E, h25km, mb4.7, ML3.6, MS3.5*

ISC 25 01:44:49.5±1.7**, 5°.62N**±0°.08×**126°.7E**±0°.1**, h62km**±14km**, n44,** σ**1s.65**/48**, mb4.3**/20**, 1C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	**Don Marcelino,**	**1.10**	**296**	*e*P	**Pn**	**01 45 07.3**	**-1.7**
DDMP				*e*S	**Sn**	**01 45 20.5**	**-3.0**
MATI	**Mati**	**1.39**	**341**	*e*P	**Pn**	**01 45 12.7**	**-0.1**
MATI				*e*S	**Sn**	**01 45 30.8**	**+0.5**
GSPH	**General Santos**	**1.81**	**285**	⇓*i*P	**Pn**	**01 45 16.1**	**-2.5**
DAV	**Davao City (W)**	**1.82**	**322**	P	**Pn**	**01 45 19.5**	**+0.8**
	61nm,0.3s,baz=137,slow=0.8,SNR=4.8						
DAV				S	**Sn**	**01 45 43.5**	**+2.8**
	180nm,0.3s,baz=298,slow=21,SNR=8.7						
DMPH	**Davao City--Mi**	**1.88**	**321**	⇑*e*P	Pn	01 45 22.7	+3.3
DMPH				*e*S	**Sn**	**01 45 44.7**	**+2.5**
SKMP	**Bagumbayan, Su**	**2.33**	**293**	*e*P	**Pn**	**01 45 24.8**	**-0.8**
SKMP				*e*S	**Sn**	**01 45 53.9**	**+0.7**
BUKP	**Musuan**	**2.77**	**324**	*e*P	**Pn**	**01 45 32.7**	**+1.0**
BUKP				*e*S	**Sn**	**01 46 06.0**	**+2.0**
BUTP	**Butuan**	**3.50**	**342**	*e*P	Pn	01 45 45.2	+3.7
BUTP				*e*S	Sn	01 46 34.1	+13
SBUM	**Sibu**	**14.79**	**258**	*e*Pn	**P**	**01 48 22.3**	**+2.5**
	4.4nm,0.7s						
PMG	**Port Moresby**	**25.26**	**126**	LR	LR	02 00 54.8	
	comp=Z,1μm,21.2s,baz=324,slow=38						
WRAB	**Tennant Creek**	**26.48**	**164**	*e*P	**P**	**01 50 21.4**	**+0.2**
	12nm,1.5s						
WR1	**Warramunga Arr**	**26.49**	**164**	*e*P	**P**	**01 50 22.6**	**+1.4**
	12nm,1.5s						
WR1				*e*PcP	**PcP**	**01 53 45.6**	**+0.6**
WRA	**Warramunga Arr**	**26.49**	**164**	P	**P**	**01 50 22.6**	**+1.4**
	1.1nm,0.6s,baz=339,slow=10,SNR=21						
WRA				PcP	**PcP**	**01 53 45.6**	**+0.6**
	0.4nm,0.9s,baz=347,slow=2.5,SNR=2.5						
WB2	**Warramunga Arr**	**26.49**	**164**	*e*P	**P**	**01 50 23.0**	**+1.7**
	8.3nm,1.2s						
MBWA	**Marble Bar**	**27.48**	**194**	*e*P	**P**	**01 50 30.7**	**+0.6**
	18nm,1.3s						
AS31	**Alice Springs**	**29.95**	**167**	*e*P	**P**	**01 50 54.0**	**+1.9**
	2.5nm,1.4s						
AS31				*e*PcP	**PcP**	**01 53 54.9**	**+1.4**
ASAR	**Alice Springs**	**29.95**	**167**	P	**P**	**01 50 54.0**	**+1.9**
	0.4nm,0.4s,baz=345,slow=7.1,SNR=8.8						
ASAR				PcP	**PcP**	**01 53 54.9**	**+1.4**
	0.4nm,0.5s,baz=343,slow=2.7,SNR=4.4						
AS01	**Alice Springs**	**29.96**	**167**	*e*P	**P**	**01 50 53.5**	**+1.4**
BJT	**Baijiatuau**	**35.53**	**346**	*e*P	**P**	**01 51 40.0**	**-0.6**
	5.5nm,0.7s						
BBOO	**Buckleboo**	**39.24**	**168**	*e*P	**P**	**01 52 14.5**	**+2.5**
	66nm,1.4s						
H11N1	**WAKE ISLAND Hy**	**41.50**	**67**	T	T	02 37 17.8	
	baz=255						
H11N2	**WAKE ISLAND Hy**	**41.51**	**67**	T	T	02 37 36.6	
	baz=255						
H11N3	**WAKE ISLAND Hy**	**41.51**	**67**	T	T	02 37 16.3	
	baz=255						
MK01	**Makanchi Array**	**55.99**	**325**	*e*P	**P**	**01 54 20.3**	**-1.4**
MK31	**Makanchi Array**	**56.01**	**325**	*e*P	**P**	**01 54 21.9**	**+0.1**
MK32	**Makanchi Array**	**56.01**	**325**	*e*P	**P**	**01 54 21.6**	**-0.2**
MK32				*e*PcP	**PcP**	**01 55 20.1**	**+0.5**
MKAR	**Makanchi Array**	**56.01**	**325**	P	**P**	**01 54 21.6**	**-0.2**
	0.8nm,0.6s,baz=130,slow=7.7,SNR=8.5						
MKAR				PcP	**PcP**	**01 55 20.1**	**+0.5**
	1.1nm,1.1s,baz=132,slow=4.3,SNR=2.6						
MKAR	**Makanchi Array**	**56.01**	**325**	*e*P	**P**	**01 54 21.4**	**-0.5**
	12nm,1.0s						
MKAR				PcP	**PcP**	**01 55 20.1**	**+0.5**
KURK	**Kurchatov**	**60.15**	**327**	*e*P	**P**	**01 54 50.4**	**-0.2**
KURBB	**Kurchatov Arra**	**60.15**	**327**	P	**P**	**01 54 50.2**	**-0.4**
	1.2nm,0.6s,baz=125,slow=6.5,SNR=16						
BVAR	**Borovoye Array**	**65.74**	**327**	P	**P**	**01 55 27.4**	**-0.3**
	0.8nm,0.6s,baz=116,slow=9.8,SNR=5.4						
HON	**Honolulu**	**74.29**	**70**	*e*P	**P**	**01 56 17.1**	**-3.6**
	78nm,0.8s						
CHGN	**Chignik**	**76.96**	**34**	*e*P	**P**	**01 56 31.5**	**-3.8**
	9.3nm,1.1s						
RAYN	**Ar Rayn**	**79.73**	**293**	*e*P	P	01 56 46.2	-5.2
	2.1nm,1.0s						
SML	**Sawmill**	**82.69**	**28**	*e*P	**P**	**01 57 06.1**	**-0.2**
	11nm,0.7s						
SCM	**Sheep Creek Mo**	**83.17**	**28**	*e*P	P	01 57 01.1	-7.7
	35nm,0.8s						
FID	**Port Fidalgo**	**83.57**	**30**	*e*P	P	01 56 57.7	-13
DIV	**Divide**	**83.91**	**29**	*e*P	**P**	**01 57 08.8**	**-3.8**
	21nm,0.8s						
ARA0	**ARCESS Array S**	**88.68**	**340**	*e*P	**P**	**01 57 35.6**	**-0.1**
ARCES	**ARCESS Array B**	**88.68**	**340**	P	**P**	**01 57 35.6**	**-0.1**
	1.3nm,0.7s,baz=75,slow=3.8,SNR=6.7						
FIA0	**FINESS Array S**	**90.17**	**332**	*e*P	**P**	**01 57 43.2**	**+0.4**
FINES	**FINESS Array B**	**90.17**	**332**	P	**P**	**01 57 43.2**	**+0.4**
	1.6nm,0.8s,baz=76,slow=6.2,SNR=4.1						
TORD	**Torodi Ar. Bea**	**122.30**	**289**	PKP	**PKPdf**	**02 03 38.1**	**-0.4**
	0.2nm,0.6s,baz=100,slow=1.7						
TOA1	**Torodi Ar. Sit**	**122.30**	**289**	*e*PKPdf	**PKPdf**	**02 03 38.1**	**-0.4**

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*ISCJB **25** 01:50:43.8±0.6, 38°.67N±0°.02×43°.43E±0°.02, h1km±4km, Error ellipse: s-maj=4.4km s-min=2.7km az=149.3*

*DDA **25** 01:50:43.7, 38°.70N×43°.33E, h5km, Ml3.3*

*ISK **25** 01:50:43.9, 38°.68N×43°.35E, h5km, ML3.3/15*

*CSEM **25** 01:50:44.6±0.1, 38°.70N×43°.41E, h5km, ML3.3, Error ellipse: s-maj=3.6km s-min=2.6km az=145.0*

*AZER **25** 01:50:45.7±1.5, 38°.71N×43°.28E, h26km±47km, ml3.1/12, Error ellipse: s-maj=36.4km s-min=8.1km az=59.0*

ISC 25 01:50:45.1±0.8**, 38°.70N**±0°.02×**43°.38E**±0°.02**, h11km**±6km**, n103,** σ**1s.10**/142**, 19C-16D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	**Van**	**0.11**	**174**	PG	**Pg**	**01 50 47.8**	**-0.2**
VANB				SG	**Sg**	**01 50 50.7**	**+0.7**
VANB	**Van**	**0.11**	**174**	*e*Pg	**Pg**	**01 50 47.8**	**-0.2**
VANB				*e*Sg	**Sg**	**01 50 50.7**	**+0.7**
ERCV	**ERCIS-VAN**	**0.32**	**355**	PG	**Pg**	**01 50 50.3**	**-1.3**
ERCV				SG	**Sb**	**01 50 56.9**	**-1.3**
ERCV	**ERCIS-VAN**	**0.32**	**355**	*e*Pg	**Pg**	**01 50 50.3**	**-1.3**
ERCV				*e*Sg	**Sb**	**01 50 56.9**	**-1.3**
VMUR	**Van-Muradiye**	**0.32**	**28**	*i* P	**Pg**	**01 50 50.7**	**-1.0**
VMUR				*i* S	**Sb**	**01 50 57.5**	**-0.9**
VMUR	**Van-Muradiye**	**0.32**	**28**	P	**Pg**	**01 50 50.7**	**-1.0**
VMUR				S	**Sb**	**01 50 57.5**	**-0.9**
GEVA	**Gevas**	**0.46**	**212**	*i* P	**Pg**	**01 50 52.5**	**-1.7**
GEVA	**Gevas**	**0.46**	**212**	P	**Pg**	**01 50 52.5**	**-1.7**
CLDR	**Caldiran**	**0.61**	**44**	PG	**Pg**	**01 50 56.6**	**-0.4**
CLDR				SG	**Sg**	**01 51 05.9**	**+0.8**
CLDR	**Caldiran**	**0.61**	**44**	*e*Pg	**Pg**	**01 50 56.6**	**-0.4**
CLDR				*e*Sg	**Sg**	**01 51 05.9**	**+0.8**
TUTA	**Tutak**	**0.82**	**328**	*i* P	**Pg**	**01 50 59.6**	**-1.4**
TUTA	**Tutak**	**0.82**	**328**	P	**Pg**	**01 50 59.6**	**-1.4**
AGRB	**Hanur-Agry**	**0.92**	**341**	PG	**Pb**	**01 51 03.0**	**-0.2**
AGRB				SG	**Sg**	**01 51 14.8**	**-0.1**
AGRB	**Hanur-Agry**	**0.92**	**341**	*e*Pg	**Pb**	**01 51 03.0**	**-0.2**
AGRB				*e*Sg	**Sg**	**01 51 14.8**	**-0.1**
GURO	**Guroymak-BITLI**	**1.06**	**262**	PG	**Pg**	**01 51 04.0**	**-1.5**
GURO				SG	**Sg**	**01 51 18.6**	**-0.8**
GURO	**Guroymak-BITLI**	**1.06**	**262**	*e*Pg	**Pg**	**01 51 04.0**	**-1.5**
GURO				*e*Sg	**Sg**	**01 51 18.6**	**-0.8**
EKAR	**Karacoban**	**1.16**	**299**	*i* P	**Pn**	**01 51 08.6**	**+1.0**
EKAR				*i* S	**Sn**	**01 51 27.9**	**+4.3**
EKAR	**Karacoban**	**1.16**	**299**	P	**Pn**	**01 51 08.6**	**+1.0**
EKAR				S	**Sn**	**01 51 27.9**	**+4.3**
EATA	**Eleskirt**	**1.34**	**330**	*i* P	**Pn**	**01 51 09.1**	**-1.1**
EATA				*i* S	**Sn**	**01 51 29.8**	**+1.5**
EATA	**Eleskirt**	**1.34**	**330**	P	**Pn**	**01 51 09.1**	**-1.1**
EATA				S	**Sn**	**01 51 29.8**	**+1.5**
SIRT	**Sirnak**	**1.41**	**212**	PN	**Pn**	**01 51 10.6**	**-0.2**
SIRT	**Sirnak**	**1.41**	**212**	*e*Pn	**Pn**	**01 51 10.6**	**-0.2**
SIRN	**S˜–rnak**	**1.42**	**212**	*i* P	**Pg**	**01 51 11.7**	**-0.7**
SIRN				*i* S	**Sn**	**01 51 31.8**	**+2.0**
SIRN	**S˜–rnak**	**1.42**	**212**	P	**Pg**	**01 51 11.7**	**-0.7**
SIRN				S	**Sn**	**01 51 31.8**	**+2.0**
TASB	**TASBURUN-IGDIR**	**1.44**	**27**	PN	**Pn**	**01 51 11.6**	**+0.3**
TASB	**TASBURUN-IGDIR**	**1.44**	**27**	*e*Pn	**Pn**	**01 51 11.6**	**+0.3**
CUKT	**Cukurca**	**1.47**	**173**	PN	**Pn**	**01 51 11.4**	**-0.2**
CUKT	**Cukurca**	**1.47**	**173**	*e*Pn	**Pn**	**01 51 11.4**	**-0.2**
HYR	**Heyderabad**	**1.53**	**48**	⇓P	**Pn**	**01 51 11.5**	**-1.0**
HYR				⇑S	**Sb**	**01 51 33.7**	**+0.7**
HYR	**Heyderabad**	**1.53**	**48**	⇓P	**Pn**	**01 51 11.5**	**-1.0**
HYR				⇑S	**Sb**	**01 51 33.7**	**+0.7**
VRTB	**Varto-Mus**	**1.56**	**288**	PN	**Pn**	**01 51 13.0**	**0.0**
VRTB	**Varto-Mus**	**1.56**	**288**	*e*Pn	**Pn**	**01 51 13.0**	**0.0**
NAX	**Nakhchivan**	**1.72**	**73**	⇓P	**Pn**	**01 51 15.6**	**+0.5**
NAX				⇑S	**Sn**	**01 51 38.2**	**+1.1**
NAX	**Nakhchivan**	**1.72**	**73**	⇓P	**Pn**	**01 51 15.6**	**+0.5**
NAX				⇑S	**Sn**	**01 51 38.2**	**+1.1**
BNGL	**BINGOL**	**1.75**	**279**	*i* P	**Pb**	**01 51 16.5**	**-0.9**
HOMI	**Horasan**	**1.76**	**320**	*i* P	**Pb**	**01 51 17.5**	**-0.1**
HOMI				*i* S	**Sg**	**01 51 46.0**	**+4.3**
GNI	**Garni**	**1.79**	**36**	PN	**Pn**	**01 51 17.1**	**+0.9**
GNI	**Garni**	**1.79**	**36**	*e*Pn	**Pn**	**01 51 17.1**	**+0.9**
SVAN	**Silvan-Diyarba**	**1.80**	**253**	PN	**Pb**	**01 51 16.9**	**-1.2**
SVAN	**Silvan-Diyarba**	**1.80**	**253**	*e*Pn	**Pb**	**01 51 16.9**	**-1.2**
SBZ	**Shahbuz**	**1.83**	**67**	⇑P	**Pn**	**01 51 16.5**	**-0.2**
SBZ				⇓S	**Sn**	**01 51 40.1**	**+0.1**
SBZ	**Shahbuz**	**1.83**	**67**	⇑P	**Pn**	**01 51 16.5**	**-0.2**
SBZ				⇓S	**Sn**	**01 51 40.1**	**+0.1**
BTMN	**Batman**	**1.84**	**245**	*i* P	**Pg**	**01 51 21.7**	**+1.3**
BTMN				*i* S	**Sg**	**01 51 43.6**	**-0.8**
BTMN	**Batman**	**1.84**	**245**	P	**Pg**	**01 51 21.7**	**+1.3**
BTMN				S	**Sg**	**01 51 43.6**	**-0.8**
KARS	**Kars**	**1.94**	**353**	PN	**Pn**	**01 51 18.8**	**+0.7**
KARS	**Kars**	**1.94**	**353**	*e*Pn	**Pn**	**01 51 18.8**	**+0.7**
ERZM	**Erzurum**	**1.97**	**308**	*i* P	**Pg**	**01 51 21.6**	**-1.2**
ERZM	**Erzurum**	**1.97**	**308**	P	**Pg**	**01 51 21.6**	**-1.2**
SENK	**Senkaya-Erzuru**	**2.02**	**337**	PN	**Pn**	**01 51 19.1**	**-0.2**
SENK	**Senkaya-Erzuru**	**2.02**	**337**	*e*Pn	**Pn**	**01 51 19.1**	**-0.2**
ORD	**Ordubad**	**2.06**	**83**	⇓P	**Pn**	**01 51 19.7**	**-0.1**
ORD				⇑S	**Sn**	**01 51 46.1**	**+0.6**
ORD	**Ordubad**	**2.06**	**83**	⇓P	**Pn**	**01 51 19.7**	**-0.1**
ORD				⇑S	**Sn**	**01 51 46.1**	**+0.6**
ECAT	**Cat-ERZURUM**	**2.07**	**297**	*i* P	**Pn**	**01 51 20.6**	**+0.4**
ECAT				*i* S	**Sg**	**01 51 49.9**	**-1.8**
ECAT	**Cat-ERZURUM**	**2.07**	**297**	P	**Pn**	**01 51 20.5**	**+0.4**
ECAT				S	**Sg**	**01 51 49.9**	**-1.8**
BNGB	**Bingˆ¶l**	**2.12**	**279**	PN	**Pn**	**01 51 20.9**	**+0.2**
BGOL	**Bingol**	**2.13**	**279**	*i* P	**Pg**	**01 51 24.6**	**-1.3**
BGOL				*i* S	**Sg**	**01 51 52.2**	**-1.4**
BGOL	**Bingol**	**2.13**	**279**	P	**Pg**	**01 51 24.6**	**-1.3**
BGOL				S	**Sg**	**01 51 52.2**	**-1.4**
YEDI	**Yedisu-Bingol**	**2.32**	**289**	PN	**Pn**	**01 51 24.4**	**+0.9**
YEDI	**Yedisu-Bingol**	**2.32**	**289**	*e*Pn	**Pn**	**01 51 24.4**	**+0.9**
MARD	**Mardin**	**2.48**	**237**	*i* P	**Pn**	**01 51 23.9**	**-1.6**
MARD				*i* S	**Sn**	**01 51 55.6**	**-0.3**
BGD	**Bogdanovka**	**2.56**	**4**	P	**Pg**	**01 51 33.5**	**-0.7**
KOPT	**Kop Dagi**	**2.59**	**301**	*i* P	**Pb**	**01 51 32.6**	**+0.9**
KOPT	**Kop Dagi**	**2.59**	**301**	P	**Pb**	**01 51 32.6**	**+0.9**
DIY	**Diyarbakir**	**2.60**	**253**	*e*Pn	**Pn**	**01 51 28.1**	**+0.8**
MAZI	**Mazidag**	**2.62**	**243**	PN	**Pn**	**01 51 28.5**	**+0.9**
MAZI	**Mazidag**	**2.62**	**243**	*e*Pn	**Pn**	**01 51 28.5**	**+0.9**
DAGI	**Agillar**	**2.62**	**335**	*i* P	**Pb**	**01 51 33.0**	**+0.7**
DBAD	**Bademkaya**	**2.65**	**331**	*i* P	**Pb**	**01 51 31.8**	**-0.8**
DBAD	**Bademkaya**	**2.65**	**331**	P	**Pb**	**01 51 31.8**	**-0.8**
DYBB	**Diyarbakir**	**2.65**	**255**	PN	**Pn**	**01 51 28.1**	**+0.2**
AKH	**Akhalkalaki**	**2.71**	**2**	P	**Pg**	**01 51 36.7**	**-0.3**
GDB	**GEDABAY**	**2.73**	**42**	⇑P	**Pn**	**01 51 28.9**	**-0.1**
	SNR=8.7						
GDB				⇑S	**Sn**	**01 52 02.0**	**-0.1**
GDB	**GEDABAY**	**2.73**	**42**	⇑P	**Pn**	**01 51 28.9**	**-0.1**
	SNR=8.7						
GDB				⇑S	**Sn**	**01 52 02.0**	**-0.1**
QZX	**Qazax, Azerbai**	**2.81**	**33**	⇓P	**Pn**	**01 51 29.5**	**-0.5**
QZX	**Qazax, Azerbai**	**2.81**	**33**	⇓P	**Pn**	**01 51 29.5**	**-0.5**
GANJ	**Ganja**	**2.99**	**49**	⇓P	**Pn**	**01 51 32.3**	**-0.2**
GANJ				⇑S	**Sn**	**01 52 08.8**	**+0.4**
GANJ	**Ganja**	**2.99**	**49**	⇓P	**Pn**	**01 51 32.3**	**-0.2**
GANJ				⇑S	**Sn**	**01 52 08.8**	**+0.4**
BAYT	**Ayd˜–ntepe-Bay**	**3.02**	**305**	PN	**Pn**	**01 51 33.9**	**+0.9**
BAYT	**Ayd˜–ntepe-Bay**	**3.02**	**305**	*e*Pn	**Pn**	**01 51 33.9**	**+0.9**
TNCL	**Tunceli-Merkez**	**3.02**	**279**	*i* P	**Pg**	**01 51 42.9**	**-0.1**
TNCL				*i* S	**Sg**	**01 52 22.7**	**+0.6**
BCA	**Borcka**	**3.05**	**334**	PN	**Pn**	**01 51 33.9**	**+0.5**
BCA	**Borcka**	**3.05**	**334**	*e*Pn	**Pn**	**01 51 33.9**	**+0.5**
PTK	**Pertek**	**3.12**	**275**	PN	**Pn**	**01 51 35.2**	**+0.8**
PTK	**Pertek**	**3.12**	**275**	*e*Pn	**Pn**	**01 51 35.2**	**+0.8**
DGRG	**David-gareji**	**3.14**	**29**	P	**Pb**	**01 51 41.6**	**+0.5**
TBLG	**Delisi**	**3.20**	**19**	P	**Pb**	**01 51 42.3**	**+0.3**
SVRC	**Sivrice-ELAZID**	**3.21**	**265**	PN	**Pn**	**01 51 36.5**	**+0.9**
SVRC	**Sivrice-ELAZID**	**3.21**	**265**	*e*Pn	**Pn**	**01 51 36.5**	**+0.9**
BRDA	**Brd**	**3.33**	**61**	⇓P	**Pn**	**01 51 36.8**	**-0.4**
BRDA	**Brd**	**3.33**	**61**	⇓P	**Pn**	**01 51 36.8**	**-0.4**
DDFL	**Dedoflistskaro**	**3.45**	**37**	P	**Pg**	**01 51 52.1**	**+0.8**
KELT	**Kelkit**	**3.50**	**296**	*i* P	**Pb**	**01 51 47.6**	**+0.4**
MNGR	**Mingechevir, A**	**3.53**	**53**	⇑P	**Pn**	**01 51 39.5**	**-0.4**
MNGR	**Mingechevir, A**	**3.53**	**53**	⇑P	**Pn**	**01 51 39.5**	**-0.4**
DUS	**Dusheti**	**3.53**	**16**	P	**Pg**	**01 51 51.4**	**-1.4**
ZRD	**Zardab**	**3.69**	**63**	⇓P	**Pn**	**01 51 41.9**	**-0.2**
ZRD	**Zardab**	**3.69**	**63**	⇓P	**Pn**	**01 51 41.9**	**-0.2**
URFA	**Urfa**	**3.81**	**252**	PN	**Pn**	**01 51 45.1**	**+1.3**
URFA	**Urfa**	**3.81**	**252**	*e*Pn	**Pn**	**01 51 45.1**	**+1.3**
ZKTA	**Zakatala**	**3.84**	**39**	⇑P	**Pn**	**01 51 44.0**	**-0.3**
ONI	**Oni**	**3.88**	**1**	P	**Pg**	**01 51 57.1**	**-2.3**
LRK	**Lerik**	**3.89**	**89**	⇑P	**Pn**	**01 51 44.6**	**-0.4**
LRK	**Lerik**	**3.89**	**89**	⇑P	**Pn**	**01 51 44.6**	**-0.4**

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*IDC **25** 01:54:57.9±2.0, 36°.70N×141°.03E, h0km, mb3.3/3, mb1 3.4/4, mb1mx3.2/61, mbtmp3.2/4, ML2.8/1, Error ellipse: s-maj=40.2km s-min=25.4km az=65.0*

*ISCJB **25** 01:55:01.1±1.0, 36°.90N±0°.04×140°.89E±0°.07, h22km±5km, mb3.4/3, Error ellipse: s-maj=10.2km s-min=5.7km az=26.5*

*JMA **25** 01:55:01.1, 36°.90N×140°.84E, h31km±1km, M3.3 Broadband fault plane solution: P waves. NP1: φs245.00000°, δ67.00000°, λ-102.00000°. NP2: φs94.00000°, δ26.00000°, λ-64.00000°. Principal axes: T Plg21.0000°, Azm344.0000°; N Plg11.0000°, Azm250.0000°; P Plg66.0000°, Azm133.0000°;*

JMA Felt I J1.

ISC 25 01:55:01.4±1.2**, 36°.91N**±0°.04×**140°.85E**±0°.06**, h26km**±7km**, n20,** σ**1s.20**/24**, mb3.4**/3**, 4C-1D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	**Iwakimizuishiy**	**0.20**	**348**	⇓P	**Pb**	**01 55 07.3**	**+0.1**
ONAJ				S	**Sb**	**01 55 11.5**	**+0.4**
JFFD	**Fukushimafurud**	**0.29**	**308**	P	**Pb**	**01 55 08.4**	**0.0**
JFFD				S	**Sb**	**01 55 13.0**	**-0.2**
JHO	**Hitachi**	**0.37**	**217**	⇑P	**Pb**	**01 55 09.2**	**-0.4**
JHO				S	**Sb**	**01 55 14.8**	**-0.4**
JFK	**Kawauchi**	**0.46**	**3**	⇑P	**Pb**	**01 55 10.6**	**-0.4**
JFK				S	**Sb**	**01 55 17.0**	**-0.5**
JFT	**Otama**	**0.73**	**326**	⇑P	**Pn**	**01 55 15.3**	**-0.8**
JFT				S	**Sb**	**01 55 25.2**	**0.0**
JSB	**Shiboa**	**0.75**	**275**	P	**Pb**	**01 55 15.8**	**0.0**
JSB				S	**Sn**	**01 55 26.2**	**-0.6**
JMM	**Marumori**	**0.96**	**357**	P	**Pn**	**01 55 18.3**	**-0.9**

JMM				S	Sn	01 55 31.0	-1.0
JFY	Yanaizu	1.04	299	⇑P	Pn	01 55 19.8	-0.6
JFY				S	Sn	01 55 33.2	-0.9
JAG	Ashikaga	1.22	247	P	Pn	01 55 22.5	-0.3
MJAR	Matsushiro Arr	2.15	261	Pn	Pn	01 55 36.4	+0.8
	2.9nm,0.3s,baz=87,slow=15,SNR=9.8						
MJAR				Sn	Sb	01 56 04.7	-1.2
	3.5nm,0.3s,baz=80,slow=29,SNR=7.2						
MAT	Matsushiro	2.15	261	P	Pn	01 55 36.9	+1.2
MAT				S	Sb	01 56 03.9	-2.1
H11N2	WAKE ISLAND Hy	28.48	120	T	T	02 30 46.8	
	baz=313,slow=75,SNR=28						
H11N1	WAKE ISLAND Hy	28.48	120	T	T	02 30 47.3	
	baz=313,slow=75,SNR=16						
H11N3	WAKE ISLAND Hy	28.49	120	T	T	02 30 48.1	
	baz=313,slow=75,SNR=36						
H11S1	WAKE ISLAND Hy	29.18	122	T	T	02 31 39.9	
	baz=314,slow=76,SNR=24						
H11S3	WAKE ISLAND Hy	29.18	122	T	T	02 31 40.5	
	baz=314,slow=76,SNR=13						
H11S2	WAKE ISLAND Hy	29.19	122	T	T	02 31 44.0	
	baz=314,slow=76,SNR=11						
MKAR	Makanchi Array	43.80	302	P	P	02 03 07.5	+2.5
	0.2nm,0.5s,baz=71,slow=7.6,SNR=2.6						
KURBB	Kurchatov Arra	45.72	308	P	P	02 03 22.8	+2.7
	0.2nm,0.4s,baz=92,slow=8.3,SNR=2.0						
WRA	Warramunga Arr	56.88	187	P	P	02 04 42.6	-1.5
	0.3nm,0.6s,baz=4.0,slow=7.2,SNR=6.7						

MAN 25 01:55:56.5, 6.°01N×125.°72E, h128^{km}, mb4.4, ML3.2, MS3.0, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	0.10	355	eP	Pn	01 56 13.5	-0.4
DDMP				eS	Sn	01 56 25.1	-2.0
GSPH	General Santos	0.77	276	⇑iP	Pn	01 56 18.3	+1.0
GSPH				i S	Sn	01 56 32.4	-0.8
MATI	Mati	1.07	30	eP	Pn	01 56 20.4	+0.4
DMPH	Davao City--Mi	1.09	349	⇑eP	Pn	01 56 15.8	-4.3
DMPH				i S	Sn	01 56 39.2	+1.2
SKMP	Bagumbayan, Su	1.28	294	eP	Pn	01 56 22.4	+0.4
SKMP				eS	Sn	01 56 41.4	0.0
BUKP	Musuan	1.97	341	eP	Pn	01 56 30.9	+0.9
BUKP				eS	Sn	01 56 56.7	+1.0

KRSC 25 02:05:23.3±1.0, 49.°77N×156.°76E, h16^{km}±12^{km}, ML3.7, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.00	336	eP	Pb	02 05 41.2	-1.1
SKR				eS	Sb	02 05 54.4	-0.9
PAU	Pauzhetka	1.70	1	eP	Pb	02 05 53.3	-0.8
PAU				eS	Sb	02 06 15.7	+0.4
KDTR	Khodutka, Kamc	2.20	22	eP	Pb	02 06 01.0	-1.8
KDTR				eS	Sb	02 06 28.5	-1.3
MIPR	Malaya Ipel'ka	2.51	360	eP	Pn	02 06 05.1	+1.7
ASAK	Asacha	2.71	15	eP	Pn	02 06 08.5	+2.2
MTVR	Mutnovka	2.86	18	eS	Sb	02 06 46.1	-2.7
RUS	Russkaya	2.88	22	eP	Pn	02 06 10.8	+2.2
RUS				eS	Sn	02 06 45.7	+2.8
UGLR	Uglovaya	3.68	20	eP	Pn	02 06 22.3	+2.7
AVH	Avacha	3.71	19	eP	Pb	02 06 24.4	-4.1
SDLR	Sedlovina	3.75	20	eP	Pn	02 06 24.4	+3.8
GNL	Ganaly	4.00	10	eP	Pb	02 06 28.7	-4.7

ISCJB 25 02:08:30.1±0.4, 51.°46N±0.°02×16.°18E±0.°03, h0^{km}, Error ellipse: s-maj=3.3km s-min=2.7km az=136.0

CSEM 25 02:08:31.7±0.2, 51.°47N×16.°14E, h2^{km}, ML2.9/12, Mw2.4, Error ellipse: s-maj=3.7km s-min=2.9km az=81.0

UPP 25 02:08:36.7±2.9, 51.°68N×15.°67E, h10^{km}, ML1.5

ISC 25 02:08:33.3±0.8, 51.°52N±0.°03×16.°00E±0.°03, h0^{km}, n57, σ2.^{s}56/100, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.70	164	i Pg	Pg	02 08 44.4	-2.2
KSP				i Sg	Sg	02 08 52.7	-3.0
KSP	Ksiaz	0.70	164	i Pg	Pg	02 08 44.4	-2.2
KSP				i Sg	Sg	02 08 52.7	-3.0
UPC	Upice	1.01	179	ePG	Pg	02 08 50.5	-2.1
UPC				eSG	Sg	02 09 02.5	-3.2
	comp=Z,44nm,0.5s						
UPC	Upice	1.01	179	Pg	Pg	02 08 50.5	-2.1
UPC				Sg	Sg	02 09 02.5	-3.2
	44nm,0.5s						
DPC	Dobruska-Polom	1.19	170	ePG	Pg	02 08 53.3	-2.7
DPC				eSG	Sg	02 09 07.9	-3.4
	comp=Z,22nm,0.6s						
DPC	Dobruska-Polom	1.19	170	Pg	Pg	02 08 53.3	-2.7
DPC				Sg	Sg	02 09 07.9	-3.4
	22nm,0.6s						
PVCC	Panska Ves	1.34	223	ePG	Pg	02 08 58.8	-0.1
PVCC				eSG	Sg	02 09 16.9	+0.7
	comp=Z,92nm,0.5s						
PVCC	Panska Ves	1.34	223	Pg	Pg	02 08 58.8	-0.1
PVCC				Sg	Sg	02 09 16.9	+0.7
	92nm,0.5s						
BRG	Berggiesshubel	1.44	244	PN	Pn	02 08 59.6	-1.1
BRG				PG	Pg	02 09 01.0	+0.1
BRG				SG	Sn	02 09 21.5	+1.2
	35nm,0.4s						
KRLC	Kraliky	1.53	161	ePG	Pn	02 08 59.5	-2.3
KRLC				eSG	Sn	02 09 17.9	-4.5
	comp=Z,4.2nm,0.3s						
KRLC	Kraliky	1.53	161	Pg	Pn	02 08 59.5	-2.3
KRLC				Sg	Sn	02 09 17.9	-4.5
	4.2nm,0.3s						
PRA	Prague	1.75	215	ePN	Pn	02 09 03.3	-1.6
PRA				ePG	Pb	02 09 05.3	-1.0
PRA				eSG	Sn	02 09 29.5	+1.6
	comp=Z,11nm,0.4s						
PRA	Prague	1.75	215	Pn	Pn	02 09 03.3	-1.6
GOPC	GO Pecny, Ondr	1.78	206	ePG	Pn	02 09 05.4	+0.1
GOPC	GO Pecny, Ondr	1.78	206	Pg	Pn	02 09 05.4	+0.1
PRU	Pruhonice	1.79	212	ePN	Pn	02 09 03.9	-1.5
PRU				ePG	Pb	02 09 05.5	-1.4
PRU				eSG	Sn	02 09 30.1	+1.4
	comp=Z,15nm,0.3s						
PRU	Pruhonice	1.79	212	Pn	Pn	02 09 03.9	-1.5
CLL	Collm	1.89	265	ePn	Pn	02 09 07.0	+0.3
CLL				ePg	Pg	02 09 10.0	+0.6
CLL				eSg	Sg	02 09 36.0	+2.2
	comp=Z,10.0nm,0.4s						
MORC	Moravsky Berou	2.00	150	ePn	Pn	02 09 05.1	-3.3
MORC				eSg	Sn	02 09 30.4	-3.7
MORC	Moravsky Berou	2.00	150	ePN	Pn	02 09 05.1	-3.3
MORC				eSG	Sn	02 09 30.4	-3.7
OKC	Ostrava-Krasne	2.17	140	ePG	Pn	02 09 11.5	+0.9
OKC				eSG	Sn	02 09 35.9	-2.2
OKC	Ostrava-Krasne	2.17	140	Pg	Pn	02 09 11.5	+0.9
OKC				Sg	Sn	02 09 35.9	-2.2
VRAC	Vranov	2.24	170	ePn	Pn	02 09 09.3	-2.4
VRAC				eSg	Sn	02 09 40.5	+0.5
VRAC	Vranov	2.24	170	ePN	Pn	02 09 09.3	-2.4
VRAC				eSG	Sn	02 09 40.5	+0.5
KRUC	Moravsky	2.47	174	ePn	Pn	02 09 13.1	-1.7
KRUC	Moravsky	2.47	174	ePN	Pn	02 09 13.1	-1.7
KRUC				ePG	Pb	02 09 16.4	-2.1
KRUC				eSG	Sn	02 09 48.1	+2.5
NKC	Novy Kostel	2.59	242	ePN	Pn	02 09 16.1	-0.3
NKC				ePG	Pg	02 09 22.3	-0.5
NKC				eSG	Sg	02 09 57.4	+1.0
	comp=Z,17nm,0.3s						
NKC	Novy Kostel	2.59	242	Pn	Pn	02 09 16.1	-0.3
OJC	Ojcow	2.74	117	ePg	Pn	02 09 22.5	+4.0
OJC				eSg	Sn	02 09 57.2	+5.0
OJC	Ojcow	2.74	117	ePg	Pn	02 09 22.5	+4.0
OJC				eSg	Sn	02 09 57.2	+5.0
OJC	Ojcow	2.74	117	ePg	Pn	02 09 22.5	+4.0
OJC				eSg	Sn	02 09 57.2	+5.0
KHC	Kasperske Hory	2.85	214	ePN	Pn	02 09 18.9	-1.1
KHC				ePG	Pb	02 09 24.9	0.0
KHC				eSN	Sn	02 09 51.0	-4.0
KHC				eSG	Sb	02 10 01.7	+1.4
	comp=Z,5.0nm,0.4s						
KHC	Kasperske Hory	2.85	214	Pn	Pn	02 09 18.9	-1.1
SMOL	Smolenice	3.15	162	ePG	Pb	02 09 31.4	+1.4
SMOL	Smolenice	3.15	162	ePg	Pb	02 09 31.4	+1.4
MODS	Modra-Piesok	3.25	165	ePG	Pb	02 09 33.7	+1.8
MODS				eSG	Sb	02 10 15.6	+3.6
MODS				eLG	Lg	02 10 17.6	
MODS	Modra-Piesok	3.25	165	ePg	Pb	02 09 33.7	+1.8
MODS				eSg	Sb	02 10 15.6	+3.6
VYHS	Vyhne	3.54	148	ePG	Pb	02 09 38.4	+1.7
VYHS				eSG	Sb	02 10 20.8	+0.6
VYHS	Vyhne	3.54	148	ePg	Pb	02 09 38.4	+1.7
VYHS				eSg	Sb	02 10 20.8	+0.6
CONA	Conrad Observa	3.59	181	ePn	Pn	02 09 28.9	-1.4
	comp=Z,0.3nm,0.2s						
CONA				Pg	Pb	02 09 38.8	+1.1
	comp=Z,1.1nm,0.2s						
CONA				Sg	Sb	02 10 25.9	+4.0
	comp=Z,4.7nm,0.4s						
CONA	Conrad Observa	3.59	181	Pn	Pn	02 09 28.9	-1.4
	comp=Z,0.3nm,0.2s						
MOA	Molln	3.84	198	ePn	Pn	02 09 32.4	-1.2
	comp=Z,0.9nm,0.2s						
MOA				Pg	Pb	02 09 45.3	+3.5
	comp=Z,1.9nm,0.4s						
MOA				Sg	Sb	02 10 34.6	+5.8
	comp=Z,3.5nm,0.3s						
MOA	Molln	3.84	198	Pn	Pn	02 09 32.4	-1.2
	comp=Z,0.9nm,0.2s						
ARSA	Arzberg	4.28	184	Sg	Sb	02 10 47.0	+5.4
	comp=Z,5.5nm,0.5s						
ARSA	Arzberg	4.28	184	Sg	Sb	02 10 47.0	+5.4
	comp=Z,5.5nm,0.5s						
KBA	Koelnbreinsper	4.77	202	ePn	Pn	02 09 46.1	-0.4
	comp=Z,0.2nm,0.2s						
KBA				Sg	Sg	02 11 04.6	-1.8
	comp=Z,2.4nm,0.6s						
KBA	Koelnbreinsper	4.77	202	Pn	Pn	02 09 46.1	-0.4
	comp=Z,0.2nm,0.2s						
KBA				Sg	Sg	02 11 04.6	-1.8
	comp=Z,2.4nm,0.6s						
BLEU	Blekinge	4.80	359	P	Pn	02 09 45.5	-1.2
BLEU				S	Sn	02 10 38.1	-4.8
BLEU	Blekinge	4.80	359	P	Pn	02 09 45.5	-1.2
BJUU	Bjuv	4.89	340	P	Pn	02 09 46.4	-1.6
BJUU				S	Sn	02 10 40.4	-4.9
BJUU	Bjuv	4.89	340	P	Pn	02 09 46.4	-1.6
DEL	Delary	5.12	347	P	Pn	02 09 49.7	-1.4
DEL				S	Sn	02 10 45.5	-5.3
DEL	Delary	5.12	347	P	Pn	02 09 49.7	-1.4
VXJU	Vaexsjoe	5.45	354	P	Pn	02 09 54.9	-0.8
VXJU	Vaexsjoe	5.45	354	P	Pn	02 09 54.9	-0.8
EKSU	Eksjoe	6.08	356	P	Pn	02 10 03.3	-1.0
EKSU	Eksjoe	6.08	356	P	Pn	02 10 03.3	-1.0

ISCJB 25 02:10:59.2±1.5, 32.°64S±0.°05×71.°70W±0.°09, h16^{km}±10^{km}, Error ellipse: s-maj=12.4km s-min=7.4km az=169.6

SJA 25 02:10:59.2±2.9, 32.°76S×71.°73W, h11^{km}±21^{km}, ML2.8, MW3.0

GUC 25 02:11:00.5±0.5, 32.°57S×71.°40W, h34^{km}±2^{km}, ML2.4

ISC 25 02:10:57.8±1.9, 32.°50S±0.°03×71.°51W±0.°09, h20^{km}±5^{km}, n17, σ1.^{s}15/27, 1C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROC1	El Roble	0.63	139	eP	Pn	02 11 12.2	+0.4
ROC1				eS	Sn	02 11 21.4	-0.1
ROCH	El Roble	0.63	139	eP	Pn	02 11 12.2	+0.4
ROCH				eS	Sn	02 11 21.0	-0.4
ROCH				IAML		02 11 21.6	
	comp=N,367nm,0.3s						
PEL	Peldehue	0.94	133	eP	Pn	02 11 16.8	+0.7
PEL				eS	Sn	02 11 29.0	0.0
CLCH	Cerro Calan	1.21	138	eP	Pg	02 11 20.8	-0.4
CLCH				eS	Sn	02 11 36.8	+1.3
CLCH				IAML		02 11 41.6	
	comp=E,173nm,1.8s						
ANTU	Antumapu	1.29	146	eS	Sg	02 11 38.6	-1.1
FCH	Farellones	1.31	129	⇑eP	Pg	02 11 22.8	-0.5
FCH				eS	Sg	02 11 40.3	-0.2
FCH				IAML		02 11 43.7	
	comp=E,107nm,0.1s						
LMEL	Las Melosas	1.73	141	eP	Pb	02 11 29.2	+0.2
LMEL				eS	Sb	02 11 50.5	0.0
LMEL				IAML		02 11 59.3	
	comp=N,144nm,0.1s						
AUSP	Uspallata	1.81	82	eP	Pg	02 11 32.9	+0.1
RTLS	Leoncito	2.00	70	eP	Pg	02 11 36.0	-0.3
RTLS				eS	Sg	02 12 03.1	+0.8
RTLS				IAML		02 12 07.2	
	comp=Z,45nm,0.3s						
ARCO	CERRO ARCO	2.20	100	eP	Pg	02 11 40.6	+0.6
ARCO				IAML		02 11 49.0	
	comp=Z,33nm,0.3s						
ASAL	Salagasta	2.26	93	eP	Pg	02 11 41.3	+0.2
AAGR	Agrelo	2.33	105	eP	Pg	02 11 42.8	+0.2
TLL	Tololo Astrono	2.40	15	eP	Pb	02 11 40.1	-0.4
TLL				eS	Sb	02 12 10.4	+0.6
GO05	HualaæØ	2.53	188	eP	Pn	02 11 38.5	+0.8
AROD	Rodeo	2.90	37	eP	Pb	02 11 50.3	+1.2
AROD				eS	Sg	02 12 32.8	+1.5
AMOG	MOGNA	3.00	60	eP	Pb	02 11 49.6	-1.0
VCA	Vinchina	4.71	38	eP	Pb	02 12 15.4	-4.4
VCA				IAML		02 12 41.9	
	comp=Z,15nm,0.2s						
VCA				eS	Sb	02 13 15.7	-0.4

MAN 25 02:18:42.3, 11.°72N×125.°63E, h18^{km}, mb4.3, ML3.1, MS2.9, 1D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	Borongan	0.22	239	eP	Pb	02 18 48.5	+0.8
BESP				eS	Sb	02 18 56.9	+5.6
PLP	Palo	0.84	230	⇓eP	Pb	02 18 58.4	-0.1
PLP				eS	Sn	02 19 13.5	+2.2
CNP	Catarman	1.23	310	eP	Pn	02 19 04.1	-0.6
CNP				eS	Sn	02 19 21.3	+0.4
MSLP	Maasin	1.75	206	eP	Pn	02 19 11.9	+0.1
MSLP				eS	Sg	02 19 41.8	+3.0

ISK 25 02:26:01.6, 37.°53N×36.°26E, h8^{km}±2^{km}, ML2.2/4

CSEM 25 02:26:02.6±0.3, 37.°54N×36.°26E, h0^{km}±5^{km}, ML2.8, Error ellipse: s-maj=8.5km s-min=6.3km az=7.0

DDA 25 02:26:03.3, 37.°53N×36.°26E, h7^{km}, Ml2.8

ISC 25 02:26:02.5±1.3, 37.°53N±0.°03×36.°28E±0.°03, h2^{km}±11^{km}, n21, σ1.^{s}17/29, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANDN	Andirin	0.07	46	i P	Pg	02 26 03.8	-0.2
ANDN	Andirin	0.07	46	P	Pg	02 26 03.8	-0.2
KMRS	Kahramanmaras	0.49	93	PG	Pg	02 26 11.5	-0.5
KMRS	Kahramanmaras	0.49	93	ePg	Pg	02 26 11.5	-0.5
GAZ	Gaziantep	0.82	115	PG	Pg	02 26 19.1	+0.8
GAZ	Gaziantep	0.82	115	ePg	Pg	02 26 19.1	+0.8
SARI	SarD1z-Kayseri	0.88	7	PG	Pg	02 26 19.4	0.0
YAHY	KAYSERI_Yahyal	0.92	308	i P	Pg	02 26 20.2	+0.1
YAHY				i S	Sb	02 26 32.9	-1.0
YAHY	KAYSERI_Yahyal	0.92	308	P	Pg	02 26 20.2	+0.1
YAHY				S	Sb	02 26 32.9	-1.0
KUZU	Kuzuini	0.99	140	i P	Pg	02 26 22.0	+0.6
KUZU				i S	Sn	02 26 36.9	-1.0
KUZU	Kuzuini	0.99	140	P	Pg	02 26 22.0	+0.6
KUZU				S	Sn	02 26 36.9	-1.0
KARA	Karaisali	1.01	255	PG	Pg	02 26 21.1	-0.7
KARA	Karaisali	1.01	255	ePg	Pg	02 26 21.1	-0.7
ELBS	KAHRAMANMARAS_	1.04	40	i P	Pb	02 26 23.2	-0.1
ELBS				i S	Sn	02 26 40.1	+0.8
ELBS	KAHRAMANMARAS_	1.04	40	P	Pb	02 26 23.2	-0.1
GULE	Gulek	1.22	259	i P	Pn	02 26 26.6	-0.1
GULE				i S	Sn	02 26 48.0	+4.2
GULE	Gulek	1.22	259	P	Pn	02 26 26.6	-0.1
BNN	Bunyan	1.36	346	PN	Pn	02 26 27.2	-1.4
BNN	Bunyan	1.36	346	ePn	Pn	02 26 27.2	-1.4
CUGUR	Gurin_S˜VAS	1.43	33	i P	Pg	02 26 31.1	+1.3
CUGUR				i S	Sg	02 26 49.2	+0.8
CUGUR	Gurin_S˜VAS	1.43	33	P	Pg	02 26 31.1	+1.3
CUGUR				S	Sg	02 26 49.2	+0.8

ISCJB 25 02:32:36.4±0.5, 5.°73S±0.°06×128.°16E±0.°09, h400^{km}, mb3.5/2, Error ellipse: s-maj=12.6km s-min=7.6km az=155.2

DJA 25 02:32:37.4±0.4, 6°S±4°×12°8E±°, h388^{km}±8^{km}, M4.3/13, mb4.4/6, mB4.5/3, MLv4.3/13, Mw(mB)3.7/3

IDC 25 02:32:38.3±3.4, 5.°94S×127.°71E, h400^{km}±34^{km}, mb3.2/2, mb1 3.9/4, mb1mx3.0/50, mbtmp4.6/4, Error ellipse: s-maj=91.2km s-min=15.0km az=68.0

ISC 25 02:32:37.7±0.8, 5.°75S±0.°08×128.°2E±0.°1, h400^{km}, n19, σ1.^{s}12/20, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAI	Ambon	2.05	1	P	Pn	02 33 32.8	-1.3
BNDI	Bandanaira	2.12	55	P	Pn	02 33 33.5	-1.0
MSAI	Masohi	2.51	18	P	Pn	02 33 36.0	-1.2
NLAI	Namlea	2.71	337	P	Pn	02 33 37.1	-1.6
SAUI	Saumlaki	3.83	126	P	Pn	02 33 47.0	-1.2
SANI	Sanana	4.26	329	P	Pn	02 33 51.4	-1.0
SOEI	Soe	5.54	224	P	Pn	02 34 04.5	-1.1
BATI	Baumata	6.28	225	P	Pn	02 34 12.8	-0.7
EDFI	Ende, Flores	7.08	245	P	Pn	02 34 20.9	-1.5
TTSI	Tana Toraja	8.74	288	P	P	02 34 46.0	+4.6
MRSI	Marisa	8.76	315	P	Pn	02 34 41.0	-0.6
	26nm,0.8s,0.1nm						
MPSI	Mapaga	10.23	306	P	Pn	02 34 59.8	+1.3
WRA	Warramunga Arr	15.34	157	P	P	02 35 54.5	+0.5
	12nm,0.3s,baz=336,slow=11,SNR=819						
WRA				S	S	02 38 34.8	-1.6
	0.6nm,0.3s,baz=332,slow=21,SNR=7.9						
ASAR	Alice Springs	18.65	163	P	P	02 36 29.7	+0.3
	4.7nm,0.3s,baz=342,slow=11,SNR=196						
ASAR				S	S	02 39 40.5	+0.6
	0.3nm,0.3s,baz=344,slow=19,SNR=10						
STKA	Stephens Creek	28.88	156	P	P	02 38 02.3	+0.6
	4.0nm,0.8s,baz=346,slow=10,SNR=4.3						
MKAR	Makanchi Array	66.19	327	P	P	02 42 44.0	-0.1
	0.3nm,0.4s,baz=114,slow=7.9,SNR=4.0						
TXAR	Lajitas Array	125.84	58	PKP	PKPdf	02 50 54.9	+1.3
	0.2nm,0.7s,baz=242,slow=1.9,SNR=2.5						
TORD	Torodi Ar. Bea	126.77	282	PKP	PKPdf	02 50 55.2	-0.4
	0.2nm,0.6s,baz=128,slow=2.4						
LPAZ	La Paz	152.81	144	PKPbc	PKPbc	02 51 50.8	+0.8
	0.6nm,0.6s,baz=298,slow=1.4,SNR=3.4						

IDC 25 02:33:02.7±2.8, 10.°35N×126.°85E, h0^{km}, mb4.0/5, mb1 4.0/5, mb1mx3.6/55, mbtmp4.0/5, Error ellipse: s-maj=192.1km s-min=67.0km az=61.0

MAN 25 02:33:07.8, 10.°55N×126.°72E, h23^{km}, mb4.5, ML3.3, MS3.1

ISC 25 02:33:10.5±1.4, 10.°58N±0.°08×126.°6E±0.°1, h44^{km}, n16, σ1.^{s}02/14, mb4.1/5, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	1.38	235	eP	Pn	02 33 32.2	-1.1
SCPH				eS	Sn	02 33 50.6	+0.2
BESP	Borongan	1.56	311	eP	Pn	02 33 34.7	-1.1
BESP				eS	Sn	02 33 56.2	+1.5
PLP	Palo	1.73	290	⇓eP	Pn	02 33 37.3	-0.9
PLP				eS	Sn	02 33 57.6	-1.5
MSLP	Maasin	1.80	256	eP	Pn	02 33 39.0	-0.2
MSLP				eS	Sn	02 34 02.4	+1.6
H11S3	WAKE ISLAND Hy	39.49	74	T	T	03 24 08.4	
	baz=261						
H11S1	WAKE ISLAND Hy	39.50	74	T	T	03 23 58.9	
	baz=261						
H11S2	WAKE ISLAND Hy	39.51	74	T	T	03 23 55.6	
	baz=261						
H11N1	WAKE ISLAND Hy	39.82	72	T	T	03 24 14.7	
	baz=264						
H11N2	WAKE ISLAND Hy	39.82	72	T	T	03 24 15.4	
	baz=264						
H11N3	WAKE ISLAND Hy	39.84	72	T	T	03 24 12.9	
	baz=264						
MKAR	Makanchi Array	52.01	322	P	P	02 42 16.3	+0.7
	1.0nm,0.6s,baz=121,slow=8.5,SNR=11						
KURBB	Kurchatov Arra	56.03	325	P	P	02 42 45.4	+0.6
	1.7nm,0.6s,baz=123,slow=7.0,SNR=10.0						
BVAR	Borovoye Array	61.62	325	P	P	02 43 24.0	+0.3
	0.4nm,0.7s,baz=125,slow=12,SNR=4.2						
ARCES	ARCESS Array B	84.03	340	P	P	02 45 36.4	+0.2
	1.2nm,0.7s,baz=80,slow=6.5,SNR=7.8						
FINES	FINESS Array B	85.79	332	P	P	02 45 45.1	0.0
	1.0nm,0.8s,baz=93,slow=3.1,SNR=1.5						
TORD	Torodi Ar. Bea	120.49	292	PKP	PKPdf	02 51 57.7	-0.6
	0.1nm,0.3s,baz=92,slow=1.9						

ISCJB 25 02:35:53.6±0.3, 49.°82N±0.°02×18.°48E±0.°03, h0^{km}, Error ellipse: s-maj=3.0km s-min=2.3km az=6.6

IPEC 25 02:35:54.3±0.2, 49.°83N×18.°59E, h0^{km}±3^{km}, ML2.4/3, Error ellipse: s-maj=1.8km s-min=1.1km az=165.0

CSEM 25 02:35:54.2±0.2, 49.°84N×18.°49E, h2^{km}, ML3.0/14, Error ellipse: s-maj=5.3km s-min=3.4km az=14.0

ISC 25 02:35:53.5±0.7, 49.°86N±0.°02×18.°60E±0.°02, h0^{km}, n54, σ0.^{s}97/107, 5D, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.29	266	⇓iPG	Pg	02 36 00.3	+1.2
OKC				eSG	Sg	02 36 02.6	-0.3
	comp=Z,228nm,0.5s						
OKC	Ostrava-Krasne	0.29	266	Pg	Pg	02 36 00.3	+1.2
OKC				Sg	Sg	02 36 02.6	-0.3
	228nm,0.5s						
RAC	Raciborz	0.34	311	ePg	Pb	02 36 02.3	-0.2
RAC				eSg	Sb	02 36 08.3	-0.2
CHZP	Chorzow	0.50	30	ePg	Pb	02 36 05.4	+0.2
CHZP				eSg	Sb	02 36 13.9	+0.8
MORC	Moravsky Berou	0.69	263	ePg	Pg	02 36 07.2	+0.5
MORC				eSg	Sg	02 36 15.4	-0.2
	87nm,0.3s						
MORC	Moravsky Berou	0.69	263	ePg	Pg	02 36 07.2	+0.5
	baz=85						
MORC				eSg	Sg	02 36 15.4	-0.2
	87nm,0.3s,baz=85						
OJC	Ojcow	0.85	65	ePg	Pb	02 36 11.0	-0.2
OJC				eSg	Sb	02 36 23.7	+0.5
OJC	Ojcow	0.85	65	ePg	Pb	02 36 11.0	-0.2
OJC				eSg	Sb	02 36 23.7	+0.5
LANS	Liptovska Anna	0.91	141	ePG	Pb	02 36 11.8	-0.4
LANS				eSG	Sb	02 36 24.8	-0.1
LANS	Liptovska Anna	0.91	141	ePg	Pb	02 36 11.8	-0.4
LANS				eSg	Sb	02 36 24.8	-0.1
JAVC	Velka Javorina	1.17	211	ePn	Pb	02 36 16.7	0.0
JAVC	Velka Javorina	1.17	211	ePN	Pb	02 36 16.7	0.0
JAVC	Velka Javorina	1.17	211	ePg	Pb	02 36 16.6	-0.1
	baz=31						
KRLC	Kraliky	1.19	281	ePG	Pg	02 36 15.8	-0.6
KRLC				eSG	Sg	02 36 32.0	+0.2
	comp=Z,21nm,0.3s						
KRLC	Kraliky	1.19	281	Pg	Pg	02 36 15.8	-0.6
KRLC				Sg	Sg	02 36 32.0	+0.2
	21nm,0.3s						
NIE	Niedzica	1.19	111	ePg	Pn	02 36 17.5	0.0
NIE				eSg	Sn	02 36 35.5	+1.1
NIE	Niedzica	1.19	111	ePg	Pn	02 36 17.5	0.0
NIE				eSg	Sn	02 36 35.5	+1.1
VYHS	Vyhne	1.38	173	ePN	Pg	02 36 19.6	-0.3
VYHS				eSN	Sg	02 36 37.6	-0.1
VYHS				eLG	Lg	02 36 41.9	
VYHS	Vyhne	1.38	173	ePg	Pg	02 36 19.6	-0.3
VYHS				eSn	Sg	02 36 37.6	-0.1
VRAC	Vranov	1.42	248	ePg	Pn	02 36 20.3	-0.3
VRAC				eSg	Sg	02 36 38.1	-0.9
	49nm,0.3s						
VRAC	Vranov	1.42	248	ePN	Pn	02 36 20.4	-0.2
VRAC				eSG	Sg	02 36 38.1	-0.9
VRAC	Vranov	1.42	248	ePg	Pn	02 36 20.3	-0.3
	baz=67						
VRAC				eSg	Sg	02 36 38.1	-0.9
	49nm,0.3s,baz=67						
DPC	Dobruska-Polom	1.54	289	ePG	Pn	02 36 22.5	+0.1
DPC				eSG	Sg	02 36 43.0	-0.1
	comp=Z,34nm,0.3s						
DPC	Dobruska-Polom	1.54	289	Pg	Pn	02 36 22.5	+0.1
DPC				Sg	Sg	02 36 43.0	-0.1
	34nm,0.3s						
SMOL	Smolenice	1.55	210	ePN	Pn	02 36 21.8	-0.6
SMOL				eSN	Sn	02 36 42.1	-1.1
SMOL	Smolenice	1.55	210	ePn	Pn	02 36 21.8	-0.6
SMOL				eSn	Sn	02 36 42.1	-1.1
KRUC	Moravsky	1.64	242	ePg	Pn	02 36 23.7	0.0

KRUC				eSg	Sn	02 36 45.2	-0.3
	29nm,0.3s						
KRUC	Moravsky	1.64	242	ePN	Pn	02 36 23.7	0.0
KRUC				eSG	Sn	02 36 45.3	-0.3
KRUC	Moravsky	1.64	242	ePg	Pn	02 36 23.7	0.0
	baz=61						
KRUC				eSg	Sn	02 36 45.2	-0.3
	29nm,0.3s,baz=61						
MODS	Modra-Piesok	1.72	211	ePN	Pn	02 36 24.4	-0.4
MODS				eSN	Sn	02 36 46.4	-1.1
MODS				eLG	Lg	02 36 49.0	
MODS	Modra-Piesok	1.72	211	ePn	Pn	02 36 24.4	-0.4
MODS				eSn	Sn	02 36 46.4	-1.1
KSP	Ksiaz	1.77	305	ePn	Pn	02 36 25.6	+0.1
KSP				Pb	Pg	02 36 27.6	+0.1
KSP				i Pg	Pb	02 36 28.9	+2.0
KSP				eSg	Sg	02 36 51.1	+0.6
UPC	Upice	1.78	292	⇓ePG	Pb	02 36 26.7	-0.4
UPC				eSG	Sg	02 36 50.8	0.0
UPC	Upice	1.78	292	Pg	Pb	02 36 26.7	-0.4
UPC				Sg	Sg	02 36 50.8	0.0
CRVS	Cervenica-Dubn	2.10	116	ePN	Pg	02 36 33.7	-0.1
CRVS				eLG	Lg	02 37 13.4	
CRVS	Cervenica-Dubn	2.10	116	ePn	Pg	02 36 33.7	-0.1
PRU	Pruhonice	2.62	274	⇓ePG	Pb	02 36 41.0	-0.4
PRU				eSG	Sb	02 37 15.1	+1.0
	comp=Z,12nm,0.4s						
PRU	Pruhonice	2.62	274	Pg	Pb	02 36 41.0	-0.4
PRU				Sg	Sb	02 37 15.1	+1.0
	12nm,0.4s						
CONA	Conrad Observa	2.65	224	Pn	Pn	02 36 36.4	-1.1
	2.2nm,0.3s						
CONA				ePg	Pg	02 36 44.7	+0.5
	2.2nm,0.2s						
CONA				Sn	Sn	02 37 07.8	-2.6
	6.1nm,0.4s						
CONA	Conrad Observa	2.65	224	Pn	Pn	02 36 36.4	-1.1
	2.2nm,0.3s						
PVCC	Panska Ves	2.67	286	⇓ePG	Pg	02 36 43.7	-1.0
PVCC				eSG	Sg	02 37 18.3	-1.1
	comp=Z,27nm,0.3s						
PVCC	Panska Ves	2.67	286	Pg	Pg	02 36 43.7	-1.0
PVCC				Sg	Sg	02 37 18.3	-1.1
	27nm,0.3s						
PRA	Prague	2.70	276	⇓ePG	Pb	02 36 42.8	+0.2
PRA	Prague	2.70	276	Pg	Pb	02 36 42.8	+0.2
BRG	Berggiesshubel	3.15	291	PG	Pb	02 36 51.0	+0.7
BRG				SG	Sg	02 37 32.4	-2.2
	11nm,0.6s						
ARSA	Arzberg	3.31	219	ePn	Pn	02 36 47.2	+0.5
	0.5nm,0.3s						
ARSA				eSn	Sn	02 37 28.0	+1.2
	1.5nm,0.3s						
ARSA				Sg	Sg	02 37 43.7	+3.7
	1.6nm,0.3s						
ARSA	Arzberg	3.31	219	Pn	Pn	02 36 47.2	+0.5
	0.5nm,0.3s						
ARSA				Sn	Sn	02 37 28.0	+1.2
	1.5nm,0.3s						
ARSA				Sg	Sg	02 37 43.7	+3.7
	1.6nm,0.3s						
KHC	Kasperske Hory	3.35	259	ePN	Pn	02 36 46.9	-0.3
KHC				ePG	Pb	02 36 54.2	+0.4
KHC				eSG	Sb	02 37 37.7	+2.6
	comp=Z,14nm,0.4s						
KHC	Kasperske Hory	3.35	259	Pn	Pn	02 36 46.9	-0.3
MOA	Molln	3.50	236	ePn	Pn	02 36 49.1	-0.1
	0.7nm,0.2s						
MOA				Sg	Sg	02 37 43.6	-2.2
	8.6nm,0.5s						
MOA	Molln	3.50	236	Pn	Pn	02 36 49.1	-0.1
	0.7nm,0.2s						
MOA				Sg	Sg	02 37 43.6	-2.2
	8.6nm,0.5s						
CLL	Collm	3.85	294	ePg	Pg	02 37 07.0	-0.2
CLL				eSg	Sg	02 37 55.0	-2.1
	comp=Z,12nm,0.7s						
KBA	Koelnbreinsper	4.47	233	ePn	Pn	02 37 03.3	+0.7
	comp=Z,0.7nm,0.3s						
KBA				eSn	Sn	02 37 54.2	-1.2
	comp=Z,1.5nm,0.3s						
KBA				Sg	Sg	02 38 16.9	-0.1
	comp=Z,2.5nm,0.5s						
KBA	Koelnbreinsper	4.47	233	Pn	Pn	02 37 03.3	+0.7
	comp=Z,0.7nm,0.3s						
KBA				Sn	Sn	02 37 54.2	-1.2
	comp=Z,1.5nm,0.3s						
KBA				Sg	Sg	02 38 16.9	-0.1
	comp=Z,2.5nm,0.5s						

JMA 25 02:43:30.5, 37°.78N×139°.99E, h8^{km}±1^{km}, M2.6, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYAR	Yonezawaarcadi	0.18	43	P	Pg	02 43 34.3	+0.1
JFT	Otama	0.38	133	P	Pg	02 43 37.9	0.0
JFT				eS	Sg	02 43 43.0	+0.1
JFY	Yanaizu	0.44	211	P	Pg	02 43 39.0	0.0
JFY				eS	Sg	02 43 44.8	+0.1
JYS	Shirataka	0.44	8	P	Pg	02 43 39.2	0.0
JNS	Sasagawa	0.53	274	P	Pg	02 43 40.8	0.0
JMM	Marumori	0.64	82	P	Pg	02 43 42.7	-0.2
JOU	Okura	0.79	42	P	Pg	02 43 45.9	+0.2
JFK	Kawauchi	0.81	120	P	Pg	02 43 45.8	-0.4
JYA	Atsumi	0.84	345	P	Pg	02 43 46.4	-0.3
JAW	Awa shima	0.89	319	P	Pg	02 43 47.6	-0.1
MAT	Matsushiro	1.89	230	P	Pb	02 44 05.7	+0.5
MAT				S	Sg	02 44 31.6	+0.5

DJA 25 02:43:31.5±0.8, 3°N±3°×9°6E±°, h10^{km}, M3.8/6, MLv3.8/6, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNSI	Sinabang, Aceh	0.43	121	P	Pb	02 43 40.9	-0.3
SNSI				S	Sb	02 43 47.0	-0.7
TPTI		1.37	63	P	Pn	02 43 54.9	-1.8
TPTI				S	Sg	02 44 15.7	+0.1
MLSI	Meulaboh, Aceh	1.69	15	P	Pn	02 44 01.0	0.0
MLSI				S	Sn	02 44 23.3	+0.6
KCSI	Kotacane, Aceh	2.01	64	P	Pn	02 44 06.4	+0.8
KCSI				S	Sn	02 44 31.5	+0.6
GSI	Gunungsitoli	2.08	129	P	Pn	02 44 07.1	+0.6
TSI	Tuntungan	2.74	72	P	Pn	02 44 15.9	+0.3
LHMI	Lhok Sumawe	2.76	21	P	Pn	02 44 15.7	-0.2

MEX 25 02:44:01.1±0.6, 17°.33N×101°.12W, h15^{km}, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.43	310	eP	Pg	02 44 08.9	-0.8
ZIIG				eS	Sg	02 44 14.7	-0.9
ARIG	Puente Sto Nin	1.20	38	eP	Pn	02 44 20.0	-3.4
ARIG				eS	Sb	02 44 33.9	-5.1
MMIG	Aquila	2.32	295	eP	Pn	02 44 35.3	-3.5
MMIG				i S	Sn	02 45 02.0	-5.1

*IDC **25** 02:44:31.8±3.0, 2°.48N×95°.98E, h0^{km}, mb3.7/7, mb1 3.7/7, mb1mx3.4/62, mbtmp3.7/7, Error ellipse: s-maj=129.8km s-min=22.1km az=57.0*

*ISCJB **25** 02:44:32.4±0.8, 2°.25N±0°.06×95°.94E±0°.06, h25^{km}, mb3.7/7, Error ellipse: s-maj=9.1km s-min=7.9km az=147.0*

*DJA **25** 02:44:33.9±0.8, 2°N±4°×9°6E±°, h20^{km}±3^{km}, M3.8/7, MLv3.8/7*

ISC 25 02:44:34.6±1.1, 2°.26N±0°.07×96°.04E±0°.09, h25^{km}, n20, σ1^{s}.08/18, mb3.8/7, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNSI	Sinabang, Aceh	0.32	63	P	Pb	02 44 41.9	-0.1
SNSI				S	Sb	02 44 47.3	+0.3
TPTI		1.51	49	P	Pn	02 44 59.6	-0.5
TPTI				S	Sn	02 45 18.9	-0.1
MLSI	Meulaboh, Aceh	2.03	10	P	Pn	02 45 07.0	-0.2
MLSI				S	Sn	02 45 32.4	+0.7
KCSI	Kotacane, Aceh	2.14	54	P	Pn	02 45 08.0	-0.7
KCSI				S	Sn	02 45 34.3	-0.2
TSI	Tuntungan	2.81	64	P	Pn	02 45 17.2	-0.7
LHMI	Lhok Sumawe	3.08	17	P	Pn	02 45 21.7	-0.1
PBSI	Pulau Batu	3.21	136	P	Pn	02 45 22.3	-1.2
H08S2	Diego Garcia H	25.47	247	T	T	03 16 26.0	
	baz=67,slow=75,SNR=18						
H08S3	Diego Garcia H	25.47	247	T	T	03 16 28.4	
	baz=67,slow=75,SNR=38						
H08S1	Diego Carcia H	25.49	247	T	T	03 16 26.0	
	baz=67,slow=75,SNR=17						
H01W3	Cape Leeuwin H	40.66	157	T	T	03 35 43.8	
	baz=331						
H01W2	Cape Leeuwin H	40.68	157	T	T	03 35 45.4	
	baz=331						
H01W1	Cape Leeuwin H	40.68	157	T	T	03 35 36.5	
	baz=331						
WRA	Warramunga Arr	43.58	122	P	P	02 52 39.2	+2.1
	0.2nm,0.3s,baz=302,slow=9.6,SNR=2.5						
ASAR	Alice Springs	44.96	127	P	P	02 52 50.5	+2.4
	0.2nm,0.5s,baz=294,slow=8.3,SNR=4.3						
MKAR	Makanchi Array	45.95	347	P	P	02 52 55.1	-0.4
	1.0nm,0.5s,baz=156,slow=9.2,SNR=14						
SONM	Songino Array	46.27	10	P	P	02 52 57.3	-0.9
	1.0nm,0.6s,baz=188,slow=7.3,SNR=5.7						
KURBB	Kurchatov Arra	50.42	346	P	P	02 53 29.2	-0.8
	0.6nm,0.6s,baz=166,slow=6.2,SNR=3.7						
ZALV	Zalesovo Beam	52.34	352	P	P	02 53 43.5	-0.8
	1.1nm,0.4s,baz=175,slow=8.5,SNR=4.6						
BVAR	Borovoye Array	54.88	341	P	P	02 54 01.8	-1.1
	0.2nm,0.4s,baz=145,slow=5.3,SNR=2.0						

*ISCJB **25** 03:15:36.0±0.8, 32°.22S±0°.03×69°.88W±0°.04, h108^{km}±9^{km}, Error ellipse: s-maj=6.4km s-min=4.9km az=23.3*

*GUC **25** 03:15:36.0±0.4, 32°.18S×70°.00W, h94^{km}±7^{km}, ML3.0*

*SJA **25** 03:15:36.6±0.7, 32°.19S×69°.75W, h104^{km}±4^{km}, ML2.9, MW3.1*

ISC 25 03:15:36.6±1.7, 32°.21S±0°.04×69°.89W±0°.04, h105^{km}±15^{km}, n18, σ0^{s}.93/31, 1C-5D, Mendoza Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AUSP	Uspallata	0.42	93	eP	Pn	03 15 52.9	+0.1
AUSP				eS	Sn	03 16 05.1	+0.2
ARCO	CERRO ARCO	1.03	128	eP	Pn	03 15 58.2	+0.4
ARCO				IAML		03 15 58.4	
	comp=Z,278nm,0.3s						
ARCO				eS	Sn	03 16 13.7	-0.2
PEL	Peldehue	1.15	215	⇓eP	Pn	03 15 58.4	-0.7
PEL				eS	Sn	03 16 15.3	-0.8
FCH	Farellones	1.17	197	⇓eP	Pn	03 15 59.6	0.0
FCH				eS	Sn	03 16 17.8	+0.9
FCH				IAML		03 16 22.8	
	comp=E,209nm,0.4s						
ROCH	El Roble	1.22	231	⇓eP	Pn	03 15 59.3	-0.7
ROCH				eS	Sn	03 16 17.3	-0.4
ROCH				IAML		03 16 18.9	
	comp=N,693nm,0.2s						
AAGR	Agrelo	1.25	135	eP	Pn	03 16 00.7	+0.4
AAGR				eS	Sn	03 16 18.2	0.0
CLCH	Cerro Calan	1.31	205	⇓eP	Pn	03 16 00.6	-0.3
CLCH				eS	Sn	03 16 18.8	-0.5
CLCH				IAML		03 16 20.1	
	comp=N,206nm,0.5s						
RTLL	Cerro Villicun	1.49	54	eP	Pn	03 16 02.9	-0.1
ANTU	Antumapu	1.50	205	eP	Pn	03 16 02.7	-0.4
ANTU				eS	Sn	03 16 23.1	-0.2
ANTU				IAML		03 16 25.1	
	comp=E,216nm,0.2s						
LMEL	Las Melosas	1.66	189	⇓eP	Pn	03 16 05.2	0.0
LMEL				eS	Sn	03 16 30.6	+3.7
AVIZ	Vizcacheras	1.71	138	eP	Pn	03 16 05.6	-0.2
AMOG	MOGNA	1.74	44	⇑eP	Pn	03 16 06.2	+0.1
AMOG				eS	Sn	03 16 27.8	-0.8
AROD	Rodeo	2.06	10	eP	Pn	03 16 11.7	+1.2
ACDV	Cuesta del Vie	2.13	18	eP	Pn	03 16 12.2	+1.0
ACDV				IAML		03 16 12.7	
	comp=Z,56nm,0.6s						
GO04	Tololo Observa	2.17	339	eP	Pn	03 16 11.8	0.0
GO04				eS	Sn	03 16 38.5	-0.2
GO04				IAML		03 16 44.2	
	comp=E,346nm,0.4s						
TLL	Tololo Astrono	2.18	339	eP	Pn	03 16 11.8	-0.1
TLL				eS	Sn	03 16 38.5	-0.3
TLL				IAML		03 16 42.8	
	comp=E,116nm,0.4s						
ACAN	Cantantal	2.29	92	eP	Pn	03 16 12.4	-0.7
ACAN				eS	Sn	03 16 39.6	-1.5
AGUA	GUANDACOL	2.96	24	eP	Pn	03 16 22.7	+0.6

*JMA **25** 03:40:42.4±0.2, 43°.68N×147°.71E, h13^{km}, M3.7*

*SKHL **25** 03:40:43.7±0.8, 43°.89N×147°.86E, h46^{km}±8^{km}, mb3.9/4*

ISC 25 03:40:42.4±2.8, 43°.9N±0°.1×147°.9E±0°.1, h32^{km}±14^{km}, n13, σ1^{s}.19/20, Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHO	Shikotan	0.76	268	i P	Pb	03 40 57.0	-0.2
SHO				AMB	AMB	03 40 58.0	
	154nm,0.3s						
SHO				i S	Sb	03 41 07.0	-0.3
SHO				A	A	03 41 09.0	
	380nm,0.3s						
SHO				A	A	03 41 09.0	
	852nm,0.3s						
KUR	Kuril'sk	1.34	360	i P	Pn	03 41 05.0	+0.2
KUR				AMB	AMB	03 41 10.0	
	53nm,0.3s						
KUR				i S	Sn	03 41 21.0	-0.5
KUR				A	A	03 41 23.0	
	382nm,0.2s						
KUR				A	A	03 41 23.0	
	288nm,0.2s						
LAGR	Lagunnoye	1.52	277	i P	Pn	03 41 07.0	-0.4
LAGR				AMB	AMB	03 41 09.0	
	48nm,0.2s						
LAGR				AMB	AMB	03 41 09.0	
	51nm,0.2s						
LAGR				AMB	AMB	03 41 09.0	
	13nm,0.2s						
LAGR				i S	Sn	03 41 25.0	-1.0
LAGR				A	A	03 41 26.0	
	540nm,0.2s						
LAGR				A	A	03 41 26.0	
	70nm,0.2s						
GRPR	Tuman	1.53	274	i P	Pn	03 41 07.8	+0.4
GRPR				AMB	AMB	03 41 08.5	
	21nm,0.3s						
GRPR				i S	Sn	03 41 25.0	-1.2
GRPR				A	A	03 41 27.0	
	598nm,0.3s						
GRPR				A	A	03 41 27.0	
	626nm,0.3s						
NEM2	Nemuro 2	1.64	252	P	Pn	03 41 08.7	-0.3
NEM2				eS	Sn	03 41 27.4	-1.6
JRA	Rausu	1.99	272	P	Pn	03 41 14.8	+0.9
JNK	Nakash	2.31	263	P	Pn	03 41 18.9	+0.6
JNK				eS	Sn	03 41 45.5	-0.1
JAK	Akkeshi	2.49	250	P	Pn	03 41 20.9	+0.3
JAK				eS	Sn	03 41 49.3	-0.6
JTKR	Abashiri--Toko	2.87	273	P	Pn	03 41 27.6	+1.7
JAR	Ashorobuto	3.05	260	P	Pn	03 41 29.9	+1.6
JOB	Onbets	3.11	253	P	Pn	03 41 30.1	+0.9
JMP	Maruseppu	3.27	274	P	Pn	03 41 33.4	+2.0
HRK	Horoka	3.47	265	eP	Pn	03 41 36.6	+2.3

*IDC **25** 03:55:21.7±1.6, 17°.79S×167°.32E, h0^{km}, mb4.0/5, mb1 4.1/6, mb1mx3.7/46, mbtmp4.0/6, ML3.5/1, Error ellipse: s-maj=41.2km s-min=31.7km az=133.0*

*ISCJB **25** 03:55:24.2±1.3, 17°.98S±0°.09×167°.2E±0°.2, h23^{km}, mb3.9/5, Error ellipse: s-maj=30.7km s-min=12.8km az=2.3*

ISC 25 03:55:25.5±1.4, 18°.0S±0°.1×167°.3E±0°.3, h23^{km}, n6, σ0^{s}.95/7, mb4.0/5, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.17	191	Pn	Pn	03 56 28.4	+0.5
	2.6nm,0.3s,baz=17,slow=20,SNR=22						
DZM				Sn	Sn	03 57 14.9	-1.1
	3.1nm,0.3s,baz=324,slow=22,SNR=10.0						
STKA	Stephens Creek	27.06	234	P	P	04 01 07.3	+1.0
	5.0nm,0.8s,baz=76,slow=9.6,SNR=3.8						
WRA	Warramunga Arr	31.25	261	P	P	04 01 42.9	-0.8
	1.0nm,0.8s,baz=90,slow=8.9,SNR=8.4						
ASAR	Alice Springs	31.72	254	P	P	04 01 47.9	+0.1
	1.4nm,0.7s,baz=78,slow=8.5,SNR=16						
ILAR	Eielson Array	89.56	18	P	P	04 08 20.1	-0.5
	0.3nm,0.7s,baz=236,slow=5.6,SNR=5.5						
SNAA	Sanae	90.34	183	P	P	04 08 25.0	+0.5
	0.9nm,0.8s,baz=171,slow=4.8,SNR=5.5						

*ISCJB **25** 04:04:51.2±0.4, 41°.88N±0°.04×142°.53E±0°.04, h69^{km}±3^{km}, mb3.8/16, Error ellipse: s-maj=7.1km s-min=4.0km az=144.2*

*JMA **25** 04:04:51.5±0.1, 41°.89N×142°.53E, h63^{km}±2^{km}, M3.8 Broadband fault plane solution: P waves. NP1: ϕ_s47.00000°, δ70.00000°, λ90.00000°. NP2: ϕ_s227.00000°, δ20.00000°, λ90.00000°. Principal axes: T Plg65.0000°, Azm317.0000°; N Plg0.0000°, Azm47.0000°; P Plg25.0000°, Azm137.0000°;*

JMA Felt I J1.

*IDC **25** 04:04:54.5±1.7, 42°.01N×142°.59E, h82^{km}±12^{km}, mb3.6/16, mb1 3.7/20, mb1mx3.6/64, mbtmp3.9/20 Error ellipse: s-maj=17.6km s-min=12.0km az=116.0*

ISC 25 04:04:52.4±0.8, 41°.90N±0°.04×142°.52E±0°.04, h63^{km}±6^{km}, n46, σ1^{s}.07/56, mb4.0/16, 2C-10D, Hokkaido region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNBK	Urakawa-nobuka	0.42	24	⇓P	Pn	04 05 02.9	-0.9
JNBK				eS	Sn	04 05 11.5	-0.6
JEM	Erimo	0.49	76	⇑P	Pn	04 05 03.7	-0.8
JEM				eS	Sn	04 05 13.1	-0.1
JSHD	Hidakashinhida	0.51	356	P	Pn	04 05 04.2	-0.5
JSHD				eS	Sn	04 05 13.9	+0.2
JTHR	Tokachihiroo	0.70	56	P	Pn	04 05 06.2	-0.6
JTHR				eS	Sn	04 05 16.7	-0.6
JBT2	Biratori 2	0.88	353	⇓P	Pn	04 05 08.3	-0.8
JBT2				eS	Sn	04 05 21.1	-0.3
JCH	Churui	0.95	41	⇑P	Pn	04 05 09.2	-0.7
JCH				eS	Sn	04 05 22.6	-0.2
JKB	Kayabe	1.11	270	⇓P	Pn	04 05 11.1	-0.9
JKB				eS	Sn	04 05 25.7	-0.8
JOT	Ohata	1.22	245	⇓P	Pn	04 05 12.8	-0.6
JOT				eS	Sn	04 05 28.1	-1.0
JEW	Eniwo	1.23	320	⇓P	Pn	04 05 13.1	-0.4
JNB	Noboribetsu	1.24	298	⇓P	Pn	04 05 12.5	-1.1
JNB				eS	Sn	04 05 28.1	-1.4
JFR	Furan	1.26	2	⇓P	Pn	04 05 13.6	-0.4
JFR				eS	Sn	04 05 30.7	+0.5
JOB	Onbets	1.40	44	⇓P	Pn	04 05 16.3	+0.6
JOB				eS	Sn	04 05 34.5	+1.2
JTM	Tenmabayashi	1.56	225	⇓P	Pn	04 05 18.3	+0.4
JTM				eS	Sn	04 05 37.4	+0.2
JAB	Ashibetsu	1.62	352	P	Pn	04 05 18.9	+0.2
JAB				eS	Sn	04 05 40.4	+1.8
JSR	Shiriuchi	1.62	257	P	Pn	04 05 18.8	+0.1
JSR				eS	Sn	04 05 38.7	+0.1
JYM2	Yakumo 2	1.62	278	⇓P	Pn	04 05 18.0	-0.7
JAR	Ashorobuto	1.67	33	P	Pn	04 05 19.1	-0.4
JAR				eS	Sn	04 05 40.3	+0.4
ASAJ	Asahikawa	2.21	1	P	Pn	04 05 27.4	+0.6
	18nm,0.3s,baz=210,slow=10,SNR=65						
ASAJ				S	Sn	04 05 53.5	+0.4
	13nm,0.3s,baz=203,slow=17,SNR=6.3						
MJAR	Matsushiro Arr	6.31	213	P	Pn	04 06 26.7	+3.9
	0.6nm,0.3s,baz=32,slow=14,SNR=4.2						
USRK	Ussuriysk Ar.	8.05	290	P	Pn	04 06 49.7	+3.2
	baz=79,slow=15						
KLR	Kul'dur	10.52	318	P	Pn	04 07 23.1	+2.9
	0.0nm,0.3s,baz=125,slow=16,SNR=7.4						
KSRS	Korea Array	12.09	253	P	Pn	04 07 46.9	+5.1
	0.4nm,0.3s,baz=62,slow=14,SNR=4.6						
H11N2	WAKE ISLAND Hy	30.25	129	T	T	04 42 37.4	
	baz=323,slow=75,SNR=65						
H11N1	WAKE ISLAND Hy	30.26	130	T	T	04 42 38.2	
	baz=323,slow=75,SNR=50						
H11N3	WAKE ISLAND Hy	30.27	129	T	T	04 42 38.8	
	baz=323,slow=75,SNR=44						
H11S1	WAKE ISLAND Hy	31.11	131	T	T	04 43 42.3	
	baz=324,slow=76,SNR=63						
H11S3	WAKE ISLAND Hy	31.11	131	T	T	04 43 44.4	
	baz=324,slow=76,SNR=74						
H11S2	WAKE ISLAND Hy	31.13	131	T	T	04 43 41.5	
	baz=324,slow=76,SNR=44						
ZALV	Zalesovo Beam	39.42	308	P	P	04 12 15.2	-0.7
	1.7nm,0.6s,baz=96,slow=8.1,SNR=4.0						
MKAR	Makanchi Array	42.43	298	P	P	04 12 40.5	-0.3
	1.2nm,0.6s,baz=84,slow=8.7,SNR=12						
MKAR				PcP	PcP	04 14 33.1	+0.3
	0.3nm,0.5s,baz=70,slow=4.7,SNR=2.7						
KDAK	Kodiak Island	42.99	45	P	P	04 12 44.8	-0.3
	2.0nm,0.8s,baz=236,slow=11,SNR=3.9						
KURBB	Kurchatov Arra	43.83	304	P	P	04 12 51.7	-0.2
	4.1nm,0.7s,baz=77,slow=8.9,SNR=17						
ILAR	Eielson Array	44.97	35	P	P	04 13 00.0	-0.9
	0.3nm,0.4s,baz=264,slow=6.5,SNR=6.8						
BVAR	Borovoye Array	48.04	309	P	P	04 13 25.4	+0.3
	1.5nm,0.4s,baz=84,slow=8.0,SNR=8.7						
INK	Inuvik	49.69	29	P	P	04 13 37.5	0.0
	0.6nm,0.4s,baz=268,slow=5.0,SNR=5.9						
WRA	Warramunga Arr	61.99	189	P	P	04 15 05.5	-0.4
	0.6nm,0.4s,baz=7.3,slow=6.9,SNR=18						
FINES	FINESS Array B	64.93	332	P	P	04 15 24.2	-0.6
	2.0nm,0.5s,baz=48,slow=7.3,SNR=13						
HFS	Hagfors	70.02	335	P	P	04 15 56.5	-0.5
	1.9nm,0.3s,baz=46,slow=8.3,SNR=30						
NB2	NORSAR Subarra	70.04	337	P	P	04 15 56.5	-0.7
	comp=Z,0.7nm,0.5s,baz=35,slow=6.5						
NOA	NORSAR Array B	70.04	337	P	P	04 15 56.4	-0.7
	comp=Z,1.5nm,0.7s,baz=36,slow=6.2,SNR=7.2						
AKASG	Malin Array Be	70.99	322	P	P	04 16 02.5	-0.5
	comp=Z,0.7nm,0.3s,baz=43,slow=6.1,SNR=7.1						
BRTR	Keskin Array B	76.28	311	P	P	04 16 34.4	-0.1
	comp=Z,0.6nm,0.7s,baz=90,slow=2.4,SNR=3.8						
EKA	Eskdalemuir Ar	78.83	341	P	P	04 16 46.4	-1.8
	comp=Z,0.5nm,0.6s,baz=29,slow=3.7,SNR=3.3						
GERES	GERESS Array B	79.03	328	P	P	04 16 49.2	-0.3
	comp=Z,0.2nm,0.3s,baz=22,slow=8.5,SNR=2.7						
TXAR	Lajitas Array	86.50	53	P	P	04 17 28.2	-0.4
	comp=Z,0.2nm,0.7s,baz=318,slow=3.8,SNR=3.2						
SNAA	Sanae	145.64	199	PKPbc	PKPdf	04 24 23.0	+0.7
	comp=Z,0.6nm,0.7s,baz=180,slow=1.0,SNR=6.3						

NNC 25 04:27:37.1±5.6, 37°.23N×70°.80E, h0^{km}, mb3.6, mpv3.2, 2C-5D, Error ellipse: s-maj=45.3km s-min=36.6km az=156.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.50	36	⇓Pn	Pn	04 28 33.4	+0.5
	1.0nm,0.2s						
SFK				⇓Sn	Sn	04 29 17.1	+1.9
	9.3nm,0.3s						
MNAS	Manas	5.41	14	⇑Pn	Pn	04 28 59.8	+0.5
	1.9nm,0.5s						
MNAS				⇓Sn	Sn	04 30 03.7	+1.4
	2.5nm,0.4s						
KK31	Karatay Array	5.87	358	⇑Pn	Pn	04 29 06.6	+1.2
	0.8nm,0.3s,baz=170,slow=12,SNR=20						
KK31				Sn	Sn	04 30 15.0	+1.5
	1.0nm,0.3s,baz=181,slow=22,SNR=11						
AAK	Ala-Archa	6.10	27	⇓Pn	Pn	04 29 06.0	-2.7
	1.3nm,0.4s						
AAK				⇓Sn	Sn	04 30 18.7	-0.7
	7.0nm,0.6s						

MEX 25 04:40:11.6±0.4, 16°.06N×98°.20W, h6^{km}±3^{km}, MD3.8, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.33	12	eP	Pg	04 40 17.7	-0.5
PNIG				i S	Sg	04 40 22.8	+0.3
TLIG	Tlapa	1.53	347	eP	Pn	04 40 36.2	-3.5
TLIG				i S	Sn	04 40 54.7	-5.3
VHO	Vista Hermosa	1.73	54	i P	Pn	04 40 39.2	-3.2
VHO				i S	Sn	04 41 00.3	-4.6

IDC 25 04:43:33.2±1.4, 25°.97N×102°.04E, h0^{km}, mb3.3/4, mb1 3.5/4, mb1mx3.3/64, mbtmp3.4/4, MS3.6/1, Ms1 3.6/1,

ms1mx2.6/36, Error ellipse: s-maj=55.8km s-min=23.5km az=72.0, Yunnan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	8.01	202	Pg	Pg	04 46 00.8	-5.8
	0.5nm,0.3s,baz=9.6,slow=17,SNR=3.0						
SONM	**Songino Array**	22.09	8	P	P	04 48 30.8	+0.8
	0.4nm,0.6s,baz=195,slow=10,SNR=2.9						
MKAR	**Makanchi Array**	26.03	328	P	P	04 49 07.7	-0.3
	0.7nm,0.8s,baz=119,slow=8.4,SNR=4.1						
WRA	**Warramunga Arr**	55.38	142	P	P	04 53 08.9	-0.4
	0.5nm,1.0s,baz=331,slow=8.0,SNR=5.5						
WRA				LR	LR	05 21 15.5	
	comp=Z,45nm,18.1s,baz=95,slow=41						
ASAR	**Alice Springs**	58.19	145	P	P	04 53 29.1	-0.2
	0.2nm,0.4s,baz=325,slow=6.9,SNR=4.2						

WEL 25 04:48:23.2, 38°S±16°×18°0W±1°0, h33^{km}, ML3.6/14, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	1.63	264	P	Pn	04 48 50.6	+1.0
WMGZ				S	Sn	04 49 10.4	+1.0
MXZ	**Matakaoa Point**	1.71	273	P	Pn	04 48 50.5	-0.2
MXZ				S	Sn	04 49 10.9	-0.5
PUZ	**Puketiti**	1.79	256	P	Pn	04 48 52.8	+1.0
PUZ				S	Sn	04 49 13.7	+0.2
PKGZ	**Pakihiroa**	1.90	262	P	Pn	04 48 54.2	+0.8
CNGZ	**Carnagh Statio**	1.96	244	P	Pn	04 48 56.0	+1.9
CNGZ				S	Sn	04 49 19.6	+2.0
TWGZ	**Tauwhareparae**	2.03	254	P	Pn	04 48 56.5	+1.4
TWGZ				S	Sn	04 49 20.1	+0.8
HAZ	**Te Kaha**	2.12	267	P	Pn	04 48 56.8	+0.4
TKGZ	**Te Karaka**	2.20	248	P	Pn	04 48 59.4	+1.9
RUGZ	**Raukumara Rang**	2.22	261	P	Pn	04 48 58.8	+1.0
PRGZ	**Paritu Road**	2.39	237	P	Pn	04 49 01.8	+1.8
MWZ	**Matawai**	2.41	253	P	Pn	04 49 01.3	+0.9
MWZ				S	Sn	04 49 28.2	-0.6
MHGZ	**Mahia Peninsul**	2.50	233	P	Pn	04 49 03.1	+1.5
RAGZ	**Rawiri**	2.54	250	P	Pn	04 49 04.0	+1.8
KNZ	**Kokohu**	2.58	237	P	Pn	04 49 04.1	+1.5
SNGZ	**Shannon Statio**	2.70	244	P	Pn	04 49 05.9	+1.5
URZ	**Urewera**	2.71	256	P	Pn	04 49 06.1	+1.6
RTZ	**Ruatahuna**	2.90	250	P	Pn	04 49 09.0	+1.8
RAHZ	**Arahi**	2.94	244	P	Pn	04 49 09.5	+1.9

MEX 25 04:54:17.6±0.3, 24°.78N×99°.78W, h4^{km}±17^{km}, MD3.6, Central Mexico

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LNIG	**Linares**	0.30	68	*e*P	Pg	04 54 23.3	-0.3
	baz=248,slow=14						
LNIG				*e*S	Sg	04 54 27.7	+0.1

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*IDC **25** 05:06:16.4±1.4, 24°.06S×179°.84W, h490^{km}±15^{km}, mb3.4/13, mb1 3.7/15, mb1mx3.5/39, mbtmp4.3/15, Error ellipse: s-maj=16.8km s-min=12.7km az=98.0*

*ISCJB **25** 05:06:17.2±0.5, 24°.10S±0°.06×179°.7W±0°.1, h518^{km}, mb3.7/12, Error ellipse: s-maj=13.3km s-min=7.5km az=19.8*

ISC 25 05:06:18.1±0.5, 24°.13S±0°.08×179°.6W±0°.1, h518^{km}, n29, σ1^{s}54/34, mb3.8/12, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	5.32	164	P	P	05 07 47.6	-1.2
	267nm,0.3s,baz=6.3,slow=23,SNR=11						
AFI	**Afiamalu**	12.58	37	P	P	05 09 01.2	-1.7
	4.6nm,0.3s,baz=135,slow=1.4,SNR=5.5						
AFI				S	S	05 11 15.0	-3.7
	2.7nm,0.3s,baz=3.6,slow=23,SNR=3.9						
DZM	**Mont Dzumac**	12.99	276	P	P	05 09 06.4	-0.8
	0.6nm,0.3s,baz=87,slow=19,SNR=7.6						
URZ	**Urewera**	14.36	190	P	P	05 09 20.2	-0.9
	6.7nm,0.3s,baz=12,slow=1.8,SNR=22						
URZ				S	S	05 11 49.5	-2.5
	1.4nm,0.3s,baz=57,slow=24,SNR=8.4						
RPZ	**Rata Peaks**	20.98	199	P	P	05 10 24.1	-0.4
	8.0nm,0.5s,baz=336,slow=20,SNR=5.8						
ASAR	**Alice Springs**	42.34	261	P	P	05 13 25.3	-1.3
	1.8nm,0.5s,baz=94,slow=7.3,SNR=23						
ASAR				ScP	ScP	05 18 11.1	+1.6
	0.6nm,0.7s,baz=111,slow=4.5,SNR=4.0						
WRA	**Warramunga Arr**	42.74	266	P	P	05 13 27.9	-1.9
	5.4nm,0.5s,baz=97,slow=8.4,SNR=185						
WRA				PcP	PcP	05 15 08.4	-1.3
	0.5nm,0.6s,baz=105,slow=3.1,SNR=3.3						
WRA				ScP	ScP	05 18 14.6	+3.4
	1.3nm,0.7s,baz=100,slow=3.7,SNR=9.1						
VNDA	**Vanda**	54.18	185	P	P	05 14 55.5	+1.5
	0.4nm,0.6s,baz=22,slow=3.7,SNR=3.7						
QSPA	**South Pole Qui**	65.95	180	P	P	05 16 13.9	+1.4
	2.4nm,0.6s,baz=17,slow=4.4,SNR=11						
MJAR	**Matsushiro Arr**	72.29	325	P	P	05 16 50.1	-0.8
	1.2nm,0.4s,baz=163,slow=6.5,SNR=7.2						
ASAJ	**Asahikawa**	76.23	333	P	P	05 17 13.6	+0.7
	3.3nm,0.3s,baz=63,slow=6.8,SNR=6.0						
KSRS	**Korea Array**	78.65	320	P	P	05 17 26.3	+0.1
	2.1nm,0.7s,baz=132,slow=5.7,SNR=12						
USRK	**Ussuriysk Ar.**	81.15	327	P	P	05 17 40.0	+0.8
	2.0nm,0.5s,baz=145,slow=5.3						
NVAR	**Mina Array Bea**	84.68	44	P	P	05 18 00.5	+3.1
	0.3nm,0.7s,baz=211,slow=6.2,SNR=3.0						
CMAR	**Chiang Mai Arr**	89.93	290	P	P	05 18 23.9	+1.6
	0.8nm,0.3s,baz=122,slow=3.0,SNR=4.7						
TXAR	**Lajitas Array**	90.26	58	P	P	05 18 25.9	+2.2
	0.6nm,0.8s,baz=215,slow=6.4,SNR=9.8						
ILAR	**Eielson Array**	92.17	13	P	P	05 18 31.2	-0.4
	0.3nm,0.6s,baz=232,slow=6.3,SNR=4.2						
KURBB	**Kurchatov Arra**	115.65	316	PKP	PKPdf	05 23 59.9	-1.1
	0.5nm,0.6s,baz=93,slow=2.0,SNR=4.9						
BVAR	**Borovoye Array**	120.84	319	PKP	PKPdf	05 24 10.6	-0.4
	0.6nm,0.3s,baz=60,slow=5.8,SNR=3.6						
ARCES	**ARCESS Array B**	132.18	348	PKP	PKPdf	05 24 31.2	-0.9
	0.7nm,0.5s,baz=119,slow=1.5,SNR=5.7						
HFS	**Hagfors**	142.84	349	PKhKP	PKPpre	05 24 48.8	
	4.0nm,0.4s,baz=67,slow=3.7,SNR=48						
AKASG	**Malin Array Be**	145.35	327	PKPbc	PKPdf	05 24 57.0	+0.4
	1.8nm,0.4s,baz=45,slow=4.1,SNR=9.7						
ASF	**Jabal al Asfar**	146.94	292	PKPbc	PKPbc	05 25 03.2	+0.4
	1.6nm,0.6s,baz=90,slow=1.0,SNR=3.5						
BRTR	**Keskin Array B**	148.00	307	PKPbc	PKPbc	05 25 05.1	-0.3
	0.9nm,0.6s,baz=106,slow=3.1,SNR=4.9						
BRTR				PKPab	PKPab	05 25 10.2	+0.3
	1.7nm,0.6s,baz=85,slow=3.6,SNR=6.6						
MMAI	**Mount Meron Ar**	148.12	294	PKPbc	PKPbc	05 25 05.9	+0.1
	3.0nm,0.4s,baz=66,slow=7.0,SNR=4.8						
EKA	**Eskdalemuir Ar**	148.73	4	PKPbc	PKPbc	05 25 06.0	-0.5
	0.4nm,0.4s,baz=15,slow=3.1,SNR=6.4						
CLL	**Collm**	151.18	343	*i* PKPbc	PKPbc	05 25 12.6	+0.2
	comp=Z,6.0nm,0.7s						
DAVOX	**Davos/Dischmat**	156.15	344	PKPab	PKPab	05 25 44.5	+0.2
	comp=Z,2.0nm,0.6s,baz=356,slow=15,SNR=3.6						
TORD	**Torodi Ar. Bea**	169.00	187	PKPab	PKPab	05 26 41.0	0.0
	baz=174,slow=3.0						

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*ISK **25** 05:08:10.9, 39°.86N×40°.55E, h7^{km}, ML2.2/2*

*ISCJB **25** 05:08:11.5±0.5, 39°.83N±0°.03×40°.49E±0°.06, h5^{km}±8^{km}, Error ellipse: s-maj=8.0km s-min=3.9km az=162.3*

*DDA **25** 05:08:11.0, 39°.84N×40°.47E, h7^{km}, Ml2.5*

*CSEM **25** 05:08:11.1±0.1, 39°.85N×40°.47E, h2^{km}, ML2.5, Error ellipse: s-maj=3.3km s-min=2.2km az=48.0*

ISC 25 05:08:11.4±0.9, 39°.84N±0°.02×40°.47E±0°.03, h11^{km}±8^{km}, n23, σ0^{s}61/33, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KOPT	**Kop Dagi**	0.18	7	*i* P	Pg	05 08 15.2	-0.5
KOPT				*i* S	Sg	05 08 18.9	+0.4
KOPT	**Kop Dagi**	0.18	7	P	Pg	05 08 15.1	-0.5
KOPT				S	Sg	05 08 18.9	+0.4
YEDI	**Yedisu-Bingol**	0.41	172	PG	Pg	05 08 19.5	0.0
YEDI				SG	Sb	05 08 25.9	-1.1
YEDI	**Yedisu-Bingol**	0.41	172	*e*Pg	Pg	05 08 19.5	0.0
ECAT	**Cat-ERZURUM**	0.45	121	*i* P	Pg	05 08 19.9	-0.5
ECAT				*i* S	Sg	05 08 26.9	+0.4
ECAT	**Cat-ERZURUM**	0.45	121	P	Pg	05 08 19.9	-0.5
ECAT				S	Sg	05 08 26.9	+0.4
BAYT	**Ayd˜–ntepe-Bay**	0.61	336	PG	Pg	05 08 23.2	-0.1
BAYT				SG	Sb	05 08 32.5	-0.3
BAYT	**Ayd˜–ntepe-Bay**	0.61	336	*e*Pg	Pg	05 08 23.2	-0.1
BAYT				*e*Sg	Sb	05 08 32.5	-0.3
ERZM	**Erzurum**	0.69	84	*i* P	Pg	05 08 24.7	-0.2
ERZM	**Erzurum**	0.69	84	P	Pg	05 08 24.7	-0.2
BNGB	**Bingˆ¶l**	0.86	169	PG	Pb	05 08 28.3	-0.2
BGOL	**Bingol**	0.86	170	*i* P	Pg	05 08 27.6	-0.5
BGOL				*i* S	Sb	05 08 40.7	+0.6
BGOL	**Bingol**	0.86	170	P	Pg	05 08 27.6	-0.5
BGOL				S	Sb	05 08 40.7	+0.6
BINT	**Bingol**	0.96	179	*e*Pg	Pg	05 08 28.3	-1.7
KELT	**Kelkit**	0.98	289	*i* P	Pg	05 08 29.8	-0.6
KELT				*i* S	Sn	05 08 45.9	+0.5
KELT	**Kelkit**	0.98	289	P	Pg	05 08 29.8	-0.6
MACK	**Trabzon**	1.23	334	*i* P	Pg	05 08 34.4	-0.6
MACK	**Trabzon**	1.23	334	P	Pg	05 08 34.4	-0.6
PTK	**Pertek**	1.26	222	PN	Pb	05 08 36.3	+0.9
PTK	**Pertek**	1.26	222	*e*Pn	Pb	05 08 36.3	+0.9
KEMA	**Kemaliye**	1.63	250	*i* P	Pb	05 08 41.5	-0.1
KEMA	**Kemaliye**	1.63	250	P	Pb	05 08 41.5	-0.1
DAGI	**Agillar**	1.66	41	*i* P	Pb	05 08 41.9	-0.1

MEX 25 05:18:16.5±0.5, 18°.31N×104°.36W, h24^{km}±19^{km}, MD3.6, Near coast of Jalisco

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMIG	**Aquila**	0.96	91	*e*P	Pb	05 18 31.4	-3.1
MMIG				*e*S	Sb	05 18 43.5	-3.3
CJM	**Chamela**	1.35	331	*e*P	Pn	05 18 37.2	-2.7
CJM				*e*S	Sn	05 18 53.3	-3.9
ZIIG	**Zihuatanejo**	2.84	104	*i* P	Pn	05 18 59.2	-1.1
ZIIG				*i* S	Sn	05 19 30.4	-3.5
ARIG	**Puente Sto Nin**	3.81	90	*i* P	Pn	05 19 11.3	-2.5
ARIG				*e*S	Sn	05 19 55.1	-2.8

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*KRAR **25** 05:35:07.0±0.2, 53°.73N×90°.91E, M2.7, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

IDC 25 05:35:11.2±3.4, 53°.66N×90°.74E, h0^{km}, mb1 3.2/3, mb1mx3.1/65, mbtmp3.2/3, ML2.7/3, Error ellipse: s-maj=28.0km s-min=23.6km az=67.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I46RU	**ZALESOVO INFRA**	3.52	277	*i*		05 58 30.0	
	baz=92,slow=325,SNR=0.9						
ZALV	**Zalesovo Beam**	3.52	277	Pn	Pn	05 36 08.9	+1.8
	0.9nm,0.3s,baz=96,slow=16,SNR=11						
ZALV				Lg	Lg	05 37 02.4	
	2.5nm,0.3s,baz=91,slow=29,SNR=16						
KURBB	**Kurchatov Arra**	8.10	253	Pn	Pn	05 37 09.6	-0.4
	0.1nm,0.3s,baz=66,slow=15,SNR=6.9						
KURBB				Sn	Sn	05 38 40.6	-1.6
	0.0nm,0.3s,baz=64,slow=24,SNR=3.2						
KURBB				Lg	Lg	05 39 26.2	
	0.0nm,0.3s,baz=71,slow=36,SNR=3.1						
MKAR	**Makanchi Array**	8.75	222	Pn	Pn	05 37 19.0	+0.1
	0.2nm,0.3s,baz=36,slow=16,SNR=4.0						
MKAR				Sn	Sn	05 38 59.0	+0.9
	0.2nm,0.3s,baz=32,slow=22,SNR=4.4						
MKAR				Lg	Lg	05 39 45.5	
	0.1nm,0.3s,baz=32,slow=26,SNR=3.2						
SONM	**Songino Array**	11.50	114	Lg	Lg	05 41 08.2	
	0.1nm,0.3s,baz=306,slow=25,SNR=7.0						

IDC 25 05:42:14.1±1.9, 1°.94N×127°.27E, h0^{km}, mb3.6/4, mb1 3.8/4, mb1mx3.5/46, mbtmp3.6/4, Error ellipse: s-maj=182.8km s-min=21.0km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	22.82	163	P	P	05 47 18.1	-0.8
	0.7nm,0.4s,baz=341,slow=10,SNR=27						
ASAR	**Alice Springs**	26.26	166	P	P	05 47 51.9	+0.6
	0.2nm,0.3s,baz=344,slow=11,SNR=3.5						
MKAR	**Makanchi Array**	59.33	326	P	P	05 52 18.3	+0.3
	0.6nm,0.5s,baz=116,slow=8.0,SNR=6.3						
KURBB	**Kurchatov Arra**	63.53	328	P	P	05 52 46.1	-0.3
	0.6nm,0.5s,baz=126,slow=5.7,SNR=4.9						

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*IDC **25** 05:53:23.7±1.2, 12°.51N×88°.23W, h0^{km}, mb3.7/8, mb1 4.0/10, mb1mx3.7/49, mbtmp3.7/10, ML3.1/2, Error ellipse: s-maj=49.8km s-min=17.6km az=50.0*

*ISCJB **25** 05:53:25.6±0.7, 12°.04N±0°.06×88°.55W±0°.05, h33^{km}, mb3.7/8, Error ellipse: s-maj=10.6km s-min=3.7km az=33.3*

*CASC **25** 05:53:26.9±1.2, 12°.20N×88°.48W, h23^{km}±8^{km}, ML3.0*

ISC 25 05:53:27.2±0.8, 12°.21N±0°.07×88°.47W±0°.06, h33^{km}, n36, σ1^{s}17/43, mb3.8/8, Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CSGN	**Cosiguina Volc**	1.17	49	*e*P	Pb	05 53 48.9	-0.1
LCY	**Lacayo**	1.22	8	*e*P	Pn	05 53 48.6	+0.4
VSM	**San Miguel**	1.23	9	*e*P	Pn	05 53 49.0	+0.7
LCND	**La Caˆ–ada**	1.23	27	*e*P	Pn	05 53 48.5	+0.4
TECA	**Tecapa**	1.28	359	*e*P	Pn	05 53 48.9	-0.1
LFRS	**El Faro**	1.52	338	*e*P	Pn	05 53 52.0	-0.2
LBRS	**Las Brisas**	1.62	340	*e*P	Pn	05 53 54.0	+0.4
SNET	**Serv Nac Est T**	1.65	333	*e*P	Pn	05 53 54.0	+0.1
SNET				*e*S	Sn	05 54 15.6	+1.5
SNET				IAML		05 54 18.3	
	comp=Z,425nm,0.2s						
LFU	**La Fuente**	1.66	338	*e*P	Pn	05 53 54.0	-0.1
COLS	**Colinas**	1.66	331	*e*P	Pn	05 53 54.5	+0.3
UEES	**San Salvador**	1.69	334	*e*P	Pn	05 53 55.2	+0.7
BOQS	**Boqueron**	1.71	333	*e*P	Pn	05 53 55.3	+0.3
CNGN	**Cerro Negro**	1.75	80	*e*P	Pn	05 53 55.8	+0.5
CNGN				IAML		05 54 29.0	
	comp=N,170nm,0.7s						
COPN	**Copaltepe**	1.84	91	*e*P	Pn	05 53 57.2	+0.8
MOMN	**Momotombo**	1.90	84	*e*P	Pn	05 53 58.0	+0.7
SBLS	**San Blas**	1.98	325	*e*P	Pn	05 53 59.4	+0.8
SNJE	**San Jose**	1.99	326	*e*P	Pn	05 53 59.3	+0.6
RTR	**El Retiro**	2.04	326	*e*P	Pn	05 54 00.1	+0.7
RTR				*e*S	Sb	05 54 26.9	-1.8
APYN	**Apoyeque**	2.07	89	*e*P	Pn	05 54 01.3	+1.6
MGAN	**Managua**	2.17	91	*e*P	Pn	05 54 02.2	+1.1
MGAN				*e*S	Sn	05 54 28.4	+1.5
MGAN				IAML		05 54 34.8	
	comp=N,59nm,0.9s						
ESTN	**Estel**	2.23	66	*e*P	Pn	05 54 03.0	+0.9
MTO3	**Montecristo**	2.35	338	*e*P	Pn	05 54 04.3	+0.6
MTO3				*e*S	Sn	05 54 34.8	+3.2
MTO3				IAML		05 54 43.2	
	comp=Z,83nm,0.6s						
MATN	**Matagalpa**	2.59	74	*e*P	Pn	05 54 07.4	+0.5
RCON	**San Juan de Ri**	2.59	60	*e*P	Pn	05 54 08.2	+1.3
BOAB	**BOACO BROADBAN**	2.75	85	*e*P	Pn	05 54 08.8	-0.2
IXG	**Ixpaco**	2.75	316	*e*P	Pn	05 54 10.2	+1.0
JTS	**JuntasAbangare**	3.94	119	Pn	Pn	05 54 27.0	+1.6
	comp=Z,0.9nm,0.3s,baz=318,slow=19,SNR=7.4						
JTS				Sn	Sn	05 55 09.2	-1.4
	comp=Z,1.3nm,0.3s,baz=336,slow=20,SNR=3.2						
CMIG	**Matias Romero**	7.88	309	Pn	Pn	05 55 20.5	+0.9
	comp=Z,0.4nm,0.3s,baz=148,slow=11,SNR=7.7						
CMIG				Sn	Sn	05 56 45.9	-1.8
	comp=Z,0.1nm,0.3s,baz=194,slow=18,SNR=2.2						
TXAR	**Lajitas Array**	22.15	323	P	P	05 58 20.7	+0.3
	comp=Z,2.1nm,0.6s,baz=144,slow=12,SNR=34						
TKL	**Tuckaleechee C**	23.73	10	P	P	05 58 35.4	-1.1
	comp=Z,3.4nm,0.8s,baz=162,slow=7.9,SNR=4.2						
PDAR	**Pinedale Array**	35.53	333	P	P	06 00 22.6	+1.2
	comp=Z,0.4nm,0.8s,baz=123,slow=5.5,SNR=4.2						
NVAR	**Mina Array Bea**	37.24	320	P	P	06 00 37.2	+1.1
	comp=Z,0.1nm,0.3s,baz=100,slow=9.2,SNR=3.0						
NVAR				PcP	PcP	06 02 57.7	+2.3
	comp=Z,0.6nm,0.7s,baz=116,slow=3.4,SNR=5.0						
ULM	**Lac du Bonnet**	38.42	352	P	P	06 00 43.9	-1.7
	comp=Z,4.6nm,0.6s,baz=170,slow=8.7,SNR=5.7						
SIV	**San Ignacio**	38.98	135	P	P	06 00 51.8	+1.1
	comp=Z,1.7nm,0.7s,baz=291,slow=5.8,SNR=12						
YKA	**Yellowknife Ar**	53.59	345	P	P	06 02 44.1	-0.8
	comp=Z,1.0nm,0.8s,baz=140,slow=8.7,SNR=3.2						
ILAR	**Eielson Array**	65.84	336	P	P	06 04 07.8	-1.4
	comp=Z,0.7nm,1.0s,baz=110,slow=3.9,SNR=6.5						

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*ISCJB **25** 06:01:10.9±0.3, 27°.97S±0°.02×66°.59W±0°.03, h145^{km}±3^{km}, mb4.6/146, Error ellipse: s-maj=4.4km s-min=3.4km az=152.6*

*GCMT **25** 06:01:11.5±0.3, 28°.23S×66°.53W, h184^{km}±2^{km}, MW5.1/96, Moment Tensor Solution. s28,c31; s96,c132; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.99±.18; $M_{\theta\theta}$-0.58±.20; $M_{\phi\phi}$4.58±.23; $M_{r\theta}$3.10±.14; $M_{\theta\phi}$-2.98±.18; $M_{\phi r}$-0.44±.17; Best double couple: $M_0$6.10300×10^{16} NP1:ϕ_s307.00000°, δ62.00000°, λ-127.00000°. NP2: ϕ_s185.00000°, δ45.00000°, λ-41.00000°. Principal axes: T 6.2450, Plg10.0000°, Azm62.0000°; N -0.2770, Plg32.0000°, Azm326.0000°; P -5.9610, Plg56.0000°, Azm168.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*MOS **25** 06:01:11.3±1.0, 28°.01S×66°.63W, h145^{km}, mb4.7/19 Error ellipse: s-maj=10.7km s-min=7.0km az=92.1*

*SJA **25** 06:01:11.9, 28°.11S×66°.63W, h183^{km}, ML4.8, MW5.2*

*NEIC **25** 06:01:11.5±0.4, 28°.03S×66°.53W, h140^{km}±3^{km}, mb4.6/99, Error ellipse: s-maj=4.4km s-min=3.2km az=73.0*

*GUC **25** 06:01:13.3±0.8, 28°.15S×66°.74W, h165^{km}±5^{km}, ML5.2, MW5.2*

*IDC **25** 06:01:14.1±0.5, 27°.96S×66°.47W, h162^{km}±3^{km}, mb4.5/23, mb1 4.6/26, mb1mx4.4/40, mbtmp4.9/26, MS3.6/4, Ms1 3.5/4, ms1mx3.1/34, Error ellipse: s-maj=12.4km s-min=9.4km az=77.0*

ISC 25 06:01:14.1±0.3, 28°.06S±0°.03×66°.70W±0°.04, h166^{km}±3^{km}, h167^{km}:pP-P, n611, σ1^{s}56/742, mb4.7/144, 28C-10D, Catamarca Province

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CYA	**Choya**	0.88	116	*i* P	Pn	06 01 39.3	-0.2
CYA				IAML		06 01 40.0	
	comp=Z,7μm,0.5s						
CYA				*i* S	Sn	06 01 58.6	-0.6
CYA	**Choya**	0.88	116	⇑*i*P	Pn	06 01 39.2	-0.4
CYA				*i* S	Sn	06 01 57.9	-1.3
CYA				IAML		06 01 58.8	
	comp=N,16μm,0.8s						
VCA	**Vinchina**	1.49	243	*i* P	Pn	06 01 45.1	+0.1
VCA				IAML		06 01 46.8	
	comp=Z,12μm,0.5s						
VCA				⇓*i*S	Sn	06 02 09.6	+0.7
VCA	**Vinchina**	1.49	243	⇑*i*P	Pn	06 01 45.0	-0.1
VCA				*e*S	Sn	06 02 08.7	-0.2
VCA				IAML		06 02 11.6	
	comp=E,37μm,0.6s						
AHML	**Horco Molle**	1.75	44	*i* P	Pn	06 01 47.2	-0.4
AHML				IAML		06 01 47.6	
	comp=Z,3μm,0.3s						
AHML	**Horco Molle**	1.75	44	IAML		06 02 12.6	
	comp=N,8μm,1.4s						
AGUA	**GUANDACOL**	2.12	227	*i* P	Pn	06 01 51.3	-0.4
ACDV	**Cuesta del Vie**	2.99	225	*i* P	Pn	06 02 01.9	-0.3
ACDV				*i* S	Sn	06 02 38.8	-0.7
GO03	**Copiap**	3.17	278	*e*Pn	Pn	06 02 03.6	-0.7
GO03				*e*Sn	Sn	06 02 41.1	-2.1
GO03	**Copiap**	3.17	278	⇑*i*P	Pn	06 02 03.3	-1.0
GO03				*e*S	Sn	06 02 41.0	-2.3
GO03				IAML		06 02 44.9	
	comp=N,16μm,0.4s						
AROD	**Rodeo**	3.21	228	*i* P	Pn	06 02 05.0	-0.1
AROD				*i* S	Sn	06 02 44.1	-0.6
AMOG	**MOGNA**	3.27	208	*i* P	Pn	06 02 04.2	-1.4
AMOG				*i* S	Sn	06 02 43.4	-2.3
CPCH	**Copiapo**	3.32	281	⇑*i*P	Pn	06 02 04.1	-2.0
CPCH				*i* S	Sn	06 02 43.6	-2.9
SLA	**San Lorenzo**	3.49	18	IAML		06 02 53.4	
	comp=N,44nm,0.8s						
SLA	**San Lorenzo**	3.49	18	⇑*i*P	Pn	06 02 09.4	+1.0
SLA				*i* S	Sn	06 02 52.4	+1.6
RTLL	**Cerro Villicun**	3.61	205	*i* P	Pn	06 02 08.6	-1.3
VACH	**Vallenar**	3.62	261	⇑*i*P	Pn	06 02 08.7	-1.2
VACH				*i* S	Sn	06 02 51.0	-2.4
LCO	**Las Campanas**	3.65	254	*e*Pn	Pn	06 02 09.5	-1.1
LCO				*e*Sn	Sn	06 02 49.0	-5.5
LCO	**Las Campanas**	3.65	254	⇑*i*P	Pn	06 02 09.4	-1.1
LCO				*i* S	Sn	06 02 52.6	-1.9
LCO	**Las Campanas**	3.65	254	*e*P	Pn	06 02 09.5	-1.1
LCO				*e*		06 02 49.0	
TCA	**Tanti**	3.74	151	*i* P	Pn	06 02 09.4	-2.1
TCA				*i* S	Sn	06 02 52.9	-3.5
TCA				IAML		06 02 54.0	
	comp=Z,1μm,0.5s						
TCA	**Tanti**	3.74	151	⇓*i*P	Pn	06 02 10.4	-1.2
TCA				*i* S	Sn	06 02 52.5	-3.9
CDCH	**Caldera**	3.79	284	⇓*i*P	Pn	06 02 10.9	-1.2
SJA	**San Juan**	3.82	205	*i* P	Pn	06 02 11.5	-1.0
SJA				IAML		06 02 59.0	
	comp=Z,2μm,0.2s						
GO02	**Mina Guanaco**	3.88	317	*e*Pn	Pn	06 02 13.3	-0.2
GO02				*e*Sn	Sn	06 02 54.0	-5.8
GO02	**Mina Guanaco**	3.88	317	*e*P	Pn	06 02 13.7	+0.2
GO02				*i* S	Sn	06 02 59.9	+0.1
ZON	**Zonda**	3.88	206	IAML		06 03 00.4	
	comp=Z,1μm,0.3s						
RTCV	**Cerro Valdivia**	4.12	202	*i* P	Pn	06 02 15.0	-1.3
GO04	**Tololo Observa**	4.16	239	*e*Pn	Pn	06 02 15.6	-1.6
GO04				*e*Sn	Sn	06 03 05.2	-1.1
GO04	**Tololo Observa**	4.16	239	⇑*i*P	Pn	06 02 15.5	-1.6
GO04				*e*S	Sn	06 03 03.5	-2.8
TLL	**Tololo Astrono**	4.17	239	⇑*i*P	Pn	06 02 15.6	-1.6
TLL				*e*S	Sn	06 03 03.1	-3.3
TLL	**Tololo Astrono**	4.17	239	P	Pn	06 02 15.0	-2.1
RTLS	**Leoncito**	4.36	211	⇓*i*P	Pn	06 02 19.0	-0.7
RTLS				IAML		06 02 21.1	
	comp=Z,2μm,0.2s						
RTLS				*i* S	Sn	06 03 08.6	-2.3
MRA	**San Martin**	4.43	169	*i* P	Pn	06 02 18.7	-1.7
MRA				IAML		06 03 09.8	
	comp=Z,1μm,0.5s						
PB14	**IPOC Station P**	4.77	315	*i* P	Pn	06 02 24.8	-0.3
PB14				IAML		06 03 23.8	
	comp=Z,1μm,0.7s						
PB14	**IPOC Station P**	4.77	315	*e*P	Pn	06 02 24.4	-0.7
PB14				*e*S	Sn	06 03 15.8	-4.8
HJA	**Humahuaca**	4.97	14	IAML		06 03 05.1	
	comp=Z,161nm,0.6s						
ARCO	**CERRO ARCO**	5.14	202	IAML		06 03 27.6	
	comp=Z,961nm,0.3s						
SUCO	**SUCO**	5.50	164	IAML		06 04 05.7	
	comp=Z,546nm,0.6s						
PB10	**IPOC Station P**	5.71	322	IAML		06 03 50.0	
	comp=Z,251nm,0.6s						
PB10	**IPOC Station P**	5.71	322	*e*P	Pn	06 02 35.7	-1.4
YJA	**Yavi**	5.95	11	IAML		06 02 45.4	
	comp=Z,50nm,0.6s						
PEL	**Peldehue**	6.13	213	*e*Pn	Pn	06 02 40.4	-2.2
PEL	**Peldehue**	6.13	213	*e*P	Pn	06 02 40.4	-2.2
ROC1	**El Roble**	6.16	216	*e*Pn	Pn	06 02 40.0	-3.2
ROC1				*e*Sn	Sn	06 03 48.4	-4.9
PB04	**IPOC Station P**	6.50	330	*e*Pn	Pn	06 02 45.9	-1.9
PB01	**IPOC Station P**	7.43	339	*e*Pn	Pn	06 02 57.9	-2.1
PB01				*e*Sn	Sn	06 04 14.0	-9.5
GO05	**HualaæØ**	8.24	211	*e*Pn	Pn	06 03 05.8	-4.8
GO05				*e*Sn	Sn	06 04 34.4	-8.4
CPUP	**Villa Florida**	8.52	81	P	Pn	06 03 11.5	-2.8
	comp=Z,3.9nm,0.3s,baz=262,slow=12,SNR=109						
CPUP				LR	LR	06 06 45.5	
	comp=Z,366nm,19.7s,baz=230,slow=40						
PB11	**IPOC Station P**	8.69	341	*e*Pn	Pn	06 03 13.0	-3.8
MNMC	**Minye Minye**	9.27	343	*e*Pn	Pn	06 03 21.2	-3.4
MNMC				*e*Sn	Sn	06 05 00.9	-7.1
TRQA	**Tornquist**	10.72	160	*e*Pn	Pn	06 03 40.8	-2.5
TRQA	**Tornquist**	10.72	160	*e*P	Pn	06 03 40.8	-2.5
LPAZ	**La Paz**	11.79	353	P	Pn	06 03 56.3	-1.5
	comp=Z,2.7nm,0.3s,baz=173,slow=6.9,SNR=76						
LPAZ				S	Sn	06 06 02.8	-6.0
	comp=Z,0.7nm,0.3s,baz=40,slow=18,SNR=3.3						
LPAZ	**La Paz**	11.79	353	*e*Pn	Pn	06 03 55.8	-2.0
LPAZ				*e*		06 03 56.3	
LPAZ				*e*Sn	Sn	06 06 02.8	-6.0
LPAZ	**La Paz**	11.79	353	*e*P	Pn	06 03 55.8	-2.0
LPAZ				*e*		06 06 02.8	
CPSB	**Cacapava Do Su**	11.81	105	*e*P	Pn	06 03 54.1	-3.3
CPSB				*i*		06 03 58.3	
CPSB				*i*		06 04 03.1	
CPSB				*e*		06 06 35.4	

PLTB	**Pedras Altas**	**11.94**	**111***c*	*i*P	**Pn**	**06 03 55.6**	**-3.6**
PLTB				*i*		06 03 56.4	
PLTB				*i*		06 03 59.4	
PLTB				*e*		06 06 36.1	
PLCA	**Paso Flores**	**13.04**	**193**	P	**Pn**	**06 04 11.9**	**-1.2**
	comp=Z,0.4nm,0.3s,baz=43,slow=12,SNR=13						
PLCA	**Paso Flores**	**13.04**	**193**	*e*Pn	**Pn**	**06 04 12.1**	**-1.1**
PLCA	**Paso Flores**	**13.04**	**193**	*e*P	**Pn**	**06 04 12.1**	**-1.1**
SIV	**San Ignacio**	**13.09**	**25**	P	**Pn**	**06 04 11.9**	**-2.1**
	comp=Z,4.2nm,0.3s,baz=226,slow=14,SNR=204						
SPB	**Sao Paulo**	**17.90**	**80**	*e*P	**P**	**06 05 10.2**	**-0.9**
	comp=Z,257nm,1.5s						
VAO	**Valinhos**	**18.50**	**79***c*	*i*P	**P**	**06 05 17.0**	**-0.7**
VAO				*i*		06 05 17.5	
VAO				*i*		06 05 22.8	
SAML	**Samuel**	**19.29**	**11**	*e*P	**P**	**06 05 25.0**	**-1.3**
	comp=Z,196nm,1.5s						
SAML	**Samuel**	**19.29**	**11**	*e*P	**P**	**06 05 25.0**	**-1.3**
SAML				pmax	pmax		
	comp=Z,195nm,1.5s						
PMNB	**Patos De Minas**	**20.85**	**67***c*	*i*P	**P**	**06 05 41.5**	**-1.6**
PMNB				*i*		06 05 42.2	
PMNB				*i*		06 05 43.1	
PMNB				*e*		06 08 05.9	
PMNB				*i*		06 09 15.9	
BDFB	**Brasilia**	**21.25**	**58**	P	**P**	**06 05 45.1**	**-2.4**
	comp=Z,87nm,0.4s,baz=229,slow=10,SNR=225						
EFI	**East Falkland**	**24.47**	**167**	*e*P	**P**	**06 06 17.0**	**-0.4**
	comp=Z,302nm,0.9s						
EFI	**East Falkland**	**24.47**	**167***c*	*i*P	**P**	**06 06 17.6**	**+0.2**
EFI				pmax	pmax		
	comp=Z,354nm,1.0s						
PTGA	**Pitinga**	**27.93**	**14**	P	**P**	**06 06 48.2**	**-0.7**
	comp=Z,58nm,0.6s,baz=201,slow=12,SNR=152						
PTGA	**Pitinga**	**27.93**	**14**	*e*P	**P**	**06 06 47.5**	**-1.4**
	comp=Z,63nm,0.6s						
HORQ	**Saladito**	**32.78**	**341**	*e*P	**P**	**06 07 31.9**	**0.0**
ROSC	**El Rosal**	**33.52**	**346**	LR	LR	06 23 11.9	
	comp=Z,91nm,20.1s,baz=162,slow=39						
RUSC	**La Rusia**	**34.31**	**349**	*e*P	**P**	**06 07 44.5**	**-0.8**
BARC	**Barichara**	**35.01**	**349**	*e*P	**P**	**06 07 49.2**	**-1.9**
HELC	**Santa Helena**	**35.10**	**345**	*e*P	**P**	**06 07 49.8**	**-2.1**
PTBC	**PUERTO BERRIO,**	**35.20**	**347**	*e*P	**P**	**06 07 47.8**	**-4.6**
ZARC	**Zaragoza, Cauc**	**36.21**	**346**	*e*P	**P**	**06 07 57.8**	**-3.2**
PMSA	**Palmer Station**	**36.77**	**178**	P	**P**	**06 08 05.7**	**+0.5**
	comp=Z,19nm,0.7s,baz=42,slow=7.2,SNR=3.6						
SDV	**Santo Domingo**	**36.92**	**354**	P	**P**	**06 08 05.6**	**-1.6**
	comp=Z,10nm,0.7s,baz=187,slow=7.4,SNR=4.9						
PCRV	**Puerto La Cruz**	**38.06**	**3**	P	**P**	**06 08 15.2**	**-1.4**
	comp=Z,11nm,0.4s,baz=216,slow=2.3,SNR=8.3						
SJCC	**San Jacinto, C**	**38.61**	**347**	*e*P	**P**	**06 08 18.4**	**-2.9**
SVB	**Belmont**	**41.42**	**8**	*e*P	**P**	**06 08 45.7**	**+1.4**
BIM	**Bigot**	**42.67**	**8**	*e*P	**P**	**06 08 56.2**	**+1.7**
FDF	**Fort de France**	**42.88**	**8**	*e*P	**P**	**06 08 54.8**	**-1.3**
	comp=Z,284nm,1.5s						
FDF	**Fort de France**	**42.88**	**8**	*e*P	**P**	**06 08 54.8**	**-1.3**
FDF	**Fort de France**	**42.88**	**8**	*e*P	**P**	**06 08 54.8**	**-1.3**
FDF				pmax	pmax		
	comp=Z,284nm,1.5s						
PML	**Morne Lenard**	**42.92**	**8**	*e*P	**P**	**06 08 58.9**	**+2.4**
PCM	**Pelee Case Pet**	**42.95**	**8**	*e*P	**P**	**06 08 56.1**	**-0.6**
PCM	**Pelee Case Pet**	**42.95**	**8**	*e*P	**P**	**06 08 56.9**	**+0.2**
CXM	**Morne La Croix**	**42.95**	**8**	*e*P	**P**	**06 08 55.0**	**-1.8**
BAMF	**Morne Balai**	**42.96**	**8**	*e*P	**P**	**06 08 55.4**	**-1.4**
OBIP	**Obispado Ponce**	**45.83**	**0**	*e*P	**P**	**06 09 17.3**	**-2.2**
	comp=Z,25nm,1.1s						
SJG	**San Juan**	**45.90**	**1**	P	**P**	**06 09 18.0**	**-2.0**
	comp=Z,5.5nm,0.5s,baz=12,slow=9.3,SNR=4.7						
SJG	**San Juan**	**45.90**	**1**	*e*P	**P**	**06 09 18.0**	**-2.0**
VNA3	**Neumayer Olymp**	**53.25**	**160**	P	**P**	**06 10 15.3**	**+0.3**
VNA1	**Neumayer--Stat**	**53.46**	**159**	P	**P**	**06 10 17.3**	**+0.8**
SNAA	**Sanae**	**55.45**	**160**	P	**P**	**06 10 31.2**	**+0.1**
SNAA				x	x	06 10 31.2	
SNAA	**Sanae**	**55.45**	**160**	P	**P**	**06 10 31.1**	**+0.1**
SNAA	**Sanae**	**55.45**	**160**	P	**P**	**06 10 31.1**	**+0.1**
	comp=Z,54nm,0.8s,baz=283,slow=7.9,SNR=412						
SNAA	**Sanae**	**55.45**	**160**	*e*P	**P**	**06 10 31.2**	**+0.1**
	comp=Z,132nm,1.3s						
NVL	**N'lazarevskaya**	**60.02**	**158**⇑	*i*P	**P**	**06 11 02.8**	**+0.1**
NVL				pmax	pmax		
	comp=Z,69nm,1.0s						
LNIG	**Linares**	**61.38**	**326**	*e*P	**P**	**06 11 12.6**	**0.0**
LNIG				*e*pP	**PcP**	**06 11 53.6**	**+0.4**
QSPA	**South Pole Qui**	**62.16**	**180**	P	**P**	**06 11 18.4**	**+0.9**
	comp=Z,60nm,0.6s,baz=167,slow=2.6,SNR=247						
QSPA	**South Pole Qui**	**62.16**	**180**	*e*P	**P**	**06 11 18.0**	**+0.6**
	comp=Z,69nm,0.8s						
QSPA				*e*P	**P**	**06 11 18.4**	**+0.9**
150A	**Eclectic**	**63.07**	**342**	P	**P**	**06 11 25.3**	**+1.7**
	baz=161						
245A	**Little AP, Sta**	**63.71**	**338**	P	**P**	**06 11 28.8**	**+1.0**
	baz=157						
342A	**Flagon Creek P**	**63.95**	**336**	P	**P**	**06 11 30.6**	**+1.2**
	baz=155						
HKT	**Hockley**	**64.05**	**332**	*e*P	**P**	**06 11 32.9**	**+2.9**
Z47A	**Carrollton**	**64.21**	**340**	P	**P**	**06 11 32.4**	**+1.3**
	baz=159						
341A	**Kurthwood**	**64.22**	**335**	P	**P**	**06 11 32.1**	**+1.0**
	baz=154						
Z48A	**Northport**	**64.22**	**341**	P	**P**	**06 11 32.8**	**+1.7**
	baz=160						
833A	**Chaparral WMA,**	**64.23**	**328**	P	**P**	**06 11 32.3**	**+1.0**
	baz=148						
833A	**Chaparral WMA,**	**64.23**	**328**	*e*P	**P**	**06 11 32.3**	**+1.0**
	comp=Z,28nm,0.9s						
833A				*e*pP	**pP**	**06 12 13.3**	**+2.7**
242A	**Grayson**	**64.51**	**336**	P	**P**	**06 11 33.9**	**+0.9**
	baz=155						
143A	**Socs Landing,**	**64.83**	**337**	P	**P**	**06 11 36.0**	**+0.9**
	baz=156						
143A	**Socs Landing,**	**64.83**	**337**	*e*P	**P**	**06 11 36.0**	**+0.9**
143A				*e*pP	**pP**	**06 12 15.8**	**+1.4**
X49A	**Woodville**	**64.94**	**342**	P	**P**	**06 11 37.7**	**+1.9**
	baz=161						
X48A	**Hartselle**	**65.09**	**342**	*e*P	**P**	**06 11 36.7**	**0.0**
X48A				*e*pP	**pP**	**06 12 16.9**	**+0.8**
W51A	**Cleveland**	**65.15**	**344**	P	**P**	**06 11 38.4**	**+1.2**
	baz=162						
NATX	**Nacogdoches**	**65.17**	**334**	P	**P**	**06 11 38.3**	**+0.9**
	baz=153						
141A	**Papa Simpson,**	**65.27**	**336**	P	**P**	**06 11 39.0**	**+1.1**
	baz=154						
Y45A	**Yeager Farm, C**	**65.28**	**339**	P	**P**	**06 11 39.2**	**+1.2**
	baz=158						
TKL	**Tuckaleechee C**	**65.39**	**345**	LR	LR	06 43 51.8	
	comp=Z,38nm,18.6s,baz=339,slow=39						
140A	**Cam and Jess,**	**65.55**	**335**	P	**P**	**06 11 40.3**	**+0.6**
	baz=154						
V48A	**Smith Brothers**	**66.23**	**342**	*e*P	**P**	**06 11 44.5**	**+0.5**
V48A				*e*pP	**pP**	**06 12 23.2**	**-0.4**
JCT	**Junction City**	**66.24**	**329**	P	**P**	**06 11 44.9**	**+0.7**
	baz=148						
JCT	**Junction City**	**66.24**	**329**	*e*P	**P**	**06 11 43.4**	**-0.9**
	comp=Z,12nm,0.8s						
JCT				*e*pP	**pP**	**06 12 26.2**	**+2.4**
JCT	**Junction City**	**66.24**	**329**	*e*P	**P**	**06 11 43.4**	**-0.9**
JCT				pmax	pmax		
	comp=Z,12nm,0.8s						
HPIG		**66.26**	**322**	*e*P	**P**	**06 11 45.4**	**+0.8**
	comp=Z,12nm,1.2s						
Y40A	**Okolona**	**66.67**	**336**	P	**P**	**06 11 47.1**	**+0.3**
	baz=154						
WVT	**Waverly**	**66.88**	**341**	*e*P	**P**	**06 11 47.5**	**-0.6**
	comp=Z,12nm,0.7s						
WVT	**Waverly**	**66.88**	**341**	*e*P	**P**	**06 11 47.5**	**-0.6**
WVT				pmax	pmax		
	comp=Z,12nm,0.7s						
LTX	**Lajitas**	**67.14**	**325**	*e*P	**P**	**06 11 50.8**	**+0.7**
LTX	**Lajitas**	**67.14**	**325**	*e*P	**P**	**06 11 50.8**	**+0.7**
TXAR	**Lajitas Array**	**67.14**	**325**	P	**P**	**06 11 50.8**	**+0.7**
	comp=Z,2.3nm,0.8s,baz=148,slow=8.0,SNR=30						
TX31	**Lajitas Ar. Si**	**67.14**	**325**	*e*P	**P**	**06 11 50.6**	**+0.5**
TX31				*e*P	**P**	**06 11 50.7**	**+0.6**
TX31				*e*pP	**pP**	**06 12 32.8**	**+3.1**
T49A	**Edmonton**	**67.19**	**344**	*e*P	**P**	**06 11 49.4**	**-0.7**
T49A				*e*pP	**pP**	**06 12 29.2**	**-0.6**
MIAR	**Mount Ida**	**67.26**	**336**	P	**P**	**06 11 50.8**	**+0.3**
	baz=154						
W41B	**Gary Mavity, V**	**67.36**	**337**	P	**P**	**06 11 51.3**	**+0.1**
	baz=156						
X39A	**Fountain Ranch**	**67.42**	**336**	P	**P**	**06 11 52.3**	**+0.7**
	baz=154						
W40A	**Ferguson Farm,**	**67.66**	**337**	P	**P**	**06 11 53.7**	**+0.7**
	baz=155						
S48A	**Wiedeman Farm,**	**67.85**	**343**	P	**P**	**06 11 54.7**	**+0.5**
	baz=162						
V41A	**Mountainview**	**67.89**	**338**	P	**P**	**06 11 54.3**	**-0.2**
	baz=156						
W39A	**Magazine**	**67.92**	**336**	P	**P**	**06 11 55.1**	**+0.5**
	baz=154						
W39A	**Magazine**	**67.92**	**336**	*e*P	**P**	**06 11 55.5**	**+0.8**
	comp=Z,7.1nm,0.9s						
ABTX	**Abilene, Hawle**	**67.99**	**330**	P	**P**	**06 11 55.5**	**+0.3**
	baz=149						
V40A	**Witts Springs**	**68.13**	**337**	P	**P**	**06 11 55.9**	**-0.2**
	baz=155						
PBMO	**Poplar Bluff**	**68.25**	**340**	*e*P	**P**	**06 11 56.0**	**-0.6**
PBMO				*e*pP	**pP**	**06 12 38.1**	**+1.7**
U41A	**Viola**	**68.32**	**338**	P	**P**	**06 11 56.9**	**-0.3**
	baz=156						
V39A	**Pettigrew**	**68.45**	**337**	P	**P**	**06 11 57.8**	**-0.2**
	baz=154,SNR=6.9						
MCWV	**Mont Chateau**	**68.47**	**349**	P	**P**	**06 11 58.5**	**+0.4**
	baz=167						
T43A	**Greenville**	**68.48**	**340**	P	**P**	**06 11 57.8**	**-0.3**
	baz=158						
LIC	**Lamto**	**68.49**	**70**	*e*P	**P**	**06 11 56.9**	**-1.9**
	comp=Z,42nm,0.8s						
U40A	**Yellville**	**68.64**	**338**	P	**P**	**06 11 59.2**	**0.0**
	baz=155						
TIC	**Toumodi**	**68.73**	**70**	*e*P	**P**	**06 11 58.2**	**-2.0**
KIC	**Kosan Boka**	**68.81**	**70**	*e*P	**P**	**06 11 58.6**	**-2.1**
	comp=Z,46nm,0.7s						
DBIC	**Dimbokro**	**68.88**	**70**	P	**P**	**06 11 59.8**	**-1.4**
	comp=Z,21nm,0.7s,baz=210,slow=7.5,SNR=34						
DBIC	**Dimbokro**	**68.88**	**70**	*e*P	**P**	**06 11 59.8**	**-1.4**
	comp=Z,22nm,0.8s						
DBIC	**Dimbokro**	**68.88**	**70**	*e*P	**P**	**06 11 59.8**	**-1.4**
DBIC				pmax	pmax		
	comp=Z,22nm,0.8s						
U39A	**Green Forest**	**68.88**	**337**	P	**P**	**06 12 00.6**	**-0.1**
	baz=155,SNR=5.5						
T41A	**Mountain View**	**68.91**	**339**	P	**P**	**06 12 00.8**	**0.0**
	baz=156						
SSPA	**Standing Stone**	**69.13**	**351**	P	**P**	**06 12 01.7**	**-0.4**
	baz=169						
T40A	**Mansfield**	**69.25**	**338**	P	**P**	**06 12 03.0**	**0.0**
	baz=156						
S42A	**Caledonia**	**69.27**	**340**	P	**P**	**06 12 02.1**	**-0.9**
	baz=157						
TUL1	**Leonard**	**69.29**	**335**	P	**P**	**06 12 02.9**	**-0.3**
	baz=153						
S41A	**Jillco Farms,**	**69.40**	**339**	P	**P**	**06 12 03.8**	**0.0**
	baz=156,SNR=8.5						
T39A	**Clever**	**69.42**	**337**	P	**P**	**06 12 03.9**	**-0.1**
	baz=155						
WMOK	**Wichita Mounta**	**69.44**	**332**	P	**P**	**06 12 03.9**	**-0.2**
	baz=150						
WMOK	**Wichita Mounta**	**69.44**	**332**	*e*P	**P**	**06 12 04.2**	**+0.1**
WMOK				*e*pP	**pP**	**06 12 47.4**	**+3.4**
WMOK	**Wichita Mounta**	**69.44**	**332**	*e*P	**P**	**06 12 04.2**	**+0.1**
S40A	**Lebanon**	**69.65**	**338**	P	**P**	**06 12 05.3**	**0.0**
	baz=156,SNR=6.1						
CCM	**Cathedral Cave**	**69.67**	**340**	P	**P**	**06 12 05.7**	**+0.3**
	baz=157						
CCM	**Cathedral Cave**	**69.67**	**340**	*e*P	**P**	**06 12 06.2**	**+0.7**
CCM				*e*pP	**pP**	**06 12 46.0**	**+0.6**
CCM	**Cathedral Cave**	**69.67**	**340**	*e*P	**P**	**06 12 06.2**	**+0.7**
CCM				*e**PP	**pP**	**06 12 46.0**	**+0.6**
SYO	**Syowa Base**	**69.69**	**158**⇑	*e*P	**P**	**06 12 05.0**	**-0.2**
SYO	**Syowa Base**	**69.69**	**158**⇓	*i*PcP	**PcP**	**06 12 27.0**	**+0.1**
R42A	**Luebbering**	**69.74**	**340**	P	**P**	**06 12 05.8**	**-0.1**
	baz=157						
T38A	**Diamond**	**69.75**	**337**	P	**P**	**06 12 06.1**	**+0.2**
	baz=154,SNR=6.0						
N54A	**Moraine State**	**69.77**	**349**	P	**P**	**06 12 06.3**	**+0.3**
	baz=167						
SBA	**Scott Base**	**69.77**	**190**	*e*P	**P**	**06 12 06.9**	**+1.3**
	comp=Z,14nm,0.8s						
SBA	**Scott Base**	**69.77**	**190**	*e*P	**P**	**06 12 06.9**	**+1.3**
SBA				pmax	pmax		
	comp=Z,14nm,0.8s						
MNTX	**Cornudas Mount**	**69.92**	**325**	P	**P**	**06 12 06.9**	**-0.3**
	baz=144						
MNTX	**Cornudas Mount**	**69.92**	**325**	*e*P	**P**	**06 12 07.2**	**+0.1**
	comp=Z,5.3nm,1.0s						
MNTX				*e*pP	**pP**	**06 12 49.2**	**+2.2**
R41A	**Rosebud**	**69.94**	**340**	P	**P**	**06 12 06.7**	**-0.3**
	baz=157						
S39A	**Bolivar**	**70.01**	**338**	P	**P**	**06 12 07.7**	**+0.2**
	baz=155,SNR=11						
S39A	**Bolivar**	**70.01**	**338**	*e*P	**P**	**06 12 07.8**	**+0.3**
	comp=Z,21nm,0.8s						
S38A	**Stockton**	**70.15**	**337**	P	**P**	**06 12 08.4**	**-0.1**
	baz=154,SNR=7.9						
R40A	**Maddies Statio**	**70.21**	**339**	P	**P**	**06 12 08.5**	**-0.2**
	baz=156						
R40A	**Maddies Statio**	**70.21**	**339**	*e*P	**P**	**06 12 08.7**	**-0.1**
R40A				*e*pP	**pP**	**06 12 48.7**	**0.0**
P44A	**Sand Creek, Wi**	**70.22**	**342**	P	**P**	**06 12 09.0**	**+0.2**
	baz=159						
M54A	**Oil Creek Stat**	**70.25**	**350**	P	**P**	**06 12 09.2**	**+0.3**
	baz=168						
R39A	**Chumby, Stover**	**70.48**	**338**	P	**P**	**06 12 11.1**	**+0.8**
	baz=155						
MSTX	**Muleshoe**	**70.53**	**329**	P	**P**	**06 12 11.0**	**+0.1**
	baz=146						
MSTX	**Muleshoe**	**70.53**	**329**	*e*P	**P**	**06 12 11.3**	**+0.4**
	comp=Z,9.9nm,0.7s						
MSTX				*e*pP	**pP**	**06 12 53.4**	**+2.5**
R38A	**Fenwick Farm,**	**70.65**	**338**	P	**P**	**06 12 11.4**	**0.0**
	baz=155						
SFIN	**Lafayette**	**70.68**	**344**	P	**P**	**06 12 11.9**	**+0.3**
	baz=161						
VNDA	**Vanda**	**70.77**	**190**	P	**P**	**06 12 13.3**	**+1.6**
	comp=Z,15nm,0.8s,baz=135,slow=5.5,SNR=81						
VNDA	**Vanda**	**70.77**	**190**	*e*P	**P**	**06 12 13.2**	**+1.6**
	comp=Z,21nm,0.9s						
VNDA	**Vanda**	**70.77**	**190**	*e*P	**P**	**06 12 13.3**	**+1.6**
VNDA				pmax	pmax		
	comp=Z,21nm,0.9s						
Q40A	**Laux Farm, Aux**	**70.79**	**339**	P	**P**	**06 12 12.1**	**-0.2**
	baz=156						
AMTX	**Amarillo**	**70.80**	**330**	P	**P**	**06 12 12.6**	**0.0**
	baz=148						
P42A	**Winchester**	**70.81**	**341**	P	**P**	**06 12 11.8**	**-0.6**
	baz=158						
P41A	**Barry, Barry**	**71.11**	**340**	P	**P**	**06 12 13.5**	**-0.6**
	baz=157						
Q38A	**Cooks Store, C**	**71.26**	**338**	P	**P**	**06 12 15.0**	**0.0**
	baz=155						
P40A	**Paris**	**71.27**	**340**	P	**P**	**06 12 14.9**	**-0.3**
	baz=156						
P40A	**Paris**	**71.27**	**340**	*e*P	**P**	**06 12 14.8**	**-0.3**
P40A				*e*pP	**pP**	**06 12 55.0**	**-0.2**
P39B	**Salisbury**	**71.45**	**339**	P	**P**	**06 12 15.8**	**-0.4**
	baz=156						
N43A	**Stutzman Famil**	**71.75**	**342**	P	**P**	**06 12 17.4**	**-0.5**
	baz=159						
O40A	**La Belle**	**71.76**	**340**	P	**P**	**06 12 17.4**	**-0.6**
	baz=157						
121A	**Cookes Peak, D**	**71.81**	**324**	P	**P**	**06 12 20.0**	**+1.3**
	baz=142						
P38A	**Dawn**	**71.83**	**338**	P	**P**	**06 12 17.8**	**-0.6**
	baz=155						
P38A	**Dawn**	**71.83**	**338**	*e*P	**P**	**06 12 18.1**	**-0.4**
P38A				*e*pP	**pP**	**06 12 58.4**	**-0.2**
M44A	**Midewin, Midew**	**71.87**	**343**	P	**P**	**06 12 18.4**	**-0.2**
	baz=160						
O38A	**Galt**	**72.26**	**339**	P	**P**	**06 12 20.6**	**-0.4**
	baz=155						
N39A	**Derby Farms, D**	**72.65**	**340**	P	**P**	**06 12 23.1**	**-0.2**
	baz=156						
N39A	**Derby Farms, D**	**72.65**	**340**	*e*P	**P**	**06 12 22.9**	**-0.4**
	comp=Z,14nm,1.0s						
L43A	**Garden Prairie**	**72.80**	**343**	P	**P**	**06 12 24.0**	**-0.1**
	baz=160						
M40A	**Post Highland**	**72.83**	**341**	P	**P**	**06 12 24.1**	**-0.2**
	baz=157						
PKME	**Peaks-Kenny Pk**	**73.01**	**358**	P	**P**	**06 12 26.1**	**+0.8**
	baz=177						
TASL	**Snake Pit, Alb**	**73.06**	**327**	P	**P**	**06 12 27.1**	**+1.0**
	baz=144						
ANMO	**Albuquerque**	**73.06**	**327**	P	**P**	**06 12 27.5**	**+1.3**
	comp=Z,4.1nm,0.8s,baz=138,slow=6.8,SNR=23						
ANMO				pP	**pP**	**06 13 06.2**	**-0.2**
	comp=Z,2.8nm,0.8s,baz=114,slow=7.4,SNR=2.8						
ANMO	**Albuquerque**	**73.06**	**327**	P	**P**	**06 12 27.2**	**+1.0**
	baz=144						
ANMO	**Albuquerque**	**73.06**	**327**	*e*P	**P**	**06 12 27.1**	**+0.9**
ANMO				*e*pP	**pP**	**06 13 06.2**	**-0.2**
TASM	**ASL Pad, Albuq**	**73.07**	**327**	P	**P**	**06 12 27.3**	**+1.1**
	baz=144						
K43A	**Burlington**	**73.18**	**344**	P	**P**	**06 12 26.8**	**+0.4**
	baz=160						
TUC	**Tucson**	**73.22**	**322**	P	**P**	**06 12 28.2**	**+1.2**
	baz=140						
TUC	**Tucson**	**73.22**	**322**	*e*P	**P**	**06 12 28.1**	**+1.1**
	comp=Z,9.1nm,1.5s						
TUC	**Tucson**	**73.22**	**322**	*e*P	**P**	**06 12 28.1**	**+1.1**
TUC				pmax	pmax		
	comp=Z,9.0nm,1.5s						
M38A	**Pleasantville**	**73.35**	**339**	P	**P**	**06 12 26.9**	**-0.5**
	baz=156						
L40A	**Anamosa**	**73.36**	**341**	P	**P**	**06 12 27.3**	**-0.1**
	baz=157						
L40A	**Anamosa**	**73.36**	**341**	*e*P	**P**	**06 12 27.5**	**+0.1**
L40A				*e*pP	**pP**	**06 13 07.3**	**-0.3**
K42A	**Prairie Point,**	**73.51**	**343**	P	**P**	**06 12 28.3**	**0.0**
	baz=159						
K41A	**Shullsburg**	**73.61**	**342**	P	**P**	**06 12 28.4**	**-0.5**
	baz=158						
M37A	**Trindle Farm,**	**73.61**	**339**	P	**P**	**06 12 29.1**	**+0.2**
	baz=155						
SUR	**Sutherland**	**73.63**	**118**	*e*P	**P**	**06 12 30.6**	**+0.9**
	comp=Z,124nm,2.0s						
L39A	**Vinton**	**73.64**	**341**	P	**P**	**06 12 28.6**	**-0.4**
	baz=157						
J43A	**Natural Harves**	**73.84**	**344**	P	**P**	**06 12 30.2**	**+0.1**
	baz=160						
JFWS	**Jewell Farm**	**73.88**	**342**	P	**P**	**06 12 31.2**	**+0.8**
	baz=158						
T25A	**Trinidad**	**73.89**	**329**	P	**P**	**06 12 32.0**	**+1.0**
	baz=146,SNR=7.2						
T25A	**Trinidad**	**73.89**	**329**	*e*P	**P**	**06 12 32.3**	**+1.3**
	comp=Z,6.0nm,0.8s						
T25A				*e*pP	**pP**	**06 13 14.4**	**+3.1**
KOWA	**Kowa**	**73.95**	**64**	P	**P**	**06 12 29.9**	**-1.6**
	comp=Z,18nm,0.7s,baz=243,slow=6.8,SNR=36						
KOWA	**Kowa**	**73.95**	**64**	*e*P	**P**	**06 12 29.9**	**-1.6**
KOWA				*e*P	**P**	**06 12 30.4**	**-1.1**
214A	**Organ Pipe Nat**	**74.08**	**320**	P	**P**	**06 12 33.5**	**+1.5**
	baz=138,SNR=7.0						
K39A	**Oelwein**	**74.14**	**341**	P	**P**	**06 12 31.2**	**-0.8**
	baz=157						
J41A	**Loganville**	**74.23**	**343**	P	**P**	**06 12 32.1**	**-0.4**
	baz=159						
I43A	**Langenfeld Bro**	**74.24**	**344**	P	**P**	**06 12 32.5**	**0.0**
	baz=160						
L36A	**Harm Buss Farm**	**74.44**	**339**	P	**P**	**06 12 33.8**	**+0.1**
	baz=154						
I42A	**Draeger Farm,**	**74.44**	**344**	P	**P**	**06 12 33.5**	**-0.2**
	baz=160						
I42A	**Draeger Farm,**	**74.44**	**344**	*e*P	**P**	**06 12 33.3**	**-0.3**
I42A				*e*pP	**pP**	**06 13 13.8**	**-0.2**
J40A	**Soldiers Grove**	**74.46**	**342**	P	**P**	**06 12 33.2**	**-0.6**
	baz=158						
J39A	**Decorah**	**74.67**	**341**	P	**P**	**06 12 34.8**	**-0.2**
	baz=157						
J38A	**Wedel Dairy, R**	**74.87**	**341**	P	**P**	**06 12 36.4**	**+0.2**
	baz=156						
SDCO	**Great Sand Dun**	**74.89**	**329**	P	**P**	**06 12 37.9**	**+1.1**
	baz=145,SNR=6.4						
SDCO	**Great Sand Dun**	**74.89**	**329**	*e*P	**P**	**06 12 37.8**	**+1.0**
SDCO				*e*pP	**pP**	**06 13 21.0**	**+3.7**
H42A	**Shiocton**	**74.92**	**344**	*e*P	**P**	**06 12 36.4**	**-0.1**
	comp=Z,13nm,0.8s						
I39A	**Houston**	**75.09**	**342**	P	**P**	**06 12 37.1**	**-0.3**
	baz=157						
I39A	**Houston**	**75.09**	**342**	*e*P	**P**	**06 12 37.6**	**+0.2**
I39A				*e*pP	**pP**	**06 13 17.9**	**0.0**
F46A	**Macinaw City C**	**75.29**	**347**	P	**P**	**06 12 38.9**	**+0.4**
	baz=163						
H41A	**Junction City**	**75.31**	**343**	*e*P	**P**	**06 12 39.5**	**+0.8**
H41A				*e*pP	**pP**	**06 13 19.2**	**+0.1**
G43A	**Wallace**	**75.43**	**345**	P	**P**	**06 12 39.3**	**0.0**
	baz=161						
I38A	**Scanlan Farm,**	**75.49**	**341**	P	**P**	**06 12 40.9**	**+1.1**
	baz=157						
S22A	**4UR Ranch, Cre**	**75.50**	**328**	P	**P**	**06 12 41.3**	**+1.0**
	baz=144,SNR=6.1						
S22A	**4UR Ranch, Cre**	**75.50**	**328**	*e*P	**P**	**06 12 41.3**	**+1.0**
S22A				*e*pP	**pP**	**06 13 25.0**	**+4.2**
G42A	**Mountain**	**75.59**	**344**	P	**P**	**06 12 41.0**	**+0.8**
	baz=160						
Q24A	**Divide**	**75.73**	**330**	P	**P**	**06 12 42.6**	**+1.1**
	baz=145						
Q24A	**Divide**	**75.73**	**330**	*e*P	**P**	**06 12 43.2**	**+1.6**
	comp=Z,12nm,0.8s						
I37A	**Lemond, Waseca**	**75.78**	**340**	P	**P**	**06 12 41.3**	**0.0**
	baz=156						
H39A	**Augusta**	**75.79**	**342**	P	**P**	**06 12 42.2**	**+0.8**
	baz=158						
MVCO	**Mesa Verde**	**75.86**	**327**	P	**P**	**06 12 43.6**	**+1.2**
	baz=143,SNR=6.3						
MVCO	**Mesa Verde**	**75.86**	**327**	*e*P	**P**	**06 12 43.5**	**+1.2**
	comp=Z,6.9nm,0.8s						
MVCO				*e*pP	**pP**	**06 13 27.8**	**+4.9**
WUAZ	**Wupatki**	**75.99**	**324**	P	**P**	**06 12 44.5**	**+1.5**
	baz=140,SNR=8.4						
WUAZ	**Wupatki**	**75.99**	**324**	*e*P	**P**	**06 12 44.8**	**+1.8**
	comp=Z,9.7nm,0.8s						
WUAZ				*e*pP	**pP**	**06 13 28.6**	**+5.1**
G40A	**Rib Lake**	**76.05**	**343**	P	**P**	**06 12 43.0**	**+0.1**
	baz=159						
F41A	**Three Lakes**	**76.22**	**344**	P	**P**	**06 12 43.9**	**+0.1**
	baz=160						
G39A	**Holcombe**	**76.32**	**342**	P	**P**	**06 12 44.4**	**0.0**
	baz=158						
TSUM	**Tsumeb**	**76.33**	**105**	P	**P**	**06 12 44.9**	**-0.5**
	comp=Z,7.0nm,0.8s,baz=244,slow=5.8,SNR=15						
TSUM	**Tsumeb**	**76.33**	**105**	*e*P	**P**	**06 12 44.9**	**-0.5**
TSUM				*e*P	**P**	**06 12 45.1**	**-0.2**
Y12C	**Blythe**	**76.37**	**321**	P	**P**	**06 12 46.4**	**+1.5**
	baz=138						
Y12C	**Blythe**	**76.37**	**321**	*e*P	**P**	**06 12 45.6**	**+0.7**
	comp=Z,10nm,0.8s						
H36A	**Jessenland, He**	**76.45**	**340**	P	**P**	**06 12 45.3**	**+0.2**
	baz=155						
ECSD	**EROS Data Cent**	**76.53**	**338**	P	**P**	**06 12 45.6**	**0.0**
	baz=153						
ECSD	**EROS Data Cent**	**76.53**	**338**	*e*P	**P**	**06 12 45.8**	**+0.1**
ECSD				*e*pP	**pP**	**06 13 25.7**	**-0.5**
E42A	**Champion**	**76.59**	**345**	P	**P**	**06 12 46.1**	**+0.2**
	baz=161						
ISCO	**Idaho Springs**	**76.62**	**330**	P	**P**	**06 12 47.7**	**+1.1**
	baz=145,SNR=7.9						
ISCO	**Idaho Springs**	**76.62**	**330**	*e*P	**P**	**06 12 47.5**	**+0.9**
	comp=Z,4.5nm,0.8s						
ISCO				*e*pP	**pP**	**06 13 28.5**	**+1.3**
ISCO	**Idaho Springs**	**76.62**	**330**	*e*P	**P**	**06 12 47.5**	**+0.9**
ISCO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SPMN	**Marine on St.**	**76.71**	**341**	P	**P**	**06 12 46.4**	**-0.2**
	baz=156						
SPMN	**Marine on St.**	**76.71**	**341**	*e*P	**P**	**06 12 46.2**	**-0.3**
SPMN				*e*pP	**pP**	**06 13 26.8**	**-0.4**
SMCO	**Snowmass**	**76.72**	**329**	*e*P	**P**	**06 12 48.1**	**+0.8**
	comp=Z,6.0nm,0.9s						
PV13	**Radium Mtn., P**	**76.77**	**327**	*e*P	**P**	**06 12 49.0**	**+1.6**
	comp=Z,7.7nm,0.9s						
PV13				*e*pP	**pP**	**06 13 32.9**	**+4.9**
BC3	**Big Chuckawall**	**76.83**	**320**	P	**P**	**06 12 48.8**	**+1.2**
	baz=137,SNR=6.2						
H35A	**Sunnyside Ranc**	**76.83**	**340**	P	**P**	**06 12 47.1**	**-0.1**
	baz=155						
MONP2	**Monument Peak**	**76.83**	**319**	P	**P**	**06 12 49.0**	**+1.1**
	baz=136						
F39A	**Loretta**	**76.84**	**343**	P	**P**	**06 12 47.2**	**-0.1**
	baz=158						
PV12	**Saucer Basin,**	**76.89**	**327**	*e*P	**P**	**06 12 49.2**	**+1.1**
	comp=Z,4.7nm,0.8s						
IRM	**Iron Mountain**	**77.02**	**320**	P	**P**	**06 12 50.1**	**+1.4**
	baz=137,SNR=6.1						
PV22	**Blue Mesa, Par**	**77.05**	**327**	*e*P	**P**	**06 12 50.0**	**+1.1**
PV22				*e*pP	**pP**	**06 13 34.5**	**+4.9**
PV23	**Carpenter Ridg**	**77.09**	**327**	*e*P	**P**	**06 12 50.0**	**+0.8**
	comp=Z,12nm,1.2s						
F37A	**Hinrichs Farm,**	**77.12**	**342**	P	**P**	**06 12 49.0**	**+0.1**
	baz=157						
F38A	**Pierce - Schro**	**77.13**	**342**	P	**P**	**06 12 49.2**	**+0.3**
	baz=157						
PV21	**Cone Mtn., Par**	**77.16**	**327**	*e*P	**P**	**06 12 50.9**	**+1.3**
	comp=Z,2.8nm,0.8s						
D41A	**Chassel**	**77.33**	**345**	P	**P**	**06 12 51.3**	**+1.3**
	baz=160						
XPFO	**Piæon Flat**	**77.37**	**319**	*e*P	**P**	**06 12 52.0**	**+1.2**
	comp=Z,4.7nm,0.8s						
FRD	**Ford Ranch, An**	**77.37**	**319**	P	**P**	**06 12 52.5**	**+1.8**

	baz=136,SNR=5.5						
PFO	Pinyon Flats O	77.37	319	P	P	06 12 52.1	+1.4
	baz=136						
PFO	Pinyon Flats O	77.37	319	eP	P	06 12 52.0	+1.3
	comp=Z,4.9nm,0.8s						
PFO	Pinyon Flats O	77.37	319	eP	P	06 12 52.0	+1.3
PFO				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BELC	Belle Mtn. Jos	77.39	320	P	P	06 12 52.2	+1.3
	baz=137						
F36A	Milaca	77.50	341	P	P	06 12 50.6	-0.4
	baz=156						
N23A	Red Feather La	77.66	331	P	P	06 12 53.5	+1.2
	baz=145						
LDFC	Landfair	77.68	321	eP	P	06 12 53.8	+1.4
	comp=Z,10nm,1.0s						
GMRC	Granite Mounta	77.77	321	P	P	06 12 54.4	+1.5
	baz=137,SNR=11						
MURC	Murrieta	77.79	319	P	P	06 12 54.3	+1.3
	baz=136						
TOA0	Torodi Ar. Sit	77.80	68	eP	P	06 12 50.2	-3.1
TOA0				eP	P	06 12 52.3	-1.1
TORD	Torodi Ar. Bea	77.80	68	P	P	06 12 51.4	-1.9
	comp=Z,29nm,0.9s,baz=253,slow=4.9						
TOA1	Torodi Ar. Sit	77.80	68	eP	P	06 12 51.4	-1.9
F35A	Swanville	77.80	340	P	P	06 12 54.5	+1.9
	baz=155						
KNB	Kanab	77.89	324	eP	P	06 12 55.0	+1.4
	comp=Z,18nm,0.9s						
KNB	Kanab	77.89	324	eP	P	06 12 55.0	+1.4
KNB				pmax	pmax		
	comp=Z,18nm,0.9s						
O20A	White River Ci	78.07	329	P	P	06 12 56.0	+1.5
	baz=143,SNR=11						
O20A	White River Ci	78.07	329	eP	P	06 12 56.2	+1.7
	comp=Z,13nm,0.8s						
O20A				epP	pP	06 13 36.3	+1.0
LCMT	Little Creek M	78.11	324	eP	P	06 12 55.9	+1.1
	comp=Z,4.3nm,0.9s						
SRU	San Rafael Swe	78.34	327	eP	P	06 12 57.2	+1.2
	comp=Z,10nm,0.8s						
SRU	San Rafael Swe	78.34	327	eP	P	06 12 57.2	+1.2
SRU				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SZCU	Shurtz Canyon	78.47	324	eP	P	06 12 58.0	+1.2
SZCU				epP	pP	06 13 43.4	+5.9
SZCU				eS	S	06 22 39.0	-0.1
BFSC	Mount Baldy Ra	78.52	319	P	P	06 12 58.2	+1.2
	baz=136						
CCUT	Cedar City	78.58	324	eP	P	06 12 59.5	+2.1
	comp=Z,10.0nm,0.8s						
CCUT				epP	pP	06 13 41.5	+3.3
P18A	Preston Nutter	78.61	327	eP	P	06 12 59.1	+1.5
	comp=Z,8.8nm,0.8s						
MSU	Marysvale	78.70	325	eP	P	06 12 59.6	+1.5
MSU				epP	pP	06 13 43.2	+4.4
P17A	Butcher Ranch,	78.73	327	eP	P	06 12 59.6	+1.5
	comp=Z,13nm,1.1s						
P17A				epP	pP	06 13 43.6	+4.7
SHPR	Sheep Range	78.75	322	eP	P	06 12 59.6	+1.3
	comp=Z,5.2nm,1.0s						
GSC	Goldstone, Bar	78.79	320	P	P	06 12 59.9	+1.4
	baz=136,SNR=5.3						
GSC	Goldstone, Bar	78.79	320	eP	P	06 12 59.5	+1.0
	comp=Z,15nm,1.4s						
GSC	Goldstone, Bar	78.79	320	eP	P	06 12 59.5	+1.0
GSC				pmax	pmax		
	comp=Z,15nm,1.4s						
TMUT	Trail Mountain	78.82	326	eP	P	06 12 59.7	+0.9
	comp=Z,4.1nm,0.7s						
RWWY	Rawlins	78.86	330	eP	P	06 12 59.2	+0.3
	comp=Z,18nm,0.8s						
RWWY				epP	pP	06 13 39.8	+0.1
C36A	Pine Crest Far	79.05	342	P	P	06 13 00.6	+1.2
	baz=156						
EDW2	Edwards Air Fo	79.17	319	P	P	06 13 01.2	+0.7
	baz=135						
BLG	Laguna Peak, P	79.25	318	P	P	06 13 01.7	+0.9
	baz=135						
K22A	Casper	79.35	331	P	P	06 13 02.5	+1.1
	baz=145						
K22A	Casper	79.35	331	eP	P	06 13 02.2	+0.8
	comp=Z,9.0nm,1.0s						
RSSD	Black Hills	79.55	334	P	P	06 13 03.2	+0.7
	baz=147						
RSSD	Black Hills	79.55	334	eP	P	06 13 03.2	+0.7
RSSD				epP	pP	06 13 44.5	+1.1
RSSD	Black Hills	79.55	334	eP	P	06 13 03.2	+0.7
RSSD				e*PP	pP	06 13 44.5	+1.1
PSUT	Pine Spring	79.57	324	eP	P	06 13 04.1	+1.3
	comp=Z,7.0nm,0.8s						
MPU	Maple Canyon	79.58	327	eP	P	06 13 04.3	+1.6
	comp=Z,6.8nm,0.9s						
FURC	Furnace Creek,	79.66	321	P	P	06 13 03.8	+0.9
	baz=136						
TPNV	Topopah Spring	79.67	322	P	P	06 13 04.8	+1.5
	baz=137,SNR=8.4						
TPNV	Topopah Spring	79.67	322	eP	P	06 13 03.6	+0.3
	comp=Z,4.4nm,0.7s						
TPNV	Topopah Spring	79.67	322	eP	P	06 13 03.6	+0.3
TPNV				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MPMC	Manual Prospec	79.72	320	P	P	06 13 04.6	+1.0
	baz=136						
B35A	Bob, Littlefor	79.84	342	P	P	06 13 03.4	-0.2
	baz=156,SNR=5.3						
B35A	Bob, Littlefor	79.84	342	eP	P	06 13 03.5	-0.2
B35A				epP	pP	06 13 44.2	-0.3
C33A	Trail	79.87	341	P	P	06 13 03.9	0.0
	baz=154						
JLU	Jordanelle	79.95	327	eP	P	06 13 06.1	+1.3
	comp=Z,8.3nm,0.7s						
JLU				epP	pP	06 13 48.4	+2.7
ISA	Isabella, Lake	80.00	319	P	P	06 13 06.1	+1.2
	baz=135						
B34A	Aery, Baudette	80.21	342	P	P	06 13 05.3	-0.3
	baz=155						
PKM	Mcpherson Peak	80.23	318	P	P	06 13 07.6	+1.3
	baz=134						
DUG	Dugway, Tooele	80.30	326	P	P	06 13 07.6	+1.0
	baz=140						
DUG	Dugway, Tooele	80.30	326	eP	P	06 13 07.7	+1.2
	comp=Z,7.1nm,1.0s						
DUG	Dugway, Tooele	80.30	326	eP	P	06 13 07.7	+1.2
DUG				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CWC	Cottonwood Cre	80.33	320	P	P	06 13 07.9	+1.1
	baz=136						
TCUT	Toone Canyon	80.33	327	eP	P	06 13 07.7	+0.9
	comp=Z,12nm,0.6s						
R11A	Troy Canyon, C	80.34	323	P	P	06 13 07.9	+1.1
	baz=138						
R11A	Troy Canyon, C	80.34	323	eP	P	06 13 08.3	+1.5
	comp=Z,7.7nm,1.3s						
R11A				epP	pP	06 13 52.8	+5.0
VES	Vestal, Richgr	80.47	319	P	P	06 13 08.4	+1.0
	baz=135						
LBTB	Lobatse	80.52	113	eP	P	06 13 08.0	-0.2
	comp=Z,29nm,0.9s						
LBTB	Lobatse	80.52	113	eP	P	06 13 08.0	-0.2
LBTB				pmax	pmax		
	comp=Z,29nm,0.9s						
PD31	Pinedale Array	80.77	330	eP	P	06 13 09.6	+0.5
PD31				epP	pP	06 13 50.6	+0.5
PDAR	Pinedale Array	80.77	330	P	P	06 13 09.5	+0.5
	comp=Z,3.0nm,0.5s,baz=122,slow=7.0,SNR=45						
PDAR				pP	pP	06 13 50.6	+0.5
	comp=Z,1.8nm,0.8s,baz=120,slow=6.7,SNR=1.4						
PDAR				PKKPbc	PKKPbc	06 31 46.5	-2.5
	comp=Z,0.4nm,0.6s,baz=58,slow=2.4,SNR=4.8						
BW06	Boulder Array	80.77	330	P	P	06 13 09.5	+0.5
	baz=142						
BW06	Boulder Array	80.77	330	eP	P	06 13 09.6	+0.5
	comp=Z,8.7nm,1.1s						
BW06				epP	pP	06 13 54.0	+3.9
HWUT	Hardware Ranch	80.78	328	eP	P	06 13 10.0	+0.9
	comp=Z,15nm,0.8s						
A33A	Warroad	80.83	341	P	P	06 13 09.3	+0.4
	baz=154						
BGU	Big Grassy Mou	80.97	326	eP	P	06 13 11.1	+1.1
	comp=Z,8.8nm,1.3s						
SPUT	South Promonto	80.97	327	eP	P	06 13 11.5	+1.4
	comp=Z,14nm,0.8s						
MDND	Maddock	81.14	338	P	P	06 13 11.1	+0.5
	baz=151,SNR=7.8						
MDND	Maddock	81.14	338	eP	P	06 13 11.6	+0.9
MDND				epP	pP	06 13 52.4	+0.7
AHID	Auburn Hatcher	81.47	329	eP	P	06 13 13.9	+1.1
	comp=Z,12nm,0.8s						
AHID				epP	pP	06 13 57.8	+4.0
HVU	Hansel Valley	81.49	327	eP	P	06 13 13.8	+1.0
	comp=Z,11nm,0.7s						
HVU				epP	pP	06 13 56.1	+2.2
HVU	Hansel Valley	81.49	327	eP	P	06 13 13.8	+1.0
HVU				pmax	pmax		
	comp=Z,11nm,0.7s						
OMMB	Old Mammoth Mi	81.68	321	eP	P	06 13 15.0	+0.9
	comp=Z,7.0nm,0.9s						
OMMB				epP	pP	06 13 57.7	+2.5
MDPB	Devils Postpil	81.73	321	eP	P	06 13 15.0	+0.7
	comp=Z,8.1nm,1.4s						
REDW	Red Top Meadow	81.82	329	eP	P	06 13 15.4	+0.8
	comp=Z,12nm,1.3s						
SNOW	Snow King Moun	81.85	329	eP	P	06 13 15.1	+0.3
	comp=Z,6.1nm,0.9s						
NV01	Mina Array Sit	81.87	322	eP	P	06 13 15.7	+0.7
NV01				epP	pP	06 13 56.7	+0.7
NVAR	Mina Array Bea	81.87	322	P	P	06 13 15.9	+0.9
	comp=Z,1.3nm,0.6s,baz=143,slow=6.4,SNR=16						
NVAR				pP	pP	06 13 56.7	+0.7
	comp=Z,1.2nm,0.9s,baz=181,slow=4.4,SNR=2.4						
NVAR				PKKPbc	PKKPbc	06 31 46.3	+0.2
	comp=Z,0.2nm,0.4s,baz=270,slow=2.7,SNR=4.5						
LOHW	Long Hollow	81.90	329	eP	P	06 13 15.8	+0.8
	comp=Z,6.3nm,0.7s						
TPAW	Teton Pass	81.96	329	eP	P	06 13 15.9	+0.5
	comp=Z,7.4nm,0.9s						
MOOW	Moose Ponds	82.07	329	eP	P	06 13 16.6	+0.7
	comp=Z,2.4nm,0.8s						
FXWY	Fox Creek	82.11	329	eP	P	06 13 16.7	+0.6
	comp=Z,3.0nm,0.7s						
ULM	Lac du Bonnet	82.15	342	P	P	06 13 16.1	+0.3
	comp=Z,1.1nm,0.3s,baz=201,slow=3.2,SNR=3.2						
ULM				pP	pP	06 13 56.4	-0.5
	comp=Z,9.6nm,1.0s,baz=168,slow=3.2,SNR=5.8						
ULM				LR	LR	06 53 24.7	
	comp=Z,28nm,19.6s,baz=178,slow=38						
KVN	Kaiserville	82.20	322	eP	P	06 13 17.4	+0.7
	comp=Z,4.9nm,0.8s						
KVN				epP	pP	06 13 60.0	+2.2
KVN	Kaiserville	82.20	322	eP	P	06 13 17.4	+0.7
KVN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
IMW	Indian Meadow	82.28	329	eP	P	06 13 18.1	+1.0
	comp=Z,10nm,0.9s						
IMW				epP	pP	06 13 59.1	+0.9
FLWY	Flagg Ranch	82.31	330	eP	P	06 13 18.5	+1.3
	comp=Z,8.8nm,0.6s						
H17A	Grant Village	82.50	330	P	P	06 13 19.3	+1.1
	baz=142						
H17A	Grant Village	82.50	330	eP	P	06 13 20.1	+1.9
	comp=Z,2.7nm,0.9s						
RLMT	Red Lodge	82.51	331	P	P	06 13 19.1	+0.9
	baz=143						
RLMT	Red Lodge	82.51	331	eP	P	06 13 19.0	+0.9
	comp=Z,7.3nm,0.7s						
LAO	LASA Array	82.54	334	P	P	06 13 18.5	+0.5
	baz=145						
LAO	LASA Array	82.54	334	eP	P	06 13 18.2	+0.2
	comp=Z,9.3nm,0.9s						
LAO				epP	pP	06 13 59.5	+0.3
YFT	Old Faithful	82.66	330	eP	P	06 13 19.6	+0.6
	comp=Z,10.0nm,1.1s						
YERR	Yerington	82.78	321	eP	P	06 13 20.5	+0.8
YERR				epP	pP	06 14 05.5	+4.6
YMR	Madison River	82.89	330	eP	P	06 13 21.6	+1.5
	comp=Z,15nm,0.8s						
YMR				epP	pP	06 14 02.9	+1.5
PNTR	Pine Nut	83.05	321	eP	P	06 13 22.4	+1.3
	comp=Z,8.6nm,0.8s						
YHB	Horse Butte	83.06	330	eP	P	06 13 22.3	+1.3
	comp=Z,6.8nm,0.9s						
YHB				epP	pP	06 14 05.3	+3.1
GCMT	Greycliff	83.21	331	eP	P	06 13 22.3	+0.7
DGMT	Dagmar	83.26	336	P	P	06 13 22.4	+0.7
	baz=147						
DGMT	Dagmar	83.26	336	eP	P	06 13 22.6	+0.9
	comp=Z,17nm,0.9s						
DGMT				epP	pP	06 14 03.7	+0.8
PAHR	Pah Rah Range	83.37	322	eP	P	06 13 23.7	+1.1
PAHR				epP	pP	06 14 07.1	+3.3
HLID	Hailey	83.63	327	P	P	06 13 25.1	+1.2
	baz=139						
HLID	Hailey	83.63	327	eP	P	06 13 25.3	+1.4
	comp=Z,9.3nm,0.8s						
HLID				epP	pP	06 14 06.3	+1.1
MCMT	McKenzie Canyo	83.86	329	eP	P	06 13 26.5	+1.4
MCMT				epP	pP	06 14 07.6	+1.2
BOZ	Bozeman (W)	83.91	330	P	P	06 13 25.7	+0.5
	baz=141						
BOZ	Bozeman (W)	83.91	330	eP	P	06 13 25.4	+0.2
	comp=Z,2.7nm,0.8s						
BOZ	Bozeman (W)	83.91	330	eP	P	06 13 25.4	+0.2
BOZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BEKR	Beckworth	84.01	321	eP	P	06 13 26.5	+0.6
	comp=Z,5.8nm,0.9s						
DLMT	Dillon	84.16	329	eP	P	06 13 27.7	+1.2
DLMT				epP	pP	06 14 11.8	+4.0
MFID	Camas Ranch	84.21	326	eP	P	06 13 27.6	+0.9
	comp=Z,5.3nm,1.0s						
MIR	Mirnyy	84.43	172	⇑iP	P	06 13 29.5	+2.1
MIR				pmax	pmax		
	comp=Z,42nm,1.0s						
LRM	Limekiln Ridge	84.45	330	eP	P	06 13 29.0	+0.9
LRM				epP	pP	06 14 10.6	+1.2
MDT	Midelt	84.49	48	P	P	06 13 28.6	+0.2
	comp=Z,12nm,0.9s,baz=249,slow=4.4,SNR=22						
PTEO	Sao Teotonio	84.92	43	eP	P	06 13 33.2	+3.0
	comp=Z,48nm,1.7s						
O03D	Paynes Creek	85.11	321	P	P	06 13 30.9	-0.4
	baz=133						
PBDV	Barranco-do-Ve	85.19	43	eP	P	06 13 33.5	+1.8
	comp=Z,42nm,1.6s						
PCVE	Castro Verde	85.38	43	eP	P	06 13 34.1	+1.5
PNCL	Nicolau / Gran	85.40	42	eP	P	06 13 33.9	+1.2
	comp=Z,28nm,1.8s						
MOD	Modoc Plateau	85.41	323	eP	P	06 13 33.7	+0.9
	comp=Z,5.2nm,0.8s						
MOD				epP	pP	06 14 17.4	+3.2
MESJ	Messejana	85.41	43	eP	P	06 13 33.2	+0.5
MESJ				AMb	AMB	06 13 35.3	
	comp=Z,26nm,1.0s						
MESJ				eSKS	SKSac	06 23 41.3	-0.7
MESJ	Messejana	85.41	43	eP	P	06 13 33.8	+1.1
	comp=Z,26nm,1.1s						
PVAQ	Vaqueiros	85.43	43	eP	P	06 13 33.9	+1.1
	comp=Z,25nm,1.6s						
J08A	Circle Bar Ran	85.48	325	eP	P	06 13 34.3	+1.2
	comp=Z,19nm,1.0s						
J08A				epP	pP	06 14 17.1	+2.6
PBEJ	Beja	85.74	43	eP	P	06 13 36.9	+2.5
	comp=Z,22nm,1.5s						
MSO	Missoula	85.88	330	P	P	06 13 35.8	+0.9
	baz=139						
MSO	Missoula	85.88	330	eP	P	06 13 36.2	+1.2
	comp=Z,22nm,2.0s						
CASY	Casey	85.94	179	eP	P	06 13 35.7	+0.7
	comp=Z,39nm,0.9s						
BMO	Blue Mountains	85.98	327	eP	P	06 13 36.0	+0.5
	comp=Z,3.6nm,0.8s						
BMO	Blue Mountains	85.98	327	eP	P	06 13 36.0	+0.5
BMO				pmax	pmax		
	comp=Z,4.0nm,0.8s						
EVO	Evora	85.98	42	eP	P	06 13 36.5	+1.0
	comp=Z,16nm,2.6s						
TAM	Tamanrasset	86.05	62	eP	P	06 13 36.7	+0.3
	comp=Z,24nm,1.2s						
N02D	Trinity Center	86.07	321	P	P	06 13 36.2	+0.1
	baz=133						
M04C	Macdoel	86.15	322	P	P	06 13 36.9	+0.4
	baz=133						
PMTG	Montargil	86.21	42	eP	P	06 13 37.8	+1.2
	comp=Z,43nm,1.4s						
K05A	Summer Lake	86.29	323	eP	P	06 13 38.4	+1.2
	comp=Z,17nm,0.8s						
K05A				epP	pP	06 14 21.7	+3.0
M02C	Callahan	86.44	321	P	P	06 13 38.2	+0.4
	baz=133						
PESTR	Estremoz	86.45	42	eP	P	06 13 39.1	+1.2
	comp=Z,32nm,1.4s						
PESTR	Estremoz	86.45	42	eP	P	06 13 39.1	+1.2
	comp=Z,7.4nm,0.8s						
PTOM	Tomar	86.46	41	eP	P	06 13 39.5	+1.7
	comp=Z,47nm,1.2s						
YBH	Yreka Blue Hor	86.59	322	P	P	06 13 38.1	-0.5
	comp=Z,4.1nm,0.7s,baz=92,slow=1.4,SNR=14						
PCAS	Casmilo, Conde	86.70	41	eP	P	06 13 40.7	+1.7
	comp=Z,40nm,1.8s						
JTMT	Jette	86.73	330	eP	P	06 13 40.3	+1.2
	comp=Z,11nm,0.7s						
JTMT				epP	pP	06 14 21.8	+1.2
COI	Coimbra	86.85	41	eP	P	06 13 41.1	+1.4
	comp=Z,46nm,2.1s						
COI	Coimbra	86.85	41	eP	P	06 13 41.1	+1.4
J05D	Fort Rock, OR	86.86	323	P	P	06 13 40.7	+0.8
	baz=134						
PMRV	Marv??o	86.94	42	eP	P	06 13 40.7	+0.5
	comp=Z,17nm,1.1s						
PINE	Pine Mountain	87.06	324	eP	P	06 13 42.3	+1.4
	comp=Z,14nm,0.8s						
PINE				epP	pP	06 14 25.1	+2.6
G08A	Pilot Rock	87.11	326	eP	P	06 13 41.5	+0.5
	comp=Z,3.9nm,0.7s						
LSZ	Lusaka	87.14	106	eP	P	06 13 41.8	-0.1
	comp=Z,9.7nm,0.8s						
LSZ	Lusaka	87.14	106	eP	P	06 13 41.8	-0.1
LSZ				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PCBR	Castelo Branco	87.15	41	eP	P	06 13 42.0	+0.8
	comp=Z,20nm,1.1s						
J04D	Umpqua Nationa	87.29	323	P	P	06 13 42.5	+0.5
	baz=133						
PTO	Porto	87.35	40	eP	P	06 13 43.9	+1.8
	comp=Z,55nm,1.6s						
L02D	Cave Junction,	87.37	321	P	P	06 13 43.0	+0.8
	baz=132						
MTE	Manteigas	87.48	41	eP	P	06 13 44.0	+1.2
	comp=Z,34nm,1.4s						
MTE	Manteigas	87.48	41	eP	P	06 13 43.5	+0.7
	comp=Z,30nm,1.2s						
PVIS	Viseu	87.48	41	eP	P	06 13 44.1	+1.3
	comp=Z,23nm,1.5s						
WALA	Waterton Lakes	87.57	331	eP	P	06 13 43.2	+0.1
	comp=Z,14nm,0.8s						
I05D	Terrebonne, OR	87.65	324	P	P	06 13 44.9	+1.4
	baz=134						
I04A	Tendick Farm,	87.83	323	P	P	06 13 44.4	0.0
	baz=133						
PVRL	Vila Real	87.95	40	eP	P	06 13 46.2	+1.2
	comp=Z,25nm,2.3s						
POLO	Lamas de Olo	87.97	40	eP	P	06 13 43.6	-1.5
	comp=Z,18nm,1.5s						
PCAB	Cabril	88.06	40	eP	P	06 13 47.6	+2.1
	comp=Z,30nm,1.8s						
PGAV	Gavieira, Arco	88.08	39	eP	P	06 13 47.6	+1.9
	comp=Z,29nm,1.5s						
G05D	Wamic, OR	88.26	325	P	P	06 13 47.6	+1.3
	baz=134						
I03D	Drain, OR	88.27	323	P	P	06 13 47.6	+1.3
	baz=132						
MVO	Moncorvo	88.27	41	eP	P	06 13 48.0	+1.5
	comp=Z,34nm,1.3s						
D08A	Wollman Farm,	88.36	327	eP	P	06 13 48.1	+1.4
	comp=Z,5.5nm,1.1s						
C09A	Chrisman Ranch	88.58	328	eP	P	06 13 48.5	+0.7
	comp=Z,10nm,0.7s						
PAB	San Pablo	88.83	43	eP	P	06 13 50.7	+1.5
	comp=Z,15nm,1.4s						
PAB	San Pablo	88.83	43	eP	P	06 13 50.7	+1.5
PAB				pmax	pmax		
	comp=Z,15nm,1.4s						
PBRG	Braganca	88.85	40	eP	P	06 13 50.6	+1.4
	comp=Z,28nm,1.7s						
ESDC	Sonseca Array	89.14	43	P	P	06 13 51.5	+0.8
	comp=Z,2.0nm,0.6s,baz=236,slow=4.5,SNR=12						
ES19	SONSECA Array	89.20	43	eP	P	06 13 51.4	+0.5
B05A	Bryant	90.73	327	P	P	06 13 57.5	-0.2
	baz=133						
LTZ	Lake Taylor	91.08	219	eP	P	06 14 01.9	+2.1
	comp=Z,56nm,1.0s						
KEST	Kesra	95.66	53	P	P	06 14 21.9	+1.0
	comp=Z,6.1nm,0.8s,baz=331,slow=21,SNR=4.5						
YKA	Yellowknife Ar	98.01	340	P	Pdif	06 14 31.2	+0.5
	comp=Z,0.6nm,0.7s,baz=135,slow=4.8,SNR=4.8						
EKA	Eskdalemuir Ar	99.15	31	P	Pdif	06 14 38.6	+2.6
	comp=Z,0.5nm,0.4s,baz=227,slow=2.6,SNR=5.4						
KLNR	Kaliningrad	110.66	38	⇑iPKIKP	PKiKP	06 19 26.0	-0.4
ILAR	Eielson Array	110.99	333	PKiKP	PKiKP	06 19 26.1	-0.6
	comp=Z,0.3nm,0.7s,baz=131,slow=1.1,SNR=4.1						
TOLK	Toolik Lake Re	113.28	337	P	PKiKP	06 19 31.5	+0.4
	baz=107						
BRTR	Keskin Array B	114.84	57	PKP	PKPdf	06 19 35.3	+0.2
	comp=Z,0.7nm,0.7s,baz=195,slow=3.8,SNR=3.2						
BRTR				pPKP	pPKP	06 20 17.4	
	comp=Z,1.7nm,0.8s,baz=199,slow=3.4,SNR=5.2						
BR101	Keskin Array S	114.84	57	ePKiKP	PKPdf	06 19 35.2	+0.2
ARCES	ARCESS Array B	116.74	23	PKKPbc	PKKPbc	06 30 05.2	-1.8
	comp=Z,3.4nm,0.9s,baz=84,slow=4.6,SNR=4.7						
OBN	Obninsk	119.96	40	i PKIKP	PKPdf	06 19 44.4	+0.2
OBN				pmax	pmax		
	comp=Z,5.0nm,0.7s						
VSR	Storozhevoye	121.04	45	⇑ePKIKP	PKPdf	06 19 45.9	-0.5
NEY	Neytrino	122.28	55	⇑iPKIKP	PKPdf	06 19 48.5	-0.9
KIV	Kislovodsk	122.37	54	i PKIKP	PKPdf	06 19 48.8	-0.6
KIV				pmax	pmax		
	comp=Z,3.0nm,0.4s						
KBZ	Khabaz	122.49	54	PKP	PKPdf	06 19 49.8	+0.3
	comp=Z,2.0nm,0.8s,baz=127,slow=10,SNR=3.0						
KBZ				pPKP	pPKPdf	06 20 32.5	-0.7
	comp=Z,4.9nm,0.9s,baz=250,slow=3.0,SNR=5.9						
NCK	Nalchik	122.95	54	⇑ePKIKP	PKPdf	06 19 49.4	-1.0
GNI	Garni	123.23	59	⇑ePKIKP	PKPdf	06 19 49.4	-1.9
PRGR	Permogore	124.85	33	ePKIKP	PKPdf	06 19 53.5	+0.1
PRGR				e		06 20 34.7	
PRGR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
AS01	Alice Springs	124.86	203	ePKPdf	PKPdf	06 19 54.2	-0.7
ASAR	Alice Springs	124.87	203	PKP	PKPdf	06 19 54.4	-0.5
	comp=Z,13nm,0.6s,baz=137,slow=1.8,SNR=101						
ASAR				pPKP	pPKPdf	06 20 38.8	+0.2
	comp=Z,2.0nm,0.6s,baz=136,slow=1.5,SNR=3.1						
AS31	Alice Springs	124.87	203	ePKPdf	PKPdf	06 19 54.6	-0.2
WB2	Warramunga Arr	128.12	205	ePKPdf	PKPdf	06 20 01.1	0.0
WR1	Warramunga Arr	128.13	205	ePKPdf	PKPdf	06 20 00.9	-0.2
WRA	Warramunga Arr	128.13	205	PKP	PKPdf	06 20 00.9	-0.1
	comp=Z,21nm,0.7s,baz=166,slow=1.6,SNR=182						
WRA				pPKP	pPKPdf	06 20 44.6	-0.2
	comp=Z,3.3nm,0.6s,baz=162,slow=1.5,SNR=3.9						
WRA	Warramunga Arr	128.13	205	PKIKP	PKPdf	06 20 01.0	-0.1
WRAB	Tennant Creek	128.13	205	ePKPdf	PKPdf	06 20 01.1	0.0
WRAB	Tennant Creek	128.13	205	d iPKIKP	PKPdf	06 20 00.9	-0.2
ABKAR	Akbulak array	134.35	47	ePKPdf	PKPdf	06 20 12.9	+1.0
MTN	Manton Dam	135.83	205	ePKPdf	PKPdf	06 20 14.8	-0.9
SEY	Seymchan	136.88	335	PKP	PKPdf	06 20 17.5	+1.4
	comp=Z,8.6nm,0.9s,baz=135,slow=1.4,SNR=13						
SEY	Seymchan	136.88	335	⇑iPKIKP	PKPdf	06 20 17.7	+1.6
PET	Petropavlovsk	138.42	320	⇓iPKIKP	PKPdf	06 20 20.6	+1.3
MA2	Magadan	139.44	332	ePKIKP	PKPdf	06 20 22.1	+1.1
BRVK	Borovoye	139.73	40	⇑iPKIKP	PKPdf	06 20 23.2	+1.5
BVAR	Borovoye Array	139.80	40	PKP	PKPdf	06 20 23.4	+1.6
	comp=Z,2.6nm,0.8s,baz=315,slow=3.4,SNR=11						
SOEI	Soe	140.94	197	PKP	PKPdf	06 20 27.5	+2.2
SOEI				PKP	PKiKP	06 20 37.3	+9.3
EDFI	Ende, Flores	142.52	194	PKP	PKPdf	06 20 28.7	+0.6
EDFI				PKP	PKiKP	06 20 29.4	-1.8
MNAS	Manas	144.07	55	PKIKP	PKPdf	06 20 29.7	-0.3
MNAS				pmax	pmax		
	comp=Z,5.0nm,1.0s						
YAK	Yakutsk	144.33	347	⇑ePKIKP	PKPbc	06 20 28.8	+0.4
BLJI	Banyuglugur	144.41	180	PKP	PKPbc	06 20 30.9	+0.9
BLJI				PKP	PKiKP	06 20 33.4	-1.5
KPJI	Karang Pucung	144.56	173	PKP	PKPbc	06 20 31.3	+0.8
KPJI				PKP	PKPdf	06 20 32.3	+0.8
NGJI	Ngawi	144.74	177	PKP	PKPdf	06 20 34.9	+3.1
NGJI				PKP	PKiKP	06 20 38.7	+3.1
CGJI	Cibinong	144.76	167	PKP	PKPdf	06 20 31.9	0.0
CGJI				PKP	PKiKP	06 20 33.8	-1.8
EKS2	Erkin-Say	144.96	55	P	PKPdf	06 20 32.3	+0.8
	SNR=9.4						
SMRI	Semarang	144.99	175	PKP	PKPdf	06 20 33.3	+1.0
SMRI				PKP	PKiKP	06 20 34.9	-1.3
SMRI	Semarang	144.99	175	ePKPbc	PKPdf	06 20 33.3	+1.0
AML	Almayashu	145.00	56	P	PKPdf	06 20 33.0	+1.1
	SNR=8.4						
DBJI	Dramaga	145.01	169	PKP	PKPdf	06 20 33.0	+0.7
DBJI				PKP	PKiKP	06 20 34.9	-1.3
SFK	Sufi-Kurgan	145.20	59	PKIKP	PKPbc	06 20 32.3	+0.2
SFK				pmax	pmax		

	comp=Z,44nm,1.5s						
GRJI	Gresik	145.22	179	PKP	PKPab	06 20 34.0	+1.2
GRJI				PKP	PKPdf	06 20 34.9	+2.2
USP	Ospenovka	145.35	54	P	PKPab	06 20 33.2	+0.6
	SNR=8.7						
KURBB	Kurchatov Arra	145.40	40	PKPbc	PKPab	06 20 32.8	+0.3
	comp=Z,13nm,1.0s,baz=300,slow=3.4,SNR=35						
KURK	Kurchatov	145.40	40	ePKPdf	PKPab	06 20 32.8	+0.3
KURK				ePKPdf	PKPbc	06 20 33.0	+0.9
KURK	Kurchatov	145.40	40	ePKP2	PKPab	06 20 32.8	+0.3
AAK	Ala-Archa	145.48	55	PKPbc	PKPab	06 20 34.3	+1.0
	comp=Z,8.0nm,0.6s,baz=226,slow=1.8,SNR=24						
AAK	Ala-Archa	145.48	55	P	PKPab	06 20 34.0	+0.7
	SNR=8.4						
AAK	Ala-Archa	145.48	55 d	iPKP2	PKPab	06 20 33.9	+0.6
NVS	Novosibirsk	145.50	31	ePKP2	PKPab	06 20 33.2	+0.5
FRU	Bishkek	145.53	54	ePKP2	PKPbc	06 20 33.0	+0.2
FRU				pmax	pmax		
	comp=Z,80nm,1.9s						
KASI	Kota Agung	145.55	164	PKP	PKPdf	06 20 30.1	-3.1
KASI				PKP	PKPab	06 20 34.7	+0.7
CHMS	Chumysh	145.59	54	P	PKPab	06 20 34.2	+0.7
	SNR=5.1						
LWLI	Liwa	145.93	163	PKP	PKPdf	06 20 33.4	-0.6
LWLI				PKP	PKPab	06 20 36.9	+1.3
KZA	Kyzart	146.15	55	P	PKPab	06 20 35.9	-0.3
	SNR=8.1						
BKSI	Bulukumba	146.17	192	PKP	PKPbc	06 20 35.3	-0.2
BKSI				PKP	PKPdf	06 20 35.4	+1.1
TKM2	Tokmak 2	146.21	54	P	PKPbc	06 20 35.0	-0.1
	SNR=22						
TKM2	Tokmak 2	146.21	54	PKP2	PKPbc	06 20 34.6	-0.5
TKM2				pmax	pmax		
	comp=Z,15nm,0.7s						
MDSI	Maura Dua	146.47	163	PKP	PKPdf	06 20 33.0	-1.8
MDSI				PKP	PKPbc	06 20 36.0	-0.4
ZAA1	Zalesovo Array	146.78	31	ePKPdf	PKPdf	06 20 35.1	+1.1
ZALV	Zalesovo Beam	146.78	31	PKPbc	PKPdf	06 20 35.1	+1.1
	comp=Z,6.6nm,0.3s,baz=296,slow=3.9,SNR=23						
ZALV				pPKPbc	pPKPdf	06 21 16.9	-1.0
	comp=Z,27nm,0.8s,baz=286,slow=3.7,SNR=6.8						
ULHL	Ulahol	146.83	55	P	PKPbc	06 20 37.0	+0.1
	SNR=14						
KDI	Kendari	146.93	197	PKP	PKPdf	06 20 36.7	+1.1
KDI				PKP	PKPbc	06 20 38.3	+0.6
KSH	Kashi	147.15	60	ePKPbc	PKPdf	06 20 32.8	-2.5
KSH				sPKP		06 21 33.6	
KSH				PKS	PP	06 24 02.5	-2.1
KSH				PP	PP	06 24 05.5	+0.9
KSH				SKS	SKSdf	06 27 25.1	-3.4
KSH	Kashi	147.15	60	SKKS	SKKSac	06 30 36.5	-3.3
SPSI	Sidrap Palu	147.56	192	PKP	PKPbc	06 20 40.2	+0.8
SANI	Sanana	147.68	204	PKP	PKPbc	06 20 39.9	+0.2
KUR	Kuril'sk	147.71	311 ⇑	ePKP2	PKPbc	06 20 38.6	-0.3
NKL	Nikolayevsk	147.80	329	ePKP2	PKPbc	06 20 39.0	+0.2
NKL				pmax	pmax		
	comp=Z,43nm,1.0s						
TTSI	Tana Toraja	148.45	193	PKP	PKPab	06 20 54.2	+8.8
MAKZ	Makanchi	149.16	44	ePKPbc	PKPbc	06 20 43.1	+0.5
MK31	Makanchi Array	149.36	44	ePKPdf	PKPdf	06 20 39.6	+1.0
MK31				ePKPbc	PKPbc	06 20 43.6	+0.5
MK31				ePKPab	PKPab	06 20 49.0	+0.7
MK32	Makanchi Array	149.36	44	ePKPbc	PKPbc	06 20 43.4	+0.3
MKAR	Makanchi Array	149.36	44	PKPbc	PKPbc	06 20 43.4	+0.3
	comp=Z,8.6nm,0.7s,baz=311,slow=1.6,SNR=57						
MKAR				pPKPbc	pPKPbc	06 21 25.2	-1.4
	comp=Z,18nm,0.7s,baz=306,slow=2.9,SNR=7.4						
MKAR	Makanchi Array	149.36	44	ePKPdf	PKPdf	06 20 39.6	+1.0
MKAR				ePKPbc	PKPbc	06 20 43.6	+0.5
MKAR				ePKPab	PKPab	06 20 48.9	+0.6
MK01	Makanchi Array	149.38	44	ePKPdf	PKPdf	06 20 39.3	+0.7
MK01				ePKPbc	PKPbc	06 20 43.7	+0.6
MK01				ePKPab	PKPab	06 20 48.7	+0.2
YUK	Yuzh-Kuril'sk	149.47	310 ⇑	ePKHKP	PKPpre	06 20 39.0	
LUWI	Luwuk	149.67	199	PKP	PKPbc	06 20 47.2	+2.4
LUWI	Luwuk	149.67	199	ePKPdf	PKPdf	06 20 40.4	+0.3
LUWI				ePKPbc	PKPbc	06 20 44.4	-0.4
APSI	Ampana	150.10	197	PKP	PKPbc	06 20 48.1	+2.2
YSS	Yuzh-Sakhalins	150.23	317	ePKPdf	PKPdf	06 20 40.8	+0.9
YSS				ePKPbc	PKPbc	06 20 45.7	+0.5
YSS	Yuzh-Sakhalins	150.23	317 ⇑	iPKIKP	PKPbc	06 20 45.9	+0.8
YSS				e		06 21 29.4	
YSS				pmax	pmax		
	comp=Z,40nm,0.8s						
BOD	Bodaibo	150.25	359	ePKIKP	PKPbc	06 20 44.2	-0.6
BOD				pmax	pmax		
	comp=Z,16nm,1.6s						
DGZ	Jazzator, Alta	150.71	35	i PKIKP	PKPbc	06 20 46.0	-0.4
KMSI	Cibinong	150.82	202	PKP	PKPbc	06 20 48.7	+1.1
MTKI	Muara Teweh, K	151.13	183	PKP	PKPbc	06 20 49.5	+1.2
PSI	Prapat	151.38	149	ePKPdf	PKPdf	06 20 41.7	-1.1
PSI				ePKPbc	PKPbc	06 20 48.8	-0.2
PSI	Prapat	151.38	149	ePKIKP	PKPdf	06 20 41.7	-1.1
ASAJ	Asahikawa	151.61	312	PKPbc	PKPbc	06 20 48.0	-0.4
	comp=Z,24nm,0.8s,baz=225,slow=1.4,SNR=21						
ASAJ	Asahikawa	151.61	312	ePKPdf	PKPdf	06 20 43.1	+1.0
ASAJ				ePKPbc	PKPbc	06 20 47.7	-0.8
MPSI	Mapaga	151.72	194	PKP	PKPbc	06 20 49.4	-0.2
ERM	Erimo	152.03	308	ePKPdf	PKPdf	06 20 44.3	+1.5
ERM				ePKPbc	PKiKP	06 20 50.0	+0.3
ERM	Erimo	152.03	308	ePKIKP	PKPdf	06 20 44.3	+1.5
ZEA	Zeya	152.37	342	ePKIKP	PKPdf	06 20 42.8	-0.1
ZEA				pmax	pmax		
	comp=Z,12nm,1.0s						
HVS	Khovu-Aksy	152.61	27 ⇓	iPKIKP	PKPbc	06 20 51.2	+0.6
WMQ	Urumqi	154.12	46	P	PKPdf	06 20 46.0	+0.1
SBUM	Sibu	154.51	177	ePKPdf	PKPdf	06 20 47.0	-0.2
SBUM				ePKPbc	PKiKP	06 20 56.1	+0.3
SBUM				ePKPab	PKPab	06 21 12.0	+1.3
KLR	Kul'dur	154.55	331 d	iPKIKP	PKPdf	06 20 46.3	+0.1
MJAR	Matsushiro Arr	157.36	298	PKPab	PKPab	06 21 23.3	+0.7
	comp=Z,4.0nm,0.6s,baz=160,slow=2.0,SNR=11						
MAJO	Matsushiro	157.36	298	ePKPdf	PKPdf	06 20 52.6	+2.3
MAJO				ePKPab	PKPab	06 21 23.8	+1.2
MAJO	Matsushiro	157.36	298	ePKIKP	PKPdf	06 20 52.6	+2.3
MJB9	Matsu-Tunnel	157.36	298	ePKPdf	PKPdf	06 20 51.3	+1.0
MJB9				ePKPab	PKPab	06 21 23.8	+1.2
SONA1	Songino Array	159.52	13	ePKPdf	PKPdf	06 20 53.5	+0.7
SONA0	Songino Array	159.53	13	ePKPdf	PKPdf	06 20 53.6	+0.9
SONA0				ePKPab	PKPab	06 21 33.4	+1.7
SONM	Songino Array	159.53	13	PKP	PKPdf	06 20 53.6	+0.9
	comp=Z,4.5nm,1.1s,baz=259,slow=0.8,SNR=15						
SONM				PKPab	PKPab	06 21 33.4	+1.7
	comp=Z,5.5nm,1.2s,baz=278,slow=0.6,SNR=2.9						
ULN	Ulaanbaatar	159.63	12	ePKPdf	PKPdf	06 20 52.6	-0.3
ULN	Ulaanbaatar	159.63	12 c	ePKIKP	PKPdf	06 20 52.4	-0.5
CMAR	Chiang Mai Arr	163.72	123	PKP	PKPdf	06 20 58.0	+0.2
	comp=Z,0.9nm,0.2s,baz=296,slow=2.2,SNR=6.3						
CMAR				PKPab	PKPab	06 21 50.0	-0.8
	comp=Z,1.2nm,0.4s,baz=227,slow=2.8,SNR=5.1						
CMAR	Chiang Mai Arr	163.72	123	PKIKP	PKPdf	06 20 58.0	+0.2
CMAR						06 21 50.0	
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KSRS	Korea Array	164.56	311	PKP	PKPdf	06 20 57.9	0.0
	comp=Z,2.8nm,0.9s,baz=95,slow=1.2,SNR=17						
KSRS				PKPab	PKPab	06 21 55.2	+1.3
	comp=Z,3.3nm,0.8s,baz=62,slow=3.8,SNR=10						
KS01	Wonju Array Si	164.56	311	ePKPdf	PKPdf	06 20 57.5	-0.4
KSAR	Wonju Array Be	164.59	311	PKP	PKPdf	06 20 57.9	-0.1
KSAR				PKPab	PKPab	06 21 55.2	+1.2
KSAR	Wonju Array Be	164.59	311	PKIKP	PKPdf	06 20 57.9	-0.1
KSAR						06 21 55.2	
HHC	Hu-ho-hao-te	167.16	6	eP	PKPdf	06 21 00.1	0.0
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,95nm,5.5s						
LZH	Lanzhou	168.67	43	ePKP	PKPdf	06 21 03.1	+1.7
LZH				pPKP	pPKPdf	06 21 46.3	+0.9
LZH				sPKP		06 22 01.8	
LZH				PKP	PKPab	06 22 20.0	+7.7
LZH				PP	PP	06 25 59.1	-2.5
NJ2	Nanjing	173.76	311	eP	PKPdf	06 21 05.0	+1.2
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						

ISCJB **25** *06:13:01.8±0.3, 1°.92N±0°.04×89°.66E±0°.03, h10^{km}, mb4.6/44, MS3.7/27, Error ellipse: s-maj=5.9km s-min=3.4km az=15.1*

IDC **25** *06:13:02.0±0.6, 2°.00N×89°.68E, h0^{km}, mb4.3/20, mb1 4.5/22, mb1mx4.2/65, mbtmp4.3/22, ML4.3/2, MS3.6/23, Ms1 3.6/23, ms1mx3.4/60, Error ellipse: s-maj=21.6km s-min=14.5km az=40.0*

BJI **25** *06:13:02.7, 1°.90N×89°.70E, h6^{km}, mb4.8/31, mB4.8/19, Ms4.4/13, Ms7 4.1/12*

NEIC **25** *06:13:03.5±0.2, 1°.98N×89°.70E, h10^{km}, mb4.9/19, Error ellipse: s-maj=5.3km s-min=3.3km az=200.0*

GCMT **25** *06:13:03.5±0.6, 2°.03N×89°.76E, h15^{km}±2^{km}, MW4.8/68, Moment Tensor Solution. s17,c20; s68,c91; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.23±.12; $M_{\theta\theta}$-1.29±.10; $M_{\phi\phi}$1.06±.10; $M_{r\theta}$1.03±.43; $M_{\theta\phi}$-1.14±.11; $M_{\phi r}$-1.40±.56; Best double couple: $M_0$2.29400×10^{16} NP1:ϕ_s112.00000°, δ79.00000°, λ141.00000°. NP2: ϕ_s211.00000°, δ51.00000°, λ14.00000°. Principal axes: T 2.6940, Plg35.0000°, Azm64.0000°; N -0.7990, Plg50.0000°, Azm280.0000°; P -1.8940, Plg18.0000°, Azm167.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 25 06:13:03.9±0.5, **1°.94N**±0°.06×**89°.59E**±0°.05, **h10^{km}, n191,** σ**1^{s}61**/177, **mb4.7**/48, **MS3.7**/28, **5C-7D, North Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMBY	CAMPBELL BAY	6.64	41	eP	Pn	06 14 40.5	-1.2
SNSI	Sinabang, Aceh	6.75	86	P	Pn	06 14 46.2	+3.0
SNSI				S	Sn	06 15 59.9	-0.3
MLSI	Meulaboh, Aceh	7.19	71	P	Pn	06 14 49.4	+0.2
MLSI				S	Sn	06 16 06.8	-4.2
TPTI		7.70	80	P	Pn	06 14 57.6	+1.4
TPTI				S	Sn	06 16 22.0	-1.6
GSI	Gunungsitoli	8.01	94	P	Pn	06 15 03.9	+3.4
GSI	Gunungsitoli	8.01	94	ePn	Pn	06 14 57.7	-2.9
LHMI	Lhok Sumawe	8.04	66	P	Pn	06 15 01.2	+0.3
LHMI	Lhok Sumawe	8.04	66	ePn	Pn	06 15 00.4	-0.5
KCSI	Kotacane, Aceh	8.33	79	P	Pn	06 15 04.5	-0.3
KCSI				S	Sn	06 16 36.1	-2.9
PBSI	Pulau Batu	8.92	103	P	Pn	06 15 19.1	+6.2
TSI	Tuntungan	9.10	80	P	Pn	06 15 18.1	+2.6
PSI	Prapat	9.37	85	ePn	Pn	06 15 17.1	-2.2
MNSI	Mandailing Nat	10.06	96	P	Pn	06 15 32.9	+4.3
PALK	Pallekele	10.31	301	Pn	Pn	06 15 31.5	-0.7
	6.4nm,0.3s,baz=116,slow=9.9,SNR=19						
PALK				Sn	Sn	06 17 18.5	-9.5
	45nm,0.3s,baz=296,slow=3.3,SNR=20						
PALK				LR	LR	06 19 10.9	
	comp=Z,358nm,18.6s,baz=112,slow=36						
PALK	Pallekele	10.31	301	ePn	Pn	06 15 32.5	+0.4
PALK				eSn	Sn	06 17 18.5	-9.5
KULM	Kulim	11.53	73	ePn	Pn	06 15 46.1	-2.7
KULM	Kulim	11.53	73	P	Pn	06 15 47.0	-1.8
TRTT	Trang	11.64	59	P	Pn	06 15 48.5	-1.8
	24nm,0.6s,568nm						
IPM	Ipoh	11.70	77	ePn	Pn	06 15 48.8	-2.3
SKLT	Songkhla	12.16	64	P	Pn	06 15 56.2	-1.2
	101nm,1.0s,894nm						
KRJI	Kerinci	12.53	109	P	Pn	06 16 09.7	+7.1
SKHT	Srikalahasti	15.26	321	eP	Pn	06 16 38.4	-1.2
SKHT				IAmb	IAmb	06 16 47.7	
	comp=Z,46nm,0.8s						
MDSI	Maura Dua	15.92	114	P	P	06 16 54.1	+2.2
LWLI	Liwa	16.03	116	P	P	06 16 55.1	+1.9
KASI	Kota Agung	16.64	117	P	P	06 17 00.8	+0.9
ADKI	Addanki	16.75	326	eP	Pn	06 16 58.9	+0.1
ADKI				IAmb	IAmb	06 16 59.5	
	comp=Z,97nm,0.4s						
VIS	Vishakhapatnam	16.84	339	i P	Pn	06 16 59.7	-0.3
VIS				i x	Sn	06 19 52.6	-15
NAYO	Nakonayok	16.90	43	P	P	06 17 03.9	+1.1
	comp=Z,0.4nm,1.0s,comp=Z,27nm						
PVM	Polavaram	17.11	333	eP	Pn	06 17 01.8	-1.5
PVM				IAmb	IAmb	06 17 07.4	
	comp=Z,70nm,1.1s						
SRAK	Srakaew	17.19	45	P	P	06 17 12.6	+6.6
CHLP	Challavanipeta	17.33	342	eP	Pn	06 17 05.6	-0.6
CHLP				IAmb	IAmb	06 17 06.9	
	comp=Z,122nm,0.8s						
SRLM	Srisailam	17.58	324	eP	Pn	06 17 09.1	-0.1
SRLM				IAmb	IAmb	06 17 11.2	
	comp=Z,33nm,0.7s						
NJS	Nagarjunasagar	17.70	326	eP	Pn	06 17 10.2	-0.6
NJS				IAmb	IAmb	06 17 24.3	
	comp=Z,27nm,0.6s						
URV	Uravakonda	17.75	317	eP	P	06 17 12.6	+0.4
URV				IAmb	IAmb	06 17 16.8	
	comp=Z,28nm,0.7s						
CGJI	Cibinong	18.19	118	P	P	06 17 25.4	+8.4
SUKH	Sukhothai	18.33	32	P	P	06 17 20.0	+1.5
	comp=Z,9.4nm,0.8s						
PBKT	Sadao Pong	18.35	37	ePn	Pn	06 17 18.0	-0.8
	comp=Z,20nm,0.9s						
PBKT	Sadao Pong	18.35	37	P	Pn	06 17 18.8	0.0
	comp=Z,24nm,1.3s						
CHAI	Chaiyaphum	18.49	41	P	P	06 17 20.0	-0.3
	comp=Z,6.6nm,0.8s						
BWNR	Bhubaneshwar	18.61	349	eP	P	06 17 20.9	-0.7
BWNR				IAmb	IAmb	06 17 22.6	
	comp=Z,721nm,2.0s						
CM01	Chiang Mai Arr	18.78	29	eP	P	06 17 22.1	-1.4
CM31	Chiang Mai Arr	18.80	29	eP	P	06 17 22.5	-1.3
CMAR	Chiang Mai Arr	18.80	29	P	P	06 17 22.9	-0.9
	comp=Z,0.2nm,0.3s,baz=222,slow=13,SNR=12						
HYB	Hyderabad	18.82	325	i P	Pn	06 17 25.0	+0.5
HYB				eS	Sn	06 20 56.0	+0.8
HYB	Hyderabad	18.82	325	eP	P	06 17 24.2	+0.2
HYB				IAmb	IAmb	06 20 36.6	
	comp=Z,110nm,1.6s						
HYBB	Hyderabad (bro	18.82	325	eP	P	06 17 24.3	+0.3
HYBB				IAmb	IAmb	06 17 24.8	
	comp=Z,20nm,0.9s						
DBJI	Dramaga	19.10	116	P	Pn	06 17 36.0	+8.1
CHTO	Chiang Mai	19.11	28	eP	P	06 17 25.4	-1.8
	comp=Z,18nm,1.1s						
CHTO	Chiang Mai	19.11	28	P	Pn	06 17 34.2	+6.2
	comp=Z,69nm,1.1s						
CMMT	Chiang Mai	19.11	28	P	Pn	06 17 34.2	+6.2
	comp=Z,12nm,1.1s						
LAMP	Lampang	19.20	30	P	Pn	06 17 32.5	+3.5
	comp=Z,8.1nm,1.1s,comp=Z,71nm						
KHON	Khomkaen	19.35	42	P	P	06 17 30.4	+0.6
	comp=Z,10.0nm,0.8s						
H08S2	Diego Garcia H	19.53	241	T	T	06 37 52.8	
	baz=59,slow=74,SNR=89						
H08S3	Diego Garcia H	19.53	241	T	T	06 37 50.2	
	baz=59,slow=74,SNR=668						
H08S1	Diego Carcia H	19.55	241	T	T	06 37 53.1	
	baz=59,slow=74,SNR=15						
RPR	Rampur	19.60	330	eP	P	06 17 32.7	+0.2
RPR				IAmb	IAmb	06 17 40.5	
	comp=Z,36nm,0.6s						
PAYA	Payao	20.03	29	P	Pn	06 17 45.5	+6.6
SRSP	Sriramsagar	20.16	328	eP	P	06 17 38.7	+0.1
SRSP				IAmb	IAmb	06 17 46.9	
	comp=Z,20nm,0.8s						
UBPT	Khong Chiam	20.52	49	P	P	06 17 42.1	-0.5
	comp=Z,82nm,1.3s						
SKNT	Sakolnakorn	20.58	43	P	P	06 17 44.3	+1.1
	comp=Z,18nm,2.5s						
SAIH	SAIHA	20.69	9	eP	P	06 17 43.4	-1.1
KSM	Kuching	20.72	91	eP	P	06 17 43.4	-1.4
	comp=Z,91nm,1.8s						
NONG	Nongkai	20.83	39	P	P	06 17 44.9	-1.0
	comp=Z,1.3nm,1.3s,comp=Z,133nm						
BELO	BELONIA	21.26	5	eP	P	06 17 52.0	+1.6
KPJI	Karang Pucung	21.39	116	P	P	06 17 53.3	+1.3
STKI	Sintang	21.97	95	P	P	06 18 13.8	+16
BOK	Bokaro	22.02	351	eP	P	06 17 58.3	-0.4
BOK				IAmb	IAmb	06 18 10.8	
	comp=Z,136nm,0.2s						
POO	Poona	22.58	318	eP	P	06 18 04.8	+0.1
POO				IAmb	IAmb	06 18 18.3	
	comp=Z,20nm,0.9s						
SBUM	Sibu	22.62	88	eP	P	06 18 04.0	-1.3
	comp=Z,13nm,1.0s						
SMRI	Semarang	22.65	113	eP	P	06 18 03.7	-1.9
	comp=Z,215nm,1.5s						
IMP	Imphal	23.14	10	eP	P	06 18 10.2	-0.4
TURI	Tura	23.48	2	eP	P	06 18 15.1	+1.1
SHL	Shillong	23.59	5	eP	P	06 18 14.3	-1.0
	comp=Z,34nm,1.1s						
SHL	Shillong	23.59	5	eP	P	06 18 14.8	-0.4
SHL				ex	Sn	06 22 41.0	-9.1
KOHI	KOHIMA	24.04	10	ex	P	06 18 16.0	-3.5
GUWA	GUWAHATI	24.20	5	eP	P	06 18 21.5	+0.7
BHPL	Bhopal	24.24	332	eP	P	06 18 21.6	+0.4
BHPL				IAmb	IAmb	06 19 02.1	
	comp=Z,23nm,0.6s						
MOKO	MOKOCHONG	24.70	11	eP	P	06 18 25.2	-0.4
TEZP	TEZPUR	24.73	7	eP	P	06 18 24.9	-0.7
RAMN	Ramite	25.03	354	eP	P	06 18 29.4	+0.8
GTK	Tadong	25.25	358	ex	P	06 18 26.7	-3.8
ITAN	ITANAGAR	25.37	9	eP	P	06 18 29.9	-1.6
ZIRO	ZIRO	25.77	9	eP	P	06 18 36.5	+1.2
JIRN	Jiri	25.78	353	eP	P	06 18 36.1	+0.5
PKIN	Phulchoki	25.80	351	eP	P	06 18 36.5	+0.8
DMN	Daman	25.88	351	eP	P	06 18 37.0	+0.6
	comp=Z,50nm,0.9s						
KKN	Kakani	26.03	351	eP	P	06 18 38.1	+0.4
	comp=Z,66nm,0.9s						
GUN	Gumba	26.07	353	eP	P	06 18 38.3	+0.1
KMI	Kunming	26.31	28	P	P	06 18 42.4	+2.1
KMI				pP	sP	06 18 50.8	+6.2
KMI				sP	pP	06 18 54.3	+11
KMI				S	S	06 23 17.8	+4.4
KMI				pmax	pmax		
	comp=Z,12nm,0.6s						
KMI				pmax	pmax		
	comp=Z,82nm,5.8s						
KMI				LR	LR		
	comp=Z,340nm,19.5s						
KMI				LR	LR		
	comp=Z,290nm,22.7s						
KMI				LR	LR		
	comp=Z,230nm,22.7s						
KOLN	Koldanda	26.31	348	eP	P	06 18 41.0	+0.8
GKN	Gorkha	26.34	350	eP	P	06 18 41.1	+0.6
	comp=Z,42nm,0.8s						
PYUN	Piuthan	26.77	347	eP	P	06 18 44.8	+0.5
DANN	Dangsing	26.84	349	eP	P	06 18 44.8	-0.3
LSA	Lhasa	27.65	3	eP	P	06 18 51.5	-1.0
	comp=Z,28nm,0.8s						
MYLDM	Lahad Datu	29.03	83	eP	P	06 19 02.5	-2.1
	comp=Z,26nm,1.0s						
GYA	Guiyang	29.39	32	eP	P	06 19 09.8	+2.1
GYA				PP	PnPn	06 20 05.3	+3.9
GYA				S	S	06 24 01.4	-0.3
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
GYA				pmax	pmax		
	comp=Z,110nm,4.9s						
GYA				LR	LR		
	comp=Z,440nm,16.9s						
GYA				LR	LR		
	comp=Z,320nm,16.0s						
GYA				LR	LR		
	comp=Z,350nm,16.2s						
SMLA	Simla	31.32	339	eP	P	06 19 24.9	+0.4
SMLA				IAmb	IAmb	06 19 26.3	
	comp=Z,8.6nm,0.7s						
CD2	Chengdu	31.78	24	eP	P	06 19 29.0	+0.3
CD2				S	S	06 24 40.8	+1.8
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.0s						
CD2				LR	LR		
	comp=Z,710nm,11.9s						
CD2				LR	LR		
	comp=Z,300nm,14.4s						
DHRM	DHARAMSHALA	32.64	339	eP	P	06 19 37.0	+0.5
DHRM				IAmb	IAmb	06 19 37.7	
	comp=Z,11nm,0.6s						
NIL	Nilore	35.06	336	eP	P	06 19 57.6	+0.4
	comp=Z,37nm,0.6s						
DAV	Davao City (W)	36.23	81	LR	LR	06 36 09.6	
	comp=Z,74nm,19.3s,baz=116,slow=38						
LZH	Lanzhou	36.45	20	eP	P	06 20 15.1	+5.8
LZH				pP	sP	06 20 17.8	+4.1
LZH				sP	pP	06 20 19.9	+7.5
LZH				pmax	pmax		
	comp=Z,25nm,1.0s						
LZH				LR	LR		
	comp=Z,590nm,14.9s						
LZH				LR	LR		
	comp=Z,290nm,13.8s						
LZH				LR	LR		
	comp=Z,620nm,19.8s						
GTA	Gaotai	38.44	13	eP	P	06 20 26.8	+0.7
GTA				pP	sP	06 20 31.5	+1.1
GTA				sP	pP	06 20 34.5	+5.3
GTA				pmax	pmax		
	comp=Z,5.0nm,1.0s						
NJ2	Nanjing	40.70	40	eP	P	06 20 45.8	+0.9
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
WMQ	Urumqi	41.73	358	P	P	06 20 53.6	+0.3
WMQ				sP	sP	06 21 01.3	+3.6
WMQ				pmax	pmax		
	comp=Z,31nm,1.1s						
WMQ				LR	LR		
	comp=Z,190nm,17.5s						
WMQ				LR	LR		
	comp=Z,330nm,22.7s						
WMQ				LR	LR		
	comp=Z,150nm,24.5s						
TIA	Tai'an	42.57	34	P	P	06 21 03.5	+3.4
TIA				pmax	pmax		
	comp=Z,14nm,1.0s						
H01W3	Cape Leeuwin H	43.26	150	T	T	07 07 32.2	
	baz=323,slow=74						
H01W2	Cape Leeuwin H	43.27	150	T	T	07 07 13.0	
	baz=323						
H01W1	Cape Leeuwin H	43.28	150	T	T	07 07 45.9	
	baz=323,slow=74						
HHC	Hu-ho-hao-te	43.53	24	eP	P	06 21 08.0	0.0
HHC				S	S	06 27 37.6	+0.5
HHC				sS	sS	06 27 47.8	+5.5
HHC				ScS	ScS	06 31 06.6	-1.7
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,90nm,5.6s						
HHC				LR	LR		
	comp=Z,150nm,16.9s						
HHC				LR	LR		
	comp=Z,180nm,15.3s						
HHC				LR	LR		
	comp=Z,97nm,14.1s						
KK31	Karatay Array	44.38	340	eP	P	06 21 13.6	-1.1
KKAR	Karatay Array	44.38	340	eP	P	06 21 13.9	-0.8
SONA0	Songino Array	47.98	15	eP	P	06 21 43.0	0.0
SONM	Songino Array	47.98	15	P	P	06 21 43.0	0.0
	comp=Z,4.6nm,0.6s,baz=195,slow=9.7,SNR=10						
SONA1	Songino Array	47.99	15	eP	P	06 21 38.0	-5.1
WRA	Warramunga Arr	48.98	119	P	P	06 21 50.2	-0.9
	comp=Z,6.7nm,0.7s,baz=296,slow=8.6,SNR=23						
WRA				LR	LR	06 45 22.6	
	comp=Z,44nm,18.3s,baz=270,slow=40						
WR1	Warramunga Arr	48.98	119	eP	P	06 21 50.2	-0.9
	comp=Z,14nm,0.8s						
WRAB	Tennant Creek	48.99	119	eP	P	06 21 50.2	-0.9
	comp=Z,14nm,0.8s						
WB2	Warramunga Arr	48.99	119	eP	P	06 21 50.0	-1.2
	comp=Z,13nm,0.8s						
WB2				eP	P	06 21 50.1	-1.1
KURBB	Kurchatov Arra	49.40	351	P	P	06 21 52.8	-1.0
	comp=Z,4.3nm,0.9s,baz=178,slow=7.4,SNR=6.4						
KURK	Kurchatov	49.48	351	eP	P	06 21 52.8	-1.5
JNU	Nakatsue	49.58	47	LR	LR	06 44 13.9	
	comp=Z,57nm,18.2s,baz=300,slow=38						
KSRS	Korea Array	49.89	40	LR	LR	06 43 49.8	
	comp=Z,78nm,19.7s,baz=237,slow=37						
AS31	Alice Springs	50.05	123	eP	P	06 21 58.5	-0.7
	comp=Z,2.2nm,0.6s						
ASAR	Alice Springs	50.05	123	P	P	06 21 58.5	-0.7
	comp=Z,5.1nm,0.8s,baz=296,slow=7.9,SNR=27						
AS01	Alice Springs	50.08	123	eP	P	06 21 57.8	-1.8
ZALV	Zalesovo Beam	51.98	356	P	P	06 22 11.9	-1.3
	comp=Z,2.5nm,0.4s,baz=183,slow=7.4,SNR=2.6						
ZAA1	Zalesovo Array	51.99	356	eP	P	06 22 11.9	-1.3
BVAR	Borovoye Array	53.35	346	P	P	06 22 21.8	-1.5
	comp=Z,2.6nm,0.8s,baz=161,slow=9.2,SNR=8.2						
BVAR				LR	LR	06 45 17.1	
	comp=Z,47nm,20.1s,baz=132,slow=36						
ABKAR	Akbulak array	53.52	336	eP	P	06 22 24.6	-0.1

GNI	**Garni**	**55.61**	**319**	LR	LR	06 46 08.2	
	comp=Z,48nm,21.4s,baz=134,slow=36						
GUMO	**Guam**	**55.85**	**75**	LR	LR	06 45 43.2	
	comp=Z,20nm,20.8s,baz=198,slow=35						
USRK	**Ussuriysk Ar.**	**56.35**	**36**	LR	LR	06 50 23.4	
	comp=Z,57nm,18.7s,baz=177,slow=40						
MAJO	**Matsushiro**	**56.50**	**46**	eP	**P**	**06 22 44.9**	**-1.6**
MJAR	**Matsushiro Arr**	**56.50**	**46**	P	**P**	**06 22 44.9**	**-1.6**
	comp=Z,0.6nm,0.3s,baz=228,slow=6.2,SNR=4.1						
MJAR				LR	LR	06 46 48.8	
	comp=Z,58nm,22.0s,baz=235,slow=36						
KBZ	**Khabaz**	**58.66**	**322**	P	**P**	**06 23 01.7**	**+0.2**
	comp=Z,6.1nm,0.9s,baz=152,slow=5.0,SNR=9.5						
KLR	**Kul'dur**	**59.27**	**31**	LR	LR	06 52 20.7	
	comp=Z,9.5nm,18.0s,slow=40						
MMAI	**Mount Meron Ar**	**59.36**	**308**	LR	LR	06 49 38.0	
	comp=Z,125nm,18.1s,baz=170,slow=37						
STKA	**Stephens Creek**	**59.62**	**129**	P	**P**	**06 23 07.3**	**-1.2**
	comp=Z,4.2nm,0.6s,baz=302,slow=7.2,SNR=7.0						
STKA	**Stephens Creek**	**59.62**	**129**	eP	**P**	**06 23 07.3**	**-1.2**
	comp=Z,6.0nm,1.5s						
ASAJ	**Asahikawa**	**62.84**	**40**	LR	LR	06 51 24.6	
	comp=Z,41nm,19.1s,baz=110,slow=37						
BR101	**Keskin Array S**	**63.06**	**314**	eP	**P**	**06 23 31.4**	**-0.4**
BR131	**Keskin Array S**	**63.06**	**314**	eP	**P**	**06 23 31.6**	**-0.3**
BRTR	**Keskin Array B**	**63.06**	**314**	P	**P**	**06 23 31.4**	**-0.4**
	comp=Z,2.0nm,0.6s,baz=137,slow=8.1,SNR=10.0						
LBTB	**Lobatse**	**67.45**	**242**	eP	**P**	**06 24 00.7**	**+0.2**
	comp=Z,6.6nm,0.7s						
BOSA	**Boshof**	**68.61**	**238**	P	**P**	**06 24 08.1**	**+0.2**
	comp=Z,2.9nm,0.9s,baz=90,slow=6.5,SNR=5.4						
KLMR	**Klimovskoe**	**69.92**	**336**	eP	**P**	**06 24 13.0**	**-2.0**
KLMR				AMP		06 24 14.6	
	comp=Z,9.0nm,0.9s						
VRI	**Vrincioaia**	**69.96**	**319**	⇑iP	**P**	**06 24 16.3**	**+0.6**
PLOR	**Plostina**	**70.01**	**319**	⇑iP	**P**	**06 24 16.9**	**+0.9**
AKASG	**Malin Array Be**	**70.11**	**324**	P	**P**	**06 24 15.2**	**-1.3**
	comp=Z,1.7nm,0.6s,baz=90,slow=5.7,SNR=4.7						
AKASG				LR	LR	07 00 17.9	
	comp=Z,23nm,18.2s,baz=295,slow=40						
TESR	**Tescani**	**70.22**	**319**	⇓iP	**P**	**06 24 17.5**	**+0.2**
MLR	**Muntele Rosu**	**70.36**	**318**	P	**P**	**06 24 18.9**	**+0.6**
	comp=Z,16nm,0.8s,baz=345,slow=1.7,SNR=15						
MLR	**Muntele Rosu**	**70.36**	**318**	⇑iP	**P**	**06 24 19.2**	**+0.9**
MLR	**Muntele Rosu**	**70.36**	**318**	eP	**P**	**06 24 19.1**	**+0.9**
	comp=Z,20nm,0.7s						
PRAR	**RASCA**	**70.77**	**320**	⇑iP	**P**	**06 24 20.4**	**-0.2**
VOIR		**70.95**	**318**	⇓iP	**P**	**06 24 21.5**	**-0.3**
VTS	**Vitosha**	**71.43**	**314**	⇑iP	**P**	**06 24 24.7**	**-0.2**
BURAR	**Bucovina Array**	**71.50**	**320**	⇓iP	**P**	**06 24 25.7**	**+0.6**
BUR04	**Bucovina Ar. S**	**71.50**	**320**	eP	**P**	**06 24 25.4**	**+0.3**
BUR08	**Bucovina Ar. S**	**71.52**	**320**	eP	**P**	**06 24 25.5**	**+0.2**
HERR	**Herculane**	**72.58**	**317**	⇓iP	**P**	**06 24 31.6**	**+0.1**
DRGR		**72.89**	**319**	⇓iP	**P**	**06 24 33.7**	**+0.2**
MDVR	**Moldovita**	**73.04**	**316**	⇓iP	**P**	**06 24 34.3**	**0.0**
TRPA	**Tarpa**	**73.38**	**320**	⇓iP	**P**	**06 24 36.3**	**+0.1**
PETK	**Petropavlovsk-**	**75.44**	**35**	LR	LR	06 59 45.6	
	comp=Z,56nm,19.4s,baz=255,slow=37						
DPC	**Dobruska-Polom**	**77.86**	**321**	eP	**P**	**06 25 03.0**	**+1.1**
DPC				ePCP	**PcP**	**06 25 13.3**	**+1.5**
GEA0	**GERESS Array S**	**79.26**	**319**	eP	**P**	**06 25 09.4**	**-0.3**
GEC2	**GERESS Array S**	**79.26**	**319**	eP	**P**	**06 25 09.8**	**0.0**
	comp=Z,9.1nm,1.0s						
GERES	**GERESS Array B**	**79.26**	**319**	P	**P**	**06 25 10.1**	**+0.3**
	comp=Z,3.0nm,0.7s,baz=100,slow=5.5,SNR=22						
GERES				LR	LR	07 08 07.3	
	comp=Z,24nm,18.3s,baz=101,slow=42						
ARA0	**ARCESS Array S**	**79.33**	**341**	eP	**P**	**06 25 09.8**	**+0.2**
ARCES	**ARCESS Array B**	**79.33**	**341**	P	**P**	**06 25 09.8**	**+0.2**
	comp=Z,4.3nm,0.8s,baz=106,slow=6.4,SNR=8.2						
KHC	**Kasperske Hory**	**79.39**	**320**	eP	**P**	**06 25 10.6**	**+0.2**
KHC				ePCP	**PcP**	**06 25 18.8**	**+0.3**
KHC	**Kasperske Hory**	**79.39**	**320**	eP	**P**	**06 25 10.5**	**+0.2**
	comp=Z,1.8nm,0.8s						
BRG	**Berggiesshubel**	**79.45**	**321**	eP	**PcP**	**06 25 21.2**	**+2.6**
	comp=Z,5.2nm,0.8s						
HFS	**Hagfors**	**81.31**	**331**	P	**P**	**06 25 19.0**	**-1.4**
	comp=Z,3.3nm,0.9s,baz=104,slow=11,SNR=6.4						
HFS				LR	LR	07 04 44.7	
	comp=Z,39nm,18.7s,baz=64,slow=38						
DAVOX	**Davos/Dischmat**	**81.54**	**317**	P	**P**	**06 25 21.4**	**-0.8**
	comp=Z,2.1nm,0.5s,baz=259,slow=12,SNR=3.0						
NOA	**NORSAR Array B**	**82.68**	**331**	LR	LR	07 07 42.1	
	comp=Z,22nm,18.1s,baz=105,slow=40						
SENIN	**Lac Senin/Sane**	**83.27**	**316**	eP	**P**	**06 25 31.5**	**+0.2**
	comp=Z,8.9nm,0.9s						
SPITS	**Spitsbergen Ar**	**84.70**	**349**	LR	LR	07 09 46.1	
	comp=Z,59nm,18.5s,baz=175,slow=40						
TORD	**Torodi Ar. Bea**	**87.51**	**283**	P	**P**	**06 25 53.4**	**+0.6**
	comp=Z,0.7nm,0.9s,baz=72,slow=4.7						
TOA1	**Torodi Ar. Sit**	**87.51**	**283**	eP	**P**	**06 25 53.4**	**+0.6**
VNDA	**Vanda**	**88.09**	**168**	LR	LR	06 58 25.6	
	comp=Z,50nm,20.5s,baz=316,slow=31						
EKA	**Eskdalemuir Ar**	**89.98**	**325**	P	**P**	**06 26 03.4**	**-0.2**
	comp=Z,0.7nm,0.7s,baz=96,slow=7.2,SNR=3.9						
ESDC	**Sonseca Array**	**91.51**	**310**	P	**P**	**06 26 10.7**	**-0.5**
	comp=Z,0.2nm,0.3s,baz=214,slow=0.5,SNR=3.4						
KOWA	**Kowa**	**93.01**	**285**	P	**P**	**06 26 19.5**	**+1.0**
	comp=Z,1.5nm,0.7s,baz=90,slow=7.1,SNR=2.8						
KOWA				LR	LR	07 05 15.3	
	comp=Z,30nm,19.5s,baz=42,slow=34						
DBIC	**Dimbokro**	**94.19**	**277**	LR	LR	07 07 31.7	
	comp=Z,20nm,18.9s,baz=84,slow=35						
BORG	**Borgarnes**	**97.04**	**336**	LR	LR	07 12 44.1	
	comp=Z,14nm,18.2s,baz=42,slow=37						
TX31	**Lajitas Ar. Si**	**146.41**	**21**	ePKPdf	**PKPbc**	**06 32 45.4**	**-0.7**
TX31				ePKPdf	**PKPdf**	**06 32 45.6**	**+0.7**
LTX	**Lajitas**	**146.41**	**21**	ePKPdf	**PKPbc**	**06 32 45.6**	**-0.5**
TXAR	**Lajitas Array**	**146.41**	**21**	PKPbc	**PKPbc**	**06 32 45.6**	**-0.5**
	comp=Z,1.9nm,0.9s,baz=261,slow=1.6,SNR=15						
HPIG		**147.74**	**26**	ePKPbc	**PKPbc**	**06 32 50.2**	**+0.2**

IDC 25 06:15:01.0±3.6**,30°.25S**×**138°.58E,h0**^{km}**,mb1 3.0**/3**,**
mb1mx3.0/40**,mbtmp2.8**/3**,ML2.5**/3**,Error ellipse:**
s-maj=100.3km s-min=16.5km az=43.0,South Australia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**3.05**	**123**	Pn	Pn	06 15 50.8	+0.2
	0.2nm,0.3s,baz=308,slow=16,SNR=2.3						
STKA				Sn	Sn	06 16 27.5	-0.4
	1.4nm,0.3s,baz=300,slow=14,SNR=5.0						
STKA				Lg	Lg	06 16 38.2	
	1.9nm,0.3s,baz=222,slow=21,SNR=7.0						
ASAR	**Alice Springs**	**7.77**	**326**	Pn	Pn	06 16 56.9	+1.4
	0.1nm,0.3s,baz=149,slow=13,SNR=3.8						
ASAR				Sn	Sn	06 18 23.6	-0.6
	0.1nm,0.3s,baz=151,slow=23,SNR=2.8						
WRA	**Warramunga Arr**	**10.96**	**339**	Pn	Pn	06 17 38.2	-0.9
	0.1nm,0.3s,baz=160,slow=13,SNR=7.2						

MEX 25 06:22:26.4±42.0**,24°.94N**×**99°.01W,h20**^{km}±999^{km}**,MD3.5,**
Central Mexico

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LNIG	**Linares**	**0.41**	**265**	eP	Pb	06 22 34.6	-0.5
	baz=244,slow=12						
LNIG				eS	Sb	06 22 39.1	-1.8

IDC ***25*** *06:28:14.7±1.1, 33°.65S×178°.63W, h0^{km}, mb4.1/3,*
mb1 4.4/5, mb1mx3.9/42, mbtmp4.3/5, ML4.2/2, MS3.7/3,
Ms1 3.7/3, ms1mx3.0/37, Error ellipse: s-maj=36.1km
s-min=30.0km az=114.0
ISCJB ***25*** *06:28:20.4±1.7, 33°.9S±0°.1×178°.9W±0°.3, h41^{km}, mb4.1/3,*
MS3.5/2, Error ellipse: s-maj=32.3km s-min=15.2km
az=19.3
ISC 25 06:28:20.6±1.2**,33°.7S**±0°.2×**178°.8W**±0°.2**,h41**^{km}**,n15,**
σ**1**^{s}**.81**/12**,mb4.1**/3**,South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera**	**5.59**	**215**	Pn	**Pn**	**06 29 40.8**	**-0.4**
	13nm,0.3s,baz=271,slow=2.9,SNR=32						
URZ				Sn	**Sn**	**06 30 44.2**	**-0.1**
	10nm,0.3s,baz=272,slow=21,SNR=8.0						
RPZ	**Rata Peaks**	**12.71**	**215**	Pn	**Pn**	**06 31 16.9**	**-1.9**
	0.7nm,0.3s,baz=131,slow=9.3,SNR=2.5						
RPZ				Sn	Sn	06 33 26.0	-13
	0.6nm,0.3s,baz=210,slow=14,SNR=4.7						
DZM	**Mont Dzumac**	**17.44**	**308**	eLR	LR	06 36 55.9	
	307nm,23.2s						
DZM	**Mont Dzumac**	**17.44**	**308**	LR	LR	06 38 25.3	
	comp=Z,381nm,18.5s,baz=193,slow=35						
PPT	**Papeete**	**30.74**	**66**	LR	LR	06 46 05.4	
	comp=Z,71nm,18.0s,baz=202,slow=35						
ASAR	**Alice Springs**	**42.36**	**271**	P	**P**	**06 36 12.3**	**+1.4**
	2.3nm,0.7s,baz=113,slow=7.2,SNR=20						
WRA	**Warramunga Arr**	**43.65**	**276**	P	**P**	**06 36 22.6**	**+1.2**
	2.4nm,0.5s,baz=117,slow=7.8,SNR=36						
QSPA	**South Pole Qui**	**56.38**	**180**	P	**P**	**06 37 59.0**	**+1.4**
	1.8nm,0.9s,baz=15,slow=12,SNR=4.2						
RPN	**Rapa Nui**	**59.26**	**104**	LR	LR	06 59 33.9	
	comp=Z,50nm,19.4s,baz=215,slow=32						
MKAR	**Makanchi Array**	**119.35**	**309**	PKP	**PKPdf**	**06 47 05.9**	**+0.7**
	0.3nm,0.5s,baz=74,slow=2.9,SNR=2.5						
KURBB	**Kurchatov Arra**	**122.85**	**312**	PKP	**PKPdf**	**06 47 10.6**	**-1.1**
	0.5nm,0.7s,baz=111,slow=2.0,SNR=4.7						
NB2	**NORSAR Subarra**	**151.92**	**350**	PKP	**PKPab**	**06 48 15.6**	**-4.1**
	comp=Z,0.3nm,0.5s,baz=12,slow=2.5						
HFS	**Hagfors**	**152.34**	**346**	PKPbc	**PKPbc**	**06 48 11.8**	**+0.5**
	comp=Z,0.9nm,0.7s,baz=79,slow=3.1,SNR=2.7						
BRTR	**Keskin Array B**	**153.41**	**292**	PKPbc	**PKPbc**	**06 48 14.8**	**+0.2**
	comp=Z,0.3nm,0.4s,baz=108,slow=4.9,SNR=2.9						
AKASG	**Malin Array Be**	**153.43**	**318**	PKPbc	**PKPbc**	**06 48 15.3**	**+1.3**
	comp=Z,0.3nm,0.3s,baz=45,slow=2.9,SNR=2.5						

ISK ***25*** *06:34:29.9, 38°.72N×43°.09E, h6^{km}, ML2.6/4*
DDA ***25*** *06:34:30.1, 38°.65N×43°.14E, h7^{km}, Ml2.6*
CSEM ***25*** *06:34:30.6±0.3, 38°.70N×43°.08E, h5^{km}, ML2.6, Error*
ellipse: s-maj=5.5km s-min=5.0km az=66.0
ISCJB ***25*** *06:34:31.0±0.5, 38°.72N±0°.03×43°.09E±0°.03, h8^{km}±5^{km},*
Error ellipse: s-maj=4.6km s-min=4.3km az=24.4
ISC 25 06:34:30.0±1.4**,38°.70N**±0°.02×**43°.09E**±0°.02**,h5**^{km}±12^{km}**,**
n26,σ**0**^{s}**.61**/42**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VANB	**Van**	**0.26**	**113**	PG	**Pb**	**06 34 36.9**	**-0.3**
VANB				SG	**Sb**	**06 34 41.8**	**-0.2**
VANB	**Van**	**0.26**	**113**	ePg	**Pb**	**06 34 36.9**	**-0.3**
VANB				eSg	**Sb**	**06 34 41.8**	**-0.2**
ADCV	**BITLIS_Adilcev**	**0.31**	**291**	iP	**Pb**	**06 34 37.6**	**-0.5**
ADCV				iS	**Sb**	**06 34 43.7**	**+0.1**
ADCV	**BITLIS_Adilcev**	**0.31**	**291**	P	**Pb**	**06 34 37.6**	**-0.5**
ADCV				S	**Sb**	**06 34 43.7**	**+0.1**
GEVA	**Gevas**	**0.39**	**184**	iP	**Pg**	**06 34 38.0**	**+0.5**
GEVA				iS	**Sb**	**06 34 45.7**	**-0.1**
GEVA	**Gevas**	**0.39**	**184**	P	**Pg**	**06 34 38.0**	**+0.5**
GEVA				S	**Sb**	**06 34 45.7**	**-0.1**
VMUR	**Van-Muradiye**	**0.48**	**52**	iP	**Pg**	**06 34 39.9**	**+0.7**
VMUR				iS	**Sb**	**06 34 47.0**	**-1.5**
VMUR	**Van-Muradiye**	**0.48**	**52**	P	**Pg**	**06 34 39.9**	**+0.7**
VMUR				S	**Sb**	**06 34 47.0**	**-1.5**
TUTA	**Tutak**	**0.74**	**343**	iP	**Pg**	**06 34 44.6**	**+0.5**
TUTA	**Tutak**	**0.74**	**343**	P	**Pg**	**06 34 44.7**	**+0.5**
CLDR	**Caldiran**	**0.78**	**55**	iP	**Pg**	**06 34 45.5**	**+0.5**
CLDR				iS	**Sb**	**06 34 56.7**	**-0.7**
CLDR	**Caldiran**	**0.78**	**55**	P	**Pg**	**06 34 45.5**	**+0.5**
CLDR				S	**Sb**	**06 34 56.7**	**-0.7**
GURO	**Guroymak-BITLI**	**0.84**	**260**	PG	**Pg**	**06 34 46.6**	**+0.4**
GURO				SG	**Sb**	**06 34 58.8**	**-0.1**
GURO	**Guroymak-BITLI**	**0.84**	**260**	ePg	**Pg**	**06 34 46.6**	**+0.4**
GURO				eSg	**Sb**	**06 34 58.8**	**-0.1**
AGRB	**Hanur-Agry**	**0.88**	**355**	PG	**Pg**	**06 34 46.8**	**-0.1**
AGRB	**Hanur-Agry**	**0.88**	**355**	ePg	**Pg**	**06 34 46.8**	**-0.1**
EKAR	**Karacoban**	**0.98**	**305**	iP	**Pn**	**06 34 51.0**	**+0.3**
EKAR	**Karacoban**	**0.98**	**305**	P	**Pn**	**06 34 51.0**	**+0.3**
SRTM	**Siirt_Merkez**	**1.16**	**233**	iP	**Pg**	**06 34 51.3**	**-0.9**
SRTM	**Siirt_Merkez**	**1.16**	**233**	P	**Pg**	**06 34 51.3**	**-0.9**
HAKT	**HAKKARI**	**1.24**	**157**	iP	**Pg**	**06 34 52.9**	**-0.8**
HAKT				iS	**Sn**	**06 35 12.4**	**+1.0**
HAKT	**HAKKARI**	**1.24**	**157**	P	**Pg**	**06 34 52.9**	**-0.8**
HAKT				S	**Sn**	**06 35 12.4**	**+1.0**
EATA	**Eleskirt**	**1.25**	**338**	iP	**Pg**	**06 34 53.8**	**-0.2**
EATA				iS	**Sn**	**06 35 12.3**	**+0.3**
EATA	**Eleskirt**	**1.25**	**338**	P	**Pg**	**06 34 53.8**	**-0.2**
EATA				S	**Sn**	**06 35 12.3**	**+0.3**
CUKT	**Cukurca**	**1.50**	**164**	PN	**Pb**	**06 34 58.4**	**-0.1**
CUKT	**Cukurca**	**1.50**	**164**	ePn	**Pb**	**06 34 58.4**	**-0.1**

ISCJB ***25*** *06:42:46.8±0.3, 41°.48N±0°.03×140°.68E±0°.06,*
h149^{km}±3^{km}, mb3.6/11, Error ellipse: s-maj=7.2km
s-min=5.4km az=14.7
JMA ***25*** *06:42:47.8±0.1, 41°.49N×140°.68E, h145^{km}±1^{km}, M3.0*
IDC ***25*** *06:42:48.0±1.4, 41°.62N×140°.62E, h141^{km}±11^{km},*
mb3.4/11, mb1 3.6/14, mb1mx3.4/61, mbtmp3.9/14, Error
ellipse: s-maj=17.7km s-min=11.8km az=146.0
ISC 25 06:42:47.8±0.7**,41°.48N**±0°.04×**140°.68E**±0°.05**,h146**^{km}±5^{km}**,**
n32,σ**0**^{s}**.79**/44**,mb3.7**/11**,Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSR	**Shiriuchi**	**0.20**	**285**	P	**Pn**	**06 43 07.4**	**-0.1**
JSR				eS	**Sn**	**06 43 22.2**	**-0.3**
JOT	**Ohata**	**0.30**	**109**	P	**Pn**	**06 43 08.0**	**+0.2**
JSI2	**Shiura 2**	**0.47**	**205**	P	**Pn**	**06 43 08.8**	**+0.3**
JSI2				eS	**Sn**	**06 43 24.3**	**+0.2**
JKB	**Kayabe**	**0.49**	**33**	P	**Pn**	**06 43 08.8**	**+0.3**
JKB				eS	**Sn**	**06 43 24.9**	**+0.5**
JYM2	**Yakumo 2**	**0.68**	**340**	P	**Pn**	**06 43 09.8**	**+0.2**
JYM2				eS	**Sn**	**06 43 26.2**	**-0.2**
JTM	**Tenmabayashi**	**0.75**	**157**	P	**Pn**	**06 43 10.4**	**+0.2**
JTM				eS	**Sn**	**06 43 27.0**	**-0.2**
JIW	**Iwasaki**	**1.02**	**210**	P	**Pn**	**06 43 12.6**	**+0.2**
JNB	**Noboribetsu**	**1.02**	**15**	P	**Pn**	**06 43 12.3**	**0.0**
JOSM	**Okushiri--Mats**	**1.08**	**304**	P	**Pn**	**06 43 12.5**	**-0.3**
JOSM				eS	**Sn**	**06 43 30.7**	**-1.2**
JHST	**Hiyamasetana**	**1.11**	**328**	P	**Pn**	**06 43 13.1**	**0.0**
JANG	**Nango**	**1.27**	**150**	P	**Pn**	**06 43 14.3**	**-0.4**
JANG				eS	**Sn**	**06 43 34.1**	**-1.2**
JEW	**Eniwo**	**1.48**	**23**	eS	**Sn**	**06 43 40.0**	**+1.0**
JNBK	**Urakawa-nobuka**	**1.75**	**62**	P	**Pn**	**06 43 19.7**	**0.0**
JNBK				eS	**Sn**	**06 43 44.0**	**-0.1**
JSK	**Shakotan**	**1.88**	**356**	P	**Pn**	**06 43 21.5**	**+0.3**
JOM	**Ohasama**	**2.06**	**167**	P	**Pn**	**06 43 23.3**	**-0.1**
JOM				eS	**Sn**	**06 43 49.8**	**-0.8**
JFR	**Furan**	**2.20**	**40**	P	**Pn**	**06 43 24.4**	**-0.7**
JCH	**Churui**	**2.30**	**60**	P	**Pn**	**06 43 26.4**	**+0.2**
JCH				eS	**Sn**	**06 43 54.2**	**-1.6**
JHR	**Hokuryu**	**2.39**	**19**	P	**Pn**	**06 43 28.3**	**+1.0**
JHR				eS	**Sn**	**06 43 58.8**	**+1.0**
ASAJ	**Asahikawa**	**2.99**	**28**	P	**Pn**	**06 43 34.8**	**0.0**
	17nm,0.3s,baz=224,slow=13,SNR=44						
ASAJ				S	**Sn**	**06 44 08.9**	**-2.3**
	3.9nm,0.3s,baz=66,slow=20,SNR=3.8						
MJAR	**Matsushiro Arr**	**5.29**	**202**	P	**Pn**	**06 44 06.0**	**+0.9**
	1.6nm,0.3s,baz=16,slow=16,SNR=9.9						
USRK	**Ussuriysk Ar.**	**6.94**	**296**	P	**Pn**	**06 44 27.6**	**+0.7**
	baz=99,slow=15						
SONM	**Songino Array**	**25.05**	**296**	P	**P**	**06 47 56.9**	**-1.7**
	0.5nm,0.4s,baz=106,slow=11,SNR=3.6						
ZALV	**Zalesovo Beam**	**38.60**	**308**	P	**P**	**06 49 55.9**	**-0.4**
	2.5nm,0.5s,baz=96,slow=8.3,SNR=7.6						
MKAR	**Makanchi Array**	**41.40**	**298**	P	**P**	**06 50 19.2**	**-0.4**
	1.3nm,0.5s,baz=85,slow=9.7,SNR=19						
KURBB	**Kurchatov Arra**	**42.92**	**304**	P	**P**	**06 50 31.3**	**-0.5**
	5.3nm,0.7s,baz=78,slow=8.8,SNR=23						
ILAR	**Eielson Array**	**46.10**	**35**	P	**P**	**06 50 57.1**	**+0.3**
	1.4nm,0.7s,baz=276,slow=7.0,SNR=17						
BVAR	**Borovoye Array**	**47.24**	**309**	P	**P**	**06 51 05.7**	**-0.1**
	1.4nm,0.4s,baz=62,slow=8.3,SNR=8.2						
INK	**Inuvik**	**50.73**	**29**	P	**P**	**06 51 32.5**	**+0.4**
	0.8nm,0.3s,baz=290,slow=6.5,SNR=8.6						
YKA	**Yellowknife Ar**	**60.28**	**31**	P	**P**	**06 52 39.7**	**-0.7**
	0.3nm,0.6s,baz=295,slow=6.8,SNR=3.0						
WRA	**Warramunga Arr**	**61.39**	**187**	P	**P**	**06 52 50.1**	**+1.7**
	0.7nm,1.2s,baz=5.3,slow=6.9,SNR=5.8						
PDAR	**Pinedale Array**	**74.97**	**46**	P	**P**	**06 54 13.4**	**+0.2**
	0.5nm,0.6s,baz=275,slow=2.5,SNR=6.3						
TXAR	**Lajitas Array**	**87.85**	**52**	P	**P**	**06 55 21.4**	**+0.5**
	0.1nm,0.6s,baz=240,slow=1.8,SNR=3.1						

MEX 25 06:48:54.6±0.5**,15°.90N**×**97°.32W,h8**^{km}±6^{km}**,MD3.8,Near**
coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.92**	**303**	eP	Pg	06 49 09.8	-2.5
PNIG				eS	Sg	06 49 22.0	-2.3
HUIG	**Huatulco**	**1.17**	**96**	eP	Pg	06 49 13.6	-3.6
HUIG				eS	Sg	06 49 28.3	-4.0
VHO	**Vista Hermosa**	**1.30**	**26**	eP	Pn	06 49 15.3	-4.0
VHO				eS	Sb	06 49 31.8	-4.6
TLIG	**Tlapa**	**2.04**	**324**	eP	Pn	06 49 26.1	-3.4
TLIG				iS	Sn	06 49 50.5	-4.8

ISCJB ***25*** *07:19:03.9±0.4, 37°.26N±0°.03×28°.22E±0°.04, h0^{km}, Error*
ellipse: s-maj=5.0km s-min=3.2km az=44.2
DDA ***25*** *07:19:04.0, 37°.25N×28°.16E, h7^{km}, Ml2.5, Suspected*
Mining explosion.
ISK ***25*** *07:19:03.3, 37°.25N×28°.22E, h7^{km}, ML2.3/8*
CSEM ***25*** *07:19:04.0±0.2, 37°.24N×28°.21E, h1^{km}, ML2.3, Error*
ellipse: s-maj=4.4km s-min=3.0km az=43.0, Suspected
Mining explosion.
ISC 25 07:19:04.3±0.8**,37°.24N**±0°.02×**28°.21E**±0°.02**,h0**^{km}**,n45,**
σ**0**^{s}**.77**/58**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YER	**Yerkesik**	**0.12**	**151**	PG	**Pg**	**07 19 06.5**	**-0.1**
YER				SG	**Sg**	**07 19 09.1**	**+0.8**
YER	**Yerkesik**	**0.12**	**151**	iPg	**Pg**	**07 19 06.5**	**-0.1**
YER				eSg	**Sg**	**07 19 09.1**	**+0.8**
MLSB	**Milas**	**0.35**	**279**	PG	**Pg**	**07 19 10.7**	**-0.2**
MLSB				SG	**Sg**	**07 19 16.4**	**+1.0**
MLSB	**Milas**	**0.35**	**279**	ePg	**Pg**	**07 19 10.7**	**-0.2**
MLSB				eSg	**Sg**	**07 19 16.4**	**+1.0**
TURN	**Turunc**	**0.49**	**139**	PG	**Pg**	**07 19 12.8**	**-0.8**
TURN	**Turunc**	**0.49**	**139**	iP	**Pg**	**07 19 12.5**	**-1.1**
TURN	**Turunc**	**0.49**	**139**	P	**Pg**	**07 19 12.5**	**-1.1**
TURN	**Turunc**	**0.49**	**139**	ePg	**Pg**	**07 19 12.8**	**-0.8**
AYDN	**Tasoluk**	**0.49**	**328**	iP	**Pg**	**07 19 13.5**	**-0.2**
AYDN				iS	**Sg**	**07 19 20.9**	**+0.8**
AYDN	**Tasoluk**	**0.49**	**328**	P	**Pg**	**07 19 13.5**	**-0.2**
AYDN				S	**Sg**	**07 19 20.9**	**+0.8**
DALY	**Dalyan (Mu˜la**	**0.56**	**140**	PG	**Pg**	**07 19 14.8**	**-0.1**
DALY	**Dalyan (Mu˜la**	**0.56**	**140**	iP	**Pg**	**07 19 15.1**	**+0.2**
DALY				iS	**Sb**	**07 19 25.1**	**-0.2**
DALY	**Dalyan (Mu˜la**	**0.56**	**140**	ePg	**Pg**	**07 19 14.8**	**-0.1**
DALY	**Dalyan (Mu˜la**	**0.56**	**140**	P	**Pg**	**07 19 15.1**	**+0.2**
DALY				S	**Sb**	**07 19 25.1**	**-0.2**
TAVA	**DENIZLI_Tavas**	**0.60**	**68**	iP	**Pg**	**07 19 15.9**	**0.0**
TAVA	**DENIZLI_Tavas**	**0.60**	**68**	P	**Pg**	**07 19 15.9**	**0.0**
DAT	**Datca**	**0.72**	**225**	PG	**Pg**	**07 19 17.8**	**-0.2**
DAT	**Datca**	**0.72**	**225**	iP	**Pg**	**07 19 17.9**	**-0.2**
DAT				iS	**Sn**	**07 19 31.9**	**-1.7**
DAT	**Datca**	**0.72**	**225**	P	**Pg**	**07 19 17.9**	**-0.2**
DAT				S	**Sn**	**07 19 31.9**	**-1.7**
BODT	**Bodrum**	**0.74**	**256**	PG	**Pg**	**07 19 17.8**	**-0.6**
BODT	**Bodrum**	**0.74**	**256**	ePg	**Pg**	**07 19 17.8**	**-0.6**
AYDB	**Zeytinkoy-Aydi**	**0.74**	**340**	PG	**Pg**	**07 19 18.2**	**-0.4**
AYDB	**Zeytinkoy-Aydi**	**0.74**	**340**	ePg	**Pg**	**07 19 18.2**	**-0.4**
DNZL	**Cakiroluk**	**0.80**	**56**	iP	**Pb**	**07 19 20.7**	**-0.5**
DNZL	**Cakiroluk**	**0.80**	**56**	P	**Pb**	**07 19 20.7**	**-0.5**
GCAM	**G?zelcaml?**	**0.90**	**301**	PG	**Pg**	**07 19 20.9**	**-0.6**
GCAM	**G?zelcaml?**	**0.90**	**301**	iP	**Pb**	**07 19 23.2**	**+0.5**
GCAM				iS	**Sb**	**07 19 36.2**	**+1.0**
GCAM	**G?zelcaml?**	**0.90**	**301**	ePg	**Pg**	**07 19 20.9**	**-0.6**
GCAM	**G?zelcaml?**	**0.90**	**301**	P	**Pb**	**07 19 23.2**	**+0.5**
GCAM				S	**Sb**	**07 19 36.2**	**+1.0**
FETY	**Fethiye**	**0.93**	**131**	PG	**Pg**	**07 19 21.4**	**-0.7**
FETY	**Fethiye**	**0.93**	**131**	ePg	**Pg**	**07 19 21.4**	**-0.7**
FETY	**Fethiye**	**0.93**	**131**	P	**Pn**	**07 19 25.8**	**+1.2**
ARG	**Arkhangelos**	**1.03**	**184**	PG	**Pg**	**07 19 23.7**	**-0.3**
ARG	**Arkhangelos**	**1.03**	**184**	ePg	**Pg**	**07 19 23.7**	**-0.3**
GOLH	**Golhisar**	**1.08**	**90**	iP	**Pg**	**07 19 24.6**	**-0.4**
GOLH				iS	**Sn**	**07 19 44.0**	**+1.5**
GOLH	**Golhisar**	**1.08**	**90**	P	**Pg**	**07 19 24.6**	**-0.4**
MANT	**Manisa**	**1.28**	**12**	iP	**Pg**	**07 19 28.3**	**-0.4**
MANT	**Manisa**	**1.28**	**12**	P	**Pg**	**07 19 28.3**	**-0.4**
KULA	**Kula-Manisa**	**1.32**	**16**	PN	**Pg**	**07 19 28.5**	**-1.1**
KULA	**Kula-Manisa**	**1.32**	**16**	ePn	**Pg**	**07 19 28.5**	**-1.1**
DGB	**˜zmir**	**1.32**	**308**	iP	**Pg**	**07 19 28.2**	**-1.5**
AKAS	**Kas**	**1.51**	**132**	PN	**Pn**	**07 19 31.6**	**-1.1**
AKAS	**Kas**	**1.51**	**132**	iP	**Pb**	**07 19 33.8**	**+0.6**
AKAS	**Kas**	**1.51**	**132**	ePn	**Pn**	**07 19 31.6**	**-1.1**
AKAS	**Kas**	**1.51**	**132**	P	**Pb**	**07 19 33.8**	**+0.6**

IDC 25 07:42:28.1±1.5**,6°.12S**×**130°.24E,h0**^{km}**,mb4.1**/3**,**
mb1 4.1/5**,mb1mx3.7**/44**,mbtmp4.0**/5**,ML3.7**/2**,Error**
ellipse: s-maj=132.3km s-min=22.3km az=67.0,Banda
Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**14.30**	**164**	Pn	Pn	07 45 54.2	+2.1
	0.2nm,0.3s,baz=346,slow=13,SNR=14						
WRA				Sn	Sn	07 48 22.1	-10
	1.2nm,0.3s,baz=329,slow=21,SNR=8.2						
ASAR	**Alice Springs**	**17.80**	**169**	P	P	07 46 39.2	+0.9
	0.8nm,0.3s,baz=348,slow=10,SNR=27						
ASAR				S	Sn	07 49 45.3	-11
	0.1nm,0.3s,baz=358,slow=28,SNR=4.5						
STKA	**Stephens Creek**	**27.74**	**159**	P	P	07 48 16.8	-1.7
	2.8nm,0.8s,baz=334,slow=7.1,SNR=3.6						
MKAR	**Makanchi Array**	**67.63**	**327**	P	P	07 53 27.4	+0.5
	1.6nm,0.5s,baz=129,slow=7.8,SNR=16						
KURBB	**Kurchatov Arra**	**71.89**	**328**	P	P	07 53 52.8	-0.3
	0.4nm,0.4s,baz=131,slow=5.2,SNR=5.5						

MEX 25 07:50:47.1±0.4**,15°.82N**×**97°.29W,h19**^{km}±150^{km}**,MD3.5,**
Near coast of Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.99**	**305**	eP	Pb	07 51 02.3	-3.3
PNIG				eS	Sb	07 51 14.7	-3.5
HUIG	**Huatulco**	**1.14**	**92**	iP	Pn	07 51 05.1	-2.9
HUIG				eS	Sb	07 51 18.4	-4.2
VHO	**Vista Hermosa**	**1.36**	**23**	eP	Pn	07 51 07.9	-3.3
VHO				eS	Sn	07 51 23.9	-4.9

SOME ***25*** *08:14:50.2, 41°.03N×71°.07E, h5^{km}*
KRNET ***25*** *08:14:54.8±0.1, 41°.20N×71°.37E, h8^{km}, mb2.3*
NNC ***25*** *08:14:55.7±9.7, 41°.39N×70°.90E, h0^{km}, mb2.9, mpv2.7,*
Error ellipse: s-maj=87.9km s-min=43.1km az=11.0
ISC 25 08:14:53.8±1.9**,41°.24N**±0°.05×**71°.16E**±0°.05**,h5**^{km}±14^{km}**,**
n12,σ**1**^{s}**.29**/24**,10C-6D,Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARK	**Arkit**	**0.82**	**47**	⇑iP	**Pg**	**08 15 09.3**	**-0.3**
	baz=38						
ARK				⇑iS	**Sg**	**08 15 20.4**	**+0.1**
	baz=38						
BTK	**Batken**	**1.21**	**193**	⇑eP	**Pn**	**08 15 18.0**	**+0.5**
	baz=1.0						
BTK				⇑iS	**Sn**	**08 15 35.2**	**+0.9**
	baz=1.0						
IUG	**Iuzhnay**	**1.24**	**317**	eP	**Pn**	**08 15 17.1**	**-0.9**
	18nm,0.1s						
IUG				eS	**Sn**	**08 15 37.0**	**+1.9**
	30nm,0.3s						
ARSB	**Arslanbob**	**1.38**	**86**	⇓eP	**Pn**	**08 15 17.9**	**-2.0**
	baz=83						
ARSB				⇓iS	**Sb**	**08 15 35.3**	**-2.8**
	baz=83						
MNAS	**Manas**	**1.60**	**38**	⇓Pn	**Pn**	**08 15 23.0**	**0.0**
	2.1nm,0.4s						
MNAS				⇓Sn	**Sg**	**08 15 46.2**	**+0.9**
	2.2nm,0.3s						
MNAS	**Manas**	**1.60**	**38**	⇓iP	**Pn**	**08 15 23.0**	**0.0**
	baz=33						
MNAS				⇓iS	**Sb**	**08 15 45.3**	**+0.7**
	baz=33						
KK31	**Karatay Array**	**1.92**	**346**	Pn	**Pn**	**08 15 27.0**	**-0.3**
	4.4nm,0.3s,baz=171,slow=17,SNR=56						
KK31				Sn	**Sb**	**08 15 54.1**	**+0.4**
	4.5nm,0.3s,baz=174,slow=26,SNR=11						
BRLS	**Borolday**	**2.04**	**332**	eP	**Pn**	**08 15 27.2**	**-1.7**
	8.3nm,0.3s						
BRLS				eS	**Sn**	**08 15 53.2**	**-1.6**
	3.3nm,0.4s						
AML	**Almayashu**	**2.10**	**64**	⇑iP	**Pn**	**08 15 31.7**	**+1.7**
	baz=61						
AML				⇑iS	**Sg**	**08 16 00.8**	**-0.4**
	baz=61						
MRKS	**Merke**	**2.15**	**45**	eP	**Pb**	**08 15 33.4**	**+0.1**
	6.3nm,0.3s						
MRKS				eS	**Sg**	**08 16 04.7**	**+1.7**

Code	Station Name	Δ°	AZ°	Op	ISC	Time	Res
	7.1nm,0.3s						
EKS2	**Erkin-Say**	2.42	53	⇑*i*P	Pn	08 15 35.6	+1.5
	baz=50						
EKS2				⇑*i*S	Sb	08 16 07.6	-0.4
	baz=50						
AAK	**Ala-Archa**	2.85	60	⇑Pn	Pb	08 15 45.9	+0.5
	1.3nm,0.3s						
AAK				⇑Sn	Sg	08 16 24.7	-0.7
	2.8nm,0.7s						

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*JMA **25** 08:17:01.8±0.1, 24°.36N×121°.98E, h0^{km}, M2.8*

*ISCJB **25** 08:17:02.6±0.4, 24°.35N±0°.02×121°.98E±0°.02, h8^{km}±2^{km}, Error ellipse: s-maj=2.8km s-min=2.5km az=135.6*

*TAP **25** 08:17:02.6, 24°.38N×121°.96E, h13^{km}, ML3.0, B*

ISC 25 08:17:02.7±0.8**, 24°.36N**±0°.02×**121°.97E**±0°.02**, h15**^{km}±6^{km}**, n58,** σ0^{s}.**48**/91**, 8D, Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENAH	**Nanao**	0.17	301	P	Pg	08 17 06.6	-0.3
	baz=297						
ENAH				S	Sg	08 17 09.4	-0.3
	baz=297						
NANB	**Nanao**	0.21	288	⇓P	Pg	08 17 07.3	-0.2
	baz=291						
NANB				S	Sg	08 17 10.6	-0.2
	baz=291						
ENA	**Nanau**	0.22	288	⇓*i*P	Pg	08 17 07.3	-0.3
	baz=291						
ENA				S	Sg	08 17 10.9	-0.1
	baz=291						
EOS1	**EOS1**	0.24	37	P	Pg	08 17 08.2	+0.3
	baz=30						
EOS1				S	Sg	08 17 12.4	+1.0
	baz=30						
TWC	**Suao**	0.27	336	⇓*i*P	Pg	08 17 08.3	-0.2
	baz=337						
TWC				*i* S	Sg	08 17 11.6	-0.9
	baz=337						
NACB	**Ninganchiao**	0.39	242	⇓*i*P	Pg	08 17 10.3	-0.3
	baz=241						
NACB				S	Sg	08 17 15.7	-0.3
	baz=241						
TWD	**Chiawan**	0.44	231	P	Pg	08 17 11.2	-0.3
	baz=237						
TWD				*e*S	Sg	08 17 17.1	-0.4
	baz=237						
TWE	**Neicheng**	0.45	322	*e*P	Pb	08 17 11.7	-0.7
	baz=323						
TWE				*e*S	Sg	08 17 17.1	-0.8
	baz=323						
ENTT	**Nioudou**	0.46	307	⇓*i*P	Pb	08 17 11.9	-0.7
	baz=307						
ENTT				S	Sg	08 17 18.2	0.0
	baz=307						
EGS		0.48	356	P	Pb	08 17 12.7	-0.3
	baz=350						
EGS				*e*S	Sb	08 17 20.0	+0.1
	baz=350						
NTC	**Toucheng**	0.51	345	*e*P	Pb	08 17 13.1	-0.3
	baz=355						
NNSB	**Datong**	0.54	277	⇓P	Pg	08 17 13.3	-0.1
	baz=285						
NNSB				S	Sg	08 17 20.4	-0.3
	baz=285						
NNS	**Nan Shan**	0.55	278	P	Pg	08 17 13.5	-0.1
	baz=278						
NNS				S	Sg	08 17 20.8	-0.3
	baz=278						
ENLB	**Shoufeng**	0.57	217	*e*P	Pn	08 17 16.9	+0.7
	baz=225						
NWLT	**Wulai**	0.60	314	*e*P	Pb	08 17 14.5	-0.3
	baz=314						
TIPB	**Shuangxi**	0.62	348	P	Pb	08 17 15.1	-0.2
	baz=347						
TIPB				S	Sb	08 17 23.4	-0.5
	baz=347						
YHNB	**Yeheng**	0.62	300	⇓P	Pb	08 17 15.2	-0.2
	baz=304						
YHNB				S	Sg	08 17 22.9	-0.4
	baz=304						
NSK	**Sanguang**	0.64	299	*e*P	Pb	08 17 15.2	-0.4
	baz=304						
NSK				*e*S	Sg	08 17 23.4	-0.4
	baz=304						
WHF	**Hehuan Shan**	0.68	252	⇓*i*P	Pg	08 17 15.8	-0.3
	baz=260						
WHF				S	Sg	08 17 25.1	-0.1
	baz=260						
TWA	**Mucha**	0.71	330	*e*P	Pb	08 17 17.1	+0.3
	baz=330						
TWA				S	Sb	08 17 26.1	-0.3
	baz=330						
NWF	**Wu-fen Shan**	0.73	346	P	Pb	08 17 17.6	+0.4
	baz=335						
NWF				S	Sb	08 17 27.0	0.0
	baz=335						
WFSB	**Wu-fen Shan**	0.73	346	P	Pb	08 17 17.6	+0.5
	baz=335						
WFSB				S	Sb	08 17 27.0	+0.1
	baz=335						
ESL	**Shilin**	0.73	222	*e*P	Pg	08 17 16.6	-0.5
	baz=229						
TDCB	**Techi**	0.75	262	P	Pb	08 17 17.6	0.0
	baz=262						
TDCB				S	Sg	08 17 27.0	-0.3
	baz=262						
TATO	**Taipei**	0.75	324	P	Pb	08 17 17.8	+0.2
	baz=314						
TATO				S	Sg	08 17 27.1	-0.3
	baz=314						
CHGB	**Renai**	0.79	248	P	Pb	08 17 18.0	-0.2
	baz=248						
CHGB				S	Sg	08 17 28.5	0.0
	baz=248						
TAP1	**Taipei**	0.79	329	*e*P	Pn	08 17 19.7	+0.4
	baz=316						
EGFH	**Guangfu**	0.85	216	*e*P	Pb	08 17 19.4	+0.2
	baz=229						
YM07	**YM07**	0.87	339	*e*P	Pb	08 17 20.2	+0.6
	baz=346						
YM10	**YM10**	0.88	335	*e*P	Pn	08 17 20.8	+0.2
	baz=334						
YM10				*e*S	Sb	08 17 31.1	-0.1
	baz=334						
YM11	**YM11**	0.88	336	*e*P	Pn	08 17 21.7	+1.1
	baz=335						
YM11				*e*S	Sb	08 17 32.2	+0.9
	baz=335						
YM04	**YM04**	0.88	333	*e*P	Pn	08 17 20.7	0.0
	baz=333						
YM04				*e*S	Sb	08 17 31.4	0.0
	baz=333						
JYNG	**Yonagunijimaku**	0.89	84	P	Pg	08 17 19.7	-0.3
JYNG				S	Sg	08 17 30.9	-0.8
TWS1	**Kuangyinshan**	0.89	326	*e*P	Pn	08 17 21.3	+0.6
	baz=315						
YM08	**YM08**	0.89	337	P	Pb	08 17 20.5	+0.5
	baz=325						
YM03	**YM03**	0.91	334	*e*P	Pb	08 17 20.6	+0.5
	baz=335						
LIOB	**Emei**	0.92	288	*e*P	Pb	08 17 21.0	+0.7
	baz=295						
LIOB				S	Sb	08 17 32.9	+0.5
	baz=295						
NSTT	**Nanjuang**	0.93	287	*e*P	Pb	08 17 20.9	+0.5
	baz=288						
NSTT				*e*S	Sg	08 17 32.0	-0.8
	baz=288						
NTST	**Danshui**	0.93	329	*e*P	Pn	08 17 21.4	+0.1
	baz=330						
YOJ	**Yonaguni jima**	0.95	84	P	Pg	08 17 20.5	-0.6
	baz=70						
YOJ				*e*S	Sb	08 17 34.0	+0.6
	baz=70						
YOJ	**Yonaguni jima**	0.95	84	P	Pg	08 17 20.6	-0.6
YOJ				*e*S	Sg	08 17 33.3	-0.3
TWY	**Chenhua**	0.97	340	*e*P	Pn	08 17 22.2	+0.4
	baz=341						
EHY	**Hungye**	1.04	215	*e*P	Pg	08 17 22.2	-0.6
	baz=213						
SSLB	**Suanglung**	1.09	239	P	Pb	08 17 23.5	+0.2
	baz=247						
SSLB				S	Sb	08 17 37.9	+0.5
	baz=247						
TYC	**Yuchr**	1.12	246	*e*P	Pg	08 17 23.7	-0.5
	baz=253						
YULB	**Yu-li**	1.15	213	*e*P	Pg	08 17 24.0	-0.8
	baz=211						
TWF1	**Yuli**	1.18	212	*e*P	Pg	08 17 24.7	-0.7
	baz=227						
YUS	**Yu-Shan**	1.27	227	*e*P	Pn	08 17 27.1	+0.7
	baz=226						
FULB	**Fuli**	1.31	208	*e*P	Pb	08 17 27.4	+0.3
	baz=190						
ALS	**Alishan**	1.36	232	*e*P	Pg	08 17 29.2	+0.2
	baz=232						
IRIF	**Iriomote-Funau**	1.60	91	P	Pn	08 17 31.1	+0.6
WTP	**Ta-pu**	1.67	229	*e*P	Pb	08 17 33.2	+0.1
	baz=228						
TWK	**Hsinying**	1.74	232	*e*P	Pg	08 17 36.0	-0.2
	baz=231						
CHN1	**Nanshi**	1.77	229	*e*P	Pg	08 17 36.2	-0.4
	baz=229						
JKRS	**Kuro-shima**	1.86	93	P	Pn	08 17 34.1	+0.1
JKRS				S	Sn	08 17 57.7	+0.4
JIJ	**Ishigaki jima**	1.98	89	P	Pn	08 17 35.2	-0.5
JIJ				*e*S	Sn	08 17 59.6	-0.6
JISG	**Ishigakijimahi**	2.14	83	P	Pn	08 17 37.2	-0.7
JTJ	**Tarama**	2.50	83	P	Pn	08 17 43.9	+1.1

MEX 25 08:17:38.2±0.7**, 15°.85N**×**97°.31W, h13**^{km}±8^{km}**, MD3.7, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	0.96	305	*e*P	Pb	08 17 53.5	-3.2
PNIG				*e*S	Sg	08 18 05.6	-3.7
HUIG	**Huatulco**	1.16	94	*e*P	Pb	08 17 56.0	-4.1
HUIG				*e*S	Sb	08 18 10.8	-4.2
VHO	**Vista Hermosa**	1.34	24	*e*P	Pn	08 17 59.1	-3.6
VHO				*e*S	Sb	08 18 15.0	-5.4

IDC 25 08:20:20.8±3.3**, 53°.61N**×**87°.88E, h0**^{km}**, mb1 3.1**/2**, mb1mx2.9**/73**, mbtmp3.1**/2**, ML2.9**/2**, Error ellipse: s-maj=34.2km s-min=21.3km az=79.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	1.84	282	*i*		08 32 39.1	
	baz=102,slow=337,SNR=2.1						
ZALV	**Zalesovo Beam**	1.84	282	Pn	Pn	08 20 52.8	-0.9
	2.9nm,0.3s,baz=99,slow=16,SNR=3.9						
ZALV				Sn	Sb	08 21 19.1	+0.2
	4.0nm,0.3s,baz=98,slow=27,SNR=9.1						
KURBB	**Kurchatov Arra**	6.49	246	Pn	Pn	08 21 57.7	+0.3
	0.2nm,0.3s,baz=61,slow=14,SNR=12						
KURBB				Lg	Lg	08 23 47.9	
	0.0nm,0.3s,baz=63,slow=32,SNR=4.9						
MKAR	**Makanchi Array**	7.71	210	Pn	Pn	08 22 15.7	+1.5
	0.2nm,0.3s,baz=26,slow=13,SNR=7.5						
MKAR				Lg	Lg	08 24 26.3	
	0.0nm,0.3s,baz=26,slow=27,SNR=2.5						

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*KRAR **25** 08:26:15.0±0.1, 53°.60N×87°.67E, M2.3, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

IDC 25 08:26:17.3±3.0**, 53°.51N**×**87°.64E, h0**^{km}**, mb1 3.2**/2**, mb1mx2.9**/71**, mbtmp3.2**/2**, ML3.0**/2**, 4C, Error ellipse: s-maj=31.8km s-min=17.0km az=86.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	**ZALESOVO INFRA**	1.73	286	*i*		08 37 30.0	
	baz=107,slow=337,SNR=4.6						
ZALV	**Zalesovo Beam**	1.73	286	Pn	Pn	08 26 47.5	-1.2
	5.6nm,0.3s,baz=103,slow=19,SNR=7.3						
ZALV				Sn	Sg	08 27 13.2	+0.2
	6.6nm,0.3s,baz=102,slow=25,SNR=9.3						
KURK	**Kurchatov**	6.22	247	⇑Pn	Pg	08 28 13.2	-3.2
	1.4nm,0.8s						
KURK				⇑Sn	Sn	08 28 39.4	-23
	3.0nm,0.5s						
KURBB	**Kurchatov Arra**	6.32	246	Pn	Pn	08 27 52.1	+0.6
	0.2nm,0.3s,baz=64,slow=14,SNR=12						
KURBB				Lg	Lg	08 29 37.6	
	baz=64,slow=30,SNR=3.6						
KURBB	**Kurchatov Arra**	6.32	246	⇑Pn	Pb	08 28 13.1	+5.1
	1.5nm,0.4s,baz=300,slow=16						
KURBB				⇑Sn	Sn	08 28 39.2	-25
	5.1nm,0.5s						
MKAR	**Makanchi Array**	7.55	209	Pn	Pn	08 28 09.6	+1.1
	0.3nm,0.3s,baz=28,slow=13,SNR=11						
MKAR				Sn	Sn	08 29 36.1	+1.4
	0.2nm,0.3s,baz=36,slow=27,SNR=4.8						
MKAR				Lg	Lg	08 30 13.4	
	0.1nm,0.3s,baz=36,slow=20,SNR=3.9						

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*IDC **25** 08:39:26.4±0.4, 11°.70N×125°.39E, h0^{km}, mb4.7/35, mb1 4.7/35, mb1mx4.6/52, mbtmp4.7/35, MS3.7/29, Ms1 3.7/29, ms1mx3.6/51, Error ellipse: s-maj=16.2km s-min=10.0km az=72.0*

*BJI **25** 08:39:31.5, 11°.57N×125°.72E, h68^{km}, mb4.9/51, mB4.8/31, Ms4.3/20, Ms7 4.2/22*

*MAN **25** 08:39:32.0, 11°.87N×125°.54E, h22^{km}, mb5.5, ML4.5, MS4.8*

*ISCJB **25** 08:39:33.1±0.4, 11°.77N±0°.02×125°.53E±0°.03, h62^{km}±3^{km}, mb4.7/134, Error ellipse: s-maj=5.1km s-min=3.9km az=159.7*

*MOS **25** 08:39:33.9±0.9, 11°.80N×125°.37E, h65^{km}, mb5.3/42, Error ellipse: s-maj=11.0km s-min=5.5km az=122.0*

*NEIC **25** 08:39:35.5±0.5, 11°.72N×125°.49E, h71^{km}±4^{km}, mb4.7/55, Error ellipse: s-maj=4.2km s-min=3.2km az=87.0*

NEIC Felt [IV PIVS] at Can-Avid, San Julian, Sulat and Taft; [III PIVS] at Borongan, Llorente and Maydolong. Also felt at Calbayog. Felt [III PIVS] at Tacloban, Leyte.

*DJA **25** 08:39:52.0±1.8, 12°N±8°×12°5E±1°0, h208^{km}±14^{km}, M4.6/12, mb4.6/12, mB5.2/3, Mw(mB)4.6/3*

ISC 25 08:39:33.5±0.7**, 11°.79N**±0°.04×**125°.55E**±0°.05**, h51**^{km}±6^{km}**, n332,** σ1^{s}.**26**/335**, mb4.7**/134**, MS3.7**/30**, 36C-7D, Samar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	**Borongan**	0.22	210	*e*P	Pn	08 39 39.7	-2.4
BESP				*e*S	Sn	08 39 45.6	-2.5
PLP	**Palo**	0.83	222	⇑*i*P	Pn	08 39 47.4	-1.6
PLP				*i* S	Sn	08 40 00.2	-0.3
CNP	**Catarman**	1.12	310	*e*P	Pn	08 39 51.5	-1.4
CNP				*e*S	Sn	08 40 07.2	-0.1
OCLP	**Ormoc**	1.18	232	*e*P	Pn	08 39 53.7	+0.1
OCLP				*e*S	Sn	08 40 17.9	+9.3
MSLP	**Maasin**	1.78	202	*e*P	Pn	08 40 03.2	+1.3
MSLP				*e*S	Sn	08 40 30.2	+6.9
SCPH	**Surigao**	2.00	182	*i* P	Pn	08 40 05.4	+0.6
SCPH				*i* S	Sn	08 40 17.6	-11
LLP	**Lapu-Lapu**	2.13	227	⇓*e*P	Pn	08 40 07.1	+0.4
LLP				*e*S	Sn	08 40 34.7	+2.6
PVCP	**Virac**	2.25	323	*e*P	Pn	08 40 06.5	-1.8
PVCP				*e*S	Sn	08 40 44.9	+10
TBP	**Tagbilaran**	2.66	219	*e*P	Pn	08 40 14.8	+0.9
RCP	**Roxas**	2.76	266	⇑*e*P	Pn	08 40 16.1	+0.8
RCP				*e*S	Sn	08 40 48.8	+1.4
BUTP	**Butuan**	2.80	179	*e*P	Pn	08 40 18.1	+2.2
SNPH	**Sibulan**	3.33	223	*i* P	Pn	08 40 23.7	+0.5
CGP	**Cagayan de Oro**	3.42	194	⇑*e*P	Pn	08 40 23.2	-1.2
CGP				*e*S	Sn	08 41 08.0	+4.4
OTRP	**Odiongan**	3.50	280	*e*P	Pn	08 40 25.8	+0.4
BIPH	**Bislig**	3.67	167	⇑*e*P	Pn	08 40 26.9	-0.8
BIPH				*e*S	Sn	08 41 20.5	+11
JAP	**San Jose, Anti**	3.68	254	⇓*e*P	Pn	08 40 32.4	+4.4
JAP				*e*S	Sn	08 41 28.7	+19
GQP	**Guinayangan**	3.69	305	⇑*e*P	Pn	08 40 38.5	+11
GQP				*e*S	Sn	08 41 19.4	+9.2
BUKP	**Musuan**	3.92	187	*e*P	Pn	08 40 34.0	+2.8
BUKP				*e*S	Sn	08 41 28.4	+12
BOAC	**Boac**	3.98	295	*e*P	Pn	08 40 32.7	+0.7
SJMP	**San Jose**	4.38	279	*e*P	Pn	08 40 39.0	+1.5
PAGZ	**Pagadian**	4.46	209	*e*P	Pn	08 40 41.4	+2.7
DAV	**Davao City (W)**	4.69	180	Pg	Pn	08 40 51.5	+10
	48nm,0.3s,baz=210,slow=14,SNR=2.1						
DAV				Lg	Lg	08 42 01.0	
	84nm,0.3s,baz=217,slow=20,SNR=2.9						
DAV				LR	LR	08 42 59.6	
	comp=Z,2µm,18.9s,baz=6.5,slow=46						
DAV	**Davao City (W)**	4.69	180	*e*Pn	Pn	08 40 44.0	+2.2
DAV				Pg		08 40 51.5	
DAV				Lg	Lg	08 42 01.0	
MATI	**Mati**	4.86	172	*e*P	Pn	08 40 47.0	+2.9
TGY	**Tagaytay City**	5.05	298	Pn	Pn	08 40 47.3	+0.6
	41nm,0.3s,baz=182,slow=15,SNR=2.7						
TGY				LR	LR	08 42 59.6	
	comp=Z,1µm,18.5s,baz=44,slow=43						
BUSP	**Coron**	5.24	273	*e*P	Pn	08 40 50.0	+0.7
LUBP	**Lubang**	5.52	291	*e*P	Pn	08 40 55.2	+2.1
DDMP	**Don Marcelino,**	5.65	178	*e*P	Pn	08 40 55.7	+0.7
BOLP	**Bolinao**	7.12	311	*e*P	Pn	08 41 16.5	+1.4
MYLDM	**Lahad Datu**	9.57	227	*e*Pn	Pn	08 41 50.7	+1.9
TWG	**Pinlang**	11.77	339	*e*Pn	Pn	08 42 21.2	+2.4
MPSI	**Mapaga**	12.69	207	P	P	08 42 47.0	+5.8
SSLB	**Suanglung**	12.71	341	*e*Pn	Pn	08 42 34.2	+2.6
NACB	**Ninganchiao**	12.88	344	*e*Pn	Pn	08 42 35.6	+1.8
JOW	**Kunigami**	15.18	9	LR	LR	08 47 56.5	
	comp=Z,222nm,20.8s,baz=134,slow=33						
TTSI	**Tana Toraja**	15.80	201	P	P	08 43 23.1	+7.3
SBUM	**Sibu**	16.14	236	*e*Pn	P	08 43 17.8	-1.8
	21nm,1.1s						
SPSI	**Sidrap Palu**	16.67	200	P	P	08 43 33.4	+7.9
KSM	**Kuching**	18.27	237	*e*P	Pn	08 43 42.8	-0.6
	19nm,1.1s						
GUMO	**Guam**	18.93	83	LR	LR	08 49 36.1	
	comp=Z,197nm,20.1s,baz=273,slow=32						
UBPT	**Khong Chiam**	19.83	282	P	Pn	08 44 01.9	-0.2
	37nm,1.3s						
EDFI	**Ende, Flores**	20.76	191	P	Pn	08 44 17.9	+4.6
	14nm,0.7s						
NJ2	**Nanjing**	21.09	344	*e*P	P	08 44 16.8	+3.1
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
WHN	**Wuhan**	21.36	333	⇑P	P	08 44 17.5	+0.9
WHN				LR	LR		
	comp=Z,570nm,15.2s						
SOEI	**Soe**	21.44	183	*e*P	P	08 44 15.0	-2.7
	19nm,0.7s						
SKNT	**Sakolnakorn**	21.51	286	P	P	08 44 19.0	+0.6
	10nm,1.1s,2µm						
JNU	**Nakatsue**	21.79	12	P	P	08 44 21.4	+0.2
	3.8nm,0.7s,baz=142,slow=5.2,SNR=4.2						
JNU				LR	LR	08 52 05.4	
	comp=Z,112nm,21.2s,baz=123,slow=35						
JNU	**Nakatsue**	21.79	12	*e*P	P	08 44 22.1	+0.9
	12nm,1.1s						
CBIJ	**Chichi jima**	21.82	43	*e*P	P	08 44 22.6	+1.0
	28nm,0.9s						
JCJ	**Chichijima**	21.82	43	P	P	08 44 22.6	+1.0
	20nm,0.7s,baz=284,slow=19,SNR=3.4						
KHON	**Khomkaen**	22.50	284	P	P	08 44 29.8	+0.8
	20nm,0.8s						
NONG	**Nongkai**	22.52	289	P	P	08 44 28.3	-0.9
	0.6nm,1.0s						
GYA	**Guiyang**	23.00	312	*e*P	P	08 44 35.5	+1.2
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CHAI	**Chaiyaphum**	23.23	283	P	P	08 44 35.0	-1.6
	7.2nm,0.9s						
NGJI	**Ngawi**	23.63	217	P	P	08 44 44.7	+4.4
	80nm,1.0s						
ENH	**Enshi**	23.67	323	*e*P	P	08 44 40.8	+0.2
	33nm,0.8s						
MYKOM	**Kota Tinggi**	23.70	247	*e*P	P	08 44 40.4	-0.6
	29nm,0.7s						
NAYO	**Nakonayok**	23.73	279	P	P	08 44 49.8	+8.5
SMRI	**Semarang**	24.00	219	*e*P	P	08 44 43.0	-0.7
	48nm,0.7s						
PBKT	**Sadao Pong**	24.29	284	*e*P	P	08 44 46.4	0.0
	21nm,1.1s						
PBKT	**Sadao Pong**	24.29	284	P	P	08 44 47.7	+1.4
	13nm,1.0s						
TJN	**Taejon**	24.54	4	⇑*i*P	P	08 44 48.5	+0.1
JHJ	**Hachijo jima 2**	24.92	29	LR	LR	08 53 05.6	
	comp=Z,116nm,21.2s,baz=306,slow=33						
NANT	**Nan**	24.94	289	P	P	08 44 51.5	-0.8
	6.8nm,0.7s						
MTN	**Manton Dam**	25.09	167	*e*P	P	08 44 52.8	-0.8
	9.3nm,0.6s						
KMI	**Kunming**	25.32	305	P	P	08 44 56.3	+0.4
KMI				pP	pP	08 45 08.5	-0.3
KMI				sP	sP	08 45 17.3	+2.4
KMI				pmax	pmax		
	comp=Z,22nm,1.0s						
IPM	**Ipoh**	25.32	255	*e*P	P	08 44 55.1	-0.7
	30nm,1.1s						
TIA	**Tai'an**	25.48	344	P	P	08 44 57.0	0.0
TIA				pmax	pmax		
	comp=Z,16nm,0.8s						
KS15	**Wonju Array Si**	25.63	4	*e*P	P	08 44 58.6	+0.3
KSAR	**Wonju Array Be**	25.63	4	P	P	08 44 58.6	+0.3
KSAR	**Wonju Array Be**	25.63	4	P	P	08 44 58.6	+0.3
KSRS	**Korea Array**	25.64	4	P	P	08 44 58.6	+0.2
	5.8nm,0.8s,baz=183,slow=10.0,SNR=27						
KSRS				LR	LR	08 54 47.0	
	comp=Z,76nm,21.1s,baz=191,slow=36						
KS01	**Wonju Array Si**	25.66	4	*e*P	P	08 44 58.6	0.0
SUKH	**Sukhothai**	25.69	286	P	P	08 45 01.2	+2.1
	5.4nm,1.0s						
PAYA	**Payao**	25.83	290	P	P	08 45 01.1	+0.7
	13nm,0.8s						
LAMP	**Lampang**	25.88	288	P	P	08 45 03.4	+2.6
	4.9nm,0.8s						
CM01	**Chiang Mai Arr**	26.48	288	*e*P	P	08 45 05.8	-0.5
CM31	**Chiang Mai Arr**	26.50	288	*e*P	P	08 45 06.3	-0.2
CMAR	**Chiang Mai Arr**	26.50	288	P	P	08 45 06.3	-0.2
	8.4nm,0.8s,baz=100,slow=7.5,SNR=21						
CMAR				LR	LR	08 55 06.7	
	comp=Z,84nm,21.6s,baz=192,slow=36						
CMAR	**Chiang Mai Arr**	26.50	288	P	P	08 45 06.3	-0.2
CMAR				pmax	pmax		
	comp=Z,11nm,0.9s						
CMAR				MLR	MLR		
	comp=Z,84nm,21.7s						
CMMT	**Chiang Mai**	26.57	289	P	P	08 45 08.8	+1.7
	comp=Z,10nm,1.1s						
CHTO	**Chiang Mai**	26.57	289	*e*P	P	08 45 05.8	-1.3
	comp=Z,6.1nm,0.7s						
CHTO	**Chiang Mai**	26.57	289	*e*P	P	08 45 05.8	-1.3
CHTO				pmax	pmax		
	comp=Z,6.0nm,0.7s						
CHTO	**Chiang Mai**	26.57	289	P	P	08 45 08.8	+1.7
	comp=Z,45nm,1.1s						
XAN	**Xi'an**	26.85	328	P	P	08 45 09.0	-0.4
XAN				pmax	pmax		
	comp=Z,26nm,0.9s						
XAN				pmax	pmax		
	comp=Z,52nm,3.6s						
MJAR	**Matsushiro Arr**	27.16	23	LR	LR	08 54 27.3	
	comp=Z,169nm,20.9s,baz=220,slow=33						
CD2	**Chengdu**	27.72	317	*e*P	P	08 45 18.0	+0.7
CD2				pP	sP	08 45 34.5	-1.8
CD2				sP	pP	08 45 42.8	+13
CD2				S	S	08 49 56.8	+0.5
CD2				sS	sS	08 50 25.5	+7.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,4.8s						
CD2				LR	LR		
	comp=Z,720nm,15.4s						
CD2				LR	LR		
	comp=Z,560nm,18.9s						
CD2				LR	LR		
	comp=Z,820nm,18.9s						
PSI	**Prapat**	27.85	253	*e*P	P	08 45 17.8	-0.9
	comp=Z,8.6nm,0.7s						
PSI	**Prapat**	27.85	253	*e*P	P	08 45 17.8	-0.9
PSI				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MNSI	**Mandailing Nat**	27.99	249	P	P	08 45 19.7	-0.1
	comp=Z,10nm,0.4s						
BJT	**Baijiatuau**	29.32	345	*e*P	P	08 45 31.6	+0.3
	comp=Z,7.0nm,0.7s						
BJT	**Baijiatuau**	29.32	345	*e*P	P	08 45 31.6	+0.3
BJT				pmax	pmax		
	comp=Z,7.0nm,0.7s						
LZH	**Lanzhou**	31.14	325	*e*P	P	08 45 46.5	-1.2
LZH				pP	sP	08 46 04.8	-1.9
LZH				sP	pP	08 46 13.0	+12
LZH				pmax	pmax		
	comp=Z,29nm,1.4s						
HHC	**Hu-ho-hao-te**	31.45	339	*e*P	P	08 45 54.3	+4.0
HHC				pP	sP	08 46 10.0	+0.6

HHC				S	S	08 51 01.5	+6.7
HHC				pmax	pmax		
	comp=Z,9.0nm,1.2s						
HHC				pmax	pmax		
	comp=Z,74nm,7.6s						
HHC				LR	LR		
	comp=Z,81nm,9.6s						
HHC				LR	LR		
	comp=Z,140nm,12.4s						
HHC				LR	LR		
	comp=Z,100nm,10.2s						
WR1	Warramunga Arr	32.70	165	eP	P	08 45 59.3	-2.0
	comp=Z,4.1nm,0.6s						
WR1				ePcP	PcP	08 48 45.9	-0.4
WRA	Warramunga Arr	32.70	165	P	P	08 45 59.3	-2.0
	comp=Z,0.9nm,0.5s,baz=344,slow=9.0,SNR=15						
WRA				PcP	PcP	08 48 45.9	-0.4
	comp=Z,3.4nm,0.7s,baz=343,slow=3.1,SNR=13						
WB2	Warramunga Arr	32.70	165	eP	P	08 46 01.3	0.0
WB2				ePcP	PcP	08 48 46.2	-0.1
USA0B	Ussuriysk Arra	32.77	9	eP	P	08 46 02.1	+0.4
	comp=Z,7.1nm,0.8s						
USRK	Ussuriysk Ar.	32.77	9	P	P	08 46 02.3	+0.6
	comp=Z,5.7nm,0.8s,baz=206,slow=8.6						
USRK				LR	LR	08 57 47.4	
	comp=Z,91nm,20.7s,baz=175,slow=34						
BRDH	Bariadhala	34.06	293	LR	LR	09 00 45.5	
	comp=Z,238nm,19.1s,baz=108,slow=38						
SHL	Shillong	34.59	298	eP	P	08 46 16.8	-1.2
	comp=Z,37nm,1.1s						
SHL	Shillong	34.59	298	eP	P	08 46 16.8	-1.2
SHL				pmax	pmax		
	comp=Z,37nm,1.1s						
ASAJ	Asahikawa	35.40	21	P	P	08 46 25.7	+1.2
	comp=Z,2.9nm,0.6s,baz=233,slow=9.0,SNR=5.0						
ASAJ				LR	LR	09 01 01.4	
	comp=Z,52nm,21.0s,baz=174,slow=36						
ASAJ	Asahikawa	35.40	21	eP	P	08 46 25.1	+0.6
	comp=Z,4.8nm,1.0s						
GTA	Gaotai	35.74	325	eP	P	08 46 28.3	+0.7
GTA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
AS31	Alice Springs	36.17	167	eP	P	08 46 31.2	-0.1
	comp=Z,2.8nm,0.6s						
AS31				ePcP	PcP	08 48 55.7	-0.5
ASAR	Alice Springs	36.17	167	P	P	08 46 30.8	-0.6
	comp=Z,2.5nm,0.5s,baz=346,slow=7.6,SNR=38						
ASAR				PcP	PcP	08 48 56.0	-0.2
	comp=Z,3.8nm,0.7s,baz=345,slow=2.8,SNR=10						
ASAR				S	S	08 52 08.0	0.0
	comp=Z,0.8nm,0.7s,baz=350,slow=16,SNR=5.9						
AS01	Alice Springs	36.18	167	eP	P	08 46 30.5	-0.9
AS01				ePcP	PcP	08 48 55.7	-0.6
LSA	Lhasa	36.58	304	eP	P	08 46 35.6	+0.2
	comp=Z,8.7nm,0.6s						
LSA	Lhasa	36.58	304	P	P	08 46 36.4	+1.0
LSA	Lhasa	36.58	304	eP	P	08 46 35.6	+0.2
LSA				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KLR	Kul'dur	37.68	7	P	P	08 46 44.0	+0.1
	comp=Z,0.2nm,0.6s,baz=203,slow=6.2,SNR=9.8						
KLR				PcP	PcP	08 49 00.7	+0.4
	comp=Z,0.2nm,0.6s,baz=202,slow=2.3,SNR=5.8						
KLR	Kul'dur	37.68	7	c iP	P	08 46 43.8	0.0
YSS	Yuzh-Sakhalins	37.94	19	P	P	08 46 47.0	+0.9
ODAN	Odare	38.83	298	⇑iP	P	08 46 53.8	-0.3
	comp=Z,153nm,0.7s						
SONA0	Songino Array	39.36	340	eP	P	08 46 58.5	+0.4
SONA0				ePcP	PcP	08 49 05.6	-0.2
SONM	Songino Array	39.36	340	P	P	08 46 58.5	+0.4
	comp=Z,3.2nm,0.6s,baz=159,slow=8.8,SNR=11						
SONM				PcP	PcP	08 49 05.6	-0.2
	comp=Z,2.1nm,0.6s,baz=166,slow=4.5,SNR=5.0						
SONM				LR	LR	09 04 41.5	
	comp=Z,51nm,18.5s,baz=156,slow=38						
RAMN	Ramite	39.53	298	⇑iP	P	08 46 59.9	-0.1
	comp=Z,92nm,0.6s						
JIRN	Jiri	40.07	299	⇑iP	P	08 47 04.5	-0.1
	comp=Z,211nm,0.4s						
HNR	Honiara	40.17	120	LR	LR	09 01 00.6	
	comp=Z,175nm,20.9s,baz=294,slow=32						
H11S3	WAKE ISLAND Hy	40.20	75	T	T	09 30 13.8	
	baz=273,slow=75,SNR=284						
H11S1	WAKE ISLAND Hy	40.21	75	T	T	09 30 17.8	
	baz=273,slow=75,SNR=131						
H11S2	WAKE ISLAND Hy	40.21	75	T	T	09 30 25.7	
	baz=273,slow=75,SNR=140						
GUN	Gumba	40.40	299	⇑iP	P	08 47 07.2	-0.1
	comp=Z,153nm,0.8s						
H11N1	WAKE ISLAND Hy	40.48	73	T	T	09 30 22.3	
	baz=265,slow=74,SNR=603						
H11N2	WAKE ISLAND Hy	40.48	73	T	T	09 30 25.1	
	baz=265,slow=74,SNR=447						
H11N3	WAKE ISLAND Hy	40.50	73	T	T	09 30 35.8	
	baz=265,slow=74,SNR=647						
PKIN	Phulchoki	40.73	299	⇑iP	P	08 47 09.1	-0.9
	comp=Z,48nm,0.5s						
KKN	Kakani	40.88	299	⇑iP	P	08 47 10.5	-0.7
	comp=Z,65nm,0.9s						
DMN	Daman	40.98	299	⇑iP	P	08 47 11.4	-0.7
	comp=Z,76nm,0.9s						
GKN	Gorkha	41.49	299	⇑iP	P	08 47 15.2	-0.8
	comp=Z,46nm,0.5s						
KOLN	Koldanda	42.32	298	⇑iP	P	08 47 22.5	-0.4
	comp=Z,65nm,0.8s						
DANN	Dangsing	42.32	299	⇑iP	P	08 47 22.6	-0.4
	comp=Z,127nm,0.7s						
ZAK	Zakamensk	42.60	339	eP	P	08 47 23.4	-1.3
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
PYUN	Piuthan	42.92	299	⇑iP	P	08 47 27.2	-0.6
	comp=Z,161nm,0.9s						
TLY	Talaya	43.57	340	eP	P	08 47 33.3	+0.8
TLY				pmax	pmax		
	comp=Z,12nm,0.9s						
TLY				MLR	MLR		
	comp=Z,47nm,18.0s						
WMQ	Urumqi	45.60	322	P	P	08 47 50.0	+1.2
WMQ				pP	sP	08 48 09.5	+1.2
WMQ				pmax	pmax		
	comp=Z,19nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,140nm,3.7s						
WMQ				LR	LR		
	comp=Z,170nm,22.7s						
WMQ				LR	LR		
	comp=Z,210nm,28.5s						
WMQ				LR	LR		
	comp=Z,120nm,20.9s						
HYB	Hyderabad	45.73	283	i P	P	08 47 50.0	-0.2
STKA	Stephens Creek	46.06	161	P	P	08 47 52.6	+0.2
	comp=Z,8.0nm,0.6s,baz=338,slow=8.1,SNR=16						
STKA	Stephens Creek	46.06	161	eP	P	08 47 52.6	+0.2
	comp=Z,2.1nm,0.7s						
STKA	Stephens Creek	46.06	161	eP	P	08 47 52.6	+0.2
STKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
HVS	Khovu-Aksy	47.02	333	⇓iP	P	08 48 00.8	+0.9
HVS				pmax	pmax		
	comp=Z,12nm,0.9s						
PETK	Petropavlovsk-	48.56	25	P	P	08 48 13.3	+1.6
	comp=Z,4.2nm,0.6s,baz=204,slow=3.2						
PETK				LR	LR	09 06 28.4	
	comp=Z,58nm,21.9s,baz=229,slow=33						
PEA1	Petropavlovsk-	48.57	25	eP	P	08 48 13.3	+1.6
DGZ	Jazzator, Alta	49.11	328	i P	P	08 48 17.1	+1.0
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MK01	Makanchi Array	50.38	322	eP	P	08 48 26.2	+0.5
MK31	Makanchi Array	50.40	322	eP	P	08 48 26.6	+0.8
MK31	Makanchi Array	50.40	322	i P	P	08 48 26.2	+0.4
MK31				pmax	pmax		
	comp=Z,33nm,0.8s						
MK32	Makanchi Array	50.40	322	eP	P	08 48 26.5	+0.7
MK32				ePcP	PcP	08 49 42.9	-0.8
MKAR	Makanchi Array	50.40	322	P	P	08 48 26.5	+0.7
	comp=Z,33nm,0.8s,baz=121,slow=8.3,SNR=211						
MKAR				PcP	PcP	08 49 42.9	-0.8
	comp=Z,3.1nm,0.7s,baz=111,slow=5.2,SNR=2.6						
MKAR				LR	LR	09 10 54.6	
	comp=Z,67nm,22.0s,baz=132,slow=38						
MKAR	Makanchi Array	50.40	322	eP	P	08 48 26.6	+0.7
	comp=Z,166nm,0.8s						
MKAR				PcP	PcP	08 49 42.9	-0.8
MKAR	Makanchi Array	50.40	322	eP	P	08 48 26.6	+0.7
MKAR						08 49 42.9	
MKAR				pmax	pmax		
	comp=Z,167nm,0.8s						
MAKZ	Makanchi	50.59	322	eP	P	08 48 28.0	+0.7
	comp=Z,29nm,1.0s						
MAKZ	Makanchi	50.59	322	eP	P	08 48 28.0	+0.7
MAKZ				pmax	pmax		
	comp=Z,29nm,1.0s						
PDGK	Podgornoye	50.61	317	i P	P	08 48 27.8	+0.2
PDGK				pmax	pmax		
	comp=Z,16nm,0.7s						
KSH	Kashi	51.70	311	P	P	08 48 38.0	+2.2
KSH				epP	sP	08 48 56.8	+1.4
KSH				ePcP	PcP	08 49 51.3	+2.5
KSH				PP	PP	08 50 37.0	+3.2
KSH				PcS	PcS	08 53 45.8	-1.1
KSH				S	S	08 55 51.8	-2.2
KSH				ScS	ScS	08 58 17.0	-5.0
KSH				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KSH				pmax	pmax		
	comp=Z,160nm,5.8s						
NIL	Nilore	52.30	303	eP	P	08 48 40.2	-0.1
	comp=Z,38nm,0.8s						
NIL	Nilore	52.30	303	eP	P	08 48 40.2	-0.1
NIL				pmax	pmax		
	comp=Z,38nm,0.8s						
DZM	Mont Dzumac	52.36	130	P	P	08 48 42.2	+1.3
	comp=Z,6.7nm,0.8s,baz=355,slow=11,SNR=3.7						
DZM	Mont Dzumac	52.36	130	eP	P	08 48 41.4	+0.5
	comp=Z,16nm,1.1s						
ZALV	Zalesovo Beam	52.96	331	P	P	08 48 44.6	-0.1
	comp=Z,3.2nm,0.3s,baz=122,slow=4.0,SNR=4.9						
ZALV				LR	LR	09 14 04.3	
	comp=Z,60nm,18.6s,baz=235,slow=39						
ZAA1	Zalesovo Array	52.97	331	eP	P	08 48 44.6	-0.2
KZA	Kyzart	53.05	314	P	P	08 48 47.4	+1.3
	SNR=8.3						
TKM2	Tokmak 2	53.09	315	P	P	08 48 46.8	+0.6
	SNR=5.3						
KBK	Karagaybulak	53.45	315	P	P	08 48 49.8	+1.0
	SNR=5.2						
SFK	Sufi-Kurgan	53.66	311	P	P	08 48 50.8	+0.3
SFK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
AML	Almayashu	54.16	314	P	P	08 48 55.2	+0.9
	SNR=9.9						
NVS	Novosibirsk	54.24	331	eP	P	08 48 52.9	-1.2
NVS				e		08 49 54.5	
NVS				pmax	pmax		
	comp=N,7.0nm,1.0s						
NVS				pmax	pmax		
	comp=E,7.0nm,1.0s						
NVS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
EKS2	Erkin-Say	54.27	314	P	P	08 48 55.3	+0.6
	SNR=9.6						
KURK	Kurchatov	54.42	325	eP	P	08 48 56.2	+0.6
	comp=Z,79nm,0.8s						
KURK				eP	P	08 48 56.4	+0.9
KURK	Kurchatov	54.42	325	c iP	P	08 48 56.1	+0.6
KURK				pmax	pmax		
	comp=Z,78nm,0.9s						
KURBB	Kurchatov Arra	54.43	325	P	P	08 48 56.4	+0.8
	comp=Z,44nm,0.8s,baz=127,slow=7.2,SNR=223						
MNAS	Manas	55.11	314	i P	P	08 49 01.4	+0.6
MNAS				pmax	pmax		
	comp=Z,14nm,0.8s						
KBL	Kabul	55.90	304	eP	P	08 49 06.2	-0.5
	comp=Z,9.2nm,0.8s						
KBL	Kabul	55.90	304	eP	P	08 49 06.2	-0.5
KBL				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KK31	Karatay Array	56.69	314	eP	P	08 49 12.1	+0.1
KK31	Karatay Array	56.69	314	eP	P	08 49 12.1	+0.1
KKAR	Karatay Array	56.69	314	eP	P	08 49 12.1	+0.1
KKAR	Karatay Array	56.69	314	eP	P	08 49 12.1	+0.1
TIXI	Tiksi	59.86	1	⇑iP	P	08 49 33.3	-0.2
TIXI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
BVAR	Borovoye Array	60.02	325	P	P	08 49 35.4	+0.4
	comp=Z,15nm,0.7s,baz=137,slow=6.9,SNR=88						
BVAR				LR	LR	09 16 46.1	
	comp=Z,68nm,18.9s,baz=90,slow=37						
BRVK	Borovoye	60.09	325	eP	P	08 49 35.9	+0.4
	comp=Z,39nm,0.8s						
BRVK	Borovoye	60.09	325	c iP	P	08 49 35.7	+0.2
BRVK				pmax	pmax		
	comp=Z,38nm,0.9s						
WSAR	Wadi Sarin	64.36	290	P	P	08 50 03.1	-1.5
	comp=Z,4.5nm,0.6s,baz=107,slow=9.5,SNR=5.6						
GEYT	Alibeck	65.08	306	P	P	08 50 07.2	-1.9
	comp=Z,2.6nm,0.3s,baz=176,slow=2.3,SNR=2.7						
GEYT				LR	LR	09 21 00.1	
	comp=Z,78nm,21.1s,baz=170,slow=38						
AB31	Akbulak array	65.27	319	P	P	08 50 09.7	-0.3
AB31				pmax	pmax		
	comp=Z,16nm,0.8s						
ABKAR	Akbulak array	65.27	319	eP	P	08 50 09.8	-0.2
BANOM	Banah	66.38	293	P	P	08 50 17.5	-0.2
UOSS	Minazif	66.50	292	eP	P	08 50 17.4	-1.0
	comp=Z,5.0nm,0.5s						
UOSS	Minazif	66.50	292	P	P	08 50 17.2	-1.3
SHME	Shamm	66.52	293	P	P	08 50 18.6	+0.1
SVE	Sverdlovsk	66.56	327	⇓eP	P	08 50 18.6	+0.4
SVE				pmax	pmax		
	comp=Z,25nm,0.6s						
HATD	Hatta, Dubai	66.57	292	i P	P	08 50 18.2	-0.7
	SNR=7.5						
ASHO	Ashiyiah	66.65	292	i P	P	08 50 18.3	-1.1
	SNR=7.3						
AKTO	Aktyubinsk	66.71	320	P	P	08 50 19.1	-0.2
	comp=Z,8.0nm,0.7s,baz=141,slow=6.5,SNR=27						
AKTO				LR	LR	09 21 26.3	
	comp=Z,95nm,18.9s,baz=115,slow=38						
ALNE	Al Ain	66.96	291	i P	P	08 50 20.6	-0.8
	SNR=8.0						
AFI	Afiamalu	67.17	111	LR	LR	09 15 28.4	
	comp=Z,40nm,18.6s,baz=160,slow=32						
ASUD	Al Ashush, Dub	67.31	292	P	P	08 50 23.0	-0.6
RPZ	Rata Peaks	69.03	146	P	P	08 50 33.5	-0.4
	comp=Z,21nm,0.9s,baz=244,slow=2.9,SNR=6.1						
AKT	Akhty	73.19	310	eP	P	08 50 59.2	-0.2
AKT				e		08 51 15.4	
AKT				pmax	pmax		
	comp=Z,17nm,1.0s						
PRGR	Permogore	74.92	331	eP	P	08 51 04.8	-4.1
PRGR				pmax	pmax		
	comp=Z,78nm,0.5s						
GNI	Garni	75.51	309	LR	LR	09 29 04.6	
	comp=Z,45nm,19.2s,baz=70,slow=40						
KDAK	Kodiak Island	75.78	33	eP	P	08 51 14.4	+0.5
	comp=Z,16nm,1.1s						
KDAK	Kodiak Island	75.78	33	eP	P	08 51 14.4	+0.5
KDAK				pmax	pmax		
	comp=Z,16nm,1.1s						
ZEI	Tsey	75.99	311	eP	P	08 51 14.9	-0.8
ZEI				pmax	pmax		
	comp=Z,20nm,0.8s						
RAYN	Ar Rayn	76.35	292	eP	P	08 51 17.2	-0.8
	comp=Z,29nm,0.9s						
RAYN	Ar Rayn	76.35	292	i P	P	08 51 17.2	-0.8
	SNR=34						
RAYN	Ar Rayn	76.35	292	eP	P	08 51 17.2	-0.8
RAYN				pmax	pmax		
	comp=Z,29nm,0.9s						
AKH	Akhalkalaki	76.38	310	eP	P	08 51 17.8	-0.1
	comp=Z,18nm,0.9s						
AKH	Akhalkalaki	76.38	310	eP	P	08 51 17.8	-0.1
AKH				pmax	pmax		
	comp=Z,18nm,0.9s						
KBZ	Khabaz	76.67	312	P	P	08 51 19.0	-0.2
	comp=Z,7.5nm,0.8s,baz=106,slow=3.8,SNR=15						
KBZ				LR	LR	09 29 10.4	
	comp=Z,65nm,19.3s,baz=58,slow=39						
SUA	Susitna One	76.73	29	eP	P	08 51 19.3	-0.1
	comp=Z,6.3nm,0.8s						
MLY	Manley	76.74	26	eP	P	08 51 20.1	+0.7
	comp=Z,5.3nm,0.8s						
KIV	Kislovodsk	76.80	313	eP	P	08 51 20.3	+0.1
	comp=Z,29nm,0.8s						
KIV	Kislovodsk	76.80	313	P	P	08 51 20.8	+0.6
KIV	Kislovodsk	76.80	313	c iP	P	08 51 20.6	+0.4
KIV				e		08 51 31.0	
KIV				e		08 54 12.2	
KIV				ePPP	PPP	08 55 59.3	
KIV				pmax	pmax		
	comp=Z,24nm,0.6s						
NEY	Neytrino	76.83	312	⇓iP	P	08 51 20.0	-0.4
NEY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
COLD	Coldfoot	76.99	23	eP	P	08 51 20.9	+0.3
	comp=Z,3.0nm,0.6s						
VRH	Novokhopyorsk	77.05	320	eP	P	08 51 19.1	-2.1
VRH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PMR	Palmer	77.50	29	eP	P	08 51 23.5	0.0
	comp=Z,4.5nm,1.0s						
PMR	Palmer	77.50	29	eP	P	08 51 23.5	0.0
PMR				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MCK	McKinley	77.53	27	eP	P	08 51 24.2	+0.4
	comp=Z,8.8nm,0.8s						
MCK	McKinley	77.53	27	eP	P	08 51 24.2	+0.4
MCK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KLMR	Klimovskoe	77.87	330	eP	P	08 51 24.1	-1.5
KLMR				pmax	pmax		
	comp=Z,30nm,1.4s						
KLMR	Klimovskoe	77.87	330	eP	P	08 51 24.1	-1.5
KLMR				AMP		08 51 25.9	
	comp=Z,30nm,1.4s						
SCM	Sheep Creek Mo	78.34	29	eP	P	08 51 29.0	+0.7
	comp=Z,9.1nm,0.8s						
HDA	Harding Lake	78.38	26	eP	P	08 51 28.1	-0.3
	comp=Z,3.8nm,0.9s						
IL1	Eielson Array	78.39	26	eP	P	08 51 26.2	-2.2
ILAR	Eielson Array	78.39	26	P	P	08 51 28.6	+0.1
	comp=Z,1.8nm,0.7s,baz=244,slow=5.9,SNR=21						
ILB	Eielson Array	78.39	26	eP	P	08 51 27.8	-0.7
GLI	Glacier Island	78.51	30	eP	P	08 51 29.8	+0.6
	comp=Z,7.4nm,0.7s						
VORD	Divnogorie	78.60	320	eP	P	08 51 27.9	-1.9
VORD				pmax	pmax		
	comp=Z,10.0nm,1.2s						
CASY	Casey	78.64	186	eP	P	08 51 28.7	-0.9
	comp=Z,9.9nm,0.6s						
VSR	Storozhevoye	78.66	320	eP	P	08 51 28.6	-1.6
VSR				pmax	pmax		
	comp=Z,20nm,1.2s						
LPSR	Galich'ya Gora	78.69	322	eP	P	08 51 29.5	-0.8
LPSR				pmax	pmax		
	comp=Z,30nm,0.8s						
FID	Port Fidalgo	78.82	30	eP	P	08 51 31.6	+0.7
	comp=Z,5.1nm,0.9s						
KLU	Klutina	79.04	29	eP	P	08 51 32.9	+0.7
	comp=Z,3.2nm,0.7s						
PAX	Paxson	79.13	28	eP	P	08 51 33.2	+0.5
	comp=Z,3.4nm,0.9s						
PAX	Paxson	79.13	28	eP	P	08 51 33.2	+0.5
PAX				pmax	pmax		
	comp=Z,3.0nm,0.9s						
DIV	Divide	79.14	30	eP	P	08 51 33.5	+0.7
	comp=Z,8.1nm,0.8s						
RIDG	Independ'e Rid	79.35	27	eP	P	08 51 34.3	+0.4
	comp=Z,10nm,0.9s						
OBN	Obninsk	79.85	324	eP	P	08 51 36.8	+0.2
OBN				e		08 51 43.8	
OBN				pmax	pmax		
	comp=Z,10.0nm,0.9s						
EGAK	Eagle	80.83	26	eP	P	08 51 41.9	+0.2
	comp=Z,2.7nm,0.7s						
DAWY	Dawson	81.70	26	eP	P	08 51 47.5	+1.1
	comp=Z,2.1nm,0.8s						
MSF	Maaselka	81.98	336	P	P	08 51 48.2	+0.4
MSF				pmax	pmax		
	comp=Z,36nm,1.0s						
SPITS	Spitsbergen Ar	82.40	349	P	P	08 51 50.1	+0.3
	comp=Z,1.6nm,0.4s,baz=67,slow=8.5,SNR=8.5						
ARA0	ARCESS Array S	82.53	340	eP	P	08 51 50.9	+0.3
ARCES	ARCESS Array B	82.53	340	P	P	08 51 50.9	+0.3
	comp=Z,16nm,0.8s,baz=78,slow=6.8,SNR=46						
SGF	Sodankyl	82.64	337	P	P	08 51 51.7	+0.5
SGF				pmax	pmax		
	comp=Z,39nm,1.2s						
ASF	Jabal al Asfar	82.70	301	P	P	08 51 52.9	+0.5
	comp=Z,7.8nm,0.7s,baz=45,slow=7.1,SNR=9.5						
SIM	Simferopol'	82.79	314	eP	P	08 51 51.6	-0.8
SIM				pmax	pmax		
	comp=Z,21nm,0.7s						
OPO	Ambohidratompo	82.93	249	P	P	08 51 53.0	-0.7
	comp=Z,2.2nm,0.4s,baz=104,slow=7.8,SNR=6.7						
OUL	Oulu	83.43	335	P	P	08 51 55.7	+0.4
OUL				pmax	pmax		
	comp=Z,36nm,2.0s						
MMAI	Mount Meron Ar	83.80	302	P	P	08 51 58.8	+0.9
	comp=Z,3.7nm,0.5s,baz=76,slow=7.6,SNR=6.2						
BR101	Keskin Array S	84.03	309	eP	P	08 51 58.4	-0.7
BR131	Keskin Array S	84.03	309	eP	P	08 51 58.5	-0.6
BRTR	Keskin Array B	84.03	309	P	P	08 51 58.4	-0.7
	comp=Z,5.7nm,0.7s,baz=115,slow=4.3,SNR=28						
WHY	Whitehorse	84.46	29	eP	P	08 52 02.1	+1.3
	comp=Z,6.3nm,0.8s						
SKAG	Skagway	84.53	30	eP	P	08 52 00.2	-0.8
	comp=Z,5.0nm,0.9s						
VSU	Vasula	84.62	329	d iP	P	08 52 01.3	-0.1
VSU				pmax	pmax		
	comp=Z,68nm,0.8s						
AKASG	Malin Array Be	84.95	321	P	P	08 52 02.5	-0.8
	comp=Z,9.8nm,0.6s,baz=64,slow=5.0,SNR=27						
AKASG	Malin Array Be	84.95	321	P	P	08 52 02.5	-0.8
AKASG				pmax	pmax		
	comp=Z,13nm,0.6s						
AKBB	Malin Array Si	84.95	321	eP	P	08 52 02.5	-0.8
	comp=Z,13nm,0.8s						
AKBB				eS	S	09 02 28.6	+0.3
KIEV	Kiev	84.96	321	eP	P	08 52 02.0	-1.3
	comp=Z,13nm,0.8s						
KIEV				eS	S	09 02 28.2	-0.1
KIEV	Kiev	84.96	321	i P	P	08 52 02.4	-1.0
	SNR=10.0						
KIEV	Kiev	84.96	321	d iP	P	08 52 02.6	-0.7
KIEV				pmax	pmax		
	comp=Z,16nm,1.0s						
AK11	Malin Array Si	84.99	321	eP	P	08 52 02.9	-0.6
CSS	Mathiatis	85.14	305	eP	P	08 52 04.6	0.0
	comp=Z,55nm,0.7s						
JIS	Juneau Island	85.30	31	eP	P	08 52 06.1	+1.2
	comp=Z,6.5nm,0.8s						
SORM	Soroca	86.07	318	⇑iP	P	08 52 08.0	-0.9
SORM	Soroca	86.07	318	⇑P	P	08 52 08.0	-0.9
TESR	Tescani	87.58	317	⇑iP	P	08 52 15.9	-0.5
VRI	Vrincioaia	87.69	316	⇑iP	P	08 52 17.2	+0.3
VRI	Vrincioaia	87.69	316	⇑P	P	08 52 17.2	+0.3
BURAR	Bucovina Array	88.24	318	⇑iP	P	08 52 19.3	-0.3
BURAR	Bucovina Array	88.24	318	⇑P	P	08 52 19.3	-0.3
BUR04	Bucovina Ar. S	88.25	318	eP	P	08 52 19.5	-0.1
BUR08	Bucovina Ar. S	88.25	318	eP	P	08 52 19.6	-0.1
MLR	Muntele Rosu	88.32	316	P	P	08 52 19.4	-0.7
	comp=Z,3.7nm,0.6s,baz=113,slow=14,SNR=4.3						
MLR				LR	LR	09 36 03.8	
	comp=Z,78nm,19.7s,baz=162,slow=38						
MLR	Muntele Rosu	88.32	316	⇑iP	P	08 52 19.4	-0.7
MLR	Muntele Rosu	88.32	316	eP	P	08 52 19.4	-0.7
	comp=Z,6.0nm,0.9s						
MLR	Muntele Rosu	88.32	316	eP	P	08 52 19.4	-0.7
MLR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
UZH	Uzhgorod	89.83	320	eP	P	08 52 23.3	-3.6
DRGR		90.11	318	⇑iP	P	08 52 28.3	-0.1
DRGR		90.11	318	⇑P	P	08 52 28.3	-0.1
CRVS	Cervenica-Dubn	90.27	320	eP	P	08 52 29.4	+0.4
CRVS				pmax	pmax		
	comp=Z,11nm,1.0s						
CRVS	Cervenica-Dubn	90.27	320	eP	P	08 52 29.4	+0.4
HFS	Hagfors	90.38	332	P	P	08 52 28.3	-0.9
	comp=Z,5.3nm,0.6s,baz=96,slow=5.8,SNR=28						
HFS				LR	LR	09 35 12.8	
	comp=Z,72nm,19.0s,baz=54,slow=37						
NC405	NORSAR Array S	90.84	334	eP	P	08 52 30.3	-1.1
NB2	NORSAR Subarra	91.09	334	P	P	08 52 31.1	-1.5
	comp=Z,4.4nm,0.7s,baz=63,slow=4.6						
NB2	NORSAR Subarra	91.09	334	P	P	08 52 31.0	-1.5
NB2	NORSAR Subarra	91.09	334	P	P	08 52 31.1	-1.5
	baz=63,slow=4.6						
NOA	NORSAR Array B	91.09	334	P	P	08 52 31.2	-1.4
	comp=Z,3.6nm,0.7s,baz=63,slow=4.7,SNR=19						
NOA				LR	LR	09 36 26.8	
	comp=Z,44nm,18.8s,baz=75,slow=38						
BZS	Buzias	91.20	317	⇑iP	P	08 52 32.3	-1.0
BZS	Buzias	91.20	317	⇑P	P	08 52 32.3	-1.0
MDVR	Moldovita	91.39	316	⇑iP	P	08 52 32.7	-1.6
VNDA	Vanda	91.52	173	P	P	08 52 34.0	0.0
	comp=Z,2.6nm,0.6s,baz=310,slow=5.9,SNR=14						

VNDA	**Vanda**	**91.52**	**173**	*e*P	**P**	**08 52 34.0**	**0.0**
	comp=Z,4.4nm,0.8s						
YKA	**Yellowknife Ar**	**92.66**	**24**	P	**P**	**08 52 40.1**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=304,slow=4.4,SNR=7.0						
GEC2	**GERESS Array S**	**95.07**	**322**	*e*P	**P**	**08 52 50.9**	**-0.4**
	comp=Z,3.8nm,1.0s						
GEC2	**GERESS Array S**	**95.07**	**322**	*e*P	**P**	**08 52 50.9**	**-0.4**
GEC2				pmax	pmax		
	comp=Z,4.0nm,1.0s						
GERES	**GERESS Array B**	**95.07**	**322**	P	**P**	**08 52 50.9**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=96,slow=2.7,SNR=6.2						
GERES				LR	LR	09 37 38.8	
	comp=Z,22nm,19.1s,baz=109,slow=37						
GEA0	**GERESS Array S**	**95.07**	**322**	*e*P	**P**	**08 52 50.8**	**-0.5**
YBH	**Yreka Blue Hor**	**97.86**	**45**	LR	LR	09 27 48.0	
	comp=Z,25nm,20.8s,baz=282,slow=30						
DAVOX	**Davos/Dischmat**	**98.28**	**321**	LR	LR	09 42 33.6	
	comp=Z,54nm,18.9s,baz=82,slow=38						
GPMM	**Pine Mountain**	**98.83**	**47**	*e*P	**P**	**08 53 07.6**	**-0.8**
SKG	**Skaggs Springs**	**98.84**	**47**	*e*P	Pdif	08 53 09.6	+1.2
GMKM	**Mount Konoctai**	**98.90**	**47**	*e*P	**P**	**08 53 07.6**	**-1.1**
GRTM	**Round Top Moun**	**98.99**	**47**	*e*P	**Pdif**	**08 53 06.8**	**-2.3**
NHSM	**Mount Saint He**	**99.14**	**47**	*e*P	**Pdif**	**08 53 08.6**	**-1.3**
EKA	**Eskdalemuir Ar**	**100.56**	**333**	P	**Pdif**	**08 53 15.0**	**-0.6**
	comp=Z,0.8nm,0.6s,baz=48,slow=4.2,SNR=3.1						
NVAR	**Mina Array Bea**	**102.31**	**46**	P	**Pdif**	**08 53 25.7**	**+1.6**
	comp=Z,0.1nm,0.4s,baz=255,slow=5.7,SNR=4.0						
H06N1	**SOCORRO T-PHAS**	**116.49**	**62**	T	T	11 05 24.6	
	SNR=18						
LTX	**Lajitas**	**117.36**	**48**	*e*PKPdf	**PKPdf**	**08 58 14.9**	**+0.7**
LTX	**Lajitas**	**117.36**	**48**	*e*PKIKP	**PKPdf**	**08 58 14.9**	**+0.7**
TXAR	**Lajitas Array**	**117.36**	**48**	PKP	**PKPdf**	**08 58 14.9**	**+0.7**
	comp=Z,0.4nm,0.6s,baz=304,slow=1.2,SNR=7.1						
S39A	**Bolivar**	**118.76**	**35**	*e*PKPdf	**PKPdf**	**08 58 16.6**	**0.0**
TORD	**Torodi Ar. Bea**	**119.04**	**292**	PKP	**PKPdf**	**08 58 16.5**	**-1.2**
	comp=Z,0.5nm,0.6s,baz=28,slow=3.5						
TOA1	**Torodi Ar. Sit**	**119.05**	**292**	*e*PKPdf	**PKPdf**	**08 58 16.5**	**-1.2**
JCT	**Junction City**	**119.45**	**45**	*e*PKPdf	**PKPdf**	**08 58 18.0**	**-0.2**
JCT	**Junction City**	**119.45**	**45**	*e*PKIKP	**PKPdf**	**08 58 18.0**	**-0.2**
V40A	**Witts Springs**	**120.38**	**36**	*e*PKPdf	**PKPdf**	**08 58 19.8**	**-0.1**
MIAR	**Mount Ida**	**120.83**	**37**	*e*PKPdf	**PKPdf**	**08 58 19.9**	**-0.7**
MIAR	**Mount Ida**	**120.83**	**37**	*e*PKIKP	**PKPdf**	**08 58 19.9**	**-0.7**
WVT	**Waverly**	**122.87**	**32**	*e*PKPdf	**PKPdf**	**08 58 24.3**	**-0.2**
WVT	**Waverly**	**122.87**	**32**	*e*PKIKP	**PKPdf**	**08 58 24.3**	**-0.2**
KOWA	**Kowa**	**123.61**	**296**	PKP	**PKPdf**	**08 58 25.4**	**-1.0**
	comp=Z,1.6nm,0.6s,baz=58,slow=5.0,SNR=4.3						
TKL	**Tuckaleechee C**	**125.27**	**29**	PKP	**PKPdf**	**08 58 29.9**	**+0.7**
	comp=Z,1.8nm,0.5s,baz=302,slow=9.5,SNR=6.2						
PLCA	**Paso Flores**	**147.87**	**157**	PKPbc	**PKPab**	**08 59 14.3**	**-1.6**
	comp=Z,3.0nm,0.7s,baz=256,slow=3.3,SNR=4.7						
LPAZ	**La Paz**	**166.00**	**110**	PKP	**PKPdf**	**08 59 35.8**	**+1.2**
	comp=Z,2.1nm,0.9s,baz=344,slow=3.4,SNR=6.4						
LPAZ	**La Paz**	**166.00**	**110**	*e*PKPdf	**PKPdf**	**08 59 34.0**	**-0.6**
LPAZ	**La Paz**	**166.00**	**110**	*e*PKIKP	**PKPdf**	**08 59 34.0**	**-0.6**

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*CSEM **25** 08:55:53.7, 32°.50N×6°.68W, h0km, ML2.1*

CNRM 25 08:55:53.7, 32°.50N×6°.68W, h0km, ML2.1, Morocco

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CZD	**Col de Zad**	**1.48**	**68**	P	Pn	08 56 20.5	-1.4
CZD				S	Sn	08 56 43.0	+0.9
OUK	**Oukaimeden**	**1.63**	**219**	P	Pn	08 56 23.2	-0.8
OUK				S	Sg	08 56 48.5	+2.3
MDT	**Midelt**	**1.77**	**79**	P	Pn	08 56 25.4	-0.4
MDT				S	Sg	08 56 50.7	0.0

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*CSEM **25** 08:57:15.7, 38°.28N×22°.20E, h8km, ML1.4/5*

ATH 25 08:57:15.7, 38°.28N×22°.20E, h8km±3km, ML1.4/5, Error ellipse: s-maj=3.8km s-min=0.7km az=237.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
TRAZ	**Trapeza**	**0.11**	**176**	P	Pg	08 57 17.2	-1.0
TRAZ				S	Sg	08 57 20.2	+0.2
TRAZ	**Trapeza**	**0.11**	**176**	P	Pg	08 57 17.0	-1.3
TRAZ				S	Sg	08 57 19.7	-0.4
TRAZ	**Trapeza**	**0.11**	**176**	P	Pg	08 57 17.7	-0.6
TRAZ				S	Sg	08 57 20.2	+0.2
KALE	**Kalithea**	**0.12**	**336**	P	Pg	08 57 18.5	0.0
KALE				AML	AML	08 57 20.7	
	comp=E,490μm,0.2s						
KALE				S	Sg	08 57 20.9	+0.4
KALE				AML	AML	08 57 22.5	
	comp=N,611μm,0.3s						
KALE	**Kalithea**	**0.12**	**336**	P	Pg	08 57 18.1	-0.4
KALE				S	Sg	08 57 20.2	-0.3
KALE				AML	AML	08 57 20.6	
	comp=E,457μm,0.2s						
KALE				AML	AML	08 57 22.4	
	comp=N,611μm,0.3s						
KALE	**Kalithea**	**0.12**	**336**	P	Pg	08 57 18.5	0.0
KALE				S	Sg	08 57 20.7	+0.3
TRIZ	**Trizonia**	**0.13**	**310**	P	Pg	08 57 18.4	-0.2
TRIZ				S	Sg	08 57 20.9	+0.3
TRIZ	**Trizonia**	**0.13**	**310**	P	Pg	08 57 18.1	-0.5
TRIZ				S	Sg	08 57 20.8	+0.1
TRIZ	**Trizonia**	**0.13**	**310**	P	Pg	08 57 18.5	-0.1
TRIZ				S	Sg	08 57 20.9	+0.3
SERG	**Sergoula**	**0.18**	**320**	P	Pg	08 57 19.3	-0.1
SERG				AML	AML	08 57 22.7	
	comp=E,551μm,0.1s						
SERG				AML	AML	08 57 22.7	
	comp=N,689μm,0.2s						
SERG				S	Sg	08 57 23.0	+1.1
SERG	**Sergoula**	**0.18**	**320**	P	Pg	08 57 19.0	-0.4
SERG				AML	AML	08 57 22.7	
	comp=E,551μm,0.1s						
SERG				AML	AML	08 57 22.8	
	comp=N,689μm,0.2s						
SERG				S	Sg	08 57 22.9	+1.0
SERG	**Sergoula**	**0.18**	**320**	P	Pg	08 57 19.3	-0.1
SERG				S	Sg	08 57 22.6	+0.7
LAKA	**Lakka**	**0.18**	**258**	P	Pg	08 57 19.6	+0.2
LAKA				S	Sg	08 57 23.2	+1.3
LAKA	**Lakka**	**0.18**	**258**	P	Pg	08 57 19.2	-0.2
LAKA				S	Sg	08 57 21.8	-0.2
LAKA				AML	AML	08 57 23.4	
	comp=E,102μm,0.3s						
LAKA				AML	AML	08 57 27.3	
	comp=N,97μm,0.3s						
LAKA	**Lakka**	**0.18**	**258**	P	Pg	08 57 19.5	+0.1
LAKA				S	Sg	08 57 22.7	+0.7
KLV	**Kalavryta, Ach**	**0.24**	**190**	P	Pg	08 57 21.1	+0.6
KLV				S	Sg	08 57 25.0	+1.3
KLV				AML	AML	08 57 25.8	
	comp=N,75μm,0.1s						
KLV				AML	AML	08 57 26.0	
	comp=E,63μm,0.1s						
KLV	**Kalavryta, Ach**	**0.24**	**190**	P	Pg	08 57 20.7	+0.3
KLV				S	Sg	08 57 25.4	+1.7
KLV				AML	AML	08 57 25.7	
	comp=N,75μm,0.1s						
KLV				AML	AML	08 57 26.0	
	comp=E,63μm,0.1s						
KLV	**Kalavryta, Ach**	**0.24**	**190**	P	Pg	08 57 20.8	+0.3
KLV				S	Sg	08 57 24.5	+0.8
EFP	**Efpalio**	**0.28**	**303**	P	Pg	08 57 20.9	-0.3
EFP				S	Sg	08 57 26.1	+1.2
EFP	**Efpalio**	**0.28**	**303**	P	Pg	08 57 20.8	-0.4
EFP				AML	AML	08 57 25.9	
	comp=E,142μm,0.3s						
EFP				S	Sg	08 57 26.0	+1.1
EFP				AML	AML	08 57 26.9	
	comp=N,168μm,0.2s						
EFP	**Efpalio**	**0.28**	**303**	P	Pg	08 57 21.1	-0.1
EFP				S	Sg	08 57 25.7	+0.8
DSF	**Desfina**	**0.29**	**62**	P	Pg	08 57 21.8	+0.3
DSF				S	Sb	08 57 26.8	-1.3
DSF				AML	AML	08 57 27.1	
	comp=E,323μm,0.2s						
DSF				AML	AML	08 57 27.6	
	comp=N,415μm,0.1s						
DSF	**Desfina**	**0.29**	**62**	P	Pg	08 57 21.5	0.0
DSF				S	Sb	08 57 27.0	-1.1
DSF				AML	AML	08 57 27.1	
	comp=E,323μm,0.2s						
DSF				AML	AML	08 57 27.5	
	comp=N,415μm,0.1s						
DSF	**Desfina**	**0.29**	**62**	P	Pg	08 57 21.6	+0.2
DSF				S	Sg	08 57 26.2	+0.9
GUR	**Goura**	**0.36**	**162**	P	Pg	08 57 22.6	-0.2
GUR				S	Sg	08 57 28.4	+0.9
GUR	**Goura**	**0.36**	**162**	P	Pg	08 57 21.7	-1.1
GUR				S	Sg	08 57 27.7	+0.2
GUR				AML	AML	08 57 29.0	
	comp=N,114μm,0.3s						
GUR				AML	AML	08 57 29.4	
	comp=E,105μm,0.3s						
GUR	**Goura**	**0.36**	**162**	P	Pg	08 57 22.7	-0.1
GUR				S	Sg	08 57 28.2	+0.7
ANX	**Ano Chora**	**0.38**	**325**	P	Pg	08 57 22.7	-0.6
ANX				S	Sg	08 57 29.3	+1.0
ANX				AML	AML	08 57 29.6	
	comp=N,122μm,0.5s						
ANX				AML	AML	08 57 30.4	
	comp=E,150μm,0.2s						
ANX	**Ano Chora**	**0.38**	**325**	P	Pg	08 57 22.8	-0.5
ANX				S	Sg	08 57 29.6	+1.2
ANX				AML	AML	08 57 30.3	
	comp=E,150μm,0.2s						
ANX				AML	AML	08 57 32.8	
	comp=N,141μm,0.3s						
ANX	**Ano Chora**	**0.38**	**325**	P	Pg	08 57 22.9	-0.4
ANX				S	Sg	08 57 29.0	+0.7
THAL	**Thalero**	**0.44**	**123**	P	Pg	08 57 23.5	-0.7
THAL				S	Sg	08 57 30.1	+0.2
PVO	**Paravola**	**0.63**	**303**	P	Pg	08 57 26.1	-1.8
PVO	**Paravola**	**0.63**	**303**	P	Pg	08 57 27.3	-0.5
PVO	**Paravola**	**0.63**	**303**	P	Pg	08 57 26.9	-0.9
LTK	**Loutraki**	**0.65**	**113**	P	Pb	08 57 29.9	+0.5
EVR	**Evrytania**	**0.71**	**334**	P	Pg	08 57 28.3	-1.1
EVR				S	Sb	08 57 41.0	+0.7
EVR				AML	AML	08 57 41.6	
	comp=N,60μm,0.7s						
EVR				AML	AML	08 57 42.4	
	comp=E,81μm,0.3s						
AGG	**Agios Georgios**	**0.75**	**8**	P	Pg	08 57 29.1	-1.0
AGG				S	Sb	08 57 41.1	-0.3
AGG	**Agios Georgios**	**0.75**	**8**	P	Pg	08 57 28.6	-1.5
AGG				S	Sg	08 57 39.4	-0.5
AGG				AML	AML	08 57 43.0	
	comp=E,74μm,0.3s						
AGG				AML	AML	08 57 44.5	
	comp=N,66μm,0.3s						
AGG	**Agios Georgios**	**0.75**	**8**	P	Pg	08 57 29.5	-0.6
AGG				S	Sb	08 57 40.7	-0.7
PDO	**Prodromos**	**0.86**	**292**	P	Pg	08 57 32.2	0.0
PDO	**Prodromos**	**0.86**	**292**	P	Pg	08 57 32.3	0.0
PDO				S	Sn	08 57 45.9	-1.0
PDO				AML	AML	08 57 47.6	
	comp=N,50μm,0.3s						
PDO				AML	AML	08 57 50.8	
	comp=E,34μm,0.5s						
PDO	**Prodromos**	**0.86**	**292**	P	Pg	08 57 32.1	-0.2
DID	**Didima**	**1.12**	**133**	P	Pn	08 57 39.1	+1.4
DID				S	Sn	08 57 54.6	+1.2

IDC 25 09:13:37.3±2.6, 3°.76N×93°.57E, h0km, mb3.5/4, mb1 3.8/5, mb1mx3.5/63, mbtmp3.6/5, MS3.2/1, Ms1 3.2/1, ms1mx2.5/48, Error ellipse: s-maj=107.5km s-min=22.9km az=59.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**15.53**	**19**	Pn	Pn	09 17 16.6	-1.1
	baz=216,slow=15,SNR=2.5						
AAK	**Ala-Archa**	**42.28**	**339**	LR	LR	09 40 56.8	
	comp=Z,29nm,18.3s,baz=150,slow=39						
H01W3	**Cape Leeuwin H**	**43.02**	**155**	T	T	10 07 09.3	
	baz=330						
H01W2	**Cape Leeuwin H**	**43.04**	**155**	T	T	10 07 12.6	
	baz=330						
H01W1	**Cape Leeuwin H**	**43.04**	**155**	T	T	10 07 11.7	
	baz=330,SNR=2.5						
MKAR	**Makanchi Array**	**43.98**	**349**	P	P	09 21 46.6	+0.3
	0.8nm,0.8s,baz=158,slow=9.5,SNR=6.7						
WRA	**Warramunga Arr**	**46.45**	**122**	P	P	09 22 06.8	+0.4
	0.7nm,0.8s,baz=297,slow=8.7,SNR=6.6						
ASAR	**Alice Springs**	**47.82**	**127**	P	P	09 22 16.4	-0.6
	0.1nm,0.4s,baz=292,slow=7.1,SNR=4.0						
KURBB	**Kurchatov Arra**	**48.40**	**347**	P	P	09 22 20.7	-0.3
	0.3nm,0.3s,baz=163,slow=6.8,SNR=3.2						

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*ISCJB **25** 09:14:58.4±0.5, 50°.17N±0°.03×18°.93E±0°.03, h0km, Error ellipse: s-maj=4.2km s-min=2.9km az=2.9*

*CSEM **25** 09:14:58.5±0.4, 50°.23N×19°.00E, h2km, ML2.7/9, Error ellipse: s-maj=8.5km s-min=3.8km az=10.0*

*IPEC **25** 09:14:59.1±0.1, 50°.21N×19°.05E, h2km±1km, ML1.8/3, Error ellipse: s-maj=2.7km s-min=0.8km az=166.0*

*PRU **25** 09:14:59.0, 50°.25N×19°.00E, h0km*

ISC 25 09:14:59.0±0.8, 50°.15N±0°.03×19°.02E±0°.02, h0km, n33, σ1s15/56, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
CHZP	**Chorzow**	**0.14**	**352**	*e*Pg	**Pg**	**09 15 02.1**	**+0.4**
CHZP				*e*Sg	**Sg**	**09 15 03.9**	**+0.4**
OJC	**Ojcow**	**0.50**	**82**	*e*Pg	**Pg**	**09 15 08.2**	**-0.4**
OJC				*e*Sg	**Sg**	**09 15 14.8**	**-0.3**
OJC	**Ojcow**	**0.50**	**82**	*e*Pg	**Pg**	**09 15 08.2**	**-0.4**
OJC				*e*Sg	**Sg**	**09 15 14.8**	**-0.3**
OKC	**Ostrava-Krasne**	**0.65**	**241**	*e*SG	**Sb**	**09 15 23.0**	**+0.3**
	comp=Z,11nm,0.4s						
OKC	**Ostrava-Krasne**	**0.65**	**241**	Sg	**Sb**	**09 15 23.0**	**+0.3**
	11nm,0.4s						
MORC	**Moravsky Berou**	**1.03**	**249**	*e*Pg	**Pb**	**09 15 19.6**	**-0.1**
MORC				*e*Sg	**Sg**	**09 15 32.4**	**+0.5**
	22nm,0.3s						
MORC	**Moravsky Berou**	**1.03**	**249**	*e*PG	**Pb**	**09 15 19.6**	**-0.1**
MORC				*e*SG	**Sg**	**09 15 32.5**	**+0.5**
MORC	**Moravsky Berou**	**1.03**	**249**	*e*Pg	**Pb**	**09 15 19.6**	**-0.1**
	baz=66						
MORC				*e*Sg	**Sg**	**09 15 32.4**	**+0.5**
	22nm,0.3s,baz=66						
LANS	**Liptovska Anna**	**1.04**	**164**	*e*PG	**Pb**	**09 15 20.2**	**+0.3**
LANS				*e*SG	**Sb**	**09 15 34.8**	**+0.6**
LANS	**Liptovska Anna**	**1.04**	**164**	*e*Pg	**Pb**	**09 15 20.2**	**+0.3**
LANS				*e*Sg	**Sb**	**09 15 34.8**	**+0.6**
NIE	**Niedzica**	**1.11**	**131**	*e*Pg	**Pn**	**09 15 21.6**	**-0.2**
NIE				*e*Sg	**Sn**	**09 15 37.9**	**+0.2**
NIE	**Niedzica**	**1.11**	**131**	*e*Pg	**Pn**	**09 15 21.6**	**-0.2**
NIE				*e*Sg	**Sn**	**09 15 37.9**	**+0.2**
KRLC	**Kraliky**	**1.45**	**268**	*e*PG	**Pn**	**09 15 26.2**	**-0.2**
KRLC				*e*SG	**Sb**	**09 15 45.6**	**-0.1**
	comp=Z,4.0nm,0.3s						
KRLC	**Kraliky**	**1.45**	**268**	Pg	**Pn**	**09 15 26.2**	**-0.2**
KRLC				Sg	**Sb**	**09 15 45.6**	**-0.1**
	4.0nm,0.3s						
VYHS	**Vyhne**	**1.67**	**184**	*e*PG	**Pn**	**09 15 29.5**	**+0.1**
VYHS				*e*SG	**Sn**	**09 15 52.1**	**+0.6**
VYHS				*e*LG	Lg	09 15 55.4	
VYHS	**Vyhne**	**1.67**	**184**	*e*Pg	**Pn**	**09 15 29.6**	**+0.1**
VYHS				*e*Sn	**Sn**	**09 15 52.1**	**+0.6**
DPC	**Dobruska-Polom**	**1.75**	**278**	*e*PG	**Pn**	**09 15 30.6**	**+0.1**
DPC				*e*SG	**Sb**	**09 15 54.3**	**0.0**
	comp=Z,11nm,0.3s						
DPC	**Dobruska-Polom**	**1.75**	**278**	Pg	**Pn**	**09 15 30.6**	**+0.1**
DPC				Sg	**Sb**	**09 15 54.3**	**0.0**
	11nm,0.3s						
VRAC	**Vranov**	**1.79**	**243**	*e*Pn	**Pn**	**09 15 31.5**	**+0.4**
VRAC				*e*Sg	**Sg**	**09 15 56.5**	**+0.1**
	8.8nm,0.4s						
VRAC	**Vranov**	**1.79**	**243**	*e*PN	**Pn**	**09 15 31.6**	**+0.4**
VRAC				*e*SG	**Sg**	**09 15 56.5**	**+0.1**
VRAC	**Vranov**	**1.79**	**243**	*e*Pn	**Pn**	**09 15 31.5**	**+0.4**
	baz=60						
VRAC				*e*Sg	**Sg**	**09 15 56.5**	**+0.1**
	8.8nm,0.4s,baz=60						
SMOL	**Smolenice**	**1.94**	**213**	*e*SN	**Sn**	**09 15 52.1**	**-6.2**
UPC	**Upice**	**1.96**	**282**	*e*SG	**Sb**	**09 16 00.2**	**-0.4**
	comp=Z,7.9nm,0.5s						
UPC	**Upice**	**1.96**	**282**	Sg	**Sb**	**09 16 00.2**	**-0.4**
	7.9nm,0.5s						
KRUC	**Moravsky**	**2.03**	**238**	*e*Pn	**Pn**	**09 15 34.8**	**+0.4**
KRUC				*e*Sg	**Sg**	**09 16 03.8**	**-0.3**
	2.9nm,0.3s						
KRUC	**Moravsky**	**2.03**	**238**	*e*PN	**Pn**	**09 15 34.8**	**+0.4**
KRUC				*e*SG	**Sg**	**09 16 03.9**	**-0.2**
KRUC	**Moravsky**	**2.03**	**238**	*e*Pn	**Pn**	**09 15 34.8**	**+0.4**
	baz=55						
KRUC				*e*Sg	**Sg**	**09 16 03.8**	**-0.3**
	2.9nm,0.3s,baz=55						
GOPC	**GO Pecny, Ondr**	**2.74**	**267**	*e*SG	**Sg**	**09 16 25.3**	**-1.7**
	comp=Z,5.8nm,0.3s						
GOPC	**GO Pecny, Ondr**	**2.74**	**267**	Sg	**Sg**	**09 16 25.3**	**-1.7**
	5.8nm,0.3s						
PRU	**Pruhonice**	**2.89**	**268**	*e*SG	**Sb**	**09 16 29.1**	**+1.8**
	comp=Z,3.3nm,0.3s						
PRU	**Pruhonice**	**2.89**	**268**	Sg	**Sb**	**09 16 29.1**	**+1.8**
	3.3nm,0.3s						
KHC	**Kasperske Hory**	**3.68**	**256**	*e*SN	**Sn**	**09 16 41.4**	**+0.1**
KHC				*e*SG	**Sb**	**09 16 53.7**	**+3.6**
	comp=Z,3.2nm,0.3s						
KHC	**Kasperske Hory**	**3.68**	**256**	Sn	**Sn**	**09 16 41.4**	**+0.1**

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*JMA **25** 09:17:35.7±0.1, 23°.38N×121°.71E, h38km±4km, M3.0*

*TAP **25** 09:17:35.8, 23°.41N×121°.63E, h41km, ML3.4, B*

ISC 25 09:17:35.4±1.0, 23°.41N±0°.02×121°.66E±0°.02, h28km±11km, n97, σ0s61/186, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
YULB	**Yu-li**	**0.33**	**268**	*e*S	**Sn**	**09 17 50.9**	**+0.7**
	baz=266						
TWF1	**Yuli**	**0.34**	**261**	*e*P	**Pn**	**09 17 44.5**	**+0.1**
	baz=258						
TWF1				*e*S	**Sn**	**09 17 50.9**	**+0.6**
	baz=258						
EGFH	**Guangfu**	**0.34**	**321**	*e*P	**Pn**	**09 17 44.7**	**+0.3**
	baz=324						
EGFH				*e*S	**Sn**	**09 17 50.9**	**+0.6**
	baz=324						
FULB	**Fuli**	**0.39**	**239**	*e*P	**Pn**	**09 17 46.0**	**+0.8**
	baz=235						
FULB				*e*S	**Sn**	**09 17 53.5**	**+1.8**
	baz=235						
CHKT	**Chengkung**	**0.41**	**222**	*e*P	**Pn**	**09 17 45.6**	**+0.3**
	baz=216						
CHKT				*e*S	**Sn**	**09 17 52.6**	**+0.6**
	baz=216						
ESL	**Shilin**	**0.46**	**333**	P	**Pn**	**09 17 46.2**	**+0.1**
	baz=337						
ESL				S	**Sn**	**09 17 53.6**	**+0.2**
	baz=337						
ENLB	**Shoufeng**	**0.50**	**354**	*e*P	**Pn**	**09 17 47.0**	**+0.3**
	baz=357						
ENLB				*e*S	**Sn**	**09 17 55.2**	**+0.8**
	baz=357						
HWA	**Hwalien**	**0.57**	**355**	*e*P	**Pn**	**09 17 48.1**	**+0.5**
	baz=358						
HWA				*e*S	**Sn**	**09 17 56.9**	**+0.7**
	baz=358						
ELDTW	**Lidau**	**0.63**	**250**	*e*P	**Pn**	**09 17 48.4**	**-0.1**
	baz=248						
ELDTW				*e*S	**Sb**	**09 17 57.4**	**+1.0**
	baz=248						
YUS	**Yu-Shan**	**0.65**	**278**	*e*P	**Pn**	**09 17 49.5**	**+0.3**
	baz=276						
YUS				*e*S	**Sb**	**09 17 58.0**	**+0.4**
	baz=276						
TWD	**Chiawan**	**0.67**	**355**	P	**Pn**	**09 17 49.3**	**+0.2**
	baz=358						
TWD				*e*S	**Sn**	**09 17 59.5**	**+0.8**
	baz=358						
TWH	**Lutao**	**0.71**	**194**	*e*P	**Pn**	**09 17 50.1**	**+0.6**
	baz=190						
TWH				*e*S	**Sn**	**09 18 00.4**	**+0.8**
	baz=190						
SSLB	**Suanglung**	**0.75**	**301**	*e*P	**Pb**	**09 17 50.1**	**+0.2**
	baz=301						
SSLB				*e*S	**Sn**	**09 18 01.3**	**+0.7**
	baz=301						
NACB	**Ninganchiao**	**0.77**	**356**	*e*P	**Pn**	**09 17 50.4**	**0.0**
	baz=357						
NACB				*e*S	**Sn**	**09 18 01.3**	**+0.3**
	baz=357						
CHGB	**Renai**	**0.79**	**326**	*e*P	**Pb**	**09 17 50.8**	**+0.1**
	baz=327						
CHGB				*e*S	**Sb**	**09 18 01.7**	**+0.6**
	baz=327						
TWGBT	**Beinan**	**0.79**	**222**	*e*P	**Pn**	**09 17 50.9**	**+0.3**
	baz=220						
TWGBT				*e*S	**Sn**	**09 18 01.9**	**+0.3**
	baz=220						
TWG	**Pinlang**	**0.79**	**223**	*i* P	**Pn**	**09 17 50.9**	**+0.2**
	baz=220						
TWG				*i* S	**Sn**	**09 18 01.9**	**+0.2**
	baz=220						
TTN	**Taitung**	**0.80**	**216**	*e*P	**Pn**	**09 17 51.1**	**+0.3**
	baz=213						
TTN				*e*S	**Sn**	**09 18 02.5**	**+0.7**
	baz=213						
WHF	**Hehuan Shan**	**0.82**	**334**	P	**Pb**	**09 17 51.5**	**+0.1**
	baz=336						
WHF				S	**Sb**	**09 18 02.5**	**+0.3**
	baz=336						
SMLT	**Sun Moon Lake**	**0.84**	**305**	*e*P	**Pn**	**09 17 51.9**	**+0.4**
	baz=305						
SMLT				*e*S	**Sb**	**09 18 02.9**	**+0.3**
	baz=305						
STYT	**Tauyuan**	**0.86**	**254**	*e*P	**Pb**	**09 17 51.6**	**-0.2**
	baz=252						
STYT				*e*S	**Sb**	**09 18 03.2**	**+0.1**
	baz=252						
TYC	**Yuchr**	**0.89**	**304**	*e*P	**Pb**	**09 17 51.9**	**-0.3**
	baz=305						
TYC				*e*S	**Sb**	**09 18 03.7**	**+0.1**
	baz=305						
CHN5	**Tsauling**	**0.92**	**282**	*e*P	**Pb**	**09 17 52.4**	**-0.4**
	baz=282						
CHN5				*e*S	**Sb**	**09 18 04.7**	**0.0**
	baz=282						
WJS	**Zhushan**	**0.95**	**296**	*e*P	**Pb**	**09 17 53.0**	**-0.2**
	baz=296						
WJS				*e*S	**Sb**	**09 18 05.3**	**-0.1**
	baz=296						
TPUB	**Ta-pu**	**0.95**	**264**	*e*P	**Pb**	**09 17 52.9**	**-0.3**
	baz=263						
TPUB				*e*S	**Sb**	**09 18 05.4**	**-0.1**
	baz=263						
TWT	**Tachien**	**0.95**	**332**	*e*P	**Pn**	**09 17 53.4**	**+0.3**
	baz=333						
TWT				S	**Sb**	**09 18 05.7**	**0.0**
	baz=333						
TDCB	**Techi**	**0.96**	**332**	*e*P	**Pn**	**09 17 53.5**	**+0.3**
	baz=333						
TDCB				*e*S	**Sb**	**09 18 05.8**	**-0.1**
	baz=333						
WTP	**Ta-pu**	**0.97**	**261**	*e*P	**Pn**	**09 17 53.4**	**+0.2**
	baz=259						
WTP				*e*S	**Sb**	**09 18 05.9**	**-0.3**
	baz=259						
WNT	**Mingjian**	**1.01**	**298**	*e*P	**Pn**	**09 17 53.5**	**-0.2**
	baz=298						
WNT				*e*S	**Sb**	**09 18 06.2**	**-0.9**
	baz=298						
SLGT	**Liugui**	**1.02**	**246**	*e*P	**Pn**	**09 17 54.2**	**+0.4**
	baz=245						
SLGT				*e*S	**Sb**	**09 18 07.4**	**0.0**
	baz=245						
ENA	**Nanau**	**1.02**	**4**	P	**Pb**	**09 17 54.2**	**-0.3**
	baz=6.0						
ENA				S	**Sn**	**09 18 08.4**	**+1.2**
	baz=6.0						
NANB	**Nanao**	**1.02**	**5**	*e*P	**Pb**	**09 17 54.2**	**-0.2**
	baz=6.0						
NANB				*e*S	**Sn**	**09 18 08.4**	**+1.1**
	baz=6.0						
SGST	**Jiashian**	**1.04**	**252**	*e*P	**Pn**	**09 17 54.2**	**+0.1**
	baz=250						
SGST				*e*S	**Sb**	**09 18 07.9**	**-0.1**
	baz=250						
WGK	**Gukeng**	**1.04**	**286**	*e*P	**Pn**	**09 17 54.4**	**+0.2**
	baz=285						
WGK				*e*S	**Sb**	**09 18 07.9**	**-0.2**
	baz=285						
ENAH	**Nanao**	**1.05**	**8**	*e*P	**Pb**	**09 17 54.8**	**-0.1**
	baz=9.0						
ENAH				*e*S	**Sn**	**09 18 08.9**	**+0.9**
	baz=9.0						
NNSB	**Datong**	**1.05**	**346**	*e*P	**Pb**	**09 17 54.8**	**-0.2**
	baz=347						
NNSB				*e*S	**Sb**	**09 18 08.4**	**0.0**
	baz=347						
NNSH	**Datong**	**1.05**	**346**	P	**Pb**	**09 17 54.7**	**-0.3**
	baz=347						
NNSH				S	**Sb**	**09 18 08.3**	**-0.2**
	baz=347						

CHN1	Nanshi	1.06	258	eP	Pn	09 17 54.8	+0.4
	baz=257						
CHN1				eS	Sb	09 18 07.1	-1.6
	baz=257						
NNS	Nan Shan	1.06	346	eP	Pn	09 17 54.7	+0.1
	baz=347						
NNS				eS	Sb	09 18 08.6	-0.3
	baz=347						
WDLH	Douliu	1.07	286	eP	Pn	09 17 54.6	+0.2
	baz=285						
WDLH				eS	Sb	09 18 08.4	-0.4
	baz=285						
TWK	Hsinying	1.08	263	eP	Pn	09 17 54.8	+0.1
	baz=262						
TWK				eS	Sb	09 18 09.1	-0.3
	baz=262						
CHY	Chiayi	1.14	275	eP	Pn	09 17 55.3	-0.1
	baz=274						
CHY				eS	Sn	09 18 10.5	+0.4
	baz=274						
SSD	Sandimen	1.15	235	eP	Pn	09 17 56.1	+0.5
	baz=233						
SSD				eS	Sn	09 18 10.4	0.0
	baz=233						
TCU	Taichung	1.17	310	eP	Pn	09 17 56.0	+0.2
	baz=310						
TCU				eS	Sn	09 18 10.2	-0.5
	baz=310						
WCHH	Zhanghua	1.21	304	eP	Pn	09 17 56.8	+0.3
	baz=304						
WCHH				eS	Sn	09 18 12.1	+0.2
	baz=304						
TWC	Suao	1.21	8	eP	Pb	09 17 57.2	-0.5
	baz=10.0						
TWC				eS	Sb	09 18 12.7	-0.3
	baz=10.0						
EOS1	EOS1	1.22	21	P	Pb	09 17 57.3	-0.4
	baz=22						
EOS1				S	Sb	09 18 13.2	+0.1
	baz=22						
MASBT	Mashibuluo	1.23	230	eP	Pn	09 17 57.4	+0.7
	baz=228						
MASBT				eS	Sn	09 18 12.8	+0.3
	baz=228						
ENTT	Nioudou	1.23	356	P	Pb	09 17 57.4	-0.6
	baz=357						
ENTT				S	Sn	09 18 13.1	+0.6
	baz=357						
WLGB	Puzi	1.25	274	eP	Pn	09 17 57.5	+0.5
	baz=273						
WLGB				eS	Sn	09 18 12.5	-0.3
	baz=273						
EAST	Anshuo	1.26	216	eP	Pb	09 17 57.9	-0.6
	baz=214						
EAST				eS	Sn	09 18 13.6	+0.3
	baz=214						
SGLT	Jiouru	1.27	238	eS	Sn	09 18 13.4	0.0
	baz=236						
TWM1	Shoushan	1.28	243	eP	Pb	09 17 58.5	-0.2
	baz=241						
TWM1				eS	Sn	09 18 13.2	-0.4
	baz=241						
YHNB	Yeheng	1.28	348	eP	Pn	09 17 58.0	+0.5
	baz=349						
YHNB				eS	Sn	09 18 14.4	+0.5
	baz=349						
RLNB	Erlin	1.29	292	eP	Pb	09 17 58.8	-0.1
	baz=292						
RLNB				eS	Sn	09 18 13.9	+0.2
	baz=292						
NSK	Sanguang	1.29	348	eP	Pn	09 17 58.3	+0.6
	baz=349						
NSK				eS	Sn	09 18 14.3	+0.2
	baz=349						
NSY	Sanyi	1.30	321	eP	Pn	09 17 57.9	+0.2
	baz=321						
NSY				eS	Sn	09 18 14.2	0.0
	baz=321						
TWE	Neicheng	1.31	0	eP	Pn	09 17 58.5	+0.7
	baz=2.0						
TWE				eS	Sn	09 18 15.2	+0.8
	baz=2.0						
CHN8	Yiju	1.33	268	eP	Pn	09 17 58.2	+0.1
	baz=267						
CHN8				eS	Sn	09 18 14.7	-0.2
	baz=267						
WSF	Szhu	1.34	280	eS	Sn	09 18 15.0	-0.1
	baz=279						
WTCT	Ta-ch'eng	1.34	290	eS	Sn	09 18 14.8	-0.3
	baz=290						
PTSB	Yuanli	1.35	320	eP	Pn	09 17 58.6	+0.1
	baz=320						
PTSB				eS	Sn	09 18 16.0	+0.5
	baz=320						
NSTT	Nanjuang	1.36	334	eP	Pn	09 17 58.9	+0.4
	baz=335						
NSTT				eS	Sn	09 18 15.8	+0.2
	baz=335						
LAY	Lan-yu	1.36	184	eP	Pn	09 17 59.0	+0.4
	baz=182						
LAY				eS	Sb	09 18 16.4	-0.9
	baz=182						
LIOB	Emei	1.37	335	eP	Pn	09 17 59.0	+0.4
	baz=335						
LIOB				eS	Sn	09 18 16.2	+0.4
	baz=335						
NWLT	Wulai	1.37	354	eP	Pb	09 17 59.6	-0.8
	baz=355						
NWLT				eS	Sn	09 18 16.5	+0.5
	baz=355						
NMLH	Miaoli	1.38	325	eP	Pn	09 17 59.4	+0.6
	baz=325						
NMLH				eS	Sn	09 18 16.4	+0.3
	baz=325						
SCZT	Fangliau	1.41	223	eP	Pn	09 17 59.1	0.0
	baz=221						
SCZT				eS	Sn	09 18 17.4	+0.7
	baz=221						
NTC	Toucheng	1.45	6	eP	Pn	09 18 00.6	+0.8
	baz=7.0						
NTC				eS	Sb	09 18 19.2	-0.6
	baz=7.0						
EGS		1.46	10	eP	Pb	09 18 00.7	-1.1
	baz=11						
EGS				eS	Sb	09 18 19.2	-0.7
	baz=11						
TIPB	Shuangxi	1.57	6	eP	Pn	09 18 02.2	+0.8
	baz=6.0						
TIPB				eS	Sn	09 18 21.3	+0.5
	baz=6.0						
TWA	Mucha	1.57	358	eS	Sn	09 18 21.4	+0.6
	baz=358						
TATO	Taipei	1.57	354	eS	Sn	09 18 21.0	+0.2
	baz=355						
JYNG	Yonagunijimaku	1.57	48	P	Pb	09 18 02.7	-1.1
JYNG				eS	Sb	09 18 22.0	-1.3
TWB1	Santiao Chiao	1.62	11	eP	Pn	09 18 03.0	+0.9
	baz=12						
TWB1				eS	Sn	09 18 22.8	+0.6
	baz=12						
YOJ	Yonaguni jima	1.62	49	eP	Pb	09 18 03.2	-1.5
	baz=50						
YOJ				eS	Sb	09 18 23.2	-1.5
	baz=50						
YOJ	Yonaguni jima	1.62	49	P	Pb	09 18 03.5	-1.2
YOJ				eS	Sb	09 18 23.2	-1.5
HEN	Hengchun	1.63	212	eP	Pn	09 18 02.8	+0.5
	baz=210						
HEN				eS	Sn	09 18 23.1	+0.8
	baz=210						
NWF	Wu-fen Shan	1.66	4	eP	Pn	09 18 03.3	+0.6
	baz=4.0						
NWF				eS	Sn	09 18 23.8	+0.6
	baz=4.0						
WFSB	Wu-fen Shan	1.66	4	eP	Pn	09 18 03.3	+0.6
	baz=4.0						
WFSB				eS	Sn	09 18 24.3	+1.2
	baz=4.0						
YM04	YM04	1.75	356	eP	Pn	09 18 04.8	+0.9
	baz=357						
YM04				eS	Sn	09 18 25.4	+0.3
	baz=357						
YM07	YM07	1.76	359	eP	Pn	09 18 04.8	+0.7
	baz=359						
YM07				eS	Sn	09 18 26.1	+0.5
	baz=359						
YM08	YM08	1.78	358	eP	Pn	09 18 04.4	+0.1
	baz=358						
YM08				eS	Sn	09 18 26.1	+0.2
	baz=358						
WDGT	Dungji	1.84	266	P	Pn	09 18 05.5	+0.4
	baz=265						
WDGT				S	Sn	09 18 27.2	-0.3
	baz=265						
PHUB	P'eng-hu	1.92	274	eP	Pn	09 18 06.5	+0.3
	baz=273						
PHUB				S	Sn	09 18 29.3	-0.1
	baz=273						
PNG	Penghu	1.94	275	P	Pn	09 18 07.2	+0.7
	baz=274						
PNG				S	Sn	09 18 29.3	-0.6
	baz=274						
VCHM	Qimei	2.06	265	eP	Pn	09 18 08.8	+0.7
	baz=264						
VCHM				eS	Sn	09 18 32.4	-0.5
	baz=264						
HATJ	Hateruma jima	2.07	71	P	Pn	09 18 09.5	+1.2
HATJ				S	Sn	09 18 33.8	+0.6
IRIF	Iriomote-Funau	2.11	64	P	Pn	09 18 09.8	+1.0
JKRS	Kuro-shima	2.31	68	P	Pn	09 18 13.2	+1.7
JKRS				S	Sn	09 18 40.1	+1.1
JIJ	Ishigaki jima	2.47	67	P	Pn	09 18 14.8	+1.1
JIJ				S	Sn	09 18 42.5	-0.4
VWUC	VWUC	2.56	309	eP	Pn	09 18 15.4	+0.4
	baz=308						
VWUC				eS	Sn	09 18 44.5	-0.7
	baz=308						
JISG	Ishigakijimahi	2.70	64	P	Pn	09 18 17.6	+0.7
JISG				S	Sn	09 18 47.8	-0.8
JTJ	Tarama	3.04	66	P	Pn	09 18 22.7	+1.1
JTJ				eS	Sn	09 18 57.8	+0.7
MATB	Ma-tsu	3.15	331	eP	Pn	09 18 23.5	+0.4
	baz=330						
MATB				eS	Sn	09 18 58.8	-0.9
	baz=330						
KNMB	Chin-men Tao	3.17	290	eP	Pn	09 18 23.5	0.0
	baz=289						
KNMB				eS	Sn	09 18 59.3	-1.1
	baz=289						
JIRB	Irabujima	3.51	65	eS	Sn	09 19 09.0	+0.3

IDC 25 09:26:32.0±2.1, 15°.14S×175°.17W, h244^{km}±43^{km}, mb3.3/3, mb1 3.5/4, mb1mx3.0/47, mbtmp3.9/4, Error ellipse: s-maj=140.8km s-min=25.0km az=145.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	3.51	70	P	Pn	09 27 29.5	-0.4
	7.3nm,0.3s,baz=106,slow=17,SNR=7.8						
AFI				S	S	09 28 16.3	+0.6
	6.2nm,0.3s,baz=83,slow=21,SNR=4.5						
WRA	Warramunga Arr	48.24	257	P	P	09 34 48.4	-0.4
	0.7nm,0.7s,baz=88,slow=7.0,SNR=14						
WRA				PcP	PcP	09 36 11.6	-0.4
	0.2nm,0.6s,baz=93,slow=3.6,SNR=3.5						
ASAR	Alice Springs	48.56	252	P	P	09 34 51.5	+0.2
	5.0nm,0.6s,baz=87,slow=8.2,SNR=59						
ILAR	Eielson Array	82.53	12	P	P	09 38 27.1	0.0
	0.1nm,0.4s,baz=217,slow=6.4,SNR=4.1						

IDC 25 09:58:46.3±7.5, 17°.53S×177°.27W, h0^{km}, mb3.9/3, mb1 4.2/3, mb1mx3.5/48, mbtmp3.9/3, Error ellipse: s-maj=329.3km s-min=36.9km az=142.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	45.77	259	P	P	10 07 09.3	-0.6
	0.4nm,0.5s,baz=95,slow=8.4,SNR=21						
ASAR	Alice Springs	45.94	254	P	P	10 07 11.7	+0.4
	3.2nm,0.5s,baz=86,slow=8.1,SNR=56						
ILAR	Eielson Array	85.28	13	P	P	10 11 24.6	0.0
	0.2nm,0.4s,baz=206,slow=3.9,SNR=5.4						

IDC 25 10:03:39.0±3.2, 17°.32S×177°.05W, h0^{km}, mb3.7/4, mb1 4.0/4, mb1mx3.5/46, mbtmp3.7/4, Error ellipse: s-maj=149.4km s-min=32.1km az=139.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	40.05	241	P	P	10 11 15.4	-0.8
	1.4nm,0.9s,baz=59,slow=12,SNR=2.0						
WRA	Warramunga Arr	46.02	259	P	P	10 12 04.8	+0.1
	0.6nm,0.4s,baz=97,slow=7.6,SNR=28						
WRA				PcP	PcP	10 13 42.8	+1.4
	0.4nm,1.0s,baz=90,slow=3.5,SNR=2.5						
ASAR	Alice Springs	46.20	254	P	P	10 12 05.7	-0.5
	0.7nm,0.4s,baz=87,slow=8.6,SNR=19						
ILAR	Eielson Array	85.03	12	P	P	10 16 15.4	-0.6
	0.3nm,0.9s,baz=224,slow=3.8,SNR=2.6						

IDC 25 10:04:15.9±55.0, 18°.46S×179°.71E, h0^{km}, mb4.1/3, mb1 4.2/3, mb1mx3.5/43, mbtmp4.1/3, 1D, Error ellipse: s-maj=990.3km s-min=140.2km az=79.0, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	36.79	241	P	P	10 11 25.9	+0.3
	9.0nm,1.4s,baz=90,slow=10,SNR=3.5						
WRA	Warramunga Arr	42.77	260	P	P	10 12 15.6	+0.1
	0.6nm,0.4s,baz=96,slow=7.6,SNR=16						
ASAR	Alice Springs	42.92	255	P	P	10 12 16.0	-0.7
	1.0nm,0.5s,baz=87,slow=8.6,SNR=13						
SYO	Syowa Base	88.21	193⇓	eP	P	10 17 04.4	-4.2

TEH 25 10:04:16.8, 29°.12N×58°.23E, h10^{km}, ML3.3, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHMN	Cheshme madani	0.96	321	ePg	Pn	10 04 36.4	-0.3
CHMN				eSg	Sn	10 04 51.1	+0.5
CHMN				e		10 04 51.8	
	comp=N,99nm,0.1s						
CHMN				e		10 04 52.1	
	comp=Z,99nm,0.1s						
CHMN				e		10 04 52.3	
	comp=E,99nm,0.1s						
NGRK	Negar Kerman	1.41	292	ePn	Pg	10 04 44.1	+0.1
NGRK				e		10 05 05.7	
	comp=N,99nm,0.1s						
NGRK				e		10 05 06.5	
	comp=E,99nm,0.1s						
NGRK				e		10 05 06.6	
	comp=Z,99nm,0.1s						
TVBK	TV Kerman	1.55	304	ePn	Pg	10 04 47.2	+0.7
TVBK				eSg	Sg	10 05 10.2	+3.6
TVBK				e		10 05 12.7	
	comp=Z,99nm,0.1s						
TVBK				e		10 05 12.9	
	comp=E,99nm,0.1s						
TVBK				e		10 05 13.2	
	comp=N,99nm,0.1s						
KHGB	Koh Gabri	1.98	310	ePn	Pg	10 04 54.0	-0.7
KHGB				e		10 05 25.4	
	comp=E,99nm,0.1s						
KHGB				e		10 05 25.5	
	comp=Z,99nm,0.1s						
KHGB				e		10 05 26.5	
	comp=N,99nm,0.1s						
NIAN	Nian	1.98	219	ePn	Pb	10 04 53.5	+0.5
NIAN				e		10 05 24.5	
	comp=Z,99nm,0.2s						
NIAN				e		10 05 28.5	
	comp=E,99nm,0.3s						
NIAN				e		10 05 28.8	
	comp=N,99nm,0.1s						

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*BJI **25** 10:09:48.0, 5°.32N×127°.29E, h106^{km}, mb4.8/32, mB4.8/22*
*MAN **25** 10:09:50.1, 5°.60N×127°.22E, h62^{km}, mb5.2, ML4.2, MS4.3*
*ISCJB **25** 10:09:51.2±0.4, 5°.63N±0°.02×127°.10E±0°.04, h110^{km}±4^{km}, mb4.6/67, Error ellipse: s-maj=7.3km s-min=3.4km az=163.6*
*MOS **25** 10:09:52.5±0.9, 5°.59N×127°.09E, h125^{km}, mb4.8/27, Error ellipse: s-maj=16.1km s-min=6.5km az=113.7*
*IDC **25** 10:09:52.9±1.2, 5°.57N×126°.99E, h112^{km}±9^{km}, mb4.2/26, mb1 4.2/27, mb1mx4.1/53, mbtmp4.5/27, MS2.8/8, Ms1 2.8/8, ms1mx2.7/47, Error ellipse: s-maj=15.6km s-min=10.2km az=73.0*
*DJA **25** 10:09:53.0±1.2, 6°N±4°×12°7E±°, h26^{km}±10^{km}, M4.9/11, mb5.0/11, mB5.3/7, MLv5.1/10, Mw(mB)4.7/7*
*NEIC **25** 10:09:54.1±0.7, 5°.63N×127°.10E, h124^{km}±6^{km}, mb4.5/20, Error ellipse: s-maj=8.0km s-min=4.5km az=74.0*

ISC 25 10:09:52.7±0.6, 5°.61N±0°.04×127°.13E±0°.06, h110^{km}±5^{km}, n150, σ1°.50/175, mb4.7/67, 8C-8D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	1.49	289	eP	Pn	10 10 17.5	-2.0
DDMP				eS	Sn	10 10 36.8	-3.0
DAV	Davao City (W)	2.12	313	P	Pn	10 10 26.4	-0.8
	219nm,0.3s,baz=72,slow=1.3,SNR=23						
DAV				LR	LR	10 10 44.1	
	comp=Z,57nm,21.7s,baz=146,slow=25						
DAV				S	Sn	10 10 53.0	-0.6
	98nm,0.3s,baz=275,slow=21,SNR=11						
DAV	Davao City (W)	2.12	313	ePn	Pn	10 10 27.9	+0.6
DAV				eSn	Sn	10 10 55.0	+1.4
DMPH	Davao City--Mi	2.18	312⇑	eP	Pn	10 10 23.4	-4.6
DMPH				i S	Sn	10 11 01.9	+6.9
GSPH	General Santos	2.22	282⇓	iP	Pn	10 10 23.3	-5.4
GSPH				i S	Sn	10 10 51.3	-4.9
BIPH	Bislig	2.67	343⇑	eP	Pn	10 10 32.6	-1.7
BIPH				eS	Sn	10 11 01.4	-5.0
SKMP	Bagumbayan, Su	2.73	289	eP	Pn	10 10 33.5	-1.7
SKMP				eS	Sn	10 11 11.7	+3.9
BUKP	Musuan	3.05	318	eP	Pn	10 10 39.1	-0.4
BUKP				eS	Sn	10 11 14.8	-0.7
CTBH	Cotabato--PC H	3.28	299⇓	iP	Pn	10 10 41.7	-0.8
CTBH				i S	Sn	10 11 19.2	-1.7
CGP	Cagayan de Oro	3.72	320⇓	eP	Pn	10 10 49.2	+0.9
CGP				eS	Sn	10 11 29.8	-1.6
PAGZ	Pagadian	4.33	301	eP	Pn	10 10 56.0	-0.6
SCPH	Surigao	4.45	339	eP	Pn	10 11 11.4	+13
SCPH				eS	Sn	10 11 46.7	-2.3
TNTI	Ternate	4.81	177	P	Pn	10 11 03.0	-0.1
TNTI				S	Sn	10 11 57.2	-0.6
TNTI	Ternate	4.81	177	ePn	Pn	10 11 03.2	+0.1
TNTI				eSn	Sn	10 11 57.2	-0.6
KMSI	Cibinong	5.91	212	P	Pn	10 11 17.8	-0.1
LBMI	Labuha	6.22	177	P	Pn	10 11 22.3	+0.2
LBMI				S	Sn	10 12 32.5	+0.6
MRSI	Marisa	7.27	226	P	Pn	10 11 36.2	-0.2
SWI	Sorong	7.64	147	P	Pn	10 11 42.1	+0.7
SANI	Sanana	7.69	189	P	Pn	10 11 40.9	-1.2
LUWI	Luwuk	7.91	213	P	Pn	10 11 44.6	-0.5
LUWI	Luwuk	7.91	213	ePn	Pn	10 11 46.7	+1.6
APSI	Ampana	8.48	220	P	Pn	10 11 52.9	+0.1
MYLDM	Lahad Datu	8.60	268	ePn	Pn	10 11 57.1	+2.6
MYLDM				eSn	Sn	10 13 32.1	+2.3
NLAI	Namlea	8.79	180	P	Pn	10 11 56.8	-0.2
MPSI	Mapaga	8.92	234	P	Pn	10 11 58.8	0.0
FAKI	Fak Fak	9.90	149	ePn	Pn	10 12 13.1	+1.1
TTSI	Tana Toraja	11.28	221	P	Pn	10 12 30.7	0.0
	58nm,1.2s,3µm						
SPSI	Sidrap Palu	12.02	218	P	Pn	10 12 39.0	-1.6
SAUI	Saumlaki	14.13	163	ePn	Pn	10 13 08.5	+0.5
MMRI	Maumere	14.97	199	ePn	P	10 13 20.0	-1.5
SBUM	Sibu	15.20	259	ePn	P	10 13 24.1	0.0
	13nm,1.0s						
EDFI	Ende, Flores	15.26	201	P	P	10 13 27.4	+2.5
SOEI	Soe	15.53	191	P	P	10 13 30.4	+2.5
SOEI	Soe	15.53	191	ePn	P	10 13 28.7	+0.8
	116nm,0.9s						
MTN	Manton Dam	18.76	168	eP	P	10 14 03.9	+0.6
	26nm,1.1s						
JOW	Kunigami	21.13	3	P	P	10 14 30.6	+1.7
	11nm,0.6s,baz=165,slow=10,SNR=5.8						
CBIJ	Chichi jima	25.73	32	eP	P	10 15 14.3	+1.2
	39nm,0.5s						
JCJ	Chichijima	25.73	32	P	P	10 15 12.2	-0.8
	32nm,0.5s,baz=278,slow=19,SNR=8.6						
WRAB	Tennant Creek	26.36	165	eP	P	10 15 20.8	+2.0
	10nm,0.8s						
WRAB	Tennant Creek	26.36	165⇓	eP	P	10 15 19.2	+0.4
WRA	Warramunga Arr	26.36	165	P	P	10 15 18.4	-0.4
	5.3nm,0.6s,baz=340,slow=11,SNR=93						
WRA				ScP	ScP	10 22 12.0	0.0
	1.6nm,0.9s,baz=340,slow=3.0,SNR=9.1						
WRA	Warramunga Arr	26.36	165	i P	P	10 15 18.3	-0.5
WRA				pmax	pmax		
	comp=Z,6.0nm,0.4s						
WB2	Warramunga Arr	26.37	165	eP	P	10 15 19.6	+0.8
NJ2	Nanjing	27.42	345	eP	P	10 15 29.5	+1.4
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
MBWA	Marble Bar	27.58	195	eP	P	10 15 29.3	-0.3
	comp=Z,64nm,2.0s						
JNU	Nakatsue	27.59	7	P	P	10 15 28.8	-0.9
	comp=Z,3.2nm,0.7s,baz=236,slow=6.8,SNR=4.4						
ENH	Enshi	29.63	328	eP	P	10 15 47.2	-0.7
	comp=Z,8.8nm,0.6s						
JHJ	Hachijo jima 2	29.80	22	LR	LR	10 32 17.9	
	comp=Z,7.6nm,18.1s,baz=106,slow=45						
AS31	Alice Springs	29.84	167	eP	P	10 15 50.3	+0.6
	comp=Z,2.3nm,1.1s						
ASAR	Alice Springs	29.84	167	P	P	10 15 49.6	-0.1
	comp=Z,1.7nm,0.6s,baz=343,slow=6.9,SNR=27						
ASAR				PcP	PcP	10 18 50.3	-0.3
	comp=Z,1.0nm,0.6s,baz=349,slow=2.1,SNR=6.7						
ASAR				ScP	ScP	10 22 22.6	-0.2
	comp=Z,1.1nm,0.7s,baz=338,slow=3.1,SNR=10						
AS01	Alice Springs	29.85	167	eP	P	10 15 50.0	+0.2
CM01	Chiang Mai Arr	30.29	297	eP	P	10 15 52.5	-1.3
CMAR	Chiang Mai Arr	30.32	297	P	P	10 15 52.4	-1.7
	comp=Z,0.7nm,0.3s,baz=110,slow=6.8,SNR=6.2						
CMAR				LR	LR	10 29 54.2	
	comp=Z,22nm,18.1s,baz=180,slow=40						
CMAR	Chiang Mai Arr	30.32	297	ceP	P	10 15 54.7	+0.7
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KSAR	Wonju Array Be	31.69	1	P	P	10 16 06.7	+0.9
KSAR	Wonju Array Be	31.69	1	P	P	10 16 06.7	+0.9
KSRS	Korea Array	31.70	1	P	P	10 16 06.7	+0.8
	comp=Z,1.3nm,0.7s,baz=175,slow=9.9,SNR=7.3						
KSRS				LR	LR	10 32 49.8	
	comp=Z,12nm,18.8s,baz=248,slow=43						
MAJO	Matsushiro	32.42	17	eP	P	10 16 11.7	-0.6
	comp=Z,4.3nm,0.9s						
MAJO	Matsushiro	32.42	17	eP	P	10 16 11.7	-0.6
MAJO				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MAT	Matsushiro	32.42	17	P	P	10 16 11.8	-0.5
MJAR	Matsushiro Arr	32.42	17	P	P	10 16 11.7	-0.6
	comp=Z,0.8nm,0.7s,baz=195,slow=9.7,SNR=5.0						
MJAR				LR	LR	10 29 43.4	
	comp=Z,14nm,20.4s,baz=215,slow=37						
MJB9	Matsu-Tunnel	32.42	17	eP	P	10 16 11.6	-0.7
	comp=Z,4.4nm,0.9s						
XAN	Xi'an	32.95	332	P	P	10 16 16.3	-0.6
XAN				pmax	pmax		
	comp=Z,37nm,0.8s						
XAN				pmax	pmax		
	comp=Z,75nm,4.5s						
BJT	Baijiatuau	35.65	345	eP	P	10 16 40.6	+0.5
	comp=Z,18nm,0.9s						
BJT	Baijiatuau	35.65	345	eP	P	10 16 40.6	+0.5
BJT				pmax	pmax		
	comp=Z,18nm,0.9s						
BJI	Beijing	35.67	346	eP	P	10 16 41.0	+0.7
BJI				pmax	pmax		
	comp=Z,26nm,0.7s						
LZH	Lanzhou	37.11	328	eP	P	10 16 53.3	+0.5
LZH				pP	pP	10 17 14.5	-3.2
LZH				sP	sP	10 17 26.8	-3.6
LZH				PcP	PcP	10 19 11.5	+0.4
LZH				pmax	pmax		
	comp=Z,70nm,1.0s						
LZH				pmax	pmax		
	comp=Z,160nm,4.3s						
HHC	Hu-ho-hao-te	37.76	341	eP	P	10 16 59.5	+1.3
HHC				pP	pP	10 17 24.8	+1.7
HHC				S	S	10 22 49.5	+8.8
HHC				SS	SS	10 25 28.5	-2.5
HHC				pmax	pmax		
	comp=Z,21nm,1.1s						
HHC				pmax	pmax		
	comp=Z,67nm,5.3s						

USRK	Ussuriysk Ar.	38.67	6	P	P	10 17 06.9	+1.3
	comp=Z,4.3nm,0.6s,baz=193,slow=6.5						
MDJ	Mudanjiang	38.91	3	P	P	10 17 06.0	-1.6
MDJ				pmax	pmax		
	comp=Z,16nm,0.7s						
MDJ				pmax	pmax		
	comp=Z,17nm,2.7s						
STKA	Stephens Creek	39.75	161	P	P	10 17 15.2	+0.5
	comp=Z,6.8nm,0.7s,baz=342,slow=8.3,SNR=10						
ASAJ	Asahikawa	40.69	17	P	P	10 17 24.4	+2.0
	comp=Z,5.5nm,0.6s,baz=184,slow=7.8,SNR=19						
ASAJ				LR	LR	10 34 11.5	
	comp=Z,12nm,20.0s,baz=205,slow=36						
ASAJ	Asahikawa	40.69	17	eP	P	10 17 23.3	+0.9
	comp=Z,6.9nm,0.8s						
GTA	Gaotai	41.71	328	eP	P	10 17 31.3	+0.3
GTA				pP	pP	10 17 56.0	-0.3
GTA				sP	sP	10 18 09.3	+0.5
GTA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
YSS	Yuzh-Sakhalins	43.34	16⇑	eP	P	10 17 45.1	+1.3
YSS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KLR	Kul'dur	43.64	4	P	P	10 17 47.0	+0.8
	comp=Z,0.4nm,0.4s,baz=188,slow=8.2,SNR=25						
KLR	Kul'dur	43.64	4d	iP	P	10 17 46.8	+0.6
SONM	Songino Array	45.66	341	P	P	10 18 02.9	+0.4
	comp=Z,5.1nm,0.8s,baz=157,slow=7.2,SNR=28						
SONM				PcP	PcP	10 19 40.1	+1.3
	comp=Z,0.6nm,0.5s,baz=125,slow=2.9,SNR=3.3						
SONM				LR	LR	10 37 29.9	
	comp=Z,29nm,19.1s,baz=164,slow=36						
SONA1	Songino Array	45.67	341	eP	P	10 18 02.6	+0.1
TLY	Talaya	49.88	341	eP	P	10 18 35.7	+0.8
TLY				pmax	pmax		
	comp=Z,6.0nm,0.8s						
MOY	Mondy	50.77	339	eP	P	10 18 42.7	+1.1
MOY				pmax	pmax		
	comp=Z,15nm,1.6s						
WMQ	Urumqi	51.43	324	P	P	10 18 48.0	+1.3
WMQ				LR	LR		
	comp=Z,100nm,27.5s						
WMQ				LR	LR		
	comp=Z,40nm,32.9s						
WMQ				LR	LR		
	comp=Z,63nm,22.1s						
HVS	Khovu-Aksy	53.22	334⇓	iP	P	10 19 01.1	+1.3
PETK	Petropavlovsk-	53.55	22	P	P	10 19 03.0	+0.9
	comp=Z,4.7nm,0.8s,baz=167,slow=3.1						
PETK	Petropavlovsk-	53.55	22	eP	P	10 19 03.2	+1.2
PETK	Petropavlovsk-	53.55	22	eP	P	10 19 03.2	+1.2
PDGK	Podgornoye	56.24	320	i P	P	10 19 21.1	-0.7
PDGK				pmax	pmax		
	comp=Z,11nm,0.7s						
MK01	Makanchi Array	56.24	324	eP	P	10 19 21.3	-0.3
MK31	Makanchi Array	56.26	324	eP	P	10 19 21.4	-0.3
MK31	Makanchi Array	56.26	324	eP	P	10 19 21.5	-0.3
MKAR	Makanchi Array	56.26	324	P	P	10 19 21.5	-0.3
	comp=Z,11nm,0.5s,baz=122,slow=8.0,SNR=163						
MKAR				PcP	PcP	10 20 17.6	-0.5
	comp=Z,1.1nm,0.5s,baz=117,slow=5.7,SNR=4.2						
MKAR				ScP	ScP	10 24 05.7	-1.6
	comp=Z,0.4nm,0.8s,baz=143,slow=5.0,SNR=3.0						
MKAR	Makanchi Array	56.26	324	eP	P	10 19 21.4	-0.3
	comp=Z,88nm,0.6s						
MKAR				PcP	PcP	10 20 17.6	-0.5
MKAR				ScP	ScP	10 24 05.7	-1.6
MKAR	Makanchi Array	56.26	324	eP	P	10 19 21.5	-0.3
MKAR						10 20 17.6	
MKAR				pmax	pmax		
	comp=Z,88nm,0.6s						
YAK	Yakutsk	56.33	1⇑	eP	P	10 19 22.4	+0.5
YAK				pmax	pmax		
	comp=Z,23nm,0.6s						
MAKZ	Makanchi	56.45	324	eP	P	10 19 22.8	-0.3
	comp=Z,16nm,1.1s						
MAKZ	Makanchi	56.45	324	eP	P	10 19 22.8	-0.3
MAKZ				pmax	pmax		
	comp=Z,16nm,1.1s						
KSH	Kashi	57.02	314	P	P	10 19 29.5	+2.1
KSH				esP	sP	10 20 09.8	+3.6
TKM2	Tokmak 2	58.62	318	P	P	10 19 38.0	-0.6
TKM2				pmax	pmax		
	comp=Z,5.0nm,0.7s						
ZALV	Zalesovo Beam	59.11	332	P	P	10 19 40.7	-0.8
	comp=Z,2.6nm,0.4s,baz=118,slow=5.7,SNR=2.7						
AAK	Ala-Archa	59.25	317⇑	eP	P	10 19 43.9	+0.9
AAK				pmax	pmax		
	comp=Z,11nm,2.3s						
KURK	Kurchatov	60.39	327	eP	P	10 19 50.1	-0.2
	comp=Z,29nm,0.6s						
KURK	Kurchatov	60.39	327c	iP	P	10 19 49.8	-0.5
KURK				pmax	pmax		
	comp=Z,21nm,0.6s						
KURBB	Kurchatov Arra	60.39	327	P	P	10 19 50.5	+0.2
	comp=Z,14nm,0.5s,baz=127,slow=6.6,SNR=121						
KK31	Karatay Array	62.15	316	eP	P	10 20 01.9	-0.5
KK31	Karatay Array	62.15	316	eP	P	10 20 01.9	-0.5
KKAR	Karatay Array	62.15	316	eP	P	10 20 01.9	-0.5
KKAR	Karatay Array	62.15	316	eP	P	10 20 01.9	-0.5
BVA0	Borovoye Array	65.98	326	i P	P	10 20 26.4	-0.8
BVA0				pmax	pmax		
	comp=Z,32nm,1.5s						
BVAR	Borovoye Array	65.98	326	P	P	10 20 27.1	-0.1
	comp=Z,9.7nm,0.6s,baz=131,slow=7.9,SNR=43						
BRVK	Borovoye	66.05	326	eP	P	10 20 26.7	-0.9
	comp=Z,49nm,1.4s						
BRVK	Borovoye	66.05	326c	iP	P	10 20 27.3	-0.4
BRVK				pmax	pmax		
	comp=Z,31nm,1.3s						
AB31	Akbulak array	70.96	320	i P	P	10 20 57.4	-0.9
AB31				pmax	pmax		
	comp=Z,9.0nm,0.7s						
ABKAR	Akbulak array	70.96	320	eP	P	10 20 57.8	-0.6
AKTO	Aktyubinsk	72.45	321	P	P	10 21 06.8	-0.4
	comp=Z,10nm,0.7s,baz=88,slow=11,SNR=41						
SVE	Sverdlovsk	72.58	328	eP	P	10 21 08.6	+0.8
AKT	Akhty	78.37	311	eP	P	10 21 40.7	-0.7
AKT				e		10 21 49.4	
AKT				e*PP	pP	10 22 09.3	-0.2
AKT				e*SP	sP	10 22 21.7	+0.3
AKT				eS	S	10 31 25.6	-2.7
AKT				pmax	pmax		
	comp=Z,12nm,0.8s						
KDAK	Kodiak Island	80.10	32	i P	P	10 21 50.8	+0.5
RAYN	Ar Rayn	80.12	293	eP	P	10 21 50.0	-1.2
	comp=Z,3.3nm,0.6s						
RAYN	Ar Rayn	80.12	293	eP	P	10 21 50.0	-1.2
RAYN				pmax	pmax		
	comp=Z,3.0nm,0.6s						
GNI	Garni	80.59	310⇓	eP	P	10 21 52.8	-0.8
GNI				pmax	pmax		
	comp=Z,53nm,1.6s						
PRGR	Permogore	81.05	331	eP	P	10 21 54.9	-0.4
PRGR				pmax	pmax		
	comp=Z,15nm,0.6s						
ZEI	Tsey	81.25	312	eP	P	10 21 56.3	-0.8
BPAW	Bear Paw Mtn.	81.43	26	eP	P	10 21 58.5	+1.2
	comp=Z,2.9nm,0.9s						
AKH	Akhalkalaki	81.55	311	eP	P	10 21 59.7	+1.0
	comp=Z,13nm,0.8s						
AKH	Akhalkalaki	81.55	311	eP	P	10 21 59.7	+1.0
AKH				pmax	pmax		
	comp=Z,13nm,0.8s						
TRF	Thorofare Moun	81.69	27	eP	P	10 22 00.2	+1.3
	comp=Z,7.5nm,1.3s						
KBZ	Khabaz	81.99	313	P	P	10 22 00.3	-0.3
	comp=Z,3.7nm,0.8s,baz=163,slow=4.7,SNR=7.8						
NEY	Neytrino	82.12	313⇓	iP	P	10 22 01.7	+0.1
NEY				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KIV	Kislovodsk	82.14	313	eP	P	10 22 01.7	+0.1
KIV				e		10 25 10.7	
KIV				ePPP	PPP	10 27 03.7	
KIV				pmax	pmax		
	comp=Z,14nm,0.9s						
VRH	Novokhopyorsk	82.78	321	eP	P	10 22 03.5	-1.1
VRH				pmax	pmax		
	comp=Z,20nm,0.7s						
CCB	Clear Creek Bu	82.85	26	eP	P	10 22 04.6	-0.1
	comp=Z,5.2nm,1.3s						
IL1	Eielson Array	83.25	26	eP	P	10 22 05.6	-1.1
ILAR	Eielson Array	83.25	26	P	P	10 22 05.9	-0.8
	comp=Z,0.7nm,0.6s,baz=249,slow=5.4,SNR=10						
KLMR	Klimovskoe	83.97	331	eP	P	10 22 08.4	-2.0
KLMR				pmax	pmax		
	comp=Z,12nm,0.7s						
KLMR	Klimovskoe	83.97	331	eP	P	10 22 08.5	-2.0
KLMR				AMP		10 22 10.8	
	comp=Z,12nm,0.7s						
VSR	Storozhevoye	84.39	321	eP	P	10 22 11.7	-1.1
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LPSR	Galich'ya Gora	84.49	322	eP	P	10 22 13.0	-0.3
LPSR				pmax	pmax		
	comp=Z,20nm,1.0s						
OBN	Obninsk	85.76	325	eP	P	10 22 19.5	0.0
OBN				e		10 25 38.5	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ASF	Jabal al Asfar	87.25	302	P	P	10 22 27.6	+0.1
	comp=Z,6.4nm,0.9s,baz=122,slow=0.6,SNR=7.0						
ARCES	ARCESS Array B	88.83	340	P	P	10 22 32.9	-1.2
	comp=Z,3.9nm,0.7s,baz=82,slow=6.4,SNR=19						
BRTR	Keskin Array B	89.14	310	P	P	10 22 35.3	-1.0
	comp=Z,1.9nm,0.8s,baz=73,slow=4.3,SNR=8.3						
BRTR				LR	LR	11 07 26.6	
	comp=Z,22nm,18.1s,baz=110,slow=39						
BRTR	Keskin Array B	89.14	310	i P	P	10 22 35.0	-1.3
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.8s						
AKASG	Malin Array Be	90.69	321	P	P	10 22 41.7	-1.4
	comp=Z,1.3nm,0.5s,baz=70,slow=4.7,SNR=5.8						
AKASG	Malin Array Be	90.69	321	i P	P	10 22 41.4	-1.7
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
BUR04	Bucovina Ar. S	93.87	318	eP	P	10 22 57.5	-0.5
HFS	Hagfors	96.55	332	P	P	10 23 08.4	-1.4
	comp=Z,1.5nm,0.5s,baz=101,slow=2.9,SNR=12						
F36A	Milaca	117.27	31	ePKPdf	PKPdf	10 28 23.4	-2.0
TORD	Torodi Ar. Bea	122.69	289	PKP	PKPdf	10 28 35.9	-0.7
	comp=Z,0.9nm,0.6s,baz=65,slow=1.7						
KOWA	Kowa	127.60	293	PKP	PKPdf	10 28 45.6	-0.4
	comp=Z,1.3nm,0.5s,baz=93,slow=2.2,SNR=4.4						
TKL	Tuckaleechee C	129.72	33	PKP	PKPdf	10 28 51.0	+1.4
	comp=Z,1.6nm,0.4s,baz=139,slow=2.1,SNR=4.7						

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*ISCJB **25** 10:09:51.4±0.5, 45°.63S±0°.09×14°.5W±0°.1, h10km, mb4.3/12, MS3.8/17, Error ellipse: s-maj=14.8km s-min=11.9km az=23.3*

*IDC **25** 10:09:51.9±0.6, 45°.59S×14°.54W, h0km, mb4.3/11, mb1 4.4/11, mb1mx4.1/40, mbtmp4.3/11, MS3.8/17, Ms1 3.8/17, ms1mx3.7/34, Error ellipse: s-maj=19.0km s-min=17.8km az=121.0*

*NEIC **25** 10:09:53.1±0.5, 45°.58S×14°.49W, h10km, mb4.6/2, Error ellipse: s-maj=15.7km s-min=13.3km az=149.0*

ISC 25 10:09:53.2±0.6, 45°.6S±0°.1×14°.5W±0°.1, h10km, n39, σ1s.17/23, mb4.3/12, MS3.8/17, 1C, Southern Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VNA1	Neumayer--Stat	25.31	175	P	P	10 15 18.4	-1.0
VNA3	Neumayer Olymp	25.83	176	P	P	10 15 23.1	-1.2
SNAA	Sanae	26.74	172	P	P	10 15 31.7	-0.8
SNAA	Sanae	26.74	172	P	P	10 15 31.7	-0.8
	3.5nm,0.9s,baz=327,slow=10,SNR=13						
SNAA				LR	LR	10 23 19.9	
	comp=Z,88nm,19.2s,baz=32,slow=30						
SUR	Sutherland	30.20	77	LR	LR	10 25 22.8	
	comp=Z,388nm,19.8s,baz=224,slow=31						
BOSA	Boshof	35.53	75	P	P	10 16 49.3	-1.2
	3.6nm,0.9s,baz=207,slow=15,SNR=4.2						
BOSA				LR	LR	10 28 38.3	
	comp=Z,252nm,19.4s,baz=234,slow=32						
SYO	Syowa Base	35.65	150⇑	eP	P	10 16 45.2	-5.6
H10S2	ASCENSION HYDR	36.51	360	T	T	10 55 56.6	
	baz=180,slow=75,SNR=33						
H10S3	ASCENSION HYDR	36.51	360	T	T	10 56 00.4	
	baz=180,slow=75,SNR=33						
H10S1	ASCENSION HYDR	36.52	360	T	T	10 55 58.7	
	baz=180,slow=75,SNR=26						
TSUM	Tsumeb	37.35	56	eP	P	10 17 05.1	-0.9
	8.6nm,1.0s						
LBTB	Lobatse	38.12	71	P	P	10 17 12.5	0.0
	5.6nm,0.9s,baz=192,slow=8.4,SNR=5.2						
CPUP	Villa Florida	39.08	285	LR	LR	10 29 57.6	
	comp=Z,152nm,21.5s,baz=177,slow=31						
PLCA	Paso Flores	40.46	256	P	P	10 17 31.6	-0.2
	5.2nm,1.0s,baz=159,slow=4.6,SNR=6.1						
PLCA				LR	LR	10 33 02.9	
	comp=Z,110nm,21.5s,baz=150,slow=34						
BDFB	Brasilia	40.99	306	P	P	10 17 34.7	-1.7
	2.5nm,0.6s,baz=122,slow=13,SNR=2.0						
BDFB				LR	LR	10 31 50.4	
	comp=Z,228nm,19.2s,baz=108,slow=32						
QSPA	South Pole Qui	44.66	180	P	P	10 18 06.4	+0.7
	18nm,0.8s,baz=218,slow=5.7,SNR=43						
QSPA	South Pole Qui	44.66	180	eP	P	10 18 06.2	+0.4
	85nm,0.9s						
LSZ	Lusaka	46.81	64	P	P	10 18 24.3	+1.1
	4.1nm,0.7s,baz=204,slow=6.8,SNR=4.9						
LSZ	Lusaka	46.81	64	eP	P	10 18 23.2	0.0
	7.9nm,1.0s						
SIV	San Ignacio	48.76	292	P	P	10 18 39.5	+1.2
	0.9nm,0.5s,baz=146,slow=6.1,SNR=8.4						
DBIC	Dimbokro	52.74	12	LR	LR	10 35 51.5	
	comp=Z,44nm,19.5s,baz=155,slow=30						
LPAZ	La Paz	53.25	285	LR	LR	10 41 45.7	
	comp=Z,99nm,18.4s,baz=75,slow=36						
VNDA	Vanda	57.14	179	P	P	10 19 40.3	+1.0
	4.9nm,0.9s,baz=218,slow=7.8,SNR=13						
OPO	Ambohidratompo	57.23	83	LR	LR	10 42 10.8	
	comp=Z,134nm,18.4s,baz=10.0,slow=34						
TORD	Torodi Ar. Bea	60.28	18	P	P	10 20 03.1	+1.3
	2.8nm,1.0s,baz=200,slow=3.9						
TORD				LR	LR	10 40 24.3	
	comp=Z,42nm,21.2s,baz=350,slow=30						
KOWA	Kowa	60.56	12	LR	LR	10 40 49.7	
	comp=Z,70nm,19.3s,baz=232,slow=31						
NNA	Nana	62.23	282	LR	LR	10 48 02.6	
	comp=Z,45nm,18.4s,baz=142,slow=37						
ROSC	El Rosal	73.02	296	LR	LR	10 52 05.6	
	comp=Z,68nm,18.4s,baz=124,slow=35						
ATD	Arta Tunnel	76.72	58	LR	LR	10 54 40.3	
	comp=Z,95nm,18.1s,baz=295,slow=35						
MDT	Midelt	78.56	8	LR	LR	10 52 15.4	
	comp=Z,63nm,18.6s,baz=180,slow=32						
KEST	Kesra	83.78	19	LR	LR	10 55 49.9	
	comp=Z,41nm,19.2s,baz=262,slow=33						
JTS	JuntasAbangare	83.98	291	LR	LR	10 59 02.5	
	comp=Z,40nm,19.8s,baz=184,slow=35						
ESDC	Sonseca Array	85.42	8	P	P	10 22 31.2	+0.7
	1.4nm,0.8s,baz=195,slow=4.7,SNR=6.7						
KURBB	Kurchatov Arra	124.93	51	PKP	PKPdf	10 28 51.0	-1.6
	0.7nm,0.8s,baz=242,slow=3.2,SNR=3.7						
KURK	Kurchatov	125.03	51	PKP	PKPdf	10 28 51.0	-1.8
EGAK	Eagle	145.38	323	ePKPdf	PKPbc	10 29 29.5	-0.4
ILAR	Eielson Array	147.80	324	PKPbc	PKPbc	10 29 36.2	-0.8
	1.2nm,1.0s,baz=13,slow=1.4,SNR=9.0						
KSAR	Wonju Array Be	150.90	93	PKPbc	PKPbc	10 29 47.2	+1.6
KSRS	Korea Array	150.93	93	PKPbc	PKPbc	10 29 47.2	+1.6
	0.8nm,0.8s,baz=262,slow=3.1,SNR=3.9						

IDC 25 10:15:57.7±1.3, 20°.30N×147°.32E, h0km, mb3.5/4, mb1 3.7/4, mb1mx3.3/54, mbtmp3.5/4, Error ellipse: s-maj=51.2km s-min=28.2km az=96.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	41.97	198	P	P	10 23 50.5	-0.1
	0.3nm,0.7s,baz=23,slow=8.9,SNR=4.6						
ASAR	Alice Springs	45.61	197	P	P	10 24 19.8	-0.2
	0.4nm,0.8s,baz=23,slow=7.3,SNR=2.6						
KURBB	Kurchatov Arra	61.17	317	P	P	10 26 13.9	-0.2
	0.3nm,0.4s,baz=84,slow=7.6,SNR=3.7						
NVAR	Mina Array Bea	80.96	52	P	P	10 28 14.8	+0.2
	0.3nm,0.6s,baz=268,slow=5.1,SNR=3.8						

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*ISCJB **25** 10:18:40.7±0.4, 33°.94N±0°.02×118°.41W±0°.02, h13km±2km, Error ellipse: s-maj=2.8km s-min=2.3km az=29.9*

*NEIC **25** 10:18:41.9±0.0, 33°.96N×118°.41W, h11km, ML3.7(PAS), After PAS.*

NEIC Felt [IV] at Beverly Hills, Inglewood and Los Angeles and [III] in the Long Beach-Pasadena-Woodland Hills area.

ISC 25 10:18:41.1±0.9, 33°.93N±0°.02×118°.41W±0°.02, h13km±7km, n110, σ1s.29/124, Southern California

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FMP	Fort Macarthur	0.24	157	P	Pg	10 18 47.1	+0.9
	baz=345,SNR=238						
PASC	Pasadena Art C	0.30	37	ePg	Pg	10 18 47.0	-0.4
PASC				eSg	Sg	10 18 50.8	-0.8
DECC	Green Verdugo	0.33	11	P	Pg	10 18 47.5	-0.3
	baz=186,SNR=425						
DECC				S	Sg	10 18 52.1	-0.3
	baz=186						
MWC	Mount Wilson	0.41	45	ePg	Pg	10 18 49.2	-0.2
MWC				eSg	Sg	10 18 54.9	-0.1
OAT	Oat Mountain	0.45	337	ePg	Pg	10 18 50.4	+0.3
CIS	Catalina Islan	0.53	181	P	Pg	10 18 52.4	+0.9
	baz=3.7,SNR=342						
CIS				S	Sg	10 19 00.5	+2.0
	baz=3.7						
BLG	Laguna Peak, P	0.58	288	P	Pg	10 18 52.0	-0.4
	baz=104,SNR=32						
BLG				S	Sg	10 19 00.2	+0.1
	baz=104						
SSK	Sunset Peak	0.65	65	ePg	Pg	10 18 53.7	-0.3
BFSC	Mount Baldy Ra	0.69	64	P	Pg	10 18 54.1	-0.6
	baz=245,SNR=180						
BFSC				S	Sg	10 19 03.2	-0.5
	baz=245						
OSI	Osito Audit: C	0.73	339	P	Pg	10 18 55.1	-0.3
	baz=156,SNR=69						
OSI	Osito Audit: C	0.73	339	ePg	Pg	10 18 55.2	-0.2
OSI				eSg	Sb	10 19 06.8	+1.1
SCI2	San Clemente I	0.96	187	P	Pg	10 18 59.7	+0.1
	baz=8.5,SNR=101						
SCI2				S	Sg	10 19 12.9	+0.8
	baz=8.5						
EDW2	Edwards Air Fo	1.01	20	P	Pg	10 18 59.4	-1.1
	baz=199,SNR=484						
EDW2				S	Sg	10 19 12.1	-1.7
	baz=199						
SCZ2	Santa Cruz Isl	1.02	274	P	Pg	10 19 00.3	-0.6
	baz=92,SNR=31						
SCZ2				S	Sg	10 19 14.3	+0.1
	baz=92						
RYS	Reyes Peak	1.06	312	ePg	Pg	10 19 01.3	-0.2
MURC	Murrieta	1.06	108	P	Pb	10 19 00.4	-0.9
	baz=290,SNR=167						
MURC				S	Sg	10 19 15.2	-0.3
	baz=290						
TJR	Tejon Ranch	1.13	346	ePg	Pb	10 19 01.5	-1.0
ABL	Mount Abel	1.14	324	ePg	Pb	10 19 01.6	-1.2
SNCC	San Nicolas Is	1.16	234	P	Pb	10 19 02.1	-0.8
	baz=53,SNR=28						
SNCC				S	Sb	10 19 18.3	+0.5
	baz=53						
SNCC	San Nicolas Is	1.16	234	ePg	Pb	10 19 02.1	-0.8
SBC	Santa Barbara	1.20	296	Pb	Pb	10 19 02.9	-0.7
	baz=113,SNR=12						
ARVC	Arvin	1.24	344	Pb	Pn	10 19 03.5	-0.7
	baz=162,SNR=468						
BBRC	Big Bear Solar	1.28	75	Pb	Pn	10 19 04.6	-0.2
	baz=256,SNR=164						
RRX	Edison Barstow	1.50	51	Pb	Pn	10 19 08.1	+0.4
	baz=231,SNR=42						
109C	Camp Elliot, M	1.50	133	P	Pn	10 19 06.7	-1.1
	baz=316,SNR=83						
109C				S	Sn	10 19 25.7	-1.6
	baz=316						
CPE	Camp Elliot	1.50	133	ePn	Pn	10 19 06.8	-1.0
CPE				eSn	Sn	10 19 25.8	-1.5
PKM	Mcpherson Peak	1.50	310	Pb	Pn	10 19 07.9	-0.1
	baz=128,SNR=65						
FRD	Ford Ranch, An	1.56	106	Pb	Pn	10 19 08.5	-0.2
	baz=288,SNR=181						
PFO	Pinyon Flats O	1.65	101	Pb	Pn	10 19 10.2	+0.3
	baz=283,SNR=75						
PFO	Pinyon Flats O	1.65	101	ePn	Pn	10 19 09.6	-0.4
LRMC	Laurel Mtn Rad	1.66	21	Pb	Pn	10 19 10.2	+0.2
	baz=201,SNR=93						
XPFO	Piæon Flat	1.66	101	ePn	Pn	10 19 09.7	-0.3
CRGC	Crocker Grade	1.70	321	ePn	Pn	10 19 10.9	+0.3
ISA	Isabella, Lake	1.73	358	Pb	Pn	10 19 11.1	+0.2
	baz=177,SNR=185						
ISA				Sb	Sn	10 19 33.4	+0.6
	baz=177						
ISA	Isabella, Lake	1.73	358	ePn	Pn	10 19 11.2	+0.2
ISA				eSn	Sn	10 19 33.5	+0.6
WASM	Alta Sierra Ca	1.81	356	ePn	Pn	10 19 12.5	+0.4
BCH	Branch Mountai	1.87	313	ePn	Pn	10 19 13.5	+0.6
GSC	Goldstone, Bar	1.90	44	Pb	Pn	10 19 13.9	+0.6
	baz=224,SNR=233						
GSC				Sb	Sn	10 19 38.2	+1.0
	baz=224						
GSC	Goldstone, Bar	1.90	44	ePn	Pn	10 19 14.1	+0.7
SMMC	Simmler	1.90	317	Pb	Pn	10 19 13.8	+0.5
	baz=135,SNR=67						
SMMC				Sb	Sb	10 19 39.0	-0.4
	baz=135						
BAR	Barrett	1.92	130	ePn	Pn	10 19 12.7	-0.8
BAR				eSn	Sn	10 19 36.3	-1.2
HEC	Hector,Ludlow	1.93	62	Pb	Pn	10 19 14.0	+0.2
	baz=243,SNR=87						
HEC				Sb	Sn	10 19 39.5	+1.5
	baz=243						
MONP2	Monument Peak	1.96	121	P	Pn	10 19 13.9	-0.3
	baz=304,SNR=56						
BELC	Belle Mtn. Jos	2.00	87	P	Pn	10 19 14.7	-0.1
	baz=269,SNR=50						
RCWM	Renegade Canyo	2.11	17	ePn	Pn	10 19 16.6	+0.5
PIRM	Iverson Ranch	2.21	318	ePn	Pn	10 19 18.0	+0.5
MPMC	Manual Prospec	2.25	19	P	Pn	10 19 18.2	0.0
	baz=199,SNR=216						
IKP	In-Ko-Pah, Jac	2.31	123	P	Pn	10 19 19.0	+0.1
	baz=305,SNR=42						
PAGB	Antelope Grade	2.35	320	ePn	Pn	10 19 19.6	+0.2
SWSC	Sam W. Stewart	2.39	114	Pb	Pb	10 19 23.8	-0.2
	baz=296						
VPDC	Valencia Peak	2.42	303	ePn	Pn	10 19 20.5	+0.2
GMRC	Granite Mounta	2.43	69	P	Pn	10 19 19.4	-1.2
	baz=250						
DAC	Darwin (Calif)	2.43	16	ePn	Pn	10 19 21.0	+0.2
PHAM	Harlan Ranch	2.51	320	ePn	Pn	10 19 22.1	+0.5
SHOC	Shoshone, Teco	2.63	41	P	Pn	10 19 22.1	-1.2
	baz=222,SNR=55						
PSTM	Stockdale Moun	2.64	320	ePn	Pn	10 19 23.7	+0.3
PVCM	Vineyard Canyo	2.65	319	ePn	Pn	10 19 23.8	+0.2
PPO	Portuguese Can	2.65	317	ePn	Pn	10 19 23.9	+0.3
IRM	Iron Mountain	2.72	84	P	Pn	10 19 23.6	-0.9
	baz=267						
PHPM	Hope Ranch	2.73	319	ePn	Pn	10 19 24.8	+0.2
PANM	San Antonio Re	2.76	313	ePn	Pn	10 19 24.9	-0.2
PSMM	Smith Mountain	2.79	321	ePn	Pn	10 19 26.2	+0.7
PHSB	Hesperia Broad	2.88	312	ePn	Pn	10 19 26.2	-0.5
PTV	Peach Tree Val	2.88	319	ePn	Pn	10 19 26.7	-0.1
LDFC	Landfair	2.95	66	ePn	Pn	10 19 28.0	+0.2
PMPB	Monarch Peak	3.01	320	ePn	Pn	10 19 28.4	-0.1
PCCM	Crazy Canyon	3.12	314	ePn	Pn	10 19 29.7	-0.4
PAPM	Alder Peak	3.13	310	ePn	Pn	10 19 29.6	-0.7
LRC	Lone Oak Road	3.16	318	ePn	Pn	10 19 30.1	-0.6
Y12C	Blythe	3.24	92	ePn	Pn	10 19 30.6	-1.0
LRV	Little Rabbit	3.28	320	ePn	Pn	10 19 32.4	+0.1
SHG	Shirttail Gulc	3.40	318	ePn	Pn	10 19 33.3	-0.6
BPIM	Pinnacles	3.41	319	ePn	Pn	10 19 33.5	-0.5
BSMM	Soledad Missio	3.48	316	ePn	Pn	10 19 34.6	-0.4
TPNV	Topopah Spring	3.49	30	P	Pn	10 19 36.1	+0.8
	baz=211,SNR=43						
TPNV				S	Sn	10 20 16.2	-0.3
	baz=211						
TPNV	Topopah Spring	3.49	30	ePn	Pn	10 19 35.2	0.0
BRMM	Rolling Bench	3.51	326	ePn	Pn	10 19 36.0	+0.7
JHC	Johnson Canyon	3.58	318	ePn	Pn	10 19 35.4	-0.9
SHPR	Sheep Range	3.69	45	ePn	Pn	10 19 39.7	+1.6
OMMB	Old Mammoth Mi	3.71	353	ePn	Pn	10 19 40.3	+1.9
BPCNC	Pine Canyon	3.73	316	ePn	Pn	10 19 38.2	-0.2
BSRM	Salinas Radio	3.73	318	ePn	Pn	10 19 38.2	-0.2
MDPB	Devils Postpil	3.73	352	ePn	Pn	10 19 40.5	+1.8
SAO	San Andreas Ge	3.76	320	ePn	Pn	10 19 38.4	-0.5
FRP	Fremont Peak	3.78	319	ePn	Pn	10 19 38.8	-0.3
HTUM	Tustin Road	3.92	318	ePn	Pn	10 19 40.7	-0.3
HCOM	Corn Cob Canyo	4.00	318	ePn	Pn	10 19 41.8	-0.2
CMB	Columbia Colle	4.40	339	ePn	Pn	10 19 49.0	+1.4
NV01	Mina Array Sit	4.49	1	ePn	Pn	10 19 51.5	+2.5
NV11	Mina Array Sit	4.50	3	ePn	Pn	10 19 50.2	+1.1
WAKR	Walker	4.64	350	ePn	Pn	10 19 51.5	+0.5

RYN	**Ryan**	**4.69**	**359**	*e*Pn	Pb	10 19 58.1	-5.2
R11A	**Troy Canyon, C**	**4.96**	**27**	*e*Pn	**Pn**	**10 19 56.7**	**+1.1**
YERR	**Yerington**	**5.09**	**353**	*e*Pn	**Pn**	**10 20 01.6**	**+4.4**
KVN	**Kaiserville**	**5.12**	**3**	*e*Pn	Pn	10 20 02.6	+5.0
LCMT	**Little Creek M**	**5.21**	**52**	*e*Pn	**Pn**	**10 20 01.3**	**+2.4**
PNTR	**Pine Nut**	**5.24**	**350**	*e*Pn	**Pn**	**10 20 03.9**	**+4.6**
VCNR	**Virginia City**	**5.45**	**350**	*e*Pn	Pn	10 20 08.6	+6.4
CCUT	**Cedar City**	**5.46**	**47**	*e*Pn	**Pn**	**10 20 05.5**	**+3.0**
KNB	**Kanab**	**5.50**	**54**	*e*Pn	**Pn**	**10 20 05.1**	**+2.2**
SZCU	**Shurtz Canyon**	**5.66**	**48**	*e*Pn	**Pn**	**10 20 08.2**	**+3.0**
PAHR	**Pah Rah Range**	**5.82**	**353**	*e*Pn	**Pn**	**10 20 11.7**	**+4.5**
PSUT	**Pine Spring**	**5.88**	**37**	*e*Pn	**Pn**	**10 20 11.3**	**+3.1**
PKCU	**Pink Cliffs**	**6.07**	**53**	*e*Pn	**Pn**	**10 20 14.9**	**+4.0**
BEKR	**Beckworth**	**6.13**	**346**	*e*Pn	Pn	10 20 17.0	+5.5
BEKR				*e*Sg	**Sb**	**10 21 39.2**	**-1.8**
MSU	**Marysvale**	**6.80**	**46**	*e*Pn	**Pn**	**10 20 24.4**	**+3.6**
P18A	**Preston Nutter**	**8.67**	**47**	*e*Pn	Pn	10 20 52.8	+6.3
HLID	**Hailey**	**10.11**	**17**	*e*Pn	Pn	10 21 12.1	+6.0
RWWY	**Rawlins**	**11.76**	**46**	*e*Pn	Pn	10 21 23.5	-5.2
YMR	**Madison River**	**12.16**	**26**	*e*Pn	Pn	10 21 40.0	+5.7

JMA 25 10:54:24.7±0.3, 23°.29N×124°.02E, h45^{km}±5^{km}, M2.8, Southwestern Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HATJ	**Hateruma jima**	**0.79**	**346**	P	Pn	10 54 39.5	0.0
HATJ				*e*S	Sn	10 54 50.2	0.0
JKRS	**Kuro-shima**	**0.94**	**359**	P	Pn	10 54 42.2	+0.6
JKRS				*e*S	Sn	10 54 54.9	+1.0
IRIF	**Iriomote-Funau**	**1.07**	**346**	P	Pn	10 54 44.0	+0.7
IRIF				S	Sn	10 54 57.7	+0.6
JIJ	**Ishigaki jima**	**1.07**	**6**	P	Pn	10 54 43.5	+0.1
JIJ				S	Sn	10 54 56.8	-0.3
JISG	**Ishigakijimahi**	**1.32**	**12**	P	Pn	10 54 47.1	+0.4
JISG				*e*S	Sn	10 55 04.3	+1.2
JTJ	**Tarama**	**1.48**	**25**	P	Pn	10 54 49.6	+0.7
JTJ				*e*S	Sn	10 55 07.9	+0.8
YOJ	**Yonaguni jima**	**1.49**	**322**	P	Pn	10 54 49.9	+0.9
YOJ				*e*S	Sn	10 55 08.0	+0.8
JYNG	**Yonagunijimaku**	**1.52**	**320**	P	Pn	10 54 49.6	+0.2
JYNG				*e*S	Sn	10 55 08.5	+0.5
JIRB	**Irabujima**	**1.86**	**34**	P	Pn	10 54 54.7	+0.6
JIRB				*e*S	Sn	10 55 17.7	+1.3
JOGS	**Gusukube**	**1.94**	**41**	P	Pn	10 54 56.3	+1.2
JOGS				*e*S	Sn	10 55 18.7	+0.4
JIKM	**Ikemajima**	**1.98**	**34**	P	Pn	10 54 56.5	+0.8
JIKM				S	Sn	10 55 19.7	+0.5

TAP 25 10:54:35.2, 24°.11N×122°.31E, h45^{km}±1^{km}, ML2.6, D, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	**EOS1**	**0.47**	**340**	*e*P	Pn	10 54 46.3	+0.5
	baz=339						
EOS1				*e*S	Sn	10 54 54.7	+1.4
	baz=339						
ENAH	**Nanao**	**0.56**	**307**	*e*P	Pn	10 54 48.3	+1.3
	baz=306						
ENAH				*e*S	Sn	10 54 56.3	+0.9
	baz=306						
NANB	**Nanao**	**0.60**	**302**	*e*P	Pn	10 54 47.9	+0.4
	baz=302						
NANB				*e*S	Sn	10 54 57.4	+1.1
	baz=302						
ENA	**Nanau**	**0.60**	**302**	*e*P	Pn	10 54 48.0	+0.4
	baz=301						
ENA				*e*S	Sn	10 54 57.3	+0.9
	baz=301						
TWD	**Chiawan**	**0.65**	**268**	*e*P	Pn	10 54 48.7	+0.6
	baz=267						
TWD				*e*S	Sn	10 54 58.4	+1.1
	baz=267						
TWC	**Suao**	**0.65**	**320**	*e*P	Pn	10 54 48.4	+0.3
	baz=320						
TWC				*e*S	Sn	10 54 58.3	+0.9
	baz=320						
NACB	**Ninganchiao**	**0.65**	**276**	P	Pn	10 54 48.6	+0.4
	baz=275						
NACB				S	Sn	10 54 58.7	+1.2
	baz=275						
ENLB	**Shoufeng**	**0.68**	**253**	*e*S	Sn	10 54 58.9	+0.9
	baz=252						
YOJ	**Yonaguni jima**	**0.73**	**61**	*e*P	Pn	10 54 49.2	0.0
	baz=60						
YOJ				*e*S	Sn	10 54 59.3	-0.1
	baz=60						
EGS		**0.81**	**335**	*e*P	Pn	10 54 50.9	+0.6
	baz=335						
EGS				*e*S	Sn	10 55 02.1	+0.9
	baz=335						
ENTT	**Nioudou**	**0.86**	**308**	*e*P	Pn	10 54 51.6	+0.6
	baz=308						
NTC	**Toucheng**	**0.86**	**330**	*e*S	Sn	10 55 04.1	+1.7
	baz=329						
NNSB	**Datong**	**0.90**	**291**	*e*P	Pn	10 54 52.5	+0.9
	baz=290						
NNSB				*e*S	Sn	10 55 05.0	+1.4
	baz=290						
NNSH	**Datong**	**0.90**	**291**	*e*P	Pn	10 54 52.3	+0.7
	baz=290						
NNSH				*e*S	Sn	10 55 04.7	+1.1
	baz=290						
EGFH	**Guangfu**	**0.92**	**242**	*e*P	Pn	10 54 52.6	+0.9
	baz=241						
EGFH				*e*S	Sn	10 55 05.2	+1.4
	baz=241						
WHF	**Hehuan Shan**	**0.95**	**272**	*e*P	Pn	10 54 53.1	+0.5
	baz=272						
WHF				*e*S	Sn	10 55 05.9	+0.6
	baz=272						
TIPB	**Shuangxi**	**0.96**	**333**	*e*P	Pn	10 54 53.3	+0.9
	baz=333						
TIPB				*e*S	Sn	10 55 06.1	+1.0
	baz=333						
NWLT	**Wulai**	**0.99**	**312**	*e*P	Pn	10 54 53.7	+0.9
	baz=312						
NWLT				*e*S	Sn	10 55 07.1	+1.5
	baz=312						
YHNB	**Yeheng**	**1.01**	**304**	*e*P	Pn	10 54 54.1	+1.0
	baz=303						
YHNB				*e*S	Sn	10 55 07.8	+1.5
	baz=303						
NSK	**Sanguang**	**1.03**	**303**	*e*S	Sn	10 55 07.8	+1.0
	baz=303						
CHGB	**Renai**	**1.03**	**268**	*e*P	Pn	10 54 54.1	+0.6
	baz=267						
CHGB				*e*S	Sn	10 55 08.0	+1.0
	baz=267						
TDCB	**Techi**	**1.06**	**278**	*e*P	Pn	10 54 54.8	+1.0
	baz=277						
TDCB				*e*S	Sn	10 55 08.6	+1.2
	baz=277						
WFSB	**Wu-fen Shan**	**1.07**	**334**	*e*P	Pn	10 54 54.6	+0.7
	baz=333						
WFSB				*e*S	Sn	10 55 08.4	+0.8
	baz=333						
YULB	**Yu-li**	**1.17**	**233**	*e*P	Pn	10 54 55.7	+0.6
	baz=232						
YULB				*e*S	Sn	10 55 11.2	+1.2
	baz=232						
TWF1	**Yuli**	**1.19**	**231**	*e*P	Pn	10 54 56.2	+0.8
	baz=230						
TWF1				*e*S	Sn	10 55 11.4	+0.9
	baz=230						
FULB	**Fuli**	**1.30**	**226**	*e*P	Pn	10 54 58.0	+1.1
	baz=225						
FULB				*e*S	Sn	10 55 14.8	+1.6
	baz=225						
TWGBT	**Beinan**	**1.71**	**221**	*e*P	Pn	10 55 03.7	+1.1
	baz=221						
TWG	**Pinlang**	**1.71**	**222**	*e*P	Pn	10 55 04.5	+1.9
	baz=221						
WTP	**Ta-pu**	**1.77**	**241**	*e*P	Pn	10 55 04.7	+1.2
	baz=240						
SLGT	**Liugui**	**1.88**	**234**	*e*P	Pn	10 55 07.3	+2.3
	baz=233						
MASBT	**Mashibuluo**	**2.14**	**226**	*e*P	Pn	10 55 10.7	+2.3
	baz=225						
EAST	**Anshuo**	**2.18**	**218**	*e*P	Pn	10 55 10.9	+1.9
	baz=217						

IDC 25 10:57:28.5±5.4, 12°.17S×167°.83E, h0^{km}, mb3.5/3, mb1 3.8/3, mb1mx3.4/41, mbtmp3.5/3, Error ellipse: s-maj=270.1km s-min=33.7km az=140.0, Santa Cruz Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**33.05**	**252**	P	P	11 04 06.0	-0.1
	0.2nm,0.4s,baz=84,slow=8.8,SNR=5.1						
ASAR	**Alice Springs**	**34.16**	**246**	P	P	11 04 15.6	0.0
	0.2nm,0.4s,baz=73,slow=10,SNR=4.7						
ILAR	**Eielson Array**	**83.93**	**18**	P	P	11 10 00.1	0.0
	0.6nm,0.7s,baz=237,slow=4.5,SNR=6.9						

IDC 25 11:02:52.0±2.3, 4°.25S×153°.93E, h0^{km}, mb3.8/4, mb1 4.0/4, mb1mx3.6/42, mbtmp3.8/4, MS2.8/2, Ms1 2.8/2, ms1mx2.6/48, Error ellipse: s-maj=126.9km s-min=23.1km az=121.0, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**7.89**	**131**	LR	LR	11 08 19.3	
	comp=Z,104nm,20.2s,baz=232,slow=42						
GUMO	**Guam**	**19.88**	**333**	LR	LR	11 14 06.9	
	comp=Z,16nm,20.8s,baz=152,slow=34						
WRA	**Warramunga Arr**	**24.65**	**229**	P	P	11 08 14.7	0.0
	2.1nm,0.6s,baz=53,slow=9.7,SNR=20						
H11S3	**WAKE ISLAND Hy**	**25.87**	**29**	T	T	11 35 08.4	
	baz=210,slow=76,SNR=26						
H11S2	**WAKE ISLAND Hy**	**25.87**	**29**	T	T	11 35 12.3	
	baz=210,slow=76,SNR=35						
H11S1	**WAKE ISLAND Hy**	**25.88**	**29**	T	T	11 35 13.2	
	baz=210,slow=76,SNR=34						
ASAR	**Alice Springs**	**27.31**	**223**	P	P	11 08 38.8	0.0
	0.3nm,0.6s,baz=59,slow=8.7,SNR=3.0						
PETK	**Petropavlovsk-**	**57.24**	**3**	P	P	11 12 41.5	+0.4
	1.8nm,0.7s,baz=165,slow=6.0						
ILAR	**Eielson Array**	**81.23**	**22**	P	P	11 15 09.1	-0.5
	0.5nm,0.7s,baz=243,slow=6.5,SNR=6.5						

MOS ***25*** *11:09:33.4±1.0, 20°.10S×177°.86W, h470^{km}, mb4.7/22,*
Error ellipse: s-maj=13.7km s-min=8.8km az=65.8
IDC ***25*** *11:09:35.7±1.3, 20°.17S×177°.75W, h488^{km}±14^{km},*
mb4.0/25, mb1 4.2/28, mb1mx4.0/47, mbtmp4.8/28, Error
ellipse: s-maj=11.8km s-min=8.8km az=109.0
ISCJB ***25*** *11:09:35.6±0.8, 20°.13S±0°.04×177°.86W±0°.04,*
h492^{km}±9^{km}, mb4.5/120, Error ellipse: s-maj=7.3km
s-min=5.4km az=138.5
BJI ***25*** *11:09:36.6, 19°.52S×177°.61W, h489^{km}, mb4.7/22,*
mB4.8/10
NEIC ***25*** *11:09:37.8±0.6, 20°.24S×177°.88W, h513^{km}±7^{km}, mb4.6/91,*
Error ellipse: s-maj=5.5km s-min=3.8km az=133.0
WEL ***25*** *11:09:37.0, 20°.24S×177°.88W, h513^{km}*

ISC 25 11:09:37.4±0.6, 20°.22S±0°.05×177°.71W±0°.07, h508^{km}±6^{km}, n563, σ1^{s}04/596, mb4.6/120, 28C-14D, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**8.46**	**43**	P	P	11 11 35.1	-3.7
	38nm,0.3s,baz=138,slow=2.0,SNR=46						
AFI				S	S	11 13 07.7	-11
	27nm,0.3s,baz=180,slow=20,SNR=7.0						
AFI	**Afiamalu**	**8.46**	**43**	*e*P	P	11 11 34.8	-4.0
AFI				*e*S	S	11 13 09.2	-9.2
AFI	**Afiamalu**	**8.46**	**43**	*e*P	P	11 11 34.8	-4.0
AFI				*e*S	S	11 13 09.3	-9.2
RIZ	**Raoul Island**	**8.99**	**181**	P	**P**	**11 11 42.8**	**-1.3**
RAO	**Raoul Island**	**9.00**	**181**	P	**P**	**11 11 42.9**	**-1.2**
	200nm,0.3s,baz=36,slow=22,SNR=7.0						
RAO				S	**S**	**11 13 26.4**	**-1.9**
	200nm,0.3s,baz=226,slow=22,SNR=5.5						
RAO	**Raoul Island**	**9.00**	**181**	*e*P	**P**	**11 11 43.1**	**-1.0**
RAO				*e*S	**S**	**11 13 27.4**	**-1.0**
RAO	**Raoul Island**	**9.00**	**181**	*e*P	**P**	**11 11 43.1**	**-1.0**
RAO				*e*S	**S**	**11 13 27.4**	**-1.0**
GLKZ	**Green Lake**	**9.01**	**181**	P	**P**	**11 11 42.8**	**-1.4**
GLKZ				S	**S**	**11 13 25.4**	**-3.1**
FUNA	**Funafuti**	**12.00**	**345**	*e*P	**P**	**11 12 16.4**	**+0.3**
DZM	**Mont Dzumac**	**14.90**	**260**	P	**P**	**11 12 45.4**	**-1.1**
	0.9nm,0.3s,baz=103,slow=23,SNR=10						
DZM	**Mont Dzumac**	**14.90**	**260**	*e*P	**P**	**11 12 47.1**	**+0.6**
OUZ	**Omahuta**	**16.80**	**205**	P	**P**	**11 13 05.8**	**0.0**
WCZ	**Waipu Caves**	**17.15**	**202**	P	**P**	**11 13 11.1**	**+1.8**
KUZ	**Kuaotunu**	**17.44**	**198**	P	**P**	**11 13 13.7**	**+1.6**
MXZ	**Matakaoa Point**	**17.63**	**191**	P	P	11 13 22.4	+8.6
WIAZ	**Waiheke Island**	**17.66**	**199**	P	**P**	**11 13 15.2**	**+1.1**
WMGZ	**Waiomatatini S**	**17.86**	**190**	P	**P**	**11 13 16.4**	**+0.6**
ETAZ	**East Tamaki Re**	**17.87**	**200**	P	**P**	**11 13 17.7**	**+1.7**
HAZ	**Te Kaha**	**17.91**	**192**	P	**P**	**11 13 16.0**	**-0.3**
MKAZ	**Moumakai**	**17.94**	**199**	P	**P**	**11 13 17.8**	**+1.2**
WTAZ	**Waiatarua**	**17.97**	**200**	P	**P**	**11 13 18.6**	**+1.8**
PKGZ	**Pakihiroa**	**17.98**	**191**	P	**P**	**11 13 18.0**	**+0.9**
KBAZ	**Karaka Road Bo**	**18.01**	**199**	P	**P**	**11 13 19.2**	**+1.9**
AWAZ	**Awhitu Peninsu**	**18.06**	**200**	P	**P**	**11 13 18.9**	**+1.2**
PUZ	**Puketiti**	**18.13**	**190**	P	**P**	**11 13 18.9**	**+0.5**
PUZ				S	**S**	**11 16 27.5**	**+8.9**
RUGZ	**Raukumara Rang**	**18.13**	**192**	P	**P**	**11 13 20.0**	**+1.4**
OPRZ	**Ohinepanea**	**18.26**	**195**	P	**P**	**11 13 19.9**	**+0.4**
TWGZ	**Tauwhareparae**	**18.28**	**191**	P	**P**	**11 13 20.0**	**+0.2**
KNTN	**Kanton**	**18.30**	**19**	*e*P	**P**	**11 13 18.6**	**-1.6**
	174nm,1.4s						
KMRZ	**Kaimai**	**18.41**	**196**	P	**P**	**11 13 22.5**	**+1.5**
MWZ	**Matawai**	**18.52**	**192**	P	**P**	**11 13 20.3**	**-1.6**
URZ	**Urewera**	**18.53**	**193**	P	**P**	**11 13 20.6**	**-1.4**
	6.8nm,0.3s,baz=297,slow=2.1,SNR=35						
URZ	**Urewera**	**18.53**	**193**	*e*P	**P**	**11 13 19.8**	**-2.2**
	51nm,0.7s						
URZ	**Urewera**	**18.53**	**193**	P	**P**	**11 13 20.0**	**-2.0**
CNGZ	**Carnagh Statio**	**18.54**	**190**	P	**P**	**11 13 22.1**	**0.0**
OMRZ	**Omania**	**18.55**	**195**	P	**P**	**11 13 22.7**	**+0.5**
TKGZ	**Te Karaka**	**18.56**	**191**	P	**P**	**11 13 23.9**	**+1.6**
MUGZ	**Murupara**	**18.81**	**194**	P	**P**	**11 13 23.4**	**-1.2**
HRRZ	**Handcock Road**	**18.84**	**195**	P	**P**	**11 13 25.3**	**+0.5**
RAHZ	**Arahi**	**19.17**	**192**	P	**P**	**11 13 27.4**	**-0.5**
HIZ	**Hauiti**	**19.33**	**198**	*e*P	**P**	**11 13 31.5**	**+2.1**
	111nm,1.2s						
HIZ	**Hauiti**	**19.33**	**198**	P	**P**	**11 13 31.4**	**+2.1**
BKZ	**Black Stump Fm**	**19.53**	**194**	*e*P	**P**	**11 13 29.2**	**-2.0**
	75nm,1.5s						
BKZ	**Black Stump Fm**	**19.53**	**194**	P	**P**	**11 13 29.6**	**-1.6**
BHHZ	**Black Hill Sta**	**19.94**	**194**	P	**P**	**11 13 33.3**	**-1.6**
BFZ	**Birch Farm**	**21.04**	**193**	*e*P	**P**	**11 13 43.6**	**-1.2**
	243nm,1.5s						
SNZO	**South Karori**	**21.99**	**195**	*e*P	**P**	**11 13 52.9**	**-0.5**
	344nm,1.5s						
THZ	**Tophouse**	**22.90**	**198**	*e*P	**P**	**11 14 01.2**	**-0.5**
	144nm,1.7s						
KHZ	**Kahutara**	**23.33**	**197**	*e*P	**P**	**11 14 03.8**	**-1.6**
	164nm,1.7s						
LTZ	**Lake Taylor**	**24.03**	**198**	*e*P	**P**	**11 14 09.5**	**-2.1**
	40nm,1.0s						
OXZ	**Oxford**	**24.59**	**198**	*e*P	**P**	**11 14 15.0**	**-1.6**
	45nm,1.1s						
MQZ	**McQueen's Vall**	**24.77**	**197**	*e*P	**P**	**11 14 16.5**	**-1.6**
	92nm,1.5s						
RPZ	**Rata Peaks**	**25.24**	**199**	P	**P**	**11 14 22.4**	**0.0**
	9.8nm,0.6s,baz=308,slow=5.2,SNR=4.1						
WHZ	**Wether Hill Ro**	**28.20**	**201**	*e*P	**P**	**11 14 48.6**	**+0.3**
	35nm,0.9s						
CTAO	**Charters Tower**	**33.79**	**264**	*e*P	**P**	**11 15 36.0**	**-0.7**
	12nm,0.6s						
CTAO	**Charters Tower**	**33.79**	**264**	*e*P	**P**	**11 15 36.1**	**-0.7**
CTAO				pmax	pmax		
	comp=Z,12nm,0.6s						
STKA	**Stephens Creek**	**38.16**	**244**	P	**P**	**11 16 12.5**	**-0.4**
	comp=Z,5.0nm,1.0s,baz=81,slow=10,SNR=6.3						
STKA				PcP	**PcP**	**11 18 15.2**	**+0.6**
	comp=Z,6.7nm,1.1s,baz=44,slow=4.4,SNR=7.0						
AS01	**Alice Springs**	**44.81**	**256**	*e*P	**P**	**11 17 05.0**	**-0.8**
AS01				*e*pP	**PcP**	**11 18 36.6**	**-0.4**
AS31	**Alice Springs**	**44.85**	**256**	*e*P	**P**	**11 17 05.3**	**-0.8**
	comp=Z,5.0nm,0.9s						
ASAR	**Alice Springs**	**44.85**	**256**	P	**P**	**11 17 05.5**	**-0.6**
	comp=Z,16nm,0.8s,baz=86,slow=8.6,SNR=116						
ASAR				PcP	**PcP**	**11 18 37.0**	**-0.3**
	comp=Z,8.2nm,0.8s,baz=107,slow=3.6,SNR=23						
ASAR				ScP	**ScP**	**11 21 43.1**	**+2.1**
	comp=Z,1.3nm,0.8s,baz=98,slow=4.6,SNR=5.4						
ASAR				S	**S**	**11 23 04.7**	**-1.8**
	comp=Z,1.5nm,0.9s,baz=87,slow=17,SNR=6.9						
WB2	**Warramunga Arr**	**44.90**	**262**	*e*P	**P**	**11 17 05.3**	**-1.2**
	comp=Z,14nm,1.1s						
WRAB	**Tennant Creek**	**44.90**	**262**	*e*P	**P**	**11 17 05.1**	**-1.4**
	comp=Z,14nm,1.1s						
WRAB	**Tennant Creek**	**44.90**	**262**	*e*P	**P**	**11 17 05.1**	**-1.4**
WRAB				pmax	pmax		
	comp=Z,14nm,1.1s						
WRA	**Warramunga Arr**	**44.91**	**262**	P	**P**	**11 17 05.3**	**-1.3**
	comp=Z,5.9nm,0.7s,baz=97,slow=8.8,SNR=65						
WRA				PcP	**PcP**	**11 18 37.4**	**-0.1**
	comp=Z,4.8nm,0.8s,baz=93,slow=3.8,SNR=11						
WRA				ScP	**ScP**	**11 21 41.9**	**+0.6**
	comp=Z,0.9nm,0.8s,baz=87,slow=3.3,SNR=4.6						
MTN	**Manton Dam**	**49.44**	**270**	*e*P	**P**	**11 17 39.5**	**-1.2**
	comp=Z,18nm,0.8s						
SOEI	**Soe**	**56.77**	**271**	*e*P	**P**	**11 18 34.2**	**+0.9**
	comp=Z,66nm,0.8s						
VNDA	**Vanda**	**58.21**	**185**	P	**P**	**11 18 43.0**	**+1.1**
	comp=Z,1.2nm,0.8s,baz=360,slow=9.5,SNR=4.9						
VNDA				PcP	**PcP**	**11 19 27.4**	**+0.9**
	comp=Z,2.1nm,0.9s,baz=14,slow=3.1,SNR=6.1						
QSPA	**South Pole Qui**	**69.85**	**180**	P	**P**	**11 19 57.5**	**+1.1**
	comp=Z,14nm,0.8s,baz=43,slow=1.7,SNR=36						
QSPA	**South Pole Qui**	**69.85**	**180**	*e*P	**P**	**11 19 57.5**	**+1.1**
	comp=Z,17nm,0.9s						
MJAR	**Matsushiro Arr**	**70.15**	**323**	P	**P**	**11 19 57.2**	**-1.3**
	comp=Z,3.4nm,0.7s,baz=166,slow=6.2,SNR=15						
MAT	**Matsushiro**	**70.15**	**323**	P	**P**	**11 19 57.6**	**-0.9**
ERM	**Erimo**	**71.72**	**330**	*i* P	**P**	**11 20 08.4**	**+0.9**
ERM				pmax	pmax		
	comp=Z,14nm,1.4s						
ASAJ	**Asahikawa**	**73.61**	**331**	P	**P**	**11 20 19.5**	**+1.0**
	comp=Z,13nm,0.9s,baz=222,slow=6.4,SNR=23						
ASAJ	**Asahikawa**	**73.61**	**331**	*e*P	**P**	**11 20 19.4**	**+1.0**
	comp=Z,15nm,0.9s						
PET	**Petropavlovsk**	**75.77**	**346**	*e*P	**P**	**11 20 32.9**	**+2.6**
PET				pmax	pmax		
	comp=Z,26nm,1.2s						
YSS	**Yuzh-Sakhalins**	**75.77**	**333**	*e*P	**P**	**11 20 31.0**	**+0.5**
	comp=Z,19nm,0.9s						
YSS	**Yuzh-Sakhalins**	**75.77**	**333**	⇓*e*P	**P**	**11 20 30.9**	**+0.5**
YSS				pmax	pmax		
	comp=Z,20nm,1.0s						
PETK	**Petropavlovsk-**	**76.07**	**345**	P	**P**	**11 20 31.5**	**-0.6**
	comp=Z,13nm,0.8s,baz=136,slow=7.8						
PETK	**Petropavlovsk-**	**76.07**	**345**	*e*P	**P**	**11 20 31.3**	**-0.7**
PETK	**Petropavlovsk-**	**76.07**	**345**	*e*P	**P**	**11 20 31.3**	**-0.7**
KSRS	**Korea Array**	**76.86**	**318**	P	**P**	**11 20 36.5**	**-0.2**
	comp=Z,1.6nm,0.8s,baz=134,slow=6.4,SNR=10						
KSAR	**Wonju Array Be**	**76.88**	**318**	P	**P**	**11 20 36.5**	**-0.2**
KSAR	**Wonju Array Be**	**76.88**	**318**	P	**P**	**11 20 36.6**	**-0.2**
KS01	**Wonju Array Si**	**76.89**	**318**	*e*P	**P**	**11 20 36.6**	**-0.3**
SCZ2	**Santa Cruz Isl**	**77.21**	**46**	P	**P**	**11 20 39.8**	**+1.0**
	baz=235						
SCI2	**San Clemente I**	**77.38**	**48**	P	**P**	**11 20 40.2**	**+0.5**
	baz=236						
PKM	**Mcpherson Peak**	**77.60**	**45**	P	**P**	**11 20 42.2**	**+1.1**
	baz=234,SNR=8.1						
SAO	**San Andreas Ge**	**77.64**	**43**	*e*P	**P**	**11 20 42.4**	**+1.4**
	comp=Z,22nm,0.8s						
SAO	**San Andreas Ge**	**77.64**	**43**	*e*P	**P**	**11 20 42.4**	**+1.4**
SAO				pmax	pmax		
	comp=Z,22nm,0.8s						
BLG	**Laguna Peak, P**	**77.66**	**46**	P	**P**	**11 20 41.9**	**+0.7**
	baz=235						
CIS	**Catalina Islan**	**77.71**	**47**	P	**P**	**11 20 42.1**	**+0.6**
	baz=236						
PMPB	**Monarch Peak**	**77.73**	**44**	*e*P	**P**	**11 20 43.2**	**+1.6**
	comp=Z,18nm,0.7s						
SMMC	**Simmler**	**77.73**	**45**	P	**P**	**11 20 42.6**	**+1.1**
	baz=234						
PAGB	**Antelope Grade**	**77.80**	**45**	*e*P	**P**	**11 20 43.5**	**+1.5**
	comp=Z,12nm,0.8s						
CHGN	**Chignik**	**77.95**	**11**	*e*P	**P**	**11 20 41.4**	**-0.7**
	comp=Z,20nm,0.8s						
FMP	**Fort Macarthur**	**77.96**	**47**	P	**P**	**11 20 43.4**	**+0.6**
	baz=236						
DECC	**Green Verdugo**	**78.24**	**47**	P	**P**	**11 20 44.9**	**+0.6**
	baz=236						
MSHR	**Mys Shultsa**	**78.25**	**324**	*ce*P	**P**	**11 20 46.1**	**+2.0**
PASC	**Pasadena Art C**	**78.30**	**47**	*e*P	**P**	**11 20 45.5**	**+0.9**
	comp=Z,26nm,0.8s						
109C	**Camp Elliot, M**	**78.33**	**48**	P	**P**	**11 20 45.5**	**+0.6**
	baz=237						
KMRM	**Mail Ridge**	**78.36**	**39**	*e*P	**P**	**11 20 46.7**	**+1.8**
	comp=Z,53nm,0.8s						
ARVC	**Arvin**	**78.40**	**46**	P	**P**	**11 20 45.8**	**+0.7**
	baz=235,SNR=5.8						
MWC	**Mount Wilson**	**78.41**	**47**	*e*P	**P**	**11 20 46.1**	**+0.6**
	comp=Z,26nm,0.8s						
MWC	**Mount Wilson**	**78.41**	**47**	*e*P	**P**	**11 20 46.1**	**+0.6**
MWC				pmax	pmax		
	comp=Z,26nm,0.8s						
BAR	**Barrett**	**78.53**	**49**	*e*P	**P**	**11 20 46.9**	**+1.0**
	comp=Z,6.6nm,0.9s						
VES	**Vestal, Richgr**	**78.64**	**45**	P	**P**	**11 20 46.9**	**+0.5**
	baz=235,SNR=7.1						
MURC	**Murrieta**	**78.66**	**48**	P	**P**	**11 20 47.3**	**+0.6**
	baz=236,SNR=7.6						
BFSC	**Mount Baldy Ra**	**78.70**	**47**	P	**P**	**11 20 47.4**	**+0.5**
	baz=236,SNR=9.7						
MONP2	**Monument Peak**	**78.82**	**49**	P	**P**	**11 20 48.6**	**+0.9**
	baz=237,SNR=18						
EDW2	**Edwards Air Fo**	**78.83**	**46**	P	**P**	**11 20 48.4**	**+0.9**
	baz=236,SNR=35						
USRK	**Ussuriysk Ar.**	**78.89**	**326**	P	**P**	**11 20 47.8**	**+0.2**
	comp=Z,12nm,1.0s,baz=151,slow=3.3						
TYV	**Tymovskoe**	**78.90**	**336**	*e*P	**P**	**11 20 47.1**	**-0.3**
TYV				pmax	pmax		
	comp=Z,100nm,6.5s						
TYV				pmax	pmax		
	comp=Z,11nm,1.3s						
IKP	**In-Ko-Pah, Jac**	**78.91**	**49**	P	**P**	**11 20 49.2**	**+1.1**
	baz=237,SNR=11						
ISA	**Isabella, Lake**	**78.94**	**45**	P	**P**	**11 20 49.0**	**+0.9**
	baz=235,SNR=18						
ISA	**Isabella, Lake**	**78.94**	**45**	*e*P	**P**	**11 20 49.1**	**+0.9**
	comp=Z,17nm,0.9s						
ISA	**Isabella, Lake**	**78.94**	**45**	*e*P	**P**	**11 20 49.1**	**+0.9**
ISA				pmax	pmax		
	comp=Z,17nm,0.9s						
SII	**Sitkinak Islan**	**79.01**	**13**	*e*P	**P**	**11 20 48.0**	**+0.1**
	comp=Z,49nm,0.8s						
FRD	**Ford Ranch, An**	**79.02**	**48**	P	**P**	**11 20 49.5**	**+0.8**
	baz=237,SNR=17						
CMB	**Columbia Colle**	**79.07**	**43**	*e*P	**P**	**11 20 49.4**	**+0.7**
	comp=Z,17nm,0.8s						
CMB	**Columbia Colle**	**79.07**	**43**	*e*P	**P**	**11 20 49.4**	**+0.7**
CMB				pmax	pmax		
	comp=Z,17nm,0.8s						
PFO	**Pinyon Flats O**	**79.18**	**48**	P	**P**	**11 20 50.3**	**+0.8**
	baz=237,SNR=5.6						
PFO	**Pinyon Flats O**	**79.18**	**48**	*e*P	**P**	**11 20 50.6**	**+1.1**
	comp=Z,12nm,1.1s						
XPFO	**Piæon Flat**	**79.18**	**48**	*e*P	**P**	**11 20 50.1**	**+0.5**
	comp=Z,11nm,1.0s						
BBRC	**Big Bear Solar**	**79.22**	**47**	P	**P**	**11 20 50.4**	**+0.6**
	baz=236						
WDC	**Whiskeytown Da**	**79.28**	**40**	*e*P	**P**	**11 20 50.6**	**+0.9**
	comp=Z,15nm,0.9s						
WDC	**Whiskeytown Da**	**79.28**	**40**	*e*P	**P**	**11 20 50.6**	**+0.9**
WDC				pmax	pmax		
	comp=Z,15nm,0.9s						
ORV	**Oroville**	**79.29**	**41**	*e*P	**P**	**11 20 50.8**	**+1.0**
	comp=Z,16nm,0.8s						
ORV	**Oroville**	**79.29**	**41**	*e*P	**P**	**11 20 50.8**	**+1.0**
ORV				pmax	pmax		
	comp=Z,16nm,0.8s						
SWSC	**Sam W. Stewart**	**79.29**	**49**	P	**P**	**11 20 50.9**	**+0.9**
	baz=237,SNR=5.3						
N02D	**Trinity Center**	**79.43**	**39**	P	**P**	**11 20 51.8**	**+1.2**
	baz=232,SNR=8.6						
O03D	**Paynes Creek**	**79.55**	**40**	P	**P**	**11 20 51.6**	**+0.3**
	baz=232,SNR=7.5						
M02C	**Callahan**	**79.60**	**39**	P	**P**	**11 20 52.8**	**+1.3**
	baz=231,SNR=9.2						
CWC	**Cottonwood Cre**	**79.65**	**45**	P	**P**	**11 20 52.4**	**+0.5**
	baz=235						
L02D	**Cave Junction,**	**79.65**	**38**	P	**P**	**11 20 52.8**	**+1.1**
	baz=231						
MDPB	**Devils Postpil**	**79.67**	**44**	*e*P	**P**	**11 20 53.4**	**+1.2**
	comp=Z,17nm,0.9s						
OMMB	**Old Mammoth Mi**	**79.71**	**44**	*e*P	**P**	**11 20 53.6**	**+1.1**
	comp=Z,19nm,1.3s						
BELC	**Belle Mtn. Jos**	**79.72**	**48**	P	**P**	**11 20 53.3**	**+0.9**
	baz=237,SNR=16						
OHAK	**Old Harbor**	**79.81**	**13**	*e*P	**P**	**11 20 50.9**	**-1.2**

MPMC	Manual Prospec	79.83	46	P	P	11 20 53.8	+0.8
	baz=236,SNR=18						
MLAC	Mammoth, Mammo	79.83	44	P	P	11 20 54.0	+1.0
	baz=235						
GSC	Goldstone, Bar	79.87	47	P	P	11 20 53.7	+0.6
	baz=236,SNR=7.5						
GSC	Goldstone, Bar	79.87	47	*e*P	P	11 20 53.8	+0.7
	comp=Z,9.9nm,1.0s						
GSC	Goldstone, Bar	79.87	47	*e*P	P	11 20 53.8	+0.7
GSC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
DAC	Darwin (Calif)	79.88	45	*e*P	P	11 20 54.2	+0.9
	comp=Z,5.5nm,1.0s						
DAC	Darwin (Calif)	79.88	45	*e*P	P	11 20 54.2	+0.9
DAC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
TIN	Tinemaha, Big	79.90	44	P	P	11 20 54.1	+0.9
	baz=235						
YBH	Yreka Blue Hor	79.90	39	P	P	11 20 54.3	+1.2
	comp=Z,20nm,0.8s,baz=228,slow=0.7,SNR=68						
YBH	Yreka Blue Hor	79.90	39	*e*P	P	11 20 54.3	+1.2
	comp=Z,21nm,0.8s						
YBH	Yreka Blue Hor	79.90	39	*e*P	P	11 20 54.3	+1.2
YBH				pmax	pmax		
	comp=Z,21nm,0.8s						
BC3	Big Chuckawall	79.91	49	P	P	11 20 54.5	+1.1
	baz=238,SNR=8.5						
NJ2	Nanjing	79.91	310	*e*P	P	11 20 55.3	+2.1
NJ2				pmax	pmax		
	comp=Z,15nm,0.6s						
HEC	Hector,Ludlow	79.93	47	P	P	11 20 53.8	+0.4
	baz=237,SNR=14						
WAKR	Walker	79.95	43	*e*P	P	11 20 54.4	+0.8
	comp=Z,25nm,1.0s						
GLA	Glamis	80.03	49	P	P	11 20 55.4	+1.4
	baz=238,SNR=8.2						
GLA	Glamis	80.03	49	*e*P	P	11 20 55.5	+1.5
	comp=Z,21nm,0.9s						
BEKR	Beckworth	80.18	41	*e*P	P	11 20 55.3	+0.6
	comp=Z,37nm,1.4s						
PNTR	Pine Nut	80.19	42	*e*P	P	11 20 55.8	+0.9
	comp=Z,41nm,0.8s						
VCNR	Virginia City	80.28	42	*e*P	P	11 20 56.5	+1.2
	comp=Z,15nm,0.9s						
HUMO	Hull Mountain	80.30	38	*e*P	P	11 20 56.7	+1.6
	comp=Z,22nm,1.2s						
YERR	Yerington	80.36	42	*e*P	P	11 20 56.5	+0.8
	comp=Z,21nm,0.8s						
GMRC	Granite Mounta	80.37	48	P	P	11 20 56.5	+0.7
	baz=237,SNR=9.2						
IRM	Iron Mountain	80.40	48	P	P	11 20 56.9	+1.1
	baz=238,SNR=18						
GRAC	Grapevine Rang	80.43	45	P	P	11 20 56.7	+0.8
	baz=236						
M04C	Macdoel	80.44	39	P	P	11 20 56.9	+0.9
	baz=232,SNR=10.0						
FURC	Furnace Creek,	80.47	46	P	P	11 20 56.5	+0.5
	baz=236						
KDAK	Kodiak Island	80.48	13	P	P	11 20 55.3	-0.3
	comp=Z,13nm,0.7s,baz=206,slow=4.1,SNR=34						
KDAK	Kodiak Island	80.48	13	*e*P	P	11 20 55.2	-0.3
	comp=Z,17nm,0.8s						
KDAK	Kodiak Island	80.48	13	*e*P	P	11 20 55.2	-0.3
KDAK				pmax	pmax		
	comp=Z,17nm,0.8s						
TUQ	Turquoise Moun	80.54	47	P	P	11 20 57.3	+0.6
	baz=237,SNR=17						
SHOC	Shoshone, Teco	80.56	46	P	P	11 20 57.0	+0.5
	baz=237						
RYN	Ryan	80.61	43	*e*P	P	11 20 57.7	+0.7
	comp=Z,19nm,1.2s						
Y12C	Blythe	80.62	49	P	P	11 20 58.0	+1.1
	baz=238,SNR=7.3						
Y12C	Blythe	80.62	49	*e*P	P	11 20 58.2	+1.3
	comp=Z,19nm,0.8s						
NV01	Mina Array Sit	80.63	43	*e*P	P	11 20 57.7	+0.5
NVAR	Mina Array Bea	80.63	43	P	P	11 20 57.8	+0.7
	comp=Z,12nm,0.8s,baz=226,slow=8.9,SNR=95						
PAHR	Pah Rah Range	80.69	42	*e*P	P	11 20 58.0	+0.7
	comp=Z,17nm,1.0s						
NV11	Mina Array Sit	80.73	43	*e*P	P	11 20 58.2	+0.7
	comp=Z,1.8nm,1.0s						
I03D	Drain, OR	80.77	37	P	P	11 20 58.1	+0.7
	baz=231						
LDFC	Landfair	80.91	48	*e*P	P	11 20 59.9	+1.4
	comp=Z,50nm,0.8s						
214A	Organ Pipe Nat	80.92	51	P	P	11 20 59.9	+1.3
	baz=239,SNR=8.2						
K04D	Chiloquin, OR	81.01	38	P	P	11 20 59.4	+0.5
	baz=232						
NEE2	Needles Airpor	81.09	48	P	P	11 21 00.1	+0.8
	baz=238						
KVN	Kaiserville	81.12	43	*e*P	P	11 21 00.2	+0.5
	comp=Z,21nm,0.9s						
KVN	Kaiserville	81.12	43	*e*P	P	11 21 00.2	+0.5
KVN				pmax	pmax		
	comp=Z,21nm,0.9s						
TPNV	Topopah Spring	81.15	45	P	P	11 21 00.5	+0.7
	baz=237,SNR=19						
TPNV	Topopah Spring	81.15	45	*e*P	P	11 21 00.5	+0.7
	comp=Z,19nm,1.1s						
TPNV	Topopah Spring	81.15	45	*e*P	P	11 21 00.5	+0.7
TPNV				pmax	pmax		
	comp=Z,19nm,1.1s						
PDMCI	Parker Dam,Lak	81.18	49	P	P	11 21 00.7	+0.9
	baz=238,SNR=13						
J04D	Umpqua Nationa	81.19	38	P	P	11 21 00.8	+1.0
	baz=232,SNR=12						
I04A	Tendick Farm,	81.36	37	P	P	11 21 01.2	+0.7
	baz=231						
MOD	Modoc Plateau	81.43	39	*e*P	P	11 21 01.7	+0.6
	comp=Z,21nm,0.8s						
K05A	Summer Lake	81.57	39	*e*P	P	11 21 03.0	+1.1
	comp=Z,53nm,0.9s						
SHPR	Sheep Range	81.64	46	*e*P	P	11 21 03.7	+1.3
	comp=Z,10nm,1.1s						
J05D	Fort Rock, OR	81.72	38	P	P	11 21 03.6	+1.1
	baz=232,SNR=36						
G03D	McMinnville, O	81.78	36	P	P	11 21 03.2	+0.6
	baz=231						
H04A	Detroit Lake	82.04	36	*e*P	P	11 21 04.5	+0.5
	comp=Z,41nm,1.3s						
PINE	Pine Mountain	82.19	38	*e*P	P	11 21 06.3	+1.2
	comp=Z,46nm,0.8s						
I05D	Terrebonne, OR	82.30	37	P	P	11 21 06.2	+0.8
	baz=232						
R11A	Troy Canyon, C	82.36	45	P	P	11 21 06.4	+0.4
	baz=237,SNR=18						
R11A	Troy Canyon, C	82.36	45	*e*P	P	11 21 06.3	+0.4
CNPM	China Poot	82.36	13	*e*P	P	11 21 05.2	0.0
KLR	Kul'dur	82.43	329	P	P	11 21 06.2	+0.4
	comp=Z,0.3nm,1.0s,baz=76,slow=2.4,SNR=8.3						
KLR	Kul'dur	82.43	329	*d i*P	P	11 21 06.1	+0.3
BMN	Battle Mountai	82.46	42	*e*P	P	11 21 07.1	+0.7
BMN	Battle Mountai	82.46	42	*e*P	P	11 21 07.1	+0.7
F04D	Rainier, OR	82.47	35	P	P	11 21 07.1	+1.0
	baz=231						
E03A	Lebam	82.47	34	*e*P	P	11 21 07.3	+1.3
	comp=Z,36nm,0.8s						
TUC	Tucson	82.59	52	P	P	11 21 08.8	+1.6
	baz=241						
TUC	Tucson	82.59	52	*e*P	P	11 21 08.8	+1.6
	comp=Z,28nm,0.9s						
TUC	Tucson	82.59	52	P	P	11 21 08.7	+1.6
TUC				pmax	pmax		
	comp=Z,31nm,1.1s						
BRLK	Bradley Lake	82.66	13	*e*P	P	11 21 06.3	-0.5
WVOR	Wild Horse Val	82.74	40	*e*P	P	11 21 08.5	+0.8
	comp=Z,30nm,1.1s						
WVOR	Wild Horse Val	82.74	40	*e*P	P	11 21 08.5	+0.8
WVOR				pmax	pmax		
	comp=Z,30nm,1.1s						
NLWA	Neilton Lookou	82.85	34	*e*P	P	11 21 09.3	+1.3
	comp=Z,20nm,1.0s						
G05D	Wamic, OR	82.87	36	P	P	11 21 08.9	+0.7
	baz=232						
SVW2	Sparrevohn	82.97	11	*e*P	P	11 21 07.8	-0.5
	comp=Z,5.6nm,0.8s						
I07A	Izee	83.20	38	*e*P	P	11 21 11.0	+1.0
	comp=Z,17nm,0.8s						
LCMT	Little Creek M	83.22	47	*e*P	P	11 21 11.7	+1.4
	comp=Z,18nm,0.8s						
G06A	Carlson Farm,	83.25	37	*e*P	P	11 21 11.0	+0.9
J08A	Circle Bar Ran	83.38	39	*e*P	P	11 21 11.6	+0.7
	comp=Z,35nm,1.3s						
CCUT	Cedar City	83.42	46	*e*P	P	11 21 12.6	+1.2
	comp=Z,18nm,0.9s						
KNB	Kanab	83.51	47	*e*P	P	11 21 12.9	+1.1
	comp=Z,20nm,1.0s						
KNB	Kanab	83.51	47	*e*P	P	11 21 12.9	+1.1
KNB				pmax	pmax		
	comp=Z,20nm,1.0s						
PSUT	Pine Spring	83.60	45	*e*P	P	11 21 13.2	+1.0
	comp=Z,9.2nm,0.7s						
SZCU	Shurtz Canyon	83.63	46	*e*P	P	11 21 13.5	+1.1
	comp=Z,16nm,1.0s						
D05A	Enumclaw	83.71	35	*e*P	P	11 21 13.7	+1.4
	comp=Z,43nm,1.3s						
WUAZ	Wupatki	83.75	49	P	P	11 21 14.0	+1.0
	baz=240						
WUAZ	Wupatki	83.75	49	*e*P	P	11 21 14.4	+1.4
	comp=Z,15nm,1.0s						
HPIG		84.05	59	*e*P	P	11 21 15.3	+0.6
	comp=Z,7.1nm,0.8s						
PKCU	Pink Cliffs	84.08	47	*e*P	P	11 21 16.1	+1.3
	comp=Z,23nm,0.9s						
RC01	Rabbit Creek A	84.10	13	*e*P	P	11 21 13.6	-0.3
G08A	Pilot Rock	84.23	37	*e*P	P	11 21 15.7	+0.6
	comp=Z,19nm,0.8s						
SUA	Susitna One	84.23	13	*e*P	P	11 21 13.8	-0.9
A04D	Lummi Island	84.30	33	P	P	11 21 15.8	+0.6
	baz=231,SNR=8.3						
B05A	Bryant	84.33	34	P	P	11 21 15.9	+0.6
	baz=231						
LTY	Liberty	84.46	35	*e*P	P	11 21 16.3	+0.2
	comp=Z,9.2nm,1.0s						
GLI	Glacier Island	84.51	14	*e*P	P	11 21 15.1	-0.8
SKT	Skwentna	84.54	12	*e*P	P	11 21 14.6	-1.5
FID	Port Fidalgo	84.54	15	*e*P	P	11 21 15.5	-0.6
EYAK	Cordova Ski Ar	84.55	15	*e*P	P	11 21 15.9	-0.2
HAWA	Hanford	84.56	36	*e*P	P	11 21 17.7	+1.1
	comp=Z,35nm,1.4s						
RAGM	Ragged Mountai	84.67	16	*e*P	P	11 21 16.8	0.0
MSU	Marysvale	84.71	46	*e*P	P	11 21 18.8	+1.0
W18A	Petrified Fore	84.72	50	P	P	11 21 18.6	+0.8
	baz=241						
ZAIG	Zacatecas	84.83	64	*e*P	P	11 21 19.9	+1.2
	comp=Z,8.9nm,0.9s						
E08A	Dider Farm, El	84.88	36	*e*P	P	11 21 19.1	+1.0
	comp=Z,12nm,0.9s						
GHO	Glory Hole Cre	84.89	13	*e*P	P	11 21 17.2	-0.6
121A	Cookes Peak, D	84.92	53	P	P	11 21 20.2	+1.3
	baz=242,SNR=13						
BMO	Blue Mountains	84.93	38	*e*P	P	11 21 18.7	+0.2
	comp=Z,9.0nm,0.8s						
MFID	Camas Ranch	84.99	40	*e*P	P	11 21 19.6	+0.8
	comp=Z,11nm,1.1s						
DIV	Divide	85.04	15	*e*P	P	11 21 18.1	-0.5
SML	Sawmill	85.05	14	*e*P	P	11 21 18.2	-0.4
SML	Sawmill	85.05	14	*e*P	P	11 21 18.2	-0.4
DUG	Dugway, Tooele	85.16	44	P	P	11 21 20.1	+0.3
	baz=239						
DUG	Dugway, Tooele	85.16	44	*e*P	P	11 21 20.2	+0.4
	comp=Z,2.2nm,0.8s						
DUG	Dugway, Tooele	85.16	44	P	P	11 21 20.6	+0.8
DUG				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BMRM	Bremner River	85.19	16	*e*P	P	11 21 19.0	-0.3
D08A	Wollman Farm,	85.29	36	*e*P	P	11 21 20.8	+0.7
	comp=Z,15nm,0.9s						
SCM	Sheep Creek Mo	85.30	14	*e*P	P	11 21 19.3	-0.5
SCM	Sheep Creek Mo	85.30	14	*e*P	P	11 21 19.3	-0.5
KLU	Klutina	85.32	15	*e*P	P	11 21 19.8	-0.2
WRAK	Wrangell Islan	85.35	23	*e*P	P	11 21 20.9	+0.9
	comp=Z,18nm,0.8s						
E09A	Wood Farm, Sta	85.41	37	*e*P	P	11 21 21.3	+0.6
	comp=Z,16nm,0.9s						
NLU	North Lily Min	85.52	45	*e*P	P	11 21 22.9	+1.3
	comp=Z,32nm,1.2s						
F10A	Beach Ranch, E	85.61	37	*e*P	P	11 21 21.8	0.0
TMUT	Trail Mountain	85.76	46	*e*P	P	11 21 24.4	+1.4
MPU	Maple Canyon	85.84	45	*e*P	P	11 21 24.1	+0.9
B08A	Colville Reser	85.84	35	*e*P	P	11 21 23.0	+0.3
	comp=Z,12nm,0.8s						
LLLB	Lillooet	85.91	32	*e*P	P	11 21 23.6	+0.6
HLID	Hailey	85.94	41	P	P	11 21 24.2	+0.8
	baz=237						
HLID	Hailey	85.94	41	*e*P	P	11 21 24.3	+0.8
	comp=Z,8.0nm,0.9s						
HVU	Hansel Valley	86.01	43	*e*P	P	11 21 24.4	+0.5
JIS	Juneau Island	86.03	21	*e*P	P	11 21 23.9	+0.6
C09A	Chrisman Ranch	86.09	36	*e*P	P	11 21 24.4	+0.5
BESE	Bessie Mountai	86.10	21	*e*P	P	11 21 24.6	+0.8
CTU	Camp Tracy	86.11	44	*e*P	P	11 21 25.5	+1.1
TRF	Thorofare Moun	86.12	12	*e*P	P	11 21 22.8	-1.1
SRU	San Rafael Swe	86.13	46	*e*P	P	11 21 25.4	+0.9
SRU	San Rafael Swe	86.13	46	*e*P	P	11 21 25.4	+0.9
SEY	Seymchan	86.17	347	P	P	11 21 23.3	-0.6
	comp=Z,15nm,0.9s,baz=154,slow=5.8,SNR=28						
SEY	Seymchan	86.17	347	⇑*i*P	P	11 21 23.6	-0.3
P17A	Butcher Ranch,	86.17	46	*e*P	P	11 21 25.8	+1.1
TLIG	Tlapa	86.23	70	*e*P	P	11 21 26.0	+0.6
JLU	Jordanelle	86.26	44	*e*P	P	11 21 25.9	+0.7
MNTX	Cornudas Mount	86.36	54	P	P	11 21 26.6	+1.0
	baz=244,SNR=32						
MNTX	Cornudas Mount	86.36	54	*e*P	P	11 21 26.6	+1.0
	comp=Z,18nm,0.9s						
DHY	Denali Highway	86.38	13	*e*P	P	11 21 24.7	-0.4
TCUT	Toone Canyon	86.55	44	*e*P	P	11 21 27.5	+1.0
P18A	Preston Nutter	86.57	46	*e*P	P	11 21 27.6	+0.8
BPAW	Bear Paw Mtn.	86.58	11	*e*P	P	11 21 24.8	-1.1
MVCO	Mesa Verde	86.60	48	P	P	11 21 26.9	0.0
	baz=242						
MVCO	Mesa Verde	86.60	48	*e*P	P	11 21 27.4	+0.5
SKAG	Skagway	86.62	20	*e*P	P	11 21 27.4	+1.3
MCK	McKinley	86.64	12	*e*P	P	11 21 25.7	-0.5
MCK	McKinley	86.64	12	*e*P	P	11 21 25.7	-0.5
TX31	Lajitas Ar. Si	86.67	57	*e*P	P	11 21 28.2	+1.0
TXAR	Lajitas Array	86.67	57	P	P	11 21 28.3	+1.1
	comp=Z,10nm,0.7s,baz=218,slow=6.5,SNR=152						
HWUT	Hardware Ranch	86.70	43	*e*P	P	11 21 27.5	+0.3
PAX	Paxson	86.72	14	*e*P	P	11 21 26.0	-0.6
PAX	Paxson	86.72	14	*e*P	P	11 21 26.0	-0.6
GYA	Guiyang	86.75	300	*e*P	P	11 21 28.8	+1.1
GYA				pP	pP	11 23 18.0	-1.8
GYA				sP	sP	11 24 07.3	-4.2
GYA				PP	PP	11 25 01.0	+1.4
GYA				SKS	SKSac	11 31 06.8	+0.6
GYA				S	S	11 31 23.5	+0.7
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
PV09	Paradox Valley	86.78	47	*e*P	P	11 21 28.6	+0.8
PV19	Morning Glory	86.79	47	*e*P	P	11 21 28.4	+0.7
PV17	East Wray Mesa	86.79	47	*e*P	P	11 21 28.2	+0.5
PV14	Lion Creek, Pa	86.79	47	*e*P	P	11 21 28.4	+0.7
PV18	Skein Mesa, Pa	86.81	47	*e*P	P	11 21 28.4	+0.6
PV20	West Nyswonger	86.82	47	*e*P	P	11 21 28.5	+0.7
PV13	Radium Mtn., P	86.83	47	*e*P	P	11 21 28.6	+0.6
PV16	Nyswonger Mesa	86.84	47	*e*P	P	11 21 28.9	+1.0
PV23	Carpenter Ridg	86.84	47	*e*P	P	11 21 28.8	+0.7
PV03	Paradox Valley	86.86	47	*e*P	P	11 21 28.4	+0.4
PV11	David Mesa, Pa	86.86	47	*e*P	P	11 21 28.6	+0.6
PV02	Paradox Valley	86.91	47	*e*P	P	11 21 29.3	+1.0
PV21	Cone Mtn., Par	86.92	47	*e*P	P	11 21 29.2	+0.8
PV12	Saucer Basin,	86.92	47	*e*P	P	11 21 29.1	+0.7
TASM	ASL Pad, Albuq	87.01	51	P	P	11 21 29.3	+0.5
	baz=243,SNR=16						
ANMO	Albuquerque	87.02	51	P	P	11 21 29.3	+0.4
	comp=Z,7.5nm,0.8s,baz=237,slow=6.1,SNR=35						
ANMO	Albuquerque	87.02	51	P	P	11 21 29.3	+0.4
	baz=243						
ANMO	Albuquerque	87.02	51	*d i*P	P	11 21 29.2	+0.4
ANMO				pmax	pmax		
	comp=Z,10.0nm,0.9s						
TASL	Snake Pit, Alb	87.02	51	P	P	11 21 29.3	+0.5
	baz=243,SNR=16						
PV22	Blue Mesa, Par	87.03	47	*e*P	P	11 21 29.6	+0.7
SYO	Syowa Base	87.06	193	⇑*e*P	P	11 21 27.0	-1.2
SYO	Syowa Base	87.06	193	⇓*e*PcP	P	11 21 29.0	+0.8
MLY	Manley	87.47	11	*e*P	P	11 21 28.8	-1.3
WRH	Wood River Hil	87.47	12	*e*P	P	11 21 29.1	-0.9
WRH				*e*pP	pP	11 23 23.5	+1.1
RIDG	Independ'e Rid	87.53	14	*e*P	P	11 21 30.2	-0.2
MCMT	McKenzie Canyo	87.56	40	*e*P	P	11 21 31.9	+0.7
AHID	Auburn Hatcher	87.58	43	*e*P	P	11 21 32.1	+0.7
CCB	Clear Creek Bu	87.68	12	*e*P	P	11 21 29.8	-1.1
DLBC	Dease Lake	87.69	23	P	P	11 21 31.2	0.0
	comp=Z,5.2nm,0.8s,baz=222,slow=5.3,SNR=17						
DLBC	Dease Lake	87.69	23	*e*P	P	11 21 31.7	+0.5
WHY	Whitehorse	87.70	20	*e*P	P	11 21 31.9	+0.6
PBKT	Sadao Pong	87.79	288	*e*P	P	11 21 34.5	+1.9
COLA	College	87.88	12	*e*P	P	11 21 31.0	-0.9
COLA	College	87.88	12	*e*P	P	11 21 31.0	-0.9
MDM	Murphy Dome	87.88	12	*e*P	P	11 21 30.7	-1.3
SCRK	Sand Creek	87.92	14	*e*P	P	11 21 32.2	-0.1
MSO	Missoula	87.98	38	P	P	11 21 33.7	+0.7
	baz=238						
MSO	Missoula	87.98	38	*e*P	P	11 21 33.3	+0.3
IL1	Eielson Array	87.98	13	*e*P	P	11 21 30.5	-1.9
IL1				*e*pP	pP	11 23 24.8	-0.2
ILAR	Eielson Array	87.98	13	P	P	11 21 31.2	-1.2
	comp=Z,6.6nm,0.8s,baz=223,slow=5.5,SNR=68						
ILB	Eielson Array	87.98	13	*e*P	P	11 21 31.4	-1.0
DLMT	Dillon	88.00	40	*e*P	P	11 21 33.9	+0.8
S22A	4UR Ranch, Cre	88.03	49	P	P	11 21 34.3	+0.6
	baz=243,SNR=16						
S22A	4UR Ranch, Cre	88.03	49	*e*P	P	11 21 34.4	+0.8
REDW	Red Top Meadow	88.04	42	*e*P	P	11 21 34.0	+0.5
TPAW	Teton Pass	88.05	42	*e*P	P	11 21 34.3	+0.8
FXWY	Fox Creek	88.07	42	*e*P	P	11 21 34.3	+0.7
SNOW	Snow King Moun	88.15	42	*e*P	P	11 21 34.8	+0.7
O20A	White River Ci	88.17	46	P	P	11 21 34.3	+0.2
	baz=242,SNR=5.6						
O20A	White River Ci	88.17	46	*e*P	P	11 21 34.5	+0.3
XAN	Xi'an	88.18	307	P	P	11 21 29.0	-5.1
XAN				pmax	pmax		
	comp=Z,8.0nm,0.6s						
XAN				pmax	pmax		
	comp=Z,63nm,6.0s						
IMW	Indian Meadow	88.26	42	*e*P	P	11 21 35.4	+0.8
JTMT	Jette	88.28	37	*e*P	P	11 21 34.2	-0.2
SNAA	Sanae	88.28	178	P	P	11 21 33.3	-0.6
SNAA	Sanae	88.28	178	P	P	11 21 33.4	-0.6
	comp=Z,3.1nm,0.9s,baz=228,slow=8.1,SNR=16						
SNAA	Sanae	88.28	178	*e*P	P	11 21 33.7	-0.3
SNAA	Sanae	88.28	178	*e*P	P	11 21 33.7	-0.3
LNIG	Linares	88.28	63	*e*P	P	11 21 34.5	-0.2
MOOW	Moose Ponds	88.30	42	*e*P	P	11 21 35.1	+0.4
LRM	Limekiln Ridge	88.32	39	*e*P	P	11 21 35.4	+0.7
LOHW	Long Hollow	88.32	42	*e*P	P	11 21 35.4	+0.6
VNA3	Neumayer Olymp	88.40	176	P	P	11 21 34.1	-0.4
QLMT	Earthquake Lak	88.43	41	*e*P	P	11 21 36.6	+1.4
FLWY	Flagg Ranch	88.50	42	*e*P	P	11 21 36.8	+1.2
YPP	Pitchstone Pla	88.53	41	*e*P	P	11 21 37.5	+1.7
YHB	Horse Butte	88.53	41	*e*P	P	11 21 36.1	+0.4
BW06	Boulder Array	88.57	43	P	P	11 21 35.9	-0.1
	baz=241,SNR=18						
BW06	Boulder Array	88.57	43	*e*P	P	11 21 36.3	+0.3
PD31	Pinedale Array	88.57	43	*e*P	P	11 21 36.0	0.0
PDAR	Pinedale Array	88.57	43	P	P	11 21 35.9	-0.1
	comp=Z,7.1nm,0.7s,baz=210,slow=3.3,SNR=85						
PDAR	Pinedale Array	88.57	43	*e*P	P	11 21 35.7	-0.2
SMCO	Snowmass	88.58	47	*e*P	P	11 21 37.0	+0.7
YFT	Old Faithful	88.60	41	*e*P	P	11 21 38.5	+2.4
YMR	Madison River	88.63	41	*e*P	P	11 21 37.6	+1.4
BOZ	Bozeman (W)	88.70	40	P	P	11 21 37.1	+0.7
	baz=239,SNR=35						
BOZ	Bozeman (W)	88.70	40	*e*P	P	11 21 37.1	+0.7
BOZ	Bozeman (W)	88.70	40	*e*P	P	11 21 37.1	+0.7
H17A	Grant Village	88.73	41	P	P	11 21 38.3	+1.5
	baz=240,SNR=12						
H17A	Grant Village	88.73	41	*e*P	P	11 21 39.0	+2.2
SDCO	Great Sand Dun	88.96	49	P	P	11 21 38.1	+0.1
	baz=243,SNR=8.4						
SDCO	Great Sand Dun	88.96	49	*e*P	P	11 21 38.2	+0.1
VNA1	Neumayer--Stat	89.07	176	P	P	11 21 37.4	-0.1
DAWY	Dawson	89.12	16	*e*P	P	11 21 37.8	+0.1
HRY	Holter Researc	89.15	39	*e*P	P	11 21 39.2	+0.8
WALA	Waterton Lakes	89.20	36	*e*P	P	11 21 39.2	+0.6
EGAK	Eagle	89.27	15	*e*P	P	11 21 38.1	-0.3
PLCA	Paso Flores	89.27	133	P	P	11 21 39.7	+0.5
	comp=Z,5.2nm,1.1s,baz=283,slow=2.3,SNR=4.0						
MSTX	Muleshoe	89.33	53	P	P	11 21 39.6	+0.1
	baz=245						
MSTX	Muleshoe	89.33	53	*e*P	P	11 21 39.8	+0.3
HHC	Hu-ho-hao-te	89.35	314	*e*P	P	11 21 42.3	+2.8
HHC				pmax	pmax		
	comp=Z,16nm,1.1s						
KMI	Kunming	89.47	297	P	P	11 21 41.5	+1.0
KMI				pmax	pmax		
	comp=Z,16nm,0.7s						
T25A	Trinidad	89.47	50	P	P	11 21 40.1	-0.2
	baz=244						
T25A	Trinidad	89.47	50	*e*P	P	11 21 41.1	+0.8
COLD	Coldfoot	89.55	10	*e*P	P	11 21 39.2	-0.5
RWWY	Rawlins	89.59	45	*e*P	P	11 21 39.9	-0.8
Q24A	Divide	89.75	48	P	P	11 21 41.7	0.0
	baz=244						
ISCO	Idaho Springs	89.81	47	P	P	11 21 42.1	+0.2
	baz=243						
ISCO	Idaho Springs	89.81	47	*e*P	P	11 21 42.6	+0.7
ISCO	Idaho Springs	89.81	47	*e*P	P	11 21 42.6	+0.7
RLMT	Red Lodge	89.90	41	P	P	11 21 42.7	+0.6
	baz=241,SNR=12						
RLMT	Red Lodge	89.90	41	*e*P	P	11 21 43.2	+1.1
GCMT	Greycliff	89.98	40	*e*P	P	11 21 43.6	+1.3
N23A	Red Feather La	90.07	46	P	P	11 21 43.0	-0.1
	baz=243,SNR=8.4						
N23A	Red Feather La	90.07	46	*e*P	P	11 21 44.5	+1.4
JCT	Junction City	90.20	58	P	P	11 21 43.3	-0.3
	baz=247						
JCT	Junction City	90.20	58	*e*P	P	11 21 43.9	+0.3
JCT	Junction City	90.20	58	*e*P	P	11 21 43.9	+0.3
CM01	Chiang Mai Arr	90.25	289	*e*P	P	11 21 45.1	+1.1
CMAR	Chiang Mai Arr	90.28	289	P	P	11 21 45.2	+1.1
	comp=Z,6.1nm,0.9s,baz=115,slow=2.9,SNR=26						
CHTO	Chiang Mai	90.41	290	*e*P	P	11 21 44.7	-0.1
	comp=Z,9.9nm,0.9s						
K22A	Casper	90.48	44	P	P	11 21 44.9	+0.1
	baz=243,SNR=6.9						
K22A	Casper	90.48	44	*e*P	P	11 21 45.3	+0.5
AMTX	Amarillo	90.53	53	P	P	11 21 45.1	0.0
	baz=246						
TOLK	Toolik Lake Re	90.93	10	P	P	11 21 47.1	+1.0
	baz=206						
EGMT	Eagleton	91.03	38	P	P	11 21 47.5	+0.4
	baz=241						
EGMT	Eagleton	91.03	38	*e*P	P	11 21 47.7	+0.7
ABTX	Abilene, Hawle	91.17	56	P	P	11 21 48.1	+0.1
	baz=247						
ABTX	Abilene, Hawle	91.17	56	*e*P	P	11 21 48.6	+0.6
KSCO	Kaye Shedlock'	91.55	49	P	P	11 21 50.2	+0.5
	baz=245						
YAK	Yakutsk	91.96	338	⇑*i*P	P	11 21 50.0	-0.8
LAO	LASA Array	92.52	41	P	P	11 21 54.8	+0.9
	baz=243						
WHTX	Lake Whitney,	92.64	57	P	P	11 21 54.5	-0.2
	baz=248						
WMOK	Wichita Mounta	92.66	54	P	P	11 21 54.2	-0.6
	baz=247						
RSSD	Black Hills	92.76	44	P	P	11 21 55.2	-0.1
	baz=244						
RSSD	Black Hills	92.76	44	*e*P	P	11 21 55.5	+0.2
RSSD	Black Hills	92.76	44	*e*P	P	11 21 55.5	+0.2
LZH	Lanzhou	92.82	307	*e*P	P	11 21 55.0	-0.7
LZH				pP	pP	11 23 44.3	-4.6
LZH				sP	sP	11 24 32.3	-7.9
LZH				PP	PP	11 25 45.3	-1.7
LZH				*e*S	S	11 32 15.5	-1.9
LZH				SS	SS	11 38 45.5	-1.0
LZH				pmax	pmax		
	comp=Z,28nm,1.3s						
LZH				pmax	pmax		
	comp=Z,100nm,4.6s						
CBKS	Cedar Bluff	93.53	50	P	P	11 21 58.7	0.0
	baz=247						
INK	Inuvik	93.93	15	P	P	11 21 58.8	-1.0
	comp=Z,5.9nm,0.9s,baz=224,slow=6.5,SNR=8.9						
INK	Inuvik	93.93	15	*e*P	P	11 21 58.9	-0.8
INK	Inuvik	93.93	15	*e*P	P	11 21 58.9	-0.8
DGMT	Dagmar	94.53	40	P	P	11 22 03.4	+0.4
	baz=245						
DGMT	Dagmar	94.53	40	*e*P	P	11 22 04.0	+1.0
BGNE	Belgrade	95.64	48	P	P	11 22 08.7	+0.4
	baz=248						
YKA	Yellowknife Ar	96.14	25	P	P	11 22 09.3	-0.6
	comp=Z,1.3nm,0.9s,baz=240,slow=3.9,SNR=5.1						
242A	Grayson	96.88	59	Pdiff	P	11 22 14.2	+0.3
	baz=251						
ECSD	EROS Data Cent	97.54	46	Pdiff	Pdif	11 22 16.6	-0.1
	baz=249						
ZALV	Zalesovo Beam	110.45	321	PKiKP	PKiKP	11 27 09.8	-1.5
	comp=Z,2.5nm,0.4s,baz=289,slow=0.4,SNR=4.1						
MKAR	Makanchi Array	111.20	313	PKiKP	PKiKP	11 27 11.7	-1.4
	comp=Z,2.7nm,0.6s,baz=109,slow=0.4,SNR=32						

KURK	**Kurchatov**	**113.97**	**317**	PKiKP	**PKiKP**	**11 27 17.0**	**-1.1**
KURK	**Kurchatov**	**113.97**	**317**	*c* *i*PKIKP	**PKiKP**	**11 27 16.8**	**-1.3**
KURK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KURBB	**Kurchatov Arra**	**114.03**	**317**	PKiKP	**PKiKP**	**11 27 17.0**	**-1.2**
	comp=Z,3.5nm,0.7s,baz=92,slow=1.9,SNR=39						
KSH	**Kashi**	**114.95**	**305**	*e*PKP	PKPdf	11 27 21.5	+0.9
KSH				PP	**PP**	**11 28 36.3**	**+7.1**
KSH				PKS	**PKSdf**	**11 30 57.5**	**+0.2**
AAK	**Ala-Archa**	**116.34**	**308**	⇑*i*PKIKP	**PKPdf**	**11 27 22.6**	**-0.6**
BVAR	**Borovoye Array**	**119.04**	**320**	PKP	**PKPdf**	**11 27 26.7**	**-1.1**
	comp=Z,7.6nm,0.7s,baz=87,slow=2.5,SNR=26						
BRVK	**Borovoye**	**119.10**	**320**	⇑*i*PKIKP	**PKPdf**	**11 27 27.1**	**-0.8**
BRVK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
DAG	**Danmarks Havn**	**122.43**	**6**	*i* PKIKP	**PKPdf**	**11 27 31.9**	**-1.8**
DAG				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ARU	**Arti**	**125.13**	**326**	PKP	**PKPdf**	**11 27 38.8**	**-0.5**
	comp=Z,4.3nm,0.3s,baz=270,slow=2.0,SNR=10						
ARU	**Arti**	**125.13**	**326**	*e*PKPdf	**PKPdf**	**11 27 38.7**	**-0.7**
ARU	**Arti**	**125.13**	**326**	*i* PKIKP	**PKPdf**	**11 27 38.1**	**-1.3**
ARU						11 29 30.5	
ARU						11 34 04.1	
ARU				SS	SS	11 45 59.9	+6.0
BOSA	**Boshof**	**126.62**	**205**	PKP	**PKPdf**	**11 27 43.2**	**-0.2**
	comp=Z,1.4nm,0.6s,baz=157,slow=2.3,SNR=4.1						
AKTO	**Aktyubinsk**	**127.04**	**319**	PKP	**PKPdf**	**11 27 43.0**	**-0.2**
	comp=Z,4.8nm,0.7s,baz=122,slow=1.1,SNR=12						
ARCES	**ARCESS Array B**	**128.69**	**350**	PKP	**PKPdf**	**11 27 44.9**	**-1.0**
	comp=Z,4.3nm,0.7s,baz=357,slow=1.6,SNR=10						
AKT	**Akhty**	**136.21**	**309**	*e*PKIKP	**PKPdf**	**11 28 02.4**	**+1.4**
AKT				*e*		11 29 51.3	
AKT				*e*		11 30 49.9	
AKT				pmax	pmax		
	comp=Z,6.0nm,0.7s						
OBN	**Obninsk**	**136.64**	**332**	*e*PKIKP	**PKPdf**	**11 27 59.5**	**-1.6**
OBN				*e*		11 30 46.8	
OBN				pmax	pmax		
	comp=Z,8.0nm,0.8s						
VSR	**Storozhevoye**	**137.70**	**326**	*e*PKIKP	**PKPdf**	**11 28 01.5**	**-1.7**
NB2	**NORSAR Subarra**	**138.74**	**353**	PKP	PKPpre	11 27 54.3	
	comp=Z,1.1nm,0.6s,baz=20,slow=3.6						
NOA	**NORSAR Array B**	**138.74**	**353**	PKhKP	PKPpre	11 27 57.6	
	comp=Z,2.0nm,0.7s,baz=21,slow=3.9,SNR=8.4						
NOA				PKP	**PKPdf**	**11 28 03.8**	**-1.1**
	comp=Z,0.8nm,0.6s,baz=14,slow=4.1,SNR=7.3						
KIV	**Kislovodsk**	**138.96**	**315**	*e*PKIKP	**PKPdf**	**11 28 04.1**	**-1.8**
KIV				*e*		11 31 03.9	
KIV				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HFS	**Hagfors**	**139.31**	**351**	PKhKP	PKPpre	11 27 56.6	
	comp=Z,3.4nm,0.5s,baz=42,slow=2.3,SNR=19						
RAYN	**Ar Rayn**	**139.87**	**283**	*e*PKPdf	**PKPdf**	**11 28 07.5**	**-0.7**
RAYN	**Ar Rayn**	**139.87**	**283**	*e*PKIKP	**PKPdf**	**11 28 07.5**	**-0.7**
KONO	**Kongsberg**	**140.26**	**354**	*i* PKIKP	**PKPdf**	**11 28 07.0**	**-0.6**
AKASG	**Malin Array Be**	**142.90**	**331**	PKhKP	PKPpre	11 28 08.7	
	comp=Z,25nm,0.7s,baz=43,slow=4.3,SNR=77						
KIEV	**Kiev**	**142.91**	**331**	*e*PKPdf	**PKPdf**	**11 28 09.0**	**-3.6**
SHEL	**Horse Pasture**	**143.19**	**167**	*i* PKIKP	**PKPdf**	**11 28 14.9**	**+0.6**
MUD	**Monsted U'grnd**	**143.45**	**354**	*i* PKIKP	PKPab	11 28 11.3	-0.3
MUD				pmax	pmax		
	comp=Z,38nm,0.9s						
BSD	**Bornholm Skovb**	**143.87**	**348**	⇓*i*PKIKP	PKPab	11 28 12.1	-1.2
BSD				pmax	pmax		
	comp=Z,48nm,0.8s						
SIM	**Simferopol'**	**143.95**	**320**	*c* *i*PKIKP	PKPab	11 28 13.6	-0.3
SIM				pmax	pmax		
	comp=Z,60nm,0.9s						
EKA	**Eskdalemuir Ar**	**144.70**	**5**	PKP	**PKPdf**	**11 28 15.1**	**-0.6**
	comp=Z,8.0nm,0.7s,baz=329,slow=3.1,SNR=22						
ESK	**Eskdalemuir**	**144.71**	**5**	*e*PKPdf	**PKPdf**	**11 28 14.9**	**-0.7**
ESK	**Eskdalemuir**	**144.71**	**5**	*e*PKIKP	**PKPdf**	**11 28 14.9**	**-0.7**
SORM	**Soroca**	**145.11**	**329**	⇓PKIKP	**PKPdf**	**11 28 16.5**	**0.0**
BEL	**Belsk**	**145.29**	**340**	*e*PKP	**PKPab**	**11 28 18.0**	**-0.8**
BEL	**Belsk**	**145.29**	**340**	*e*PKP2	**PKPab**	**11 28 18.0**	**-0.8**
LVV	**L'vov**	**145.77**	**335**	*e*PKIKP	**PKPbc**	**11 28 18.6**	**-0.6**
LEOM	**Leova**	**146.29**	**327**	⇑PKP2	**PKPbc**	**11 28 20.8**	**+0.1**
BRTR	**Keskin Array B**	**146.85**	**313**	PKPbc	**PKPbc**	**11 28 22.0**	**-0.7**
	comp=Z,12nm,0.8s,baz=137,slow=4.7,SNR=42						
ASF	**Jabal al Asfar**	**146.89**	**298**	PKPbc	**PKPbc**	**11 28 23.2**	**+0.2**
	comp=Z,13nm,0.8s,baz=11,slow=2.4,SNR=21						
BURAR	**Bucovina Array**	**146.95**	**331**	⇑PKIKP	**PKPbc**	**11 28 21.5**	**-1.2**
OJC	**Ojcow**	**147.00**	**339**	*e*PKP	**PKPbc**	**11 28 22.1**	**-0.5**
OJC	**Ojcow**	**147.00**	**339**	*e*PKP2	**PKPbc**	**11 28 22.1**	**-0.5**
CFR	**Carcaliu**	**147.21**	**325**	⇑PKIKP	**PKPbc**	**11 28 22.3**	**-1.0**
ANTO	**Ankara**	**147.37**	**314**	*e*PKPbc	**PKPbc**	**11 28 24.0**	**0.0**
ANTO	**Ankara**	**147.37**	**314**	*e*PKP2	**PKPbc**	**11 28 24.0**	**0.0**
UZH	**Uzhgorod**	**147.41**	**335**	⇓*i*PKP2	**PKPbc**	**11 28 23.9**	**+0.2**
VRI	**Vrincioaia**	**147.48**	**327**	⇓PKP2	**PKPbc**	**11 28 23.8**	**-0.2**
KSP	**Ksiaz**	**147.50**	**343**	*e*PKP	**PKPbc**	**11 28 24.1**	**+0.2**
KSP	**Ksiaz**	**147.50**	**343**	*e*PKP2	**PKPbc**	**11 28 24.1**	**+0.2**
NIE	**Niedzica**	**147.51**	**338**	*e*PKP	**PKPbc**	**11 28 24.1**	**+0.1**
NIE	**Niedzica**	**147.51**	**338**	*e*PKP2	**PKPbc**	**11 28 24.1**	**+0.1**
CRVS	**Cervenica-Dubn**	**147.51**	**336**	*e*PKP2	**PKPbc**	**11 28 23.7**	**-0.3**
CRVS	**Cervenica-Dubn**	**147.51**	**336**	*e*PKP	**PKPbc**	**11 28 23.7**	**-0.3**
CRVS				*e*		11 28 26.4	
CLL	**Collm**	**147.85**	**347**	*e*PKPdf	**PKPdf**	**11 28 21.0**	**0.0**
CLL				⇓*i*PKPbc	**PKPbc**	**11 28 24.5**	**-0.2**
	comp=Z,62nm,0.8s						
CLL				⇑*i*PKPab	**PKPab**	**11 28 28.6**	**-0.4**
	comp=Z,21nm,0.9s						
CLL				*e*pPKPab	**pPKPdf**	**11 30 24.0**	**+2.4**
CLL	**Collm**	**147.85**	**347**	⇓*e*PKIKP	**PKPdf**	**11 28 21.0**	**0.0**
CLL				*i*		11 28 28.6	
CLL				pmax	pmax		
	comp=Z,6.0nm,0.8s						
OKC	**Ostrava-Krasne**	**147.86**	**341**	⇑*e*PKP	**PKPbc**	**11 28 24.9**	**+0.1**
OKC				*e*PKPAB	**PKPab**	**11 28 29.1**	**0.0**
OKC	**Ostrava-Krasne**	**147.86**	**341**	*e*PKP2	**PKPbc**	**11 28 24.9**	**+0.1**
UPC	**Upice**	**147.88**	**343**	⇑*e*PKP	**PKPbc**	**11 28 25.2**	**+0.3**
UPC				*e*PKPAB	**PKPab**	**11 28 29.8**	**+0.6**
UPC	**Upice**	**147.88**	**343**	*e*PKP2	**PKPbc**	**11 28 25.2**	**+0.3**
MMAI	**Mount Meron Ar**	**147.91**	**300**	PKPbc	**PKPbc**	**11 28 26.1**	**+0.5**
	comp=Z,37nm,0.8s,baz=56,slow=4.5,SNR=21						
DPC	**Dobruska-Polom**	**147.94**	**343**	⇑*e*PKP	**PKPbc**	**11 28 25.5**	**+0.4**
DPC				*e*PKPAB	**PKPab**	**11 28 29.7**	**+0.2**
DPC	**Dobruska-Polom**	**147.94**	**343**	*e*PKP2	**PKPbc**	**11 28 25.5**	**+0.4**
LANS	**Liptovska Anna**	**148.02**	**339**	*e*PKP2	**PKPbc**	**11 28 26.2**	**+0.9**
LANS	**Liptovska Anna**	**148.02**	**339**	*e*PKP	**PKPbc**	**11 28 26.2**	**+0.9**
BRG	**Berggiesshubel**	**148.06**	**346**	*i* PKP	**PKPdf**	**11 28 21.4**	**0.0**
	comp=Z,5.4nm,0.9s						
BRG	**Berggiesshubel**	**148.06**	**346**	*i* PKP	**PKPbc**	**11 28 25.3**	**+0.1**
	comp=Z,31nm,0.8s						
MORC	**Moravsky Berou**	**148.10**	**341**	⇓PKP2	**PKPbc**	**11 28 25.5**	**0.0**
MORC	**Moravsky Berou**	**148.10**	**341**	*e*PKP	**PKPbc**	**11 28 25.6**	**0.0**
MLR	**Muntele Rosu**	**148.14**	**328**	PKPbc	**PKPbc**	**11 28 25.1**	**-0.7**
	comp=Z,10nm,0.5s,baz=20,slow=4.2,SNR=12						
MLR	**Muntele Rosu**	**148.14**	**328**	⇑PKP2	**PKPbc**	**11 28 25.5**	**-0.3**
PVCC	**Panska Ves**	**148.23**	**345**	⇑*e*PKP	**PKPbc**	**11 28 26.2**	**+0.5**
PVCC				*e*PKPAB	**PKPab**	**11 28 30.3**	**-0.3**
PVCC	**Panska Ves**	**148.23**	**345**	*e*PKP2	**PKPbc**	**11 28 26.2**	**+0.5**
DRGR		**148.69**	**333**	⇑PKP2	**PKPbc**	**11 28 27.0**	**-0.1**
PRA	**Prague**	**148.69**	**345**	⇑*e*PKP	**PKPbc**	**11 28 27.3**	**+0.4**
PRA	**Prague**	**148.69**	**345**	*e*PKP2	**PKPbc**	**11 28 27.3**	**+0.4**
PRU	**Pruhonice**	**148.74**	**345**	⇑*e*PKP	**PKPbc**	**11 28 27.2**	**+0.2**
PRU				*e*PKPAB	**PKPab**	**11 28 33.3**	**+0.6**
PRU	**Pruhonice**	**148.74**	**345**	*e*PKP2	**PKPbc**	**11 28 27.2**	**+0.2**
GOPC	**GO Pecny, Ondr**	**148.74**	**344**	⇑*e*PKP	**PKPbc**	**11 28 27.3**	**+0.2**
GOPC				*e*PKPAB	**PKPab**	**11 28 33.1**	**+0.3**
GOPC	**GO Pecny, Ondr**	**148.74**	**344**	*e*PKP2	**PKPbc**	**11 28 27.3**	**+0.2**
MOX	**Moxa**	**148.75**	**349**	PKHKP	**PKPbc**	**11 28 26.9**	**-0.2**
VRAC	**Vranov**	**148.80**	**342**	PKPbc	**PKPbc**	**11 28 26.6**	**-0.6**
	comp=Z,11nm,0.7s,baz=26,slow=3.3,SNR=16						
VRAC	**Vranov**	**148.80**	**342**	⇑PKHKP	**PKPbc**	**11 28 27.0**	**-0.2**
VRAC	**Vranov**	**148.80**	**342**	*e*PKP	**PKPbc**	**11 28 27.3**	**+0.1**
VYHS	**Vyhne**	**148.80**	**339**	*e*PKP	**PKPbc**	**11 28 27.1**	**-0.1**
JAVC	**Velka Javorina**	**148.87**	**340**	*e*PKP	**PKPbc**	**11 28 28.4**	**+0.9**
NKC	**Novy Kostel**	**148.98**	**347**	⇑*e*PKP	**PKPbc**	**11 28 27.9**	**+0.3**
NKC	**Novy Kostel**	**148.98**	**347**	PKHKP	**PKPbc**	**11 28 27.8**	**+0.2**
EIL	**Elat**	**149.02**	**294**	PKPbc	**PKPbc**	**11 28 30.9**	**+2.6**
	comp=Z,16nm,0.7s,baz=324,slow=4.2,SNR=13						
KRUC	**Moravsky**	**149.08**	**342**	*e*PKP	**PKPbc**	**11 28 27.7**	**-0.2**
MODS	**Modra-Piesok**	**149.42**	**340**	*e*PKP	**PKPbc**	**11 28 29.1**	**+0.3**
MEM	**Membach**	**149.53**	**355**	⇑PKP	**PKPbc**	**11 28 28.9**	**0.0**
SNF	**Seneffe**	**149.73**	**357**	⇑PKP	**PKPbc**	**11 28 29.5**	**+0.1**
GRFO	**Grafenberg**	**149.74**	**348**	*e*PKPbc	**PKPbc**	**11 28 29.5**	**+0.1**
GRFO				*e*PKPab	**PKPab**	**11 28 37.1**	**+0.3**
KHC	**Kasperske Hory**	**149.77**	**345**	⇑*e*PKP	**PKPbc**	**11 28 29.8**	**+0.2**
KHC				*e*PKPAB	**PKPab**	**11 28 37.6**	**+0.5**
BCLA	**Clavier**	**149.77**	**356**	⇑PKP	**PKPbc**	**11 28 29.2**	**-0.3**
WET	**Wettzell**	**149.92**	**346**	PKHKP	**PKPbc**	**11 28 29.2**	**-0.7**
GERES	**GERESS Array B**	**150.00**	**345**	PKP	**PKPdf**	**11 28 24.4**	**-0.3**
	comp=Z,0.6nm,0.7s,baz=54,slow=1.8,SNR=10						
GERES				PKPbc	**PKPbc**	**11 28 30.1**	**-0.1**
	comp=Z,17nm,0.8s,baz=40,slow=2.3,SNR=94						
BZS	**Buzias**	**150.08**	**332**	⇓PKHKP	**PKPbc**	**11 28 30.1**	**-0.3**
DOU	**Dourbes**	**150.13**	**357**	⇓PKP	**PKPbc**	**11 28 30.2**	**-0.1**
CONA	**Conrad Observa**	**150.25**	**341**	*e*PKiKP	**PKPbc**	**11 28 30.6**	**-0.2**
	comp=Z,20nm,0.7s						
CONA				*i* PKiKP	**PKiKP**	**11 28 30.8**	**-0.6**
	SNR=15						
WLF	**Walferdange**	**150.46**	**355**	⇓PKP	**PKPbc**	**11 28 31.7**	**+0.6**
MOA	**Molln**	**150.78**	**343**	*i* PKPbc	**PKPbc**	**11 28 31.5**	**-0.4**
	comp=Z,7.3nm,0.7s						
ARSA	**Arzberg**	**150.96**	**341**	*e*PKPbc	**PKPbc**	**11 28 31.5**	**-0.9**
	comp=Z,2.3nm,0.6s						
BFO	**Black Forest**	**151.53**	**352**	*e*PKPdf	**PKPdf**	**11 28 27.5**	**+0.5**
BFO				*e*PKPbc	**PKPbc**	**11 28 33.1**	**-0.5**
BFO				*e*PKPab	**PKPab**	**11 28 43.5**	**-0.9**
BFO	**Black Forest**	**151.53**	**352**	*e*PKIKP	**PKPdf**	**11 28 27.5**	**+0.5**
BFO				*e*		11 28 43.6	
VTS	**Vitosha**	**151.58**	**326**	⇑PKIKP	**PKPbc**	**11 28 34.0**	**-0.1**
SOKA	**Soboth**	**151.62**	**341**	*e*PKPbc	**PKPbc**	**11 28 32.7**	**-1.3**
	comp=Z,7.1nm,0.7s						
SOKA				*i* PKPbc	**PKiKP**	**11 28 33.0**	**-1.2**
	SNR=6.1						
KBA	**Koelnbreinsper**	**151.73**	**344**	*e*PKPbc	**PKPbc**	**11 28 33.5**	**-0.8**
	comp=Z,9.2nm,0.7s						
WATA	**Walderalm**	**151.91**	**347**	*e*PKPbc	**PKPbc**	**11 28 34.3**	**-0.4**
	comp=Z,4.0nm,0.5s						
RETA	**Reutte**	**151.94**	**348**	*e*PKPbc	**PKPbc**	**11 28 34.3**	**-0.4**
	comp=Z,7.9nm,1.0s						
WTTA	**Wattenberg**	**151.97**	**346**	*e*PKiKP	**PKPbc**	**11 28 34.5**	**-0.4**
	comp=Z,9.3nm,0.7s						
MOTA	**Moosalm**	**152.01**	**347**	*e*PKPdf	**PKPdf**	**11 28 26.5**	**-1.4**
	comp=Z,2.5nm,0.6s						
MYKA	**Terra Mystica**	**152.07**	**343**	*e*PKPbc	**PKPbc**	**11 28 33.5**	**-1.4**
	comp=Z,6.0nm,0.5s						
ABTA	**Abfaltersbach**	**152.25**	**345**	*e*PKPdf	**PKPdf**	**11 28 27.2**	**-1.0**
	comp=Z,11nm,1.0s						
ABTA				*e*PKPbc	**PKPbc**	**11 28 34.6**	**-0.7**
	comp=Z,16nm,0.7s						
DAVA	**Damuels**	**152.30**	**349**	*i* PKiKP	**PKPbc**	**11 28 35.3**	**-0.2**
	SNR=5.8						
DAVA				*e*PKiKP	**PKiKP**	**11 28 35.7**	**-0.1**
	comp=Z,16nm,1.1s						
FETA	**Feichten**	**152.39**	**347**	*e*PKPdf	**PKPdf**	**11 28 27.9**	**-0.5**
	comp=Z,8.0nm,1.2s						
FETA				*e*PKiKP	**PKiKP**	**11 28 35.7**	**-0.2**
	comp=Z,8.2nm,0.9s						
DAVOX	**Davos/Dischmat**	**152.79**	**349**	PKP	**PKPdf**	**11 28 28.4**	**-0.7**
	comp=Z,1.4nm,0.3s,baz=248,slow=3.3,SNR=5.0						
DAVOX				PKPbc	**PKiKP**	**11 28 36.7**	**-0.1**
	comp=Z,10nm,0.6s,baz=327,slow=2.8,SNR=12						
ESDC	**Sonseca Array**	**159.88**	**14**	PKP	**PKPdf**	**11 28 36.9**	**-1.3**
	comp=Z,0.1nm,0.3s,baz=349,slow=1.3,SNR=3.4						
ESDC				PKPab	**PKPab**	**11 29 20.0**	**-0.7**
	comp=Z,0.3nm,0.3s,baz=350,slow=3.5,SNR=7.8						
DBIC	**Dimbokro**	**164.85**	**152**	PKP	**PKPdf**	**11 28 42.5**	**-1.2**
	comp=Z,3.4nm,0.7s,baz=86,slow=3.3,SNR=3.7						
DBIC				PKPab	**PKPab**	**11 29 43.4**	**+0.4**
	comp=Z,3.3nm,0.7s,baz=153,slow=6.8,SNR=4.9						
MDT	**Midelt**	**166.02**	**25**	PKPab	**PKPab**	**11 29 48.0**	**+0.1**
	comp=Z,2.2nm,0.7s,baz=356,slow=6.3,SNR=6.0						
KOWA	**Kowa**	**171.71**	**132**	PKP	**PKPdf**	**11 28 46.4**	**-1.8**
	comp=Z,3.3nm,0.7s,baz=276,slow=4.8,SNR=6.1						
TORD	**Torodi Ar. Bea**	**172.94**	**175**	PKP	**PKPdf**	**11 28 47.2**	**-1.5**
	comp=Z,5.0nm,1.0s,baz=186,slow=2.6						
TORD				PKPab	**PKPab**	**11 30 17.5**	**-1.2**
	baz=183,slow=2.9						

MEX 25 11:16:25.9±0.9,16°.30N×98°.09W,h5^{km},MD3.6,Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.10**	**338**	*i* P	Pg	11 16 27.2	-0.9
PNIG				*i* S	Sg	11 16 29.3	-0.2
TLIG	**Tlapa**	**1.34**	**340**	*i* P	Pn	11 16 48.4	-3.0
TLIG				*i* S	Sg	11 17 05.5	-3.5

MAN 25 11:19:25.3,9°.92N×123°.14E,h1^{km},mb4.4,ML3.2,MS3.0, 2C-2D,Negros

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNPH	**Sibulan**	**0.58**	**171**	⇓*i*P	Pg	11 19 37.0	+0.5
SNPH				*i* S	Sg	11 19 44.7	+0.6
TBP	**Tagbilaran**	**0.74**	**108**	*e*P	Pg	11 19 39.1	-0.4
TBP				*i* S	Sg	11 19 50.0	+0.7
GUIM	**Jordan**	**0.89**	**322**	*e*P	Pg	11 19 42.2	-0.1
GUIM				*e*S	Sn	11 19 58.0	-0.4
LLP	**Lapu-Lapu**	**0.90**	**64**	*e*P	Pg	11 19 42.4	-0.2
LLP				*e*S	Sg	11 19 54.6	+0.4
DCPH	**Dipolog City**	**1.35**	**171**	⇑*e*P	Pg	11 19 50.2	-0.9
DCPH				*i* S	Sg	11 20 08.0	-0.6
JAP	**San Jose, Anti**	**1.44**	**305**	⇓*e*P	Pb	11 19 55.9	+3.1
RCP	**Roxas**	**1.67**	**346**	⇑*e*P	Pb	11 19 56.7	-0.3
RCP				*e*S	Sg	11 20 21.4	+2.3
MSLP	**Maasin**	**1.70**	**83**	*e*P	Pn	11 19 56.3	+0.2
MSLP				*e*S	Sb	11 20 19.6	+0.3
PAGZ	**Pagadian**	**2.08**	**173**	*e*P	Pn	11 20 01.9	+0.7
PAGZ				*e*S	Sn	11 20 28.6	+0.9
CUYO	**Cuyo Island**	**2.29**	**294**	*e*P	Pn	11 20 05.0	+0.8
BUKP	**Musuan**	**2.78**	**137**	*e*P	Pn	11 20 08.5	-2.5
BUKP				*e*S	Sn	11 20 46.7	+1.5
SJMP	**San Jose**	**3.21**	**322**	*e*P	Pb	11 20 20.2	-2.9

DJA 25 11:19:45.5±0.9,2°N±3°×9°6E±°,h10^{km}±3^{km},M3.5/5, MLv3.5/5,Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNSI	**Sinabang, Aceh**	**0.56**	**95**	P	Pb	11 19 57.0	-0.4
SNSI				S	Sb	11 20 05.0	-0.4
TPTI		**1.62**	**61**	P	Pn	11 20 14.0	-0.1
TPTI				S	Sb	11 20 35.5	-0.4
MLSI	**Meulaboh, Aceh**	**1.90**	**19**	P	Pn	11 20 18.0	0.0
MLSI				S	Sn	11 20 42.6	+0.5
GSI	**Gunungsitoli**	**2.14**	**122**	P	Pn	11 20 21.0	-0.3
GSI				S	Sn	11 20 48.6	+0.7
KCSI	**Kotacane, Aceh**	**2.26**	**62**	P	Pn	11 20 23.0	0.0
KCSI				S	Sn	11 20 51.6	+0.7
PBSI	**Pulau Batu**	**3.54**	**135**	P	Pn	11 20 40.5	-0.1

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*IDC **25** 11:20:23.1±0.3,9°.74S×159°.82E,h0^{km},mb5.8/43, mb1 5.7/43,mb1mx5.7/49,mbtmp5.7/43,MS6.2/45, Ms1 6.2/45,ms1mx6.2/47,Error ellipse: s-maj=12.0km s-min=8.4km az=98.0*

*BJI **25** 11:20:25.3,9°.64S×159°.66E,h18^{km},mb6.0/73,mB6.5/67, Ms6.4/97,Ms7 6.3/88*

*ISCJB **25** 11:20:26.9±0.7,9°.69S±0°.02×159°.79E±0°.02,h28^{km}±5^{km}, mb6.2/274,MS6.4/212,Error ellipse: s-maj=3.5km s-min=2.9km az=175.8*

*MOS **25** 11:20:27.4±0.7,9°.67S×159°.79E,h36^{km},mb6.5/66, MS6.5/50,Error ellipse: s-maj=7.2km s-min=6.0km az=106.2*

*NEIC **25** 11:20:27.0±0.0,9°.52S×159°.73E,h30^{km},Moment Tensor Solution. s37 Moment tensor: Scale 10^{18}Nm; M_{rr}-0.05; $M_{\theta\theta}$0.23; $M_{\phi\phi}$-0.18; $M_{r\theta}$4.42; $M_{\theta\phi}$1.68; $M_{\phi r}$-0.33; Best double couple: $M_0$4.80000×10^{18} NP1:ϕ_s274.00000°, δ90.00000°,λ-69.00000°. NP2:ϕ_s4.00000°,δ21.00000°, λ-179.00000°. Principal axes: T 4.7200, Plg41.0000°, Azm344.0000°; N 0.0500, Plg20.0000°, Azm93.0000°; P -4.7800, Plg41.0000°, Azm203.0000°;*

*GCMT **25** 11:20:27.0±0.1,9°.84S×159°.71E,h25^{km},MW6.5/148, Moment Tensor Solution. s146,c354; s148,c578; Duration: 4^{s}.1 Moment tensor: Scale 10^{18}Nm; M_{rr}0.16±.01; $M_{\theta\theta}$0.19±.01; $M_{\phi\phi}$-0.35±.01; $M_{r\theta}$5.60±.06; $M_{\theta\phi}$1.68±.01; $M_{\phi r}$-0.55±.04; Best double couple: $M_0$5.88100×10^{18} NP1:ϕ_s96.00000°,δ89.00000°, λ73.00000°. NP2:ϕ_s3.00000°,δ17.00000°,λ177.00000°. Principal axes: T 5.8810, Plg43.0000°, Azm350.0000°; N -0.0010, Plg17.0000°, Azm96.0000°; P -5.8800, Plg42.0000°, Azm202.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*NEIC **25** 11:20:27.0±0.1,9°.69S×159°.73E,h20^{km},mb6.4/118, ME6.4,MS6.5/121,MW6.3,MW6.4 Error ellipse: s-maj=3.9km s-min=3.5km az=98.0,Moment Tensor Solution. s69 Moment tensor: Scale 10^{18}Nm; M_{rr}0.14; $M_{\theta\theta}$0.39; $M_{\phi\phi}$-0.53; $M_{r\theta}$2.67; $M_{\theta\phi}$1.56; $M_{\phi r}$0.01; Best double couple: $M_0$3.10000×10^{18} NP1:ϕ_s4.00000°, δ31.00000°,λ178.00000°. NP2:ϕ_s96.00000°,δ89.00000°, λ59.00000°. Principal axes: T 3.3000, Plg38.0000°, Azm338.0000°; N -0.3600, Plg31.0000°, Azm96.0000°; P -2.9400, Plg36.0000°, Azm213.0000°; Broadband fault plane solution: P waves. NP1:ϕ_s359.00000°,δ10.00000°, λ174.00000°. NP2:ϕ_s95.00000°,δ89.00000°,λ80.00000°. Principal axes: T Plg45.0000°, Azm355.0000°; N Plg0.0000°, Azm0.0000°; P Plg43.0000°, Azm195.0000°;*

Complex earthquake observed on broadband displacement seismograms. A small event is followed by a larger one about 3 seconds later. Depth from synthetics of broadband displacement seismograms based on larger event. Energy computed from BB mechanism.

NEIC Twenty-six houses destroyed and landslides occurred on the south coast of Guadalcanal. Felt [VI] at Honiara. Also felt on Tulaghi.

ISC 25 11:20:27.9±0.3,9°.67S±0°.03×159°.86E±0°.03,h24^{km}±1^{km}, h24^{km}:pP-P,n1390,σ2^{s}.20/1578,mb6.4/286,MS6.5/219, 70C-36D,Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**0.25**	**21**	Pn	**Pn**	**11 20 35.4**	**-0.8**
	40μm,0.3s,baz=184,slow=3.5,SNR=4776						
HNR	**Honiara**	**0.25**	**21**	*i* P	**Pb**	**11 20 34.0**	**-0.1**
RABL	**Rabaul**	**9.38**	**305**	*e*Pn	Pn	11 22 46.6	+5.0
PMG	**Port Moresby**	**12.53**	**270**	Pn	**Pn**	**11 23 28.0**	**+3.2**
	2.1nm,0.3s,baz=93,slow=9.0,SNR=34						
PMG				Sn	**Sn**	**11 25 49.7**	**+6.1**
	1.5nm,0.3s,baz=54,slow=19,SNR=1.4						
PMG				LR	LR	11 27 59.2	
	comp=Z,198μm,20.9s,baz=104,slow=36						
DZM	**Mont Dzumac**	**13.86**	**154**	*e*Pn	**Pn**	**11 23 43.9**	**+0.8**
	2μm,1.4s						
DZM				*e*LR	LR	11 26 54.2	
	276μm,21.1s						
DZM	**Mont Dzumac**	**13.86**	**154**	Pn	**Pn**	**11 23 43.5**	**+0.4**
	2.8nm,0.3s,baz=33,slow=8.0,SNR=40						
DZM	**Mont Dzumac**	**13.86**	**154**	*e*Pn	**Pn**	**11 23 43.8**	**+0.7**
MANU	**Manus Island**	**14.54**	**301**	*e*Pn	**Pn**	**11 23 54.0**	**+1.6**
PATS	**Pohnpei**	**16.47**	**355**	*e*Pn	**Pn**	**11 24 16.6**	**-0.9**
	10μm,1.1s						
CTAO	**Charters Tower**	**16.72**	**230**	*e*Pn	**Pn**	**11 24 20.1**	**-0.7**
	6μm,1.4s						
CTAO	**Charters Tower**	**16.72**	**230**	*e*P	**Pn**	**11 24 20.1**	**-0.7**
CTAO				pmax	pmax		
	comp=Z,6μm,1.4s						
COEN	**Coen**	**16.87**	**254**	P	**P**	**11 24 24.6**	**0.0**
	baz=17,SNR=31						
COEN	**Coen**	**16.87**	**254**	*e*Pn	**P**	**11 24 24.6**	**0.0**
	comp=Z,3μm,1.8s						
TARA	**Tarawa**	**17.01**	**51**	*e*P	**P**	**11 24 27.7**	**+1.6**
	comp=Z,2μm,0.8s						
MTSU	**Mount Surprise**	**17.26**	**239**	P	**P**	**11 24 30.0**	**+1.1**
	baz=17,SNR=427						
EIDS	**Eidsvold**	**17.70**	**207**	P	**Pn**	**11 24 32.3**	**-0.6**
	baz=18,SNR=70						
EIDS	**Eidsvold**	**17.70**	**207**	*e*P	**Pn**	**11 24 33.0**	**0.0**
	comp=Z,2μm,1.1s						
FUNA	**Funafuti**	**19.13**	**88**	*e*P	**Pn**	**11 24 51.1**	**+0.6**
	comp=Z,2μm,1.5s						
RMQ	**Roma**	**19.75**	**211**	P	**Pn**	**11 24 57.4**	**-0.4**
	baz=20,SNR=45						
JAY	**Jayapura**	**20.32**	**289**	P	Pn	11 25 04.0	-0.6
JAY	**Jayapura**	**20.32**	**289**	P	**P**	**11 25 03.4**	**+0.9**
JAY				pmax	pmax		
	comp=Z,2μm,1.1s						
GENI	**Genyem**	**20.79**	**289**	P	Pn	11 25 09.1	-1.0
LHI	**Lord Howe Isla**	**21.76**	**182**	P	**P**	**11 25 17.1**	**-0.7**
	baz=22,SNR=10						
LHI	**Lord Howe Isla**	**21.76**	**182**	*e*P	**P**	**11 25 17.2**	**-0.7**
	comp=Z,1μm,1.0s						
ARMA	**Armidale**	**22.02**	**199**	P	**P**	**11 25 20.0**	**-0.9**
	baz=22,SNR=136						
ARMA	**Armidale**	**22.02**	**199**	*e*P	**P**	**11 25 19.8**	**-1.0**
	comp=Z,3μm,1.4s						
QIS	**Mount Isa**	**22.32**	**239**	P	**P**	**11 25 23.7**	**-0.3**
	baz=22,SNR=131						
QLP	**Quilpie**	**22.39**	**219**	P	**P**	**11 25 23.5**	**-1.2**
	baz=22,SNR=251						
SRPI	**Serui, Papua**	**24.72**	**287**	P	**P**	**11 25 49.6**	**+1.9**
MGCD	**Mangrove Creek**	**24.78**	**198**	P	**P**	**11 25 47.8**	**-0.2**
	baz=25,SNR=37						
BAKI	**Biak**	**25.08**	**288**	P	**P**	**11 25 51.5**	**+0.6**
	comp=Z,8μm,1.3s,comp=Z,109μm						
RIV	**Riverview**	**25.34**	**197**	P	**P**	**11 25 52.9**	**-0.2**
	baz=25,SNR=21						
RIV	**Riverview**	**25.34**	**197**	P	**P**	**11 25 53.0**	**0.0**
RIV				pmax	pmax		
	comp=Z,2μm,1.0s						
CMSA	**Cobar Meteorol**	**25.43**	**209**	P	**P**	**11 25 52.6**	**-1.3**
	baz=26,SNR=62						
KMPI	**Kaimana, Papua**	**26.64**	**281**	P	**P**	**11 26 06.7**	**+1.7**
WRAB	**Tennant Creek**	**26.65**	**245**	*e*P	**P**	**11 26 04.1**	**-1.0**
	comp=Z,1μm,1.0s						
WRAB				LR	LR		
	comp=Z,79μm,20.0s						
WRAB	**Tennant Creek**	**26.65**	**245**	*d* *i*P	**P**	**11 26 04.1**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,148nm,2.0s						
WRAB				MLR	MLR		
	comp=Z,77μm,20.0s						
WB2	**Warramunga Arr**	**26.65**	**245**	*e*P	**P**	**11 26 03.6**	**-1.5**
WRA	**Warramunga Arr**	**26.66**	**245**	P	**P**	**11 26 03.7**	**-1.6**
	comp=Z,34nm,0.8s,baz=71,slow=9.3,SNR=88						
WRA				PcP	**PcP**	**11 29 27.5**	**-1.4**
	comp=Z,11nm,0.8s,baz=66,slow=2.9,SNR=2.5						
WRA				S	**S**	**11 30 35.3**	**-4.0**
	comp=Z,21nm,1.0s,baz=71,slow=18,SNR=3.4						
WRA				ScP	**ScP**	**11 33 08.6**	**+0.9**
	comp=Z,7.9nm,0.8s,baz=72,slow=3.6,SNR=3.3						
WRA				LR	LR	11 36 02.3	
	comp=Z,79μm,20.9s,baz=70,slow=35						
WRA				PKiKP	**PKiKP**	**11 37 07.2**	**-0.3**
	comp=Z,4.3nm,0.9s,baz=97,slow=1.5,SNR=5.0						
WRA				P3KPbc		11 58 50.2	
	comp=Z,1.8nm,0.9s,baz=253,slow=2.9,SNR=11						
YNG	**Young**	**26.67**	**201**	P	**P**	**11 26 04.7**	**-0.5**
	baz=27,SNR=198						
RKPI	**Ransiki, Papua**	**26.79**	**286**	P	**P**	**11 26 08.1**	**+1.7**
	comp=Z,2μm,1.5s,comp=Z,31μmcomp=Z,26μm						
KDU	**Kakadu**	**27.02**	**261**	P	**P**	**11 26 07.6**	**-0.9**
	baz=27,SNR=31						
CNB	**Canberra Magne**	**27.27**	**199**	P	**P**	**11 26 10.2**	**-0.3**
	baz=27,SNR=73						
CAN	**Canberra**	**27.39**	**200**	*e*P	**P**	**11 26 11.4**	**-0.3**
	comp=Z,1μm,1.0s						
CAN	**Canberra**	**27.39**	**200**	*e*P	**P**	**11 26 11.4**	**-0.3**
CAN				pmax	pmax		
	comp=Z,1μm,1.0s						
GUMO	**Guam**	**27.48**	**327**	P	**P**	**11 26 12.1**	**-0.4**
	comp=Z,2μm,1.3s,baz=147,slow=4.6,SNR=20						
GUMO				LR	LR	11 36 18.9	
	comp=Z,62μm,21.4s,baz=146,slow=35						
STKA	**Stephens Creek**	**27.84**	**215**	P	**P**	**11 26 14.9**	**-0.7**
	comp=Z,89nm,0.7s,baz=52,slow=14,SNR=34						
STKA				LR	LR	11 37 03.2	
	comp=Z,96μm,19.4s,baz=38,slow=36						
STKA	**Stephens Creek**	**27.84**	**215**	P	**P**	**11 26 14.2**	**-1.4**
	baz=28,SNR=63						
STKA	**Stephens Creek**	**27.84**	**215**	*e*P	**P**	**11 26 14.3**	**-1.3**
	comp=Z,101nm,1.0s						
AFI	**Afiamalu**	**28.07**	**101**	P	**P**	**11 26 18.2**	**+0.2**
	comp=Z,129nm,1.1s,baz=6.5,slow=2.2,SNR=15						
AFI				LR	LR	11 35 15.7	
	comp=Z,39μm,19.8s,baz=278,slow=32						
AFI	**Afiamalu**	**28.07**	**101**	*e*P	**P**	**11 26 19.3**	**+1.3**
	comp=Z,417nm,1.1s						
AFI	**Afiamalu**	**28.07**	**101**	P	**P**	**11 26 18.2**	**+0.2**
AFI				pmax	pmax		
	comp=Z,338nm,1.1s						
FAKI	**Fak Fak**	**28.23**	**282**	P	**P**	**11 26 21.2**	**+1.8**
FAKI	**Fak Fak**	**28.23**	**282**	*e*P	**P**	**11 26 16.5**	**-2.9**
	comp=Z,1μm,1.5s						
SAUI	**Saumlaki**	**28.26**	**271**	P	**P**	**11 26 21.3**	**+1.7**
SAUI	**Saumlaki**	**28.26**	**271**	*e*P	**P**	**11 26 21.7**	**+2.1**
	comp=Z,2μm,1.3s						
AS01	**Alice Springs**	**28.38**	**237**	*e*P	**P**	**11 26 18.8**	**-1.9**
AS31	**Alice Springs**	**28.42**	**237**	*e*P	**P**	**11 26 19.0**	**-2.0**

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      comp=Z,147nm,1.2s
ASAR  Alice Springs     28.42 237  P       P        11 26 19.1 -1.9
      comp=Z,81nm,0.9s,baz=62,slow=9.5,SNR=62
ASAR                               PcP     PcP      11 29 32.3 -0.8
      comp=Z,18nm,0.9s,baz=86,slow=2.8,SNR=3.1
ASAR                               ScP     ScP      11 33 12.5 -0.5
      comp=Z,11nm,0.9s,baz=98,slow=2.8,SNR=4.7
ASAR                               PKiKP   PKiKP    11 37 07.9 -0.6
      comp=Z,2.2nm,0.8s,baz=85,slow=1.1,SNR=4.6
ASAR                               LR      LR       11 37 26.0
      comp=Z,51µm,18.1s,baz=70,slow=36
ASAR                               P3KPbc           11 58 43.4
      comp=Z,3.5nm,1.0s,baz=246,slow=3.9,SNR=9.5
RAO   Raoul Island      28.51 136  P       P        11 26 23.6 +1.9
      comp=Z,273nm,0.4s,baz=234,slow=4.5,SNR=4.1
RAO                                LR      LR       11 36 47.0
      comp=Z,55µm,18.7s,baz=315,slow=34
RAO   Raoul Island      28.51 136 eP       P        11 26 22.2 +0.6
      comp=Z,4µm,0.8s
RAO   Raoul Island      28.51 136 eP       P        11 26 22.2 +0.6
RAO                                pmax    pmax
      comp=Z,4µm,0.8s
MILA  Mila              28.93 198  P       P        11 26 25.2 -0.1
      baz=29,SNR=39
KNTN  Kanton            29.06  78 eP       P        11 26 29.8 +3.2
      comp=Z,504nm,1.2s
WAKE  Wake Island       29.54  13 eP       P        11 26 30.9 +0.1
      comp=Z,2µm,1.5s
WAKE                               LR      LR
      comp=Z,64µm,20.0s
SWI   Sorong            29.76 285  P       P        11 26 33.8 +0.8
      comp=Z,303nm,0.8s,comp=Z,4µm
SWI   Sorong            29.76 285  P       P        11 26 33.7 +0.8
SWI                                pmax    pmax
      comp=Z,306nm,0.8s
H11N1 WAKE ISLAND Hy    30.01  13  P       P        11 26 31.6 -3.1
      baz=207,slow=13,SNR=13
H11N3 WAKE ISLAND Hy    30.02  13  P       P        11 26 31.7 -3.1
      baz=207,slow=13,SNR=13
H11N2 WAKE ISLAND Hy    30.03  13  P       P        11 26 31.8 -3.1
      baz=207,slow=13,SNR=8.3
BNDI  Bandanaira        30.15 278  P       P        11 26 38.6 +2.3
PALU  Palau             30.41 303  P       P        11 26 38.4 -0.2
      baz=31,SNR=5.7
HTT   Hallett           30.50 216  P       P        11 26 38.0 -1.3
      baz=31,SNR=43
TOO   Toolangi          30.66 203  P       P        11 26 40.2 -0.5
      baz=31,SNR=72
TOO   Toolangi          30.66 203  P       P        11 26 40.1 -0.5
TOO                                pmax    pmax
      comp=Z,827nm,1.1s
KNRA  Kununurra         30.89 256  P       P        11 26 41.9 -1.0
      baz=31,SNR=86
MSAI  Masohi            31.35 279  P       P        11 26 49.0 +2.0
ARPS  Mount Arapiles    31.53 208  P       P        11 26 47.6 -0.7
      baz=32,SNR=31
BBOO  Buckleboo         31.82 220  P       P        11 26 49.3 -1.6
      baz=32,SNR=29
BBOO  Buckleboo         31.82 220 eP       P        11 26 49.6 -1.3
      comp=Z,1µm,1.0s
AAI   Ambon             31.99 279  P       P        11 26 54.4 +1.8
      comp=Z,485nm,1.0s,comp=Z,7µm
AAI   Ambon             31.99 279  P       P        11 26 52.5 -0.1
AAI                                pmax    pmax
      comp=Z,487nm,1.0s
MXZ   Matakaoa Point    32.38 152 eP       P        11 26 56.7 +1.0
      comp=Z,494nm,1.7s
URZ   Urewera           32.42 154  P       P        11 26 54.0 -2.1
      comp=Z,53nm,1.0s,baz=300,slow=1.5,SNR=11
URZ                                LR      LR       11 38 38.9
      comp=Z,50µm,19.1s,baz=330,slow=34
URZ   Urewera           32.42 154 eP       P        11 26 56.5 +0.5
      comp=Z,514nm,1.7s
BKZ   Black Stump Fm    32.93 156 eP       P        11 26 59.8 -0.8
      comp=Z,157nm,0.7s
NLAI  Namlea            33.15 279  P       P        11 27 04.3 +1.5
LBMI  Labuha            33.42 284  P       P        11 27 07.2 +2.1
      comp=Z,1µm,1.0s,comp=Z,24µm
WRKA  Warakurna         33.66 239  P       P        11 27 05.3 -1.9
      baz=34,SNR=224
TNTI  Ternate           33.97 286  P       P        11 27 12.0 +2.1
TNTI  Ternate           33.97 286 eP       P        11 27 08.9 -1.0
      comp=Z,1µm,1.3s
THZ   Tophouse          33.97 162 eP       P        11 27 08.8 -0.9
      comp=Z,512nm,1.0s
BFZ   Birch Farm        34.13 158 eP       P        11 27 14.4 +3.4
      comp=Z,439nm,1.3s
SNZO  South Karori      34.14 160 eP       P        11 27 11.8 +0.8
      comp=Z,211nm,0.9s
SNZO                               LR      LR
      comp=Z,55µm,20.0s
MOO   Moorlands         34.48 197  P       P        11 27 14.4 +0.4
      baz=35,SNR=72
SANI  Sanana            34.50 281  P       P        11 27 15.8 +1.2
LTZ   Lake Taylor       34.73 164 eP       P        11 27 15.4 -0.8
      comp=Z,2µm,2.0s
KHZ   Kahutara          34.76 162 eP       P        11 27 14.7 -1.6
      comp=Z,495nm,1.0s
FOZ   Fox Glacier       34.83 167 eP       P        11 27 16.7 -0.3
      comp=Z,712nm,1.1s
TAU   Tasmania Unive    34.88 196 eP       P        11 27 18.2 +0.8
      comp=Z,3µm,1.4s
TAU                                LR      LR
      comp=Z,23µm,19.0s
TAU   Tasmania Unive    34.88 196 eP       P        11 27 18.2 +0.8
TAU                                pmax    pmax
      comp=Z,3µm,1.4s
TAU                                MLR     MLR
      comp=Z,23µm,19.0s
SOEI  Soe               35.07 267  P       P        11 27 21.2 +1.6
SOEI  Soe               35.07 267 eP       P        11 27 21.1 +1.6
      comp=Z,596nm,1.0s
OXZ   Oxford            35.17 164 eP       P        11 27 18.6 -1.4
      comp=Z,1µm,1.5s
RPZ   Rata Peaks        35.29 166  P       P        11 27 18.9 -2.1
      comp=Z,115nm,0.8s,baz=39,slow=0.8,SNR=19
RPZ                                LR      LR       11 41 15.5
      comp=Z,102µm,19.4s,baz=324,slow=36
RPZ   Rata Peaks        35.29 166 eP       P        11 27 20.0 -1.0
      comp=Z,398nm,0.9s
BATI  Baumata           35.64 266  P       P        11 27 25.8 +1.4
MQZ   McQueen’s Vall    35.69 164 eP       P        11 27 23.3 -1.1
      comp=Z,775nm,1.3s
LBZ   Lake Benmore      35.73 167 eP       P        11 27 24.3 -0.4
      comp=Z,236nm,1.1s
WKZ   Wanaka            35.91 169 eP       P        11 27 26.6 +0.2
      comp=Z,543nm,1.5s
DCZ   Deep Cove         36.22 171 eP       P        11 27 28.1 -0.7
      comp=Z,715nm,1.1s
MLZ   Mavora Lakes      36.27 170 eP       P        11 27 28.6 -0.8
      comp=Z,601nm,1.3s
FORT  Forrest           36.27 230  P       P        11 27 29.7 +0.1
      baz=36,SNR=16
FORT  Forrest           36.27 230 eP       P        11 27 29.8 +0.1
      comp=Z,1µm,1.1s
ODZ   Otahua Downs      36.45 167 eP       P        11 27 33.2 +2.3
      comp=Z,595nm,2.0s
WHZ   Wether Hill Ro    36.76 171 eP       P        11 27 32.1 -1.4
      comp=Z,684nm,1.4s
PYZ   Puysegur Point    36.84 172 eP       P        11 27 35.6 +1.4
      comp=Z,393nm,1.0s
KMSI  Cibinong          37.13 284  P       P        11 27 38.8 +1.7
MMRI  Maumere           37.14 268  P       P        11 27 38.4 +1.2
MMRI  Maumere           37.14 268 eP       P        11 27 37.4 +0.1
      comp=Z,1µm,1.1s
MATI  Mati              37.32 295 eP       P        11 27 35.9 -2.8
KDI   Kendari           37.38 276  P       P        11 27 40.6 +1.3
      comp=Z,306nm,1.4s,comp=Z,4µm
DDMP  Don Marcelino,    37.46 293 eP       P        11 27 37.6 -2.2
EDFI  Ende, Flores      37.67 268  P       P        11 27 42.4 +0.6
      comp=Z,369nm,1.5s,comp=Z,7µm
LUWI  Luwuk             37.87 281  P       P        11 27 44.9 +1.6
LUWI  Luwuk             37.87 281 eP       P        11 27 43.1 -0.3
      comp=Z,3µm,1.1s
DAV   Davao City (W)    37.98 295  P       P        11 27 43.3 -1.0
      comp=Z,226nm,0.4s,baz=207,slow=2.3,SNR=3.0
DAV                                LR      LR       11 44 14.6
      comp=Z,8µm,18.1s,baz=114,slow=38
DAV   Davao City (W)    37.98 295⇑iP       P        11 27 45.8 +1.6
BASI  Baing, Sumba      38.68 266  P       P        11 27 51.4 +1.2
      comp=Z,1µm,1.4s,comp=Z,14µm
SKMP  Bagumbayan, Su    38.68 293 eP       P        11 27 49.1 -1.1
BUTP  Butuan            38.79 297 eP       P        11 27 54.4 +3.4
BUKP  Musuan            38.79 296 eP       P        11 27 55.8 +4.6
WSI   Waingapu          38.98 267  P       P        11 27 54.0 +1.3
      comp=Z,842nm,0.8s,comp=Z,22µm
APSI  Ampana            38.99 281  P       P        11 27 54.3 +1.5
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      comp=Z,2µm,1.2s,comp=Z,23µm
MRSI  Marisa            39.06 283  P       P        11 27 54.2 +0.8
      comp=Z,630nm,1.2s,comp=Z,5µm
CTBH  Cotabato--PC H    39.24 294 eP       P        11 27 54.2 -0.7
CGP   Cagayan de Oro    39.37 296⇓eP       P        11 27 57.7 +1.8
BKSI  Bulukumba         39.61 273  P       P        11 27 59.3 +1.3
      comp=Z,217nm,1.0s,comp=Z,3µmcomp=Z,4µm
WBSI  Waikabubak, Su    39.88 267  P       P        11 28 02.2 +2.0
      comp=Z,876nm,1.2s,comp=Z,9µm
MSLP  Maasin            40.00 299 eP       P        11 28 00.2 -0.9
KAPI  Kappang           40.02 274  PFAKE            11 28 10.0 +8.6
KAPI                               LR      LR
      comp=Z,16µm,22.0s
JOHN  Johnston Islan    40.06  49 eP       P        11 28 01.4 -0.2
JOHN                               LR      LR
      comp=Z,4µm,19.0s
SPSI  Sidrap Palu       40.18 275  P       P        11 28 04.0 +1.3
      comp=Z,407nm,1.4s,comp=Z,4µm
BESP  Borongan          40.22 301 eP       P        11 28 03.0  0.0
MBWA  Marble Bar        40.22 249 eP       P        11 28 01.2 -1.7
      comp=Z,708nm,1.1s
MBWA                               LR      LR
      comp=Z,34µm,20.0s
MBWA  Marble Bar        40.22 249  P       P        11 28 02.4 -0.6
      SNR=51
PAGZ  Pagadian          40.28 294 eP       P        11 28 03.2 -0.3
TTSI  Tana Toraja       40.30 277  P       P        11 28 05.2 +1.5
      comp=Z,671nm,1.3s,comp=Z,8µm
CBIJ  Chichi jima       40.37 335 eP       P        11 28 01.6 -2.4
      comp=Z,6µm,1.8s
JCJ   Chichijima        40.37 335  P       P        11 28 01.8 -2.3
      comp=Z,218nm,0.8s,baz=162,slow=6.4,SNR=16
JCJ                                LR      LR       11 42 56.4
      comp=Z,38µm,21.8s,baz=157,slow=34
RAR   Rarotonga         40.45 111  LR      LR       11 41 51.1
      comp=Z,18µm,21.6s,baz=272,slow=32
RAR   Rarotonga         40.45 111 eP       P        11 28 03.1 -1.7
RAR   Rarotonga         40.45 111 eP       P        11 28 03.2 -1.7
OCLP  Ormoc             40.65 300 eP       P        11 28 10.7 +4.2
PCI   Palu              40.75 280  P       P        11 28 08.5 +1.0
      comp=Z,4µm,1.2s,comp=Z,37µmcomp=Z,11µm
PCI   Palu              40.75 280  P       P        11 28 08.4 +1.0
PCI                                pmax    pmax
      comp=Z,4µm,1.2s
LLP   Lapu-Lapu         40.86 298 eP       P        11 28 08.7 +0.4
LLP                               eS       S        11 34 23.5 +5.0
MPSI  Mapaga            40.99 282  P       P        11 28 11.2 +1.7
      comp=Z,580nm,1.2s,comp=Z,7µm
KMBL  Kambalda          41.30 233  P       P        11 28 10.8 -1.0
      baz=41,SNR=17
PLAI  Plampang          41.52 268  P       P        11 28 15.3 +1.5
GUIM  Jordan            42.20 298 eP       P        11 28 17.0 -2.3
PVCP  Virac             42.31 303 eP       P        11 28 19.4 -0.8
TWSI  Taliwang, Sumb    42.41 268  P       P        11 28 22.2 +1.1
      comp=Z,259nm,1.1s,comp=Z,4µm
MEEK  Meekatharra       42.44 241  P       P        11 28 20.4 -0.8
      baz=42,SNR=310
RCP   Roxas             42.50 299⇑eP       P        11 28 21.2 -0.5
SMKI  Samarinda         43.41 280  P       P        11 28 31.0 +1.8
      comp=Z,2µm,1.3s,comp=Z,19µm
AUQP  San Andres        43.41 301 eP       P        11 28 35.5 +6.4
OTRP  Odiongan          43.50 299 eP       P        11 28 34.5 +4.6
BKB   Balikpapan        43.53 278  P       P        11 28 34.6 +4.5
      comp=Z,3µm,1.2s,comp=Z,36µmcomp=Z,14µm
MIDW  Midway            43.63  30  P       P        11 28 30.6 -0.1
      comp=Z,461nm,1.0s
MIDW                               LR      LR
      comp=Z,54µm,22.0s
CUYO  Cuyo Island       43.68 297 eP       P        11 28 31.2 -0.1
MYLDM Lahad Datu        43.77 288 eP       P        11 28 32.2 +0.2
      comp=Z,3µm,1.6s
DNP   Denpasar          44.06 267  P       P        11 28 37.7 +3.3
      comp=Z,2µm,1.1s,comp=Z,25µm
XMAS  Kiritimati        44.09  77 eP       P        11 28 38.5 +3.9
      comp=Z,552nm,1.4s
SRBI  Singaraja         44.11 268  P       P        11 28 38.4 +3.6
      comp=Z,265nm,1.0s,comp=Z,5µm
IGBI  Denpasar          44.12 267  P       P        11 28 36.4 +1.6
      comp=Z,1µm,1.1s,comp=Z,11µm
BOAC  Boac              44.18 301 eP       P        11 28 40.2 +5.0
SJMP  San Jose          44.32 299 eP       P        11 28 36.7 +0.3
KLBR  Kellerberrin      44.66 234  P       P        11 28 38.6 -0.4
      baz=45,SNR=8.8
MCQ   Macquarie Isla    44.72 181  P       P        11 28 39.7 +0.7
      baz=45,SNR=10
JAGI  Jajag, Banyuwa    45.12 268  P       P        11 28 42.4 -0.5
      comp=Z,2µm,1.1s,comp=Z,13µm
JAGI  Jajag, Banyuwa    45.12 268 eP       P        11 28 40.5 -2.5
      comp=Z,2µm,1.1s
BLDU  Ballidu           45.19 236  P       P        11 28 41.9 -1.4
      baz=45,SNR=28
TGY   Tagaytay City     45.26 301  P       P        11 28 43.6 -0.4
      comp=Z,174nm,0.4s,baz=131,slow=9.3,SNR=2.0
TGY                                LR      LR       11 45 38.4
      comp=Z,23µm,21.4s,baz=124,slow=34
MORW  Morawa            45.29 239  P       P        11 28 42.8 -1.3
      baz=45,SNR=22
QVPH  Quezon City--P    45.43 302 eP       P        11 28 49.6 +4.3
GIRL  Giralia           45.50 248  P       P        11 28 46.2 +0.5
      baz=46,SNR=9.3
NWAO  Narrogin (SRO)    45.54 233 eP       P        11 28 44.6 -1.3
      comp=Z,483nm,1.1s
NWAO                               LR      LR
      comp=Z,58µm,20.0s
NWAO  Narrogin (SRO)    45.54 233  P       P        11 28 49.5 +3.5
      SNR=17
NWAO  Narrogin (SRO)    45.54 233 eP       P        11 28 44.6 -1.3
NWAO                               pmax    pmax
      comp=Z,483nm,1.1s
NWAO                               MLR     MLR
      comp=Z,58µm,20.0s
MTKI  Muara Teweh, K    45.55 278  P       P        11 28 46.9 +0.6
      comp=Z,532nm,1.5s,comp=Z,8µmcomp=Z,8µm
LUBP  Lubang            45.67 300 eP       P        11 28 47.1 -0.1
BATP  Bataraza          45.71 292 eP       P        11 28 46.9 -0.7
BLJI  Banyuglugur       45.74 269  P       P        11 28 49.2 +1.4
      comp=Z,456nm,1.4s,comp=Z,7µm
GMJI  Gumukmas          45.84 268  P       P        11 28 51.4 +2.8
      comp=Z,249nm,1.1s,comp=Z,5µm
CAUP  Cauayan           45.97 305 eP       P        11 28 53.0 +3.5
MUN   Mundaring         46.03 235  P       P        11 28 49.1 -0.8
      baz=46,SNR=20
KKM   Kota Kinabalu     46.20 288 eP       P        11 28 49.8 -1.8
      comp=Z,1µm,1.1s
RKGY  Rocky Gully       46.35 231  P       P        11 28 52.8 +0.5
      baz=46,SNR=8.9
SGCP  Mt. Cagua         46.50 307 eP       P        11 28 58.3 +4.7
JHJ2  Mitsune           46.63 337 eP       P        11 28 53.6 -0.8
JHJ   Hachijo jima 2    46.65 337  P       P        11 28 53.7 -0.9
      comp=Z,134nm,0.6s,baz=238,slow=21,SNR=18
JHJ                                LR      LR       11 48 57.6
      comp=Z,22µm,19.2s,baz=153,slow=37
APYP  Conner            46.93 306 eP       P        11 28 57.5 +0.5
GRJI  Gresik            46.93 270  P       P        11 29 01.8 +4.6
SCZP  Santa Cruz        46.94 302 eP       P        11 29 00.3 +3.1
ABRA  Dolores           47.24 305 eP       P        11 28 57.4 -2.1
BOLP  Bolinao           47.24 303 eP       P        11 29 02.6 +3.1
PWJI  Pagerwojo         47.48 268  P       P        11 29 02.3 +0.9
      comp=Z,587nm,1.0s,comp=Z,8µm
JOW   Kunigami          47.50 321  P       P        11 29 00.7 -0.6
      comp=Z,291nm,1.1s,baz=166,slow=8.1,SNR=18
JOW                                LR      LR       11 47 26.3
      comp=Z,20µm,21.3s,baz=123,slow=34
JOW   Kunigami          47.50 321 eP       P        11 29 02.0 +0.7
TBJI  Tambak Boyo       47.57 270  P       P        11 29 07.8 +5.7
BBP   Basco             47.80 309 eP       P        11 29 05.4 +1.7
NGJI  Ngawi             47.89 269  P       P        11 29 08.7 +4.1
      comp=Z,751nm,1.7s,comp=Z,14µm
PCJI  Pacitan           48.08 268  P       P        11 29 07.2 +1.1
      comp=Z,2µm,1.4s,comp=Z,24µm
PBKI  Pangkalan Bun     48.36 275  P       P        11 29 11.7 +3.4
      comp=Z,2µm,1.3s,comp=Z,17µm
WOJI  Wonogiri, Jawa    48.37 268  P       P        11 29 10.4 +2.1
      comp=Z,422nm,1.4s,comp=Z,8µm
H01W1 Cape Leeuwin H    48.62 232  P       P        11 29 11.3 +1.6
      baz=88,slow=7.3,SNR=12
H01W3 Cape Leeuwin H    48.63 232  P       P        11 29 11.4 +1.6
      baz=88,slow=7.3,SNR=6.8
H01W2 Cape Leeuwin H    48.64 232  P       P        11 29 11.4 +1.6
      baz=88,slow=7.3,SNR=4.1
UGM   Wanagama          48.75 268  P       P        11 29 15.4 +4.1
      comp=Z,892nm,1.2s,comp=Z,12µm
UGM   Wanagama          48.75 268 eP       P        11 29 13.1 +1.7
      comp=Z,982nm,1.1s
SMRI  Semarang          48.93 269  P       P        11 29 14.6 +1.9
      comp=Z,1µm,1.5s,comp=Z,20µm
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SMRI  Semarang          48.93 269 eP       P        11 29 13.1 +0.4
      comp=Z,3µm,1.4s
SBUM  Sibu              48.95 282 eP       P        11 29 12.1 -0.8
STKI  Sintang           49.10 279  P       P        11 29 14.2 +0.2
      comp=Z,765nm,1.4s,comp=Z,27µm
YOJ   Yonaguni jima     49.43 314 eP       P        11 29 16.5 +0.2
YOJ   Yonaguni jima     49.43 314 eP       P        11 29 16.5 +0.2
PAE   Paea              49.65 105 eP       P        11 29 19.5 +1.4
      comp=Z,47nm,1.2s
PPT   Papeete           49.65 105  LR      LR       11 47 03.0
      comp=Z,9µm,19.9s,baz=268,slow=32
PPT2  Papeete2          49.65 105 eP       P        11 29 19.8 +1.6
      comp=Z,231nm,1.3s
PPT2                              eS       S        11 36 22.7 -3.1
      comp=Z,28µm,26.2s
PPT2                              eLQ      LQ       11 41 22.9
      comp=Z,47µm,32.5s
PPT2                              eLR      LR       11 43 36.4
      comp=Z,11µm,23.2s
INU   Inuyama           49.71 335 eP       P        11 29 18.1 -0.1
TWG   Pinlang           49.85 311 eP       P        11 29 18.2 -1.3
TIAR  Tiarei            49.87 105 eP       P        11 29 21.4 +1.6
      comp=Z,66nm,1.1s
TVO   Taravao           49.97 105 eP       P        11 29 22.1 +1.5
      comp=Z,113nm,1.4s
YULB  Yu-li             50.02 312 eP       P        11 29 20.2 -0.6
      comp=Z,226nm,0.7s
TBI   Tubuai            50.21 112 eP       P        11 29 23.8 +1.5
      comp=Z,906nm,1.3s
TBI                               eS       S        11 36 30.6 -2.8
      comp=Z,10µm,26.8s
TBI                               eLQ      LQ       11 41 42.0
      comp=Z,104µm,30.0s
TBI                               eLR      LR       11 43 49.9
      comp=Z,43µm,31.5s,baz=281
NACB  Ninganchiao       50.27 313 eP       P        11 29 21.8 -0.9
MJAR  Matsushiro Arr    50.27 337  P       P        11 29 21.2 -1.3
      comp=Z,66nm,0.8s,baz=172,slow=8.9,SNR=112
MJAR                               S       S        11 36 32.1 -1.7
      comp=Z,1.0nm,0.9s,baz=123,slow=4.5,SNR=3.2
MJAR                               LR      LR       11 49 16.1
      comp=Z,39µm,21.9s,baz=155,slow=34
MAJO  Matsushiro        50.27 337 eP       P        11 29 21.4 -1.0
      comp=Z,407nm,0.9s
MAJO                               LR      LR
      comp=Z,46µm,22.0s
MAJO  Matsushiro        50.27 337c iP      P        11 29 21.5 -1.0
MAJO                               pmax    pmax
      comp=Z,60nm,0.9s
MAJO                               MLR     MLR
      comp=Z,22µm,19.0s
MAT   Matsushiro        50.28 337  P       P        11 29 21.3 -1.2
MAT                                S       S        11 36 33.2 -0.6
MJB9  Matsu-Tunnel      50.28 337 eP       P        11 29 21.5 -1.0
KPJI  Karang Pucung     50.38 268  P       P        11 29 25.8 +2.1
      comp=Z,619nm,1.5s,comp=Z,8µm
TPUB  Ta-pu             50.46 311 eP       P        11 29 23.4 -0.8
SSLB  Suanglung         50.51 312 eP       P        11 29 23.4 -1.1
KSM   Kuching           50.56 280 eP       P        11 29 23.7 -1.4
KEKH  Kekaha            50.62  51 eP       P        11 29 26.6 +1.3
      comp=Z,357nm,0.9s
JNU   Nakatsue          50.72 328  P       P        11 29 25.6 -0.3
      comp=Z,90nm,0.7s,baz=97,slow=2.5,SNR=67
JNU                                LR      LR       11 48 05.7
      comp=Z,12µm,21.7s,baz=102,slow=33
YHNB  Yeheng            50.73 313 eP       P        11 29 26.3 +0.1
CMJI  Cimerak           50.81 268  P       P        11 29 30.8 +3.9
      comp=Z,450nm,0.9s,comp=Z,7µm
TATO  Taipei            50.84 313 eP       P        11 29 27.0 +0.1
      comp=Z,1µm,1.0s
TATO                               LR      LR
      comp=Z,35µm,20.0s
TATO  Taipei            50.84 313  P       P        11 29 25.2 -1.7
      SNR=13
JCJI  Jatiwangi         51.13 269  P       P        11 29 32.4 +3.0
      comp=Z,2µm,1.3s,comp=Z,22µm
PMOR  Pomariorio Ree    51.23 101 eP       P        11 29 31.9 +1.9
      comp=Z,766nm,1.4s
VAH   Vaihoa            51.48 102 eP       P        11 29 33.4 +1.4
      comp=Z,365nm,1.3s
KIP   Kipapa            51.63  53 eP       P        11 29 33.3 +0.4
KIP                                LR      LR
      comp=Z,32µm,20.0s
KIP   Kipapa            51.63  53⇑eP       P        11 29 32.8 -0.1
KIP                                pmax    pmax
      comp=Z,311nm,0.7s
OPA   Opana             51.78  53 eP       P        11 29 34.7 +0.7
      comp=Z,926nm,0.7s
OPA   Opana             51.78  53 eP       P        11 29 34.7 +0.7
OPA                                pmax    pmax
      comp=Z,927nm,0.7s
KHLU  Kahalu‘u          52.39  56 eP       P        11 29 40.3 +1.5
KHU   Kahuku            52.45  57 eP       P        11 29 40.1 +0.7
KHU   Kahuku            52.45  57 eP       P        11 29 40.1 +0.7
MWH   Moku‘aweowe       52.58  56 eP       P        11 29 44.3 +3.6
DBJI  Dramaga           52.63 269  P       P        11 29 41.5 +0.9
      comp=Z,781nm,1.8s,comp=Z,12µm
AIN   Ainahou           52.64  57 eP       P        11 29 41.6 +0.8
HLK   Haleakala         52.69  55 eP       P        11 29 42.9 +1.7
HMH   Humu‘ula Sheep    52.73  56 eP       P        11 29 42.3 +0.8
MLH   Mauna Loa         52.76  57 eP       P        11 29 42.8 +1.1
MLH   Mauna Loa         52.76  57 eP       P        11 29 42.8 +1.1
SKJI  Sukabumi          52.76 269  P       P        11 29 45.1 +3.6
      comp=Z,899nm,1.3s,comp=Z,16µm
HPAH  Hawaii Prepara    52.77  56 eP       P        11 29 42.0 +0.4
POHA  Pohakuloa         52.77  56 eP       P        11 29 42.5 +0.7
POHA                               LR      LR
      comp=Z,35µm,21.0s
QZH   Quanzhou          52.93 311  P       P        11 29 43.3 +0.8
QZH                                S       S        11 37 14.5 +3.9
QZH                                pmax    pmax
      comp=Z,570nm,1.4s
QZH                                pmax    pmax
      comp=Z,4µm,6.6s
QZH                                LR      LR
      comp=Z,10µm,19.2s
QZH                                LR      LR
      comp=Z,6µm,19.2s
QZH                                LR      LR
      comp=Z,13µm,19.2s
SBJI  Serang            53.29 270  P       P        11 29 49.2 +3.8
      comp=Z,496nm,1.9s,comp=Z,8µm
CGJI  Cibinong          53.66 269  P       P        11 29 48.3 +0.1
      comp=Z,978nm,1.4s,comp=Z,12µm
ERM   Erimo             53.67 345 eP       P        11 29 48.1 +0.5
ERM                                LR      LR
      comp=Z,47µm,22.0s
ERM   Erimo             53.67 345d iP      P        11 29 48.4 +0.8
ERM                                pmax    pmax
      comp=Z,52nm,1.0s
ERM                                MLR     MLR
      comp=Z,37µm,20.0s
BLSI  Bandar Lampung    54.27 270  P       P        11 29 59.0 +6.4
KLI   Kotabumi          54.72 271  P       P        11 29 59.7 +3.8
      comp=Z,303nm,1.8s
SSE   Sheshan           54.93 319  P       P        11 30 02.3 +5.3
SSE                                S       S        11 37 30.5 -7.0
SSE                                pmax    pmax
      comp=Z,420nm,1.1s
SSE                                pmax    pmax
      comp=Z,2.0nm,1.9s
SSE                                LR      LR
      comp=N,5µm,19.9s
SSE                                LR      LR
      comp=E,6µm,18.1s
KASI  Kota Agung        54.98 270  P       P        11 29 59.8 +2.0
      comp=E,442nm,1.3s,comp=E,5µm
TJN   Taejon            55.07 328c iP      P        11 29 57.7 -0.2
PMBI  Palembang         55.10 273  P       P        11 30 04.6 +5.9
MCO   Taipa Grande      55.31 305  P       P        11 30 02.0 +2.1
MDSI  Maura Dua         55.44 271  P       P        11 30 00.0 -1.1
      comp=E,370nm,1.5s,comp=E,5µm
LWLI  Liwa              55.48 271  P       P        11 30 04.5 +2.9
      comp=E,393nm,1.1s,comp=E,9µm
KSRS  Korea Array       55.61 329  P       P        11 30 01.7 -0.1
      comp=E,48nm,0.9s,baz=139,slow=6.9,SNR=108
KSRS                               LR      LR       11 51 25.1
      comp=E,22µm,21.5s,baz=117,slow=34
KSRS                               PKPPKP  P’P’df   12 00 08.2 +5.3
      comp=E,0.4nm,0.3s,baz=348,slow=4.0,SNR=4.5
KS15  Wonju Array Si    55.62 329 eP       P        11 30 01.9  0.0
KSAR  Wonju Array Be    55.62 329  P       P        11 30 01.7 -0.2
KSAR                               P’P’             12 00 08.2
KSAR  Wonju Array Be    55.62 329  P       P        11 30 01.7 -0.2
KS01  Wonju Array Si    55.64 329 eP       P        11 30 00.9 -1.2
KUR   Kuril’sk          55.71 350c iP      P        11 30 02.6 +0.3
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KUR			*i* *PP	pP	11 30 09.6	-0.2
KUR			*e*		11 31 02.0	
KUR			*i* PPP	PPP	11 33 20.3	
KUR			*i* S	S	11 37 52.6	+5.2
KUR			pmax	pmax		
	comp=Z,1µm,1.4s					
KUR			pmax	pmax		
	comp=N,279nm,1.2s					
KUR			pmax	pmax		
	comp=E,161nm,0.7s					
KUR			pmax	pmax		
	comp=Z,6µm,4.8s					
DSRI	**Dabo**	**55.74 276**	P	P	11 30 07.2	+4.0
	comp=Z,1µm,1.5s,comp=Z,18µm					
ASAJ	**Asahikawa**	**55.78 345**	P	P	11 30 03.3	+0.4
	comp=Z,83nm,0.6s,baz=207,slow=7.3,SNR=110					
ASAJ			S	S	11 37 42.0	-6.4
	comp=Z,3.1nm,1.0s,baz=143,slow=20,SNR=1.8					
ASAJ			LR	LR	11 53 11.5	
	comp=Z,43µm,20.1s,baz=170,slow=35					
GZH	**Guangzhou**	**55.96 306**	P	P	11 30 03.0	-1.6
GZH			pP	pP	11 30 10.8	-1.2
GZH			PcP	PcP	11 31 00.3	-2.7
GZH			PP	PP	11 32 07.5	-2.2
GZH			PcS	PcS	11 35 01.0	-2.5
GZH			S	S	11 37 50.8	-0.8
GZH			ScS	ScS	11 39 50.0	-2.8
GZH			LR	LR		
	comp=Z,7µm,18.9s					
GZH			LR	LR		
	comp=Z,9µm,17.9s					
TPRI	**Tanjung Pinang**	**56.07 278**	P	P	11 30 09.9	+4.3
	comp=Z,573nm,1.3s,comp=Z,8µm					
INCN	**Inchon**	**56.29 328**	*e*P	P	11 30 07.1	+0.4
INCN			LR	LR		
	comp=Z,23µm,20.0s					
INCN	**Inchon**	**56.29 328**	P	P	11 30 07.1	+0.4
	SNR=174					
INCN	**Inchon**	**56.29 328**	*e*P	P	11 30 07.1	+0.4
INCN			MLR	MLR		
	comp=Z,23µm,20.0s					
MNAI	**Manna**	**56.67 271**	P	P	11 30 20.1	+10
MYKOM	**Kota Tinggi**	**56.92 278**	*e*P	P	11 30 10.2	-1.5
QIZ	**Qiongzhong**	**56.95 300**	P	P	11 30 12.0	+0.2
QIZ			pP	pP	11 30 18.0	-1.2
QIZ			S	S	11 38 10.0	+5.1
QIZ			sS	sS	11 38 15.5	-1.7
QIZ			pmax	pmax		
	comp=Z,4µm,5.1s					
QIZ			LR	LR		
	comp=Z,6µm,17.7s					
QIZ			LR	LR		
	comp=Z,13µm,21.6s					
QIZ			LR	LR		
	comp=Z,19µm,22.6s					
QIZ	**Qiongzhong**	**56.95 300**	*e*P	P	11 30 10.8	-1.0
	comp=Z,1µm,1.5s					
QIZ			LR	LR		
	comp=Z,19µm,22.0s					
NJ2	**Nanjing**	**57.06 318**	*e*P	P	11 30 12.3	0.0
NJ2			pP	pP	11 30 18.8	-0.9
NJ2			sP	sP	11 30 21.0	-1.6
NJ2			S	S	11 38 08.3	+2.4
NJ2			sS	sS	11 38 20.0	+1.9
NJ2			pmax	pmax		
	comp=Z,92nm,1.0s					
NJ2			pmax	pmax		
	comp=Z,6µm,8.6s					
NJ2			LR	LR		
	comp=Z,10µm,21.7s					
NJ2			LR	LR		
	comp=Z,9µm,20.1s					
NJ2			LR	LR		
	comp=Z,17µm,21.1s					
MASI	**Maura Aman, Be**	**57.56 272**	P	P	11 30 17.1	+0.8
	comp=Z,921nm,1.4s,comp=Z,9µm					
MSHR	**Mys Shultsa**	**58.24 335***c*	*e*P	P	11 30 20.5	+0.1
TEY	**Ternei**	**58.36 341**	*e*P	P	11 30 24.8	+3.7
TEY			pmax	pmax		
	comp=Z,370nm,1.5s					
YSS	**Yuzh-Sakhalins**	**58.40 346**	*e*P	P	11 30 21.5	+0.1
YSS			LR	LR		
	comp=Z,52µm,20.0s					
YSS	**Yuzh-Sakhalins**	**58.40 346**α	*i*P	P	11 30 21.8	+0.4
YSS			*e**SP	sP	11 30 37.8	+6.1
YSS			*e*		11 31 08.4	
YSS			*e*		11 32 30.4	
YSS			*e*S	S	11 38 22.2	-0.7
YSS			*e*		11 40 03.5	
YSS			*e*SS	SS	11 42 19.7	+4.1
YSS			pmax	pmax		
	comp=E,340nm,1.0s					
YSS			pmax	pmax		
	comp=Z,670nm,1.0s					
YSS			pmax	pmax		
	comp=N,290nm,1.1s					
YSS			smax	smax		
	comp=N,4µm,14.9s					
YSS			smax	smax		
	comp=E,4µm,9.7s					
KRJI	**Kerinci**	**58.50 273**	P	P	11 30 26.3	+3.3
	comp=E,665nm,1.0s,comp=E,10µm					
TAOE	**Nuku Hiva Isla**	**59.15 95**	*e*P	P	11 30 28.7	+1.3
	comp=E,421nm,1.3s					
TAOE			*e*S	S	11 38 30.0	-4.1
	comp=E,17µm,27.2s					
TAOE			*e*LQ	LQ	11 45 20.8	
	comp=E,21µm,34.5s					
TAOE			*e*LR	LR	11 47 54.0	
	comp=E,8µm,23.7s,baz=264					
WHN	**Wuhan**	**59.22 314**	P	P	11 30 26.8	-0.6
WHN			S	S	11 38 35.3	+1.2
WHN			pmax	pmax		
	comp=E,6µm,2.6s					
WHN			LR	LR		
	comp=E,29µm,16.9s					
WHN			LR	LR		
	comp=E,22µm,16.4s					
WHN			LR	LR		
	comp=E,66µm,20.4s					
USRK	**Ussuriysk Ar.**	**59.27 337**	P	P	11 30 27.5	0.0
	comp=E,74nm,0.8s,baz=162,slow=5.5					
USRK			S	S	11 38 30.8	-3.5
	baz=133,slow=13					
USRK			LR	LR	11 54 19.4	
	comp=E,34µm,20.7s,baz=135,slow=34					
UBPT	**Khong Chiam**	**59.31 294**	P	P	11 30 28.6	+0.3
	comp=E,610nm,1.4s,comp=E,10µmcomp=E,13µm					
BKNI	**Bangkinang**	**59.37 276**	P	P	11 30 32.1	+3.3
	comp=E,2µm,1.4s,comp=E,22µm					
BKNI	**Bangkinang**	**59.37 276**	*e*P	P	11 30 28.9	0.0
PPSI	**Pulau Pagai**	**59.82 272**	P	P	11 30 37.1	+5.1
DL2	**Dalian**	**60.00 326**⇑	*i*P	P	11 30 32.3	-0.4
DL2			S	S	11 38 44.5	+0.5
DL2			pmax	pmax		
	comp=E,420nm,1.3s					
DL2			pmax	pmax		
	comp=E,5µm,9.8s					
DL2			LR	LR		
	comp=E,21µm,18.1s					
DL2			LR	LR		
	comp=E,11µm,20.1s					
DL2			LR	LR		
	comp=E,22µm,19.6s					
SKR	**Severo-Kuril’s**	**60.19 357**	*e*P	P	11 30 25.1	-8.6
SKR			*e*		11 31 23.9	
SKR			*e*SS	SS	11 42 47.5	+3.9
SKR			pmax	pmax		
	comp=Z,410nm,1.0s					
SKR			pmax	pmax		
	comp=Z,5µm,10.7s					
SKR			pmax	pmax		
	comp=Z,4µm,14.7s					
SKR			MLR	MLR		
	comp=Z,43µm,17.0s					
SKR			MLR	MLR		
	comp=Z,41µm,16.0s					
MDJ	**Mudanjiang**	**60.57 336**	P	P	11 30 33.5	-2.9
MDJ			pP	pP	11 30 40.3	-3.6
MDJ			sP	sP	11 30 43.3	-3.5
MDJ			PP	PP	11 32 47.5	-2.8
MDJ			S	S	11 38 52.3	+1.3
MDJ			sS	sS	11 39 04.3	+0.9
MDJ			ScS	SKKSac	11 40 23.0	-2.7
MDJ			SS	SS	11 42 53.5	+3.7
MDJ			pmax	pmax		
	comp=Z,650nm,1.4s					
MDJ			pmax	pmax		
	comp=Z,4µm,2.7s					
MDJ			LR	LR		
	comp=Z,36µm,22.3s					
MDJ			LR	LR		
	comp=Z,21µm,23.1s					
MDJ			LR	LR		
	comp=Z,79µm,23.9s					
MDJ	**Mudanjiang**	**60.57 336**	*e*P	P	11 30 36.4	0.0
	comp=Z,1µm,1.4s					
MDJ			LR	LR		
	comp=Z,41µm,22.0s					
TIA	**Tai’an**	**60.82 321**	P	P	11 30 37.3	-1.1
TIA			S	S	11 38 57.5	+2.9
TIA			pmax	pmax		
	comp=Z,360nm,3.2s					
TIA			LR	LR		
	comp=Z,7µm,22.0s					
TIA			LR	LR		
	comp=Z,8µm,19.8s					
TIA			LR	LR		
	comp=Z,14µm,21.8s					
MNSI	**Mandailing Nat**	**60.89 276**	P	P	11 30 37.3	-2.0
SISI	**Saibi**	**60.97 274**	P	P	11 30 44.3	+4.5
	comp=Z,152nm,1.1s,comp=Z,4µm					
SKNT	**Sakolnakorn**	**61.25 295**	P	P	11 30 41.3	-0.3
	comp=Z,416nm,1.4s,comp=Z,7µm					
SKLT	**Songkhla**	**61.33 284**	P	P	11 30 42.1	-0.1
	comp=Z,410nm,1.3s,comp=Z,6µmcomp=Z,190µm					
CN2	**Changchun**	**61.71 332**	⇑P	P	11 30 44.0	-0.2
CN2			*e*pP	pP	11 30 50.0	-1.7
CN2			*e*PP	PP	11 33 01.8	+1.4
CN2			*e*SS	SS	11 43 08.0	+0.2
CN2			pmax	pmax		
	comp=Z,50nm,0.8s					
CN2			pmax	pmax		
	comp=Z,200nm,3.0s					
CN2			LR	LR		
	comp=Z,13µm,20.0s					
CN2			LR	LR		
	comp=Z,11µm,20.0s					
CN2			LR	LR		
	comp=Z,19µm,21.0s					
COCO	**West Island**	**61.81 261**	PFAKE		11 31 00.0	+15
COCO			LR	LR		
	comp=Z,10µm,21.0s					
SRAK	**Srakaew**	**61.99 291**	P	P	11 30 42.8	-3.8
	comp=Z,580nm,1.4s,comp=Z,6µm					
PBSI	**Pulau Batu**	**62.00 275**	P	P	11 30 49.7	+2.9
	comp=Z,1µm,1.4s,comp=Z,15µm					
KHON	**Khomkaen**	**62.06 294**	P	P	11 30 47.1	0.0
	comp=Z,211nm,1.1s,comp=Z,2µm					
KHON	**Khomkaen**	**62.06 294**	P	P’P’ab	12 00 10.1	-2.2
TYV	**Tymovskoe**	**62.11 348**	*e*P	P	11 30 47.6	+0.9
TYV			*e*S	S	11 39 15.1	+4.8
TYV			pmax	pmax		
	comp=Z,6µm,4.7s					
TYV			pmax	pmax		
	comp=Z,747nm,1.3s					
TYV			smax	smax		
	comp=N,49nm,2.5s					
TYV			smax	smax		
	comp=E,6µm,9.0s					
NONG	**Nongkai**	**62.39 296**	P	P	11 30 48.9	-0.4
	comp=E,18nm,1.6s,comp=E,229nm					
NONG	**Nongkai**	**62.39 296**	P	P’P’df	11 59 54.8	-0.7
TRTT	**Trang**	**62.39 284**	P	P	11 30 49.1	-0.3
	comp=E,154nm,1.4s,comp=E,3µm					
TSI	**Tuntungan**	**62.44 279**	P	P	11 30 49.0	-0.7
	comp=E,2µm,1.2s,comp=E,21µm					
PET	**Petropavlovsk**	**62.45 359**	*e*P	P	11 30 48.6	-0.4
	comp=E,678nm,1.1s					
PET			LR	LR		
	comp=Z,43µm,20.0s					
PET	**Petropavlovsk**	**62.45 359***c*	*i*P	P	11 30 48.6	-0.4
PET			pmax	pmax		
	comp=Z,589nm,1.1s					
PET			pmax	pmax		
	comp=Z,6µm,15.4s					
PET			pmax	pmax		
	comp=Z,5µm,12.8s					
PETK	**Petropavlovsk-**	**62.56 359**	P	P	11 30 50.0	+0.3
	comp=Z,222nm,0.9s,baz=149,slow=6.7					
PETK			S	S	11 39 17.0	+1.0
	baz=158,slow=12					
PETK			LR	LR	11 54 12.2	
	comp=Z,62µm,21.6s,baz=167,slow=32					
ENH	**Enshi**	**62.59 311**	*e*P	P	11 30 49.7	-0.8
	comp=Z,1µm,1.3s					
ENH			LR	LR		
	comp=Z,12µm,21.0s					
CHAI	**Chaiyaphum**	**62.67 293**	P	P	11 30 50.6	-0.6
	comp=Z,124nm,1.1s,comp=Z,1µm					
CHAI	**Chaiyaphum**	**62.67 293**	P	P’P’bc	12 00 06.8	+4.0
PATY	**Pattaya**	**62.73 290**	P	P	11 30 52.0	+0.4
	comp=Z,363nm,1.0s,comp=Z,5µm					
NAYO	**Nakonayok**	**62.75 292**	P	P	11 30 52.0	+0.3
	comp=Z,15nm,1.3s,comp=Z,232nm					
GYA	**Guiyang**	**62.90 306**⇑	*i*P	P	11 30 52.5	-0.2
GYA			pP	sP	11 31 02.3	-0.7
GYA			PP	PP	11 33 15.0	+3.7
GYA			S	S	11 39 18.8	-2.7
GYA			sS	sS	11 39 33.3	-0.5
GYA			SKS	SKSac	11 40 42.5	-2.0
GYA			SS	SS	11 43 29.0	+1.8
GYA			pmax	pmax		
	comp=Z,570nm,1.0s					
GYA			pmax	pmax		
	comp=Z,3µm,13.0s					
GYA			LR	LR		
	comp=Z,5µm,22.7s					
GYA			LR	LR		
	comp=Z,7µm,22.4s					
GYA			LR	LR		
	comp=Z,9µm,22.7s					
GSI	**Gunungsitoli**	**62.95 276**	P	P	11 30 52.0	-1.2
	comp=Z,2µm,1.2s,comp=Z,23µm					
GSI	**Gunungsitoli**	**62.95 276**	*e*P	P	11 30 51.8	-1.4
KCSI	**Kotacane, Aceh**	**63.22 279**	P	P	11 30 52.5	-2.5
RKT	**Rikitea**	**63.49 111**	*e*S	S	11 39 25.5	-3.4
	comp=Z,14µm,28.5s					
RKT			*e*SS	SS	11 43 33.9	-2.3
	comp=Z,9µm,30.2s					
RKT			*e*LQ	LQ	11 47 13.7	
	comp=Z,34µm,32.0s					
RKT			*e*LR	LR	11 49 55.9	
	comp=Z,22µm,28.5s,baz=279					
GRNR	**Gornyy**	**63.54 344**	*e*P	P	11 30 59.9	+3.6
GRNR			pmax	pmax		
	comp=N,50nm,1.0s					
GRNR			pmax	pmax		
	comp=Z,100nm,1.0s					
KLR	**Kul’dur**	**63.63 340**	P	P	11 30 56.9	-0.1
	comp=Z,11nm,1.0s,baz=148,slow=7.9					
TPTI		**63.74 278**	P	P	11 30 59.3	+0.9
	comp=Z,823nm,1.2s,comp=Z,9µm					
PBKT	**Sadao Pong**	**63.81 294**	P	P	11 30 58.8	+0.1
	comp=Z,415nm,1.5s,comp=Z,9µm					
PBKT	**Sadao Pong**	**63.81 294**	P	P’P’ab	11 59 58.0	-7.3
BJT	**Baijiatuau**	**63.85 324**	*e*P	P	11 30 57.7	-0.9
	comp=Z,704nm,1.5s					
BJT			*e*PP	PP	11 33 16.7	-2.7
BJT			*e*S	S	11 39 38.0	+5.3
BJT			LR	LR		
	comp=Z,13µm,20.0s					
BJT	**Baijiatuau**	**63.85 324**	*e*P	P	11 30 57.7	-0.9
BJT			*e*		11 33 16.7	
BJT			*e*S	S	11 39 38.0	+5.3
BJT			pmax	pmax		
	comp=Z,704nm,1.5s					
BJT			MLR	MLR		
	comp=Z,13µm,20.0s					
BJI	**Beijing**	**63.86 324**⇑	*i*P	P	11 30 58.0	-0.6
BJI			S	S	11 39 35.0	+2.2
BJI			pmax	pmax		
	comp=Z,400nm,1.6s					
BJI			pmax	pmax		
	comp=Z,450nm,4.9s					
BJI			LR	LR		
	comp=Z,5µm,20.8s					
BJI			LR	LR		
	comp=Z,3µm,22.2s					
PHET	**Kaeng Krachan**	**63.87 289**	P	P	11 31 00.8	+1.6
	comp=Z,301nm,1.2s,comp=Z,3µm					
SNSI	**Sinabang, Aceh**	**64.40 277**	P	P	11 31 07.0	+4.3
	comp=Z,1µm,1.3s,comp=Z,11µm					
LHMI	**Lhok Sumawe**	**64.40 281**	P	P	11 31 07.6	+4.9
	comp=Z,1µm,1.2s,comp=Z,12µm					
PHIT	**Phitsanulok**	**64.52 294**	P	P	11 31 03.9	+0.5
	comp=Z,307nm,1.4s,comp=Z,3µm					
PHIT	**Phitsanulok**	**64.52 294**	P	P’P’bc	12 00 04.8	+7.0
UTTA	**Uttaradit**	**64.59 295**	P	P’P’bc	11 59 57.2	-0.4
NKL	**Nikolayevsk**	**64.68 347**	*i* P	P	11 31 04.0	+0.3
NKL			*e*S	S	11 39 48.0	+5.7
NKL			*e*S	PnS	11 40 04.0	+1.8
NKL			pmax	pmax		
	comp=N,260nm,1.0s					
NKL			pmax	pmax		
	comp=Z,690nm,1.0s					
NKL			pmax	pmax		
	comp=N,2µm,6.0s					
NKL			pmax	pmax		
	comp=E,1µm,6.0s					
NKL			pmax	pmax		
	comp=Z,6µm,6.0s					
NKL			smax	smax		
	comp=N,6µm,9.0s					
NKL			smax	smax		
	comp=E,4µm,9.0s					
TIY	**Taiyuan**	**64.70 320**	*e*P	P	11 31 02.0	-2.3
TIY			S	S	11 39 46.3	+2.9
TIY			sS	sS	11 40 00.0	+4.2
TIY			SS	SS	11 43 53.8	-1.1
TIY			pmax	pmax		
	comp=E,3µm,5.6s					
TIY			LR	LR		
	comp=E,10µm,16.0s					
TIY			LR	LR		
	comp=E,11µm,19.3s					
TIY			LR	LR		
	comp=E,15µm,20.1s					
MLSI	**Meulaboh, Aceh**	**64.71 279**	P	P	11 31 02.9	-1.9
SRDT	**SRDT**	**64.78 291**	P	P	11 31 05.9	+0.8
	comp=E,1µm,1.4s,comp=E,16µm					
NANT	**Nan**	**64.82 296**	P	P	11 31 05.1	-0.3
	comp=E,213nm,1.1s,comp=E,2µm					
XAN	**Xi’an**	**64.97 315**	P	P	11 31 05.5	-0.6
XAN			pP	pP	11 31 11.0	-2.7
XAN			sP	sP	11 31 14.5	-2.0
XAN			PcP	PcP	11 31 37.0	-2.1
XAN			PP	PP	11 33 30.0	+0.6
XAN			S	S	11 39 48.3	+1.4
XAN			sS	sS	11 39 58.8	-0.5
XAN			ScS	SKSac	11 40 56.0	-3.8
XAN			pmax	pmax		
	comp=E,42nm,0.7s					
XAN			pmax	pmax		
	comp=E,4µm,5.0s					
XAN			LR	LR		
	comp=E,11µm,18.3s					
XAN			LR	LR		
	comp=E,12µm,22.6s					
XAN			LR	LR		
	comp=E,18µm,20.5s					
KMI	**Kunming**	**65.49 303**	P	P	11 31 10.5	+0.6
KMI			pP	pP	11 31 16.5	-0.9
KMI			sP	sP	11 31 20.0	-0.2
KMI			PP	PP	11 33 38.0	+3.7
KMI			S	S	11 39 55.3	+1.4
KMI			sS	sS	11 40 05.5	-0.8
KMI			SS	SS	11 44 03.5	-4.5
KMI			pmax	pmax		
	comp=E,84nm,1.0s					
KMI			pmax	pmax		
	comp=E,4µm,6.8s					
KMI			LR	LR		
	comp=E,7µm,20.1s					
KMI			LR	LR		
	comp=E,9µm,20.8s					
KMI			LR	LR		
	comp=E,12µm,19.1s					
UMPA	**Umpang Tak**	**65.60 293**	P	P	11 31 14.6	+4.1
	comp=E,108nm,1.3s,comp=E,1µm					
CASY	**Casey**	**65.63 200**	*e*P	P	11 31 08.8	-1.0
	comp=E,552nm,1.1s					
CASY			LR	LR		
	comp=Z,3µm,21.0s					
LAMP	**Lampang**	**65.67 295**	P	P	11 31 10.9	0.0
	comp=Z,191nm,1.1s,comp=Z,2µm					
LAMP	**Lampang**	**65.67 295**	P	P’P’ab	11 59 58.1	+0.2
PAYA	**Payao**	**65.75 296**	P	P’P’df	11 59 48.4	-1.6
BSI	**Banda Aceh**	**66.06 280**	P	P	11 31 19.7	+6.2
CMAR	**Chiang Mai Arr**	**66.27 295**	P	P	11 31 14.9	+0.2
	comp=Z,79nm,1.1s,baz=128,slow=5.1,SNR=75					
CMAR			S	S	11 40 08.0	+4.8
	comp=Z,0.7nm,0.4s,baz=122,slow=15,SNR=3.0					
CMAR			PKP2bc		11 59 50.0	
	comp=Z,5.7nm,0.8s,baz=278,slow=4.0,SNR=9.3					
CMAR			LR	LR	12 02 12.3	
	comp=Z,5µm,18.2s,baz=114,slow=38					
CMAR	**Chiang Mai Arr**	**66.27 295**	*i* P	P	11 31 14.8	+0.1
CMAR			pmax	pmax		
	comp=Z,88nm,1.1s					
CMMT	**Chiang Mai**	**66.38 295**	P	P	11 31 15.3	-0.2
	comp=Z,637nm,1.4s,comp=Z,9µm					
CMMT	**Chiang Mai**	**66.38 295**	P	P’P’ab	11 59 56.5	+1.4
CHTO	**Chiang Mai**	**66.39 295**	*e*P	P	11 31 15.3	-0.2
	comp=Z,1µm,1.4s					
CHTO			*e*S	S	11 40 07.6	+3.0
CHTO			LR	LR		
	comp=Z,7µm,20.0s					
CHTO	**Chiang Mai**	**66.39 295**	P	P	11 31 15.6	+0.1
	SNR=171					
CHTO	**Chiang Mai**	**66.39 295**	*e*P	P	11 31 15.3	-0.2
CHTO			*e*S	S	11 40 07.6	+3.0
CHTO			pmax	pmax		
	comp=Z,1µm,1.4s					
CHTO			MLR	MLR		
	comp=Z,7µm,20.0s					
CHTO	**Chiang Mai**	**66.39 295**	P	P	11 31 15.3	-0.2
	comp=Z,3µm,1.5s,comp=Z,40µmcomp=Z,47µm					
CHTO	**Chiang Mai**	**66.39 295**	P	P’P’ab	11 59 56.6	+1.5
HHC	**Hu-ho-hao-te**	**67.11 322**	*e*P	P	11 31 19.8	0.0
HHC			sP	sP	11 31 34.8	+4.6
HHC			PP	PP	11 33 50.5	+2.5
HHC			S	S	11 40 15.5	+2.7
HHC			sS	pS	11 40 19.0	-3.1
HHC			ScS	SKSac	11 41 16.0	+0.1
HHC			pmax	pmax		
	comp=Z,56nm,1.4s					
HHC			pmax	pmax		
	comp=Z,5µm,5.2s					
HHC			LR	LR		
	comp=Z,10µm,16.5s					
HHC			LR	LR		
	comp=Z,12µm,18.0s					
HHC			LR	LR		
	comp=Z,17µm,18.4s					
CD2	**Chengdu**	**67.21 309**⇑	*i*P	P	11 31 20.3	-0.2
CD2			pP	pP	11 31 26.8	-1.3
CD2			sP	sP	11 31 29.5	-1.4
CD2			PP	PP	11 33 48.5	-0.5
CD2			S	S	11 40 14.8	+0.6
CD2			sS	sS	11 40 25.8	-0.9
CD2			SS	SS	11 44 35.3	+1.2
CD2			pmax	pmax		
	comp=Z,170nm,0.6s					
CD2			pmax	pmax		
	comp=Z,5µm,4.3s					
CD2			LR	LR		
	comp=Z,17µm,24.8s					
CD2			LR	LR		
	comp=Z,12µm,26.8s					
CD2			LR	LR		
	comp=Z,14µm,29.8s					
CMBY	**CAMPBELL BAY**	**67.73 282**	*e*P	P	11 31 23.0	-1.1
VNDA	**Vanda**	**67.84 180**	P	P	11 31 23.3	-0.4
	comp=Z,10nm,0.6s,baz=346,slow=8.3,SNR=41					
VNDA			LR	LR	11 56 04.6	
	comp=Z,72µm,20.2s,baz=358,slow=32					
VNDA			PKP2bc		11 59 43.6	
	comp=Z,13nm,1.3s,baz=249,slow=3.3,SNR=7.1					
SBA	**Scott Base**	**68.26 178**	*e*P	P	11 31 27.1	+0.8
	comp=Z,329nm,1.1s					
SBA			LR	LR		
	comp=Z,40µm,19.0s					
SBA	**Scott Base**	**68.26 178**	*e*P	P	11 31 27.1	+0.8
SBA			pmax	pmax		
	comp=Z,329nm,1.1s					
SBA			MLR	MLR		
	comp=Z,40µm,19.0s					

HIA	**Hailar**	**68.42**	**333**	*e*P	**P**	**11 31 27.7**	**0.0**
	comp=Z,697nm,1.1s						
HIA				LR	LR		
	comp=Z,24µm,22.0s						
HIA	**Hailar**	**68.42**	**333**	*e*P	**P**	**11 31 27.7**	**0.0**
HIA				pmax	pmax		
	comp=Z,697nm,1.1s						
HIA				MLR	MLR		
	comp=Z,24µm,22.0s						
ZEA	**Zeya**	**68.95**	**340**	c*e*P	**P**	**11 31 31.4**	**+0.5**
ZEA				*e*		11 31 45.5	
ZEA				*e*		11 34 03.0	
ZEA				*e*PPP	PPP	11 35 46.0	
ZEA				*e*S	**S**	**11 40 36.0**	**+2.0**
ZEA				*e*PS	**PnS**	**11 40 54.0**	**-6.6**
ZEA				*e*SS	**SS**	**11 44 58.0**	**-2.1**
ZEA				pmax	pmax		
	comp=N,2µm,2.0s						
ZEA				pmax	pmax		
	comp=Z,4µm,2.0s						
ZEA				pmax	pmax		
	comp=E,1µm,3.0s						
ZEA				pmax	pmax		
	comp=N,1µm,1.2s						
ZEA				pmax	pmax		
	comp=E,220nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,1µm,1.0s						
ZEA				pmax	pmax		
	comp=E,600nm,8.0s						
ZEA				pmax	pmax		
	comp=Z,1µm,8.0s						
ZEA				smax	smax		
	comp=E,4µm,7.0s						
ZEA				smax	smax		
	comp=N,3µm,9.0s						
MA2	**Magadan**	**69.40**	**355**	P	**P**	**11 31 32.7**	**-0.9**
	comp=N,302nm,0.9s,baz=154,slow=5.5,SNR=37						
MA2	**Magadan**	**69.40**	**355**	*e*P	**P**	**11 31 32.8**	**-0.8**
	comp=N,3µm,1.0s						
MA2				LR	LR		
	comp=Z,39µm,22.0s						
MA2	**Magadan**	**69.40**	**355**	*e*P	**P**	**11 31 32.8**	**-0.8**
MA2				pmax	pmax		
	comp=Z,3µm,1.0s						
MA2				MLR	MLR		
	comp=Z,39µm,22.0s						
LZH	**Lanzhou**	**69.60**	**314**	⇑P	**P**	**11 31 36.0**	**+0.5**
LZH				pP	pP	11 31 41.5	-1.6
LZH				sP	sP	11 31 43.5	-2.5
LZH				PP	**PP**	**11 34 15.5**	**+5.7**
LZH				*e*S	**S**	**11 40 44.0**	**+1.3**
LZH				sS	sS	11 40 53.3	-1.9
LZH				SS	**SS**	**11 45 04.8**	**-6.3**
LZH				pmax	pmax		
	comp=Z,1µm,1.4s						
LZH				pmax	pmax		
	comp=Z,5µm,4.6s						
LZH				LR	LR		
	comp=Z,23µm,17.4s						
LZH				LR	LR		
	comp=Z,23µm,17.3s						
LZH				LR	LR		
	comp=Z,35µm,18.2s						
LKP	**Lekhapani**	**72.05**	**303**	*e*P	**P**	**11 31 50.2**	**-0.3**
MIR	**Mirnyy**	**72.06**	**203**	⇑*i*P	**P**	**11 31 52.0**	**+2.3**
MIR				*e*		11 32 06.0	
MIR				*e*S	**S**	**11 41 14.0**	**+4.1**
MIR				*e*PS	**ScS**	**11 41 59.0**	**+4.9**
SEY	**Seymchan**	**72.61**	**356**	P	**P**	**11 31 52.9**	**-0.1**
	comp=Z,139nm,0.9s,baz=169,slow=5.7,SNR=76						
SEY	**Seymchan**	**72.61**	**356**	c *i*P	**P**	**11 31 52.7**	**-0.3**
IMP	**Imphal**	**72.78**	**300**	*e*P	**P**	**11 31 53.4**	**-1.6**
MOKO	**MOKOCHONG**	**72.81**	**301**	*e*P	**P**	**11 31 54.4**	**-0.7**
MOKO				IAmb	IAmb	11 32 01.2	
	comp=Z,825nm,1.1s						
SAIH	**SAIHA**	**72.86**	**297**	*e*P	**P**	**11 31 55.1**	**-0.4**
DIBR	**DIBRUGARH**	**72.88**	**303**	*e*P	**P**	**11 31 55.9**	**+0.6**
KOHI	**KOHIMA**	**72.94**	**301**	*e*P	**P**	**11 31 54.7**	**-1.2**
CIT	**Chita**	**73.16**	**332**	*e*P	**P**	**11 31 56.8**	**+0.2**
CIT				*e*		11 32 08.0	
CIT				*e*		11 32 11.8	
CIT				*e*S	**SKiKP**	**11 41 29.4**	**+1.9**
CIT				pmax	pmax		
	comp=Z,1µm,1.6s						
JORH	**JORHAT**	**73.17**	**302**	*e*P	**P**	**11 31 55.5**	**-1.6**
SILR	**SILCHAR**	**73.75**	**299**	*e*P	**P**	**11 32 01.7**	**+1.2**
ITAN	**ITANAGAR**	**73.75**	**302**	*e*P	**P**	**11 32 00.8**	**+0.2**
ZIRO	**ZIRO**	**73.78**	**302**	*e*P	**P**	**11 32 00.2**	**-0.7**
GTA	**Gaotai**	**73.98**	**316**	P	**P**	**11 32 02.3**	**+0.5**
GTA				pP	pP	11 32 06.8	-2.6
GTA				sP	sP	11 32 09.5	-2.8
GTA				S	**S**	**11 41 37.0**	**+4.0**
GTA				ScS	**ScS**	**11 42 10.0**	**-0.7**
GTA				pmax	pmax		
	comp=Z,79nm,0.8s						
GTA				pmax	pmax		
	comp=Z,520nm,6.7s						
BRDH	**Bariadhala**	**74.10**	**297**	P	**P**	**11 32 01.9**	**-0.7**
	comp=Z,80nm,0.4s,baz=127,slow=5.1,SNR=3.6						
BRDH				LR	LR	12 03 12.8	
	comp=Z,8µm,22.0s,baz=142,slow=35						
SONM	**Songino Array**	**74.20**	**326**	P	**P**	**11 32 03.0**	**+0.1**
	comp=Z,116nm,1.0s,baz=134,slow=5.1,SNR=66						
SONM				PKKP	**PKKPdf**	**11 51 20.9**	**-0.6**
	comp=Z,0.3nm,0.4s,baz=208,slow=2.9,SNR=3.9						
SONM				PKPPKP	**P’P’df**	**11 59 31.3**	**-1.7**
	comp=Z,0.5nm,0.4s,baz=250,slow=3.0,SNR=4.2						
SONM				LR	LR	12 06 40.7	
	comp=Z,16µm,18.0s,baz=109,slow=37						
TEZP	**TEZPUR**	**74.35**	**301**	*e*P	**P**	**11 32 03.4**	**-0.7**
BELO	**BELONIA**	**74.44**	**297**	*e*P	**P**	**11 32 08.6**	**+4.0**
SHL	**Shillong**	**74.79**	**300**	*e*P	**P**	**11 32 06.4**	**-0.4**
SHL				*e*x	x	11 41 46.0	
AGT	**Agartala**	**74.81**	**298**	*e*P	**P**	**11 32 05.6**	**-1.1**
AGT				IAmb	IAmb	11 32 14.3	
	comp=Z,454nm,0.6s						
GUWA	**GUWAHATI**	**75.15**	**300**	*e*P	**P**	**11 32 08.2**	**-0.5**
GUWA				IAmb	IAmb	11 32 13.8	
	comp=Z,411nm,1.1s						
YAK	**Yakutsk**	**75.24**	**346**	P	**P**	**11 32 08.0**	**-0.4**
	comp=Z,44nm,0.6s,baz=217,slow=18,SNR=30						
YAK				LR	LR	12 04 37.4	
	comp=Z,28µm,20.1s,baz=98,slow=35						
YAK	**Yakutsk**	**75.24**	**346**	*e*P	**P**	**11 32 08.0**	**-0.4**
	comp=Z,3µm,1.1s						
YAK	**Yakutsk**	**75.24**	**346**	c*e*P	**P**	**11 32 08.1**	**-0.3**
YAK				*e*		11 34 56.7	
YAK				*e*S	**S**	**11 41 46.6**	**+0.7**
YAK				*e*SS	SS	11 46 52.4	+16
YAK				pmax	pmax		
	comp=Z,169nm,0.9s						
YAK				pmax	pmax		
	comp=E,12nm,0.8s						
YAK				pmax	pmax		
	comp=N,21nm,0.9s						
YAK				pmax	pmax		
	comp=Z,194nm,1.3s						
YAK				smax	smax		
	comp=E,3µm,5.2s						
YAK				MLR	MLR		
	comp=Z,4µm,20.3s						
TURI	**Tura**	**76.11**	**299**	*e*P	**P**	**11 32 13.5**	**-0.7**
LSA	**Lhasa**	**76.75**	**304**	P	**P**	**11 32 18.5**	**+0.2**
LSA				sP	**PcP**	**11 32 30.0**	**+0.4**
LSA				S	**S**	**11 42 06.5**	**+1.7**
LSA				sS	**sS**	**11 42 17.5**	**+0.1**
LSA				pmax	pmax		
	comp=Z,28nm,0.8s						
LSA				LR	LR		
	comp=Z,2µm,20.2s						
LSA				LR	LR		
	comp=Z,3µm,23.0s						
LSA				LR	LR		
	comp=Z,10µm,21.2s						
LSA	**Lhasa**	**76.75**	**304**	*e*P	**P**	**11 32 18.5**	**+0.2**
	comp=Z,705nm,1.4s						
LSA				LR	LR		
	comp=Z,11µm,22.0s						
LSA	**Lhasa**	**76.75**	**304**	*e*P	**P**	**11 32 18.5**	**+0.2**
LSA				pmax	pmax		
	comp=Z,705nm,1.4s						
LSA				MLR	MLR		
	comp=Z,11µm,22.0s						
BOD	**Bodaibo**	**76.91**	**337**	*e*P	**P**	**11 32 17.3**	**-0.7**
BOD				pmax	pmax		
	comp=Z,472nm,1.5s						
KDAK	**Kodiak Island**	**77.55**	**24**	P	**P**	**11 32 20.5**	**-1.1**
	comp=Z,68nm,1.0s,baz=236,slow=3.4,SNR=63						
KDAK	**Kodiak Island**	**77.55**	**24**	*e*P	**P**	**11 32 21.4**	**-0.1**
	comp=Z,469nm,1.1s						
KDAK				*e*S	**S**	**11 42 18.0**	**+6.7**
KDAK				LR	LR		
	comp=Z,12µm,20.0s						
KDAK	**Kodiak Island**	**77.55**	**24**	*i* P	**P**	**11 32 21.0**	**-0.6**
IRK	**Irkutsk**	**77.82**	**329**	*e*P	**P**	**11 32 22.7**	**-0.5**
IRK				*e*		11 42 16.9	
IRK				pmax	pmax		
	comp=Z,796nm,1.8s						
TLY	**Talaya**	**77.83**	**328**	LR	LR	12 05 34.7	
	comp=Z,7µm,21.9s,baz=112,slow=35						
TLY	**Talaya**	**77.83**	**328**	*e*P	**P**	**11 32 23.0**	**-0.4**
TLY				*e*S	**S**	**11 42 14.1**	**-0.7**
TLY	**Talaya**	**77.83**	**328**	c *i*P	**P**	**11 32 22.2**	**-1.2**
TLY				*e*S	**S**	**11 42 12.7**	**-2.0**
TLY				*e*		11 42 42.8	
TLY				*e*SS	**SS**	**11 47 10.7**	**-5.1**
TLY				pmax	pmax		
	comp=Z,510nm,1.7s						
TLY				MLR	MLR		
	comp=Z,9µm,19.0s						
GTK	**Tadong**	**78.13**	**301**	*e*P	**P**	**11 32 26.0**	**+0.3**
GTK				IAmb	IAmb	11 32 32.8	
	comp=Z,736nm,1.1s						
BWNR	**Bhubaneshwar**	**78.65**	**293**	*e*P	**P**	**11 32 29.0**	**+0.5**
BWNR				IAmb	IAmb	11 32 34.2	
	comp=Z,313nm,0.5s						
TAPN	**Taplejung**	**78.89**	**300**	*e*P	**P**	**11 32 30.0**	**-0.1**
ODAN	**Odare**	**79.03**	**300**	*e*P	**P**	**11 32 30.5**	**-0.3**
	comp=Z,4µm,1.5s						
MOY	**Mondy**	**79.22**	**327**	*e*P	**P**	**11 32 30.9**	**-0.3**
MOY				pmax	pmax		
	comp=Z,505nm,2.0s						
BOK	**Bokaro**	**79.49**	**296**	*e*P	**P**	**11 32 32.7**	**-0.4**
BOK				IAmb	IAmb	11 32 40.2	
	comp=Z,209nm,0.7s						
RAMN	**Ramite**	**79.73**	**300**	*e*P	**P**	**11 32 33.9**	**-0.7**
	comp=Z,1µm,1.5s						
CHLP	**Challavanipeta**	**79.81**	**291**	*e*P	**P**	**11 32 34.8**	**-0.1**
CHLP				IAmb	IAmb	11 32 41.7	
	comp=Z,872nm,1.4s						
JIRN	**Jiri**	**80.28**	**300**	*e*P	**P**	**11 32 37.3**	**-0.4**
	comp=Z,4µm,1.6s						
QSPA	**South Pole Qui**	**80.32**	**180**	P	**P**	**11 32 36.3**	**-0.6**
	comp=Z,69nm,1.1s,baz=336,slow=1.1,SNR=36						
QSPA				PKPPKP	P’P’df	11 59 13.1	-12
	comp=Z,5.2nm,1.1s,baz=83,slow=0.8,SNR=5.3						
QSPA				LR	LR	12 05 16.7	
	comp=Z,47µm,18.5s,baz=16,slow=34						
QSPA	**South Pole Qui**	**80.32**	**180**	*e*P	**P**	**11 32 36.4**	**-0.6**
	comp=Z,2µm,1.3s						
QSPA				P’P’		11 59 13.2	
GUN	**Gumba**	**80.61**	**300**	*e*P	**P**	**11 32 39.0**	**-0.5**
	comp=Z,3µm,1.6s						
PALK	**Pallekele**	**80.61**	**279**	P	**P**	**11 32 38.4**	**-1.0**
	comp=Z,32nm,0.6s,baz=116,slow=4.1,SNR=13						
PALK				LR	LR	12 13 04.2	
	comp=Z,4µm,19.0s,baz=183,slow=39						
PALK	**Pallekele**	**80.61**	**279**	*e*P	**P**	**11 32 40.3**	**+0.9**
	comp=Z,578nm,1.2s						
PALK	**Pallekele**	**80.61**	**279**	P	**P**	**11 32 40.9**	**+1.5**
	SNR=29						
PKIN	**Phulchoki**	**80.93**	**300**	*e*P	**P**	**11 32 40.4**	**-0.7**
	comp=Z,2µm,1.4s						
KKN	**Kakani**	**81.09**	**300**	*e*P	**P**	**11 32 41.3**	**-0.6**
	comp=Z,2µm,1.6s						
DMN	**Daman**	**81.19**	**300**	*e*P	**P**	**11 32 42.2**	**-0.3**
	comp=Z,3µm,1.3s						
GKN	**Gorkha**	**81.69**	**300**	*e*P	**P**	**11 32 44.2**	**-0.8**
	comp=Z,3µm,1.3s						
PVM	**Polavaram**	**81.78**	**289**	*e*P	**P**	**11 32 44.7**	**-0.7**
PVM				IAmb	IAmb	11 32 51.4	
	comp=Z,449nm,1.3s						
PVM				IVMs_BB	IVMs_BB	12 03 03.0	
	comp=Z,2µm,29.3s						
KOLN	**Koldanda**	**82.52**	**300**	*e*P	**P**	**11 32 48.4**	**-1.0**
	comp=Z,923nm,1.1s						
DANN	**Dangsing**	**82.53**	**300**	*e*P	**P**	**11 32 48.5**	**-1.1**
	comp=Z,2µm,1.4s						
SKHT	**Srikalahasti**	**82.84**	**285**	*e*P	**P**	**11 32 50.6**	**-0.5**
SKHT				IAmb	IAmb	11 32 57.5	
	comp=Z,579nm,1.3s						
SKHT				IVMs_BB	IVMs_BB	12 17 08.2	
	comp=Z,2µm,16.6s						
HVS	**Khovu-Aksy**	**83.02**	**325**	⇑*e*P	**P**	**11 32 51.5**	**+0.2**
HVS				MLR	MLR		
	comp=Z,30µm,17.0s						
ADKI	**Addanki**	**83.03**	**287**	*e*P	**P**	**11 32 54.5**	**+2.5**
ADKI				IAmb	IAmb	11 32 58.2	
	comp=Z,442nm,1.4s						
ADKI				IVMs_BB	IVMs_BB	12 03 59.6	
	comp=Z,2µm,27.9s						
PYUN	**Piuthan**	**83.12**	**300**	*e*P	**P**	**11 32 51.3**	**-1.3**
	comp=Z,2µm,1.2s						
TIXI	**Tiksi**	**83.72**	**351**	P	**P**	**11 32 52.8**	**-1.6**
	comp=Z,14nm,0.5s,baz=88,slow=2.5,SNR=10						
TIXI				LR	LR	12 09 38.3	
	comp=Z,23µm,20.4s,baz=120,slow=35						
TIXI	**Tiksi**	**83.72**	**351**	*e*P	**P**	**11 32 53.1**	**-1.2**
	comp=Z,589nm,1.5s						
TIXI				*e*S	**S**	**11 43 14.4**	**-0.9**
TIXI	**Tiksi**	**83.72**	**351**	c *i*P	**P**	**11 32 53.1**	**-1.2**
TIXI				pmax	pmax		
	comp=Z,44nm,1.9s						
TIXI				MLR	MLR		
	comp=Z,8µm,18.0s						
NJS	**Nagarjunasagar**	**83.80**	**288**	*e*P	**P**	**11 32 54.9**	**-1.1**
NJS				IAmb	IAmb	11 33 01.9	
	comp=Z,1µm,1.3s						
NJS				IVMs_BB	IVMs_BB	12 06 56.8	
	comp=Z,2µm,32.2s						
WMQ	**Urumqi**	**84.06**	**316**	P	**P**	**11 32 56.3**	**-0.5**
WMQ				pP	PcP	11 33 02.0	+1.3
WMQ				PP	**PP**	**11 36 09.8**	**-1.3**
WMQ				SKS	**S**	**11 43 14.0**	**-6.1**
WMQ				S	**SKSac**	**11 43 19.8**	**+0.9**
WMQ				SS	**SS**	**11 48 44.8**	**-4.4**
WMQ				pmax	pmax		
	comp=Z,790nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,4µm,3.7s						
WMQ				LR	LR		
	comp=Z,25µm,18.5s						
WMQ				LR	LR		
	comp=Z,16µm,23.5s						
WMQ				LR	LR		
	comp=Z,24µm,25.1s						
SRLM	**Srisailam**	**84.10**	**287**	*e*P	**P**	**11 32 56.5**	**-1.1**
SRLM				IAmb	IAmb	11 33 04.1	
	comp=Z,2µm,1.3s						
SRLM				IVMs_BB	IVMs_BB	12 08 01.7	
	comp=Z,2µm,20.6s						
ILAR	**Eielson Array**	**84.14**	**20**	P	**P**	**11 32 55.3**	**-1.4**
	comp=Z,41nm,0.4s,baz=249,slow=5.2,SNR=366						
ILAR				PKKP	**PKKPdf**	**11 51 00.5**	**-5.0**
	comp=Z,1.4nm,0.9s,baz=263,slow=1.4,SNR=4.4						
ILAR				PKPPKP	**P’P’df**	**11 59 11.1**	**-3.0**
	comp=Z,1.5nm,0.9s,baz=349,slow=1.4,SNR=5.6						
ILAR				LR	LR	12 05 24.6	
	comp=Z,20µm,21.7s,baz=240,slow=32						
RPR	**Rampur**	**84.29**	**290**	*e*P	**P**	**11 32 57.4**	**-1.0**
RPR				IAmb	IAmb	11 33 04.1	
	comp=Z,1µm,1.2s						
RPR				IVMs_BB	IVMs_BB	12 09 04.8	
	comp=Z,2µm,18.6s						
HYB	**Hyderabad**	**84.68**	**289**	*i* P	**P**	**11 33 00.0**	**-0.5**
	comp=Z,260nm,1.0s						
HYB				*e*S	**S**	**11 43 26.0**	**-1.2**
HYB	**Hyderabad**	**84.68**	**289**	*e*P	**P**	**11 32 58.9**	**-1.6**
HYB				IAmb	IAmb	11 33 06.6	
	comp=Z,329nm,0.7s						
HYBB	**Hyderabad (bro**	**84.68**	**289**	*e*P	**P**	**11 32 59.9**	**-0.6**
HYBB				IAmb	IAmb	11 33 06.0	
	comp=Z,822nm,1.3s						
HYBB				IVMs_BB	IVMs_BB	12 09 52.5	
	comp=Z,2µm,25.3s						
NGP	**Nagpur**	**85.00**	**292**	⇑*e*P	**P**	**11 33 00.6**	**-1.4**
NGP				*e*x	x	11 43 18.4	
SRSP	**Sriramsagar**	**85.19**	**290**	*e*P	**P**	**11 33 01.7**	**-1.3**
SRSP				IAmb	IAmb	11 33 08.3	
	comp=Z,1µm,1.2s						
SRSP				IVMsBB		12 10 23.0	
	comp=Z,1µm,18.7s						
URV	**Uravakonda**	**85.41**	**286**	*e*P	**P**	**11 33 03.1**	**-1.1**
URV				IAmb	IAmb	11 33 10.2	
	comp=Z,907nm,1.2s						
URV				IVMs_BB	IVMs_BB	12 09 57.1	
	comp=Z,1µm,24.3s						
TOLK	**Toolik Lake Re**	**85.75**	**16**	P	**P**	**11 33 05.0**	**+0.3**
	baz=230,SNR=60						
MCCM	**Marconi Confer**	**86.06**	**50**	*e*P	**P**	**11 33 08.0**	**+1.1**
	comp=Z,1µm,1.4s						
WRAK	**Wrangell Islan**	**86.08**	**31**	*e*P	**P**	**11 33 06.0**	**-0.5**
	comp=Z,142nm,1.0s						
WRAK				LR	LR		
	comp=Z,24µm,19.0s						
HOPS	**Hopland Field**	**86.14**	**50**	*e*P	**P**	**11 33 08.1**	**+0.8**
	comp=Z,357nm,1.4s						
EGAK	**Eagle**	**86.16**	**22**	*e*P	**P**	**11 33 06.9**	**+0.1**
	comp=Z,505nm,1.1s						
EGAK				LR	LR		
	comp=Z,31µm,22.0s						
DGZ	**Jazzator, Alta**	**86.19**	**322**	⇑*i*P	**P**	**11 33 05.3**	**-2.2**
DGAR	**Diego Garcia**	**86.23**	**263**	PFAKE		11 33 20.0	+12
DGAR				LR	LR		
	comp=Z,4µm,20.0s						
RPN	**Rapa Nui**	**86.37**	**117**	LR	LR	12 06 39.8	
	comp=Z,4µm,20.0s,baz=263,slow=32						
DAWY	**Dawson**	**86.45**	**23**	*e*P	**P**	**11 33 08.7**	**+0.4**
	comp=Z,473nm,1.2s						
L02D	**Cave Junction,**	**86.61**	**46**	P	**P**	**11 33 10.2**	**+0.6**
	baz=254,SNR=9.9						
SAO	**San Andreas Ge**	**86.80**	**52**	*e*P	**P**	**11 33 11.4**	**+0.8**
	comp=Z,171nm,1.2s						
SAO	**San Andreas Ge**	**86.80**	**52**	*e*P	**P**	**11 33 11.4**	**+0.8**
SAO				pmax	pmax		
	comp=Z,171nm,1.2s						
BHPL	**Bhopal**	**86.91**	**294**	*e*P	**P**	**11 33 10.0**	**-1.4**
BHPL				IAmb	IAmb	11 33 17.1	
	comp=Z,311nm,1.1s						
N02D	**Trinity Center**	**86.94**	**48**	P	**P**	**11 33 11.9**	**+0.6**
	baz=254,SNR=26						
M02C	**Callahan**	**86.94**	**47**	P	**P**	**11 33 11.8**	**+0.5**
	baz=254,SNR=51						
ZSN	**Zaisan**	**87.09**	**319**	⇑*i*P	**P**	**11 33 10.9**	**-0.8**
	comp=Z,44nm,3.1s						
ZSN				*i* S	**SKSac**	**11 43 37.3**	**-0.4**
ZSN				LR	LR	12 13 29.9	
	comp=Z,667nm,16.5s						
YBH	**Yreka Blue Hor**	**87.14**	**47**	LR	LR	12 04 35.8	
	comp=Z,13µm,21.6s,baz=259,slow=30						
HUMO	**Hull Mountain**	**87.20**	**46**	*e*P	**P**	**11 33 12.7**	**+0.3**
	comp=Z,846nm,1.3s						
I03D	**Drain, OR**	**87.22**	**45**	P	**P**	**11 33 13.0**	**+0.6**
	baz=254,SNR=16						
O03D	**Paynes Creek**	**87.43**	**49**	P	**P**	**11 33 13.8**	**+0.1**
	baz=255,SNR=91						
COR	**Corvallis**	**87.50**	**44**	P	**P**	**11 33 12.3**	**-1.5**
	comp=Z,529nm,1.7s						
COR	**Corvallis**	**87.50**	**44**	P	**P**	**11 33 12.3**	**-1.5**
COR				pmax	pmax		
	comp=Z,529nm,1.7s						
SNCC	**San Nicolas Is**	**87.50**	**56**	P	**P**	**11 33 14.0**	**0.0**
	baz=257,SNR=9.5						
SCZ2	**Santa Cruz Isl**	**87.58**	**55**	P	**P**	**11 33 13.8**	**-0.6**
	baz=257						
SMMC	**Simmler**	**87.60**	**54**	P	**P**	**11 33 15.2**	**+0.6**
	baz=256,SNR=19						
SBC	**Santa Barbara**	**87.62**	**55**	P	**P**	**11 33 14.8**	**+0.2**
	baz=257						
PKM	**Mcpherson Peak**	**87.64**	**54**	P	**P**	**11 33 15.4**	**+0.4**
	baz=257,SNR=69						
G03D	**McMinnville, O**	**87.70**	**44**	P	**P**	**11 33 15.3**	**+0.6**
	baz=254,SNR=9.1						
M04C	**Macdoel**	**87.78**	**47**	P	**P**	**11 33 15.7**	**+0.3**
	baz=255,SNR=21						
DDI	**Dehra Dun**	**87.84**	**301**	*e*P	**P**	**11 33 14.7**	**-1.1**
I04A	**Tendick Farm,**	**87.90**	**45**	P	**P**	**11 33 16.3**	**+0.5**
	baz=255,SNR=24						
NLWA	**Neilton Lookou**	**87.91**	**41**	*e*P	**P**	**11 33 17.5**	**+1.8**
	comp=Z,90nm,1.3s						
NLWA				LR	LR		
	comp=Z,29µm,20.0s						
CMB	**Columbia Colle**	**87.93**	**51**	*e*P	**P**	**11 33 16.3**	**+0.2**
	comp=Z,636nm,1.3s						
CMB	**Columbia Colle**	**87.93**	**51**	*e*P	**P**	**11 33 16.3**	**+0.2**
CMB				pmax	pmax		
	comp=Z,636nm,1.3s						
J04D	**Umpqua Nationa**	**87.97**	**46**	P	**P**	**11 33 16.7**	**+0.4**
	baz=255,SNR=45						
DLBC	**Dease Lake**	**88.03**	**30**	P	**P**	**11 33 16.7**	**+0.6**
	comp=Z,77nm,1.1s,baz=224,slow=3.1,SNR=16						
DLBC	**Dease Lake**	**88.03**	**30**	*e*P	**P**	**11 33 15.6**	**-0.5**
	comp=Z,178nm,1.3s						
DLBC				*e*PP	**PP**	**11 36 48.9**	**+6.0**
K04D	**Chiloquin, OR**	**88.06**	**46**	P	**P**	**11 33 17.5**	**+0.9**
	baz=255,SNR=11						
BLG	**Laguna Peak, P**	**88.07**	**55**	P	**P**	**11 33 17.4**	**+0.7**
	baz=257,SNR=6.9						
F04D	**Rainier, OR**	**88.11**	**43**	P	**P**	**11 33 17.1**	**+0.5**
	baz=254						
NDI	**New Delhi**	**88.21**	**299**	*e*P	**P**	**11 33 17.0**	**-0.5**
SCI2	**San Clemente I**	**88.24**	**56**	P	**P**	**11 33 18.0**	**+0.4**
	baz=257,SNR=7.7						
CIS	**Catalina Islan**	**88.44**	**56**	P	**P**	**11 33 19.0**	**+0.4**
	baz=257,SNR=29						
VES	**Vestal, Richgr**	**88.44**	**53**	P	**P**	**11 33 18.6**	**+0.2**
	baz=257,SNR=25						
OSI	**Osito Audit: C**	**88.45**	**55**	P	**P**	**11 33 18.5**	**-0.1**
	baz=257						
ARVC	**Arvin**	**88.48**	**54**	P	**P**	**11 33 19.2**	**+0.5**
	baz=257,SNR=25						
MK31	**Makanchi Array**	**88.59**	**318**	*i* P	**P**	**11 33 17.8**	**-1.2**
MK31				pmax	pmax		
	comp=Z,240nm,1.0s						
MKAR	**Makanchi Array**	**88.59**	**318**	P	**P**	**11 33 17.9**	**-1.0**
	comp=Z,75nm,0.7s,baz=101,slow=5.8,SNR=363						
MKAR				PP	**PP**	**11 36 46.9**	**-0.8**
	comp=Z,11nm,1.1s,baz=271,slow=14,SNR=3.8						
MKAR				S	**SKSac**	**11 43 44.4**	**-2.4**
	comp=Z,2.2nm,1.0s,baz=116,slow=3.4,SNR=3.0						
MKAR				PKKP	**PKKPdf**	**11 50 53.7**	**-3.5**
	comp=Z,0.5nm,0.7s,baz=318,slow=1.9,SNR=2.3						
MKAR				PKPPKP	**P’P’df**	**11 59 07.4**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=255,slow=5.7,SNR=2.8						
MKAR				LR	LR	12 13 57.3	
	comp=Z,9µm,20.2s,baz=72,slow=36						
J05D	**Fort Rock, OR**	**88.60**	**46**	P	**P**	**11 33 19.8**	**+0.6**
	baz=255,SNR=96						
FMP	**Fort Macarthur**	**88.61**	**56**	P	**P**	**11 33 19.3**	**0.0**
	baz=258						
DECC	**Green Verdugo**	**88.69**	**55**	P	**P**	**11 33 19.7**	**0.0**
	baz=258,SNR=8.9						
SMLA	**Simla**	**88.75**	**302**	*e*P	**P**	**11 33 18.8**	**-1.2**
I05D	**Terrebonne, OR**	**88.79**	**45**	P	**P**	**11 33 20.2**	**+0.2**
	baz=255,SNR=30						
MAKZ	**Makanchi**	**88.80**	**318**	P	**P**	**11 33 18.7**	**-1.3**
MAKZ				pmax	pmax		
	comp=Z,336nm,1.1s						
ISA	**Isabella, Lake**	**88.89**	**54**	P	**P**	**11 33 21.0**	**+0.3**
	baz=257,SNR=92						
MOD	**Modoc Plateau**	**88.92**	**47**	*e*P	**P**	**11 33 21.0**	**+0.1**
	comp=Z,226nm,1.4s						
A04D	**Lummi Island**	**89.03**	**40**	P	**P**	**11 33 21.7**	**+0.8**
	baz=254,SNR=16						
G05D	**Wamic, OR**	**89.03**	**44**	P	**P**	**11 33 21.7**	**+0.6**
	baz=255,SNR=5.7						
MLAC	**Mammoth, Mammo**	**89.03**	**52**	P	**P**	**11 33 22.1**	**+0.5**
	baz=257,SNR=11						
ZALV	**Zalesovo Beam**	**89.09**	**325**	P	**P**	**11 33 19.9**	**-1.2**
	comp=Z,60nm,0.7s,baz=111,slow=8.1,SNR=13						
ZALV				PKKPbc	**PKKPdf**	**11 50 57.1**	**+0.6**
	comp=Z,7.2nm,0.3s,baz=200,slow=12,SNR=4.2						
ZALV				LR	LR	12 14 21.3	
	comp=Z,5µm,19.0s,baz=102,slow=36						
EDW2	**Edwards Air Fo**	**89.10**	**55**	P	**P**	**11 33 22.1**	**+0.4**
	baz=258,SNR=111						
BFSC	**Mount Baldy Ra**	**89.23**	**55**	P	**P**	**11 33 22.8**	**+0.4**
	baz=258,SNR=87						
POO	**Poona**	**89.29**	**289**	⇓*i*P	**P**	**11 33 23.0**	**+0.1**
	comp=Z,280nm,1.0s						
POO				*e*P	**P**	**11 33 23.3**	**+0.4**
B05A	**Bryant**	**89.30**	**41**	P	**P**	**11 33 23.1**	**+0.9**
	baz=255,SNR=15						
CWC	**Cottonwood Cre**	**89.36**	**53**	P	**P**	**11 33 23.5**	**+0.5**
	baz=258						
TIN	**Tinemaha, Big**	**89.38**	**52**	P	**P**	**11 33 23.6**	**+0.6**
	baz=258,SNR=37						
109C	**Camp Elliot, M**	**89.41**	**57**	P	**P**	**11 33 23.8**	**+0.7**

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       baz=258,SNR=21
LRMC   Laurel Mtn Rad   89.48  54    P       P        11 33 24.1 +0.5
       baz=258,SNR=24
MURC   Murrieta         89.48  56    P       P        11 33 24.4 +0.9
       baz=258,SNR=19
SHLS   Shalkode         89.62 314⇑ iP       P        11 33 21.9 -2.1
       comp=Z,39nm,1.1s
SHLS                              i S       SKSac    11 43 51.1 -2.2
SHLS                                LR      LR       12 14 52.2
       comp=Z,2μm,18.1s
NVAR   Mina Array Bea   89.62  51    P       P        11 33 24.7 +0.4
       comp=Z,60nm,1.1s,baz=238,slow=6.8,SNR=42
NVAR                                PKKPbc  PKKPbc   11 51 01.6 +2.2
       comp=Z,2.1nm,0.8s,baz=66,slow=3.1,SNR=7.6
NVAR                                PKPPKP  P'P'df   11 59 03.0 -3.7
       comp=Z,2.1nm,1.0s,baz=159,slow=1.5,SNR=6.6
NVAR                                LR      LR       12 09 14.2
       comp=Z,29μm,18.8s,baz=97,slow=33
PDGK   Podgornoye       89.64 314  i P       P        11 33 22.8 -1.3
PDGK                                pmax    pmax
       comp=Z,369nm,1.1s
DHRM   DHARAMSHALA      89.70 303  eP       P        11 33 23.1 -1.7
DAC    Darwin (Calif)   89.71  53  eP       P        11 33 24.9 +0.2
       comp=Z,287nm,1.3s
DAC                                ePP      PP       11 36 57.6 +0.5
DAC    Darwin (Calif)   89.71  53  eP       P        11 33 24.9 +0.2
DAC                                e                 11 36 57.6
DAC                                 pmax    pmax
       comp=Z,287nm,1.3s
MPMC   Manual Prospec   89.75  53    P       P        11 33 25.3 +0.4
       baz=258,SNR=181
BBRC   Big Bear Solar   89.84  55    P       P        11 33 25.6 +0.2
       baz=258,SNR=27
RRX    Edison Barstow   89.90  55    P       P        11 33 26.3 +0.9
       baz=258
UZB    Uzynbulak        89.93 314⇑ iP       P        11 33 24.7 -0.8
       comp=Z,29nm,0.8s
UZB                               i S       SKSac    11 43 54.7 -0.5
FRD    Ford Ranch, An   89.94  56    P       P        11 33 26.5 +0.7
       baz=258,SNR=36
MONP2  Monument Peak    89.97  57    P       P        11 33 26.4 +0.4
       baz=258,SNR=82
C06D   Leavenworth      89.99  41    P       P        11 33 25.8 +0.3
       baz=256
GRAC   Grapevine Rang   90.04  53    P       P        11 33 26.4 +0.3
       baz=258,SNR=22
PFO    Pinyon Flats O   90.08  56    P       P        11 33 27.0 +0.6
       baz=258,SNR=31
PFO    Pinyon Flats O   90.08  56  eP       P        11 33 26.5 +0.1
       comp=Z,139nm,1.3s
PFO                                 LR      LR
       comp=Z,46μm,19.0s
PFO    Pinyon Flats O   90.08  56  eP       P        11 33 26.5 +0.1
PFO                                 pmax    pmax
       comp=Z,139nm,1.3s
PFO                                 MLR     MLR
       comp=Z,46μm,19.0s
GSC    Goldstone, Bar   90.14  54    P       P        11 33 26.9 +0.3
       baz=258,SNR=93
IKP    In-Ko-Pah, Jac   90.18  57    P       P        11 33 27.2 +0.3
       baz=259,SNR=20
NVS    Novosibirsk      90.24 326  eP       P        11 33 28.6 +2.2
NVS                                e                 11 37 07.2
NVS                                eS       SKSac    11 43 55.2 -0.8
NVS                                 pmax    pmax
       comp=N,88nm,1.5s
NVS                                 pmax    pmax
       comp=E,194nm,1.5s
NVS                                 pmax    pmax
       comp=Z,363nm,1.5s
NVS                                 pmax    pmax
       comp=N,75nm,2.2s
NVS                                 pmax    pmax
       comp=E,131nm,2.2s
NVS                                 pmax    pmax
       comp=Z,150nm,2.2s
NVS                                 smax    smax
       comp=N,72nm,2.4s
NVS                                 smax    smax
       comp=E,86nm,2.4s
KPKS   Kokpek           90.24 314⇑ iP       P        11 33 26.0 -0.9
       comp=E,81nm,1.3s
KPKS                              i S       SKSac    11 43 56.4 -0.5
KPKS                                LR      LR       12 15 13.1
       comp=E,3μm,17.6s
WVOR   Wild Horse Val   90.25  47  eP       P        11 33 27.4 +0.4
       comp=E,501nm,1.5s
WVOR                                LR      LR
       comp=Z,14μm,20.0s
BOM    Bombay           90.32 289  eS       SKSac    11 43 56.9 -1.1
FURC   Furnace Creek,   90.33  53    P       P        11 33 27.5 +0.3
       baz=258,SNR=119
SATY   Saty             90.35 314⇑ iP       P        11 33 26.7 -0.7
       comp=Z,45nm,0.7s
SATY                               eS       SKSac    11 43 57.2 -0.3
ZHN    Zhinishke        90.35 314  eP       P        11 33 26.6 -0.8
       comp=Z,25nm,1.0s
ZHN                                eS       SKSac    11 43 57.0 -0.6
HEC    Hector,Ludlow    90.42  55    P       P        11 33 28.2 +0.3
       baz=259,SNR=133
SWSC   Sam W. Stewart   90.49  57    P       P        11 33 28.8 +0.7
       baz=259,SNR=28
HAWA   Hanford          90.52  43  eP       P        11 33 28.8 +0.8
       comp=Z,150nm,1.2s
HAWA                                LR      LR
       comp=Z,30μm,21.0s
BELC   Belle Mtn. Jos   90.53  56    P       P        11 33 28.8 +0.3
       baz=259,SNR=148
INK    Inuvik           90.54  20    P       P        11 33 26.0 -1.5
       comp=Z,16nm,0.9s,baz=288,slow=5.1,SNR=10
INK                                 PKKPbc  PKKPdf   11 50 56.1 +1.8
       comp=Z,10.0nm,1.1s,baz=22,slow=3.0,SNR=7.2
INK    Inuvik           90.54  20  eP       P        11 33 26.7 -0.8
       comp=Z,111nm,1.1s
INK                                ePP      PP       11 37 06.0 +3.5
INK                                 PKKPbc  PKKPdf   11 50 56.1 +1.8
INK    Inuvik           90.54  20  eP       P        11 33 26.7 -0.8
INK                                e                 11 37 06.1
INK                                 pmax    pmax
       comp=Z,111nm,1.1s
SHOC   Shoshone, Teco   90.68  54    P       P        11 33 29.4 +0.4
       baz=259,SNR=108
BMN    Battle Mountai   90.86  49  eP       P        11 33 29.5 -0.5
       comp=Z,293nm,1.3s
BMN                                eS       S        11 44 20.0 -5.8
BMN    Battle Mountai   90.86  49  eP       P        11 33 29.5 -0.5
BMN                                eS       S        11 44 20.0 -5.8
BMN                                 pmax    pmax
       comp=Z,293nm,1.3s
TUQ    Turquoise Moun   90.87  54    P       P        11 33 30.3 +0.2
       baz=259,SNR=67
TPNV   Topopah Spring   90.91  53    P       P        11 33 30.6 +0.3
       baz=259,SNR=158
BC3    Big Chuckawall   90.91  56    P       P        11 33 30.5 +0.2
       baz=259,SNR=82
GMRC   Granite Mounta   90.96  55    P       P        11 33 30.8 +0.3
       baz=259,SNR=114
IRM    Iron Mountain    91.26  56    P       P        11 33 32.2 +0.5
       baz=259,SNR=157
GLA    Glamis           91.32  57    P       P        11 33 32.7 +0.6
       baz=259,SNR=22
SYO    Syowa Base       91.34 198⇓ iP       P        11 33 30.0 -1.4
SYO    Syowa Base       91.34 198⇑ iP       P        11 33 34.8 +3.4
SYO    Syowa Base       91.34 198⇓ ipP      pP       11 33 37.8 -1.4
MDOK   Medeo            91.34 313  i P       P        11 33 31.2 -0.9
       comp=Z,456nm,0.9s
MDOK                              i S       SKSac    11 44 02.9 -0.5
MDOK                                LR      LR       12 15 28.7
       comp=Z,3μm,18.6s
KSH    Kashi            91.40 310    P       P        11 33 33.0 +0.6
KSH                                 sP      sP       11 33 44.0 +1.0
KSH                                 PP      PP       11 37 14.5 +4.1
KSH                                 SKS     SKSac    11 44 00.3 -3.5
KSH                                 S       S        11 44 27.0 -3.6
KSH                                 SS      SS       11 50 37.0 +0.3
KSH                                 pmax    pmax
       comp=Z,320nm,1.1s
KSH                                 pmax    pmax
       comp=Z,1μm,5.9s
KSH                                 LR      LR
       comp=Z,4μm,15.7s
KSH                                 LR      LR
       comp=Z,8μm,20.8s
KSH                                 LR      LR
       comp=Z,6μm,26.8s
AAA    Alma-Ata         91.45 313  eP       P        11 33 32.4 -0.1
       comp=Z,50nm,1.8s
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AAA                                eS       SKSac    11 44 04.1 +0.4
AAA                                 LR      LR       12 15 34.9
       comp=Z,4μm,18.6s
Y12C   Blythe           91.69  56    P       P        11 33 34.7 +1.0
       baz=260,SNR=23
R11A   Troy Canyon, C   91.69  52    P       P        11 33 34.4 +0.5
       baz=259,SNR=129
BMO    Blue Mountains   91.71  45  eP       P        11 33 34.0 +0.3
       comp=Z,254nm,1.3s
BMO                                 LR      LR
       comp=Z,28μm,19.0s
ULHL   Ulahol           91.74 312    P       P        11 33 33.9 -0.1
       SNR=23
NEE2   Needles Airpor   91.80  55    P       P        11 33 34.7 +0.5
       baz=260,SNR=19
KURK   Kurchatov        91.91 321  eP       P        11 33 32.5 -1.8
       comp=Z,3μm,1.4s
KURK                                PKKPbc  PKKPbc   11 50 54.0 +0.2
KURK                                P'P'             11 59 01.5
KURK                                LR      LR
       comp=Z,21μm,19.0s
KURK   Kurchatov        91.91 321    P       P        11 33 32.7 -1.6
       SNR=150
KURK   Kurchatov        91.91 321c iP       P        11 33 32.3 -2.0
KURK                                pmax    pmax
       comp=Z,24nm,0.9s
KURBB  Kurchatov Arra   91.94 321    P       P        11 33 32.4 -2.1
       comp=Z,22nm,0.8s,baz=106,slow=3.3,SNR=105
KURBB                               PKKPbc  PKKPbc   11 50 54.0 +0.2
       comp=Z,1.6nm,0.6s,baz=284,slow=3.4,SNR=4.3
KURBB                               PKPPKP  P'P'df   11 59 01.5 +0.5
       comp=Z,1.3nm,1.1s,baz=282,slow=3.6,SNR=3.5
KUU    Kurty            91.99 314  eP       P        11 33 33.7 -1.2
       comp=Z,78nm,0.7s
KUU                               i S       SKSac    11 44 06.1 -0.6
KUU                                 LR      LR       12 15 47.5
       comp=Z,6μm,19.8s
PDMCI  Parker Dam,Lak   92.10  56    P       P        11 33 36.2 +0.6
       baz=260,SNR=40
TKM2   Tokmak 2         92.34 313    P       P        11 33 36.1 -0.7
       SNR=34
TKM2   Tokmak 2         92.34 313    P       P        11 33 35.4 -1.4
TKM2                                pmax    pmax
       comp=Z,133nm,1.3s
KZA    Kyzart           92.43 312    P       P        11 33 37.6 +0.1
       SNR=25
MFID   Camas Ranch      92.47  47  eP       P        11 33 37.8 +0.5
       comp=Z,211nm,1.3s
NIL    Nilore           92.48 304  eP       P        11 33 35.8 -1.7
       comp=Z,387nm,0.9s
NIL                                 LR      LR
       comp=Z,2μm,21.0s
NIL    Nilore           92.48 304  eP       P        11 33 35.8 -1.7
NIL                                 pmax    pmax
       comp=Z,387nm,0.9s
NIL                                 MLR     MLR
       comp=Z,2μm,21.0s
KBK    Karagaybulak     92.76 313    P       P        11 33 42.0 +3.3
       SNR=12
214A   Organ Pipe Nat   92.80  58    P       P        11 33 39.6 +0.7
       baz=260,SNR=10
CHMS   Chumysh          92.96 313    P       P        11 33 38.3 -1.2
       SNR=18
UCH    Uchtor           93.00 312    P       P        11 33 45.7 +5.5
       SNR=16
FRU    Bishkek          93.03 313  eP       P        11 33 40.0 +0.2
FRU                                i                 11 37 27.0
FRU                                e                 11 44 14.0
FRU                                e                 11 44 49.0
AAK    Ala-Archa        93.08 313    P       P        11 33 38.9 -1.3
       comp=Z,19nm,0.7s,baz=122,slow=3.2,SNR=12
AAK                                 LR      LR       12 17 47.8
       comp=Z,6μm,19.1s,baz=74,slow=37
AAK    Ala-Archa        93.08 313    P       P        11 33 43.5 +3.3
       SNR=12
AAK    Ala-Archa        93.08 313  eP       P        11 33 38.8 -1.3
       comp=Z,89nm,1.1s
AAK                                ePP      PP       11 37 25.0 +1.4
AAK                                eS       SKSac    11 44 15.8 +2.7
AAK    Ala-Archa        93.08 313    P       P        11 33 39.4 -0.8
       SNR=54
AAK    Ala-Archa        93.08 313    P       P        11 33 39.1 -1.1
AAK                                 pmax    pmax
       comp=Z,122nm,1.3s
USP    Ospenovka        93.19 313    P       P        11 33 39.0 -1.5
       SNR=15
SFK    Sufi-Kurgan      93.36 310    P       P        11 33 40.8 -0.8
SFK                                 pmax    pmax
       comp=Z,440nm,1.4s
HLID   Hailey           93.51  47    P       P        11 33 42.7 +0.5
       baz=260,SNR=93
HLID   Hailey           93.51  47  eP       P        11 33 42.4 +0.2
       comp=Z,199nm,1.3s
HLID                               ePP      PP       11 37 24.8 -2.1
HLID                                LR      LR
       comp=Z,26μm,22.0s
AML    Almayashu        93.58 312    P       P        11 33 42.1 -0.6
       SNR=13
EKS2   Erkin-Say        93.61 312    P       P        11 33 42.0 -0.6
       SNR=18
LPIG   La Paz           93.74  66    LR      LR       12 09 31.9
       comp=Z,21μm,19.5s,baz=261,slow=31
BTLS   Baital           93.82 315⇑ iP       P        11 33 41.9 -1.4
       comp=Z,18nm,0.8s
BTLS                              i S       SKSac    11 44 16.0 -0.7
BTLS                                LR      LR       12 17 14.0
       comp=Z,3μm,21.8s
BHJ    Bhuj             93.94 293  eP       P        11 33 43.7 -0.6
DUG    Dugway, Tooele   94.13  50    P       P        11 33 45.4 +0.4
       baz=261,SNR=38
DUG    Dugway, Tooele   94.13  50  eP       P        11 33 46.9 +1.8
       comp=Z,110nm,1.5s
DUG                                ePP      PP       11 37 40.3 +8.5
DUG                                 LR      LR
       comp=Z,9μm,19.0s
DUG    Dugway, Tooele   94.13  50  eP       P        11 33 46.9 +1.8
DUG                                e                 11 37 40.3
DUG                                 pmax    pmax
       comp=Z,109nm,1.5s
DUG                                 MLR     MLR
       comp=Z,9μm,19.0s
MSO    Missoula         94.39  43    P       P        11 33 46.4 +0.4
       baz=261,SNR=13
MNAS   Manas            94.51 312    P       P        11 33 46.1 -0.6
MNAS                                pmax    pmax
       comp=Z,180nm,1.5s
WUAZ   Wupatki          94.55  55    P       P        11 33 46.6 -0.4
       baz=262
WUAZ   Wupatki          94.55  55    P       P        11 33 50.2 +3.1
       comp=Z,25nm,0.9s
WUAZ                               ePP      PP       11 37 37.0 +1.8
WUAZ                                LR      LR
       comp=Z,38μm,20.0s
TUC    Tucson           94.56  58    P       P        11 33 47.3 +0.2
       baz=262
TUC    Tucson           94.56  58  eP       P        11 33 47.7 +0.6
       comp=Z,51nm,1.0s
TUC                                 LR      LR
       comp=Z,25μm,21.0s
TUC    Tucson           94.56  58  eP       P        11 33 47.7 +0.6
TUC                                 pmax    pmax
       comp=Z,51nm,1.0s
TUC                                 MLR     MLR
       comp=Z,25μm,21.0s
WALA   Waterton Lakes   94.76  41  eP       P        11 33 47.9 +0.1
       comp=Z,120nm,1.3s
HWUT   Hardware Ranch   95.28  49  eP       P        11 33 51.1 +0.7
       comp=Z,47nm,1.1s
HWUT                                LR      LR
       comp=Z,13μm,19.0s
BRZS   Berezniki        95.52 320  eP       P        11 33 50.3 -0.7
       comp=Z,36nm,1.2s
BRZS                               eS       SKSac    11 44 25.9 +0.3
BRZS                                LR      LR       12 18 50.9
       comp=Z,6μm,21.4s
AHID   Auburn Hatcher   95.78  48  eP       P        11 33 53.6 +1.0
       comp=Z,148nm,1.5s
AHID                               ePP      PP       11 37 45.5 +0.8
AHID                                LR      LR
       comp=Z,25μm,20.0s
BOZ    Bozeman (W)      95.79  45    P       P        11 33 52.6 +0.1
       baz=262,SNR=57
BOZ    Bozeman (W)      95.79  45  eP       P        11 33 52.5  0.0
       comp=Z,49nm,1.0s
BOZ                                 LR      LR
       comp=Z,24μm,22.0s
BOZ    Bozeman (W)      95.79  45  eP       P        11 33 52.5  0.0
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BOZ                                 pmax    pmax
       comp=Z,49nm,1.0s
BOZ                                 MLR     MLR
       comp=Z,24μm,22.0s
W18A   Petrified Fore   95.81  55    P       P        11 33 52.5 -0.4
       baz=262
KK31   Karatay Array    96.05 313  i P       P        11 33 51.7 -1.9
KK31                                pmax    pmax
       comp=Z,63nm,1.1s
IUG    Iuzhnay          96.28 312  eP       P        11 33 53.9 -0.9
IUG                                eS       SKSac    11 44 30.2  0.0
IUG                                 LR      LR       12 17 04.6
       comp=Z,2μm,18.6s
H17A   Grant Village    96.37  46    P       P        11 33 55.6 +0.2
       baz=263,SNR=32
YKA    Yellowknife Ar   96.44  28    P       P        11 33 53.5 -1.3
       comp=Z,17nm,0.7s,baz=261,slow=4.4,SNR=33
YKA                                 PP      PP       11 37 51.6 +2.8
       comp=Z,4.8nm,0.9s,baz=262,slow=7.6,SNR=4.1
YKA                                 PKKPbc  PKKPbc   11 50 42.5 +0.2
       comp=Z,6.9nm,1.0s,baz=76,slow=2.8,SNR=12
YKA                                 LR      LR       12 10 19.7
       comp=Z,3μm,21.8s,baz=282,slow=31
LKWY   Lake             96.52  46    PFAKE            11 34 10.0  +14
LKWY                                LR      LR
       comp=Z,38μm,20.0s
NVL    N'lazarevskaya   96.88 190⇓ iP       P        11 34 00.9 +4.2
NVL                                e                 11 37 56.9
NVL                                eSP      SP       11 46 35.1 -2.1
NVL                                ePS      PS       11 46 45.7 +4.9
NVL                                 pmax    pmax
       comp=Z,33nm,1.2s
NVL                                 MLR     MLR
       comp=Z,35μm,16.0s
BW06   Boulder Array    96.91  48    P       P        11 33 57.8  0.0
       baz=263,SNR=45
BW06   Boulder Array    96.91  48  eP       P        11 33 57.4 -0.3
       comp=Z,89nm,1.2s
BW06                                LR      LR
       comp=Z,23μm,20.0s
PDAR   Pinedale Array   96.91  48    P       P        11 33 57.0 -0.8
       comp=Z,55nm,1.1s,baz=210,slow=1.7,SNR=25
PDAR                                PP      PP       11 37 50.8 -2.6
       comp=Z,4.8nm,1.2s,baz=248,slow=3.8,SNR=2.8
PDAR                                PKKPbc  PKKPbc   11 50 40.5 -0.1
       comp=Z,3.9nm,0.9s,baz=93,slow=2.4,SNR=9.8
PDAR                                PKPPKP  P'P'df   11 58 51.2 -1.6
       comp=Z,0.1nm,0.3s,baz=205,slow=3.8,SNR=3.6
PDAR                                LR      LR       12 13 19.6
       comp=Z,19μm,19.4s,baz=302,slow=33
MVCO   Mesa Verde       97.07  54    P       P        11 33 58.2 -0.4
       baz=263
MVCO   Mesa Verde       97.07  54  eP       Pdif     11 33 59.6 +0.9
       comp=Z,33nm,1.2s
MVCO                                LR      LR
       comp=Z,20μm,22.0s
121A   Cookes Peak, D   97.10  58    P       P        11 33 58.4 -0.4
       baz=263
BVA0   Borovoye Array   97.32 322  i P       P        11 33 56.6 -2.5
BVA0                                pmax    pmax
       comp=Z,199nm,1.2s
BVAR   Borovoye Array   97.32 322    P       P        11 33 57.0 -2.0
       comp=Z,32nm,0.8s,baz=100,slow=5.0,SNR=67
BVAR                                PKKPbc  PKKPbc   11 50 36.7 -2.9
       comp=Z,0.8nm,0.7s,baz=322,slow=4.4,SNR=2.4
BVAR                                LR      LR       12 20 21.7
       comp=Z,6μm,18.0s,baz=79,slow=37
EGMT   Eagleton         97.36  43    P       P        11 33 59.2 -0.3
       baz=264
EGMT   Eagleton         97.36  43  eP       P        11 33 59.4 -0.1
       comp=Z,144nm,1.2s
EGMT                                LR      LR
       comp=Z,21μm,20.0s
RLMT   Red Lodge        97.38  46    P       Pdif     11 34 00.7 +0.8
       baz=264,SNR=13
RLMT   Red Lodge        97.38  46  eP       Pdif     11 33 59.9  0.0
       comp=Z,30nm,1.0s
RLMT                                LR      LR
       comp=Z,20μm,20.0s
BRVK   Borovoye         97.39 323  eP       P        11 33 57.4 -2.0
       comp=Z,336nm,1.1s
BRVK                               ePP      PP       11 37 53.6 -2.9
BRVK                                LR      LR
       comp=Z,6μm,20.0s
BRVK   Borovoye         97.39 323    P       P        11 33 57.8 -1.6
       SNR=86
BRVK   Borovoye         97.39 323  eP       P        11 33 57.4 -2.0
BRVK                               e                 11 37 53.6
BRVK                                pmax    pmax
       comp=Z,336nm,1.1s
BRVK                                MLR     MLR
       comp=Z,6μm,20.0s
O20A   White River Ci   97.60  51    P       Pdif     11 34 01.9 +1.0
       baz=264
Y22D   IRIS PASSCAL I   97.99  57    P       Pdif     11 34 03.6 +0.8
       baz=264
Y22E   IRIS PASSCAL I   97.99  57    Pdiff   Pdif     11 34 03.7 +0.9
       baz=264
SNAA   Sanae            98.02 185    P       P        11 34 01.2 -0.9
       comp=Z,2.5nm,0.8s,baz=198,slow=6.0,SNR=7.9
SNAA                                LR      LR       12 14 26.7
       comp=Z,43μm,21.2s,baz=166,slow=33
SNAA   Sanae            98.02 185d iP       Pdif     11 34 03.8 +1.7
S22A   4UR Ranch, Cre   98.45  53    Pdiff   P        11 34 04.7 -0.2
       baz=264
TASM   ASL Pad, Albuq   98.46  56    Pdiff   P        11 34 04.7 -0.2
       baz=264
ANMO   Albuquerque      98.47  56    P       Pdif     11 34 05.4 +0.5
       comp=Z,14nm,1.1s,baz=234,slow=6.3,SNR=17
ANMO                                LR      LR       12 15 15.8
       comp=Z,18μm,18.2s,baz=286,slow=33
ANMO   Albuquerque      98.47  56    Pdiff   Pdif     11 34 05.2 +0.2
       baz=264
ANMO   Albuquerque      98.47  56  eP       Pdif     11 34 05.2 +0.3
       comp=Z,22nm,1.0s
ANMO   Albuquerque      98.47  56⇑ eP       Pdif     11 34 06.3 +1.4
ANMO                                MLR     MLR
       comp=Z,7μm,17.0s
TASL   Snake Pit, Alb   98.47  56    Pdiff   Pdif     11 34 05.2 +0.2
       baz=264
PMSA   Palmer Station   98.84 162    LR      LR       12 15 48.1
       comp=Z,29μm,18.2s,baz=224,slow=34
MNTX   Cornudas Mount   99.03  59    Pdiff   Pdif     11 34 07.1 -0.2
       baz=264
MNTX   Cornudas Mount   99.03  59  eP       Pdif     11 34 08.8 +1.5
       comp=Z,11nm,1.1s
MNTX                                LR      LR
       comp=Z,29μm,19.0s
K22A   Casper           99.12  48    Pdiff   Pdif     11 34 07.7 +0.1
       baz=265
N23A   Red Feather La   99.41  50    Pdiff   Pdif     11 34 09.0 -0.1
       baz=265
SDCO   Great Sand Dun   99.50  53    Pdiff   Pdif     11 34 09.7 +0.2
       baz=265
SDCO   Great Sand Dun   99.50  53    PFAKE            11 34 20.0  +10
SDCO                                LR      LR
       comp=Z,22μm,20.0s
ISCO   Idaho Springs    99.58  51    Pdiff   Pdif     11 34 08.9 -1.0
       baz=265
ISCO   Idaho Springs    99.58  51  ePdif    Pdif     11 34 12.6 +2.7
       comp=Z,22nm,1.4s
ISCO                                LR      LR
       comp=Z,30μm,19.0s
ISCO   Idaho Springs    99.58  51  eP       Pdif     11 34 12.6 +2.7
ISCO                                pmax    pmax
       comp=Z,22nm,1.4s
ISCO                                MLR     MLR
       comp=Z,30μm,19.0s
LAO    LASA Array       99.64  44    Pdiff   Pdif     11 34 10.7 +1.0
       baz=266
LAO    LASA Array       99.64  44  ePdif    Pdif     11 34 09.1 -0.6
       comp=Z,222nm,1.3s
LAO                                ePP      PP       11 38 17.3 +3.3
LAO                                 LR      LR
       comp=Z,29μm,22.0s
Q24A   Divide           99.87  52    Pdiff   Pdif     11 34 11.6 +0.3
       baz=266
TXAR   Lajitas Array   100.28  62    P       Pdif     11 34 14.2 +1.2
       comp=Z,2.2nm,1.1s,baz=256,slow=3.6,SNR=14
TXAR                                PP      PP       11 38 18.4 -0.9
       comp=Z,8.0nm,1.2s,baz=254,slow=4.7,SNR=5.9
TXAR                                PKKPbc  PKKPbc   11 50 24.0 -6.5
       comp=Z,0.9nm,0.8s,baz=72,slow=2.9,SNR=4.3
TXAR                                PKKP    PKKPdf   11 50 33.2 -2.5
       comp=Z,3.9nm,0.9s,baz=106,slow=3.0,SNR=12
TXAR                                PKPPKP  P'P'df   11 58 48.3 +0.8
       comp=Z,1.0nm,1.1s,baz=106,slow=3.2,SNR=4.1
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T25A	**Trinidad**	**100.31**	**54**	Pdiff	**Pdif**	**11 34 13.3**	**+0.2**
	baz=266						
RSSD	**Black Hills**	**101.03**	**47**	Pdiff	**Pdif**	**11 34 16.7**	**+0.5**
	baz=267						
RSSD	**Black Hills**	**101.03**	**47**	*e*Pdif	**Pdif**	**11 34 16.7**	**+0.5**
	comp=Z,60nm,1.3s						
RSSD	**Black Hills**	**101.03**	**47**	*e*P	**Pdif**	**11 34 16.7**	**+0.5**
RSSD				pmax	pmax		
	comp=Z,60nm,1.3s						
DGMT	**Dagmar**	**101.10**	**42**	Pdiff	**Pdif**	**11 34 18.0**	**+1.9**
	baz=268						
DGMT	**Dagmar**	**101.10**	**42**	*e*Pdif	**Pdif**	**11 34 18.4**	**+2.3**
	comp=Z,126nm,1.3s						
DGMT				*e*PP	**PP**	**11 38 24.2**	**-0.7**
DGMT				LR	LR		
	comp=Z,11µm,19.0s						
MSTX	**Muleshoe**	**101.42**	**57**	Pdiff	**Pdif**	**11 34 19.6**	**+1.6**
	baz=266						
KSCO	**Kaye Shedlock'**	**101.83**	**52**	Pdiff	**Pdif**	**11 34 20.7**	**+0.9**
	baz=267						
AMTX	**Amarillo**	**102.37**	**56**	Pdiff	**Pdif**	**11 34 21.3**	**-0.9**
	baz=267						
AMTX	**Amarillo**	**102.37**	**56**	*e*Pdif	**Pdif**	**11 34 26.2**	**+4.0**
	comp=Z,31nm,1.0s						
OGNE	**Ogallala**	**102.38**	**50**	Pdiff	**Pdif**	**11 34 21.9**	**-0.2**
	baz=268						
OGNE	**Ogallala**	**102.38**	**50**	PFAKE		11 34 30.0	+8.0
OGNE				LR	LR		
	comp=Z,13µm,20.0s						
SVE	**Sverdlovsk**	**103.08**	**326**	*e*P	**Pdif**	**11 34 26.8**	**+2.2**
SVE				*e*		11 38 42.0	
SVE				*e*S	**SKSac**	**11 45 03.7**	**+0.8**
SVE				*e*SS	**SS**	**11 53 13.8**	**-6.2**
SVE				pmax	pmax		
	comp=Z,52nm,1.5s						
MSEY	**Mahe Island**	**103.33**	**263**	PFAKE		11 34 40.0	+13
MSEY				LR	LR		
	comp=Z,24µm,19.0s						
JCT	**Junction City**	**103.71**	**61**	Pdiff	**Pdif**	**11 34 28.2**	**0.0**
	baz=267						
JCT	**Junction City**	**103.71**	**61**	*e*Pdif	**Pdif**	**11 34 32.2**	**+4.1**
	comp=Z,14nm,0.9s						
JCT				LR	LR		
	comp=Z,23µm,20.0s						
AB31	**Akbulak array**	**103.73**	**318**	*i* P	**Pdif**	**11 34 25.0**	**-2.7**
AB31				pmax	pmax		
	comp=Z,23nm,0.9s						
833A	**Chaparral WMA,**	**103.94**	**63**	Pdiff	**Pdif**	**11 34 28.4**	**-0.8**
	baz=266						
ABTX	**Abilene, Hawle**	**103.96**	**59**	Pdiff	**Pdif**	**11 34 29.1**	**-0.1**
	baz=267						
WSAR	**Wadi Sarin**	**104.01**	**292**	Pdiff	**Pdif**	**11 34 31.8**	**+2.2**
	comp=Z,41nm,1.1s,baz=138,slow=4.9,SNR=9.6						
CBKS	**Cedar Bluff**	**104.08**	**52**	Pdiff	**Pdif**	**11 34 30.0**	**+0.4**
	baz=269						
CBKS	**Cedar Bluff**	**104.08**	**52**	*e*Pdif	**Pdif**	**11 34 33.8**	**+4.1**
CBKS				LR	LR		
	comp=Z,25µm,20.0s						
MDND	**Maddock**	**104.17**	**43**	Pdiff	**Pdif**	**11 34 29.6**	**-0.2**
	baz=271						
ARU	**Arti**	**104.24**	**326**	Pdiff	**Pdif**	**11 34 30.6**	**+0.8**
	comp=Z,26nm,1.1s,baz=92,slow=3.8,SNR=25						
ARU				PP	**PKiKP**	**11 38 41.1**	**-5.4**
	comp=Z,2.2nm,0.3s,baz=69,slow=7.5,SNR=4.8						
ARU				PKKPbc	**PKKPbc**	**11 50 21.3**	**+1.6**
	comp=Z,2.6nm,0.4s,baz=284,slow=0.9,SNR=6.4						
ARU	**Arti**	**104.24**	**326**	Pdif	**Pdif**	**11 34 30.6**	**+0.8**
ARU				PP	**PKiKP**	**11 38 41.1**	**-5.4**
ARU				PKKPbc	**PKKPbc**	**11 50 21.2**	**+1.6**
ARU				LR	LR		
	comp=Z,14µm,19.0s						
ARU	**Arti**	**104.24**	**326**	P	**Pdif**	**11 34 30.1**	**+0.3**
ARU						11 38 44.1	
ARU				S	**SKSac**	**11 45 10.0**	**+1.7**
ARU				SP	**SP**	**11 47 47.8**	**-9.1**
ARU				PS	**PS**	**11 48 02.9**	**+2.4**
SUSD	**Miller**	**104.68**	**47**	Pdiff	**Pdif**	**11 34 31.7**	**-0.5**
	baz=271						
WMOK	**Wichita Mounta**	**104.75**	**57**	Pdiff	**Pdif**	**11 34 33.4**	**+0.7**
	baz=268						
WMOK	**Wichita Mounta**	**104.75**	**57**	PFAKE		11 34 40.0	+7.3
WMOK				LR	LR		
	comp=Z,28µm,19.0s						
AKTO	**Aktyubinsk**	**104.93**	**320**	Pdiff	**Pdif**	**11 34 33.0**	**-0.1**
	comp=Z,15nm,1.1s,baz=77,slow=6.2,SNR=26						
AKTO				PP	**PKiKP**	**11 38 47.0**	**-1.0**
	comp=Z,12nm,1.1s,baz=79,slow=6.9,SNR=4.6						
AKTO				PKKPbc	**PKKPbc**	**11 50 19.4**	**+2.1**
	comp=Z,1.1nm,0.3s,baz=107,slow=8.0,SNR=4.7						
AKTO	**Aktyubinsk**	**104.93**	**320**	P	**Pdif**	**11 34 33.0**	**-0.1**
AKTO				pmax	pmax		
	comp=Z,46nm,1.5s						
GEYT	**Alibeck**	**105.12**	**307**	Pdiff	**Pdif**	**11 34 34.7**	**+0.5**
	comp=Z,2.6nm,0.3s,baz=66,slow=8.1,SNR=7.1						
GEYT				PKiKP	**PKiKP**	**11 38 47.0**	**-1.8**
	comp=Z,3.6nm,0.3s,baz=188,slow=2.9,SNR=4.1						
KVTX	**Kingsville**	**105.22**	**64**	PFAKE		11 39 00.0	
KVTX				LR	LR		
	comp=Z,12µm,19.0s						
BGNE	**Belgrade**	**105.31**	**50**	Pdiff	**Pdif**	**11 34 37.5**	**+2.5**
	baz=271						
435B	**Jarrell**	**105.63**	**61**	Pdiff	**Pdif**	**11 34 38.1**	**+1.5**
	baz=268						
G32A	**Webster**	**105.70**	**46**	Pdiff	**Pdif**	**11 34 38.7**	**+2.0**
	baz=272						
WHTX	**Lake Whitney,**	**105.78**	**59**	Pdiff	**Pdif**	**11 34 40.1**	**+2.8**
	baz=268						
BANOM	**Banah**	**106.30**	**294**	P	**Pdif**	**11 34 45.7**	**+5.9**
	SNR=5.5						
ECSD	**EROS Data Cent**	**106.39**	**47**	Pdiff	**Pdif**	**11 34 41.6**	**+1.9**
	baz=272						
ECSD	**EROS Data Cent**	**106.39**	**47**	*e*Pdif	**Pdif**	**11 34 44.5**	**+4.7**
	comp=Z,12nm,1.0s						
ECSD				LR	LR		
	comp=Z,10µm,20.0s						
HATD	**Hatta, Dubai**	**106.39**	**293**	P	**Pdif**	**11 34 45.0**	**+4.8**
	SNR=5.2						
ASHO	**Ashiyiah**	**106.45**	**293**	P	**Pdif**	**11 34 45.8**	**+5.3**
	SNR=6.0						
ULM	**Lac du Bonnet**	**106.50**	**40**	Pdiff	**Pdif**	**11 34 40.8**	**+0.8**
	comp=Z,4.1nm,0.7s,baz=310,slow=5.7,SNR=5.4						
ULM				PKiKP	**PKiKP**	**11 38 51.2**	**+0.3**
	comp=Z,9.2nm,1.2s,baz=209,slow=3.1,SNR=3.5						
KSU1	**Kansas State U**	**106.52**	**52**	Pdiff	**Pdif**	**11 34 42.3**	**+1.9**
	baz=271						
KSU1	**Kansas State U**	**106.52**	**52**	PFAKE		11 39 00.0	
KSU1				LR	LR		
	comp=Z,30µm,20.0s						
AGMN	**Agassiz Nation**	**106.66**	**42**	Pdiff	**Pdif**	**11 34 40.8**	**+0.1**
	baz=274						
AGMN	**Agassiz Nation**	**106.66**	**42**	*e*Pdif	**Pdif**	**11 34 44.5**	**+3.7**
	comp=Z,8.9nm,1.4s						
AGMN				LR	LR		
	comp=Z,9µm,20.0s						
C33A	**Trail**	**106.75**	**43**	Pdiff	**Pdif**	**11 34 40.6**	**-0.6**
	baz=274						
A33A	**Warroad**	**106.92**	**42**	Pdiff	**Pdif**	**11 34 41.3**	**-0.6**
	baz=275						
G34A	**Benson**	**107.01**	**46**	Pdiff	**Pdif**	**11 34 41.5**	**-0.9**
	baz=274						
TUL1	**Leonard**	**107.21**	**55**	Pdiff	**Pdif**	**11 34 44.4**	**+0.9**
	baz=270						
E34A	**Wadena**	**107.25**	**44**	Pdiff	**Pdif**	**11 34 45.8**	**+2.3**
	baz=274						
C34A	**RKJ Ranch, Bem**	**107.34**	**43**	Pdiff	**Pdif**	**11 34 45.5**	**+1.6**
	baz=275						
B34A	**Aery, Baudette**	**107.45**	**42**	Pdiff	**Pdif**	**11 34 45.7**	**+1.4**
	baz=275						
H35A	**Sunnyside Ranc**	**107.62**	**46**	Pdiff	**Pdif**	**11 34 47.7**	**+2.6**
	baz=274						
F35A	**Swanville**	**107.72**	**45**	Pdiff	**Pdif**	**11 34 48.3**	**+2.7**
	baz=274						
N36A	**Muff Farm, Cla**	**107.74**	**50**	Pdiff	**Pdif**	**11 34 46.2**	**+0.5**
	baz=273						
ABPO	**Ambohimpanom**	**107.75**	**246**	PFAKE		11 39 10.0	
ABPO				LR	LR		
	comp=Z,4µm,20.0s						
E35A	**Pequot Lakes**	**107.78**	**44**	Pdiff	**Pdif**	**11 34 44.6**	**-1.2**
	baz=275						
G35A	**Watkins**	**107.83**	**46**	Pdiff	**Pdif**	**11 34 48.1**	**+2.0**
	baz=274						
M36A	**Felix, Anita**	**107.83**	**50**	Pdiff	**Pdif**	**11 34 45.1**	**-1.0**
	baz=273						
L36A	**Harm Buss Farm**	**107.89**	**49**	Pdiff	**Pdif**	**11 34 47.8**	**+1.4**
	baz=273						
C35A	**Jirik Farms, M**	**107.97**	**43**	Pdiff	**Pdif**	**11 34 47.9**	**+1.3**
	baz=276						
D35A	**Remer**	**107.97**	**44**	Pdiff	**Pdif**	**11 34 47.9**	**+1.3**
	baz=275						
K36A	**Gilmore City**	**108.02**	**48**	Pdiff	**Pdif**	**11 34 48.9**	**+1.9**
	baz=274						
J36A	**Seneca 1, Swea**	**108.06**	**48**	Pdiff	**Pdif**	**11 34 46.9**	**-0.3**
	baz=274						
B35A	**Bob, Littlefor**	**108.07**	**42**	Pdiff	**Pdif**	**11 34 49.0**	**+1.9**
	baz=276						
NATX	**Nacogdoches**	**108.16**	**60**	Pdiff	**Pdif**	**11 34 47.5**	**-0.4**
	baz=270						
NATX	**Nacogdoches**	**108.16**	**60**	PFAKE		11 39 10.0	
NATX				LR	LR		
	comp=Z,21µm,20.0s						
Q37A	**Longview Farm,**	**108.21**	**52**	Pdiff	**Pdif**	**11 34 48.0**	**+0.1**
	baz=272						
I36A	**Fitzsimmons Fa**	**108.25**	**47**	Pdiff	**Pdif**	**11 34 50.2**	**+2.2**
	baz=274						
P37A	**Lathrop**	**108.26**	**52**	Pdiff	**Pdif**	**11 34 49.3**	**+1.2**
	baz=273						
H36A	**Jessenland, He**	**108.27**	**46**	Pdiff	**Pdif**	**11 34 49.3**	**+1.3**
	baz=274						
N37A	**Lee Faris, Mou**	**108.31**	**50**	Pdiff	**Pdif**	**11 34 49.4**	**+1.1**
	baz=273						
G36A	**St. Michael**	**108.34**	**46**	Pdiff	**Pdif**	**11 34 50.3**	**+2.0**
	baz=275						
O37A	**Wolven Farm, M**	**108.39**	**51**	Pdiff	**Pdif**	**11 34 50.0**	**+1.3**
	baz=273						
M37A	**Trindle Farm,**	**108.39**	**50**	Pdiff	**Pdif**	**11 34 51.7**	**+3.0**
	baz=273						
T38A	**Diamond**	**108.39**	**54**	Pdiff	**Pdif**	**11 34 50.0**	**+1.2**
	baz=272						
F36A	**Milaca**	**108.45**	**45**	Pdiff	**Pdif**	**11 34 48.8**	**0.0**
	baz=275						
D36A	**Goodland**	**108.57**	**43**	Pdiff	**Pdif**	**11 34 49.5**	**+0.1**
	baz=276						
E36A	**McGregor**	**108.57**	**44**	Pdiff	**Pdif**	**11 34 51.2**	**+1.8**
	baz=276						
L37A	**Phoenix Point,**	**108.57**	**49**	Pdiff	**Pdif**	**11 34 50.3**	**+0.9**
	baz=274						
X39A	**Fountain Ranch**	**108.60**	**57**	Pdiff	**Pdif**	**11 34 51.7**	**+1.9**
	baz=271						
K37A	**Belmond**	**108.61**	**48**	Pdiff	**Pdif**	**11 34 51.7**	**+2.1**
	baz=274						
J37A	**Redenius Farm,**	**108.64**	**48**	Pdiff	**Pdif**	**11 34 50.9**	**+1.2**
	baz=274						
R38A	**Fenwick Farm,**	**108.66**	**53**	Pdiff	**Pdif**	**11 34 51.4**	**+1.4**
	baz=272						
S38A	**Stockton**	**108.68**	**54**	Pdiff	**Pdif**	**11 34 52.2**	**+2.2**
	baz=272						
I37A	**Lemond, Waseca**	**108.69**	**47**	Pdiff	**Pdif**	**11 34 51.4**	**+1.5**
	baz=275						
C36A	**Pine Crest Far**	**108.73**	**43**	Pdiff	**Pdif**	**11 34 51.5**	**+1.4**
	baz=276						
Q38A	**Cooks Store, C**	**108.85**	**52**	Pdiff	**Pdif**	**11 34 50.0**	**-0.7**
	baz=273						
W39A	**Magazine**	**108.86**	**56**	Pdiff	**Pdif**	**11 34 48.8**	**-2.1**
	baz=271						
P38A	**Dawn**	**108.89**	**51**	Pdiff	**Pdif**	**11 34 50.5**	**-0.4**
	baz=273						
O38A	**Galt**	**108.91**	**51**	Pdiff	**Pdif**	**11 34 50.1**	**-0.9**
	baz=273						
240A	**Hunter Patters**	**108.92**	**59**	Pdiff	**Pdif**	**11 34 53.5**	**+2.3**
	baz=270						
V39A	**Pettigrew**	**108.95**	**55**	Pdiff	**Pdif**	**11 34 49.8**	**-1.6**
	baz=272						
KBS	**Kingsbay**	**108.98**	**354**	PFAKE		11 39 10.0	
KBS				LR	LR		
	comp=Z,23µm,22.0s						
SCIA	**State Center**	**108.99**	**49**	Pdiff	**Pdif**	**11 34 54.9**	**+3.6**
	baz=274						
SCIA	**State Center**	**108.99**	**49**	PFAKE		11 39 10.0	
SCIA				LR	LR		
	comp=Z,19µm,20.0s						
H37A	**Dierke Farm, C**	**108.99**	**46**	Pdiff	**Pdif**	**11 34 52.0**	**+0.7**
	baz=275						
SPMN	**Marine on St.**	**109.01**	**46**	Pdiff	**Pdif**	**11 34 53.7**	**+2.4**
	baz=276						
M38A	**Pleasantville**	**109.03**	**50**	Pdiff	**Pdif**	**11 34 52.5**	**+1.0**
	baz=274						
MIAR	**Mount Ida**	**109.04**	**57**	Pdiff	**Pdif**	**11 34 54.2**	**+2.5**
	baz=271						
MIAR	**Mount Ida**	**109.04**	**57**	PFAKE		11 39 10.0	
MIAR				LR	LR		
	comp=Z,27µm,19.0s						
N38A	**Joes South For**	**109.05**	**50**	Pdiff	**Pdif**	**11 34 53.8**	**+2.2**
	baz=274						
SPITS	**Spitsbergen Ar**	**109.07**	**353**	PKiKP	**PKiKP**	**11 38 54.5**	**-0.5**
	comp=Z,21nm,1.0s,baz=61,slow=6.9,SNR=3.4						
SPITS				PKKPbc	**PKKPbc**	**11 50 03.6**	**-1.5**
	comp=Z,23nm,1.0s,baz=68,slow=4.6,SNR=7.1						
U39A	**Green Forest**	**109.07**	**55**	Pdiff	**Pdif**	**11 34 53.4**	**+1.6**
	baz=272						
D37A	**Cotton**	**109.07**	**43**	Pdiff	**Pdif**	**11 34 53.4**	**+1.8**
	baz=276						
140A	**Cam and Jess,**	**109.08**	**59**	Pdiff	**Pdif**	**11 34 55.1**	**+3.2**
	baz=271						
F37A	**Hinrichs Farm,**	**109.08**	**45**	Pdiff	**Pdif**	**11 34 53.8**	**+2.2**
	baz=276						
T39A	**Clever**	**109.13**	**54**	Pdiff	**Pdif**	**11 34 54.3**	**+2.3**
	baz=272						
S39A	**Bolivar**	**109.14**	**53**	Pdiff	**Pdif**	**11 34 53.1**	**+1.0**
	baz=273						
E37A	**Wrenshall**	**109.15**	**44**	Pdiff	**Pdif**	**11 34 53.1**	**+1.2**
	baz=276						
L38A	**Oak Wood Farm,**	**109.16**	**49**	Pdiff	**Pdif**	**11 34 53.5**	**+1.5**
	baz=274						
C37A	**Embarrass**	**109.17**	**43**	Pdiff	**Pdif**	**11 34 51.9**	**-0.1**
	baz=277						
Z40A	**Long Farm, Mag**	**109.21**	**58**	Pdiff	**Pdif**	**11 34 53.7**	**+1.2**
	baz=271						
Y40A	**Okolona**	**109.30**	**57**	Pdiff	**Pdif**	**11 34 53.8**	**+1.0**
	baz=271						
R39A	**Chumby, Stover**	**109.34**	**53**	Pdiff	**Pdif**	**11 34 54.3**	**+1.4**
	baz=273						
Q39A	**Willow Grove F**	**109.35**	**52**	Pdiff	**Pdif**	**11 34 55.2**	**+2.2**
	baz=273						
441A	**DeRidder**	**109.42**	**61**	Pdiff	**Pdif**	**11 34 56.6**	**+3.1**
	baz=270						
J38A	**Wedel Dairy, R**	**109.42**	**48**	Pdiff	**Pdif**	**11 34 55.7**	**+2.5**
	baz=275						
H38A	**Maiden Rock**	**109.43**	**46**	Pdiff	**Pdif**	**11 34 56.2**	**+3.0**
	baz=276						
W40A	**Ferguson Farm,**	**109.44**	**56**	Pdiff	**Pdif**	**11 34 56.6**	**+3.2**
	baz=272						
PAYG	**Puerto Ayora**	**109.45**	**94**	PFAKE		11 39 10.0	
PAYG				LR	LR		
	comp=Z,5µm,20.0s						
I38A	**Scanlan Farm,**	**109.46**	**47**	Pdiff	**Pdif**	**11 34 55.4**	**+2.0**
	baz=276						
P39B	**Salisbury**	**109.50**	**52**	Pdiff	**Pdif**	**11 34 56.7**	**+3.1**
	baz=274						
U40A	**Yellville**	**109.58**	**55**	Pdiff	**Pdif**	**11 34 56.0**	**+2.0**
	baz=272						
F38A	**Pierce - Schro**	**109.58**	**45**	Pdiff	**Pdif**	**11 34 56.4**	**+2.6**
	baz=276						
N39A	**Derby Farms, D**	**109.59**	**50**	Pdiff	**Pdif**	**11 34 56.5**	**+2.5**
	baz=274						
EYMN	**Ely**	**109.60**	**43**	Pdiff	**Pdif**	**11 34 56.1**	**+2.1**
	baz=278						
EYMN	**Ely**	**109.60**	**43**	PFAKE		11 39 10.0	
EYMN				LR	LR		
	comp=Z,14µm,19.0s						
O39A	**Kirksville**	**109.61**	**51**	Pdiff	**Pdif**	**11 34 54.4**	**+0.3**
	baz=274						
V40A	**Witts Springs**	**109.62**	**55**	Pdiff	**Pdif**	**11 34 54.4**	**+0.1**
	baz=272						
241A	**Mo Tay, Goldon**	**109.64**	**59**	Pdiff	**Pdif**	**11 34 56.6**	**+2.2**
	baz=271						
141A	**Papa Simpson,**	**109.64**	**59**	Pdiff	**Pdif**	**11 34 56.6**	**+2.2**
	baz=271						
X40A	**Basin Creek Fa**	**109.66**	**57**	Pdiff	**Pdif**	**11 34 56.6**	**+2.2**
	baz=272						
Z41A	**Richland Creek**	**109.71**	**58**	Pdiff	**Pdif**	**11 34 55.0**	**+0.3**
	baz=271						
E38A	**The Farm, Brul**	**109.73**	**44**	Pdiff	**Pdif**	**11 34 56.3**	**+1.8**
	baz=277						
C38A	**Sawbill Land.**	**109.78**	**43**	Pdiff	**Pdif**	**11 34 57.2**	**+2.5**
	baz=278						
M39A	**Webster**	**109.80**	**49**	Pdiff	**Pdif**	**11 34 56.0**	**+1.1**
	baz=275						
S40A	**Lebanon**	**109.80**	**54**	Pdiff	**Pdif**	**11 34 58.1**	**+3.1**
	baz=273						
Y41A	**Eaglette Beard**	**109.86**	**58**	Pdiff	**Pdif**	**11 34 58.3**	**+2.9**
	baz=272						
PRGR	**Permogore**	**109.87**	**332**	*i* P	**Pdif**	**11 34 56.0**	**+1.3**
L39A	**Vinton**	**109.87**	**49**	Pdiff	**Pdif**	**11 34 57.8**	**+2.6**
	baz=275						
K39A	**Oelwein**	**109.90**	**48**	Pdiff	**Pdif**	**11 34 57.1**	**+1.7**
	baz=275						
X41A	**Kaden, Bauxite**	**109.92**	**57**	Pdiff	**Pdif**	**11 34 58.8**	**+3.2**
	baz=272						
R40A	**Maddies Statio**	**109.94**	**53**	Pdiff	**Pdif**	**11 34 59.7**	**+4.0**
	baz=274						
J39A	**Decorah**	**109.98**	**47**	Pdiff	**Pdif**	**11 34 58.0**	**+2.4**
	baz=276						
P40A	**Paris**	**110.04**	**51**	Pdiff	**Pdif**	**11 34 56.9**	**+0.9**
	baz=274						
Q40A	**Laux Farm, Aux**	**110.05**	**52**	Pdiff	**Pdif**	**11 34 57.8**	**+1.7**
	baz=274						
I39A	**Houston**	**110.06**	**47**	Pdiff	**Pdif**	**11 34 58.6**	**+2.6**
	baz=276						
442A	**Mamou**	**110.07**	**61**	Pdiff	**Pdif**	**11 34 59.9**	**+3.6**
	baz=271						
W41B	**Gary Mavity, V**	**110.11**	**56**	Pdiff	**Pdif**	**11 34 59.2**	**+2.7**
	baz=272						
O40A	**La Belle**	**110.13**	**51**	Pdiff	**Pdif**	**11 34 57.5**	**+1.1**
	baz=274						
H39A	**Augusta**	**110.14**	**46**	Pdiff	**Pdif**	**11 34 57.5**	**+1.1**
	baz=276						
G39A	**Holcombe**	**110.15**	**45**	Pdiff	**Pdif**	**11 34 57.1**	**+0.7**
	baz=277						
342A	**Flagon Creek P**	**110.15**	**60**	Pdiff	**Pdif**	**11 34 57.5**	**+0.9**
	baz=271						
V41A	**Mountainview**	**110.17**	**55**	Pdiff	**Pdif**	**11 34 58.4**	**+1.7**
	baz=273						
F39A	**Loretta**	**110.25**	**45**	Pdiff	**Pdif**	**11 34 58.1**	**+1.3**
	baz=277						
N40A	**Mertquake, Sal**	**110.29**	**50**	Pdiff	**Pdif**	**11 34 57.8**	**+0.7**
	baz=275						
M40A	**Post Highland**	**110.30**	**49**	Pdiff	**Pdif**	**11 34 59.1**	**+1.9**
	baz=275						
U41A	**Viola**	**110.33**	**55**	Pdiff	**Pdif**	**11 35 00.8**	**+3.4**
	baz=273						
S41A	**Jillco Farms,**	**110.40**	**54**	Pdiff	**Pdif**	**11 34 59.7**	**+2.0**
	baz=274						
EFI	**East Falkland**	**110.72**	**156**	PFAKE		11 39 10.0	
EFI				LR	LR		
	comp=Z,7µm,21.0s						
JFWS	**Jewell Farm**	**111.08**	**48**	PFAKE		11 39 10.0	
JFWS				LR	LR		
	comp=Z,9µm,20.0s						
COWI	**Conover**	**111.46**	**44**	PFAKE		11 39 10.0	
COWI				LR	LR		
	comp=Z,10µm,20.0s						
PLCA	**Paso Flores**	**111.66**	**141**	PKKPbc	PKKPbc	11 49 57.8	+1.9
	comp=Z,8.6nm,1.0s,baz=109,slow=2.8,SNR=5.2						
APA	**Apatity**	**112.27**	**341**	⇓*i*PKIKP	**PKiKP**	**11 39 03.4**	**+2.2**
APA				*i*		11 39 51.4	
APA				*i*		11 45 44.0	
APA				*i* PS	**PS**	**11 49 18.0**	**-2.1**
APA				pmax	pmax		
	comp=Z,18nm,0.9s						
MAK	**Makhachkala**	**112.86**	**313**	*i* P	**Pdif**	**11 35 05.2**	**-3.3**
MAK				*i*		11 38 59.4	
MAK				*e*		11 39 50.7	
MAK				*e*		11 45 46.3	
MAK				*e*PS	**PS**	**11 49 19.3**	**-7.4**
MAK				*e*SS	SS	11 55 34.8	+1.7
MAK				*e*SSS	SSS	11 59 47.2	
MAK				pmax	pmax		
	comp=Z,90nm,0.9s						
AKT	**Akhty**	**112.90**	**311**	*e*P	**Pdif**	**11 35 11.8**	**+2.9**
AKT				*e*		11 39 58.7	
KLMR	**Klimovskoe**	**112.91**	**333**	*e*P	**Pdif**	**11 35 09.0**	**+0.7**
KLMR				*i*		11 39 03.6	
KLMR				pmax	pmax		
	comp=Z,48nm,1.4s						
KLMR	**Klimovskoe**	**112.91**	**333**	*e*Pdif	**Pdif**	**11 35 09.0**	**+0.7**
KLMR				AMP		11 35 12.9	
	comp=Z,48nm,1.4s						
KLMR				*e*PKiKP	**PKiKP**	**11 39 03.7**	**+1.1**
KLMR				*e*PKKPbc	**PKKPbc**	**11 49 47.4**	**-4.7**
KLMR				LQ	LQ	12 19 39.6	
KLMR				LQ	LQ	12 19 39.6	
KLMR				LR	LR	12 26 34.4	
KLMR				AMP		12 31 03.8	
	comp=Z,27µm,19.2s						
DAG	**Danmarks Havn**	**112.92**	**360**	*i* P	**PKiKP**	**11 39 04.7**	**+2.5**
DAG	**Danmarks Havn**	**112.92**	**360**	*i* PKIKP	**PKiKP**	**11 39 04.7**	**+2.5**
KEV	**Kevo**	**112.94**	**344**	PFAKE		11 39 10.0	
KEV				LR	LR		
	comp=Z,31µm,20.0s						
ARCES	**ARCESS Array B**	**113.49**	**344**	PKiKP	**PKiKP**	**11 39 01.9**	**-1.6**
	comp=Z,18nm,0.8s,baz=67,slow=3.0,SNR=25						
ARCES				PKKPbc	**PKKPbc**	**11 49 50.0**	**-0.4**
	comp=Z,7.4nm,0.8s,baz=245,slow=3.9,SNR=6.2						
LRAL	**Lakeview Retre**	**114.59**	**58**	*e*PKPdf	PKPdf	11 39 10.2	+3.5
WCI	**Wyandotte Cave**	**114.63**	**52**	*e*PKPdf	PKPdf	11 39 09.9	+3.3
WCI				*e*PP	**PP**	**11 40 05.1**	**+1.0**
BRAL	**Brewton**	**114.67**	**60**	PFAKE		11 39 20.0	+13
BRAL				LR	LR		
	comp=Z,17µm,19.0s						
HOPE	**Hope Point**	**114.81**	**170**	PFAKE		11 39 20.0	+14
HOPE				LR	LR		
	comp=Z,14µm,19.0s						
VRH	**Novokhopyorsk**	**114.97**	**322**	*i* PKIKP	PKPdf	11 39 09.9	+3.1
VRH				*e*		11 40 09.9	
VRH				pmax	pmax		
	comp=Z,40nm,0.9s						
VRH				MLR	MLR		
	comp=Z,17µm,23.0s						
GNI	**Garni**	**115.34**	**310**	PKP	**PKPdf**	**11 39 10.2**	**+2.0**
	comp=Z,27nm,0.8s,baz=130,slow=2.8,SNR=11						
GNI	**Garni**	**115.34**	**310**	*e*P	**PKPdf**	**11 39 11.2**	**+3.1**
GNI	**Garni**	**115.34**	**310**	*e*PKPdf	**PKPdf**	**11 39 06.2**	**-2.0**
GNI				LR	LR		
	comp=Z,9µm,21.0s						
GNI	**Garni**	**115.34**	**310**	*e*PKIKP	**PKPdf**	**11 39 06.2**	**-2.0**
ZEI	**Tsey**	**115.51**	**313**	*i* PKIKP	**PKPdf**	**11 39 10.7**	**+2.3**
ZEI				*e*		11 40 13.0	
ZEI				pmax	pmax		
	comp=Z,42nm,1.0s						
NCK	**Nalchik**	**115.59**	**314**	⇑*i*PKIKP	**PKPdf**	**11 39 07.3**	**-1.0**
MOS	**Moscow**	**115.79**	**328**	*i* PKIKP	**PKPdf**	**11 39 13.3**	**+5.0**
MOS				*e*		11 40 15.2	
MOS				*e*PPP	PPP	11 42 42.6	
MOS				*e*SP	SP	11 49 39.9	-9.0
MOS				pmax	pmax		
	comp=Z,70nm,1.3s						
AAM	**Ann Arbor**	**115.98**	**48**	PFAKE		11 39 20.0	+11
AAM				LR	LR		
	comp=Z,15µm,19.0s						
KBZ	**Khabaz**	**116.04**	**314**	PKP	**PKPdf**	**11 39 09.4**	**+0.3**
	comp=Z,7.6nm,0.8s,baz=141,slow=3.6,SNR=3.4						
KBZ				PP	**PP**	**11 40 14.1**	**+0.3**
	comp=Z,32nm,1.2s,baz=67,slow=11,SNR=6.8						
KBZ				PKKPab	**PKKPab**	**11 49 44.7**	**+0.6**
	comp=Z,7.6nm,0.9s,baz=216,slow=1.7,SNR=8.0						
RAYN	**Ar Rayn**	**116.07**	**291**	*e*PKPdf	**PKPdf**	**11 39 06.8**	**-3.0**
RAYN				LR	LR		
	comp=Z,7µm,19.0s						
RAYN	**Ar Rayn**	**116.07**	**291**	*e*PKIKP	**PKPdf**	**11 39 06.8**	**-3.0**
RAYN				MLR	MLR		
	comp=Z,7µm,19.0s						
KIV	**Kislovodsk**	**116.14**	**314**	*e*PKPdf	**PKPdf**	**11 39 11.3**	**+1.8**
KIV				LR	LR		
	comp=Z,12µm,21.0s						
KIV	**Kislovodsk**	**116.14**	**314**	*d i*PKIKP	**PKPdf**	**11 39 11.4**	**+1.9**
KIV				*e*		11 40 14.8	
KIV				*e*PPP	PPP	11 42 37.4	
KIV				*e*SS	SS	11 56 31.4	+15
KIV				pmax	pmax		
	comp=Z,31nm,1.0s						
KIV				MLR	MLR		
	comp=Z,15µm,24.0s						
SUMG	**Summit**	**116.17**	**6**	*i* P	**PKPdf**	**11 39 11.3**	**+2.2**
SUMG	**Summit**	**116.17**	**6**	*i* PKIKP	**PKPdf**	**11 39 11.3**	**+2.2**
LPSR	**Galich'ya Gora**	**116.19**	**324**	*i* PKIKP	**PKPdf**	**11 39 12.1**	**+3.0**
LPSR				*e*		11 40 18.6	
LPSR				pmax	pmax		
	comp=Z,90nm,1.2s						
NEY	**Neytrino**	**116.26**	**314**	⇓*i*PKIKP	**PKPdf**	**11 39 09.1**	**-0.8**
NEY				MLR	MLR		
	comp=Z,6µm,24.0s						
JTS	**JuntasAbangare**	**116.27**	**83**	PFAKE		11 39 20.0	+10
JTS				LR	LR		
	comp=Z,8µm,20.0s						
VORR	**Voronezh**	**116.33**	**323**	PKIKP	**PKPdf**	**11 39 12.0**	**+2.6**
VORR				pmax	pmax		
	comp=Z,350nm,1.4s						
VSR	**Storozhevoye**	**116.50**	**323**	*i* PKIKP	**PKPdf**	**11 39 11.9**	**+2.1**
VSR				*e*		11 40 18.8	
VSR				pmax	pmax		

	comp=Z,70nm,1.3s						
VSR				MLR	MLR		
	comp=Z,13µm,21.0s						
OBN	**Obninsk**	**116.58**	**328**	*e*PKPdf	**PKPdf**	**11 39 14.3**	**+4.5**
OBN				*e*PP	**PP**	**11 40 20.1**	**+3.1**
OBN				LR	LR		
	comp=Z,7µm,20.0s						
OBN	**Obninsk**	**116.58**	**328**	*i* PKIKP	**PKPdf**	**11 39 09.7**	**-0.1**
OBN				*i*		11 40 16.5	
OBN				*e*SS	SS	11 56 20.4	-0.6
OBN				pmax	pmax		
	comp=Z,24nm,1.1s						
OBN				MLR	MLR		
	comp=Z,16µm,23.0s						
VANB	**Van**	**116.62**	**308**	*e*P	**PP**	**11 40 12.5**	**-5.7**
CUKT	**Cukurca**	**116.65**	**307**	*e*P	**PKPdf**	**11 39 08.1**	**-2.6**
AGRB	**Hanur-Agry**	**116.76**	**309**	*e*P	**PKPdf**	**11 39 13.9**	**+3.0**
ACSO	**Alum Creek Sta**	**116.87**	**50**	*e*PKPdf	**PKPdf**	**11 39 09.9**	**-1.0**
ACSO				*e*PP	**PP**	**11 40 20.8**	**+1.1**
ACSO				LR	LR		
	comp=Z,21µm,22.0s						
TKL	**Tuckaleechee C**	**116.97**	**55**	PKP	**PKPdf**	**11 39 11.6**	**+0.4**
	comp=Z,8.4nm,0.9s,baz=168,slow=5.4,SNR=5.4						
BCA	**Borcka**	**117.43**	**312**	*e*P	**PKPdf**	**11 39 14.1**	**+2.1**
GOGA	**Godfrey**	**117.50**	**57**	PFAKE		11 39 20.0	+7.7
GOGA				LR	LR		
	comp=Z,16µm,20.0s						
SIRT	**Sirnak**	**117.53**	**307**	*e*P	**PKPdf**	**11 39 14.1**	**+1.7**
GURO	**Guroymak-BITLI**	**117.67**	**308**	*e*P	**PKPdf**	**11 39 15.7**	**+3.0**
LCO	**Las Campanas**	**117.92**	**130**	PFAKE		11 39 30.0	+16
LCO				LR	LR		
	comp=Z,7µm,21.0s						
VRTB	**Varto-Mus**	**118.00**	**309**	*e*P	**PKPdf**	**11 39 14.5**	**+1.2**
ATD	**Arta Tunnel**	**118.16**	**278**	PKP	**PKPdf**	**11 39 17.1**	**+2.9**
	comp=Z,55nm,1.1s,baz=76,slow=8.9,SNR=6.3						
FINES	**FINESS Array B**	**118.30**	**337**	PKP	**PKPdf**	**11 39 11.8**	**-1.1**
	comp=Z,8.7nm,0.7s,baz=52,slow=2.3,SNR=13						
FINES				PP	**PP**	**11 40 28.4**	**-0.4**
	comp=Z,79nm,1.2s,baz=54,slow=3.6,SNR=8.8						
SOC	**Sochi**	**118.32**	**314**	*i* P	**Pdif**	**11 35 30.6**	**-2.1**
SOC				*i*		11 39 13.8	
SOC				*e*		11 39 21.7	
SOC				*e*		11 40 29.1	
SOC				*e*		11 45 57.7	
SOC				*e*SSS	SSS	12 01 05.5	
SOC				pmax	pmax		
	comp=Z,19nm,0.6s						
TRQA	**Tornquist**	**118.52**	**143**	PFAKE		11 39 30.0	+16
TRQA				LR	LR		
	comp=Z,13µm,19.0s						
SADO	**Sadowa**	**118.61**	**44**	PKKPab	PKKPab	11 49 33.6	+0.8
	comp=Z,19nm,1.0s,baz=120,slow=2.5,SNR=5.7						
SADO	**Sadowa**	**118.61**	**44**	*e*PKPdf	**PKPdf**	**11 39 15.1**	**+1.0**
SADO				PKKPab	**PKKPab**	**11 49 33.6**	**+0.8**
BNGB	**Bingˆ¶l**	**118.63**	**309**	*e*P	**PKPdf**	**11 39 17.9**	**+3.4**
YEDI	**Yedisu-Bingol**	**118.64**	**310**	*e*P	**PKPdf**	**11 39 14.9**	**+0.4**
BAYT	**Ayd˜–ntepe-Bay**	**118.75**	**311**	*e*P	**PKPdf**	**11 39 16.9**	**+2.2**
SFJD	**Kangerlussuaq**	**119.17**	**13**	PKP	**PKPdf**	**11 39 14.7**	**+0.2**
	comp=Z,27nm,0.8s,baz=332,slow=2.0,SNR=12						
SFJD	**Kangerlussuaq**	**119.17**	**13**	*e*PKPdf	**PKPdf**	**11 39 15.7**	**+1.2**
SFJD				LR	LR		
	comp=Z,10µm,20.0s						
SFJD	**Kangerlussuaq**	**119.17**	**13**	*i* P	**PKPdf**	**11 39 14.5**	**0.0**
SFJD	**Kangerlussuaq**	**119.17**	**13**	*e*PKIKP	**PKPdf**	**11 39 14.5**	**0.0**
BLA	**Blacksburg**	**119.39**	**53**	PFAKE		11 39 30.0	+14
BLA				LR	LR		
	comp=Z,33µm,19.0s						
ANN	**Anapa**	**119.57**	**316**	*e*P	**Pdif**	**11 35 34.9**	**-3.4**
ANN				*i*		11 39 14.2	
ANN				*e*		11 40 35.4	
ANN				pmax	pmax		
	comp=Z,101nm,1.7s						
ANN				pmax	pmax		
	comp=Z,116nm,1.2s						
PTK	**Pertek**	**119.63**	**309**	*e*P	**PKPdf**	**11 39 15.5**	**-1.0**
ESPY	**Espiye-Giresun**	**119.68**	**312**	*e*P	**PKPdf**	**11 39 17.9**	**+1.6**
NNA	**Nana**	**119.69**	**110**	PFAKE		11 39 30.0	+13
NNA				LR	LR		
	comp=Z,2µm,19.0s						
VSU	**Vasula**	**119.75**	**334**	⇑*i*PKIKP	**PKPdf**	**11 39 14.0**	**-1.8**
VSU				MLR	MLR		
	comp=Z,44µm,22.0s						
SVRC	**Sivrice-ELAZID**	**119.81**	**309**	*e*P	**PKPdf**	**11 39 21.9**	**+5.1**
NHSC	**New Hope**	**120.27**	**57**	PFAKE		11 39 30.0	+12
NHSC				LR	LR		
	comp=Z,22µm,20.0s						
URFA	**Urfa**	**120.37**	**308**	*e*P	**PKPdf**	**11 39 18.9**	**+1.1**
SSPA	**Standing Stone**	**120.58**	**48**	*e*PKPdf	**PKPdf**	**11 39 17.4**	**-0.6**
SSPA				*e*PP	**PP**	**11 40 45.1**	**-0.1**
DARE	**Darende-Malaty**	**121.16**	**309**	*e*P	**PKPdf**	**11 39 20.2**	**+0.9**
BCIP	**Isla Barro Col**	**121.18**	**85**	PFAKE		11 39 30.0	+10
BCIP				LR	LR		
	comp=Z,5µm,20.0s						
OTAV	**Otavalo**	**121.24**	**96**	*e*PKPdf	**PKPdf**	**11 39 20.4**	**-0.2**
OTAV				LR	LR		
	comp=Z,3µm,19.0s						
OTAV	**Otavalo**	**121.24**	**96**	*e*P	**PKPdf**	**11 39 20.9**	**+0.3**
OTAV	**Otavalo**	**121.24**	**96**	PKIKP	**PKPdf**	**11 39 22.2**	**+1.6**
MICGM	**Minsk**	**121.34**	**329**	⇓*e*P	**PKPdf**	**11 39 23.0**	**+4.0**
MICGM				PM		11 39 26.0	
	comp=Z,0.2nm,1.5s						
MICGM				*e*PP	**PP**	**11 40 50.0**	**+0.2**
MICGM				*e*PKS	PKSdf	11 42 40.0	-15
MICGM				*e*PPP	PPP	11 43 10.0	
MICGM				*e*SKS	**SKSdf**	**11 46 20.0**	**-10**
MICGM				*e*SKKS	**SKKSac**	**11 47 52.0**	**+3.9**
MICGM				*e*PS	**PS**	**11 50 44.0**	**+1.1**
MICGM				*e*SS	SS	11 57 34.0	+12
MICGM				*e*SSS	SSS	12 00 18.0	
MICGM				*e*LQ	LQ	12 25 30.0	
MICGM				*e*LR	LR	12 30 00.0	
MICGM				LRM	MLR	12 35 48.0	
	comp=Z,25nm,18.0s						
MICGM				LRM	MLR	12 35 52.0	
	comp=E,10.0nm,18.0s						
MNK	**Minsk**	**121.34**	**329**	⇓*e*PKIKP	**PKPdf**	**11 39 23.0**	**+4.0**
MNK				*e*		11 40 50.0	
MNK				*e*		11 46 20.0	
MNK				*e*		11 50 44.0	
MNK				*e*		11 57 34.0	
MNK				pmax	pmax		
	comp=Z,170nm,1.5s						
TOKT	**Tokat**	**121.44**	**312**	*e*P	**PKPdf**	**11 39 22.8**	**+3.1**
IZAR	**Zarasai**	**121.48**	**331**	*e*P	**PKPdf**	**11 39 20.8**	**+1.6**
IZAR				IAmb	IAmb	11 39 25.2	
	comp=Z,43nm,1.1s						
IDID	**Didziasalis**	**121.48**	**331**	*e*P	**PKPdf**	**11 39 18.7**	**-0.5**
IDID				IAmb	IAmb	11 39 25.1	
	comp=Z,40nm,1.0s						
BINY	**Binghamton**	**121.54**	**46**	*e*PKPdf	**PKPdf**	**11 39 22.0**	**+2.2**
BINY				LR	LR		
	comp=Z,26µm,20.0s						
CBN	**Corbin Frederi**	**121.55**	**51**	PFAKE		11 39 30.0	+10
CBN				LR	LR		
	comp=Z,34µm,19.0s						
KVT	**Kavak**	**121.60**	**312**	*e*P	**PKPdf**	**11 39 22.8**	**+2.8**
ISAL	**Salakas**	**121.63**	**331**	*e*P	**PKPdf**	**11 39 19.4**	**-0.2**
ISAL				IAmb	IAmb	11 39 25.5	
	comp=Z,36nm,1.1s						
NACGM	**Naroch**	**121.68**	**330**	*e*PKP	**PKPdf**	**11 39 20.0**	**+0.4**
NACGM				*e*PP	**PP**	**11 40 56.0**	**+3.9**
NACGM				*e*PPP	PPP	11 42 46.0	
NACGM				*e*SKS	**SKSac**	**11 46 14.0**	**-3.5**
NACGM				*e*SKKS	**SKKSac**	**11 47 50.0**	**-0.3**
NACGM				*e*SKSP		11 50 32.0	
NACGM				*e*SS	SKKSdf	11 56 38.0	-29
NACGM				*e*SSS	SSS	12 00 18.0	
NACGM				*e*LQ	LQ	12 17 36.0	
NACGM				*e*LR	LR	12 24 24.0	
NACGM				LRM	MLR	12 31 24.0	
	comp=E,11nm,23.0s						
NACGM				LRM	MLR	12 31 29.0	
	comp=Z,23nm,23.0s						
GAZ	**Gaziantep**	**121.68**	**308**	*e*P	**PKPdf**	**11 39 20.1**	**-0.2**
IIGN	**Ignalina**	**121.71**	**331**	*e*P	**PKPdf**	**11 39 19.1**	**-0.6**
IIGN				IAmb	IAmb	11 39 25.6	
	comp=Z,33nm,0.8s						
LONY	**Lake Ozonia**	**121.76**	**43**	*e*PKPdf	**PKPdf**	**11 39 21.6**	**+1.4**
LONY				LR	LR		
	comp=Z,16µm,20.0s						
SIM	**Simferopol’**	**121.77**	**317**	*i* PKIKP	**PKPdf**	**11 39 23.1**	**+3.0**
SIM				*i*		11 40 57.0	
SIM				*i* PS	**PS**	**11 50 41.0**	**-6.2**
SIM				*e*PPS	PPS	11 51 59.0	
SIM				*i* SS	SS	11 57 24.0	-4.6
SIM				pmax	pmax		
	comp=Z,87nm,0.8s						
SIM				pmax	pmax		
	comp=Z,1µm,12.6s						
SCHQ	**Schefferville**	**121.83**	**30**	PKKPbc	PKKPbc	11 49 22.9	+2.8
	comp=Z,17nm,0.8s,baz=237,slow=4.1,SNR=5.5						
KMRS	**Kahramanmaras**	**121.85**	**308**	*e*P	**PKPdf**	**11 39 22.9**	**+2.3**
KMBO	**Kilima Mbogo**	**121.86**	**263**	*i* PKIKP	**PKPdf**	**11 39 21.8**	**+0.2**
KMBO				pmax	pmax		
	comp=Z,5.0nm,0.2s						
BOSA	**Boshof**	**121.95**	**228**	PKP	**PKPdf**	**11 39 19.7**	**-1.5**
	comp=Z,3.6nm,0.5s,baz=113,slow=2.7,SNR=14						
BOSA				PKKPbc	**PKKPab**	**11 49 20.4**	**+0.2**
	comp=Z,9.3nm,1.0s,baz=269,slow=1.3,SNR=6.1						
BOSA	**Boshof**	**121.95**	**228**	PKIKP	**PKPdf**	**11 39 19.7**	**-1.5**
BOSA				pmax	pmax		
	comp=Z,18nm,0.8s						
SARI	**SarD1z-Kayseri**	**122.01**	**309**	*e*P	**PKPdf**	**11 39 24.0**	**+2.9**
BNN	**Bunyan**	**122.33**	**310**	*e*P	**PKPdf**	**11 39 21.9**	**+0.3**
AKASG	**Malin Array Be**	**122.48**	**325**	PKP	**PKPdf**	**11 39 19.4**	**-1.9**
	comp=Z,32nm,0.8s,baz=63,slow=2.3,SNR=16						
AKASG				PP	**PP**	**11 40 55.7**	**-2.1**
	comp=Z,9.3nm,0.9s,baz=60,slow=3.6,SNR=6.1						
AKASG				PKKPbc	**PKKPbc**	**11 49 18.2**	**+0.8**
	comp=Z,1.7nm,0.6s,baz=248,slow=4.0,SNR=9.6						
KIEV	**Kiev**	**122.50**	**325**	*e*PKPdf	**PKPdf**	**11 39 19.8**	**-1.5**
KIEV				*e*PP	**PP**	**11 40 55.2**	**-2.6**
KIEV				LR	LR		
	comp=Z,21µm,20.0s						
KIEV	**Kiev**	**122.50**	**325**	*e*PKIKP	**PKPdf**	**11 39 19.8**	**-1.5**
KIEV				*e*		11 40 55.2	
KIEV				MLR	MLR		
	comp=Z,21µm,20.0s						
TAHT	**Tahtakopru-Hat**	**122.66**	**307**	*e*P	**PKPdf**	**11 39 25.6**	**+3.5**
PB01	**IPOC Station P**	**122.72**	**123**	*e*P	**PKPdf**	**11 39 23.9**	**+1.1**
SUR	**Sutherland**	**122.76**	**221**	*e*PKPdf	**PKPdf**	**11 39 22.4**	**-0.3**
SUR				*e*PP	**PP**	**11 40 59.8**	**-0.2**
SUR				LR	LR		
	comp=Z,19µm,20.0s						
YAYL	**Yayladag**	**122.80**	**307**	*e*P	**PKPdf**	**11 39 22.8**	**+0.2**
CORM	**Corum**	**122.89**	**312**	*e*P	**PKPdf**	**11 39 23.6**	**+1.0**
ASF	**Jabal al Asfar**	**122.91**	**302**	PKP	**PKPdf**	**11 39 21.4**	**-1.4**
	comp=Z,18nm,1.0s,baz=42,slow=3.5,SNR=11						
ASF				PKKPbc	**PKKPbc**	**11 49 17.3**	**+1.9**
	comp=Z,5.8nm,0.9s,baz=341,slow=5.1,SNR=4.6						
YURE	**YUREGIR**	**122.99**	**308**	*e*P	**PKPdf**	**11 39 18.5**	**-4.3**
KRTS	**Karatas**	**123.25**	**307**	*e*P	**PKPdf**	**11 39 27.2**	**+4.0**
KARA	**Karaisali**	**123.34**	**308**	*e*P	**PKPdf**	**11 39 22.2**	**-1.2**
PB08	**IPOC Station P**	**123.41**	**122**	*e*P	**PKPdf**	**11 39 27.0**	**+2.5**
MNMCX	**Minye Minye**	**123.48**	**121**	⇑*i*P	**PKPdf**	**11 39 25.9**	**+1.4**
CANT	**Cankiri**	**123.50**	**313**	*e*P	**PKPdf**	**11 39 26.2**	**+2.5**
HORQ	**Saladito**	**123.61**	**92**	*e*P	**PKPdf**	**11 39 21.9**	**-3.0**
HFS	**Hagfors**	**123.67**	**340**	PKP	**PKPdf**	**11 39 20.8**	**-2.5**
	comp=Z,13nm,0.7s,baz=52,slow=2.4,SNR=19						
HFS				PP	**PP**	**11 41 08.0**	**+2.8**
	comp=Z,49nm,1.2s,baz=40,slow=9.4,SNR=5.6						
BRTR	**Keskin Array B**	**123.75**	**312**	PKP	**PKPdf**	**11 39 22.7**	**-1.6**
	comp=Z,8.8nm,0.9s,baz=135,slow=2.2,SNR=15						
BRTR				PKKPbc	**PKKPab**	**11 49 09.4**	**-1.6**
	comp=Z,0.5nm,0.5s,baz=251,slow=3.4,SNR=2.3						
NB2	**NORSAR Subarra**	**123.75**	**342**	PKPdf	**PKPdf**	**11 39 21.7**	**-1.8**
	comp=Z,55nm,0.8s,baz=35,slow=1.7						
NB2	**NORSAR Subarra**	**123.75**	**342**	PKPdf	**PKPdf**	**11 39 21.7**	**-1.8**
	baz=35,slow=1.7						
NOA	**NORSAR Array B**	**123.75**	**342**	PKP	**PKPdf**	**11 39 21.5**	**-2.0**
	comp=Z,12nm,0.7s,baz=41,slow=1.9,SNR=24						
NOA				PP	**PP**	**11 41 07.5**	**+1.7**
	comp=Z,19nm,1.2s,baz=44,slow=6.2,SNR=3.3						
NOA				PKKPbc	**PKKPab**	**11 49 11.2**	**+0.9**
	comp=Z,2.2nm,1.0s,baz=217,slow=4.4,SNR=2.8						
KAMT	**Kaman**	**123.79**	**311**	*e*P	**PKPdf**	**11 39 24.0**	**-0.4**
MTDJ	**Mount Denham**	**123.84**	**75**	PFAKE		11 39 40.0	+15
MTDJ				LR	LR		
	comp=Z,4µm,20.0s						
MERS	**Mersin**	**123.85**	**308**	*e*P	**PKPdf**	**11 39 24.6**	**+0.1**
PB16	**IPOC Station P**	**123.90**	**120**	⇓*i*P	**PKPdf**	**11 39 28.4**	**+2.6**
SUW	**Suwalki**	**123.92**	**331**	*e*PKPdf	**PKPdf**	**11 39 25.6**	**+1.6**
SUW				*e*PP	**PP**	**11 41 11.1**	**+3.9**
SUW				*e*SKSdf	**SKSdf**	**11 46 32.0**	**-2.4**
SUW				LMZ	LR	12 30 24.0	
	comp=Z,29µm,25.4s						
SUW	**Suwalki**	**123.92**	**331**	*e*PKIKP	**PKPdf**	**11 39 25.6**	**+1.6**
SUW				*e*		11 41 11.1	
SUW				*e*		11 46 32.0	
SUW				MLR	MLR		
	comp=Z,29µm,25.4s						
MMAI	**Mount Meron Ar**	**124.00**	**303**	PKP	**PKPdf**	**11 39 23.5**	**-1.4**
	comp=Z,2.1nm,0.3s,baz=68,slow=3.9,SNR=7.2						
SORM	**Soroca**	**124.17**	**323**	⇓*i*P	**PKPdf**	**11 39 23.5**	**-1.1**
SORM	**Soroca**	**124.17**	**323**	⇓PKIKP	**PKPdf**	**11 39 23.5**	**-1.1**
MARP	**Paez Belalcaza**	**124.17**	**93**	*e*P	**PKPdf**	**11 39 23.7**	**-2.3**
KIZK	**Mersin**	**124.24**	**308**	*e*P	**PKPdf**	**11 39 23.4**	**-1.7**
AFSR	**Af¯ar-Bala (A**	**124.25**	**311**	*e*P	**PKPdf**	**11 39 25.4**	**+0.2**
SULT	**Sultanhani-AKS**	**124.27**	**310**	*e*P	**PKPdf**	**11 39 24.9**	**-0.4**
ANTO	**Ankara**	**124.33**	**312**	*e*P	**PKPdf**	**11 39 28.2**	**+2.9**
ANTO	**Ankara**	**124.33**	**312**	⇑*i*P	**PKPdf**	**11 39 24.8**	**-0.6**
ANTO	**Ankara**	**124.33**	**312**	*e*PKPdf	**PKPdf**	**11 39 24.6**	**-0.6**
ANTO				LR	LR		
	comp=Z,7µm,21.0s						
ANTO	**Ankara**	**124.33**	**312**	*e*PKIKP	**PKPdf**	**11 39 24.7**	**-0.6**
ANTO				MLR	MLR		
	comp=Z,7µm,21.0s						
LOD	**Lodumlu**	**124.34**	**312**	*e*P	**PKPdf**	**11 39 25.0**	**-0.4**
KIS	**Kishinev**	**124.39**	**321**	*e*PKP	**PKPdf**	**11 39 27.0**	**+1.9**
	comp=Z,300nm,1.7s						
KIS	**Kishinev**	**124.39**	**321**	*e*PP	PP	11 41 13.0	+2.3
KIS				*e*SKP		11 42 50.0	
KIS	**Kishinev**	**124.39**	**321**	*e*PS	PS	11 50 43.0	-27
EREN	**Erenkoy**	**124.45**	**307**	*e*P	**PKPdf**	**11 39 28.6**	**+3.0**
KEBE	**Keben-Mersin**	**124.58**	**308**	*e*P	**PKPdf**	**11 39 27.1**	**+1.2**
IKL	**Isikli**	**124.66**	**307**	*e*P	**PKPdf**	**11 39 27.2**	**+1.3**
KLNR	**Kaliningrad**	**124.95**	**333**	⇑*e*PKIKP	**PKPdf**	**11 39 26.1**	**+0.2**
ANIL	**Santa Ana**	**124.97**	**91**	*e*P	**PKPdf**	**11 39 30.9**	**+3.3**
BERE	**Bereket-Mersin**	**124.99**	**308**	*e*P	**PKPdf**	**11 39 27.0**	**+0.2**
BORG	**Borgarnes**	**125.00**	**1**	PKP	**PKPdf**	**11 39 25.3**	**-0.4**
	comp=Z,11nm,0.5s,baz=323,slow=2.3,SNR=2.8						
BORG	**Borgarnes**	**125.00**	**1**	PKP	**PKPdf**	**11 39 25.3**	**-0.4**
BORG				LR	LR		
	comp=Z,3µm,20.0s						
BORG	**Borgarnes**	**125.00**	**1**	PKIKP	**PKPdf**	**11 39 25.3**	**-0.4**
BORG				MLR	MLR		
	comp=Z,3µm,20.0s						
PKME	**Peaks-Kenny Pk**	**125.00**	**41**	*e*PKPdf	**PKPdf**	**11 39 26.2**	**-0.1**
PKME				LR	LR		
	comp=Z,30µm,21.0s						
HELC	**Santa Helena**	**125.08**	**89**	*e*P	**PKPdf**	**11 39 26.5**	**-1.3**
TEKE	**Tekeli-Mersin**	**125.13**	**308**	*e*P	**PKPdf**	**11 39 28.2**	**+1.3**
LADK	**Ladik-KONYA**	**125.14**	**310**	*e*P	**PKPdf**	**11 39 24.7**	**-2.3**
TLCR		**125.16**	**319**	⇑*i*P	**PKPdf**	**11 39 30.0**	**+3.4**
TLCR		**125.16**	**319**	⇑PKIKP	**PKPdf**	**11 39 30.0**	**+3.4**
KONT	**Konya--Tatoy**	**125.22**	**310**	*e*P	**PKPdf**	**11 39 28.9**	**+1.9**
MOTC	**Monteria, Cord**	**125.24**	**86**	*e*P	**PKPdf**	**11 39 27.9**	**+0.2**
CSS	**Mathiatis**	**125.25**	**306**	P	**PKPdf**	**11 39 29.2**	**+2.0**
AUMIH	**MIHALICIK**	**125.28**	**312**	*e*P	**PKPdf**	**11 39 28.2**	**+0.9**
KONO	**Kongsberg**	**125.34**	**342**	⇑*e*PKIKP	**PKPdf**	**11 39 25.5**	**-1.0**
AUSIV	**SIVRIHISAR**	**125.38**	**312**	*e*P	**PKPdf**	**11 39 30.7**	**+3.3**
LEF	**Lefka**	**125.56**	**306**	*e*P	**PKPdf**	**11 39 29.1**	**+1.4**
CFR	**Carcaliu**	**125.59**	**320**	⇑*i*P	**PKPdf**	**11 39 26.8**	**-0.6**
CFR	**Carcaliu**	**125.59**	**320**	⇑PKIKP	**PKPdf**	**11 39 26.8**	**-0.6**
NORC	**Norcasia**	**125.65**	**90**	*e*P	**PKPdf**	**11 39 30.1**	**+1.6**
TIRR	**Tirgusor**	**125.72**	**319**	⇓*i*P	**PKPdf**	**11 39 32.9**	**+5.2**
TIRR	**Tirgusor**	**125.72**	**319**	⇓PKIKP	**PKPdf**	**11 39 32.9**	**+5.2**
GAZI	**Gazipasa**	**125.73**	**308**	*e*P	**PKPdf**	**11 39 27.2**	**-0.8**
GULT	**Gulveren**	**125.80**	**313**	*e*P	**PKPdf**	**11 39 28.0**	**-0.1**
LVV	**L’vov**	**125.82**	**326**	*e*PKIKP	**PKPdf**	**11 39 29.6**	**+1.8**
LVV				*i*		11 41 26.2	
LVV				*e*		11 51 21.6	
LVV				*e*SS	SS	11 58 15.5	-3.7
SJCC	**San Jacinto, C**	**125.82**	**85**	*e*P	**PKPdf**	**11 39 28.1**	**-0.8**
SAUV	**Serdivan-Sakar**	**125.83**	**314**	*e*P	**PKPdf**	**11 39 27.6**	**-0.4**
SPNC	**Sapanca-Adapaz**	**125.86**	**314**	*e*P	**PKPdf**	**11 39 31.5**	**+3.4**
LPAZ	**La Paz**	**125.96**	**118**	PKP	**PKPdf**	**11 39 28.5**	**-1.3**
	comp=Z,27nm,0.9s,baz=255,slow=1.8,SNR=12						
LPAZ	**La Paz**	**125.96**	**118**	*e*P	**PKPdf**	**11 39 31.4**	**+1.6**
BORA	**Eskisehir**	**126.03**	**313**	*e*P	**PKPdf**	**11 39 29.3**	**+0.7**
BIZ	**Bicaz**	**126.07**	**322**	⇓*i*P	**PKPdf**	**11 39 28.3**	**-0.1**
LSZ	**Lusaka**	**126.08**	**243**	*e*PKPdf	**PKPdf**	**11 39 29.3**	**-0.1**
LSZ				*e*PP	**PP**	**11 41 21.3**	**-1.7**
LSZ				LR	LR		
	comp=Z,7µm,21.0s						
ROSC	**El Rosal**	**126.09**	**91**	PKP	**PKPdf**	**11 39 28.9**	**-1.0**
	comp=Z,11nm,0.6s,baz=83,slow=2.3,SNR=13						
ROSC	**El Rosal**	**126.09**	**91**	*e*P	**PKPdf**	**11 39 28.8**	**-1.0**
GTBY	**Guantanamo Bay**	**126.09**	**72**	PFAKE		11 39 40.0	+11
GTBY				LR	LR		
	comp=Z,5µm,20.0s						
VRI	**Vrincioaia**	**126.18**	**321**	⇑*i*P	**PKPdf**	**11 39 30.2**	**+1.6**
VRI	**Vrincioaia**	**126.18**	**321**	⇑PKIKP	**PKPdf**	**11 39 30.2**	**+1.6**
PTBC	**PUERTO BERRIO,**	**126.18**	**89**	*e*P	**PKPdf**	**11 39 26.0**	**-3.5**
PLOR	**Plostina**	**126.24**	**321**	⇑*i*P	**PKPdf**	**11 39 33.4**	**+4.6**
PLOR	**Plostina**	**126.24**	**321**	⇑PKIKP	**PKPdf**	**11 39 33.4**	**+4.6**
HRT	**Hereke**	**126.27**	**314**	*e*P	**PKPdf**	**11 39 31.9**	**+2.9**
BURAR	**Bucovina Array**	**126.27**	**323**	⇓*i*P	**PKPdf**	**11 39 29.6**	**+0.8**
BURAR	**Bucovina Array**	**126.27**	**323**	⇓PKIKP	**PKPdf**	**11 39 29.6**	**+0.8**
ADVT	**Abdulvahap**	**126.35**	**314**	*e*P	**PKPdf**	**11 39 30.5**	**+1.4**
CAVI	**Cavuskoy**	**126.36**	**313**	*e*P	**PKPdf**	**11 39 29.7**	**+0.6**
BEL	**Belsk**	**126.37**	**330**	*e*PKPdf	**PKPdf**	**11 39 32.0**	**+3.3**
BEL				*e*PP	**PP**	**11 41 29.2**	**+5.6**
BEL				LMZ	LR	12 31 54.2	
	comp=Z,22µm,25.0s						
BEL	**Belsk**	**126.37**	**330**	*e*PKIKP	**PKPdf**	**11 39 32.0**	**+3.3**
BEL				*e*		11 41 29.2	
BEL				MLR	MLR		
	comp=Z,22µm,25.0s						
SUTC	**Sutluce-Ispart**	**126.39**	**310**	*e*P	**PKPdf**	**11 39 27.6**	**-1.8**
KUTH	**Kutahya**	**126.50**	**312**	*e*P	**PKPdf**	**11 39 31.3**	**+1.7**
KLYT	**Kilyos**	**126.55**	**315**	*e*P	**PKPdf**	**11 39 29.5**	**+0.1**
YLV	**Yalova**	**126.57**	**314**	*e*P	**PKPdf**	**11 39 30.1**	**+0.5**
CHIC	**Chingaza**	**126.64**	**91**	*e*P	**PKPdf**	**11 39 32.0**	**+1.1**
KWP	**Kalwaria Pacla**	**126.64**	**327**	*e*PKPdf	**PKPdf**	**11 39 33.9**	**+4.5**
KWP				*e*PP	**PP**	**11 41 31.3**	**+5.8**
KWP				LMZ	LR	12 36 07.7	
	comp=Z,18µm,23.3s						
KWP	**Kalwaria Pacla**	**126.64**	**327**	*e*PKIKP	**PKPdf**	**11 39 33.9**	**+4.5**
KWP				*e*		11 41 31.3	
KWP				MLR	MLR		
	comp=Z,18µm,23.3s						
ISP	**Isparta**	**126.64**	**310**	*e*P	**PKPdf**	**11 39 30.8**	**+0.9**
ISP	**Isparta**	**126.64**	**310**	P	**PKPdf**	**11 39 32.6**	**+2.7**
GEMT	**Gemlik**	**126.74**	**314**	*e*P	**PKPdf**	**11 39 31.7**	**+1.9**
MLR	**Muntele Rosu**	**126.84**	**321**	PKP	**PKPdf**	**11 39 29.3**	**-0.7**
	comp=Z,52nm,1.2s,baz=27,slow=3.5,SNR=20						
MLR	**Muntele Rosu**	**126.84**	**321**	⇓*i*P	**PKPdf**	**11 39 31.5**	**+1.5**
BSD	**Bornholm Skovb**	**126.89**	**336**	*i* P	**PKPdf**	**11 39 32.1**	**+2.5**
	comp=Z,103nm,1.2s						
BSD				*i*		11 41 24.6	
BSD	**Bornholm Skovb**	**126.89**	**336**	*i* PKIKP	**PKPdf**	**11 39 32.1**	**+2.5**
BSD				*i*		11 41 24.6	
BSD				pmax	pmax		
	comp=Z,100nm,1.2s						
SBT5	**Esenkoy-Cinarc**	**126.89**	**314**	*e*P	**PKPdf**	**11 39 31.7**	**+1.7**
TVSB	**Tavsanli**	**126.89**	**312**	*e*P	**PKPdf**	**11 39 31.3**	**+1.0**
PRD	**Provadia**	**126.91**	**318**	*e*P	**PKPdf**	**11 39 35.9**	**+5.9**
CTKS	**Kestanelik-??a**	**126.93**	**315**	*e*P	**PKPdf**	**11 39 31.9**	**+1.8**
MDNY	**Mudanya-Bursa**	**126.98**	**314**	*e*P	**PKPdf**	**11 39 29.3**	**-1.0**
KORT	**Korkueli**	**127.02**	**309**	*e*P	**PKPdf**	**11 39 30.7**	**0.0**
SLVT	**Silivri**	**127.14**	**315**	*e*P	**PKPdf**	**11 39 33.9**	**+3.4**
GKP	**Gorka Klasztor**	**127.16**	**333**	*e*PKPdf	**PKPdf**	**11 39 33.6**	**+3.5**
GKP				*e*PP	**PP**	**11 41 33.7**	**+5.0**
GKP				LMZ	LR	12 35 47.6	
	comp=Z,33µm,22.5s						
GKP	**Gorka Klasztor**	**127.16**	**333**	*e*PKIKP	**PKPdf**	**11 39 33.7**	**+3.5**
GKP				*e*		11 41 33.7	
GKP				MLR	MLR		
	comp=Z,33µm,22.5s						
SIMA	**Simav-Kutahya**	**127.37**	**312**	*e*P	**PKPdf**	**11 39 30.1**	**-1.1**
UZH	**Uzhgorod**	**127.42**	**326**	*e*PKHKP	PKPpre	11 39 13.7	
UZH				*e*		11 39 32.3	
UZH				*e*		11 39 40.7	
SBT3	**Marmara-Eregli**	**127.44**	**315**	*e*P	**PKPdf**	**11 39 34.5**	**+3.6**
BARC	**Barichara**	**127.45**	**89**	*e*P	**PKPdf**	**11 39 32.6**	**+0.4**
COP	**Copenhagen**	**127.45**	**337**	*i* P	**PKPdf**	**11 39 31.5**	**+0.9**
COP	**Copenhagen**	**127.45**	**337**	*e*PKIKP	**PKPdf**	**11 39 31.5**	**+0.9**
RUSC	**La Rusia**	**127.45**	**90**	*e*P	**PKPdf**	**11 39 32.2**	**-0.3**
OCAC	**Ocana**	**127.50**	**87**	*e*P	**PKPdf**	**11 39 33.4**	**+1.2**
TRPA	**Tarpa**	**127.55**	**325**	⇓*i*P	**PKPdf**	**11 39 31.0**	**-0.1**
TRPA	**Tarpa**	**127.55**	**325**	*e*PKPdf	**PKPdf**	**11 39 34.0**	**+2.9**
CRVS	**Cervenica-Dubn**	**127.72**	**326**	*e*PKIKP	**PKPdf**	**11 39 32.3**	**+0.8**
CRVS				*e*		11 41 35.0	
CRVS				*e*SS	SS	11 58 47.7	+4.7
CRVS	**Cervenica-Dubn**	**127.72**	**326**	*e*PKP	**PKPdf**	**11 39 32.3**	**+0.8**
CRVS				*e*PP	**PP**	**11 41 35.0**	**+2.3**
CRVS				*e*SS	SS	11 58 47.7	+4.7
JMB	**Yambol**	**127.76**	**317**	*e*P	**PKPdf**	**11 39 36.0**	**+4.3**
KULA	**Kula-Manisa**	**127.80**	**312**	*e*P	**PKPdf**	**11 39 30.1**	**-1.9**
AKAS	**Kas**	**127.83**	**309**	*e*P	**PKPdf**	**11 39 34.9**	**+2.7**
OJC	**Ojcow**	**127.84**	**329**	*e*PKPdf	**PKPdf**	**11 39 32.3**	**+0.7**
OJC				*e*SKPdf	**SKPdf**	**11 43 03.3**	**-2.4**
OJC				*e*SP	**SP**	**11 51 26.4**	**-10**
OJC				*e*SS	**SS**	**11 58 51.0**	**+6.7**
OJC				LMZ	LR	12 36 54.3	
	comp=Z,23µm,22.1s						
OJC	**Ojcow**	**127.84**	**329**	*e*PKIKP	**PKPdf**	**11 39 32.3**	**+0.7**
OJC				*e*SP	SP	11 51 26.4	-10
HUMR	**Humele**	**127.89**	**320**	⇓*i*P	**PKPdf**	**11 39 35.3**	**+3.4**
EDRB	**Edirne**	**127.91**	**316**	*e*P	**PKPdf**	**11 39 34.3**	**+2.3**
BALB	**Balikesir**	**127.97**	**313**	*e*P	**PKPdf**	**11 39 32.7**	**+0.5**
MUD	**Monsted U’grnd**	**128.03**	**340**	*i* P	**PKPdf**	**11 39 34.8**	**+3.1**
MUD	**Monsted U’grnd**	**128.03**	**340**	*i* PKIKP	**PKPdf**	**11 39 34.8**	**+3.1**
NIE	**Niedzica**	**128.05**	**327**	*e*PKPdf	**PKPdf**	**11 39 34.7**	**+2.6**
NIE				*e*PP	**PP**	**11 41 35.0**	**+0.1**
NIE				*e*SKPdf	**SKiKP**	**11 43 07.8**	**+0.5**
NIE				*e*SP	**SP**	**11 51 36.8**	**-1.4**
NIE				*e*SS	SS	11 59 00.0	+13
NIE				LMZ	LR	12 39 45.3	
	comp=Z,12µm,19.6s						
NIE	**Niedzica**	**128.05**	**327**	*e*PKIKP	**PKPdf**	**11 39 34.7**	**+2.6**
NIE				*e*		11 41 35.0	
NIE				*e*SP	SP	11 51 36.8	-1.4
RKY	**Sarkoy-Tekirda**	**128.07**	**315**	*e*P	**PKPdf**	**11 39 32.3**	**-0.1**
FETY	**Fethiye**	**128.10**	**309**	*e*P	**PKPdf**	**11 39 33.9**	**+1.3**
DRGR		**128.16**	**324**	⇓*i*P	**PKPdf**	**11 39 35.4**	**+3.0**
DRGR		**128.16**	**324**	⇓PKIKP	**PKPdf**	**11 39 35.4**	**+3.0**
PVL	**Pavlikeni**	**128.26**	**318**	*e*P	**PKPdf**	**11 39 38.2**	**+5.6**
MBAR	**Mbarara**	**128.34**	**262**	PFAKE		11 39 40.0	+6.1
MBAR				LR	LR		
	comp=Z,793nm,21.0s						
DALY	**Dalyan (Mu˜la**	**128.37**	**310**	*e*P	**PKPdf**	**11 39 34.5**	**+1.5**
TURN	**Turunc**	**128.39**	**310**	*e*P	**PKPdf**	**11 39 35.5**	**+2.4**
LPK	**Lapseki**	**128.49**	**315**	*e*P	**PKPdf**	**11 39 32.7**	**-0.4**
ERIK	**Erikli-Kesan**	**128.54**	**315**	*e*P	**PKPdf**	**11 39 33.7**	**+0.5**
AYDB	**Zeytinkoy-Aydi**	**128.57**	**311**	*e*P	**PKPdf**	**11 39 34.3**	**+0.7**
LANS	**Liptovska Anna**	**128.65**	**328**	*e*PKIKP	**PKPdf**	**11 39 34.7**	**+1.4**
LANS	**Liptovska Anna**	**128.65**	**328**	*e*PKP	**PKPdf**	**11 39 34.7**	**+1.4**
GELI	**Tayfur-Gelibol**	**128.68**	**315**	*e*P	**PKPdf**	**11 39 32.7**	**-0.8**
ENEZ	**Enez**	**128.76**	**315**	*e*P	**PKPdf**	**11 39 34.9**	**+1.2**
ALN	**Alexandroupoli**	**128.77**	**315**	*e*P	**PKPdf**	**11 39 30.3**	**-3.4**
ALN	**Alexandroupoli**	**128.77**	**315**	P	**PKPdf**	**11 39 36.3**	**+2.6**
MLSB	**Milas**	**128.88**	**311**	*e*P	**PKPdf**	**11 39 34.3**	**+0.3**
DKL	**Dikili**	**128.88**	**313**	*e*P	**PKPdf**	**11 39 35.9**	**+2.0**
OKC	**Ostrava-Krasne**	**128.92**	**329**	*e*PP	PP	11 41 36.6	-3.8
OKC				*e*SKP		11 43 00.4	
OKC				*e*SKS	**SKSdf**	**11 46 47.1**	**+3.2**
OKC				*e*SP	**SP**	**11 51 46.2**	**+0.6**
OKC				*e*x	x	11 58 44.4	
OKC				AMS	AMS	12 35 00.0	
	comp=Z,16µm,23.9s						
RDO	**Rodhopi**	**129.02**	**316**	*e*P	**PKPdf**	**11 39 32.7**	**-1.4**
RDO	**Rodhopi**	**129.02**	**316**	P	**PKPdf**	**11 39 33.6**	**-0.5**
BLCB	**Balcova**	**129.03**	**312**	*e*P	**PKPdf**	**11 39 37.5**	**+3.3**
PSZ	**Piszkesteto**	**129.14**	**326**	⇑*i*P	**PKPdf**	**11 39 38.0**	**+3.7**
PSZ	**Piszkesteto**	**129.14**	**326**	*e*PKPdf	**PKPdf**	**11 39 37.3**	**+3.0**
PSZ	**Piszkesteto**	**129.14**	**326**	⇑PKIKP	**PKPdf**	**11 39 38.0**	**+3.7**
CPUP	**Villa Florida**	**129.15**	**136**	PKP	**PKPdf**	**11 39 32.4**	**-2.5**
	comp=Z,8.9nm,1.1s,baz=270,slow=2.8,SNR=5.2						
GADA	**Gvkgeada**	**129.16**	**315**	*e*P	**PKPdf**	**11 39 35.3**	**+0.9**
GADA	**Gvkgeada**	**129.16**	**315**	P	**PKPdf**	**11 39 37.6**	**+3.2**
PLD	**Plovdiv**	**129.17**	**317**	*e*P	**PKPdf**	**11 39 37.0**	**+2.6**
BOZC	**Bozcaada**	**129.19**	**314**	*e*P	**PKPdf**	**11 39 34.7**	**+0.2**
KSP	**Ksiaz**	**129.19**	**331**	*e*PKPdf	**PKPdf**	**11 39 36.6**	**+2.4**
KSP				*e*PP	**PP**	**11 41 41.1**	**-1.1**
KSP				*e*SKPdf	**SKiKP**	**11 43 09.7**	**+0.1**
KSP				*e*SP	**SP**	**11 51 40.2**	**-7.6**
KSP				*e*SS	**SS**	**11 59 03.5**	**+2.6**
KSP				LMZ	LR	12 33 51.7	
	comp=Z,21µm,26.0s						
KSP	**Ksiaz**	**129.19**	**331**	*e*PKIKP	**PKPdf**	**11 39 36.6**	**+2.4**
KSP				*e*		11 41 41.1	
KSP				*e*SP	SP	11 51 40.3	-7.6
KSP				*e*SS	**SS**	**11 59 03.5**	**+2.6**
DAT	**Datca**	**129.22**	**310**	*e*P	**PKPdf**	**11 39 29.9**	**-4.9**
MORC	**Moravsky Berou**	**129.26**	**329**	⇑*i*P	**PKPdf**	**11 39 37.4**	**+3.0**

MORC	**Moravsky Berou**	**129.26**	**329**	⇑PKIKP	**PKPdf**	**11 39 37.4**	**+3.0**
MORC	**Moravsky Berou**	**129.26**	**329**	*e*PKP	**PKPdf**	**11 39 36.4**	**+2.0**
PRK	**Paraskevi**	**129.27**	**313**	P	**PKPdf**	**11 39 35.3**	**+0.6**
BODT	**Bodrum**	**129.31**	**310**	*e*P	**PKPdf**	**11 39 35.1**	**+0.3**
SMTH	**Samothraki Isl**	**129.31**	**315**	P	**PKPdf**	**11 39 35.5**	**+0.8**
HERR	**Herculane**	**129.32**	**322**	⇓*i*P	**PKPdf**	**11 39 38.0**	**+3.4**
RZN	**Rozhen**	**129.35**	**317**	*e*P	**PKPdf**	**11 39 39.4**	**+4.4**
URLA	**Izmir**	**129.37**	**312**	*e*P	**PKPdf**	**11 39 33.5**	**-1.4**
VYHS	**Vyhne**	**129.38**	**327**	*e*PKIKP	**PKPdf**	**11 39 36.0**	**+1.4**
VYHS				*e*		11 41 44.3	
VYHS				*e*SS	SS	11 59 08.5	+5.0
VYHS	**Vyhne**	**129.38**	**327**	*e*PKP	**PKPdf**	**11 39 36.0**	**+1.4**
VYHS				*e*PP	**PP**	**11 41 44.3**	**+0.8**
VYHS				*e*SS	SS	11 59 08.5	+5.0
BZS	**Buzias**	**129.42**	**323**	⇓*i*P	**PKPdf**	**11 39 34.5**	**-0.3**
BZS	**Buzias**	**129.42**	**323**	⇓PKIKP	**PKPdf**	**11 39 34.5**	**-0.3**
SMG	**Samos**	**129.43**	**311**	P	**PKPdf**	**11 39 38.2**	**+3.1**
KRLC	**Kraliky**	**129.45**	**330**	AMS	AMS	12 33 50.0	
	comp=Z,7μm,24.6s						
DPC	**Dobruska-Polom**	**129.50**	**330**	*e*PDIFF	**Pdif**	**11 36 22.6**	**+0.2**
DPC				*e*PKPdf	**PKiKP**	**11 39 38.3**	**+2.7**
DPC				*e*pPKP	**pPKPdf**	**11 39 40.9**	**-1.9**
DPC				*e*PP	**PP**	**11 41 44.9**	**+0.6**
DPC				*e*SKP		11 42 56.7	
DPC				*e*SKS	**SKSdf**	**11 46 48.6**	**+3.5**
DPC				*e*SKKS	**SKKSac**	**11 48 40.9**	**+0.6**
DPC				*e*x	x	11 51 42.0	
DPC				*e*x	x	11 58 39.4	
DPC				AMS	AMS	12 34 00.0	
	comp=Z,21μm,24.8s						
DPC	**Dobruska-Polom**	**129.50**	**330**	*e*P	**Pdif**	**11 36 22.6**	**+0.2**
DPC				*e*		11 39 38.3	
DPC				*e*		11 41 44.9	
DPC				*e*		11 51 42.0	
DPC				MLR	MLR		
	comp=Z,21μm,24.8s						
UPC	**Upice**	**129.55**	**331**	*e*PP	PP	11 41 46.9	+2.4
UPC				*e*SKP		11 42 56.6	
UPC				*e*SKKS		11 48 38.9	
UPC				*e*x	x	11 51 39.1	
UPC				*e*x	x	11 58 56.5	
UPC				AMS	AMS	12 34 10.0	
	comp=Z,24μm,25.4s						
SIGR	**SIGRI**	**129.58**	**314**	*e*P	**PKPdf**	**11 39 35.6**	**+0.3**
SIGR	**SIGRI**	**129.58**	**314**	P	**PKPdf**	**11 39 36.6**	**+1.3**
GRTK	**Grand Turk**	**129.70**	**70**	PFAKE		11 39 50.0	+14
GRTK				LR	LR		
	comp=Z,8μm,19.0s						
JAVC	**Velka Javorina**	**129.77**	**328**	*e*PKP	**PKPdf**	**11 39 38.6**	**+3.2**
MDVR	**Moldovita**	**129.80**	**322**	⇓*i*P	**PKPdf**	**11 39 35.3**	**-0.3**
THAS	**Thassos island**	**129.81**	**316**	P	**PKPdf**	**11 39 38.2**	**+2.6**
BUD	**Budapest**	**129.87**	**326**	*e*PKPdf	**PKPdf**	**11 39 40.2**	**+4.6**
KARP	**Karpathos**	**129.93**	**309**	*e*P	**PKPdf**	**11 39 38.3**	**+2.2**
VTS	**Vitosha**	**129.94**	**319**	⇑*i*P	**PKPdf**	**11 39 37.0**	**+0.9**
VTS	**Vitosha**	**129.94**	**319**	*e*P	**PKPdf**	**11 39 38.4**	**+2.3**
VTS	**Vitosha**	**129.94**	**319**	⇑PKIKP	**PKPdf**	**11 39 37.0**	**+0.9**
VRAC	**Vranov**	**130.04**	**329**	PKP	**PKPdf**	**11 39 35.7**	**-0.1**
	comp=Z,4.0nm,0.3s,baz=71,slow=1.1,SNR=16						
VRAC	**Vranov**	**130.04**	**329**	⇑*i*P	**PKPdf**	**11 39 39.9**	**+4.0**
VRAC	**Vranov**	**130.04**	**329**	PKIKP	**PKPdf**	**11 39 35.7**	**-0.1**
VRAC				pmax	pmax		
	comp=Z,23nm,1.0s						
VRAC	**Vranov**	**130.04**	**329**	*e*PKP	**PKPdf**	**11 39 39.4**	**+3.5**
MMB	**Musomiste**	**130.06**	**317**	*e*P	**PKPdf**	**11 39 39.9**	**+3.7**
NVR	**Nevrokopi**	**130.07**	**317**	P	**PKPdf**	**11 39 36.6**	**+0.4**
SMOL	**Smolenice**	**130.11**	**328**	*e*PKIKP	**PKPdf**	**11 39 39.8**	**+3.8**
SMOL	**Smolenice**	**130.11**	**328**	*e*PKP	**PKPdf**	**11 39 39.8**	**+3.8**
SDV	**Santo Domingo**	**130.20**	**87**	PKP	**PKPdf**	**11 39 36.1**	**-1.3**
	comp=Z,36nm,0.8s,baz=284,slow=2.7,SNR=9.6						
SDV	**Santo Domingo**	**130.20**	**87**	*e*PKPdf	**PKPdf**	**11 39 36.2**	**-1.2**
SDV				LR	LR		
	comp=Z,4μm,20.0s						
SDV	**Santo Domingo**	**130.20**	**87**	*e*P	**PKPdf**	**11 39 35.5**	**-1.9**
PVCC	**Panska Ves**	**130.22**	**332**	*e*PKPdf	**PKPdf**	**11 39 36.4**	**+0.3**
PVCC				*e*PP	**PP**	**11 41 51.3**	**+2.5**
PVCC				*e*SKP		11 42 59.7	
PVCC				*e*SP	SP	11 51 53.9	-2.8
PVCC				AMS	AMS	12 37 30.0	
	comp=Z,31μm,21.4s						
PVCC	**Panska Ves**	**130.22**	**332**	*e*PKIKP	**PKPdf**	**11 39 36.4**	**+0.3**
PVCC				*e*		11 41 51.3	
PVCC				*e*SP	SP	11 51 53.9	-2.8
PVCC				MLR	MLR		
	comp=Z,31μm,21.4s						
BRG	**Berggiesshubel**	**130.28**	**332**	*e*PKP	**PKPdf**	**11 39 37.4**	**+1.2**
	comp=Z,226nm,1.5s						
BRG				*i* PP	**PP**	**11 41 53.2**	**+4.0**
	comp=Z,188nm,1.7s						
BRG				SKP		11 43 04.0	
BRG				SS	SS	11 59 24.0	+10
	comp=N,16μm,22.4s						
	comp=E,8μm,19.5s						
	comp=Z,21μm,21.2s						
BRG	**Berggiesshubel**	**130.28**	**332**	*e*P	**Pdif**	**11 36 32.3**	**+6.5**
BRG				*e*		11 39 37.4	
BRG				*i*		11 41 53.2	
BRG				pmax	pmax		
	comp=Z,31nm,1.7s						
BRG				MLR	MLR		
	comp=N,19μm,22.4s						
BRG				MLR	MLR		
	comp=E,16μm,19.5s						
BRG				MLR	MLR		
	comp=Z,8μm,21.2s						
BRG	**Berggiesshubel**	**130.28**	**332**	*e*PDIFF	**Pdif**	**11 36 32.3**	**+6.5**
	comp=Z,7.6nm,1.7s						
MODS	**Modra-Piesok**	**130.28**	**328**	*e*PKIKP	**PKPdf**	**11 39 39.0**	**+2.7**
MODS				*e*SS	SS	11 59 20.1	+5.6
MODS				MLR	MLR		
	comp=Z,19μm,23.5s						
MODS	**Modra-Piesok**	**130.28**	**328**	*e*PKP	**PKPdf**	**11 39 39.0**	**+2.7**
MODS				*e*PP	**PP**	**11 41 44.1**	**-5.3**
MODS				*e*SS	SS	11 59 20.1	+5.6
MODS				*e*L	L	12 35 56.1	
KRUC	**Moravsky**	**130.30**	**329**	*e*PKP	**PKPdf**	**11 39 38.5**	**+2.2**
KKB	**Krupnik**	**130.36**	**318**	*e*P	**PKPdf**	**11 39 39.6**	**+2.9**
CSKK	**Csˆ‡kako**	**130.36**	**326**	*e*PKPdf	**PKPdf**	**11 39 37.8**	**+1.3**
CLL	**Collm**	**130.40**	**333**	*e*Pdif	**Pdif**	**11 36 28.0**	**+1.7**
CLL				*i* PKPdf	**PKPdf**	**11 39 38.0**	**+1.6**
	comp=Z,63nm,2.0s						
CLL				*i*		11 39 40.5	
	comp=Z,171nm,1.6s						
CLL				*i* sPKPdf	**sPKPdf**	**11 39 45.9**	**-1.3**
CLL				*e*PP	**PP**	**11 41 49.0**	**-0.9**
CLL				*i* pPP		11 41 55.5	
CLL				*e*PPlp		11 41 58.0	
	comp=Z,2μm,21.9s						
CLL				*i* PKSbc	**PKSbc**	**11 43 02.4**	**+1.5**
	comp=Z,527nm,2.6s						
CLL				*e*SKPdf	**SKiKP**	**11 43 13.0**	**+1.0**
	comp=Z,645nm,2.8s						
CLL				*e*PPP	PPP	11 44 42.0	
CLL				*e*SKSac	**SKSac**	**11 46 43.0**	**-1.5**
CLL				*e*SKKSac	**SKKSac**	**11 48 45.0**	**-0.7**
CLL				*e*PS	**PS**	**11 51 58.0**	**-4.4**
CLL				*e*		11 53 12.0	
CLL				*e*PPS	PPS	11 53 42.0	
CLL				*e*PPPrev		11 56 06.0	
CLL				*e*SS	**SS**	**11 59 14.0**	**-1.5**
CLL				*e*		12 01 30.0	
CLL				*e*SSS	SSS	12 04 06.0	
CLL				*e*		12 05 42.0	
CLL				*e*SSSS		12 07 42.0	
CLL				Lm	MLR	12 39 00.0	
	comp=N,13μm,21.0s						
CLL				Lm	MLR	12 39 00.0	
	comp=E,9μm,20.6s						
CLL				Lm	MLR	12 39 00.0	
	comp=Z,18μm,21.0s						
CLL				Lmax		12 43 00.0	
CLL	**Collm**	**130.40**	**333**	*i* PKIKP	**PKPdf**	**11 39 38.0**	**+1.6**
CLL				*i*		11 39 45.9	
CLL				*e*		11 46 43.0	
CLL				pmax	pmax		
	comp=Z,21nm,2.0s						
CLL				MLR	MLR		
	comp=Z,18μm,21.0s						
OUR	**Ouranopolis**	**130.44**	**316**	P	**PKPdf**	**11 39 39.2**	**+2.4**
AMGA	**Amorgos Island**	**130.45**	**311**	P	**PKPdf**	**11 39 37.0**	**0.0**
GOPC	**GO Pecny, Ondr**	**130.53**	**331**	*e*PDIFF	**Pdif**	**11 36 31.4**	**+4.4**
GOPC				*e*PKPdf	**PKiKP**	**11 39 37.4**	**-0.2**
GOPC				*e*pPKP	**pPKPdf**	**11 39 40.5**	**-4.3**
GOPC				*e*PP	**PP**	**11 41 53.7**	**+2.8**
GOPC				*e*PKS	**PKSdf**	**11 43 05.6**	**-7.5**
GOPC				*e*SKKS		11 48 51.8	
GOPC				*e*x	x	11 51 51.9	
GOPC				*e*x	x	11 58 50.1	
GOPC				AMS	AMS	12 37 40.0	
	comp=Z,28μm,22.1s						
GOPC	**GO Pecny, Ondr**	**130.53**	**331**	*e*P	**Pdif**	**11 36 31.4**	**+4.4**
GOPC				*e*		11 39 37.4	
GOPC				*e*		11 41 53.7	
GOPC				*e*		11 51 51.9	
GOPC				MLR	MLR		
	comp=Z,28μm,22.1s						
PRA	**Prague**	**130.60**	**331**	*e*PP	PP	11 41 54.3	+3.0
PRA				*e*SKP		11 43 07.4	
PRA				*e*SKKS		11 48 46.4	
PRA				AMS	AMS	12 38 30.0	
	comp=Z,30μm,21.7s						
PRU	**Pruhonice**	**130.60**	**331**	*e*PDIFF	**Pdif**	**11 36 27.7**	**+0.5**
PRU				*e*PKPdf	**PKPdf**	**11 39 36.3**	**-0.6**
PRU				*e*PP	**PP**	**11 41 53.7**	**+2.4**
PRU				*e*PKS	**PKSdf**	**11 43 05.6**	**-7.6**
PRU				*e*SKS	**SKSdf**	**11 46 51.7**	**+4.7**
PRU				*e*SKKS	**SKKSac**	**11 48 49.0**	**+2.0**
PRU				*e*x	x	11 51 48.1	
PRU				*e*x	x	11 58 57.3	
PRU				AMS	AMS	12 37 50.0	
	comp=Z,29μm,21.7s						
PRU	**Pruhonice**	**130.60**	**331**	*e*P	**Pdif**	**11 36 27.7**	**+0.5**
PRU				*e*		11 39 36.3	
PRU				*e*		11 41 53.7	
PRU				MLR	MLR		
	comp=Z,29μm,21.7s						
APE	**Apeiranthos**	**130.63**	**311**	*e*P	**PKPdf**	**11 39 35.5**	**-1.9**
ANAF	**Anafi Island**	**130.71**	**310**	P	**PKPdf**	**11 39 39.6**	**+2.1**
KNT	**Kendrikon**	**130.81**	**317**	P	**PKPdf**	**11 39 39.6**	**+2.0**
PAIG	**Paliouri**	**130.82**	**315**	P	**PKPdf**	**11 39 39.2**	**+1.6**
MORH	**Mˆ‡rˆ¡gy, Hung**	**130.82**	**325**	*e*PKPdf	**PKPdf**	**11 39 39.3**	**+1.9**
VAY	**Valandovo**	**130.95**	**317**	*i* P	**PKPdf**	**11 39 41.2**	**+3.4**
VAY				*i* P	**SKPab**	**11 43 05.3**	**+4.3**
THE	**Thessaloniki**	**131.00**	**316**	P	**PKPdf**	**11 39 40.0**	**+2.1**
AOS	**Alonnisos**	**131.00**	**314**	P	**PKPdf**	**11 39 41.2**	**+3.2**
SOP	**Sopron**	**131.08**	**328**	*e*PKPdf	**PKPdf**	**11 39 40.7**	**+2.8**
CONA	**Conrad Observa**	**131.29**	**328**	*e*PKiKP	**PKiKP**	**11 39 40.4**	**+1.1**
	comp=Z,164nm,1.9s						
CONA				S	**SKPab**	**11 43 07.4**	**+5.0**
	comp=Z,91nm,1.6s						
SKO	**Skopje**	**131.39**	**319**	P	**PKPdf**	**11 39 40.5**	**+1.9**
SKO	**Skopje**	**131.39**	**319**	*e*P	**PKPdf**	**11 39 40.1**	**+1.5**
SKO				*i* P	**SKPab**	**11 43 06.4**	**+3.6**
XOR	**Xorichti**	**131.40**	**315**	P	**PKPdf**	**11 39 39.2**	**+0.4**
NKC	**Novy Kostel**	**131.41**	**333**	*e*PDIFF	**Pdif**	**11 36 34.2**	**+3.3**
NKC				*e*PKPdf	**PKPdf**	**11 39 38.7**	**+0.3**
NKC				*e*PP	**PP**	**11 41 56.8**	**+0.3**
NKC				*e*PKS	**PKSdf**	**11 43 07.5**	**-7.3**
NKC				*e*SP	SP	11 52 04.6	-2.4
NKC				AMS	AMS	12 37 40.0	
	comp=Z,20μm,21.3s						
NKC	**Novy Kostel**	**131.41**	**333**	*e*P	**Pdif**	**11 36 34.2**	**+3.3**
NKC				*e*		11 39 38.7	
NKC				*e*		11 41 56.8	
NKC				*e*SP	SP	11 52 04.6	-2.4
NKC				MLR	MLR		
	comp=Z,20μm,21.3s						
PTL	**Penteli**	**131.47**	**313**	P	**PKPdf**	**11 39 40.4**	**+1.4**
FYTO	**Fytoko, Volos**	**131.56**	**315**	P	**PKPdf**	**11 39 41.6**	**+2.6**
ATHU	**Athens Univers**	**131.56**	**313**	P	**PKPdf**	**11 39 42.8**	**+3.7**
SMIA	**Simia**	**131.60**	**314**	P	**PKPdf**	**11 39 39.7**	**+0.5**
KHC	**Kasperske Hory**	**131.64**	**331**	*e*PDIFF	**Pdif**	**11 36 29.2**	**-2.8**
KHC				*e*PKPdf	**PKPdf**	**11 39 38.5**	**-0.4**
KHC				*e*pPKP	**sPKPdf**	**11 39 49.3**	**-0.4**
KHC				*e*PP	**PP**	**11 42 01.3**	**+3.2**
KHC				*e*PKS	**PKSdf**	**11 43 08.2**	**-7.1**
KHC				*e*SKS	**SKSdf**	**11 46 55.1**	**+6.1**
KHC				*e*SKKS	**SKKSac**	**11 48 56.9**	**+3.3**
KHC				*e*SP	**SP**	**11 52 04.5**	**-4.6**
KHC				*e*x	x	11 59 03.0	
KHC				AMS	AMS	12 39 50.0	
	comp=Z,28μm,21.6s						
BEHE	**Becsehely**	**131.71**	**326**	*e*PKPdf	**PKPdf**	**11 39 43.1**	**+4.0**
IDI	**Anoyia**	**131.76**	**309**	⇓*i*P	**PKPdf**	**11 39 37.7**	**-1.9**
GERES	**GERESS Array B**	**131.78**	**330**	PKP	**PKPdf**	**11 39 38.4**	**-0.9**
	comp=Z,4.3nm,0.6s,baz=75,slow=0.8,SNR=14						
KRUS	**Krusevo**	**131.81**	**318**	*i* P	**PKPdf**	**11 39 38.6**	**-1.0**
KRUS				*i* P	**SKPbc**	**11 43 08.7**	**+4.7**
ARSA	**Arzberg**	**131.90**	**328**	*e*PKiKP	**PKiKP**	**11 39 41.3**	**+0.8**
	comp=Z,43nm,1.6s						
ARSA				S	**SKPab**	**11 43 08.9**	**+4.0**
	comp=Z,157nm,2.2s						
SIVA	**Sivas**	**131.91**	**309**	P	**PKPdf**	**11 39 44.6**	**+4.8**
IVA	**Berane**	**131.92**	**321**	*e*PKP	**PKPdf**	**11 39 40.9**	**+1.2**
PLE	**Pljevlja**	**131.99**	**321**	*e*PKP	**PKPdf**	**11 39 40.6**	**+0.7**
FNA	**Florina**	**132.00**	**317**	P	**PKPdf**	**11 39 37.8**	**-2.1**
KOGS	**Kog**	**132.01**	**326**	*e*PKPdf	**PKPdf**	**11 39 41.2**	**+1.5**
PVY	**Plav**	**132.02**	**320**	⇑*i*PKP	**PKPdf**	**11 39 41.1**	**+1.1**
AXAR	**Agios Charalam**	**132.03**	**314**	P	**PKPdf**	**11 39 44.3**	**+4.3**
THL	**Klokotos Trika**	**132.13**	**316**	P	**PKPdf**	**11 39 40.2**	**+0.1**
DID	**Didima**	**132.15**	**313**	P	**PKPdf**	**11 39 42.2**	**+2.0**
AGG	**Agios Georgios**	**132.15**	**315**	P	**PKPdf**	**11 39 41.8**	**+1.6**
MOA	**Molln**	**132.16**	**329**	*e*PKiKP	**PKiKP**	**11 39 41.6**	**+0.6**
	comp=Z,66nm,2.3s						
MOA				S	**SKPab**	**11 43 10.2**	**+4.2**
	comp=Z,124nm,2.0s						
KOME	**Kolasin**	**132.17**	**321**	⇑*i*PKP	**PKPdf**	**11 39 41.6**	**+1.4**
OHR	**Ohrid**	**132.23**	**318**	*e*P	**PKPdf**	**11 39 43.6**	**+3.3**
OHR				*i* P	**SKPbc**	**11 43 08.3**	**+2.8**
DSF	**Desfina**	**132.28**	**314**	P	**PKPdf**	**11 39 43.3**	**+2.8**
GRFO	**Grafenberg**	**132.35**	**333**	*e*PKPdf	**PKPdf**	**11 39 40.7**	**+0.5**
GRFO				*e*SKPbc	**SKPab**	**11 43 09.4**	**+2.7**
UPM	**Unac-Piva**	**132.36**	**321**	⇑*i*PKP	**PKPdf**	**11 39 41.7**	**+1.0**
IMMV	**Iera Moni Meta**	**132.39**	**310**	P	**PKPdf**	**11 39 45.2**	**+4.5**
KPRO	**Kipourio**	**132.40**	**316**	P	**PKPdf**	**11 39 41.5**	**+0.8**
KBN	**Korca**	**132.47**	**317**	P	**PKPdf**	**11 39 43.3**	**+2.5**
BLY	**Banja Luka**	**132.51**	**324**	⇑*i*P	**PKPdf**	**11 39 43.6**	**+2.9**
EKA	**Eskdalemuir Ar**	**132.51**	**347**	PKP	**PKPdf**	**11 39 37.5**	**-2.8**
	comp=Z,4.5nm,0.8s,baz=26,slow=3.4,SNR=9.9						
EKA				PP	**PP**	**11 41 59.0**	**-4.2**
	comp=Z,9.8nm,1.0s,baz=29,slow=7.4,SNR=4.5						
NKY	**Niksic**	**132.51**	**321**	⇑*i*PKP	**PKPdf**	**11 39 41.8**	**+0.9**
SOKA	**Soboth**	**132.53**	**327**	*e*PKPdf	**PKPdf**	**11 39 39.9**	**-0.8**
	comp=Z,88nm,1.5s,SNR=13						
SOKA				*e*S	**SKPab**	**11 43 10.7**	**+3.1**
	comp=Z,97nm,2.2s						
ESK	**Eskdalemuir**	**132.54**	**347**	*e*PKPdf	**PKPdf**	**11 39 40.5**	**+0.1**
ESK				LR	LR		
	comp=Z,11μm,20.0s						
PDG	**Podgorica**	**132.55**	**320**	P	**PKPdf**	**11 39 43.5**	**+2.7**
TTG	**Podgorica**	**132.55**	**320**	⇑*i*PKP	**PKPdf**	**11 39 42.2**	**+1.4**
NKME	**Niksic**	**132.56**	**321**	*e*PKP	**PKPdf**	**11 39 42.2**	**+1.3**
GUR	**Goura**	**132.62**	**313**	P	**PKPdf**	**11 39 41.7**	**+0.5**
TRIZ	**Trizonia**	**132.62**	**314**	P	**PKPdf**	**11 39 42.6**	**+1.6**
ANX	**Ano Chora**	**132.63**	**314**	P	**PKPdf**	**11 39 44.8**	**+3.6**
CEME	**Cevo**	**132.70**	**321**	⇑*i*PKP	**PKPdf**	**11 39 42.1**	**+0.9**
KLV	**Kalavryta, Ach**	**132.71**	**314**	P	**PKPdf**	**11 39 43.7**	**+2.4**
DRME	**Dracevica, Mon**	**132.72**	**320**	⇑*i*PKP	**PKPdf**	**11 39 42.6**	**+1.5**
BRY	**Bratogost**	**132.75**	**321**	*e*PKP	**PKPdf**	**11 39 42.3**	**+0.9**
ULC	**Ulcinj**	**132.80**	**320**	⇑*i*PKP	**PKPdf**	**11 39 42.3**	**+1.0**
TRIP	**Tripoli**	**132.84**	**313**	P	**PKPdf**	**11 39 43.2**	**+1.6**
BUM	**Brajici-Budva**	**132.85**	**320**	⇑*i*PKP	**PKPdf**	**11 39 42.7**	**+1.2**
OBKA	**Obir**	**132.89**	**328**	*e*PKPdf	**PKPdf**	**11 39 39.1**	**-2.4**
	comp=Z,43nm,1.7s						
OBKA				*e*PP	**PP**	**11 42 02.3**	**-4.0**
	comp=Z,52nm,1.3s						
OBKA				S	**SKPab**	**11 43 11.6**	**+2.4**
	comp=Z,44nm,1.3s						
HCY	**Herceg Novi**	**133.02**	**321**	⇑*i*PKP	**PKPdf**	**11 39 42.7**	**+1.0**
TSUM	**Tsumeb**	**133.03**	**232**	*e*PKPdf	**PKPdf**	**11 39 36.5**	**-6.1**
TSUM				LR	LR		
	comp=Z,20μm,19.0s						
BBSR	**BB Station**	**133.12**	**54**	PFAKE		11 39 50.0	+7.9
BBSR				LR	LR		
	comp=Z,11μm,21.0s						
KBA	**Koelnbreinsper**	**133.14**	**329**	*e*PKiKP	**PKiKP**	**11 39 43.1**	**-0.1**
	comp=Z,49nm,1.1s						
KBA	**Koelnbreinsper**	**133.14**	**329**	PKIKP	**PKPdf**	**11 39 45.1**	**+3.1**
PDO	**Prodromos**	**133.15**	**315**	P	**PKPdf**	**11 39 41.7**	**-0.3**
BOJS	**Bojanci**	**133.15**	**326**	*e*PKPdf	**PKPdf**	**11 39 40.8**	**-1.1**
BOJS				*e*PP	**PP**	**11 42 13.5**	**+5.6**
BOJS				*e*SKP		11 43 12.5	
BOJS				*e*		11 43 25.7	
BOJS				*e*		11 46 58.4	
BOJS				*e*		11 49 07.0	
BOJS				*e*		11 52 16.7	
BOJS				*e*		11 59 07.6	
BOJS				*e*		12 01 58.3	
LJU	**Ljubljana**	**133.20**	**327**	*e*PKPdf	**PKPdf**	**11 39 40.5**	**-1.4**
LJU				*e*		11 41 04.1	
LJU				*e*PP	**PP**	**11 42 09.6**	**+1.4**
LJU				*e*SKP		11 43 12.4	
LJU				*e*		11 43 25.5	
MYKA	**Terra Mystica**	**133.29**	**328**	*e*PKPdf	**PKPdf**	**11 39 40.5**	**-1.6**
	comp=Z,44nm,1.5s						
MYKA				*e*PP	**PP**	**11 42 07.4**	**-1.4**
	comp=Z,57nm,1.7s						
MYKA				S	**SKPab**	**11 43 12.7**	**+1.8**
	comp=Z,61nm,1.3s						
SAML	**Samuel**	**133.33**	**112**	*e*PKPdf	**PKPdf**	**11 39 42.4**	**-0.7**
SAML				*e*PP	**PP**	**11 42 12.0**	**+1.7**
SAML				*e*SKPbc	**SKPbc**	**11 43 09.6**	**-0.5**
SAML				LR	LR		
	comp=Z,4μm,21.0s						
ABTA	**Abfaltersbach**	**133.79**	**329**	*e*PKPdf	**PKPdf**	**11 39 42.6**	**-0.5**
	comp=Z,52nm,1.0s						
ABTA				*e*S	**SKPab**	**11 43 13.9**	**+0.8**
	comp=Z,46nm,1.2s						
BEBN	**Eben Emael**	**133.81**	**337**	⇓PKP	**PKPdf**	**11 39 48.1**	**+5.2**
MEM	**Membach**	**133.83**	**337**	⇑PKP	**PKPdf**	**11 39 46.1**	**+3.2**
WATA	**Walderalm**	**133.85**	**330**	*e*PKiKP	**PKiKP**	**11 39 45.4**	**+0.8**
	comp=Z,62nm,1.1s						
WTTA	**Wattenberg**	**133.87**	**330**	*e*PKiKP	**PKPdf**	**11 39 43.5**	**+0.1**
	comp=Z,65nm,1.1s						
WTTA				*e*PP	**PP**	**11 42 10.8**	**-1.8**
	comp=Z,55nm,1.8s						
MOTA	**Moosalm**	**134.07**	**331**	*e*PKiKP	**PKiKP**	**11 39 45.0**	**0.0**
	comp=Z,30nm,0.9s						
MOTA				*e*PP	**PP**	**11 42 15.1**	**+1.3**
	comp=Z,37nm,1.2s						
RETA	**Reutte**	**134.14**	**331**	PP	PP	11 42 11.7	-2.4
	comp=Z,51nm,1.8s						
BCLA	**Clavier**	**134.25**	**337**	⇑PKP	**PKPdf**	**11 39 47.8**	**+4.0**
UCC	**Uccle**	**134.29**	**338**	⇓PKP	**PKPdf**	**11 39 47.5**	**+3.7**
FETA	**Feichten**	**134.48**	**331**	*e*PKiKP	**PKPdf**	**11 39 44.2**	**-0.4**
	comp=Z,57nm,1.1s						
WLF	**Walferdange**	**134.52**	**336**	⇓PKP	**PKPdf**	**11 39 49.1**	**+4.8**
SNF	**Seneffe**	**134.56**	**338**	⇑PKP	**PKPdf**	**11 39 47.6**	**+3.3**
FASA	**Fasano**	**134.62**	**320**	*e*P	**PKPdf**	**11 39 47.4**	**+2.7**
CGL1	**Ceglie Messapi**	**134.62**	**319**	*e*P	**PKPdf**	**11 39 47.9**	**+3.1**
BFO	**Black Forest**	**134.64**	**333**	*e*PKPdf	**PKPdf**	**11 39 44.7**	**+0.1**
BFO				*e*PP	**PP**	**11 42 15.5**	**-1.7**
BFO				LR	LR		
	comp=Z,616nm,21.0s						
BFO	**Black Forest**	**134.64**	**333**	*i* PKIKP	**PKPdf**	**11 39 48.8**	**+4.2**
SJG	**San Juan**	**134.66**	**74**	*e*PKPdf	**PKPdf**	**11 39 46.4**	**+1.0**
SJG				LR	LR		
	comp=Z,6μm,21.0s						
DAVA	**Damuels**	**134.70**	**331**	*e*PKPdf	**PKPdf**	**11 39 41.0**	**-3.9**
	comp=Z,39nm,1.1s						
DOU	**Dourbes**	**134.78**	**338**	⇑PKP	**PKPdf**	**11 39 48.7**	**+3.9**
TAR1	**Taranto**	**134.82**	**319**	*e*P	**PKPdf**	**11 39 48.4**	**+3.3**
MASS	**Massafra**	**134.85**	**319**	*e*P	**PKPdf**	**11 39 46.3**	**+1.1**
MS1	**Monte Sant'Ang**	**135.01**	**321**	*e*P	**PKPdf**	**11 39 47.1**	**+1.6**
SG1	**Sgolgore (BA)**	**135.03**	**320**	*e*P	**PKPdf**	**11 39 44.4**	**-1.2**
DAVOX	**Davos/Dischmat**	**135.06**	**331**	PKhKP	PKPpre	11 39 34.2	
	comp=Z,2.8nm,0.6s,baz=302,slow=3.3,SNR=3.5						
DAVOX				PKP	**PKPdf**	**11 39 42.7**	**-3.0**
	comp=Z,9.8nm,0.9s,baz=319,slow=4.5,SNR=8.2						
DAVOX				PP	**PP**	**11 42 24.9**	**+4.8**
	comp=Z,14nm,1.0s,baz=54,slow=6.3,SNR=7.5						
MATE	**Matera**	**135.12**	**320**	⇓*i*P	**PKPdf**	**11 39 49.3**	**+3.7**
TIP	**Timpagrande**	**135.87**	**318**	⇓*i*P	**PKPdf**	**11 39 49.2**	**+2.0**
TIP	**Timpagrande**	**135.87**	**318**	P	**PKPdf**	**11 39 39.6**	**-7.6**
VAL	**Valentia**	**137.08**	**351**	*e*P	**Pdif**	**11 37 01.0**	**+5.0**
VAE	**Valguarnera**	**138.34**	**317**	PKP	**PKPdf**	**11 39 50.2**	**-1.6**
	comp=Z,9.7nm,0.4s,baz=101,slow=5.2,SNR=2.5						
ANWB	**Willy Bob**	**138.84**	**74**	PFAKE		11 40 00.0	+6.8
ANWB				LR	LR		
	comp=Z,5μm,20.0s						
PTGA	**Pitinga**	**139.03**	**102**	PFAKE		11 40 10.0	+16
PTGA				LR	LR		
	comp=Z,14μm,21.0s						
GRGR	**Grenville**	**139.19**	**83**	PFAKE		11 40 10.0	+16
GRGR				LR	LR		
	comp=Z,7μm,21.0s						
FDF	**Fort de France**	**139.65**	**79**	*e*P	**PKPdf**	**11 39 54.5**	**-0.3**
BIM	**Bigot**	**139.73**	**79**	*e*P	**PKPdf**	**11 39 58.2**	**+3.3**
ZAM	**Aeronautique**	**139.77**	**79**	*e*P	**PKPdf**	**11 39 52.4**	**-2.6**
LPMF	**Morne Lapointe**	**139.83**	**79**	*e*P	**PKPdf**	**11 39 51.6**	**-3.4**
BBGH	**Gun Hill**	**141.24**	**81**	PFAKE		11 40 10.0	+12
BBGH				LR	LR		
	comp=Z,14μm,21.0s						
BDFB	**Brasilia**	**142.66**	**132**	PKP	**PKPdf**	**11 39 57.4**	**-2.9**
	comp=Z,31nm,0.9s,baz=272,slow=1.4,SNR=7.6						
KEST	**Kesra**	**142.68**	**319**	PKhKP	PKPpre	11 39 55.2	
	comp=Z,12nm,0.7s,baz=343,slow=2.0,SNR=11						
CMAH	**Djebel Manchou**	**143.35**	**321**	P	**PKPdf**	**11 40 01.9**	**+1.0**
ABSA	**Djebel Ababsia**	**143.54**	**321**	P	**PKPdf**	**11 40 02.8**	**+1.5**
CAEH	**'Ain El Ouahch**	**143.59**	**322**	P	**PKPdf**	**11 40 05.7**	**+4.4**
CKFL	**Kef-Lekhel**	**143.92**	**322**	P	**PKPdf**	**11 40 02.6**	**+0.6**
CASM	**Ain Smara**	**144.16**	**322**	P	**PKPdf**	**11 40 03.6**	**+1.3**
CTEI	**Djebel Teioual**	**144.34**	**322**	P	**PKPab**	**11 40 00.4**	**-0.3**
DFRA	**Djebel Bou Aff**	**144.34**	**323**	P	PKPbc	11 40 01.1	+0.1
SET	**Setif**	**144.85**	**323**	P	**PKPdf**	**11 40 06.0**	**+2.4**
CKHR	**Kef el Ahmar**	**144.91**	**322**	P	**PKPab**	**11 40 02.3**	**-0.5**
PBRG	**Braganca**	**145.88**	**342**	*e*PKP	**PKPdf**	**11 40 05.3**	**+0.2**
PGAV	**Gavieira, Arco**	**146.18**	**344**	*e*PKP	**PKPdf**	**11 40 06.2**	**+0.5**
PGAV	**Gavieira, Arco**	**146.18**	**344**	*e*LR	LR	12 33 19.9	
	comp=Z,9μm,24.0s						
EMHD	**Djebel Mahouad**	**146.27**	**325**	P	**PKPbc**	**11 40 06.8**	**-0.4**
PCAB	**Cabril**	**146.35**	**344**	*e*PKP	**PKPbc**	**11 40 06.6**	**-0.5**
MVO	**Moncorvo**	**146.56**	**342**	*e*PKP	**PKPbc**	**11 40 07.2**	**-0.6**
MVO	**Moncorvo**	**146.56**	**342**	*e*LR	LR	12 33 48.0	
	comp=Z,18μm,22.0s						
POLO	**Lamas de Olo**	**146.59**	**343**	*e*PKP	**PKPbc**	**11 40 07.3**	**-0.6**
PVRL	**Vila Real**	**146.66**	**343**	*e*PKP	**PKPbc**	**11 40 07.9**	**-0.1**
ESDC	**Sonseca Array**	**146.82**	**337**	PKPbc	**PKPdf**	**11 40 06.9**	**+0.1**
	comp=Z,49nm,1.0s,baz=35,slow=2.6,SNR=26						
ESDC				PP	**PP**	**11 43 33.9**	**+2.4**
	comp=Z,11nm,1.0s,baz=16,slow=6.6,SNR=4.3						
EBNR	**Beni Rached**	**146.99**	**327**	P	**PKPab**	**11 40 11.6**	**+1.0**
PTO	**Porto**	**147.04**	**344**	*e*PKP	**PKPbc**	**11 40 09.0**	**0.0**
PAB	**San Pablo**	**147.08**	**337**	*e*PKPdf	**PKPdf**	**11 40 05.5**	**-1.8**
PAB				LR	LR		
	comp=Z,17μm,21.0s						
PAB	**San Pablo**	**147.08**	**337**	*e*PKIKP	**PKPdf**	**11 40 05.5**	**-1.8**
PAB				MLR	MLR		
	comp=Z,17μm,21.0s						
ECHA	**Ech Chlef**	**147.19**	**327**	P	**PKPab**	**11 40 12.5**	**+1.3**
PVIS	**Viseu**	**147.23**	**343**	*e*PKP	**PKPbc**	**11 40 09.5**	**-0.2**
MTE	**Manteigas**	**147.41**	**342**	*e*PKP	**PKPbc**	**11 40 10.4**	**+0.2**
MTE	**Manteigas**	**147.41**	**342**	*e*LR	LR	12 34 28.8	
	comp=Z,11μm,20.0s						
EANR	**'Ain N'Sour**	**147.48**	**327**	P	**PKPab**	**11 40 12.4**	**-0.1**
ETRT	**Tiaret**	**147.78**	**326**	P	**PKPab**	**11 40 14.6**	**+0.8**
COI	**Coimbra**	**147.85**	**343**	*e*PKP	**PKPbc**	**11 40 12.0**	**+0.7**
PCBR	**Castelo Branco**	**147.90**	**341**	*e*PKP	**PKPbc**	**11 40 11.3**	**-0.2**
PCAS	**Casmilo, Conde**	**148.01**	**343**	*e*PKP	**PKPbc**	**11 40 10.3**	**-1.5**
PMRV	**Marv??o**	**148.25**	**341**	*e*PKP	**PKPbc**	**11 40 11.9**	**-0.5**
PMRV	**Marv??o**	**148.25**	**341**	*e*LR	LR	12 34 53.0	
	comp=Z,14μm,22.0s						
PTOM	**Tomar**	**148.39**	**343**	*e*PKP	**PKPbc**	**11 40 12.7**	**-0.1**
H07S1	**FLORES T-PHASE**	**148.81**	**17**	*e*PKP	**PKPab**	**11 40 18.7**	**+1.1**
PESTR	**Estremoz**	**148.82**	**341**	*e*PKP	**PKPbc**	**11 40 12.9**	**-1.0**
PMTG	**Montargil**	**148.84**	**342**	*e*PKP	**PKPbc**	**11 40 13.0**	**-0.9**
ALMR	**Almeirim**	**148.87**	**342**	*e*PKP	**PKPdf**	**11 40 11.1**	**+1.0**
ALMR				AMS	AMS	12 49 30.9	
	comp=Z,16μm,23.7s						
ALMR	**Almeirim**	**148.87**	**342**	*e*PKP	**PKPbc**	**11 40 13.8**	**-0.2**
ALMR	**Almeirim**	**148.87**	**342**	*e*PKIKP	**PKPdf**	**11 40 11.1**	**+1.0**
PMAFR	**Mafra**	**149.26**	**343**	*e*PKP	**PKPbc**	**11 40 17.1**	**+2.1**
EVO	**Evora**	**149.27**	**341**	*e*PKP	**PKPbc**	**11 40 14.5**	**-0.5**
PMST	**Lisbon--Monsan**	**149.43**	**343**	*e*PKP	**PKPab**	**11 40 19.3**	**-0.8**
LIS	**Lisbon**	**149.44**	**343**	*e*PKP	**PKPdf**	**11 40 11.9**	**+0.9**
LIS				AMS	AMS	12 48 21.0	
	comp=N,13μm,22.7s						
PBEJ	**Beja**	**149.68**	**341**	*e*PKP	**PKPbc**	**11 40 16.5**	**+0.4**
PNCL	**Nicolau / Gran**	**149.81**	**342**	*e*PKP	**PKPbc**	**11 40 15.2**	**-1.2**
PGRA	**Graciosa**	**149.93**	**12**	*e*PKP	**PKPbc**	**11 40 17.3**	**+0.6**
MESJ	**Messejana**	**149.96**	**341**	*e*PKP	**PKPdf**	**11 40 12.8**	**+0.9**
MESJ				AMS	AMS	12 50 26.1	
	comp=Z,15μm,15.7s						
MESJ	**Messejana**	**149.96**	**341**	*e*PKP	**PKPbc**	**11 40 16.3**	**-0.5**
MESJ	**Messejana**	**149.96**	**341**	*e*PKHKP	**PKPdf**	**11 40 12.8**	**+0.9**
PCVE	**Castro Verde**	**150.09**	**340**	*e*PKP	**PKPbc**	**11 40 16.5**	**-0.6**
ROSA	**Rosais**	**150.18**	**13**	*e*PKP	**PKPbc**	**11 40 17.6**	**+0.3**
PVAQ	**Vaqueiros**	**150.19**	**340**	*e*PKP	**PKPbc**	**11 40 17.0**	**-0.3**
PVAQ	**Vaqueiros**	**150.19**	**340**	*e*LR	LR	12 35 55.7	

	comp=Z,26µm,20.0s						
HOR	Horta	150.27	13	ePKP	PKPbc	11 40 20.1	+2.6
PICO	Pico	150.34	13	ePKP	PKPab	11 40 21.5	-2.5
PCAN	Candelaria	150.37	13	ePKP	PKPab	11 40 22.0	-2.0
PTEO	Sao Teotonio	150.39	341	ePKP	PKPbc	11 40 17.9	+0.1
PBDV	Barranco-do-Ve	150.41	340	ePKP	PKPbc	11 40 17.8	-0.1
PSCM	Serra do Cume	150.42	11	ePKP	PKPab	11 40 22.9	-1.3
ADH	Angra Heroismo	150.44	11	ePKP	PKPbc	11 40 19.5	+1.6
MORF	Marmelete	150.59	341	ePKP	PKPdf	11 40 13.8	+0.8
MORF				AMS	AMS	12 49 06.4	
	comp=Z,17µm,19.9s						
MORF	Marmelete	150.59	341	ePKP	PKPbc	11 40 18.1	-0.3
MORF	Marmelete	150.59	341	ePKIKP	PKPdf	11 40 13.7	+0.8
PFVI	Vila Bisbo	150.80	341	ePKP	PKPbc	11 40 18.4	-0.4
SHEL	Horse Pasture	150.82	209	ePKPdf	PKPdf	11 40 13.4	-0.4
SHEL				ePKPbc	PKiKP	11 40 20.2	+0.1
SHEL				ePKPab	PKPab	11 40 25.5	-0.9
SHEL				LR	LR		
	comp=Z,7µm,20.0s						
SHEL	Horse Pasture	150.82	209	ePKIKP	PKPdf	11 40 13.5	-0.4
SHEL				e		11 40 20.2	
SHEL				e		11 40 25.5	
SHEL				MLR	MLR		
	comp=Z,7µm,20.0s						
PSET	Sete Cidades	151.52	9	ePKP	PKPab	11 40 25.2	-3.6
PDA	Ponta Delgada	151.60	9	ePKP	PKPbc	11 40 18.3	-2.3
CMLA	Cha da Macela	151.61	9	ePKP	PKPbc	11 40 24.8	+4.1
CMLA	Cha da Macela	151.61	9	ePKPab	PKPab	11 40 26.9	-2.3
CMLA				LR	LR		
	comp=Z,9µm,20.0s						
BART	Pico Bartolome	151.65	8	ePKP	PKPbc	11 40 24.6	+3.7
PSMA	Santa Maria	152.42	9	ePKP	PKPbc	11 40 21.5	-1.0
PSMN	Pico do Norte,	152.43	9	ePKP	PKPdf	11 40 18.7	+3.0
MDT	Midelt	152.87	330	PKP	PKPdf	11 40 14.9	-1.8
	comp=Z,9.1nm,1.1s,baz=358,slow=1.4,SNR=5.5						
MDT				PKPbc	PKPbc	11 40 21.9	-2.0
	comp=Z,66nm,1.3s,baz=62,slow=1.5,SNR=14						
PMOZ	Porto Moniz, M	156.80	354	eLR	LR	12 35 25.0	
PMAR	Madeira	156.86	353	ePKP	PKPdf	11 40 27.7	+5.5
RCBR	Riachuelo	158.01	134	PFAKE		11 40 30.0	+6.0
RCBR				LR	LR		
	comp=Z,45µm,22.0s						
TORD	Torodi Ar. Bea	158.32	281	PKP	PKPdf	11 40 21.4	-2.8
	comp=Z,10nm,1.1s,baz=69,slow=1.4						
TORD				PKPab	pPKPab	11 41 02.4	-3.9
	baz=90,slow=4.3						
TORD				PP	PP	11 44 36.6	-2.2
	baz=114,slow=3.5						
ASCN	Ascension	161.59	198	PFAKE		11 40 40.0	+12
ASCN				LR	LR		
	comp=Z,10µm,20.0s						
KOWA	Kowa	163.52	288	PKP	PKPdf	11 40 28.7	-1.1
	comp=Z,32nm,1.2s,baz=110,slow=0.8,SNR=19						
KOWA				PKPab	PKPab	11 41 24.1	+2.9
	comp=Z,124nm,1.1s,baz=61,slow=4.8,SNR=15						
KOWA				PP	PP	11 45 06.0	-0.7
	comp=Z,83nm,1.3s,baz=95,slow=6.6,SNR=3.9						
KIC	Kosan Boka	164.40	259	ePKP1	PKPdf	11 40 28.7	-2.0
	comp=Z,381nm,1.3s						
DBIC	Dimbokro	164.58	260	PKP	PKPdf	11 40 30.1	-0.7
	comp=Z,64nm,1.3s,baz=88,slow=2.2,SNR=4.0						
DBIC				PKPab	pPKPab	11 41 30.4	-3.3
	comp=Z,180nm,1.1s,baz=85,slow=6.0,SNR=9.5						
DBIC				PP	PP	11 45 13.7	+1.3
	comp=Z,41nm,1.1s,baz=92,slow=5.5,SNR=5.2						
LIC	Lamto	164.64	258	ePKP1	PKPdf	11 40 29.6	-1.3
	comp=Z,299nm,1.2s						
TIC	Toumodi	164.73	260	ePKP1	PKPdf	11 40 29.7	-1.3
SACV	Santiago Islan	173.74	32	PFAKE		11 40 50.0	+14
SACV				LR	LR		
	comp=Z,9µm,20.0s						

IDC 25 11:43:52.2±15.0**,7°.91S×119°.17E,h0^{km},mb3.7**/2**,**
mb1 3.9/3**,mb1mx3.5**/56**,mbtmp3.7**/3**,ML3.6**/1**,Error**
ellipse: s-maj=269.0km s-min=169.2km az=4.0,Flores
Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.95	131	P	P	11 48 14.9	-0.2
	0.2nm,0.3s,baz=302,slow=12,SNR=15						
ASAR	Alice Springs	21.10	140	P	P	11 48 38.8	+0.3
	0.9nm,0.6s,baz=317,slow=8.8,SNR=19						
STKA	Stephens Creek	31.69	142	P	P	11 50 17.6	-0.1
	2.2nm,0.8s,baz=328,slow=9.5,SNR=6.6						

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*TEH **25** 11:52:14.8,36°.05N×52°.15E,h6^{km},ML3.7*
*IDC **25** 11:52:15.8±3.0,35°.88N×52°.06E,h0^{km},mb3.7/6,*
mb1 3.8/8,mb1mx3.5/61,mbtmp3.8/8,ML2.8/2,Error
ellipse: s-maj=53.6km s-min=16.0km az=2.0
*THR **25** 11:52:16.8±0.4,36°.00N×52°.12E,h6^{km}±4^{km},ML3.6*
*CSEM **25** 11:52:16.7±0.2,36°.04N×52°.15E,h2^{km},ML3.7,Error*
ellipse: s-maj=5.0km s-min=3.3km az=61.0
*ISCJB **25** 11:52:16.7±0.3,36°.06N±0°.02×52°.11E±0°.03,h11^{km},*
mb3.6/5,Error ellipse: s-maj=3.8km s-min=2.7km
az=135.3
*AZER **25** 11:52:17.5±99.0,36°.18N×51°.92E,h6^{km}±15^{km},ml4.0/6,*
Error ellipse: s-maj=239.3km s-min=9.1km az=324.0
ISC 25 11:52:17.8±0.7**,36°.03N**±0°.03×**52°.15E**±0°.02**,h11^{km},n85,**
σ**1^{s}37**/107**,mb3.7**/5**,30C-20D,Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IPRN	Peran	0.26	36	ePg	Pg	11 52 21.8	-1.4
IPRN				e		11 52 26.9	
	comp=N,1260µm,0.1s						
IPRN				e		11 52 27.8	
	comp=E,1167µm,0.2s						
IPRN				e		11 52 28.0	
	comp=Z,32µm,0.2s						
IAFJ	Afjeh	0.39	244	ePg	Pg	11 52 24.1	-1.6
IAFJ				e		11 52 30.9	
	comp=Z,75µm,0.1s						
IAFJ				e		11 52 31.8	
	comp=E,3µm,0.0s						
IAFJ				e		11 52 33.0	
	comp=N,65µm,0.1s						
IAFJ	Afjeh	0.39	244	ePg	Pg	11 52 24.1	-1.6
DAMV	Damavand	0.43	200	ePg	Pg	11 52 24.8	-1.4
DAMV	Damavand	0.43	200	ePg	Pg	11 52 24.8	-1.4
DAMV	Damavand	0.43	200	ePg	Pg	11 52 24.8	-1.4
IDMV	Damavand	0.46	192	ePg	Pg	11 52 25.4	-1.5
IDMV				e		11 52 32.9	
	comp=E,37µm,0.1s						
IDMV				e		11 52 33.0	
	comp=N,2µm,0.1s						
IDMV				e		11 52 34.6	
	comp=Z,33µm,0.1s						
IDMV	Damavand	0.46	192	ePg	Pg	11 52 25.4	-1.5
IALA	Alasht	0.54	84	ePg	Pg	11 52 27.0	-1.4
IALA				e		11 52 36.9	
	comp=E,1063µm,0.1s						
IALA				e		11 52 37.2	
	comp=Z,17µm,0.2s						
IALA	Alasht	0.54	84	ePg	Pg	11 52 27.0	-1.4
IFIR	Firoozkooh	0.63	128	ePg	Pg	11 52 27.9	-2.1
IFIR				e		11 52 38.7	
	comp=E,88µm,0.1s						
IFIR				e		11 52 39.0	
	comp=N,63µm,0.1s						
IFIR				e		11 52 39.2	
	comp=Z,65µm,0.1s						
IFIR	Firoozkooh	0.63	128	ePg	Pg	11 52 27.9	-2.1
ILAS	Lasjerd	0.93	134	ePg	Pg	11 52 33.8	-1.8
ILAS				e		11 52 54.0	
	comp=E,34µm,0.1s						
ILAS	Lasjerd	0.93	134	ePg	Pg	11 52 33.8	-1.8
ISHM	Shahmirzad	0.96	103	ePg	Pg	11 52 34.1	-2.1
ISHM				e		11 52 49.0	
	comp=N,183nm,0.1s						
ISHM				e		11 52 50.3	
	comp=E,21µm,0.1s						
ISHM				e		11 52 50.7	
	comp=Z,68µm,0.1s						
THKV	Tehran--Karaj	1.04	264	ePg	Pg	11 52 36.4	-1.3
THKV				eSg	Sg	11 52 50.8	-0.4
THKV				IAML		11 52 53.5	
	comp=N,1µm,0.6s						
THKV	Tehran--Karaj	1.04	264	ePg	Pg	11 52 36.4	-1.3
THKV	Tehran--Karaj	1.04	264	ePg	Pg	11 52 36.4	-1.3
IMHD	Mahdasht	1.25	254	ePn	Pn	11 52 40.1	-1.2
IMHD				e		11 52 58.9	
	comp=Z,10µm,0.1s						
IMHD				e		11 52 59.3	
	comp=E,28µm,0.1s						
IMHD				e		11 53 00.6	
	comp=N,31µm,0.1s						
IMHD	Mahdasht	1.25	254	ePn	Pn	11 52 40.1	-1.2
IKIA	Kiasar	1.26	82	ePn	Pn	11 52 39.9	-1.6
IKIA				e		11 53 02.5	
	comp=N,19µm,0.1s						
IKIA				e		11 53 02.9	
	comp=E,27µm,0.2s						
IKIA				e		11 53 03.5	
	comp=Z,14µm,0.2s						
IKIA	Kiasar	1.26	82	ePn	Pn	11 52 39.9	-1.6
IGLO	Ghaloghah	1.44	70	ePn	Pn	11 52 44.0	0.0
IGLO				e		11 53 11.1	
	comp=E,46µm,0.2s						
IGLO				e		11 53 12.2	
	comp=N,55µm,0.3s						
IGLO				e		11 53 15.8	
	comp=Z,28µm,0.2s						
IANJ	Anjilo	1.54	111	ePn	Pn	11 52 44.8	-0.6
IANJ				e		11 53 11.0	
	comp=Z,13µm,0.1s						
IANJ	Anjilo	1.54	111	ePn	Pn	11 52 44.8	-0.6
IGZV	Ghazvin	1.60	283	ePn	Pn	11 52 45.6	-0.6
IGZV				e		11 52 52.5	
	comp=Z,5µm,0.1s						
IGZV				e		11 53 15.2	
	comp=N,12µm,0.2s						
IGZV				e		11 53 18.2	
	comp=E,10µm,0.2s						
IGZV	Ghazvin	1.60	283	ePn	Pn	11 52 45.6	-0.6
ISFB	Sefidab	1.68	177	e		11 53 14.4	
	comp=Z,7µm,0.1s						
ISFB				e		11 53 14.5	
	comp=N,16µm,0.1s						
ISFB				e		11 53 14.8	
	comp=E,14µm,0.2s						
GHVR	GHOM	1.70	205	ePg	Pb	11 52 48.9	-0.2
GHVR	GHOM	1.70	205	ePg	Pb	11 52 48.9	-0.2
GHVR	GHOM	1.70	205	ePg	Pb	11 52 48.9	-0.2
IRAZ	Razeghan	1.91	252	ePn	Pn	11 52 51.1	+0.6
IRAZ				e		11 53 19.1	
	comp=Z,8µm,0.2s						
IRAZ				e		11 53 19.8	
	comp=N,6µm,0.2s						
IRAZ				e		11 53 22.3	
	comp=E,19µm,0.3s						
IRAZ	Razeghan	1.91	252	ePn	Pn	11 52 51.1	+0.6
ASAO	Ashtian	2.28	230	ePn	Pn	11 52 56.9	+1.3
ASAO	Ashtian	2.28	230	ePn	Pn	11 52 56.9	+1.3
ASAO	Ashtian	2.28	230	ePn	Pn	11 52 56.9	+1.3
IKLH	Kolahrood	2.75	190	ePn	Pn	11 53 03.8	+1.8
IKLH				e		11 53 43.2	
	comp=Z,4µm,0.2s						
IKLH				e		11 53 43.2	
	comp=N,4µm,0.2s						
IKLH				e		11 53 44.0	
	comp=E,4µm,0.2s						
IKLH	Kolahrood	2.75	190	ePn	Pn	11 53 03.8	+1.8
SHRO	Shahrood	3.13	90	ePn	Pn	11 53 09.2	+2.0
SHRO	Shahrood	3.13	90	ePn	Pn	11 53 09.2	+2.0
IZEF	Zefreh	3.13	177	e		11 53 55.6	
	comp=N,1µm,0.2s						
IZEF				ePn	Pn	11 53 08.7	+1.4
IZEF				e		11 54 02.0	
	comp=E,1µm,0.2s						
IZEF				e		11 54 25.0	
	comp=Z,1µm,0.3s						
NASN	Na'in	3.27	170	ePn	Pn	11 53 10.3	+1.0
NASN	Na'in	3.27	170	ePn	Pn	11 53 10.3	+1.0
NASN	Na'in	3.27	170	ePn	Pn	11 53 10.3	+1.0
IGAR	Gharneh	3.62	181	e		11 54 13.7	
	comp=N,820nm,0.1s						
IGAR				e		11 54 17.9	
	comp=Z,455nm,0.3s						
ASTR	Astara	3.68	314	⇑P	Pn	11 53 14.1	-0.5
ASTR				⇓S	Sn	11 53 57.4	-0.5
ASTR	Astara	3.68	314	⇑P	Pn	11 53 14.1	-0.5
ASTR				⇓S	Sn	11 53 57.4	-0.5
LRK	Lerik	4.00	312	⇑P	Pn	11 53 18.9	-0.3
LRK	Lerik	4.00	312	⇑P	Pn	11 53 18.9	-0.3
ICHK	Chekchek	4.22	153	ePn	Pn	11 53 23.5	+1.3
ICHK				e		11 54 38.0	
	comp=N,2µm,0.3s						
ICHK				e		11 54 39.1	
	comp=E,3µm,0.3s						
ICHK				e		11 54 45.9	
	comp=Z,1µm,0.3s						
ICHK	Chekchek	4.22	153	ePn	Pn	11 53 23.5	+1.3
IRAM	Ramesheh	4.22	177	e		11 54 36.6	
	comp=N,548nm,0.3s						
IRAM				e		11 54 41.1	
	comp=E,634nm,0.4s						
IRAM				e		11 55 03.7	
	comp=Z,346nm,0.2s						
GLBA	Clilabad	4.38	318	⇑P	Pn	11 53 23.8	-0.4
GLBA				⇑S	Sn	11 54 14.9	-0.2
GLBA	Clilabad	4.38	318	⇑P	Pn	11 53 23.8	-0.4
GLBA				⇑S	Sn	11 54 14.9	-0.2
ALIB	Äli-Bayra	4.64	329	⇓P	Pn	11 53 29.1	+1.4
ALIB				⇑S	Sn	11 54 23.7	+2.1
ALIB	Äli-Bayra	4.64	329	⇓P	Pn	11 53 29.1	+1.4
ALIB				⇑S	Sn	11 54 23.7	+2.1
IMEH	Mehriz	5.06	155	ePn	Pn	11 53 35.3	+1.4
IMEH	Mehriz	5.06	155	ePn	Pn	11 53 35.3	+1.4
GEYT	Alibeck	5.14	67	Pn	Pn	11 53 35.7	+1.0
	comp=Z,2.2nm,0.3s,baz=247,slow=11,SNR=5.1						
GEYT				Sn	Sn	11 54 36.9	+2.8
	comp=Z,2.5nm,0.3s,baz=333,slow=8.7,SNR=3.4						
GEYT				Lg	Lg	11 55 04.1	
	comp=Z,0.5nm,0.3s,baz=235,slow=40,SNR=2.8						
GBS	Qobustan	5.16	332	⇓P	Pn	11 53 36.1	+1.2
GBS				⇑S	Sn	11 54 36.4	+1.9
GBS	Qobustan	5.16	332	⇓P	Pn	11 53 36.1	+1.2
GBS				⇑S	Sn	11 54 36.4	+1.9
ATGJ	Altiaghaj	5.44	333	⇑P	Pn	11 53 39.5	+0.6
ATGJ				⇑S	Sn	11 54 42.4	+0.9
ATGJ	Altiaghaj	5.44	333	⇑P	Pn	11 53 39.5	+0.6
ATGJ				⇑S	Sn	11 54 42.4	+0.9
SIZA	Siyzn	5.64	334	⇓P	Pn	11 53 41.6	-0.1
SIZA				⇓S	Sn	11 54 47.4	+0.9
SIZA	Siyzn	5.64	334	⇓P	Pn	11 53 41.6	-0.1
SIZA				⇓S	Sn	11 54 47.4	+0.9
BRDA	Brd	5.76	319	⇓S	Sn	11 54 48.6	-0.6
BRDA	Brd	5.76	319	⇓S	Sn	11 54 48.6	-0.6
XNQ	Khinaliq	6.01	330	⇓P	Pn	11 53 46.8	-0.1
XNQ				⇑S	Sn	11 54 55.6	-0.2
XNQ	Khinaliq	6.01	330	⇓P	Pn	11 53 46.8	-0.1
XNQ				⇑S	Sn	11 54 55.6	-0.2
SEKA	Sheki	6.46	325	⇑P	Pn	11 53 52.2	-0.6
SEKA				⇑S	Sn	11 55 03.5	-3.1
SEKA	Sheki	6.46	325	⇑P	Pn	11 53 52.2	-0.6
SEKA				⇑S	Sn	11 55 03.5	-3.1
GANJ	Ganja	6.49	317	⇓P	Pn	11 53 53.2	-0.1
GANJ				⇑S	Sn	11 55 05.0	-2.4
GANJ	Ganja	6.49	317	⇓P	Pn	11 53 53.2	-0.1
GANJ				⇑S	Sn	11 55 05.0	-2.4
GDB	GEDABAY	6.87	315	⇑P	Pn	11 53 59.4	+0.9
GDB				⇓S	Sn	11 55 14.2	-2.5
GDB	GEDABAY	6.87	315	⇑P	Pn	11 53 59.4	+0.9
GDB				⇓S	Sn	11 55 14.2	-2.5
ZKTA	Zakatala	7.07	324	⇑P	Pn	11 54 01.4	+0.3
ZKTA				⇑S	Sn	11 55 20.3	-1.1
GNI	Garni	7.14	307	Pn	Pn	11 54 04.9	+2.6
	comp=Z,1.2nm,0.3s,baz=198,slow=20,SNR=1.8						
GNI				Lg	Lg	11 56 04.2	
	comp=Z,1.7nm,0.3s,baz=90,slow=20,SNR=1.9						
QZX	Qazax, Azerbai	7.30	315	⇑P	Pn	11 54 05.4	+1.0
QZX				⇓S	Sn	11 55 25.7	-1.6
QZX	Qazax, Azerbai	7.30	315	⇑P	Pn	11 54 05.4	+1.0
QZX				⇓S	Sn	11 55 25.7	-1.6
ARU	Arti	20.86	10	P	P	11 57 00.2	+0.7
	comp=Z,2.5nm,0.3s,baz=180,slow=4.0,SNR=4.7						
BVAR	Borovoye Array	21.29	31	P	P	11 57 05.9	+1.7
	comp=Z,1.9nm,0.6s,baz=216,slow=8.9,SNR=8.7						
AKASG	Malin Array Be	22.07	319	P	P	11 57 12.2	-0.3
	comp=Z,0.7nm,0.5s,baz=122,slow=12,SNR=4.4						
KURBB	Kurchatov Arra	23.94	44	P	P	11 57 33.7	+2.0
	comp=Z,2.1nm,0.8s,baz=245,slow=9.8,SNR=10.0						
MKAR	Makanchi Array	24.89	55	P	P	11 57 41.1	+0.6
	comp=Z,1.7nm,1.0s,baz=262,slow=8.7,SNR=2.7						
GERES	GERESS Array B	30.79	307	P	P	11 58 33.9	+0.5
	comp=Z,0.7nm,0.5s,baz=115,slow=9.4,SNR=5.6						

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*MOS **25** 12:12:36.9±1.0,22°.80S×176°.29W,h33^{km},mb5.0/16,*
Error ellipse: s-maj=14.2km s-min=10.3km az=140.0
*IDC **25** 12:12:37.7±0.4,22°.82S×176°.31W,h0^{km},mb4.6/17,*
mb1 4.8/19,mb1mx4.6/44,mbtmp4.7/19,ML4.5/2,Error
ellipse: s-maj=17.8km s-min=13.5km az=127.0
*ISCJB **25** 12:12:38.5±0.2,22°.89S±0°.07×176°.34W±0°.07,h10^{km},*
mb4.8/35,Error ellipse: s-maj=11.7km s-min=6.7km
az=139.0
*NEIC **25** 12:12:39.4±0.2,22°.83S×176°.30W,h10^{km},mb4.8/8,Error*
ellipse: s-maj=9.6km s-min=6.2km az=146.0
ISC 25 12:12:39.4±0.4**,22°.85S**±0°.09×**176°.27W**±0°.09**,h10^{km},**
n184,σ**0^{s}86**/190**,mb4.7**/34**,14C-3D,South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	9.86	26	Pn	Pn	12 15 00.9	-0.5
	5.0nm,0.3s,baz=187,slow=11,SNR=8.1						
AFI				Sn	Sn	12 16 40.3	-12
	4.3nm,0.3s,baz=225,slow=19,SNR=3.9						
AFI	Afiamalu	9.86	26	Pn	Pn	12 15 00.9	-0.5
AFI				Sn	Sn	12 16 40.4	-12
AFI				eSn	Sn	12 16 45.2	-7.0
AFI	Afiamalu	9.86	26	P	Pn	12 15 00.9	-0.5
AFI				e		12 16 45.2	
RAR	Rarotonga	15.38	87	Pn	Pn	12 16 15.8	-0.9
	14nm,0.3s,baz=258,slow=11,SNR=20						
RAR				Sn	Sn	12 18 48.9	-18
	1.7nm,0.3s,baz=311,slow=19,SNR=3.5						
RPZ	Rata Peaks	23.30	204	P	P	12 17 47.3	-0.2
	5.5nm,0.5s,baz=357,slow=3.8,SNR=7.3						
CTAO	Charters Tower	34.93	267	eP	P	12 19 32.9	+1.2
	94nm,0.6s						
CTAO	Charters Tower	34.93	267	eP	P	12 19 32.9	+1.2
CTAO				pmax	pmax		
	comp=Z,94nm,0.6s						
TOO	Toolangi	35.90	237	P	P	12 19 40.4	+0.5
TOO				pmax	pmax		
	comp=Z,20nm,2.2s						
PMG	Port Moresby	37.47	285	P	P	12 19 53.4	0.0
	comp=Z,27nm,0.8s,baz=160,slow=4.3,SNR=5.6						
STKA	Stephens Creek	38.29	247	P	P	12 20 00.1	-0.1
	comp=Z,2.1nm,0.4s,baz=91,slow=11,SNR=9.5						
STKA	Stephens Creek	38.29	247	eP	P	12 20 00.7	+0.4
STKA				pmax	pmax		
	comp=Z,2.0nm,0.4s						
ASAR	Alice Springs	45.60	259	P	P	12 20 59.9	-0.3
	comp=Z,8.8nm,0.8s,baz=96,slow=6.5,SNR=59						
ASAR				PcP	PcP	12 22 38.1	-0.5
	comp=Z,1.3nm,0.5s,baz=107,slow=4.0,SNR=5.7						
ASAR				ScP	ScP	12 26 31.1	-0.6
	comp=Z,0.4nm,0.8s,baz=96,slow=4.3,SNR=4.4						
ASAR				S	S	12 27 31.8	-11
	comp=Z,0.2nm,0.8s,baz=97,slow=16,SNR=3.0						
WRAB	Tennant Creek	45.91	264	eP	P	12 21 01.8	-0.8
	comp=Z,17nm,0.9s						
WRAB	Tennant Creek	45.91	264	⇑iP	P	12 21 02.0	-0.6
WRAB				pmax	pmax		
	comp=Z,16nm,0.8s						
WRA	Warramunga Arr	45.91	264	P	P	12 21 02.3	-0.4
	comp=Z,13nm,0.8s,baz=89,slow=5.8,SNR=240						
WRA				PcP	PcP	12 22 37.6	-2.1
	comp=Z,0.8nm,0.7s,baz=95,slow=2.8,SNR=2.9						
WRA				ScP	ScP	12 26 32.3	-0.7
	comp=Z,0.4nm,0.7s,baz=92,slow=3.5,SNR=3.2						
WRA				S	S	12 27 35.5	-12
	comp=Z,0.7nm,1.1s,baz=101,slow=14,SNR=2.9						
WRA	Warramunga Arr	45.91	264	ceP	P	12 21 02.2	-0.4
WRA				pmax	pmax		
	comp=Z,12nm,0.8s						
SBA	Scott Base	55.65	184	P	P	12 22 17.6	+2.4
SBA				pmax	pmax		
	comp=Z,10.0nm,1.4s						
VNDA	Vanda	55.73	186	P	P	12 22 17.6	+1.8
	comp=Z,1.2nm,0.5s,baz=2.3,slow=5.8,SNR=7.6						
QSPA	South Pole Qui	67.23	180	P	P	12 23 34.3	+0.4
	comp=Z,4.3nm,0.7s,baz=50,slow=2.7,SNR=16						
KUR	Kuril'sk	75.22	335	eP	P	12 24 24.4	+2.2
PKM	Mcpherson Peak	78.51	44	P	P	12 24 42.8	+1.6
	baz=232						
SMMC	Simmler	78.66	44	P	P	12 24 43.6	+1.7
	baz=231						
YSS	Yuzh-Sakhalins	78.71	333	⇓eP	P	12 24 41.5	-0.3
YSS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
PETK	Petropavlovsk-	78.95	344	P	P	12 24 42.1	-0.8
	comp=Z,4.4nm,0.7s,baz=112,slow=6.4						
BFSC	Mount Baldy Ra	79.52	46	P	P	12 24 47.6	+0.8
	baz=233						
MONP2	Monument Peak	79.56	48	P	P	12 24 48.1	+1.0
	baz=234,SNR=5.4						
VES	Vestal, Richgr	79.56	44	P	P	12 24 47.7	+1.0
	baz=232						
IKP	In-Ko-Pah, Jac	79.63	48	P	P	12 24 47.7	+0.4
	baz=234						
EDW2	Edwards Air Fo	79.69	45	P	P	12 24 48.6	+1.0
	baz=233,SNR=12						
FRD	Ford Ranch, An	79.79	47	P	P	12 24 49.3	+1.1
	baz=234,SNR=7.6						
ISA	Isabella, Lake	79.85	44	P	P	12 24 49.7	+1.3
	baz=232,SNR=10						
PFO	Pinyon Flats O	79.95	47	P	P	12 24 49.9	+0.9
	baz=234						
PFO	Pinyon Flats O	79.95	47	eP	P	12 24 50.0	+0.9
	comp=Z,3.1nm,0.8s						
PFO	Pinyon Flats O	79.95	47	eP	P	12 24 50.0	+0.9
PFO				pmax	pmax		
	comp=Z,3.0nm,0.8s						
SWSC	Sam W. Stewart	80.02	48	P	P	12 24 50.0	+0.8
	baz=234						
BELC	Belle Mtn. Jos	80.49	47	P	P	12 24 52.7	+0.7
	baz=234,SNR=6.0						
CWC	Cottonwood Cre	80.57	44	P	P	12 24 53.3	+0.9
	baz=232						
N02D	Trinity Center	80.64	38	P	P	12 24 53.9	+1.3
	baz=229						
BC3	Big Chuckawall	80.66	48	P	P	12 24 53.7	+0.8
	baz=235						
O03D	Paynes Creek	80.71	39	P	P	12 24 54.0	+1.0
	baz=229						
GSC	Goldstone, Bar	80.72	46	P	P	12 24 53.9	+0.8
	baz=234,SNR=7.5						
MPMC	Manual Prospec	80.72	45	P	P	12 24 54.2	+1.0
	baz=233,SNR=14						
GLA	Glamis	80.75	48	P	P	12 24 54.6	+1.3
	baz=235						
HEC	Hector,Ludlow	80.75	46	P	P	12 24 54.2	+0.9
	baz=234,SNR=5.3						
M02C	Callahan	80.83	38	P	P	12 24 55.3	+1.7
	baz=229						
TIN	Tinemaha, Big	80.85	43	P	P	12 24 55.1	+1.2
	baz=232						
YBH	Yreka Blue Hor	81.13	38	P	P	12 24 56.3	+1.1
	comp=Z,5.5nm,0.7s,baz=180,slow=2.0,SNR=17						
IRM	Iron Mountain	81.16	47	P	P	12 24 56.6	+1.1
	baz=235,SNR=7.7						
GMRC	Granite Mounta	81.18	47	P	P	12 24 56.5	+0.8
	baz=234						
Y12C	Blythe	81.35	48	P	P	12 24 57.6	+1.2
	baz=235						
GRAC	Grapevine Rang	81.36	44	P	P	12 24 57.9	+1.4
	baz=233,SNR=6.0						
FURC	Furnace Creek,	81.37	45	P	P	12 24 57.5	+1.1
	baz=233						
TUQ	Turquoise Moun	81.38	46	P	P	12 24 57.7	+1.0
	baz=234						
SHOC	Shoshone, Teco	81.42	45	P	P	12 24 57.7	+0.9
	baz=234,SNR=6.5						
214A	Organ Pipe Nat	81.54	50	P	P	12 24 58.5	+0.9
	baz=236						
NVAR	Mina Array Bea	81.64	42	P	P	12 24 58.8	+0.7
	comp=Z,5.9nm,0.9s,baz=223,slow=8.7,SNR=36						
M04C	Macdoel	81.66	38	P	P	12 24 59.3	+1.3
	baz=229						
PDMCI	Parker Dam,Lak	81.93	48	P	P	12 25 00.3	+0.9
	baz=235						
TPNV	Topopah Spring	82.06	44	P	P	12 25 01.3	+1.0
	baz=234,SNR=10						
J04D	Umpqua Nationa	82.46	37	P	P	12 25 03.4	+1.1
	baz=229						
I04A	Tendick Farm,	82.66	36	P	P	12 25 04.0	+0.9
	baz=229						
KDAK	Kodiak Island	82.73	13	ceP	P	12 25 03.5	+0.5

J05D	Fort Rock, OR	82.97	37	P	P	12 25 06.2	+1.3
	baz=230						
G03D	McMinnville, O	83.15	35	P	P	12 25 07.2	+1.7
	baz=228						
TUC	Tucson	83.18	51	P	P	12 25 07.6	+1.4
	baz=238						
TUC	Tucson	83.18	51	*e*P	P	12 25 06.9	+0.8
	comp=Z,15nm,1.2s						
TUC	Tucson	83.18	51	*e*P	P	12 25 06.9	+0.8
TUC				pmax	pmax		
	comp=Z,15nm,1.2s						
R11A	Troy Canyon, C	83.30	44	P	P	12 25 07.3	+0.6
	baz=234,SNR=6.0						
I05D	Terrebonne, OR	83.60	36	P	P	12 25 08.8	+0.8
	baz=229						
WVOR	Wild Horse Val	83.91	39	*e*P	P	12 25 09.8	+0.1
	comp=Z,11nm,1.1s						
WVOR	Wild Horse Val	83.91	39	*e*P	P	12 25 09.8	+0.1
WVOR				pmax	pmax		
	comp=Z,11nm,1.1s						
WUAZ	Wupatki	84.49	48	P	P	12 25 13.9	+1.0
	baz=237						
WUAZ	Wupatki	84.49	48	*e*P	P	12 25 14.5	+1.6
	comp=Z,11nm,1.3s						
SYO	Syowa Base	84.79	192	⇑*e*P	P	12 25 08.0	-5.7
SYO	Syowa Base	84.79	192	⇑*e*P	P	12 25 12.8	-0.9
121A	Cookes Peak, D	85.46	52	P	P	12 25 18.9	+1.1
	baz=239						
SNAA	Sanae	85.62	178	P	P	12 25 17.3	-0.7
SNAA	Sanae	85.62	178	P	P	12 25 17.1	-0.9
	comp=Z,3.7nm,0.9s,baz=185,slow=4.0,SNR=12						
SNAA	Sanae	85.62	178	*i* P	P	12 25 16.6	-1.3
SNAA				*i*		12 25 18.3	
VNA3	Neumayer Olymp	85.70	176	P	P	12 25 17.8	-0.4
A04D	Lummi Island	85.78	32	P	P	12 25 20.2	+1.5
	baz=228						
B05A	Bryant	85.78	33	P	P	12 25 19.8	+1.1
	baz=228						
DUG	Dugway, Tooele	86.12	43	P	P	12 25 20.9	0.0
DUG				pmax	pmax		
	comp=Z,2.0nm,0.9s						
VNA2	Neumayer--Watz	86.16	176	P	P	12 25 20.3	-0.2
VNA1	Neumayer--Stat	86.38	176	P	P	12 25 21.2	-0.3
PLCA	Paso Flores	86.50	133	P	P	12 25 22.5	-0.4
	comp=Z,5.5nm,1.0s,baz=251,slow=5.3,SNR=5.2						
MNTX	Cornudas Mount	86.81	54	P	P	12 25 25.4	+1.1
	baz=241						
MNTX	Cornudas Mount	86.81	54	*e*P	P	12 25 24.9	+0.6
	comp=Z,10nm,1.1s						
TXAR	Lajitas Array	86.98	57	P	P	12 25 25.9	+0.6
	comp=Z,5.7nm,0.8s,baz=214,slow=8.1,SNR=67						
HLID	Hailey	87.06	40	P	P	12 25 26.1	+0.6
	baz=234						
TASM	ASL Pad, Albuq	87.62	51	P	P	12 25 28.9	+0.4
	baz=240						
ANMO	Albuquerque	87.63	51	P	P	12 25 29.1	+0.6
	baz=240						
ANMO	Albuquerque	87.63	51	*e*P	P	12 25 29.3	+0.8
	comp=Z,9.6nm,1.3s						
ANMO	Albuquerque	87.63	51	*d i*P	P	12 25 29.5	+1.0
ANMO				*i*		12 25 30.6	
ANMO				pmax	pmax		
	comp=Z,5.0nm,1.1s						
TASL	Snake Pit, Alb	87.63	51	P	P	12 25 29.1	+0.7
	baz=240						
S22A	4UR Ranch, Cre	88.77	48	P	P	12 25 34.4	+0.4
	baz=240						
SEY	Seymchan	89.02	346	P	P	12 25 34.6	+0.5
	comp=Z,11nm,0.8s,baz=153,slow=5.4,SNR=27						
SEY	Seymchan	89.02	346	*d i*P	P	12 25 34.3	+0.2
SEY				*i*		12 25 35.4	
O20A	White River Ci	89.04	45	P	P	12 25 35.2	+0.2
	baz=239						
MSO	Missoula	89.23	37	P	P	12 25 36.3	+0.6
	baz=235						
BW06	Boulder Array	89.58	43	P	P	12 25 37.6	+0.1
	baz=238						
PDAR	Pinedale Array	89.58	43	P	P	12 25 37.4	-0.2
	comp=Z,1.7nm,0.9s,baz=220,slow=3.9,SNR=12						
DLBC	Dease Lake	89.59	22	*e*P	P	12 25 38.2	+1.3
	comp=Z,5.4nm,1.1s						
SDCO	Great Sand Dun	89.68	48	P	P	12 25 38.3	+0.1
	baz=240						
SDCO	Great Sand Dun	89.68	48	*e*P	P	12 25 38.1	-0.1
	comp=Z,12nm,1.8s						
MSTX	Muleshoe	89.82	53	P	P	12 25 38.9	+0.1
	baz=242						
BOZ	Bozeman (W)	89.86	39	P	P	12 25 39.4	+0.7
	baz=236						
BOZ	Bozeman (W)	89.86	39	*e*P	P	12 25 39.1	+0.4
	comp=Z,2.1nm,0.6s						
BOZ	Bozeman (W)	89.86	39	*e*P	P	12 25 39.1	+0.4
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
T25A	Trinidad	90.15	49	P	P	12 25 40.2	-0.1
	baz=241						
ILAR	Eielson Array	90.25	12	P	P	12 25 39.4	-0.4
	comp=Z,2.8nm,0.9s,baz=220,slow=5.2,SNR=22						
RLMT	Red Lodge	91.00	41	P	P	12 25 44.7	+0.6
	baz=238						
K22A	Casper	91.43	44	P	P	12 25 46.2	+0.1
	baz=240						
EGAK	Eagle	91.46	14	*e*P	P	12 25 45.9	+0.5
	comp=Z,9.3nm,1.1s						
CMAR	Chiang Mai Arr	92.41	289	P	P	12 25 50.8	-0.2
	comp=Z,1.1nm,0.4s,baz=126,slow=3.0,SNR=9.6						
CMAR	Chiang Mai Arr	92.41	289	*e*P	P	12 25 51.2	+0.3
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.4s						
WMOK	Wichita Mounta	93.12	54	P	P	12 25 54.0	+0.1
	baz=244						
TOLK	Toolik Lake Re	93.29	9	P	P	12 25 55.8	+2.0
	baz=204						
RSSD	Black Hills	93.73	43	P	P	12 25 56.7	-0.1
	baz=242						
RSSD	Black Hills	93.73	43	*e*P	P	12 25 56.8	+0.1
	comp=Z,8.3nm,0.9s						
RSSD	Black Hills	93.73	43	*e*P	P	12 25 56.8	+0.1
RSSD				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ECSD	EROS Data Cent	98.39	46	P	P	12 26 17.4	-0.2
	baz=246						
ECSD	EROS Data Cent	98.39	46	*e*P	Pdif	12 26 18.0	+0.3
	comp=Z,5.8nm,1.3s						
BVAR	Borovoye Array	121.90	319	PKP	PKPdf	12 31 32.2	-1.5
	comp=Z,1.5nm,0.6s,baz=78,slow=3.5,SNR=8.7						
SPITS	Spitsbergen Ar	124.29	357	PKP	PKPdf	12 31 36.5	-1.2
	comp=Z,14nm,1.1s,baz=342,slow=3.2,SNR=2.6						
ARCES	ARCESS Array B	131.51	350	PKP	PKPdf	12 31 50.7	-0.9
	comp=Z,1.8nm,0.5s,baz=15,slow=1.2,SNR=15						
ARCES	ARCESS Array B	131.51	350	*e*PKIKP	PKPdf	12 31 51.6	0.0
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
OBN	Obninsk	139.58	331	*e*PKIKP	PKPdf	12 32 07.0	0.0
OBN				*e*PPP	PPP	12 38 07.0	
OBN				pmax	pmax		
	comp=Z,8.0nm,0.5s						
NOA	NORSAR Array B	141.48	354	PKP	PKPdf	12 32 09.6	-0.8
	comp=Z,0.7nm,0.6s,baz=13,slow=4.1,SNR=3.9						
KIV	Kislovodsk	141.73	313	*e*PKIKP	PKPdf	12 32 11.6	+0.2
KIV				pmax	pmax		
	comp=Z,9.0nm,1.3s						
HFS	Hagfors	142.09	352	PKhKP	PKPpre	12 32 05.4	
	comp=Z,0.7nm,0.3s,baz=56,slow=5.7,SNR=8.1						
SUW	Suwalki	145.59	340	*e*PKP	PKPbc	12 32 17.8	-0.1
SUW	Suwalki	145.59	340	*e*PKIKP	PKPbc	12 32 17.8	-0.1
AKASG	Malin Array Be	145.84	331	PKPbc	PKPdf	12 32 17.6	-0.7
	comp=Z,5.3nm,0.5s,baz=42,slow=4.3,SNR=24						
KIEV	Kiev	145.85	331	*e*PKPbc	PKPdf	12 32 17.8	-0.4
KIEV	Kiev	145.85	331	*e*PKP2	PKPdf	12 32 17.8	-0.4
EKA	Eskdalemuir Ar	147.15	7	PKPbc	PKPbc	12 32 21.6	-0.9
	comp=Z,2.9nm,0.5s,baz=330,slow=3.0,SNR=6.9						
BEL	Belsk	148.21	340	*e*PKP	PKPbc	12 32 26.1	+0.6
BEL	Belsk	148.21	340	*e*PKP2	PKPbc	12 32 26.1	+0.6
ASF	Jabal al Asfar	149.25	295	PKPbc	PKPbc	12 32 28.5	-0.4
	comp=Z,1.9nm,0.6s,baz=95,slow=7.4,SNR=4.7						
BRTR	Keskin Array B	149.59	311	PKPbc	PKPbc	12 32 28.7	-0.9
	comp=Z,1.6nm,0.5s,baz=148,slow=4.9,SNR=8.3						
OJC	Ojcow	149.92	339	*e*PKP	PKPbc	12 32 29.9	0.0
OJC	Ojcow	149.92	339	*e*PKP2	PKPbc	12 32 29.9	0.0
MMAI	Mount Meron Ar	150.34	297	PKPbc	PKPbc	12 32 31.8	+0.3
	comp=Z,3.5nm,0.5s,baz=75,slow=6.1,SNR=4.7						
UZH	Uzhgorod	150.34	335	*e*PKIKP	PKPdf	12 32 27.3	+1.6
UZH				*e*		12 32 28.9	
UZH				*i*		12 32 30.5	
UZH				*e*		12 32 36.9	
KSP	Ksiaz	150.39	344	*e*PKP	PKPbc	12 32 31.5	+0.5
KSP	Ksiaz	150.39	344	*e*PKIKP	PKPbc	12 32 31.5	+0.5
NIE	Niedzica	150.43	338	*e*PKP	PKPbc	12 32 31.5	+0.3
NIE	Niedzica	150.43	338	*e*PKIKP	PKPbc	12 32 31.5	+0.3
CRVS	Cervenica-Dubn	150.44	336	*e*PKIKP	PKPbc	12 32 31.2	0.0
CRVS	Cervenica-Dubn	150.44	336	*e*PKP	PKPbc	12 32 31.2	0.0
CRVS				*e*		12 32 38.0	
CLL	Collm	150.69	348	⇑*i*PKPbc	PKPbc	12 32 31.3	-0.4
	comp=Z,26nm,1.0s						
CLL				*i* PKPab	PKPab	12 32 38.9	+0.4
	comp=Z,6.0nm,0.7s						
CLL	Collm	150.69	348	⇑*i*PKIKP	PKPbc	12 32 31.3	-0.4
CLL				pmax	pmax		
	comp=Z,63nm,1.0s						
UPC	Upice	150.77	344	⇑*e*PKP	PKPbc	12 32 32.3	+0.4
UPC				*e*PKPAB	PKPab	12 32 39.9	+1.0
UPC	Upice	150.77	344	*e*PKIKP	PKPbc	12 32 32.3	+0.4
DPC	Dobruska-Polom	150.83	343	⇑*e*PKP	PKPbc	12 32 32.7	+0.6
DPC				*e*PKPAB	PKPab	12 32 39.7	+0.5
DPC	Dobruska-Polom	150.83	343	*e*PKIKP	PKPbc	12 32 32.7	+0.6
BRG	Berggiesshubel	150.91	347	*e*PKP	PKPbc	12 32 32.1	-0.1
	comp=Z,16nm,0.6s						
BRG	Berggiesshubel	150.91	347	*e*PKIKP	PKPbc	12 32 32.1	-0.1
BRG				pmax	pmax		
	comp=Z,21nm,0.6s						
LANS	Liptovska Anna	150.95	338	*e*PKIKP	PKPbc	12 32 33.1	+0.7
LANS	Liptovska Anna	150.95	338	*e*PKP	PKPbc	12 32 33.1	+0.7
KRLC	Kraliky	150.96	343	⇑*e*PKP	PKPbc	12 32 32.8	+0.4
KRLC	Kraliky	150.96	343	*e*PKIKP	PKPbc	12 32 32.8	+0.4
MORC	Moravsky Berou	151.01	341	*e*PKP	PKPbc	12 32 32.3	-0.2
MLR	Muntele Rosu	151.06	327	PKPbc	PKPbc	12 32 32.5	-0.4
	comp=Z,7.0nm,1.0s,baz=342,slow=6.8,SNR=4.7						
PVCC	Panska Ves	151.10	346	⇑*e*PKP	PKPbc	12 32 33.3	+0.7
PVCC				*e*PKPAB	pPKPab	12 32 42.3	-1.3
PVCC	Panska Ves	151.10	346	*e*PKIKP	PKPbc	12 32 33.3	+0.7
PRU	Pruhonice	151.61	345	⇑*e*PKP	PKPbc	12 32 33.9	+0.1
PRU				*e*PKPAB	PKPab	12 32 43.2	+0.8
PRU	Pruhonice	151.61	345	*e*PKIKP	PKPbc	12 32 33.9	+0.1
GOPC	GO Pecny, Ondr	151.62	345	⇑*e*PKP	PKPbc	12 32 34.0	+0.1
GOPC	GO Pecny, Ondr	151.62	345	*e*PKIKP	PKPbc	12 32 34.0	+0.1
VRAC	Vranov	151.70	342	*e*PKP	PKPbc	12 32 33.9	-0.2
VRAC				*e*		12 32 43.6	
VYHS	Vyhne	151.73	339	*e*PKIKP	PKPbc	12 32 34.1	-0.1
VYHS	Vyhne	151.73	339	*e*PKP	PKPbc	12 32 34.1	-0.1
VYHS				*e*		12 32 43.5	
JAVC	Velka Javorina	151.78	340	*e*PKP	PKPbc	12 32 35.3	+0.9
JAVC				*e*		12 32 45.1	
KRUC	Moravsky	151.98	342	*e*PKP	PKPbc	12 32 34.1	-0.6
KRUC				*e*		12 32 44.5	
KHC	Kasperske Hory	152.64	346	⇑*e*PKP	PKPbc	12 32 36.0	-0.3
KHC	Kasperske Hory	152.64	346	*e*PKIKP	PKPbc	12 32 36.0	-0.3
GERES	GERESS Array B	152.88	345	PKPbc	PKPbc	12 32 36.6	-0.3
	comp=Z,2.1nm,0.7s,baz=20,slow=1.6,SNR=15						
ESDC	Sonseca Array	162.00	20	PKPab	PKPab	12 33 26.2	-1.1
	comp=Z,0.2nm,0.4s,baz=314,slow=2.6,SNR=8.3						
KEST	Kesra	166.26	340	PKPab	PKPab	12 33 43.6	-2.6
	comp=Z,1.1nm,0.5s,baz=276,slow=3.7,SNR=3.7						
MDT	Midelt	167.63	35	PKPab	PKPab	12 33 52.3	-0.2
	comp=Z,1.5nm,0.8s,baz=30,slow=8.1,SNR=3.6						
KOWA	Kowa	168.92	137	PKPab	PKPab	12 33 58.3	-0.1
	comp=Z,2.8nm,0.8s,baz=193,slow=3.8,SNR=4.7						
TORD	Torodi Ar. Bea	170.16	168	PKPab	PKPab	12 34 01.5	-2.2
	baz=224,slow=6.0						

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*IDC **25** 12:22:26.7±1.9, 36°.75N×141°.94E, h0km, mb4.1/5, mb1 4.0/10, mb1mx3.7/64, mbtmp4.1/10, ML3.9/4, MS4.9/1, Ms1 4.9/1, ms1mx3.8/65, Error ellipse: s-maj=36.3km s-min=23.5km az=94.0*

*ISCJB **25** 12:22:27.2±0.8, 36°.72N±0°.05×142°.00E±0°.07, h19km, mb4.0/5, MS4.7/1, Error ellipse: s-maj=8.7km s-min=7.1km az=16.7*

*JMA **25** 12:22:31.0±0.3, 36°.76N×141°.71E, h51km±4km, M3.9*

ISC 25 12:22:28.2±0.9**, 36°.70N**±0°.04×**141°.80E**±0°.07**, h19km, n29, σ2ˢ.44**/28**, mb4.1**/5**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONAJ	Iwakimizuishiy	0.90	297	P	Pn	12 22 46.1	+0.2
JHO	Hitachi	0.99	265	P	Pg	12 22 47.7	+0.1
JFK	Kawauchi	1.00	312	P	Pg	12 22 47.4	-0.2
JHYU	Hitachinakayam	1.04	250	P	Pg	12 22 49.1	+0.6
JFFD	Fukushimafurud	1.07	292	P	Pg	12 22 48.4	-0.6
JMM	Marumori	1.42	326	P	Pb	12 22 53.6	-0.4
JMM				S	Sb	12 23 10.9	-0.8
JFT	Otama	1.43	305	P	Pg	12 22 54.8	-1.0
JIO	Ouri	1.79	349	P	Pb	12 22 58.8	-1.6
JFY	Yanaizu	1.82	293	P	Pb	12 23 00.3	-0.6
JOU	Okura	1.89	332	P	Pb	12 23 01.2	-1.0
JAG	Ashikaga	1.91	262	P	Pb	12 23 01.3	-1.2
MJAR	Matsushiro Arr	2.89	268	Pn	Pb	12 23 16.1	-3.2
	28nm,0.3s,baz=90,slow=15,SNR=121						
MJAR				Sn	Sb	12 23 51.5	-2.8
	9.2nm,0.3s,baz=74,slow=17,SNR=8.2						
MAT	Matsushiro	2.90	268	P	Pb	12 23 16.5	-2.8
MAT				S	Sb	12 23 53.5	-0.8
JHJ	Hachijo jima 2	3.94	205	Pn	Pn	12 23 30.2	+2.6
	18nm,0.3s,baz=127,slow=24,SNR=42						
JHJ				Sn	Sn	12 24 12.3	-1.0
	22nm,0.3s,baz=53,slow=20,SNR=3.4						
ASAJ	Asahikawa	7.43	4	Pn	Pn	12 24 16.3	+0.6
	0.9nm,0.3s,baz=195,slow=9.4,SNR=11						
ASAJ				Sn	Sn	12 25 33.3	-6.2
	0.6nm,0.3s,baz=72,slow=20,SNR=1.9						
JCJ	Chichijima	9.58	178	Pn	Pn	12 24 46.7	+1.5
	2.6nm,0.3s,baz=90,slow=20,SNR=2.9						
JCJ				Sn	Sn	12 26 25.7	-6.6
	3.5nm,0.3s,baz=285,slow=20,SNR=4.6						
USRK	Ussuriysk Ar.	10.58	318	Pn	Pn	12 25 02.1	+3.4
	baz=124,slow=13						
SEY	Seymchan	27.06	11	LR	LR	12 37 58.8	
	comp=Z,2µm,21.0s,baz=355,slow=34						
H11N2	WAKE ISLAND Hy	27.71	121	T	T	12 57 38.2	
	baz=314,slow=75,SNR=46						
H11N1	WAKE ISLAND Hy	27.72	121	T	T	12 57 38.3	
	baz=314,slow=75,SNR=46						
H11N3	WAKE ISLAND Hy	27.73	121	T	T	12 57 39.0	
	baz=314,slow=75,SNR=41						
SONM	Songino Array	28.23	304	P	P	12 28 21.3	+1.3
	2.3nm,0.7s,baz=107,slow=9.5,SNR=11						
H11S1	WAKE ISLAND Hy	28.42	123	T	T	12 58 36.3	
	baz=315,slow=76,SNR=29						
H11S3	WAKE ISLAND Hy	28.42	123	T	T	12 58 36.9	
	baz=315,slow=76,SNR=17						
H11S2	WAKE ISLAND Hy	28.43	123	T	T	12 58 37.2	
	baz=315,slow=76,SNR=15						
ZALV	Zalesovo Beam	42.37	313	P	P	12 30 22.9	+1.9
	3.9nm,0.4s,baz=98,slow=10,SNR=1.9						
MKAR	Makanchi Array	44.56	302	P	P	12 30 40.5	+1.7
	1.0nm,0.8s,baz=89,slow=9.2,SNR=9.2						
KURBB	Kurchatov Arra	46.45	308	P	P	12 30 55.0	+1.3
	1.3nm,0.5s,baz=83,slow=8.0,SNR=12						
AKASG	Malin Array Be	74.75	323	P	P	12 34 08.3	+1.6
	0.6nm,0.4s,baz=48,slow=6.7,SNR=3.1						

IDC 25 12:27:30.1±1.9**, 2°.92S×141°.14E, h0km, mb3.3**/2**, mb1 3.7**/3**, mb1mx3.4**/40**, mbtmp3.4**/3**, ML3.7**/1**, Error ellipse: s-maj=139.9km s-min=30.6km az=111.0, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	18.18	201	P	Pn	12 31 43.7	-0.4
	0.3nm,0.3s,baz=24,slow=12,SNR=22						
WRA				S	Sn	12 34 56.3	-12
	0.0nm,0.3s,baz=34,slow=22,SNR=2.4						
ASAR	Alice Springs	21.79	198	P	P	12 32 23.3	-0.5
	0.7nm,0.8s,baz=32,slow=11,SNR=9.0						
ASAR				S	S	12 36 18.3	-7.4
	0.3nm,0.8s,baz=16,slow=27,SNR=3.6						
H11S3	WAKE ISLAND Hy	32.95	49	T	T	13 08 02.4	
	baz=229,slow=75,SNR=12						
H11S2	WAKE ISLAND Hy	32.96	49	T	T	13 08 04.4	
	baz=229,slow=75,SNR=6.6						
H11S1	WAKE ISLAND Hy	32.96	49	T	T	13 07 59.5	
	baz=229,slow=75,SNR=7.2						
H11N1	WAKE ISLAND Hy	33.85	47	T	T	13 09 16.5	
	baz=230,slow=76,SNR=12						
H11N2	WAKE ISLAND Hy	33.86	47	T	T	13 09 19.7	
	baz=230,slow=76,SNR=12						
H11N3	WAKE ISLAND Hy	33.87	47	T	T	13 09 19.8	
	baz=230,slow=76,SNR=8.0						
ILAR	Eielson Array	85.02	24	P	P	12 40 07.7	+0.4
	0.2nm,0.6s,baz=269,slow=5.3,SNR=4.3						

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*IDC **25** 12:35:41.9±0.6, 9°.68S×159°.76E, h0km, mb4.3/20, mb1 4.4/21, mb1mx4.3/46, mbtmp4.3/21, ML3.6/1, Error ellipse: s-maj=19.0km s-min=8.8km az=125.0*

*ISCJB **25** 12:35:45.4±0.4, 9°.71S±0°.07×159°.70E±0°.08, h34km, mb4.3/21, Error ellipse: s-maj=12.8km s-min=7.7km az=32.3*

*NEIC **25** 12:35:46.6±1.0, 9°.70S×159°.77E, h30km±7km, mb4.5/1, Error ellipse: s-maj=13.1km s-min=7.9km az=100.0*

ISC 25 12:35:47.0±0.6**, 9°.71S**±0°.08×**159°.8E**±0°.1**, h34km, n26, σ0ˢ.76**/25**, mb4.3**/19**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	0.33	32	LR	LR	12 35 43.9	
	comp=Z,3µm,18.7s,baz=287,slow=6.5						
HNR				Pn	Pb	12 35 54.2	-1.1
	baz=171,slow=11						
HNR				Sn	Sb	12 36 00.1	-0.8
	19µm,0.3s,baz=24,slow=20,SNR=172						
DZM	Mont Dzumac	13.86	153	Pn	Pn	12 39 00.8	-0.4
	0.3nm,0.3s,baz=292,slow=19,SNR=5.5						
CTAO	Charters Tower	16.63	230	*e*P	P	12 39 40.1	+0.2
	160nm,0.9s						
WRAB	Tennant Creek	26.56	245	*e*P	P	12 41 22.1	+0.1
	14nm,1.2s						
WRA	Warramunga Arr	26.57	245	P	P	12 41 22.2	0.0
	6.9nm,0.8s,baz=71,slow=9.3,SNR=38						
STKA	Stephens Creek	27.75	215	P	P	12 41 31.6	-1.1
	7.9nm,0.8s,baz=54,slow=15,SNR=8.6						
ASAR	Alice Springs	28.33	237	P	P	12 41 37.0	-1.0
	2.2nm,0.7s,baz=62,slow=9.8,SNR=21						
MJAR	Matsushiro Arr	50.28	337	P	P	12 44 39.5	-0.8
	3.1nm,0.7s,baz=171,slow=9.2,SNR=11						
JNU	Nakatsue	50.72	328	P	P	12 44 42.8	-0.9
	5.9nm,0.8s,baz=129,slow=2.6,SNR=4.1						
KSRS	Korea Array	55.60	329	P	P	12 45 19.1	-0.4
	1.0nm,0.6s,baz=146,slow=6.5,SNR=9.1						
KSAR	Wonju Array Be	55.61	329	P	P	12 45 19.1	-0.4
ASAJ	Asahikawa	55.80	345	P	P	12 45 22.0	+1.2
	2.8nm,0.5s,baz=261,slow=3.5,SNR=19						
PETK	Petropavlovsk-	62.60	359	P	P	12 46 09.0	+1.3
	5.1nm,0.9s,baz=164,slow=7.5						
CMAR	Chiang Mai Arr	66.21	295	P	P	12 46 31.9	-0.1
	1.8nm,0.7s,baz=119,slow=5.2,SNR=7.3						
VNDA	Vanda	67.80	180	P	P	12 46 42.0	+0.9
	4.3nm,0.7s,baz=341,slow=8.2,SNR=14						
SEY	Seymchan	72.65	356	P	P	12 47 11.8	+0.9
	3.1nm,0.8s,baz=172,slow=5.7,SNR=3.6						
SONM	Songino Array	74.19	326	P	P	12 47 20.3	-0.2
	2.6nm,0.8s,baz=134,slow=6.0,SNR=9.4						
QSPA	South Pole Qui	80.28	180	P	P	12 47 54.4	0.0
	3.1nm,0.8s,baz=129,slow=1.6,SNR=8.3						
ILAR	Eielson Array	84.21	20	P	P	12 48 14.4	-0.3
	0.8nm,0.4s,baz=248,slow=5.1,SNR=18						
MKAR	Makanchi Array	88.56	318	P	P	12 48 36.8	+0.3
	1.0nm,0.6s,baz=96,slow=6.1,SNR=13						
ZALV	Zalesovo Beam	89.08	325	P	P	12 48 38.3	-0.4
	0.7nm,0.3s,baz=108,slow=3.2,SNR=2.0						
NVAR	Mina Array Bea	89.71	51	P	P	12 48 43.5	+1.2
	0.7nm,1.0s,baz=225,slow=1.9,SNR=3.9						
KURK	Kurchatov	91.89	321	P	P	12 48 51.7	-0.1
KURBB	Kurchatov Arra	91.92	321	P	P	12 48 51.7	-0.3
	0.9nm,0.8s,baz=106,slow=3.3,SNR=6.6						
BVAR	Borovoye Array	97.31	322	P	Pdif	12 49 15.7	-1.0
	0.8nm,0.7s,baz=90,slow=5.9,SNR=5.0						
SNAA	Sanae	97.97	185	P	Pdif	12 49 19.4	0.0
	0.8nm,0.8s,baz=169,slow=3.7,SNR=3.0						

MAN 25 12:40:28.1, 13°.46N×121°.05E, h2km, mb4.3, ML3.1, MS2.8, 2D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PGP	Puerto Galera	0.10	295	⇓*e*P	Pg	12 40 29.9	-0.3
PGP				*i* S	Sg	12 40 32.0	+0.5
BOAC	Boac	0.77	90	*e*P	Pb	12 40 43.7	-0.6
BOAC				*e*S	Sn	12 40 57.7	-0.6
LUBP	Lubang	0.83	289	*e*P	Pg	12 40 40.2	-3.8
LUBP				*e*S	Sg	12 40 51.2	-3.6
SJMP	San Jose	0.99	176	*e*P	Pn	12 40 49.8	+0.8
SJMP				*e*S	Sn	12 41 07.4	+3.8
GQP	Guinayangan	1.43	72	⇓*e*P	Pg	12 41 05.2	+10
GQP				*e*S	Sn	12 41 24.8	+10
OTRP	Odiongan	1.44	139	*e*P	Pn	12 40 54.2	-1.1
OTRP				*e*S	Sn	12 41 17.5	+2.7
AUQP	San Andres	1.59	95	*e*P	Pg	12 40 59.5	+0.9
BUSP	Coron	1.67	210	*e*P	Pn	12 40 57.9	-0.4
BUSP				*e*S	Sb	12 41 21.2	+0.3
CUYO	Cuyo Island	2.59	181	*e*P	Pn	12 41 11.3	+0.2
CAUP	Cauayan	3.55	12	*e*P	Pn	12 41 24.6	+0.4
APYP	Conner	4.38	2	*e*P	Pn	12 41 37.9	+2.2

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*IDC **25** 12:43:49.2±2.1, 15°.19N×147°.23E, h0km, mb3.7/7, mb1 3.8/8, mb1mx3.5/60, mbtmp3.7/8, ML3.6/1, Error ellipse: s-maj=65.8km s-min=19.9km az=88.0*

*ISCJB **25** 12:43:52.6±1.2, 15°.2N±0°.1×147°.1E±0°.2, h32km, mb3.7/7, Error ellipse: s-maj=25.5km s-min=11.0km az=29.3*

ISC 25 12:43:54.6±1.5**, 15°.2N**±0°.1×**147°.1E**±0°.2**, h32km, n9, σ0ˢ.69**/10**, mb3.8**/7**, Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	Guam	2.65	234	Pn	Pn	12 44 34.7	-0.5
	10nm,0.3s,baz=58,slow=7.6,SNR=8.5						
GUMO				Sn	Sn	12 45 06.7	+0.4
	15nm,0.3s,baz=1.6,slow=21,SNR=8.0						
KSRS	Korea Array	27.96	326	P	P	12 49 41.2	-1.1
	0.4nm,0.4s,baz=144,slow=8.7,SNR=3.5						
WRA	Warramunga Arr	37.06	200	P	P	12 51 01.5	-0.5
	1.2nm,0.8s,baz=24,slow=9.3,SNR=10						
ASAR	Alice Springs	40.68	199	P	P	12 51 32.9	+0.6
	0.2nm,0.5s,baz=18,slow=12,SNR=3.4						
SONM	Songino Array	46.74	323	P	P	12 52 21.2	+0.2
	0.3nm,0.4s,baz=138,slow=6.7,SNR=2.2						
MKAR	Makanchi Array	61.88	315	P	P	12 54 11.8	+0.7
	0.7nm,0.5s,baz=89,slow=9.0,SNR=10						
KURBB	Kurchatov Arra	64.84	319	P	P	12 54 30.0	-0.4
	1.5nm,0.6s,baz=98,slow=6.7,SNR=17						
BVAR	Borovoye Array	70.04	321	P	P	12 55 03.7	+0.3
	0.5nm,0.5s,baz=104,slow=6.1,SNR=3.9						
DBIC	Dimbokro	144.73	306	PKP	PKPab	13 03 27.5	-0.5
	1.4nm,0.4s,baz=68,slow=2.4,SNR=3.8						

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*ISCJB **25** 12:51:30.6±0.5, 41°.96N±0°.04×142°.51E±0°.04, h70km±5km, mb3.5/3, Error ellipse: s-maj=7.3km s-min=4.1km az=145.4*

*JMA **25** 12:51:31.1±0.1, 41°.99N×142°.51E, h65km±2km, M3.3 Broadband fault plane solution: P waves. NP1: ϕ_s13.00000°, δ86.00000°, λ96.00000°. NP2: ϕ_s133.00000°, δ7.00000°, λ30.00000°. Principal axes: T Plg48.0000°, Azm289.0000°; N Plg6.0000°, Azm192.0000°; P Plg41.0000°, Azm97.0000°;*

*IDC **25** 12:51:32.5±2.7, 41°.99N×142°.83E, h85km±20km, mb3.3/3, mb1 3.2/6, mb1mx3.0/65, mbtmp3.5/6, MS4.2/1, Ms1 4.2/1, ms1mx3.4/32 Error ellipse: s-maj=53.6km s-min=16.3km az=100.0*

ISC 25 12:51:30.9±0.9**, 41°.99N**±0°.04×**142°.49E**±0°.04**, h63km**±7km**, n30, σ1ˢ.41**/39**, mb3.7**/3**, 4C-6D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNBK	Urakawa-nobuka	0.35	34	⇑P	Pn	12 51 41.8	+0.1
JNBK				*e*S	Sn	12 51 50.0	+0.4
JSHD	Hidakashinhida	0.42	358	P	Pn	12 51 42.8	+0.5
JSHD				*e*S	Sn	12 51 52.4	+1.8
JEM	Erimo	0.50	86	⇑P	Pn	12 51 43.5	+0.5
JEM				*e*S	Sn	12 51 52.5	+0.6
JTHR	Tokachihiroo	0.68	63	P	Pn	12 51 45.4	+0.4
JTHR				*e*S	Sn	12 51 56.1	+0.8
JBT2	Biratori 2	0.80	353	⇓P	Pn	12 51 46.7	+0.2
JBT2				*e*S	Sn	12 51 58.5	+0.5
JCH	Churui	0.90	46	⇑P	Pn	12 51 48.1	+0.3
JCH				*e*S	Sn	12 52 01.1	+0.8
JKB	Kayabe	1.09	265	⇓P	Pn	12 51 50.7	+0.5
JKB				*e*S	Sn	12 52 05.0	+0.5

JEW	**Eniwo**	**1.15**	**318**	⇓P	**Pn**	**12 51 51.7**	**+0.7**
JNB	**Noboribetsu**	**1.18**	**295**	⇓P	**Pn**	**12 51 51.3**	**0.0**
JNB				*e*S	**Sn**	**12 52 06.9**	**+0.3**
JFR	**Furan**	**1.18**	**4**	P	**Pn**	**12 51 51.6**	**+0.2**
JOT	**Ohata**	**1.23**	**241**	⇓P	**Pn**	**12 51 52.7**	**+0.6**
JOT				*e*S	**Sn**	**12 52 08.6**	**+0.7**
JOB	**Onbets**	**1.36**	**47**	⇑P	**Pn**	**12 51 55.0**	**+1.3**
JOB				*e*S	**Sn**	**12 52 12.8**	**+2.0**
JAB	**Ashibetsu**	**1.53**	**353**	P	**Pn**	**12 51 57.3**	**+1.3**
JAB				*e*S	**Sn**	**12 52 17.8**	**+2.8**
JYM2	**Yakumo 2**	**1.58**	**276**	⇓P	**Pn**	**12 51 57.4**	**+0.7**
JYM2				*e*S	**Sn**	**12 52 18.1**	**+1.9**
JTM	**Tenmabayashi**	**1.60**	**222**	P	**Pn**	**12 51 58.5**	**+1.5**
JTM				*e*S	**Sn**	**12 52 18.8**	**+2.1**
JSR	**Shiriuchi**	**1.61**	**254**	P	**Pn**	**12 51 57.9**	**+0.8**
JSR				*e*S	**Sn**	**12 52 18.5**	**+1.6**
JAR	**Ashorobuto**	**1.62**	**35**	P	**Pn**	**12 51 57.6**	**+0.4**
JAR				*e*S	**Sn**	**12 52 17.7**	**+0.6**
ASAJ	**Asahikawa**	**2.13**	**2**	P	**Pn**	**12 52 05.5**	**+1.3**
	11nm,0.3s,baz=199,slow=14,SNR=179						
ASAJ				S	**Sn**	**12 52 32.9**	**+3.4**
	6.3nm,0.3s,baz=80,slow=25,SNR=19						
MJAR	**Matsushiro Arr**	**6.37**	**213**	P	**Pn**	**12 53 04.5**	**+2.4**
	0.2nm,0.3s,baz=28,slow=14,SNR=3.2						
KSRS	**Korea Array**	**12.09**	**253**	P	**P**	**12 54 27.2**	**-3.7**
	0.1nm,0.3s,baz=66,slow=14,SNR=5.1						
JNU	**Nakatsue**	**12.76**	**230**	LR	LR	13 00 15.8	
	comp=Z,1μm,19.6s,baz=328,slow=40						
H11N2	**WAKE ISLAND Hy**	**30.32**	**130**	T	T	13 29 15.3	
	baz=324,slow=75,SNR=18						
H11N1	**WAKE ISLAND Hy**	**30.33**	**130**	T	T	13 29 19.7	
	baz=324,slow=75,SNR=17						
H11N3	**WAKE ISLAND Hy**	**30.34**	**130**	T	T	13 29 14.8	
	baz=324,slow=75,SNR=15						
H11S1	**WAKE ISLAND Hy**	**31.18**	**131**	T	T	13 30 17.7	
	baz=325,slow=76,SNR=28						
H11S3	**WAKE ISLAND Hy**	**31.19**	**131**	T	T	13 30 18.3	
	baz=325,slow=76,SNR=31						
H11S2	**WAKE ISLAND Hy**	**31.20**	**131**	T	T	13 30 18.9	
	baz=325,slow=76,SNR=19						
BVAR	**Borovoye Array**	**47.97**	**309**	P	**P**	**13 00 02.7**	**-0.3**
	0.4nm,0.4s,baz=90,slow=10,SNR=2.9						
WRA	**Warramunga Arr**	**62.07**	**189**	P	**P**	**13 01 44.9**	**0.0**
	0.3nm,0.8s,baz=7.4,slow=6.6,SNR=1.8						
HFS	**Hagfors**	**69.93**	**335**	P	**P**	**13 02 35.1**	**+0.1**
	0.4nm,0.4s,baz=42,slow=6.6,SNR=1.4						

IDC 25 12:55:49.2±986.0**, 47˚.83N**×**46˚.16E, h0**^{km}**, Error ellipse:**
s-maj=430.9km s-min=193.3km az=133.0,
Ukraine-Moldova-Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**10.45**	**332**	*i*		14 05 50.0	
	baz=143,slow=317,SNR=1.3						
I26DE	**FREYUNG INFRAS**	**21.51**	**285**	*i*		15 03 55.0	
	baz=81,slow=300,SNR=5.6						
I48TN	**KESRA INFRASON**	**29.69**	**260**	*i*		15 59 40.0	
	baz=56,slow=315,SNR=0.6						

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*IDC **25** 12:56:59.9±0.9, 41˚.67N×81˚.90E, h0^{km}, mb3.9/10, mb1 4.0/13, mb1mx3.7/68, mbtmp3.9/13, ML3.6/4, Error ellipse: s-maj=18.7km s-min=14.9km az=68.0*

*SOME **25** 12:57:02.1, 41˚.80N×81˚.78E, h10^{km}*

*BJI **25** 12:57:03.9, 41˚.84N×81˚.68E, h11^{km}, ML3.8/10*

*NNC **25** 12:57:05.1±4.0, 41˚.91N×81˚.67E, h0^{km}, mb4.2, mpv3.8, Error ellipse: s-maj=33.3km s-min=21.0km az=146.0*

ISC 25 12:57:02.5±1.7**, 41˚.82N**±0˚.05×**81˚.68E**±0˚.04**, h3**^{km}±10^{km}**,**
n52, σ**2**^{s}**30**/78**, mb3.9**/10**, 17C-12D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	**Ketmen**	**1.90**	**329**	*e*P	**Pb**	**12 57 38.5**	**+0.7**
	224nm,0.2s						
KTMS				*e*S	**Sg**	**12 58 04.2**	**+0.6**
	1μm,0.5s						
SHLS	**Shalkode**	**2.12**	**310**	*e*P	**Pn**	**12 57 38.8**	**-0.2**
	321nm,0.2s						
SHLS				*e*S	**Sn**	**12 58 05.0**	**-0.8**
	3μm,0.4s						
PDGK	**Podgornoye**	**2.21**	**314**	⇑Pn	**Pb**	**12 57 43.0**	**-0.3**
	106nm,0.4s						
PDGK				⇑Sn	**Sg**	**12 58 13.2**	**-0.5**
	618nm,0.7s						
UZB	**Uzynbulak**	**2.38**	**305**	*e*P	**Pb**	**12 57 46.4**	**+0.4**
	90nm,0.5s						
UZB				*e*S	**Sb**	**12 58 17.3**	**+1.6**
	620nm,0.4s						
SATY	**Saty**	**2.73**	**298**	*e*P	**Pb**	**12 57 54.2**	**+2.3**
	268nm,0.7s						
SATY				*e*S	**Sg**	**12 58 30.8**	**+0.7**
	302nm,0.2s						
ZHN	**Zhinishke**	**2.75**	**300**	*e*P	**Pb**	**12 57 53.8**	**+1.4**
	53nm,0.6s						
ZHN				*e*S	**Sg**	**12 58 29.9**	**-1.1**
	277nm,0.3s						
KPKS	**Kokpek**	**2.76**	**308**	*e*P	**Pb**	**12 57 51.8**	**-0.7**
	146nm,0.2s						
KPKS				*e*S	**Sb**	**12 58 26.4**	**-0.3**
	710nm,0.5s						
DJR	**Jarkent**	**2.87**	**332**	*e*P	**Pb**	**12 57 56.1**	**+1.7**
	37nm,0.4s						
DJR				*e*S	**Sg**	**12 58 34.2**	**-0.5**
	135nm,0.6s						
KURS	**Kuram**	**3.08**	**304**	*e*P	**Pb**	**12 57 59.8**	**+1.8**
	44nm,0.5s						
KURS				*e*S	**Sg**	**12 58 40.6**	**-0.9**
	107nm,0.5s						
KOTS	**Kotyrbulak**	**3.66**	**294**	*e*P	**Pb**	**12 58 08.4**	**+0.4**
	32nm,0.4s						
KOTS				*e*S	**Sb**	**12 58 55.2**	**+2.4**
	199nm,0.5s						
MDOK	**Medeo**	**3.68**	**293**	*e*P	**Pb**	**12 58 09.7**	**+1.4**
	35nm,0.4s						
MDOK				*e*S	**Sb**	**12 58 57.5**	**+4.1**
	85nm,0.5s						
ARXS	**Arharly**	**3.71**	**312**	*e*P	**Pb**	**12 58 11.3**	**+2.7**
	41nm,0.7s						
ARXS				*e*S	**Sg**	**12 58 59.2**	**-2.3**
	54nm,0.5s						
TNSS	**Tian-Shan**	**3.71**	**291**	*e*P	**Pb**	**12 58 09.0**	**+0.1**
	23nm,0.4s						
TNSS				*e*S	**Sb**	**12 58 58.2**	**+3.7**
	80nm,0.3s						
KNDC	**Almaty**	**3.76**	**293**	⇑Pg	**Pn**	**12 58 03.6**	**+2.3**
	50nm,0.5s						
KNDC				⇑Lg	Lg	12 59 01.2	
	315nm,0.9s						
AAA	**Alma-Ata**	**3.79**	**293**	*e*P	**Pg**	**12 58 14.8**	**-0.3**
	52nm,0.2s						
AAA				*e*S	**Sg**	**12 59 05.1**	**+0.9**
	136nm,0.7s						
KAPS	**Kapalarasan**	**3.86**	**335**	*e*P	**Pb**	**12 58 11.4**	**+0.2**
	34nm,0.3s						
KAPS				*e*S	**Sb**	**12 59 00.6**	**+2.4**
	68nm,0.4s						
IZV	**Izvestkoviy**	**3.95**	**290**	*e*P	**Pb**	**12 58 13.9**	**+1.1**
	73nm,0.4s						
IZV				*e*S	**Sb**	**12 59 04.8**	**+3.8**
	159nm,0.4s						
TDK	**Taldyqorghan**	**3.98**	**324**	*e*P	**Pb**	**12 58 14.7**	**+1.5**
	89nm,0.4s						
TDK				*e*S	**Sg**	**12 59 06.0**	**-4.3**
	314nm,1.1s						
CHKK	**Chushkaly**	**4.01**	**302**	*e*P	**Pb**	**12 58 16.2**	**+2.5**
	18nm,0.8s						
CHKK				*e*S	**Sg**	**12 59 08.9**	**-2.3**
	92nm,0.6s						
KTBS	**Karatobe**	**4.14**	**299**	*e*P	**Pb**	**12 58 18.4**	**+2.4**
	21nm,0.4s						
KTBS				*e*S	**Sb**	**12 59 11.4**	**+5.0**
	63nm,0.6s						
KST	**Kastek**	**4.41**	**288**	*e*P	**Pb**	**12 58 22.4**	**+1.8**
	25nm,0.7s						
KST				⇓*i*S	**Sg**	**12 59 21.1**	**-3.0**
	72nm,0.7s						
KUU	**Kurty**	**4.44**	**300**	⇑*i*P	**Pg**	**12 58 25.8**	**-1.9**
	18nm,0.9s						
KUU				⇑*i*S	**Sg**	**12 59 24.2**	**-1.0**
	86nm,0.5s						
DGS	**Degeres**	**4.59**	**290**	*e*P	**Pb**	**12 58 28.5**	**+4.8**
	21nm,0.6s						
DGS				*e*S	**Sg**	**12 59 29.0**	**-1.1**
	46nm,0.6s						
TKM2	**Tokmak 2**	**4.64**	**286**	⇑Pn	**Pn**	**12 58 15.8**	**+2.2**
	3.8nm,0.3s						
TKM2				⇓Pg	**Pb**	**12 58 28.3**	**+3.7**
	11nm,0.6s						
TKM2				⇓Lg	Lg	12 59 30.5	
	35nm,0.6s						
WMQ	**Urumqi**	**4.85**	**64**	Pn	**Pn**	**12 58 17.5**	**+1.1**
WMQ				Sn	**Sn**	**12 59 13.5**	**+0.4**
WMQ				smax	smax		
	comp=N,220nm,0.7s						
WMQ				smax	smax		
	comp=E,210nm,0.7s						
MKAR	**Makanchi Array**	**4.99**	**5**	Pn	**Pn**	**12 58 20.2**	**+1.9**
	4.9nm,0.3s,baz=182,slow=15,SNR=241						
MKAR				Pg	**Pb**	**12 58 34.2**	**+3.7**
	5.2nm,0.3s,baz=184,slow=15,SNR=14						
MKAR				Sn	**Sn**	**12 59 19.6**	**+3.1**
	3.9nm,0.3s,baz=190,slow=16,SNR=4.3						
MKAR				Lg	Lg	12 59 40.4	
	11nm,0.3s,baz=185,slow=28,SNR=8.3						
MK31	**Makanchi Array**	**5.00**	**5**	⇑Pn	**Pn**	**12 58 20.1**	**+1.8**
	4.1nm,0.3s,baz=191,slow=13,SNR=248						
MK31				⇓Pg	**Pb**	**12 58 34.2**	**+3.7**
	3.0nm,0.3s,baz=188,slow=16,SNR=14						
MK31				⇑Lg	Lg	12 59 38.1	
	5.5nm,0.3s,baz=188,slow=29,SNR=5.2						
AAK	**Ala-Archa**	**5.40**	**281**	Pg	**Pb**	**12 58 41.7**	**+4.1**
	2.1nm,0.3s,baz=80,slow=15,SNR=9.8						
AAK				Lg	Lg	12 59 54.2	
	1.9nm,0.3s,baz=219,slow=19,SNR=6.7						
AAK	**Ala-Archa**	**5.40**	**281**	⇓Pg	**Pg**	**12 58 44.7**	**-1.3**
	9.5nm,0.6s						
AAK				⇑Lg	Lg	12 59 55.0	
	46nm,0.8s						
ZSN	**Zaisan**	**6.07**	**21**	⇓*i*P	**Pb**	**12 58 53.4**	**+4.5**
	3.8nm,0.5s						
ZSN				⇓*i*S	**Sg**	**13 00 14.2**	**-3.2**
	12nm,0.7s						
MRKS	**Merke**	**6.34**	**281**	⇑*i*P	Pg	12 59 01.1	-2.9
	6.1nm,0.6s						
MRKS				⇓*i*S	**Sg**	**13 00 23.3**	**-2.8**
	12nm,0.6s						
BTLS	**Baital**	**6.43**	**303**	*e*P	Pb	12 59 00.9	+6.1
	10nm,0.8s						
BTLS				*e*S	**Sg**	**13 00 24.2**	**-4.6**
	10nm,0.6s						
SFK	**Sufi-Kurgan**	**6.45**	**256**	⇑Pg	**Pg**	**12 59 07.4**	**+1.3**
	2.2nm,0.6s						
SFK				⇑Lg	Lg	13 00 35.9	
	5.7nm,0.5s						
MNAS	**Manas**	**6.86**	**279**	⇓Lg	Lg	13 00 40.2	
	6.3nm,0.6s						
KK31	**Karatay Array**	**8.36**	**283**	⇓Pg	**Pg**	**12 59 40.8**	**-1.7**
	0.8nm,0.3s						
KK31				Lg	Lg	13 01 31.5	
	1.5nm,0.5s,baz=91,slow=26,SNR=4.4						
KURBB	**Kurchatov Arra**	**9.07**	**347**	Pn	**Pn**	**12 59 14.8**	**+0.6**
	0.1nm,0.3s,baz=174,slow=12,SNR=8.3						
KURBB				Sn	**Sn**	**13 00 57.1**	**+0.3**
	0.3nm,0.3s,baz=157,slow=24,SNR=5.0						
KURBB				Lg	Lg	13 01 50.8	
	0.2nm,0.3s,baz=164,slow=34,SNR=4.9						
KURBB	**Kurchatov Arra**	**9.07**	**347**	⇓Pn	Pn	12 59 20.0	+5.7
	1.2nm,0.3s						
KURBB				⇓Sn	**Sn**	**13 00 58.7**	**+1.9**
	11nm,0.6s						
KURBB				⇑Lg	Lg	13 01 49.8	
	27nm,0.8s						
KURK	**Kurchatov**	**9.15**	**348**	⇑Pn	**Pn**	**12 59 18.5**	**+3.2**
	7.5nm,1.0s						
KURK				⇑Sn	**Sn**	**13 00 57.3**	**-1.3**
	5.2nm,0.5s						
KURK				⇑Lg	Lg	13 01 50.2	
	12nm,0.6s						
AKTO	**Aktyubinsk**	**18.47**	**306**	P	**P**	**13 01 19.0**	**-0.2**
	0.4nm,0.3s,baz=106,slow=12,SNR=3.5						
SONM	**Songino Array**	**18.49**	**63**	P	**P**	**13 01 16.4**	**-3.3**
	0.2nm,0.3s,baz=254,slow=12,SNR=6.6						
ARU	**Arti**	**20.89**	**322**	P	Pn	13 01 47.8	-0.3
	5.2nm,0.2s,baz=117,slow=12,SNR=5.5						
HHC	**Hu-ho-hao-te**	**22.41**	**82**	*e*P	**P**	**13 02 02.0**	**-0.2**
HHC				pmax	pmax		
	comp=Z,18nm,1.0s						
HHC				pmax	pmax		
	comp=Z,690nm,6.6s						
BRTR	**Keskin Array B**	**36.07**	**283**	P	**P**	**13 04 06.1**	**+0.7**
	comp=Z,0.6nm,0.4s,baz=60,slow=8.5,SNR=5.7						
HFS	**Hagfors**	**44.33**	**318**	P	**P**	**13 05 12.7**	**-0.7**
	comp=Z,1.1nm,0.6s,baz=88,slow=9.2,SNR=5.6						
NB2	**NORSAR Subarra**	**45.42**	**320**	P	**P**	**13 05 21.2**	**-0.9**
	comp=Z,0.6nm,0.5s,baz=81,slow=7.9						
NOA	**NORSAR Array B**	**45.42**	**320**	P	**P**	**13 05 21.4**	**-0.7**
	comp=Z,0.3nm,0.6s,baz=83,slow=7.2,SNR=3.9						
INK	**Inuvik**	**67.07**	**13**	P	**P**	**13 07 55.4**	**-1.1**
	comp=Z,1.9nm,1.0s,baz=316,slow=4.6,SNR=4.2						
ILAR	**Eielson Array**	**67.16**	**20**	P	**P**	**13 07 55.5**	**-1.6**
	comp=Z,0.7nm,0.7s,baz=313,slow=5.3,SNR=10.0						
TORD	**Torodi Ar. Bea**	**73.94**	**273**	P	**P**	**13 08 37.5**	**-1.7**
	comp=Z,0.4nm,0.5s,baz=48,slow=4.9						
WRA	**Warramunga Arr**	**78.38**	**130**	P	P	13 09 01.2	-3.1
	comp=Z,0.4nm,0.9s,baz=318,slow=6.8,SNR=3.0						
ASAR	**Alice Springs**	**81.10**	**133**	P	**P**	**13 09 16.9**	**-2.2**
	comp=Z,0.2nm,0.9s,baz=337,slow=6.2,SNR=2.4						
STKA	**Stephens Creek**	**91.73**	**133**	P	P	13 10 06.9	-4.3
	comp=Z,2.5nm,0.8s,baz=306,slow=15,SNR=2.4						

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*KRNET **25** 13:03:44.1±0.1, 41˚.26N×72˚.36E, h18^{km}, mb2.7*

*SOME **25** 13:03:45.0, 41˚.32N×72˚.43E, h5^{km}*

*NNC **25** 13:03:45.1±2.7, 41˚.31N×72˚.56E, h0^{km}, mb2.7, mpv2.5, Error ellipse: s-maj=29.4km s-min=17.2km az=73.0*

ISC 25 13:03:44.4±1.3**, 41˚.29N**±0˚.04×**72˚.43E**±0˚.03**, h5**^{km}±11^{km}**,**
n20, σ**0**^{s}**84**/35**, 19C-13D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARSB	**Arslanbob**	**0.42**	**85**	⇑*i*P	**Pg**	**13 03 53.0**	**+0.5**
	baz=82						
ARSB				⇑*i*S	**Sb**	**13 04 00.2**	**-0.9**
	baz=82						
ARK	**Arkit**	**0.62**	**326**	⇑*i*P	**Pg**	**13 03 56.2**	**-0.1**
	baz=32						
ARK				⇑*i*S	**Sg**	**13 04 04.2**	**-0.2**
	baz=32						
TOKL	**Toktogul**	**0.73**	**27**	⇓*i*P	**Pg**	**13 03 58.8**	**+0.3**
	baz=29						
TOKL				⇓*i*S	**Sb**	**13 04 09.5**	**-0.6**
	baz=29						
MNAS	**Manas**	**1.20**	**3**	⇑Pg	**Pn**	**13 04 09.4**	**+1.4**
	1.2nm,0.2s						
MNAS				⇑Lg	Lg	13 04 24.2	
	6.6nm,0.3s						
MNAS	**Manas**	**1.20**	**3**	⇑*i*P	**Pg**	**13 04 06.8**	**-0.6**
	baz=5.0						
MNAS				⇑*i*S	**Sb**	**13 04 24.1**	**+0.5**
	baz=5.0						
AML	**Almayashu**	**1.27**	**48**	⇑*i*P	**Pg**	**13 04 08.6**	**-0.2**
	baz=48						
AML				⇑*i*S	**Sn**	**13 04 26.8**	**0.0**
	baz=48						
SFK	**Sufi-Kurgan**	**1.51**	**147**	⇓Pg	**Pn**	**13 04 13.0**	**+0.7**
	2.4nm,0.2s						
SFK				⇑Lg	Lg	13 04 32.9	
	12nm,0.2s						
SFK	**Sufi-Kurgan**	**1.51**	**147**	⇓*i*P	**Pn**	**13 04 12.4**	**+0.1**
	baz=45						
SFK				⇓*i*S	**Sn**	**13 04 32.8**	**+0.3**
	baz=45						
MRKS	**Merke**	**1.57**	**22**	*e*P	**Pn**	**13 04 13.7**	**+0.7**
	18nm,0.3s						
MRKS				*e*S	**Sg**	**13 04 35.0**	**0.0**
	93nm,0.4s						
EKS2	**Erkin-Say**	**1.70**	**36**	⇓*i*P	**Pb**	**13 04 16.3**	**0.0**
	baz=37						
EKS2				⇓*i*S	**Sg**	**13 04 39.7**	**+0.5**
	baz=37						
BTK	**Batken**	**1.73**	**225**	⇓*i*P	**Pn**	**13 04 14.6**	**-0.6**
	baz=25						
BTK				⇓*i*S	**Sn**	**13 04 37.2**	**-0.5**
	baz=25						
UCH	**Uchtor**	**1.82**	**58**	⇑*i*P	**Pb**	**13 04 18.6**	**+0.1**
	baz=58						
UCH				⇑*i*S	**Sg**	**13 04 43.6**	**+0.6**
	baz=58						
DRK	**Karamyk**	**1.87**	**195**	⇑*i*P	**Pn**	**13 04 17.2**	**0.0**
	baz=94						
DRK				⇑*i*S	**Sn**	**13 04 41.7**	**+0.4**
	baz=94						
IUG	**Iuzhnay**	**1.99**	**296**	*e*P	**Pb**	**13 04 21.5**	**+0.4**
	19nm,0.2s						
IUG				*e*S	**Sg**	**13 04 47.9**	**-0.4**
	154nm,0.4s						
AAK	**Ala-Archa**	**2.05**	**48**	⇑Pg	**Pb**	**13 04 22.9**	**+0.7**
	1.1nm,0.3s						
AAK				⇓Lg	Lg	13 04 49.2	
	10nm,0.5s						
AAK	**Ala-Archa**	**2.05**	**48**	⇑*i*P	**Pb**	**13 04 21.5**	**-0.7**
	baz=49						
AAK				⇑*i*S	**Sb**	**13 04 48.7**	**+0.7**
	baz=49						
KK31	**Karatay Array**	**2.31**	**323**	⇓Pg	**Pb**	**13 04 27.0**	**+0.5**
	1.1nm,0.3s,baz=142,slow=12,SNR=19						
KK31				⇑Lg	Lg	13 04 55.9	
	3.1nm,0.3s,baz=131,slow=27,SNR=4.3						
BRLS	**Borolday**	**2.60**	**313**	*e*P	**Pb**	**13 04 31.2**	**-0.2**
	1.9nm,0.2s						
BRLS				*e*S	**Sb**	**13 05 03.9**	**+0.3**
	4.1nm,0.4s						
TKM2	**Tokmak 2**	**2.87**	**54**	⇓Pg	**Pn**	**13 04 28.2**	**-2.7**
	0.5nm,0.4s						
TKM2				⇓Lg	Lg	13 05 14.3	
	3.1nm,0.3s						
DGS	**Degeres**	**3.16**	**51**	*e*P	**Pb**	**13 04 42.5**	**+1.5**
	3.0nm,0.5s						
DGS				*e*S	**Sg**	**13 05 24.0**	**-1.9**
	12nm,0.5s						

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*IDC **25** 13:08:53.0±1.3, 32˚.34N×47˚.07E, h0^{km}, mb3.9/11, mb1 3.9/13, mb1mx3.7/56, mbtmp3.9/13, ML3.7/2, Error ellipse: s-maj=30.7km s-min=18.4km az=169.0*

*THR **25** 13:08:54.5±0.3, 32˚.50N×46˚.74E, h18^{km}±4^{km}, ML3.7*

*ISN **25** 13:08:55.1±1.0, 32˚.49N×46˚.92E, h10^{km}±4^{km}, ML3.7*

*CSEM **25** 13:08:56.5±0.2, 32˚.47N×46˚.93E, h10^{km}, ML3.7, Error ellipse: s-maj=5.9km s-min=4.2km az=8.0*

*ISCJB **25** 13:08:56.0±0.5, 32˚.46N±0˚.05×46˚.90E±0˚.04, h20^{km}, mb3.8/11, Error ellipse: s-maj=7.8km s-min=4.4km az=176.7*

*TEH **25** 13:08:57.7, 32˚.54N×46˚.94E, h10^{km}, ML3.7*

ISC 25 13:08:56.9±0.6**, 32˚.45N**±0˚.05×**46˚.86E**±0˚.03**, h20**^{km}**, n69,**
σ**1**^{s}**42**/70**, mb3.9**/11**, Iran-Iraq border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
IKFM	**Kafar-mosalman**	**1.35**	**37**	*e*Pg	**Pn**	**13 09 18.8**	**-1.8**
IKFM				*e*		13 09 43.0	
	comp=Z,99nm,0.3s						
NSR	**Nassriya**	**1.56**	**203**	*e*Pn	**Pb**	**13 09 25.0**	**-0.1**
	SNR=4.0						
NSR				*e*Sn	**Sb**	**13 09 47.0**	**+2.6**
	SNR=4.0						
SHGR	**Shooshtar-Gavs**	**1.68**	**101**	*e*Pg	**Pb**	**13 09 27.1**	**+0.1**
SHGR				*e*Sg	**Sb**	**13 09 51.0**	**+3.2**
SHGR				IAML		13 09 53.8	
	comp=N,957nm,0.4s						
SHGR				IAML		13 09 57.1	
	comp=E,1μm,0.6s						
SHGR	**Shooshtar-Gavs**	**1.68**	**101**	*e*Pg	**Pb**	**13 09 27.1**	**+0.1**
SHGR				*e*Sg	**Sb**	**13 09 51.0**	**+3.2**
IKOM	**Komasi**	**1.80**	**17**	*e*Pn	**Pn**	**13 09 27.0**	**0.0**
IKOM				*e*		13 09 52.4	
	comp=Z,99nm,0.5s						
IKOM	**Komasi**	**1.80**	**17**	*e*Pn	**Pn**	**13 09 27.0**	**0.0**
KCHF	**Cheshme Sefid,**	**1.83**	**5**	*e*Pn	**Pn**	**13 09 28.2**	**+0.9**
KCHF				*e*		13 09 58.0	
	comp=Z,99nm,0.2s						
KCHF	**Cheshme Sefid,**	**1.83**	**5**	*e*Pn	**Pn**	**13 09 28.2**	**+0.9**
IVIS	**Veis**	**2.07**	**360**	*e*Pn	**Pn**	**13 09 30.8**	**+0.2**
IVIS				*e*		13 10 05.7	
	comp=N,30μm,0.3s						
IVIS				*e*		13 10 05.7	
	comp=E,12μm,0.4s						
IVIS				*e*		13 10 05.8	
	comp=Z,9μm,0.3s						
IVIS	**Veis**	**2.07**	**360**	*e*Pn	**Pn**	**13 09 30.8**	**+0.2**
IBZA	**Bozab**	**2.18**	**22**	*e*Pn	**Pn**	**13 09 32.3**	**0.0**
IBZA				*e*		13 10 11.2	
	comp=Z,99nm,0.4s						
IBZA	**Bozab**	**2.18**	**22**	*e*Pn	**Pn**	**13 09 32.3**	**0.0**
BHD	**Baghdad**	**2.24**	**292**	*e*Pn	**Pn**	**13 09 34.0**	**+1.2**
	SNR=4.0						
BHD				*e*Sn	**Sb**	**13 10 03.0**	**-1.0**
	SNR=4.0						
HSAM	**Samen**	**2.28**	**39**	*e*Pn	**Pn**	**13 09 34.2**	**+0.5**
HSAM				*e*		13 10 08.9	
	comp=Z,99nm,0.3s						
HSAM	**Samen**	**2.28**	**39**	*e*Pn	**Pn**	**13 09 34.2**	**+0.5**
ILIN	**Lien**	**2.46**	**2**	*e*		13 10 19.2	
	comp=E,6μm,0.2s						
ILIN				*e*		13 10 19.8	
	comp=Z,5μm,0.3s						
KHMZ	**Khomeyn**	**2.90**	**63**	*e*Pn	**Pn**	**13 09 43.0**	**+0.9**
KHMZ				IAML		13 10 32.3	
	comp=N,128nm,0.6s						
KHMZ	**Khomeyn**	**2.90**	**63**	*e*Pn	**Pn**	**13 09 43.1**	**+0.9**
KHMZ	**Khomeyn**	**2.90**	**63**	*e*Pn	**Pn**	**13 09 43.0**	**+0.9**
HAGD	**Aghdareh**	**3.04**	**38**	*e*Pn	**Pn**	**13 09 44.3**	**+0.3**
HAGD				*e*		13 09 49.4	
	comp=Z,99nm,0.1s						
HAGD	**Aghdareh**	**3.04**	**38**	*e*Pn	**Pn**	**13 09 44.3**	**+0.3**
ASAO	**Ashtian**	**3.37**	**51**	*e*Pn	**Pn**	**13 09 49.2**	**+0.6**
ASAO				*e*Sg	**Sb**	**13 10 41.1**	**+4.4**
ASAO				IAML		13 10 54.7	
	comp=E,88nm,0.6s						
ASAO	**Ashtian**	**3.37**	**51**	*e*Pn	**Pn**	**13 09 49.3**	**+0.6**
ASAO	**Ashtian**	**3.37**	**51**	*e*Pn	**Pn**	**13 09 49.2**	**+0.6**
HKZM	**Kohzaman**	**3.38**	**30**	*e*Pn	**Pn**	**13 09 49.4**	**+0.7**
HKZM				*e*		13 10 37.7	
	comp=Z,99nm,0.3s						
HKZM	**Kohzaman**	**3.38**	**30**	*e*Pn	**Pn**	**13 09 49.4**	**+0.7**
ZNGN	**Zangian**	**3.40**	**95**	*e*		13 11 08.9	
	comp=Z,99nm,0.3s						
ROKH	**ROKH**	**3.53**	**91**	*e*Pn	**Pn**	**13 09 51.1**	**+0.3**
ROKH	**ROKH**	**3.53**	**91**	*e*Pn	**Pn**	**13 09 51.1**	**+0.3**
IRAZ	**Razeghan**	**3.90**	**40**	*e*Pn	**Pn**	**13 09 57.5**	**+1.7**
IRAZ				*e*		13 11 13.8	
	comp=Z,2μm,0.4s						
IRAZ	**Razeghan**	**3.90**	**40**	*e*Pn	**Pn**	**13 09 57.5**	**+1.7**
IKLH	**Kolahrood**	**4.06**	**76**	*e*Pn	**Pn**	**13 09 59.0**	**+0.9**
IKLH				*e*		13 10 02.0	
	comp=Z,1μm,0.2s						
IKLH				*e*		13 11 16.1	
	comp=E,2μm,0.3s						
IKLH				*e*		13 11 17.6	
	comp=N,2μm,0.5s						
IKLH	**Kolahrood**	**4.06**	**76**	*e*Pn	**Pn**	**13 09 59.0**	**+0.9**
GHVR	**GHOM**	**4.22**	**60**	*e*Pn	**Pn**	**13 10 00.6**	**+0.4**
GHVR	**GHOM**	**4.22**	**60**	*e*Pn	**Pn**	**13 10 00.6**	**+0.4**
GHVR	**GHOM**	**4.22**	**60**	*e*Pn	**Pn**	**13 10 00.6**	**+0.4**
IGAR	**Gharneh**	**4.38**	**89**	*e*Pn	**Pn**	**13 10 02.3**	**-0.2**
IGAR				*e*		13 10 55.9	
	comp=N,2μm,0.2s						
IGAR				*e*		13 10 56.5	
	comp=Z,1μm,0.2s						
ZNJK	**Zanjan**	**4.47**	**19**	*e*Pn	**Pn**	**13 10 03.7**	**0.0**
ZNJK	**Zanjan**	**4.47**	**19**	*e*Pn	**Pn**	**13 10 03.7**	**0.0**
ZNJK	**Zanjan**	**4.47**	**19**	*e*Pn	**Pn**	**13 10 03.7**	**0.0**
IMHD	**Mahdasht**	**4.51**	**43**	*e*		13 10 21.3	
	comp=Z,407nm,0.2s						
IMHD				*e*Pn	**Pn**	**13 10 04.9**	**+0.7**
IMHD				*e*		13 11 20.6	
	comp=E,795nm,0.2s						
IMHD				*e*		13 11 22.9	
	comp=N,1μm,0.3s						
IZEF	**Zefreh**	**4.63**	**83**	*e*Pn	**Pn**	**13 10 06.4**	**+0.4**
IZEF				*e*		13 11 25.1	
	comp=E,631nm,0.4s						
IZEF				*e*		13 11 32.6	
	comp=Z,392nm,0.3s						
IZEF				*e*		13 11 33.5	
	comp=N,502nm,0.3s						
IZEF	**Zefreh**	**4.63**	**83**	*e*Pn	**Pn**	**13 10 06.4**	**+0.4**
IRAM	**Ramesheh**	**4.73**	**96**	*e*Pn	**Pn**	**13 10 07.4**	**+0.2**
IRAM				*e*		13 11 03.5	
	comp=N,605nm,0.2s						
IRAM				*e*		13 11 05.9	
	comp=E,520nm,0.3s						
IRAM				*e*		13 11 09.5	
	comp=Z,423nm,0.3s						
IRAM	**Ramesheh**	**4.73**	**96**	*e*Pn	**Pn**	**13 10 07.4**	**+0.2**
IGZV	**Ghazvin**	**4.81**	**34**	*e*		13 10 23.1	
	comp=Z,610nm,0.3s						

IGZV				*e*Pn	Pn	13 10 07.6	-0.7
IGZV				*e*		13 11 14.3	
	comp=N,657nm,0.3s						
IGZV				*e*		13 11 37.7	
	comp=E,656nm,0.4s						
ISFB	Sefidab	4.88	66	*e*Pn	Pn	13 10 08.3	-0.9
ISFB				*e*		13 11 37.8	
	comp=E,540nm,0.3s						
ISFB	Sefidab	4.88	66	*e*Pn	Pn	13 10 08.3	-0.9
IDMV	Damavand	5.31	53	*e*		13 11 57.2	
	comp=Z,697nm,0.5s						
RTB	Rutbah	5.55	278	*e*Pn	Pn	13 10 20.0	+1.6
	SNR=4.0						
RTB				*e*Sn	Sn	13 11 23.0	+1.3
	SNR=4.0						
ANAR	Anarak	5.83	81	*e*Pn	Pn	13 10 23.3	+1.0
ANAR				*e*		13 12 19.0	
	comp=Z,99nm,0.5s						
ANAR	Anarak	5.83	81	*e*Pn	Pn	13 10 23.3	+1.0
IFIR	Firoozkooh	5.83	55	*e*Pn	Pn	13 10 22.1	-0.4
IFIR				*e*		13 10 32.0	
	comp=Z,169nm,0.1s						
IFIR				*e*		13 12 13.4	
	comp=E,510nm,0.4s						
IFIR				*e*		13 12 15.8	
	comp=N,298nm,0.3s						
IFIR	Firoozkooh	5.83	55	*e*Pn	Pn	13 10 22.1	-0.4
IALA	Alasht	6.11	52	*e*		13 11 53.0	
	comp=Z,353nm,0.1s						
IGLO	Ghaloghah	7.03	53	*e*		13 11 32.9	
	comp=N,528nm,0.4s						
IGLO				*e*		13 11 39.5	
	comp=E,378nm,0.3s						
WSAR	Wadi Sarin	13.87	128	Pn	Pn	13 12 06.8	-5.5
	comp=E,0.2nm,0.3s,baz=300,slow=8.1,SNR=1.6						
WSAR				Sn	Sn	13 14 39.3	-6.5
	comp=E,0.2nm,0.3s,baz=113,slow=9.2,SNR=3.7						
AKTO	Aktyubinsk	19.78	21	P	P	13 13 24.4	-1.3
	comp=E,0.4nm,0.3s,baz=204,slow=10.0,SNR=2.2						
AKASG	Malin Array Be	22.41	330	P	P	13 13 54.9	+0.9
	comp=E,1.7nm,0.7s,baz=137,slow=9.5,SNR=4.0						
ARU	Arti	25.32	15	P	P	13 14 22.2	+0.3
	comp=E,4.6nm,0.2s,baz=279,slow=18,SNR=1.1						
BVAR	Borovoye Array	26.64	33	P	P	13 14 33.6	-0.5
	comp=E,3.7nm,0.8s,baz=218,slow=9.0,SNR=12						
KURBB	Kurchatov Arra	29.54	43	P	P	13 14 59.4	-0.5
	comp=E,1.0nm,0.6s,baz=248,slow=9.3,SNR=8.1						
MKAR	Makanchi Array	30.53	52	P	P	13 15 08.5	-0.3
	comp=E,1.7nm,0.8s,baz=249,slow=6.4,SNR=15						
ZALV	Zalesovo Beam	34.44	40	P	P	13 15 40.3	-2.5
	comp=E,1.2nm,0.3s,baz=265,slow=10.0,SNR=1.4						
HFS	Hagfors	35.26	332	P	P	13 15 49.9	0.0
	comp=E,2.0nm,0.8s,baz=144,slow=12,SNR=2.4						
ESDC	Sonseca Array	41.26	295	P	P	13 16 41.8	+1.1
	comp=E,0.1nm,0.3s,baz=75,slow=9.3,SNR=1.8						
EKA	Eskdalemuir Ar	41.53	319	P	P	13 16 42.8	+0.2
	comp=E,0.5nm,0.5s,baz=104,slow=8.8,SNR=1.7						
TORD	Torodi Ar. Bea	45.46	256	P	P	13 17 15.6	+0.7
	comp=E,0.8nm,0.8s,baz=36,slow=7.5						
KSRS	Korea Array	64.67	60	P	P	13 19 31.4	-1.9
	comp=E,0.9nm,0.7s,baz=283,slow=6.7,SNR=7.8						

KLM ***25*** *13:27:49.0, 5°.66N×126°.31E, h100^{km}, mb4.9*
BJI ***25*** *13:27:49.1, 5°.27N×126°.51E, h139^{km}, mb4.8/50, mB5.2/22*
ISCJB ***25*** *13:27:52.4±0.3, 5°.56N±0°.02×126°.47E±0°.03, h147^{km}±2^{km}, mb4.6/114, Error ellipse: s-maj=4.7km s-min=2.5km az=174.1*
MAN ***25*** *13:27:52.9, 5°.56N×126°.44E, h131^{km}, mb5.4, ML4.4, MS4.6*
MOS ***25*** *13:27:52.9±0.9, 5°.53N×126°.43E, h155^{km}, mb4.6/30, Error ellipse: s-maj=10.9km s-min=5.5km az=109.3*
NEIC ***25*** *13:27:53.5±0.5, 5°.53N×126°.45E, h146^{km}±4^{km}, mb4.8/67, Error ellipse: s-maj=4.6km s-min=3.0km az=80.0*
NEIC Felt [II PIVS] at Davao.
IDC ***25*** *13:27:53.1±1.1, 5°.54N×126°.41E, h139^{km}±9^{km}, mb4.3/33, mb1 4.3/34, mb1mx4.3/49, mbtmp4.7/34, Error ellipse: s-maj=13.5km s-min=8.1km az=73.0*
DJA ***25*** *13:27:54.4±0.3, 5°N±3°×12°6E±°, h133^{km}±3^{km}, M4.8/56, mb5.0/56, mB5.3/26, MLv5.5/12, Mw(mB)4.7/26, Mwp6.8/1*
ISC 25 13:27:53.1±0.6**, 5°.50N**±0°.03×**126°.48E**±0°.05**, h140**^{km}±5^{km}**, n319,** σ1^{s}**22**/351**, mb4.7**/114**, 13C-12D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	Don Marcelino,	0.97	308	*e*P	Pn	13 28 15.6	-1.0
DDMP				*e*S	Sn	13 28 33.4	-1.1
MATI	Mati	1.45	351	*e*P	Pn	13 28 20.9	-0.5
GSPH	General Santos	1.63	291	⇓*i*P	Pn	13 28 22.9	-0.6
GSPH				*i* S	Sn	13 28 44.9	-1.7
DAV	Davao City (W)	1.79	330	P	Pn	13 28 25.9	+0.7
	773nm,0.3s,baz=117,slow=1.9,SNR=52						
DAV				S	Sn	13 28 51.6	+1.7
	2µm,0.3s,baz=120,slow=20,SNR=48						
DAV				LR	LR	13 29 21.0	
	comp=Z,2µm,21.6s,baz=334,slow=51						
DMPH	Davao City--Mi	1.84	329	⇑*e*P	Pn	13 28 28.4	+2.6
DMPH				*i* S	Sn	13 28 54.0	+3.1
SKMP	Bagumbayan, Su	2.17	298	*e*P	Pn	13 28 28.8	-0.8
SKMP				*e*S	Sn	13 28 57.5	-0.3
BIPH	Bislig	2.67	358	⇑*e*P	Pn	13 28 35.1	-0.7
BIPH				*i* S	Sn	13 29 07.6	-1.3
BUKP	Musuan	2.75	329	*e*P	Pn	13 28 37.0	+0.1
BUKP				*e*S	Sn	13 29 11.0	+0.2
CTBH	Cotabato--PC H	2.80	308	⇑*e*P	Pn	13 28 37.0	-0.4
CTBH				*i* S	Sn	13 29 09.8	-1.9
CGP	Cagayan de Oro	3.43	329	⇑*e*P	Pn	13 28 45.6	0.0
CGP				*e*S	Sn	13 29 24.7	-1.5
BUTP	Butuan	3.55	346	*e*P	Pn	13 28 47.5	+0.3
BUTP				*e*S	Sn	13 29 33.6	+4.5
PAGZ	Pagadian	3.86	307	*e*P	Pn	13 28 50.5	-0.7
SCPH	Surigao	4.36	347	*e*P	Pn	13 28 58.8	+0.8
SCPH				*e*S	Sn	13 29 47.9	-0.5
TNTI	Ternate	4.78	169	P	Pn	13 29 03.5	0.0
TNTI				S	Sn	13 29 55.4	-2.9
TNTI	Ternate	4.78	169	*e*Pn	Pn	13 29 03.2	-0.3
MSLP	Maasin	4.87	341	*e*P	Pn	13 29 04.6	-0.1
MSLP				*e*S	Sn	13 29 59.7	-0.7
TBP	Tagbilaran	4.90	328	*e*P	Pn	13 29 03.9	-1.2
LLP	Lapu-Lapu	5.39	333	⇓*e*P	Pn	13 29 10.8	-0.8
LLP				*e*S	Sn	13 30 16.6	+3.8
KMSI	Cibinong	5.49	207	P	Pn	13 29 14.2	+1.3
OCLP	Ormoc	5.81	342	*e*P	Pn	13 29 17.5	+0.2
PLP	Palo	5.82	345	⇓*e*P	Pn	13 29 17.3	0.0
PLP				*e*S	Sn	13 30 27.0	+3.9
LBMI	Labuha	6.18	170	P	Pn	13 29 23.1	+0.9
LBMI				S	Sn	13 30 29.8	-2.1
GUIM	Jordan	6.38	323	*e*P	Pn	13 29 24.0	-0.8
MRSI	Marisa	6.74	222	P	Pn	13 29 31.1	+1.5
RCP	Roxas	7.06	329	⇑*e*P	Pn	13 29 34.8	+0.9
LUWI	Luwuk	7.48	210	P	Pn	13 29 41.3	+1.7
LUWI	Luwuk	7.48	210	*e*Pn	Pn	13 29 38.6	-1.0
SANI	Sanana	7.52	184	P	Pn	13 29 37.6	-2.5
CUYO	Cuyo Island	7.58	315	*e*P	Pn	13 29 39.8	-1.1
MYLDM	Lahad Datu	7.95	268	*e*Pn	Pn	13 29 46.9	+1.0
APSI	Ampana	7.99	217	P	Pn	13 29 48.7	+2.3
OTRP	Odiongan	8.11	327	*e*P	Pn	13 29 49.8	+1.7
PALU	Palau	8.16	77	P	Pn	13 29 44.4	-4.3
	baz=8.1,SNR=33						
MPSI	Mapaga	8.33	232	P	Pn	13 29 51.1	+0.1
NLAI	Namlea	8.70	176	P	Pn	13 29 54.7	-1.3
SJMP	San Jose	8.71	323	*e*P	Pn	13 29 56.2	+0.2
PCI	Palu	9.19	226	P	Pn	13 30 05.1	+2.6
	245nm,1.2s,3µm						
AAI	Ambon	9.29	169	P	Pn	13 30 03.4	-0.4
KDI	Kendari	10.15	202	P	Pn	13 30 15.5	+0.1
	118nm,0.6s,2µm						
FAKI	Fak Fak	10.16	145	P	Pn	13 30 16.9	+1.4
FAKI	Fak Fak	10.16	145	*e*Pn	Pn	13 30 15.9	+0.5
KKM	Kota Kinabalu	10.22	274	*e*Pn	Pn	13 30 16.7	+0.3
RKPI	Ransiki, Papua	10.38	132	P	Pn	13 30 20.9	+2.5
TTSI	Tana Toraja	10.78	218	P	Pn	13 30 25.6	+1.9
SPSI	Sidrap Palu	11.54	216	P	Pn	13 30 34.0	+0.2
SRPI	Serui, Papua	12.20	127	P	P	13 30 47.7	-1.2
BKSI	Bulukumba	12.48	211	P	Pn	13 30 44.6	-1.4
MTKI	Muara Teweh, K	13.22	241	P	Pn	13 30 57.0	+1.5
SBUM	Sibu	14.54	259	*e*P	P	13 31 14.3	-0.7
MMRI	Maumere	14.66	197	P	Pn	13 31 15.1	+1.2
MMRI	Maumere	14.66	197	*e*Pn	Pn	13 31 12.7	-1.2
EDFI	Ende, Flores	14.94	199	P	Pn	13 31 17.6	+0.2
SOEI	Soe	15.31	188	P	P	13 31 24.5	+0.8
SOEI	Soe	15.31	188	*e*Pn	P	13 31 23.4	-0.3
	120nm,0.8s						
BATI	Baumata	15.85	190	P	P	13 31 30.8	+1.2
STKI	Sintang	15.92	251	P	P	13 31 31.9	+1.6
WBSI	Waikabubak, Su	16.62	205	P	P	13 31 38.9	+0.9
KSM	Kuching	16.62	257	*e*Pn	P	13 31 39.4	+1.3
	71nm,0.9s						
KSM	Kuching	16.62	257	P	P	13 31 41.0	+2.9
PLAI	Plampang	16.67	211	P	Pn	13 31 39.0	+0.4
PBKI	Pangkalan Bun	16.89	241	P	Pn	13 31 44.0	+2.7
TWSI	Taliwang, Sumb	17.07	214	P	Pn	13 31 44.5	+1.0
TWG	Pinlang	17.99	344	*e*P	P	13 31 52.0	-1.1
	168nm,0.9s						
YULB	Yu-li	18.48	345	*e*P	P	13 31 56.1	-2.3
	26nm,0.9s						
JAGI	Jajag, Banyuwa	18.54	222	P	Pn	13 32 00.1	-0.9
JAGI	Jajag, Banyuwa	18.54	222	*e*P	P	13 31 57.8	-1.3
	56nm,0.8s						
TPUB	Ta-pu	18.57	343	*e*P	P	13 31 57.9	-1.5
	120nm,0.9s						
MTN	Manton Dam	18.80	166	P	Pn	13 32 03.5	-0.6
	baz=19,SNR=23						
MTN	Manton Dam	18.80	166	*e*P	P	13 32 02.1	+0.2
	48nm,0.9s						
GMJI	Gumukmas	18.87	224	P	Pn	13 32 04.5	-0.3
SSLB	Suanglung	18.94	344	*e*P	P	13 32 02.6	-0.8
	42nm,0.8s						
KDU	Kakadu	19.03	162	P	P	13 32 05.7	+1.4
	baz=19,SNR=35						
YOJ	Yonaguni jima	19.14	350	*e*P	Pn	13 32 06.4	-1.6
	90nm,0.9s						
YOJ	Yonaguni jima	19.14	350	*e*P	Pn	13 32 06.4	-1.6
YOJ				pmax	pmax		
	comp=Z,90nm,0.9s						
NACB	Ninganchiao	19.15	346	*e*P	P	13 32 05.0	-0.7
	comp=Z,29nm,0.9s						
YHNB	Yeheng	19.68	346	*e*P	P	13 32 11.5	0.0
	comp=Z,53nm,0.7s						
NGJI	Ngawi	19.69	230	P	Pn	13 32 14.4	-0.1
GUMO	Guam	19.83	65	P	P	13 32 12.6	-0.4
	comp=Z,4.2nm,0.3s,baz=14,slow=19,SNR=4.6						
GUMO	Guam	19.83	65	*e*P	P	13 32 12.6	-0.4
	comp=Z,90nm,1.1s						
GUMO	Guam	19.83	65	*e*P	P	13 32 12.6	-0.4
GUMO				pmax	pmax		
	comp=Z,90nm,1.1s						
PWJI	Pagerwojo	19.86	228	P	P	13 32 13.6	+0.1
TATO	Taipei	19.95	347	*e*P	P	13 32 14.6	+0.4
	comp=Z,168nm,1.5s						
SMRI	Semarang	20.28	232	P	Pn	13 32 19.8	-1.7
SMRI	Semarang	20.28	232	*e*P	P	13 32 19.4	+1.3
	comp=Z,150nm,1.1s						
KNRA	Kununurra	21.16	174	P	P	13 32 28.5	+1.2
	baz=21,SNR=58						
JOW	Kunigami	21.28	4	P	P	13 32 30.1	+1.6
	comp=Z,24nm,0.7s,baz=211,slow=9.0,SNR=7.9						
JOW	Kunigami	21.28	4	*e*P	P	13 32 30.0	+1.4
	comp=Z,31nm,0.8s						
GZH	Guangzhou	21.59	325	*e*P	P	13 32 33.3	+1.4
KPJI	Karang Pucung	21.66	234	P	P	13 32 33.0	+0.3
DSRI	Dabo	22.66	255	P	P	13 32 45.0	+2.2
	comp=Z,128nm,1.1s						
UBPT	Khong Chiam	22.81	297	P	P	13 32 44.2	+0.1
	comp=Z,18nm,1.0s						
MYKOM	Kota Tinggi	22.87	262	*e*P	P	13 32 45.3	+0.5
	comp=Z,92nm,1.3s						
MDSI	Maura Dua	24.38	246	P	P	13 33 00.2	+1.7
SKNT	Sakolnakorn	24.80	299	P	P	13 33 02.4	+0.1
	comp=Z,17nm,0.8s						
PMG	Port Moresby	25.38	126	P	P	13 33 07.9	+0.3
	comp=Z,28nm,0.7s,baz=60,slow=3.9,SNR=8.6						
COEN	Coen	25.46	140	P	P	13 33 09.1	+0.7
	baz=26,SNR=59						
COEN	Coen	25.46	140	*e*P	P	13 33 08.7	+0.4
	comp=Z,48nm,0.7s						
MASI	Maura Aman, Be	25.68	251	P	P	13 33 14.2	+3.8
NONG	Nongkai	25.98	301	P	P	13 33 15.7	+2.7
	comp=Z,0.2nm,1.7s						
CBIJ	Chichi jima	26.18	33	*e*P	P	13 33 12.4	-2.3
	comp=Z,59nm,0.6s						
JCJ	Chichijima	26.18	33	P	P	13 33 12.9	-1.7
	comp=Z,39nm,0.4s,baz=275,slow=12						
WRAB	Tennant Creek	26.43	163	*e*P	P	13 33 17.3	+0.2
	comp=Z,62nm,1.5s						
WRAB	Tennant Creek	26.43	163	⇓*e*P	P	13 33 17.4	+0.4
WRAB				pmax	pmax		
	comp=Z,32nm,1.8s						
WRA	Warramunga Arr	26.44	163	P	P	13 33 17.3	+0.2
	comp=Z,4.5nm,0.3s,baz=332,slow=11,SNR=141						
WRA				S	S	13 37 39.3	-1.3
	comp=Z,2.8nm,0.9s,baz=332,slow=15,SNR=6.9						
WRA				ScP	ScP	13 40 06.9	+0.9
	comp=Z,1.6nm,0.9s,baz=337,slow=3.2,SNR=6.0						
WRA	Warramunga Arr	26.44	163	*i* P	P	13 33 16.5	-0.6
WRA				pmax	pmax		
	comp=Z,5.0nm,0.3s						
WB2	Warramunga Arr	26.45	163	*e*P	P	13 33 17.2	+0.1
	comp=Z,22nm,0.9s						
MBWA	Marble Bar	27.31	194	*e*P	P	13 33 25.0	+0.2
	comp=Z,42nm,1.0s						
NJ2	Nanjing	27.36	346	*e*P	P	13 33 27.5	+2.3
NJ2				pmax	pmax		
	comp=Z,14nm,0.5s						
PSI	Prapat	27.61	266	*e*P	P	13 33 27.3	-0.4
	comp=Z,16nm,1.0s						
PSI	Prapat	27.61	266	*e*P	P	13 33 27.3	-0.4
PSI				pmax	pmax		
	comp=Z,16nm,1.0s						
JNU	Nakatsue	27.79	8	P	P	13 33 28.0	-1.0
	comp=Z,12nm,0.9s,baz=183,slow=4.7,SNR=8.0						
JNU	Nakatsue	27.79	8	*e*P	P	13 33 28.1	-0.9
	comp=Z,18nm,1.0s						
GYA	Guiyang	28.14	320	*e*P	P	13 33 34.0	+1.6
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NANT	Nan	28.39	300	P	P	13 33 35.1	+0.5
	comp=Z,7.3nm,0.5s						
KCSI	Kotacane, Aceh	28.68	267	P	P	13 33 36.3	-0.9
QIS	Mount Isa	28.93	154	P	P	13 33 40.4	+1.1
	baz=29,SNR=28						
GSI	Gunungsitoli	29.14	263	P	P	13 33 40.1	-1.1
GSI	Gunungsitoli	29.14	263	*e*P	P	13 33 39.8	-1.4
	comp=Z,57nm,1.1s						
LAMP	Lampang	29.21	299	P	P	13 33 43.1	+1.3
	comp=Z,3.3nm,0.6s						
MTSU	Mount Surprise	29.35	144	P	P	13 33 44.2	+1.2
	baz=30,SNR=29						
ENH	Enshi	29.38	329	*e*P	P	13 33 42.4	-0.8
	comp=Z,19nm,0.8s						
CM01	Chiang Mai Arr	29.76	298	*e*P	P	13 33 46.1	-0.6
CM31	Chiang Mai Arr	29.79	298	*e*P	P	13 33 47.4	+0.5
CMAR	Chiang Mai Arr	29.79	298	P	P	13 33 46.6	-0.3
	comp=Z,6.2nm,0.6s,baz=105,slow=7.0,SNR=30						
CMAR				PcP	PcP	13 36 48.8	+1.5
	comp=Z,0.5nm,0.5s,baz=123,slow=3.3,SNR=4.4						
CMAR				ScP	ScP	13 40 17.5	+1.0
	comp=Z,3.5nm,0.8s,baz=104,slow=1.2,SNR=16						
AS31	Alice Springs	29.88	166	*e*P	P	13 33 47.8	+0.1
	comp=Z,4.3nm,0.5s						
ASAR	Alice Springs	29.88	166	P	P	13 33 48.4	+0.7
	comp=Z,6.8nm,0.4s,baz=344,slow=7.1,SNR=111						
ASAR				PcP	PcP	13 36 48.1	+0.7
	comp=Z,3.5nm,0.5s,baz=342,slow=2.1,SNR=8.5						
ASAR				ScP	ScP	13 40 17.4	+0.7
	comp=Z,1.4nm,0.6s,baz=347,slow=3.3,SNR=6.7						
AS01	Alice Springs	29.89	166	*e*P	P	13 33 48.0	+0.2
CMMT	Chiang Mai	29.92	299	P	P	13 33 48.3	+0.2
	comp=Z,14nm,0.6s						
CHTO	Chiang Mai	29.93	299	*e*P	P	13 33 42.0	-6.2
	comp=Z,10nm,0.6s						
CHTO	Chiang Mai	29.93	299	*e*P	P	13 33 42.0	-6.1
CHTO				pmax	pmax		
	comp=Z,11nm,0.6s						
CHTO	Chiang Mai	29.93	299	P	P	13 33 48.5	+0.4
	comp=Z,60nm,0.6s						
KMI	Kunming	29.97	313	P	P	13 33 49.3	+0.6
KMI				pmax	pmax		
	comp=Z,20nm,1.2s						
KMI				pmax	pmax		
	comp=Z,500nm,13.0s						
WRKA	Warakurna	30.41	177	P	P	13 33 53.1	+0.8
	baz=31,SNR=43						
GIRL	Giralia	30.43	203	P	P	13 33 54.6	+2.2
	baz=31,SNR=3.8						
TJN	Taejon	30.74	1	⇑*e*P	P	13 33 56.9	+1.9
TIA	Tai’an	31.75	346	P	P	13 34 04.5	+0.6
TIA				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KS15	Wonju Array Si	31.82	2	*e*P	P	13 34 05.0	+0.6
KSAR	Wonju Array Be	31.82	2	P	P	13 34 05.0	+0.6
KSAR				PcP	PcP	13 36 53.5	+1.2
KSAR				ScP	ScP	13 40 22.7	-0.1
KSAR	Wonju Array Be	31.82	2	P	P	13 34 05.1	+0.6
KSAR						13 36 53.5	
KSRS	Korea Array	31.83	2	P	P	13 34 05.0	+0.5
	comp=Z,3.9nm,0.8s,baz=178,slow=11,SNR=26						
KSRS				PcP	PcP	13 36 53.5	+1.2
	comp=Z,1.3nm,0.5s,baz=176,slow=2.8,SNR=7.3						
KSRS				ScP	ScP	13 40 22.7	-0.1
	comp=Z,0.6nm,0.5s,baz=197,slow=3.6,SNR=5.3						
KS01	Wonju Array Si	31.85	2	*e*P	P	13 34 04.9	+0.1
KS01				*e*PcP	PcP	13 36 53.4	+1.0
CTAO	Charters Tower	32.01	143	*e*P	P	13 34 07.1	+0.7
	comp=Z,16nm,0.8s						
CTAO	Charters Tower	32.01	143	*e*P	P	13 34 07.1	+0.7
CTAO				pmax	pmax		
	comp=Z,16nm,0.8s						
MAJO	Matsushiro	32.72	18	⇑*i*P	P	13 34 10.8	-1.6
MAJO				pmax	pmax		
	comp=Z,9.0nm,1.6s						
MJAR	Matsushiro Arr	32.72	18	P	P	13 34 10.4	-1.9
	comp=Z,2.1nm,0.9s,baz=198,slow=9.6,SNR=7.1						
MJAR				ScP	ScP	13 40 26.9	+1.0
	comp=Z,3.3nm,0.9s,baz=199,slow=4.1,SNR=7.7						
XAN	Xi’an	32.73	332	P	P	13 34 11.5	-1.1
XAN				pmax	pmax		
	comp=Z,35nm,0.8s						
XAN				pmax	pmax		
	comp=Z,180nm,7.4s						
MEEK	Meekatharra	32.84	193	P	P	13 34 13.9	+0.3
	baz=33,SNR=28						
CD2	Chengdu	33.08	323	*e*P	P	13 34 16.0	+0.3
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
DL2	Dalian	33.54	353	P	P	13 34 20.5	+1.0
DL2				pmax	pmax		
	comp=Z,56nm,0.7s						
BJT	Baijiatuau	35.60	346	*e*P	P	13 34 37.0	-0.2
	comp=Z,58nm,1.1s						
BJT	Baijiatuau	35.60	346	*e*P	P	13 34 37.0	-0.2
BJT				pmax	pmax		
	comp=Z,58nm,1.1s						
BJI	Beijing	35.62	346	⇓*e*P	P	13 34 37.8	+0.5
BJI				pmax	pmax		
	comp=Z,63nm,1.0s						
MORW	Morawa	35.81	196	P	P	13 34 39.5	+0.4
	baz=36,SNR=10						
FORT	Forrest	36.11	178	P	P	13 34 42.7	+1.1
	baz=36,SNR=39						
FORT	Forrest	36.11	178	*e*P	P	13 34 42.5	+1.0
	comp=Z,93nm,0.6s						
QLP	Quilpie	36.24	152	P	P	13 34 43.4	+0.6
	baz=36,SNR=10						
LZH	Lanzhou	36.86	329	*e*P	P	13 34 48.8	+0.6
LZH				pP	pP	13 35 21.5	+2.7
LZH				sP	sP	13 35 36.0	+1.2
LZH				pmax	pmax		
	comp=Z,21nm,1.1s						
LZH				LR	LR		
	comp=Z,1µm,17.4s						
LZH				LR	LR		
	comp=Z,1µm,16.3s						
LZH				LR	LR		
	comp=Z,2µm,17.9s						
KMBL	Kambalda	36.92	187	P	P	13 34 49.4	+0.9
	baz=37,SNR=17						
BLDU	Ballidu	37.11	194	P	P	13 34 50.6	+0.5
	baz=37,SNR=18						
MSHR	Mys Shultsa	37.16	6	*de*P	P	13 34 51.2	+0.8
HHC	Hu-ho-hao-te	37.65	341	*e*P	P	13 34 55.8	+1.1
HHC				PP	PnPn	13 36 30.0	+3.7
HHC				S	S	13 40 42.8	+8.6
HHC				sS	sS	13 41 28.5	+0.8
HHC				pmax	pmax		
	comp=Z,20nm,1.1s						
HHC				pmax	pmax		
	comp=Z,480nm,7.4s						
KLBR	Kellerberrin	37.81	192	P	P	13 34 56.7	+0.7
	baz=38,SNR=17						
RMQ	Roma	38.44	147	P	P	13 35 02.3	+0.9
	baz=39,SNR=4.7						
MUN	Mundaring	38.53	194	P	P	13 35 02.9	+0.8
	baz=39,SNR=9.0						
SHL	Shillong	38.65	305	*e*P	P	13 35 02.5	-0.9
	comp=Z,64nm,0.9s						
SHL	Shillong	38.65	305	*e*P	P	13 35 06.5	+3.1
SHL	Shillong	38.65	305	*e*P	P	13 35 02.5	-0.9
SHL				pmax	pmax		
	comp=Z,64nm,0.9s						
USRK	Ussuriysk Ar.	38.85	6	P	P	13 35 05.3	+0.7
	comp=Z,5.4nm,0.7s,baz=185,slow=7.3						
EIDS	Eidsvold	38.90	143	P	P	13 35 06.0	+0.8
	baz=39,SNR=4.1						
EIDS	Eidsvold	38.90	143	*e*P	P	13 35 05.7	+0.4
	comp=Z,10nm,0.8s						
MDJ	Mudanjiang	39.05	4	*e*P	P	13 35 06.5	+0.2
	comp=Z,18nm,1.1s						
BBOO	Buckleboo	39.17	167	P	P	13 35 08.7	+1.3
	baz=40,SNR=42						
NWAO	Narrogin (SRO)	39.21	192	*e*P	P	13 35 08.1	+0.4
	comp=Z,54nm,0.8s						
NWAO	Narrogin (SRO)	39.21	192	*e*P	P	13 35 08.1	+0.4
NWAO				pmax	pmax		
	comp=Z,54nm,0.8s						
STKA	Stephens Creek	39.87	160	P	P	13 35 14.4	+1.3
	comp=Z,24nm,0.8s,baz=335,slow=9.0,SNR=25						
STKA	Stephens Creek	39.87	160	P	P	13 35 14.5	+1.3
	baz=40,SNR=8.6						
STKA	Stephens Creek	39.87	160	*e*P	P	13 35 14.1	+0.9
	comp=Z,5.5nm,0.8s						
STKA	Stephens Creek	39.87	160	*e*P	P	13 35 14.1	+0.9
STKA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
HTT	Hallett	40.48	164	P	P	13 35 20.0	+1.8
	baz=41,SNR=8.5						
RKGY	Rocky Gully	40.89	192	P	P	13 35 23.8	+2.3
	baz=41,SNR=20						
ASAJ	Asahikawa	40.99	18	P	P	13 35 23.0	+0.8
	comp=Z,6.2nm,0.7s,baz=242,slow=9.7,SNR=17						
ASAJ	Asahikawa	40.99	18	*e*P	P	13 35 22.0	-0.2
	comp=Z,13nm,1.0s						
LSA	Lhasa	41.10	310	*e*P	P	13 35 24.2	+0.3
	comp=Z,44nm,1.8s						
LSA	Lhasa	41.10	310	*e*P	P	13 35 24.2	+0.3
LSA				pmax	pmax		
	comp=Z,44nm,1.8s						
CMSA	Cobar Meteorol	41.15	155	P	P	13 35 25.1	+1.4
	baz=41,SNR=26						
GTA	Gaotai	41.46	328	*e*P	P	13 35 25.8	-0.5
GTA				pP	pP	13 35 57.0	-0.5
GTA				sP	sP	13 36 13.0	-0.3
ODAN	Odare	42.86	304	*e*P	P	13 35 37.4	-0.6
	comp=Z,80nm,0.8s						
ARMA	Armidale	43.08	147	P	P	13 35 40.4	+0.9
	baz=43,SNR=10.0						
ARMA	Armidale	43.08	147	*e*P	P	13 35 41.0	+1.4
	comp=Z,11nm,0.7s						
RAMN	Ramite	43.54	304	*e*P	P	13 35 43.3	-0.2
	comp=Z,84nm,0.8s						
YSS	Yuzh-Sakhalins	43.62	16	*e*P	P	13 35 43.1	-0.3
	comp=Z,14nm,1.1s						
YSS	Yuzh-Sakhalins	43.62	16	⇑*e*P	P	13 35 43.7	+0.3
YSS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KUR	Kuril’sk	43.75	22	⇓*e*P	P	13 35 44.6	+0.1
KLR	Kul’dur	43.80	5	P	P	13 35 45.1	+0.2
	comp=Z,0.3nm,0.4s,baz=201,slow=4.3,SNR=17						
HIA	Hailar	43.98	354	*e*P	P	13 35 46.4	0.0
HIA	Hailar	43.98	354	*e*P	P	13 35 46.4	0.0
JIRN	Jiri	44.15	305	*e*P	P	13 35 48.0	-0.5
	comp=Z,144nm,0.7s						
ARPS	Mount Arapiles	44.44	162	P	P	13 35 52.0	+1.9
	baz=45,SNR=14						
GUN	Gumba	44.50	305	*e*P	P	13 35 50.9	-0.3
	comp=Z,130nm,0.7s						
YNG	Young	44.67	154	P	P	13 35 53.5	+1.5
	baz=45,SNR=6.2						
PKIN	Phulchoki	44.77	304	*e*P	P	13 35 52.1	-1.2
	comp=Z,28nm,0.7s						
KKN	Kakani	44.94	304	*e*P	P	13 35 53.7	-0.9
	comp=Z,48nm,0.7s						
DMN	Daman	45.02	304	*e*P	P	13 35 54.5	-0.8
	comp=Z,65nm,0.9s						

SONM	Songino Array	45.55	341	P	P	13 35 59.1	+0.1
	comp=Z,4.5nm,0.5s,baz=154,slow=9.0,SNR=20						
SONM				PcP	PcP	13 37 35.1	-0.1
	comp=Z,2.2nm,0.7s,baz=132,slow=1.9,SNR=5.1						
SONM				ScP	ScP	13 41 14.7	-0.5
	comp=Z,1.3nm,1.0s,baz=172,slow=4.8,SNR=5.2						
GKN	Gorkha	45.55	304	*e*P	P	13 35 58.4	-0.9
	comp=Z,32nm,0.7s						
SONA1	Songino Array	45.56	341	*e*P	P	13 35 58.6	-0.4
KOLN	Koldanda	46.33	304	*e*P	P	13 36 05.0	-0.5
	comp=Z,133nm,0.6s						
DANN	Dangsing	46.40	304	*e*P	P	13 36 05.6	-0.5
	comp=Z,164nm,0.6s						
PYUN	Piuthan	46.95	304	*e*P	P	13 36 10.1	-0.2
	comp=Z,103nm,0.7s						
ZEA	Zeya	48.09	1	*e*P	P	13 36 18.1	-0.3
ZEA				pmax	pmax		
	comp=Z,13nm,0.8s						
ZAK	Zakamensk	48.78	340	*e*P	P	13 36 22.1	-1.8
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TLY	Talaya	49.78	342	*e*P	P	13 36 33.2	+1.8
TLY				pmax	pmax		
	comp=Z,8.0nm,0.6s						
TLY				MLR	MLR		
	comp=Z,1μm,19.0s						
MOY	Mondy	50.64	340	*e*P	P	13 36 39.3	+1.3
WMQ	Urumqi	51.14	324	P	P	13 36 43.5	+1.7
WMQ				LR	LR		
	comp=Z,2μm,24.9s						
WMQ				LR	LR		
	comp=Z,1μm,19.7s						
WMQ				LR	LR		
	comp=Z,2μm,18.7s						
HVS	Khovu-Aksy	53.04	335⇓	*e*P	P	13 36 56.4	+0.7
HVS				pmax	pmax		
	comp=Z,15nm,1.0s						
BOD	Bodaibo	53.09	352	*e*P	P	13 36 56.4	+0.6
BOD				pmax	pmax		
	comp=Z,22nm,1.3s						
PETK	Petropavlovsk-	53.90	23	P	P	13 37 02.4	+0.6
	comp=Z,6.3nm,0.8s,baz=178,slow=3.9						
PETK	Petropavlovsk-	53.90	23	*e*P	P	13 37 02.1	+0.3
PETK	Petropavlovsk-	53.90	23	*e*P	P	13 37 02.1	+0.3
PDGK	Podgornoye	55.90	320	*i* P	P	13 37 15.7	-0.9
PDGK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
MK01	Makanchi Array	55.95	325	*e*P	P	13 37 15.8	-0.9
MK31	Makanchi Array	55.97	325	*e*P	P	13 37 16.2	-0.7
MK31	Makanchi Array	55.97	325	*e*P	P	13 37 16.2	-0.7
MKAR	Makanchi Array	55.97	325	P	P	13 37 16.4	-0.5
	comp=Z,6.4nm,0.6s,baz=124,slow=8.1,SNR=59						
MKAR				PcP	PcP	13 38 12.8	-1.0
	comp=Z,8.9nm,0.7s,baz=120,slow=4.2,SNR=12						
MKAR				ScP	ScP	13 41 59.3	-0.6
	comp=Z,0.9nm,0.7s,baz=121,slow=3.6,SNR=5.5						
MKAR	Makanchi Array	55.97	325	*e*P	P	13 37 16.1	-0.8
	comp=Z,52nm,0.6s						
MKAR				PcP	PcP	13 38 12.8	-1.0
MKAR				ScP	ScP	13 41 59.2	-0.6
MAKZ	Makanchi	56.16	325	*e*P	P	13 37 17.3	-0.9
	comp=Z,7.2nm,0.6s						
MAKZ	Makanchi	56.16	325	*e*P	P	13 37 17.3	-0.9
MAKZ				pmax	pmax		
	comp=Z,7.0nm,0.6s						
YAK	Yakutsk	56.46	2	*e*P	P	13 37 20.5	+0.5
	comp=Z,56nm,0.9s						
YAK	Yakutsk	56.46	2	*e*P	P	13 37 19.4	-0.6
YAK				pmax	pmax		
	comp=Z,43nm,0.9s						
YAK				pmax	pmax		
	comp=N,11nm,1.1s						
YAK				pmax	pmax		
	comp=E,4.0nm,1.0s						
KSH	Kashi	56.62	314	*e*P	P	13 37 22.8	+1.0
KSH				sP	PcP	13 38 13.0	-3.6
KSH				*e*PcP	sP	13 38 17.5	+7.4
KSH				*e*PP	PP	13 39 32.0	+2.7
TKM2	Tokmak 2	58.26	318	P	P	13 37 32.2	-1.1
TKM2				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ZALV	Zalesovo Beam	58.91	333	P	P	13 37 36.5	-0.8
	comp=Z,2.1nm,0.3s,baz=115,slow=6.8,SNR=2.5						
KURBB	Kurchatov Arra	60.12	327	P	P	13 37 45.3	-0.3
	comp=Z,6.5nm,0.6s,baz=128,slow=6.6,SNR=34						
KURK	Kurchatov	60.12	327	*e*P	P	13 37 45.0	-0.7
	comp=Z,17nm,1.0s						
KURK	Kurchatov	60.12	327	*e*P	P	13 37 45.0	-0.7
KURK				pmax	pmax		
	comp=Z,17nm,1.0s						
MNAS	Manas	60.19	316	P	P	13 37 46.9	+0.4
NVS	Novosibirsk	60.19	333	*e*P	P	13 37 44.6	-1.4
KBL	Kabul	60.26	307	*e*P	P	13 37 46.3	-0.9
	comp=Z,8.1nm,0.7s						
KBL	Kabul	60.26	307	*e*P	P	13 37 46.3	-0.9
KBL				pmax	pmax		
	comp=Z,8.0nm,0.7s						
SEY	Seymchan	60.38	13⇓	*e*P	P	13 37 49.1	+1.9
KK31	Karatay Array	61.78	316	*e*P	P	13 37 56.1	-1.0
KK31	Karatay Array	61.78	316	*e*P	P	13 37 56.1	-1.0
KKAR	Karatay Array	61.78	316	*e*P	P	13 37 56.1	-0.9
KKAR	Karatay Array	61.78	316	*e*P	P	13 37 56.1	-0.9
BVAR	Borovoye Array	65.71	327	P	P	13 38 22.4	-0.2
	comp=Z,5.7nm,0.9s,baz=126,slow=7.4,SNR=22						
BRVK	Borovoye	65.78	327	*e*P	P	13 38 22.2	-0.8
	comp=Z,19nm,1.3s						
BRVK	Borovoye	65.78	327	*ce*P	P	13 38 22.7	-0.3
BRVK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
TIXI	Tiksi	66.09	1	*ce*P	P	13 38 25.0	+0.4
TIXI				pmax	pmax		
	comp=Z,15nm,1.1s						
WSAR	Wadi Sarin	67.50	293	P	P	13 38 33.8	-0.8
	comp=Z,4.5nm,0.8s,baz=75,slow=5.7,SNR=2.8						
GEYT	Alibeck	69.60	308	P	P	13 38 46.5	-0.9
	comp=Z,1.7nm,0.7s,baz=117,slow=5.6,SNR=5.8						
ABKAR	Akbulak array	70.63	320	*e*P	P	13 38 52.5	-0.8
MSEY	Mahe Island	71.61	263	*i* P	P	13 39 00.3	+0.3
AKTO	Aktyubinsk	72.12	321	P	P	13 39 01.8	-0.5
	comp=Z,4.2nm,0.5s,baz=96,slow=12,SNR=24						
CASY	Casey	72.53	187	*e*P	P	13 39 04.2	-0.1
	comp=Z,18nm,0.8s						
ARU	Arti	73.31	327	*e*P	P	13 39 08.0	-1.2
	comp=Z,7.9nm,0.7s						
ARU	Arti	73.31	327	*d i*P	P	13 39 08.1	-1.1
ARU						13 41 48.8	
ARU				S	S	13 48 25.1	-1.3
ARU				pmax	pmax		
	comp=Z,11nm,1.0s						
MIR	Mirnyy	75.81	193⇓	*i*P	P	13 39 27.0	+3.7
MIR				pmax	pmax		
	comp=Z,63nm,1.0s						
SVW2	Sparrevohn	79.38	29	*e*P	P	13 39 43.7	+0.3
RAYN	Ar Rayn	79.56	293	*e*P	P	13 39 44.1	-1.0
	comp=Z,6.3nm,0.9s						
RAYN	Ar Rayn	79.56	293	*e*P	P	13 39 44.2	-1.0
RAYN				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KDAK	Kodiak Island	80.54	32	*i* P	P	13 39 50.3	+0.7
PRGR	Permogore	80.83	331	*e*P	P	13 39 50.5	-0.6
PRGR				pmax	pmax		
	comp=Z,34nm,0.4s						
SKT	Skwentna	81.41	28	*e*P	P	13 39 54.1	-0.1
	comp=Z,5.5nm,1.0s						
BRLK	Bradley Lake	81.57	30	*e*P	P	13 39 53.1	-2.0
	comp=Z,7.1nm,0.8s						
KBZ	Khabaz	81.59	313	P	P	13 39 54.8	-0.6
	comp=Z,1.5nm,0.5s,baz=131,slow=9.3,SNR=3.1						
OPO	Ambohidratompo	81.64	250	P	P	13 39 56.0	-0.5
	comp=Z,2.2nm,0.5s,baz=104,slow=4.2,SNR=3.8						
KIV	Kislovodsk	81.74	313	*e*P	P	13 39 55.9	-0.5
KIV				*e*		13 43 04.3	
KIV				*e*PPP	PPP	13 44 55.3	
KIV				pmax	pmax		
	comp=Z,4.0nm,0.5s						
BPAW	Bear Paw Mtn.	81.82	26	*e*P	P	13 39 57.3	+1.0
	comp=Z,14nm,1.0s						
MLY	Manley	81.99	25	*e*P	P	13 39 57.9	+0.7
	comp=Z,7.4nm,0.8s						
TRF	Thorofare Moun	82.08	27	*e*P	P	13 39 58.2	+0.3
	comp=Z,10nm,1.0s						
COLD	Coldfoot	82.37	23	*e*P	P	13 40 00.5	+1.4
	comp=Z,5.3nm,0.9s						
MCK	McKinley	82.70	27	*e*P	P	13 40 01.4	+0.5
MCK	McKinley	82.70	27	*e*P	P	13 40 01.4	+0.5
WRH	Wood River Hil	83.10	26	*e*P	P	13 40 02.8	-0.1
	comp=Z,11nm,1.2s						
CCB	Clear Creek Bu	83.23	26	*e*P	P	13 40 03.4	-0.2
	comp=Z,11nm,1.2s						
DHY	Denali Highway	83.39	27	*e*P	P	13 40 03.8	-0.8
	comp=Z,8.3nm,1.3s						
SCM	Sheep Creek Mo	83.39	28	*e*P	P	13 40 03.8	-0.8
	comp=Z,18nm,1.2s						
SCM	Sheep Creek Mo	83.39	28	*e*P	P	13 40 03.8	-0.8
SCM				pmax	pmax		
	comp=Z,18nm,1.2s						
HDA	Harding Lake	83.59	26	*e*P	P	13 40 04.8	-0.6
	comp=Z,59nm,2.0s						
IL1	Eielson Array	83.62	25	*e*P	P	13 40 03.8	-1.8
ILAR	Eielson Array	83.62	25	P	P	13 40 04.8	-0.8
	comp=Z,1.8nm,0.6s,baz=231,slow=4.8,SNR=25						
ILB	Eielson Array	83.62	25	*e*P	P	13 40 04.2	-1.4
KLMR	Klimovskoe	83.75	331	*e*P	P	13 40 03.9	-2.4
KLMR				pmax	pmax		
	comp=Z,25nm,0.8s						
KLMR	Klimovskoe	83.75	331	*e*P	P	13 40 03.9	-2.4
KLMR				AMP		13 40 06.9	
	comp=Z,25nm,0.8s						
KLU	Klutina	84.06	29	*e*P	P	13 40 07.2	-0.7
	comp=Z,18nm,1.6s						
VSR	Storozhevoye	84.06	321⇑	*e*P	P	13 40 08.3	+0.2
DIV	Divide	84.13	29	*e*P	P	13 40 08.0	-0.3
	comp=Z,11nm,0.9s						
FYU	Fort Yukon	84.31	24	*e*P	P	13 40 10.0	+1.0
	comp=Z,27nm,1.5s						
RIDG	Independ’e Rid	84.52	27	*e*P	P	13 40 10.4	+0.2
	comp=Z,10.0nm,1.0s						
BMRM	Bremner River	84.71	29	*e*P	P	13 40 11.5	+0.3
	comp=Z,9.7nm,1.0s						
SCRK	Sand Creek	84.89	26	*e*P	P	13 40 12.4	+0.3
	comp=Z,3.3nm,1.0s						
VNDA	Vanda	85.20	173	P	P	13 40 14.0	+0.7
	comp=Z,4.2nm,0.7s,baz=318,slow=5.4,SNR=20						
VNDA	Vanda	85.20	173	*e*P	P	13 40 13.7	+0.4
	comp=Z,5.2nm,0.8s						
VNDA	Vanda	85.20	173	*e*P	P	13 40 13.7	+0.4
VNDA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
OBN	Obninsk	85.48	325	*e*P	P	13 40 13.8	-1.2
OBN				*e*PPP	PPP	13 45 27.6	
OBN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
EGAK	Eagle	86.08	25	*e*P	P	13 40 18.2	+0.4
	comp=Z,8.3nm,1.6s						
BRTR	Keskin Array B	88.70	310	P	P	13 40 30.0	-1.2
	comp=Z,1.8nm,0.7s,baz=117,slow=4.9,SNR=8.7						
SPITS	Spitsbergen Ar	88.70	349	P	P	13 40 29.1	-1.1
	comp=Z,4.1nm,0.7s,baz=70,slow=17,SNR=6.5						
ARCES	ARCESS Array B	88.71	340	P	P	13 40 30.1	-0.3
	comp=Z,8.5nm,0.7s,baz=83,slow=6.5,SNR=33						
FINES	FINESS Array B	90.16	332	P	P	13 40 37.1	-0.2
	comp=Z,5.3nm,0.5s,baz=65,slow=4.9,SNR=56						
AKASG	Malin Array Be	90.37	321	P	P	13 40 38.2	-0.3
	comp=Z,0.3nm,0.3s,baz=77,slow=3.4,SNR=4.1						
KIEV	Kiev	90.38	321⇑	*e*P	P	13 40 38.3	-0.2
KIEV				pmax	pmax		
	comp=Z,5.0nm,1.8s						
VSU	Vasula	90.43	329⇓	*e*P	P	13 40 37.7	-0.9
VSU				pmax	pmax		
	comp=Z,24nm,0.6s						
SYO	Syowa Base	93.97	201⇑	*e*P	P	13 40 53.0	-1.7
QSPA	South Pole Qui	95.40	180	P	P	13 41 00.0	-1.4
	comp=Z,2.7nm,0.9s,baz=347,slow=3.5,SNR=5.0						
HFS	Hagfors	96.34	332	P	P	13 41 04.7	-1.0
	comp=Z,3.4nm,0.5s,baz=83,slow=6.0,SNR=24						
NB2	NORSAR Subarra	97.10	334	P	P	13 41 08.2	-1.0
	comp=Z,5.5nm,0.8s,baz=65,slow=4.6						
NB2	NORSAR Subarra	97.10	334	P	P	13 41 07.7	-1.5
NB2	NORSAR Subarra	97.10	334	P	P	13 41 08.2	-1.0
	baz=65,slow=4.6						
NOA	NORSAR Array B	97.10	334	P	P	13 41 08.1	-1.1
	comp=Z,2.4nm,0.7s,baz=66,slow=4.6,SNR=16						
NVAR	Mina Array Bea	105.92	48	PKKPab	PKKPab	13 57 41.1	-1.0
	comp=Z,0.4nm,0.6s,baz=115,slow=4.3,SNR=4.6						
PDAR	Pinedale Array	110.19	41	PKKPab	PKKPab	13 57 20.9	-2.2
	comp=Z,0.8nm,0.8s,baz=101,slow=7.7,SNR=5.4						
TXAR	Lajitas Array	120.71	51	PKKPbc	PKKPbc	13 56 35.0	0.0
	comp=Z,0.6nm,0.7s,baz=126,slow=6.4,SNR=8.9						
TOA0	Torodi Ar. Sit	122.11	289	*e*PKPdf	PKPdf	13 46 31.1	-1.1
TORD	Torodi Ar. Bea	122.11	289	PKP	PKPdf	13 46 30.6	-1.6
	comp=Z,0.9nm,0.4s,baz=44,slow=2.4						
KOWA	Kowa	127.04	293	PKP	PKPdf	13 46 41.8	+0.2
	comp=Z,1.1nm,0.4s,baz=110,slow=2.9,SNR=3.6						
PLCA	Paso Flores	141.74	159	PKP	PKPdf	13 47 07.5	-1.1
	comp=Z,3.3nm,1.0s,baz=272,slow=16,SNR=2.2						
CPUP	Villa Florida	158.97	170	PKPab	PKPab	13 48 11.6	-0.3
	comp=Z,5.7nm,1.1s,baz=194,slow=8.3,SNR=5.1						
LPAZ	La Paz	162.11	128	PKP	PKPdf	13 47 40.6	+1.0
	comp=Z,1.1nm,0.8s,baz=264,slow=3.0,SNR=4.0						
LPAZ				PKPab	PKPab	13 48 29.1	+2.2
	comp=Z,1.0nm,0.6s,baz=211,slow=5.2,SNR=3.7						

BJI ***25*** *13:44:14.8, 7°.82S×127°.31E, h230km, mb4.4/26, mB4.9/14*

ISCJB ***25*** *13:44:17.6±0.4, 7°.74S±0°.04×126°.98E±0°.03, h240km±4km, mb4.2/41, Error ellipse: s-maj=6.3km s-min=4.7km az=29.1*

NEIC ***25*** *13:44:17.9±0.5, 7°.68S×127°.01E, h226km±6km, mb4.6/19, Error ellipse: s-maj=7.1km s-min=4.8km az=47.0*

DJA ***25*** *13:44:19.4±0.2, 8°S±3°×12°7E±°, h234km±4km, M4.8/24, mb4.7/24, mB5.0/6, MLv5.3/8, Mw(mB)4.3/6*

IDC ***25*** *13:44:21.4±3.4, 7°.65S×126°.92E, h254km±33km, mb3.8/18, mb1 3.9/19, mb1mx3.7/43, mbtmp4.4/19, Error ellipse: s-maj=20.2km s-min=9.6km az=67.0*

ISC 25 13:44:18.2±0.7**, 7°.76S**±0°.05×**127°.01E**±0°.05**, h228**km±7km**,** **n111, σ1§25**/126**, mb4.3**/41**, 1D, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SOEI	Soe	3.36	234	P	Pn	13 45 14.7	+1.1
SOEI				S	S	13 45 57.3	+0.2
SOEI	Soe	3.36	234	*e*Pn	Pn	13 45 14.7	+1.1
BATI	Baumata	4.11	233	P	Pn	13 45 23.6	+1.2
BATI				S	S	13 46 13.2	+0.2
SAUI	Saumlaki	4.26	93	*e*Pn	Pn	13 45 25.0	+0.8
MMRI	Maumere	4.80	259	P	Pn	13 45 31.2	+0.3
MMRI	Maumere	4.80	259	*e*Pn	Pn	13 45 30.9	0.0
EDFI	Ende, Flores	5.36	259	P	Pn	13 45 38.2	+0.3
EDFI				S	S	13 46 42.0	+0.9
MTN	Manton Dam	6.48	142	*e*Pn	Pn	13 45 52.4	+0.3
BASI	Baing, Sumba	6.81	248	P	Pn	13 45 56.3	+0.1
WSI	Waingapu	6.90	254	P	Pn	13 45 55.9	-1.5
FAKI	Fak Fak	7.09	48	*e*Pn	Pn	13 45 57.6	-2.3
WBSI	Waikabubak, Su	7.76	255	P	Pn	13 46 07.7	-0.8
SWI	Sorong	8.05	32	P	Pn	13 46 13.9	+1.7
PLAI	Plampang	9.20	263	P	Pn	13 46 24.9	-2.0
MPSI	Mapaga	10.72	318	P	Pn	13 46 49.0	+2.7
WAMI	Wamena	12.26	72	P	P	13 47 10.8	+1.8
JAGI	Jajag, Banyuwa	12.75	266	*e*Pn	Pn	13 47 10.5	-1.3
MTKI	Muara Teweh, K	13.84	299	P	P	13 47 28.6	+2.0
WRAB	Tennant Creek	14.04	150	*e*Pn	Pn	13 47 26.9	-0.9
WRA	Warramunga Arr	14.04	150	P	Pn	13 47 26.8	-1.0
	0.8nm,0.3s,baz=328,slow=12,SNR=13						
WRA				S	S	13 49 58.9	-4.3
	2.9nm,0.3s,baz=329,slow=21,SNR=7.4						
WB2	Warramunga Arr	14.05	150	*e*Pn	Pn	13 47 27.0	-0.8
GENI	Genyem	14.07	69	P	Pn	13 47 28.8	+0.7
JAY	Jayapura	14.60	70	P	P	13 47 36.8	+1.7
DAV	Davao City (W)	14.80	354	*e*Pn	Pn	13 47 34.6	-2.3
MBWA	Marble Bar	15.07	207	*e*P	Pn	13 47 41.8	+1.7
	16nm,1.1s						
MYLDM	Lahad Datu	15.40	326	*e*P	Pn	13 47 45.7	+1.4
	60nm,1.3s						
UGM	Wanagama	16.33	268	*e*P	P	13 47 52.4	-1.8
	437nm,1.4s						
SMRI	Semarang	16.45	271	*e*P	P	13 47 54.4	-1.1
	306nm,1.9s						
COEN	Coen	17.02	113	*e*P	P	13 48 02.7	+1.0
	121nm,1.4s						
AS31	Alice Springs	17.15	158	*e*P	P	13 48 03.1	0.0
	10nm,0.6s						
ASAR	Alice Springs	17.15	158	P	Pn	13 48 05.3	+0.4
	4.0nm,0.3s,baz=330,slow=10,SNR=142						
ASAR				S	S	13 51 09.9	0.0
	0.8nm,0.3s,baz=331,slow=20,SNR=14						
AS01	Alice Springs	17.16	158	*e*P	P	13 48 02.3	-0.9
STKI	Sintang	17.32	296	P	Pn	13 48 06.9	-0.2
KKM	Kota Kinabalu	17.43	322	*e*P	P	13 48 07.1	+0.8
	19nm,0.9s						
SBUM	Sibu	17.90	304	*e*P	P	13 48 12.8	+1.5
	8.8nm,0.8s						
KSM	Kuching	19.01	298	*e*P	P	13 48 23.3	-0.1
	27nm,1.2s						
PMG	Port Moresby	19.99	96	P	Pn	13 48 37.2	-1.4
	56nm,0.9s,baz=150,slow=10,SNR=8.4						
CTAO	Charters Tower	22.31	125	*e*P	P	13 48 57.4	+0.3
STKA	Stephens Creek	27.58	152	P	P	13 49 46.2	+1.8
	5.6nm,0.7s,baz=331,slow=6.1,SNR=4.8						
IPM	Ipoh	28.63	294	*e*P	P	13 49 53.4	-0.6
	17nm,1.0s						
MNSI	Mandailing Nat	28.64	286	P	P	13 49 52.7	-1.3
KULM	Kulim	29.32	295	*e*P	P	13 49 59.1	-0.9
	14nm,0.6s						
PSI	Prapat	29.92	289	*e*P	P	13 50 04.1	-1.3
	25nm,0.9s						
MLSI	Meulaboh, Aceh	32.79	290	P	P	13 50 28.6	-1.8
SKNT	Sakolnakorn	33.50	317	P	P	13 50 37.5	+1.0
	5.3nm,0.9s						
NAYO	Nakonayok	33.62	311	P	P	13 50 38.0	+0.5
	0.3nm,0.9s,195nm						
CHAI	Chaiyaphum	34.15	314	P	P	13 50 42.3	+0.2
	5.4nm,0.8s						
PHIT	Phitsanulok	36.13	313	P	P	13 50 59.6	+0.7
	20nm,0.9s						
UTTA	Uttaradit	36.40	314	P	P	13 51 02.2	+1.0
	4.9nm,0.9s						
LAMP	Lampang	37.57	314	P	P	13 51 13.0	+2.0
	3.7nm,0.9s						
CM01	Chiang Mai Arr	37.98	313	*e*P	P	13 51 13.7	-0.8
CM31	Chiang Mai Arr	38.02	314	*e*P	P	13 51 14.5	-0.3
CMAR	Chiang Mai Arr	38.02	314	P	P	13 51 15.1	+0.3
	5.8nm,0.8s,baz=144,slow=7.2,SNR=27						
CMMT	Chiang Mai	38.24	314	P	P	13 51 17.3	+0.6
	12nm,1.0s						
CHTO	Chiang Mai	38.25	314	*e*P	P	13 51 16.1	-0.7
	11nm,1.0s						
CHTO	Chiang Mai	38.25	314	P	P	13 51 17.4	+0.7
	54nm,1.0s						
GYA	Guiyang	39.33	331	*e*P	P	13 51 27.0	+1.3
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KMI	Kunming	40.33	325	P	P	13 51 34.8	+0.7
KMI				pmax	pmax		
	comp=Z,16nm,1.0s						
NJ2	Nanjing	40.34	349	*e*P	P	13 51 34.8	+1.0
NJ2				pmax	pmax		
	comp=Z,19nm,0.6s						
DZM	Mont Dzumac	40.53	115	P	P	13 51 37.0	+1.3
	4.9nm,1.0s,baz=90,slow=20,SNR=3.1						
XAN	Xi’an	44.97	339	P	P	13 52 09.5	-1.4
XAN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
XAN				pmax	pmax		
	comp=Z,130nm,4.6s						
KSAR	Wonju Array Be	44.97	1	P	P	13 52 10.8	0.0
KSAR				PcP	PcP	13 53 47.1	-0.8
KSRS	Korea Array	44.98	1	P	P	13 52 10.8	-0.1
	1.6nm,0.8s,baz=175,slow=10,SNR=12						
KSRS				PcP	PcP	13 53 47.1	-0.8
	1.1nm,0.7s,baz=185,slow=4.4,SNR=5.8						
KS01	Wonju Array Si	45.00	1	*e*P	P	13 52 11.1	0.0
KS01				*e*PcP	PcP	13 53 48.3	+0.3
MAJO	Matsushiro	45.30	13	*e*P	P	13 52 11.8	-1.7
	37nm,0.8s						
MAT	Matsushiro	45.30	13	P	P	13 52 11.9	-1.6
MJAR	Matsushiro Arr	45.30	13	P	P	13 52 11.7	-1.8
	9.2nm,0.3s,baz=188,slow=9.8,SNR=5.9						
MJB9	Matsu-Tunnel	45.30	13	*e*P	P	13 52 11.8	-1.8
	37nm,0.8s						
LZH	Lanzhou	48.75	335	*e*P	P	13 52 40.5	+0.2
LZH				pP	pP	13 53 28.0	-1.7
LZH				sP	sP	13 53 52.8	-2.3
LZH				PcP	PcP	13 54 03.0	+1.3
LZH				pmax	pmax		
	comp=Z,25nm,1.3s						
HHC	Hu-ho-hao-te	50.41	345	*e*P	P	13 52 52.8	+0.1
HHC				S	S	13 59 53.0	+4.7
HHC				SS	SS	14 03 23.5	-2.0
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,360nm,8.3s						
LSA	Lhasa	50.75	319	*e*P	P	13 52 53.7	-2.2
	7.6nm,0.6s						
ODAN	Odare	51.56	313	*e*P	P	13 53 01.3	-0.3
	22nm,0.7s						
RAMN	Ramite	52.19	313	*e*P	P	13 53 06.1	-0.2
	39nm,0.7s						
JIRN	Jiri	52.89	313	*e*P	P	13 53 10.2	-1.4
	39nm,0.8s						
GUN	Gumba	53.26	313	*e*P	P	13 53 13.4	-0.8
GTA	Gaotai	53.27	334	*e*P	P	13 53 14.0	+0.2
GTA				pmax	pmax		
	comp=Z,11nm,1.0s						
PKIN	Phulchoki	53.42	313	*e*P	P	13 53 14.0	-1.3
	14nm,0.5s						
KKN	Kakani	53.63	313	*e*P	P	13 53 15.7	-1.0
DMN	Daman	53.65	313	*e*P	P	13 53 16.2	-0.8
	37nm,0.9s						
GKN	Gorkha	54.22	313	*e*P	P	13 53 20.3	-0.6
	42nm,0.6s						
KOLN	Koldanda	54.85	312	*e*P	P	13 53 24.1	-1.4
	37nm,0.6s						
DANN	Dangsing	55.05	313	*e*P	P	13 53 26.2	-0.9
	38nm,0.7s						
PYUN	Piuthan	55.48	312	*e*P	P	13 53 29.4	-0.6
	101nm,0.9s						
SONM	Songino Array	58.27	344	P	P	13 53 49.3	+0.2
	2.4nm,0.8s,baz=164,slow=7.8,SNR=14						
SONM				PcP	PcP	13 54 36.3	-1.4
	0.8nm,0.7s,baz=156,slow=7.8,SNR=3.7						
SONA1	Songino Array	58.28	344	*e*P	P	13 53 48.2	-1.0
WMQ	Urumqi	62.45	329	P	P	13 54 18.3	+0.9
WMQ				pmax	pmax		
	comp=Z,2μm,11.7s						
WMQ				LR	LR		
	comp=N,1μm,16.3s						
WMQ				LR	LR		
	comp=E,780nm,16.3s						
WMQ				LR	LR		
	comp=Z,1μm,17.5s						
PETK	Petropavlovsk-	66.00	20	P	P	13 54 40.6	+0.5
	1.6nm,0.6s,baz=150,slow=4.3						
KSH	Kashi	66.61	319	*e*P	P	13 54 44.5	+0.1
KSH				*e*PcP	PcP	13 55 13.5	+1.6
KSH				sP	sP	13 56 00.5	-1.1
MK01	Makanchi Array	67.25	328	*e*P	P	13 54 47.0	-1.2
MK31	Makanchi Array	67.27	328	*e*P	P	13 54 47.6	-0.7
MKAR	Makanchi Array	67.27	328	P	P	13 54 48.0	-0.3
	2.8nm,0.6s,baz=128,slow=7.7,SNR=41						
MKAR				PcP	PcP	13 55 14.6	+0.3
	0.8nm,0.6s,baz=122,slow=5.4,SNR=3.5						
MKAR	Makanchi Array	67.27	328	*e*P	P	13 54 47.6	-0.7
	17nm,0.6s						
MKAR				PcP	PcP	13 55 14.6	+0.3
KBL	Kabul	69.01	311	*e*P	P	13 54 58.8	-0.9
	8.1nm,0.7s						
ZALV	Zalesovo Beam	70.98	335	P	P	13 55 09.9	-1.0
	6.8nm,0.6s,baz=129,slow=4.8,SNR=7.1						
KURBB	Kurchatov Arra	71.63	330	P	P	13 55 14.3	-0.5
	1.6nm,0.4s,baz=133,slow=5.2,SNR=22						
KURK	Kurchatov	71.65	330	P	P	13 55 14.3	-0.6
VNDA	Vanda	72.08	172	P	P	13 55 18.4	+1.3
	0.6nm,0.4s,baz=321,slow=8.7,SNR=9.1						
BVAR	Borovoye Array	77.14	329	P	P	13 55 46.4	-0.2
	3.6nm,0.6s,baz=115,slow=6.8,SNR=20						
GEYT	Alibeck	78.45	311	P	P	13 55 53.2	-1.0
	1.7nm,0.7s,baz=82,slow=11,SNR=5.4						
ABKAR	Akbulak array	81.27	322	*e*P	P	13 56 08.0	-1.0
SYO	Syowa Base	81.89	201⇓	*e*P	P	13 56 12.8	+1.0
QSPA	South Pole Qui	82.23	180	P	P	13 56 14.6	+0.8
	3.0nm,0.8s,baz=270,slow=1.6,SNR=8.9						
AKTO	Aktyubinsk	82.87	323	P	P	13 56 16.9	-0.3
	5.6nm,0.7s,baz=98,slow=7.1,SNR=9.4						
ARU	Arti	84.79	329	*e*P	P	13 56 26.1	-0.7
	9.6nm,1.1s						
RAYN	Ar Rayn	85.35	294	*e*P	P	13 56 29.7	-0.7
	6.7nm,0.8s						
SNAA	Sanae	94.23	194	P	P	13 57 12.5	+1.4
	1.6nm,0.9s,baz=190,slow=3.6,SNR=6.5						
BRTR	Keskin Array B	97.48	309	P	P	13 57 24.8	-1.8
	0.7nm,0.7s,baz=124,slow=2.5,SNR=3.2						
AKASG	Malin Array Be	100.88	320	P	Pdif	13 57 39.7	-1.5
	0.6nm,0.4s,baz=68,slow=6.3,SNR=3.2						
TXAR	Lajitas Array	127.86	59	PKP	PKPdf	14 02 58.3	+0.8
	0.2nm,0.6s,baz=239,slow=3.0,SNR=4.1						

CPUP	Villa Florida	145.86	173	PKPbc	PKPbc	14 03 32.0	+0.5
	3.9nm,0.9s,baz=191,slow=4.4,SNR=5.5						
LPAZ	La Paz	151.80	148	PKPbc	PKPbc	14 03 47.8	+0.2
	0.8nm,0.4s,baz=216,slow=8.7,SNR=4.6						

KRSC 25 13:54:30.5±1.0, 48°.69N×157°.85E, h40km±23km, ML3.9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	2.29	331	eP	Pn	13 55 07.3	+1.5
SKR				eS	Sn	13 55 34.9	+2.2
PAU	Pauzhetka	2.86	347	eP	Pn	13 55 16.9	+3.3
PAU				eS	Sn	13 55 51.2	+4.4
KDTR	Khodutka, Kamc	3.13	3	eP	Pn	13 55 21.1	+3.8
KDTR				eS	Sn	13 55 57.1	+3.7
MIPR	Malaya Ipel'ka	3.66	349	eP	Pn	13 55 28.4	+3.8
ASAK	Asacha	3.70	1	eP	Pn	13 55 29.4	+4.2
ASAK				eS	Sn	13 56 12.2	+4.6
RUS	Russkaya	3.78	6	eP	Pn	13 55 30.0	+3.9
RUS				eS	Sn	13 56 14.3	+5.0
MTVR	Mutnovka	3.81	3	eP	Pn	13 55 31.0	+4.3
MTVR				eS	Sn	13 56 15.2	+4.9
KRMR	Karymshinskiy	4.15	2	eP	Pn	13 55 35.9	+4.6
KRMR				eS	Sn	13 56 24.5	+5.9
APC	Apacha	4.27	354	eP	Pn	13 55 36.5	+3.6
PET	Petropavlovsk	4.37	6	eP	Pn	13 55 39.2	+4.9
PET				eS	Sn	13 56 29.1	+5.1
DALK	Dalny	4.39	7	eP	Pn	13 55 39.0	+4.5
DALK				eS	Sn	13 56 29.5	+5.2
UGLR	Uglovaya	4.57	7	eP	Pn	13 55 42.2	+5.0
NLC	Nalytchevo	4.59	11	eS	Sn	13 56 33.4	+4.1
SPN	Mys Shipunski	4.63	17	eP	Pn	13 55 42.7	+4.9
SPN				eS	Sn	13 56 34.7	+4.4
SDLR	Sedlovina	4.64	8	eP	Pn	13 55 42.2	+4.0
KRX	Arik	4.71	6	eP	Pn	13 55 43.8	+4.7
KRX				eS	Sn	13 56 38.0	+5.6
GNL	Ganaly	5.02	1	eP	Pn	13 55 48.4	+5.1
KZV	Kizimen	6.61	12	eP	Pn	13 56 10.7	+5.5
KBTR	Krutoberegovo	8.12	20	eP	Pn	13 56 30.6	+4.9

SOME 25 14:03:35.9, 41°.88N×81°.63E, h0km
NNC 25 14:03:36.2±2.8, 41°.76N×81°.79E, h0km, mb3.5, mpv3.1, Error ellipse: s-maj=24.4km s-min=17.9km az=170.0
ISC 25 14:03:37.0±2.3, 41°.88N±0°.10×81°.63E±0°.08, h10km, n11, σ1s.58/21, 4C-2D, Southern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	1.83	329	eP	Pg	14 04 10.8	-1.3
	38nm,0.3s						
KTMS				eS	Sg	14 04 36.6	+0.8
	211nm,0.5s						
SHLS	Shalkode	2.05	309	eP	Pn	14 04 11.6	-0.1
	61nm,0.2s						
SHLS				eS	Sn	14 04 37.6	+0.2
	430nm,0.5s						
PDGK	Podgornoye	2.15	313	⇑Pn	Pb	14 04 15.6	-0.5
	15nm,0.3s						
PDGK				⇓Sn	Sg	14 04 46.6	+0.6
	44nm,0.3s						
UZB	Uzynbulak	2.31	304	eP	Pg	14 04 19.9	-1.3
	24nm,0.4s						
UZB				eS	Sg	14 04 51.9	+0.7
	97nm,0.3s						
SATY	Saty	2.66	297	eP	Pg	14 04 26.0	-2.0
	30nm,0.3s						
SATY				eS	Sg	14 05 01.7	-0.9
	96nm,0.2s						
KPKS	Kokpek	2.69	307	eP	Pb	14 04 24.4	-0.9
	28nm,0.2s						
KPKS				eS	Sb	14 04 59.0	+0.6
	130nm,0.3s						
ZHN	Zhinishke	2.69	300	eP	Pg	14 04 27.0	-1.6
	15nm,0.3s						
ZHN				eS	Sg	14 05 03.5	0.0
	190nm,0.3s						
DJR	Jarkent	2.80	332	eP	Pb	14 04 26.8	-0.4
	2.4nm,0.2s						
DJR				eS	Sb	14 05 02.9	+1.3
	26nm,0.5s						
IZV	Izvestkoviy	3.89	289	eP	Pb	14 04 46.9	+1.2
TKM2	Tokmak 2	4.59	285	⇑Pn	Pn	14 04 49.9	+3.3
	0.4nm,0.2s						
TKM2				⇑Pg	Pg	14 05 01.5	-3.4
	1.2nm,0.4s						
TKM2				⇓Lg	Lg	14 06 03.5	
	10nm,0.5s						
MK31	Makanchi Array	4.94	5	Pn	Pn	14 04 52.6	+1.3
	0.5nm,0.2s,baz=191,slow=12,SNR=66						
MK31				Pg	Pg	14 05 09.5	-2.0
	0.6nm,0.3s,baz=191,slow=15,SNR=5.7						
MK31				⇑Lg	Lg	14 06 12.5	
	3.2nm,0.5s,baz=188,slow=29,SNR=5.0						

TIR 25 14:19:27.4, 40°.68N×19°.67E, h1km, Md3.0/11
ISCJB 25 14:19:28.2±0.5, 40°.69N±0°.02×19°.65E±0°.04, h3km±5km, Error ellipse: s-maj=5.5km s-min=3.4km az=179.4
ATH 25 14:19:29.8, 40°.67N×19°.85E, h19km±5km, ML2.3/2, Error ellipse: s-maj=6.3km s-min=1.5km az=137.0
CSEM 25 14:19:31.6±0.6, 40°.63N×19°.91E, h20km, ML2.3, Error ellipse: s-maj=19.7km s-min=11.4km az=69.0
BEO 25 14:19:33.8±1.5, 40°.88N×19°.66E, h20km±7km, ML2.0/2
ISC 25 14:19:28.9±1.0, 40°.63N±0°.02×19°.79E±0°.03, h9km±10km, n36, σ1s.16/51, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VLO	Vlora	0.27	234	i PG	Pg	14 19 33.2	-1.2
VLO				i SG	Sg	14 19 37.6	-0.5
KBN	Korca	0.76	90	i PG	Pn	14 19 44.7	-1.2
KBN				i SG	Sn	14 19 58.1	+0.5
SRN	Sarande	0.77	168	i PG	Pb	14 19 44.6	+0.2
SRN				i SG	Sn	14 19 57.4	-0.1
OHR	Ohrid	0.91	58	ePn	Pn	14 19 47.7	-0.2
KEK	Kerkira	0.92	179	P	Pn	14 19 48.1	+0.2
KEK				AML	AML	14 20 08.3	
	comp=E,385µm,1.0s						
KEK				AML	AML	14 20 09.5	
	comp=N,130µm,0.4s						
KEK	Kerkira	0.92	179	P	Pn	14 19 48.1	+0.2
NEST	Nestorio	0.99	102	P	Pn	14 19 48.0	-1.0
NEST	Nestorio	0.99	102	P	Pn	14 19 48.0	-1.0
PHP	Peshkopia	1.16	25	i PG	Pb	14 19 50.5	-0.7
PHP				i SG	Sg	14 20 08.7	+2.3
IGT	Igoumenitsa	1.17	159	P	Pb	14 19 52.3	+1.0
IGT				S	Sg	14 20 08.9	+2.2
IGT	Igoumenitsa	1.17	159	P	Pb	14 19 52.4	+1.0
IGT				S	Sg	14 20 08.9	+2.2
FNA	Florina	1.22	82	P	Pb	14 19 51.7	-0.4
FNA				S	Sg	14 20 08.2	+0.1
FNA				AML	AML	14 20 17.7	
	comp=E,340µm,0.5s						
FNA				AML	AML	14 20 18.0	
	comp=N,350µm,0.7s						
FNA	Florina	1.22	82	P	Pg	14 19 51.9	-0.4
FNA				S	Sg	14 20 08.2	+0.1
KRUS	Krusevo	1.33	56	ePn	Pg	14 19 53.8	-0.7
KRUS				eSg	Sg	14 20 15.3	+3.5
PUK	Puka	1.41	3	i PG	Pb	14 19 54.6	-0.9
PUK				i SG	Sg	14 20 14.6	+0.2
BCI	Bajram Curri	1.75	7	i PN	Pb	14 20 00.5	-0.6
BCI				i SN	Sb	14 20 21.3	-1.9
SKO	Skopje	1.83	42	ePg	Pg	14 20 04.8	+0.8
SKO	Skopje	1.83	42	ePn	Pg	14 20 03.4	-0.7
SKO	Skopje	1.83	42	ePg	Pg	14 20 04.8	+0.8
PDG	Podgorica	1.84	348	ePg	Pb	14 20 03.0	+0.3
PDG				eSg	Sb	14 20 24.6	-1.3
PDG	Podgorica	1.84	348	ePg	Pb	14 20 03.0	+0.3
	baz=6.0						
PDG				eSg	Sb	14 20 24.6	-1.3
	baz=4.0						
GRG	Griva	2.01	80	P	Pb	14 20 04.3	-1.4
GRG	Griva	2.01	80	P	Pb	14 20 04.3	-1.4
TREB	Trebinje	2.35	333	ePg	Pb	14 20 11.3	0.0
TREB				eSg	Sb	14 20 39.2	-1.2
TREB	Trebinje	2.35	333	ePg	Pb	14 20 11.3	0.0
	baz=1.0						
TREB				eSg	Sb	14 20 39.2	-1.2
	baz=9.0						
SJES	Sjenica	2.63	3	ePn	Pn	14 20 12.7	+1.0
SJES	Sjenica	2.63	3	ePn	Pn	14 20 12.7	+1.0
	baz=4.0						
BARS	Barje	2.66	34	ePn	Pn	14 20 13.3	+1.4
SELS	Selova	2.77	21	ePn	Pn	14 20 15.0	+1.5
IVAS	Ivanjica	2.96	5	ePn	Pn	14 20 17.2	+1.1
IVAS	Ivanjica	2.96	5	ePn	Pn	14 20 17.2	+1.1
	baz=4.0						
BBLS	Lazići	3.25	355	ePn	Pn	14 20 20.8	+0.8
BBLS	Lazići	3.25	355	ePn	Pn	14 20 20.8	+0.8
	baz=4.0						
DIVS	Divibare	3.47	2	ePn	Pn	14 20 23.6	+0.5
DIVS	Divibare	3.47	2	ePn	Pn	14 20 23.6	+0.5
	baz=1.0						
SVIS	Svilajnac	3.78	16	ePn	Pn	14 20 27.6	+0.3

KRSC 25 14:20:25.8±1.1, 48°.95N×156°.57E, h6km±23km, ML3.5, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.75	351	eP	Pn	14 20 56.3	-0.4
SKR				eS	Sb	14 21 20.5	-0.1
PAU	Pauzhetka	2.52	3	eP	Pn	14 21 08.2	+1.0
PAU				eS	Sb	14 21 41.2	-1.4
KDTR	Khodutka, Kamc	3.02	18	eP	Pb	14 21 17.1	-2.7
KDTR				eS	Sb	14 21 54.7	-2.2
ASAK	Asacha	3.54	13	eP	Pn	14 21 24.2	+3.0
RUS	Russkaya	3.70	19	eP	Pn	14 21 26.5	+3.2
RUS				eS	Sn	14 22 10.9	+3.7
DALK	Dalny	4.31	18	eP	Pn	14 21 35.9	+4.2
DALK				eS	Sn	14 22 27.1	+4.8
UGLR	Uglovaya	4.49	18	eP	Pn	14 21 39.2	+4.8
AVH	Avacha	4.53	17	eP	Pn	14 21 39.1	+4.3
SDLR	Sedlovina	4.57	18	eP	Pn	14 21 39.6	+4.2
SPN	Mys Shipunski	4.69	26	P	Pn	14 21 41.9	+5.0
SPN				eS	Sn	14 22 36.3	+4.7
GNL	Ganaly	4.83	10	eP	Pn	14 21 43.6	+4.6
MKZ	Mys Kozlova	6.46	28	eP	Pn	14 22 06.0	+4.8

IDC 25 14:46:37.2±1.8, 19°.13S×177°.12W, h304km±18km, mb3.6/11, mb1 3.8/13, mb1mx3.5/50, mbtmp4.3/13, Error ellipse: s-maj=16.4km s-min=11.1km az=139.0
ISCJB 25 14:46:40.0±0.6, 19°.26S±0°.09×177°.1W±0°.1, h344km, mb3.9/12, Error ellipse: s-maj=14.3km s-min=10.7km az=36.0
ISC 25 14:46:41.1±0.7, 19°.3S±0°.1×177°.1W±0°.1, h344km, n17, σ1s.57/19, mb3.9/12, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	7.42	44	P	Pn	14 48 20.8	-7.7
	6.3nm,0.3s,baz=195,slow=3.7,SNR=24						
AFI				S	S	14 49 37.4	-18
	4.4nm,0.3s,baz=24,slow=19,SNR=4.2						
DZM	Mont Dzumac	15.63	257	P	Pn	14 50 06.0	+0.3
	1.7nm,0.3s,baz=84,slow=19,SNR=20						
URZ	Urewera	19.52	194	P	P	14 50 44.0	-0.5
	2.7nm,0.3s,baz=290,slow=2.6,SNR=17						
URZ				S	S	14 54 00.3	-4.7
	0.5nm,0.3s,baz=35,slow=12,SNR=3.6						
HNR	Honiara	24.28	291	P	P	14 51 27.0	-1.6
	25nm,0.3s,baz=194,slow=17,SNR=4.1						
STKA	Stephens Creek	39.06	243	P	P	14 53 37.1	+0.9
	9.6nm,0.4s,baz=88,slow=11,SNR=52						
WRA	Warramunga Arr	45.61	261	P	P	14 54 27.7	-0.9
	4.6nm,0.5s,baz=97,slow=6.3,SNR=190						
WRA				S	S	15 00 46.4	+1.6
	0.3nm,0.6s,baz=102,slow=17,SNR=3.3						
ASAR	Alice Springs	45.62	255	P	P	14 54 28.8	+0.2
	20nm,0.6s,baz=94,slow=7.6,SNR=213						
ASAR				S	S	15 00 44.8	0.0
	0.8nm,1.1s,baz=90,slow=16,SNR=4.4						
VNDA	Vanda	59.15	185	P	P	14 56 08.2	+2.0
	0.6nm,0.6s,baz=3.8,slow=7.5,SNR=3.7						
QSPA	South Pole Qui	70.73	180	P	P	14 57 22.0	+1.6
	5.6nm,0.9s,baz=38,slow=4.0,SNR=9.8						
KDAK	Kodiak Island	79.49	13	P	P	14 58 09.4	-0.4
	1.9nm,0.5s,baz=221,slow=5.3,SNR=6.5						
NVAR	Mina Array Bea	79.60	43	P	P	14 58 09.8	-1.4
	1.0nm,0.8s,baz=228,slow=7.9,SNR=7.5						
TXAR	Lajitas Array	85.72	57	P	P	14 58 43.3	+0.8
	0.6nm,0.7s,baz=222,slow=8.4,SNR=5.3						
ILAR	Eielson Array	86.99	12	P	P	14 58 46.7	-0.9
	0.3nm,0.4s,baz=222,slow=5.9,SNR=2.1						
PDAR	Pinedale Array	87.53	43	P	P	14 58 50.7	-0.4
	0.2nm,0.7s,baz=215,slow=7.7,SNR=2.3						
SNAA	Sanae	89.15	178	P	P	14 58 57.7	-0.3
	0.6nm,0.5s,baz=166,slow=15,SNR=5.1						
MMAI	Mount Meron Ar	147.94	302	PKPbc	PKPbc	15 05 46.8	+0.1
	0.6nm,0.4s,baz=98,slow=11,SNR=3.6						
GERES	GERESS Array B	149.29	346	PKPbc	PKPbc	15 05 49.6	0.0
	0.1nm,0.3s,baz=72,slow=4.2,SNR=5.4						

IDC 25 14:51:11.2±0.6, 35°.87N×69°.23E, h0km, mb4.2/31, mb1 4.3/37, mb1mx4.2/71, mbtmp4.2/37, ML4.0/6, MS3.6/1, Ms1 3.7/1, ms1mx2.9/64, Error ellipse: s-maj=13.8km s-min=10.4km az=6.0
NEIC 25 14:51:14.0±2.3, 36°.06N×69°.26E, h16km±14km, mb4.7/33, Error ellipse: s-maj=7.1km s-min=5.5km az=178.0
BJI 25 14:51:13.5, 36°.14N×69°.26E, h14km, mb4.6/27, mB4.7/16, Ms3.9/9, Ms7 3.7/9
MOS 25 14:51:15.7±1.2, 36°.08N×69°.32E, h37km, mb4.7/34, Error ellipse: s-maj=7.2km s-min=4.3km az=81.2
ISCJB 25 14:51:15.2±0.2, 36°.04N±0°.02×69°.27E±0°.03, h35km, mb4.4/90, MS3.6/1, Error ellipse: s-maj=3.8km s-min=2.7km az=146.1
NNC 25 14:51:19.1±2.9, 36°.11N×69°.19E, h111km±41km, mb4.0, mpv4.6, Error ellipse: s-maj=22.4km s-min=19.0km az=22.0
ISC 25 14:51:16.6±0.4, 36°.04N±0°.04×69°.15E±0°.04, h35km, n222, σ1s.99/243, mb4.5/91, 19C-10D, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBL	Kabul	1.49	183	ePn	Pn	14 51 42.8	+1.6
KBL	Kabul	1.49	183	ePN	Pn	14 51 42.8	+1.6
CEP	Cherat	3.16	133	P	Pn	14 52 08.3	+4.3
THW	Thamme Wali	3.88	146	⇑P	Pn	14 52 17.0	+3.2
SARP	Sargodha	5.04	144	P	Pn	14 52 32.2	+2.5
SFK	Sufi-Kurgan	5.25	40	⇓P	Pn	14 52 34.5	+1.7
	35nm,0.4s						
SFK				⇑S	Sn	14 53 34.8	+2.6
	52nm,0.4s						
SFK	Sufi-Kurgan	5.25	40	ePN	Pn	14 52 34.0	+1.2
TAS	Tashkent	5.29	1	⇓P	Pn	14 52 35.6	+2.5
	39nm,0.3s						
TAS				⇑S	Sn	14 53 35.7	+2.8
	259nm,0.3s						
TAS	Tashkent	5.29	1	PN	Pn	14 52 35.6	+2.5
TAS				S	Sn	14 53 35.6	+2.8
TAS				pmax	pmax		
	comp=Z,43nm,0.4s						
TAS				smax	smax		
	comp=N,259nm,0.3s						
KSH	Kashi	6.42	55	P	Pn	14 52 45.8	-3.0
KSH				sP		14 52 54.0	
KSH				S	Sn	14 53 53.5	-7.5
KSH				smax	smax		
	comp=N,910nm,0.6s						
KSH				smax	smax		
	comp=E,910nm,0.8s						
MNAS	Manas	6.95	21	⇑P	Pn	14 52 56.7	+0.6
	comp=E,16nm,0.3s						
MNAS				⇓S	Sn	14 54 14.2	+0.3
	comp=E,81nm,0.5s						
MNAS	Manas	6.95	21	PN	Pn	14 52 56.8	+0.8
MNAS				S	Sn	14 54 16.2	+2.3
MNAS				pmax	pmax		
	comp=Z,17nm,0.3s						
MNAS				smax	smax		
	comp=N,81nm,0.5s						
DHRM	DHARAMSHALA	7.03	120	eP	Pn	14 52 59.5	+2.3
DHRM				eS	Sn	14 54 17.6	+1.6
DHRM				IAML		14 54 21.8	
	comp=N,906nm,0.3s						
DHRM				IAML		14 54 22.0	
	comp=E,654nm,0.6s						
AML	Almayashu	7.04	29	P	Pn	14 52 57.7	+0.2
	SNR=71						
KK31	Karatay Array	7.14	8	⇑P	Pn	14 52 59.2	+0.6
	comp=E,12nm,0.5s,baz=173,slow=11						
KK31				⇑S	Sn	14 54 17.4	-1.0
	comp=E,37nm,0.4s						
KK31	Karatay Array	7.14	8	ePn	Pn	14 52 58.9	+0.4
KK31	Karatay Array	7.14	8	PN	Pn	14 52 59.1	+0.6
KK31				pmax	pmax		
	comp=Z,12nm,0.5s						
KKAR	Karatay Array	7.14	8	ePn	Pn	14 52 58.8	+0.3
KKAR	Karatay Array	7.14	8	ePN	Pn	14 52 58.8	+0.3
EKS2	Erkin-Say	7.52	27	P	Pn	14 53 04.8	+0.8
	SNR=15						
KZA	Kyzart	7.67	36	P	Pn	14 53 06.7	+0.4
	SNR=13						
AAK	Ala-Archa	7.78	30	Pn	Pn	14 53 07.9	+0.3
	comp=Z,13nm,0.3s,baz=211,slow=8.2,SNR=22						
AAK				Sn	Sn	14 54 34.8	+0.3
	comp=Z,5.0nm,0.3s,baz=139,slow=20,SNR=6.1						
AAK	Ala-Archa	7.78	30	⇑P	Pn	14 53 08.2	+0.7
	comp=Z,18nm,0.4s						
AAK				⇓S	Sn	14 54 36.6	+2.1
	comp=Z,25nm,0.5s						
AAK	Ala-Archa	7.78	30	P	Pn	14 53 08.7	+1.1
	SNR=24						
AAK	Ala-Archa	7.78	30	ePn	Pn	14 53 06.9	-0.6
AAK				Sn	Sn	14 54 34.8	+0.3
AAK	Ala-Archa	7.78	30	⇑iP	Pn	14 53 07.7	+0.2
KBK	Karagaybulak	7.99	32	P	Pn	14 53 11.3	+0.9
	SNR=7.4						
FRU	Bishkek	8.00	30	eP	Pn	14 53 12.0	+1.7
FRU				i S	Sn	14 54 42.0	+2.5
FRU				smax	smax		
	comp=E,280nm,1.8s						
CHMS	Chumysh	8.19	30	P	Pn	14 53 13.6	+0.6
	SNR=11						
SMLA	Simla	8.28	124	eP	Pn	14 53 15.8	+1.5
SMLA				eS	Sn	14 54 45.3	-1.3
ULHL	Ulahol	8.29	39	P	Pn	14 53 15.2	+0.6
	SNR=9.9						
USP	Ospenovka	8.32	28	P	Pn	14 53 14.9	+0.2
	SNR=21						
TKM2	Tokmak 2	8.49	34	⇓P	Pn	14 53 17.4	+0.1
	comp=E,21nm,0.6s						
TKM2				⇓S	Sn	14 54 49.5	-2.4
	comp=E,21nm,0.7s						
TKM2	Tokmak 2	8.49	34	P	Pn	14 53 17.6	+0.4
	SNR=34						
TKM2	Tokmak 2	8.49	34	P	Pn	14 53 17.3	+0.1
TKM2						14 54 49.4	
TKM2				pmax	pmax		
	comp=Z,21nm,0.6s						
TKM2				smax	smax		
	comp=N,21nm,0.7s						
GEYT	Alibeck	9.03	285	Pn	Pn	14 53 23.0	-1.5
	comp=N,2.8nm,0.3s,baz=90,slow=11,SNR=27						
GEYT				Sn	Sn	14 55 03.4	-1.6
	comp=N,5.0nm,0.3s,baz=106,slow=16,SNR=14						
GYA0B	ALIBECK ARRAY	9.03	285	ePn	Pn	14 53 23.7	-0.9
DDI	Dehra Dun	9.38	125	eP	Pn	14 53 30.0	+0.6
DDI				ex	x	14 55 10.3	
DDI				IAML		14 55 22.8	
	comp=N,158nm,0.3s						
DDI				IAML		14 55 23.7	
	comp=E,160nm,0.4s						
NDI	New Delhi	10.01	135	eP	Pn	14 53 37.0	-0.9
NDI				eS	Sn	14 55 27.0	-2.0
PDGK	Podgornoye	10.79	44	⇓P	Pn	14 53 48.2	-0.5
	comp=E,3.8nm,0.5s						
PDGK	Podgornoye	10.79	44	i P	Pn	14 53 48.1	-0.5
PDGK				pmax	pmax		
	comp=Z,12nm,1.1s						
BHJ	Bhuj	12.74	178	eP	Pn	14 54 11.5	-3.8
PYUN	Piuthan	14.14	120	eP	Pn	14 54 32.8	-1.8
	comp=Z,66nm,0.4s						
MAKZ	Makanchi	14.42	38	ePn	Pn	14 54 35.3	-2.8
MAKZ	Makanchi	14.42	38	eP	Pn	14 54 35.3	-2.8
DANN	Dangsing	14.54	118	eP	Pn	14 54 38.5	-1.6
	comp=Z,127nm,0.6s						
MK01	Makanchi Array	14.55	38	ePn	Pn	14 54 37.8	-2.2
MK31	Makanchi Array	14.56	38	P	Pn	14 54 37.9	-2.2
	comp=Z,3.7nm,0.6s,baz=219,slow=14,SNR=31						
MK31	Makanchi Array	14.56	38	ePn	Pn	14 54 38.1	-1.9
MK31	Makanchi Array	14.56	38	eP	Pn	14 54 37.9	-2.2
MK31				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MKAR	Makanchi Array	14.56	38	Pn	Pn	14 54 38.5	-1.6
	comp=Z,0.3nm,0.3s,baz=223,slow=15,SNR=14						
MKAR	Makanchi Array	14.56	38	ePn	Pn	14 54 38.1	-2.0
MKAR	Makanchi Array	14.56	38	eP	Pn	14 54 38.1	-2.0
BHPL	Bhopal	14.63	148	eP	Pn	14 54 39.5	-1.6
BHPL				ex	x	14 57 17.9	
KOLN	Koldanda	14.77	120	eP	Pn	14 54 41.3	-1.8
	comp=Z,54nm,0.5s						
AB31	Akbulak array	14.83	336	P	Pn	14 54 41.0	-2.6
	comp=Z,10.0nm,0.6s,baz=152,slow=15,SNR=129						
AB31				⇑S	Sn	14 57 20.8	-5.9
	comp=Z,5.9nm,0.4s,baz=148,slow=24,SNR=11						
AB31	Akbulak array	14.83	336	i P	Pn	14 54 41.0	-2.6
AB31				eS	Sn	14 57 20.7	-5.9
AB31				pmax	pmax		
	comp=Z,10.0nm,0.6s						
AB31				smax	smax		
	comp=N,6.0nm,0.4s						
ABKAR	Akbulak array	14.83	336	ePn	Pn	14 54 40.4	-3.2
GKN	Gorkha	15.37	117	eP	Pn	14 54 48.5	-2.6
	comp=N,184nm,0.8s						
DMN	Daman	15.94	117	eP	Pn	14 54 56.1	-2.4
	comp=N,179nm,1.0s						
KKN	Kakani	15.96	116	eP	Pn	14 54 56.7	-2.0
	comp=N,162nm,0.5s						
KURBB	Kurchatov Arra	16.08	22	Pn	Pn	14 54 56.0	-3.8
	comp=N,0.1nm,0.3s,baz=212,slow=11,SNR=9.2						
KURBB	Kurchatov Arra	16.08	22	⇑P	P	14 55 03.0	+0.1
	comp=N,16nm,0.7s						
PKIN	Phulchoki	16.16	117	eP	Pn	14 54 58.8	-2.6
	comp=N,128nm,0.6s						
KURK	Kurchatov	16.19	22	⇓P	Pn	14 55 00.3	-1.0
	comp=N,7.6nm,0.9s						
KURK	Kurchatov	16.19	22	ePn	Pn	14 54 59.5	-1.7
	comp=N,9.4nm,0.9s						
KURK	Kurchatov	16.19	22	⇑iP	Pn	14 55 00.4	-0.8
WMQ	Urumqi	16.19	56	P	Pn	14 55 01.5	+0.1
WMQ				LR	LR		
	comp=N,250nm,18.9s						
WMQ				LR	LR		
	comp=N,270nm,23.1s						
WMQ				LR	LR		
	comp=N,250nm,21.7s						
GUN	Gumba	16.33	115	eP	Pn	14 55 00.9	-2.6
	comp=N,135nm,0.5s						
AKTO	Aktyubinsk	16.49	334	Pn	Pn	14 55 04.2	-0.9
	comp=N,0.5nm,0.3s,baz=134,slow=16,SNR=21						
AKTO				Sn	Sn	14 57 59.2	-7.8
	comp=N,0.7nm,0.3s,baz=6.3,slow=18,SNR=4.1						
AKTO	Aktyubinsk	16.49	334	⇓P	Pn	14 55 04.9	-0.2
	comp=N,18nm,0.9s						
JIRN	Jiri	16.70	115	eP	Pn	14 55 06.7	-1.5
	comp=N,245nm,0.5s						
BVA0	Borovoye Array	17.01	3	P	Pn	14 55 09.5	-2.1
	comp=N,2.2nm,0.6s,baz=218,slow=27,SNR=34						
BVA0	Borovoye Array	17.01	3	P	Pn	14 55 09.5	-2.1
BVA0				pmax	pmax		
	comp=Z,5.0nm,0.7s						
BVAR	Borovoye Array	17.01	3	Pn	Pn	14 55 09.7	-1.9
	comp=Z,0.8nm,0.3s,baz=181,slow=12,SNR=12						
BVAR				Sn	Sn	14 58 13.8	-5.7
	comp=Z,0.5nm,0.3s,baz=174,slow=17,SNR=3.1						
BRVK	Borovoye	17.04	2	ePn	Pn	14 55 09.1	-2.9
	comp=Z,11nm,0.6s						
BRVK	Borovoye	17.04	2	eP	Pn	14 55 11.2	-0.8
RAMN	Ramite	17.40	116	eP	Pn	14 55 15.3	-1.6
	comp=Z,108nm,0.6s						
ODAN	Odare	18.03	115	eP	Pn	14 55 23.9	-0.7
	comp=Z,267nm,0.7s						
GTK	Tadong	18.67	112	eP	P	14 55 30.9	-0.9
BOK	Bokaro	18.92	126	eP	P	14 55 34.0	-0.4
BOK				IAmb	IAmb	14 55 38.6	
	comp=Z,11nm,0.8s						
DGZ	Jazzator, Alta	19.06	39	⇑iP	P	14 55 34.5	-1.5
LSA	Lhasa	19.51	103	P	Pn	14 55 44.0	+1.2
LSA	Lhasa	19.51	103	eP	P	14 55 41.4	0.0
	comp=Z,22nm,0.8s						
LSA	Lhasa	19.51	103	eP	P	14 55 41.4	0.0
LSA				pmax	pmax		
	comp=Z,22nm,0.8s						
TBLG	Delisi	19.81	294	eP	P	14 55 44.9	+0.8

	comp=Z,11nm,0.4s						
TBLG	Delisi	19.81	294	eP	P	14 55 44.9	+0.8
TBLG				pmax	pmax		
	comp=Z,11nm,0.4s						
HYB	Hyderabad	20.33	153	eP	P	14 55 50.0	+0.1
HYB				IAmb	IAmb	14 56 02.0	
	comp=Z,19nm,0.3s						
AKH	Akhalkalaki	20.69	293	eP	P	14 55 52.4	-1.4
	comp=Z,15nm,1.1s						
AKH	Akhalkalaki	20.69	293	eP	P	14 55 52.4	-1.4
AKH				pmax	pmax		
	comp=Z,15nm,1.1s						
TURI	Tura	20.94	114	eP	P	14 55 57.2	+0.7
ZAA0	Zalesovo Array	20.98	26	eP	P	14 55 55.3	-1.3
	comp=Z,16nm,0.8s						
ZALV	Zalesovo Beam	20.98	26	P	P	14 55 57.2	+0.6
	comp=Z,9.9nm,0.3s,baz=214,slow=10,SNR=5.4						
NVS	Novosibirsk	21.17	23	eP	P	14 55 58.7	+0.1
NVS				pmax	pmax		
	comp=N,8.0nm,0.5s						
NVS				pmax	pmax		
	comp=E,2.0nm,0.5s						
NVS				pmax	pmax		
	comp=Z,11nm,0.5s						
BWNR	Bhubaneshwar	21.43	133	eP	P	14 56 01.2	-0.5
KBZ	Khabaz	21.50	299	P	P	14 56 03.6	+1.3
	comp=Z,1.6nm,0.9s,baz=85,slow=4.5,SNR=2.5						
KBZ				S	S	14 59 58.8	0.0
	comp=Z,1.5nm,0.7s,baz=50,slow=17,SNR=2.7						
SVE	Sverdlovsk	21.58	347	eP	P	14 56 04.4	+1.4
SVE				eS	S	14 59 48.7	-11
SVE				pmax	pmax		
	comp=Z,21nm,1.2s						
GUWA	GUWAHATI	21.60	111	eP	P	14 56 03.9	+0.4
ARU	Arti	21.63	344	P	P	14 56 04.7	+1.3
	comp=Z,2.7nm,0.3s,baz=107,slow=20,SNR=8.0						
ARU				S	S	14 59 57.6	-3.4
	comp=Z,1.3nm,0.4s,baz=108,slow=20,SNR=3.1						
ARU	Arti	21.63	344	eP	P	14 56 03.0	-0.5
	comp=Z,13nm,0.8s						
ARU				S	S	14 59 57.6	-3.4
ARU	Arti	21.63	344	d iP	P	14 56 07.0	+3.5
ARU						14 56 27.0	
ARU				PPP	PPP	14 56 35.7	
ARU				S	Sn	15 00 10.1	-0.6
ARU				SS	SnSn	15 00 37.2	+11
ARU				pmax	pmax		
	comp=Z,21nm,1.7s						
KIV	Kislovodsk	21.70	299	eP	P	14 56 07.0	+2.5
KIV				e		14 56 28.3	
KIV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
SHL	Shillong	22.09	112	eP	P	14 56 07.8	-1.2
	comp=Z,71nm,0.7s						
SHL	Shillong	22.09	112	eP	P	14 56 09.5	+0.5
SHL	Shillong	22.09	112	eP	P	14 56 07.8	-1.2
SHL				pmax	pmax		
	comp=Z,71nm,0.7s						
TEZP	TEZPUR	22.23	108	eP	P	14 56 10.3	0.0
ZIRO	ZIRO	22.60	105	eP	P	14 56 14.6	+0.2
ITAN	ITANAGAR	22.68	106	eP	P	14 56 15.7	+0.6
HVS	Khovu-Aksy	23.17	42	eP	P	14 56 20.2	+0.2
HVS				pmax	pmax		
	comp=Z,25nm,1.0s						
KOHI	KOHIMA	23.70	109	eP	P	14 56 26.5	+1.1
KOHI				IAmb	IAmb	14 56 31.2	
	comp=Z,26nm,0.6s						
MOKO	MOKOCHONG	23.70	107	eP	P	14 56 26.1	+0.6
GTA	Gaotai	24.43	73	eP	P	14 56 34.5	+2.4
GTA				pP	pP	14 56 39.5	-2.6
GTA				sP	sP	14 56 43.3	-3.1
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SAIH	SAIHA	24.71	117	eP	P	14 56 34.4	-0.3
VSR	Storozhevoye	26.25	315	eP	P	14 56 50.3	+2.0
VSR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
LPSR	Galich'ya Gora	26.96	317	eP	P	14 56 56.6	+1.9
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
MOY	Mondy	27.49	45	eP	P	14 57 00.9	+1.3
MOY				pmax	pmax		
	comp=Z,9.0nm,1.6s						
LZH	Lanzhou	27.96	80	eP	P	14 57 07.5	+3.5
LZH				pP	pP	14 57 11.8	-2.2
LZH				sP	sP	14 57 14.3	-4.0
LZH				eS	S	15 01 46.3	+0.5
LZH				sS	sS	15 01 58.8	-3.6
LZH				SS	SnSn	15 03 02.0	+0.6
LZH				pmax	pmax		
	comp=Z,34nm,0.9s						
LZH				pmax	pmax		
	comp=Z,270nm,4.9s						
LZH				LR	LR		
	comp=Z,1μm,16.5s						
BRTR	Keskin Array B	28.16	288	P	P	14 57 06.1	+0.3
	comp=Z,0.6nm,0.4s,baz=70,slow=8.0,SNR=4.3						
ZAK	Zakamensk	28.42	49	eP	P	14 57 08.6	+0.7
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
TLY	Talaya	29.04	47	⇑eP	P	14 57 15.3	+2.0
CD2	Chengdu	29.22	90	eP	P	14 57 13.0	-2.1
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
OBN	Obninsk	29.34	321	eP	P	14 57 16.3	+0.5
OBN				e		14 58 12.1	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.9s						
PRGR	Permogore	29.60	337	eP	P	14 57 17.5	-0.6
PRGR				pmax	pmax		
	comp=Z,9.0nm,0.4s						
SONM	Songino Array	29.83	55	P	P	14 57 21.4	+0.9
	comp=Z,1.9nm,0.8s,baz=256,slow=9.1,SNR=9.9						
SONA1	Songino Array	29.83	55	eP	P	14 57 17.4	-3.1
ULN	Ulaanbaatar	30.27	55	⇑eP	P	14 57 24.8	+0.4
ULN				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KMI	Kunming	30.75	101	P	P	14 57 29.0	0.0
KMI				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KLMR	Klimovskoe	31.17	332	eP	P	14 57 31.5	-0.5
KLMR				pmax	pmax		
	comp=Z,8.0nm,1.2s						
KLMR	Klimovskoe	31.17	332	eP	P	14 57 31.5	-0.5
KLMR				AMP		14 57 33.0	
	comp=Z,8.0nm,1.2s						
CMAR	Chiang Mai Arr	31.57	116	P	P	14 57 34.0	-1.9
	comp=Z,1.7nm,0.6s,baz=297,slow=8.2,SNR=10						
CMAR				PcP	PcP	15 00 27.9	0.0
	comp=Z,1.7nm,0.7s,baz=299,slow=4.8,SNR=4.1						
AKASG	Malin Array Be	32.08	310	P	P	14 57 41.7	+1.6
	comp=Z,2.0nm,0.5s,baz=84,slow=7.4,SNR=14						
KIEV	Kiev	32.09	310	⇑eP	P	14 57 42.6	+2.4
KIEV				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GYA	Guiyang	33.29	96	eP	P	14 57 52.0	+0.9
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
HHC	Hu-ho-hao-te	33.32	69	eP	P	14 57 51.8	+0.6
HHC				sP	sP	14 58 04.3	-1.3
HHC				S	S	15 03 11.0	+1.4
HHC				sS	sS	15 03 22.3	-4.0
HHC				SS	SnSn	15 05 13.5	+1.7
HHC				pmax	pmax		
	comp=Z,22nm,1.0s						
HHC				pmax	pmax		
	comp=Z,130nm,5.3s						
HHC				LR	LR		
	comp=Z,160nm,14.7s						
HHC				LR	LR		
	comp=Z,170nm,14.7s						
HHC				LR	LR		
	comp=Z,210nm,16.2s						
BOD	Bodaibo	36.65	39	eP	P	14 58 19.6	0.0
BOD				pmax	pmax		
	comp=Z,12nm,1.0s						
FINES	FINESS Array B	37.05	327	P	P	14 58 24.5	+1.7
	comp=Z,4.1nm,0.7s,baz=108,slow=10,SNR=12						
APA	Apatity	37.51	338	⇑iP	P	14 58 21.0	-5.7
DIVS	Divibare	38.00	298	eP	P	14 58 31.7	+0.5
	comp=Z,4.5nm,1.2s						
OUL	Oulu	38.68	332	eP	P	14 58 38.2	+1.6
OUL				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MORC	Moravsky Berou	39.44	307	P	P	14 58 46.7	+3.4
DPC	Dobruska-Polom	40.23	308	eP	P	14 58 54.0	+4.2
DPC				ex	x	14 58 58.0	
DPC	Dobruska-Polom	40.23	308	eP	P	14 58 54.0	+4.2
ARCES	ARCESS Array B	41.01	338	P	P	14 58 56.3	+0.4
	comp=Z,2.6nm,0.7s,baz=114,slow=8.0,SNR=6.5						
NJ2	Nanjing	41.02	81	eP	P	14 58 56.5	0.0
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
BRG	Berggiesshubel	41.74	309	eP	P	14 59 04.8	+2.7
	comp=Z,4.1nm,0.7s						
BRG	Berggiesshubel	41.74	309	eP	P	14 59 04.8	+2.7
BRG				pmax	pmax		
	comp=Z,16nm,0.7s						
GERES	GERESS Array B	41.98	306	P	P	14 59 06.3	+2.0
	comp=Z,0.3nm,0.3s,baz=76,slow=8.2,SNR=4.3						
CLL	Collm	42.33	309	eP	P	14 59 09.0	+2.1
CLL	Collm	42.33	309	eP	P	14 59 09.0	+2.1
HFS	Hagfors	42.52	322	P	P	14 59 09.4	+1.1
	comp=Z,6.4nm,0.6s,baz=91,slow=9.2,SNR=25						
ZEA	Zeya	43.48	47	eP	P	14 59 14.8	-1.4
ZEA				pmax	pmax		
	comp=Z,26nm,0.8s						
NC303	NORSAR Array S	43.81	324	eP	P	14 59 19.8	+1.0
NB2	NORSAR Subarra	43.86	323	P	P	14 59 19.5	+0.3
	comp=Z,1.7nm,0.4s,baz=99,slow=8.6						
NOA	NORSAR Array B	43.86	323	P	P	14 59 19.7	+0.5
	comp=Z,3.1nm,0.6s,baz=99,slow=8.0,SNR=19						
NOA				LR	LR	15 21 10.9	
	comp=Z,64nm,18.6s,baz=25,slow=41						
KS01	Wonju Array Si	46.41	70	eP	P	14 59 36.9	-2.8
KSAR	Wonju Array Be	46.42	70	P	P	14 59 40.3	+0.5
KSRS	Korea Array	46.44	70	P	P	14 59 40.3	+0.3
	comp=Z,1.4nm,0.7s,baz=278,slow=6.5,SNR=8.3						
KLR	Kul'dur	46.62	53	P	P	14 59 42.1	+0.9
	comp=Z,0.2nm,0.5s,baz=285,slow=9.7,SNR=4.5						
KLR	Kul'dur	46.62	53	eP	P	14 59 42.6	+1.4
HINF	Hinteralfeld	46.64	305	eP	P	14 59 47.1	+5.6
HINF				pmax	pmax		
	comp=Z,6.0nm,1.0s						
TIXI	Tiksi	46.76	22	eP	P	14 59 40.2	-1.8
	comp=Z,8.7nm,0.6s						
TIXI	Tiksi	46.76	22	⇑eP	P	14 59 42.6	+0.6
TIXI				pmax	pmax		
	comp=Z,12nm,1.0s						
HAU	Haudompre	46.94	305	eP	P	14 59 49.6	+5.8
HAU				pmax	pmax		
	comp=Z,6.0nm,0.9s						
LPL	La Plagne	47.13	302	eP	P	14 59 52.1	+6.5
LPL				pmax	pmax		
	comp=Z,9.0nm,1.1s						
MBDF	Montbardon	47.26	301	eP	P	14 59 49.9	+3.4
MBDF				pmax	pmax		
	comp=Z,3.0nm,0.6s						
SPITS	Spitsbergen Ar	47.61	347	P	P	14 59 50.3	+1.8
	comp=Z,5.3nm,0.9s,baz=134,slow=4.2,SNR=4.6						
USRK	Ussuriysk Ar.	47.70	60	P	P	14 59 50.2	+0.5
	comp=Z,1.5nm,0.5s,baz=256,slow=5.9						
BAIF	Baives	48.01	308	eP	P	14 59 54.1	+2.1
BAIF				pmax	pmax		
	comp=Z,12nm,1.2s						
VIVF	Saint-Julien-l	48.69	301	eP	P	15 00 03.7	+6.3
VIVF				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GRNR	Gornyy	49.36	51	eP	P	15 00 06.1	+3.7
CAF	Calviac	50.48	302	eP	P	15 00 17.5	+6.5
CAF				pmax	pmax		
	comp=Z,7.0nm,1.0s						
JOW	Kunigami	50.61	83	P	P	15 00 12.0	-0.2
	comp=Z,5.2nm,0.5s,baz=122,slow=19,SNR=3.4						
RJF	Les Rejaudoux	50.76	303	eP	P	15 00 19.7	+6.6
RJF				pmax	pmax		
	comp=Z,2.0nm,0.5s						
MTLF	Montolieu	50.78	300	eP	P	15 00 19.4	+6.1
MTLF				pmax	pmax		
	comp=Z,4.0nm,1.1s						
EKA	Eskdalemuir Ar	51.58	316	P	P	15 00 19.0	-0.1
	comp=Z,4.1nm,0.9s,baz=90,slow=8.5,SNR=3.7						
GRR	Gorron	51.59	307	eP	P	15 00 21.0	+1.7
GRR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
YSS	Yuzh-Sakhalins	54.31	54	eP	P	15 00 38.4	-0.9
	comp=Z,13nm,0.8s						
YSS	Yuzh-Sakhalins	54.31	54	⇑eP	P	15 00 40.5	+1.2
YSS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MAJO	Matsushiro	54.51	67	⇑eP	P	15 00 40.6	-0.4
MAJO				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MJAR	Matsushiro Arr	54.51	67	P	P	15 00 40.9	-0.1
	comp=Z,1.7nm,0.9s,baz=292,slow=8.5,SNR=4.6						
ASAJ	Asahikawa	55.07	57	P	P	15 00 44.7	-0.2
	comp=Z,1.9nm,0.6s,baz=280,slow=6.1,SNR=2.2						
SEY	Seymchan	55.63	33	P	P	15 00 49.6	+1.0
	comp=Z,1.1nm,0.6s,baz=274,slow=8.9,SNR=5.9						
ESDC	Sonseca Array	56.35	297	P	P	15 00 55.1	+0.9
	comp=Z,0.7nm,0.6s,baz=57,slow=7.6,SNR=5.7						
TOA0	Torodi Ar. Sit	64.21	268	eP	P	15 01 47.2	-1.1
TORD	Torodi Ar. Bea	64.21	268	P	P	15 01 48.3	0.0
	comp=Z,1.5nm,0.6s,baz=46,slow=6.0						
KOWA	Kowa	68.10	272	P	P	15 02 13.5	+0.3
	comp=Z,2.5nm,0.9s,baz=56,slow=7.3,SNR=3.7						
TOLK	Toolik Lake Re	71.74	14	eP	P	15 02 33.7	-1.1
	comp=Z,51nm,1.8s						
COLD	Coldfoot	72.81	15	eP	P	15 02 39.4	-1.8
	comp=Z,4.9nm,0.8s						
DBIC	Dimbokro	73.18	266	P	P	15 02 44.2	0.0
	comp=Z,2.8nm,0.9s,baz=127,slow=10,SNR=2.7						
MLY	Manley	74.55	16	eP	P	15 02 49.9	-1.6
	comp=Z,15nm,1.7s						
INK	Inuvik	74.59	9	P	P	15 02 52.1	+0.6
	comp=Z,2.5nm,0.4s,baz=359,slow=5.1,SNR=16						
INK	Inuvik	74.59	9	eP	P	15 02 51.9	+0.3
	comp=Z,5.4nm,0.8s						
MDM	Murphy Dome	75.17	16	eP	P	15 02 55.3	+0.3
	comp=Z,5.5nm,0.8s						
BPAW	Bear Paw Mtn.	75.28	17	eP	P	15 02 55.5	-0.2
	comp=Z,5.7nm,1.1s						
IL1	Eielson Array	75.62	15	eP	P	15 02 57.0	-0.6
ILAR	Eielson Array	75.62	15	P	P	15 02 57.5	0.0
	comp=Z,3.0nm,1.0s,baz=313,slow=4.5,SNR=23						
ILB	Eielson Array	75.62	15	eP	P	15 02 56.1	-1.5
BOSA	Boshof	76.44	219	P	P	15 03 03.1	+0.4
	comp=Z,1.6nm,0.7s,baz=59,slow=2.5,SNR=3.6						
SCRK	Sand Creek	76.92	14	eP	P	15 03 05.7	+0.5
	comp=Z,10nm,1.4s						
SKT	Skwentna	76.94	18	eP	P	15 03 04.4	-0.7
	comp=Z,12nm,1.0s						
DHY	Denali Highway	77.00	16	eP	P	15 03 05.1	-0.5
	comp=Z,5.3nm,0.8s						
PAX	Paxson	77.51	15	eP	P	15 03 08.2	-0.2
	comp=Z,5.2nm,0.6s						
PAX	Paxson	77.51	15	eP	P	15 03 08.2	-0.2
PAX				pmax	pmax		
	comp=Z,5.0nm,0.6s						
SUA	Susitna One	77.58	18	eP	P	15 03 08.7	-0.2
	comp=Z,6.2nm,1.0s						
DAWY	Dawson	77.71	12	eP	P	15 03 10.0	+0.5
	comp=Z,9.5nm,1.4s						
GHO	Glory Hole Cre	77.77	17	eP	P	15 03 09.9	+0.1
	comp=Z,6.3nm,0.7s						
SML	Sawmill	77.88	17	eP	P	15 03 10.0	-0.4
	comp=Z,12nm,0.8s						
SML	Sawmill	77.88	17	eP	P	15 03 10.0	-0.4
SML				pmax	pmax		
	comp=Z,12nm,0.8s						
HARP	HAARP	78.08	16	eP	P	15 03 12.7	+1.2
	comp=Z,18nm,0.8s						
SCM	Sheep Creek Mo	78.09	17	eP	P	15 03 11.8	+0.2
	comp=Z,26nm,1.5s						
SCM	Sheep Creek Mo	78.09	17	eP	P	15 03 11.8	+0.2
SCM				pmax	pmax		
	comp=Z,26nm,1.5s						
KLU	Klutina	78.72	16	eP	P	15 03 15.8	+0.7
	comp=Z,6.3nm,0.8s						
GLI	Glacier Island	78.98	17	eP	P	15 03 16.6	+0.1
	comp=Z,7.8nm,0.8s						
BRLK	Bradley Lake	78.98	19	eP	P	15 03 16.4	-0.1
	comp=Z,7.2nm,0.7s						
FID	Port Fidalgo	79.24	17	eP	P	15 03 18.0	+0.1
	comp=Z,5.0nm,0.8s						
EYAK	Cordova Ski Ar	79.59	17	eP	P	15 03 20.2	+0.5
	comp=Z,8.6nm,0.8s						
KDAK	Kodiak Island	80.18	21	P	P	15 03 23.6	+0.7
	comp=Z,12nm,0.9s,baz=346,slow=4.9,SNR=16						
KDAK	Kodiak Island	80.18	21	eP	P	15 03 22.7	-0.3
	comp=Z,10nm,0.8s						
KDAK	Kodiak Island	80.18	21	eP	P	15 03 22.7	-0.3
KDAK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
YKA	Yellowknife Ar	81.77	2	P	P	15 03 32.7	+1.4
	comp=Z,1.7nm,0.7s,baz=349,slow=5.7,SNR=4.2						
WRA	Warramunga Arr	83.03	121	P	P	15 03 37.6	-0.9
	comp=Z,2.0nm,0.7s,baz=324,slow=4.8,SNR=29						
ASAR	Alice Springs	85.23	124	P	P	15 03 48.8	-1.0
	comp=Z,1.4nm,0.5s,baz=313,slow=4.9,SNR=18						

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*NEIC **25** 14:51:40.9±0.0, 59°.22N×139°.53W, h15^{km}, ML3.6(AEIC), ML3.8(OTT), After OTT.*

NEIC Felt at Yakutat.

PGC 25 14:51:40.9±0.4**, 59°.22N×139°.53W, h15**^{km}**, ML3.8**/12**, 8km Ssw of Yakutat, Ak Southeastern Alaska, Southeastern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YKU2	Yakutat	0.31	346	ePg	Pg	14 51 47.5	+0.2
PNL	Peninsula	0.46	8	P	Pg	14 51 49.7	-0.4
PNL				S	Sg	14 51 56.5	+0.1
PNL	Peninsula	0.46	8	ePg	Pg	14 51 49.7	-0.5
PNL				eSg	Sg	14 51 56.9	+0.5
SAMH	Samovar Hills	1.12	326	ePg	Pb	14 51 59.3	-2.7
CHX	Chaix Hills	1.17	317	ePn	Pn	14 52 00.1	-2.8
RKAV	Rock Avalanche	1.43	321	ePn	Pn	14 52 04.3	-2.1
TABL	Table Mountain	1.48	327	ePn	Pn	14 52 04.7	-2.4
YUK7	Dusty Glacier	1.50	27	Pn	Pn	14 52 07.0	-0.4
YUK7				Sg	Sn	14 52 27.0	+0.2
YUK7	Dusty Glacier	1.50	27	P	Pn	14 52 07.0	-0.4
MESA	MESA	1.56	309	ePn	Pn	14 52 05.2	-3.1
YAH	Yahtse	1.61	317	ePn	Pn	14 52 05.2	-3.8
PLBC	Pleasant Camp	1.64	80	Pn	Pn	14 52 08.9	-0.3
PLBC				Sg	Sn	14 52 29.9	-0.1
PLBC	Pleasant Camp	1.64	80	eSn	Sn	14 52 29.7	-0.3
BAGL	Bagley Icefiel	1.82	316	ePn	Pn	14 52 08.4	-3.3
YUK6	Outpost Mounta	1.83	18	Pn	Pn	14 52 11.3	-0.8
YUK6				Sg	Sb	14 52 36.0	-1.0
GRNC	Granite Creek	1.89	325	ePn	Pn	14 52 09.6	-3.2
HYT	Haines Junctio	1.91	31	Pn	Pn	14 52 12.4	-0.6
HYT				Sg	Sb	14 52 39.7	+0.5
HYT	Haines Junctio	1.91	31	ePn	Pn	14 52 12.3	-0.7
BARK	Barkley Ridge	1.91	310	ePn	Pn	14 52 09.8	-3.3
KULT	Kultieth River	1.92	304	ePn	Pn	14 52 09.8	-3.3
CTGM	Chitina Glacie	1.98	334	Pn	Pn	14 52 11.2	-2.8
CTGM				Sn	Sn	14 52 36.3	-2.2
CTGM	Chitina Glacie	1.98	334	ePn	Pn	14 52 11.5	-2.5
CTGM				eSn	Sn	14 52 34.0	-4.5
ISLE	Juniper Island	1.98	316	ePn	Pn	14 52 10.5	-3.6
WAX	Waxell Ridge	2.08	308	ePn	Pn	14 52 12.0	-3.4
YUK5	Granite Creek	2.10	23	Pn	Pn	14 52 15.5	-0.2
YUK5				Sn	Sn	14 52 41.4	-0.1
YUK5				Sg	Sb	14 52 45.8	+1.2
BGLC	Bering Glacier	2.11	297	ePn	Pn	14 52 12.4	-3.2
BARN	Barnard Glacie	2.14	331	ePn	Pn	14 52 13.5	-2.7
YUK4	Talbot Arm	2.18	11	Pn	Pn	14 52 17.9	+1.0
YUK4				Sn	Sb	14 52 46.1	-1.0
GRIN	Grindle Hills	2.20	301	ePn	Pn	14 52 14.5	-2.4
KIAG	Kiagna River	2.23	322	ePn	Pn	14 52 14.5	-2.9
KHIT	Khitrov Hills	2.25	305	ePn	Pn	14 52 14.4	-3.3
TGL	Tana Glacier	2.27	314	ePn	Pn	14 52 14.5	-3.4
BALM	Baldy	2.31	324	Pn	Pn	14 52 15.4	-3.1
BALM				Sn	Sn	14 52 46.4	-0.2
BALM	Baldy	2.31	324	ePn	Pn	14 52 15.4	-3.1
SUCK	Suckling Hills	2.32	294	ePn	Pn	14 52 15.4	-3.2
BERG	Berg Lake	2.42	301	ePn	Pn	14 52 16.5	-3.4
PTPK	Patty Peak	2.46	325	ePn	Pn	14 52 18.5	-2.2
NICHA	Nichawak Mount	2.47	296	ePn	Pn	14 52 17.1	-3.5
BESE	Bessie Mountai	2.51	103	Pn	Pn	14 52 19.7	-1.5
BESE				Sg	Sb	14 52 58.0	+1.6
BESE	Bessie Mountai	2.51	103	ePn	Pn	14 52 19.5	-1.7
KAIM	Kayak Island	2.59	288	ePn	Pn	14 52 18.6	-3.6
YUK3	Moose Creek	2.61	350	Pn	Pn	14 52 21.9	-0.8
YUK3				Sg	Sb	14 52 57.8	-1.6
YUK2	White River	2.66	346	Pn	Pn	14 52 22.4	-1.0
YUK2				Sg	Sb	14 52 58.9	-1.9
YUK2	White River	2.66	346	P	Pn	14 52 22.1	-1.2
WHY	Whitehorse	2.75	56	Pn	Pn	14 52 24.4	-0.2
WHY				Sg	Sg	14 53 06.4	-2.9
WHY	Whitehorse	2.75	56	ePn	Pn	14 52 24.4	-0.2
MCARA	McCarthy VSAT	2.79	323	ePn	Pn	14 52 22.8	-2.2
VRDI	Verde Repeater	2.81	318	ePn	Pn	14 52 21.9	-3.6
JIS	Juneau Island	2.84	107	ePn	Pn	14 52 24.4	-1.2
RAGM	Ragged Mountai	2.85	297	ePn	Pn	14 52 22.0	-4.0
YUK1	Sand Pete Hill	2.99	351	Pn	Pn	14 52 29.1	+1.3
YUK1				Sg	Sb	14 53 08.7	-1.6
GLB	Gilahina Butte	3.08	318	ePn	Pn	14 52 25.8	-3.3
BMRM	Bremner River	3.09	307	ePn	Pn	14 52 26.0	-3.2
SIT	Sitka	3.11	132	ePn	Pn	14 52 27.1	-2.2
BVCY	Beaver Creek	3.28	349	Pn	Pb	14 52 35.4	-3.4
EYAK	Cordova Ski Ar	3.41	296	ePn	Pn	14 52 29.8	-3.7
MID	Middleton Isla	3.50	276	ePn	Pn	14 52 32.0	-2.6
DIV	Divide	3.66	304	Pn	Pn	14 52 34.9	-2.2
DIV				Sg	Sn	14 53 24.3	+4.3
DIV	Divide	3.66	304	ePn	Pn	14 52 34.1	-3.0
HIN	Hinchinbrook I	3.72	292	ePn	Pn	14 52 34.5	-3.3
FID	Port Fidalgo	3.82	297	ePn	Pn	14 52 36.6	-2.5
KLU	Klutina	3.91	308	ePn	Pn	14 52 37.2	-3.3
JPK	Jack Peak	3.99	301	ePn	Pn	14 52 38.6	-2.9
BCA3	Beaver Creek A	4.02	345	ePn	Pn	14 52 40.0	-1.8
GLI	Glacier Island	4.14	297	ePn	Pn	14 52 40.2	-3.4
HARP	HAARP	4.22	322	Pn	Pn	14 52 43.8	-0.9
HARP				Sn	Sb	14 53 42.4	-3.2
HARP	HAARP	4.22	322	ePn	Pn	14 52 43.1	-1.6
SCM	Sheep Creek Mo	4.66	308	ePn	Pn	14 52 47.8	-2.9
PAX	Paxson	4.74	325	Pn	Pn	14 52 50.5	-1.4
PAX	Paxson	4.74	325	ePn	Pn	14 52 50.3	-1.6
WRAK	Wrangell Islan	4.75	123	ePn	Pn	14 52 50.9	-1.1
DAWY	Dawson	4.87	1	Pn	Pn	14 52 53.0	-0.6
DAWY				Sn	Sn	14 53 46.8	-2.8
DAWY	Dawson	4.87	1	ePn	Pn	14 52 52.9	-0.7
KNK	Knik Glacier	4.96	300	ePn	Pn	14 52 52.5	-2.2
DLBC	Dease Lake	5.00	95	Pn	Pn	14 52 54.5	-1.0
DLBC				Sn	Sn	14 53 50.7	-2.2
DLBC				Sg	Sb	14 54 13.9	+5.9
DLBC	Dease Lake	5.00	95	ePn	Pn	14 52 54.4	-1.0
PTE	Portage	5.04	293	ePn	Pn	14 52 52.7	-3.2
SML	Sawmill	5.07	305	ePn	Pn	14 52 54.2	-2.1
CRAG	Craig	5.11	135	ePn	Pn	14 52 55.6	-1.3
RIDG	Independ'e Rid	5.21	333	ePn	Pn	14 52 56.4	-1.8
SCRK	Sand Creek	5.23	338	ePn	Pn	14 52 57.4	-1.3
GHO	Glory Hole Cre	5.30	303	ePn	Pn	14 52 57.5	-2.1
PMR	Palmer	5.32	301	ePn	Pn	14 52 56.3	-3.5
DHY	Denali Highway	5.42	319	ePn	Pn	14 52 59.1	-2.2
RC01	Rabbit Creek A	5.43	295	ePn	Pn	14 52 57.9	-3.4
EGAK	Eagle	5.63	353	ePn	Pn	14 53 03.1	-1.0
BRLK	Bradley Lake	5.81	280	ePn	Pn	14 53 03.7	-2.8
CNPM	China Poot	5.99	278	ePn	Pn	14 53 06.1	-2.9
SUA	Susitna One	6.01	297	ePn	Pn	14 53 05.9	-3.4
HOM	Homer	6.20	279	ePn	Pn	14 53 07.2	-4.5
HDA	Harding Lake	6.28	329	ePn	Pn	14 53 09.9	-3.0
MCK	McKinley	6.39	319	ePn	Pn	14 53 11.3	-3.1
SKT	Skwentna	6.53	300	ePn	Pn	14 53 13.1	-3.2
SPU	Mount Spurr	6.55	293	ePn	Pn	14 53 12.9	-3.7
IL1	Eielson Array	6.56	331	ePn	Pn	14 53 14.5	-2.2
ILB	Eielson Array	6.56	331	ePn	Pn	14 53 13.9	-2.8
WRH	Wood River Hil	6.65	326	ePn	Pn	14 53 16.6	-1.3
TRF	Thorofare Moun	6.69	314	ePn	Pn	14 53 17.1	-1.6
CCB	Clear Creek Bu	6.70	328	ePn	Pn	14 53 17.6	-1.1
RSO	Redoubt South	6.78	286	ePn	Pn	14 53 17.1	-2.9
RDWB	Redoubt West	6.83	286	ePn	Pn	14 53 17.9	-2.6
KDAK	Kodiak Island	6.99	264	ePn	Pn	14 53 19.4	-3.2
NEA	Nenana	7.01	324	ePn	Pn	14 53 21.6	-1.4
MDM	Murphy Dome	7.06	328	ePn	Pn	14 53 20.9	-2.7
VIB	Van Inlet	7.13	144	Pn	Pn	14 53 23.0	-1.7
VIB				Sn	Sn	14 54 40.4	-5.0
DIB	Dawson Inlet,	7.19	144	Pn	Pn	14 53 22.9	-2.5
DIB				Sn	Sn	14 54 41.4	-5.4
DIB	Dawson Inlet,	7.19	144	ePn	Pn	14 53 24.6	-0.9
BPAW	Bear Paw Mtn.	7.32	317	ePn	Pn	14 53 24.8	-2.5
OHAK	Old Harbor	7.54	261	ePn	Pn	14 53 25.3	-4.8
MLY	Manley	7.84	323	ePn	Pn	14 53 32.3	-2.0
BNB	Barry Inlet	7.96	143	Pn	Pn	14 53 34.0	-1.9
SVW2	Sparrevohn	8.22	290	ePn	Pn	14 53 36.0	-3.6
SII	Sitkinak Islan	8.25	258	ePn	Pn	14 53 36.5	-3.4
BM3	Burnt Mountain	8.54	347	ePn	Pn	14 53 43.3	-0.7
TT01	Tatalina	8.80	302	ePn	Pn	14 53 44.2	-3.3
COLD	Coldfoot	9.36	334	P	Pn	14 54 00.7	+5.7
IM05	Indian Mountai	9.40	322	ePn	Pn	14 53 54.2	-1.5

INK	Inuvik	9.50	14	P	Pn	14 53 56.9	-0.1
INK	Inuvik	9.50	14	*e*Pn	Pn	14 53 55.7	-1.3

ISCJB ***25*** *14:54:59.0±0.3, 34°.34N±0°.05×136°.97E±0°.06, h358^{km}±2^{km}, mb3.3/13, Error ellipse: s-maj=8.9km s-min=6.4km az=146.8*

JMA ***25*** *14:54:59.6±0.2, 34°.37N×136°.97E, h357^{km}±2^{km}, M3.3*

IDC ***25*** *14:54:59.4±0.6, 34°.30N×137°.00E, h349^{km}±5^{km}, mb3.1/13, mb1 3.3/21, mb1mx3.1/75, mbtmp3.9/21, Error ellipse: s-maj=12.5km s-min=9.3km az=90.0*

ISC 25 14:54:59.7±0.7**, 34°.36N**±0°.06×**137°.00E**±0°.06**, h352**^{km}±5^{km}**, n40, σ1^{s}.22**/53**, mb3.3**/13**, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIE	Ise	0.25	277	P	Pn	14 55 44.6	+0.9
JIE				S	S	14 56 19.1	0.0
JAA	Atsumi	0.29	23	P	Pn	14 55 44.9	+1.2
JAA				S	S	14 56 19.5	+0.4
TK02	Tokai 2	0.75	123	P	Pn	14 55 45.8	+1.2
TTO1	TONANKAI O.B.S	0.76	194	P	Pn	14 55 45.6	+1.0
JWY	Kouya	1.18	263	P	Pn	14 55 47.1	+0.6
JWY				S	S	14 56 23.0	-1.0
JWZ	Kozaga	1.35	233	P	Pn	14 55 47.2	-0.1
JWZ				S	S	14 56 24.4	-1.1
JWT	Wachi	1.61	305	P	Pn	14 55 49.3	+0.7
JWT				S	S	14 56 27.0	-0.9
JYN	Shimob	1.70	48	P	Pn	14 55 49.8	+0.6
JOD2	Odawara 2	1.94	62	P	Pn	14 55 51.3	+0.6
JKG	Kaga	1.99	344	P	Pn	14 55 51.7	+0.7
JKG				S	S	14 56 32.0	-0.2
JAI	Aioi	2.19	256	P	Pn	14 55 52.7	+0.1
JAI				S	S	14 56 34.0	-1.1
JRY	Ryogami san	2.27	43	P	Pn	14 55 54.1	+1.0
JRY				S	S	14 56 35.7	-0.3
MAT	Matsushiro	2.39	24	P	Pn	14 55 54.7	+0.7
MAT				S	S	14 56 37.6	-0.1
MAT	Matsushiro	2.39	24	P	Pn	14 55 54.7	+0.7
MAT				S	S	14 56 37.3	-0.4
MJAR	Matsushiro Arr	2.39	24	P	Pn	14 55 54.7	+0.7
	18nm,0.3s,baz=200,slow=9.1,SNR=324						
MJAR				S	S	14 56 37.7	0.0
	1.8nm,0.3s,baz=202,slow=15,SNR=9.3						
JHJ	Hachijo jima 2	2.63	117	P	Pn	14 55 55.5	-0.5
	24nm,0.3s,baz=14,slow=22,SNR=15						
JHJ				S	S	14 56 40.8	-0.5
	18nm,0.3s,baz=231,slow=23,SNR=5.9						
JHJ2	Mitsune	2.66	117	P	Pn	14 55 56.4	+0.2
JMN	Monobe	2.67	257	P	Pn	14 55 56.7	+0.3
JMN				S	S	14 56 41.1	-0.9
JAG	Ashikaga	2.87	44	P	Pn	14 55 57.4	-0.6
JNU	Nakatsue	5.25	258	P	Pn	14 56 22.3	+0.1
	1.1nm,0.3s,baz=66,slow=1.9,SNR=12						
KSRS	Korea Array	7.99	295	P	P	14 56 54.8	+0.1
	0.6nm,0.3s,baz=111,slow=12,SNR=38						
JCJ	Chichijima	8.50	147	P	Pn	14 56 54.4	-5.5
	9.3nm,0.3s,baz=264,slow=10,SNR=10						
JCJ				S	S	14 58 25.9	-12
	19nm,0.3s,baz=301,slow=19,SNR=9.7						
USRK	Ussuriysk Ar.	10.56	340	P	P	14 57 25.1	+0.1
	baz=153,slow=10						
JOW	Kunigami	10.62	227	P	Pn	14 57 24.8	-0.3
	1.4nm,0.3s,baz=92,slow=13,SNR=5.3						
ASAJ	Asahikawa	10.66	22	P	Pn	14 57 24.2	-1.0
	2.0nm,0.3s,baz=224,slow=12,SNR=19						
ASAJ				S	S	14 59 18.1	-6.8
	0.4nm,0.3s,baz=343,slow=30,SNR=7.6						
KLR	Kul'dur	15.36	347	P	P	14 58 18.1	+0.3
	0.2nm,0.3s,baz=158,slow=8.7,SNR=54						
TIA	Tai'an	16.34	282	P	P	14 58 28.8	+0.1
TIA				pmax	pmax		
	comp=Z,17nm,0.8s						
PETK	Petropavlovsk-	23.82	32	P	P	14 59 42.4	+0.4
	comp=Z,2.4nm,0.7s,baz=224,slow=4.0						
SEY	Seymchan	30.18	14	P	P	15 00 38.7	+0.6
	comp=Z,1.0nm,0.5s,baz=204,slow=8.2,SNR=7.9						
CMAR	Chiang Mai Arr	37.34	255	P	P	15 01 38.0	-1.9
	comp=Z,0.6nm,0.4s,baz=49,slow=8.4,SNR=5.3						
MKAR	Makanchi Array	42.56	304	P	P	15 02 22.8	+0.8
	comp=Z,0.6nm,0.7s,baz=90,slow=10,SNR=4.1						
KURBB	Kurchatov Arra	44.88	310	P	P	15 02 40.7	+0.6
	comp=Z,0.3nm,0.4s,baz=87,slow=9.2,SNR=3.9						
ILAR	Eielson Array	53.65	31	P	P	15 03 45.4	-0.3
	comp=Z,0.7nm,0.8s,baz=277,slow=4.9,SNR=3.6						
WRA	Warramunga Arr	54.06	183	P	P	15 03 48.2	-0.9
	comp=Z,1.1nm,0.8s,baz=359,slow=7.5,SNR=21						
ASAR	Alice Springs	57.78	183	P	P	15 04 14.9	-0.3
	comp=Z,0.6nm,0.6s,baz=9.8,slow=12,SNR=8.2						
ARCES	ARCESS Array B	65.21	339	P	P	15 05 03.5	-0.2
	comp=Z,1.3nm,0.7s,baz=80,slow=10.0,SNR=7.4						
FINES	FINESS Array B	69.47	331	P	P	15 05 30.5	+0.2
	comp=Z,1.3nm,0.7s,baz=64,slow=4.4,SNR=7.3						
NVAR	Mina Array Bea	79.46	51	P	P	15 06 28.9	+0.8
	comp=Z,0.3nm,0.7s,baz=308,slow=4.4,SNR=3.4						
PDAR	Pinedale Array	82.08	43	P	P	15 06 43.0	+1.2
	comp=Z,0.4nm,0.7s,baz=321,slow=1.2,SNR=3.0						
TXAR	Lajitas Array	94.59	50	P	P	15 07 42.8	+1.4
	comp=Z,0.3nm,0.7s,baz=282,slow=2.4,SNR=3.8						

JMA 25 14:59:32.2±0.3**, 25°.02N**×**123°.41E, h23**^{km}**, M2.3, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.66	213	*e*P	Pb	14 59 44.6	-0.5
	81nm,0.6s						
YOJ	Yonaguni jima	0.66	213	P	Pb	14 59 44.9	-0.2
YOJ				*e*S	Sb	14 59 53.9	0.0
YOJ	Yonaguni jima	0.66	213	*e*P	Pb	14 59 44.7	-0.4
JYNG	Yonagunijimaku	0.71	217	P	Pb	14 59 45.6	-0.2
JYNG				S	Sb	14 59 54.9	-0.2
IRIF	Iriomote-Funau	0.74	157	P	Pb	14 59 46.1	-0.3
JISG	Ishigakijimahi	0.93	118	P	Pb	14 59 49.5	-0.1
JISG				*e*S	Sb	15 00 01.4	0.0
JIJ	Ishigaki jima	0.93	134	P	Pb	14 59 49.0	-0.7
JIJ				S	Sb	15 00 00.6	-1.1
JKRS	Kuro-shima	0.95	145	P	Pb	14 59 50.0	0.0
JKRS				*e*S	Sn	15 00 02.9	-0.1
HATJ	Hateruma jima	1.02	159	*e*S	Sb	15 00 04.1	-0.2

ISCJB ***25*** *14:59:47.0±0.4, 39°.63N±0°.03×43°.55E±0°.03, h0^{km}±7^{km}, Error ellipse: s-maj=4.8km s-min=3.6km az=167.5*

DDA ***25*** *14:59:47.0, 39°.61N×43°.61E, h15^{km}, Ml3.1*

CSEM ***25*** *14:59:46.7±0.2, 39°.64N×43°.56E, h10^{km}, ML3.1, Error ellipse: s-maj=4.0km s-min=3.4km az=151.0*

ISK ***25*** *14:59:46.3, 39°.61N×43°.55E, h5^{km}, ML2.7/5*

ISC 25 14:59:46.7±0.9**, 39°.63N**±0°.03×**43°.56E**±0°.02**, h12**^{km}±6^{km}**, n33, σ0^{s}.50**/51**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DYDN	Diyadin	0.13	130	*i* P	Pg	14 59 50.1	0.0
DYDN				*i* S	Sg	14 59 52.9	+0.2
DYDN	Diyadin	0.13	130	P	Pg	14 59 50.1	0.0
DYDN				S	Sg	14 59 52.8	+0.2
AGRB	Hanur-Agry	0.44	263	PG	Pg	14 59 55.5	+0.1
AGRB				SG	Sg	15 00 01.7	+0.4
AGRB	Hanur-Agry	0.44	263	*e*Pg	Pg	14 59 55.5	+0.1
AGRB				*e*Sg	Sg	15 00 01.7	+0.4
IGDI	IGDIR	0.47	59	*i* P	Pg	14 59 56.1	+0.2
IGDI				*i* S	Sb	15 00 03.7	-0.1
CLDR	Caldiran	0.56	150	PG	Pg	14 59 57.4	-0.2
CLDR				SG	Sb	15 00 05.5	-1.1
CLDR	Caldiran	0.56	150	*i* P	Pg	14 59 57.3	-0.4
CLDR				*i* S	Sb	15 00 05.8	-0.7
CLDR	Caldiran	0.56	150	*e*Pg	Pg	14 59 57.4	-0.2
CLDR				*e*Sg	Sb	15 00 05.5	-1.1
TUTA	Tutak	0.62	249	*i* P	Pg	14 59 59.0	+0.2
TUTA				*i* S	Sb	15 00 08.1	-0.2
TUTA	Tutak	0.62	249	P	Pg	14 59 59.0	+0.2
TUTA				S	Sb	15 00 08.1	-0.2
TASB	TASBURUN-IGDIR	0.63	56	PG	Pg	14 59 59.3	+0.3
TASB				SG	Sb	15 00 08.8	+0.2
TASB	TASBURUN-IGDIR	0.63	56	*e*Pg	Pg	14 59 59.3	+0.3
TASB				*e*Sg	Sb	15 00 08.8	+0.2
VMUR	Van-Muradiye	0.64	179	*i* P	Pg	14 59 59.2	+0.1
VMUR	Van-Muradiye	0.64	179	P	Pg	14 59 59.2	+0.1
DIGO	Kars	0.80	350	*i* P	Pb	15 00 02.7	0.0
DIGO	Kars	0.80	350	P	Pb	15 00 02.7	0.0
EATA	Eleskirt	0.85	286	*i* P	Pg	15 00 02.7	-0.6
EATA				*i* S	Sn	15 00 17.3	-0.1
EATA	Eleskirt	0.85	286	P	Pg	15 00 02.7	-0.6
EATA				S	Sn	15 00 17.3	-0.1
ADCV	BITLIS_Adilcev	1.04	219	*i* P	Pn	15 00 07.3	0.0
ADCV				*i* S	Sn	15 00 22.4	+0.5
ADCV	BITLIS_Adilcev	1.04	219	P	Pn	15 00 07.3	0.0
ADCV				S	Sn	15 00 22.4	+0.5
GNI	Garni	1.05	60	PG	Pb	15 00 06.7	-0.2
GNI				SG	Sn	15 00 22.2	+0.2
GNI	Garni	1.05	60	*e*Pg	Pb	15 00 06.7	-0.2
GNI				*e*Sg	Sn	15 00 22.2	+0.2
KARS	Kars	1.06	340	PG	Pb	15 00 06.9	-0.2
KARS	Kars	1.06	340	*e*Pg	Pb	15 00 06.9	-0.2
TVAN	Van	1.10	186	*i* P	Pg	15 00 09.2	+1.2
TVAN	Van	1.10	186	P	Pg	15 00 09.2	+1.2
EKAR	Karacoban	1.22	253	*i* P	Pg	15 00 10.5	+0.4
EKAR	Karacoban	1.22	253	P	Pg	15 00 10.5	+0.4
GURO	Guroymak-BITLI	1.60	228	PN	Pb	15 00 15.9	-0.4
GURO	Guroymak-BITLI	1.60	228	*e*Pn	Pb	15 00 15.9	-0.4
DAGI	Agillar	1.92	320	*i* P	Pg	15 00 23.3	-0.2
BNGB	Bingˆ¶l	2.32	255	PN	Pn	15 00 26.1	+1.3
BINT	Bingol	2.50	253	*e*Pn	Pn	15 00 26.1	-1.2

WEL 25 15:03:59.6, 44°S±4°×**16°8E**±°**, h5**^{km}**, ML3.7**/18**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MSZ	Milford Sound	0.38	168	P	Pb	15 04 08.9	0.0
MSZ				S	Sb	15 04 14.2	-0.8
JCZ	Jackson Bay	0.74	72	P	Pb	15 04 14.5	-0.4
JCZ				S	Sb	15 04 24.8	-0.6
WKZ	Wanaka	1.01	122	P	Pn	15 04 20.2	-0.3
WKZ				S	Sb	15 04 33.7	+0.5
MLZ	Mavora Lakes	1.08	169	P	Pb	15 04 21.1	+0.2
MLZ				S	Sn	15 04 37.5	+0.5
DCZ	Deep Cove	1.25	202	P	Pg	15 04 22.0	-1.7
EAZ	Earnscleugh	1.41	132	P	Pg	15 04 27.2	+0.5
WHZ	Wether Hill Ro	1.59	177	P	Pb	15 04 29.1	-0.4
WHZ				S	Sg	15 04 51.3	+0.5
FOZ	Fox Glacier	1.64	63	P	Pn	15 04 28.0	-1.1
LBZ	Lake Benmore	1.70	94	P	Pb	15 04 30.9	-0.5
PYZ	Puysegur Point	2.03	203	P	Pn	15 04 34.2	-0.2
TUZ	Tuapeka	2.09	143	P	Pn	15 04 36.2	+0.9
ODZ	Otahua Downs	2.15	111	P	Pn	15 04 37.3	+1.1
RPZ	Rata Peaks	2.41	77	P	Pn	15 04 39.4	-0.3
WVZ	Waitaha Valley	2.45	61	P	Pn	15 04 38.9	-1.4
APZ	The Paps	2.53	177	P	Pn	15 04 42.7	+1.3
INZ	Inchbonnie	3.08	60	P	Pn	15 04 47.7	-1.2
OXZ	Oxford	3.21	74	P	Pn	15 04 49.7	-1.0
LTZ	Lake Taylor	3.58	66	P	Pn	15 04 54.3	-1.6
DSZ	Denniston Nort	3.89	50	P	Pn	15 04 58.5	-1.6
THZ	Tophouse	4.51	58	P	Pn	15 05 08.5	-0.2
QRZ	Quartz Range	4.92	47	P	Pn	15 05 11.8	-2.4
NNZ	Nelson	5.13	55	P	Pn	15 05 17.5	+0.4

ISCJB ***25*** *15:09:17.4±0.6, 39°.90N±0°.04×33°.09E±0°.04, h0^{km}, Error ellipse: s-maj=5.9km s-min=4.7km az=13.1*

DDA ***25*** *15:09:17.9, 39°.90N×33°.10E, h7^{km}, Ml2.7*

CSEM ***25*** *15:09:17.6±0.1, 39°.89N×33°.08E, h1^{km}, ML1.7, Error ellipse: s-maj=2.9km s-min=2.2km az=18.0, Suspected Mining explosion.*

ISK ***25*** *15:09:17.4, 39°.88N×33°.05E, h5^{km}, ML1.7/4, Suspected Mining explosion.*

ISC 25 15:09:17.2±0.9**, 39°.94N**±0°.05×**33°.10E**±0°.03**, h0**^{km}**, n23, σ0^{s}.29**/29**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANTO	Ankara	0.25	254	PG	Pg	15 09 21.9	0.0
ANTO				SG	Sg	15 09 25.4	+0.3
ANTO	Ankara	0.25	254	*e*Pg	Pg	15 09 21.9	0.0
ANTO				*e*Sg	Sg	15 09 25.4	+0.3
LOD	Lodumlu	0.26	259	PG	Pg	15 09 22.3	+0.1
LOD				SG	Sg	15 09 26.1	+0.5
LOD	Lodumlu	0.26	259	*e*Pg	Pg	15 09 22.3	+0.1
LOD				*e*Sg	Sg	15 09 26.1	+0.5
AFSR	Af¯ar-Bala (A	0.49	183	PG	Pg	15 09 26.5	-0.1
AFSR				SG	Sg	15 09 32.9	-0.1
AFSR	Af¯ar-Bala (A	0.49	183	*e*Pg	Pg	15 09 26.5	-0.1
AFSR				*e*Sg	Sg	15 09 32.9	-0.1
ELDT	Eldivan	0.60	24	*i* P	Pb	15 09 30.4	-0.4
ELDT	Eldivan	0.60	24	P	Pb	15 09 30.4	-0.4
CMDR	Camlidere-ANKA	0.73	319	*i* P	Pb	15 09 32.9	0.0
CMDR	Camlidere-ANKA	0.73	319	P	Pb	15 09 32.9	0.0
KAMT	Kaman	0.74	140	PG	Pg	15 09 31.3	0.0
KAMT	Kaman	0.74	140	*e*Pg	Pg	15 09 31.3	0.0
CDAG	Cicekdag	1.03	107	*i* P	Pb	15 09 37.6	-0.3
CDAG	Cicekdag	1.03	107	P	Pb	15 09 37.6	-0.3
BCAM	Yenicaga	1.18	318	*i* P	Pn	15 09 40.9	-0.2
BCAM	Yenicaga	1.18	318	P	Pn	15 09 40.9	-0.2
CORM	Corum	1.20	78	PN	Pn	15 09 41.9	+0.6
CORM	Corum	1.20	78	*e*Pn	Pn	15 09 41.9	+0.6
AUMIH	MIHALICIK	1.25	267	PN	Pg	15 09 40.8	-0.3
AUMIH	MIHALICIK	1.25	267	*i* P	Pg	15 09 40.8	-0.3
AUMIH	MIHALICIK	1.25	267	P	Pg	15 09 40.8	-0.3
AUSIV	SIVRIHISAR	1.30	248	PN	Pg	15 09 41.9	-0.3
AUSIV	SIVRIHISAR	1.30	248	*e*Pn	Pg	15 09 41.9	-0.3

ISCJB ***25*** *15:37:58.0±1.4, 39°.14N±0°.04×142°.64E±0°.08, h20^{km}±7^{km}, mb3.3/3, Error ellipse: s-maj=11.2km s-min=5.9km az=17.7*

JMA ***25*** *15:37:59.7±0.1, 39°.19N×142°.56E, h29^{km}±1^{km}, M3.2*

IDC ***25*** *15:38:02.1±3.5, 39°.17N×142°.68E, h59^{km}±30^{km}, mb3.1/3, mb1 3.0/5, mb1mx2.9/60, mbtmp3.1/5, ML2.6/2, MS2.8/1, Ms1 2.8/1, ms1mx2.2/15, Error ellipse: s-maj=49.6km s-min=24.5km az=84.0*

ISC 25 15:37:57.0±2.0**, 39°.13N**±0°.04×**142°.59E**±0°.08**, h7**^{km}±11^{km}**, n16, σ1^{s}.34**/26**, mb3.4**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.72	267	P	Pn	15 38 13.1	-0.4
OFUJ				S	Sb	15 38 22.3	+0.5
MIYJ	Miyakonagasawa	0.74	307	P	Pb	15 38 12.8	+0.5
MIYJ				S	Sg	15 38 22.3	+1.3
JTH	Tanohata	0.98	326	P	Pn	15 38 16.5	-0.7
JTH				*e*S	Sg	15 38 28.9	+0.2
JOM	Ohasama	1.06	289	P	Pn	15 38 18.2	0.0
JOM				S	Sg	15 38 31.6	+0.5
JMK	Ichinoseki	1.08	261	P	Pn	15 38 18.7	+0.2
JMK				S	Sb	15 38 32.9	+0.7
JIO	Ouri	1.18	236	P	Pn	15 38 20.0	+0.2
JIO				S	Sg	15 38 34.3	-0.5
JKZ	Kuzumaki	1.29	312	P	Pg	15 38 21.8	0.0
JKZ				S	Sg	15 38 37.6	-1.0
JANG	Nango	1.49	327	P	Pn	15 38 24.1	-0.1
JANG				S	Sn	15 38 42.3	-1.6
JRG	Rokugo	1.54	281	P	Pg	15 38 26.1	-0.4
JRG				S	Sn	15 38 46.0	+1.0
JOU	Okura	1.69	244	P	Pg	15 38 28.2	-1.1
JOU				*e*S	Sn	15 38 49.4	+0.7
MJAR	Matsushiro Arr	4.32	235	P	Pn	15 39 06.7	+3.6
	0.4nm,0.3s,baz=30,slow=14,SNR=6.0						
ASAJ	Asahikawa	4.99	0	P	Pn	15 39 13.3	+1.2
	0.2nm,0.3s,baz=195,slow=16,SNR=3.8						
ASAJ				S	Sn	15 40 13.2	+3.2
	0.2nm,0.3s,baz=107,slow=19,SNR=2.8						
JHJ	Hachijo jima 2	6.41	202	LR	LR	15 42 09.1	
	comp=Z,87nm,20.1s,baz=62,slow=38						
MKAR	Makanchi Array	43.82	300	P	P	15 46 03.0	-0.5
	0.3nm,0.7s,baz=96,slow=7.4,SNR=3.0						
KURBB	Kurchatov Arra	45.47	307	P	P	15 46 15.0	-1.5
	0.6nm,0.6s,baz=82,slow=8.4,SNR=6.7						
WRA	Warramunga Arr	59.26	189	P	P	15 47 57.7	-1.5
	0.3nm,1.0s,baz=0.8,slow=7.6,SNR=3.0						

ISCJB ***25*** *15:47:09.5±0.6, 40°.14N±0°.03×31°.72E±0°.05, h8^{km}, Error ellipse: s-maj=5.7km s-min=4.7km az=17.2*

DDA ***25*** *15:47:09.1, 40°.19N×31°.67E, h7^{km}, Ml2.3*

ISK ***25*** *15:47:09.9, 40°.11N×31°.65E, h8^{km}, ML2.5/3*

CSEM ***25*** *15:47:10.1±0.2, 40°.11N×31°.67E, h10^{km}, ML2.5, Error ellipse: s-maj=4.1km s-min=3.5km az=39.0*

ISC 25 15:47:09.4±1.0**, 40°.14N**±0°.02×**31°.71E**±0°.03**, h8**^{km}**, n23, σ0^{s}.75**/31**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUMIH	MIHALICIK	0.32	213	PG	Pg	15 47 15.2	-0.6
AUMIH				SG	Sg	15 47 20.5	+0.5
AUMIH	MIHALICIK	0.32	213	*i* P	Pg	15 47 15.1	-0.6
AUMIH				*i* S	Sb	15 47 22.1	-0.7
AUMIH	MIHALICIK	0.32	213	*e*Pg	Pg	15 47 15.2	-0.6
AUMIH				*e*Sg	Sg	15 47 20.5	+0.5
AUMIH				S	Sb	15 47 22.1	-0.7
MDUB	Mudurnu	0.52	311	PG	Pg	15 47 20.2	+0.8
MDUB				SG	Sb	15 47 27.7	-0.8
MDUB	Mudurnu	0.52	311	*e*Pg	Pg	15 47 20.2	+0.8
MDUB				*e*Sg	Sb	15 47 27.7	-0.8
AUSIV	SIVRIHISAR	0.71	191	PG	Pg	15 47 23.1	+0.1
AUSIV	SIVRIHISAR	0.71	191	*e*Pg	Pg	15 47 23.1	+0.1
BCAM	Yenicaga	0.73	22	*i* P	Pg	15 47 21.9	-1.6
BCAM				*i* S	Sg	15 47 33.5	+0.5
BCAM	Yenicaga	0.73	22	P	Pg	15 47 21.9	-1.6
BCAM				S	Sg	15 47 33.5	+0.5
LOD	Lodumlu	0.84	107	PG	Pb	15 47 27.2	+0.9
LOD	Lodumlu	0.84	107	*e*Pg	Pb	15 47 27.2	+0.9
ANTO	Ankara	0.87	107	PG	Pb	15 47 27.9	+1.1
ANTO	Ankara	0.87	107	*e*Pg	Pb	15 47 27.9	+1.1
ESKT	Eskisehir	0.91	227	*i* P	Pb	15 47 27.1	-0.3
SEYT	Eskypehyr	0.91	227	P	Pb	15 47 27.1	-0.3
GULT	Gulveren	0.96	288	PG	Pg	15 47 28.0	+0.1
GULT	Gulveren	0.96	288	*e*Pg	Pg	15 47 28.0	+0.1
SAHE	Sakarya_HENDEK	0.97	318	*i* P	Pb	15 47 29.2	+0.7
SAHE	Sakarya_HENDEK	0.97	318	P	Pb	15 47 29.2	+0.7
BORA	Eskisehir	1.00	256	PG	Pg	15 47 28.5	-0.1
BORA	Eskisehir	1.00	256	*e*Pg	Pg	15 47 28.5	-0.1
CAVI	Cavuskoy	1.43	273	PN	Pb	15 47 36.2	-0.1
CAVI	Cavuskoy	1.43	273	*e*Pn	Pb	15 47 36.2	-0.1

ISK ***25*** *16:14:24.8, 41°.41N×35°.92E, h6^{km}, ML2.2/6*

ISCJB ***25*** *16:14:25.4±0.5, 41°.34N±0°.04×35°.80E±0°.05, h0^{km}, Error ellipse: s-maj=6.6km s-min=3.6km az=42.9*

CSEM ***25*** *16:14:25.5±0.2, 41°.33N×35°.83E, h1^{km}, ML3.0, Error ellipse: s-maj=5.6km s-min=3.3km az=45.0, Suspected Mining explosion.*

DDA ***25*** *16:14:25.7, 41°.32N×35°.82E, h7^{km}, Ml3.0, Suspected Mining explosion.*

ISC 25 16:14:25.2±0.9**, 41°.33N**±0°.03×**35°.85E**±0°.03**, h0**^{km}**, n24, σ0^{s}.67**/32**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SAMS	Samsun-Alacam	0.25	84	*i* P	Pg	16 14 30.6	+0.6
SAMS				*i* S	Sb	16 14 36.6	-1.0
SAMS	Samsun-Alacam	0.25	84	P	Pg	16 14 30.6	+0.6
SAMS				S	Sb	16 14 36.6	-1.0
HAVZ	Havza	0.28	201	*i* P	Pg	16 14 30.6	+0.1
HAVZ	Havza	0.28	201	P	Pg	16 14 30.6	+0.1
KVT	Kavak	0.29	150	PG	Pg	16 14 31.7	+0.9
KVT				SG	Sb	16 14 37.5	-1.2
KVT	Kavak	0.29	150	*e*Pg	Pg	16 14 31.7	+0.9
KVT				*e*Sg	Sb	16 14 37.5	-1.2
DIKM	Dikmen	0.55	305	PG	Pg	16 14 35.8	+0.1
DIKM				SG	Sg	16 14 44.1	+1.3
DIKM	Dikmen	0.55	305	*e*Pg	Pg	16 14 35.8	+0.1
DIKM				*e*Sg	Sg	16 14 44.1	+1.3
SNOP	Sinop	0.84	325	PG	Pg	16 14 41.2	-0.1
SNOP				SG	Sg	16 14 52.3	+0.1
SNOP	Sinop	0.84	325	*e*Pg	Pg	16 14 41.2	-0.1
SNOP				*e*Sg	Sg	16 14 52.3	+0.1
SINO	SINOP_Merkez	0.84	325	*i* P	Pg	16 14 41.9	+0.6
SINO	SINOP_Merkez	0.84	325	P	Pg	16 14 41.9	+0.6
ERBA	Erbaa	0.94	133	*i* P	Pb	16 14 44.2	-0.3
ERBA	Erbaa	0.94	133	P	Pb	16 14 44.2	-0.3
CTAK	Corum_Osmancik	1.06	230	*i* P	Pg	16 14 45.8	+0.4
CTAK	Corum_Osmancik	1.06	230	P	Pg	16 14 45.8	+0.4
TOKT	Tokat	1.14	152	PN	Pb	16 14 47.9	+0.1
TOKT	Tokat	1.14	152	*e*Pn	Pb	16 14 47.9	+0.1
CORM	Corum	1.48	219	PN	Pg	16 14 53.6	0.0
CORM	Corum	1.48	219	*e*Pn	Pg	16 14 53.6	0.0
ORDU	Ordu-Boztepe	1.55	102	*i* P	Pn	16 14 53.7	-0.4
ORDU	Ordu-Boztepe	1.55	102	P	Pn	16 14 53.7	-0.4
SVSK	Karacayir	1.66	148	PN	Pn	16 14 55.9	+0.4
SVSK	Karacayir	1.66	148	*e*Pn	Pn	16 14 55.9	+0.4

NIED ***25*** *16:21:00, 37°.90N×141°.50E, h68^{km}, Mw3.7 Best double couple: $M_0$4.68000×10^{14} NP1:ϕ_s336.00000°, δ22.00000°, λ48.00000°. NP2:ϕ_s200.00000°, δ74.00000°, λ105.00000°.*

ISCJB ***25*** *16:21:03.3±0.7, 37°.90N±0°.04×141°.66E±0°.07, h66^{km}±5^{km}, mb3.7/8, Error ellipse: s-maj=9.9km s-min=5.2km az=19.2*

IDC ***25*** *16:21:04.5±2.1, 37°.95N×141°.69E, h62^{km}±18^{km}, mb3.5/8, mb1 3.6/13, mb1mx3.3/68, mbtmp3.8/13, MS2.9/2, Ms1 2.9/2, ms1mx2.3/50, Error ellipse: s-maj=24.6km s-min=13.1km az=92.0*

JMA ***25*** *16:21:05.0, 37°.91N×141°.54E, h60^{km}±1^{km}, M3.8*

JMA Felt I J1.

ISC 25 16:21:04.5±1.3**, 37°.90N**±0°.05×**141°.63E**±0°.09**, h55**^{km}±10^{km}**, n33, σ1^{s}.34**/41**, mb3.8**/8**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIO	Ouri	0.60	338	P	Pn	16 21 17.7	+0.5
JIO				S	Sn	16 21 26.7	+0.3
JMM	Marumori	0.67	267	P	Pn	16 21 17.9	-0.1
JMM				S	Sn	16 21 27.2	-0.7
JFK	Kawauchi	0.81	229	P	Pn	16 21 19.9	+0.1
JFK				S	Sn	16 21 30.7	-0.4
JOU	Okura	0.89	302	P	Pn	16 21 20.8	-0.2
JOU				S	Sn	16 21 32.7	-0.4
JFT	Otama	1.10	250	P	Pn	16 21 23.8	+0.1
JFT				S	Sn	16 21 37.6	-0.3
JMK	Ichinoseki	1.10	343	P	Pn	16 21 24.1	+0.5
JMK				S	Sn	16 21 38.3	+0.4
JYS	Shirataka	1.28	285	P	Pn	16 21 26.1	0.0
JYS				S	Sn	16 21 42.3	+0.1
JYK	Kaneyama	1.43	316	P	Pn	16 21 28.3	+0.2
JYK				S	Sn	16 21 46.0	+0.2
JOM	Ohasama	1.59	350	P	Pn	16 21 30.9	+0.6
JFY	Yanaizu	1.61	253	P	Pn	16 21 30.8	+0.2
JFY				S	Sn	16 21 50.0	-0.2
JYA	Atsumi	1.66	295	P	Pn	16 21 31.1	-0.2
JYA				*e*S	Sn	16 21 51.1	-0.4
JRG	Rokugo	1.69	333	P	Pn	16 21 32.5	+0.9
JRG				S	Sn	16 21 53.9	+1.8
MAT	Matsushiro	3.05	245	P	Pn	16 21 51.8	+1.5
MAT				S	Sn	16 22 28.0	+2.4
MJAR	Matsushiro Arr	3.05	245	P	Pn	16 21 51.5	+1.2
	2.8nm,0.3s,baz=55,slow=10,SNR=34						
MJAR				S	Sn	16 22 30.7	+5.1
	3.9nm,0.3s,baz=172,slow=14,SNR=5.1						
JHJ	Hachijo jima 2	5.00	198	P	Pn	16 22 16.6	-0.5
	15nm,0.3s,baz=140,slow=22,SNR=16						
JHJ				S	Sn	16 23 10.5	-3.0
	13nm,0.3s,baz=73,slow=19,SNR=4.2						
ASAJ	Asahikawa	6.25	6	P	Pn	16 22 33.1	-1.0
	0.7nm,0.3s,baz=204,slow=15,SNR=12						
ASAJ				S	Sn	16 23 43.0	-1.1
	0.2nm,0.3s,baz=234,slow=19,SNR=2.8						
USRK	Ussuriysk Ar.	9.62	314	P	Pn	16 23 21.0	+0.8
	baz=117,slow=15						
KSRS	Korea Array	10.88	272	P	Pn	16 23 40.1	+2.8
	0.1nm,0.3s,baz=84,slow=14,SNR=7.7						
KSRS				LR	LR	16 27 42.3	
	comp=Z,14nm,22.0s,baz=110,slow=36						
SONM	Songino Array	27.46	303	P	P	16 26 44.8	-0.5
	0.4nm,0.5s,baz=97,slow=11,SNR=2.4						
H11N2	WAKE ISLAND Hy	28.45	122	T	T	16 57 10.8	
	baz=315,slow=75,SNR=75						
H11N1	WAKE ISLAND Hy	28.46	122	T	T	16 57 15.5	
	baz=315,slow=75,SNR=58						
H11N3	WAKE ISLAND Hy	28.47	122	T	T	16 57 14.5	
	baz=315,slow=75,SNR=58						
H11S1	WAKE ISLAND Hy	29.19	124	T	T	16 58 05.4	
	baz=317,slow=76,SNR=39						
H11S3	WAKE ISLAND Hy	29.20	125	T	T	16 58 06.9	
	baz=317,slow=76,SNR=38						
H11S2	WAKE ISLAND Hy	29.21	125	T	T	16 58 06.5	
	baz=317,slow=76,SNR=25						

ZALV	Zalesovo Beam	41.46	312	P	P	16 28 44.6	-1.0
	0.8nm,0.4s,baz=110,slow=8.5,SNR=4.8						
MKAR	Makanchi Array	43.81	301	P	P	16 29 04.0	-0.9
	0.7nm,0.7s,baz=85,slow=10,SNR=7.4						
KURBB	Kurchatov Arra	45.61	307	P	P	16 29 17.9	-1.2
	1.6nm,0.6s,baz=82,slow=8.0,SNR=13						
WRA	Warramunga Arr	57.94	188	P	P	16 30 50.5	-0.7
	0.8nm,0.4s,baz=6.1,slow=7.2,SNR=37						
SPITS	Spitsbergen Ar	59.71	349	LR	LR	16 59 18.5	
	comp=Z,39nm,18.1s,baz=105,slow=38						
ASAR	Alice Springs	61.67	188	P	P	16 31 16.4	-0.3
	1.1nm,1.1s,baz=3.2,slow=6.2,SNR=9.4						
FINES	FINESS Array B	68.13	332	P	P	16 31 57.6	-0.7
	0.8nm,0.6s,baz=10,slow=8.5,SNR=3.3						
TXAR	Lajitas Array	89.45	52	P	P	16 33 56.1	+0.3
	0.2nm,0.6s,baz=288,slow=2.6,SNR=3.7						

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*NIED **25** 16:34:00, 36°.40N×141°.00E, h53^{km}, Mw3.5 Best double couple: $M_0$2.16000×10^{14} NP1:ϕ_s244.00000°, δ20.00000°, λ151.00000°. NP2:ϕ_s2.00000°, δ80.00000°, λ72.00000°.*

*IDC **25** 16:34:18.9±1.7, 36°.38N×141°.28E, h0^{km}, mb3.5/3, mb1 3.5/6, mb1mx3.3/63, mbtmp3.5/6, ML3.0/3, Error ellipse: s-maj=40.0km s-min=21.2km az=84.0*

*JMA **25** 16:34:24.7±0.1, 36°.34N×141°.00E, h46^{km}±1^{km}, M3.5*

JMA Felt I J1.

ISC 25 16:34:21.1±1.9**, 36°.34N**±0°.05×**141°.18E**±0°.07**, h14**^{km}±11^{km}**, n22, σ0ˢ89**/26**, mb3.5**/3**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHYU	Hitachinakayam	0.48	270	P	Pn	16 34 33.9	+0.4
JHYU				S	Sb	16 34 40.0	+1.8
JHO	Hitachi	0.56	299	P	Pn	16 34 34.7	0.0
JYT	Yasato	0.81	262	P	Pn	16 34 37.7	-0.3
JYT				S	Sg	16 34 46.8	-0.5
ONAJ	Iwakimizuishiy	0.82	338	P	Pn	16 34 39.0	+0.7
ONAJ				S	Sb	16 34 48.7	+0.6
JFK	Kawauchi	1.05	347	P	Pn	16 34 42.2	+0.7
JFK				S	Sg	16 34 54.5	-0.7
JFT	Otama	1.36	330	P	Pg	16 34 47.5	+0.3
JFT				S	Sb	16 35 03.5	0.0
JAG	Ashikaga	1.40	274	P	Pn	16 34 46.2	+0.1
JFY	Yanaizu	1.59	312	P	Pb	16 34 50.0	-0.3
JKT	Katashina	1.61	286	P	Pb	16 34 50.0	-0.7
JKT				S	Sn	16 35 08.5	-1.3
MJAR	Matsushiro Arr	2.40	276	Pn	Pn	16 35 00.6	+0.6
	4.4nm,0.3s,baz=120,slow=7.6,SNR=54						
MJAR				Sn	Sn	16 35 28.7	-0.6
	4.8nm,0.3s,baz=312,slow=43,SNR=6.2						
MAT	Matsushiro	2.41	276	P	Pn	16 35 01.4	+1.4
MAT				S	Sn	16 35 28.9	-0.4
JHJ	Hachijo jima 2	3.41	200	Pn	Pn	16 35 15.8	+2.0
	6.5nm,0.3s,baz=59,slow=19,SNR=9.4						
JHJ				Sn	Sn	16 35 52.7	-1.4
	10.0nm,0.3s,baz=248,slow=19,SNR=4.4						
ASAJ	Asahikawa	7.84	7	Pn	Pn	16 36 15.3	+0.6
	0.2nm,0.3s,baz=355,slow=12,SNR=3.9						
ASAJ				Sn	Sn	16 37 43.0	-0.3
	0.1nm,0.3s,baz=49,slow=18,SNR=1.9						
H11N2	WAKE ISLAND Hy	27.96	119	T	T	17 09 55.0	
	baz=313,slow=75,SNR=15						
H11N1	WAKE ISLAND Hy	27.97	119	T	T	17 09 54.5	
	baz=313,slow=75,SNR=17						
H11N3	WAKE ISLAND Hy	27.98	119	T	T	17 09 55.6	
	baz=313,slow=75,SNR=17						
H11S1	WAKE ISLAND Hy	28.65	121	T	T	17 10 35.7	
	baz=314,slow=76,SNR=54						
H11S3	WAKE ISLAND Hy	28.65	122	T	T	17 10 36.7	
	baz=314,slow=76,SNR=34						
H11S2	WAKE ISLAND Hy	28.66	122	T	T	17 10 34.1	
	baz=314,slow=76,SNR=30						
MKAR	Makanchi Array	44.33	303	P	P	16 42 31.0	+0.4
	0.2nm,0.5s,baz=99,slow=9.2,SNR=2.5						
KURBB	Kurchatov Arra	46.28	308	P	P	16 42 45.5	-0.4
	0.8nm,0.5s,baz=85,slow=8.1,SNR=8.0						
WRA	Warramunga Arr	56.35	188	P	P	16 44 01.7	0.0
	0.2nm,0.4s,baz=5.3,slow=7.4,SNR=16						

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*ISK **25** 16:39:16.8, 37°.33N×42°.57E, h5^{km}, ML2.5/7*

*DDA **25** 16:39:17.5, 37°.36N×42°.61E, h8^{km}, Ml2.6*

*CSEM **25** 16:39:18.2±0.3, 37°.38N×42°.62E, h2^{km}, ML2.5, Error ellipse: s-maj=10.3km s-min=5.0km az=10.0*

ISC 25 16:39:17.5±1.3**, 37°.35N**±0°.05×**42°.63E**±0°.03**, h4**^{km}±11^{km}**, n34, σ0ˢ95**/41**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SIRT	Sirnak	0.21	315	PG	Pg	16 39 21.0	-0.6
SIRT				SG	Sg	16 39 25.7	+1.3
SIRT	Sirnak	0.21	315	*e*Pg	Pg	16 39 21.0	-0.6
SIRT				*e*Sg	Sg	16 39 25.7	+1.3
SIRN	S˜–rnak	0.22	310	*i* P	Pg	16 39 21.2	-0.6
CUKT	Cukurca	0.79	97	PG	Pb	16 39 33.8	0.0
CUKT				SG	Sn	16 39 46.3	-1.5
CUKT	Cukurca	0.79	97	*i* P	Pb	16 39 33.9	+0.1
CUKT				*i* S	Sn	16 39 49.7	+1.9
CUKT	Cukurca	0.79	97	*e*Pg	Pb	16 39 33.8	0.0
CUKT				*e*Sg	Sn	16 39 46.3	-1.5
SRTM	Siirt_Merkez	0.85	319	*i* P	Pg	16 39 33.6	-0.1
SRTM	Siirt_Merkez	0.85	319	P	Pg	16 39 33.6	-0.1
HAKT	HAKKARI	0.88	76	*i* P	Pg	16 39 33.8	-0.6
GEVA	Gevas	1.02	19	*i* P	Pb	16 39 37.4	-0.5
GEVA	Gevas	1.02	19	P	Pb	16 39 37.3	-0.5
BTMN	Batman	1.20	297	*i* P	Pg	16 39 41.1	+0.5
BTMN	Batman	1.20	297	P	Pg	16 39 41.1	+0.5
GURO	Guroymak-BITLI	1.28	339	PN	Pg	16 39 42.5	+0.4
GURO				SN	Sn	16 40 01.2	+1.1
GURO	Guroymak-BITLI	1.28	339	*e*Pn	Pg	16 39 42.5	+0.4
GURO				*e*Sn	Sn	16 40 01.2	+1.1
YOVA	Hakkari_Yˆ…kse	1.34	79	*i* P	Pb	16 39 42.9	-0.4
YOVA	Hakkari_Yˆ…kse	1.34	79	P	Pb	16 39 42.9	-0.4
SVAN	Silvan-Diyarba	1.39	306	PN	Pg	16 39 44.2	+0.2
SVAN	Silvan-Diyarba	1.39	306	*e*Pn	Pg	16 39 44.2	+0.2
MARD	Mardin	1.47	269	*i* P	Pb	16 39 44.6	-0.9
MAZI	Mazidag	1.74	274	PN	Pn	16 39 48.5	-0.1
MAZI	Mazidag	1.74	274	*e*Pn	Pn	16 39 48.5	-0.1
DIY	Diyarbakir	1.98	287	*e*Pn	Pb	16 39 52.9	-1.3
HANI	Diyarbakir_Han	2.06	302	*i* P	Pg	16 39 55.9	-1.0
HANI	Diyarbakir_Han	2.06	302	P	Pg	16 39 55.9	-1.0
DYBB	Diyarbakir	2.06	288	PN	Pn	16 39 52.9	-0.1
AGRB	Hanur-Agry	2.24	7	PN	Pb	16 39 56.5	-2.1
AGRB	Hanur-Agry	2.24	7	*e*Pn	Pb	16 39 56.5	-2.1
SVRC	Sivrice-ELAZID	2.82	292	PN	Pn	16 40 04.2	+0.7
SVRC	Sivrice-ELAZID	2.82	292	*e*Pn	Pn	16 40 04.2	+0.7
PTK	Pertek	2.98	302	PN	Pn	16 40 06.2	+0.5
PTK	Pertek	2.98	302	*e*Pn	Pn	16 40 06.2	+0.5
URFA	Urfa	3.03	273	PN	Pn	16 40 07.1	+0.8
URFA	Urfa	3.03	273	*e*Pn	Pn	16 40 07.1	+0.8

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*ISK **25** 16:41:09.8, 38°.55N×28°.65E, h8^{km}, ML1.9/5, Suspected Mining explosion.*

*ISCJB **25** 16:41:10.3±0.5, 38°.57N±0°.03×28°.65E±0°.05, h0^{km}, Error ellipse: s-maj=6.2km s-min=3.3km az=18.1*

*DDA **25** 16:41:10.1, 38°.58N×28°.67E, h7^{km}, Ml2.8*

*CSEM **25** 16:41:10.3±0.2, 38°.56N×28°.66E, h1^{km}, ML1.9, Error ellipse: s-maj=5.4km s-min=3.7km az=107.0, Suspected Mining explosion.*

ISC 25 16:41:10.6±0.9**, 38°.56N**±0°.02×**28°.65E**±0°.03**, h0**^{km}**, n26, σ0ˢ54**/35**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KULA	Kula-Manisa	0.05	172	PG	Pg	16 41 12.0	+0.5
KULA				SG	Sg	16 41 12.9	+0.7
KULA	Kula-Manisa	0.05	172	*e*Pg	Pg	16 41 12.0	+0.5
MANT	Manisa	0.10	225	*i* P	Pg	16 41 12.5	-0.1
MANT				*i* S	Sg	16 41 15.2	+1.3
MANT	Manisa	0.10	225	P	Pg	16 41 12.5	-0.1
MANT				S	Sg	16 41 15.2	+1.3
DEMI	Demirci	0.48	6	*i* P	Pg	16 41 19.8	0.0
DEMI				*i* S	Sg	16 41 26.1	0.0
DEMI	Demirci	0.48	6	P	Pg	16 41 19.8	0.0
DEMI				S	Sg	16 41 26.1	0.0
SIMA	Simav-Kutahya	0.58	26	PG	Pg	16 41 21.8	+0.1
SIMA				SG	Sg	16 41 30.2	+1.0
SIMA	Simav-Kutahya	0.58	26	*e*Pg	Pg	16 41 21.8	+0.1
SIMA				*e*Sg	Sg	16 41 30.2	+1.0
KHAL	Karahalli	0.69	106	*i* P	Pg	16 41 23.2	-0.6
KHAL	Karahalli	0.69	106	P	Pg	16 41 23.2	-0.6
AKHS	Akhisar	0.73	296	*i* P	Pg	16 41 24.3	-0.3
AKHS	Akhisar	0.73	296	P	Pg	16 41 24.3	-0.3
AYDB	Zeytinkoy-Aydi	0.86	224	PG	Pg	16 41 26.7	-0.4
AYDB				SG	Sg	16 41 38.6	+0.4
AYDB	Zeytinkoy-Aydi	0.86	224	*e*Pg	Pg	16 41 26.7	-0.4
AYDB				*e*Sg	Sg	16 41 38.6	+0.4
DURS	Dursunbey	1.04	352	*i* P	Pb	16 41 31.9	+0.3
DURS	Dursunbey	1.04	352	P	Pb	16 41 31.9	+0.3
TVSB	Tavsanli	1.09	35	PN	Pg	16 41 31.2	-0.2
TVSB	Tavsanli	1.09	35	*e*Pn	Pg	16 41 31.2	-0.2
TAVA	DENIZLI_Tavas	1.12	169	*i* P	Pb	16 41 32.2	-0.6
TAVA	DENIZLI_Tavas	1.12	169	P	Pb	16 41 32.2	-0.6
BALB	Balikesir	1.23	331	PN	Pb	16 41 34.5	-0.2
BALB	Balikesir	1.23	331	*e*Pn	Pb	16 41 34.5	-0.2
BLCB	Balcova	1.28	262	PN	Pg	16 41 34.6	-0.5
BLCB	Balcova	1.28	262	*e*Pn	Pg	16 41 34.6	-0.5
BALY	Balya	1.42	326	*i* P	Pn	16 41 37.6	-0.2
BALY	Balya	1.42	326	P	Pn	16 41 37.6	-0.2

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*ISCJB **25** 16:58:18.9±0.4, 40°.35N±0°.03×27°.42E±0°.04, h12^{km}±4^{km}, Error ellipse: s-maj=5.9km s-min=4.2km az=28.1*

*DDA **25** 16:58:19.0, 40°.33N×27°.39E, h10^{km}, Ml2.5*

*ISK **25** 16:58:18.7, 40°.34N×27°.41E, h12^{km}, ML1.7/12*

*CSEM **25** 16:58:19.1±0.1, 40°.34N×27°.41E, h12^{km}, ML1.7, Error ellipse: s-maj=2.1km s-min=1.5km az=10.0*

ISC 25 16:58:19.1±0.9**, 40°.34N**±0°.03×**27°.41E**±0°.02**, h14**^{km}±7^{km}**, n40, σ0ˢ26**/47**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KNL	Bal˜–kesir	0.11	127	*i* P	Pg	16 58 22.1	-0.2
KNL				*i* S	Sg	16 58 24.5	0.0
EDC	Edincik	0.35	88	PG	Pg	16 58 25.7	-0.5
EDC	Edincik	0.35	88	*e*Pg	Pg	16 58 25.7	-0.5
GONE	Gonen-Balikesi	0.36	144	PG	Pg	16 58 26.6	+0.2
GONE				SG	Sg	16 58 31.8	+0.5
GONE	Gonen-Balikesi	0.36	144	*e*Pg	Pg	16 58 26.6	+0.2
GONE				*e*Sg	Sg	16 58 31.8	+0.5
RKY	Sarkoy-Tekirda	0.39	333	PG	Pg	16 58 26.9	-0.1
RKY				SG	Sg	16 58 32.6	+0.3
RKY	Sarkoy-Tekirda	0.39	333	*e*Pg	Pg	16 58 26.9	-0.1
RKY				*e*Sg	Sg	16 58 32.6	+0.3
SART	Tekirdag	0.39	334	*i* P	Pg	16 58 27.1	+0.1
SART	Tekirdag	0.39	334	P	Pg	16 58 27.1	+0.1
LPK	Lapseki	0.50	274	PG	Pg	16 58 29.2	+0.3
LPK				SG	Sb	16 58 36.5	-0.3
LPK	Lapseki	0.50	274	*e*Pg	Pg	16 58 29.2	+0.3
LPK				*e*Sg	Sb	16 58 36.5	-0.3
BALY	Balya	0.62	165	*i* P	Pg	16 58 31.3	+0.1
BALY	Balya	0.62	165	P	Pg	16 58 31.3	+0.1
SBT3	Marmara-Eregli	0.69	38	PG	Pb	16 58 32.8	-0.1
SBT3	Marmara-Eregli	0.69	38	*e*Pg	Pb	16 58 32.8	-0.1
GELI	Tayfur-Gelibol	0.72	275	PG	Pb	16 58 33.4	0.0
GELI	Tayfur-Gelibol	0.72	275	*e*Pg	Pb	16 58 33.4	0.0
KCTX	Karacabey (Bur	0.73	95	PG	Pg	16 58 33.1	-0.2
KCTX	Karacabey (Bur	0.73	95	*e*Pg	Pg	16 58 33.1	-0.2
ERIK	Erikli-Kesan	0.76	296	PG	Pg	16 58 33.8	-0.1
ERIK	Erikli-Kesan	0.76	296	*e*Pg	Pg	16 58 33.8	-0.1
BAYC	CANAKKALE_Bayr	0.89	228	*i* P	Pg	16 58 35.9	-0.5
BAYC	CANAKKALE_Bayr	0.89	228	P	Pg	16 58 35.9	-0.5
ENEZ	Enez	1.04	293	PG	Pn	16 58 39.2	-0.1
ENEZ	Enez	1.04	293	*e*Pg	Pn	16 58 39.2	-0.1
SLVT	Silivri	1.08	34	PG	Pb	16 58 39.3	-0.3
SLVT	Silivri	1.08	34	*e*Pg	Pb	16 58 39.3	-0.3
BOZC	Bozcaada	1.15	245	PN	Pb	16 58 40.7	-0.1
BOZC	Bozcaada	1.15	245	*i* P	Pb	16 58 40.4	-0.5
BOZC	Bozcaada	1.15	245	*e*Pn	Pb	16 58 40.7	-0.1
SBT5	Esenkoy-Cinarc	1.16	75	PN	Pg	16 58 41.7	+0.3
SBT5	Esenkoy-Cinarc	1.16	75	*e*Pn	Pg	16 58 41.7	+0.3
GADA	Gvkgeada	1.17	263	PN	Pb	16 58 41.2	+0.1
GADA	Gvkgeada	1.17	263	*e*Pn	Pb	16 58 41.2	+0.1
ALN	Alexandroupoli	1.18	299	PN	Pb	16 58 41.4	+0.1
ALN	Alexandroupoli	1.18	299	*e*Pn	Pb	16 58 41.4	+0.1
CTKS	Kestanelik-??a	1.22	43	PN	Pb	16 58 42.0	-0.1
CTKS	Kestanelik-??a	1.22	43	*e*Pn	Pb	16 58 42.0	-0.1
YLV	Yalova	1.52	81	PN	Pn	16 58 46.2	+0.3
YLV	Yalova	1.52	81	*e*Pn	Pn	16 58 46.2	+0.3

IDC 25 17:09:45.2±2.6**, 41°.91N**×**29°.61W, h0**^{km}**, mb3.5**/3**, mb1 3.7**/4**, mb1mx3.2**/66**, mbtmp3.4**/4**, ML4.3**/1**, MS3.2**/11**, Ms1 3.2**/11**, ms1mx2.9**/54**, Error ellipse: s-maj=109.3km s-min=26.5km az=178.0, Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ESDC	Sonseca Array	19.52	88	P	P	17 14 13.8	-0.3
	0.2nm,0.3s,baz=289,slow=12,SNR=4.3						
ESDC				LR	LR	17 20 27.8	
	comp=Z,53nm,21.0s,baz=280,slow=33						
DAVOX	Davos/Dischmat	28.44	67	LR	LR	17 25 38.8	
	comp=Z,34nm,19.2s,baz=280,slow=34						
GERES	GERESS Array B	30.86	62	LR	LR	17 27 56.5	
	comp=Z,30nm,18.6s,baz=260,slow=35						
NOA	NORSAR Array B	31.10	38	LR	LR	17 26 26.3	
	comp=Z,26nm,20.4s,baz=230,slow=32						
HFS	Hagfors	32.01	40	LR	LR	17 28 08.2	
	comp=Z,45nm,18.5s,baz=276,slow=34						
VAE	Valguarnera	33.88	83	LR	LR	17 28 01.1	
	comp=Z,28nm,18.9s,baz=172,slow=32						
KOWA	Kowa	35.16	133	LR	LR	17 28 31.8	
	comp=Z,32nm,21.2s,baz=90,slow=32						
FINES	FINESS Array B	38.20	40	LR	LR	17 30 57.0	
	comp=Z,40nm,19.6s,baz=300,slow=33						
ULM	Lac du Bonnet	45.33	304	LR	LR	17 36 36.6	
	comp=Z,43nm,18.2s,baz=36,slow=36						
PDAR	Pinedale Array	56.90	300	P	P	17 19 31.7	-0.3
	0.3nm,0.8s,baz=61,slow=7.3,SNR=3.5						
PDAR				LR	LR	17 43 50.0	
	comp=Z,28nm,19.5s,baz=106,slow=36						
JTS	JuntasAbangare	57.60	253	LR	LR	17 42 43.1	
	comp=Z,14nm,18.9s,baz=199,slow=34						
TXAR	Lajitas Array	59.78	284	P	P	17 19 52.3	+0.1
	0.5nm,0.6s,baz=71,slow=7.3,SNR=9.0						
KURBB	Kurchatov Arra	68.59	41	P	P	17 20 49.8	+0.2
	0.1nm,0.3s,baz=314,slow=7.0,SNR=4.0						

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*NIED **25** 17:20:00, 31°.00N×130°.40E, h130^{km}, Mw5.0 Best double couple: $M_0$3.01000×10^{16} NP1:ϕ_s244.00000°, δ41.00000°, λ166.00000°. NP2:ϕ_s344.00000°, δ81.00000°, λ50.00000°.*

*BJI **25** 17:20:07.4, 30°.84N×130°.65E, h135^{km}, mb4.9/69, mB4.9/44*

*ISCJB **25** 17:20:09.8±0.2, 30°.98N±0°.02×130°.41E±0°.02, h140^{km}±1^{km}, mb4.7/209, Error ellipse: s-maj=3.4km s-min=2.5km az=135.0*

*MOS **25** 17:20:10.6±1.1, 31°.01N×130°.42E, h150^{km}, mb4.8/65, Error ellipse: s-maj=6.8km s-min=3.9km az=111.5*

*GCMT **25** 17:20:11.1±0.2, 31°.05N×130°.37E, h138^{km}±2^{km}, MW5.0/98, Moment Tensor Solution. s32,c38; s98,c167; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.90±.12; $M_{\theta\theta}$1.01±.11; $M_{\phi\phi}$-1.92±.12; $M_{r\theta}$-1.34±.09; $M_{\theta\phi}$-2.21±.12; $M_{\phi r}$3.14±.10; Best double couple: $M_0$4.38500×10^{16} NP1:ϕ_s347.00000°, δ82.00000°, λ52.00000°. NP2: ϕ_s247.00000°, δ38.00000°, λ168.00000°. Principal axes: T 4.5360, Plg40.0000°, Azm222.0000°; N -0.3080, Plg37.0000°, Azm353.0000°; P -4.2340, Plg27.0000°, Azm106.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **25** 17:20:11.1±0.1, 30°.98N×130°.35E, mb5.0/98 Error ellipse: s-maj=3.8km s-min=2.8km az=137.0*

NEIC Felt at Kagoshima, Kanoya, Miyazaki and Nobeoka. Recorded [3 JMA] in Kagoshima and [2 JMA] on Tanega-shima.

*JMA **25** 17:20:11.5±0.1, 31°.00N×130°.45E, h131^{km}±1^{km}, M4.7 Broadband fault plane solution: P waves. NP1: ϕ_s336.00000°, δ86.00000°, λ41.00000°. NP2: ϕ_s242.00000°, δ49.00000°, λ174.00000°. Principal axes: T Plg31.0000°, Azm207.0000°; N Plg49.0000°, Azm341.0000°; P Plg24.0000°, Azm102.0000°;*

JMA Felt III J1.

*IDC **25** 17:20:11.3±0.4, 31°.05N×130°.40E, h142^{km}±2^{km}, mb4.3/44, mb1 4.5/52, mb1mx4.4/73, mbtmp4.8/52, MS3.5/13, Ms1 3.5/13, ms1mx3.2/62 Error ellipse: s-maj=8.0km s-min=6.7km az=97.0*

ISC 25 17:20:10.8±0.3**, 30°.97N**±0°.03×**130°.44E**±0°.03**, h140**^{km}±2^{km}**, h140**^{km}**:pP-P, n619, σ1ˢ38**/772**, mb4.8**/216**, 45C-21D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JTSR	Tashiro 2	0.46	64	⇑P	Pn	17 20 30.3	-0.5
JTSR				*e*S	Sn	17 20 44.4	-1.6
JSU	Suzuyama	0.54	1	⇑P	Pn	17 20 30.9	-0.3
JSU				S	Sn	17 20 45.4	-1.4
JKC	Kuchinoerabu	0.55	203	⇓P	Pn	17 20 31.2	-0.1
JKC				S	Sn	17 20 46.0	-0.8
JTN	Tanegashima 3	0.56	124	⇑P	Pn	17 20 31.3	-0.1
JTN				*e*S	Sn	17 20 46.3	-0.6
JMTN	Minamitane	0.69	145	P	Pn	17 20 32.1	-0.1
JMTN				*e*S	Sn	17 20 48.5	+0.1
JYAK	Yakushimahirau	0.73	175	P	Pn	17 20 32.4	-0.1
JYAK				*e*S	Sn	17 20 48.0	-0.9
JNAR	Kushima--Naru	0.90	52	⇑P	Pn	17 20 33.8	0.0
JNAR				S	Sn	17 20 50.6	-0.7
JSJ	Shimokoshiki	0.94	319	⇓P	Pn	17 20 33.4	-0.7
JSJ				S	Sn	17 20 50.3	-1.6
JTZ	Takazaki	1.08	31	⇑P	Pn	17 20 35.2	-0.2
JTZ				*e*S	Sn	17 20 52.8	-1.3
JZO	Okuchi	1.18	7	⇑P	Pn	17 20 36.2	-0.1
JZO				*e*S	Sn	17 20 55.0	-0.8
JNN	Nakanoshima	1.23	204	⇓P	Pn	17 20 37.0	+0.2
JNN				*e*S	Sn	17 20 56.7	+0.1
JTAJ	Takarajima	2.10	211	⇑P	Pn	17 20 47.1	+0.5
JNU	Nakatsue	2.18	10	P	Pn	17 20 47.4	-0.1
	1µm,0.3s,baz=218,slow=5.9,SNR=8248						
JNU				S	Sn	17 21 14.6	-1.2
	459nm,0.3s,baz=356,slow=15,SNR=8.9						
JNU				LR	LR	17 21 40.6	
	comp=Z,1µm,21.0s,baz=172,slow=42						
JOW	Kunigami	4.54	205	P	Pn	17 21 17.5	-0.5
	82nm,0.3s,baz=94,slow=14,SNR=365						
JOW				S	Sn	17 22 05.8	-4.3
	211nm,0.3s,baz=291,slow=25,SNR=15						
JOW	Kunigami	4.54	205	*e*Pn	Pn	17 21 16.5	-1.5
JOW				S	Sn	17 22 05.8	-4.3
TJN	Taejon	5.97	335*c*	*i*P	Pn	17 21 38.1	+1.1
KS15	Wonju Array Si	6.79	343	*e*Pn	Pn	17 21 48.9	+0.9
KSAR	Wonju Array Be	6.79	343	P	Pn	17 21 48.7	+0.7
KSAR				ScP	ScP	17 31 43.9	-0.6
KSAR	Wonju Array Be	6.79	343	P	Pn	17 21 48.7	+0.7
KSRS	Korea Array	6.80	343	P	Pn	17 21 48.7	+0.7
	3.6nm,0.3s,baz=155,slow=15,SNR=275						
KSRS				ScP	ScP	17 31 43.9	-0.6
	baz=218,slow=1.5,SNR=4.6						
KS01	Wonju Array Si	6.83	343	*e*Pn	Pn	17 21 48.1	-0.3
INU	Inuyama	7.03	50	*e*Pn	Pn	17 21 51.0	-0.2
INCN	Inchon	7.22	335	*e*Pn	Pn	17 21 55.5	+1.7
INCN	Inchon	7.22	335	P	Pn	17 21 55.2	+1.4
	SNR=15						
INCN	Inchon	7.22	335	*e*P	Pn	17 21 55.5	+1.7
JHJ	Hachijo jima 2	8.21	72	P	Pn	17 22 09.9	+2.9
	312nm,0.3s,baz=243,slow=16,SNR=164						
JHJ				S	Sn	17 23 38.8	+0.4
	58nm,0.3s,baz=78,slow=20,SNR=6.7						
JHJ2	Mitsune	8.24	73	*e*Pn	Pn	17 22 09.9	+2.5
JHJ2				*e*Sn	Sn	17 23 40.2	+1.2
MAJO	Matsushiro	8.52	47	*e*Pn	Pn	17 22 11.1	-0.1
MAJO	Matsushiro	8.52	47	*de*P	Pn	17 22 11.5	+0.3
MAT	Matsushiro	8.52	47	P	Pn	17 22 10.6	-0.6
MAT				S	Sn	17 23 42.9	-3.0
MJB9	Matsu-Tunnel	8.52	47	*e*Pn	Pn	17 22 11.9	+0.6
MJAR	Matsushiro Arr	8.53	47	P	Pn	17 22 11.5	+0.3
	47nm,0.3s,baz=241,slow=15,SNR=274						
MJAR				S	Sn	17 23 43.4	-2.5
	18nm,0.3s,baz=40,slow=22,SNR=6.5						
MJAR				LR	LR	17 26 11.1	
	comp=Z,214nm,18.0s,baz=225,slow=42						
TATO	Taipei	9.91	235	*e*Pn	Pn	17 22 31.2	+1.3
NJ2	Nanjing	9.95	279	*e*P	Pn	17 22 31.5	+1.2
NJ2				S	Sn	17 24 20.8	+0.5
NJ2				pmax	pmax		
	comp=Z,36nm,0.9s						
NJ2				LR	LR		
	comp=N,680nm,4.9s						
NJ2				LR	LR		
	comp=E,260nm,4.9s						
NJ2				LR	LR		
	comp=Z,510nm,8.1s						
YHNB	Yeheng	10.18	234	*e*Pn	Pn	17 22 33.2	-0.3
NACB	Ninganchiao	10.36	231	*e*Pn	Pn	17 22 34.4	-1.4
DL2	Dalian	10.72	320	P	Pn	17 22 40.0	-0.4
DL2				sP		17 23 13.5	
DL2				S	Sn	17 24 43.8	+5.1
DL2				pmax	pmax		
	comp=Z,53nm,1.0s						
DL2				pmax	pmax		
	comp=Z,99nm,4.4s						
CBIJ	Chichi jima	10.98	108	*e*Pn	Pn	17 22 46.2	+2.3
JCJ	Chichijima	10.98	108	P	Pn	17 22 46.2	+2.2
	baz=261,slow=12						
SSLB	Suanglung	11.05	232	*e*Pn	Pn	17 22 42.0	-3.1
YULB	Yu-li	11.10	229	*e*Pn	Pn	17 22 40.7	-4.9
TPUB	Ta-pu	11.60	231	*e*Pn	Pn	17 22 47.9	-4.3
MSHR	Mys Shultsa	11.60	3*c*	*i*P	Pn	17 22 52.6	+0.5
TWG	Pinlang	11.65	228	*e*Pn	Pn	17 22 47.8	-5.1
QZH	Quanzhou	12.07	243	⇑*i*P	Pn	17 23 00.3	+2.0
QZH				S	Sn	17 25 18.8	+7.3
QZH				pmax	pmax		
	comp=Z,490nm,5.1s						
QZH				LR	LR		
	comp=N,880nm,7.5s						
TIA	Tai’an	12.27	299	P	Pn	17 23 01.8	+0.9
TIA				pmax	pmax		
	comp=Z,23nm,1.0s						
TIA				pmax	pmax		
	comp=Z,180nm,4.0s						
TIA				LR	LR		
	comp=N,510nm,6.9s						
TIA				LR	LR		
	comp=E,340nm,6.6s						
TIA				LR	LR		
	comp=Z,260nm,7.1s						
USRK	Ussuriysk Ar.	13.26	5	P	Pn	17 23 14.3	+0.7
	baz=181,slow=12						
CN2	Changchun	13.41	344	*e*P	Pn	17 23 17.0	+1.6
CN2				*e*S	Sn	17 25 46.8	+3.3
CN2				LR	LR		
	comp=N,220nm,5.0s						
CN2				LR	LR		
	comp=E,1µm,5.0s						
CN2				LR	LR		
	comp=Z,330nm,5.0s						
MDJ	Mudanjiang	13.64	357	P	Pn	17 23 17.5	-0.9
MDJ				S	Sn	17 25 51.0	+1.9
MDJ				PcS	PcS	17 32 04.0	-3.1
MDJ				pmax	pmax		
	comp=Z,11nm,1.0s						
MDJ				LR	LR		
	comp=N,270nm,9.2s						
MDJ				LR	LR		
	comp=E,220nm,8.8s						
MDJ				LR	LR		
	comp=Z,290nm,9.6s						
WHN	Wuhan	13.85	272	⇓*i*P	Pn	17 23 22.8	+1.6
WHN				sP	P	17 24 01.3	+36
WHN				S	Sn	17 25 59.3	+5.0
WHN				pmax	pmax		
	comp=Z,73nm,1.1s						
WHN				pmax	pmax		
	comp=Z,860nm,4.3s						
WHN				LR	LR		
	comp=N,1µm,7.7s						
WHN				LR	LR		
	comp=E,860nm,11.0s						
WHN				LR	LR		
	comp=Z,410nm,10.3s						
BJT	Baijiatuau	14.71	312	*e*Pn	P	17 23 33.9	-0.4
BJT	Baijiatuau	14.71	312	*e*P	P	17 23 33.9	-0.4
BJI	Beijing	14.71	312	P	P	17 23 33.5	-0.9
BJI				S	Sn	17 26 15.8	+0.8
BJI				pmax	pmax		
	comp=Z,120nm,0.8s						
BJI				LR	LR		
	comp=N,750nm,8.4s						
BJI				LR	LR		
	comp=E,470nm,6.7s						

TEY	**Ternei**	**14.85**	**17**	*e*P	**Pn**	**17 23 31.0**	**-2.7**
ERM	**Erimo**	**15.02**	**39**	*e*Pn	**Pn**	**17 23 34.1**	**-1.7**
	26nm,0.8s						
ERM	**Erimo**	**15.02**	**39**	*ce*P	**Pn**	**17 23 33.7**	**-2.1**
ERM				pmax	pmax		
	comp=Z,26nm,0.8s						
ASAJ	**Asahikawa**	**16.26**	**33**	P	**Pn**	**17 23 49.4**	**-1.7**
	comp=Z,6.1nm,0.3s,baz=230,slow=11,SNR=253						
ASAJ				S	**Sn**	**17 26 45.9**	**-6.2**
	comp=Z,0.1nm,0.3s,baz=329,slow=19,SNR=5.6						
ASAJ	**Asahikawa**	**16.26**	**33**	*e*Pn	**Pn**	**17 23 49.0**	**-2.0**
	comp=Z,64nm,0.7s						
ASAJ				S	**Sn**	**17 26 45.9**	**-6.2**
TIY	**Taiyuan**	**16.31**	**299**	*e*P	**P**	**17 23 55.0**	**+2.8**
TIY				S	**S**	**17 26 59.5**	**+5.5**
TIY				ScS	**ScS**	**17 35 37.8**	**+0.6**
TIY				pmax	pmax		
	comp=Z,81nm,0.9s						
TIY				pmax	pmax		
	comp=Z,240nm,3.7s						
TIY				LR	LR		
	comp=Z,190nm,11.0s						
TIY				LR	LR		
	comp=Z,220nm,9.4s						
TIY				LR	LR		
	comp=Z,160nm,9.7s						
GZH	**Guangzhou**	**17.12**	**247**	*e*P	**P**	**17 23 56.3**	**-4.9**
ENH	**Enshi**	**18.05**	**273**	*e*P	**Pn**	**17 24 12.8**	**0.0**
HHC	**Hu-ho-hao-te**	**18.16**	**308**	*e*P	**Pn**	**17 24 14.3**	**+0.2**
HHC				sP	sP	17 24 55.0	+0.2
HHC				S	**S**	**17 27 28.8**	**-4.5**
HHC				pmax	pmax		
	comp=Z,130nm,4.6s						
KLR	**Kul'dur**	**18.27**	**3**	P	**P**	**17 24 13.2**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=180,slow=7.3,SNR=18						
KLR				ScP	**ScP**	**17 32 00.2**	**-1.5**
	comp=Z,0.0nm,0.3s,baz=281,slow=3.7,SNR=5.0						
KLR	**Kul'dur**	**18.27**	**3**	*ce*P	**P**	**17 24 13.5**	**0.0**
XAN	**Xi'an**	**18.40**	**285**	P	**P**	**17 24 15.5**	**+0.3**
XAN				sP	sP	17 24 56.0	-1.5
XAN				S	**S**	**17 27 38.0**	**-0.2**
XAN				pmax	pmax		
	comp=Z,33nm,1.1s						
XAN				pmax	pmax		
	comp=Z,170nm,3.8s						
XAN				LR	LR		
	comp=Z,280nm,12.0s						
XAN				LR	LR		
	comp=Z,330nm,13.4s						
XAN				LR	LR		
	comp=Z,350nm,12.7s						
YSS	**Yuzh-Sakhalins**	**18.57**	**27**	*e*P	**P**	**17 24 16.6**	**-0.2**
	comp=Z,25nm,1.0s						
YSS	**Yuzh-Sakhalins**	**18.57**	**27**	κ *i*P	**P**	**17 24 17.6**	**+0.7**
YSS				*e*S	**S**	**17 27 43.0**	**+1.8**
YSS				pmax	pmax		
	comp=Z,10.0nm,1.0s						
YSS				pmax	pmax		
	comp=N,20nm,0.8s						
YSS				pmax	pmax		
	comp=E,10.0nm,0.9s						
YSS				smax	smax		
	comp=E,100nm,6.2s						
YSS				smax	smax		
	comp=N,200nm,6.5s						
TGY	**Tagaytay City**	**18.93**	**210**	P	**Pn**	**17 24 22.5**	**-0.7**
	baz=292,slow=7.7,SNR=9.8						
KUR	**Kuril'sk**	**19.71**	**39**	*e*P	**P**	**17 24 29.5**	**+0.3**
KUR				*e*S	**S**	**17 28 03.8**	**+0.1**
KUR				pmax	pmax		
	comp=Z,102nm,1.1s						
KUR				pmax	pmax		
	comp=E,32nm,1.2s						
KUR				pmax	pmax		
	comp=N,35nm,0.8s						
GRNR	**Gornyy**	**20.28**	**11**	*e*P	Pn	17 24 41.0	+2.3
GRNR				pmax	pmax		
	comp=Z,26nm,1.0s						
GYA	**Guiyang**	**21.32**	**264**	⇑*i*P	**P**	**17 24 46.0**	**-0.8**
GYA				pP	pP	17 25 15.8	+3.8
GYA				PP	**sP**	**17 25 23.0**	**-6.5**
GYA				S	**S**	**17 28 29.5**	**-6.0**
GYA				SS	**SnSn**	**17 29 16.0**	**+3.6**
GYA				pmax	pmax		
	comp=Z,90nm,0.7s						
GYA				LR	LR		
	comp=Z,490nm,16.7s						
GYA				LR	LR		
	comp=Z,440nm,17.4s						
GYA				LR	LR		
	comp=Z,460nm,17.2s						
GUMO	**Guam**	**21.81**	**139**	P	**P**	**17 24 54.0**	**+2.1**
	comp=Z,70nm,0.9s,baz=323,slow=4.6,SNR=8.2						
GUMO	**Guam**	**21.81**	**139**	*e*P	**P**	**17 24 54.5**	**+2.5**
	comp=Z,80nm,0.9s						
LZH	**Lanzhou**	**22.72**	**290**	*e*P	**P**	**17 24 59.0**	**-2.0**
LZH				pP	pP	17 25 29.5	+2.3
LZH				PP	**PnPn**	**17 25 36.8**	**+2.9**
LZH				sP	sP	17 25 45.5	+0.9
LZH				*e*S	**S**	**17 28 52.3**	**-6.7**
LZH				SS	**SnSn**	**17 29 46.0**	**-0.2**
LZH				pmax	pmax		
	comp=Z,120nm,1.0s						
LZH				pmax	pmax		
	comp=Z,470nm,4.9s						
LZH				LR	LR		
	comp=Z,1μm,13.6s						
LZH				LR	LR		
	comp=Z,1μm,13.0s						
LZH				LR	LR		
	comp=Z,1μm,14.1s						
ZEA	**Zeya**	**22.87**	**355**	*e*P	**P**	**17 25 01.7**	**-0.3**
ZEA				*e*		17 25 29.0	
ZEA				*e*S	Sn	17 29 50.0	+20
ZEA				pmax	pmax		
	comp=Z,18nm,1.2s						
ZEA				smax	smax		
	comp=E,700nm,11.0s						
ZEA				MLR	MLR		
	comp=Z,200nm,10.0s						
CD2	**Chengdu**	**22.87**	**277**	⇑P	**P**	**17 25 01.5**	**-0.8**
CD2				pP	pP	17 25 28.3	-0.5
CD2				sP	sP	17 25 46.3	+0.2
CD2				S	**S**	**17 29 00.5**	**-0.8**
CD2				pmax	pmax		
	comp=Z,140nm,0.6s						
CD2				pmax	pmax		
	comp=Z,460nm,3.2s						
CD2				LR	LR		
	comp=Z,270nm,7.9s						
CD2				LR	LR		
	comp=Z,430nm,9.1s						
CD2				LR	LR		
	comp=Z,480nm,8.3s						
NKL	**Nikolayevsk**	**23.39**	**16**	*e*P	**P**	**17 25 08.0**	**+1.3**
NKL				*e*		17 29 06.0	
NKL				pmax	pmax		
	comp=Z,26nm,1.0s						
NKL				MLR	MLR		
	comp=Z,500nm,13.0s						
ULN	**Ulaanbaatar**	**24.57**	**320**	*e*P	**P**	**17 25 17.9**	**0.0**
	comp=Z,34nm,1.0s						
ULN	**Ulaanbaatar**	**24.57**	**320**	P	**P**	**17 25 17.1**	**-0.7**
	SNR=6.9						
ULN	**Ulaanbaatar**	**24.57**	**320**	*ce*P	**P**	**17 25 17.7**	**-0.1**
ULN				pmax	pmax		
	comp=Z,9.0nm,0.8s						
SONM	**Songino Array**	**24.92**	**319**	P	**P**	**17 25 20.7**	**-0.2**
	comp=Z,6.6nm,0.8s,baz=139,slow=9.2,SNR=30						
SONM				pP	**pP**	**17 25 50.1**	**-0.2**
	comp=Z,8.2nm,0.8s,baz=134,slow=9.8,SNR=6.3						
SONM				ScP	**ScP**	**17 32 17.3**	**-1.4**
	comp=Z,1.3nm,0.9s,baz=135,slow=2.7,SNR=6.6						
SONA1	**Songino Array**	**24.93**	**319**	*e*P	**P**	**17 25 20.6**	**-0.3**
KMI	**Kunming**	**25.10**	**263**	P	**P**	**17 25 23.5**	**+0.6**
KMI				pP	pP	17 25 53.8	+1.5
KMI				PP	**sP**	**17 26 07.3**	**-1.2**
KMI				sP	PP	17 26 11.0	-11
KMI				S	**S**	**17 29 37.8**	**+0.4**
KMI				sS	sS	17 30 27.0	-2.2
KMI				SS	**SnSn**	**17 30 45.0**	**+0.9**
KMI				pmax	pmax		
	comp=Z,21nm,0.8s						
KMI				pmax	pmax		
	comp=Z,140nm,5.5s						
KMI				LR	LR		
	comp=Z,250nm,11.7s						
KMI				LR	LR		
	comp=Z,250nm,10.8s						
KMI				LR	LR		
	comp=Z,200nm,12.9s						
GTA	**Gaotai**	**26.31**	**297**	*e*P	**P**	**17 25 33.5**	**-0.1**
GTA				pP	pP	17 26 03.5	+0.4
GTA				sP	sP	17 26 19.5	+0.1
GTA				pmax	pmax		
	comp=Z,22nm,0.6s						
UBPT	**Khong Chiam**	**27.68**	**241**	P	**P**	**17 25 47.1**	**+1.3**
	comp=Z,32nm,1.3s						
SKNT	**Sakolnakorn**	**27.81**	**246**	P	**P**	**17 25 47.5**	**+0.5**
	comp=Z,19nm,0.9s,comp=Z,2μm						
NONG	**Nongkai**	**27.88**	**249**	P	**P**	**17 25 48.3**	**+0.7**
	comp=Z,0.8nm,0.8s,comp=Z,267nm						
MYLDM	**Lahad Datu**	**28.00**	**206**	*e*P	**P**	**17 25 50.5**	**+1.8**
	comp=Z,34nm,1.0s						
ZAK	**Zakamensk**	**28.04**	**322**	*e*P	**P**	**17 25 46.9**	**-1.9**
ZAK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
KHON	**Khomkaen**	**29.09**	**246**	P	**P**	**17 25 58.5**	**+0.2**
	comp=Z,41nm,0.7s,comp=Z,569nm						
PETK	**Petropavlovsk-**	**29.67**	**34**	P	**P**	**17 26 03.7**	**+0.6**
	comp=Z,6.4nm,0.8s,baz=220,slow=8.8						
PETK				LR	LR	17 38 35.6	
	comp=Z,32nm,18.4s,baz=220,slow=37						
PETK	**Petropavlovsk-**	**29.67**	**34**	*e*P	**P**	**17 26 03.9**	**+0.7**
PETK				*e*pP	**pP**	**17 26 33.2**	**+0.2**
PETK	**Petropavlovsk-**	**29.67**	**34**	*e*P	**P**	**17 26 03.9**	**+0.7**
PETK				*e**PP	**pP**	**17 26 33.2**	**+0.2**
PAYA	**Payao**	**29.89**	**254**	P	**P**	**17 26 06.5**	**+1.1**
	comp=Z,9.0nm,0.8s						
CHAI	**Chaiyaphum**	**29.99**	**247**	P	**P**	**17 26 06.5**	**+0.2**
	comp=Z,28nm,0.8s,comp=Z,259nm						
UTTA	**Uttaradit**	**30.14**	**251**	P	**P**	**17 26 07.9**	**+0.3**
	comp=Z,15nm,0.8s,comp=Z,122nm						
TNTI	**Ternate**	**30.17**	**186**	P	**P**	**17 26 10.2**	**+2.3**
	comp=Z,44nm,1.0s						
TNTI	**Ternate**	**30.17**	**186**	*e*P	**P**	**17 26 08.0**	**+0.1**
	comp=Z,36nm,1.0s						
PBKT	**Sadao Pong**	**30.43**	**249**	*e*P	**P**	**17 26 10.8**	**+0.6**
	comp=Z,37nm,0.8s						
PBKT	**Sadao Pong**	**30.43**	**249**	P	**P**	**17 26 10.5**	**+0.4**
	comp=Z,51nm,0.9s,comp=Z,934nm						
LAMP	**Lampang**	**30.49**	**253**	P	**P**	**17 26 11.5**	**+0.7**
	comp=Z,15nm,0.9s,comp=Z,117nm						
PHIT	**Phitsanulok**	**30.54**	**250**	P	**P**	**17 26 11.9**	**+0.8**
	comp=Z,45nm,1.0s,comp=Z,419nm						
CMMT	**Chiang Mai**	**30.92**	**254**	P	**P**	**17 26 14.8**	**+0.3**
	comp=Z,37nm,1.1s						
CHTO	**Chiang Mai**	**30.92**	**254**	*e*P	**P**	**17 26 15.0**	**+0.5**
	comp=Z,37nm,1.0s						
CHTO	**Chiang Mai**	**30.92**	**254**	P	**P**	**17 26 15.6**	**+1.1**
	SNR=7.2						
CHTO	**Chiang Mai**	**30.92**	**254**	*e*P	**P**	**17 26 15.0**	**+0.5**
CHTO				pmax	pmax		
	comp=Z,37nm,1.0s						
CHTO	**Chiang Mai**	**30.92**	**254**	P	**P**	**17 26 14.9**	**+0.5**
	comp=Z,165nm,1.1s						
SRAK	**Srakaew**	**31.06**	**243**	P	**P**	**17 26 12.7**	**-3.1**
	comp=Z,190nm,0.9s,comp=Z,1μm						
YAK	**Yakutsk**	**31.07**	**359**	⇑*e*P	**P**	**17 26 16.1**	**+0.8**
YAK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
CM31	**Chiang Mai Arr**	**31.09**	**254**	*e*P	**P**	**17 26 16.8**	**+0.8**
CMAR	**Chiang Mai Arr**	**31.09**	**254**	P	**P**	**17 26 16.4**	**+0.3**
	comp=Z,9.6nm,0.8s,baz=52,slow=6.9,SNR=59						
CMAR				pP	**pP**	**17 26 46.9**	**+0.9**
	comp=Z,5.0nm,1.1s,baz=50,slow=9.7,SNR=2.1						
CMAR				PcP	**PcP**	**17 29 09.2**	**+1.1**
	comp=Z,3.9nm,0.8s,baz=35,slow=1.6,SNR=13						
CMAR				ScP	**ScP**	**17 32 38.2**	**+0.2**
	comp=Z,4.4nm,1.2s,baz=71,slow=2.1,SNR=7.7						
CMAR	**Chiang Mai Arr**	**31.09**	**254**	*i* P	**P**	**17 26 16.6**	**+0.6**
CMAR				pmax	pmax		
	comp=Z,12nm,0.8s						
CM01	**Chiang Mai Arr**	**31.10**	**254**	*e*P	**P**	**17 26 16.2**	**+0.2**
CM01				*e*PcP	**PcP**	**17 29 09.1**	**+0.9**
MRSI	**Marisa**	**31.38**	**196**	P	**P**	**17 26 18.8**	**+0.3**
NAYO	**Nakonayok**	**31.44**	**245**	P	**P**	**17 26 20.0**	**+0.9**
	comp=Z,0.6nm,1.1s						
MPSI	**Mapaga**	**32.07**	**200**	P	**P**	**17 26 25.2**	**+0.7**
UMPA	**Umpang Tak**	**32.32**	**250**	P	**P**	**17 26 29.2**	**+2.4**
	comp=Z,19nm,1.0s,comp=Z,146nm						
SRDT	**SRDT**	**33.14**	**247**	P	**P**	**17 26 35.7**	**+1.7**
	comp=Z,36nm,1.0s						
SBUM	**Sibu**	**33.19**	**215**	*e*P	**P**	**17 26 34.7**	**+0.4**
	comp=Z,5.6nm,0.7s						
PHET	**Kaeng Krachan**	**33.59**	**245**	P	**P**	**17 26 40.0**	**+2.2**
	comp=Z,14nm,0.9s						
FAKI	**Fak Fak**	**33.74**	**177**	*e*P	**P**	**17 26 39.4**	**+0.2**
	comp=Z,87nm,0.7s						
HVS	**Khovu-Aksy**	**33.77**	**317**	⇓*e*P	**P**	**17 26 40.0**	**+0.9**
HVS				pmax	pmax		
	comp=Z,5.0nm,0.8s						
SHL	**Shillong**	**34.27**	**271**	*e*P	**P**	**17 26 43.5**	**-0.2**
	comp=Z,17nm,0.5s						
SHL	**Shillong**	**34.27**	**271**	*e*x	**P**	**17 26 47.0**	**+3.2**
SHL	**Shillong**	**34.27**	**271**	*e*P	**P**	**17 26 43.6**	**-0.2**
SHL				pmax	pmax		
	comp=Z,17nm,0.5s						
SEY	**Seymchan**	**34.94**	**17**	P	**P**	**17 26 49.5**	**+0.7**
	comp=Z,5.1nm,0.6s,baz=217,slow=7.4,SNR=21						
SEY				pP	**pP**	**17 27 19.6**	**+0.4**
	comp=Z,7.9nm,1.1s,baz=217,slow=11,SNR=4.6						
SEY	**Seymchan**	**34.94**	**17**	⇑*e*P	**P**	**17 26 49.0**	**+0.1**
KSM	**Kuching**	**34.99**	**217**	*e*P	**P**	**17 26 51.1**	**+1.2**
	comp=Z,107nm,1.6s						
MTKI	**Muara Teweh, K**	**35.01**	**208**	P	**P**	**17 26 51.0**	**+1.0**
WMQ	**Urumqi**	**35.91**	**303**	P	**P**	**17 26 57.3**	**-0.3**
WMQ				pP	pP	17 27 28.0	0.0
WMQ				sP	sP	17 27 47.0	+2.9
WMQ				pmax	pmax		
	comp=Z,17nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,91nm,3.7s						
WMQ				LR	LR		
	comp=Z,160nm,29.3s						
WMQ				LR	LR		
	comp=Z,150nm,30.9s						
WMQ				LR	LR		
	comp=Z,170nm,29.3s						
SKLT	**Songkhla**	**36.59**	**236**	P	**P**	**17 27 05.1**	**+1.6**
	comp=Z,56nm,1.2s						
TRTT	**Trang**	**36.80**	**238**	P	**P**	**17 27 06.7**	**+1.4**
	comp=Z,34nm,1.2s,comp=Z,634nm						
DGZ	**Jazzator, Alta**	**37.13**	**313**	⇓*e*P	**P**	**17 27 09.3**	**+1.4**
DGZ				pmax	pmax		
	comp=Z,3.0nm,1.9s						
ODAN	**Odare**	**37.74**	**275**	*e*P	**P**	**17 27 14.0**	**+0.6**
	comp=Z,52nm,0.7s						
KULM	**Kulim**	**37.89**	**234**	*e*P	**P**	**17 27 15.5**	**+1.0**
	comp=Z,137nm,0.7s						
IPM	**Ipoh**	**38.22**	**232**	*e*P	**P**	**17 27 17.5**	**+0.2**
	comp=Z,218nm,0.8s						
RAMN	**Ramite**	**38.39**	**275**	*e*P	**P**	**17 27 19.1**	**+0.2**
	comp=Z,29nm,0.7s						
JIRN	**Jiri**	**38.54**	**277**	*e*P	**P**	**17 27 21.0**	**+0.7**
	comp=Z,92nm,0.7s						
GUN	**Gumba**	**38.74**	**277**	*e*P	**P**	**17 27 22.9**	**+1.0**
	comp=Z,101nm,0.6s						
PKIN	**Phulchoki**	**39.24**	**277**	*e*P	**P**	**17 27 26.3**	**+0.3**
	comp=Z,21nm,0.6s						
KKN	**Kakani**	**39.28**	**277**	*e*P	**P**	**17 27 27.0**	**+0.7**
	comp=Z,41nm,0.6s						
DMN	**Daman**	**39.48**	**277**	*e*P	**P**	**17 27 28.5**	**+0.5**
	comp=Z,22nm,0.7s						
GKN	**Gorkha**	**39.77**	**278**	*e*P	**P**	**17 27 30.7**	**+0.4**
	comp=Z,18nm,0.5s						
ZAA0	**Zalesovo Array**	**39.81**	**319**	*e*P	**P**	**17 27 31.3**	**+1.2**
ZAA0				*e*pP	**pP**	**17 28 03.2**	**+2.2**
ZALV	**Zalesovo Beam**	**39.81**	**319**	P	**P**	**17 27 29.0**	**-1.1**
	comp=Z,3.7nm,0.8s,baz=91,slow=5.9,SNR=10						
ZALV				pP	**pP**	**17 28 01.9**	**+1.0**
	comp=Z,4.5nm,0.8s,baz=99,slow=7.7,SNR=4.8						
ZALV				PcP	**PcP**	**17 29 31.9**	**-1.4**
	comp=Z,3.4nm,0.8s,baz=103,slow=4.3,SNR=5.8						
ZALV				ScP	**ScP**	**17 33 06.5**	**-2.6**
	comp=Z,4.3nm,0.8s,baz=113,slow=3.4,SNR=9.1						
ZALV				LR	LR	17 45 42.2	
	comp=Z,44nm,18.1s,baz=222,slow=38						
ZALV	**Zalesovo Beam**	**39.81**	**319**	*e*P	**P**	**17 27 29.3**	**-0.8**
ZALV				*e*pP	**pP**	**17 28 03.0**	**+2.1**
ZALV				*e*PcP	**PcP**	**17 29 32.3**	**-1.0**
ZALV				ScP	**ScP**	**17 33 06.5**	**-2.6**
ZALV	**Zalesovo Beam**	**39.81**	**319**	*e*P	**P**	**17 27 29.3**	**-0.8**
ZALV				*e**PP	**pP**	**17 28 03.1**	**+2.1**
ZALV				*e*		17 29 32.3	
MK01	**Makanchi Array**	**40.01**	**307**	*e*P	**P**	**17 27 31.2**	**-0.6**
MK31	**Makanchi Array**	**40.02**	**307**	*e*P	**P**	**17 27 31.7**	**-0.2**
MK31	**Makanchi Array**	**40.02**	**307**	*i* P	**P**	**17 27 30.8**	**-1.2**
MK31				pmax	pmax		
	comp=Z,3.0nm,0.7s						
MKAR	**Makanchi Array**	**40.02**	**307**	P	**P**	**17 27 31.4**	**-0.6**
	comp=Z,4.7nm,0.8s,baz=94,slow=10,SNR=38						
MKAR				pP	**pP**	**17 28 03.1**	**+0.2**
	comp=Z,9.7nm,0.8s,baz=98,slow=6.5,SNR=11						
MKAR				PcP	**PcP**	**17 29 32.9**	**-1.3**
	comp=Z,6.5nm,1.1s,baz=92,slow=2.7,SNR=3.9						
MKAR				ScP	**ScP**	**17 33 08.0**	**-2.1**
	comp=Z,3.2nm,0.8s,baz=84,slow=4.3,SNR=13						
MKAR				LR	LR	17 45 57.5	
	comp=Z,63nm,20.4s,baz=107,slow=39						
MKAR	**Makanchi Array**	**40.02**	**307**	*e*P	**P**	**17 27 31.7**	**-0.2**
	comp=Z,63nm,0.9s						
MKAR				pP	**pP**	**17 28 03.1**	**+0.2**
MKAR				PcP	**PcP**	**17 29 32.9**	**-1.3**
MKAR				ScP	**ScP**	**17 33 08.0**	**-2.1**
MMRI	**Maumere**	**40.16**	**193**	P	**P**	**17 27 33.9**	**+0.6**
	comp=Z,78nm,1.0s						
MMRI	**Maumere**	**40.16**	**193**	*e*P	**P**	**17 27 32.1**	**-1.2**
	comp=Z,74nm,1.0s						
MAKZ	**Makanchi**	**40.24**	**307**	*e*P	**P**	**17 27 33.6**	**-0.1**
MAKZ				*e*pP	**pP**	**17 28 03.9**	**-0.8**
MAKZ	**Makanchi**	**40.24**	**307**	*e*P	**P**	**17 27 33.6**	**-0.1**
MAKZ				*e**PP	**pP**	**17 28 03.9**	**-0.8**
EDFI	**Ende, Flores**	**40.37**	**193**	P	**P**	**17 27 33.4**	**-1.8**
DANN	**Dangsing**	**40.42**	**279**	*e*P	**P**	**17 27 36.6**	**+0.8**
	comp=Z,49nm,0.5s						
LHMI	**Lhok Sumawe**	**40.56**	**238**	P	**P**	**17 27 38.2**	**+1.5**
LHMI	**Lhok Sumawe**	**40.56**	**238**	*e*P	**P**	**17 27 38.6**	**+1.9**
	comp=Z,169nm,0.8s						
TSI	**Tuntungan**	**40.61**	**234**	P	**P**	**17 27 38.1**	**+1.0**
KOLN	**Koldanda**	**40.72**	**278**	*e*P	**P**	**17 27 37.3**	**-0.8**
	comp=Z,20nm,0.5s						
TIXI	**Tiksi**	**40.74**	**359**	P	**P**	**17 27 37.1**	**-0.4**
	comp=Z,3.0nm,0.7s,baz=152,slow=7.3,SNR=4.0						
TIXI	**Tiksi**	**40.74**	**359**	*e*P	**P**	**17 27 36.9**	**-0.6**
	comp=Z,12nm,1.0s						
TIXI	**Tiksi**	**40.74**	**359**	*de*P	**P**	**17 27 37.0**	**-0.4**
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.8s						
PSI	**Prapat**	**40.87**	**233**	*e*P	**P**	**17 27 39.9**	**+0.6**
	comp=Z,124nm,0.7s						
PSI	**Prapat**	**40.87**	**233**	*e*P	**P**	**17 27 39.9**	**+0.6**
PSI				pmax	pmax		
	comp=Z,124nm,0.7s						
SOEI	**Soe**	**40.92**	**189**	P	**P**	**17 27 38.7**	**-1.0**
SOEI	**Soe**	**40.92**	**189**	*e*P	**P**	**17 27 38.1**	**-1.6**
	comp=Z,56nm,0.9s						
NVS	**Novosibirsk**	**40.95**	**320**	*e*P	**P**	**17 27 38.5**	**-0.9**
PYUN	**Piuthan**	**41.14**	**278**	*e*P	**P**	**17 27 41.0**	**-0.6**
	comp=Z,41nm,0.7s						
KCSI	**Kotacane, Aceh**	**41.15**	**235**	P	**P**	**17 27 40.9**	**-0.7**
PLAI	**Plampang**	**41.39**	**199**	P	**P**	**17 27 43.0**	**-0.4**
GRJI	**Gresik**	**41.41**	**208**	P	**P**	**17 27 45.2**	**+1.6**
BATI	**Baumata**	**41.45**	**190**	P	**P**	**17 27 42.4**	**-1.5**
TWSI	**Taliwang, Sumb**	**41.57**	**200**	P	**P**	**17 27 44.9**	**+0.1**
MLSI	**Meulaboh, Aceh**	**41.61**	**237**	P	**P**	**17 27 45.2**	**-0.1**
TPTI		**41.75**	**235**	P	**P**	**17 27 44.5**	**-1.9**
MNSI	**Mandailing Nat**	**41.90**	**230**	P	**P**	**17 27 47.7**	**+0.1**
JAGI	**Jajag, Banyuwa**	**42.21**	**204**	*e*P	**P**	**17 27 49.6**	**-0.5**
	comp=Z,72nm,1.2s						
NGJI	**Ngawi**	**42.23**	**209**	P	**P**	**17 27 52.2**	**+1.9**
SMRI	**Semarang**	**42.38**	**210**	P	**P**	**17 27 52.7**	**+1.2**
SMRI	**Semarang**	**42.38**	**210**	*e*P	**P**	**17 27 52.6**	**+1.2**
	comp=Z,260nm,1.4s						
GSI	**Gunungsitoli**	**42.87**	**233**	P	**P**	**17 27 55.0**	**-0.5**
GSI	**Gunungsitoli**	**42.87**	**233**	*e*P	**P**	**17 27 55.3**	**-0.2**
	comp=Z,260nm,0.6s						
KURK	**Kurchatov**	**42.88**	**313**	*e*P	**P**	**17 27 54.8**	**-0.4**
	comp=Z,18nm,0.8s						
KURK				pP	**pP**	**17 28 27.9**	**+1.5**
KURK				ScP	**ScP**	**17 33 19.1**	**-2.3**
KURK	**Kurchatov**	**42.88**	**313**	*c i*P	**P**	**17 27 54.2**	**-0.9**
KURK				pmax	pmax		
	comp=Z,12nm,0.8s						
KURBB	**Kurchatov Arra**	**42.92**	**313**	P	**P**	**17 27 54.8**	**-0.7**
	comp=Z,6.4nm,0.8s,baz=99,slow=8.9,SNR=38						
KURBB				pP	**pP**	**17 28 27.9**	**+1.1**
	comp=Z,10nm,0.8s,baz=99,slow=9.5,SNR=11						
KURBB				ScP	**ScP**	**17 33 19.1**	**-2.5**
	comp=Z,1.8nm,0.8s,baz=96,slow=4.0,SNR=17						
MDSI	**Maura Dua**	**43.27**	**220**	P	**P**	**17 27 59.6**	**+1.0**
KPJI	**Karang Pucung**	**43.30**	**212**	P	**P**	**17 27 59.5**	**+0.6**
PBSI	**Pulau Batu**	**43.39**	**231**	P	**P**	**17 27 59.4**	**-0.2**
MTN	**Manton Dam**	**43.56**	**179**	*e*P	**P**	**17 28 00.5**	**-0.4**
	comp=Z,35nm,0.9s						
SBJI	**Serang**	**43.60**	**216**	P	**P**	**17 28 01.9**	**+0.6**
DBJI	**Dramaga**	**43.66**	**215**	P	**P**	**17 28 03.1**	**+1.3**
SISI	**Saibi**	**43.81**	**229**	P	**P**	**17 28 02.9**	**-0.1**
TKM2	**Tokmak 2**	**44.70**	**301**	P	**P**	**17 28 10.2**	**+0.1**
TKM2				pmax	pmax		
	comp=Z,13nm,0.8s						
KSH	**Kashi**	**44.71**	**297**	*e*P	**P**	**17 28 13.8**	**+3.7**
KSH				sP	sP	17 29 01.0	+3.7
KSH				*e*PcP	**PP**	**17 29 55.0**	**-2.1**
KSH				PP	PcP	17 30 00.5	+10
KSH				PcS	**PcS**	**17 33 46.0**	**+2.1**
KSH				S	**S**	**17 34 39.5**	**+3.2**
KSH				ScS	**ScS**	**17 37 53.0**	**-0.2**
KSH				pmax	pmax		
	comp=Z,120nm,3.9s						
AAK	**Ala-Archa**	**45.53**	**301**	P	**P**	**17 28 16.5**	**-0.1**
	comp=Z,1.6nm,0.3s,baz=62,slow=4.4,SNR=4.1						
AAK				LR	LR	17 50 37.6	
	comp=Z,55nm,18.4s,baz=72,slow=40						
AAK	**Ala-Archa**	**45.53**	**301**	⇑*e*P	**P**	**17 28 16.6**	**0.0**
AAK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BVAR	**Borovoye Array**	**48.16**	**315**	P	**P**	**17 28 36.8**	**+0.2**
	comp=Z,8.4nm,0.6s,baz=98,slow=8.9,SNR=39						
BVAR				pP	**pP**	**17 29 08.4**	**-0.1**
	comp=Z,15nm,0.7s,baz=95,slow=9.5,SNR=10						
BVAR				PcP	**PcP**	**17 30 01.3**	**-0.5**
	comp=Z,5.3nm,0.7s,baz=128,slow=4.0,SNR=3.6						
BVAR				ScP	**ScP**	**17 33 40.6**	**-2.6**
	comp=Z,3.5nm,0.8s,baz=67,slow=3.7,SNR=13						
BRVK	**Borovoye**	**48.22**	**315**	*e*P	**P**	**17 28 36.8**	**-0.3**
	comp=Z,23nm,0.9s						
BRVK	**Borovoye**	**48.22**	**315**	P	**P**	**17 28 37.0**	**-0.1**
	SNR=6.1						
BRVK	**Borovoye**	**48.22**	**315**	*c i*P	**P**	**17 28 36.7**	**-0.4**
BRVK				pmax	pmax		
	comp=Z,13nm,0.7s						
KK31	**Karatay Array**	**48.41**	**302**	*e*P	**P**	**17 28 39.0**	**+0.4**
KK31				*e*pP	**pP**	**17 29 10.8**	**+0.2**
KK31	**Karatay Array**	**48.41**	**302**	*e*P	**P**	**17 28 39.1**	**+0.4**
KK31				*e**PP	**pP**	**17 29 10.8**	**+0.2**
KKAR	**Karatay Array**	**48.41**	**302**	*e*P	**P**	**17 28 39.0**	**+0.4**
KKAR				*e*pP	**pP**	**17 29 10.8**	**+0.2**
KKAR	**Karatay Array**	**48.41**	**302**	*e*P	**P**	**17 28 39.1**	**+0.4**
KKAR				*e**PP	**pP**	**17 29 10.8**	**+0.2**
HYB	**Hyderabad**	**48.82**	**266**	*i* P	**P**	**17 28 42.0**	**-0.2**
HYB				*e*pP	**pP**	**17 29 17.0**	**+2.8**
WRAB	**Tennant Creek**	**50.75**	**175**	⇑*e*P	**P**	**17 28 55.6**	**-1.0**
WRAB				pmax	pmax		
	comp=Z,32nm,0.9s						
WRA	**Warramunga Arr**	**50.76**	**175**	P	**P**	**17 28 56.7**	**+0.1**
	comp=Z,23nm,0.9s,baz=351,slow=8.1,SNR=89						
WRA	**Warramunga Arr**	**50.76**	**175**	*i* P	**P**	**17 28 56.7**	**+0.1**
WRA				pmax	pmax		
	comp=Z,26nm,0.9s						
WB2	**Warramunga Arr**	**50.76**	**175**	*e*P	**P**	**17 28 55.8**	**-0.9**
KBL	**Kabul**	**51.06**	**291**	*e*P	**P**	**17 29 01.6**	**+2.4**
	comp=Z,24nm,0.6s						
KBL	**Kabul**	**51.06**	**291**	*e*P	**P**	**17 29 01.6**	**+2.4**
KBL				pmax	pmax		
	comp=Z,24nm,0.6s						
PALK	**Pallekele**	**52.04**	**254**	P	**P**	**17 29 06.6**	**+0.2**
	comp=Z,28nm,0.7s,baz=116,slow=10,SNR=14						
PALK	**Pallekele**	**52.04**	**254**	*e*P	**P**	**17 29 07.2**	**+0.8**
	comp=Z,31nm,0.8s						
PALK	**Pallekele**	**52.04**	**254**	P	**P**	**17 29 05.8**	**-0.7**
PALK	**Pallekele**	**52.04**	**254**	*i* P	**P**	**17 29 08.6**	**+2.2**
MBWA	**Marble Bar**	**52.84**	**193**	*e*P	**P**	**17 29 11.3**	**-0.7**
	comp=Z,39nm,1.0s						
AS31	**Alice Springs**	**54.42**	**176**	*e*P	**P**	**17 29 24.2**	**+0.6**
	comp=Z,5.8nm,0.8s						
ASAR	**Alice Springs**	**54.43**	**176**	P	**P**	**17 29 24.1**	**+0.5**
	comp=Z,22nm,0.8s,baz=4.2,slow=7.6,SNR=137						

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AS01  Alice Springs      54.43 176  eP     P       17 29 24.0 +0.4
ABKAR Akbulak array      54.92 311  eP     P       17 29 27.1 +0.1
ARU   Arti               54.96 320  eP     P       17 29 27.0 -0.1
      comp=Z,21nm,0.8s
ARU   Arti               54.96 320c iP     P       17 29 27.0 -0.1
ARU                                 *PP    pP      17 29 59.2 -0.5
ARU                                                17 30 25.8
ARU                                 S      S       17 37 00.3 +2.5
ARU                                 SS     SS      17 40 44.1 +1.2
ARU                                 pmax   pmax
      comp=Z,24nm,1.7s
SVW2  Sparrevohn         55.76  34  eP     P       17 29 33.3 +0.6
      comp=Z,10nm,1.0s
SVW2                                epP    pP      17 30 06.9 +1.4
AKTO  Aktyubinsk         55.98 313   P     P       17 29 35.5 +1.0
      comp=Z,6.9nm,0.8s,baz=78,slow=11,SNR=18
AKTO                                LR     LR      17 55 42.0
      comp=Z,62nm,18.8s,baz=92,slow=38
SII   Sitkinak Islan     56.88  40  eP     P       17 29 41.3 +0.6
      comp=Z,23nm,0.8s
SII                                 epP    pP      17 30 15.4 +1.8
RSO   Redoubt South      57.19  35  eP     P       17 29 43.7 +0.6
OHAK  Old Harbor         57.28  39  eP     P       17 29 42.7 -0.8
      comp=Z,41nm,1.6s
OHAK                                epP    pP      17 30 15.7 -0.7
KDAK  Kodiak Island      57.58  38   P     P       17 29 45.9 +0.3
      comp=Z,18nm,0.7s,baz=277,slow=4.6,SNR=37
KDAK                                 pP    pP      17 30 18.6  0.0
      comp=Z,11nm,0.6s,baz=280,slow=6.4,SNR=6.3
KDAK  Kodiak Island      57.58  38  eP     P       17 29 45.9 +0.3
      comp=Z,26nm,1.0s
KDAK                                epP    pP      17 30 18.5 -0.1
KDAK  Kodiak Island      57.58  38  i P    P       17 29 45.7 +0.1
SKT   Skwentna           57.62  33  eP     P       17 29 46.5 +0.6
      comp=Z,9.6nm,1.0s
SKT                                 epP    pP      17 30 19.9 +1.0
BPAW  Bear Paw Mtn.      57.67  31  eP     P       17 29 47.2 +0.9
      comp=Z,12nm,1.1s
MLY   Manley             57.70  30  eP     P       17 29 47.7 +1.2
MLY                                 epP    pP      17 30 20.8 +1.4
TRF   Thorofare Moun     58.04  31  eP     P       17 29 50.7 +1.7
TRF                                 epP    pP      17 30 24.1 +2.1
CNPM  China Poot         58.05  36  eP     P       17 29 48.5 -0.4
      comp=Z,16nm,0.8s
CNPM                                epP    pP      17 30 23.7 +1.8
SUA   Susitna One        58.05  34  eP     P       17 29 49.4 +0.4
      comp=Z,27nm,0.7s
BRLK  Bradley Lake       58.20  36  eP     P       17 29 51.4 +1.4
      comp=Z,21nm,0.9s
BRLK                                epP    pP      17 30 24.6 +1.7
RC01  Rabbit Creek A     58.58  34  eP     P       17 29 53.4 +0.8
      comp=Z,13nm,0.7s
RC01                                epP    pP      17 30 26.6 +1.0
MCK   McKinley           58.61  31  eP     P       17 29 53.4 +0.6
MCK                                 epP    pP      17 30 27.5 +1.7
MCK   McKinley           58.61  31  eP     P       17 29 53.4 +0.6
MCK                                 e*PP   pP      17 30 27.5 +1.7
GEYT  Alibeck            58.69 298   P     P       17 29 53.7 -0.1
      comp=Z,2.0nm,0.6s,baz=82,slow=10,SNR=8.7
GYA0B ALIBECK ARRAY      58.69 298  eP     P       17 29 56.1 +2.3
      comp=Z,5.0nm,0.8s
MDM   Murphy Dome        58.77  29  eP     P       17 29 54.7 +0.8
      comp=Z,32nm,1.1s
PMR   Palmer             58.80  33  eP     P       17 29 54.3 +0.3
      comp=Z,24nm,1.2s
PMR                                 epP    pP      17 30 27.9 +0.8
PMR   Palmer             58.80  33  eP     P       17 29 54.3 +0.3
PMR                                 e*PP   pP      17 30 27.9 +0.8
PMR                                  pmax  pmax
      comp=Z,25nm,1.2s
GHO   Glory Hole Cre     58.87  33  eP     P       17 29 55.3 +0.7
      comp=Z,16nm,1.0s
WRH   Wood River Hil     58.89  30  eP     P       17 29 55.5 +0.8
WRH                                 epP    pP      17 30 28.6 +0.9
CCB   Clear Creek Bu     58.99  30  eP     P       17 29 55.5 +0.2
      comp=Z,6.6nm,0.9s
CCB                                 ePcP   sP      17 30 43.4 -0.4
SML   Sawmill            59.15  33  eP     P       17 29 57.2 +0.7
SML                                 epP    pP      17 30 32.2 +2.6
SML   Sawmill            59.15  33  eP     P       17 29 57.2 +0.7
SML                                 e*PP   pP      17 30 32.2 +2.6
IL1   Eielson Array      59.36  30  eP     P       17 29 57.2 -0.7
IL1                                 epP    pP      17 30 33.2 +2.2
ILAR  Eielson Array      59.36  30   P     P       17 29 57.6 -0.3
      comp=Z,1.6nm,0.7s,baz=267,slow=5.4,SNR=11
ILAR                                 pP    pP      17 30 31.6 +0.6
      comp=Z,0.6nm,0.7s,baz=266,slow=5.9,SNR=4.4
ILAR                                LR     LR      17 57 42.4
      comp=Z,31nm,18.7s,baz=312,slow=38
ILB   Eielson Array      59.36  30  eP     P       17 29 58.0 +0.2
HDA   Harding Lake       59.39  30  eP     P       17 29 58.1  0.0
HDA                                 epP    pP      17 30 31.1 -0.1
DHY   Denali Highway     59.40  32  eP     P       17 29 58.5 +0.2
      comp=Z,7.8nm,0.8s
SCM   Sheep Creek Mo     59.61  33  eP     P       17 30 00.7 +0.9
      comp=Z,20nm,0.9s
SCM   Sheep Creek Mo     59.61  33  eP     P       17 30 00.7 +0.9
SCM                                  pmax  pmax
      comp=Z,20nm,0.9s
GLI   Glacier Island     59.89  34  eP     P       17 30 02.1 +0.6
GLI                                 epP    pP      17 30 35.2 +0.4
FID   Port Fidalgo       60.21  34  eP     P       17 30 04.0 +0.3
      comp=Z,18nm,1.0s
FID                                 epP    pP      17 30 37.1 +0.1
PAX   Paxson             60.27  32  eP     P       17 30 04.9 +0.7
      comp=Z,8.8nm,1.2s
PAX   Paxson             60.27  32  eP     P       17 30 04.9 +0.7
PAX                                  pmax  pmax
      comp=Z,9.0nm,1.2s
KLU   Klutina            60.34  33  eP     P       17 30 05.6 +0.9
KLU                                 epP    pP      17 30 40.8 +2.9
RIDG  Independ'e Rid     60.41  31  eP     P       17 30 05.2  0.0
      comp=Z,9.5nm,1.2s
DIV   Divide             60.48  34  eP     P       17 30 06.7 +1.1
      comp=Z,15nm,0.9s
DIV                                 epP    pP      17 30 39.9 +1.0
HARP  HAARP              60.52  32  eP     P       17 30 07.3 +1.5
HARP                                epP    pP      17 30 43.6 +4.6
SCRK  Sand Creek         60.74  30  eP     P       17 30 07.5 +0.1
      comp=Z,19nm,1.0s
PRGR  Permogore          60.86 327  eP     P       17 30 07.3 -0.8
PRGR                                e*PP   pP      17 30 40.1 -1.2
BMRM  Bremner River      61.06  34  eP     P       17 30 10.4 +0.8
BMRM                                epP    pP      17 30 43.8 +0.9
RAGM  Ragged Mountai     61.15  34  eP     P       17 30 11.4 +1.2
      comp=Z,37nm,1.4s
RAGM                                epP    pP      17 30 45.9 +2.4
EGAK  Eagle              61.78  29  eP     P       17 30 13.1 -1.1
EGAK                                epP    PcP     17 30 51.7 -2.3
DAWY  Dawson             62.69  30  eP     P       17 30 20.7 +0.3
DAWY                                epP    PcP     17 30 56.7 -1.2
DAWY                                eS     S       17 38 39.0 +1.5
DZM   Mont Dzumac        63.05 142   P     P       17 30 24.5 +1.2
      comp=Z,4.2nm,0.9s,baz=311,slow=20,SNR=2.3
STKA  Stephens Creek     63.39 169   P     P       17 30 26.0 +0.7
      comp=Z,11nm,0.7s,baz=348,slow=6.4,SNR=18
STKA  Stephens Creek     63.39 169   P     P       17 30 26.0 +0.7
WSAR  Wadi Sarin         63.41 282   P     P       17 30 25.3 -0.5
      comp=Z,10.0nm,0.9s,baz=94,slow=6.5,SNR=5.4
INK   Inuvik             63.78  24   P     P       17 30 27.6 +0.2
      comp=Z,3.6nm,0.8s,baz=305,slow=8.6,SNR=7.1
INK                                  pP    pP      17 31 00.6 -0.4
      comp=Z,13nm,1.0s,baz=274,slow=6.7,SNR=9.5
INK   Inuvik             63.78  24   P     P       17 30 27.6 +0.2
INK                                 epP    pP      17 31 01.0  0.0
INK   Inuvik             63.78  24   P     P       17 30 27.6 +0.2
INK                                 e*PP   pP      17 31 01.0  0.0
KLMR  Klimovskoe         63.91 327  eP     P       17 30 26.7 -1.7
KLMR                                e*PP   pP      17 30 59.8 -2.2
KLMR                                 pmax  pmax
      comp=Z,14nm,0.8s
KLMR  Klimovskoe         63.91 327  eP     P       17 30 26.7 -1.7
KLMR                                 AMP           17 30 28.1
      comp=Z,14nm,0.8s
KLMR                                epP    pP      17 30 59.9 -2.1
KIP   Kipapa             63.94  80⇑eP     P       17 30 28.3 -0.9
BANOM Banah              64.28 286   P     P       17 30 32.3 +0.9
BANOM Banah              64.28 286   P     P       17 30 32.1 +0.7
SHME  Shamm              64.36 286  i P    P       17 30 33.4 +1.4
      SNR=7.6
SPITS Spitsbergen Ar     64.61 348   P     P       17 30 31.8 -0.9
      comp=Z,7.9nm,0.8s,baz=80,slow=8.9,SNR=3.7
MSFE  Esma-Masafi        64.62 285   P     P       17 30 35.0 +1.3
UOSS  Minazif            64.75 285  eP     P       17 30 36.8 +2.3
      comp=Z,14nm,1.3s
UOSS  Minazif            64.75 285   P     P       17 30 36.1 +1.6
NWAO  Narrogin (SRO)     64.77 192  eP     P       17 30 34.5 +0.3
      comp=Z,42nm,0.9s
NWAO  Narrogin (SRO)     64.77 192  eP     P       17 30 34.5 +0.3
NWAO                                 pmax  pmax
      comp=Z,42nm,0.9s
HATD  Hatta, Dubai       64.86 285   P     P       17 30 35.8 +0.6
HATD  Hatta, Dubai       64.86 285   P     P       17 30 36.4 +1.2
ASHO  Ashiyiah           64.97 285   P     P       17 30 36.7 +0.7
ASHO  Ashiyiah           64.97 285  i P    P       17 30 36.8 +0.8
      SNR=9.5
AKT   Akhty              65.18 305  eP     P       17 30 37.6 +0.4
AKT                                 e*PP   PcP     17 31 09.5 +0.9
AKT                                 e*SP   sP      17 31 25.2 -0.8
AKT                                 e              17 33 01.2
AKT                                  pmax  pmax
      comp=Z,37nm,0.6s
ALNE  Al Ain             65.49 284  i P    P       17 30 40.0 +0.7
      SNR=9.6
ASUD  Al Ashush, Dub     65.60 285   P     P       17 30 40.4 +0.4
WHY   Whitehorse         65.72  33  eP     P       17 30 41.8 +1.5
WHY                                 epP    pP      17 31 15.1 +1.1
VRH   Novokhopyorsk      65.79 316  eP     P       17 30 39.4 -1.3
VRH                                  pmax  pmax
      comp=Z,30nm,0.8s
GROC  Groznyy            65.93 307  eP     P       17 30 40.4 -1.4
GROC                                e              17 31 09.5
GROC                                e*SP   sP      17 31 28.7 -2.0
GROC                                e              17 33 07.3
GROC                                 pmax  pmax
      comp=Z,24nm,0.9s
SKAG  Skagway            65.93  34  eP     P       17 30 43.1 +1.7
      comp=Z,7.1nm,1.0s
ARCES ARCESS Array B     66.33 338   P     P       17 30 42.9 -1.0
      comp=Z,2.9nm,0.6s,baz=62,slow=8.4,SNR=14
LPSR  Galich'ya Gora     66.92 318  eP     P       17 30 47.1 -0.8
LPSR                                 pmax  pmax
      comp=Z,30nm,0.9s
GOF   Gofitskoye         67.12 310  eP     P       17 30 48.9 -0.4
GOF                                  pmax  pmax
      comp=Z,60nm,0.7s
VSR   Storozhevoye       67.29 317  eP     P       17 30 49.0 -1.2
VSR                                  pmax  pmax
      comp=Z,20nm,0.7s
VORD  Divnogorie         67.31 317  eP     P       17 30 48.7 -1.6
VORD                                 pmax  pmax
      comp=Z,10.0nm,0.5s
OBN   Obninsk            67.31 322  eP     P       17 30 48.7 -1.6
OBN                                 e              17 31 21.6
OBN                                 e              17 33 17.7
OBN                                 ePPP   PPP     17 35 05.3
OBN                                  pmax  pmax
      comp=Z,19nm,0.9s
NCK   Nalchik            67.32 308⇓eP     P       17 30 51.1 +0.5
NCK                                  pmax  pmax
      comp=Z,10.0nm,0.5s
ZEI   Tsey               67.37 307  eP     P       17 30 49.0 -2.2
ZEI                                  pmax  pmax
      comp=Z,22nm,0.6s
KBZ   Khabaz             67.70 308   P     P       17 30 53.4 +0.4
      comp=Z,39nm,0.8s,baz=85,slow=3.9,SNR=67
KIV   Kislovodsk         67.76 309  eP     P       17 30 54.5 +1.0
      comp=Z,59nm,1.0s
KIV   Kislovodsk         67.76 309   P     P       17 30 54.2 +0.7
      SNR=14
KIV   Kislovodsk         67.76 309  i P    P       17 30 54.3 +0.8
      SNR=12
KIV   Kislovodsk         67.76 309c iP     P       17 30 53.7 +0.2
KIV                                 e              17 31 19.1
KIV                                 e              17 33 25.0
KIV                                  pmax  pmax
      comp=Z,65nm,1.0s
GNI   Garni              67.78 304   P     P       17 30 55.1 +1.3
      comp=Z,17nm,0.7s,baz=40,slow=3.6,SNR=7.6
GNI   Garni              67.78 304  eP     P       17 30 55.6 +1.8
      comp=Z,22nm,0.8s
GNI   Garni              67.78 304c iP     P       17 30 54.7 +1.0
GNI                                  pmax  pmax
      comp=Z,73nm,0.8s
MZR   Muzera             67.82 284   P     P       17 30 54.1  0.0
NEY   Neytrino           68.00 308⇑eP     P       17 30 55.8 +0.7
NEY                                  pmax  pmax
      comp=Z,5.0nm,1.0s
AKH   Akhalkalaki        68.17 306  eP     P       17 30 57.8 +1.6
      comp=Z,23nm,0.8s
AKH   Akhalkalaki        68.17 306  eP     P       17 30 57.8 +1.6
AKH                                  pmax  pmax
      comp=Z,23nm,0.8s
FIA1  FINESS Array S     69.72 330  eP     P       17 31 04.1 -1.0
FINES FINESS Array B     69.72 330   P     P       17 31 04.4 -0.7
      comp=Z,16nm,0.6s,baz=69,slow=5.8,SNR=75
FINES                                pP    pP      17 31 40.6 +1.4
      comp=Z,7.0nm,0.5s,baz=70,slow=6.1,SNR=5.1
WHFO  Wadi Hawf          69.81 279   P     P       17 31 06.1 -0.4
SOC   Sochi              69.89 309  eP     P       17 31 05.9 -0.6
SOC                                 e*PP   pP      17 31 41.6 +1.0
SOC                                 e              17 33 38.9
SOC                                 ePPP   PPP     17 35 24.9
SOC                                 eS     S       17 40 02.4 -2.6
SOC                                 eSS    SS      17 44 36.7 +0.6
SOC                                  pmax  pmax
      comp=Z,55nm,0.6s
VSU   Vasula             70.81 327ceP     P       17 31 11.3 -0.5
VSU                                  pmax  pmax
      comp=Z,56nm,0.8s
DAG   Danmarks Havn      70.82 353  i P    pP      17 31 46.6 +0.8
      comp=Z,8.7nm,0.9s
ANN   Anapa              70.88 311  eP     P       17 31 09.4 -3.1
ANN                                 e              17 31 28.8
ANN                                 e*PP   pP      17 31 44.2 -2.5
ANN                                 eS     S       17 40 13.7 -2.8
ANN                                 eSS    SS      17 44 51.0 -0.2
ANN                                  pmax  pmax
      comp=Z,103nm,1.3s
IDID  Didziasalis        72.31 324  eP     P       17 31 20.6 -0.3
IDID                                 IAmb  IAmb    17 31 22.2
      comp=Z,12nm,0.8s
IZAR  Zarasai            72.35 325  eP     P       17 31 20.8 -0.2
IZAR                                 IAmb  IAmb    17 31 22.3
      comp=Z,23nm,0.6s
ISAL  Salakas            72.49 325  eP     P       17 31 21.9 -0.1
ISAL                                 IAmb  IAmb    17 31 23.3
      comp=Z,11nm,0.8s
IIGN  Ignalina           72.55 325  eP     P       17 31 22.0 -0.4
IIGN                                 IAmb  IAmb    17 31 23.5
      comp=Z,8.1nm,0.7s
SIM   Simferopol'        72.94 312  eP     P       17 31 24.2 -0.6
SIM                                  pmax  pmax
      comp=Z,26nm,0.9s
AKASG Malin Array Be     73.21 319   P     P       17 31 25.5 -0.8
      comp=Z,17nm,0.7s,baz=52,slow=6.2,SNR=50
AKASG                                pP    pP      17 31 59.2 -1.4
      comp=Z,4.1nm,0.6s,baz=51,slow=6.5,SNR=4.0
AKASG Malin Array Be     73.21 319   P     P       17 31 25.5 -0.8
AKASG                                *PP   pP      17 31 59.2 -1.4
AKASG                                pmax  pmax
      comp=Z,10.0nm,0.5s
AKBB  Malin Array Si     73.21 319  eP     P       17 31 25.4 -0.8
      comp=Z,26nm,1.0s
AKBB                                epP    pP      17 31 59.8 -0.8
KIEV  Kiev               73.22 319  eP     P       17 31 24.8 -1.6
      comp=Z,30nm,1.1s
KIEV                                epP    pP      17 31 59.0 -1.7
KIEV  Kiev               73.22 319  i P    P       17 31 25.6 -0.7
      SNR=12
KIEV  Kiev               73.22 319c iP     P       17 31 25.3 -1.0
KIEV                                 pmax  pmax
      comp=Z,26nm,1.0s
AK11  Malin Array Si     73.25 319  eP     P       17 31 25.8 -0.7
AK11                                epP    pP      17 32 00.4 -0.5
YKA   Yellowknife Ar     73.43  26   P     P       17 31 27.6 +0.3
      comp=Z,2.3nm,0.6s,baz=305,slow=5.1,SNR=7.8
YKA                                  pP    pP      17 32 01.3 -0.4
      comp=Z,5.2nm,0.7s,baz=307,slow=5.5,SNR=10
RAYN  Ar Rayn            74.17 288  eP     P       17 31 32.8 +0.3
      comp=Z,56nm,0.9s
RAYN  Ar Rayn            74.17 288  i P    P       17 31 32.8 +0.3
      SNR=52
RAYN  Ar Rayn            74.17 288  eP     P       17 31 32.8 +0.3
RAYN                                 pmax  pmax
      comp=Z,56nm,0.9s
SUW   Suwalki            74.76 324  eP     P       17 31 34.5 -0.7
SUW   Suwalki            74.76 324  eP     P       17 31 34.5 -0.7
      comp=Z,41nm,0.8s
SUW   Suwalki            74.76 324  eP     P       17 31 34.5 -0.7
SORM  Soroca             74.95 317⇓iP     P       17 31 35.0 -1.4
SORM  Soroca             74.95 317   P     P       17 31 35.0 -1.4
ILGA  Ilgaz              74.99 309  eP     P       17 31 38.1 +1.0
      comp=Z,30nm,1.0s
HORU  Horodok            75.51 319   P     P       17 31 38.9 -0.8
HFS   Hagfors            75.53 333   P     P       17 31 38.7 -0.9
      comp=Z,7.7nm,0.7s,baz=66,slow=7.1,SNR=19
BR131 Keskin Array S     75.67 308  eP     P       17 31 40.9  0.0
BR131 Keskin Array S     75.67 308   P     P       17 31 41.1 +0.1
BRTR  Keskin Array B     75.67 308   P     P       17 31 40.9  0.0
      comp=Z,34nm,0.9s,baz=97,slow=5.0,SNR=166
NC405 NORSAR Array S     75.69 334  eP     P       17 31 39.4 -1.1
NC405                               epP    pP      17 32 16.0 +1.0
NB201 NORSAR Array S     75.89 334  eP     P       17 31 41.1 -0.5
NB201                               epP    pP      17 32 19.2 +3.0
NB2   NORSAR Subarra     75.92 334   P     P       17 31 40.2 -1.6
      comp=Z,2.4nm,0.6s,baz=48,slow=5.6
NOA   NORSAR Array B     75.92 334   P     P       17 31 40.9 -1.0
      comp=Z,4.9nm,0.8s,baz=50,slow=5.6,SNR=24
NC204 NORSAR Array S     75.94 334  eP     P       17 31 41.6 -0.3
TLCR                     76.14 314⇑iP     P       17 31 42.3 -0.9
ANTO  Ankara             76.17 308⇑iP     P       17 31 42.1 -1.6
ANTO  Ankara             76.17 308  eP     P       17 31 43.7  0.0
      comp=Z,31nm,1.0s
ANTO  Ankara             76.17 308   P     P       17 31 43.8  0.0
ANTO  Ankara             76.17 308  eP     P       17 31 43.7  0.0
ANTO                                 pmax  pmax
      comp=Z,31nm,1.0s
SUMG  Summit             76.45 357  eP     P       17 31 46.1 +1.1
      comp=Z,22nm,0.7s
SUMG  Summit             76.45 357  eP     P       17 31 46.1 +1.1
SUMG                                 pmax  pmax
      comp=Z,22nm,0.7s
LVV   L'vov              76.53 320  eP     P       17 31 46.3 +0.9
CFR   Carcaliu           76.56 315⇑iP     P       17 31 44.8 -0.8
CFR   Carcaliu           76.56 315   P     P       17 31 44.7 -0.8
KSV   Kosov              76.75 319   P     P       17 31 46.4 -0.3
TIRR  Tirgusor           76.75 314⇑iP     P       17 31 45.9 -0.8
TIRR  Tirgusor           76.75 314   P     P       17 31 45.9 -0.8
TESR  Tescani            76.77 316⇓iP     P       17 31 46.4 -0.4
LLLB  Lillooet           76.79  39  epP    pP      17 32 22.4 +0.8
BIZ   Bicaz              76.87 317⇑iP     P       17 31 46.9 -0.5
ASF   Jabal al Asfar     76.92 300   P     P       17 31 48.7 +0.6
      comp=Z,17nm,0.9s,baz=28,slow=1.8,SNR=38
MORS  Morshin            76.97 320   P     P       17 31 47.2 -0.7
BUR08 Bucovina Ar. S     77.02 318  eP     P       17 31 48.6 +0.3
BURAR Bucovina Array     77.03 318⇑iP     P       17 31 48.1 -0.3
BURAR Bucovina Array     77.03 318   P     P       17 31 48.0 -0.3
BUR04 Bucovina Ar. S     77.03 318  eP     P       17 31 48.1 -0.3
BUR04                               epP    pP      17 32 22.9 -0.1
VRI   Vrincioaia         77.06 316⇑iP     P       17 31 49.3 +0.8
VRI   Vrincioaia         77.06 316   P     P       17 31 49.2 +0.8
PLOR  Plostina           77.11 316⇓iP     P       17 31 48.6 -0.2
PLOR  Plostina           77.11 316   P     P       17 31 48.6 -0.2
MMAI  Mount Meron Ar     77.63 301   P     P       17 31 52.6 +0.7
      comp=Z,11nm,0.7s,baz=68,slow=8.0,SNR=21
MLR   Muntele Rosu       77.72 316   P     P       17 31 52.3  0.0
      comp=Z,7.7nm,0.7s,baz=59,slow=5.9,SNR=6.9
MLR   Muntele Rosu       77.72 316⇑iP     P       17 31 52.0 -0.2
MLR   Muntele Rosu       77.72 316  eP     P       17 31 52.1 -0.2
      comp=Z,20nm,1.3s
MLR   Muntele Rosu       77.72 316  eP     P       17 31 52.1 -0.2
MLR                                  pmax  pmax
      comp=Z,20nm,1.3s
DOPR  Dopca              77.80 316⇓iP     P       17 31 53.2 +0.6
BMR   Baia Mare          77.98 319⇑iP     P       17 31 54.3 +0.8
BSD   Bornholm Skovb     78.09 328  i P    P       17 31 53.1 -0.8
      comp=Z,24nm,0.8s
BSD   Bornholm Skovb     78.09 328  i P    P       17 31 53.1 -0.8
BSD                                  pmax  pmax
      comp=Z,25nm,0.8s
CSS   Mathiatis          78.18 304  eP     P       17 31 54.4 -0.5
      comp=Z,17nm,0.8s
TRPA  Tarpa              78.27 319⇓iP     P       17 31 54.9 -0.2
CRVS  Cervenica-Dubn     78.44 320  eP     P       17 31 56.4 +0.3
CRVS                                 pmax  pmax
      comp=Z,8.0nm,1.1s
CRVS  Cervenica-Dubn     78.44 320  eP     P       17 31 56.3 +0.2
ARR   Arges              78.57 316⇓iP     P       17 31 57.3 +0.4
OJC   Ojcow              78.59 322  eP     P       17 31 57.3 +0.5
OJC   Ojcow              78.59 322  eP     P       17 31 56.7 -0.1
      comp=Z,42nm,0.8s
OJC   Ojcow              78.59 322  eP     P       17 31 57.3 +0.5
NIE   Niedzica           78.78 321  eP     P       17 31 58.5 +0.6
NIE   Niedzica           78.78 321  eP     P       17 31 58.5 +0.6
DRGR                     78.91 318   P     P       17 31 59.9 +1.1
DAMY  Dhamar             79.32 281  eP     P       17 32 03.6 +1.8
      comp=Z,35nm,0.8s
LANS  Liptovska Anna     79.38 321  eP     P       17 32 02.1 +0.9
LANS  Liptovska Anna     79.38 321  eP     P       17 32 02.1 +0.9
B08A  Colville Reser     79.43  40  epP    pP      17 32 36.5 +0.1
OKC   Ostrava-Krasne     79.67 322  eP     P       17 32 03.6 +0.9
OKC   Ostrava-Krasne     79.67 322  eP     P       17 32 03.6 +0.9
PSZ   Piszkesteto        79.86 320⇑iP     P       17 32 02.1 -1.8
PSZ   Piszkesteto        79.86 320  eP     P       17 32 04.5 +0.6
      comp=Z,12nm,1.0s
PSZ   Piszkesteto        79.86 320  eP     P       17 32 04.5 +0.6
PSZ                                  pmax  pmax
      comp=Z,12nm,1.0s
KSP   Ksiaz              80.03 324  eP     P       17 32 05.0 +0.4
KSP   Ksiaz              80.03 324  eP     P       17 32 05.0 +0.4
MORC  Moravsky Berou     80.03 323⇓iP     P       17 32 04.5 -0.1
MORC  Moravsky Berou     80.03 323  eP     P       17 32 04.9 +0.2
      comp=Z,13nm,0.9s
MORC  Moravsky Berou     80.03 323  eP     P       17 32 04.9 +0.2
MORC                                 pmax  pmax
      comp=Z,13nm,0.9s
MORC  Moravsky Berou     80.03 323  eP     P       17 32 04.6 -0.1
VYHS  Vyhne              80.10 321  eP     P       17 32 05.5 +0.4
VYHS                                 pmax  pmax
      comp=Z,9.0nm,1.1s
VYHS  Vyhne              80.10 321  eP     P       17 32 05.5 +0.4
HERR  Herculane          80.15 317⇑iP     P       17 32 04.6 -0.8
BZS   Buzias             80.20 318⇓iP     P       17 32 05.0 -0.7
BZS   Buzias             80.20 318   P     P       17 32 04.9 -0.7
KRLC  Kraliky            80.24 323  eP     P       17 32 06.4 +0.6
KRLC  Kraliky            80.24 323  eP     P       17 32 06.4 +0.6
DPC   Dobruska-Polom     80.31 324  eP     P       17 32 07.0 +0.8
DPC                                 ePCP   PcP     17 32 13.6 +0.7
DPC   Dobruska-Polom     80.31 324  eP     P       17 32 07.0 +0.8
TIM   Timisoara          80.36 318⇑iP     P       17 32 00.3 -6.2
D08A  Wollman Farm,      80.41  40  epP    pP      17 32 41.8 +0.1
JAVC  Velka Javorina     80.51 322  eP     P       17 32 08.6 +1.3
MDVR  Moldovita          80.62 317⇑iP     P       17 32 07.7 -0.3
J04D  Umpqua Nationa     80.72  45   P     P       17 32 09.5 +0.8
      baz=304
VRAC  Vranov             80.80 323⇑iP     P       17 32 09.3 +0.4
VRAC  Vranov             80.80 323   P     P       17 32 09.2 +0.4
VRAC  Vranov             80.80 323  eP     P       17 32 09.1 +0.3
SMOL  Smolenice          80.84 322   P     P       17 32 10.9 +1.9
VTS   Vitosha            80.95 314⇓iP     P       17 32 10.2 +0.3
VTS   Vitosha            80.95 314  eP     P       17 32 10.1 +0.3
      comp=Z,9.2nm,0.8s
VTS   Vitosha            80.95 314  eP     P       17 32 10.1 +0.2
VTS                                  pmax  pmax
      comp=Z,9.0nm,0.8s
MODS  Modra-Piesok       81.01 322  eP     P       17 32 10.7 +0.8
MODS                                 pmax  pmax
      comp=Z,20nm,1.1s
MODS  Modra-Piesok       81.01 322  eP     P       17 32 10.7 +0.8
KRUC  Moravsky           81.06 323  eP     P       17 32 10.3 +0.2
PINE  Pine Mountain      81.11  44  eP     P       17 32 12.5 +1.7
PINE                                epP    pP      17 32 46.5 +0.7
BRG   Berggiesshubel     81.18 325  eP     P       17 32 10.6 -0.2
      comp=Z,7.8nm,1.0s
BRG                                 e              17 32 25.9
      comp=Z,4.7nm,0.9s
      comp=N,203nm,15.5s
      comp=E,168nm,13.9s
      comp=Z,258nm,11.5s
BRG   Berggiesshubel     81.18 325  eP     P       17 32 10.6 -0.2
BRG                                  pmax  pmax
      comp=Z,11nm,1.0s
BRG                                  MLR   MLR
      comp=N,470nm,15.5s
BRG                                  MLR   MLR
      comp=E,203nm,13.9s
BRG                                  MLR   MLR
      comp=Z,168nm,11.5s
J05D  Fort Rock, OR      81.22  45   P     P       17 32 12.4 +1.0
      baz=305
M02C  Callahan           81.28  47   P     P       17 32 11.4 -0.2
      baz=304
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GOPC	GO Pecny, Ondr	81.36	324	eP	P	17 32 12.3	+0.6
GOPC	GO Pecny, Ondr	81.36	324	eP	P	17 32 12.3	+0.6
CLL	Collm	81.36	326	⇑iP	P	17 32 11.6	-0.1
	comp=Z,28nm,0.8s						
CLL				epP	pP	17 32 46.0	-0.7
CLL				esP	sP	17 33 01.0	-0.6
CLL	Collm	81.36	326	eP	P	17 32 11.7	-0.1
	comp=Z,25nm,0.8s						
CLL	Collm	81.36	326	⇑iP	P	17 32 11.6	-0.1
CLL				e*PP	pP	17 32 46.0	-0.7
CLL				e*SP	sP	17 33 01.0	-0.6
CLL				pmax	pmax		
	comp=Z,6.0nm,0.8s						
PRU	Pruhonice	81.44	324	eP	P	17 32 12.6	+0.5
PRU	Pruhonice	81.44	324	eP	P	17 32 12.6	+0.5
SRS	Serrai	81.53	313	P	P	17 32 12.6	-0.2
M04C	Macdoel	81.70	46	P	P	17 32 14.5	+0.6
	baz=304						
WALA	Waterton Lakes	81.89	37	eP	P	17 32 15.9	+1.3
WALA				epP	pP	17 32 49.8	0.0
DIVS	Divibare	82.02	317	eP	P	17 32 15.0	-0.4
	comp=Z,11nm,1.0s						
CONA	Conrad Observa	82.03	322	i P	P	17 32 16.2	+0.8
	comp=Z,14nm,0.8s,SNR=14						
ATD	Arta Tunnel	82.12	279	P	P	17 32 17.1	+0.8
	comp=Z,26nm,1.0s,baz=40,slow=7.9,SNR=9.3						
ATD	Arta Tunnel	82.12	279	eP	P	17 32 17.9	+1.5
	comp=Z,37nm,1.1s						
NKC	Novy Kostel	82.32	325	eP	P	17 32 17.6	+0.8
NKC	Novy Kostel	82.32	325	eP	P	17 32 17.6	+0.8
KHC	Kasperske Hory	82.46	324	eP	P	17 32 17.9	+0.3
KHC	Kasperske Hory	82.46	324	eP	P	17 32 18.0	+0.3
	comp=Z,2.9nm,0.9s						
KHC	Kasperske Hory	82.46	324	eP	P	17 32 17.9	+0.3
GEC2	GERESS Array S	82.58	323	eP	P	17 32 18.4	+0.1
	comp=Z,6.9nm,0.8s						
GEC2	GERESS Array S	82.58	323	eP	P	17 32 18.4	+0.1
GEC2				pmax	pmax		
	comp=Z,7.0nm,0.8s						
GERES	GERESS Array B	82.58	323	P	P	17 32 17.9	-0.3
	comp=Z,3.8nm,0.7s,baz=46,slow=5.8,SNR=41						
GERES				pP	pP	17 32 55.1	+1.7
	comp=Z,0.8nm,0.6s,baz=21,slow=3.6,SNR=2.6						
GERES				LR	LR	18 12 02.4	
	comp=Z,29nm,18.4s,baz=53,slow=38						
GEA0	GERESS Array S	82.59	323	eP	P	17 32 17.4	-0.8
BMO	Blue Mountains	82.61	42	eP	P	17 32 19.2	+0.7
BMO				epP	pP	17 32 53.3	-0.4
BMO	Blue Mountains	82.61	42	eP	P	17 32 19.2	+0.7
BMO				e*PP	pP	17 32 53.3	-0.4
ARSA	Arzberg	82.63	321	i P	P	17 32 18.7	+0.3
	comp=Z,6.8nm,1.1s						
J08A	Circle Bar Ran	82.82	43	eP	P	17 32 21.0	+1.3
J08A				epP	pP	17 32 55.0	+0.2
MOA	Molln	82.92	322	i P	P	17 32 20.4	+0.4
	comp=Z,11nm,1.0s,SNR=9.0						
PERS	Pernice	83.23	321	i P	P	17 32 21.5	-0.1
BLY	Banja Luka	83.25	319	⇓iP	P	17 32 22.2	+0.6
BLY	Banja Luka	83.25	319	eP	P	17 32 22.2	+0.6
	comp=Z,9.8nm,0.7s						
SOKA	Soboth	83.25	321	i P	P	17 32 21.9	+0.2
	comp=Z,26nm,1.0s,SNR=30						
MSO	Missoula	83.27	39	P	P	17 32 22.1	+0.2
	baz=309						
WVOR	Wild Horse Val	83.27	44	eP	P	17 32 23.4	+1.4
	comp=Z,10nm,1.3s						
GRFO	Grafenberg	83.28	325	eP	P	17 32 22.4	+0.6
	comp=Z,29nm,0.9s						
PDG	Podgorica	83.43	316	⇑iP	P	17 32 22.2	-0.4
TTG	Podgorica	83.43	316	eP	P	17 32 22.2	-0.4
	comp=Z,15nm,0.9s						
AGG	Agios Georgios	83.51	312	eP	P	17 32 21.9	-1.2
	comp=Z,40nm,1.0s						
AGG	Agios Georgios	83.51	312	eP	P	17 32 21.9	-1.2
AGG				pmax	pmax		
	comp=Z,40nm,1.0s						
CSPM	San Pablo Ridg	83.55	49	eP	P	17 32 21.7	-1.7
OBKA	Obir	83.61	321	i P	P	17 32 23.6	0.0
	comp=Z,16nm,0.8s,SNR=11						
BOJS	Bojanci	83.86	320	i P	P	17 32 24.8	0.0
KBA	Koelnbreinsper	83.89	322	i P	P	17 32 24.8	-0.3
	comp=Z,13nm,0.9s,SNR=11						
KBA	Koelnbreinsper	83.89	322	P	P	17 32 25.3	+0.2
IDI	Anoyia	83.91	308	P	P	17 32 24.4	-0.8
	comp=Z,17nm,0.9s,baz=95,slow=11,SNR=4.1						
LJU	Ljubljana	83.92	321	i P	P	17 32 25.0	-0.1
MYKA	Terra Mystica	84.02	322	i P	P	17 32 25.1	-0.5
	comp=Z,11nm,0.6s,SNR=9.4						
RUBR	Rubicon Trail	84.31	48	eP	P	17 32 29.1	+1.6
	comp=Z,89nm,0.8s						
MFID	Camas Ranch	84.33	42	epP	pP	17 33 02.6	0.0
PAHR	Pah Rah Range	84.42	47	eP	P	17 32 29.1	+1.2
	comp=Z,5.6nm,0.9s						
PAHR				epP	pP	17 33 03.9	+0.8
HRY	Holter Researc	84.46	38	eP	P	17 32 29.5	+1.6
HRY				epP	pP	17 33 03.0	-0.2
IGT	Igoumenitsa	84.48	313	P	P	17 32 27.3	-0.7
ABTA	Abfaltersbach	84.54	322	i P	P	17 32 27.7	-0.6
	comp=Z,18nm,0.8s,SNR=10						
PNTR	Pine Nut	84.64	47	eP	P	17 32 30.9	+1.8
	comp=Z,5.6nm,0.7s						
WTTA	Wattenberg	84.66	323	i PcP	P	17 32 29.5	+0.5
	comp=Z,7.8nm,1.1s						
EGMT	Eagleton	84.67	36	P	P	17 32 29.7	+0.8
	baz=312						
RAR	Rarotonga	84.68	118	LR	LR	18 01 53.3	
	comp=Z,57nm,21.3s,baz=308,slow=30						
LRM	Limekiln Ridge	84.70	39	epP	pP	17 33 04.8	+0.2
ITM	Ithomi	84.82	310	eP	P	17 32 29.2	-0.6
	comp=Z,44nm,0.8s						
MOTA	Moosalm	84.88	323	i P	P	17 32 30.3	+0.3
	comp=Z,5.7nm,0.7s						
SQTA	Sankt Quirin	84.91	323	i P	P	17 32 30.0	-0.2
	comp=Z,0.1nm,0.6s						
DLMT	Dillon	84.92	39	eP	P	17 32 31.3	+1.0
DLMT				epP	pP	17 33 05.7	+0.1
YERR	Yerington	84.93	47	epP	pP	17 33 06.7	+0.9
RETA	Reutte	84.96	324	i PcP	P	17 32 31.6	+1.3
	comp=Z,9.2nm,1.0s						
HLID	Hailey	85.05	41	P	P	17 32 31.7	+0.7
	baz=309						
HLID	Hailey	85.05	41	eP	P	17 32 32.3	+1.3
HLID				epP	pP	17 33 06.5	+0.1
WAKR	Walker	85.09	48	eP	P	17 32 32.8	+1.5
	comp=Z,18nm,1.7s						
FETA	Feichten	85.29	323	i P	P	17 32 31.7	-0.4
	comp=Z,7.3nm,0.9s						
BOZ	Bozeman (W)	85.29	38	P	P	17 32 32.8	+0.7
	baz=311						
BOZ	Bozeman (W)	85.29	38	eP	P	17 32 33.3	+1.1
BOZ				epP	pP	17 33 07.1	-0.4
BOZ	Bozeman (W)	85.29	38	eP	P	17 32 33.3	+1.1
BOZ				e*PP	pP	17 33 07.1	-0.4
EKA	Eskdalemuir Ar	85.31	335	P	P	17 32 30.8	-1.0
	comp=Z,2.8nm,0.5s,baz=38,slow=5.1,SNR=22						
BMN	Battle Mountai	85.32	45	epP	pP	17 33 08.9	+1.2
DAVA	Damuels	85.54	324	i P	P	17 32 33.3	-0.1
	comp=Z,8.0nm,0.9s						
RYN	Ryan	85.59	47	eP	P	17 32 35.3	+1.5
RYN				epP	pP	17 33 10.1	+0.9
BFO	Black Forest	85.60	325	eP	P	17 32 33.8	+0.3
	comp=Z,20nm,1.3s						
BFO	Black Forest	85.60	325	eP	P	17 32 33.8	+0.3
BFO				pmax	pmax		
	comp=Z,20nm,1.3s						
KVN	Kaiserville	85.61	47	eP	P	17 32 35.0	+1.0
	comp=Z,12nm,1.1s						
KVN	Kaiserville	85.61	47	P	P	17 32 34.9	+1.0
KVN				pmax	pmax		
	comp=Z,12nm,1.0s						
WLF	Walferdange	85.71	327	eP	P	17 32 34.7	+0.8
	comp=Z,21nm,1.0s						
WLF	Walferdange	85.71	327	eP	P	17 32 34.7	+0.8
WLF				pmax	pmax		
	comp=Z,21nm,1.0s						
FUORN	Ofenpass-Fuorn	85.79	323	eP	P	17 32 35.5	+0.8
	comp=Z,12nm,0.8s						
MDPB	Devils Postpil	85.83	48	epP	pP	17 33 13.2	+2.8
NV01	Mina Array Sit	85.85	47	eP	P	17 32 36.0	+0.9
NV01				epP	pP	17 33 10.2	-0.3
NVAR	Mina Array Bea	85.85	47	P	P	17 32 36.2	+1.0
	comp=Z,3.2nm,0.7s,baz=296,slow=5.4,SNR=26						
NVAR				pP	pP	17 33 10.3	-0.2
	comp=Z,3.4nm,0.6s,baz=305,slow=5.5,SNR=10.0						
DAVOX	Davos/Dischmat	85.88	324	P	P	17 32 34.9	-0.2
	comp=Z,3.7nm,0.8s,baz=0.0,slow=7.1,SNR=5.4						
DAVOX				LR	LR	18 15 02.3	
	comp=Z,44nm,18.3s,baz=72,slow=38						
OMMB	Old Mammoth Mi	85.89	48	epP	pP	17 33 13.1	+2.3
NV11	Mina Array Sit	85.94	47	epP	pP	17 33 11.8	+0.9
GIVF	Givet	86.01	328	eP	P	17 32 34.8	-0.6
GIVF				pmax	pmax		
	comp=Z,10.0nm,0.9s						
YHB	Horse Butte	86.07	39	epP	pP	17 33 12.6	+1.1
PAGB	Antelope Grade	86.18	50	epP	pP	17 33 13.6	+1.6
GCMT	Greycliff	86.20	37	epP	pP	17 33 12.1	+0.1
ECH	Echery	86.25	326	eP	P	17 32 36.1	-0.5
	comp=Z,9.5nm,1.2s						
ECH	Echery	86.25	326	eP	P	17 32 36.1	-0.5
ECH				pmax	pmax		
	comp=Z,10.0nm,1.2s						
H17A	Grant Village	86.64	39	P	P	17 32 42.3	+3.4
	baz=311						
H17A	Grant Village	86.64	39	epP	pP	17 33 16.5	+2.1
HINF	Hinteralfeld	86.67	326	eP	P	17 32 38.9	+0.1
HINF				pmax	pmax		
	comp=Z,2.0nm,0.6s						
IMW	Indian Meadow	86.77	39	epP	pP	17 33 16.0	+0.9
FLWY	Flagg Ranch	86.78	39	epP	pP	17 33 16.3	+1.3
HAU	Haudompre	86.78	326	eP	P	17 32 39.6	+0.3
HAU				pmax	pmax		
	comp=Z,4.0nm,0.8s						
RLMT	Red Lodge	86.85	38	P	P	17 32 40.7	+0.8
	baz=312						
RLMT	Red Lodge	86.85	38	eP	P	17 32 41.3	+1.4
	comp=Z,4.3nm,0.6s						
AQU	L'Aquila	86.89	319	eP	P	17 32 41.1	+1.2
	comp=Z,29nm,0.8s						
AQU	L'Aquila	86.89	319	eP	P	17 32 41.1	+1.2
AQU				pmax	pmax		
	comp=Z,29nm,0.8s						
FXWY	Fox Creek	86.89	40	epP	pP	17 33 16.4	+0.8
PKM	Mcpherson Peak	86.96	51	P	P	17 32 41.7	+1.1
	baz=306						
HVU	Hansel Valley	87.11	42	epP	pP	17 33 17.1	+0.5
BGU	Big Grassy Mou	87.51	43	epP	pP	17 33 19.1	+0.5
R11A	Troy Canyon, C	87.59	46	P	P	17 32 43.9	+0.3
	baz=308						
R11A	Troy Canyon, C	87.59	46	eP	P	17 32 44.4	+0.8
R11A				epP	pP	17 33 18.8	-0.3
MPMC	Manual Prospec	87.79	49	P	P	17 32 45.2	+0.7
	baz=307						
HWUT	Hardware Ranch	87.92	42	epP	pP	17 33 21.1	+0.5
TPNV	Topopah Spring	88.04	47	P	P	17 32 47.3	+1.6
	baz=308						
TPNV	Topopah Spring	88.04	47	epP	pP	17 33 23.1	+1.8
BW06	Boulder Array	88.27	40	eP	P	17 32 47.5	+0.8
	comp=Z,6.5nm,0.4s						
PDAR	Pinedale Array	88.27	40	P	P	17 32 47.1	+0.3
	comp=Z,2.0nm,0.8s,baz=310,slow=1.2,SNR=13						
PDAR				pP	pP	17 33 21.8	-0.6
	comp=Z,3.0nm,0.7s,baz=45,slow=0.6,SNR=4.3						
PDAR	Pinedale Array	88.27	40	eP	P	17 32 46.7	-0.1
PDAR				epP	pP	17 33 21.3	-1.0
LPL	La Plagne	88.34	324	eP	P	17 32 46.0	-1.0
LPL				pmax	pmax		
	comp=Z,3.0nm,0.8s						
LPG	La Plagne	88.34	324	eP	P	17 32 46.2	-0.9
LPG				pmax	pmax		
	comp=Z,5.0nm,0.8s						
PSUT	Pine Spring	88.54	45	epP	pP	17 33 23.8	+0.2
SMF	Signal de Mont	88.95	326	eP	P	17 32 48.4	-1.2
SMF				pmax	pmax		
	comp=Z,9.0nm,0.8s						
AVF	Avril sur Loir	89.08	327	eP	P	17 32 49.1	-1.0
AVF				pmax	pmax		
	comp=Z,5.0nm,0.9s						
TUQ	Turquoise Moun	89.18	48	P	P	17 32 52.3	+1.3
	baz=308						
ULM	Lac du Bonnet	89.33	28	P	P	17 32 51.5	+0.3
	comp=Z,2.9nm,0.7s,baz=336,slow=5.0,SNR=6.5						
ULM				pP	pP	17 33 25.9	-1.0
	comp=Z,6.5nm,0.8s,baz=280,slow=3.5,SNR=4.2						
ULM	Lac du Bonnet	89.33	28	P	P	17 32 51.5	+0.3
ULM				epP	pP	17 33 25.5	-1.3
ULM	Lac du Bonnet	89.33	28	P	P	17 32 51.5	+0.3
ULM				e*PP	pP	17 33 25.5	-1.3
MSU	Marysvale	89.56	44	eP	P	17 32 55.9	+3.0
MSU	Marysvale	89.56	44	eP	P	17 32 55.9	+3.0
P17A	Butcher Ranch,	89.79	43	eP	P	17 32 55.7	+1.9
P17A				epP	pP	17 33 30.1	+0.6
VIVF	Saint-Julien-l	89.84	325	eP	P	17 32 52.6	-1.2
VIVF				pmax	pmax		
	comp=Z,4.0nm,1.2s						
P18A	Preston Nutter	89.97	42	eP	P	17 32 56.7	+1.8
P18A				epP	pP	17 33 31.1	+0.6
KNB	Kanab	90.14	46	epP	pP	17 33 31.9	+0.7
SRU	San Rafael Swe	90.15	43	eP	P	17 32 57.1	+1.5
	comp=Z,7.9nm,1.1s						
SRU	San Rafael Swe	90.15	43	eP	P	17 32 57.1	+1.5
SRU				pmax	pmax		
	comp=Z,8.0nm,1.1s						
IRM	Iron Mountain	90.47	49	P	P	17 32 57.8	+0.8
	baz=309						
PPT	Papeete	90.64	110	LR	LR	18 07 58.2	
	comp=Z,37nm,19.9s,baz=48,slow=32						
O20A	White River Ci	90.78	41	P	P	17 32 59.4	+0.9
	baz=313						
ROSF	Rostrenen	90.84	331	eP	P	17 32 57.5	-0.8
ROSF				pmax	pmax		
	comp=Z,8.0nm,1.0s						
RJF	Les Rejaudoux	91.04	327	eP	P	17 32 58.7	-0.6
RJF				pmax	pmax		
	comp=Z,6.0nm,1.0s						
CAF	Calviac	91.06	326	eP	P	17 32 58.9	-0.5
CAF				pmax	pmax		
	comp=Z,5.0nm,0.9s						
PV09	Paradox Valley	91.37	43	eP	P	17 33 03.4	+2.0
PV09				epP	pP	17 33 37.8	+0.8
PV21	Cone Mtn., Par	91.42	42	eP	P	17 33 03.3	+1.8
PV21				epP	pP	17 33 37.7	+0.5
PV23	Carpenter Ridg	91.47	43	eP	P	17 33 04.0	+2.2
PV23				epP	pP	17 33 38.6	+1.2
PV14	Lion Creek, Pa	91.52	43	epP	pP	17 33 37.9	+0.3
PV22	Blue Mesa, Par	91.55	42	eP	P	17 33 03.9	+1.8
PV22				epP	pP	17 33 38.2	+0.5
PV20	West Nyswonger	91.57	43	epP	pP	17 33 38.6	+0.8
PV17	East Wray Mesa	91.62	43	eP	P	17 33 04.2	+1.8
PV17				epP	pP	17 33 38.8	+0.8
PV18	Skein Mesa, Pa	91.67	43	eP	P	17 33 04.4	+1.8
PV18				epP	pP	17 33 39.0	+0.7
LFF	La Frestale	91.67	327	eP	P	17 33 02.4	+0.2
LFF				pmax	pmax		
	comp=Z,3.0nm,0.3s						
PV12	Saucer Basin,	91.68	43	eP	P	17 33 06.0	+3.2
PV12				epP	pP	17 33 40.0	+1.6
B35A	Bob, Littlefor	91.68	28	P	P	17 33 02.5	+0.3
	baz=323						
PV03	Paradox Valley	91.70	43	eP	P	17 33 05.0	+2.2
PV03				epP	pP	17 33 39.0	+0.6
PV13	Radium Mtn., P	91.78	43	eP	P	17 33 04.9	+1.7
PV13				epP	pP	17 33 39.4	+0.6
SMCO	Snowmass	92.14	41	epP	pP	17 33 40.7	0.0
S22A	4UR Ranch, Cre	93.21	42	P	P	17 33 10.8	+0.9
	baz=314						
SCHQ	Schefferville	93.26	10	LR	LR	18 19 04.6	
	comp=Z,22nm,18.0s,baz=279,slow=38						
SJPF	Ste Jean	93.98	327	eP	P	17 33 14.5	+1.6
SJPF				pmax	pmax		
	comp=Z,28nm,2.4s						
ESDC	Sonseca Array	97.95	326	P	P	17 33 29.1	-2.0
	comp=Z,0.6nm,0.6s,baz=16,slow=3.6,SNR=3.8						
TXAR	Lajitas Array	100.96	46	P	Pdif	17 33 45.4	+0.7
	comp=Z,0.2nm,0.7s,baz=326,slow=2.6,SNR=3.0						
TXAR				pP	pP	17 34 21.3	+0.7
	comp=Z,0.6nm,0.8s,baz=288,slow=3.7,SNR=4.9						
TORD	Torodi Ar. Bea	114.08	304	PKiKP	PKPdf	17 38 32.9	-1.2
	baz=29,slow=2.0						
TORD				PP	PP	17 39 23.1	-6.9
	baz=33,slow=8.6						
BOSA	Boshof	116.22	251	PKP	PKPdf	17 38 37.8	-0.1
	comp=Z,1.5nm,0.9s,baz=112,slow=1.0,SNR=3.7						
QSPA	South Pole Qui	120.73	180	PKP	PKPdf	17 38 45.1	-0.3
	comp=Z,3.0nm,1.1s,baz=330,slow=1.9,SNR=4.2						
QSPA				PP	PP	17 40 14.4	-1.3
	comp=Z,2.1nm,0.8s,baz=350,slow=6.5,SNR=3.7						
DBIC	Dimbokro	123.19	303	PKP	PKPdf	17 38 50.9	-0.8
	comp=Z,2.6nm,0.7s,baz=22,slow=3.7,SNR=3.4						
PTGA	Pitinga	148.35	20	ePKPbc	PKPbc	17 39 41.6	+0.3
SAML	Samuel	154.67	33	ePKPab	PKPab	17 40 10.8	-0.3
SAML	Samuel	154.67	33	ePKP2	PKPab	17 40 10.8	-0.3

ISCJB **25** *17:30:01.6±0.4, 42.14°N±0.03°×142.80°E±0.03°, h71km±3km, mb3.9/10, Error ellipse: s-maj=5.8km s-min=3.8km az=156.8*

SKHL **25** *17:30:01.8±1.1, 42.03°N×142.85°E, h51km±3km, mb4.6/7*

MOS **25** *17:30:01.8±2.8, 42.03°N×142.85°E, h51km, mb4.3/7, Error ellipse: s-maj=13.8km s-min=8.9km az=81.7*

JMA **25** *17:30:02.6±0.1, 42.19°N×142.80°E, h63km±1km, M3.5 Broadband fault plane solution: P waves. NP1: φs273.00000°, δ77.00000°, λ-156.00000°. NP2: φs178.00000°, δ67.00000°, λ-14.00000°. Principal axes: T Plg7.0000°, Azm44.0000°; N Plg63.0000°, Azm300.0000°; P Plg26.0000°, Azm137.0000°;*

JMA Felt I J1.

IDC **25** *17:30:03.2±3.5, 42.19°N×142.90E, h76km±17km, mb3.6/6, mb1 3.5/7, mb1mx3.1/72, mbtmp3.8/7 Error ellipse: s-maj=61.1km s-min=18.3km az=100.0*

ISC 25 17:30:02.9±0.8, **42.13°N**±0.05°×**142.78°E**±0.03°, **h64**km±6km, **n47, σ1.37**/64, **mb4.0**/10, **5C-5D, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNBK	Urakawa-nobuka	0.15	352	⇓P	Pn	17 30 11.8	-0.8
JNBK				eS	Sn	17 30 19.5	-0.1
ERM	Erimo	0.30	112	c iPN	Pn	17 30 13.3	-0.1
ERM				i S	Sn	17 30 21.6	+0.6
JEM	Erimo	0.30	112	⇓P	Pn	17 30 13.3	-0.1
JEM				eS	Sn	17 30 21.8	+0.8
JSHD	Hidakashinhida	0.37	320	P	Pn	17 30 13.2	-0.7
JSHD				eS	Sn	17 30 21.8	-0.1
JTHR	Tokachihiroo	0.42	67	P	Pn	17 30 14.0	-0.3
JTHR				eS	Sn	17 30 22.4	-0.3
JCH	Churui	0.65	41	⇑P	Pn	17 30 15.9	-0.9
JCH				eS	Sn	17 30 26.2	-0.7
JBT2	Biratori 2	0.72	335	⇓P	Pn	17 30 16.4	-1.2
JBT2				eS	Sn	17 30 27.5	-0.9
JFR	Furan	1.04	352	P	Pn	17 30 20.4	-1.3
JFR				eS	Sn	17 30 34.4	-1.2
JOB	Onbets	1.10	45	⇑P	Pn	17 30 22.3	0.0
JOB				eS	Sn	17 30 37.3	+0.5
JEW	Eniwo	1.22	306	⇓P	Pn	17 30 23.6	-0.3
JEW				eS	Sn	17 30 39.5	-0.1
JKB	Kayabe	1.33	260	⇑P	Pn	17 30 24.9	-0.4
JKB				eS	Sn	17 30 42.3	+0.2
JNB	Noboribetsu	1.34	285	⇓P	Pn	17 30 24.5	-1.0
JNB				eS	Sn	17 30 41.2	-1.2
JAR	Ashorobuto	1.38	32	⇑P	Pn	17 30 25.0	-1.0
JAR				eS	Sn	17 30 41.9	-1.5
JAB	Ashibetsu	1.44	344	P	Pn	17 30 26.3	-0.5
JAB				eS	Sn	17 30 45.4	+0.6
ASAJ	Asahikawa	1.99	356	P	Pn	17 30 34.7	+0.4
	21nm,0.3s,baz=207,slow=13,SNR=513						
ASAJ				S	Sn	17 30 58.3	+0.1
	17nm,0.3s,baz=184,slow=6.0,SNR=7.6						
GLVR	Golovnino	2.58	50	i P	Pn	17 30 41.0	-1.2
GLVR				AMB	AMB	17 30 43.0	
	97nm,0.3s						
GLVR				AMB	AMB	17 30 43.0	
	64nm,0.3s						
GLVR				AMB	AMB	17 30 43.0	
	52nm,0.3s						
GLVR				i S	Sn	17 31 11.3	-1.0
GLVR				A	A	17 31 15.0	
	104nm,0.4s						
GLVR				A	A	17 31 15.0	
	537nm,0.4s						
GRPR	Tuman	2.88	49	i P	Pn	17 30 46.0	-0.3
GRPR				AMB	AMB	17 30 52.0	
	116nm,0.4s						
GRPR				AMB	AMB	17 30 52.0	
	118nm,0.4s						
GRPR				AMB	AMB	17 30 52.0	
	232nm,0.4s						
GRPR				i S	Sn	17 31 18.0	-1.7
GRPR				A	A	17 31 27.0	
	519nm,0.4s						
GRPR				A	A	17 31 27.0	
	345nm,0.4s						
LAGR	Lagunnoye	2.92	48	i P	Pn	17 30 47.0	+0.1
LAGR				AMB	AMB	17 30 53.0	
	182nm,0.4s						
LAGR				AMB	AMB	17 30 53.0	
	194nm,0.4s						
LAGR				AMB	AMB	17 30 53.0	
	284nm,0.4s						
LAGR				i S	Sn	17 31 21.0	+0.1
LAGR				A	A	17 31 28.0	
	591nm,0.5s						
LAGR				A	A	17 31 28.0	
	373nm,0.5s						
YUK	Yuzh-Kuril'sk	2.95	49	i P	Pn	17 30 47.0	-0.3
YUK				AMB	AMB	17 30 52.0	
	194nm,0.2s						
YUK				AMB	AMB	17 30 52.0	
	100nm,0.2s						
YUK				AMB	AMB	17 30 52.0	
	31nm,0.2s						
YUK				i S	Sn	17 31 21.0	-0.6
YUK				A	A	17 31 26.0	
	279nm,0.5s						
YUK				A	A	17 31 26.0	
	475nm,0.5s						
YUK	Yuzh-Kuril'sk	2.95	49	i PN	Pn	17 30 47.9	+0.6
YUK				i S	Sn	17 31 21.6	0.0
SHO	Shikotan	3.44	58	i P	Pn	17 30 53.0	-1.0
SHO				AMB	AMB	17 31 02.0	
	43nm,0.3s						
SHO				AMB	AMB	17 31 02.0	
	94nm,0.3s						
SHO				AMB	AMB	17 31 02.0	
	93nm,0.3s						
SHO				i S	Sn	17 31 31.0	-2.5
SHO				A	A	17 31 34.0	
	259nm,0.2s						
SHO				A	A	17 31 34.0	
	82nm,0.2s						
KUR	Kuril'sk	4.82	48	i P	Pn	17 31 13.0	+0.2
KUR				AMB	AMB	17 31 17.0	
	12nm,0.4s						
KUR				AMB	AMB	17 31 17.0	
	16nm,0.4s						
KUR				AMB	AMB	17 31 17.0	
	37nm,0.4s						
KUR				i S	Sn	17 32 09.0	+1.7
KUR				A	A	17 32 11.0	
	47nm,0.3s						
KUR	Kuril'sk	4.82	48	ePN	Pn	17 31 13.5	+0.7
KUR				i S	Sn	17 32 10.0	+2.7
KUR				pmax	pmax		
	comp=Z,37nm,0.4s						
KUR				pmax	pmax		
	comp=N,12nm,0.2s						
KUR				pmax	pmax		
	comp=E,17nm,0.3s						
KUR				smax	smax		
	comp=N,47nm,0.3s						
KUR				smax	smax		
	comp=E,47nm,0.2s						
YSS	Yuzh-Sakhalins	4.83	360	eP	Pn	17 31 14.0	+1.1
YSS				AMB	AMB	17 31 15.0	
	comp=E,10.0nm,0.4s						
YSS				eS	Sn	17 32 09.0	+1.6
YSS	Yuzh-Sakhalins	4.83	360	ePN	Pn	17 31 14.5	+1.6
YSS				eS	Sn	17 32 09.2	+1.8
YSS				pmax	pmax		
	comp=Z,10.0nm,0.4s						
YSS				smax	smax		
	comp=N,20µm,0.9s						
MJA0	Matsu Arr-Jizo	6.59	214	ePN	Pn	17 31 41.5	+4.3
MJA0				pmax	pmax		
	comp=Z,1.0nm,0.3s						
MAJO	Matsushiro	6.61	214	ePN	Pn	17 31 39.0	+1.6
MJAR	Matsushiro Arr	6.61	214	P	Pn	17 31 38.6	+1.2
	comp=Z,0.8nm,0.3s,baz=22,slow=16,SNR=12						
KLR	Kul'dur	10.48	316	i PN	Pn	17 32 32.5	+2.3
KSRS	Korea Array	12.34	253	P	P	17 33 02.1	-3.5
	comp=Z,0.3nm,0.3s,baz=65,slow=14,SNR=19						
BOD	Bodaibo	24.01	321	eP	P	17 35 25.0	+14
BOD				pmax	pmax		
	comp=Z,11nm,2.1s						
H11N2	WAKE ISLAND Hy	30.24	130	T	T	18 07 46.5	

	baz=324,slow=75,SNR=72						
H11N1	**WAKE ISLAND Hy**	**30.25**	**130**	T	T	18 07 47.3	
	baz=324,slow=75,SNR=69						
H11N3	**WAKE ISLAND Hy**	**30.26**	**130**	T	T	18 07 47.8	
	baz=324,slow=75,SNR=67						
H11S1	**WAKE ISLAND Hy**	**31.11**	**132**	T	T	18 08 52.7	
	baz=325,slow=76,SNR=84						
H11S3	**WAKE ISLAND Hy**	**31.12**	**132**	T	T	18 08 52.9	
	baz=325,slow=76,SNR=60						
H11S2	**WAKE ISLAND Hy**	**31.13**	**132**	T	T	18 08 52.8	
	baz=325,slow=76,SNR=67						
HVS	**Khovu-Aksy**	**34.31**	**302**	*e*P	**P**	**17 36 47.2**	**+4.1**
HVS				pmax	pmax		
	comp=Z,6.0nm,0.9s						
ZALV	**Zalesovo Beam**	**39.44**	**308**	P	**P**	**17 37 25.9**	**-0.5**
	comp=Z,1.9nm,0.8s,baz=88,slow=7.6,SNR=5.9						
ZALV	**Zalesovo Beam**	**39.44**	**308**	P	**P**	**17 37 25.9**	**-0.5**
ZALV				pmax	pmax		
	comp=Z,1.0nm,0.6s						
MKAR	**Makanchi Array**	**42.50**	**298**	P	**P**	**17 37 51.1**	**-0.7**
	comp=Z,0.5nm,0.8s,baz=85,slow=9.5,SNR=4.2						
KURK	**Kurchatov**	**43.78**	**304**	P	**P**	**17 38 01.6**	**-0.4**
KURK				pmax	pmax		
	comp=Z,1.0nm,0.4s						
KURBB	**Kurchatov Arra**	**43.86**	**304**	P	**P**	**17 38 01.6**	**-1.0**
	comp=Z,0.9nm,0.4s,baz=77,slow=9.0,SNR=9.8						
BVAR	**Borovoye Array**	**48.05**	**309**	P	**P**	**17 38 35.3**	**-0.2**
	comp=Z,0.7nm,0.4s,baz=68,slow=8.3,SNR=7.5						
OBN	**Obninsk**	**64.68**	**322**	*e*P	P	17 40 39.8	+6.1
OBN				*e*		17 43 01.0	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.8s						
FINES	**FINESS Array B**	**64.82**	**332**	P	**P**	**17 40 33.1**	**-1.5**
	comp=Z,0.9nm,0.5s,baz=47,slow=7.2,SNR=12						
HFS	**Hagfors**	**69.89**	**336**	P	**P**	**17 41 05.3**	**-1.3**
	comp=Z,0.9nm,0.5s,baz=57,slow=5.5,SNR=8.1						

WEL 25 17:36:05.8, 38˚S±8˚×18˚0W±˚, h33^{km}, ML3.6/13, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**1.47**	**268**	P	Pn	17 36 30.4	+0.5
WMGZ				S	Sn	17 36 49.3	+1.3
MXZ	**Matakaoa Point**	**1.57**	**278**	P	Pn	17 36 31.5	+0.2
MXZ				S	Sn	17 36 50.0	-0.5
PUZ	**Puketiti**	**1.61**	**259**	P	Pn	17 36 32.6	+0.7
PUZ				S	Sn	17 36 52.8	+1.2
PKGZ	**Pakihiroa**	**1.73**	**266**	P	Pn	17 36 34.0	+0.3
CNGZ	**Carnagh Statio**	**1.77**	**246**	P	Pb	17 36 35.8	-1.7
TWGZ	**Tauwhareparae**	**1.85**	**257**	P	Pn	17 36 36.3	+1.1
TWGZ				S	Sb	17 36 59.7	-2.0
HAZ	**Te Kaha**	**1.97**	**270**	P	Pn	17 36 37.6	+0.8
TKGZ	**Te Karaka**	**2.01**	**250**	P	Pn	17 36 38.7	+1.3
RUGZ	**Raukumara Rang**	**2.06**	**264**	P	Pn	17 36 38.6	+0.5
PRGZ	**Paritu Road**	**2.19**	**238**	P	Pn	17 36 42.0	+2.1
MWZ	**Matawai**	**2.23**	**255**	P	Pn	17 36 41.0	+0.6
MWZ				S	Sn	17 37 07.4	+0.6
MHGZ	**Mahia Peninsul**	**2.30**	**233**	P	Pn	17 36 43.1	+1.7
MHGZ				S	Sb	17 37 12.3	-2.3
KNZ	**Kokohu**	**2.38**	**238**	P	Pn	17 36 44.2	+1.7
KNZ				S	Sn	17 37 12.2	+1.7
URZ	**Urewera**	**2.54**	**258**	P	Pn	17 36 46.0	+1.4
URZ				S	Sn	17 37 15.2	+0.8
MUGZ	**Murupara**	**2.84**	**255**	P	Pn	17 36 50.1	+1.2
MTHZ	**Maungataniwha**	**2.90**	**247**	P	Pn	17 36 51.3	+1.7
MTHZ				S	Sn	17 37 24.6	+1.2
ARHZ	**Aropaoanui**	**2.96**	**239**	P	Pn	17 36 52.5	+2.0

IDC 25 17:37:59.9±2.4, 11˚.18N×92˚.60E, h0^{km}, mb3.6/3, mb1 3.8/4, mb1mx3.2/68, mbtmp3.6/4, ML3.7/1, Error ellipse: s-maj=72.2km s-min=27.8km az=70.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	**Chiang Mai Arr**	**9.48**	**40**	Pn	Pn	17 40 17.8	-0.1
	0.2nm,0.3s,baz=232,slow=15,SNR=9.6						
ZALV	**Zalesovo Beam**	**43.11**	**353**	P	P	17 46 01.4	-0.4
	0.7nm,0.3s,baz=178,slow=8.4,SNR=3.9						
WRA	**Warramunga Arr**	**51.42**	**127**	P	P	17 47 06.8	-0.4
	0.3nm,0.6s,baz=300,slow=10.0,SNR=8.9						
ASAR	**Alice Springs**	**53.20**	**131**	P	P	17 47 20.7	+0.3
	0.2nm,0.4s,baz=311,slow=7.0,SNR=17						

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*ISCJB **25** 17:47:06.7±1.0, 17˚.4S±0˚.2×178˚.8W±0˚.1, h539^{km}, mb4.2/5, Error ellipse: s-maj=30.5km s-min=16.1km az=158.7*

*IDC **25** 17:47:07.1±1.8, 17˚.41S×178˚.82W, h524^{km}±21^{km}, mb3.6/5, mb1 3.7/7, mb1mx3.1/44, mbtmp4.5/7, Error ellipse: s-maj=29.7km s-min=22.0km az=13.0*

ISC 25 17:47:07.5±1.1, 17˚.3S±0˚.2×178˚.9W±0˚.1, h539^{km}, n7, σ2^{s}06/11, mb4.2/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**7.64**	**65**	P	**P**	**17 49 00.5**	**-1.0**
	2.7nm,0.3s,baz=42,slow=6.0,SNR=4.4						
DZM	**Mont Dzumac**	**14.59**	**248**	P	**P**	**17 50 14.2**	**+1.1**
	0.4nm,0.3s,baz=88,slow=20,SNR=6.3						
URZ	**Urewera**	**21.22**	**189**	P	**P**	**17 51 13.5**	**-1.5**
	4.0nm,0.6s,baz=0.0,slow=3.0,SNR=3.2						
STKA	**Stephens Creek**	**38.52**	**240**	P	**P**	**17 53 45.2**	**+1.2**
	6.5nm,0.8s,baz=84,slow=8.8,SNR=8.2						
WRA	**Warramunga Arr**	**44.27**	**259**	P	**P**	**17 54 30.1**	**+0.4**
	3.4nm,0.6s,baz=95,slow=7.1,SNR=76						
WRA				PcP	**PcP**	**17 56 03.4**	**+1.0**
	0.2nm,0.4s,baz=83,slow=3.9,SNR=2.3						
WRA				S	**S**	**18 00 20.9**	**-3.7**
	0.3nm,0.9s,baz=90,slow=15,SNR=3.5						
ASAR	**Alice Springs**	**44.50**	**254**	P	**P**	**17 54 32.1**	**+0.7**
	33nm,0.6s,baz=88,slow=8.1,SNR=527						
ASAR				ScP	**ScP**	**17 59 06.1**	**+2.0**
	0.6nm,0.8s,baz=111,slow=4.1,SNR=4.9						
ASAR				S	**S**	**18 00 24.9**	**-2.9**
	1.1nm,0.9s,baz=88,slow=16,SNR=5.9						
QSPA	**South Pole Qui**	**72.81**	**180**	P	**P**	**17 57 41.6**	**+0.3**
	1.3nm,0.6s,baz=127,slow=5.7,SNR=6.2						

IGQ 25 17:55:13.9±0.7, 3˚S±5˚×8˚1W±˚, h10^{km}, MLv4.3/2, Near coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AGUAY	**Guayaquil**	**0.89**	**41**	P	Pg	17 55 30.1	-1.0
AGUAY				S	Sb	17 55 44.0	+0.5
MILO	**Milagro-Astudi**	**1.08**	**65**	P	Pg	17 55 33.6	-1.1
MILO				S	Sn	17 55 50.5	+0.4
COHC	**Cochancay**	**1.31**	**78**	P	Pn	17 55 36.0	-2.3
COHC				S	Sb	17 55 55.3	-0.2
QUEV	**Quevedo**	**2.08**	**36**	P	Pn	17 55 45.8	-3.2
QUEV				S	Sn	17 56 12.6	-2.4
BMAS	**Trigal station**	**2.39**	**59**	P	Pb	17 55 55.7	-1.6
RETU	**Refugio**	**2.44**	**59**	P	Pn	17 55 54.0	-0.4
POND	**Pondoa**	**2.46**	**58**	P	Pn	17 55 54.1	-0.3
BULB	**Ulba Tungurahu**	**2.48**	**59**	P	Pn	17 55 54.4	-0.4
ILLI	**Illinizas Sur**	**2.70**	**42**	P	Pn	17 55 57.7	-0.1
PISA	**Pisayambo**	**2.72**	**52**	P	Pn	17 55 58.8	+0.7
MAG1	**Magdalena**	**2.75**	**16**	P	Pn	17 55 56.5	-1.7
PAST	**Pastocalle**	**2.77**	**43**	P	Pn	17 55 58.5	-0.4
BREF	**Cotopaxi Volca**	**2.93**	**46**	P	Pn	17 56 03.1	+1.9
BTAM	**Cotopaxi Volca**	**2.96**	**46**	P	Pn	17 56 01.9	+0.4
BVC2	**Cotopaxi Volca**	**2.96**	**46**	P	Pn	17 56 02.0	+0.4
VC1	**Cotopaxi 1**	**2.98**	**46**	P	Pn	17 56 02.8	+1.0
PITA	**Cotopaxi Volc**	**3.01**	**44**	P	Pn	17 56 03.5	+1.3
GGPC	**Guagua Pichinc**	**3.19**	**37**	P	Pn	17 56 05.1	+0.3
PINO	**Pino**	**3.20**	**37**	P	Pn	17 56 04.2	-0.8
YANA	**Yana**	**3.25**	**37**	P	Pn	17 56 05.2	-0.4
OTAV	**Otavalo**	**3.61**	**35**	P	Pn	17 56 09.2	-1.2
CUIC	**Cuicocha-Domo**	**3.72**	**36**	P	Pn	17 56 12.0	+0.1
IMBA	**Imbabura, San**	**3.79**	**38**	P	Pn	17 56 14.2	+1.3
URCU	**Urcuqui**	**3.89**	**36**	P	Pn	17 56 14.1	0.0

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*KRNET **25** 18:09:56.7±0.1, 39˚.74N×72˚.05E, h4^{km}, mb4.1*

*IDC **25** 18:09:56.0±0.9, 39˚.67N×72˚.09E, h0^{km}, mb3.7/10, mb1 3.7/18, mb1mx3.6/65, mbtmp3.7/18, ML3.3/8, MS2.5/2, Ms1 2.5/2, ms1mx2.2/59, Error ellipse: s-maj=17.3km s-min=11.0km az=143.0*

*SOME **25** 18:09:58.9, 39˚.82N×72˚.07E, h0^{km}, MS2.5*

*NNC **25** 18:09:58.3±1.5, 39˚.74N×72˚.15E, h0^{km}, mb4.4, mpv4.2, Error ellipse: s-maj=13.1km s-min=3.8km az=15.0*

*MOS **25** 18:10:00.2±2.3, 39˚.85N×72˚.23E, h16^{km}, mb4.2/8, Error ellipse: s-maj=10.4km s-min=6.6km az=80.4*

*BJI **25** 18:10:06.5, 40˚.05N×72˚.81E, h7^{km}, mb4.2/1, ML3.8/6, Ms3.7/1*

ISC 25 18:09:58.4±0.9, 39˚.58N±0˚.04×72˚.00E±0˚.03, h16^{km}±6^{km}, n94, σ2^{s}14/129, mb3.6/13, 29C-31D, Kyrgyzstan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DRK	**Karamyk**	**0.18**	**239**	⇓*i*P	**Pg**	**18 10 03.0**	**-0.2**
	baz=17						
DRK				⇓*i*S	**Sg**	**18 10 07.8**	**+1.4**
	baz=17						
BTK	**Batken**	**1.03**	**298**	⇓*i*P	**Pg**	**18 10 15.8**	**-2.6**
	baz=89						
BTK				⇓*i*S	**Sg**	**18 10 30.4**	**-1.5**
	baz=89						
SFK	**Sufi-Kurgan**	**1.24**	**69**	⇓P	**Pn**	**18 10 18.3**	**-2.9**
	49nm,0.2s						
SFK				⇓S	**Sb**	**18 10 33.9**	**-3.5**
	391nm,0.3s						
SFK	**Sufi-Kurgan**	**1.24**	**69**	⇓*i*P	**Pn**	**18 10 18.4**	**-2.9**
	baz=75						
SFK				⇓*i*S	**Sb**	**18 10 35.2**	**-2.2**
	baz=75						
SFK	**Sufi-Kurgan**	**1.24**	**69**	PG	**Pn**	**18 10 18.0**	**-3.3**
SFK				S	**Sb**	**18 10 33.9**	**-3.5**
SFK				pmax	pmax		
	comp=Z,27nm,0.1s						
SFK				smax	smax		
	comp=N,391nm,0.3s						
ARK	**Arkit**	**2.22**	**359**	⇑*i*P	**Pn**	**18 10 34.4**	**-0.3**
	baz=58						
ARK				⇑*i*S	**Sn**	**18 11 02.2**	**+0.3**
	baz=58						
TAS	**Tashkent**	**2.71**	**311**	⇑Pg	**Pb**	**18 10 46.7**	**+0.1**
	comp=N,221nm,0.3s						
TAS				⇓Lg	Lg	18 11 23.9	
	comp=N,997nm,0.4s						
TAS	**Tashkent**	**2.71**	**311**	⇓*i*P	**Pn**	**18 10 42.1**	**+0.7**
	baz=8.0						
TAS				⇓*i*S	**Sn**	**18 11 16.0**	**+2.2**
	baz=8.0						
TAS	**Tashkent**	**2.71**	**311**	PN	**Pb**	**18 10 47.0**	**+0.4**
TAS				pmax	pmax		
	comp=Z,221nm,0.3s						
AML	**Almayashu**	**2.86**	**26**	P	**Pn**	**18 10 44.3**	**+0.6**
	SNR=71						
AML	**Almayashu**	**2.86**	**26**	⇓*i*P	**Pn**	**18 10 43.4**	**-0.3**
	baz=27						
AML				⇓*i*S	**Sn**	**18 11 18.0**	**0.0**
	baz=27						
MNAS	**Manas**	**2.93**	**7**	⇓Pn	**Pn**	**18 10 44.9**	**+0.4**
	comp=Z,15nm,0.4s						
MNAS				⇓Pg	**Pb**	**18 10 49.6**	**-0.8**
	comp=Z,19nm,0.4s						
MNAS				⇑Sn	**Sn**	**18 11 19.7**	**+0.2**
	comp=Z,90nm,0.3s						
MNAS				⇓Lg	Lg	18 11 26.8	
	comp=Z,342nm,0.5s						
MNAS	**Manas**	**2.93**	**7**	⇑*i*P	**Pn**	**18 10 44.8**	**+0.3**
	baz=7.0						
MNAS				⇑*i*S	**Sn**	**18 11 19.7**	**+0.2**
	baz=7.0						
MNAS	**Manas**	**2.93**	**7**	PN	**Pn**	**18 10 44.9**	**+0.4**
MNAS						18 10 49.6	
MNAS						18 11 19.6	
MNAS				pmax	pmax		
	comp=Z,7.0nm,0.3s						
MNAS				pmax	pmax		
	comp=Z,22nm,0.4s						
MNAS				smax	smax		
	comp=N,90nm,0.3s						
IUG	**Iuzhnay**	**2.97**	**330**	*e*P	**Pb**	**18 10 51.1**	**+0.1**
	comp=N,786nm,0.6s						
IUG				*e*S	**Sb**	**18 11 30.0**	**+2.9**
	comp=N,696nm,0.4s						
KSH	**Kashi**	**3.07**	**90**	Pn	**Pn**	**18 10 46.0**	**-0.4**
KSH				Sn	**Sn**	**18 11 22.8**	**0.0**
KSH				smax	smax		
	comp=N,1μm,0.4s						
KSH				smax	smax		
	comp=N,1μm,0.3s						
UCH	**Uchtor**	**3.26**	**35**	P	**Pn**	**18 10 52.2**	**+2.9**
	SNR=20						
UCH	**Uchtor**	**3.26**	**35**	⇓*i*P	**Pn**	**18 10 49.5**	**+0.2**
	baz=36						
UCH				⇓*i*S	**Sn**	**18 11 27.9**	**-0.1**
	baz=36						
CHM	**Chimkent**	**3.29**	**327**	*e*P	**Pb**	**18 10 57.7**	**+1.3**
	comp=N,553nm,0.3s						
CHM				*e*S	**Sg**	**18 11 41.0**	**-3.0**
	comp=N,2μm,0.4s						
MRKS	**Merke**	**3.30**	**16**	*e*P	**Pb**	**18 10 55.7**	**-0.9**
	comp=N,302nm,0.4s						
MRKS				*e*S	**Sb**	**18 11 37.4**	**+0.8**
	comp=N,362nm,0.3s						
DZA	**Taraz**	**3.35**	**352**	*e*P	**Pb**	**18 10 58.0**	**+0.5**
	comp=N,153nm,0.4s						
DZA				*e*S	**Sb**	**18 11 39.4**	**+1.4**
	comp=N,2μm,0.2s						
EKS2	**Erkin-Say**	**3.36**	**23**	P	**Pn**	**18 10 51.5**	**+1.1**
	SNR=25						
EKS2	**Erkin-Say**	**3.36**	**23**	⇓*i*P	**Pn**	**18 10 50.5**	**+0.1**
	baz=23						
EKS2				⇓*i*S	**Sn**	**18 11 29.7**	**-0.3**
	baz=23						
KZA	**Kyzart**	**3.51**	**44**	P	**Pn**	**18 10 54.0**	**+1.4**
	SNR=179						
KZA	**Kyzart**	**3.51**	**44**	⇑*i*P	**Pn**	**18 10 52.9**	**+0.2**
	baz=45						
KZA				⇑*i*S	**Sn**	**18 11 34.2**	**+0.1**
	baz=45						
AAK	**Ala-Archa**	**3.59**	**31**	Pn	**Pn**	**18 10 54.6**	**+1.0**
	comp=N,15nm,0.3s,baz=177,slow=5.2,SNR=37						
AAK				LR	LR	18 11 38.7	
	comp=N,22nm,21.2s,baz=200,slow=30						
AAK				Lg	Lg	18 11 45.0	
	comp=N,46nm,0.3s,baz=131,slow=20,SNR=7.1						
AAK	**Ala-Archa**	**3.59**	**31**	⇑Pn	**Pn**	**18 10 54.6**	**+1.0**
	comp=N,14nm,0.3s						
AAK				⇓Pg	**Pb**	**18 11 01.4**	**-0.2**
	comp=N,79nm,0.5s						
AAK				⇑Lg	Lg	18 11 44.8	
	comp=N,136nm,0.5s						
AAK	**Ala-Archa**	**3.59**	**31**	P	**Pn**	**18 10 54.7**	**+1.1**
	SNR=30						
AAK	**Ala-Archa**	**3.59**	**31**	⇑*i*P	**Pn**	**18 10 54.1**	**+0.5**
	baz=32						
AAK				⇑*i*S	**Sn**	**18 11 35.6**	**-0.2**
	baz=32						
AAK	**Ala-Archa**	**3.59**	**31**	*i* PN	**Pn**	**18 10 54.5**	**+0.9**
KK31	**Karatay Array**	**3.70**	**343**	⇑Pn	**Pn**	**18 10 56.2**	**+1.2**
	comp=N,2.3nm,0.2s,baz=149,slow=12,SNR=267						
KK31				Pg	**Pb**	**18 11 04.3**	**+0.9**
	comp=N,15nm,0.3s,baz=170,slow=19,SNR=58						
KK31				⇑Sn	**Sn**	**18 11 37.5**	**-0.6**
	comp=N,23nm,0.3s,baz=172,slow=13,SNR=4.6						
KK31				Lg	Lg	18 11 49.7	
	comp=N,59nm,0.3s,baz=156,slow=28,SNR=7.7						
KK31	**Karatay Array**	**3.70**	**343**	PN	**Pn**	**18 10 56.1**	**+1.2**
KK31				*e*		18 11 04.2	
KK31						18 11 37.5	
KK31				pmax	pmax		
	comp=Z,2.0nm,0.2s						
KK31				pmax	pmax		
	comp=Z,15nm,0.4s						
KK31				smax	smax		
	comp=N,23nm,0.3s						
KBK	**Karagaybulak**	**3.80**	**35**	P	**Pn**	**18 10 58.1**	**+1.7**
	SNR=34						
KBK	**Karagaybulak**	**3.80**	**35**	⇑*i*P	**Pn**	**18 10 57.2**	**+0.8**
	baz=36						
KBK				⇑*i*S	**Sn**	**18 11 40.5**	**-0.4**
	baz=36						
FRU	**Bishkek**	**3.81**	**30**	*e*PN	**Pn**	**18 10 58.0**	**+1.6**
FRU				*i*		18 11 06.0	
BRLS	**Borolday**	**3.82**	**335**	*e*P	**Pb**	**18 11 03.8**	**-1.7**
	comp=N,32nm,0.3s						
BRLS				*e*S	**Sb**	**18 11 49.6**	**-1.8**
	comp=N,129nm,0.3s						
CHMS	**Chumysh**	**4.00**	**30**	P	**Pn**	**18 11 00.4**	**+1.4**
	SNR=68						
CHMS	**Chumysh**	**4.00**	**30**	⇓*i*P	**Pn**	**18 10 59.4**	**+0.3**
	baz=31						
CHMS				⇓*i*S	**Sn**	**18 11 44.9**	**-0.7**
	baz=31						
USP	**Ospenovka**	**4.14**	**26**	P	**Pn**	**18 11 01.7**	**+0.7**
	SNR=52						
USP	**Ospenovka**	**4.14**	**26**	⇓*i*P	**Pn**	**18 11 01.5**	**+0.5**
	baz=27						
USP				⇓*i*S	**Sn**	**18 11 48.5**	**-0.6**
	baz=27						
ULHL	**Ulahol**	**4.18**	**49**	P	**Pn**	**18 11 03.9**	**+2.3**
	SNR=111						
ULHL	**Ulahol**	**4.18**	**49**	⇓*e*P	**Pn**	**18 11 02.3**	**+0.6**
	baz=50						
ULHL				⇓*i*S	**Sn**	**18 11 50.9**	**+0.7**
	baz=50						
TKM2	**Tokmak 2**	**4.30**	**38**	⇓Pn	**Pn**	**18 11 03.8**	**+0.4**
	comp=N,8.5nm,0.3s						
TKM2				⇑Pg	**Pb**	**18 11 15.8**	**+2.0**
	comp=N,63nm,0.5s						
TKM2				⇑Lg	Lg	18 12 08.3	
	comp=N,38nm,0.4s						
TKM2	**Tokmak 2**	**4.30**	**38**	P	**Pn**	**18 11 04.4**	**+1.0**
	SNR=19						
TKM2	**Tokmak 2**	**4.30**	**38**	⇑*i*P	**Pn**	**18 11 04.0**	**+0.6**
	baz=39						
TKM2				⇑*i*S	**Sn**	**18 11 53.4**	**+0.1**
	baz=39						
TKM2	**Tokmak 2**	**4.30**	**38**	PN	**Pn**	**18 11 04.0**	**+0.6**
TKM2						18 11 14.8	
TKM2				pmax	pmax		
	comp=Z,11nm,0.4s						
TKM2				pmax	pmax		
	comp=Z,63nm,0.5s						
KST	**Kastek**	**4.57**	**39**	*e*P	**Pb**	**18 11 18.4**	**+0.1**
	comp=Z,53nm,0.3s						
KST				*e*S	**Sb**	**18 12 16.8**	**+3.6**
	comp=Z,112nm,0.7s						
DGS	**Degeres**	**4.63**	**37**	*e*P	**Pb**	**18 11 20.1**	**+0.8**
	comp=Z,128nm,0.6s						
DGS				*e*S	**Sb**	**18 12 18.4**	**+3.5**
	comp=Z,85nm,0.5s						
MTBS	**Maitube**	**4.87**	**42**	*e*P	**Pb**	**18 11 25.2**	**+1.8**
	comp=Z,41nm,0.3s						
MTBS				*e*S	**Sb**	**18 12 27.5**	**+5.8**
	comp=Z,69nm,0.5s						
IZV	**Izvestkoviy**	**4.90**	**44**	*e*P	**Pb**	**18 11 25.3**	**+1.3**
	comp=Z,110nm,0.5s						
IZV				*e*S	**Sb**	**18 12 27.0**	**+4.3**
	comp=Z,89nm,0.6s						
AAA	**Alma-Ata**	**5.18**	**44**	*e*PN	**Pb**	**18 11 30.3**	**+1.6**
AAA				pmax	pmax		
	comp=Z,57nm,0.4s						
AAA	**Alma-Ata**	**5.18**	**44**	*e*P	**Pb**	**18 11 30.9**	**+2.2**
	comp=Z,57nm,0.4s						
AAA				*e*S	**Sb**	**18 12 37.2**	**+6.6**
	comp=Z,105nm,0.5s						
KNDC	**Almaty**	**5.21**	**44**	⇑Pg	**Pb**	**18 11 30.4**	**+1.2**
	comp=Z,34nm,0.4s						
KNDC				⇑Lg	Lg	18 12 38.1	
	comp=Z,160nm,0.8s						
KOTS	**Kotyrbulak**	**5.30**	**45**	*e*P	**Pb**	**18 11 32.4**	**+1.6**
	comp=Z,43nm,0.5s						
KOTS				*e*S	**Sb**	**18 12 39.9**	**+5.6**
	comp=Z,147nm,0.6s						
KUU	**Kurty**	**5.40**	**36**	*e*P	**Pb**	**18 11 33.9**	**+1.5**
	comp=Z,31nm,0.4s						
KUU				*e*S	**Sb**	**18 12 42.0**	**+5.1**
	comp=Z,87nm,0.4s						
CHKK	**Chushkaly**	**5.67**	**39**	*e*P	**Pb**	**18 11 39.4**	**+2.4**
	comp=Z,29nm,0.4s						
CHKK				*e*S	**Sb**	**18 12 49.7**	**+4.9**
	comp=Z,128nm,0.6s						
PDGK	**Podgornoye**	**6.76**	**54**	⇑Pn	**Pn**	**18 11 37.4**	**+0.4**
	comp=Z,24nm,0.7s						
PDGK				⇑Lg	Lg	18 13 22.8	
	comp=Z,24nm,0.6s						
PDGK	**Podgornoye**	**6.76**	**54**	*i* PN	**Pn**	**18 11 37.0**	**-0.1**
PDGK				pmax	pmax		
	comp=Z,24nm,0.7s						
MK31	**Makanchi Array**	**10.41**	**43**	Pn	**Pn**	**18 12 28.3**	**+1.3**
	comp=Z,0.4nm,0.4s,baz=224,slow=13,SNR=8.3						
MK31				⇑Lg	Lg	18 15 22.4	
	comp=Z,4.7nm,0.8s,baz=233,slow=30,SNR=3.6						
MKAR	**Makanchi Array**	**10.41**	**43**	Pn	**Pn**	**18 12 27.5**	**+0.5**
	comp=Z,0.1nm,0.3s,baz=224,slow=13,SNR=7.4						
MKAR				Lg	Lg	18 15 19.5	
	comp=Z,0.2nm,0.3s,baz=236,slow=28,SNR=3.5						
MKAR	**Makanchi Array**	**10.41**	**43**	*e*P	**Pn**	**18 12 27.7**	**+0.7**
GEYT	**Alibeck**	**10.97**	**266**	Pn	**Pn**	**18 12 34.1**	**-0.5**
	comp=Z,0.3nm,0.3s,baz=96,slow=14,SNR=4.0						
GEYT				Sn	**Sn**	**18 14 39.0**	**+2.1**
	comp=Z,0.5nm,0.3s,baz=66,slow=43,SNR=4.7						
KURBB	**Kurchatov Arra**	**11.96**	**20**	Pn	**Pn**	**18 12 45.1**	**-3.1**
	comp=Z,0.1nm,0.3s,baz=214,slow=13,SNR=8.5						
KURBB				Sn	Sn	18 14 51.3	-10
	comp=Z,0.0nm,0.3s,baz=273,slow=30,SNR=2.8						
KURBB				Lg	Lg	18 16 10.4	
	comp=Z,0.2nm,0.3s,baz=204,slow=28,SNR=6.7						
KURK	**Kurchatov**	**12.07**	**21**	⇑*e*P	**Pn**	**18 12 49.4**	**-0.3**
AB31	**Akbulak array**	**12.94**	**322**	Pn	**Pn**	**18 12 58.4**	**-3.1**
	comp=Z,1.3nm,0.3s,baz=127,slow=14,SNR=49						
AB31	**Akbulak array**	**12.94**	**322**	P	**Pn**	**18 12 58.4**	**-3.1**
AB31				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BVAR	**Borovoye Array**	**13.50**	**356**	Pn	**Pn**	**18 13 06.3**	**-2.9**
	comp=Z,0.3nm,0.3s,baz=159,slow=13,SNR=4.2						
BVAR				Sn	**Sn**	**18 15 36.5**	**-2.2**
	comp=Z,0.1nm,0.3s,baz=160,slow=18,SNR=2.1						
BVAR				Lg	Lg	18 16 58.8	
	comp=Z,0.3nm,0.3s,baz=166,slow=25,SNR=3.8						
BRVK	**Borovoye**	**13.54**	**356**	⇑*e*P	**Pn**	**18 13 07.6**	**-2.1**
AKTO	**Aktyubinsk**	**14.66**	**322**	Pn	**Pn**	**18 13 21.7**	**-3.3**
	comp=Z,0.4nm,0.3s,baz=133,slow=13,SNR=5.0						
AKTO				Sn	Sn	18 15 53.9	-13
	comp=Z,0.3nm,0.3s,baz=252,slow=20,SNR=2.7						
AKTO	**Aktyubinsk**	**14.66**	**322**	⇓Pn	**Pn**	**18 13 21.4**	**-3.7**
	comp=Z,6.5nm,0.8s						
AKTO	**Aktyubinsk**	**14.66**	**322**	P	**Pn**	**18 13 21.3**	**-3.7**
AKTO				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ZALV	**Zalesovo Beam**	**16.81**	**27**	Pn	**Pn**	**18 13 50.8**	**-2.1**
	comp=Z,1.1nm,0.3s,baz=218,slow=11,SNR=14						
ARU	**Arti**	**19.05**	**337**	P	**P**	**18 14 18.3**	**-1.3**
	comp=Z,0.0nm,0.3s,baz=114,slow=20,SNR=2.7						
ARU	**Arti**	**19.05**	**337**	P	**Pn**	**18 14 20.8**	**+0.3**
ARU				S	**Sn**	**18 17 51.3**	**-2.0**
HVS	**Khovu-Aksy**	**19.06**	**46**	⇑*e*P	**Pn**	**18 14 24.1**	**+3.4**
WSAR	**Wadi Sarin**	**19.85**	**219**	LR	LR	18 22 48.1	
	comp=Z,36nm,18.4s,baz=42,slow=39						
GNI	**Garni**	**20.91**	**280**	P	Pn	18 14 42.0	-0.7
	comp=Z,8.4nm,1.0s,baz=140,slow=4.7,SNR=4.3						
GNI	**Garni**	**20.91**	**280**	⇑*e*P	Pn	18 14 47.0	+4.2
GNI				pmax	pmax		
	comp=Z,48nm,1.3s						
NCK	**Nalchik**	**21.57**	**290**	⇓*e*P	**P**	**18 14 53.2**	**+6.0**
NCK				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NEY	**Neytrino**	**22.21**	**289**	⇓*e*P	**P**	**18 14 58.8**	**+4.6**
NEY				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KIV	**Kislovodsk**	**22.24**	**291**	*e*P	**P**	**18 14 59.2**	**+4.8**
KIV				pmax	pmax		
	comp=Z,2.0nm,0.8s						
SONM	**Songino Array**	**26.03**	**60**	P	**P**	**18 15 30.8**	**0.0**
	comp=Z,0.5nm,0.6s,baz=268,slow=11,SNR=3.4						
BRTR	**Keskin Array B**	**29.39**	**283**	P	**P**	**18 16 02.6**	**+1.6**
	comp=Z,0.5nm,0.8s,baz=72,slow=11,SNR=3.9						
BRTR	**Keskin Array B**	**29.39**	**283**	*e*P	P	18 16 08.7	+7.7
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES	**FINESS Array B**	**35.43**	**323**	P	**P**	**18 16 53.2**	**-0.2**
	comp=Z,0.7nm,0.5s,baz=128,slow=9.0,SNR=4.1						
ARCES	**ARCESS Array B**	**38.64**	**336**	P	**P**	**18 17 19.9**	**-0.6**
	comp=Z,1.2nm,0.9s,baz=111,slow=9.7,SNR=3.3						
ARCES	**ARCESS Array B**	**38.64**	**336**	*e*P	P	18 17 25.9	+5.3
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.8s						
HFS	**Hagfors**	**41.19**	**320**	P	**P**	**18 17 41.6**	**-0.2**
	comp=Z,0.8nm,0.5s,baz=94,slow=10,SNR=8.4						
TORD	**Torodi Ar. Bea**	**66.60**	**268**	P	**P**	**18 20 48.1**	**-0.1**
	comp=Z,54nm,0.5s,baz=38,slow=6.9						
INK	**Inuvik**	**70.75**	**10**	P	**P**	**18 21 13.1**	**-0.1**
	comp=Z,1.1nm,0.5s,baz=344,slow=7.2,SNR=5.1						
ILAR	**Eielson Array**	**71.61**	**16**	P	**P**	**18 21 17.3**	**-1.2**
	comp=Z,0.2nm,0.3s,baz=335,slow=4.0,SNR=3.9						
WRA	**Warramunga Arr**	**82.97**	**123**	P	**P**	**18 22 22.3**	**-0.5**
	comp=Z,0.4nm,0.9s,baz=331,slow=4.5,SNR=4.0						
WRA	**Warramunga Arr**	**82.97**	**123**	*i* P	P	18 22 28.3	+5.5

```
WRA                                    pmax    pmax
      comp=Z,1.0nm,0.8s
ASAR  Alice Springs      85.39 126     P       P        18 22 35.1 +0.1
      comp=Z,0.3nm,0.9s,baz=325,slow=4.6,SNR=3.0
```

IDC ***25*** *19:01:30.7±0.6, 19°.27S×167°.69E, h0^{km}, mb4.3/17, mb1 4.5/18, mb1mx4.3/39, mbtmp4.3/18, ML5.0/1, MS3.5/10, Ms1 3.5/10, ms1mx3.2/38, Error ellipse: s-maj=20.6km s-min=15.3km az=104.0*

ISCJB ***25*** *19:01:34.8±0.2, 19°.40S±0°.05×167°.69E±0°.05, h35^{km}, mb4.8/60, MS3.8/11, Error ellipse: s-maj=8.4km s-min=5.3km az=43.8*

MOS ***25*** *19:01:34.7±0.9, 19°.34S×167°.66E, h33^{km}, mb5.1/17, Error ellipse: s-maj=13.8km s-min=12.1km az=50.2*

BJI ***25*** *19:01:35.0, 19°.40S×167°.80E, h38^{km}, mb4.7/25, mB4.9/15, Ms4.8/8, Ms7 4.5/8*

NEIC ***25*** *19:01:36.4±0.2, 19°.30S×167°.73E, h35^{km}, mb5.0/37, Error ellipse: s-maj=10.3km s-min=6.3km az=138.0*

ISC 25 19:01:36.1±0.6**, 19°.47S**±0°.07×**167°.88E**±0°.10**, h34**^{km}±2^{km}**, h35**^{km}**:pP-P, n177, σ1^{s}.01**/178**, mb4.9**/59**, MS3.5**/12**, 12C-3D, Vanuatu Islands region**

```
Code  Station Name        Δ°   AZ°     Phase ID               Time      Res
                                       Op      ISC          h  m  s     ISC
DZM   Mont Dzumac         2.92 207     ePn     Pn       19 02 19.3 -0.9
      626nm,0.3s
DZM                                    eSn     Sn       19 02 52.9 -1.2
      563nm,0.3s
DZM                                    eLR     LR       19 02 59.0
      862nm,27.5s
DZM   Mont Dzumac         2.92 207     Pn      Pn       19 02 19.2 -0.9
      214nm,0.3s,baz=162,slow=16,SNR=790
DZM                                    Sn      Sn       19 02 52.8 -1.3
      131nm,0.3s,baz=319,slow=23,SNR=18
HNR   Honiara            12.59 321     LR      LR       19 08 00.1
      comp=Z,88nm,21.2s,baz=156,slow=32
EIDS  Eidsvold           16.60 246     ePn     Pn       19 05 26.2  0.0
      61nm,1.9s
ARMA  Armidale           18.31 230     eP      Pn       19 05 50.3 +2.8
      29nm,1.3s
AFI   Afiamalu           20.25  77     LR      LR       19 12 45.2
      comp=Z,141nm,21.8s,baz=220,slow=33
CTAO  Charters Tower     20.36 265     eP      P        19 06 10.5 +0.7
      63nm,1.0s
CTAO  Charters Tower     20.36 265     eP      P        19 06 10.5 +0.7
CTAO                                   pmax    pmax
      comp=Z,63nm,1.0s
URZ   Urewera            20.37 159     P       Pn       19 06 11.9 -0.1
      comp=Z,8.7nm,0.7s,baz=357,slow=15,SNR=2.3
PMG   Port Moresby       22.40 294     LR      LR       19 14 01.3
      comp=Z,196nm,18.1s,baz=38,slow=34
RPZ   Rata Peaks         24.32 174     P       P        19 06 52.8 +2.3
      comp=Z,5.2nm,0.6s,baz=355,slow=15,SNR=3.1
RPZ                                    LR      LR       19 16 05.3
      comp=Z,79nm,19.6s,baz=336,slow=36
STKA  Stephens Creek     26.64 237     P       P        19 07 11.6 -0.1
      comp=Z,2.8nm,0.8s,baz=110,slow=14,SNR=4.6
STKA                                   LR      LR       19 16 24.3
      comp=Z,145nm,21.1s,baz=29,slow=34
RAR   Rarotonga          30.35  99     LR      LR       19 17 37.7
      comp=Z,47nm,20.4s,baz=291,slow=32
WRAB  Tennant Creek      31.54 263c  i P       P        19 07 53.8 -1.6
WRAB                                   pmax    pmax
      comp=Z,22nm,2.8s
WRA   Warramunga Arr     31.55 263     P       P        19 07 53.1 -2.4
      comp=Z,0.5nm,0.4s,baz=81,slow=6.2,SNR=13
WRA                                    PcP     PcP      19 10 46.5 -1.2
      comp=Z,0.4nm,0.8s,baz=85,slow=2.3,SNR=5.3
WRA   Warramunga Arr     31.55 263c    eP      P        19 07 53.7 -1.8
WRA                                    pmax    pmax
      comp=Z,1.0nm,0.4s
AS01  Alice Springs      31.79 256     eP      P        19 07 56.1 -1.4
AS31  Alice Springs      31.83 256     eP      P        19 07 56.5 -1.3
      comp=Z,2.9nm,0.4s
ASAR  Alice Springs      31.83 256     P       P        19 07 56.3 -1.6
      comp=Z,1.9nm,0.4s,baz=81,slow=8.2,SNR=39
MTN   Manton Dam         35.85 275     eP      P        19 08 31.0 -1.9
      comp=Z,16nm,0.9s
TBI   Tubuai             39.80 103     eLR     LR       19 20 09.5
      comp=Z,131nm,26.5s
PPT2  Papeete2           40.31  94     eLR     LR       19 20 24.0
      comp=Z,136nm,29.0s
PPT   Papeete            40.31  94     LR      LR       19 22 55.4
      comp=Z,143nm,19.8s,baz=301,slow=32
TAOE  Nuku Hiva Isla     51.31  86     eLR     LR       19 25 28.1
      comp=Z,124nm,30.7s
VNDA  Vanda              58.17 182     P       P        19 11 28.1 +2.0
      comp=Z,0.7nm,0.7s,baz=340,slow=5.9,SNR=3.5
ASAJ  Asahikawa          67.38 341     P       P        19 12 27.4 -0.4
      comp=Z,5.7nm,0.7s,baz=219,slow=6.1,SNR=18
ASAJ  Asahikawa          67.38 341     eP      P        19 12 27.6 -0.1
      comp=Z,7.1nm,0.8s
KSRS  Korea Array        67.98 327     P       P        19 12 31.2 -0.5
      comp=Z,0.8nm,0.6s,baz=151,slow=5.6,SNR=3.0
KSAR  Wonju Array Be     67.99 327     P       P        19 12 31.2 -0.6
KSAR  Wonju Array Be     67.99 327     P       P        19 12 31.2 -0.6
NJ2   Nanjing            69.49 317     eP      P        19 12 43.8 +2.6
NJ2                                    pmax    pmax
      comp=Z,12nm,0.5s
YSS   Yuzh-Sakhalins     69.89 342⇑    eP      P        19 12 43.0 -0.3
YSS                                    e                19 12 55.0
YSS                                    pmax    pmax
      comp=Z,10.0nm,0.7s
QSPA  South Pole Qui     70.59 180     P       P        19 12 48.4 +0.7
      comp=Z,3.2nm,0.9s,baz=59,slow=2.8,SNR=6.7
WHN   Wuhan              71.56 313     P       P        19 13 06.3  +12
PETK  Petropavlovsk-     72.81 354     P       P        19 12 59.3 -1.5
      comp=Z,4.5nm,0.9s,baz=136,slow=5.2
GYA   Guiyang            74.90 306     eP      P        19 13 15.5 +1.6
GYA                                    pP      PcP      19 13 27.3 -0.4
GYA                                    PP      PP       19 16 05.5 +3.5
GYA                                    S       S        19 22 49.8 +0.6
GYA                                    sS      pS       19 23 03.0 +0.5
GYA                                    pmax    pmax
      comp=Z,20nm,1.0s
GYA                                    pmax    pmax
      comp=Z,120nm,5.6s
GRNR  Gornyy             75.22 340     eP      P        19 13 17.8 +2.8
KLR   Kul'dur            75.56 336   i P       P        19 13 16.2 -0.8
KLR                                  i *PP     pP       19 13 27.6 -0.1
KLR                                  i                  19 13 28.6
KMI   Kunming            77.31 303     P       P        19 13 27.0 -0.8
KMI                                    pmax    pmax
      comp=Z,8.0nm,1.6s
KMI                                    LR      LR
      comp=Z,170nm,16.7s
KMI                                    LR      LR
      comp=Z,120nm,17.6s
KMI                                    LR      LR
      comp=Z,180nm,32.3s
CM01  Chiang Mai Arr     77.40 295     eP      P        19 13 28.0 -0.2
CM01                                   epP     pP       19 13 39.3 +0.4
CMAR  Chiang Mai Arr     77.43 295     P       P        19 13 26.3 -2.0
      comp=Z,1.5nm,0.8s,baz=139,slow=5.7,SNR=7.3
CMAR  Chiang Mai Arr     77.43 295c    eP      P        19 13 28.7 +0.4
CMAR                                   pmax    pmax
      comp=Z,2.0nm,0.8s
CD2   Chengdu            79.36 308     eP      P        19 13 38.5 -0.3
CD2                                    pmax    pmax
      comp=Z,10.0nm,0.5s
MA2   Magadan            79.99 351⇑    eP      P        19 13 40.5 -1.0
LZH   Lanzhou            81.93 313     eP      P        19 13 55.3 +2.7
LZH                                    pP      pP       19 14 04.5 +1.1
LZH                                    sP      sP       19 14 07.8 +0.4
LZH                                    SS      SS       19 29 23.5 -0.5
LZH                                    pmax    pmax
      comp=Z,18nm,1.0s
LZH                                    pmax    pmax
      comp=Z,170nm,4.9s
LZH                                    LR      LR
      comp=Z,1μm,14.1s
LZH                                    LR      LR
      comp=Z,1μm,14.6s
LZH                                    LR      LR
      comp=Z,1μm,14.6s
SII   Sitkinak Islan     82.18  20     eP      P        19 13 52.7 -0.5
      comp=Z,22nm,0.9s
SEY   Seymchan           83.03 353     eP      P        19 13 58.6 +1.2
KDAK  Kodiak Island      83.68  20     eP      P        19 14 00.7 -0.2
      comp=Z,28nm,1.5s
KDAK  Kodiak Island      83.68  20c    eP      P        19 14 02.1 +1.2
SVW2  Sparrevohn         85.48  17     eP      P        19 14 10.1 +0.1
      comp=Z,19nm,1.1s
CNPM  China Poot         85.49  20     eP      P        19 14 09.7 -0.4
      comp=Z,21nm,1.0s
BRLK  Bradley Lake       85.79  20     eP      P        19 14 11.4 -0.1
      comp=Z,11nm,0.8s
ULN   Ulaanbaatar        86.29 324     eP      P        19 14 14.0 -0.5
ULN                                    epP     pP       19 14 24.7 -0.6
ULN   Ulaanbaatar        86.29 324⇑  i P       P        19 14 14.1 -0.4
ULN                                  i *PP     pP       19 14 24.8 -0.6
ULN                                    pmax    pmax
      comp=Z,8.0nm,1.3s
SONM  Songino Array      86.64 324     P       P        19 14 15.1 -1.0
      comp=Z,1.9nm,0.8s,baz=143,slow=5.1,SNR=12
SONA1 Songino Array      86.64 324     eP      P        19 14 14.8 -1.3
SONA1                                  epP     pP       19 14 26.2 -0.9
YAK   Yakutsk            86.71 343   i P       P        19 14 15.8 -0.1
YAK                                    pmax    pmax
      comp=Z,7.0nm,0.8s
SUA   Susitna One        87.17  19     eP      P        19 14 17.1 -1.2
      comp=Z,6.7nm,0.7s
PKM   Mcpherson Peak     87.30  52     P       P        19 14 19.8 +0.1
      baz=244
L02D  Cave Junction,     87.97  44     P       P        19 14 23.0 +0.4
      baz=242
N02D  Trinity Center     88.00  45     P       P        19 14 23.2 +0.3
      baz=242
M02C  Callahan           88.10  45     P       P        19 14 23.5 +0.2
      baz=242
CMB   Columbia Colle     88.26  49     eP      P        19 14 24.3 +0.2
      comp=Z,8.2nm,0.9s
CMB   Columbia Colle     88.26  49     eP      P        19 14 24.3 +0.2
CMB                                    pmax    pmax
      comp=Z,8.0nm,0.9s
O03D  Paynes Creek       88.30  46     P       P        19 14 24.4 +0.1
      baz=243
YBH   Yreka Blue Hor     88.36  45     P       P        19 14 25.0 +0.5
      comp=Z,4.6nm,0.8s,baz=172,slow=7.9,SNR=9.5
SCM   Sheep Creek Mo     88.50  20     eP      P        19 14 25.0 +0.3
      comp=Z,6.0nm,0.7s
SCM   Sheep Creek Mo     88.50  20     eP      P        19 14 25.0 +0.3
SCM                                    pmax    pmax
      comp=Z,6.0nm,0.7s
ISA   Isabella, Lake     88.62  51     P       P        19 14 25.9  0.0
      baz=245
BFSC  Mount Baldy Ra     88.63  53     P       P        19 14 26.5 +0.4
      baz=246
EDW2  Edwards Air Fo     88.65  52     P       P        19 14 26.2 +0.2
      baz=245
KLU   Klutina            88.70  20     eP      P        19 14 24.7 -1.0
      comp=Z,4.2nm,1.1s
TRF   Thorofare Moun     88.86  17     eP      P        19 14 25.2 -1.2
      comp=Z,5.0nm,0.9s
SNAA  Sanae              88.87 183d    eP      P        19 14 26.6 +0.1
IND   Independence       88.95  47     eP      P        19 14 27.4 -0.1
M04C  Macdoel            88.96  45     P       P        19 14 27.6 +0.2
      baz=243
MONP2 Monument Peak      89.02  55     P       P        19 14 28.1 +0.1
      baz=246
OMMB  Old Mammoth Mi     89.07  49     eP      P        19 14 28.6 +0.4
      comp=Z,12nm,1.8s
FRD   Ford Ranch, An     89.13  54     P       P        19 14 28.6 +0.3
      baz=246
WAKR  Walker             89.14  49     eP      P        19 14 29.0 +0.6
      comp=Z,26nm,1.8s
PFO   Pinyon Flats O     89.28  54     P       P        19 14 29.5 +0.4
      baz=246
TPFO  Pinon Flats        89.28  54     P       P        19 14 29.4 +0.2
      baz=246
J04D  Umpqua Nationa     89.45  43     P       P        19 14 29.9 +0.2
      baz=243
MPMC  Manual Prospec     89.51  51     P       P        19 14 30.3  0.0
      baz=246
SWSC  Sam W. Stewart     89.52  55     P       P        19 14 30.3 +0.2
      baz=247
PAHR  Pah Rah Range      89.70  47     eP      P        19 14 31.4 +0.5
      comp=Z,7.8nm,1.1s
BELC  Belle Mtn. Jos     89.79  54     P       P        19 14 31.4 -0.1
      baz=246
RYN   Ryan               89.84  49     eP      P        19 14 32.0 +0.3
      comp=Z,13nm,0.6s
NV01  Mina Array Sit     89.91  49     eP      P        19 14 31.2 -0.8
NVAR  Mina Array Bea     89.91  49     P       P        19 14 32.0 -0.1
      comp=Z,2.9nm,0.7s,baz=225,slow=8.6,SNR=20
NVAR                                   LR      LR       19 48 45.3
      comp=Z,18nm,19.5s,baz=100,slow=32
K05A  Summer Lake        90.01  44     eP      P        19 14 33.1 +0.7
      comp=Z,11nm,1.0s
NV11  Mina Array Sit     90.02  49     eP      P        19 14 32.8 +0.3
      comp=Z,0.3nm,0.8s
MOD   Modoc Plateau      90.03  45     eP      P        19 14 32.8 +0.3
      comp=Z,5.7nm,0.8s
J05D  Fort Rock, OR      90.04  44     P       P        19 14 32.7 +0.2
      baz=243
E03A  Lebam              90.09  40     eP      P        19 14 33.5 +1.1
      comp=Z,32nm,1.1s
FURC  Furnace Creek,     90.14  51     P       P        19 14 33.2 +0.3
      baz=246
WRH   Wood River Hil     90.26  18     eP      P        19 14 31.4 -1.3
      comp=Z,17nm,1.8s
GLA   Glamis             90.31  55     P       P        19 14 35.0 +1.2
      baz=247
GLA   Glamis             90.31  55     eP      P        19 14 35.4 +1.5
      comp=Z,12nm,1.1s
GLA   Glamis             90.31  55     P       P        19 14 35.3 +1.5
GLA                                    pmax    pmax
      comp=Z,12nm,1.1s
KVN   Kaiserville        90.32  48     eP      P        19 14 34.2 +0.2
      comp=Z,5.5nm,0.7s
KVN   Kaiserville        90.32  48     P       P        19 14 34.1 +0.2
KVN                                    pmax    pmax
      comp=Z,6.0nm,0.7s
SHOC  Shoshone, Teco     90.34  52     P       P        19 14 34.0 +0.1
      baz=246
GMRC  Granite Mounta     90.36  53     P       P        19 14 34.1  0.0
      baz=247
TUQ   Turquoise Moun     90.42  52     P       P        19 14 34.4  0.0
      baz=246
I05D  Terrebonne, OR     90.45  43     P       P        19 14 34.7 +0.5
      baz=243
PINE  Pine Mountain      90.46  43     eP      P        19 14 35.2 +0.7
      comp=Z,12nm,0.8s
CCB   Clear Creek Bu     90.48  18     eP      P        19 14 32.2 -1.6
      comp=Z,3.3nm,1.0s
IRM   Iron Mountain      90.50  54     P       P        19 14 34.7  0.0
      baz=247
HDA   Harding Lake       90.55  18     eP      P        19 14 33.2 -0.9
      comp=Z,13nm,0.4s
MDM   Murphy Dome        90.59  17     eP      P        19 14 32.5 -1.8
      comp=Z,4.9nm,0.9s
LPIG  La Paz             90.67  65     LR      LR       19 47 24.5
      comp=Z,28nm,19.5s,baz=203,slow=30
TPNV  Topopah Spring     90.79  51     P       P        19 14 36.3 +0.3
      baz=246
TPNV  Topopah Spring     90.79  51     eP      P        19 14 36.4 +0.3
      comp=Z,5.6nm,0.8s
TPNV                                   epP     pP       19 14 47.0 -0.1
TPNV  Topopah Spring     90.79  51     eP      P        19 14 36.4 +0.3
TPNV                                   e*PP    pP       19 14 47.0 -0.1
TPNV                                   pmax    pmax
      comp=Z,6.0nm,0.8s
IL1   Eielson Array      90.83  18     eP      P        19 14 32.5 -3.0
ILAR  Eielson Array      90.83  18     P       P        19 14 33.4 -2.1
      comp=Z,3.2nm,0.7s,baz=236,slow=5.5,SNR=23
ILB   Eielson Array      90.83  18     eP      P        19 14 33.8 -1.6
SCRK  Sand Creek         91.12  19     eP      P        19 14 36.1 -0.8
      comp=Z,2.1nm,0.9s
PDMCI Parker Dam,Lak     91.33  54     P       P        19 14 38.7 +0.2
      baz=248
WVOR  Wild Horse Val     91.38  45     eP      P        19 14 39.2 +0.6
      comp=Z,8.1nm,1.1s
WVOR  Wild Horse Val     91.38  45     eP      P        19 14 39.3 +0.6
WVOR                                   pmax    pmax
      comp=Z,8.0nm,1.1s
BMN   Battle Mountai     91.51  47     eP      P        19 14 39.9 +0.5
      comp=Z,5.3nm,0.8s
BMN   Battle Mountai     91.51  47     eP      P        19 14 39.9 +0.5
BMN                                    pmax    pmax
      comp=Z,5.0nm,0.8s
B05A  Bryant             91.78  39     P       P        19 14 40.4 +0.2
      baz=243
R11A  Troy Canyon, C     91.83  50     P       P        19 14 41.3 +0.4
      baz=247
J08A  Circle Bar Ran     91.88  44     eP      P        19 14 41.3 +0.3
      comp=Z,14nm,1.4s
G08A  Pilot Rock         92.39  43     eP      P        19 14 43.5 +0.2
      comp=Z,7.7nm,1.0s
G08A                                   epP     pP       19 14 54.3  0.0
DLBC  Dease Lake         92.83  28     eP      P        19 14 45.3 +0.3
      comp=Z,5.6nm,1.1s
TUC   Tucson             93.20  57     P       P        19 14 47.0 -0.3
      baz=249
TUC   Tucson             93.20  57     P       P        19 14 47.7 +0.4
TUC                                    pmax    pmax
      comp=Z,4.0nm,1.1s
WMQ   Urumqi             96.44 314     P       P        19 15 02.8 +1.0
WMQ                                    pP      pP       19 15 13.5 +0.7
WMQ                                    sP      sP       19 15 18.0 +1.3
WMQ                                    LR      LR
      comp=Z,230nm,29.3s
WMQ                                    LR      LR
      comp=Z,240nm,23.5s
WMQ                                    LR      LR
      comp=Z,230nm,20.5s
PDAR  Pinedale Array     97.71  47     P       Pdif     19 15 08.9 +1.0
      comp=Z,0.3nm,0.6s,baz=235,slow=3.2,SNR=3.4
TXAR  Lajitas Array      98.00  62     P       P        19 15 09.0 -0.3
      comp=Z,0.4nm,0.7s,baz=228,slow=5.9,SNR=6.2
TXAR                                   LR      LR       19 49 36.4
      comp=Z,15nm,21.9s,baz=0.0,slow=29
TXAR  Lajitas Array      98.00  62     P       P        19 15 09.0 -0.3
ARCES ARCESS Array B    124.96 345     PKP     PKPdf    19 20 31.0 -0.9
      comp=Z,2.5nm,0.9s,baz=93,slow=3.6,SNR=4.3
KIV   Kislovodsk        128.45 311     ePKIKP  PKPdf    19 20 35.2 -4.3
KIV                                    pmax    pmax
      comp=Z,5.0nm,1.0s
OBN   Obninsk           128.98 326     ePKIKP  PKPdf    19 20 39.9  0.0
OBN                                    e                19 22 49.8
OBN                                    pmax    pmax
      comp=Z,3.0nm,1.0s
FINES FINESS Array B    130.30 337     PKP     PKPdf    19 20 41.9 -0.4
      comp=Z,2.7nm,1.0s,baz=90,slow=0.3,SNR=5.4
AKASG Malin Array Be    134.92 324     PKP     PKPdf    19 20 50.9 -0.4
      comp=Z,0.3nm,0.2s,baz=60,slow=2.6,SNR=4.3
CLL   Collm             142.57 334     ePKPdf  PKPdf    19 21 04.0 -1.3
CLL                                    ePKiKP  PKiKP    19 21 07.0 -1.4
CLL   Collm             142.57 334     ePKIKP  PKPdf    19 21 04.0 -1.3
EKA   Eskdalemuir Ar    143.55 351     PKhKP   PKPpre   19 21 02.5
      comp=Z,0.8nm,0.6s,baz=14,slow=1.8,SNR=5.6
CONA  Conrad Observa    143.66 328   i PKPdf   PKPbc    19 21 05.6 +0.6
      comp=Z,1.2nm,0.6s
GERES GERESS Array B    144.07 331     PKP     PKPab    19 21 05.2 -0.5
      comp=Z,0.4nm,0.5s,baz=58,slow=3.3,SNR=5.0
GEA0  GERESS Array S    144.08 331     ePKPdf  PKPbc    19 21 06.1 -0.1
MOA   Molln             144.51 329   i PKPdf   PKPbc    19 21 07.8 +0.3
      comp=Z,3.1nm,0.6s
SOKA  Soboth            144.92 327   i PKPdf   PKPab    19 21 08.5 -0.4
      comp=Z,2.8nm,0.6s
OBKA  Obir              145.28 327   i PKPdf   PKPbc    19 21 09.5 -0.6
      comp=Z,4.7nm,1.0s
KBA   Koelnbreinsper    145.49 329   i PKPdf   PKPdf    19 21 10.2 -0.6
      comp=Z,4.6nm,0.7s
LJU   Ljubljana         145.60 326   i PKPbc   PKPdf    19 21 10.6 -0.2
LJU                                  i pPKPbc  pPKPdf   19 21 21.9 -0.2
MYKA  Terra Mystica     145.66 328   i PKPab   PKPdf    19 21 10.5 -0.5
      comp=Z,4.6nm,0.9s
GBAS  Gorenja Brezov    145.72 326   i PKPbc   PKPdf    19 21 10.7 -0.3
GBAS                                 i pPKPbc  pPKPdf   19 21 22.1 -0.2
MEM   Membach           145.76 339   ⇑PKPbc    PKPdf    19 21 11.2 +0.3
MEM                                  ⇓APKP     pPKPdf   19 21 22.2  0.0
ABTA  Abfaltersbach     146.13 329   i PKPab   PKPdf    19 21 11.9 +0.1
      comp=Z,14nm,1.2s,SNR=6.3
WATA  Walderalm         146.15 331   i PKPab   PKPab    19 21 13.4 -0.1
      comp=Z,4.4nm,0.6s
BCLA  Clavier           146.15 340   ⇑PKP      PKPbc    19 21 12.2 -0.3
WTTA  Wattenberg        146.18 330   i PKPab   PKPbc    19 21 12.9 -0.1
      comp=Z,6.7nm,0.8s
MOTA  Moosalm           146.36 331   i PKPab   PKPdf    19 21 12.8 +0.5
      comp=Z,12nm,1.1s,SNR=6.4
RETA  Reutte            146.41 332   i PKPab   PKPbc    19 21 13.4 -0.2
      comp=Z,3.6nm,0.7s
WLF   Walferdange       146.51 338   ⇑PKPbc    PKPbc    19 21 14.0 +0.3
WLF                                  ⇑APKP     pPKPbc   19 21 25.3 +0.5
WLF   Walferdange       146.51 338     ePKPdf  PKPbc    19 21 14.2 +0.5
DOU   Dourbes           146.66 340   ⇑PKPbc    PKPbc    19 21 14.0  0.0
DOU                                  ⇓APKP     pPKPbc   19 21 25.1 -0.1
FETA  Feichten          146.77 331   i PKPab   PKPbc    19 21 14.7  0.0
      comp=Z,9.0nm,1.1s
BFO   Black Forest      146.79 335     ePKPdf  PKPdf    19 21 13.5 +0.7
BFO   Black Forest      146.79 335     ePKP2   PKPdf    19 21 13.5 +0.7
DAVA  Damuels           146.95 332   i PKPab   PKPbc    19 21 15.2  0.0
      comp=Z,7.1nm,0.8s
FUORN Ofenpass-Fuorn    147.28 331     ePKPdf  PKPbc    19 21 16.4 +0.1
DAVOX Davos/Dischmat    147.34 332     PKPbc   PKPbc    19 21 16.0 -0.4
      comp=Z,7.4nm,0.4s,baz=9.0,slow=19,SNR=20
DAVOX Davos/Dischmat    147.34 332     PKP2    PKPbc    19 21 16.0 -0.4
DAVOX                                  pmax    pmax
      comp=Z,7.0nm,0.4s
ECH   Echery            147.35 336     ePKPdf  PKPbc    19 21 15.8 -0.3
ECH   Echery            147.35 336     ePKP2   PKPbc    19 21 15.8 -0.3
TUE   Stuetta           147.81 332     ePKPbc  PKPbc    19 21 17.8 +0.1
SENIN Lac Senin/Sane    148.78 334     ePKPbc  PKPbc    19 21 20.2  0.0
BNI   Bardonecchia      150.09 333     ePKPbc  PKPbc    19 21 23.7 +0.3
BNI   Bardonecchia      150.09 333     ePKP2   PKPbc    19 21 23.7 +0.3
ESDC  Sonseca Array     158.67 342     PKPab   PKPab    19 22 03.5 -2.3
      comp=Z,0.3nm,0.5s,baz=24,slow=5.1,SNR=2.9
```

IDC ***25*** *19:15:28.0±0.4, 0°.21S×124°.25E, h0^{km}, mb4.5/30, mb1 4.5/30, mb1mx4.4/51, mbtmp4.5/30, MS3.6/21, Ms1 3.6/21, ms1mx3.4/52, Error ellipse: s-maj=18.5km s-min=9.2km az=76.0*

BJI ***25*** *19:15:29.5, 0°.20S×124°.50E, h17^{km}, mb4.8/33, mB4.8/20, Ms4.1/3, Ms7 4.0/3*

NEIC ***25*** *19:15:33.4±0.3, 0°.20S×124°.40E, h35^{km}, mb4.8/14, Error ellipse: s-maj=13.2km s-min=7.0km az=79.0*

GCMT ***25*** *19:15:33.4±0.4, 0°.12S×124°.38E, h62^{km}±2^{km}, MW4.8/55, Moment Tensor Solution. s27,c34; s55,c82; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-1.94±.12; $M_{\theta\theta}$0.72±.08; $M_{\phi\phi}$1.22±.10; $M_{r\theta}$0.59±.05; $M_{\theta\phi}$0.81±.06; $M_{\phi r}$-0.09±.09; Best double couple: $M_0$1.96000×10^{16} NP1:ϕ_s230.00000°, δ51.00000°, λ-73.00000°. NP2: ϕ_s24.00000°, δ42.00000°, λ-110.00000°. Principal axes: T 1.8350, Plg4.0000°, Azm308.0000°; N 0.2490, Plg13.0000°, Azm39.0000°; P -2.0860, Plg76.0000°, Azm200.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

MOS ***25*** *19:15:35.3±1.1, 0°.17S×124°.49E, h69^{km}, mb4.9/35 Error ellipse: s-maj=12.2km s-min=6.1km az=112.0*

ISCJB ***25*** *19:15:35.6±0.5, 0°.18S±0°.03×124°.52E±0°.03, h70^{km}±5^{km}, mb4.5/80, Error ellipse: s-maj=5.6km s-min=4.4km az=43.7*

DJA ***25*** *19:15:37.7±0.2, 0°S±3°×12°5E±°, h44^{km}±6^{km}, M4.9/25, mb5.0/25, mB5.3/10, MLv5.2/18, Mw(mB)4.7/10*

ISC 25 19:15:37.6±0.8**, 0°.20S**±0°.05×**124°.50E**±0°.05**, h72**^{km}±7^{km}**, n180, σ1^{s}.60**/182**, mb4.6**/80**, 9C-10D, Southern Molucca Sea**

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Code  Station Name        Δ°   AZ°     Phase ID               Time      Res
                                       Op      ISC          h  m  s     ISC
KMSI  Cibinong            0.92 326     P       Pn       19 15 52.8 -2.5
LUWI  Luwuk               1.92 244     P       Pn       19 16 07.0 -1.3
SANI  Sanana              2.37 141     P       Pn       19 16 10.6 -3.7
MRSI  Marisa              2.65 285     P       Pn       19 16 14.4 -3.6
APSI  Ampana              2.94 256     P       Pn       19 16 22.1 +0.1
TNTI  Ternate             3.02  71     P       Pn       19 16 23.5 +0.3
LBMI  Labuha              3.03  98     P       Pn       19 16 23.2 -0.1
NLAI  Namlea              3.99 139     P       Pn       19 16 35.0 -1.4
KDI   Kendari             4.18 207     P       Pn       19 16 36.8 -2.2
MPSI  Mapaga              4.63 277     P       Pn       19 16 45.3 +0.1
PCI   Palu                4.72 261     P       Pn       19 16 46.1 -0.2
PCI   Palu                4.72 261     P       Pn       19 16 46.4 +0.1
AAI   Ambon               5.07 133     P       Pn       19 16 50.5 -0.6
      185nm,0.8s,4μm1.0nm
AAI   Ambon               5.07 133     P       Pn       19 16 50.9 -0.2
AAI                                    pmax    pmax
      comp=Z,174nm,0.8s
MSAI  Masohi              5.42 125     P       Pn       19 16 55.6 -0.4
TTSI  Tana Toraja         5.47 239     P       Pn       19 16 55.9 -0.7
SPSI  Sidrap Palu         6.03 232     P       Pn       19 17 03.8 -0.5
BKSI  Bulukumba           6.71 221     P       Pn       19 17 12.7 -0.9
SMKI  Samarinda           7.29 268     P       Pn       19 17 23.2 +1.6
      comp=Z,136nm,1.0s,comp=Z,1μmcomp=Z,0.7nm
DAV   Davao City (W)      7.30   8     LR      LR       19 20 29.8
      comp=Z,1μm,20.8s,baz=173,slow=41
EDFI  Ende, Flores        8.95 198     P       Pn       19 17 43.9 -0.4
      comp=Z,55nm,0.8s,comp=Z,699nm
MTKI  Muara Teweh, K      9.63 266     P       Pn       19 17 54.8 +1.3
      comp=Z,61nm,0.9s
STKI  Sintang            13.03 271     P       Pn       19 18 41.0 +1.2
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PBKI	Pangkalan Bun	13.06	259	P	Pn	19 18 41.3	+1.0
MTN	Manton Dam	14.18	153	P	Pn	19 18 54.1	-1.0
	baz=14,SNR=5.3						
TGY	Tagaytay City	14.64	346	LR	LR	19 26 00.5	
	comp=Z,291nm,18.9s,baz=188,slow=43						
PWJI	Pagerwojo	14.85	238	P	Pn	19 19 05.1	+1.3
WOJI	Wonogiri, Jawa	15.52	240	P	Pn	19 19 13.3	+1.0
KNRA	Kununurra	15.95	165	P	Pn	19 19 16.1	-1.7
	baz=16,SNR=17						
KPJI	Karang Pucung	17.07	245	P	P	19 19 33.5	+1.1
DBJI	Dramaga	18.80	250	P	P	19 19 51.4	-0.2
TPRI	Tanjung Pinang	20.00	273	P	P	19 20 05.1	+0.4
MDSI	Maura Dua	20.74	258	P	Pn	19 20 14.6	-1.1
MBWA	Marble Bar	21.35	192	eP	P	19 20 18.2	-0.8
	comp=Z,284nm,1.0s						
WRAB	Tennant Creek	21.86	154	eP	P	19 20 23.0	-1.6
	comp=Z,24nm,0.9s						
WRAB	Tennant Creek	21.86	154⇑	eP	P	19 20 23.3	-1.3
WRAB				pmax	pmax		
	comp=Z,19nm,0.8s						
WRA	Warramunga Arr	21.86	154	P	P	19 20 22.5	-2.1
	comp=Z,10.0nm,0.7s,baz=334,slow=10,SNR=55						
WRA				PcP	PcP	19 24 22.4	+0.5
	comp=Z,0.4nm,0.8s,baz=335,slow=2.0,SNR=7.6						
WRA	Warramunga Arr	21.86	154	iP	P	19 20 22.7	-1.9
WRA				pmax	pmax		
	comp=Z,13nm,0.8s						
KRJI	Kerinci	23.11	265	P	P	19 20 38.0	+0.1
UBPT	Khong Chiam	24.29	310	P	P	19 20 51.1	+2.6
	comp=Z,20nm,1.0s						
SKLT	Songkhla	24.92	288	P	P	19 21 00.5	+6.3
	comp=Z,24nm,0.8s						
WRKA	Warakurna	24.97	172	P	P	19 20 54.6	0.0
	baz=25,SNR=12						
ASAR	Alice Springs	25.05	159	P	P	19 20 55.2	-0.2
	comp=Z,20nm,0.8s,baz=333,slow=8.0,SNR=156						
ASAR				PcP	PcP	19 24 29.6	+1.0
	comp=Z,3.2nm,0.6s,baz=346,slow=2.1,SNR=14						
ASAR				S	S	19 25 20.1	+5.4
	comp=Z,2.9nm,1.1s,baz=348,slow=20,SNR=6.0						
ASAR				LR	LR	19 32 29.2	
	comp=Z,102nm,18.0s,baz=342,slow=41						
QIS	Mount Isa	25.06	145	P	P	19 20 56.3	+0.9
	baz=25,SNR=40						
TRTT	Trang	25.99	288	P	P	19 21 12.8	+8.9
MTSU	Mount Surprise	26.41	134	P	P	19 21 08.4	+0.7
	baz=26,SNR=4.8						
SKNT	Sakolnakorn	26.45	311	P	P	19 21 09.8	+1.7
	comp=Z,6.7nm,1.1s						
MEEK	Meekatharra	26.89	192	P	P	19 21 10.8	-1.2
	baz=27,SNR=5.7						
KHON	Khomkaen	26.96	309	P	P	19 21 13.5	+0.8
NAYO	Nakonayok	27.09	303	P	P	19 21 15.4	+1.5
	comp=Z,0.5nm,0.9s,comp=Z,410nm						
CHAI	Chaiyaphum	27.38	307	P	P	19 21 17.3	+0.8
	comp=Z,5.2nm,0.9s,comp=Z,61nm						
NONG	Nongkai	27.75	312	P	P	19 21 20.4	+0.7
	comp=Z,0.4nm,0.9s,comp=Z,203nm						
UTTA	Uttaradit	29.55	308	P	P	19 21 36.9	+1.2
	comp=Z,3.9nm,0.9s						
FORT	Forrest	30.60	174	P	P	19 21 44.0	-0.9
	baz=31,SNR=7.3						
LAMP	Lampang	30.71	309	P	P	19 21 47.8	+1.8
	comp=Z,3.7nm,0.7s,comp=Z,61nm						
CMAR	Chiang Mai Arr	31.21	308	P	P	19 21 49.6	-0.8
	comp=Z,3.4nm,0.8s,baz=134,slow=7.3,SNR=26						
CMAR				PcP	PcP	19 24 45.0	+1.1
	comp=Z,4.4nm,0.9s,baz=168,slow=1.8,SNR=17						
CMAR				LR	LR	19 34 36.8	
	comp=Z,140nm,21.5s,baz=175,slow=37						
CMAR	Chiang Mai Arr	31.21	308	iP	P	19 21 50.9	+0.5
CMAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
CMMT	Chiang Mai	31.41	308	P	P	19 21 52.7	+0.6
	comp=Z,18nm,1.0s						
CHTO	Chiang Mai	31.41	308	eP	P	19 21 52.3	+0.1
	comp=Z,11nm,0.8s						
CHTO	Chiang Mai	31.41	308	eP	P	19 21 52.3	+0.1
CHTO				pmax	pmax		
	comp=Z,11nm,0.8s						
CHTO	Chiang Mai	31.41	308	P	P	19 21 52.8	+0.6
	comp=Z,82nm,1.0s						
CBIJ	Chichi jima	32.02	31	P	P	19 21 57.4	-0.1
JCJ	Chichijima	32.02	31	P	P	19 21 57.4	-0.1
	comp=Z,20nm,0.7s,baz=72,slow=20						
QLP	Quilpie	32.39	146	P	P	19 22 01.6	+0.9
	baz=32,SNR=5.3						
ENH	Enshi	33.50	336	eP	P	19 22 11.9	+1.6
	comp=Z,15nm,0.8s						
JNU	Nakatsue	33.68	10	P	P	19 22 11.4	-0.4
	comp=Z,19nm,0.9s,baz=201,slow=5.0,SNR=13						
STKA	Stephens Creek	35.42	154	P	P	19 22 26.9	+0.1
	comp=Z,5.1nm,0.6s,baz=324,slow=8.7,SNR=11						
STKA				LR	LR	19 38 35.9	
	comp=Z,137nm,18.6s,baz=5.7,slow=39						
STKA	Stephens Creek	35.42	154	P	P	19 22 27.1	+0.3
	baz=35,SNR=11						
HTT	Hallett	35.73	159	P	P	19 22 30.8	+1.2
	baz=36,SNR=3.6						
JHJ	Hachijo jima 2	36.13	22	LR	LR	19 35 54.1	
	comp=Z,52nm,20.1s,baz=135,slow=34						
TJN	Taejon	36.48	4⇓	eP	P	19 22 34.2	-1.7
XAN	Xi’an	37.06	338	P	P	19 22 41.0	+0.1
XAN				pmax	pmax		
	comp=Z,12nm,0.9s						
XAN				pmax	pmax		
	comp=Z,63nm,3.9s						
CMSA	Cobar Meteorol	37.07	149	P	P	19 22 42.3	+1.3
	baz=37,SNR=31						
KSAR	Wonju Array Be	37.58	4	P	P	19 22 45.4	+0.2
KSAR				PcP	PcP	19 25 02.5	+0.7
KSAR	Wonju Array Be	37.58	4	P	P	19 22 45.4	+0.2
KSAR						19 25 02.5	
KSRS	Korea Array	37.59	4	P	P	19 22 45.4	+0.1
	comp=Z,2.6nm,0.8s,baz=180,slow=10,SNR=15						
KSRS				PcP	PcP	19 25 02.5	+0.7
	comp=Z,0.6nm,0.4s,baz=175,slow=2.8,SNR=5.7						
MJAR	Matsushiro Arr	38.70	18	P	P	19 22 54.2	-0.5
	comp=Z,5.6nm,0.8s,baz=198,slow=9.9,SNR=14						
MJAR				LR	LR	19 37 59.0	
	comp=Z,64nm,21.7s,baz=220,slow=35						
MAJO	Matsushiro	38.70	18	eP	P	19 22 54.3	-0.4
	comp=Z,10nm,0.9s						
MAJO	Matsushiro	38.70	18c	iP	P	19 22 54.5	-0.2
MAJO				pmax	pmax		
	comp=Z,11nm,1.0s						
BRDH	Bariadhala	39.23	308	LR	LR	19 39 44.4	
	comp=Z,97nm,21.9s,baz=140,slow=37						
ARMA	Armidale	39.60	142	P	P	19 23 03.9	+1.5
	baz=40,SNR=4.2						
ARPS	Mount Arapiles	39.78	158	P	P	19 23 04.7	+1.1
	baz=40,SNR=6.6						
SHL	Shillong	40.60	312	P	P	19 23 12.0	+1.2
YNG	Young	40.64	149	P	P	19 23 12.8	+2.0
	baz=41,SNR=8.3						
LZH	Lanzhou	40.89	334	eP	P	19 23 14.5	+1.5
LZH				pmax	pmax		
	comp=Z,21nm,1.0s						
CAN	Canberra	41.75	149	P	P	19 23 24.0	+4.1
CAN				pmax	pmax		
	comp=Z,49nm,1.1s						
MSHR	Mys Shultsa	43.00	7c	iP	P	19 23 31.4	+1.5
LSA	Lhasa	43.52	316	eP	P	19 23 35.6	+0.7
	comp=Z,4.6nm,0.6s						
LSA	Lhasa	43.52	316	eP	P	19 23 35.6	+0.7
LSA				pmax	pmax		
	comp=Z,5.0nm,0.6s						
PALK	Pallekele	44.30	281	LR	LR	19 43 59.1	
	comp=Z,115nm,18.1s,baz=128,slow=39						
ODAN	Odare	44.69	310	eP	P	19 23 43.3	-0.7
	comp=Z,27nm,1.0s						
USRK	Ussuriysk Ar.	44.70	8	P	P	19 23 43.7	+0.3
	comp=Z,17nm,0.9s,baz=185,slow=6.7						
MDJ	Mudanjiang	44.85	5	P	P	19 23 42.3	-2.3
MDJ				pmax	pmax		
	comp=Z,25nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,69nm,4.0s						
MDJ	Mudanjiang	44.85	5	eP	P	19 23 44.9	+0.3
	comp=Z,23nm,1.1s						
RAMN	Ramite	45.34	310	eP	P	19 23 48.8	-0.4
	comp=Z,23nm,0.7s						
GTA	Gaotai	45.43	333	eP	P	19 23 50.0	+0.5
GTA				pP	pP	19 23 55.5	-12
GTA				sP	sP	19 23 58.8	-17
GTA				pmax	pmax		
	comp=Z,16nm,1.0s						
JIRN	Jiri	46.02	310	eP	P	19 23 55.1	+0.4
DZM	Mont Dzumac	46.27	121	LR	LR	19 43 37.0	
	comp=Z,95nm,18.3s,baz=322,slow=36						
GUN	Gumba	46.38	310	eP	P	19 23 57.5	0.0
PKIN	Phulchoki	46.59	310	eP	P	19 23 58.6	-0.4
KKN	Kakani	46.78	310	eP	P	19 23 59.3	-1.1
DMN	Daman	46.83	309	eP	P	19 23 59.8	-1.1
	comp=Z,38nm,1.2s						
ASAJ	Asahikawa	46.98	18	P	P	19 24 02.2	+0.8
	comp=Z,3.2nm,0.3s,baz=233,slow=8.9,SNR=17						
ASAJ				LR	LR	19 46 24.9	
	comp=Z,33nm,18.7s,baz=193,slow=39						
GKN	Gorkha	47.38	310	eP	P	19 24 04.4	-0.6
	comp=Z,15nm,0.7s						
KOLN	Koldanda	48.07	309	eP	P	19 24 09.7	-0.8
	comp=Z,29nm,0.8s						
DANN	Dangsing	48.22	310	eP	P	19 24 11.2	-0.5
HYB	Hyderabad	48.48	294	iP	P	19 24 11.0	-2.6
PYUN	Piuthan	48.70	309	eP	P	19 24 14.3	-1.0
	comp=Z,46nm,0.7s						
YSS	Yuzh-Sakhalins	49.60	16⇑	eP	P	19 24 22.3	+0.8
YSS				e		19 24 38.3	
YSS				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KLR	Kul’dur	49.63	6	P	P	19 24 22.2	+0.5
	comp=Z,0.8nm,0.8s,baz=197,slow=5.2,SNR=30						
KLR	Kul’dur	49.63	6d	eP	P	19 24 21.5	-0.2
ULN	Ulaanbaatar	50.22	345	eP	P	19 24 25.8	-0.6
	comp=Z,8.4nm,1.0s						
ULN	Ulaanbaatar	50.22	345⇑	eP	P	19 24 25.9	-0.6
ULN				pmax	pmax		
	comp=Z,16nm,1.7s						
SONM	Songino Array	50.37	344	P	P	19 24 27.1	-0.5
	comp=Z,6.0nm,0.8s,baz=158,slow=7.4,SNR=28						
SONM				LR	LR	19 47 47.4	
	comp=Z,52nm,18.4s,baz=152,slow=38						
GRNR	Gornyy	51.78	10	eP	P	19 24 41.8	+3.9
GRNR				pmax	pmax		
	comp=Z,20nm,0.9s						
ZAK	Zakamensk	53.54	343	eP	P	19 24 50.0	-1.1
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
ZEA	Zeya	53.80	2	eP	P	19 24 52.9	+0.2
ZEA				pmax	pmax		
	comp=Z,20nm,1.0s						
TLY	Talaya	54.61	344	eP	P	19 25 00.5	+1.8
TLY				pmax	pmax		
	comp=Z,7.0nm,0.9s						
TLY				MLR	MLR		
	comp=Z,29nm,13.0s						
MOY	Mondy	55.36	342	eP	P	19 25 04.9	+0.7
MOY				pmax	pmax		
	comp=Z,18nm,2.8s						
HVS	Khovu-Aksy	57.41	337⇓	iP	P	19 25 19.3	+0.5
HVS				pmax	pmax		
	comp=Z,14nm,1.0s						
BOD	Bodaibo	58.44	353	eP	P	19 25 20.0	-5.7
BOD				pmax	pmax		
	comp=Z,18nm,1.1s						
DGZ	Jazzator, Alta	58.97	333⇑	eP	P	19 25 29.3	-0.5
DGZ				pmax	pmax		
	comp=Z,4.0nm,1.1s						
PDGK	Podgornoye	59.10	323	P	P	19 25 30.1	-0.7
PDGK				pmax	pmax		
	comp=Z,15nm,1.2s						
KSH	Kashi	59.33	318	P	P	19 25 33.5	+1.1
KSH				PP	PP	19 27 49.5	+5.3
KSH				S	S	19 33 30.5	-5.2
KSH				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KSH				pmax	pmax		
	comp=Z,98nm,4.7s						
MKAR	Makanchi Array	59.57	328	P	P	19 25 32.7	-1.2
	comp=Z,2.1nm,0.4s,baz=122,slow=8.5,SNR=42						
MKAR				PcP	PcP	19 26 19.9	-0.7
	comp=Z,2.7nm,0.8s,baz=126,slow=4.7,SNR=6.6						
MKAR				ScP	ScP	19 30 17.0	+1.8
	comp=Z,0.6nm,0.8s,baz=108,slow=4.7,SNR=3.6						
MKAR				LR	LR	19 51 57.3	
	comp=Z,80nm,20.5s,baz=126,slow=37						
PETK	Petropavlovsk-	59.88	22	P	P	19 25 36.2	+0.4
	comp=Z,2.8nm,0.5s,baz=188,slow=3.6						
SFK	Sufi-Kurgan	61.24	317	P	P	19 25 44.3	-1.3
SFK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KRAR	Krasnoyarsk	61.62	340⇓	eP	P	19 25 46.6	-0.9
AAK	Ala-Archa	61.84	320	eP	P	19 25 50.9	+1.4
	comp=Z,2.8nm,0.7s						
AAK	Ala-Archa	61.84	320⇑	eP	P	19 25 50.7	+1.2
AAK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
YAK	Yakutsk	62.19	3	eP	P	19 25 51.5	+0.3
	comp=Z,46nm,0.8s						
YAK	Yakutsk	62.19	3	eP	P	19 25 50.7	-0.5
YAK				pmax	pmax		
	comp=Z,36nm,0.9s						
YAK				pmax	pmax		
	comp=N,12nm,1.2s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.5s						
MA2	Magadan	63.03	15⇑	iP	P	19 25 59.6	+2.7
MA2				pmax	pmax		
	comp=Z,14nm,0.8s						
MNAS	Manas	63.05	319	P	P	19 25 57.3	-0.3
MNAS				pmax	pmax		
	comp=Z,7.0nm,1.1s						
ZALV	Zalesovo Beam	63.12	335	P	P	19 25 55.3	-2.3
	comp=Z,1.5nm,0.6s,baz=108,slow=4.8,SNR=7.6						
ZALV				LR	LR	19 55 08.2	
	comp=Z,67nm,19.2s,baz=68,slow=38						
KURBB	Kurchatov Arra	63.89	329	P	P	19 26 01.1	-1.6
	comp=Z,4.9nm,0.8s,baz=117,slow=6.4,SNR=35						
KURK	Kurchatov	63.90	329	eP	P	19 26 00.9	-1.9
KURK	Kurchatov	63.90	329d	iP	P	19 26 01.3	-1.5
KURK				pmax	pmax		
	comp=Z,18nm,1.0s						
SEY	Seymchan	66.34	14	P	P	19 26 19.8	+1.4
	comp=Z,2.9nm,0.8s,baz=217,slow=7.5,SNR=8.2						
SEY	Seymchan	66.34	14⇓	eP	P	19 26 19.2	+0.8
BVAR	Borovoye Array	69.43	328	P	P	19 26 36.6	-1.4
	comp=Z,1.6nm,0.3s,baz=138,slow=8.9,SNR=19						
BRVK	Borovoye	69.50	328	eP	P	19 26 36.5	-1.8
	comp=Z,21nm,1.0s						
BRVK	Borovoye	69.50	328	eP	P	19 26 36.6	-1.8
BRVK				pmax	pmax		
	comp=Z,21nm,1.0s						
GEYT	Alibeck	71.66	310	P	P	19 26 50.5	-1.4
	comp=Z,1.4nm,0.8s,baz=98,slow=10,SNR=5.2						
TIXI	Tiksi	71.78	1⇓	eP	P	19 26 51.5	-0.4
TIXI				pmax	pmax		
	comp=Z,15nm,1.0s						
AKTO	Aktyubinsk	75.37	323	P	P	19 27 11.8	-1.6
	comp=Z,4.4nm,0.9s,baz=94,slow=6.2,SNR=16						
AKTO				LR	LR	20 04 19.8	
	comp=Z,36nm,19.1s,baz=121,slow=39						
SVE	Sverdlovsk	76.15	329⇓	eP	P	19 27 16.7	-1.0
SVE				pmax	pmax		
	comp=Z,17nm,1.4s						
ARU	Arti	77.07	329	eP	P	19 27 20.7	-2.3
	comp=Z,11nm,1.2s						
ARU	Arti	77.07	329d	iP	P	19 27 20.9	-2.0
ARU						19 30 12.0	
ARU				S	S	19 37 05.6	-0.4
ARU				SS	SS	19 42 01.6	-3.0
ARU				pmax	pmax		
	comp=Z,8.0nm,1.0s						
OPO	Ambohidratompo	77.91	251	P	P	19 27 28.3	-0.3
	comp=Z,16nm,0.8s,baz=85,slow=5.7,SNR=12						
VNDA	Vanda	79.85	172	P	P	19 27 38.5	+0.7
	comp=Z,3.7nm,0.8s,baz=304,slow=6.9,SNR=18						
VNDA				LR	LR	20 04 16.9	
	comp=Z,18nm,19.1s,baz=318,slow=37						
AKT	Akhty	80.23	312	eP	P	19 27 39.8	-1.0
AKT				e		19 30 42.8	
AKT				pmax	pmax		
	comp=Z,14nm,1.1s						
SBA	Scott Base	80.79	172	eP	P	19 27 44.3	+1.4
SBA	Scott Base	80.79	172	eP	P	19 27 44.3	+1.4
ATD	Arta Tunnel	81.86	282	LR	LR	20 02 00.7	
	comp=Z,61nm,21.2s,baz=190,slow=34						
ZEI	Tsey	83.22	313	eP	P	19 27 55.4	-1.2
KBZ	Khabaz	84.06	314	P	P	19 27 59.6	-0.9
	comp=Z,2.0nm,0.8s,baz=138,slow=2.6,SNR=4.8						
KBZ				LR	LR	20 09 35.8	
	comp=Z,23nm,21.0s,baz=71,slow=39						
NEY	Neytrino	84.13	313⇓	eP	P	19 28 02.1	+0.9
NEY				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KIV	Kislovodsk	84.23	314	eP	P	19 28 01.8	+0.2
KIV				e		19 31 17.4	
KIV				pmax	pmax		
	comp=Z,4.0nm,0.9s						
PRGR	Permogore	84.88	332	eP	P	19 28 02.4	-1.9
PRGR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KLMR	Klimovskoe	87.71	331	eP	P	19 28 13.4	-4.8
KLMR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KLMR	Klimovskoe	87.71	331	eP	P	19 28 13.5	-4.7
KLMR				AMP		19 28 21.1	
	comp=Z,7.0nm,1.0s						
ASF	Jabal al Asfar	88.07	302	P	P	19 28 20.7	0.0
	comp=Z,3.1nm,0.8s,baz=74,slow=5.1,SNR=5.6						
OBN	Obninsk	88.97	325	eP	P	19 28 20.5	-3.8
OBN				e		19 31 54.1	
OBN				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MMAI	Mount Meron Ar	89.35	303	P	P	19 28 26.1	-0.6
	comp=Z,4.1nm,1.0s,baz=35,slow=3.5,SNR=4.9						
ILAR	Eielson Array	89.58	25	P	P	19 28 26.1	-0.8
	comp=Z,0.5nm,0.7s,baz=233,slow=5.3,SNR=4.4						
QSPA	South Pole Qui	89.74	180	P	P	19 28 28.5	+0.6
	comp=Z,8.6nm,1.0s,baz=327,slow=2.5,SNR=14						
QSPA				LR	LR	20 08 18.8	
	comp=Z,72nm,19.8s,baz=330,slow=35						
QSPA	South Pole Qui	89.74	180	eP	P	19 28 28.0	+0.2
	comp=Z,44nm,1.0s						
BRTR	Keskin Array B	90.79	310	P	P	19 28 31.7	-1.7
	comp=Z,0.8nm,0.7s,baz=123,slow=5.3,SNR=5.0						
BRTR				LR	LR	20 16 42.7	
	comp=Z,14nm,18.7s,baz=72,slow=41						
BRTR	Keskin Array B	90.79	310	iP	P	19 28 31.2	-2.2
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ARCES	ARCESS Array B	93.33	340	P	P	19 28 43.0	-1.3
	comp=Z,1.5nm,0.8s,baz=88,slow=6.6,SNR=6.0						
FINES	FINESS Array B	94.21	332	P	P	19 28 46.7	-1.7
	comp=Z,1.1nm,0.7s,baz=38,slow=7.0,SNR=4.6						
VSU	Vasula	94.24	329⇑	eP	P	19 28 50.9	+2.3
VSU				pmax	pmax		
	comp=Z,16nm,1.0s						
INK	Inuvik	94.61	21	LR	LR	20 11 18.1	
	comp=Z,18nm,21.0s,baz=202,slow=35						
LSZ	Lusaka	96.04	255	eP	P	19 28 57.6	-0.4
	comp=Z,2.6nm,0.6s						
LSZ	Lusaka	96.04	255	eP	P	19 28 57.6	-0.4
LSZ				pmax	pmax		
	comp=Z,3.0nm,0.6s						
HFS	Hagfors	100.41	332	P	Pdif	19 29 14.1	-2.3
	comp=Z,1.7nm,0.9s,baz=151,slow=6.3,SNR=4.5						
TORD	Torodi Ar. Bea	121.91	285	PKP	PKPdf	19 34 24.1	-0.7
	comp=Z,1.0nm,0.7s,baz=79,slow=1.5						
CPUP	Villa Florida	153.57	176	PKPbc	PKPbc	19 35 30.2	+1.4
	comp=Z,1.9nm,0.7s,baz=131,slow=1.7,SNR=4.0						
CPUP				PKPab	pPKPdf	19 35 42.3	+0.5
	comp=Z,1.4nm,0.7s,baz=147,slow=4.3,SNR=5.6						
LPAZ	La Paz	159.42	143	PKP	PKPdf	19 35 30.8	+1.1
	comp=Z,1.8nm,1.0s,baz=190,slow=2.3,SNR=4.0						
LPAZ				PKPab	PKPab	19 36 09.8	+2.2
	comp=Z,3.8nm,0.8s,baz=191,slow=5.5,SNR=8.5						

MAN 25 19:20:06.3, 13°.71N×120°.59E, h120km, mb4.0, ML2.8, MS2.4, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	Lubang	0.33	275	eP	Pn	19 20 22.1	-1.3
LUBP				eS	Sn	19 20 29.2	-7.0
PGP	Puerto Galera	0.41	119⇑	eP	Pn	19 20 21.9	-1.9
PGP				iS	Sn	19 20 34.4	-2.5
BOAC	Boac	1.25	101	eP	Pn	19 20 30.1	-0.8
SJMP	San Jose	1.34	157	eP	Pn	19 20 30.7	-1.3
SJMP				eS	Sn	19 20 49.7	-1.7
BUSP	Coron	1.73	193	eP	Pn	19 20 35.4	-1.1
BUSP				eS	Sn	19 20 57.9	-1.7

DJA 25 19:29:27.8±1.4, 3°S±5°×13°0E±°, h11km±13km, M3.7/11, MLv3.7/11, Seram

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MSAI	Masohi	1.00	236	P	Pg	19 29 46.8	-0.2
BNDI	Bandanaira	1.73	175	P	Pn	19 29 57.4	-0.4
AAI	Ambon	1.80	240	P	Pn	19 29 59.0	+0.2
SWI	Sorong	2.43	38	P	Pn	19 30 07.7	+0.2
FAKI	Fak Fak	2.49	93	P	Pn	19 30 07.7	-0.6
NLAI	Namlea	2.69	260	P	Pn	19 30 11.3	+0.2
LBMI	Labuha	3.11	313	P	Pn	19 30 17.4	+0.6
SANI	Sanana	3.84	281	P	Pn	19 30 26.3	-0.6
RKPI	Ransiki, Papua	4.59	74	P	Pn	19 30 37.2	-0.1

WEL ***25*** *19:38:15.6, 38°S±8°×18°0W±°, h33km, ML4.2/26*
IDC ***25*** *19:38:16.9±2.4, 37°.04S×179°.58E, h0km, mb4.1/2, mb1 4.3/3, mb1mx3.8/38, mbtmp4.0/3, ML3.6/1, Error ellipse: s-maj=78.5km s-min=28.7km az=144.0*
ISC 25 19:38:14.2±3.0, 37°.69S±0°.08×179°.90W±0°.08, h2km±17km, n46, σ0s.97/60, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.34	264	P	Pb	19 38 40.3	+0.2
WMGZ				S	Sb	19 38 57.3	-0.4
MXZ	Matakaoa Point	1.43	275	P	Pb	19 38 41.4	-0.1
MXZ				S	Sb	19 38 59.9	-0.3
PUZ	Puketiti	1.51	255	P	Pb	19 38 42.5	-0.4
PUZ				S	Sn	19 39 02.5	0.0
PKGZ	Pakihiroa	1.61	262	P	Pn	19 38 43.9	+0.1
CNGZ	Carnagh Statio	1.69	242	P	Pb	19 38 45.9	-0.1
CNGZ				S	Sg	19 39 08.7	+0.3
TWGZ	Tauwhareparae	1.75	253	P	Pb	19 38 46.1	-0.8
TWGZ				S	Sb	19 39 09.1	-0.2
HAZ	Te Kaha	1.84	267	P	Pb	19 38 47.6	-0.9
TKGZ	Te Karaka	1.93	247	P	Pn	19 38 48.7	+0.7
TKGZ				S	Sb	19 39 13.7	-0.9
RUGZ	Raukumara Rang	1.94	261	P	Pn	19 38 48.6	+0.3
MWZ	Matawai	2.13	252	P	Pn	19 38 50.9	+0.1
MWZ				S	Sn	19 39 17.4	-0.6
PRGZ	Paritu Road	2.13	234	P	Pn	19 38 51.7	+0.8
MHGZ	Mahia Peninsul	2.26	229	P	Pn	19 38 53.2	+0.6
KNZ	Kokohu	2.32	234	P	Pn	19 38 53.7	+0.3
URZ	Urewera	2.43	256	Pn	Pn	19 38 55.8	+0.9
	15nm,0.3s,baz=91,slow=4.8,SNR=70						
URZ				Sn	Sn	19 39 24.5	-0.7
	49nm,0.3s,baz=236,slow=18,SNR=28						
URZ	Urewera	2.43	256	P	Pn	19 38 55.9	+1.0
URZ				S	Sn	19 39 24.7	-0.5
SNGZ	Shannon Statio	2.43	243	P	Pn	19 38 55.8	+0.8
SNGZ				S	Sn	19 39 25.6	+0.4
RTZ	Ruatahuna	2.63	249	P	Pn	19 38 58.8	+1.1
RTZ				S	Sn	19 39 30.9	+0.7
WHHZ	Waihua	2.64	238	P	Pn	19 38 58.9	+1.1
WHHZ				S	Sn	19 39 30.6	+0.1
RAHZ	Arahi	2.67	242	P	Pn	19 38 59.4	+1.1
MUGZ	Murupara	2.74	252	P	Pn	19 39 00.1	+0.9
OPRZ	Ohinepanea	2.81	266	P	Pn	19 39 00.4	+0.2
MTHZ	Maungataniwha	2.81	245	P	Pn	19 39 01.0	+0.7
ARHZ	Aropaoanui	2.90	236	P	Pn	19 39 02.4	+1.1
KARZ	Kaharoa	3.07	263	P	Pn	19 39 04.0	+0.3
MCHZ	McNeill Hill	3.19	236	P	Pn	19 39 06.1	+0.7
BKZ	Black Stump Fm	3.19	241	P	Pn	19 39 05.9	+0.4
KAHZ	Kahuranaki	3.28	229	P	Pn	19 39 06.8	+0.2
PXZ	Pawanui	3.44	226	P	Pn	19 39 08.0	-0.8
KRHZ	Kereru	3.51	235	P	Pn	19 39 09.8	0.0
KUZ	Kuaotunu	3.62	284	P	Pn	19 39 11.3	0.0
BHHZ	Black Hill Sta	3.64	239	P	Pn	19 39 12.0	+0.4
PNHZ	Pukenui	3.77	233	P	Pn	19 39 13.0	-0.3
MOVZ	Moawhango	3.81	242	P	Pn	19 39 15.9	+1.9
TUVZ	Tukino	3.83	244	P	Pn	19 39 17.0	+2.7
WHVZ	Whangaehu Hut	3.88	244	P	Pn	19 39 17.8	+2.7
ANWZ	Angora Road	3.95	224	P	Pn	19 39 17.0	+1.2
DVHZ	Dannevirke	4.02	228	P	Pn	19 39 16.1	-0.7
HIZ	Hauiti	4.22	257	P	Pn	19 39 20.6	+1.1
PRWZ	Pori Road	4.30	227	P	Pn	19 39 20.4	-0.2
POWZ	Post Office Ro	4.32	230	P	Pn	19 39 21.2	+0.3
VRZ	Vera Road	4.43	250	P	Pn	19 39 24.6	+2.1
PKE	Pukeiti	5.03	251	P	Pn	19 39 33.2	+2.6
ASAR	Alice Springs	41.71	276	P	P	19 46 04.0	-0.7

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            2.0nm,0.6s,baz=122,slow=8.1,SNR=33
WRA   Warramunga Arr  43.36 281  P      P        19 46 17.1 -1.0
            1.3nm,0.5s,baz=121,slow=7.8,SNR=39
WRA                              PcP    PcP      19 48 07.5 +0.6
            0.3nm,0.7s,baz=114,slow=3.2,SNR=3.6
ARCES ARCESS Array B 145.28 345  PKP    PKPdf    19 57 52.8 +0.4
            2.9nm,1.0s,baz=23,slow=2.9,SNR=5.1
FINES FINESS Array B 151.24 334  PKPbc  PKPbc    19 58 09.0 +0.8
            1.5nm,0.9s,baz=41,slow=4.4,SNR=4.1
FINES                            PKPab  PKPab    19 58 15.8 -0.4
            0.5nm,0.5s,baz=46,slow=4.0,SNR=5.7
```

IDC ***25*** *19:42:04.1±0.9, 20°.60N×121°.09E, h0km, mb3.6/8, mb1 3.7/10, mb1mx3.5/56, mbtmp3.6/10, ML3.5/2, MS2.6/1, Ms1 2.8/1, ms1mx2.3/49, Error ellipse: s-maj=29.2km s-min=17.1km az=80.0*

JMA ***25*** *19:42:07.0±0.4, 20°.95N×121°.31E, h0km, M4.0*

ISCJB ***25*** *19:42:08.1±0.7, 20°.73N±0°.06×121°.38E±0°.08, h36km, mb3.5/8, MS2.4/1, Error ellipse: s-maj=13.4km s-min=5.4km az=37.1*

ISC 25 19:42:09.5±0.9**, 20°.69N**±0°.09×**121°.3E**±0°.1**, h36km, n23,** σ1s.**08**/34**, mb3.5**/8**, Philippine Islands region**

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Code  Station Name      Δ°   AZ°   Phase ID          Time      Res
                                   Op     ISC        h  m  s   ISC
JYNG  Yonagunijimaku    4.04  22   P      Pn       19 43 10.1 +1.4
JYNG                              eS      Sn       19 43 54.2 -0.6
YOJ   Yonaguni jima     4.07  23   P      Pn       19 43 09.6 +0.4
YOJ                                S      Sn       19 43 54.9 -0.7
HATJ  Hateruma jima     4.07  34   P      Pn       19 43 09.3 +0.1
HATJ                              eS      Sn       19 43 55.0 -0.6
IRIF  Iriomote-Funau    4.26  31   P      Pn       19 43 12.3 +0.5
IRIF                              eS      Sn       19 44 00.6 +0.2
JKRS  Kuro-shima        4.33  35   P      Pn       19 43 13.1 +0.4
JKRS                              eS      Sn       19 44 02.4 +0.5
JIJ   Ishigaki jima     4.50  35   P      Pn       19 43 15.0 -0.1
JIJ                                S      Sn       19 44 05.4 -0.8
JISG  Ishigakijimahi    4.77  35   P      Pn       19 43 18.5 -0.3
JISG                              eS      Sn       19 44 11.3 -1.5
JTJ   Tarama            5.03  38   P      Pn       19 43 22.9 +0.5
JTJ                                S      Sn       19 44 18.0 -1.3
JIRB  Irabujima         5.45  40   P      Pn       19 43 29.5 +1.3
JIRB                              eS      Sn       19 44 27.0 -2.6
JMJ   Miyako jima 2     5.51  41  eS      Sn       19 44 30.8 -0.4
JOGS  Gusukube          5.54  42   P      Pn       19 43 30.6 +1.1
JOGS                              eS      Sn       19 44 31.2 -0.8
JIKM  Ikemajima         5.57  40  eS      Sn       19 44 30.9 -1.6
JOW   Kunigami          8.84  45   Pn     Pn       19 44 15.0 +0.3
      1.6nm,0.3s,baz=180,slow=11,SNR=12
KSRS  Korea Array      17.67  18   P      Pn       19 46 12.0 -0.7
      0.1nm,0.3s,baz=203,slow=9.7,SNR=4.6
CMAR  Chiang Mai Arr   21.18 268   LR     LR       19 54 46.8
      comp=Z,16nm,18.5s,baz=194,slow=36
MJAR  Matsushiro Arr   21.62  39   P      P        19 46 59.1 +2.7
      0.9nm,0.7s,baz=225,slow=11,SNR=3.2
ASAJ  Asahikawa        29.31  32   P      P        19 48 10.3 +1.8
      1.4nm,0.6s,baz=239,slow=12,SNR=3.0
SONM  Songino Array    29.64 339   P      P        19 48 11.3 -0.3
      0.5nm,0.6s,baz=166,slow=9.6,SNR=3.3
MKAR  Makanchi Array   40.97 319   P      P        19 49 48.5 -0.3
      0.2nm,0.5s,baz=123,slow=9.7,SNR=3.2
WRA   Warramunga Arr   42.35 162   P      P        19 49 59.4 -0.9
      1.4nm,0.6s,baz=344,slow=9.0,SNR=21
WRA                                PcP    PcP      19 51 53.5 +0.1
      0.4nm,0.8s,baz=342,slow=3.2,SNR=3.3
ZALV  Zalesovo Beam    43.25 329   P      P        19 50 07.1 -0.1
      0.6nm,0.5s,baz=116,slow=9.8,SNR=2.7
ASAR  Alice Springs    45.77 164   P      P        19 50 27.9 +0.2
      0.4nm,0.4s,baz=342,slow=7.1,SNR=11
BVAR  Borovoye Array   50.47 323   P      P        19 51 03.4 -0.2
      0.2nm,0.5s,baz=108,slow=7.7,SNR=2.0
BVAR                               PcP    PcP      19 52 20.0 -1.4
      0.3nm,0.5s,baz=123,slow=5.3,SNR=3.8
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NIED ***25*** *20:00:00, 36°.50N×142°.60E, h8km, Mw4.6   Best double couple: $M_0$9.20000×10^{15} NP1:ϕ_s208.00000°, δ38.00000°, λ98.00000°.   NP2:ϕ_s17.00000°, δ53.00000°, λ84.00000°.*

IDC ***25*** *20:00:10.7±0.5, 36°.37N×142°.54E, h0km, mb4.3/27, mb1 4.4/34, mb1mx4.2/78, mbtmp4.3/34, ML4.0/4, MS3.9/31, Ms1 3.9/31, ms1mx3.7/63, Error ellipse: s-maj=14.5km s-min=11.6km az=125.0*

JMA ***25*** *20:00:12.8±0.3, 36°.47N×142°.64E, h55km, M4.6*

ISCJB ***25*** *20:00:13.1±0.8, 36°.51N±0°.03×142°.48E±0°.03, h20km±5km, mb4.5/112, MS4.2/55, Error ellipse: s-maj=5.6km s-min=3.5km az=159.4*

BJI ***25*** *20:00:15.4, 36°.56N×142°.50E, h46km, mb4.6/55, mB5.0/46, Ms4.6/58, Ms7 4.3/55*

MOS ***25*** *20:00:17.1±0.9, 36°.81N×142°.42E, h39km, mb5.0/44, MS4.4/9, Error ellipse: s-maj=8.3km s-min=5.0km az=121.4*

NEIC ***25*** *20:00:17.3±0.7, 36°.36N×142°.47E, h43km±6km, mb4.7/44, Error ellipse: s-maj=6.8km s-min=4.7km az=158.0*

ISC 25 20:00:15.5±0.6**, 36°.44N**±0°.04×**142°.53E**±0°.04**, h31**km±3km**, h31**km**:pP-P, n259,** σ1s.**72**/278**, mb4.6**/112**, MS4.3**/55**, 12C-14D, Off east coast of Honshu**

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Code  Station Name      Δ°   AZ°   Phase ID          Time      Res
                                   Op     ISC        h  m  s   ISC
ONAJ  Iwakimizuishiy    1.54 296   P      Pn       20 00 39.5 -1.3
CHOJ  Chosi             1.54 242   P      Pn       20 00 39.9 -0.9
JHYU  Hitachinakayam    1.57 267   P      Pn       20 00 40.4 -0.8
JHO   Hitachi           1.59 277   P      Pn       20 00 40.3 -1.2
JHO                               eS      Sn       20 01 00.9  0.0
JFK   Kawauchi          1.62 305   P      Pn       20 00 40.4 -1.5
JFT   Otama             2.06 302   P      Pn       20 00 47.5 -0.5
JAG   Ashikaga          2.48 271   P      Pn       20 00 52.9 -0.8
JAG                               eS      Sn       20 01 22.4 -0.6
JMK   Ichinoseki        2.71 338   P      Pn       20 00 55.2 -1.8
JMK                               eS      Sn       20 01 26.1 -2.6
JRY   Ryogami san       2.96 263   P      Pn       20 00 59.6 -0.8
JRY                               eS      Sn       20 01 35.0 +0.1
JYK   Kaneyama          3.01 326   P      Pn       20 01 00.1 -1.0
JOD2  Odawara 2         3.03 248   P      Pn       20 01 00.6 -0.7
JOM   Ohasama           3.18 343  eS      Sn       20 01 37.9 -2.4
JYN   Shimob            3.37 255   P      Pn       20 01 06.2 +0.2
MJAR  Matsushiro Arr    3.48 273   Pn     Pn       20 01 07.3 -0.2
      9.2nm,0.3s,baz=106,slow=7.5,SNR=100
MJAR                               LR     LR       20 02 48.7
      comp=Z,1μm,19.9s,baz=110,slow=46
MAJO  Matsushiro        3.48 273  ePn     Pn       20 01 08.4 +0.9
MAJO  Matsushiro        3.48 273c iP      Pn       20 01 08.3 +0.7
MAJO                               pmax   pmax
      comp=Z,57nm,0.6s
MAT   Matsushiro        3.48 273   P      Pn       20 01 08.3 +0.7
MAT   Matsushiro        3.48 273   P      Pn       20 01 08.3 +0.7
MAT                                S      Sn       20 01 50.4 +2.6
MJB9  Matsu-Tunnel      3.48 273  ePn     Pn       20 01 08.4 +0.9
JHJ2  Mitsune           4.00 215  ePn     Pn       20 01 13.8 -0.8
JANG  Nango             4.01 349   P      Pn       20 01 12.0 -2.8
JANG                              eS      Sn       20 01 58.5 -2.2
JHJ   Hachijo jima 2    4.01 215   Pn     Pn       20 01 12.5 -2.3
      comp=Z,30nm,0.3s,baz=309,slow=21,SNR=20
JHJ                                Sn     Sn       20 01 58.9 -1.8
      comp=Z,108nm,0.3s,baz=284,slow=22,SNR=8.0
INU   Inuyama           4.60 258  ePn     Pn       20 01 22.1 -0.8
ERM   Erimo             5.59   5  ePn     Pn       20 01 33.2 -3.2
ERM   Erimo             5.59   5c iP      Pn       20 01 33.6 -2.8
ERM                                pmax   pmax
      comp=Z,16nm,0.7s
ASAJ  Asahikawa         7.67   0   Pn     Pn       20 02 02.6 -2.4
      comp=Z,7.3nm,0.3s,baz=241,slow=6.3,SNR=53
ASAJ                               Sn     Sn       20 03 26.1 -4.7
      comp=Z,1.6nm,0.3s,baz=24,slow=18,SNR=2.3
ASAJ  Asahikawa         7.67   0  ePn     Pn       20 02 02.2 -2.8
ASAJ                               Sn     Sn       20 03 26.1 -4.7
CBIJ  Chichi jima       9.32 182  ePn     Pn       20 02 24.2 -3.5
CBIJ                               Sn     Sn       20 04 00.2  -11
JCJ   Chichijima        9.32 182   Pn     Pn       20 02 23.6 -4.2
      baz=303,slow=16
JCJ                                Sn     Sn       20 04 00.2  -11
      baz=322,slow=19
TEY   Ternei            9.69 334  eP      Pn       20 02 38.0 +5.3
JNU   Nakatsue         10.14 254   Pn     Pn       20 02 37.0 -1.9
      comp=Z,0.3nm,0.3s,baz=92,slow=9.7,SNR=4.2
JNU                                LR     LR       20 06 38.0
      comp=Z,506nm,19.9s,baz=60,slow=38
JNU   Nakatsue         10.14 254  ePn     Pn       20 02 40.1 +1.2
YSS   Yuzh-Sakhalins   10.51   1  ePn     Pn       20 02 41.3 -2.6
YSS   Yuzh-Sakhalins   10.51   1κeP      Pn       20 02 41.8 -2.1
YSS                               eS      Sn       20 04 37.1 -3.3
YSS                                pmax   pmax
      comp=Z,30nm,0.8s
YSS                                MLR    MLR
      comp=Z,1μm,15.0s
YSS                                MLR    MLR
      comp=N,970nm,14.0s
MSHR  Mys Shultsa      10.71 308ceP       Pn       20 02 46.9 +0.3
USRK  Ussuriysk Ar.    11.16 317   Pn     Pn       20 02 52.5 -0.4
      baz=139,slow=42
USRK                               LR     LR       20 05 58.2
      comp=N,180nm,21.1s,baz=117,slow=31
KSRS  Korea Array      11.73 279   Pn     Pn       20 03 03.4 +2.7
      comp=N,0.2nm,0.3s,baz=95,slow=13,SNR=36
KSRS                               LR     LR       20 07 29.7
      comp=N,228nm,18.1s,baz=95,slow=37
KS01  Wonju Array Si   11.76 279  ePn     Pn       20 03 02.4 +1.4
KS15  Wonju Array Si   11.76 279  ePn     Pn       20 03 04.4 +3.3
KSAR  Wonju Array Be   11.76 279   Pn     Pn       20 03 03.4 +2.3
KSAR  Wonju Array Be   11.76 279   P      Pn       20 03 03.4 +2.3
TJN   Taejon           12.22 274⇓eP       Pn       20 03 08.4 +1.0
TYV   Tymovskoe        14.42   0  eP      Pn       20 03 34.7 -2.6
TYV                               eS      Sn       20 06 04.8  -11
TYV                                pmax   pmax
      comp=Z,11nm,1.5s
TYV                                smax   smax
      comp=E,7.0nm,1.4s
TYV                                MLR    MLR
      comp=E,1μm,15.0s
TYV                                MLR    MLR
      comp=Z,500nm,15.0s
CN2   Changchun        14.98 305  eP      P        20 03 48.8 -1.2
CN2                               eS      Sn       20 06 35.0 +5.3
CN2                                LR     LR
      comp=Z,1μm,12.0s
CN2                                LR     LR
      comp=Z,1μm,12.0s
CN2                                LR     LR
      comp=Z,890nm,13.0s
GRNR  Gornyy           14.98 345  eP      P        20 03 51.1 +1.0
GRNR                               pmax   pmax
      comp=Z,80nm,1.0s
KLR   Kul'dur          15.01 332   Pn     Pn       20 03 46.8 +1.6
      comp=Z,0.0nm,0.3s,baz=128,slow=12,SNR=13
KLR   Kul'dur          15.01 332⇑eP       Pn       20 03 43.8 -1.5
DL2   Dalian           16.73 285   P      P        20 04 09.8 +0.3
DL2                               eS      Sn       20 07 09.5 -2.7
DL2                                pmax   pmax
      comp=Z,240nm,6.9s
DL2                                LR     LR
      comp=Z,500nm,13.5s
DL2                                LR     LR
      comp=Z,940nm,13.2s
DL2                                LR     LR
      comp=Z,1μm,14.4s
PETK  Petropavlovsk-   19.77  28   P      P        20 04 42.4 -0.5
      baz=230,slow=11
PETK                               LR     LR       20 14 13.9
      comp=Z,329nm,18.3s,baz=220,slow=42
NJ2   Nanjing          20.04 264  eP      P        20 04 46.0 +0.1
NJ2                                S      S        20 08 28.5 -1.1
NJ2                                pmax   pmax
      comp=Z,12nm,0.5s
NJ2                                LR     LR
      comp=Z,680nm,13.0s
NJ2                                LR     LR
      comp=Z,1μm,14.4s
NJ2                                LR     LR
      comp=Z,820nm,14.4s
PET   Petropavlovsk    20.08  29  eP      Pn       20 04 52.1 +4.0
PET                                MLR    MLR
      comp=Z,400nm,19.0s
ZEA   Zeya             20.31 333  eP      P        20 04 48.9 +0.2
ZEA                                pmax   pmax
      comp=Z,20nm,0.7s
ZEA                                MLR    MLR
      comp=E,500nm,15.0s
ZEA                                MLR    MLR
      comp=Z,1μm,15.0s
ZEA                                MLR    MLR
      comp=N,700nm,16.0s
TIA   Tai'an           20.46 277   P      Pn       20 04 51.8 -0.9
TIA                                pmax   pmax
      comp=N,10.0nm,1.0s
TIA                                pmax   pmax
      comp=N,170nm,4.5s
TIA                                LR     LR
      comp=N,320nm,11.1s
TIA                                LR     LR
      comp=N,570nm,12.3s
TIA                                LR     LR
      comp=N,490nm,12.2s
BJI   Beijing          20.98 288  eP      P        20 04 55.0 -1.1
BJI                                pmax   pmax
      comp=N,12nm,1.3s
BJI                                LR     LR
      comp=N,610nm,13.5s
BJI                                LR     LR
      comp=N,790nm,13.7s
BJI                                LR     LR
      comp=N,290nm,13.2s
MA2   Magadan          23.76  10   P      P        20 05 24.2 -0.7
      comp=N,8.3nm,0.7s,baz=191,slow=12,SNR=7.5
MA2                                LR     LR       20 15 43.3
      comp=N,334nm,18.5s,baz=200,slow=39
MA2   Magadan          23.76  10  eP      P        20 05 26.4 +1.5
      comp=N,76nm,1.8s
MA2   Magadan          23.76  10⇓eP       P        20 05 25.8 +0.9
MA2                                pmax   pmax
      comp=Z,17nm,0.9s
TIY   Taiyuan          24.00 282  eP      P        20 05 28.8 +1.3
TIY                                S      S        20 09 38.5 -4.0
TIY                                pmax   pmax
      comp=Z,19nm,0.5s
TIY                                pmax   pmax
      comp=Z,220nm,5.1s
TIY                                LR     LR
      comp=Z,350nm,12.7s
TIY                                LR     LR
      comp=Z,1μm,14.2s
TIY                                LR     LR
      comp=Z,1μm,15.3s
WHN   Wuhan            24.18 264   P      P        20 05 28.3 -0.7
WHN                                pP     sP       20 05 39.3 -2.4
WHN                                S      S        20 09 43.3 -1.9
WHN                                LR     LR
      comp=Z,500nm,5.6s
WHN                                LR     LR
      comp=Z,2μm,13.6s
WHN                                LR     LR
      comp=Z,2μm,13.9s
CIT   Chita            25.73 316  eP      P        20 05 43.0  0.0
CIT                               e                20 05 53.8
CIT                               e                20 06 19.6
CIT                                pmax   pmax
      comp=Z,79nm,1.3s
YAK   Yakutsk          26.85 347   P      P        20 05 53.6 +0.7
      comp=Z,2.6nm,0.3s,baz=200,slow=23,SNR=8.2
YAK                                LR     LR       20 16 46.4
      comp=Z,372nm,19.9s,baz=118,slow=37
YAK   Yakutsk          26.85 347  eP      P        20 05 51.4 -1.5
YAK                               e*PP    pP       20 06 02.4 +0.6
YAK                               e                20 06 36.3
YAK                               eS      S        20 10 27.1 -0.1
YAK                               e*SS    sS       20 10 43.3 +1.4
YAK                               eSS     SnSn     20 11 33.9 +0.9
YAK                                pmax   pmax
      comp=Z,33nm,1.2s
YAK                                pmax   pmax
      comp=E,7.0nm,1.3s
YAK                                pmax   pmax
      comp=N,603nm,19.0s
YAK                                pmax   pmax
      comp=Z,15nm,0.9s
YAK                                pmax   pmax
      comp=N,11nm,1.0s
YAK                                pmax   pmax
      comp=E,5.0nm,0.8s
YAK                                smax   smax
      comp=E,37nm,2.6s
YAK                                smax   smax
      comp=N,16nm,2.2s
YAK                                MLR    MLR
      comp=Z,893nm,17.0s
YAK                                MLR    MLR
      comp=E,270nm,17.0s
YAK                                MLR    MLR
      comp=N,864nm,15.0s
H11N2 WAKE ISLAND Hy   27.07 121   T      T        20 34 09.2
      baz=313,slow=75,SNR=14
H11N1 WAKE ISLAND Hy   27.08 121   T      T        20 34 04.4
      baz=313,slow=75,SNR=12
H11N3 WAKE ISLAND Hy   27.09 121   T      T        20 34 07.0
      baz=313,slow=75,SNR=14
SEY   Seymchan         27.21  10   P      P        20 05 56.5 +0.3
      comp=N,5.1nm,0.8s,baz=189,slow=5.3,SNR=11
SEY   Seymchan         27.21  10⇓iP       P        20 05 57.3 +1.1
XAN   Xi'an            27.48 275   P      P        20 05 59.0  0.0
XAN                                pP     pP       20 06 09.0 +1.1
XAN                                sP     sP       20 06 13.0 +1.4
XAN                                PP     PnPn     20 06 48.5 +4.3
XAN                                S      S        20 10 38.0 +0.2
XAN                                sS     sS       20 10 53.3 +0.8
XAN                                pmax   pmax
      comp=N,21nm,1.2s
XAN                                pmax   pmax
      comp=N,130nm,4.4s
XAN                                LR     LR
      comp=N,310nm,13.4s
XAN                                LR     LR
      comp=N,500nm,14.1s
XAN                                LR     LR
      comp=N,550nm,13.8s
ENH   Enshi            28.18 267  eP      P        20 06 05.3  0.0
ENH                               epP     sP       20 06 16.6 -1.4
ULN   Ulaanbaatar      28.43 305  eP      P        20 06 08.8 +1.3
      comp=N,36nm,1.3s
ULN   Ulaanbaatar      28.43 305c iP      P        20 06 08.0 +0.5
ULN                                pmax   pmax
      comp=Z,18nm,1.3s
BOD   Bodaibo          28.51 328  eP      P        20 06 11.8 +4.0
BOD                                pmax   pmax
      comp=Z,50nm,1.4s
SONA1 Songino Array    28.86 305  eP      P        20 06 12.2 +1.0
SONM  Songino Array    28.86 305   P      P        20 06 12.3 +1.1
      comp=Z,8.3nm,1.0s,baz=107,slow=9.0,SNR=51
SONM                               LR     LR       20 17 05.9
      comp=Z,44nm,20.5s,baz=112,slow=35
LZH   Lanzhou          31.05 281  eP      P        20 06 32.0 +1.2
LZH                                pP     sP       20 06 42.0 -1.6
LZH                                sP     pP       20 06 48.0 +8.2
LZH                                PP     PnPn     20 07 33.0 +0.5
LZH                               eS      S        20 11 36.5 +2.3
LZH                                sS     sS       20 11 53.3 +4.3
LZH                                SS     SnSn     20 13 14.0 -2.2
LZH                                pmax   pmax
      comp=Z,38nm,1.0s
LZH                                pmax   pmax
      comp=Z,160nm,4.6s
LZH                                LR     LR
      comp=Z,820nm,13.0s
LZH                                LR     LR
      comp=Z,1μm,13.3s
LZH                                LR     LR
      comp=Z,2μm,15.2s
ZAK   Zakamensk        31.34 309  eP      P        20 06 33.8 +0.7
ZAK                                pmax   pmax
      comp=Z,14nm,1.6s
TLY   Talaya           31.39 311  eP      P        20 06 34.9 +1.4
TLY                               eS      S        20 11 37.6 -1.3
TLY                                pmax   pmax
      comp=Z,15nm,1.5s
TLY                                MLR    MLR
      comp=Z,349nm,14.0s
GYA   Guiyang          32.02 262  eP      P        20 06 38.3 -1.0
GYA                                pP     sP       20 06 53.3 +1.3
GYA                                PP     PnPn     20 07 48.0 +3.0
GYA                                S      S        20 11 48.8 -0.4
GYA                                sS     sS       20 12 08.5 +4.4
GYA                                SS     SnSn     20 13 41.5 +1.7
GYA                                pmax   pmax
      comp=Z,10.0nm,0.8s
GYA                                pmax   pmax
      comp=Z,100nm,4.8s
GYA                                LR     LR
      comp=Z,470nm,16.7s
GYA                                LR     LR
      comp=Z,420nm,17.4s
GYA                                LR     LR
      comp=Z,460nm,17.2s
CD2   Chengdu          32.58 272  eP      P        20 06 43.5 -0.6
CD2                                pP     sP       20 06 55.3 -1.6
CD2                                sP     pP       20 07 00.8 +7.7
CD2                                S      S        20 11 55.8 -2.0
CD2                                sS     sS       20 12 16.3 +3.7
CD2                                pmax   pmax
      comp=Z,10.0nm,0.5s
CD2                                pmax   pmax
      comp=Z,120nm,5.0s
CD2                                LR     LR
      comp=Z,930nm,13.1s
CD2                                LR     LR
      comp=Z,620nm,12.5s
CD2                                LR     LR
      comp=Z,630nm,13.5s
MOY   Mondy            33.00 311  eP      P        20 06 50.0 +2.3
GTA   Gaotai           33.60 288  eP      P        20 06 53.5 +0.4
GTA                                pP     sP       20 07 05.3 -0.5
GTA                                sP     pP       20 07 11.0 +9.0
GTA                                S      S        20 12 10.5 -3.1
GTA                                sS     sS       20 12 30.5 +2.0
GTA                                SS     SnSn     20 14 15.5 -2.4
GTA                                pmax   pmax
      comp=Z,7.0nm,1.3s
GTA                                pmax   pmax
      comp=Z,130nm,5.7s
GTA                                LR     LR
      comp=Z,250nm,12.0s
KMI   Kunming          35.77 263   P      P        20 07 12.0  0.0
KMI                                pP     pP       20 07 21.5 +0.4
KMI                                sP     sP       20 07 27.0 +2.2
KMI                                PP     PnPn     20 08 30.0 -2.3
KMI                                S      S        20 12 47.0 -0.5
KMI                                sS     sS       20 13 06.5 +4.1
KMI                                SS     SnSn     20 15 06.8 -4.1
KMI                                pmax   pmax
      comp=Z,8.0nm,1.2s
KMI                                pmax   pmax
      comp=Z,94nm,5.5s
KMI                                LR     LR
      comp=Z,290nm,15.6s
KMI                                LR     LR
      comp=Z,520nm,12.8s
KMI                                LR     LR
      comp=Z,470nm,12.0s
HVS   Khovu-Aksy       37.46 309⇓eP       P        20 07 27.4 +1.3
HVS                                pmax   pmax
      comp=Z,7.0nm,1.1s
UBPT  Khong Chiam      39.11 247   P      P        20 07 42.5 +2.4
      comp=Z,39nm,2.0s
NONG  Nongkai          39.18 253   P      P        20 07 42.7 +2.0
      comp=Z,0.5nm,1.6s,comp=Z,155nm
SKNT  Sakolnakorn      39.18 251   P      P        20 07 43.6 +2.8
      comp=Z,8.5nm,1.5s
KHON  Khomkaen         40.45 251   P      P        20 07 55.5 +4.2
      comp=Z,6.1nm,0.5s,comp=Z,767nm
CHAI  Chaiyaphum       41.35 251   P      P        20 08 00.3 +1.6
      comp=Z,5.0nm,1.2s
DGZ   Jazzator, Alta   41.46 306  i P     P        20 08 00.8 +1.3
DGZ                                pmax   pmax
      comp=Z,12nm,1.5s
WMQ   Urumqi           41.91 298   P      P        20 08 05.8 +2.7
WMQ                                pP     sP       20 08 17.8 +1.8
WMQ                                sP     pP       20 08 23.5  +11
WMQ                                S      S        20 14 16.0 -3.4
WMQ                                sS     sS       20 14 35.8 +1.4
WMQ                                ScS    ScS      20 17 57.0 -6.5
WMQ                                pmax   pmax
      comp=Z,39nm,1.5s
WMQ                                pmax   pmax
      comp=Z,380nm,4.1s
WMQ                                LR     LR
      comp=Z,600nm,11.5s
WMQ                                LR     LR
      comp=Z,880nm,13.7s
WMQ                                LR     LR
      comp=Z,280nm,17.1s
CMAR  Chiang Mai Arr   42.22 257   P      P        20 08 05.0 -0.9
      comp=Z,0.8nm,0.7s,baz=46,slow=5.5,SNR=4.4
CMAR                               LR     LR       20 27 27.9
      comp=Z,157nm,18.0s,baz=48,slow=39
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CMAR	Chiang Mai Arr	42.22	257	P	P	20 08 05.0	-0.9
CM01	Chiang Mai Arr	42.23	257	*e*P	P	20 08 04.7	-1.2
ZAA0	Zalesovo Array	42.98	313	*e*P	P	20 08 12.2	+0.6
	comp=Z,12nm,1.1s						
ZALV	Zalesovo Beam	42.98	313	P	P	20 08 11.5	-0.1
	comp=Z,2.9nm,0.6s,baz=98,slow=6.7,SNR=11						
ZALV				PcP	PcP	20 10 00.8	-0.7
	comp=Z,1.8nm,0.6s,baz=55,slow=3.6,SNR=3.8						
ZALV				LR	LR	20 25 54.3	
	comp=Z,84nm,19.5s,baz=65,slow=36						
LSA	Lhasa	43.16	276	*e*P	P	20 08 13.1	-0.8
	comp=Z,15nm,1.3s						
LSA	Lhasa	43.16	276	*e*P	P	20 08 13.1	-0.8
LSA				pmax	pmax		
	comp=Z,15nm,1.3s						
NVS	Novosibirsk	43.90	314	*e*P	P	20 08 18.7	-0.2
NVS				pmax	pmax		
	comp=N,3.0nm,1.3s						
NVS				pmax	pmax		
	comp=E,10.0nm,1.3s						
NVS				pmax	pmax		
	comp=Z,13nm,1.3s						
SHL	Shillong	44.30	271	P	P	20 08 22.4	-0.4
MK01	Makanchi Array	45.19	303	*e*P	P	20 08 29.6	+0.2
MK31	Makanchi Array	45.19	303	*e*P	P	20 08 30.0	+0.5
MK31	Makanchi Array	45.19	303	*i* P	P	20 08 29.3	-0.2
MK31				pmax	pmax		
	comp=Z,25nm,1.1s						
MKAR	Makanchi Array	45.19	303	P	P	20 08 29.7	+0.2
	comp=Z,6.2nm,0.9s,baz=90,slow=9.8,SNR=17						
MKAR				LR	LR	20 26 24.1	
	comp=Z,95nm,20.5s,baz=86,slow=35						
MKAR	Makanchi Array	45.19	303	*e*P	P	20 08 30.0	+0.5
	comp=Z,81nm,1.0s						
MKAR	Makanchi Array	45.19	303	*i* P	P	20 08 32.5	+3.0
MKAR				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MAKZ	Makanchi	45.40	303	*e*P	P	20 08 31.8	+0.7
	comp=Z,25nm,1.3s						
MAKZ	Makanchi	45.40	303	*e*P	P	20 08 31.8	+0.7
MAKZ				pmax	pmax		
	comp=Z,25nm,1.3s						
SVW2	Sparrevohn	45.45	37	*e*P	P	20 08 33.0	+1.7
	comp=Z,16nm,1.4s						
BRDH	Bariadhala	45.85	267	LR	LR	20 31 09.4	
	comp=Z,278nm,18.2s,baz=121,slow=40						
RSO	Redoubt South	46.82	38	*e*P	P	20 08 43.9	+1.6
KDAK	Kodiak Island	46.95	42	P	P	20 08 42.3	-0.8
	comp=Z,4.6nm,0.8s,baz=292,slow=4.7,SNR=8.5						
KDAK	Kodiak Island	46.95	42	*e*P	P	20 08 43.9	+0.9
	comp=Z,8.1nm,1.0s						
KDAK	Kodiak Island	46.95	42	*i* P	P	20 08 43.7	+0.7
KURK	Kurchatov	47.00	309	*e*P	P	20 08 43.7	+0.1
	comp=Z,21nm,1.0s						
KURK	Kurchatov	47.00	309*c*	*i*P	P	20 08 43.5	-0.1
KURK				pmax	pmax		
	comp=Z,26nm,1.7s						
KURBB	Kurchatov Arra	47.07	309	P	P	20 08 44.1	-0.1
	comp=Z,6.6nm,0.9s,baz=84,slow=8.1,SNR=29						
SKT	Skwentna	47.43	36	*e*P	P	20 08 50.1	+3.3
	comp=Z,5.7nm,1.1s						
SUA	Susitna One	47.80	37	*e*P	P	20 08 51.6	+1.8
	comp=Z,5.5nm,0.9s						
PDGK	Podgornoye	47.84	299	*i* P	P	20 08 50.0	-0.4
PDGK				pmax	pmax		
	comp=Z,33nm,1.3s						
MLY	Manley	47.88	32	*e*P	P	20 08 51.0	+0.7
	comp=Z,6.9nm,0.9s						
GHO	Glory Hole Cre	48.66	36	*e*P	P	20 08 55.0	-1.4
	comp=Z,6.9nm,1.0s						
SML	Sawmill	48.94	36	*e*P	P	20 08 58.8	+0.3
	comp=Z,6.7nm,1.0s						
SML	Sawmill	48.94	36	*e*P	P	20 08 58.8	+0.3
SML				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MDM	Murphy Dome	48.95	32	*e*P	P	20 08 59.8	+1.3
	comp=Z,8.1nm,0.8s						
WRH	Wood River Hil	49.00	33	*e*P	P	20 09 00.6	+1.8
	comp=Z,22nm,1.9s						
HDA	Harding Lake	49.50	33	*e*P	P	20 09 01.9	-0.8
	comp=Z,14nm,1.4s						
IL1	Eielson Array	49.52	32	*e*P	P	20 09 00.7	-2.1
ILAR	Eielson Array	49.52	32	P	P	20 09 02.8	-0.1
	comp=Z,4.4nm,0.8s,baz=265,slow=6.3,SNR=35						
ILB	Eielson Array	49.52	32	*e*P	P	20 09 03.8	+1.0
KLU	Klutina	50.11	36	*e*P	P	20 09 09.0	+1.5
	comp=Z,8.2nm,1.1s						
DIV	Divide	50.21	37	*e*P	P	20 09 09.6	+1.4
	comp=Z,8.6nm,1.0s						
TKM2	Tokmak 2	50.70	299	*i* P	P	20 09 13.2	+0.8
TKM2				pmax	pmax		
	comp=Z,20nm,1.2s						
BMRM	Bremner River	50.79	37	*e*P	P	20 09 13.5	+0.9
	comp=Z,9.9nm,1.0s						
SCRK	Sand Creek	50.81	33	*e*P	P	20 09 13.4	+0.6
	comp=Z,2.9nm,0.7s						
RAGM	Ragged Mountai	50.82	38	*e*P	P	20 09 14.3	+1.4
	comp=Z,7.9nm,0.9s						
FRU	Bishkek	51.41	299	*e*P	P	20 09 19.0	+1.5
FRU				*e*		20 09 32.0	
KSH	Kashi	51.47	295	P	P	20 09 22.8	+4.7
KSH				*e*sP	sP	20 09 40.8	+10
KSH				PcP	PcP	20 10 35.3	+3.2
KSH				PP	PP	20 11 20.0	+4.7
KSH				S	S	20 16 39.0	+2.8
KSH				ScS	ScS	20 19 05.3	-1.0
KSH				pmax	pmax		
	comp=Z,8.0nm,1.1s						
KSH				pmax	pmax		
	comp=Z,110nm,4.7s						
KSH				LR	LR		
	comp=Z,340nm,18.4s						
KSH				LR	LR		
	comp=Z,320nm,16.0s						
AAK	Ala-Archa	51.56	299	*e*P	P	20 09 18.4	-0.3
	comp=Z,8.2nm,1.1s						
AAK	Ala-Archa	51.56	299⇓	*i*P	P	20 09 19.8	+1.0
AAK				pmax	pmax		
	comp=Z,5.0nm,1.3s						
BVAR	Borovoye Array	51.63	313	P	P	20 09 19.4	+0.4
	comp=Z,1.6nm,0.8s,baz=73,slow=9.7,SNR=7.0						
BVAR				LR	LR	20 34 20.4	
	comp=Z,108nm,18.1s,baz=72,slow=40						
BRVK	Borovoye	51.69	313⇓	*e*P	P	20 09 20.1	+0.7
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
MNAS	Manas	53.00	299	P	P	20 09 31.0	+1.5
SFK	Sufi-Kurgan	53.10	296	*i* P	P	20 09 30.2	-0.1
SFK				pmax	pmax		
	comp=Z,30nm,1.4s						
KK31	Karatay Array	54.20	301	*e*P	P	20 09 39.4	+1.4
KK31	Karatay Array	54.20	301	*i* P	P	20 09 37.9	-0.2
KK31				pmax	pmax		
	comp=Z,22nm,1.2s						
KKAR	Karatay Array	54.20	301	*e*P	P	20 09 39.4	+1.4
KKAR	Karatay Array	54.20	301	*e*P	P	20 09 39.4	+1.4
GSI	Gunungsitoli	54.27	240	*e*P	P	20 09 39.4	+0.5
GSI				*e*pP	sP	20 09 50.5	-1.4
INK	Inuvik	54.51	27	P	P	20 09 40.5	+0.7
	comp=Z,2.8nm,0.7s,baz=304,slow=9.2,SNR=4.6						
SVE	Sverdlovsk	56.18	319⇑	*e*P	P	20 09 53.2	+1.1
SVE				pmax	pmax		
	comp=Z,21nm,1.4s						
SVE				MLR	MLR		
	comp=Z,354nm,18.0s						
WRAB	Tennant Creek	56.60	189⇑	*e*P	P	20 10 00.5	+5.1
WRAB				pmax	pmax		
	comp=Z,8.0nm,1.1s						
WRA	Warramunga Arr	56.61	189	P	P	20 09 54.3	-1.2
	comp=Z,3.6nm,0.9s,baz=10,slow=7.2,SNR=9.1						
ARU	Arti	57.40	319	*e*P	P	20 10 01.0	+0.3
	comp=Z,16nm,1.1s						
ARU	Arti	57.40	319*c*	*i*P	P	20 10 00.8	+0.1
ARU						20 10 52.7	
ARU						20 12 03.3	
ARU				S	S	20 17 55.5	+0.2
ARU						20 19 44.9	
ARU				SS	SS	20 21 37.5	-7.0
ARU				pmax	pmax		
	comp=Z,20nm,1.2s						
ARU				MLR	MLR		
	comp=Z,258nm,17.0s						
DLBC	Dease Lake	58.54	38	P	P	20 10 09.4	+0.5
	comp=Z,0.8nm,0.6s,baz=278,slow=14,SNR=3.2						
AB31	Akbulak array	59.01	311	*i* P	P	20 10 11.6	-0.5
AB31				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ABKAR	Akbulak array	59.01	311	*e*P	P	20 10 12.2	+0.1
AKTO	Aktyubinsk	59.74	313	LR	LR	20 38 17.3	
	comp=Z,107nm,18.1s,baz=59,slow=38						
AS01	Alice Springs	60.33	189	*e*P	P	20 10 20.2	-1.2
ASAR	Alice Springs	60.33	189	P	P	20 10 22.2	+0.8
	comp=Z,1.5nm,0.8s,baz=12,slow=5.5,SNR=9.2						
ASAR				LR	LR	20 34 27.4	
	comp=Z,53nm,20.9s,baz=332,slow=34						
SPITS	Spitsbergen Ar	61.28	349	LR	LR	20 40 11.0	
	comp=Z,180nm,18.8s,baz=85,slow=39						
PRGR	Permogore	61.75	327	*e*P	P	20 10 30.5	-0.1
PRGR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
DZM	Mont Dzumac	62.43	155	*e*LR	LR	20 29 10.8	
	comp=Z,163nm,20.4s						
DZM	Mont Dzumac	62.43	155	LR	LR	20 38 10.6	
	comp=Z,129nm,18.5s,baz=354,slow=37						
RES	Resolute Bay	62.95	15	P	P	20 10 39.3	+0.8
	comp=Z,6.7nm,0.7s,baz=169,slow=5.2,SNR=2.3						
YKA	Yellowknife Ar	63.87	30	P	P	20 10 45.5	+0.8
	comp=Z,2.5nm,0.8s,baz=297,slow=6.6,SNR=4.0						
YKA	Yellowknife Ar	63.87	30	*i* P	P	20 10 46.9	+2.2
YKA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KLMR	Klimovskoe	64.73	328	*e*P	P	20 10 49.4	-0.9
KLMR				*e*		20 13 12.4	
KLMR				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KLMR	Klimovskoe	64.73	328	*e*P	P	20 10 49.5	-0.9
KLMR				AMP		20 10 52.2	
	comp=Z,9.0nm,1.0s						
KLMR				*e*PP	PP	20 13 12.5	0.0
VRH	Novokhopyorsk	68.62	318	*e*P	P	20 11 14.5	-0.8
VRH				pmax	pmax		
	comp=Z,6.0nm,0.6s						
VRH				MLR	MLR		
	comp=Z,300nm,15.0s						
OBN	Obninsk	69.11	324⇓	*e*P	P	20 11 18.5	+0.2
OBN				*e*		20 11 42.6	
OBN				*e*		20 13 49.1	
OBN				*e*PPP	PPP	20 15 33.4	
OBN				pmax	pmax		
	comp=Z,29nm,1.3s						
LPSR	Galich'ya Gora	69.33	321	*e*P	P	20 11 19.5	-0.2
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
FIA1	FINESS Array S	69.75	333	*e*P	P	20 11 22.3	+0.1
FINES	FINESS Array B	69.75	333	P	P	20 11 22.6	+0.4
	comp=Z,3.0nm,0.7s,baz=60,slow=4.6,SNR=10						
FINES				LR	LR	20 44 39.7	
	comp=Z,180nm,18.3s,baz=57,slow=38						
VSR	Storozhevoye	69.97	319	*e*P	P	20 11 23.0	-0.7
VSR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
VSR				MLR	MLR		
	comp=Z,310nm,13.0s						
VORD	Divnogorie	70.04	319	*e*P	P	20 11 23.7	-0.4
VORD				pmax	pmax		
	comp=Z,7.0nm,1.0s						
SUMG	Summit	71.28	0	P	P	20 11 32.5	+0.7
SUMG				pmax	pmax		
	comp=Z,17nm,1.3s						
VSU	Vasula	71.42	330⇓	*e*P	P	20 11 32.4	0.0
VSU				pmax	pmax		
	comp=Z,31nm,1.1s						
NCK	Nalchik	71.67	311⇑	*e*P	P	20 11 35.5	+1.3
NCK				pmax	pmax		
	comp=Z,6.0nm,1.1s						
KBZ	Khabaz	71.97	311	P	P	20 11 36.8	+0.9
	comp=Z,4.6nm,0.8s,baz=103,slow=1.3,SNR=8.9						
KIV	Kislovodsk	71.97	312*d*	*i*P	P	20 11 37.6	+1.5
KIV				*i*		20 11 48.0	
KIV				*e*		20 11 56.4	
KIV				pmax	pmax		
	comp=Z,15nm,1.0s						
NEY	Neytrino	72.34	311⇓	*e*P	P	20 11 40.2	+1.8
GNI	Garni	72.78	307	LR	LR	20 48 40.8	
	comp=Z,55nm,18.2s,baz=54,slow=40						
GNI	Garni	72.78	307⇑	*e*P	P	20 11 43.1	+2.0
GNI				pmax	pmax		
	comp=Z,36nm,1.6s						
MFID	Camas Ranch	73.36	48	*e*P	P	20 11 44.8	+0.3
	comp=Z,11nm,1.4s						
LRM	Limekiln Ridge	73.94	45	*e*P	P	20 11 49.3	+1.3
SOC	Sochi	73.96	312	*e*P	P	20 11 49.1	+1.3
SOC				*e*PPP	PPP	20 16 15.9	
SOC				*e*S	S	20 21 17.2	-0.6
SOC				MLR	MLR		
	comp=Z,109nm,15.0s						
RYN	Ryan	74.37	53	*e*P	P	20 11 51.8	+1.3
	comp=Z,3.5nm,0.9s						
NV01	Mina Array Sit	74.62	54	*e*P	P	20 11 53.0	+1.0
NVAR	Mina Array Bea	74.62	54	P	P	20 11 53.2	+1.1
	comp=Z,2.2nm,0.7s,baz=287,slow=5.9,SNR=14						
HFS	Hagfors	75.00	336	P	P	20 11 54.0	+0.5
	comp=Z,1.8nm,0.8s,baz=57,slow=5.3,SNR=3.8						
HFS				LR	LR	20 49 57.1	
	comp=Z,215nm,18.2s,baz=40,slow=40						
HFS	Hagfors	75.00	336	P	P	20 11 54.0	+0.5
NB2	NORSAR Subarra	75.08	338	P	P	20 11 54.2	+0.2
	comp=Z,25nm,2.0s,baz=40,slow=5.9						
NOA	NORSAR Array B	75.08	338	P	P	20 11 54.5	+0.5
	comp=Z,2.0nm,1.0s,baz=38,slow=5.7,SNR=3.7						
NOA				LR	LR	20 49 09.5	
	comp=Z,187nm,19.3s,baz=35,slow=39						
AKASG	Malin Array Be	75.31	323	P	P	20 11 55.0	-0.4
	comp=Z,3.7nm,0.9s,baz=48,slow=6.9,SNR=11						
AKASG				LR	LR	20 46 20.8	
	comp=Z,25nm,19.2s,baz=50,slow=37						
AKASG	Malin Array Be	75.31	323	*i* P	P	20 11 55.0	-0.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
AKBB	Malin Array Si	75.31	323	*e*P	P	20 11 55.9	+0.5
	comp=Z,10nm,1.4s						
KIEV	Kiev	75.32	323	*e*P	P	20 11 55.5	-0.1
	comp=Z,9.1nm,1.3s						
KIEV	Kiev	75.32	323⇑	*e*P	P	20 11 55.4	-0.1
KIEV				pmax	pmax		
	comp=Z,10.0nm,1.7s						
HVU	Hansel Valley	76.14	48	*e*P	P	20 12 00.8	+0.2
	comp=Z,8.8nm,1.4s						
HVU	Hansel Valley	76.14	48	*e*P	P	20 12 00.8	+0.2
HVU				pmax	pmax		
	comp=Z,9.0nm,1.4s						
SIM	Simferopol'	76.38	316	P	P	20 12 00.3	-1.4
SIM				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SIM				MLR	MLR		
	comp=Z,190nm,14.1s						
BGU	Big Grassy Mou	76.50	49	*e*P	P	20 12 03.3	+0.6
	comp=Z,7.2nm,0.9s						
TPNV	Topopah Spring	76.81	54	*e*P	P	20 12 04.9	+0.4
	comp=Z,6.3nm,1.0s						
TPNV	Topopah Spring	76.81	54	*e*P	P	20 12 04.9	+0.4
TPNV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SHPR	Sheep Range	77.78	54	*e*P	P	20 12 12.6	+2.7
	comp=Z,4.7nm,1.1s						
CCUT	Cedar City	78.31	52	*e*P	P	20 12 13.7	+0.8
	comp=Z,3.7nm,1.1s						
LVV	L'vov	78.38	324	*e*P	P	20 12 13.2	+0.4
LCMT	Little Creek M	78.71	52	*e*P	P	20 12 17.2	+2.2
	comp=Z,3.7nm,0.9s						
KNB	Kanab	78.97	52	*e*P	P	20 12 18.7	+2.1
	comp=Z,6.7nm,1.1s						
KNB	Kanab	78.97	52	*e*P	P	20 12 18.7	+2.1
KNB				pmax	pmax		
	comp=Z,7.0nm,1.1s						
RAR	Rarotonga	79.09	127	LR	LR	20 45 56.2	
	comp=Z,129nm,18.6s,baz=281,slow=35						
BUR08	Bucovina Ar. S	79.32	322	*e*P	P	20 12 19.6	+1.4
BUR04	Bucovina Ar. S	79.33	322	*e*P	P	20 12 18.2	0.0
BRTR	Keskin Array B	79.91	312	P	P	20 12 21.8	+0.3
	comp=Z,1.7nm,1.0s,baz=116,slow=5.7,SNR=9.5						
BRTR				LR	LR	20 52 31.6	
	comp=Z,49nm,18.8s,baz=42,slow=39						
BRTR	Keskin Array B	79.91	312	*i* P	P	20 12 22.5	+0.9
BRTR				pmax	pmax		
	comp=Z,2.0nm,0.9s						
OJC	Ojcow	80.03	327	*e*P	P	20 12 22.9	+1.1
	comp=Z,11nm,1.1s						
OJC	Ojcow	80.03	327	*e*P	P	20 12 22.9	+1.1
OJC				pmax	pmax		
	comp=Z,11nm,1.1s						
NIE	Niedzica	80.39	326	P	P	20 12 24.4	+0.6
NIE				pmax	pmax		
	comp=Z,2.0nm,1.4s						
PV21	Cone Mtn., Par	80.41	49	*e*P	P	20 12 24.1	-0.4
	comp=Z,14nm,0.9s						
MLR	Muntele Rosu	80.41	320	LR	LR	20 53 37.1	
	comp=Z,200nm,18.1s,baz=68,slow=40						
PV14	Lion Creek, Pa	80.50	49	*e*P	P	20 12 26.9	+2.0
	comp=Z,7.3nm,0.9s						
PV17	East Wray Mesa	80.60	49	*e*P	P	20 12 27.2	+1.8
	comp=Z,21nm,1.4s						
PV18	Skein Mesa, Pa	80.65	49	*e*P	P	20 12 27.4	+1.7
	comp=Z,19nm,1.5s						
PV03	Paradox Valley	80.68	49	*e*P	P	20 12 27.9	+2.0
PV13	Radium Mtn., P	80.76	49	*e*P	P	20 12 27.9	+1.6
	comp=Z,8.0nm,1.0s						
OKC	Ostrava-Krasne	81.03	327	AMS	AMS	20 57 40.0	
	comp=Z,200nm,15.8s						
DPC	Dobruska-Polom	81.43	328	AMS	AMS	20 57 00.0	
	comp=Z,200nm,13.4s						
UPC	Upice	81.44	329	AMS	AMS	20 57 20.0	
	comp=Z,200nm,15.4s						
BRG	Berggiesshubel	82.02	330	*e*P	P	20 12 32.9	+0.5
	comp=Z,2.7nm,0.8s						
BRG	Berggiesshubel	82.02	330	*e*P	P	20 12 32.9	+0.5
BRG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PVCC	Panska Ves	82.03	329	AMS	AMS	20 53 40.0	
	comp=Z,200nm,16.1s						
CLL	Collm	82.05	331⇓	*i*P	P	20 12 33.0	+0.5
CLL	Collm	82.05	331⇓	*i*P	P	20 12 33.0	+0.5
GOPC	GO Pecny, Ondr	82.41	329	AMS	AMS	20 57 10.0	
	comp=Z,200nm,18.1s						
PRU	Pruhonice	82.45	329	AMS	AMS	20 55 10.0	
	comp=Z,200nm,17.0s						
MMAI	Mount Meron Ar	83.04	306	P	P	20 12 38.8	+0.7
	comp=Z,2.1nm,0.7s,baz=267,slow=25,SNR=5.9						
MMAI				LR	LR	20 52 58.3	
	comp=Z,35nm,18.5s,baz=10.0,slow=38						
KHC	Kasperske Hory	83.51	329	*e*P	P	20 12 39.3	-1.0
KHC				AMS	AMS	20 55 30.0	
	comp=Z,200nm,15.1s						
KHC	Kasperske Hory	83.51	329	*e*P	P	20 12 41.1	+0.9
	comp=Z,1.6nm,1.1s						
KHC	Kasperske Hory	83.51	329	*e*P	P	20 12 41.1	+0.9
KHC				pmax	pmax		
	comp=Z,2.0nm,1.1s						
PPT	Papeete	83.57	117	LR	LR	20 46 53.5	
	comp=Z,64nm,19.5s,baz=338,slow=34						
PPT2	Papeete2	83.58	117	*e*LR	LR	20 38 55.2	
	comp=Z,94nm,24.8s						
GERES	GERESS Array B	83.69	329	P	P	20 12 41.1	-0.1
	comp=Z,0.4nm,0.6s,baz=42,slow=6.1,SNR=5.8						
GERES				LR	LR	20 52 38.2	
	comp=Z,96nm,18.8s,baz=64,slow=38						
GEA0	GERESS Array S	83.69	329	*e*P	P	20 12 41.0	-0.2
VTS	Vitosha	83.85	320	*e*P	P	20 12 43.1	+0.9
	comp=Z,8.7nm,1.4s						
VTS	Vitosha	83.85	320	*e*P	P	20 12 43.1	+0.9
VTS				pmax	pmax		
	comp=Z,9.0nm,1.4s						
EKA	Eskdalemuir Ar	83.99	341	LR	LR	20 55 44.5	
	comp=Z,78nm,18.0s,baz=0.0,slow=40						
DIVS	Divibare	84.40	322	*e*P	P	20 12 44.2	-0.7
	comp=Z,6.1nm,1.2s						
KNT	Kendrikon	85.02	319	P	P	20 12 48.3	+0.3
KNT				pmax	pmax		
	comp=Z,3.0nm,2.1s						
TAOE	Nuku Hiva Isla	85.16	105	*e*LR	LR	20 39 36.9	
	comp=Z,169nm,24.9s						
BFO	Black Forest	86.26	331	*i* P	P	20 12 55.0	+1.0
DAVOX	Davos/Dischmat	86.90	330	LR	LR	20 53 31.5	
	comp=Z,79nm,18.1s,baz=48,slow=37						
TBI	Tubuai	87.45	121	*e*LR	LR	20 40 37.1	
	comp=Z,104nm,24.5s						
TX31	Lajitas Ar. Si	89.77	53	*e*P	P	20 13 12.4	+1.1
TXAR	Lajitas Array	89.77	53	P	P	20 13 11.4	+0.1
	comp=Z,1.0nm,0.7s,baz=295,slow=4.1,SNR=12						
KEST	Kesra	96.03	323	LR	LR	21 01 45.4	
	comp=Z,92nm,18.9s,baz=246,slow=38						
QSPA	South Pole Qui	126.18	180	PKP	PKPdf	20 19 13.6	-0.2
	comp=Z,1.5nm,0.8s,baz=303,slow=4.6,SNR=3.9						
SNAA	Sanae	140.44	196	PKhKP	PKPpre	20 19 31.7	
	comp=Z,0.7nm,0.8s,baz=299,slow=17,SNR=7.4						
LPAZ	La Paz	146.20	62	PKPbc	PKPdf	20 19 53.5	+0.6
	comp=Z,1.7nm,0.6s,baz=358,slow=4.7,SNR=8.1						

IDC ***25*** *20:01:32.1±0.7, 9°.73S×159°.89E, h0^{km}, mb4.3/19,*
mb1 4.4/19, mb1mx4.3/48, mbtmp4.3/19, MS3.5/8,
Ms1 3.5/8, ms1mx3.2/38, Error ellipse: s-maj=24.7km
s-min=8.7km az=108.0
ISCJB ***25*** *20:01:35.9±0.6, 9°.76S±0°.08×159°.8E±0°.1, h35^{km},*
mb4.2/21, MS3.5/6, Error ellipse: s-maj=19.8km
s-min=8.2km az=29.0
NEIC ***25*** *20:01:35.8±1.5, 9°.80S×159°.83E, h23^{km}±10^{km}, mb4.8/2,*
Error ellipse: s-maj=18.5km s-min=10.1km az=110.0
ISC 25 20:01:37.5±0.8**, 9°.71S**±0°.09×**159°.9E**±0°.2**, h35^{km}, n38,**
σ**1^{s}15**/30**, mb4.2**/20**, MS3.5**/6**, Bougainville-Solomon**
Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HNR	Honiara	0.28	10	Pn	Pn	20 01 44.0	-1.2
	8µm,0.3s,baz=175,slow=6.7,SNR=404						
HNR				Sn	Sn	20 01 50.0	-0.5
	18µm,0.3s,baz=13,slow=19,SNR=190						
HNR	Honiara	0.28	10	*i* P	Pn	20 01 43.0	-2.2
HNR				*i* S	Sn	20 01 50.0	-0.5
HNR	Honiara	0.28	10	*e*P	Pn	20 01 43.9	-1.4
HNR				Pn	Pn	20 01 44.0	-1.2
HNR				Sn	Sn	20 01 50.0	-0.5
PMG	Port Moresby	12.57	270	LR	LR	20 09 10.0	
	comp=Z,278nm,19.1s,baz=106,slow=36						
DZM	Mont Dzumac	13.80	154	LR	LR	20 09 50.8	
	comp=Z,226nm,18.4s,baz=342,slow=36						
CTAO	Charters Tower	16.73	230	*e*P	P	20 05 32.1	+0.9
	115nm,0.8s						
WRAB	Tennant Creek	26.67	245	*e*P	P	20 07 12.4	-1.0
	8.7nm,0.8s						
WRA	Warramunga Arr	26.68	245	P	P	20 07 12.6	-1.0
	11nm,0.8s,baz=72,slow=9.9,SNR=70						
STKA	Stephens Creek	27.83	215	P	P	20 07 22.6	-1.0
	6.5nm,0.7s,baz=52,slow=15,SNR=17						
STKA				LR	LR	20 18 05.8	
	comp=Z,121nm,19.2s,baz=19,slow=36						
ASAR	Alice Springs	28.43	238	P	P	20 07 27.3	-2.0
	2.1nm,0.6s,baz=61,slow=10.0,SNR=34						
H11S2	WAKE ISLAND Hy	28.82	13	T	T	20 36 15.5	
	baz=194,slow=76,SNR=27						
H11S3	WAKE ISLAND Hy	28.82	13	T	T	20 36 15.3	
	baz=194,slow=76,SNR=99						
H11S1	WAKE ISLAND Hy	28.83	13	T	T	20 36 16.6	
	baz=194,slow=76,SNR=12						
H11N1	WAKE ISLAND Hy	30.04	13	T	T	20 37 47.4	
	baz=193,slow=76,SNR=38						
H11N3	WAKE ISLAND Hy	30.05	13	T	T	20 37 50.7	
	baz=193,slow=76,SNR=49						
H11N2	WAKE ISLAND Hy	30.06	13	T	T	20 37 48.8	
	baz=193,slow=76,SNR=54						
RPZ	Rata Peaks	35.24	166	LR	LR	20 20 34.8	
	comp=Z,80nm,21.1s,baz=6.5,slow=32						
MJAR	Matsushiro Arr	50.33	337	P	P	20 10 30.7	-0.3
	0.9nm,0.6s,baz=172,slow=8.9,SNR=4.5						
JNU	Nakatsue	50.78	328	P	P	20 10 34.4	-0.1
	1.1nm,0.5s,baz=30,slow=4.0,SNR=4.1						
KSRS	Korea Array	55.66	329	P	P	20 11 12.1	+1.8
	0.8nm,0.6s,baz=146,slow=7.2,SNR=5.7						
KSRS				LR	LR	20 32 50.9	
	comp=Z,19nm,19.4s,baz=110,slow=34						
KSAR	Wonju Array Be	55.67	329	P	P	20 11 12.1	+1.7
ASAJ	Asahikawa	55.83	345	P	P	20 11 12.5	+1.2
	2.2nm,0.6s,baz=122,slow=30,SNR=8.9						
ASAJ				LR	LR	20 34 35.4	
	comp=Z,37nm,19.6s,baz=178,slow=36						
PETK	Petropavlovsk-	62.60	359	LR	LR	20 36 09.2	
	comp=Z,53nm,20.1s,baz=148,slow=33						
KLR	Kul'dur	63.69	340	P	P	20 12 05.8	+0.5
	0.1nm,0.5s,baz=109,slow=6.8,SNR=3.7						
CMAR	Chiang Mai Arr	66.33	295	P	P	20 12 23.7	+0.6
	1.2nm,0.6s,baz=136,slow=5.5,SNR=5.5						
VNDA	Vanda	67.80	180	P	P	20 12 31.6	+0.2
	3.0nm,0.7s,baz=337,slow=5.9,SNR=19						
VNDA				LR	LR	20 38 14.2	
	comp=Z,41nm,18.2s,baz=346,slow=32						
SEY	Seymchan	72.66	356	P	P	20 13 01.8	+0.5
	2.0nm,0.7s,baz=139,slow=4.8,SNR=5.4						

SONM	Songino Array	74.26	326	P	P	20 13 12.5	+1.3
	1.6nm,0.7s,baz=132,slow=6.0,SNR=11						
QSPA	South Pole Qui	80.28	180	P	P	20 13 44.6	-0.1
	1.8nm,0.5s,baz=242,slow=0.6,SNR=11						
PALK	Pallekele	80.66	279	P	P	20 13 48.0	+0.3
	10.0nm,0.9s,baz=116,slow=4.2,SNR=2.5						
ILAR	Eielson Array	84.17	20	P	P	20 14 04.2	-0.6
	1.3nm,0.5s,baz=250,slow=5.1,SNR=13						
MKAR	Makanchi Array	88.65	318	P	P	20 14 26.7	-0.5
	2.7nm,0.9s,baz=100,slow=5.7,SNR=12						
ZALV	Zalesovo Beam	89.15	325	P	P	20 14 30.7	+1.4
	0.8nm,0.6s,baz=122,slow=5.2,SNR=3.7						
NVAR	Mina Array Bea	89.61	51	P	P	20 14 33.7	+1.5
	0.5nm,0.6s,baz=255,slow=6.4,SNR=4.2						
KURK	Kurchatov	91.97	321	P	P	20 14 41.6	-0.9
KURBB	Kurchatov Arra	92.00	321	P	P	20 14 41.7	-1.0
	0.6nm,0.7s,baz=113,slow=3.2,SNR=7.0						
BVAR	Borovoye Array	97.38	322	P	Pdif	20 15 05.9	-1.5
	0.5nm,0.6s,baz=77,slow=6.5,SNR=3.1						
BRTR	Keskin Array B	123.81	312	PKP	PKPdf	20 20 31.0	-1.4
	0.4nm,0.7s,baz=139,slow=3.1,SNR=2.6						

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*KRNET **25** 20:13:40.1±0.1, 42°.96N×78°.28E, h20^{km}, mb3.0*
*SOME **25** 20:13:40.0, 42°.95N×78°.25E, h5^{km}*
*NNC **25** 20:13:40.9±3.0, 43°.07N×78°.32E, h0^{km}, mb2.8, mpv2.4, Error ellipse: s-maj=105.9km s-min=12.4km az=168.0*
ISC 25 20:13:40.5±1.1**, 42°.99N**±0°.02×**78°.25E**±0°.02**, h3**^{km}±9^{km}**, n48,** σ1s.**17**/93**, 28C-10D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SATY	Saty	0.13	57	⇑*i*P	Pg	20 13 43.3	+0.2
	95nm,0.1s						
SATY				⇓*i*S	Sg	20 13 45.5	+0.6
	692nm,0.1s						
ZHN	Zhinishke	0.22	36	*e*P	Pg	20 13 45.1	+0.3
	baz=28						
ZHN				*e*S	Sg	20 13 48.9	+1.1
	baz=28						
ZHN	Zhinishke	0.22	36	*e*P	Pg	20 13 45.1	+0.3
	141nm,0.1s						
ZHN				*e*S	Sg	20 13 49.0	+1.1
	2μm,0.2s						
KURS	Kuram	0.50	353	*e*P	Pg	20 13 50.5	+0.3
	baz=51						
KURS				*e*S	Sb	20 13 58.2	-1.5
	baz=51						
KURS	Kuram	0.50	353	*e*P	Pg	20 13 50.5	+0.3
	3.7nm,0.1s						
KURS				*e*S	Sb	20 13 58.2	-1.5
	32nm,0.3s						
PRZ	Przheval'sk	0.52	168	⇑*i*P	Pg	20 13 50.0	-0.4
	baz=68						
PRZ				⇑*i*S	Sg	20 13 57.1	+0.1
	baz=68						
KPKS	Kokpek	0.57	33	*e*P	Pg	20 13 51.4	-0.1
	baz=30						
KPKS				*e*S	Sg	20 13 59.9	+1.0
	baz=30						
KPKS	Kokpek	0.57	33	*e*P	Pg	20 13 51.4	-0.1
	19nm,0.1s						
KPKS				*e*S	Sg	20 13 59.9	+1.0
	61nm,0.2s						
UZB	Uzynbulak	0.58	74	*e*P	Pg	20 13 50.9	-0.8
	baz=71						
UZB				*e*S	Sg	20 13 59.0	-0.3
	baz=71						
UZB	Uzynbulak	0.58	74	*e*P	Pg	20 13 50.9	-0.8
	31nm,0.1s						
UZB				*e*S	Sg	20 13 59.0	-0.3
	137nm,0.2s						
KOTS	Kotyrbulak	0.87	287	*e*P	Pg	20 13 56.9	-0.3
	3.4nm,0.1s						
KOTS				*e*S	Sg	20 14 09.1	+0.6
	35nm,0.2s						
MDOK	Medeo	0.90	282	*e*P	Pg	20 13 57.1	-0.6
	baz=83						
MDOK				*e*S	Sg	20 14 09.2	-0.2
	baz=83						
MDOK	Medeo	0.90	282	*e*P	Pg	20 13 57.1	-0.6
	3.3nm,0.2s						
MDOK				*e*S	Sg	20 14 09.2	-0.2
	12nm,0.2s						
SHLS	Shalkode	0.90	79	*e*P	Pn	20 14 02.1	+2.0
	baz=80						
SHLS				*e*S	Sn	20 14 18.4	+4.7
	baz=80						
SHLS	Shalkode	0.90	79	*e*P	Pn	20 14 02.1	+2.0
	14nm,0.2s						
SHLS				*e*S	Sn	20 14 18.4	+4.7
	19nm,0.3s						
TNSS	Tian-Shan	0.96	273	⇑*i*P	Pg	20 13 58.8	-0.1
	baz=75						
TNSS				⇑*e*S	Sb	20 14 11.9	-1.3
	baz=75						
TNSS	Tian-Shan	0.96	273	⇑*i*P	Pg	20 13 58.8	-0.1
	2.1nm,0.2s						
TNSS				*e*S	Sb	20 14 11.9	-1.3
	18nm,0.3s						
PDGK	Podgornoye	0.97	69	⇑P	Pg	20 13 57.5	-1.5
	3.9nm,0.4s						
PDGK				⇑S	Sg	20 14 10.6	-0.9
	5.4nm,0.4s						
PDGK	Podgornoye	0.97	69	⇓*i*P	Pg	20 13 57.7	-1.3
	baz=67						
PDGK				⇓*i*S	Sg	20 14 10.4	-1.2
	baz=67						
MNBS	Baschi	1.10	6	*e*P	Pg	20 14 01.2	-0.3
	0.1nm,0.1s						
MNBS				*e*S	Sb	20 14 16.4	-0.5
	23nm,0.1s						
IZV	Izvestkoviy	1.20	273	*e*P	Pb	20 14 02.8	-1.2
	baz=74						
IZV				*e*S	Sg	20 14 19.3	+0.1
	baz=74						
IZV	Izvestkoviy	1.20	273	*e*P	Pb	20 14 02.8	-1.2
	4.9nm,0.1s						
IZV				*e*S	Sg	20 14 19.3	+0.1
	21nm,0.4s						
ARXS	Arharly	1.26	346	*e*P	Pn	20 14 04.3	-0.7
	2.9nm,0.2s						
ARXS				*e*S	Sn	20 14 21.9	-0.7
	37nm,0.2s						
CHKK	Chushkaly	1.27	314	*e*P	Pb	20 14 04.5	-0.4
	baz=14						
CHKK				*e*S	Sn	20 14 21.8	-0.7
	baz=14						
CHKK	Chushkaly	1.27	314	*e*P	Pb	20 14 04.5	-0.4
	7.8nm,0.1s						
CHKK				*e*S	Sn	20 14 21.8	-0.7
	32nm,0.2s						
MTBS	Maitube	1.34	277	*e*P	Pb	20 14 05.7	-0.6
	baz=78						
MTBS				*e*S	Sg	20 14 24.1	+0.4
	baz=78						
MTBS	Maitube	1.34	277	*e*P	Pb	20 14 05.7	-0.6
	3.3nm,0.2s						
MTBS				*e*S	Sg	20 14 24.0	+0.4
	10nm,0.2s						
KTBS	Karatobe	1.36	303	*e*P	Pb	20 14 05.8	-0.7
	11nm,0.1s						
KTBS				*e*S	Sg	20 14 24.3	+0.3
	8.1nm,0.2s						
KTMS	Ketmen	1.60	73	*e*P	Pn	20 14 08.8	-1.0
	baz=71						
KTMS				*e*S	Sn	20 14 30.0	-1.0
	baz=71						
KTMS	Ketmen	1.60	73	*e*P	Pn	20 14 08.8	-1.0
	7.8nm,0.1s						
KTMS				*e*S	Sn	20 14 30.0	-1.0
	16nm,0.2s						
ULHL	Ulahol	1.66	244	⇑*i*P	Pb	20 14 10.4	-1.4
	baz=45						
ULHL				⇑*i*S	Sb	20 14 31.7	-1.4
	baz=45						
KUU	Kurty	1.66	304	⇑*i*P	Pb	20 14 11.2	-0.5
	baz=4.0						
KUU				⇓*i*S	Sg	20 14 33.7	-0.2
	baz=4.0						
KUU	Kurty	1.66	304	⇑*i*P	Pb	20 14 11.2	-0.5
	5.7nm,0.2s						
KUU				⇓*i*S	Sg	20 14 33.7	-0.2
	24nm,0.3s						
KST	Kastek	1.68	273	*e*P	Pb	20 14 11.4	-0.7
	baz=74						
KST				⇓*i*S	Sb	20 14 33.6	-0.1
	baz=74						
KST	Kastek	1.68	273	*e*P	Pb	20 14 11.4	-0.7
	2.2nm,0.5s						
KST				⇓*i*S	Sb	20 14 33.5	-0.1
	10.0nm,0.9s						
DJR	Jarkent	1.75	39	⇓*i*P	Pb	20 14 12.4	-0.8
	10nm,0.3s						
DJR				⇓*i*S	Sg	20 14 36.4	-0.2
	9.1nm,0.3s						
BOOM	Boomskoye usch	1.77	255	⇑*i*P	Pb	20 14 12.6	-1.1
	baz=56						
BOOM				⇑*i*S	Sg	20 14 36.8	-0.7
	baz=56						
DGS	Degeres	1.83	279	*e*P	Pb	20 14 14.2	-0.5
	baz=80						
DGS				*e*S	Sg	20 14 38.6	-0.8
	baz=80						
DGS	Degeres	1.83	279	*e*P	Pb	20 14 14.2	-0.5
	3.0nm,0.1s						
DGS				*e*S	Sg	20 14 38.5	-0.8
	18nm,0.3s						
TKM2	Tokmak 2	1.95	269	⇑Pg	Pb	20 14 16.2	-0.6
	0.6nm,0.3s						
TKM2				⇑Lg	Lg	20 14 42.6	
	8.4nm,0.5s						
TKM2	Tokmak 2	1.95	269	⇑*i*P	Pb	20 14 15.6	-1.2
	baz=70						
TKM2				⇑*i*S	Sb	20 14 41.1	-0.4
	baz=70						
KZA	Kyzart	2.40	249	⇑*i*P	Pn	20 14 21.0	0.0
	baz=50						
KZA				⇑*i*S	Sn	20 14 51.5	+0.5
	baz=50						
KAPS	Kapalarasan	2.43	19	*e*P	Pb	20 14 25.2	+0.4
	2.0nm,0.2s						
KAPS				*e*S	Sg	20 14 57.6	-1.0
	19nm,0.4s						
KBK	Karagaybulak	2.45	263	⇑*i*P	Pn	20 14 22.5	+1.0
	baz=64						
KBK				⇑*i*S	Sn	20 14 52.8	+0.7
	baz=64						
USP	Ospenovka	2.76	277	⇑*i*P	Pn	20 14 26.9	+1.3
	baz=78						
USP				⇑*i*S	Sn	20 15 00.7	+1.2
	baz=78						
AAK	Ala-Archa	2.79	264	⇑Pg	Pg	20 14 37.7	+3.9
	0.6nm,0.3s						
AAK				⇓Lg	Lg	20 15 07.8	
	1.7nm,0.3s						
EKS2	Erkin-Say	3.31	266	⇑*i*P	Pn	20 14 34.5	+1.3
	baz=66						
EKS2				⇑*i*S	Sn	20 15 13.5	+0.4
	baz=66						
MK31	Makanchi Array	4.76	36	Pn	Pn	20 14 54.4	+1.2
	0.2nm,0.2s,baz=85,slow=12,SNR=11						
MK31				⇑Lg	Lg	20 16 08.1	
	0.1nm,0.3s,baz=216,slow=29,SNR=3.8						

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*IDC **25** 20:33:28.1±1.3, 17°.62N×120°.92E, h0^{km}, mb3.4/5, mb1 3.5/5, mb1mx3.2/55, mbtmp3.4/5, Error ellipse: s-maj=184.0km s-min=20.4km az=67.0*
*ISCJB **25** 20:33:30.0±0.9, 17°.5N±0°.1×120°.6E±0°.1, h22^{km}, mb3.3/5, Error ellipse: s-maj=23.2km s-min=16.5km az=138.5*
ISC 25 20:33:31.7±1.1**, 17°.5N**±0°.2×**120°.7E**±0°.2**, h22**^{km}**, n9,** σ**0s.79**/6**, mb3.2**/5**, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CVP	Callao Caves	1.05	80	*i* P	Pn	20 33 51.2	+0.1
SONM	Songino Array	32.43	342	P	P	20 40 00.4	+0.2
	0.1nm,0.6s,baz=134,slow=8.3,SNR=3.6						
WRA	Warramunga Arr	39.56	160	P	P	20 41 01.2	-0.1
	0.2nm,0.6s,baz=340,slow=9.2,SNR=3.1						
ASAR	Alice Springs	42.92	162	P	P	20 41 29.3	+0.4
	0.2nm,0.4s,baz=338,slow=6.9,SNR=6.0						
H11S3	WAKE ISLAND Hy	43.62	81	T	T	21 26 48.2	
	baz=280,slow=74						
H11S1	WAKE ISLAND Hy	43.63	81	T	T	21 26 49.0	
	baz=280						
H11S2	WAKE ISLAND Hy	43.64	81	T	T	21 26 51.1	
	baz=280,slow=74						
KURBB	Kurchatov Arra	47.08	324	P	P	20 42 02.5	+0.7
	0.4nm,0.7s,baz=122,slow=7.1,SNR=3.2						
HFS	Hagfors	83.15	331	P	P	20 45 54.7	-1.1
	0.6nm,0.7s,baz=49,slow=4.4,SNR=4.0						

MEX 25 20:52:01.2±35.0**, 25°.18N×99°.17W, h20**^{km}±999^{km}**, MD3.5, Northern Mexico**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LNIG	Linares	0.39	224	*e*P	Pb	20 52 08.1	-1.2
	baz=242,slow=12						
LNIG				*i* S	Sb	20 52 12.8	-2.1

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*ISCJB **25** 20:59:39.0±0.4, 24°.44N±0°.02×122°.37E±0°.02, h69^{km}±5^{km}, Error ellipse: s-maj=3.8km s-min=2.6km az=163.3*
*JMA **25** 20:59:39.0±0.1, 24°.39N×122°.35E, h74^{km}±2^{km}, M1.9*
*TAP **25** 20:59:39.4, 24°.47N×122°.27E, h79^{km}, ML2.7, C*
ISC 25 20:59:39.3±1.3**, 24°.44N**±0°.03×**122°.36E**±0°.02**, h71**^{km}±8^{km}**, n66,** σ**0s.83**/127**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1	0.24	297	P	Pn	20 59 50.7	+0.6
	baz=296						
EOS1				S	Sn	20 59 59.3	+1.3
	baz=296						
TWC	Suao	0.50	290	P	Pn	20 59 52.0	-0.1
	baz=295						
TWC				*e*S	Sn	21 00 01.1	-0.4
	baz=295						
ENAH	Nanao	0.50	271	P	Pn	20 59 52.4	+0.2
	baz=265						
ENAH				*e*S	Sn	21 00 01.9	+0.2
	baz=265						
JYNG	Yonagunijimaku	0.53	89	P	Pn	20 59 52.7	+0.3
JYNG				S	Sn	21 00 02.5	+0.4
NANB	Nanao	0.56	269	P	Pn	20 59 52.8	+0.1
	baz=265						
NANB				*e*S	Sn	21 00 02.4	-0.2
	baz=265						
EGS		0.56	316	*e*P	Pn	20 59 52.7	-0.1
	baz=322						
EGS				*e*S	Sn	21 00 02.7	0.0
	baz=322						
ENA	Nanau	0.57	269	P	Pn	20 59 52.9	+0.1
	baz=265						
ENA				*e*S	Sn	21 00 02.8	0.0
	baz=265						
YOJ	Yonaguni jima	0.59	88	*e*P	Pn	20 59 53.1	+0.1
	baz=90						
YOJ				*e*S	Sn	21 00 03.5	+0.3
	baz=90						
YOJ	Yonaguni jima	0.59	88	P	Pn	20 59 53.2	+0.1
YOJ				*e*S	Sn	21 00 03.6	+0.4
NTC	Toucheng	0.64	310	*e*P	Pn	20 59 53.4	-0.1
	baz=317						
NTC				*e*S	Sn	21 00 03.4	-0.6
	baz=317						
TWE	Neicheng	0.69	294	P	Pn	20 59 54.2	+0.1
	baz=295						
TWE				*e*S	Sn	21 00 04.7	-0.4
	baz=295						
TIPB	Shuangxi	0.72	317	P	Pn	20 59 54.2	-0.3
	baz=321						
TIPB				*e*S	Sn	21 00 05.0	-0.7
	baz=321						
NACB	Ninganchiao	0.75	249	P	Pn	20 59 54.4	-0.4
	baz=245						
NACB				*e*S	Sn	21 00 05.9	-0.4
	baz=245						
ENTT	Nioudou	0.75	285	P	Pn	20 59 55.3	+0.4
	baz=289						
ENTT				*e*S	Sn	21 00 06.4	+0.1
	baz=289						
TWD	Chiawan	0.79	243	P	Pn	20 59 55.0	-0.2
	baz=232						
TWD				*e*S	Sn	21 00 06.8	-0.2
	baz=232						
NWF	Wu-fen Shan	0.82	320	*e*P	Pn	20 59 55.3	-0.4
	baz=315						
NWF				*e*S	Sn	21 00 06.9	-1.0
	baz=315						
WFSB	Wu-fen Shan	0.82	320	*e*P	Pn	20 59 55.4	-0.2
	baz=317						
WFSB				*e*S	Sn	21 00 06.7	-1.0
	baz=317						
NWLT	Wulai	0.85	293	*e*P	Pn	20 59 56.5	+0.5
	baz=298						
NWLT				*e*S	Sn	21 00 08.4	0.0
	baz=298						
ENLB	Shoufeng	0.88	233	*e*P	Pn	20 59 56.2	-0.1
	baz=220						
ENLB				*e*S	Sn	21 00 09.2	+0.2
	baz=220						
NNSB	Datong	0.89	269	*e*P	Pn	20 59 56.6	0.0
	baz=262						
NNSB				*e*S	Sn	21 00 09.5	0.0
	baz=262						
NNSH	Datong	0.89	269	*e*P	Pn	20 59 56.6	0.0
	baz=262						
NNSH				*e*S	Sn	21 00 09.4	-0.1
	baz=262						
NNS	Nan Shan	0.90	270	*e*P	Pn	20 59 57.0	+0.2
	baz=263						
NNS				*e*S	Sn	21 00 09.5	-0.2
	baz=263						
YHNB	Yeheng	0.93	284	P	Pn	20 59 57.2	+0.3
	baz=276						
YHNB				*e*S	Sn	21 00 10.3	+0.1
	baz=276						
NSK	Sanguang	0.94	285	*e*P	Pn	20 59 57.5	+0.4
	baz=276						
NSK				*e*S	Sn	21 00 10.5	0.0
	baz=276						
YM07	YM07	1.00	317	*e*P	Pn	20 59 57.6	-0.2
	baz=313						
YM07				*e*S	Sn	21 00 10.5	-1.1
	baz=313						
YM11	YM11	1.02	315	*e*P	Pn	20 59 58.6	+0.5
	baz=318						
YM11				*e*S	Sn	21 00 11.7	-0.5
	baz=318						
YM10	YM10	1.02	314	*e*P	Pn	20 59 57.4	-0.7
	baz=317						
YM10				*e*S	Sn	21 00 10.7	-1.4
	baz=317						
YM08	YM08	1.02	317	*e*S	Sn	21 00 10.3	-1.9
	baz=312						
YM04	YM04	1.03	314	*e*P	Pn	20 59 57.8	-0.5
	baz=316						
YM04				*e*S	Sn	21 00 11.1	-1.3
	baz=316						
WHF	Hehuan Shan	1.04	254	P	Pn	20 59 58.8	+0.1
	baz=250						
WHF				*e*S	Sn	21 00 12.9	-0.3
	baz=250						
ESL	Shilin	1.05	234	*e*P	Pn	20 59 58.0	-0.5
	baz=239						
ESL				*e*S	Sn	21 00 12.3	-0.5
	baz=239						
TWS1	Kuangyinshan	1.08	308	*e*P	Pn	20 59 58.5	-0.4
	baz=315						
TWS1				*e*S	Sn	21 00 12.9	-0.5
	baz=315						
TWT	Tachien	1.10	260	*e*P	Pn	21 00 00.2	+1.0
	baz=258						
TWT				*e*S	Sn	21 00 14.3	+0.3
	baz=258						
TDCB	Techi	1.11	261	P	Pn	21 00 00.0	+0.6
	baz=258						
TDCB				*e*S	Sn	21 00 14.3	-0.1
	baz=258						
CHGB	Renai	1.15	251	*e*P	Pn	21 00 00.2	+0.3
	baz=241						
CHGB				*e*S	Sn	21 00 15.6	+0.3
	baz=241						
EGFH	Guangfu	1.15	228	*e*P	Pn	20 59 59.0	-0.7
	baz=218						
EGFH				*e*S	Sn	21 00 14.1	-0.9
	baz=218						
LIOB	Emei	1.24	280	*e*P	Pn	21 00 01.3	+0.4
	baz=279						
LIOB				*e*S	Sn	21 00 16.9	-0.3
	baz=279						
IRIF	Iriomote-Funau	1.25	95	P	Pn	21 00 01.2	+0.2
IRIF				S	Sn	21 00 17.6	+0.4
NSTT	Nanjuang	1.25	279	*e*P	Pn	21 00 01.4	+0.3
	baz=278						
NSTT				*e*S	Sn	21 00 17.1	-0.3
	baz=278						
EHY	Hungye	1.33	226	*e*P	Pn	21 00 00.9	-1.2
	baz=222						
EHY				*e*S	Sn	21 00 17.4	-1.8
	baz=222						
YULB	Yu-li	1.43	223	*e*P	Pn	21 00 02.7	-0.7
	baz=220						
YULB				*e*S	Sn	21 00 19.6	-1.8
	baz=220						
SSLB	Suanglung	1.44	243	*e*P	Pn	21 00 03.9	+0.3
	baz=237						
SSLB				*e*S	Sn	21 00 21.7	-0.1
	baz=237						
SMLT	Sun Moon Lake	1.45	248	*e*P	Pn	21 00 04.2	+0.5
	baz=239						
SMLT				*e*S	Sn	21 00 23.1	+1.0
	baz=239						
TWF1	Yuli	1.46	222	*e*P	Pn	21 00 03.2	-0.5
	baz=226						
TWF1				*e*S	Sn	21 00 20.5	-1.6
	baz=226						
TYC	Yuchr	1.48	249	*e*P	Pn	21 00 04.5	+0.5
	baz=240						
TYC				*e*S	Sn	21 00 23.2	+0.7
	baz=240						
JKRS	Kuro-shima	1.52	97	P	Pn	21 00 05.0	+0.6
JKRS				*e*S	Sn	21 00 24.4	+1.0
FULB	Fuli	1.58	219	*e*P	Pn	21 00 05.8	+0.5
	baz=208						
FULB				*e*S	Sn	21 00 24.4	-0.6
	baz=208						
YUS	Yu-Shan	1.60	234	*e*P	Pn	21 00 06.4	+0.4
	baz=225						
YUS				*e*S	Sn	21 00 25.9	-0.4
	baz=225						
WJS	Zhushan	1.62	248	*e*P	Pn	21 00 06.9	+1.1
	baz=257						
WJS				*e*S	Sn	21 00 28.2	+2.3
	baz=257						
CHKT	Chengkung	1.62	215	*e*P	Pn	21 00 05.1	-0.7
	baz=204						
CHKT				*e*S	Sn	21 00 24.3	-1.6
	baz=204						
JIJ	Ishigaki jima	1.62	92	P	Pn	21 00 05.9	0.0
JIJ				S	Sn	21 00 25.4	-0.6
WNT	Mingjian	1.63	250	*e*S	Sn	21 00 27.9	+1.6
	baz=259						
ALS	Alishan	1.70	237	*e*S	Sn	21 00 29.0	+0.7
	baz=228						
ELDTW	Lidau	1.75	225	*e*P	Pn	21 00 07.4	-0.3
	baz=219						
ELDTW				*e*S	Sn	21 00 27.9	-1.4
	baz=219						
CHN5	Tsauling	1.75	242	*e*P	Pn	21 00 09.5	+1.7
	baz=231						
CHN5				*e*S	Sn	21 00 31.1	+1.8
	baz=231						
JISG	Ishigakijimahi	1.78	85	P	Pn	21 00 07.9	-0.1
JISG				*e*S	Sn	21 00 29.3	-0.4
TWH	Lutao	1.91	205	*e*P	Pn	21 00 09.0	-0.7
	baz=202						
TWH				*e*S	Sn	21 00 31.0	-1.8
	baz=202						
STYT	Tauyuan	1.94	229	*e*P	Pn	21 00 11.1	+0.8
	baz=227						
STYT				*e*S	Sn	21 00 34.6	+0.8
	baz=227						
TPUB	Ta-pu	1.95	235	*e*P	Pn	21 00 11.3	+1.0
	baz=232						
TPUB				*e*S	Sn	21 00 35.1	+1.2
	baz=232						
WTP	Ta-pu	2.00	234	*e*P	Pn	21 00 12.1	+1.2
	baz=231						
WTP				*e*S	Sn	21 00 36.7	+1.7
	baz=231						
TWGBT	Beinan	2.00	216	*e*P	Pn	21 00 10.2	-0.7
	baz=213						
TWGBT				*e*S	Sn	21 00 33.3	-1.7
	baz=213						
TWG	Pinlang	2.00	217	*e*P	Pn	21 00 10.2	-0.8
	baz=213						
TWG				*e*S	Sn	21 00 32.8	-2.3

	baz=213						
TWK	**Hsinying**	**2.08**	**236**	*e*S	**Sn**	**21 00 38.4**	**+1.4**
	baz=233						
CHN1	**Nanshi**	**2.10**	**234**	*e*P	**Pn**	**21 00 12.8**	**+0.6**
	baz=231						
CHN1				*e*S	**Sn**	**21 00 38.2**	**+0.9**
	baz=231						
SLGT	**Liugui**	**2.13**	**228**	*e*P	**Pn**	**21 00 14.0**	**+1.3**
	baz=225						
SLGT				*e*S	**Sn**	**21 00 39.4**	**+1.0**
	baz=225						
JTJ	**Tarama**	**2.14**	**84**	*e*S	**Sn**	**21 00 38.6**	**+0.2**

ISCJB ***25*** *21:01:28.2±0.7, 21°.23S±0°.04×68°.7W±0°.1, h146*^{km}*±9*^{km}*, mb4.0/3, Error ellipse: s-maj=19.9km s-min=5.9km az=3.8*
GUC ***25*** *21:01:29.3±0.6, 21°.21S×68°.72W, h130*^{km}*±4*^{km}*, ML3.6*
IDC ***25*** *21:01:37.4±8.7, 20°.62S×67°.57W, h164*^{km}*±73*^{km}*, mb3.9/3, mb1 3.7/4, mb1mx3.2/38, mbtmp4.2/4, MS4.2/2, Ms1 4.1/2, ms1mx2.9/43, Error ellipse: s-maj=101.8km s-min=81.4km az=76.0*
ISC 25 21:01:28.4±1.0, 21°.22S±0°.04×68°.6W±0°.1, h137^{km}**±11**^{km}**, n18, σ1**^{s}**.19/28, mb4.1/3, 11C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	**0.83**	**226**	⇑*i*P	**Pn**	**21 01 51.1**	**+0.3**
PB09				*i* S	**Sn**	**21 02 06.9**	**-0.8**
PB09				IAML		21 02 08.8	
	comp=N,857nm,0.3s						
PB08	**IPOC Station P**	**1.20**	**334**	⇑*i*P	**Pn**	**21 01 55.0**	**+0.7**
PB08				*i* S	**Sn**	**21 02 14.1**	**+0.1**
PB08				IAML		21 02 15.0	
	comp=E,590nm,0.5s						
PB02	**IPOC Station P**	**1.22**	**265**	⇑*i*P	**Pn**	**21 01 54.7**	**+0.6**
PB02				*i* S	**Sn**	**21 02 13.5**	**-0.3**
PB02				IAML		21 02 16.1	
	comp=E,2µm,0.5s						
PB07	**IPOC Station P**	**1.30**	**247**	⇑*i*P	**Pn**	**21 01 55.6**	**+0.5**
PB07				*i* S	**Sn**	**21 02 15.1**	**-0.4**
PB07				IAML		21 02 16.2	
	comp=N,971nm,0.2s						
PB03	**IPOC Station P**	**1.35**	**232**	⇑*i*P	**Pn**	**21 01 56.1**	**+0.5**
PB03				*i* S	**Sn**	**21 02 15.9**	**-0.5**
PB03				IAML		21 02 17.3	
	comp=N,2µm,0.1s						
PB06	**IPOC Station P**	**1.73**	**211**	⇑*i*P	**Pn**	**21 02 00.1**	**+0.3**
PB06				*i* S	**Sn**	**21 02 24.0**	**+0.2**
PB06				IAML		21 02 24.8	
	comp=E,966nm,0.3s						
PB11	**IPOC Station P**	**1.76**	**325**	⇑*i*P	**Pn**	**21 02 00.4**	**+0.2**
PB11				*i* S	**Sn**	**21 02 24.3**	**-0.2**
PB11				IAML		21 02 27.0	
	comp=E,824nm,0.3s						
PB04	**IPOC Station P**	**1.82**	**232**	⇑*i*P	**Pn**	**21 02 01.2**	**+0.4**
PB04				*i* S	**Sn**	**21 02 25.5**	**-0.1**
PB04				IAML		21 02 32.0	
	comp=E,705nm,0.2s						
PB15	**IPOC Station P**	**2.14**	**202**	⇑*i*P	**Pn**	**21 02 04.9**	**+0.3**
PB15				*i* S	**Sn**	**21 02 32.8**	**+0.3**
PSGC	**Pisagua**	**2.16**	**318**	⇑*i*P	**Pn**	**21 02 04.9**	**+0.1**
PSGC				*i* S	**Sn**	**21 02 32.2**	**-0.6**
PSGC				IAML		21 02 34.4	
	comp=E,545nm,0.3s						
PB05	**IPOC Station P**	**2.20**	**222**	⇑*i*P	**Pn**	**21 02 05.5**	**+0.1**
PB05				*i* S	**Sn**	**21 02 32.0**	**-1.8**
PB05				IAML		21 02 40.5	
	comp=N,216nm,0.3s						
LPAZ	**La Paz**	**4.93**	**5**	P	**Pn**	**21 02 43.4**	**+2.2**
	comp=N,1.0nm,0.3s,baz=171,slow=6.5,SNR=17						
LPAZ				S	**Sn**	**21 03 34.5**	**-3.4**
	comp=N,0.1nm,0.3s,baz=228,slow=7.8,SNR=2.5						
PLCA	**Paso Flores**	**19.52**	**184**	LR	LR	21 15 01.3	
	comp=N,122nm,18.8s,baz=152,slow=40						
DBIC	**Dimbokro**	**68.37**	**73**	P	**P**	**21 12 13.3**	**-2.2**
	comp=N,3.1nm,0.7s,baz=222,slow=7.6,SNR=3.9						
KOWA	**Kowa**	**72.64**	**66**	P	**P**	**21 12 41.5**	**+0.1**
	comp=N,1.3nm,0.5s,baz=266,slow=5.2,SNR=4.7						
TORD	**Torodi Ar. Bea**	**76.99**	**70**	P	**P**	**21 13 06.9**	**+0.5**
	comp=N,1.5nm,0.4s,baz=251,slow=5.4						
RAO	**Raoul Island**	**95.44**	**236**	LR	LR	21 50 47.3	
	comp=N,522nm,20.1s,baz=280,slow=30						
MKAR	**Makanchi Array**	**145.24**	**36**	PKP	**PKPab**	**21 20 52.4**	**+2.5**
	comp=N,1.0nm,0.7s,baz=311,slow=4.0,SNR=8.6						

IDC ***25*** *21:06:20.5±2.8, 12°.39N×47°.21E, h0*^{km}*, mb3.4/7, mb1 3.5/8, mb1mx3.3/59, mbtmp3.5/8, ML3.1/1, Error ellipse: s-maj=58.7km s-min=27.7km az=173.0*
ISC 25 21:06:19.5±1.5, 12°.1N±0°.2×46°.8E±0°.1, h10^{km}**, n10, σ1**^{s}**.60/10, mb3.5/7, 1C, Western Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BDHA	**Al Bayda’**	**2.24**	**327**	⇑*i*P	**Pn**	**21 06 57.4**	**+0.5**
BDHA				*e*		21 06 57.9	
	baz=136,slow=16						
BDHA				*i* S	**Sn**	**21 07 23.2**	**-1.6**
BDHA				AML	AML	21 07 25.8	
	comp=N,1µm,0.6s						
MUKL	**Al Mukalla**	**3.22**	**42**	*i* S	Sn	21 07 33.5	-15
ATD	**Arta Tunnel**	**3.92**	**262**	Pn	**Pb**	**21 07 28.2**	**-0.6**
	comp=N,1.1nm,0.3s,baz=94,slow=13,SNR=4.0						
ASF	**Jabal al Asfar**	**21.98**	**337**	P	**P**	**21 11 14.7**	**+0.9**
	comp=N,0.5nm,0.4s,baz=162,slow=9.6,SNR=2.0						
BRTR	**Keskin Array B**	**29.90**	**339**	P	**P**	**21 12 30.4**	**+2.8**
	comp=N,0.3nm,0.5s,baz=149,slow=13,SNR=2.9						
MKAR	**Makanchi Array**	**45.70**	**34**	P	**P**	**21 14 39.9**	**-0.8**
	comp=N,0.5nm,0.8s,baz=221,slow=9.4,SNR=3.6						
GERES	**GERESS Array B**	**45.79**	**330**	P	**P**	**21 14 41.9**	**+0.5**
	comp=N,0.1nm,0.4s,baz=139,slow=7.7,SNR=4.0						
KURBB	**Kurchatov Arra**	**46.35**	**28**	P	**P**	**21 14 44.9**	**-0.8**
	comp=N,0.3nm,0.7s,baz=228,slow=8.0,SNR=4.4						
ZALV	**Zalesovo Beam**	**51.44**	**28**	P	**P**	**21 15 22.6**	**-2.1**
	comp=N,0.6nm,0.5s,baz=247,slow=9.2,SNR=3.3						
SONM	**Songino Array**	**60.83**	**42**	P	**P**	**21 16 32.0**	**-0.2**
	comp=N,1.0nm,1.1s,baz=270,slow=8.3,SNR=2.5						

ISCJB ***25*** *21:23:14.9±0.6, 19°.22N±0°.06×121°.1E±0°.1, h39*^{km}*, mb3.7/9, MS3.1/6, Error ellipse: s-maj=14.0km s-min=7.2km az=164.1*
IDC ***25*** *21:23:19.4±2.9, 19°.02N×121°.24E, h81*^{km}*±27*^{km}*, mb3.4/9, mb1 3.5/11, mb1mx3.3/63, mbtmp3.7/11, MS3.1/10, Ms1 3.2/10, ms1mx3.0/34, Error ellipse: s-maj=28.3km s-min=12.5km az=69.0*
ISC 25 21:23:15.5±0.7, 19°.11N±0°.08×121°.2E±0°.1, h39^{km}**, n27, σ1**^{s}**.27/18, mb3.6/9, MS3.1/6, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CVP	**Callao Caves**	**1.54**	**156**	*i* P	**Pn**	**21 23 41.6**	**+1.2**
CVP				*i* S	**Sn**	**21 24 01.3**	**+2.1**
TGY	**Tagaytay City**	**4.99**	**182**	P	Pn	21 24 33.0	+5.1
	57nm,0.3s,baz=128,slow=17,SNR=2.6						
TGY				LR	LR	21 27 03.5	
	comp=Z,95nm,19.6s,baz=210,slow=46						
JOW	**Kunigami**	**10.10**	**39**	P	**Pn**	**21 25 38.7**	**+0.7**
	1.1nm,0.3s,baz=218,slow=14,SNR=5.0						
DAV	**Davao City (W)**	**12.72**	**160**	LR	LR	21 31 56.5	
	comp=Z,178nm,20.2s,baz=346,slow=41						
JNU	**Nakatsue**	**16.44**	**30**	P	**P**	**21 27 05.5**	**-0.2**
	0.1nm,0.3s,baz=146,slow=3.6,SNR=2.0						
JNU				LR	LR	21 33 12.2	
	comp=Z,36nm,18.2s,baz=179,slow=36						
KSRS	**Korea Array**	**19.21**	**17**	P	**Pn**	**21 27 37.4**	**+0.2**
	0.1nm,0.3s,baz=194,slow=12,SNR=3.4						
KSRS				LR	LR	21 35 25.8	
	comp=Z,26nm,18.1s,baz=195,slow=38						
CMAR	**Chiang Mai Arr**	**21.04**	**272**	P	**P**	**21 27 57.4**	**+1.2**
	0.5nm,0.4s,baz=84,slow=8.5,SNR=5.4						
CMAR				LR	LR	21 36 09.8	
	comp=Z,43nm,18.9s,baz=192,slow=36						
MJAR	**Matsushiro Arr**	**22.93**	**37**	LR	LR	21 36 22.7	
	comp=Z,33nm,19.7s,baz=230,slow=34						
GUMO	**Guam**	**23.40**	**100**	LR	LR	21 36 06.7	
	comp=Z,46nm,20.7s,baz=230,slow=33						
SONM	**Songino Array**	**31.07**	**341**	P	**P**	**21 29 30.4**	**+0.5**
	0.4nm,0.6s,baz=168,slow=7.4,SNR=3.2						
SONM				LR	LR	21 43 06.5	
	comp=Z,49nm,18.0s,baz=183,slow=38						
TLY	**Talaya**	**35.30**	**341**	LR	LR	21 45 33.9	
	comp=Z,60nm,18.8s,baz=160,slow=38						
WRA	**Warramunga Arr**	**40.91**	**161**	P	**P**	**21 30 51.3**	**-2.9**
	0.9nm,0.4s,baz=342,slow=9.1,SNR=19						
WRA				PcP	**PcP**	**21 32 53.7**	**-0.6**
	0.3nm,0.4s,baz=345,slow=3.2,SNR=6.5						
MKAR	**Makanchi Array**	**42.07**	**320**	P	**P**	**21 31 04.3**	**+0.8**
	0.6nm,0.5s,baz=112,slow=8.8,SNR=12						
H11S3	**WAKE ISLAND Hy**	**43.01**	**83**	T	T	22 16 56.5	
	baz=283						
H11S1	**WAKE ISLAND Hy**	**43.02**	**83**	T	T	22 16 50.5	
	baz=283						
H11S2	**WAKE ISLAND Hy**	**43.03**	**83**	T	T	22 16 58.6	
	baz=283						
H11N1	**WAKE ISLAND Hy**	**43.04**	**81**	T	T	22 16 48.9	
	baz=277,slow=75,SNR=94						
H11N2	**WAKE ISLAND Hy**	**43.04**	**81**	T	T	22 16 48.2	
	baz=277,slow=75,SNR=105						
H11N3	**WAKE ISLAND Hy**	**43.06**	**81**	T	T	22 16 50.2	
	baz=277,slow=75,SNR=85						
ASAR	**Alice Springs**	**44.30**	**163**	P	**P**	**21 31 19.7**	**-2.0**
	0.7nm,0.4s,baz=343,slow=7.0,SNR=21						
ASAR				PcP	**PcP**	**21 33 05.2**	**-0.4**
	0.2nm,0.6s,baz=343,slow=5.0,SNR=3.2						
ZALV	**Zalesovo Beam**	**44.54**	**330**	P	**P**	**21 31 23.2**	**-0.1**
	0.5nm,0.4s,baz=84,slow=16,SNR=3.1						
KURBB	**Kurchatov Arra**	**46.05**	**323**	P	**P**	**21 31 35.6**	**+0.3**
	0.8nm,0.5s,baz=121,slow=8.0,SNR=9.8						
BVAR	**Borovoye Array**	**51.64**	**323**	P	**P**	**21 32 19.0**	**+0.8**
	0.3nm,0.4s,baz=122,slow=13,SNR=3.8						
ARU	**Arti**	**59.17**	**325**	P	**P**	**21 33 11.9**	**-0.4**
	1.5nm,0.4s,baz=83,slow=12,SNR=4.4						
NOA	**NORSAR Array B**	**82.68**	**333**	LR	LR	22 15 26.2	
	comp=Z,37nm,18.1s,baz=70,slow=38						
TXAR	**Lajitas Array**	**115.28**	**43**	PKP	**PKPdf**	**21 41 53.3**	**-0.3**
	0.2nm,0.4s,baz=239,slow=0.6,SNR=3.7						
SDV	**Santo Domingo**	**149.85**	**24**	PKPbc	**PKPbc**	**21 43 01.4**	**-1.3**
	2.1nm,0.3s,baz=262,slow=15,SNR=3.2						

SKO ***25*** *21:28:17.1, 40°.05N×27°.17E, h0*^{km}*, M3.9, ML4.8*
IDC ***25*** *21:28:28.1±0.7, 40°.42N×26°.18E, h0*^{km}*, mb3.6/17, mb1 3.7/28, mb1mx3.7/72, mbtmp3.7/28, ML3.7/10, MS3.3/17, Ms1 3.3/17, ms1mx3.1/54, Error ellipse: s-maj=11.6km s-min=9.1km az=39.0*
NEIC ***25*** *21:28:28.8±0.0, 40°.43N×26°.19E, h14*^{km}*, mb4.2/1, ML4.3(THE), ML4.6(ISK), After ISK.*
DDA ***25*** *21:28:28.9, 40°.43N×26°.22E, h28*^{km}*, Ml4.6*
MOS ***25*** *21:28:28.1±1.2, 40°.47N×26°.23E, h13*^{km}*, mb4.0/11, Error ellipse: s-maj=4.5km s-min=3.2km az=95.4*
ISK ***25*** *21:28:28.9, 40°.43N×26°.20E, h17*^{km}*, ML4.6/46*
CSEM ***25*** *21:28:29.7±0.1, 40°.41N×26°.18E, h15*^{km}*, mb3.9/14, Error ellipse: s-maj=1.3km s-min=1.2km az=12.0*
PDG ***25*** *21:28:29.2±0.5, 40°.42N×26°.19E, h20*^{km}*, ML4.2/12, Error ellipse: s-maj=0.4km s-min=0.5km az=0.0*
ATH ***25*** *21:28:29.2, 40°.42N×26°.13E, h31*^{km}*, ML4.3/17, Error ellipse: s-maj=1.4km s-min=0.6km az=59.0*
ISCJB ***25*** *21:28:29.3±0.2, 40°.443N±0°.009×26°.15E±0°.01, h24*^{km}*±2*^{km}*, mb3.7/21, MS3.2/12, Error ellipse: s-maj=1.6km s-min=1.3km az=18.0*
THE ***25*** *21:28:30.3, 40°.44N×26°.13E, h17*^{km}*, ML4.3/14, Error ellipse: s-maj=0.7km s-min=0.4km az=81.0*
BEO ***25*** *21:28:32.7±1.3, 40°.64N×26°.12E, h16*^{km}*±7*^{km}*, ML4.3/2*
TIR ***25*** *21:28:53.1, 40°.43N×26°.19E, h14*^{km}*, Md4.6/4*
ISC 25 21:28:29.3±0.8, 40°.43N±0°.01×26°.19E±0°.01, h14^{km}**±5**^{km}**, n787, σ1**^{s}**.32/935, mb3.7/21, MS3.2/12, 52C-71D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GELI	**Tayfur-Gelibol**	**0.22**	**97**	PG	**Pg**	**21 28 34.4**	**+0.2**
GELI				SG	**Sg**	**21 28 37.9**	**+0.3**
GELI	**Tayfur-Gelibol**	**0.22**	**97**	Pg	**Pg**	**21 28 33.8**	**-0.4**
GELI				Sg	**Sg**	**21 28 37.8**	**+0.3**
GELI	**Tayfur-Gelibol**	**0.22**	**97**	*e*Pg	**Pg**	**21 28 34.4**	**+0.2**
GELI				*e*Sg	**Sg**	**21 28 37.9**	**+0.3**
ENEZ	**Enez**	**0.31**	**355**	PG	**Pb**	**21 28 36.5**	**-0.2**
ENEZ				SG	**Sb**	**21 28 41.1**	**-0.5**
ENEZ	**Enez**	**0.31**	**355**	*e*Pg	**Pb**	**21 28 36.5**	**-0.2**
ENEZ				*e*Sg	**Sb**	**21 28 41.1**	**-0.5**
GADA	**Gvkgeada**	**0.32**	**223**	PG	**Pb**	**21 28 36.8**	**-0.1**
GADA				SG	**Sb**	**21 28 41.8**	**-0.2**
GADA	**Gvkgeada**	**0.32**	**223**	Pg	**Pg**	**21 28 36.0**	**0.0**
GADA	**Gvkgeada**	**0.32**	**223**	P	**Pb**	**21 28 36.7**	**-0.1**
GADA				S	**Sb**	**21 28 41.7**	**-0.2**
GADA	**Gvkgeada**	**0.32**	**223**	Pg	**Pg**	**21 28 36.0**	**0.0**
GADA	**Gvkgeada**	**0.32**	**223**	P	**Pb**	**21 28 36.7**	**-0.1**
GADA				S	**Sb**	**21 28 41.7**	**-0.2**
ERIK	**Erikli-Kesan**	**0.35**	**45**	PG	**Pg**	**21 28 36.6**	**+0.2**
ERIK				SG	**Sg**	**21 28 41.5**	**+0.2**
ERIK	**Erikli-Kesan**	**0.35**	**45**	Pg	**Pg**	**21 28 36.3**	**-0.2**
ERIK				Sg	**Sg**	**21 28 41.3**	**0.0**
ERIK	**Erikli-Kesan**	**0.35**	**45**	*e*Pg	**Pg**	**21 28 36.6**	**+0.2**
ERIK				*e*Sg	**Sg**	**21 28 41.5**	**+0.2**
LPK	**Lapseki**	**0.44**	**97**	PG	**Pb**	**21 28 38.4**	**-0.5**
LPK				SG	**Sb**	**21 28 44.9**	**-0.4**
LPK	**Lapseki**	**0.44**	**97**	*e*Pg	**Pb**	**21 28 38.4**	**-0.5**
LPK				*e*Sg	**Sb**	**21 28 44.9**	**-0.4**
ALN	**Alexandroupoli**	**0.48**	**347**	PG	**Pb**	**21 28 40.2**	**+0.6**
ALN	**Alexandroupoli**	**0.48**	**347**	P	**Pb**	**21 28 39.9**	**+0.2**
ALN				S	**Sb**	**21 28 46.0**	**-0.5**
ALN				AML	AML	21 28 47.0	
	comp=E,78857µm,0.5s						
ALN				AML	AML	21 28 47.6	
	comp=N,36594µm,0.5s						
ALN	**Alexandroupoli**	**0.48**	**347**	P	**Pb**	**21 28 39.2**	**-0.4**
ALN				S	**Sg**	**21 28 45.7**	**+0.3**
ALN	**Alexandroupoli**	**0.48**	**347**	P	**Pb**	**21 28 39.2**	**-0.4**
ALN				S	**Sg**	**21 28 45.7**	**+0.3**
ALN	**Alexandroupoli**	**0.48**	**347**	P	**Pb**	**21 28 39.2**	**-0.4**
ALN				S	**Sg**	**21 28 45.7**	**+0.3**
ALN	**Alexandroupoli**	**0.48**	**347**	P	**Pb**	**21 28 39.2**	**-0.4**
ALN	**Alexandroupoli**	**0.48**	**347**	*e*Pg	**Pb**	**21 28 40.2**	**+0.6**
ALN				S	**Sg**	**21 28 45.7**	**+0.3**
SMTH	**Samothraki Isl**	**0.50**	**275**	P	**Pg**	**21 28 39.5**	**+0.2**
SMTH				S	**Sb**	**21 28 47.3**	**+0.1**
SMTH				AML	AML	21 28 47.6	
	comp=N,93258µm,0.2s						
SMTH				AML	AML	21 28 50.4	
	comp=E,68061µm,0.2s						
SMTH	**Samothraki Isl**	**0.50**	**275**	P	**Pg**	**21 28 39.3**	**0.0**
SMTH	**Samothraki Isl**	**0.50**	**275**	P	**Pg**	**21 28 39.3**	**0.0**
SMTH				S	**Sb**	**21 28 47.0**	**-0.2**
SMTH	**Samothraki Isl**	**0.50**	**275**	P	**Pg**	**21 28 39.3**	**0.0**
SMTH				S	**Sb**	**21 28 47.0**	**-0.2**
KESN	**Edirne-Kesan**	**0.55**	**43**	⇑*i*P	**Pg**	**21 28 39.7**	**-0.6**
KESN				*i* S	**Sg**	**21 28 48.1**	**+0.5**
KESN	**Edirne-Kesan**	**0.55**	**43**	P	**Pg**	**21 28 39.7**	**-0.6**
KESN				S	**Sg**	**21 28 48.1**	**+0.5**
BOZC	**Bozcaada**	**0.59**	**190**	PG	**Pg**	**21 28 40.9**	**-0.1**
BOZC	**Bozcaada**	**0.59**	**190**	⇑*i*P	**Pg**	**21 28 40.9**	**-0.1**
BOZC				*i* S	**Sb**	**21 28 49.6**	**-0.1**
BOZC	**Bozcaada**	**0.59**	**190**	Pg	**Pb**	**21 28 41.2**	**-0.3**
BOZC	**Bozcaada**	**0.59**	**190**	*e*Pg	**Pg**	**21 28 40.9**	**-0.1**
BAYC	**CANAKKALE_Bayr**	**0.74**	**158**	⇓*i*P	**Pg**	**21 28 43.6**	**-0.1**
BAYC				*i* S	**Sg**	**21 28 53.5**	**+0.1**
BAYC	**CANAKKALE_Bayr**	**0.74**	**158**	P	**Pg**	**21 28 43.6**	**-0.1**
BAYC				S	**Sg**	**21 28 53.5**	**+0.1**
RKY	**Sarkoy-Tekirda**	**0.80**	**71**	PG	**Pg**	**21 28 44.4**	**-0.5**
RKY	**Sarkoy-Tekirda**	**0.80**	**71**	Pg	**Pg**	**21 28 44.2**	**-0.6**
RKY	**Sarkoy-Tekirda**	**0.80**	**71**	*e*Pg	**Pg**	**21 28 44.4**	**-0.5**
SART	**Tekirdag**	**0.80**	**71**	⇑*i*P	**Pg**	**21 28 44.3**	**-0.6**
SART				*i* S	**Sb**	**21 28 55.9**	**+0.1**
SART	**Tekirdag**	**0.80**	**71**	P	**Pg**	**21 28 44.3**	**-0.6**
SART				S	**Sb**	**21 28 55.9**	**+0.1**
RDO	**Rodhopi**	**0.87**	**326**	PG	**Pg**	**21 28 46.1**	**-0.1**
RDO	**Rodhopi**	**0.87**	**326**	P	**Pb**	**21 28 46.4**	**+0.1**
RDO				S	**Sn**	**21 28 58.9**	**-0.7**
RDO				AML	AML	21 28 59.7	
	comp=E,45282µm,0.6s						
RDO				AML	AML	21 29 00.6	
	comp=N,33699µm,0.6s						
RDO	**Rodhopi**	**0.87**	**326**	P	**Pg**	**21 28 45.9**	**-0.3**
RDO	**Rodhopi**	**0.87**	**326**	P	**Pg**	**21 28 45.9**	**-0.3**
RDO				S	**Sg**	**21 28 57.3**	**-0.4**
RDO	**Rodhopi**	**0.87**	**326**	P	**Pb**	**21 28 46.2**	**0.0**
RDO				S	**Sg**	**21 28 57.3**	**-0.4**
LIA	**Limnos Island**	**0.93**	**236**	P	**Pn**	**21 28 47.8**	**-0.2**
LIA				S	**Sg**	**21 28 59.5**	**-0.2**
LIA				AML	AML	21 29 01.1	
	comp=N,49836µm,0.5s						
LIA				AML	AML	21 29 03.9	
	comp=E,38049µm,0.4s						
LIA	**Limnos Island**	**0.93**	**236**	P	**Pb**	**21 28 47.0**	**-0.3**
LIA	**Limnos Island**	**0.93**	**236**	P	**Pb**	**21 28 47.0**	**-0.3**
LIA				S	**Sb**	**21 29 00.0**	**+0.5**
LIA	**Limnos Island**	**0.93**	**236**	P	**Pb**	**21 28 47.0**	**-0.3**
LIA				S	**Sg**	**21 28 59.4**	**-0.2**
GPNR	**Gulpinar-Canak**	**0.97**	**182**	PG	**Pb**	**21 28 47.6**	**-0.3**
GPNR	**Gulpinar-Canak**	**0.97**	**182**	*e*Pg	**Pb**	**21 28 47.6**	**-0.3**
KNL	**Bal˜–kesir**	**1.03**	**98**	⇓*i*P	**Pb**	**21 28 48.5**	**-0.5**
KNL				*i* S	**Sb**	**21 29 02.3**	**-0.1**
THAS	**Thassos island**	**1.13**	**280**	P	**Pg**	**21 28 51.4**	**+0.2**
THAS				S	**Sg**	**21 29 06.0**	**0.0**
THAS				AML	AML	21 29 07.2	
	comp=N,42524µm,1.0s						
THAS				AML	AML	21 29 08.0	
	comp=E,19718µm,0.3s						
THAS	**Thassos island**	**1.13**	**280**	P	**Pb**	**21 28 49.8**	**-0.9**
THAS				S	**Sb**	**21 29 04.8**	**-0.5**
THAS	**Thassos island**	**1.13**	**280**	P	**Pb**	**21 28 50.6**	**-0.1**
THAS				S	**Sb**	**21 29 04.8**	**-0.5**
TKR	**Tekirdag**	**1.17**	**61**	PN	**Pb**	**21 28 51.4**	**+0.1**
TKR	**Tekirdag**	**1.17**	**61**	Pn	**Pb**	**21 28 51.4**	**+0.1**
TKR	**Tekirdag**	**1.17**	**61**	*e*Pn	**Pb**	**21 28 51.4**	**+0.1**
PRK	**Paraskevi**	**1.18**	**177**	P	**Pg**	**21 28 52.8**	**+0.7**
PRK				S	**Sg**	**21 29 08.8**	**+1.3**
PRK				AML	AML	21 29 09.0	
PRK				AML	AML	21 29 09.4	
PRK	**Paraskevi**	**1.18**	**177**	P	**Pg**	**21 28 51.7**	**-0.4**
PRK	**Paraskevi**	**1.18**	**177**	P	**Pg**	**21 28 51.7**	**-0.4**
PRK				S	**Sn**	**21 29 07.1**	**-0.2**
PRK	**Paraskevi**	**1.18**	**177**	P	**Pg**	**21 28 51.7**	**-0.4**
PRK	**Paraskevi**	**1.18**	**177**	P	**Pg**	**21 28 51.7**	**-0.4**
PRK				S	**Sn**	**21 29 07.1**	**-0.2**
AYVA	**Ayvalik**	**1.18**	**161**	⇓*i*P	**Pb**	**21 28 51.6**	**+0.2**
AYVA				*i* S	**Sn**	**21 29 07.1**	**-0.2**
AYVA	**Ayvalik**	**1.18**	**161**	P	**Pb**	**21 28 51.7**	**+0.2**
AYVA				S	**Sn**	**21 29 07.1**	**-0.2**
GONE	**Gonen-Balikesi**	**1.21**	**108**	PN	**Pn**	**21 28 51.5**	**-0.3**
GONE	**Gonen-Balikesi**	**1.21**	**108**	Pn	**Pn**	**21 28 51.5**	**-0.3**
GONE	**Gonen-Balikesi**	**1.21**	**108**	*e*Pn	**Pn**	**21 28 51.5**	**-0.3**
SIGR	**SIGRI**	**1.24**	**192**	PN	**Pn**	**21 28 52.3**	**+0.1**
SIGR	**SIGRI**	**1.24**	**192**	P	**Pg**	**21 28 53.2**	**0.0**
SIGR				S	**Sn**	**21 29 08.7**	**-0.1**
SIGR				AML	AML	21 29 11.0	
SIGR				AML	AML	21 29 11.0	
	comp=E,73907µm,0.4s						
SIGR	**SIGRI**	**1.24**	**192**	P	**Pn**	**21 28 51.9**	**-0.3**
SIGR	**SIGRI**	**1.24**	**192**	P	**Pn**	**21 28 51.9**	**-0.3**
SIGR				S	**Sg**	**21 29 09.5**	**+0.1**
SIGR	**SIGRI**	**1.24**	**192**	P	**Pn**	**21 28 51.9**	**-0.3**
SIGR	**SIGRI**	**1.24**	**192**	*e*Pn	**Pn**	**21 28 52.3**	**+0.1**
SIGR				S	**Sg**	**21 29 09.5**	**+0.1**
EDC	**Edincik**	**1.28**	**93**	PN	**Pn**	**21 28 52.5**	**-0.3**
EDC	**Edincik**	**1.28**	**93**	Pn	**Pn**	**21 28 52.9**	**+0.1**
EDC	**Edincik**	**1.28**	**93**	P	**Pn**	**21 28 52.9**	**+0.1**
EDC	**Edincik**	**1.28**	**93**	P	**Pn**	**21 28 52.9**	**+0.1**
BALY	**Balya**	**1.29**	**122**	⇓*i*P	**Pn**	**21 28 53.1**	**+0.1**
BALY				*i* S	**Sg**	**21 29 11.7**	**+0.6**
BALY	**Balya**	**1.29**	**122**	P	**Pn**	**21 28 53.2**	**+0.1**
CRLT	**Corlu**	**1.37**	**59**	PN	**Pn**	**21 28 54.2**	**+0.2**
CRLT	**Corlu**	**1.37**	**59**	Pn	**Pb**	**21 28 54.6**	**-0.1**
CRLT	**Corlu**	**1.37**	**59**	Pn	**Pb**	**21 28 54.6**	**-0.1**
KAVA	**Kavala**	**1.39**	**295**	P	**Pn**	**21 28 54.1**	**-0.2**
KAVA				S	**Sn**	**21 29 11.9**	**-0.7**
KAVA				AML	AML	21 29 17.4	
	comp=N,8820µm,0.6s						
KAVA				AML	AML	21 29 22.2	
	comp=E,5821µm,0.4s						
KAVA	**Kavala**	**1.39**	**295**	P	**Pn**	**21 28 54.0**	**-0.4**
KAVA	**Kavala**	**1.39**	**295**	P	**Pn**	**21 28 54.0**	**-0.4**
KAVA				S	**Sn**	**21 29 11.6**	**-0.9**
KAVA	**Kavala**	**1.39**	**295**	P	**Pn**	**21 28 54.0**	**-0.4**
KAVA				S	**Sn**	**21 29 11.9**	**-0.7**
SBT3	**Marmara-Eregli**	**1.44**	**71**	PN	**Pb**	**21 28 55.2**	**-0.5**
SBT3	**Marmara-Eregli**	**1.44**	**71**	*e*Pn	**Pb**	**21 28 55.2**	**-0.5**
DKL	**Dikili**	**1.46**	**158**	PN	**Pn**	**21 28 55.3**	**0.0**
DKL	**Dikili**	**1.46**	**158**	*e*Pn	**Pn**	**21 28 55.3**	**0.0**
EDRB	**Edirne**	**1.48**	**16**	PN	**Pn**	**21 28 55.1**	**-0.5**
EDRB	**Edirne**	**1.48**	**16**	Pn	**Pn**	**21 28 55.2**	**-0.3**
EDRB	**Edirne**	**1.48**	**16**	Pn	**Pn**	**21 28 55.2**	**-0.3**
BALB	**Balikesir**	**1.52**	**121**	PN	**Pn**	**21 28 56.3**	**+0.2**
BALB	**Balikesir**	**1.52**	**121**	Pn	**Pn**	**21 28 56.1**	**0.0**
BALB	**Balikesir**	**1.52**	**121**	*e*Pn	**Pn**	**21 28 56.3**	**+0.2**
PHSR	**Pinarhisar**	**1.57**	**40**	PN	**Pn**	**21 28 56.3**	**-0.5**
PHSR	**Pinarhisar**	**1.57**	**40**	*e*Pn	**Pn**	**21 28 56.3**	**-0.5**
STEP	**BALIKESIR_Sava**	**1.58**	**131**	⇓*i*P	**Pb**	**21 28 57.6**	**-0.6**
STEP				*i* S	**Sg**	**21 29 19.0**	**-1.1**
STEP	**BALIKESIR_Sava**	**1.58**	**131**	P	**Pb**	**21 28 57.7**	**-0.6**
KCTX	**Karacabey (Bur**	**1.67**	**95**	PN	**Pn**	**21 28 58.6**	**+0.5**
KCTX	**Karacabey (Bur**	**1.67**	**95**	*e*Pn	**Pn**	**21 28 58.6**	**+0.5**
OUR	**Ouranopolis**	**1.69**	**268**	PN	**Pn**	**21 28 57.6**	**-0.8**
OUR	**Ouranopolis**	**1.69**	**268**	P	**Pn**	**21 28 57.5**	**-0.8**
OUR				S	**Sn**	**21 29 17.9**	**-1.9**
OUR				AML	AML	21 29 26.9	
	comp=E,23531µm,0.7s						
OUR				AML	AML	21 29 27.6	
	comp=N,17293µm,0.4s						
OUR	**Ouranopolis**	**1.69**	**268**	P	**Pn**	**21 28 57.5**	**-0.8**
OUR	**Ouranopolis**	**1.69**	**268**	P	**Pn**	**21 28 57.5**	**-0.8**
OUR				S	**Sn**	**21 29 18.2**	**-1.6**
OUR	**Ouranopolis**	**1.69**	**268**	P	**Pn**	**21 28 57.5**	**-0.8**
OUR	**Ouranopolis**	**1.69**	**268**	P	**Pn**	**21 28 57.7**	**-0.7**
OUR				S	**Sn**	**21 29 18.4**	**-1.4**
SLVT	**Silivri**	**1.73**	**62**	PN	**Pn**	**21 28 58.8**	**-0.2**
SLVT	**Silivri**	**1.73**	**62**	Pn	**Pn**	**21 28 58.3**	**-0.7**
SLVT	**Silivri**	**1.73**	**62**	P	**Pn**	**21 28 57.3**	**-1.7**
SLVT	**Silivri**	**1.73**	**62**	*e*Pn	**Pn**	**21 28 58.8**	**-0.2**
SLVT				S	**Sn**	**21 29 18.6**	**-2.3**
FOCM	**Foˆ§a**	**1.76**	**166**	PN	**Pn**	**21 28 59.2**	**-0.2**
FOCM	**Foˆ§a**	**1.76**	**166**	*e*Pn	**Pn**	**21 28 59.2**	**-0.2**
ELBA	**Catalca**	**1.85**	**66**	⇑*i*P	**Pn**	**21 28 60.0**	**-0.7**
ELBA				*i* S	**Sn**	**21 29 23.4**	**-0.4**
ELBA	**Catalca**	**1.85**	**66**	P	**Pn**	**21 29 00.0**	**-0.7**
ELBA				S	**Sn**	**21 29 23.4**	**-0.4**
KRBN	**Karaburun**	**1.85**	**171**	PN	**Pn**	**21 29 00.9**	**+0.2**
KRBN	**Karaburun**	**1.85**	**171**	*e*Pn	**Pn**	**21 29 00.9**	**+0.2**
CTYL	**Yalikoy Yolu**	**1.91**	**56**	PN	**Pn**	**21 29 00.9**	**-0.5**
CTYL	**Yalikoy Yolu**	**1.91**	**56**	Pn	**Pn**	**21 29 00.5**	**-0.9**
CTYL	**Yalikoy Yolu**	**1.91**	**56**	*e*Pn	**Pn**	**21 29 00.9**	**-0.5**
CTKS	**Kestanelik-??a**	**1.94**	**65**	PN	**Pn**	**21 29 01.3**	**-0.5**
CTKS	**Kestanelik-??a**	**1.94**	**65**	Pn	**Pn**	**21 29 02.3**	**+0.5**
CTKS	**Kestanelik-??a**	**1.94**	**65**	Pn	**Pn**	**21 29 02.3**	**+0.5**
DURS	**Dursunbey**	**1.94**	**114**	⇓*i*P	**Pn**	**21 29 02.5**	**+0.5**
DURS				*i* S	**Sn**	**21 29 27.0**	**+0.8**
DURS	**Dursunbey**	**1.94**	**114**	P	**Pn**	**21 29 02.5**	**+0.5**
DURS				S	**Sn**	**21 29 27.0**	**+0.8**
PAIG	**Paliouri**	**1.98**	**256**	P	**Pn**	**21 29 01.2**	**-1.3**
PAIG				S	**Sn**	**21 29 27.5**	**+0.3**
PAIG	**Paliouri**	**1.98**	**256**	P	**Pn**	**21 29 01.4**	**-1.1**
PAIG	**Paliouri**	**1.98**	**256**	P	**Pn**	**21 29 01.4**	**-1.1**
PAIG				S	**Sn**	**21 29 26.3**	**-0.8**
PAIG	**Paliouri**	**1.98**	**256**	P	**Pn**	**21 29 01.4**	**-1.1**
PAIG	**Paliouri**	**1.98**	**256**	P	**Pn**	**21 29 01.6**	**-0.9**
PAIG				S	**Sn**	**21 29 26.8**	**-0.3**
NVR	**Nevrokopi**	**1.99**	**298**	P	**Pn**	**21 29 02.9**	**+0.3**
NVR				S	**Sn**	**21 29 26.9**	**-0.4**
NVR	**Nevrokopi**	**1.99**	**298**	P	**Pn**	**21 29 02.5**	**-0.1**
NVR	**Nevrokopi**	**1.99**	**298**	P	**Pn**	**21 29 02.5**	**-0.1**
NVR	**Nevrokopi**	**1.99**	**298**	P	**Pn**	**21 29 02.6**	**-0.1**
NVR				S	**Sn**	**21 29 26.7**	**-0.6**
AKHS	**Akhisar**	**1.99**	**140**	⇓*i*P	**Pn**	**21 29 03.1**	**+0.5**
AKHS				*i* S	**Sb**	**21 29 29.4**	**-0.6**
AKHS	**Akhisar**	**1.99**	**140**	P	**Pn**	**21 29 03.1**	**+0.5**
AKS	**Akhisar**	**1.99**	**140**	PN	**Pn**	**21 29 03.1**	**+0.5**
AKS	**Akhisar**	**1.99**	**140**	Pn	**Pn**	**21 29 03.2**	**+0.6**
AKS	**Akhisar**	**1.99**	**140**	*e*Pn	**Pn**	**21 29 03.1**	**+0.5**
SKY	**Skiros Island**	**2.00**	**220**	P	**Pn**	**21 29 01.5**	**-1.2**
SKY	**Skiros Island**	**2.00**	**220**	P	**Pn**	**21 29 01.5**	**-1.2**
SKY	**Skiros Island**	**2.00**	**220**	P	**Pn**	**21 29 01.5**	**-1.2**
SKY	**Skiros Island**	**2.00**	**220**	P	**Pn**	**21 29 01.9**	**-0.8**
PLD	**Plovdiv**	**2.02**	**327**	PN	**Pn**	**21 29 02.9**	**0.0**
PLD	**Plovdiv**	**2.02**	**327**	Pn	**Pn**	**21 29 03.6**	**+0.7**
PLD	**Plovdiv**	**2.02**	**327**	P	**Pn**	**21 29 03.6**	**+0.7**
PLD	**Plovdiv**	**2.02**	**327**	*e*Pn	**Pn**	**21 29 02.9**	**0.0**
PLD	**Plovdiv**	**2.02**	**327**	P	**Pn**	**21 29 03.6**	**+0.7**
CHOS	**Chios island**	**2.04**	**183**	PN	**Pn**	**21 29 03.8**	**+0.5**
CHOS	**Chios island**	**2.04**	**183**	P	**Pn**	**21 29 04.7**	**+1.3**
CHOS				S	**Sn**	**21 29 28.5**	**-0.1**
CHOS				AML	AML	21 29 40.4	
	comp=N,14186µm,0.6s						
CHOS				AML	AML	21 29 41.1	
	comp=E,21673µm,0.6s						

CHOS	Chios island	2.04	183	P	Pn	21 29 03.2	-0.1
CHOS	Chios island	2.04	183	P	Pn	21 29 03.2	-0.1
CHOS				S	Sn	21 29 30.0	+1.4
CHOS	Chios island	2.04	183	P	Pn	21 29 03.2	-0.1
CHOS	Chios island	2.04	183	ePn	Pn	21 29 03.8	+0.5
CHOS				S	Sn	21 29 30.0	+1.4
DST	Dursunbey	2.04	113	PN	Pn	21 29 03.7	+0.4
DST	Dursunbey	2.04	113	Pn	Pn	21 29 04.1	+0.7
DST	Dursunbey	2.04	113	P	Pn	21 29 04.0	+0.7
DST	Dursunbey	2.04	113	ePn	Pn	21 29 03.7	+0.4
DST	Dursunbey	2.04	113	P	Pn	21 29 04.0	+0.7
JMB	Yambol	2.06	8	ePg	Pb	21 29 05.9	-0.6
JMB				eSg	Sb	21 29 31.6	-0.4
JMB	Yambol	2.06	8	ePg	Pb	21 29 05.9	-0.6
JMB				eSg	Sb	21 29 31.6	-0.4
MDNY	Mudanya-Bursa	2.06	91	PN	Pn	21 29 03.3	-0.2
MDNY	Mudanya-Bursa	2.06	91	Pn	Pn	21 29 03.7	+0.2
MDNY	Mudanya-Bursa	2.06	91	Pn	Pn	21 29 03.7	+0.2
SBT5	Esenkoy-Cinarc	2.06	83	PN	Pn	21 29 03.7	+0.2
SBT5	Esenkoy-Cinarc	2.06	83	ePn	Pn	21 29 03.7	+0.2
SRS	Serrai	2.09	290	ePg	Pg	21 29 08.6	-0.8
SRS				eSg	Sg	21 29 35.0	-1.5
SRS	Serrai	2.09	290	P	Pn	21 29 03.8	-0.2
SRS	Serrai	2.09	290	P	Pn	21 29 03.6	-0.4
SRS	Serrai	2.09	290	P	Pn	21 29 03.6	-0.4
SRS	Serrai	2.09	290	P	Pn	21 29 03.5	-0.4
SRS	Serrai	2.09	290	P	Pn	21 29 03.7	-0.2
SRS	Serrai	2.09	290	ePg	Pg	21 29 08.6	-0.8
SRS				eSg	Sg	21 29 35.0	-1.5
URLA	Izmir	2.09	171	PN	Pn	21 29 04.1	+0.2
URLA	Izmir	2.09	171	⇓iP	Pn	21 29 04.1	+0.2
URLA				i S	Sg	21 29 35.4	-1.0
URLA	Izmir	2.09	171	P	Pn	21 29 04.1	+0.2
CESE	ˆe¯me	2.10	178	PN	Pn	21 29 04.2	+0.2
CESE	ˆe¯me	2.10	178	ePn	Pn	21 29 04.2	+0.2
PLG	Polygyros	2.10	269	P	Pn	21 29 03.4	-0.6
PLG				S	Sn	21 29 30.6	+0.7
PLG				AML	AML	21 29 38.1	
	comp=N,14082μm,0.7s						
PLG				AML	AML	21 29 41.7	
	comp=E,7801μm,0.8s						
PLG	Polygyros	2.10	269	P	Pn	21 29 03.3	-0.7
PLG	Polygyros	2.10	269	P	Pn	21 29 03.3	-0.7
PLG	Polygyros	2.10	269	P	Pn	21 29 03.3	-0.7
PLG	Polygyros	2.10	269	P	Pn	21 29 03.5	-0.6
PLG				S	Sn	21 29 29.7	-0.2
BLCB	Balcova	2.14	162	PN	Pn	21 29 05.2	+0.5
BLCB	Balcova	2.14	162	Pn	Pn	21 29 04.7	+0.1
BLCB	Balcova	2.14	162	Pn	Pn	21 29 04.7	+0.1
AOS	Alonnisos	2.18	236	PN	Pn	21 29 05.1	0.0
AOS	Alonnisos	2.18	236	P	Pn	21 29 03.8	-1.3
AOS	Alonnisos	2.18	236	P	Pn	21 29 04.1	-1.0
AOS	Alonnisos	2.18	236	P	Pn	21 29 04.1	-1.0
AOS				S	Sn	21 29 31.1	-0.7
AOS	Alonnisos	2.18	236	P	Pn	21 29 04.3	-0.8
AOS	Alonnisos	2.18	236	ePn	Pn	21 29 05.1	0.0
AOS				S	Sn	21 29 31.1	-0.7
SOH	Sokhos	2.19	281	P	Pn	21 29 05.2	-0.2
SOH				S	Sn	21 29 30.9	-1.5
SOH				AML	AML	21 29 43.2	
	comp=N,7744μm,0.4s						
SOH				AML	AML	21 29 45.8	
	comp=E,6707μm,0.8s						
SOH	Sokhos	2.19	281	P	Pn	21 29 05.0	-0.3
SOH	Sokhos	2.19	281	P	Pn	21 29 05.0	-0.3
SOH	Sokhos	2.19	281	i P	Pn	21 29 05.1	-0.3
SOH				S	Sn	21 29 28.8	-3.5
SOH	Sokhos	2.19	281	P	Pn	21 29 05.1	-0.3
SOH				S	Sn	21 29 31.1	-1.2
ISK	Istanbul-Kandi	2.27	73	PN	Pn	21 29 05.9	-0.5
ISK	Istanbul-Kandi	2.27	73	P	Pn	21 29 05.8	-0.6
ISK	Istanbul-Kandi	2.27	73	ePn	Pn	21 29 05.9	-0.5
KAVV	Kandilli-Istan	2.27	73	PN	Pn	21 29 05.9	-0.5
KAVV	Kandilli-Istan	2.27	73	ePn	Pn	21 29 05.9	-0.5
GEMT	Gemlik	2.29	89	PN	Pn	21 29 06.6	-0.1
GEMT	Gemlik	2.29	89	Pn	Pn	21 29 07.4	+0.7
GEMT	Gemlik	2.29	89	Pn	Pn	21 29 07.4	+0.7
IGD	Bursa	2.31	93	⇓iP	Pn	21 29 06.8	-0.1
IGD				i S	Sg	21 29 41.6	-1.9
KLYT	Kilyos	2.32	68	PN	Pn	21 29 06.6	-0.4
KLYT	Kilyos	2.32	68	Pn	Pn	21 29 07.2	+0.1
KLYT	Kilyos	2.32	68	Pn	Pn	21 29 07.2	+0.1
HORT	Hortiatis	2.36	275	PN	Pn	21 29 06.9	-0.8
HORT	Hortiatis	2.36	275	P	Pn	21 29 08.0	+0.2
HORT				S	Sn	21 29 34.3	-2.2
HORT				AML	AML	21 29 46.6	
	comp=N,7424μm,0.6s						
HORT				AML	AML	21 29 50.8	
	comp=E,4737μm,0.9s						
HORT	Hortiatis	2.36	275	P	Pn	21 29 07.2	-0.5
HORT	Hortiatis	2.36	275	P	Pn	21 29 07.2	-0.5
HORT	Hortiatis	2.36	275	ePn	Pn	21 29 06.9	-0.8
HORT	Hortiatis	2.36	275	P	Pn	21 29 07.7	0.0
HORT				S	Sn	21 29 34.8	-1.7
DEMI	Demirci	2.39	125	⇓iP	Pn	21 29 09.2	+1.1
DEMI				i S	Sn	21 29 37.0	-0.2
DEMI	Demirci	2.39	125	P	Pn	21 29 09.2	+1.1
DGB	˜zmir	2.43	167	i P	Pn	21 29 08.8	+0.1
DGB				i S	Sg	21 29 45.6	-1.9
YLV	Yalova	2.43	86	PN	Pn	21 29 08.0	-0.7
YLV	Yalova	2.43	86	ePn	Pn	21 29 08.0	-0.7
SKIA	Skiathos	2.44	240	P	Pn	21 29 08.2	-0.6
SKIA				S	Sn	21 29 36.3	-2.2
SKIA				AML	AML	21 29 51.9	
	comp=N,13473μm,0.9s						
SKIA				AML	AML	21 29 52.1	
	comp=E,10439μm,1.0s						
SKIA	Skiathos	2.44	240	P	Pn	21 29 08.4	-0.4
SKIA				S	Sn	21 29 36.8	-1.7
THE	Thessaloniki	2.46	276	P	Pn	21 29 09.0	-0.1
THE				S	Sn	21 29 37.5	-1.4
THE				AML	AML	21 29 52.9	
	comp=E,1960μm,0.6s						
THE				AML	AML	21 29 55.5	
	comp=N,3328μm,0.7s						
THE	Thessaloniki	2.46	276	P	Pn	21 29 09.1	0.0
THE	Thessaloniki	2.46	276	P	Pn	21 29 09.1	0.0
THE	Thessaloniki	2.46	276	P	Pn	21 29 09.1	0.0
THE	Thessaloniki	2.46	276	P	Pn	21 29 08.9	-0.1
THE				S	Sn	21 29 37.7	-1.2
XOR	Xorichti	2.54	246	P	Pn	21 29 08.9	-1.2
XOR	Xorichti	2.54	246	P	Pn	21 29 08.5	-1.6
XOR	Xorichti	2.54	246	P	Pn	21 29 08.5	-1.6
XOR	Xorichti	2.54	246	P	Pn	21 29 09.4	-0.7
SIMA	Simav-Kutahya	2.54	121	PN	Pn	21 29 10.9	+0.7
SIMA	Simav-Kutahya	2.54	121	ePn	Pn	21 29 10.9	+0.7
NEO	Neokhori	2.54	245	P	Pn	21 29 08.5	-1.7
NEO	Neokhori	2.54	245	P	Pn	21 29 09.2	-1.0
KNT	Kendrikon	2.60	287	PN	Pn	21 29 11.2	+0.2
KNT	Kendrikon	2.60	287	P	Pn	21 29 12.0	+1.0
KNT				S	Sn	21 29 40.5	-1.9
KNT				AML	AML	21 29 53.6	
	comp=N,4986μm,0.5s						
KNT				AML	AML	21 29 57.1	
	comp=E,3971μm,0.6s						
KNT	Kendrikon	2.60	287	P	Pn	21 29 11.1	+0.1
KNT	Kendrikon	2.60	287	P	Pn	21 29 11.1	+0.1
KNT	Kendrikon	2.60	287	P	Pn	21 29 11.1	+0.1
KNT	Kendrikon	2.60	287	P	Pn	21 29 11.1	+0.1
KNT				S	Sn	21 29 40.9	-1.5
PGB	Panagyurishte	2.61	325	P	Pn	21 29 11.9	+0.8
PGB	Panagyurishte	2.61	325	P	Pn	21 29 11.9	+0.8
MANT	Manisa	2.67	136	⇓iP	Pn	21 29 13.0	+1.0
MANT				i S	Sn	21 29 46.2	+1.9
MANT	Manisa	2.67	136	P	Pn	21 29 13.0	+1.0
HRT	Hereke	2.68	80	PN	Pn	21 29 11.2	-0.9
HRT	Hereke	2.68	80	P	Pn	21 29 12.8	+0.7
HRT	Hereke	2.68	80	ePn	Pn	21 29 11.2	-0.9
HRT	Hereke	2.68	80	P	Pn	21 29 12.8	+0.7
FYTO	Fytoko, Volos	2.70	249	P	Pn	21 29 10.8	-1.4
FYTO	Fytoko, Volos	2.70	249	P	Pn	21 29 11.3	-1.0
FYTO	Fytoko, Volos	2.70	249	P	Pn	21 29 11.3	-1.0
FYTO	Fytoko, Volos	2.70	249	P	Pn	21 29 11.5	-0.8
TVSB	Tavsanli	2.70	110	PN	Pn	21 29 13.1	+0.7
TVSB	Tavsanli	2.70	110	Pn	Pn	21 29 12.6	+0.2
TVSB	Tavsanli	2.70	110	ePn	Pn	21 29 13.1	+0.7
KULA	Kula-Manisa	2.70	134	PN	Pn	21 29 13.0	+0.5
KULA	Kula-Manisa	2.70	134	Pn	Pn	21 29 12.7	+0.3
KULA	Kula-Manisa	2.70	134	Pn	Pn	21 29 12.7	+0.3
ADVT	Abdulvahap	2.71	89	PN	Pn	21 29 12.4	-0.1
ADVT	Abdulvahap	2.71	89	Pn	Pn	21 29 13.3	+0.8
ADVT	Abdulvahap	2.71	89	Pn	Pn	21 29 13.3	+0.8
SILT	Sile	2.72	73	PN	Pn	21 29 12.8	+0.2
SILT	Sile	2.72	73	ePn	Pn	21 29 12.8	+0.2
SHAP	Saphane-Kutahy	2.73	120	PN	Pn	21 29 13.9	+1.1
SHAP	Saphane-Kutahy	2.73	120	ePn	Pn	21 29 13.9	+1.1
KARY	Karystos	2.75	210	P	Pn	21 29 12.2	-0.8
KARY	Karystos	2.75	210	P	Pn	21 29 12.2	-0.8
SMG	Samos	2.76	169	P	Pn	21 29 13.3	+0.2
SMG				S	Sn	21 29 46.1	-0.2
SMG	Samos	2.76	169	P	Pn	21 29 13.5	+0.3
SMIA	Simia	2.77	237	P	Pn	21 29 12.8	-0.5
SMIA	Simia	2.77	237	P	Pn	21 29 13.2	-0.1
SMIA	Simia	2.77	237	P	Pn	21 29 13.0	-0.3
CAVI	Cavuskoy	2.80	93	PN	Pn	21 29 13.9	+0.1
CAVI	Cavuskoy	2.80	93	ePn	Pn	21 29 13.9	+0.1
GCAM	G?zelcaml?	2.84	163	PN	Pn	21 29 14.1	-0.1
GCAM	G?zelcaml?	2.84	163	i P	Pn	21 29 14.6	+0.4
GCAM				i S	Sg	21 29 58.1	-2.5
GCAM	G?zelcaml?	2.84	163	ePn	Pn	21 29 14.1	-0.1
GCAM	G?zelcaml?	2.84	163	P	Pn	21 29 14.6	+0.4
SZH	Strazhica	2.84	356	P	Pn	21 29 14.9	+0.6
SZH				S	Sn	21 29 49.6	+1.2
SZH	Strazhica	2.84	356	P	Pn	21 29 14.9	+0.6
SZH				S	Sn	21 29 49.6	+1.2
LIT	Litokhoron	2.85	265	P	Pn	21 29 13.4	-1.0
LIT	Litokhoron	2.85	265	P	Pn	21 29 13.6	-0.8
LIT	Litokhoron	2.85	265	P	Pn	21 29 13.6	-0.8
LIT	Litokhoron	2.85	265	P	Pn	21 29 13.6	-0.8
LIT	Litokhoron	2.85	265	P	Pn	21 29 13.8	-0.6
PVL	Pavlikeni	2.86	347	P	Pn	21 29 14.9	+0.4
PVL	Pavlikeni	2.86	347	P	Pn	21 29 14.9	+0.4
GDZ	Gediz	2.87	117	⇓iP	Pn	21 29 15.8	+1.1
GDZ				i S	Sn	21 29 49.2	+0.1
GDZ	Gediz	2.87	117	P	Pn	21 29 15.9	+1.1
GDZ				S	Sn	21 29 49.2	+0.1
VAY	Valandovo	2.88	289	ePn	Pn	21 29 15.2	+0.3
VAY	Valandovo	2.88	289	i Pn	Pn	21 29 15.6	+0.7
VAY				eSn	Sg	21 29 59.0	-3.0
VAY				eLg	Lg	21 30 05.5	
	comp=N,2μm,1.1s						
VAY				eLg	Lg	21 30 06.5	
	comp=E,707nm,0.6s						
VAY	Valandovo	2.88	289	P	Pn	21 29 14.9	+0.1
VAY	Valandovo	2.88	289	P	Pn	21 29 14.9	+0.1
VAY	Valandovo	2.88	289	ePn	Pn	21 29 15.2	+0.3
AVR	AVREN	2.91	22	P	Pn	21 29 16.5	+1.3
AVR				S	Sn	21 29 49.8	-0.2
AVR	AVREN	2.91	22	P	Pn	21 29 16.5	+1.3
AVR				S	Sn	21 29 49.8	-0.2
PRD	Provadia	2.92	18	P	Pn	21 29 14.6	-0.7
PRD				S	Sn	21 29 49.3	-0.8
PRD	Provadia	2.92	18	P	Pn	21 29 14.6	-0.7
PRD				S	Sn	21 29 49.3	-0.8
DION	Dionisos Attik	2.93	217	P	Pn	21 29 14.2	-1.3
DION	Dionisos Attik	2.93	217	P	Pn	21 29 14.8	-0.7
GRG	Griva	2.93	282	PN	Pn	21 29 16.0	+0.5
GRG	Griva	2.93	282	P	Pn	21 29 16.7	+1.2
GRG	Griva	2.93	282	P	Pn	21 29 15.5	0.0
GRG	Griva	2.93	282	P	Pn	21 29 15.5	0.0
GRG	Griva	2.93	282	P	Pn	21 29 15.5	0.0
GRG	Griva	2.93	282	P	Pn	21 29 15.5	0.0
GRG	Griva	2.93	282	ePn	Pn	21 29 16.0	+0.5
NEF	NEVSHA	2.95	16	P	Pn	21 29 15.7	-0.1
NEF				S	Sn	21 29 50.9	-0.1
NEF	NEVSHA	2.95	16	P	Pn	21 29 15.7	-0.1
NEF				S	Sn	21 29 50.9	-0.1
AUKUT	KUTAHYA	2.97	98	i P	Pb	21 29 19.5	-2.6
AUKUT				i S	Sb	21 29 58.5	+0.2
AUKUT	KUTAHYA	2.97	98	P	Pb	21 29 19.5	-2.6
PTL	Penteli	2.98	218	P	Pn	21 29 14.8	-1.4
PTL	Penteli	2.98	218	P	Pn	21 29 15.7	-0.5
PTL	Penteli	2.98	218	P	Pn	21 29 15.7	-0.5
PTL	Penteli	2.98	218	P	Pn	21 29 15.7	-0.5
LRSO	Larissa Observ	3.01	257	P	Pn	21 29 17.4	+0.9
LRSO	Larissa Observ	3.01	257	P	Pn	21 29 17.0	+0.4
LKR	Lokris	3.04	235	P	Pn	21 29 15.5	-1.4
LKR	Lokris	3.04	235	P	Pn	21 29 16.3	-0.6
ATHU	Athens Univers	3.09	218	P	Pn	21 29 16.4	-1.3
ATHU	Athens Univers	3.09	218	P	Pn	21 29 16.6	-1.0
ATHU	Athens Univers	3.09	218	P	Pn	21 29 16.6	-1.0
ATHU	Athens Univers	3.09	218	P	Pn	21 29 17.0	-0.6
VTS	Vitosha	3.11	315	ePn	Pn	21 29 18.9	+0.8
VTS	Vitosha	3.11	315	⇓iP	Pn	21 29 18.7	+0.6
VTS	Vitosha	3.11	315	S	Sg	21 30 08.6	-0.7
VTS	Vitosha	3.11	315	⇓iP	Pn	21 29 18.7	+0.6
ATH	Athens Observa	3.11	219	P	Pn	21 29 17.7	-0.3
ATH	Athens Observa	3.11	219	P	Pn	21 29 17.8	-0.2
ATH	Athens Observa	3.11	219	P	Pn	21 29 17.8	-0.2
ATH	Athens Observa	3.11	219	P	Pn	21 29 17.8	-0.2
ATH	Athens Observa	3.11	219	P	Pn	21 29 17.8	-0.2
KAND	Kocaeli-Kandir	3.11	76	⇑iP	Pn	21 29 18.2	+0.2
KAND				i S	Sn	21 29 55.2	+0.2
KAND	Kocaeli-Kandir	3.11	76	P	Pn	21 29 18.2	+0.2
KAND				S	Sn	21 29 55.2	+0.2
KUTH	Kutahya	3.12	108	PN	Pn	21 29 19.2	+0.9
KUTH	Kutahya	3.12	108	ePn	Pn	21 29 19.2	+0.9
GEYV	SAKARYA_Geyve	3.13	88	i P	Pn	21 29 18.6	+0.3
GEYV				i S	Sb	21 30 05.6	+2.7
GEYV	SAKARYA_Geyve	3.13	88	P	Pn	21 29 18.6	+0.3
SPNC	Sapanca-Adapaz	3.15	84	PN	Pn	21 29 19.1	+0.6
SPNC	Sapanca-Adapaz	3.15	84	ePn	Pn	21 29 19.1	+0.6
SAUV	Serdivan-Sakar	3.17	83	PN	Pn	21 29 19.6	+0.9
SAUV	Serdivan-Sakar	3.17	83	ePn	Pn	21 29 19.6	+0.9
VLY	Voula,Athens	3.17	217	P	Pn	21 29 17.7	-1.2
VLY	Voula,Athens	3.17	217	P	Pn	21 29 18.2	-0.6
VLY	Voula,Athens	3.17	217	P	Pn	21 29 18.2	-0.6
VLY	Voula,Athens	3.17	217	P	Pn	21 29 18.3	-0.6
KHAL	Karahalli	3.28	128	i P	Pn	21 29 21.7	+1.3
KHAL				i S	Sn	21 29 58.4	-0.9
KHAL	Karahalli	3.28	128	P	Pn	21 29 21.7	+1.3
KHAL				S	Sn	21 29 58.4	-0.9
ZIMR		3.29	350	⇓iP	Pn	21 29 21.2	+0.8
ZIMR		3.29	350	S	Sg	21 30 18.0	+3.1
AGG	Agios Georgios	3.29	246	P	Pn	21 29 20.3	-0.2
AGG	Agios Georgios	3.29	246	P	Pn	21 29 20.2	-0.2
AGG	Agios Georgios	3.29	246	P	Pn	21 29 20.2	-0.2
AGG	Agios Georgios	3.29	246	P	Pn	21 29 20.2	-0.2
AGG	Agios Georgios	3.29	246	P	Pn	21 29 20.3	-0.2
GULT	Gulveren	3.30	89	PN	Pn	21 29 21.4	+0.7
GULT	Gulveren	3.30	89	ePn	Pn	21 29 21.4	+0.7
BORA	Eskisehir	3.31	98	PN	Pn	21 29 21.4	+0.5
BORA	Eskisehir	3.31	98	i P	Pn	21 29 21.6	+0.7
BORA				i S	Sn	21 29 59.6	-0.5
BORA	Eskisehir	3.31	98	ePn	Pn	21 29 21.4	+0.5
BORA				S	Sn	21 29 59.6	-0.5
THL	Klokotos Trika	3.32	256	P	Pn	21 29 20.3	-0.5
THL				S	Sn	21 29 57.1	-2.9
THL	Klokotos Trika	3.32	256	P	Pn	21 29 20.6	-0.2
THL				S	Sn	21 29 57.8	-2.2
PROD	Prodromos	3.34	231	P	Pn	21 29 20.3	-0.9
PROD	Prodromos	3.34	231	P	Pn	21 29 20.8	-0.4
KZN	Kozani	3.38	269	P	Pn	21 29 22.3	+0.6
KZN	Kozani	3.38	269	P	Pn	21 29 22.0	+0.3
APE	Apeiranthos	3.39	189	P	Pn	21 29 21.6	-0.3
APE				S	Sn	21 30 00.9	-1.0
APE	Apeiranthos	3.39	189	⇓iP	Pn	21 29 19.5	-2.4
APE	Apeiranthos	3.39	189	P	Pn	21 29 21.4	-0.5
APE	Apeiranthos	3.39	189	P	Pn	21 29 21.4	-0.5
APE	Apeiranthos	3.39	189	c iP	Pn	21 29 21.2	-0.7
APE	Apeiranthos	3.39	189	P	Pn	21 29 21.9	0.0
APE				S	Sn	21 30 01.0	-1.0
LTK	Loutraki	3.47	227	P	Pn	21 29 21.7	-1.1
LTK	Loutraki	3.47	227	P	Pn	21 29 22.4	-0.5
BODT	Bodrum	3.47	165	P	Pn	21 29 23.1	+0.1
BODT	Bodrum	3.47	165	P	Pn	21 29 23.1	+0.1
BODT	Bodrum	3.47	165	P	Pn	21 29 23.1	+0.1
DSF	Desfina	3.48	236	P	Pn	21 29 21.3	-1.7
DSF	Desfina	3.48	236	P	Pn	21 29 22.2	-0.9
DSF	Desfina	3.48	236	P	Pn	21 29 22.2	-0.9
DSF	Desfina	3.48	236	P	Pn	21 29 22.2	-0.9
SAHE	Sakarya_HENDEK	3.58	82	i P	Pn	21 29 25.3	+0.9
SAHE				i S	Sn	21 30 08.4	+2.0
SAHE	Sakarya_HENDEK	3.58	82	P	Pn	21 29 25.3	+0.9
SAHE				S	Sn	21 30 08.4	+2.0
AMGA	Amorgos Island	3.60	184	P	Pn	21 29 23.8	-0.9
AMGA				S	Sn	21 30 05.9	-1.0
AMGA				AML	AML	21 30 08.1	
	comp=E,836μm,0.5s						
AMGA				AML	AML	21 30 11.0	
	comp=N,816μm,0.4s						
AMGA	Amorgos Island	3.60	184	P	Pn	21 29 23.9	-0.8
AMGA	Amorgos Island	3.60	184	P	Pn	21 29 24.5	-0.2
AMGA				S	Sn	21 30 06.0	-1.0
THAL	Thalero	3.63	230	P	Pn	21 29 25.9	+0.8
THAL	Thalero	3.63	230	P	Pn	21 29 25.6	+0.5
FNA	Florina	3.68	277	ePn	Pn	21 29 26.6	+0.7
FNA	Florina	3.68	277	P	Pn	21 29 26.9	+1.1
FNA	Florina	3.68	277	P	Pn	21 29 26.3	+0.4
FNA	Florina	3.68	277	P	Pn	21 29 26.3	+0.4
FNA	Florina	3.68	277	P	Pn	21 29 26.3	+0.4
FNA	Florina	3.68	277	P	Pn	21 29 26.3	+0.4
FNA	Florina	3.68	277	ePn	Pn	21 29 26.6	+0.7
EVR	Evrytania	3.70	247	P	Pn	21 29 27.3	+1.1
EVR	Evrytania	3.70	247	P	Pn	21 29 26.8	+0.6
DID	Didima	3.71	219	P	Pn	21 29 25.7	-0.6
DID	Didima	3.71	219	P	Pn	21 29 25.7	-0.6
DID	Didima	3.71	219	P	Pn	21 29 25.7	-0.6
KPRO	Kipourio	3.73	264	P	Pn	21 29 27.7	+1.2
KPRO	Kipourio	3.73	264	P	Pn	21 29 27.2	+0.7
KALE	Kalithea	3.74	238	P	Pn	21 29 25.9	-0.8
KALE	Kalithea	3.74	238	P	Pn	21 29 26.3	-0.3
ANX	Ano Chora	3.77	242	P	Pn	21 29 27.1	-0.1
ANX	Ano Chora	3.77	242	P	Pn	21 29 27.1	-0.1
SERG	Sergoula	3.78	239	P	Pn	21 29 26.3	-0.9
SERG	Sergoula	3.78	239	P	Pn	21 29 26.8	-0.4
TRIZ	Trizonia	3.79	238	P	Pn	21 29 26.8	-0.6
TRIZ	Trizonia	3.79	238	P	Pn	21 29 27.2	-0.1
SGRR	Singureni	3.80	358	⇑iP	Pg	21 29 44.5	+2.4
SGRR	Singureni	3.80	358	S	Sg	21 30 29.3	-1.9
TRAZ	Trapeza	3.82	235	P	Pn	21 29 25.9	-1.8
TRAZ	Trapeza	3.82	235	P	Pn	21 29 27.0	-0.8
KRND	KRANIDI	3.85	219	P	Pn	21 29 27.9	-0.3
KRND	KRANIDI	3.85	219	P	Pn	21 29 28.2	0.0
KRND	KRANIDI	3.85	219	P	Pn	21 29 28.2	0.0
KRUS	Krusevo	3.86	286	⇓iPn	Pn	21 29 29.2	+0.8
EFP	Efpalio	3.87	240	P	Pn	21 29 29.1	+0.7
EFP	Efpalio	3.87	240	P	Pn	21 29 28.3	-0.1
EFP	Efpalio	3.87	240	P	Pn	21 29 28.3	-0.1
GUR	Goura	3.89	231	P	Pn	21 29 28.4	-0.3
GUR	Goura	3.89	231	P	Pn	21 29 28.2	-0.5
GUR	Goura	3.89	231	P	Pn	21 29 28.2	-0.5
GUR	Goura	3.89	231	P	Pn	21 29 28.7	0.0
ZAPS	Zavoj	3.89	318	ePn	Pn	21 29 30.4	+1.7
SKO	Skopje	3.90	295	i Pn	Pn	21 29 30.5	+1.7
NEST	Nestorio	3.92	271	P	Pn	21 29 30.6	+1.4
NEST	Nestorio	3.92	271	P	Pn	21 29 30.0	+0.8
LAKA	Lakka	3.93	238	P	Pn	21 29 28.7	-0.5
LAKA	Lakka	3.93	238	P	Pn	21 29 29.1	-0.1
MHLA	Plaka, Milos I	3.93	201	P	Pn	21 29 28.4	-0.8
MHLA	Plaka, Milos I	3.93	201	P	Pn	21 29 29.1	-0.1
KLV	Kalavryta, Ach	3.94	234	P	Pn	21 29 28.3	-1.1
KLV	Kalavryta, Ach	3.94	234	P	Pn	21 29 28.9	-0.5
MHLO	Agia Marina, M	3.98	201	P	Pn	21 29 29.7	-0.3
MHLO	Agia Marina, M	3.98	201	P	Pn	21 29 29.3	-0.7
MHLO	Agia Marina, M	3.98	201	P	Pn	21 29 30.1	+0.1
BARS	Barje	4.05	308	ePn	Pn	21 29 31.9	+0.9
BARS	Barje	4.05	308	ePn	Pn	21 29 31.9	+0.9
EFOR	EFORIE	4.08	26	⇑iP	Pg	21 29 44.9	-2.5
ANAF	Anafi Island	4.08	185	P	Pn	21 29 30.6	-0.7
ANAF	Anafi Island	4.08	185	P	Pn	21 29 31.3	0.0
SANT	Santorini	4.09	188	⇓iP	Pn	21 29 30.4	-1.1
SANT	Santorini	4.09	188	⇓iP	Pn	21 29 30.4	-1.1
KBN	Korca	4.12	274	i Pn	Pn	21 29 34.7	+2.8
KBN	Korca	4.12	274	i PN	Pn	21 29 34.7	+2.8
KBN				i SN	Sg	21 30 38.2	-3.4
DSL	Palaion Diasel	4.13	253	P	Pn	21 29 33.3	+1.3
DSL	Palaion Diasel	4.13	253	P	Pn	21 29 32.5	+0.5
DSL	Palaion Diasel	4.13	253	P	Pn	21 29 32.5	+0.5
DSL	Palaion Diasel	4.13	253	P	Pn	21 29 32.5	+0.5
OHR	Ohrid	4.15	281	i Pn	Pn	21 29 33.3	+0.9
OHR				eSn	Sg	21 30 37.6	-4.9
OHR				eLg	Lg	21 30 48.3	
	comp=N,784nm,1.2s						
OHR				eLg	Lg	21 30 55.4	
	comp=E,679nm,1.7s						
OHR	Ohrid	4.15	281	i P	Pn	21 29 33.2	+0.9
OHR	Ohrid	4.15	281	i P	Pn	21 29 33.2	+0.9
HUMR	Humele	4.20	348	⇓iP	Pn	21 29 32.9	0.0
HUMR	Humele	4.20	348	⇓iP	Pn	21 29 32.9	0.0
SULR		4.25	1	⇑iP	Pn	21 29 35.1	+1.5
SULR		4.25	1	⇑iP	Pn	21 29 35.1	+1.5
ISP	Isparta	4.26	126	⇓iP	Pn	21 29 34.9	+1.1
ISP	Isparta	4.26	126	P	Pn	21 29 34.6	+0.8
ISP	Isparta	4.26	126	P	Pn	21 29 34.6	+0.8
ISP	Isparta	4.26	126	d iP	Pn	21 29 34.8	+1.0
ISP	Isparta	4.26	126	P	Pn	21 29 34.6	+0.8
AMRR	Amara	4.27	11	⇓iP	Pg	21 29 50.1	-0.9
AMRR	Amara	4.27	11	S	Sg	21 30 43.4	-2.9
CRAR	CRAIOVA	4.28	336	⇑iP	Pn	21 29 34.9	+0.9
CRAR	CRAIOVA	4.28	336	S	Sg	21 30 49.8	+3.1
CRAR	CRAIOVA	4.28	336	⇑iP	Pn	21 29 34.9	+0.9
PDO	Prodromos	4.28	246	P	Pn	21 29 34.2	+0.2
PDO	Prodromos	4.28	246	P	Pn	21 29 34.3	+0.3
TIRR	Tirgusor	4.35	21	⇑iP	Pn	21 29 34.8	-0.2
TIRR	Tirgusor	4.35	21	P	Pn	21 29 35.3	+0.3
TIRR				S	Sn	21 30 23.8	-1.7
TIRR	Tirgusor	4.35	21	P	Pn	21 29 35.3	+0.3
TIRR				S	Sn	21 30 23.8	-1.7
FETY	Fethiye	4.41	148	P	Pn	21 29 37.3	+1.4
FETY	Fethiye	4.41	148	P	Pn	21 29 37.3	+1.4
FETY	Fethiye	4.41	148	P	Pn	21 29 37.3	+1.4
HARR	Harsova	4.45	16	⇓iP	Pn	21 29 37.8	+1.4
HARR	Harsova	4.45	16	P	Pn	21 29 37.8	+1.4
HARR	Harsova	4.45	16	P	Pn	21 29 37.8	+1.4
ARG	Arkhangelos	4.47	159	P	Pn	21 29 37.0	+0.3
ARG	Arkhangelos	4.47	159	P	Pn	21 29 37.4	+0.7
ZAGS	Zajecar	4.48	320	ePn	Pn	21 29 37.3	+0.5
ZAGS	Zajecar	4.48	320	ePn	Pn	21 29 37.3	+0.5
PLAR	PLOIESTI	4.49	359	⇓iP	Pn	21 29 38.3	+1.4
PLAR	PLOIESTI	4.49	359	⇓iP	Pn	21 29 38.3	+1.4
PGOR	Pogoanele	4.52	7	⇑iP	Pn	21 29 39.3	+2.0
PGOR	Pogoanele	4.52	7	⇑iP	Pn	21 29 39.3	+2.0
PHP	Peshkopia	4.52	288	P	Pn	21 29 40.2	+2.8
PHP	Peshkopia	4.52	288	i Pn	Pn	21 29 37.4	0.0
PHP	Peshkopia	4.52	288	P	Pn	21 29 40.2	+2.8
PHP	Peshkopia	4.52	288	i PN	Pn	21 29 37.4	0.0
PHP				i SN	Sg	21 30 55.9	+1.4
IGT	Igoumenitsa	4.59	261	ePn	Pn	21 29 41.4	+3.1
IGT	Igoumenitsa	4.59	261	ePn	Pn	21 29 41.4	+3.1
BOVS	Bovan	4.63	315	ePn	Pn	21 29 39.6	+0.8
BOVS	Bovan	4.63	315	ePn	Pn	21 29 39.6	+0.8
SGD	Sagiada	4.64	262	P	Pn	21 29 39.9	+0.8
SGD	Sagiada	4.64	262	P	Pn	21 29 39.7	+0.7
ITM	Ithomi	4.65	227	P	Pn	21 29 40.1	+1.0
ITM	Ithomi	4.65	227	P	Pn	21 29 39.9	+0.8
ISR	Istrita	4.70	3	⇑iP	Pn	21 29 43.3	+3.5
ISR	Istrita	4.70	3	P	Pn	21 29 41.0	+1.2
ISR	Istrita	4.70	3	P	Pn	21 29 41.0	+1.2
SELS	Selova	4.70	308	ePn	Pn	21 29 40.0	+0.1
SELS	Selova	4.70	308	ePn	Pn	21 29 40.0	+0.1
DYR	Agios Nikonas	4.74	221	P	Pn	21 29 41.8	+1.4
DYR	Agios Nikonas	4.74	221	P	Pn	21 29 41.0	+0.6
DYR	Agios Nikonas	4.74	221	P	Pn	21 29 41.0	+0.6
FSK	Fiskardo	4.78	248	P	Pn	21 29 40.8	0.0
KYTH	Kithira	4.83	212	P	Pn	21 29 40.9	-0.7
KYTH	Kithira	4.83	212	P	Pn	21 29 41.6	-0.1
MTUR	Matau	4.87	351	⇓iP	Pn	21 29 46.7	+4.5
MTUR	Matau	4.87	351	⇓iP	Pn	21 29 46.7	+4.5
CFR	Carcaliu	4.96	16	⇓iP	Pn	21 29 43.7	+0.4
CFR	Carcaliu	4.96	16	P	Pn	21 29 43.8	+0.4
CFR				pmax	pmax		
	comp=Z,52nm,1.0s						
CFR	Carcaliu	4.96	16	P	Pn	21 29 43.8	+0.4
	comp=Z,52nm,1.0s						
GRER		4.99	6	⇓iP	Pn	21 29 46.7	+3.0
GRER		4.99	6	⇓iP	Pn	21 29 46.7	+3.0
BCI	Bajram Curri	4.99	295	i Pn	Pn	21 29 46.6	+2.7
BCI	Bajram Curri	4.99	295	i PN	Pn	21 29 46.6	+2.7
BCI				i SN	Sg	21 31 14.8	+5.2
PUK	Puka	5.01	291	i Pn	Pn	21 29 45.5	+1.3
PUK	Puka	5.01	291	i PN	Pn	21 29 45.5	+1.3
KSL	Kastellorizon	5.04	147	P	Pn	21 29 46.9	+2.5
MLR	Muntele Rosu	5.07	358	Pn	Pn	21 29 46.4	+1.5
	comp=Z,4.1nm,0.3s,baz=262,slow=3.1,SNR=58						
MLR				Lg	Lg	21 31 11.7	
	comp=Z,11nm,0.3s,baz=72,slow=20,SNR=5.3						
MLR	Muntele Rosu	5.07	358	⇓iP	Pn	21 29 47.1	+2.2
MLR	Muntele Rosu	5.07	358	S	Sg	21 31 16.7	+4.8

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ARR   Arges             5.07 348⇑iP     Pn      21 29 45.4 +0.5
ARR   Arges             5.07 348  S     Sg      21 31 14.1 +2.1
ARR   Arges             5.07 348⇑iP     Pn      21 29 45.4 +0.5
VOIR                    5.08 351⇑iP     Pn      21 29 45.2 +0.1
VOIR                    5.08 351  P     Pn      21 29 45.0 -0.1
VOIR                              pmax  pmax
      comp=Z,70nm,0.6s
VOIR                    5.08 351  P     Pn      21 29 45.0 -0.1
      comp=Z,70nm,0.6s
ANTO  Ankara            5.09  94⇑iP     Pn      21 29 46.2 +0.9
ANTO  Ankara            5.09  94 ePn    Pn      21 29 45.2 -0.1
      comp=Z,306nm,0.7s
ANTO                             ePg    Pg      21 30 04.0 -2.9
ANTO                             eSg    Sg      21 31 08.9 -3.9
ANTO  Ankara            5.09  94 eP     Pn      21 29 45.2 -0.1
ANTO                              pmax  pmax
      comp=Z,306nm,0.7s
ANTO  Ankara            5.09  94 eP     Pn      21 29 45.2 -0.1
      comp=Z,306nm,0.7s
ANTO  Ankara            5.09  94 ePg    Pg      21 30 04.0 -2.9
TLCR                    5.13  21⇓iP     Pn      21 29 47.3 +1.6
TLCR                    5.13  21⇓iP     Pn      21 29 47.3 +1.6
PVY   Plav              5.15 297 ePn    Pn      21 29 47.2 +1.0
PVY                              eSn    Sn      21 30 44.9 -0.6
KUBS  Kucevo            5.20 322 ePn    Pn      21 29 45.3 -1.3
KUBS  Kucevo            5.20 322 ePn    Pn      21 29 45.3 -1.3
IDI   Anoyia            5.23 192  Pn    Pn      21 29 46.6 -0.6
      comp=Z,2.0nm,0.3s,baz=47,slow=14,SNR=14
IDI                               Sn    Sn      21 30 44.6 -2.7
      comp=Z,3.9nm,0.3s,baz=357,slow=19,SNR=3.4
IDI                               Lg    Lg      21 31 14.7
      comp=Z,0.7nm,0.3s,baz=348,slow=20,SNR=1.9
IDI   Anoyia            5.23 192⇑iP     Pn      21 29 46.6 -0.6
HERR  Herculane         5.25 329⇓iP     Pn      21 29 47.4 +0.1
HERR  Herculane         5.25 329  S     Sg      21 31 13.2 -4.6
HERR  Herculane         5.25 329⇓iP     Pn      21 29 47.4 +0.1
ZKR   Zakros            5.30 180  P     Pn      21 29 48.3 +0.2
ZKR   Zakros            5.30 180  P     Pn      21 29 48.8 +0.7
BEY   Berane            5.31 299 ePn    Pn      21 29 49.4 +1.1
BEY                              eSn    Sn      21 30 49.1 -0.2
IVA   Berane            5.31 299 ePn    Pn      21 29 49.4 +1.1
IVA                              eSn    Sn      21 30 49.1 -0.2
SVIS  Svilajnac         5.32 318 ePn    Pn      21 29 47.5 -0.8
LOT   Lotru             5.32 341⇑iP     Pn      21 29 48.1 -0.4
LOT   Lotru             5.32 341⇑iP     Pn      21 29 48.1 -0.4
GRUS  Gruza             5.34 312 ePn    Pn      21 29 48.7 +0.1
GRUS  Gruza             5.34 312 ePn    Pn      21 29 48.7 +0.1
PETR  Petresti          5.35   8⇑iP     Pn      21 29 48.7  0.0
PETR  Petresti          5.35   8⇑iP     Pn      21 29 48.7  0.0
PLOR  Plostina          5.43   3  P     Pn      21 29 51.6 +1.7
PLOR  Plostina          5.43   3  P     Pn      21 29 51.6 +1.7
SJES  Sjenica           5.44 303 ePn    Pn      21 29 51.0 +1.0
VRI   Vrincioaia        5.45   4⇓iP     Pn      21 29 51.7 +1.6
VRI   Vrincioaia        5.45   4  P     Pn      21 29 51.5 +1.4
VRI                               pmax  pmax
      comp=Z,662nm,0.7s
VRI   Vrincioaia        5.45   4  P     Pn      21 29 51.5 +1.4
      comp=Z,662nm,0.7s
ULC   Ulcinj            5.46 289 ePn    Pn      21 29 52.0 +1.7
ULC                              eSn    Sn      21 30 52.7 -0.1
ULC   Ulcinj            5.46 289 ePn    Pn      21 29 52.0 +1.7
ULC                              eSn    Sn      21 30 52.7 -0.1
MDVR  Moldovita         5.46 324⇓iP     Pn      21 29 50.1 -0.2
MDVR  Moldovita         5.46 324⇓iP     Pn      21 29 50.1 -0.2
IVAS  Ivanjica          5.49 307 ePn    Pn      21 29 50.9 +0.2
IVAS  Ivanjica          5.49 307 ePn    Pn      21 29 50.9 +0.2
KOME  Kolasin           5.55 298⇓iPn    Pn      21 29 53.2 +1.6
KOME                             eSn    Sn      21 30 55.0 -0.3
KOME  Kolasin           5.55 298⇓iPn    Pn      21 29 53.2 +1.6
KOME                             eSn    Sn      21 30 55.0 -0.3
DRME  Dracevica, Mon    5.56 291⇑iPn    Pn      21 29 53.3 +1.7
DRME                             eSn    Sn      21 30 54.9 -0.4
DRME  Dracevica, Mon    5.56 291⇑iPn    Pn      21 29 53.3 +1.7
DRME                             eSn    Sn      21 30 54.9 -0.4
DOPR  Dopca             5.57 354⇓iP     Pn      21 29 52.7 +0.9
DOPR  Dopca             5.57 354⇓iP     Pn      21 29 52.7 +0.9
PDG   Podgorica         5.58 293 ePn    Pn      21 29 53.3 +1.4
PDG   Podgorica         5.58 293⇓iP     Pn      21 29 53.3 +1.4
PDG   Podgorica         5.58 293⇑iPn    Pn      21 29 53.0 +1.1
PDG   Podgorica         5.58 293⇓iP     Pn      21 29 53.3 +1.4
PDG                              eSn    Sn      21 30 55.9 +0.1
TTG   Podgorica         5.58 293⇑iPn    Pn      21 29 53.0 +1.1
TTG                              eSn    Sn      21 30 55.9 +0.1
TRUS  Trudelj           5.72 313 ePn    Pn      21 29 53.6 -0.3
TRUS  Trudelj           5.72 313 ePn    Pn      21 29 53.6 -0.3
BRTR  Keskin Array B    5.76  95  Pn    Pn      21 29 55.4 +0.8
      comp=Z,4.5nm,0.3s,baz=260,slow=10,SNR=150
BRTR                              Sn    Sn      21 30 58.5 -2.0
      comp=Z,4.6nm,0.3s,baz=274,slow=16,SNR=6.1
BRTR                              Lg    Lg      21 31 31.5
      comp=Z,0.7nm,0.3s,baz=255,slow=16,SNR=2.8
BUM   Brajici-Budva     5.80 291⇓iPn    Pn      21 29 56.6 +1.6
BUM                              eSn    Sn      21 31 00.9 -0.4
BUM   Brajici-Budva     5.80 291⇓iPn    Pn      21 29 56.6 +1.6
BUM                              eSn    Sn      21 31 00.9 -0.4
PLE   Pljevlja          5.84 302⇓iPn    Pn      21 29 56.9 +1.3
PLE                              eSn    Sn      21 31 02.0 -0.5
PLE   Pljevlja          5.84 302⇓iPn    Pn      21 29 56.9 +1.3
PLE                              eSn    Sn      21 31 02.0 -0.5
CEME  Cevo              5.86 294 ePn    Pn      21 29 57.5 +1.8
CEME                             eSn    Sn      21 31 02.7  0.0
CEME  Cevo              5.86 294 ePn    Pn      21 29 57.5 +1.8
CEME                             eSn    Sn      21 31 02.7  0.0
DIVS  Divibare          5.88 311 ePn    Pn      21 29 56.0 -0.1
DIVS  Divibare          5.88 311 ePn    Pn      21 29 56.0 -0.1
NKY   Niksic            5.89 296⇑iPn    Pn      21 29 57.4 +1.1
NKY                              eSn    Sn      21 31 03.3 -0.4
NKY   Niksic            5.89 296⇑iPn    Pn      21 29 57.4 +1.1
NKY                              eSn    Sn      21 31 03.3 -0.4
NKME  Niksic            5.91 296⇑iPn    Pn      21 29 58.0 +1.6
NKME                             eSn    Sn      21 31 03.9  0.0
NKME  Niksic            5.91 296⇑iPn    Pn      21 29 58.0 +1.6
NKME                             eSn    Sn      21 31 03.9  0.0
DEV   Deva              5.96 337  P     Pn      21 29 57.7 +0.6
DEV                               pmax  pmax
      comp=Z,42nm,1.1s
DEV   Deva              5.96 337  P     Pn      21 29 57.7 +0.6
      comp=Z,42nm,1.1s
TESR  Tescani           6.09   3⇓iP     Pn      21 29 59.8 +0.9
TESR  Tescani           6.09   3⇓iP     Pn      21 29 59.8 +0.9
BBLS  Lazi&#263;i       6.10 307 ePn    Pn      21 29 59.9 +0.8
BBLS  Lazi&#263;i       6.10 307 ePn    Pn      21 29 59.9 +0.8
UPM   Unac-Piva         6.11 299⇑iPn    Pn      21 30 00.5 +1.2
UPM                              eSn    Sn      21 31 08.8 -0.2
UPM   Unac-Piva         6.11 299⇑iPn    Pn      21 30 00.5 +1.2
UPM                              eSn    Sn      21 31 08.8 -0.2
HCY   Herceg Novi       6.12 292⇑iPn    Pn      21 30 00.5 +1.1
HCY                              eSn    Sn      21 31 08.6 -0.6
HCY   Herceg Novi       6.12 292⇑iPn    Pn      21 30 00.5 +1.1
HCY                              eSn    Sn      21 31 08.6 -0.6
BZS   Buzias            6.17 329⇑iP     Pn      21 29 59.4 -0.6
BZS   Buzias            6.17 329  S     Sg      21 31 43.9 -3.5
BZS   Buzias            6.17 329⇑iP     Pn      21 29 59.4 -0.6
BANR  Banloc            6.19 325⇓iP     Pn      21 30 00.8 +0.6
BANR  Banloc            6.19 325  S     Sg      21 31 46.1 -1.7
BANR  Banloc            6.19 325⇓iP     Pn      21 30 00.8 +0.6
LEOM  Leova             6.23  13⇑iP     Pn      21 30 01.8 +1.0
LEOM  Leova             6.23  13  P     Pn      21 30 01.7 +1.0
LEOM  Leova             6.23  13  P     Pn      21 30 01.7 +1.0
TREB  Trebinje          6.31 294 ePn    Pn      21 30 03.5 +1.6
TREB  Trebinje          6.31 294 ePn    Pn      21 30 03.5 +1.6
TEKS  Tekeris           6.42 312 ePn    Pn      21 30 03.9 +0.5
TEKS  Tekeris           6.42 312 ePn    Pn      21 30 03.9 +0.5
HAPS  Han Pijesak,Bl    6.50 307 ePn    Pn      21 30 04.3 -0.3
HAPS  Han Pijesak,Bl    6.50 307 ePn    Pn      21 30 04.3 -0.3
BIZ   Bicaz             6.51 359⇑iP     Pn      21 30 06.0 +1.3
BIZ   Bicaz             6.51 359⇑iP     Pn      21 30 06.0 +1.3
CJR   Cluj-Napoca       6.56 344⇓iP     Pn      21 30 06.7 +1.3
CJR   Cluj-Napoca       6.56 344  P     Pn      21 30 06.7 +1.3
CJR   Cluj-Napoca       6.56 344  P     Pn      21 30 06.7 +1.3
FGSL  Fruska Gora       6.66 317 ePn    Pn      21 30 06.7  0.0
FRGS  Fruska Gora       6.66 317 ePn    Pn      21 30 06.7  0.0
ARCR  ARCALIA           6.79 349⇓iP     Pn      21 30 09.2 +0.7
ARCR  ARCALIA           6.79 349⇓iP     Pn      21 30 09.2 +0.7
STON  Ston              6.81 294  P     Pn      21 30 11.6 +2.8
IAS   Iasi              6.84   8⇑iP     Pn      21 30 09.4 +0.3
IAS   Iasi              6.84   8  P     Pn      21 30 10.5 +1.4
IAS                               pmax  pmax
      comp=Z,50nm,0.6s
IAS   Iasi              6.84   8  P     Pn      21 30 10.5 +1.4
      comp=Z,50nm,0.6s
KIS   Kishinev          6.84  15⇓eP     Pn      21 30 10.0 +0.8
      comp=Z,140nm,0.8s
KIS                              eS     Sn      21 31 20.0 -6.8
KIS                               LQM           21 32 22.0
      comp=Z,1µm,14.0s
KIS                               LRM   MLR     21 33 05.0
      comp=Z,400nm,9.0s
KIS   Kishinev          6.84  15⇓eP     Pn      21 30 10.0 +0.8
      comp=Z,140nm,0.8s
DRGR                    6.84 340  P     Pn      21 30 10.1 +0.8
DRGR                    6.84 340  P     Pn      21 30 10.1 +0.8
SEV   Sevastopol'       6.89  51 eP     Pn      21 30 09.0 -0.9
SEV                              eS     Sn      21 31 22.6 -5.4
SEV   Sevastopol'       6.89  51 eP     Pn      21 30 09.0 -0.9
PRAR  RASCA             6.93   0⇓iP     Pn      21 30 11.6 +1.1
PRAR  RASCA             6.93   0⇓iP     Pn      21 30 11.6 +1.1
YAL   Yalta             7.15  53⇑iP     Pn      21 30 12.4 -1.0
YAL                              eS     Sn      21 31 27.9 -6.5
YAL   Yalta             7.15  53 i P    Pn      21 30 12.4 -1.0
BURAR Bucovina Array    7.22 355⇓iP     Pn      21 30 16.3 +1.8
BURAR Bucovina Array    7.22 355  P     Pn      21 30 16.3 +1.8
BURAR Bucovina Array    7.22 355⇓iP     Pn      21 30 16.3 +1.8
MATE  Matera            7.23 275⇑iP     Pn      21 30 13.7 -0.8
MATE  Matera            7.23 275⇑iP     Pn      21 30 13.7 -0.8
DOB   Doboj             7.36 308 ePn    Pn      21 30 13.9 -2.4
TIP   Timpagrande       7.37 263⇓iP     Pn      21 30 16.7 +0.2
TIP   Timpagrande       7.37 263⇓iP     Pn      21 30 16.7 +0.2
SIM   Simferopol'       7.38  50 eP     Pn      21 30 14.6 -2.0
SIM                              eS     Sn      21 31 33.9 -6.3
SIM                               pmax  pmax
      comp=Z,154nm,0.3s
SIM                               smax  smax
      comp=N,58nm,0.8s
SIM                               smax  smax
      comp=E,61nm,0.9s
SIM                               MLR   MLR
      comp=Z,70nm,9.8s
ALU   Alushta           7.41  52 eP     Pn      21 30 16.6 -0.3
ALU                              eS     Sn      21 31 34.9 -5.8
ALU   Alushta           7.41  52 eP     Pn      21 30 16.6 -0.3
BMR   Baia Mare         7.50 346⇓iP     Pn      21 30 23.1 +4.9
SORM  Soroca            7.86  11⇑iP     Pn      21 30 23.1 -0.1
SORM  Soroca            7.86  11  P     Pn      21 30 23.1 -0.1
SORM  Soroca            7.86  11  P     Pn      21 30 23.1 -0.1
SUDU  Sudak             7.88  53 eP     Pn      21 30 22.6 -0.8
SUDU                             eS     Sn      21 31 46.7 -5.6
SUDU  Sudak             7.88  53 eP     Pn      21 30 22.6 -0.8
BLY   Banja Luka        7.92 306⇓iP     Pn      21 30 23.7 -0.3
BLY   Banja Luka        7.92 306 ePn    Pn      21 30 23.3 -0.7
BLY   Banja Luka        7.92 306⇓iP     Pn      21 30 23.7 -0.3
MORH  Mˆ‡rˆ¡gy, Hung    7.98 319⇓ePn    Pn      21 30 24.3 -0.5
MORH  Mˆ‡rˆ¡gy, Hung    7.98 319 ePn    Pn      21 30 22.9 -1.9
TRPA  Tarpa             8.13 342⇑iP     Pb      21 30 41.1 -8.8
UZH   Uzhgorod          8.66 343 eP     Pn      21 30 34.6 +0.5
UZH                              eS     Sn      21 32 11.7 +0.2
UZH   Uzhgorod          8.66 343 eP     Pn      21 30 34.6 +0.5
UZH                              eS     Sn      21 32 11.7 +0.2
PSZ   Piszkesteto       8.75 331  P     Pn      21 30 35.7 +0.3
PSZ                               pmax  pmax
      comp=Z,10.0nm,0.8s
PSZ   Piszkesteto       8.75 331  P     Pn      21 30 35.7 +0.3
      comp=Z,10.0nm,0.8s
CSKK  Csˆ‡kako          8.99 323⇑ePn    Pn      21 30 36.6 -2.0
CRVS  Cervenica-Dubn    9.12 340 eSG            21 33 39.6
BEHE  Becsehely         9.12 315⇑epPn   Pn      21 30 46.2 +5.7
ANN   Anapa             9.37  59 eP     Pn      21 30 40.3 -3.6
ANN                              eS     Sn      21 32 26.6 -2.4
ANN                               pmax  pmax
      comp=Z,56nm,1.0s
LVV   L'vov             9.52 352 eP     Pn      21 30 51.4 +5.6
LVV                               MLR   MLR
      comp=N,400nm,13.0s
LVV                               MLR   MLR
      comp=E,1µm,13.0s
LVV                               MLR   MLR
      comp=Z,300nm,12.0s
CRES  Cresnjev          9.52 308 ePn    Pn      21 30 45.7 -0.2
VYHS  Vyhne             9.62 329 eP     Pn      21 30 46.7 -0.6
VYHS  Vyhne             9.62 329 ePN    Pn      21 30 46.7 -0.6
VYHS  Vyhne             9.62 329 eSG            21 33 50.4
VYHS  Vyhne             9.62 329 eP     Pn      21 30 46.7 -0.6
VAE   Valguarnera       9.63 256  Pn    Pn      21 30 47.8 +0.3
      comp=Z,0.4nm,0.3s,baz=167,slow=19,SNR=2.2
NIE   Niedzica          9.91 337  P     Pn      21 30 52.9 +1.6
NIE                               pmax  pmax
      comp=Z,4.0nm,1.4s
SOP   Sopron           10.03 320  P     Pn      21 30 54.0 +1.1
SOP                               pmax  pmax
      comp=Z,12nm,0.8s
SOP   Sopron           10.03 320  P     Pn      21 30 54.0 +1.1
      comp=Z,12nm,0.8s
MODS  Modra-Piesok     10.18 324 eP     Pn      21 31 02.6 +7.6
MODS  Modra-Piesok     10.18 324 ePN    Pn      21 31 02.6 +7.6
MODS  Modra-Piesok     10.18 324 eSG            21 34 13.8
SOKA  Soboth           10.22 311 i P    Pn      21 30 56.2 +0.6
      comp=Z,3.2nm,1.0s
SOKA  Soboth           10.22 311  P     Pn      21 30 56.2 +0.6
      comp=Z,3.2nm,1.0s
ARSA  Arzberg          10.28 315 i P    Pn      21 30 57.7 +1.3
      comp=Z,6.7nm,1.1s
ARSA  Arzberg          10.28 315  P     Pn      21 30 57.7 +1.3
      comp=Z,6.7nm,1.1s
MMAI  Mount Meron Ar   10.46 132  Pn    Pn      21 30 57.5 -1.4
      comp=Z,1.3nm,0.3s,baz=314,slow=12,SNR=14
MMAI                              Sn    Sn      21 32 53.6 -2.2
      comp=Z,1.1nm,0.3s,baz=297,slow=28,SNR=4.2
MMAI                              LR    LR      21 36 00.0
      comp=Z,106nm,18.8s,baz=175,slow=43
KIEV  Kiev             10.48  11 ePn    Pn      21 30 58.8 -0.3
      comp=Z,5.7nm,0.8s
KIEV  Kiev             10.48  11⇓eP     Pn      21 30 58.1 -1.0
KIEV                              pmax  pmax
      comp=Z,2.0nm,1.0s
KIEV  Kiev             10.48  11 eP     Pn      21 30 58.1 -1.0
      comp=Z,2.0nm,1.0s
KIEV  Kiev             10.48  11 ePn    Pn      21 30 58.8 -0.3
      comp=Z,5.7nm,0.8s
AKASG Malin Array Be   10.49  11  Pn    Pn      21 30 58.2 -1.0
      comp=Z,0.9nm,0.3s,baz=200,slow=12,SNR=3.9
AKASG                             Sn    Sn      21 32 49.4 -7.1
      comp=Z,2.6nm,0.3s,baz=234,slow=33,SNR=4.2
AKASG                             Lg    Lg      21 33 56.9
      baz=186,slow=29,SNR=3.0
CONA  Conrad Observa   10.54 319 i P    Pn      21 31 01.3 +1.3
      comp=Z,6.0nm,0.8s
CONA  Conrad Observa   10.54 319  P     Pn      21 31 01.3 +1.3
      comp=Z,6.0nm,0.8s
OKC   Ostrava-Krasne   10.98 332  AMS   AMS     21 37 50.0
      comp=Z,300nm,6.9s
KRUC  Moravsky         11.08 324 ePN    Pn      21 31 01.9 -5.4
MORC  Moravsky Berou   11.16 330 ePN    Pn      21 31 15.8 +7.4
VRAC  Vranov           11.18 326  Pn    Pn      21 31 09.6 +0.9
      comp=Z,0.2nm,0.3s,baz=143,slow=12,SNR=5.3
VRAC                              LR    LR      21 35 20.9
      comp=Z,84nm,18.5s,baz=114,slow=37
VRAC  Vranov           11.18 326 ePN    Pn      21 31 09.5 +0.9
MOA   Molln            11.32 315 i P    Pn      21 31 12.6 +2.0
      comp=Z,3.8nm,0.9s
MOA   Molln            11.32 315  P     Pn      21 31 12.6 +2.0
      comp=Z,3.8nm,0.9s
ABTA  Abfaltersbach    11.75 307 i P    Pn      21 31 19.9 +3.4
      comp=Z,2.9nm,0.9s
ASF   Jabal al Asfar   11.93 130  Pn    Pn      21 31 20.7 +1.7
      comp=Z,0.2nm,0.3s,baz=127,slow=20,SNR=2.9
DPC   Dobruska-Polom   12.09 328  AMS   AMS     21 37 00.0
      comp=Z,300nm,10.8s
GERES GERESS Array B   12.23 318  Pn    Pn      21 31 24.8 +1.7
      comp=Z,0.0nm,0.3s,baz=146,slow=14,SNR=6.3
GERES                             LR    LR      21 35 56.6
      comp=Z,98nm,19.6s,baz=132,slow=37
UPC   Upice            12.34 328  AMS   AMS     21 37 10.0
      comp=Z,200nm,9.0s
GOPC  GO Pecny, Ondr   12.42 324  AMS   AMS     21 36 50.0
      comp=Z,300nm,10.6s
KHC   Kasperske Hory   12.47 318 eP     Pn      21 31 27.7 +1.3
KHC                              ex     x       21 31 43.9
KHC                              ex     x       21 31 50.5
KHC                               AMS   AMS     21 36 40.0
      comp=Z,300nm,9.4s
KHC   Kasperske Hory   12.47 318 eP     Pn      21 31 27.7 +1.3
KHC                               MLR   MLR
      comp=Z,300nm,9.4s
KHC   Kasperske Hory   12.47 318 eP     Pn      21 31 27.7 +1.3
      comp=Z,300nm,9.4s
PRU   Pruhonice        12.59 323  AMS   AMS     21 36 50.0
      comp=Z,300nm,12.2s
PRA   Prague           12.70 323  AMS   AMS     21 37 00.0
KIV   Kislovodsk       12.73  69 eP     Pn      21 31 30.6 +0.6
KIV                               pmax  pmax
      comp=Z,2.0nm,0.8s
KIV   Kislovodsk       12.73  69 eP     Pn      21 31 30.6 +0.6
      comp=Z,2.0nm,0.8s
KVAR  Kislovodsk Arr   12.74  69  Pn    Pn      21 31 30.3 +0.2
      baz=250,slow=1.7,SNR=3.7
KVAR                              Sn    Sn      21 33 42.9 -8.8
      baz=199,slow=7.1,SNR=3.4
KBZ   Khabaz           12.85  70  Pn    P       21 31 41.0 -1.2
      comp=Z,0.1nm,0.3s,baz=270,slow=8.1,SNR=2.2
MOTA  Moosalm          12.88 307 i P    Pn      21 31 36.0 +4.0
      comp=Z,3.0nm,0.5s
EIL   Elat             12.90 144  Pn    Pn      21 31 33.6 +1.3
      comp=Z,0.7nm,0.3s,baz=178,slow=1.6,SNR=6.1
PVCC  Panska Ves       12.96 325  AMS   AMS     21 37 10.0
      comp=Z,200nm,11.7s
RETA  Reutte           13.15 308 i P    Pn      21 31 38.9 +3.2
      comp=Z,1.4nm,0.7s
DAVOX Davos/Dischmat   13.40 304  Pn    Pn      21 31 41.4 +2.2
      baz=315,slow=2.9
DAVOX                             LR    LR      21 37 45.4
      comp=Z,131nm,18.3s,baz=94,slow=42
SUW   Suwalki          13.74 353  P     Pn      21 31 42.4 -1.2
SUW                               pmax  pmax
      comp=Z,199nm,0.8s
VORD  Divnogorie       13.94  37 eP     Pn      21 31 42.8 -3.5
VORD                              pmax  pmax
      comp=Z,10.0nm,0.6s
VSR   Storozhevoye     14.06  36 eP     Pn      21 31 45.9 -2.0
VSR                               pmax  pmax
      comp=Z,20nm,1.2s
KEST  Kesra            14.07 256  Pn    P       21 31 53.5 -2.5
      comp=Z,0.1nm,0.3s,baz=336,slow=8.3,SNR=4.0
KEST                              LR    LR      21 37 57.7
      comp=Z,74nm,20.1s,baz=324,slow=40
LPSR  Galich'ya Gora   14.98  31 eP     Pn      21 31 56.1 -4.3
LPSR                              pmax  pmax
      comp=Z,10.0nm,0.9s
LPG   La Plagne        15.10 296 eP     P       21 32 05.8 -1.8
LPG                               pmax  pmax
      comp=Z,9.0nm,1.1s
LPG   La Plagne        15.10 296 eP     P       21 32 05.8 -1.8
      comp=Z,9.0nm,1.1s
VRH   Novokhopyorsk    15.24  40 eP     Pn      21 32 01.5 -2.5
VRH                               pmax  pmax
      comp=Z,10.0nm,0.7s
CDF   Champ du Feu     15.67 307 eP     P       21 32 14.9 +1.2
CDF                               pmax  pmax
      comp=Z,13nm,1.4s
CABF  La Chapelle      15.82 300 eP     P       21 32 16.5 +1.1
CABF                              pmax  pmax
      comp=Z,17nm,1.6s
HAU   Haudompre        16.09 305 eP     P       21 32 18.4 +0.1
HAU                               pmax  pmax
      comp=Z,1.0nm,0.4s
OBN   Obninsk          16.24  22 eP     Pn      21 32 12.2 -4.6
OBN                               pmax  pmax
      comp=Z,14nm,1.3s
OBN                               MLR   MLR
      comp=Z,101nm,16.0s
SMF   Signal de Mont   17.33 298 eP     P       21 32 33.7 +1.7
SMF                               pmax  pmax
      comp=Z,10.0nm,1.2s
SMF   Signal de Mont   17.33 298 eP     P       21 32 33.7 +1.7
      comp=Z,10.0nm,1.2s
SSF   Saint Saulge     17.65 300 eP     P       21 32 37.4 +1.9
SSF                               pmax  pmax
      comp=Z,2.0nm,0.7s
SSF   Saint Saulge     17.65 300 eP     P       21 32 37.4 +1.9
      comp=Z,2.0nm,0.7s
AVF   Avril sur Loir   17.69 299 eP     P       21 32 38.2 +2.2
AVF                               pmax  pmax
      comp=Z,10.0nm,1.6s
AVF   Avril sur Loir   17.69 299 eP     P       21 32 38.2 +2.2
      comp=Z,10.0nm,1.6s
BGF   Bois d'Agland    17.98 298 eP     P       21 32 41.9 +2.7
BGF                               pmax  pmax
      comp=Z,5.0nm,1.0s
VSU   Vasula           18.06   1⇑eP     Pn      21 32 35.2 -4.4
VSU                               pmax  pmax
      comp=Z,36nm,1.1s
FINES FINESS Array B   21.05 360  P     P       21 33 13.6 +1.1
      comp=Z,2.4nm,0.9s,baz=181,slow=9.3,SNR=5.5
FINES                             LR    LR      21 41 14.1
      comp=Z,77nm,19.2s,baz=173,slow=36
FINES FINESS Array B   21.05 360  P     P       21 33 13.6 +1.1
FINES                             pmax  pmax
      comp=Z,1.0nm,0.7s
FINES                             MLR   MLR
      comp=Z,77nm,19.2s
HFS   Hagfors          21.21 343  P     P       21 33 13.2 -1.1
      comp=Z,1.5nm,0.7s,baz=148,slow=8.7,SNR=5.1
HFS                               LR    LR      21 41 49.5
      comp=Z,113nm,19.3s,baz=157,slow=38
HFS   Hagfors          21.21 343  P     P       21 33 13.2 -1.1
HFS                               pmax  pmax
      comp=Z,1.0nm,0.6s
HFS                               MLR   MLR
      comp=Z,113nm,19.3s
KLMR  Klimovskoe       22.05  18 eP     P       21 33 21.6 -1.7
KLMR                              pmax  pmax
      comp=Z,12nm,1.4s
KLMR  Klimovskoe       22.05  18 eP     P       21 33 21.7 -1.6
KLMR                              AMP           21 33 37.3
      comp=Z,12nm,1.4s
NB2   NORSAR Subarra   22.60 341  P     P       21 33 28.2 -1.1
      comp=Z,16nm,1.4s,baz=146,slow=11
NOA   NORSAR Array B   22.60 341  P     P       21 33 28.3 -1.1
      comp=Z,0.8nm,0.7s,baz=145,slow=11,SNR=9.0
NOA                               LR    LR      21 43 44.9
      comp=Z,61nm,19.5s,baz=160,slow=41
ESDC  Sonseca Array    23.04 278  P     P       21 33 35.2 +1.1
      comp=Z,1.2nm,0.8s,baz=70,slow=9.6,SNR=7.5
AKTO  Aktyubinsk       24.30  55  P     P       21 33 47.8 +1.6
      comp=Z,0.5nm,0.4s,baz=239,slow=12,SNR=2.3
AKTO                              LR    LR      21 46 33.0
      comp=Z,49nm,18.1s,baz=258,slow=45
EKA   Eskdalemuir Ar   24.45 317  P     P       21 33 47.4  0.0
      comp=Z,2.0nm,0.8s,baz=112,slow=11,SNR=7.3
GEYT  Alibeck          24.81  85  P     P       21 33 52.3 +1.4
      comp=Z,2.0nm,0.8s,baz=286,slow=6.0,SNR=5.8
GEYT                              LR    LR      21 44 19.0
      comp=Z,72nm,20.3s,baz=235,slow=38
ASHT  Ashkhabad        25.01  85  P     P       21 33 54.7 +2.0
ASHT  Ashkhabad        25.01  85  P     P       21 33 54.7 +2.0
ARU   Arti             26.46  42  P     P       21 34 08.1 +2.5
      comp=Z,3.6nm,0.6s,baz=239,slow=6.2,SNR=10
ARU                               LR    LR      21 45 27.6
      comp=Z,87nm,18.2s,baz=180,slow=38
ARU   Arti             26.46  42 eP     P       21 34 07.2 +1.6
      comp=Z,13nm,1.1s
ARU   Arti             26.46  42d iP    P       21 34 08.0 +2.4
ARU                                             21 34 47.3
ARU                               S     S       21 38 45.4 +6.6
ARU                               SS    SnSn    21 39 41.3 +1.4
ARU                               pmax  pmax
      comp=Z,13nm,1.0s
ARCES ARCESS Array B   29.17 360  P     P       21 34 31.8 +2.0
      comp=Z,2.4nm,1.0s,baz=190,slow=4.6,SNR=3.8
BRVK  Borovoye         32.23  52 eP     P       21 34 56.4 -0.5
      comp=Z,1.5nm,0.5s
BRVK  Borovoye         32.23  52⇑iP     P       21 34 57.2 +0.3
BRVK                              pmax  pmax
      comp=Z,3.0nm,1.4s
BVAR  Borovoye Array   32.29  52  P     P       21 34 58.3 +0.8
      comp=Z,0.2nm,0.4s,baz=220,slow=6.6,SNR=3.0
TAS   Tashkent         32.35  74  P     P       21 34 59.8 +1.6
TAS   Tashkent         32.35  74  P     P       21 34 59.8 +1.6
TORD  Torodi Ar. Bea   34.64 225  P     P       21 35 18.9 +0.6
      comp=Z,0.4nm,0.9s,baz=29,slow=9.9
TORD                              LR    LR      21 51 27.4
      comp=Z,34nm,18.4s,baz=250,slow=40
SFK   Sufi-Kurgan      35.79  75  P     P       21 35 29.0 +0.7
SFK                               pmax  pmax
      comp=Z,3.0nm,0.9s
SFK   Sufi-Kurgan      35.79  75  P     P       21 35 29.0 +0.7
      comp=Z,3.0nm,0.9s
BORG  Borgarnes        36.42 328  LR    LR      21 50 06.3
      comp=Z,38nm,21.4s,baz=110,slow=36
KOWA  Kowa             36.90 234  LR    LR      21 50 39.9
      comp=Z,82nm,21.8s,baz=70,slow=36
KURBB Kurchatov Arra   37.34  56  P     P       21 35 41.9 +0.8
      comp=Z,0.6nm,0.9s,baz=279,slow=9.2,SNR=4.1
KURK  Kurchatov        37.39  56  P     P       21 35 41.9 +0.4
```

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MKAR  Makanchi Array     40.37  62   P       P       21 36 07.5 +0.9
      comp=Z,0.6nm,0.6s,baz=273,slow=6.7,SNR=5.6
MKAR  Makanchi Array     40.37  62 i P       P       21 36 07.3 +0.7
MKAR                                 pmax    pmax
      comp=Z,1.0nm,0.6s
ZALV  Zalesovo Beam      40.90  50   P       P       21 36 11.2 +0.4
      comp=Z,1.5nm,0.6s,baz=272,slow=8.8,SNR=5.5
ZALV                                 LR      LR      21 55 11.4
      comp=Z,31nm,19.8s,baz=248,slow=39
DGZ   Jazzator, Alta     43.14  56 i P       P       21 36 30.8 +1.5
DGZ                                  pmax    pmax
      comp=Z,2.0nm,1.6s
DBIC  Dimbokro           43.60 228   LR      LR      21 57 43.3
      comp=Z,34nm,18.1s,baz=32,slow=40
SONM  Songino Array      55.61  54   P       P       21 38 05.8 +1.2
      comp=Z,0.3nm,0.5s,baz=286,slow=5.8,SNR=2.8
TSUM  Tsumeb             59.86 189   LR      LR      22 09 09.4
      comp=Z,30nm,18.4s,baz=74,slow=41
CMAR  Chiang Mai Arr     65.29  86   P       P       21 39 13.7 +2.7
      comp=Z,0.3nm,0.5s,baz=306,slow=7.7,SNR=2.8
KSRS  Korea Array        74.48  54   P       P       21 40 07.3 +0.1
      comp=Z,0.8nm,0.7s,baz=308,slow=4.5,SNR=4.5
```

ISCJB ***25*** *21:38:46.9±0.6, 19°.20N±0°.06×121°.2E±0°.1, h46km, mb3.8/11, MS2.8/1, Error ellipse: s-maj=16.0km s-min=7.4km az=167.2*

IDC ***25*** *21:38:52.8±2.4, 19°.12N×121°.43E, h95km±23km, mb3.6/11, mb1 3.6/14, mb1mx3.4/62, mbtmp3.9/14, MS3.0/5, Ms1 3.1/5, ms1mx2.8/47, Error ellipse: s-maj=21.4km s-min=12.4km az=82.0*

ISC 25 21:38:47.8±0.8**, 19°.15N**±0°.07×**121°.2E**±0°.2**, h46km, n22, σ1s.49**/18**, mb3.7**/11**, Philippine Islands region**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op      ISC      h  m  s    ISC
CVP   Callao Caves        1.56 157 eP      Pn      21 39 14.0 +0.9
CVP                                i S     Sn      21 39 33.8 +1.7
TGY   Tagaytay City       5.03 183   P     Pn      21 40 07.7 +6.9
      21nm,0.3s,baz=82,slow=14,SNR=2.0
JOW   Kunigami           10.05  39   P     Pn      21 41 11.0 +1.5
      1.7nm,0.3s,baz=195,slow=15,SNR=9.6
JOW                                  LR    LR      21 45 22.7
      comp=Z,41nm,18.1s,baz=201,slow=39
DAV   Davao City (W)     12.75 160   LR    LR      21 47 29.0
      comp=Z,200nm,19.3s,baz=350,slow=41
JNU   Nakatsue           16.39  30   P     P       21 42 36.2 -0.8
      0.1nm,0.3s,baz=304,slow=3.6,SNR=2.4
JNU                                  LR    LR      21 48 57.0
      comp=Z,43nm,19.3s,baz=126,slow=37
KSRS  Korea Array        19.16  17   P     Pn      21 43 08.4 -0.2
      0.2nm,0.3s,baz=190,slow=12,SNR=3.3
KSRS                                 LR    LR      21 51 50.8
      comp=Z,51nm,18.1s,baz=208,slow=41
CMAR  Chiang Mai Arr     21.07 272   LR    LR      21 50 59.1
      comp=Z,43nm,20.9s,baz=188,slow=34
MJAR  Matsushiro Arr     22.89  37   P     P       21 43 48.2 +0.7
      1.0nm,0.6s,baz=210,slow=8.3,SNR=2.7
ASAJ  Asahikawa          30.67  31   P     P       21 44 56.8 -1.1
      1.2nm,0.3s,baz=252,slow=19,SNR=2.8
SONM  Songino Array      31.04 341   P     P       21 45 02.4 +1.0
      1.0nm,1.0s,baz=161,slow=9.2,SNR=4.3
WRA   Warramunga Arr     40.94 161   P     P       21 46 23.4 -2.7
      0.9nm,0.5s,baz=342,slow=9.0,SNR=18
WRA                                  PcP   PcP     21 48 26.2 +0.4
      0.3nm,0.5s,baz=344,slow=3.4,SNR=4.4
MKAR  Makanchi Array     42.06 320   P     P       21 46 36.3 +1.3
      0.9nm,0.6s,baz=112,slow=8.6,SNR=14
H11S3 WAKE ISLAND Hy     42.98  83   T     T       22 32 21.5
      baz=278,slow=75,SNR=26
H11S1 WAKE ISLAND Hy     42.99  83   T     T       22 32 22.3
      baz=278,slow=75,SNR=21
H11S2 WAKE ISLAND Hy     42.99  83   T     T       22 32 22.4
      baz=278,slow=75,SNR=15
ASAR  Alice Springs      44.33 163   P     P       21 46 53.3 -0.3
      0.5nm,0.3s,baz=347,slow=7.9,SNR=13
ZALV  Zalesovo Beam      44.52 330   P     P       21 46 55.6 +0.9
      0.8nm,0.6s,baz=103,slow=6.7,SNR=3.6
KURBB Kurchatov Arra     46.03 323   P     P       21 47 07.8 +1.0
      1.6nm,0.7s,baz=120,slow=7.7,SNR=13
BVAR  Borovoye Array     51.62 323   P     P       21 47 50.2 +0.6
      0.3nm,0.4s,baz=120,slow=13,SNR=3.9
KDAK  Kodiak Island      72.02  34   P     P       21 50 06.4 -0.2
      1.5nm,0.5s,baz=254,slow=15,SNR=2.4
YKA   Yellowknife Ar     87.59  23   P     P       21 51 30.6 -0.2
      0.7nm,0.5s,baz=306,slow=4.4,SNR=3.2
TXAR  Lajitas Array     115.23  43   PKP   PKPdf   21 57 21.3 -3.6
      0.1nm,0.5s,baz=270,slow=2.7,SNR=2.5
```

IDC ***25*** *21:39:27.4±1.9, 2°.86N×95°.74E, h0km, mb3.7/6, mb1 3.8/7, mb1mx3.5/65, mbtmp3.7/7, ML3.8/1, MS3.6/1, Ms1 3.6/1, ms1mx2.6/56, Error ellipse: s-maj=65.7km s-min=25.4km az=53.0*

ISCJB ***25*** *21:39:29.7±1.5, 2°.9N±0°.2×95°.8E±0°.3, h27km, mb3.8/6, MS3.6/1, Error ellipse: s-maj=40.5km s-min=21.3km az=151.1*

ISC 25 21:39:31.6±1.7**, 2°.9N**±0°.2×**95°.8E**±0°.3**, h27km, n8, σ1s.13**/7**, mb3.8**/6**, Off west coast of northern Sumatera**

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Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op      ISC      h  m  s    ISC
CMAR  Chiang Mai Arr     15.73  11   Pn    Pn      21 43 11.0 -0.5
      0.1nm,0.3s,baz=208,slow=11,SNR=3.6
WRA   Warramunga Arr     44.14 123   P     P       21 47 38.1 -0.2
      1.1nm,0.9s,baz=301,slow=9.1,SNR=4.0
MKAR  Makanchi Array     45.24 347   P     P       21 47 45.5 -1.1
      0.6nm,0.6s,baz=164,slow=7.2,SNR=4.5
SONM  Songino Array      45.65  10   P     P       21 47 50.2 +0.2
      1.0nm,0.8s,baz=184,slow=9.2,SNR=5.5
GEYT  Alibeck            48.99 320   P     P       21 48 15.6 -0.5
      0.9nm,0.9s,baz=65,slow=40,SNR=2.9
KURBB Kurchatov Arra     49.71 346   P     P       21 48 22.9 +1.6
      0.5nm,0.6s,baz=163,slow=6.9,SNR=4.0
JHJ   Hachijo jima 2     50.89  49   LR    LR      22 10 08.8
      comp=Z,65nm,20.4s,baz=81,slow=36
ZALV  Zalesovo Beam      51.64 352   P     P       21 48 36.6 +0.9
      1.4nm,0.5s,baz=164,slow=5.0,SNR=6.2
```

KRSC 25 21:41:25.0±2.1**, 49°.22N**×**156°.92E, h15km**±10km**, ML3.7, Kuril Islands**

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Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op      ISC      h  m  s    ISC
SKR   Severo-Kuril's      1.56 341 eP      Pn      21 41 50.8 -1.3
PAU   Pauzhetka           2.26 358 eP      Pn      21 42 03.0 +1.3
PAU                                eS      Sn      21 42 30.1 +0.9
KDTR  Khodutka, Kamc      2.70  15 eP      Pb      21 42 11.1 -1.8
KDTR                               eS      Sb      21 42 43.4 -2.4
ASAK  Asacha              3.23  11 eP      Pn      21 42 18.6 +3.4
RUS   Russkaya            3.38  17 eP      Pb      21 42 20.9 -3.5
RUS                                eS      Sb      21 43 01.6 -3.7
AVH   Avacha              4.21  15 eP      Pn      21 42 31.9 +3.3
SDLR  Sedlovina           4.25  16 eP      Pb      21 42 34.5 -4.9
GNL   Ganaly              4.53   8 eP      Pn      21 42 38.1 +5.0
MKZ   Mys Kozlova         6.12  27 eP      Pn      21 42 58.8 +4.1
KBTR  Krutoberegovo       7.87  25 eP      Pn      21 43 22.9 +4.2
```

IDC ***25*** *21:43:24.3±0.4, 9°.71S×159°.86E, h0km, mb4.8/26, mb1 4.9/27, mb1mx4.8/43, mbtmp4.7/27, ML3.6/1, MS3.8/22, Ms1 3.8/22, ms1mx3.7/40, Error ellipse: s-maj=17.0km s-min=7.7km az=111.0*

BJI ***25*** *21:43:25.7, 9°.34S×159°.95E, h12km, mb5.0/50, mB5.0/33, Ms4.8/13, Ms7 4.4/15*

MOS ***25*** *21:43:27.0±1.0, 9°.64S×159°.60E, h22km, mb5.2/39, Error ellipse: s-maj=8.9km s-min=7.2km az=80.4*

ISCJB ***25*** *21:43:28.5±0.2, 9°.69S±0°.03×159°.68E±0°.03, h32km, mb4.9/122, MS4.0/26, Error ellipse: s-maj=5.4km s-min=3.1km az=142.2*

NEIC ***25*** *21:43:28.9±0.9, 9°.73S×159°.70E, h26km±6km, mb5.0/70, Error ellipse: s-maj=6.2km s-min=4.2km az=133.0*

NEIC Felt at Honiara.

ISC 25 21:43:29.6±0.3**, 9°.73S**±0°.05×**159°.86E**±0°.06**, h32km, n350, σ1s.20**/347**, mb4.9**/121**, MS4.0**/26**, 7C-9D, Bougainville-Solomon Islands region**

```
Code  Station Name        Δ°   AZ°   Phase ID          Time      Res
                                     Op      ISC      h  m  s    ISC
HNR   Honiara             0.31  17   Pn    Pb      21 43 35.9 -1.4
      18µm,0.3s,baz=183,slow=5.1,SNR=2014
HNR                                  Sn    Sb      21 43 41.7 -0.9
      29µm,0.3s,baz=202,slow=19,SNR=125
HNR   Honiara             0.31  17 i P     Pb      21 43 35.0 -2.3
HNR                                i S     Sb      21 43 41.0 -1.6
HNR   Honiara             0.31  17 ePg     Pb      21 43 36.2 -1.1
HNR                                eSg     Sb      21 43 41.4 -1.2
HNR   Honiara             0.31  17 eP      Pb      21 43 36.2 -1.1
HNR                                e               21 43 41.4
PMG   Port Moresby       12.53 270   Pn    Pn      21 46 30.9 +5.2
      1.4nm,0.3s,baz=89,slow=7.4,SNR=15
PMG                                  LR    LR      21 51 02.1
      comp=Z,2µm,18.7s,baz=117,slow=36
DZM   Mont Dzumac        13.80 154 ePn     Pn      21 46 45.6 +2.4
      62nm,1.2s
DZM                                eLR     LR      21 49 55.3
      472nm,26.9s
DZM   Mont Dzumac        13.80 154   Pn    Pn      21 46 42.6 -0.6
      0.3nm,0.3s,baz=336,slow=20,SNR=2.8
DZM                                  LR    LR      21 51 41.6
      comp=Z,363nm,18.3s,baz=6.5,slow=36
PATS  Pohnpei            16.53 355   P     Pn      21 47 19.3 +0.1
      baz=17,SNR=17
PATS  Pohnpei            16.53 355 ePn     Pn      21 47 18.8 -0.4
      381nm,0.9s
CTAO  Charters Tower     16.68 230 ePn     Pn      21 47 20.8 -0.3
      100nm,1.0s
CTAO  Charters Tower     16.68 230 eP      Pn      21 47 20.8 -0.3
CTAO                                 pmax  pmax
      comp=Z,100nm,1.0s
COEN  Coen               16.86 254   P     Pn      21 47 24.4 +1.1
      baz=17,SNR=13
COEN  Coen               16.86 254 ePn     P       21 47 24.8 -0.3
      comp=Z,26nm,0.8s
TARA  Tarawa             17.05  50 eP      P       21 47 28.8 +1.6
MTSU  Mount Surprise     17.23 239   P     P       21 47 29.0 -0.2
      baz=17,SNR=64
EIDS  Eidsvold           17.65 207   P     P       21 47 34.7 +0.9
      baz=18,SNR=11
EIDS  Eidsvold           17.65 207 ePn     P       21 47 34.8 +0.9
      comp=Z,27nm,0.7s
RMQ   Roma               19.70 211   P     Pn      21 47 58.2 +0.2
      baz=20,SNR=26
JAY   Jayapura           20.34 289   P     P       21 48 04.9 +1.5
JAY   Jayapura           20.34 289   P     P       21 48 03.2 -0.2
JAY                                  pmax  pmax
      comp=Z,22nm,0.8s
GENI  Genyem             20.81 289   P     Pn      21 48 11.8 +0.8
ARMA  Armidale           21.97 199   P     P       21 48 21.2 +0.2
      baz=22,SNR=14
ARMA  Armidale           21.97 199 eP      P       21 48 21.2 +0.2
      comp=Z,26nm,0.9s
QIS   Mount Isa          22.29 239   P     P       21 48 24.5 +0.1
      baz=22,SNR=38
QLP   Quilpie            22.35 219   P     P       21 48 24.5 -0.5
      baz=22,SNR=7.3
CMSA  Cobar Meteorol     25.37 209   P     P       21 48 53.6 -0.3
      baz=26,SNR=13
YNG   Young              26.62 202   P     P       21 49 05.7 +0.4
      baz=27,SNR=9.1
WRAB  Tennant Creek      26.62 245 eP      P       21 49 04.9 -0.6
      comp=Z,45nm,0.9s
WRAB  Tennant Creek      26.62 245d iP     P       21 49 04.4 -1.1
WRAB                                 pmax  pmax
      comp=Z,40nm,0.7s
WB2   Warramunga Arr     26.62 245 eP      P       21 49 04.4 -1.1
      comp=Z,45nm,0.9s
WRA   Warramunga Arr     26.64 245   P     P       21 49 04.5 -1.1
      comp=Z,42nm,0.9s,baz=71,slow=9.2,SNR=70
WRA                                  PcP   PcP     21 52 30.0 +0.7
      comp=Z,2.2nm,0.7s,baz=71,slow=2.9,SNR=4.8
WRA                                  ScP   ScP     21 56 08.9 +1.7
      comp=Z,0.9nm,0.7s,baz=76,slow=3.4,SNR=4.8
KDU   Kakadu             27.02 261   P     P       21 49 08.0 -0.9
      baz=27,SNR=5.6
CNB   Canberra Magne     27.21 199   P     P       21 49 11.1 +0.5
      baz=27,SNR=8.7
CAN   Canberra           27.33 200 eP      P       21 49 11.6 -0.1
      comp=Z,23nm,0.7s
CAN   Canberra           27.33 200 eP      P       21 49 11.6 -0.1
CAN                                  pmax  pmax
      comp=Z,23nm,0.7s
GUMO  Guam               27.53 327   LR    LR      22 00 13.0
      comp=Z,52nm,19.2s,baz=144,slow=37
STKA  Stephens Creek     27.79 215   P     P       21 49 15.1 -0.7
      comp=Z,16nm,0.6s,baz=50,slow=14,SNR=18
STKA                                 LR    LR      22 00 08.4
      comp=Z,475nm,18.9s,baz=32,slow=36
STKA  Stephens Creek     27.79 215   P     P       21 49 15.0 -0.7
      baz=28,SNR=14
STKA  Stephens Creek     27.79 215 eP      P       21 49 15.2 -0.5
      comp=Z,3.7nm,0.6s
STKA  Stephens Creek     27.79 215 eP      P       21 49 15.3 -0.5
STKA                                 pmax  pmax
      comp=Z,4.0nm,0.6s
AFI   Afiamalu           28.06 101   LR    LR      21 58 39.2
      comp=Z,480nm,19.2s,baz=186,slow=33
MTN   Manton Dam         28.33 261 eP      P       21 49 20.2 -0.6
      comp=Z,28nm,1.3s
AS01  Alice Springs      28.35 238 eP      P       21 49 18.9 -2.0
AS31  Alice Springs      28.39 238 eP      P       21 49 19.6 -1.7
      comp=Z,5.3nm,1.0s
ASAR  Alice Springs      28.39 238   P     P       21 49 19.0 -2.3
      comp=Z,11nm,0.9s,baz=66,slow=9.5,SNR=59
ASAR                                 PcP   PcP     21 52 33.2 -0.2
      comp=Z,1.2nm,0.8s,baz=96,slow=2.0,SNR=2.9
ASAR                                 ScP   ScP     21 56 14.6 +2.2
      comp=Z,2.0nm,1.1s,baz=63,slow=4.3,SNR=5.8
ASAR                                 LR    LR      22 00 22.2
      comp=Z,362nm,18.2s,baz=65,slow=36
H11S2 WAKE ISLAND Hy     28.84  14   T     T       22 18 08.8
      baz=194,slow=76,SNR=117
H11S3 WAKE ISLAND Hy     28.84  14   T     T       22 18 09.8
      baz=194,slow=76,SNR=65
H11S1 WAKE ISLAND Hy     28.86  14   T     T       22 18 05.5
      baz=194,slow=76,SNR=83
H11N1 WAKE ISLAND Hy     30.07  13   T     T       22 19 40.6
      baz=193,slow=76,SNR=208
H11N3 WAKE ISLAND Hy     30.07  13   T     T       22 19 41.3
      baz=193,slow=76,SNR=366
H11N2 WAKE ISLAND Hy     30.09  13   T     T       22 19 42.6
      baz=193,slow=76,SNR=253
HTT   Hallett            30.45 216   P     P       21 49 38.7 -0.8
      baz=31,SNR=5.9
TOO   Toolangi           30.60 203   P     P       21 49 41.1 +0.4
      baz=31,SNR=8.7
TOO   Toolangi           30.60 203   P     P       21 49 40.4 -0.3
TOO                                  pmax  pmax
      comp=Z,24nm,1.4s
KNRA  Kununurra          30.88 256   P     P       21 49 42.4 -0.9
      baz=31,SNR=18
ARPS  Mount Arapiles     31.48 208   P     P       21 49 48.4  0.0
      baz=32,SNR=7.2
BBOO  Buckleboo          31.77 220   P     P       21 49 50.2 -0.9
      baz=32,SNR=14
WRKA  Warakurna          33.63 239   P     P       21 50 05.8 -1.7
      baz=34,SNR=9.0
BATI  Baumata            35.64 266   P     P       21 50 25.1 +0.2
MMRI  Maumere            37.14 269   P     P       21 50 36.0 -1.8
KMSI  Cibinong           37.15 284   P     P       21 50 38.3 +0.5
EDFI  Ende, Flores       37.67 268   P     P       21 50 41.8 -0.6
LUWI  Luwuk              37.88 281   P     P       21 50 44.5 +0.5
DAV   Davao City (W)     38.01 295   LR    LR      22 06 49.0
      comp=Z,43nm,18.1s,baz=114,slow=37
APSI  Ampana             39.00 281   P     P       21 50 53.4  0.0
MRSI  Marisa             39.08 283   P     P       21 50 56.1 +2.0
      comp=Z,18nm,1.0s
MBWA  Marble Bar         40.20 249 eP      P       21 51 01.3 -2.0
      comp=Z,29nm,0.9s
RAR   Rarotonga          40.43 111   LR    LR      22 04 47.8
      comp=Z,121nm,18.5s,baz=270,slow=32
PCI   Palu               40.76 280   P     P       21 51 09.3 +1.2
MPSI  Mapaga             41.01 282   P     P       21 51 08.9 -1.2
KMBL  Kambalda           41.26 233   P     P       21 51 11.1 -0.9
      baz=41,SNR=11
PLAI  Plampang           41.52 268   P     P       21 51 12.3 -2.0
TWSI  Taliwang, Sumb     42.41 268   P     P       21 51 20.5 -1.1
MEEK  Meekatharra        42.41 241   P     P       21 51 21.0 -0.5
      baz=42,SNR=14
KLBR  Kellerberrin       44.63 235   P     P       21 51 38.7 -0.5
      baz=45,SNR=6.6
JAGI  Jajag, Banyuwa     45.12 268   P     P       21 51 40.8 -2.6
BLDU  Ballidu            45.16 236   P     P       21 51 42.6 -0.9
      baz=45,SNR=6.8
MORW  Morawa             45.26 239   P     P       21 51 43.5 -0.8
      baz=45,SNR=5.8
TGY   Tagaytay City      45.29 301   LR    LR      22 11 41.7
      comp=Z,50nm,19.0s,baz=140,slow=38
MTKI  Muara Teweh, K     45.56 278   P     P       21 51 46.3 -0.6
PWJI  Pagerwojo          47.48 268   P     P       21 52 02.1 +0.2
JOW   Kunigami           47.54 321   P     P       21 52 03.0 +0.8
      comp=Z,14nm,0.7s,baz=180,slow=4.2,SNR=7.9
JOW                                  LR    LR      22 10 34.0
      comp=Z,66nm,21.1s,baz=114,slow=34
PCJI  Pacitan            48.08 268   P     P       21 52 05.1 -1.5
STKI  Sintang            49.11 279   P     P       21 52 14.8 +0.2
PPT   Papeete            49.63 105   LR    LR      22 08 48.7
      comp=Z,156nm,20.9s,baz=284,slow=31
PPT2  Papeete2           49.63 105 eS      S       21 59 41.9  +17
      comp=Z,84nm,27.8s
PPT2                               eLR     LR      22 06 45.4
      comp=Z,269nm,22.8s
INU   Inuyama            49.76 335 eP      P       21 52 19.4 +0.3
      comp=Z,34nm,1.5s
MJAR  Matsushiro Arr     50.33 337   P     P       21 52 22.3 -1.2
      comp=Z,4.9nm,0.6s,baz=175,slow=9.1,SNR=15
MJAR                                 LR    LR      22 12 32.7
      comp=Z,71nm,20.9s,baz=140,slow=35
MAJO  Matsushiro         50.33 337 eP      P       21 52 22.4 -1.1
      comp=Z,9.5nm,0.6s
MAJO  Matsushiro         50.33 337c iP     P       21 52 22.6 -0.8
MAJO                                 pmax  pmax
      comp=Z,9.0nm,0.7s
MAT   Matsushiro         50.33 337   P     P       21 52 22.4 -1.0
MJB9  Matsu-Tunnel       50.34 337 eP      P       21 52 22.9 -0.6
      comp=Z,9.7nm,0.7s
KSM   Kuching            50.57 280 eP      P       21 52 25.2 -0.5
      comp=Z,24nm,1.0s
JNU   Nakatsue           50.77 328   P     P       21 52 26.7 -0.1
      comp=Z,7.4nm,0.7s,baz=61,slow=2.5,SNR=9.2
JNU   Nakatsue           50.77 328 eP      P       21 52 27.1 +0.2
      comp=Z,12nm,0.9s
LEM   Lembang            51.74 269   P     P       21 52 33.5 -1.1
OPA   Opana              51.81  53   P     P       21 52 36.5 +1.7
OPA                                  pmax  pmax
      comp=Z,160nm,0.7s
CGJI  Cibinong           53.66 269   P     P       21 52 46.2 -2.5
TJN   Taejon             55.12 328⇓eP      P       21 52 58.3 -0.5
KSRS  Korea Array        55.66 329   P     P       21 53 02.8 +0.1
      comp=Z,4.2nm,0.9s,baz=145,slow=7.6,SNR=18
KSAR  Wonju Array Be     55.67 329   P     P       21 53 02.8  0.0
KSAR  Wonju Array Be     55.67 329   P     P       21 53 02.8  0.0
KS01  Wonju Array Si     55.69 329 eP      P       21 53 02.3 -0.6
KUR   Kuril'sk           55.77 350⇑eP      P       21 53 02.3 -1.0
ASAJ  Asahikawa          55.83 345   P     P       21 53 04.1 +0.3
      comp=Z,18nm,0.5s,baz=237,slow=4.6,SNR=31
ASAJ                                 LR    LR      22 14 04.1
      comp=Z,116nm,22.0s,baz=174,slow=33
NJ2   Nanjing            57.11 318 eP      P       21 53 14.3 +1.2
NJ2                                  pmax  pmax
      comp=Z,13nm,0.6s
MSHR  Mys Shultsa        58.30 335⇓eP      P       21 53 22.1 +0.8
YSS   Yuzh-Sakhalins     58.46 346 eP      P       21 53 22.5 +0.2
YSS   Yuzh-Sakhalins     58.46 346⇑eP      P       21 53 23.0 +0.7
YSS                                  pmax  pmax
      comp=Z,20nm,0.8s
TAOE  Nuku Hiva Isla     59.15  95 eLR     LR      22 11 24.4
      comp=Z,196nm,23.1s
WHN   Wuhan              59.26 314   P     P       21 53 28.3 +0.1
USRK  Ussuriysk Ar.      59.33 337   P     P       21 53 28.7 +0.3
      comp=Z,6.9nm,0.8s,baz=166,slow=3.4
MDJ   Mudanjiang         60.62 336   P     P       21 53 35.0 -2.3
MDJ                                  pP    pP      21 53 40.8 -6.3
MDJ                                  sP    sP      21 53 43.3 -7.6
MDJ                                  PP    PP      21 55 50.3 -1.0
MDJ                                  S     S       22 01 56.5 +5.0
MDJ                                  sS    pS      22 02 06.3 +2.9
MDJ                                  ScS   SKKSac  22 03 25.8 +0.1
MDJ                                  pmax  pmax
      comp=Z,12nm,1.0s
MDJ                                  LR    LR
      comp=Z,170nm,21.5s
MDJ                                  LR    LR
      comp=Z,140nm,22.3s
MDJ                                  LR    LR
      comp=Z,150nm,23.1s
MNSI  Mandailing Nat     60.90 276   P     P       21 53 37.9 -1.9
SKNT  Sakolnakorn        61.28 295   P     P       21 53 44.4 +2.1
      comp=Z,7.2nm,1.2s
CN2   Changchun          61.77 332 eP      P       21 53 45.0 -0.1
CN2                                  pmax  pmax
      comp=Z,10.0nm,0.7s
PET   Petropavlovsk      62.51 359 eP      P       21 53 49.8  0.0
PET                                eS      S       22 02 13.2 -1.8
PET                                  pmax  pmax
      comp=Z,31nm,1.4s
PETK  Petropavlovsk-     62.62 359   P     P       21 53 50.8 +0.2
      comp=Z,26nm,0.8s,baz=159,slow=6.3
ENH   Enshi              62.63 311 eP      P       21 53 50.0 -1.2
      comp=Z,20nm,1.1s
NAYO  Nakonayok          62.77 292   P     P       21 53 54.7 +2.4
      comp=Z,0.3nm,1.0s
GYA   Guiyang            62.93 306   P     P       21 53 54.0 +0.6
GYA                                  PP    PP      21 56 15.5 +3.3
GYA                                  S     S       22 02 22.8 +1.2
GYA                                  SKS   SKSac   22 03 43.3 -1.0
GYA                                  SS    SS      22 06 28.0 +0.4
GYA                                  pmax  pmax
      comp=Z,20nm,1.0s
GYA                                  pmax  pmax
      comp=Z,120nm,5.8s
GYA                                  LR    LR
      comp=Z,510nm,19.7s
GYA                                  LR    LR
      comp=Z,520nm,19.4s
GYA                                  LR    LR
      comp=Z,500nm,19.2s
GSI   Gunungsitoli       62.96 276   P     P       21 53 52.8 -0.9
KCSI  Kotacane, Aceh     63.23 279   P     P       21 53 53.3 -2.2
KLR   Kul'dur            63.69 340deP      P       21 53 57.6 -0.2
PBKT  Sadao Pong         63.84 294   P     P       21 54 02.0 +2.6
      comp=Z,8.6nm,0.9s,comp=Z,846nm
PHET  Kaeng Krachan      63.89 290   P     P       21 54 03.3 +3.5
      comp=Z,6.4nm,1.0s
MLSI  Meulaboh, Aceh     64.72 279   P     P       21 54 03.7 -1.6
SRDT  SRDT               64.80 291   P     P       21 54 08.3 +2.5
      comp=Z,30nm,1.0s,comp=Z,3µm
XAN   Xi'an              65.02 315   P     P       21 54 06.0 -0.9
XAN                                  pP    pP      21 54 12.8 -4.0
XAN                                  sP    sP      21 54 16.3 -4.2
XAN                                  pmax  pmax
      comp=Z,10.0nm,0.8s
XAN                                  pmax  pmax
      comp=Z,66nm,4.0s
KMI   Kunming            65.53 303   P     P       21 54 11.3 +0.7
KMI                                  pP    pP      21 54 19.5 -1.0
KMI                                  sP    sP      21 54 24.3 +0.1
KMI                                  pmax  pmax
      comp=Z,17nm,1.1s
KMI                                  pmax  pmax
      comp=Z,110nm,4.5s
LAMP  Lampang            65.70 295   P     P       21 54 13.3 +1.8
      comp=Z,5.3nm,0.9s
CM01  Chiang Mai Arr     66.27 295 eP      P       21 54 15.6 +0.4
CM31  Chiang Mai Arr     66.29 295 eP      P       21 54 16.7 +1.3
CMAR  Chiang Mai Arr     66.29 295   P     P       21 54 16.4 +1.0
      comp=Z,5.3nm,0.5s,baz=122,slow=5.0,SNR=33
CMAR                                 LR    LR      22 22 01.5
      comp=Z,28nm,20.4s,baz=165,slow=35
CMMT  Chiang Mai         66.41 295   P     P       21 54 17.8 +1.7
      comp=Z,9.4nm,2.0s
CHTO  Chiang Mai         66.41 295 eP      P       21 54 16.0 -0.1
      comp=Z,17nm,1.4s
CHTO  Chiang Mai         66.41 295 eP      P       21 54 16.0 -0.1
CHTO                                 pmax  pmax
      comp=Z,17nm,1.4s
CHTO  Chiang Mai         66.41 295   P     P       21 54 17.9 +1.8
      comp=Z,42nm,2.0s
CD2   Chengdu            67.25 309 eP      P       21 54 21.0 -0.3
CD2                                  pmax  pmax
      comp=Z,10.0nm,0.5s
CD2                                  pmax  pmax
      comp=Z,120nm,5.0s
VNDA  Vanda              67.78 180   P     P       21 54 24.7 +1.0
      comp=Z,2.5nm,0.8s,baz=343,slow=5.9,SNR=16
VNDA                                 LR    LR      22 19 01.0
      comp=Z,196nm,20.1s,baz=357,slow=32
VNDA  Vanda              67.78 180 eP      P       21 54 24.9 +1.1
      comp=Z,23nm,1.7s
VNDA  Vanda              67.78 180 eP      P       21 54 24.9 +1.1
VNDA                                 pmax  pmax
      comp=Z,23nm,1.7s
ZEA   Zeya               69.01 340 eP      P       21 54 32.2 +0.5
ZEA                                  pmax  pmax
      comp=Z,38nm,0.9s
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MA2	Magadan	69.46	355	eP	P	21 54 34.0	-0.5
MA2	Magadan	69.46	355	eP	P	21 54 34.2	-0.2
MA2				pmax	pmax		
	comp=Z,45nm,0.9s						
LZH	Lanzhou	69.64	314	eP	P	21 54 36.8	+0.5
LZH				pP	pP	21 54 41.5	-4.8
LZH				sP	sP	21 54 44.0	-6.0
LZH				SS	SS	22 08 07.5	-4.1
LZH				pmax	pmax		
	comp=Z,24nm,1.4s						
LZH				pmax	pmax		
	comp=Z,130nm,4.9s						
LZH				LR	LR		
	comp=Z,1µm,11.4s						
LZH				LR	LR		
	comp=Z,1µm,11.7s						
LZH				LR	LR		
	comp=Z,1µm,12.7s						
SEY	Seymchan	72.67	356	⇑eP	P	21 54 53.9	+0.1
ULN	Ulaanbaatar	73.91	326	eP	P	21 55 02.7	+1.0
	comp=Z,11nm,1.1s						
ULN	Ulaanbaatar	73.91	326	ceP	P	21 55 02.4	+0.7
ULN				pmax	pmax		
	comp=Z,19nm,1.7s						
GTA	Gaotai	74.03	316	eP	P	21 55 03.3	+0.8
GTA				pP	pP	21 55 07.8	-4.8
GTA				sP	sP	21 55 10.8	-5.5
GTA				pmax	pmax		
	comp=Z,13nm,0.8s						
SONM	Songino Array	74.25	326	P	P	21 55 04.4	+0.7
	comp=Z,4.0nm,0.6s,baz=138,slow=5.8,SNR=27						
SONA1	Songino Array	74.26	326	eP	P	21 55 04.0	+0.4
SHL	Shillong	74.82	300	P	P	21 55 08.2	+0.7
SHL				pmax	pmax		
	comp=Z,19nm,0.4s						
YAK	Yakutsk	75.30	346	eP	P	21 55 09.4	+0.2
YAK	Yakutsk	75.30	346	eP	P	21 55 07.5	-1.7
YAK				pmax	pmax		
	comp=Z,41nm,0.9s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.8s						
YAK				pmax	pmax		
	comp=N,7.0nm,1.2s						
LSA	Lhasa	76.78	304	eP	P	21 55 19.5	+0.6
	comp=N,4.3nm,0.9s						
LSA	Lhasa	76.78	304	eP	P	21 55 19.5	+0.6
LSA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
BOD	Bodaibo	76.96	337	eP	P	21 55 15.1	-3.6
BOD				pmax	pmax		
	comp=Z,8.0nm,1.1s						
ZAK	Zakamensk	77.37	327	eP	P	21 55 21.3	-0.1
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.4s						
KDAK	Kodiak Island	77.61	24	P	P	21 55 22.4	+0.1
	comp=Z,16nm,0.8s,baz=211,slow=2.7,SNR=17						
KDAK	Kodiak Island	77.61	24	eP	P	21 55 23.0	+0.6
	comp=Z,17nm,0.8s						
KDAK	Kodiak Island	77.61	24	i P	P	21 55 22.8	+0.5
TLY	Talaya	77.88	328	eP	P	21 55 24.0	-0.1
	comp=Z,5.7nm,0.7s						
TLY	Talaya	77.88	328	eP	P	21 55 23.9	-0.2
TLY				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ODAN	Odare	79.06	300	eP	P	21 55 31.8	+0.4
	comp=Z,22nm,0.6s						
QSPA	South Pole Qui	80.26	180	P	P	21 55 36.9	-0.2
	comp=Z,1.6nm,0.6s,baz=104,slow=0.3,SNR=6.0						
QSPA				LR	LR	22 28 30.8	
	comp=Z,126nm,18.3s,baz=11,slow=34						
JIRN	Jiri	80.31	300	eP	P	21 55 39.8	+1.5
PALK	Pallekele	80.62	279	P	P	21 55 40.2	+0.3
	comp=Z,16nm,1.0s,baz=120,slow=2.4,SNR=3.5						
PALK				LR	LR	22 34 20.3	
	comp=Z,64nm,19.7s,baz=159,slow=38						
PALK	Pallekele	80.62	279	eP	P	21 55 39.8	-0.1
	comp=Z,9.4nm,0.7s						
PALK	Pallekele	80.62	279	eP	P	21 55 39.8	-0.1
PALK				pmax	pmax		
	comp=Z,9.0nm,0.7s						
SUA	Susitna One	80.75	22	eP	P	21 55 39.2	-0.5
	comp=Z,22nm,0.8s						
RC01	Rabbit Creek A	80.88	22	eP	P	21 55 40.7	+0.5
	comp=Z,30nm,1.1s						
PKIN	Phulchoki	80.96	300	eP	P	21 55 41.8	+0.1
	comp=Z,6.3nm,0.4s						
KKN	Kakani	81.12	300	eP	P	21 55 43.5	+1.0
	comp=Z,11nm,0.6s						
DMN	Daman	81.22	300	eP	P	21 55 43.3	+0.2
	comp=Z,50nm,1.1s						
PMR	Palmer	81.42	22	eP	P	21 55 43.5	+0.5
	comp=Z,28nm,0.9s						
PMR	Palmer	81.42	22	eP	P	21 55 43.5	+0.5
PMR				pmax	pmax		
	comp=Z,28nm,0.9s						
GKN	Gorkha	81.72	300	eP	P	21 55 45.6	0.0
	comp=Z,41nm,0.9s						
SML	Sawmill	81.86	22	eP	P	21 55 46.1	+0.7
	comp=Z,30nm,0.9s						
SML	Sawmill	81.86	22	eP	P	21 55 46.1	+0.7
SML				pmax	pmax		
	comp=Z,30nm,0.9s						
FID	Port Fidalgo	81.92	24	eP	P	21 55 46.0	+0.3
	comp=Z,8.1nm,1.0s						
TRF	Thorofare Moun	82.21	20	eP	P	21 55 47.0	-0.4
	comp=Z,21nm,0.8s						
SCM	Sheep Creek Mo	82.25	22	eP	P	21 55 48.2	+0.7
	comp=Z,17nm,1.1s						
SCM	Sheep Creek Mo	82.25	22	eP	P	21 55 48.2	+0.7
SCM				pmax	pmax		
	comp=Z,17nm,1.1s						
BPAW	Bear Paw Mtn.	82.40	20	eP	P	21 55 47.8	-0.4
	comp=Z,11nm,0.9s						
KLU	Klutina	82.58	23	eP	P	21 55 50.1	+0.8
	comp=Z,18nm,1.4s						
DHY	Denali Highway	82.99	21	eP	P	21 55 51.7	+0.2
	comp=Z,11nm,0.9s						
HVS	Khovu-Aksy	83.07	325	⇑eP	P	21 55 51.5	-0.5
HVS				pmax	pmax		
	comp=Z,5.0nm,1.0s						
TGL	Tana Glacier	83.39	25	eP	P	21 55 54.7	+1.2
	comp=Z,8.1nm,0.8s						
PAX	Paxson	83.62	22	eP	P	21 55 56.6	+2.0
	comp=Z,6.1nm,1.2s						
PAX	Paxson	83.62	22	eP	P	21 55 56.6	+2.0
PAX				pmax	pmax		
	comp=Z,6.0nm,1.2s						
TIXI	Tiksi	83.78	351	⇓eP	P	21 55 53.6	-1.5
TIXI				pmax	pmax		
	comp=Z,11nm,1.5s						
CCB	Clear Creek Bu	83.81	20	eP	P	21 55 54.7	-0.7
	comp=Z,24nm,1.1s						
WMQ	Urumqi	84.10	316	P	P	21 55 58.0	+0.5
WMQ				pmax	pmax		
	comp=Z,21nm,1.7s						
WMQ				pmax	pmax		
	comp=Z,240nm,4.3s						
WMQ				LR	LR		
	comp=Z,76nm,22.9s						
WMQ				LR	LR		
	comp=Z,29nm,24.7s						
WMQ				LR	LR		
	comp=Z,86nm,17.7s						
ILAR	Eielson Array	84.20	20	P	P	21 55 56.6	-0.8
	comp=Z,11nm,0.5s,baz=246,slow=4.9,SNR=88						
ILB	Eielson Array	84.20	20	eP	P	21 55 56.6	-0.8
RIDG	Independ'e Rid	84.30	22	eP	P	21 55 58.3	+0.3
	comp=Z,20nm,1.0s						
COLD	Coldfoot	84.70	17	eP	P	21 56 01.1	+1.2
	comp=Z,5.8nm,0.8s						
SCRK	Sand Creek	84.75	22	eP	P	21 56 00.9	+0.5
	comp=Z,13nm,0.8s						
DIB	Dawson Inlet,	84.77	34	eP	P	21 56 02.1	+1.6
	comp=Z,21nm,1.2s						
TOLK	Toolik Lake Re	85.81	16	P	P	21 56 06.8	+1.3
	baz=230						
EGAK	Eagle	86.22	22	eP	P	21 56 07.9	+0.4
DGZ	Jazzator, Alta	86.24	322	i P	P	21 56 07.4	-0.8
DGZ				pmax	pmax		
	comp=Z,3.0nm,1.2s						
DAWY	Dawson	86.50	23	eP	P	21 56 10.3	+1.3
	comp=Z,11nm,0.9s						
N02D	Trinity Center	86.98	48	P	P	21 56 13.7	+1.8
	baz=254						
M02C	Callahan	86.98	47	P	P	21 56 13.7	+1.8
	baz=254						
YBH	Yreka Blue Hor	87.18	47	P	P	21 56 13.7	+0.9
	comp=Z,1.8nm,0.6s,baz=80,slow=0.5,SNR=5.9						
YBH	Yreka Blue Hor	87.18	47	eP	P	21 56 14.6	+1.7
	comp=Z,24nm,1.9s						
YBH	Yreka Blue Hor	87.18	47	eP	P	21 56 14.6	+1.7
YBH				pmax	pmax		
	comp=Z,24nm,1.9s						
I03D	Drain, OR	87.26	45	P	P	21 56 14.5	+1.4
	baz=254						
O03D	Paynes Creek	87.47	49	P	P	21 56 15.1	+0.8
	baz=255						
PKM	Mcpherson Peak	87.68	54	P	P	21 56 16.6	+1.0
	baz=257						
AFDM	Forest Hills D	87.75	50	eP	P	21 56 17.3	+1.7
	comp=Z,6.4nm,1.1s						
I04A	Tendick Farm,	87.94	45	P	P	21 56 16.9	+0.5
	baz=255						
J04D	Umpqua Nationa	88.01	46	P	P	21 56 18.0	+1.1
	baz=255						
BEKR	Beckworth	88.43	49	eP	P	21 56 20.3	+1.3
MK01	Makanchi Array	88.62	318	eP	P	21 56 18.8	-0.8
MK31	Makanchi Array	88.63	318	eP	P	21 56 19.4	-0.2
MK31	Makanchi Array	88.63	318	eP	P	21 56 19.4	-0.2
MKAR	Makanchi Array	88.63	318	P	P	21 56 19.2	-0.4
	comp=Z,4.9nm,0.6s,baz=103,slow=5.2,SNR=42						
J05D	Fort Rock, OR	88.64	46	P	P	21 56 21.2	+1.4
	baz=255						
WAKR	Walker	88.81	51	eP	P	21 56 23.0	+2.2
	comp=Z,7.6nm,1.3s						
MAKZ	Makanchi	88.84	318	eP	P	21 56 20.3	-0.3
	comp=Z,5.4nm,0.8s						
MAKZ	Makanchi	88.84	318	eP	P	21 56 20.3	-0.3
MAKZ				pmax	pmax		
	comp=Z,5.0nm,0.8s						
OMMB	Old Mammoth Mi	88.94	52	eP	P	21 56 23.5	+1.9
MWC	Mount Wilson	88.94	55	eP	P	21 56 23.3	+1.7
	comp=Z,22nm,1.3s						
MWC	Mount Wilson	88.94	55	eP	P	21 56 23.3	+1.7
MWC				pmax	pmax		
	comp=Z,22nm,1.3s						
MOD	Modoc Plateau	88.96	47	eP	P	21 56 22.8	+1.4
	comp=Z,14nm,1.5s						
PAHR	Pah Rah Range	89.12	50	eP	P	21 56 23.7	+1.4
	comp=Z,12nm,1.3s						
EDW2	Edwards Air Fo	89.13	55	P	P	21 56 23.6	+1.3
	baz=258						
ZALV	Zalesovo Beam	89.14	325	P	P	21 56 20.4	-1.4
	comp=Z,1.8nm,0.6s,baz=117,slow=5.2,SNR=8.1						
BFSC	Mount Baldy Ra	89.27	55	P	P	21 56 23.8	+0.8
	baz=258						
CWC	Cottonwood Cre	89.40	53	P	P	21 56 24.7	+1.0
	baz=258						
NV01	Mina Array Sit	89.66	51	eP	P	21 56 25.8	+0.9
NVAR	Mina Array Bea	89.66	51	P	P	21 56 25.8	+0.9
	comp=Z,5.0nm,1.1s,baz=236,slow=6.1,SNR=10						
PDGK	Podgornoye	89.68	314	P	P	21 56 24.2	-0.5
PDGK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
DAC	Darwin (Calif)	89.75	53	eP	P	21 56 26.6	+1.2
	comp=Z,12nm,1.2s						
DAC	Darwin (Calif)	89.75	53	P	P	21 56 26.5	+1.2
DAC				pmax	pmax		
	comp=Z,12nm,1.2s						
NV11	Mina Array Sit	89.77	51	eP	P	21 56 26.7	+1.4
	comp=Z,1.2nm,1.3s						
MPMC	Manual Prospec	89.79	53	P	P	21 56 26.5	+1.0
	baz=258						
KVN	Kaiserville	89.95	50	eP	P	21 56 27.7	+1.5
	comp=Z,8.8nm,0.9s						
KVN	Kaiserville	89.95	50	eP	P	21 56 27.7	+1.5
KVN				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MONP2	Monument Peak	90.00	57	P	P	21 56 27.1	+0.5
	baz=258						
GRAC	Grapevine Rang	90.08	53	P	P	21 56 28.1	+1.4
	baz=258						
PFO	Pinyon Flats O	90.11	56	P	P	21 56 28.0	+1.0
	baz=258						
TPFO	Pinon Flats	90.12	56	P	P	21 56 27.9	+0.9
	baz=258						
GSC	Goldstone, Bar	90.17	54	P	P	21 56 28.1	+1.0
	baz=258						
GSC	Goldstone, Bar	90.17	54	eP	P	21 56 28.5	+1.3
	comp=Z,6.5nm,0.9s						
PRZ	Przheval'sk	90.27	313	eP	P	21 56 28.6	+1.0
PRZ	Przheval'sk	90.27	313	P	P	21 56 28.6	+1.0
NVS	Novosibirsk	90.29	326	eP	P	21 56 25.1	-2.0
WVOR	Wild Horse Val	90.29	47	eP	P	21 56 28.8	+1.2
	comp=Z,8.7nm,0.8s						
FURC	Furnace Creek,	90.37	53	P	P	21 56 28.6	+0.8
	baz=258						
HEC	Hector,Ludlow	90.46	55	P	P	21 56 29.5	+0.9
	baz=259						
BELC	Belle Mtn. Jos	90.57	56	P	P	21 56 30.1	+1.0
	baz=259						
INK	Inuvik	90.60	20	eP	P	21 56 28.4	+0.1
	comp=Z,1.6nm,0.5s						
INK	Inuvik	90.60	20	eP	P	21 56 28.4	+0.1
INK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
J08A	Circle Bar Ran	90.61	46	eP	P	21 56 30.5	+1.4
	comp=Z,9.9nm,0.8s						
G08A	Pilot Rock	90.70	44	eP	P	21 56 30.6	+1.2
	comp=Z,4.6nm,0.9s						
BMN	Battle Mountai	90.90	49	eP	P	21 56 31.2	+0.7
	comp=Z,6.9nm,1.2s						
BMN	Battle Mountai	90.90	49	eP	P	21 56 31.2	+0.7
BMN				pmax	pmax		
	comp=Z,7.0nm,1.2s						
TUQ	Turquoise Moun	90.91	54	P	P	21 56 31.1	+0.4
	baz=259						
BC3	Big Chuckawall	90.95	56	P	P	21 56 31.5	+0.6
	baz=259						
GMRC	Granite Mounta	90.99	55	P	P	21 56 31.9	+0.8
	baz=259						
IRM	Iron Mountain	91.29	56	P	P	21 56 33.7	+1.4
	baz=259						
KSH	Kashi	91.44	310	P	P	21 56 34.8	+1.8
KSH				PP	PP	22 00 15.5	+4.3
KSH				SKS	SKSac	22 07 04.0	+0.5
KSH				S	S	22 07 29.8	-0.8
KSH				SS	SS	22 13 41.0	+3.9
KSH				pmax	pmax		
	comp=Z,62nm,3.8s						
E09A	Wood Farm, Sta	91.53	43	eP	P	21 56 34.1	+1.0
	comp=Z,8.7nm,1.0s						
SHPR	Sheep Range	91.72	53	eP	P	21 56 36.4	+2.0
	comp=Z,5.2nm,0.9s						
R11A	Troy Canyon, C	91.73	52	P	P	21 56 35.3	+0.9
	baz=259						
R11A	Troy Canyon, C	91.73	52	eP	P	21 56 35.8	+1.3
	comp=Z,3.4nm,0.8s						
BMO	Blue Mountains	91.75	45	eP	P	21 56 34.3	0.0
	comp=Z,5.8nm,0.9s						
BMO	Blue Mountains	91.75	45	eP	P	21 56 34.3	0.0
BMO				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KURK	Kurchatov	91.95	321	eP	P	21 56 32.7	-2.2
KURK	Kurchatov	91.95	321	⇓eP	P	21 56 33.4	-1.5
KURK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KURBB	Kurchatov Arra	91.99	321	P	P	21 56 33.8	-1.3
	comp=Z,2.7nm,0.8s,baz=101,slow=4.8,SNR=21						
MFID	Camas Ranch	92.51	47	eP	P	21 56 38.5	+0.7
	comp=Z,5.5nm,0.8s						
AAK	Ala-Archa	93.12	313	LR	LR	22 42 06.9	
	comp=Z,20nm,18.1s,baz=140,slow=38						
AAK	Ala-Archa	93.12	313	⇓eP	P	21 56 39.3	-1.5
AAK				pmax	pmax		
	comp=Z,2.0nm,1.1s						
SFK	Sufi-Kurgan	93.40	310	P	P	21 56 41.6	-0.6
SFK				pmax	pmax		
	comp=Z,7.0nm,1.0s						
HLID	Hailey	93.55	47	P	P	21 56 43.8	+1.0
	baz=260						
HLID	Hailey	93.55	47	eP	P	21 56 44.4	+1.6
	comp=Z,8.2nm,0.9s						
HVU	Hansel Valley	94.45	49	eP	P	21 56 48.5	+1.6
	comp=Z,6.4nm,0.7s						
HVU	Hansel Valley	94.45	49	eP	P	21 56 48.5	+1.6
HVU				pmax	pmax		
	comp=Z,6.0nm,0.7s						
TUC	Tucson	94.59	58	eP	P	21 56 49.7	+2.0
TUC	Tucson	94.59	58	eP	P	21 56 49.7	+2.0
HWUT	Hardware Ranch	95.32	49	eP	P	21 56 51.5	+0.6
	comp=Z,1.3nm,0.7s						
BOZ	Bozeman (W)	95.83	45	P	P	21 56 53.9	+0.8
	baz=262						
BOZ	Bozeman (W)	95.83	45	eP	P	21 56 54.2	+1.1
	comp=Z,5.9nm,1.4s						
BOZ	Bozeman (W)	95.83	45	eP	P	21 56 54.2	+1.1
BOZ				pmax	pmax		
	comp=Z,6.0nm,1.4s						
YKA	Yellowknife Ar	96.49	28	P	P	21 56 54.7	-0.8
	comp=Z,2.4nm,0.7s,baz=256,slow=4.5,SNR=6.7						
YKA				LR	LR	22 37 02.4	
	comp=Z,12nm,18.1s,baz=226,slow=33						
BW06	Boulder Array	96.95	48	P	P	21 56 58.6	+0.3
	baz=263						
BW06	Boulder Array	96.95	48	eP	P	21 56 58.4	+0.1
	comp=Z,2.8nm,0.8s						
PD31	Pinedale Array	96.95	48	eP	P	21 56 59.4	+1.0
PDAR	Pinedale Array	96.95	48	P	P	21 56 58.5	+0.2
	comp=Z,1.0nm,0.8s,baz=230,slow=1.2,SNR=7.4						
PDAR	Pinedale Array	96.95	48	eP	P	21 56 58.1	-0.2
BVAR	Borovoye Array	97.37	322	P	P	21 56 58.3	-1.4
	comp=Z,2.0nm,0.7s,baz=106,slow=5.3,SNR=12						
BVAR				LR	LR	22 39 56.5	
	comp=Z,35nm,21.5s,baz=60,slow=35						
EGMT	Eagleton	97.41	43	P	P	21 56 60.0	-0.1
	baz=264						
BRVK	Borovoye	97.44	323	⇑eP	P	21 56 58.2	-1.8
BRVK				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SNAA	Sanae	97.96	185	P	P	21 57 02.0	-0.2
	comp=Z,0.6nm,0.9s,baz=48,slow=2.1,SNR=3.5						
SNAA				LR	LR	22 37 43.7	
	comp=Z,134nm,19.9s,baz=149,slow=33						
SNAA	Sanae	97.96	185	P	P	21 57 02.0	-0.2
ANMO	Albuquerque	98.50	56	LR	LR	22 35 03.8	
	comp=Z,101nm,19.6s,baz=279,slow=32						
ANMO	Albuquerque	98.50	56	eP	Pdif	21 57 08.2	+2.6
	comp=Z,0.8nm,0.6s						
ANMO	Albuquerque	98.50	56	eP	Pdif	21 57 08.2	+2.7
ANMO				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ARCES	ARCESS Array B	113.55	344	PKiKP	PKiKP	22 02 03.2	-0.8
	comp=Z,0.9nm,0.6s,baz=70,slow=1.4,SNR=12						
NCK	Nalchik	115.63	314	⇓iPKIKP	PKPdf	22 02 08.3	-0.5
KIV	Kislovodsk	116.18	314	ePKIKP	PKPdf	22 02 06.7	-3.3
KIV				e		22 03 15.7	
KIV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
OBN	Obninsk	116.63	328	ePKIKP	PKPdf	22 02 07.7	-2.6
OBN				e		22 03 14.9	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
FINES	FINESS Array B	118.36	337	PKP	PKPdf	22 02 11.7	-1.7
	comp=Z,1.5nm,0.8s,baz=49,slow=8.6,SNR=3.9						
BOSA	Boshof	121.91	228	PKP	PKPdf	22 02 21.4	-0.1
	comp=Z,0.8nm,0.5s,baz=293,slow=0.9,SNR=5.5						
AKASG	Malin Array Be	122.53	325	PKP	PKPdf	22 02 20.3	-1.5
	comp=Z,1.5nm,0.7s,baz=54,slow=3.2,SNR=4.5						
AKASG	Malin Array Be	122.53	325	i PKIKP	PKPdf	22 02 21.7	-0.1
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KIEV	Kiev	122.55	325	⇓iPKIKP	PKPdf	22 02 19.8	-2.0
ASF	Jabal al Asfar	122.94	302	PKP	PKPdf	22 02 23.3	-0.1
	comp=Z,1.2nm,0.6s,baz=316,slow=16,SNR=3.9						
HFS	Hagfors	123.72	340	PKP	PKPdf	22 02 22.4	-1.4
	comp=Z,1.4nm,0.6s,baz=207,slow=1.0,SNR=7.8						
BRTR	Keskin Array B	123.78	312	PKP	PKPdf	22 02 23.8	-1.0
	comp=Z,1.1nm,0.8s,baz=104,slow=1.9,SNR=5.5						
NB2	NORSAR Subarra	123.81	342	PKPdf	PKPdf	22 02 23.2	-0.8
	comp=Z,0.8nm,0.6s,baz=41,slow=1.9						
NOA	NORSAR Array B	123.81	342	PKP	PKPdf	22 02 23.1	-0.8
	comp=Z,0.9nm,0.6s,baz=42,slow=2.0,SNR=5.6						
MMAI	Mount Meron Ar	124.03	303	PKP	PKPdf	22 02 25.6	+0.3
	comp=Z,1.3nm,0.6s,baz=100,slow=4.4,SNR=5.1						
LPAZ	La Paz	125.93	118	PKP	PKPdf	22 02 29.5	-0.6
	comp=Z,1.1nm,0.7s,baz=307,slow=1.6,SNR=3.7						
SDV	Santo Domingo	130.21	87	PKP	PKPdf	22 02 36.8	-1.0
	comp=Z,2.6nm,0.4s,baz=233,slow=10,SNR=4.6						
GOPC	GO Pecny, Ondr	130.59	331	AMS	AMS	23 01 50.0	
	comp=Z,100nm,17.7s						
PRU	Pruhonice	130.65	331	AMS	AMS	23 01 50.0	
	comp=Z,100nm,15.4s						
GERES	GERESS Array B	131.83	330	PKP	PKPdf	22 02 39.0	-0.8
	comp=Z,0.4nm,0.5s,baz=117,slow=1.5,SNR=6.1						
EKA	Eskdalemuir Ar	132.57	347	PKP	PKPdf	22 02 40.7	-0.1
	comp=Z,0.4nm,0.5s,baz=25,slow=3.9,SNR=3.9						
DAVOX	Davos/Dischmat	135.12	331	PKP	PKPdf	22 02 46.7	+0.6
	comp=Z,1.8nm,0.6s,baz=343,slow=20,SNR=2.8						
BDFB	Brasilia	142.62	132	PKP	PKPdf	22 03 02.4	+1.8
	comp=Z,1.5nm,0.4s,baz=95,slow=15,SNR=3.7						
PBRG	Braganca	145.94	342	ePKP	PKPbc	22 03 06.7	+0.4
MVO	Moncorvo	146.61	342	ePKP	PKPbc	22 03 08.4	+0.1
POLO	Lamas de Olo	146.65	343	ePKP	PKPbc	22 03 08.2	-0.3
PVRL	Vila Real	146.72	343	ePKP	PKPdf	22 03 08.0	+1.1
ESDC	Sonseca Array	146.87	337	PKPbc	PKPbc	22 03 08.7	-0.4
	comp=Z,0.8nm,0.7s,baz=22,slow=3.3,SNR=9.1						
PVIS	Viseu	147.28	343	ePKP	PKPbc	22 03 10.5	+0.3
MTE	Manteigas	147.47	342	ePKP	PKPbc	22 03 11.1	+0.3
PCBR	Castelo Branco	147.96	341	ePKP	PKPbc	22 03 12.1	+0.1
PMRV	Marv??o	148.31	341	ePKP	PKPbc	22 03 13.2	+0.2
PTOM	Tomar	148.45	343	ePKP	PKPbc	22 03 13.7	+0.4
PMTG	Montargil	148.90	342	ePKP	PKPbc	22 03 14.3	-0.2
EVO	Evora	149.32	341	ePKP	PKPbc	22 03 15.8	+0.2
PBAR	Barrancos	149.32	339	ePKP	PKPbc	22 03 15.6	0.0
PBEJ	Beja	149.74	341	ePKP	PKPbc	22 03 17.5	+0.9
PNCL	Nicolau / Gran	149.87	342	ePKP	PKPbc	22 03 17.1	+0.2
MESJ	Messejana	150.02	341	ePKP	PKPbc	22 03 17.9	+0.6
PCVE	Castro Verde	150.15	340	ePKP	PKPbc	22 03 18.3	+0.7
PVAQ	Vaqueiros	150.25	340	ePKP	PKPbc	22 03 18.0	+0.1
MORF	Marmelete	150.65	341	ePKP	PKPbc	22 03 19.4	+0.5
PFVI	Vila Bisbo	150.86	341	ePKP	PKPbc	22 03 20.1	+0.8
MDT	Midelt	152.92	330	PKP	PKPdf	22 03 16.5	-0.6
	comp=Z,2.2nm,0.9s,baz=259,slow=10,SNR=5.6						
MDT				PKPab	pPKPbc	22 03 33.7	-1.2
	comp=Z,4.4nm,1.0s,baz=39,slow=6.9,SNR=6.9						
TORD	Torodi Ar. Bea	158.33	281	PKPab	PKPab	22 03 58.9	-0.1
	baz=66,slow=3.5						
KOWA	Kowa	163.54	288	PKPab	PKPab	22 04 21.8	+0.1
	comp=Z,4.7nm,0.6s,baz=23,slow=5.5,SNR=11						
DBIC	Dimbokro	164.57	260	PKPab	PKPab	22 04 24.3	-2.0
	comp=Z,4.0nm,1.0s,baz=126,slow=19,SNR=3.2						

ISCJB ***25*** *21:45:48.3±1.6, 32°.94S±0°.08×71°.79W±0°.07, h8^{km}±8^{km},*
Error ellipse: s-maj=14.2km s-min=10.0km az=12.3
SJA ***25*** *21:45:49.1±0.5, 33°.00S×71°.69W, h32^{km}±4^{km}, ML3.0,*
MW3.3
GUC ***25*** *21:45:50.1±0.5, 32°.73S×71°.59W, h37^{km}±7^{km}, ML3.2*
ISC 25 21:45:48.7±2.5**, 33°.00S**±0°.09×**71°.7W**±0°.1**, h8**^{km}±15^{km}**, n14,**
σ**0ˢ.37**/18**, 1C-2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROC1	El Roble	0.58	88	eP	Pb	21 46 01.4	+0.1
ROC1				eS	Sb	21 46 10.5	+0.6
ROCH	El Roble	0.59	88	⇓iP	Pb	21 46 01.2	-0.2
ROCH				i S	Sb	21 46 09.6	-0.4
PEL	Peldehue	0.87	100	eP	Pb	21 46 06.1	-0.1
PEL				eS	Sb	21 46 18.4	+0.3
PEL				IAML		21 46 21.2	
	comp=N,1µm,0.2s						
CLCH	Cerro Calan	1.06	112	⇓iP	Pn	21 46 09.9	-0.1
CLCH				i S	Sn	21 46 24.5	-0.5
CLCH				IAML		21 46 30.8	
	comp=E,606nm,0.5s						
FCH	Farellones	1.24	106	i P	Pg	21 46 12.3	-0.1
FCH				i S	Sn	21 46 29.9	+0.2
FCH				IAML		21 46 30.8	
	comp=N,676nm,0.2s						
LMEL	Las Melosas	1.52	124	⇑iP	Pg	21 46 17.9	+0.1
LMEL				IAML		21 46 44.7	
	comp=N,776nm,0.2s						
GO05	HualaæØ	2.01	185	eP	Pn	21 46 23.2	+0.1
AUSP	Uspallata	2.11	69	eP	Pn	21 46 25.2	+0.6
ARCO	CERRO ARCO	2.34	87	eP	Pb	21 46 30.8	-0.4
ARCO				IAML		21 46 40.6	
	comp=Z,96nm,0.7s						
RTLS	Leoncito	2.37	60	eP	Pn	21 46 28.5	+0.4
RTLS				IAML		21 47 06.9	
	comp=Z,52nm,0.4s						
AAGR	Agrelo	2.42	93	eP	Pb	21 46 32.5	-0.1
ASAL	Salagasta	2.46	81	eP	Pn	21 46 29.2	0.0
AMOG	MOGNA	3.42	54	eP	Pn	21 46 42.0	-0.4
MRA	San Martin	5.09	85	IAML		21 48 11.5	
	comp=Z,11nm,0.6s						

MEX 25 21:47:06.7±26.0, 27°.92N×112°.04W, h20^{km}±999^{km}, MD3.6, Baja California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRIG	Santa Rosalia	0.62	197	eP	Pb	21 47 16.9	-2.0
	baz=257,slow=10						
SRIG				eS	Sb	21 47 25.5	-1.7
GUYB	Guaymas	1.03	91	eP	Pb	21 47 22.0	-3.9
HSIG		1.46	41	eP	Pn	21 47 29.3	-2.6

IDC 25 22:02:47.9±1.4, 37°.77S×179°.97E, h0^{km}, mb4.3/4, mb1 4.4/6, mb1mx4.0/37, mbtmp4.3/6, ML4.1/2, MS3.6/12, Ms1 3.6/12, ms1mx3.3/39, Error ellipse: s-maj=60.4km s-min=23.9km az=158.0

NEIC 25 22:02:48.6±0.0, 37°.59S×179°.83W, h12^{km}, ML4.4(WEL), After WEL.

WEL 25 22:02:48.0, 38°S±9°×18°0W±°, h33^{km}, ML4.6/37

ISC 25 22:02:48.4±3.6, 37°.93S±0°.05×179°.77W±0°.08, h12^{km}±21^{km}, n122, σ1^{s}30/135, mb4.2/4, MS3.5/11, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.44	274	P	Pn	22 03 13.7	-0.6
WMGZ				S	Sn	22 03 32.2	-0.9
PUZ	Puketiti	1.56	264	P	Pn	22 03 15.7	-0.3
MXZ	Matakaoa Point	1.57	283	P	Pn	22 03 14.5	-1.5
MXZ				S	Sn	22 03 33.6	-2.6
CNGZ	Carnagh Statio	1.69	250	P	Pb	22 03 19.0	-0.3
PKGZ	Pakihiroa	1.70	271	P	Pn	22 03 17.0	-1.0
PKGZ				P	Pn	22 03 16.9	-1.0
TWGZ	Tauwhareparae	1.79	261	P	Pn	22 03 19.2	0.0
TWGZ				S	Sn	22 03 42.4	+0.6
TKGZ	Te Karaka	1.94	254	P	Pn	22 03 21.8	+0.7
HAZ	Te Kaha	1.94	274	P	Pn	22 03 20.3	-0.9
RUGZ	Raukumara Rang	2.02	268	P	Pn	22 03 21.6	-0.8
PRGZ	Paritu Road	2.09	241	P	Pn	22 03 24.7	+1.4
MWZ	Matawai	2.17	258	P	Pn	22 03 24.1	-0.3
MWZ				S	Sn	22 03 50.7	-0.5
MHGZ	Mahia Peninsul	2.19	235	P	Pn	22 03 26.1	+1.4
MHGZ				S	Sb	22 03 55.4	+0.3
KNZ	Kokohu	2.28	241	P	Pn	22 03 27.0	+1.1
RAGZ	Rawiri	2.29	255	P	Pn	22 03 27.2	+1.1
SNGZ	Shannon Statio	2.42	249	P	Pn	22 03 28.7	+0.8
URZ	Urewera	2.48	261	Pn	Pn	22 03 29.1	+0.5
	50nm,0.3s,baz=93,slow=3.9,SNR=148						
URZ				Sn	Sn	22 03 58.1	-0.7
	129nm,0.3s,baz=280,slow=21,SNR=15						
URZ	Urewera	2.48	261	P	Pn	22 03 28.9	+0.3
URZ				S	Sn	22 03 58.4	-0.3
WHRZ	Whale Island	2.58	271	P	Pn	22 03 30.1	+0.2
WHHZ	Waihua	2.61	243	P	Pn	22 03 32.3	+1.8
WHHZ				S	Sn	22 04 04.0	+1.9
RTZ	Ruatahuna	2.65	254	P	Pn	22 03 31.8	+0.9
RTZ				S	Sn	22 04 04.2	+1.2
RAHZ	Arahi	2.66	247	P	Pn	22 03 32.5	+1.4
EDRZ	Edgecumbe	2.76	265	P	Pn	22 03 32.5	-0.1
MUGZ	Murupara	2.78	258	P	Pn	22 03 33.8	+1.1
MTHZ	Maungataniwha	2.82	250	P	Pn	22 03 34.1	+0.9
MTHZ				S	Sn	22 04 08.1	+1.0
ARHZ	Aropaoanui	2.86	241	P	Pn	22 03 35.9	+2.1
OPRZ	Ohinepanea	2.91	271	P	Pn	22 03 33.4	-1.0
NMHZ	Naumai	2.93	245	P	Pn	22 03 36.0	+1.2
TARZ	Mount Tarawera	2.95	263	P	Pn	22 03 35.4	+0.2
RRRZ	Republican Roa	2.96	261	P	Pn	22 03 35.9	+0.8
CKHZ	Cape Kidnapper	3.01	234	P	Pn	22 03 37.0	+1.2
OMRZ	Omania	3.05	266	P	Pn	22 03 36.2	-0.3
HLRZ	Highlands Stat	3.08	263	P	Pn	22 03 37.2	+0.4
ALRZ	Allen Road	3.12	257	P	Pn	22 03 38.3	+0.9
MRHZ	Matea Rd	3.13	252	P	Pn	22 03 38.3	+0.8
MRHZ				S	Sn	22 04 13.9	-0.9
HRRZ	Handcock Road	3.14	260	P	Pn	22 03 37.7	0.0
TGRZ	Tauranga	3.15	272	P	Pn	22 03 37.1	-0.6
KARZ	Kaharoa	3.15	267	P	Pn	22 03 37.2	-0.6
MCHZ	McNeill Hill	3.15	240	P	Pn	22 03 38.8	+1.0
MCHZ	McNeill Hill	3.15	240	P	Sn	22 04 17.6	+2.3
HSRZ	Hossack Road	3.17	262	P	Pn	22 03 38.3	+0.3
BKZ	Black Stump Fm	3.18	246	P	Pn	22 03 39.0	+0.7
NGRZ	Ngongotaha	3.20	266	P	Pn	22 03 38.8	+0.3
KAHZ	Kahuranaki	3.21	234	P	Pn	22 03 40.0	+1.4
GRRZ	Galatos Road	3.27	261	P	Pn	22 03 39.6	+0.1
KWHZ	Kaweka Forest	3.33	242	P	Pn	22 03 41.3	+0.9
KWHZ	Kaweka Forest	3.33	242	P	Sn	22 04 21.4	+1.5
PXZ	Pawanui	3.36	230	P	Pn	22 03 41.0	+0.4
KRHZ	Kereru	3.47	239	P	Pn	22 03 42.7	+0.5
RITZ	Rihia Road	3.59	252	P	Pn	22 03 44.9	+1.0
BHHZ	Black Hill Sta	3.61	243	P	Pn	22 03 45.0	+0.7
WPHZ	Waipukurau	3.64	233	P	Pn	22 03 45.1	+0.5
PRHZ	Porangahau	3.64	229	P	Pn	22 03 44.7	+0.2
KATZ	Kakaramea	3.71	252	P	Pn	22 03 46.5	+0.9
PNHZ	Pukenui	3.71	237	P	Pn	22 03 46.1	+0.5
KRVZ	Karewarewa	3.78	251	P	Pn	22 03 46.9	+0.3
KUZ	Kuaotunu	3.78	287	P	Pn	22 03 44.3	-2.2
MOVZ	Moawhango	3.80	246	P	Pn	22 03 47.2	+0.4
TUVZ	Tukino	3.83	248	P	Pn	22 03 48.6	+1.4
WTVZ	West Tongariro	3.83	251	P	Pn	22 03 48.7	+1.5
NGZ	Ngauruhoe	3.83	250	P	Pb	22 03 47.9	-8.2
NGZ				P	Pn	22 03 47.8	+0.5
ANWZ	Angora Road	3.86	228	P	Pn	22 03 48.4	+0.8
WHVZ	Whangaehu Hut	3.88	248	P	Pn	22 03 48.9	+0.9
FWVZ	Far West T-bar	3.90	249	P	Pn	22 03 49.3	+1.1
TWVZ	Taurewa	3.93	252	P	Pn	22 03 50.1	+1.5
TSZ	Takapari Road	3.95	236	P	Pn	22 03 49.3	+0.5
DVHZ	Dannevirke	3.95	232	P	Pn	22 03 48.8	0.0
MKAZ	Moumakai	4.11	280	P	Pn	22 03 49.7	-1.3
WIAZ	Waiheke Island	4.21	284	P	Pn	22 03 50.9	-1.5
PRWZ	Pori Road	4.22	230	P	Pn	22 03 53.4	+1.0
HIZ	Hauiti	4.27	261	P	Pn	22 03 53.7	+0.5
HIZ				P	Pn	22 03 53.8	+0.5
ETAZ	East Tamaki Re	4.33	281	P	Pn	22 03 53.2	-0.8
TIWZ	Tintock	4.41	228	P	Pn	22 03 55.0	0.0
TIWZ				S	Sn	22 04 45.9	-0.4
WAZ	Wanganui	4.48	244	P	Pn	22 03 57.9	+1.8
MRZ	Mangatainoka R	4.52	231	P	Pn	22 03 56.4	-0.3
MRZ				S	Sn	22 04 48.5	-0.7
AWAZ	Awhitu Peninsu	4.53	279	P	Pn	22 03 56.3	-0.4
TMWZ	Te Maipa	4.62	225	P	Pn	22 03 57.5	-0.5
TMWZ				S	Sn	22 04 49.7	-1.8
RVAZ	Riverhead Bore	4.65	283	P	Pn	22 03 57.8	-0.6
HOWZ	Holdsworth Sta	4.70	229	P	Pn	22 03 58.2	-0.9
HOWZ				S	Sn	22 04 52.1	-1.5
OGWZ	Otaki Gorge	4.87	232	P	Pn	22 04 01.5	+0.1
MTW	Mount Morrison	4.87	227	P	Pn	22 03 59.8	-1.7
MTW				S	Sn	22 04 56.2	-1.6
TRWZ	Traveller	4.93	224	P	Pn	22 04 01.7	-0.5
TRWZ				S	Sn	22 04 57.3	-1.8
PKE	Pukeiti	5.05	254	P	Pn	22 04 06.2	+2.2
KIW	Kapiti Island	5.05	233	P	Pn	22 04 03.9	-0.1
KHEZ	Kahui Hut	5.05	252	P	Pn	22 04 05.9	+1.9
PAWZ	Paruwai Farm	5.06	226	P	Pn	22 04 02.7	-1.4
PAWZ				S	Sn	22 05 00.7	-1.8
CAW	Cannon Point	5.10	230	P	Pn	22 04 03.9	-0.7
MSWZ	Moikau Station	5.18	226	P	Pn	22 04 04.0	-1.8
PLWZ	Palliser	5.28	225	P	Pn	22 04 05.4	-1.8
TCW	Tory Channel	5.65	233	P	Pn	22 04 11.7	-0.4
QRZ	Quartz Range	6.63	242	P	Pn	22 04 23.5	-2.0
LTZ	Lake Taylor	7.77	229	P	Pn	22 04 40.0	-1.3
OKCZ	Okains Bay	7.94	221	P	Pn	22 04 42.9	-0.7
MQZ	McQueen's Vall	8.14	222	P	Pn	22 04 45.4	-0.9
OXZ	Oxford	8.23	227	P	Pn	22 04 47.1	-0.5
INZ	Inchbonnie	8.24	232	P	Pn	22 04 47.3	-0.4
WVZ	Waitaha Valley	8.87	232	P	Pn	22 04 55.3	-1.0
RPZ	Rata Peaks	9.04	227	Pn	Pn	22 04 57.2	-1.4
	1.7nm,0.3s,baz=59,slow=3.4,SNR=6.6						
RPZ				Sn	Sn	22 06 32.1	-8.2
	7.0nm,0.3s,baz=7.1,slow=21,SNR=19						
RPZ	Rata Peaks	9.04	227	P	Pn	22 04 57.4	-1.2
ODZ	Otahua Downs	10.10	222	P	Pn	22 05 12.2	-1.1
DZM	Mont Dzumac	19.77	319	P	Pn	22 07 22.2	+2.2
	0.7nm,0.3s,baz=110,slow=22,SNR=6.3						
DZM				LR	LR	22 13 38.1	
	comp=Z,356nm,18.3s,baz=207,slow=33						
RAR	Rarotonga	24.00	52	LR	LR	22 18 47.7	
	comp=Z,68nm,18.0s,baz=148,slow=40						
STKA	Stephens Creek	32.09	269	P	P	22 09 15.6	+0.2
	1.2nm,0.5s,baz=120,slow=9.9,SNR=2.9						
STKA				LR	LR	22 22 16.5	
	comp=Z,115nm,18.5s,baz=31,slow=37						
HNR	Honiara	33.75	322	LR	LR	22 22 02.6	
	comp=Z,59nm,18.0s,baz=292,slow=34						
PMG	Port Moresby	41.13	305	LR	LR	22 26 17.4	
	comp=Z,118nm,18.5s,baz=162,slow=34						
ASAR	Alice Springs	41.84	276	P	P	22 10 37.2	-1.1
	4.2nm,0.7s,baz=123,slow=8.1,SNR=38						
ASAR				PcP	PcP	22 12 34.2	0.0
	0.5nm,0.6s,baz=125,slow=3.7,SNR=2.6						
ASAR				LR	LR	22 28 03.1	
	comp=Z,64nm,18.5s,baz=144,slow=36						
WRA	Warramunga Arr	43.50	281	P	P	22 10 50.1	-1.8
	3.2nm,0.4s,baz=121,slow=7.7,SNR=96						
WRA				PcP	PcP	22 12 40.3	+0.5
	0.8nm,0.8s,baz=128,slow=2.9,SNR=3.0						
GUMO	Guam	61.04	320	LR	LR	22 35 13.5	
	comp=Z,17nm,21.2s,baz=151,slow=32						
DAV	Davao City (W)	67.71	299	LR	LR	22 45 37.3	
	comp=Z,32nm,18.1s,baz=126,slow=38						
JNU	Nakatsue	84.30	320	LR	LR	22 51 46.0	
	comp=Z,18nm,18.9s,baz=123,slow=35						
KSRS	Korea Array	89.19	321	P	P	22 15 44.0	+0.2
	0.5nm,0.4s,baz=166,slow=5.1,SNR=4.1						
KSAR	Wonju Array Be	89.20	321	P	P	22 15 44.0	+0.2
PETK	Petropavlovsk-	92.75	347	LR	LR	22 48 41.9	
	comp=Z,19nm,21.9s,baz=107,slow=30						
CMAR	Chiang Mai Arr	94.53	290	LR	LR	23 01 54.9	
	comp=Z,60nm,18.0s,baz=197,slow=38						
CPUP	Villa Florida	96.35	130	LR	LR	22 53 27.8	
	comp=Z,81nm,18.7s,baz=208,slow=32						
KURK	Kurchatov	125.01	311	PKP	PKPdf	22 21 48.0	+0.1
KURBB	Kurchatov Arra	125.03	310	PKP	PKPdf	22 21 48.0	+0.1
	0.2nm,0.4s,baz=95,slow=2.2,SNR=3.4						
BVAR	Borovoye Array	130.54	312	PKP	PKPdf	22 21 59.5	+1.1
	0.2nm,0.4s,baz=107,slow=1.5,SNR=2.6						
ARCES	ARCESS Array B	145.54	345	PKPbc	PKPab	22 22 26.1	+0.3
	1.6nm,0.7s,baz=38,slow=3.4,SNR=14						
MMAI	Mount Meron Ar	151.05	271	PKPbc	PKPbc	22 22 42.9	+1.5
	0.6nm,0.4s,baz=79,slow=7.5,SNR=5.5						
FINES	FINESS Array B	151.50	334	PKPbc	PKPbc	22 22 41.9	+0.6
	3.3nm,0.9s,baz=12,slow=2.7,SNR=9.0						
BRTR	Keskin Array B	153.99	284	PKPab	PKPab	22 23 02.1	+0.8
	0.3nm,0.5s,baz=90,slow=1.4,SNR=2.7						
TORD	Torodi Ar. Bea	155.28	183	PKPbc	PKPbc	22 22 54.1	
	baz=146,slow=4.2						

WEL 25 22:06:32.0, 38°S±9°×18°0W±°, h33^{km}, ML4.0/15

IDC 25 22:06:33.4±3.6, 37°.02S×179°.55E, h0^{km}, mb4.0/2, mb1 4.2/3, mb1mx3.7/36, mbtmp3.9/3, ML3.5/1, Error ellipse: s-maj=92.6km s-min=34.3km az=138.0

ISC 25 22:06:31.2±2.6, 37°.82S±0°.09×179°.98W±0°.10, h6^{km}±12^{km}, n23, σ1^{s}52/31, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.27	269	P	Pg	22 06 56.5	+0.9
WMGZ				S	Sn	22 07 15.0	+2.1
MXZ	Matakaoa Point	1.38	280	P	Pg	22 06 57.7	0.0
MXZ				S	Sg	22 07 17.5	+1.9
PUZ	Puketiti	1.42	259	P	Pg	22 06 59.0	+0.6
PUZ				S	Sg	22 07 18.9	+2.1
PKGZ	Pakihiroa	1.54	267	P	Pg	22 07 00.1	-0.6
CNGZ	Carnagh Statio	1.58	244	P	Pg	22 07 02.2	+0.8
TWGZ	Tauwhareparae	1.65	257	P	Pg	22 07 02.6	-0.2
TWGZ				S	Sg	22 07 24.9	+0.6
HAZ	Te Kaha	1.77	271	P	Pg	22 07 03.8	-1.4
TKGZ	Te Karaka	1.82	249	P	Pg	22 07 05.0	-1.1
TKGZ				S	Sg	22 07 29.6	-0.2
RUGZ	Raukumara Rang	1.86	265	P	Pb	22 07 05.0	-0.7
PRGZ	Paritu Road	2.01	236	P	Pb	22 07 08.0	-0.1
MWZ	Matawai	2.04	255	P	Pb	22 07 07.4	-1.1
MWZ				S	Sb	22 07 33.9	-0.2
MHGZ	Mahia Peninsul	2.13	231	P	Pb	22 07 09.4	-0.8
KNZ	Kokohu	2.20	236	P	Pb	22 07 10.4	-0.9
URZ	Urewera	2.34	258	Pn	Pb	22 07 12.3	-1.4
	12nm,0.3s,baz=101,slow=5.2,SNR=14						
URZ				Sn	Sb	22 07 40.8	-2.0
	21nm,0.3s,baz=143,slow=20,SNR=10						
URZ	Urewera	2.34	258	P	Pb	22 07 12.3	-1.4
URZ				S	Sb	22 07 40.9	-2.0
RTZ	Ruatahuna	2.52	251	P	Pb	22 07 14.9	-2.0
RAHZ	Arahi	2.56	244	P	Pb	22 07 15.1	-2.3
MUGZ	Murupara	2.65	255	P	Pb	22 07 16.2	-2.8
MTHZ	Maungataniwha	2.71	247	P	Pb	22 07 17.4	-2.6
BKZ	Black Stump Fm	3.08	243	P	Pn	22 07 22.3	+2.0
ASAR	Alice Springs	41.66	276	P	P	22 14 20.2	-0.4
	1.8nm,0.8s,baz=122,slow=8.0,SNR=9.0						
WRA	Warramunga Arr	43.32	281	P	P	22 14 33.4	-0.6
	1.0nm,0.4s,baz=121,slow=7.9,SNR=14						
FINES	FINESS Array B	151.32	334	PKPbc	PKPbc	22 26 25.1	+0.4
	1.3nm,0.9s,baz=47,slow=2.9,SNR=3.6						

IDC 25 22:24:12.2±1.4, 43°.90N×129°.43W, h0^{km}, mb3.8/7, mb1 4.0/12, mb1mx3.7/75, mbtmp3.8/12, ML3.4/5, MS3.6/19, Ms1 3.6/19, ms1mx3.3/66, Error ellipse: s-maj=34.1km s-min=14.4km az=43.0

ISCJB 25 22:24:14.8±0.4, 44°.17N±0°.02×129°.13W±0°.05, h13^{km}, mb4.0/15, MS3.7/17, Error ellipse: s-maj=5.4km s-min=3.2km az=161.5

NEIC 25 22:24:16.1±0.5, 44°.20N×129°.24W, h10^{km}, mb4.2/40, Error ellipse: s-maj=6.7km s-min=3.8km az=66.0

ISC 25 22:24:16.4±0.8, 44°.16N±0°.07×129°.07W±0°.08, h13^{km}, n228, σ1^{s}64/209, mb4.1/15, MS3.7/17, Off coast of Oregon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COR	Corvallis	4.16	82	ePn	Pn	22 25 20.0	+0.5
I03D	Drain, OR	4.16	94	P	Pn	22 25 18.4	-1.2
	baz=279,SNR=214						
I03D				S	Sn	22 26 06.1	-1.9
	baz=279						
G03D	McMinnville, O	4.27	74	P	Pn	22 25 19.5	-1.6
	baz=259						
F03A	Seaside	4.29	64	ePn	Pn	22 25 21.1	-0.3
DBO	Dodson Butte	4.36	102	ePn	Pn	22 25 20.5	-1.9
L02D	Cave Junction,	4.47	115	P	Pn	22 25 21.4	-2.5
	baz=298,SNR=7.0						
L02D				S	Sn	22 26 13.6	-2.2
	baz=298						
E03A	Lebam	4.56	56	ePn	Pn	22 25 24.5	-0.5
B023	Clatskanie	4.67	63	ePn	Pn	22 25 23.7	-2.8
HUMO	Hull Mountain	4.72	107	ePn	Pn	22 25 25.4	-1.9
HUMO				eSn	Sn	22 26 21.6	-0.4
I04A	Tendick Farm,	4.82	92	P	Pn	22 25 27.2	-1.5
	baz=277,SNR=34						
NLWA	Neilton Lookou	4.87	47	ePn	Pn	22 25 28.5	-0.9
NLWA				eSn	Sn	22 26 26.1	+0.6
IRO	Indian Ridge	4.92	89	ePn	Pn	22 25 30.8	+0.6
H04A	Detroit Lake	4.96	82	ePn	Pn	22 25 31.4	+0.8
PRLK	Prince Lake	5.11	87	ePn	Pn	22 25 34.1	+1.3
J04D	Umpqua Nationa	5.13	98	P	Pn	22 25 31.6	-1.5
	baz=283,SNR=9.3						
MTMW	Mount Mitchell	5.20	67	ePn	Pn	22 25 34.8	+0.7
YBH	Yreka Blue Hor	5.26	115	Pn	Pn	22 25 35.1	+0.3
	0.5nm,0.3s,baz=278,slow=7.7,SNR=12						
YBH				Sn	Sn	22 26 37.2	+1.8
	0.2nm,0.3s,baz=277,slow=23,SNR=3.2						
YBH	Yreka Blue Hor	5.26	115	ePn	Pn	22 25 33.6	-1.3
YBH				Sn	Sn	22 26 37.2	+1.8
TDH	Tom, Dick, Har	5.31	75	ePn	Pn	22 25 36.6	+1.0
TDL	Tradedollar La	5.31	63	ePn	Pn	22 25 36.1	+0.6
M02C	Callahan	5.35	119	P	Pn	22 25 33.8	-2.2
	baz=303						
HDW	Hoodsport	5.46	48	ePn	Pn	22 25 38.1	+0.6
GMW	Gold Mountain	5.55	50	ePn	Pn	22 25 38.7	0.0
I05D	Terrebonne, OR	5.56	85	P	Pn	22 25 38.9	0.0
	baz=271						
KMRM	Mail Ridge	5.60	133	ePn	Pn	22 25 39.3	-0.1
G05D	Wamic, OR	5.63	76	P	Pn	22 25 39.2	-0.7
	baz=262,SNR=9.7						
N02D	Trinity Center	5.68	122	P	Pn	22 25 41.3	+0.7
	baz=306						
BLN	Blyn Mountain	5.73	46	ePn	Pn	22 25 41.8	+0.6
J05D	Fort Rock, OR	5.75	96	P	Pn	22 25 40.6	-0.9
	baz=282						
M04C	Macdoel	5.81	112	P	Pn	22 25 45.2	+2.8
	baz=296						
D05A	Enumclaw	5.81	56	ePn	Pn	22 25 43.2	+0.9
PINE	Pine Mountain	5.88	91	ePn	Pn	22 25 44.3	+0.9
WDC	Whiskeytown Da	6.01	124	ePn	Pn	22 25 47.4	+2.3
G06A	Carlson Farm,	6.11	77	ePn	Pn	22 25 47.0	+0.6
K05A	Summer Lake	6.12	101	ePn	Pn	22 25 49.4	+2.6
B05A	Bryant	6.35	47	P	Pn	22 25 49.9	+0.3
	baz=233,SNR=30						
JCW	Jim Creek	6.39	48	ePn	Pn	22 25 50.9	+0.6
O03D	Paynes Creek	6.63	123	P	Pn	22 25 53.0	-0.7
	baz=308						
LTY	Liberty	6.65	59	ePn	Pn	22 25 54.1	+0.2
RPW	Rockport	6.77	48	ePn	Pn	22 25 56.1	+0.7
MBW	Mount Baker	6.78	44	ePn	Pn	22 25 56.7	+1.1
MOD	Modoc Plateau	6.81	106	ePn	Pn	22 25 57.6	+1.5
I07A	Izee	6.89	87	ePn	Pn	22 25 59.0	+1.9
SHUK	Shuksan-Mt. Ba	6.93	45	ePn	Pn	22 25 59.2	+1.4
HAWA	Hanford	7.09	68	ePn	Pn	22 26 02.3	+2.4
ORV	Oroville	7.29	127	ePn	Pn	22 26 04.0	+1.4
G08A	Pilot Rock	7.29	78	ePn	Pn	22 26 02.7	0.0
MAC	Mark West Spri	7.36	137	eSn	Sn	22 27 32.1	+5.2
D08A	Wollman Farm,	7.69	64	ePn	Pn	22 26 09.0	+1.0
J08A	Circle Bar Ran	7.71	92	ePn	Pn	22 26 09.6	+1.0
WVOR	Wild Horse Val	7.81	99	ePn	Pn	22 26 10.0	+0.2
AFDM	Forest Hills D	8.00	128	ePn	Pn	22 26 13.9	+1.5
E09A	Wood Farm, Sta	8.05	69	ePn	Pn	22 26 14.9	+1.8
BBB	Bella Bella	8.06	4	Pn	Pn	22 26 15.4	+2.4
	0.3nm,0.3s,baz=194,slow=12,SNR=2.2						
BBB				LR	LR	22 28 54.9	
	comp=Z,225nm,19.0s,baz=214,slow=34						
LLLB	Lillooet	8.09	35	ePn	Pn	22 26 14.8	+1.3
C09A	Chrisman Ranch	8.36	60	ePn	Pn	22 26 17.5	+0.3
BMO	Blue Mountains	8.44	81	ePn	Pn	22 26 19.4	+1.0
PAHR	Pah Rah Range	8.48	118	ePn	Pn	22 26 23.0	+4.0
F10A	Beach Ranch, E	8.58	74	ePn	Pn	22 26 22.6	+2.2
JHUM	Huhtala Lane,	8.69	141	ePn	Pn	22 26 23.1	+1.3
PNTR	Pine Nut	8.71	122	ePn	Pn	22 26 24.1	+1.7
CMB	Columbia Colle	8.96	130	ePn	Pn	22 26 27.0	+1.3
YERR	Yerington	9.00	122	ePn	Pn	22 26 27.9	+1.7
WAKR	Walker	9.19	125	ePn	Pn	22 26 30.9	+2.1
H02S1	DAWSON INLET T	9.32	347	T	T	22 36 04.9	
H02N1	VAN INLET T-PH	9.38	347	T	T	22 36 07.5	
BMN	Battle Mountai	9.54	109	ePn	Pn	22 26 38.4	+4.8
MFID	Camas Ranch	9.61	90	ePn	Pn	22 26 37.9	+3.3
RYN	Ryan	9.66	121	ePn	Pn	22 26 37.2	+2.0
KVN	Kaiserville	9.67	118	ePn	Pn	22 26 38.1	+2.7
NV01	Mina Array Sit	9.92	122	ePn	Pn	22 26 40.4	+1.6
NVAR	Mina Array Bea	9.92	122	Pn	Pn	22 26 39.0	+0.1
	0.1nm,0.3s,baz=278,slow=14,SNR=11						
NVAR				LR	LR	22 30 31.4	
	comp=Z,195nm,18.6s,baz=58,slow=38						
NV11	Mina Array Sit	10.01	121	ePn	Pn	22 26 41.7	+1.7
OMMB	Old Mammoth Mi	10.04	127	ePn	Pn	22 26 42.5	+1.9
HLID	Hailey	10.61	88	P	Pn	22 26 50.1	+1.8
	baz=278						
HLID	Hailey	10.61	88	ePn	Pn	22 26 52.4	+4.2
JTMT	Jette	10.90	66	ePn	Pn	22 26 53.8	+1.6
MSO	Missoula	10.95	71	P	Pn	22 26 52.1	-0.8
	baz=262						
MSO	Missoula	10.95	71	ePn	Pn	22 26 55.5	+2.6
WALA	Waterton Lakes	11.52	59	ePn	Pn	22 27 01.6	+1.0
R11A	Troy Canyon, C	11.69	115	ePn	Pn	22 27 05.2	+2.2
ISA	Isabella, Lake	11.75	133	P	Pn	22 27 04.0	+0.2
	baz=319						
ISA	Isabella, Lake	11.75	133	ePn	Pn	22 27 05.6	+1.8
DLMT	Dillon	11.78	78	ePn	Pn	22 27 06.3	+2.1
MPMC	Manual Prospec	11.99	128	P	Pn	22 27 08.0	+0.7
	baz=316						
FURC	Furnace Creek,	12.07	125	P	Pn	22 27 09.9	+1.9
	baz=313						
TPNV	Topopah Spring	12.12	122	P	Pn	22 27 08.1	-0.8
	baz=310						
TPNV	Topopah Spring	12.12	122	ePn	Pn	22 27 11.4	+2.6
BGU	Big Grassy Mou	12.27	100	ePn	Pn	22 27 16.3	+5.4
BOZ	Bozeman (W)	12.46	77	ePn	Pn	22 27 16.2	+2.7
EDW2	Edwards Air Fo	12.60	134	P	Pn	22 27 14.9	-0.4
	baz=320						
PSUT	Pine Spring	12.73	111	ePn	Pn	22 27 20.9	+3.5
YHB	Horse Butte	12.79	81	ePn	Pn	22 27 21.2	+3.1
SHOC	Shoshone, Teco	12.80	126	P	Pn	22 27 17.0	-1.1
	baz=314						
GSC	Goldstone, Bar	12.93	129	P	Pn	22 27 20.3	+0.4
	baz=317						
FXWY	Fox Creek	13.03	86	ePn	Pn	22 27 22.9	+1.5
SHPR	Sheep Range	13.07	121	ePn	Pn	22 27 25.6	+3.7
HWUT	Hardware Ranch	13.09	95	ePn	Pn	22 27 22.9	+0.7
TPAW	Teton Pass	13.11	87	ePn	Pn	22 27 25.8	+3.3
YPP	Pitchstone Pla	13.11	83	ePn	Pn	22 27 23.6	+1.1
REDW	Red Top Meadow	13.20	87	ePn	Pn	22 27 25.9	+2.2
TUQ	Turquoise Moun	13.33	126	P	Pn	22 27 25.7	+0.2
	baz=315						
LOHW	Long Hollow	13.34	86	ePn	Pn	22 27 29.3	+3.7
HEC	Hector,Ludlow	13.53	129	P	Pn	22 27 27.9	-0.3
	baz=317						
CCUT	Cedar City	13.59	114	ePn	Pn	22 27 32.4	+3.3
SZCU	Shurtz Canyon	13.75	113	ePn	Pn	22 27 34.6	+3.4
MSU	Marysvale	13.88	108	ePn	Pn	22 27 36.5	+3.5
EGMT	Eagleton	13.95	67	P	Pn	22 27 30.8	-3.0
	baz=261						
GMRC	Granite Mounta	13.95	128	P	Pn	22 27 32.9	-0.9
	baz=316						
LCMT	Little Creek M	13.97	115	ePn	Pn	22 27 37.2	+3.0
RLMT	Red Lodge	14.14	79	P	Pn	22 27 36.4	-0.1
	baz=273						
RLMT	Red Lodge	14.14	79	ePn	Pn	22 27 37.6	+1.1
PD31	Pinedale Array	14.24	89	ePn	Pn	22 27 41.5	+3.5
PDAR	Pinedale Array	14.24	89	Pn	Pn	22 27 41.5	+3.5
	0.1nm,0.3s,baz=272,slow=10,SNR=5.0						
PDAR	Pinedale Array	14.24	89	ePn	Pn	22 27 40.5	+2.6
KNB	Kanab	14.25	114	ePn	Pn	22 27 40.9	+2.9
PKCU	Pink Cliffs	14.35	112	ePn	Pn	22 27 42.5	+3.0
PFO	Pinyon Flats O	14.38	133	P	Pn	22 27 39.3	-0.6
	baz=321						
XPFO	Piæon Flat	14.38	133	ePn	Pn	22 27 39.6	-0.3
FRD	Ford Ranch, An	14.40	133	P	Pn	22 27 39.2	-0.8
	baz=321,SNR=5.2						
P17A	Butcher Ranch,	14.45	103	ePn	Pn	22 27 42.5	+1.8
IRM	Iron Mountain	14.69	128	P	Pn	22 27 44.0	0.0
	baz=317						
P18A	Preston Nutter	14.73	101	ePn	Pn	22 27 46.8	+2.1
SRU	San Rafael Swe	14.75	104	ePn	P	22 27 49.1	-1.8
BC3	Big Chuckawall	14.89	130	P	Pn	22 27 46.4	-0.4
	baz=319,SNR=5.3						
MONP2	Monument Peak	14.96	134	P	Pn	22 27 47.2	-0.6
	baz=322,SNR=6.6						
PDMCI	Parker Dam,Lak	15.17	125	P	Pn	22 27 49.9	-0.4
	baz=315						
SWSC	Sam W. Stewart	15.25	133	P	Pn	22 27 50.4	-0.9
	baz=321						
IKP	In-Ko-Pah, Jac	15.32	134	P	Pn	22 27 51.7	-0.6
	baz=322						
Y12C	Blythe	15.34	128	P	Pn	22 27 52.3	-0.4
	baz=317						
Y12C	Blythe	15.34	128	ePn	Pn	22 27 53.0	+0.4
	24nm,1.4s						
GLA	Glamis	15.69	130	P	Pn	22 27 56.4	-0.8
	baz=319						
GLA	Glamis	15.69	130	ePn	Pn	22 27 56.3	-0.9
	20nm,1.4s						
O20A	White River Ci	15.96	97	P	Pn	22 27 59.2	-1.5
	baz=292,SNR=8.3						
O20A	White River Ci	15.96	97	ePn	Pn	22 28 00.9	+0.1
	98nm,1.9s						
PV09	Paradox Valley	16.00	104	ePn	Pn	22 28 03.3	+1.9
WUAZ	Wupatki	16.08	116	P	Pn	22 28 02.3	-0.1
	baz=308						
WUAZ	Wupatki	16.08	116	ePn	P	22 28 04.3	-1.4
	58nm,2.0s						
PV21	Cone Mtn., Par	16.08	103	ePn	P	22 28 04.8	-0.9
	42nm,1.4s						
PV23	Carpenter Ridg	16.10	104	ePn	P	22 28 05.2	-0.9
	39nm,1.4s						
PV14	Lion Creek, Pa	16.13	104	ePn	Pn	22 28 05.0	+2.0
	20nm,1.1s						
PV20	West Nyswonger	16.18	104	ePn	Pn	22 28 04.1	+0.4
	67nm,2.0s						
PV19	Morning Glory	16.19	104	ePn	Pn	22 28 05.7	+2.0
	40nm,1.8s						
RWWY	Rawlins	16.20	91	ePn	Pn	22 28 02.2	-1.7
	8.6nm,0.9s						
PV05	Paradox Valley	16.21	105	ePn	Pn	22 28 04.9	+0.8
PV17	East Wray Mesa	16.22	104	ePn	P	22 28 06.3	-0.9
	25nm,1.1s						
PV22	Blue Mesa, Par	16.22	103	ePn	P	22 28 06.5	-0.8
	41nm,1.7s						
PV16	Nyswonger Mesa	16.23	104	ePn	Pn	22 28 04.2	-0.2
	14nm,1.0s						
PV18	Skein Mesa, Pa	16.27	104	ePn	Pn	22 28 05.1	+0.3
	14nm,1.0s						
PV11	David Mesa, Pa	16.27	104	ePn	P	22 28 07.1	-0.7

	34nm,1.3s						
PV03	Paradox Valley	16.31	104	ePn	P	22 28 07.2	-1.0
PV12	Saucer Basin,	16.31	104	ePn	P	22 28 07.7	-0.6
	28nm,1.1s						
PV13	Radium Mtn., P	16.37	105	ePn	Pn	22 28 07.9	+1.8
	23nm,1.3s						
PV02	Paradox Valley	16.41	104	ePn	Pn	22 28 06.6	0.0
	10nm,1.1s						
PV01	Paradox Valley	16.56	104	ePn	Pn	22 28 08.9	+0.5
MVCO	Mesa Verde	17.05	107	P	Pn	22 28 15.0	+0.2
	baz=300,SNR=5.8						
MVCO	Mesa Verde	17.05	107	ePn	P	22 28 16.3	-0.3
	30nm,1.1s						
SMCO	Snowmass	17.23	99	ePn	Pn	22 28 18.4	+1.3
	22nm,1.4s						
N23A	Red Feather La	17.34	93	P	Pn	22 28 17.2	-1.2
	baz=289						
N23A	Red Feather La	17.34	93	ePn	P	22 28 20.9	+1.1
	70nm,1.9s						
W18A	Petrified Fore	17.38	115	P	Pn	22 28 18.9	+0.1
	baz=307						
W18A	Petrified Fore	17.38	115	ePn	P	22 28 20.0	-0.2
	54nm,1.8s						
S22A	4UR Ranch, Cre	17.95	103	P	Pn	22 28 26.0	0.0
	baz=298,SNR=13						
S22A	4UR Ranch, Cre	17.95	103	ePn	P	22 28 27.4	+0.8
	38nm,1.6s						
ISCO	Idaho Springs	17.96	96	P	Pn	22 28 25.4	-0.6
	baz=292						
ISCO	Idaho Springs	17.96	96	ePn	P	22 28 28.6	+2.0
	5.1nm,1.0s						
TUC	Tucson	18.56	123	eP	P	22 28 32.8	-0.3
	10nm,1.4s						
SDCO	Great Sand Dun	18.89	102	P	P	22 28 37.2	+0.4
	baz=297						
SDCO	Great Sand Dun	18.89	102	eP	Pn	22 28 38.3	+0.9
	14nm,1.1s						
TASM	ASL Pad, Albuq	19.66	110	P	Pn	22 28 46.3	-0.4
	baz=305						
ANMO	Albuquerque	19.67	110	P	P	22 28 46.0	+0.8
	0.1nm,0.3s,baz=312,slow=10,SNR=5.5						
ANMO	Albuquerque	19.67	110	P	P	22 28 46.0	+0.8
	baz=305						
ANMO	Albuquerque	19.67	110	eP	Pn	22 28 46.4	-0.3
	4.7nm,0.9s						
TASL	Snake Pit, Alb	19.67	110	P	P	22 28 46.1	+0.9
	baz=305						
GLI	Glacier Island	19.90	334	eP	P	22 28 46.2	-1.1
	4.1nm,0.6s						
T25A	Trinidad	19.94	102	P	P	22 28 48.3	+0.1
	baz=298						
T25A	Trinidad	19.94	102	eP	Pn	22 28 51.0	+1.1
	16nm,1.0s						
KDAK	Kodiak Island	19.99	321	LR	LR	22 34 30.3	
	comp=Z,242nm,20.6s,baz=120,slow=31						
YKA	Yellowknife Ar	20.21	20	P	Pn	22 28 52.2	-0.4
	1.4nm,0.7s,baz=209,slow=9.9,SNR=3.0						
121A	Cookes Peak, D	20.27	118	P	P	22 28 52.0	+0.1
	baz=311,SNR=8.9						
FFC	Flin Flon	20.41	49	eP	P	22 28 52.6	-0.4
	15nm,0.8s						
SUA	Susitna One	21.54	331	eP	P	22 29 06.1	+0.8
	23nm,1.6s						
RIDG	Independ'e Rid	21.58	341	eP	P	22 29 07.2	+1.6
	10nm,1.4s						
EGAK	Eagle	21.75	346	eP	P	22 29 07.8	+0.5
	2.9nm,1.0s						
MNTX	Cornudas Mount	22.36	116	P	P	22 29 14.0	-0.2
	baz=311						
MNTX	Cornudas Mount	22.36	116	eP	P	22 29 15.8	+1.6
	2.6nm,0.9s						
ILAR	Eielson Array	22.94	340	P	P	22 29 18.7	-1.3
	1.4nm,1.0s,baz=157,slow=9.2,SNR=6.7						
ILAR				LR	LR	22 36 57.4	
	comp=Z,109nm,20.6s,baz=184,slow=33						
WRH	Wood River Hil	23.00	339	eP	P	22 29 20.6	0.0
	7.7nm,1.1s						
ULM	Lac du Bonnet	23.23	63	P	P	22 29 24.1	+1.0
	6.6nm,0.8s,baz=302,slow=7.2,SNR=5.6						
ULM				LR	LR	22 38 35.2	
	comp=Z,201nm,19.2s,baz=280,slow=37						
ULM	Lac du Bonnet	23.23	63	eP	P	22 29 24.7	+1.6
	25nm,1.4s						
ECSD	EROS Data Cent	23.30	80	P	P	22 29 23.1	-0.8
	baz=283,SNR=6.3						
ECSD	EROS Data Cent	23.30	80	eP	P	22 29 25.0	+1.1
	9.7nm,1.0s						
A33A	Warroad	23.53	66	P	P	22 29 26.5	+0.3
	baz=271						
G34A	Benson	23.70	76	P	P	22 29 27.9	+0.1
	baz=280						
B34A	Aery, Baudette	24.04	67	P	P	22 29 31.6	+0.6
	baz=273						
INK	Inuvik	24.32	356	LR	LR	22 38 43.2	
	comp=Z,126nm,20.1s,baz=189,slow=36						
D35A	Remer	24.54	71	P	P	22 29 35.8	+0.2
	baz=276						
B35A	Bob, Littlefor	24.66	68	P	P	22 29 37.9	+1.2
	baz=274						
TX31	Lajitas Ar. Si	25.03	118	eP	P	22 29 40.2	-0.1
TXAR	Lajitas Array	25.03	118	P	P	22 29 39.6	-0.8
	2.3nm,0.9s,baz=299,slow=6.1,SNR=6.8						
TXAR				LR	LR	22 40 02.4	
	comp=Z,166nm,18.4s,baz=0.0,slow=38						
F36A	Milaca	25.07	74	P	P	22 29 41.6	+1.2
	baz=279						
WMOK	Wichita Mounta	25.09	102	P	P	22 29 41.7	+1.0
	baz=301						
WMOK	Wichita Mounta	25.09	102	eP	P	22 29 42.5	+1.7
	13nm,1.0s						
ABTX	Abilene, Hawle	25.64	107	eP	P	22 29 46.8	+1.0
	14nm,1.4s						
P37A	Lathrop	26.13	88	P	P	22 29 51.2	+1.1
	baz=292						
HKT	Hockley	29.85	107	eP	P	22 30 25.8	+2.5
	7.8nm,1.2s						
TKL	Tuckaleechee C	35.39	88	LR	LR	22 46 10.8	
	comp=Z,243nm,18.0s,baz=294,slow=37						
SCHQ	Schefferville	40.52	52	LR	LR	22 49 39.7	
	comp=Z,136nm,18.6s,baz=322,slow=37						
SFJD	Kangerlussuaq	45.97	32	LR	LR	22 50 50.9	
	comp=Z,54nm,18.8s,baz=304,slow=34						
MA2	Magadan	48.69	318	LR	LR	22 51 18.4	
	comp=Z,51nm,21.5s,baz=102,slow=33						
H11N3	WAKE ISLAND Hy	58.00	267	T	T	23 36 43.4	
	baz=49,slow=75,SNR=3533						
H11N2	WAKE ISLAND Hy	58.00	267	T	T	23 36 44.3	
	baz=49,slow=75,SNR=706						
H11N1	WAKE ISLAND Hy	58.02	267	T	T	23 36 41.2	
	baz=49,slow=75,SNR=650						
H11S1	WAKE ISLAND Hy	58.94	266	T	T	23 37 53.4	
	baz=49,slow=75,SNR=249						
H11S2	WAKE ISLAND Hy	58.94	266	T	T	23 37 55.3	
	baz=49,slow=75,SNR=160						
H11S3	WAKE ISLAND Hy	58.95	266	T	T	23 37 55.8	
	baz=49,slow=75,SNR=161						
SONM	Songino Array	76.22	325	P	P	22 36 02.9	-1.6
	0.6nm,0.7s,baz=90,slow=4.4,SNR=4.7						
SONM				LR	LR	23 10 11.7	
	comp=Z,62nm,18.1s,baz=34,slow=36						
GUMO	Guam	77.87	277	LR	LR	23 03 18.6	
	comp=Z,27nm,20.9s,baz=112,slow=30						
ZALV	Zalesovo Beam	78.06	340	LR	LR	23 15 05.0	
	comp=Z,26nm,19.1s,baz=70,slow=39						
LPAZ	La Paz	81.82	122	P	P	22 36 34.2	-1.8
	1.2nm,0.8s,baz=356,slow=7.7,SNR=3.5						
DAVOX	Davos/Dischmat	82.46	27	LR	LR	23 13 28.3	
	comp=Z,50nm,18.9s,baz=56,slow=36						
KURK	Kurchatov	82.49	343	eP	P	22 36 36.8	-1.6
KURBB	Kurchatov Arra	82.59	343	P	P	22 36 37.3	-1.6
	0.6nm,0.5s,baz=15,slow=5.5,SNR=5.4						
HNR	Honiara	83.20	250	LR	LR	23 05 48.9	
	comp=Z,45nm,21.3s,baz=353,slow=30						
MKAR	Makanchi Array	85.29	339	LR	LR	23 17 49.0	
	comp=Z,28nm,18.6s,baz=4.0,slow=38						
WMQ	Urumqi	86.46	334	P	P	22 37 01.8	+3.0
WMQ				LR	LR		
	comp=N,67nm,22.5s						
WMQ				LR	LR		
	comp=E,87nm,20.3s						
WMQ				LR	LR		
	comp=Z,40nm,26.5s						
DZM	Mont Dzumac	88.38	237	LR	LR	23 10 38.7	
	comp=Z,40nm,20.1s,baz=38,slow=32						
PMG	Port Moresby	92.04	259	LR	LR	23 12 24.4	
	comp=Z,29nm,19.3s,baz=57,slow=32						

MEX 25 22:35:06.2±0.7, 16°.12N×98°.18W, h5^{km}, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.28	11	iP	Pg	22 35 10.9	-0.7
PNIG				eS	Sg	22 35 15.4	+0.1
TLIG	Tlapa	1.48	346	eP	Pn	22 35 29.8	-3.9
TLIG				eS	Sn	22 35 48.8	-4.7

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*NIED **25** 22:45:00, 37°.80N×140°.00E, h8^{km}, Mw3.4 Best double couple: M$_0$1.58000×10^{14} NP1:φ$_s$354.00000°, δ50.00000°, λ41.00000°. NP2:φ$_s$234.00000°, δ60.00000°, λ132.00000°.*

JMA 25 22:45:26.1, 37°.77N×140°.01E, h8^{km}±1^{km}, M3.6, 4C-5D, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYAR	Yonezawaarcadi	0.18	37	P	Pg	22 45 29.8	0.0
JYAR				S	Sg	22 45 32.6	+0.3
JFT	Otama	0.36	134	⇓P	Pg	22 45 33.3	+0.1
JFT				S	Sg	22 45 38.2	+0.3
JFY	Yanaizu	0.44	214	⇑P	Pg	22 45 34.7	+0.1
JFY				S	Sg	22 45 40.5	+0.2
JYS	Shirataka	0.45	6	⇑P	Pg	22 45 35.0	+0.1
JYS				S	Sg	22 45 41.5	+0.6
JNS	Sasagawa	0.55	275	⇓P	Pg	22 45 36.7	-0.1
JNS				S	Sg	22 45 43.9	-0.1
JMM	Marumori	0.63	81	⇓P	Pg	22 45 38.1	-0.1
JMM				eS	Sg	22 45 46.3	-0.1
JOU	Okura	0.79	41	⇑P	Pg	22 45 41.2	-0.1
JOU				eS	Sg	22 45 51.4	-0.1
JFK	Kawauchi	0.80	120	P	Pg	22 45 41.1	-0.3
JYA	Atsumi	0.85	344	⇓P	Pg	22 45 42.3	-0.2
JYA				eS	Sg	22 45 53.6	-0.1
JAW	Awa shima	0.91	319	⇓P	Pg	22 45 43.6	0.0
JAW				eS	Sb	22 45 56.2	-0.2
JHK	Hiroka	0.95	237	⇑P	Pg	22 45 43.8	-0.5
JHK				eS	Sg	22 45 55.8	-0.8

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*ISCJB **25** 23:12:17.3±1.4, 25°.01N±0°.09×123°.41E±0°.04, h20^{km}±14^{km}, mb3.5/5, Error ellipse: s-maj=14.5km s-min=6.1km az=173.8*

*JMA **25** 23:12:17.5±0.1, 25°.00N×123°.42E, h20^{km}, M3.1*

*IDC **25** 23:12:17.9±1.4, 24°.52N×122°.26E, h0^{km}, mb3.6/5, mb1 3.7/6, mb1mx3.4/62, mbtmp3.7/6, ML3.2/1, Error ellipse: s-maj=66.5km s-min=23.4km az=67.0*

ISC 25 23:12:17.9±1.6, **24°.96N**±0°.07×**123°.45E**±0°.04, **h10**^{km}±12^{km}, **n14**, σ**0^{s}.85**/20, **mb3.6**/5, **Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	Yonaguni jima	0.63	219	P	Pg	23 12 30.0	-0.1
YOJ				eS	Sg	23 12 38.9	+0.5
IRIF	Iriomote-Funau	0.67	157	P	Pg	23 12 31.1	+0.2
JYNG	Yonagunijimaku	0.68	222	P	Pg	23 12 30.8	-0.2
JYNG				eS	Sg	23 12 40.0	+0.1
JIJ	Ishigaki jima	0.87	133	P	Pg	23 12 34.1	-0.5
JIJ				eS	Sg	23 12 45.9	0.0
JISG	Ishigakijimahi	0.87	115	P	Pg	23 12 34.4	-0.2
JISG				eS	Sb	23 12 46.8	0.0
JKRS	Kuro-shima	0.88	144	P	Pg	23 12 34.9	0.0
JKRS				eS	Sb	23 12 47.4	+0.3
HATJ	Hateruma jima	0.95	160	P	Pg	23 12 35.8	-0.5
HATJ				eS	Sb	23 12 49.2	-0.1
JTJ	Tarama	1.18	105	eS	Sg	23 12 55.6	-0.4
KSRS	Korea Array	13.03	16	Pn	P	23 15 35.5	+2.0
	0.1nm,0.3s,baz=196,slow=13,SNR=9.9						
SONM	Songino Array	26.52	334	P	P	23 17 56.1	+0.3
	0.7nm,0.7s,baz=145,slow=10,SNR=4.3						
MKAR	Makanchi Array	39.24	314	P	P	23 19 45.0	-1.6
	0.6nm,0.8s,baz=98,slow=10,SNR=5.8						
ZALV	Zalesovo Beam	40.74	326	P	P	23 19 57.2	-1.7
	0.8nm,0.5s,baz=107,slow=7.8,SNR=3.4						
KURBB	Kurchatov Arra	42.87	319	P	P	23 20 15.3	-1.0
	0.4nm,0.3s,baz=108,slow=7.9,SNR=4.1						
WRA	Warramunga Arr	45.87	166	P	P	23 20 40.9	+0.3
	0.5nm,0.7s,baz=345,slow=8.7,SNR=3.8						

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*ISCJB **25** 23:20:09.8±1.2, 25°.00N±0°.08×123°.42E±0°.04, h26^{km}±11^{km}, mb3.7/6, MS2.5/3, Error ellipse: s-maj=13.6km s-min=6.0km az=175.6*

*JMA **25** 23:20:09.5±0.3, 25°.02N×123°.42E, h22^{km}, M3.1*

*IDC **25** 23:20:09.7±1.2, 24°.48N×122°.26E, h0^{km}, mb3.8/6, mb1 3.9/7, mb1mx3.5/58, mbtmp3.8/7, ML3.5/1, MS2.8/5, Ms1 2.8/5, ms1mx2.5/62, Error ellipse: s-maj=67.5km s-min=18.5km az=67.0*

ISC 25 23:20:10.2±1.7, **24°.95N**±0°.07×**123°.45E**±0°.05, **h12**^{km}±12^{km}, **n18**, σ**0^{s}.99**/21, **mb3.6**/6, **MS2.6**/3, **Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YOJ	Yonaguni jima	0.63	220	P	Pg	23 20 22.4	0.0
YOJ				eS	Sg	23 20 31.4	+0.7
IRIF	Iriomote-Funau	0.66	157	P	Pb	23 20 23.3	-0.3
IRIF				S	Sb	23 20 33.4	+0.7
JYNG	Yonagunijimaku	0.68	223	P	Pg	23 20 22.7	-0.6
JYNG				S	Sg	23 20 32.5	+0.3
JIJ	Ishigaki jima	0.85	133	P	Pg	23 20 26.2	-0.5
JIJ				S	Sb	23 20 37.8	-0.5
JISG	Ishigakijimahi	0.86	114	P	Pb	23 20 26.7	-0.3
JISG				S	Sb	23 20 38.7	+0.3
JKRS	Kuro-shima	0.87	144	P	Pb	23 20 27.1	-0.1
JKRS				S	Sb	23 20 39.9	+1.2
HATJ	Hateruma jima	0.94	160	P	Pb	23 20 28.3	-0.1
JTJ	Tarama	1.17	105	eS	Sn	23 20 48.0	-0.3
KSRS	Korea Array	13.04	16	Pn	P	23 23 27.8	+2.1
	0.2nm,0.3s,baz=196,slow=13,SNR=12						
KSRS				LR	LR	23 28 05.0	
	comp=Z,32nm,21.3s,baz=202,slow=34						
DAV	Davao City (W)	17.89	173	LR	LR	23 31 13.4	
	comp=Z,52nm,18.5s,baz=322,slow=38						
ASAJ	Asahikawa	24.68	34	LR	LR	23 35 19.2	
	comp=Z,18nm,18.5s,baz=106,slow=35						
KLR	Kul'dur	25.10	13	LR	LR	23 36 46.9	
	comp=Z,4.1nm,18.4s,baz=219,slow=39						
SONM	Songino Array	26.54	334	P	P	23 25 48.4	+0.6
	0.9nm,0.8s,baz=154,slow=10,SNR=5.7						
SONM				LR	LR	23 37 20.5	
	comp=Z,42nm,18.7s,baz=178,slow=39						
MKAR	Makanchi Array	39.26	314	P	P	23 27 37.0	-1.6
	1.0nm,0.9s,baz=96,slow=12,SNR=6.3						
ZALV	Zalesovo Beam	40.76	326	P	P	23 27 49.1	-1.8
	1.9nm,0.8s,baz=122,slow=7.2,SNR=6.4						
KURBB	Kurchatov Arra	42.88	319	P	P	23 28 07.3	-1.0
	1.1nm,0.2s,baz=106,slow=9.3,SNR=4.7						
WRA	Warramunga Arr	45.86	166	P	P	23 28 31.5	-0.9
	0.6nm,0.8s,baz=348,slow=8.3,SNR=3.3						
ASAR	Alice Springs	49.37	167	P	P	23 29 00.4	+0.7
	0.4nm,0.7s,baz=346,slow=6.4,SNR=3.6						

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*NIED **25** 23:41:00, 27°.60N×142°.90E, h5^{km}, Mw4.7 Best double couple: M$_0$1.25000×10^{16} NP1:φ$_s$192.00000°, δ12.00000°, λ112.00000°. NP2:φ$_s$349.00000°, δ79.00000°, λ85.00000°.*

*JMA **25** 23:41:21.9, 27°.62N×142°.93E, h15^{km}±2^{km}, M4.5*

*IDC **25** 23:41:22.3±0.6, 27°.42N×142°.65E, h0^{km}, mb4.2/24, mb1 4.3/28, mb1mx4.2/65, mbtmp4.2/28, ML3.6/3, MS3.7/29, Ms1 3.7/29, ms1mx3.5/57, Error ellipse: s-maj=17.6km s-min=12.1km az=112.0*

*MOS **25** 23:41:26.7±1.1, 27°.44N×142°.59E, h39^{km}, mb4.7/25, Error ellipse: s-maj=14.8km s-min=6.2km az=116.0*

*NEIC **25** 23:41:28.7±1.0, 27°.42N×142°.39E, h38^{km}±9^{km}, mb4.3/8, Error ellipse: s-maj=10.3km s-min=8.2km az=90.0*

ISC 25 23:41:27.9±0.5, **27°.49N**±0°.04×**142°.54E**±0°.08, **h30**^{km}, **n132**, σ**1^{s}.67**/128, **mb4.5**/54, **MS3.9**/25, **7C-2D, Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CBIJ	Chichi jima	0.51	219	ePg	Pb	23 41 38.6	+0.2
CBIJ				Sn	Sn	23 41 49.1	+2.3
CBIJ	Chichi jima	0.51	219	P	Pb	23 41 37.9	-0.5
CBIJ				eS	Sn	23 41 49.1	+2.3
JCJ	Chichijima	0.51	219	Pn	Pb	23 41 38.0	-0.4
	612nm,0.3s,baz=18,slow=9.9,SNR=149						
JCJ				Sn	Sn	23 41 49.1	+2.3
	2µm,0.3s,baz=311,slow=20,SNR=38						
JHHJ	Haha-jima-NKT	0.92	201	P	Pn	23 41 43.7	-1.0
JHJ	Hachijo jima 2	6.09	338	LR	LR	23 45 18.1	
	comp=Z,884nm,18.3s,baz=144,slow=38						
BSO1	Boso 1	7.26	350	P	Pn	23 43 09.1	-2.4
BSO3	Boso 3	7.49	347	P	Pn	23 43 13.3	-1.6
BSO4	Boso 4	7.71	346	P	Pn	23 43 17.3	-0.7
BSO4				eS	Sn	23 44 43.3	-0.9
JOD2	Odawara 2	8.29	340	P	Pn	23 43 25.0	-1.1
JOD2				eS	Sn	23 44 59.6	+0.9
JHU	Hanno	8.78	342	P	Pn	23 43 31.2	-1.6
JHU				eS	Sn	23 45 07.0	-3.8
JRY	Ryogami san	9.04	341	S	Sn	23 45 14.8	-2.5
JAG	Ashikaga	9.28	344	P	Pn	23 43 37.6	-2.1
JAG				eS	Sn	23 45 18.1	-5.0
MJA0	Matsu Arr-Jizo	9.73	339	eP	Pn	23 43 47.2	+1.3
MJA0				pmax	pmax		
	comp=Z,2.0nm,0.3s						
MJAR	Matsushiro Arr	9.74	339	Pn	Pn	23 43 44.6	-1.4
	comp=Z,1.6nm,0.3s,baz=166,slow=12,SNR=8.2						
MJAR				Sn	Sn	23 45 33.2	-1.2
	comp=Z,0.5nm,0.3s,baz=172,slow=25,SNR=4.3						
MJAR				LR	LR	23 47 09.2	
	comp=Z,244nm,20.3s,baz=160,slow=35						
MAJO	Matsushiro	9.74	339	ePn	Pn	23 43 46.7	+0.7
	comp=Z,7.9nm,0.4s						
MAJO	Matsushiro	9.74	339	⇑iP	Pn	23 43 47.0	+1.0
MAT	Matsushiro	9.74	339	P	Pn	23 43 44.8	-1.2
MAT				S	Sn	23 45 31.6	-2.8
JNU	Nakatsue	11.53	302	LR	LR	23 48 25.7	
	comp=Z,450nm,18.7s,baz=123,slow=36						
JOW	Kunigami	12.72	270	LR	LR	23 49 03.6	
	comp=Z,440nm,18.7s,baz=67,slow=36						
GUMO	Guam	14.00	171	LR	LR	23 49 32.2	
	comp=Z,269nm,19.1s,baz=356,slow=35						
ERM	Erimo	14.50	2	⇑iP	Pn	23 44 50.3	-0.6
TJN	Taejon	15.62	308	ceP	P	23 45 11.3	+1.6
KSRS	Korea Array	15.82	313	Pn	Pn	23 45 09.0	+0.6
	comp=Z,0.1nm,0.3s,baz=118,slow=12,SNR=4.3						
KSRS				LR	LR	23 51 10.6	
	comp=Z,353nm,18.3s,baz=118,slow=37						
KSAR	Wonju Array Be	15.84	312	Pn	Pn	23 45 09.0	+0.3
KSAR	Wonju Array Be	15.84	312	P	Pn	23 45 09.0	+0.3
ASAJ	Asahikawa	16.59	0	Pn	Pn	23 45 17.4	-0.9
	comp=Z,0.4nm,0.3s,baz=180,slow=12,SNR=2.4						
ASAJ				LR	LR	23 53 04.3	
	comp=Z,114nm,20.6s,baz=178,slow=42						
USRK	Ussuriysk Ar.	18.71	336	P	Pn	23 45 45.1	+0.7
	baz=142,slow=12						
USRK				LR	LR	23 52 16.5	
	comp=Z,116nm,21.1s,baz=146,slow=35						
KLR	Kul'dur	23.25	342	P	P	23 46 32.6	0.0
	comp=Z,0.2nm,0.5s,baz=136,slow=11,SNR=11						
KLR				LR	LR	23 56 02.2	
	comp=Z,16nm,18.3s,baz=158,slow=38						
KLR	Kul'dur	23.25	342	⇓iP	P	23 46 32.4	-0.2
H11N2	WAKE ISLAND Hy	23.59	104	T	T	00 11 14.9	
	baz=297,slow=74,SNR=22						
H11N1	WAKE ISLAND Hy	23.59	104	T	T	00 11 27.0	
	baz=297,slow=74,SNR=21						
H11N3	WAKE ISLAND Hy	23.61	104	T	T	00 11 15.2	
	baz=297,slow=74,SNR=27						
GRNR	Gornyy	23.71	350	eP	P	23 46 40.0	+2.9
H11S3	WAKE ISLAND Hy	23.93	107	T	T	00 12 03.7	
	baz=296,slow=74,SNR=31						
H11S1	WAKE ISLAND Hy	23.93	107	T	T	00 11 34.5	
	baz=296,slow=74,SNR=18						
H11S2	WAKE ISLAND Hy	23.95	107	T	T	00 11 46.8	
	baz=296,slow=74,SNR=7.6						
ZEA	Zeya	28.55	341	eP	P	23 47 24.8	+4.0
ZEA				pmax	pmax		
	comp=Z,28nm,1.2s						
XAN	Xi'an	29.52	291	P	P	23 47 28.5	-1.3
XAN				pmax	pmax		
	comp=Z,6.0nm,0.6s						
XAN				pmax	pmax		
	comp=Z,63nm,3.5s						
ULN	Ulaanbaatar	34.26	316	eP	P	23 48 10.3	-1.0
	comp=Z,2.8nm,0.7s						
ULN	Ulaanbaatar	34.26	316	ceP	P	23 48 10.8	-0.5
ULN				pmax	pmax		
	comp=Z,6.0nm,1.3s						
SONM	Songino Array	34.65	316	P	P	23 48 14.1	-0.6
	comp=Z,0.6nm,0.4s,baz=104,slow=6.0,SNR=5.5						
SONM				LR	LR	00 02 39.7	
	comp=Z,69nm,18.5s,baz=122,slow=37						
SONM	Songino Array	34.65	316	eP	P	23 48 15.3	+0.6
SONM				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KMI	Kunming	35.65	275	P	P	23 48 23.5	-0.2
KMI				pP	pP	23 48 32.8	+0.3
KMI				sP	sP	23 48 37.8	+1.6
KMI				pmax	pmax		
	comp=Z,11nm,1.4s						
SEY	Seymchan	36.03	8	P	P	23 48 26.3	+0.2
	comp=Z,1.5nm,0.2s,baz=180,slow=20,SNR=3.5						
BOD	Bodaibo	36.34	334	eP	P	23 48 24.4	-4.4
BOD				pmax	pmax		
	comp=Z,7.0nm,2.0s						
ZAK	Zakamensk	37.52	318	eP	P	23 48 38.8	-0.4
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.3s						
TLY	Talaya	37.84	320	eP	P	23 48 44.9	+3.2
TLY				eS	S	23 54 32.0	+1.2
TLY				pmax	pmax		
	comp=Z,6.0nm,0.5s						
TLY				MLR	MLR		
	comp=Z,183nm,17.0s						
CHTO	Chiang Mai	40.84	267	eP	P	23 49 05.9	-1.2
	comp=Z,1.9nm,0.5s						
CHTO	Chiang Mai	40.84	267	eP	P	23 49 05.9	-1.2
CHTO				pmax	pmax		
	comp=Z,2.0nm,0.5s						
CMAR	Chiang Mai Arr	40.96	267	P	P	23 49 07.6	-0.6
	comp=Z,1.2nm,0.3s,baz=56,slow=9.8,SNR=4.4						
CMAR	Chiang Mai Arr	40.96	267	eP	P	23 49 09.2	+1.0
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
BRDH	Bariadhala	46.09	276	LR	LR	00 09 06.0	
	comp=Z,147nm,19.3s,baz=162,slow=36						
WMQ	Urumqi	46.60	305	P	P	23 49 53.3	0.0
WMQ				LR	LR		
	comp=N,130nm,23.3s						
WMQ				LR	LR		
	comp=E,140nm,20.5s						
WMQ				LR	LR		
	comp=Z,180nm,23.3s						
DGZ	Jazzator, Alta	47.22	313	iP	P	23 49 58.3	+0.1
DGZ				iPCP	PcP	23 51 27.8	-1.4
DGZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WRAB	Tennant Creek	47.81	190	eP	P	23 50 01.1	-1.6
WRAB	Tennant Creek	47.81	190	⇓iP	P	23 50 00.2	-2.5
WRAB				i*SP	pP	23 50 10.9	-0.9
WRAB				pmax	pmax		
	comp=Z,5.0nm,0.9s						
WRA	Warramunga Arr	47.82	190	P	P	23 50 00.9	-1.9
	comp=Z,2.4nm,0.4s,baz=11,slow=8.5,SNR=16						
WRA	Warramunga Arr	47.82	190	eP	P	23 50 00.9	-1.9
WRA				pmax	pmax		
	comp=Z,3.0nm,0.4s						
ZALV	Zalesovo Beam	49.40	319	P	P	23 50 14.2	-0.4
	comp=Z,5.0nm,0.8s,baz=102,slow=7.8,SNR=8.0						
ZALV				PcP	PcP	23 51 36.2	-0.5
	comp=Z,1.0nm,0.4s,baz=60,slow=3.3,SNR=3.1						
ZALV				LR	LR	00 11 58.1	
	comp=Z,149nm,18.3s,baz=70,slow=37						
NVS	Novosibirsk	50.44	320	eP	P	23 50 23.6	+1.0
NVS				pmax	pmax		
	comp=N,6.0nm,1.4s						
NVS				pmax	pmax		
	comp=E,11nm,1.4s						
NVS				pmax	pmax		
	comp=Z,13nm,1.4s						
MK01	Makanchi Array	50.46	309	eP	P	23 50 22.2	-0.7
MKAR	Makanchi Array	50.47	309	P	P	23 50 22.4	-0.5
	comp=Z,0.9nm,0.5s,baz=92,slow=9.7,SNR=8.7						
MKAR				PcP	PcP	23 51 40.4	-0.4
	comp=Z,0.7nm,0.6s,baz=101,slow=3.1,SNR=3.6						
ASAR	Alice Springs	51.54	190	P	P	23 50 28.9	-2.2
	comp=Z,0.7nm,0.5s,baz=5.2,slow=8.4,SNR=10						
ASAR	Alice Springs	51.54	190	eP	P	23 50 29.7	-1.4
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
KURK	Kurchatov	52.94	314	eP	P	23 50 39.8	-1.5
KURK	Kurchatov	52.94	314	ceP	P	23 50 40.7	-0.5

KURK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KURBB	Kurchatov Arra	52.99	314	P	P	23 50 41.1	-0.6
	comp=Z,2.3nm,0.4s,baz=92,slow=6.9,SNR=20						
DZM	Mont Dzumac	54.42	152	*e*LR	LR	00 06 50.2	
	comp=Z,109nm,25.2s						
TRF	Thorofare Moun	55.59	30	*e*P	P	23 51 04.0	+3.4
	comp=Z,3.9nm,0.8s						
ILAR	Eielson Array	57.21	29	P	P	23 51 10.2	-1.7
	comp=Z,2.8nm,0.9s,baz=265,slow=6.9,SNR=5.4						
ILAR	Eielson Array	57.21	29	*e*P	P	23 51 10.0	-2.0
ILAR				pmax	pmax		
	comp=Z,2.0nm,1.0s						
BVAR	Borovoye Array	57.97	317	P	P	23 51 17.6	+0.2
	comp=Z,3.4nm,0.5s,baz=89,slow=7.0,SNR=46						
BVAR				LR	LR	00 17 17.2	
	comp=Z,104nm,18.9s,baz=89,slow=37						
BRVK	Borovoye	58.03	317	*e*P	P	23 51 17.1	-0.7
BRVK	Borovoye	58.03	317*c*	*i*P	P	23 51 17.8	-0.1
BRVK				pmax	pmax		
	comp=Z,22nm,1.7s						
SCRK	Sand Creek	58.43	30	*e*P	P	23 51 22.9	+2.3
	comp=Z,4.6nm,0.9s						
EGAK	Eagle	59.67	29	*e*P	P	23 51 30.8	+1.7
	comp=Z,0.9nm,0.7s						
PALK	Pallekele	61.73	263	LR	LR	00 19 46.9	
	comp=Z,90nm,18.2s,baz=164,slow=37						
SVE	Sverdlovsk	63.10	322	*e*P	P	23 51 52.8	+0.4
ARU	Arti	64.31	322	*e*P	P	23 51 59.6	-0.7
ARU	Arti	64.31	322*c*	*i*P	P	23 52 00.1	-0.2
ARU						23 52 34.6	
ARU						23 54 19.2	
ARU				S	S	00 00 40.3	+4.1
ARU				SS	SS	00 04 48.3	+2.7
ARU				pmax	pmax		
	comp=Z,13nm,1.2s						
AKTO	Aktyubinsk	65.97	316	P	P	23 52 10.9	-0.4
	comp=Z,8.7nm,0.7s,baz=76,slow=13,SNR=18						
AKTO				LR	LR	00 22 23.4	
	comp=Z,102nm,18.6s,baz=80,slow=37						
PRGR	Permogore	69.37	330	*e*P	P	23 52 28.6	-3.8
PRGR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
GEYT	Alibeck	69.55	303	P	P	23 52 32.7	-1.4
	comp=Z,1.4nm,0.9s,baz=71,slow=9.3,SNR=5.1						
KLMR	Klimovskoe	72.40	330	*e*P	P	23 52 49.8	-1.1
KLMR				pmax	pmax		
	comp=Z,12nm,1.2s						
KLMR	Klimovskoe	72.40	330	*e*P	P	23 52 49.9	-1.0
KLMR				AMP		23 53 00.9	
	comp=Z,12nm,1.2s						
ARCES	ARCESS Array B	73.27	341	P	P	23 52 56.1	+0.2
	comp=Z,3.0nm,1.0s,baz=72,slow=7.8,SNR=5.1						
ARCES	ARCESS Array B	73.27	341	*e*P	P	23 52 57.0	+1.1
ARCES				pmax	pmax		
	comp=Z,3.0nm,1.0s						
MAK	Makhachkala	75.25	311	*e*P	P	23 53 08.6	+0.7
MAK				*e*S	S	00 02 48.0	+2.9
MAK				MLR	MLR		
	comp=Z,165nm,16.0s						
VRH	Novokhopyorsk	75.40	320	*e*P	P	23 53 07.5	-1.1
VRH				pmax	pmax		
	comp=Z,5.0nm,0.6s						
YBH	Yreka Blue Hor	75.56	50	LR	LR	00 22 54.7	
	comp=Z,39nm,20.3s,baz=332,slow=33						
PINE	Pine Mountain	75.90	48	*e*P	P	23 53 15.4	+3.5
	comp=Z,8.5nm,1.1s						
LPSR	Galich'ya Gora	76.33	322	*e*P	P	23 53 14.2	+0.3
LPSR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
OBN	Obninsk	76.39	325	*e*P	P	23 53 13.5	-0.6
OBN				*e*		23 53 22.7	
OBN				*e*		23 56 07.8	
OBN				*e*PPP	PPP	23 57 51.0	
OBN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
VSR	Storozhevoye	76.83	321	*e*P	P	23 53 16.3	-0.5
VSR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
VORD	Divnogorie	76.88	321	*e*P	P	23 53 16.7	-0.3
VORD				pmax	pmax		
	comp=Z,4.0nm,0.7s						
FIA1	FINESS Array S	77.73	334	*e*P	P	23 53 20.7	-0.9
FINES	FINESS Array B	77.73	334	P	P	23 53 21.2	-0.4
	comp=Z,1.8nm,0.5s,baz=74,slow=6.6,SNR=14						
BMO	Blue Mountains	77.80	46	*e*P	P	23 53 24.2	+1.8
	comp=Z,1.8nm,0.8s						
KBZ	Khabaz	77.97	313	P	P	23 53 23.4	+0.2
	comp=Z,7.0nm,0.9s,baz=91,slow=2.5,SNR=14						
KBZ				LR	LR	00 30 26.9	
	comp=Z,58nm,20.2s,baz=62,slow=38						
KIV	Kislovodsk	78.01	313	*e*P	P	23 53 24.2	+0.6
KIV	Kislovodsk	78.01	313	*e*P	P	23 53 25.2	+1.6
KIV				*e*		23 53 33.9	
KIV				*e*		23 56 17.1	
KIV				*e*PPP	PPP	23 58 06.4	
KIV				pmax	pmax		
	comp=Z,11nm,1.7s						
GNI	Garni	78.32	309	*e*P	P	23 53 26.4	+0.9
GNI	Garni	78.32	309	*e*P	P	23 53 26.4	+0.9
CMB	Columbia Colle	78.73	53	*e*P	P	23 53 28.9	+1.2
CMB	Columbia Colle	78.73	53	*e*P	P	23 53 28.9	+1.2
MFID	Camas Ranch	79.40	47	*e*P	P	23 53 33.4	+2.0
	comp=Z,6.7nm,1.3s						
PMOR	Pomariorio Ree	79.54	113	*e*T	T	01 20 26.1	
	comp=Z,4.2nm,0.3s						
PPT	Papeete	79.56	116	LR	LR	00 23 00.3	
	comp=Z,70nm,18.8s,baz=9.0,slow=31						
PPT2	Papeete2	79.57	116	*e*LR	LR	00 18 17.2	
	comp=Z,124nm,26.8s						
NVAR	Mina Array Bea	80.03	52	P	P	23 53 34.0	-1.0
	comp=Z,0.3nm,0.3s,baz=300,slow=6.2,SNR=3.7						
NVAR				LR	LR	00 27 34.9	
	comp=Z,38nm,18.6s,baz=86,slow=35						
AKASG	Malin Array Be	82.48	324	P	P	23 53 48.0	+0.5
	comp=Z,0.9nm,0.5s,baz=50,slow=5.3,SNR=3.3						
AKASG				LR	LR	00 33 11.5	
	comp=Z,119nm,19.6s,baz=55,slow=38						
KIEV	Kiev	82.50	324	*e*P	P	23 53 47.1	-0.4
	comp=Z,3.1nm,0.3s						
KIEV	Kiev	82.50	324	*e*P	P	23 53 47.1	-0.4
KIEV				pmax	pmax		
	comp=Z,3.0nm,0.3s						
HFS	Hagfors	83.19	337	P	P	23 53 49.8	-1.1
	comp=Z,0.9nm,0.4s,baz=42,slow=4.5,SNR=10						
HFS				LR	LR	00 35 09.3	
	comp=Z,66nm,18.9s,baz=38,slow=39						
NB2	NORSAR Subarra	83.36	338	P	P	23 53 51.2	-0.7
	comp=Z,5.6nm,1.2s,baz=43,slow=5.3						
NOA	NORSAR Array B	83.36	338	P	P	23 53 52.4	+0.5
	comp=Z,0.9nm,0.9s,baz=52,slow=4.4,SNR=4.0						
PDAR	Pinedale Array	83.71	45	P	P	23 53 54.4	+0.1
	comp=Z,0.2nm,0.3s,baz=282,slow=4.2,SNR=3.3						
PDAR				LR	LR	00 28 35.8	
	comp=Z,33nm,18.5s,baz=290,slow=34						
RAYN	Ar Rayn	85.28	294	*e*P	P	23 54 01.9	-0.4
RAYN	Ar Rayn	85.28	294	*e*P	P	23 54 02.0	-0.4
BRTR	Keskin Array B	85.97	313	P	P	23 54 05.1	-0.5
	comp=Z,1.0nm,0.9s,baz=102,slow=5.2,SNR=5.3						
BRTR				LR	LR	00 35 18.2	
	comp=Z,38nm,21.5s,baz=76,slow=38						
BRTR	Keskin Array B	85.97	313	*e*P	P	23 54 06.2	+0.6
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ULM	Lac du Bonnet	86.94	33	LR	LR	00 34 04.1	
	comp=Z,18nm,19.3s,baz=260,slow=36						
MMAI	Mount Meron Ar	88.33	307	P	P	23 54 16.3	-0.8
	comp=Z,2.2nm,1.0s,baz=73,slow=5.3,SNR=4.1						
MMAI				LR	LR	00 40 16.7	
	comp=Z,23nm,18.0s,baz=140,slow=40						
ANMO	Albuquerque	89.98	50	LR	LR	00 27 41.9	
	comp=Z,21nm,20.7s,baz=267,slow=31						
KHC	Kasperske Hory	91.19	329	*e*P	P	23 54 34.0	+3.9
KHC	Kasperske Hory	91.19	329	*e*P	P	23 54 34.0	+3.9
GERES	GERESS Array B	91.33	329	P	P	23 54 29.6	-1.2
	comp=Z,0.4nm,0.7s,baz=62,slow=4.6,SNR=3.1						
GERES				LR	LR	00 39 47.1	
	comp=Z,94nm,18.5s,baz=76,slow=38						
LPIG	La Paz	93.03	61	LR	LR	00 33 34.4	
	comp=Z,39nm,18.4s,baz=274,slow=34						
DAVOX	Davos/Dischmat	94.60	330	LR	LR	00 41 02.0	
	comp=Z,31nm,18.9s,baz=74,slow=38						
TXAR	Lajitas Array	95.11	53	P	P	23 54 48.2	-0.5
	comp=Z,0.8nm,1.0s,baz=324,slow=4.5,SNR=3.1						
TXAR				LR	LR	00 35 10.0	
	comp=Z,13nm,19.3s,baz=0.0,slow=34						
SAML	Samuel	149.50	58	*e*PKPdf	PKPdf	00 01 11.8	+1.3
LPAZ	La Paz	149.52	75	PKPbc	PKPbc	00 01 14.6	-1.2
	comp=Z,1.5nm,0.9s,baz=297,slow=2.3,SNR=2.2						

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*IDC **25** 23:48:49.0±0.7, 10°.03N×122°.18E, h0^{km}, mb3.9/13, mb1 4.1/13, mb1mx3.8/59, mbtmp3.9/13, MS3.4/8, Ms1 3.4/8, ms1mx3.1/47, Error ellipse: s-maj=32.0km s-min=14.9km az=70.0*

*MAN **25** 23:48:52.8, 10°.26N×122°.04E, h19^{km}, mb5.0, ML3.9, MS3.9*

*NEIC **25** 23:48:56.7±1.5, 10°.01N×122°.13E, h60^{km}±15^{km}, mb4.2/5, Error ellipse: s-maj=15.1km s-min=8.1km az=62.0*

NEIC Felt [III PIVS] at Iloilo and [II PIVS] at Anini-y. Also felt [II PIVS] at Jordan, Guimaras Island.

ISC 25 23:48:50.1±1.5**, 10°.08N**±0°.04×**122°.00E**±0°.04**, h7**^{km}±9^{km}**, n47,** σ1$\overset{s}{.}$**51**/50**, mb4.0**/18**, MS3.2**/7**, 3C-5D, Panay**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAP	San Jose, Anti	0.66	356	⇓*i*P	Pn	23 49 06.0	+0.1
GUIM	Jordan	0.79	47	*e*P	Pg	23 49 05.4	+0.1
GUIM				*e*S	Sn	23 49 18.0	-1.9
CUYO	Cuyo Island	1.23	308	*e*P	Pn	23 49 13.8	+0.1
CUYO				*e*S	Sb	23 49 30.2	+0.5
SNPH	Sibulan	1.43	121	⇓*i*P	Pg	23 49 17.7	+0.2
SNPH				*i* S	Sg	23 49 38.8	+2.7
RCP	Roxas	1.64	27	⇑*e*P	Pb	23 49 20.3	-0.4
RCP				*e*S	Sb	23 49 42.5	+0.9
LLP	Lapu-Lapu	1.95	83	⇓*e*P	Pb	23 49 24.6	-1.4
LLP				*e*S	Sb	23 49 50.3	-0.3
DCPH	Dipolog City	2.00	138	⇑*e*P	Pg	23 49 27.2	-1.3
OTRP	Odiongan	2.26	1	*e*P	Pn	23 49 27.2	-0.7
OTRP				*e*S	Sn	23 49 52.5	-3.7
SJMP	San Jose	2.51	340	*e*P	Pn	23 49 31.1	-0.2
SJMP				*e*S	Sn	23 49 59.8	-2.6
PAGZ	Pagadian	2.61	148	*e*P	Pb	23 49 35.4	-1.8
OCLP	Ormoc	2.74	69	*e*P	Pn	23 49 35.9	+1.3
OCLP				*e*S	Sn	23 50 05.5	-2.6
CGP	Cagayan de Oro	3.12	121	⇓*e*P	Pn	23 49 42.0	+2.3
CGP				*e*S	Sn	23 50 15.4	-1.8
PLP	Palo	3.12	70	⇑*e*P	Pn	23 49 41.0	+1.2
BOAC	Boac	3.36	357	*e*P	Pn	23 49 43.2	+0.2
PGP	Puerto Galera	3.55	343	⇓*e*P	Pn	23 49 46.8	+1.1
BUKP	Musuan	3.74	126	*e*P	Pb	23 49 51.7	-4.8
DAV	Davao City (W)	4.64	130	Pn	Pn	23 50 03.0	+2.4
	30nm,0.3s,baz=27,slow=6.8,SNR=1.8						
DAV				Lg	Lg	23 51 17.5	
	26nm,0.3s,baz=246,slow=20,SNR=1.5						
DAV				LR	LR	23 52 02.2	
	comp=Z,1μm,20.9s,baz=242,slow=43						
MATI	Mati	5.24	126	*e*P	Pg	23 50 26.7	-3.9
DDMP	Don Marcelino,	5.40	137	*e*P	Pn	23 50 16.3	+5.2
GUMO	Guam	22.65	79	LR	LR	00 00 47.3	
	comp=Z,49nm,20.8s,baz=231,slow=32						
CMAR	Chiang Mai Arr	23.82	293	P	P	23 54 05.8	+1.8
	1.2nm,0.6s,baz=112,slow=7.8,SNR=9.9						
CHTO	Chiang Mai	23.93	294	*e*P	P	23 54 05.8	+0.8
	2.0nm,0.6s						
JNU	Nakatsue	24.34	18	LR	LR	00 04 40.7	
	comp=Z,79nm,19.5s,baz=126,slow=39						
KSAR	Wonju Array Be	27.75	10	P	P	23 54 39.5	0.0
KSRS	Korea Array	27.77	10	P	P	23 54 39.5	-0.1
	0.5nm,0.5s,baz=198,slow=7.3,SNR=3.5						
KSRS				LR	LR	00 06 31.4	
	comp=Z,64nm,20.1s,baz=194,slow=38						
MJAR	Matsushiro Arr	30.16	27	LR	LR	00 07 28.8	
	comp=Z,56nm,18.6s,baz=140,slow=37						
WRAB	Tennant Creek	32.21	158	*e*P	P	23 55 17.3	-1.9
	3.7nm,0.9s						
WRA	Warramunga Arr	32.22	158	P	P	23 55 17.2	-2.0
	2.9nm,0.7s,baz=341,slow=9.3,SNR=10						
USRK	Ussuriysk Ar.	35.08	13	LR	LR	00 10 36.6	
	comp=Z,50nm,20.4s,baz=106,slow=37						
ASAR	Alice Springs	35.51	161	P	P	23 55 47.2	-0.5
	4.8nm,0.6s,baz=344,slow=7.3,SNR=55						
ASAR				PcP	PcP	23 58 16.5	-0.8
	1.2nm,0.8s,baz=341,slow=2.8,SNR=5.1						
ASAJ	Asahikawa	38.32	24	LR	LR	00 12 14.3	
	comp=Z,40nm,18.6s,baz=166,slow=37						
KLR	Kul'dur	39.86	10	P	P	23 56 24.9	+0.6
	0.3nm,0.7s,baz=272,slow=10,SNR=12						
SONM	Songino Array	39.86	344	P	P	23 56 25.4	+0.8
	0.7nm,0.8s,baz=171,slow=9.1,SNR=4.2						
SONM				PcP	PcP	23 58 29.9	-0.5
	0.3nm,0.5s,baz=180,slow=1.4,SNR=2.6						
MKAR	Makanchi Array	49.69	325	P	P	23 57 44.0	+1.2
	0.6nm,0.7s,baz=116,slow=8.2,SNR=3.8						
NIL	Nilore	50.38	306	*e*P	P	23 57 50.4	+2.1
KURBB	Kurchatov Arra	53.89	327	P	P	23 58 15.0	+1.0
	1.0nm,0.2s,baz=123,slow=8.3,SNR=5.7						
KURK	Kurchatov	53.89	327	P	P	23 58 15.0	+1.0
BVAR	Borovoye Array	59.47	327	P	P	23 58 54.7	+1.0
	2.2nm,1.1s,baz=134,slow=8.3,SNR=7.3						
RAYN	Ar Rayn	73.73	292	*e*P	P	00 00 25.9	+0.4
	1.2nm,0.6s						
KIV	Kislovodsk	75.39	313	*e*P	P	00 00 35.0	+0.2
	3.9nm,0.8s						
ILAR	Eielson Array	81.43	26	P	P	00 01 07.3	-0.4
	0.6nm,0.8s,baz=260,slow=5.2,SNR=3.7						
BRTR	Keskin Array B	82.39	309	P	P	00 01 14.6	+1.2
	0.6nm,0.9s,baz=108,slow=5.1,SNR=3.5						
SPITS	Spitsbergen Ar	83.37	348	LR	LR	00 43 33.7	
	comp=Z,54nm,18.6s,baz=165,slow=39						
FINES	FINESS Array B	84.04	331	P	P	00 01 20.7	-0.6
	0.6nm,0.7s,baz=57,slow=7.0,SNR=5.1						
INK	Inuvik	85.99	21	*e*P	P	00 01 30.1	-0.7
	2.2nm,0.6s						
VNDA	Vanda	90.31	172	P	P	00 01 51.0	-0.3
	2.0nm,1.1s,baz=309,slow=6.1,SNR=5.4						
PLCA	Paso Flores	147.52	162	PKPbc	PKPbc	00 08 35.8	+0.3
	4.8nm,0.9s,baz=208,slow=5.0,SNR=4.2						

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*WEL **26** 00:03:01.6, 38°S±7°×18°0W±°, h33^{km}, ML4.6/33*

*NEIC **26** 00:03:02.6±0.0, 37°.57S×179°.73W, h27^{km}, ML4.4(WEL), After WEL.*

*IDC **26** 00:03:02.2±1.0, 37°.34S×179°.89E, h0^{km}, mb4.3/3, mb1 4.5/4, mb1mx4.0/39, mbtmp4.3/4, ML4.1/1, MS3.6/6, Ms1 3.6/6, ms1mx3.1/40, Error ellipse: s-maj=34.3km s-min=29.6km az=176.0*

ISC 26 00:03:03.0±1.4**, 37°.98S**±0°.05×**179°.92W**±0°.05**, h20**^{km}±5^{km}**, n129,** σ1$\overset{s}{.}$**75**/146**, mb4.3**/3**, MS3.4**/5**, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.33	276	P	Pb	00 03 27.1	-0.2
WMGZ				S	Sg	00 03 46.6	+0.5
PUZ	Puketiti	1.45	266	P	Pb	00 03 29.3	0.0
PUZ				S	Sg	00 03 49.3	-0.5
MXZ	Matakaoa Point	1.47	286	*e*Pn	Pn	00 03 28.5	+0.1
MXZ	Matakaoa Point	1.47	286	P	Pn	00 03 28.1	-0.3
CNGZ	Carnagh Statio	1.56	250	P	Pg	00 03 32.7	-0.4
PKGZ	Pakihiroa	1.59	273	P	Pn	00 03 30.5	+0.4
TWGZ	Tauwhareparae	1.67	262	P	Pb	00 03 33.0	-0.2
TWGZ				S	Sg	00 03 56.5	-0.5
TKGZ	Te Karaka	1.82	255	P	Pb	00 03 35.3	-0.3
HAZ	Te Kaha	1.83	276	P	Pn	00 03 34.0	+0.6
RUGZ	Raukumara Rang	1.90	270	P	Pn	00 03 35.3	+0.8
PRGZ	Paritu Road	1.97	241	P	Pb	00 03 38.3	+0.1
PRGZ				S	Sg	00 04 06.3	-0.2
MWZ	Matawai	2.05	259	P	Pn	00 03 37.7	+1.4
MWZ				S	Sb	00 04 04.4	-0.2
MHGZ	Mahia Peninsul	2.07	235	P	Pb	00 03 39.9	0.0
MHGZ				S	Sg	00 04 09.2	-0.5
KNZ	Kokohu	2.16	240	P	Pb	00 03 40.7	-0.7
KNZ				S	Sb	00 04 09.6	+1.8
RAGZ	Rawiri	2.16	255	P	Pb	00 03 40.3	-1.3
RAGZ				S	Sb	00 04 08.8	+0.7
SNGZ	Shannon Statio	2.30	249	P	Pb	00 03 42.5	-1.4
SNGZ				S	Sb	00 04 12.6	+0.7
URZ	Urewera	2.36	262	Pn	Pn	00 03 42.6	+1.9
	48nm,0.3s,baz=95,slow=1.4,SNR=75						
URZ				Sn	Sn	00 04 10.1	+1.0
	79nm,0.3s,baz=164,slow=17,SNR=8.1						
URZ	Urewera	2.36	262	*e*Pn	Pb	00 03 43.1	-1.8
URZ				*e*Sn	Sn	00 04 10.1	+1.0
URZ	Urewera	2.36	262	P	Pn	00 03 42.7	+2.1
URZ				S	Sb	00 04 12.4	-1.2
WHRZ	Whale Island	2.46	272	P	Pb	00 03 44.9	-1.7
WHHZ	Waihua	2.49	243	P	Pb	00 03 45.7	-1.3
WHHZ				S	Sb	00 04 17.8	+0.4
WHHZ	Waihua	2.49	243	P	Sb	00 04 18.9	+1.6
RTZ	Ruatahuna	2.52	254	P	Pb	00 03 45.6	-2.1
RTZ				S	Sb	00 04 18.1	-0.3
RAHZ	Arahi	2.53	247	P	Pb	00 03 46.2	-1.6
EDRZ	Edgecumbe	2.64	266	P	Pn	00 03 46.2	+1.6
MUGZ	Murupara	2.66	258	P	Pn	00 03 46.9	+2.1
MTHZ	Maungataniwha	2.69	250	P	Pn	00 03 47.7	+2.5
ARHZ	Aropaoanui	2.74	241	P	Pb	00 03 49.0	-2.3
OPRZ	Ohinepanea	2.79	272	P	Pn	00 03 47.6	+1.0
NMHZ	Naumai	2.80	245	P	Pb	00 03 49.7	-2.7
TARZ	Mount Tarawera	2.83	264	P	Pn	00 03 49.1	+1.8
RRRZ	Republican Roa	2.84	262	P	Pn	00 03 49.6	+2.3
CKHZ	Cape Kidnapper	2.89	233	P	Pb	00 03 51.0	-2.8
HLRZ	Highlands Stat	2.96	264	P	Pn	00 03 49.8	+1.0
ALRZ	Allen Road	3.00	258	P	Pn	00 03 51.5	+2.0
MRHZ	Matea Rd	3.00	252	P	Pn	00 03 52.3	+2.8
MCHZ	McNeill Hill	3.03	240	P	Pn	00 03 52.6	+2.8
KARZ	Kaharoa	3.03	268	P	Pn	00 03 51.2	+1.3
HSRZ	Hossack Road	3.04	263	P	Pn	00 03 51.9	+1.8
BKZ	Black Stump Fm	3.06	246	*e*Pn	Pn	00 03 53.0	+2.8
BKZ	Black Stump Fm	3.06	246	P	Pn	00 03 52.8	+2.6
KAHZ	Kahuranaki	3.09	233	P	Pn	00 03 53.5	+2.7
KWHZ	Kaweka Forest	3.21	242	P	Pn	00 03 54.9	+2.5
PXZ	Pawanui	3.24	230	P	Pn	00 03 54.8	+2.0
KRHZ	Kereru	3.34	239	P	Pn	00 03 56.5	+2.3
RITZ	Rihia Road	3.46	252	P	Pn	00 03 58.7	+2.8
BHHZ	Black Hill Sta	3.49	243	P	Pn	00 03 58.6	+2.4
RATZ	Rangitukua	3.50	254	P	Pn	00 03 59.0	+2.6
RATZ				P	Pn	00 03 59.0	+2.6
WPHZ	Waipukurau	3.52	233	P	Pn	00 03 58.9	+2.3
PRHZ	Porangahau	3.52	228	P	Pn	00 03 58.6	+1.9
KATZ	Kakaramea	3.59	252	P	Pn	00 04 00.2	+2.6
PNHZ	Pukenui	3.59	236	P	Pn	00 03 60.0	+2.3
KRVZ	Karewarewa	3.66	251	P	Pn	00 04 00.7	+2.1
MOVZ	Moawhango	3.68	246	P	Pn	00 04 01.2	+2.3
KUZ	Kuaotunu	3.69	288	P	Pn	00 03 58.4	-0.5
TUVZ	Tukino	3.70	248	P	Pn	00 04 02.3	+3.1
WTVZ	West Tongariro	3.70	251	P	Pn	00 04 02.0	+2.8
NGZ	Ngauruhoe	3.71	250	P	Pn	00 04 01.5	+2.2
ANWZ	Angora Road	3.74	227	P	Pn	00 04 01.6	+2.0
WHVZ	Whangaehu Hut	3.75	248	P	Pn	00 04 02.5	+2.5
COVZ	Chateau Observ	3.76	250	P	Pn	00 04 03.0	+3.0
TWVZ	Taurewa	3.80	252	P	Pn	00 04 02.5	+1.9
TSZ	Takapari Road	3.83	236	P	Pn	00 04 02.8	+1.9
DVHZ	Dannevirke	3.83	231	P	Pn	00 04 02.9	+2.1
MKAZ	Moumakai	4.01	281	P	Pn	00 04 03.4	+0.1
BFZ	Birch Farm	4.02	227	*e*Pn	Pn	00 04 04.5	+1.1
BFZ				*e*Sn	Sn	00 04 50.0	+0.1
BFZ	Birch Farm	4.02	227	P	Pn	00 04 04.2	+0.7
PRWZ	Pori Road	4.10	230	P	Pn	00 04 07.3	+2.7
WIAZ	Waiheke Island	4.12	285	P	Pn	00 04 05.0	+0.3
POWZ	Post Office Ro	4.13	233	P	Pn	00 04 07.6	+2.6
HIZ	Hauiti	4.15	261	*e*Pn	Pn	00 04 08.2	+2.9
HIZ	Hauiti	4.15	261	P	Pn	00 04 07.3	+2.1
ETAZ	East Tamaki Re	4.23	282	P	Pn	00 04 07.2	+0.9
TIWZ	Tintock	4.29	228	P	Pn	00 04 08.6	+1.4
VRZ	Vera Road	4.33	253	P	Pn	00 04 10.1	+2.4
WAZ	Wanganui	4.36	244	P	Pn	00 04 11.5	+3.4
MRZ	Mangatainoka R	4.40	231	P	Pn	00 04 10.3	+1.6
TMWZ	Te Maipa	4.50	225	P	Pn	00 04 10.6	+0.5
RVAZ	Riverhead Bore	4.55	284	P	Pn	00 04 11.6	+0.9
HOWZ	Holdsworth Sta	4.58	229	P	Pn	00 04 12.1	+0.9
MTW	Mount Morrison	4.76	227	P	Pn	00 04 14.0	+0.4
TRWZ	Traveller	4.81	223	P	Pn	00 04 14.5	+0.1
PKE	Pukeiti	4.93	254	P	Pn	00 04 19.7	+3.7
KHEZ	Kahui Hut	4.93	253	P	Pn	00 04 19.8	+3.7
KIW	Kapiti Island	4.93	233	P	Pn	00 04 17.2	+1.2
PAWZ	Paruwai Farm	4.95	225	P	Pn	00 04 16.6	+0.4
CAW	Cannon Point	4.98	230	P	Pn	00 04 17.6	+0.9
MSWZ	Moikau Station	5.07	226	P	Pn	00 04 18.0	+0.1
PLWZ	Palliser	5.17	225	P	Pn	00 04 19.6	+0.3
SNZO	South Karori	5.32	230	*e*Pn	Pn	00 04 21.6	+0.3
TCW	Tory Channel	5.53	232	P	Pn	00 04 25.0	+0.8
TUWZ	Tuamarina	5.86	232	P	Pn	00 04 28.9	+0.3
OUZ	Omahuta	5.90	296	*e*Pn	Pn	00 04 29.5	+0.2
BSWZ	Blackbirch Sta	6.06	230	P	Pn	00 04 31.3	-0.2
NNZ	Nelson	6.11	236	P	Pn	00 04 32.9	+0.8
KHZ	Kahutara	6.69	226	*e*Pn	Pn	00 04 40.0	0.0
KHZ				*e*Sn	Sn	00 05 51.2	-4.5
KHZ	Kahutara	6.69	226	P	Pn	00 04 40.3	+0.2
THZ	Tophouse	6.69	233	*e*Pn	Pn	00 04 40.4	+0.1
THZ				*e*Sn	Sn	00 05 53.2	-2.6
THZ	Tophouse	6.69	233	P	Pn	00 04 40.3	+0.1
LTZ	Lake Taylor	7.65	229	*e*Pn	Pn	00 04 54.5	+1.1
LTZ				*e*Sn	Sn	00 06 19.9	+0.4
LTZ	Lake Taylor	7.65	229	P	Pn	00 04 54.4	+1.0
OKCZ	Okains Bay	7.83	221	P	Pn	00 04 57.3	+1.5
MQZ	McQueen's Vall	8.03	222	*e*Pn	Pn	00 04 58.5	+0.1
MQZ				*e*Sn	Sn	00 06 27.2	-1.4
MQZ	McQueen's Vall	8.03	222	P	Pn	00 04 58.7	+0.2
OXZ	Oxford	8.12	226	*e*Pn	Pn	00 05 00.7	+1.0
OXZ				*e*Sn	Sn	00 06 28.9	-2.0
OXZ	Oxford	8.12	226	P	Pn	00 05 01.0	+1.3
WVZ	Waitaha Valley	8.75	231	P	Pn	00 05 09.8	+1.4
RPZ	Rata Peaks	8.92	227	Pn	Pn	00 05 10.4	-0.4
	0.5nm,0.3s,baz=27,slow=6.8,SNR=4.3						
RPZ				Sn	Sn	00 06 47.2	-3.5
	2.7nm,0.3s,baz=351,slow=21,SNR=11						
RPZ	Rata Peaks	8.92	227	*e*Pn	Pn	00 05 11.7	+0.9
RPZ				*e*Sn	Sn	00 06 47.2	-3.5
RPZ	Rata Peaks	8.92	227	P	Pn	00 05 12.2	+1.4
DZM	Mont Dzumac	19.73	320	P	P	00 07 23.1	-8.4
	0.1nm,0.3s,baz=107,slow=20,SNR=2.3						
DZM				LR	LR	00 13 52.5	
	comp=Z,221nm,18.2s,baz=74,slow=34						
HNR	Honiara	33.71	322	LR	LR	00 21 04.2	
	comp=Z,57nm,18.1s,baz=354,slow=33						
VNDA	Vanda	40.41	186	LR	LR	00 24 10.0	
	comp=Z,38nm,18.2s,baz=340,slow=31						
PMG	Port Moresby	41.06	305	LR	LR	00 26 31.1	
	comp=Z,66nm,18.0s,baz=204,slow=35						
AS01	Alice Springs	41.69	276	*e*P	P	00 10 50.3	-0.3
ASAR	Alice Springs	41.73	276	P	P	00 10 51.1	+0.2
	5.1nm,0.7s,baz=120,slow=7.8,SNR=36						
WRA	Warramunga Arr	43.40	281	P	P	00 11 04.2	-0.3
	2.7nm,0.5s,baz=121,slow=7.7,SNR=22						
WRA				PcP	PcP	00 12 54.5	+1.7
	0.9nm,0.9s,baz=126,slow=3.6,SNR=3.3						
QSPA	South Pole Qui	52.15	180	P	P	00 12 18.3	+6.5
	0.8nm,0.5s,baz=76,slow=1.1,SNR=4.2						
BATI	Baumata	57.44	283	LR	LR	00 40 30.7	
	comp=Z,261nm,18.1s,baz=253,slow=39						
DAV	Davao City (W)	67.64	299	LR	LR	00 42 58.3	
	comp=Z,20nm,19.7s,baz=142,slow=36						
ARCES	ARCESS Array B	145.55	345	PKP	PKPab	00 22 39.6	+0.5
	2.5nm,0.8s,baz=44,slow=3.7,SNR=8.8						
KBZ	Khabaz	147.39	294	PKPbc	PKPab	00 22 46.2	-0.7
	2.9nm,1.1s,baz=166,slow=4.2,SNR=4.0						
DBIC	Dimbokro	148.51	171	PKPbc	PKPab	00 22 52.8	+0.6
	2.9nm,0.9s,baz=93,slow=9.2,SNR=3.3						
MMAI	Mount Meron Ar	150.93	271	PKPbc	PKPbc	00 22 57.5	+3.1
	0.4nm,0.3s,baz=103,slow=6.2,SNR=5.4						
FINES	FINESS Array B	151.49	334	PKPbc	PKPbc	00 22 55.8	+1.2
	3.2nm,0.9s,baz=101,slow=4.4,SNR=8.0						
BRTR	Keskin Array B	153.89	284	PKPbc	PKPbc	00 23 02.1	+1.2
	1.1nm,1.0s,baz=191,slow=3.3,SNR=4.2						
EKA	Eskdalemuir Ar	162.50	6	PKPab	PKPab	00 23 49.3	-1.2
	1.2nm,0.8s,baz=4.1,slow=1.0,SNR=3.8						
CLL	Collm	163.84	330	*e*PKPab	PKPab	00 23 56.0	-0.6
GERES	GERESS Array B	165.33	322	PKPab	PKPab	00 24 02.4	-1.1
	0.2nm,0.5s,baz=50,slow=2.3,SNR=3.8						

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*TIR **26** 00:13:34.8, 41°.39N×19°.93E, h10^{km}, Md3.1/7*

*CSEM **26** 00:13:35.0±0.3, 41°.36N×19°.84E, h2^{km}, ML2.7, Error ellipse: s-maj=5.4km s-min=3.0km az=32.0*

*BEO **26** 00:13:35.8±0.5, 41°.33N×19°.93E, h0^{km}, ML2.4/14*

*SKO **26** 00:13:36.6, 41°.34N×19°.89E, h0^{km}, M2.0, ML2.5*

*PDG **26** 00:13:37.1±0.3, 41°.47N×19°.86E, h1^{km}, ML2.7/12, Error ellipse: s-maj=0.5km s-min=0.7km az=0.0*

ISC 26 00:13:36.1±1.1**, 41°.42N**±0°.02×**19°.92E**±0°.02**, h7**^{km}±9^{km}**, n89,** σ1$\overset{s}{.}$**08**/170**, 14C-12D, Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PHP	Peshkopia	0.47	56	*i* Pg	Pg	00 13 45.1	-0.1
PHP				*i* Sg	Sg	00 13 53.0	+1.6
PHP	Peshkopia	0.47	56	*i* PG	Pg	00 13 45.1	-0.1
PHP				*i* SG	Sg	00 13 53.0	+1.6
PUK	Puka	0.62	358	*i* Pg	Pg	00 13 48.2	+0.1
PUK				*i* Sg	Sb	00 13 59.6	+1.3

PUK	Puka	0.62	358	i PG	Pg	00 13 48.2	+0.1
PUK				i SG	Sb	00 13 59.6	+1.3
OHR	Ohrid	0.73	115	i Pg	Pg	00 13 49.3	-0.9
OHR				i Sg	Sb	00 14 00.8	-0.7
OHR				eLg	Lg	00 14 04.4	
	comp=N,292nm,0.7s						
OHR				eLg	Lg	00 14 05.7	
	comp=E,274nm,0.9s						
ULC	Ulcinj	0.74	317	⇓iPg	Pg	00 13 50.0	-0.3
ULC				eSg	Sg	00 14 00.1	+0.2
ULC	Ulcinj	0.74	317	⇓iPg	Pg	00 13 50.0	-0.3
ULC				eSg	Sg	00 14 00.1	+0.2
DRME	Dracevica, Mon	0.94	325	⇑iPg	Pg	00 13 53.4	-0.7
DRME				eSg	Sb	00 14 07.3	-0.2
DRME	Dracevica, Mon	0.94	325	⇑iPg	Pg	00 13 53.4	-0.7
DRME				eSg	Sb	00 14 07.3	-0.2
DRME	Dracevica, Mon	0.94	325	⇑iPg	Pg	00 13 53.3	-0.8
DRME				eSg	Sb	00 14 08.1	+0.6
BCI	Bajram Curri	0.95	7	i PG	Pg	00 13 45.0	-9.3
BCI				i SG	Sg	00 14 01.8	-4.9
KRUS	Krusevo	1.00	93	i Pg	Pg	00 13 53.4	-1.9
KRUS				i Sg	Sb	00 14 10.0	+0.7
KBN	Korca	1.03	140	i Pg	Pb	00 13 55.9	-0.5
KBN				i Sg	Sb	00 14 09.3	-0.9
KBN	Korca	1.03	140	i PG	Pb	00 13 55.9	-0.5
KBN				i SG	Sb	00 14 09.3	-0.9
PDG	Podgorica	1.12	334	ePg	Pg	00 13 56.4	-1.2
PDG				eSg	Sn	00 14 14.5	+0.5
PDG	Podgorica	1.12	334	⇓iPg	Pg	00 13 56.6	-1.0
PDG				eSg	Sn	00 14 13.6	-0.4
PDG	Podgorica	1.12	334	⇑iPg	Pg	00 13 56.4	-1.2
PDG				eSg	Sn	00 14 13.6	-0.4
TTG	Podgorica	1.12	334	⇓iPg	Pg	00 13 56.6	-1.0
TTG				eSg	Sn	00 14 13.6	-0.4
BUM	Brajici-Budva	1.17	319	⇑iPg	Pg	00 13 57.3	-1.1
BUM				eSg	Sn	00 14 14.7	-0.5
BUM	Brajici-Budva	1.17	319	⇑iPg	Pg	00 13 57.3	-1.1
BUM				eSg	Sn	00 14 14.7	-0.5
PVY	Plav	1.17	1	⇑iPg	Pg	00 13 57.7	-0.9
PVY				eSg	Sn	00 14 15.7	+0.3
PVY	Plav	1.17	1	⇑iPg	Pg	00 13 57.7	-0.9
PVY				eSg	Sn	00 14 15.7	+0.3
SKO	Skopje	1.26	64	ePg	Pn	00 14 00.2	0.0
SKO				eSg	Sn	00 14 17.6	+0.1
SKO	Skopje	1.26	64	ePg	Pg	00 14 00.7	+0.4
SKO				i Sg	Sn	00 14 18.1	+0.6
SKO	Skopje	1.26	64	ePg	Pn	00 14 00.2	0.0
SKO				eSg	Sn	00 14 17.6	+0.1
CEME	Cevo	1.35	327	ePg	Pn	00 14 00.7	-0.8
CEME				eSg	Sn	00 14 21.1	+1.4
CEME	Cevo	1.35	327	ePg	Pn	00 14 00.7	-0.8
CEME				eSg	Sn	00 14 21.1	+1.4
BEY	Berane	1.45	359	⇑iPg	Pn	00 14 02.9	0.0
BEY				eSg	Sg	00 14 24.8	+2.1
IVA	Berane	1.45	359	⇑iPg	Pn	00 14 02.9	0.0
IVA				eSg	Sg	00 14 24.8	+2.1
KOME	Kolasin	1.46	348	⇓iPg	Pn	00 14 03.0	0.0
KOME				eSg	Sg	00 14 25.3	+2.3
KOME	Kolasin	1.46	348	⇓iPg	Pn	00 14 03.0	0.0
KOME				eSg	Sg	00 14 25.3	+2.3
HCY	Herceg Novi	1.48	314	⇓iPg	Pn	00 14 03.0	-0.2
HCY				eSg	Sg	00 14 25.1	+1.6
HCY	Herceg Novi	1.48	314	⇑iPn	Pn	00 14 02.9	-0.2
HCY				eSn	Sg	00 14 24.6	+1.1
HCY				eSg	Sg	00 14 25.1	+1.6
HCY	Herceg Novi	1.48	314	⇑iPn	Pn	00 14 02.9	-0.2
HCY				eSn	Sg	00 14 24.6	+1.1
NKME	Niksic	1.52	332	ePg	Pn	00 14 03.9	+0.1
NKME				eSg	Sg	00 14 27.2	+2.1
NKME	Niksic	1.52	332	ePg	Pn	00 14 03.9	+0.1
NKME				eSg	Sg	00 14 27.2	+2.1
SRN	Sarande	1.54	178	i PN	Pg	00 14 06.2	+0.6
SRN				i SN	Sg	00 14 27.1	+1.5
NKY	Niksic	1.55	334	⇓iPg	Pn	00 14 04.4	+0.1
NKY				eSg	Sg	00 14 27.9	+2.0
NKY	Niksic	1.55	334	⇓iPg	Pn	00 14 04.4	+0.1
NKY				eSg	Sg	00 14 27.9	+2.0
TREB	Trebinje	1.74	318	ePn	Pb	00 14 08.1	-0.3
TREB				eSn	Sg	00 14 32.9	+0.8
TREB	Trebinje	1.74	318	ePn	Pn	00 14 06.8	0.0
TREB				eSn	Sb	00 14 30.2	-0.3
TREB	Trebinje	1.74	318	ePn	Pn	00 14 06.8	0.0
TREB				eSn	Sb	00 14 30.2	-0.3
BRY	Bratogost	1.80	326	⇑iPg	Pb	00 14 08.8	-0.7
BRY				eSn	Sb	00 14 32.2	-0.1
BRY	Bratogost	1.80	326	⇑iPg	Pb	00 14 08.8	-0.7
BRY				eSn	Sb	00 14 32.2	-0.1
SJES	Sjenica	1.84	1	ePn	Pb	00 14 09.9	-0.2
SJES				eSn	Sg	00 14 35.2	0.0
SJES	Sjenica	1.84	1	ePn	Pb	00 14 09.9	-0.2
SJES				eSn	Sg	00 14 35.2	0.0
UPM	Unac-Piva	1.93	337	⇓iPn	Pb	00 14 11.4	-0.4
UPM				eSn	Sg	00 14 38.3	+0.1
UPM	Unac-Piva	1.93	337	ePn	Pn	00 14 08.8	-0.8
UPM				eSn	Sb	00 14 35.9	-0.3
UPM	Unac-Piva	1.93	337	ePn	Pn	00 14 08.8	-0.8
UPM				eSn	Sb	00 14 35.9	-0.3
PLE	Pljevlja	1.95	349	⇓iPn	Pb	00 14 11.7	-0.3
PLE				eSn	Sg	00 14 39.0	+0.4
PLE	Pljevlja	1.95	349	⇓iPn	Pb	00 14 11.7	-0.3
PLE				eSn	Sg	00 14 39.0	+0.4
BARS	Barje	1.98	45	ePn	Pb	00 14 11.4	-1.1
BARS				eSn	Sb	00 14 38.0	+0.5
VAY	Valandovo	2.00	92	ePn	Pn	00 14 10.8	+0.5
VAY				eSn	Sb	00 14 36.7	-1.2
VAY	Valandovo	2.00	92	ePn	Pb	00 14 12.2	-0.6
VAY				eSg	Sg	00 14 39.5	-0.8
VAY				eLg	Lg	00 14 42.6	
	comp=N,23nm,0.8s						
VAY				eLg	Lg	00 14 51.4	
	comp=E,25nm,0.9s						
VAY	Valandovo	2.00	92	ePn	Pn	00 14 10.8	+0.5
VAY				eSn	Sb	00 14 36.7	-1.2
SELS	Selova	2.00	26	ePn	Pn	00 14 11.1	+0.7
SELS				eSn	Sb	00 14 37.4	-0.7
IVAS	Ivanjica	2.16	5	ePn	Pb	00 14 14.6	-1.0
IVAS				eSn	Sb	00 14 42.1	-0.5
IVAS	Ivanjica	2.16	5	ePn	Pb	00 14 14.6	-1.0
IVAS				eSn	Sb	00 14 42.1	-0.5
STON	Ston	2.19	312	ePn	Pb	00 14 15.0	-1.1
STON				eSn	Sb	00 14 43.1	-0.4
STON	Ston	2.19	312	ePn	Pn	00 14 14.2	+1.2
STON				Sn	Sb	00 14 43.5	0.0
STON	Ston	2.19	312	ePn	Pn	00 14 12.7	-0.3
STON				eSn	Sn	00 14 41.7	+1.3
STON	Ston	2.19	312	ePn	Pn	00 14 12.7	-0.3
STON				eSn	Sn	00 14 41.7	+1.3
BBLS	Lazići	2.47	351	ePn	Pb	00 14 19.2	-1.7
BBLS				eSn	Sb	00 14 51.9	+0.3
BBLS	Lazići	2.47	351	ePn	Pn	00 14 16.2	-0.7
BBLS				eSn	Sn	00 14 48.9	+1.5
BBLS	Lazići	2.47	351	ePn	Pn	00 14 16.2	-0.7
BBLS				eSn	Sn	00 14 48.9	+1.5
GRUS	Gruza	2.53	13	ePn	Pn	00 14 18.1	+0.4
GRUS	Gruza	2.53	13	ePn	Pn	00 14 18.1	+0.4
DIVS	Divibare	2.67	1	ePn	Pn	00 14 20.8	+1.1
DIVS				eSn	Sb	00 14 55.8	-1.7
DIVS	Divibare	2.67	1	ePn	Pn	00 14 20.8	+1.1
DIVS				eSn	Sn	00 14 53.3	+0.9
DIVS	Divibare	2.67	1	ePn	Pn	00 14 18.9	-0.8
DIVS				eSn	Sn	00 14 53.3	+0.9
VTS	Vitosha	2.72	63	ePn	Pn	00 14 20.7	+0.4
VTS	Vitosha	2.72	63	ePn	Pn	00 14 20.7	+0.4
ZAPS	Zavoj	2.73	47	ePn	Pn	00 14 21.9	+1.4
ZAPS				eSn	Sn	00 14 55.9	+2.1
ZAPS	Zavoj	2.73	47	ePn	Pn	00 14 21.9	+1.4
ZAPS				eSn	Sn	00 14 55.9	+2.1
HAPS	Han Pijesak,Bl	2.76	345	ePn	Pn	00 14 20.9	+0.1
HAPS				eSn	Sn	00 14 55.7	+1.2
HAPS	Han Pijesak,Bl	2.76	345	ePn	Pn	00 14 20.9	+0.1
HAPS				eSn	Sn	00 14 55.7	+1.2
TRUS	Trudelj	2.82	7	ePn	Pn	00 14 22.8	+1.1
TRUS	Trudelj	2.82	7	ePn	Pn	00 14 22.8	+1.1
KUBS	Kucevo	3.25	23	ePn	Pn	00 14 27.7	+0.1
KUBS	Kucevo	3.25	23	ePn	Pn	00 14 27.7	+0.1
FRGS	Fruska Gora	3.73	359	ePn	Pn	00 14 33.3	-0.9
FRGS				eSn	Sn	00 15 18.4	-0.1
BLY	Banja Luka	3.88	330	ePn	Pn	00 14 36.1	-0.1
BLY				eSn	Sn	00 15 22.1	+0.1
BLY	Banja Luka	3.88	330	ePn	Pn	00 14 36.1	-0.1
BLY				eSn	Sn	00 15 22.1	+0.1
UDBI	Udbina	4.35	317	i Pn	Pn	00 14 45.2	+2.5
UDBI				Sn	Sn	00 15 37.2	+3.5
NVLJ	Novalja	4.85	312	ePn	Pn	00 14 50.3	+0.8
NVLJ				Sn	Sn	00 15 48.3	+2.3
CRES	Cresnjev	5.46	325	ePn	Pn	00 14 57.4	-0.5
CRES				eSn	Sn	00 16 00.0	-1.1
CRES	Cresnjev	5.46	325	ePn	Pn	00 14 57.4	-0.5
CRES				eSn	Sn	00 16 00.0	-1.1
CEY	Cerknica	5.88	319	ePn	Pn	00 15 02.7	-0.9
CEY				eSn	Sn	00 16 09.6	-1.6
CEY	Cerknica	5.88	319	ePn	Pn	00 15 02.7	-0.9
CEY				eSn	Sn	00 16 09.6	-1.6

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*IDC **26** 00:31:42.3±1.7, 2°.21S×128°.40E, h0^{km}, mb3.7/3, mb1 4.1/4, mb1mx3.6/45, mbtmp3.9/4, ML4.3/1, Error ellipse: s-maj=141.2km s-min=22.6km az=68.0*

*ISCJB **26** 00:31:47.0±0.7, 2°.62S±0°.05×127°.38E±0°.06, h32^{km}, mb3.8/3, Error ellipse: s-maj=9.0km s-min=6.4km az=149.8*

*DJA **26** 00:31:47.3±0.9, 3°S±3°×12°7E±°, h16^{km}±10^{km}, M3.7/6, MLv3.7/6*

ISC 26 00:31:47.8±0.9**, 2°.68S**±0°.06×**127°.36E**±0°.06**, h32^{km}, n10, σ1^{s}.85**/14**, mb3.8**/3**, Ceram Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NLAI	Namlea	0.61	205	P	Pn	00 32 01.6	+1.3
NLAI				S	Sn	00 32 11.0	+2.0
AAI	Ambon	1.30	140	P	Pb	00 32 12.8	+1.0
SANI	Sanana	1.50	295	P	Pn	00 32 12.5	-0.1
SANI				S	Sn	00 32 29.8	-1.3
MSAI	Masohi	1.70	113	P	Pb	00 32 18.5	-0.1
LBMI	Labuha	2.04	4	P	Pn	00 32 21.3	+1.3
FAKI	Fak Fak	4.89	93	P	Pn	00 32 59.7	+0.4
WRA	Warramunga Arr	18.46	159	P	Pn	00 36 01.3	-0.1
	0.9nm,0.3s,baz=341,slow=12,SNR=28						
WRA				S	Sn	00 39 23.8	-3.0
	0.1nm,0.3s,baz=338,slow=22,SNR=4.4						
ASAR	Alice Springs	21.80	164	P	P	00 36 37.7	+0.3
	1.6nm,0.6s,baz=346,slow=12,SNR=20						
ASAR				S	S	00 40 32.9	-4.1
	0.6nm,0.6s,baz=345,slow=20,SNR=3.3						
MKAR	Makanchi Array	63.19	327	P	P	00 42 12.9	-0.1
	0.6nm,0.7s,baz=134,slow=6.9,SNR=6.1						
KURBB	Kurchatov Arra	67.48	329	P	P	00 42 41.7	+1.1
	0.9nm,0.7s,baz=123,slow=6.8,SNR=6.8						

IDC 26 00:48:54.7±2.9**, 18°.79S×169°.69E, h0^{km}, mb3.7**/2**, mb1 3.9**/3**, mb1mx3.6**/38**, mbtmp3.7**/3**, ML3.5**/1**, MS3.5**/3**, Ms1 3.5**/3**, ms1mx2.9**/42**, Error ellipse: s-maj=97.3km s-min=32.9km az=132.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.46	222	Pn	Pn	00 50 05.6	+1.9
	2.7nm,0.3s,baz=130,slow=9.3,SNR=29						
DZM				Sn	Sn	00 50 54.9	-1.6
	4.0nm,0.3s,baz=127,slow=20,SNR=7.8						
RAO	Raoul Island	15.37	135	LR	LR	00 56 11.0	
	comp=Z,86nm,20.5s,baz=300,slow=28						
WRA	Warramunga Arr	33.33	262	P	P	00 55 35.7	+1.0
	0.4nm,0.5s,baz=96,slow=8.5,SNR=4.9						
ASAR	Alice Springs	33.65	255	P	P	00 55 36.1	-1.3
	1.0nm,0.6s,baz=79,slow=9.1,SNR=10						
KSRS	Korea Array	68.38	325	LR	LR	01 26 07.8	
	comp=Z,59nm,20.8s,baz=276,slow=33						
USRK	Ussuriysk Ar.	71.54	332	LR	LR	01 32 17.5	
	comp=Z,34nm,18.1s,baz=272,slow=36						
GERES	GERESS Array B	144.29	333	PKP	PKPdf	01 08 32.5	-0.4
	0.7nm,0.6s,baz=28,slow=4.4,SNR=6.4						
DAVOX	Davos/Dischmat	147.52	334	PKPbc	PKPbc	01 08 40.2	-0.9
	3.7nm,0.7s,baz=72,slow=9.6,SNR=6.1						

NNC 26 00:52:14.7±5.1**, 37°.09N×70°.44E, h0^{km}, mb3.7, mpv3.4, 7C-2D, Error ellipse: s-maj=41.5km s-min=35.7km az=140.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.78	39	⇓Pn	Pn	00 53 14.7	+0.2
	3.8nm,0.3s						
SFK				⇓Sn	Sn	00 54 02.9	+3.1
	2.9nm,0.3s						
MNAS	Manas	5.62	16	⇑Pn	Pn	00 53 40.5	+0.8
	2.1nm,0.7s						
MNAS				⇑Sn	Sn	00 54 46.5	+1.4
	2.8nm,0.5s						
KK31	Karatay Array	6.01	1	⇑Pn	Pn	00 53 46.6	+1.8
	0.3nm,0.3s,baz=177,slow=12,SNR=15						
KK31				⇑Sn	Sn	00 54 56.0	+1.6
	3.5nm,0.7s,baz=184,slow=22,SNR=8.7						
AAK	Ala-Archa	6.36	28	⇑Pn	Pn	00 53 48.6	-1.2
	2.3nm,0.6s						
AAK				Sn	Sn	00 55 00.1	-3.2
	1.9nm,0.7s						
TKM2	Tokmak 2	7.04	33	⇑Pn	Pn	00 53 56.5	-2.7
	4.2nm,0.7s						
TKM2				⇑Sn	Sn	00 55 20.6	+0.4
	0.5nm,0.6s						

WEL 26 00:55:56.8, 38°S±7°×**18°0W**±°**, h33^{km}, ML3.7**/12**, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.40	266	P	Pn	00 56 20.4	+0.5
MXZ	Matakaoa Point	1.49	276	P	Pn	00 56 21.4	+0.2
MXZ				S	Sn	00 56 39.6	+0.1
PUZ	Puketiti	1.56	257	P	Pn	00 56 22.7	+0.6
PUZ				S	Sn	00 56 42.3	+1.1
PKGZ	Pakihiroa	1.67	264	P	Pn	00 56 24.1	+0.4
PKGZ				S	Sn	00 56 44.2	+0.1
CNGZ	Carnagh Statio	1.73	243	P	Pb	00 56 26.2	-1.6
TWGZ	Tauwhareparae	1.79	255	P	Pn	00 56 26.7	+1.3
TWGZ				S	Sb	00 56 49.5	-1.5
HAZ	Te Kaha	1.90	268	P	Pn	00 56 27.9	+1.1
TKGZ	Te Karaka	1.97	248	P	Pn	00 56 29.2	+1.4
TKGZ				S	Sn	00 56 53.5	+2.2
RUGZ	Raukumara Rang	1.99	262	P	Pn	00 56 28.7	+0.5
RIGZ	Rimuhau	2.13	242	P	Pn	00 56 30.9	+0.8
RIGZ				S	Sn	00 56 57.4	+1.9
PRGZ	Paritu Road	2.16	236	P	Pn	00 56 32.4	+1.9
PRGZ				S	Sb	00 56 59.1	-2.6
MWZ	Matawai	2.17	253	P	Pn	00 56 31.1	+0.4
MWZ				S	Sn	00 56 57.4	+0.9
MHGZ	Mahia Peninsul	2.28	231	P	Pn	00 56 33.5	+1.5
SNGZ	Shannon Statio	2.47	244	P	Pn	00 56 36.2	+1.5
URZ	Urewera	2.48	257	P	Pn	00 56 33.4	-1.4
URZ				S	Sn	00 57 05.3	+1.5
RTZ	Ruatahuna	2.67	250	P	Pn	00 56 38.9	+1.4
RTZ				S	Sn	00 57 10.8	+2.1
MTHZ	Maungataniwha	2.85	246	P	Pn	00 56 41.4	+1.4
MTHZ				S	Sn	00 57 15.0	+1.8
ARHZ	Aropaoanui	2.93	237	P	Pn	00 56 43.3	+2.3
MCHZ	McNeill Hill	3.22	237	P	Pn	00 56 46.5	+1.5
BKZ	Black Stump Fm	3.23	242	P	Pn	00 56 46.3	+1.2
KAHZ	Kahuranaki	3.30	230	P	Pn	00 56 47.2	+1.1
KWHZ	Kaweka Forest	3.39	239	P	Pn	00 56 48.5	+1.1
KRHZ	Kereru	3.54	236	P	Pn	00 56 50.0	+0.6
BHHZ	Black Hill Sta	3.67	240	P	Pn	00 56 52.3	+1.0
PNHZ	Pukenui	3.79	234	P	Pn	00 56 53.6	+0.6
MOVZ	Moawhango	3.85	243	P	Pn	00 56 56.7	+3.0
TSZ	Takapari Road	4.03	233	P	Pn	00 56 56.4	+0.3
MKAZ	Moumakai	4.04	277	P	Pn	00 56 56.5	+0.3
MRZ	Mangatainoka R	4.62	229	P	Pn	00 57 04.2	0.0

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*ISCJB **26** 01:06:30.2±0.2, 38°.26N±0°.01×74°.00E±0°.01, h131^{km}±2^{km}, mb5.2/423, Error ellipse: s-maj=2.3km s-min=1.8km az=32.1*

*NEIC **26** 01:06:31.8±0.4, 38°.31N×74°.01E, h131^{km}±3^{km}, mb5.4/236, MW5.2, Error ellipse: s-maj=2.8km s-min=2.1km az=187.0, Moment Tensor Solution. s31 Moment tensor: Scale 10^{16}Nm; M_{rr}-2.26; $M_{\theta\theta}$1.12; $M_{\phi\phi}$1.13; $M_{r\theta}$-7.75; $M_{\theta\phi}$-0.81; $M_{\phi r}$2.10; Best double couple: $M_0$8.30000×10^{16} NP1: ϕ_s322.00000°, δ8.00000°, λ-54.00000°. NP2: ϕ_s106.00000°, δ83.00000°, λ-95.00000°. Principal axes: T 7.9300, Plg38.0000°, Azm201.0000°; N 0.7000, Plg5.0000°, Azm107.0000°; P -8.6300, Plg51.0000°, Azm11.0000°;*

*GCMT **26** 01:06:31.8±0.1, 38°.27N×73°.93E, h158^{km}±1^{km}, MW5.3/126, Moment Tensor Solution. s83,c124; s126,c243; Duration: 1^{s}.1 Moment tensor: Scale 10^{17} Nm; M_{rr}-0.52±.02; $M_{\theta\theta}$0.21±.02; $M_{\phi\phi}$0.31±.02; $M_{r\theta}$-0.92±.01; $M_{\theta\phi}$-0.34±.02; $M_{\phi r}$0.32±.01; Best double couple: $M_0$1.12000×10^{17} NP1: ϕ_s114.00000°, δ76.00000°, λ-104.00000°. NP2: ϕ_s341.00000°, δ20.00000°, λ-44.00000°. Principal axes: T 1.0950, Plg30.0000°, Azm215.0000°; N 0.0500, Plg14.0000°, Azm117.0000°; P -1.1450, Plg56.0000°, Azm5.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*MOS **26** 01:06:31.3±1.0, 38°.34N×74°.04E, h142^{km}, mb5.4/149 Error ellipse: s-maj=4.4km s-min=2.8km az=127.4*

*BJI **26** 01:06:31.5, 38°.50N×74°.25E, h120^{km}, mb5.5/70, mB5.1/38*

*IDC **26** 01:06:32.8±0.6, 38°.24N×74°.04E, h144^{km}±4^{km}, mb4.9/45, mb1 5.0/49, mb1mx4.8/75, mbtmp5.4/49, MS3.8/23, Ms1 3.8/23, ms1mx3.5/63, Error ellipse: s-maj=8.9km s-min=6.5km az=7.0*

*NNC **26** 01:06:34.0±2.0, 38°.46N×73°.63E, h145^{km}±13^{km}, mb4.5, mpv5.3, Error ellipse: s-maj=19.0km s-min=11.5km az=170.0*

ISC 26 01:06:31.9±0.2**, 38°.31N**±0°.03×**73°.96E**±0°.02**, h137^{km}**±1^{km}**, h137^{km}:pP-P, n1230, σ1^{s}.60**/1434**, mb5.3**/427**, 72C-102D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	1.73	348	⇑P	Pn	01 07 04.0	+0.6
	5µm,0.4s						
SFK				⇑S	Sn	01 07 26.9	-0.7
	8µm,0.3s						
SFK	Sufi-Kurgan	1.73	348	PN	Pn	01 07 04.0	+0.6
SFK				S	Sn	01 07 26.8	-0.7
SFK				pmax	pmax		
	comp=Z,5µm,0.4s						
SFK				smax	smax		
	comp=N,8µm,0.3s						
KSH	Kashi	1.98	52	Pg	Pn	01 07 01.5	-4.6
KSH				Sg	Sn	01 07 22.0	-10
KSH				smax	smax		
	comp=N,204µm,0.5s						
KSH				smax	smax		
	comp=E,292µm,0.5s						
AML	Almayashu	3.82	357	P	Pn	01 07 30.0	+0.2
	SNR=1271						
KZA	Kyzart	3.89	14	P	Pn	01 07 30.9	+0.2
	SNR=403						
UCH	Uchtor	3.93	6	P	Pn	01 07 32.0	+0.7
	SNR=64						
ULHL	Ulahol	4.30	23	P	Pn	01 07 36.2	+0.3
	SNR=184						
MNAS	Manas	4.32	346	⇑P	Pn	01 07 36.6	+0.5
	comp=E,235nm,0.5s						
MNAS				⇓S	Sn	01 08 23.5	-2.5
	comp=E,3µm,0.5s						
MNAS	Manas	4.32	346	PN	Pn	01 07 36.6	+0.5
MNAS				pmax	pmax		
	comp=Z,235nm,0.5s						
AAK	Ala-Archa	4.34	5	P	Pn	01 07 37.3	+0.9
	comp=Z,59nm,0.3s,baz=180,slow=13,SNR=94						
AAK				S	Sn	01 08 26.0	-0.6
	comp=Z,128nm,0.3s,baz=305,slow=12,SNR=14						
AAK	Ala-Archa	4.34	5	⇑P	Pn	01 07 37.1	+0.7
	comp=Z,127nm,0.7s						
AAK				⇓S	Sn	01 08 23.6	-3.0
	comp=Z,3µm,1.2s						
AAK	Ala-Archa	4.34	5	P	Pn	01 07 37.3	+0.9
	SNR=26						
AAK	Ala-Archa	4.34	5	ePn	Pn	01 07 37.3	+0.9
AAK				eSn	Sn	01 08 19.4	-7.1
AAK	Ala-Archa	4.34	5	P	Pn	01 07 37.4	+1.0
	SNR=181						
AAK	Ala-Archa	4.34	5	i P	Pn	01 07 37.2	+0.7
	SNR=49						
AAK	Ala-Archa	4.34	5	c iPN	Pn	01 07 36.9	+0.5
EKS2	Erkin-Say	4.35	358	P	Pn	01 07 37.3	+0.8
	SNR=220						
KBK	Karagaybulak	4.40	10	P	Pn	01 07 38.3	+1.0
	SNR=85						
FRU1	Bishkek	4.52	6	ePn	Pn	01 07 40.2	+1.4
FRU1				eSn	Sn	01 08 27.8	-3.0
FRU1	Bishkek	4.52	6	ePN	Pn	01 07 40.2	+1.4
FRU	Bishkek	4.54	6	⇑ePN	Pn	01 07 39.0	0.0
FRU				i		01 08 39.0	
NIL	Nilore	4.69	187	ePn	Pn	01 07 42.2	+1.2
NIL				eSn	Sn	01 08 34.0	-0.7
NIL	Nilore	4.69	187	ePN	Pn	01 07 42.2	+1.2
TAS	Tashkent	4.69	311	⇓P	Pn	01 07 40.6	-0.4
	comp=Z,124nm,0.4s						
TAS				⇓S	Sn	01 08 32.3	-2.5
	comp=Z,1µm,0.3s						
TAS	Tashkent	4.69	311	PN	Pn	01 07 40.6	-0.4
TAS				pmax	pmax		
	comp=Z,124nm,0.4s						
CHMS	Chumysh	4.72	7	P	Pn	01 07 42.0	+0.6
	SNR=285						
TKM2	Tokmak 2	4.77	15	⇑P	Pn	01 07 42.9	+0.7
	comp=Z,477nm,0.7s						
TKM2				⇓S	Sn	01 08 37.5	+0.7
	comp=Z,3µm,1.1s						
TKM2	Tokmak 2	4.77	15	P	Pn	01 07 42.8	+0.7
	SNR=169						
TKM2	Tokmak 2	4.77	15	PN	Pn	01 07 42.9	+0.7
TKM2				pmax	pmax		
	comp=Z,477nm,0.7s						
CEP	Cherat	4.78	201	P	Pn	01 07 43.0	+0.7
USP	Ospenovka	4.97	5	P	Pn	01 07 44.9	+0.3
	SNR=28						
PRZ	Przheval'sk	5.37	38	ePn	Pn	01 07 50.5	+0.3
PRZ				eSn	Sn	01 08 43.6	-7.5
PRZ	Przheval'sk	5.37	38	ePN	Pn	01 07 50.5	+0.3
KNDC	Almaty	5.40	24	⇑P	Pn	01 07 51.2	+0.7
	comp=Z,981nm,1.2s						
KNDC				⇑S	Sn	01 08 54.3	+2.5
	comp=Z,5µm,1.4s						
KK31	Karatay Array	5.46	332	⇑P	Pn	01 07 51.1	-0.1
	comp=Z,72nm,0.3s,baz=145,slow=13,SNR=3892						
KK31				⇓S	Sn	01 08 49.3	-3.7
	comp=Z,661nm,0.4s,baz=154,slow=25,SNR=16						
KK31	Karatay Array	5.46	332	ePn	Pn	01 07 50.5	-0.7
KK31				eSn	Sn	01 08 49.0	-4.0
KK31	Karatay Array	5.46	332	ePN	Pn	01 07 51.1	-0.1
KK31				pmax	pmax		
	comp=Z,72nm,0.3s						
KKAR	Karatay Array	5.46	332	ePn	Pn	01 07 50.5	-0.7
KKAR				eSn	Sn	01 08 49.5	-3.5
KKAR	Karatay Array	5.46	332	ePN	Pn	01 07 50.5	-0.7
KBL	Kabul	5.47	228	ePn	Pn	01 07 51.6	0.0
KBL				eSn	Sn	01 08 44.3	-9.3
KBL	Kabul	5.47	228	ePN	Pn	01 07 51.6	0.0
THW	Thamme Wali	5.79	199	P	Pn	01 07 55.5	-0.3
DHRM	DHARAMSHALA	6.34	162	eP	Pn	01 08 02.9	-0.5
DHRM				eS	Sn	01 09 09.6	-5.1
DHRM				IAML		01 09 39.4	
	comp=N,4µm,0.6s						
DHRM				IAML		01 09 41.3	
	comp=E,4µm,0.4s						
SARP	Sargodha	6.46	190	P	Pn	01 08 03.5	-1.3
PDGK	Podgornoye	6.53	38	⇑P	Pn	01 08 05.0	-0.7
	comp=E,564nm,1.1s						
PDGK				⇑S	Sn	01 09 26.8	+7.8
	comp=E,3µm,1.0s						
PDGK	Podgornoye	6.53	38	PN	Pn	01 08 05.0	-0.7
PDGK				S	Sn	01 09 26.8	+7.8
PDGK				pmax	pmax		
	comp=Z,565nm,1.1s						
PDGK				smax	smax		
	comp=N,3µm,1.0s						
SMLA	Simla	7.64	159	eP	Pn	01 08 18.9	-1.5
SMLA				eS	Sn	01 09 37.0	-8.5
SMLA				IAML		01 09 44.3	
	comp=N,8µm,0.4s						
DDI	Dehra Dun	8.66	156	eP	Pn	01 08 32.8	-1.5
KKR	Kurukshetra	8.66	163	eP	Pn	01 08 32.9	-1.4
KKR				eS	Sn	01 10 00.2	-10
KKR				IAML		01 10 06.0	
JOSI	Joshimath	9.01	148	eP	Pn	01 08 36.5	-2.7
JOSI				eS	Sn	01 10 09.6	-10
BHGR	Bahadurgarh	9.91	165	eP	Pn	01 08 49.5	-1.5

BHGR				*e*S	**Sn**	**01 10 31.8**	**-8.8**
NDI	**New Delhi**	**9.98**	**163**	*e*P	**Pn**	**01 08 50.0**	**-1.9**
NDI				*e*S	Sn	01 10 32.0	-10
KHET	**Khetri**	**10.33**	**171**	*e*P	**Pn**	**01 08 55.0**	**-1.6**
KHET				*e*S	Sn	01 10 38.1	-12
KHET				IAML		01 10 48.5	
	comp=E,1µm,0.9s						
MAKZ	**Makanchi**	**10.34**	**32**	*e*Pn	**Pn**	**01 08 56.0**	**-0.6**
MAKZ				*e*Sn	**Sn**	**01 10 47.0**	**-3.7**
MAKZ	**Makanchi**	**10.34**	**32**	*e*P	**Pn**	**01 08 56.0**	**-0.6**
MAKZ				*e*		01 10 47.0	
KUDL	**Kundal**	**10.36**	**167**	*e*P	**Pn**	**01 08 55.7**	**-1.2**
KUDL				*e*x	x	01 10 40.6	
KUDL				IAML		01 10 45.0	
	comp=N,1µm,0.7s						
KUDL				IAML		01 10 45.5	
	comp=E,2µm,0.4s						
MK01	**Makanchi Array**	**10.45**	**33**	*e*Pn	**Pn**	**01 08 56.8**	**-1.3**
MK31	**Makanchi Array**	**10.46**	**33**	*e*Pn	**Pn**	**01 08 57.8**	**-0.4**
MK31	**Makanchi Array**	**10.46**	**33**	*i* P	**Pn**	**01 08 57.5**	**-0.7**
MK31				pmax	pmax		
	comp=Z,84nm,0.9s						
MK32	**Makanchi Array**	**10.46**	**33**	*e*Pn	**Pn**	**01 08 57.4**	**-0.8**
MKAR	**Makanchi Array**	**10.46**	**33**	P	**Pn**	**01 08 57.4**	**-0.8**
	comp=Z,2.2nm,0.3s,baz=212,slow=13,SNR=242						
MKAR	**Makanchi Array**	**10.46**	**33**	*e*Pn	**Pn**	**01 08 57.8**	**-0.4**
MKAR	**Makanchi Array**	**10.46**	**33**	*e*P	**Pn**	**01 08 57.8**	**-0.4**
WMQ	**Urumqi**	**11.73**	**58**	P	**Pn**	**01 09 13.5**	**-1.6**
WMQ				S	**Sn**	**01 11 19.0**	**-5.4**
WMQ				pmax	pmax		
	comp=Z,160nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,150nm,3.8s						
WMQ				LR	LR		
	comp=Z,6µm,4.0s						
WMQ				LR	LR		
	comp=Z,6µm,3.9s						
WMQ				LR	LR		
	comp=Z,2µm,19.1s						
GEYT	**Alibeck**	**12.49**	**273**	P	**Pn**	**01 09 20.3**	**-4.7**
	comp=Z,13nm,0.3s,baz=199,slow=23,SNR=112						
GEYT				S	Sn	01 11 31.8	-11
	comp=Z,11nm,0.3s,baz=99,slow=24,SNR=7.6						
GEYT				LR	LR	01 15 06.3	
	comp=Z,459nm,19.5s,baz=210,slow=41						
GEYT				ScP	**ScP**	**01 18 11.9**	**-1.0**
	baz=266,slow=10,SNR=4.5						
GYA0B	**ALIBECK ARRAY**	**12.49**	**273**	⇑P	Pn	01 09 20.2	-4.8
	comp=Z,66nm,0.8s						
GYA0B				⇑S	**Sn**	**01 11 35.1**	**-7.6**
	comp=Z,355nm,0.7s						
GYA0B	**ALIBECK ARRAY**	**12.49**	**273**	*e*Pn	**Pn**	**01 09 21.5**	**-3.4**
GYA0B				*e*Sn	Sn	01 11 32.4	-10
PYUN	**Piuthan**	**12.68**	**141**	*e*P	**Pn**	**01 09 23.9**	**-3.7**
KURBB	**Kurchatov Arra**	**12.73**	**13**	P	**Pn**	**01 09 25.4**	**-2.5**
	comp=Z,1.2nm,0.3s,baz=202,slow=12,SNR=152						
KURK	**Kurchatov**	**12.83**	**13**	*e*Pn	**Pn**	**01 09 26.8**	**-2.5**
KURK				*e*Sn	**Sn**	**01 11 42.5**	**-8.2**
KURK	**Kurchatov**	**12.83**	**13**	P	**Pn**	**01 09 26.9**	**-2.4**
	SNR=400						
KURK	**Kurchatov**	**12.83**	**13**	⇑*i*P	**Pn**	**01 09 26.9**	**-2.4**
KURK				pmax	pmax		
	comp=Z,141nm,1.3s						
DANN	**Dangsing**	**12.87**	**138**	*e*P	**Pn**	**01 09 26.5**	**-3.7**
	comp=Z,720nm,0.4s						
DANN				*e*S	Sn	01 11 38.5	-14
KOLN	**Koldanda**	**13.25**	**140**	*e*P	**Pn**	**01 09 31.6**	**-3.4**
	comp=Z,518nm,0.4s						
KOLN				*e*S	Sn	01 11 49.0	-13
GKN	**Gorkha**	**13.61**	**136**	*e*P	**Pn**	**01 09 36.3**	**-3.3**
	comp=Z,794nm,0.4s						
GKN				*e*S	Sn	01 11 55.6	-15
KKN	**Kakani**	**14.14**	**135**	*e*P	**Pn**	**01 09 42.4**	**-3.9**
DMN	**Daman**	**14.18**	**136**	*e*P	**Pn**	**01 09 43.6**	**-3.3**
PKIN	**Phulchoki**	**14.37**	**135**	*e*P	**Pn**	**01 09 46.2**	**-3.1**
GUN	**Gumba**	**14.38**	**133**	*e*P	**Pn**	**01 09 46.0**	**-3.6**
JIRN	**Jiri**	**14.75**	**132**	*e*P	**Pn**	**01 09 51.3**	**-3.0**
AB31	**Akbulak array**	**14.88**	**322**	⇑P	**Pn**	**01 09 53.3**	**-1.9**
	comp=Z,40nm,0.5s,baz=136,slow=11,SNR=876						
AB31				⇑S	**Sn**	**01 12 31.8**	**-8.2**
	comp=Z,33nm,0.6s,baz=143,slow=21,SNR=9.8						
AB31	**Akbulak array**	**14.88**	**322**	P	**Pn**	**01 09 52.7**	**-2.5**
AB31				S	Sn	01 12 29.2	-11
AB31				pmax	pmax		
	comp=Z,40nm,0.5s						
AB31				smax	smax		
	comp=N,33nm,0.6s						
ABKAR	**Akbulak array**	**14.88**	**322**	*e*Pn	**Pn**	**01 09 53.0**	**-2.3**
ABKAR				*e*Sn	Sn	01 12 25.8	-14
BVA0	**Borovoye Array**	**14.92**	**352**	*i* P	**Pn**	**01 09 53.3**	**-2.5**
BVA0				pmax	pmax		
	comp=Z,638nm,1.0s						
BVAR	**Borovoye Array**	**14.92**	**352**	P	**Pn**	**01 09 54.0**	**-1.8**
	comp=Z,3.3nm,0.3s,baz=164,slow=12,SNR=143						
BVAR				LR	LR	01 15 46.1	
	comp=Z,388nm,21.0s,baz=170,slow=37						
BVAR	**Borovoye Array**	**14.92**	**352**	P	**Pn**	**01 09 54.0**	**-1.8**
BVAR				pmax	pmax		
	comp=Z,3.0nm,0.3s						
BVAR				MLR	MLR		
	comp=Z,388nm,21.0s						
DGZ	**Jazzator, Alta**	**14.92**	**36**	*i* P	**Pn**	**01 09 54.4**	**-1.6**
BRVK	**Borovoye**	**14.97**	**351**	*e*Pn	**Pn**	**01 09 54.6**	**-1.7**
BRVK	**Borovoye**	**14.97**	**351**	P	**Pn**	**01 09 54.9**	**-1.4**
	SNR=506						
BRVK	**Borovoye**	**14.97**	**351**	*d i*P	**Pn**	**01 09 54.6**	**-1.7**
BRVK				*i* S	**Sn**	**01 12 38.2**	**-3.9**
BHPL	**Bhopal**	**15.31**	**168**	*e*P	**Pn**	**01 09 59.3**	**-1.6**
BHPL				IAmb	IAmb	01 10 00.4	
	comp=Z,411nm,1.3s						
BHJ	**Bhuj**	**15.46**	**195**	*e*P	**Pn**	**01 10 00.6**	**-2.0**
RAMN	**Ramite**	**15.53**	**133**	*e*P	**Pn**	**01 09 59.5**	**-4.3**
RAMN				*e*S	Sn	01 12 40.5	-16
TAPN	**Taplejung**	**15.89**	**129**	*e*P	**Pn**	**01 10 05.4**	**-2.9**
ODAN	**Odare**	**16.06**	**131**	*e*P	**Pn**	**01 10 06.9**	**-3.4**
GTK	**Tadong**	**16.46**	**127**	*e*P	**P**	**01 10 15.3**	**0.0**
AKTO	**Aktyubinsk**	**16.59**	**322**	P	**Pn**	**01 10 15.5**	**-0.9**
	comp=Z,28nm,0.3s,baz=133,slow=12,SNR=140						
AKTO				S	**Sn**	**01 13 18.3**	**-2.9**
	comp=Z,3.1nm,0.3s,baz=359,slow=18,SNR=3.7						
AKTO	**Aktyubinsk**	**16.59**	**322**	⇓P	**Pn**	**01 10 15.7**	**-0.7**
	comp=Z,430nm,1.1s						
AKTO				⇑S	**Sn**	**01 13 15.3**	**-5.9**
	comp=Z,91nm,1.1s						
LSA	**Lhasa**	**16.62**	**116**	P	**P**	**01 10 17.8**	**+0.3**
LSA	**Lhasa**	**16.62**	**116**	*e*Pn	**P**	**01 10 18.0**	**+0.5**
LSA				*e*S	**Sn**	**01 13 20.4**	**-2.4**
LSA	**Lhasa**	**16.62**	**116**	*i* P	**P**	**01 10 17.6**	**+0.1**
	SNR=67						
LSA	**Lhasa**	**16.62**	**116**	P	**P**	**01 10 18.2**	**+0.7**
LSA				pmax	pmax		
	comp=Z,203nm,0.6s						
ZAA0	**Zalesovo Array**	**17.32**	**22**	*e*P	**P**	**01 10 24.3**	**-0.1**
	comp=Z,235nm,0.7s						
ZAA0				*e*S	**S**	**01 13 30.5**	**-7.2**
ZALV	**Zalesovo Beam**	**17.32**	**22**	P	**P**	**01 10 23.3**	**-1.1**
	comp=Z,48nm,0.3s,baz=211,slow=10,SNR=458						
ZALV	**Zalesovo Beam**	**17.32**	**22**	*e*P	**P**	**01 10 22.9**	**-1.5**
ZALV				*e*S	**S**	**01 13 32.8**	**-4.9**
ZAA1	**Zalesovo Array**	**17.32**	**22**	*e*P	**P**	**01 10 23.3**	**-1.1**
NGP	**Nagpur**	**17.66**	**164**	*e*P	**P**	**01 10 28.1**	**-0.3**
NGP				*e*x	x	01 10 58.1	
	comp=Z,237nm,1.7s						
NGP				*e*x	x	01 13 31.2	
BOK	**Bokaro**	**17.69**	**141**	*e*P	**P**	**01 10 26.6**	**-2.2**
BOK				IAmb	IAmb	01 10 29.3	
	comp=Z,104nm,0.6s						
NVS	**Novosibirsk**	**17.69**	**18**	*e*P	**Pn**	**01 10 29.1**	**-0.4**
NVS				*e*		01 13 41.0	
HVS	**Khovu-Aksy**	**18.93**	**41**	*c i*P	**P**	**01 10 42.8**	**+0.7**
GUWA	**GUWAHATI**	**19.22**	**124**	*e*P	**P**	**01 10 45.8**	**+0.4**
GUWA				IAmb	IAmb	01 10 47.2	
	comp=Z,378nm,1.0s						
BANOM	**Banah**	**19.36**	**236**	P	**P**	**01 10 46.7**	**-0.3**
	SNR=20						
BANOM	**Banah**	**19.36**	**236**	*i* P	**P**	**01 10 45.0**	**-2.0**
	SNR=76						
SHME	**Shamm**	**19.38**	**236**	*i* P	**P**	**01 10 45.6**	**-1.5**
	SNR=58						
TEZP	**TEZPUR**	**19.67**	**121**	*e*P	**P**	**01 10 50.5**	**+0.2**
POO	**Poona**	**19.71**	**180**	*e*P	**P**	**01 10 51.5**	**+0.7**
SHL	**Shillong**	**19.77**	**125**	*e*P	**P**	**01 10 51.4**	**-0.2**
SHL				⇓*i*P	**Pn**	**01 10 52.0**	**-2.5**
SHL				*i* x	x	01 14 23.5	
SHL	**Shillong**	**19.77**	**125**	P	**P**	**01 10 50.9**	**-0.7**
SHL				pmax	pmax		
	comp=Z,324nm,1.1s						
MDH	**Madha**	**19.80**	**234**	*i* P	**P**	**01 10 48.9**	**-2.8**
	SNR=13						
ZIRO	**ZIRO**	**19.82**	**117**	*e*P	**P**	**01 10 53.5**	**+1.4**
MSFE	**Esma-Masafi**	**19.84**	**235**	*i* P	**P**	**01 10 51.1**	**-1.1**
	SNR=37						
WSAR	**Wadi Sarin**	**19.94**	**225**	P	**P**	**01 10 53.6**	**+0.4**
	comp=Z,16nm,0.3s,baz=71,slow=6.7,SNR=118						
ITAN	**ITANAGAR**	**19.97**	**118**	*e*P	**P**	**01 10 54.7**	**+1.2**
BIDO	**Bidbid**	**20.00**	**227**	P	**P**	**01 10 55.0**	**+1.1**
	SNR=8.8						
UMQ	**Umm Al-Quwin**	**20.05**	**236**	*i* P	**P**	**01 10 53.9**	**-0.4**
	SNR=11						
UOSS	**Minazif**	**20.11**	**234**	*e*P	**P**	**01 10 52.5**	**-2.5**
	comp=Z,98nm,0.8s						
UOSS	**Minazif**	**20.11**	**234**	*i* P	**P**	**01 10 52.3**	**-2.8**
	SNR=11						
GTA	**Gaotai**	**20.14**	**79**	⇓P	**P**	**01 10 56.8**	**+1.3**
GTA				pP	pP	01 11 17.0	-2.9
GTA				sP	sP	01 11 32.3	-4.8
GTA				pmax	pmax		
	comp=Z,220nm,1.0s						
GTA				pmax	pmax		
	comp=Z,620nm,5.3s						
GTA				LR	LR		
	comp=Z,23nm,8.8s						
GTA				LR	LR		
	comp=Z,500nm,8.9s						
HATD	**Hatta, Dubai**	**20.24**	**234**	P	**P**	**01 10 57.0**	**+0.5**
	SNR=20						
HATD	**Hatta, Dubai**	**20.24**	**234**	*i* P	**P**	**01 10 54.0**	**-2.4**
	SNR=25						
WBK	**Wadi Bani Khal**	**20.25**	**224**	P	Pn	01 10 59.0	-1.0
	SNR=16						
AKT	**Akhty**	**20.35**	**287**	⇑*i*P	**P**	**01 10 58.7**	**+1.1**
AKT				*e**PP	**pP**	**01 11 26.1**	**+4.0**
AKT				*e**SP	**sP**	**01 11 39.1**	**-0.2**
AKT				*e*S	**S**	**01 14 36.9**	**-1.3**
AKT				*e*		01 15 02.2	
AKT				*e**SS	**sS**	**01 15 15.2**	**-3.8**
AKT				*e*		01 22 15.0	
AKT				pmax	pmax		
	comp=Z,45nm,0.6s						
ASHO	**Ashiyiah**	**20.39**	**233**	P	**P**	**01 10 58.7**	**+0.6**
	SNR=60						
ASHO	**Ashiyiah**	**20.39**	**233**	*i* P	**P**	**01 10 56.9**	**-1.2**
	SNR=20						
SMDO	**Samad**	**20.41**	**226**	P	**P**	**01 10 59.3**	**+0.9**
	SNR=18						
NAZ	**Nazwa, Dubai**	**20.42**	**235**	P	**P**	**01 10 58.0**	**-0.4**
	SNR=27						
NAZ	**Nazwa, Dubai**	**20.42**	**235**	*i* P	**P**	**01 10 57.1**	**-1.3**
	SNR=15						
HOQ	**Hoqain**	**20.43**	**229**	P	**P**	**01 11 00.0**	**+1.5**
	SNR=9.9						
SVE	**Sverdlovsk**	**20.52**	**339**	*c i*P	**P**	**01 10 59.6**	**+0.5**
SVE				*e*S	**S**	**01 14 39.7**	**-1.3**
SVE				pmax	pmax		
	comp=Z,373nm,1.2s						
MAK	**Makhachkala**	**20.57**	**291**	*e*P	**P**	**01 10 59.5**	**-0.3**
MAK				*e**PP	**pP**	**01 11 23.2**	**-1.2**
MAK				*e**SP	**sP**	**01 11 41.8**	**+0.3**
MAK				*e*S	**S**	**01 14 44.5**	**+2.2**
MAK				*e**SS	**sS**	**01 15 19.2**	**-4.0**
MAK				pmax	pmax		
	comp=Z,202nm,1.5s						
MAK				MLR	MLR		
	comp=Z,401nm,16.0s						
JORH	**JORHAT**	**20.59**	**118**	*e*P	**P**	**01 11 01.5**	**+1.4**
AGT	**Agartala**	**20.59**	**129**	*e*P	**P**	**01 11 01.9**	**+1.8**
SEKA	**Sheki**	**20.75**	**286**	P	**P**	**01 11 02.2**	**+0.4**
ARU	**Arti**	**20.82**	**335**	P	**P**	**01 11 02.8**	**+0.4**
	comp=Z,134nm,0.7s,baz=124,slow=6.6,SNR=249						
ARU	**Arti**	**20.82**	**335**	*e*P	**P**	**01 11 02.6**	**+0.2**
	comp=Z,407nm,1.1s						
ARU	**Arti**	**20.82**	**335**	*d i*P	**P**	**01 11 02.7**	**+0.4**
ARU						01 11 35.8	
ARU				S	**S**	**01 14 48.8**	**+1.9**
ARU				pmax	pmax		
	comp=Z,397nm,1.0s						
MNGR	**Mingechevir, A**	**20.84**	**285**	P	**P**	**01 11 03.6**	**+0.8**
ASUD	**Al Ashush, Dub**	**20.89**	**235**	P	Pn	01 11 06.0	-1.5
	SNR=8.9						
ASUD	**Al Ashush, Dub**	**20.89**	**235**	*i* P	**P**	**01 11 02.4**	**-1.0**
	SNR=14						
SILR	**SILCHAR**	**20.92**	**125**	*e*P	**P**	**01 11 05.2**	**+1.5**
ALNE	**Al Ain**	**21.03**	**233**	*i* P	**P**	**01 11 03.7**	**-1.3**
	SNR=32						
MOKO	**MOKOCHONG**	**21.04**	**119**	*e*P	**P**	**01 11 05.8**	**+0.7**
ARQ	**Araqi**	**21.09**	**230**	P	**P**	**01 11 10.0**	**+4.4**
	SNR=16						
BSY	**Bisya**	**21.14**	**228**	P	**P**	**01 11 12.0**	**+5.8**
	SNR=12						
AJN	**Ajban**	**21.16**	**235**	*i* P	**P**	**01 11 04.7**	**-1.6**
	SNR=5.9						
ZKTA	**Zakatala**	**21.18**	**288**	P	**P**	**01 11 07.0**	**+0.6**
HYB	**Hyderabad**	**21.20**	**168**	⇑*i*P	**P**	**01 11 06.5**	**-0.3**
HYB				*e*S	**S**	**01 14 57.0**	**+2.2**
HYB	**Hyderabad**	**21.20**	**168**	*e*P	**P**	**01 11 07.0**	**+0.2**
LKP	**Lekhapani**	**21.35**	**114**	*e*P	**P**	**01 11 09.2**	**+0.9**
GANJ	**Ganja**	**21.43**	**285**	P	**P**	**01 11 09.6**	**+0.5**
DDFL	**Dedoflistskaro**	**21.56**	**287**	P	**P**	**01 11 14.3**	**+3.8**
BRDH	**Bariadhala**	**21.73**	**131**	P	**P**	**01 11 12.4**	**0.0**
	comp=Z,255nm,0.6s,baz=80,slow=2.7,SNR=8.3						
GROC	**Groznyy**	**21.84**	**292**	*e*P	**P**	**01 11 13.8**	**+0.5**
GROC				*e*S	**S**	**01 15 06.8**	**+1.2**
GROC				pmax	pmax		
	comp=Z,231nm,1.2s						
VIS	**Vishakhapatnam**	**22.09**	**156**	*i* P	**P**	**01 11 15.9**	**-0.2**
VIS				*i* x	x	01 15 16.1	
DGRG	**David-gareji**	**22.12**	**287**	P	**P**	**01 11 18.5**	**+2.2**
DGRG	**David-gareji**	**22.12**	**287**	*e*P	**P**	**01 11 18.5**	**+2.2**
NAX	**Nakhchivan**	**22.19**	**281**	P	**P**	**01 11 19.0**	**+1.9**
TBLG	**Delisi**	**22.59**	**288**	P	**P**	**01 11 23.3**	**+2.4**
TBLG	**Delisi**	**22.59**	**288**	*e*P	**P**	**01 11 23.2**	**+2.4**
	comp=Z,48nm,1.0s						
TBLG	**Delisi**	**22.59**	**288**	*e*P	**P**	**01 11 23.3**	**+2.4**
DUS	**Dusheti**	**22.61**	**289**	P	**P**	**01 11 24.3**	**+3.1**
DUS	**Dusheti**	**22.61**	**289**	*e*P	**P**	**01 11 24.3**	**+3.1**
GNI	**Garni**	**22.67**	**284**	P	**P**	**01 11 23.9**	**+2.1**
	comp=Z,22nm,0.7s,baz=161,slow=3.6,SNR=28						
GNI	**Garni**	**22.67**	**284**	P	**P**	**01 11 25.5**	**+3.6**
	SNR=22						
GNI	**Garni**	**22.67**	**284**	*i* P	**P**	**01 11 22.8**	**+0.9**
	SNR=23						
GNI	**Garni**	**22.67**	**284**	*d i*P	**P**	**01 11 24.6**	**+2.8**
GNI				pmax	pmax		
	comp=Z,141nm,1.1s						
SAIH	**SAIHA**	**22.69**	**129**	*e*P	**P**	**01 11 22.7**	**+0.6**
MOY	**Mondy**	**23.16**	**46**	*e*P	**P**	**01 11 28.3**	**+2.1**
MOY				pmax	pmax		
	comp=Z,453nm,2.3s						
ZEI	**Tsey**	**23.21**	**291**	*e*P	**P**	**01 11 26.1**	**-0.8**
ZEI				pmax	pmax		
	comp=Z,20nm,0.5s						
NCK	**Nalchik**	**23.45**	**292**	⇓*i*P	**P**	**01 11 30.0**	**+1.1**
NCK				pmax	pmax		
	comp=Z,44nm,0.6s						
BGD	**Bogdanovka**	**23.46**	**287**	P	**P**	**01 11 32.4**	**+3.2**
AKH	**Akhalkalaki**	**23.53**	**287**	P	**P**	**01 11 33.7**	**+3.8**
AKH	**Akhalkalaki**	**23.53**	**287**	*e*P	**P**	**01 11 33.2**	**+3.4**
	comp=Z,97nm,1.2s						
AKH	**Akhalkalaki**	**23.53**	**287**	*e*P	**P**	**01 11 33.2**	**+3.4**
AKH				pmax	pmax		
	comp=Z,97nm,1.2s						
LZH	**Lanzhou**	**23.86**	**86**	⇓P	**P**	**01 11 34.5**	**+1.6**
LZH				pP	pP	01 11 58.8	-1.4
LZH				sP	sP	01 12 13.0	-4.2
LZH				S	**S**	**01 15 38.0**	**-1.0**
LZH				sS	Sn	01 16 19.8	+4.1
LZH				SS	**SnSn**	**01 16 38.3**	**+3.4**
LZH				pmax	pmax		
	comp=Z,380nm,1.2s						
LZH				pmax	pmax		
	comp=Z,960nm,4.5s						
LZH				LR	LR		
	comp=Z,720nm,11.4s						
LZH				LR	LR		
	comp=Z,700nm,13.0s						
LZH				LR	LR		
	comp=Z,990nm,14.2s						
GOF	**Gofitskoye**	**23.96**	**296**	⇓*i*P	**P**	**01 11 35.1**	**+1.7**
GOF				pmax	pmax		
	comp=Z,130nm,1.0s						
KBZ	**Khabaz**	**23.97**	**293**	P	**P**	**01 11 34.1**	**+0.6**
	comp=Z,12nm,0.8s,baz=135,slow=7.8,SNR=25						
KBZ				LR	LR	01 23 09.3	
	comp=Z,203nm,19.9s,baz=80,slow=41						
ZAK	**Zakamensk**	**24.02**	**50**	*e*P	**P**	**01 11 35.0**	**+0.9**
ZAK				*e*		01 12 24.0	
ZAK				pmax	pmax		
	comp=Z,235nm,1.4s						
NEY	**Neytrino**	**24.08**	**292**	*d i*P	**P**	**01 11 36.9**	**+2.1**
NEY				pmax	pmax		
	comp=Z,7.0nm,0.8s						
KVAR	**Kislovodsk Arr**	**24.13**	**294**	P	**P**	**01 11 36.6**	**+1.5**
	comp=Z,34nm,0.9s,baz=280,slow=22,SNR=14						
KVAR				LR	LR	01 23 04.6	
	comp=Z,202nm,19.0s,baz=72,slow=41						
KIV	**Kislovodsk**	**24.13**	**294**	*e*P	**P**	**01 11 36.1**	**+0.9**
	comp=Z,27nm,0.7s						
KIV	**Kislovodsk**	**24.13**	**294**	P	**P**	**01 11 38.4**	**+3.3**
	SNR=12						
KIV	**Kislovodsk**	**24.13**	**294**	*i* P	**P**	**01 11 35.9**	**+0.7**
	SNR=8.7						
KIV	**Kislovodsk**	**24.13**	**294**	*i* P	**P**	**01 11 36.2**	**+1.1**
KIV				pmax	pmax		
	comp=Z,36nm,1.0s						
TLY	**Talaya**	**24.68**	**48**	*e*P	**P**	**01 11 41.8**	**+1.8**
	comp=Z,108nm,0.7s						
TLY	**Talaya**	**24.68**	**48**	P	**P**	**01 11 42.2**	**+2.2**
	SNR=88						
TLY	**Talaya**	**24.68**	**48**	*d i*P	**P**	**01 11 42.0**	**+2.0**
TLY				*e*		01 12 14.2	
TLY				*e*		01 12 29.1	
TLY				pmax	pmax		
	comp=Z,120nm,0.9s						
IRK	**Irkutsk**	**25.25**	**47**	*e*P	**P**	**01 11 46.2**	**+1.1**
IRK				pmax	pmax		
	comp=Z,295nm,2.3s						
SONA0	**Songino Array**	**25.37**	**57**	*e*P	**P**	**01 11 47.8**	**+1.4**
SONA0				*e*ScP	**ScP**	**01 18 41.1**	**-0.5**
SONM	**Songino Array**	**25.37**	**57**	P	**P**	**01 11 47.8**	**+1.4**
	comp=Z,209nm,0.8s,baz=256,slow=10,SNR=855						
SONM				ScP	**ScP**	**01 18 41.1**	**-0.5**
	comp=Z,4.4nm,0.8s,baz=228,slow=3.2,SNR=5.8						
SONA1	**Songino Array**	**25.38**	**57**	*e*P	**P**	**01 11 46.0**	**-0.5**
CD2	**Chengdu**	**25.54**	**98**	⇑P	**P**	**01 11 49.0**	**+1.1**
CD2				pP	pP	01 12 14.0	-2.9
CD2				sP	sP	01 12 28.0	-4.6
CD2				S	**S**	**01 16 08.3**	**+2.9**
CD2				sS	sS	01 16 53.0	-3.3
CD2				pmax	pmax		
	comp=Z,50nm,0.7s						
CD2				pmax	pmax		
	comp=Z,320nm,5.0s						
CD2				LR	LR		
	comp=Z,540nm,11.4s						
CD2				LR	LR		
	comp=Z,350nm,10.9s						
ULN	**Ulaanbaatar**	**25.81**	**58**	*e*P	**P**	**01 11 51.3**	**+0.9**
	comp=Z,186nm,0.9s						
ULN	**Ulaanbaatar**	**25.81**	**58**	P	**P**	**01 11 51.8**	**+1.4**
	SNR=127						
ULN	**Ulaanbaatar**	**25.81**	**58**	*d i*P	**P**	**01 11 51.4**	**+1.0**
ULN				pmax	pmax		
	comp=Z,171nm,0.9s						
VRH	**Novokhopyorsk**	**26.04**	**310**	*e*P	**P**	**01 11 52.5**	**+0.3**
VRH				*e**SP	**sP**	**01 12 37.6**	**+0.6**
VRH				*e*S	**S**	**01 16 10.7**	**-2.1**
VRH				pmax	pmax		
	comp=Z,70nm,0.6s						
VRH				smax	smax		
	comp=E,250nm,1.8s						
SOC	**Sochi**	**26.27**	**293**	*e*P	**P**	**01 11 54.2**	**-0.2**
SOC				*e**PP	**pP**	**01 12 21.5**	**-1.8**
SOC				*e*		01 12 40.5	
SOC				*e*S	**S**	**01 16 18.9**	**+2.1**
SOC				pmax	pmax		
	comp=Z,22nm,1.1s						
VORD	**Divnogorie**	**27.45**	**309**	*e*P	**P**	**01 12 05.1**	**+0.3**
VORD				pmax	pmax		
	comp=Z,50nm,1.1s						
VSR	**Storozhevoye**	**27.59**	**309**	*e*P	**P**	**01 12 05.8**	**-0.3**
VSR				*e**SP	**sP**	**01 12 51.0**	**0.0**
VSR				*e*		01 12 57.6	
VSR				*e*S	**S**	**01 16 35.2**	**-2.1**
VSR				pmax	pmax		
	comp=Z,70nm,0.9s						
VSR				smax	smax		
	comp=N,100nm,1.0s						
KMI	**Kunming**	**27.66**	**110**	P	**P**	**01 12 09.3**	**+2.1**
KMI				pP	pP	01 12 36.0	-0.3
KMI				sP	sP	01 12 52.0	-0.1
KMI				S	**S**	**01 16 38.8**	**-0.6**
KMI				sS	sS	01 17 27.0	-3.6
KMI				pmax	pmax		
	comp=N,21nm,0.7s						
KMI				pmax	pmax		
	comp=N,94nm,4.7s						
KMI				LR	LR		
	comp=N,300nm,11.4s						
KMI				LR	LR		
	comp=N,190nm,10.8s						
KMI				LR	LR		
	comp=N,180nm,9.7s						
VORR	**Voronezh**	**27.68**	**310**	*e*P	**P**	**01 12 08.0**	**+1.1**
VORR				pmax	pmax		
	comp=Z,300nm,1.2s						
BTO	**Baotou**	**27.82**	**74**	*e*P	**P**	**01 12 08.0**	**-0.3**
ANN	**Anapa**	**27.92**	**295**	*e*P	**P**	**01 12 08.6**	**-0.5**
ANN				*e*S	**S**	**01 16 43.5**	**+0.9**
ANN				pmax	pmax		
	comp=Z,121nm,1.5s						
LPSR	**Galich’ya Gora**	**28.10**	**312**	*e*P	**P**	**01 12 11.2**	**+0.6**
LPSR				*e*S	**S**	**01 16 44.7**	**-0.6**
LPSR				pmax	pmax		
	comp=Z,120nm,0.8s						
LPSR				smax	smax		
	comp=E,260nm,1.9s						
RAYN	**Ar Rayn**	**28.38**	**247**	*e*P	**P**	**01 12 13.0**	**-0.4**
	comp=E,41nm,0.9s						
RAYN	**Ar Rayn**	**28.38**	**247**	*i* P	**P**	**01 12 13.1**	**-0.3**
	SNR=38						
RAYN	**Ar Rayn**	**28.38**	**247**	*e*P	**P**	**01 12 13.0**	**-0.4**
RAYN				pmax	pmax		
	comp=Z,41nm,0.9s						
XAN	**Xi’an**	**28.43**	**88**	P	**P**	**01 12 14.0**	**+0.2**
XAN				pP	pP	01 12 40.5	-2.5
XAN				sP	sP	01 12 53.0	-5.8
XAN				S	**S**	**01 16 50.5**	**-0.5**
XAN				SS	**SnSn**	**01 18 26.5**	**+0.9**
XAN				pmax	pmax		
	comp=Z,120nm,0.8s						
XAN				pmax	pmax		
	comp=Z,130nm,6.4s						
XAN				LR	LR		
	comp=Z,270nm,11.8s						
XAN				LR	LR		
	comp=Z,290nm,11.8s						
XAN				LR	LR		
	comp=Z,240nm,17.6s						
HHC	**Hu-ho-hao-te**	**28.95**	**73**	*e*P	**P**	**01 12 19.8**	**+1.4**
CHTO	**Chiang Mai**	**29.15**	**125**	*e*P	**P**	**01 12 19.8**	**-0.4**
	comp=Z,22nm,1.1s						
CHTO	**Chiang Mai**	**29.15**	**125**	*e*P	**P**	**01 12 19.8**	**-0.4**
CHTO				pmax	pmax		
	comp=Z,22nm,1.1s						
CHTO	**Chiang Mai**	**29.15**	**125**	P	**P**	**01 12 20.3**	**+0.1**
	comp=Z,71nm,0.8s						
CMMT	**Chiang Mai**	**29.15**	**125**	P	**P**	**01 12 20.2**	**-0.1**
	comp=Z,16nm,0.8s						
PRGR	**Permogore**	**29.18**	**332**	*e*P	**P**	**01 12 18.7**	**-1.3**
PRGR				pmax	pmax		
	comp=Z,99nm,0.7s						
PAYA	**Payao**	**29.36**	**123**	P	**P**	**01 12 21.7**	**-0.4**
	comp=Z,16nm,0.6s,comp=Z,152nm						
CM31	**Chiang Mai Arr**	**29.41**	**125**	*e*P	**P**	**01 12 21.7**	**-0.8**
CM31				*e*ScP	**ScP**	**01 18 54.4**	**+0.2**
CMAR	**Chiang Mai Arr**	**29.41**	**125**	P	**P**	**01 12 21.7**	**-0.8**
	comp=Z,7.5nm,0.7s,baz=315,slow=8.6,SNR=24						
CMAR				ScP	**ScP**	**01 18 54.4**	**+0.2**
	comp=Z,9.1nm,1.0s,baz=304,slow=4.4,SNR=13						
CM01	**Chiang Mai Arr**	**29.45**	**125**	*e*P	**P**	**01 12 21.7**	**-1.1**
LAMP	**Lampang**	**29.81**	**124**	P	**P**	**01 12 25.4**	**-0.6**
	comp=Z,31nm,0.7s,comp=Z,249nm						
MOS	**Moscow**	**29.82**	**318**	*e*P	**P**	**01 12 25.0**	**-0.8**
MOS				*e**PP	**pP**	**01 12 58.2**	**+3.1**

MOS				eS	S	01 17 11.9	-0.3
MOS				e		01 22 48.4	
MOS				pmax	pmax		
	comp=Z,500nm,1.7s						
MOS				pmax	pmax		
	comp=Z,327nm,1.3s						
MOS				smax	smax		
	comp=E,300nm,1.8s						
GYA	Guiyang	29.89	104	⇑iP	P	01 12 26.5	-0.3
GYA				pP	pP	01 12 54.0	-2.1
GYA				sP	sP	01 13 08.5	-3.3
GYA				PP	PnPn	01 13 29.5	0.0
GYA				S	S	01 17 11.3	-2.8
GYA				sS	sS	01 18 01.0	-4.4
GYA				SS	SnSn	01 18 59.0	-2.5
GYA				pmax	pmax		
	comp=E,30nm,0.9s						
GYA				pmax	pmax		
	comp=E,100nm,4.7s						
GYA				LR	LR		
	comp=E,540nm,11.5s						
GYA				LR	LR		
	comp=E,610nm,12.2s						
GYA				LR	LR		
	comp=E,540nm,11.8s						
TIY	Taiyuan	30.17	79	eP	P	01 12 30.0	+0.8
TIY				pP	pP	01 13 00.5	+2.0
TIY				PP	PnPn	01 13 35.8	+2.8
TIY				S	S	01 17 19.3	+1.0
TIY				SS	SnSn	01 19 08.0	0.0
TIY				pmax	pmax		
	comp=E,97nm,0.8s						
TIY				LR	LR		
	comp=E,370nm,4.5s						
TIY				LR	LR		
	comp=E,390nm,6.4s						
TIY				LR	LR		
	comp=E,270nm,7.3s						
OBN	Obninsk	30.19	316	eP	P	01 12 29.4	+0.4
	comp=E,146nm,0.9s						
OBN	Obninsk	30.19	316	d iP	P	01 12 29.2	+0.2
OBN				e*PP	pP	01 12 58.8	+0.5
OBN				e		01 13 29.8	
OBN				pmax	pmax		
	comp=Z,122nm,1.0s						
SIM	Simferopol’	30.28	296	ceP	P	01 12 30.4	+0.4
SIM				eS	S	01 17 20.0	+0.4
SIM				pmax	pmax		
	comp=Z,162nm,1.2s						
SIM				MLR	MLR		
	comp=Z,80nm,16.0s						
ENH	Enshi	30.28	95	eP	P	01 12 30.9	+0.7
	comp=Z,92nm,0.9s						
SUKH	Sukhothai	30.57	126	P	P	01 12 32.7	0.0
	comp=Z,23nm,0.7s						
CIT	Chita	30.68	51	eP	P	01 12 34.2	+0.7
CIT				e		01 13 23.0	
CIT				pmax	pmax		
	comp=Z,349nm,1.4s						
ILGA	Ilgaz	30.90	288	eP	P	01 12 38.8	+3.0
	comp=Z,68nm,1.1s						
UMPA	Umpang Tak	31.04	128	P	P	01 12 40.0	+3.1
	comp=Z,9.6nm,0.7s,comp=Z,1µm						
KLMR	Klimovskoe	31.14	328	eP	P	01 12 36.0	-1.3
KLMR				e		01 15 28.2	
KLMR				pmax	pmax		
	comp=Z,187nm,1.4s						
KLMR	Klimovskoe	31.14	328	eP	P	01 12 36.0	-1.3
KLMR				AMP		01 12 38.6	
	comp=Z,187nm,1.4s						
KLMR				ePcP	PcP	01 15 28.3	-0.6
BR101	Keskin Array S	31.18	285	eP	P	01 12 39.5	+1.4
BR131	Keskin Array S	31.18	285	eP	P	01 12 39.7	+1.6
BRTR	Keskin Array B	31.18	285	P	P	01 12 39.5	+1.4
	comp=Z,15nm,0.8s,baz=97,slow=6.7,SNR=81						
PHIT	Phitsanulok	31.29	125	P	P	01 12 39.4	+0.3
	comp=Z,37nm,0.8s,comp=Z,409nm						
PALK	Pallekele	31.50	167	LR	LR	01 24 29.9	
	comp=Z,190nm,20.9s,baz=292,slow=34						
PALK	Pallekele	31.50	167	eP	P	01 12 42.4	+1.5
	comp=Z,26nm,0.6s						
PALK	Pallekele	31.50	167	P	P	01 12 41.4	+0.4
PALK	Pallekele	31.50	167	eP	P	01 12 42.4	+1.5
PALK				pmax	pmax		
	comp=Z,26nm,0.6s						
MMAI	Mount Meron Ar	31.61	272	LR	LR	01 28 19.0	
	comp=Z,161nm,18.7s,baz=110,slow=41						
ANTO	Ankara	31.79	286	⇑iP	P	01 12 45.0	+1.6
ANTO	Ankara	31.79	286	eP	P	01 12 45.7	+2.3
	comp=Z,58nm,1.2s						
ANTO	Ankara	31.79	286	P	P	01 12 45.7	+2.3
	SNR=11						
ANTO	Ankara	31.79	286	eP	P	01 12 45.7	+2.3
ANTO				pmax	pmax		
	comp=Z,58nm,1.2s						
PBKT	Sadao Pong	32.10	125	eP	P	01 12 46.4	+0.2
	comp=Z,49nm,0.6s						
PBKT	Sadao Pong	32.10	125	P	P	01 12 46.2	0.0
	comp=Z,72nm,0.7s						
BOD	Bodaibo	32.45	40	eP	P	01 12 49.6	+0.8
BOD				pmax	pmax		
	comp=Z,187nm,1.4s						
NONG	Nongkai	32.47	120	P	P	01 12 49.1	-0.3
	comp=Z,1.2nm,0.8s,comp=Z,146nm						
BJT	Baijiatuau	32.55	74	eP	P	01 12 51.2	+1.3
	comp=Z,69nm,0.8s						
BJT				ePcP	PcP	01 15 34.4	+1.2
BJT	Baijiatuau	32.55	74	eP	P	01 12 51.2	+1.3
BJT				e		01 15 34.4	
BJT				pmax	pmax		
	comp=Z,69nm,0.8s						
BJI	Beijing	32.55	73	i P	P	01 12 51.0	+1.1
BJI				S	S	01 17 56.3	+1.2
BJI				pmax	pmax		
	comp=Z,110nm,0.7s						
BJI				pmax	pmax		
	comp=Z,260nm,5.4s						
BJI				LR	LR		
	comp=Z,650nm,7.5s						
BJI				LR	LR		
	comp=Z,510nm,6.9s						
BJI				LR	LR		
	comp=Z,510nm,49.3s						
SRDT	SRDT	32.63	130	P	P	01 12 52.1	+1.3
	comp=Z,38nm,1.0s						
KHON	Khomkaen	33.48	123	P	P	01 12 58.2	0.0
	comp=Z,68nm,0.7s,comp=Z,899nm						
AKASG	Malin Array Be	33.71	306	P	P	01 13 00.2	+0.3
	comp=Z,12nm,0.4s,baz=80,slow=8.2,SNR=80						
AKASG				PcP	PcP	01 15 36.0	-0.3
	comp=Z,11nm,0.9s,baz=76,slow=2.9,SNR=6.6						
AKBB	Malin Array Si	33.71	306	eP	P	01 13 00.2	+0.3
	comp=Z,55nm,0.9s						
AKBB				ePcP	PcP	01 15 36.0	-0.3
AKBB	Malin Array Si	33.71	306	eP	P	01 13 00.2	+0.3
AKBB				e		01 15 36.0	
AKBB				pmax	pmax		
	comp=Z,55nm,0.9s						
KIEV	Kiev	33.72	306	eP	P	01 13 00.2	+0.3
	comp=Z,58nm,1.0s						
KIEV	Kiev	33.72	306	i P	P	01 13 00.0	0.0
	SNR=34						
KIEV	Kiev	33.72	306	d iP	P	01 13 00.0	0.0
KIEV				pmax	pmax		
	comp=Z,49nm,1.0s						
AK11	Malin Array Si	33.75	306	eP	P	01 13 00.2	0.0
AK11				ePcP	PcP	01 15 36.6	+0.3
SKNT	Sakolnakorn	33.80	121	P	P	01 13 00.5	-0.5
	comp=Z,56nm,0.7s						
KIS	Kishinev	33.91	300	⇓iP	P	01 13 02.0	+0.3
	comp=Z,200nm,1.4s						
KIS				epP	pP	01 13 29.0	-2.2
KIS	Kishinev	33.91	300	ePP	PP	01 14 10.0	-11
KIS				eS	S	01 18 16.0	0.0
KIS				esS	ScP	01 19 10.0	+1.1
KIS				eSS	SnSn	01 20 41.0	+3.1
WHN	Wuhan	33.99	91	⇓iP	P	01 13 02.8	+0.3
WHN				sP	sP	01 13 47.0	-0.8
WHN				S	S	01 18 19.0	+1.4
WHN				pmax	pmax		
	comp=Z,280nm,0.8s						
WHN				LR	LR		
	comp=Z,410nm,13.9s						
NAYO	Nakonayok	34.01	127	P	P	01 13 03.2	+0.4
	comp=Z,0.5nm,0.8s						
TLCR		34.02	296	⇓iP	P	01 13 03.8	+1.2
TLCR		34.02	296	⇓P	P	01 13 03.8	+1.2
PHET	Kaeng Krachan	34.06	131	P	P	01 13 04.4	+1.1
	comp=Z,14nm,0.8s,comp=Z,162nm						
TIA	Tai’an	34.19	80	P	P	01 13 05.3	+1.1
TIA				pmax	pmax		
	comp=Z,100nm,1.0s						
SORM	Soroca	34.21	302	⇑iP	P	01 13 04.3	+0.1
SORM	Soroca	34.21	302	⇑P	P	01 13 04.3	+0.1
HIA	Hailar	34.32	56	eP	P	01 13 07.0	+1.8
	comp=Z,83nm,1.1s						
HIA	Hailar	34.32	56	eP	P	01 13 07.0	+1.8
HIA				pmax	pmax		
	comp=Z,83nm,1.1s						
LEOM	Leova	34.33	299	⇓iP	P	01 13 05.9	+0.7
LEOM	Leova	34.33	299	⇓P	P	01 13 06.0	+0.7
CFR	Carcaliu	34.50	296	⇓iP	P	01 13 07.6	+0.9
CFR	Carcaliu	34.50	296	⇓P	P	01 13 07.6	+0.9
HARR	Harsova	34.69	296	⇓iP	P	01 13 10.8	+2.5
HARR	Harsova	34.69	296	⇓P	P	01 13 10.8	+2.5
SRAK	Srakaew	34.69	127	P	P	01 13 12.7	+4.0
	comp=Z,50nm,0.8s						
IAS	Iasi	34.76	300	⇑iP	P	01 13 09.5	+0.5
IAS	Iasi	34.76	300	⇑P	P	01 13 09.5	+0.5
PUL	Pulkovo	34.86	322	⇓iP	P	01 13 10.1	+0.5
PUL				pmax	pmax		
	comp=Z,167nm,0.9s						
MICGM	Minsk	34.94	313	⇑eP	P	01 13 10.0	-0.4
MICGM				PM		01 13 11.0	
	comp=Z,0.3nm,1.5s						
MICGM				PM		01 13 12.0	
	comp=E,0.2nm,1.5s						
MICGM				epP	pP	01 13 38.0	-2.1
MICGM				esP	sP	01 13 49.0	-6.8
MICGM				ePPP	PPP	01 14 30.0	
MICGM				ePcP	PcP	01 15 35.0	-4.7
MICGM				eS	S	01 18 30.0	-1.6
MNK	Minsk	34.94	313	⇑eP	P	01 13 10.0	-0.4
MNK				e		01 13 38.0	
MNK				e		01 14 30.0	
MNK				e		01 15 35.0	
MNK				eS	S	01 18 30.0	-1.6
MNK				pmax	pmax		
	comp=Z,340nm,1.5s						
MNK				pmax	pmax		
	comp=E,220nm,1.5s						
PETR	Petresti	35.09	297	⇑iP	P	01 13 14.6	+2.9
DURS	Dursunbey	35.11	287	i P	P	01 13 13.5	+1.3
DAMY	Dhamar	35.23	236	eP	P	01 13 14.5	+0.8
	comp=E,23nm,0.9s						
MANT	Manisa	35.30	285	eP	P	01 13 16.1	+2.1
	comp=E,156nm,1.2s						
PGOR	Pogoanele	35.34	296	⇑iP	P	01 13 16.9	+3.0
VRI	Vrincioaia	35.42	298	⇑iP	P	01 13 16.6	+1.9
VRI	Vrincioaia	35.42	298	⇑P	P	01 13 16.6	+1.9
TESR	Tescani	35.43	299	⇑iP	P	01 13 15.6	+0.9
HORU	Horodok	35.47	304	P	P	01 13 15.8	+0.7
PLOR	Plostina	35.48	298	⇓iP	P	01 13 17.8	+2.6
PLOR	Plostina	35.48	298	⇓P	P	01 13 17.8	+2.6
ISR	Istrita	35.62	296	⇓iP	P	01 13 18.1	+1.6
ISR	Istrita	35.62	296	⇓P	P	01 13 18.1	+1.6
NACGM	Naroch	35.63	313	eP	P	01 13 07.0	-9.3
NACGM				PM		01 13 08.0	
	comp=Z,0.5nm,1.0s						
NACGM				eS	S	01 18 28.0	-14
PRAR	RASCA	35.66	300	⇑iP	P	01 13 18.0	+1.3
IDID	Didziasalis	35.71	314	eP	P	01 13 18.1	+1.1
IDID				IAmb	IAmb	01 13 19.1	
	comp=Z,45nm,0.9s						
BALY	Balya	35.72	287	i P	P	01 13 18.9	+1.5
STEP	BALIKESIR_Sava	35.73	287	i P	P	01 13 18.8	+1.4
BIZ	Bicaz	35.77	300	⇓iP	P	01 13 19.0	+1.3
MLR	Muntele Rosu	36.01	297	P	P	01 13 22.3	+2.5
	comp=Z,66nm,0.9s,baz=67,slow=3.5,SNR=67						
MLR				LR	LR	01 30 32.3	
	comp=Z,175nm,19.7s,baz=86,slow=40						
MLR	Muntele Rosu	36.01	297	⇓iP	P	01 13 22.4	+2.6
MLR	Muntele Rosu	36.01	297	eP	P	01 13 22.3	+2.5
	comp=Z,129nm,1.0s						
UBPT	Khong Chiam	36.01	121	P	P	01 13 19.0	-0.9
	comp=Z,38nm,0.9s						
IIGN	Ignalina	36.01	314	eP	P	01 13 20.8	+1.3
IIGN				IAmb	IAmb	01 13 21.8	
	comp=Z,47nm,0.7s						
IZAR	Zarasai	36.05	315	eP	P	01 13 21.2	+1.3
IZAR				IAmb	IAmb	01 13 22.1	
	comp=Z,76nm,0.6s						
ISAL	Salakas	36.09	314	eP	P	01 13 21.5	+1.3
ISAL				IAmb	IAmb	01 13 22.5	
	comp=Z,53nm,0.9s						
VSU	Vasula	36.29	319	d iP	P	01 13 22.4	+0.5
VSU				pmax	pmax		
	comp=Z,316nm,1.0s						
SZH	Strazhica	36.30	293	i P	P	01 13 24.4	+2.2
BURAR	Bucovina Array	36.33	301	⇑iP	P	01 13 23.5	+1.0
BURAR	Bucovina Array	36.33	301	⇑P	P	01 13 23.5	+1.0
BUR04	Bucovina Ar. S	36.34	301	eP	P	01 13 22.4	-0.2
BUR08	Bucovina Ar. S	36.34	301	eP	P	01 13 23.7	+1.1
DOPR	Dopca	36.34	298	⇑iP	P	01 13 23.7	+1.1
BAYC	CANAKKALE_Bayr	36.53	287	i P	P	01 13 25.9	+1.8
QIZ	Qiongzhong	36.58	111	eP	P	01 13 25.1	+0.3
	comp=Z,32nm,1.0s						
VOIR		36.64	297	⇓iP	P	01 13 26.8	+1.7
VOIR		36.64	297	⇓P	P	01 13 26.8	+1.7
ALN	Alexandroupoli	36.65	290	eP	P	01 13 27.0	+1.9
	comp=Z,17nm,1.2s						
ALN	Alexandroupoli	36.65	290	P	P	01 13 26.3	+1.2
ALN	Alexandroupoli	36.65	290	eP	P	01 13 27.0	+1.9
ALN				pmax	pmax		
	comp=Z,17nm,1.2s						
ZIMR		36.65	294	⇑iP	P	01 13 27.7	+2.6
ZIMR		36.65	294	⇑P	P	01 13 27.7	+2.6
MTUR	Matau	36.65	297	⇑iP	P	01 13 28.1	+2.9
MTUR	Matau	36.65	297	⇑P	P	01 13 28.1	+2.9
GOLR		36.77	296	⇑iP	P	01 13 29.1	+3.0
HUMR	Humele	36.80	296	⇑iP	P	01 13 27.7	+1.3
PRK	Paraskevi	36.85	287	P	P	01 13 27.9	+1.0
PRK	Paraskevi	36.85	287	P	P	01 13 27.9	+1.0
PRK	Paraskevi	36.85	287	P	P	01 13 27.9	+1.0
DL2	Dalian	36.92	74	P	P	01 13 27.8	+0.4
DL2				PcP	PcP	01 15 49.3	+3.4
DL2				S	S	01 19 02.0	-0.1
DL2				pmax	pmax		
	comp=Z,100nm,0.8s						
APA	Apatity	36.92	335	⇑iP	P	01 13 26.4	-0.7
APA				pmax	pmax		
	comp=Z,31nm,0.9s						
APA				MLR	MLR		
	comp=Z,400nm,14.0s						
NJ2	Nanjing	36.94	86	eP	P	01 13 28.5	+0.8
NJ2				S	S	01 19 08.5	+5.9
NJ2				sS	sS	01 19 49.3	-5.4
NJ2				pmax	pmax		
	comp=Z,93nm,1.0s						
NJ2				LR	LR		
	comp=Z,760nm,21.7s						
NJ2				LR	LR		
	comp=Z,1µm,20.6s						
NJ2				LR	LR		
	comp=Z,810nm,23.9s						
ARCR	ARCALIA	36.96	300	⇑iP	P	01 13 30.3	+2.6
RDO	Rodhopi	36.97	290	P	P	01 13 28.9	+1.0
RDO	Rodhopi	36.97	290	P	P	01 13 28.9	+1.0
LVV	L’vov	37.03	305	eP	P	01 13 29.3	+1.1
LVV				e*PP	pP	01 13 56.7	-1.5
LVV				e		01 15 01.1	
LVV				eS	S	01 19 00.8	-2.8
LVV				eSS	SS	01 21 40.4	-11
LVV				eSSS	SSS	01 22 17.7	
LVV				pmax	pmax		
	comp=Z,200nm,1.4s						
KARP	Karpathos	37.21	281	eP	P	01 13 31.4	+1.4
	comp=Z,96nm,0.9s						
FIA0	FINESS Array S	37.35	324	eP	P	01 13 31.5	+0.7
FIA0				eScP	ScP	01 19 21.5	+0.3
FIA0	FINESS Array S	37.35	324	eP	P	01 13 31.5	+0.7
FINES	FINESS Array B	37.35	324	P	P	01 13 31.5	+0.7
	comp=Z,39nm,0.4s,baz=116,slow=10,SNR=579						
FINES				ScP	ScP	01 19 21.5	+0.3
	comp=Z,8.7nm,1.0s,baz=98,slow=7.9,SNR=4.2						
RZN	Rozhen	37.47	291	i P	P	01 13 34.2	+1.9
BMR	Baia Mare	37.49	301	⇓iP	P	01 13 33.0	+0.8
BMR	Baia Mare	37.49	301	⇓P	P	01 13 33.0	+0.8
CJR	Cluj-Napoca	37.51	300	⇑iP	P	01 13 33.7	+1.3
CJR	Cluj-Napoca	37.51	300	⇑P	P	01 13 33.7	+1.3
LOT	Lotru	37.53	297	⇑iP	P	01 13 34.7	+2.0
SUW	Suwalki	37.63	312	eP	P	01 13 33.6	+0.3
SUW				ePP	PnPn	01 15 03.9	-0.6
SUW				eS	S	01 19 12.0	-0.6
SUW	Suwalki	37.63	312	⇓eP	P	01 13 33.6	+0.3
SUW				e		01 15 03.9	
SUW				eS	S	01 19 12.0	-0.6
MSF	Maaselka	37.66	332	P	P	01 13 33.7	+0.3
MSF				pmax	pmax		
	comp=Z,94nm,1.3s						
THAS	Thassos island	37.69	289	P	P	01 13 34.2	+0.2
PGB	Panagyurishte	37.70	293	i P	P	01 13 36.3	+2.2
SNY	Shenyang	37.71	69	⇑P	P	01 13 34.3	+0.2
SNY				pmax	pmax		
	comp=Z,74nm,0.6s						
KWP	Kalwaria Pacla	37.89	304	eP	P	01 13 36.9	+1.3
KWP				eS	S	01 19 18.4	+1.8
KWP	Kalwaria Pacla	37.89	304	eP	P	01 13 36.8	+1.3
	comp=Z,1µm,1.2s						
KWP	Kalwaria Pacla	37.89	304	⇓eP	P	01 13 36.9	+1.3
KWP				eS	S	01 19 18.4	+1.8
APE	Apeiranthos	38.00	284	⇓iP	P	01 13 36.2	-0.4
APE	Apeiranthos	38.00	284	c iP	P	01 13 38.0	+1.4
APE				pmax	pmax		
	comp=Z,47nm,0.9s						
DEV	Deva	38.08	298	⇑iP	P	01 13 39.4	+2.3
DEV	Deva	38.08	298	⇑P	P	01 13 39.4	+2.3
TRPA	Tarpa	38.09	302	⇑iP	P	01 13 39.5	+2.3
DRGR		38.10	300	⇑iP	P	01 13 39.3	+1.9
DRGR		38.10	300	⇑P	P	01 13 39.3	+1.9
NVR	Nevrokopi	38.16	291	P	P	01 13 39.1	+1.1
NVR	Nevrokopi	38.16	291	P	P	01 13 39.1	+1.1
TRTT	Trang	38.21	136	P	P	01 13 38.9	+0.4
	comp=Z,26nm,0.8s						
MMB	Musomiste	38.21	291	i P	P	01 13 39.8	+1.4
UZH	Uzhgorod	38.22	303	⇑iP	P	01 13 38.9	+0.6
VTS	Vitosha	38.39	293	⇑iP	P	01 13 41.3	+1.3
VTS	Vitosha	38.39	293	eP	P	01 13 41.5	+1.5
	comp=Z,24nm,1.0s						
VTS	Vitosha	38.39	293	i P	P	01 13 41.1	+1.1
VTS	Vitosha	38.39	293	P	P	01 13 41.5	+1.5
VTS	Vitosha	38.39	293	⇑P	P	01 13 41.3	+1.3
SRS	Serrai	38.41	291	P	P	01 13 41.1	+1.1
SRS	Serrai	38.41	291	P	P	01 13 41.1	+1.1
SRS	Serrai	38.41	291	P	P	01 13 41.1	+1.1
HERR	Herculane	38.56	297	⇑iP	P	01 13 42.1	+0.9
PAIG	Paliouri	38.63	289	P	P	01 13 43.0	+1.2
PAIG	Paliouri	38.63	289	P	P	01 13 43.0	+1.2
PAIG	Paliouri	38.63	289	P	P	01 13 43.0	+1.2
SOH	Sokhos	38.66	290	P	P	01 13 43.6	+1.5
SOH				pmax	pmax		
	comp=Z,10.0nm,1.2s						
AOS	Alonnisos	38.67	287	P	P	01 13 42.3	+0.2
AOS	Alonnisos	38.67	287	P	P	01 13 42.3	+0.2
CN2	Changchun	38.69	65	⇓P	P	01 13 42.8	+0.5
CN2				epP	pP	01 14 08.5	-3.9
CN2				eS	S	01 19 31.0	+2.2
CN2				pmax	pmax		
	comp=Z,40nm,0.9s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CRVS	Cervenica-Dubn	38.75	303	eP	P	01 13 43.1	+0.4
CRVS				pmax	pmax		
	comp=Z,11nm,1.0s						
CRVS	Cervenica-Dubn	38.75	303	eP	P	01 13 43.1	+0.4
KNT	Kendrikon	38.91	291	P	P	01 13 44.9	+0.7
KNT	Kendrikon	38.91	291	P	P	01 13 44.9	+0.7
KNT	Kendrikon	38.91	291	P	P	01 13 44.9	+0.7
PTL	Penteli	38.98	286	P	P	01 13 45.3	+0.5
PTL	Penteli	38.98	286	P	P	01 13 45.3	+0.5
BZS	Buzias	39.01	298	⇓iP	P	01 13 46.5	+1.6
BZS	Buzias	39.01	298	⇓P	P	01 13 46.5	+1.6
BEL	Belsk	39.04	308	eP	P	01 13 46.0	+1.0
BEL				eS	S	01 19 36.0	+2.2
BEL	Belsk	39.04	308	⇓eP	P	01 13 46.0	+1.0
BEL				eS	S	01 19 36.0	+2.2
ATHU	Athens Univers	39.07	286	P	P	01 13 46.5	+1.0
ATHU	Athens Univers	39.07	286	P	P	01 13 46.5	+1.0
MDVR	Moldovita	39.07	297	⇑iP	P	01 13 46.8	+1.3
VLY	Voula,Athens	39.09	285	P	P	01 13 46.2	+0.5
VLY	Voula,Athens	39.09	285	P	P	01 13 46.2	+0.5
ZEA	Zeya	39.10	49	eP	P	01 13 47.0	+1.4
ZEA				e		01 14 37.0	
ZEA				e		01 23 40.0	
ZEA				pmax	pmax		
	comp=N,68nm,0.8s						
ZEA				pmax	pmax		
	comp=E,83nm,0.8s						
ZEA				pmax	pmax		
	comp=Z,130nm,0.8s						
ZEA				pmax	pmax		
	comp=N,100nm,2.0s						
ZEA				pmax	pmax		
	comp=E,200nm,2.0s						
ZEA				pmax	pmax		
	comp=Z,500nm,2.0s						
ZEA				MLR	MLR		
	comp=Z,300nm,14.0s						
VAY	Valandovo	39.12	291	P	P	01 13 46.8	+0.9
VAY	Valandovo	39.12	291	P	P	01 13 46.8	+0.9
VAY	Valandovo	39.12	291	i P	P	01 13 47.1	+1.2
VAY	Valandovo	39.12	291	P	P	01 13 46.8	+0.9
NEO	Neokhori	39.12	288	P	P	01 13 46.6	+0.6
NEO	Neokhori	39.12	288	P	P	01 13 46.6	+0.6
XOR	Xorichti	39.13	288	P	P	01 13 46.8	+0.7
XOR	Xorichti	39.13	288	P	P	01 13 46.8	+0.7
SGF	Sodankyl	39.21	333	P	P	01 13 47.0	+0.8
SGF				pmax	pmax		
	comp=Z,81nm,1.2s						
VAF	Ylistaro	39.31	326	P	P	01 13 48.3	+1.2
VAF				pmax	pmax		
	comp=Z,133nm,1.2s						
GRG	Griva	39.33	291	P	P	01 13 49.0	+1.3
GRG				pmax	pmax		
	comp=Z,18nm,0.9s						
BANR	Banloc	39.38	298	⇓iP	P	01 13 48.2	+0.3
KLNR	Kaliningrad	39.40	312	d iP	P	01 13 48.1	+0.1
KLNR				pmax	pmax		
	comp=Z,131nm,0.9s						
LIT	Litokhoron	39.47	289	eP	P	01 13 49.8	+1.0
	comp=Z,26nm,0.9s						
LIT	Litokhoron	39.47	289	P	P	01 13 48.2	-0.6
LIT	Litokhoron	39.47	289	eP	P	01 13 49.8	+1.0
LIT				pmax	pmax		
	comp=Z,26nm,0.9s						
LKR	Lokris	39.47	287	P	P	01 13 49.2	+0.4
LKR	Lokris	39.47	287	P	P	01 13 49.2	+0.4
NIE	Niedzica	39.47	304	i P	P	01 13 50.5	+1.8
NIE				ePP	PnPn	01 15 24.7	-1.5
NIE				eS	S	01 19 42.7	+2.3
NIE	Niedzica	39.47	304	⇓iP	P	01 13 50.5	+1.8
NIE				e		01 15 24.7	
NIE				eS	S	01 19 42.7	+2.3
OJC	Ojcow	39.73	305	i P	P	01 13 51.7	+0.8
OJC				ePP	PP	01 15 24.4	-0.4
OJC				eS	S	01 19 43.8	-0.5
OJC	Ojcow	39.73	305	eP	P	01 13 51.2	+0.3
	comp=Z,75nm,0.7s						
OJC	Ojcow	39.73	305	⇓iP	P	01 13 51.7	+0.8
OJC				e		01 15 24.4	
OJC				eS	S	01 19 43.8	-0.5
SKO	Skopje	39.80	292	i P	P	01 13 52.6	+1.1
AGG	Agios Georgios	39.87	288	eP	P	01 13 53.0	+0.8
	comp=Z,92nm,1.3s						
AGG	Agios Georgios	39.87	288	P	P	01 13 52.4	+0.2
AGG	Agios Georgios	39.87	288	eP	P	01 13 53.0	+0.8
AGG				pmax	pmax		
	comp=Z,92nm,1.3s						
PSZ	Piszkesteto	39.88	302	⇓iP	P	01 13 54.1	+1.9
PSZ	Piszkesteto	39.88	302	eP	P	01 13 53.6	+1.4
	comp=Z,37nm,1.1s						
PSZ	Piszkesteto	39.88	302	⇓P	P	01 13 54.1	+1.9
KZN	Kozani	39.95	290	P	P	01 13 53.1	+0.2
KZN	Kozani	39.95	290	P	P	01 13 53.1	+0.2
KZN	Kozani	39.95	290	P	P	01 13 53.1	+0.2
THL	Klokotos Trika	39.96	289	P	P	01 13 52.9	0.0
KEV	Kevo	40.03	337	eP	P	01 13 53.3	+0.3
	comp=Z,73nm,0.8s						
KEV	Kevo	40.03	337	eP	P	01 13 53.3	+0.3
KEV				pmax	pmax		

	comp=Z,73nm,0.8s				
LANS	Liptovska Anna	40.04 304	eP	P	01 13 55.5 +2.1
LANS	Liptovska Anna	40.04 304	eP	P	01 13 55.5 +2.1
KRUS	Krusevo	40.08 292	i P	P	01 13 54.7 +0.8
FNA	Florina	40.12 291	eP	P	01 13 55.2 +0.9
	comp=Z,23nm,0.8s				
FNA	Florina	40.12 291	P	P	01 13 54.2 -0.1
FNA	Florina	40.12 291	eP	P	01 13 55.2 +0.9
FNA			pmax	pmax	
	comp=Z,23nm,0.8s				
EVR	Evrytania	40.29 288	P	P	01 13 55.5 -0.2
EVR	Evrytania	40.29 288	P	P	01 13 55.5 -0.2
KPRO	Kipourio	40.34 289	P	P	01 13 56.2 +0.1
DIVS	Divibare	40.40 296	eP	P	01 13 58.0 +1.4
	comp=Z,62nm,0.9s				
ARA0	ARCESS Array S	40.41 336	eP	P	01 13 57.2 +1.0
ARA0			eScP	ScP	01 19 32.9 +0.1
ARCES	ARCESS Array B	40.41 336	P	P	01 13 57.2 +1.0
	comp=Z,97nm,0.6s,baz=109,slow=8.2,SNR=815				
ARCES			ScP	ScP	01 19 32.9 +0.1
	comp=Z,17nm,1.0s,baz=116,slow=2.8,SNR=11				
ARCES	ARCESS Array B	40.41 336	eP	P	01 13 57.1 +0.9
BUD	Budapest	40.52 301	P	P	01 13 59.2 +1.8
BUD			pmax	pmax	
	comp=Z,58nm,1.2s				
VYHS	Vyhne	40.52 303	eP	P	01 13 58.5 +1.1
VYHS			pmax	pmax	
	comp=Z,35nm,1.4s				
VYHS	Vyhne	40.52 303	eP	P	01 13 58.5 +1.1
VYHS			eS	S	01 19 53.8 -2.2
VYHS			eSS	SS	01 22 58.4 -2.5
PVO	Paravola	40.59 287	P	P	01 13 58.9 +0.9
ITM	Ithomi	40.71 285	eP	P	01 13 59.5 +0.4
	comp=Z,21nm,0.6s				
DSL	Palaion Diasel	40.76 288	P	P	01 13 59.5 0.0
DSL	Palaion Diasel	40.76 288	P	P	01 13 59.5 0.0
JAN	Janina	40.80 289	P	P	01 14 00.5 +0.7
JAN	Janina	40.80 289	P	P	01 14 00.5 +0.7
JAN	Janina	40.80 289	P	P	01 14 00.5 +0.7
OKC	Ostrava-Krasne	40.83 305	eP	P	01 13 59.7 -0.2
OKC			eS	S	01 20 00.8 +0.3
OKC	Ostrava-Krasne	40.83 305	eP	P	01 13 59.7 -0.2
OKC			eS	S	01 20 00.8 +0.3
TPTI		40.83 143	P	P	01 13 59.0 -1.2
	comp=Z,52nm,0.8s				
KULM	Kulim	40.85 137	eP	P	01 14 00.5 +0.1
	comp=Z,39nm,1.3s				
PDO	Prodromos	40.85 287	P	P	01 13 59.7 -0.5
KTK1	Kautokeino	40.95 335	eP	P	01 14 01.2 +0.6
INCN	Inchon	41.10 74	eP	P	01 14 03.0 +0.7
	comp=Z,63nm,0.8s				
INCN	Inchon	41.10 74	P	P	01 14 03.0 +0.7
	SNR=8.7				
YAK	Yakutsk	41.12 36	P	P	01 14 02.0 0.0
	comp=Z,6.1nm,0.3s,baz=73,slow=23,SNR=28				
YAK	Yakutsk	41.12 36	eP	P	01 14 02.3 +0.3
	comp=Z,284nm,0.8s				
YAK	Yakutsk	41.12 36	d iP	P	01 14 02.1 +0.1
YAK			e		01 15 39.4
YAK			eS	S	01 20 04.3 -0.1
YAK			eSS	SS	01 23 09.7 -2.4
YAK			e		01 23 47.3
YAK			pmax	pmax	
	comp=Z,370nm,1.4s				
YAK			pmax	pmax	
	comp=E,161nm,1.5s				
YAK			pmax	pmax	
	comp=N,59nm,1.4s				
YAK			pmax	pmax	
	comp=Z,59nm,0.8s				
YAK			pmax	pmax	
	comp=N,12nm,0.9s				
YAK			pmax	pmax	
	comp=E,86nm,1.4s				
YAK			smax	smax	
	comp=N,103nm,2.8s				
YAK			smax	smax	
	comp=E,69nm,1.8s				
YAK			MLR	MLR	
	comp=Z,135nm,11.0s				
YAK			MLR	MLR	
	comp=N,145nm,12.0s				
YAK			MLR	MLR	
	comp=E,113nm,14.0s				
GKP	Gorka Klasztor	41.16 310	i P	P	01 14 03.5 +1.0
GKP			eS	S	01 20 05.6 +0.2
GKP	Gorka Klasztor	41.16 310	⇓iP	P	01 14 03.5 +1.0
GKP			eS	S	01 20 05.6 +0.2
IGT	Igoumenitsa	41.22 289	P	P	01 14 03.5 +0.3
MORC	Moravsky Berou	41.22 305	⇑iP	P	01 14 04.1 +0.9
MORC	Moravsky Berou	41.22 305	eP	P	01 14 03.8 +0.7
	comp=E,47nm,0.9s				
MORC	Moravsky Berou	41.22 305	⇑P	P	01 14 04.1 +0.9
MORC	Moravsky Berou	41.22 305	⇓iP	P	01 14 04.3 +1.1
MORC			eS	S	01 20 07.1 +0.6
JAVC	Velka Javorina	41.24 304	⇓iP	P	01 14 05.6 +2.2
JAVC			eS	S	01 20 09.0 +2.2
SGD	Sagiada	41.27 289	P	P	01 14 03.4 -0.2
PDG	Podgorica	41.28 294	⇑iP	P	01 14 04.3 +0.7
TTG	Podgorica	41.28 294	eP	P	01 14 04.3 +0.7
	comp=E,42nm,1.1s				
TTG	Podgorica	41.28 294	eP	P	01 14 04.3 +0.7
TTG			pmax	pmax	
	comp=Z,42nm,1.1s				
HAMF	Hammerfest	41.44 337	eP	P	01 14 05.9 +1.4
HAMF			IAmb	IAmb	01 14 06.5
	comp=Z,193nm,0.8s				
SMOL	Smolenice	41.45 303	eP	P	01 14 06.1 +1.1
SMOL	Smolenice	41.45 303	eP	P	01 14 06.1 +1.1
MDJ	Mudanjiang	41.47 63	P	P	01 14 03.0 -2.2
MDJ			pP	pP	01 14 29.5 -6.1
MDJ			S	S	01 20 10.5 +0.4
MDJ			pmax	pmax	
	comp=Z,54nm,0.8s				
MDJ			pmax	pmax	
	comp=Z,350nm,3.2s				
MDJ	Mudanjiang	41.47 63	eP	P	01 14 05.9 +0.7
	comp=Z,129nm,1.4s				
MODS	Modra-Piesok	41.56 303	eP	P	01 14 07.1 +1.2
MODS			pmax	pmax	
	comp=Z,44nm,1.4s				
MODS	Modra-Piesok	41.56 303	eP	P	01 14 07.1 +1.2
KRLC	Kraliky	41.68 305	eP	P	01 14 08.2 +1.3
KRLC			ex	x	01 14 47.2
KRLC	Kraliky	41.68 305	eP	P	01 14 08.2 +1.3
IPM	Ipoh	41.73 137	eP	P	01 14 07.2 -0.4
	comp=Z,35nm,0.7s				
VRAC	Vranov	41.89 304	⇓iP	P	01 14 09.8 +1.2
VRAC	Vranov	41.89 304	⇓P	P	01 14 09.8 +1.2
VRAC	Vranov	41.89 304	⇓iP	P	01 14 10.1 +1.5
VRAC			eS	S	01 20 17.4 +1.1
KSP	Ksiaz	41.91 307	i P	P	01 14 09.8 +1.1
KSP			ePP	PP	01 15 48.8 +0.6
KSP			eS	S	01 20 16.6 +0.1
KSP	Ksiaz	41.91 307	⇓iP	P	01 14 09.8 +1.1
KSP			e		01 15 48.8
KSP			eS	S	01 20 16.6 +0.1
DPC	Dobruska-Polom	41.94 306	eP	P	01 14 10.6 +1.6
DPC			eS	S	01 20 17.0 -0.1
DPC			eXS	sS	01 21 12.6 +2.5
DPC	Dobruska-Polom	41.94 306	eP	P	01 14 10.6 +1.6
DPC			eS	S	01 20 17.0 -0.1
DPC			e		01 21 12.6
TJN	Taejon	42.01 76	d iP	P	01 14 08.9 -0.7
KRUC	Moravsky	42.05 304	⇓iP	P	01 14 11.3 +1.4
KRUC			eS	S	01 20 19.1 +0.5
KS15	Wonju Array Si	42.06 74	eP	P	01 14 10.7 +0.6
KS15			ePcP	PcP	01 16 02.1 -0.2
KS15			eScP	ScP	01 19 38.5 -1.5
KSAR	Wonju Array Be	42.06 74	P	P	01 14 10.0 0.0
PSI	Prapat	42.07 141	eP	P	01 14 08.9 -1.6
	comp=Z,13nm,0.7s				
PSI	Prapat	42.07 141	eP	P	01 14 08.9 -1.6
PSI			pmax	pmax	
	comp=Z,13nm,0.7s				
KSRS	Korea Array	42.08 74	P	P	01 14 10.0 -0.2
	comp=Z,58nm,1.1s,baz=281,slow=7.3,SNR=90				
KSRS			PcP	PcP	01 16 02.1 -0.2
	comp=Z,16nm,1.0s,baz=300,slow=2.8,SNR=11				
KSRS			ScP	ScP	01 19 38.5 -1.6
	comp=Z,4.1nm,0.7s,baz=288,slow=4.5,SNR=8.3				
UPC	Upice	42.12 306	eP	P	01 14 11.8 +1.4
UPC			eS	S	01 20 16.0 -3.7
UPC			eXS	sS	01 21 15.1 +2.4
UPC	Upice	42.12 306	eP	P	01 14 11.8 +1.4
UPC			eS	S	01 20 16.0 -3.7
UPC			e		01 21 15.1
SOP	Sopron	42.14 302	⇓eP	P	01 14 11.8 +1.1
SOP	Sopron	42.14 302	P	P	01 14 11.7 +1.1
SOP			pmax	pmax	
	comp=Z,60nm,1.4s				
KLR	Kul'dur	42.17 56	d iP	P	01 14 11.8 +1.0
BEHE	Becsehely	42.20 300	⇓eP	P	01 14 12.6 +1.5
YHNB	Yeheng	42.22 95	eP	P	01 14 13.1 +1.5
	comp=Z,47nm,0.9s				
BLY	Banja Luka	42.24 298	⇓iP	P	01 14 12.5 +1.0
BLY	Banja Luka	42.24 298	eP	P	01 14 12.7 +1.3
	comp=Z,51nm,1.1s				
STON	Ston	42.29 295	P	P	01 14 12.3 +0.4
SSLB	Suanglung	42.34 96	eP	P	01 14 14.3 +1.7
	comp=Z,61nm,0.9s				
BSD	Bornholm Skovb	42.46 313	⇓iP	P	01 14 12.6 -0.4
	comp=Z,48nm,0.9s				
BSD	Bornholm Skovb	42.46 313	⇓iP	P	01 14 12.6 -0.4
BSD			pmax	pmax	
	comp=Z,48nm,0.9s				
CONA	Conrad Observa	42.57 302	i P	P	01 14 15.6 +1.4
	comp=Z,105nm,1.2s,SNR=78				
TRO	Tromso	42.60 335	eP	P	01 14 14.1 +0.1
TRO			IAmb	IAmb	01 14 15.3
	comp=Z,263nm,1.6s				
NACB	Ninganchiao	42.64 95	eP	P	01 14 17.8 +2.9
	comp=Z,53nm,0.9s				
GSI	Gunungsitoli	42.73 144	P	P	01 14 16.5 +0.8
GSI	Gunungsitoli	42.73 144	eP	P	01 14 16.7 +1.0
	comp=Z,81nm,1.1s				
YULB	Yu-li	42.81 96	eP	P	01 14 18.3 +2.0
	comp=Z,28nm,1.0s				
ARSA	Arzberg	42.91 302	i P	P	01 14 17.9 +1.1
	comp=Z,36nm,1.1s,SNR=13				
TWG	Pinlang	42.94 97	eP	P	01 14 19.9 +2.6
	comp=Z,332nm,1.1s				
GOPC	GO Pecny, Ondr	42.98 305	eP	P	01 14 19.1 +1.7
GOPC			ex	x	01 14 53.6
GOPC			eS	S	01 20 31.6 -0.6
GOPC			eXS	sS	01 21 29.8 +4.4
GOPC			eSS	SS	01 23 36.7 -12
GOPC	GO Pecny, Ondr	42.98 305	eP	P	01 14 19.1 +1.7
GOPC			e		01 14 53.6
GOPC			eS	S	01 20 31.6 -0.6
GOPC			e		01 21 29.8
GOPC			eSS	SS	01 23 36.7 -12
MSHR	Mys Shultsa	43.03 65	ceP	P	01 14 19.4 +1.6
PVCC	Panska Ves	43.04 306	eP	P	01 14 18.7 +0.9
PVCC	Panska Ves	43.04 306	eP	P	01 14 18.7 +0.9
PRU	Pruhonice	43.12 306	eP	P	01 14 19.7 +1.2
PRU			ex	x	01 16 51.6
PRU			eS	S	01 20 36.1 +1.8
PRU			eXS	sS	01 21 32.1 +4.6
PRU			eSS	SS	01 23 49.5 -2.3
PRU	Pruhonice	43.12 306	eP	P	01 14 19.7 +1.2
PRU			eS	S	01 20 36.1 +1.8
PRU			e		01 21 32.1
PRU			eSS	SS	01 23 49.5 -2.3
HFS	Hagfors	43.13 321	P	P	01 14 18.8 +0.4
	comp=Z,71nm,0.5s,baz=98,slow=11,SNR=563				
HFS			ScP	ScP	01 19 43.2 -0.7
	comp=Z,2.3nm,0.7s,baz=98,slow=2.1,SNR=3.7				
HFS			LR	LR	01 33 27.5
	comp=Z,180nm,18.6s,baz=90,slow=37				
PRA	Prague	43.18 306	eP	P	01 14 19.9 +0.9
PRA			eS	S	01 20 35.8 +0.7
PRA			eXS	sS	01 21 34.4 +6.1
PRA	Prague	43.18 306	eP	P	01 14 19.9 +0.9
PRA			eS	S	01 20 35.8 +0.7
PRA			e		01 21 34.4
TIXI	Tiksi	43.21 22	P	P	01 14 19.3 +0.4
	comp=Z,156nm,0.6s,baz=270,slow=6.2,SNR=80				
TIXI			PP	PP	01 16 02.1 +0.3
	comp=Z,28nm,0.6s,baz=259,slow=9.0,SNR=5.2				
TIXI			ScP	ScP	01 19 43.2 -0.7
	comp=Z,6.2nm,0.7s,baz=215,slow=2.0,SNR=3.4				
TIXI	Tiksi	43.21 22	eP	P	01 14 19.1 +0.3
	comp=Z,218nm,0.8s				
TIXI			eScP	ScP	01 19 43.2 -0.7
TIXI	Tiksi	43.21 22	d iP	P	01 14 19.2 +0.4
TIXI			pmax	pmax	
	comp=Z,194nm,0.9s				
USA0B	Ussuriysk Arra	43.24 63	eP	P	01 14 19.6 +0.1
	comp=Z,32nm,0.7s				
USA0B			ePP	PP	01 16 01.4 -1.1
USRK	Ussuriysk Ar.	43.24 63	P	P	01 14 19.4 -0.1
	comp=Z,27nm,0.6s,baz=272,slow=7.3				
USRK			PP	PP	01 16 04.0 +1.6
	baz=256,slow=4.3				
OZLJ	Ozalj	43.26 299	P	P	01 14 21.0 +1.5
PERS	Pernice	43.29 301	eP	P	01 14 21.1 +1.1
PERS			i pP	PcP	01 16 06.9 +0.5
PERS			eS	S	01 20 37.8 +0.9
SOKA	Soboth	43.34 301	i P	P	01 14 21.7 +1.3
	comp=Z,103nm,1.2s,SNR=83				
BRG	Berggiesshubel	43.39 307	⇓iP	P	01 14 21.8 +1.2
	comp=Z,90nm,1.0s				
BRG			i pP	pP	01 14 55.8 +4.5
	comp=Z,21nm,1.1s				
BRG			sP	sP	01 15 10.0 +3.3
BRG			ePP	PcP	01 16 05.9 -0.7
	comp=Z,28nm,1.4s				
BRG			SCP	ScP	01 19 44.3 -0.7
	comp=Z,6.4nm,1.1s				
BRG			S	S	01 20 39.0 +0.9
BRG			SS	SS	01 23 58.0 +1.0
BRG	Berggiesshubel	43.39 307	⇓iP	P	01 14 21.8 +1.2
BRG			i *PP	pP	01 14 55.8 +4.5
BRG			*SP	sP	01 15 10.0 +3.3
BRG			e		01 16 05.9
BRG			S	S	01 20 39.0 +0.9
BRG			SS	SS	01 23 58.0 +1.0
BRG			pmax	pmax	
	comp=Z,2.0nm,1.0s				
RGN	Rugen	43.41 312	eP	P	01 14 22.1 +1.4
	comp=Z,234nm,1.2s				
RGN			ePP	PP	01 16 01.9 -2.2
BOJS	Bojanci	43.43 299	i P	P	01 14 22.1 +1.1
BOJS			epP	PcP	01 16 07.4 +0.6
BOJS			eS	S	01 20 39.7 +0.9
BOJS			e		01 24 04.8
BOJS			e		01 25 07.6
MOR8	Moi Rana	43.43 329	eP	P	01 14 20.7 0.0
MOR8			IAmb	IAmb	01 14 21.4
	comp=Z,231nm,1.0s				
STEI	Steigen	43.45 332	eP	P	01 14 21.1 +0.3
STEI			IAmb	IAmb	01 14 22.5
	comp=Z,88nm,1.0s				
MATE	Matera	43.58 292	⇓iP	P	01 14 22.7 +0.4
MOA	Molln	43.64 303	i P	P	01 14 23.6 +0.9
	comp=Z,45nm,1.1s,SNR=38				
VISS	Visnje	43.65 300	eP	P	01 14 24.0 +1.3
VISS			epP	PcP	01 16 07.9 +0.3
VISS			eS	S	01 20 42.8 +0.7
VISS			e		01 24 06.2
OBKA	Obir	43.70 301	i P	P	01 14 24.7 +1.4
	comp=Z,75nm,1.1s,SNR=40				
GEC2	GERESS Array S	43.84 304	eP	P	01 14 25.6 +1.2
	comp=Z,62nm,1.1s				
GEC2			eScP	ScP	01 19 46.9 -0.2
GERES	GERESS Array B	43.84 304	P	P	01 14 25.3 +0.9
	comp=Z,19nm,0.9s,baz=74,slow=5.8,SNR=120				
GERES			ScP	ScP	01 19 46.9 -0.2
	comp=Z,1.2nm,0.8s,baz=88,slow=4.4,SNR=3.7				
GEA0	GERESS Array S	43.84 304	eP	P	01 14 24.7 +0.3
COP	Copenhagen	43.84 314	⇓iP	P	01 14 25.1 +1.0
	comp=Z,81nm,0.9s				
COP	Copenhagen	43.84 314	⇓iP	P	01 14 25.1 +1.0
COP			pmax	pmax	
	comp=Z,81nm,0.9s				
KHC	Kasperske Hory	43.87 305	eP	P	01 14 25.8 +1.2
KHC			ex	x	01 15 03.2
KHC			ex	x	01 16 57.9
KHC			eS	S	01 20 47.8 +2.5
KHC			ex	x	01 21 44.5
KHC			eSS	ScS	01 24 09.9 +0.9
KHC	Kasperske Hory	43.87 305	eP	P	01 14 25.3 +0.7
	comp=Z,20nm,0.8s				
KHC	Kasperske Hory	43.87 305	eP	P	01 14 25.8 +1.2
KHC			e		01 16 57.9
KHC			eS	S	01 20 47.8 +2.5
KHC			e		01 21 44.5
KHC			eSS	ScS	01 24 09.9 +0.9
NVLJ	Novalja	43.90 298	P	P	01 14 24.8 +0.1
CLL	Collm	43.92 308	⇓iP	P	01 14 25.6 +0.8
	comp=Z,55nm,0.9s				
CLL			epP	pP	01 14 55.0 -0.6
CLL			e(sP)	sP	01 15 15.0 +4.0
CLL			ePP	PP	01 16 10.0 +0.4
CLL			e		01 16 16.0
CLL			ePPP	PPP	01 17 00.0
CLL			eS	S	01 20 46.0 +0.2
CLL			esS	sS	01 21 44.0 +4.9
CLL			eSS	SS	01 24 00.0 -7.2
CLL			esSS		01 24 54.0
CLL	Collm	43.92 308	eP	P	01 14 25.6 +0.8
	comp=Z,45nm,0.8s				
CLL	Collm	43.92 308	⇓iP	P	01 14 25.6 +0.8
CLL			e*PP	pP	01 14 55.0 -0.6
CLL			eS	S	01 20 46.0 +0.2
CLL			pmax	pmax	
	comp=Z,28nm,0.9s				
TIP	Timpagrande	43.98 290	⇓iP	P	01 14 26.5 +0.9
TIP	Timpagrande	43.98 290	eP	P	01 14 26.2 +0.6
	comp=Z,54nm,1.1s				
TIP			ePcP	PcP	01 16 06.9 -2.0
KONS	Konsvik	44.01 330	eP	P	01 14 26.1 +0.9
KONS			IAmb	IAmb	01 14 26.7
	comp=Z,50nm,0.9s				
LOF	Lofoten	44.12 332	eP	P	01 14 25.8 -0.3
LOF			IAmb	IAmb	01 14 26.5
	comp=Z,100nm,1.1s				
MNSI	Mandailing Nat	44.13 142	P	P	01 14 26.7 -0.2
NC405	NORSAR Array S	44.14 322	eP	P	01 14 27.0 +0.5
JAVS	Javornik	44.16 300	eP	P	01 14 27.8 +0.8
JAVS			epP	PcP	01 16 09.3 -0.1
JAVS			eS	S	01 20 50.8 +1.2
NC602	NORSAR Array S	44.22 321	eP	P	01 14 27.2 +0.2
NC602			ePcP	PcP	01 16 09.3 +0.1
NC602	NORSAR Array S	44.22 321	eP	P	01 14 27.0 -0.1
NC602			IAmb	IAmb	01 14 28.1
	comp=Z,364nm,0.9s				
NSS	Namsos	44.24 327	eP	P	01 14 26.9 -0.3
NSS			IAmb	IAmb	01 14 28.2
	comp=Z,63nm,1.4s				
MYKA	Terra Mystica	44.29 301	i P	P	01 14 28.9 +0.9
	comp=Z,13nm,0.8s,SNR=15				
NC303	NORSAR Array S	44.31 322	eP	P	01 14 28.4 +0.5
WET	Wettzell	44.32 305	P	P	01 14 29.2 +1.1
WET			pmax	pmax	
	comp=Z,47nm,1.6s				
NB201	NORSAR Array S	44.35 322	eP	P	01 14 28.5 +0.3
NB2	NORSAR Subarra	44.38 322	P	P	01 14 28.3 -0.2
	comp=Z,140nm,1.2s,baz=91,slow=7.9				
NB2	NORSAR Subarra	44.38 322	P	P	01 14 28.3 -0.2
	baz=91,slow=7.9				
NOA	NORSAR Array B	44.38 322	P	P	01 14 28.5 0.0
	comp=Z,28nm,0.6s,baz=90,slow=7.7,SNR=230				
NOA			LR	LR	01 34 25.6
	comp=Z,165nm,19.9s,baz=85,slow=38				
NOA	NORSAR Array B	44.38 322	P	P	01 14 28.5 0.0
NOA			pmax	pmax	
	comp=Z,29nm,0.6s				
NOA			MLR	MLR	
	comp=Z,165nm,19.9s				
KBA	Koelnbreinsper	44.40 302	i P	P	01 14 29.6 +0.7
	comp=Z,20nm,0.7s				
KBA	Koelnbreinsper	44.40 302	P	P	01 14 31.0 +2.1
KBA			pmax	pmax	
	comp=Z,27nm,1.2s				
TRI	Trieste	44.40 300	eP	P	01 14 29.6 +0.8
	comp=Z,88nm,1.0s				
TRI	Trieste	44.40 300	eP	P	01 14 29.6 +0.8
TRI			pmax	pmax	
	comp=Z,88nm,1.0s				
NKC	Novy Kostel	44.42 306	eP	P	01 14 30.8 +1.9
NKC	Novy Kostel	44.42 306	eP	P	01 14 30.8 +1.9
CUC	Castrocucco	44.42 291	eP	P	01 14 30.3 +1.2
	comp=Z,61nm,0.9s				
NAO01	NORSAR Array S	44.54 322	eP	P	01 14 29.6 -0.1
NBO00	NORSAR Array S	44.60 322	eP	P	01 14 30.2 +0.1
NC204	NORSAR Array S	44.61 322	eP	P	01 14 30.6 +0.4
OSL	Oslo	44.62 320	eP	P	01 14 30.5 +0.2
OSL			IAmb	IAmb	01 14 31.5
	comp=Z,38nm,1.0s				
MOX	Moxa	44.88 307	P	P	01 14 33.5 +1.0
MOX			pmax	pmax	
	comp=Z,47nm,1.2s				
TBLU	Trondheim	44.91 325	eP	P	01 14 32.6 +0.1
TBLU			IAmb	IAmb	01 14 33.5
	comp=Z,26nm,0.7s				
CEL	Celeste	44.91 289	eP	P	01 14 33.0 +0.1
	comp=Z,55nm,1.0s				
GRNR	Gornyy	44.94 53	⇓iP	P	01 14 37.0 +4.1
GRNR			e		01 16 12.3
GRNR			pmax	pmax	
	comp=E,160nm,1.0s				
GRNR			pmax	pmax	
	comp=Z,290nm,1.0s				
ABTA	Abfaltersbach	45.03 301	i P	P	01 14 33.9 0.0
	comp=Z,16nm,0.8s,SNR=16				
GRB1	Grafenberg Arr	45.07 305	P	P	01 14 35.8 +1.8
GRB1			pmax	pmax	
	comp=Z,105nm,1.2s				
KONO	Kongsberg	45.20 320	eP	P	01 14 35.1 +0.4
	comp=Z,58nm,0.8s				
KONO	Kongsberg	45.20 320	d iP	P	01 14 35.2 +0.4
KONO			pmax	pmax	
	comp=Z,59nm,1.0s				
KONO	Kongsberg	45.20 320	eP	P	01 14 35.0 +0.1
KONO			IAmb	IAmb	01 14 36.0
	comp=Z,56nm,0.8s				
GRC1	Grafenberg Arr	45.23 305	P	P	01 14 36.9 +1.6
BKNI	Bangkinang	45.26 140	P	P	01 14 35.5 -0.3
GRF	Grafenberg Arr	45.29 306	P	P	01 14 37.6 +1.8
GRF			pmax	pmax	
	comp=Z,94nm,1.3s				
GRFO	Grafenberg	45.30 306	eP	P	01 14 37.6 +1.8
	comp=Z,99nm,1.1s				
GRFO	Grafenberg	45.30 306	eP	P	01 14 37.6 +1.8
GRFO			pmax	pmax	
	comp=Z,99nm,1.1s				
DOMB	Dombas	45.43 323	eP	P	01 14 36.7 0.0
DOMB			IAmb	IAmb	01 14 37.9
	comp=Z,53nm,0.9s				
AQU	L'Aquila	45.49 295	eP	P	01 14 38.9 +1.4
	comp=Z,38nm,1.1s				
AQU	L'Aquila	45.49 295	eP	P	01 14 38.9 +1.4
AQU			pmax	pmax	
	comp=Z,38nm,1.1s				
WTTA	Wattenberg	45.50 302	i P	P	01 14 38.0 +0.4
	comp=Z,52nm,1.3s,SNR=13				
WTTA			i PcP	PcP	01 16 14.1 -0.1
	comp=Z,16nm,0.8s,SNR=4.5				
MYKOM	Kota Tinggi	45.50 136	eP	P	01 14 38.1 +0.3
	comp=Z,37nm,0.6s				
WATA	Walderalm	45.53 302	i P	P	01 14 38.1 +0.3
	comp=Z,12nm,0.7s,SNR=9.6				
WATA			i PcP	PcP	01 16 14.2 0.0
	comp=Z,11nm,0.7s,SNR=5.5				
FUR	Furstenfeldbru	45.55 304	P	P	01 14 39.7 +1.9
MUD	Monsted U'grnd	45.61 315	i P	P	01 14 39.4 +1.3
	comp=Z,81nm,1.2s				
MUD	Monsted U'grnd	45.61 315	i P	P	01 14 39.4 +1.3
MUD			pmax	pmax	
	comp=Z,81nm,1.2s				
HOMB	Homborsund	45.83 318	eP	P	01 14 39.6 -0.2
HOMB			IAmb	IAmb	01 14 41.0
	comp=Z,62nm,1.0s				
MOTA	Moosalm	45.84 302	i P	P	01 14 40.4 +0.1
	comp=Z,36nm,1.0s,SNR=29				
MOTA			i PcP	PcP	01 16 15.7 +0.4
	comp=Z,21nm,0.9s,SNR=5.7				
JNU	Nakatsue	45.88 78	eP	P	01 14 41.2 +0.6
	comp=Z,189nm,1.1s				
HSPB	Hornsund (broa	46.01 344	eP	P	01 14 42.7 +1.7
HSPB			IAmb	IAmb	01 14 43.5
	comp=Z,178nm,1.0s				
RETA	Reutte	46.03 303	i P	P	01 14 42.0 +0.3
	comp=Z,50nm,1.5s,SNR=26				
FETA	Feichten	46.16 302	i P	P	01 14 42.9 +0.1
	comp=Z,36nm,1.2s,SNR=19				
FETA			i PcP	PcP	01 16 17.1 +0.7
	comp=Z,39nm,1.1s,SNR=10				
TEY	Ternei	46.24 61	eP	P	01 14 41.0 -2.2
TEY			pmax	pmax	
	comp=Z,30nm,0.7s				

SPA0	Spitsbergen Ar	46.29	346	eP	P	01 14 45.1	+1.9
SPA0	Spitsbergen Ar	46.29	346	eP	P	01 14 44.6	+1.5
SPA0					IAmb	IAmb	01 14 45.7	
	comp=Z,210nm,1.0s						
SPITS	Spitsbergen Ar	46.29	346	P	P	01 14 44.7	+1.5
	comp=Z,92nm,0.7s,baz=83,slow=6.8,SNR=54						
SPITS				LR	LR	01 38 28.6	
	comp=Z,140nm,18.0s,baz=10.0,slow=41						
SPITS	Spitsbergen Ar	46.29	346	P	P	01 14 44.7	+1.5
SPITS				pmax	pmax		
	comp=Z,92nm,0.7s						
SPITS				MLR	MLR		
	comp=Z,140nm,18.0s						
AKN	Aaknes	46.40	323	eP	P	01 14 46.0	+1.8
AKN				IAmb	IAmb	01 14 48.1	
	comp=Z,20nm,0.8s						
SNART	Snartemo	46.51	318	eP	P	01 14 45.8	+0.7
SNART				IAmb	IAmb	01 14 46.9	
	comp=Z,17nm,0.5s						
FUORN	Ofenpass-Fuorn	46.56	302	eP	P	01 14 46.2	+0.1
	comp=Z,39nm,1.0s						
FUORN				eS	S	01 21 27.8	+3.3
JOW	Kunigami	46.59	88	P	P	01 14 46.0	-0.2
	comp=Z,73nm,0.5s,baz=291,slow=8.2,SNR=30						
JOW	Kunigami	46.59	88	eP	P	01 14 45.2	-1.0
	comp=Z,99nm,0.6s						
DAVA	Damuels	46.66	303	i P	P	01 14 47.4	+0.7
	comp=Z,77nm,0.6s,SNR=68						
ODD1	Odda	46.68	320	eP	P	01 14 47.6	+1.0
STU	Stuttgart	46.78	305	eP	P	01 14 47.7	+0.3
	comp=Z,58nm,1.0s						
STU	Stuttgart	46.78	305	eP	P	01 14 47.7	+0.3
STU				pmax	pmax		
	comp=Z,58nm,1.0s						
DAVOX	Davos/Dischmat	46.78	302	P	P	01 14 48.0	+0.3
	comp=Z,31nm,0.6s,baz=111,slow=3.8,SNR=74						
DAVOX				LR	LR	01 38 38.3	
	comp=Z,97nm,18.8s,baz=80,slow=41						
BLS5	Blasjo	46.81	320	eP	P	01 14 48.4	+0.9
BLS5				IAmb	IAmb	01 14 49.2	
	comp=Z,69nm,1.3s						
VLC	Villacollemand	47.11	298	eP	P	01 14 51.2	+1.1
	comp=Z,64nm,0.8s						
CLTB	Caltabellotta	47.13	289	eP	P	01 14 50.1	-0.3
	comp=Z,39nm,1.3s						
NKL	Nikolayevsk	47.15	49	i P	P	01 14 50.0	-0.1
NKL				pmax	pmax		
	comp=Z,800nm,2.0s						
NKL				pmax	pmax		
	comp=N,34nm,0.8s						
NKL				pmax	pmax		
	comp=Z,230nm,0.8s						
TUE	Stuetta	47.21	302	eP	P	01 14 50.8	-0.3
	comp=Z,18nm,0.9s						
BER	Bergen	47.29	321	P	P	01 14 52.8	+1.6
BER				pmax	pmax		
	comp=Z,24nm,0.9s						
BER	Bergen	47.29	321	eP	P	01 14 52.0	+0.8
ASK	Askoy	47.35	321	eP	P	01 14 52.8	+1.2
ASK				IAmb	IAmb	01 14 53.2	
	comp=Z,48nm,0.9s						
KBS	Kingsbay	47.38	347	eP	P	01 14 53.1	+1.4
	comp=Z,146nm,0.8s						
KBS	Kingsbay	47.38	347	eP	P	01 14 53.1	+1.4
KBS				pmax	pmax		
	comp=Z,146nm,0.8s						
KBS	Kingsbay	47.38	347	eP	P	01 14 52.6	+1.0
KBS				IAmb	IAmb	01 14 54.0	
	comp=Z,152nm,0.8s						
BFO	Black Forest	47.44	304	eP	P	01 14 53.1	+0.6
	comp=Z,35nm,1.1s						
BFO	Black Forest	47.44	304	i P	P	01 14 53.3	+0.8
BUG	Bochum--Univer	47.44	309	P	P	01 14 53.9	+1.4
BUG				pmax	pmax		
	comp=Z,65nm,1.4s						
SLE	Schleitheim	47.46	304	P	P	01 14 54.1	+1.3
SLE				pmax	pmax		
	comp=Z,23nm,1.5s						
KRJI	Kerinci	47.55	141	P	P	01 14 53.8	0.0
LANF	Langenberg	47.63	305	P	P	01 14 55.2	+1.2
CDF	Champ du Feu	48.10	305	eP	P	01 14 57.5	-0.2
CDF				pmax	pmax		
	comp=Z,43nm,1.2s						
ECH	Echery	48.22	304	eP	P	01 14 59.1	+0.5
	comp=Z,38nm,1.4s						
ECH	Echery	48.22	304	eP	P	01 14 59.1	+0.5
ECH				pmax	pmax		
	comp=Z,38nm,1.4s						
MOF	Molkenrain	48.33	304	P	P	01 15 00.3	+0.8
MEM	Membach	48.40	308	⇓P	P	01 15 00.5	+0.7
	comp=Z,29nm,1.2s						
MEM	Membach	48.40	308	P	P	01 15 01.0	+1.2
MEM				pmax	pmax		
	comp=Z,44nm,1.1s						
WLF	Walferdange	48.52	307	⇑P	P	01 15 02.1	+1.2
	comp=Z,57nm,1.3s						
WLF	Walferdange	48.52	307	eP	P	01 15 02.2	+1.4
	comp=Z,67nm,1.0s						
WLF	Walferdange	48.52	307	eP	P	01 15 02.2	+1.4
WLF				pmax	pmax		
	comp=Z,67nm,1.0s						
HINF	Hinteralfeld	48.52	304	eP	P	01 15 00.6	-0.3
HINF				pmax	pmax		
	comp=Z,54nm,1.1s						
PGF	Pioggiola	48.55	297	eP	P	01 15 00.9	-0.4
PGF				pmax	pmax		
	comp=Z,62nm,1.2s						
BEBN	Eben Emael	48.56	308	⇑P	P	01 15 01.3	+0.2
SENIN	Lac Senin/Sane	48.61	302	eP	P	01 15 02.1	+0.3
	comp=Z,44nm,1.0s						
SENIN				epP	pP	01 15 33.5	+0.5
HAU	Haudompre	48.80	304	eP	P	01 15 02.8	-0.2
HAU				pmax	pmax		
	comp=Z,57nm,1.0s						
MASI	Maura Aman, Be	48.84	141	P	P	01 15 03.0	-0.7
	comp=Z,294nm,1.0s						
BCLA	Clavier	48.88	308	⇑P	P	01 15 04.1	+0.5
SAOF	Saorge	49.12	299	P	P	01 15 06.9	+1.4
SAOF				pmax	pmax		
	comp=Z,54nm,1.1s						
LPG	La Plagne	49.22	301	eP	P	01 15 07.6	+1.0
LPG				pmax	pmax		
	comp=Z,80nm,1.2s						
LPL	La Plagne	49.23	301	eP	P	01 15 06.7	+0.2
LPL				pmax	pmax		
	comp=Z,107nm,1.0s						
SBF	Sospel	49.23	299	eP	P	01 15 07.5	+1.1
SBF				pmax	pmax		
	comp=Z,176nm,1.2s						
GIVF	Givet	49.25	307	eP	P	01 15 06.7	+0.3
GIVF				pmax	pmax		
	comp=Z,89nm,1.3s						
UCC	Uccle	49.37	308	⇓P	P	01 15 07.7	+0.4
UCC	Uccle	49.37	308	eP	P	01 15 08.3	+1.1
	comp=Z,18nm,1.1s						
BNI	Bardonecchia	49.40	301	eP	P	01 15 08.3	+0.5
	comp=Z,71nm,1.2s						
BNI				epP	pP	01 15 41.3	+2.2
BNI	Bardonecchia	49.40	301	eP	P	01 15 08.3	+0.5
BNI				e*PP	pP	01 15 41.3	+2.2
BNI				pmax	pmax		
	comp=Z,71nm,1.2s						
DOU	Dourbes	49.40	307	⇓P	P	01 15 08.5	+1.0
MBDF	Montbardon	49.43	300	eP	P	01 15 07.4	-0.6
MBDF				pmax	pmax		
	comp=Z,36nm,1.0s						
SNF	Seneffe	49.49	308	⇓P	P	01 15 08.4	+0.3
KSM	Kuching	49.52	129	eP	P	01 15 08.3	-0.5
	comp=Z,29nm,0.8s						
BAIF	Baives	49.65	307	eP	P	01 15 09.7	+0.3
BAIF				pmax	pmax		
	comp=Z,90nm,1.2s						
INU	Inuyama	49.69	73	eP	P	01 15 09.9	0.0
	comp=Z,65nm,1.0s						
YSS	Yuzh-Sakhalins	49.86	57	eP	P	01 15 11.6	+0.6
	comp=Z,157nm,0.9s						
YSS	Yuzh-Sakhalins	49.86	57κ	eP	P	01 15 11.4	+0.4
YSS				e*PP	pP	01 15 38.8	-3.6
YSS				e		01 16 30.6	
YSS				e		01 17 11.0	
YSS				ePPP	PPP	01 18 06.2	
YSS				eS	S	01 22 09.0	-1.2
YSS				e		01 24 46.0	
YSS				eSS	SS	01 25 44.0	-0.1
YSS				eSSS	SSS	01 27 23.0	
YSS				pmax	pmax		
	comp=Z,150nm,0.9s						
YSS				pmax	pmax		
	comp=E,50nm,0.7s						
YSS				pmax	pmax		
	comp=Z,100nm,3.3s						
YSS				smax	smax		
	comp=E,200nm,8.3s						
YSS				smax	smax		
	comp=N,100nm,13.0s						
YSS				MLR	MLR		
	comp=Z,200nm,12.0s						
YSS				MLR	MLR		
	comp=N,200nm,14.0s						
YSS				MLR	MLR		
	comp=E,100nm,14.0s						
FRF	La Foret Royal	49.87	299	eP	P	01 15 10.9	-0.3
FRF				pmax	pmax		
	comp=Z,78nm,1.2s						
KKM	Kota Kinabalu	49.94	119	eP	P	01 15 13.1	+1.0
	comp=Z,84nm,0.7s						
SBUM	Sibu	49.96	126	eP	P	01 15 13.2	+1.0
	comp=Z,18nm,0.9s						
ORIF	Oris-en-Rattie	49.98	301	eP	P	01 15 11.3	-0.8
ORIF				pmax	pmax		
	comp=Z,35nm,1.3s						
MJB9	Matsu-Tunnel	50.11	71	eP	P	01 15 12.9	-0.2
	comp=Z,105nm,0.8s						
MAJO	Matsushiro	50.11	71	eP	P	01 15 12.9	-0.3
	comp=Z,105nm,0.8s						
MAJO				eScP	ScP	01 20 12.2	-1.3
MAJO	Matsushiro	50.11	71d	iP	P	01 15 12.7	-0.4
MAJO				pmax	pmax		
	comp=Z,98nm,0.9s						
MAT	Matsushiro	50.11	71	P	P	01 15 12.7	-0.4
MAT				S	S	01 22 10.6	-3.5
MJAR	Matsushiro Arr	50.11	71	P	P	01 15 13.2	+0.1
	comp=Z,68nm,0.8s,baz=287,slow=10,SNR=173						
MJAR				ScP	ScP	01 20 12.2	-1.3
	comp=Z,6.0nm,0.9s,baz=287,slow=5.4,SNR=8.2						
TAMR	Tamra	50.37	290	eP	P	01 15 16.5	+1.5
	comp=Z,44nm,1.2s						
ASAJ	Asahikawa	50.60	60	P	P	01 15 16.7	+0.1
	comp=Z,21nm,0.6s,baz=288,slow=14,SNR=23						
ASAJ	Asahikawa	50.60	60	eP	P	01 15 16.0	-0.7
	comp=Z,34nm,0.8s						
KEST	Kesra	50.70	288	P	P	01 15 18.7	+1.1
	comp=Z,27nm,1.0s,baz=278,slow=2.1,SNR=19						
KEST	Kesra	50.70	288	eP	P	01 15 18.9	+1.2
	comp=Z,30nm,0.9s						
VIVF	Saint-Julien-l	50.81	301	eP	P	01 15 18.2	-0.1
VIVF				pmax	pmax		
	comp=Z,102nm,1.7s						
SMF	Signal de Mont	50.82	303	eP	P	01 15 17.8	-0.5
SMF				pmax	pmax		
	comp=Z,112nm,1.3s						
AVF	Avril sur Loir	51.10	304	eP	P	01 15 19.5	-0.8
AVF				pmax	pmax		
	comp=Z,68nm,0.8s						
THTN	Thala	51.26	288	eP	P	01 15 23.1	+1.2
	comp=Z,14nm,0.7s						
STKI	Sintang	51.34	129	P	P	01 15 23.6	+1.1
MA2	Magadan	51.48	39	P	P	01 15 23.6	+0.6
	comp=Z,30nm,0.4s,baz=290,slow=7.4,SNR=29						
MA2				PcP	PcP	01 16 35.8	+0.5
	comp=Z,40nm,0.9s,baz=275,slow=2.2,SNR=6.6						
MA2				LR	LR	01 37 01.7	
	comp=Z,98nm,18.7s,baz=290,slow=36						
MA2	Magadan	51.48	39	eP	P	01 15 23.6	+0.6
	comp=Z,61nm,0.8s						
MA2				ePcP	PcP	01 16 35.9	+0.6
MA2	Magadan	51.48	39	i P	P	01 15 23.6	+0.6
MA2				i SP		01 15 57.8	
MA2				i AP	sP	01 16 13.0	+3.2
MA2				i PCP	PcP	01 16 35.4	+0.1
MA2				i PP	PP	01 17 21.0	-0.2
MA2				pmax	pmax		
	comp=Z,187nm,1.7s						
BGF	Bois d'Agland	51.50	303	eP	P	01 15 22.7	-0.6
BGF				pmax	pmax		
	comp=Z,41nm,1.1s						
SEY	Seymchan	51.59	35	P	P	01 15 24.6	+0.8
	comp=Z,72nm,0.9s,baz=281,slow=9.6,SNR=113						
ERM	Erimo	51.69	63	eP	P	01 15 24.9	+0.1
	comp=Z,68nm,1.2s						
ERM	Erimo	51.69	63c	iP	P	01 15 24.7	-0.1
ERM				pmax	pmax		
	comp=Z,40nm,1.0s						
TCF	Toulx Ste Croi	52.00	303	eP	P	01 15 27.0	-0.1
TCF				pmax	pmax		
	comp=Z,90nm,1.2s						
MYLDM	Lahad Datu	52.13	118	eP	P	01 15 30.7	+2.3
	comp=Z,74nm,1.2s						
EKA	Eskdalemuir Ar	52.64	316	P	P	01 15 31.7	+0.1
	comp=Z,18nm,0.6s,baz=83,slow=7.8,SNR=102						
EKA	Eskdalemuir Ar	52.64	316	P	P	01 15 31.7	+0.1
EKA				pmax	pmax		
	comp=Z,16nm,0.6s						
ESK	Eskdalemuir	52.67	315	eP	P	01 15 32.1	+0.3
	comp=Z,50nm,1.0s						
ESK	Eskdalemuir	52.67	315	eP	P	01 15 32.1	+0.3
ESK				pmax	pmax		
	comp=Z,50nm,1.0s						
RJF	Les Rejaudoux	52.78	302	eP	P	01 15 33.1	+0.3
RJF				pmax	pmax		
	comp=Z,95nm,1.4s						
FLN	La Foliniere	52.95	307	eP	P	01 15 33.2	-0.8
FLN				pmax	pmax		
	comp=Z,49nm,1.2s						
GRR	Gorron	53.31	307	eP	P	01 15 33.9	-2.7
GRR				pmax	pmax		
	comp=Z,81nm,1.0s						
DAG	Danmarks Havn	53.66	343	⇓iP	P	01 15 39.6	+0.8
	comp=Z,160nm,0.8s						
DAG	Danmarks Havn	53.66	343	⇓iP	P	01 15 39.6	+0.8
DAG				pmax	pmax		
	comp=Z,160nm,0.8s						
ROSF	Rostrenen	54.84	307	eP	P	01 15 47.1	-0.6
ROSF				pmax	pmax		
	comp=Z,91nm,1.2s						
QUIF	Quistinic	54.92	307	eP	P	01 15 47.6	-0.7
QUIF				pmax	pmax		
	comp=Z,49nm,1.0s						
ETSF	Etsaut	55.04	300	eP	P	01 15 49.3	-0.1
ETSF				pmax	pmax		
	comp=Z,10.0nm,0.5s						
SJPF	Ste Jean	55.41	301	eP	P	01 15 52.2	+0.3
SJPF				pmax	pmax		
	comp=Z,33nm,1.5s						
MBAR	Mbarara	55.48	236	eP	P	01 15 52.1	-0.8
	comp=Z,12nm,0.8s						
MBAR	Mbarara	55.48	236	eP	P	01 15 52.1	-0.8
MBAR				pmax	pmax		
	comp=Z,12nm,0.8s						
MPSI	Mapaga	56.59	121	P	P	01 16 01.9	+1.3
	comp=Z,46nm,1.1s,comp=Z,406nm						
SKR	Severo-Kuril's	57.00	49	eP	P	01 16 02.5	-0.5
SKR				eS	S	01 23 53.0	+6.5
SKR				pmax	pmax		
	comp=Z,134nm,1.1s						
SKR				MLR	MLR		
	comp=Z,200nm,16.0s						
SKR				MLR	MLR		
	comp=Z,200nm,17.0s						
PEA1	Petropavlovsk-	57.02	46	eP	P	01 16 02.8	-0.4
PEA0B	Petropavlovsk-	57.02	46	eP	P	01 16 03.8	+0.6
	comp=Z,61nm,1.0s						
PETK	Petropavlovsk-	57.02	46	P	P	01 16 02.8	-0.4
	comp=Z,34nm,0.8s,baz=333,slow=1.6						
PETK	Petropavlovsk-	57.02	46	eP	P	01 16 02.6	-0.6
PCI	Palu	57.46	122	P	P	01 16 07.4	+0.7
	comp=Z,80nm,1.0s						
PET	Petropavlovsk	57.59	45	eP	P	01 16 06.3	-0.8
	comp=Z,72nm,1.0s						
PET	Petropavlovsk	57.59	45κ	iP	P	01 16 05.9	-1.2
PET				e		01 16 57.9	
PET				e		01 18 15.7	
PET				eS	S	01 23 50.6	-3.5
PET				pmax	pmax		
	comp=Z,200nm,3.8s						
PET				pmax	pmax		
	comp=Z,83nm,1.1s						
PET				pmax	pmax		
	comp=Z,100nm,16.9s						
VAL	Valentia	57.72	313	P	P	01 16 10.3	+2.2
VAL				pmax	pmax		
	comp=Z,47nm,1.3s						
MRSI	Marisa	57.88	119	P	P	01 16 10.2	+0.5
	comp=Z,88nm,0.9s,comp=Z,961nm						
BORG	Borgarnes	58.22	330	LR	LR	01 40 10.8	
	comp=Z,104nm,21.3s,baz=65,slow=35						
BORG	Borgarnes	58.22	330	eP	P	01 16 13.9	+2.5
	comp=Z,37nm,0.9s						
BORG	Borgarnes	58.22	330	eP	P	01 16 13.9	+2.5
BORG				pmax	pmax		
	comp=Z,37nm,0.9s						
ES19	SONSECA Array	58.64	298	eP	P	01 16 15.2	+0.4
APSI	Ampana	58.68	120	P	P	01 16 15.6	+0.4
	comp=Z,56nm,1.1s,comp=Z,572nm						
ESDC	Sonseca Array	58.70	298	P	P	01 16 15.5	+0.3
	comp=Z,6.0nm,0.5s,baz=56,slow=7.1,SNR=78						
ESLA	Sonseca Array	58.70	298	eP	P	01 16 15.6	+0.4
	comp=Z,22nm,1.1s						
PAB	San Pablo	59.02	298	eP	P	01 16 18.1	+0.7
	comp=Z,41nm,1.4s						
PAB	San Pablo	59.02	298	eP	P	01 16 18.1	+0.7
PAB				pmax	pmax		
	comp=Z,41nm,1.4s						
TTSI	Tana Toraja	59.03	123	P	P	01 16 17.3	-0.3
	comp=Z,64nm,0.9s						
PBRG	Braganca	59.67	301	eP	P	01 16 22.6	+0.8
	comp=Z,30nm,2.1s						
TAM	Tamanrasset	59.70	276	eP	P	01 16 22.9	+0.5
	comp=Z,5.0nm,0.7s						
TAM	Tamanrasset	59.70	276	eP	P	01 16 22.9	+0.5
TAM				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SUMG	Summit	60.11	341	eP	P	01 16 26.0	+1.3
	comp=Z,574nm,0.9s						
SUMG	Summit	60.11	341	⇓iP	P	01 16 26.2	+1.5
	comp=Z,456nm,0.9s						
SUMG	Summit	60.11	341	eP	P	01 16 26.0	+1.3
MVO	Moncorvo	60.14	301	eP	P	01 16 25.6	+0.5
	comp=Z,37nm,1.3s						
PVRL	Vila Real	60.56	301	eP	P	01 16 28.3	+0.4
	comp=Z,32nm,1.7s						
POLO	Lamas de Olo	60.57	301	eP	P	01 16 28.6	+0.6
	comp=Z,16nm,2.0s						
PCAB	Cabril	60.57	302	eP	P	01 16 28.9	+1.0
	comp=Z,83nm,1.7s						
PGAV	Gavieira, Arco	60.62	302	eP	P	01 16 29.3	+1.0
	comp=Z,68nm,1.4s						
MTE	Manteigas	60.84	300	eP	P	01 16 30.7	+0.9
	comp=Z,61nm,1.6s						
MTE	Manteigas	60.84	300	eP	P	01 16 30.7	+0.9
	comp=Z,42nm,1.1s						
MTE				epP	pP	01 17 02.3	-0.1
PCBR	Castelo Branco	61.05	300	eP	P	01 16 32.2	+1.1
	comp=Z,33nm,1.7s						
PMRV	Marv??o	61.17	299	eP	P	01 16 32.7	+0.7
	comp=Z,40nm,1.5s						
PBAR	Barrancos	61.51	298	eP	P	01 16 35.0	+0.7
	comp=Z,130nm,1.6s						
COI	Coimbra	61.51	300	eP	P	01 16 35.4	+1.2
	comp=Z,72nm,1.6s						
COI	Coimbra	61.51	300	eP	P	01 16 34.6	+0.4
PESTR	Estremoz	61.57	299	eP	P	01 16 35.4	+0.7
	comp=Z,24nm,1.9s						
PESTR	Estremoz	61.57	299	eP	P	01 16 35.6	+0.9
	comp=Z,12nm,1.2s						
PTOM	Tomar	61.79	300	eP	P	01 16 37.0	+0.9
	comp=Z,73nm,1.4s						
PMTG	Montargil	61.91	299	eP	P	01 16 35.6	-1.4
	comp=Z,27nm,1.5s						
EVO	Evora	62.02	298	eP	P	01 16 38.3	+0.6
	comp=Z,21nm,1.2s						
ALMR	Almeirim	62.12	299	eP	P	01 16 38.9	+0.6
ALMR				AMb	AMB	01 16 40.5	
	comp=Z,71nm,0.9s						
ALMR	Almeirim	62.12	299	eP	P	01 16 39.6	+1.3
	comp=Z,72nm,1.3s						
PBEJ	Beja	62.16	298	eP	P	01 16 40.9	+2.3
	comp=Z,40nm,1.4s						
ABPO	Ambohimpanom	62.31	209	eP	P	01 16 40.3	+0.4
	comp=Z,13nm,0.8s						
ABPO	Ambohimpanom	62.31	209	eP	P	01 16 40.3	+0.4
ABPO				pmax	pmax		
	comp=Z,13nm,0.8s						
PVAQ	Vaqueiros	62.35	297	eP	P	01 16 40.7	+0.8
	comp=Z,54nm,1.5s						
PCVE	Castro Verde	62.47	298	eP	P	01 16 41.3	+0.6
	comp=Z,24nm,1.1s						
MESJ	Messejana	62.49	298	eP	P	01 16 41.3	+0.5
MESJ	Messejana	62.49	298	eP	P	01 16 41.7	+0.9
	comp=Z,33nm,1.5s						
PBDV	Barranco-do-Ve	62.58	297	eP	P	01 16 42.5	+1.1
	comp=Z,73nm,1.1s						
PNCL	Nicolau / Gran	62.58	298	eP	P	01 16 42.8	+1.4
	comp=Z,33nm,1.6s						
PMAFR	Mafra	62.70	299	eP	P	01 16 43.2	+1.0
	comp=Z,63nm,1.2s						
KULLO	Kullorsuaq	62.85	347	⇓iP	P	01 16 43.4	+0.8
	comp=Z,77nm,0.9s						
KULLO	Kullorsuaq	62.85	347	⇓iP	P	01 16 43.4	+0.8
KULLO				pmax	pmax		
	comp=Z,77nm,0.9s						
ANGG	Ammassalik, Gr	63.80	335	eP	P	01 16 50.0	+1.1
	comp=Z,147nm,0.9s						
EDFI	Ende, Flores	64.55	126	P	P	01 16 51.7	-3.0
	comp=Z,31nm,0.9s						
ILULI	Ilulissat	65.46	341	eP	P	01 17 00.6	+0.9
	comp=Z,160nm,0.7s						
ILULI	Ilulissat	65.46	341	⇓iP	P	01 17 00.5	+0.9
	comp=Z,157nm,0.7s						
ILULI	Ilulissat	65.46	341	eP	P	01 17 00.6	+0.9
ILULI				pmax	pmax		
	comp=Z,160nm,0.7s						
RDOG	Red Dog Mine	65.76	20	eP	P	01 17 02.3	+0.6
	comp=Z,34nm,1.0s						
SMY	Shemya	66.05	41	eP	P	01 17 03.7	0.0
	comp=Z,205nm,1.1s						
SMY	Shemya	66.05	41	eP	P	01 17 03.7	0.0
SMY				pmax	pmax		
	comp=Z,205nm,1.1s						
GUMO	Guam	66.77	91	eP	P	01 17 10.1	+1.2
	comp=Z,99nm,1.0s						
SFJD	Kangerlussuaq	66.91	339	eP	P	01 17 09.4	+0.5
	comp=Z,84nm,1.0s						
SFJD	Kangerlussuaq	66.91	339	⇓iP	P	01 17 09.4	+0.5
	comp=Z,66nm,0.9s						
SFJD	Kangerlussuaq	66.91	339	⇓iP	P	01 17 09.4	+0.5
SFJD				pmax	pmax		
	comp=Z,66nm,0.9s						
BATI	Baumata	66.91	125	P	P	01 17 08.5	-1.2
	comp=Z,35nm,0.7s						
SOEI	Soe	66.96	124	P	P	01 17 08.9	-1.2
SOEI	Soe	66.96	124	eP	P	01 17 09.0	-1.2
	comp=Z,102nm,1.5s						
SOEI				eS	S	01 25 54.6	+1.8
TOA1	Torodi Ar. Sit	68.10	270	eP	P	01 17 16.7	-0.6
TOA0	Torodi Ar. Sit	68.10	270	eP	P	01 17 16.7	-0.6
TOA0				epP	pP	01 17 52.1	+1.6
TORD	Torodi Ar. Bea	68.10	270	P	P	01 17 16.7	-0.6
	comp=Z,12nm,0.4s,baz=47,slow=5.5						
TORD				LR	LR	01 50 03.8	
	comp=Z,42nm,18.4s,baz=340,slow=38						
LSZ	Lusaka	68.41	228	eP	P	01 17 18.1	-1.1
	comp=Z,9.8nm,0.7s						
LSZ	Lusaka	68.41	228	eP	P	01 17 18.1	-1.1
LSZ				pmax	pmax		
	comp=Z,10.0nm,0.7s						
TOLK	Toolik Lake Re	68.56	16	P	P	01 17 19.9	+0.6
	baz=324						
TOLK	Toolik Lake Re	68.56	16	eP	P	01 17 19.9	+0.6
	comp=Z,151nm,0.6s						
NRS	Narsarsuaq	69.34	333	⇓iP	P	01 17 24.7	+0.5
	comp=Z,98nm,0.9s						
NRS	Narsarsuaq	69.34	333	⇓iP	P	01 17 24.7	+0.5
NRS				pmax	pmax		
	comp=Z,98nm,0.9s						
COLD	Coldfoot	69.57	17	eP	P	01 17 26.2	+0.6
	comp=Z,124nm,1.0s						
FYU	Fort Yukon	71.22	15	eP	P	01 17 36.8	+1.3
	comp=Z,275nm,1.4s						
MLY	Manley	71.24	18	eP	P	01 17 36.1	+0.4
	comp=Z,57nm,1.0s						
INK	Inuvik	71.72	10	P	P	01 17 39.2	+0.7
	comp=Z,68nm,0.5s,baz=344,slow=6.3,SNR=133						
INK	Inuvik	71.72	10	eP	P	01 17 39.1	+0.7
	comp=Z,100nm,0.8s						
KOWA	Kowa	71.80	274	LR	LR	01 54 15.2	
	comp=Z,53nm,19.2s,baz=61,slow=40						
KOWA	Kowa	71.80	274	eP	P	01 17 39.9	0.0

	comp=Z,22nm,0.9s						
MDM	**Murphy Dome**	**71.90**	**18**	*e*P	**P**	**01 17 40.2**	**+0.4**
	comp=Z,148nm,1.3s						
MDM				*e*PP	**PP**	**01 20 18.8**	**-1.6**
BPAW	**Bear Paw Mtn.**	**71.93**	**19**	*e*P	**P**	**01 17 40.0**	**+0.1**
	comp=Z,76nm,1.0s						
BPAW				*e*PP	**PP**	**01 20 16.3**	**-4.4**
COLA	**College**	**72.06**	**17**	*e*P	**P**	**01 17 41.1**	**+0.5**
	comp=Z,172nm,0.9s						
COLA	**College**	**72.06**	**17**	*e*P	**P**	**01 17 41.1**	**+0.5**
COLA				pmax	pmax		
	comp=Z,172nm,0.9s						
BWN	**Browne**	**72.26**	**18**	*e*P	**P**	**01 17 42.7**	**+0.8**
	comp=Z,189nm,1.0s						
CCB	**Clear Creek Bu**	**72.27**	**18**	*e*P	**P**	**01 17 41.4**	**-0.4**
	comp=Z,78nm,1.4s						
CCB				*e*PP	PP	01 20 14.7	-8.8
WRH	**Wood River Hil**	**72.34**	**18**	*e*P	**P**	**01 17 41.9**	**-0.4**
	comp=Z,44nm,1.0s						
IL1	**Eielson Array**	**72.38**	**17**	*e*P	**P**	**01 17 41.0**	**-1.5**
ILAR	**Eielson Array**	**72.38**	**17**	P	**P**	**01 17 42.1**	**-0.4**
	comp=Z,56nm,0.9s,baz=318,slow=4.8,SNR=290						
ILAR				PP	**PP**	**01 20 26.2**	**+1.8**
	comp=Z,5.2nm,0.9s,baz=314,slow=8.4,SNR=5.8						
ILAR				LR	LR	01 53 11.8	
	comp=Z,79nm,18.9s,baz=320,slow=39						
ILB	**Eielson Array**	**72.38**	**17**	*e*P	**P**	**01 17 42.1**	**-0.4**
ILB				*e*PP	**PP**	**01 20 26.2**	**+1.8**
TRF	**Thorofare Moun**	**72.64**	**19**	*e*P	**P**	**01 17 43.8**	**-0.5**
	comp=Z,20nm,0.8s						
TRF				*e*PP	**PP**	**01 20 22.0**	**-5.0**
HDA	**Harding Lake**	**72.67**	**17**	*e*P	**P**	**01 17 43.7**	**-0.6**
	comp=Z,65nm,1.1s						
MCK	**McKinley**	**72.75**	**18**	*e*P	**P**	**01 17 44.6**	**-0.2**
	comp=Z,59nm,1.2s						
MCK	**McKinley**	**72.75**	**18**	*e*P	**P**	**01 17 44.6**	**-0.2**
MCK				pmax	pmax		
	comp=Z,59nm,1.2s						
SVW2	**Sparrevohn**	**73.04**	**23**	*e*P	**P**	**01 17 47.7**	**+1.2**
	comp=Z,59nm,1.1s						
GENI	**Genyem**	**73.18**	**107**	P	**P**	**01 17 48.8**	**+0.8**
SKT	**Skwentna**	**73.51**	**21**	*e*P	**P**	**01 17 48.9**	**-0.4**
	comp=Z,187nm,1.0s						
EGAK	**Eagle**	**73.61**	**15**	*e*P	**P**	**01 17 49.8**	**0.0**
	comp=Z,81nm,1.2s						
DHY	**Denali Highway**	**73.69**	**18**	*e*P	**P**	**01 17 49.8**	**-0.6**
	comp=Z,69nm,1.0s						
SCRK	**Sand Creek**	**73.71**	**16**	*e*P	**P**	**01 17 50.7**	**+0.2**
	comp=Z,94nm,1.0s						
RIDG	**Independ’e Rid**	**73.72**	**17**	*e*P	**P**	**01 17 50.2**	**-0.3**
	comp=Z,149nm,1.0s						
SUA	**Susitna One**	**74.15**	**21**	*e*P	**P**	**01 17 52.9**	**-0.2**
	comp=Z,100nm,1.0s						
PAX	**Paxson**	**74.24**	**18**	*e*P	**P**	**01 17 53.4**	**-0.2**
	comp=Z,124nm,1.0s						
PAX	**Paxson**	**74.24**	**18**	*e*P	**P**	**01 17 53.4**	**-0.2**
PAX				pmax	pmax		
	comp=Z,124nm,1.0s						
GHO	**Glory Hole Cre**	**74.39**	**20**	*e*P	**P**	**01 17 54.5**	**+0.1**
	comp=Z,99nm,0.9s						
UNV	**Unalaska Valle**	**74.48**	**32**	*e*P	**P**	**01 17 54.7**	**-0.3**
	comp=Z,49nm,1.0s						
PMR	**Palmer**	**74.48**	**20**	*e*P	**P**	**01 17 54.4**	**-0.4**
	comp=Z,86nm,1.0s						
PMR	**Palmer**	**74.48**	**20**	*e*P	**P**	**01 17 54.4**	**-0.4**
PMR				pmax	pmax		
	comp=Z,86nm,1.0s						
SML	**Sawmill**	**74.52**	**19**	*e*P	**P**	**01 17 55.2**	**+0.1**
	comp=Z,210nm,0.8s						
SML	**Sawmill**	**74.52**	**19**	*e*P	**P**	**01 17 55.2**	**+0.1**
SML				pmax	pmax		
	comp=Z,211nm,0.8s						
DAWY	**Dawson**	**74.60**	**15**	*e*P	**P**	**01 17 55.8**	**+0.2**
	comp=Z,91nm,0.9s						
RC01	**Rabbit Creek A**	**74.74**	**20**	*e*P	**P**	**01 17 56.2**	**-0.2**
	comp=Z,98nm,0.8s						
SCM	**Sheep Creek Mo**	**74.75**	**19**	*e*P	**P**	**01 17 56.7**	**+0.1**
	comp=Z,154nm,0.8s						
SCM	**Sheep Creek Mo**	**74.75**	**19**	*e*P	**P**	**01 17 56.7**	**+0.1**
SCM				pmax	pmax		
	comp=Z,154nm,0.8s						
HARP	**HAARP**	**74.80**	**18**	*e*P	**P**	**01 17 57.9**	**+1.1**
	comp=Z,583nm,0.9s						
KLU	**Klutina**	**75.40**	**19**	*e*P	**P**	**01 18 00.9**	**+0.6**
	comp=Z,92nm,0.9s						
CNPM	**China Poot**	**75.60**	**22**	*e*P	**P**	**01 18 01.0**	**-0.4**
	comp=Z,45nm,1.1s						
GLI	**Glacier Island**	**75.62**	**19**	*e*P	**P**	**01 18 01.6**	**+0.1**
	comp=Z,122nm,0.8s						
DIV	**Divide**	**75.75**	**19**	*e*P	**P**	**01 18 02.6**	**+0.4**
	comp=Z,71nm,0.8s						
CHGN	**Chignik**	**75.82**	**27**	*e*P	**P**	**01 18 02.4**	**-0.2**
	comp=Z,45nm,0.9s						
FID	**Port Fidalgo**	**75.89**	**19**	*e*P	**P**	**01 18 03.4**	**+0.4**
	comp=Z,87nm,1.0s						
BMRM	**Bremner River**	**76.18**	**18**	*e*P	**P**	**01 18 05.3**	**+0.6**
	comp=Z,132nm,1.1s						
EYAK	**Cordova Ski Ar**	**76.25**	**19**	*e*P	**P**	**01 18 05.8**	**+0.8**
	comp=Z,92nm,0.8s						
KDAK	**Kodiak Island**	**76.61**	**24**	P	**P**	**01 18 07.3**	**+0.2**
	comp=Z,114nm,0.8s,baz=355,slow=3.3						
KDAK	**Kodiak Island**	**76.61**	**24**	*e*P	**P**	**01 18 07.6**	**+0.6**
	comp=Z,173nm,0.9s						
RAGM	**Ragged Mountai**	**76.66**	**19**	*e*P	**P**	**01 18 08.4**	**+1.0**
	comp=Z,104nm,1.2s						
CRQM	**Cirque**	**76.72**	**18**	*e*P	**P**	**01 18 08.5**	**+0.7**
	comp=Z,67nm,0.9s						
TGL	**Tana Glacier**	**76.79**	**18**	*e*P	**P**	**01 18 08.8**	**+0.6**
	comp=Z,80nm,1.0s						
MID	**Middleton Isla**	**77.06**	**20**	*e*P	**P**	**01 18 10.6**	**+1.1**
	comp=Z,142nm,1.0s						
MID	**Middleton Isla**	**77.06**	**20**	*e*P	**P**	**01 18 10.6**	**+1.1**
MID				pmax	pmax		
	comp=Z,143nm,1.0s						
SII	**Sitkinak Islan**	**77.08**	**25**	*e*P	**P**	**01 18 10.8**	**+1.0**
	comp=Z,190nm,1.0s						
DBIC	**Dimbokro**	**77.13**	**268**	P	**P**	**01 18 11.0**	**+0.3**
	comp=Z,26nm,0.8s,baz=26,slow=7.1,SNR=21						
DBIC				pP	**pP**	**01 18 47.5**	**+2.8**
	comp=Z,8.7nm,0.7s,baz=43,slow=3.8,SNR=2.6						
DBIC				LR	LR	01 57 17.8	
	comp=Z,48nm,19.7s,baz=46,slow=40						
DBIC	**Dimbokro**	**77.13**	**268**	*e*P	**P**	**01 18 11.2**	**+0.5**
	comp=Z,24nm,0.8s						
DBIC				*e*pP	**pP**	**01 18 47.5**	**+2.8**
DBIC	**Dimbokro**	**77.13**	**268**	*e*P	**P**	**01 18 11.2**	**+0.5**
DBIC				e*PP	**pP**	**01 18 47.5**	**+2.8**
DBIC				pmax	pmax		
	comp=Z,24nm,0.8s						
KIC	**Kosan Boka**	**77.23**	**268**	*e*P	**P**	**01 18 11.2**	**0.0**
	comp=Z,89nm,0.8s						
TIC	**Toumodi**	**77.27**	**268**	*e*P	**P**	**01 18 11.3**	**-0.2**
LIC	**Lamto**	**77.53**	**268**	*e*P	**P**	**01 18 12.8**	**-0.1**
	comp=Z,119nm,0.9s						
LBTB	**Lobatse**	**77.61**	**224**	*e*P	**P**	**01 18 12.8**	**-0.3**
	comp=Z,27nm,0.6s						
LBTB	**Lobatse**	**77.61**	**224**	*e*P	**P**	**01 18 12.8**	**-0.3**
LBTB				pmax	pmax		
	comp=Z,27nm,0.6s						
TSUM	**Tsumeb**	**77.89**	**234**	P	**P**	**01 18 14.8**	**-0.1**
	comp=Z,6.9nm,0.5s,baz=19,slow=7.9,SNR=35						
YKW3	**Yellowknife Ar**	**79.23**	**4**	*e*P	**P**	**01 18 21.7**	**+0.3**
	comp=Z,80nm,0.9s						
YKW3				*e*pP	**pP**	**01 18 58.5**	**+3.0**
YKA	**Yellowknife Ar**	**79.30**	**4**	P	**P**	**01 18 22.2**	**+0.3**
	comp=Z,49nm,0.6s,baz=347,slow=5.7,SNR=110						
YKA				pP	**pP**	**01 18 58.8**	**+2.9**
	comp=Z,11nm,0.9s,baz=348,slow=5.3,SNR=1.7						
YKA				LR	LR	01 58 12.5	
	comp=Z,5.4nm,18.0s,baz=356,slow=39						
YKB5	**Yellowknife Ar**	**79.30**	**4**	*e*P	**P**	**01 18 22.2**	**+0.3**
YKB5				*e*pP	**pP**	**01 18 59.0**	**+3.1**
SKAG	**Skagway**	**79.60**	**15**	*e*P	**P**	**01 18 24.7**	**+1.2**
	comp=Z,80nm,1.0s						
BESE	**Bessie Mountai**	**80.51**	**15**	*e*P	**P**	**01 18 29.6**	**+1.1**
	comp=Z,46nm,0.9s						
BOSA	**Boshof**	**80.66**	**222**	P	**P**	**01 18 28.7**	**-1.0**
	comp=Z,24nm,0.8s,baz=15,slow=3.8,SNR=52						
BOSA				LR	LR	01 55 53.2	
	comp=Z,61nm,18.4s,baz=32,slow=37						
WR1	**Warramunga Arr**	**81.00**	**124**	*e*P	**P**	**01 18 30.7**	**-0.8**
	comp=Z,56nm,0.7s						
WR1				*e*pP	**pP**	**01 19 07.4**	**+1.6**
WRA	**Warramunga Arr**	**81.00**	**124**	P	**P**	**01 18 30.7**	**-0.8**
	comp=Z,38nm,0.7s,baz=326,slow=5.1,SNR=260						
WRA				pP	**pP**	**01 19 07.4**	**+1.6**
	comp=Z,20nm,1.0s,baz=320,slow=4.8,SNR=4.4						
WRA				PKKPbc	**PKKPbc**	**01 37 08.7**	**+1.3**
	comp=Z,2.3nm,0.8s,baz=136,slow=2.1,SNR=10						
WRAB	**Tennant Creek**	**81.00**	**124**	*e*P	**P**	**01 18 30.8**	**-0.8**
	comp=Z,50nm,0.8s						
WRAB				*e*S	**S**	**01 28 27.6**	**-1.8**
WRAB	**Tennant Creek**	**81.00**	**124**	*d i*P	**P**	**01 18 30.7**	**-0.8**
WRAB				pmax	pmax		
	comp=Z,40nm,0.8s						
SCHQ	**Schefferville**	**81.32**	**338**	P	**P**	**01 18 33.2**	**+0.4**
	comp=Z,12nm,0.5s,baz=30,slow=4.6,SNR=11						
SCHQ	**Schefferville**	**81.32**	**338**	*e*P	**P**	**01 18 33.1**	**+0.3**
	comp=Z,30nm,1.0s						
DLBC	**Dease Lake**	**81.54**	**12**	P	**P**	**01 18 34.8**	**+0.8**
	comp=Z,36nm,0.7s,baz=343,slow=5.8,SNR=78						
DLBC	**Dease Lake**	**81.54**	**12**	*e*P	**P**	**01 18 34.7**	**+0.7**
	comp=Z,48nm,0.8s						
SIT	**Sitka**	**81.82**	**16**	*e*P	**P**	**01 18 36.6**	**+1.3**
	comp=Z,73nm,1.0s						
SIT	**Sitka**	**81.82**	**16**	*e*P	**P**	**01 18 36.6**	**+1.3**
SIT				pmax	pmax		
	comp=Z,73nm,1.0s						
COEN	**Coen**	**82.93**	**114**	*e*P	**P**	**01 18 41.7**	**0.0**
	comp=Z,30nm,0.9s						
WRAK	**Wrangell Islan**	**83.03**	**14**	*e*P	**P**	**01 18 42.7**	**+1.1**
	comp=Z,78nm,0.9s						
AS31	**Alice Springs**	**83.41**	**127**	*e*P	**P**	**01 18 43.2**	**-0.8**
	comp=Z,4.6nm,0.8s						
AS31				*e*pP	**pP**	**01 19 19.8**	**+1.3**
ASAR	**Alice Springs**	**83.41**	**127**	P	**P**	**01 18 43.0**	**-1.0**
	comp=Z,14nm,0.7s,baz=321,slow=5.4,SNR=111						
ASAR				pP	**pP**	**01 19 19.8**	**+1.3**
	comp=Z,11nm,0.9s,baz=327,slow=5.5,SNR=6.0						
ASAR				PKKPbc	**PKKPbc**	**01 37 02.9**	**+0.8**
	comp=Z,1.5nm,0.9s,baz=94,slow=3.3,SNR=6.7						
AS01	**Alice Springs**	**83.43**	**127**	*e*P	**P**	**01 18 42.7**	**-1.5**
CRAG	**Craig**	**83.76**	**15**	*e*P	**P**	**01 18 45.5**	**+0.2**
	comp=Z,40nm,1.0s						
FORT	**Forrest**	**85.26**	**136**	*e*P	**P**	**01 18 52.9**	**-0.2**
	comp=Z,76nm,0.6s						
SUR	**Sutherland**	**85.98**	**223**	*e*P	**P**	**01 18 57.8**	**+0.9**
	comp=Z,14nm,0.8s						
DIB	**Dawson Inlet,**	**86.02**	**16**	*e*P	**P**	**01 18 58.0**	**+1.3**
	comp=Z,33nm,1.4s						
FFC	**Flin Flon**	**87.27**	**358**	*e*P	**P**	**01 19 03.1**	**+0.3**
	comp=Z,97nm,1.1s						
FFC	**Flin Flon**	**87.27**	**358**	*e*P	**P**	**01 19 03.1**	**+0.3**
FFC				pmax	pmax		
	comp=Z,97nm,1.1s						
CTAO	**Charters Tower**	**89.19**	**116**	*e*P	**P**	**01 19 12.3**	**0.0**
	comp=Z,18nm,0.8s						
CTAO	**Charters Tower**	**89.19**	**116**	*e*P	**P**	**01 19 12.3**	**0.0**
CTAO				pmax	pmax		
	comp=Z,18nm,0.8s						
LLLB	**Lillooet**	**90.36**	**10**	*e*P	**P**	**01 19 18.4**	**+0.9**
	comp=Z,61nm,1.1s						
LLLB				*e*pP	**pP**	**01 19 51.5**	**-0.8**
PKME	**Peaks-Kenny Pk**	**90.46**	**335**	P	**P**	**01 19 18.8**	**+0.9**
	baz=28,SNR=5.5						
PKME	**Peaks-Kenny Pk**	**90.46**	**335**	*e*P	**P**	**01 19 19.5**	**+1.6**
	comp=Z,33nm,1.1s						
TRQ	**Mont Tremblant**	**91.23**	**339**	*e*P	**P**	**01 19 22.6**	**+0.9**
ULM	**Lac du Bonnet**	**91.36**	**353**	P	**P**	**01 19 21.7**	**-0.3**
	comp=Z,31nm,1.0s,baz=356,slow=4.8,SNR=19						
ULM				LR	LR	02 03 15.4	
	comp=Z,78nm,21.9s,baz=337,slow=37						
ULM	**Lac du Bonnet**	**91.36**	**353**	*e*P	**P**	**01 19 21.9**	**-0.2**
	comp=Z,48nm,1.1s						
ULM	**Lac du Bonnet**	**91.36**	**353**	*e*P	**P**	**01 19 21.9**	**-0.2**
ULM				pmax	pmax		
	comp=Z,48nm,1.1s						
A04D	**Lummi Island**	**92.09**	**11**	P	**P**	**01 19 26.0**	**+0.6**
	baz=347						
FRNY	**Flat Rock**	**92.21**	**338**	*e*P	**P**	**01 19 26.8**	**+0.7**
	comp=Z,14nm,1.0s						
LBNH	**Lisbon**	**92.23**	**336**	P	**P**	**01 19 27.2**	**+1.0**
	baz=26						
B06A	**Marblemount**	**92.46**	**10**	*e*P	**P**	**01 19 27.6**	**+0.5**
	comp=Z,39nm,1.1s						
A33A	**Warroad**	**92.62**	**353**	P	**P**	**01 19 28.0**	**+0.1**
	baz=8.3,SNR=9.6						
B05A	**Bryant**	**92.62**	**11**	P	**P**	**01 19 28.3**	**+0.4**
	baz=347						
HNR	**Honiara**	**92.65**	**100**	LR	LR	02 02 52.7	
	comp=Z,25nm,19.3s,baz=30,slow=36						
LONY	**Lake Ozonia**	**92.70**	**338**	P	**P**	**01 19 29.1**	**+0.8**
	baz=24,SNR=10.0						
LONY	**Lake Ozonia**	**92.70**	**338**	*e*P	**P**	**01 19 29.1**	**+0.8**
	comp=Z,28nm,0.9s						
LONY				*e*pP	**pP**	**01 20 07.5**	**+4.2**
WALA	**Waterton Lakes**	**92.73**	**5**	*e*P	**P**	**01 19 28.7**	**+0.2**
	comp=Z,38nm,0.9s						
C40A	**Isle Royale Na**	**92.84**	**349**	P	**P**	**01 19 28.7**	**-0.2**
	baz=13						
B08A	**Colville Reser**	**92.90**	**9**	*e*P	**P**	**01 19 29.7**	**+0.4**
	comp=Z,26nm,1.1s						
B34A	**Aery, Baudette**	**92.99**	**352**	P	**P**	**01 19 29.6**	**0.0**
	baz=8.9,SNR=19						
B35A	**Bob, Littlefor**	**93.01**	**352**	P	**P**	**01 19 29.5**	**-0.2**
	baz=9.6,SNR=7.5						
B35A	**Bob, Littlefor**	**93.01**	**352**	*e*P	**P**	**01 19 30.1**	**+0.4**
	comp=Z,30nm,1.0s						
PLVO	**Plevna**	**93.02**	**340**	*e*P	**P**	**01 19 30.8**	**+1.0**
	comp=Z,27nm,1.1s						
C06D	**Leavenworth**	**93.13**	**10**	P	**P**	**01 19 30.4**	**+0.1**
	baz=348						
EYMN	**Ely**	**93.15**	**350**	P	**P**	**01 19 30.4**	**+0.1**
	baz=11,SNR=9.1						
EYMN	**Ely**	**93.15**	**350**	*e*P	**P**	**01 19 29.0**	**-1.3**
	comp=Z,59nm,1.1s						
NLWA	**Neilton Lookou**	**93.20**	**12**	*e*P	**P**	**01 19 32.4**	**+1.7**
	comp=Z,12nm,0.8s						
AGMN	**Agassiz Nation**	**93.29**	**353**	P	**P**	**01 19 31.0**	**0.0**
	baz=7.9,SNR=20						
AGMN	**Agassiz Nation**	**93.29**	**353**	*e*P	**P**	**01 19 31.3**	**+0.3**
	comp=Z,40nm,0.9s						
AGMN				*e*PP	**PP**	**01 23 09.0**	**-6.4**
C38A	**Sawbill Land.**	**93.34**	**350**	P	**P**	**01 19 31.0**	**-0.3**
	baz=12						
C37A	**Embarrass**	**93.45**	**351**	P	**P**	**01 19 31.7**	**0.0**
	baz=11,SNR=5.7						
C36A	**Pine Crest Far**	**93.50**	**351**	P	**P**	**01 19 31.6**	**-0.3**
	baz=10,SNR=7.4						
E44A	**Grand Marais A**	**93.55**	**346**	P	**P**	**01 19 32.6**	**+0.4**
	baz=16						
C09A	**Chrisman Ranch**	**93.57**	**8**	*e*P	**P**	**01 19 33.0**	**+0.6**
	comp=Z,28nm,0.8s						
C09A				*e*pP	**pP**	**01 20 05.8**	**-1.4**
D41A	**Chassel**	**93.58**	**348**	P	**P**	**01 19 32.4**	**0.0**
	baz=14						
DGMT	**Dagmar**	**93.58**	**359**	P	**P**	**01 19 33.4**	**+1.1**
	baz=1.4						
DGMT	**Dagmar**	**93.58**	**359**	*e*P	**P**	**01 19 34.1**	**+1.7**
	comp=Z,70nm,1.0s						
E45A	**Wooded Hills,**	**93.66**	**346**	P	**P**	**01 19 32.9**	**+0.2**
	baz=16						
HRV	**Adam Dziewonsk**	**93.66**	**335**	P	**P**	**01 19 32.2**	**-0.7**
	baz=26						
D05A	**Enumclaw**	**93.69**	**11**	*e*P	**P**	**01 19 33.9**	**+1.1**
	comp=Z,81nm,1.4s						
C35A	**Jirik Farms, M**	**93.69**	**352**	P	**P**	**01 19 32.1**	**-0.7**
	baz=9.4,SNR=8.1						
LTY	**Liberty**	**93.81**	**10**	*e*P	**P**	**01 19 33.6**	**+0.1**
	comp=Z,7.8nm,0.8s						
C33A	**Trail**	**93.82**	**353**	P	**P**	**01 19 33.3**	**-0.2**
	baz=8.0,SNR=6.7						
C34A	**RKJ Ranch, Bem**	**93.84**	**352**	P	**P**	**01 19 33.5**	**0.0**
	baz=8.7,SNR=7.0						
E43A	**Lone Tree Farm**	**93.98**	**347**	P	**P**	**01 19 34.1**	**-0.1**
	baz=15						
EGMT	**Eagleton**	**93.98**	**2**	P	**P**	**01 19 34.5**	**+0.2**
	baz=357						
EGMT	**Eagleton**	**93.98**	**2**	*e*P	**P**	**01 19 35.0**	**+0.7**
	comp=Z,47nm,1.0s						
STKA	**Stephens Creek**	**94.00**	**128**	P	**P**	**01 19 33.1**	**-1.2**
	comp=Z,3.0nm,0.5s,baz=344,slow=3.5,SNR=7.1						
STKA	**Stephens Creek**	**94.00**	**128**	*e*P	**P**	**01 19 33.1**	**-1.2**
	comp=Z,4.3nm,1.5s						
JTMT	**Jette**	**94.00**	**6**	*e*P	**P**	**01 19 35.4**	**+0.9**
	comp=Z,42nm,1.1s						
MDND	**Maddock**	**94.03**	**356**	P	**P**	**01 19 34.5**	**+0.1**
	baz=5.0,SNR=6.8						
MDND	**Maddock**	**94.03**	**356**	*e*P	**P**	**01 19 35.2**	**+0.8**
	comp=Z,35nm,0.8s						
D37A	**Cotton**	**94.04**	**351**	P	**P**	**01 19 34.4**	**-0.1**
	baz=11						
E42A	**Champion**	**94.08**	**348**	P	**P**	**01 19 34.6**	**0.0**
	baz=14						
D36A	**Goodland**	**94.11**	**351**	P	**P**	**01 19 34.4**	**-0.4**
	baz=10,SNR=8.1						
D36A	**Goodland**	**94.11**	**351**	*e*P	**P**	**01 19 35.1**	**+0.3**
	comp=Z,42nm,1.1s						
LON	**Longmire**	**94.15**	**11**	*e*P	**P**	**01 19 35.4**	**+0.4**
	comp=Z,14nm,0.8s						
LON	**Longmire**	**94.15**	**11**	*e*P	**P**	**01 19 35.4**	**+0.4**
LON				pmax	pmax		
	comp=Z,14nm,0.8s						
E41A	**Kenton**	**94.22**	**348**	P	**P**	**01 19 35.0**	**-0.4**
	baz=13,SNR=5.9						
D08A	**Wollman Farm,**	**94.23**	**9**	*e*P	**P**	**01 19 35.8**	**+0.5**
	comp=Z,18nm,0.9s						
F44A	**Big Bay de Noc**	**94.26**	**346**	P	**P**	**01 19 35.2**	**-0.2**
	baz=15						
D35A	**Remer**	**94.31**	**352**	P	**P**	**01 19 35.7**	**-0.1**
	baz=9.4						
F45A	**CMU Biological**	**94.37**	**346**	P	**P**	**01 19 36.0**	**0.0**
	baz=16						
E40A	**Wakefield**	**94.39**	**349**	P	**P**	**01 19 36.4**	**+0.3**
	baz=13,SNR=11						
E38A	**The Farm, Brul**	**94.47**	**350**	P	**P**	**01 19 36.3**	**-0.2**
	baz=11						
E38A	**The Farm, Brul**	**94.47**	**350**	*e*P	**P**	**01 19 36.6**	**+0.2**
	comp=Z,31nm,1.1s						
F43A	**Flat Rock, Esc**	**94.53**	**347**	P	**P**	**01 19 36.7**	**-0.1**
	baz=15						
E39A	**Mellen**	**94.55**	**349**	P	**P**	**01 19 36.8**	**-0.1**
	baz=12,SNR=7.3						
COWI	**Conover**	**94.61**	**348**	*e*P	**P**	**01 19 37.3**	**+0.2**
	comp=Z,27nm,1.1s						
F04D	**Rainier, OR**	**94.61**	**12**	P	**P**	**01 19 36.8**	**-0.3**
	baz=347						
E08A	**Dider Farm, El**	**94.77**	**9**	*e*P	**P**	**01 19 38.8**	**+1.0**
	comp=Z,23nm,1.0s						
F42A	**Maple Grove Fa**	**94.77**	**348**	P	**P**	**01 19 37.8**	**-0.1**
	baz=14						
E36A	**McGregor**	**94.77**	**351**	P	**P**	**01 19 38.2**	**+0.3**
	baz=10.0,SNR=14						
E09A	**Wood Farm, Sta**	**94.86**	**8**	*e*P	**P**	**01 19 39.1**	**+0.9**
	comp=Z,27nm,0.9s						
E35A	**Pequot Lakes**	**94.87**	**352**	P	**P**	**01 19 38.2**	**-0.1**
	baz=9.1						
F40A	**Park Falls**	**94.94**	**349**	P	**P**	**01 19 38.4**	**-0.2**
	baz=12						
MSO	**Missoula**	**94.94**	**5**	P	**P**	**01 19 38.5**	**-0.2**
	baz=354						
MSO	**Missoula**	**94.94**	**5**	*e*P	**P**	**01 19 38.7**	**-0.1**
	comp=Z,23nm,1.4s						
F41A	**Three Lakes**	**94.95**	**348**	P	**P**	**01 19 38.7**	**0.0**
	baz=13,SNR=6.8						
F41A	**Three Lakes**	**94.95**	**348**	*e*P	**P**	**01 19 38.9**	**+0.2**
	comp=Z,38nm,1.1s						
E34A	**Wadena**	**94.99**	**352**	P	**P**	**01 19 39.0**	**+0.2**
	baz=8.5,SNR=5.4						
F39A	**Loretta**	**95.06**	**349**	P	**P**	**01 19 39.1**	**-0.1**
	baz=12,SNR=7.7						
F38A	**Pierce - Schro**	**95.15**	**350**	P	**P**	**01 19 39.9**	**+0.3**
	baz=11,SNR=13						
G43A	**Wallace**	**95.18**	**347**	P	**P**	**01 19 39.8**	**+0.1**
	baz=14						
HRY	**Holter Researc**	**95.20**	**4**	*e*P	**P**	**01 19 40.5**	**+0.6**
HRY				*e*pP	**pP**	**01 20 11.9**	**-3.0**
BINY	**Binghamton**	**95.32**	**338**	P	**P**	**01 19 40.4**	**0.0**
	baz=23						
G42A	**Mountain**	**95.32**	**348**	P	**P**	**01 19 40.3**	**-0.1**
	baz=14						
LAO	**LASA Array**	**95.38**	**0**	P	**P**	**01 19 42.0**	**+1.3**
	baz=360						
LAO	**LASA Array**	**95.38**	**0**	*e*P	**P**	**01 19 42.2**	**+1.5**
	comp=Z,68nm,1.1s						
MMNY	**Mt. Morris Dam**	**95.38**	**340**	*e*P	**P**	**01 19 41.4**	**+0.8**
	comp=Z,57nm,1.4s						
F36A	**Milaca**	**95.45**	**351**	P	**P**	**01 19 40.8**	**-0.1**
	baz=9.8,SNR=8.3						
F36A	**Milaca**	**95.45**	**351**	*e*P	**P**	**01 19 40.8**	**-0.1**
	comp=Z,28nm,1.4s						
F37A	**Hinrichs Farm,**	**95.48**	**351**	P	**P**	**01 19 41.1**	**0.0**
	baz=10						
F10A	**Beach Ranch, E**	**95.49**	**8**	*e*P	**P**	**01 19 42.0**	**+0.7**
	comp=Z,12nm,0.9s						
F35A	**Swanville**	**95.58**	**352**	P	**P**	**01 19 41.3**	**-0.2**
	baz=9.0						
G40A	**Rib Lake**	**95.58**	**349**	P	**P**	**01 19 41.7**	**+0.1**
	baz=12,SNR=6.6						
G40A	**Rib Lake**	**95.58**	**349**	*e*P	**P**	**01 19 41.7**	**+0.1**
	comp=Z,26nm,1.0s						
G05D	**Wamic, OR**	**95.69**	**11**	P	**P**	**01 19 42.5**	**+0.4**
	baz=348						
G39A	**Holcombe**	**95.71**	**350**	P	**P**	**01 19 41.9**	**-0.2**
	baz=12						
PAL	**Palisades**	**95.78**	**336**	P	**P**	**01 19 42.0**	**-0.5**
	baz=25						
G38A	**Ridgeland**	**95.92**	**350**	P	**P**	**01 19 42.9**	**-0.2**
	baz=11,SNR=6.4						
H43A	**Windswept, Lux**	**95.96**	**347**	P	**P**	**01 19 43.4**	**+0.1**
	baz=14						
SPMN	**Marine on St.**	**95.99**	**351**	P	**P**	**01 19 43.0**	**-0.4**
	baz=10						
SPMN	**Marine on St.**	**95.99**	**351**	*e*P	**P**	**01 19 43.6**	**+0.2**
	comp=Z,18nm,1.1s						
LRM	**Limekiln Ridge**	**96.05**	**5**	*e*P	**P**	**01 19 44.3**	**+0.4**
H42A	**Shiocton**	**96.05**	**348**	P	**P**	**01 19 43.7**	**0.0**
	baz=14						
G36A	**St. Michael**	**96.10**	**351**	P	**P**	**01 19 44.0**	**+0.1**
	baz=9.6						
H41A	**Junction City**	**96.13**	**348**	P	**P**	**01 19 43.7**	**-0.3**
	baz=13						
GCMT	**Greycliff**	**96.21**	**3**	*e*P	**P**	**01 19 45.9**	**+1.3**
H40A	**Chili**	**96.24**	**349**	P	**P**	**01 19 44.5**	**0.0**
	baz=12,SNR=6.5						
G34A	**Benson**	**96.30**	**353**	P	**P**	**01 19 44.5**	**-0.3**
	baz=8.2						
BOZ	**Bozeman (W)**	**96.32**	**4**	P	**P**	**01 19 45.3**	**+0.3**
	baz=356						
BOZ	**Bozeman (W)**	**96.32**	**4**	*e*P	**P**	**01 19 45.6**	**+0.5**
	comp=Z,9.6nm,0.9s						
BOZ	**Bozeman (W)**	**96.32**	**4**	*e*P	**P**	**01 19 45.6**	**+0.5**
BOZ				pmax	pmax		
	comp=Z,10.0nm,0.9s						
H39A	**Augusta**	**96.32**	**349**	P	**P**	**01 19 44.9**	**0.0**
	baz=12						
N59A	**State Game Lan**	**96.44**	**337**	P	**P**	**01 19 45.1**	**-0.5**
	baz=23						
G32A	**Webster**	**96.46**	**354**	P	**P**	**01 19 45.6**	**0.0**
	baz=6.7						
G32A	**Webster**	**96.46**	**354**	*e*P	**P**	**01 19 45.6**	**0.0**
	comp=Z,49nm,0.8s						
H38A	**Maiden Rock**	**96.46**	**350**	P	**P**	**01 19 45.7**	**+0.1**
	baz=11						
DLMT	**Dillon**	**96.50**	**5**	*e*P	**P**	**01 19 46.7**	**+0.8**
	comp=Z,15nm,1.1s						
ERPA	**Erie**	**96.51**	**341**	P	**P**	**01 19 45.5**	**-0.3**
	baz=20						
BMO	**Blue Mountains**	**96.59**	**8**	*e*P	**P**	**01 19 45.9**	**-0.4**
	comp=Z,3.4nm,0.9s						
BMO	**Blue Mountains**	**96.59**	**8**	*e*P	**P**	**01 19 45.9**	**-0.4**
BMO				pmax	pmax		
	comp=Z,3.0nm,0.9s						
I43A	**Langenfeld Bro**	**96.59**	**347**	P	**P**	**01 19 46.4**	**+0.2**
	baz=14						
H37A	**Dierke Farm, C**	**96.64**	**351**	P	**P**	**01 19 46.4**	**+0.1**
	baz=10						
I41A	**Arkdale**	**96.71**	**348**	P	**P**	**01 19 46.9**	**+0.2**
	baz=13						
I41A	**Arkdale**	**96.71**	**348**	*e*P	**P**	**01 19 47.5**	**+0.8**
	comp=Z,29nm,1.0s						
I42A	**Draeger Farm,**	**96.72**	**348**	P	**P**	**01 19 46.6**	**-0.1**
	baz=13						
H35A	**Sunnyside Ranc**	**96.75**	**352**	P	**P**	**01 19 47.2**	**+0.3**
	baz=8.8						
H36A	**Jessenland, He**	**96.77**	**351**	P	**P**	**01 19 47.4**	**+0.5**
	baz=9.5						
I03D	**Drain, OR**	**96.88**	**13**	P	**P**	**01 19 47.6**	**+0.2**
	baz=346						
RLMT	**Red Lodge**	**96.89**	**2**	P	**P**	**01 19 48.3**	**+0.5**
	baz=357						
RLMT	**Red Lodge**	**96.89**	**2**	*e*P	**P**	**01 19 49.0**	**+1.2**
	comp=Z,23nm,1.1s						
I04A	**Tendick Farm,**	**96.94**	**12**	P	**P**	**01 19 47.5**	**-0.2**
	baz=347						
I40A	**Norwalk**	**96.99**	**349**	P	**P**	**01 19 48.0**	**+0.1**
	baz=12						
M54A	**Oil Creek Stat**	**96.99**	**340**	P	**P**	**01 19 48.2**	**+0.2**
	baz=20						
MCMT	**McKenzie Canyo**	**97.01**	**5**	*e*P	Pdif	01 19 48.8	+0.4
I07A	**Izee**	**97.08**	**10**	*e*P	Pdif	01 19 49.8	+1.2
	comp=Z,11nm,1.2s						
I38A	**Scanlan Farm,**	**97.09**	**350**	P	**P**	**01 19 48.0**	**-0.4**

	baz=11						
J43A	Natural Harves	97.13	347	P	P	01 19 48.6	0.0
	baz=14						
I39A	Houston	97.16	349	P	P	01 19 48.5	-0.2
	baz=11						
I39A	Houston	97.16	349	*e*P	Pdif	01 19 49.2	+0.4
	comp=Z,19nm,1.0s						
PINE	Pine Mountain	97.17	11	*e*P	Pdif	01 19 50.4	+1.3
	comp=Z,16nm,1.2s						
J42A	Columbus	97.31	348	P	Pdif	01 19 49.4	0.0
	baz=13						
SSPA	Standing Stone	97.32	339	P	P	01 19 49.5	0.0
	baz=22						
I36A	Fitzsimmons Fa	97.33	351	P	Pdif	01 19 49.8	+0.3
	baz=9.4						
SUSD	Miller	97.38	355	P	P	01 19 49.7	0.0
	baz=5.6						
J41A	Loganville	97.41	348	P	P	01 19 49.7	-0.2
	baz=13,SNR=6.7						
J40A	Soldiers Grove	97.49	349	P	P	01 19 50.1	-0.1
	baz=12						
N54A	Moraine State	97.59	340	P	P	01 19 50.6	-0.1
	baz=20						
J05D	Fort Rock, OR	97.62	11	P	Pdif	01 19 51.5	+0.5
	baz=348						
YPP	Pitchstone Pla	97.68	3	*e*P	Pdif	01 19 54.1	+2.6
	comp=Z,10nm,1.4s						
J39A	Decorah	97.70	349	P	P	01 19 51.1	-0.1
	baz=11						
L48A	N Adams	97.73	344	P	P	01 19 51.3	0.0
	baz=17						
J38A	Wedel Dairy, R	97.82	350	P	P	01 19 51.4	-0.3
	baz=11						
O56A	Blue Knob Stat	97.85	339	P	P	01 19 51.8	-0.1
	baz=21						
K42A	Prairie Point,	97.87	348	P	P	01 19 51.7	-0.3
	baz=13						
FLWY	Flagg Ranch	97.88	3	*e*P	Pdif	01 19 54.3	+2.0
	comp=Z,27nm,1.5s						
ECSD	EROS Data Cent	97.89	353	P	Pdif	01 19 52.3	+0.3
	baz=7.4						
ECSD	EROS Data Cent	97.89	353	*e*P	Pdif	01 19 52.9	+0.9
	comp=Z,26nm,1.0s						
JFWS	Jewell Farm	97.89	348	P	P	01 19 51.8	-0.2
	baz=12						
JFWS	Jewell Farm	97.89	348	*e*P	Pdif	01 19 52.4	+0.4
	comp=Z,19nm,0.9s						
JFWS	Jewell Farm	97.89	348	*e*P	Pdif	01 19 52.4	+0.4
JFWS				pmax	pmax		
	comp=Z,19nm,0.9s						
RSSD	Black Hills	97.93	359	P	Pdif	01 19 52.8	+0.3
	baz=1.6						
RSSD	Black Hills	97.93	359	*e*P	Pdif	01 19 53.2	+0.7
	comp=Z,17nm,0.9s						
RSSD	Black Hills	97.93	359	*e*P	Pdif	01 19 53.2	+0.7
RSSD				pmax	pmax		
	comp=Z,17nm,0.9s						
J08A	Circle Bar Ran	97.93	9	*e*P	Pdif	01 19 53.2	+0.9
	comp=Z,17nm,1.4s						
J37A	Redenius Farm,	97.97	351	P	Pdif	01 19 52.6	+0.2
	baz=9.8						
J36A	Seneca 1, Swea	98.05	351	P	Pdif	01 19 53.2	+0.4
	baz=9.2						
J36A	Seneca 1, Swea	98.05	351	*e*P	Pdif	01 19 53.6	+0.9
	comp=Z,21nm,0.8s						
IMW	Indian Meadow	98.05	4	*e*P	Pdif	01 19 54.9	+1.8
	comp=Z,14nm,1.3s						
HLID	Hailey	98.15	6	P	Pdif	01 19 53.5	+0.1
	baz=353						
HLID	Hailey	98.15	6	*e*P	Pdif	01 19 54.0	+0.6
	comp=Z,6.1nm,1.4s						
MFID	Camas Ranch	98.17	7	*e*P	Pdif	01 19 54.4	+1.0
	comp=Z,7.6nm,1.0s						
K41A	Shullsburg	98.20	348	P	P	01 19 53.4	0.0
	baz=12						
MOOW	Moose Ponds	98.21	3	*e*P	Pdif	01 19 55.3	+1.6
	comp=Z,8.2nm,1.3s						
K40A	Colesburg	98.24	349	P	P	01 19 53.4	-0.2
	baz=12						
FXWY	Fox Creek	98.30	4	*e*P	Pdif	01 19 55.6	+1.4
	comp=Z,3.4nm,1.0s						
K39A	Oelwein	98.34	350	P	P	01 19 53.6	-0.5
	baz=11						
L43A	Garden Prairie	98.35	347	P	P	01 19 54.1	0.0
	baz=14						
TPAW	Teton Pass	98.45	4	*e*P	Pdif	01 19 55.6	+0.7
	comp=Z,3.6nm,1.1s						
N50A	Nevada	98.56	343	P	P	01 19 54.4	-0.6
	baz=18						
REDW	Red Top Meadow	98.59	4	*e*P	Pdif	01 19 56.8	+1.3
	comp=Z,5.5nm,1.1s						
L42A	Oliver, Polo	98.68	348	P	P	01 19 55.1	-0.5
	baz=13						
L41A	Preston	98.75	348	P	P	01 19 55.4	-0.5
	baz=12						
WVOR	Wild Horse Val	98.82	9	*e*P	Pdif	01 19 57.3	+0.9
	comp=Z,4.1nm,0.9s						
WVOR	Wild Horse Val	98.82	9	*e*P	Pdif	01 19 57.3	+0.9
WVOR				pmax	pmax		
	comp=Z,4.0nm,0.9s						
M45A	Boilermakers S	98.84	346	P	P	01 19 55.8	-0.5
	baz=15						
YBH	Yreka Blue Hor	98.89	13	LR	LR	02 08 00.7	
	comp=Z,33nm,21.4s,baz=354,slow=37						
L39A	Vinton	98.93	349	P	P	01 19 56.0	-0.6
	baz=11						
M44A	Midewin, Midew	98.99	346	P	P	01 19 55.7	-1.2
	baz=14						
ACSO	Alum Creek Sta	99.03	342	P	Pdif	01 19 56.4	-0.8
	baz=18						
L38A	Oak Wood Farm,	99.04	350	P	Pdif	01 19 56.4	-0.8
	baz=10						
MOD	Modoc Plateau	99.11	11	*e*P	Pdif	01 19 58.4	+0.7
	comp=Z,4.6nm,1.0s						
M02C	Callahan	99.20	13	P	Pdif	01 19 58.1	0.0
	baz=347						
BW06	Boulder Array	99.24	3	P	Pdif	01 19 57.2	-1.2
	baz=357						
PD31	Pinedale Array	99.24	3	*e*Pdif	Pdif	01 19 59.3	+0.9
PDAR	Pinedale Array	99.24	3	P	Pdif	01 19 58.3	-0.1
	comp=Z,1.1nm,0.7s,baz=29,slow=3.4,SNR=8.7						
PDAR				LR	LR	02 08 10.8	
	comp=Z,46nm,21.4s,baz=22,slow=37						
O49A	Covington	99.39	343	P	Pdif	01 19 57.6	-1.2
	baz=17						
K22A	Casper	99.41	0	P	Pdif	01 19 58.1	-1.0
	baz=360						
N45A	Kentland	99.42	346	P	Pdif	01 19 57.6	-1.2
	baz=15						
O48A	Farmland	99.50	344	P	Pdif	01 19 58.3	-0.9
	baz=16						
M40A	Post Highland	99.56	349	P	Pdif	01 19 58.8	-0.7
	baz=12						
M39A	Webster	99.58	349	P	Pdif	01 19 59.1	-0.5
	baz=11						
N02D	Trinity Center	99.63	13	P	Pdif	01 19 59.6	-0.4
	baz=347						
N43A	Stutzman Famil	99.63	347	P	Pdif	01 19 59.8	0.0
	baz=13						
M38A	Pleasantville	99.79	350	P	Pdif	01 20 00.3	-0.2
	baz=10						
P50A	Jamestown	99.81	343	P	Pdif	01 20 00.2	-0.5
	baz=18						
HVU	Hansel Valley	100.05	5	*e*Pdif	Pdif	01 20 03.4	+1.5
HVU	Hansel Valley	100.05	5	*e*P	Pdif	01 20 03.4	+1.5
N40A	Mertquake, Sal	100.08	349	P	Pdif	01 20 01.2	-0.6
	baz=11						
N39A	Derby Farms, D	100.22	350	P	Pdif	01 20 02.2	-0.3
	baz=11						
HWUT	Hardware Ranch	100.30	4	*e*Pdif	Pdif	01 20 04.1	+1.0
O03D	Paynes Creek	100.45	12	P	Pdif	01 20 02.3	-1.3
	baz=348						
P47A	Martinsville	100.48	345	P	Pdif	01 20 02.5	-1.1
	baz=16						
O41A	Passleys Farm,	100.72	348	P	Pdif	01 20 04.0	-0.7
	baz=12						
O40A	La Belle	100.87	349	P	Pdif	01 20 04.9	-0.4
	baz=11						
N23A	Red Feather La	101.17	360	P	Pdif	01 20 06.6	-0.5
P38A	Dawn	101.59	350	P	Pdif	01 20 07.5	-1.1
	baz=9.9						
P39B	Salisbury	101.62	350	P	Pdif	01 20 08.4	-0.3
	baz=11						
DUG	Dugway, Tooele	101.62	5	P	Pdif	01 20 08.3	-0.6
	baz=355						
DUG	Dugway, Tooele	101.62	5	*e*Pdif	Pdif	01 20 10.4	+1.5
DUG	Dugway, Tooele	101.62	5	*e*P	Pdif	01 20 10.4	+1.5
S51A	Beattyville	101.64	342	P	Pdif	01 20 08.4	-0.4
	baz=18						
Q43A	New Douglas	101.67	347	P	Pdif	01 20 08.2	-0.7
	baz=13						
R47A	Wooly Knot Far	101.68	344	P	Pdif	01 20 07.9	-1.0
	baz=16						
Q42A	Golden Eagle	101.84	348	P	Pdif	01 20 09.1	-0.6
	baz=12						
O20A	White River Ci	101.90	2	P	Pdif	01 20 08.7	-1.5
	baz=358						
O20A	White River Ci	101.90	2	*e*Pdif	Pdif	01 20 11.7	+1.4
NLU	North Lily Min	101.91	5	*e*Pdif	Pdif	01 20 10.6	+0.3
Q41A	Truxton	101.91	348	P	Pdif	01 20 09.0	-1.0
	baz=12						
Q39A	Willow Grove F	102.09	350	P	Pdif	01 20 10.9	+0.1
	baz=10						
ISCO	Idaho Springs	102.26	360	P	Pdif	01 20 11.2	-0.8
	baz=0.3						
ISCO	Idaho Springs	102.26	360	*e*Pdif	Pdif	01 20 13.8	+1.8
ISCO	Idaho Springs	102.26	360	*e*P	Pdif	01 20 13.8	+1.8
R41A	Rosebud	102.58	348	P	Pdif	01 20 12.4	-0.6
	baz=12						
U53A	Fall Branch	102.59	341	P	Pdif	01 20 12.3	-0.8
	baz=19						
T49A	Edmonton	102.60	343	P	Pdif	01 20 12.2	-0.9
	baz=16						
U52A	Thorn Hill	102.77	341	P	Pdif	01 20 14.0	+0.1
	baz=18						
T48A	Bowling Green	102.79	344	P	Pdif	01 20 13.1	-0.9
	baz=16						
CCM	Cathedral Cave	102.79	348	P	Pdif	01 20 12.7	-1.2
	baz=12						
NV01	Mina Array Sit	102.80	10	*e*Pdif	Pdif	01 20 14.8	+0.5
NVAR	Mina Array Bea	102.80	10	P	Pdif	01 20 14.9	+0.6
	comp=Z,1.1nm,0.7s,baz=1.9,slow=2.8,SNR=9.8						
R38A	Fenwick Farm,	103.06	350	P	Pdif	01 20 14.3	-0.8
	baz=9.7						
U50A	Jamestown	103.10	343	P	Pdif	01 20 14.4	-1.0
	baz=17						
T46A	Princeton	103.17	345	P	Pdif	01 20 14.3	-1.3
	baz=14						
R11A	Troy Canyon, C	103.21	8	P	Pdif	01 20 15.4	-0.7
	baz=352						
R11A	Troy Canyon, C	103.21	8	*e*Pdif	Pdif	01 20 17.2	+1.2
U49A	Red Boiling Sp	103.23	343	P	Pdif	01 20 15.2	-0.7
	baz=16						
S40A	Lebanon	103.44	349	P	Pdif	01 20 16.0	-0.9
	baz=11						
S39A	Bolivar	103.47	350	P	Pdif	01 20 17.2	+0.2
	baz=10						
PV22	Blue Mesa, Par	103.48	2	*e*Pdif	Pdif	01 20 18.9	+1.6
T43A	Greenville	103.58	347	P	Pdif	01 20 17.4	0.0
	baz=13						
S38A	Stockton	103.61	350	P	Pdif	01 20 17.3	-0.3
	baz=9.7						
U47A	Clarksville	103.62	345	P	Pdif	01 20 17.2	-0.5
	baz=15						
T42A	Van Buren	103.77	348	P	Pdif	01 20 17.8	-0.5
	baz=12						
WVT	Waverly	104.04	345	P	Pdif	01 20 18.8	-0.8
	baz=15						
SDCO	Great Sand Dun	104.31	360	*e*Pdif	Pdif	01 20 21.7	+0.6
U39A	Green Forest	104.77	350	P	Pdif	01 20 22.7	-0.1
	baz=10						
W48A	Pulaski	104.80	344	P	Pdif	01 20 22.2	-0.8
	baz=15						
Y54A	Tignall	104.98	340	P	Pdif	01 20 23.3	-0.5
	baz=19						
MPMC	Manual Prospec	105.25	10	P	Pdif	01 20 24.2	-0.9
	baz=351						
ANMO	Albuquerque	107.11	0	P	PKiKP	01 24 43.2	+1.1
	baz=360						
TASM	ASL Pad, Albuq	107.11	0	P	PKiKP	01 24 42.9	+0.9
	baz=360						
TASL	Snake Pit, Alb	107.11	0	P	PKiKP	01 24 43.0	+1.0
	baz=360						
CIS	Catalina Islan	107.73	11	P	PKiKP	01 24 42.0	-1.0
	baz=350						
MNTX	Cornudas Mount	110.34	359	P	PKiKP	01 24 47.4	-0.6
	baz=0.5						
TXAR	Lajitas Array	112.67	358	Pdiff	Pdif	01 21 00.4	+2.2
	comp=Z,0.5nm,0.9s,baz=37,slow=3.4,SNR=5.3						
TXAR				PKiKP	PKiKP	01 24 52.9	+0.3
	comp=Z,0.7nm,0.8s,baz=205,slow=0.4,SNR=5.8						
TXAR				PP	PP	01 25 40.2	0.0
	comp=Z,1.6nm,1.0s,baz=1.4,slow=5.0,SNR=5.6						
TXAR				PKKPbc	PKKPbc	01 35 39.7	-0.8
	comp=Z,0.6nm,0.8s,baz=192,slow=6.4,SNR=6.1						
SNAA	Sanae	121.93	201	PKP	PKPdf	01 25 08.6	-0.3
SDV	Santo Domingo	122.61	317	PKP	PKPdf	01 25 11.6	-0.5
	comp=Z,6.9nm,0.7s,baz=45,slow=4.4,SNR=9.0						
VNA1	Neumayer--Stat	123.13	203	PKP	PKPdf	01 25 11.6	+0.6
PTGA	Pitinga	123.61	300	PKP	PKPdf	01 25 13.9	+0.1
	comp=Z,0.9nm,0.4s,baz=32,slow=21,SNR=6.7						
VNA3	Neumayer Olymp	123.78	203	PKP	PKPdf	01 25 12.6	+0.3
BDFB	Brasilia	124.53	277	PKP	PKPdf	01 25 15.7	+0.2
	comp=Z,1.4nm,0.3s,baz=170,slow=2.6,SNR=4.8						
ESPN	Las Esperanzas	125.79	333	*e*PKPdf	PKPdf	01 25 18.0	+0.1
VNDA	Vanda	126.61	164	PKP	PKPdf	01 25 17.3	-0.3
	comp=Z,2.1nm,0.9s,baz=273,slow=4.0,SNR=9.6						
ROSC	El Rosal	127.96	318	PKP	PKPdf	01 25 24.0	+1.4
	comp=Z,17nm,0.8s,baz=3.9,slow=22,SNR=13						
ROSC	El Rosal	127.96	318	*e*PKPdf	PKPdf	01 25 23.9	+1.4
QSPA	South Pole Qui	128.10	180	*e*PKPdf	PKPdf	01 25 21.1	+0.3
SAML	Samuel	131.69	296	*e*PKPdf	PKPdf	01 25 29.5	+0.4
SAML	Samuel	131.69	296	*e*PKIKP	PKPdf	01 25 29.5	+0.4
OTAV	Otavalo	134.00	320	*e*PKPdf	PKPdf	01 25 35.6	+1.5
OTAV	Otavalo	134.00	320	*e*PKIKP	PKPdf	01 25 35.6	+1.5
SIV	San Ignacio	134.78	287	PKP	PKPdf	01 25 35.0	+0.1
	comp=Z,7.7nm,0.8s,baz=104,slow=3.2,SNR=34						
CPUP	Villa Florida	137.58	272	PKP	PKPdf	01 25 39.7	-0.1
	comp=Z,13nm,0.8s,baz=55,slow=1.9,SNR=23						
CPUP				SKPbc	SKPbc	01 28 59.0	-1.6
	comp=Z,4.6nm,0.9s,baz=45,slow=4.5,SNR=5.4						
CPUP	Villa Florida	137.58	272	*e*PKIKP	PKPdf	01 25 39.8	0.0
LPAZ	La Paz	140.19	293	PKP	PKPdf	01 25 45.6	0.0
	comp=Z,6.2nm,0.9s,baz=22,slow=4.2,SNR=13						
LPAZ	La Paz	140.19	293	*e*PKPdf	PKPdf	01 25 46.0	+0.4
LPAZ	La Paz	140.19	293	*e*PKIKP	PKPdf	01 25 46.0	+0.4
PB01	IPOC Station P	144.16	288	*e*PKPdf	PKPbc	01 25 50.9	+0.5
PB04	IPOC Station P	145.42	287	*e*PKPdf	PKPab	01 25 54.9	+0.1
TRQA	Tornquist	145.62	256	*e*PKPdf	PKPab	01 25 54.7	-0.2
TRQA	Tornquist	145.62	256	*e*PKP2	PKPab	01 25 54.7	-0.2
GO02	Mina Guanaco	146.56	282	*e*PKPdf	PKPbc	01 25 57.9	0.0
GO03	Copiap	148.29	279	*e*PKPdf	PKPdf	01 26 00.1	+1.5
LCO	Las Campanas	149.31	277	*e*PKPdf	PKPbc	01 26 03.0	-2.1
GO04	Tololo Observa	149.90	275	*e*PKPbc	PKPbc	01 26 07.0	+0.6
PEL	Peldehue	150.96	269	*e*PKPbc	PKPbc	01 26 09.1	+0.6
ROC1	El Roble	151.16	270	*e*PKPbc	PKPbc	01 26 08.8	-0.5
GO05	HualaæØ	152.53	266	*e*PKPbc	PKPbc	01 26 12.6	+0.6
PLCA	Paso Flores	152.63	254	PKPbc	PKPbc	01 26 13.1	+1.0
	comp=Z,14nm,0.7s,baz=39,slow=3.1,SNR=32						
PLCA	Paso Flores	152.63	254	*e*PKPdf	PKPdf	01 26 06.6	+1.6
PLCA				*e*PKPbc	PKPbc	01 26 13.1	+1.0
PLCA	Paso Flores	152.63	254	*e*PKIKP	PKPdf	01 26 06.6	+1.6

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*IDC **26** 01:29:56.7±1.0, 31°.34N×142°.37E, h0^{km}, mb3.7/6, mb1 3.9/8, mb1mx3.6/61, mbtmp3.7/8, ML3.5/2, Error ellipse: s-maj=30.8km s-min=23.1km az=80.0*

*ISCJB **26** 01:29:59.7±0.7, 31°.24N±0°.06×142°.2E±0°.2, h35^{km}, mb3.8/6, Error ellipse: s-maj=24.2km s-min=8.9km az=173.8*

ISC 26 01:30:01.6±0.8**, 31°.27N**±0°.08×**142°.3E**±0°.2**, h35**^{km}**, n8, σ0^{s}.90**/9**, mb3.8**/6**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	Chichijima	4.16	181	Pn	Pn	01 31 03.2	+0.6
	4.2nm,0.3s,baz=84,slow=23,SNR=3.5						
JCJ				Sn	Sn	01 31 48.5	-1.6
	14nm,0.3s,baz=279,slow=24,SNR=4.9						
MJAR	Matsushiro Arr	6.24	328	Pn	Pn	01 31 30.4	-0.7
	0.9nm,0.3s,baz=162,slow=11,SNR=6.9						
MKAR	Makanchi Array	47.95	307	P	P	01 38 37.3	+0.6
	0.6nm,0.6s,baz=90,slow=10,SNR=6.2						
KURBB	Kurchatov Arra	50.23	312	P	P	01 38 54.3	+0.3
	0.4nm,0.4s,baz=88,slow=7.5,SNR=3.4						
WRA	Warramunga Arr	51.48	190	P	P	01 39 04.2	+0.5
	0.8nm,0.7s,baz=6.2,slow=7.8,SNR=5.3						
ILAR	Eielson Array	54.05	30	P	P	01 39 21.4	-0.8
	0.6nm,0.6s,baz=261,slow=5.4,SNR=5.0						
NVAR	Mina Array Bea	77.91	52	P	P	01 41 56.4	+0.1
	0.4nm,0.7s,baz=316,slow=5.0,SNR=3.5						
TXAR	Lajitas Array	93.05	53	P	P	01 43 12.6	+0.5
	0.5nm,0.8s,baz=300,slow=2.7,SNR=5.5						

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*NEIC **26** 01:37:29.9±0.8, 19°.15S×177°.70W, h554^{km}±9^{km}, mb4.2/68, Error ellipse: s-maj=10.6km s-min=5.5km az=137.0*

*ISCJB **26** 01:37:30.3±0.2, 19°.21S±0°.07×177°.72W±0°.07, h570^{km}, mb4.2/79, Error ellipse: s-maj=10.8km s-min=5.3km az=139.4*

*IDC **26** 01:37:33.5±1.9, 19°.20S×177°.68W, h597^{km}±21^{km}, mb3.7/14, mb1 3.9/15, mb1mx3.6/43, mbtmp4.7/15, Error ellipse: s-maj=14.8km s-min=10.0km az=153.0*

ISC 26 01:37:30.5±0.4**, 19°.16S**±0°.09×**177°.54W**±0°.08**, h570**^{km}**, n166, σ1^{s}.25**/176**, mb4.3**/79**, 1D, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	7.60	48	P	P	01 39 23.5	-1.6
	11nm,0.3s,baz=277,slow=1.4,SNR=13						
AFI				S	S	01 40 54.0	-5.0
	27nm,0.3s,baz=231,slow=21,SNR=11						
AFI	Afiamalu	7.60	48	*e*P	P	01 39 23.7	-1.4
AFI				*e*S	S	01 40 55.7	-3.3
DZM	Mont Dzumac	15.27	256	P	P	01 40 41.5	-0.9
	2.3nm,0.3s,baz=75,slow=17,SNR=17						
DZM	Mont Dzumac	15.27	256	*e*P	P	01 40 41.5	-0.9
	19nm,0.7s						
URZ	Urewera	19.60	193	P	P	01 41 18.7	-3.1
	7.7nm,0.3s,baz=288,slow=3.0,SNR=28						
URZ	Urewera	19.60	193	*e*P	P	01 41 19.3	-2.5
	89nm,1.4s						
RPZ	Rata Peaks	26.29	199	P	P	01 42 21.8	+0.4
	7.4nm,0.7s,baz=15,slow=3.9,SNR=6.1						
MLZ	Mavora Lakes	28.72	201	*e*P	P	01 42 42.0	-0.7
	16nm,1.0s						
WHZ	Wether Hill Ro	29.24	201	*e*P	P	01 42 47.6	+0.6
	41nm,0.5s						
EIDS	Eidsvold	29.64	252	*e*P	P	01 42 49.8	-1.1
	11nm,1.3s						
CTAO	Charters Tower	34.08	262	*e*P	P	01 43 28.9	+0.3
	24nm,0.7s						
PMG	Port Moresby	35.49	281	P	P	01 43 41.6	+1.2
	61nm,0.9s,baz=66,slow=6.5,SNR=9.9						
COEN	Coen	37.95	272	*e*P	P	01 44 01.5	+0.9
	25nm,0.6s						
STKA	Stephens Creek	38.77	243	P	P	01 44 07.9	+0.9
	2.8nm,0.4s,baz=101,slow=8.3,SNR=11						
AS01	Alice Springs	45.22	255	*e*P	P	01 44 57.3	-0.5
AS01				*e*PcP	PcP	01 46 24.4	-1.3
WB2	Warramunga Arr	45.22	261	*e*P	P	01 44 57.2	-0.6
	9.9nm,0.6s						
WB2				*e*PcP	PcP	01 46 26.2	+0.5
WRA	Warramunga Arr	45.23	261	P	P	01 44 57.4	-0.5
	6.1nm,0.5s,baz=97,slow=8.6,SNR=92						
WRA				PcP	PcP	01 46 25.8	0.0
	1.7nm,0.6s,baz=87,slow=3.5,SNR=6.1						
WRA				S	S	01 50 55.3	-1.9
	0.5nm,0.8s,baz=93,slow=7.8,SNR=4.8						
AS31	Alice Springs	45.26	255	*e*P	P	01 44 58.1	0.0
	4.0nm,0.5s						
ASAR	Alice Springs	45.26	255	P	P	01 44 57.9	-0.2
	6.8nm,0.4s,baz=87,slow=8.3,SNR=79						
ASAR				PcP	PcP	01 46 25.9	+0.1
	2.5nm,0.7s,baz=103,slow=4.1,SNR=8.1						
ASAR				S	S	01 50 55.7	-1.9
	3.4nm,0.8s,baz=92,slow=15,SNR=19						
SBA	Scott Base	59.23	184	*e*P	P	01 46 39.5	+2.5
	12nm,1.0s						
VNDA	Vanda	59.28	185	P	P	01 46 38.6	+1.2
	2.4nm,0.6s,baz=356,slow=8.9,SNR=15						
VNDA	Vanda	59.28	185	*e*P	P	01 46 38.6	+1.2
	3.3nm,0.8s						
CASY	Casey	65.36	205	*e*P	P	01 47 16.9	+0.1
	10nm,1.0s						
QSPA	South Pole Qui	70.91	180	P	P	01 47 51.2	+0.7
	18nm,0.8s,baz=41,slow=2.9,SNR=47						
QSPA	South Pole Qui	70.91	180	*e*P	P	01 47 51.3	+0.7
	20nm,0.8s						
CMB	Columbia Colle	78.19	43	*e*P	P	01 48 33.4	+1.6
	4.4nm,0.9s						
AFDM	Forest Hills D	78.35	42	*e*P	P	01 48 34.2	+1.6
	3.2nm,0.9s						
MDPB	Devils Postpil	78.80	44	*e*P	P	01 48 37.1	+1.7
	5.1nm,0.8s						
OMMB	Old Mammoth Mi	78.84	44	*e*P	P	01 48 37.4	+1.8
	6.9nm,1.5s						
YBH	Yreka Blue Hor	78.97	39	P	P	01 48 37.8	+1.8
	4.2nm,0.8s,baz=335,slow=0.5,SNR=10						
YBH	Yreka Blue Hor	78.97	39	*e*P	P	01 48 38.1	+2.1
	4.3nm,0.8s						
WAKR	Walker	79.07	43	*e*P	P	01 48 38.6	+2.0
	4.4nm,0.8s						
BEKR	Beckworth	79.28	41	*e*P	P	01 48 39.3	+1.6
	3.0nm,0.7s						
PNTR	Pine Nut	79.30	42	*e*P	P	01 48 39.8	+1.9
	11nm,0.8s						
YERR	Yerington	79.47	42	*e*P	P	01 48 40.5	+1.7
	7.2nm,0.6s						
NV01	Mina Array Sit	79.75	43	*e*P	P	01 48 41.3	+1.0
NVAR	Mina Array Bea	79.75	43	P	P	01 48 41.8	+1.5
	2.2nm,0.6s,baz=225,slow=8.8,SNR=20						
PAHR	Pah Rah Range	79.79	42	*e*P	P	01 48 42.1	+1.7
	3.4nm,0.7s						
KVN	Kaiserville	80.24	43	*e*P	P	01 48 44.3	+1.5
	5.9nm,1.2s						
TPNV	Topopah Spring	80.30	45	*e*P	P	01 48 44.8	+1.7
	3.6nm,1.0s						
MOD	Modoc Plateau	80.51	40	*e*P	P	01 48 45.5	+1.4
	5.8nm,0.8s						
K05A	Summer Lake	80.65	39	*e*P	P	01 48 46.6	+1.8
	10nm,0.8s						
PINE	Pine Mountain	81.26	38	*e*P	P	01 48 49.8	+1.9
	11nm,0.9s						
HOM	Homer	81.33	13	*e*P	P	01 48 52.8	+5.2
	638nm,0.2s						
R11A	Troy Canyon, C	81.49	45	*e*P	P	01 48 50.5	+1.3
	2.5nm,1.0s						
TUC	Tucson	81.81	52	*e*P	P	01 48 53.1	+2.3
	6.1nm,0.9s						
WVOR	Wild Horse Val	81.83	40	*e*P	P	01 48 52.2	+1.5
	7.5nm,1.1s						
RSO	Redoubt South	81.84	12	*e*P	P	01 48 52.6	+2.2
LCMT	Little Creek M	82.38	47	*e*P	P	01 48 55.6	+1.9
	3.9nm,0.8s						
J08A	Circle Bar Ran	82.46	39	*e*P	P	01 48 55.6	+1.7
	10nm,1.3s						
CCUT	Cedar City	82.57	46	*e*P	P	01 48 56.6	+1.9
	3.8nm,0.9s						
KNB	Kanab	82.67	47	*e*P	P	01 48 57.2	+2.0
	5.4nm,1.0s						
PSUT	Pine Spring	82.75	45	*e*P	P	01 48 57.2	+1.6
	2.6nm,0.9s						
SUA	Susitna One	83.16	13	*e*P	P	01 48 57.2	+0.2
	8.8nm,0.6s						
G08A	Pilot Rock	83.29	37	*e*P	P	01 48 59.7	+1.7
	4.1nm,0.8s						
GLI	Glacier Island	83.45	14	*e*P	P	01 48 58.4	+0.1
	9.9nm,0.7s						
PMR	Palmer	83.62	13	*e*P	P	01 48 59.1	+0.1
	6.4nm,0.5s						
GHO	Glory Hole Cre	83.82	13	*e*P	P	01 49 00.5	+0.3
	14nm,0.7s						
DIV	Divide	83.98	15	*e*P	P	01 49 01.6	+0.7
	5.5nm,0.7s						
BMRM	Bremner River	84.13	15	*e*P	P	01 49 02.5	+0.8
	7.4nm,0.8s						
SCM	Sheep Creek Mo	84.23	14	*e*P	P	01 49 02.9	+0.7
	9.8nm,0.7s						
TGL	Tana Glacier	84.41	16	*e*P	P	01 49 03.6	+0.4
	44nm,0.4s						
F10A	Beach Ranch, E	84.68	37	*e*P	P	01 49 05.6	+0.8
	5.8nm,0.7s						
B08A	Colville Reser	84.89	35	*e*P	P	01 49 06.7	+0.9
	3.8nm,0.8s						
TMUT	Trail Mountain	84.91	46	*e*P	P	01 49 08.4	+2.0
	3.6nm,0.7s						
HLID	Hailey	85.03	41	*e*P	P	01 49 08.2	+1.5
	2.6nm,0.9s						
TRF	Thorofare Moun	85.05	12	*e*P	P	01 49 06.2	-0.1
	7.2nm,0.8s						
SRU	San Rafael Swe	85.28	46	*e*P	P	01 49 09.4	+1.4
	3.3nm,0.7s						
MCK	McKinley	85.57	12	*e*P	P	01 49 08.8	+0.2
	6.6nm,0.8s						
GSI	Gunungsitoli	85.59	273	*e*P	P	01 49 07.9	-1.9
	27nm,1.3s						
MNTX	Cornudas Mount	85.62	54	*e*P	P	01 49 11.3	+1.6
	4.7nm,0.8s						
TX31	Lajitas Ar. Si	85.97	57	*e*P	P	01 49 13.4	+2.0
TXAR	Lajitas Array	85.97	57	P	P	01 49 13.3	+1.9

	3.7nm,0.7s,baz=218,slow=6.6,SNR=53						
ANMO	Albuquerque	86.23	51	eP	P	01 49 14.1	+1.5
	4.1nm,0.9s						
WRH	Wood River Hil	86.40	12	eP	P	01 49 12.7	+0.2
	4.9nm,0.8s						
CCB	Clear Creek Bu	86.62	12	eP	P	01 49 13.2	-0.2
	5.6nm,0.7s						
MCMT	McKenzie Canyo	86.65	40	eP	P	01 49 16.3	+1.9
MDM	Murphy Dome	86.81	12	eP	P	01 49 14.3	-0.2
	5.8nm,0.9s						
IL1	Eielson Array	86.92	13	eP	P	01 49 14.5	-0.4
ILAR	Eielson Array	86.92	13	P	P	01 49 14.6	-0.3
	1.4nm,0.6s,baz=233,slow=5.0,SNR=16						
ILB	Eielson Array	86.92	13	eP	P	01 49 14.8	-0.1
DLMT	Dillon	87.08	40	eP	P	01 49 18.1	+1.7
	6.3nm,1.0s						
REDW	Red Top Meadow	87.15	42	eP	P	01 49 18.8	+2.0
	3.9nm,0.9s						
TPAW	Teton Pass	87.15	42	eP	P	01 49 17.8	+0.9
	3.6nm,1.0s						
S22A	4UR Ranch, Cre	87.21	49	eP	P	01 49 18.7	+1.3
	3.5nm,0.9s						
IMW	Indian Meadow	87.36	42	eP	P	01 49 19.7	+1.8
	4.7nm,0.9s						
QLMT	Earthquake Lak	87.52	41	eP	P	01 49 20.5	+2.0
LNIG	Linares	87.66	63	eP	P	01 49 19.4	+0.1
	6.3nm,0.9s						
PD31	Pinedale Array	87.69	43	eP	P	01 49 20.4	+1.0
PDAR	Pinedale Array	87.69	43	P	P	01 49 20.1	+0.7
	1.4nm,0.7s,baz=205,slow=3.1,SNR=13						
PDAR	Pinedale Array	87.69	43	eP	P	01 49 18.7	-0.7
BOZ	Bozeman (W)	87.79	40	eP	P	01 49 21.3	+1.7
	5.3nm,0.9s						
DAWY	Dawson	88.06	16	eP	P	01 49 21.4	+1.0
	2.8nm,0.7s						
EGAK	Eagle	88.20	15	eP	P	01 49 21.8	+0.9
	3.9nm,0.8s						
MSTX	Muleshoe	88.57	53	eP	P	01 49 24.9	+1.3
	7.6nm,0.8s						
RLMT	Red Lodge	89.00	41	eP	P	01 49 27.8	+2.3
	4.0nm,0.9s						
SNAA	Sanae	89.33	178	P	P	01 49 25.7	-0.7
SNAA	Sanae	89.33	178	P	P	01 49 25.9	-0.5
	4.5nm,0.6s,baz=206,slow=6.9,SNR=43						
SNAA	Sanae	89.33	178	eP	P	01 49 24.6	-1.8
	5.0nm,0.7s						
VNA3	Neumayer Olymp	89.45	176	P	P	01 49 26.5	-0.4
VNA1	Neumayer--Stat	90.12	176	P	P	01 49 30.2	+0.3
INK	Inuvik	92.87	15	P	P	01 49 42.5	+0.2
	2.8nm,0.8s,baz=156,slow=5.7,SNR=4.5						
LPAZ	La Paz	102.17	112	PKiKP	PKiKP	01 54 44.5	-0.3
	0.5nm,0.4s,baz=230,slow=2.2,SNR=4.7						
ZALV	Zalesovo Beam	109.72	322	PKiKP	PKiKP	01 54 55.8	-1.1
	1.1nm,0.4s,baz=76,slow=0.6,SNR=3.8						
MKAR	Makanchi Array	110.59	314	PKiKP	PKiKP	01 54 58.0	-0.9
	0.9nm,0.5s,baz=184,slow=0.6,SNR=14						
MKAR				PKKPbc	PKKPbc	02 05 59.5	-1.2
	0.4nm,0.7s,baz=35,slow=3.0,SNR=3.6						
KURBB	Kurchatov Arra	113.35	318	PKiKP	PKiKP	01 55 03.2	-0.7
	1.3nm,0.7s,baz=90,slow=1.8,SNR=13						
BVAR	Borovoye Array	118.33	321	PKP	PKPdf	01 55 12.9	-0.5
	2.1nm,0.3s,baz=101,slow=1.5,SNR=17						
BOSA	Boshof	127.65	205	PKP	PKPdf	01 55 33.0	+0.7
	1.8nm,0.6s,baz=175,slow=2.4,SNR=4.7						
ARCES	ARCESS Array B	127.68	350	PKP	PKPdf	01 55 31.1	+0.3
	2.2nm,0.4s,baz=12,slow=1.0,SNR=28						
FINES	FINESS Array B	134.61	344	PKP	PKPdf	01 55 45.2	+1.0
	1.4nm,0.6s,baz=84,slow=3.7,SNR=7.6						
NB2	NORSAR Subarra	137.70	354	PKP	PKPdf	01 55 51.6	+1.6
	comp=Z,1.0nm,0.6s,baz=11,slow=4.1						
NOA	NORSAR Array B	137.70	354	PKP	PKPdf	01 55 51.6	+1.6
	comp=Z,0.9nm,0.7s,baz=13,slow=4.1,SNR=5.6						
AKASG	Malin Array Be	142.04	332	PKhKP	PKPpre	01 55 53.6	
	comp=Z,1.0nm,0.3s,baz=43,slow=4.1,SNR=10						
EKA	Eskdalemuir Ar	143.63	5	PKP	PKPab	01 55 59.4	-0.3
	comp=Z,4.3nm,0.6s,baz=340,slow=3.0,SNR=24						
GKP	Gorka Klasztor	144.07	345	ePKP	PKPab	01 56 01.8	+0.5
KWP	Kalwaria Pacla	145.54	337	ePKP	PKPbc	01 56 06.3	+0.6
BUR08	Bucovina Ar. S	146.08	332	ePKPdf	PKPbc	01 56 07.5	+0.1
BUR04	Bucovina Ar. S	146.09	332	ePKPdf	PKPdf	01 56 06.8	+1.5
BR131	Keskin Array S	146.24	314	ePKPdf	PKPbc	01 56 08.1	0.0
BRTR	Keskin Array B	146.24	314	PKPbc	PKPbc	01 56 08.1	0.0
	comp=Z,2.9nm,0.5s,baz=129,slow=3.3,SNR=18						
KSP	Ksiaz	146.53	344	ePKP	PKPbc	01 56 09.3	+0.9
ANTO	Ankara	146.74	315	ePKPbc	PKPbc	01 56 10.2	+0.8
CLL	Collm	146.85	348	ePKPdf	PKPdf	01 56 07.0	+0.7
CLL				⇓iPKPbc	PKPbc	01 56 09.4	+0.2
	comp=Z,13nm,0.6s						
CLL				i PKPab	PKPab	01 56 12.5	+0.2
	comp=Z,6.0nm,1.1s						
CLL				e		01 58 26.0	
CLL				eSKPbc	SKiKP	01 58 55.0	+1.4
UPC	Upice	146.91	344	ePKP	PKPbc	01 56 09.8	+0.4
DPC	Dobruska-Polom	146.97	344	ePKP	PKPbc	01 56 09.8	+0.2
DPC				ex	x	01 56 13.9	
BRG	Berggiesshubel	147.07	347	i PKP	PKPbc	01 56 10.1	+0.3
	comp=Z,5.6nm,0.8s						
KRLC	Kraliky	147.10	343	ePKP	PKPdf	01 56 08.3	+1.5
KRLC				ex	x	01 56 10.9	
MORC	Moravsky Berou	147.15	342	ePKP	PKPbc	01 56 10.7	+0.6
PVCC	Panska Ves	147.25	346	ePKP	PKPbc	01 56 11.5	+1.2
MMAI	Mount Meron Ar	147.50	302	PKPbc	PKPbc	01 56 12.1	+0.5
	comp=Z,6.7nm,0.5s,baz=69,slow=5.1,SNR=26						
PRU	Pruhonice	147.76	345	ePKP	PKPbc	01 56 12.0	+0.4
GOPC	GO Pecny, Ondr	147.77	345	ePKP	PKPbc	01 56 12.3	+0.7
VRAC	Vranov	147.84	343	ePKP	PKPbc	01 56 13.0	+1.1
VYHS	Vyhne	147.87	339	ePKP	PKPbc	01 56 12.3	+0.3
JAVC	Velka Javorina	147.93	341	ePKP	PKPbc	01 56 13.7	+1.6
PSZ	Piszkesteto	148.00	338	ePKPbc	PKPbc	01 56 12.9	+0.6
KRUC	Moravsky	148.12	343	ePKP	PKPbc	01 56 13.0	+0.5
MODS	Modra-Piesok	148.48	341	ePKP	PKPbc	01 56 14.5	+1.0
CSS	Mathiatis	148.48	306	ePKPbc	PKPbc	01 56 13.3	-0.6
KHC	Kasperske Hory	148.78	346	ePKP	PKPbc	01 56 15.0	+0.8
KHC	Kasperske Hory	148.78	346	ePKPbc	PKPbc	01 56 14.9	+0.6
GEC2	GERESS Array S	149.02	346	ePKPbc	PKPbc	01 56 15.6	+0.7
GERES	GERESS Array B	149.02	346	PKPbc	PKPbc	01 56 15.2	+0.3
	comp=Z,4.9nm,0.7s,baz=42,slow=2.2,SNR=31						
GEA0	GERESS Array S	149.03	346	ePKPdf	PKPdf	01 56 11.6	+1.5
CONA	Conrad Observa	149.30	342	i PKPbc	PKPbc	01 56 16.2	+0.7
	comp=Z,8.1nm,0.7s,SNR=8.7						
WLF	Walferdange	149.42	355	ePKPbc	PKPbc	01 56 15.7	0.0
MOA	Molln	149.81	344	i PKPbc	PKPbc	01 56 16.9	+0.2
	comp=Z,3.2nm,0.6s						
BFO	Black Forest	150.51	352	ePKPbc	PKPbc	01 56 18.6	+0.2
SOKA	Soboth	150.67	342	i PKPbc	PKPbc	01 56 18.5	-0.3
	comp=Z,7.4nm,1.0s,SNR=6.4						
KBA	Koelnbreinsper	150.76	345	i PKPbc	PKPbc	01 56 18.6	-0.5
	comp=Z,6.6nm,0.5s						
VTS	Vitosha	150.78	328	ePKPbc	PKPbc	01 56 19.3	0.0
WATA	Walderalm	150.92	347	i PKPbc	PKPbc	01 56 19.3	-0.1
	comp=Z,9.7nm,0.5s						
RETA	Reutte	150.94	348	i PKPbc	PKPbc	01 56 19.3	-0.1
	comp=Z,2.8nm,0.5s						
OBKA	Obir	150.96	343	i PKPbc	PKPbc	01 56 19.1	-0.4
	comp=Z,3.5nm,0.7s						
WTTA	Wattenberg	150.98	347	i PKPbc	PKPbc	01 56 20.0	+0.4
	comp=Z,10nm,0.6s						
MOTA	Moosalm	151.01	348	i PKPbc	PKPbc	01 56 20.1	+0.5
	comp=Z,3.7nm,0.5s						
MYKA	Terra Mystica	151.10	344	i PKPbc	PKPbc	01 56 19.3	-0.5
	comp=Z,6.1nm,0.5s						
DIVS	Divibare	151.12	333	ePKPbc	PKPbc	01 56 20.2	+0.2
ABTA	Abfaltersbach	151.27	346	i PKPbc	PKPbc	01 56 19.6	-0.5
	comp=Z,12nm,0.5s,SNR=10						
DAVA	Damuels	151.29	349	i PKPbc	PKPbc	01 56 20.5	+0.2
	comp=Z,7.0nm,0.8s						
FETA	Feichten	151.39	348	i PKPbc	PKPbc	01 56 20.6	0.0
	comp=Z,4.7nm,0.6s						
BLY	Banja Luka	151.68	338	ePKPbc	PKPbc	01 56 21.7	+0.7
DAVOX	Davos/Dischmat	151.78	349	PKPbc	PKPbc	01 56 21.8	+0.3
	comp=Z,11nm,0.5s,baz=280,slow=6.1,SNR=30						
FUORN	Ofenpass-Fuorn	151.87	349	ePKPbc	PKPbc	01 56 22.2	+0.5
TOA0	Torodi Ar. Sit	173.98	173	ePKPdf	PKPdf	01 56 35.1	-0.9
TORD	Torodi Ar. Bea	173.98	173	PKP	PKPdf	01 56 35.1	-0.9
	comp=Z,1.8nm,1.0s,baz=337,slow=2.3						
TORD				PKPab	PKPab	01 58 10.9	+0.1
	baz=181,slow=5.9						

IDC 26 02:04:18.5±54.0, 19°.65S×177°.09W, h0^{km}, mb4.1/3, mb1 4.3/3, mb1mx3.7/39, mbtmp4.1/3, Error ellipse: s-maj=997.3km s-min=154.5km az=82.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.93	243	P	P	02 11 46.2	-0.2
	1.4nm,0.5s,baz=90,slow=13,SNR=2.9						
ASAR	Alice Springs	45.55	256	P	P	02 12 40.2	-0.3
	2.8nm,0.5s,baz=96,slow=7.9,SNR=28						
WRA	Warramunga Arr	45.58	261	P	P	02 12 40.7	0.0
	0.5nm,0.3s,baz=96,slow=7.3,SNR=26						

WEL 26 02:07:23.0, 38°S±8°×18°0W±°, h33^{km}, ML3.8/20, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.39	272	P	Pn	02 07 46.3	+0.4
WMGZ				S	Sn	02 08 03.1	0.0
MXZ	Matakaoa Point	1.51	282	P	Pn	02 07 47.8	+0.1
MXZ				S	Sn	02 08 06.5	+0.4
PUZ	Puketiti	1.52	263	P	Pn	02 07 48.3	+0.5
PUZ				S	Sn	02 08 06.8	+0.4
PKGZ	Pakihiroa	1.65	269	P	Pn	02 07 50.0	+0.4
PKGZ				S	Sn	02 08 09.9	+0.1
CNGZ	Carnagh Statio	1.65	248	P	Pb	02 07 51.3	-1.5
TWGZ	Tauwhareparae	1.75	260	P	Pn	02 07 52.2	+1.2
TWGZ				S	Sn	02 08 13.9	+1.8
HAZ	Te Kaha	1.89	273	P	Pn	02 07 53.5	+0.7
TKGZ	Te Karaka	1.91	253	P	Pn	02 07 54.3	+1.2
TKGZ				S	Sn	02 08 17.2	+1.2
RUGZ	Raukumara Rang	1.97	267	P	Pn	02 07 54.5	+0.4
PRGZ	Paritu Road	2.07	239	P	Pn	02 07 57.4	+2.0
MWZ	Matawai	2.13	257	P	Pn	02 07 56.9	+0.7
MWZ				S	Sn	02 08 21.5	0.0
MHGZ	Mahia Peninsul	2.17	234	P	Pn	02 07 58.6	+1.8
MHGZ				S	Sb	02 08 25.5	-2.7
KNZ	Kokohu	2.26	239	P	Pn	02 07 59.7	+1.7
URZ	Urewera	2.44	260	P	Pn	02 08 01.7	+1.3
URZ				S	Sn	02 08 29.4	+0.4
RTZ	Ruatahuna	2.61	253	P	Pn	02 08 04.8	+2.0
MUGZ	Murupara	2.74	257	P	Pn	02 08 05.8	+1.2
MUGZ				S	Sn	02 08 36.3	-0.2
MTHZ	Maungataniwha	2.78	249	P	Pn	02 08 06.6	+1.4
MTHZ				S	Sn	02 08 38.8	+1.1
ARHZ	Aropaoanui	2.84	240	P	Pn	02 08 08.3	+2.4
OPRZ	Ohinepanea	2.86	270	P	Pn	02 08 06.5	+0.4
TARZ	Mount Tarawera	2.91	262	P	Pn	02 08 08.2	+1.2
MCHZ	McNeill Hill	3.13	239	P	Pn	02 08 11.7	+1.8
BKZ	Black Stump Fm	3.15	245	P	Pn	02 08 12.0	+1.7
BKZ				S	Sn	02 08 48.0	+1.3
KAHZ	Kahuranaki	3.19	232	P	Pn	02 08 12.6	+1.7
KWHZ	Kaweka Forest	3.31	241	P	Pn	02 08 13.8	+1.4
KRHZ	Kereru	3.44	238	P	Pn	02 08 15.5	+1.2
KRHZ				S	Sn	02 08 54.2	+0.3
BHHZ	Black Hill Sta	3.58	242	P	Pn	02 08 17.5	+1.2
BHHZ				S	Sn	02 08 56.9	-0.6
PNHZ	Pukenui	3.69	236	P	Pn	02 08 18.8	+1.0
MOVZ	Moawhango	3.77	245	P	Pn	02 08 20.6	+1.7
TUVZ	Tukino	3.79	247	P	Pn	02 08 22.0	+2.8
NGZ	Ngauruhoe	3.80	249	P	Pn	02 08 22.2	+2.9
TSZ	Takapari Road	3.93	235	P	Pn	02 08 21.3	+0.4
DVHZ	Dannevirke	3.93	231	P	Pn	02 08 21.6	+0.6
BFZ	Birch Farm	4.13	226	P	Pn	02 08 23.2	-0.4
HIZ	Hauiti	4.23	260	P	Pn	02 08 26.5	+1.5
POWZ	Post Office Ro	4.23	232	P	Pn	02 08 26.0	+0.8
MRZ	Mangatainoka R	4.51	231	P	Pn	02 08 28.8	-0.1
HOWZ	Holdsworth Sta	4.69	229	P	Pn	02 08 31.3	-0.1
PKE	Pukeiti	5.02	253	P	Pn	02 08 38.9	+3.0
KIW	Kapiti Island	5.04	232	P	Pn	02 08 36.7	+0.5
OUZ	Omahuta	5.92	295	P	Pn	02 08 49.4	+1.2

MAN 26 02:08:48.4, 12°.84N×121°.39E, h17^{km}, mb3.8, ML2.5, MS2.0, 1C, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SJMP	San Jose	0.46	215	eP	Pb	02 08 58.2	+0.2
SJMP				eS	Sb	02 09 05.8	+1.3
BOAC	Boac	0.76	36	eP	Pn	02 09 04.4	+0.1
BOAC				eS	Sn	02 09 15.6	+0.2
PGP	Puerto Galera	0.78	327	⇑eP	Pb	02 09 02.3	-1.3
PGP				i S	Sb	02 09 12.0	-1.9
OTRP	Odiongan	0.78	127	eP	Pn	02 09 08.1	+3.4
LUBP	Lubang	1.42	309	eP	Pn	02 09 13.6	+0.1
LUBP				eS	Sg	02 09 34.0	-0.3
BUSP	Coron	1.43	234	eP	Pn	02 09 12.8	-0.7
BUSP				eS	Sb	02 09 32.4	0.0

SKO ***26*** *02:27:24.7, 41°.55N×19°.79E, h0^{km}, M1.1, ML1.6*
TIR ***26*** *02:27:24.7, 41°.34N×19°.93E, h6^{km}, Md2.6/3*

ISC 26 02:27:25.9±2.3, 41°.34N±0°.09×20°.06E±0°.06, h3^{km}±14^{km}, n6, σ0^s.79/12, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PHP	Peshkopia	0.45	40	i PG	Pg	02 27 35.2	+0.7
PHP				i SG	Sb	02 27 43.0	-0.6
OHR	Ohrid	0.60	112	ePg	Pn	02 27 41.2	-0.2
OHR				eSg	Sn	02 27 51.5	-0.2
OHR				eLg	Lg	02 27 53.3	
	comp=N,11nm,0.6s						
OHR				eLg	Lg	02 27 57.7	
	comp=E,18nm,0.6s						
PUK	Puka	0.71	350	i PG	Pg	02 27 38.9	-0.7
PUK				i SG	Sg	02 27 49.5	+0.7
KRUS	Krusevo	0.89	88	ePg	Pn	02 27 44.6	-0.9
KRUS				eSg	Sn	02 28 00.3	+1.3
BCI	Bajram Curri	1.02	0	i PG	Pg	02 27 44.8	-0.7
BCI				i SG	Sn	02 28 02.1	0.0
STON	Ston	2.33	312	ePn	Pn	02 28 05.2	+0.1
STON				Sn	Sb	02 28 38.2	+0.5

TIR ***26*** *02:37:13.2, 41°.18N×20°.26E, h7^{km}, Md2.7/3*

SKO 26 02:37:12.9, 41°.17N×20°.26E, h15^{km}, M1.4, ML1.9, Albania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OHR	Ohrid	0.41	98	ePg	Pg	02 37 21.5	+0.3
OHR				i Sg	Sb	02 37 28.1	+0.2
OHR				eLg	Lg	02 37 28.3	
	comp=N,67nm,0.3s						
OHR				eLg	Lg	02 37 28.3	
	comp=E,69nm,0.5s						
PHP	Peshkopia	0.53	15	i PG	Pg	02 37 23.6	+0.2
PHP				i SG	Sb	02 37 32.1	+0.6
KBN	Korca	0.68	144	i PG	Pg	02 37 25.8	-0.3
KBN				i SG	Sg	02 37 32.6	-2.5
KRUS	Krusevo	0.77	75	ePg	Pb	02 37 28.1	+0.1
KRUS				i Sg	Sb	02 37 39.4	+1.0
PUK	Puka	0.91	343	i PN	Pg	02 37 30.8	+0.2
PUK				i SN	Sn	02 37 49.1	+4.9

BJI ***26*** *02:38:56.7, 31°.34S×178°.78W, h37^{km}, mb5.3/8, mB5.4/5, Ms4.6/4, Ms7 4.4/3*
WEL ***26*** *02:38:59.5±0.8, 32°S±5°×17°8W±1°4, h33^{km}, ML5.8/24*
MOS ***26*** *02:39:02.8±1.1, 31°.30S×179°.09W, h89^{km}, mb5.0/14, Error ellipse: s-maj=13.6km s-min=10.2km az=72.4*
GCMT ***26*** *02:39:02.4±0.3, 31°.36S×178°.92W, h94^{km}±2^{km}, MW5.1/82, Moment Tensor Solution. s45,c58; s82,c121; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}2.26±.14; $M_{\theta\theta}$-3.63±.16; $M_{\phi\phi}$1.37±.16; $M_{r\theta}$-0.56±.12; $M_{\theta\phi}$4.22±.14; $M_{\phi r}$-1.93±.10; Best double couple: $M_0$5.59100×10^{16} NP1:ϕ_s159.00000°,δ69.00000°,λ152.00000°. NP2: ϕ_s260.00000°,δ64.00000°,λ24.00000°. Principal axes: T 5.1200, Plg35.0000°, Azm118.0000°; N 0.9420, Plg55.0000°, Azm305.0000°; P -6.0620, Plg3.0000°, Azm210.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
ISCJB ***26*** *02:39:02.9±0.1, 31°.78S±0°.02×179°.05W±0°.05, h96^{km}, mb4.8/70 Error ellipse: s-maj=6.0km s-min=2.3km az=27.8*
NEIC ***26*** *02:39:02.4±0.8, 31°.50S×179°.14W, h82^{km}±7^{km}, mb4.9/53, Error ellipse: s-maj=9.1km s-min=6.4km az=145.0*
IDC ***26*** *02:39:07.4±1.4, 31°.30S×179°.00W, h126^{km}±10^{km}, mb4.4/14, mb1 4.6/16, mb1mx4.4/38, mbtmp4.8/16, MS3.5/24, Ms1 3.5/24, ms1mx3.4/39, Error ellipse: s-maj=13.3km s-min=11.3km az=25.0*

ISC 26 02:39:04.2±0.2, 31°.77S±0°.03×179°.05W±0°.06, h96^{km}, n382, σ2^s.01/370, mb4.8/70, 14C-8D, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.69	22	P	Pn	02 39 39.8	-5.9
RAO	Raoul Island	2.70	22	P	Pn	02 39 40.0	-5.8
	759nm,0.3s,baz=205,slow=6.4,SNR=38						
RAO				S	Sn	02 40 11.8	-5.9
	2µm,0.3s,baz=72,slow=22,SNR=6.2						
RAO				LR	LR	02 40 39.4	
	comp=Z,1µm,19.8s,baz=322,slow=41						
RAO	Raoul Island	2.70	22	ePn	Pn	02 39 40.2	-5.6
RAO				eSn	Sn	02 40 11.5	-6.2
RAO	Raoul Island	2.70	22	eP	Pn	02 39 40.2	-5.6
RAO				e		02 40 11.5	
RIZ	Raoul Island	2.70	21	P	Pn	02 39 41.0	-4.9
RIZ				S	Sn	02 40 12.6	-5.3
MXZ	Matakaoa Point	6.17	200	ePn	Pn	02 40 32.6	-0.2
MXZ				eSn	Sn	02 41 53.2	+11
MXZ	Matakaoa Point	6.17	200	P	Pn	02 40 33.0	+0.2
MXZ				S	Sn	02 41 46.0	+4.1
GRZ	Great Barrier	6.38	224	P	Pn	02 40 41.9	+6.4
WMGZ	Waiomatatini S	6.38	198	P	Pn	02 40 36.4	+0.8
WMGZ				S	Sn	02 41 51.4	+4.5
HAZ	Te Kaha	6.51	203	P	Pn	02 40 38.9	+1.5
HAZ				S	Sn	02 41 55.8	+5.7
PKGZ	Pakihiroa	6.54	200	P	Pn	02 40 38.0	+0.1
PKGZ				S	Sn	02 41 54.1	+3.2
PUZ	Puketiti	6.66	199	P	Pn	02 40 39.1	-0.3
PUZ				S	Sn	02 41 55.5	+1.7
RUGZ	Raukumara Rang	6.74	203	P	Pn	02 40 40.8	+0.2
TWGZ	Tauwhareparae	6.84	200	P	Pn	02 40 41.8	0.0
TWGZ				S	Sn	02 42 01.8	+3.6
WCZ	Waipu Caves	6.89	231	P	Pn	02 40 50.4	+7.9
WHRZ	Whale Island	6.89	207	P	Pn	02 40 46.4	+3.8
WHRZ				S	Sn	02 42 08.1	+8.6
WIAZ	Waiheke Island	6.94	222	P	Pn	02 40 49.9	+6.6
OUZ	Omahuta	7.04	239	P	Pn	02 40 51.5	+7.0
OPRZ	Ohinepanea	7.05	210	P	Pn	02 40 47.1	+2.4
CNGZ	Carnagh Statio	7.06	198	P	Pn	02 40 45.2	+0.3
TGRZ	Tauranga	7.08	212	P	Pn	02 40 51.2	+6.0
TKGZ	Te Karaka	7.12	200	P	Pn	02 40 45.5	-0.2
MWZ	Matawai	7.12	202	P	Pn	02 40 45.2	-0.5
MWZ				S	Sn	02 42 11.1	+6.0
MARZ	Manawahe	7.12	208	P	Pn	02 40 50.5	+4.8
MKAZ	Moumakai	7.15	220	P	Pn	02 40 51.6	+5.5
URZ	Urewera	7.20	205	P	Pn	02 40 46.9	+0.2
	3.4nm,0.3s,baz=274,slow=3.2,SNR=54						
URZ				S	Sn	02 42 09.6	+2.8
	33nm,0.3s,baz=28,slow=23,SNR=12						
URZ	Urewera	7.20	205	P	Pn	02 40 46.8	+0.2
RAGZ	Rawiri	7.30	202	P	Pn	02 40 48.4	+0.2
KMRZ	Kaimai	7.32	213	P	Pn	02 40 54.6	+6.1
KARZ	Kaharoa	7.33	210	P	Pn	02 40 52.7	+4.1
OMRZ	Omania	7.35	209	P	Pn	02 40 55.5	+6.7
TARZ	Mount Tarawera	7.41	208	P	Pn	02 40 54.0	+4.4
MUGZ	Murupara	7.51	206	P	Pn	02 40 51.0	0.0
PRGZ	Paritu Road	7.56	198	P	Pn	02 40 51.4	-0.3
RTZ	Ruatahuna	7.56	204	P	Pn	02 40 52.6	+0.9
SNGZ	Shannon Statio	7.59	202	P	Pn	02 40 51.9	-0.2
HRRZ	Handcock Road	7.63	209	P	Pn	02 40 56.3	+3.7
KNZ	Kokohu	7.71	199	P	Pn	02 40 52.9	-0.8
ALRZ	Allen Road	7.75	208	P	Pn	02 40 58.2	+4.0
MHGZ	Mahia Peninsul	7.77	198	P	Pn	02 40 53.2	-1.3
RAHZ	Arahi	7.79	203	P	Pn	02 40 54.3	-0.5
MTHZ	Maungataniwha	7.82	204	P	Pn	02 40 55.9	+0.6
WHHZ	Waihua	7.89	202	P	Pn	02 40 55.8	-0.4
KUTZ	Kaahu Road	7.91	211	P	Pn	02 41 01.8	+5.4
MRHZ	Matea Rd	7.96	206	P	Pn	02 40 57.8	+0.7
NMHZ	Naumai	8.05	204	P	Pn	02 40 58.0	-0.4
WATZ	Wairara	8.13	210	P	Pn	02 41 03.7	+4.3
ARHZ	Aropaoanui	8.14	202	P	Pn	02 40 58.4	-1.1
BKZ	Black Stump Fm	8.22	205	ePn	Pn	02 40 59.6	-1.2
BKZ				eSn	Sn	02 42 24.4	-7.5
BKZ	Black Stump Fm	8.22	205	P	Pn	02 40 59.5	-1.2
RITZ	Rihia Road	8.30	209	P	Pn	02 41 03.9	+2.1
KATZ	Kakaramea	8.37	209	P	Pn	02 41 06.2	+3.4
HIZ	Hauiti	8.37	215	ePn	Pn	02 41 06.3	+3.6
HIZ	Hauiti	8.37	215	P	Pn	02 41 07.0	+4.3
MCHZ	McNeill Hill	8.40	203	P	Pn	02 41 01.8	-1.3
CKHZ	Cape Kidnapper	8.47	201	P	Pn	02 41 02.8	-1.3
KWHZ	Kaweka Forest	8.48	204	P	Pn	02 41 02.1	-2.1
KRVZ	Karewarewa	8.49	209	P	Pn	02 41 05.8	+1.3
WTVZ	West Tongariro	8.53	209	P	Pn	02 41 06.8	+1.9
TWVZ	Taurewa	8.56	210	P	Pn	02 41 05.6	+0.3
NGZ	Ngauruhoe	8.58	209	P	Pn	02 41 05.6	0.0
TUVZ	Tukino	8.63	208	P	Pn	02 41 06.5	+0.1
BHHZ	Black Hill Sta	8.66	206	P	Pn	02 41 05.7	-1.0
WHVZ	Whangaehu Hut	8.67	209	P	Pn	02 41 08.3	+1.3
KRHZ	Kereru	8.69	204	P	Pn	02 41 05.0	-2.1
MOVZ	Moawhango	8.71	208	P	Pn	02 41 06.6	-0.8
PKVZ	Pokaka	8.78	210	P	Pn	02 41 11.0	+2.7
PXZ	Pawanui	8.88	201	P	Pn	02 41 07.7	-1.9
VRZ	Vera Road	8.90	213	P	Pn	02 41 14.0	+4.1
PNHZ	Pukenui	8.99	204	P	Pn	02 41 08.0	-3.2
WPHZ	Waipukurau	9.04	203	P	Pn	02 41 11.0	-0.8
PRHZ	Porangahau	9.17	201	P	Pn	02 41 09.9	-3.6
TSZ	Takapari Road	9.20	205	P	Pn	02 41 11.3	-2.7
WAZ	Wanganui	9.32	210	P	Pn	02 41 17.0	+1.4
PKE	Pukeiti	9.33	216	P	Pn	02 41 20.8	+5.1
DVHZ	Dannevirke	9.35	203	P	Pn	02 41 13.1	-2.8
PREZ	Palmer Road	9.36	214	P	Pn	02 41 21.1	+4.9
KHEZ	Kahui Hut	9.39	215	P	Pn	02 41 21.3	+4.7
ANWZ	Angora Road	9.39	201	P	Pn	02 41 12.9	-3.7
POWZ	Post Office Ro	9.57	205	P	Pn	02 41 17.1	-1.9
PRWZ	Pori Road	9.64	203	P	Pn	02 41 19.3	-0.7
BFZ	Birch Farm	9.67	202	P	Pn	02 41 15.9	-4.4
HOWZ	Holdsworth Sta	10.10	204	P	Pn	02 41 22.7	-3.5
OGWZ	Otaki Gorge	10.16	206	P	Pn	02 41 25.0	-2.0
TMWZ	Te Maipa	10.16	202	P	Pn	02 41 23.0	-4.1
TRWZ	Traveller	10.49	202	P	Pn	02 41 28.0	-3.5
DUWZ	D’Urville Isla	10.64	210	P	Pn	02 41 32.9	-0.7
MSWZ	Moikau Station	10.65	204	P	Pn	02 41 31.5	-2.3
TUWZ	Tuamarina	11.16	208	P	Pn	02 41 37.9	-2.6
CMWZ	Cape Campbell	11.32	207	P	Pn	02 41 42.2	-0.6
THZ	Tophouse	11.87	211	ePn	Pn	02 41 47.5	-2.6
THZ				eSn	Sn	02 43 57.8	-2.8
KHZ	Kahutara	12.15	207	ePn	Pn	02 41 49.4	-4.5
KHZ				eSn	Sn	02 44 04.1	-3.2
OXZ	Oxford	13.52	209	ePn	Pn	02 42 07.5	-4.3
OXZ				eSn	Sn	02 44 34.8	-5.6
MQZ	McQueen’s Vall	13.59	206	ePn	Pn	02 42 07.5	-5.3
MQZ				eSn	Sn	02 44 35.7	-6.5
RPZ	Rata Peaks	14.25	210	eSn	Sn	02 44 54.1	-4.1
DZM	Mont Dzumac	16.13	303	eP	Pn	02 42 46.9	+1.5
	96nm,1.5s						
DZM				eLR	LR	02 46 15.0	
	1µm,29.3s						
DZM	Mont Dzumac	16.13	303	P	Pn	02 42 46.2	+0.8
	0.7nm,0.3s,baz=84,slow=15,SNR=9.2						
DZM				LR	LR	02 46 24.4	
	comp=Z,166nm,21.2s,baz=202,slow=28						
DZM	Mont Dzumac	16.13	303	eP	Pn	02 42 41.3	-4.1
	18nm,0.8s						
AFI	Afiamalu	18.99	22	P	P	02 43 13.0	-5.4
	9.5nm,0.3s,baz=103,slow=14,SNR=6.9						
AFI				S	S	02 46 20.7	-28
	2.9nm,0.3s,baz=28,slow=21,SNR=2.5						
AFI				LR	LR	02 49 19.4	
	comp=Z,103nm,21.9s,baz=172,slow=33						
AFI	Afiamalu	18.99	22	eP	P	02 43 13.0	-5.4
	55nm,0.6s						
AFI	Afiamalu	18.99	22	eP	P	02 43 13.0	-5.4
AFI				pmax	pmax		
	comp=Z,55nm,0.6s						
RAR	Rarotonga	20.18	63	eP	Pn	02 43 36.3	+2.5
	comp=Z,87nm,0.9s						
RAR	Rarotonga	20.18	63	eP	Pn	02 43 36.3	+2.5
RAR				pmax	pmax		
	comp=Z,87nm,0.9s						
EIDS	Eidsvold	26.94	276	eP	P	02 44 35.9	-0.8
	comp=Z,10nm,0.8s						
TBI	Tubuai	27.48	80	eLQ	LQ	02 50 26.5	
	comp=Z,591nm,33.8s						
TBI				eLR	LR	02 51 25.4	
	comp=Z,442nm,31.8s						
TBI	Tubuai	27.48	80	eT	T	03 12 21.0	
	comp=Z,31nm,0.3s						
HNR	Honiara	29.56	314	LR	LR	02 54 41.7	
	comp=Z,45nm,18.4s,baz=174,slow=32						

PAE	Paea	30.12	69	eT	T	03 15 40.8	
	comp=Z,11nm,0.3s						
PPT2	Papeete2	30.16	69	eLQ	LQ	02 51 14.9	
	comp=Z,423nm,26.5s						
PPT2				eLR	LR	02 52 31.4	
	comp=Z,496nm,29.2s						
PPT2	Papeete2	30.16	69	eT	T	03 15 45.4	
	comp=Z,6.5nm,0.3s						
PPT	Papeete	30.17	69	LR	LR	02 55 06.9	
	comp=Z,54nm,21.4s,baz=213,slow=32						
TVO	Taravao	30.31	70	eT	T	03 15 49.6	
	comp=Z,2.2nm,0.3s						
VAH	Vaihoa	33.03	67	eT	T	03 19 19.0	
	comp=Z,63nm,0.3s						
CTAO	Charters Tower	33.16	282	eP	P	02 45 33.8	+2.1
	comp=Z,26nm,0.6s						
CTAO	Charters Tower	33.16	282	eP	P	02 45 33.8	+2.1
CTAO				pmax	pmax		
	comp=Z,26nm,0.6s						
STKA	Stephens Creek	33.31	259	P	P	02 45 35.8	+2.9
	comp=Z,13nm,0.7s,baz=95,slow=9.8,SNR=12						
STKA				LR	LR	02 56 53.8	
	comp=Z,245nm,21.7s,baz=85,slow=32						
STKA	Stephens Creek	33.31	259	eP	P	02 45 33.9	+1.1
	comp=Z,3.1nm,0.8s						
STKA	Stephens Creek	33.31	259	eP	P	02 45 33.9	+1.1
STKA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
AS01	Alice Springs	42.12	269	eP	P	02 46 47.3	+0.1
AS31	Alice Springs	42.16	269	eP	P	02 46 48.5	+1.0
	comp=Z,5.2nm,0.8s						
AS31				eScP	ScP	02 52 19.6	-2.5
AS31				eS	S	02 52 59.5	-1.0
ASAR	Alice Springs	42.16	269	P	P	02 46 48.0	+0.6
	comp=Z,11nm,0.4s,baz=105,slow=7.2,SNR=169						
ASAR				ScP	ScP	02 52 19.6	-2.5
	comp=Z,3.0nm,0.8s,baz=114,slow=4.4,SNR=11						
ASAR				S	S	02 52 59.5	-1.0
	comp=Z,2.6nm,1.0s,baz=109,slow=16,SNR=9.1						
TAOE	Nuku Hiva Isla	42.68	66	eLQ	LQ	02 56 21.3	
	comp=Z,787nm,27.0s						
TAOE				eLR	LR	02 58 12.1	
	comp=Z,221nm,31.0s						
WB2	Warramunga Arr	43.26	274	eP	P	02 46 56.8	+0.4
	comp=Z,44nm,0.7s						
WB2				eS	S	02 53 14.8	-1.8
WRAB	Tennant Creek	43.27	274	eP	P	02 46 57.4	+0.9
	comp=Z,39nm,0.8s						
WRAB	Tennant Creek	43.27	274c	eP	P	02 46 57.1	+0.7
WR1	Warramunga Arr	43.27	274	eP	P	02 46 56.8	+0.3
	comp=Z,49nm,0.8s						
WR1				ePP	PcP	02 48 43.3	-0.7
WR1				eScP	ScP	02 52 22.9	-3.6
WR1				eS	S	02 53 14.9	-1.9
WRA	Warramunga Arr	43.27	274	P	P	02 46 56.8	+0.3
	comp=Z,32nm,0.5s,baz=112,slow=7.9,SNR=198						
WRA				PcP	PcP	02 48 43.3	-0.7
	comp=Z,5.1nm,0.8s,baz=121,slow=3.3,SNR=6.0						
WRA				ScP	ScP	02 52 22.9	-3.6
	comp=Z,4.2nm,0.8s,baz=116,slow=4.1,SNR=14						
WRA				S	S	02 53 14.9	-1.9
	comp=Z,6.9nm,1.1s,baz=111,slow=13,SNR=6.8						
WRA				LR	LR	03 02 37.8	
	comp=Z,157nm,21.8s,baz=90,slow=33						
SBA	Scott Base	46.61	184	eP	P	02 47 28.1	+6.0
	comp=Z,35nm,0.9s						
SBA	Scott Base	46.61	184	P	P	02 47 28.0	+5.9
SBA				pmax	pmax		
	comp=Z,46nm,0.9s						
VNDA	Vanda	46.65	186	P	P	02 47 26.7	+4.3
	comp=Z,3.9nm,0.7s,baz=356,slow=8.6,SNR=24						
VNDA				PcP	PcP	02 48 56.5	+1.9
	comp=Z,3.0nm,0.9s,baz=321,slow=5.4,SNR=4.3						
VNDA				ScP	ScP	02 52 38.9	-0.5
	comp=Z,1.1nm,0.7s,baz=345,slow=6.0,SNR=5.6						
VNDA				LR	LR	03 05 25.8	
	comp=Z,49nm,18.0s,baz=25,slow=34						
VNDA	Vanda	46.65	186	eP	P	02 47 27.1	+4.7
	comp=Z,4.6nm,0.8s						
VNDA				ePcP	PcP	02 48 56.5	+1.9
VNDA				eScP	ScP	02 52 38.9	-0.5
VNDA	Vanda	46.65	186	eP	P	02 47 27.1	+4.7
VNDA				e		02 48 56.5	
VNDA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MTN	Manton Dam	49.33	281	eP	P	02 47 44.0	+0.1
	comp=Z,15nm,0.6s						
KIP	Kipapa	56.60	24⇑	eP	P	02 48 34.5	-2.6
SOEI	Soe	56.67	280	eP	P	02 48 40.8	+2.7
	comp=Z,30nm,1.0s						
GUMO	Guam	56.84	317	LR	LR	03 10 45.6	
	comp=Z,30nm,21.7s,baz=130,slow=34						
QSPA	South Pole Qui	58.34	180	P	P	02 48 52.7	+3.6
	comp=Z,33nm,0.8s,baz=36,slow=3.6,SNR=81						
QSPA				LR	LR	03 09 12.8	
	comp=Z,89nm,21.1s,baz=70,slow=31						
DAV	Davao City (W)	65.40	296	LR	LR	03 17 19.2	
	comp=Z,25nm,19.7s,baz=156,slow=35						
SYO	Syowa Base	75.58	193⇑	eP	P	02 50 38.4	+0.5
SNAA	Sanae	76.81	179	P	P	02 50 46.6	+1.6
SNAA	Sanae	76.81	179	P	P	02 50 46.6	+1.6
	comp=Z,10.0nm,1.0s,baz=177,slow=6.0,SNR=30						
SNAA				S	S	03 00 26.1	+1.8
	comp=Z,1.3nm,0.8s,baz=173,slow=24,SNR=8.1						
VNA3	Neumayer Olymp	77.00	176	P	P	02 50 47.4	+1.4
NVL	N'lazarevskaya	77.46	184	eP	P	02 50 51.2	+2.7
NVL				eS	S	03 00 47.9	+17
NVL				pmax	pmax		
	comp=Z,21nm,1.1s						
VNA1	Neumayer--Stat	77.66	177	P	P	02 50 51.5	+1.9
MJAR	Matsushiro Arr	78.86	326	P	P	02 50 53.9	-2.8
	comp=Z,0.8nm,0.5s,baz=172,slow=7.5,SNR=5.3						
MJAR				LR	LR	03 24 48.1	
	comp=Z,12nm,18.4s,baz=220,slow=35						
MAJO	Matsushiro	78.86	326	eP	P	02 50 53.9	-2.8
MAJO	Matsushiro	78.86	326	eP	P	02 50 53.9	-2.8
JNU	Nakatsue	79.99	319	LR	LR	03 21 03.1	
	comp=Z,20nm,19.0s,baz=122,slow=32						
ERM	Erimo	81.25	332⇓	eP	P	02 51 09.6	+0.3
ERM				pmax	pmax		
	comp=Z,8.0nm,0.9s						
PLCA	Paso Flores	82.23	133	P	P	02 51 16.9	+2.0
	comp=Z,19nm,0.8s,baz=250,slow=5.8,SNR=30						
PLCA				LR	LR	03 20 08.7	
	comp=Z,56nm,18.8s,baz=189,slow=30						
PLCA	Paso Flores	82.23	133	eP	P	02 51 17.0	+2.0
	comp=Z,25nm,0.9s						
PLCA	Paso Flores	82.23	133	eP	P	02 51 17.0	+2.0
PLCA				pmax	pmax		
	comp=Z,25nm,0.9s						
ASAJ	Asahikawa	83.25	333	LR	LR	03 24 29.1	
	comp=Z,30nm,18.9s,baz=98,slow=33						
TJN	Taejon	84.34	319⇑	eP	P	02 51 24.8	-0.7
KSRS	Korea Array	84.81	320	P	P	02 51 26.4	-1.4
	comp=Z,2.0nm,0.8s,baz=141,slow=6.6,SNR=6.6						
KS15	Wonju Array Si	84.83	320	eP	P	02 51 26.4	-1.5
KSAR	Wonju Array Be	84.83	320	P	P	02 51 26.4	-1.5
KSAR	Wonju Array Be	84.83	320	P	P	02 51 26.4	-1.5
KS01	Wonju Array Si	84.85	320	eP	P	02 51 26.7	-1.3
YSS	Yuzh-Sakhalins	85.59	335	eP	P	02 51 29.6	-1.9
YSS				pmax	pmax		
	comp=Z,20nm,0.4s						
LPIG	La Paz	86.02	59	LR	LR	03 25 44.1	
	comp=Z,16nm,19.3s,baz=234,slow=33						
NJ2	Nanjing	86.46	311	eP	P	02 51 37.3	+1.2
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
PKM	Mcpherson Peak	86.57	45	P	P	02 51 36.6	-0.3
	baz=227						
PETK	Petropavlovsk-	86.92	346	LR	LR	03 22 43.8	
	comp=Z,26nm,21.2s,baz=131,slow=30						
ARVC	Arvin	87.33	45	P	P	02 51 40.7	+0.4
	baz=228						
MONP2	Monument Peak	87.35	48	P	P	02 51 40.6	-0.1
	baz=229						
IKP	In-Ko-Pah, Jac	87.39	49	P	P	02 51 40.8	0.0
	baz=230						
BFSC	Mount Baldy Ra	87.46	47	P	P	02 51 40.5	-0.6
	baz=229,SNR=5.1						
FRD	Ford Ranch, An	87.63	48	P	P	02 51 41.7	-0.2
	baz=229,SNR=5.9						
VES	Vestal, Richgr	87.66	45	P	P	02 51 41.0	-0.8
	baz=228						
EDW2	Edwards Air Fo	87.68	46	P	P	02 51 41.6	-0.5
	baz=228,SNR=5.4						
SWSC	Sam W. Stewart	87.78	49	P	P	02 51 42.3	-0.2
	baz=230						
PFO	Pinyon Flats O	87.80	48	P	P	02 51 42.5	-0.2
	baz=229						
ISA	Isabella, Lake	87.90	45	P	P	02 51 42.9	-0.2
	baz=228,SNR=11						
ISA	Isabella, Lake	87.90	45	eP	P	02 51 43.2	0.0
	comp=Z,12nm,0.9s						
ISA	Isabella, Lake	87.90	45	eP	P	02 51 43.2	0.0
ISA				pmax	pmax		
	comp=Z,12nm,0.9s						
LRMC	Laurel Mtn Rad	88.26	46	P	P	02 51 44.8	-0.1
	baz=228						
BELC	Belle Mtn. Jos	88.34	48	P	P	02 51 45.0	-0.3
	baz=230,SNR=6.7						
CMB	Columbia Colle	88.38	42	eP	P	02 51 44.6	-0.7
	comp=Z,5.5nm,0.9s						
CMB	Columbia Colle	88.38	42	eP	P	02 51 44.6	-0.7
CMB				pmax	pmax		
	comp=Z,6.0nm,0.9s						
BC3	Big Chuckawall	88.46	48	P	P	02 51 46.0	+0.1
	baz=230,SNR=6.4						
GLA	Glamis	88.47	49	P	P	02 51 46.1	+0.2
	baz=230,SNR=6.0						
GLA	Glamis	88.47	49	eP	P	02 51 46.7	+0.8
	comp=Z,20nm,0.8s						
GLA	Glamis	88.47	49	eP	P	02 51 46.7	+0.8
GLA				pmax	pmax		
	comp=Z,20nm,0.8s						
CWC	Cottonwood Cre	88.66	45	P	P	02 51 46.1	-0.7
	baz=228						
HEC	Hector,Ludlow	88.67	47	P	P	02 51 46.3	-0.5
	baz=229,SNR=5.5						
AFDM	Forest Hills D	88.68	41	eP	P	02 51 46.0	-0.7
	comp=Z,3.7nm,1.0s						
GSC	Goldstone, Bar	88.68	46	P	P	02 51 46.5	-0.4
	baz=229,SNR=7.7						
GSC	Goldstone, Bar	88.68	46	eP	P	02 51 46.8	0.0
	comp=Z,8.2nm,0.9s						
GSC	Goldstone, Bar	88.68	46	eP	P	02 51 46.8	0.0
GSC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MPMC	Manual Prospec	88.76	45	P	P	02 51 46.8	-0.6
	baz=229,SNR=5.4						
OMMB	Old Mammoth Mi	88.90	43	eP	P	02 51 47.8	-0.3
	comp=Z,4.1nm,1.3s						
IRM	Iron Mountain	88.98	48	P	P	02 51 48.4	+0.2
	baz=230,SNR=10						
TIN	Tinemaha, Big	88.98	44	P	P	02 51 47.6	-0.7
	baz=228						
GMRC	Granite Mounta	89.06	47	P	P	02 51 48.3	-0.4
	baz=230						
214A	Organ Pipe Nat	89.10	51	P	P	02 51 48.9	+0.1
	baz=231						
Y12C	Blythe	89.12	49	P	P	02 51 48.7	0.0
	baz=230,SNR=5.4						
Y12C	Blythe	89.12	49	eP	P	02 51 49.0	+0.2
	comp=Z,10nm,1.0s						
N02D	Trinity Center	89.13	39	P	P	02 51 48.3	-0.5
	baz=225						
O03D	Paynes Creek	89.15	40	P	P	02 51 47.7	-1.2
	baz=226						
WAKR	Walker	89.25	43	eP	P	02 51 49.3	-0.3
	comp=Z,7.6nm,1.1s						
TUQ	Turquoise Moun	89.32	47	P	P	02 51 49.6	-0.2
	baz=230						
M02C	Callahan	89.35	39	P	P	02 51 49.6	-0.2
	baz=225						
SHOC	Shoshone, Teco	89.40	46	P	P	02 51 49.7	-0.4
	baz=229						
FURC	Furnace Creek,	89.41	45	P	P	02 51 49.7	-0.4
	baz=229						
GRAC	Grapevine Rang	89.46	45	P	P	02 51 49.8	-0.6
	baz=229,SNR=10						
PNTR	Pine Nut	89.55	42	eP	P	02 51 50.9	-0.2
	comp=Z,9.3nm,1.0s						
LDFC	Landfair	89.59	47	eP	P	02 51 52.0	+0.9
	comp=Z,24nm,1.0s						
BEKR	Beckworth	89.65	41	eP	P	02 51 50.7	-0.7
	comp=Z,3.7nm,1.1s						
YBH	Yreka Blue Hor	89.67	39	LR	LR	03 26 31.0	
	comp=Z,23nm,18.8s,baz=194,slow=32						
YERR	Yerington	89.69	42	eP	P	02 51 51.0	-0.6
	comp=Z,4.7nm,0.9s						
PDMCI	Parker Dam,Lak	89.71	49	P	P	02 51 51.4	-0.2
	baz=231						
NV01	Mina Array Sit	89.86	43	eP	P	02 51 51.3	-1.1
NVAR	Mina Array Bea	89.86	43	P	P	02 51 51.5	-0.9
	comp=Z,5.1nm,0.9s,baz=221,slow=8.6,SNR=30						
RYN	Ryan	89.86	43	eP	P	02 51 51.9	-0.4
	comp=Z,3.8nm,1.0s						
NV11	Mina Array Sit	89.94	43	eP	P	02 51 52.1	-0.6
	comp=Z,0.4nm,1.0s						
PAHR	Pah Rah Range	90.09	42	eP	P	02 51 52.7	-0.7
	comp=Z,6.1nm,1.3s						
TPNV	Topopah Spring	90.10	45	P	P	02 51 53.0	-0.5
	baz=229,SNR=6.9						
TPNV	Topopah Spring	90.10	45	eP	P	02 51 53.4	-0.1
	comp=Z,4.7nm,0.8s						
TPNV	Topopah Spring	90.10	45	eP	P	02 51 53.4	-0.1
TPNV				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KVN	Kaiserville	90.39	43	eP	P	02 51 54.1	-0.8
	comp=Z,7.0nm,1.2s						
KVN	Kaiserville	90.39	43	eP	P	02 51 54.1	-0.8
KVN				pmax	pmax		
	comp=Z,7.0nm,1.2s						
SHPR	Sheep Range	90.48	46	eP	P	02 51 55.7	+0.3
	comp=Z,4.2nm,1.0s						
TUC	Tucson	90.67	52	P	P	02 51 56.7	+0.6
	baz=232						
TUC	Tucson	90.67	52	eP	P	02 51 56.8	+0.6
	comp=Z,15nm,0.8s						
TUC	Tucson	90.67	52	eP	P	02 51 56.8	+0.6
TUC				pmax	pmax		
	comp=Z,15nm,0.8s						
CN2	Changchun	90.69	323	eP	P	02 51 58.5	+2.6
CN2				pmax	pmax		
	comp=Z,20nm,0.8s						
I03D	Drain, OR	90.72	37	P	P	02 51 55.2	-0.8
	baz=225						
K04D	Chiloquin, OR	90.80	38	P	P	02 51 56.5	-0.1
	baz=226						
J04D	Umpqua Nationa	91.04	38	P	P	02 51 56.9	-0.9
	baz=226						
HPIG		91.07	59	eP	P	02 51 58.1	-0.2
	comp=Z,6.7nm,0.9s						
MOD	Modoc Plateau	91.08	40	eP	P	02 51 57.2	-0.7
	comp=Z,4.7nm,1.1s						
MOD				eS	S	03 02 52.4	+4.7
I04A	Tendick Farm,	91.27	37	P	P	02 51 58.1	-0.5
	baz=226						
TLIG	Tlapa	91.31	70	eP	P	02 52 01.0	+1.5
	comp=Z,12nm,1.0s						
R11A	Troy Canyon, C	91.41	45	P	P	02 51 58.5	-1.1
	baz=230						
GYA	Guiyang	91.45	300	eP	P	02 52 02.5	+2.5
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
J05D	Fort Rock, OR	91.53	38	P	P	02 51 59.1	-0.9
	baz=226						
KLR	Kul'dur	91.77	330⇓	eP	P	02 51 59.0	-1.7
LCMT	Little Creek M	91.99	47	eP	P	02 52 02.4	+0.1
	comp=Z,4.1nm,1.0s						
PINE	Pine Mountain	92.03	38	eP	P	02 52 02.2	-0.2
	comp=Z,10nm,0.9s						
I05D	Terrebonne, OR	92.21	37	P	P	02 52 02.6	-0.4
	baz=226						
WUAZ	Wupatki	92.24	49	P	P	02 52 03.1	-0.4
	baz=232						
WUAZ	Wupatki	92.24	49	eP	P	02 52 03.8	+0.3
	comp=Z,4.2nm,0.8s						
CCUT	Cedar City	92.25	46	eP	P	02 52 03.8	+0.2
	comp=Z,2.3nm,0.9s						
KNB	Kanab	92.25	47	eP	P	02 52 03.8	+0.2
	comp=Z,5.5nm,0.9s						
WVOR	Wild Horse Val	92.35	40	eP	P	02 52 03.0	-0.8
	comp=Z,2.5nm,1.0s						
WVOR	Wild Horse Val	92.35	40	eP	P	02 52 03.0	-0.8
WVOR				pmax	pmax		
	comp=Z,3.0nm,1.0s						
PSUT	Pine Spring	92.57	45	eP	P	02 52 04.7	-0.3
	comp=Z,2.9nm,0.7s						
PKCU	Pink Cliffs	92.84	47	eP	P	02 52 07.2	+0.8
	comp=Z,8.2nm,1.0s						
CM31	Chiang Mai Arr	93.01	290	eP	P	02 52 07.9	+0.7
CMAR	Chiang Mai Arr	93.01	290	P	P	02 52 07.9	+0.7
	comp=Z,1.0nm,0.3s,baz=133,slow=4.0,SNR=5.4						
CMAR				LR	LR	03 36 54.6	
	comp=Z,53nm,18.1s,baz=194,slow=37						
J08A	Circle Bar Ran	93.06	40	eP	P	02 52 06.8	-0.2
	comp=Z,4.0nm,1.0s						
KMI	Kunming	93.64	297	P	P	02 52 12.5	+2.2
KMI				pmax	pmax		
	comp=Z,16nm,0.5s						
LTX	Lajitas	93.88	58	eP	P	02 52 10.6	-0.5
LTX	Lajitas	93.88	58	eP	P	02 52 10.6	-0.5
TX31	Lajitas Ar. Si	93.88	58	eP	P	02 52 10.9	-0.3
TXAR	Lajitas Array	93.88	58	P	P	02 52 10.6	-0.5
	comp=Z,1.9nm,0.8s,baz=205,slow=7.7,SNR=19						
TXAR				LR	LR	03 26 45.3	
	comp=Z,17nm,20.6s,baz=0.0,slow=30						
NNA	Nana	93.91	107	LR	LR	03 27 27.5	
	comp=Z,21nm,18.1s,baz=199,slow=31						
MNTX	Cornudas Mount	94.01	55	P	P	02 52 11.1	-0.5
	baz=235						
G08A	Pilot Rock	94.09	38	eP	P	02 52 11.3	-0.4
	comp=Z,8.0nm,1.4s						
MA2	Magadan	94.38	345⇑	eP	P	02 52 14.2	+1.7
MA2				pmax	pmax		
	comp=Z,20nm,2.3s						
NLU	North Lily Min	94.54	45	eP	P	02 52 15.7	+1.6
	comp=Z,27nm,1.2s						
NLU				epP	PcP	02 52 26.6	+12
MFID	Camas Ranch	94.55	41	eP	P	02 52 13.1	-0.8
	comp=Z,3.4nm,0.9s						
TMUT	Trail Mountain	94.66	46	eP	P	02 52 14.8	0.0
	comp=Z,3.4nm,0.7s						
TASM	ASL Pad, Albuq	95.13	52	P	P	02 52 15.9	-0.9
	baz=235						
ANMO	Albuquerque	95.13	52	LR	LR	03 32 13.0	
	comp=Z,20nm,18.0s,baz=227,slow=34						
ANMO	Albuquerque	95.13	52	P	P	02 52 15.8	-1.1
	baz=235						
ANMO	Albuquerque	95.13	52⇓	iP	P	02 52 16.4	-0.5
ANMO				pmax	pmax		
	comp=Z,3.0nm,2.5s						
TASL	Snake Pit, Alb	95.14	52	P	P	02 52 15.9	-1.0
	baz=235						
SPUT	South Promonto	95.15	44	eP	P	02 52 16.6	-0.1
	comp=Z,3.0nm,1.0s						
HVU	Hansel Valley	95.25	43	eP	P	02 52 16.5	-0.7
	comp=Z,3.3nm,0.8s						
HVU	Hansel Valley	95.25	43	eP	P	02 52 16.5	-0.7
HVU				pmax	pmax		
	comp=Z,3.0nm,0.8s						
HLID	Hailey	95.43	41	P	P	02 52 17.0	-1.0
	baz=231						
HLID	Hailey	95.43	41	eP	P	02 52 17.4	-0.6
	comp=Z,2.4nm,0.9s						
CD2	Chengdu	96.06	303	eP	P	02 52 22.0	+1.0
S22A	4UR Ranch, Cre	96.50	49	P	P	02 52 22.7	-0.5
	baz=235						
HHC	Hu-ho-hao-te	96.54	314	eP	P	02 52 25.8	+2.8
HHC				PP	PP	02 56 22.8	+3.9
HHC				S	S	03 03 41.0	+5.3
HHC				SS	SS	03 10 19.5	+7.0
HHC				pmax	pmax		
	comp=Z,39nm,5.1s						
HHC				LR	LR		
	comp=Z,120nm,15.6s						
HHC				LR	LR		
	comp=Z,85nm,17.4s						
PD31	Pinedale Array	97.75	44	eP	P	02 52 26.8	-1.8
PDAR	Pinedale Array	97.75	44	P	P	02 52 26.8	-1.8
	comp=Z,0.4nm,0.7s,baz=223,slow=6.1,SNR=4.6						
PDAR				LR	LR	03 35 01.5	
	comp=Z,21nm,18.4s,baz=256,slow=34						
LPAZ	La Paz	98.40	115	P	P	02 52 32.7	0.0
	comp=Z,1.2nm,0.8s,baz=178,slow=5.7,SNR=5.2						
LPAZ				LR	LR	03 27 54.7	
	comp=Z,21nm,19.8s,baz=174,slow=30						
LZH	Lanzhou	98.82	307	eP	Pdif	02 52 35.0	+1.5
LZH				pP	P	02 52 46.0	+13
LZH				sP	pP	02 52 49.8	-9.2
LZH				pmax	pmax		
	comp=Z,20nm,1.5s						
LZH				pmax	pmax		
	comp=Z,93nm,9.3s						
LZH				LR	LR		
	comp=Z,230nm,17.5s						
LZH				LR	LR		
	comp=Z,330nm,19.6s						
ULN	Ulaanbaatar	103.20	318⇑	eP	Pdif	02 52 53.7	+1.1
ULN				pmax	pmax		
	comp=Z,1.0nm,0.8s						
SONM	Songino Array	103.55	318	PKKPbc	PKKPbc	03 08 47.4	-0.3
	comp=Z,0.4nm,0.4s,baz=303,slow=3.5,SNR=4.6						
WMQ	Urumqi	113.36	308	PKP	PKiKP	02 57 32.0	+1.3
WMQ				LR	LR		
	comp=Z,64nm,29.5s						
WMQ				LR	LR		
	comp=Z,61nm,29.9s						
DGZ	Jazzator, Alta	115.62	314⇑	ePKIKP	PKPdf	02 57 35.4	+0.5
BOSA	Boshof	115.65	204	PKP	PKPdf	02 57 36.1	+0.4
	comp=Z,1.3nm,0.7s,baz=227,slow=3.5,SNR=3.9						
MK01	Makanchi Array	117.94	310	ePKPdf	PKPdf	02 57 37.0	-2.4
MK32	Makanchi Array	117.96	310	ePKPdf	PKPdf	02 57 37.0	-2.4
MK32				eSKPdf	SKPdf	03 01 03.2	-2.9
MKAR	Makanchi Array	117.96	310	PKP	PKPdf	02 57 37.0	-2.4
	comp=Z,0.6nm,0.6s,baz=186,slow=1.5,SNR=7.6						
MKAR				SKP		03 01 03.2	
	comp=Z,0.9nm,0.8s,baz=102,slow=3.0,SNR=4.1						
MKAR				PKKPbc	PKKPbc	03 08 00.5	+0.3
	comp=Z,1.0nm,0.8s,baz=298,slow=2.9,SNR=8.1						
MKAR	Makanchi Array	117.96	310c	iPKIKP	PKPdf	02 57 42.9	+3.6
KSH	Kashi	120.15	300	ePKP	PKPdf	02 57 47.0	+3.1
KSH				PP	PP	02 59 17.5	+6.6
KSH				PKS	PKSdf	03 01 21.5	+0.8
KURK	Kurchatov	121.34	313	ePKPdf	PKPdf	02 57 43.4	-2.2
KURK	Kurchatov	121.34	313	ePKIKP	PKPdf	02 57 43.4	-2.2
KURBB	Kurchatov Arra	121.37	313	PKP	PKPdf	02 57 43.4	-2.3
	comp=Z,1.7nm,0.5s,baz=114,slow=2.0,SNR=9.5						
AAK	Ala-Archa	122.12	303⇑	ePKIKP	PKPdf	02 57 45.2	-2.5
LSZ	Lusaka	126.42	213	ePKPdf	PKPdf	02 57 57.4	+0.7
LSZ	Lusaka	126.42	213	ePKIKP	PKPdf	02 57 57.4	+0.7
BVAR	Borovoye Array	126.75	315	PKP	PKPdf	02 57 53.9	-2.1
	comp=Z,1.4nm,0.5s,baz=99,slow=1.9,SNR=9.7						
BRVK	Borovoye	126.81	315⇓	ePKIKP	PKPdf	02 57 54.2	-1.9
KBS	Kingsbay	132.51	357	ePKPdf	PKPdf	02 58 10.4	+4.2
KBS				IAmb	IAmb	02 58 13.1	
	comp=Z,14nm,1.0s						
ARU	Arti	133.56	320	i PKIKP	PKPdf	02 58 07.5	-1.3
PRGR	Permogore	138.55	330	ePKIKP	PKPdf	02 58 17.6	-0.3
PRGR				pmax	pmax		
	comp=Z,5.0nm,0.6s						
ARA0	ARCESS Array S	139.73	347	eSKPdf	SKPdf	03 01 42.5	-3.4
ARCES	ARCESS Array B	139.73	347	PKhKP	PKPpre	02 58 12.3	
	comp=Z,2.0nm,0.7s,baz=49,slow=3.7,SNR=11						
ARCES				SKPbc	SKPbc	03 01 42.5	-4.4
	comp=Z,2.8nm,0.7s,baz=17,slow=5.1,SNR=6.1						
RAYN	Ar Rayn	139.91	270	ePKPdf	PKPdf	02 58 23.3	+1.6
RAYN	Ar Rayn	139.91	270	ePKIKP	PKPdf	02 58 23.3	+1.6
GNI	Garni	143.88	296⇑	ePKIKP	PKPab	02 58 26.0	+0.3
VRH	Novokhopyorsk	144.40	315	ePKIKP	PKPdf	02 58 29.5	+0.8
VRH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
ZEI	Tsey	144.44	300	i PKIKP	PKPab	02 58 27.1	-0.8
NCK	Nalchik	144.62	302⇓	ePKIKP	PKPab	02 58 27.3	-0.9
AKH	Akhalkalaki	144.81	298	ePKPdf	PKPdf	02 58 30.2	+0.2
GOF	Gofitskoye	144.84	304	ePKIKP	PKPbc	02 58 27.0	-2.0
KBZ	Khabaz	145.10	302	PKP	PKPbc	02 58 28.6	-1.2
	comp=Z,7.9nm,0.9s,baz=78,slow=4.9,SNR=13						
KIV	Kislovodsk	145.23	303d	iPKIKP	PKPbc	02 58 29.5	-0.9
KIV				e		03 01 52.0	
KIV				pmax	pmax		
	comp=Z,11nm,1.2s						
KIV				MLR	MLR		
	comp=Z,21nm,16.0s						
NEY	Neytrino	145.27	301⇓	ePKIKP	PKPdf	02 58 30.5	-0.2
LPSR	Galich'ya Gora	145.56	318	ePKP2	PKPdf	02 58 29.3	-1.3
LPSR				pmax	pmax		
	comp=Z,70nm,1.2s						
OBN	Obninsk	145.76	324	ePKPdf	PKPdf	02 58 29.3	-1.6
OBN	Obninsk	145.76	324d	ePKP2	PKPdf	02 58 29.3	-1.6
OBN				e		03 01 49.9	
OBN				eSS	SS	03 21 13.9	+35
OBN				pmax	pmax		
	comp=Z,23nm,0.6s						
OBN				MLR	MLR		
	comp=Z,26nm,14.0s						
PUL	Pulkovo	145.85	334⇑	ePKIKP	PKPdf	02 58 29.3	-1.6
VSR	Storozhevoye	145.92	316	ePKIKP	PKPdf	02 58 29.6	-1.7
VSR				pmax	pmax		
	comp=Z,30nm,0.8s						

VORD	Divnogorie	145.93	316	ePKIKP	PKPdf	02 58 29.8	-1.5
VORD				pmax	pmax		
	comp=Z,20nm,0.6s						
FIA1	FINESS Array S	146.10	339	ePKPdf	PKPdf	02 58 29.4	-1.9
FIA1				ePKPdf	PKPbc	02 58 29.8	-2.6
FIA0	FINESS Array S	146.10	339	ePKPdf	PKPdf	02 58 29.8	-1.5
FIA0				ePP	PP	03 01 57.9	+2.9
FIA0	FINESS Array S	146.10	339	ePKIKP	PKPdf	02 58 29.8	-1.5
FIA0				e		03 01 57.9	
FINES	FINESS Array B	146.10	339	PKPbc	PKPdf	02 58 29.8	-1.5
	comp=Z,13nm,0.5s,baz=56,slow=3.7,SNR=159						
FINES				SKPbc	PP	03 01 57.9	+2.9
	comp=Z,1.7nm,0.7s,baz=38,slow=7.0,SNR=5.3						
NSS	Namsos	146.51	351	ePKPdf	PKPdf	02 58 31.5	-0.4
VSU	Vasula	148.09	334c	iPKP2	PKPdf	02 58 36.0	+1.3
AKN	Aaknes	149.33	354	ePKPdf	PKPdf	02 58 39.2	+2.6
AKN				IAmb	IAmb	02 58 43.5	
	comp=Z,19nm,0.7s						
NC303	NORSAR Array S	149.75	350	ePKPbc	PKPdf	02 58 40.1	+2.8
NC405	NORSAR Array S	149.81	350	ePKPbc	PKPbc	02 58 43.0	+0.7
NB201	NORSAR Array S	149.93	350	ePKPbc	PKPbc	02 58 40.7	-2.0
NB2	NORSAR Subarra	149.96	350	PKP	PKPdf	02 58 40.4	+2.7
	comp=Z,5.4nm,0.6s,baz=17,slow=2.6						
NB2	NORSAR Subarra	149.96	350	PKP	PKPdf	02 58 40.4	+2.7
	baz=17,slow=2.6						
NOA	NORSAR Array B	149.96	350	PKPbc	PKPdf	02 58 40.1	+2.4
	comp=Z,5.1nm,0.6s,baz=16,slow=4.2,SNR=36						
NBO00	NORSAR Array S	150.03	350	ePKPbc	PKPbc	02 58 43.0	+0.2
NBO00	NORSAR Array S	150.03	350	ePKPbc	PKPbc	02 58 42.3	-0.5
NBO00				IAmb	IAmb	02 58 43.4	
	comp=Z,44nm,1.2s						
NAO01	NORSAR Array S	150.19	350	ePKPbc	PKPbc	02 58 43.1	-0.2
NC602	NORSAR Array S	150.20	350	ePKPbc	PKPdf	02 58 41.0	+3.0
HFS	Hagfors	150.39	347	PKPbc	PKPdf	02 58 41.1	+2.8
	comp=Z,8.5nm,0.5s,baz=85,slow=1.7,SNR=41						
HYA	Hoyanger	150.40	355	ePKPbc	PKPbc	02 58 43.8	+0.1
HYA				IAmb	IAmb	02 58 44.4	
	comp=Z,10nm,0.9s						
SUE	Sulen	150.60	356	ePKPbc	PKPbc	02 58 42.7	-1.4
SUE				IAmb	IAmb	02 58 45.8	
	comp=Z,12nm,0.6s						
MMAI	Mount Meron Ar	150.95	282	PKPbc	PKPbc	02 58 45.6	-0.5
	comp=Z,22nm,0.6s,baz=73,slow=5.0,SNR=52						
BER	Bergen	151.23	355	ePKPbc	PKPbc	02 58 45.2	-0.4
BER				IAmb	IAmb	02 58 46.6	
	comp=Z,14nm,0.8s						
KONO	Kongsberg	151.52	351	ePKPbc	PKPbc	02 58 44.6	-1.7
KONO	Kongsberg	151.52	351	⇑iPKIKP	PKPbc	02 58 45.0	-1.3
KONO	Kongsberg	151.52	351	ePKPbc	PKPbc	02 58 44.7	-1.7
KONO				IAmb	IAmb	02 58 47.8	
	comp=Z,16nm,0.5s						
ODD1	Odda	151.60	354	ePKPbc	PKPbc	02 58 45.4	-1.2
ODD1				IAmb	IAmb	02 58 48.0	
	comp=Z,21nm,0.6s						
AKASG	Malin Array Be	151.81	320	PKPbc	PKPbc	02 58 45.2	-2.1
	comp=Z,3.2nm,0.6s,baz=55,slow=2.6,SNR=12						
AKBB	Malin Array Si	151.81	320	ePKPbc	PKPbc	02 58 45.6	-1.7
AKBB				ePKPab	PKPab	02 58 54.5	-2.1
KIEV	Kiev	151.82	320	ePKPbc	PKPbc	02 58 45.6	-1.7
KIEV				ePKPab	PKPab	02 58 53.5	-3.1
KIEV	Kiev	151.82	320	⇑ePKIKP	PKPdf	02 58 44.0	+3.2
AK11	Malin Array Si	151.85	320	ePKPbc	PKPbc	02 58 45.2	-2.2
BLS5	Blasjo	152.10	354	ePKPbc	PKPbc	02 58 46.8	-1.0
BLS5				IAmb	IAmb	02 58 49.1	
	comp=Z,9.3nm,1.0s						
ILGA	Ilgaz	152.18	299	ePKPbc	PKPbc	02 58 48.4	-0.4
BR101	Keskin Array S	152.42	296	ePKPbc	PKPbc	02 58 47.2	-2.0
BR131	Keskin Array S	152.42	296	ePKPbc	PKPbc	02 58 47.6	-1.7
BRTR	Keskin Array B	152.42	296	PKPbc	PKPbc	02 58 47.2	-2.0
	comp=Z,5.4nm,0.7s,baz=135,slow=3.7,SNR=25						
CSS	Mathiatis	152.83	286	ePKPbc	PKPbc	02 58 49.0	-1.2
HOMB	Homborsund	153.00	351	eP	PKPbc	02 58 47.4	-2.3
HOMB				IAmb	IAmb	02 58 51.1	
	comp=Z,27nm,0.7s						
ANTO	Ankara	153.05	296	ePKPbc	PKPbc	02 58 49.3	-1.2
SNART	Snartemo	153.09	353	ePKPbc	PKPbc	02 58 50.2	+0.3
SNART				IAmb	IAmb	02 58 50.8	
	comp=Z,26nm,1.2s						
DBIC	Dimbokro	154.44	167	PKP	PKPdf	02 58 46.5	+0.7
	comp=Z,5.1nm,0.8s,baz=319,slow=3.1,SNR=5.5						
DBIC				PKPbc	PKiKP	02 58 54.8	+0.6
	comp=Z,8.7nm,0.9s,baz=186,slow=3.0,SNR=6.6						
DBIC				PKPab	PKPab	02 59 10.3	+1.6
	comp=Z,13nm,1.0s,baz=164,slow=3.0,SNR=6.3						
BSD	Bornholm Skovb	154.66	341	i PKIKP	PKPbc	02 58 52.0	-1.3
BUR08	Bucovina Ar. S	155.66	318	ePKPab	PKPab	02 59 12.2	-1.1
BUR04	Bucovina Ar. S	155.67	318	ePKPab	PKPab	02 59 11.8	-1.5
VYHS	Vyhne	158.50	326	ePKP2	PKPab	02 59 23.5	-1.8
VYHS	Vyhne	158.50	326	ePKP	PKPab	02 59 23.5	-1.8
CLL	Collm	158.55	339	ePKP2	PKPab	02 59 24.0	-1.4
CLL				pmax	pmax		
	comp=Z,6.0nm,0.6s						
BRG	Berggiesshubel	158.62	337	ePKP2	PKPab	02 59 23.7	-2.0
BRG				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KHC	Kasperske Hory	160.22	335	epPKP	pPKPdf	02 59 19.0	+0.4
KHC				ePKPAB	sPKPdf	02 59 30.0	+1.4
GEC2	GERESS Array S	160.41	334	ePKPab	PKPab	02 59 32.5	-1.3
GERES	GERESS Array B	160.41	334	PKPab	PKPab	02 59 32.5	-1.3
	comp=Z,0.6nm,0.7s,baz=46,slow=4.2,SNR=4.5						
DIVS	Divibare	160.64	315	ePKPab	PKPab	02 59 33.0	-1.9
TOA0	Torodi Ar. Sit	161.45	182	ePKPdf	PKPdf	02 58 53.1	-1.2
TOA0				ePKPab	PKPab	02 59 38.6	-0.3
TOA0				ePKPab	sPKPdf	02 59 39.8	+8.9
TORD	Torodi Ar. Bea	161.45	182	PKP	PKPdf	02 58 53.4	-0.9
	comp=Z,3.0nm,0.9s,baz=309,slow=1.3						
TORD				PKPab	PKPab	02 59 38.8	0.0
	baz=185,slow=2.5						
TOA1	Torodi Ar. Sit	161.46	182	ePKPdf	PKPdf	02 58 53.4	-0.9
TOA1				ePKPab	PKPab	02 59 38.8	-0.1
KOWA	Kowa	162.21	164	ePKPab	PKPab	02 59 43.7	+1.5
FUORN	Ofenpass-Fuorn	163.53	337	ePKPab	PKPab	02 59 46.0	-1.6
TAM	Tamanrasset	170.18	206	ePKPdf	PKPdf	02 59 01.8	+0.5
TAM	Tamanrasset	170.18	206	ePKIKP	PKPdf	02 59 01.8	+0.5
ES19	SONSECA Array	171.16	25	ePKPdf	PKPdf	02 59 01.1	-0.1
ESDC	Sonseca Array	171.16	25	PKP	PKPdf	02 59 00.5	-0.7
	comp=Z,2.8nm,1.0s,baz=352,slow=2.9,SNR=8.5						

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*IDC **26** 03:30:12.6±10.0, 37°.30N×76°.18E, h0^{km}, mb3.8/3, mb1 3.7/4, mb1mx3.2/60, mbtmp3.7/4, ML3.7/1, MS3.1/1, Ms1 3.1/1, ms1mx2.2/61, Error ellipse: s-maj=194.4km s-min=34.8km az=141.0*

*NNC **26** 03:30:18.8±3.4, 36°.94N×77°.01E, h217^{km}±55^{km}, mb2.3, mpv3.4, Error ellipse: s-maj=34.6km s-min=21.4km az=141.0*

ISC 26 03:30:18.1±2.0**, 36°.9N**±0°.1×**77°.22E**±0°.09**, h100^{km}, n15, σ2^s.71**/24**, mb3.8**/3**, 9C-7D, Kashmir-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KSH	Kashi	2.81	340	Pn	Pn	03 30 59.8	-1.6
KSH				Sn	Sn	03 31 28.0	-6.7
KSH				smax	smax		
	comp=N,470nm,0.4s						
KSH				smax	smax		
	comp=E,550nm,0.3s						
SFK	Sufi-Kurgan	4.28	318	⇑P	Pn	03 31 20.5	-0.7
	comp=E,1.7nm,0.3s						
SFK				⇓S	Sn	03 32 13.9	+3.7
	comp=E,15nm,0.4s						
AAK	Ala-Archa	6.12	341	⇑P	Pn	03 31 47.5	+1.4
	comp=E,1.0nm,0.3s						
AAK				⇓S	Sn	03 32 56.6	+1.8
	comp=E,2.1nm,0.5s						
TKM2	Tokmak 2	6.16	349	⇑P	Pn	03 31 49.4	+2.7
	comp=E,1.3nm,0.5s						
TKM2				⇑S	Sn	03 33 01.4	+5.6
	comp=E,2.6nm,0.6s						
PDGK	Podgornoye	6.67	14	⇓P	Pn	03 31 54.7	+1.1
	comp=E,3.9nm,0.6s						
PDGK				⇓S	Sn	03 33 11.8	+3.7
	comp=E,20nm,0.9s						
MNAS	Manas	6.68	328	⇓P	Pn	03 31 55.7	+2.0
	comp=E,0.7nm,0.4s						
MNAS				⇑S	Sn	03 33 07.6	-0.7
	comp=E,4.7nm,0.8s						
KK31	Karatay Array	8.07	322	⇑P	Pn	03 32 12.1	-0.4
	comp=E,1.4nm,0.5s,baz=126,slow=12,SNR=18						
KK31				⇑S	Sn	03 33 39.8	-2.2
	comp=E,2.3nm,0.6s,baz=138,slow=23,SNR=10						
MAKZ	Makanchi	10.53	18	⇓P	Pn	03 32 44.1	-1.9
	comp=E,0.5nm,0.3s						
MAKZ				⇑S	Sn	03 34 39.9	-1.9
	comp=E,1.2nm,0.5s						
WMQ	Urumqi	10.58	46	eP	Pn	03 32 48.0	+1.4
WMQ				smax	smax		
	comp=N,27nm,0.5s						
WMQ				smax	smax		
	comp=E,20nm,0.7s						
MK31	Makanchi Array	10.60	19	⇓P	Pn	03 32 45.8	-1.0
	comp=E,0.3nm,0.3s,baz=199,slow=13,SNR=18						
MK31				⇑S	Sn	03 34 40.4	-3.1
	comp=E,1.5nm,0.5s,baz=195,slow=22,SNR=6.7						
MKAR	Makanchi Array	10.60	19	Pn	Pn	03 32 46.7	-0.2
	comp=E,0.5nm,0.3s,baz=203,slow=13,SNR=18						
MKAR				Sn	Sn	03 34 41.6	-1.9
	comp=E,0.8nm,0.3s,baz=189,slow=24,SNR=12						
SONM	Songino Array	24.04	54	LR	LR	03 46 59.3	
	comp=E,44nm,18.5s,baz=114,slow=41						
FINES	FINESS Array B	40.03	324	P	P	03 37 42.3	-0.6
	comp=E,0.4nm,0.2s,baz=113,slow=8.1,SNR=7.5						
ARCES	ARCESS Array B	42.77	336	P	P	03 38 05.0	-0.2
	comp=E,1.1nm,0.8s,baz=96,slow=7.3,SNR=5.2						
HFS	Hagfors	45.88	321	P	P	03 38 29.6	-0.5
	comp=E,0.9nm,0.7s,baz=102,slow=13,SNR=4.1						

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*ISCJB **26** 03:30:20.8±1.3, 25°.03N±0°.08×123°.43E±0°.05, h10^{km}, mb3.4/2, Error ellipse: s-maj=10.9km s-min=6.0km az=2.4*

*JMA **26** 03:30:21.1±0.4, 25°.05N×123°.40E, h23^{km}, M3.0*

*IDC **26** 03:30:25.6±1.7, 24°.71N×122°.23E, h0^{km}, mb3.4/2, mb1 3.6/3, mb1mx3.1/60, mbtmp3.4/3, ML2.7/1, MS2.3/1, Ms1 2.3/1, ms1mx2.1/33, Error ellipse: s-maj=70.2km s-min=28.6km az=68.0*

ISC 26 03:30:22.0±1.6**, 24°.97N**±0°.09×**123°.43E**±0°.05**, h10^{km}, n10, σ0^s.45**/11**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.64	217	P	Pg	03 30 33.8	-0.5
YOJ				eS	Sg	03 30 43.1	+0.5
JYNG	Yonagunijimaku	0.68	221	P	Pg	03 30 35.0	-0.1
JYNG				eS	Sb	03 30 45.5	+0.1
IRIF	Iriomote-Funau	0.69	157	P	Pg	03 30 35.6	+0.3
JIJ	Ishigaki jima	0.89	133	S	Sg	03 30 50.2	-0.3
JISG	Ishigakijimahi	0.89	115	eS	Sg	03 30 50.7	+0.2
JKRS	Kuro-shima	0.90	144	P	Pg	03 30 39.3	0.0
JKRS				S	Sg	03 30 51.4	+0.4
HATJ	Hateruma jima	0.97	159	P	Pg	03 30 39.8	-0.9
KSRS	Korea Array	13.02	16	Pn	Pn	03 33 39.9	+13
	0.0nm,0.3s,baz=196,slow=13,SNR=4.0						
KSRS				LR	LR	03 38 39.8	
	comp=Z,13nm,20.4s,baz=230,slow=36						
MKAR	Makanchi Array	39.23	314	P	P	03 37 50.6	+0.1
	0.5nm,0.8s,baz=118,slow=8.8,SNR=2.7						
WRA	Warramunga Arr	45.89	166	P	P	03 38 50.2	+5.4
	0.4nm,0.6s,baz=348,slow=8.9,SNR=3.4						

MAN 26 03:33:30.5, 9°.78N×123°.53E, h3^{km}, mb4.1, ML2.9, MS2.6, 3C, Negros

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TBP	Tagbilaran	0.34	105	eP	Pg	03 33 37.0	0.0
TBP				i S	Sg	03 33 42.2	+0.8
SNPH	Sibulan	0.52	214	⇑iP	Pb	03 33 41.4	-0.9
SNPH				i S	Sg	03 33 48.6	+1.3
LLP	Lapu-Lapu	0.69	39	⇑iP	Pg	03 33 43.9	+0.2
LLP				i S	Sb	03 33 54.1	-1.0
MSLP	Maasin	1.36	75	eP	Pn	03 33 55.8	-0.6
MSLP				eS	Sn	03 34 14.9	0.0
PAGZ	Pagadian	1.92	184	eP	Pn	03 34 04.8	+0.6
PAGZ				eS	Sn	03 34 28.7	-0.2
RCP	Roxas	1.93	337	⇑eP	Pn	03 34 05.2	+0.9

IDC 26 03:42:18.6±4.5**, 39°.43N**×**110°.32E, h0^{km}, mb3.6**/3**, mb1 3.8**/4**, mb1mx3.4**/68**, mbtmp3.6**/4**, ML2.8**/1**, Error ellipse: s-maj=92.1km s-min=24.9km az=85.0, Western Nei Mongol**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I34MN	SONGINO INFRAS	8.84	343	i		04 41 10.0	
	baz=157,slow=319,SNR=0.3						
SONM	Songino Array	8.87	343	Pn	Pn	03 44 27.8	-0.4
	0.1nm,0.3s,baz=163,slow=12,SNR=6.4						
SONM				Sn	Sn	03 46 05.6	-3.3
	0.1nm,0.3s,baz=171,slow=22,SNR=4.3						
SONM				Lg	Lg	03 46 58.3	
	0.1nm,0.3s,baz=165,slow=31,SNR=6.6						
MKAR	Makanchi Array	21.67	299	P	P	03 47 11.0	+0.3
	1.7nm,0.8s,baz=99,slow=13,SNR=16						
CMAR	Chiang Mai Arr	23.11	209	P	P	03 47 25.6	-0.5
	1.3nm,0.3s,baz=12,slow=9.4,SNR=5.6						
KURBB	Kurchatov Arra	24.91	307	P	P	03 47 43.7	+0.6
	0.6nm,0.8s,baz=106,slow=11,SNR=3.7						

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*IDC **26** 03:48:08.6±1.5, 24°.65N×122°.69E, h0^{km}, mb3.7/4, mb1 3.8/5, mb1mx3.4/59, mbtmp3.7/5, MS3.3/14, Ms1 3.4/14, ms1mx3.0/57, Error ellipse: s-maj=66.9km s-min=24.2km az=67.0*

JMA 26 03:47:45.8±0.3**, 25°.01N**×**123°.41E, h19^{km}, M3.3, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.66	214	P	Pb	03 47 58.2	-0.4
YOJ				eS	Sb	03 48 07.1	-0.2
JYNG	Yonagunijimaku	0.70	217	P	Pb	03 47 59.1	-0.2
JYNG				S	Sb	03 48 08.4	-0.1
IRIF	Iriomote-Funau	0.73	157	P	Pb	03 47 59.9	0.0
IRIF				eS	Sg	03 48 09.8	-0.2
JISG	Ishigakijimahi	0.92	117	P	Pb	03 48 03.1	0.0
JISG				eS	Sb	03 48 15.1	+0.1
JIJ	Ishigaki jima	0.93	134	P	Pb	03 48 02.8	-0.5
JIJ				eS	Sb	03 48 14.6	-0.6
JKRS	Kuro-shima	0.94	145	P	Pb	03 48 03.7	+0.2
JKRS				eS	Sg	03 48 16.7	+0.1
HATJ	Hateruma jima	1.01	159	P	Pb	03 48 03.8	-1.0
HATJ				eS	Sb	03 48 17.5	-0.2
JTJ	Tarama	1.23	107	P	Pb	03 48 08.9	+0.5
JTJ				eS	Sg	03 48 25.1	-0.6
JNU	Nakatsue	10.39	37	LR	LR	03 55 58.7	
	comp=Z,46nm,19.2s,baz=297,slow=42						
KSRS	Korea Array	12.99	16	Pn	P	03 51 22.0	+22
	baz=186,slow=11,SNR=2.5						
KSRS				LR	LR	03 56 26.0	
	comp=Z,90nm,19.3s,baz=195,slow=37						
DAV	Davao City (W)	17.96	173	LR	LR	03 59 19.4	
	comp=Z,94nm,18.9s,baz=356,slow=38						
USRK	Ussuriysk Ar.	20.38	18	LR	LR	04 02 14.7	
	comp=Z,31nm,18.1s,baz=163,slow=40						
ASAJ	Asahikawa	24.65	35	LR	LR	04 03 36.9	
	comp=Z,33nm,19.2s,baz=156,slow=37						
KLR	Kul'dur	25.04	13	LR	LR	04 03 54.1	
	comp=Z,7.8nm,18.2s,baz=216,slow=37						
SONM	Songino Array	26.46	334	P	P	03 53 47.4	+26
	0.6nm,0.5s,baz=147,slow=8.6,SNR=4.2						
SONM				LR	LR	04 05 06.8	
	comp=Z,143nm,18.1s,baz=162,slow=38						
BRDH	Bariadhala	29.12	272	LR	LR	04 07 05.0	
	comp=Z,121nm,18.0s,baz=50,slow=40						
MKAR	Makanchi Array	39.18	314	P	P	03 55 36.8	+24
	1.6nm,0.9s,baz=106,slow=10,SNR=9.1						
ZALV	Zalesovo Beam	40.68	326	LR	LR	04 13 39.6	
	comp=Z,60nm,18.3s,baz=131,slow=38						
KURBB	Kurchatov Arra	42.81	319	P	P	03 56 06.3	+24
	1.4nm,0.8s,baz=108,slow=10,SNR=6.6						
WRA	Warramunga Arr	45.93	166	P	P	03 56 31.7	+24
	0.7nm,0.7s,baz=348,slow=8.5,SNR=3.5						
AKTO	Aktyubinsk	55.61	315	LR	LR	04 22 48.3	
	comp=Z,30nm,21.1s,baz=101,slow=38						
SPITS	Spitsbergen Ar	69.11	348	LR	LR	04 33 03.7	
	comp=Z,39nm,19.0s,baz=245,slow=39						
FINES	FINESS Array B	71.75	330	LR	LR	04 33 59.8	
	comp=Z,74nm,18.0s,baz=74,slow=38						
HFS	Hagfors	77.83	331	LR	LR	04 37 29.8	
	comp=Z,66nm,19.1s,baz=88,slow=38						
NOA	NORSAR Array B	78.44	333	LR	LR	04 38 09.7	
	comp=Z,34nm,18.3s,baz=75,slow=38						

IDC 26 03:52:51.0±7.3**, 6°.48S**×**154°.56E, h104^{km}**±63^{km}**, mb3.3**/3**, mb1 3.8**/4**, mb1mx3.2**/42**, mbtmp3.8**/4**, MS2.9**/1**, Ms1 2.9**/1**, ms1mx2.5**/18**, Error ellipse: s-maj=121.8km s-min=36.2km az=139.0, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	7.89	248	P	Pn	03 54 43.3	+0.3
	6.7nm,0.3s,baz=41,slow=11,SNR=9.7						
PMG				S	Sn	03 56 11.4	+0.8
	3.1nm,0.3s,baz=327,slow=15,SNR=4.5						
PMG				LR	LR	03 57 24.9	
	comp=Z,79nm,18.5s,baz=99,slow=35						
WRA	Warramunga Arr	23.76	234	P	P	03 57 54.5	+0.5
	1.2nm,0.8s,baz=59,slow=9.4,SNR=12						
WRA				PcP	PcP	04 01 35.4	+0.2
	0.3nm,0.5s,baz=54,slow=2.4,SNR=6.5						
ASAR	Alice Springs	26.20	227	P	P	03 58 15.4	-0.8
	0.3nm,0.5s,baz=56,slow=9.5,SNR=4.2						
NVAR	Mina Array Bea	91.74	52	P	P	04 05 47.1	-0.4
	0.5nm,0.8s,baz=249,slow=5.6,SNR=4.3						

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*SOME **26** 03:56:49.9, 41°.87N×81°.58E, h0^{km}*

*NNC **26** 03:56:50.2±3.4, 41°.90N×81°.89E, h0^{km}, mb3.0, mpv2.5, Error ellipse: s-maj=27.9km s-min=16.6km az=174.0*

ISC 26 03:56:48.0±3.3**, 42°.0N**±0°.1×**81°.76E**±0°.09**, h2^{km}**±20^{km}**, n13, σ1^s.51**/24**, 2C-5D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KTMS	Ketmen	1.82	326	eP	Pg	03 57 24.2	+1.3
	4.5nm,0.2s						
KTMS				eS	Sg	03 57 49.1	+2.5
	20nm,0.3s						
SHLS	Shalkode	2.09	306	eP	Pb	03 57 25.7	-1.0
	11nm,0.2s						
SHLS				eS	Sb	03 57 51.9	-1.2
	44nm,0.5s						
PDGK	Podgornoye	2.17	310	⇑Pn	Pg	03 57 29.1	-0.5
	3.6nm,0.6s						
PDGK				⇓Sn	Sg	03 57 58.8	+1.0
	4.0nm,0.5s						
UZB	Uzynbulak	2.35	302	eP	Pg	03 57 33.5	+0.3
	2.1nm,0.3s						
UZB				eS	Sg	03 58 05.3	+1.6
	10nm,0.2s						
SATY	Saty	2.72	295	eP	Pg	03 57 40.3	+0.1
	3.0nm,0.1s						
SATY				eS	Sg	03 58 16.3	+0.9
	17nm,0.1s						
KPKS	Kokpek	2.73	305	eP	Pb	03 57 37.6	0.0
	5.6nm,0.2s						
KPKS				eS	Sb	03 58 11.9	+0.3
	8.2nm,0.4s						
ZHN	Zhinishke	2.75	298	eP	Pb	03 57 39.1	+1.2
	2.9nm,0.1s						
ZHN				eS	Sg	03 58 14.3	-1.8
	15nm,0.2s						
DJR	Jarkent	2.79	329	eP	Pg	03 57 41.0	-0.4
	1.5nm,0.4s						
DJR				⇓iS	Sg	03 58 17.7	+0.2
	3.5nm,0.5s						
ARXS	Arharly	3.67	309	eP	Pg	03 57 56.8	-1.5
	1.4nm,0.8s						
ARXS				eS	Sg	03 58 45.1	-0.7
	2.7nm,0.4s						
KAPS	Kapalarasan	3.77	333	eP	Pg	03 57 59.4	-0.8
	1.0nm,0.3s						
KAPS				eS	Sg	03 58 49.0	+0.1
	1.5nm,0.3s						
KTBS	Karatobe	4.13	297	eP	Pb	03 58 04.0	+2.5
	1.0nm,0.5s						
KTBS				eS	Sg	03 58 57.0	-3.8
	1.3nm,0.6s						
MK31	Makanchi Array	4.86	4	⇓Pg	Pg	03 58 21.1	-0.1
	0.2nm,0.5s,baz=185,slow=14,SNR=4.0						
MK31				⇑Lg	Lg	03 59 25.9	
	0.6nm,0.6s,baz=181,slow=27,SNR=4.2						
MAKZ	Makanchi	4.86	2	⇓Pg	Pg	03 58 19.7	-1.5
	0.7nm,0.7s						
MAKZ				⇓Lg	Lg	03 59 25.1	
	1.8nm,1.1s						

MEX 26 04:06:56.6±0.3**, 16°.27N**×**98°.30W, h3^{km}**±2^{km}**, MD3.9, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.21	54	eP	Pg	04 07 00.5	-0.1
PNIG				eS	Sg	04 07 03.5	+0.1
TLIG	Tlapa	1.31	349	eP	Pg	04 07 18.2	-3.6
TLIG				i S	Sg	04 07 34.9	-4.0
VHO	Vista Hermosa	1.70	62	eP	Pn	04 07 23.8	-3.6
VHO				i S	Sn	04 07 45.2	-4.7
CAIG	El Cayaco	2.04	293	i P	Pn	04 07 29.1	-2.6
CAIG				i S	Sn	04 07 53.0	-4.7
ARIG	Puente Sto Nin	2.80	316	i P	Pn	04 07 39.6	-2.7
ARIG				i S	Sn	04 08 12.9	-3.7

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*ISCJB **26** 04:44:53.5±1.5, 25°.03N±0°.09×123°.44E±0°.05, h17^{km}±15^{km}, mb3.5/4, MS3.0/2, Error ellipse: s-maj=14.6km s-min=6.9km az=176.5*

*JMA **26** 04:44:53.5±0.3, 25°.02N×123°.43E, h22^{km}, M3.1*

*IDC **26** 04:44:54.3±1.5, 24°.51N×122°.39E, h0^{km}, mb3.6/4, mb1 3.7/5, mb1mx3.3/55, mbtmp3.6/5, ML3.6/1, MS3.0/3, Ms1 3.0/3, ms1mx2.5/53, Error ellipse: s-maj=66.4km s-min=24.2km az=68.0*

ISC 26 04:44:54.4±1.7**, 24°.93N**±0°.07×**123°.46E**±0°.05**, h12^{km}**±12^{km}**, n15, σ0^s.90**/18**, mb3.4**/4**, Southwestern Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
YOJ	Yonaguni jima	0.62	222	P	Pg	04 45 06.2	-0.2
IRIF	Iriomote-Funau	0.64	157	P	Pg	04 45 07.3	+0.5
IRIF				eS	Sb	04 45 17.1	+0.8
JYNG	Yonagunijimaku	0.66	225	P	Pg	04 45 06.9	-0.4
JYNG				S	Sb	04 45 17.1	0.0
JIJ	Ishigaki jima	0.84	132	P	Pb	04 45 10.2	-0.7
JIJ				S	Sb	04 45 21.4	-0.7
JISG	Ishigakijimahi	0.84	113	P	Pb	04 45 10.7	-0.3
JISG				eS	Sb	04 45 22.8	+0.5
JKRS	Kuro-shima	0.85	144	P	Pb	04 45 11.1	0.0
JKRS				S	Sn	04 45 23.9	-0.6
HATJ	Hateruma jima	0.92	160	P	Pb	04 45 12.1	-0.2
JTJ	Tarama	1.17	104	eS	Sb	04 45 29.7	-1.8
KSRS	Korea Array	13.06	16	Pn	P	04 48 11.6	+1.6
	0.3nm,0.3s,baz=194,slow=12,SNR=10.0						
KSRS				LR	LR	04 53 22.8	
	comp=Z,32nm,19.7s,baz=231,slow=37						
SONM	Songino Array	26.56	334	P	P	04 50 32.8	+0.6
	0.7nm,0.8s,baz=148,slow=8.5,SNR=2.8						
MKAR	Makanchi Array	39.27	314	P	P	04 52 21.7	-1.2
	0.5nm,0.7s,baz=103,slow=10.0,SNR=4.6						
MA2	Magadan	39.52	22	LR	LR	05 09 20.7	
	comp=Z,23nm,18.5s,baz=348,slow=36						
ZALV	Zalesovo Beam	40.78	326	LR	LR	05 10 47.2	
	comp=Z,22nm,18.8s,baz=94,slow=38						
KURBB	Kurchatov Arra	42.90	319	P	P	04 52 51.8	-1.0
	0.6nm,0.7s,baz=109,slow=10,SNR=3.8						
WRA	Warramunga Arr	45.84	166	P	P	04 53 17.0	+0.5
	0.9nm,0.8s,baz=348,slow=8.6,SNR=7.7						

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*SOME **26** 04:49:56.9, 43°.27N×81°.88E, h5^{km}*

*NNC **26** 04:49:59.2±3.5, 43°.25N×81°.78E, h0^{km}, mb2.7, mpv2.4, Error ellipse: s-maj=34.7km s-min=12.4km az=145.0*

ISC 26 04:50:00.7±2.5**, 43°.3N**±0°.1×**81°.68E**±0°.10**, h10^{km}, n10, σ1^s.80**/17**, 4C-3D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PDGK	Podgornoye	1.60	273	⇓Pn	Pn	04 50 29.8	+0.6
	2.4nm,0.3s						
PDGK				⇑Sn	Sg	04 50 53.2	+1.0
	6.1nm,0.4s						
SHLS	Shalkode	1.62	267	eP	Pn	04 50 25.3	-4.2
	9.1nm,0.2s						
SHLS				eS	Sn	04 50 45.3	-5.2
	18nm,0.3s						
DJR	Jarkent	1.74	309	eP	Pn	04 50 31.2	+0.1
	1.8nm,0.2s						
DJR				⇓iS	Sb	04 50 55.3	+0.5
	3.5nm,0.4s						

UZB	Uzynbulak	1.95	268	eP	Pn	04 50 35.8	+1.8
	2.3nm,0.2s						
UZB				eS	Sg	04 51 03.7	+0.4
	5.2nm,0.3s						
KPKS	Kokpek	2.19	277	eP	Pb	04 50 39.7	-0.9
	6.3nm,0.2s						
KPKS				eS	Sb	04 51 09.9	+2.1
	20nm,0.4s						
ZHN	Zhinishke	2.37	269	eP	Pb	04 50 44.1	+0.5
	6.5nm,0.2s						
ZHN				eS	Sg	04 51 17.4	+0.4
	8.4nm,0.2s						
SATY	Saty	2.40	266	eP	Pb	04 50 44.0	-0.2
	8.2nm,0.2s						
SATY				eS	Sg	04 51 17.5	-0.4
	12nm,0.4s						
KAPS	Kapalarasan	2.63	321	eP	Pn	04 50 45.8	+2.6
	0.7nm,0.3s						
KAPS				eS	Sb	04 51 20.6	+0.3
	4.2nm,0.3s						
MAKZ	Makanchi	3.56	3	⇑Pg	Pb	04 51 03.3	-0.5
	0.4nm,0.5s						
MAKZ				⇑Lg	Lg	04 51 53.6	
	0.4nm,0.5s						
MK31	Makanchi Array	3.57	7	⇓Pg	Pb	04 51 03.2	-0.7
	0.3nm,0.4s,baz=183,slow=14,SNR=6.1						
MK31				⇑Lg	Lg	04 51 55.0	
	0.7nm,0.6s,baz=190,slow=25,SNR=4.7						

JMA 26 04:55:33.0±0.2, 37°.43N×141°.83E, h43^{km}±4^{km}, M1.9, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	Kawauchi	0.76	266	P	Pn	04 55 47.6	+0.2
JFK				S	Sn	04 55 57.6	-0.2
ONAJ	Iwakimizuishiy	0.89	249	P	Pn	04 55 49.2	+0.1
ONAJ				eS	Sn	04 56 00.4	-0.4
JMM	Marumori	0.93	298	P	Pn	04 55 50.0	+0.4
JMM				S	Sn	04 56 01.8	0.0
JIO	Ouri	1.09	340	S	Sn	04 56 05.1	-0.6
JOU	Okura	1.31	316	P	Pn	04 55 56.2	+1.3
JOU				eS	Sn	04 56 12.6	+1.4

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*IDC **26** 04:55:51.9±2.5, 37°.45N×141°.80E, h0^{km}, mb3.4/3, mb1 3.6/4, mb1mx3.3/59, mbtmp3.4/4, ML3.4/1, Error ellipse: s-maj=61.4km s-min=30.0km az=65.0*

*ISCJB **26** 04:56:11.3±0.7, 36°.87N±0°.05×140°.13E±0°.08, h133^{km}±5^{km}, mb3.2/3, Error ellipse: s-maj=11.0km s-min=7.4km az=26.0*

*JMA **26** 04:56:12.5±0.1, 36°.87N×140°.14E, h124^{km}±1^{km}, M3.2*

ISC 26 04:56:12.9±2.6, 36°.89N±0°.07×140°.12E±0°.07, h123^{km}±19^{km}, n21, σ0^{s}.46/21, mb3.4/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JSB	Shiboa	0.18	296	P	Pn	04 56 30.0	+0.2
JFY	Yanaizu	0.61	327	P	Pn	04 56 31.8	-0.1
JFT	Otama	0.65	15	P	Pn	04 56 32.1	-0.1
JAG	Ashikaga	0.71	229	P	Pn	04 56 32.5	-0.1
JAG				S	S	04 56 47.4	-0.1
JKT	Katashina	0.71	260	P	Pn	04 56 32.1	-0.6
JFK	Kawauchi	0.77	51	P	Pn	04 56 32.7	-0.4
JFK				i S	S	04 56 48.9	+0.5
JNS	Sasagawa	1.13	326	P	Pn	04 56 35.9	-0.5
JRY	Ryogami san	1.31	229	P	Pn	04 56 38.5	+0.1
JRY				S	S	04 56 57.6	-0.2
MJAR	Matsushiro Arr	1.57	258	Pn	Pn	04 56 41.3	-0.1
	5.2nm,0.3s,baz=68,slow=8.3,SNR=33						
MAT	Matsushiro	1.58	258	P	Pn	04 56 41.6	+0.2
MAT				S	S	04 57 03.6	+0.5
MAT	Matsushiro	1.58	258	P	Pn	04 56 41.6	+0.2
MAT				S	S	04 57 03.5	+0.5
JAW	Awa shima	1.71	336	P	Pn	04 56 42.4	-0.5
JOD2	Odawara 2	1.82	208	P	Pn	04 56 43.7	-0.7
JOD2				S	S	04 57 07.6	-0.8
JYN	Shimob	1.89	223	P	Pn	04 56 45.3	+0.1
JYN				S	S	04 57 10.1	+0.3
BSO1	Boso 1	2.34	162	S	S	04 57 19.7	+0.8
H11S1	WAKE ISLAND Hy	29.66	121	T	T	05 33 13.2	
	baz=315,slow=75,SNR=5.9						
H11S3	WAKE ISLAND Hy	29.66	121	T	T	05 33 14.1	
	baz=315,slow=75,SNR=9.7						
H11S2	WAKE ISLAND Hy	29.68	121	T	T	05 33 12.7	
	baz=315,slow=75,SNR=7.3						
MKAR	Makanchi Array	43.32	302	P	P	05 04 02.3	-0.2
	0.2nm,0.5s,baz=93,slow=8.7,SNR=2.6						
KURBB	Kurchatov Arra	45.27	308	P	P	05 04 16.4	-1.6
	0.2nm,0.3s,baz=83,slow=8.4,SNR=3.0						
WRA	Warramunga Arr	56.79	187	P	P	05 05 42.9	-1.4
	0.4nm,0.6s,baz=2.9,slow=7.6,SNR=9.3						

IDC 26 05:00:46.1±1.3, 10°.48N×93°.21E, h0^{km}, mb3.6/6, mb1 3.7/6, mb1mx3.5/63, mbtmp3.6/6, Error ellipse: s-maj=54.1km s-min=19.8km az=56.0, Andaman Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	37.37	348	P	P	05 08 00.3	-0.2
	0.8nm,0.9s,baz=182,slow=8.5,SNR=3.6						
SONM	Songino Array	38.86	14	P	P	05 08 12.3	-0.9
	0.2nm,0.4s,baz=195,slow=4.5,SNR=4.0						
KURBB	Kurchatov Arra	41.81	346	P	P	05 08 38.5	+1.0
	0.2nm,0.4s,baz=158,slow=7.8,SNR=3.1						
WRA	Warramunga Arr	50.53	127	P	P	05 09 46.5	-0.2
	1.4nm,1.1s,baz=305,slow=8.7,SNR=11						
ASAR	Alice Springs	52.29	131	P	P	05 10 00.0	+0.1
	1.4nm,0.9s,baz=301,slow=7.7,SNR=8.1						
BRTR	Keskin Array B	60.05	310	P	P	05 10 55.0	-0.4
	0.3nm,0.5s,baz=90,slow=7.2,SNR=2.5						

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*ISCJB **26** 05:06:34.5±0.6, 6°.85N±0°.03×73°.14W±0°.03, h147^{km}±5^{km}, mb2.8/1, Error ellipse: s-maj=5.8km s-min=4.9km az=37.8*

*IDC **26** 05:06:34.0±0.8, 6°.75N×72°.94W, h159^{km}±10^{km}, mb2.5/1, mb1 3.2/3, mb1mx2.8/47, mbtmp3.4/3, Error ellipse: s-maj=39.1km s-min=7.5km az=132.0*

*RSNC **26** 05:06:36.2±0.9, 6°.81N×73°.16W, h140^{km}±4^{km}, ML3.2, Mw3.5*

ISC 26 05:06:34.7±0.9, 6°.85N±0°.04×73°.12W±0°.04, h148^{km}±6^{km}, n23, σ0^{s}.81/41, 2D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	Barichara	0.26	193	i P	Pn	05 06 55.2	0.0
BARC				eS	Sn	05 07 09.9	-0.9
BARC				i		05 07 11.6	
	comp=Z,367nm,0.2s						
BRRC	Barranca, Sant	0.64	294	⇓iP	Pn	05 06 57.1	+0.5
BRRC				eS	Sn	05 07 13.4	+0.2
BRRC				i		05 07 18.4	
	comp=Z,370nm,0.2s						
PAMC	Pamplona, Colo	0.65	41	eP	Pn	05 06 58.1	+0.9
PAMC				eS	Sn	05 07 14.7	+0.4
RUSC	La Rusia	0.95	178	eP	Pn	05 06 59.3	-0.1
RUSC				eS	Sn	05 07 17.2	-1.0
RUSC				i		05 07 19.7	
	comp=Z,241nm,0.3s						
PTBC	PUERTO BERRIO,	1.36	257	eP	Pn	05 07 02.2	-0.4
PTBC				eS	Sn	05 07 22.7	-1.3
PTBC				i		05 07 28.4	
	comp=Z,113nm,0.3s						
TAMC	Tame, Arauca	1.39	107	⇓iP	Pn	05 07 03.6	+0.7
TAMC				i		05 07 03.9	
	comp=Z,246nm,0.1s						
TAMC				eS	Sn	05 07 24.7	+0.1
OCAC	Ocana	1.40	352	eP	Pn	05 07 03.5	+0.2
OCAC				eS	Sn	05 07 24.9	-0.1
OCAC				i		05 07 30.8	
	comp=Z,285nm,0.5s						
YOPC	Yopal, Colombi	1.64	155	eP	Pn	05 07 06.1	+0.3
YOPC				eS	Sn	05 07 30.1	+0.5
YOPC				i		05 07 33.4	
	comp=Z,109nm,0.4s						
ZARC	Zaragoza, Cauc	1.84	291	eP	Pn	05 07 08.5	+0.7
ZARC				eS	Sn	05 07 34.0	+0.8
ZARC				i		05 07 43.5	
	comp=Z,159nm,0.7s						
NORC	Norcasia	2.15	234	eP	Pn	05 07 11.9	+0.3
NORC				eS	Sn	05 07 39.2	-0.7
CHIC	Chingaza	2.28	195	eP	Pn	05 07 13.7	+0.2
CHIC				eS	Sn	05 07 41.9	-1.4
CHIC				i		05 07 46.4	
	comp=Z,74nm,0.3s						
ROSC	El Rosal	2.32	211	P	Pn	05 07 15.8	+1.9
	comp=Z,17nm,0.3s,baz=342,slow=3.9,SNR=31						
ROSC				S	Sn	05 07 45.0	+0.9
	comp=Z,30nm,0.3s,baz=224,slow=22,SNR=20						
HELC	Santa Helena	2.48	255	eP	Pn	05 07 16.0	+0.2
HELC				eS	Sn	05 07 47.4	+0.1
HELC				i		05 07 53.1	
	comp=Z,77nm,0.2s						
UREC	San Josˆ' de U	2.55	291	eP	Pn	05 07 16.3	-0.1
UREC				i		05 07 51.0	
	comp=Z,92nm,0.3s						
VILC	Villavicencio,	2.77	192	eP	Pn	05 07 19.6	+0.3
VILC				eS	Sn	05 07 52.9	-0.9
VILC				i		05 07 57.3	
	comp=Z,44nm,0.4s						
DBBC	Dabeiba	3.07	273	eP	Pn	05 07 23.3	+0.4
DBBC				eS	Sn	05 07 59.5	-0.7
TOLC	Tolima	3.13	224	eP	Pn	05 07 25.1	+1.1
SDV	Santo Domingo	3.19	50	P	Pn	05 07 24.8	+0.2
	comp=Z,12nm,0.3s,baz=167,slow=1.0,SNR=14						
SDV				S	Sn	05 08 01.7	-1.5
	comp=Z,9.3nm,0.3s,baz=258,slow=21,SNR=23						
ANIL	Santa Ana	3.26	224	eP	Pn	05 07 26.3	+0.7
ANIL				eS	Sn	05 08 04.3	-0.6
PRAC	Prado	3.57	209	eP	Pn	05 07 29.7	+0.3
PRAC				eS	Sn	05 08 11.5	-0.4
TXAR	Lajitas Array	36.44	312	P	P	05 13 25.4	-0.1
	comp=Z,0.1nm,0.4s,baz=114,slow=11,SNR=2.8						
ASAR	Alice Springs	149.12	234	PKPbc	PKPdf	05 26 03.5	+1.4
	comp=Z,0.3nm,0.6s,baz=123,slow=3.4,SNR=3.2						
WRA	Warramunga Arr	150.35	241	PKPbc	PKPbc	05 26 08.1	-1.4
	comp=Z,0.2nm,0.4s,baz=106,slow=2.9,SNR=5.0						

MEX 26 05:15:19.1±0.6, 15°.85N×98°.65W, h16^{km}±999^{km}, MD3.8, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.73	43	eP	Pg	05 15 31.0	-2.5
PNIG				eS	Sg	05 15 39.7	-3.5
TLIG	Tlapa	1.70	3	eP	Pn	05 15 44.4	-3.9
TLIG				eS	Sn	05 16 04.8	-4.9

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*ISCJB **26** 05:19:55.5±0.8, 40°.99N±0°.03×43°.89E±0°.04, h4^{km}±7^{km}, Error ellipse: s-maj=6.3km s-min=4.9km az=139.1*

*CSEM **26** 05:19:55.4±0.2, 40°.99N×43°.89E, h8^{km}, ML2.1, Error ellipse: s-maj=3.9km s-min=2.7km az=132.0*

*DDA **26** 05:19:55.0, 41°.00N×43°.87E, h7^{km}, Ml2.5*

*TIF **26** 05:19:56.3, 41°.09N×43°.90E, h11^{km}±3^{km}*

ISC 26 05:19:55.9±1.0, 41°.00N±0°.03×43°.85E±0°.03, h11^{km}±9^{km}, n17, σ1^{s}.14/31, Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BGD	Bogdanovka	0.33	325	P	Pg	05 20 02.8	+0.2
BGD				S	Sg	05 20 08.0	+0.9
BGD	Bogdanovka	0.33	325	P	Pg	05 20 02.8	+0.2
BGD				S	Sg	05 20 08.0	+0.9
EAK	Akyaka	0.36	211	i P	Pg	05 20 02.2	-1.0
EAK	Akyaka	0.36	211	P	Pg	05 20 02.2	-1.0
AKH	Akhalkalaki	0.49	327	P	Pg	05 20 05.4	-0.2
AKH				S	Sg	05 20 12.3	+0.1
AKH	Akhalkalaki	0.49	327	P	Pg	05 20 05.4	-0.2
AKH				S	Sg	05 20 12.3	+0.1
DIGO	Kars	0.68	212	i P	Pb	05 20 09.9	-0.1
DIGO				i S	Sb	05 20 19.0	-0.5
DIGO	Kars	0.68	212	P	Pb	05 20 09.9	-0.1
DIGO				S	Sb	05 20 19.0	-0.5
TBLG	Delisi	0.99	42	S	Sg	05 20 26.2	-1.9
DGRG	David-gareji	1.24	68	P	Pb	05 20 18.1	-1.2
DGRG				S	Sn	05 20 36.2	+0.3
DGRG	David-gareji	1.24	68	P	Pb	05 20 18.4	-0.9
DGRG				S	Sn	05 20 35.5	-0.3
DUS	Dusheti	1.27	30	P	Pn	05 20 19.3	-0.3
DUS				S	Sn	05 20 36.1	-0.5
DUS	Dusheti	1.27	30	P	Pn	05 20 19.3	-0.3
DUS				S	Sn	05 20 36.2	-0.5
ARTV	Artvin	1.46	278	i P	Pn	05 20 22.9	+0.5
ARTV				i S	Sn	05 20 42.4	+0.7
ARTV	Artvin	1.46	278	P	Pn	05 20 22.9	+0.5
ARTV				S	Sn	05 20 42.4	+0.7
DAGI	Agillar	1.47	274	i P	Pn	05 20 22.9	+0.6
DAGI				i S	Sg	05 20 43.7	+0.6
DDFL	Dedoflistskaro	1.77	75	P	Pg	05 20 30.6	+0.7
DDFL				S	Sg	05 20 57.5	+4.7

MAN 26 05:21:24.3, 10°.14N×122°.11E, h38^{km}, mb4.5, ML3.4, MS3.2, 2C, Panay

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAP	San Jose, Anti	0.62	346	⇑eP	Pn	05 21 38.5	+1.7
GUIM	Jordan	0.68	44	eP	Pn	05 21 37.9	+0.4
GUIM				eS	Sn	05 21 49.0	+2.1
CUYO	Cuyo Island	1.28	304	eP	Pn	05 21 46.5	+0.8
CUYO				eS	Sn	05 22 02.1	+0.4
RCP	Roxas	1.55	24	⇑eP	Pn	05 21 59.7	+10
RCP				eS	Sn	05 22 14.1	+5.9

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*IDC **26** 05:31:30.3±0.9, 33°.30N×75°.93E, h0^{km}, mb3.8/9, mb1 3.9/11, mb1mx3.7/66, mbtmp3.8/11, ML3.3/2, MS3.2/3, Ms1 3.2/3, ms1mx3.1/68, Error ellipse: s-maj=27.4km s-min=15.6km az=53.0*

*NDI **26** 05:31:30.1±2.2, 33°.76N×75°.76E, h15^{km}, ML4.3, mb4.4(NEIC)*

*ISCJB **26** 05:31:33.4±0.3, 33°.53N±0°.03×76°.42E±0°.03, h31^{km}, mb3.9/10, MS3.3/2, Error ellipse: s-maj=5.0km s-min=2.6km az=136.5*

*NEIC **26** 05:31:38.0±1.3, 33°.47N×76°.11E, h56^{km}±13^{km}, mb4.4/2, Error ellipse: s-maj=12.1km s-min=10.3km az=218.0*

*NNC **26** 05:31:39.9±5.8, 33°.39N×74°.98E, h119^{km}±200^{km}, mb3.5, mpv4.1, Error ellipse: s-maj=70.9km s-min=40.5km az=84.0*

ISC 26 05:31:36.2±0.6, 33°.54N±0°.04×76°.38E±0°.05, h31^{km}, n50, σ2^{s}.26/73, mb3.9/10, 4C-5D, Kashmir-India border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DHRM	DHARAMSHALA	1.29	183	eP	Pn	05 31 57.8	-0.6
DHRM				eS	Sb	05 32 20.2	+3.8
DHRM				IAML		05 32 21.5	
	comp=N,10µm,0.2s						
DHRM				IAML		05 32 21.6	
	comp=E,6µm,0.2s						
SMLA	Simla	2.50	164	eP	Pn	05 32 16.1	+1.4
SMLA				eS	Sb	05 32 48.1	-2.7
CHCP	Chirah Chowk	2.60	273	P	Pn	05 32 15.5	-0.7
NIL	Nilore	2.61	273	ePn	Pn	05 32 15.3	-1.1
NIL				eSn	Sn	05 32 47.0	-0.1
DDI	Dehra Dun	3.51	156	eP	Pn	05 32 31.1	+2.3
DDI				eS	Sn	05 33 13.0	+3.7
DDI				IAML		05 33 16.9	
	comp=N,750nm,0.2s						
SARP	Sargodha	3.52	244	P	Pn	05 32 25.5	-3.3
KKR	Kurukshetra	3.59	174	eP	Pb	05 32 41.5	+2.5
KKR				eS	Sb	05 33 26.6	+4.4
CEP	Cherat	3.74	276	P	Pn	05 32 29.7	-2.2
THW	Thamme Wali	3.96	260	P	Pn	05 32 32.9	-2.0
JOSI	Joshimath	4.02	137	eP	Pn	05 32 38.3	+2.4
JOSI				eS	Sb	05 33 28.8	-6.0
BHGR	Bahadurgarh	4.87	174	eS	Sn	05 33 42.2	-0.4
NDI	New Delhi	4.90	171	eP	Pn	05 32 48.0	+0.2
NDI				eS	Sn	05 33 43.0	-0.4
KHET	Khetri	5.47	185	eP	Pn	05 32 54.3	-1.4
KHET				eS	Sn	05 33 54.8	-2.8
SFK	Sufi-Kurgan	6.86	341	⇑Pn	Pn	05 33 16.3	+1.4
	comp=N,6.8nm,0.4s						
SFK				⇓Sn	Sn	05 34 32.4	+0.5
	comp=N,10nm,0.5s						
PYUN	Piuthan	7.86	132	ePn	Pn	05 33 27.8	-0.8
PYUN				eSn	Sn	05 34 56.3	-0.3
	comp=N,52nm,0.4s						
DANN	Dangsing	8.18	127	ePn	Pn	05 33 33.7	+0.5
DANN				eSn	Sn	05 35 04.6	-0.1
	comp=N,51nm,0.5s						
KOLN	Koldanda	8.47	131	ePn	Pn	05 33 36.7	-0.3
KOLN				eSn	Sn	05 35 11.0	-0.7
	comp=N,38nm,0.4s						
GKN	Gorkha	9.00	126	ePn	Pn	05 33 44.6	+0.4
GKN				eSn	Sn	05 35 24.5	0.0
	comp=N,57nm,0.5s						
AAK	Ala-Archa	9.20	351	Pn	Pn	05 33 48.7	+1.8
	comp=N,0.5nm,0.3s,baz=248,slow=7.9,SNR=4.3						
AAK				Sn	Sn	05 35 31.5	+2.1
	comp=N,0.3nm,0.3s,baz=336,slow=20,SNR=2.9						
AAK				LR	LR	05 37 53.3	
	comp=N,53nm,18.4s,baz=162,slow=41						
AAK	Ala-Archa	9.20	351	Pn	Pn	05 33 50.4	+3.5
	comp=N,8.7nm,1.2s						
AAK				⇑Sn	Sn	05 35 31.8	+2.4
	comp=N,9.6nm,1.2s						
TKM2	Tokmak 2	9.38	356	⇓Pn	Pn	05 33 55.5	+6.0
	comp=N,3.7nm,1.0s						
TKM2				⇓Sn	Sn	05 35 39.3	+5.3
	comp=N,2.6nm,0.8s						
MNAS	Manas	9.44	342	⇑Pn	Pn	05 33 48.8	-1.3
	comp=N,5.6nm,0.9s						
MNAS				⇓Sn	Sn	05 35 33.6	-1.6
	comp=N,8.7nm,1.0s						
DMN	Daman	9.57	126	ePn	Pn	05 33 52.3	+0.2
DMN				eSn	Sn	05 35 38.2	-0.5
	comp=N,45nm,0.7s						
KKN	Kakani	9.57	124	ePn	Pn	05 33 51.9	-0.2
PKIN	Phulchoki	9.79	125	ePn	Pn	05 33 55.3	+0.2
PKIN				eSn	Sn	05 35 42.9	-1.2
	comp=N,59nm,0.5s						
GUN	Gumba	9.91	122	ePn	Pn	05 33 57.7	+0.7
GUN				eSn	Sn	05 35 47.2	-0.2
	comp=N,32nm,0.5s						
JIRN	Jiri	10.29	122	ePn	Pn	05 34 01.6	-0.4
JIRN				eSn	Sn	05 35 55.7	-0.8
	comp=N,45nm,0.3s						
BHPL	Bhopal	10.31	175	eP	Pn	05 33 59.9	-2.2
BHPL				eS	Sn	05 35 48.4	-8.2
BHPL				IAML		05 35 53.7	
	comp=N,88nm,0.4s						
BHPL				IAML		05 35 53.7	
	comp=E,50nm,0.3s						
KK31	Karatay Array	10.60	336	⇓Pn	Pn	05 34 04.8	-1.1
	comp=E,3.9nm,0.8s,baz=152,slow=13,SNR=23						
KK31				⇑Sn	Sn	05 36 00.9	-2.5
	comp=E,4.6nm,0.6s,baz=162,slow=22,SNR=7.2						
RAMN	Ramite	11.01	124	ePn	Pn	05 34 11.8	0.0
RAMN				eSn	Sn	05 36 12.9	-1.2
	comp=E,35nm,0.4s						
TAPN	Taplejung	11.56	119	ePn	Pn	05 34 19.2	-0.2
TAPN				eSn	Sn	05 36 25.3	-2.3
ODAN	Odare	11.62	122	ePn	Pn	05 34 19.6	-0.6
ODAN				eSn	Sn	05 36 28.0	-1.0
	comp=E,21nm,0.4s						
MKAR	Makanchi Array	13.98	17	Pn	Pn	05 34 54.0	+1.9
	comp=E,0.1nm,0.3s,baz=184,slow=12,SNR=4.6						
KURBB	Kurchatov Arra	17.14	5	P	Pn	05 35 31.0	-2.3
	comp=E,0.0nm,0.3s,baz=127,slow=26,SNR=4.2						
KURK	Kurchatov	17.24	5	eP	Pn	05 35 31.8	-2.7
	comp=E,45nm,0.9s						
BVAR	Borovoye Array	19.94	349	P	P	05 36 05.6	+0.1
	comp=E,1.2nm,0.6s,baz=168,slow=8.7,SNR=5.5						
ZALV	Zalesovo Beam	21.26	14	LR	LR	05 46 02.1	
	comp=E,206nm,20.3s,baz=72,slow=40						
AKTO	Aktyubinsk	21.61	327	P	P	05 36 22.7	-0.8
	comp=E,5.3nm,0.8s,baz=123,slow=16,SNR=12						
CHTO	Chiang Mai	24.93	120	eP	P	05 36 57.1	+0.3
	comp=E,4.6nm,0.7s						
CHTO	Chiang Mai	24.93	120	P	P	05 36 57.9	+1.1
	comp=E,38nm,0.9s						
CMMT	Chiang Mai	24.93	120	P	P	05 36 57.8	+1.0
	comp=E,8.2nm,0.8s						
CMAR	Chiang Mai Arr	25.16	121	P	P	05 36 59.5	+0.7
	comp=E,7.9nm,0.8s,baz=312,slow=9.9,SNR=32						
ARU	Arti	25.97	337	LR	LR	05 46 56.3	
	comp=E,58nm,21.9s,baz=359,slow=36						
SONM	Songino Array	26.66	49	P	P	05 37 14.8	+2.4
	comp=E,0.5nm,0.5s,baz=224,slow=10,SNR=3.3						
FINES	FINESS Array B	42.38	327	P	P	05 39 26.4	-1.0
	comp=E,0.8nm,0.5s,baz=142,slow=9.5,SNR=5.4						
NB2	NORSAR Subarra	49.37	324	P	P	05 40 26.9	+4.3
	comp=Z,1.3nm,0.8s,baz=92,slow=7.9						
NOA	NORSAR Array B	49.37	324	P	P	05 40 21.4	-1.1
	comp=Z,0.6nm,0.8s,baz=96,slow=7.6,SNR=2.4						
TORD	Torodi Ar. Bea	70.17	273	P	P	05 42 42.3	-4.0
	comp=Z,0.6nm,0.7s,baz=18,slow=6.2						
WRA	Warramunga Arr	76.68	125	P	P	05 43 24.2	-0.3
	comp=Z,1.1nm,0.8s,baz=326,slow=5.8,SNR=15						
ASAR	Alice Springs	78.95	128	P	P	05 43 36.9	-0.2
	comp=Z,0.6nm,0.6s,baz=318,slow=5.0,SNR=5.1						

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*IDC **26** 05:33:29.4±0.4, 17°.38S×66°.50E, h0^{km}, mb4.6/39, mb1 4.6/40, mb1mx4.6/60, mbtmp4.6/40, ML5.2/1, MS5.7/50, Ms1 5.7/50, ms1mx5.6/64, Error ellipse: s-maj=12.3km s-min=11.5km az=147.0*

*BJI **26** 05:33:30.8, 17°.60S×66°.40E, h6^{km}, mb5.4/22, mB5.6/59, Ms5.9/77, Ms7 5.7/70*

*ISCJB **26** 05:33:31.3±0.2, 17°.54S±0°.04×66°.45E±0°.03, h15^{km}, mb5.2/194, MS6.0/211, Error ellipse: s-maj=5.7km s-min=4.4km az=176.6*

*NEIC **26** 05:33:31.0±0.0, 17°.89S×66°.05E, h30^{km}, Moment Tensor Solution. s47 Moment tensor: Scale 10^{19}Nm; M_{rr}-0.10; $M_{\theta\theta}$-1.01; $M_{\phi\phi}$1.11; $M_{r\theta}$-0.40; $M_{\theta\phi}$0.54; $M_{\phi r}$-0.01; Best double couple: $M_0$1.30000×10^{19} NP1:ϕ_s57.00000°, δ80.00000°, λ-16.00000°. NP2:ϕ_s150.00000°, δ74.00000°, λ-170.00000°. Principal axes: T 1.2500, Plg4.0000°, Azm104.0000°; N 0.0200, Plg71.0000°, Azm207.0000°; P -1.2700, Plg18.0000°, Azm12.0000°;*

*MOS **26** 05:33:32.7±1.8, 17°.21S×66°.91E, h15^{km}, mb5.3/54, MS5.6/31 Error ellipse: s-maj=10.0km s-min=4.9km az=102.6*

*GCMT **26** 05:33:33.0±0.0, 17°.47S×65°.88E, h25^{km}, MW6.6/140, Moment Tensor Solution. s140,c334; s138,c599; Duration: 5^{s}.0 Moment tensor: Scale 10^{19}Nm; M_{rr}-0.09±.00; $M_{\theta\theta}$-0.90±.00; $M_{\phi\phi}$0.99±.00; $M_{r\theta}$-0.15±.01; $M_{\theta\phi}$0.45±.00; $M_{\phi r}$0.02±.01; Best double couple: $M_0$1.06200×10^{19} NP1:ϕ_s57.00000°, δ84.00000°, λ-7.00000°. NP2:ϕ_s148.00000°, δ83.00000°, λ-174.00000°. Principal axes: T 1.0970, Plg1.0000°, Azm103.0000°; N -0.0710, Plg81.0000°, Azm198.0000°; P -1.0260, Plg9.0000°, Azm12.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=125s.*

*NEIC **26** 05:33:33.0±0.3, 17°.59S×66°.39E, h20^{km}, mb5.8/61, ME6.9, MS6.3/123, MW6.6, MW6.7, MW6.7 Error ellipse: s-maj=8.5km s-min=6.0km az=166.0 Best double couple: NP1:ϕ_s152.00000°, δ88.00000°, λ178.00000°. NP2: ϕ_s242.00000°, δ88.00000°, λ2.00000°. Principal axes: T 1.0700, Plg2.0000°, Azm107.0000°; N -0.0300, Plg88.0000°, Azm286.0000°; P -1.0400, Plg0.0000°, Azm17.0000°; Broadband fault plane solution: P waves. NP1:ϕ_s242.00000°, δ88.00000°, λ2.00000°. NP2: ϕ_s152.00000°, δ88.00000°, λ178.00000°. Principal axes: T Plg3.0000°, Azm107.0000°; N Plg0.0000°, Azm0.0000°; P Plg0.0000°, Azm17.0000°; Complex earthquake observed on broadband displacement seismograms, with at least one event occurring about 4 seconds after the onset. Energy computed from BB mechanism.*

*NEIC **26** 05:33:58.0±0.0, 17°.60S×65°.77E, h33^{km}, Moment Tensor Solution. s13 Moment tensor: Scale 10^{19}Nm; M_{rr}-0.20; $M_{\theta\theta}$-0.95; $M_{\phi\phi}$1.16; $M_{r\theta}$-0.05; $M_{\theta\phi}$0.57; $M_{\phi r}$0.10; Best double couple: $M_0$1.20000×10^{19} NP1:ϕ_s149.00000°, δ89.00000°, λ-174.00000°. NP2:ϕ_s59.00000°, δ84.00000°, λ-1.00000°. Principal axes: T 1.3100, Plg3.0000°, Azm284.0000°; N -0.2000, Plg84.0000°, Azm160.0000°; P -1.1100, Plg5.0000°, Azm14.0000°;*

ISC 26 05:33:33.9±0.5, 17°.55S±0°.04×66°.29E±0°.04, h16^{km}±2^{km}, h16^{km}:pP-P, n1039, σ2^{s}.51/937, mb5.4/205, MS5.9/220, 51C-33D, Mauritius-Reunion region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MRIV	Mauritius Mete	8.76	250	*e*Pn	Pn	05 35 37.4	-2.6
MRIV				*e*Sn	Sn	05 37 12.4	-6.1
RER	Riviere de l'E	10.58	248	*e*Pn	Pn	05 36 02.2	-2.8
H08S1	Diego Carcia H	11.54	32	T	T	05 48 25.5	
	baz=210,slow=76,SNR=644						
H08S2	Diego Garcia H	11.55	32	T	T	05 48 17.4	
	baz=210,slow=76,SNR=1325						
H08S3	Diego Garcia H	11.56	32	T	T	05 48 15.8	
	baz=210,slow=76						
DGAR	Diego Garcia	11.73	32	*e*Pn	Pn	05 36 18.6	-2.0
DGAR	Diego Garcia	11.73	32	*e*P	Pn	05 36 17.2	-3.5
H08N3	Diego Garcia H	12.05	23	T	T	05 48 59.1	
	baz=204,slow=76						
H08N1	Diego Carcia H	12.06	23	T	T	05 49 27.4	
	baz=204,slow=76						
H08N2	Diego Garcia H	12.07	23	T	T	05 49 28.0	
	baz=204,slow=76						
MSEY	Mahe Island	16.61	319	*e*Pn	Pn	05 37 26.9	+0.7
	2μm,1.9s						
MSEY				*e*Sn	Sn	05 40 12.9	-18
MSEY	Mahe Island	16.61	319	*i* P	P	05 37 28.9	+0.2
	SNR=8.6						
MSEY	Mahe Island	16.61	319	*e*P	Pn	05 37 26.9	+0.7
MSEY				pmax	pmax		
	comp=Z,2μm,1.9s						
ABPO	Ambohimpanom	18.16	262	*e*P	Pn	05 37 44.0	-1.7
	comp=Z,1μm,1.7s						
ABPO				*e*S	S	05 41 12.1	-1.6
ABPO	Ambohimpanom	18.16	262	*e*P	Pn	05 37 44.0	-1.7
ABPO				*e*S	S	05 41 12.1	-1.6
ABPO				pmax	pmax		
	comp=Z,1μm,1.7s						
OPO	Ambohidratompo	18.19	264	P	P	05 37 46.6	+0.3
	comp=Z,7.3nm,0.3s,baz=90,slow=9.9,SNR=43						
OPO				S	Sn	05 41 02.7	-6.4
	comp=Z,4.1nm,0.3s,baz=342,slow=20,SNR=2.9						
OPO				T	T	05 54 18.9	
	comp=Z,2.8nm,0.3s,baz=133,slow=18,SNR=2.8						
MNCI	Minicoy	26.52	15	*e*P	P	05 39 13.5	+2.6
	comp=Z,994nm,1.7s						
COCO	West Island	29.98	84	PFAKE		05 39 50.0	+8.2
COCO				LR	LR		
	comp=Z,12μm,22.0s						
KMBO	Kilima Mbogo	32.88	297	LR	LR	05 51 00.3	
	comp=Z,80μm,21.0s,baz=117,slow=32						
GSI	Gunungsitoli	36.07	62	P	P	05 40 39.3	+4.3
	comp=Z,101nm,1.3s						
GSI	Gunungsitoli	36.07	62	*e*P	P	05 40 39.7	+4.6
	comp=Z,272nm,1.4s						
DILA	Dilla	36.51	308	*i* P	P	05 40 36.8	-2.2
DILA				*i* S	S	05 46 07.6	-13
LSZ	Lusaka	36.58	268	*e*P	P	05 40 39.2	-0.4
	comp=Z,212nm,1.5s						
LSZ				*e*S	S	05 46 03.8	-18
LSZ				LR	LR		
	comp=Z,60μm,21.0s						
LSZ	Lusaka	36.58	268	P	P	05 40 41.3	+1.7
	SNR=40						
LSZ	Lusaka	36.58	268	*e*P	P	05 40 39.2	-0.4
LSZ				pmax	pmax		
	comp=Z,212nm,1.5s						
LSZ				MLR	MLR		
	comp=Z,60μm,21.0s						
POO	Poona	36.62	12	*e*P	P	05 40 38.7	-0.9
BOM	Bombay	36.78	10	*e*P	P	05 40 40.2	-0.8
BOM				*e*x	x	05 46 11.5	
HYB	Hyderabad	36.78	20	*i* P	P	05 40 39.0	-2.1
HYB				*e*S	S	05 46 23.0	-1.7
HYB	Hyderabad	36.78	20	*e*P	P	05 40 41.5	+0.4
TPTI		36.83	59	P	P	05 40 46.2	+4.7
	comp=Z,47nm,1.4s,comp=Z,2μm						
LODK	Lodwar	36.95	301	*e*Pg	P	05 40 49.5	+6.8
LODK				*i* Sg	S	05 46 35.2	+7.8
LODK	Lodwar	36.95	301	*i* Pg	P	05 40 43.5	+0.8
LODK				*i* Sg	S	05 46 35.3	+7.8
ATD	Arta Tunnel	37.03	320	P	P	05 40 44.1	+0.9
	comp=Z,6.5nm,0.6s,baz=336,slow=19,SNR=2.0						
ATD				LR	LR	05 53 07.4	
	comp=Z,20μm,21.3s,baz=132,slow=32						
KCSI	Kotacane, Aceh	37.46	59	P	P	05 40 54.4	+7.5
	comp=Z,59nm,1.0s,comp=Z,2μm						
MNSI	Mandailing Nat	37.51	64	P	P	05 40 49.9	+2.6
	comp=Z,60nm,0.9s,comp=Z,3μm						
ANKE	Ethiopia-Afar	37.63	314	*i* P	P	05 40 40.7	-8.0
ANKE				*e*S	S	05 46 45.5	+7.2
ANKE	Ethiopia-Afar	37.63	314	*i* P	P	05 40 54.7	+6.0
ANKE	Ethiopia-Afar	37.63	314	*i* P	P	05 40 40.7	-8.0
ANKE				*e*S	S	05 46 45.5	+7.2
AAE	Adis Abeba	37.91	312	*e*P	P	05 40 52.7	+1.7
AAE				*e*S	S	05 46 33.5	-9.0
AAE	Adis Abeba	37.91	312	*e*P	P	05 40 52.7	+1.7
AAE				*e*S	S	05 46 33.5	-9.0
AAE	Adis Abeba	37.91	312	*e*P	P	05 40 52.7	+1.7
AAE				*e*S	S	05 46 33.5	-9.0
AAE	Adis Abeba	37.91	312	*e*P	P	05 40 52.7	+1.7
AAE				*e*S	S	05 46 33.5	-9.0
PSI	Prapat	38.01	61	P	P	05 40 52.2	+0.6
	comp=Z,5.7nm,0.7s,baz=178,slow=1.7,SNR=4.3						
PSI				LR	LR	05 53 27.4	
	comp=Z,9μm,20.7s,baz=269,slow=32						
PSI	Prapat	38.01	61	*e*P	P	05 40 54.9	+3.3
	comp=Z,101nm,1.4s						
LBTB	Lobatse	38.53	252	P	P	05 40 54.4	-1.5
	comp=Z,27nm,0.9s,baz=91,slow=8.6,SNR=18						
LBTB	Lobatse	38.53	252	*e*P	P	05 40 55.3	-0.7
	comp=Z,107nm,0.8s						
LBTB	Lobatse	38.53	252	*e*P	P	05 40 55.3	-0.7
LBTB				pmax	pmax		
	comp=Z,107nm,0.8s						
DESE	Dese	38.79	315	*i* P	P	05 41 04.7	+6.2
DESE				*e*S	S	05 46 55.8	0.0
DESE	Dese	38.79	315	*i* P	P	05 41 04.7	+6.2
DESE				*e*S	S	05 46 55.8	0.0
DESE	Dese	38.79	315	*i* P	P	05 41 04.7	+6.2
DESE				*e*S	S	05 46 55.8	0.0
MBAR	Mbarara	38.81	292	*i* P	P	05 41 00.0	+1.5
MBAR				*e*P	P	05 41 01.5	+3.0
MBAR				*e*S	S	05 47 03.2	+7.3
BOSA	Boshof	39.15	246	P	P	05 41 01.2	+0.1
	comp=Z,12nm,0.8s,baz=86,slow=8.3,SNR=11						
BOSA				LR	LR	05 54 10.9	
	comp=Z,53μm,20.5s,baz=82,slow=32						
BOSA	Boshof	39.15	246	*e*P	P	05 41 01.3	+0.1
	comp=Z,219nm,1.5s						
MDSI	Maura Dua	39.29	75	P	P	05 41 05.2	+2.9
	comp=Z,33nm,1.0s,comp=Z,2μm						
NGP	Nagpur	40.44	19	*e*P	P	05 41 08.9	-2.8
NGP				*e*x	x	05 47 24.4	
IPM	Ipoh	40.68	61	*e*P	P	05 41 14.6	+0.7
	comp=Z,121nm,1.2s						
BHJ	Bhuj	40.69	5	*e*P	P	05 41 12.2	-1.5
KULM	Kulim	40.82	59	*e*P	P	05 41 15.2	+0.2
	comp=Z,208nm,1.4s						
DBJI	Dramaga	40.96	80	P	P	05 41 15.6	-0.6
SMDO	Samad	41.16	348	P	P	05 41 25.0	+7.3
	SNR=8.6						
WSAR	Wadi Sarin	41.23	349	P	P	05 41 15.4	-2.8
	comp=Z,9.2nm,1.1s,baz=135,slow=8.6,SNR=2.6						
WSAR				LR	LR	05 55 49.3	
	comp=Z,5μm,18.7s,baz=191,slow=33						
TRTT	Trang	41.54	55	P	P	05 41 25.7	+4.8
	comp=Z,17nm,1.0s,comp=Z,871nm						
BIDO	Bidbid	41.59	349	P	P	05 41 31.1	+10
	SNR=11						
LEM	Lembang	41.69	80	LR	LR	05 55 20.2	
	comp=Z,16μm,21.9s,baz=236,slow=32						
SKLT	Songkhla	41.88	57	P	P	05 41 29.2	+5.5
	comp=Z,47nm,1.0s						
BHPL	Bhopal	41.98	15	*e*P	P	05 41 25.1	+0.8
ASHO	Ashiyiah	43.15	346	P	P	05 41 35.0	+1.2
	SNR=16						
ASHO	Ashiyiah	43.15	346	*i* P	P	05 41 32.7	-1.2
	SNR=9.6						
ASUD	Al Ashush, Dub	43.26	345	P	P	05 41 33.5	-1.2
HATD	Hatta, Dubai	43.27	346	P	P	05 41 39.9	+5.1
	SNR=6.7						
HATD	Hatta, Dubai	43.27	346	*i* P	P	05 41 34.3	-0.5
	SNR=11						
UOSS	Minazif	43.37	347	*e*P	P	05 41 36.3	+0.7
	comp=Z,115nm,1.5s						
SUR	Sutherland	43.47	241	P	P	05 41 37.8	+1.1
	comp=Z,13nm,0.9s,baz=106,slow=8.2,SNR=7.9						
SUR	Sutherland	43.47	241	*e*P	P	05 41 35.6	-1.1
	comp=Z,338nm,1.8s						
SUR				LR	LR		
	comp=Z,92μm,21.0s						
NAZ	Nazwa, Dubai	43.53	346	*i* P	P	05 41 35.4	-1.6
	SNR=5.7						
MDH	Madha	43.69	347	P	P	05 41 36.9	-1.2
MSFE	Esma-Masafi	43.78	347	*i* P	P	05 41 37.4	-1.6
	SNR=6.2						
SMRI	Semarang	44.28	82	*e*P	P	05 41 45.2	+2.0
	comp=Z,280nm,1.2s						
BANOM	Banah	44.29	347	P	P	05 41 42.3	-0.7
NGJI	Ngawi	45.15	83	P	P	05 41 58.0	+7.9
PWJI	Pagerwojo	45.28	84	P	P	05 41 56.4	+5.2
	comp=Z,80nm,1.1s						
BOK	Bokaro	45.33	26	*e*P	P	05 41 50.9	-0.5
BOK				IAmb	IAmb	05 41 56.1	
	comp=Z,83nm,1.0s						
RAYN	Ar Rayn	45.59	333	*e*P	P	05 41 52.2	-1.2
	comp=Z,37nm,1.0s						
RAYN				LR	LR		
	comp=Z,11μm,19.0s						
RAYN	Ar Rayn	45.59	333	*i* P	P	05 41 53.6	+0.2
	SNR=7.2						
RAYN	Ar Rayn	45.59	333	*e*P	P	05 41 52.3	-1.2
RAYN				pmax	pmax		
	comp=Z,37nm,1.0s						
RAYN				MLR	MLR		
	comp=Z,11μm,19.0s						
H01W3	Cape Leeuwin H	45.81	122	T	T	06 30 49.0	
	baz=279,slow=75,SNR=8785						
H01W2	Cape Leeuwin H	45.81	122	T	T	06 30 46.7	
	baz=279,slow=75						
H01W1	Cape Leeuwin H	45.83	122	T	T	06 31 06.7	
	baz=279,slow=75						
TSUM	Tsumeb	46.13	260	P	P	05 41 57.8	-0.3
	comp=Z,7.7nm,0.9s,baz=102,slow=10.0,SNR=8.7						
TSUM				LR	LR	05 59 35.5	
	comp=Z,47μm,20.0s,baz=84,slow=34						
TSUM	Tsumeb	46.13	260	*e*P	P	05 41 57.7	-0.3
	comp=Z,86nm,1.4s						
GRJI	Gresik	46.25	83	P	P	05 42 03.2	+4.4
	comp=Z,93nm,0.8s						
BRDH	Bariadhala	47.05	33	LR	LR	06 03 24.1	
	comp=Z,6μm,18.1s,baz=216,slow=38						
BLJI	Banyuglugur	47.06	84	P	P	05 42 08.2	+3.0
KSM	Kuching	47.30	71	*e*P	P	05 42 05.3	-1.7
	comp=Z,144nm,1.7s						
JAGI	Jajag, Banyuwa	47.39	85	P	P	05 42 13.4	+5.6
SAIH	SAIHA	47.60	34	*e*P	P	05 42 08.4	-0.9
SAIH				IAmb	IAmb	05 42 33.6	
	comp=Z,70nm,1.2s						
STKI	Sintang	47.77	73	P	P	05 42 09.8	-1.0
SUKH	Sukhothai	47.84	45	P	P	05 42 11.6	+0.5
	comp=Z,11nm,1.1s						
CM01	Chiang Mai Arr	48.06	44	*e*P	P	05 42 11.7	-1.1
CM31	Chiang Mai Arr	48.08	43	*e*P	P	05 42 11.9	-1.0
CMAR	Chiang Mai Arr	48.08	43	P	P	05 42 08.7	-4.3
	comp=Z,8.7nm,1.0s,baz=234,slow=8.4,SNR=18						
CMAR				LR	LR	05 59 29.0	
	comp=Z,7μm,21.9s,baz=230,slow=33						
NWAO	Narrogin (SRO)	48.11	119	PFAKE		05 42 20.0	+6.8
NWAO				LR	LR		
	comp=Z,14μm,21.0s						
PBKT	Sadao Pong	48.13	47	*e*P	P	05 42 13.5	+0.1
PBKT	Sadao Pong	48.13	47	P	P	05 42 14.6	+1.2
	comp=Z,22nm,1.1s,comp=Z,2μm						
PHIT	Phitsanulok	48.17	46	P	P	05 42 14.0	+0.3
	comp=Z,47nm,0.7s,comp=Z,828nm						
CHTO	Chiang Mai	48.33	43	*e*P	P	05 42 13.9	-1.1
	comp=Z,97nm,1.3s						
CHTO				LR	LR		
	comp=Z,6μm,21.0s						
CHTO	Chiang Mai	48.33	43	*e*P	P	05 42 13.9	-1.1
CHTO				pmax	pmax		
	comp=Z,97nm,1.3s						
CHTO				MLR	MLR		
	comp=Z,6μm,21.0s						
CHAI	Chaiyaphum	48.40	49	P	P	05 42 15.7	+0.2
	comp=Z,14nm,1.2s,comp=Z,309nm						
TURI	Tura	48.82	29	*e*P	P	05 42 16.4	-2.2
DDI	Dehra Dun	48.93	14	*e*P	P	05 42 17.2	-2.2
DHUB	DHUBRI	49.06	29	*e*P	P	05 42 19.2	-1.2
DHUB				IAmb	IAmb	05 42 39.9	
	comp=Z,33nm,0.5s						
SILR	SILCHAR	49.38	32	*e*P	P	05 42 21.2	-1.6
SBUM	Sibu	49.44	71	*e*P	P	05 42 21.0	-2.6
	comp=Z,43nm,1.1s						
SMLA	Simla	49.52	12	*e*P	P	05 42 22.5	-1.2
SHL	Shillong	49.57	31	*e*P	P	05 42 22.9	-1.7
	comp=Z,236nm,1.3s						
SHL	Shillong	49.57	31	*e*P	P	05 42 22.0	-2.5
SHL				*e*P	P	05 42 23.3	-1.3
SHL				IAmb	IAmb	05 42 31.5	
	comp=Z,41nm,0.3s						
SHL				*e*x	x	05 49 52.0	
SHL	Shillong	49.57	31	*e*P	P	05 42 22.9	-1.7
SHL				pmax	pmax		
	comp=Z,236nm,1.3s						
GTK	Tadong	49.58	26	*e*P	P	05 42 22.1	-2.4
GUWA	GUWAHATI	50.00	30	*e*P	P	05 42 26.1	-1.5
MBWA	Marble Bar	50.36	103	PFAKE		05 42 40.0	+9.5
MBWA				LR	LR		
	comp=Z,13μm,22.0s						
DHRM	DHARAMSHALA	50.44	11	*e*P	P	05 42 27.0	-4.1
DHRM				IAmb	IAmb	05 42 54.7	
	comp=Z,219nm,1.7s						
SKNT	Sakolnakorn	50.54	49	P	P	05 42 40.1	+8.3
UBPT	Khong Chiam	50.56	52	P	P	05 42 31.8	-0.2
	comp=Z,58nm,1.4s,comp=Z,3μm						
NONG	Nongkai	50.67	48	P	P	05 42 31.5	-1.2
	comp=Z,1.1nm,0.9s,comp=Z,63nm						
KOHI	KOHIMA	50.82	33	*e*P	P	05 42 35.8	+1.8
KOHI				IAmb	IAmb	05 42 43.1	
	comp=Z,50nm,1.1s						
TEZP	TEZPUR	50.90	31	*e*P	P	05 42 32.7	-1.6
NIL	Nilore	51.34	7	*e*P	P	05 42 36.4	-1.2
	comp=Z,440nm,1.4s						
NIL				*e*S	S	05 50 01.1	+4.7
NIL				LR	LR		
	comp=Z,9μm,21.0s						
NIL	Nilore	51.34	7	*e*P	P	05 42 36.4	-1.2
NIL				*e*S	S	05 50 01.1	+4.7
NIL				pmax	pmax		
	comp=Z,440nm,1.4s						
NIL				MLR	MLR		
	comp=Z,9μm,21.0s						
MOKO	MOKOCHONG	51.52	33	*e*P	P	05 42 36.7	-2.5
MOKO				IAmb	IAmb	05 43 08.6	
	comp=Z,248nm,1.1s						
JORH	JORHAT	51.73	32	*e*P	P	05 42 41.6	+1.0
JORH				IAmb	IAmb	05 43 09.2	
	comp=Z,2μm,2.3s						
ITAN	ITANAGAR	51.79	31	*e*P	P	05 42 39.6	-1.5
ITAN				IAmb	IAmb	05 42 49.3	
	comp=Z,1μm,3.0s						
KBL	Kabul	51.87	3	*e*P	P	05 42 39.5	-2.2
	comp=Z,497nm,1.8s						
KBL	Kabul	51.87	3	*e*P	P	05 42 39.6	-2.2
KBL				pmax	pmax		
	comp=Z,497nm,1.8s						
MIR	Mirnyy	52.00	167	*e*P	P	05 42 51.0	+8.9
MIR				*e*		05 42 54.0	
MIR				*e*S	S	05 50 20.0	+15
MIR				*e*		05 52 32.0	
MIR				pmax	pmax		
	comp=Z,42nm,1.0s						
ZIRO	ZIRO	52.17	31	*e*P	P	05 42 44.2	+0.1
LSA	Lhasa	52.74	27	P	P	05 42 48.8	+0.2
LSA	Lhasa	52.74	27	*e*P	P	05 42 47.2	-1.5
	comp=Z,594nm,1.9s						
LSA				LR	LR		
	comp=Z,14μm,22.0s						
LSA	Lhasa	52.74	27	*e*P	P	05 42 47.2	-1.5
LSA				pmax	pmax		
	comp=Z,594nm,1.9s						
LSA				MLR	MLR		
	comp=Z,14μm,22.0s						
LKP	Lekhapani	53.03	33	*e*P	P	05 42 47.6	-2.6
LKP				IAmb	IAmb	05 43 01.2	
	comp=Z,2μm,3.2s						
KAPI	Kappang	53.71	83	PFAKE		05 43 10.0	+14
KAPI				LR	LR		
	comp=Z,9μm,22.0s						
SYO	Syowa Base	54.08	192	⇑*i*pP	P	05 42 59.0	+1.6
SYO	Syowa Base	54.08	192	⇑*i*sP	P	05 43 00.4	+3.0
KKM	Kota Kinabalu	54.59	69	*e*P	P	05 43 00.6	-1.5
	comp=Z,113nm,1.4s						
MMRI	Maumere	55.04	88	*e*P	P	05 43 02.0	-3.3
	comp=Z,323nm,1.1s						
KMI	Kunming	55.31	41	P	P	05 43 09.3	+2.1
KMI				pP	pP	05 43 12.0	-0.4
KMI				sP	sP	05 43 13.5	-0.9
KMI				S	S	05 50 52.8	+1.8
KMI				sS	pS	05 50 57.5	+0.2
KMI				SS	SS	05 54 36.8	+0.9
KMI				pmax	pmax		
	comp=Z,290nm,6.0s						
KMI				LR	LR		
	comp=Z,3μm,25.2s						
KMI				LR	LR		
	comp=Z,7μm,23.8s						
KMI				LR	LR		
	comp=Z,10μm,29.6s						
GEYT	Alibeck	55.72	352	LR	LR	06 05 11.2	
	comp=Z,4μm,19.3s,baz=220,slow=34						
BATI	Baumata	56.01	91	P	P	05 43 10.2	-2.0
	comp=Z,26nm,0.5s,baz=123,slow=8.0,SNR=3.5						
BATI				LR	LR	06 02 31.6	
	comp=Z,5μm,21.5s,baz=252,slow=31						
QIZ	Qiongzhong	56.15	52	P	P	05 43 24.5	+11
QIZ				S	S	05 51 14.5	+13
QIZ				pmax	pmax		
	comp=Z,660nm,3.3s						
QIZ				LR	LR		
	comp=N,11μm,27.9s						
QIZ				LR	LR		
	comp=E,5μm,18.6s						
QIZ				LR	LR		
	comp=Z,4μm,21.6s						
QIZ	Qiongzhong	56.15	52	PFAKE		05 43 20.0	+6.9
QIZ				LR	LR		
	comp=Z,5μm,20.0s						
MYLDM	Lahad Datu	56.26	71	*e*P	P	05 43 09.4	-4.6
	comp=Z,246nm,1.5s						
CASY	Casey	56.59	160	*e*P	P	05 43 17.9	+2.4
	comp=Z,96nm,1.4s						
CASY				LR	LR		
	comp=Z,1μm,20.0s						
SOEI	Soe	56.69	90	*e*P	P	05 43 14.2	-3.1
	comp=Z,989nm,1.9s						
ASF	Jabal al Asfar	56.90	330	P	P	05 43 17.2	-1.1
	comp=Z,0.8nm,0.4s,baz=90,slow=2.0,SNR=1.6						
ASF				LR	LR	06 04 34.4	
	comp=Z,7μm,20.9s,baz=102,slow=33						
KSH	Kashi	57.48	9	P	P	05 43 16.0	-6.3
KSH				sP	pP	05 43 23.5	-4.0
KSH				*e*PcP	PcP	05 44 10.5	-5.3
KSH				PP	PP	05 45 25.0	-5.2
KSH				S	S	05 51 05.3	-14
KSH				ScS	ScS	05 52 48.5	-23
KSH	Kashi	57.48	9	SS	SS	05 54 46.0	-24
KSH				pmax	pmax		
	comp=Z,150nm,1.3s						
KSH				pmax	pmax		
	comp=Z,420nm,4.5s						
KSH				LR	LR		
	comp=N,22μm,23.4s						
KSH				LR	LR		
	comp=E,4μm,18.1s						
KSH				LR	LR		
	comp=Z,76μm,25.7s						
SFK	Sufi-Kurgan	57.66	7	P	P	05 43 23.6	-0.1
SFK				pmax	pmax		
	comp=Z,27nm,1.9s						
MMAI	Mount Meron Ar	58.31	330	P	P	05 43 30.1	+1.9
	comp=Z,1.4nm,0.4s,baz=115,slow=16,SNR=3.3						
MMAI				LR	LR	06 06 06.1	
	comp=Z,7μm,21.3s,baz=165,slow=34						
GYA	Guiyang	58.75	43	⇑*i*P	P	05 43 32.8	+1.3
GYA				PcP	PcP	05 44 22.0	+0.8
GYA				PP	PP	05 45 45.5	+3.8
GYA				ScP	ScP	05 48 21.3	+0.1
GYA				S	S	05 51 38.5	+2.3
GYA				SS	SS	05 55 33.0	+3.1
GYA				pmax	pmax		
	comp=Z,50nm,1.0s						
GYA				pmax	pmax		
	comp=Z,510nm,7.7s						
GYA				LR	LR		
	comp=Z,5μm,23.3s						
GYA				LR	LR		
	comp=Z,5μm,21.6s						
GYA				LR	LR		
	comp=Z,6μm,24.3s						
IUG	Iuzhnay	59.50	3	*e*P	P	05 43 34.9	-1.4
	comp=Z,3.9nm,0.8s						
NAX	Nakhchivan	59.69	341	P	P	05 43 41.6	+4.0
CD2	Chengdu	60.16	37	⇓P	P	05 43 40.3	-0.7
CD2				pP	pP	05 43 43.5	-2.7
CD2				PP	PP	05 45 53.3	-0.7
CD2				S	S	05 51 55.8	+1.7
CD2				sS	pS	05 52 01.3	+0.9
CD2				SS	SS	05 55 54.8	+3.1
CD2				pmax	pmax		
	comp=Z,30nm,0.6s						
CD2				pmax	pmax		
	comp=Z,1μm,7.2s						
CD2				LR	LR		
	comp=Z,10μm,31.3s						
CD2				LR	LR		
	comp=Z,13μm,27.3s						
CD2				LR	LR		
	comp=Z,6μm,24.3s						
AAK	Ala-Archa	60.36	7	*e*P	P	05 43 41.0	-1.4
	comp=Z,53nm,1.1s						
AAK				LR	LR		
	comp=Z,6μm,21.0s						
AAK	Ala-Archa	60.36	7	P	P	05 43 40.9	-1.4
	SNR=21						
AAK	Ala-Archa	60.36	7	*i* P	P	05 43 40.9	-1.4
	SNR=6.3						
AAK	Ala-Archa	60.36	7	*ce*P	P	05 43 41.2	-1.1
AAK				pmax	pmax		
	comp=Z,32nm,1.3s						
KK31	Karatay Array	60.48	4	*e*P	P	05 43 41.8	-1.1
KK31	Karatay Array	60.48	4	*e*P	P	05 43 41.8	-1.1
KKAR	Karatay Array	60.48	4	*e*P	P	05 43 42.0	-0.8
KKAR	Karatay Array	60.48	4	*e*P	P	05 43 42.1	-0.8
FRU	Bishkek	60.57	7	*e*P	P	05 43 40.5	-3.0
FRU				*e*		05 52 25.0	
FRU				pmax	pmax		
	comp=Z,130nm,1.8s						
MCO	Taipa Grande	60.79	51	P	PcP	05 44 26.0	-3.2
GANJ	Ganja	60.80	343	P	P	05 43 49.8	+4.6
GNI	Garni	60.81	341	P	P	05 43 44.2	-1.3
	comp=Z,7.3nm,0.5s,baz=12,slow=9.3,SNR=4.2						
GNI	Garni	60.81	341	*e*P	P	05 43 46.1	+0.7
	comp=Z,819nm,1.6s						
GNI				LR	LR		
	comp=Z,6μm,20.0s						
GNI	Garni	60.81	341	P	P	05 43 51.6	+6.1
	SNR=39						
GNI	Garni	60.81	341	*i* P	P	05 43 44.1	-1.3
	SNR=27						
GNI	Garni	60.81	341	*ce*P	P	05 43 44.3	-1.1
GNI				pmax	pmax		
	comp=Z,20nm,0.7s						
GZH	Guangzhou	61.20	50	*e*P	P	05 43 53.3	+5.1
GZH				ScP	ScP	05 48 34.5	+2.5
GZH				S	S	05 52 14.3	+6.7
GZH				LR	LR		
	comp=Z,4μm,21.0s						
GZH				LR	LR		
	comp=Z,5μm,21.5s						
MDOK	Medeo	61.22	9	*e*P	P	05 43 46.7	-1.4
	comp=Z,72nm,1.1s						
MDOK				*e*S	S	05 52 06.3	-1.0
MDOK				LR	LR	06 04 56.2	
	comp=Z,5μm,18.8s						
SATY	Saty	61.33	10	*e*P	P	05 43 47.6	-1.3
	comp=Z,18nm,1.0s						
SATY				*e*S	S	05 52 07.6	-1.2
SATY				LR	LR	06 06 48.5	
	comp=Z,2μm,15.9s						
UZB	Uzynbulak	61.52	11	*e*P	P	05 43 49.0	-1.1
	comp=Z,2.0nm,1.1s						
UZB				LR	LR	06 06 46.2	
	comp=Z,1μm,15.6s						
SHLS	Shalkode	61.61	11	*e*P	P	05 43 50.0	-0.7
	comp=Z,6.0nm,1.1s						
SHLS				LR	LR	06 06 40.8	
	comp=Z,576nm,14.7s						

KPKS	Kokpek	61.77	10	eP	P	05 43 49.5	-2.3
	comp=Z,2.3nm,0.8s						
KPKS				eS	S	05 52 12.0	-2.3
KPKS				LR	LR	06 06 43.9	
	comp=Z,2μm,16.6s						
KUU	Kurty	61.83	8	eP	P	05 43 50.3	-1.8
	comp=Z,9.8nm,1.1s						
NVL	N'lazarevskaya	62.19	198⇓	iP	P	05 44 01.6	+7.5
NVL				e		05 44 33.7	
NVL				iS	S	05 52 25.3	+6.5
NVL				pmax	pmax		
	comp=Z,98nm,1.2s						
AKH	Akhalkalaki	62.35	341	eP	P	05 43 55.0	-0.8
	comp=Z,409nm,1.8s						
AKH	Akhalkalaki	62.35	341	eP	P	05 43 55.0	-0.8
AKH				pmax	pmax		
	comp=Z,409nm,1.8s						
TGY	Tagaytay City	62.42	63	LR	LR	06 06 28.5	
	comp=Z,4μm,21.9s,baz=244,slow=32						
MTN	Manton Dam	62.50	96	eP	P	05 43 56.0	-1.1
	comp=Z,170nm,1.8s						
MAK	Makhachkala	62.64	345	eP	P	05 43 57.9	+0.4
MAK				e		05 46 18.3	
MAK				eS	S	05 52 26.9	+1.9
MAK				pmax	pmax		
	comp=Z,151nm,1.2s						
BTLS	Baital	62.69	6	eP	P	05 43 56.0	-1.7
	comp=Z,3.7nm,0.9s						
ASAR	Alice Springs	63.08	108	P	P	05 43 57.8	-3.2
	comp=Z,15nm,0.8s,baz=272,slow=6.0,SNR=53						
ASAR				LR	LR	06 07 37.2	
	comp=Z,39μm,21.9s,baz=270,slow=32						
AS31	Alice Springs	63.08	108	eP	P	05 43 57.9	-3.1
	comp=Z,7.9nm,0.8s						
AS01	Alice Springs	63.12	108	eP	P	05 43 56.7	-4.6
ENH	Enshi	63.17	42	eP	P	05 43 59.7	-1.6
	comp=Z,108nm,1.0s						
ENH				LR	LR		
	comp=Z,7μm,21.0s						
GROC	Groznyy	63.32	343	eP	P	05 43 57.5	-4.5
GROC				e		05 44 35.1	
GROC				eS	S	05 52 27.5	-6.0
GROC				pmax	pmax		
	comp=Z,197nm,1.4s						
DAV	Davao City (W)	63.45	73	LR	LR	06 09 41.3	
	comp=Z,4μm,21.9s,baz=238,slow=34						
DAV	Davao City (W)	63.45	73⇑	eP	P	05 44 05.1	+1.6
DAV	Davao City (W)	63.45	73	PFAKE		05 44 10.0	+6.5
DAV				LR	LR		
	comp=Z,39μm,22.0s						
ZEI	Tsey	63.48	342	eP	P	05 44 02.0	-1.3
ZEI				pmax	pmax		
	comp=Z,47nm,1.3s						
WRA	Warramunga Arr	64.08	104	P	P	05 44 04.8	-2.8
	comp=Z,31nm,1.0s,baz=266,slow=5.8,SNR=50						
WRA				LR	LR	06 08 15.7	
	comp=Z,10μm,22.0s,baz=265,slow=33						
WRA				PKP2ab		06 13 15.0	
	comp=Z,1.3nm,1.1s,baz=70,slow=4.0,SNR=3.2						
WB2	Warramunga Arr	64.09	104	eP	P	05 44 04.9	-2.8
	comp=Z,148nm,1.2s						
WRAB	Tennant Creek	64.09	104	eP	P	05 44 04.6	-3.1
	comp=Z,98nm,1.0s						
WRAB				LR	LR		
	comp=Z,11μm,22.0s						
WRAB	Tennant Creek	64.09	104c	eP	P	05 44 05.4	-2.3
WRAB				pmax	pmax		
	comp=Z,43nm,1.0s						
LZH	Lanzhou	64.09	33	eP	P	05 44 07.3	-0.2
LZH				pP	pP	05 44 10.8	-1.9
LZH				eS	S	05 52 43.3	-0.5
LZH				sS	pS	05 52 51.5	+1.2
LZH				SS	SS	05 56 53.8	+0.4
LZH				pmax	pmax		
	comp=Z,98nm,1.5s						
LZH				pmax	pmax		
	comp=Z,2μm,8.7s						
LZH				LR	LR		
	comp=Z,6μm,17.0s						
LZH				LR	LR		
	comp=Z,10μm,17.4s						
LZH				LR	LR		
	comp=Z,11μm,18.5s						
WMQ	Urumqi	64.14	17	P	P	05 44 05.3	-2.2
WMQ				sP	sP	05 44 17.8	+3.1
WMQ				PP	PP	05 46 36.3	+7.4
WMQ				S	S	05 52 46.8	+2.9
WMQ				pmax	pmax		
	comp=Z,37nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,470nm,3.7s						
WMQ				LR	LR		
	comp=Z,20μm,18.7s						
WMQ				LR	LR		
	comp=Z,14μm,21.5s						
WMQ				LR	LR		
	comp=Z,23μm,25.3s						
NCK	Nalchik	64.22	342	iP	P	05 44 08.7	+0.8
NCK				pmax	pmax		
	comp=Z,4.0nm,0.5s						
NEY	Neytrino	64.26	341c	eP	P	05 44 10.6	+2.2
NEY				pmax	pmax		
	comp=Z,1.0nm,0.8s						
ISP	Isparta	64.53	329	iP	P	05 44 19.8	+10
ISP				pmax	pmax		
	comp=Z,12nm,0.8s						
PLP	Palo	64.60	68⇓	eP	P	05 44 10.0	-1.0
BR131	Keskin Array S	64.61	333	eP	P	05 44 09.2	-1.6
BRTR	Keskin Array B	64.61	333	P	P	05 44 08.5	-2.3
	comp=Z,1.6nm,0.7s,baz=134,slow=8.4,SNR=7.5						
BRTR				LR	LR	06 10 15.4	
	comp=Z,4μm,20.2s,baz=140,slow=34						
BRTR	Keskin Array B	64.61	333c	eP	P	05 44 13.1	+2.3
KBZ	Khabaz	64.64	341	P	P	05 44 10.5	-0.1
	comp=Z,3.4nm,0.7s,baz=178,slow=9.4,SNR=8.1						
KBZ				LR	LR	06 11 33.7	
	comp=Z,6μm,21.0s,baz=160,slow=35						
KVAR	Kislovodsk Arr	64.91	341	P	P	05 44 13.2	+0.7
	comp=Z,6.0nm,0.5s,baz=113,slow=7.9,SNR=3.1						
KVAR				LR	LR	06 11 40.4	
	comp=Z,5μm,20.4s,slow=35						
KIV	Kislovodsk	64.91	341	eP	P	05 44 14.9	+2.3
	comp=Z,51nm,1.2s						
KIV				LR	LR		
	comp=Z,6μm,20.0s						
KIV	Kislovodsk	64.91	341⇑	eP	P	05 44 14.8	+2.3
KIV				e		05 44 46.6	
KIV				e		05 46 38.1	
KIV				iS	S	05 53 09.3	+16
KIV				pmax	pmax		
	comp=Z,16nm,1.1s						
ANTO	Ankara	65.11	332	PFAKE		05 44 30.0	+16
ANTO				LR	LR		
	comp=Z,9μm,21.0s						
XAN	Xi'an	65.43	38	P	P	05 44 14.5	-1.6
XAN				S	S	05 53 01.0	+0.9
XAN				pmax	pmax		
	comp=Z,350nm,5.1s						
XAN				LR	LR		
	comp=Z,4μm,24.0s						
XAN				LR	LR		
	comp=Z,3μm,23.0s						
XAN				LR	LR		
	comp=Z,3μm,27.3s						
SOC	Sochi	65.53	339	eP	P	05 44 23.7	+7.2
SOC				eS	S	05 53 15.9	+15
SOC				pmax	pmax		
	comp=Z,60nm,1.2s						
SOC				MLR	MLR		
	comp=Z,2μm,16.0s						
MAKZ	Makanchi	65.60	12	eP	P	05 44 12.4	-4.5
	comp=Z,72nm,1.5s						
MAKZ	Makanchi	65.60	12	eP	P	05 44 12.4	-4.5
MAKZ				pmax	pmax		
	comp=Z,72nm,1.5s						
MK31	Makanchi Array	65.65	12	eP	P	05 44 15.7	-1.5
MK31	Makanchi Array	65.65	12	eP	P	05 44 15.7	-1.5
MKAR	Makanchi Array	65.65	12	P	P	05 44 12.3	-4.8
	comp=Z,5.7nm,1.0s,baz=201,slow=6.5,SNR=19						
MKAR				LR	LR	06 11 34.1	
	comp=Z,5μm,20.0s,baz=192,slow=35						
MKAR				PKP2ab		06 13 06.5	
	comp=Z,0.2nm,0.5s,baz=66,slow=4.9,SNR=2.9						
MKAR	Makanchi Array	65.65	12	eP	P	05 44 15.7	-1.5
	comp=Z,138nm,0.8s						
MKAR				P'P'ab	P'P'ab	06 13 06.5	+7.4
MKAR	Makanchi Array	65.65	12c	eP	P	05 44 15.5	-1.7
GOF	Gofitskoye	65.81	342	eP	P	05 44 24.5	+6.3
QZH	Quanzhou	66.18	52	P	P	05 44 26.5	+5.5
QZH				S	S	05 53 13.5	+4.1
QZH				LR	LR		
	comp=Z,10μm,25.4s						
QZH				LR	LR		
	comp=Z,6μm,27.0s						
QZH				LR	LR		
	comp=Z,3μm,20.4s						
WHN	Wuhan	66.51	44	P	P	05 44 16.8	-6.2
WHN				S	S	05 53 06.0	-7.3
WHN				LR	LR		
	comp=N,57μm,34.2s						
WHN				LR	LR		
	comp=E,11μm,23.3s						
WHN				LR	LR		
	comp=Z,20μm,28.2s						
APE	Apeiranthos	66.54	325⇑	iP	P	05 44 26.8	+3.6
APE	Apeiranthos	66.54	325	iP	P	05 44 26.0	+2.8
APE				pmax	pmax		
	comp=Z,39nm,2.1s						
AB31	Akbulak array	66.75	355	iP	P	05 44 19.7	-4.4
AB31				pmax	pmax		
	comp=Z,70nm,1.0s						
ABKAR	Akbulak array	66.75	355	eP	P	05 44 20.2	-3.9
SNAA	Sanae	66.93	199	P	P	05 44 25.0	-0.2
SNAA	Sanae	66.93	199	P	P	05 44 24.5	-0.7
	comp=Z,2.5nm,0.9s,baz=98,slow=6.6,SNR=12						
SNAA				LR	LR	06 06 36.3	
	comp=Z,27μm,21.4s,baz=52,slow=30						
SNAA	Sanae	66.93	199	eP	P	05 44 25.1	-0.2
	comp=Z,222nm,1.9s						
SNAA	Sanae	66.93	199	iP	P	05 44 25.2	0.0
ANN	Anapa	67.39	338	eP	P	05 44 33.6	+5.3
ANN				eS	S	05 53 33.5	+10
ANN				pmax	pmax		
	comp=Z,142nm,1.9s						
YULB	Yu-li	67.40	55	eP	P	05 44 30.7	+1.9
	comp=Z,76nm,1.1s						
AKTO	Aktyubinsk	68.08	354	P	P	05 44 28.3	-4.3
	comp=Z,6.0nm,1.1s,baz=194,slow=6.5,SNR=6.6						
AKTO				LR	LR	06 13 48.3	
	comp=Z,3μm,20.1s,baz=176,slow=36						
AKTO	Aktyubinsk	68.08	354	P	P	05 44 30.2	-2.4
AKTO				pmax	pmax		
	comp=Z,79nm,1.4s						
TATO	Taipei	68.39	53	PFAKE		05 44 50.0	+15
TATO				LR	LR		
	comp=Z,4μm,22.0s						
VNA1	Neumayer--Stat	68.45	200	P	P	05 44 35.0	+0.3
SHEL	Horse Pasture	68.60	259	PFAKE		05 44 50.0	+13
SHEL				LR	LR		
	comp=Z,22μm,20.0s						
STKA	Stephens Creek	68.69	118	P	P	05 44 33.9	-3.1
	comp=Z,8.9nm,0.9s,baz=305,slow=7.5,SNR=5.5						
STKA	Stephens Creek	68.69	118	eP	P	05 44 38.1	+1.1
	comp=Z,31nm,1.5s						
KURBB	Kurchatov Arra	68.73	8	P	P	05 44 32.3	-4.3
	comp=Z,8.4nm,1.1s,baz=205,slow=6.5,SNR=17						
KURBB				PKP2ab		06 13 05.4	
	comp=Z,1.5nm,1.1s,baz=12,slow=2.7,SNR=5.6						
SIM	Simferopol'	68.75	336	eP	P	05 44 48.2	+11
SIM				pmax	pmax		
	comp=Z,380nm,8.7s						
KURK	Kurchatov	68.83	8	eP	P	05 44 34.9	-2.3
	comp=Z,281nm,1.8s						
KURK				eS	S	05 53 37.6	-2.7
KURK				P'P'ab	P'P'ab	06 13 05.4	+19
KURK				LR	LR		
	comp=Z,13μm,20.0s						
KURK	Kurchatov	68.83	8	P	P	05 44 35.8	-1.4
	SNR=20						
KURK	Kurchatov	68.83	8	iP	P	05 44 35.1	-2.1
KURK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
VNA3	Neumayer Olymp	68.99	200	P	P	05 44 38.0	-0.2
KDZ	Kurdzhali	69.99	329	P	P	05 44 52.5	+7.8
TIY	Taiyuan	70.02	37	eP	P	05 44 49.8	+4.8
TIY				PP	PP	05 47 27.0	+6.7
TIY				S	S	05 53 50.3	-4.8
TIY				pmax	pmax		
	comp=Z,370nm,7.1s						
TIY				LR	LR		
	comp=Z,4μm,20.5s						
TIY				LR	LR		
	comp=Z,7μm,25.7s						
TIY				LR	LR		
	comp=Z,2μm,18.7s						
BVA0	Borovoye Array	70.37	3	iP	P	05 44 42.2	-4.5
BVA0				pmax	pmax		
	comp=Z,112nm,1.5s						
BVAR	Borovoye Array	70.37	3	P	P	05 44 42.8	-3.9
	comp=Z,5.7nm,0.9s,baz=148,slow=11,SNR=11						
BVAR				LR	LR	06 14 44.9	
	comp=Z,4μm,19.6s,baz=187,slow=35						
LIT	Litokhoron	70.38	326	P	P	05 44 51.3	+4.2
LIT				pmax	pmax		
	comp=Z,39nm,2.1s						
BRVK	Borovoye	70.40	3	eP	P	05 44 44.9	-2.0
	comp=Z,57nm,0.9s						
BRVK				LR	LR		
	comp=Z,5μm,22.0s						
BRVK	Borovoye	70.40	3	P	P	05 44 46.9	0.0
BRVK	Borovoye	70.40	3c	eP	P	05 44 44.8	-2.0
BRVK				pmax	pmax		
	comp=Z,28nm,1.3s						
NJ2	Nanjing	70.48	46	eP	P	05 44 48.5	+0.7
NJ2				pP	pP	05 44 54.0	+0.9
NJ2				S	S	05 54 01.0	+0.5
NJ2				sS	sS	05 54 09.0	-0.2
NJ2				SKS	SKSac	05 54 49.0	-0.2
NJ2				pmax	pmax		
	comp=Z,800nm,4.9s						
NJ2				LR	LR		
	comp=Z,4μm,23.9s						
NJ2				LR	LR		
	comp=Z,6μm,23.9s						
NJ2				LR	LR		
	comp=Z,4μm,23.0s						
TORD	Torodi Ar. Bea	70.67	291	P	P	05 44 47.0	-2.4
	comp=Z,6.6nm,1.1s,baz=114,slow=9.6						
TORD				LR	LR	06 14 19.1	
	comp=Z,26μm,19.5s,baz=35,slow=35						
PLD	Plovdiv	70.68	328	P	P	05 45 01.0	+12
BTO	Baotou	70.70	34	eP	P	05 44 48.0	-1.1
TIRR	Tirgusor	70.73	332⇑	iP	P	05 44 47.8	-1.2
TIRR	Tirgusor	70.73	332	⇑P	P	05 44 47.8	-1.2
MMB	Musomiste	70.80	328	iP	P	05 44 58.5	+8.9
HARR	Harsova	71.12	332⇓	iP	P	05 44 48.5	-3.0
HARR	Harsova	71.12	332	⇓P	P	05 44 48.5	-3.0
PGB	Panagyurishte	71.28	328	P	P	05 45 01.5	+8.9
KKB	Krupnik	71.33	327	iP	P	05 45 00.7	+7.9
CFR	Carcaliu	71.41	333⇓	iP	P	05 44 50.7	-2.5
CFR	Carcaliu	71.41	333	eP	P	05 44 54.1	+0.9
CFR				pmax	pmax		
	comp=Z,72nm,1.4s						
SSE	Sheshan	71.54	48	P	P	05 44 55.0	+0.7
SSE				S	S	05 54 16.0	+3.1
SSE				pmax	pmax		
	comp=Z,110nm,4.3s						
SSE				LR	LR		
	comp=Z,2μm,26.2s						
SSE				LR	LR		
	comp=Z,1μm,22.5s						
HHC	Hu-ho-hao-te	71.70	35	eP	P	05 44 55.0	-0.2
HHC				sP	sP	05 45 06.5	+4.0
HHC				PP	PP	05 47 35.0	+0.3
HHC				S	S	05 54 17.8	+3.2
HHC				sS	SKiKP	05 54 29.5	-4.0
HHC				pmax	pmax		
	comp=Z,270nm,6.0s						
HHC				LR	LR		
	comp=Z,2μm,17.7s						
HHC				LR	LR		
	comp=Z,2μm,17.3s						
HHC				LR	LR		
	comp=Z,3μm,18.3s						
VRH	Novokhopyorsk	71.77	344	eP	P	05 44 58.0	+2.8
VRH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
TAU	Tasmania Unive	71.78	130	PFAKE		05 45 10.0	+14
TAU				LR	LR		
	comp=Z,9μm,20.0s						
VTS	Vitosha	71.79	328⇑	iP	P	05 44 54.0	-1.8
VTS	Vitosha	71.79	328	iP	P	05 45 03.6	+7.8
VTS	Vitosha	71.79	328	⇑P	P	05 44 54.0	-1.8
TIA	Tai'an	71.88	41	P	P	05 44 56.3	0.0
TIA				pmax	pmax		
	comp=Z,350nm,4.5s						
TIA				LR	LR		
	comp=Z,4μm,24.9s						
TIA				LR	LR		
	comp=Z,4μm,25.4s						
TIA				LR	LR		
	comp=Z,6μm,27.3s						
ISR	Istrita	72.08	332⇑	iP	P	05 44 59.0	+1.7
ISR	Istrita	72.08	332	⇑P	P	05 44 59.0	+1.7
VORD	Divnogorie	72.22	342	eP	P	05 45 05.8	+7.9
VORD				pmax	pmax		
	comp=Z,20nm,0.6s						
VSR	Storozhevoye	72.48	343	eP	P	05 45 01.9	+2.4
VSR				eS	S	05 54 26.8	+4.0
VSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VSR				smax	smax		
	comp=N,350nm,4.6s						
QSPA	South Pole Qui	72.55	180	P	P	05 44 58.9	-1.1
	comp=N,8.6nm,0.9s,baz=251,slow=5.3,SNR=12						
QSPA				LR	LR	06 12 29.9	
	comp=N,12μm,21.3s,baz=281,slow=32						
QSPA	South Pole Qui	72.55	180	eP	P	05 44 59.6	-0.4
	comp=N,381nm,1.4s						
KIS	Kishinev	72.56	334	eP	P	05 45 08.0	+8.0
	comp=N,200nm,1.9s						
KIS	Kishinev	72.56	334	ePP	PP	05 48 10.0	+28
KIS				eS	SKiKP	05 54 36.0	+1.6
KIS				eSSS	SSS	06 03 00.0	
KIS				eL	L	06 06 26.0	
KIS				LQM		06 14 10.0	
	comp=N,2μm,18.0s						
KIS	Kishinev	72.56	334	eP	P	05 45 08.0	+8.0
KIS				i		05 45 13.0	
KIS				e		05 45 21.0	
VRI	Vrincioaia	72.57	332⇑	iP	P	05 44 58.6	-1.6
VRI	Vrincioaia	72.57	332	⇑P	P	05 44 58.6	-1.6
PLOR	Plostina	72.59	332⇑	iP	P	05 45 00.5	+0.1
PLOR	Plostina	72.59	332	⇑P	P	05 45 00.5	+0.1
MLR	Muntele Rosu	72.64	332	P	P	05 44 59.2	-1.5
	comp=N,3.3nm,0.9s,baz=129,slow=6.5,SNR=4.0						
MLR	Muntele Rosu	72.64	332⇓	iP	P	05 45 02.4	+1.7
MLR	Muntele Rosu	72.64	332	eP	P	05 45 02.0	+1.3
	comp=N,124nm,1.2s						
ZALV	Zalesovo Beam	72.97	11	P	P	05 44 58.2	-4.1
	comp=N,6.6nm,0.8s,baz=206,slow=5.5,SNR=9.7						
ZALV				LR	LR	06 15 11.7	
	comp=N,8μm,21.7s,baz=194,slow=34						
TIP	Timpagrande	72.98	322⇑	iP	P	05 45 07.2	+4.4
VOIR		73.01	331⇓	iP	P	05 45 02.4	-0.5
VOIR		73.01	331	⇓P	P	05 45 02.4	-0.5
TESR	Tescani	73.11	333⇓	iP	P	05 45 02.4	-0.9
ARR	Arges	73.15	331⇑	iP	P	05 45 01.6	-2.1
DOPR	Dopca	73.25	332⇓	iP	P	05 45 04.9	+0.7
ULC	Ulcinj	73.43	325⇓	iP	P	05 45 12.6	+7.2
PVY	Plav	73.48	326	eP	P	05 45 12.9	+7.1
NVS	Novosibirsk	73.54	10	eP	P	05 45 04.0	-1.6
NVS				pmax	pmax		
	comp=Z,205nm,1.9s						
NVS				pmax	pmax		
	comp=N,98nm,1.7s						
NVS				pmax	pmax		
	comp=E,46nm,1.5s						
LOT	Lotru	73.61	330⇑	iP	P	05 45 05.8	-0.7
DRME	Dracevica, Mon	73.62	325⇓	iP	P	05 45 14.2	+7.8
SORM	Soroca	73.65	335⇑	iP	P	05 45 03.7	-2.8
SORM	Soroca	73.65	335	⇑P	P	05 45 03.7	-2.8
BIZ	Bicaz	73.67	333⇑	iP	P	05 45 07.9	+1.2
IVA	Berane	73.71	326	eP	P	05 45 13.7	+6.6
BJT	Baijiatuau	73.73	38	PFAKE		05 45 20.0	+13
BJT				LR	LR		
	comp=Z,3μm,20.0s						
PDG	Podgorica	73.75	326⇑	iP	P	05 45 05.5	-1.6
TTG	Podgorica	73.75	326⇓	iP	P	05 45 14.5	+7.3
BJI	Beijing	73.75	38	P	P	05 45 07.0	-0.2
BJI				S	S	05 54 43.0	+5.3
BJI				LR	LR		
	comp=Z,6μm,27.9s						
BJI				LR	LR		
	comp=Z,8μm,27.5s						
BJI				LR	LR		
	comp=Z,4μm,27.0s						
LPSR	Galich'ya Gora	73.78	343	eP	P	05 45 07.5	+0.4
LPSR				eS	S	05 54 42.5	+5.0
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
LPSR				smax	smax		
	comp=E,250nm,3.4s						
HERR	Herculane	73.85	329⇑	iP	P	05 45 05.3	-2.4
BUM	Brajici-Budva	73.85	325⇓	iP	P	05 45 15.3	+7.4
KOME	Kolasin	73.89	326⇓	iP	P	05 45 16.1	+7.9
MATE	Matera	73.97	323⇓	iP	P	05 45 10.6	+2.1
ARU	Arti	73.98	356	P	P	05 45 04.8	-3.4
	comp=E,2.5nm,0.4s,baz=156,slow=3.2,SNR=11						
ARU				LR	LR	06 17 26.4	
	comp=E,4μm,19.4s,baz=164,slow=36						
ARU	Arti	73.98	356	eP	P	05 45 06.2	-2.0
	comp=E,248nm,1.5s						
ARU	Arti	73.98	356d	iP	P	05 45 08.0	-0.2
ARU						05 47 50.3	
ARU				S	S	05 54 40.4	+0.8
ARU				pmax	pmax		
	comp=Z,23nm,1.2s						
ARU				MLR	MLR		
	comp=Z,4μm,19.0s						
CEME	Cevo	74.01	326⇓	iP	P	05 45 16.4	+7.6
KIC	Kosan Boka	74.02	282	ePKIKP	P	05 45 08.6	-0.9
	comp=Z,431nm,1.6s						
MDVR	Moldovita	74.12	329⇑	iP	P	05 45 08.9	-0.5
NKME	Niksic	74.14	326⇓	iP	P	05 45 17.1	+7.6
NKY	Niksic	74.15	326⇓	iP	P	05 45 17.6	+7.9
HCY	Herceg Novi	74.17	325⇓	iP	P	05 45 17.1	+7.4
VNDA	Vanda	74.19	167	P	P	05 45 08.4	-0.9
	comp=Z,2.3nm,1.0s,baz=276,slow=8.2,SNR=5.5						
VNDA				LR	LR	06 14 04.5	
	comp=Z,12μm,20.8s,baz=249,slow=33						
VNDA	Vanda	74.19	167	eP	P	05 45 11.0	+1.7
	comp=Z,112nm,1.3s						
DBIC	Dimbokro	74.24	282	P	P	05 45 09.4	-1.3
	comp=Z,11nm,1.0s,baz=85,slow=8.6,SNR=4.8						
DBIC	Dimbokro	74.24	282	eP	P	05 45 09.4	-1.3
	comp=Z,204nm,1.7s						
SVE	Sverdlovsk	74.24	357	eP	P	05 45 08.2	-1.5
SVE				pmax	pmax		
	comp=Z,184nm,1.6s						
LIC	Lamto	74.25	282	ePKIKP	P	05 45 08.5	-2.2
	comp=Z,159nm,0.9s						
PLE	Pljevlja	74.29	326	eP	P	05 45 17.1	+6.6
SONM	Songino Array	74.33	27	P	P	05 45 08.1	-2.5
	comp=Z,6.8nm,1.1s,baz=216,slow=5.8,SNR=21						
SONM				LR	LR	06 17 05.9	
	comp=Z,11μm,21.1s,baz=216,slow=35						
SONA1	Songino Array	74.34	27	eP	P	05 45 08.1	-2.6
TIC	Toumodi	74.38	282	ePKIKP	P	05 45 09.2	-2.4
UPM	Unac-Piva	74.46	326	eP	P	05 45 17.5	+5.9
DIVS	Divibare	74.51	327	eP	P	05 45 09.6	-2.2
	comp=Z,113nm,1.1s						
BURAR	Bucovina Array	74.58	333⇑	iP	P	05 45 13.8	+1.7
JOW	Kunigami	74.58	55	LR	LR	06 14 50.3	
	comp=Z,2μm,21.4s,baz=246,slow=33						
BUR04	Bucovina Ar. S	74.58	333	eP	P	05 45 10.2	-1.9
ULN	Ulaanbaatar	74.63	27	eP	P	05 45 11.1	-1.4
	comp=Z,26nm,1.0s						
ULN	Ulaanbaatar	74.63	27	eP	P	05 45 11.1	-1.4
ULN				pmax	pmax		
	comp=Z,26nm,1.0s						
BZS	Buzias	74.77	329⇑	iP	P	05 45 13.1	0.0
BZS	Buzias	74.77	329	⇑P	P	05 45 13.2	+0.1
CTAO	Charters Tower	75.01	107	eP	P	05 45 14.8	-0.4
	comp=Z,134nm,1.4s						
CTAO				LR	LR		
	comp=Z,11μm,20.0s						
DRGR		75.10	331⇓	iP	P	05 45 17.3	+2.2
DRGR		75.10	331	⇓P	P	05 45 17.3	+2.2
SBA	Scott Base	75.16	168	P	P	05 45 14.3	-0.6
	comp=Z,272nm,1.6s						
SBA				LR	LR		
	comp=Z,6μm,19.0s						
MOY	Mondy	75.29	22	eP	P	05 45 15.8	-0.3
MOY				pmax	pmax		
	comp=Z,61nm,2.7s						

AKASG	**Malin Array Be**	**75.36**	**337**	P	**P**	**05 45 13.3**	**-3.0**
	comp=Z,5.8nm,0.7s,baz=134,slow=5.0,SNR=14						
AKASG				LR	LR	06 18 09.6	
	comp=Z,2µm,20.3s,baz=145,slow=36						
AKBB	**Malin Array Si**	**75.36**	**337**	*e*P	**P**	**05 45 15.1**	**-1.2**
	comp=Z,301nm,1.9s						
AKBB	**Malin Array Si**	**75.36**	**337**	*e*P	**P**	**05 45 15.1**	**-1.2**
AKBB				pmax	pmax		
	comp=Z,301nm,1.9s						
KIEV	**Kiev**	**75.36**	**337**	*e*P	**P**	**05 45 15.1**	**-1.2**
	comp=Z,337nm,2.0s						
KIEV				LR	LR		
	comp=Z,3µm,20.0s						
KIEV	**Kiev**	**75.36**	**337**	*i* P	**P**	**05 45 16.4**	**0.0**
	SNR=8.4						
KIEV	**Kiev**	**75.36**	**337**	*i* P	**P**	**05 45 16.3**	**0.0**
KIEV				pmax	pmax		
	comp=Z,10.0nm,0.8s						
AK11	**Malin Array Si**	**75.36**	**337**	*e*P	**P**	**05 45 18.4**	**+2.1**
BMR	**Baia Mare**	**75.39**	**332**	⇑*i*P	**P**	**05 45 17.8**	**+1.2**
BMR	**Baia Mare**	**75.39**	**332**	⇑P	**P**	**05 45 17.8**	**+1.2**
KEST	**Kesra**	**75.57**	**315**	P	**P**	**05 45 18.6**	**+0.5**
	comp=Z,1.4nm,0.4s,baz=283,slow=7.0,SNR=3.4						
KEST				LR	LR	06 17 40.0	
	comp=Z,10µm,20.7s,baz=80,slow=35						
KEST	**Kesra**	**75.57**	**315**	*e*P	**P**	**05 45 19.0**	**+0.9**
	comp=Z,168nm,1.7s						
TRPA	**Tarpa**	**76.16**	**332**	⇑*i*P	**P**	**05 45 20.5**	**-0.5**
TRPA	**Tarpa**	**76.16**	**332**	⇓*e*ScP	**PcP**	**05 45 33.8**	**+0.8**
TLY	**Talaya**	**76.25**	**23**	PFAKE		05 45 30.0	+8.5
TLY				LR	LR		
	comp=Z,8µm,21.0s						
TLY	**Talaya**	**76.25**	**23**	*c i*P	**P**	**05 45 21.2**	**-0.3**
TLY				*e*S	**S**	**05 54 59.9**	**-5.3**
TLY				*e*		05 55 41.4	
TLY				pmax	pmax		
	comp=Z,28nm,1.6s						
TLY				MLR	MLR		
	comp=Z,3µm,19.0s						
KOWA	**Kowa**	**76.30**	**290**	P	**P**	**05 45 21.2**	**-1.3**
	comp=Z,7.1nm,0.8s,baz=122,slow=5.6,SNR=9.7						
KOWA	**Kowa**	**76.30**	**290**	*e*P	**P**	**05 45 21.4**	**-1.1**
	comp=Z,135nm,1.4s						
DL2	**Dalian**	**76.36**	**41**	⇓*i*P	P	05 45 29.0	+6.7
DL2				S	S	05 55 19.0	+12
DL2	**Dalian**	**76.36**	**41**	SS	SS	06 00 15.5	+14
DL2				pmax	pmax		
	comp=Z,780nm,5.0s						
DL2				LR	LR		
	comp=N,3µm,33.7s						
DL2				LR	LR		
	comp=E,3µm,34.8s						
DL2				LR	LR		
	comp=Z,5µm,26.5s						
UZH	**Uzhgorod**	**76.64**	**332**	*e*P	P	05 45 30.7	+7.0
UZH				*i*		05 45 37.1	
UZH				*e*		05 56 04.1	
UZH				*i*		06 00 13.9	
OBN	**Obninsk**	**76.66**	**343**	PFAKE		05 45 30.0	+6.4
OBN				LR	LR		
	comp=Z,3µm,20.0s						
OBN	**Obninsk**	**76.66**	**343**	⇓*e*P	**P**	**05 45 27.1**	**+3.5**
OBN				*e*		05 45 36.8	
OBN				*e*		05 48 19.4	
OBN				*i* S	**SKSac**	**05 55 33.2**	**-1.3**
OBN				pmax	pmax		
	comp=Z,40nm,1.7s						
OBN				MLR	MLR		
	comp=Z,4µm,20.0s						
MORH	**Mˆ‡rˆ¡gy, Hung**	**76.67**	**328**	⇓*e*ScP	**PcP**	**05 45 36.3**	**+1.0**
LVV	**L'vov**	**76.76**	**333**	*e*P	P	05 45 31.6	+7.2
MOS	**Moscow**	**76.92**	**344**	*e*P	P	05 45 34.4	+9.3
MOS				*e*S	**SKSac**	**05 55 32.4**	**-4.1**
MOS				*e*SS	**SS**	**06 00 05.0**	**-4.6**
MOS				pmax	pmax		
	comp=Z,149nm,1.7s						
MOS				pmax	pmax		
	comp=Z,400nm,2.3s						
MOS				MLR	MLR		
	comp=Z,4µm,21.0s						
KWP	**Kalwaria Pacla**	**77.19**	**333**	*e*P	**P**	**05 45 24.9**	**-2.0**
KWP				LMZ	LR	06 11 09.7	
	comp=Z,6µm,36.5s						
KWP	**Kalwaria Pacla**	**77.19**	**333**	*e*P	**P**	**05 45 24.9**	**-2.0**
CRVS	**Cervenica-Dubn**	**77.22**	**332**	*e*P	**P**	**05 45 27.2**	**+0.2**
CRVS				*e*		05 45 39.9	
CRVS				*e*S	**S**	**05 55 23.8**	**+7.9**
CRVS				*e*SS	**SS**	**06 00 13.6**	**-0.8**
CRVS				pmax	pmax		
	comp=Z,129nm,1.5s						
CRVS	**Cervenica-Dubn**	**77.22**	**332**	*e*P	**P**	**05 45 27.1**	**+0.1**
CRVS				*e*PCP	**PcP**	**05 45 39.9**	**+2.3**
CRVS				*e*S	**S**	**05 55 23.8**	**+7.9**
CRVS				*e*SS	**SS**	**06 00 13.6**	**-0.8**
CRVS				*e*L	L	06 09 27.7	
PSZ	**Piszkesteto**	**77.24**	**330**	⇑*i*P	**P**	**05 45 28.5**	**+1.3**
PSZ	**Piszkesteto**	**77.24**	**330**	⇓*e*ScP	**PcP**	**05 45 39.7**	**+1.8**
PSZ	**Piszkesteto**	**77.24**	**330**	⇑P	**P**	**05 45 28.5**	**+1.3**
BUD	**Budapest**	**77.36**	**329**	⇓*e*ScP	**PcP**	**05 45 41.1**	**+2.9**
CSKK	**Csˆ‡kako**	**77.65**	**329**	*e*ScP	**P**	**05 45 27.6**	**-1.8**
BEHE	**Becsehely**	**77.79**	**327**	⇓*e*ScP	**PcP**	**05 45 43.0**	**+2.8**
BOJS	**Bojanci**	**77.95**	**326**	*e*P	P	05 45 38.2	+7.0
BOJS				*e*S	**S**	**05 55 20.8**	**-3.1**
BOJS				*e*		06 00 39.3	
BOJS				*e*		06 04 03.9	
BOJS				*e*		06 06 18.1	
NIE	**Niedzica**	**78.12**	**331**	*e*P	**P**	**05 45 36.8**	**+4.8**
NIE				*e*S	**S**	**05 55 26.9**	**+1.2**
NIE				LMZ	LR	06 10 16.4	
	comp=Z,3µm,36.2s						
NIE	**Niedzica**	**78.12**	**331**	*e*P	**P**	**05 45 36.8**	**+4.8**
NIE				*e*S	**S**	**05 55 26.9**	**+1.2**
VYHS	**Vyhne**	**78.15**	**330**	*e*P	**P**	**05 45 32.3**	**+0.1**
VYHS				*e*		05 45 43.4	
VYHS				*e*S	**S**	**05 55 30.9**	**+4.9**
VYHS				pmax	pmax		
	comp=Z,123nm,2.1s						
VYHS	**Vyhne**	**78.15**	**330**	*e*P	**P**	**05 45 32.3**	**+0.1**
VYHS				*e*PCP	**PcP**	**05 45 43.4**	**+1.7**
VYHS				*e*S	**S**	**05 55 30.9**	**+4.9**
LANS	**Liptovska Anna**	**78.31**	**331**	*e*P	**P**	**05 45 34.8**	**+1.7**
LANS	**Liptovska Anna**	**78.31**	**331**	*e*P	**P**	**05 45 34.8**	**+1.7**
VISS	**Visnje**	**78.36**	**326**	*i* P	P	05 45 41.6	+8.2
VISS				*e*S	**S**	**05 55 27.2**	**-1.1**
TJN	**Taejon**	**78.73**	**46**	*e*P	**P**	**05 45 33.8**	**-1.9**
PERS	**Pernice**	**78.76**	**327**	*e*P	P	05 45 48.6	+13
PERS				*e*S	**S**	**05 55 32.0**	**-0.7**
ASCN	**Ascension**	**78.78**	**265**	PFAKE		05 45 50.0	+14
ASCN				LR	LR		
	comp=Z,23µm,20.0s						
INCN	**Inchon**	**78.82**	**45**	*e*P	**P**	**05 45 33.0**	**-3.1**
	comp=Z,112nm,1.0s						
INCN				LR	LR		
	comp=Z,3µm,22.0s						
INCN	**Inchon**	**78.82**	**45**	*e*P	**P**	**05 45 33.0**	**-3.1**
INCN				pmax	pmax		
	comp=Z,113nm,1.0s						
INCN				MLR	MLR		
	comp=Z,3µm,22.0s						
MODS	**Modra-Piesok**	**78.82**	**329**	*e*P	**P**	**05 45 37.3**	**+1.4**
MODS				*e*		05 45 46.9	
MODS				*e*S	**S**	**05 55 33.5**	**+0.3**
MODS				pmax	pmax		
	comp=Z,124nm,1.5s						
MODS	**Modra-Piesok**	**78.82**	**329**	*e*P	**P**	**05 45 37.3**	**+1.4**
MODS				*e*sP	**PcP**	**05 45 46.9**	**+2.3**
MODS				*e*S	**S**	**05 55 33.5**	**+0.3**
MODS				*e*L	L	06 12 43.1	
SOKA	**Soboth**	**78.83**	**327**	*e*P	**P**	**05 45 35.9**	**-0.1**
	comp=Z,3.4nm,0.8s						
JAVS	**Javornik**	**78.83**	**326**	*e*P	P	05 45 44.0	+7.8
JAVS				*e*S	**S**	**05 55 33.0**	**-0.6**
MICGM	**Minsk**	**78.90**	**338**	*e*P	P	05 45 43.0	+6.9
MICGM				*e*PP	**PP**	**05 48 42.0**	**+6.8**
MICGM				*e*PPP	PPP	05 50 24.0	
MICGM				*e*S	S	05 55 44.0	+10
MICGM				*e*PS	PnS	05 56 36.0	+19
MICGM				*e*SS	**SS**	**06 00 44.0**	**+4.6**
MICGM				*e*SSS	SSS	06 04 36.0	
MICGM				*e*LQ	LQ	06 08 20.0	
MICGM				*e*LR	LR	06 12 20.0	
MNK	**Minsk**	**78.90**	**338**	*e*P	P	05 45 43.0	+6.9
MNK				*e*		05 48 42.0	
MNK				*e*		05 50 24.0	
MNK				*e*S	S	05 55 44.0	+10
MNK				*e*		05 56 36.0	
MNK				*e*		06 00 44.0	
OJC	**Ojcow**	**78.92**	**332**	*e*P	P	05 45 43.7	+7.3
OJC				*e*S	**S**	**05 55 35.1**	**+1.0**
OJC				LMZ	LR	06 10 40.7	
	comp=Z,4µm,31.6s						
OJC	**Ojcow**	**78.92**	**332**	*e*P	P	05 45 43.7	+7.3
OJC				*e*S	**S**	**05 55 35.1**	**+1.0**
ARSA	**Arzberg**	**78.95**	**327**	*e*P	**P**	**05 45 36.6**	**-0.1**
	comp=Z,11nm,1.1s						
JAVC	**Velka Javorina**	**78.96**	**330**	*e*P	**P**	**05 45 40.0**	**+3.3**
JAVC				*e*PCP	**PcP**	**05 45 48.9**	**+3.6**
JAVC				*e*S	**S**	**05 55 36.4**	**+1.6**
JAVC				*e*		06 04 13.7	
JAVC				*e*		06 06 33.1	
OBKA	**Obir**	**78.97**	**326**	*e*P	**P**	**05 45 35.8**	**-1.1**
	comp=Z,6.1nm,1.1s						
CONA	**Conrad Observa**	**79.23**	**328**	*e*P	**P**	**05 45 35.7**	**-2.5**
	comp=Z,10nm,1.5s						
SNY	**Shenyang**	**79.27**	**40**	⇑P	**P**	**05 45 40.3**	**+1.8**
SNY				pmax	pmax		
	comp=Z,460nm,6.3s						
SNY				LR	LR		
	comp=Z,4µm,30.2s						
SNY				LR	LR		
	comp=Z,4µm,27.1s						
SNY				LR	LR		
	comp=Z,6µm,23.5s						
OKC	**Ostrava-Krasne**	**79.41**	**331**	*e*P	**P**	**05 45 43.8**	**+4.7**
OKC				*e*x	x	05 45 48.9	
OKC				*e*x	x	05 46 52.4	
OKC				*e*S	**S**	**05 55 41.1**	**+1.8**
OKC				*e*x	x	06 00 32.4	
OKC				AMS	AMS	06 23 20.0	
	comp=Z,2µm,17.0s						
OKC	**Ostrava-Krasne**	**79.41**	**331**	*e*P	**P**	**05 45 43.8**	**+4.7**
OKC				*e*		05 45 48.9	
OKC				*e*S	**S**	**05 55 41.1**	**+1.8**
OKC				MLR	MLR		
	comp=Z,2µm,17.0s						
MYKA	**Terra Mystica**	**79.53**	**326**	*i* P	**P**	**05 45 41.0**	**+1.1**
	comp=Z,1.2nm,0.5s						
JNU	**Nakatsue**	**79.60**	**50**	P	**P**	**05 45 38.5**	**-2.1**
	comp=Z,4.9nm,0.8s,baz=214,slow=6.1,SNR=4.1						
JNU				LR	LR	06 18 15.7	
	comp=Z,3µm,21.7s,baz=232,slow=34						
NACGM	**Naroch**	**79.61**	**338**	*e*P	**P**	**05 45 40.0**	**0.0**
NACGM				*e*PP	**PP**	**05 48 48.0**	**+6.9**
NACGM				*e*PPP	PPP	05 50 23.0	
NACGM				*e*SS	SS	06 00 44.0	-6.0
NACGM				*e*SSS	SSS	06 05 10.0	
NACGM				*e*LQ	LQ	06 13 06.0	
NACGM				*e*LR	LR	06 20 24.0	
BEL	**Belsk**	**79.64**	**333**	*e*P	P	05 45 54.7	+14
BEL				*e*S	**S**	**05 55 47.4**	**+5.7**
BEL				LMZ	LR	06 14 49.8	
	comp=Z,4µm,40.6s						
BEL	**Belsk**	**79.64**	**333**	*e*P	P	05 45 54.7	+14
BEL				*e*S	**S**	**05 55 47.4**	**+5.7**
KSAR	**Wonju Array Be**	**79.64**	**45**	P	**P**	**05 45 36.8**	**-3.8**
KSAR	**Wonju Array Be**	**79.64**	**45**	P	**P**	**05 45 36.8**	**-3.8**
MORC	**Moravsky Berou**	**79.65**	**330**	⇓*i*P	**P**	**05 45 41.7**	**+1.2**
MORC	**Moravsky Berou**	**79.65**	**330**	*e*P	**P**	**05 45 40.9**	**+0.4**
	comp=Z,169nm,1.9s						
MORC	**Moravsky Berou**	**79.65**	**330**	*e*P	**P**	**05 45 40.9**	**+0.4**
MORC				pmax	pmax		
	comp=Z,169nm,1.9s						
MORC	**Moravsky Berou**	**79.65**	**330**	*e*P	**P**	**05 45 40.9**	**+0.4**
MORC				*e*PCP	**PcP**	**05 45 50.4**	**+2.1**
MORC				*e*S	**S**	**05 55 41.1**	**-0.9**
MORC				*e*		06 04 24.4	
MORC				*e*		06 06 47.7	
KS01	**Wonju Array Si**	**79.67**	**45**	*e*P	**P**	**05 45 38.4**	**-2.3**
KSRS	**Korea Array**	**79.67**	**45**	P	**P**	**05 45 36.8**	**-4.0**
	comp=Z,2.6nm,0.9s,baz=247,slow=6.3,SNR=10						
KSRS				LR	LR	06 19 02.2	
	comp=Z,2µm,21.7s,baz=236,slow=34						
KRUC	**Moravsky**	**79.72**	**329**	*e*P	**P**	**05 45 40.8**	**0.0**
KRUC				*e*PCP	**PcP**	**05 45 50.3**	**+1.8**
KRUC				*e*S	**S**	**05 55 41.6**	**-1.0**
KRUC				*e*		06 04 25.1	
KRUC				*e*		06 06 47.6	
VRAC	**Vranov**	**79.79**	**330**	⇑*i*P	**P**	**05 45 38.2**	**-3.0**
VRAC	**Vranov**	**79.79**	**330**	⇑P	**P**	**05 45 38.2**	**-3.0**
VRAC	**Vranov**	**79.79**	**330**	*e*P	**P**	**05 45 41.3**	**+0.1**
VRAC				*e*PCP	**PcP**	**05 45 50.9**	**+2.1**
VRAC				*e*S	**S**	**05 55 42.4**	**-1.0**
VRAC				*e*		06 04 24.4	
VRAC				*e*		06 06 44.8	
IDID	**Didziasalis**	**79.94**	**338**	*e*P	P	05 45 48.7	+6.9
KBA	**Koelnbreinsper**	**79.97**	**326**	*i* P	**P**	**05 45 41.0**	**-1.5**
	comp=Z,1.7nm,0.8s						
MOA	**Molln**	**79.99**	**327**	*i* P	**P**	**05 45 39.7**	**-2.6**
	comp=Z,7.2nm,1.8s						
IIGN	**Ignalina**	**80.16**	**338**	*e*P	P	05 45 49.9	+6.9
IIGN				IAmb	IAmb	05 46 20.0	
	comp=Z,144nm,2.0s						
ABTA	**Abfaltersbach**	**80.21**	**326**	*i* P	**P**	**05 45 43.2**	**-0.4**
	comp=Z,5.2nm,0.9s						
SUW	**Suwalki**	**80.26**	**336**	*e*P	**P**	**05 45 44.4**	**+0.8**
SUW				LMZ	LR	06 14 47.0	
	comp=Z,5µm,37.4s						
SUW	**Suwalki**	**80.26**	**336**	*e*P	**P**	**05 45 44.4**	**+0.8**
ISAL	**Salakas**	**80.36**	**338**	*e*P	P	05 45 50.7	+6.7
ISAL				IAmb	IAmb	05 46 14.2	
	comp=Z,16nm,0.9s						
IZAR	**Zarasai**	**80.46**	**338**	*e*P	P	05 45 51.4	+6.8
IZAR				IAmb	IAmb	05 46 11.1	
	comp=Z,17nm,1.1s						
CIT	**Chita**	**80.53**	**27**	*e*P	P	05 45 56.0	+11
CIT				*e*		05 46 02.6	
DPC	**Dobruska-Polom**	**80.62**	**330**	*e*P	P	05 45 50.9	+5.2
DPC				*e*x	x	05 45 55.5	
DPC				*e*x	x	05 46 59.4	
DPC				*e*S	**S**	**05 55 50.8**	**-1.4**
DPC				AMS	AMS	06 21 00.0	
	comp=Z,3µm,21.6s						
DPC	**Dobruska-Polom**	**80.62**	**330**	*e*P	P	05 45 50.9	+5.2
DPC				*e*		05 45 55.5	
DPC				*e*S	**S**	**05 55 50.8**	**-1.4**
DPC				MLR	MLR		
	comp=Z,3µm,21.6s						
PRGR	**Permogore**	**80.62**	**350**	*e*P	**P**	**05 45 43.8**	**-1.5**
PRGR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
UPC	**Upice**	**80.87**	**330**	*e*P	**P**	**05 45 50.3**	**+3.3**
UPC				*e*x	x	05 47 00.0	
UPC				*e*S	**S**	**05 55 50.6**	**-4.1**
UPC				AMS	AMS	06 25 20.0	
	comp=Z,2µm,19.8s						
UPC	**Upice**	**80.87**	**330**	*e*P	**P**	**05 45 50.3**	**+3.3**
UPC				*e*S	**S**	**05 55 50.6**	**-4.1**
UPC				MLR	MLR		
	comp=Z,2µm,19.8s						
GEA0	**GERESS Array S**	**80.91**	**328**	*e*P	**P**	**05 45 46.5**	**-0.8**
GERES	**GERESS Array B**	**80.92**	**328**	P	**P**	**05 45 46.8**	**-0.5**
	comp=Z,0.5nm,0.3s,baz=133,slow=5.9,SNR=6.8						
GERES				LR	LR	06 23 40.1	
	comp=Z,2µm,18.7s,baz=151,slow=37						
KSP	**Ksiaz**	**80.97**	**331**	*e*P	P	05 45 56.2	+8.7
KSP				*e*S	**S**	**05 56 01.5**	**+5.8**
KSP				LMZ	LR	06 12 47.5	
	comp=Z,5µm,32.4s						
KSP	**Ksiaz**	**80.97**	**331**	*e*P	P	05 45 56.2	+8.7
KSP				*e*S	**S**	**05 56 01.5**	**+5.8**
KLMR	**Klimovskoe**	**81.05**	**347**	*e*P	**P**	**05 45 45.0**	**-2.6**
KLMR				*e*S	**S**	**05 55 54.7**	**-1.3**
KLMR				pmax	pmax		
	comp=Z,55nm,1.3s						
KLMR	**Klimovskoe**	**81.05**	**347**	*e*P	**P**	**05 45 45.0**	**-2.6**
KLMR				AMP		05 46 01.8	
	comp=Z,55nm,1.3s						
KLMR				*e*S	**S**	**05 55 54.7**	**-1.3**
KLMR				*e*S	**S**	**05 55 54.7**	**-1.3**
KLMR				LQ	LQ	06 14 00.5	
KLMR				LQ	LQ	06 14 00.5	
KLMR				LR	LR	06 20 26.5	
GOPC	**GO Pecny, Ondr**	**81.07**	**329**	*e*P	**P**	**05 45 50.9**	**+2.8**
GOPC				*e*x	x	05 46 01.5	
GOPC				*e*x	x	05 47 01.0	
GOPC				*e*S	S	05 55 47.4	-9.4
GOPC				AMS	AMS	06 20 10.0	
	comp=Z,3µm,24.1s						
GOPC	**GO Pecny, Ondr**	**81.07**	**329**	*e*P	**P**	**05 45 50.9**	**+2.8**
GOPC				*e*		05 46 01.5	
GOPC				*e*S	S	05 55 47.4	-9.4
GOPC				MLR	MLR		
	comp=Z,3µm,24.1s						
KHC	**Kasperske Hory**	**81.16**	**328**	*e*P	**P**	**05 45 50.5**	**+1.9**
KHC				*e*x	x	05 46 01.2	
KHC				*e*x	x	05 47 00.7	
KHC				*e*S	S	05 55 48.3	-10
KHC				AMS	AMS	06 23 40.0	
	comp=Z,3µm,20.4s						
KHC	**Kasperske Hory**	**81.16**	**328**	*e*P	**P**	**05 45 50.5**	**+1.9**
KHC				*e*		05 46 01.2	
KHC				*e*S	S	05 55 48.3	-10
KHC				MLR	MLR		
	comp=Z,3µm,20.4s						
PRU	**Pruhonice**	**81.24**	**329**	*e*P	**P**	**05 45 50.9**	**+2.0**
PRU				*e*x	x	05 47 01.9	
PRU				*e*S	**S**	**05 55 50.7**	**-7.8**
PRU				*e*x	x	06 00 55.3	
PRU				AMS	AMS	06 23 10.0	
	comp=Z,3µm,18.6s						
PRU	**Pruhonice**	**81.24**	**329**	*e*P	**P**	**05 45 50.9**	**+2.0**
PRU				*e*S	**S**	**05 55 50.7**	**-7.8**
PRU				MLR	MLR		
	comp=Z,3µm,18.6s						
PRA	**Prague**	**81.34**	**329**	*e*S	**S**	**05 56 01.5**	**+1.9**
PRA				AMS	AMS	06 23 10.0	
	comp=Z,3µm,19.1s						
CN2	**Changchun**	**81.52**	**39**	*e*P	**P**	**05 45 50.5**	**-0.1**
CN2				*e*sP	pP	05 45 56.0	+0.1
CN2				*e*S	**S**	**05 56 00.0**	**-1.7**
CN2				pmax	pmax		
	comp=Z,200nm,5.0s						
CN2				LR	LR		
	comp=Z,4µm,20.0s						
CN2				LR	LR		
	comp=Z,3µm,20.0s						
CN2				LR	LR		
	comp=Z,3µm,21.0s						
PVCC	**Panska Ves**	**81.58**	**330**	*e*P	**P**	**05 45 54.8**	**+4.1**
PVCC				*e*x	x	05 47 04.1	
PVCC				*e*S	S	05 55 52.2	-10
PVCC				AMS	AMS	06 21 30.0	
	comp=Z,3µm,20.3s						
PVCC	**Panska Ves**	**81.58**	**330**	*e*P	**P**	**05 45 54.8**	**+4.1**
PVCC				*e*S	S	05 55 52.2	-10
PVCC				MLR	MLR		
	comp=Z,3µm,20.3s						
HIA	**Hailar**	**81.62**	**32**	PFAKE		05 46 00.0	+9.0
HIA				LR	LR		
	comp=Z,3µm,19.0s						
DAVOX	**Davos/Dischmat**	**81.66**	**325**	P	**P**	**05 45 53.0**	**+1.5**
	comp=Z,3.6nm,0.8s,baz=148,slow=16,SNR=4.3						
DAVOX				LR	LR	06 22 16.8	
	comp=Z,3µm,21.8s,baz=132,slow=36						
DAVOX	**Davos/Dischmat**	**81.66**	**325**	P	**P**	**05 45 53.0**	**+1.5**
DAVOX				pmax	pmax		
	comp=Z,4.0nm,0.8s						
DAVOX				MLR	MLR		
	comp=Z,3µm,21.8s						
KLNR	**Kaliningrad**	**81.88**	**335**	*i* P	**P**	**05 45 56.4**	**+4.2**
KLNR				pmax	pmax		
	comp=Z,48nm,1.3s						
BRG	**Berggiesshubel**	**82.10**	**330**	*e*P	P	05 46 01.7	+8.2
	comp=Z,91nm,2.0s						
BRG				S	**S**	**05 56 01.0**	**-6.4**
BRG				SS	**SS**	**06 01 17.0**	**-11**
	comp=N,4µm,22.6s						
	comp=E,2µm,19.9s						
	comp=Z,3µm,17.7s						
BRG	**Berggiesshubel**	**82.10**	**330**	*e*P	P	05 46 01.7	+8.2
BRG				S	**S**	**05 56 01.0**	**-6.4**
BRG				pmax	pmax		
	comp=Z,3.0nm,2.0s						
BRG				MLR	MLR		
	comp=N,9µm,22.6s						
BRG				MLR	MLR		
	comp=E,4µm,19.9s						
BRG				MLR	MLR		
	comp=Z,2µm,17.7s						
GKP	**Gorka Klasztor**	**82.19**	**333**	*e*P	P	05 46 04.8	+11
GKP				*e*S	**S**	**05 56 14.8**	**+6.6**
GKP				LMZ	LR	06 11 53.4	
	comp=Z,7µm,47.7s						
GKP	**Gorka Klasztor**	**82.19**	**333**	*e*P	P	05 46 04.8	+11
GKP				*e*S	**S**	**05 56 14.8**	**+6.6**
NKC	**Novy Kostel**	**82.43**	**328**	*e*P	P	05 46 00.3	+5.1
NKC				*e*x	x	05 47 08.4	
NKC				*e*S	**S**	**05 56 12.1**	**+1.2**
NKC				*e*x	x	06 01 00.8	
NKC				AMS	AMS	06 30 00.0	
	comp=Z,3µm,24.3s						
NKC	**Novy Kostel**	**82.43**	**328**	*e*P	P	05 46 00.3	+5.1
NKC				*e*S	**S**	**05 56 12.1**	**+1.2**
NKC				MLR	MLR		
	comp=Z,3µm,24.3s						
VSU	**Vasula**	**82.44**	**340**	*c e*P	**P**	**05 45 58.3**	**+3.3**
VSU				pmax	pmax		
	comp=Z,24nm,0.8s						
CLL	**Collm**	**82.84**	**330**	*e*P	**P**	**05 45 57.0**	**-0.3**
CLL				*e*Pmax		05 46 04.0	
CLL				*e*sP	**sP**	**05 46 07.0**	**+2.4**
	comp=Z,24nm,1.6s						
CLL				*i* Pmax		05 46 10.8	
	comp=Z,89nm,1.8s						
CLL				*i*		05 46 17.0	
	comp=Z,74nm,1.5s						
CLL				*e*		05 46 31.0	
	comp=Z,98nm,1.5s						
CLL				*e*		05 46 56.0	
CLL				*e*S	**S**	**05 56 17.0**	**+2.1**
	comp=N,6µm,44.9s						
CLL				*e*S	**S**	**05 56 17.0**	**+2.1**
	comp=E,6µm,47.5s						
CLL				*e*SS	**SS**	**06 01 36.0**	**-2.4**
CLL				*e*SSS	SSS	06 05 06.0	
CLL	**Collm**	**82.84**	**330**	*e*P	**P**	**05 45 57.0**	**-0.3**
CLL				*e*		05 46 07.0	
CLL				*e*S	**S**	**05 56 17.0**	**+2.1**
CLL				pmax	pmax		
	comp=Z,4.0nm,1.5s						
SENIN	**Lac Senin/Sane**	**82.87**	**323**	*e*P	**P**	**05 45 59.4**	**+1.6**
HOPE	**Hope Point**	**83.16**	**215**	PFAKE		05 46 10.0	+11
HOPE				LR	LR		
	comp=Z,21µm,22.0s						
BFO	**Black Forest**	**83.42**	**325**	*e*P	**P**	**05 46 01.2**	**+0.8**
	comp=Z,17nm,1.5s						
BFO				LR	LR		
	comp=Z,103nm,22.0s						
BFO	**Black Forest**	**83.42**	**325**	*e*P	**P**	**05 46 01.2**	**+0.8**
BFO				pmax	pmax		
	comp=Z,17nm,1.5s						
BFO				MLR	MLR		
	comp=Z,103nm,22.0s						
GUMO	**Guam**	**83.47**	**74**	LR	LR	06 21 18.7	
	comp=Z,538nm,19.4s,baz=250,slow=34						
GUMO	**Guam**	**83.47**	**74**	PFAKE		05 46 10.0	+8.6
GUMO				LR	LR		
	comp=Z,106µm,20.0s						
HINF	**Hinteralfeld**	**83.94**	**324**	*e*P	**P**	**05 46 07.0**	**+3.9**
HINF				pmax	pmax		
	comp=Z,13nm,1.0s						
CDF	**Champ du Feu**	**84.05**	**325**	*e*P	**P**	**05 46 07.8**	**+4.1**
CDF				pmax	pmax		
	comp=Z,14nm,1.1s						
MDT	**Midelt**	**84.19**	**307**	LR	LR	06 23 19.5	
	comp=Z,15µm,20.0s,baz=130,slow=36						
BSD	**Bornholm Skovb**	**84.44**	**333**	*i* P	P	05 46 19.6	+14
MDJ	**Mudanjiang**	**84.47**	**40**	P	**P**	**05 46 07.0**	**+1.2**
MDJ				sP	pP	05 46 11.5	+0.3
MDJ				S	**S**	**05 56 38.3**	**+6.6**
MDJ				sS	ScS	05 56 47.0	+3.7
MDJ				pmax	pmax		
	comp=Z,300nm,6.8s						
MDJ				LR	LR		
	comp=Z,3µm,34.3s						
MDJ				LR	LR		
	comp=Z,3µm,31.2s						
MDJ				LR	LR		
	comp=Z,6µm,24.1s						
MDJ	**Mudanjiang**	**84.47**	**40**	*e*P	P	05 46 00.9	-5.0
	comp=Z,19nm,0.9s						

MDJ				LR	LR		
	comp=Z,2µm,22.0s						
BOD	Bodaibo	84.82	23	eP	P	05 46 05.6	-1.6
BOD				pmax	pmax		
	comp=Z,99nm,2.0s						
FINES	FINESS Array B	85.00	342	P	P	05 46 06.3	-1.8
	comp=Z,2.1nm,0.7s,baz=151,slow=3.2,SNR=3.4						
SMF	Signal de Mont	85.02	322	eP	P	05 46 11.6	+3.0
SMF				pmax	pmax		
	comp=Z,5.0nm,0.7s						
CAF	Calviac	85.20	320	eP	P	05 46 13.5	+4.0
CAF				pmax	pmax		
	comp=Z,16nm,1.2s						
WLF	Walferdange	85.36	326	⇓P	P	05 46 16.3	+6.1
BGF	Bois d'Agland	85.56	322	eP	P	05 46 15.1	+3.8
BGF				pmax	pmax		
	comp=Z,40nm,1.4s						
RJF	Les Rejaudoux	85.72	320	eP	P	05 46 16.0	+3.9
RJF				pmax	pmax		
	comp=Z,25nm,1.2s						
USRK	Ussuriysk Ar.	85.75	41	P	P	05 46 09.9	-2.3
	comp=Z,2.9nm,0.8s,baz=249,slow=4.0						
USRK				LR	LR	06 23 28.0	
	comp=Z,997nm,21.9s,baz=227,slow=35						
COP	Copenhagen	85.89	333	i P	P	05 46 26.8	+14
COP	Copenhagen	85.89	333	eP	P	05 46 26.8	+14
MEM	Membach	85.97	326	⇑P	P	05 46 24.8	+12
BCLA	Clavier	86.24	326	⇑P	P	05 46 18.3	+3.8
JHJ	Hachijo jima 2	86.30	54	LR	LR	06 22 40.7	
	comp=Z,1µm,21.0s,baz=260,slow=34						
DOU	Dourbes	86.44	325	⇑P	P	05 46 20.3	+4.8
	comp=Z,52nm,2.2s						
MJB9	Matsu-Tunnel	86.51	50	eP	P	05 46 16.1	-0.1
MAJO	Matsushiro	86.51	50	eP	P	05 46 16.1	-0.2
MAJO				LR	LR		
	comp=Z,2µm,21.0s						
MAJO	Matsushiro	86.51	50c	eP	P	05 46 12.1	-4.2
MAJO				pmax	pmax		
	comp=Z,30nm,2.5s						
MAT	Matsushiro	86.51	50	P	P	05 46 14.8	-1.5
MAT				S	S	05 56 46.4	-5.9
MJAR	Matsushiro Arr	86.52	50	P	P	05 46 13.7	-2.6
	comp=Z,7.8nm,1.0s,baz=232,slow=6.0,SNR=12						
MJAR				LR	LR	06 22 13.9	
	comp=Z,2µm,21.8s,baz=230,slow=34						
ES19	SONSECA Array	86.63	313	eP	P	05 46 16.7	-0.1
ESDC	Sonseca Array	86.66	313	P	P	05 46 14.6	-2.4
	comp=Z,0.2nm,0.3s,baz=111,slow=0.9,SNR=3.6						
ESDC				LR	LR	06 27 41.3	
	comp=Z,6µm,18.3s,baz=125,slow=38						
PAB	San Pablo	86.88	313	eP	P	05 46 19.5	+1.5
	comp=Z,364nm,1.9s						
PAB				LR	LR		
	comp=Z,10µm,20.0s						
PAB	San Pablo	86.88	313	eP	P	05 46 19.5	+1.5
PAB				pmax	pmax		
	comp=Z,364nm,1.9s						
PAB				MLR	MLR		
	comp=Z,10µm,20.0s						
MFF	Saint Martin d	87.37	321	eP	P	05 46 23.9	+3.8
MFF				pmax	pmax		
	comp=Z,14nm,1.0s						
MUD	Monsted U'grnd	87.81	332	i P	P	05 46 35.6	+14
ZEA	Zeya	88.05	31	eP	P	05 46 21.8	-1.4
ZEA				e		05 49 46.0	
ZEA				eS	SKSac	05 56 53.0	+2.1
ZEA				pmax	pmax		
	comp=Z,200nm,6.0s						
ZEA				pmax	pmax		
	comp=Z,64nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,500nm,7.0s						
ZEA				smax	smax		
	comp=E,900nm,14.0s						
KLR	Kul'dur	88.08	37c	eP	P	05 46 21.4	-2.1
APA	Apatity	88.24	348⇑	iP	P	05 46 21.2	-2.6
APA				i		05 49 47.0	
APA				i PPP	PPP	05 51 57.0	
APA				i S	S	05 57 03.0	-4.5
APA				i PS	PnS	05 58 09.0	-2.3
APA				pmax	pmax		
	comp=Z,3.0nm,0.0s						
HFS	Hagfors	88.25	337	P	P	05 46 22.4	-1.6
	comp=Z,1.6nm,0.8s,baz=116,slow=3.4,SNR=3.3						
RPZ	Rata Peaks	88.28	135	LR	LR	06 17 42.7	
	comp=Z,6µm,20.5s,baz=237,slow=30						
PVAQ	Vaqueiros	88.39	310	eP	P	05 46 36.1	+11
	comp=Z,58nm,1.7s						
PVAQ	Vaqueiros	88.39	310	eS	S	05 57 13.3	+3.1
PVAQ	Vaqueiros	88.39	310	eLQ	LQ	06 09 49.9	
PVAQ				eLR	LR	06 13 16.7	
	comp=Z,6µm,12.0s						
PBDV	Barranco-do-Ve	88.49	310	eP	P	05 46 38.2	+12
	comp=Z,80nm,1.7s						
PBDV	Barranco-do-Ve	88.49	310	eS	S	05 57 15.5	+4.3
PCVE	Castro Verde	88.72	310	eP	P	05 46 40.9	+14
	comp=Z,134nm,1.8s						
PCVE	Castro Verde	88.72	310	eS	S	05 57 20.7	+7.4
PBEJ	Beja	88.75	311	eP	P	05 46 36.9	+10
	comp=Z,104nm,1.8s						
PESTR	Estremoz	88.89	311	eP	P	05 46 39.0	+11
	comp=Z,148nm,1.7s						
PESTR	Estremoz	88.89	311	eS	S	05 57 22.8	+7.9
MESJ	Messejana	88.93	310	eP	P	05 46 28.7	+0.9
MESJ				AMS	AMS	06 29 30.6	
	comp=N,7µm,23.4s						
MESJ	Messejana	88.93	310	eP	P	05 46 38.8	+11
	comp=N,117nm,1.7s						
MESJ	Messejana	88.93	310	eP	P	05 46 28.7	+0.9
PMRV	Marv??o	88.97	312	eP	P	05 46 39.3	+11
	comp=N,148nm,1.7s						
PMRV	Marv??o	88.97	312	eS	S	05 57 17.3	+1.7
PMRV	Marv??o	88.97	312	eLQ	LQ	06 10 04.2	
PMRV				eLR	LR	06 13 14.3	
	comp=N,9µm,22.3s						
MORF	Marmelete	89.04	310	eP	P	05 46 29.3	+0.9
MORF				eSKS	SKSac	05 56 59.7	+2.0
MORF				AMS	AMS	06 23 30.8	
	comp=Z,8µm,29.8s						
MORF	Marmelete	89.04	310	eP	P	05 46 45.8	+17
	comp=Z,182nm,1.8s						
MORF	Marmelete	89.04	310	eS	S	05 57 26.1	+10
MORF	Marmelete	89.04	310	eP	P	05 46 29.2	+0.9
MORF				e		05 56 59.7	
TEY	Ternei	89.05	42	eP	P	05 46 21.0	-7.1
EVO	Evora	89.06	311	eP	P	05 46 41.5	+13
	comp=Z,160nm,1.8s						
PFVI	Vila Bisbo	89.10	309	eP	P	05 46 42.0	+13
	comp=Z,163nm,1.9s						
PFVI	Vila Bisbo	89.10	309	eS	S	05 57 24.7	+7.8
PNCL	Nicolau / Gran	89.26	310	eP	P	05 46 43.1	+14
	comp=Z,161nm,1.8s						
PNCL	Nicolau / Gran	89.26	310	eS	S	05 57 26.1	+7.7
MVO	Moncorvo	89.41	314	eP	P	05 46 39.6	+10
	comp=Z,141nm,1.8s						
MVO	Moncorvo	89.41	314	eS	S	05 57 21.7	+1.9
MVO	Moncorvo	89.41	314	eLQ	LQ	06 09 54.6	
MVO				eLR	LR	06 14 30.1	
	comp=Z,7µm,20.0s						
PMTG	Montargil	89.42	311	eS	S	05 57 25.5	+5.7
MTE	Manteigas	89.46	313	eP	P	05 46 40.5	+10
	comp=Z,107nm,1.7s						
MTE	Manteigas	89.46	313	eS	S	05 57 21.5	+1.2
MTE	Manteigas	89.46	313	eLQ	LQ	06 10 16.1	
MTE				eLR	LR	06 14 47.3	
	comp=Z,6µm,24.0s						
PBRG	Braganca	89.48	314	eS	S	05 57 29.7	+9.3
KONO	Kongsberg	89.55	335	i P	P	05 46 35.5	+5.4
KONO				pmax	pmax		
	comp=Z,50nm,1.7s						
PMSA	Palmer Station	89.65	199	LR	LR	06 20 42.7	
	comp=Z,9µm,19.6s,baz=123,slow=32						
PMSA	Palmer Station	89.65	199	PFAKE		05 46 40.0	+9.3
PMSA				LR	LR		
	comp=Z,141µm,21.0s						
ALMR	Almeirim	89.70	311	eP	P	05 46 32.3	+1.0
ALMR				AMS	AMS	06 28 13.2	
	comp=Z,8µm,19.4s						
ALMR	Almeirim	89.70	311	eP	P	05 46 32.3	+1.0
NB2	NORSAR Subarra	89.77	336	P	P	05 46 32.7	+1.5
	comp=Z,100nm,2.5s,baz=127,slow=5.1						
NB2	NORSAR Subarra	89.77	336	P	P	05 46 32.7	+1.5
	baz=127,slow=5.1						
NOA	NORSAR Array B	89.77	336	P	P	05 46 30.5	-0.8
	comp=Z,0.7nm,0.9s,baz=121,slow=4.3,SNR=2.3						
LIS	Lisbon	89.95	311	eP	P	05 46 33.5	+0.9
LIS				AMS	AMS	06 29 21.0	
	comp=Z,8µm,17.3s						
LIS	Lisbon	89.95	311	eP	P	05 46 33.4	+0.9
PCAS	Casmilo, Conde	90.00	312	eS	S	05 57 35.0	+10
POLO	Lamas de Olo	90.03	314	eP	P	05 46 44.6	+12
	comp=Z,61nm,1.7s						
POLO	Lamas de Olo	90.03	314	eS	S	05 57 30.0	+4.4
PMAFR	Mafra	90.13	311	eP	P	05 46 45.3	+12
	comp=Z,200nm,1.6s						
PMAFR	Mafra	90.13	311	eS	S	05 57 31.0	+4.5
PCAB	Cabril	90.32	314	eP	P	05 46 44.8	+11
	comp=Z,132nm,1.8s						
PGAV	Gavieira, Arco	90.59	314	eP	P	05 46 47.6	+12
	comp=Z,97nm,1.7s						
PGAV	Gavieira, Arco	90.59	314	eS	S	05 57 31.8	+1.1
PGAV	Gavieira, Arco	90.59	314	eLQ	LQ	06 10 40.0	
PGAV				eLR	LR	06 13 41.6	
	comp=Z,5µm,23.4s						
HNR	Honiara	90.64	100	LR	LR	06 25 39.9	
	comp=Z,4µm,20.5s,baz=242,slow=35						
HNR	Honiara	90.64	100	PFAKE		05 46 50.0	+14
HNR				LR	LR		
	comp=Z,576µm,20.0s						
KEV	Kevo	91.37	347	PFAKE		05 46 50.0	+12
KEV				LR	LR		
	comp=Z,5µm,22.0s						
GRNR	Gornyy	91.47	37	eP	P	05 46 52.5	+13
ARCES	ARCESS Array B	91.52	347	P	P	05 46 38.4	-0.7
	comp=Z,2.6nm,0.6s,baz=150,slow=5.1,SNR=10						
SNZO	South Karori	91.72	134	PFAKE		05 46 50.0	+9.2
SNZO				LR	LR		
	comp=Z,4µm,20.0s						
ERM	Erimo	92.20	47	PFAKE		05 46 50.0	+7.1
ERM				LR	LR		
	comp=Z,2µm,20.0s						
DZM	Mont Dzumac	92.52	114	ePP	PP	05 50 21.5	-4.8
	comp=Z,461nm,23.4s						
DZM				eSKSac	SKSac	05 57 15.3	-3.4
	comp=Z,2µm,24.4s						
DZM				eSP	SP	05 58 55.6	-4.0
	comp=Z,6µm,25.4s						
DZM				eSS	SS	06 04 00.5	-0.1
	comp=Z,8µm,26.6s						
DZM	Mont Dzumac	92.52	114	eLR	LR	06 16 26.3	
	comp=Z,15µm,21.6s						
DZM	Mont Dzumac	92.52	114	LR	LR	06 25 34.4	
	comp=Z,11µm,20.8s,baz=244,slow=34						
ASAJ	Asahikawa	92.59	44	LR	LR	06 24 32.1	
	comp=Z,1µm,21.9s,baz=244,slow=33						
EKA	Eskdalemuir Ar	93.13	328	P	P	05 46 46.3	-0.6
	comp=Z,0.1nm,0.3s,baz=139,slow=5.6,SNR=3.2						
ESK	Eskdalemuir	93.15	328	PFAKE		05 47 00.0	+13
ESK				LR	LR		
	comp=Z,4µm,19.0s						
YAK	Yakutsk	93.60	25	PFAKE		05 47 00.0	+11
YAK				LR	LR		
	comp=Z,7µm,22.0s						
YSS	Yuzh-Sakhalins	93.75	42	PFAKE		05 47 00.0	+10
YSS				LR	LR		
	comp=Z,976nm,20.0s						
URZ	Urewera	94.71	132	LR	LR	06 21 37.4	
	comp=Z,3µm,21.1s,baz=250,slow=30						
YUK	Yuzh-Kuril'sk	94.76	45	eP	P	05 46 53.4	-1.2
YUK				i S	SKSac	05 57 30.3	+0.8
YUK				pmax	pmax		
	comp=Z,85nm,1.5s						
YUK				pmax	pmax		
	comp=N,60nm,0.7s						
YUK				pmax	pmax		
	comp=E,39nm,0.7s						
YUK				MLR	MLR		
	comp=Z,852nm,16.0s						
YUK				MLR	MLR		
	comp=E,404nm,19.0s						
YUK				MLR	MLR		
	comp=N,182nm,14.0s						
NKL	Nikolayevsk	94.85	36	eP	P	05 47 04.0	+9.2
NKL				e		05 47 05.0	
NKL				e		06 04 36.0	
NKL				MLR	MLR		
	comp=E,3µm,16.0s						
NKL				MLR	MLR		
	comp=Z,4µm,16.0s						
VAL	Valentia	95.61	323	eP	P	05 47 03.8	+5.5
VAL	Valentia	95.61	323	i S	S	05 58 14.8	+0.2
EFI	East Falkland	95.78	211	PFAKE		05 47 10.0	+11
EFI				LR	LR		
	comp=Z,15µm,20.0s						
KUR	Kuril'sk	96.51	45	eP	P	05 46 57.4	-5.2
KUR				ePPP	PPP	05 52 53.0	
KUR				i SS	SS	06 05 00.5	+3.6
KUR				pmax	pmax		
	comp=Z,91nm,1.6s						
KUR				pmax	pmax		
	comp=Z,359nm,6.2s						
KUR				MLR	MLR		
	comp=Z,910nm,18.0s						
TIXI	Tiksi	98.34	17	PFAKE		05 47 20.0	+10
TIXI				LR	LR		
	comp=Z,5µm,19.0s						
SPITS	Spitsbergen Ar	99.59	351	LR	LR	06 33 58.1	
	comp=Z,3µm,21.0s,baz=175,slow=36						
RCBR	Riachuelo	99.80	261	PFAKE		05 47 30.0	+12
RCBR				LR	LR		
	comp=Z,70µm,21.0s						
KBS	Kingsbay	100.75	351	PFAKE		05 47 30.0	+9.1
KBS				LR	LR		
	comp=Z,4µm,22.0s						
CMLA	Cha da Macela	101.93	306	PFAKE		05 47 40.0	+13
CMLA				LR	LR		
	comp=Z,10µm,21.0s						
MA2	Magadan	102.20	31	PFAKE		05 47 40.0	+12
MA2				LR	LR		
	comp=Z,2µm,20.0s						
RAO	Raoul Island	102.53	126	PFAKE		05 47 40.0	+10
RAO				LR	LR		
	comp=Z,5µm,21.0s						
BORG	Borgarnes	104.70	334	PFAKE		05 47 50.0	+11
BORG				LR	LR		
	comp=Z,918nm,20.0s						
WAKE	Wake Island	105.10	74	PFAKE		05 52 10.0	
WAKE				LR	LR		
	comp=Z,1µm,21.0s						
PET	Petropavlovsk	105.22	39	PFAKE		05 52 10.0	
PET				LR	LR		
	comp=Z,2µm,20.0s						
TARA	Tarawa	106.26	94	PFAKE		05 52 10.0	
TARA				LR	LR		
	comp=Z,231nm,21.0s						
TRQA	Tornquist	106.41	220	PFAKE		05 52 10.0	
TRQA				LR	LR		
	comp=Z,17µm,20.0s						
FUNA	Funafuti	108.85	106	PFAKE		05 52 10.0	
FUNA				LR	LR		
	comp=Z,11µm,19.0s						
AFI	Afiamalu	114.73	115	PFAKE		05 52 20.0	+5.4
AFI				LR	LR		
	comp=Z,3µm,22.0s						
SFJD	Kangerlussuaq	116.44	337	PFAKE		05 52 30.0	+14
SFJD				LR	LR		
	comp=Z,5µm,20.0s						
LCO	Las Campanas	117.80	222	PFAKE		05 52 30.0	+9.5
LCO				LR	LR		
	comp=Z,12µm,19.0s						
RAR	Rarotonga	120.65	129	PFAKE		05 52 40.0	+14
RAR				LR	LR		
	comp=Z,4µm,22.0s						
MIDW	Midway	120.97	67	PFAKE		05 52 40.0	+14
MIDW				LR	LR		
	comp=Z,1µm,20.0s						
SAML	Samuel	123.57	246	PFAKE		05 52 40.0	+8.4
SAML				LR	LR		
	comp=Z,20µm,20.0s						
LPAZ	La Paz	123.90	236	PKP	PKPdf	05 52 37.8	+4.8
	comp=Z,2.8nm,1.0s,baz=78,slow=2.4,SNR=6.6						
PTGA	Pitinga	124.08	257	PFAKE		05 52 40.0	+7.4
PTGA				LR	LR		
	comp=Z,14µm,21.0s						
TBI	Tubuai	126.40	138	eSS	SS	06 11 33.5	-1.1
	comp=Z,5µm,41.0s						
TBI	Tubuai	126.40	138	eLQ	LQ	06 26 44.0	
	comp=Z,8µm,39.5s						
TBI				eLR	LR	06 31 55.7	
	comp=Z,6µm,30.8s						
JOHN	Johnston Islan	126.82	82	PFAKE		05 52 50.0	+12
JOHN				LR	LR		
	comp=Z,192nm,21.0s						
INK	Inuvik	127.73	9	PKP	PKPdf	05 52 38.5	+0.6
	comp=Z,1.6nm,0.9s,baz=34,slow=1.8,SNR=2.7						
INK	Inuvik	127.73	9	PKPdf	PKPdf	05 52 34.1	-3.8
INK	Inuvik	127.73	9	PKIKP	PKPdf	05 52 34.1	-3.8
BBGH	Gun Hill	127.73	273	PFAKE		05 52 50.0	+11
BBGH				LR	LR		
	comp=Z,18µm,19.0s						
ILAR	Eielson Array	127.81	17	PKP	PKPdf	05 52 38.1	0.0
	comp=Z,3.3nm,1.0s,baz=312,slow=3.0,SNR=8.0						
EGAK	Eagle	129.31	15	ePKPdf	PKPdf	05 52 47.0	+5.9
EGAK				LR	LR		
	comp=Z,2µm,21.0s						
GRGR	Grenville	129.51	271	PFAKE		05 52 50.0	+7.1
GRGR				LR	LR		
	comp=Z,9µm,22.0s						
DAWY	Dawson	130.34	14	ePKPdf	PKPdf	05 52 42.4	-0.7
PPT2	Papeete2	130.35	133	eSS	SS	06 12 21.4	-2.6
	comp=Z,2µm,25.5s						
PPT2	Papeete2	130.35	133	eLQ	LQ	06 28 21.0	
	comp=Z,17µm,42.8s						
PPT2				eLR	LR	06 33 47.7	
	comp=Z,9µm,28.0s						
KDAK	Kodiak Island	130.61	26	ePKPdf	PKPdf	05 52 42.6	-1.0
KDAK				LR	LR		
	comp=Z,2µm,22.0s						
KDAK	Kodiak Island	130.61	26	ePKIKP	PKPdf	05 52 42.6	-1.0
KDAK				MLR	MLR		
	comp=Z,2µm,22.0s						
ANWB	Willy Bob	130.64	278	PFAKE		05 53 00.0	+15
ANWB				LR	LR		
	comp=Z,9µm,20.0s						
NNA	Nana	133.23	234	PFAKE		05 53 00.0	+10
NNA				LR	LR		
	comp=Z,5µm,19.0s						
BBSR	BB Station	133.57	298	PFAKE		05 53 00.0	+10
BBSR				LR	LR		
	comp=Z,7µm,22.0s						
PKME	Peaks-Kenny Pk	133.90	317	PFAKE		05 53 00.0	+10
PKME				LR	LR		
	comp=Z,10µm,20.0s						
RKT	Rikitea	134.55	152	eSS	SS	06 13 18.6	+5.0
	comp=Z,2µm,42.8s						
RKT	Rikitea	134.55	152	eLQ	LQ	06 30 06.6	
	comp=Z,10µm,39.5s						
RKT				eLR	LR	06 35 55.8	
	comp=Z,6µm,23.5s						
RKT	Rikitea	134.55	152	eT	T	08 22 21.9	
	comp=Z,18nm,0.2s						
SJG	San Juan	134.82	278	PFAKE		05 53 00.0	+7.2
SJG				LR	LR		
	comp=Z,11µm,21.0s						
YKA	Yellowknife Ar	135.10	1	PKP	PKPdf	05 52 47.9	-4.0
	comp=Z,0.9nm,0.9s,baz=12,slow=3.2,SNR=3.9						
YKA	Yellowknife Ar	135.10	1	PKIKP	PKPdf	05 52 48.0	-4.0
SDV	Santo Domingo	137.27	264	PFAKE		05 53 10.0	+12
SDV				LR	LR		
	comp=Z,19µm,20.0s						
DLBC	Dease Lake	137.43	13	ePKPdf	PKPdf	05 52 58.3	+1.7
LONY	Lake Ozonia	137.59	318	PFAKE		05 53 10.0	+13
LONY				LR	LR		
	comp=Z,10µm,20.0s						
KIP	Kipapa	138.16	77	PFAKE		05 53 10.0	+11
KIP				LR	LR		
	comp=Z,4µm,21.0s						
WRAK	Wrangell Islan	138.72	16	PFAKE		05 53 10.0	+11
WRAK				LR	LR		
	comp=Z,6µm,21.0s						
CHIC	Chingaza	138.83	257	eP	PKPdf	05 53 06.1	+5.2
BINY	Binghamton	139.58	315	P	PKPdf	05 53 02.2	+1.2
	baz=64						
BINY	Binghamton	139.58	315	PFAKE		05 53 10.0	+9.0
BINY				LR	LR		
	comp=Z,15µm,21.0s						
GRTK	Grand Turk	139.77	283	PFAKE		05 53 10.0	+8.2
GRTK				LR	LR		
	comp=Z,12µm,21.0s						
PTBC	PUERTO BERRIO,	140.17	259	eP	PKPdf	05 53 13.4	+11
POHA	Pohakuloa	140.38	80	PFAKE		05 53 10.0	+6.7
POHA				LR	LR		
	comp=Z,2µm,20.0s						
ZARC	Zaragoza, Cauc	140.85	260	eP	PKPdf	05 53 07.4	+3.3
YOTC	Yotoco, Valle	141.00	254	eP	PKPdf	05 53 00.1	-4.4
HELC	Santa Helena	141.05	258	eP	PKPdf	05 53 06.1	+1.2
OTAV	Otavalo	141.28	247	ePKPdf	PKPdf	05 53 05.4	0.0
OTAV				LR	LR		
	comp=Z,17µm,20.0s						
OTAV	Otavalo	141.28	247	ePKIKP	PKPdf	05 53 05.4	0.0
OTAV				MLR	MLR		
	comp=Z,17µm,20.0s						
PLMC	San Jos˜ı del	141.29	256	eP	PKPdf	05 53 16.0	+11
SSPA	Standing Stone	141.55	314	P	PKPdf	05 53 06.2	+1.7
	baz=64						
FFC	Flin Flon	141.81	349	PFAKE		05 53 10.0	+5.4
FFC				LR	LR		
	comp=Z,6µm,19.0s						
SJCC	San Jacinto, C	141.86	264	eP	PKPdf	05 53 13.4	+7.4
O56A	Blue Knob Stat	142.18	314	P	PKPdf	05 53 08.0	+2.3
	baz=63						
CBN	Corbin Frederi	142.19	310	PFAKE		05 53 20.0	+14
CBN				LR	LR		
	comp=Z,16µm,22.0s						
TAOE	Nuku Hiva Isla	142.97	133	eSS	SS	06 14 55.0	+0.3
	comp=Z,4µm,34.8s						
TAOE	Nuku Hiva Isla	142.97	133	eLR	LR	06 39 37.3	
	comp=Z,6µm,23.6s						
GTBY	Guantanamo Bay	143.42	280	PFAKE		05 53 20.0	+12
GTBY				LR	LR		
	comp=Z,9µm,22.0s						
CNNC	Cliffs of the	143.65	306	PFAKE		05 53 20.0	+12
CNNC				LR	LR		
	comp=Z,829nm,22.0s						
D41A	Chassel	144.01	330	P	PKPdf	05 53 08.4	-0.3
	baz=43						
F43A	Flat Rock, Esc	144.20	328	P	PKPdf	05 53 08.3	-0.8
	baz=47						
ULM	Lac du Bonnet	144.37	340	PKP	PKPdf	05 53 08.5	-0.7
	comp=Z,5.0nm,0.6s,baz=68,slow=3.3,SNR=8.5						
AAM	Ann Arbor	144.45	320	PFAKE		05 53 20.0	+10
AAM				LR	LR		
	comp=Z,17µm,22.0s						
E41A	Kenton	144.63	330	P	PKPab	05 53 08.5	+0.1
	baz=43						
EYMN	Ely	144.65	334	P	PKPab	05 53 04.7	-3.8
	baz=38						
EYMN	Ely	144.65	334	ePKPdf	PKPab	05 53 06.9	-1.5
EYMN				LR	LR		
	comp=Z,9µm,19.0s						
C38A	Sawbill Land.	144.74	333	P	PKPab	05 53 07.0	-1.7
	baz=39						
BLA	Blacksburg	144.80	311	P	PKPab	05 53 06.9	-2.5
	baz=65						
BLA	Blacksburg	144.80	311	ePKPdf	PKPab	05 53 09.3	-0.1
BLA				LR	LR		
	comp=Z,12µm,22.0s						
BLA	Blacksburg	144.80	311	ePKP2	PKPab	05 53 09.3	-0.1
BLA				MLR	MLR		
	comp=Z,12µm,22.0s						
N50A	Nevada	144.97	318	P	PKPab	05 53 07.3	-2.5
	baz=58						
COWI	Conover	144.98	330	ePKPdf	PKPbc	05 53 09.9	+0.1
COWI				LR	LR		
	comp=Z,9µm,21.0s						
E40A	Wakefield	145.09	331	P	PKPbc	05 53 07.8	-2.3
	baz=42						
C37A	Embarrass	145.11	334	P	PKPbc	05 53 08.5	-1.6
	baz=38						
M49A	Liberty Center	145.11	319	P	PKPbc	05 53 08.4	-1.9
	baz=56						
L48A	N Adams	145.12	320	P	PKPbc	05 53 07.6	-2.7
	baz=54						
ACSO	Alum Creek Sta	145.15	317	P	PKPbc	05 53 08.4	-2.0
	baz=58						
ACSO	Alum Creek Sta	145.15	317	ePKPdf	PKPbc	05 53 08.3	-2.2
ACSO				LR	LR		
	comp=Z,15µm,21.0s						
B35A	Bob, Littlefor	145.21	336	P	PKPbc	05 53 08.1	-2.2
	baz=35						
F41A	Three Lakes	145.23	329	P	PKPbc	05 53 07.9	-2.6
	baz=44						
G42A	Mountain	145.24	328	P	PKPbc	05 53 08.6	-1.9
	baz=45						
A33A	Warroad	145.34	339	P	PKPbc	05 53 09.2	-1.6
	baz=32						
C36A	Pine Crest Far	145.35	335	P	PKPbc	05 53 09.2	-1.6

	baz=36						
H43A	Windswept, Lux	145.44	326	P	PKPbc	05 53 09.5	-1.7
	baz=47						
E39A	Mellen	145.44	331	P	PKPbc	05 53 09.1	-2.1
	baz=41						
B34A	Aery, Baudette	145.46	337	P	PKPbc	05 53 09.4	-1.7
	baz=33						
L47A	Sherwood	145.57	321	P	PKPdf	05 53 10.0	-1.6
	baz=54						
F40A	Park Falls	145.58	330	P	PKPdf	05 53 09.7	-1.8
	baz=42						
MTDJ	Mount Denham	145.60	277	*e*PKPdf	PKPdf	05 53 09.8	-2.6
MTDJ				LR	LR		
	comp=Z,7µm,21.0s						
O50A	Cable	145.61	317	P	PKPdf	05 53 10.2	-1.5
	baz=58						
G41A	Antigo	145.64	329	P	PKPdf	05 53 09.9	-1.7
	baz=44						
D37A	Cotton	145.66	334	P	PKPdf	05 53 10.4	-1.1
	baz=38						
E38A	The Farm, Brul	145.72	333	P	PKPdf	05 53 10.3	-1.4
	baz=40						
H42A	Shiocton	145.81	327	P	PKPdf	05 53 10.6	-1.3
	baz=46						
C35A	Jirik Farms, M	145.85	336	P	PKPdf	05 53 09.1	-2.8
	baz=35						
R52A	Catlettsburg	145.87	314	P	PKPdf	05 53 10.6	-1.6
	baz=61						
D36A	Goodland	145.95	335	PKiKP	PKPab	05 53 13.7	+0.5
	baz=36						
F39A	Loretta	145.96	331	P	PKPdf	05 53 10.0	-2.2
	baz=41						
Q51A	Peebles	146.01	315	P	PKPdf	05 53 09.9	-2.5
	baz=59						
P50A	Jamestown	146.01	316	PKiKP	PKPab	05 53 14.8	+1.1
	baz=58						
I43A	Langenfeld Bro	146.03	326	PKiKP	PKPab	05 53 14.6	+0.9
	baz=47						
AGMN	Agassiz Nation	146.05	339	P	PKPdf	05 53 10.1	-2.1
	baz=31						
AGMN	Agassiz Nation	146.05	339	*e*PKPdf	PKPdf	05 53 11.3	-0.8
AGMN				LR	LR		
	comp=Z,11µm,20.0s						
O49A	Covington	146.05	318	P	PKPdf	05 53 09.8	-2.7
	baz=57						
BCIP	Isla Barro Col	146.05	260	PKPdf	PKPab	05 53 18.7	+4.1
BCIP				LR	LR		
	comp=Z,21µm,20.0s						
BCIP	Isla Barro Col	146.05	260	*e*P	PKPab	05 53 23.4	+8.8
G40A	Rib Lake	146.10	330	P	PKPdf	05 53 10.2	-2.2
	baz=43						
E37A	Wrenshall	146.12	333	PKiKP	PKiKP	05 53 15.4	-1.1
	baz=38						
NHSC	New Hope	146.14	304	PKiKP	PKPab	05 53 15.1	+0.7
	baz=71						
NHSC	New Hope	146.14	304	PKPdf	PKPab	05 53 17.9	+3.5
NHSC				LR	LR		
	comp=Z,6µm,20.0s						
C34A	RKJ Ranch, Bem	146.25	337	PKiKP	PKPab	05 53 15.3	+1.0
	baz=33						
H41A	Junction City	146.30	328	P	PKPdf	05 53 10.1	-2.6
	baz=44						
KMSC	Kings Mountain	146.31	308	P	PKPdf	05 53 09.4	-3.7
	baz=67						
D35A	Remer	146.39	335	P	PKPdf	05 53 10.8	-2.0
	baz=35						
S52A	Salyersville	146.49	313	PKiKP	PKPab	05 53 16.4	+0.8
	baz=62						
J43A	Natural Harves	146.52	326	PKiKP	PKiKP	05 53 16.8	-0.7
	baz=47						
E36A	McGregor	146.52	334	PKiKP	PKPab	05 53 15.9	+0.5
	baz=37						
Q50A	Georgetown	146.53	315	PKiKP	PKPab	05 53 16.1	+0.4
	baz=59						
O48A	Farmland	146.53	318	PKiKP	PKPab	05 53 16.1	+0.4
	baz=56						
R51A	Hillsboro	146.53	314	PKiKP	PKPab	05 53 16.2	+0.5
	baz=60						
G39A	Holcombe	146.54	331	PKiKP	PKPab	05 53 16.2	+0.6
	baz=41						
P49A	Miami Univ. Ec	146.65	317	PKiKP	PKPab	05 53 16.5	+0.3
	baz=57						
H40A	Chili	146.66	329	PKiKP	PKPab	05 53 16.8	+0.8
	baz=43						
U53A	Fall Branch	146.73	310	PKiKP	PKPab	05 53 17.1	+0.5
	baz=64						
I41A	Arkdale	146.81	328	PKiKP	PKPab	05 53 16.7	+0.1
	baz=45						
S51A	Beattyville	146.87	313	PKiKP	PKPab	05 53 17.0	-0.1
	baz=61						
F37A	Hinrichs Farm,	146.87	333	PKiKP	PKPab	05 53 16.8	0.0
	baz=39						
K43A	Burlington	146.92	325	PKiKP	PKPab	05 53 16.8	-0.3
	baz=48						
J42A	Columbus	146.94	326	PKiKP	PKPab	05 53 16.5	-0.6
	baz=46						
G38A	Ridgeland	146.95	331	PKiKP	PKPab	05 53 16.8	-0.3
	baz=40						
E35A	Pequot Lakes	146.96	335	PKiKP	PKPab	05 53 17.0	-0.1
	baz=35						
R50A	Paris	147.05	315	PKiKP	PKPab	05 53 17.5	-0.3
	baz=59						
H39A	Augusta	147.05	330	PKiKP	PKPab	05 53 16.9	-0.7
	baz=42						
Q49A	Aurora	147.05	316	PKiKP	PKPab	05 53 17.2	-0.6
	baz=58						
N46A	Monticello	147.14	321	PKiKP	PKPbc	05 53 17.1	+0.7
	baz=53						
M45A	Boilermakers S	147.15	322	PKiKP	PKPab	05 53 18.2	+0.1
	baz=51						
P48A	Milroy	147.15	317	PKiKP	PKPbc	05 53 17.1	+0.6
	baz=56						
F36A	Milaca	147.15	334	PKiKP	PKPbc	05 53 16.8	+0.5
	baz=37						
O47A	Sheridan	147.19	319	PKiKP	PKPbc	05 53 17.4	+0.8
	baz=54						
V53A	Saluda	147.20	309	PKiKP	PKPab	05 53 18.4	-0.1
	baz=65						
U52A	Thorn Hill	147.29	311	PKiKP	PKPbc	05 53 17.7	+0.7
	baz=63						
E34A	Wadena	147.29	336	PKiKP	PKPab	05 53 18.5	0.0
	baz=34						
I40A	Norwalk	147.30	328	PKiKP	PKPab	05 53 18.7	+0.1
	baz=44						
SPMN	Marine on St.	147.34	332	PKiKP	PKPab	05 53 18.7	0.0
	baz=39						
TZTN	Tazewell	147.35	311	PKiKP	PKPbc	05 53 17.5	+0.3
	baz=62						
TZTN	Tazewell	147.35	311	*e*PKPdf	PKPdf	05 53 13.0	-1.8
J41A	Loganville	147.37	327	PKiKP	PKPbc	05 53 17.4	+0.4
	baz=45						
S50A	Richmond	147.40	314	PKiKP	PKPbc	05 53 18.1	+0.8
	baz=60						
K42A	Prairie Point,	147.42	326	PKiKP	PKPab	05 53 18.2	-0.9
	baz=47						
T51A	Gray	147.43	312	PKiKP	PKPbc	05 53 17.4	0.0
	baz=62						
H38A	Maiden Rock	147.53	331	PKiKP	PKPbc	05 53 18.1	+0.7
	baz=40						
F35A	Swanville	147.59	335	PKiKP	PKPbc	05 53 17.5	0.0
	baz=36						
R49A	Shelbyville	147.61	315	PKiKP	PKPbc	05 53 17.9	+0.1
	baz=58						
Q48A	North Vernon	147.64	317	PKiKP	PKPbc	05 53 18.6	+0.7
	baz=57						
MDND	Maddock	147.65	342	PKiKP	PKPbc	05 53 17.4	-0.2
	baz=26						
Z55A	Blythe	147.65	305	PKiKP	PKPbc	05 53 17.9	-0.2
	baz=69						
SFIN	Lafayette	147.67	320	PKiKP	PKPbc	05 53 18.4	+0.5
	baz=53						
W53A	Cullowhee	147.67	309	PKiKP	PKPbc	05 53 18.3	+0.1
	baz=65						
P47A	Martinsville	147.68	318	PKiKP	PKPbc	05 53 17.8	-0.2
	baz=55						
V52A	Sevierville	147.70	310	PKiKP	PKPbc	05 53 18.0	-0.1
	baz=63						
J40A	Soldiers Grove	147.72	328	PKiKP	PKPbc	05 53 18.4	+0.5
	baz=44						
G36A	St. Michael	147.75	333	PKiKP	PKPbc	05 53 17.9	0.0
	baz=37						
U51A	La Follette	147.76	311	PKiKP	PKPbc	05 53 18.3	-0.1
	baz=62						
I39A	Houston	147.78	329	PKiKP	PKPbc	05 53 17.9	-0.2
	baz=42						
JFWS	Jewell Farm	147.81	327	PKiKP	PKPbc	05 53 18.2	0.0
	baz=45						
JFWS	Jewell Farm	147.81	327	*e*PKPbc	PKPab	05 53 24.1	+3.5
JFWS				LR	LR		
	comp=Z,10µm,19.0s						
Y54A	Tignall	147.84	306	PKiKP	PKPbc	05 53 18.8	+0.3
	baz=67						
256A	Glennville	147.87	303	PKiKP	PKiKP	05 53 20.3	-0.3
	baz=71						
H37A	Dierke Farm, C	147.89	331	PKiKP	PKPbc	05 53 18.7	+0.3
	baz=39						
TKL	Tuckaleechee C	147.91	310	PKPbc	PKPdf	05 53 17.0	+1.3
	comp=Z,3.0nm,0.8s,baz=98,slow=7.1,SNR=3.2						
S49A	Springfield	147.96	315	PKiKP	PKPbc	05 53 19.6	+0.9
	baz=59						
R48A	Northridge Ran	148.02	316	PKiKP	PKPbc	05 53 19.7	+0.8
	baz=57						
I38A	Scanlan Farm,	148.03	330	PKiKP	PKiKP	05 53 20.3	-0.2
	baz=41						
T50A	Nancy	148.03	313	PKiKP	PKPbc	05 53 19.6	+0.6
	baz=60						
N44A	Piper City	148.04	322	PKiKP	PKPbc	05 53 19.6	+0.8
	baz=51						
X53A	Estanollee	148.05	308	PKiKP	PKPbc	05 53 19.9	+0.8
	baz=66						
K41A	Shullsburg	148.05	326	PKiKP	PKiKP	05 53 19.7	-0.9
	baz=46						
A04D	Lummi Island	148.06	11	PKiKP	PKPbc	05 53 18.9	+0.3
	baz=344						
G35A	Watkins	148.07	334	PKiKP	PKPbc	05 53 18.9	0.0
	baz=36						
Q47A	Bedord North L	148.09	317	PKiKP	PKPbc	05 53 19.1	0.0
	baz=56						
859A	Kempfer Cattle	148.09	295	PKiKP	PKiKP	05 53 21.2	+0.1
	baz=78						
155A	Kite	148.12	304	PKiKP	PKiKP	05 53 21.5	+0.4
	baz=69						
L42A	Oliver, Polo	148.12	325	PKiKP	PKiKP	05 53 20.5	-0.3
	baz=47						
O45A	Potomac	148.13	321	PKiKP	PKPbc	05 53 19.4	+0.2
	baz=52						
758A	Lake Helen	148.15	297	PKiKP	PKiKP	05 53 21.0	-0.3
	baz=76						
959A	Okeechobee	148.18	294	PKiKP	PKPbc	05 53 19.6	0.0
	baz=79						
Z54A	Sparta	148.19	305	PKiKP	PKPbc	05 53 19.8	+0.3
	baz=68						
P46A	Rosedale	148.19	319	PKiKP	PKiKP	05 53 20.8	-0.3
	baz=54						
DGMT	Dagmar	148.20	348	PKiKP	PKPbc	05 53 19.2	+0.1
	baz=17						
DGMT	Dagmar	148.20	348	*e*PKPdf	PKPdf	05 53 15.2	-0.6
DGMT				LR	LR		
	comp=Z,10µm,21.0s						
J39A	Decorah	148.25	329	PKiKP	PKPbc	05 53 19.6	+0.3
	baz=43						
V51A	Loudon	148.26	311	PKiKP	PKiKP	05 53 20.9	-0.4
	baz=63						
W52A	Murphy	148.27	309	PKiKP	PKiKP	05 53 20.8	-0.6
	baz=64						
557A	Orange Park	148.33	299	PKiKP	PKPbc	05 53 20.1	+0.1
	baz=74						
U50A	Jamestown	148.33	312	PKiKP	PKPbc	05 53 19.6	-0.2
	baz=61						
255A	Hazlehurst	148.36	303	PKiKP	PKPbc	05 53 20.0	0.0
	baz=70						
WCI	Wyandotte Cave	148.39	316	PKiKP	PKPbc	05 53 20.1	+0.2
	baz=57						
WCI	Wyandotte Cave	148.39	316	PKPdf	PKPdf	05 53 15.3	-1.1
WCI	Wyandotte Cave	148.39	316	PKIKP	PKPdf	05 53 15.3	-1.1
X52A	Dahlonega	148.45	308	PKiKP	PKPbc	05 53 20.1	-0.1
	baz=65						
T49A	Edmonton	148.47	314	PKiKP	PKPbc	05 53 19.8	-0.3
	baz=59						
R47A	Wooly Knot Far	148.51	317	PKiKP	PKiKP	05 53 21.0	-0.8
	baz=56						
G34A	Benson	148.53	335	PKiKP	PKiKP	05 53 21.0	-0.6
	baz=34						
L41A	Preston	148.53	326	PKiKP	PKPbc	05 53 20.3	+0.2
	baz=46						
Y53A	Monroe	148.53	307	PKiKP	PKiKP	05 53 21.9	0.0
	baz=66						
DWPF	Disney Wildern	148.54	295	PKiKP	PKiKP	05 53 22.2	+0.1
	baz=77						
DWPF	Disney Wildern	148.54	295	PKPdf	PKPbc	05 53 21.9	+1.4
S48A	Wiedeman Farm,	148.54	315	PKiKP	PKiKP	05 53 21.6	-0.3
	baz=58						
PRVC	Isla de Provid	148.57	267	*e*P	PKPbc	05 53 21.4	+0.4
P45A	Graceland, Par	148.58	319	PKiKP	PKPbc	05 53 20.8	+0.5
	baz=53						
B05A	Bryant	148.61	11	PKiKP	PKPbc	05 53 20.3	+0.2
	baz=344						
GOGA	Godfrey	148.61	306	PKiKP	PKiKP	05 53 21.7	-0.4
	baz=67						
GOGA	Godfrey	148.61	306	PKPdf	PKPab	05 53 22.7	-1.4
GOGA				LR	LR		
	comp=Z,6µm,20.0s						
GOGA	Godfrey	148.61	306	PKP2	PKPab	05 53 22.7	-1.4
GOGA				MLR	MLR		
	comp=Z,6µm,20.0s						
154A	Montrose	148.63	304	PKiKP	PKPbc	05 53 21.0	+0.3
	baz=69						
H35A	Sunnyside Ranc	148.64	334	PKiKP	PKiKP	05 53 21.7	-0.1
	baz=36						
J38A	Wedel Dairy, R	148.64	329	PKiKP	PKiKP	05 53 22.3	+0.4
	baz=41						
O44A	Mansfield	148.64	321	PKiKP	PKiKP	05 53 22.3	+0.4
	baz=51						
Z53A	Monticello	148.74	306	PKiKP	PKPbc	05 53 21.4	+0.4
	baz=67						
K39A	Oelwein	148.80	328	PKiKP	PKiKP	05 53 22.0	-0.2
	baz=43						
I36A	Fitzsimmons Fa	148.82	332	PKiKP	PKiKP	05 53 22.4	+0.2
	baz=38						
W51A	Cleveland	148.85	310	PKiKP	PKiKP	05 53 22.4	-0.2
	baz=63						
V50A	Pikevile	148.87	311	PKiKP	PKiKP	05 53 22.6	+0.1
	baz=62						
Y52A	Lilburn	148.89	307	PKiKP	PKiKP	05 53 23.0	+0.3
	baz=66						
059Z	Ave Maria	148.89	292	PKiKP	PKiKP	05 53 23.8	+1.0
	baz=80						
L40A	Anamosa	148.92	327	PKiKP	PKiKP	05 53 22.1	-0.3
	baz=45						
U49A	Red Boiling Sp	148.94	313	PKiKP	PKPab	05 53 24.1	-1.3
	baz=60						
254A	Abbeville	149.01	303	PKiKP	PKiKP	05 53 22.9	-0.1
	baz=70						
M41A	Milan	149.03	325	PKiKP	PKiKP	05 53 23.6	+0.9
	baz=47						
058A	Arcadia	149.08	293	PKiKP	PKiKP	05 53 23.9	+0.7
	baz=79						
NLWA	Neilton Lookou	149.09	13	PKPdf	PKPab	05 53 25.2	-0.4
NLWA				LR	LR		
	comp=Z,12µm,20.0s						
N42A	Yates City	149.12	324	PKiKP	PKiKP	05 53 23.5	+0.6
	baz=48						
S47A	Hartford	149.12	316	PKiKP	PKiKP	05 53 24.3	+1.3
	baz=57						
P44A	Sand Creek, Wi	149.16	320	PKiKP	PKiKP	05 53 23.7	+0.7
	baz=52						
J37A	Redenius Farm,	149.16	331	PKiKP	PKiKP	05 53 23.6	+0.6
	baz=40						
455A	Stateville	149.19	301	PKiKP	PKPbc	05 53 22.6	+0.5
	baz=72						
857A	Zephyrhills	149.19	296	PKiKP	PKPbc	05 53 22.6	+0.4
	baz=76						
Q45A	Warren Harvey,	149.21	319	PKiKP	PKiKP	05 53 23.6	+0.4
	baz=53						
G32A	Webster	149.23	337	PKiKP	PKiKP	05 53 24.3	+1.2
	baz=31						
W50A	Signal Mountai	149.24	310	PKiKP	PKPbc	05 53 21.3	-0.9
	baz=62						
L39A	Vinton	149.28	327	PKiKP	PKPbc	05 53 22.2	+0.2
	baz=44						
K38A	Parkersburg	149.28	329	PKiKP	PKPbc	05 53 22.1	0.0
	baz=42						
555A	McAlpin	149.33	300	PKiKP	PKiKP	05 53 24.6	+1.0
	baz=73						
V49A	McMinnville	149.39	312	PKiKP	PKPbc	05 53 21.8	-0.7
	baz=61						
TIGA	Tifton	149.42	303	PKiKP	PKiKP	05 53 24.8	+0.9
	baz=70						
Z52A	Williamson	149.43	306	PKiKP	PKiKP	05 53 24.4	+0.6
	baz=66						
EGMT	Eagleton	149.44	355	PKiKP	PKiKP	05 53 23.2	-0.3
	baz=7.2						
EGMT	Eagleton	149.44	355	PKPdf	PKPdf	05 53 18.6	+0.7
EGMT				LR	LR		
	comp=Z,6µm,21.0s						
U48A	Cassie Pea, Po	149.47	314	PKiKP	PKPbc	05 53 21.2	-1.5
	baz=59						
J36A	Seneca 1, Swea	149.51	332	PKiKP	PKPbc	05 53 20.9	-1.6
	baz=38						
M40A	Post Highland	149.54	326	PKiKP	PKiKP	05 53 23.8	+0.1
	baz=45						
P43A	Skaggs, Pawnee	149.59	321	PKiKP	PKPbc	05 53 22.2	-0.7
	baz=50						
T47A	Sharon Grove	149.60	315	PKiKP	PKPbc	05 53 23.1	+0.1
	baz=57						
K37A	Belmond	149.62	330	PKiKP	PKPbc	05 53 22.3	-0.5
	baz=40						
S46A	Don Dixon Farm	149.63	317	PKiKP	PKPbc	05 53 22.9	-0.1
	baz=56						
Y51A	Rockmart	149.63	308	PKiKP	PKPbc	05 53 22.8	-0.4
	baz=65						
253A	Americus	149.63	304	PKiKP	PKPbc	05 53 22.3	-0.9
	baz=68						
R45A	Skylar, Fairfi	149.65	318	PKiKP	PKPbc	05 53 21.3	-1.7
	baz=54						
454A	Quitman	149.69	301	PKiKP	PKPbc	05 53 23.4	0.0
	baz=71						
Q44A	Meyer Farm, Va	149.74	320	PKiKP	PKPbc	05 53 23.6	+0.3
	baz=52						
L38A	Oak Wood Farm,	149.75	328	PKiKP	PKPbc	05 53 23.5	+0.3
	baz=42						
X50B	Fort Payne	149.82	309	PKiKP	PKPbc	05 53 23.4	-0.3
	baz=63						
M39A	Webster	149.83	327	PKiKP	PKPbc	05 53 22.8	-0.6
	baz=44						
152A	Waverly Hall	149.87	305	PKiKP	PKPbc	05 53 23.1	-0.7
	baz=67						
N40A	Mertquake, Sal	149.94	325	PKiKP	PKPbc	05 53 24.1	+0.4
	baz=46						
353A	Camilla	149.96	303	PKiKP	PKPbc	05 53 23.8	-0.2
	baz=70						
W49A	Belvidere	149.96	311	PKiKP	PKPbc	05 53 23.8	-0.1
	baz=61						
U47A	Clarksville	150.02	314	PKiKP	PKPbc	05 53 22.4	-1.6
	baz=58						
SCIA	State Center	150.06	328	PKiKP	PKPbc	05 53 23.9	-0.1
	baz=42						
SCIA	State Center	150.06	328	PKPdf	PKPbc	05 53 23.6	-0.3
SCIA				LR	LR		
	comp=Z,16µm,22.0s						
V48A	Smith Brothers	150.06	313	PKiKP	PKPbc	05 53 24.1	-0.1
	baz=60						
O41A	Passleys Farm,	150.07	323	PKiKP	PKPbc	05 53 23.6	-0.5
	baz=48						
K36A	Gilmore City	150.10	331	PKiKP	PKPbc	05 53 24.4	+0.4
	baz=39						
T46A	Princeton	150.11	316	PKiKP	PKPbc	05 53 22.2	-2.0
	baz=56						
P42A	Winchester	150.11	322	PKiKP	PKPbc	05 53 23.1	-1.0
	baz=49						
252A	Lumpkin	150.13	304	PKiKP	PKPbc	05 53 23.9	-0.6
	baz=68						
Y50A	Piedmont	150.14	308	PKiKP	PKPbc	05 53 23.9	-0.5
	baz=64						
Q43A	New Douglas	150.14	320	PKiKP	PKPbc	05 53 23.4	-0.8
	baz=51						
L37A	Phoenix Point,	150.16	329	PKiKP	PKPbc	05 53 22.5	-1.7
	baz=41						
ECSD	EROS Data Cent	150.16	335	PKiKP	PKPbc	05 53 22.2	-2.0
	baz=34						
ECSD	EROS Data Cent	150.16	335	PKPdf	PKPbc	05 53 22.6	-1.6
ECSD				LR	LR		
	comp=Z,16µm,22.0s						
R44A	Waltonville	150.18	319	PKiKP	PKPbc	05 53 23.3	-1.1
	baz=53						
LAO	LASA Array	150.29	350	PKPdf	PKPdf	05 53 18.6	-0.6
LAO				LR	LR		
	comp=Z,10µm,20.0s						
X49A	Woodville	150.29	310	PKiKP	PKPbc	05 53 23.7	-1.0
	baz=62						
M38A	Pleasantville	150.41	328	PKiKP	PKPbc	05 53 25.1	+0.3
	baz=42						
N39A	Derby Farms, D	150.44	326	PKiKP	PKPbc	05 53 23.6	-1.3
	baz=44						
SUSD	Miller	150.46	338	PKiKP	PKPbc	05 53 23.7	-1.1
	baz=29						
P41A	Barry, Barry	150.47	323	PKiKP	PKPbc	05 53 22.8	-2.2
	baz=48						
352A	Blakely	150.48	303	PKiKP	PKPbc	05 53 24.0	-1.2
	baz=69						
V47A	Nunnelly	150.50	313	PKiKP	PKPbc	05 53 24.0	-1.2
	baz=59						
Z50A	Ashland	150.55	307	PKiKP	PKPbc	05 53 23.4	-2.0
	baz=65						
WVT	Waverly	150.56	314	PKiKP	PKPbc	05 53 23.4	-1.9
	baz=58						
S44A	Carbondale	150.62	318	PKiKP	PKPbc	05 53 24.0	-1.5
	baz=53						
251A	Midway	150.63	305	PKiKP	PKPbc	05 53 24.6	-1.0
	baz=67						
O40A	La Belle	150.63	324	PKiKP	PKPbc	05 53 23.2	-2.2
	baz=46						
Y49A	Blount Mountai	150.66	309	PKiKP	PKPbc	05 53 23.6	-2.1
	baz=63						
Q42A	Golden Eagle	150.66	321	PKiKP	PKPbc	05 53 24.0	-1.5
	baz=50						
U46A	Springville	150.67	315	PKiKP	PKPbc	05 53 24.9	-0.7
	baz=57						
PAYG	Puerto Ayora	150.67	234	PFAKE		05 53 30.0	-3.1
PAYG				LR	LR		
	comp=Z,11µm,20.0s						
MSO	Missoula	150.80	0	PKiKP	PKPbc	05 53 24.4	-1.3
	baz=359						
HAWA	Hanford	150.84	8	PKPdf	PKPbc	05 53 29.0	+3.4
HAWA				LR	LR		
	comp=Z,10µm,21.0s						
W47A	Westpoint	150.85	312	PKiKP	PKPbc	05 53 23.5	-2.6
	baz=59						
150A	Eclectic	150.90	306	PKiKP	PKPbc	05 53 24.3	-1.9
	baz=66						
V46A	Holladay	150.93	314	PKiKP	PKPbc	05 53 24.3	-1.9
	baz=58						
Z49A	Columbiana	151.04	308	PKiKP	PKPbc	05 53 25.1	-1.4
	baz=64						
Q41A	Truxton	151.05	322	PKiKP	PKPbc	05 53 25.1	-1.3
	baz=49						
U45A	Rockin P Farm,	151.07	315	PKiKP	PKPbc	05 53 24.4	-2.1
	baz=56						
351A	Pinckard	151.09	303	PKiKP	PKPbc	05 53 24.0	-2.7
	baz=68						
P40A	Paris	151.13	324	PKiKP	PKPbc	05 53 24.0	-2.6
	baz=47						
M36A	Felix, Anita	151.18	330	PKiKP	PKPbc	05 53 24.6	-2.0
	baz=40						
JTS	JuntasAbangare	151.20	259	PFAKE		05 53 30.0	+2.5
JTS				LR	LR		
	comp=Z,15µm,21.0s						
S43A	Fulton Ridge,	151.22	319	PKiKP	PKPbc	05 53 25.4	-1.5
	baz=52						
R42A	Luebbering	151.22	320	PKiKP	PKPbc	05 53 25.4	-1.5
	baz=50						
X47A	Russelville	151.40	311	PKiKP	PKPbc	05 53 25.0	-2.3
	baz=60						
LRAL	Lakeview Retre	151.46	308	PKPdf	PKPbc	05 53 25.0	-2.6
149A	Jones	151.49	307	PKiKP	PKPbc	05 53 26.3	-1.3
	baz=65						
O38A	Galt	151.50	326	PKiKP	PKPbc	05 53 26.1	-1.3
	baz=44						
V45A	Humboldt	151.54	314	PKiKP	PKPbc	05 53 26.7	-0.9
	baz=57						
S42A	Caledonia	151.54	320	PKiKP	PKPbc	05 53 26.6	-1.0
	baz=51						
R41A	Rosebud	151.56	321	PKiKP	PKPbc	05 53 27.1	-0.5
	baz=49						
CCM	Cathedral Cave	151.64	321	PKiKP	PKPbc	05 53 27.3	-0.5
	baz=50						
CCM	Cathedral Cave	151.64	321	PKPdf	PKPbc	05 53 27.1	-0.7
T43A	Greenville	151.65	318	PKiKP	PKPbc	05 53 24.9	-2.9
	baz=53						
G05D	Wamic, OR	151.67	11	PKiKP	PKPbc	05 53 27.0	-0.7
	baz=344						
Y47A	UCPARC, Winfie	151.69	310	PKiKP	PKPbc	05 53 25.9	-2.2
	baz=61						
Z48A	Northport	151.72	309	PKiKP	PKPbc	05 53 25.8	-2.3
	baz=62						
P38A	Dawn	151.88	326	PKiKP	PKPbc	05 53 27.3	-1.0
	baz=44						
X46A	Booneville	151.90	312	PKiKP	PKPbc	05 53 26.9	-1.6
	baz=59						
BOZ	Bozeman (W)	151.98	357	PKiKP	PKPbc	05 53 27.1	-1.4
	baz=4.0						
BOZ	Bozeman (W)	151.98	357	PKPdf	PKPbc	05 53 30.0	+1.4
BOZ				LR	LR		
	comp=Z,8µm,20.0s						

Q39A	**Willow Grove F**	**151.99**	**324**	PKiKP	**PKPbc**	**05 53 27.6**	**-1.0**
	baz=46						
249A	**Camden**	**152.01**	**306**	PKiKP	**PKPbc**	**05 53 27.6**	**-1.2**
	baz=65						
W45A	**Hickory Valley**	**152.01**	**314**	PKiKP	**PKPbc**	**05 53 27.2**	**-1.5**
	baz=57						
148A	**Greensboro**	**152.06**	**308**	PKiKP	**PKPbc**	**05 53 27.5**	**-1.4**
	baz=64						
R40A	**Maddies Statio**	**152.09**	**322**	PKiKP	**PKPbc**	**05 53 27.1**	**-1.7**
	baz=48						
U43A	**Rector**	**152.15**	**317**	PKiKP	**PKPbc**	**05 53 27.9**	**-1.1**
	baz=54						
Z47A	**Carrollton**	**152.19**	**309**	PKiKP	**PKPbc**	**05 53 27.2**	**-2.0**
	baz=62						
T42A	**Van Buren**	**152.19**	**319**	PKiKP	**PKPbc**	**05 53 27.7**	**-1.4**
	baz=52						
S41A	**Jillco Farms,**	**152.24**	**320**	PKiKP	**PKPbc**	**05 53 27.9**	**-1.3**
	baz=50						
RLMT	**Red Lodge**	**152.26**	**353**	PKiKP	**PKPbc**	**05 53 27.5**	**-1.8**
	baz=8.9						
RLMT	**Red Lodge**	**152.26**	**353**	PKPdf	**PKPbc**	**05 53 31.2**	**+1.9**
RLMT				LR	LR		
	comp=Z,14µm,22.0s						
BRAL	**Brewton**	**152.28**	**304**	PFAKE		05 53 30.0	+0.6
BRAL				LR	LR		
	comp=Z,11µm,20.0s						
RSSD	**Black Hills**	**152.28**	**345**	PKiKP	**PKPbc**	**05 53 27.6**	**-1.8**
	baz=20						
RSSD	**Black Hills**	**152.28**	**345**	PKPdf	**PKPbc**	**05 53 27.9**	**-1.4**
349A	**Repton**	**152.32**	**305**	PKiKP	**PKPbc**	**05 53 27.8**	**-1.7**
	baz=66						
P37A	**Lathrop**	**152.35**	**327**	PKiKP	**PKPbc**	**05 53 27.6**	**-1.7**
	baz=43						
Q38A	**Cooks Store, C**	**152.40**	**325**	PKiKP	**PKPbc**	**05 53 28.7**	**-0.8**
	baz=45						
248A	**Dixon Mills**	**152.43**	**307**	PKiKP	**PKPbc**	**05 53 27.8**	**-1.9**
	baz=64						
Y46A	**Houston**	**152.44**	**311**	PKiKP	**PKPbc**	**05 53 27.7**	**-2.0**
	baz=60						
OXF	**Oxford**	**152.50**	**313**	PKiKP	**PKPbc**	**05 53 28.9**	**-0.9**
	baz=58						
OXF	**Oxford**	**152.50**	**313**	PKPdf	**PKPbc**	**05 53 29.6**	**-0.2**
R39A	**Chumby, Stover**	**152.53**	**323**	PKiKP	**PKPbc**	**05 53 28.5**	**-1.3**
	baz=47						
I05D	**Terrebonne, OR**	**152.53**	**12**	PKiKP	**PKPbc**	**05 53 28.6**	**-1.1**
	baz=344						
X45A	**UM Field Stati**	**152.54**	**312**	PKiKP	**PKPbc**	**05 53 28.8**	**-1.1**
	baz=58						
T41A	**Mountain View**	**152.60**	**319**	PKiKP	**PKPbc**	**05 53 29.1**	**-0.9**
	baz=51						
BMO	**Blue Mountains**	**152.61**	**6**	PKPdf	**PKPdf**	**05 53 25.4**	**+2.5**
BMO				LR	LR		
	comp=Z,8µm,22.0s						
BMO	**Blue Mountains**	**152.61**	**6**	PKIKP	**PKPdf**	**05 53 25.4**	**+2.5**
BMO				MLR	MLR		
	comp=Z,8µm,22.0s						
I03D	**Drain, OR**	**152.69**	**15**	PKiKP	**PKPbc**	**05 53 28.3**	**-1.6**
	baz=340						
S40A	**Lebanon**	**152.69**	**321**	PKiKP	**PKPbc**	**05 53 28.8**	**-1.4**
	baz=49						
U42A	**Revenden**	**152.69**	**318**	PKiKP	**PKPbc**	**05 53 28.2**	**-2.0**
	baz=52						
BGNE	**Belgrade**	**152.73**	**334**	PKiKP	**PKPbc**	**05 53 28.5**	**-1.7**
	baz=34						
I04A	**Tendick Farm,**	**152.82**	**14**	PKiKP	**PKPbc**	**05 53 29.3**	**-1.1**
	baz=341						
Z46A	**Louisville**	**152.83**	**310**	PKiKP	**PKPbc**	**05 53 29.3**	**-1.4**
	baz=61						
348A	**Jackson**	**152.84**	**305**	PKiKP	**PKPbc**	**05 53 28.8**	**-1.9**
	baz=65						
Q37A	**Longview Farm,**	**152.92**	**326**	PKiKP	**PKPbc**	**05 53 28.6**	**-2.1**
	baz=44						
LKWY	**Lake**	**152.92**	**355**	PFAKE		05 53 30.0	-0.8
LKWY				LR	LR		
	comp=Z,21µm,21.0s						
Y45A	**Yeager Farm, C**	**152.94**	**312**	PKiKP	**PKPbc**	**05 53 30.9**	**+0.1**
	baz=59						
T40A	**Mansfield**	**152.99**	**321**	PKiKP	**PKPbc**	**05 53 29.3**	**-1.6**
	baz=49						
X44A	**Crenshaw**	**153.03**	**313**	PKiKP	**PKPbc**	**05 53 30.1**	**-0.9**
	baz=57						
R38A	**Fenwick Farm,**	**153.11**	**324**	PKiKP	**PKPbc**	**05 53 30.1**	**-1.0**
	baz=45						
S39A	**Bolivar**	**153.11**	**322**	PKiKP	**PKPbc**	**05 53 30.1**	**-1.0**
	baz=47						
V42A	**Cord**	**153.12**	**317**	PKiKP	**PKPbc**	**05 53 29.8**	**-1.4**
	baz=53						
U41A	**Viola**	**153.13**	**318**	PKiKP	**PKPbc**	**05 53 29.9**	**-1.3**
	baz=51						
S38A	**Stockton**	**153.49**	**323**	PKiKP	**PKPbc**	**05 53 29.7**	**-2.3**
	baz=46						
W42A	**Bald Knob**	**153.52**	**316**	PKiKP	**PKPbc**	**05 53 30.4**	**-1.7**
	baz=54						
J05D	**Fort Rock, OR**	**153.56**	**12**	PKiKP	**PKPbc**	**05 53 30.0**	**-2.1**
	baz=344						
T39A	**Clever**	**153.59**	**321**	PKiKP	**PKPbc**	**05 53 30.4**	**-1.8**
	baz=48						
V41A	**Mountainview**	**153.63**	**318**	PKiKP	**PKPbc**	**05 53 30.4**	**-1.9**
	baz=52						
U40A	**Yellville**	**153.71**	**320**	PKiKP	**PKPbc**	**05 53 29.8**	**-2.7**
	baz=50						
HUMO	**Hull Mountain**	**153.81**	**16**	PKPdf	**PKPbc**	**05 53 38.6**	**+6.1**
KSU1	**Kansas State U**	**153.87**	**329**	PKPdf	**PKPdf**	**05 53 22.0**	**-2.8**
KSU1				LR	LR		
	comp=Z,16µm,22.0s						
Z44A	**Pea Ridge, Bel**	**153.87**	**311**	PKiKP	**PKPbc**	**05 53 31.7**	**-1.1**
	baz=59						
V40A	**Witts Springs**	**154.04**	**319**	PKiKP	**PKPbc**	**05 53 31.6**	**-1.7**
	baz=51						
346A	**Big Creek Wild**	**154.06**	**307**	PKiKP	**PKPbc**	**05 53 31.3**	**-2.1**
	baz=63						
HLID	**Hailey**	**154.06**	**1**	PKiKP	**PKPbc**	**05 53 31.7**	**-1.5**
	baz=358						
HLID	**Hailey**	**154.06**	**1**	PKPdf	**PKPbc**	**05 53 33.2**	**-0.1**
HLID				PKPbc	**PKPab**	**05 53 45.1**	**-1.5**
HLID				PKPab	**sPKPab**	**05 53 59.1**	**+5.1**
HLID				LR	LR		
	comp=Z,14µm,21.0s						
U39A	**Green Forest**	**154.08**	**320**	PKiKP	**PKPbc**	**05 53 31.1**	**-2.2**
	baz=49						
K04D	**Chiloquin, OR**	**154.08**	**14**	PKiKP	**PKPbc**	**05 53 31.3**	**-1.9**
	baz=342						
T38A	**Diamond**	**154.12**	**322**	PKiKP	**PKPbc**	**05 53 31.1**	**-2.3**
	baz=46						
MFID	**Camas Ranch**	**154.16**	**4**	PKPdf	**PKPdf**	**05 53 24.5**	**-0.7**
K22A	**Casper**	**154.24**	**348**	PKiKP	**PKPbc**	**05 53 31.4**	**-2.3**
	baz=16						
OGNE	**Ogallala**	**154.61**	**339**	PKPdf	**PKPbc**	**05 53 34.5**	**+0.1**
OGNE				LR	LR		
	comp=Z,13µm,21.0s						
BW06	**Boulder Array**	**154.62**	**353**	PKiKP	**PKPbc**	**05 53 32.0**	**-2.5**
	baz=9.0						
BW06	**Boulder Array**	**154.62**	**353**	PKPdf	**PKPdf**	**05 53 28.7**	**+2.7**
BW06				LR	LR		
	comp=Z,17µm,20.0s						
PDAR	**Pinedale Array**	**154.62**	**353**	PKP	**PKPdf**	**05 53 26.4**	**+0.3**
	comp=Z,0.9nm,0.9s,baz=85,slow=1.6,SNR=3.7						
PDAR				PKPbc	**PKiKP**	**05 53 36.2**	**+1.7**
	comp=Z,1.8nm,0.8s,baz=81,slow=2.0,SNR=9.7						
AHID	**Auburn Hatcher**	**154.77**	**355**	PKPdf	**PKPdf**	**05 53 24.1**	**-2.1**
AHID				LR	LR		
	comp=Z,11µm,19.0s						
WVOR	**Wild Horse Val**	**154.84**	**9**	PFAKE		05 53 40.0	+5.1
WVOR				LR	LR		
	comp=Z,13µm,22.0s						
M02C	**Callahan**	**154.97**	**16**	PKiKP	**PKPbc**	**05 53 32.7**	**-2.4**
	baz=339						
445A	**Amite**	**155.03**	**306**	PKiKP	**PKPdf**	**05 53 33.1**	**+6.5**
	baz=64						
Y41A	**Eaglette Beard**	**155.06**	**315**	PKiKP	**PKPdf**	**05 53 32.9**	**+6.3**
	baz=54						
MOD	**Modoc Plateau**	**155.08**	**12**	*e*PKPbc	PKPbc	05 53 38.8	
MOD				*e*PKPab	pPKPab	05 53 56.2	-0.2
MIAR	**Mount Ida**	**155.31**	**317**	PKiKP	**PKPdf**	**05 53 33.3**	**+6.4**
	baz=52						
MIAR	**Mount Ida**	**155.31**	**317**	PKPdf	**PKPdf**	**05 53 27.7**	**+0.8**
MIAR				LR	LR		
	comp=Z,8µm,21.0s						
MIAR	**Mount Ida**	**155.31**	**317**	PKIKP	**PKPdf**	**05 53 27.7**	**+0.8**
MIAR				MLR	MLR		
	comp=Z,8µm,21.0s						
N02D	**Trinity Center**	**155.40**	**17**	PKiKP	**PKPdf**	**05 53 33.3**	**+6.3**
	baz=339						
CBKS	**Cedar Bluff**	**155.56**	**333**	PFAKE		05 53 40.0	+13
CBKS				LR	LR		
	comp=Z,19µm,22.0s						
HWUT	**Hardware Ranch**	**155.95**	**356**	PKPdf	**PKPdf**	**05 53 32.3**	**+4.5**
HWUT				LR	LR		
	comp=Z,14µm,20.0s						
ISCO	**Idaho Springs**	**156.74**	**344**	PFAKE		05 53 40.0	+11
ISCO				LR	LR		
	comp=Z,13µm,21.0s						
HOPS	**Hopland Field**	**157.13**	**19**	PKPdf	PKPdf	05 53 20.0	-9.2
DUG	**Dugway, Tooele**	**157.42**	**358**	PKPdf	**PKPdf**	**05 53 29.9**	**+0.2**
DUG				LR	LR		
	comp=Z,10µm,21.0s						
DUG	**Dugway, Tooele**	**157.42**	**358**	PKIKP	**PKPdf**	**05 53 29.9**	**+0.2**
DUG				MLR	MLR		
	comp=Z,10µm,21.0s						
NATX	**Nacogdoches**	**157.69**	**313**	PFAKE		05 53 40.0	+10
NATX				LR	LR		
	comp=Z,5µm,22.0s						
WMOK	**Wichita Mounta**	**158.31**	**325**	PFAKE		05 53 40.0	+9.2
WMOK				LR	LR		
	comp=Z,6µm,21.0s						
SDCO	**Great Sand Dun**	**158.63**	**342**	*e*PKPab	**PKPab**	**05 54 01.0**	**-5.5**
SDCO				LR	LR		
	comp=Z,16µm,22.0s						
NVAR	**Mina Array Bea**	**158.81**	**10**	PKP	**PKPdf**	**05 53 34.8**	**+3.2**
	comp=Z,0.2nm,0.4s,baz=242,slow=1.9,SNR=3.3						
NVAR				PKPab	**PKPab**	**05 54 04.5**	**-2.6**
	comp=Z,2.6nm,0.9s,baz=304,slow=2.1,SNR=6.7						
MVCO	**Mesa Verde**	**159.88**	**348**	PFAKE		05 53 40.0	+7.1
MVCO				LR	LR		
	comp=Z,13µm,22.0s						
DAC	**Darwin (Calif)**	**161.03**	**10**	PKPdf	**PKPdf**	**05 53 30.5**	**-3.6**
DAC	**Darwin (Calif)**	**161.03**	**10**	PKIKP	**PKPdf**	**05 53 30.5**	**-3.6**
ANMO	**Albuquerque**	**161.51**	**341**	PKP	**PKPdf**	**05 53 35.0**	**+0.4**
	comp=Z,0.8nm,0.7s,baz=61,slow=4.8,SNR=2.7						
ANMO	**Albuquerque**	**161.51**	**341**	*e*PKPdf	**PKPdf**	**05 53 33.4**	**-1.2**
ANMO				*e*PKPab	**PKPab**	**05 54 17.6**	**-1.4**
ANMO				LR	LR		
	comp=Z,10µm,22.0s						
ANMO	**Albuquerque**	**161.51**	**341**	*e*PKIKP	**PKPdf**	**05 53 33.4**	**-1.2**
ANMO				*e*		05 54 17.6	
ANMO				MLR	MLR		
	comp=Z,10µm,22.0s						
JCT	**Junction City**	**161.94**	**318**	PKPdf	**PKPdf**	**05 53 38.6**	**+3.6**
JCT				LR	LR		
	comp=Z,6µm,21.0s						
WUAZ	**Wupatki**	**161.99**	**354**	PFAKE		05 53 40.0	+4.9
WUAZ				LR	LR		
	comp=Z,9µm,22.0s						
KVTX	**Kingsville**	**162.34**	**307**	PFAKE		05 53 40.0	+4.6
KVTX				LR	LR		
	comp=Z,10µm,22.0s						
PFO	**Pinyon Flats O**	**163.82**	**8**	PFAKE		05 53 50.0	+13
PFO				LR	LR		
	comp=Z,10µm,21.0s						
MNTX	**Cornudas Mount**	**164.02**	**333**	*e*PKPdf	**PKPdf**	**05 53 37.7**	**+0.7**
MNTX				*e*PKPab	**pPKPab**	**05 54 34.4**	**-0.9**
MNTX				LR	LR		
	comp=Z,7µm,20.0s						
TUC	**Tucson**	**165.07**	**350**	PKPdf	**PKPdf**	**05 53 36.8**	**-1.1**
TUC				LR	LR		
	comp=Z,13µm,20.0s						
TUC	**Tucson**	**165.07**	**350**	PKIKP	**PKPdf**	**05 53 36.8**	**-1.1**
TUC				MLR	MLR		
	comp=Z,13µm,20.0s						
TXAR	**Lajitas Array**	**165.09**	**324**	PKP	**PKPdf**	**05 53 38.8**	**+0.7**
	comp=Z,0.5nm,0.8s,baz=320,slow=2.7,SNR=3.5						
TXAR				PKPab	**PKPab**	**05 54 33.9**	**-0.9**
	comp=Z,2.1nm,1.0s,baz=50,slow=4.9,SNR=3.6						

MAN 26 05:42:10.0,9°.97N×122°.12E,h37km,mb4.2,ML3.0,MS2.6, 1C-1D,Negros

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAP	**San Jose, Anti**	**0.79**	**347**	⇑*e*P	Pn	05 42 25.9	+1.3
GUIM	**Jordan**	**0.80**	**35**	*e*P	Pn	05 42 24.7	0.0
GUIM				*e*S	Sn	05 42 37.1	+1.8
CUYO	**Cuyo Island**	**1.40**	**309**	*e*P	Pn	05 42 33.9	+1.0
CUYO				*e*S	Sn	05 42 50.5	+0.4
RCP	**Roxas**	**1.69**	**21**	⇓*e*P	Pn	05 42 42.2	+5.2
RCP				*e*S	Sn	05 43 01.6	+4.1

MAN 26 05:45:14.0,9°.99N×122°.15E,h35km,mb4.4,ML3.3,MS3.1, 1C-1D,Negros

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUIM	**Jordan**	**0.77**	**34**	*e*P	Pn	05 45 28.4	0.0
GUIM				*e*S	Sn	05 45 38.3	-0.5
JAP	**San Jose, Anti**	**0.78**	**346**	⇑*i*P	Pn	05 45 30.0	+1.4
CUYO	**Cuyo Island**	**1.40**	**308**	*e*P	Pn	05 45 37.7	+0.6
CUYO				*e*S	Sn	05 45 54.7	+0.3
RCP	**Roxas**	**1.67**	**21**	⇓*e*P	Pn	05 45 44.2	+3.4
RCP				*e*S	Sn	05 46 05.1	+4.0
OTRP	**Odiongan**	**2.37**	**357**	*e*P	Pn	05 45 51.6	+1.2
OTRP				*e*S	Sn	05 46 17.3	-0.8
SJMP	**San Jose**	**2.66**	**338**	*e*P	Pn	05 45 55.1	+0.7
BUSP	**Coron**	**2.77**	**317**	*e*P	Pn	05 45 56.9	+1.0

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*ISCJB **26** 05:49:47.1±1.7,16°.44N±0°.05×122°.53E±0°.06, h17km±11km,mb3.7/6,Error ellipse: s-maj=10.5km s-min=9.0km az=20.1*

*MAN **26** 05:49:50.3,16°.46N×122°.30E,h15km,mb4.6,ML3.4, MS3.3*

*IDC **26** 05:49:57.8±3.3,16°.44N×122°.44E,h100km±32km,mb3.4/6, mb1 3.6/7,mb1mx3.3/64,mbtmp3.8/7,Error ellipse: s-maj=49.7km s-min=20.0km az=77.0*

ISC 26 05:49:48.5±1.5,16°.51N±0°.03×122°.32E±0°.08,h14km±9km, n21,σ0s.86/20,mb3.7/6,1C-2D,Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAUP	**Cauayan**	**0.64**	**312**	*e*P	**Pn**	**05 50 02.5**	**-0.7**
CAUP				*e*S	**Sn**	**05 50 12.8**	**-0.4**
CVP	**Callao Caves**	**1.28**	**338**	⇓*e*P	**Pg**	**05 50 12.9**	**-0.3**
CVP				*e*S	**Sg**	**05 50 30.8**	**+0.9**
PCPH	**Palayan**	**1.51**	**232**	*e*P	**Pn**	**05 50 15.1**	**+0.1**
PCPH				*e*S	**Sb**	**05 50 35.4**	**+0.2**
APYP	**Conner**	**1.69**	**323**	*e*P	**Pb**	**05 50 18.8**	**-0.7**
APYP				*e*S	**Sg**	**05 50 42.8**	**-0.3**
ABRA	**Dolores**	**1.91**	**307**	*e*P	**Pb**	**05 50 23.0**	**-0.1**
ABRA				*e*S	**Sb**	**05 50 47.1**	**+0.2**
BOLP	**Bolinao**	**2.31**	**267**	*e*P	**Pb**	**05 50 29.7**	**-0.3**
BOLP				*e*S	**Sb**	**05 50 59.9**	**+1.4**
GQP	**Guinayangan**	**2.59**	**177**	⇓*i*P	Pg	05 50 42.9	+4.7
GQP				*i* S	**Sg**	**05 51 12.8**	**+0.9**
TGY	**Tagaytay City**	**2.74**	**209**	P	**Pg**	**05 50 40.5**	**-0.5**
	77nm,0.3s,baz=293,slow=13,SNR=2.9						
TGY	**Tagaytay City**	**2.74**	**209**	⇑*e*P	Pn	05 50 26.1	-6.0
KSRS	**Korea Array**	**21.44**	**12**	P	**P**	**05 54 38.2**	**+1.9**
	0.4nm,0.4s,baz=192,slow=11,SNR=4.2						
SONM	**Songino Array**	**33.88**	**341**	P	**P**	**05 56 31.8**	**+1.0**
	0.4nm,0.5s,baz=170,slow=9.4,SNR=2.3						
WRA	**Warramunga Arr**	**38.10**	**161**	P	**P**	**05 57 05.9**	**-1.2**
	1.0nm,0.8s,baz=342,slow=9.5,SNR=4.2						
H11S3	**WAKE ISLAND Hy**	**42.28**	**81**	T	T	06 42 52.0	
	baz=275,slow=75,SNR=53						
H11S1	**WAKE ISLAND Hy**	**42.29**	**80**	T	T	06 42 51.1	
	baz=275,slow=75,SNR=53						
H11S2	**WAKE ISLAND Hy**	**42.30**	**81**	T	T	06 42 53.3	
	baz=275,slow=75,SNR=73						
H11N1	**WAKE ISLAND Hy**	**42.40**	**79**	T	T	06 42 59.0	
	baz=273,slow=75,SNR=30						
H11N2	**WAKE ISLAND Hy**	**42.40**	**79**	T	T	06 43 00.9	
	baz=273,slow=75,SNR=41						
H11N3	**WAKE ISLAND Hy**	**42.41**	**79**	T	T	06 43 00.7	
	baz=273,slow=75,SNR=25						
KURBB	**Kurchatov Arra**	**48.79**	**324**	P	**P**	**05 58 32.6**	**-0.4**
	1.4nm,0.5s,baz=120,slow=8.8,SNR=9.9						
FINES	**FINESS Array B**	**78.61**	**331**	P	**P**	**06 01 49.7**	**+0.1**
	0.5nm,0.5s,baz=33,slow=7.7,SNR=4.0						
NOA	**NORSAR Array B**	**85.49**	**333**	P	**P**	**06 02 25.4**	**-0.4**
	0.5nm,0.6s,baz=64,slow=5.1,SNR=2.7						

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*NNC **26** 05:58:47.3±6.0,44°.17N×81°.62E,h0km,mb2.5,mpv2.2, Error ellipse: s-maj=89.7km s-min=12.7km az=125.0*

*SOME **26** 05:58:48.4,44°.25N×81°.58E,h15km*

ISC 26 05:58:46.5±2.1,44°.18N±0°.06×81°.63E±0°.09,h6km±14km, n9,σ1s.13/18,4C-3D,Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**1.18**	**232**	*e*P	**Pn**	**05 59 10.3**	**+0.6**
	0.9nm,0.1s						
KTMS				*e*S	**Sn**	**05 59 26.4**	**+0.3**
	7.5nm,0.2s						
DJR	**Jarkent**	**1.33**	**277**	*e*P	**Pg**	**05 59 12.4**	**+0.4**
	0.9nm,0.2s						
DJR				*e*S	**Sg**	**05 59 29.9**	**+0.7**
	3.1nm,0.2s						
PDGK	**Podgornoye**	**1.77**	**242**	⇑Pn	**Pn**	**05 59 17.4**	**-0.3**
	1.0nm,0.4s						
PDGK				⇑Sn	**Sg**	**05 59 43.9**	**+0.5**
	1.2nm,0.4s						
KAPS	**Kapalarasan**	**1.96**	**305**	*e*P	**Pb**	**05 59 22.4**	**-0.2**
	0.5nm,0.1s						
KAPS				⇓*i*S	**Sb**	**05 59 47.4**	**+0.2**
	1.3nm,0.1s						
UZB	**Uzynbulak**	**2.16**	**242**	*e*P	**Pb**	**05 59 26.6**	**+0.6**
	0.5nm,0.3s						
UZB				*e*S	**Sg**	**05 59 54.6**	**-1.2**
	2.7nm,0.3s						
KPKS	**Kokpek**	**2.25**	**252**	*e*P	**Pb**	**05 59 28.0**	**+0.4**
	3.5nm,0.2s						
KPKS				*e*S	**Sg**	**05 59 57.1**	**-1.6**
	8.2nm,0.3s						
ZHN	**Zhinishke**	**2.53**	**247**	*e*P	**Pg**	**05 59 34.5**	**-0.4**
	3.4nm,0.1s						
ZHN				*e*S	**Sg**	**06 00 07.9**	**+0.2**
	6.6nm,0.3s						
MAKZ	**Makanchi**	**2.63**	**5**	⇑Pn	**Pn**	**05 59 31.0**	**+1.4**
	0.8nm,0.6s						
MAKZ				⇑Sn	**Sb**	**06 00 04.1**	**-2.6**
	0.6nm,0.5s						
MK31	**Makanchi Array**	**2.65**	**10**	⇓Pn	**Pb**	**05 59 34.9**	**+0.6**
	0.5nm,0.6s,baz=189,slow=17,SNR=5.2						
MK31				⇓Sn	**Sb**	**06 00 05.6**	**-1.6**
	0.2nm,0.3s,baz=183,slow=26,SNR=2.6						

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*ISCJB **26** 06:00:37.5±0.5,37°.53N±0°.04×140°.09E±0°.04,h19km±4km, mb3.8/8,Error ellipse: s-maj=7.0km s-min=4.1km az=145.8*

*JMA **26** 06:00:37.6,37°.53N×140°.07E,h10km,M4.1 Broadband fault plane solution: P waves. NP1:φs238.00000°, δ78.00000°,λ-166.00000°. NP2:φs146.00000°, δ77.00000°,λ-12.00000°. Principal axes: T Plg1.0000°, Azm12.0000°; N Plg72.0000°, Azm279.0000°; P Plg18.0000°, Azm102.0000°;*

JMA Felt III J1.

*IDC **26** 06:00:42.6±1.8,37°.34N×140°.02E,h57km±18km,mb3.4/8, mb1 3.7/11,mb1mx3.4/74,mbtmp3.8/11,ML3.7/3 Error ellipse: s-maj=21.8km s-min=12.0km az=84.0*

ISC 26 06:00:36.6±1.3,37°.50N±0°.04×140°.05E±0°.04,h14km±9km, n29,σ1s.28/30,mb3.8/8,3C-6D,Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFT	**Otama**	**0.23**	**85**	⇓P	**Pb**	**06 00 42.2**	**-0.4**
JFY	**Yanaizu**	**0.29**	**252**	⇓P	**Pb**	**06 00 43.9**	**+0.3**
JFY				*e*S	**Sb**	**06 00 48.2**	**0.0**
JNS	**Sasagawa**	**0.66**	**299**	⇓P	**Pg**	**06 00 50.2**	**+0.6**
JNS				S	**Sg**	**06 00 58.8**	**+0.4**
JFK	**Kawauchi**	**0.67**	**101**	⇓P	**Pb**	**06 00 50.1**	**0.0**
JMM	**Marumori**	**0.70**	**58**	⇓P	**Pb**	**06 00 50.2**	**-0.3**
JMM				S	**Sb**	**06 00 59.2**	**-0.8**
JYS	**Shirataka**	**0.72**	**1**	⇑P	**Pb**	**06 00 50.9**	**-0.1**
JYS				S	**Sb**	**06 01 00.3**	**-0.5**
JHK	**Hiroka**	**0.86**	**254**	⇓P	**Pn**	**06 00 54.0**	**-0.2**
JHK				S	**Sn**	**06 01 05.4**	**-1.1**
JKT	**Katashina**	**0.97**	**221**	⇑P	**Pn**	**06 00 56.3**	**+0.5**
JKT				S	**Sn**	**06 01 09.0**	**-0.4**
JOU	**Okura**	**0.99**	**29**	⇑P	**Pb**	**06 00 55.8**	**+0.2**
MJAR	**Matsushiro Arr**	**1.75**	**238**	P	**Pg**	**06 01 09.5**	**-0.8**
	49nm,0.3s,baz=35,slow=14,SNR=299						
MJAR				S	**Sg**	**06 01 33.1**	**0.0**
	41nm,0.3s,baz=82,slow=21,SNR=5.7						
MAT	**Matsushiro**	**1.75**	**238**	P	**Pg**	**06 01 09.5**	**-0.8**
MAT				S	**Sg**	**06 01 32.9**	**-0.2**
JHJ	**Hachijo jima 2**	**4.37**	**183**	P	**Pn**	**06 01 44.8**	**+2.2**
	37nm,0.3s,baz=224,slow=4.1,SNR=14						
JHJ				S	**Sn**	**06 02 31.4**	**-1.9**
	6.1nm,0.3s,baz=49,slow=20,SNR=2.1						
ASAJ	**Asahikawa**	**6.89**	**15**	P	Pn	06 02 23.4	+6.2
	0.8nm,0.3s,baz=218,slow=7.9,SNR=5.4						
KSRS	**Korea Array**	**9.64**	**273**	P	Pn	06 02 59.6	+4.8
	0.8nm,0.3s,baz=87,slow=14,SNR=12						
KLR	**Kul'dur**	**13.18**	**335**	P	**P**	**06 03 49.6**	**-3.6**
	0.0nm,0.3s,baz=130,slow=10.0,SNR=5.4						
H11N2	**WAKE ISLAND Hy**	**29.32**	**120**	T	T	06 36 46.4	
	baz=313,slow=75,SNR=231						
H11N1	**WAKE ISLAND Hy**	**29.33**	**120**	T	T	06 36 46.5	
	baz=313,slow=75,SNR=379						
H11N3	**WAKE ISLAND Hy**	**29.34**	**120**	T	T	06 36 47.7	
	baz=313,slow=75,SNR=327						
H11S1	**WAKE ISLAND Hy**	**30.03**	**122**	T	T	06 37 38.5	
	baz=314,slow=76,SNR=490						
H11S3	**WAKE ISLAND Hy**	**30.03**	**122**	T	T	06 37 37.5	
	baz=314,slow=76,SNR=413						
H11S2	**WAKE ISLAND Hy**	**30.04**	**122**	T	T	06 37 40.0	
	baz=314,slow=76,SNR=289						
MKAR	**Makanchi Array**	**42.95**	**301**	P	**P**	**06 08 35.2**	**+0.3**
	0.5nm,0.8s,baz=72,slow=9.3,SNR=3.4						
KURBB	**Kurchatov Arra**	**44.86**	**307**	P	**P**	**06 08 51.3**	**+1.1**
	1.0nm,0.7s,baz=86,slow=8.6,SNR=10						
ILAR	**Eielson Array**	**49.69**	**33**	P	**P**	**06 09 29.1**	**+1.4**
	0.3nm,0.6s,baz=271,slow=6.6,SNR=4.1						
INK	**Inuvik**	**54.47**	**27**	P	**P**	**06 10 06.1**	**+3.0**
	1.6nm,0.8s,baz=236,slow=3.6,SNR=3.5						
WRA	**Warramunga Arr**	**57.38**	**186**	P	**P**	**06 10 25.8**	**+1.3**
	1.1nm,0.5s,baz=2.4,slow=7.5,SNR=20						
ASAR	**Alice Springs**	**61.11**	**186**	P	**P**	**06 10 49.4**	**-0.9**
	0.7nm,0.8s,baz=2.1,slow=10,SNR=4.6						
FINES	**FINESS Array B**	**67.89**	**332**	P	**P**	**06 11 35.2**	**+1.0**
	1.4nm,0.9s,baz=125,slow=7.3,SNR=2.7						
TXAR	**Lajitas Array**	**90.69**	**52**	P	**P**	**06 13 38.3**	**-1.0**
	0.2nm,0.9s,baz=11,slow=0.9,SNR=2.3						

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*ISCJB **26** 06:03:29.9±0.8,52°.5S±0°.1×16°.3E±0°.4,h10km,mb3.9/5, Error ellipse: s-maj=32.9km s-min=15.5km az=16.6*

*IDC **26** 06:03:29.2±0.9,52°.45S×16°.09E,h0km,mb4.0/6, mb1 4.1/6,mb1mx3.8/50,mbtmp4.0/6,Error ellipse: s-maj=34.8km s-min=24.8km az=88.0*

ISC 26 06:03:30.9±1.0,52°.4S±0°.1×16°.2E±0°.3,h10km,n14, σ1s.76/11,mb3.9/5,Southwest of Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUR	**Sutherland**	**20.33**	**11**	P	**P**	**06 08 08.5**	**+1.3**
	9.8nm,0.8s,baz=181,slow=12,SNR=11						
SNAA	**Sanae**	**21.06**	**197**	P	**P**	**06 08 14.9**	**+0.2**
SNAA	**Sanae**	**21.06**	**197**	P	**P**	**06 08 14.2**	**-0.5**
	4.8nm,1.1s,baz=300,slow=8.7,SNR=11						
VNA1	**Neumayer--Stat**	**21.37**	**202**	P	**P**	**06 08 20.7**	**+2.7**
VNA3	**Neumayer Olymp**	**22.12**	**202**	P	**P**	**06 08 24.8**	**-1.3**
QSPA	**South Pole Qui**	**37.79**	**180**	P	**P**	**06 10 47.0**	**0.0**
	2.2nm,1.1s,baz=174,slow=10,SNR=2.5						
H10S2	**ASCENSION HYDR**	**50.09**	**319**	T	T	07 05 27.1	
	baz=156,slow=75,SNR=7.7						
H10S3	**ASCENSION HYDR**	**50.11**	**319**	T	T	07 05 29.6	
	baz=156,slow=75,SNR=7.9						
H10S1	**ASCENSION HYDR**	**50.11**	**319**	T	T	07 05 27.1	
	baz=156,slow=75,SNR=8.2						
LPAZ	**La Paz**	**73.83**	**264**	P	**P**	**06 15 07.8**	**+1.4**
	1.2nm,0.9s,baz=133,slow=6.8,SNR=4.6						
ASAR	**Alice Springs**	**86.86**	**126**	P	**P**	**06 16 16.4**	**+0.6**
	1.2nm,0.7s,baz=207,slow=4.6,SNR=14						
WRA	**Warramunga Arr**	**90.20**	**124**	P	**P**	**06 16 31.4**	**-0.2**
	0.5nm,0.8s,baz=217,slow=3.3,SNR=3.4						
NVAR	**Mina Array Bea**	**145.74**	**264**	PKPbc	**PKPdf**	**06 23 07.0**	**-2.2**
	2.0nm,0.6s,baz=130,slow=4.0,SNR=20						
YKA	**Yellowknife Ar**	**152.39**	**311**	PKPab	**PKPab**	**06 23 33.4**	**-2.5**
	1.0nm,0.8s,baz=80,slow=3.4,SNR=3.9						

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*BJI **26** 06:12:07.0,26°.55S×178°.12W,h321km,mb4.8/34, mB5.4/14*

*ISCJB **26** 06:12:08.4±0.5,26°.38S±0°.03×178°.61W±0°.02, h319km±4km,mb5.1/116,Error ellipse: s-maj=4.9km s-min=3.0km az=150.0*

*MOS **26** 06:12:11.4±0.9,26°.22S×178°.60W,h346km,mb5.1/32, Error ellipse: s-maj=9.8km s-min=7.3km az=50.4*

*NEIC **26** 06:12:12.4±0.5,26°.44S×178°.61W,h350km±5km,mb5.2/39, Error ellipse: s-maj=4.7km s-min=3.0km az=153.0*

*IDC **26** 06:12:13.6±0.5, 26°.25S×178°.58W, h358^{km}±4^{km}, mb4.7/32, mb1 4.7/35, mb1mx4.7/43, mbtmp5.4/35, Error ellipse: s-maj=9.0km s-min=8.5km az=26.0*

*WEL **26** 06:12:15.0±0.9, 27°S±10°×17°6W±2°3, h378^{km}±5^{km}*

ISC 26 06:12:12.6±0.4**, 26°.47S**±0°.04×**178°.40W**±0°.04**, h355^{km}**±3^{km}**, h355^{km}:pP-P, n872, σ1^{s}79**/942**, mb5.1**/115**, 35C-18D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RIZ	Raoul Island	2.79	172	P	Pn	06 13 13.3	+2.8
RIZ				S	S	06 13 52.6	-4.4
RAO	Raoul Island	2.80	171	P	Pn	06 13 13.0	+2.5
	4µm,0.3s,baz=103,slow=4.8,SNR=142						
RAO				S	S	06 13 51.0	-6.1
	4µm,0.3s,baz=72,slow=16,SNR=7.2						
GLKZ	Green Lake	2.81	171	P	Pn	06 13 12.8	+2.2
GLKZ				S	S	06 13 55.9	-1.4
NIUE	Niue	10.73	48	P	Pn	06 14 37.9	-1.5
	baz=11,SNR=18						
GRZ	Great Barrier	11.07	207	P	P	06 14 46.2	+2.7
OUZ	Omahuta	11.10	216	P	P	06 14 46.8	+2.9
WCZ	Waipu Caves	11.29	212	P	P	06 14 49.2	+3.1
KUZ	Kuaotunu	11.40	205	P	P	06 14 48.8	+1.6
MXZ	Matakaoa Point	11.40	193	*e*Pn	Pn	06 14 47.0	-0.1
MXZ				*e*S	S	06 16 50.1	-4.2
MXZ	Matakaoa Point	11.40	193	P	Pn	06 14 43.6	-3.5
MXZ				S	S	06 16 46.1	-8.2
ABAZ	Army Bay	11.62	208	P	P	06 14 52.9	+3.1
WMGZ	Waiomatatini S	11.63	193	P	P	06 14 47.0	-2.8
WIAZ	Waiheke Island	11.67	207	P	Pn	06 14 52.9	+2.6
HAZ	Te Kaha	11.71	195	P	P	06 14 48.5	-2.1
HAZ	Te Kaha	11.71	195	P	S	06 16 56.1	-4.8
MTAZ	Motutapu	11.75	207	P	Pn	06 14 54.0	+2.7
PKGZ	Pakihiroa	11.77	194	P	P	06 14 48.1	-3.3
PKGZ	Pakihiroa	11.77	194	P	S	06 16 54.9	-7.5
ETAZ	East Tamaki Re	11.89	207	P	Pn	06 14 55.8	+2.9
PUZ	Puketiti	11.90	193	P	P	06 14 49.5	-3.4
MKAZ	Moumakai	11.93	206	P	Pn	06 14 55.9	+2.6
RUGZ	Raukumara Rang	11.93	195	P	S	06 16 57.7	-8.3
WHRZ	Whale Island	12.00	198	P	Pn	06 14 57.2	+3.0
WHRZ				S	S	06 17 06.0	-1.4
WHRZ	Whale Island	12.00	198	P	S	06 17 06.6	-0.8
TWGZ	Tauwhareparae	12.06	194	P	P	06 14 52.3	-2.3
TWGZ				S	S	06 17 03.4	-5.4
TWGZ	Tauwhareparae	12.06	194	P	S	06 16 59.1	-10
TGRZ	Tauranga	12.10	201	P	Pn	06 14 58.0	+2.7
OPRZ	Ohinepanea	12.11	199	P	P	06 14 54.7	-0.5
EDRZ	Edgecumbe	12.30	198	P	S	06 17 14.0	+0.2
CNGZ	Carnagh Statio	12.31	193	P	P	06 14 54.6	-2.8
MWZ	Matawai	12.31	195	P	P	06 14 54.3	-3.2
MWZ				S	S	06 17 09.3	-4.6
MWZ	Matawai	12.31	195	P	S	06 17 09.3	-4.6
TKGZ	Te Karaka	12.34	194	P	P	06 14 55.3	-2.4
TKGZ				S	S	06 17 07.8	-6.6
TKGZ	Te Karaka	12.34	194	P	S	06 17 08.1	-6.3
URZ	Urewera	12.35	197	P	Pn	06 14 58.3	+0.1
	170nm,0.3s,baz=312,slow=2.6,SNR=118						
URZ				S	S	06 17 09.6	-4.9
	78nm,0.3s,baz=126,slow=20,SNR=17						
URZ	Urewera	12.35	197	P	P	06 14 54.5	-3.2
URZ				S	S	06 17 10.1	-4.4
URZ	Urewera	12.35	197	P	S	06 17 11.2	-3.3
NFK	Norfolk Island	12.37	255	P	Pn	06 14 59.3	+0.6
	baz=12,SNR=6.8						
RAGZ	Rawiri	12.50	195	P	S	06 17 06.6	-11
RRRZ	Republican Roa	12.58	199	P	S	06 17 16.2	-3.2
RTZ	Ruatahuna	12.72	197	P	S	06 17 15.1	-7.1
PRGZ	Paritu Road	12.80	193	P	S	06 17 14.4	-9.4
TLZ	Tolley Road	12.88	202	P	Pn	06 15 05.0	+0.4
KNZ	Kokohu	12.94	194	P	S	06 17 15.6	-11
RAHZ	Arahi	12.97	196	P	S	06 17 21.0	-6.3
MTHZ	Maungataniwha	12.98	197	P	S	06 17 22.3	-5.0
MHGZ	Mahia Peninsul	13.02	193	P	S	06 17 18.9	-9.2
HIZ	Hauiti	13.28	204	*e*P	Pn	06 15 10.7	+1.4
HIZ	Hauiti	13.28	204	P	Pn	06 15 10.6	+1.3
BKZ	Black Stump Fm	13.36	197	*e*P	P	06 15 08.1	-0.9
BKZ	Black Stump Fm	13.36	197	P	P	06 15 06.0	-3.0
BKZ				S	S	06 17 30.5	-4.6
BKZ	Black Stump Fm	13.36	197	P	S	06 17 31.7	-3.5
KATZ	Kakaramea	13.42	200	P	P	06 15 10.1	+0.4
KRVZ	Karewarewa	13.54	200	P	P	06 15 10.3	-0.7
MCHZ	McNeill Hill	13.57	196	P	S	06 17 37.5	-1.8
WTVZ	West Tongariro	13.58	200	P	P	06 15 10.2	-1.2
TWVZ	Taurewa	13.59	201	P	P	06 15 11.0	-0.5
KWHZ	Kaweka Forest	13.62	197	P	P	06 15 09.4	-2.5
KWHZ	Kaweka Forest	13.62	197	P	S	06 17 35.3	-5.1
NGZ	Ngauruhoe	13.63	200	P	P	06 15 11.4	-0.6
COVZ	Chateau Observ	13.67	200	P	P	06 15 12.8	+0.4
TUVZ	Tukino	13.70	200	P	P	06 15 11.7	-1.1
FWVZ	Far West T-bar	13.72	200	P	P	06 15 13.2	+0.1
WHVZ	Whangaehu Hut	13.73	200	P	P	06 15 12.1	-1.2
WHVZ	Whangaehu Hut	13.73	200	P	S	06 17 45.4	+2.5
DRZ	Dome Shelter	13.73	200	P	P	06 15 13.5	+0.1
DRZ	Dome Shelter	13.73	200	P	S	06 17 44.2	+1.1
TRVZ	Turoa	13.76	200	P	P	06 15 12.5	-1.1
BHHZ	Black Hill Sta	13.78	198	P	P	06 15 10.2	-3.4
BHHZ	Black Hill Sta	13.78	198	P	S	06 17 39.4	-4.2
MOVZ	Moawhango	13.80	199	P	P	06 15 12.1	-1.7
MOVZ	Moawhango	13.80	199	P	S	06 17 41.3	-2.6
PKVZ	Pokaka	13.81	201	P	P	06 15 13.1	-0.9
KRHZ	Kereru	13.84	197	P	P	06 15 11.8	-2.5
KRHZ	Kereru	13.84	197	P	S	06 17 39.8	-5.0
MTVZ	Mangateitei	13.86	200	P	P	06 15 14.0	-0.5
MTVZ	Mangateitei	13.86	200	P	S	06 17 46.0	+0.8
AFI	Afiamalu	13.95	28	P	P	06 15 13.8	-2.0
	81nm,0.3s,baz=154,slow=0.8,SNR=51						
AFI				S	S	06 17 39.5	-8.0
	127nm,0.3s,baz=39,slow=21,SNR=9.8						
AFI	Afiamalu	13.95	28	*e*P	P	06 15 14.3	-1.4
AFI				S	S	06 17 39.5	-8.0
AFI	Afiamalu	13.95	28	*e*P	P	06 15 14.4	-1.4
AFI				S	S	06 17 39.6	-8.0
PXZ	Pawanui	14.09	195	P	P	06 15 14.5	-2.4
PXZ	Pawanui	14.09	195	P	S	06 17 44.7	-4.9
PNHZ	Pukenui	14.14	197	P	P	06 15 14.5	-3.0
PNHZ	Pukenui	14.14	197	P	S	06 17 46.3	-4.5
PREZ	Palmer Road	14.27	204	P	Pn	06 15 22.0	+1.3
KHEZ	Kahui Hut	14.28	205	P	Pn	06 15 21.3	+0.4
TSZ	Takapari Road	14.34	198	P	P	06 15 17.9	-1.8
TSZ	Takapari Road	14.34	198	P	S	06 17 49.9	-4.9
WAZ	Wanganui	14.35	201	P	P	06 15 19.8	0.0
WAZ	Wanganui	14.35	201	P	S	06 17 53.9	-1.1
PRHZ	Porangahau	14.36	195	P	P	06 15 17.9	-2.0
DZM	Mont Dzumac	14.50	284	*e*P	Pn	06 15 23.7	0.0
	472nm,0.8s						
DZM	Mont Dzumac	14.50	284	P	Pn	06 15 23.3	-0.4
	35nm,0.3s,baz=101,slow=13,SNR=115						
DVHZ	Dannevirke	14.51	197	P	P	06 15 19.6	-2.0
DVHZ	Dannevirke	14.51	197	P	S	06 17 52.3	-5.9
ANWZ	Angora Road	14.59	196	P	S	06 17 54.0	-5.6
POWZ	Post Office Ro	14.71	198	P	S	06 17 59.6	-2.5
PRWZ	Pori Road	14.80	197	P	S	06 17 58.0	-6.0
BFZ	Birch Farm	14.85	196	*e*P	P	06 15 24.4	-0.9
BFZ	Birch Farm	14.85	196	P	S	06 18 00.9	-4.1
MRZ	Mangatainoka R	15.01	198	P	S	06 17 59.6	-8.5
TIWZ	Tintock	15.03	197	P	S	06 18 04.8	-3.9
CPWZ	Castlepoint	15.08	196	P	S	06 18 06.9	-2.5
SNZO	South Karori	15.86	199	*e*P	P	06 15 35.0	-1.1
	70nm,0.9s						
THZ	Tophouse	16.85	203	*e*P	P	06 15 46.3	-0.6
	55nm,0.5s						
KHZ	Kahutara	17.22	201	*e*P	P	06 15 49.1	-1.8
	82nm,0.8s						
RAR	Rarotonga	17.82	77	P	P	06 15 58.4	+0.9
	6.0nm,0.3s,baz=246,slow=10,SNR=9.1						
RAR	Rarotonga	17.82	77	*e*P	P	06 15 57.4	-0.1
	404nm,1.5s						
LTZ	Lake Taylor	17.97	203	*e*P	P	06 15 55.3	-3.6
	73nm,0.7s						
LTZ				*e*S	S	06 19 04.6	-1.9
FUNA	Funafuti	18.00	352	*e*P	P	06 15 58.1	-1.4
	156nm,1.3s						
OXZ	Oxford	18.53	202	*e*P	P	06 16 00.8	-4.0
	79nm,0.7s						
MQZ	McQueen's Vall	18.67	201	*e*P	P	06 16 04.7	-1.5
	80nm,1.5s						
MQZ				*e*S	S	06 19 19.1	-0.8
RPZ	Rata Peaks	19.22	204	P	P	06 16 09.0	-3.1
	11nm,0.3s,baz=324,slow=0.4,SNR=33						
RPZ				S	S	06 19 30.3	+0.4
	2.7nm,0.3s,baz=164,slow=20,SNR=4.7						
RPZ	Rata Peaks	19.22	204	*e*P	P	06 16 09.9	-2.2
	64nm,0.5s						
RPZ				*e*S	S	06 19 33.1	+3.2
FOZ	Fox Glacier	19.53	206	*e*P	P	06 16 14.4	-0.9
	102nm,0.5s						
FOZ				*e*S	S	06 19 38.2	+3.2
LBZ	Lake Benmore	20.11	204	*e*P	P	06 16 20.0	-1.2
	25nm,0.7s						
LBZ				*e*S	S	06 19 49.9	+5.4
LHI	Lord Howe Isla	20.33	250	P	P	06 16 25.4	+2.0
	baz=20,SNR=22						
LHI	Lord Howe Isla	20.33	250	*e*P	P	06 16 24.8	+1.4
	304nm,0.6s						
ODZ	Otahua Downs	20.52	203	*e*P	P	06 16 23.9	-1.0
	26nm,0.7s						
WKZ	Wanaka	20.93	206	*e*P	P	06 16 27.6	-1.0
	82nm,1.1s						
MLZ	Mavora Lakes	21.73	206	*e*P	P	06 16 35.4	-0.6
	60nm,0.9s						
DCZ	Deep Cove	22.20	208	*e*P	P	06 16 38.9	-1.3
	57nm,0.7s						
WHZ	Wether Hill Ro	22.23	206	*e*P	P	06 16 39.6	-0.8
	86nm,0.7s						
HNR	Honiara	26.60	306	P	P	06 17 17.6	-2.4
	154nm,0.6s,baz=23,slow=5.9,SNR=4.6						
HNR	Honiara	26.60	306	*e*P	P	06 17 19.4	-0.6
	886nm,1.8s						
HNR	Honiara	26.60	306	*e*P	P	06 17 19.4	-0.6
HNR				pmax	pmax		
	comp=Z,886nm,1.8s						
ARMA	Armidale	26.61	254	P	P	06 17 21.8	+1.7
	baz=27,SNR=22						
ARMA	Armidale	26.61	254	*e*P	P	06 17 20.6	+0.6
	comp=Z,52nm,0.8s						
MGCD	Mangrove Creek	27.23	248	P	P	06 17 27.5	+2.2
	baz=27,SNR=46						
RIV	Riverview	27.26	247	P	P	06 17 27.9	+2.3
	baz=27,SNR=6.3						
EIDS	Eidsvold	27.44	265	P	P	06 17 26.9	-0.4
	baz=27,SNR=57						
EIDS	Eidsvold	27.44	265	*e*P	P	06 17 26.7	-0.6
	comp=Z,126nm,0.8s						
PAE	Paea	28.06	78	*e*P	P	06 17 34.0	+1.2
	comp=Z,20nm,1.2s						
PPT2	Papeete2	28.09	78	*e*P	P	06 17 34.3	+1.1
	comp=Z,120nm,1.3s						
PPT	Papeete	28.10	78	P	P	06 17 34.4	+1.2
	comp=Z,69nm,0.7s,baz=226,slow=2.7,SNR=10						
TVO	Taravao	28.30	78	*e*P	P	06 17 36.6	+1.5
	comp=Z,22nm,0.7s						
TIAR	Tiarei	28.30	78	*e*P	P	06 17 36.2	+1.1
	comp=Z,50nm,1.1s						
TARA	Tarawa	28.91	342	*e*P	P	06 17 38.3	-2.0
	comp=Z,88nm,0.8s						
CNB	Canberra Magne	28.93	244	P	P	06 17 42.4	+1.9
	baz=29,SNR=45						
CAN	Canberra	29.23	244	*e*P	P	06 17 44.7	+1.6
	comp=Z,66nm,0.9s						
CAN	Canberra	29.23	244	*e*P	P	06 17 44.7	+1.6
CAN				pmax	pmax		
	comp=Z,66nm,0.9s						
RMQ	Roma	29.36	263	P	P	06 17 44.9	+0.7
	baz=29,SNR=169						
MILA	Mila	29.41	241	P	P	06 17 46.0	+1.4
	baz=30,SNR=27						
YNG	Young	29.59	247	P	P	06 17 47.5	+1.3
	baz=30,SNR=138						
VAH	Vaihoa	30.77	75	*e*P	P	06 17 57.8	+1.1
	comp=Z,243nm,1.2s						
CMSA	Cobar Meteorol	31.72	252	P	P	06 18 05.4	+0.6
	baz=32,SNR=85						
MOO	Moorlands	32.28	232	P	P	06 18 11.4	+2.0
	baz=32,SNR=7.3						
TAU	Tasmania Unive	32.34	231	*e*P	P	06 18 10.6	+0.7
	comp=Z,90nm,1.5s						
TAU	Tasmania Unive	32.34	231	*e*P	P	06 18 10.6	+0.7
TAU				pmax	pmax		
	comp=Z,90nm,1.5s						
TOO	Toolangi	32.37	241	P	P	06 18 12.1	+1.8
	baz=32,SNR=31						
TOO	Toolangi	32.37	241	P	P	06 18 11.8	+1.4
TOO				pmax	pmax		
	comp=Z,104nm,0.9s						
CTAO	Charters Tower	33.01	274	*e*P	P	06 18 15.3	-0.7
	comp=Z,186nm,0.6s						
CTAO	Charters Tower	33.01	274	*e*P	P	06 18 15.4	-0.7
CTAO				pmax	pmax		
	comp=Z,187nm,0.6s						
QLP	Quilpie	33.36	261	P	P	06 18 19.1	+0.2
	baz=33,SNR=36						
ARPS	Mount Arapiles	35.16	243	P	P	06 18 35.4	+1.3
	baz=35,SNR=22						
STKA	Stephens Creek	35.20	252	P	P	06 18 35.3	+0.7
	comp=Z,25nm,0.3s,baz=98,slow=9.1,SNR=30						
STKA	Stephens Creek	35.20	252	P	P	06 18 35.3	+0.7
	baz=35,SNR=30						
STKA	Stephens Creek	35.20	252	*e*P	P	06 18 35.0	+0.4
	comp=Z,37nm,1.3s						
STKA	Stephens Creek	35.20	252	*e*P	P	06 18 35.0	+0.4
STKA				pmax	pmax		
	comp=Z,37nm,1.3s						
MTSU	Mount Surprise	35.38	276	P	P	06 18 35.3	-0.9
	baz=35,SNR=213						
HTT	Hallett	37.42	249	P	P	06 18 52.6	-0.6
	baz=37,SNR=93						
COEN	Coen	38.00	281	P	P	06 18 58.7	+0.6
	baz=38,SNR=93						
COEN	Coen	38.00	281	*e*P	P	06 18 57.7	-0.5
	comp=Z,179nm,0.6s						
QIS	Mount Isa	38.83	270	P	P	06 19 03.8	-1.1
	baz=39,SNR=50						
BBOO	Buckleboo	39.85	250	P	P	06 19 11.8	-1.3
	baz=40,SNR=66						
BBOO	Buckleboo	39.85	250	*e*P	P	06 19 12.4	-0.7
	comp=Z,138nm,0.9s						
TAOE	Nuku Hiva Isla	40.23	71	*e*P	P	06 19 17.2	+0.6
	comp=Z,319nm,1.1s						
TAOE	Nuku Hiva Isla	40.23	71	*e*P	P	06 19 18.0	+1.4
	comp=Z,373nm,1.4s						
MANU	Manus Island	40.86	301	*e*P	P	06 19 19.5	-2.0
	comp=Z,110nm,0.9s						
AS01	Alice Springs	43.06	263	*e*P	P	06 19 37.7	-1.5
AS31	Alice Springs	43.10	263	*e*P	P	06 19 38.3	-1.2
	comp=Z,70nm,0.5s						
ASAR	Alice Springs	43.10	263	P	P	06 19 38.4	-1.1
	comp=Z,114nm,0.4s,baz=106,slow=7.5,SNR=236						
ASAR				ScP	ScP	06 24 40.3	+1.5
	comp=Z,6.9nm,0.9s,baz=110,slow=4.3,SNR=7.0						
ASAR				S	S	06 25 34.2	-4.3
	comp=Z,11nm,1.0s,baz=102,slow=15,SNR=6.3						
ASAR	Alice Springs	43.10	263	P	P	06 19 38.4	-1.1
ASAR				S	S	06 25 34.3	-4.3
ASAR				pmax	pmax		
	comp=Z,117nm,0.4s						
ASAR				smax	smax		
	comp=N,11nm,1.0s						
WB2	Warramunga Arr	43.72	268	*e*P	P	06 19 42.2	-2.1
	comp=N,115nm,0.9s						
WB2				*e*S	S	06 25 46.7	-0.8
WRAB	Tennant Creek	43.72	268	*e*P	P	06 19 42.6	-1.8
	comp=N,114nm,0.9s						
WRAB				*e*S	S	06 25 49.7	+2.1
WRAB	Tennant Creek	43.72	268	*i* P	P	06 19 42.2	-2.2
WRAB				pmax	pmax		
	comp=Z,123nm,0.9s						
WRA	Warramunga Arr	43.73	268	P	P	06 19 42.2	-2.2
	comp=Z,101nm,0.9s,baz=104,slow=7.9,SNR=147						
WRA				ScP	ScP	06 24 42.8	+1.4
	comp=Z,10nm,1.0s,baz=107,slow=4.3,SNR=7.4						
WRA				S	S	06 25 40.6	-7.1
	comp=Z,4.6nm,1.0s,baz=102,slow=13,SNR=3.4						
JAY	Jayapura	45.88	294	P	P	06 19 59.7	-1.5
GENI	Genyem	46.27	294	P	P	06 20 02.8	-1.4
FORT	Forrest	46.83	252	P	P	06 20 06.7	-1.7
	baz=47,SNR=18						
FORT	Forrest	46.83	252	*e*P	P	06 20 06.6	-1.7
	comp=Z,247nm,0.9s						
WRKA	Warakurna	47.74	259	P	P	06 20 13.4	-2.1
	baz=48,SNR=189						
KDU	Kakadu	48.00	277	P	P	06 20 15.1	-2.3
	baz=48,SNR=96						
MTN	Manton Dam	49.13	276	P	P	06 20 25.1	-0.9
	baz=49,SNR=11						
MTN	Manton Dam	49.13	276	*e*P	P	06 20 24.5	-1.4
	comp=Z,28nm,0.6s						
KNRA	Kununurra	50.16	271	P	P	06 20 32.1	-1.5
	baz=50,SNR=35						
HMH	Humu'ula Sheep	50.92	28	*e*P	P	06 20 39.4	-0.1
HPAH	Hawaii Prepara	51.21	28	*e*P	P	06 20 41.2	-0.1
	comp=Z,143nm,0.8s						
KIP	Kipapa	51.55	24	*ce*P	P	06 20 44.6	+0.9
KIP				pmax	pmax		
	comp=Z,674nm,1.2s						
SBA	Scott Base	51.91	184	*e*P	P	06 20 50.0	+4.4
	comp=Z,46nm,0.9s						
VNDA	Vanda	51.95	185	P	P	06 20 49.2	+3.3
	comp=Z,13nm,0.8s,baz=0.2,slow=8.0,SNR=52						
VNDA	Vanda	51.95	185	*e*P	P	06 20 49.1	+3.2
	comp=Z,29nm,1.1s						
VNDA	Vanda	51.95	185	*e*P	P	06 20 49.1	+3.2
VNDA				pmax	pmax		
	comp=Z,29nm,1.1s						
KMBL	Kambalda	51.96	250	P	P	06 20 45.2	-1.5
	baz=52,SNR=26						
FAKI	Fak Fak	52.73	288	*e*P	P	06 20 50.8	-1.8
	comp=Z,77nm,1.1s						
GUMO	Guam	53.49	314	P	P	06 20 55.4	-2.4
	comp=Z,58nm,0.7s,baz=187,slow=11,SNR=7.3						
GUMO	Guam	53.49	314	*e*P	P	06 20 55.3	-2.6
	comp=Z,59nm,0.8s						
SWI	Sorong	54.65	289	P	P	06 21 04.8	-1.5
	comp=Z,158nm,0.6s,comp=Z,2µm						
MSAI	Masohi	55.37	285	P	P	06 21 12.5	+1.1
	comp=Z,40nm,0.6s						
KLBR	Kellerberrin	55.37	249	P	P	06 21 09.8	-1.4
	baz=55,SNR=40						
RKGY	Rocky Gully	55.42	245	P	P	06 21 11.0	-0.5
	baz=55,SNR=7.9						
NWAO	Narrogin (SRO)	55.53	247	*e*P	P	06 21 12.1	-0.2
	comp=Z,34nm,0.6s						
NWAO	Narrogin (SRO)	55.53	247	*e*P	P	06 21 12.1	-0.2
NWAO				pmax	pmax		
	comp=Z,33nm,0.6s						
MEEK	Meekatharra	55.80	255	P	P	06 21 12.6	-1.8
	baz=56,SNR=34						
AAI	Ambon	55.84	284	P	P	06 21 15.3	+0.6
	comp=Z,135nm,1.4s						
MBWA	Marble Bar	56.39	261	*e*P	P	06 21 16.2	-2.3
	comp=Z,38nm,0.6s						
BLDU	Ballidu	56.46	249	P	P	06 21 17.1	-1.8
	baz=56,SNR=42						
SOEI	Soe	56.53	276	P	P	06 21 19.8	+0.1
	comp=Z,136nm,0.9s						
SOEI	Soe	56.53	276	*e*P	P	06 21 19.1	-0.6
	comp=Z,183nm,1.1s						
MUN	Mundaring	56.57	248	P	P	06 21 18.3	-1.3
	baz=56,SNR=9.1						
BATI	Baumata	56.88	275	P	P	06 21 21.8	-0.3
	comp=Z,58nm,0.5s,baz=176,slow=4.0,SNR=6.4						
NLAI	Namlea	57.01	284	P	P	06 21 23.3	+0.4
	comp=Z,106nm,0.5s						
MORW	Morawa	57.39	251	P	P	06 21 24.0	-1.4
	baz=57,SNR=72						
LBMI	Labuha	57.96	287	P	P	06 21 30.6	+1.1
	comp=Z,113nm,0.5s						
CASY	Casey	58.46	207	*e*P	P	06 21 32.2	+0.1
	comp=Z,107nm,1.2s						
SANI	Sanana	58.56	285	P	P	06 21 31.5	-2.1
	comp=Z,109nm,0.6s,comp=Z,2µm						
MMRI	Maumere	58.82	276	P	P	06 21 36.1	+0.8
	comp=Z,132nm,1.0s						
MMRI	Maumere	58.82	276	*e*P	P	06 21 35.8	+0.5
	comp=Z,272nm,1.4s						
EDFI	Ende, Flores	59.26	276	P	P	06 21 36.8	-1.7
	comp=Z,83nm,0.9s,comp=Z,1µm						
WSI	Waingapu	60.11	274	P	P	06 21 43.7	-0.4
	comp=Z,380nm,0.7s						
KDI	Kendari	60.58	281	P	P	06 21 45.5	-1.8
	comp=Z,60nm,0.8s						
GIRL	Giralia	60.77	258	P	P	06 21 48.7	+0.3
	baz=61,SNR=12						
WBSI	Waikabubak, Su	60.93	274	P	P	06 21 48.6	-1.1
	comp=Z,77nm,0.7s						
KMSI	Cibinong	61.60	286	P	P	06 21 53.7	-0.3
	comp=Z,256nm,0.5s,comp=Z,4µm						
LUWI	Luwuk	61.84	284	P	P	06 21 54.5	-1.2
	comp=Z,77nm,0.7s,comp=Z,5µm						
LUWI	Luwuk	61.84	284	*e*P	P	06 21 54.2	-1.4
	comp=Z,112nm,0.9s						
BKSI	Bulukumba	62.16	278	P	P	06 21 55.5	-2.2
	comp=Z,108nm,0.6s,comp=Z,1µm						
PLAI	Plampang	62.72	274	P	P	06 21 59.6	-1.8
	comp=Z,208nm,0.9s,comp=Z,2µm						
APSI	Ampana	62.89	284	P	P	06 22 01.4	-1.1
	comp=Z,89nm,1.1s,comp=Z,868nm						
SPSI	Sidrap Palu	63.09	280	P	P	06 22 01.3	-2.5
	comp=Z,30nm,0.6s						
MRSI	Marisa	63.32	285	P	P	06 22 02.9	-2.4
	comp=Z,43nm,0.6s						
TTSI	Tana Toraja	63.47	280	P	P	06 22 05.4	-0.9
	comp=Z,41nm,1.0s,comp=Z,2µm						
TWSI	Taliwang, Sumb	63.56	273	P	P	06 22 07.8	+0.9
	comp=Z,49nm,0.6s,comp=Z,1µm						
QSPA	South Pole Qui	63.62	180	P	P	06 22 09.0	+2.4
	comp=Z,26nm,0.6s,baz=44,slow=0.7,SNR=92						
QSPA	South Pole Qui	63.62	180	*e*P	P	06 22 07.0	+0.4
MPSI	Mapaga	65.02	284	P	P	06 22 13.9	-2.4
	comp=Z,34nm,0.8s						
CBIJ	Chichi jima	65.39	321	*e*P	P	06 22 17.5	-0.8
JCJ	Chichijima	65.39	321	P	P	06 22 17.0	-1.3
	comp=Z,45nm,0.3s,baz=270,slow=15,SNR=8.5						
JAGI	Jajag, Banyuwa	66.11	272	P	P	06 22 20.9	-2.3
	comp=Z,94nm,0.7s						
JAGI	Jajag, Banyuwa	66.11	272	*e*P	P	06 22 20.6	-2.7
GMJI	Gumukmas	66.83	272	P	P	06 22 26.6	-1.1
	comp=Z,81nm,0.6s						
BLJI	Banyuglugur	66.92	273	P	P	06 22 27.7	-0.6
	comp=Z,104nm,0.5s						
GRJI	Gresik	68.27	273	P	P	06 22 37.8	+1.1
	comp=Z,157nm,0.8s,comp=Z,1µm						
PWJI	Pagerwojo	68.41	272	P	P	06 22 36.7	-0.8
	comp=Z,75nm,0.6s						
MYLDM	Lahad Datu	68.65	288	*e*P	P	06 22 39.3	+0.4
MTKI	Muara Teweh, K	68.80	280	P	P	06 22 38.3	-1.6
PCJI	Pacitan	68.89	271	P	P	06 22 40.6	+0.1
	comp=Z,120nm,0.6s						
WOJI	Wonogiri, Jawa	69.27	271	P	P	06 22 41.0	-1.8
	comp=Z,46nm,1.3s,comp=Z,5µm						
KKM	Kota Kinabalu	71.04	287	*e*P	P	06 22 52.2	-1.3
KPJI	Karang Pucung	71.27	271	P	P	06 22 53.5	-1.3
	comp=Z,66nm,0.6s						
JHJ	Hachijo jima 2	71.37	324	P	P	06 22 53.8	-1.1
	comp=Z,75nm,0.5s,baz=216,slow=19,SNR=9.2						
STKI	Sintang	72.29	279	P	P	06 23 00.7	-0.1
	comp=Z,126nm,0.7s						
LEM	Lembang	72.67	271	P	P	06 23 02.9	-0.3
	comp=Z,110nm,0.8s,baz=83,slow=8.1,SNR=13						
LEM	Lembang	72.67	271	P	P	06 23 02.8	-0.4
	comp=Z,1µm,0.8s						
SBUM	Sibu	72.75	282	*e*P	P	06 23 02.7	-0.8
JOW	Kunigami	73.78	312	P	P	06 23 08.2	-0.9
	comp=Z,25nm,0.6s,baz=154,slow=8.0,SNR=8.9						
KSM	Kuching	73.97	280	*e*P	P	06 23 09.6	-1.0
INU	Inuyama	74.54	323	*e*P	P	06 23 12.4	-0.8
MJAR	Matsushiro Arr	74.83	325	P	P	06 23 13.9	-1.1
	comp=Z,21nm,0.6s,baz=169,slow=6.2,SNR=56						
MAJO	Matsushiro	74.83	325	*e*P	P	06 23 14.0	-0.9
MAJO	Matsushiro	74.83	325	*ce*P	P	06 23 13.8	-1.1
MAJO				pmax	pmax		
	comp=Z,41nm,0.8s						
MAT	Matsushiro	74.83	325	P	P	06 23 13.8	-1.1
MJB9	Matsu-Tunnel	74.83	325	*e*P	P	06 23 14.4	-0.6
PMSA	Palmer Station	75.98	156	P	P	06 23 23.7	+2.7
	comp=Z,44nm,1.0s,baz=225,slow=8.6,SNR=3.8						
TWG	Pinlang	76.36	304	*e*P	P	06 23 20.8	-3.0
JNU	Nakatsue	76.41	318	P	P	06 23 23.1	-0.7
	comp=Z,23nm,0.5s,baz=126,slow=1.5,SNR=17						
YULB	Yu-li	76.53	305	*e*P	P	06 23 22.2	-2.6
MDSI	Maura Dua	76.76	272	P	P	06 23 24.1	-2.2
TPUB	Ta-pu	76.97	304	*e*P	P	06 23 24.8	-2.4
SSLB	Suanglung	77.02	305	*e*P	P	06 23 25.0	-2.5
ASAJ	Asahikawa	78.81	332	P	P	06 23 38.2	+1.5
	comp=Z,17nm,0.7s,baz=185,slow=6.2,SNR=11						
ASAJ	Asahikawa	78.81	332	*e*P	P	06 23 37.9	+1.2
MYKOM	Kota Tinggi	79.84	277	*e*P	P	06 23 42.7	-0.4
TJN	Taejon	80.74	318	*i* P	P	06 23 44.9	-2.3
SYO	Syowa Base	80.85	193	⇓*i*P	P	06 23 47.4	+0.1
SYO	Syowa Base	80.85	193	⇑*i*PcP	PcP	06 23 53.2	+0.5
YSS	Yuzh-Sakhalins	81.07	334	*e*P	P	06 23 50.1	+1.4
YSS	Yuzh-Sakhalins	81.07	334	⇑*e*P	P	06 23 49.0	+0.4
YSS				*e*		06 25 04.7	
YSS				*e*		06 25 44.3	
YSS				*e*		06 26 55.4	
YSS				pmax	pmax		

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        comp=Z,30nm,0.6s
YSS                                    MLR    MLR
        comp=N,500nm,15.0s
YSS                                    MLR    MLR
        comp=Z,400nm,15.0s
YSS                                    MLR    MLR
        comp=E,400nm,16.0s
KSRS  Korea Array        81.14 320   P      P        06 23 49.3 +0.1
        comp=E,12nm,0.7s,baz=135,slow=5.8,SNR=40
KS15  Wonju Array Si     81.15 320  eP      P        06 23 49.6 +0.2
KSAR  Wonju Array Be     81.15 320   P      P        06 23 49.3  0.0
KSAR  Wonju Array Be     81.15 320   P      P        06 23 49.3  0.0
KS01  Wonju Array Si     81.17 320  eP      P        06 23 48.8 -0.6
SNCC  San Nicolas Is     81.59  46   P      P        06 23 53.2 +1.5
        baz=231
PET   Petropavlovsk      81.65 346  i P     P        06 23 50.6 -0.9
PET                                  pmax   pmax
        comp=Z,10.0nm,1.2s
PETK  Petropavlovsk-     81.94 346   P      P        06 23 53.1 +0.1
        comp=Z,7.2nm,0.6s,baz=114,slow=7.7
PETK  Petropavlovsk-     81.94 346  eP      P        06 23 52.9 -0.1
PETK  Petropavlovsk-     81.94 346  eP      P        06 23 52.9 -0.1
SCZ2  Santa Cruz Isl     81.99  46   P      P        06 23 54.9 +1.1
        baz=231
SCI2  San Clemente I     82.06  47   P      P        06 23 55.3 +1.1
        baz=232
SNAA  Sanae              82.08 179   P      P        06 23 54.2 +0.4
SNAA  Sanae              82.08 179   P      P        06 23 54.5 +0.8
        comp=Z,23nm,0.7s,baz=202,slow=4.6,SNR=160
SNAA  Sanae              82.08 179  eP      P        06 23 54.1 +0.3
SBC   Santa Barbara      82.22  45   P      P        06 23 56.1 +1.2
        baz=231
VNA3  Neumayer Olymp     82.23 176   P      P        06 23 55.1 +0.6
CIS   Catalina Islan     82.41  47   P      P        06 23 56.7 +0.7
        baz=232
BLG   Laguna Peak, P     82.42  46   P      P        06 23 56.9 +0.9
        baz=231
PKM   Mcpherson Peak     82.44  45   P      P        06 23 57.4 +1.1
        baz=230,SNR=16
SMMC  Simmler            82.59  45   P      P        06 23 58.3 +1.4
        baz=230,SNR=9.0
SAO   San Andreas Ge     82.63  43  eP      P        06 23 58.1 +1.1
SAO   San Andreas Ge     82.63  43  eP      P        06 23 58.1 +1.1
PMPB  Monarch Peak       82.67  44  eP      P        06 23 58.5 +1.2
FMP   Fort Macarthur     82.68  47   P      P        06 23 58.3 +1.0
        baz=232
MCCM  Marconi Confer     82.68  41  eP      P        06 23 58.6 +1.4
PAGB  Antelope Grade     82.70  44  eP      P        06 23 59.0 +1.6
NVL   N'lazarevskaya     82.76 183⇑iP      P        06 23 58.7 +1.5
NVL                                  pmax   pmax
        comp=Z,31nm,0.8s
LPIG  La Paz             82.78  59   P      P        06 23 59.4 +1.3
        comp=Z,14nm,0.8s,baz=266,slow=4.8,SNR=4.9
SLBS  Sierra La Lagu     82.84  59  eP      P        06 23 59.9 +1.5
VNA1  Neumayer--Stat     82.90 177   P      P        06 23 58.6 +0.8
MSHR  Mys Shultsa        82.95 325  i P     P        06 23 57.5 -1.0
109C  Camp Elliot, M     82.96  48   P      P        06 23 59.7 +0.9
        baz=232
CPE   Camp Elliot        82.96  48  eP      P        06 24 00.1 +1.3
OSI   Osito Audit: C     82.96  46   P      P        06 23 60.0 +1.2
        baz=231
DECC  Green Verdugo      82.99  46   P      P        06 24 00.1 +1.2
        baz=232
PASC  Pasadena Art C     83.03  46  eP      P        06 24 00.3 +1.1
SRIG  Santa Rosalia      83.11  55  eP      P        06 24 00.6 +1.0
BAR   Barrett            83.12  48  eP      P        06 24 00.6 +0.9
HOPS  Hopland Field      83.14  40  eP      P        06 24 00.2 +0.7
MWC   Mount Wilson       83.15  46  eP      P        06 23 59.4 -0.6
MWC   Mount Wilson       83.15  46  eP      P        06 23 59.4 -0.6
ARVC  Arvin              83.21  45   P      P        06 24 00.8 +0.8
        baz=231,SNR=7.1
KCPM  Cahto Peak         83.31  39  eP      P        06 24 02.3 +1.8
MURC  Murrieta           83.33  47   P      P        06 24 01.4 +0.8
        baz=232,SNR=19
MONP2 Monument Peak      83.42  48   P      P        06 24 02.4 +1.1
        baz=233,SNR=26
BFSC  Mount Baldy Ra     83.42  47   P      P        06 24 01.7 +0.5
        baz=232,SNR=26
NJ2   Nanjing            83.43 311  eP      P        06 24 01.0 -0.2
NJ2                                  pmax   pmax
        comp=Z,24nm,0.6s
IKP   In-Ko-Pah, Jac     83.48  49   P      P        06 24 02.6 +1.1
        baz=233,SNR=15
VES   Vestal, Richgr     83.50  45   P      P        06 24 01.9 +0.5
        baz=231,SNR=23
EDW2  Edwards Air Fo     83.60  46   P      P        06 24 02.9 +0.8
        baz=232,SNR=33
KMRM  Mail Ridge         83.60  39  eP      P        06 24 03.8 +1.9
FRD   Ford Ranch, An     83.66  48   P      P        06 24 03.5 +1.1
        baz=233,SNR=47
USRK  Ussuriysk Ar.      83.70 327   P      P        06 24 02.2  0.0
        comp=Z,7.3nm,0.6s,baz=113,slow=5.3
ISA   Isabella, Lake     83.78  45   P      P        06 24 03.9 +0.9
        baz=231,SNR=58
ISA   Isabella, Lake     83.78  45  eP      P        06 24 04.0 +1.1
ISA   Isabella, Lake     83.78  45  eP      P        06 24 04.0 +1.1
PFO   Pinyon Flats O     83.83  48   P      P        06 24 04.3 +1.1
        baz=233,SNR=16
PFO   Pinyon Flats O     83.83  48  eP      P        06 24 04.4 +1.1
PFO   Pinyon Flats O     83.83  48  eP      P        06 24 04.4 +1.1
XPFO  Piæon Flat         83.83  48  eP      P        06 24 04.4 +1.1
SWSC  Sam W. Stewart     83.86  49   P      P        06 24 04.4 +1.0
        baz=233,SNR=13
BBRC  Big Bear Solar     83.92  47   P      P        06 24 04.8 +0.9
        baz=232
KHMM  Horse Mountain     84.03  38  eP      P        06 24 05.7 +1.5
CMB   Columbia Colle     84.09  42  eP      P        06 24 05.0 +0.6
CMB   Columbia Colle     84.09  42  eP      P        06 24 05.0 +0.6
LRMC  Laurel Mtn Rad     84.17  46   P      P        06 24 05.5 +0.6
        baz=232,SNR=11
RRX   Edison Barstow     84.24  47   P      P        06 24 06.1 +1.0
        baz=232
AFDM  Forest Hills D     84.33  41  eP      P        06 24 06.2 +0.6
BELC  Belle Mtn. Jos     84.36  48   P      P        06 24 07.1 +1.1
        baz=233,SNR=42
ORV   Oroville           84.42  41  eP      P        06 24 07.1 +1.1
ORV   Oroville           84.42  41  eP      P        06 24 07.1 +1.1
WDC   Whiskeytown Da     84.50  39  eP      P        06 24 07.2 +0.9
WDC   Whiskeytown Da     84.50  39  eP      P        06 24 07.2 +0.9
CWC   Cottonwood Cre     84.51  45   P      P        06 24 07.6 +0.9
        baz=232
BC3   Big Chuckawall     84.52  48   P      P        06 24 08.1 +1.4
        baz=233,SNR=31
GLA   Glamis             84.58  49   P      P        06 24 08.6 +1.6
        baz=234,SNR=18
GLA   Glamis             84.58  49  eP      P        06 24 08.7 +1.6
GLA   Glamis             84.58  49   P      P        06 24 08.6 +1.6
GSC   Goldstone, Bar     84.62  46   P      P        06 24 08.1 +0.9
        baz=232,SNR=54
GSC   Goldstone, Bar     84.62  46  eP      P        06 24 08.1 +0.9
GSC   Goldstone, Bar     84.62  46  eP      P        06 24 08.1 +0.9
MDPB  Devils Postpil     84.63  43  eP      P        06 24 08.3 +0.9
HEC   Hector,Ludlow      84.64  47   P      P        06 24 08.1 +0.9
        baz=233,SNR=24
MPMC  Manual Prospec     84.65  45   P      P        06 24 08.3 +0.8
        baz=232,SNR=42
N02D  Trinity Center     84.67  39   P      P        06 24 08.7 +1.5
        baz=228,SNR=39
OMMB  Old Mammoth Mi     84.67  43  eP      P        06 24 08.9 +1.2
PSI   Prapat             84.69 276   P      P        06 24 06.7 -1.4
        comp=Z,8.9nm,0.5s,baz=180,slow=7.2,SNR=6.7
PSI   Prapat             84.69 276  eP      P        06 24 06.5 -1.5
DAC   Darwin (Calif)     84.72  45  eP      P        06 24 08.2 +0.5
        comp=Z,32nm,1.4s
DAC   Darwin (Calif)     84.72  45  eP      P        06 24 08.2 +0.5
DAC                                  pmax   pmax
        comp=Z,32nm,1.4s
O03D  Paynes Creek       84.73  40   P      P        06 24 08.0 +0.4
        baz=229,SNR=44
O03D  Paynes Creek       84.73  40  eP      P        06 24 08.2 +0.6
UBPT  Khong Chiam        84.77 290   P      P        06 24 09.8 +1.6
MLAC  Mammoth, Mammo84.78  43        P      P        06 24 09.1 +1.0
        baz=231,SNR=7.5
TIN   Tinemaha, Big      84.80  44   P      P        06 24 09.0 +1.0
        baz=231,SNR=7.9
M02C  Callahan           84.86  39   P      P        06 24 09.7 +1.5
        baz=228,SNR=28
L02D  Cave Junction,     84.97  38   P      P        06 24 10.0 +1.3
        baz=227
WAKR  Walker             84.97  42  eP      P        06 24 10.0 +1.1
HSIG                     85.00  54  eP      P        06 24 10.0 +0.9
IRM   Iron Mountain      85.03  48   P      P        06 24 10.5 +1.4
        baz=234,SNR=63
GMRC  Granite Mounta     85.06  47   P      P        06 24 10.4 +1.0
        baz=233,SNR=41
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YBH   Yreka Blue Hor     85.17  38   P      P        06 24 10.7 +1.0
        comp=Z,9.4nm,0.8s,baz=160,slow=4.3,SNR=21
YBH   Yreka Blue Hor     85.17  38  eP      P        06 24 10.3 +0.5
MDJ   Mudanjiang         85.20 326   P      P        06 24 09.5 -0.2
MDJ                                  pP     pP       06 25 26.5 -5.3
MDJ                                  pmax   pmax
        comp=Z,14nm,1.0s
MDJ                                  pmax   pmax
        comp=Z,1μm,14.2s
Y12C  Blythe             85.20  49   P      P        06 24 11.2 +1.3
        baz=234,SNR=17
Y12C  Blythe             85.20  49  eP      P        06 24 11.4 +1.4
SII   Sitkinak Islan     85.22  13  eP      P        06 24 10.0 +0.5
GSI   Gunungsitoli       85.22 274  eP      P        06 24 10.6  0.0
PNTR  Pine Nut           85.24  42  eP      P        06 24 11.2 +0.9
TUQ   Turquoise Moun     85.28  47   P      P        06 24 11.4 +1.0
        baz=233,SNR=34
BEKR  Beckworth          85.29  41  eP      P        06 24 11.1 +0.6
FURC  Furnace Creek,     85.30  45   P      P        06 24 11.0 +0.7
        baz=232,SNR=20
GRAC  Grapevine Rang     85.30  45   P      P        06 24 11.5 +1.0
        baz=232,SNR=66
SHOC  Shoshone, Teco     85.33  46   P      P        06 24 11.2 +0.6
        baz=233,SNR=24
214A  Organ Pipe Nat     85.33  51   P      P        06 24 12.1 +1.5
        baz=235
VCNR  Virginia City      85.34  42  eP      P        06 24 11.9 +1.1
YERR  Yerington          85.39  42  eP      P        06 24 11.8 +0.8
PLCA  Paso Flores        85.44 133   P      P        06 24 13.5 +2.2
        comp=Z,14nm,0.9s,baz=234,slow=3.8,SNR=18
PLCA  Paso Flores        85.44 133  eP      P        06 24 13.2 +1.9
LDFC  Landfair           85.60  47  eP      P        06 24 13.7 +1.7
RYN   Ryan               85.60  43  eP      P        06 24 13.0 +1.0
NV01  Mina Array Sit     85.61  43  eP      P        06 24 12.7 +0.5
NVAR  Mina Array Bea     85.61  43   P      P        06 24 12.8 +0.6
        comp=Z,20nm,0.8s,baz=222,slow=7.7,SNR=56
HUMO  Hull Mountain      85.62  38  eP      P        06 24 13.2 +1.4
M04C  Macdoel            85.69  39   P      P        06 24 13.0 +0.7
        baz=229,SNR=6.7
NV11  Mina Array Sit     85.70  43  eP      P        06 24 13.1 +0.6
WHN   Wuhan              85.71 307   P      P        06 24 11.8 -0.7
NEE2  Needles Airpor     85.74  48   P      P        06 24 14.0 +1.4
        baz=234
PAHR  Pah Rah Range      85.77  42  eP      P        06 24 13.3 +0.6
PDMCI Parker Dam,Lak     85.78  48   P      P        06 24 14.0 +1.2
        baz=234,SNR=17
TPNV  Topopah Spring     85.98  45   P      P        06 24 14.8 +0.9
        baz=233,SNR=46
TPNV  Topopah Spring     85.98  45  eP      P        06 24 14.7 +0.8
TPNV  Topopah Spring     85.98  45  eP      P        06 24 14.7 +0.8
OHAK  Old Harbor         86.02  13  eP      P        06 24 12.3 -1.0
KVN   Kaiserville        86.12  43  eP      P        06 24 15.0 +0.4
KVN   Kaiserville        86.12  43  eP      P        06 24 15.0 +0.4
I03D  Drain, OR          86.15  37   P      P        06 24 15.1 +0.8
        baz=228,SNR=6.4
EFI   East Falkland      86.27 147  i P     P        06 24 15.7 +0.8
EFI                                  pmax   pmax
        comp=Z,65nm,1.0s
K04D  Chiloquin, OR      86.30  38   P      P        06 24 16.2 +0.9
        baz=229
SHPR  Sheep Range        86.41  46  eP      P        06 24 17.1 +1.1
J04D  Umpqua Nationa     86.51  38   P      P        06 24 17.1 +0.8
        baz=228,SNR=9.8
GRNR  Gornyy             86.64 333  eP      P        06 24 20.1 +3.6
MOD   Modoc Plateau      86.64  39  eP      P        06 24 17.4 +0.5
KDAK  Kodiak Island      86.68  14   P      P        06 24 16.8 +0.3
        comp=Z,12nm,1.1s,baz=202,slow=8.9,SNR=5.6
I04A  Tendick Farm,      86.72  37   P      P        06 24 17.4 +0.3
        baz=228,SNR=11
CN2   Changchun          86.81 323  eP      P        06 24 19.5 +2.0
CN2                                  pmax   pmax
        comp=Z,10.0nm,0.7s
K05A  Summer Lake        86.84  38  eP      P        06 24 18.9 +0.9
NKL   Nikolayevsk        86.91 337  eP      P        06 24 18.0 +0.4
NKL                                  pmax   pmax
        comp=Z,34nm,1.0s
TUC   Tucson             86.95  52   P      P        06 24 20.4 +1.8
        baz=236
TUC   Tucson             86.95  52  eP      P        06 24 20.3 +1.8
TUC   Tucson             86.95  52  eP      P        06 24 20.3 +1.8
J05D  Fort Rock, OR      87.02  38   P      P        06 24 19.5 +0.8
        baz=229,SNR=17
G03D  McMinnville, O     87.22  35   P      P        06 24 20.4 +1.1
        baz=228
R11A  Troy Canyon, C     87.25  44   P      P        06 24 20.3 +0.4
        baz=233,SNR=16
R11A  Troy Canyon, C     87.25  44  eP      P        06 24 20.2 +0.4
H04A  Detroit Lake       87.43  36  eP      P        06 24 20.8 +0.4
KLR   Kul'dur            87.48 330ceP      P        06 24 19.9 -0.6
PINE  Pine Mountain      87.51  38  eP      P        06 24 22.2 +1.1
I05D  Terrebonne, OR     87.65  37   P      P        06 24 22.1 +0.5
        baz=229,SNR=20
HPIG                     87.84  59  eP      P        06 24 23.6 +0.5
WVOR  Wild Horse Val     87.93  40  eP      P        06 24 23.7 +0.7
WVOR  Wild Horse Val     87.93  40  eP      P        06 24 23.7 +0.7
F04D  Rainier, OR        87.94  35   P      P        06 24 24.0 +1.3
        baz=228
LCMT  Little Creek M     87.95  47  eP      P        06 24 24.3 +1.0
E03A  Lebam              87.97  34  eP      P        06 24 24.5 +1.6
ZAIG  Zacatecas          88.17  64  eP      P        06 24 26.0 +1.2
CCUT  Cedar City         88.19  46  eP      P        06 24 25.8 +1.3
KNB   Kanab              88.23  47  eP      P        06 24 25.8 +1.2
KNB   Kanab              88.23  47  eP      P        06 24 25.8 +1.2
G05D  Wamic, OR          88.26  36   P      P        06 24 25.3 +0.9
        baz=229,SNR=6.2
WUAZ  Wupatki            88.34  49   P      P        06 24 26.3 +1.1
        baz=236
WUAZ  Wupatki            88.34  49  eP      P        06 24 26.4 +1.3
NLWA  Neilton Lookou     88.39  34  eP      P        06 24 26.5 +1.6
SZCU  Shurtz Canyon      88.39  46  eP      P        06 24 26.7 +1.3
PSUT  Pine Spring        88.45  45  eP      P        06 24 26.5 +0.8
I07A  Izee               88.49  38  eP      P        06 24 26.9 +1.4
CNPM  China Poot         88.57  13  eP      P        06 24 25.3 -0.1
HOM   Homer              88.61  13  eP      P        06 24 26.4 +0.9
J08A  Circle Bar Ran     88.61  39  eP      P        06 24 26.9 +0.7
G06A  Carlson Farm,      88.62  37  eP      P        06 24 26.8 +0.8
PHET  Kaeng Krachan      88.65 285   P      P        06 24 29.9 +3.1
DIB   Dawson Inlet,      88.80  26  eP      P        06 24 27.6 +1.1
PKCU  Pink Cliffs        88.81  47  eP      P        06 24 29.4 +1.9
TLIG  Tlapa              88.97  70  eP      P        06 24 30.1 +1.7
LON   Longmire           89.00  35  eP      P        06 24 28.3 +0.5
LON   Longmire           89.00  35  eP      P        06 24 28.3 +0.5
ENH   Enshi              89.10 305  eP      P        06 24 28.5 -0.1
        comp=Z,29nm,0.8s
PBKT  Sadao Pong         89.18 289  eP      P        06 24 30.6 +1.4
PBKT  Sadao Pong         89.18 289   P      P        06 24 31.4 +2.2
121A  Cookes Peak, D     89.20  53   P      P        06 24 30.7 +1.5
        baz=238,SNR=25
D05A  Enumclaw           89.20  35  eP      P        06 24 30.4 +1.7
SVW2  Sparrevohn         89.21  11  eP      P        06 24 29.3 +1.0
W18A  Petrified Fore     89.23  50   P      P        06 24 30.2 +0.9
        baz=237
W18A  Petrified Fore     89.23  50  eP      P        06 24 30.9 +1.6
GYA   Guiyang            89.29 300   P      P        06 24 29.8 +0.1
GYA                                  pP     pP       06 25 48.5 -4.2
GYA                                  sP     sP       06 26 21.5 -8.0
GYA                                  PP     PP       06 28 07.0 +0.4
GYA                                  SKS    SKSac    06 34 25.5  0.0
GYA                                  S      S        06 34 48.3 -0.4
GYA                                  pmax   pmax
        comp=Z,20nm,1.0s
GYA                                  pmax   pmax
        comp=Z,120nm,5.9s
F07A  Phinny Hill Vi     89.43  37  eP      P        06 24 31.1 +1.5
MSU   Marysvale          89.51  46  eP      P        06 24 32.0 +1.4
MSU   Marysvale          89.51  46  eP      P        06 24 32.0 +1.4
G08A  Pilot Rock         89.56  37  eP      P        06 24 31.2 +0.7
SRDT  SRDT               89.74 286   P      P        06 24 36.6 +4.7
BBB   Bella Bella        89.81  28  eP      P        06 24 32.5 +1.3
B05A  Bryant             89.86  34   P      P        06 24 32.5 +0.9
        baz=228,SNR=19
A04D  Lummi Island       89.87  33   P      P        06 24 32.6 +1.0
        baz=228,SNR=8.6
BJI   Beijing            89.88 316⇓eP      P        06 24 33.0 +1.1
BJI                                  S      S        06 34 57.5 +4.3
BJI                                  pmax   pmax
        comp=Z,16nm,0.6s
LTY   Liberty            89.92  35  eP      P        06 24 32.4 +0.3
PHIT  Phitsanulok        89.94 289   P      P        06 24 35.6 +2.9
HAWA  Hanford            89.96  36  eP      P        06 24 32.8 +0.7
DUG   Dugway, Tooele     90.07  44   P      P        06 24 33.4 +0.3
        baz=235
DUG   Dugway, Tooele     90.07  44  eP      P        06 24 33.5 +0.5
DUG   Dugway, Tooele     90.07  44  eP      P        06 24 33.5 +0.5
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MFID  Camas Ranch        90.16  40  eP      P        06 24 34.0 +0.7
BMO   Blue Mountains     90.20  39  eP      P        06 24 33.8 +0.3
BMO   Blue Mountains     90.20  39  eP      P        06 24 33.8 +0.3
E08A  Dider Farm, El     90.27  36  eP      P        06 24 34.4 +0.7
CRAG  Craig              90.30  24  eP      P        06 24 35.1 +1.6
RC01  Rabbit Creek A     90.31  13  eP      P        06 24 33.0 -0.4
BGU   Big Grassy Mou     90.36  44  eP      P        06 24 35.2 +0.8
SUA   Susitna One        90.44  13  eP      P        06 24 33.6 -0.6
MNTX  Cornudas Mount     90.50  55   P      P        06 24 35.8 +0.8
        baz=239,SNR=48
MNTX  Cornudas Mount     90.50  55  eP      P        06 24 36.0 +0.9
TX31  Lajitas Ar. Si     90.57  57  eP      P        06 24 36.5 +0.9
TXAR  Lajitas Array      90.57  57   P      P        06 24 36.4 +0.8
        comp=Z,8.5nm,0.8s,baz=212,slow=5.5,SNR=86
TXAR                                 pP     pP       06 26 03.0 +4.4
        comp=Z,1.7nm,0.8s,baz=209,slow=7.2,SNR=4.2
TXAR                                 PP     PP       06 28 16.6 +0.1
        comp=Z,1.7nm,1.1s,baz=224,slow=7.6,SNR=4.0
TXAR                                 PKKP   PKKPbc   06 42 01.7 +0.6
        comp=Z,0.2nm,0.5s,baz=136,slow=2.5,SNR=6.2
TMUT  Trail Mountain     90.58  46  eP      P        06 24 36.9 +1.2
Y22D  IRIS PASSCAL I     90.62  52   P      P        06 24 35.5 -0.3
        baz=238
Y22E  IRIS PASSCAL I     90.62  52   P      P        06 24 35.2 -0.5
        baz=238
GLI   Glacier Island     90.69  15  eP      P        06 24 35.1 -0.2
D08A  Wollman Farm,      90.70  36  eP      P        06 24 36.5 +0.8
MPU   Maple Canyon       90.71  45  eP      P        06 24 37.0 +1.0
EYAK  Cordova Ski Ar     90.72  15  eP      P        06 24 35.5 +0.2
FID   Port Fidalgo       90.72  15  eP      P        06 24 35.2 -0.1
SUKH  Sukhothai          90.74 289   P      P        06 24 39.0 +2.6
SKT   Skwentna           90.76  12  eP      P        06 24 34.2 -1.3
E09A  Wood Farm, Sta     90.78  37  eP      P        06 24 36.7 +0.7
SIT   Sitka              90.78  22  eP      P        06 24 36.8 +1.1
SIT   Sitka              90.78  22   P      P        06 24 36.7 +1.1
RAGM  Ragged Mountai     90.83  16  eP      P        06 24 36.9 +1.0
PMR   Palmer             90.89  14  eP      P        06 24 35.9 -0.2
PMR   Palmer             90.89  14  eP      P        06 24 35.9 -0.2
SRU   San Rafael Swe     90.91  46  eP      P        06 24 37.7 +0.6
SRU   San Rafael Swe     90.91  46  eP      P        06 24 37.7 +0.6
F10A  Beach Ranch, E     90.94  38  eP      P        06 24 36.7 -0.1
SPUT  South Promonto     90.94  43  eP      P        06 24 37.8 +0.7
P17A  Butcher Ranch,     90.97  46  eP      P        06 24 38.6 +1.3
HVU   Hansel Valley      91.01  43  eP      P        06 24 38.0 +0.7
HVU   Hansel Valley      91.01  43  eP      P        06 24 38.1 +0.7
CTU   Camp Tracy         91.02  44  eP      P        06 24 38.4 +0.9
HLID  Hailey             91.07  41   P      P        06 24 38.5 +0.8
        baz=234
HLID  Hailey             91.07  41  eP      P        06 24 38.5 +0.8
GHO   Glory Hole Cre     91.09  14  eP      P        06 24 36.8 -0.4
JLU   Jordanelle         91.16  44  eP      P        06 24 39.2 +1.0
MVCO  Mesa Verde         91.21  49   P      P        06 24 38.9 +0.4
        baz=237
MVCO  Mesa Verde         91.21  49  eP      P        06 24 39.3 +0.7
LAMP  Lampang            91.21 290   P      P        06 24 41.7 +3.1
DIV   Divide             91.22  15  eP      P        06 24 37.8  0.0
SML   Sawmill            91.25  14  eP      P        06 24 40.6 +2.8
SML   Sawmill            91.25  14   P      P        06 24 40.6 +2.8
WRAK  Wrangell Islan     91.31  24  eP      P        06 24 39.4 +1.2
B08A  Colville Reser     91.32  35  eP      P        06 24 38.2 -0.2
BMRM  Bremner River      91.36  16  eP      P        06 24 38.6 +0.3
P18A  Preston Nutter     91.38  46  eP      P        06 24 40.1 +0.8
TASM  ASL Pad, Albuq     91.41  51   P      P        06 24 40.1 +0.7
        baz=238,SNR=40
ANMO  Albuquerque        91.41  51   P      P        06 24 40.5 +1.1
        comp=Z,18nm,0.9s,baz=214,slow=6.3,SNR=56
ANMO                                 pP     pP       06 26 04.0 +1.4
        comp=Z,2.3nm,0.9s,baz=209,slow=8.9,SNR=2.6
ANMO  Albuquerque        91.41  51   P      P        06 24 40.3 +0.8
        baz=238
ANMO  Albuquerque        91.41  51ceP      P        06 24 40.4 +1.0
ANMO                                 pmax   pmax
        comp=Z,25nm,1.0s
TASL  Snake Pit, Alb     91.41  51   P      P        06 24 40.1 +0.7
        baz=238,SNR=36
XAN   Xi'an              91.46 308   P      P        06 24 43.5 +4.0
XAN                                  pmax   pmax
        comp=Z,20nm,0.9s
XAN                                  pmax   pmax
        comp=Z,250nm,10.8s
TCUT  Toone Canyon       91.47  44  eP      P        06 24 40.6 +0.9
PV17  East Wray Mesa     91.48  47  eP      P        06 24 40.4 +0.7
PV19  Morning Glory      91.48  47  eP      P        06 24 40.5 +0.8
PV09  Paradox Valley     91.48  47  eP      P        06 24 40.7 +0.9
PV14  Lion Creek, Pa     91.49  47  eP      P        06 24 40.5 +0.7
SCM   Sheep Creek Mo     91.49  14  eP      P        06 24 39.1 +0.1
SCM   Sheep Creek Mo     91.49  14  eP      P        06 24 39.1 +0.1
PV18  Skein Mesa, Pa     91.49  48  eP      P        06 24 40.4 +0.6
PV13  Radium Mtn., P     91.50  48  eP      P        06 24 40.5 +0.7
KLU   Klutina            91.50  15  eP      P        06 24 39.2 +0.2
PV20  West Nyswonger     91.51  47  eP      P        06 24 40.5 +0.6
PV16  Nyswonger Mesa     91.52  47  eP      P        06 24 40.6 +0.7
LLLB  Lillooet           91.53  32  eP      P        06 24 39.8 +0.4
PV23  Carpenter Ridg     91.54  47  eP      P        06 24 40.9 +0.9
PV03  Paradox Valley     91.54  48  eP      P        06 24 40.6 +0.6
PV11  David Mesa, Pa     91.55  48  eP      P        06 24 40.8 +0.8
PV02  Paradox Valley     91.59  48  eP      P        06 24 41.0 +0.7
PV12  Saucer Basin,      91.60  48  eP      P        06 24 41.1 +0.8
PV21  Cone Mtn., Par     91.62  47  eP      P        06 24 41.3 +0.9
HWUT  Hardware Ranch     91.65  44  eP      P        06 24 40.5 +0.1
LNIG  Linares            91.68  63  eP      P        06 24 39.7 -1.0
PV22  Blue Mesa, Par     91.73  47  eP      P        06 24 41.7 +0.8
KMI   Kunming            91.73 297   P      P        06 24 43.0 +1.8
KMI                                  pP     pP       06 25 59.0 -5.3
KMI                                  sP     sP       06 26 34.3 -6.8
KMI                                  pmax   pmax
        comp=Z,18nm,0.8s
CM01  Chiang Mai Arr     91.73 290  eP      P        06 24 41.9 +0.8
CMAR  Chiang Mai Arr     91.77 290   P      P        06 24 42.2 +1.0
        comp=Z,7.0nm,0.9s,baz=154,slow=3.6,SNR=15
CMAR                                 pP     pP       06 26 06.8 +2.5
        comp=Z,1.0nm,0.4s,baz=199,slow=4.7,SNR=1.5
CMAR                                 PP     PP       06 28 26.1 +0.2
        comp=Z,4.4nm,0.9s,baz=129,slow=6.4,SNR=8.9
CMAR                                 PKKPbc PKKPbc   06 41 58.0 +0.5
        comp=Z,1.0nm,0.4s,baz=295,slow=4.0,SNR=4.2
CMMT  Chiang Mai         91.92 290   P      P        06 24 44.2 +2.3
CHTO  Chiang Mai         91.93 290  eP      P        06 24 42.7 +0.8
CHTO  Chiang Mai         91.93 290  eP      P        06 24 42.7 +0.8
CHTO  Chiang Mai         91.93 290   P      P        06 24 44.3 +2.4
SEY   Seymchan           92.09 347  i P     P        06 24 40.4 -1.2
BESE  Bessie Mountai     92.14  21  eP      P        06 24 43.0 +0.9
TRF   Thorofare Moun     92.34  12  eP      P        06 24 41.8 -1.2
DHY   Denali Highway     92.59  14  eP      P        06 24 43.8 -0.4
AHID  Auburn Hatcher     92.59  43  eP      P        06 24 45.2 +0.5
S22A  4UR Ranch, Cre     92.62  49   P      P        06 24 45.7 +0.6
        baz=238,SNR=29
S22A  4UR Ranch, Cre     92.62  49  eP      P        06 24 45.8 +0.7
SKAG  Skagway            92.68  20  eP      P        06 24 45.2 +0.8
MCMT  McKenzie Canyo     92.72  40  eP      P        06 24 46.3 +1.0
BPAW  Bear Paw Mtn.      92.80  12  eP      P        06 24 44.8 -0.1
MCK   McKinley           92.86  13  eP      P        06 24 44.8 -0.4
MCK   McKinley           92.86  13  eP      P        06 24 44.8 -0.4
PAX   Paxson             92.91  14  eP      P        06 24 44.9 -0.6
PAX   Paxson             92.91  14  eP      P        06 24 44.9 -0.6
O20A  White River Ci     92.95  46   P      P        06 24 46.6 +0.1
        baz=238,SNR=12
O20A  White River Ci     92.95  46  eP      P        06 24 46.5 +0.1
REDW  Red Top Meadow     93.08  42  eP      P        06 24 47.4 +0.4
TPAW  Teton Pass         93.09  42  eP      P        06 24 47.8 +0.7
FXWY  Fox Creek          93.12  42  eP      P        06 24 47.7 +0.5
DLMT  Dillon             93.18  40  eP      P        06 24 48.1 +0.8
SNOW  Snow King Moun     93.19  42  eP      P        06 24 48.3 +0.8
HHC   Hu-ho-hao-te       93.25 314  eP      P        06 24 50.5 +2.8
HHC                                  sP     sP       06 26 33.0  -15
HHC                                  PP     PP       06 28 39.5 +2.2
HHC                                  S      S        06 35 30.0 +6.6
HHC                                  SS     SS       06 41 56.5 +7.0
HHC                                  pmax   pmax
        comp=Z,18nm,0.9s
HHC                                  pmax   pmax
        comp=Z,640nm,7.2s
MSO   Missoula           93.27  38   P      P        06 24 48.2 +0.6
        baz=234
SMCO  Snowmass           93.27  48  eP      P        06 24 48.6 +0.4
IMW   Indian Meadow      93.32  42  eP      P        06 24 48.8 +0.6
MOOW  Moose Ponds        93.36  42  eP      P        06 24 49.0 +0.8
833A  Chaparral WMA,     93.36  60   P      P        06 24 48.6 +0.3
        baz=242
LOHW  Long Hollow        93.37  42  eP      P        06 24 49.1 +0.8
SDCO  Great Sand Dun     93.52  49   P      P        06 24 49.4 +0.2
        baz=239,SNR=19
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SDCO	Great Sand Dun	93.52	49	eP	P	06 24 49.9	+0.7
MSTX	Muleshoe	93.54	54	P	P	06 24 49.5	+0.3
	baz=240						
MSTX	Muleshoe	93.54	54	eP	P	06 24 49.3	+0.2
BW06	Boulder Array	93.54	43	P	P	06 24 48.7	-0.4
	baz=237,SNR=24						
BW06	Boulder Array	93.54	43	eP	P	06 24 48.9	-0.3
PD31	Pinedale Array	93.54	43	eP	P	06 24 48.9	-0.2
PDAR	Pinedale Array	93.54	43	P	P	06 24 48.9	-0.2
	comp=Z,6.4nm,0.7s,baz=206,slow=3.3,SNR=54						
PDAR				pP	pP	06 26 13.5	+1.2
	comp=Z,1.4nm,0.8s,baz=216,slow=5.6,SNR=2.3						
PDAR				PKKPbc	PKKPbc	06 41 54.0	-0.5
	comp=Z,0.5nm,0.6s,baz=71,slow=4.8,SNR=8.3						
PDAR	Pinedale Array	93.54	43	eP	P	06 24 47.9	-1.2
PDAR				pP	pP	06 26 13.5	+1.2
PDAR				PKKPbc	PKKPbc	06 41 54.0	-0.5
QLMT	Earthquake Lak	93.56	41	eP	P	06 24 50.6	+1.5
FLWY	Flagg Ranch	93.57	42	eP	P	06 24 50.5	+1.3
YPP	Pitchstone Pla	93.61	42	eP	P	06 24 51.2	+1.7
YHB	Horse Butte	93.65	41	eP	P	06 24 51.0	+1.4
DLBC	Dease Lake	93.66	23	eP	P	06 24 49.9	+0.8
WRH	Wood River Hil	93.69	13	eP	P	06 24 47.9	-1.0
CD2	Chengdu	93.69	303	eP	P	06 24 49.3	-0.6
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
YFT	Old Faithful	93.69	42	eP	P	06 24 52.6	+2.8
MLY	Manley	93.70	11	eP	P	06 24 47.5	-1.5
RIDG	Independ'e Rid	93.72	14	eP	P	06 24 49.0	-0.2
YMR	Madison River	93.74	41	eP	P	06 24 51.6	+1.6
H17A	Grant Village	93.82	42	P	P	06 24 51.6	+1.2
	baz=236,SNR=7.3						
H17A	Grant Village	93.82	42	eP	P	06 24 52.5	+2.1
BOZ	Bozeman (W)	93.87	40	P	P	06 24 50.9	+0.5
	baz=236,SNR=25						
BOZ	Bozeman (W)	93.87	40	eP	P	06 24 50.9	+0.5
BOZ	Bozeman (W)	93.87	40	P	P	06 24 50.9	+0.5
CCB	Clear Creek Bu	93.90	13	eP	P	06 24 49.0	-0.9
T25A	Trinidad	93.95	50	P	P	06 24 51.3	+0.1
	baz=240,SNR=10						
T25A	Trinidad	93.95	50	eP	P	06 24 50.8	-0.3
JCT	Junction City	94.06	58	P	P	06 24 51.2	-0.3
	baz=242						
JCT	Junction City	94.06	58	eP	P	06 24 51.3	-0.3
JCT	Junction City	94.06	58	eP	P	06 24 51.3	-0.2
COLA	College	94.09	13	eP	P	06 24 50.0	-0.8
COLA	College	94.09	13	eP	P	06 24 50.0	-0.8
MDM	Murphy Dome	94.09	12	eP	P	06 24 49.8	-1.0
SCRK	Sand Creek	94.11	14	eP	P	06 24 51.1	0.0
IL1	Eielson Array	94.19	13	eP	P	06 24 49.9	-1.3
ILAR	Eielson Array	94.19	13	P	P	06 24 50.4	-0.9
	comp=Z,4.3nm,0.9s,baz=225,slow=5.1,SNR=26						
ILAR				pP	pP	06 26 15.9	+1.4
	comp=Z,1.0nm,0.8s,baz=219,slow=5.0,SNR=3.5						
ILAR				PP	PP	06 28 47.1	+3.3
	comp=Z,1.1nm,1.0s,baz=212,slow=6.7,SNR=4.2						
Q24A	Divide	94.38	48	P	P	06 24 53.4	+0.3
	baz=239						
HRY	Holter Researc	94.38	39	eP	P	06 24 53.3	+0.6
RWWY	Rawlins	94.43	45	eP	P	06 24 52.5	-0.7
ISCO	Idaho Springs	94.49	48	P	P	06 24 53.9	+0.2
	baz=239,SNR=7.5						
ISCO	Idaho Springs	94.49	48	eP	P	06 24 54.0	+0.4
ISCO	Idaho Springs	94.49	48	eP	P	06 24 54.0	+0.4
WALA	Waterton Lakes	94.59	37	eP	P	06 24 53.8	+0.2
AMTX	Amarillo	94.77	53	P	P	06 24 54.6	-0.2
	baz=241						
AMTX	Amarillo	94.77	53	eP	P	06 24 55.0	+0.3
N23A	Red Feather La	94.84	47	P	P	06 24 55.4	+0.3
	baz=239,SNR=11						
N23A	Red Feather La	94.84	47	eP	P	06 24 55.9	+0.8
RLMT	Red Lodge	95.00	42	P	P	06 24 55.3	-0.4
	baz=237						
RLMT	Red Lodge	95.00	42	eP	P	06 24 58.0	+2.3
ABTX	Abilene, Hawle	95.19	56	P	P	06 24 56.8	+0.1
	baz=242						
ABTX	Abilene, Hawle	95.19	56	eP	P	06 24 57.2	+0.6
DAWY	Dawson	95.28	16	eP	P	06 24 55.6	-0.6
	comp=Z,7.9nm,1.1s						
PHWY	Pilot Hill	95.36	46	eP	P	06 24 57.8	+0.3
K22A	Casper	95.37	45	P	P	06 24 57.5	+0.1
	baz=239,SNR=8.9						
K22A	Casper	95.37	45	eP	P	06 24 57.9	+0.5
EGAK	Eagle	95.44	15	eP	P	06 24 56.9	0.0
COLD	Coldfoot	95.79	11	eP	P	06 25 00.1	+1.7
LZH	Lanzhou	96.09	307	⇑P	P	06 25 02.8	+2.0
LZH				pP	pP	06 26 20.0	-4.1
LZH				sP	sP	06 26 55.5	-5.3
LZH				PP	PP	06 29 02.8	+3.5
LZH				S	S	06 35 50.5	+2.2
LZH				SS	SS	06 42 33.3	+3.4
LZH				pmax	pmax		
	comp=Z,22nm,1.1s						
LZH				pmax	pmax		
	comp=Z,260nm,5.6s						
LZH				LR	LR		
	comp=Z,1µm,18.5s						
LZH				LR	LR		
	comp=Z,1µm,18.4s						
LZH				LR	LR		
	comp=Z,2µm,20.0s						
KSCO	Kaye Shedlock'	96.10	49	P	P	06 25 00.9	+0.1
	baz=241						
KSCO	Kaye Shedlock'	96.10	49	eP	P	06 25 02.2	+1.5
EGMT	Eagleton	96.29	39	P	P	06 25 01.3	0.0
	baz=237						
EGMT	Eagleton	96.29	39	eP	P	06 25 03.0	+1.7
WHTX	Lake Whitney,	96.54	58	P	P	06 25 02.4	-0.3
	baz=243						
WMOK	Wichita Mounta	96.80	55	P	P	06 25 03.7	-0.2
	baz=243						
HKT	Hockley	96.87	60	i P	P	06 25 04.2	+0.1
HKT				pmax	pmax		
	comp=Z,12nm,1.0s						
TOLK	Toolik Lake Re	97.17	10	P	Pdif	06 25 05.4	+0.7
	baz=206						
YAK	Yakutsk	97.49	338	i P	P	06 25 05.3	-0.9
YAK				pmax	pmax		
	comp=Z,7.0nm,0.7s						
LAO	LASA Array	97.63	41	P	Pdif	06 25 07.6	+0.3
	baz=240						
RSSD	Black Hills	97.68	44	P	P	06 25 07.7	-0.1
	baz=241						
RSSD	Black Hills	97.68	44	eP	Pdif	06 25 08.0	+0.2
RSSD	Black Hills	97.68	44	eP	Pdif	06 25 08.0	+0.2
441A	DeRidder	99.27	60	P	Pdif	06 25 14.7	-0.2
	baz=245						
DGMT	Dagmar	99.70	41	P	Pdif	06 25 16.6	+0.2
	baz=241						
SONM	Songino Array	99.99	319	P	Pdif	06 25 19.7	+1.9
	comp=Z,0.4nm,0.6s,baz=131,slow=4.0,SNR=3.7						
SONM				PP	PP	06 29 24.0	-4.6
	comp=Z,0.4nm,0.6s,baz=62,slow=6.7,SNR=2.6						
SONM				PKKPbc	PKKPbc	06 41 36.7	-0.2
	comp=Z,1.2nm,0.8s,baz=276,slow=2.7,SNR=6.8						
LPAZ	La Paz	100.06	114	P	Pdif	06 25 21.2	+1.6
	comp=Z,0.9nm,0.6s,baz=243,slow=3.5,SNR=5.0						
INK	Inuvik	100.11	15	P	Pdif	06 25 16.8	-0.9
	comp=Z,2.1nm,0.9s,baz=324,slow=7.3,SNR=3.4						
YKA	Yellowknife Ar	102.06	25	P	Pdif	06 25 25.2	-1.3
	comp=Z,0.5nm,0.7s,baz=222,slow=4.7,SNR=3.7						
YKA				PP	PP	06 29 43.5	0.0
	comp=Z,1.2nm,1.0s,baz=238,slow=7.5,SNR=4.9						
YKA				PKKPbc	PKKPbc	06 41 27.0	-4.3
	comp=Z,0.3nm,0.6s,baz=43,slow=3.1,SNR=5.0						
WMQ	Urumqi	110.50	310	ePKP	PKiKP	06 30 00.5	-2.7
WMQ				LR	LR		
	comp=Z,3µm,25.3s						
WMQ				LR	LR		
	comp=Z,1µm,19.1s						
WMQ				LR	LR		
	comp=Z,1µm,25.3s						
N54A	Moraine State	112.88	54	P	PKiKP	06 30 07.3	-0.5
	baz=254						
ZALV	Zalesovo Beam	114.85	320	PKP	PKPdf	06 30 09.4	-1.6
	comp=Z,1.3nm,0.4s,baz=154,slow=2.1,SNR=6.8						
MKAR	Makanchi Array	114.95	312	PKP	PKPdf	06 30 10.2	-1.3
	comp=Z,2.1nm,0.6s,baz=90,slow=1.1,SNR=24						
MKAR				PP	PP	06 31 15.4	-1.6
	comp=Z,1.8nm,0.9s,baz=111,slow=6.6,SNR=4.3						
MKAR				PKKPbc	PKKPbc	06 40 50.1	+0.2
	comp=Z,2.4nm,0.7s,baz=276,slow=3.6,SNR=23						
MKAR	Makanchi Array	114.95	312	c iPKIKP	PKPdf	06 30 10.1	-1.5
NVS	Novosibirsk	115.92	320	ePKIKP	PKPdf	06 30 12.1	-1.0
NVS				e		06 31 25.1	
NVS				e		06 36 29.4	
BINY	Binghamton	116.10	54	P	PKPdf	06 30 14.1	+0.1
	baz=257						
BDFB	Brasilia	116.15	125	PKP	PKPdf	06 30 15.5	+0.6
	comp=Z,1.9nm,0.6s,baz=155,slow=3.2,SNR=4.8						
PAL	Palisades	117.36	56	P	PKPdf	06 30 15.8	-0.5
	baz=258						
LONY	Lake Ozonia	117.59	51	P	PKPdf	06 30 16.2	-0.5
	baz=259						
KSH	Kashi	117.89	303	ePKP	PKPdf	06 30 15.5	-2.1
KURK	Kurchatov	118.05	315	PKP	PKPdf	06 30 16.5	-0.8
KURK	Kurchatov	118.05	315	c iPKIKP	PKPdf	06 30 16.1	-1.2
KURK				pmax	pmax		
	comp=Z,69nm,1.3s						
KURBB	Kurchatov Arra	118.09	315	PKP	PKPdf	06 30 16.5	-0.9
	comp=Z,3.4nm,0.7s,baz=104,slow=2.0,SNR=48						
LBNH	Lisbon	119.40	52	P	PKPdf	06 30 20.1	-0.1
	baz=261						
AAK	Ala-Archa	119.59	306	c iPKIKP	PKPdf	06 30 20.4	-0.4
AAK				pmax	pmax		
	comp=Z,4.0nm,0.6s						
BOSA	Boshof	120.70	204	PKP	PKPdf	06 30 23.7	+0.2
	comp=Z,3.8nm,0.5s,baz=165,slow=1.7,SNR=20						
PKME	Peaks-Kenny Pk	121.41	51	P	PKPdf	06 30 24.2	+0.2
	baz=263						
BVAR	Borovoye Array	123.32	318	PKP	PKPdf	06 30 26.9	-0.5
	comp=Z,7.1nm,0.5s,baz=119,slow=1.6,SNR=30						
BVAR				pPKP	pPKPdf	06 31 58.4	+3.3
	comp=Z,2.0nm,0.7s,baz=132,slow=2.1,SNR=4.1						
BRVK	Borovoye	123.38	318	ePKPdf	PKPdf	06 30 26.5	-1.0
BRVK				eSKPdf	SKiKP	06 33 30.6	+1.5
BRVK	Borovoye	123.38	318	c iPKIKP	PKPdf	06 30 27.0	-0.5
BRVK				pmax	pmax		
	comp=Z,40nm,1.7s						
SPITS	Spitsbergen Ar	127.78	356	PKP	PKPdf	06 30 35.0	-0.3
	comp=Z,4.5nm,0.4s,baz=28,slow=10,SNR=20						
ARU	Arti	129.80	323	ePKPdf	PKPdf	06 30 39.5	-0.2
ARU	Arti	129.80	323	i PKIKP	PKPdf	06 30 40.2	+0.5
ARU						06 32 52.9	
ARU						06 37 16.6	
LSZ	Lusaka	131.11	215	ePKPdf	PKPdf	06 30 44.9	+1.3
AKTO	Aktyubinsk	131.14	315	PKP	PKPdf	06 30 41.8	-0.6
	comp=Z,4.8nm,0.6s,baz=96,slow=4.7,SNR=9.7						
AKTO				SKPbc	SKPbc	06 33 33.5	+0.2
	comp=Z,15nm,0.8s,baz=77,slow=4.1,SNR=28						
GEYT	Alibeck	131.49	298	SKPbc	SKPbc	06 33 34.4	-0.6
	comp=Z,3.8nm,0.4s,baz=35,slow=5.4,SNR=8.2						
TSUM	Tsumeb	132.02	201	PKP	PKPdf	06 30 45.2	-0.1
	comp=Z,5.2nm,1.0s,baz=149,slow=3.4,SNR=6.0						
TSUM				SKPbc	SKPab	06 33 38.7	-0.1
	comp=Z,6.2nm,0.9s,baz=140,slow=6.5,SNR=5.1						
HAMF	Hammerfest	134.02	350	eP	PKPdf	06 30 48.6	+1.3
HAMF				IAmb	IAmb	06 30 52.1	
	comp=Z,40nm,1.1s						
ARCES	ARCESS Array B	134.69	348	PKhKP	PKPpre	06 30 41.8	
	comp=Z,4.3nm,0.8s,baz=14,slow=2.8,SNR=7.3						
ARCES				PKP	PKPdf	06 30 49.1	+0.6
	comp=Z,5.2nm,0.5s,baz=27,slow=1.4,SNR=28						
ARCES				SKPbc	SKPbc	06 33 45.7	+1.0
	comp=Z,6.0nm,0.9s,baz=33,slow=4.1,SNR=8.2						
TRO	Tromso	135.63	351	ePKPdf	PKPdf	06 30 50.8	+0.6
TRO				IAmb	IAmb	06 30 51.7	
	comp=Z,7.6nm,0.9s						
KLMR	Klimovskoe	137.12	334	ePKIKP	PKPpre	06 30 49.2	
KLMR				pmax	pmax		
	comp=Z,16nm,1.2s						
KLMR	Klimovskoe	137.12	334	ePKPdf	PKPpre	06 30 49.3	
KLMR				AMP		06 30 54.6	
	comp=Z,16nm,1.2s						
KLMR				epPKPdf	pPKPdf	06 32 21.8	+0.8
KLMR				eSKP		06 33 52.0	
AKT	Akhty	139.41	304	ePKIKP	PKPdf	06 31 00.6	+2.3
AKT				e		06 32 25.9	
AKT				e		06 34 00.7	
AKT				pmax	pmax		
	comp=Z,15nm,1.2s						
VRH	Novokhopyorsk	140.88	320	ePKIKP	PKPdf	06 30 59.7	-0.7
VRH				pmax	pmax		
	comp=Z,20nm,0.7s						
FINES	FINESS Array B	141.34	341	PKhKP	PKPpre	06 30 54.9	
	comp=Z,3.4nm,0.4s,baz=44,slow=5.4,SNR=32						
OBN	Obninsk	141.71	328	⇑ePKIKP	PKPdf	06 31 01.2	-0.6
OBN				e		06 32 28.3	
OBN				e		06 34 07.2	
OBN				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GNI	Garni	141.82	302	i PKIKP	PKPdf	06 31 01.4	-1.3
LPSR	Galich'ya Gora	141.82	323	ePKIKP	PKPdf	06 31 00.1	-1.9
LPSR				pmax	pmax		
	comp=Z,20nm,0.5s						
ZEI	Tsey	142.01	306	i PKHKP	PKPpre	06 30 57.8	
VSR	Storozhevoye	142.33	321	ePKIKP	PKPdf	06 31 01.1	-1.9
VSR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
VORD	Divnogorie	142.37	321	ePKIKP	PKPdf	06 31 00.8	-2.3
VORD				pmax	pmax		
	comp=Z,5.0nm,0.6s						
KBZ	Khabaz	142.52	308	PKhKP	PKPpre	06 30 59.9	
	comp=Z,1.1nm,0.4s,baz=34,slow=3.8,SNR=4.0						
KIV	Kislovodsk	142.62	309	⇓ePKIKP	PKPdf	06 31 00.8	-3.1
KIV				e		06 37 33.3	
KIV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
NEY	Neytrino	142.76	307	c iPKIKP	PKPdf	06 31 04.9	+0.6
VSU	Vasula	143.49	338	i PKIKP	PKPab	06 31 01.9	-0.3
DOMB	Dombas	144.09	354	ePKPdf	PKPab	06 31 03.8	-0.7
DOMB				IAmb	IAmb	06 31 05.6	
	comp=Z,40nm,0.8s						
AKN	Aaknes	144.12	356	ePKPdf	PKPbc	06 31 05.3	+0.4
AKN				IAmb	IAmb	06 31 07.0	
	comp=Z,71nm,1.1s						
NC204	NORSAR Array S	144.66	352	ePKPdf	PKPbc	06 31 05.4	-1.3
NC204				IAmb	IAmb	06 31 07.8	
	comp=Z,141nm,1.5s						
SOC	Sochi	144.79	309	⇑ePKIKP	PKPab	06 31 07.7	-0.1
SOC				pmax	pmax		
	comp=Z,23nm,1.0s						
NB2	NORSAR Subarra	144.83	352	PKP	pPKPdf	06 32 37.6	+2.6
	comp=Z,41nm,1.7s,baz=9.4,slow=3.7						
NB2	NORSAR Subarra	144.83	352	PKP	pPKPdf	06 32 37.6	+2.6
	baz=9.4,slow=3.7						
NOA	NORSAR Array B	144.83	352	PKP	PKPbc	06 31 06.4	-0.8
	comp=Z,21nm,0.7s,baz=17,slow=2.8,SNR=68						
NOA				pPKP	pPKPdf	06 32 35.7	+0.7
	comp=Z,2.5nm,0.7s,baz=16,slow=2.5,SNR=2.7						
NOA	NORSAR Array B	144.83	352	PKIKP	PKPbc	06 31 06.4	-0.7
NOA						06 32 35.7	
NOA				pmax	pmax		
	comp=Z,12nm,1.0s						
HFS	Hagfors	145.34	349	PKPbc	PKPdf	06 31 07.5	-0.5
	comp=Z,15nm,0.3s,baz=72,slow=4.7,SNR=127						
SUE	Sulen	145.36	357	ePKPdf	PKPdf	06 31 07.9	0.0
SUE				IAmb	IAmb	06 31 10.0	
	comp=Z,33nm,0.9s						
IZAR	Zarasai	145.72	335	eP	PKPbc	06 31 09.8	-0.1
IZAR				IAmb	IAmb	06 31 11.3	
	comp=Z,18nm,0.6s						
IDID	Didziasalis	145.86	334	eP	PKPbc	06 31 09.9	-0.4
IDID				IAmb	IAmb	06 31 10.7	
	comp=Z,13nm,1.0s						
ISAL	Salakas	145.90	335	eP	PKPbc	06 31 10.4	-0.1
ISAL				IAmb	IAmb	06 31 10.9	
	comp=Z,17nm,1.1s						
BER	Bergen	146.00	357	e	PKPbc	06 31 09.9	-0.7
IIGN	Ignalina	146.03	335	eP	PKPbc	06 31 10.3	-0.5
IIGN				IAmb	IAmb	06 31 12.2	
	comp=Z,17nm,1.0s						
NACGM	Naroch	146.14	334	e	PKPdf	06 31 10.0	+0.5
KONO	Kongsberg	146.38	353	c iPKP2	PKPbc	06 31 11.2	-0.5
KONO				pmax	pmax		
	comp=Z,61nm,1.7s						
ODD1	Odda	146.40	355	e	PKPbc	06 31 11.2	-0.6
BLS5	Blasjo	146.89	355	ePKPdf	PKPbc	06 31 12.8	-0.4
BLS5				IAmb	IAmb	06 31 14.9	
	comp=Z,261nm,2.5s						
HOMB	Homborsund	147.85	353	ePKPdf	PKPbc	06 31 15.7	0.0
HOMB				IAmb	IAmb	06 31 16.3	
	comp=Z,182nm,1.6s						
SNART	Snartemo	147.91	354	ePKPdf	PKPbc	06 31 15.2	-0.6
SNART				IAmb	IAmb	06 31 17.3	
	comp=Z,20nm,0.7s						
AKASG	Malin Array Be	147.91	326	PKP	PKPdf	06 31 12.0	-0.5
	comp=Z,8.9nm,0.5s,baz=44,slow=3.7,SNR=28						
AKASG				PKPbc	PKPbc	06 31 15.2	-0.9
	comp=Z,8.6nm,0.5s,baz=45,slow=3.1,SNR=32						
AKASG				pPKPbc	pPKPab	06 32 43.8	-0.6
	comp=Z,1.9nm,0.5s,baz=44,slow=4.2,SNR=2.4						
KIEV	Kiev	147.92	326	ePKPdf	PKPdf	06 31 11.4	-1.1
KIEV				ePKPbc	PKPbc	06 31 15.6	-0.6
KIEV				ePKPab	PKPab	06 31 19.6	-0.2
KIEV	Kiev	147.92	326	ePKIKP	PKPdf	06 31 12.1	-0.5
SIM	Simferopol'	148.09	314	ePKP2	PKPbc	06 31 16.7	-0.1
SIM				pmax	pmax		
	comp=Z,20nm,0.8s						
SUW	Suwalki	148.20	336	ePKP	PKPbc	06 31 15.8	-0.9
SUW	Suwalki	148.20	336	ePKP2	PKPbc	06 31 15.8	-0.9
ASF	Jabal al Asfar	148.80	289	PKPbc	PKPbc	06 31 19.7	+0.6
	comp=Z,10nm,0.9s,baz=33,slow=1.5,SNR=16						
BSD	Bornholm Skovb	149.77	345	i P	PKPbc	06 31 19.8	-0.7
	comp=Z,102nm,1.4s						
SORM	Soroca	149.92	323	⇓iP	PKPbc	06 31 20.6	-0.5
MMAI	Mount Meron Ar	150.02	291	PKPbc	PKPbc	06 31 23.0	+1.0
	comp=Z,15nm,0.4s,baz=83,slow=6.2,SNR=23						
BRTR	Keskin Array B	150.25	304	PKP	PKPdf	06 31 16.1	-0.8
	comp=Z,1.3nm,1.0s,baz=76,slow=5.2,SNR=6.0						
BRTR				PKPbc	PKPbc	06 31 21.6	-0.8
	comp=Z,5.4nm,0.6s,baz=116,slow=2.9,SNR=29						
BRTR				PKPab	PKPab	06 31 28.6	-1.5
	comp=Z,8.4nm,0.6s,baz=128,slow=4.9,SNR=16						
BRTR				pPKPbc	pPKPbc	06 32 50.0	+0.4
	comp=Z,1.9nm,0.7s,baz=52,slow=5.7,SNR=2.2						
KIS	Kishinev	150.32	321	⇑ePKP	PKPbc	06 31 22.0	-0.1
	comp=Z,100nm,1.4s						
KIS				LRM	MLR	08 10 46.0	
	comp=Z,400nm,20.0s						
KIS	Kishinev	150.32	321	ePKIKP	PKPbc	06 31 22.0	-0.1
KIS				pmax	pmax		
	comp=Z,110nm,1.4s						
GKP	Gorka Klasztor	150.80	341	ePKP	PKPbc	06 31 23.2	+0.2
GKP	Gorka Klasztor	150.80	341	ePKIKP	PKPbc	06 31 23.2	+0.2
BEL	Belsk	150.81	335	ePKP	PKPbc	06 31 23.2	+0.1
BEL	Belsk	150.81	335	ePKIKP	PKPbc	06 31 23.2	+0.1
ANTO	Ankara	150.83	305	⇑iP	PKPbc	06 31 21.8	-1.9
ANTO	Ankara	150.83	305	ePKPdf	PKPdf	06 31 17.9	+0.2
ANTO				ePKPbc	PKPbc	06 31 23.2	-0.5
ANTO	Ankara	150.83	305	⇑PKIKP	PKPbc	06 31 21.8	-1.9
LEOM	Leova	150.94	320	⇓iP	PKPbc	06 31 24.0	+0.4
LEOM	Leova	150.94	320	⇓PKIKP	PKPbc	06 31 24.0	+0.4
EKA	Eskdalemuir Ar	150.96	6	PKP	PKPdf	06 31 17.6	+0.4
	comp=Z,2.9nm,0.6s,baz=25,slow=3.5,SNR=6.3						
EKA				PKPbc	PKPbc	06 31 22.6	-0.8
	comp=Z,6.9nm,0.4s,baz=338,slow=2.2,SNR=58						
EKA				PKPab	PKPab	06 31 30.2	-2.0
	comp=Z,2.7nm,0.4s,baz=332,slow=2.4,SNR=8.6						
EKA				pPKPbc	pPKPbc	06 32 52.8	+2.2
	comp=Z,3.2nm,0.8s,baz=335,slow=2.8,SNR=2.7						
ESK	Eskdalemuir	150.97	6	ePKPbc	PKPbc	06 31 22.5	-0.9
ESK				ePKPab	PKPab	06 31 32.9	+0.7
ESK	Eskdalemuir	150.97	6	ePKIKP	PKPbc	06 31 22.5	-0.9
LVV	L'vov	150.98	329	ePKIKP	PKPbc	06 31 23.0	-0.6
TLCR		151.31	318	⇑iP	PKPbc	06 31 25.3	+0.8
TLCR		151.31	318	⇑PKIKP	PKPbc	06 31 25.3	+0.8
CFR	Carcaliu	151.72	318	⇑iP	PKPbc	06 31 25.3	-0.1
CFR	Carcaliu	151.72	318	⇑PKIKP	PKPbc	06 31 25.3	-0.1
TESR	Tescani	151.82	322	⇑iP	PKPbc	06 31 24.5	-1.1
BIZ	Bicaz	151.86	323	⇓iP	PKPbc	06 31 26.0	+0.3
BURAR	Bucovina Array	151.90	325	⇑iP	PKPbc	06 31 26.1	+0.2
BURAR	Bucovina Array	151.90	325	⇑PKIKP	PKPbc	06 31 26.2	+0.3
HARR	Harsova	152.10	317	⇓iP	PKPbc	06 31 25.4	-0.9
HARR	Harsova	152.10	317	⇓PKIKP	PKPbc	06 31 25.4	-0.9
VRI	Vrincioaia	152.16	321	⇓iP	PKPbc	06 31 25.7	-0.7
VRI	Vrincioaia	152.16	321	⇓PKIKP	PKPbc	06 31 25.7	-0.7
PLOR	Plostina	152.21	321	⇑iP	PKPbc	06 31 24.0	-2.6
PLOR	Plostina	152.21	321	PKIKP	PKPbc	06 31 24.0	-2.6
OJC	Ojcow	152.47	334	ePKPdf	PKPdf	06 31 19.7	0.0
OJC				ePKPab	PKPbc	06 31 26.6	-0.3
OJC	Ojcow	152.47	334	ePKIKP	PKPdf	06 31 19.7	0.0
CRVS	Cervenica-Dubn	152.80	331	ePKIKP	PKPbc	06 31 27.0	-0.7
CRVS	Cervenica-Dubn	152.80	331	ePKP	PKPbc	06 31 27.0	-0.7
MLR	Muntele Rosu	152.82	321	PKPbc	PKPbc	06 31 27.5	-0.6
	comp=Z,7.9nm,1.0s,baz=32,slow=6.2,SNR=7.0						
MLR	Muntele Rosu	152.82	321	⇓iP	PKPbc	06 31 27.4	-0.6
DOPR	Dopca	152.85	322	⇓iP	PKPbc	06 31 25.4	-2.5
TRPA	Tarpa	152.87	328	⇓iP	PKPbc	06 31 26.8	-1.1
NIE	Niedzica	152.90	333	ePKPdf	PKPdf	06 31 20.7	+0.3
NIE				ePKPab	PKiKP	06 31 28.1	0.0
NIE	Niedzica	152.90	333	ePKIKP	PKPdf	06 31 20.7	+0.3
KSP	Ksiaz	153.20	339	ePKPdf	PKPdf	06 31 20.7	0.0
KSP				ePKPab	PKPbc	06 31 28.5	0.0
KSP	Ksiaz	153.20	339	ePKIKP	PKPdf	06 31 20.7	0.0
VOIR		153.36	321	⇓iP	PKPbc	06 31 29.9	+0.8
VOIR		153.36	321	⇓PKIKP	PKPbc	06 31 29.9	+0.8
LANS	Liptovska Anna	153.45	333	ePKIKP	PKPbc	06 31 31.3	+2.1
LANS	Liptovska Anna	153.45	333	ePKP	PKPbc	06 31 31.3	+2.1
UPC	Upice	153.58	339	ePKPAB	PKPab	06 31 44.8	+1.3
UPC	Upice	153.58	339	ePKP2	PKPab	06 31 44.8	+1.3
DPC	Dobruska-Polom	153.61	339	⇑ePKP	PKPbc	06 31 30.1	+0.6
DPC				ePKPAB	PKPab	06 31 44.8	+1.1
DPC	Dobruska-Polom	153.61	339	ePKIKP	PKPbc	06 31 30.1	+0.6
ARR	Arges	153.63	322	⇓iP	PKPdf	06 31 21.7	+0.1
MORC	Moravsky Berou	153.68	336	⇑iP	PKPbc	06 31 27.8	-1.8
MORC	Moravsky Berou	153.68	336	⇑PKIKP	PKPbc	06 31 27.8	-1.8
MORC	Moravsky Berou	153.68	336	ePKP	PKPdf	06 31 20.8	-0.7
MORC				e		06 31 29.3	
MORC				e		06 31 44.1	
CLL	Collm	153.72	344	ePKPdf	PKPdf	06 31 21.0	-0.4
	comp=Z,8.0nm,1.3s						
CLL				i PKPbc	PKPbc	06 31 29.2	-0.4
	comp=Z,19nm,1.0s						
CLL				i		06 31 37.3	
CLL				⇑iPKPab	PKPab	06 31 43.1	-0.9
	comp=Z,26nm,1.6s						
CLL				epPKPab	pPKPbc	06 33 02.0	+5.0
CLL				e		06 33 13.0	
CLL	Collm	153.72	344	⇑ePKIKP	PKPdf	06 31 21.0	-0.4
CLL				i		06 31 43.1	
CLL				pmax	pmax		
	comp=Z,74nm,1.3s						
BRG	Berggiesshubel	153.87	342	ePKP	PKPdf	06 31 21.4	-0.3
	comp=Z,9.4nm,1.0s						
BRG	Berggiesshubel	153.87	342	ePKP	PKPbc	06 31 29.0	-0.9
	comp=Z,20nm,1.3s						
BRG				e		06 31 45.5	
	comp=Z,7.4nm,0.7s						
BRG				epPKP	pPKPbc	06 32 58.4	+1.0
	comp=Z,9.5nm,1.0s						
BRG	Berggiesshubel	153.87	342	ePKIKP	PKPdf	06 31 21.4	-0.3
BRG				pmax	pmax		
	comp=Z,3.0nm,1.0s						
PVCC	Panska Ves	154.00	341	ePKPAB	PKPab	06 31 46.7	+1.4
PVCC	Panska Ves	154.00	341	ePKP2	PKPab	06 31 46.7	+1.4
VYHS	Vyhne	154.23	333	ePKP2	PKPab	06 31 46.1	-0.2
VYHS	Vyhne	154.23	333	ePKP	PKPab	06 31 46.1	-0.2
JAVC	Velka Javorina	154.39	335	ePKP	PKPdf	06 31 23.0	+0.4
JAVC				e		06 31 32.2	
JAVC				e		06 31 48.2	
VRAC	Vranov	154.41	337	ePKP	PKPdf	06 31 21.9	-0.6
VRAC				e		06 31 47.3	
KRUC	Moravsky	154.69	337	ePKP	PKPdf	06 31 21.9	-1.0
KRUC				e		06 31 31.3	
KRUC				e		06 31 48.2	
KHC	Kasperske Hory	155.54	341	ePKPDF	PKPdf	06 31 23.0	-1.1
KHC				ePKPAB	PKPab	06 31 50.4	-1.6
KHC	Kasperske Hory	155.54	341	ePKIKP	PKPdf	06 31 23.0	-1.1
KHC				e		06 31 50.4	
MDVR	Moldovita	155.60	324	⇓iP	PKPdf	06 31 32.9	+8.6
GERES	GERESS Array B	155.76	340	PKP	PKPdf	06 31 23.2	-1.3
	comp=Z,1.0nm,0.7s,baz=107,slow=1.4,SNR=14						
GERES				PKPab	PKPab	06 31 51.6	-1.4
	comp=Z,0.6nm,0.4s,baz=46,slow=3.9,SNR=4.2						
CONA	Conrad Observa	155.84	336	i PKPdf	PKPdf	06 31 23.7	-0.9
	comp=Z,5.5nm,1.1s						
CONA				i PKPab	PKPab	06 31 54.0	+0.6
	comp=Z,10nm,1.0s						
VTS	Vitosha	156.12	318	⇑iP	PKPab	06 31 55.6	+0.8
VTS	Vitosha	156.12	318	⇑PKP2	PKPab	06 31 55.6	+0.8
MOA	Molln	156.46	338	i PKPdf	PKPdf	06 31 24.4	-0.9
	comp=Z,3.6nm,0.9s						
MOA				i PKPab	PKPab	06 31 56.5	+0.5
	comp=Z,8.7nm,1.4s						
SOKA	Soboth	157.19	336	i PKPdf	PKPdf	06 31 25.0	-1.4
	comp=Z,9.2nm,1.4s						
SOKA				i PKPab	PKPab	06 31 59.2	0.0
	comp=Z,6.5nm,1.3s						
KBA	Koelnbreinsper	157.43	339	i PKPdf	PKPdf	06 31 25.3	-1.5
	comp=Z,4.6nm,1.0s						
MYKA	Terra Mystica	157.73	338	i PKPab	PKPab	06 32 00.9	-0.6
	comp=Z,5.2nm,0.8s						

WTTA	Wattenberg	157.79	342	*e*PKPdf	PKPdf	06 31 27.5	+0.3
	comp=Z,6.7nm,0.8s						
WTTA				*i* PKPab	PKPab	06 32 03.3	+1.4
	comp=Z,3.3nm,0.7s						
RETA	Reutte	157.82	343	*i* PKPab	PKPab	06 32 01.8	-0.1
	comp=Z,13nm,1.3s						
ABTA	Abfaltersbach	157.99	340	PKPdf	PKPdf	06 31 26.6	-0.8
	comp=Z,8.2nm,1.3s						
IDI	Anoyia	158.21	299⇑	*i*P	PKPab	06 32 05.0	+0.9
DAVA	Damuels	158.22	345	*i* PKPdf	PKPdf	06 31 26.8	-0.9
	comp=Z,1.9nm,0.5s						
DAVA				*i* PKPab	PKPab	06 32 02.4	-1.3
	comp=Z,8.8nm,0.9s						
FETA	Feichten	158.26	343	*i* PKPdf	PKPdf	06 31 27.5	-0.3
	comp=Z,13nm,1.7s						
FETA				*i* PKPab	PKPab	06 32 04.6	+0.6
	comp=Z,7.9nm,1.3s						
DAVOX	Davos/Dischmat	158.69	344	PKPab	PKPab	06 32 05.0	-0.9
	comp=Z,5.5nm,0.7s,baz=16,slow=6.4,SNR=5.6						
DAVOX	Davos/Dischmat	158.69	344	PKP2	PKPab	06 32 05.0	-0.9
DAVOX				pmax	pmax		
	comp=Z,6.0nm,0.7s						
LIC	Lamto	158.89	161	*e*PKIKP	PKPdf	06 31 29.1	-0.2
	comp=Z,36nm,1.1s						
KIC	Kosan Boka	159.10	162	*e*PKIKP	PKPdf	06 31 29.1	-0.5
	comp=Z,33nm,1.0s						
TIC	Toumodi	159.30	161	*e*PKIKP	PKPdf	06 31 29.3	-0.5
DBIC	Dimbokro	159.37	162	PKP	PKPdf	06 31 29.9	+0.1
	comp=Z,3.8nm,0.5s,baz=212,slow=2.1,SNR=15						
DBIC				PKPab	PKPab	06 32 09.4	+0.1
	comp=Z,6.0nm,0.7s,baz=177,slow=5.3,SNR=5.4						
POLO	Lamas de Olo	163.23	25	*e*PKPdf	PKPdf	06 31 33.9	+0.7
POLO	Lamas de Olo	163.23	25	*e*PKPab	PKPab	06 32 25.5	-0.3
PBRG	Braganca	163.24	22	*e*PKPab	PKPab	06 32 25.8	+0.1
MVO	Moncorvo	163.70	24	*e*PKPdf	PKPdf	06 31 34.4	+0.8
MVO	Moncorvo	163.70	24	*e*PKPab	PKPab	06 32 28.8	+1.0
PVIS	Viseu	163.76	27	*e*PKPab	PKPab	06 32 27.5	-0.5
MTE	Manteigas	164.17	26	*e*PKPdf	PKPdf	06 31 35.1	+1.1
MTE	Manteigas	164.17	26	*e*PKPab	PKPab	06 32 29.5	-0.4
PCBR	Castelo Branco	164.67	27	*e*PKPdf	PKPdf	06 31 35.3	+0.9
PCBR	Castelo Branco	164.67	27	*e*PKPab	PKPab	06 32 31.9	-0.1
PMTG	Montargil	164.98	31	*e*PKPdf	PKPdf	06 31 35.5	+0.8
PMRV	Marv??o	165.05	28	*e*PKPdf	PKPdf	06 31 35.4	+0.6
PMRV	Marv??o	165.05	28	*e*PKPab	PKPab	06 32 32.4	-1.3
PESTR	Estremoz	165.43	30	*e*PKPdf	PKPdf	06 31 35.4	+0.3
PESTR	Estremoz	165.43	30	*e*PKPab	PKPab	06 32 34.6	-0.8
PNCL	Nicolau / Gran	165.59	34	*e*PKPdf	PKPdf	06 31 35.6	+0.4
PNCL	Nicolau / Gran	165.59	34	*e*PKPab	PKPab	06 32 35.6	-0.5
MESJ	Messejana	165.95	34	*e*PKPdf	PKPdf	06 31 36.3	+0.8
ESDC	Sonseca Array	166.04	18	PKP	PKPdf	06 31 35.5	-0.1
	comp=Z,0.2nm,0.4s,baz=329,slow=4.6,SNR=6.7						
ESDC				PKPab	PKPab	06 32 37.0	-1.1
	comp=Z,8.7nm,1.1s,baz=332,slow=4.0,SNR=20						
MORF	Marmelete	166.14	36	*e*PKPab	PKPab	06 32 39.9	+1.2
PCVE	Castro Verde	166.21	34	*e*PKPdf	PKPdf	06 31 36.5	+0.8
PBAR	Barrancos	166.24	30	*e*PKPdf	PKPdf	06 31 36.8	+1.1
PBDV	Barranco-do-Ve	166.56	35	*e*PKPdf	PKPdf	06 31 35.9	-0.2
TORD	Torodi Ar. Bea	166.74	180	PKP	PKPdf	06 31 35.0	-1.8
	comp=Z,5.9nm,0.9s,baz=27,slow=0.5						
TORD				PKPab	PKPab	06 32 40.9	-0.7
	baz=222,slow=1.9						
KOWA	Kowa	166.98	155	PKP	PKPdf	06 31 36.0	-0.9
	comp=Z,7.9nm,1.0s,baz=182,slow=2.8,SNR=7.6						
KOWA				PKPab	PKPab	06 32 43.8	+1.2
	comp=Z,2.8nm,0.6s,baz=210,slow=7.7,SNR=4.7						
MDT	Midelt	171.68	39	PKP	PKPdf	06 31 40.6	+1.1
	comp=Z,6.2nm,0.9s,baz=102,slow=1.6,SNR=14						
MDT				PKPab	PKPab	06 33 03.5	0.0
	comp=Z,7.2nm,1.0s,baz=342,slow=6.4,SNR=9.2						

IDC 26 06:14:19.5±4.9**, 5°.89S**×**150°.12E, h0**^{km}**, mb3.5**/3**, mb1 3.7**/3**, mb1mx3.5**/47**, mbtmp3.5**/3**, Error ellipse: s-maj=145.0km s-min=34.5km az=106.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.75	226	P	P	06 19 01.7	-0.4
	0.6nm,0.4s,baz=51,slow=11,SNR=12						
ASAR	Alice Springs	23.59	220	P	P	06 19 31.9	-0.2
	1.1nm,0.7s,baz=54,slow=8.1,SNR=4.3						
MKAR	Makanchi Array	79.40	320	P	P	06 26 27.9	+0.3
	0.3nm,0.5s,baz=107,slow=7.7,SNR=3.0						

IDC 26 06:14:57.0±1.9**, 30°.48S**×**138°.30E, h0**^{km}**, mb1 3.1**/3**, mb1mx3.1**/42**, mbtmp2.9**/3**, ML2.4**/3**, Error ellipse: s-maj=61.4km s-min=15.6km az=38.0, South Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	3.15	117	Pn	Pn	06 15 48.4	+0.6
	0.1nm,0.3s,baz=295,slow=14,SNR=2.0						
STKA				Pg	Pg	06 15 56.2	-1.1
	0.7nm,0.3s,baz=298,slow=16,SNR=6.0						
STKA				Sn	Sn	06 16 26.2	+0.1
	1.4nm,0.3s,baz=319,slow=16,SNR=4.6						
STKA				Lg	Lg	06 16 35.4	
	2.0nm,0.3s,baz=200,slow=19,SNR=6.6						
ASAR	Alice Springs	7.83	329	Pn	Pn	06 16 52.9	+0.6
	0.1nm,0.3s,baz=151,slow=12,SNR=7.7						
ASAR				Sn	Sn	06 18 20.6	-1.2
	0.1nm,0.3s,baz=154,slow=22,SNR=3.7						
WRA	Warramunga Arr	11.09	340	Pn	Pn	06 17 37.5	+0.6
	0.1nm,0.3s,baz=159,slow=13,SNR=7.1						
FINES	FINESS Array B	126.83	326	PKhKP	PKPpre	06 33 51.4	
	3.5nm,0.5s,baz=64,slow=3.2,SNR=5.0						
TXAR	Lajitas Array	126.89	75	PKP	PKPdf	06 34 02.2	-0.9
	0.4nm,0.8s,baz=208,slow=6.8,SNR=4.6						
TORD	Torodi Ar. Bea	136.48	256	PKP	PKPdf	06 34 21.3	-0.2
	1.5nm,0.6s,baz=99,slow=3.0						

MEX 26 06:21:27.5±0.8**, 17°.82N**×**99°.95W, h56**^{km}±8^{km}**, MD3.5, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MEIG	Mezcala	0.33	72	*e*P	Pn	06 21 36.0	-1.6
MEIG				*e*S	Sn	06 21 43.4	-1.4
ARIG	Puente Sto Nin	0.59	321	*i* P	Pn	06 21 38.6	-1.7
ARIG				*i* S	Sn	06 21 47.8	-1.7
PLIG	Platanillo	0.71	37	*i* P	Pn	06 21 40.3	-1.5
PLIG				*e*S	Sn	06 21 50.4	-1.8
TLIG	Tlapa	1.35	101	*e*P	Pn	06 21 49.3	-0.8
TLIG				*i* S	Sn	06 22 04.8	-2.3
ZIIG	Zihuatanejo	1.46	262	*e*P	Pn	06 21 49.5	-2.0
ZIIG				*i* S	Sn	06 22 07.5	-2.0

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*IDC **26** 06:57:44.2±0.5, 40°.31S×175°.97E, h0^{km}, mb4.6/11, mb1 4.8/14, mb1mx4.5/40, mbtmp4.6/14, ML4.0/3, MS4.4/3, Ms1 4.4/3, ms1mx3.9/40, Error ellipse: s-maj=20.3km s-min=14.4km az=78.0*

*BJI **26** 06:57:44.1, 40°.73S×176°.80E, h32^{km}, mb5.3/7, Ms5.4/5, Ms7 5.2/5*

*ISCJB **26** 06:57:46.7±0.3, 40°.66S±0°.02×176°.34E±0°.04, h38^{km}±2^{km}, mb4.9/32, MS4.8/5, Error ellipse: s-maj=5.3km s-min=2.4km az=33.2*

*WEL **26** 06:57:48.0, 40°.5S±0°.7×17°6E±°, h27^{km}±1^{km}, ML5.4/22*

*NEIC **26** 06:57:48.5±0.0, 40°.50S×176°.14E, h28^{km}, mb4.9/12, ML5.2(WEL), After WEL.*

NEIC Felt at Feilding, Lower Hutt, Masterton, Pahiatua, Palmerston North, Wanganui and Wellington.

*MOS **26** 06:57:49.1±1.1, 40°.32S×175°.93E, h33^{km}, mb5.1/16, Error ellipse: s-maj=21.4km s-min=13.4km az=40.1*

ISC 26 06:57:48.5±0.5**, 40°.54S**±0°.02×**176°.17E**±0°.03**, h30**^{km}±3^{km}**, n284,** σ1^{s}.**44**/301**, mb4.9**/32**, MS4.8**/5**, 6C-5D, North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRWZ	Pori Road	0.15	263	P	Pb	06 57 53.7	-0.6
PRWZ				S	Sb	06 57 58.0	-0.2
BFZ	Birch Farm	0.16	158	*e*Pg	Pb	06 57 53.7	-0.7
BFZ				*e*Sg	Sb	06 57 58.3	0.0
BFZ	Birch Farm	0.16	158	P	Pb	06 57 53.9	-0.5
BFZ				S	Sb	06 57 58.0	-0.4
DVHZ	Dannevirke	0.24	360	P	Pb	06 57 53.8	-1.4
DVHZ				S	Sb	06 57 58.2	-1.6
ANWZ	Angora Road	0.25	72	P	Pb	06 57 54.9	-0.4
ANWZ				S	Sb	06 58 00.4	+0.6
TIWZ	Tintock	0.32	222	P	Pb	06 57 56.5	+0.1
TIWZ				S	Sn	06 58 03.5	+0.6
POWZ	Post Office Ro	0.34	295	P	Pb	06 57 55.9	-0.6
CPWZ	Castlepoint	0.38	176	P	Pn	06 57 58.3	+0.4
CPWZ				S	Sn	06 58 07.0	+2.9
PRHZ	Porangahau	0.45	53	P	Pb	06 57 58.1	0.0
MRZ	Mangatainoka R	0.47	254	P	Pb	06 57 58.0	-0.4
MRZ				S	Sb	06 58 05.5	+0.3
TSZ	Takapari Road	0.50	342	P	Pb	06 57 58.2	-0.8
WPHZ	Waipukurau	0.52	24	P	Pb	06 57 59.1	-0.1
WPHZ				S	Sn	06 58 07.9	+0.2
TMWZ	Te Maipa	0.61	200	P	Pn	06 58 01.1	-0.1
TMWZ				S	Sn	06 58 11.8	+1.8
HOWZ	Holdsworth Sta	0.61	234	P	Pn	06 58 01.1	-0.1
PNHZ	Pukenui	0.62	2	P	Pb	06 58 00.5	-0.5
OHWZ	Ohakea	0.73	297	P	Pn	06 58 03.2	+0.4
PXZ	Pawanui	0.73	47	P	Pb	06 58 02.3	-0.5
MTW	Mount Morrison	0.80	219	P	Pn	06 58 03.5	-0.2
OGWZ	Otaki Gorge	0.81	249	P	Pb	06 58 04.1	+0.1
KRHZ	Kereru	0.91	10	P	Pn	06 58 05.1	-0.1
KAHZ	Kahuranaki	0.92	37	P	Pn	06 58 05.2	-0.3
TRWZ	Traveller	0.94	203	P	Pn	06 58 05.4	-0.3
KIW	Kapiti Island	1.01	251	P	Pn	06 58 07.0	+0.3
CAW	Cannon Point	1.01	235	P	Pn	06 58 06.6	-0.1
PAWZ	Paruwai Farm	1.01	213	P	Pn	06 58 06.3	-0.4
BHHZ	Black Hill Sta	1.05	356	P	Pb	06 58 07.5	-0.6
CKHZ	Cape Kidnapper	1.12	39	P	Pn	06 58 07.4	-0.7
MSWZ	Moikau Station	1.12	218	P	Pn	06 58 07.5	-0.7
KWHZ	Kaweka Forest	1.13	10	P	Pn	06 58 08.3	0.0
MCHZ	McNeill Hill	1.16	21	P	Pn	06 58 08.8	0.0
MOVZ	Moawhango	1.17	344	P	Pb	06 58 09.5	-0.7
WAZ	Wanganui	1.20	310	P	Pb	06 58 10.6	0.0
PLWZ	Palliser	1.24	213	P	Pn	06 58 09.0	-0.9
MTVZ	Mangateitei	1.27	335	P	Pb	06 58 11.3	-0.5
BHW	Baring Head	1.31	228	P	Pn	06 58 10.2	-0.5
TRVZ	Turoa	1.32	339	P	Pb	06 58 12.1	-0.8
TUVZ	Tukino	1.33	343	P	Pb	06 58 12.3	-0.6
WHVZ	Whangaehu Hut	1.33	340	P	Pb	06 58 12.4	-0.6
DRZ	Dome Shelter	1.34	340	P	Pb	06 58 12.8	-0.5
SNZO	South Karori	1.35	235	*e*Pn	Pn	06 58 10.4	-0.9
FWVZ	Far West T-bar	1.36	340	P	Pb	06 58 12.9	-0.7
BKZ	Black Stump Fm	1.39	10	*e*Pn	Pn	06 58 11.9	-0.1
BKZ				*e*Sn	Sb	06 58 31.7	+0.3
BKZ	Black Stump Fm	1.39	10	P	Pn	06 58 11.8	-0.2
PKVZ	Pokaka	1.40	333	P	Pb	06 58 13.2	-0.8
COVZ	Chateau Observ	1.42	340	P	Pb	06 58 13.4	-1.0
ARHZ	Aropaoanui	1.42	27	P	Pn	06 58 12.3	0.0
NGZ	Ngauruhoe	1.43	342	P	Pb	06 58 13.7	-0.9
WTVZ	West Tongariro	1.49	342	P	Pb	06 58 14.4	-1.2
KRVZ	Karewarewa	1.50	344	P	Pb	06 58 15.0	-0.8
NMHZ	Naumai	1.52	19	P	Pn	06 58 13.7	0.0
TWVZ	Taurewa	1.57	339	P	Pn	06 58 15.2	+0.8
RITZ	Rihia Road	1.57	351	P	Pb	06 58 15.7	-1.3
TCW	Tory Channel	1.58	244	P	Pn	06 58 14.2	-0.3
KATZ	Kakaramea	1.60	347	P	Pb	06 58 16.3	-1.3
HATZ	Hinemaiaia	1.64	358	P	Pn	06 58 15.9	+0.5
WHHZ	Waihua	1.67	30	P	Pn	06 58 15.5	-0.3
RATZ	Rangitukua	1.69	350	P	Pn	06 58 17.0	+0.9
MRHZ	Matea Rd	1.71	7	P	Pn	06 58 16.6	+0.2
DUWZ	D'Urville Isla	1.73	260	P	Pn	06 58 16.6	0.0
LREZ	Lake Rotokare	1.73	308	P	Pb	06 58 18.3	-1.3
MTHZ	Maungataniwha	1.76	17	P	Pn	06 58 16.4	-0.6
RAHZ	Arahi	1.77	24	P	Pn	06 58 16.6	-0.5
VRZ	Vera Road	1.78	322	P	Pn	06 58 18.5	+1.3
WATZ	Wairara	1.86	349	P	Pn	06 58 19.0	+0.6
WHTZ	Whakaora	1.87	355	P	Pn	06 58 19.6	+1.0
KNZ	Kokohu	1.91	38	P	Pn	06 58 17.5	-1.5
TUWZ	Tuamarina	1.91	241	P	Pn	06 58 18.0	-0.9
CMWZ	Cape Campbell	1.91	230	P	Pn	06 58 18.6	-0.5
MHGZ	Mahia Peninsul	1.92	45	P	Pn	06 58 17.9	-1.3
PREZ	Palmer Road	1.95	307	P	Pb	06 58 21.8	-1.6
SNGZ	Shannon Statio	1.97	28	P	Pn	06 58 19.1	-0.8
ALRZ	Allen Road	1.98	4	P	Pn	06 58 19.9	0.0
WPRZ	Whakapapatarin	2.01	360	P	Pn	06 58 20.5	+0.1
RTZ	Ruatahuna	2.02	18	P	Pn	06 58 20.2	-0.4
DREZ	Durham Road	2.02	311	P	Pn	06 58 22.4	+1.8
MHEZ	Mangahewa	2.04	315	P	Pb	06 58 23.5	-1.3
PRRZ	Plateau Road	2.04	5	P	Pn	06 58 20.6	-0.3
KUTZ	Kaahu Road	2.06	352	P	Pn	06 58 21.5	+0.3
KHEZ	Kahui Hut	2.07	306	P	Pb	06 58 23.2	-2.2
PRGZ	Paritu Road	2.08	40	P	Pn	06 58 19.9	-1.5
NMEZ	Namu Road	2.09	302	P	Pb	06 58 23.5	-2.2
BSWZ	Blackbirch Sta	2.09	235	P	Pn	06 58 20.6	-0.9
MUGZ	Murupara	2.11	13	P	Pn	06 58 21.0	-0.8
HRRZ	Handcock Road	2.15	2	P	Pn	06 58 22.4	+0.1
PKE	Pukeiti	2.15	308	P	Pb	06 58 24.5	-2.3
GRRZ	Galatos Road	2.18	359	P	Pn	06 58 23.2	+0.4
RIGZ	Rimuhau	2.20	34	P	Pn	06 58 21.4	-1.7
RRRZ	Republican Roa	2.21	7	P	Pn	06 58 22.6	-0.6
NNZ	Nelson	2.22	251	P	Pn	06 58 22.9	-0.3
HSRZ	Hossack Road	2.22	2	P	Pn	06 58 23.3	-0.1
RAGZ	Rawiri	2.25	26	P	Pn	06 58 22.7	-1.2
TLZ	Tolley Road	2.26	347	P	Pn	06 58 24.1	+0.3
HIZ	Hauiti	2.26	333	*e*Pn	Pb	06 58 27.8	-0.9
HIZ	Hauiti	2.26	333	P	Pn	06 58 25.0	+1.1
HLRZ	Highlands Stat	2.29	4	P	Pn	06 58 24.9	+0.7
TARZ	Mount Tarawera	2.31	7	P	Pn	06 58 24.3	-0.4
UTU	Utuhina	2.36	1	P	Pn	06 58 26.0	+0.8
URZ	Urewera	2.39	18	Pn	Pn	06 58 24.1	-1.4
	36nm,0.3s,baz=235,slow=7.1,SNR=146						
URZ				Sn	Sn	06 58 50.9	-3.0
	88nm,0.3s,baz=229,slow=9.3,SNR=13						
URZ	Urewera	2.39	18	P	Pn	06 58 24.1	-1.4
NGRZ	Ngongotaha	2.43	0	P	Pb	06 58 30.3	-1.3
OMRZ	Omania	2.43	4	P	Pn	06 58 25.8	-0.5
MWZ	Matawai	2.44	26	P	Pn	06 58 24.7	-1.6
TKGZ	Te Karaka	2.46	32	P	Pn	06 58 25.0	-1.6
EDRZ	Edgecumbe	2.47	11	P	Pn	06 58 26.2	-0.5
KARZ	Kaharoa	2.51	1	P	Pn	06 58 27.4	+0.1
MARZ	Manawahe	2.58	9	P	Pn	06 58 28.6	+0.3
CNGZ	Carnagh Statio	2.59	38	P	Pn	06 58 26.6	-1.8
KMRZ	Kaimai	2.69	356	P	Pn	06 58 29.8	0.0
OPRZ	Ohinepanea	2.71	7	P	Pn	06 58 28.6	-1.3
KHZ	Kahutara	2.73	226	*e*Pn	Pn	06 58 28.7	-1.5
KHZ	Kahutara	2.73	226	P	Pn	06 58 28.3	-1.9
TWGZ	Tauwhareparae	2.74	31	P	Pn	06 58 29.3	-1.2
WHRZ	Whale Island	2.75	13	P	Pn	06 58 30.0	-0.6
THZ	Tophouse	2.75	242	*e*Pn	Pn	06 58 29.5	-1.2
THZ	Tophouse	2.75	242	P	Pn	06 58 29.3	-1.4
QRZ	Quartz Range	2.78	263	P	Pn	06 58 30.4	-0.6
TGRZ	Tauranga	2.80	2	P	Pn	06 58 31.1	-0.2
RUGZ	Raukumara Rang	2.82	25	P	Pn	06 58 30.1	-1.5
PUZ	Puketiti	2.95	34	P	Pn	06 58 30.9	-2.4
PKGZ	Pakihiroa	3.03	30	P	Pn	06 58 32.9	-1.6
HAZ	Te Kaha	3.05	25	P	Pn	06 58 33.2	-1.4
WMGZ	Waiomatatini S	3.23	33	P	Pn	06 58 35.0	-2.1
MXZ	Matakaoa Point	3.41	30	*e*Pn	Pn	06 58 37.9	-1.7
MXZ	Matakaoa Point	3.41	30	P	Pn	06 58 38.2	-1.3
DSZ	Denniston Nort	3.51	248	P	Pn	06 58 39.8	-1.2
MKAZ	Moumakai	3.52	347	P	Pn	06 58 41.9	+0.8
KBAZ	Karaka Road Bo	3.58	343	P	Pn	06 58 43.8	+1.9
AWAZ	Awhitu Peninsu	3.67	341	P	Pn	06 58 44.6	+1.4
LTZ	Lake Taylor	3.68	231	*e*Pn	Pn	06 58 41.5	-1.9
LTZ	Lake Taylor	3.68	231	P	Pn	06 58 41.3	-2.1
ETAZ	East Tamaki Re	3.71	344	P	Pn	06 58 45.3	+1.6
KUZ	Kuaotunu	3.80	355	P	Pn	06 58 45.2	+0.2
WTAZ	Waiatarua	3.81	340	P	Pn	06 58 47.1	+1.9
WIAZ	Waiheke Island	3.82	347	P	Pn	06 58 46.1	+0.8
OKCZ	Okains Bay	3.94	215	P	Pn	06 58 44.6	-2.3
RVAZ	Riverhead Bore	3.96	341	P	Pn	06 58 48.8	+1.6
EYCZ	Eyrewell	4.05	223	P	Pn	06 58 46.6	-1.7
ABAZ	Army Bay	4.07	345	P	Pn	06 58 50.0	+1.3
MQZ	McQueen's Vall	4.11	218	*e*Pn	Pn	06 58 46.2	-2.9
MQZ				*e*Sn	Sn	06 59 31.4	-4.8
MQZ	McQueen's Vall	4.11	218	P	Pn	06 58 45.9	-3.3
AKCZ	Akaroa Harbour	4.12	215	P	Pn	06 58 47.4	-2.0
OXZ	Oxford	4.15	226	*e*Pn	Pn	06 58 47.5	-2.4
OXZ	Oxford	4.15	226	P	Pn	06 58 46.9	-2.9
INZ	Inchbonnie	4.16	237	P	Pn	06 58 47.9	-2.0
GRZ	Great Barrier	4.32	352	P	Pn	06 58 53.8	+1.7
WVZ	Waitaha Valley	4.79	236	P	Pn	06 58 56.3	-2.2
WCZ	Waipu Caves	4.81	342	P	Pn	06 58 59.8	+1.0
RPZ	Rata Peaks	4.95	228	Pn	Pn	06 58 59.2	-1.7
	5.4nm,0.3s,baz=310,slow=2.5,SNR=36						
RPZ				Sn	Sn	06 59 52.0	-5.1
	43nm,0.3s,baz=139,slow=19,SNR=20						
RPZ				LR	LR	07 00 59.2	
	comp=Z,2µm,18.8s,baz=344,slow=39						
RPZ	Rata Peaks	4.95	228	P	Pn	06 58 57.9	-2.9
FOZ	Fox Glacier	5.60	236	*e*Pn	Pn	06 59 08.5	-1.1
FOZ	Fox Glacier	5.60	236	P	Pn	06 59 06.8	-2.9
OUZ	Omahuta	5.68	338	P	Pn	06 59 12.0	+1.1
LBZ	Lake Benmore	5.86	227	*e*Pn	Pn	06 59 11.6	-1.7
LBZ	Lake Benmore	5.86	227	P	Pn	06 59 11.3	-2.1
ODZ	Otahua Downs	6.07	220	*e*Pn	Pn	06 59 14.4	-1.7
ODZ	Otahua Downs	6.07	220	P	Pn	06 59 13.6	-2.5
CTZ	Chatham Island	6.24	123	P	Pn	06 59 17.7	-0.9
I36NZ	CHATHAM INFRAS	6.42	124	*i*		07 35 30.0	
	baz=300,slow=328,SNR=0.5						
JCZ	Jackson Bay	6.51	235	P	Pn	06 59 19.2	-3.2
HHSZ	Highcliff Hill	6.72	215	P	Pn	06 59 23.3	-1.7
WKZ	Wanaka	6.79	228	*e*Pn	Pn	06 59 26.9	+0.8
WKZ	Wanaka	6.79	228	P	Pn	06 59 23.3	-2.8
EAZ	Earnscleugh	6.88	225	P	Pn	06 59 25.1	-2.3
TUZ	Tuapeka	7.22	219	P	Pn	06 59 29.3	-2.6
MSZ	Milford Sound	7.35	233	P	Pn	06 59 31.5	-2.2
WHZ	Wether Hill Ro	8.04	226	P	Pn	06 59 39.8	-3.4
APZ	The Paps	8.64	221	P	Pn	06 59 48.9	-2.6
DZM	Mont Dzumac	20.17	333	P	P	07 02 18.4	-2.2
	0.5nm,0.3s,baz=122,slow=14,SNR=11						
DZM	Mont Dzumac	20.17	333	*e*P	P	07 02 21.0	+0.4
	35nm,1.1s						
CAN	Canberra	22.01	275	*e*P	P	07 02 41.1	+0.7
	57nm,1.5s						
CAN	Canberra	22.01	275	*e*P	P	07 02 41.1	+0.7
CAN				pmax	pmax		
	comp=Z,57nm,1.5s						
ARMA	Armidale	22.32	289	*e*P	P	07 02 45.8	+2.0
	comp=Z,50nm,1.7s						
TOO	Toolangi	23.95	267	P	P	07 03 01.2	+1.1
TOO				pmax	pmax		
	comp=Z,46nm,1.6s						
EIDS	Eidsvold	25.80	298	*e*P	P	07 03 17.5	+0.6
	comp=Z,66nm,1.8s						
STKA	Stephens Creek	29.06	276	P	P	07 03 45.4	-0.7
	comp=Z,17nm,1.0s,baz=108,slow=11,SNR=14						
STKA	Stephens Creek	29.06	276	*e*P	P	07 03 46.6	+0.5
	comp=Z,5.9nm,1.0s						
STKA	Stephens Creek	29.06	276	*e*P	P	07 03 47.1	+1.0
STKA				pmax	pmax		
	comp=Z,17nm,1.0s						
FUNA	Funafuti	31.99	6	*e*P	P	07 04 09.6	-2.5
	comp=Z,137nm,1.1s						
CTAO	Charters Tower	32.65	300	*e*P	P	07 04 16.7	-1.2
	comp=Z,25nm,1.2s						
CTAO	Charters Tower	32.65	300	*e*P	P	07 04 16.7	-1.2
CTAO				pmax	pmax		
	comp=Z,25nm,1.2s						
BBOO	Buckleboo	32.86	271	*e*P	P	07 04 19.5	-0.2
	comp=Z,180nm,1.9s						
VNDA	Vanda	37.58	185	P	P	07 05 02.9	+3.2
	comp=Z,1.9nm,1.2s,baz=349,slow=10.0,SNR=4.2						
COEN	Coen	39.12	303	*e*P	P	07 05 12.6	-0.8
	comp=Z,46nm,1.1s						
AS31	Alice Springs	39.14	282	*e*P	P	07 05 12.4	-1.1
	comp=Z,8.0nm,1.0s						
ASAR	Alice Springs	39.14	282	P	P	07 05 12.9	-0.6
	comp=Z,20nm,0.9s,baz=135,slow=9.4,SNR=158						
ASAR				PcP	PcP	07 07 21.1	-1.6
	comp=Z,5.4nm,1.0s,baz=124,slow=3.3,SNR=4.6						
WB2	Warramunga Arr	41.07	287	*e*P	P	07 05 28.8	-0.8
WRAB	Tennant Creek	41.08	287	*e*P	P	07 05 28.3	-1.3
	comp=Z,24nm,0.6s						
WRAB	Tennant Creek	41.08	287	*ce*P	P	07 05 28.7	-0.9
WRAB				pmax	pmax		
	comp=Z,13nm,0.6s						
WRA	Warramunga Arr	41.08	287	P	P	07 05 28.9	-0.8
	comp=Z,19nm,0.5s,baz=126,slow=8.1,SNR=360						
WRA				PcP	PcP	07 07 28.1	-0.8
	comp=Z,2.2nm,0.9s,baz=126,slow=3.5,SNR=3.1						
WRA				LR	LR	07 23 00.7	
	comp=Z,1µm,19.0s,baz=270,slow=37						
CASY	Casey	44.01	212	*e*P	P	07 05 53.1	+0.4
	comp=Z,7.4nm,1.0s						
MTN	Manton Dam	48.06	292	*e*P	P	07 06 24.9	-0.4
QSPA	South Pole Qui	49.59	180	P	P	07 06 39.3	+2.6
	comp=Z,8.4nm,1.0s,baz=38,slow=2.2,SNR=13						
SYO	Syowa Base	66.14	196⇑	*e*P	P	07 08 32.8	+0.3
SYO	Syowa Base	66.14	196⇓	*e*pP	pP	07 08 40.4	-1.4
KPJI	Karang Pucung	68.00	279	P	P	07 08 44.9	-0.2
	comp=Z,30nm,0.8s						
SNAA	Sanae	68.10	180	P	P	07 08 37.3	-7.7
SNAA	Sanae	68.10	180	P	P	07 08 46.7	+1.7
	comp=Z,7.6nm,1.1s,baz=182,slow=8.3,SNR=14						
NVL	N'lazarevskaya	68.43	186⇓	*i*P	P	07 08 49.4	+2.5
NVL				pmax	pmax		
	comp=Z,6.0nm,0.7s						
VNA3	Neumayer Olymp	68.45	178	P	P	07 08 39.4	-7.7
VNA3				SKS	SKiKP	07 18 35.3	-2.8
VNA1	Neumayer--Stat	69.08	178	P	P	07 08 42.0	-8.9
LEM	Lembang	69.32	279	LR	LR	07 43 08.6	
	comp=Z,262nm,18.0s,baz=180,slow=39						
CGJI	Cibinong	70.91	278	P	P	07 09 02.1	-0.9
	comp=Z,31nm,1.3s,comp=Z,4µm						
MDSI	Maura Dua	73.43	278	P	P	07 09 17.3	-0.8
	comp=Z,24nm,1.1s,comp=Z,1µm						
MASI	Maura Aman, Be	75.76	278	P	P	07 09 31.1	-0.7
	comp=Z,88nm,0.8s						
KRJI	Kerinci	77.03	278	P	P	07 09 38.8	-0.2
	comp=Z,138nm,1.1s						
PLCA	Paso Flores	78.94	135	P	P	07 09 52.3	+3.0
	comp=Z,1.2nm,0.8s,baz=198,slow=20,SNR=2.1						
PSI	Prapat	82.14	280	P	P	07 10 05.0	-1.8
	comp=Z,7.2nm,0.8s,baz=0.2,slow=3.4,SNR=3.9						
GSI	Gunungsitoli	82.18	278	P	P	07 10 06.7	-0.2
KCSI	Kotacane, Aceh	83.48	280	P	P	07 10 15.5	+1.9
TPTI		83.75	280	P	P	07 10 14.6	-0.4
MJA0	Matsu Arr-Jizo	84.24	330	*e*P	P	07 10 15.9	-1.0
MJA0				pmax	pmax		
	comp=Z,3.0nm,0.6s						
MJAR	Matsushiro Arr	84.25	330	P	P	07 10 15.5	-1.5
	comp=Z,4.8nm,0.9s,baz=170,slow=6.1,SNR=8.9						
TRTT	Trang	84.90	285	P	P	07 10 21.3	+0.5
QIZ	Qiongzhong	85.43	300	P	P	07 10 22.0	-1.3
QIZ				S	S	07 20 55.5	+3.0
SKNT	Sakolnakorn	87.98	294	P	P	07 10 36.6	+0.8
TJN	Taejon	88.69	323	*ce*P	P	07 10 37.1	-1.6
NONG	Nongkai	89.30	295	P	P	07 10 42.9	+0.9
KSRS	Korea Array	89.32	324	P	P	07 10 42.0	+0.4
	comp=Z,5.6nm,0.9s,baz=142,slow=5.8,SNR=26						
KSAR	Wonju Array Be	89.33	324	P	P	07 10 42.0	+0.4
KSAR	Wonju Array Be	89.33	324	P	P	07 10 42.0	+0.4
NJ2	Nanjing	89.56	314	*e*P	P	07 10 42.8	-0.1
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
YSS	Yuzh-Sakhalins	92.05	338⇓	*e*P	P	07 10 55.5	+1.4
YSS				*e*		07 11 03.7	
YSS				pmax	pmax		
	comp=Z,10.0nm,0.8s						
YSS				MLR	MLR		
	comp=Z,400nm,16.0s						
YSS				MLR	MLR		
	comp=N,200nm,16.0s						
YSS				MLR	MLR		
	comp=E,400nm,16.0s						
CMAR	Chiang Mai Arr	92.51	292	P	P	07 10 57.2	+0.3
	comp=E,2.5nm,0.6s,baz=155,slow=3.7,SNR=16						
CMAR	Chiang Mai Arr	92.51	292	*e*P	P	07 10 57.6	+0.7
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.6s						
GYA	Guiyang	92.73	303	*e*P	P	07 10 58.0	+0.1
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
KMI	Kunming	94.38	299	P	P	07 11 05.5	-0.2
KMI				pmax	pmax		
	comp=Z,8.0nm,0.6s						
CN2	Changchun	95.58	326	*e*P	P	07 11 10.5	+0.1
KLR	Kul'dur	97.59	332	*i* P	P	07 11 18.9	-0.5
CD2	Chengdu	97.64	304	*e*P	Pdif	07 11 20.5	+0.3
HHC	Hu-ho-hao-te	100.01	316	*e*P	Pdif	07 11 30.8	+0.2
HHC				PP	PP	07 15 41.5	+4.9
HHC				S	Sdif	07 23 02.3	-0.7
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HHC				LR	LR		
	comp=Z,410nm,18.2s						
HHC				LR	LR		
	comp=Z,440nm,18.1s						
HHC				LR	LR		
	comp=Z,680nm,19.0s						
LZH	Lanzhou	101.08	308	*e*P	Pdif	07 11 34.5	-1.0
LZH				pP	pPdif	07 11 45.0	-0.2
LZH				sP	sPdif	07 11 49.0	+0.3
LZH				*e*PP	PP	07 15 47.5	+2.7
LZH				LR	LR		
	comp=Z,190nm,17.5s						

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
LZH				LR	LR		
	comp=Z,200nm,17.8s						
LZH				LR	LR		
	comp=Z,250nm,19.7s						
WMQ	Urumqi	115.59	307	PKP	PKPdf	07 16 27.8	+0.6
TIXI	Tiksi	116.77	345	i PKIKP	PKPdf	07 16 29.8	+1.3
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MKAR	Makanchi Array	120.38	307	PKP	PKPdf	07 16 35.0	-1.3
	comp=Z,1.4nm,0.6s,baz=185,slow=1.1,SNR=15						
KSH	Kashi	120.97	297	ePKP	PKPdf	07 16 36.0	-1.8
KSH				PP	PP	07 18 14.5	+6.6
KSH				PKS	PKSdf	07 20 10.5	-4.0
AAK	Ala-Archa	123.42	300	i PKIKP	PKPdf	07 16 43.0	+0.5
KURK	Kurchatov	124.29	310	PKP	PKPdf	07 16 42.5	-1.1
KURK	Kurchatov	124.29	310	c iPKIKP	PKPdf	07 16 42.9	-0.7
KURK				pmax	pmax		
	comp=Z,8.0nm,1.7s						
KURBB	Kurchatov Arra	124.30	310	PKP	PKPdf	07 16 42.5	-1.1
	comp=Z,3.1nm,0.8s,baz=106,slow=2.0,SNR=25						
BVAR	Borovoye Array	129.88	311	PKP	PKPdf	07 16 54.3	0.0
	comp=Z,1.2nm,0.5s,baz=83,slow=4.5,SNR=8.9						
BRVK	Borovoye	129.95	311	c iPKIKP	PKPdf	07 16 54.5	+0.1
BRVK				pmax	pmax		
	comp=Z,5.0nm,2.5s						
AKTO	Aktyubinsk	136.69	305	PKP	PKPdf	07 17 06.8	-0.4
	comp=Z,0.9nm,0.3s,baz=74,slow=4.7,SNR=4.7						
ARU	Arti	137.26	313	i PKIKP	PKPdf	07 17 09.8	+1.8
ARU						07 19 51.0	
PRGR	Permogore	143.65	322	ePKIKP	PKPdf	07 17 18.2	-1.1
PRGR				pmax	pmax		
	comp=Z,15nm,0.6s						
ZEI	Tsey	144.64	290	ePKHKP	PKPpre	07 17 18.7	
ZEI				pmax	pmax		
	comp=Z,21nm,1.0s						
KBZ	Khabaz	145.55	291	PKPbc	PKPdf	07 17 22.8	-0.4
	comp=Z,21nm,1.0s,baz=130,slow=1.6,SNR=36						
GOF	Gofitskoye	145.69	293	ePKP2	PKPdf	07 17 22.8	-0.7
KIV	Kislovodsk	145.75	291	⇓iPKP2	PKPdf	07 17 23.2	-0.5
KIV				e		07 20 45.1	
KIV				pmax	pmax		
	comp=Z,9.0nm,1.1s						
LIC	Lamto	145.82	178	ePKIKP	PKPab	07 17 26.6	+1.1
	comp=Z,51nm,0.9s						
KIC	Kosan Boka	145.96	178	ePKIKP	PKPab	07 17 26.0	-0.1
	comp=Z,38nm,0.9s						
TIC	Toumodi	146.24	178	ePKIKP	PKPbc	07 17 26.4	-0.1
DBIC	Dimbokro	146.27	178	PKPbc	PKPab	07 17 26.9	-0.3
	comp=Z,6.3nm,0.7s,baz=156,slow=3.5,SNR=7.2						
ASF	Jabal al Asfar	146.39	269	PKPbc	PKPdf	07 17 25.5	+0.3
	comp=Z,3.7nm,0.9s,baz=138,slow=5.0,SNR=4.9						
KLMR	Klimovskoe	146.70	322	ePKIKP	PKPdf	07 17 23.8	-0.8
KLMR				pmax	pmax		
	comp=Z,26nm,1.1s						
KLMR	Klimovskoe	146.70	322	ePKPdf	PKPdf	07 17 23.9	-0.7
KLMR				AMP		07 17 25.7	
	comp=Z,26nm,1.1s						
VRH	Novokhopyorsk	147.03	304	ePKP2	PKPbc	07 17 26.8	-0.8
VRH				pmax	pmax		
	comp=Z,40nm,0.9s						
ARCES	ARCESS Array B	147.11	341	PKPbc	PKPbc	07 17 26.6	-0.7
	comp=Z,16nm,0.8s,baz=61,slow=3.1,SNR=37						
ARCES	ARCESS Array B	147.11	341	ePKP2	PKPbc	07 17 26.8	-0.5
ARCES				pmax	pmax		
	comp=Z,16nm,0.8s						
MMAI	Mount Meron Ar	147.89	269	PKPbc	PKPbc	07 17 31.3	+0.6
	comp=Z,8.4nm,0.8s,baz=73,slow=4.8,SNR=9.0						
VORD	Divnogorie	148.57	304	ePKP2	PKPbc	07 17 31.1	-0.6
VORD				pmax	pmax		
	comp=Z,10.0nm,0.8s						
VSR	Storozhevoye	148.64	304	ePKIKP	PKPbc	07 17 30.0	-1.9
VSR				pmax	pmax		
	comp=Z,9.0nm,0.6s						
LPSR	Galich'ya Gora	148.69	307	ePKP2	PKPbc	07 17 31.8	-0.2
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
OBN	Obninsk	149.69	312	⇓ePKHKP	PKPpre	07 17 30.3	
OBN				e		07 21 13.5	
OBN				pmax	pmax		
	comp=Z,17nm,1.5s						
BRTR	Keskin Array B	151.47	281	PKPbc	PKPbc	07 17 38.6	-0.8
	comp=Z,5.0nm,0.9s,baz=146,slow=2.8,SNR=20						
BRTR				PKPab	sPKPdf	07 17 47.0	+0.4
	comp=Z,3.5nm,0.7s,baz=136,slow=5.2,SNR=10						
BRTR	Keskin Array B	151.47	281	ePKIKP	PKPbc	07 17 39.0	-0.4
BRTR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
FINES	FINESS Array B	152.28	329	PKPbc	PKPbc	07 17 39.9	-0.4
	comp=Z,6.1nm,0.7s,baz=95,slow=4.0,SNR=23						
FINES	FINESS Array B	152.28	329	ePKIKP	PKPbc	07 17 39.7	-0.6
FINES				pmax	pmax		
	comp=Z,6.0nm,0.7s						
TORD	Torodi Ar. Bea	152.29	192	PKPbc	PKPbc	07 17 41.9	+0.2
	baz=140,slow=1.4						
TORD				PKPab	pPKPbc	07 17 51.9	+0.2
	baz=176,slow=2.6						
VSU	Vasula	153.60	323	c iPKIKP	PKPbc	07 17 43.4	+0.1
VSU				pmax	pmax		
	comp=Z,62nm,2.5s						
AKASG	Malin Array Be	154.94	305	PKPbc	PKPbc	07 17 46.0	-0.4
	comp=Z,0.2nm,0.3s,baz=67,slow=2.2,SNR=4.8						
AKASG				PKPab	sPKPbc	07 18 00.6	+0.9
	comp=Z,1.2nm,0.6s,baz=73,slow=4.0,SNR=5.0						
AKASG	Malin Array Be	154.94	305	ePKIKP	PKPbc	07 17 48.0	+1.6
NB2	NORSAR Subarra	157.48	341	PKP	PKPab	07 18 11.1	-1.5
	comp=Z,4.4nm,1.1s,baz=26,slow=3.3						
NOA	NORSAR Array B	157.48	341	PKPab	PKPab	07 18 11.7	-0.9
	comp=Z,0.2nm,0.6s,baz=15,slow=3.5,SNR=4.5						
HFS	Hagfors	157.55	337	PKPab	PKPab	07 18 10.9	-1.9
	comp=Z,1.5nm,0.6s,baz=83,slow=4.8,SNR=5.4						
MLR	Muntele Rosu	157.74	293	PKPab	PKPab	07 18 14.0	-0.4
	comp=Z,3.4nm,0.9s,baz=303,slow=15,SNR=3.6						
CRVS	Cervenica-Dubn	160.24	303	ePKP2	PKPab	07 18 23.9	-1.1
CRVS	Cervenica-Dubn	160.24	303	ePKP	PKPab	07 18 23.9	-1.1
VRAC	Vranov	163.12	308	PKPab	PKPab	07 18 36.6	-1.0
	comp=Z,1.1nm,0.3s,baz=90,slow=5.1,SNR=5.6						
CLL	Collm	164.13	318	ePKPdf	PKPdf	07 17 48.0	-0.2
	comp=Z,4.0nm,1.0s						
CLL				ePKPab	PKPab	07 18 41.0	-0.8
CLL	Collm	164.13	318	ePKIKP	PKPdf	07 17 48.0	-0.2
CLL				e		07 18 41.0	
CLL				pmax	pmax		
	comp=Z,26nm,1.0s						
GERES	GERESS Array B	165.04	310	PKPab	PKPab	07 18 44.9	-1.2
	comp=Z,1.0nm,0.8s,baz=52,slow=5.2,SNR=8.6						
DAVOX	Davos/Dischmat	168.28	307	PKPab	PKPab	07 18 58.8	-1.9
	comp=Z,5.0nm,0.8s,baz=271,slow=0.9,SNR=9.2						
KEST	Kesra	168.57	249	PKPab	PKPab	07 19 01.1	-1.0
	comp=Z,2.0nm,0.4s,baz=178,slow=5.8,SNR=3.7						
ESDC	Sonseca Array	179.13	173	PKPab		07 19 47.9	
	comp=Z,0.6nm,0.6s,baz=108,slow=3.8,SNR=4.1						

WEL 26 07:00:05.4,40°.5S±0°.7×176°.1E±1°.0,h20^{km}±1^{km},ML3.6/13, North Island

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
PRWZ	Pori Road	0.14	245	P	Pg	07 00 10.5	+0.7
PRWZ				S	Sg	07 00 14.5	+1.9
DVHZ	Dannevirke	0.20	8	P	Pg	07 00 10.8	+0.2
DVHZ				S	Sg	07 00 14.9	+0.8
BFZ	Birch Farm	0.20	155	P	Pg	07 00 10.8	+0.1
BFZ				S	Sg	07 00 15.3	+1.1
ANWZ	Angora Road	0.27	82	P	Pg	07 00 12.0	+0.5
ANWZ				S	Sg	07 00 17.6	+1.9
POWZ	Post Office Ro	0.30	291	P	Pb	07 00 12.6	+0.6
TIWZ	Tintock	0.34	214	P	Pb	07 00 13.6	+0.8
CPWZ	Castlepoint	0.41	173	P	Pb	07 00 15.2	+1.1
CPWZ				S	Sn	07 00 24.1	+0.6
PRHZ	Porangahau	0.45	59	P	Pb	07 00 15.3	+0.7
PRHZ				S	Sn	07 00 23.7	-0.5
TSZ	Takapari Road	0.46	343	P	Pb	07 00 15.1	+0.2
TSZ				S	Sb	07 00 22.3	+1.0
WPHZ	Waipukurau	0.49	29	P	Pg	07 00 16.2	+0.7
PNHZ	Pukenui	0.59	5	P	Pg	07 00 17.6	+0.4
HOWZ	Holdsworth Sta	0.62	229	P	Pg	07 00 17.9	+0.1
HOWZ				S	Sn	07 00 27.6	-0.8
PXZ	Pawanui	0.73	50	P	Pg	07 00 19.7	-0.1
OGWZ	Otaki Gorge	0.80	246	P	Pb	07 00 20.8	+0.2
OGWZ				S	Sg	07 00 32.2	+0.5
KRHZ	Kereru	0.87	12	P	Pb	07 00 22.2	+0.3
KIW	Kapiti Island	1.00	248	P	Pb	07 00 23.8	-0.2
KIW				P	Pb	07 00 23.8	-0.2
BHHZ	Black Hill Sta	1.01	357	P	Pn	07 00 24.6	0.0

IDC 26 07:01:01.1±4.2,36°.85S×178°.42E,h0^{km},mb3.8/2, mb1 4.1/2,mb1mx3.7/38,mbtmp3.8/2,Error ellipse: s-maj=81.8km s-min=40.8km az=98.0,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
URZ	Urewera	1.75	216	Pn	Pn	07 01 32.4	-0.3
	7.2nm,0.3s,baz=260,slow=6.4,SNR=13						
URZ				Sn	Sg	07 02 01.0	+3.8
	26nm,0.3s,baz=241,slow=22,SNR=10						
ASAR	Alice Springs	40.29	276	P	P	07 08 39.4	-0.8
	0.8nm,0.6s,baz=118,slow=8.0,SNR=4.6						
WRA	Warramunga Arr	41.88	281	P	P	07 08 53.7	+0.5
	0.7nm,0.4s,baz=122,slow=7.7,SNR=11						
ARCES	ARCESS Array B	144.11	344	PKP	PKPdf	07 20 37.1	-0.5
	2.1nm,0.7s,baz=27,slow=2.2,SNR=4.1						

ISCJB 26 07:07:26.9±0.6,17°.7S±0°.1×65°.7E±0°.1,h10^{km},mb4.3/23, MS4.7/1,Error ellipse: s-maj=18.8km s-min=16.5km az=145.7

IDC 26 07:07:26.4±0.9,17°.83S×65°.67E,h0^{km},mb4.3/15, mb1 4.4/15,mb1mx4.0/69,mbtmp4.3/15,MS4.4/2, Ms1 4.4/2,ms1mx3.8/65,Error ellipse: s-maj=28.6km s-min=21.4km az=37.0

NEIC 26 07:07:28.5±0.5,17°.74S×65°.66E,h10^{km},mb4.6/1,Error ellipse: s-maj=15.0km s-min=14.2km az=48.0

ISC 26 07:07:28.4±0.7,17°.7S±0°.2×65°.6E±0°.2,h10^{km},n42, σ1^{s}.30/29,mb4.4/23,Mauritius-Reunion region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	12.00	35	T	T	07 21 56.6	
	baz=209,slow=76						
H08S2	Diego Garcia H	12.01	35	T	T	07 21 57.2	
	baz=209,slow=76						
H08S3	Diego Garcia H	12.02	35	T	T	07 21 58.1	
	baz=209,slow=76						
H08N3	Diego Garcia H	12.42	26	T	T	07 22 45.8	
	baz=200,slow=76,SNR=222						
H08N1	Diego Carcia H	12.43	26	T	T	07 22 48.7	
	baz=200,slow=76,SNR=171						
H08N2	Diego Garcia H	12.44	26	T	T	07 22 47.0	
	baz=200,slow=76,SNR=268						
OPO	Ambohidratompo	17.56	264	LR	LR	07 16 50.0	
	comp=Z,816nm,21.2s,baz=11,slow=32						
LBTB	Lobatse	37.90	252	P	P	07 14 44.5	-1.6
	0.6nm,0.3s,baz=97,slow=8.5,SNR=2.0						
H01W2	Cape Leeuwin H	46.27	122	T	T	08 04 58.7	
	baz=278,slow=75,SNR=1010						
H01W3	Cape Leeuwin H	46.27	122	T	T	08 05 05.0	
	baz=278,slow=75,SNR=830						
H01W1	Cape Leeuwin H	46.29	122	T	T	08 04 59.9	
	baz=278,slow=75,SNR=807						
SUKH	Sukhothai	48.38	46	P	P	07 16 19.6	+8.8
	3.9nm,0.9s						
CMAR	Chiang Mai Arr	48.60	44	P	P	07 16 12.2	-0.4
	4.1nm,0.9s,baz=229,slow=7.6,SNR=8.4						
PBKT	Sadao Pong	48.68	48	P	P	07 16 21.4	+8.3
	6.9nm,1.5s						
PHIT	Phitsanulok	48.71	47	P	P	07 16 19.4	+6.0
	14nm,1.0s						
KSH	Kashi	57.71	9	eP	P	07 17 17.5	-2.0
KSH				ePcP	PcP	07 18 08.0	-4.3
KSH				pmax	pmax		
	comp=Z,6.0nm,0.7s						
ASAR	Alice Springs	63.63	108	P	P	07 17 59.2	-1.0
	comp=Z,4.6nm,0.9s,baz=260,slow=6.4,SNR=20						
WRA	Warramunga Arr	64.65	104	P	P	07 18 06.2	-0.7
	comp=Z,6.5nm,0.9s,baz=264,slow=6.2,SNR=27						
WRAB	Tennant Creek	64.66	104	eP	P	07 18 07.5	+0.6
	comp=Z,17nm,0.8s						
MKAR	Makanchi Array	65.91	12	P	P	07 18 14.4	0.0
	comp=Z,0.9nm,0.7s,baz=215,slow=7.9,SNR=6.5						
AKTO	Aktyubinsk	68.15	355	P	P	07 18 29.0	+0.4
	comp=Z,1.2nm,0.4s,baz=156,slow=3.9,SNR=4.9						
KURBB	Kurchatov Arra	68.95	9	P	P	07 18 33.8	+0.3
	comp=Z,1.7nm,0.7s,baz=203,slow=6.3,SNR=11						
KURK	Kurchatov	69.05	9	P	P	07 18 33.8	-0.4
BVAR	Borovoye Array	70.53	3	P	P	07 18 43.1	-0.1
	comp=Z,1.9nm,0.8s,baz=185,slow=8.0,SNR=9.2						
QSPA	South Pole Qui	72.42	180	P	P	07 18 56.4	+1.6
	comp=Z,1.7nm,0.9s,baz=270,slow=2.0,SNR=1.9						
ZALV	Zalesovo Beam	73.22	12	P	P	07 18 59.2	-0.1
	comp=Z,2.6nm,0.7s,baz=220,slow=4.4,SNR=6.8						
SONM	Songino Array	74.72	27	P	P	07 19 08.9	+0.4
	comp=Z,1.6nm,0.7s,baz=213,slow=6.5,SNR=6.4						
AKASG	Malin Array Be	75.23	337	P	P	07 19 13.0	+1.8
	comp=Z,1.4nm,0.6s,baz=147,slow=5.1,SNR=4.7						
KIEV	Kiev	75.23	337	eP	P	07 19 13.1	+2.0
	comp=Z,3.6nm,0.6s						
JNU	Nakatsue	80.16	51	P	P	07 19 40.7	+1.5
	comp=Z,4.0nm,0.9s,baz=196,slow=7.4,SNR=2.1						
KSAR	Wonju Array Be	80.18	46	P	P	07 19 39.6	+0.5
KSRS	Korea Array	80.21	46	P	P	07 19 39.6	+0.3
	comp=Z,1.2nm,0.8s,baz=242,slow=5.1,SNR=4.3						
DAVOX	Davos/Dischmat	81.41	325	LR	LR	07 54 58.1	
	comp=Z,370nm,20.3s,baz=317,slow=35						
FINES	FINESS Array B	84.93	342	P	P	07 20 04.5	+1.3
	comp=Z,1.3nm,0.7s,baz=161,slow=5.9,SNR=3.5						
MAJO	Matsushiro	87.08	50	eP	P	07 20 13.7	-0.9
	comp=Z,15nm,1.4s						
MJAR	Matsushiro Arr	87.08	50	P	P	07 20 14.7	+0.1
	comp=Z,0.9nm,0.3s,baz=242,slow=5.8,SNR=5.0						
ILAR	Eielson Array	128.12	17	PKP	PKPdf	07 26 34.0	-0.4
	comp=Z,0.4nm,0.8s,baz=342,slow=0.3,SNR=3.3						
ULM	Lac du Bonnet	144.28	340	PKP	PKPbc	07 27 04.5	+1.6
	comp=Z,3.3nm,0.8s,baz=34,slow=7.3,SNR=3.2						
DGMT	Dagmar	148.19	347	ePKPdf	PKPdf	07 27 11.8	+0.4
RSSD	Black Hills	152.24	344	ePKPdf	PKPdf	07 27 17.6	-0.6
PDAR	Pinedale Array	154.66	352	PKPbc	PKPbc	07 27 30.3	+0.1
	comp=Z,0.5nm,0.8s,baz=37,slow=2.3,SNR=4.0						
PDAR				PKPab	PKPab	07 27 45.6	+0.8
	comp=Z,1.6nm,1.0s,baz=53,slow=3.5,SNR=5.1						
NVAR	Mina Array Bea	159.04	9	PKPab	PKPab	07 28 04.1	+0.3
	comp=Z,0.5nm,0.8s,baz=0.0,slow=0.9,SNR=5.0						

IDC 26 07:14:39.1±14.0,18°.11S×65°.42E,h0^{km},mb3.7/4, mb1 3.9/4,mb1mx3.5/70,mbtmp3.7/4,MS4.3/2,Ms1 4.3/2, ms1mx3.7/66,Error ellipse: s-maj=486.7km s-min=34.9km az=55.0,Mauritius-Reunion region

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
H08S1	Diego Carcia H	12.47	34	T	T	07 29 15.7	
	baz=210						
H08S2	Diego Garcia H	12.48	34	T	T	07 29 16.1	
	baz=210,slow=74						
H08S3	Diego Garcia H	12.49	34	T	T	07 29 20.5	
	baz=210,slow=74						
H08N3	Diego Garcia H	12.90	26	T	T	07 29 41.5	
	baz=203,slow=76,SNR=7.8						
H08N1	Diego Carcia H	12.91	26	T	T	07 29 44.4	
	baz=203,slow=76,SNR=3.5						
H08N2	Diego Garcia H	12.92	26	T	T	07 29 43.0	
	baz=203,slow=76,SNR=7.2						
PALK	Pallekele	29.39	32	LR	LR	07 30 16.8	
	comp=Z,503nm,19.2s,baz=305,slow=32						
H01W2	Cape Leeuwin H	46.23	121	T	T	08 12 26.2	
	baz=278,slow=75,SNR=36						
H01W3	Cape Leeuwin H	46.23	121	T	T	08 12 21.0	
	baz=278,slow=75,SNR=30						
H01W1	Cape Leeuwin H	46.24	121	T	T	08 12 27.3	
	baz=278,slow=75,SNR=41						
ASAR	Alice Springs	63.70	108	P	P	07 25 12.7	-0.2
	0.9nm,0.8s,baz=272,slow=5.9,SNR=5.4						
WRA	Warramunga Arr	64.75	104	P	P	07 25 20.0	+0.2
	1.5nm,0.9s,baz=266,slow=5.8,SNR=8.4						
MKAR	Makanchi Array	66.37	13	P	P	07 25 29.7	0.0
	0.4nm,0.8s,baz=199,slow=7.6,SNR=2.6						
BVAR	Borovoye Array	70.97	3	P	P	07 25 58.3	0.0
	0.4nm,0.3s,baz=180,slow=5.3,SNR=2.9						
KSRS	Korea Array	80.66	46	LR	LR	08 01 09.9	
	comp=Z,170nm,21.2s,baz=40,slow=35						

ISCJB 26 07:19:09.2±0.7,38°.07S±0°.04×179°.57W±0°.07,h10^{km}, mb4.4/13,Error ellipse: s-maj=8.2km s-min=5.7km az=14.5

IDC 26 07:19:12.2±0.8,37°.59S×179°.92E,h0^{km},mb4.3/7, mb1 4.5/9,mb1mx4.2/41,mbtmp4.3/9,ML4.0/2,Error ellipse: s-maj=24.0km s-min=22.7km az=19.0

NEIC 26 07:19:14.2±0.0,37°.63S×179°.93W,h12^{km},mb4.6/7, ML4.6(WEL),After WEL.

BJI 26 07:19:14.0,37°.90S×179°.90W,h33^{km},Ms5.1/2,Ms7 4.8/2

WEL 26 07:20:08.3,41°S±44°×17°6E±1°1,h59^{km}±13^{km}

ISC 26 07:19:14.9±0.6,38°.00S±0°.05×179°.96E±0°.06,h21^{km},n143, σ1^{s}.53/163,mb4.6/13,Off east coast of North Island

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.24	278	Pn	Pb	07 19 37.8	+0.3
WMGZ				Sn	Sn	07 19 55.8	+2.8
PUZ	Puketiti	1.35	266	Pn	Pb	07 19 40.0	+0.5
MXZ	Matakaoa Point	1.38	288	ePn	Pn	07 19 39.1	+0.2
MXZ				eSn	Sb	07 19 57.7	+0.5
CNGZ	Carnagh Statio	1.47	250	Pn	Pb	07 19 43.1	+1.7
TWGZ	Tauwhareparae	1.57	263	Pn	Pb	07 19 43.6	+0.3
TKGZ	Te Karaka	1.72	254	Pn	Pb	07 19 46.1	+0.3
PRGZ	Paritu Road	1.88	240	Pn	Pb	07 19 48.8	+0.3
MWZ	Matawai	1.95	259	Pn	Pn	07 19 48.4	+1.6
MHGZ	Mahia Peninsul	1.98	234	Pn	Pb	07 19 50.3	0.0
RAGZ	Rawiri	2.07	255	Pn	Pb	07 19 50.5	-1.2
KNZ	Kokohu	2.07	240	Pn	Pb	07 19 51.0	-0.7
SNGZ	Shannon Statio	2.21	248	Pn	Pb	07 19 53.0	-1.1
URZ	Urewera	2.26	262	Pn	Pb	07 19 53.6	-1.4
	79nm,0.3s,baz=264,slow=1.3,SNR=384						
URZ				Sn	Sb	07 20 22.8	+0.2
	362nm,0.3s,baz=298,slow=19,SNR=45						
ARHZ	Aropaoanui	2.65	241	Pn	Pb	07 19 59.6	-2.0
OPRZ	Ohinepanea	2.70	272	Pn	Pn	07 19 57.8	+0.7
NMHZ	Naumai	2.71	245	Pn	Pn	07 20 00.1	+2.8
NMHZ	Naumai	2.71	245	P	Sb	07 20 35.3	-0.1
TARZ	Mount Tarawera	2.74	264	Pn	Pn	07 19 59.6	+1.9
RRRZ	Republican Roa	2.74	262	Pn	Pn	07 19 59.0	+1.3
CKHZ	Cape Kidnapper	2.80	233	Pn	Pn	07 20 01.2	+2.8
HRRZ	Handcock Road	2.92	261	Pn	Pn	07 20 01.8	+1.6
MCHZ	McNeill Hill	2.94	239	Pn	Pn	07 20 03.2	+2.9
BKZ	Black Stump Fm	2.96	246	ePn	Pn	07 20 03.0	+2.3
KAHZ	Kahuranaki	3.00	232	Pn	Pn	07 20 03.9	+2.5
PXZ	Pawanui	3.16	229	Pn	Pn	07 20 04.0	+0.6
KUTZ	Kaahu Road	3.30	260	Pn	Pn	07 20 07.3	+2.0
RITZ	Rihia Road	3.37	252	Pn	Pn	07 20 08.8	+2.5
BHHZ	Black Hill Sta	3.40	243	Pn	Pn	07 20 09.0	+2.3
WPHZ	Waipukurau	3.43	232	Pn	Pn	07 20 09.2	+2.0
PRHZ	Porangahau	3.44	228	Pn	Pn	07 20 08.8	+1.5
KATZ	Kakaramea	3.49	252	Pn	Pn	07 20 10.4	+2.3
PNHZ	Pukenui	3.50	236	Pn	Pn	07 20 10.6	+2.4
KRVZ	Karewarewa	3.56	251	Pn	Pn	07 20 11.3	+2.3
OTVZ	Oturere	3.56	250	Pn	Pn	07 20 11.0	+1.9
MOVZ	Moawhango	3.58	246	Pn	Pn	07 20 11.5	+2.2
KUZ	Kuaotunu	3.60	289	Pn	Pn	07 20 08.7	-0.8
TUVZ	Tukino	3.60	248	Pn	Pn	07 20 12.0	+2.3
WTVZ	West Tongariro	3.61	251	Pn	Pn	07 20 12.0	+2.3
NGZ	Ngauruhoe	3.62	250	Pn	Pn	07 20 12.1	+2.2
WHVZ	Whangaehu Hut	3.66	248	Pn	Pn	07 20 12.7	+2.2
WNVZ	Wahianoa	3.67	247	Pn	Pn	07 20 12.7	+2.2
TRVZ	Turoa	3.69	248	Pn	Pn	07 20 13.1	+2.1
TWVZ	Taurewa	3.71	252	Pn	Pn	07 20 13.4	+2.3
TSZ	Takapari Road	3.74	235	Pn	Pn	07 20 12.7	+1.4
DVHZ	Dannevirke	3.74	231	Pn	Pn	07 20 13.0	+1.5
PKVZ	Pokaka	3.84	249	Pn	Pn	07 20 15.6	+2.8
MKAZ	Moumakai	3.92	282	Pn	Pn	07 20 14.0	+0.1
BFZ	Birch Farm	3.94	226	ePn	Pn	07 20 14.8	+0.7
BFZ				eSn	Sn	07 21 01.1	+1.4
BFZ	Birch Farm	3.94	226	P	Pn	07 20 14.6	+0.5
PRWZ	Pori Road	4.02	229	Pn	Pn	07 20 16.7	+1.5
POWZ	Post Office Ro	4.04	232	Pn	Pn	07 20 17.6	+2.0
HIZ	Hauiti	4.05	261	ePn	Pn	07 20 17.7	+2.0
TIWZ	Tintock	4.21	227	Pn	Pn	07 20 18.8	+0.9
TIWZ	Tintock	4.21	227	P	Pn	07 20 18.9	+1.1
WAZ	Wanganui	4.26	244	Pn	Pn	07 20 21.3	+2.7
MRZ	Mangatainoka R	4.32	231	Pn	Pn	07 20 20.2	+0.8
TMWZ	Te Maipa	4.42	224	Pn	Pn	07 20 20.7	-0.1
TMWZ	Te Maipa	4.42	224	P	Pn	07 20 20.7	-0.1
HOWZ	Holdsworth Sta	4.50	229	Pn	Pn	07 20 22.4	+0.5
HOWZ	Holdsworth Sta	4.50	229	P	Pn	07 20 22.4	+0.5
MTW	Mount Morrison	4.67	226	Pn	Pn	07 20 24.0	-0.3
MTW	Mount Morrison	4.67	226	P	Pn	07 20 24.2	-0.1
TRWZ	Traveller	4.74	223	Pn	Pn	07 20 25.2	+0.1
TRWZ	Traveller	4.74	223	P	Pn	07 20 25.2	+0.1
PREZ	Palmer Road	4.74	252	Pn	Pn	07 20 29.2	+4.1
NEZ	North Egmont	4.77	253	Pn	Pn	07 20 29.2	+3.7
KIW	Kapiti Island	4.85	232	Pn	Pn	07 20 27.9	+1.2
PAWZ	Paruwai Farm	4.87	225	Pn	Pn	07 20 26.8	-0.1
PAWZ	Paruwai Farm	4.87	225	P	Pn	07 20 26.5	-0.4
CAW	Cannon Point	4.90	229	Pn	Pn	07 20 27.9	+0.6
CAW	Cannon Point	4.90	229	P	Pn	07 20 27.9	+0.7
MSWZ	Moikau Station	4.99	225	Pn	Pn	07 20 27.9	-0.6
MSWZ	Moikau Station	4.99	225	P	Pn	07 20 27.9	-0.6
PLWZ	Palliser	5.09	224	Pn	Pn	07 20 29.4	-0.6
PLWZ	Palliser	5.09	224	P	Pn	07 20 29.5	-0.5
BHW	Baring Head	5.20	227	P	Pn	07 20 31.8	+0.4
SNZO	South Karori	5.24	229	ePn	Pn	07 20 32.3	+0.4
SNZO				eSn	Sn	07 21 33.3	+1.7
TCW	Tory Channel	5.44	232	Pn	Pn	07 20 35.4	+0.6
TCW	Tory Channel	5.44	232	P	Pn	07 20 35.4	+0.6
DUWZ	D'Urville Isla	5.45	237	Pn	Pn	07 20 35.7	+0.7
TUWZ	Tuamarina	5.77	232	Pn	Pn	07 20 39.2	0.0
TUWZ	Tuamarina	5.77	232	P	Pn	07 20 39.2	0.0
BSWZ	Blackbirch Sta	5.98	230	Pn	Pn	07 20 41.9	-0.2
BSWZ	Blackbirch Sta	5.98	230	P	Pn	07 20 42.0	-0.2
NNZ	Nelson	6.02	236	Pn	Pn	07 20 43.1	+0.5
NNZ	Nelson	6.02	236	P	Pn	07 20 43.1	+0.4
CTZ	Chatham Island	6.29	157	Pn	Pn	07 20 49.8	+3.4
QRZ	Quartz Range	6.41	242	Pn	Pn	07 20 47.6	-0.5
THZ	Tophouse	6.60	233	ePn	Pn	07 20 51.3	+0.5
THZ				eSn	Sn	07 22 07.3	+1.9
THZ	Tophouse	6.60	233	P	Pn	07 20 50.8	0.0
KHZ	Kahutara	6.61	226	ePn	Pn	07 20 50.8	+0.1
KHZ				eSn	Sn	07 22 05.2	-0.2
KHZ	Kahutara	6.61	226	P	Pn	07 20 49.6	-1.1
DSZ	Denniston Nort	7.31	237	P	Pn	07 21 00.8	+0.4
LTZ	Lake Taylor	7.57	228	ePn	Pn	07 21 03.5	-0.5
LTZ				eSn	Sn	07 22 27.8	-1.4
LTZ	Lake Taylor	7.57	228	P	Pn	07 21 03.3	-0.7
OKCZ	Okains Bay	7.75	220	P	Pn	07 21 06.5	0.0
AKCZ	Akaroa Harbour	7.93	220	P	Pn	07 21 10.2	+1.2
MQZ	McQueen's Vall	7.95	222	ePn	Pn	07 21 09.4	+0.3
MQZ				eSn	Sn	07 22 35.8	-2.6
MQZ	McQueen's Vall	7.95	222	P	Pn	07 21 08.8	-0.3
INZ	Inchbonnie	8.04	231	P	Pn	07 21 09.4	-0.9
OXZ	Oxford	8.04	226	ePn	Pn	07 21 10.8	+0.5
OXZ				eSn	Sn	07 22 38.6	-2.0
OXZ	Oxford	8.04	226	P	Pn	07 21 10.6	+0.3
WVZ	Waitaha Valley	8.66	231	P	Pn	07 21 19.8	+0.8
RPZ	Rata Peaks	8.84	227	Pn	Pn	07 21 21.6	+0.2
	2.6nm,0.3s,baz=62,slow=2.4,SNR=7.8						
RPZ				Sn	Sn	07 22 56.8	-3.6
	8.3nm,0.3s,baz=121,slow=23,SNR=22						
RPZ	Rata Peaks	8.84	227	ePn	Pn	07 21 21.8	+0.3
RPZ				eSn	Sn	07 22 58.1	-2.3
RPZ	Rata Peaks	8.84	227	P	Pn	07 21 21.9	+0.4
FOZ	Fox Glacier	9.48	231	ePn	Pn	07 21 32.5	+2.4
FOZ				eSn	Sn	07 23 13.3	-2.6
LBZ	Lake Benmore	9.75	226	ePn	Pn	07 21 33.8	0.0
LBZ				eSn	Sn	07 23 18.2	-4.4
ODZ	Otahua Downs	9.91	222	ePn	Pn	07 21 36.5	+0.4
ODZ				eSn	Sn	07 23 24.9	-1.8
WHZ	Wether Hill Ro	11.92	225	ePn	Pn	07 22 04.1	+0.6
DZM	Mont Dzumac	19.68	320	P	P	07 23 41.1	-1.7
	0.2nm,0.3s,baz=128,slow=17,SNR=3.9						
DZM	Mont Dzumac	19.68	320	eP	P	07 23 42.0	-0.8
	24nm,1.2s						
STKA	Stephens Creek	31.88	269	P	P	07 25 37.7	-1.0
	2.6nm,0.6s,baz=107,slow=14,SNR=3.1						
CTAO	Charters Tower	34.20	292	eP	P	07 25 58.4	-0.7
	6.6nm,0.9s						
COEN	Coen	40.43	296	eP	P	07 26 51.3	-0.6
	21nm,0.8s						
AS01	Alice Springs	41.60	276	eP	P	07 27 01.1	-0.5
AS31	Alice Springs	41.64	276	eP	P	07 27 01.9	+0.1
	4.1nm,0.6s						
ASAR	Alice Springs	41.64	276	P	P	07 27 01.4	-0.4
	9.0nm,0.8s,baz=119,slow=7.8,SNR=79						
ASAR				PcP	PcP	07 28 58.1	-0.5
	1.1nm,0.6s,baz=121,slow=4.2,SNR=5.5						
FORT	Forrest	42.97	264	eP	P	07 27 13.5	+0.9
	36nm,0.9s						
WB2	Warramunga Arr	43.30	281	eP	P	07 27 14.6	-0.7
WRAB	Tennant Creek	43.31	281	eP	P	07 27 14.7	-0.7
	9.3nm,0.7s						
WRA	Warramunga Arr	43.31	281	P	P	07 27 14.6	-0.9

	4.5nm,0.3s,baz=123,slow=7.5,SNR=164						
WRA				PcP	PcP	07 29 04.3	+0.1
	1.2nm,0.7s,baz=125,slow=3.2,SNR=6.9						
MTN	Manton Dam	50.01	287	*e*P	P	07 28 06.2	-1.8
	5.9nm,0.8s						
QSPA	South Pole Qui	52.13	180	P	P	07 28 26.9	+3.5
	0.8nm,0.6s,baz=357,slow=3.2,SNR=3.5						
SNAA	Sanae	70.62	179	P	P	07 30 31.8	+3.5
	0.4nm,0.5s,baz=190,slow=17,SNR=3.8						
KSRS	Korea Array	89.11	321	P	P	07 32 07.9	-0.4
	1.6nm,0.8s,baz=146,slow=5.2,SNR=5.8						
KSAR	Wonju Array Be	89.12	321	P	P	07 32 07.9	-0.5
KS01	Wonju Array Si	89.14	321	*e*P	P	07 32 08.8	+0.3
CMAR	Chiang Mai Arr	94.35	290	P	P	07 32 31.7	-1.5
	0.8nm,0.3s,baz=144,slow=3.4,SNR=4.4						
CD2	Chengdu	98.71	302	*e*P	P	07 32 51.5	-1.3
HHC	Hu-ho-hao-te	100.30	314	*e*P	Pdif	07 33 00.8	+1.1
LZH	Lanzhou	101.89	307	*e*P	Pdif	07 33 06.5	-0.4
LZH				pP	sPdif	07 33 17.3	+0.9
LZH				sP	pP	07 33 21.0	+6.8
LZH				*e*PP	PP	07 37 21.5	+2.9
LZH				LR	LR		
	comp=N,100nm,18.0s						
LZH				LR	LR		
	comp=E,110nm,18.2s						
LZH				LR	LR		
	comp=Z,150nm,19.8s						
WMQ	Urumqi	116.46	306	*e*PKP	PKPdf	07 37 55.5	-1.3
WMQ				LR	LR		
	comp=E,460nm,21.5s						
WMQ				LR	LR		
	comp=Z,530nm,21.5s						
KURK	Kurchatov	124.89	311	PKP	PKPdf	07 38 12.0	-0.6
KURBB	Kurchatov Arra	124.91	310	PKP	PKPdf	07 38 12.0	-0.6
	1.1nm,0.7s,baz=115,slow=2.2,SNR=8.4						
ARCES	ARCESS Array B	145.54	344	PKPbc	PKPdf	07 38 50.2	-0.1
	1.7nm,0.7s,baz=29,slow=4.2,SNR=17						
KBZ	Khabaz	147.31	294	PKPbc	PKPbc	07 38 56.5	0.0
	2.8nm,0.8s,baz=204,slow=4.9,SNR=5.2						
FIA1	FINESS Array S	151.46	334	*e*PKPbc	PKPbc	07 39 06.0	-0.3
FINES	FINESS Array B	151.46	334	PKPbc	PKPbc	07 39 06.2	-0.1
	4.9nm,0.7s,baz=83,slow=4.8,SNR=17						
FINES				PKPab	pPKPbc	07 39 12.9	-0.5
	2.4nm,0.5s,baz=66,slow=5.1,SNR=12						
BRTR	Keskin Array B	153.80	284	PKPbc	PKPbc	07 39 13.0	+0.6
	0.5nm,0.6s,baz=113,slow=3.3,SNR=2.8						
BRTR				PKPab	PKPab	07 39 24.9	-0.6
	0.7nm,0.6s,baz=147,slow=7.1,SNR=4.1						
TORD	Torodi Ar. Bea	155.21	184	PKPab	PKPab	07 39 33.9	+2.2
	baz=180,slow=4.5						
EKA	Eskdalemuir Ar	162.53	6	PKPab	PKPab	07 40 01.6	-0.8
	0.6nm,0.5s,baz=335,slow=3.1,SNR=2.9						
GERES	GERESS Array B	165.29	322	PKPab	PKPab	07 40 13.9	-1.1
	0.3nm,0.2s,baz=76,slow=4.1,SNR=5.9						

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*IDC **26** 07:27:57.2±2.5, 18°.46S×175°.65W, h198^{km}±25^{km}, mb3.4/6, mb1 3.6/7, mb1mx3.3/45, mbtmp4.0/7, Error ellipse: s-maj=35.5km s-min=15.9km az=140.0*

*ISCJB **26** 07:27:58.7±0.9, 18°.4S±0°.2×175°.5W±0°.2, h238^{km}, mb3.4/5, Error ellipse: s-maj=37.7km s-min=14.6km az=43.2*

ISC 26 07:28:01.3±1.1**, 18°.6S**±0°.2×**175°.6W**±0°.2**, h238**^{km}**, n7, σ0^{s}.66**/8**, mb3.4**/5**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	5.95	39	P	Pn	07 29 22.8	-5.8
	0.8nm,0.3s,baz=194,slow=13,SNR=1.7						
AFI				S	S	07 30 24.2	-14
	9.4nm,0.3s,baz=76,slow=22,SNR=7.4						
URZ	Urewera	20.60	196	P	P	07 32 21.8	-0.6
	6.9nm,0.5s,baz=12,slow=18,SNR=8.3						
STKA	Stephens Creek	40.63	243	P	P	07 35 19.1	+0.8
	0.9nm,0.5s,baz=84,slow=10,SNR=2.7						
WRA	Warramunga Arr	47.10	260	P	P	07 36 09.3	-0.6
	1.2nm,0.7s,baz=97,slow=6.7,SNR=30						
WRA				PcP	PcP	07 37 38.0	+0.2
	0.7nm,0.9s,baz=101,slow=3.3,SNR=2.8						
ASAR	Alice Springs	47.15	255	P	P	07 36 10.2	-0.1
	6.8nm,0.7s,baz=88,slow=8.6,SNR=117						
ASAR				PcP	PcP	07 37 38.2	+0.3
	0.4nm,0.5s,baz=99,slow=4.2,SNR=3.9						
TXAR	Lajitas Array	84.15	57	P	P	07 40 06.7	+0.6
	0.1nm,0.5s,baz=224,slow=6.3,SNR=2.6						
ILAR	Eielson Array	85.97	12	P	P	07 40 13.6	-0.7
	0.2nm,0.5s,baz=218,slow=5.7,SNR=4.2						

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*IDC **26** 07:28:13.3±5.3, 0°.48N×97°.19E, h0^{km}, mb3.9/6, mb1 3.9/8, mb1mx3.6/64, mbtmp3.8/8, ML4.4/1, Error ellipse: s-maj=103.0km s-min=43.3km az=169.0*

*ISCJB **26** 07:28:19.4±0.9, 1°.03N±0°.06×97°.15E±0°.05, h25^{km}, mb3.9/6, Error ellipse: s-maj=10.1km s-min=6.8km az=32.1*

*DJA **26** 07:28:20.0±1.0, 1°N±5°×9°7E±°, h20^{km}±6^{km}, M3.4/7, MLv3.4/7*

ISC 26 07:28:21.3±1.1**, 1°.08N**±0°.08×**97°.23E**±0°.07**, h25**^{km}**, n21, σ0^{s}.71**/18**, mb3.9**/6**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSI	Gunungsitoli	0.41	57	P	Pn	07 28 31.1	-0.5
GSI				S	Sn	07 28 37.7	-0.8
PBSI	Pulau Batu	1.54	137	P	Pn	07 28 47.0	-0.2
SNSI	Sinabang, Aceh	1.60	325	P	Pn	07 28 46.5	-1.5
SNSI				S	Sn	07 29 07.5	-0.4
TPTI		2.16	359	P	Pn	07 28 55.6	-0.2
MNSI	Mandailing Nat	2.36	97	P	Pn	07 28 58.1	-0.5
PSI	Prapat	2.40	45	Pn	Pn	07 28 59.3	+0.1
	0.9nm,0.3s,baz=180,slow=8.1,SNR=3.7						
PSI				Sn	Sn	07 29 26.7	-1.2
	2.1nm,0.3s,baz=360,slow=19,SNR=9.1						
KCSI	Kotacane, Aceh	2.48	13	P	Pn	07 29 00.3	+0.1
MLSI	Meulaboh, Aceh	3.27	345	S	Sn	07 29 49.6	+0.4
CMAR	Chiang Mai Arr	17.35	5	P	P	07 32 24.1	+0.9
	0.4nm,0.3s,baz=204,slow=12,SNR=5.5						
H08S2	Diego Garcia H	26.15	250	T	T	08 00 54.0	
	baz=71,slow=75,SNR=42						
H08S3	Diego Garcia H	26.16	250	T	T	08 01 01.4	
	baz=71,slow=75,SNR=462						
H08S1	Diego Carcia H	26.17	250	T	T	08 01 02.5	
	baz=71,slow=75,SNR=11						
H01W3	Cape Leeuwin H	39.13	158	T	T	08 17 04.5	
	baz=333,slow=76,SNR=22						
H01W2	Cape Leeuwin H	39.14	158	T	T	08 17 05.7	
	baz=333,slow=76,SNR=22						
H01W1	Cape Leeuwin H	39.14	158	T	T	08 17 07.6	
	baz=333,slow=76,SNR=20						
KSRS	Korea Array	45.92	34	P	P	07 36 41.6	-0.5
	1.4nm,0.8s,baz=225,slow=8.7,SNR=7.5						
SONM	Songino Array	47.24	8	P	P	07 36 53.0	+0.5
	0.6nm,0.5s,baz=208,slow=9.1,SNR=3.6						
MKAR	Makanchi Array	47.36	346	P	P	07 36 54.1	+0.8
	1.0nm,0.7s,baz=153,slow=8.2,SNR=12						
KURBB	Kurchatov Arra	51.85	345	P	P	07 37 27.0	-0.4
	0.4nm,0.5s,baz=163,slow=6.8,SNR=6.9						
ZALV	Zalesovo Beam	53.68	351	P	P	07 37 40.5	-0.3
	2.3nm,0.3s,baz=185,slow=7.2,SNR=5.4						
BVAR	Borovoye Array	56.37	341	P	P	07 38 00.3	0.0
	0.4nm,0.6s,baz=131,slow=7.9,SNR=3.7						

MAN 26 07:36:48.7, 16°.86N×122°.27E, h44^{km}, mb4.2, ML3.0, MS2.7, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CVP	Callao Caves	0.94	333	*e*P	Pn	07 37 16.9	+11
CVP				*e*S	Sn	07 37 36.2	+18
SGCP	Mt. Cagua	1.39	351	*e*P	Pn	07 37 12.0	+0.3
SGCP				*e*S	Sn	07 37 30.4	+1.6
APYP	Conner	1.39	316	*e*P	Pn	07 37 12.0	+0.3
APYP				*e*S	Sn	07 37 29.7	+0.7
ABRA	Dolores	1.68	298	*e*P	Pn	07 37 17.9	+2.3
ABRA				*e*S	Sn	07 37 37.6	+1.6

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*AZER **26** 07:45:35.3±1.1, 38°.44N×42°.95E, h5^{km}, ml3.4/9, Error ellipse: s-maj=13.0km s-min=4.0km az=6.0*

*ISK **26** 07:45:39.8, 38°.70N×43°.35E, h3^{km}, ML3.6/10*

*CSEM **26** 07:45:40.9±0.1, 38°.70N×43°.39E, h5^{km}, ML3.6, Error ellipse: s-maj=3.4km s-min=2.6km az=129.0*

*ISCJB **26** 07:45:41.2±0.4, 38°.71N±0°.02×43°.37E±0°.03, h6^{km}±3^{km}, Error ellipse: s-maj=3.5km s-min=2.7km az=28.9*

*DDA **26** 07:45:41.0, 38°.71N×43°.36E, h7^{km}, Ml3.8*

ISC 26 07:45:41.7±0.8**, 38°.71N**±0°.02×**43°.38E**±0°.02**, h10**^{km}±6^{km}**, n85, σ1^{s}.08**/126**, 12C-21D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	Van	0.11	174	PG	Pg	07 45 44.8	+0.3
VANB				SG	Sg	07 45 48.7	+2.2
VANB	Van	0.11	174	*i* Pg	Pg	07 45 44.8	+0.3
TVAN	Van	0.18	172	⇓*i*P	Pg	07 45 44.7	-0.9
TVAN				*i* S	Sg	07 45 48.6	+0.2
TVAN	Van	0.18	172	P	Pg	07 45 44.7	-0.9
TVAN				S	Sg	07 45 48.6	+0.2
ERCV	ERCIS-VAN	0.32	355	PG	Pg	07 45 46.9	-1.2
ERCV				SG	Sg	07 45 52.6	+0.2
ERCV	ERCIS-VAN	0.32	355	*i* Pg	Pg	07 45 46.9	-1.2
ERCV				*e*Sg	Sg	07 45 52.6	+0.2
VMUR	Van-Muradiye	0.32	28	⇓*i*P	Pg	07 45 47.5	-0.7
VMUR				*i* S	Sg	07 45 53.8	+1.2
VMUR	Van-Muradiye	0.32	28	P	Pg	07 45 47.5	-0.7
VMUR				S	Sg	07 45 53.8	+1.2
GEVA	Gevas	0.46	212	⇓*i*P	Pg	07 45 49.4	-1.4
GEVA				*i* S	Sg	07 45 57.3	+0.4
GEVA	Gevas	0.46	212	P	Pg	07 45 49.4	-1.4
GEVA				S	Sg	07 45 57.3	+0.4
ADCV	BITLIS_Adilcev	0.52	282	*i* P	Pg	07 45 51.5	-0.3
ADCV				*i* S	Sb	07 46 00.7	0.0
ADCV	BITLIS_Adilcev	0.52	282	P	Pg	07 45 51.5	-0.3
ADCV				S	Sb	07 46 00.7	0.0
CLDR	Caldiran	0.61	44	PG	Pg	07 45 52.6	-1.0
CLDR				SG	Sg	07 46 01.9	+0.3
CLDR	Caldiran	0.61	44	⇑*i*P	Pg	07 45 52.5	-1.0
CLDR				*i* S	Sg	07 46 02.4	+0.8
CLDR	Caldiran	0.61	44	*i* Pg	Pg	07 45 52.6	-1.0
CLDR				*e*Sg	Sg	07 46 01.9	+0.3
CLDR				S	Sg	07 46 02.4	+0.8
TUTA	Tutak	0.82	328	⇑*i*P	Pg	07 45 56.4	-1.3
TUTA				*i* S	Sg	07 46 08.7	+0.4
TUTA	Tutak	0.82	328	P	Pg	07 45 56.3	-1.3
TUTA				S	Sg	07 46 08.7	+0.4
DYDN	Diyadin	0.87	16	*i* P	Pg	07 45 57.2	-1.3
DYDN				*i* S	Sg	07 46 10.2	+0.3
DYDN	Diyadin	0.87	16	P	Pg	07 45 57.2	-1.3
DYDN				S	Sg	07 46 10.2	+0.3
AGRB	Hanur-Agry	0.92	341	PG	Pg	07 45 58.4	-1.0
AGRB				SG	Sg	07 46 11.6	+0.2
AGRB	Hanur-Agry	0.92	341	*e*Pg	Pg	07 45 58.4	-1.0
AGRB				*e*Sg	Sg	07 46 11.6	+0.2
GURO	Guroymak-BITLI	1.06	262	PG	Pb	07 46 00.4	-1.9
GURO				SG	Sb	07 46 15.1	-1.2
GURO	Guroymak-BITLI	1.06	262	*i* Pg	Pb	07 46 00.4	-1.9
GURO				*e*Sg	Sb	07 46 15.1	-1.2
EKAR	Karacoban	1.16	299	*i* P	Pg	07 46 04.7	+0.7
EKAR				*i* S	Sn	07 46 24.2	+4.0
EKAR	Karacoban	1.16	299	P	Pg	07 46 04.7	+0.7
HAKT	HAKKARI	1.18	167	⇓*i*P	Pb	07 46 01.4	-2.7
HAKT				*i* S	Sn	07 46 21.3	+0.7
HAKT	HAKKARI	1.18	167	P	Pb	07 46 01.5	-2.7
HAKT				S	Sn	07 46 21.3	+0.7
IGDI	IGDIR	1.28	25	⇓*i*P	Pn	07 46 04.9	-0.9
IGDI				*i* S	Sg	07 46 24.6	+1.6
EATA	Eleskirt	1.34	330	⇓*i*P	Pn	07 46 06.4	-0.4
EATA				*i* S	Sg	07 46 24.9	-0.1
EATA	Eleskirt	1.34	330	P	Pn	07 46 06.4	-0.4
EATA				S	Sg	07 46 24.9	-0.1
SRTM	Siirt_Merkez	1.35	238	⇓*i*P	Pb	07 46 06.7	-0.4
SRTM				*i* S	Sg	07 46 26.2	+1.2
SRTM	Siirt_Merkez	1.35	238	P	Pb	07 46 06.7	-0.4
SRTM				S	Sg	07 46 26.2	+1.2
SIRT	Sirnak	1.41	212	PN	Pn	07 46 07.2	-0.3
SIRT	Sirnak	1.41	212	*e*Pn	Pn	07 46 07.2	-0.3
TASB	TASBURUN-IGDIR	1.44	27	PN	Pn	07 46 07.5	-0.4
TASB	TASBURUN-IGDIR	1.44	27	*e*Pn	Pn	07 46 07.5	-0.4
CUKT	Cukurca	1.47	173	PN	Pn	07 46 07.1	-1.2
CUKT	Cukurca	1.47	173	*i* P	Pn	07 46 07.1	-1.2
CUKT				*i* S	Sg	07 46 31.1	+2.2
CUKT	Cukurca	1.47	173	P	Pn	07 46 07.1	-1.2
CUKT				S	Sg	07 46 31.1	+2.2
HYR	Heyderabad	1.53	48	⇓P	Pn	07 46 09.4	+0.3
HYR	Heyderabad	1.53	48	⇓P	Pn	07 46 09.4	+0.3
HYR				⇓S	Sg	07 46 35.2	+4.3
VRTB	Varto-Mus	1.56	287	PN	Pn	07 46 08.6	-1.1
VRTB	Varto-Mus	1.56	287	*e*Pn	Pn	07 46 08.6	-1.1
NAX	Nakhchivan	1.72	74	⇓P	Pn	07 46 11.5	-0.3
	SNR=5.9						
NAX	Nakhchivan	1.72	74	⇓P	Pn	07 46 11.5	-0.3
	SNR=5.9						
NAX				⇓S	Sg	07 46 39.0	+2.1
BNGL	BINGOL	1.75	279	*i* P	Pn	07 46 12.9	+0.5
BNGL				*i* S	Sb	07 46 36.6	+0.3
GNI	Garni	1.79	36	PN	Pn	07 46 12.8	0.0
GNI	Garni	1.79	36	*e*Pn	Pn	07 46 12.8	0.0
SVAN	Silvan-Diyarba	1.80	253	PN	Pn	07 46 12.9	+0.1
SVAN	Silvan-Diyarba	1.80	253	*e*Pn	Pn	07 46 12.9	+0.1
SBZ	Shahbuz	1.83	67	⇓P	Pn	07 46 13.5	+0.2
SBZ	Shahbuz	1.83	67	⇓P	Pn	07 46 13.5	+0.2
SBZ				⇑S	Sg	07 46 42.3	+1.8
KARS	Kars	1.93	353	PN	Pn	07 46 14.4	-0.4
KARS	Kars	1.93	353	*e*Pn	Pn	07 46 14.4	-0.4
SENK	Senkaya-Erzuru	2.02	337	PN	Pn	07 46 16.7	+0.7
SENK	Senkaya-Erzuru	2.02	337	*e*Pn	Pn	07 46 16.7	+0.7
ORD	Ordubad	2.06	83	⇓P	Pn	07 46 16.0	-0.4
ORD				⇑S	Sb	07 46 46.0	+1.1
ORD	Ordubad	2.06	83	⇓P	Pn	07 46 16.0	-0.4
ORD				⇑S	Sb	07 46 46.0	+1.1
BNGB	Bingˆ¶l	2.12	279	PN	Pn	07 46 17.7	+0.3
BINT	Bingol	2.26	275	*e*Pn	Pn	07 46 17.7	-1.6
YEDI	Yedisu-Bingol	2.32	289	PN	Pn	07 46 19.9	-0.2
YEDI	Yedisu-Bingol	2.32	289	*e*Pn	Pn	07 46 19.9	-0.2
DIY	Diyarbakir	2.61	253	*e*Pn	Pn	07 46 24.8	+0.9
MAZI	Mazidag	2.62	243	PN	Pn	07 46 23.7	-0.5
MAZI	Mazidag	2.62	243	*e*Pn	Pn	07 46 23.7	-0.5
DYBB	Diyarbakir	2.65	255	PN	Pn	07 46 24.8	+0.2
GDB	GEDABAY	2.72	42	⇓P	Pn	07 46 26.0	+0.3
	SNR=15						
GDB	GEDABAY	2.72	42	⇓P	Pn	07 46 26.0	+0.3
	SNR=15						
GDB				⇑S	Sb	07 47 04.7	+0.5
QZX	Qazax, Azerbai	2.81	33	⇑P	Pn	07 46 26.3	-0.4
	SNR=4.3						
QZX	Qazax, Azerbai	2.81	33	⇑P	Pn	07 46 26.3	-0.4
	SNR=4.3						
GANJ	Ganja	2.99	49	⇑P	Pn	07 46 29.2	0.0
	SNR=6.6						
GANJ	Ganja	2.99	49	⇑P	Pn	07 46 29.2	0.0
	SNR=6.6						
GANJ				⇑S	Sb	07 47 11.3	-0.3
BAYT	Ayd˜–ntepe-Bay	3.02	305	PN	Pn	07 46 30.6	+0.9
BAYT	Ayd˜–ntepe-Bay	3.02	305	*e*Pn	Pn	07 46 30.6	+0.9
BCA	Borcka	3.05	334	PN	Pn	07 46 30.6	+0.6
BCA	Borcka	3.05	334	*e*Pn	Pn	07 46 30.6	+0.6
PTK	Pertek	3.12	275	PN	Pn	07 46 31.6	+0.5
PTK	Pertek	3.12	275	*e*Pn	Pn	07 46 31.6	+0.5
SVRC	Sivrice-ELAZID	3.21	265	PN	Pn	07 46 33.4	+1.1
SVRC	Sivrice-ELAZID	3.21	265	*e*Pn	Pn	07 46 33.4	+1.1
URFA	Urfa	3.81	252	PN	Pn	07 46 41.9	+1.4
URFA	Urfa	3.81	252	*e*Pn	Pn	07 46 41.9	+1.4
ZKTA	Zakatala	3.84	39	⇑P	Pn	07 46 41.2	+0.3
	SNR=4.5						
IML	Ismayilli	4.25	59	⇓P	Pn	07 46 46.4	-0.2
	SNR=2.9						
IML	Ismayilli	4.25	59	⇓P	Pn	07 46 46.4	-0.2
	SNR=2.9						

IDC 26 07:49:01.2±3.8**, 5°.56S×149°.86E, h0**^{km}**, mb3.2**/2**, mb1 3.6**/3**, mb1mx3.3**/44**, mbtmp3.4**/3**, ML1.8**/1**, Error ellipse: s-maj=142.1km s-min=41.8km az=114.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	4.67	215	Pn	Pn	07 50 13.2	+0.2
	2.9nm,0.3s,baz=42,slow=14,SNR=4.1						
PMG				Sn	Sn	07 51 04.8	-3.1
	1.4nm,0.3s,baz=260,slow=9.0,SNR=3.5						
WRA	Warramunga Arr	20.79	225	P	P	07 53 43.7	-0.5
	2.1nm,0.8s,baz=51,slow=11,SNR=16						
ASAR	Alice Springs	23.67	219	P	P	07 54 15.2	+0.5
	0.2nm,0.6s,baz=48,slow=10,SNR=4.1						
TORD	Torodi Ar. Bea	147.73	286	PKPbc	PKPbc	08 08 48.2	-0.9
	baz=108,slow=4.5						

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*ISCJB **26** 07:58:06.3±0.9, 25°.5S±0°.1×179°.5E±0°.2, h507^{km}, mb3.1/5, Error ellipse: s-maj=23.3km s-min=13.3km az=10.7*

*IDC **26** 07:58:06.3±5.4, 25°.50S×179°.60E, h501^{km}±59^{km}, mb2.8/5, mb1 3.2/7, mb1mx3.0/42, mbtmp3.9/7, Error ellipse: s-maj=37.7km s-min=26.0km az=21.0*

ISC 26 07:58:06.2±0.9**, 25°.5S**±0°.1×**179°.5E**±0°.2**, h507**^{km}**, n11, σ1^{s}.68**/12**, mb3.2**/5**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	12.85	188	P	P	08 00 53.3	-0.2
	3.1nm,0.3s,baz=29,slow=7.9,SNR=15						
URZ				S	S	08 03 10.7	-0.8
	1.0nm,0.3s,baz=49,slow=18,SNR=6.1						
RPZ	Rata Peaks	19.40	199	P	P	08 02 00.2	+1.3
	0.9nm,0.3s,baz=34,slow=4.6,SNR=5.4						
ASAR	Alice Springs	41.34	263	P	P	08 05 09.1	+1.5
	0.5nm,0.8s,baz=92,slow=7.4,SNR=5.0						
WRA	Warramunga Arr	41.87	268	P	P	08 05 12.7	+0.9
	0.4nm,0.5s,baz=103,slow=7.6,SNR=6.3						
SNAA	Sanae	83.05	179	P	P	08 09 38.2	+0.5
	0.8nm,1.0s,baz=198,slow=9.6,SNR=1.9						
NVAR	Mina Array Bea	86.24	44	P	P	08 09 54.4	+0.4
	0.3nm,0.7s,baz=220,slow=5.2,SNR=3.8						
TXAR	Lajitas Array	91.68	58	P	P	08 10 20.6	+1.3
	0.3nm,0.7s,baz=204,slow=4.0,SNR=4.0						
NB2	NORSAR Subarra	143.61	350	PKP	PKPdf	08 16 40.5	-1.9
	comp=Z,0.7nm,0.5s,baz=16,slow=3.2						
NOA	NORSAR Array B	143.61	350	PKP	PKPdf	08 16 40.6	-1.9
	comp=Z,0.6nm,0.5s,baz=14,slow=2.5,SNR=7.0						
HFS	Hagfors	144.04	348	PKP	PKPdf	08 16 41.7	-1.5
	comp=Z,1.6nm,0.4s,baz=47,slow=3.7,SNR=12						
MMAI	Mount Meron Ar	147.92	292	PKPbc	PKPab	08 16 56.1	-2.8
	comp=Z,0.7nm,0.3s,baz=71,slow=6.2,SNR=2.7						

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*ISCJB **26** 08:06:40.8±1.0, 23°.5S±0°.1×179°.8E±0°.2, h535^{km}, mb3.3/4, Error ellipse: s-maj=24.5km s-min=14.4km az=11.4*

*IDC **26** 08:06:41.0±6.6, 23°.59S×179°.85E, h528^{km}±77^{km}, mb2.8/4, mb1 3.3/5, mb1mx2.9/42, mbtmp3.8/5, Error ellipse: s-maj=60.8km s-min=27.6km az=2.0*

ISC 26 08:06:41.2±1.0**, 23°.6S**±0°.1×**179°.9E**±0°.2**, h535**^{km}**, n8, σ1^{s}.08**/8**, mb3.3**/4**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	14.77	188	P	P	08 09 49.0	+0.7
	2.7nm,0.3s,baz=25,slow=6.5,SNR=14						
URZ				S	S	08 12 21.7	-0.9
	0.5nm,0.3s,baz=194,slow=9.7,SNR=1.3						
ASAR	Alice Springs	41.95	260	P	P	08 13 46.0	+0.5
	0.6nm,0.7s,baz=97,slow=6.8,SNR=6.9						
WRA	Warramunga Arr	42.29	266	P	P	08 13 48.0	-0.2
	0.4nm,0.3s,baz=103,slow=8.6,SNR=58						
TXAR	Lajitas Array	90.41	58	P	P	08 18 46.5	+0.6
	0.3nm,0.7s,baz=212,slow=4.4,SNR=4.5						
PDAR	Pinedale Array	92.59	44	P	P	08 18 55.6	-0.3
	0.1nm,0.5s,baz=186,slow=2.7,SNR=2.5						
HFS	Hagfors	142.26	349	PKhKP	PKPpre	08 25 07.4	
	1.2nm,0.5s,baz=46,slow=4.2,SNR=3.8						
AKASG	Malin Array Be	144.67	327	PKP	PKPdf	08 25 14.9	-1.8
	1.2nm,0.5s,baz=44,slow=3.7,SNR=7.8						
MMAI	Mount Meron Ar	147.47	295	PKPbc	PKPbc	08 25 26.2	+0.7
	0.6nm,0.3s,baz=82,slow=3.1,SNR=2.6						

IDC 26 08:13:33.4±2.8**, 54°.00N×86°.51E, h0**^{km}**, mb1 3.2**/2**, mb1mx3.0**/69**, mbtmp3.2**/2**, ML2.9**/2**, Error ellipse: s-maj=24.9km s-min=15.2km az=46.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.00	268	*i*		08 21 40.0	
	baz=87,slow=315,SNR=1.0						
ZALV	Zalesovo Beam	1.00	268	Pg	Pg	08 13 51.7	-0.9
	1.1nm,0.3s,baz=78,slow=21,SNR=1.2						
ZALV				Lg	Lg	08 14 06.5	
	3.7nm,0.3s,baz=80,slow=34,SNR=2.4						
ZALV				Rg	Rg	08 14 12.2	
	17nm,0.9s,baz=82,slow=31,SNR=15						
KURBB	Kurchatov Arra	5.95	239	Pn	Pn	08 15 03.5	+0.8
	0.2nm,0.3s,baz=57,slow=14,SNR=8.2						
KURBB				Lg	Lg	08 16 42.0	
	0.0nm,0.3s,baz=53,slow=35,SNR=2.2						
MKAR	Makanchi Array	7.70	202	Pn	Pn	08 15 27.9	+1.1
	0.4nm,0.3s,baz=25,slow=14,SNR=15						
MKAR				Lg	Lg	08 17 38.5	
	0.1nm,0.3s,baz=24,slow=26,SNR=2.2						

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*NIED **26** 08:33:00, 25°.30N×124°.50E, h74^{km}, Mw4.2 Best double couple: $M_0$2.25000×10^{15} NP1:ϕ_s147.00000°, δ47.00000°, λ-170.00000°. NP2:ϕ_s50.00000°, δ83.00000°, λ-43.00000°.*

*BJI **26** 08:33:36.1, 25°.13N×124°.80E, h121^{km}, mb4.5/35, mB4.6/19*

*ISCJB **26** 08:33:39.4±0.2, 25°.37N±0°.03×124°.48E±0°.02, h126^{km}±2^{km}, mb4.5/95, Error ellipse: s-maj=5.4km s-min=3.2km az=161.1*

*IDC **26** 08:33:39.9±2.3, 25°.53N×124°.48E, h114^{km}±20^{km}, mb4.1/29, mb1 4.1/33, mb1mx4.1/64, mbtmp4.4/33, Error ellipse: s-maj=13.9km s-min=11.4km az=66.0*

*MOS **26** 08:33:40.6±1.1, 25°.44N×124°.39E, h136^{km}, mb4.3/35, Error ellipse: s-maj=9.6km s-min=5.8km az=92.7*

*NEIC **26** 08:33:40.6±0.4, 25°.41N×124°.45E, h121^{km}±3^{km}, mb4.7/59, Error ellipse: s-maj=5.4km s-min=3.8km az=140.0*

*JMA **26** 08:33:41.0±0.2, 25°.30N×124°.47E, h119^{km}±4^{km}, M4.2*

ISC 26 08:33:40.2±0.5**, 25°.44N**±0°.05×**124°.47E**±0°.03**, h119**^{km}±4^{km}**, n199, σ1^{s}.44**/238**, mb4.6**/95**, 12C-4D, Northeast of Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTJ	Tarama	0.82	165	P	Pn	08 34 00.4	-0.1
JTJ				S	Sn	08 34 15.2	-0.6
JISG	Ishigakijimahi	0.86	190	P	Pn	08 34 00.6	-0.2
JISG				S	Sn	08 34 15.6	-0.8
JIKM	Ikemajima	0.87	126	P	Pn	08 34 01.3	+0.4
JIKM				S	Sn	08 34 16.5	0.0
JIRB	Irabujima	0.88	134	P	Pn	08 34 00.9	-0.1
JIRB				S	Sn	08 34 15.7	-1.0
JMJ	Miyako jima 2	0.97	130	P	Pn	08 34 02.1	+0.3
JMJ				S	Sn	08 34 17.8	-0.4
JOGS	Gusukube	1.08	128	P	Pn	08 34 03.5	+0.5
JOGS				S	Sn	08 34 20.4	+0.2
JIJ	Ishigaki jima	1.11	196	P	Pn	08 34 02.6	-0.7
JIJ				S	Sn	08 34 18.7	-2.0
JKRS	Kuro-shima	1.27	200	P	Pn	08 34 04.6	-0.3
JKRS				S	Sn	08 34 22.4	-1.3
IRIF	Iriomote-Funau	1.29	212	P	Pn	08 34 04.7	-0.5
IRIF				S	Sn	08 34 22.9	-1.2
HATJ	Hateruma jima	1.50	204	P	Pn	08 34 07.1	-0.5
HATJ				*e*S	Sn	08 34 26.7	-1.7
YOJ	Yonaguni jima	1.65	234	*e*Pn	Pn	08 34 09.6	+0.3
YOJ				*e*Sn	Sn	08 34 32.2	+0.8
YOJ	Yonaguni jima	1.65	234	P	Pn	08 34 09.7	+0.4
YOJ				S	Sn	08 34 31.6	+0.2
YOJ	Yonaguni jima	1.65	234	*e*P	Pn	08 34 09.6	+0.3
YOJ				*e*		08 34 32.2	
JYNG	Yonagunijimaku	1.70	235	P	Pn	08 34 10.4	+0.5
JYNG				S	Sn	08 34 32.9	+0.3
JKE	Kume jima 2	2.26	67	P	Pn	08 34 17.5	+0.6
JKE				*e*S	Sn	08 34 45.0	-0.1
TATO	Taipei	2.74	261	*e*Pn	Pn	08 34 24.7	+1.6
NACB	Ninganchiao	2.90	245	*e*Pn	Pn	08 34 25.1	-0.1
NACB				*e*Sn	Sn	08 34 59.0	-0.9
YHNB	Yeheng	2.91	255	*e*Pn	Pn	08 34 27.1	+1.8
YULB	Yu-li	3.54	236	*e*Pn	Pn	08 34 32.5	-1.1
SSLB	Suanglung	3.60	244	*e*Pn	Pn	08 34 34.6	+0.1
SSLB				*e*Sn	Sn	08 35 14.8	-1.5
JOW	Kunigami	3.69	67	P	Pn	08 34 35.2	-0.4
	84nm,0.3s,baz=166,slow=11,SNR=418						
JOW				S	Sn	08 35 15.7	-2.7
	78nm,0.3s,baz=159,slow=28,SNR=10						
JOW	Kunigami	3.69	67	*e*Pn	Pn	08 34 35.1	-0.4
JOW				*e*Sn	Sn	08 35 16.0	-2.4
TWG	Pinlang	4.05	231	*e*Pn	Pn	08 34 38.6	-1.9
TWG				*e*Sn	Sn	08 35 23.3	-3.9
TPUB	Ta-pu	4.10	240	*e*Pn	Pn	08 34 41.6	+0.5
TPUB				*e*Sn	Sn	08 35 28.1	-0.2
QZH	Quanzhou	5.35	266	⇑*i*P	Pn	08 34 59.3	+1.5

QZH				eS	Sn	08 35 56.3	-2.0
NJ2	Nanjing	8.23	324	eP	Pn	08 35 39.5	+2.8
NJ2				pmax	pmax		
	comp=Z,21nm,0.5s						
JNU	Nakatsue	9.48	35	P	Pn	08 35 51.6	-2.0
	1.0nm,0.3s,baz=347,slow=4.3,SNR=6.8						
JNU				S	Sn	08 37 33.4	-5.0
	0.2nm,0.3s,baz=93,slow=21,SNR=0.9						
WHN	Wuhan	10.29	302	P	Pn	08 36 07.5	+3.0
TJN	Taejon	11.18	12	ceP	Pn	08 36 19.3	+2.8
INCN	Inchon	12.15	8	ePn	Pn	08 36 28.7	-0.6
INCN	Inchon	12.15	8	eP	Pn	08 36 28.7	-0.6
KS15	Wonju Array Si	12.31	13	ePn	Pn	08 36 35.0	+3.5
KSAR	Wonju Array Be	12.31	13	P	Pn	08 36 34.2	+2.8
KSAR	Wonju Array Be	12.31	13	P	Pn	08 36 34.2	+2.8
KSRS	Korea Array	12.33	13	P	Pn	08 36 34.2	+2.5
	1.1nm,0.3s,baz=188,slow=13,SNR=64						
KS01	Wonju Array Si	12.35	13	ePn	Pn	08 36 34.7	+2.8
CBIJ	Chichi jima	15.98	80	ePn	Pn	08 37 18.4	+0.2
	43nm,0.8s						
XAN	Xi'an	15.98	306	P	P	08 37 22.0	+2.5
XAN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GYA	Guiyang	16.05	277	eP	P	08 37 20.3	-0.1
GYA				PP	pP	08 37 37.0	-4.7
GYA				sP	sP	08 37 54.5	-2.3
GYA				S	Sn	08 40 14.3	-3.3
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MAJO	Matsushiro	16.14	43	ePn	P	08 37 20.9	-0.2
	5.7nm,0.7s						
MAJO	Matsushiro	16.14	43	eP	P	08 37 22.8	+1.6
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.6s						
MAT	Matsushiro	16.14	43	P	P	08 37 21.2	0.0
MJAR	Matsushiro Arr	16.14	43	P	P	08 37 21.0	-0.2
	comp=Z,1.0nm,0.3s,baz=227,slow=9.3,SNR=24						
MJB9	Matsu-Tunnel	16.14	43	ePn	Pn	08 37 20.7	+0.4
	comp=Z,5.8nm,0.7s						
MSHR	Mys Shultsa	17.96	16	ceP	Pn	08 37 43.0	+0.8
CN2	Changchun	18.34	2	eP	Pn	08 37 48.3	+1.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
HHC	Hu-ho-hao-te	18.76	328	eP	Pn	08 37 56.0	+4.2
HHC				sP	sP	08 38 25.3	-1.4
HHC				S	S	08 41 19.3	+2.1
HHC				pmax	pmax		
	comp=Z,39nm,1.0s						
HHC				pmax	pmax		
	comp=Z,120nm,5.6s						
CD2	Chengdu	19.05	291	eP	P	08 37 53.0	-0.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,140nm,5.0s						
KMI	Kunming	19.66	274	P	Pn	08 38 03.0	+0.4
KMI				pmax	pmax		
	comp=Z,7.0nm,0.5s						
USRK	Ussuriysk Ar.	19.69	16	P	P	08 37 59.5	-0.5
	baz=200,slow=11						
LZH	Lanzhou	20.62	306	⇓P	P	08 38 11.3	+1.0
LZH				pP	pP	08 38 34.0	+1.8
LZH				sP	sP	08 38 49.0	+1.8
LZH				eS	S	08 41 50.0	-4.3
LZH				pmax	pmax		
	comp=Z,28nm,1.0s						
LZH				pmax	pmax		
	comp=Z,220nm,4.3s						
LZH				LR	LR		
	comp=Z,380nm,12.1s						
LZH				LR	LR		
	comp=Z,440nm,12.0s						
LZH				LR	LR		
	comp=Z,470nm,13.5s						
ASAJ	Asahikawa	23.76	34	P	P	08 38 40.5	-1.0
	comp=Z,7.4nm,0.4s,baz=238,slow=9.1,SNR=10						
ASAJ	Asahikawa	23.76	34	eP	P	08 38 40.4	-1.1
	comp=Z,6.9nm,0.5s						
KLR	Kul'dur	24.42	12	P	P	08 38 47.3	-0.2
	comp=Z,0.4nm,0.6s,baz=208,slow=9.8,SNR=16						
KLR	Kul'dur	24.42	12	diP	P	08 38 47.1	-0.4
CMAR	Chiang Mai Arr	24.65	259	P	P	08 38 50.7	+0.8
	comp=Z,1.0nm,0.3s,baz=64,slow=8.1,SNR=4.4						
CMAR	Chiang Mai Arr	24.65	259	ceP	P	08 38 51.5	+1.6
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.3s						
YSS	Yuzh-Sakhalins	25.93	29	eP	P	08 39 02.1	+1.0
	comp=Z,11nm,0.7s						
YSS	Yuzh-Sakhalins	25.93	29	⇑eP	P	08 39 02.6	+1.4
YSS				pmax	pmax		
	comp=N,20nm,0.4s						
YSS				pmax	pmax		
	comp=E,20nm,0.4s						
YSS				pmax	pmax		
	comp=Z,20nm,0.4s						
YSS				MLR	MLR		
	comp=Z,200nm,14.0s						
YSS				MLR	MLR		
	comp=N,100nm,13.0s						
SONM	Songino Array	26.52	332	P	P	08 39 05.9	-0.8
	comp=N,2.0nm,0.8s,baz=150,slow=10,SNR=6.9						
SONM				PcP	PcP	08 42 28.2	-0.1
	comp=N,0.7nm,0.6s,baz=144,slow=2.7,SNR=3.1						
SONA1	Songino Array	26.53	332	eP	P	08 39 06.5	-0.3
ZEA	Zeya	28.34	3	eP	P	08 39 23.0	+0.3
ZEA				pmax	pmax		
	comp=Z,15nm,1.0s						
TLY	Talaya	30.64	334	eP	P	08 39 43.0	0.0
TLY				pmax	pmax		
	comp=Z,3.0nm,0.9s						
WMQ	Urumqi	35.02	311	P	P	08 40 22.5	+1.1
YAK	Yakutsk	36.75	4	i P	P	08 40 33.2	-2.5
YAK				pmax	pmax		
	comp=Z,33nm,0.5s						
PETK	Petropavlovsk-	37.17	33	P	P	08 40 39.1	-0.4
	comp=Z,2.5nm,0.4s,baz=225,slow=3.9						
MTN	Manton Dam	38.60	170	eP	P	08 40 51.4	-0.4
	comp=Z,7.7nm,0.7s						
H11N1	WAKE ISLAND Hy	39.46	89	T	T	09 22 15.0	
	baz=283						
H11N2	WAKE ISLAND Hy	39.46	89	T	T	09 22 32.2	
	baz=283						
H11N3	WAKE ISLAND Hy	39.47	89	T	T	09 22 11.6	
	baz=283						
MK01	Makanchi Array	39.57	314	eP	P	08 40 59.8	+0.1
MK01				ePcP	PcP	08 43 05.2	+0.5
MK31	Makanchi Array	39.58	314	eP	P	08 40 59.9	+0.1
MK31	Makanchi Array	39.58	314	eP	P	08 40 59.9	+0.1
MKAR	Makanchi Array	39.58	314	P	P	08 40 59.3	-0.5
	comp=Z,9.3nm,0.5s,baz=100,slow=10,SNR=73						
MKAR				PcP	PcP	08 43 04.8	+0.2
	comp=Z,1.3nm,0.7s,baz=90,slow=4.9,SNR=5.4						
MKAR	Makanchi Array	39.58	314	eP	P	08 40 59.9	+0.1
	comp=Z,62nm,0.6s						
MKAR				PcP	PcP	08 43 04.8	+0.2
MKAR	Makanchi Array	39.58	314	i P	P	08 40 59.5	-0.3
MKAR				pmax	pmax		
	comp=Z,9.0nm,0.5s						
ZAA0	Zalesovo Array	40.88	325	eP	P	08 41 10.3	0.0
	comp=Z,9.4nm,0.6s						
ZALV	Zalesovo Beam	40.88	325	P	P	08 41 09.1	-1.3
	comp=Z,13nm,0.5s,baz=118,slow=7.9,SNR=10.0						
KSH	Kashi	42.76	301	P	P	08 41 29.5	+3.5
KSH				sP	sP	08 42 12.8	+6.1
KSH				PcS	PcS	08 47 09.0	+1.2
KSH				S	S	08 47 45.0	+3.9
KSH				sS	sS	08 48 35.0	+6.9
KSH				ScS	ScS	08 51 14.0	-0.9
KSH				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KURK	Kurchatov	43.10	318	eP	P	08 41 28.6	+0.2
	comp=Z,10nm,0.7s						
KURK				PcP	PcP	08 43 16.2	+0.1
KURK				eS	S	08 47 46.2	+0.7
KURK	Kurchatov	43.10	318	ceP	P	08 41 28.5	+0.1
KURK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
KURBB	Kurchatov Arra	43.13	318	P	P	08 41 27.8	-0.9
	comp=Z,5.8nm,0.5s,baz=107,slow=9.8,SNR=31						
KURBB				PcP	PcP	08 43 16.2	0.0
	comp=Z,1.4nm,0.6s,baz=110,slow=3.4,SNR=5.8						
COEN	Coen	43.19	153	eP	P	08 41 29.4	-0.1
	comp=Z,13nm,0.6s						
AAK	Ala-Archa	44.16	306	i P	P	08 41 36.8	-0.5
AAK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
WRAB	Tennant Creek	46.11	167	ceP	P	08 41 52.6	0.0
WRAB				pmax	pmax		
	comp=Z,4.0nm,0.9s						
WRA	Warramunga Arr	46.12	167	P	P	08 41 52.9	+0.3
	comp=Z,5.1nm,0.6s,baz=349,slow=8.7,SNR=66						
WB2	Warramunga Arr	46.12	167	eP	P	08 41 52.3	-0.4
KK31	Karatay Array	47.12	306	eP	P	08 42 00.9	+0.6
KK31	Karatay Array	47.12	306	eP	P	08 42 00.9	+0.6
KKAR	Karatay Array	47.12	306	eP	P	08 42 00.9	+0.6
KKAR	Karatay Array	47.12	306	eP	P	08 42 00.9	+0.6
KBL	Kabul	48.35	295	eP	P	08 42 11.0	+0.9
	comp=Z,14nm,0.9s						
KBL	Kabul	48.35	295	eP	P	08 42 11.0	+0.9
KBL				pmax	pmax		
	comp=Z,14nm,0.9s						
BVAR	Borovoye Array	48.64	319	P	P	08 42 11.8	-0.1
	comp=Z,4.0nm,0.3s,baz=107,slow=8.4,SNR=23						
BVAR				PcP	PcP	08 43 35.7	+0.2
	comp=Z,4.8nm,0.6s,baz=114,slow=3.6,SNR=14						
BRVK	Borovoye	48.71	319	eP	P	08 42 12.8	+0.5
	comp=Z,9.8nm,0.9s						
BRVK	Borovoye	48.71	319	ceP	P	08 42 12.6	+0.2
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AS31	Alice Springs	49.66	169	eP	P	08 42 20.4	+0.5
	comp=Z,3.7nm,1.4s						
ASAR	Alice Springs	49.66	169	P	P	08 42 20.8	+0.9
	comp=Z,2.4nm,0.5s,baz=355,slow=13,SNR=40						
AS01	Alice Springs	49.67	169	eP	P	08 42 19.9	-0.1
ABKAR	Akbulak array	54.73	314	eP	P	08 42 57.5	+0.4
ARU	Arti	55.93	322	P	P	08 43 05.6	0.0
	comp=Z,10.0nm,0.2s,baz=108,slow=2.6,SNR=11						
ARU	Arti	55.93	322	eP	P	08 43 05.6	0.0
	comp=Z,12nm,1.0s						
ARU	Arti	55.93	322	diP	P	08 43 05.5	0.0
ARU				S	S	08 50 42.5	-1.6
ARU				SS	SS	08 54 23.3	-8.0
ARU				pmax	pmax		
	comp=Z,12nm,1.0s						
AKTO	Aktyubinsk	55.99	315	P	P	08 43 06.3	+0.2
	comp=Z,7.2nm,0.7s,baz=38,slow=4.8,SNR=18						
GEYT	Alibeck	56.75	300	P	P	08 43 12.4	+0.5
	comp=Z,7.2nm,0.6s,baz=276,slow=1.3,SNR=5.8						
STKA	Stephens Creek	59.29	163	P	P	08 43 29.4	0.0
	comp=Z,0.8nm,0.4s,baz=333,slow=7.2,SNR=4.4						
CHGN	Chignik	62.16	38	eP	P	08 43 47.6	-0.9
	comp=Z,75nm,1.7s						
SVW2	Sparrevohn	63.25	32	eP	P	08 43 56.7	+0.9
	comp=Z,7.9nm,0.8s						
RSO	Redoubt South	64.70	33	eP	P	08 44 06.5	+1.0
OHAK	Old Harbor	64.86	37	eP	P	08 44 05.7	-0.6
MLY	Manley	65.06	28	eP	P	08 44 08.2	+0.6
	comp=Z,5.4nm,0.6s						
BPAW	Bear Paw Mtn.	65.07	29	eP	P	08 44 08.6	+1.0
	comp=Z,5.2nm,0.9s						
SKT	Skwentna	65.09	31	eP	P	08 44 07.0	-0.8
	comp=Z,6.4nm,0.8s						
KDAK	Kodiak Island	65.15	36	eP	P	08 44 08.4	+0.3
	comp=Z,32nm,1.3s						
KDAK	Kodiak Island	65.15	36	i P	P	08 44 08.2	0.0
TRF	Thorofare Moun	65.46	29	eP	P	08 44 11.3	+1.0
	comp=Z,4.7nm,0.9s						
SUA	Susitna One	65.53	32	eP	P	08 44 11.3	+0.6
	comp=Z,23nm,0.8s						
CNPM	China Poot	65.58	34	eP	P	08 44 11.5	+0.5
	comp=Z,8.2nm,0.7s						
KLMR	Klimovskoe	65.71	328	eP	P	08 44 10.0	-1.7
KLMR				pmax	pmax		
	comp=Z,6.0nm,1.0s						
KLMR	Klimovskoe	65.71	328	eP	P	08 44 10.0	-1.7
KLMR				AMP		08 44 11.5	
	comp=Z,6.0nm,1.0s						
MCK	McKinley	66.02	29	eP	P	08 44 14.3	+0.6
	comp=Z,7.9nm,0.8s						
MCK	McKinley	66.02	29	eP	P	08 44 14.3	+0.6
MCK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
RC01	Rabbit Creek A	66.07	32	eP	P	08 44 14.1	0.0
	comp=Z,5.0nm,0.8s						
MDM	Murphy Dome	66.13	28	eP	P	08 44 15.0	+0.6
	comp=Z,23nm,1.4s						
VRH	Novokhopyorsk	66.18	317	eP	P	08 44 14.4	-0.5
VRH				pmax	pmax		
	comp=Z,10.0nm,0.4s						
WRH	Wood River Hil	66.27	28	eP	P	08 44 16.4	+1.2
	comp=Z,4.9nm,1.0s						
GHO	Glory Hole Cre	66.34	31	eP	P	08 44 16.4	+0.5
	comp=Z,8.9nm,1.0s						
CCB	Clear Creek Bu	66.36	28	eP	P	08 44 15.9	+0.1
	comp=Z,1.6nm,0.6s						
SML	Sawmill	66.61	31	eP	P	08 44 18.2	+0.7
	comp=Z,11nm,1.0s						
IL1	Eielson Array	66.72	28	eP	P	08 44 18.3	+0.1
ILAR	Eielson Array	66.72	28	P	P	08 44 17.3	-0.8
	comp=Z,1.3nm,0.6s,baz=248,slow=4.6,SNR=30						
ILB	Eielson Array	66.72	28	eP	P	08 44 17.6	-0.6
HDA	Harding Lake	66.76	28	eP	P	08 44 17.2	-1.3
	comp=Z,7.8nm,1.0s						
DHY	Denali Highway	66.82	30	eP	P	08 44 19.4	+0.4
	comp=Z,4.7nm,0.6s						
KBZ	Khabaz	67.03	309	P	P	08 44 20.6	+0.2
	comp=Z,7.5nm,1.1s,baz=127,slow=2.6,SNR=11						
SCM	Sheep Creek Mo	67.08	31	eP	P	08 44 21.0	+0.4
	comp=Z,18nm,0.8s						
SCM	Sheep Creek Mo	67.08	31	eP	P	08 44 21.0	+0.4
SCM				pmax	pmax		
	comp=Z,18nm,0.8s						
KIV	Kislovodsk	67.12	309	⇑iP	P	08 44 22.4	+1.2
KIV				e*PP	pP	08 44 54.2	+3.7
KIV				e		08 46 46.9	
KIV				eS	S	08 52 54.4	-12
KIV				pmax	pmax		
	comp=Z,22nm,1.2s						
PAX	Paxson	67.69	30	eP	P	08 44 25.3	+0.9
	comp=Z,4.7nm,0.8s						
PAX	Paxson	67.69	30	eP	P	08 44 25.3	+0.9
PAX				pmax	pmax		
	comp=Z,5.0nm,0.8s						
FID	Port Fidalgo	67.70	32	eP	P	08 44 24.9	+0.5
	comp=Z,12nm,0.6s						
VSR	Storozhevoye	67.75	317	eP	P	08 44 23.4	-1.5
VSR				pmax	pmax		
	comp=Z,4.0nm,0.4s						
KLU	Klutina	67.80	31	eP	P	08 44 25.6	+0.5
	comp=Z,8.2nm,0.6s						
RIDG	Independ'e Rid	67.80	29	eP	P	08 44 24.8	-0.3
	comp=Z,7.2nm,0.9s						
DIV	Divide	67.95	32	eP	P	08 44 26.7	+0.6
	comp=Z,16nm,0.7s						
HARP	HAARP	67.96	30	eP	P	08 44 27.4	+1.4
	comp=Z,11nm,0.7s						
SCRK	Sand Creek	68.12	28	eP	P	08 44 27.3	+0.2
	comp=Z,24nm,1.8s						
OBN	Obninsk	68.37	322	⇓eP	P	08 44 29.4	+0.8
OBN				e*PP	sP	08 45 07.8	-3.2
OBN				e		08 47 01.1	
OBN				eS	SKiKP	08 54 07.0	-3.6
OBN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BMRM	Bremner River	68.54	32	eP	P	08 44 30.2	+0.5
	comp=Z,12nm,0.9s						
RAGM	Ragged Mountai	68.65	32	eP	P	08 44 31.6	+1.2
	comp=Z,27nm,1.2s						
SPITS	Spitsbergen Ar	68.89	348	P	P	08 44 29.7	-1.9
	comp=Z,3.9nm,0.5s,baz=67,slow=3.7,SNR=12						
EGAK	Eagle	69.12	27	eP	P	08 44 32.8	-0.3
	comp=Z,3.6nm,0.6s						
ARCES	ARCESS Array B	69.49	338	P	P	08 44 35.1	-0.3
	comp=Z,1.5nm,0.9s,baz=70,slow=7.8,SNR=4.7						
DAWY	Dawson	70.05	28	eP	P	08 44 39.5	+0.6
	comp=Z,4.9nm,0.6s						
FINES	FINESS Array B	71.87	330	P	P	08 44 49.5	-0.4
	comp=Z,1.7nm,0.4s,baz=59,slow=6.0,SNR=18						
VSU	Vasula	72.58	327	ceP	P	08 44 55.7	+1.6
VSU				pmax	pmax		
	comp=Z,37nm,1.7s						
WHY	Whitehorse	73.17	30	eP	P	08 44 58.4	+0.6
	comp=Z,25nm,1.3s						
SKAG	Skagway	73.41	32	eP	P	08 45 00.8	+1.8
	comp=Z,13nm,0.7s						
AKASG	Malin Array Be	73.91	319	P	P	08 45 01.5	-0.7
	comp=Z,1.2nm,0.4s,baz=58,slow=6.1,SNR=7.9						
AKASG	Malin Array Be	73.91	319	ceP	P	08 45 01.7	-0.5
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
BESE	Bessie Mountai	73.97	32	eP	P	08 45 03.7	+1.3
	comp=Z,15nm,1.1s						
SIT	Sitka	74.32	34	eP	P	08 45 06.1	+1.8
	comp=Z,21nm,1.0s						
SIT	Sitka	74.32	34	eP	P	08 45 06.1	+1.8
SIT				pmax	pmax		
	comp=Z,21nm,1.0s						
BR131	Keskin Array S	74.82	307	eP	P	08 45 08.0	+0.1
BRTR	Keskin Array B	74.82	307	P	P	08 45 07.8	-0.1
	comp=Z,3.0nm,0.8s,baz=84,slow=4.4,SNR=13						
BRTR	Keskin Array B	74.82	307	ceP	P	08 45 08.3	+0.4
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
ASF	Jabal al Asfar	75.00	299	P	P	08 45 10.0	+1.1
	comp=Z,1.6nm,0.5s,baz=173,slow=21,SNR=4.1						
WRAK	Wrangell Islan	76.08	34	eP	P	08 45 15.8	+1.3
	comp=Z,16nm,0.8s						
CRAG	Craig	76.08	35	eP	P	08 45 15.9	+1.4
	comp=Z,30nm,1.4s						
DLBC	Dease Lake	76.34	31	eP	P	08 45 18.1	+2.1
	comp=Z,14nm,1.0s						
HFS	Hagfors	77.92	331	P	P	08 45 24.0	-0.7
	comp=Z,2.3nm,0.4s,baz=108,slow=4.7,SNR=22						
HFS	Hagfors	77.92	331	P	P	08 45 24.0	-0.7
HFS				pmax	pmax		
	comp=Z,2.0nm,0.4s						
NC405	NORSAR Array S	78.25	333	eP	P	08 45 26.3	-0.3
NB2	NORSAR Subarra	78.50	333	P	P	08 45 27.3	-0.7
	comp=Z,1.1nm,0.6s,baz=57,slow=5.6						
NB2	NORSAR Subarra	78.50	333	P	P	08 45 27.2	-0.7
NOA	NORSAR Array B	78.50	333	P	P	08 45 27.5	-0.5
	comp=Z,1.6nm,0.7s,baz=55,slow=5.6,SNR=12						
YKW3	Yellowknife Ar	80.59	24	eP	P	08 45 39.8	+0.6
YKA	Yellowknife Ar	80.64	24	P	P	08 45 39.7	+0.2
	comp=Z,3.9nm,0.5s,baz=304,slow=5.3,SNR=36						
VYHS	Vyhne	80.98	320	eP	P	08 45 42.4	+0.8
VYHS				pmax	pmax		
	comp=Z,2.0nm,0.8s						
VYHS	Vyhne	80.98	320	eP	P	08 45 42.4	+0.8
CLL	Collm	82.83	324	eP	P	08 45 52.0	+0.8
GEC2	GERESS Array S	83.75	322	eP	P	08 45 56.4	+0.3
	comp=Z,2.5nm,0.9s						
GEC2	GERESS Array S	83.75	322	eP	P	08 45 56.4	+0.3
GEC2				pmax	pmax		
	comp=Z,3.0nm,0.9s						
GERES	GERESS Array B	83.75	322	P	P	08 45 56.5	+0.5
	comp=Z,1.5nm,0.8s,baz=57,slow=4.9,SNR=11						
GEA0	GERESS Array S	83.75	322	eP	P	08 45 56.2	+0.1
LLLB	Lillooet	84.36	36	eP	P	08 46 00.1	+1.0
	comp=Z,6.5nm,0.8s						
B08A	Colville Reser	87.01	37	eP	P	08 46 13.4	+1.2
	comp=Z,4.9nm,0.9s						
EKA	Eskdalemuir Ar	87.99	333	P	P	08 46 15.9	-0.7
	comp=Z,0.3nm,0.3s,baz=69,slow=3.9,SNR=3.2						
D08A	Wollman Farm,	88.00	38	eP	P	08 46 18.0	+1.0
	comp=Z,6.1nm,0.9s						
WALA	Waterton Lakes	89.43	34	eP	P	08 46 25.0	+1.3
	comp=Z,8.3nm,1.0s						
BMO	Blue Mountains	90.22	39	eP	P	08 46 29.1	+1.6
	comp=Z,2.8nm,1.0s						
BMO	Blue Mountains	90.22	39	eP	P	08 46 29.1	+1.6
BMO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
FFC	Flin Flon	90.77	25	eP	P	08 46 30.3	+0.6
	comp=Z,9.3nm,1.0s						
FFC	Flin Flon	90.77	25	eP	P	08 46 30.3	+0.6
FFC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HRY	Holter Researc	92.02	35	eP	P	08 46 37.0	+1.2
HLID	Hailey	92.65	39	eP	P	08 46 39.8	+0.9
	comp=Z,1.8nm,0.9s						
NV01	Mina Array Sit	93.47	44	eP	P	08 46 43.1	+0.3
NVAR	Mina Array Bea	93.47	44	P	P	08 46 44.2	+1.4
	comp=Z,0.7nm,0.7s,baz=295,slow=4.2,SNR=8.2						
PDAR	Pinedale Array	95.86	37	P	P	08 46 53.8	+0.1
	comp=Z,0.1nm,0.4s,baz=270,slow=0.9,SNR=2.8						

TAP 26 08:34:01.6, 24°.37N × 121°.91E, h36^{km}, ML1.6, C, Taiwan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ENAH	Nanao	0.12	310	eP	Pn	08 34 07.5	-6.1
	baz=309						
ENAH				eS	Sn	08 34 12.8	-12
	baz=309						
NANB	Nanao	0.15	290	i P	Pn	08 34 08.5	-3.5
	baz=289						
NANB				S	Sn	08 34 13.5	-8.6
	baz=289						
ENA	Nanau	0.16	289	eP	Pn	08 34 08.7	-3.1
	baz=289						
ENA				eS	Sn	08 34 13.5	-8.0
	baz=289						
TWC	Suao	0.24	347	eP	Pn	08 34 08.7	-1.3
	baz=348						
TWC				eS	Sn	08 34 13.9	-3.8
	baz=348						
EOS1	EOS1	0.27	49	eP	Pn	08 34 09.7	-0.1
	baz=48						
EOS1				S	Sn	08 34 15.5	-1.6
	baz=48						
NACB	Ninganchiao	0.35	235	eP	Pn	08 34 10.6	+0.5
	baz=235						
NACB				eS	Sn	08 34 17.3	+0.5
	baz=235						
ENTT	Nioudou	0.41	310	eP	Pn	08 34 11.6	+0.8
	baz=310						
TWD	Chiawan	0.41	224	eP	Pn	08 34 11.3	+0.6
	baz=223						
EGS		0.47	2	eP	Pn	08 34 10.8	-1.0
	baz=3.0						
NNSB	Datong	0.48	277	P	Pn	08 34 12.4	+0.3
	baz=276						
NNSB				S	Sn	08 34 20.7	+1.3
	baz=276						
NNSH	Datong	0.48	277	eP	Pn	08 34 12.7	+0.6
	baz=276						
YHNB	Yeheng	0.57	301	eP	Pn	08 34 13.7	+0.2
	baz=301						
NSK	Sanguang	0.59	301	eP	Pn	08 34 14.4	+0.8
	baz=301						

ISCJB ***26*** *08:50:08.4±0.8, 41°.06N±0°.07 × 38°.05E±0°.05, h19^{km}±6^{km}, Error ellipse: s-maj=11.1km s-min=6.0km az=178.5*

CSEM ***26*** *08:50:08.1±0.4, 41°.06N × 38°.06E, h15^{km}, ML2.6, Error ellipse: s-maj=12.2km s-min=6.8km az=176.0*

ISK ***26*** *08:50:08.6, 41°.10N × 38°.13E, h30^{km}, ML2.5/6*

DDA ***26*** *08:50:09.3, 40°.94N × 38°.04E, h7^{km}, Ml2.6*

ISC 26 08:50:08.5±1.0, 41°.03N±0°.05 × 38°.08E±0°.03, h16^{km}±8^{km}, n36, σ0^{s}.77/41, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ORDU	Ordu-Boztepe	0.17	256	i P	Pg	08 50 12.9	+0.1
ORDU				i S	Sg	08 50 15.6	0.0
ORDU	Ordu-Boztepe	0.17	256	P	Pg	08 50 12.9	+0.1
ORDU				S	Sg	08 50 15.6	0.0
GRSN	GIRESUNGRSN	0.18	126	i P	Pb	08 50 13.7	+0.2
GRSN	GIRESUNGRSN	0.18	126	P	Pb	08 50 13.7	+0.2
ESPY	Espiye-Giresun	0.51	103	PG	Pb	08 50 19.6	+0.6
ESPY				SG	Sb	08 50 27.4	+1.2
ESPY	Espiye-Giresun	0.51	103	ePg	Pb	08 50 19.6	+0.6
ESPY				eSg	Sb	08 50 27.4	+1.2
SUSE	Susehri	0.83	173	i P	Pg	08 50 23.9	-0.7
SUSE				i S	Sg	08 50 34.8	-0.7
SUSE	Susehri	0.83	173	P	Pg	08 50 23.9	-0.7
SUSE				S	Sg	08 50 34.8	-0.7
ERBA	Erbaa	1.06	251	i P	Pb	08 50 28.0	-0.5
ERBA	Erbaa	1.06	251	P	Pb	08 50 28.0	-0.5
GUMT	Gumushane	1.21	118	PN	Pn	08 50 29.5	-1.4
GUMT	Gumushane	1.21	118	ePn	Pn	08 50 29.5	-1.4
KELT	Kelkit	1.26	134	i P	Pn	08 50 32.3	+0.7
KELT	Kelkit	1.26	134	P	Pn	08 50 32.3	+0.7
KTUT	Trabzon	1.28	91	PN	Pn	08 50 30.6	-1.1
KTUT	Trabzon	1.28	91	ePn	Pn	08 50 30.6	-1.1
MACK	Trabzon	1.28	93	i P	Pg	08 50 33.8	+0.6
MACK	Trabzon	1.28	93	P	Pg	08 50 33.8	+0.6
TOKT	Tokat	1.36	239	PN	Pn	08 50 32.9	0.0
TOKT	Tokat	1.36	239	ePn	Pn	08 50 32.9	0.0
SVSK	Karacayir	1.38	217	PN	Pn	08 50 33.4	+0.3
SVSK	Karacayir	1.38	217	ePn	Pn	08 50 33.4	+0.3
KVT	Kavak	1.54	272	PN	Pn	08 50 35.4	+0.1
KVT	Kavak	1.54	272	ePn	Pn	08 50 35.4	+0.1

ILIC	ilic-Erzincan	1.62	166	PN	Pn	08 50 36.7	+0.1
ILIC	ilic-Erzincan	1.62	166	*e*Pn	Pn	08 50 36.7	+0.1
BAYT	Ayd˜–ntepe-Bay	1.69	111	PN	Pn	08 50 36.0	-1.6
BAYT	Ayd˜–ntepe-Bay	1.69	111	*e*Pn	Pn	08 50 36.0	-1.6
REFA	Refahiye_ERZ˜	1.72	162	*i* P	Pn	08 50 31.2	-6.7
KEMA	Kemaliye	1.79	170	*i* P	Pb	08 50 40.9	-0.1
KEMA	Kemaliye	1.79	170	P	Pb	08 50 40.9	-0.1
KOPT	Kop Dagi	2.10	118	*i* P	Pg	08 50 48.9	0.0
PTK	Pertek	2.36	154	PN	Pn	08 50 47.4	+0.6
PTK	Pertek	2.36	154	*e*Pn	Pn	08 50 47.4	+0.6
BCA	Borcka	2.71	80	PN	Pn	08 50 50.4	-1.0
BCA	Borcka	2.71	80	*e*Pn	Pn	08 50 50.4	-1.0

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*IDC **26** 09:16:02.4±2.3, 38°.46N×21°.80E, h0^{km}, mb3.3/6, mb1 3.3/8, mb1mx3.2/62, mbtmp3.3/8, ML3.0/2, Error ellipse: s-maj=47.7km s-min=21.6km az=39.0*

*CSEM **26** 09:16:03.9±0.1, 38°.40N×21°.88E, h2^{km}, ML3.2, Error ellipse: s-maj=2.7km s-min=2.3km az=37.0*

*ISCJB **26** 09:16:03.9±0.2, 38°.41N±0°.01×21°.88E±0°.02, h8^{km}±1^{km}, mb3.2/6, Error ellipse: s-maj=2.2km s-min=1.9km az=32.8*

*ATH **26** 09:16:03.7, 38°.41N×21°.88E, h13^{km}±1^{km}, ML3.2/9, Error ellipse: s-maj=1.8km s-min=0.7km az=115.0*

*THE **26** 09:16:04.0, 38°.41N×21°.87E, h3^{km}±1^{km}, ML3.1/32, Error ellipse: s-maj=1.2km s-min=0.4km az=199.0*

*BEO **26** 09:16:05.5±1.1, 38°.49N×21°.98E, h0^{km}, ML3.1/2*

ISC 26 09:16:03.9±0.7**, 38°.41N**±0°.01×**21°.88E**±0°.01**, h9**^{km}±3^{km}**, n174, σ0^{s}.77**/260**, mb3.3**/6**, Greece**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EFP	Efpalio	0.03	51	P	Pg	09 16 05.0	-0.6
EFP				S	Sg	09 16 05.8	-0.9
EFP	Efpalio	0.03	51	P	Pg	09 16 05.4	-0.1
EFP				S	Sg	09 16 06.7	-0.1
EFP	Efpalio	0.03	51	P	Pg	09 16 05.5	-0.1
EFP				S	Sg	09 16 06.7	-0.1
VVK	Vomvokou	0.06	282	P	Pg	09 16 05.5	-0.4
VVK				S	Sg	09 16 07.0	-0.3
SERG	Sergoula	0.14	89	P	Pg	09 16 07.1	+0.1
SERG				S	Sg	09 16 09.7	+0.5
UPR	University Cam	0.15	210	P	Pg	09 16 07.4	+0.3
UPR				S	Sg	09 16 10.9	+1.6
UPR	University Cam	0.15	210	P	Pg	09 16 07.1	0.0
UPR				S	Sg	09 16 09.8	+0.5
UPR	University Cam	0.15	210	P	Pg	09 16 07.2	+0.1
UPR				S	Sg	09 16 09.7	+0.5
TRIZ	Trizonia	0.16	106	P	Pg	09 16 07.6	+0.4
TRIZ				S	Sg	09 16 10.7	+1.1
TRIZ	Trizonia	0.16	106	P	Pg	09 16 07.5	+0.2
TRIZ				S	Sg	09 16 10.1	+0.5
TRIZ	Trizonia	0.16	106	P	Pg	09 16 07.5	+0.2
TRIZ				S	Sg	09 16 10.1	+0.5
ANX	Ano Chora	0.18	10	P	Pg	09 16 07.7	-0.1
ANX				S	Sg	09 16 10.9	+0.3
ANX				AML	AML	09 16 11.2	
ANX				AML	AML	09 16 12.6	
	comp=E,61457µm,0.4s						
ANX	Ano Chora	0.18	10	P	Pg	09 16 07.7	-0.1
ANX				S	Sg	09 16 10.9	+0.3
ANX	Ano Chora	0.18	10	P	Pg	09 16 07.8	-0.1
ANX				S	Sg	09 16 10.9	+0.3
LAKA	Lakka	0.19	156	P	Pg	09 16 07.9	+0.1
LAKA	Lakka	0.19	156	P	Pg	09 16 08.0	+0.2
LAKA				S	Sg	09 16 11.0	+0.5
LAKA	Lakka	0.19	156	P	Pg	09 16 07.9	+0.1
LAKA				S	Sg	09 16 11.0	+0.5
KALE	Kalithea	0.20	95	P	Pg	09 16 08.3	+0.2
KALE				S	Sg	09 16 11.8	+0.7
KALE				AML	AML	09 16 12.5	
	comp=N,13829µm,0.5s						
KALE				AML	AML	09 16 14.5	
	comp=E,14607µm,0.2s						
KALE	Kalithea	0.20	95	P	Pg	09 16 08.3	+0.2
KALE				S	Sg	09 16 11.7	+0.7
KALE	Kalithea	0.20	95	P	Pg	09 16 08.3	+0.2
KALE				S	Sg	09 16 11.6	+0.6
ALIK	Aliki, Aigiali	0.23	129	P	Pg	09 16 09.0	+0.3
ALIK				S	Sg	09 16 13.2	+1.3
ALIK	Aliki, Aigiali	0.23	129	P	Pg	09 16 09.0	+0.3
ALIK				S	Sg	09 16 13.2	+1.3
PVO	Paravola	0.35	307	P	Pg	09 16 10.2	-0.6
PVO	Paravola	0.35	307	P	Pg	09 16 10.3	-0.4
PVO				S	Sg	09 16 15.3	0.0
PVO	Paravola	0.35	307	P	Pg	09 16 10.4	-0.3
PVO				S	Sg	09 16 15.3	0.0
TRAZ	Trapeza	0.36	133	P	Pg	09 16 08.9	-2.0
TRAZ				S	Sg	09 16 15.2	-0.4
TRAZ				AML	AML	09 16 16.6	
	comp=N,9464µm,0.3s						
TRAZ				AML	AML	09 16 17.9	
	comp=E,12723µm,0.2s						
TRAZ	Trapeza	0.36	133	P	Pg	09 16 09.8	-1.1
TRAZ				S	Sg	09 16 14.5	-1.1
TRAZ	Trapeza	0.36	133	P	Pg	09 16 09.9	-1.0
TRAZ				S	Sg	09 16 15.7	+0.1
KLV	Kalavryta, Ach	0.42	150	P	Pg	09 16 11.9	-0.3
KLV				S	Sg	09 16 19.0	+1.2
KLV	Kalavryta, Ach	0.42	150	P	Pg	09 16 11.9	-0.3
KLV				S	Sg	09 16 18.8	+1.0
KLV	Kalavryta, Ach	0.42	150	P	Pg	09 16 12.0	-0.3
KLV				S	Sg	09 16 18.6	+0.8
AXS	Araxos	0.45	242	P	Pg	09 16 12.9	+0.3
AXS	Araxos	0.45	242	P	Pg	09 16 12.7	0.0
DRO	Drossia	0.48	196	P	Pg	09 16 12.8	-0.4
DRO				S	Sg	09 16 20.3	+0.9
DRO	Drossia	0.48	196	P	Pg	09 16 12.8	-0.4
DRO				S	Sg	09 16 20.0	+0.6
RLS	Riolos of Patr	0.48	223	P	Pg	09 16 13.1	-0.1
RLS				S	Sb	09 16 21.0	-0.6
RLS				AML	AML	09 16 21.2	
	comp=N,3232µm,0.3s						
RLS				AML	AML	09 16 22.2	
	comp=E,5384µm,0.3s						
RLS	Riolos of Patr	0.48	223	P	Pg	09 16 13.1	-0.1
RLS				S	Sg	09 16 20.7	+1.2
RLS	Riolos of Patr	0.48	223	P	Pg	09 16 13.1	-0.1
RLS				S	Sg	09 16 20.5	+1.0
DLFA	Delphi	0.49	82	P	Pb	09 16 14.6	0.0
DLFA				S	Sg	09 16 20.9	+1.1
DLFA				AML	AML	09 16 23.6	
	comp=N,4650µm,0.3s						
DLFA				AML	AML	09 16 27.5	
	comp=E,3184µm,0.4s						
DLFA	Delphi	0.49	82	P	Pg	09 16 13.9	+0.5
DLFA				S	Sg	09 16 20.6	+0.8
DSF	Desfina	0.51	90	P	Pg	09 16 12.7	-1.1
DSF				S	Sg	09 16 21.7	+1.2
DSF				AML	AML	09 16 24.1	
	comp=E,5987µm,0.2s						
DSF				AML	AML	09 16 24.5	
	comp=N,9390µm,0.3s						
DSF	Desfina	0.51	90	P	Pg	09 16 13.1	-0.7
DSF				S	Sb	09 16 22.1	-0.5
DSF	Desfina	0.51	90	P	Pg	09 16 13.2	-0.6
DSF				S	Sg	09 16 21.3	+0.8
EVR	Evrytania	0.51	354	P	Pg	09 16 13.2	-0.6
EVR				S	Sg	09 16 21.8	+1.3
EVR				AML	AML	09 16 22.8	
	comp=N,13847µm,0.2s						
EVR				AML	AML	09 16 23.1	
	comp=E,8714µm,0.2s						
EVR	Evrytania	0.51	354	P	Pg	09 16 13.1	-0.7
EVR				S	Sg	09 16 21.1	+0.6
EVR	Evrytania	0.51	354	P	Pg	09 16 13.4	-0.4
EVR				S	Sg	09 16 21.3	+0.8
PDO	Prodromos	0.58	289	P	Pg	09 16 14.9	-0.2
PDO				S	Sb	09 16 24.9	+0.3
PDO				AML	AML	09 16 26.3	
	comp=N,14852µm,0.3s						
PDO				AML	AML	09 16 27.2	
	comp=E,6476µm,0.2s						
PDO	Prodromos	0.58	289	P	Pg	09 16 14.2	-0.9
PDO				S	Sg	09 16 23.8	+1.1
PDO	Prodromos	0.58	289	P	Pg	09 16 14.9	-0.2
PDO				S	Sg	09 16 23.8	+1.1
GUR	Goura	0.60	142	P	Pg	09 16 14.6	-0.9
GUR	Goura	0.60	142	P	Pg	09 16 14.8	-0.7
GUR				S	Sg	09 16 23.2	-0.1
GUR	Goura	0.60	142	P	Pg	09 16 14.9	-0.6
GUR				S	Sg	09 16 23.2	-0.1
AGG	Agios Georgios	0.70	30	P	Pg	09 16 16.5	-1.0
AGG				S	Sb	09 16 27.8	-0.4
AGG	Agios Georgios	0.70	30	P	Pg	09 16 16.5	-1.0
AGG				S	Sb	09 16 27.8	-0.4
THAL	Thalero	0.72	121	P	Pb	09 16 19.5	+0.9
THAL	Thalero	0.72	121	P	Pg	09 16 18.0	+0.2
THAL				S	Sb	09 16 29.0	+0.4
THAL	Thalero	0.72	121	P	Pg	09 16 18.0	+0.2
THAL				S	Sb	09 16 29.0	+0.4
PROD	Prodromos	0.82	100	P	Pn	09 16 21.2	-0.4
PROD	Prodromos	0.82	100	P	Pb	09 16 20.2	-0.1
AMT	Artemida-Makis	0.89	189	P	Pg	09 16 21.3	+0.3
AMT	Artemida-Makis	0.89	189	P	Pg	09 16 20.7	-0.3
AMT				S	Sb	09 16 33.5	+0.1
AMT	Artemida-Makis	0.89	189	P	Pg	09 16 20.9	-0.1
AMT				S	Sb	09 16 33.5	+0.1
MGNA	Meganis˛„	0.89	286	P	Pb	09 16 22.0	+0.6
MGNA	Meganis˛„	0.89	286	P	Pg	09 16 21.3	+0.3
LKR	Lokris	0.91	74	P	Pg	09 16 21.3	-0.1
LKR				S	Sb	09 16 34.5	+0.5
LKR				AML	AML	09 16 38.4	
	comp=N,2051µm,0.4s						
LKR				AML	AML	09 16 38.5	
	comp=E,3069µm,0.2s						
LKR	Lokris	0.91	74	P	Pg	09 16 20.0	-1.4
LKR				S	Sb	09 16 35.0	+0.9
LKR	Lokris	0.91	74	P	Pg	09 16 21.1	-0.3
LKR				S	Sb	09 16 34.1	0.0
KFL	Anninata	0.91	251	P	Pg	09 16 20.6	-0.8
KFL	Anninata	0.91	251	P	Pg	09 16 20.8	-0.6
KFL				S	Sb	09 16 34.3	+0.2
KFL	Anninata	0.91	251	P	Pg	09 16 20.8	-0.6
KFL				S	Sb	09 16 34.3	+0.2
TRIP	Tripoli	0.93	161	P	Pg	09 16 20.7	-1.1
TRIP	Tripoli	0.93	161	P	Pg	09 16 21.1	-0.8
TRIP				S	Sb	09 16 34.9	+0.1
TRIP	Tripoli	0.93	161	P	Pg	09 16 21.1	-0.8
TRIP				S	Sb	09 16 34.9	+0.1
LTK	Loutraki	0.94	114	P	Pg	09 16 21.7	-0.3
LTK				S	Sn	09 16 36.4	-0.5
LTK	Loutraki	0.94	114	P	Pg	09 16 21.7	-0.3
LTK				S	Sn	09 16 36.4	-0.5
DSL	Palaion Diasel	0.95	320	P	Pg	09 16 20.9	-1.2
DSL				S	Sg	09 16 34.8	+0.3
DSL	Palaion Diasel	0.95	320	P	Pg	09 16 20.9	-1.2
DSL				S	Sg	09 16 34.8	+0.3
LOUT	Loutraki	0.96	116	P	Pn	09 16 23.6	0.0
LOUT	Loutraki	0.96	116	P	Pb	09 16 23.1	+0.4
LOUT	Loutraki	0.96	116	P	Pg	09 16 22.7	+0.4
EVGI	Lefkada island	0.98	283	P	Pg	09 16 21.9	-0.9
EVGI	Lefkada island	0.98	283	P	Pg	09 16 21.9	-0.9
LKD2	Lefkada island	1.03	292	P	Pg	09 16 22.9	-0.9
LKD2	Lefkada island	1.03	292	P	Pg	09 16 22.8	-0.9
LKD2				S	Sn	09 16 38.8	-0.3
LKD2	Lefkada island	1.03	292	P	Pg	09 16 23.0	-0.7
LKD2				S	Sn	09 16 38.8	-0.3
FSK	Fiskardo	1.04	273	P	Pg	09 16 22.8	-1.0
FSK	Fiskardo	1.04	273	P	Pg	09 16 22.8	-1.0
FSK				S	Sb	09 16 38.4	+0.7
VLS	Valsamata	1.04	257	P	Pg	09 16 22.5	-1.4
VLS				S	Sb	09 16 38.2	+0.3
VLS	Valsamata	1.04	257	P	Pg	09 16 22.5	-1.4
VLS				S	Sb	09 16 38.2	+0.3
VLX	Vlachokerasia	1.11	159	P	Pg	09 16 23.6	-1.7
VLX	Vlachokerasia	1.11	159	P	Pg	09 16 24.0	-1.2
VLX	Vlachokerasia	1.11	159	P	Pg	09 16 24.1	-1.2
ZKS	Zakynthos	1.12	231	P	Pg	09 16 24.6	-0.8
ZKS	Zakynthos	1.12	231	P	Pg	09 16 24.6	-0.8
SMIA	Simia	1.14	65	P	Pb	09 16 25.2	-0.6
SMIA	Simia	1.14	65	P	Pb	09 16 25.1	-0.7
SMIA				S	Sn	09 16 41.6	-0.3
SMIA	Simia	1.14	65	P	Pb	09 16 25.2	-0.6
SMIA				S	Sn	09 16 41.6	-0.3
THL	Klokotos Trika	1.16	5	P	Pb	09 16 25.0	-1.1
THL	Klokotos Trika	1.16	5	P	Pb	09 16 24.9	-1.1
THL				S	Sn	09 16 42.3	+0.1
THL	Klokotos Trika	1.16	5	P	Pb	09 16 25.2	-0.9
THL				S	Sn	09 16 42.3	+0.1
ITM	Ithomi	1.23	178	P	Pn	09 16 26.1	-1.2
ITM	Ithomi	1.23	178	P	Pn	09 16 26.5	-0.8
ITM	Ithomi	1.23	178	P	Pn	09 16 26.5	-0.8
NEO	Neokhori	1.38	49	P	Pn	09 16 29.3	-0.1
NEO	Neokhori	1.38	49	P	Pn	09 16 29.4	0.0
NEO				S	Sn	09 16 48.2	+0.5
NEO	Neokhori	1.38	49	P	Pn	09 16 29.4	0.0
NEO				S	Sn	09 16 48.2	+0.5
XOR	Xorichti	1.40	47	P	Pn	09 16 29.5	-0.1
XOR				S	Sn	09 16 48.8	+0.5
XOR	Xorichti	1.40	47	P	Pn	09 16 29.5	-0.1
XOR				S	Sn	09 16 48.8	+0.5
DID	Didima	1.40	130	P	Pn	09 16 29.8	+0.1
DID	Didima	1.40	130	P	Pn	09 16 29.8	+0.1
DID				S	Sg	09 16 49.8	+0.8
DID	Didima	1.40	130	P	Pn	09 16 29.9	+0.2
DID				S	Sg	09 16 49.8	+0.8
SKIA	Skiathos	1.45	58	P	Pn	09 16 30.0	-0.3
SKIA	Skiathos	1.45	58	P	Pn	09 16 30.7	+0.4
SKIA	Skiathos	1.45	58	P	Pn	09 16 30.7	+0.4
JAN	Janina	1.48	328	P	Pg	09 16 32.3	0.0
JAN	Janina	1.48	328	P	Pg	09 16 32.3	0.0
PYL	PYLOS	1.52	184	P	Pn	09 16 31.3	+0.1
PYL	PYLOS	1.52	184	P	Pn	09 16 31.3	+0.1
ATHU	Athens Univers	1.56	106	P	Pn	09 16 31.4	-0.4
ATHU	Athens Univers	1.56	106	P	Pn	09 16 32.3	+0.4
KPRO	Kipourio	1.59	346	P	Pb	09 16 33.5	-0.1
KPRO	Kipourio	1.59	346	P	Pb	09 16 33.5	-0.1
VLY	Voula,Athens	1.61	110	P	Pn	09 16 32.8	+0.3
VLY	Voula,Athens	1.61	110	P	Pn	09 16 32.8	+0.3
IGT	Igoumenitsa	1.65	313	*e*Pn	Pg	09 16 35.3	-0.2
IGT				*e*Sn	Sg	09 16 58.0	+1.2
IGT	Igoumenitsa	1.65	313	*e*Pn	Pg	09 16 35.3	-0.2
	baz=2.0						
IGT				*e*Sn	Sg	09 16 58.0	+1.2
	baz=2.0						
DION	Dionisos Attik	1.65	101	P	Pn	09 16 33.0	0.0
DION	Dionisos Attik	1.65	101	P	Pn	09 16 33.8	+0.7
DYR	Agios Nikonas	1.68	168	P	Pn	09 16 34.2	+0.7
DYR	Agios Nikonas	1.68	168	P	Pn	09 16 34.2	+0.7
AOS	Alonnisos	1.74	63	P	Pn	09 16 33.7	-0.6
AOS	Alonnisos	1.74	63	P	Pn	09 16 33.7	-0.6
LIT	Litokhoron	1.75	15	P	Pn	09 16 35.4	+0.9
LIT				S	Sb	09 16 58.1	-0.3
LIT	Litokhoron	1.75	15	P	Pn	09 16 35.4	+0.9
LIT				S	Sb	09 16 58.1	-0.3
SGD	Sagiada	1.76	314	P	Pb	09 16 36.5	+0.2
SGD	Sagiada	1.76	314	P	Pb	09 16 36.5	+0.2
VLI	Veliai	1.89	153	P	Pn	09 16 36.3	0.0
VLI	Veliai	1.89	153	P	Pn	09 16 36.3	0.0
KZN	Kozani	1.90	357	P	Pb	09 16 38.0	-0.7
KZN	Kozani	1.90	357	P	Pb	09 16 38.0	-0.7
KARY	Karystos	2.05	100	P	Pn	09 16 39.1	+0.6
KARY	Karystos	2.05	100	P	Pn	09 16 39.1	+0.6
PAIG	Paliouri	2.06	42	P	Pn	09 16 38.1	-0.6
PAIG	Paliouri	2.06	42	P	Pn	09 16 38.1	-0.6
KEK	Kerkira	2.08	309	P	Pb	09 16 40.7	-1.1
KEK	Kerkira	2.08	309	P	Pb	09 16 40.6	-1.1
FNA	Florina	2.40	351	*e*Pn	Pn	09 16 45.0	+1.5
FNA				*e*Sn	Sn	09 17 14.3	+1.3
FNA	Florina	2.40	351	P	Pn	09 16 45.0	+1.5
FNA	Florina	2.40	351	P	Pn	09 16 45.0	+1.5
FNA				*e*Sn	Sn	09 17 14.3	+1.3
	baz=2.0						
GRG	Griva	2.58	9	P	Pn	09 16 46.8	+1.0
GRG	Griva	2.58	9	P	Pn	09 16 46.8	+1.0
VAY	Valandovo	2.96	10	*e*Pn	Pn	09 16 52.1	+1.1
VAY	Valandovo	2.96	10	*e*Pn	Pn	09 16 52.1	+1.1
	baz=3.0						
SRS	Serrai	3.01	25	*e*Pn	Pn	09 16 52.7	+1.0
SRS	Serrai	3.01	25	*e*Pn	Pn	09 16 52.7	+1.0
	baz=2.0						
IDI	Anoyia	3.94	141	Pn	Pn	09 17 05.0	+0.3
	comp=E,0.6nm,0.3s,baz=322,slow=16,SNR=4.9						
IDI				Sn	Sn	09 17 49.8	-1.2
	comp=E,2.8nm,0.3s,baz=289,slow=18,SNR=4.2						
BARS	Barje	4.40	359	*e*Pn	Pn	09 17 11.9	+1.0
BARS	Barje	4.40	359	*e*Pn	Pn	09 17 11.9	+1.0
	baz=2.0						
ZAPS	Zavoj	4.89	6	*e*Pn	Pn	09 17 19.0	+1.3
TREB	Trebinje	5.07	329	*e*Pn	Pn	09 17 21.2	+1.1
TREB	Trebinje	5.07	329	*e*Pn	Pn	09 17 21.2	+1.1
	baz=7.0						
IVAS	Ivanjica	5.32	346	*e*Pn	Pn	09 17 25.5	+1.9
IVAS	Ivanjica	5.32	346	*e*Pn	Pn	09 17 25.5	+1.9
	baz=7.0						
GRUS	Gruza	5.54	351	*e*Pn	Pn	09 17 28.3	+1.7
GRUS	Gruza	5.54	351	*e*Pn	Pn	09 17 28.3	+1.7
	baz=6.0						
BBLS	Lazići	5.76	342	*e*Pn	Pn	09 17 31.0	+1.4
BBLS	Lazići	5.76	342	*e*Pn	Pn	09 17 31.0	+1.4
	baz=2.0						
BRTR	Keskin Array B	9.24	78	Pn	Pn	09 18 20.3	+2.8
	comp=E,0.2nm,0.3s,baz=267,slow=13,SNR=4.3						
HFS	Hagfors	22.36	349	P	P	09 21 01.4	-0.5
	comp=E,0.5nm,0.4s,baz=171,slow=10,SNR=3.3						
FINES	FINESS Array B	23.21	5	P	P	09 21 09.8	-1.1
	comp=E,0.7nm,0.5s,baz=187,slow=7.0,SNR=3.7						
NOA	NORSAR Array B	23.62	347	P	P	09 21 13.9	-1.1
	comp=E,0.2nm,0.5s,baz=160,slow=9.5,SNR=2.2						
EKA	Eskdalemuir Ar	23.87	323	P	P	09 21 16.8	-0.6
	comp=E,0.4nm,0.6s,baz=121,slow=12,SNR=4.1						
KURBB	Kurchatov Arra	41.23	54	P	P	09 23 49.2	+0.3
	comp=E,0.2nm,0.5s,baz=281,slow=9.2,SNR=2.2						
MKAR	Makanchi Array	44.27	59	P	P	09 24 13.8	+0.1
	comp=E,0.9nm,0.4s,baz=276,slow=7.5,SNR=22						

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*IDC **26** 09:30:21.8±3.4, 17°.59S×179°.62E, h573^{km}±40^{km}, mb3.1/12, mb1 3.3/13, mb1mx3.1/40, mbtmp4.1/13, Error ellipse: s-maj=20.2km s-min=16.9km az=95.0*

*ISCJB **26** 09:30:22.8±0.6, 17°.6S±0°.1×179°.6E±0°.1, h602^{km}, mb3.6/12, Error ellipse: s-maj=21.0km s-min=13.7km az=43.6*

ISC 26 09:30:24.0±0.7**, 17°.6S**±0°.1×**179°.6E**±0°.2**, h602**^{km}**, n16, σ0^{s}.83**/16**, mb3.5**/12**, Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	Mont Dzumac	13.12	248	P	P	09 33 14.2	+0.1
	0.3nm,0.3s,baz=75,slow=20,SNR=4.1						
RPZ	Rata Peaks	27.02	194	P	P	09 35 17.7	-1.9
	6.1nm,0.7s,baz=22,slow=19,SNR=4.2						
STKA	Stephens Creek	37.09	240	P	P	09 36 45.1	+0.2
	3.8nm,0.9s,baz=66,slow=9.1,SNR=3.2						
WRA	Warramunga Arr	42.78	259	P	P	09 37 30.0	-0.5
	0.8nm,0.6s,baz=93,slow=6.9,SNR=19						
WRA				PcP	PcP	09 39 08.8	+1.0
	0.2nm,0.3s,baz=92,slow=3.6,SNR=5.8						
ASAR	Alice Springs	43.01	254	P	P	09 37 32.3	+0.1
	5.2nm,0.5s,baz=87,slow=8.1,SNR=120						
ASAR				PcP	PcP	09 39 08.9	+0.4
	0.4nm,0.6s,baz=92,slow=4.2,SNR=4.2						
VNDA	Vanda	60.60	184	P	P	09 39 38.5	+1.3
	0.5nm,0.5s,baz=9.5,slow=12,SNR=4.1						
MJAR	Matsushiro Arr	66.51	325	P	P	09 40 15.2	-0.2
	1.4nm,0.6s,baz=165,slow=7.2,SNR=6.2						
QSPA	South Pole Qui	72.46	180	P	P	09 40 50.9	+0.4
	3.3nm,0.7s,baz=347,slow=1.2,SNR=9.9						
YBH	Yreka Blue Hor	79.52	40	P	P	09 41 30.1	+0.5
	1.6nm,1.0s,baz=61,slow=10,SNR=3.7						
NVAR	Mina Array Bea	80.55	45	P	P	09 41 35.4	+0.2
	0.5nm,0.6s,baz=223,slow=8.1,SNR=6.0						
ILAR	Eielson Array	86.03	14	P	P	09 42 00.6	-0.8
	0.3nm,0.7s,baz=219,slow=5.5,SNR=5.2						
PDAR	Pinedale Array	88.47	44	P	P	09 42 13.5	-0.2
	0.3nm,0.7s,baz=235,slow=3.2,SNR=3.3						
SNAA	Sanae	90.95	179	P	P	09 42 23.6	-0.8
	0.6nm,0.7s,baz=173,slow=8.1,SNR=4.7						
BRTR	Keskin Array B	143.17	314	PKP	PKPbc	09 48 49.8	+0.3
	0.7nm,0.4s,baz=108,slow=2.2,SNR=4.5						
BRG	Berggiesshubel	144.86	344	*e*P	PKPbc	09 48 54.4	+0.4
	3.6nm,0.7s						
GERES	GERESS Array B	146.77	343	PKPbc	PKPbc	09 49 00.1	+0.5
	0.9nm,0.4s,baz=55,slow=5.6,SNR=7.4						

MEX 26 09:35:56.7±0.3**, 19°.42N**×**105°.80W, h15**^{km}**, MD4.1, Near coast of Jalisco**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CJM	Chamela	0.71	83	*e*P	Pg	09 36 08.3	-2.4
CJM				*e*S	Sg	09 36 17.4	-2.7
MMIG	Aquila	2.58	115	*e*P	Pn	09 36 35.0	-2.9
MMIG				*i* S	Sn	09 37 05.1	-3.9
ZIIG	Zihuatanejo	4.49	113	*i* P	Pn	09 37 02.1	-2.1
ZIIG				*i* S	Sn	09 37 52.1	-4.0
ARIG	Puente Sto Nin	5.28	101	*e*P	Pn	09 37 12.8	-2.4
ARIG				*i* S	Sn	09 38 12.0	-3.8

NEIC 26 09:37:01.3±0.0**, 39°.85S**×**174°.61E, h109**^{km}**, ML4.1**(WEL)**, After WEL., North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WAZ	Wanganui	0.31	72	Pn	Pn	09 37 17.0	0.0
WAZ				Sn	Sn	09 37 29.0	+0.3
PREZ	Palmer Road	0.61	325	Pn	Pn	09 37 18.6	-0.3
PREZ				Sn	Sn	09 37 31.7	-0.4
NEZ	North Egmont	0.70	325	Pn	Pn	09 37 19.4	-0.3
NMEZ	Namu Road	0.71	307	Pn	Pn	09 37 19.3	-0.4
KHEZ	Kahui Hut	0.72	320	Pn	Pn	09 37 19.5	-0.3
VRZ	Vera Road	0.73	9	Pn	Pn	09 37 19.5	-0.3
PKVZ	Pokaka	0.80	46	Pn	Pn	09 37 20.3	-0.2
MHEZ	Mangahewa	0.80	344	Pn	Pn	09 37 20.6	+0.1
NWEZ	Newall Road	0.81	315	Pn	Pn	09 37 20.4	-0.1
PKE	Pukeiti	0.81	324	Pn	Pn	09 37 20.2	-0.4
MTVZ	Mangateitei	0.81	55	Pn	Pn	09 37 20.4	-0.2
TRVZ	Turoa	0.91	53	Pn	Pn	09 37 21.4	-0.4
WNVZ	Wahianoa	0.93	56	Pn	Pn	09 37 21.6	-0.3
DRZ	Dome Shelter	0.94	53	Pn	Pn	09 37 22.0	-0.1
FWVZ	Far West T-bar	0.94	51	Pn	Pn	09 37 21.6	-0.4
WHVZ	Whangaehu Hut	0.95	54	Pn	Pn	09 37 21.7	-0.4
MOVZ	Moawhango	0.99	64	Pn	Pn	09 37 21.8	-0.6
TUVZ	Tukino	1.00	55	Pn	Pn	09 37 22.4	-0.1
TWVZ	Taurewa	1.01	40	Pn	Pn	09 37 22.1	-0.6
NGZ	Ngauruhoe	1.02	49	Pn	Pn	09 37 22.4	-0.4
KIW	Kapiti Island	1.04	167	Pn	Pn	09 37 22.7	-0.1
POWZ	Post Office Ro	1.04	122	Pn	Pn	09 37 22.7	-0.2
WTVZ	West Tongariro	1.06	46	Pn	Pn	09 37 22.8	-0.3
OGWZ	Otaki Gorge	1.06	156	Pn	Pn	09 37 23.4	+0.4
TSZ	Takapari Road	1.06	102	Pn	Pn	09 37 22.6	-0.4
OTVZ	Oturere	1.07	50	Pn	Pn	09 37 23.1	-0.2
DUWZ	D’Urville Isla	1.09	209	Pn	Pn	09 37 23.1	-0.2
KRVZ	Karewarewa	1.10	47	Pn	Pn	09 37 23.2	-0.4
MRZ	Mangatainoka R	1.10	138	Pn	Pn	09 37 23.1	-0.4
BHHZ	Black Hill Sta	1.18	73	Pn	Pn	09 37 23.6	-0.8
KATZ	Kakaramea	1.21	44	Pn	Pn	09 37 24.7	-0.2
PNHZ	Pukenui	1.23	94	Pn	Pn	09 37 24.7	-0.2
HOWZ	Holdsworth Sta	1.26	147	Pn	Pn	09 37 25.1	-0.1
PRWZ	Pori Road	1.26	124	Pn	Pn	09 37 25.5	+0.3
DVHZ	Dannevirke	1.28	111	Pn	Pn	09 37 24.9	-0.6
RITZ	Rihia Road	1.30	48	Pn	Pn	09 37 25.9	+0.2
CAW	Cannon Point	1.30	165	Pn	Pn	09 37 25.8	0.0
RATZ	Rangitukua	1.33	43	Pn	Pn	09 37 26.3	+0.2
TIWZ	Tintock	1.35	134	Pn	Pn	09 37 26.2	-0.1
HIZ	Hauiti	1.35	8	Pn	Pn	09 37 26.0	-0.2
TCW	Tory Channel	1.38	190	Pn	Pn	09 37 26.5	-0.2
WPHZ	Waipukurau	1.43	99	Pn	Pn	09 37 27.1	0.0
WATZ	Wairara	1.44	38	Pn	Pn	09 37 27.6	+0.3
WEL	Wellington	1.44	175	Pn	Pn	09 37 27.2	-0.1
MTW	Mount Morrison	1.48	153	Pn	Pn	09 37 27.6	-0.1
BHW	Baring Head	1.57	173	Pn	Pn	09 37 28.7	-0.2
TMWZ	Te Maipa	1.59	142	Pn	Pn	09 37 29.1	-0.1
BKZ	Black Stump Fm	1.61	66	Pn	Pn	09 37 28.8	-0.6
PRHZ	Porangahau	1.61	106	Pn	Pn	09 37 29.0	-0.3
CPWZ	Castlepoint	1.61	132	Pn	Pn	09 37 30.0	+0.6
MSWZ	Moikau Station	1.64	163	Pn	Pn	09 37 29.6	-0.2
PAWZ	Paruwai Farm	1.65	158	Pn	Pn	09 37 29.8	-0.1
KUTZ	Kaahu Road	1.66	35	Pn	Pn	09 37 30.3	+0.3
NNZ	Nelson	1.66	214	Pn	Pn	09 37 29.6	-0.3
TUWZ	Tuamarina	1.66	198	Pn	Pn	09 37 29.3	-0.6
MCHZ	McNeill Hill	1.66	77	Pn	Pn	09 37 30.1	+0.1
TLZ	Tolley Road	1.68	26	Pn	Pn	09 37 29.9	-0.4
PXZ	Pawanui	1.74	97	Pn	Pn	09 37 30.8	-0.2
KAHZ	Kahuranaki	1.75	89	Pn	Pn	09 37 31.0	-0.1
TRWZ	Traveller	1.75	152	Pn	Pn	09 37 31.6	+0.5
PLWZ	Palliser	1.79	164	Pn	Pn	09 37 31.2	-0.4
WPRZ	Whakapapatarin	1.79	43	Pn	Pn	09 37 31.5	-0.2
NMHZ	Naumai	1.86	67	Pn	Pn	09 37 32.7	+0.1
QRZ	Quartz Range	1.86	238	Pn	Pn	09 37 31.6	-0.9
CMWZ	Cape Campbell	1.92	189	Pn	Pn	09 37 33.7	+0.5

ARHZ	**Aropaoanui**	1.94	73	Pn	Pn	09 37 33.0	-0.4
BSWZ	**Blackbirch Sta**	1.94	196	Pn	Pn	09 37 33.3	-0.2
THZ	**Tophouse**	2.31	214	Pn	Pn	09 37 37.7	-0.5
SNGZ	**Shannon Statio**	2.37	64	Pn	Pn	09 37 38.4	-0.6
KNZ	**Kokohu**	2.51	72	Pn	Pn	09 37 39.6	-1.2
OPRZ	**Ohinepanea**	2.51	38	Pn	Pn	09 37 40.9	0.0
URZ	**Urewera**	2.51	52	Pn	Pn	09 37 39.4	-1.4
MHGZ	**Mahia Peninsul**	2.65	76	Pn	Pn	09 37 41.5	-1.1
KHZ	**Kahutara**	2.69	197	Pn	Pn	09 37 42.5	-0.5
PRGZ	**Paritu Road**	2.70	71	Pn	Pn	09 37 42.1	-1.3
MWZ	**Matawai**	2.73	57	Pn	Pn	09 37 42.3	-1.4
MKAZ	**Moumakai**	2.77	9	Pn	Pn	09 37 44.0	-0.3
DSZ	**Denniston Nort**	2.85	227	Pn	Pn	09 37 44.3	-0.9
TKGZ	**Te Karaka**	2.89	62	Pn	Pn	09 37 44.5	-1.2
ETAZ	**East Tamaki Re**	2.90	5	Pn	Pn	09 37 46.0	0.0
WTAZ	**Waiatarua**	2.91	359	Pn	Pn	09 37 46.6	+0.5
MTAZ	**Motutapu**	3.07	4	Pn	Pn	09 37 45.4	-2.7
RVAZ	**Riverhead Bore**	3.07	360	Pn	Pn	09 37 48.4	+0.2
CNGZ	**Carnagh Statio**	3.11	65	Pn	Pn	09 37 47.4	-1.3
TWGZ	**Tauwhareparae**	3.11	59	Pn	Pn	09 37 47.5	-1.3
KUZ	**Kuaotunu**	3.22	16	Pn	Pn	09 37 49.6	-0.6
ABAZ	**Army Bay**	3.25	3	Pn	Pn	09 37 50.9	+0.4
PUZ	**Puketiti**	3.35	59	Pn	Pn	09 37 50.2	-1.7
WMGZ	**Waiomatatini S**	3.60	57	Pn	Pn	09 37 53.1	-2.1
MXZ	**Matakaoa Point**	3.69	53	Pn	Pn	09 37 55.3	-1.1
WCZ	**Waipu Caves**	3.91	357	Pn	Pn	09 38 00.6	+1.2
OXZ	**Oxford**	3.97	208	Pn	Pn	09 37 57.2	-3.0
MQZ	**McQueen's Vall**	4.12	200	Pn	Pn	09 37 59.1	-3.1
WVZ	**Waitaha Valley**	4.34	221	Pn	Pn	09 38 03.8	-1.3
RPZ	**Rata Peaks**	4.69	213	Pn	Pn	09 38 08.4	-1.4
FOZ	**Fox Glacier**	5.14	223	Pn	Pn	09 38 13.7	-2.2
ODZ	**Otahua Downs**	5.96	208	Pn	Pn	09 38 24.9	-2.2
JCZ	**Jackson Bay**	6.05	224	Pn	Pn	09 38 25.8	-2.5
TUZ	**Tuapeka**	7.11	209	Pn	Pn	09 38 40.9	-1.6
CTZ	**Chatham Island**	7.62	123	Pn	Pn	09 38 49.5	+0.1

*SOME **26** 09:37:39.2, 41°.20N×70°.98E, h0^{km}*

*NNC **26** 09:37:40.0±1.3, 41°.14N×71°.00E, h0^{km}, mb2.9, mpv2.5, Error ellipse: s-maj=11.2km s-min=6.3km az=50.0*

*KRNET **26** 09:37:41.1±0.1, 41°.31N×71°.07E, h10^{km}, mb2.3*

ISC 26 09:37:40.7±1.3**, 41°.27N**±0°.03×**71°.02E**±0°.03**, h2**^{km}±12^{km}**, n14, σ1^{s}.21**/27**, 14C-8D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARK	**Arkit** baz=55	0.88	53	⇑*i*P	**Pg**	**09 37 57.2**	**-0.4**
ARK	baz=55			⇑*i*S	**Sg**	**09 38 08.3**	**-0.8**
IUG	**Iuzhnay** 8.6nm,0.3s	1.14	320	*e*P	**Pb**	**09 38 01.7**	**-1.6**
IUG	4.3nm,0.4s			*e*S	**Sg**	**09 38 17.9**	**+0.5**
BTK	**Batken** baz=89	1.22	187	⇑*e*P	**Pg**	**09 38 05.0**	**+0.9**
BTK	baz=89			⇑*i*S	**Sn**	**09 38 22.3**	**+0.2**
ARSB	**Arslanbob** baz=89	1.48	87	⇑*e*P	**Pb**	**09 38 07.9**	**-1.2**
ARSB	baz=89			⇑*i*S	**Sg**	**09 38 27.8**	**-0.5**
TOKL	**Toktogul** baz=64	1.54	64	⇑*i*P	**Pb**	**09 38 09.2**	**-0.8**
TOKL	baz=64			⇑*i*S	**Sb**	**09 38 29.5**	**-0.6**
MNAS	**Manas** 1.2nm,0.3s	1.65	42	⇓Pn	**Pb**	**09 38 10.9**	**-0.9**
MNAS	2.0nm,0.3s			⇑Sn	**Sg**	**09 38 36.1**	**+2.6**
MNAS	**Manas** baz=42	1.65	42	⇓*e*P	**Pb**	**09 38 10.8**	**-1.0**
MNAS	baz=42			⇓*i*S	**Sb**	**09 38 32.8**	**-0.3**
KK31	**Karatay Array** 3.6nm,0.3s,baz=171,slow=15,SNR=51	1.87	349	⇑Pn	**Pb**	**09 38 15.6**	**0.0**
KK31	6.5nm,0.5s,baz=170,slow=33,SNR=19			⇓Sn	**Sg**	**09 38 41.5**	**+0.9**
BRLS	**Borolday** 1.0nm,0.3s	1.96	334	*e*P	**Pn**	**09 38 15.1**	**0.0**
BRLS	4.4nm,0.4s			*e*S	**Sb**	**09 38 40.5**	**-1.6**
AML	**Almayashu** baz=66	2.18	66	⇓*e*P	**Pb**	**09 38 19.2**	**-1.9**
AML	baz=66			⇓*i*S	**Sb**	**09 38 47.8**	**-1.0**
MRKS	**Merke** 2.6nm,0.1s	2.21	47	*e*P	**Pb**	**09 38 21.3**	**-0.1**
MRKS	6.5nm,0.3s			*e*S	**Sg**	**09 38 51.8**	**+0.2**
SFK	**Sufi-Kurgan** 0.6nm,0.3s	2.27	123	⇑Pg	**Pb**	**09 38 20.6**	**-2.0**
SFK	1.3nm,0.3s			⇑Lg	Lg	09 38 51.3	
SFK	**Sufi-Kurgan** baz=24	2.27	123	⇑*e*P	**Pb**	**09 38 21.6**	**-1.0**
SFK	baz=24			⇑*i*S	**Sb**	**09 38 50.9**	**-0.3**
KZA	**Kyzart** baz=75	3.27	74	⇓*i*P	**Pn**	**09 38 35.3**	**+1.9**
KZA	baz=75			⇓*i*S	**Sn**	**09 39 14.3**	**+1.2**

MEX 26 09:44:10.2±0.5**, 15°.88N**×**98°.33W, h10**^{km}±11^{km}**, MD3.8, Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	0.54	21	*e*P	Pg	09 44 19.8	-1.0
PNIG				*e*S	Sg	09 44 27.2	-0.7
TLIG	**Tlapa**	1.69	352	*e*P	Pn	09 44 36.3	-3.6
TLIG				*e*S	Sn	09 44 56.8	-4.8
VHO	**Vista Hermosa**	1.93	52	*e*P	Pn	09 44 39.7	-3.7
VHO				*i* S	Sn	09 45 03.6	-4.2
CAIG	**El Cayaco**	2.19	302	*i* P	Pn	09 44 43.3	-3.5
CAIG				*i* S	Sn	09 45 09.0	-5.0
ARIG	**Puente Sto Nin**	3.07	321	*i* P	Pn	09 44 55.8	-3.1
ARIG				*e*S	Sn	09 45 32.0	-3.7

*IDC **26** 09:50:31.0±1.3, 39°.72N×74°.99E, h0^{km}, mb3.7/6, mb1 3.6/8, mb1mx3.4/65, mbtmp3.5/8, ML2.6/2, MS3.5/1, Ms1 3.5/1, ms1mx2.4/68, Error ellipse: s-maj=25.2km s-min=14.6km az=99.0*

*SOME **26** 09:50:34.0, 39°.85N×75°.27E, h0^{km}*

*NNC **26** 09:50:34.1±2.5, 40°.06N×75°.34E, h30^{km}±19^{km}, mb4.2, mpv3.7, Error ellipse: s-maj=24.3km s-min=10.5km az=142.0*

ISC 26 09:50:31.5±0.9**, 39°.86N**±0°.06×**75°.25E**±0°.03**, h10**^{km}**, n48, σ1^{s}.93**/59**, mb3.7**/6**, 11C-5D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSH	**Kashi**	0.65	121	Pg	Pg	09 50 34.8	-9.3
KSH				Sg	Sg	09 50 43.8	-8.8
KSH	comp=N,2μm,0.4s			smax	smax		
KSH	comp=E,2μm,0.4s			smax	smax		
SFK	**Sufi-Kurgan** comp=E,87nm,0.5s	1.36	277	⇑Pg	**Pb**	**09 51 00.7**	**+3.6**
SFK	comp=E,253nm,0.3s			⇑Lg	Lg	09 51 17.0	
KZA	**Kyzart** SNR=19	2.22	360	P	Pn	09 51 03.0	-5.7
UCH	**Uchtor** SNR=5.3	2.44	347	P	Pn	09 51 06.4	-5.3
ULHL	**Ulahol** SNR=10	2.50	17	P	Pn	09 51 06.4	-6.1
AML	**Almayashu** SNR=6.6	2.56	333	P	**Pg**	**09 51 19.9**	**-0.8**
KBK	**Karagaybulak** SNR=9.2	2.81	355	P	Pn	09 51 11.8	-4.9
AAK	**Ala-Archa** comp=E,21nm,0.3s,baz=161,slow=8.9,SNR=73	2.84	349	Pg	**Pg**	**09 51 24.2**	**-1.7**
AAK	comp=E,8.1nm,0.3s,baz=331,slow=20,SNR=2.0			Lg	Lg	09 52 03.2	
AAK	**Ala-Archa** comp=E,22nm,0.8s	2.84	349	Pn	**Pn**	**09 51 12.8**	**-4.2**
AAK	comp=E,110nm,0.8s			Pg	**Pg**	**09 51 23.6**	**-2.3**
AAK	comp=E,142nm,0.9s			Lg	Lg	09 51 59.5	
AAK	**Ala-Archa** SNR=14	2.84	349	P	Pn	09 51 12.0	-5.0
EKS2	**Erkin-Say** SNR=7.9	3.02	339	P	**Pn**	**09 51 15.2**	**-4.3**
TKM2	**Tokmak 2** comp=E,15nm,0.3s	3.07	5	⇑Pn	Pn	09 51 15.5	-4.8
TKM2	comp=E,78nm,0.4s			⇑Pg	**Pb**	**09 51 27.0**	**+0.6**
TKM2	comp=E,65nm,0.4s			⇓Lg	Lg	09 52 07.5	
TKM2	**Tokmak 2** SNR=48	3.07	5	P	Pn	09 51 15.2	-5.1
CHMS	**Chumysh** SNR=11	3.16	353	P	Pn	09 51 16.3	-5.1
KST	**Kastek** comp=E,55nm,0.5s	3.23	9	*e*P	**Pg**	**09 51 34.4**	**+1.0**
KST	comp=E,136nm,0.6s			*e*S	**Sg**	**09 52 18.3**	**+3.1**
MRKS	**Merke** comp=E,35nm,0.4s	3.27	333	*e*P	**Pg**	**09 51 35.4**	**+1.3**
MRKS	comp=E,81nm,0.5s			⇑*i*S	**Sg**	**09 52 19.7**	**+3.3**
IZV	**Izvestkoviy** comp=E,46nm,0.5s	3.34	17	*e*P	**Pg**	**09 51 36.4**	**+0.9**
IZV	comp=E,132nm,0.8s			*e*S	**Sg**	**09 52 21.9**	**+3.2**
MNAS	**Manas** comp=E,1.9nm,0.5s	3.35	323	⇑Pn	**Pn**	**09 51 24.5**	**+0.4**
MNAS	comp=E,9.4nm,0.5s			⇑Pg	**Pg**	**09 51 34.6**	**-1.1**
MNAS	comp=E,34nm,0.5s			⇓Lg	Lg	09 52 20.0	
MTBS	**Maitube** comp=E,16nm,0.4s	3.39	15	*e*P	**Pg**	**09 51 37.2**	**+0.7**
MTBS	comp=E,60nm,0.5s			*e*S	**Sg**	**09 52 23.1**	**+2.8**
DGS	**Degeres** comp=E,36nm,0.5s	3.41	6	*e*P	**Pg**	**09 51 37.8**	**+1.1**
DGS	comp=E,88nm,0.6s			*e*S	**Sg**	**09 52 23.7**	**+2.8**
TNSS	**Tian-Shan** comp=E,45nm,0.5s	3.42	21	*e*P	**Pg**	**09 51 38.1**	**+0.9**
TNSS	comp=E,95nm,0.6s			*e*S	**Sg**	**09 52 24.2**	**+2.7**
USP	**Ospenovka** SNR=6.3	3.46	351	P	Pn	09 51 20.4	-5.0
MDOK	**Medeo** comp=E,18nm,0.4s	3.57	22	*e*P	**Pg**	**09 51 40.1**	**+0.3**
MDOK	comp=E,85nm,0.8s			*e*S	**Sg**	**09 52 28.0**	**+1.9**
AAA	**Alma-Ata** comp=E,30nm,0.2s	3.58	20	*e*P	**Pg**	**09 51 40.8**	**+0.8**
AAA	comp=E,158nm,0.6s			*e*S	**Sg**	**09 52 28.7**	**+2.4**
KNDC	**Almaty** comp=E,29nm,0.4s	3.60	20	⇓Pg	**Pb**	**09 51 36.2**	**+1.0**
KNDC	comp=E,184nm,0.8s			⇓Lg	Lg	09 52 18.4	
KOTS	**Kotyrbulak** comp=E,28nm,0.5s	3.65	22	*e*P	**Pg**	**09 51 42.2**	**+0.8**
KOTS	comp=E,171nm,0.5s			*e*S	**Sg**	**09 52 31.2**	**+2.5**
KTBS	**Karatobe** comp=E,18nm,0.4s	4.00	15	*e*P	**Pg**	**09 51 48.3**	**+0.2**
KTBS	comp=E,81nm,0.5s			*e*S	**Sg**	**09 52 42.0**	**+2.1**
KUU	**Kurty** comp=E,14nm,0.7s	4.12	11	*e*P	**Pg**	**09 51 50.4**	**+0.1**
KUU	comp=E,92nm,0.6s			*e*S	**Sg**	**09 52 45.6**	**+2.0**
CHKK	**Chushkaly** comp=E,13nm,0.5s	4.20	17	*e*P	**Pg**	**09 51 51.6**	**-0.3**
CHKK	comp=E,51nm,0.6s			*e*S	**Sg**	**09 52 47.6**	**+1.3**
KURS	**Kuram** comp=E,14nm,0.7s	4.24	30	*e*P	**Pg**	**09 51 51.3**	**-1.3**
KURS	comp=E,33nm,0.9s			*e*S	**Sg**	**09 52 47.3**	**-0.2**
UZB	**Uzynbulak** comp=E,3.8nm,0.4s	4.34	39	*e*P	**Pg**	**09 51 52.1**	**-2.4**
UZB	comp=E,12nm,0.9s			*e*S	**Sg**	**09 52 49.2**	**-1.6**
KPKS	**Kokpek** comp=E,30nm,0.4s	4.43	34	*e*P	**Pg**	**09 51 54.1**	**-2.2**
KPKS	comp=E,75nm,0.4s			*e*S	**Sg**	**09 52 52.5**	**-1.1**
IUG	**Iuzhnay** comp=E,6.7nm,0.4s	4.57	302	*e*P	**Pg**	**09 51 58.0**	**-1.0**
IUG	comp=E,41nm,0.7s			*e*S	**Sg**	**09 52 57.9**	**-0.2**
PDGK	**Podgornoye** comp=E,3.5nm,0.7s	4.70	41	⇑Pn	**Pn**	**09 51 42.6**	**-0.1**
PDGK	comp=E,12nm,0.6s			⇑Pg	**Pb**	**09 51 55.6**	**+1.4**
PDGK	comp=E,35nm,0.8s			⇓Lg	Lg	09 52 54.5	
ARXS	**Arharly** comp=E,12nm,0.6s	4.76	23	*e*P	**Pg**	**09 52 02.6**	**0.0**
ARXS	comp=E,32nm,0.5s			*e*S	**Sg**	**09 53 06.5**	**+2.3**
KK31	**Karatay Array** comp=E,1.2nm,0.5s,baz=126,slow=13,SNR=11	4.82	314	⇑Pn	**Pn**	**09 51 45.0**	**+0.8**
KK31	comp=E,100nm,1.1s,baz=126,slow=28,SNR=6.8			⇑Lg	Lg	09 53 03.5	
BRLS	**Borolday** comp=E,0.7nm,0.5s	5.16	310	*e*P	**Pg**	**09 52 08.9**	**-1.4**
BRLS	comp=E,18nm,0.8s			*e*S	**Sg**	**09 53 16.7**	**-0.5**
BTLS	**Baital** comp=E,4.8nm,0.6s	5.26	351	*e*P	**Pg**	**09 52 10.3**	**-1.9**
BTLS	comp=E,29nm,0.7s			*e*S	**Sg**	**09 53 20.1**	**-0.2**
MKAR	**Makanchi Array** comp=E,0.1nm,0.3s,baz=223,slow=14,SNR=2.2	8.62	34	Pn	Pn	09 52 42.7	+6.4
MKAR	comp=E,0.1nm,0.3s,baz=218,slow=27,SNR=3.4			Lg	Lg	09 55 04.5	
WMQ	**Urumqi**	10.09	63	*e*P	**Pn**	**09 53 00.0**	**+3.5**
WMQ	comp=Z,26nm,0.7s			pmax	pmax		
WMQ	comp=Z,210nm,3.7s			pmax	pmax		
WMQ	comp=N,21nm,0.5s			smax	smax		
WMQ	comp=E,24nm,0.5s			smax	smax		
KURBB	**Kurchatov Arra** comp=E,0.0nm,0.3s,baz=199,slow=12,SNR=2.5	11.01	11	Pn	**Pn**	**09 53 12.4**	**+3.5**
KURBB	comp=E,0.1nm,0.3s,baz=204,slow=30,SNR=8.5			Lg	Lg	09 56 21.6	
BRTR	**Keskin Array B** comp=E,0.9nm,0.7s,baz=94,slow=7.1,SNR=5.2	31.77	283	P	**P**	**09 56 57.0**	**+1.0**
FINES	**FINESS Array B** comp=E,0.5nm,0.4s,baz=106,slow=8.8,SNR=3.9	36.72	323	P	**P**	**09 57 39.5**	**+1.1**
ARCES	**ARCESS Array B** comp=E,2.0nm,0.9s,baz=108,slow=8.8,SNR=6.9	39.42	335	P	**P**	**09 58 02.9**	**+1.7**
ATD	**Arta Tunnel** comp=E,63nm,20.5s,baz=268,slow=39	40.21	234	LR	LR	10 16 21.4	
HFS	**Hagfors** comp=E,1.3nm,0.8s,baz=61,slow=6.9,SNR=2.4	42.60	319	P	**P**	**09 58 28.6**	**+1.1**
TORD	**Torodi Ar. Bea** comp=E,0.2nm,0.4s,baz=28,slow=7.8	69.11	270	P	**P**	**10 01 37.6**	**-0.5**
WRA	**Warramunga Arr** comp=E,0.4nm,1.0s,baz=319,slow=4.0,SNR=1.5	81.05	125	P	**P**	**10 02 46.5**	**-0.3**

*SOME **26** 10:13:52.2, 42°.00N×81°.68E, h0^{km}*

*NNC **26** 10:13:54.3±1.7, 42°.01N×81°.65E, h0^{km}, mb3.4, mpv3.0, Error ellipse: s-maj=16.9km s-min=11.5km az=177.0*

ISC 26 10:13:53.6±2.4**, 41°.94N**±0°.10×**81°.52E**±0°.08**, h10**^{km}**, n16, σ2^{s}.01**/28**, 3C-4D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen** 14nm,0.2s	1.74	331	*e*P	**Pg**	**10 14 27.0**	**+0.1**
KTMS	21nm,0.4s			*e*S	**Sg**	**10 14 52.8**	**+3.4**
SHLS	**Shalkode** 32nm,0.2s	1.95	309	*e*P	**Pn**	**10 14 26.4**	**-0.6**
PDGK	**Podgornoye** 19nm,0.6s	2.04	314	⇓Pn	**Pb**	**10 14 30.4**	**-0.6**
PDGK	24nm,0.5s			⇑Lg	Lg	10 15 00.3	
UZB	**Uzynbulak** 12nm,0.1s	2.21	304	*e*P	**Pb**	**10 14 34.6**	**+0.9**
UZB	36nm,0.3s			*e*S	**Sg**	**10 15 05.4**	**+0.8**
KPKS	**Kokpek** 16nm,0.1s	2.59	307	*e*P	**Pb**	**10 14 40.0**	**-0.2**
KPKS	38nm,0.4s			*e*S	**Sb**	**10 15 14.1**	**+2.0**
ZHN	**Zhinishke** 11nm,0.1s	2.59	299	*e*P	**Pb**	**10 14 41.1**	**+0.8**
ZHN	21nm,0.2s			*e*S	**Sg**	**10 15 16.1**	**-0.7**
DJR	**Jarkent** 2.9nm,0.5s	2.71	333	*e*P	**Pg**	**10 14 44.2**	**-1.4**
DJR	9.6nm,0.4s			*e*S	**Sg**	**10 15 22.1**	**+1.5**
KOTS	**Kotyrbulak** 2.6nm,0.4s	3.50	293	*e*P	**Pg**	**10 15 00.4**	**-0.3**
KOTS	15nm,0.4s			*e*S	**Sg**	**10 15 49.1**	**+2.9**
ARXS	**Arharly** 3.2nm,0.6s	3.53	311	*e*P	**Pg**	**10 14 59.9**	**-1.4**
ARXS	6.0nm,0.6s			*e*S	**Sg**	**10 15 48.8**	**+1.6**
TNSS	**Tian-Shan** 3.5nm,0.4s	3.56	290	*e*P	**Pb**	**10 14 58.3**	**+1.4**
TNSS	5.5nm,0.5s			*e*S	**Sg**	**10 15 45.5**	**-2.4**
KAPS	**Kapalarasan** 3.5nm,0.3s	3.70	336	*e*P	**Pg**	**10 15 00.3**	**-4.1**
KAPS	4.3nm,0.4s			*e*S	**Sg**	**10 15 49.1**	**-3.2**
KTBS	**Karatobe** 5.0nm,0.6s	3.98	298	*e*P	**Pg**	**10 15 06.8**	**-3.0**
KTBS	5.0nm,0.6s			*e*S	**Sg**	**10 16 00.2**	**-1.1**
KUU	**Kurty** 5.3nm,0.5s	4.28	299	⇓*i*P	**Pg**	**10 15 13.1**	**-2.5**
KUU	5.3nm,0.6s			*e*S	**Sg**	**10 16 11.0**	**0.0**
DGS	**Degeres** 2.6nm,0.4s	4.44	289	*e*P	**Pb**	**10 15 14.5**	**+2.8**
DGS	5.6nm,0.7s			*e*S	**Sg**	**10 16 14.0**	**-2.2**
MAKZ	**Makanchi** 1.0nm,0.3s	4.88	4	⇓Pn	**Pn**	**10 15 08.2**	**+1.1**
MAKZ	1.5nm,0.8s			⇑Lg	Lg	10 16 26.3	
MK31	**Makanchi Array** 0.2nm,0.3s,baz=193,slow=13,SNR=28	4.88	6	⇑Pn	**Pn**	**10 15 07.6**	**+0.4**
MK31	1.7nm,0.6s,baz=192,slow=31,SNR=6.6			⇓Lg	Lg	10 16 27.3	

*IDC **26** 10:20:03.3±0.3, 21°.05S×174°.45W, h0^{km}, mb4.9/30, mb1 5.0/31, mb1mx4.8/51, mbtmp4.8/31, ML4.9/1, MS5.0/23, Ms1 5.0/23, ms1mx4.8/50, Error ellipse: s-maj=15.3km s-min=11.9km az=116.0*

*ISCJB **26** 10:20:04.1±0.1, 21°.04S±0°.03×174°.46W±0°.03, h10^{km}, mb5.2/241, MS5.3/638, Error ellipse: s-maj=5.7km s-min=2.9km az=140.4*

*BJI **26** 10:20:05.0, 20°.57S×174°.27W, h6^{km}, mb5.2/51, mB5.8/48, Ms5.4/61, Ms7 5.1/56*

*NEIC **26** 10:20:05.5±0.1, 21°.02S×174°.49W, h10^{km}, mb5.4/193, MS5.3/300, MW5.5, Error ellipse: s-maj=5.8km s-min=3.1km az=136.0, Moment Tensor Solution. s80 Moment tensor: Scale 10^{17}Nm; M_{rr}2.03; $M_{\theta\theta}$-0.31; $M_{\phi\phi}$-1.72; $M_{r\theta}$0.40; $M_{\theta\phi}$-0.97; $M_{\phi r}$1.43; Best double couple: $M_0$2.60000×10^{17} NP1:ϕ_s215.00000°, δ28.00000°, λ103.00000°. NP2:ϕ_s20.00000°, δ63.00000°, λ83.00000°. Principal axes: T 2.5100, Plg72.0000°, Azm275.0000°; N 0.1600, Plg6.0000°, Azm23.0000°; P -2.6600, Plg17.0000°, Azm115.0000°;*

*GCMT **26** 10:20:05.5±0.1, 21°.25S×173°.82W, h20^{km}, MW5.6/131, Moment Tensor Solution. s103,c178; s131,c284; Duration: 1^{s}.6 Moment tensor: Scale 10^{17}Nm; M_{rr}2.90±.06; $M_{\theta\theta}$-0.36±.04; $M_{\phi\phi}$-2.54±.04; $M_{r\theta}$0.56±.08; $M_{\theta\phi}$-1.00±.02; $M_{\phi r}$1.31±.07; Best double couple: $M_0$3.24400×10^{17} NP1:ϕ_s22.00000°, δ58.00000°, λ91.00000°. NP2:ϕ_s200.00000°, δ32.00000°, λ88.00000°. Principal axes: T 3.2310, Plg77.0000°, Azm295.0000°; N 0.0280, Plg1.0000°, Azm202.0000°; P -3.2570, Plg13.0000°, Azm111.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*MOS **26** 10:20:08.4±1.3, 20°.83S×174°.62W, h33^{km}, mb5.3/56, MS5.3/40 Error ellipse: s-maj=10.3km s-min=8.0km az=68.8*

ISC 26 10:20:05.7±0.4**, 21°.13S**±0°.04×**174°.24W**±0°.05**, h16**^{km}±2^{km}**, h16**^{km}**:pP-P, n1159, σ1^{s}.78**/811**, mb5.3**/240**, MS5.3**/646**, 46C-27D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	**Niue** baz=4.2,SNR=119	4.54	64	P	Pn	10 21 06.3	-7.4
AFI	**Afiamalu** 25nm,0.3s,baz=197,slow=2.4,SNR=43	7.55	19	Pn	Pn	10 21 49.3	-5.9
AFI	19nm,0.3s,baz=121,slow=19,SNR=2.7			Sn	Sn	10 23 06.8	-14
AFI	comp=Z,7μm,20.0s,baz=192,slow=37			LR	LR	10 24 40.1	
AFI	**Afiamalu**	7.55	19	*e*Pn	Pn	10 21 49.5	-5.7
AFI				*e*		10 21 49.7	
AFI				*e*Sn	Sn	10 23 06.8	-14
AFI	**Afiamalu**	7.55	19	*e*P	Pn	10 21 49.5	-5.7
RAO	**Raoul Island** 40nm,0.3s,baz=72,slow=19,SNR=2.3	8.75	202	Pn	Pn	10 22 03.9	-7.6
RAO	62nm,0.3s,baz=343,slow=19,SNR=2.5			Sn	**Sn**	**10 23 42.7**	**-7.1**
RAO	comp=Z,6μm,18.4s,baz=22,slow=38			LR	LR	10 25 40.3	
RAO	**Raoul Island**	8.75	202	*e*Pn	Pn	10 22 03.9	-7.6
RAO				*e*Pn	**Pn**	**10 22 11.7**	**+0.1**
RAO				*e*Sn	**Sn**	**10 23 42.8**	**-7.1**
RAO				*e*Sn	**Sn**	**10 23 49.1**	**-0.8**
RAR	**Rarotonga** 26nm,0.3s,baz=269,slow=8.3,SNR=47	13.50	93	Pn	Pn	10 23 08.8	-7.7
RAR	4.7nm,0.3s,baz=168,slow=20,SNR=3.9			Sn	Sn	10 25 23.8	-23
RAR	comp=Z,6μm,18.1s,baz=224,slow=40			LR	LR	10 29 10.8	
RAR	**Rarotonga**	13.50	93	*e*Pn	Pn	10 23 08.5	-8.1
RAR				*e*Sn	Sn	10 25 23.8	-23
DZM	**Mont Dzumac** 373nm,1.2s	17.99	263	*e*P	**P**	**10 24 17.3**	**+1.6**
DZM	2μm,24.5s			*e*S	**Sn**	**10 27 34.7**	**-1.0**
DZM	26μm,25.9s			*e*LQ	LQ	10 28 18.0	
DZM	11μm,22.3s			*e*LR	LR	10 28 31.6	
DZM	**Mont Dzumac** 2.6nm,0.3s,baz=73,slow=14,SNR=26	17.99	263	P	**P**	**10 24 18.1**	**+2.4**
DZM	comp=Z,10μm,19.8s,baz=94,slow=34			LR	LR	10 30 07.9	
DZM	**Mont Dzumac** 148nm,1.1s	17.99	263	*e*Pn	**P**	**10 24 15.4**	**-0.3**
URZ	**Urewera** 4.2nm,0.3s,baz=288,slow=3.4,SNR=18	18.64	202	P	**Pn**	**10 24 23.9**	**+0.9**
URZ	2.2nm,0.3s,baz=330,slow=20,SNR=6.6			S	Sn	10 27 36.6	-14
URZ	**Urewera** 62nm,0.8s	18.64	202	*e*P	**Pn**	**10 24 23.8**	**+0.8**
URZ				*e*P	**Pn**	**10 24 23.9**	**+0.9**
URZ				*e*Sn	Sn	10 27 36.6	-14
URZ				*e*Sn	S	10 27 40.7	-14
BKZ	**Black Stump Fm** 39nm,0.9s	19.66	202	*e*P	**Pn**	**10 24 35.4**	**0.0**
BFZ	**Birch Farm** 317nm,1.5s	21.11	200	*e*P	**P**	**10 24 51.6**	**+2.1**
BFZ	comp=Z,8μm,18.0s			LR	LR		
SNZO	**South Karori**	22.20	202	*e*P	**P**	**10 25 01.4**	**+0.2**
SNZO				*e*sP	**sP**	**10 25 08.4**	**+0.4**
SNZO	comp=Z,5μm,18.0s			LR	LR		
BSWZ	**Blackbirch Sta**	22.85	203	P	P	10 25 15.4	+7.2
TBI	**Tubuai** comp=Z,2μm,24.1s	23.04	100	*e*S	**S**	**10 29 12.6**	**-7.9**
TBI	comp=Z,6μm,27.2s			*e*LQ	LQ	10 29 33.6	
TBI	comp=Z,10μm,29.0s,baz=276			*e*LR	LR	10 30 38.0	
TBI	**Tubuai** comp=Z,15nm,0.3s	23.04	100	*e*T	T	10 48 44.3	
THZ	**Tophouse**	23.26	205	*e*P	**P**	**10 25 12.8**	**+0.3**

	comp=Z,86nm,0.9s						
THZ				LR	LR		
	comp=Z,6µm,19.0s						
PAE	Paea	23.51	86	*e*P	P	10 25 12.7	-2.4
	comp=Z,9.4nm,0.9s						
PAE	Paea	23.51	86	*e*T	T	10 49 16.0	
	comp=Z,14nm,0.4s						
PPT2	Papeete2	23.53	86	*e*P	P	10 25 13.1	-2.2
	comp=Z,132nm,1.3s						
PPT2				*e*S	S	10 29 19.2	-10
	comp=Z,2µm,24.2s						
PPT2				*e*LQ	LQ	10 29 39.0	
	comp=Z,9µm,27.0s						
PPT2				*e*LR	LR	10 30 47.0	
	comp=Z,12µm,27.2s,baz=254						
PPT2	Papeete2	23.53	86	*e*T	T	10 49 20.8	
	comp=Z,13nm,0.4s						
PPT	Papeete	23.53	86	LR	LR	10 34 06.5	
	comp=Z,4µm,18.1s,baz=264,slow=36						
PPTF	Pamatai, Papee	23.54	86	PFAKE		10 25 30.0	+15
PPTF				LR	LR		
	comp=Z,6µm,20.0s						
KHZ	Kahutara	23.58	203	*e*P	P	10 25 16.2	+0.7
	comp=Z,116nm,1.3s						
KHZ				LR	LR		
	comp=Z,5µm,21.0s						
DSZ	Denniston Nort	23.70	207	P	P	10 25 20.0	+3.3
TIAR	Tiarei	23.75	86	*e*P	P	10 25 15.3	-2.1
	comp=Z,32nm,1.0s						
TVO	Taravao	23.79	86	*e*P	P	10 25 15.5	-2.4
	comp=Z,49nm,1.2s						
TVO	Taravao	23.79	86	*e*T	T	10 49 33.2	
	comp=Z,4.4nm,0.4s						
LTZ	Lake Taylor	24.38	205	*e*P	P	10 25 23.8	+0.7
	comp=Z,86nm,0.6s						
LTZ				LR	LR		
	comp=Z,6µm,20.0s						
LTZ	Lake Taylor	24.38	205	P	P	10 25 26.5	+3.4
INZ	Inchbonnie	24.66	206	P	P	10 25 26.0	+0.4
OXZ	Oxford	24.93	204	*e*P	P	10 25 27.4	-0.7
	comp=Z,181nm,1.0s						
OXZ				LR	LR		
	comp=Z,5µm,18.0s						
OXZ	Oxford	24.93	204	P	P	10 25 31.3	+3.3
MQZ	McQueen's Vall	25.02	203	PFAKE		10 25 40.0	+11
MQZ				LR	LR		
	comp=Z,4µm,20.0s						
MQZ	McQueen's Vall	25.02	203	P	P	10 25 32.6	+3.7
WVZ	Waitaha Valley	25.24	206	P	P	10 25 32.3	+1.5
TARA	Tarawa	25.63	329	PFAKE		10 25 40.0	+5.4
TARA				LR	LR		
	comp=Z,8µm,18.0s						
RPZ	Rata Peaks	25.64	205	P	P	10 25 33.9	-0.6
	comp=Z,21nm,0.8s,baz=6.0,slow=4.0,SNR=8.5						
RPZ				LR	LR	10 35 31.9	
	comp=Z,8µm,19.0s,baz=23,slow=36						
RPZ	Rata Peaks	25.64	205	*e*P	P	10 25 33.9	-0.6
RPZ				*e*P	P	10 25 35.1	+0.5
RPZ	Rata Peaks	25.64	205	P	P	10 25 37.1	+2.6
VAH	Vaihoa	25.93	81	*e*P	P	10 25 35.3	-2.1
	comp=Z,178nm,1.4s						
FOZ	Fox Glacier	26.00	207	*e*P	P	10 25 40.1	+2.4
	comp=Z,329nm,0.9s						
FOZ				LR	LR		
	comp=Z,9µm,18.0s						
FOZ	Fox Glacier	26.00	207	P	P	10 25 39.7	+1.9
LHI	Lord Howe Isla	26.01	241	PFAKE		10 25 50.0	+12
LHI				LR	LR		
	comp=Z,2µm,18.0s						
LBZ	Lake Benmore	26.55	206	*e*P	P	10 25 45.5	+2.8
	comp=Z,88nm,1.1s						
LBZ				LR	LR		
	comp=Z,11µm,18.0s						
LBZ	Lake Benmore	26.55	206	P	P	10 25 45.3	+2.6
JCZ	Jackson Bay	26.88	208	P	P	10 25 48.5	+2.7
ODZ	Otahua Downs	26.92	204	*e*P	P	10 25 47.0	+1.0
	comp=Z,221nm,1.7s						
ODZ				LR	LR		
	comp=Z,6µm,18.0s						
ODZ	Otahua Downs	26.92	204	P	P	10 25 50.8	+4.8
WKZ	Wanaka	27.39	206	*e*P	P	10 25 53.5	+3.2
	comp=Z,192nm,1.1s						
WKZ				LR	LR		
	comp=Z,6µm,19.0s						
WKZ	Wanaka	27.39	206	P	P	10 25 53.5	+3.2
HNR	Honiara	27.43	291	LR	LR	10 35 14.2	
	comp=Z,3µm,19.6s,baz=126,slow=34						
MSZ	Milford Sound	27.73	208	P	P	10 25 58.7	+5.4
MLZ	Mavora Lakes	28.20	207	*e*P	P	10 25 57.7	+0.2
	comp=Z,57nm,0.9s						
MLZ				LR	LR		
	comp=Z,6µm,18.0s						
XMAS	Kiritimati	28.29	38	PFAKE		10 26 10.0	+11
XMAS				LR	LR		
	comp=Z,6µm,18.0s						
DCZ	Deep Cove	28.69	208	*e*P	P	10 26 04.1	+2.3
	comp=Z,44nm,0.9s						
DCZ				LR	LR		
	comp=Z,4µm,18.0s						
WHZ	Wether Hill Ro	28.69	206	*e*P	P	10 26 04.7	+2.8
	comp=Z,67nm,1.2s						
WHZ				LR	LR		
	comp=Z,4µm,20.0s						
PYZ	Puysegur Point	29.45	208	PFAKE		10 26 20.0	+11
PYZ				LR	LR		
	comp=Z,6µm,18.0s						
ARMA	Armidale	32.00	246	P	P	10 26 32.6	+1.1
	baz=32,SNR=4.2						
ARMA	Armidale	32.00	246	*e*P	P	10 26 31.5	0.0
	comp=Z,23nm,1.1s						
ARMA				LR	LR		
	comp=Z,3µm,18.0s						
EIDS	Eidsvold	32.09	256	P	P	10 26 31.4	-0.8
	baz=32,SNR=6.0						
EIDS	Eidsvold	32.09	256	*e*P	P	10 26 31.3	-0.8
	comp=Z,16nm,0.8s						
EIDS				LR	LR		
	comp=Z,4µm,18.0s						
MGCD	Mangrove Creek	32.95	241	P	P	10 26 40.1	+0.6
	baz=33,SNR=5.1						
RMQ	Roma	34.19	254	P	P	10 26 51.1	+0.6
	baz=34,SNR=16						
CNB	Canberra Magne	34.84	238	P	P	10 26 56.0	-0.1
	baz=35,SNR=5.9						
TAOE	Nuku Hiva Isla	35.03	75	*e*S	S	10 32 23.6	-6.3
	comp=Z,772nm,24.2s						
TAOE				*e*LQ	LQ	10 34 44.5	
	comp=Z,2µm,23.0s						
TAOE				*e*LR	LR	10 36 03.0	
	comp=Z,6µm,29.3s,baz=249						
TAOE	Nuku Hiva Isla	35.03	75	*e*T	T	11 03 48.9	
	comp=Z,50nm,0.3s						
CAN	Canberra	35.13	238	*e*P	P	10 26 57.8	-0.8
	comp=Z,20nm,1.0s						
CAN				LR	LR		
	comp=Z,3µm,18.0s						
CAN	Canberra	35.13	238	*e*P	P	10 26 57.8	-0.8
CAN				pmax	pmax		
	comp=Z,21nm,1.0s						
CAN				MLR	MLR		
	comp=Z,3µm,18.0s						
RKT	Rikitea	36.36	101	*e*LR	LR	10 36 46.6	
	comp=Z,4µm,29.0s,baz=275						
RKT	Rikitea	36.36	101	*e*T	T	11 05 29.9	
	comp=Z,8.1nm,0.3s						
RABL	Rabaul	36.72	293	PFAKE		10 27 20.0	+7.6
RABL				LR	LR		
	comp=Z,3µm,21.0s						
CTAO	Charters Tower	36.93	264	*e*P	P	10 27 13.3	-0.8
	comp=Z,16nm,0.6s						
CTAO				LR	LR		
	comp=Z,4µm,18.0s						
CTAO	Charters Tower	36.93	264	*e*P	P	10 27 13.3	-0.8
CTAO				pmax	pmax		
	comp=Z,16nm,0.6s						
CTAO				MLR	MLR		
	comp=Z,4µm,18.0s						
CMSA	Cobar Meteorol	37.20	245	P	P	10 27 15.0	-1.3
	baz=38,SNR=28						
JOHN	Johnston Islan	37.91	7	PFAKE		10 27 30.0	+7.7
JOHN				LR	LR		
	comp=Z,3µm,19.0s						
QLP	Quilpie	38.24	254	P	P	10 27 23.3	-1.9
	baz=38,SNR=18						
TOO	Toolangi	38.41	236	P	P	10 27 26.0	-0.5
	baz=39,SNR=10						
TOO	Toolangi	38.41	236	P	P	10 27 27.6	+1.1
TOO				pmax	pmax		
	comp=Z,16nm,1.0s						
MOO	Moorlands	38.63	228	P	P	10 27 30.3	+2.1
	baz=39,SNR=6.2						
TAU	Tasmania Unive	38.71	227	PFAKE		10 27 40.0	+11
TAU				LR	LR		
	comp=Z,4µm,18.0s						
PMG	Port Moresby	38.91	281	P	P	10 27 27.9	-3.0
	comp=Z,16nm,0.6s,baz=118,slow=9.7,SNR=6.8						
PMG				LR	LR	10 41 48.3	
	comp=Z,3µm,18.3s,baz=157,slow=34						
MTSU	Mount Surprise	39.07	267	P	P	10 27 31.3	-1.0
	baz=39,SNR=25						
STKA	Stephens Creek	40.70	245	P	P	10 27 43.5	-2.2
	comp=Z,11nm,0.6s,baz=92,slow=10,SNR=23						
STKA				LR	LR	10 43 29.1	
	comp=Z,2µm,18.7s,baz=101,slow=35						
STKA	Stephens Creek	40.70	245	P	P	10 27 44.6	-1.1
	baz=41,SNR=18						
STKA	Stephens Creek	40.70	245	*e*P	P	10 27 45.4	-0.3
COEN	Coen	41.13	273	P	P	10 27 48.4	-1.0
	baz=41,SNR=14						
COEN	Coen	41.13	273	*e*P	P	10 27 47.9	-1.5
	comp=Z,86nm,1.7s						
COEN				LR	LR		
	comp=Z,4µm,20.0s						
MANU	Manus Island	41.93	292	PFAKE		10 28 10.0	+14
MANU				LR	LR		
	comp=Z,3µm,18.0s						
QIS	Mount Isa	43.02	262	P	P	10 28 04.5	-0.3
	baz=43,SNR=4.0						
HTT	Hallett	43.07	243	P	P	10 28 03.7	-1.3
	baz=43,SNR=8.8						
WAKE	Wake Island	44.30	334	PFAKE		10 28 30.0	+15
WAKE				LR	LR		
	comp=Z,3µm,19.0s						
KKO	Keanakako'i	44.35	26	PFAKE		10 28 30.0	+15
KKO				LR	LR		
	comp=Z,1µm,19.0s						
HATHI	Halema'uma'u T	44.37	26	PFAKE		10 28 30.0	+14
HATHI				LR	LR		
	comp=Z,2µm,20.0s						
STCH	Steam Cracks	44.40	26	PFAKE		10 28 30.0	+14
STCH				LR	LR		
	comp=Z,1µm,20.0s						
KIP	Kipapa	45.16	22	*i* P	P	10 28 22.3	+0.6
BBOO	Buckleboo	45.43	244	PFAKE		10 28 40.0	+16
BBOO				LR	LR		
	comp=Z,3µm,18.0s						
AS01	Alice Springs	47.76	257	*e*P	P	10 28 40.0	-2.4
AS31	Alice Springs	47.80	257	*e*P	P	10 28 41.0	-1.7
	comp=Z,20nm,1.2s						
AS31				*e*PcP	PcP	10 30 11.4	-0.2
AS31				*e*S	S	10 35 32.5	-6.5
ASAR	Alice Springs	47.80	257	P	P	10 28 40.9	-1.8
	comp=Z,25nm,0.7s,baz=96,slow=7.7,SNR=178						
ASAR				PcP	PcP	10 30 11.4	-0.2
	comp=Z,4.9nm,0.8s,baz=95,slow=6.0,SNR=2.3						
ASAR				S	S	10 35 32.5	-6.5
	comp=Z,1.5nm,1.0s,baz=97,slow=16,SNR=4.1						
WR0	Warramunga Arr	47.81	262	PFAKE		10 28 50.0	+7.3
WR0				LR	LR		
	comp=Z,3µm,19.0s						
WR9	Warramunga Arr	47.83	262	PFAKE		10 28 50.0	+7.1
WR9				LR	LR		
	comp=Z,3µm,18.0s						
WR8	Warramunga Arr	47.84	262	PFAKE		10 28 50.0	+7.0
WR8				LR	LR		
	comp=Z,4µm,18.0s						
WR7	Warramunga Arr	47.87	262	PFAKE		10 28 50.0	+6.8
WR7				LR	LR		
	comp=Z,3µm,18.0s						
WR6	Warramunga Arr	47.89	262	PFAKE		10 28 50.0	+6.6
WR6				LR	LR		
	comp=Z,3µm,18.0s						
WR5	Warramunga Arr	47.91	262	PFAKE		10 28 50.0	+6.5
WR5				LR	LR		
	comp=Z,3µm,18.0s						
WR4	Warramunga Arr	47.93	262	PFAKE		10 28 50.0	+6.3
WR4				LR	LR		
	comp=Z,3µm,19.0s						
WR3	Warramunga Arr	47.95	262	PFAKE		10 28 50.0	+6.1
WR3				LR	LR		
	comp=Z,3µm,19.0s						
WC3	Warramunga Arr	47.96	262	PFAKE		10 28 50.0	+6.0
WC3				LR	LR		
	comp=Z,3µm,20.0s						
WR2	Warramunga Arr	47.97	262	PFAKE		10 29 00.0	+16
WR2				LR	LR		
	comp=Z,3µm,18.0s						
WC2	Warramunga Arr	47.97	262	PFAKE		10 29 00.0	+16
WC2				LR	LR		
	comp=Z,4µm,19.0s						
WB0	Warramunga Arr	47.98	262	PFAKE		10 29 00.0	+16
WB0				LR	LR		
	comp=Z,4µm,18.0s						
WB8	Warramunga Arr	47.98	262	PFAKE		10 29 00.0	+16
WB8				LR	LR		
	comp=Z,3µm,18.0s						
WB5	Warramunga Arr	47.98	262	PFAKE		10 29 00.0	+16
WB5				LR	LR		
	comp=Z,4µm,18.0s						
WB9	Warramunga Arr	47.98	262	PFAKE		10 29 00.0	+16
WB9				LR	LR		
	comp=Z,7µm,18.0s						
WB3	Warramunga Arr	47.98	262	PFAKE		10 29 00.0	+16
WB3				LR	LR		
	comp=Z,3µm,18.0s						
WB2	Warramunga Arr	47.98	262	*e*P	P	10 28 41.9	-2.2
WB2				*e*P	P	10 28 42.3	-1.8
WB2				LR	LR		
	comp=Z,3µm,18.0s						
WB4	Warramunga Arr	47.98	262	PFAKE		10 29 00.0	+16
WB4				LR	LR		
	comp=Z,4µm,18.0s						
WB6	Warramunga Arr	47.99	262	PFAKE		10 29 00.0	+16
WB6				LR	LR		
	comp=Z,3µm,18.0s						
WRAB	Tennant Creek	47.99	262	*e*P	P	10 28 42.2	-2.0
	comp=Z,73nm,1.6s						
WRAB				LR	LR		
	comp=Z,3µm,18.0s						
WRAB	Tennant Creek	47.99	262	*ce*P	P	10 28 41.3	-2.8
WRAB				pmax	pmax		
	comp=Z,14nm,0.7s						
WC4	Warramunga Arr	47.99	262	PFAKE		10 29 00.0	+16
WC4				LR	LR		
	comp=Z,3µm,18.0s						
WR1	Warramunga Arr	47.99	262	*e*P	P	10 28 41.5	-2.7
	comp=Z,28nm,0.9s						
WR1				*e*PcP	PcP	10 30 12.5	+0.2
WR1				*e*S	S	10 35 35.6	-6.2
WR1				LR	LR		
	comp=Z,4µm,18.0s						
WRA	Warramunga Arr	47.99	262	P	P	10 28 41.5	-2.7
	comp=Z,10nm,0.7s,baz=93,slow=8.3,SNR=94						
WRA				PcP	PcP	10 30 12.5	+0.2
	comp=Z,5.0nm,0.7s,baz=93,slow=3.7,SNR=3.4						
WRA				S	S	10 35 35.6	-6.3
	comp=Z,1.0nm,0.8s,baz=96,slow=13,SNR=3.2						
WC1	Warramunga Arr	48.00	262	PFAKE		10 29 00.0	+16
WC1				LR	LR		
	comp=Z,3µm,18.0s						
MIDW	Midway	49.14	356	PFAKE		10 29 00.0	+7.3
MIDW				LR	LR		
	comp=Z,3µm,19.0s						
KDU	Kakadu	51.48	270	P	P	10 29 09.4	-1.3
	baz=52,SNR=9.9						
FORT	Forrest	52.28	247	P	P	10 29 17.3	+0.7
	baz=52,SNR=19						
FORT	Forrest	52.28	247	*e*P	P	10 29 16.1	-0.4
	comp=Z,81nm,0.7s						
FORT				LR	LR		
	comp=Z,2µm,18.0s						
WRKA	Warakurna	52.68	254	P	P	10 29 17.5	-2.1
	baz=53,SNR=81						
MTN	Manton Dam	52.68	270	P	P	10 29 17.9	-1.8
	baz=53,SNR=11						
MTN	Manton Dam	52.68	270	*e*P	P	10 29 17.9	-1.8
	comp=Z,15nm,0.6s						
MTN				LR	LR		
	comp=Z,3µm,21.0s						
GUMO	Guam	52.94	307	P	P	10 29 20.0	-1.5
	comp=Z,27nm,0.6s,baz=164,slow=15,SNR=3.5						
GUMO				LR	LR	10 48 43.6	
	comp=Z,1µm,21.8s,baz=140,slow=33						
KNRA	Kununurra	54.12	266	P	P	10 29 28.9	-1.4
	baz=54,SNR=11						
KMBL	Kambalda	57.51	246	P	P	10 29 54.8	+0.4
	baz=58,SNR=4.3						
SBA	Scott Base	57.51	185	*e*P	P	10 29 59.1	+5.5
	comp=Z,71nm,1.1s						
SBA				LR	LR		
	comp=Z,1µm,19.0s						
SBA	Scott Base	57.51	185	P	P	10 29 59.1	+5.4
SBA				pmax	pmax		
	comp=Z,71nm,1.1s						
VNDA	Vanda	57.63	186	P	P	10 29 55.1	+0.6
	comp=Z,3.9nm,0.7s,baz=1.7,slow=5.3,SNR=19						
VNDA	Vanda	57.63	186	*e*P	P	10 29 56.9	+2.4
	comp=Z,28nm,1.2s						
VNDA	Vanda	57.63	186	P	P	10 29 55.1	+0.6
VNDA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
RPN	Rapa Nui	58.98	110	LR	LR	10 51 17.8	
	comp=Z,3µm,18.2s,baz=270,slow=32						
SOEI	Soe	60.03	271	PFAKE		10 30 20.0	+7.7
SOEI				LR	LR		
	comp=Z,2µm,18.0s						
KLBR	Kellerberrin	60.98	245	P	P	10 30 18.6	+0.1
	baz=61,SNR=13						
MEEK	Meekatharra	61.03	251	P	P	10 30 17.5	-1.4
	baz=61,SNR=10						
MBWA	Marble Bar	61.14	257	*e*P	P	10 30 18.5	-1.3
	comp=Z,28nm,0.6s						
MBWA				LR	LR		
	comp=Z,2µm,19.0s						
NWAO	Narrogin (SRO)	61.23	243	PFAKE		10 30 30.0	+10
NWAO				LR	LR		
	comp=Z,2µm,18.0s						
BLDU	Ballidu	62.01	246	P	P	10 30 23.8	-1.7
	baz=62,SNR=24						
MUN	Mundaring	62.22	244	P	P	10 30 27.3	+0.4
	baz=62,SNR=7.3						
MORW	Morawa	62.84	247	P	P	10 30 30.2	-0.9
	baz=63,SNR=16						
CASY	Casey	64.91	206	*e*P	P	10 30 45.3	+1.4
	comp=Z,44nm,1.0s						
DAV	Davao City (W)	65.36	289	PFAKE		10 31 00.0	+12
DAV				LR	LR		
	comp=Z,1µm,19.0s						
GIRL	Giralia	65.77	254	P	P	10 30 50.1	-0.1
	baz=66,SNR=8.9						
QSPA	South Pole Qui	68.95	180	P	P	10 31 11.2	+1.4
	comp=Z,26nm,1.1s,baz=8.4,slow=1.6,SNR=10.0						
QSPA	South Pole Qui	68.95	180	*e*P	P	10 31 11.2	+1.4
QSPA				*e*P	P	10 31 11.6	+1.7
QSPA				LR	LR		
	comp=Z,1µm,19.0s						
MYLDM	Lahad Datu	70.89	284	*e*P	P	10 31 25.5	+3.0
	comp=Z,42nm,1.1s						
MIR	Mirnyy	71.91	205	*e*P	P	10 31 31.5	+3.8
MIR				*e*		10 31 54.0	
MIR				*e*S	S	10 40 56.0	+8.2
MIR				pmax	pmax		
	comp=Z,108nm,1.5s						
MIR				MLR	MLR		
	comp=N,970nm,16.0s						
MIR				MLR	MLR		
	comp=E,700nm,16.0s						
MIR				MLR	MLR		
	comp=Z,1µm,16.0s						
TGY	Tagaytay City	72.63	293	LR	LR	11 02 45.9	
	comp=Z,608nm,18.6s,baz=136,slow=35						
INU	Inuyama	72.73	320	PFAKE		10 31 40.0	+7.0
INU				LR	LR		
	comp=Z,1µm,18.0s						
MAJO	Matsushiro	72.84	322	PFAKE		10 31 50.0	+16
MAJO				LR	LR		
	comp=Z,800nm,20.0s						
MJB9	Matsu-Tunnel	72.84	322	PFAKE		10 31 50.0	+16
MJB9				LR	LR		
	comp=Z,900nm,20.0s						
ATKA	Atka Island	73.01	0	PFAKE		10 31 50.0	+16
ATKA				LR	LR		
	comp=Z,800nm,20.0s						
JOW	Kunigami	73.29	308	LR	LR	10 58 31.6	
	comp=Z,930nm,22.0s,baz=124,slow=32						
KKM	Kota Kinabalu	73.32	283	*e*P	P	10 31 35.9	-1.3
	comp=Z,65nm,1.4s						
KKM				LR	LR		
	comp=Z,600nm,21.0s						
ERM	Erimo	74.15	328	PFAKE		10 31 50.0	+8.8
ERM				LR	LR		
	comp=Z,2µm,19.0s						
YUK	Yuzh-Kuril'sk	74.43	331	*c i*P	P	10 31 43.9	+1.1
YUK				*i*		10 31 59.9	
YUK				*i*		10 34 31.1	
YUK				*i* PPP	PPP	10 36 15.2	
YUK				*i* S	S	10 41 19.8	+3.0
YUK				pmax	pmax		
	comp=Z,105nm,1.6s						
YUK				pmax	pmax		
	comp=N,72nm,1.1s						
YUK				pmax	pmax		
	comp=Z,72nm,1.1s						
YUK				pmax	pmax		
	comp=E,54nm,1.0s						
KUR	Kuril'sk	74.51	333	*c i*P	P	10 31 43.4	+0.1
KUR				*i* S	S	10 41 19.0	+1.3
KUR				pmax	pmax		
	comp=Z,643nm,6.8s						
KUR				pmax	pmax		
	comp=N,35nm,1.3s						
KUR				pmax	pmax		
	comp=Z,79nm,1.3s						
KUR				pmax	pmax		
	comp=E,25nm,1.1s						
KUR				MLR	MLR		
	comp=E,222nm,18.0s						
KUR				MLR	MLR		
	comp=Z,939nm,18.0s						
KUR				MLR	MLR		
	comp=N,542nm,15.0s						
UNV	Unalaska Valle	74.96	5	PFAKE		10 32 00.0	+14
UNV				LR	LR		
	comp=Z,900nm,21.0s						
SNCC	San Nicolas Is	75.14	45	PFAKE		10 32 00.0	+13
SNCC				LR	LR		
	comp=Z,1µm,20.0s						
JNU	Nakatsue	75.18	315	P	P	10 31 46.1	-1.4
	comp=Z,14nm,0.8s,baz=155,slow=3.3,SNR=7.4						
JNU	Nakatsue	75.18	315	*e*P	P	10 31 47.3	-0.2
	comp=Z,58nm,1.4s						
JNU				LR	LR		
	comp=Z,600nm,19.0s						
AKUT	Akutan	75.30	5	PFAKE		10 32 00.0	+12
AKUT				LR	LR		
	comp=Z,1µm,18.0s						
SBUM	Sibu	75.58	278	*e*P	P	10 31 50.9	+0.7
	comp=Z,21nm,1.6s						
SBUM				LR	LR		
	comp=Z,400nm,21.0s						
PKM	Mcpherson Peak	75.97	44	P	P	10 31 51.7	-0.5
	baz=232						
YOJ	Yonaguni jima	75.99	303	PFAKE		10 32 00.0	+7.7
YOJ				LR	LR		
	comp=Z,1µm,20.0s						
ASAJ	Asahikawa	76.00	329	LR	LR	11 04 09.6	
	comp=Z,1µm,18.1s,baz=162,slow=35						
ASAJ	Asahikawa	76.00	329	*e*P	P	10 31 52.3	+0.4
	comp=Z,39nm,1.2s						
SMMC	Simmler	76.12	43	P	P	10 31 52.9	0.0
	baz=231						
SAO	San Andreas Ge	76.12	41	*e*P	P	10 31 54.0	+1.2
	comp=Z,44nm,1.3s						
SAO				LR	LR		
	comp=Z,3µm,18.0s						
SAO	San Andreas Ge	76.12	41	*e*P	P	10 31 54.0	+1.2
SAO				pmax	pmax		
	comp=Z,44nm,1.3s						
SAO				MLR	MLR		
	comp=Z,3µm,18.0s						
SKR	Severo-Kuril's	76.13	341	*e*P	P	10 31 51.7	-0.7
SKR				*e*S	S	10 41 35.1	-0.3
SKR				pmax	pmax		
	comp=Z,400nm,7.1s						
SKR				pmax	pmax		
	comp=Z,300nm,11.2s						
SKR				MLR	MLR		
	comp=Z,500nm,19.0s						
MCCM	Marconi Confer	76.16	39	PFAKE		10 32 10.0	+17
MCCM				LR	LR		

	comp=Z,1µm,18.0s						
PMPB	**Monarch Peak**	**76.17**	**42**	*e*P	**P**	**10 31 55.1**	**+1.9**
	comp=Z,79nm,1.4s						
PMPB				LR	LR		
	comp=Z,3µm,18.0s						
PAGB	**Antelope Grade**	**76.22**	**43**	*e*P	**P**	**10 31 56.0**	**+2.6**
	comp=Z,35nm,1.1s						
PAGB				LR	LR		
	comp=Z,2µm,18.0s						
FALS	**False Pass**	**76.24**	**6**	PFAKE		10 32 10.0	+17
FALS				LR	LR		
	comp=Z,1µm,20.0s						
FMP	**Fort Macarthur**	**76.24**	**45**	P	**P**	**10 31 52.0**	**-1.6**
	baz=233						
OSI	**Osito Audit: C**	**76.51**	**44**	PFAKE		10 32 10.0	+15
OSI				LR	LR		
	comp=Z,1µm,18.0s						
CPE	**Camp Elliot**	**76.55**	**47**	PFAKE		10 32 10.0	+15
CPE				LR	LR		
	comp=Z,900nm,19.0s						
PASC	**Pasadena Art C**	**76.59**	**45**	PFAKE		10 32 10.0	+14
PASC				LR	LR		
	comp=Z,1µm,20.0s						
HOPS	**Hopland Field**	**76.61**	**39**	*e*P	**P**	**10 31 58.1**	**+2.6**
	comp=Z,95nm,1.6s						
HOPS				LR	LR		
	comp=Z,2µm,18.0s						
GDXM	**Geysers**	**76.64**	**39**	PFAKE		10 32 10.0	+14
GDXM				LR	LR		
	comp=Z,3µm,18.0s						
TWG	**Pinlang**	**76.70**	**301**	*e*P	**P**	**10 31 55.4**	**-1.0**
	comp=Z,59nm,0.8s						
TWG				LR	LR		
	comp=Z,4µm,20.0s						
MWC	**Mount Wilson**	**76.71**	**45**	PFAKE		10 32 10.0	+14
MWC				LR	LR		
	comp=Z,1µm,19.0s						
BAR	**Barrett**	**76.72**	**47**	PFAKE		10 32 10.0	+14
BAR				LR	LR		
	comp=Z,900nm,19.0s						
ARVC	**Arvin**	**76.75**	**44**	P	**P**	**10 31 55.8**	**-0.6**
	baz=232						
KCPM	**Cahto Peak**	**76.77**	**38**	PFAKE		10 32 10.0	+13
KCPM				LR	LR		
	comp=Z,2µm,18.0s						
YULB	**Yu-li**	**76.80**	**302**	*e*P	**P**	**10 31 55.6**	**-1.4**
	comp=Z,13nm,0.7s						
YULB				LR	LR		
	comp=Z,1µm,21.0s						
SLBS	**Sierra La Lagu**	**76.82**	**58**	PFAKE		10 32 10.0	+13
SLBS				LR	LR		
	comp=Z,2µm,18.0s						
MURC	**Murrieta**	**76.91**	**46**	P	**P**	**10 31 58.0**	**+0.6**
	baz=234						
SRIG	**Santa Rosalia**	**76.92**	**54**	PFAKE		10 32 10.0	+13
SRIG				LR	LR		
	comp=Z,2µm,18.0s						
NACB	**Ninganchiao**	**76.96**	**302**	*e*P	**P**	**10 31 57.2**	**-0.5**
	comp=Z,36nm,0.8s						
KSM	**Kuching**	**76.98**	**277**	*e*P	**P**	**10 31 57.5**	**-0.7**
	comp=Z,91nm,1.7s						
KSM				LR	LR		
	comp=Z,1µm,19.0s						
MONP2	**Monument Peak**	**77.01**	**47**	P	**P**	**10 31 57.3**	**-0.9**
	baz=234						
VES	**Vestal, Richgr**	**77.03**	**43**	P	**P**	**10 31 58.7**	**+0.8**
	baz=232,SNR=9.8						
KMRM	**Mail Ridge**	**77.06**	**37**	*e*P	**P**	**10 31 59.8**	**+1.6**
KMRM				LR	LR		
	comp=Z,2µm,18.0s						
EDW2	**Edwards Air Fo**	**77.14**	**45**	P	**P**	**10 31 59.6**	**+0.9**
	baz=233,SNR=8.4						
FRD	**Ford Ranch, An**	**77.25**	**46**	P	**P**	**10 32 00.2**	**+0.9**
	baz=234						
SSLB	**Suanglung**	**77.27**	**302**	*e*P	**P**	**10 31 58.4**	**-1.2**
	comp=Z,22nm,1.0s						
SSLB				LR	LR		
	comp=Z,900nm,21.0s						
JCC	**Jacoby Creek,**	**77.28**	**37**	PFAKE		10 32 10.0	+11
JCC				LR	LR		
	comp=Z,2µm,19.0s						
TPUB	**Ta-pu**	**77.29**	**301**	*e*P	**P**	**10 31 58.2**	**-1.5**
	comp=Z,35nm,0.7s						
TPUB				LR	LR		
	comp=Z,1µm,20.0s						
ISA	**Isabella, Lake**	**77.31**	**44**	P	**P**	**10 32 00.7**	**+1.1**
	baz=232,SNR=7.4						
ISA	**Isabella, Lake**	**77.31**	**44**	*e*P	**P**	**10 32 01.3**	**+1.7**
	comp=Z,45nm,1.3s						
ISA				LR	LR		
	comp=Z,1µm,19.0s						
ISA	**Isabella, Lake**	**77.31**	**44**	*e*P	**P**	**10 32 01.3**	**+1.7**
ISA				pmax	pmax		
	comp=Z,45nm,1.3s						
ISA				MLR	MLR		
	comp=Z,1µm,19.0s						
YHNB	**Yeheng**	**77.38**	**303**	PFAKE		10 32 10.0	+10
YHNB				LR	LR		
	comp=Z,1µm,20.0s						
PFO	**Pinyon Flats O**	**77.41**	**46**	P	**P**	**10 32 01.5**	**+1.2**
	baz=234						
PFO	**Pinyon Flats O**	**77.41**	**46**	PFAKE		10 32 10.0	+10
PFO				LR	LR		
	comp=Z,1µm,19.0s						
XPFO	**Piæon Flat**	**77.41**	**46**	PFAKE		10 32 10.0	+10
XPFO				LR	LR		
	comp=Z,1µm,19.0s						
TATO	**Taipei**	**77.44**	**303**	PFAKE		10 32 10.0	+10
TATO				LR	LR		
	comp=Z,1µm,20.0s						
KHMM	**Horse Mountain**	**77.49**	**37**	PFAKE		10 32 10.0	+9.4
KHMM				LR	LR		
	comp=Z,2µm,19.0s						
PET	**Petropavlovsk**	**77.50**	**344**	PFAKE		10 32 10.0	+10
PET				LR	LR		
	comp=Z,1µm,19.0s						
PET	**Petropavlovsk**	**77.50**	**344***c*	*i*P	**P**	**10 31 59.4**	**-0.7**
PET				*e*S	**S**	**10 41 45.8**	**-4.5**
PET				*e*PS	**PnS**	**10 42 20.4**	**-11**
PET				*e*SS	**SS**	**10 46 41.8**	**-8.3**
PET				*e*SSS	SSS	10 50 08.7	
PET				pmax	pmax		
	comp=Z,500nm,8.8s						
PET				pmax	pmax		
	comp=Z,400nm,12.4s						
CMB	**Columbia Colle**	**77.58**	**41**	*e*P	**P**	**10 32 01.7**	**+0.6**
	comp=Z,44nm,1.4s						
CMB				LR	LR		
	comp=Z,2µm,18.0s						
CMB	**Columbia Colle**	**77.58**	**41**	*e*P	**P**	**10 32 01.7**	**+0.6**
CMB				pmax	pmax		
	comp=Z,44nm,1.4s						
CMB				MLR	MLR		
	comp=Z,2µm,18.0s						
LRMC	**Laurel Mtn Rad**	**77.71**	**44**	P	**P**	**10 32 03.5**	**+1.5**
	baz=233						
AFDM	**Forest Hills D**	**77.81**	**40**	*e*P	**P**	**10 32 02.9**	**+0.5**
	comp=Z,28nm,1.4s						
AFDM				LR	LR		
	comp=Z,2µm,18.0s						
PEA0B	**Petropavlovsk-**	**77.83**	**343**	PFAKE		10 32 10.0	+8.0
PEA0B				LR	LR		
	comp=Z,1µm,22.0s						
PETK	**Petropavlovsk-**	**77.83**	**343**	P	**P**	**10 31 60.0**	**-2.0**
	comp=Z,6.1nm,0.7s,baz=151,slow=11						
PETK	**Petropavlovsk-**	**77.83**	**343**	*e*P	**P**	**10 32 01.9**	**-0.1**
PETK	**Petropavlovsk-**	**77.83**	**343**	P	**P**	**10 32 00.0**	**-2.0**
PETK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
PEA1	**Petropavlovsk-**	**77.83**	**343**	*e*P	**P**	**10 31 60.0**	**-2.0**
ORV	**Oroville**	**77.89**	**39**	PFAKE		10 32 20.0	+17
ORV				LR	LR		
	comp=Z,1µm,18.0s						
BELC	**Belle Mtn. Jos**	**77.95**	**46**	P	**P**	**10 32 05.5**	**+2.1**
	baz=234						
WDC	**Whiskeytown Da**	**77.96**	**38**	*e*P	**P**	**10 32 04.7**	**+1.7**
	comp=Z,22nm,1.2s						
WDC				LR	LR		
	comp=Z,2µm,19.0s						
WDC	**Whiskeytown Da**	**77.96**	**38**	*e*P	**P**	**10 32 04.7**	**+1.7**
WDC				pmax	pmax		
	comp=Z,22nm,1.2s						
WDC				MLR	MLR		
	comp=Z,2µm,19.0s						
CWC	**Cottonwood Cre**	**78.03**	**43**	P	**P**	**10 32 05.3**	**+1.5**
	baz=233						
YSS	**Yuzh-Sakhalins**	**78.07**	**331**	*e*P	**P**	**10 32 03.9**	**+0.4**

	comp=Z,42nm,0.9s						
YSS				LR	LR		
	comp=Z,700nm,19.0s						
YSS	**Yuzh-Sakhalins**	**78.07**	**331***j*	*e*P	**P**	**10 32 02.7**	**-0.8**
YSS				*e*		10 32 11.4	
YSS				*e*S	**S**	**10 41 55.2**	**-1.5**
YSS				*e*		10 42 07.0	
YSS				*e*PS	**PnS**	**10 42 44.0**	**+5.4**
YSS				pmax	pmax		
	comp=Z,20nm,1.1s						
YSS				pmax	pmax		
	comp=Z,500nm,5.3s						
YSS				pmax	pmax		
	comp=N,200nm,4.4s						
YSS				pmax	pmax		
	comp=E,100nm,4.4s						
YSS				MLR	MLR		
	comp=Z,400nm,16.0s						
YSS				MLR	MLR		
	comp=N,300nm,12.0s						
BC3	**Big Chuckawall**	**78.12**	**47**	P	**P**	**10 32 06.1**	**+1.8**
	baz=235						
KBO	**Bosley Butte**	**78.12**	**36**	PFAKE		10 32 20.0	+16
KBO				LR	LR		
	comp=Z,2µm,19.0s						
N02D	**Trinity Center**	**78.13**	**37**	P	**P**	**10 32 06.7**	**+2.6**
	baz=228						
MDPB	**Devils Postpil**	**78.14**	**42**	*e*P	**P**	**10 32 05.2**	**+0.7**
	comp=Z,30nm,1.0s						
OMMB	**Old Mammoth Mi**	**78.17**	**42**	*e*P	**P**	**10 32 05.4**	**+0.7**
	comp=Z,49nm,1.6s						
OMMB				LR	LR		
	comp=Z,3µm,18.0s						
GSC	**Goldstone, Bar**	**78.18**	**45**	P	**P**	**10 32 05.7**	**+1.3**
	baz=234						
GSC	**Goldstone, Bar**	**78.18**	**45**	*e*P	**P**	**10 32 05.8**	**+1.3**
	comp=Z,28nm,1.1s						
GSC				LR	LR		
	comp=Z,1µm,18.0s						
GSC	**Goldstone, Bar**	**78.18**	**45**	*e*P	**P**	**10 32 05.8**	**+1.3**
GSC				pmax	pmax		
	comp=Z,28nm,1.1s						
GSC				MLR	MLR		
	comp=Z,1µm,18.0s						
MPMC	**Manual Prospec**	**78.18**	**44**	P	**P**	**10 32 05.6**	**+0.9**
	baz=233,SNR=24						
O03D	**Paynes Creek**	**78.20**	**38**	P	**P**	**10 32 04.8**	**+0.3**
	baz=229						
GLA	**Glamis**	**78.20**	**48**	P	**P**	**10 32 04.2**	**-0.4**
	baz=235						
GLA	**Glamis**	**78.20**	**48**	PFAKE		10 32 20.0	+15
GLA				LR	LR		
	comp=Z,800nm,18.0s						
HEC	**Hector,Ludlow**	**78.21**	**45**	P	**P**	**10 32 04.3**	**-0.4**
	baz=234						
DAC	**Darwin (Calif)**	**78.25**	**44**	PFAKE		10 32 20.0	+15
DAC				LR	LR		
	comp=Z,2µm,18.0s						
CHGN	**Chignik**	**78.28**	**9**	PFAKE		10 32 20.0	+16
CHGN				LR	LR		
	comp=Z,1µm,19.0s						
MLAC	**Mammoth, Mammo**	**78.29**	**42**	P	**P**	**10 32 06.3**	**+1.1**
	baz=232						
M02C	**Callahan**	**78.33**	**37**	P	**P**	**10 32 03.9**	**-1.3**
	baz=228						
RUBR	**Rubicon Trail**	**78.37**	**40**	PFAKE		10 32 20.0	+14
RUBR				LR	LR		
	comp=Z,2µm,18.0s						
L02D	**Cave Junction,**	**78.42**	**36**	P	**P**	**10 32 07.7**	**+2.1**
	baz=228						
WAKR	**Walker**	**78.46**	**41**	*e*P	**P**	**10 32 07.0**	**+0.9**
	comp=Z,75nm,1.4s						
WAKR				LR	LR		
	comp=Z,2µm,18.0s						
KEBM	**Edson Butte**	**78.51**	**35**	PFAKE		10 32 20.0	+14
KEBM				LR	LR		
	comp=Z,3µm,18.0s						
IRM	**Iron Mountain**	**78.62**	**47**	P	**P**	**10 32 08.5**	**+1.6**
	baz=235						
GMRC	**Granite Mounta**	**78.63**	**46**	P	**P**	**10 32 09.5**	**+2.5**
	baz=234						
YBH	**Yreka Blue Hor**	**78.63**	**37**	P	**P**	**10 32 07.2**	**+0.3**
	comp=Z,2.8nm,0.8s,baz=206,slow=4.1,SNR=8.1						
YBH	**Yreka Blue Hor**	**78.63**	**37**	*e*P	**P**	**10 32 07.4**	**+0.6**
	comp=Z,82nm,1.9s						
YBH				LR	LR		
	comp=Z,2µm,19.0s						
PNTR	**Pine Nut**	**78.73**	**40**	*e*P	**P**	**10 32 08.5**	**+0.9**
	comp=Z,48nm,1.0s						
PNTR				LR	LR		
	comp=Z,2µm,18.0s						
BEKR	**Beckworth**	**78.77**	**39**	*e*P	**P**	**10 32 08.5**	**+0.8**
	comp=Z,120nm,1.9s						
BEKR				LR	LR		
	comp=Z,1µm,18.0s						
HSIG		**78.78**	**53**	PFAKE		10 32 20.0	+12
HSIG				LR	LR		
	comp=Z,1µm,18.0s						
Y12C	**Blythe**	**78.81**	**47**	PFAKE		10 32 20.0	+12
Y12C				LR	LR		
	comp=Z,900nm,19.0s						
GRAC	**Grapevine Rang**	**78.83**	**43**	P	**P**	**10 32 08.9**	**+0.9**
	baz=233,SNR=15						
VCNR	**Virginia City**	**78.83**	**40**	*e*P	**P**	**10 32 09.0**	**+0.8**
	comp=Z,53nm,1.2s						
VCNR				LR	LR		
	comp=Z,2µm,18.0s						
FURC	**Furnace Creek,**	**78.83**	**44**	P	**P**	**10 32 10.0**	**+2.1**
	baz=233						
TUQ	**Turquoise Moun**	**78.84**	**45**	P	**P**	**10 32 08.7**	**+0.5**
	baz=234						
SHOC	**Shoshone, Teco**	**78.88**	**45**	P	**P**	**10 32 09.6**	**+1.3**
	baz=234						
YERR	**Yerington**	**78.88**	**41**	*e*P	**P**	**10 32 08.7**	**+0.2**
	comp=Z,79nm,1.5s						
YERR				LR	LR		
	comp=Z,2µm,18.0s						
214A	**Organ Pipe Nat**	**79.00**	**50**	P	**P**	**10 32 10.6**	**+1.6**
	baz=237						
HUMO	**Hull Mountain**	**79.08**	**36**	*e*P	**P**	**10 32 11.2**	**+2.0**
	comp=Z,32nm,1.3s						
HUMO				LR	LR		
	comp=Z,2µm,19.0s						
RYN	**Ryan**	**79.10**	**41**	*e*P	**P**	**10 32 10.4**	**+0.8**
	comp=Z,55nm,1.3s						
RYN				LR	LR		
	comp=Z,2µm,19.0s						
NV01	**Mina Array Sit**	**79.11**	**41**	*e*P	**P**	**10 32 09.9**	**+0.2**
NVAR	**Mina Array Bea**	**79.11**	**41**	P	**P**	**10 32 10.0**	**+0.3**
	comp=Z,16nm,0.8s,baz=225,slow=7.4,SNR=102						
M04C	**Macdoel**	**79.15**	**37**	P	**P**	**10 32 09.4**	**-0.4**
	baz=229						
LDFC	**Landfair**	**79.17**	**46**	PFAKE		10 32 20.0	+10
LDFC				LR	LR		
	comp=Z,1µm,19.0s						
NV11	**Mina Array Sit**	**79.20**	**42**	*e*P	**P**	**10 32 10.5**	**+0.3**
	comp=Z,3.0nm,1.1s						
NV11				LR	LR		
	comp=Z,200nm,18.0s						
SII	**Sitkinak Islan**	**79.21**	**11**	PFAKE		10 32 20.0	+10
SII				LR	LR		
	comp=Z,2µm,18.0s						
PAHR	**Pah Rah Range**	**79.25**	**40**	*e*P	**P**	**10 32 11.2**	**+0.8**
	comp=Z,47nm,1.4s						
PAHR				LR	LR		
	comp=Z,2µm,18.0s						
PMSA	**Palmer Station**	**79.30**	**156**	LR	LR	11 04 54.5	
	comp=Z,701nm,18.3s,baz=236,slow=34						
PDMCI	**Parker Dam,Lak**	**79.38**	**47**	P	**P**	**10 32 12.0**	**+1.0**
	baz=236						
TJN	**Taejon**	**79.44**	**316***c*	*e*P	**P**	**10 32 11.8**	**+0.5**
TPNV	**Topopah Spring**	**79.51**	**44**	P	**P**	**10 32 13.2**	**+1.3**
	baz=234,SNR=13						
TPNV	**Topopah Spring**	**79.51**	**44**	*e*P	**P**	**10 32 12.4**	**+0.5**
	comp=Z,29nm,1.2s						
TPNV				LR	LR		
	comp=Z,2µm,18.0s						
TPNV	**Topopah Spring**	**79.51**	**44**	*e*P	**P**	**10 32 12.4**	**+0.5**
TPNV				pmax	pmax		
	comp=Z,29nm,1.2s						
TPNV				MLR	MLR		
	comp=Z,2µm,18.0s						
TEY	**Ternei**	**79.61**	**327**	*e*P	P	10 32 04.0	-8.0
KVN	**Kaiserville**	**79.62**	**41**	*e*P	**P**	**10 32 12.6**	**+0.1**
	comp=Z,28nm,1.2s						
KVN				LR	LR		
	comp=Z,2µm,18.0s						

KVN	**Kaiserville**	**79.62**	**41**	*e*P	**P**	**10 32 12.6**	**+0.1**
KVN				pmax	pmax		
	comp=Z,29nm,1.2s						
KVN				MLR	MLR		
	comp=Z,2µm,18.0s						
QZH	**Quanzhou**	**79.71**	**302**⇑	*i*P	**P**	**10 32 13.3**	**+0.3**
QZH				S	**S**	**10 42 14.5**	**-0.7**
QZH				pmax	pmax		
	comp=Z,500nm,7.3s						
QZH				LR	LR		
	comp=Z,600nm,18.6s						
QZH				LR	LR		
	comp=Z,830nm,21.5s						
QZH				LR	LR		
	comp=Z,930nm,19.4s						
KSRS	**Korea Array**	**79.72**	**317**	P	**P**	**10 32 13.6**	**+0.9**
	comp=Z,12nm,1.1s,baz=136,slow=6.1,SNR=20						
KSRS	**Korea Array**	**79.72**	**317**	P	**P**	**10 32 13.6**	**+0.9**
KSRS				pmax	pmax		
	comp=Z,15nm,1.1s						
KS15	**Wonju Array Si**	**79.73**	**317**	*e*P	**P**	**10 32 13.5**	**+0.6**
KSAR	**Wonju Array Be**	**79.73**	**317**	P	**P**	**10 32 13.6**	**+0.7**
KS01	**Wonju Array Si**	**79.75**	**317**	*e*P	**P**	**10 32 12.4**	**-0.5**
K04D	**Chiloquin, OR**	**79.76**	**37**	P	**P**	**10 32 14.3**	**+1.3**
	baz=229						
SHPR	**Sheep Range**	**79.96**	**45**	*e*P	**P**	**10 32 15.6**	**+1.2**
	comp=Z,34nm,1.3s						
SHPR				LR	LR		
	comp=Z,1µm,19.0s						
J04D	**Umpqua Nationa**	**79.97**	**36**	P	**P**	**10 32 15.7**	**+1.5**
	baz=229						
OHAK	**Old Harbor**	**80.00**	**11**	*e*P	**P**	**10 32 16.0**	**+2.2**
MOD	**Modoc Plateau**	**80.10**	**38**	*e*P	**P**	**10 32 15.6**	**+0.6**
	comp=Z,22nm,1.0s						
MOD				LR	LR		
	comp=Z,2µm,19.0s						
I04A	**Tendick Farm,**	**80.17**	**35**	P	**P**	**10 32 16.8**	**+1.7**
	baz=228						
COR	**Corvallis**	**80.23**	**34**	PFAKE		10 32 30.0	+15
COR				LR	LR		
	comp=Z,2µm,18.0s						
K05A	**Summer Lake**	**80.30**	**37**	*e*P	**P**	**10 32 17.9**	**+1.9**
	comp=Z,75nm,1.4s						
K05A				LR	LR		
	comp=Z,2µm,19.0s						
J05D	**Fort Rock, OR**	**80.48**	**36**	P	**P**	**10 32 17.8**	**+0.9**
	baz=229						
INCN	**Inchon**	**80.56**	**316**	PFAKE		10 32 30.0	+13
INCN				LR	LR		
	comp=Z,600nm,18.0s						
TUC	**Tucson**	**80.64**	**50**	P	**P**	**10 32 20.1**	**+2.1**
	baz=238						
TUC	**Tucson**	**80.64**	**50**	PFAKE		10 32 30.0	+12
TUC				LR	LR		
	comp=Z,2µm,18.0s						
KDAK	**Kodiak Island**	**80.66**	**12**	P	**P**	**10 32 17.9**	**+0.6**
	comp=Z,3.5nm,0.6s,baz=264,slow=8.6,SNR=7.7						
KDAK	**Kodiak Island**	**80.66**	**12**	*e*P	**P**	**10 32 18.2**	**+0.9**
	comp=Z,32nm,1.1s						
KDAK				LR	LR		
	comp=Z,1µm,18.0s						
KDAK	**Kodiak Island**	**80.66**	**12**	*i* P	**P**	**10 32 21.1**	**+3.8**
G03D	**McMinnville, O**	**80.67**	**34**	P	**P**	**10 32 19.2**	**+1.4**
	baz=228						
R11A	**Troy Canyon, C**	**80.77**	**43**	P	**P**	**10 32 19.7**	**+1.0**
	baz=234,SNR=12						
R11A	**Troy Canyon, C**	**80.77**	**43**	*e*P	**P**	**10 32 19.1**	**+0.4**
	comp=Z,21nm,1.3s						
R11A				LR	LR		
	comp=Z,1µm,19.0s						
SSE	**Sheshan**	**80.81**	**308**	P	**P**	**10 32 17.5**	**-1.3**
SSE				S	**S**	**10 42 28.3**	**+1.8**
SSE				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SSE				pmax	pmax		
	comp=Z,200nm,6.5s						
SSE				LR	LR		
	comp=Z,220nm,17.7s						
SSE				LR	LR		
	comp=Z,260nm,19.2s						
H04A	**Detroit Lake**	**80.88**	**35**	*e*P	**P**	**10 32 20.0**	**+1.1**
	comp=Z,19nm,1.0s						
H04A				LR	LR		
	comp=Z,2µm,18.0s						
MSHR	**Mys Shultsa**	**80.92**	**322***c*	*e*P	**P**	**10 32 19.3**	**+0.2**
PINE	**Pine Mountain**	**80.97**	**36**	*e*P	**P**	**10 32 19.9**	**+0.3**
	comp=Z,40nm,1.0s						
PINE				LR	LR		
	comp=Z,2µm,19.0s						
BMN	**Battle Mountai**	**81.00**	**40**	PFAKE		10 32 30.0	+10
BMN				LR	LR		
	comp=Z,2µm,18.0s						
TYV	**Tymovskoe**	**81.09**	**334**	*e*P	**P**	**10 32 19.8**	**0.0**
TYV				*e*S	**S**	**10 42 29.0**	**+0.4**
TYV				pmax	pmax		
	comp=Z,400nm,9.2s						
TYV				pmax	pmax		
	comp=Z,29nm,1.2s						
TYV				smax	smax		
	comp=E,400nm,8.4s						
I05D	**Terrebonne, OR**	**81.11**	**35**	P	**P**	**10 32 22.2**	**+2.0**
	baz=229						
F04D	**Rainier, OR**	**81.39**	**33**	P	**P**	**10 32 23.0**	**+1.4**
	baz=228						
WVOR	**Wild Horse Val**	**81.40**	**38**	*e*P	**P**	**10 32 22.7**	**+0.9**
	comp=E,28nm,1.1s						
WVOR				LR	LR		
	comp=Z,2µm,19.0s						
WVOR	**Wild Horse Val**	**81.40**	**38**	*e*P	**P**	**10 32 22.7**	**+0.9**
WVOR				pmax	pmax		
	comp=Z,28nm,1.1s						
WVOR				MLR	MLR		
	comp=Z,2µm,19.0s						
E03A	**Lebam**	**81.43**	**33**	PFAKE		10 32 30.0	+8.3
E03A				LR	LR		
	comp=Z,1µm,19.0s						
USA0B	**Ussuriysk Arra**	**81.49**	**324**	PFAKE		10 32 30.0	+7.9
USA0B				LR	LR		
	comp=Z,900nm,22.0s						
USRK	**Ussuriysk Ar.**	**81.49**	**324**	P	**P**	**10 32 22.6**	**+0.5**
	comp=Z,4.9nm,0.8s,baz=129,slow=5.7						
USRK				LR	LR	11 04 22.7	
	comp=Z,639nm,19.9s,baz=123,slow=33						
LCMT	**Little Creek M**	**81.51**	**45**	*e*P	**P**	**10 32 24.3**	**+1.7**
	comp=Z,21nm,1.3s						
LCMT				LR	LR		
	comp=Z,900nm,20.0s						
G05D	**Wamic, OR**	**81.72**	**35**	P	**P**	**10 32 23.7**	**+0.4**
	baz=229						
CCUT	**Cedar City**	**81.74**	**45**	*e*P	**P**	**10 32 24.9**	**+1.0**
	comp=Z,24nm,1.3s						
CCUT				LR	LR		
	comp=Z,1µm,18.0s						
HPIG		**81.78**	**57**	*e*P	**P**	**10 32 25.1**	**+0.8**
	comp=Z,6.0nm,1.0s						
HPIG				LR	LR		
	comp=Z,3µm,18.0s						
KNB	**Kanab**	**81.80**	**45**	*e*P	**P**	**10 32 26.3**	**+2.1**
	comp=Z,65nm,1.5s						
KNB	**Kanab**	**81.80**	**45**	*e*P	**P**	**10 32 26.3**	**+2.1**
KNB				pmax	pmax		
	comp=Z,65nm,1.5s						
NLWA	**Neilton Lookou**	**81.85**	**32**	PFAKE		10 32 40.0	+16
NLWA				LR	LR		
	comp=Z,2µm,18.0s						
SZCU	**Shurtz Canyon**	**81.94**	**45**	*e*P	**P**	**10 32 26.8**	**+1.8**
	comp=Z,28nm,1.3s						
SZCU				LR	LR		
	comp=Z,1µm,19.0s						
WUAZ	**Wupatki**	**81.94**	**47**	P	**P**	**10 32 27.3**	**+2.3**
	baz=237						
WUAZ	**Wupatki**	**81.94**	**47**	*e*P	**P**	**10 32 26.5**	**+1.6**
	comp=Z,14nm,1.0s						
WUAZ				LR	LR		
	comp=Z,800nm,19.0s						
I07A	**Izee**	**81.95**	**36**	PFAKE		10 32 40.0	+15
I07A				LR	LR		
	comp=Z,2µm,19.0s						
PSUT	**Pine Spring**	**81.98**	**44**	*e*P	**P**	**10 32 27.1**	**+2.0**
	comp=Z,16nm,1.2s						
PSUT				LR	LR		
	comp=Z,2µm,19.0s						
J08A	**Circle Bar Ran**	**82.07**	**38**	*e*P	**P**	**10 32 26.0**	**+0.6**
	comp=Z,39nm,1.3s						
J08A				LR	LR		
	comp=Z,2µm,19.0s						
G06A	**Carlson Farm,**	**82.08**	**35**	*e*P	**P**	**10 32 29.8**	**+4.6**

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      comp=Z,67nm,1.5s
MAW   Mawson            82.14 199  P       P        10 32 26.4 +1.1
      comp=Z,6.3nm,0.8s,baz=102,slow=4.4,SNR=9.1
MOIG  Morelia           82.15  65  PFAKE            10 32 40.0  +14
MOIG                               LR      LR
      comp=Z,1µm,18.0s
ZAIG  Zacatecas         82.35  62  PFAKE            10 32 40.0  +12
ZAIG                               LR      LR
      comp=Z,700nm,18.0s
PKCU  Pink Cliffs       82.37  45 eP       P        10 32 29.6 +2.2
      comp=Z,136nm,1.5s
PKCU                               LR      LR
      comp=Z,1µm,20.0s
DIB   Dawson Inlet,     82.37  24  PFAKE            10 32 40.0  +13
DIB                                LR      LR
      comp=Z,600nm,19.0s
LON   Longmire          82.46  33 eP       P        10 32 28.6 +1.3
      comp=Z,20nm,1.2s
LON   Longmire          82.46  33 eP       P        10 32 28.6 +1.3
LON                                pmax    pmax
      comp=Z,20nm,1.2s
CNPM  China Poot        82.55  12 eP       P        10 32 29.2 +1.8
      comp=Z,29nm,1.0s
CNPM                               LR      LR
      comp=Z,1µm,19.0s
HOM   Homer             82.59  11  PFAKE            10 32 40.0  +12
HOM                                LR      LR
      comp=Z,1µm,18.0s
D05A  Enumclaw          82.66  33 eP       P        10 32 29.7 +1.5
      comp=Z,132nm,1.4s
D05A                               LR      LR
      comp=Z,700nm,18.0s
BRLK  Bradley Lake      82.83  12  PFAKE            10 32 40.0  +11
BRLK                               LR      LR
      comp=Z,1µm,19.0s
W18A  Petrified Fore    82.86  48  P       P        10 32 28.5  -1.3
      baz=238
W18A  Petrified Fore    82.86  48  PFAKE            10 32 40.0  +10
W18A                               LR      LR
      comp=Z,900nm,18.0s
F07A  Phinny Hill Vi    82.88  35  PFAKE            10 32 40.0  +11
F07A                               LR      LR
      comp=Z,2µm,18.0s
121A  Cookes Peak, D    82.92  51  P       P        10 32 30.4 +0.3
      baz=240
TCRU  Three Creeks R    82.93  44  PFAKE            10 32 40.0  +10
TCRU                               LR      LR
      comp=Z,1µm,19.0s
NJ2   Nanjing           83.01 308 eP       P        10 32 32.8 +2.5
NJ2                                pmax    pmax
      comp=Z,14nm,0.6s
G08A  Pilot Rock        83.02  36 eP       P        10 32 30.9 +0.6
      comp=Z,74nm,1.5s
MSU   Marysvale         83.05  44 eP       P        10 32 32.0 +1.2
MSU   Marysvale         83.05  44 eP       P        10 32 32.0 +1.2
MDJ   Mudanjiang        83.08 323  P       P        10 32 28.3  -2.1
MDJ                                pP      PcP      10 32 34.5  -0.5
MDJ                                sP      sP       10 32 36.0  -1.9
MDJ                                S       S        10 42 50.5 +1.1
MDJ                                sS      pS       10 42 55.5  -0.8
MDJ                                pmax    pmax
      comp=Z,21nm,1.3s
MDJ                                pmax    pmax
      comp=Z,670nm,6.3s
MDJ                                LR      LR
      comp=Z,350nm,19.8s
MDJ                                LR      LR
      comp=Z,650nm,19.8s
MDJ                                LR      LR
      comp=Z,1µm,20.6s
MDJ   Mudanjiang        83.08 323 eP       P        10 32 30.6 +0.1
      comp=Z,80nm,1.4s
MDJ                                LR      LR
      comp=Z,1µm,20.0s
MYKOM Kota Tinggi       83.10 275  PFAKE            10 32 40.0 +8.7
MYKOM                              LR      LR
      comp=Z,1µm,21.0s
B05A  Bryant            83.32  32  P       P        10 32 31.4  -0.2
      baz=228
A04D  Lummi Island      83.33  31  P       P        10 32 33.0 +1.5
      baz=228
BBB   Bella Bella       83.34  27  PFAKE            10 32 40.0 +8.5
BBB                                LR      LR
      comp=Z,900nm,18.0s
E07A  Sunnyside         83.35  34  PFAKE            10 32 40.0 +8.2
E07A                               LR      LR
      comp=Z,3µm,18.0s
LTY   Liberty           83.38  33 eP       P        10 32 33.9 +1.8
      comp=Z,30nm,1.2s
LTY                                LR      LR
      comp=Z,1µm,19.0s
HAWA  Hanford           83.41  35 eP       P        10 32 33.8 +1.7
      comp=Z,66nm,1.4s
HAWA                               LR      LR
      comp=Z,2µm,18.0s
MID   Middleton Isla    83.47  14  PFAKE            10 32 40.0 +8.0
MID                                LR      LR
      comp=Z,1µm,18.0s
TLIG  Tlapa             83.52  68  PFAKE            10 32 50.0  +17
TLIG                               LR      LR
      comp=Z,900nm,20.0s
DUG   Dugway, Tooele    83.59  43  P       P        10 32 34.4 +1.1
      baz=236,SNR=7.2
DUG   Dugway, Tooele    83.59  43 eP       P        10 32 34.5 +1.1
      comp=Z,27nm,1.4s
DUG                                LR      LR
      comp=Z,2µm,18.0s
DUG   Dugway, Tooele    83.59  43 eP       P        10 32 34.5 +1.1
DUG                                pmax    pmax
      comp=Z,27nm,1.4s
DUG                                MLR     MLR
      comp=Z,2µm,18.0s
NKL   Nikolayevsk       83.62 335 eP       P        10 32 32.0  -1.0
NKL                               e                 10 42 54.0
NKL                                pmax    pmax
      comp=Z,500nm,9.0s
MFID  Camas Ranch       83.63  39 eP       P        10 32 34.0 +0.5
      comp=Z,41nm,1.3s
MFID                               LR      LR
      comp=Z,800nm,20.0s
BMO   Blue Mountains    83.66  37  PFAKE            10 32 50.0  +16
BMO                                LR      LR
      comp=Z,1µm,18.0s
GRNR  Gornyy            83.71 331 eP       P        10 32 38.1 +4.5
UNM   Universidad Na    83.72  67  PFAKE            10 32 50.0  +15
UNM                                LR      LR
      comp=Z,1µm,18.0s
E08A  Dider Farm, El    83.73  35 eP       P        10 32 35.9 +2.2
      comp=Z,38nm,1.1s
E08A                               LR      LR
      comp=Z,2µm,18.0s
B06A  Marblemount       83.80  32  PFAKE            10 32 50.0  +16
B06A                               LR      LR
      comp=Z,1µm,18.0s
BGU   Big Grassy Mou    83.86  42 eP       P        10 32 36.6 +1.9
      comp=Z,11nm,1.2s
BGU                                LR      LR
      comp=Z,2µm,19.0s
CRAG  Craig             83.92  22  PFAKE            10 32 50.0  +16
CRAG                               LR      LR
      comp=Z,600nm,21.0s
NLU   North Lily Min    83.92  43  PFAKE            10 32 50.0  +15
NLU                                LR      LR
      comp=Z,4µm,21.0s
TMUT  Trail Mountain    84.12  44 eP       P        10 32 37.7 +1.4
      comp=Z,52nm,1.1s
TMUT                               LR      LR
      comp=Z,1µm,19.0s
PAYG  Puerto Ayora      84.12  88  PFAKE            10 32 50.0  +13
PAYG                               LR      LR
      comp=Z,2µm,19.0s
D08A  Wollman Farm,     84.16  34 eP       P        10 32 36.6 +0.7
      comp=Z,50nm,1.0s
D08A                               LR      LR
      comp=Z,2µm,18.0s
E09A  Wood Farm, Sta    84.23  35 eP       P        10 32 38.1 +1.8
      comp=Z,32nm,1.1s
E09A                               LR      LR
      comp=Z,2µm,18.0s
MPU   Maple Canyon      84.24  43 eP       P        10 32 38.8 +2.1
      comp=Z,35nm,1.3s
MPU                                LR      LR
      comp=Z,2µm,18.0s
MNTX  Cornudas Mount    84.28  53  P       P        10 32 37.4 +0.4
      baz=241
MNTX  Cornudas Mount    84.28  53 eP       P        10 32 38.5 +1.5
      comp=Z,9.5nm,1.1s
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MNTX                               LR      LR
      comp=Z,1µm,19.0s
RC01  Rabbit Creek A    84.28  12 eP       P        10 32 37.7 +1.5
      comp=Z,22nm,0.9s
RC01                               LR      LR
      comp=Z,800nm,20.0s
Y22D  IRIS PASSCAL I    84.32  50  P       P        10 32 38.5 +1.3
      baz=240
Y22D  IRIS PASSCAL I    84.32  50  PFAKE            10 32 50.0  +13
Y22D                               LR      LR
      comp=Z,1µm,18.0s
Y22E  IRIS PASSCAL I    84.32  50  P       P        10 32 35.9  -1.3
      baz=240
QIZ   Qiongzhong        84.33 293  P       P        10 32 39.0 +1.6
QIZ                                S       S        10 43 09.8 +6.8
QIZ                                LR      LR
      comp=Z,300nm,14.5s
QIZ                                LR      LR
      comp=Z,270nm,14.9s
QIZ                                LR      LR
      comp=Z,500nm,23.5s
QIZ   Qiongzhong        84.33 293  PFAKE            10 32 50.0  +13
QIZ                                LR      LR
      comp=Z,500nm,19.0s
F10A  Beach Ranch, E    84.39  36 eP       P        10 32 37.2   0.0
      comp=Z,42nm,0.9s
F10A                               LR      LR
      comp=Z,1µm,20.0s
SUA   Susitna One       84.44  11 eP       P        10 32 38.9 +1.7
      comp=Z,26nm,1.0s
SUA                                LR      LR
      comp=Z,1µm,20.0s
SPUT  South Promonto    84.44  42 eP       P        10 32 39.3 +1.6
      comp=Z,44nm,1.3s
SPUT                               LR      LR
      comp=Z,2µm,18.0s
SRU   San Rafael Swe    84.46  44 eP       P        10 32 38.8 +0.8
      comp=Z,53nm,1.2s
SRU                                LR      LR
      comp=Z,800nm,20.0s
LTX   Lajitas           84.46  56 eP       P        10 32 39.2 +1.2
TX31  Lajitas Ar. Si    84.46  56 eP       P        10 32 38.1 +0.1
TX31                              eP       P        10 32 39.1 +1.1
TXAR  Lajitas Array     84.46  56  P       P        10 32 39.2 +1.2
      comp=Z,3.2nm,0.9s,baz=215,slow=7.1,SNR=25
HVU   Hansel Valley     84.51  41 eP       P        10 32 38.5 +0.5
      comp=Z,41nm,1.3s
HVU                                LR      LR
      comp=Z,2µm,18.0s
HVU   Hansel Valley     84.51  41 eP       P        10 32 38.6 +0.5
HVU                                pmax    pmax
      comp=Z,41nm,1.3s
HVU                                MLR     MLR
      comp=Z,2µm,18.0s
P17A  Butcher Ranch,    84.52  44 eP       P        10 32 39.5 +1.3
      comp=Z,50nm,1.2s
P17A                               LR      LR
      comp=Z,1µm,19.0s
CTU   Camp Tracy        84.54  43 eP       P        10 32 39.6 +1.3
      comp=Z,37nm,1.3s
HLID  Hailey            84.55  39  P       P        10 32 38.6 +0.4
      baz=234
HLID  Hailey            84.55  39 eP       P        10 32 39.0 +0.8
      comp=Z,38nm,1.1s
HLID                               LR      LR
      comp=Z,700nm,18.0s
EYAK  Cordova Ski Ar    84.61  14 eP       P        10 32 39.3 +1.5
      comp=Z,30nm,1.2s
EYAK                               LR      LR
      comp=Z,1µm,20.0s
GLI   Glacier Island    84.61  13 eP       P        10 32 37.4  -0.5
      comp=Z,36nm,1.0s
GLI                                LR      LR
      comp=Z,1µm,20.0s
DL2   Dalian            84.62 315⇑iP       P        10 32 38.8 +0.4
DL2                                S       S        10 43 03.5  -1.6
DL2                                pmax    pmax
      comp=Z,60nm,1.5s
DL2                                pmax    pmax
      comp=Z,490nm,3.5s
DL2                                LR      LR
      comp=Z,570nm,20.2s
DL2                                LR      LR
      comp=Z,390nm,18.4s
DL2                                LR      LR
      comp=Z,480nm,19.1s
FID   Port Fidalgo      84.63  13 eP       P        10 32 41.6 +3.6
      comp=Z,94nm,1.9s
FID                                LR      LR
      comp=Z,1µm,20.0s
JLU   Jordanelle        84.68  43  PFAKE            10 32 50.0  +11
JLU                                LR      LR
      comp=Z,2µm,18.0s
RAGM  Ragged Mountai    84.70  14  PFAKE            10 32 50.0  +12
RAGM                               LR      LR
      comp=Z,2µm,18.0s
B08A  Colville Reser    84.78  33 eP       P        10 32 40.6 +1.5
      comp=Z,25nm,1.0s
B08A                               LR      LR
      comp=Z,400nm,18.0s
SKT   Skwentna          84.79  11 eP       P        10 32 37.9  -0.8
      comp=Z,17nm,1.0s
SKT                                LR      LR
      comp=Z,1µm,20.0s
MVCO  Mesa Verde        84.81  47  P       P        10 32 40.3 +0.6
      baz=239
MVCO  Mesa Verde        84.81  47  PFAKE            10 32 50.0  +10
MVCO                               LR      LR
      comp=Z,800nm,18.0s
PMR   Palmer            84.86  12 eP       P        10 32 38.6  -0.5
      comp=Z,27nm,1.2s
PMR   Palmer            84.86  12 eP       P        10 32 38.6  -0.5
PMR                                pmax    pmax
      comp=Z,27nm,1.2s
KLR   Kul'dur           84.89 328  P       P        10 32 41.0 +1.4
      comp=Z,0.2nm,0.6s,baz=105,slow=5.0,SNR=2.6
KLR                                LR      LR       11 06 29.0
      comp=Z,97nm,20.3s,slow=33
KLR   Kul'dur           84.89 328c iP      P        10 32 38.2  -1.4
P18A  Preston Nutter    84.92  44 eP       P        10 32 41.6 +1.2
      comp=Z,20nm,1.0s
P18A                               LR      LR
      comp=Z,1µm,20.0s
WRAK  Wrangell Islan    84.93  22 eP       P        10 32 41.6 +2.0
      comp=Z,40nm,1.6s
WRAK                               LR      LR
      comp=Z,700nm,19.0s
CN2   Changchun         84.97 321 eP       P        10 32 42.0 +1.9
CN2                               esP      sP       10 32 49.0 +1.5
CN2                               eS       S        10 43 09.0 +0.7
CN2                                pmax    pmax
      comp=Z,10.0nm,1.0s
CN2                                pmax    pmax
      comp=Z,200nm,5.0s
CN2                                LR      LR
      comp=Z,500nm,16.0s
CN2                                LR      LR
      comp=Z,500nm,16.0s
CN2                                LR      LR
      comp=Z,800nm,17.0s
C09A  Chrisman Ranch    84.97  34 eP       P        10 32 41.6 +1.6
      comp=Z,56nm,1.4s
C09A                               LR      LR
      comp=Z,2µm,18.0s
SNY   Shenyang          84.98 318 ⇓P       P        10 32 42.8 +2.7
SNY                                S       S        10 43 14.8 +6.3
SNY                                pmax    pmax
      comp=Z,18nm,0.8s
SNY                                pmax    pmax
      comp=Z,660nm,5.3s
SNY                                LR      LR
      comp=Z,550nm,17.6s
SNY                                LR      LR
      comp=Z,640nm,16.9s
SNY                                LR      LR
      comp=Z,1µm,17.8s
TCUT  Toone Canyon      84.99  42 eP       P        10 32 42.0 +1.3
      comp=Z,94nm,1.3s
TCUT                               LR      LR
      comp=Z,2µm,19.0s
LLLB  Lillooet          85.00  30 eP       P        10 32 42.3 +2.1
      comp=Z,36nm,1.2s
PV09  Paradox Valley    85.05  46 eP       P        10 32 42.7 +1.6
PV19  Morning Glory     85.05  46 eP       P        10 32 42.4 +1.4
      comp=Z,23nm,1.2s
PV17  East Wray Mesa    85.06  46 eP       P        10 32 43.1 +2.1
      comp=Z,32nm,1.4s
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PV14  Lion Creek, Pa    85.06  46 eP       P        10 32 42.4 +1.4
GHO   Glory Hole Cre    85.06  12 eP       P        10 32 40.4 +0.1
      comp=Z,31nm,0.9s
GHO                                LR      LR
      comp=Z,800nm,20.0s
PV18  Skein Mesa, Pa    85.07  46 eP       P        10 32 43.1 +2.1
      comp=Z,52nm,1.8s
PV18                               LR      LR
      comp=Z,800nm,18.0s
PV20  West Nyswonger    85.08  46 eP       P        10 32 43.0 +1.9
      comp=Z,34nm,1.4s
PV20                               LR      LR
      comp=Z,900nm,22.0s
TASM  ASL Pad, Albuq    85.08  50  P       P        10 32 42.0 +0.9
      baz=240
ANMO  Albuquerque       85.08  50  P       P        10 32 41.7 +0.6
      comp=Z,8.6nm,0.9s,baz=232,slow=5.6,SNR=35
ANMO                               LR      LR       11 04 50.3
      comp=Z,772nm,18.9s,baz=251,slow=32
ANMO  Albuquerque       85.08  50  P       P        10 32 42.0 +0.9
      baz=240
ANMO  Albuquerque       85.08  50 eP       P        10 32 42.0 +0.9
      comp=Z,30nm,1.3s
ANMO  Albuquerque       85.08  50ceP       P        10 32 42.1 +0.9
ANMO                               pmax    pmax
      comp=Z,23nm,1.7s
PV13  Radium Mtn., P    85.08  46 eP       P        10 32 42.5 +1.3
      comp=Z,32nm,1.6s
PV13                               LR      LR
      comp=Z,900nm,20.0s
TASL  Snake Pit, Alb    85.08  50  P       P        10 32 42.4 +1.2
      baz=240
PV16  Nyswonger Mesa    85.10  46 eP       P        10 32 42.7 +1.5
      comp=Z,24nm,1.4s
PV16                               LR      LR
      comp=Z,900nm,18.0s
PV03  Paradox Valley    85.12  46 eP       P        10 32 42.5 +1.3
DIV   Divide            85.12  13 eP       P        10 32 41.6 +1.0
      comp=Z,35nm,1.0s
DIV                                LR      LR
      comp=Z,1µm,20.0s
PV11  David Mesa, Pa    85.12  46 eP       P        10 32 42.9 +1.6
      comp=Z,39nm,1.4s
HWUT  Hardware Ranch    85.16  42 eP       P        10 32 41.9 +0.6
      comp=Z,20nm,1.3s
HWUT                               LR      LR
      comp=Z,2µm,18.0s
PV02  Paradox Valley    85.17  46 eP       P        10 32 43.6 +2.0
      comp=Z,35nm,1.5s
PV12  Saucer Basin,     85.18  46 eP       P        10 32 42.9 +1.3
      comp=Z,51nm,1.5s
PV21  Cone Mtn., Par    85.19  46 eP       P        10 32 43.9 +2.2
      comp=Z,28nm,1.3s
SML   Sawmill           85.21  12 eP       P        10 32 41.8 +0.9
      comp=Z,17nm,1.0s
SML                                LR      LR
      comp=Z,1µm,18.0s
BMRM  Bremner River     85.24  14 eP       P        10 32 42.0 +0.9
      comp=Z,84nm,1.3s
BMRM                               LR      LR
      comp=Z,1µm,19.0s
PV01  Paradox Valley    85.24  46 eP       P        10 32 43.2 +1.3
PV22  Blue Mesa, Par    85.30  46 eP       P        10 32 43.8 +1.6
      comp=Z,52nm,1.9s
MA2   Magadan           85.36 343  P       P        10 32 40.6  -1.1
      comp=Z,2.7nm,0.3s,baz=133,slow=19,SNR=3.3
MA2   Magadan           85.36 343  P       P        10 32 40.6  -1.1
MA2                                LR      LR
      comp=Z,1µm,20.0s
CRQM  Cirque            85.39  15 eP       P        10 32 43.9 +1.9
      comp=Z,27nm,1.0s
CRQM                               LR      LR
      comp=Z,2µm,20.0s
KLU   Klutina           85.42  13 eP       P        10 32 44.2 +2.2
      comp=Z,21nm,1.1s
KLU                                LR      LR
      comp=Z,1µm,20.0s
SCM   Sheep Creek Mo    85.43  12 eP       P        10 32 42.2 +0.1
      comp=Z,27nm,0.8s
SCM                                LR      LR
      comp=Z,800nm,19.0s
SCM   Sheep Creek Mo    85.43  12 eP       P        10 32 42.2 +0.1
SCM                                pmax    pmax
      comp=Z,27nm,0.8s
SCM                                MLR     MLR
      comp=Z,800nm,19.0s
TGL   Tana Glacier      85.46  15  PFAKE            10 32 50.0 +7.7
TGL                                LR      LR
      comp=Z,2µm,20.0s
WHN   Wuhan             85.66 305 ⇑P       P        10 32 42.3  -1.6
WHN                                S       S        10 43 10.8  -5.0
WHN                                LR      LR
      comp=Z,3µm,20.0s
WHN                                LR      LR
      comp=Z,1µm,14.3s
WHN                                LR      LR
      comp=Z,2µm,22.2s
ANM   Nome              85.69   4  PFAKE            10 32 50.0 +6.8
ANM                                LR      LR
      comp=Z,1µm,21.0s
BESE  Bessie Mountai    85.83  19 eP       P        10 32 46.5 +2.4
      comp=Z,45nm,1.5s
BESE                               LR      LR
      comp=Z,600nm,20.0s
LNIG  Linares           85.83  61 eP       P        10 32 44.7  -0.1
      comp=Z,19nm,1.2s
LNIG                               LR      LR
      comp=Z,1µm,18.0s
AHID  Auburn Hatcher    86.09  41 eP       P        10 32 47.2 +1.3
      comp=Z,21nm,1.1s
AHID                               LR      LR
      comp=Z,2µm,18.0s
MCMT  McKenzie Canyo    86.19  39 eP       P        10 32 47.1 +0.6
S22A  4UR Ranch, Cre    86.22  47  P       P        10 32 48.0 +1.1
      baz=240
S22A  4UR Ranch, Cre    86.22  47 eP       P        10 32 48.5 +1.7
      comp=Z,25nm,1.6s
S22A                               LR      LR
      comp=Z,800nm,19.0s
LVIG  Laguna Verde      86.25  67  PFAKE            10 33 00.0  +13
LVIG                               LR      LR
      comp=Z,800nm,19.0s
PLCA  Paso Flores       86.27 132  P       P        10 32 48.5 +1.5
      comp=Z,7.0nm,1.2s,baz=270,slow=7.1,SNR=2.4
PLCA                               LR      LR       11 07 06.1
      comp=Z,651nm,18.3s,baz=260,slow=33
PLCA  Paso Flores       86.27 132 eP       P        10 32 48.5 +1.5
      comp=Z,62nm,2.0s
TIA   Tai'an            86.31 311  P       P        10 32 47.8 +0.8
TIA                                SKS     SKSac    10 43 14.5 +1.8
TIA                                pmax    pmax
      comp=Z,13nm,1.2s
TIA                                pmax    pmax
      comp=Z,480nm,7.9s
TIA                                LR      LR
      comp=Z,290nm,21.1s
TIA                                LR      LR
      comp=Z,220nm,18.6s
TIA                                LR      LR
      comp=Z,390nm,19.0s
TRF   Thorofare Moun    86.37  11 eP       P        10 32 46.5  -0.3
      comp=Z,45nm,0.9s
TRF                                LR      LR
      comp=Z,2µm,19.0s
SKAG  Skagway           86.39  19 eP       P        10 32 47.7 +0.9
      comp=Z,101nm,1.6s
SKAG                               LR      LR
      comp=Z,500nm,21.0s
HARP  HAARP             86.40  13  PFAKE            10 33 00.0  +13
HARP                               LR      LR
      comp=Z,1µm,20.0s
O20A  White River Ci    86.50  45  P       P        10 32 50.3 +2.2
      baz=239
O20A  White River Ci    86.50  45 eP       P        10 32 49.8 +1.7
      comp=Z,9.8nm,1.0s
O20A                               LR      LR
      comp=Z,600nm,21.0s
DHY   Denali Highway    86.55  12  PFAKE            10 33 00.0  +12
DHY                                LR      LR
      comp=Z,1µm,19.0s
REDW  Red Top Meadow    86.57  41 eP       P        10 32 50.1 +1.8
      comp=Z,23nm,1.3s
REDW                               LR      LR
      comp=Z,2µm,18.0s
TPAW  Teton Pass        86.58  41 eP       P        10 32 50.0 +1.5
      comp=Z,6.1nm,1.0s
TPAW                               LR      LR
      comp=Z,2µm,18.0s
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FXWY	**Fox Creek**	**86.61**	**40**	*e*P	**P**	**10 32 50.5**	**+1.9**
	comp=Z,7.6nm,1.1s						
DLMT	**Dillon**	**86.65**	**38**	*e*P	**P**	**10 32 50.0**	**+1.4**
	comp=Z,50nm,1.9s						
DLMT				LR	LR		
	comp=Z,1µm,20.0s						
UBPT	**Khong Chiam**	**86.67**	**288**	P	**P**	**10 32 52.0**	**+2.9**
	comp=Z,19nm,2.2s						
SNOW	**Snow King Moun**	**86.68**	**41**	*e*P	**P**	**10 32 50.6**	**+1.7**
	comp=Z,23nm,1.3s						
SNOW				LR	LR		
	comp=Z,2µm,18.0s						
IPM	**Ipoh**	**86.70**	**276**	PFAKE		10 33 00.0	+11
IPM				LR	LR		
	comp=Z,900nm,20.0s						
MSO	**Missoula**	**86.73**	**37**	P	**P**	**10 32 50.0**	**+1.1**
	baz=234						
MSO	**Missoula**	**86.73**	**37**	PFAKE		10 33 00.0	+11
MSO				LR	LR		
	comp=Z,2µm,20.0s						
IMW	**Indian Meadow**	**86.81**	**40**	*e*P	**P**	**10 32 50.0**	**+0.4**
	comp=Z,8.1nm,1.0s						
IMW				LR	LR		
	comp=Z,1µm,18.0s						
PAX	**Paxson**	**86.84**	**13**	*e*P	**P**	**10 32 49.6**	**+0.6**
	comp=Z,15nm,1.0s						
PAX				LR	LR		
	comp=Z,800nm,22.0s						
PAX	**Paxson**	**86.84**	**13**	P	**P**	**10 32 51.6**	**+2.6**
PAX				pmax	pmax		
	comp=Z,15nm,1.0s						
MOOW	**Moose Ponds**	**86.84**	**41**	*e*P	**P**	**10 32 51.3**	**+1.6**
	comp=Z,14nm,1.8s						
MOOW				LR	LR		
	comp=Z,2µm,18.0s						
SMCO	**Snowmass**	**86.85**	**46**	*e*P	**P**	**10 32 51.2**	**+1.1**
	comp=Z,8.8nm,1.0s						
SMCO				LR	LR		
	comp=Z,800nm,20.0s						
LOHW	**Long Hollow**	**86.86**	**41**	*e*P	**P**	**10 32 51.5**	**+1.8**
	comp=Z,9.9nm,1.3s						
LOHW				LR	LR		
	comp=Z,2µm,18.0s						
BPAW	**Bear Paw Mtn.**	**86.86**	**10**	*e*P	**P**	**10 32 50.1**	**+1.1**
	comp=Z,11nm,1.0s						
BPAW				LR	LR		
	comp=Z,1µm,18.0s						
SYO	**Syowa Base**	**86.86**	**192⇑**	*e*P	**P**	**10 32 49.0**	**-0.1**
MCK	**McKinley**	**86.86**	**11**	*e*P	**P**	**10 32 49.1**	**0.0**
	comp=Z,64nm,1.0s						
MCK				LR	LR		
	comp=Z,900nm,20.0s						
MCK	**McKinley**	**86.86**	**11**	*e*P	**P**	**10 32 49.1**	**0.0**
MCK				pmax	pmax		
	comp=Z,65nm,1.0s						
MCK				MLR	MLR		
	comp=Z,900nm,20.0s						
QLMT	**Earthquake Lak**	**87.03**	**39**	*e*P	**P**	**10 32 51.9**	**+1.3**
BW06	**Boulder Array**	**87.04**	**42**	P	**P**	**10 32 51.6**	**+0.9**
	baz=238,SNR=15						
BW06	**Boulder Array**	**87.04**	**42**	*e*P	**P**	**10 32 50.5**	**-0.2**
	comp=Z,9.3nm,1.1s						
BW06				LR	LR		
	comp=Z,2µm,18.0s						
PD31	**Pinedale Array**	**87.04**	**42**	*e*P	**P**	**10 32 50.8**	**+0.1**
PDAR	**Pinedale Array**	**87.04**	**42**	P	**P**	**10 32 50.7**	**0.0**
	comp=Z,5.2nm,0.8s,baz=207,slow=2.7,SNR=41						
PDAR	**Pinedale Array**	**87.04**	**42**	*e*P	**P**	**10 32 49.9**	**-0.8**
FLWY	**Flagg Ranch**	**87.06**	**40**	*e*P	**P**	**10 32 52.4**	**+1.7**
	comp=Z,11nm,1.1s						
FLWY				LR	LR		
	comp=Z,1µm,18.0s						
JTMT	**Jette**	**87.07**	**36**	PFAKE		10 33 00.0	+9.4
JTMT				LR	LR		
	comp=Z,1µm,19.0s						
YPP	**Pitchstone Pla**	**87.09**	**40**	PFAKE		10 33 00.0	+9.0
YPP				LR	LR		
	comp=Z,1µm,18.0s						
YHB	**Horse Butte**	**87.13**	**39**	*e*P	**P**	**10 32 53.2**	**+2.2**
	comp=Z,6.5nm,0.9s						
YHB				LR	LR		
	comp=Z,1µm,18.0s						
SDCO	**Great Sand Dun**	**87.14**	**48**	P	**P**	**10 32 52.4**	**+1.1**
	baz=241						
SDCO	**Great Sand Dun**	**87.14**	**48**	*e*P	**P**	**10 32 53.0**	**+1.7**
SDCO				LR	LR		
	comp=Z,700nm,18.0s						
YFT	**Old Faithful**	**87.17**	**40**	PFAKE		10 33 00.0	+8.7
YFT				LR	LR		
	comp=Z,1µm,19.0s						
BWN	**Browne**	**87.18**	**11**	*e*P	**P**	**10 32 52.5**	**+2.0**
	comp=Z,92nm,1.4s						
BWN				LR	LR		
	comp=Z,2µm,20.0s						
YMR	**Madison River**	**87.22**	**40**	*e*P	**P**	**10 32 53.4**	**+1.9**
	comp=Z,8.2nm,0.9s						
YMR				LR	LR		
	comp=Z,900nm,18.0s						
VNA3	**Neumayer Olymp**	**87.25**	**175**	P	**P**	**10 32 52.3**	**+1.2**
SNAA	**Sanae**	**87.26**	**177**	P	**P**	**10 32 51.8**	**+0.6**
SNAA	**Sanae**	**87.26**	**177**	P	**P**	**10 32 51.4**	**+0.2**
	comp=Z,4.9nm,0.9s,baz=228,slow=5.3,SNR=14						
SNAA	**Sanae**	**87.26**	**177**	*e*P	**P**	**10 32 51.5**	**+0.3**
	comp=Z,21nm,1.2s						
SNAA				LR	LR		
	comp=Z,1µm,18.0s						
SNAA	**Sanae**	**87.26**	**177**	*i* P	**P**	**10 32 53.7**	**+2.5**
MSTX	**Muleshoe**	**87.29**	**52**	P	**P**	**10 32 52.2**	**+0.3**
	baz=242						
MSTX	**Muleshoe**	**87.29**	**52**	*e*P	**P**	**10 32 53.3**	**+1.4**
	comp=Z,46nm,1.4s						
MSTX				LR	LR		
	comp=Z,2µm,18.0s						
DLBC	**Dease Lake**	**87.29**	**22**	P	**P**	**10 32 51.7**	**+0.4**
	comp=Z,3.7nm,1.0s,baz=220,slow=6.7,SNR=7.2						
DLBC	**Dease Lake**	**87.29**	**22**	*e*P	**P**	**10 32 52.2**	**+0.9**
	comp=Z,25nm,1.3s						
DLBC				LR	LR		
	comp=Z,700nm,18.0s						
H17A	**Grant Village**	**87.30**	**40**	P	**P**	**10 32 53.8**	**+1.9**
	baz=237						
H17A	**Grant Village**	**87.30**	**40**	*e*P	**P**	**10 32 53.3**	**+1.4**
	comp=Z,4.4nm,0.8s						
H17A				LR	LR		
	comp=Z,1µm,20.0s						
KULM	**Kulim**	**87.34**	**277**	PFAKE		10 33 00.0	+7.5
KULM				LR	LR		
	comp=Z,700nm,18.0s						
BOZ	**Bozeman (W)**	**87.34**	**39**	P	**P**	**10 32 52.5**	**+0.5**
	baz=236						
BOZ	**Bozeman (W)**	**87.34**	**39**	*e*P	**P**	**10 32 52.4**	**+0.4**
BOZ				LR	LR		
	comp=Z,1µm,19.0s						
BOZ	**Bozeman (W)**	**87.34**	**39**	*e*P	**P**	**10 32 52.4**	**+0.4**
BOZ				MLR	MLR		
	comp=Z,1µm,19.0s						
833A	**Chaparral WMA,**	**87.36**	**58**	P	**P**	**10 32 52.9**	**+0.6**
	baz=244						
833A	**Chaparral WMA,**	**87.36**	**58**	PFAKE		10 33 00.0	+7.7
833A				LR	LR		
	comp=Z,800nm,19.0s						
WHY	**Whitehorse**	**87.50**	**18**	*e*P	**P**	**10 32 54.8**	**+2.5**
	comp=Z,40nm,1.4s						
LKWY	**Lake**	**87.50**	**40**	PFAKE		10 33 10.0	+17
LKWY				LR	LR		
	comp=Z,2µm,18.0s						
T25A	**Trinidad**	**87.60**	**49**	P	**P**	**10 32 53.7**	**+0.2**
	baz=241						
T25A	**Trinidad**	**87.60**	**49**	PFAKE		10 33 10.0	+16
T25A				LR	LR		
	comp=Z,900nm,19.0s						
GO05	**HualaæØ**	**87.64**	**127**	PFAKE		10 33 10.0	+16
GO05				LR	LR		
	comp=Z,1µm,19.0s						
RIDG	**Independ’e Rid**	**87.66**	**13**	PFAKE		10 33 00.0	+7.1
RIDG				LR	LR		
	comp=Z,900nm,20.0s						
WRH	**Wood River Hil**	**87.69**	**11**	*e*P	**P**	**10 32 52.7**	**-0.3**
	comp=Z,63nm,1.2s						
WRH				LR	LR		
	comp=Z,800nm,20.0s						
DOT	**Dot Lake**	**87.73**	**13**	PFAKE		10 33 10.0	+17
DOT				LR	LR		
	comp=Z,1µm,20.0s						
MLY	**Manley**	**87.77**	**10**	*e*P	**P**	**10 32 52.8**	**-0.6**
	comp=Z,24nm,1.3s						
MLY				LR	LR		
	comp=Z,800nm,18.0s						
SEY	**Seymchan**	**87.82**	**345**	P	**P**	**10 32 53.2**	**-0.4**
	comp=Z,11nm,0.8s,baz=149,slow=9.9,SNR=31						
HDA	**Harding Lake**	**87.85**	**11**	*e*P	**P**	**10 32 55.8**	**+2.0**
	comp=Z,26nm,1.0s						
HDA				LR	LR		
	comp=Z,900nm,18.0s						
HRY	**Holter Researc**	**87.85**	**38**	*e*P	**P**	**10 32 56.0**	**+1.7**
CCB	**Clear Creek Bu**	**87.91**	**11**	*e*P	**P**	**10 32 53.5**	**-0.5**
	comp=Z,41nm,1.2s						
CCB				LR	LR		
	comp=Z,800nm,20.0s						
VNA1	**Neumayer--Stat**	**87.94**	**175**	P	**P**	**10 32 54.8**	**+0.5**
RWWY	**Rawlins**	**87.97**	**44**	PFAKE		10 33 10.0	+15
RWWY				LR	LR		
	comp=Z,2µm,19.0s						
JCT	**Junction City**	**87.97**	**56**	P	**P**	**10 32 56.1**	**+0.9**
	baz=244						
JCT	**Junction City**	**87.97**	**56**	PFAKE		10 33 10.0	+15
JCT				LR	LR		
	comp=Z,1µm,18.0s						
Q24A	**Divide**	**87.97**	**47**	P	**P**	**10 32 55.7**	**+0.4**
	baz=241						
Q24A	**Divide**	**87.97**	**47**	PFAKE		10 33 10.0	+15
Q24A				LR	LR		
	comp=Z,1µm,18.0s						
SCRK	**Sand Creek**	**88.04**	**13**	*e*P	**P**	**10 32 56.6**	**+1.7**
	comp=Z,30nm,1.4s						
SCRK				*e*S	**S**	**10 43 44.6**	**+7.0**
SCRK				LR	LR		
	comp=Z,900nm,20.0s						
WALA	**Waterton Lakes**	**88.04**	**35**	*e*P	**P**	**10 32 56.0**	**+0.8**
	comp=Z,22nm,1.1s						
PSI	**Prapat**	**88.05**	**274**	P	**P**	**10 32 55.2**	**-0.9**
	comp=Z,11nm,0.8s,baz=2.3,slow=0.1,SNR=5.4						
PSI	**Prapat**	**88.05**	**274**	*e*P	**P**	**10 32 55.6**	**-0.5**
	comp=Z,36nm,1.1s						
PSI				LR	LR		
	comp=Z,1µm,19.0s						
ISCO	**Idaho Springs**	**88.07**	**46**	P	**P**	**10 32 56.8**	**+1.0**
	baz=241						
ISCO	**Idaho Springs**	**88.07**	**46**	PFAKE		10 33 10.0	+14
ISCO				LR	LR		
	comp=Z,800nm,19.0s						
COLA	**College**	**88.11**	**11**	*e*P	**P**	**10 32 54.9**	**0.0**
	comp=Z,62nm,1.4s						
COLA				LR	LR		
	comp=Z,1µm,20.0s						
COLA	**College**	**88.11**	**11**	*e*P	**P**	**10 32 54.9**	**0.0**
COLA				pmax	pmax		
	comp=Z,62nm,1.4s						
COLA				MLR	MLR		
	comp=Z,1µm,20.0s						
MDM	**Murphy Dome**	**88.12**	**11**	*e*P	**P**	**10 32 54.8**	**-0.2**
	comp=Z,79nm,1.5s						
MDM				LR	LR		
	comp=Z,1µm,20.0s						
IL1	**Eielson Array**	**88.19**	**11**	*e*P	**P**	**10 32 53.9**	**-1.4**
ILAR	**Eielson Array**	**88.19**	**11**	P	**P**	**10 32 55.0**	**-0.4**
	comp=Z,5.8nm,1.1s,baz=197,slow=4.9,SNR=24						
ILAR	**Eielson Array**	**88.19**	**11**	P	**P**	**10 32 55.0**	**-0.4**
ILAR				pmax	pmax		
	comp=Z,6.0nm,1.1s						
ILB	**Eielson Array**	**88.19**	**11**	*e*P	**P**	**10 32 55.2**	**-0.1**
KVTX	**Kingsville**	**88.23**	**60**	PFAKE		10 33 10.0	+14
KVTX				LR	LR		
	comp=Z,500nm,18.0s						
NVL	**N’lazarevskaya**	**88.26**	**182**	*e*P	**P**	**10 32 57.0**	**+1.2**
NVL				*e*S	**SKSac**	**10 43 22.1**	**-1.6**
NVL				pmax	pmax		
	comp=Z,6.0nm,0.6s						
NVL				MLR	MLR		
	comp=Z,916nm,18.0s						
N23A	**Red Feather La**	**88.39**	**45**	P	**P**	**10 32 58.7**	**+1.4**
	baz=240						
N23A	**Red Feather La**	**88.39**	**45**	*e*P	**P**	**10 32 58.5**	**+1.3**
	comp=Z,15nm,1.4s						
N23A				LR	LR		
	comp=Z,600nm,18.0s						
RLMT	**Red Lodge**	**88.48**	**40**	P	**P**	**10 32 59.0**	**+1.5**
	baz=238						
RLMT	**Red Lodge**	**88.48**	**40**	PFAKE		10 33 10.0	+13
RLMT				LR	LR		
	comp=Z,1µm,18.0s						
AMTX	**Amarillo**	**88.51**	**52**	P	**P**	**10 32 57.3**	**-0.4**
	baz=243						
AMTX	**Amarillo**	**88.51**	**52**	*e*P	**P**	**10 32 59.2**	**+1.5**
	comp=Z,29nm,1.5s						
AMTX				LR	LR		
	comp=Z,2µm,18.0s						
SKNT	**Sakolnakorn**	**88.64**	**289**	P	**P**	**10 33 00.0**	**+1.4**
	comp=Z,12nm,1.1s,comp=Z,963nm						
CCIG	**Comitan**	**88.66**	**72**	PFAKE		10 33 10.0	+11
CCIG				LR	LR		
	comp=Z,1µm,18.0s						
BJT	**Baijiatuau**	**88.82**	**314**	PFAKE		10 33 10.0	+11
BJT				LR	LR		
	comp=Z,799nm,19.0s						
BJI	**Beijing**	**88.83**	**314**	P	**P**	**10 32 59.5**	**+0.6**
BJI				SKS	**SKSac**	**10 43 30.0**	**+2.2**
BJI				S	**ScS**	**10 43 50.5**	**-0.6**
BJI				pmax	pmax		
	comp=Z,32nm,1.6s						
BJI				LR	LR		
	comp=Z,1µm,19.0s						
BJI				LR	LR		
	comp=Z,2µm,17.8s						
BJI				LR	LR		
	comp=Z,2µm,52.0s						
K22A	**Casper**	**88.89**	**43**	P	**P**	**10 33 00.7**	**+1.2**
	baz=240						
K22A	**Casper**	**88.89**	**43**	*e*P	**P**	**10 33 00.7**	**+1.2**
	comp=Z,8.2nm,0.9s						
K22A				LR	LR		
	comp=Z,2µm,18.0s						
PHWY	**Pilot Hill**	**88.91**	**45**	PFAKE		10 33 10.0	+10
PHWY				LR	LR		
	comp=Z,800nm,18.0s						
ABTX	**Abilene, Hawle**	**89.03**	**54**	P	**P**	**10 33 00.1**	**0.0**
	baz=244						
ABTX	**Abilene, Hawle**	**89.03**	**54**	*e*P	**P**	**10 33 01.1**	**+1.0**
	comp=Z,56nm,1.8s						
ABTX				LR	LR		
	comp=Z,2µm,18.0s						
DAWY	**Dawson**	**89.14**	**15**	*e*P	**P**	**10 33 00.3**	**+0.4**
	comp=Z,62nm,1.6s						
DAWY				LR	LR		
	comp=Z,1µm,18.0s						
SRAK	**Srakaew**	**89.26**	**285**	P	P	10 33 13.7	+12
RDOG	**Red Dog Mine**	**89.31**	**4**	PFAKE		10 33 10.0	+9.4
RDOG				LR	LR		
	comp=Z,1µm,20.0s						
ENH	**Enshi**	**89.31**	**303**	*e*P	**P**	**10 33 02.1**	**+0.5**
	comp=Z,204nm,1.4s						
ENH				LR	LR		
	comp=Z,800nm,19.0s						
EGAK	**Eagle**	**89.34**	**14**	*e*P	**P**	**10 33 01.4**	**+0.7**
	comp=Z,96nm,1.9s						
EGAK				*e*S	**S**	**10 43 49.0**	**-0.6**
EGAK				LR	LR		
	comp=Z,1µm,20.0s						
PEL	**Peldehue**	**89.35**	**125**	PFAKE		10 33 20.0	+18
PEL				LR	LR		
	comp=Z,2µm,18.0s						
KHON	**Khomkaen**	**89.42**	**288**	P	P	10 33 15.4	+13
KSCO	**Kaye Shedlock’**	**89.72**	**48**	P	**P**	**10 33 05.9**	**+2.5**
	baz=242						
KSCO	**Kaye Shedlock’**	**89.72**	**48**	*e*P	**P**	**10 33 05.1**	**+1.7**
	comp=Z,34nm,1.6s						
KSCO				LR	LR		
	comp=Z,700nm,18.0s						
EGMT	**Eagleton**	**89.75**	**37**	P	**P**	**10 33 04.3**	**+1.1**
	baz=238						
EGMT	**Eagleton**	**89.75**	**37**	*e*P	**P**	**10 33 04.9**	**+1.7**
	comp=Z,24nm,1.6s						
EGMT				LR	LR		
	comp=Z,2µm,19.0s						
NONG	**Nongkai**	**89.78**	**289**	P	**P**	**10 33 05.7**	**+1.8**
435B	**Jarrell**	**89.83**	**57**	P	**P**	**10 33 04.2**	**+0.3**
	baz=245						
435B	**Jarrell**	**89.83**	**57**	PFAKE		10 33 20.0	+16
435B				LR	LR		
	comp=Z,2µm,18.0s						
COLD	**Coldfoot**	**89.89**	**9**	*e*P	**P**	**10 33 05.3**	**+2.0**
	comp=Z,9.7nm,1.0s						
COLD				LR	LR		
	comp=Z,600nm,20.0s						
ZEA	**Zeya**	**89.92**	**330**	*e*P	**P**	**10 33 04.0**	**+0.3**
ZEA				pmax	pmax		
	comp=Z,400nm,8.0s						
ZEA				pmax	pmax		
	comp=N,200nm,9.0s						
ZEA				pmax	pmax		
	comp=N,50nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,53nm,1.2s						
NAYO	**Nakonayok**	**90.02**	**285**	P	**P**	**10 33 07.7**	**+2.6**
GYA	**Guiyang**	**90.03**	**298**	P	**P**	**10 33 07.0**	**+1.9**
GYA				PP	**PP**	**10 36 41.0**	**+2.5**
GYA				SKS	**SKSac**	**10 43 35.8**	**0.0**
GYA				S	**S**	**10 43 56.5**	**-1.4**
GYA				SS	**SS**	**10 49 57.3**	**+0.5**
GYA				pmax	pmax		
	comp=Z,30nm,1.0s						
GYA				pmax	pmax		
	comp=Z,140nm,6.8s						
GYA				LR	LR		
	comp=Z,790nm,23.8s						
GYA				LR	LR		
	comp=Z,660nm,21.9s						
GYA				LR	LR		
	comp=Z,570nm,24.0s						
TIY	**Taiyuan**	**90.33**	**311**	*e*P	**P**	**10 33 08.8**	**+2.6**
TIY				pP	**sP**	**10 33 16.5**	**+2.9**
TIY				S	**S**	**10 44 05.0**	**+4.8**
TIY				pmax	pmax		
	comp=Z,230nm,3.5s						
TIY				LR	LR		
	comp=Z,1µm,23.4s						
TIY				LR	LR		
	comp=Z,620nm,21.4s						
TIY				LR	LR		
	comp=Z,530nm,18.7s						
WHTX	**Lake Whitney,**	**90.43**	**56**	PFAKE		10 33 20.0	+13
WHTX				LR	LR		
	comp=Z,2µm,18.0s						
GO04	**Tololo Observa**	**90.50**	**123**	PFAKE		10 33 20.0	+12
GO04				LR	LR		
	comp=Z,2µm,18.0s						
WMOK	**Wichita Mounta**	**90.58**	**53**	P	**P**	**10 33 09.3**	**+1.9**
	baz=245						
WMOK	**Wichita Mounta**	**90.58**	**53**	*e*P	**P**	**10 33 10.9**	**+3.5**
	comp=Z,7.4nm,1.4s						
WMOK				LR	LR		
	comp=Z,700nm,19.0s						
HKT	**Hockley**	**90.87**	**58**	PFAKE		10 33 20.0	+11
HKT				LR	LR		
	comp=Z,1µm,18.0s						
OGNE	**Ogallala**	**91.02**	**46**	P	**P**	**10 33 09.3**	**0.0**
	baz=243						
OGNE	**Ogallala**	**91.02**	**46**	PFAKE		10 33 20.0	+11
OGNE				LR	LR		
	comp=Z,1µm,18.0s						
PHET	**Kaeng Krachan**	**91.04**	**283**	P	P	10 33 24.2	+14
LAO	**LASA Array**	**91.11**	**40**	P	**P**	**10 33 10.6**	**+1.1**
	baz=240						
LAO	**LASA Array**	**91.11**	**40**	*e*P	**P**	**10 33 11.4**	**+1.9**
LAO				LR	LR		
	comp=Z,700nm,18.0s						
PBKT	**Sadao Pong**	**91.16**	**287**	*e*P	**P**	**10 33 12.2**	**+1.9**
	comp=Z,73nm,1.3s						
PBKT	**Sadao Pong**	**91.16**	**287**	P	**P**	**10 33 12.3**	**+1.9**
	comp=Z,40nm,1.2s,comp=Z,2µm						
RSSD	**Black Hills**	**91.19**	**43**	P	**P**	**10 33 10.7**	**+0.5**
	baz=242						
RSSD	**Black Hills**	**91.19**	**43**	*e*P	**P**	**10 33 10.8**	**+0.5**
	comp=Z,25nm,1.4s						
RSSD				LR	LR		
	comp=Z,2µm,18.0s						
RSSD	**Black Hills**	**91.19**	**43**	*e*P	**P**	**10 33 10.8**	**+0.5**
RSSD				pmax	pmax		
	comp=Z,25nm,1.4s						
RSSD				MLR	MLR		
	comp=Z,2µm,18.0s						
HIA	**Hailar**	**91.27**	**323**	PFAKE		10 33 20.0	+10
HIA				LR	LR		
	comp=Z,1µm,20.0s						
TOLK	**Toolik Lake Re**	**91.29**	**9**	P	**P**	**10 33 11.0**	**+1.1**
	baz=203						
TOLK	**Toolik Lake Re**	**91.29**	**9**	PFAKE		10 33 20.0	+10
TOLK				LR	LR		
	comp=Z,600nm,20.0s						
XAN	**Xi’an**	**91.32**	**306**	P	**P**	**10 33 10.8**	**0.0**
XAN				pP	sP	10 33 17.5	-0.8
XAN				sP	pP	10 33 20.8	+4.4
XAN				SKS	**SKSac**	**10 43 41.5**	**-1.3**
XAN				S	**S**	**10 44 05.8**	**-3.6**
XAN				sS	pS	10 44 14.8	-1.6
XAN				SS	**SS**	**10 50 17.5**	**+2.3**
XAN				pmax	pmax		
	comp=Z,25nm,1.2s						
XAN				pmax	pmax		
	comp=Z,280nm,3.9s						
XAN				LR	LR		
	comp=Z,500nm,17.3s						
XAN				LR	LR		
	comp=Z,340nm,15.8s						
XAN				LR	LR		
	comp=Z,520nm,18.7s						
CSGN	**Cosiguina Volc**	**91.56**	**77**	PFAKE		10 33 30.0	+18
CSGN				LR	LR		
	comp=Z,600nm,18.0s						
CBKS	**Cedar Bluff**	**91.65**	**49**	P	**P**	**10 33 13.2**	**+1.0**
	baz=244						
CBKS	**Cedar Bluff**	**91.65**	**49**	PFAKE		10 33 20.0	+7.8
CBKS				LR	LR		
	comp=Z,1µm,18.0s						
UTTA	**Uttaradit**	**91.96**	**288**	P	**P**	**10 33 15.8**	**+1.8**
	comp=Z,8.0nm,1.1s,comp=Z,81nm						
HHC	**Hu-ho-hao-te**	**92.32**	**313**	*e*P	**P**	**10 33 15.5**	**+0.1**
HHC				sP	sP	10 33 23.5	+0.6
HHC				SKS	**SKSac**	**10 43 52.5**	**+4.3**
HHC				S	**S**	**10 44 14.5**	**-3.7**
HHC				sS	sS	10 44 28.3	+0.9
HHC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,270nm,4.1s						
HHC				LR	LR		
	comp=Z,340nm,17.3s						
HHC				LR	LR		
	comp=Z,610nm,17.7s						
HHC				LR	LR		
	comp=Z,800nm,16.5s						
NNA	**Nana**	**92.50**	**104**	LR	LR	11 07 33.1	
	comp=Z,641nm,18.0s,baz=238,slow=31						
MYIG	**MØrida**	**92.51**	**69**	PFAKE		10 33 30.0	+13
MYIG				LR	LR		
	comp=Z,800nm,22.0s						
NATX	**Nacogdoches**	**92.51**	**57**	PFAKE		10 33 30.0	+14
NATX				LR	LR		
	comp=Z,2µm,18.0s						
KMI	**Kunming**	**92.78**	**296**	P	**P**	**10 33 19.3**	**+1.3**
KMI				pP	pP	10 33 22.3	-1.2
KMI				sP	sP	10 33 23.5	-2.0
KMI				PP	**PP**	**10 37 03.3**	**+2.8**
KMI				SKS	**SKSac**	**10 43 52.0**	**+0.3**
KMI				pmax	pmax		
	comp=Z,20nm,0.8s						
KMI				pmax	pmax		
	comp=Z,260nm,3.3s						
KMI				LR	LR		
	comp=Z,240nm,6.5s						
KMI				LR	LR		
	comp=Z,320nm,15.4s						
KMI				LR	LR		
	comp=Z,440nm,19.7s						
541A	**Lake Charles**	**93.02**	**59**	PFAKE		10 33 30.0	+11
541A				LR	LR		
	comp=Z,2µm,18.0s						
LAMP	**Lampang**	**93.06**	**289**	P	**P**	**10 33 21.0**	**+1.9**
	comp=Z,18nm,0.8s,comp=Z,137nm						
DGMT	**Dagmar**	**93.17**	**39**	P	**P**	**10 33 19.8**	**+0.8**
	baz=242,SNR=10						
DGMT	**Dagmar**	**93.17**	**39**	*e*P	**P**	**10 33 20.5**	**+1.4**
	comp=Z,64nm,1.1s						
DGMT				LR	LR		
	comp=Z,1µm,19.0s						
BTO	**Baotou**	**93.28**	**312**	*e*P	**P**	**10 33 21.0**	**+1.2**
TUL1	**Leonard**	**93.29**	**53**	P	**P**	**10 33 20.8**	**+0.9**
	baz=246						
TUL1	**Leonard**	**93.29**	**53**	PFAKE		10 33 30.0	+10
TUL1				LR	LR		

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      comp=Z,1µm,18.0s
240A  Hunter Patters   93.32   57  PFAKE          10 33 30.0  +10
240A                               LR     LR
      comp=Z,2µm,18.0s
TRQA  Tornquist        93.40  133  PFAKE          10 33 30.0  +10
TRQA                               LR     LR
      comp=Z,2µm,18.0s
341A  Kurthwood        93.52   58  PFAKE          10 33 30.0 +9.0
341A                               LR     LR
      comp=Z,1µm,18.0s
CM01  Chiang Mai Arr   93.62  288 eP      P       10 33 21.4 -0.3
CM31  Chiang Mai Arr   93.64  288 eP      P       10 33 22.9 +1.0
CMAR  Chiang Mai Arr   93.64  288  P      P       10 33 22.9 +1.0
      comp=Z,7.8nm,0.8s,baz=118,slow=2.7,SNR=37
CMAR                               LR     LR      11 11 32.6
      comp=Z,256nm,21.6s,baz=148,slow=33
CMAR  Chiang Mai Arr   93.64  288 iP      P       10 33 23.1 +1.2
CMAR                               pmax   pmax
      comp=Z,8.0nm,0.8s
HDC   Heredia          93.66   81  PFAKE          10 33 40.0  +18
HDC                                LR     LR
      comp=Z,600nm,18.0s
140A  Cam and Jess,    93.70   57  PFAKE          10 33 30.0 +8.2
140A                               LR     LR
      comp=Z,2µm,18.0s
CMMT  Chiang Mai       93.77  289  P      P       10 33 23.7 +1.3
CHTO  Chiang Mai       93.77  289 eP      P       10 33 23.1 +0.7
      comp=Z,27nm,1.1s
CHTO  Chiang Mai       93.77  289 eP      P       10 33 23.1 +0.7
CHTO                               pmax   pmax
      comp=Z,27nm,1.1s
CHTO  Chiang Mai       93.77  289  P      P       10 33 23.8 +1.4
      comp=Z,87nm,0.8s,comp=Z,2µm
BGNE  Belgrade         93.86   47  P      P       10 33 24.9 +2.6
      baz=245
BGNE  Belgrade         93.86   47  PFAKE          10 33 30.0 +7.6
BGNE                               LR     LR
      comp=Z,900nm,19.0s
241A  Mo Tay, Goldon   93.98   57  PFAKE          10 33 40.0  +17
241A                               LR     LR
      comp=Z,2µm,18.0s
KSU1  Kansas State U   93.98   50  PFAKE          10 33 40.0  +17
KSU1                               LR     LR
      comp=Z,1µm,19.0s
INK   Inuvik           93.99   14  P      P       10 33 21.9 -0.3
      comp=Z,6.5nm,1.0s,baz=212,slow=1.7,SNR=7.9
INK   Inuvik           93.99   14 eP      P       10 33 23.9 +1.7
      comp=Z,13nm,1.0s
INK                                LR     LR
      comp=Z,1µm,19.0s
YAK   Yakutsk          94.03  337  PFAKE          10 33 30.0 +7.4
YAK                                LR     LR
      comp=Z,600nm,18.0s
543A  St. Martinvill   94.10   59  PFAKE          10 33 40.0  +16
543A                               LR     LR
      comp=Z,2µm,18.0s
CD2   Chengdu          94.10  301  P      P       10 33 24.0 +0.3
CD2                                pP     pP      10 33 27.3 -2.0
CD2                                sP     sP      10 33 28.5 -2.7
CD2                                PP     PP      10 37 09.5 -1.0
CD2                                SKS    SKSac   10 43 58.5 +0.2
CD2                                S      S       10 44 34.3 +0.1
CD2                                SS     SS      10 50 55.0 -0.2
CD2                                pmax   pmax
      comp=Z,20nm,0.5s
CD2                                pmax   pmax
      comp=Z,510nm,5.4s
CD2                                LR     LR
      comp=Z,2µm,17.9s
CD2                                LR     LR
      comp=Z,2µm,16.4s
CD2                                LR     LR
      comp=Z,790nm,18.4s
342A  Flagon Creek P   94.20   58  PFAKE          10 33 40.0  +16
342A                               LR     LR
      comp=Z,1µm,18.0s
ESPN  Las Esperanzas   94.26   79  PFAKE          10 33 40.0  +15
ESPN                               LR     LR
      comp=Z,400nm,18.0s
MIAR  Mount Ida        94.43   55  P      P       10 33 26.0 +0.9
      baz=248
MIAR  Mount Ida        94.43   55  PFAKE          10 33 40.0  +15
MIAR                               LR     LR
      comp=Z,1µm,19.0s
W39A  Magazine         94.52   54  P      P       10 33 25.4 -0.1
      baz=248
W39A  Magazine         94.52   54  PFAKE          10 33 40.0  +15
W39A                               LR     LR
      comp=Z,2µm,18.0s
Z41A  Richland Creek   94.54   56  PFAKE          10 33 40.0  +14
Z41A                               LR     LR
      comp=Z,1µm,20.0s
SUSD  Miller           94.60   44  P      P       10 33 26.3 +0.7
      baz=245
HHAR  Hobbs            94.82   53  PFAKE          10 33 40.0  +13
HHAR                               LR     LR
      comp=Z,2µm,19.0s
T38A  Diamond          94.85   52  P      P       10 33 27.2 +0.2
      baz=247
V39A  Pettigrew        94.87   54  P      P       10 33 28.0 +0.8
      baz=248
X40A  Basin Creek Fa   94.97   55  PFAKE          10 33 40.0  +12
X40A                               LR     LR
      comp=Z,1µm,18.0s
W40A  Ferguson Farm,   95.06   54  PFAKE          10 33 40.0  +12
W40A                               LR     LR
      comp=Z,2µm,18.0s
545A  Edgard           95.19   60  PFAKE          10 33 40.0  +11
545A                               LR     LR
      comp=Z,2µm,18.0s
U39A  Green Forest     95.20   53  P      P       10 33 29.8 +1.2
      baz=248
S38A  Stockton         95.36   52  P      P       10 33 30.2 +0.9
      baz=248
143A  Socs Landing,    95.42   57  PFAKE          10 33 40.0  +10
143A                               LR     LR
      comp=Z,2µm,18.0s
UALR  University of    95.46   55  PFAKE          10 33 40.0  +10
UALR                               LR     LR
      comp=Z,800nm,19.0s
V40A  Witts Springs    95.48   54  P      P       10 33 30.1 +0.2
      baz=248
V40A  Witts Springs    95.48   54  PFAKE          10 33 40.0  +10
V40A                               LR     LR
      comp=Z,1µm,19.0s
OTAV  Otavalo          95.49   92  PFAKE          10 33 40.0 +9.0
OTAV                               LR     LR
      comp=Z,700nm,19.0s
344A  Westbrook Farm   95.50   59  PFAKE          10 33 40.0  +10
344A                               LR     LR
      comp=Z,2µm,18.0s
T39A  Clever           95.52   53  P      P       10 33 30.9 +0.9
      baz=248
R38A  Fenwick Farm,    95.57   51  P      P       10 33 30.8 +0.6
      baz=248
CCAR  Cane Creek       95.58   56  PFAKE          10 33 40.0  +10
CCAR                               LR     LR
      comp=Z,2µm,20.0s
YKA   Yellowknife Ar   95.64   24  P      P       10 33 29.7 -0.2
      comp=Z,2.7nm,0.8s,baz=238,slow=4.3,SNR=14
MDND  Maddock          95.64   41  PFAKE          10 33 40.0  +10
MDND                               LR     LR
      comp=Z,2µm,18.0s
U40A  Yellville        95.66   53  P      P       10 33 32.5 +1.8
      baz=248
YKW3  Yellowknife Ar   95.67   24  PFAKE          10 33 40.0  +10
YKW3                               LR     LR
      comp=Z,500nm,20.0s
W41B  Gary Mavity, V   95.68   55  P      P       10 33 32.6 +1.9
      baz=248
W41B  Gary Mavity, V   95.68   55  PFAKE          10 33 40.0 +9.2
W41B                               LR     LR
      comp=Z,2µm,18.0s
WHAR  Wooly Hollow     95.69   54  PFAKE          10 33 40.0 +9.2
WHAR                               LR     LR
      comp=Z,2µm,19.0s
P37A  Lathrop          95.78   50  P      P       10 33 32.1 +0.9
      baz=248
S39A  Bolivar          95.81   52  P      P       10 33 32.2 +0.9
      baz=248
S39A  Bolivar          95.81   52  PFAKE          10 33 40.0 +8.6
S39A                               LR     LR
      comp=Z,2µm,18.0s
ECSD  EROS Data Cent   95.84   45  P      P       10 33 33.3 +1.9
      baz=247
ECSD  EROS Data Cent   95.84   45 eP      P       10 33 31.7 +0.3
      comp=Z,26nm,1.3s
ECSD                               LR     LR
      comp=Z,900nm,19.0s
G32A  Webster          95.88   44  P      P       10 33 33.4 +1.9
      baz=246
G32A  Webster          95.88   44  PFAKE          10 33 40.0 +8.5
G32A                               LR     LR
      comp=Z,1µm,18.0s
VBMS  Vicksburg        95.95   58  PFAKE          10 33 40.0 +7.9
VBMS                               LR     LR
      comp=Z,1µm,18.0s
LZH   Lanzhou          95.96  306 ⇑P      P       10 33 33.0 +0.7
LZH                                pP     pP      10 33 36.3 -1.5
LZH                                sP     sP      10 33 37.8 -2.0
LZH                                PP     PP      10 37 27.0 +2.0
LZH                                SKS    SKSac   10 44 07.0 -1.3
LZH                                S      S       10 44 47.5 -2.9
LZH                                sS     pS      10 44 53.8 -3.7
LZH                                SS     SS      10 51 22.5 +0.9
LZH                                pmax   pmax
      comp=Z,34nm,1.2s
LZH                                pmax   pmax
      comp=Z,400nm,6.8s
LZH                                LR     LR
      comp=Z,650nm,17.9s
LZH                                LR     LR
      comp=Z,750nm,16.3s
LZH                                LR     LR
      comp=Z,930nm,18.6s
345A  Thompson Farm,   96.01   59  P      P       10 33 32.2 -0.2
      baz=249
Q38A  Cooks Store, C   96.07   51  P      P       10 33 32.4 -0.1
      baz=248
R39A  Chumby, Stover   96.25   51  P      P       10 33 33.2 -0.1
      baz=248
N37A  Lee Faris, Mou   96.33   49  PFAKE          10 33 50.0  +16
N37A                               LR     LR
      comp=Z,1µm,18.0s
U41A  Viola            96.36   54  P      P       10 33 35.3 +1.5
      baz=249
S40A  Lebanon          96.38   52  P      P       10 33 36.1 +2.1
      baz=248
P38A  Dawn             96.38   50  P      P       10 33 36.1 +2.2
      baz=248
P38A  Dawn             96.38   50  PFAKE          10 33 50.0  +16
P38A                               LR     LR
      comp=Z,2µm,18.0s
X43A  Marvell          96.49   56  PFAKE          10 33 50.0  +16
X43A                               LR     LR
      comp=Z,2µm,18.0s
346A  Big Creek Wild   96.49   59  PFAKE          10 33 50.0  +15
346A                               LR     LR
      comp=Z,800nm,18.0s
O38A  Galt             96.61   50  P      P       10 33 34.8 -0.1
      baz=248
M37A  Trindle Farm,    96.68   48  P      P       10 33 37.1 +1.9
      baz=248
T41A  Mountain View    96.73   53  P      P       10 33 36.4 +0.8
      baz=249
R40A  Maddies Statio   96.81   52  P      P       10 33 36.7 +0.8
      baz=249
R40A  Maddies Statio   96.81   52  PFAKE          10 33 50.0  +14
R40A                               LR     LR
      comp=Z,2µm,18.0s
P39B  Salisbury        96.89   50  P      P       10 33 36.1 -0.1
      baz=249
447A  Lucedale         96.93   60  PFAKE          10 33 50.0  +13
447A                               LR     LR
      comp=Z,700nm,19.0s
Z45A  Winona           97.00   57  PFAKE          10 33 50.0  +13
Z45A                               LR     LR
      comp=Z,2µm,18.0s
HBAR  Harrisburg       97.03   55  PFAKE          10 33 50.0  +13
HBAR                               LR     LR
      comp=Z,2µm,18.0s
J36A  Seneca 1, Swea   97.21   46  PFAKE          10 33 50.0  +12
J36A                               LR     LR
      comp=Z,1µm,19.0s
T42A  Van Buren        97.22   53  PFAKE          10 33 50.0  +12
T42A                               LR     LR
      comp=Z,900nm,18.0s
146A  Union            97.25   58  PFAKE          10 33 50.0  +12
146A                               LR     LR
      comp=Z,800nm,18.0s
FFC   Flin Flon        97.29   34  PFAKE          10 33 50.0  +12
FFC                                LR     LR
      comp=Z,1µm,18.0s
O39A  Kirksville       97.32   50  P      Pdif    10 33 40.6 +2.4
      baz=249
BCIP  Isla Barro Col   97.32   83  PFAKE          10 33 50.0  +11
BCIP                               LR     LR
      comp=Z,600nm,18.0s
H35A  Sunnyside Ranc   97.40   45  P      Pdif    10 33 38.9 +0.5
      baz=248
P40A  Paris            97.42   51  PFAKE          10 33 50.0  +11
P40A                               LR     LR
      comp=Z,2µm,18.0s
MET   Memphis--Engin   97.43   55  PFAKE          10 33 50.0  +11
MET                                LR     LR
      comp=Z,900nm,19.0s
SCIA  State Center     97.45   48  PFAKE          10 33 50.0  +11
SCIA                               LR     LR
      comp=Z,900nm,18.0s
CCM   Cathedral Cave   97.47   52  PFAKE          10 33 50.0  +11
CCM                                LR     LR
      comp=Z,2µm,18.0s
K37A  Belmond          97.48   47  P      Pdif    10 33 39.0 +0.1
      baz=248
N39A  Derby Farms, D   97.58   49  PFAKE          10 33 50.0  +11
N39A                               LR     LR
      comp=Z,1µm,18.0s
OXF   Oxford           97.62   56  PFAKE          10 33 50.0  +10
OXF                                LR     LR
      comp=Z,2µm,18.0s
PBMO  Poplar Bluff     97.63   54  PFAKE          10 33 50.0  +10
PBMO                               LR     LR
      comp=Z,1µm,19.0s
GNAR  Gosnell          97.66   55  PFAKE          10 33 50.0  +10
GNAR                               LR     LR
      comp=Z,2µm,18.0s
348A  Jackson          97.75   59  PFAKE          10 33 50.0  +10
348A                               LR     LR
      comp=Z,700nm,18.0s
G35A  Watkins          97.82   45  PFAKE          10 33 50.0  +10
G35A                               LR     LR
      comp=Z,900nm,21.0s
K38A  Parkersburg      98.03   47  PFAKE          10 33 50.0 +8.7
K38A                               LR     LR
      comp=Z,900nm,18.0s
FVM   French Village   98.05   53  PFAKE          10 33 50.0 +8.4
FVM                                LR     LR
      comp=Z,2µm,18.0s
PVMO  Portageville     98.06   54  PFAKE          10 33 50.0 +8.4
PVMO                               LR     LR
      comp=Z,2µm,18.0s
I37A  Lemond, Waseca   98.10   46  PFAKE          10 33 50.0 +8.4
I37A                               LR     LR
      comp=Z,1µm,19.0s
PARMO Parma            98.10   54  PFAKE          10 33 50.0 +8.2
PARMO                              LR     LR
      comp=Z,2µm,18.0s
AGMN  Agassiz Nation   98.11   41  PFAKE          10 33 50.0 +8.5
AGMN                               LR     LR
      comp=Z,600nm,19.0s
HALT  Halls            98.16   55  PFAKE          10 33 50.0 +8.0
HALT                               LR     LR
      comp=Z,1µm,18.0s
GLAT  Glass            98.32   54  PFAKE          10 34 00.0  +17
GLAT                               LR     LR
      comp=Z,2µm,19.0s
BRAL  Brewton          98.35   60  PFAKE          10 34 00.0  +17
BRAL                               LR     LR
      comp=Z,700nm,18.0s
SLM   Saint Louis      98.42   52  PFAKE          10 34 00.0  +17
SLM                                LR     LR
      comp=Z,1µm,18.0s
SONA0 Songino Array    98.55  318 eP      Pdif    10 33 44.9 +1.3
SONM  Songino Array    98.55  318  P      Pdif    10 33 44.9 +1.3
      comp=Z,0.4nm,0.4s,baz=123,slow=5.3,SNR=2.8
LPAZ  La Paz           98.56  111  LR     LR      11 11 21.8
      comp=Z,1µm,18.4s,baz=263,slow=31
P42A  Winchester       98.67   51  PFAKE          10 34 00.0  +16
P42A                               LR     LR
      comp=Z,2µm,18.0s
N41A  Harden Midland   98.69   50  PFAKE          10 34 00.0  +16
N41A                               LR     LR
      comp=Z,2µm,18.0s
F36A  Milaca           98.69   44  PFAKE          10 34 00.0  +16
F36A                               LR     LR
      comp=Z,1µm,18.0s
PLAL  Pickwick Lake    98.81   56  PFAKE          10 34 00.0  +15
PLAL                               LR     LR
      comp=Z,2µm,18.0s
ULM   Lac du Bonnet    98.85   40  LR     LR      11 14 52.0
      comp=Z,1µm,18.4s,baz=254,slow=33
SIUC  Southern Illin   98.86   53  PFAKE          10 34 00.0  +15
SIUC                               LR     LR
      comp=Z,900nm,18.0s
L40A  Anamosa          98.90   48  PFAKE          10 34 00.0  +15
L40A                               LR     LR
      comp=Z,900nm,18.0s
SPMN  Marine on St.    98.93   45  PFAKE          10 34 00.0  +15
SPMN                               LR     LR
      comp=Z,900nm,18.0s
LRAL  Lakeview Retre   99.01   58  PFAKE          10 34 00.0  +14
LRAL                               LR     LR
      comp=Z,1µm,18.0s
T45A  Paducah          99.06   54  PFAKE          10 34 00.0  +14
T45A                               LR     LR
      comp=Z,2µm,20.0s
451A  Vernon           99.23   61  PFAKE          10 34 00.0  +13
451A                               LR     LR
      comp=Z,600nm,18.0s
250A  Grady            99.25   59  PFAKE          10 34 00.0  +13
250A                               LR     LR
      comp=Z,600nm,20.0s
I39A  Houston          99.31   47  PFAKE          10 34 00.0  +13
I39A                               LR     LR
      comp=Z,700nm,19.0s
WVT   Waverly          99.38   55  PFAKE          10 34 00.0  +13
WVT                                LR     LR
      comp=Z,2µm,18.0s
D36A  Goodland         99.39   43  PFAKE          10 34 00.0  +13
D36A                               LR     LR
      comp=Z,1µm,19.0s
X48A  Hartselle        99.44   57  PFAKE          10 34 00.0  +12
X48A                               LR     LR
      comp=Z,1µm,18.0s
B35A  Bob, Littlefor   99.46   42  PFAKE          10 34 00.0  +12
B35A                               LR     LR
      comp=Z,600nm,18.0s
Y49A  Blount Mountai   99.75   58  PFAKE          10 34 00.0  +11
Y49A                               LR     LR
      comp=Z,1µm,18.0s
D37A  Cotton           99.86   43  P      Pdif    10 33 49.8 +0.5
      baz=250
JFWS  Jewell Farm      99.86   48  PFAKE          10 34 00.0  +11
JFWS                               LR     LR
      comp=Z,900nm,18.0s
Z50A  Ashland          99.94   58  PFAKE          10 34 00.0  +10
Z50A                               LR     LR
      comp=Z,1µm,18.0s
L42A  Oliver, Polo     99.97   49  PFAKE          10 34 00.0  +10
L42A                               LR     LR
      comp=Z,1µm,18.0s
OLIL  Olney            100.03  52  PFAKE          10 34 00.0  +10
OLIL                               LR     LR
      comp=Z,1µm,18.0s
V48A  Smith Brothers   100.03  56  PFAKE          10 34 00.0  +10
V48A                               LR     LR
      comp=Z,1µm,18.0s
USIN  University of    100.10  53  PFAKE          10 34 00.0 +9.4
USIN                               LR     LR
      comp=Z,1µm,19.0s
352A  Blakely          100.17  60  PFAKE          10 34 00.0 +8.9
352A                               LR     LR
      comp=Z,700nm,19.0s
T47A  Sharon Grove     100.21  54  PFAKE          10 34 00.0 +8.8
T47A                               LR     LR
      comp=Z,1µm,18.0s
E38A  The Farm, Brul   100.23  44  PFAKE          10 34 00.0 +9.0
E38A                               LR     LR
      comp=Z,2µm,18.0s
TIXI  Tiksi            100.27 344  PFAKE          10 34 00.0 +9.4
TIXI                               LR     LR
      comp=Z,800nm,22.0s
TIXI  Tiksi            100.27 344 iP      Pdif    10 33 48.2 -2.4
TIXI                               pmax   pmax
      comp=Z,23nm,1.1s
453A  Whigham          100.47  61  PFAKE          10 34 10.0  +18
453A                               LR     LR
      comp=Z,1µm,19.0s
I41A  Arkdale          100.50  47  PFAKE          10 34 00.0 +7.7
I41A                               LR     LR
      comp=Z,900nm,19.0s
P45A  Graceland, Par   100.55  52  PFAKE          10 34 10.0  +17
P45A                               LR     LR
      comp=Z,2µm,18.0s
SWET  Sewanee          100.55  56  PFAKE          10 34 10.0  +17
SWET                               LR     LR
      comp=Z,1µm,18.0s
G40A  Rib Lake         100.67  46  PFAKE          10 34 10.0  +17
G40A                               LR     LR
      comp=Z,1µm,18.0s
152A  Waverly Hall     100.71  59  PFAKE          10 34 10.0  +16
152A                               LR     LR
      comp=Z,800nm,20.0s
EYMN  Ely              100.72  43  PFAKE          10 34 10.0  +17
EYMN                               LR     LR
      comp=Z,1µm,19.0s
H41A  Junction City    100.83  46  PFAKE          10 34 10.0  +16
H41A                               LR     LR
      comp=Z,700nm,19.0s
M44A  Midewin, Midew   100.92  50  PFAKE          10 34 10.0  +16
M44A                               LR     LR
      comp=Z,2µm,18.0s
253A  Americus         101.00  60  PFAKE          10 34 10.0  +15
253A                               LR     LR
      comp=Z,600nm,18.0s
W50A  Signal Mountai   101.03  57  PFAKE          10 34 10.0  +15
W50A                               LR     LR
      comp=Z,1µm,18.0s
I42A  Draeger Farm,    101.10  47  PFAKE          10 34 10.0  +15
I42A                               LR     LR
      comp=Z,900nm,19.0s
K43A  Burlington       101.13  49  PFAKE          10 34 10.0  +15
K43A                               LR     LR
      comp=Z,1µm,18.0s
X51A  Calhoun          101.19  57  PFAKE          10 34 10.0  +14
X51A                               LR     LR
      comp=Z,900nm,19.0s
WCI   Wyandotte Cave   101.21  53  PFAKE          10 34 10.0  +14
WCI                                LR     LR
      comp=Z,2µm,18.0s
TIGA  Tifton           101.25  61  PFAKE          10 34 10.0  +14
TIGA                               LR     LR
      comp=Z,600nm,21.0s
SFIN  Lafayette        101.28  51  PFAKE          10 34 10.0  +14
SFIN                               LR     LR
      comp=Z,1µm,19.0s
BLO   Bloomington      101.33  52  PFAKE          10 34 10.0  +14
BLO                                LR     LR
      comp=Z,1µm,18.0s
555A  McAlpin          101.36  62  PFAKE          10 34 10.0  +14
555A                               LR     LR
      comp=Z,1µm,19.0s
T49A  Edmonton         101.44  55  PFAKE          10 34 10.0  +13
T49A                               LR     LR
      comp=Z,1µm,18.0s
656A  Willston         101.48  63  PFAKE          10 34 10.0  +13
656A                               LR     LR
      comp=Z,800nm,21.0s
F41A  Three Lakes      101.56  45  PFAKE          10 34 10.0  +13
F41A                               LR     LR
      comp=Z,1µm,18.0s
H42A  Shiocton         101.56  47  PFAKE          10 34 10.0  +13
H42A                               LR     LR
      comp=Z,900nm,19.0s
TLY   Talaya           101.58 321  PFAKE          10 34 10.0  +13
TLY                                LR     LR
      comp=Z,700nm,19.0s
Y52A  Lilburn          101.60  58  PFAKE          10 34 10.0  +13
Y52A                               LR     LR
      comp=Z,1µm,19.0s
COWI  Conover          101.65  45  PFAKE          10 34 10.0  +13
COWI                               LR     LR
      comp=Z,1µm,18.0s
CPCT  Cooper Cave      101.72  56  PFAKE          10 34 10.0  +12
CPCT                               LR     LR
      comp=Z,1µm,18.0s
061Z  Ochoppi          101.79  67  PFAKE          10 34 10.0  +12
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061Z				LR	LR		
	comp=Z,500nm,20.0s						
G42A	**Mountain**	101.85	46	PFAKE		10 34 10.0	+12
G42A				LR	LR		
	comp=Z,1µm,19.0s						
059A	**Moore Haven**	101.92	66	PFAKE		10 34 10.0	+11
059A				LR	LR		
	comp=Z,600nm,21.0s						
GOGA	**Godfrey**	101.94	59	PFAKE		10 34 10.0	+11
GOGA				LR	LR		
	comp=Z,1µm,18.0s						
V51A	**Loudon**	101.96	56	PFAKE		10 34 10.0	+11
V51A				LR	LR		
	comp=Z,700nm,18.0s						
154A	**Montrose**	101.99	60	PFAKE		10 34 10.0	+11
154A				LR	LR		
	comp=Z,900nm,19.0s						
DWPF	**Disney Wildern**	102.03	64	PFAKE		10 34 10.0	+11
DWPF				LR	LR		
	comp=Z,600nm,19.0s						
H43A	**Windswept, Lux**	102.06	47	PFAKE		10 34 10.0	+11
H43A				LR	LR		
	comp=Z,800nm,18.0s						
W52A	**Murphy**	102.08	57	PFAKE		10 34 10.0	+10
W52A				LR	LR		
	comp=Z,1µm,18.0s						
M46A	**Old House Fiel**	102.13	50	PFAKE		10 34 10.0	+10
M46A				LR	LR		
	comp=Z,2µm,18.0s						
C40A	**Isle Royale Na**	102.20	43	PFAKE		10 34 10.0	+10
C40A				LR	LR		
	comp=Z,900nm,20.0s						
255A	**Hazlehurst**	102.30	60	PFAKE		10 34 10.0	+9.5
255A				LR	LR		
	comp=Z,500nm,18.0s						
456A	**Hilliard**	102.31	62	PFAKE		10 34 10.0	+9.4
456A				LR	LR		
	comp=Z,600nm,21.0s						
D41A	**Chassel**	102.32	44	PFAKE		10 34 10.0	+10
D41A				LR	LR		
	comp=Z,2µm,19.0s						
G43A	**Wallace**	102.36	46	PFAKE		10 34 10.0	+10
G43A				LR	LR		
	comp=Z,900nm,18.0s						
TKL	**Tuckaleechee C**	102.36	56	PFAKE		10 34 10.0	+9.2
TKL				LR	LR		
	comp=Z,800nm,18.0s						
V52A	**Sevierville**	102.56	56	PFAKE		10 34 10.0	+8.4
V52A				LR	LR		
	comp=Z,900nm,18.0s						
658A	**Bunnell**	102.56	63	PFAKE		10 34 10.0	+8.2
658A				LR	LR		
	comp=Z,800nm,19.0s						
060A	**Indiantown**	102.61	66	PFAKE		10 34 20.0	+18
060A				LR	LR		
	comp=Z,600nm,18.0s						
TZTN	**Tazewell**	102.80	56	PFAKE		10 34 20.0	+17
TZTN				LR	LR		
	comp=Z,700nm,19.0s						
BG3	**Lake Jocassee**	102.83	57	PFAKE		10 34 20.0	+17
BG3				LR	LR		
	comp=Z,2µm,20.0s						
S51A	**Beattyville**	103.08	55	PFAKE		10 34 20.0	+16
S51A				LR	LR		
	comp=Z,2µm,18.0s						
V53A	**Saluda**	103.12	57	PFAKE		10 34 20.0	+16
V53A				LR	LR		
	comp=Z,900nm,19.0s						
E43A	**Lone Tree Farm**	103.15	45	PFAKE		10 34 20.0	+16
E43A				LR	LR		
	comp=Z,1µm,18.0s						
257A	**Skidaway Islan**	103.49	61	PFAKE		10 34 20.0	+14
257A				LR	LR		
	comp=Z,500nm,19.0s						
E44A	**Grand Marais A**	103.93	45	PFAKE		10 34 20.0	+13
E44A				LR	LR		
	comp=Z,1µm,20.0s						
JSC	**Jenkinsville**	103.95	58	PFAKE		10 34 20.0	+12
JSC				LR	LR		
	comp=Z,500nm,21.0s						
LSA	**Lhasa**	104.00	297	PFAKE		10 34 20.0	+11
LSA				LR	LR		
	comp=Z,400nm,20.0s						
KMSC	**Kings Mountain**	104.13	58	PFAKE		10 34 20.0	+11
KMSC				LR	LR		
	comp=Z,1µm,18.0s						
ACSO	**Alum Creek Sta**	104.25	52	PFAKE		10 34 20.0	+11
ACSO				LR	LR		
	comp=Z,1µm,18.0s						
AAM	**Ann Arbor**	104.32	50	PFAKE		10 34 20.0	+11
AAM				LR	LR		
	comp=Z,2µm,18.0s						
NHSC	**New Hope**	104.50	60	PFAKE		10 34 20.0	+10
NHSC				LR	LR		
	comp=Z,1µm,18.0s						
BLA	**Blacksburg**	105.39	56	PFAKE		10 38 40.0	
BLA				LR	LR		
	comp=Z,1µm,18.0s						
NCAT	**North Carolina**	105.61	57	PFAKE		10 38 40.0	
NCAT				LR	LR		
	comp=Z,1µm,18.0s						
SDV	**Santo Domingo**	105.78	86	PFAKE		10 38 40.0	
SDV				LR	LR		
	comp=Z,500nm,18.0s						
SAML	**Samuel**	106.03	106	PFAKE		10 38 40.0	
SAML				LR	LR		
	comp=Z,900nm,19.0s						
MCWV	**Mont Chateau**	106.44	53	PFAKE		10 38 40.0	
MCWV				LR	LR		
	comp=Z,1µm,19.0s						
N54A	**Moraine State**	106.64	52	PFAKE		10 38 40.0	
N54A				LR	LR		
	comp=Z,2µm,18.0s						
ALLY	**Alegheny Colle**	106.69	51	PFAKE		10 38 40.0	
ALLY				LR	LR		
	comp=Z,2µm,18.0s						
ERPA	**Erie**	106.91	51	PFAKE		10 38 40.0	
ERPA				LR	LR		
	comp=Z,2µm,18.0s						
M54A	**Oil Creek Stat**	107.01	52	PFAKE		10 38 40.0	
M54A				LR	LR		
	comp=Z,1µm,18.0s						
RES	**Resolute Bay**	107.43	16	PFAKE		10 38 40.0	
RES				LR	LR		
	comp=Z,1µm,21.0s						
O56A	**Blue Knob Stat**	107.54	53	PFAKE		10 38 40.0	
O56A				LR	LR		
	comp=Z,2µm,18.0s						
CVRD	**Centerville Ro**	107.61	55	PFAKE		10 38 40.0	
CVRD				LR	LR		
	comp=Z,1µm,18.0s						
CBN	**Corbin Frederi**	107.98	55	PFAKE		10 38 50.0	
CBN				LR	LR		
	comp=Z,1µm,18.0s						
SADO	**Sadowa**	108.09	48	PFAKE		10 38 50.0	
SADO				LR	LR		
	comp=Z,900nm,18.0s						
SSPA	**Standing Stone**	108.12	53	PFAKE		10 38 50.0	
SSPA				LR	LR		
	comp=Z,1µm,19.0s						
MMNY	**Mt. Morris Dam**	108.55	51	PFAKE		10 38 50.0	
MMNY				LR	LR		
	comp=Z,2µm,19.0s						
SDMD	**Soldier’s Deli**	108.65	54	PFAKE		10 38 50.0	
SDMD				LR	LR		
	comp=Z,800nm,18.0s						
PAGS	**Pennsylvania G**	108.91	53	PFAKE		10 38 50.0	
PAGS				LR	LR		
	comp=Z,2µm,19.0s						
PLVO	**Plevna**	109.59	48	PFAKE		10 38 50.0	
PLVO				LR	LR		
	comp=Z,1µm,18.0s						
N59A	**State Game Lan**	109.75	53	PFAKE		10 38 50.0	
N59A				LR	LR		
	comp=Z,1µm,19.0s						
PSUB	**Penn St. - Bra**	109.80	54	PFAKE		10 38 50.0	
PSUB				LR	LR		
	comp=Z,2µm,19.0s						
BINY	**Binghamton**	109.84	51	PFAKE		10 38 50.0	
BINY				LR	LR		
	comp=Z,1µm,18.0s						
KSPA	**Keystone Colle**	109.88	52	PFAKE		10 38 50.0	
KSPA				LR	LR		
	comp=Z,2µm,18.0s						
BRNJ	**Basking Ridge**	110.61	53	PFAKE		10 38 50.0	
BRNJ				LR	LR		
	comp=Z,2µm,18.0s						
ODNJ	**Ogdensburg**	110.65	53	PFAKE		10 38 50.0	
ODNJ				LR	LR		
	comp=Z,1µm,19.0s						
PAL	**Palisades**	111.16	53	PFAKE		10 38 50.0	
PAL				LR	LR		
	comp=Z,2µm,18.0s						
LONY	**Lake Ozonia**	111.26	49	PFAKE		10 38 50.0	
LONY				LR	LR		
	comp=Z,900nm,18.0s						
NCB	**Newcomb**	111.42	50	PFAKE		10 38 50.0	
NCB				LR	LR		
	comp=Z,900nm,18.0s						
ACCN	**Adirondack Com**	111.72	50	PFAKE		10 38 50.0	
ACCN				LR	LR		
	comp=Z,1µm,18.0s						
SPB	**Sao Paulo**	111.75	128	PFAKE		10 38 50.0	
SPB				LR	LR		
	comp=Z,1µm,18.0s						
CRPR	**Cabo Rojo, PR**	111.83	78	PFAKE		10 38 50.0	
CRPR				LR	LR		
	comp=Z,1µm,21.0s						
MPR	**Mayaguez**	111.85	78	PFAKE		10 38 50.0	
MPR				LR	LR		
	comp=Z,300nm,20.0s						
AGP	**Aguadilla**	111.91	78	PFAKE		10 38 50.0	
AGP				LR	LR		
	comp=Z,800nm,22.0s						
FRNY	**Flat Rock**	112.00	49	PFAKE		10 38 50.0	
FRNY				LR	LR		
	comp=Z,1µm,19.0s						
PTGA	**Pitinga**	112.29	100	PFAKE		10 38 50.0	
PTGA				LR	LR		
	comp=Z,700nm,21.0s						
SJG	**San Juan**	112.73	79	PFAKE		10 39 00.0	
SJG				LR	LR		
	comp=Z,400nm,19.0s						
LBNH	**Lisbon**	113.09	50	PFAKE		10 38 50.0	
LBNH				LR	LR		
	comp=Z,2µm,19.0s						
HRV	**Adam Dziewonsk**	113.13	52	PFAKE		10 39 00.0	
HRV				LR	LR		
	comp=Z,2µm,18.0s						
ZAA0	**Zalesovo Array**	113.19	321	PFAKE		10 38 50.0	
ZAA0				LR	LR		
	comp=Z,400nm,21.0s						
MK32	**Makanchi Array**	114.19	313	*e*Pdif	**Pdif**	**10 34 54.4**	**+1.3**
MK32				*e*PKiKP	PKPdf	10 38 43.1	-1.2
MKAR	**Makanchi Array**	114.19	313	Pdiff	**Pdif**	**10 34 54.4**	**+1.3**
	comp=Z,0.1nm,0.4s,baz=107,slow=4.8,SNR=2.0						
MKAR				PKiKP	PKPdf	10 38 43.1	-1.2
	comp=Z,0.8nm,0.5s,baz=190,slow=1.0,SNR=7.7						
MAKZ	**Makanchi**	114.40	313	PFAKE		10 39 00.0	+15
MAKZ				LR	LR		
	comp=Z,500nm,20.0s						
PKME	**Peaks-Kenny Pk**	115.07	49	PFAKE		10 39 00.0	+14
PKME				LR	LR		
	comp=Z,1µm,18.0s						
SABA	**Saba**	115.27	80	PFAKE		10 39 00.0	+13
SABA				LR	LR		
	comp=Z,600nm,18.0s						
SEUS	**St. Eustatius**	115.47	80	PFAKE		10 39 00.0	+12
SEUS				LR	LR		
	comp=Z,400nm,18.0s						
BDFB	**Brasilia**	115.82	120	PFAKE		10 39 00.0	+12
BDFB				LR	LR		
	comp=Z,2µm,18.0s						
KURK	**Kurchatov**	116.84	317	*e*PKPdf	**PKPdf**	**10 38 48.1**	**-1.1**
KURK				LR	LR		
	comp=Z,700nm,20.0s						
KURK	**Kurchatov**	116.84	317	*i* PKIKP	**PKPdf**	**10 38 51.6**	**+2.4**
KURBB	**Kurchatov Arra**	116.89	317	PKiKP	**PKPdf**	**10 38 48.1**	**-1.2**
	comp=Z,1.9nm,0.6s,baz=96,slow=2.1,SNR=7.4						
SCHQ	**Schefferville**	116.99	38	PFAKE		10 39 00.0	+11
SCHQ				LR	LR		
	comp=Z,1µm,18.0s						
KSH	**Kashi**	118.13	304	*e*PKP	**PKPdf**	**10 38 54.0**	**+1.7**
AAK	**Ala-Archa**	119.45	308	PFAKE		10 39 10.0	+15
AAK				LR	LR		
	comp=Z,400nm,19.0s						
AAK	**Ala-Archa**	119.45	308	*i* PKIKP	**PKPdf**	**10 38 54.1**	**-0.7**
NIL	**Nilore**	119.72	297	PFAKE		10 39 10.0	+15
NIL				LR	LR		
	comp=Z,700nm,20.0s						
ILULI	**Ilulissat**	121.12	20	PFAKE		10 39 10.0	+13
ILULI				LR	LR		
	comp=Z,500nm,18.0s						
BVAR	**Borovoye Array**	121.81	320	PKhKP	PKPpre	10 38 49.9	
	comp=Z,1.1nm,0.5s,baz=89,slow=7.2,SNR=5.7						
BVAR				PKP	**PKPdf**	**10 38 58.1**	**-0.7**
	comp=Z,4.9nm,0.7s,baz=90,slow=2.9,SNR=17						
BRVK	**Borovoye**	121.87	320	*e*PKPdf	**PKPdf**	**10 38 58.7**	**-0.1**
BRVK				LR	LR		
	comp=Z,700nm,21.0s						
BRVK	**Borovoye**	121.87	320c	*i*PKIKP	**PKPdf**	**10 38 57.9**	**-0.9**
BRVK				pmax	pmax		
	comp=Z,5.0nm,1.7s						
KBS	**Kingsbay**	122.07	359	PFAKE		10 39 10.0	+11
KBS				LR	LR		
	comp=Z,500nm,18.0s						
SFJD	**Kangerlussuaq**	122.18	23	PFAKE		10 39 10.0	+11
SFJD				LR	LR		
	comp=Z,800nm,19.0s						
SPITS	**Spitsbergen Ar**	122.67	357	PKP	**PKPdf**	**10 38 58.9**	**-0.9**
	comp=Z,10.0nm,0.9s,baz=52,slow=9.3,SNR=3.0						
SUMG	**Summit**	122.91	14	PFAKE		10 39 10.0	+9.2
SUMG				LR	LR		
	comp=Z,2µm,20.0s						
KBL	**Kabul**	123.28	298	*e*PKPdf	**PKPdf**	**10 39 02.4**	**0.0**
KBL				LR	LR		
	comp=Z,500nm,21.0s						
KBL	**Kabul**	123.28	298	*e*PKIKP	**PKPdf**	**10 39 02.4**	**0.0**
KBL				MLR	MLR		
	comp=Z,500nm,21.0s						
IVI	**Ivigtut**	125.42	29	PFAKE		10 39 20.0	+15
IVI				LR	LR		
	comp=Z,700nm,19.0s						
NRS	**Narsarsuaq**	126.67	28	PFAKE		10 39 20.0	+12
NRS				LR	LR		
	comp=Z,900nm,19.0s						
BOSA	**Boshof**	127.09	202	*e*PKPdf	**PKPdf**	**10 39 10.0**	**+0.1**
ANGG	**Ammassalik, Gr**	127.42	21	PFAKE		10 39 20.0	+11
ANGG				LR	LR		
	comp=Z,700nm,20.0s						
ARU	**Arti**	127.70	326	PKP	**PKPdf**	**10 39 09.4**	**-0.5**
	comp=Z,4.4nm,0.5s,baz=85,slow=0.9,SNR=11						
ARU	**Arti**	127.70	326	*e*PKPdf	**PKPdf**	**10 39 09.6**	**-0.3**
ARU				LR	LR		
	comp=Z,700nm,19.0s						
ARU	**Arti**	127.70	326	*i* PKIKP	**PKPdf**	**10 39 09.6**	**-0.3**
ARU						10 41 07.9	
ARU						10 46 20.6	
ARU				SP	SP	10 51 11.1	-3.4
ARU				PS	**PS**	**10 51 21.3**	**+3.6**
ARU				SS	SS	10 58 10.8	-12
ABKAR	**Akbulak array**	128.95	317	*e*PKPdf	**PKPdf**	**10 39 12.1**	**-0.4**
KEV	**Kevo**	129.70	351	PFAKE		10 39 30.0	+17
KEV				LR	LR		
	comp=Z,500nm,20.0s						
AKTO	**Aktyubinsk**	129.86	319	PKP	**PKPdf**	**10 39 12.9**	**-1.3**
	comp=Z,1.9nm,0.7s,baz=346,slow=1.4,SNR=5.4						
ARA0	**ARCESS Array S**	130.12	351	*e*PKPdf	**PKPdf**	**10 39 15.2**	**+1.0**
ARCES	**ARCESS Array B**	130.12	351	PKP	**PKPdf**	**10 39 15.2**	**+1.0**
	comp=Z,2.6nm,0.6s,baz=350,slow=1.1,SNR=13						
APA	**Apatity**	130.41	346⇓	*i*PKIKP	**PKPdf**	**10 39 16.3**	**+1.6**
APA				pmax	pmax		
	comp=Z,4.0nm,1.0s						
RCBR	**Riachuelo**	131.13	119	PFAKE		10 39 30.0	+12
RCBR				LR	LR		
	comp=Z,1µm,18.0s						
GYA0B	**ALIBECK ARRAY**	132.08	302	PFAKE		10 39 30.0	+11
GYA0B				LR	LR		
	comp=Z,400nm,20.0s						
KLMR	**Klimovskoe**	133.82	338	*e*PKIKP	PKPpre	10 39 15.7	
KLMR				pmax	pmax		
	comp=Z,8.0nm,1.2s						
KLMR	**Klimovskoe**	133.82	338	*e*PKPdf	PKPpre	10 39 15.8	
KLMR				AMP		10 39 23.6	
	comp=Z,8.0nm,1.2s						
FIA1	**FINESS Array S**	137.30	346	*e*PKPdf	**PKPdf**	**10 39 29.1**	**+1.2**
FIA0	**FINESS Array S**	137.30	346	*e*PKPpre	PKPpre	10 39 19.5	
FIA0	**FINESS Array S**	137.30	346	*e*PKHKP	PKPpre	10 39 19.5	
FINES	**FINESS Array B**	137.30	346	PKhKP	PKPpre	10 39 19.5	
	comp=Z,0.5nm,0.5s,baz=94,slow=2.0,SNR=3.4						
LSZ	**Lusaka**	137.65	213	PFAKE		10 39 40.0	+10
LSZ				LR	LR		
	comp=Z,600nm,19.0s						
TSUM	**Tsumeb**	138.28	197	PFAKE		10 39 40.0	+8.8
TSUM				LR	LR		
	comp=Z,800nm,20.0s						
VRH	**Novokhopyorsk**	138.93	326	*e*PKIKP	**PKPdf**	**10 39 32.6**	**+1.5**
VRH				pmax	pmax		
	comp=Z,8.0nm,0.5s						
VRH				MLR	MLR		
	comp=Z,710nm,23.0s						
OBN	**Obninsk**	138.93	333	PFAKE		10 39 40.0	+9.0
OBN				LR	LR		
	comp=Z,600nm,20.0s						
OBN	**Obninsk**	138.93	333⇑	*e*PKIKP	**PKPdf**	**10 39 32.0**	**+1.0**
OBN				*e*		10 42 19.4	
OBN				*e*SS	SS	11 00 36.7	-1.1
OBN				pmax	pmax		
	comp=Z,12nm,1.0s						
MAK	**Makhachkala**	139.00	312	*i* P	**Pdif**	**10 36 38.3**	**-5.1**
MAK				*i*		10 39 28.7	
MAK				*e*		10 42 21.3	
MAK				*e*PPP	PPP	10 45 21.1	
VSU	**Vasula**	139.73	343	*i* PKIKP	**PKPdf**	**10 39 33.1**	**+0.8**
NB2	**NORSAR Subarra**	139.94	356	PKP	PKPpre	10 39 26.6	
	comp=Z,5.0nm,1.4s,baz=17,slow=2.6						
NOA	**NORSAR Array B**	139.94	356	PKhKP	PKPpre	10 39 26.1	
	comp=Z,1.1nm,0.7s,baz=16,slow=4.4,SNR=5.9						
VSR	**Storozhevoye**	140.24	327	*e*PKIKP	**PKPdf**	**10 39 33.2**	**-0.3**
VSR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
VSR				MLR	MLR		
	comp=Z,960nm,22.0s						
HFS	**Hagfors**	140.62	354	PKhKP	PKPpre	10 39 26.5	
	comp=Z,3.2nm,0.7s,baz=308,slow=3.4,SNR=7.1						
KONO	**Kongsberg**	141.42	357	PFAKE		10 39 50.0	+15
KONO				LR	LR		
	comp=Z,500nm,19.0s						
KBZ	**Khabaz**	141.84	315	PKP	**PKPdf**	**10 39 35.0**	**-1.7**
	comp=Z,2.3nm,0.9s,baz=97,slow=5.0,SNR=3.6						
KBZ	**Khabaz**	141.84	315	PKIKP	**PKPdf**	**10 39 35.0**	**-1.7**
KBZ				pmax	pmax		
	comp=Z,2.0nm,1.0s						
GNI	**Garni**	141.85	309	*i* PKIKP	**PKPdf**	**10 39 36.9**	**-0.1**
KIV	**Kislovodsk**	141.89	315	PFAKE		10 39 50.0	+13
KIV				LR	LR		
	comp=Z,500nm,20.0s						
KIV	**Kislovodsk**	141.89	315⇑	*e*PKIKP	**PKPdf**	**10 39 38.0**	**+1.1**
KIV				*e*		10 42 36.4	
KIV				pmax	pmax		
	comp=Z,6.0nm,0.9s						
DAMY	**Dhamar**	142.72	266	PFAKE		10 39 50.0	+11
DAMY				LR	LR		
	comp=Z,900nm,20.0s						
ATD	**Arta Tunnel**	143.23	261	PFAKE		10 39 50.0	+10
ATD				LR	LR		
	comp=Z,900nm,22.0s						
RAYN	**Ar Rayn**	143.24	281	*e*PKPdf	**PKPdf**	**10 39 39.1**	**-0.7**
RAYN	**Ar Rayn**	143.24	281	*e*PKIKP	**PKPdf**	**10 39 39.1**	**-0.7**
DRUM	**Mains of Drumt**	143.74	8	*e*P	**PKPdf**	**10 39 39.3**	**-0.3**
INVG	**Invergeldie, C**	144.00	9	*e*P	PKPab	10 39 37.1	-0.4
INVG				IAMs_20	IAMs_20	11 41 58.0	
	comp=Z,606nm,17.3s						
EDU	**Dundee**	144.03	8	*e*P	**PKPab**	**10 39 37.1**	**-0.4**
EAB	**Aberfoyle**	144.19	10	*e*P	**PKPab**	**10 39 38.0**	**-0.1**
SUW	**Suwalki**	144.59	342	*e*PKP	PKPbc	10 39 40.0	+0.2
SUW	**Suwalki**	144.59	342	*e*PKPdf	**PKPdf**	**10 39 41.3**	**+0.1**
SUW				LR	LR		
	comp=Z,700nm,20.0s						
SUW	**Suwalki**	144.59	342	*e*PKIKP	PKPbc	10 39 40.0	+0.2
EDI	**Edinburgh**	144.61	9	*e*P	PKPbc	10 39 40.0	+0.1
MUD	**Monsted U’grnd**	144.63	357	*i* P	**PKPdf**	**10 39 41.2**	**+0.1**
MUD	**Monsted U’grnd**	144.63	357	*i* PKIKP	**PKPdf**	**10 39 41.2**	**+0.1**
ESY	**Stoneypath**	144.70	8	*e*P	**PKPab**	**10 39 39.7**	**-0.3**
ANN	**Anapa**	144.81	320	*e*PKIKP	PKPbc	10 39 40.9	0.0
ANN				*i*		10 39 45.6	
KLNR	**Kaliningrad**	144.83	345	*i* PKIKP	**PKPdf**	**10 39 42.1**	**+0.6**
CLGH	**Cloghs, Cushen**	144.93	12	*e*P	PKPbc	10 39 41.1	+0.2
CLGH				IAMs_20	IAMs_20	11 47 24.9	
	comp=Z,688nm,21.8s						
COP	**Copenhagen**	145.13	353	*i* P	**PKPdf**	**10 39 42.7**	**+0.7**
COP	**Copenhagen**	145.13	353	*i* PKIKP	**PKPdf**	**10 39 42.7**	**+0.7**
EKA	**Eskdalemuir Ar**	145.19	9	PKPbc	**PKPbc**	**10 39 41.5**	**-0.2**
	comp=Z,23nm,0.8s,baz=338,slow=3.2,SNR=44						
AKASG	**Malin Array Be**	145.20	334	PKPbc	**PKPbc**	**10 39 41.3**	**-0.6**
	comp=Z,19nm,0.6s,baz=41,slow=4.2,SNR=51						
AKBB	**Malin Array Si**	145.20	334	*e*PKPbc	**PKPbc**	**10 39 41.2**	**-0.7**
AKBB				LR	LR		
	comp=Z,600nm,20.0s						
ESK	**Eskdalemuir**	145.20	9	*e*PKPbc	**PKPbc**	**10 39 41.6**	**-0.2**
ESK				LR	LR		
	comp=Z,700nm,19.0s						
ESK	**Eskdalemuir**	145.20	9	*e*P	**PKPbc**	**10 39 41.5**	**-0.3**
ESK				IAMs_20	IAMs_20	11 41 55.0	
	comp=Z,812nm,20.4s						
ESK	**Eskdalemuir**	145.20	9	*e*PKIKP	**PKPbc**	**10 39 41.6**	**-0.2**
ESK				MLR	MLR		
	comp=Z,700nm,19.0s						
KIEV	**Kiev**	145.21	334	*e*PKPbc	**PKPbc**	**10 39 40.5**	**-1.4**
KIEV				LR	LR		
	comp=Z,600nm,20.0s						
KIEV	**Kiev**	145.21	334c	*i*PKIKP	**PKPbc**	**10 39 39.7**	**-2.3**
AK11	**Malin Array Si**	145.24	334	*e*PKPbc	**PKPbc**	**10 39 41.2**	**-0.8**
ECK	**Cauldkaine Hil**	145.34	9	*e*P	**PKPbc**	**10 39 41.4**	**-0.8**
BSD	**Bornholm Skovb**	145.37	351⇑	*i*P	**PKPbc**	**10 39 41.3**	**-1.0**
BSD	**Bornholm Skovb**	145.37	351⇑	*i*PKP2	**PKPbc**	**10 39 41.3**	**-1.0**
GAL1	**Galloway**	145.39	11	*e*P	**PKPbc**	**10 39 42.5**	**+0.1**
GAL1				IAMs_20	IAMs_20	11 50 43.0	
	comp=Z,322nm,15.7s						
GMM	**Mts of Mourne**	145.76	12	*e*P	**PKPdf**	**10 39 43.0**	**-0.2**
EDMD	**Edmundbyers**	145.84	8	*e*P	**PKPab**	**10 39 44.5**	**+0.2**
EDMD				IAMs_20	IAMs_20	11 56 34.0	
	comp=Z,488nm,14.2s						
KESW	**Keswick, Cumbr**	145.92	9	*e*P	**PKPab**	**10 39 44.4**	**-0.2**
KESW				IAMs_20	IAMs_20	11 50 55.9	
	comp=Z,879nm,15.4s						
IOMK	**Kirk Michael**	146.00	11	*e*P	**PKPdf**	**10 39 41.5**	**-2.1**
IOMK				IAMs_20	IAMs_20	11 49 56.0	
	comp=Z,686nm,15.3s						
FURI	**Furi**	146.04	254	PFAKE		10 40 00.0	+13
FURI				LR	LR		
	comp=Z,700nm,20.0s						
LODK	**Lodwar**	146.26	243	*e*P	**PKPab**	**10 39 47.5**	**+0.3**
LODK				*e*P	**PKiKP**	**10 39 48.1**	**-1.5**
LODK				*e*P	**pPKPdf**	**10 39 48.4**	**-2.7**
LODK				*e*		10 40 03.1	
	baz=172,slow=3.5						
DSB	**Dublin**	146.61	13	*e*PKPdf	**PKPdf**	**10 39 45.4**	**+0.8**
DSB				LR	LR		
	comp=Z,800nm,18.0s						
SIM	**Simferopol’**	146.69	322	*e*PKP2	**PKPab**	**10 39 48.1**	**+0.2**
SIM				pmax	pmax		
	comp=Z,37nm,0.8s						
SIM				pmax	pmax		
	comp=Z,300nm,9.1s						
WME	**Myndd Eilian**	146.87	11	*e*P	**PKPab**	**10 39 48.0**	**-0.2**
WPM1	**Penmaenmawr**	147.07	11	*e*P	**PKPbc**	**10 39 47.9**	**+0.4**
LBWR	**Ladybower, Pea**	147.27	8	*e*P	**PKPbc**	**10 39 47.8**	**-0.2**
LBWR				IAMs_20	IAMs_20	11 50 48.4	
	comp=Z,728nm,16.2s						
MBAR	**Mbarara**	147.41	232	*e*PKPbc	**PKPbc**	**10 39 50.0**	**+0.1**
MBAR	**Mbarara**	147.41	232	*e*PKP2	**PKPbc**	**10 39 50.0**	**+0.1**
SORM	**Soroca**	147.50	331⇑	*i*P	**PKPbc**	**10 39 48.6**	**-0.3**
SORM	**Soroca**	147.50	331	⇑PKP2	**PKPbc**	**10 39 48.6**	**-0.3**
LVV	**L’vov**	147.91	338	*e*PKP2	**PKPbc**	**10 39 50.1**	**+0.1**
KIS	**Kishinev**	148.12	329	*e*PKP	**PKPdf**	**10 39 48.0**	**+0.6**
KIS	**Kishinev**	148.12	329	*e*PP	PP	10 43 36.0	+18
KIS				*e*SKSP		10 53 36.0	
KIS	**Kishinev**	148.12	329	*e*PKIKP	**PKPdf**	**10 39 48.0**	**+0.6**
KIS				*i*		10 39 53.0	
KIS				MLR	MLR		
	comp=Z,900nm,20.0s						
KWP	**Kalwaria Pacla**	148.53	339	*e*PKP	**PKPbc**	**10 39 52.3**	**+0.7**
KWP	**Kalwaria Pacla**	148.53	339	PFAKE		10 40 00.0	+5.0
KWP				LR	LR		
	comp=Z,6µm,19.0s						
KWP	**Kalwaria Pacla**	148.53	339	*e*PKP2	**PKPbc**	**10 39 52.3**	**+0.7**
OJC	**Ojcow**	148.92	342	*e*PKP	**PKPbc**	**10 39 52.8**	**+0.2**
OJC	**Ojcow**	148.92	342	*e*PKPbc	**PKPbc**	**10 39 52.8**	**+0.2**
OJC	**Ojcow**	148.92	342	*e*PKP2	**PKPbc**	**10 39 52.8**	**+0.2**
ILGA	**Ilgaz**	149.10	316	*e*PKPbc	**PKPbc**	**10 39 54.8**	**+1.1**
KSP	**Ksiaz**	149.21	347	*e*PKP	**PKPbc**	**10 39 53.7**	**+0.4**
KSP	**Ksiaz**	149.21	347	*e*PKP2	**PKPbc**	**10 39 53.7**	**+0.4**
BUR08	**Bucovina Ar. S**	149.24	334	*e*PKPdf	**PKPbc**	**10 39 52.4**	**-1.2**

BUR04	Bucovina Ar. S	149.25	334	ePKPdf	PKPdf	10 39 51.2	+1.8
BURAR	Bucovina Array	149.25	334	⇓iP	PKPbc	10 39 54.0	+0.4
BURAR	Bucovina Array	149.25	334	⇓PKP2	PKPbc	10 39 54.0	+0.4
CLL	Collm	149.35	351	ePKPdf	PKPdf	10 39 51.0	+1.8
CLL				ePKPbc	pPKPdf	10 39 54.0	-0.9
	comp=Z,16nm,1.2s						
CLL				i PKiKP	sPKPdf	10 39 55.8	-1.0
	comp=Z,45nm,1.3s						
CLL				ePKPlp		10 39 55.0	
	comp=Z,400nm,18.9s						
CLL				i PKPab	pPKPbc	10 39 58.7	-0.5
	comp=Z,26nm,0.9s						
CLL				i pPKPab	pPKPab	10 40 03.2	-0.6
	comp=Z,42nm,1.0s						
CLL				ePP	PP	10 43 23.0	-1.9
CLL				ePSKS		10 53 48.0	
CLL				ePPS	PPS	10 56 12.0	
CLL				eSS	SS	11 02 34.0	-2.7
CLL				ePSPS		11 03 56.0	
CLL				Lm	MLR	11 55 00.0	
	comp=N,400nm,21.3s						
CLL				Lm	MLR	11 55 00.0	
	comp=E,400nm,20.4s						
CLL				Lm	MLR	11 55 00.0	
	comp=Z,600nm,19.5s						
CLL	Collm	149.35	351	ePKPbc	PKPbc	10 39 53.4	-0.2
CLL				LR	LR		
	comp=Z,600nm,20.0s						
CLL	Collm	149.35	351	ePKIKP	PKPdf	10 39 51.0	+1.8
CLL				i		10 39 55.8	
CLL				MLR	MLR		
	comp=Z,600nm,19.5s						
BIZ	Bicaz	149.40	332	⇓iP	PKPbc	10 39 55.3	+1.4
NIE	Niedzica	149.49	341	ePKP	PKPbc	10 39 52.0	-2.1
NIE	Niedzica	149.49	341	ePKIKP	PKPbc	10 39 52.0	-2.1
TESR	Tescani	149.49	331	⇓iP	PKPbc	10 39 56.4	+2.3
UZH	Uzhgorod	149.53	338	⇑iPKP2	PKPbc	10 39 54.7	+0.6
CRVS	Cervenica-Dubn	149.57	339	ePKP	PKPbc	10 39 52.5	-1.8
CRVS				e		10 39 56.4	
UPC	Upice	149.58	347	ePKPDF	PKPdf	10 39 48.3	-1.4
UPC				⇑ePKP	sPKPdf	10 39 55.9	-1.4
UPC				ePP	PP	10 43 26.2	-0.1
UPC				AMS	AMS	11 51 30.0	
	comp=Z,600nm,17.8s						
UPC	Upice	149.58	347	ePKIKP	PKPdf	10 39 48.3	-1.4
UPC				e		10 39 55.9	
UPC				e		10 43 26.2	
UPC				MLR	MLR		
	comp=Z,600nm,17.8s						
BRG	Berggiesshubel	149.62	350	ePKP	PKPbc	10 39 54.5	+0.2
	comp=Z,14nm,1.1s						
BRG	Berggiesshubel	149.62	350	ePKP2	PKPbc	10 39 54.5	+0.2
BRG				pmax	pmax		
	comp=Z,4.0nm,1.1s						
DPC	Dobruska-Polom	149.66	347	⇑ePKP	PKPbc	10 39 55.2	+0.7
DPC				ePKPAB	sPKPbc	10 40 00.8	-1.3
DPC				epPKP	sPKPab	10 40 05.7	-1.4
DPC				ePP	PP	10 43 26.4	-0.5
DPC				eSS	SS	11 02 33.8	-6.7
DPC				AMS	AMS	11 59 00.0	
	comp=Z,600nm,19.4s						
DPC	Dobruska-Polom	149.66	347	ePKP2	PKPbc	10 39 55.2	+0.7
DPC				e		10 43 26.4	
DPC				eSS	SS	11 02 33.8	-6.7
DPC				MLR	MLR		
	comp=Z,600nm,19.4s						
OKC	Ostrava-Krasne	149.71	344	⇑ePKP	PKPbc	10 39 55.4	+0.9
OKC				ePP	PP	10 43 25.3	-1.8
OKC				eSS	SS	11 02 44.0	+3.1
OKC				AMS	AMS	11 49 40.0	
	comp=Z,500nm,15.9s						
OKC	Ostrava-Krasne	149.71	344	ePKP2	PKPbc	10 39 55.4	+0.9
OKC				e		10 43 25.3	
OKC				eSS	SS	11 02 44.0	+3.1
OKC				MLR	MLR		
	comp=Z,500nm,15.9s						
CFR	Carcaliu	149.76	328	⇓iP	PKPbc	10 39 54.9	+0.1
CFR	Carcaliu	149.76	328	⇓PKP2	PKPbc	10 39 54.9	+0.1
BR101	Keskin Array S	149.83	314	ePKPbc	PKPbc	10 39 55.5	+0.2
BR131	Keskin Array S	149.83	314	ePKPdf	PKPdf	10 39 51.6	+1.1
BRTR	Keskin Array B	149.83	314	PKPbc	PKPbc	10 39 55.5	+0.2
	comp=Z,8.8nm,0.8s,baz=134,slow=3.7,SNR=24						
PVCC	Panska Ves	149.84	349	ePKPDF	PKPdf	10 39 50.3	+0.2
PVCC				⇑ePKP	PKiKP	10 39 56.1	+0.3
PVCC				ePP	PP	10 43 27.3	-0.5
PVCC				AMS	AMS	11 57 00.0	
	comp=Z,700nm,17.0s						
TRPA	Tarpa	149.86	337	⇓iP	PKPbc	10 39 55.7	+0.8
BMR	Baia Mare	149.89	336	⇓iP	PKPbc	10 39 56.8	+1.7
BMR	Baia Mare	149.89	336	⇓PKP2	PKPbc	10 39 56.8	+1.7
MORC	Moravsky Berou	149.92	345	⇑iP	PKPbc	10 39 55.5	+0.4
MORC	Moravsky Berou	149.92	345	ePKPdf	PKPbc	10 39 53.3	-1.9
MORC				LR	LR		
	comp=Z,800nm,20.0s						
MORC	Moravsky Berou	149.92	345	⇑PKP2	PKPbc	10 39 55.5	+0.4
MORC	Moravsky Berou	149.92	345	ePKP	PKPbc	10 39 55.3	+0.2
VRI	Vrincioaia	149.94	330	⇓iP	PKPbc	10 39 55.2	-0.1
VRI	Vrincioaia	149.94	330	⇓PKP2	PKPbc	10 39 55.2	-0.1
LANS	Liptovska Anna	149.97	342	ePKP2	PKPbc	10 39 56.4	+1.1
LANS	Liptovska Anna	149.97	342	ePKP	PKPbc	10 39 56.4	+1.1
PLOR	Plostina	149.98	330	⇓iP	PKPbc	10 39 54.7	-0.7
PLOR	Plostina	149.98	330	⇓PKP2	PKPbc	10 39 54.7	-0.7
TIRR	Tirgusor	150.12	326	PFAKE		10 40 00.0	-1.6
TIRR				LR	LR		
	comp=Z,700nm,20.0s						
ASF	Jabal al Asfar	150.18	298	PKPbc	PKPbc	10 39 56.9	+0.5
	comp=Z,9.1nm,0.8s,baz=7.6,slow=2.3,SNR=12						
HARR	Harsova	150.21	327	⇑iP	PKPbc	10 39 55.6	-0.3
HARR	Harsova	150.21	327	⇑PKP2	PKPbc	10 39 55.6	-0.3
PRA	Prague	150.31	349	AMS	AMS	12 02 00.0	
	comp=Z,700nm,20.0s						
ANTO	Ankara	150.32	315	⇓iP	PKPbc	10 39 56.6	+0.1
ANTO	Ankara	150.32	315	ePKPdf	PKPbc	10 39 55.4	-1.0
ANTO				LR	LR		
	comp=Z,500nm,22.0s						
ANTO	Ankara	150.32	315	⇓PKP2	PKPbc	10 39 56.6	+0.1
UCC	Uccle	150.37	2	⇑PKP	PKPbc	10 39 56.1	0.0
UCC	Uccle	150.37	2	PFAKE		10 40 00.0	-2.4
UCC				LR	LR		
	comp=Z,900nm,20.0s						
PRU	Pruhonice	150.37	349	ePKPDF	PKPdf	10 39 50.9	0.0
PRU				⇑ePKP	PKiKP	10 39 57.1	+0.2
PRU				epPKP	pPKPab	10 40 06.9	-1.1
PRU				ePP	PP	10 43 30.0	-0.8
PRU				eSS	SS	11 02 42.8	-5.3
PRU				AMS	AMS	11 58 00.0	
	comp=Z,500nm,17.4s						
PRU	Pruhonice	150.37	349	ePKIKP	PKPdf	10 39 50.9	0.0
PRU				e		10 39 57.1	
PRU				e		10 40 06.9	
PRU				e		10 43 30.0	
PRU				eSS	SS	11 02 42.8	-5.3
PRU				MLR	MLR		
	comp=Z,500nm,17.4s						
GOPC	GO Pecny, Ondr	150.39	348	AMS	AMS	11 53 40.0	
	comp=Z,600nm,21.8s						
DOPR	Dopca	150.47	332	⇑iP	PKPbc	10 39 54.8	-1.7
NKC	Novy Kostel	150.47	351	ePKPDF	PKPdf	10 39 50.3	-0.8
NKC				⇑ePKP	sPKPdf	10 39 59.1	+0.4
NKC				ePKPAB	pPKPab	10 40 06.3	-2.2
NKC				ePP	PP	10 43 30.9	-0.5
NKC				AMS	AMS	11 50 50.0	
	comp=Z,600nm,18.6s						
NKC	Novy Kostel	150.47	351	ePKIKP	PKPdf	10 39 50.3	-0.8
NKC				e		10 39 59.1	
NKC				e		10 40 06.3	
NKC				e		10 43 30.9	
NKC				MLR	MLR		
	comp=Z,600nm,18.6s						
MEM	Membach	150.57	360	⇑PKP	PKPbc	10 39 57.8	+1.2
MLR	Muntele Rosu	150.58	330	PKPbc	PKPbc	10 39 57.3	+0.4
	comp=Z,12nm,1.0s,baz=339,slow=1.9,SNR=9.2						
MLR	Muntele Rosu	150.58	330	⇑iP	PKPbc	10 39 56.9	-0.1
MLR	Muntele Rosu	150.58	330	ePKPbc	PKPbc	10 39 57.4	+0.4
MLR				LR	LR		
	comp=Z,800nm,20.0s						
MLR	Muntele Rosu	150.58	330	⇑PKIKP	PKPbc	10 39 56.9	-0.1
VRAC	Vranov	150.58	345	PKPbc	PKPbc	10 39 56.6	-0.1
	comp=Z,6.7nm,0.8s,baz=96,slow=1.1,SNR=9.6						
VRAC	Vranov	150.58	345	ePKP	PKPbc	10 39 56.8	+0.1
JAVC	Velka Javorina	150.73	344	ePKP	PKPbc	10 39 58.4	+1.3
VYHS	Vyhne	150.75	342	ePKIKP	PKPbc	10 39 57.6	+0.5
VYHS	Vyhne	150.75	342	ePKP	PKPbc	10 39 57.6	+0.5
BCLA	Clavier	150.76	1	⇓PKP	PKPab	10 40 04.5	+0.5
KRUC	Moravsky	150.86	346	ePKP	PKPbc	10 39 57.3	0.0
DRGR		150.92	336	⇑iP	PKPdf	10 39 53.4	+1.4
DRGR		150.92	336	⇑PKIKP	PKPdf	10 39 53.4	+1.4
PSZ	Piszkesteto	150.94	340	⇓iP	PKPbc	10 39 58.7	+1.0
PSZ	Piszkesteto	150.94	340	ePKPdf	PKPbc	10 40 00.0	+2.3
PSZ	Piszkesteto	150.94	340	ePKPbc	PKPbc	10 39 58.4	+0.7
PSZ				LR	LR		
	comp=Z,600nm,20.0s						
PSZ	Piszkesteto	150.94	340	⇓PKIKP	PKPbc	10 39 58.7	+1.0
VOIR		151.03	331	⇓iP	PKPbc	10 40 00.1	+2.1
VOIR		151.03	331	⇓PKIKP	PKPbc	10 40 00.1	+2.1
DOU	Dourbes	151.07	2	⇑PKP	PKPbc	10 39 57.9	+0.1
GRFO	Grafenberg	151.17	353	PFAKE		10 40 00.0	+2.0
GRFO				LR	LR		
	comp=Z,600nm,19.0s						
MMAI	Mount Meron Ar	151.17	300	PKPbc	PKPbc	10 39 59.6	+0.9
	comp=Z,18nm,0.8s,baz=69,slow=4.6,SNR=13						
ARR	Arges	151.27	332	⇑iP	PKPbc	10 40 00.1	+1.6
MODS	Modra-Piesok	151.28	344	ePKIKP	PKPbc	10 39 59.0	+0.6
MODS	Modra-Piesok	151.28	344	ePKP	PKPbc	10 39 59.0	+0.6
KHC	Kasperske Hory	151.37	349	⇑ePKP	PKPbc	10 39 59.4	+0.8
KHC				ePKPAB	PKPab	10 40 08.6	+1.9
KHC				ePP	PP	10 43 34.8	-1.8
KHC				eSS	SS	11 02 50.7	-8.6
KHC				AMS	AMS	12 00 30.0	
	comp=Z,700nm,18.2s						
KHC	Kasperske Hory	151.37	349	ePKPdf	PKPdf	10 39 53.4	+0.8
KHC				ePKPbc	PKPbc	10 39 59.4	+0.8
KHC				LR	LR		
	comp=Z,300nm,18.0s						
KHC	Kasperske Hory	151.37	349	ePKIKP	PKPpre	10 39 38.5	
KHC				e		10 43 34.8	
KHC				eSS	SS	11 02 50.7	-8.6
KHC				MLR	MLR		
	comp=Z,700nm,18.2s						
SACV	Santiago Islan	151.44	97	PFAKE		10 40 10.0	+2.0
SACV				LR	LR		
	comp=Z,800nm,19.0s						
WLF	Walferdange	151.52	359	⇓PKP	PKPbc	10 39 59.5	+0.7
WLF	Walferdange	151.52	359	ePKPdf	PKPdf	10 39 53.4	+0.7
WLF				ePKPbc	PKiKP	10 39 59.7	+0.4
WLF				LR	LR		
	comp=Z,800nm,19.0s						
LOT	Lotru	151.58	333	⇓iP	PKPdf	10 39 55.6	+2.5
GEC2	GERESS Array S	151.62	349	ePKPdf	PKPdf	10 39 53.3	+0.3
GEC2				ePKPbc	PKiKP	10 39 59.8	+0.1
GEC2				LR	LR		
	comp=Z,700nm,18.0s						
GERES	GERESS Array B	151.62	349	PKP	PKPdf	10 39 53.3	+0.3
	comp=Z,0.4nm,0.5s,baz=14,slow=2.0,SNR=7.0						
GERES				PKPbc	sPKPdf	10 39 59.5	-1.1
	comp=Z,7.6nm,0.8s,baz=38,slow=3.7,SNR=34						
GEA0	GERESS Array S	151.63	349	ePKPdf	PKPdf	10 39 54.6	+1.6
GEA0				ePKPbc	PKiKP	10 39 59.7	0.0
STU	Stuttgart	152.28	355	PFAKE		10 40 10.0	-0.4
STU				LR	LR		
	comp=Z,600nm,20.0s						
BZS	Buzias	152.32	336	⇑iP	PKPbc	10 40 00.7	-0.1
BZS	Buzias	152.32	336	⇑PKIKP	PKPbc	10 40 00.7	-0.1
EIL	Elat	152.35	294	PKPbc	PKPab	10 40 07.2	-4.2
	comp=Z,4.1nm,0.6s,baz=148,slow=9.5,SNR=3.3						
HERR	Herculane	152.61	334	⇓iP	PKPbc	10 40 01.6	+0.1
BFO	Black Forest	152.78	356	ePKPdf	PKPdf	10 39 52.1	-2.6
BFO				ePKPbc	PKiKP	10 40 03.8	+1.8
BFO				LR	LR		
	comp=Z,500nm,18.0s						
BFO	Black Forest	152.78	356	ePKIKP	PKPdf	10 39 52.1	-2.6
BFO				e		10 40 03.8	
BFO				MLR	MLR		
	comp=Z,500nm,18.0s						
MORH	Mˆ‡rˆ¡gy, Hung	152.85	340	ePKPdf	PKPdf	10 39 52.8	-1.9
ISP	Isparta	152.89	313	PFAKE		10 40 10.0	-3.6
ISP				LR	LR		
	comp=Z,600nm,19.0s						
ECH	Echery	152.95	358	ePKPbc	PKPbc	10 40 01.8	-0.3
ECH				ePKPab	PKPab	10 40 13.2	-0.1
ECH				LR	LR		
	comp=Z,600nm,18.0s						
MDVR	Moldovita	152.97	334	⇓iP	PKPbc	10 40 00.8	-1.6
MANT	Manisa	153.83	316	PFAKE		10 40 10.0	+5.3
MANT				LR	LR		
	comp=Z,1µm,21.0s						
ALN	Alexandroupoli	153.83	323	PFAKE		10 40 10.0	+5.7
ALN				LR	LR		
	comp=Z,300nm,20.0s						
VTS	Vitosha	154.07	330	⇑iP	PKPbc	10 40 06.3	+1.4
VTS	Vitosha	154.07	330	ePKPdf	PKPdf	10 39 58.1	+1.2
VTS				LR	LR		
	comp=Z,700nm,21.0s						
VTS	Vitosha	154.07	330	ePKIKP	PKPdf	10 39 58.1	+1.2
VTS				MLR	MLR		
	comp=Z,700nm,21.0s						
DAVOX	Davos/Dischmat	154.19	353	PKPbc	PKPbc	10 40 06.8	+1.7
	comp=Z,5.0nm,0.6s,baz=315,slow=8.6,SNR=9.5						
DIVS	Divibare	154.22	336	PFAKE		10 40 10.0	+4.9
DIVS				LR	LR		
	comp=Z,600nm,20.0s						
VISS	Visnje	154.28	345	ePKPdf	PKPbc	10 40 01.5	-3.6
FUORN	Ofenpass-Fuorn	154.30	353	ePKPdf	PKPdf	10 40 00.2	+3.0
FUORN				LR	LR		
	comp=Z,700nm,20.0s						
BOJS	Bojanci	154.46	344	i PKPdf	PKPbc	10 40 02.6	-2.8
TUE	Stuetta	154.55	354	PFAKE		10 40 10.0	+4.1
TUE				LR	LR		
	comp=Z,900nm,19.0s						
TRI	Trieste	154.61	347	PFAKE		10 40 10.0	+4.2
TRI				LR	LR		
	comp=Z,700nm,20.0s						
SENIN	Lac Senin/Sane	154.79	357	ePKPdf	PKPdf	10 40 01.2	+3.4
SENIN				LR	LR		
	comp=Z,700nm,19.0s						
SSB	Saint Sauveur	155.89	2	PFAKE		10 40 10.0	+11
SSB				LR	LR		
	comp=Z,600nm,19.0s						
TTG	Podgorica	155.92	335	PFAKE		10 40 10.0	+11
TTG				LR	LR		
	comp=Z,700nm,20.0s						
BNI	Bardonecchia	156.12	358	PFAKE		10 40 10.0	+10
BNI				LR	LR		
	comp=Z,800nm,20.0s						
LIT	Litokhoron	156.30	327	PFAKE		10 40 10.0	+10
LIT				LR	LR		
	comp=Z,500nm,21.0s						
FNA	Florina	156.33	329	ePKPdf	PKPdf	10 40 01.4	+1.5
FNA				LR	LR		
	comp=Z,600nm,20.0s						
FNA	Florina	156.33	329	ePKIKP	PKPdf	10 40 01.4	+1.5
FNA				MLR	MLR		
	comp=Z,600nm,20.0s						
VLC	Villacollemand	156.71	352	PFAKE		10 40 10.0	+10
VLC				LR	LR		
	comp=Z,700nm,19.0s						
POLO	Lamas de Olo	156.78	27	ePKPab	PKPab	10 40 31.8	+1.9
PBRG	Braganca	156.84	24	ePKPab	PKPab	10 40 31.7	+1.6
AGG	Agios Georgios	157.18	325	PFAKE		10 40 10.0	+9.0
AGG				LR	LR		
	comp=Z,1µm,20.0s						
MVO	Moncorvo	157.27	26	ePKPab	PKPab	10 40 33.9	+1.9
MTE	Manteigas	157.69	28	PFAKE		10 40 10.0	+8.4
MTE				LR	LR		
	comp=Z,700nm,19.0s						
AQU	L’Aquila	157.88	345	PFAKE		10 40 10.0	+8.2
AQU				LR	LR		
	comp=Z,600nm,22.0s						
ALMR	Almeirim	158.22	31	ePKP	PKPdf	10 40 02.8	+0.5
ALMR	Almeirim	158.22	31	ePKIKP	PKPdf	10 40 02.7	+0.5
LIS	Lisbon	158.27	33	ePKP	PKPdf	10 40 03.2	+0.9
LIS				AMS	AMS	11 49 23.0	
	comp=E,1µm,22.7s						
LIS	Lisbon	158.27	33	ePKIKP	PKPdf	10 40 03.2	+0.9
PMRV	Marv??o	158.56	29	ePKPab	PKPab	10 40 39.0	+1.4
PESTR	Estremoz	158.92	30	PFAKE		10 40 10.0	+6.9
PESTR				LR	LR		
	comp=Z,300nm,20.0s						
CUC	Castrocucco	159.32	338	PFAKE		10 40 20.0	+16
CUC				LR	LR		
	comp=Z,700nm,19.0s						
MESJ	Messejana	159.41	33	ePKP	PKPdf	10 40 04.4	+0.8
MESJ				ePP	PP	10 44 23.6	+1.6
MESJ				AMS	AMS	11 50 36.9	
	comp=Z,632nm,23.6s						
MESJ	Messejana	159.41	33	ePKIKP	PKPdf	10 40 04.4	+0.8
MESJ				e		10 44 23.6	
MORF	Marmelete	159.59	35	ePKP	PKPdf	10 40 04.6	+0.6
MORF				ePP	PP	10 44 24.7	+1.6
MORF				AMS	AMS	11 51 03.7	
	comp=Z,642nm,15.7s						
MORF	Marmelete	159.59	35	ePKIKP	PKPdf	10 40 04.6	+0.6
MORF				e		10 44 24.6	
PFVI	Vila Bisbo	159.63	35	PFAKE		10 40 20.0	+16
PFVI				LR	LR		
	comp=Z,1µm,19.0s						
TIP	Timpagrande	159.68	335	PFAKE		10 40 20.0	+16
TIP				LR	LR		
	comp=Z,800nm,20.0s						
PAB	San Pablo	159.70	23	PFAKE		10 40 20.0	+16
PAB				LR	LR		
	comp=Z,600nm,18.0s						
ES19	SONSECA Array	159.72	22	ePKPdf	PKPdf	10 40 05.0	+0.9
ESDC	Sonseca Array	159.72	22	PKPab	PKPab	10 40 43.0	+0.4
	comp=Z,1.6nm,0.6s,baz=325,slow=4.1,SNR=7.8						
ESLA	Sonseca Array	159.72	22	PFAKE		10 40 20.0	+16
ESLA				LR	LR		
	comp=Z,700nm,20.0s						
LIC	Lamto	161.87	143	eP	PKPdf	10 40 02.7	-4.4
	comp=Z,67nm,1.7s						
KIC	Kosan Boka	162.14	144	eP	PKPdf	10 40 06.5	-0.9
	comp=Z,149nm,2.0s						
TIC	Toumodi	162.22	143	eP	PKPdf	10 40 05.0	-2.4
DBIC	Dimbokro	162.33	143	PKPab	PKPab	10 40 55.2	+0.6
	comp=Z,5.4nm,0.9s,baz=192,slow=4.8,SNR=4.5						
KOWA	Kowa	168.60	124	PKPab	PKPab	10 41 22.7	+0.4
	comp=Z,5.5nm,1.2s,baz=201,slow=3.1,SNR=2.4						
TOA0	Torodi Ar. Sit	171.17	153	ePKPdf	PKPdf	10 40 14.4	+0.3
TORD	Torodi Ar. Bea	171.17	153	PKP	PKPdf	10 40 13.3	-0.8
	comp=Z,1.6nm,0.9s,baz=263,slow=1.6						
TORD				PKPab	PKPab	10 41 34.3	+0.8
	baz=261,slow=4.3						
TOA1	Torodi Ar. Sit	171.17	153	ePKPdf	PKPdf	10 40 13.3	-0.9
TOA1				ePKPab	PKPab	10 41 34.3	+0.8

JMA 26 10:28:37.1±0.1, 36.°43N×140.°98E, h26km±2km, M3.5, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHYU	Hitachinakayam	0.33	254	P	Pb	10 28 44.5	-0.1
JHYU				S	Sb	10 28 50.0	+0.3
JHO	Hitachi	0.38	299	P	Pb	10 28 45.0	-0.4
JHO				S	Sb	10 28 50.3	-0.7
JIHU	Itakohorinouch	0.59	219	P	Pb	10 28 49.3	+0.4
JYT	Yasato	0.67	253	P	Pb	10 28 49.7	-0.4
JYT				S	Sb	10 28 59.2	+0.2
ONAJ	Iwakimizuishiy	0.69	348	P	Pb	10 28 50.0	-0.5
ONAJ				S	Sb	10 29 00.0	+0.3
JFK	Kawauchi	0.94	355	P	Pn	10 28 53.3	-1.4
JFK				S	Sb	10 29 05.8	-1.0
JSB	Shiboa	1.01	303	P	Pn	10 28 55.4	-0.2
MAT	Matsushiro	2.24	274	P	Pn	10 29 12.9	+0.4
MAT				S	Sn	10 29 39.7	+0.4

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*ISCJB **26** 10:29:59.4±0.4, 36.°07N±0.°03×140.°19E±0.°05, h73km±3km, mb4.1/27, Error ellipse: s-maj=6.6km s-min=5.2km az=172.8*

*NEIC **26** 10:30:00.4±0.5, 36.°07N×140.°15E, h66km±5km, mb4.6/8, Error ellipse: s-maj=6.1km s-min=5.7km az=75.0*

NEIC Recorded [3 JMA] in Ibaraki and Tochigi.

*JMA **26** 10:30:00.9±0.1, 36.°11N×140.°11E, h63km±1km, M4.1 Broadband fault plane solution: P waves. NP1: φs52.00000°, δ86.00000°, λ94.00000°. NP2:φs184.00000°, δ6.00000°, λ42.00000°. Principal axes: T Plg49.0000°, Azm327.0000°; N Plg4.0000°, Azm232.0000°; P Plg41.0000°, Azm138.0000°;*

JMA Felt III J1.

*NIED **26** 10:30:00, 36.°20N×140.°10E, h68km, Mw4.3 Best double couple: M0 2.75000×10¹⁵ NP1:φs160.00000°, δ19.00000°, λ20.00000°. NP2:φs51.00000°, δ84.00000°, λ108.00000°.*

*IDC **26** 10:30:02.8±1.4, 36.°08N×140.°10E, h86km±13km, mb3.8/20, mb1 3.9/22, mb1mx3.7/76, mbtmp4.2/22, MS3.9/1, Ms1 3.9/1, ms1mx2.8/72, Error ellipse: s-maj=14.8km s-min=12.3km az=70.0*

ISC 26 10:29:59.4±0.7, 36.°06N±0.°04×140.°27E±0.°05, h62km±7km, n70, σ1.°59/80, mb4.2/27, 1C-4D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYT	Yasato	0.18	340	⇓P	Pn	10 30 10.5	+1.6
JYT				S	Sn	10 30 17.6	+1.8
JAG	Ashikaga	0.76	299	⇓P	Pn	10 30 14.5	+0.1
JAG				S	Sn	10 30 24.6	-0.9
JKT	Katashina	1.09	311	⇓P	Pn	10 30 18.9	+0.2
JKT				S	Sn	10 30 32.6	-0.5
JRY	Ryogami san	1.11	268	P	Pn	10 30 19.0	0.0
JRY				S	Sn	10 30 32.8	-0.8
JOD2	Odawara 2	1.25	231	⇑P	Pn	10 30 21.6	+0.8
JOD2				S	Sn	10 30 36.3	-0.4
BSO3	Boso 3	1.27	171	P	Pn	10 30 23.3	+2.6
JFY	Yanaizu	1.42	341	⇓P	Pn	10 30 23.8	+0.7
JFY				S	Sn	10 30 41.5	+0.6
MJAR	Matsushiro Arr	1.74	287	P	Pn	10 30 27.4	+0.1
	36nm,0.3s,baz=107,slow=6.0,SNR=33						
MJAR				S	Sn	10 30 49.6	+1.1
	44nm,0.3s,baz=86,slow=28,SNR=8.4						
MAJO	Matsushiro	1.74	287	ePn	Pn	10 30 27.4	0.0
MAJO				e		10 30 27.8	
MAJO				eSn	Sn	10 30 49.6	+1.1
MAT	Matsushiro	1.74	287	P	Pn	10 30 27.5	+0.2
MAT				eS	Sn	10 30 49.4	+0.9
MJB9	Matsu-Tunnel	1.74	287	ePn	Pn	10 30 27.8	+0.4
INU	Inuyama	2.74	256	ePn	Pn	10 30 42.0	+1.0
JHJ	Hachijo jima 2	2.96	188	P	Pn	10 30 46.0	+2.1
	103nm,0.3s,baz=323,slow=23,SNR=15						
JHJ				S	Sn	10 31 19.4	+1.1
	118nm,0.3s,baz=38,slow=19,SNR=7.7						
JHJ2	Mitsune	2.96	187	ePn	Pn	10 30 45.8	+1.8
ERM	Erimo	6.36	20	ePn	Pn	10 31 30.5	+0.1
ERM				eSn	Sn	10 32 40.3	-1.3
ASAJ	Asahikawa	8.25	12	P	Pn	10 31 55.2	-1.0
	1.6nm,0.3s,baz=200,slow=3.9,SNR=14						
ASAJ				S	Sn	10 33 23.6	-4.2
	baz=210,slow=20,SNR=2.8						
ASAJ	Asahikawa	8.25	12	ePn	Pn	10 31 53.0	-3.2
ASAJ				eSn	Sn	10 33 23.6	-4.2
JNU	Nakatsue	8.28	252	P	Pn	10 31 58.1	+1.3
	0.6nm,0.3s,baz=142,slow=4.5,SNR=12						
JNU	Nakatsue	8.28	252	ePn	Pn	10 31 56.6	-0.2
CBIJ	Chichi jima	9.08	169	ePn	Pn	10 32 06.5	-1.2
CBIJ				eSn	Sn	10 33 42.6	-5.8
JCJ	Chichijima	9.08	169	P	Pn	10 32 06.8	-0.9
	7.9nm,0.3s,baz=287,slow=19,SNR=5.4						
JCJ				S	Sn	10 33 42.6	-5.8
	5.5nm,0.3s,baz=287,slow=19,SNR=4.7						
USA0B	Ussuriysk Arra	10.31	325	ePn	Pn	10 32 24.3	-0.1
MA2	Magadan	24.50	13	P	P	10 35 13.4	+0.7
	4.3nm,0.6s,baz=183,slow=18,SNR=3.7						
ENH	Enshi	26.34	266	eP	P	10 35 28.0	-1.6
	13nm,0.6s						
YAK	Yakutsk	26.84	349	LR	LR	10 46 48.3	
	comp=Z,225nm,18.8s,baz=97,slow=38						
YAK	Yakutsk	26.84	349	eP	P	10 35 33.3	-0.4
	24nm,1.0s						
ULN	Ulaanbaatar	27.17	306	eP	P	10 35 36.2	-0.8
	2.2nm,0.6s						
SONA1	Songino Array	27.59	306	eP	P	10 35 40.0	-0.8
SONA0	Songino Array	27.59	306	eP	P	10 35 40.8	0.0
SONM	Songino Array	27.59	306	P	P	10 35 40.8	0.0
	1.8nm,0.5s,baz=104,slow=8.7,SNR=6.5						
SEY	Seymchan	27.93	12	P	P	10 35 45.7	+2.2
	1.4nm,0.6s,baz=233,slow=20,SNR=5.2						
H11N2	WAKE ISLAND Hy	28.47	118	T	T	11 06 04.1	
	baz=313,slow=75,SNR=78						
H11N1	WAKE ISLAND Hy	28.48	118	T	T	11 06 03.5	
	baz=313,slow=75,SNR=52						
H11N3	WAKE ISLAND Hy	28.49	118	T	T	11 06 05.9	
	baz=313,slow=75,SNR=3.8						
H11S1	WAKE ISLAND Hy	29.14	120	T	T	11 06 55.8	
	baz=314,slow=75,SNR=5.7						
H11S3	WAKE ISLAND Hy	29.14	120	T	T	11 06 54.7	
	baz=314,slow=75,SNR=4.5						
H11S2	WAKE ISLAND Hy	29.15	120	T	T	11 06 55.3	
	baz=314,slow=75,SNR=4.3						
ZAA1	Zalesovo Array	41.90	313	eP	P	10 37 43.3	-0.2

ZALV	Zalesovo Beam	41.90	313	P	P	10 37 43.3	-0.2
	5.0nm,0.4s,baz=76,slow=6.1,SNR=7.7						
MK01	Makanchi Array	43.86	303	*e*P	P	10 37 59.0	-0.5
MK31	Makanchi Array	43.87	303	*e*P	P	10 37 59.6	0.0
MK32	Makanchi Array	43.87	303	*e*P	P	10 37 59.5	0.0
MKAR	Makanchi Array	43.87	303	P	P	10 37 59.5	0.0
	5.1nm,0.9s,baz=88,slow=9.7,SNR=23						
MKAR	Makanchi Array	43.87	303	*e*P	P	10 37 59.6	0.0
	42nm,1.1s						
MAKZ	Makanchi	44.08	303	*e*P	P	10 38 01.4	+0.1
	6.3nm,1.0s						
KURK	Kurchatov	45.82	309	*e*P	P	10 38 14.2	-0.7
	13nm,0.8s						
KURK				*e*P	P	10 38 15.0	0.0
KURBB	Kurchatov Arra	45.89	309	P	P	10 38 15.0	-0.5
	7.6nm,0.8s,baz=86,slow=8.6,SNR=35						
KDAK	Kodiak Island	48.44	41	P	P	10 38 36.9	+1.7
	2.3nm,0.5s,baz=295,slow=1.3,SNR=11						
KDAK	Kodiak Island	48.44	41	P	P	10 38 36.9	+1.7
KDAK				*e*PcP	PcP	10 39 59.1	-1.5
MDM	Murphy Dome	50.23	32	*e*P	P	10 38 50.2	+1.4
	5.4nm,0.9s						
ILAR	Eielson Array	50.81	32	P	P	10 38 54.1	+0.9
	1.7nm,0.8s,baz=270,slow=6.2,SNR=15						
ILB	Eielson Array	50.81	32	*e*P	P	10 38 53.8	+0.6
IL1	Eielson Array	50.81	32	*e*P	P	10 38 53.4	+0.2
INK	Inuvik	55.67	27	P	P	10 39 30.4	+1.6
	1.1nm,0.5s,baz=306,slow=8.3,SNR=6.0						
WR1	Warramunga Arr	55.98	187	*e*P	P	10 39 31.8	+0.3
	5.7nm,1.1s						
WRA	Warramunga Arr	55.98	187	P	P	10 39 31.8	+0.3
	2.0nm,0.4s,baz=1.0,slow=7.7,SNR=30						
ARU	Arti	56.49	319	P	P	10 39 34.8	0.0
	2.8nm,0.3s,baz=70,slow=5.5,SNR=4.1						
ASAR	Alice Springs	59.70	187	P	P	10 39 59.7	+2.1
	0.6nm,0.5s,baz=18,slow=11,SNR=14						
YKA	Yellowknife Ar	65.11	30	P	P	10 40 33.9	+0.7
	0.7nm,0.8s,baz=293,slow=6.0,SNR=3.7						
YKB5	Yellowknife Ar	65.11	30	*e*P	P	10 40 34.8	+1.6
FIA0	FINESS Array S	69.25	332	*e*P	P	10 40 58.8	-0.6
FINES	FINESS Array B	69.25	332	P	P	10 40 58.8	-0.6
	2.1nm,0.7s,baz=45,slow=7.6,SNR=4.6						
AKASG	Malin Array Be	74.50	322	P	P	10 41 31.0	-0.1
	2.0nm,0.5s,baz=47,slow=5.8,SNR=4.6						
HFS	Hagfors	74.60	335	P	P	10 41 31.0	-0.5
	2.3nm,0.8s,baz=54,slow=3.7,SNR=4.4						
NB2	NORSAR Subarra	74.73	337	P	P	10 41 32.1	-0.3
	comp=Z,1.0nm,0.6s,baz=41,slow=5.9						
NOA	NORSAR Array B	74.73	337	P	P	10 41 32.0	-0.3
	comp=Z,2.9nm,0.8s,baz=40,slow=5.8,SNR=8.3						
NVAR	Mina Array Bea	76.31	52	P	P	10 41 43.8	+1.8
	comp=Z,0.3nm,0.7s,baz=313,slow=4.5,SNR=3.4						
PDAR	Pinedale Array	79.01	45	P	P	10 41 57.7	+0.7
	comp=Z,0.2nm,0.6s,baz=293,slow=4.8,SNR=2.9						
LTX	Lajitas	91.45	52	*e*P	P	10 43 00.9	+1.6
TXAR	Lajitas Array	91.45	52	P	P	10 43 00.9	+1.6
	comp=Z,0.2nm,0.5s,baz=299,slow=2.5,SNR=6.4						

WEL 26 10:46:05.7,38°S±9°×**18°0W**±°**,h33^{km},ML3.9**/23**,East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.47	268	P	Pn	10 46 30.4	+0.6
WMGZ				S	Sn	10 46 48.3	+0.4
MXZ	Matakaoa Point	1.57	278	P	Pn	10 46 31.5	+0.3
MXZ				S	Sn	10 46 49.5	-0.9
PUZ	Puketiti	1.61	259	P	Pn	10 46 32.6	+0.7
PUZ				S	Sn	10 46 52.1	+0.6
PKGZ	Pakihiroa	1.73	266	P	Pn	10 46 34.0	+0.4
PKGZ				S	Sn	10 46 54.6	0.0
CNGZ	Carnagh Statio	1.77	246	P	Pb	10 46 36.1	-1.4
TWGZ	Tauwhareparae	1.85	257	P	Pn	10 46 36.4	+1.2
TWGZ				S	Sn	10 46 58.5	+1.2
HAZ	Te Kaha	1.97	270	P	Pn	10 46 37.6	+0.9
HAZ				S	Sn	10 46 59.9	-0.3
TKGZ	Te Karaka	2.01	250	P	Pn	10 46 39.0	+1.6
TKGZ				S	Sn	10 47 03.3	+1.9
RUGZ	Raukumara Rang	2.06	264	P	Pn	10 46 38.6	+0.5
PRGZ	Paritu Road	2.19	238	P	Pn	10 46 41.8	+2.0
MWZ	Matawai	2.23	255	P	Pn	10 46 41.0	+0.7
MWZ				S	Sn	10 47 07.2	+0.4
MHGZ	Mahia Peninsul	2.30	233	P	Pn	10 46 43.0	+1.7
KNZ	Kokohu	2.38	238	P	Pn	10 46 44.1	+1.7
KNZ				S	Sn	10 47 12.5	+2.0
SNGZ	Shannon Statio	2.51	246	P	Pn	10 46 45.8	+1.6
SNGZ				S	Sn	10 47 15.0	+1.4
URZ	Urewera	2.54	258	P	Pn	10 46 46.1	+1.6
URZ				S	Sn	10 47 14.6	+0.3
RTZ	Ruatahuna	2.72	251	P	Pn	10 46 49.1	+2.0
RAHZ	Arahi	2.74	245	P	Pn	10 46 49.5	+2.1
MUGZ	Murupara	2.84	255	P	Pn	10 46 50.0	+1.3
MTHZ	Maungataniwha	2.90	247	P	Pn	10 46 51.1	+1.6
OPRZ	Ohinepanea	2.94	268	P	Pn	10 46 50.6	+0.5
ARHZ	Aropaoanui	2.96	239	P	Pn	10 46 53.1	+2.7
TARZ	Mount Tarawera	3.00	260	P	Pn	10 46 52.3	+1.3
NMHZ	Naumai	3.01	243	P	Pn	10 46 53.0	+1.8
MRHZ	Matea Rd	3.20	250	P	Pn	10 46 55.6	+1.8
MCHZ	McNeill Hill	3.25	238	P	Pn	10 46 56.4	+2.0
BKZ	Black Stump Fm	3.27	244	P	Pn	10 46 56.1	+1.4
KAHZ	Kahuranaki	3.32	232	P	Pn	10 46 56.6	+1.2
KWHZ	Kaweka Forest	3.42	240	P	Pn	10 46 58.5	+1.6
KRHZ	Kereru	3.57	237	P	Pn	10 46 59.9	+1.2
BHHZ	Black Hill Sta	3.70	241	P	Pn	10 47 01.9	+1.3
PNHZ	Pukenui	3.82	235	P	Pn	10 47 03.2	+0.9
MOVZ	Moawhango	3.89	244	P	Pn	10 47 05.2	+2.0
TUVZ	Tukino	3.91	246	P	Pn	10 47 07.1	+3.5
MKAZ	Moumakai	4.12	278	P	Pn	10 47 06.5	+0.2
POWZ	Post Office Ro	4.36	232	P	Pn	10 47 10.9	+1.2

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*IDC **26** 10:46:25.6±0.7,21°.01S×174°.00W,h0^{km},mb4.2/8, mb1 4.4/9,mb1mx4.1/44,mbtmp4.2/9,ML4.2/1,Error ellipse: s-maj=56.4km s-min=20.8km az=117.0*

*NEIC **26** 10:46:27.1±0.4,20°.92S×174°.16W,h10^{km},mb4.6/8,Error ellipse: s-maj=25.2km s-min=10.5km az=117.0*

*ISCJB **26** 10:46:28.3±0.4,21°.1S±0°.1×174°.0W±0°.1,h26^{km},mb4.3/16, Error ellipse: s-maj=22.1km s-min=10.0km az=135.4*

ISC 26 10:46:29.3±0.7**,20°.9S**±0°.1×**174°.0W**±0°.2**,h26^{km},n41,** σ**1^{s}52**/40**,mb4.4**/16**,Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	7.29	17	Pn	Pn	10 48 10.9	-3.4
	12nm,0.3s,baz=231,slow=3.5,SNR=18						
AFI				Sn	Sn	10 49 26.2	-10
	baz=163,slow=20,SNR=1.9						
AFI	Afiamalu	7.29	17	*e*Pn	Pn	10 48 11.9	-2.4
AFI				*e*		10 48 12.8	
AFI				*e*Sn	Sn	10 49 26.2	-10
RAR	Rarotonga	13.30	94	Pn	Pn	10 49 30.1	-6.3
	3.3nm,0.3s,baz=262,slow=6.6,SNR=8.7						
URZ	Urewera	18.91	202	P	P	10 50 46.0	-2.0
	0.7nm,0.3s,baz=3.4,slow=19,SNR=4.6						
RPZ	Rata Peaks	25.91	205	P	P	10 52 00.1	+0.8
	7.8nm,0.7s,baz=60,slow=3.7,SNR=6.0						
CNB	Canberra Magne	35.13	238	P	P	10 53 22.1	+1.3
	baz=23,SNR=13						
YNG	Young	35.67	240	P	P	10 53 24.7	-0.8
	baz=23,SNR=7.7						
HTT	Hallett	43.35	243	P	P	10 54 25.8	-3.7
	baz=30,SNR=6.8						
NLAI	Namlea	59.85	279	P	P	10 56 35.5	+2.3
SOEI	Soe	60.24	271	P	P	10 56 34.9	-1.1
EDFI	Ende, Flores	62.97	271	P	P	10 56 56.3	+1.9
PNTR	Pine Nut	78.44	40	*e*P	P	10 58 31.0	+2.9
	5.1nm,1.0s						
YERR	Yerington	78.59	41	*e*P	P	10 58 29.2	+0.2
	3.1nm,0.9s						
NV01	Mina Array Sit	78.82	41	*e*P	P	10 58 31.3	+1.0
NVAR	Mina Array Bea	78.82	41	P	P	10 58 32.7	+2.4
	2.1nm,0.8s,baz=224,slow=9.5,SNR=15						
NV11	Mina Array Sit	78.91	41	*e*P	P	10 58 31.6	+0.9
	0.3nm,0.9s						
KVN	Kaiserville	79.33	41	*e*P	P	10 58 34.4	+1.3
	1.7nm,0.9s						
KS01	Wonju Array Si	79.75	317	*e*P	P	10 58 36.2	+1.1
TMUT	Trail Mountain	83.82	44	*e*P	P	10 58 58.8	+1.8
	6.0nm,1.0s						
LTX	Lajitas	84.17	56	*e*P	P	10 58 58.5	-0.2
TXAR	Lajitas Array	84.17	56	P	P	10 58 58.5	-0.2
	0.8nm,1.0s,baz=216,slow=6.2,SNR=5.3						
HLID	Hailey	84.25	39	*e*P	P	10 59 00.9	+2.0
	4.0nm,1.0s						
TCUT	Toone Canyon	84.69	42	*e*P	P	10 59 03.2	+1.9
	8.4nm,0.9s						
ANMO	Albuquerque	84.79	50	P	P	10 59 01.9	+0.1
	3.1nm,1.1s,baz=208,slow=6.2,SNR=5.8						
PDAR	Pinedale Array	86.75	42	P	P	10 59 12.4	+1.0
	0.8nm,0.8s,baz=222,slow=2.0,SNR=7.1						
PDAR	Pinedale Array	86.75	42	*e*P	P	10 59 11.9	+0.5
BWN	Browne	86.94	11	*e*P	P	10 59 08.3	-3.2
	23nm,0.9s						
SNAA	Sanae	87.45	177	P	P	10 59 13.8	-0.4
	2.5nm,1.0s,baz=141,slow=4.1,SNR=5.5						
ILAR	Eielson Array	87.94	11	P	P	10 59 17.2	+0.8
	0.7nm,0.9s,baz=215,slow=4.6,SNR=7.0						
ILB	Eielson Array	87.94	11	*e*P	P	10 59 17.2	+0.8
IL1	Eielson Array	87.95	11	*e*P	P	10 59 17.0	+0.7
YKA	Yellowknife Ar	95.36	24	P	P	10 59 51.3	+0.5
	0.7nm,0.8s,baz=251,slow=4.4,SNR=4.3						
EKA	Eskdalemuir Ar	144.96	9	PKPbc	PKPbc	11 06 02.9	-0.2
	1.2nm,0.6s,baz=354,slow=3.7,SNR=6.2						
AKASG	Malin Array Be	145.11	334	PKPbc	PKPbc	11 06 03.7	0.0
	0.9nm,0.4s,baz=42,slow=4.2,SNR=7.4						
AKBB	Malin Array Si	145.11	334	*e*PKPdf	PKPbc	11 06 03.7	0.0
BUR04	Bucovina Ar. S	149.16	334	*e*PKPbc	PKPbc	11 06 15.6	+0.1
CLL	Collm	149.18	351	*i* PKPbc	PKPbc	11 06 16.0	+0.7
	comp=Z,3.0nm,0.8s						
CLL				*i* PKPab	PKPab	11 06 20.6	+1.0
BR101	Keskin Array S	149.84	315	*e*PKPbc	PKPbc	11 06 17.4	-0.1
BRTR	Keskin Array B	149.84	315	PKPbc	PKPbc	11 06 17.4	-0.1
	comp=Z,0.8nm,0.7s,baz=64,slow=2.9,SNR=4.5						
GEC2	GERESS Array S	151.46	349	*e*pPKPdf	PKPbc	11 06 19.1	-1.8
GERES	GERESS Array B	151.46	349	PKPbc	PKPbc	11 06 21.6	+0.6
	comp=Z,0.6nm,0.6s,baz=87,slow=5.6,SNR=4.8						

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*MOS **26** 10:48:19.9±1.1,21°.06S×169°.50E,h25^{km},mb5.3/63, MS5.3/27,Error ellipse: s-maj=8.1km s-min=7.4km az=83.9*

*ISCJB **26** 10:48:20.4±0.1,21°.12S±0°.03×169°.52E±0°.03,h30^{km}, mb5.1/168,MS5.3/237,Error ellipse: s-maj=4.0km s-min=3.1km az=148.0*

*IDC **26** 10:48:21.1±2.9,21°.16S×169°.56E,h28^{km}±19^{km},mb4.7/28, mb1 4.8/32,mb1mx4.7/45,mbtmp4.9/32,ML4.5/4,MS5.0/31, Ms1 5.0/31,ms1mx5.0/35,Error ellipse: s-maj=14.2km s-min=11.1km az=83.0*

*NEIC **26** 10:48:22.1±0.1,21°.10S×169°.51E,mb5.2/130,MS5.4/189, Error ellipse: s-maj=4.2km s-min=3.6km az=122.0*

*BJI **26** 10:48:22.5,20°.40S×169°.74E,h34^{km},mb5.0/52,mB5.6/37, Ms5.1/42,Ms7 4.9/38*

*GCMT **26** 10:48:22.1±0.1,21°.24S×169°.31E,h33^{km},MW5.7/126, Moment Tensor Solution. s117,c199; s126,c246; Duration: 1^{s}6 Moment tensor: Scale 10^{17}Nm; M_{rr}3.21±.06; $M_{\theta\theta}$-0.59±.04; $M_{\phi\phi}$-2.62±.04; $M_{r\theta}$0.65±.07; $M_{\theta\phi}$1.53±.03; $M_{\phi r}$-1.38±.06; Best double couple: $M_0$3.66000×10^{17} NP1:ϕ_s153.00000°,δ57.00000°, λ91.00000°. NP2:ϕ_s330.00000°,δ33.00000°,λ88.00000°. Principal axes: T 3.5450, Plg78.0000°, Azm68.0000°; N 0.2280, Plg1.0000°, Azm332.0000°; P -3.7740, Plg12.0000°, Azm242.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

ISC 26 10:48:21.7±0.2**,21°.13S**±0°.05×**169°.53E**±0°.04**,h30^{km},n867,** σ**1^{s}23**/733**,mb5.2**/167**,MS5.3**/239**,40C-13D,Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	3.02	251	*e*Pn	Pn	10 49 05.4	-2.2
	203nm,0.2s						
DZM				*e*Sn	Sn	10 49 40.0	-2.8
	721nm,0.3s						
DZM	Mont Dzumac	3.02	251	Pn	Pn	10 49 05.6	-1.9
	15nm,0.3s,baz=74,slow=15,SNR=136						
DZM				Sn	Sn	10 49 40.3	-2.4
	137nm,0.3s,baz=127,slow=20,SNR=7.6						
DZM				LR	LR	10 49 48.8	
	comp=Z,20μm,21.4s,baz=74,slow=29						
NFK	Norfolk Island	8.01	190	P	Pn	10 50 15.6	-0.5
	baz=8.2,SNR=4.5						
HNR	Honiara	14.84	320	Pn	Pn	10 51 48.0	-1.6
	6.7nm,0.3s,baz=205,slow=14,SNR=2.7						
HNR				LR	LR	10 57 11.7	
	comp=Z,5μm,19.5s,baz=150,slow=36						
HNR	Honiara	14.84	320	P	Pn	10 51 48.0	-1.6
HNR	Honiara	14.84	320	*e*Pn	Pn	10 51 48.0	-1.6
HNR				*e*Pn	P	10 51 49.7	-5.4
HNR	Honiara	14.84	320	P	Pn	10 51 48.0	-1.6
HNR				pmax	pmax		
	comp=Z,7.0nm,0.3s						
HNR				MLR	MLR		
	comp=Z,5μm,19.5s						
EIDS	Eidsvold	17.46	252	P	P	10 52 24.4	+0.3
	baz=18,SNR=7.0						
EIDS	Eidsvold	17.46	252	*e*Pn	P	10 52 24.8	+0.7
	comp=Z,105nm,1.1s						
HIZ	Hauiti	17.93	166	*e*Pn	P	10 52 29.0	-0.1
	comp=Z,137nm,1.1s						
URZ	Urewera	18.29	161	P	P	10 52 32.1	-1.0
	comp=Z,1.9nm,0.3s,baz=338,slow=6.0,SNR=14						
URZ				LR	LR	10 58 08.7	
	comp=Z,8μm,20.1s,baz=342,slow=32						
URZ	Urewera	18.29	161	*e*P	P	10 52 32.1	-1.0
URZ				*e*P	Pn	10 52 35.3	+2.1
ARMA	Armidale	18.56	236	P	Pn	10 52 38.0	+1.3
	baz=19,SNR=20						
ARMA	Armidale	18.56	236	*e*P	Pn	10 52 38.0	+1.3
	comp=Z,96nm,1.1s						
BKZ	Black Stump Fm	18.95	163	*e*P	Pn	10 52 42.1	+0.9
	comp=Z,204nm,1.2s						
AFI	Afiamalu	19.21	71	P	P	10 52 42.4	-1.0
	comp=Z,1.8nm,0.3s,baz=232,slow=12,SNR=11						
AFI				LR	LR	10 58 46.7	
	comp=Z,6μm,20.4s,baz=233,slow=33						
AFI	Afiamalu	19.21	71	*e*P	P	10 52 44.0	+0.5
AFI				*e*sP	Pn	10 52 44.2	-0.4
AFI	Afiamalu	19.21	71	*e*P	P	10 52 44.0	+0.5
RMQ	Roma	19.73	250	P	Pn	10 52 51.1	+0.5
	baz=20,SNR=23						
MGCD	Mangrove Creek	20.29	230	P	Pn	10 52 56.8	-0.4
	baz=20,SNR=11						
BFZ	Birch Farm	20.32	165	*e*P	P	10 52 55.1	-0.2
	comp=Z,99nm,1.0s						
BFZ				LR	LR		
	comp=Z,10μm,20.0s						
RIV	Riverview	20.59	228	P	Pn	10 53 00.2	-0.4
	baz=21,SNR=8.9						
RIV	Riverview	20.59	228	P	Pn	10 52 59.4	-1.3
RIV				pmax	pmax		
	comp=Z,258nm,1.0s						
SNZO	South Karori	20.59	169	*e*P	P	10 52 58.4	+0.1
SNZO				*e*sP	sP	10 53 15.3	+5.1
SNZO				LR	LR		
	comp=Z,7μm,22.0s						
THZ	Tophouse	20.77	173	*e*P	P	10 53 01.1	+0.9
	comp=Z,163nm,1.1s						
KHZ	Kahutara	21.49	172	*e*P	P	10 53 08.8	+0.9
	comp=Z,77nm,1.0s						
KHZ				LR	LR		
	comp=Z,7μm,19.0s						
LTZ	Lake Taylor	21.71	175	*e*P	P	10 53 11.6	+1.2
	comp=Z,96nm,1.2s						
LTZ				LR	LR		
	comp=Z,6μm,21.0s						
CTAO	Charters Tower	21.81	269	*e*P	P	10 53 13.0	+1.5
	comp=Z,114nm,1.1s						
CTAO				LR	LR		
	comp=Z,11μm,18.0s						
CTAO	Charters Tower	21.81	269	*e*P	P	10 53 13.0	+1.5
CTAO				pmax	pmax		
	comp=Z,114nm,1.1s						
CTAO				MLR	MLR		
	comp=Z,11μm,18.0s						
OXZ	Oxford	22.24	175	*e*P	P	10 53 16.0	+0.1
	comp=Z,115nm,1.1s						
OXZ				LR	LR		
	comp=Z,6μm,19.0s						
FOZ	Fox Glacier	22.34	179	*e*P	P	10 53 18.6	+1.6
	comp=Z,100nm,1.0s						
RPZ	Rata Peaks	22.56	177	P	P	10 53 19.2	-0.2
	comp=Z,18nm,0.7s,baz=338,slow=5.3,SNR=4.7						
RPZ	Rata Peaks	22.56	177	*e*P	P	10 53 19.2	-0.2
RPZ				*e*P	P	10 53 20.7	+1.3
RPZ				LR	LR		
	comp=Z,11μm,20.0s						
TARA	Tarawa	22.59	9	PFAKE		10 53 30.0	+10
TARA				LR	LR		
	comp=Z,6μm,19.0s						
MQZ	McQueen's Vall	22.67	174	*e*P	P	10 53 21.7	+1.2
	comp=Z,56nm,1.2s						
MQZ				LR	LR		
	comp=Z,4μm,19.0s						
CAN	Canberra	22.89	227	*e*P	P	10 53 24.1	+1.0
	comp=Z,41nm,0.9s						
CAN	Canberra	22.89	227	*e*P	P	10 53 24.1	+1.0
CAN				pmax	pmax		
	comp=Z,41nm,0.9s						
LBZ	Lake Benmore	23.20	179	*e*P	P	10 53 28.5	+2.5
	comp=Z,36nm,1.0s						
LBZ				LR	LR		
	comp=Z,7μm,21.0s						
WKZ	Wanaka	23.64	181	*e*P	P	10 53 31.5	+1.1
	comp=Z,68nm,1.0s						
WKZ				LR	LR		
	comp=Z,9μm,20.0s						
CMSA	Cobar Meteorol	23.70	239	P	P	10 53 31.4	+0.4
	baz=24,SNR=104						
QLP	Quilpie	23.74	252	P	P	10 53 32.2	+0.8
	baz=24,SNR=30						
MILA	Mila	23.77	224	P	P	10 53 33.0	+1.3
	baz=24,SNR=17						
RABL	Rabaul	23.83	313	*e*P	P	10 53 33.3	+0.9
	comp=Z,82nm,0.6s						
MTSU	Mount Surprise	23.92	273	P	P	10 53 34.5	+1.3
	baz=24,SNR=51						
MLZ	Mavora Lakes	24.20	182	*e*P	P	10 53 36.8	+1.2
	comp=Z,27nm,0.9s						
DCZ	Deep Cove	24.35	184	*e*P	P	10 53 37.6	+0.7
	comp=Z,91nm,1.2s						
PMG	Port Moresby	24.48	295	P	P	10 53 38.9	+0.5
	comp=Z,29nm,0.9s,baz=127,slow=5.1,SNR=4.2						
PMG				LR	LR	11 02 25.4	
	comp=Z,5μm,18.5s,baz=144,slow=34						
PMG	Port Moresby	24.48	295	*e*P	P	10 53 36.0	-2.4
PMG				*e*pP	P	10 53 38.9	+0.5
WHZ	Wether Hill Ro	24.74	183	*e*P	P	10 53 40.6	+0.2
	comp=Z,56nm,0.9s						
COEN	Coen	26.09	282	P	P	10 53 53.9	+0.8
	baz=26,SNR=5.8						
COEN	Coen	26.09	282	*e*P	P	10 53 55.1	+2.1
	comp=Z,45nm,1.0s						
TOO	Toolangi	26.48	227	P	P	10 53 57.4	+1.0
	baz=27,SNR=6.7						
TOO	Toolangi	26.48	227	P	P	10 53 57.2	+0.8
TOO				pmax	pmax		
	comp=Z,64nm,1.2s						
STKA	Stephens Creek	27.12	241	P	P	10 54 02.5	+0.3
	comp=Z,10nm,0.7s,baz=68,slow=9.3,SNR=8.3						
STKA				LR	LR	11 04 55.3	
	comp=Z,7μm,18.4s,baz=81,slow=37						
STKA	Stephens Creek	27.12	241	P	P	10 54 02.1	0.0
	baz=27,SNR=10						
STKA	Stephens Creek	27.12	241	*e*P	P	10 54 03.4	+1.3
	comp=Z,11nm,1.0s						
STKA	Stephens Creek	27.12	241	*e*P	P	10 54 03.4	+1.3
STKA				pmax	pmax		
	comp=Z,11nm,1.0s						
QIS	Mount Isa	27.95	266	P	P	10 54 11.0	+1.2
	baz=28,SNR=8.8						
MOO	Moorlands	28.34	216	P	P	10 54 15.3	+2.4
	baz=28,SNR=6.9						
TAU	Tasmania Unive	28.58	215	*e*P	P	10 54 16.5	+1.4
	comp=Z,48nm,1.1s						
TAU				LR	LR		
	comp=Z,5μm,19.0s						
TAU	Tasmania Unive	28.58	215	*e*P	P	10 54 16.5	+1.4
TAU				pmax	pmax		
	comp=Z,48nm,1.1s						
TAU				MLR	MLR		
	comp=Z,5μm,19.0s						
RAR	Rarotonga	28.61	96	LR	LR	11 03 24.3	
	comp=Z,1μm,21.9s,baz=266,slow=32						
ARPS	Mount Arapiles	28.67	231	P	P	10 54 17.5	+1.6
	baz=29,SNR=4.9						
BBOO	Buckleboo	31.89	242	PFAKE		10 55 00.0	+16
BBOO				LR	LR		
	comp=Z,8μm,18.0s						
WR0	Warramunga Arr	32.74	266	PFAKE		10 55 00.0	+7.9
WR0				LR	LR		
	comp=Z,10μm,18.0s						
WR9	Warramunga Arr	32.77	266	PFAKE		10 55 00.0	+7.7
WR9				LR	LR		
	comp=Z,9μm,19.0s						
WR8	Warramunga Arr	32.78	266	PFAKE		10 55 00.0	+7.5
WR8				LR	LR		
	comp=Z,10μm,18.0s						
WR7	Warramunga Arr	32.80	266	PFAKE		10 55 00.0	+7.3
WR7				LR	LR		
	comp=Z,9μm,19.0s						
WR6	Warramunga Arr	32.82	266	PFAKE		10 55 00.0	+7.2
WR6				LR	LR		
	comp=Z,9μm,19.0s						
WR5	Warramunga Arr	32.85	266	PFAKE		10 55 10.0	+17
WR5				LR	LR		
	comp=Z,10μm,18.0s						
WR4	Warramunga Arr	32.87	266	PFAKE		10 55 10.0	+17
WR4				LR	LR		
	comp=Z,9μm,18.0s						
WR3	Warramunga Arr	32.89	266	PFAKE		10 55 10.0	+17
WR3				LR	LR		
	comp=Z,9μm,19.0s						
WC3	Warramunga Arr	32.90	266	PFAKE		10 55 10.0	+17
WC3				LR	LR		
	comp=Z,10μm,18.0s						
WB0	Warramunga Arr	32.91	266	PFAKE		10 55 10.0	+16
WB0				LR	LR		
	comp=Z,9μm,19.0s						
WR2	Warramunga Arr	32.91	266	PFAKE		10 55 10.0	+16
WR2				LR	LR		
	comp=Z,9μm,18.0s						
WC2	Warramunga Arr	32.91	266	PFAKE		10 55 10.0	+16
WC2				LR	LR		
	comp=Z,10μm,20.0s						
WB8	Warramunga Arr	32.91	266	PFAKE		10 55 10.0	+16
WB8				LR	LR		
	comp=Z,9μm,19.0s						
WB9	Warramunga Arr	32.91	266	PFAKE		10 55 10.0	+16
WB9				LR	LR		
	comp=Z,18μm,19.0s						
WB5	Warramunga Arr	32.92	266	PFAKE		10 55 10.0	+16
WB5				LR	LR		
	comp=Z,9μm,19.0s						
WB6	Warramunga Arr	32.92	266	PFAKE		10 55 10.0	+16
WB6				LR	LR		
	comp=Z,9μm,19.0s						
WB3	Warramunga Arr	32.92	266	PFAKE		10 55 10.0	+16
WB3				LR	LR		
	comp=Z,9μm,20.0s						
WB4	Warramunga Arr	32.92	266	PFAKE		10 55 10.0	+16
WB4				LR	LR		
	comp=Z,9μm,18.0s						
WB2	Warramunga Arr	32.92	266	*e*P	P	10 54 53.3	-0.4
	comp=Z,68nm,1.1s						
WB2				LR	LR		
	comp=Z,10μm,18.0s						
WRAB	Tennant Creek	32.92	266	*e*P	P	10 54 53.8	+0.1
	comp=Z,63nm,1.1s						
WRAB				LR	LR		
	comp=Z,10μm,18.0s						
WRAB	Tennant Creek	32.92	266	*ce*P	P	10 54 53.2	-0.5
WRAB				pmax	pmax		
	comp=Z,39nm,1.7s						
WC4	Warramunga Arr	32.93	266	PFAKE		10 55 10.0	+16
WC4				LR	LR		
	comp=Z,10μm,18.0s						
WR1	Warramunga Arr	32.93	266	*e*P	P	10 54 52.4	-1.3
	comp=Z,80nm,1.1s						
WR1				*e*PcP	PcP	10 57 37.8	0.0
WR1				LR	LR		
	comp=Z,10μm,18.0s						
WRA	Warramunga Arr	32.93	266	P	P	10 54 52.4	-1.4
	comp=Z,14nm,1.0s,baz=94,slow=9.3,SNR=39						
WRA				PcP	PcP	10 57 37.8	0.0
	comp=Z,2.3nm,0.9s,baz=73,slow=1.1,SNR=3.0						
WRA				LR	LR	11 08 36.8	
	comp=Z,10μm,18.1s,baz=100,slow=37						
WC1	Warramunga Arr	32.94	266	PFAKE		10 55 10.0	+16
WC1				LR	LR		
	comp=Z,7μm,18.0s						
AS01	Alice Springs	32.94	259	*e*P	P	10 54 53.2	-0.6
AS31	Alice Springs	32.98	259	*e*P	P	10 54 54.1	-0.1

	comp=Z,16nm,0.8s						
AS31				*e*PcP	**PcP**	**10 57 36.6**	**-1.3**
ASAR	**Alice Springs**	**32.98**	**259**	P	**P**	**10 54 54.0**	**-0.1**
	comp=Z,18nm,0.9s,baz=84,slow=8.8,SNR=72						
ASAR				PcP	**PcP**	**10 57 36.6**	**-1.3**
	comp=Z,2.8nm,0.7s,baz=100,slow=2.8,SNR=4.9						
ASAR				LR	LR	11 08 52.7	
	comp=Z,2µm,19.4s,baz=96,slow=37						
ASAR	**Alice Springs**	**32.98**	**259**	P	**P**	**10 54 54.1**	**-0.1**
ASAR						10 57 36.6	
ASAR				pmax	pmax		
	comp=Z,17nm,0.9s						
ASAR				MLR	MLR		
	comp=Z,2µm,19.4s						
MCQ	**Macquarie Isla**	**34.27**	**191**	PFAKE		10 55 20.0	+15
MCQ				LR	LR		
	comp=Z,6µm,19.0s						
MTN	**Manton Dam**	**37.55**	**276**	P	**P**	**10 55 33.6**	**+0.1**
	baz=38,SNR=6.6						
MTN	**Manton Dam**	**37.55**	**276**	*e*P	**P**	**10 55 33.7**	**+0.1**
	comp=Z,26nm,0.7s						
MTN				LR	LR		
	comp=Z,8µm,20.0s						
TBI	**Tubuai**	**37.94**	**101**	*e*S	**S**	**11 01 30.4**	**+3.5**
	comp=Z,868nm,28.9s						
TBI				*e*LQ	LQ	11 04 16.6	
	comp=Z,5µm,31.2s						
TBI				*e*LR	LR	11 05 54.6	
	comp=Z,2µm,25.0s,baz=267						
WRKA	**Warakurna**	**38.03**	**256**	P	**P**	**10 55 37.4**	**-0.1**
	baz=38,SNR=9.1						
FORT	**Forrest**	**38.32**	**247**	PFAKE		10 55 50.0	+10
FORT				LR	LR		
	comp=Z,6µm,18.0s						
PPT2	**Papeete2**	**38.67**	**92**	*e*S	**S**	**11 01 41.0**	**+2.8**
	comp=Z,1µm,25.2s						
PPT2				*e*LQ	LQ	11 04 38.3	
	comp=Z,5µm,29.0s						
PPT2				*e*LR	LR	11 06 16.4	
	comp=Z,3µm,23.8s,baz=254						
PPT	**Papeete**	**38.68**	**92**	LR	LR	11 08 13.6	
	comp=Z,946nm,21.4s,baz=256,slow=31						
KNRA	**Kununurra**	**38.98**	**271**	P	**P**	**10 55 45.7**	**+0.1**
	baz=39,SNR=13						
WAKE	**Wake Island**	**40.26**	**356**	PFAKE		10 56 10.0	+14
WAKE				LR	LR		
	comp=Z,3µm,20.0s						
FAKI	**Fak Fak**	**40.53**	**291**	PFAKE		10 56 10.0	+11
FAKI				LR	LR		
	comp=Z,2µm,21.0s						
GUMO	**Guam**	**42.15**	**323**	P	**P**	**10 56 13.0**	**+1.3**
	comp=Z,38nm,0.8s,baz=150,slow=14,SNR=5.8						
GUMO				LR	LR	11 12 43.6	
	comp=Z,1µm,20.9s,baz=147,slow=35						
SOEI	**Soe**	**44.92**	**277**	*e*pP	**pP**	**10 56 45.4**	**+2.1**
SOEI				LR	LR		
	comp=Z,3µm,19.0s						
BATI	**Baumata**	**45.33**	**277**	LR	LR	11 15 34.5	
	comp=Z,7µm,20.9s,baz=148,slow=36						
LBMI	**Labuha**	**45.78**	**291**	P	**P**	**10 56 42.3**	**+1.4**
	comp=Z,99nm,1.5s,comp=Z,2µm						
MBWA	**Marble Bar**	**46.28**	**261**	*e*P	**P**	**10 56 45.7**	**+0.8**
	comp=Z,111nm,1.0s						
MBWA				LR	LR		
	comp=Z,10µm,18.0s						
SANI	**Sanana**	**46.44**	**288**	P	**P**	**10 56 47.3**	**+1.1**
MEEK	**Meekatharra**	**46.63**	**253**	P	**P**	**10 56 47.3**	**-0.3**
	baz=47,SNR=6.6						
KLBR	**Kellerberrin**	**47.17**	**246**	P	**P**	**10 56 51.3**	**-0.5**
	baz=47,SNR=10						
NWAO	**Narrogin (SRO)**	**47.62**	**244**	PFAKE		10 57 10.0	+15
NWAO				LR	LR		
	comp=Z,6µm,22.0s						
MUN	**Mundaring**	**48.48**	**246**	P	**P**	**10 57 02.3**	**+0.4**
	baz=49,SNR=3.0						
MORW	**Morawa**	**48.74**	**249**	P	**P**	**10 57 03.7**	**-0.1**
	baz=49,SNR=4.9						
TAOE	**Nuku Hiva Isla**	**49.92**	**84**	*e*LR	LR	11 12 15.1	
	comp=Z,3µm,24.8s,baz=250						
APSI	**Ampana**	**50.82**	**287**	P	**P**	**10 57 20.7**	**+0.8**
RKT	**Rikitea**	**51.19**	**103**	*e*LR	LR	11 12 05.5	
	comp=Z,902nm,29.8s						
SPSI	**Sidrap Palu**	**51.22**	**282**	P	**P**	**10 57 23.5**	**+0.6**
DAV	**Davao City (W)**	**51.44**	**298**	LR	LR	11 19 12.0	
	comp=Z,933nm,20.3s,baz=116,slow=36						
TTSI	**Tana Toraja**	**51.55**	**283**	P	**P**	**10 57 25.9**	**+0.6**
PCI	**Palu**	**52.45**	**286**	P	**P**	**10 57 32.7**	**+0.7**
MPSI	**Mapaga**	**52.94**	**287**	P	**P**	**10 57 36.4**	**+0.7**
SDHHI	**Sand Hill**	**52.98**	**43**	PFAKE		10 57 50.0	+14
SDHHI				LR	LR		
	comp=Z,3µm,22.0s						
WRMHI	**West Rim**	**52.99**	**43**	PFAKE		10 57 50.0	+14
WRMHI				LR	LR		
	comp=Z,700nm,21.0s						
KKO	**Keanakako‘i**	**53.01**	**43**	PFAKE		10 57 50.0	+14
KKO				LR	LR		
	comp=Z,2µm,21.0s						
UWB	**Uwekahuna B**	**53.02**	**43**	PFAKE		10 57 50.0	+14
UWB				LR	LR		
	comp=Z,2µm,18.0s						
BYL	**Byron’s Ledge**	**53.02**	**43**	PFAKE		10 57 50.0	+14
BYL				LR	LR		
	comp=Z,2µm,22.0s						
OPA	**Opana**	**53.06**	**39**	PFAKE		10 57 50.0	+14
OPA				LR	LR		
	comp=Z,3µm,21.0s						
NPOC	**North of Pu‘u**	**53.10**	**43**	PFAKE		10 57 50.0	+13
NPOC				LR	LR		
	comp=Z,2µm,20.0s						
CBIJ	**Chichi jima**	**54.76**	**330**	*e*P	**P**	**10 57 47.4**	**-1.3**
	comp=Z,96nm,1.0s						
JCJ	**Chichijima**	**54.76**	**330**	P	**P**	**10 57 47.4**	**-1.3**
	comp=Z,26nm,0.4s,baz=54,slow=7.8,SNR=4.4						
SMKI	**Samarinda**	**55.01**	**285**	P	**P**	**10 57 51.3**	**+0.5**
RCP	**Roxas**	**56.28**	**301**	⇓*e*P	**P**	**10 58 00.9**	**+1.1**
MYLDM	**Lahad Datu**	**56.45**	**292**	*e*P	**P**	**10 58 01.4**	**+0.3**
MYLDM				*e*pP	**pP**	**10 58 10.9**	**+0.6**
VNDA	**Vanda**	**56.56**	**182**	P	**P**	**10 58 00.6**	**-0.4**
	comp=Z,3.7nm,0.8s,baz=11,slow=4.6,SNR=12						
VNDA				LR	LR	11 19 26.1	
	comp=Z,911nm,18.2s,baz=24,slow=33						
VNDA	**Vanda**	**56.56**	**182**	*e*P	**P**	**10 58 00.8**	**-0.2**
VNDA	**Vanda**	**56.56**	**182**	*e*P	**P**	**10 58 00.8**	**-0.2**
SBA	**Scott Base**	**56.79**	**181**	*e*P	**P**	**10 58 03.3**	**+0.7**
	comp=Z,35nm,0.9s						
SBA				LR	LR		
	comp=Z,2µm,21.0s						
SBA	**Scott Base**	**56.79**	**181**	*e*P	**P**	**10 58 03.3**	**+0.7**
SBA				pmax	pmax		
	comp=Z,35nm,0.9s						
SBA				MLR	MLR		
	comp=Z,2µm,21.0s						
CASY	**Casey**	**58.52**	**204**	*e*P	**P**	**10 58 14.2**	**-0.7**
	comp=Z,36nm,1.1s						
CASY				LR	LR		
	comp=Z,2µm,20.0s						
KKM	**Kota Kinabalu**	**58.85**	**291**	*e*P	**P**	**10 58 18.6**	**+0.5**
	comp=Z,46nm,1.1s						
LEM	**Lembang**	**61.39**	**274**	P	**P**	**10 58 32.1**	**-3.6**
	comp=Z,7.7nm,0.4s,baz=90,slow=19,SNR=1.9						
LEM				LR	LR	11 27 10.1	
	comp=Z,2µm,18.8s,baz=93,slow=38						
KSM	**Kuching**	**62.06**	**284**	*e*P	**P**	**10 58 40.7**	**+0.7**
	comp=Z,25nm,1.0s						
JOW	**Kunigami**	**62.20**	**318**	LR	LR	11 26 10.4	
	comp=Z,457nm,18.2s,baz=126,slow=36						
INU	**Inuyama**	**64.07**	**331**	*e*P	**P**	**10 58 53.1**	**+0.3**
INU				*e*pP	**pP**	**10 59 03.7**	**+1.5**
MJAR	**Matsushiro Arr**	**64.54**	**332**	P	**P**	**10 58 55.1**	**-0.8**
	comp=Z,11nm,0.8s,baz=175,slow=7.7,SNR=17						
MAJO	**Matsushiro**	**64.54**	**332**	*e*P	**P**	**10 58 55.8**	**-0.1**
	comp=Z,18nm,0.7s						
MAJO	**Matsushiro**	**64.54**	**332**	*c* *i*P	**P**	**10 58 54.9**	**-1.0**
MAJO				pmax	pmax		
	comp=Z,51nm,1.8s						
MAT	**Matsushiro**	**64.54**	**332**	P	**P**	**10 58 55.1**	**-0.8**
MAT				*e*S	S	11 07 19.4	-14
MJB9	**Matsu-Tunnel**	**64.55**	**332**	*e*P	**P**	**10 58 55.8**	**-0.1**
	comp=Z,18nm,0.7s						
JNU	**Nakatsue**	**65.35**	**325**	P	**P**	**10 59 00.8**	**-0.5**
	comp=Z,4.0nm,0.4s,baz=145,slow=3.8,SNR=21						
JNU	**Nakatsue**	**65.35**	**325**	*e*P	**P**	**10 59 01.4**	**+0.1**
	comp=Z,24nm,1.0s						
MIR	**Mirnyy**	**65.45**	**205**	⇓*i*P	**P**	**10 59 03.0**	**+1.6**
MIR				*i*		10 59 10.0	
MIR				*e*		10 59 28.0	
MIR				*e*S	**S**	**11 07 44.0**	**+0.2**
MIR				pmax	pmax		
	comp=Z,137nm,2.0s						
ERM	**Erimo**	**67.39**	**339**	*i* P	**P**	**10 59 15.0**	**+0.9**
ERM				pmax	pmax		
	comp=Z,14nm,0.7s						
QZH	**Quanzhou**	**67.43**	**310**	⇑*i*P	**P**	**10 59 15.8**	**+1.1**
QSPA	**South Pole Qui**	**68.94**	**180**	P	**P**	**10 59 23.5**	**-0.3**
	comp=Z,32nm,0.8s,baz=12,slow=1.1,SNR=75						
QSPA				LR	LR	11 26 17.0	
	comp=Z,1µm,19.8s,baz=26,slow=33						
QSPA	**South Pole Qui**	**68.94**	**180**	*e*P	**P**	**10 59 22.8**	**-1.0**
	comp=Z,63nm,0.9s						
QSPA				*e*P	**P**	**10 59 23.5**	**-0.3**
ASAJ	**Asahikawa**	**69.45**	**340**	P	**P**	**10 59 27.3**	**+0.3**
	comp=Z,17nm,0.6s,baz=216,slow=4.2,SNR=26						
ASAJ	**Asahikawa**	**69.45**	**340**	*e*P	**P**	**10 59 27.7**	**+0.8**
	comp=Z,26nm,0.8s						
ASAJ				LR	LR		
	comp=Z,2µm,22.0s						
TJN	**Taejon**	**69.70**	**325**	*ce*P	**P**	**10 59 28.0**	**-0.7**
KSRS	**Korea Array**	**70.21**	**326**	P	**P**	**10 59 31.9**	**+0.2**
	comp=Z,1.9nm,0.7s,baz=143,slow=5.4,SNR=7.0						
KSRS	**Korea Array**	**70.21**	**326**	P	**P**	**10 59 32.0**	**+0.2**
KSRS				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KS15	**Wonju Array Si**	**70.22**	**326**	*e*P	**P**	**10 59 31.9**	**+0.1**
KSAR	**Wonju Array Be**	**70.22**	**326**	P	**P**	**10 59 31.9**	**+0.1**
KSAR	**Wonju Array Be**	**70.22**	**326**	P	**P**	**10 59 32.0**	**+0.1**
KS01	**Wonju Array Si**	**70.24**	**326**	*e*P	**P**	**10 59 31.9**	**-0.1**
QIZ	**Qiongzhong**	**70.75**	**300**	P	**P**	**10 59 37.0**	**+1.5**
QIZ				S	**S**	**11 08 51.0**	**+2.5**
QIZ				LR	LR		
	comp=Z,330nm,15.7s						
QIZ				LR	LR		
	comp=Z,430nm,15.7s						
QIZ				LR	LR		
	comp=Z,440nm,19.6s						
INCN	**Inchon**	**70.91**	**325**	PFAKE		10 59 50.0	+14
INCN				LR	LR		
	comp=Z,600nm,19.0s						
NJ2	**Nanjing**	**71.75**	**316**	*e*P	**P**	**10 59 41.5**	**+0.3**
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
YSS	**Yuzh-Sakhalins**	**71.94**	**341**	*e*P	**P**	**10 59 43.2**	**+1.2**
	comp=Z,41nm,1.0s						
YSS				LR	LR		
	comp=Z,900nm,22.0s						
YSS	**Yuzh-Sakhalins**	**71.94**	**341**	⇑*e*P	**P**	**10 59 42.0**	**0.0**
YSS				*e*		10 59 49.7	
YSS				*e*		11 00 02.7	
YSS				*e*S	**S**	**11 09 00.3**	**-0.8**
YSS				pmax	pmax		
	comp=Z,30nm,1.2s						
YSS				MLR	MLR		
	comp=N,400nm,16.0s						
YSS				MLR	MLR		
	comp=E,300nm,14.0s						
KULM	**Kulim**	**72.41**	**283**	*e*P	**P**	**10 59 46.6**	**+0.9**
	comp=E,15nm,1.0s						
KULM				LR	LR		
	comp=Z,1µm,20.0s						
UBPT	**Khong Chiam**	**72.52**	**295**	P	**P**	**10 59 49.2**	**+3.0**
MSHR	**Mys Shultsa**	**72.60**	**331**	*ce*P	**P**	**10 59 46.5**	**+0.4**
PSI	**Prapat**	**73.00**	**280**	P	**P**	**10 59 47.5**	**-1.8**
	comp=Z,7.3nm,0.8s,baz=180,slow=5.3,SNR=5.8						
PSI				LR	LR	11 35 40.2	
	comp=Z,1µm,18.3s,baz=91,slow=39						
PSI	**Prapat**	**73.00**	**280**	*e*P	**P**	**10 59 47.5**	**-1.8**
	comp=Z,19nm,1.1s						
RPN	**Rapa Nui**	**73.10**	**113**	LR	LR	11 24 01.1	
	comp=Z,659nm,20.1s,baz=264,slow=29						
SKLT	**Songkhla**	**73.20**	**285**	P	P	10 59 58.8	+8.5
USA0B	**Ussuriysk Arra**	**73.53**	**333**	*e*P	**P**	**10 59 51.9**	**+0.3**
	comp=Z,27nm,1.0s						
USA0B				LR	LR		
	comp=Z,600nm,20.0s						
USRK	**Ussuriysk Ar.**	**73.53**	**333**	P	**P**	**10 59 52.4**	**+0.8**
	comp=Z,8.7nm,0.7s,baz=154,slow=6.1						
ATKA	**Atka Island**	**74.39**	**10**	PFAKE		11 00 10.0	+14
ATKA				LR	LR		
	comp=Z,2µm,22.0s						
PET	**Petropavlovsk**	**74.44**	**353**	PFAKE		11 00 10.0	+13
PET				LR	LR		
	comp=Z,1µm,20.0s						
PET	**Petropavlovsk**	**74.44**	**353**	*i* P	**P**	**10 59 56.1**	**-0.5**
PET				pmax	pmax		
	comp=Z,23nm,1.1s						
SKNT	**Sakolnakorn**	**74.58**	**295**	P	**P**	**11 00 00.2**	**+1.9**
PEA0B	**Petropavlovsk-**	**74.63**	**353**	PFAKE		11 00 10.0	+12
PEA0B				LR	LR		
	comp=Z,2µm,19.0s						
PETK	**Petropavlovsk-**	**74.63**	**353**	P	**P**	**10 59 59.0**	**+1.2**
	comp=Z,10nm,0.8s,baz=121,slow=6.9						
PETK	**Petropavlovsk-**	**74.63**	**353**	*e*P	**P**	**10 59 58.7**	**+0.9**
PETK	**Petropavlovsk-**	**74.63**	**353**	P	**P**	**10 59 59.0**	**+1.2**
PETK				pmax	pmax		
	comp=Z,11nm,0.8s						
PEA1	**Petropavlovsk-**	**74.64**	**353**	*e*P	**P**	**10 59 59.0**	**+1.2**
MDJ	**Mudanjiang**	**74.90**	**332**	P	**P**	**10 59 56.8**	**-2.8**
MDJ				pP	pP	11 00 08.0	-1.0
MDJ				sP	sP	11 00 13.0	+0.5
MDJ				pmax	pmax		
	comp=Z,27nm,1.2s						
MDJ				pmax	pmax		
	comp=Z,270nm,4.9s						
MDJ	**Mudanjiang**	**74.90**	**332**	*e*P	**P**	**11 00 00.4**	**+0.8**
	comp=Z,29nm,1.0s						
KHON	**Khomkaen**	**75.27**	**294**	P	**P**	**11 00 05.9**	**+3.6**
TIA	**Tai’an**	**75.53**	**319**	P	**P**	**11 00 03.0**	**-0.4**
TIA				pmax	pmax		
	comp=Z,20nm,2.2s						
NAYO	**Nakonayok**	**75.64**	**292**	P	P	11 00 14.2	+10
NONG	**Nongkai**	**75.79**	**296**	P	**P**	**11 00 07.6**	**+2.3**
CN2	**Changchun**	**76.20**	**329**	*e*P	**P**	**11 00 10.0**	**+3.0**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
MAW	**Mawson**	**76.80**	**202**	P	**P**	**11 00 10.7**	**+0.6**
	comp=Z,6.9nm,0.9s,baz=113,slow=6.8,SNR=9.3						
MAW				LR	LR	11 29 58.9	
	comp=Z,1µm,20.2s,baz=98,slow=32						
PBKT	**Sadao Pong**	**76.95**	**294**	*e*P	**P**	**11 00 12.5**	**+0.6**
PBKT	**Sadao Pong**	**76.95**	**294**	P	**P**	**11 00 14.6**	**+2.8**
ENH	**Enshi**	**77.08**	**310**	*e*P	**P**	**11 00 12.6**	**+0.3**
	comp=Z,24nm,0.8s						
ENH				LR	LR		
	comp=Z,500nm,21.0s						
GYA	**Guiyang**	**77.12**	**305**	P	**P**	**11 00 13.0**	**+0.2**
GYA				pP	sP	11 00 26.5	+0.7
GYA				PP	**PP**	**11 03 11.3**	**+4.4**
GYA				S	**S**	**11 10 00.5**	**+0.3**
GYA				sS	sS	11 10 17.8	+1.9
GYA				SKS	**SKSac**	**11 10 19.0**	**-4.7**
GYA				pmax	pmax		
	comp=Z,20nm,1.0s						
GYA				pmax	pmax		
	comp=Z,120nm,5.3s						
GRNR	**Gornyy**	**77.30**	**339**	*e*P	**P**	**11 00 16.8**	**+3.7**
GRNR				pmax	pmax		
	comp=Z,78nm,1.0s						
UNV	**Unalaska Valle**	**77.48**	**14**	PFAKE		11 00 30.0	+16
UNV				LR	LR		
	comp=Z,1µm,20.0s						
SRDT	**SRDT**	**77.57**	**291**	P	**P**	**11 00 19.2**	**+3.8**
KLR	**Kul’dur**	**77.69**	**336**	P	**P**	**11 00 15.7**	**+0.4**
	baz=142,slow=5.3						
KLR	**Kul’dur**	**77.69**	**336**	*c* *i*P	**P**	**11 00 15.4**	**+0.1**
PHIT	**Phitsanulok**	**77.70**	**294**	P	P	11 00 21.4	+5.4
UTTA	**Uttaradit**	**77.83**	**294**	P	**P**	**11 00 20.2**	**+3.4**
NKL	**Nikolayevsk**	**78.08**	**343**	*e*P	**P**	**11 00 17.0**	**-0.3**
NKL				pmax	pmax		
	comp=Z,550nm,7.0s						
NKL				pmax	pmax		
	comp=Z,40nm,1.0s						
NANT	**Nan**	**78.19**	**296**	P	**P**	**11 00 22.1**	**+3.3**
BJI	**Beijing**	**78.57**	**321**	P	**P**	**11 00 20.3**	**0.0**
BJI				S	**S**	**11 10 19.0**	**+4.0**
BJI				pmax	pmax		
	comp=Z,27nm,2.0s						
BJI				LR	LR		
	comp=Z,580nm,19.6s						
BJI				LR	LR		
	comp=Z,680nm,21.0s						
UMPA	**Umpang Tak**	**78.60**	**292**	P	P	11 00 26.6	+5.5
LAMP	**Lampang**	**78.97**	**295**	P	**P**	**11 00 26.9**	**+3.9**
FALS	**False Pass**	**79.14**	**16**	PFAKE		11 00 30.0	+6.9
FALS				LR	LR		
	comp=Z,1µm,20.0s						
TIY	**Taiyuan**	**79.40**	**317**	*e*P	**P**	**11 00 25.5**	**+0.4**
TIY				pmax	pmax		
	comp=Z,400nm,4.0s						
TIY				LR	LR		
	comp=Z,410nm,17.4s						
TIY				LR	LR		
	comp=Z,590nm,22.7s						
TIY				LR	LR		
	comp=Z,680nm,23.8s						
CM01	**Chiang Mai Arr**	**79.49**	**294**	*e*P	**P**	**11 00 26.4**	**+0.5**
KMI	**Kunming**	**79.50**	**302**	P	**P**	**11 00 27.5**	**+1.4**
KMI				pP	sP	11 00 39.8	+0.7
KMI				sP	pP	11 00 44.3	+8.7
KMI				pmax	pmax		
	comp=Z,41nm,1.9s						
KMI				pmax	pmax		
	comp=Z,540nm,3.1s						
KMI				LR	LR		
	comp=Z,230nm,15.8s						
KMI				LR	LR		
	comp=Z,370nm,20.9s						
KMI				LR	LR		
	comp=Z,440nm,17.5s						
CM31	**Chiang Mai Arr**	**79.52**	**294**	*e*P	**P**	**11 00 26.7**	**+0.6**
CMAR	**Chiang Mai Arr**	**79.52**	**294**	P	**P**	**11 00 27.8**	**+1.7**
	comp=Z,9.8nm,0.8s,baz=132,slow=4.1,SNR=20						
CMAR	**Chiang Mai Arr**	**79.52**	**294**	*ce*P	**P**	**11 00 28.1**	**+2.0**
CMAR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
XAN	**Xi’an**	**79.58**	**313**	P	**P**	**11 00 26.3**	**+0.2**
XAN				pP	pP	11 00 36.8	+1.1
XAN				sP	sP	11 00 40.8	+1.7
XAN				S	**S**	**11 10 28.3**	**+2.1**
XAN				pmax	pmax		
	comp=Z,19nm,1.3s						
XAN				pmax	pmax		
	comp=Z,470nm,5.5s						
XAN				LR	LR		
	comp=Z,430nm,17.2s						
XAN				LR	LR		
	comp=Z,240nm,18.7s						
XAN				LR	LR		
	comp=Z,510nm,18.7s						
CMMT	**Chiang Mai**	**79.68**	**295**	P	**P**	**11 00 28.7**	**+1.8**
CHTO	**Chiang Mai**	**79.68**	**295**	*e*P	**P**	**11 00 28.0**	**+1.1**
	comp=Z,39nm,1.0s						
CHTO	**Chiang Mai**	**79.68**	**295**	*e*P	**P**	**11 00 28.0**	**+1.1**
CHTO				pmax	pmax		
	comp=Z,39nm,1.0s						
CHTO	**Chiang Mai**	**79.68**	**295**	P	**P**	**11 00 28.7**	**+1.8**
	comp=Z,252nm,1.6s,comp=Z,3µm						
CD2	**Chengdu**	**81.59**	**308**	P	**P**	**11 00 38.0**	**+1.0**
CD2				pP	sP	11 00 49.5	-0.5
CD2				sP	pP	11 00 54.0	+7.4
CD2				PP	**PP**	**11 03 45.0**	**+0.9**
CD2				S	**S**	**11 10 48.5**	**+1.1**
CD2				SKS	**SKSac**	**11 10 53.8**	**-1.1**
CD2				SS	**SS**	**11 16 07.8**	**+2.4**
CD2				pmax	pmax		
	comp=Z,30nm,0.6s						
CD2				pmax	pmax		
	comp=Z,610nm,5.0s						
CD2				LR	LR		
	comp=Z,610nm,18.4s						
CD2				LR	LR		
	comp=Z,640nm,19.4s						
CD2				LR	LR		
	comp=Z,610nm,20.9s						
HHC	**Hu-ho-hao-te**	**81.82**	**319**	*e*P	**P**	**11 00 38.3**	**+0.2**
HHC				sP	sP	11 00 51.0	-0.1
HHC				PP	**PP**	**11 03 44.5**	**-1.3**
HHC				S	**S**	**11 10 52.8**	**+3.3**
HHC				pmax	pmax		
	comp=Z,31nm,0.9s						
HHC				pmax	pmax		
	comp=Z,480nm,7.1s						
HHC				LR	LR		
	comp=Z,310nm,16.1s						
HHC				LR	LR		
	comp=Z,330nm,16.5s						
HHC				LR	LR		
	comp=Z,610nm,18.4s						
MA2	**Magadan**	**81.87**	**350**	PFAKE		11 00 50.0	+12
MA2				LR	LR		
	comp=Z,1µm,21.0s						
BTO	**Baotou**	**82.62**	**319**	*e*P	**P**	**11 00 43.3**	**+1.1**
ZEA	**Zeya**	**82.98**	**336**	*e*P	**P**	**11 00 44.0**	**+0.3**
ZEA				pmax	pmax		
	comp=Z,500nm,5.0s						
ZEA				pmax	pmax		
	comp=N,58nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,60nm,1.2s						
SYO	**Syowa Base**	**83.20**	**196**	⇓*i*P	**P**	**11 00 43.0**	**-1.7**
SYO	**Syowa Base**	**83.20**	**196**	⇓*i*pP	pP	11 00 55.2	+0.9
OHAK	**Old Harbor**	**84.04**	**19**	*e*P	**P**	**11 00 46.9**	**-2.0**
LZH	**Lanzhou**	**84.19**	**312**	⇓P	**P**	**11 00 52.0**	**+1.5**
LZH				pP	sP	11 01 04.0	+0.4
LZH				sP	pP	11 01 08.3	+8.2
LZH				PP	**PP**	**11 04 10.0**	**+4.6**
LZH				SKS	**S**	**11 11 10.3**	**-3.5**
LZH				S	**SKKSac**	**11 11 15.5**	**-1.9**
LZH				sS	sS	11 11 34.0	+4.3
LZH				pmax	pmax		
	comp=Z,47nm,1.5s						
LZH				pmax	pmax		
	comp=Z,250nm,5.2s						
LZH				LR	LR		
	comp=Z,630nm,16.3s						
LZH				LR	LR		
	comp=Z,650nm,17.0s						
LZH				LR	LR		
	comp=Z,840nm,18.2s						
KDAK	**Kodiak Island**	**84.72**	**19**	P	**P**	**11 00 52.1**	**-0.3**
	comp=Z,5.6nm,0.7s,baz=153,slow=2.3,SNR=10						
KDAK	**Kodiak Island**	**84.72**	**19**	*e*P	**P**	**11 00 54.4**	**+2.0**
	comp=Z,11nm,0.8s						
KDAK	**Kodiak Island**	**84.72**	**19**	*ce*P	**P**	**11 00 53.1**	**+0.7**
SEY	**Seymchan**	**84.87**	**352**	*ce*P	**P**	**11 00 53.4**	**+0.4**
PMSA	**Palmer Station**	**85.06**	**160**	LR	LR	11 32 32.3	
	comp=Z,953nm,18.2s,baz=228,slow=31						
SNCC	**San Nicolas Is**	**86.57**	**53**	P	**P**	**11 01 03.1**	**+0.8**
	baz=242						
SCZ2	**Santa Cruz Isl**	**86.84**	**52**	P	**P**	**11 01 03.6**	**0.0**
	baz=242						
HOPS	**Hopland Field**	**86.85**	**46**	*e*P	**P**	**11 01 03.6**	**+0.1**
	comp=Z,14nm,0.8s						
KCPM	**Cahto Peak**	**86.86**	**45**	*e*P	**P**	**11 01 04.9**	**+1.3**
	comp=Z,32nm,0.7s						
SAO	**San Andreas Ge**	**86.86**	**49**	*e*P	**P**	**11 01 03.9**	**+0.3**
	comp=Z,23nm,1.1s						
SAO				LR	LR		
	comp=Z,1µm,19.0s						
SAO	**San Andreas Ge**	**86.86**	**49**	P	**P**	**11 01 03.8**	**+0.3**
SAO				pmax	pmax		
	comp=Z,23nm,1.1s						
GDXM	**Geysers**	**86.94**	**46**	*e*P	**P**	**11 01 04.9**	**+0.9**
	comp=Z,12nm,1.1s						
SBC	**Santa Barbara**	**86.99**	**51**	P	**P**	**11 01 04.1**	**-0.2**
	baz=242						
NVL	**N’lazarevskaya**	**87.03**	**187**	⇑*i*P	P	11 01 11.1	+7.2
NVL				*e*S	S	11 11 31.1	-9.3
NVL				pmax	pmax		
	comp=Z,26nm,0.9s						
NVL				MLR	MLR		
	comp=Z,1µm,15.0s						
KMRM	**Mail Ridge**	**87.05**	**45**	*e*P	**P**	**11 01 05.9**	**+1.4**
	comp=Z,25nm,0.8s						
PMPB	**Monarch Peak**	**87.05**	**49**	*e*P	**P**	**11 01 05.1**	**+0.5**
	comp=Z,32nm,1.1s						
PKM	**Mcpherson Peak**	**87.13**	**51**	P	**P**	**11 01 05.0**	**-0.2**
	baz=242						
SMMC	**Simmler**	**87.20**	**51**	P	**P**	**11 01 05.3**	**+0.1**
	baz=242						
PAGB	**Antelope Grade**	**87.21**	**50**	*e*P	**P**	**11 01 06.0**	**+0.7**
	comp=Z,13nm,1.0s						
PAGB				LR	LR		
	comp=Z,1µm,20.0s						
SNAA	**Sanae**	**87.30**	**182**	P	**P**	**11 01 04.0**	**-1.2**
SNAA	**Sanae**	**87.30**	**182**	P	**P**	**11 01 03.6**	**-1.6**
	comp=Z,8.6nm,0.7s,baz=188,slow=7.7,SNR=67						
SNAA				LR	LR	11 37 08.1	
	comp=Z,1µm,21.1s,baz=156,slow=34						

SNAA	**Sanae**	**87.30**	**182**	*e*P	**P**	**11 01 03.6**	**-1.6**
	comp=Z,57nm,1.1s						
SNAA	**Sanae**	**87.30**	**182***c*	*i*P	**P**	**11 01 03.0**	**-2.3**
BLG	**Laguna Peak, P**	**87.31**	**52**	P	**P**	**11 01 05.2**	**-0.6**
	baz=242						
KHMM	**Horse Mountain**	**87.37**	**44**	*e*P	**P**	**11 01 07.0**	**+0.9**
	comp=Z,19nm,0.9s						
CIS	**Catalina Islan**	**87.47**	**53**	P	**P**	**11 01 06.0**	**-0.6**
	baz=243						
ANM	**Nome**	**87.60**	**11**	PFAKE		11 01 20.0	+14
ANM				LR	LR		
	comp=Z,2µm,20.0s						
FMP	**Fort Macarthur**	**87.70**	**53**	P	**P**	**11 01 06.9**	**-0.7**
	baz=243						
OSI	**Osito Audit: C**	**87.79**	**52**	P	**P**	**11 01 07.3**	**-0.9**
	baz=242						
VNA3	**Neumayer Olymp**	**87.88**	**180**	P	**P**	**11 01 06.5**	**-1.5**
DECC	**Green Verdugo**	**87.91**	**52**	P	**P**	**11 01 08.2**	**-0.6**
	baz=243						
ARVC	**Arvin**	**87.95**	**51**	P	**P**	**11 01 08.4**	**-0.4**
	baz=242						
PASC	**Pasadena Art C**	**87.99**	**52**	*e*P	**P**	**11 01 08.8**	**-0.3**
	comp=Z,11nm,0.8s						
WDC	**Whiskeytown Da**	**88.00**	**45**	*e*P	**P**	**11 01 09.3**	**+0.4**
	comp=Z,16nm,1.1s						
WDC				LR	LR		
	comp=Z,1µm,20.0s						
WDC	**Whiskeytown Da**	**88.00**	**45**	*e*P	**P**	**11 01 09.3**	**+0.4**
WDC				pmax	pmax		
	comp=Z,16nm,1.1s						
WDC				MLR	MLR		
	comp=Z,1µm,20.0s						
N02D	**Trinity Center**	**88.09**	**45**	P	**P**	**11 01 09.5**	**0.0**
	baz=240,SNR=11						
VES	**Vestal, Richgr**	**88.10**	**50**	P	**P**	**11 01 08.7**	**-0.8**
	baz=242						
MWC	**Mount Wilson**	**88.10**	**52**	*e*P	**P**	**11 01 09.6**	**-0.2**
	comp=Z,22nm,1.1s						
L02D	**Cave Junction,**	**88.11**	**43**	P	**P**	**11 01 09.4**	**0.0**
	baz=239						
M02C	**Callahan**	**88.20**	**44**	P	**P**	**11 01 10.0**	**0.0**
	baz=240,SNR=16						
CMB	**Columbia Colle**	**88.21**	**48**	*e*P	**P**	**11 01 09.5**	**-0.6**
	comp=Z,12nm,0.8s						
CMB	**Columbia Colle**	**88.21**	**48**	*e*P	**P**	**11 01 09.5**	**-0.6**
CMB				pmax	pmax		
	comp=Z,12nm,0.8s						
109C	**Camp Elliot, M**	**88.21**	**54**	P	**P**	**11 01 09.6**	**-0.6**
	baz=243						
AFDM	**Forest Hills D**	**88.25**	**47**	*e*P	**P**	**11 01 09.7**	**-0.5**
	comp=Z,17nm,0.9s						
MGL	**Magalia**	**88.27**	**46**	*e*P	**P**	**11 01 09.9**	**-0.5**
O03D	**Paynes Creek**	**88.34**	**45**	P	**P**	**11 01 10.1**	**-0.6**
	baz=240,SNR=14						
BFSC	**Mount Baldy Ra**	**88.41**	**52**	P	**P**	**11 01 10.6**	**-0.7**
	baz=243						
EDW2	**Edwards Air Fo**	**88.45**	**52**	P	**P**	**11 01 10.9**	**-0.4**
	baz=243,SNR=6.9						
ISA	**Isabella, Lake**	**88.46**	**51**	P	**P**	**11 01 11.2**	**-0.2**
	baz=243,SNR=14						
ISA	**Isabella, Lake**	**88.46**	**51**	*e*P	**P**	**11 01 11.5**	**+0.1**
	comp=Z,20nm,1.1s						
ISA	**Isabella, Lake**	**88.46**	**51**	*e*P	**P**	**11 01 11.5**	**+0.1**
ISA				pmax	pmax		
	comp=Z,20nm,1.1s						
VNA1	**Neumayer--Stat**	**88.46**	**181**	P	**P**	**11 01 09.7**	**-1.0**
MURC	**Murrieta**	**88.46**	**53**	P	**P**	**11 01 10.6**	**-0.8**
	baz=243						
YBH	**Yreka Blue Hor**	**88.46**	**44**	P	**P**	**11 01 11.3**	**+0.1**
	comp=Z,7.4nm,0.8s,baz=285,slow=2.3,SNR=18						
YBH				LR	LR	11 32 59.7	
	comp=Z,1µm,21.2s,baz=251,slow=30						
YBH	**Yreka Blue Hor**	**88.46**	**44**	*e*P	**P**	**11 01 11.7**	**+0.4**
	comp=Z,10nm,0.9s						
YBH	**Yreka Blue Hor**	**88.46**	**44**	*e*P	**P**	**11 01 11.7**	**+0.4**
YBH				pmax	pmax		
	comp=Z,10.0nm,0.9s						
SHL	**Shillong**	**88.47**	**298**	*e*P	**P**	**11 01 12.5**	**+0.7**
	comp=Z,26nm,1.1s						
SHL	**Shillong**	**88.47**	**298**	*e*P	**P**	**11 01 12.0**	**+0.2**
SHL	**Shillong**	**88.47**	**298**	P	**P**	**11 01 12.5**	**+0.7**
SHL				pmax	pmax		
	comp=Z,26nm,1.1s						
GTA	**Gaotai**	**88.61**	**313**	*e*P	**P**	**11 01 13.0**	**+0.9**
GTA				pP	pP	11 01 23.3	+1.6
GTA				sP	sP	11 01 27.8	+2.6
GTA				S	**S**	**11 11 55.8**	**-0.9**
GTA				sS	sS	11 12 15.0	+2.3
GTA				SS	**SS**	**11 17 49.8**	**+1.1**
GTA				pmax	pmax		
	comp=Z,9.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,230nm,7.0s						
GTA				LR	LR		
	comp=Z,330nm,17.9s						
GTA				LR	LR		
	comp=Z,360nm,18.2s						
GTA				LR	LR		
	comp=Z,340nm,18.7s						
MONP2	**Monument Peak**	**88.73**	**54**	P	**P**	**11 01 12.3**	**-0.6**
	baz=244,SNR=9.5						
YAK	**Yakutsk**	**88.74**	**342**	*e*P	**P**	**11 01 12.0**	**+0.1**
	comp=Z,30nm,0.6s						
YAK				LR	LR		
	comp=Z,1µm,22.0s						
YAK	**Yakutsk**	**88.74**	**342**	*e*P	**P**	**11 01 10.3**	**-1.6**
YAK				*e*		11 01 19.0	
YAK				*e**PP	**pP**	**11 01 21.7**	**+0.1**
YAK				*e*		11 04 42.0	
YAK				*e*S	**SKSac**	**11 11 33.6**	**-5.1**
YAK				*e*		11 11 55.6	
YAK				pmax	pmax		
	comp=Z,36nm,1.5s						
YAK				pmax	pmax		
	comp=E,6.0nm,1.5s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.4s						
YAK				smax	smax		
	comp=N,30nm,2.4s						
YAK				smax	smax		
	comp=E,22nm,3.0s						
YAK				MLR	MLR		
	comp=Z,1µm,18.0s						
YAK				MLR	MLR		
	comp=N,912nm,17.0s						
YAK				MLR	MLR		
	comp=E,400nm,15.0s						
HUMO	**Hull Mountain**	**88.75**	**43**	*e*P	**P**	**11 01 13.1**	**+0.6**
	comp=E,15nm,1.0s						
HUMO				LR	LR		
	comp=Z,2µm,19.0s						
RUBR	**Rubicon Trail**	**88.86**	**47**	*e*P	**P**	**11 01 13.0**	**-0.3**
	comp=Z,18nm,0.8s						
RUBR				LR	LR		
	comp=Z,1µm,20.0s						
FRD	**Ford Ranch, An**	**88.86**	**53**	P	**P**	**11 01 12.8**	**-0.5**
	baz=244,SNR=7.8						
IKP	**In-Ko-Pah, Jac**	**88.86**	**54**	P	**P**	**11 01 12.8**	**-0.6**
	baz=244						
SONA0	**Songino Array**	**88.88**	**323**	*e*P	**P**	**11 01 13.0**	**-0.1**
SONM	**Songino Array**	**88.88**	**323**	P	**P**	**11 01 13.0**	**-0.1**
	comp=Z,6.7nm,1.1s,baz=134,slow=2.8,SNR=19						
SONA1	**Songino Array**	**88.89**	**323**	*e*P	**P**	**11 01 12.3**	**-0.8**
GLI	**Glacier Island**	**88.89**	**20**	*e*P	**P**	**11 01 13.2**	**+0.5**
	comp=Z,6.1nm,0.7s						
MDPB	**Devils Postpil**	**88.93**	**49**	*e*P	**P**	**11 01 13.8**	**0.0**
	comp=Z,15nm,1.0s						
LRMC	**Laurel Mtn Rad**	**88.95**	**51**	P	**P**	**11 01 13.1**	**-0.6**
	baz=243						
BBRC	**Big Bear Solar**	**88.96**	**53**	P	**P**	**11 01 13.3**	**-0.7**
	baz=244						
OMMB	**Old Mammoth Mi**	**88.98**	**49**	*e*P	**P**	**11 01 14.1**	**0.0**
	comp=Z,10nm,1.2s						
PFO	**Pinyon Flats O**	**89.02**	**53**	P	**P**	**11 01 13.6**	**-0.5**
	baz=244						
PFO	**Pinyon Flats O**	**89.02**	**53**	*e*P	**P**	**11 01 14.1**	**0.0**
	comp=Z,10nm,1.1s						
PFO	**Pinyon Flats O**	**89.02**	**53**	*e*P	**P**	**11 01 14.1**	**0.0**
PFO				pmax	pmax		
	comp=Z,10.0nm,1.1s						
XPFO	**Piæon Flat**	**89.02**	**53**	*e*P	**P**	**11 01 14.1**	**-0.1**
	comp=Z,9.4nm,1.0s						
GHO	**Glory Hole Cre**	**89.03**	**18**	*e*P	**P**	**11 01 14.2**	**+0.8**
	comp=Z,7.1nm,0.8s						
GHO				LR	LR		
	comp=Z,1µm,20.0s						
I03D	**Drain, OR**	**89.05**	**42**	P	**P**	**11 01 13.6**	**-0.2**
	baz=239						
M04C	**Macdoel**	**89.05**	**44**	P	**P**	**11 01 13.9**	**-0.2**
	baz=240						
WAKR	**Walker**	**89.09**	**48**	*e*P	**P**	**11 01 14.8**	**+0.4**
	comp=Z,17nm,0.8s						
WAKR				LR	LR		
	comp=Z,2µm,18.0s						
CWC	**Cottonwood Cre**	**89.09**	**50**	P	**P**	**11 01 13.9**	**-0.6**
	baz=243						
MLAC	**Mammoth, Mammo**	**89.10**	**49**	P	**P**	**11 01 14.4**	**-0.2**
	baz=242						
BEKR	**Beckworth**	**89.11**	**46**	*e*P	**P**	**11 01 14.3**	**-0.2**
	comp=Z,12nm,0.8s						
RRX	**Edison Barstow**	**89.18**	**52**	P	**P**	**11 01 14.2**	**-0.5**
	baz=243						
SWSC	**Sam W. Stewart**	**89.22**	**54**	P	**P**	**11 01 14.6**	**-0.3**
	baz=244						
SML	**Sawmill**	**89.23**	**19**	*e*pP	pP	11 01 28.3	+4.3
PNTR	**Pine Nut**	**89.25**	**47**	*e*P	**P**	**11 01 15.5**	**+0.2**
	comp=Z,22nm,0.8s						
TIN	**Tinemaha, Big**	**89.27**	**50**	P	**P**	**11 01 15.2**	**0.0**
	baz=243						
VCNR	**Virginia City**	**89.32**	**47**	*e*P	**P**	**11 01 15.8**	**+0.3**
	comp=Z,9.0nm,0.9s						
DIB	**Dawson Inlet,**	**89.35**	**31**	*e*P	**P**	**11 01 15.9**	**+0.9**
	comp=Z,31nm,1.2s						
DIB				LR	LR		
	comp=Z,900nm,20.0s						
MPMC	**Manual Prospec**	**89.35**	**51**	P	**P**	**11 01 15.2**	**-0.5**
	baz=243,SNR=15						
DAC	**Darwin (Calif)**	**89.37**	**51**	*e*P	**P**	**11 01 15.8**	**0.0**
	comp=Z,9.4nm,1.1s						
DAC	**Darwin (Calif)**	**89.37**	**51**	*e*P	**P**	**11 01 15.8**	**0.0**
DAC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
YERR	**Yerington**	**89.45**	**48**	*e*P	**P**	**11 01 16.3**	**+0.2**
	comp=Z,13nm,0.9s						
YERR				LR	LR		
	comp=Z,1µm,20.0s						
GSC	**Goldstone, Bar**	**89.51**	**52**	P	**P**	**11 01 15.9**	**-0.4**
	baz=244						
GSC	**Goldstone, Bar**	**89.51**	**52**	*e*P	**P**	**11 01 16.4**	**+0.1**
	comp=Z,8.8nm,1.1s						
GSC	**Goldstone, Bar**	**89.51**	**52**	*e*P	**P**	**11 01 16.4**	**+0.1**
GSC				pmax	pmax		
	comp=Z,9.0nm,1.1s						
K04D	**Chiloquin, OR**	**89.53**	**43**	P	**P**	**11 01 15.9**	**-0.4**
	baz=240						
BELC	**Belle Mtn. Jos**	**89.53**	**53**	P	**P**	**11 01 16.2**	**-0.4**
	baz=244,SNR=25						
J04D	**Umpqua Nationa**	**89.60**	**43**	P	**P**	**11 01 16.6**	**-0.2**
	baz=240						
HEC	**Hector,Ludlow**	**89.65**	**52**	P	**P**	**11 01 16.7**	**-0.3**
	baz=244						
I04A	**Tendick Farm,**	**89.69**	**42**	P	**P**	**11 01 16.5**	**-0.4**
	baz=240						
PAHR	**Pah Rah Range**	**89.69**	**47**	*e*P	**P**	**11 01 17.2**	**0.0**
	comp=Z,15nm,1.0s						
RYN	**Ryan**	**89.78**	**48**	*e*P	**P**	**11 01 17.7**	**0.0**
	comp=Z,15nm,0.8s						
RYN				LR	LR		
	comp=Z,2µm,19.0s						
BC3	**Big Chuckawall**	**89.79**	**54**	P	**P**	**11 01 17.5**	**-0.2**
	baz=244,SNR=8.2						
NV01	**Mina Array Sit**	**89.84**	**48**	*e*P	**P**	**11 01 16.7**	**-1.3**
NVAR	**Mina Array Bea**	**89.84**	**48**	P	**P**	**11 01 18.2**	**+0.2**
	comp=Z,13nm,0.7s,baz=228,slow=7.9,SNR=60						
NVAR				LR	LR	11 33 28.3	
	comp=Z,1µm,20.5s,baz=96,slow=30						
GRAC	**Grapevine Rang**	**89.86**	**50**	P	**P**	**11 01 17.7**	**-0.1**
	baz=243,SNR=11						
G03D	**McMinnville, O**	**89.88**	**41**	P	**P**	**11 01 18.2**	**+0.5**
	baz=239						
NV11	**Mina Array Sit**	**89.95**	**48**	*e*P	**P**	**11 01 17.9**	**-0.5**
	comp=Z,1.3nm,0.8s						
FURC	**Furnace Creek,**	**89.98**	**51**	P	**P**	**11 01 17.9**	**-0.5**
	baz=244,SNR=12						
LPIG	**La Paz**	**89.99**	**64**	LR	LR	11 32 06.5	
	comp=Z,1µm,21.8s,baz=243,slow=29						
GLA	**Glamis**	**90.01**	**54**	P	**P**	**11 01 18.6**	**-0.1**
	baz=245,SNR=8.2						
GLA	**Glamis**	**90.01**	**54**	*e*P	**P**	**11 01 19.4**	**+0.7**
	comp=Z,15nm,0.8s						
GLA	**Glamis**	**90.01**	**54**	P	**P**	**11 01 19.4**	**+0.7**
GLA				pmax	pmax		
	comp=Z,15nm,0.8s						
MOD	**Modoc Plateau**	**90.12**	**45**	*e*P	**P**	**11 01 19.0**	**-0.1**
	comp=Z,17nm,0.9s						
GMRC	**Granite Mounta**	**90.13**	**53**	P	**P**	**11 01 19.0**	**-0.3**
	baz=244,SNR=8.5						
K05A	**Summer Lake**	**90.13**	**44**	*e*P	**P**	**11 01 18.7**	**-0.5**
	comp=Z,21nm,1.0s						
K05A				LR	LR		
	comp=Z,2µm,18.0s						
SHOC	**Shoshone, Teco**	**90.16**	**51**	P	**P**	**11 01 18.5**	**-0.7**
	baz=244,SNR=8.6						
J05D	**Fort Rock, OR**	**90.18**	**43**	P	**P**	**11 01 19.2**	**-0.1**
	baz=241						
TUQ	**Turquoise Moun**	**90.21**	**52**	P	**P**	**11 01 19.1**	**-0.5**
	baz=244,SNR=6.9						
IRM	**Iron Mountain**	**90.24**	**53**	P	**P**	**11 01 19.2**	**-0.5**
	baz=244,SNR=10.0						
KVN	**Kaiserville**	**90.27**	**48**	*e*P	**P**	**11 01 19.4**	**-0.6**
	comp=Z,15nm,0.7s						
KVN				LR	LR		
	comp=Z,2µm,19.0s						
KVN	**Kaiserville**	**90.27**	**48**	*e*P	**P**	**11 01 19.4**	**-0.6**
KVN				pmax	pmax		
	comp=Z,15nm,0.7s						
KVN				MLR	MLR		
	comp=Z,2µm,19.0s						
H04A	**Detroit Lake**	**90.27**	**42**	*e*P	**P**	**11 01 19.1**	**-0.5**
	comp=Z,13nm,0.7s						
CRAG	**Craig**	**90.44**	**29**	PFAKE		11 01 30.0	+10
CRAG				LR	LR		
	comp=Z,800nm,19.0s						
F04D	**Rainier, OR**	**90.47**	**40**	P	**P**	**11 01 20.6**	**+0.2**
	baz=240						
SIT	**Sitka**	**90.49**	**27**	PFAKE		11 01 30.0	+10
SIT				LR	LR		
	comp=Z,1µm,18.0s						
DHY	**Denali Highway**	**90.50**	**18**	PFAKE		11 01 30.0	+10
DHY				LR	LR		
	comp=Z,900nm,20.0s						
Y12C	**Blythe**	**90.53**	**54**	P	**P**	**11 01 20.6**	**-0.4**
	baz=245,SNR=7.4						
Y12C	**Blythe**	**90.53**	**54**	*e*P	**P**	**11 01 21.4**	**+0.4**
	comp=Z,22nm,1.1s						
Y12C				LR	LR		
	comp=Z,1µm,20.0s						
PINE	**Pine Mountain**	**90.61**	**43**	*e*P	**P**	**11 01 21.6**	**+0.2**
	comp=Z,30nm,0.8s						
PINE				LR	LR		
	comp=Z,2µm,20.0s						
I05D	**Terrebonne, OR**	**90.63**	**42**	P	**P**	**11 01 21.2**	**-0.1**
	baz=241						
NLWA	**Neilton Lookou**	**90.63**	**39**	*e*P	**P**	**11 01 22.3**	**+1.1**
	comp=Z,12nm,0.9s						
NLWA				LR	LR		
	comp=Z,700nm,20.0s						
TPNV	**Topopah Spring**	**90.64**	**50**	P	**P**	**11 01 21.2**	**-0.5**
	baz=244,SNR=41						
TPNV	**Topopah Spring**	**90.64**	**50**	*e*P	**P**	**11 01 21.4**	**-0.3**
	comp=Z,22nm,0.8s						
TPNV	**Topopah Spring**	**90.64**	**50**	*e*P	**P**	**11 01 21.4**	**-0.3**
TPNV				pmax	pmax		
	comp=Z,22nm,0.8s						
LDFC	**Landfair**	**90.66**	**53**	*e*P	**P**	**11 01 22.3**	**+0.6**
	comp=Z,26nm,0.8s						
NEE2	**Needles Airpor**	**90.89**	**53**	P	**P**	**11 01 22.3**	**-0.4**
	baz=245						
PDMCI	**Parker Dam,Lak**	**91.06**	**54**	P	**P**	**11 01 23.1**	**-0.3**
	baz=245,SNR=11						
G05D	**Wamic, OR**	**91.08**	**41**	P	**P**	**11 01 23.0**	**-0.4**
	baz=241						
214A	**Organ Pipe Nat**	**91.10**	**56**	P	**P**	**11 01 23.9**	**+0.1**
	baz=246						
MLY	**Manley**	**91.13**	**16**	PFAKE		11 01 30.0	+6.9
MLY				LR	LR		
	comp=Z,1µm,21.0s						
BOD	**Bodaibo**	**91.14**	**334**	*e*P	**P**	**11 01 21.9**	**-1.3**
BOD				pmax	pmax		
	comp=Z,34nm,2.0s						
RDOG	**Red Dog Mine**	**91.20**	**10**	PFAKE		11 01 30.0	+6.7
RDOG				LR	LR		
	comp=Z,1µm,21.0s						
SHPR	**Sheep Range**	**91.23**	**51**	*e*P	**P**	**11 01 24.7**	**+0.2**
	comp=Z,7.3nm,1.0s						
WRAK	**Wrangell Islan**	**91.37**	**28**	*e*P	**P**	**11 01 24.4**	**+0.1**
	comp=Z,14nm,1.0s						
WRH	**Wood River Hil**	**91.38**	**17**	*e*P	P	11 01 29.9	+5.7
	comp=Z,3.3nm,0.8s						
WRH				LR	LR		
	comp=Z,900nm,19.0s						
WVOR	**Wild Horse Val**	**91.46**	**45**	*e*P	**P**	**11 01 24.9**	**-0.4**
	comp=Z,9.9nm,0.8s						
PALK	**Pallekele**	**91.49**	**277**	LR	LR	11 44 20.3	
	comp=Z,782nm,19.4s,baz=99,slow=37						
G06A	**Carlson Farm,**	**91.50**	**42**	*e*P	**P**	**11 01 25.1**	**-0.2**
	comp=Z,8.2nm,1.0s						
G06A				LR	LR		
	comp=Z,1µm,20.0s						
LON	**Longmire**	**91.53**	**40**	*e*P	**P**	**11 01 25.0**	**-0.5**
	comp=Z,5.7nm,0.9s						
LON				LR	LR		
	comp=Z,900nm,21.0s						
LON	**Longmire**	**91.53**	**40**	P	**P**	**11 01 24.9**	**-0.5**
LON				pmax	pmax		
	comp=Z,6.0nm,0.9s						
D05A	**Enumclaw**	**91.64**	**39**	*e*P	**P**	**11 01 26.1**	**+0.3**
	comp=Z,26nm,1.1s						
HDA	**Harding Lake**	**91.65**	**17**	PFAKE		11 01 40.0	+15
HDA				LR	LR		
	comp=Z,1µm,20.0s						
BESE	**Bessie Mountai**	**91.67**	**26**	*e*P	**P**	**11 01 26.4**	**+0.6**
	comp=Z,27nm,1.2s						
R11A	**Troy Canyon, C**	**91.72**	**49**	P	**P**	**11 01 25.5**	**-1.2**
	baz=244,SNR=14						
R11A	**Troy Canyon, C**	**91.72**	**49**	*e*P	**P**	**11 01 26.4**	**-0.3**
	comp=Z,6.6nm,1.1s						
IL1	**Eielson Array**	**91.94**	**17**	*e*P	**P**	**11 01 24.3**	**-2.6**
ILAR	**Eielson Array**	**91.94**	**17**	P	**P**	**11 01 24.6**	**-2.3**
	comp=Z,0.6nm,0.5s,baz=232,slow=5.1,SNR=9.7						
ILAR				PKKPbc	**PKKPdf**	**11 18 45.2**	**+0.5**
	comp=Z,0.2nm,0.7s,baz=4.3,slow=5.7,SNR=4.2						
ILAR				LR	LR	11 39 31.8	
	comp=Z,741nm,19.1s,baz=234,slow=33						
ILB	**Eielson Array**	**91.94**	**17**	*e*P	**P**	**11 01 26.9**	**+0.1**
ZAK	**Zakamensk**	**91.98**	**324**	*e*P	**P**	**11 01 26.9**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,21nm,1.4s						
A04D	**Lummi Island**	**91.98**	**38**	P	**P**	**11 01 27.0**	**-0.3**
	baz=240						
J08A	**Circle Bar Ran**	**91.99**	**44**	*e*P	**P**	**11 01 27.5**	**-0.2**
SKAG	**Skagway**	**92.04**	**25**	*e*P	**P**	**11 01 29.7**	**+2.3**
	comp=Z,23nm,1.2s						
SKAG				LR	LR		
	comp=Z,1µm,19.0s						
SCRK	**Sand Creek**	**92.18**	**19**	*e*P	**P**	**11 01 27.9**	**-0.2**
	comp=Z,3.4nm,0.8s						
IRK	**Irkutsk**	**92.42**	**326**	*e*P	**P**	**11 01 28.3**	**-1.1**
IRK				pmax	pmax		
	comp=Z,40nm,3.4s						
TLY	**Talaya**	**92.46**	**325**	P	**P**	**11 01 28.9**	**-0.7**
	comp=Z,1.5nm,0.4s,baz=140,slow=4.7,SNR=11						
TLY	**Talaya**	**92.46**	**325**	*e*P	**P**	**11 01 28.8**	**-0.7**
	comp=Z,17nm,1.1s						
TLY	**Talaya**	**92.46**	**325**	*e*P	**P**	**11 01 28.9**	**-0.7**
TLY				pmax	pmax		
	comp=Z,21nm,2.0s						
TLY				MLR	MLR		
	comp=Z,209nm,17.0s						
G08A	**Pilot Rock**	**92.57**	**42**	*e*P	**P**	**11 01 30.1**	**-0.3**
	comp=Z,9.3nm,1.0s						
G08A				LR	LR		
	comp=Z,1µm,21.0s						
TUC	**Tucson**	**92.81**	**57**	P	**P**	**11 01 31.2**	**-0.6**
	baz=247						
TUC	**Tucson**	**92.81**	**57**	*e*P	**P**	**11 01 32.0**	**+0.2**
	comp=Z,5.8nm,1.0s						
TUC	**Tucson**	**92.81**	**57**	*e*P	**P**	**11 01 32.0**	**+0.2**
TUC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
LCMT	**Little Creek M**	**92.84**	**51**	*e*P	**P**	**11 01 31.9**	**0.0**
	comp=Z,6.1nm,0.9s						
CCUT	**Cedar City**	**92.98**	**51**	*e*P	**P**	**11 01 32.9**	**+0.3**
	comp=Z,6.6nm,1.1s						
COLD	**Coldfoot**	**93.03**	**15**	PFAKE		11 01 40.0	+8.2
COLD				LR	LR		
	comp=Z,1µm,21.0s						
PSUT	**Pine Spring**	**93.03**	**50**	*e*P	**P**	**11 01 34.5**	**+1.7**
	comp=Z,5.5nm,1.0s						
KNB	**Kanab**	**93.15**	**52**	*e*P	**P**	**11 01 33.6**	**+0.3**
	comp=Z,11nm,1.1s						
SZCU	**Shurtz Canyon**	**93.20**	**51**	*e*P	**P**	**11 01 33.9**	**+0.4**
	comp=Z,7.1nm,1.1s						
BMO	**Blue Mountains**	**93.42**	**43**	*e*P	**P**	**11 01 33.5**	**-0.7**
	comp=Z,3.3nm,1.0s						
BMO				LR	LR		
	comp=Z,2µm,20.0s						
BMO	**Blue Mountains**	**93.42**	**43**	*e*P	**P**	**11 01 33.5**	**-0.7**
BMO				pmax	pmax		
	comp=Z,3.0nm,1.0s						
BMO				MLR	MLR		
	comp=Z,2µm,20.0s						
DLBC	**Dease Lake**	**93.59**	**27**	*e*P	**P**	**11 01 35.7**	**+1.0**
	comp=Z,8.7nm,1.1s						
EGAK	**Eagle**	**93.61**	**19**	*e*P	**P**	**11 01 34.0**	**-0.5**
	comp=Z,7.2nm,0.9s						
WUAZ	**Wupatki**	**93.62**	**53**	P	**P**	**11 01 35.0**	**-0.6**
	baz=247						
WUAZ	**Wupatki**	**93.62**	**53**	*e*P	**P**	**11 01 35.9**	**+0.4**
	comp=Z,10nm,0.9s						
E09A	**Wood Farm, Sta**	**93.64**	**41**	PFAKE		11 01 50.0	+15
E09A				LR	LR		
	comp=Z,900nm,20.0s						
DAWY	**Dawson**	**93.67**	**20**	*e*P	**P**	**11 01 37.2**	**+2.3**
	comp=Z,7.2nm,1.0s						
PKCU	**Pink Cliffs**	**93.70**	**51**	*e*P	**P**	**11 01 36.8**	**+0.8**
	comp=Z,12nm,1.0s						
MFID	**Camas Ranch**	**93.74**	**45**	*e*P	**P**	**11 01 36.1**	**+0.3**
	comp=Z,5.5nm,0.9s						
B08A	**Colville Reser**	**93.77**	**39**	*e*P	**P**	**11 01 36.8**	**+1.1**
	comp=Z,3.1nm,0.8s						
TCRU	**Three Creeks R**	**94.07**	**50**	PFAKE		11 01 50.0	+12
TCRU				LR	LR		
	comp=Z,2µm,19.0s						
MSU	**Marysvale**	**94.22**	**50**	*e*P	**P**	**11 01 39.0**	**+0.8**
MSU	**Marysvale**	**94.22**	**50**	*e*P	**P**	**11 01 39.1**	**+0.8**
TOLK	**Toolik Lake Re**	**94.30**	**14**	P	**P**	**11 01 39.6**	**+1.9**
	baz=218						
TOLK	**Toolik Lake Re**	**94.30**	**14**	PFAKE		11 01 50.0	+12
TOLK				LR	LR		
	comp=Z,1µm,20.0s						
DUG	**Dugway, Tooele**	**94.45**	**49**	P	**P**	**11 01 38.4**	**-0.8**
	baz=246						
DUG	**Dugway, Tooele**	**94.45**	**49**	P	**P**	**11 01 38.0**	**-1.2**
DUG				pmax	pmax		
	comp=Z,4.0nm,1.1s						
W18A	**Petrified Fore**	**94.71**	**54**	P	**P**	**11 01 40.2**	**-0.4**
	baz=248						
W18A	**Petrified Fore**	**94.71**	**54**	PFAKE		11 01 50.0	+9.5
W18A				LR	LR		
	comp=Z,1µm,18.0s						
HLID	**Hailey**	**94.74**	**45**	P	**P**	**11 01 40.4**	**0.0**
	baz=245						
HLID	**Hailey**	**94.74**	**45**	*e*P	**P**	**11 01 40.8**	**+0.3**
	comp=Z,4.0nm,1.0s						
HLID				LR	LR		
	comp=Z,1µm,18.0s						
NLU	**North Lily Min**	**94.87**	**49**	PFAKE		11 01 50.0	+8.8
NLU				LR	LR		
	comp=Z,3µm,20.0s						
HVU	**Hansel Valley**	**95.11**	**47**	*e*P	**P**	**11 01 42.5**	**+0.3**
	comp=Z,4.3nm,0.9s						
HVU	**Hansel Valley**	**95.11**	**47**	*e*P	**P**	**11 01 42.5**	**+0.3**
HVU				pmax	pmax		
	comp=Z,4.0nm,0.9s						
TMUT	**Trail Mountain**	**95.23**	**50**	*e*P	**P**	**11 01 44.3**	**+1.3**
	comp=Z,8.4nm,1.0s						
TMUT				LR	LR		
	comp=Z,600nm,20.0s						
121A	**Cookes Peak, D**	**95.25**	**57**	P	**P**	**11 01 42.6**	**-0.5**
	baz=248						
SRU	**San Rafael Swe**	**95.65**	**50**	*e*P	**P**	**11 01 45.4**	**+0.6**
	comp=Z,5.0nm,0.7s						
SRU	**San Rafael Swe**	**95.65**	**50**	*e*P	**P**	**11 01 45.4**	**+0.6**
SRU				pmax	pmax		
	comp=Z,5.0nm,0.7s						
TCUT	**Toone Canyon**	**95.79**	**48**	*e*P	**P**	**11 01 45.8**	**+0.4**
	comp=Z,11nm,0.7s						
P18A	**Preston Nutter**	**96.04**	**50**	*e*P	**P**	**11 01 50.1**	**+3.4**
	comp=Z,3.7nm,0.9s						
P18A				LR	LR		
	comp=Z,800nm,20.0s						

MOIG	Morelia	96.26	71	PFAKE		11 02 00.0	+12
MOIG				LR	LR		
	comp=Z,2µm,19.0s						
MSO	Missoula	96.39	42	P	P	11 01 47.9	+0.1
	baz=246						
MSO	Missoula	96.39	42	PFAKE		11 02 00.0	+12
MSO				LR	LR		
	comp=Z,1µm,19.0s						
MVCO	Mesa Verde	96.42	53	P	P	11 01 47.9	-0.4
	baz=248						
MVCO	Mesa Verde	96.42	53	PFAKE		11 02 00.0	+12
MVCO				LR	LR		
	comp=Z,1µm,18.0s						
Y22D	IRIS PASSCAL I	96.48	56	P	P	11 01 48.6	0.0
	baz=249						
PV23	Carpenter Ridg	96.49	51	*e*P	P	11 01 49.8	+1.1
	comp=Z,6.7nm,0.8s						
TIXI	Tiksi	96.64	348	*i* P	P	11 01 49.5	+1.3
TIXI				pmax	pmax		
	comp=Z,32nm,1.3s						
DLMT	Dillon	96.66	44	*e*P	P	11 01 50.0	+0.9
	comp=Z,3.0nm,0.9s						
DLMT				LR	LR		
	comp=Z,2µm,21.0s						
MNTX	Cornudas Mount	96.85	59	P	P	11 01 50.5	+0.3
	baz=250						
PLCA	Paso Flores	96.95	138	P	P	11 01 51.0	+0.4
	comp=Z,2.1nm,0.8s,baz=180,slow=20,SNR=1.9						
PLCA				LR	LR	11 39 15.2	
	comp=Z,248nm,18.9s,baz=256,slow=32						
REDW	Red Top Meadow	97.04	46	*e*P	Pdif	11 01 51.4	+0.3
	comp=Z,4.8nm,1.1s						
TASM	ASL Pad, Albuq	97.14	55	P	Pdif	11 01 51.8	+0.1
	baz=249						
ANMO	Albuquerque	97.14	55	LR	LR	11 38 27.2	
	comp=Z,763nm,19.9s,baz=266,slow=31						
ANMO	Albuquerque	97.14	55	P	Pdif	11 01 52.1	+0.4
	baz=249						
ANMO	Albuquerque	97.14	55	*i* P	P	11 01 51.4	-0.3
ANMO				pmax	pmax		
	comp=Z,9.0nm,2.5s						
JRQG	Juriquilla Cam	97.26	71	PFAKE		11 02 00.0	+7.4
JRQG				LR	LR		
	comp=Z,4µm,21.0s						
WALA	Waterton Lakes	97.31	40	PFAKE		11 02 00.0	+8.0
WALA				LR	LR		
	comp=Z,900nm,18.0s						
YHB	Horse Butte	97.33	45	PFAKE		11 02 00.0	+7.6
YHB				LR	LR		
	comp=Z,1µm,19.0s						
BOZ	Bozeman (W)	97.37	44	P	Pdif	11 01 53.2	+0.7
	baz=247						
BOZ	Bozeman (W)	97.37	44	PFAKE		11 02 00.0	+7.5
BOZ				LR	LR		
	comp=Z,2µm,21.0s						
LTX	Lajitas	97.43	62	*e*P	P	11 01 53.0	+0.1
LTX	Lajitas	97.43	62	*e*P	Pdif	11 01 53.0	0.0
TX31	Lajitas Ar. Si	97.43	62	*e*P	P	11 01 52.5	-0.5
TXAR	Lajitas Array	97.43	62	P	P	11 01 53.0	+0.1
	comp=Z,0.7nm,0.9s,baz=253,slow=3.8,SNR=5.1						
TXAR				PKKPbc	PKKPbc	11 18 30.9	0.0
	comp=Z,0.4nm,0.8s,baz=116,slow=5.8,SNR=4.4						
TXAR				LR	LR	11 37 41.4	
	comp=Z,1µm,20.1s,baz=0.0,slow=30						
TXAR	Lajitas Array	97.43	62	P	Pdif	11 01 53.0	0.0
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.9s						
O20A	White River Ci	97.66	50	P	P	11 01 53.9	0.0
	baz=249						
O20A	White River Ci	97.66	50	*e*P	P	11 01 53.4	-0.4
	comp=Z,3.7nm,0.9s						
O20A				LR	LR		
	comp=Z,1µm,20.0s						
PD31	Pinedale Array	97.69	47	*e*P	P	11 01 53.2	-0.8
PDAR	Pinedale Array	97.69	47	P	P	11 01 53.2	-0.8
	comp=Z,0.9nm,0.7s,baz=214,slow=3.9,SNR=7.1						
PDAR				PKKPbc	PKKPbc	11 18 29.3	-1.6
	comp=Z,0.4nm,0.8s,baz=79,slow=7.7,SNR=4.0						
PDAR				LR	LR	11 37 32.8	
	comp=Z,328nm,21.7s,baz=270,slow=30						
PDAR	Pinedale Array	97.69	47	*e*P	P	11 01 52.7	-1.3
PDAR				PKKPbc	PKKPbc	11 18 29.3	-1.6
S22A	4UR Ranch, Cre	97.85	53	P	P	11 01 54.8	-0.1
	baz=249						
S22A	4UR Ranch, Cre	97.85	53	PFAKE		11 02 10.0	+15
S22A				LR	LR		
	comp=Z,1µm,19.0s						
UNM	Universidad Na	97.92	72	PFAKE		11 02 10.0	+14
UNM				LR	LR		
	comp=Z,2µm,20.0s						
WMQ	Urumqi	98.70	314	P	Pdif	11 01 59.0	+0.7
WMQ				pP	pP	11 02 09.3	+1.4
WMQ				pmax	pmax		
	comp=Z,390nm,4.7s						
WMQ				LR	LR		
	comp=Z,290nm,23.9s						
WMQ				LR	LR		
	comp=Z,680nm,23.9s						
WMQ				LR	LR		
	comp=Z,720nm,28.3s						
RLMT	Red Lodge	98.75	45	PFAKE		11 02 10.0	+11
RLMT				LR	LR		
	comp=Z,1µm,21.0s						
SDCO	Great Sand Dun	98.83	53	PFAKE		11 02 10.0	+11
SDCO				LR	LR		
	comp=Z,1µm,18.0s						
EGMT	Eagleton	99.47	42	PFAKE		11 02 10.0	+8.4
EGMT				LR	LR		
	comp=Z,800nm,19.0s						
Q24A	Divide	99.50	52	PFAKE		11 02 10.0	+7.7
Q24A				LR	LR		
	comp=Z,800nm,18.0s						
N23A	Red Feather La	99.57	50	PFAKE		11 02 10.0	+7.5
N23A				LR	LR		
	comp=Z,1µm,20.0s						
LAO	LASA Array	101.28	44	PFAKE		11 02 20.0	+10
LAO				LR	LR		
	comp=Z,2µm,19.0s						
ABTX	Abilene, Hawle	101.75	60	PFAKE		11 02 20.0	+7.9
ABTX				LR	LR		
	comp=Z,600nm,18.0s						
RSSD	Black Hills	101.94	47	P	Pdif	11 02 12.6	-0.3
	baz=252						
YKA	Yellowknife Ar	102.21	27	P	Pdif	11 02 12.5	-0.8
	comp=Z,0.3nm,0.6s,baz=255,slow=4.8,SNR=3.5						
YKB5	Yellowknife Ar	102.21	27	*e*Pdif	Pdif	11 02 12.6	-0.8
MK32	Makanchi Array	103.26	315	*e*Pdif	Pdif	11 02 21.7	+3.3
MK32				*e*PP	PKiKP	11 06 37.1	-0.6
MKAR	Makanchi Array	103.26	315	Pdiff	Pdif	11 02 21.7	+3.3
	comp=Z,0.8nm,0.6s,baz=111,slow=5.5,SNR=4.4						
MKAR				PKiKP	PKiKP	11 06 37.1	-0.6
	comp=Z,0.6nm,0.8s,baz=97,slow=4.5,SNR=4.5						
MKAR				PKKPbc	PKKPbc	11 18 11.4	-3.3
	comp=Z,0.3nm,0.5s,baz=292,slow=2.8,SNR=4.0						
BGNE	Belgrade	105.34	51	PFAKE		11 06 50.0	
BGNE				LR	LR		
	comp=Z,800nm,18.0s						
CSGN	Cosiguina Volc	106.46	82	PFAKE		11 07 00.0	
CSGN				LR	LR		
	comp=Z,300nm,18.0s						
KURK	Kurchatov	106.62	318	*e*PKiKP	PKiKP	11 06 48.9	+5.2
KURBB	Kurchatov Arra	106.65	318	PP	PP	11 06 48.9	-10
	comp=Z,0.4nm,0.4s,baz=64,slow=4.2,SNR=3.7						
341A	Kurthwood	106.68	62	PFAKE		11 07 00.0	
341A				LR	LR		
	comp=Z,800nm,20.0s						
ECSD	EROS Data Cent	107.00	49	PFAKE		11 07 00.0	
ECSD				LR	LR		
	comp=Z,1µm,19.0s						
241A	Mo Tay, Goldon	107.06	62	PFAKE		11 07 00.0	
241A				LR	LR		
	comp=Z,1µm,20.0s						
P37A	Lathrop	107.72	54	P	PKiKP	11 06 46.2	+0.1
	baz=257						
U40A	Yellville	108.15	57	P	PKiKP	11 06 47.4	+0.4
	baz=257						
W41B	Gary Mavity, V	108.36	59	PFAKE		11 07 00.0	
W41B				LR	LR		
	comp=Z,1µm,20.0s						
J36A	Seneca 1, Swea	108.53	50	PFAKE		11 07 00.0	
J36A				LR	LR		
	comp=Z,1µm,19.0s						
V41A	Mountainview	108.57	58	P	PKiKP	11 06 48.4	+0.5
	baz=257						
S40A	Lebanon	108.70	56	P	PKiKP	11 06 48.1	+0.1
	baz=257						
ULM	Lac du Bonnet	108.83	43	PFAKE		11 07 00.0	
ULM				LR	LR		
	comp=Z,700nm,18.0s						
SCIA	State Center	109.06	52	PFAKE		11 07 00.0	
SCIA				LR	LR		
	comp=Z,800nm,19.0s						
VBMS	Vicksburg	109.08	62	PFAKE		11 07 00.0	
VBMS				LR	LR		
	comp=Z,900nm,20.0s						
ESPN	Las Esperanzas	109.24	84	PFAKE		11 07 00.0	
ESPN				LR	LR		
	comp=Z,300nm,20.0s						
I37A	Lemond, Waseca	109.33	49	PFAKE		11 07 00.0	
I37A				LR	LR		
	comp=Z,2µm,19.0s						
K38A	Parkersburg	109.53	51	PFAKE		11 07 00.0	
K38A				LR	LR		
	comp=Z,2µm,18.0s						
B35A	Bob, Littlefor	109.89	45	PFAKE		11 07 00.0	
B35A				LR	LR		
	comp=Z,2µm,20.0s						
D36A	Goodland	110.06	46	PFAKE		11 07 00.0	
D36A				LR	LR		
	comp=Z,1µm,19.0s						
I39A	Houston	110.64	50	PFAKE		11 07 00.0	
I39A				LR	LR		
	comp=Z,1µm,20.0s						
HALT	Halls	110.83	58	PFAKE		11 07 00.0	
HALT				LR	LR		
	comp=Z,800nm,18.0s						
L42A	Oliver, Polo	111.68	52	PFAKE		11 07 10.0	
L42A				LR	LR		
	comp=Z,1µm,21.0s						
G40A	Rib Lake	111.80	48	PFAKE		11 07 10.0	
G40A				LR	LR		
	comp=Z,700nm,18.0s						
I41A	Arkdale	111.85	50	PFAKE		11 07 10.0	
I41A				LR	LR		
	comp=Z,2µm,19.0s						
BVAR	Borovoye Array	112.03	320	PKiKP	PKiKP	11 06 52.8	-1.0
	comp=Z,1.2nm,0.5s,baz=131,slow=2.4,SNR=4.3						
H41A	Junction City	112.09	49	PFAKE		11 07 10.0	
H41A				LR	LR		
	comp=Z,1µm,18.0s						
R45A	Skylar, Fairfi	112.10	56	P	PKiKP	11 06 54.1	-0.3
	baz=260						
Q45A	Warren Harvey,	112.30	55	P	PKiKP	11 06 54.6	-0.2
	baz=260						
X48A	Hartselle	112.39	60	PFAKE		11 07 10.0	
X48A				LR	LR		
	comp=Z,900nm,20.0s						
Z49A	Columbiana	112.58	62	P	PKiKP	11 06 55.8	+0.4
	baz=259						
COWI	Conover	112.65	48	PFAKE		11 07 10.0	
COWI				LR	LR		
	comp=Z,800nm,18.0s						
Y49A	Blount Mountai	112.80	61	PFAKE		11 07 10.0	
Y49A				LR	LR		
	comp=Z,1µm,19.0s						
C40A	Isle Royale Na	112.86	46	PFAKE		11 07 10.0	
C40A				LR	LR		
	comp=Z,1µm,19.0s						
H42A	Shiocton	112.87	49	PFAKE		11 07 10.0	
H42A				LR	LR		
	comp=Z,1µm,18.0s						
D41A	Chassel	113.16	47	P	PKiKP	11 06 56.9	+0.7
	baz=264						
G43A	Wallace	113.56	49	PFAKE		11 07 10.0	
G43A				LR	LR		
	comp=Z,1µm,18.0s						
352A	Blakely	113.58	64	PFAKE		11 07 10.0	
352A				LR	LR		
	comp=Z,600nm,19.0s						
152A	Waverly Hall	113.97	63	PFAKE		11 07 10.0	
152A				LR	LR		
	comp=Z,600nm,20.0s						
T49A	Edmonton	114.06	58	P	PKPdf	11 06 58.7	+0.5
	baz=261						
T49A	Edmonton	114.06	58	PFAKE		11 07 10.0	+12
T49A				LR	LR		
	comp=Z,900nm,19.0s						
E43A	Lone Tree Farm	114.16	48	P	PKPdf	11 06 58.5	+0.4
	baz=264						
E43A	Lone Tree Farm	114.16	48	PFAKE		11 07 10.0	+12
E43A				LR	LR		
	comp=Z,900nm,18.0s						
V50A	Pikevile	114.18	59	P	PKPdf	11 06 58.9	+0.4
	baz=261						
X51A	Calhoun	114.19	61	PFAKE		11 07 10.0	+11
X51A				LR	LR		
	comp=Z,1µm,20.0s						
TIGA	Tifton	114.69	64	PFAKE		11 07 10.0	+10
TIGA				LR	LR		
	comp=Z,700nm,22.0s						
Y52A	Lilburn	114.72	61	PFAKE		11 07 10.0	+10
Y52A				LR	LR		
	comp=Z,900nm,19.0s						
E44A	Grand Marais A	114.92	47	PFAKE		11 07 10.0	+10
E44A				LR	LR		
	comp=Z,1µm,18.0s						
U51A	La Follette	115.15	59	P	PKPdf	11 07 00.4	0.0
	baz=262						
TKL	Tuckaleechee C	115.24	60	PKP	PKPdf	11 06 59.0	-1.5
	comp=Z,3.2nm,0.8s,baz=176,slow=4.7,SNR=4.1						
TKL	Tuckaleechee C	115.24	60	PKIKP	PKPdf	11 06 59.0	-1.5
TKL				pmax	pmax		
	comp=Z,3.0nm,0.8s						
TZTN	Tazewell	115.55	59	P	PKPdf	11 07 01.6	+0.5
	baz=262						
W53A	Cullowhee	115.66	60	P	PKPdf	11 07 02.1	+0.6
	baz=261						
061Z	Ochoppi	115.92	71	PFAKE		11 07 10.0	+7.9
061Z				LR	LR		
	comp=Z,400nm,21.0s						
059A	Moore Haven	115.94	69	PFAKE		11 07 10.0	+7.9
059A				LR	LR		
	comp=Z,600nm,21.0s						
U53A	Fall Branch	116.30	59	P	PKPdf	11 07 01.8	-0.8
	baz=262						
JSC	Jenkinsville	117.08	61	PFAKE		11 07 20.0	+16
JSC				LR	LR		
	comp=Z,1µm,19.0s						
BLA	Blacksburg	118.12	58	P	PKPdf	11 07 04.7	-1.4
	baz=264						
MCWV	Mont Chateau	118.80	56	P	PKPdf	11 07 06.1	-1.1
	baz=266						
ARU	Arti	118.92	324	PKP	PKPdf	11 07 05.8	-1.0
	comp=Z,6.1nm,0.5s,baz=59,slow=5.6,SNR=7.2						
ARU	Arti	118.92	324	*i* PKIKP	PKPdf	11 07 06.4	-0.5
ARU						11 08 24.3	
ARU						11 14 15.6	
M54A	Oil Creek Stat	119.06	53	P	PKPdf	11 07 06.1	-1.6
	baz=267						
AKTO	Aktyubinsk	119.63	317	PKP	PKPdf	11 07 06.5	-2.0
	comp=Z,1.3nm,0.6s,baz=100,slow=12,SNR=3.4						
O56A	Blue Knob Stat	119.82	55	P	PKPdf	11 07 07.7	-1.5
	baz=267						
CNNC	Cliffs of the	119.95	61	P	PKPdf	11 07 08.3	-1.3
	baz=264						
SSPA	Standing Stone	120.35	55	P	PKPdf	11 07 08.9	-1.3
	baz=267						
SSPA	Standing Stone	120.35	55	PFAKE		11 07 20.0	+10
SSPA				LR	LR		
	comp=Z,800nm,18.0s						
KBS	Kingsbay	121.23	355	PFAKE		11 07 20.0	+9.2
KBS				LR	LR		
	comp=Z,400nm,20.0s						
SPA0	Spitsbergen Ar	121.49	354	*e*PKPdf	PKPdf	11 07 09.8	-1.6
SPITS	Spitsbergen Ar	121.49	354	PKP	PKPdf	11 07 09.8	-1.6
	comp=Z,9.5nm,0.7s,baz=45,slow=8.4,SNR=10						
BINY	Binghamton	121.83	53	P	PKPdf	11 07 11.4	-1.6
	baz=270						
N59A	State Game Lan	121.97	54	P	PKPdf	11 07 12.0	-1.3
	baz=269						
LONY	Lake Ozonia	122.82	50	P	PKPdf	11 07 13.3	-1.5
	baz=272						
LONY	Lake Ozonia	122.82	50	PFAKE		11 07 30.0	+15
LONY				LR	LR		
	comp=Z,900nm,19.0s						
PAL	Palisades	123.38	54	P	PKPdf	11 07 14.7	-1.2
	baz=270						
PAL	Palisades	123.38	54	PFAKE		11 07 30.0	+14
PAL				LR	LR		
	comp=Z,800nm,18.0s						
FRNY	Flat Rock	123.52	50	PFAKE		11 07 30.0	+14
FRNY				LR	LR		
	comp=Z,1µm,18.0s						
ACCN	Adirondack Com	123.52	51	PFAKE		11 07 30.0	+14
ACCN				LR	LR		
	comp=Z,1µm,20.0s						
DAG	Danmarks Havn	124.16	2	*i* P	PKPdf	11 07 11.8	-4.7
	comp=Z,5.3nm,0.7s						
DAG	Danmarks Havn	124.16	2	*i* PKIKP	PKPdf	11 07 11.8	-4.7
DAG				pmax	pmax		
	comp=Z,5.0nm,0.7s						
PRGR	Permogore	124.30	331	*e*PKIKP	PKPdf	11 07 15.7	-1.4
PRGR				*e*		11 09 03.6	
PRGR				pmax	pmax		
	comp=Z,6.0nm,0.6s						
LBNH	Lisbon	124.74	50	P	PKPdf	11 07 17.5	-1.0
	baz=274						
HRV	Adam Dziewonsk	125.10	52	P	PKPdf	11 07 18.1	-1.2
	baz=273						
APA	Apatity	126.10	341	⇓*i*PKIKP	PKPdf	11 07 17.3	-3.1
APA				pmax	pmax		
	comp=Z,4.0nm,0.9s						
SUMG	Summit	126.16	10	*i* P	PKPdf	11 07 19.6	-1.3
	comp=Z,68nm,1.4s						
SUMG	Summit	126.16	10	*i* PKIKP	PKPdf	11 07 19.6	-1.3
SUMG				pmax	pmax		
	comp=Z,68nm,1.4s						
SCHQ	Schefferville	126.26	37	PFAKE		11 07 30.0	+8.9
SCHQ				LR	LR		
	comp=Z,1µm,21.0s						
PKME	Peaks-Kenny Pk	126.52	49	P	PKPdf	11 07 20.7	-1.1
	baz=276						
PKME	Peaks-Kenny Pk	126.52	49	*e*PKPdf	PKPdf	11 07 20.8	-1.1
PKME				LR	LR		
	comp=Z,1µm,20.0s						
CRPR	Cabo Rojo, PR	126.78	83	PFAKE		11 07 30.0	+6.9
CRPR				LR	LR		
	comp=Z,700nm,19.0s						
MPR	Mayaguez	126.80	83	PFAKE		11 07 30.0	+6.9
MPR				LR	LR		
	comp=Z,300nm,19.0s						
ARA0	ARCESS Array S	126.95	345	*e*PKPdf	PKPdf	11 07 20.9	-1.1
ARCES	ARCESS Array B	126.95	345	PKP	PKPdf	11 07 20.9	-1.1
	comp=Z,7.7nm,0.6s,baz=72,slow=2.1,SNR=35						
PTGA	Pitinga	127.00	108	*e*PKPdf	PKPdf	11 07 22.4	-1.3
PQI	Presque Isle	127.22	47	*e*PKPdf	PKPdf	11 07 21.5	-1.6
ICMP	Isla Caja de M	127.29	83	PFAKE		11 07 40.0	+16
ICMP				LR	LR		
	comp=Z,700nm,18.0s						
KLMR	Klimovskoe	127.32	332	*e*PKIKP	PKPdf	11 07 20.1	-2.8
KLMR				pmax	pmax		
	comp=Z,25nm,1.5s						
KLMR	Klimovskoe	127.32	332	*e*PKPdf	PKPdf	11 07 20.2	-2.7
KLMR				AMP		11 07 30.1	
	comp=Z,25nm,1.5s						
EMPR	Esperanza - Ma	127.42	82	PFAKE		11 07 40.0	+16
EMPR				LR	LR		
	comp=Z,700nm,21.0s						
LSZ	Lusaka	127.57	230	*e*PKPdf	PKPdf	11 07 24.2	-0.7
DAMY	Dhamar	127.58	272	PFAKE		11 07 40.0	+15
DAMY				LR	LR		
	comp=Z,900nm,20.0s						
SFJD	Kangerlussuaq	127.59	19	PFAKE		11 07 30.0	+6.8
SFJD				LR	LR		
	comp=Z,900nm,19.0s						
SJG	San Juan	127.69	83	*e*PKPdf	PKPdf	11 07 23.5	-1.3
SJG	San Juan	127.69	83	*e*PKIKP	PKPdf	11 07 23.5	-1.3
HUMP	Col San Antoni	127.97	83	*e*PKPdf	PKPdf	11 07 24.3	-1.1
CBYP	Canovanas	128.00	83	PFAKE		11 07 40.0	+14
CBYP				LR	LR		
	comp=Z,400nm,20.0s						
BDFB	Brasilia	128.11	132	PKP	PKPdf	11 07 24.4	-1.6
	comp=Z,4.9nm,0.6s,baz=250,slow=6.3,SNR=6.1						
ATD	Arta Tunnel	128.15	268	PFAKE		11 07 40.0	+14
ATD				LR	LR		
	comp=Z,1µm,18.0s						
RAYN	Ar Rayn	128.44	284	*e*PKPdf	PKPdf	11 07 26.9	+0.6
RAYN	Ar Rayn	128.44	284	*e*PKIKP	PKPdf	11 07 26.9	+0.6
SABA	Saba	130.28	84	PFAKE		11 07 40.0	+10
SABA				LR	LR		
	comp=Z,500nm,21.0s						
KBZ	Khabaz	130.59	310	PKP	PKPdf	11 07 30.6	+1.0
	comp=Z,0.5nm,0.4s,baz=124,slow=7.7,SNR=4.1						
KIV	Kislovodsk	130.70	310	⇑*e*PKIKP	PKPdf	11 07 27.5	-2.5
KIV				*e*		11 09 45.1	
KIV				pmax	pmax		
	comp=Z,20nm,1.6s						
SVB	Belmont	131.03	91	PFAKE		11 07 40.0	+8.7
SVB				LR	LR		
	comp=Z,300nm,20.0s						
OBN	Obninsk	131.21	326	⇓*e*PKIKP	PKPdf	11 07 31.0	+0.6
OBN				*e*		11 09 45.5	
OBN				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ANGG	Ammassalik, Gr	132.13	15	PFAKE		11 07 40.0	+8.1
ANGG				LR	LR		
	comp=Z,600nm,18.0s						
FIA1	FINESS Array S	132.42	337	*e*PKPdf	PKPdf	11 07 32.6	0.0
FIA0	FINESS Array S	132.42	337	*e*PKPdf	PKPdf	11 07 32.0	-0.5
FIA0	FINESS Array S	132.42	337	*e*PKIKP	PKPdf	11 07 32.1	-0.5
FINES	FINESS Array B	132.42	337	PKP	PKPdf	11 07 32.0	-0.5
	comp=Z,3.5nm,0.8s,baz=47,slow=1.0,SNR=16						
FINES				SKPbc	SKPbc	11 10 56.3	-1.0
	comp=Z,3.1nm,0.7s,baz=98,slow=3.9,SNR=7.1						
VSU	Vasula	134.08	334*c*	*i*PKIKP	PKPdf	11 07 36.5	+0.8
VSU				pmax	pmax		
	comp=Z,71nm,2.5s						
MBAR	Mbarara	134.31	247	PFAKE		11 07 50.0	+12
MBAR				LR	LR		
	comp=Z,300nm,19.0s						
AKASG	Malin Array Be	137.17	323	PKP	PKPdf	11 07 42.4	+0.7
	comp=Z,1.1nm,0.5s,baz=68,slow=2.0,SNR=5.5						
AKASG				SKPbc	SKPbc	11 11 12.1	-0.8
	comp=Z,0.7nm,0.5s,baz=52,slow=4.3,SNR=2.6						
AKASG	Malin Array Be	137.17	323	PKIKP	PKPdf	11 07 42.4	+0.7
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
AKBB	Malin Array Si	137.17	323	*e*PKPdf	PKPdf	11 07 42.4	+0.7
AK11	Malin Array Si	137.21	323	*e*PKPdf	PKPdf	11 07 42.6	+0.7
NB2	NORSAR Subarra	137.33	345	PKPdf	PKPdf	11 07 39.9	-1.9
	comp=Z,13nm,1.7s,baz=31,slow=1.9						
NB2	NORSAR Subarra	137.33	345	PKPdf	PKPdf	11 07 39.9	-1.9
	baz=31,slow=1.9						
NOA	NORSAR Array B	137.33	345	PKP	PKPdf	11 07 41.5	-0.3
	comp=Z,2.0nm,0.8s,baz=32,slow=2.0,SNR=8.1						
HFS	Hagfors	137.44	342	PKhKP	PKPpre	11 07 27.8	
	comp=Z,0.4nm,0.4s,baz=111,slow=8.2,SNR=2.8						
BR101	Keskin Array S	138.16	306	*e*PKPdf	PKPdf	11 07 43.5	-0.7
BRTR	Keskin Array B	138.16	306	PKP	PKPdf	11 07 43.5	-0.7
	comp=Z,0.7nm,0.6s,baz=111,slow=2.0,SNR=2.3						
KONO	Kongsberg	138.94	345	PFAKE		11 08 00.0	+15
KONO				LR	LR		
	comp=Z,600nm,19.0s						
ISP	Isparta	140.97	304	PFAKE		11 08 00.0	+11
ISP				LR	LR		
	comp=Z,600nm,19.0s						
BURAR	Bucovina Array	140.97	321	⇓*i*P	PKPdf	11 07 50.5	+1.5
BURAR	Bucovina Array	140.97	321	⇓PKIKP	PKPdf	11 07 50.5	+1.5
BUR04	Bucovina Ar. S	140.98	321	*e*PKPdf	PKPdf	11 07 50.5	+1.6
KWP	Kalwaria Pacla	141.29	325	PFAKE		11 08 00.0	+11
KWP				LR	LR		
	comp=Z,6µm,19.0s						
MLR	Muntele Rosu	141.55	318	⇑*i*P	PKPdf	11 07 47.8	-2.3
MLR	Muntele Rosu	141.55	318	⇑PKIKP	PKPdf	11 07 47.8	-2.3
UZH	Uzhgorod	142.08	324	*e*PKIKP	PKPdf	11 07 51.9	+1.1
UZH				*e*		11 07 58.1	
MANT	Manisa	142.30	306	PFAKE		11 08 00.0	+8.2
MANT				LR	LR		
	comp=Z,2µm,20.0s						
CRVS	Cervenica-Dubn	142.38	325	*e*PKIKP	PKPab	11 07 47.4	
CRVS	Cervenica-Dubn	142.38	325	*e*PKP	PKPab	11 07 47.4	
DRGR		142.86	321	⇑*i*P	PKPdf	11 07 53.3	+0.9
DRGR		142.86	321	⇑PKIKP	PKPdf	11 07 53.3	+0.9
ALN	Alexandroupoli	143.37	311	*e*PKPpre	PKPab	11 07 48.6	-0.7
ALN	Alexandroupoli	143.37	311	P	PKPab	11 07 48.6	-0.7
ALN	Alexandroupoli	143.37	311	*e*PKHKP	PKPab	11 07 48.6	-0.7
RDO	Rodhopi	143.63	312	*e*PKPpre	PKPab	11 07 49.1	-1.3
RDO	Rodhopi	143.63	312	P	PKPab	11 07 49.1	-1.3
GADA	Gvkgeada	143.72	310	*e*PKPpre	PKPab	11 07 49.8	-1.0
GADA	Gvkgeada	143.72	310	P	PKPab	11 07 49.8	-1.0
PSZ	Piszkesteto	143.80	325	⇑*i*P	PKPab	11 07 50.7	-0.2
PSZ	Piszkesteto	143.80	325	⇑*e*PKPdf	PKPab	11 07 50.3	-0.6
PSZ	Piszkesteto	143.80	325	*e*PKPdf	PKPbc	11 07 52.1	+0.5
PSZ	Piszkesteto	143.80	325	*e*PKIKP	PKPbc	11 07 52.1	+0.5
MORC	Moravsky Berou	143.82	329	*e*PKPdf	PKPdf	11 07 53.5	-0.4
MORC	Moravsky Berou	143.82	329	PKIKP	PKPdf	11 07 54.1	+0.2

MORC	Moravsky Berou	143.82	329	ePKP	PKPab	11 07 50.3	-0.6
SMTH	Samothraki Isl	143.88	310	P	PKPab	11 07 50.8	-0.6
DPC	Dobruska-Polom	144.00	331	ePKP	PKPab	11 07 49.7	-1.9
DPC				AMS	AMS	12 11 20.0	
	comp=Z,700nm,20.4s						
DPC	Dobruska-Polom	144.00	331	ePKHKP	PKPab	11 07 49.7	-1.9
DPC				MLR	MLR		
	comp=Z,700nm,20.4s						
VYHS	Vyhne	144.00	326	ePKIKP	PKPab	11 07 51.5	-0.1
VYHS	Vyhne	144.00	326	ePKP	PKPab	11 07 51.5	-0.1
UPC	Upice	144.03	331	ePKP	PKPbc	11 07 52.0	-0.1
UPC				AMS	AMS	12 07 20.0	
	comp=Z,900nm,20.5s						
UPC	Upice	144.03	331	ePKIKP	PKPbc	11 07 52.0	-0.1
UPC				MLR	MLR		
	comp=Z,900nm,20.5s						
SIGR	SIGRI	144.09	308	ePKPdf	PKPab	11 07 51.6	-0.6
SIGR	SIGRI	144.09	308	P	PKPab	11 07 51.6	-0.6
BZS	Buzias	144.13	320	⇑iP	PKPbc	11 07 52.7	+0.1
BZS	Buzias	144.13	320	⇑PKIKP	PKPbc	11 07 52.7	+0.1
CHOS	Chios island	144.21	307	P	PKPab	11 07 52.3	-0.5
LIA	Limnos Island	144.34	310	P	PKPab	11 07 52.1	-1.0
JAVC	Velka Javorina	144.36	328	ePKP	PKPbc	11 07 53.8	+0.5
THAS	Thassos island	144.41	311	P	PKPab	11 07 52.1	-1.2
MDVR	Moldovita	144.51	319	⇓iP	PKPab	11 07 52.5	-1.2
BUD	Budapest	144.53	325	⇑ePKPdf	PKPab	11 07 52.7	-0.9
VRAC	Vranov	144.59	329	⇑iP	PKPab	11 07 53.2	-0.6
VRAC	Vranov	144.59	329	⇑PKIKP	PKPab	11 07 53.2	-0.6
VRAC	Vranov	144.59	329	ePKP	PKPab	11 07 53.0	-0.8
VTS	Vitosha	144.62	315	⇑iP	PKPab	11 07 53.9	-0.4
VTS	Vitosha	144.62	315	ePKPdf	PKPab	11 07 53.9	-0.4
VTS				ePKPdf	PKPbc	11 07 54.1	-0.4
VTS	Vitosha	144.62	315	P	PKPab	11 07 53.9	-0.4
VTS	Vitosha	144.62	315	⇑PKIKP	PKPab	11 07 53.9	-0.4
PVCC	Panska Ves	144.66	332	ePKP	PKPab	11 07 54.0	+0.1
PVCC				AMS	AMS	12 09 50.0	
	comp=Z,800nm,19.0s						
PVCC	Panska Ves	144.66	332	ePKIKP	PKPab	11 07 54.0	+0.1
PVCC				MLR	MLR		
	comp=Z,800nm,19.0s						
BRG	Berggiesshubel	144.67	333	i PKP	PKPab	11 07 53.3	-0.7
	comp=Z,51nm,1.1s						
BRG				e		11 11 32.7	
	comp=Z,13nm,1.5s						
	comp=N,455nm,18.0s						
	comp=E,417nm,20.9s						
	comp=Z,688nm,19.5s						
BRG	Berggiesshubel	144.67	333	i PKIKP	PKPab	11 07 53.3	-0.7
BRG				pmax	pmax		
	comp=Z,14nm,1.1s						
BRG				MLR	MLR		
	comp=N,13µm,18.0s						
BRG				MLR	MLR		
	comp=E,455nm,20.9s						
BRG				MLR	MLR		
	comp=Z,417nm,19.5s						
NVR	Nevrokopi	144.71	313	P	PKPab	11 07 53.6	-0.9
CLL	Collm	144.73	334	⇑iPKPdf	PKPab	11 07 53.2	-0.9
	comp=Z,58nm,1.2s						
CLL				ePKPlp		11 07 57.0	
	comp=Z,500nm,19.2s						
CLL				i PKiKP	PKiKP	11 08 00.6	+1.5
	comp=Z,62nm,1.3s						
CLL				ePP	PP	11 11 15.0	+2.9
CLL				epSKPdf		11 11 45.0	
CLL				Lm	MLR	12 15 00.0	
	comp=N,300nm,21.8s						
CLL				Lm	MLR	12 15 00.0	
	comp=E,400nm,20.0s						
CLL				Lm	MLR	12 15 00.0	
	comp=Z,500nm,19.9s						
CLL	Collm	144.73	334	ePKPdf	PKPab	11 07 53.2	-0.9
CLL	Collm	144.73	334	ePKIKP	PKPab	11 07 53.3	-0.9
AMGA	Amorgos Island	144.79	304	P	PKPab	11 07 53.7	-1.2
KRUC	Moravsky	144.85	329	ePKP	PKPab	11 07 53.6	-1.1
MODS	Modra-Piesok	144.88	327	ePKIKP	PKPab	11 07 54.9	0.0
MODS	Modra-Piesok	144.88	327	ePKP	PKPab	11 07 54.9	0.0
ZKR	Zakros	144.98	301	ePKPbc	PKPab	11 07 55.7	0.0
ZKR	Zakros	144.98	301	P	PKPab	11 07 55.7	0.0
SRS	Serrai	144.99	312	ePKPbc	PKPbc	11 07 53.8	-1.7
SRS	Serrai	144.99	312	P	PKPbc	11 07 53.8	-1.7
SRS	Serrai	144.99	312	ePKIKP	PKPbc	11 07 53.8	-1.7
APE	Apeiranthos	145.00	305	ePKPbc	PKPbc	11 07 54.8	-0.9
APE	Apeiranthos	145.00	305	P	PKPbc	11 07 54.8	-0.9
GOPC	GO Pecny, Ondr	145.00	331	ePKP	PKPbc	11 07 55.1	-0.2
GOPC				AMS	AMS	12 09 10.0	
	comp=Z,1µm,20.5s						
GOPC	GO Pecny, Ondr	145.00	331	ePKIKP	PKPbc	11 07 55.1	-0.2
GOPC				MLR	MLR		
	comp=Z,1µm,20.5s						
ANAF	Anafi Island	145.01	304	P	PKPbc	11 07 53.5	-2.2
OUR	Ouranopolis	145.03	311	ePKPbc	PKPbc	11 07 54.1	-1.5
OUR	Ouranopolis	145.03	311	P	PKPbc	11 07 54.1	-1.5
OUR	Ouranopolis	145.03	311	ePKIKP	PKPbc	11 07 54.1	-1.5
PRA	Prague	145.05	332	ePKP	PKPbc	11 07 55.1	-0.3
PRA				AMS	AMS	12 08 10.0	
	comp=Z,1µm,23.8s						
PRA	Prague	145.05	332	ePKIKP	PKPbc	11 07 55.1	-0.3
PRA				MLR	MLR		
	comp=Z,1µm,23.8s						
PRU	Pruhonice	145.06	332	ePKP	PKPbc	11 07 55.1	-0.3
PRU				AMS	AMS	12 10 20.0	
	comp=Z,900nm,20.9s						
PRU	Pruhonice	145.06	332	ePKIKP	PKPbc	11 07 55.1	-0.3
PRU				MLR	MLR		
	comp=Z,900nm,20.9s						
SANT	Santorini	145.25	304	⇑iP	PKPbc	11 07 54.5	-2.0
SANT	Santorini	145.25	304	ePKPbc	PKPbc	11 07 55.8	-0.8
SOH	Sokhos	145.28	312	P	PKPbc	11 07 53.3	-3.2
PLG	Polygyros	145.39	311	P	PKPbc	11 07 55.7	-1.2
PAIG	Paliouri	145.40	311	P	PKPbc	11 07 54.0	-2.8
EKA	Eskdalemuir Ar	145.40	353	PKPbc	PKPbc	11 07 54.8	-1.5
	comp=Z,17nm,0.4s,baz=0.9,slow=2.5,SNR=180						
NPS	Neapolis	145.42	302	P	PKPab	11 07 57.4	+0.1
ESK	Eskdalemuir	145.43	353	ePKPdf	PKPbc	11 07 54.6	-1.8
ESK	Eskdalemuir	145.43	353	ePKP2	PKPbc	11 07 54.6	-1.8
KNT	Kendrikon	145.45	313	P	PKPdf	11 07 55.1	-1.9
MORH	Mˆ‡rˆ¡gy, Hung	145.51	323	⇑ePKPbc	PKPdf	11 07 56.1	-0.8
AOS	Alonnisos	145.54	309	ePKPdf	PKPdf	11 07 55.2	-2.0
AOS	Alonnisos	145.54	309	P	PKPdf	11 07 55.2	-2.0
HORT	Hortiatis	145.54	312	P	PKPdf	11 07 55.5	-1.7
LAST	Lasithi	145.55	302	ePKPdf	PKPab	11 07 57.9	0.0
LAST	Lasithi	145.55	302	P	PKPab	11 07 57.9	0.0
VAY	Valandovo	145.60	313	ePKPdf	PKPdf	11 07 56.0	-1.2
VAY	Valandovo	145.60	313	P	PKPdf	11 07 56.0	-1.2
VAY	Valandovo	145.60	313	i P	PKPdf	11 07 55.8	-1.4
VAY	Valandovo	145.60	313	ePKP2	PKPdf	11 07 56.0	-1.2
SOP	Sopron	145.70	327	⇑ePKPdf	PKPdf	11 07 55.8	-1.3
SERI	Serifos	145.77	306	P	PKPdf	11 07 55.6	-2.1
NKC	Novy Kostel	145.78	334	ePKP	PKPbc	11 07 57.6	-0.1
NKC				AMS	AMS	12 17 50.0	
	comp=Z,400nm,15.5s						
NKC	Novy Kostel	145.78	334	ePKP2	PKPbc	11 07 57.6	-0.1
NKC				MLR	MLR		
	comp=Z,400nm,15.5s						
MOX	Moxa	145.80	335	PKP2	PKPbc	11 07 57.7	-0.1
GRG	Griva	145.88	313	ePKPdf	PKPdf	11 07 56.1	-1.6
GRG	Griva	145.88	313	P	PKPdf	11 07 56.1	-1.6
GRG	Griva	145.88	313	ePKIKP	PKPdf	11 07 56.1	-1.6
CONA	Conrad Observa	145.88	328	i PKPab	PKPdf	11 07 57.8	+0.2
	comp=Z,104nm,1.6s,SNR=44						
DIVS	Divibare	145.92	319	ePKPdf	PKPdf	11 07 57.1	-0.7
XOR	Xorichti	145.97	310	P	PKPdf	11 07 55.9	-2.0
IDI	Anoyia	145.99	302	PKPbc	PKPdf	11 07 57.7	-0.5
	comp=Z,4.7nm,0.3s,baz=128,slow=9.3,SNR=9.8						
IDI	Anoyia	145.99	302	⇑iP	PKPab	11 08 01.3	+1.8
IDI	Anoyia	145.99	302	ePKPdf	PKPdf	11 07 58.0	-0.1
IDI				LR	LR		
	comp=Z,500nm,20.0s						
ATHU	Athens Univers	146.04	307	ePKPdf	PKPdf	11 07 57.2	-0.9
ATHU	Athens Univers	146.04	307	P	PKPdf	11 07 57.2	-0.9
SKO	Skopje	146.07	315	ePKPdf	PKPdf	11 07 57.8	-0.2
SKO	Skopje	146.07	315	P	PKPdf	11 07 57.8	-0.2
SKO	Skopje	146.07	315	i P	PKPdf	11 07 58.0	0.0
VLY	Voula,Athens	146.07	307	ePKPdf	PKPdf	11 07 56.9	-1.2
VLY	Voula,Athens	146.07	307	P	PKPdf	11 07 56.9	-1.2
ATH	Athens Observa	146.08	307	P	PKPdf	11 07 58.2	+0.1
KHC	Kasperske Hory	146.12	331	ePKP	PKPdf	11 07 57.6	-0.3
KHC				epPKP	PKiKP	11 08 04.5	+2.4
KHC				esPKP		11 08 16.0	
KHC				AMS	AMS	12 10 40.0	
	comp=Z,800nm,23.1s						
KHC	Kasperske Hory	146.12	331	ePKPdf	PKPdf	11 07 57.1	-0.8
KHC	Kasperske Hory	146.12	331	ePKP2	PKPdf	11 07 57.6	-0.3
KHC				MLR	MLR		
	comp=Z,800nm,23.1s						
SMIA	Simia	146.13	309	P	PKPdf	11 07 57.7	-0.5
LIT	Litokhoron	146.17	311	ePKPdf	PKPdf	11 07 57.4	-0.9
LIT				ePKPdf	PKPdf	11 07 58.6	+0.3
LIT	Litokhoron	146.17	311	P	PKPdf	11 07 58.6	+0.3
LIT	Litokhoron	146.17	311	ePKIKP	PKPdf	11 07 57.4	-0.9
LIT				e		11 07 58.6	
GEC2	GERESS Array S	146.27	331	ePKPdf	PKPdf	11 07 58.0	-0.2
GEC2				LR	LR		
	comp=Z,900nm,22.0s						
GEC2	GERESS Array S	146.27	331	ePKP2	PKPdf	11 07 58.0	-0.2
GEC2				MLR	MLR		
	comp=Z,900nm,22.0s						
GERES	GERESS Array B	146.27	331	PKPbc	PKPdf	11 07 58.6	+0.4
	comp=Z,12nm,0.6s,baz=46,slow=3.9,SNR=52						
GEA0	GERESS Array S	146.27	331	ePKPdf	PKPdf	11 07 57.1	-1.1
BEHE	Becsehely	146.37	325	⇑ePKPdf	PKPbc	11 07 59.4	-0.2
LKR	Lokris	146.37	309	P	PKPdf	11 07 58.1	-0.5
WET	Wettzell	146.42	332	PKP2	PKPbc	11 07 59.6	-0.1
KRUS	Krusevo	146.47	314	i P	PKPdf	11 07 59.2	+0.4
VAM	Vamos	146.50	303	P	PKPbc	11 08 00.2	-0.2
ARSA	Arzberg	146.51	327	PKPab	PKPbc	11 07 59.8	-0.3
	comp=Z,6.9nm,1.1s						
KZN	Kozani	146.59	312	P	PKPdf	11 07 58.6	-0.4
DID	Didima	146.60	307	ePKPdf	PKPdf	11 07 58.1	-1.0
DID	Didima	146.60	307	P	PKPdf	11 07 58.1	-1.0
LTK	Loutraki	146.62	308	ePKPdf	PKPdf	11 07 58.0	-1.1
LTK	Loutraki	146.62	308	P	PKPdf	11 07 58.0	-1.1
FNA	Florina	146.65	313	ePKPdf	PKPdf	11 07 59.7	+0.7
FNA	Florina	146.65	313	P	PKPdf	11 07 59.1	0.0
IMMV	Iera Moni Meta	146.66	303	P	PKPbc	11 08 00.5	-0.3
GRFO	Grafenberg	146.70	334	ePKPdf	PKPdf	11 07 58.9	+0.1
GRFO	Grafenberg	146.70	334	ePKP2	PKPdf	11 07 58.9	+0.1
KRND	KRANIDI	146.71	307	P	PKPdf	11 07 59.1	-0.1
AGG	Agios Georgios	146.72	310	ePKPdf	PKPdf	11 07 59.3	+0.1
AGG				ePKPdf	PKPbc	11 07 59.8	-1.1
AGG	Agios Georgios	146.72	310	P	PKPdf	11 07 59.3	+0.1
AGG	Agios Georgios	146.72	310	ePKP2	PKPdf	11 07 59.3	+0.1
MOA	Molln	146.72	329	i PKPbc	PKPbc	11 08 00.2	-0.5
	comp=Z,0.9nm,0.4s,SNR=9.5						
DSF	Desfina	146.80	309	ePKPdf	PKPbc	11 08 00.5	-0.7
DSF	Desfina	146.80	309	P	PKPbc	11 08 00.5	-0.7
PHP	Peshkopia	146.86	315	ePKPdf	PKPdf	11 07 59.8	+0.4
PHP	Peshkopia	146.86	315	P	PKPdf	11 07 59.8	+0.4
PHP	Peshkopia	146.86	315	ePKP2	PKPdf	11 07 59.8	+0.4
OHR	Ohrid	146.89	314	i P	PKPdf	11 07 60.0	+0.5
KPRO	Kipourio	147.02	312	P	PKPdf	11 08 00.1	+0.4
GUR	Goura	147.11	308	ePKPdf	PKPdf	11 08 00.4	+0.4
GUR	Goura	147.11	308	P	PKPdf	11 08 00.4	+0.4
PERS	Pernice	147.13	327	ePKPdf	PKPdf	11 07 59.1	-0.6
EVR	Evrytania	147.13	310	P	PKPdf	11 07 59.8	-0.2
SOKA	Soboth	147.14	327	i PKPbc	PKPbc	11 08 01.0	-0.9
	comp=Z,34nm,1.4s,SNR=6.9						
SERG	Sergoula	147.15	309	P	PKPdf	11 08 01.0	+1.1
TRIZ	Trizonia	147.15	309	P	PKPdf	11 08 00.2	+0.3
ANX	Ano Chora	147.18	309	P	PKPbc	11 08 01.6	-0.7
BLY	Banja Luka	147.21	322	⇑iP	PKPbc	11 08 01.5	-0.6
BLY	Banja Luka	147.21	322	ePKPdf	PKPbc	11 08 02.0	0.0
KLV	Kalavryta, Ach	147.22	308	ePKPdf	PKPdf	11 08 00.6	+0.5
KLV	Kalavryta, Ach	147.22	308	P	PKPdf	11 08 00.6	+0.5
EFP	Efpalio	147.25	309	P	PKPbc	11 08 01.8	-0.6
PDG	Podgorica	147.25	317	⇓iP	PKPbc	11 08 01.2	-1.1
PDG	Podgorica	147.25	317	P	PKPbc	11 08 01.8	-0.5
TTG	Podgorica	147.25	317	ePKPdf	PKPdf	11 08 00.7	+0.8
TTG				LR	LR		
	comp=Z,700nm,20.0s						
TTG	Podgorica	147.25	317	ePKP2	PKPdf	11 08 00.7	+0.8
TTG				MLR	MLR		
	comp=Z,700nm,20.0s						
LAKA	Lakka	147.27	309	ePKPdf	PKPdf	11 08 01.1	+0.9
LAKA	Lakka	147.27	309	P	PKPdf	11 08 01.1	+0.9
PVO	Paravola	147.45	310	P	PKPbc	11 08 03.5	+0.6
OBKA	Obir	147.50	327	i PKPbc	PKPbc	11 08 02.7	-0.2
	comp=Z,18nm,1.2s						
ITM	Ithomi	147.69	307	ePKPdf	PKPbc	11 08 02.3	-1.3
KBA	Koelnbreinsper	147.70	329	i PKPbc	PKPdf	11 08 01.8	+1.0
	comp=Z,24nm,0.6s,SNR=9.9						
KBA	Koelnbreinsper	147.70	329	PKP2	PKPdf	11 08 02.0	+1.2
PDO	Prodromos	147.71	310	P	PKPbc	11 08 03.0	-0.6
BEBN	Eben Emael	147.78	341	⇑PKP	PKPbc	11 08 04.4	+1.0
BOJS	Bojanci	147.80	325	ePKPdf	PKPdf	11 07 59.5	-1.3
VISS	Visnje	147.82	326	ePKPdf	PKPdf	11 07 59.3	-1.5
MEM	Membach	147.84	340	⇑PKP	PKPbc	11 08 02.5	-1.1
MYKA	Terra Mystica	147.87	328	i PKPbc	PKPdf	11 08 02.0	+1.1
	comp=Z,20nm,0.7s,SNR=9.3						
IGT	Igoumenitsa	147.92	312	ePKPdf	PKPdf	11 08 02.4	+1.2
IGT	Igoumenitsa	147.92	312	P	PKPdf	11 08 02.4	+1.2
SGD	Sagiada	147.95	312	P	PKPbc	11 08 03.4	-0.9
SRN	Sarande	148.00	313	ePKPdf	PKPbc	11 08 03.0	-1.3
SRN	Sarande	148.00	313	P	PKPbc	11 08 03.0	-1.3
JAVS	Javornik	148.17	327	ePKPdf	PKPdf	11 07 59.7	-1.8
UCC	Uccle	148.17	342	⇑PKP	PKPbc	11 08 03.4	-1.0
KEK	Kerkira	148.21	312	P	PKPbc	11 08 03.5	-1.5
BCLA	Clavier	148.23	341	⇑PKP	PKPdf	11 08 02.3	+1.0
ABTA	Abfaltersbach	148.34	329	i PKPdf	PKPdf	11 08 00.7	-1.0
	comp=Z,1.9nm,0.6s,SNR=8.6						
ABTA				i PKPbc	PKPbc	11 08 04.5	-0.7
	comp=Z,16nm,0.8s						
SNF	Seneffe	148.45	342	⇓PKP	PKPab	11 08 08.2	-0.3
MOTA	Moosalm	148.55	331	i PKPbc	PKPbc	11 08 05.5	-0.3
	comp=Z,15nm,0.7s,SNR=8.0						
RETA	Reutte	148.59	332	i PKPbc	PKPbc	11 08 05.2	-0.6
	comp=Z,1.0nm,0.3s,SNR=7.1						
WLF	Walferdange	148.61	339	⇓PKP	PKPbc	11 08 05.3	-0.3
WLF	Walferdange	148.61	339	ePKPdf	PKPdf	11 08 02.4	+0.4
WLF				LR	LR		
	comp=Z,800nm,19.0s						
WLF	Walferdange	148.61	339	ePKIKP	PKPdf	11 08 02.4	+0.4
WLF				MLR	MLR		
	comp=Z,800nm,19.0s						
DOU	Dourbes	148.73	341	⇑PKP	PKPbc	11 08 05.6	-0.4
BFO	Black Forest	148.94	335	ePKPdf	PKPdf	11 08 02.5	-0.1
BFO				LR	LR		
	comp=Z,500nm,18.0s						
BFO	Black Forest	148.94	335	ePKIKP	PKPdf	11 08 02.5	-0.1
BFO				MLR	MLR		
	comp=Z,500nm,18.0s						
FETA	Feichten	148.96	331	i PKPdf	PKPdf	11 08 02.6	-0.2
	comp=Z,39nm,1.0s,SNR=10						
DAVA	Damuels	149.13	333	i PKPdf	PKPdf	11 08 03.4	+0.3
	comp=Z,45nm,1.1s						
FUORN	Ofenpass-Fuorn	149.48	331	ePKPdf	PKPdf	11 08 04.2	+0.4
ECH	Echery	149.48	336	ePKPbc	PKPbc	11 08 07.0	-0.9
ECH				LR	LR		
	comp=Z,600nm,20.0s						
DAVOX	Davos/Dischmat	149.52	332	PKPbc	PKPbc	11 08 06.4	-1.9
	comp=Z,12nm,0.3s,baz=74,slow=6.0,SNR=19						
TIP	Timpagrande	150.54	314	⇑iP	PKPbc	11 08 10.3	-0.6
TIP	Timpagrande	150.54	314	ePKPbc	PKPbc	11 08 10.1	-0.8
TIP	Timpagrande	150.54	314	P	PKPbc	11 08 10.1	-0.8
AQU	L’Aquila	150.85	322	ePKPdf	PKPdf	11 08 05.4	-0.4
AQU	L’Aquila	150.85	322	ePKIKP	PKPdf	11 08 05.4	-0.4
SENIN	Lac Senin/Sane	150.95	334	ePKPdf	PKPdf	11 08 06.4	+0.3
SENIN				LR	LR		
	comp=Z,600nm,20.0s						
BNI	Bardonecchia	152.26	333	ePKPdf	PKPdf	11 08 07.8	-0.2
BNI				ePKPbc	PKPbc	11 08 14.4	-0.3
BNI	Bardonecchia	152.26	333	ePKIKP	PKPdf	11 08 07.8	-0.2
BNI				e		11 08 14.4	
KEST	Kesra	157.36	314	PKPab	PKPab	11 08 47.0	+0.5
	comp=Z,5.1nm,0.8s,baz=298,slow=10,SNR=5.2						
MTE	Manteigas	160.63	353	ePKPdf	PKPdf	11 08 17.8	-1.1
ES19	SONSECA Array	160.65	345	ePKPdf	PKPdf	11 08 17.8	-1.2
ESDC	Sonseca Array	160.69	345	PKP	PKPdf	11 08 18.5	-0.5
	comp=Z,0.2nm,0.3s,baz=299,slow=2.6,SNR=3.8						
ESDC				PKPab	PKPab	11 09 00.2	-0.5
	comp=Z,0.5nm,0.3s,baz=17,slow=4.0,SNR=8.4						
ESLA	Sonseca Array	160.69	345	ePKPdf	PKPdf	11 08 18.6	-0.4
LIC	Lamto	164.27	200	ePKIKP	PKPab	11 09 16.6	-0.4
	comp=Z,115nm,1.4s						
KIC	Kosan Boka	164.31	202	ePKIKP	PKPab	11 09 16.6	-0.5
	comp=Z,90nm,1.5s						
DBIC	Dimbokro	164.63	202	PKPab	PKPab	11 09 18.2	-0.4
	comp=Z,6.1nm,0.7s,baz=160,slow=4.7,SNR=7.0						
TIC	Toumodi	164.66	201	ePKIKP	PKPab	11 09 16.7	-2.0
TOA0	Torodi Ar. Sit	165.93	238	ePKPdf	PKPdf	11 08 23.6	-0.9
TORD	Torodi Ar. Bea	165.93	238	PKPab	PKPab	11 09 23.0	-1.4
	baz=106,slow=4.2						
TOA1	Torodi Ar. Sit	165.93	238	ePKPab	PKPab	11 09 23.0	-1.4
MDT	Midelt	167.24	337	PKPab	PKPab	11 09 28.8	-1.0
	comp=Z,1.7nm,0.8s,baz=86,slow=2.9,SNR=4.2						
KOWA	Kowa	170.99	224	PKPab	PKPab	11 09 46.2	-0.5
	comp=Z,3.3nm,0.8s,baz=62,slow=2.0,SNR=4.3						

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*IDC **26** 10:52:59.1±1.0, 21°.35S×169°.49E, h0^{km}, mb4.0/7, mb1 4.2/8, mb1mx3.9/45, mbtmp4.0/8, ML3.3/1, Error ellipse: s-maj=35.6km s-min=21.4km az=150.0*

ISC 26 10:53:02.4±1.0, **21°.4S**±0°.2×**169°.3E**±0°.1, **h21**^{km}**, n12,** σ**1ˢ.08**/13, **mb4.1**/7, **Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	2.69	255	Pn	Pb	10 53 49.1	-0.9
	4.6nm,0.3s,baz=58,slow=19,SNR=22						
DZM				Sn	Sb	10 54 22.2	-0.3
	29nm,0.3s,baz=153,slow=20,SNR=8.2						
WRA	Warramunga Arr	32.66	266	P	P	10 59 35.2	+2.0
	1.1nm,0.8s,baz=100,slow=8.3,SNR=5.5						
ASAR	Alice Springs	32.67	259	P	P	10 59 35.1	+1.7
	1.7nm,0.7s,baz=88,slow=9.2,SNR=4.8						
MJAR	Matsushiro Arr	64.67	333	P	P	11 03 37.9	-0.8
	1.0nm,0.6s,baz=164,slow=6.6,SNR=3.8						
ASAJ	Asahikawa	69.63	340	P	P	11 04 10.6	+0.6
	3.1nm,0.9s,baz=239,slow=5.9,SNR=3.1						
SNAA	Sanae	87.00	182	P	P	11 05 46.0	+0.1
	1.3nm,0.8s,baz=225,slow=1.4,SNR=4.0						
NVAR	Mina Array Bea	90.22	48	P	P	11 06 01.1	-0.7
	0.6nm,0.6s,baz=224,slow=8.2,SNR=5.6						
ILAR	Eielson Array	92.29	17	P	P	11 06 11.5	+1.0
	0.2nm,0.6s,baz=212,slow=4.9,SNR=3.4						
ARCES	ARCESS Array B	127.16	345	PKP	PKPdf	11 12 03.9	-0.6
	0.9nm,0.5s,baz=101,slow=1.2,SNR=6.9						
EKA	Eskdalemuir Ar	145.65	352	PKPbc	PKPdf	11 12 38.0	-0.9
	2.4nm,0.4s,baz=15,slow=3.1,SNR=25						
GERES	GERESS Array B	146.39	330	PKPbc	PKPab	11 12 42.2	-0.4
	0.5nm,0.4s,baz=35,slow=3.6,SNR=3.2						
DAVOX	Davos/Dischmat	149.65	331	PKPbc	PKPbc	11 12 50.2	-0.5
	1.6nm,0.3s,baz=16,slow=11,SNR=2.6						

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*IDC **26** 10:57:35.6±0.9, 34°.30N×70°.17E, h0^{km}, mb3.7/11, mb1 3.8/16, mb1mx3.6/71, mbtmp3.7/16, ML3.3/5, Error ellipse: s-maj=19.9km s-min=18.3km az=24.0*

*ISCJB **26** 10:57:38.4±0.5, 34°.20N±0°.04×70°.10E±0°.06, h33^{km}, mb3.7/12, Error ellipse: s-maj=7.8km s-min=4.2km az=148.4*

*NNC **26** 10:57:45.8±4.9, 34°.30N×70°.13E, h187^{km}±108^{km}, mb3.4, mpv4.3, Error ellipse: s-maj=52.4km s-min=39.3km az=80.0*

ISC 26 10:57:40.2±0.7, **34°.15N**±0°.07×**70°.09E**±0°.07, **h35**^{km}**, n37,** σ**1ˢ.83**/44, **mb3.7**/12, **7C-2D, Southeastern Afghanistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DHRM	DHARAMSHALA	5.54	108	eP	Pn	10 59 02.1	+1.7
DHRM				eS	Sn	11 00 07.0	+4.0
DHRM				IAML		11 00 38.9	
	comp=E,260nm,0.8s						
DHRM				IAML		11 00 41.1	
	comp=N,217nm,0.2s						
SFK	Sufi-Kurgan	6.46	24	⇓Pn	Pn	10 59 16.5	+3.5
	comp=N,26nm,0.5s						
SFK				⇑Sn	Sn	11 00 30.0	+4.5
	comp=N,14nm,0.6s						
SMLA	Simla	6.69	115	eP	Pn	10 59 16.9	+1.0
SMLA				eS	Sn	11 00 33.5	+2.7
SMLA				IAML		11 00 37.3	
	comp=E,130nm,0.5s						
SMLA				IAML		11 00 37.3	
	comp=N,133nm,0.5s						
MNAS	Manas	8.54	12	⇑Pn	Pn	10 59 44.3	+2.9
	comp=N,14nm,1.0s						
MNAS				⇑Sn	Sn	11 01 19.0	+2.4
	comp=N,7.4nm,0.5s						
KK31	Karatay Array	8.95	2	Pn	Pn	10 59 47.5	+0.6
	comp=N,3.4nm,0.5s,baz=191,slow=13,SNR=54						
KK31				⇑Sn	Sn	11 01 29.3	+2.8
	comp=N,6.0nm,0.6s,baz=192,slow=22,SNR=4.8						
AAK	Ala-Archa	9.15	21	Pn	Pn	10 59 50.2	+0.4
	comp=N,0.4nm,0.3s,baz=202,slow=11,SNR=1.8						
AAK				Sn	Sn	11 01 30.4	-1.3
	comp=N,0.1nm,0.3s,baz=168,slow=19,SNR=2.1						
AAK	Ala-Archa	9.15	21	⇑Pn	Pn	10 59 54.1	+4.2
	comp=N,4.6nm,0.6s						
AAK				⇑Sn	Sn	11 01 33.1	+1.5
	comp=N,16nm,0.8s						
TKM2	Tokmak 2	9.76	25	⇑Pn	Pn	11 00 00.8	+2.6
	comp=N,7.5nm,0.9s						
TKM2				⇓Sn	Sn	11 01 45.8	-0.9
	comp=N,3.0nm,0.7s						
PYUN	Piuthan	12.59	115	eP	Pn	11 00 37.0	0.0
	comp=N,25nm,0.4s						
PYUN				eS	Sn	11 02 53.9	-2.1
DANN	Dangsing	13.04	113	eP	Pn	11 00 43.4	+0.1
KOLN	Koldanda	13.22	115	eP	Pn	11 00 44.1	-1.5
	comp=N,9.3nm,0.3s						
GKN	Gorkha	13.89	112	eP	Pn	11 00 55.1	+0.4
DMN	Daman	14.44	113	eP	Pn	11 01 02.1	-0.3
	comp=N,12nm,0.4s						
KKN	Kakani	14.49	112	eP	Pn	11 01 02.6	-0.3
PKIN	Phulchoki	14.68	112	eP	Pn	11 01 04.8	-0.8
	comp=N,21nm,0.5s						
GUN	Gumba	14.89	110	eP	Pn	11 01 08.6	+0.1
JIRN	Jiri	15.25	111	eP	Pn	11 01 13.5	+0.2
MKAR	Makanchi Array	15.65	33	Pn	Pn	11 01 16.6	-1.5
	comp=N,0.1nm,0.3s,baz=212,slow=14,SNR=3.8						
RAMN	Ramite	15.92	112	eP	Pn	11 01 20.3	-1.6
ODAN	Odare	16.57	111	eP	Pn	11 01 30.3	+0.1
	comp=N,17nm,0.7s						
TAPN	Taplejung	16.59	109	eP	P	11 01 31.1	-1.5
KURBB	Kurchatov Arra	17.58	18	P	Pn	11 01 41.1	-1.2
	comp=N,0.1nm,0.3s,baz=211,slow=12,SNR=6.1						
AKTO	Aktyubinsk	18.52	335	P	P	11 01 52.9	-0.6
	comp=N,0.1nm,0.3s,baz=154,slow=14,SNR=6.9						
BVAR	Borovoye Array	18.87	1	P	P	11 01 56.2	-1.1
	comp=N,0.2nm,0.3s,baz=164,slow=12,SNR=7.9						
ZALV	Zalesovo Beam	22.36	23	P	P	11 02 30.5	-4.5
	comp=N,2.3nm,0.3s,baz=215,slow=10,SNR=2.6						
BRTR	Keskin Array B	29.52	292	P	P	11 03 42.7	+1.2
	comp=N,0.4nm,0.5s,baz=96,slow=13,SNR=2.6						
SONM	Songino Array	30.32	52	P	P	11 03 48.1	-0.4
	comp=N,0.7nm,0.8s,baz=243,slow=6.3,SNR=2.4						
AKASG	Malin Array Be	33.89	312	P	P	11 04 20.0	+0.4
	comp=N,0.2nm,0.2s,baz=91,slow=7.5,SNR=3.6						
ARCES	ARCESS Array B	43.05	339	P	P	11 05 35.8	-0.3
	comp=N,1.9nm,0.8s,baz=96,slow=6.4,SNR=2.8						
HFS	Hagfors	44.48	323	P	P	11 05 45.5	-2.3
	comp=N,0.7nm,0.4s,baz=89,slow=15,SNR=2.5						
NB2	NORSAR Subarra	45.83	324	P	P	11 05 58.3	-0.3
	comp=Z,0.3nm,0.4s,baz=103,slow=7.9						
NOA	NORSAR Array B	45.83	324	P	P	11 05 58.1	-0.4
	comp=Z,0.7nm,0.7s,baz=103,slow=7.9,SNR=3.7						
TORD	Torodi Ar. Bea	64.93	269	P	P	11 08 18.6	+2.0
	comp=Z,0.9nm,1.0s,baz=50,slow=7.0						
ILAR	Eielson Array	77.24	15	P	P	11 09 29.6	-0.8
	comp=Z,0.4nm,0.7s,baz=313,slow=4.0,SNR=3.7						
WRA	Warramunga Arr	81.40	121	P	P	11 09 54.8	+1.1
	comp=Z,0.8nm,0.5s,baz=322,slow=5.0,SNR=8.9						
ASAR	Alice Springs	83.54	124	P	P	11 10 06.0	+1.2
	comp=Z,0.6nm,0.5s,baz=310,slow=4.8,SNR=12						
YKA	Yellowknife Ar	83.62	2	P	P	11 10 02.8	-1.9
	comp=Z,0.4nm,0.7s,baz=351,slow=5.6,SNR=3.0						

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*ISCJB **26** 11:34:34.1±1.0, 36°.06S±0°.08×70°.7W±0°.1, h187^{km}, Error ellipse: s-maj=16.4km s-min=7.8km az=37.6*

*GUC **26** 11:34:34.7±0.8, 36°.07S×70°.58W, h182^{km}±14^{km}, ML3.5*

*SJA **26** 11:34:34.8±0.9, 35°.99S×70°.60W, h187^{km}±21^{km}, ML3.6, MW3.4*

ISC 26 11:34:34.0±1.9, **36°.1S**±0°.1×**70°.6W**±0°.1, **h187**^{km}**, n16,** σ**0ˢ.72**/21, **Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCHI	Chillan	1.28	246	eP	Pn	11 35 04.6	+0.1
CCHI				i S	Sn	11 35 28.0	-0.3
GO05	HualaæØ	1.52	315	eP	Pn	11 35 07.5	+0.7
GO05				eS	Sn	11 35 31.5	-0.6
GO05	HualaæØ	1.52	315	eP	Pn	11 35 07.5	+0.7
GO05				i S	Sn	11 35 31.6	-0.6
LMEL	Las Melosas	2.27	9	eP	Pn	11 35 15.2	+0.5
LMEL				i S	Sn	11 35 46.6	+0.4
LMEL				IAML		11 35 56.0	
	comp=N,156nm,0.1s						
FCH	Farellones	2.77	6	eP	Pn	11 35 21.3	+0.6

FCH				*i* S	Sn	11 35 56.3	-0.6
FCH				IAML		11 35 59.2	
	comp=E,100nm,0.3s						
ROCH	El Roble	3.13	354	*e*P	Pn	11 35 25.0	+0.2
ROCH				*i* S	Sn	11 36 03.0	-1.4
AAGR	Agrelo	3.34	27	*e*P	Pn	11 35 27.6	+0.4
ASAL	Salagasta	3.79	23	*e*P	Pn	11 35 33.3	+0.5
AUSP	Uspallata	3.99	15	*e*P	Pn	11 35 36.5	+1.0
RTLS	Leoncito	4.42	15	*e*P	Pn	11 35 42.3	+1.4
RTLS				IAML		11 35 42.5	
	comp=Z,39nm,0.3s						
RTCV	Cerro Valdivia	4.56	23	*e*P	Pn	11 35 42.4	-0.1
RTLL	Cerro Villicun	5.08	21	*e*P	Pn	11 35 48.6	-0.6
RTLL				IAML		11 35 49.7	
	comp=Z,35nm,0.3s						
AMOG	MOGNA	5.44	20	*e*P	Pn	11 35 53.4	-0.5
AROD	Rodeo	5.99	10	*e*P	Pn	11 36 01.8	+0.5
ACDV	Cuesta del Vie	6.04	12	*e*P	Pn	11 36 02.3	+0.5
VCA	Vinchina	7.61	16	IAML		11 36 25.1	
	comp=Z,11nm,0.2s						

MAN 26 11:35:59.9, 12°.95N×124°.18E, h16^{km}, mb4.5, ML3.3, MS3.1, 1D, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CNP	Catarman	0.64	133	*e*P	Pb	11 36 13.3	+0.6
CNP				*e*S	Sn	11 36 24.5	+0.3
PVCP	Virac	0.65	358	*e*P	Pg	11 36 12.0	-0.5
AUQP	San Andres	1.51	284	*e*P	Pn	11 36 26.4	+0.1
BESP	Borongan	1.82	137	*e*P	Pb	11 36 33.2	+0.4
BESP				*e*S	Sb	11 36 55.1	-0.3
RCP	Roxas	1.97	226	⇓*e*P	Pn	11 36 32.1	-0.4
RCP				*e*S	Sn	11 36 54.4	-2.5

IDC 26 11:39:49.2±1.3, 9°.35S×159°.71E, h0^{km}, mb3.3/3, mb1 3.6/3, mb1mx3.4/43, mbtmp3.3/3, Error ellipse: s-maj=39.5km s-min=11.8km az=12.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	0.25	110	Pn	Pn	11 40 01.2	+1.0
	baz=184,slow=11						
HNR				Sn	Sb	11 40 06.4	+4.8
	1µm,0.3s,baz=198,slow=20,SNR=89						
HNR	Honiara	0.25	110	*i* P	Pn	11 40 01.0	+0.8
HNR				*i* S	Sb	11 40 07.5	+5.9
WRA	Warramunga Arr	26.67	244	P	P	11 45 29.9	-0.3
	0.5nm,1.1s,baz=71,slow=9.8,SNR=2.7						
ASAR	Alice Springs	28.47	237	P	P	11 45 45.8	-0.5
	0.3nm,0.6s,baz=63,slow=9.8,SNR=4.6						
H11S2	WAKE ISLAND Hy	28.51	14	T	T	12 14 33.3	
	baz=194,slow=76,SNR=5.9						
H11S3	WAKE ISLAND Hy	28.51	14	T	T	12 14 33.1	
	baz=194,slow=76,SNR=6.3						
H11S1	WAKE ISLAND Hy	28.52	14	T	T	12 14 33.7	
	baz=194,slow=76,SNR=5.8						
H11N1	WAKE ISLAND Hy	29.73	14	T	T	12 16 05.0	
	baz=194,slow=76,SNR=5.5						
H11N3	WAKE ISLAND Hy	29.74	14	T	T	12 16 06.2	
	baz=194,slow=76,SNR=6.9						
H11N2	WAKE ISLAND Hy	29.75	14	T	T	12 16 06.5	
	baz=194,slow=76,SNR=5.0						
ILAR	Eielson Array	83.89	20	P	P	11 52 19.9	-0.7
	0.2nm,0.4s,baz=232,slow=5.2,SNR=4.7						

IDC 26 11:42:38.1±11.0, 30°.28S×177°.12W, h0^{km}, mb3.3/2, mb1 3.6/2, mb1mx3.4/40, mbtmp3.3/2, Error ellipse: s-maj=492.5km s-min=61.1km az=155.0, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	43.88	266	P	P	11 50 46.5	-0.1
	0.3nm,0.8s,baz=110,slow=8.2,SNR=3.1						
WRA	Warramunga Arr	44.86	272	P	P	11 50 54.3	-0.2
	0.3nm,0.5s,baz=114,slow=7.5,SNR=7.8						
FINES	FINESS Array B	145.29	341	PKPbc	PKPbc	12 02 16.1	-0.8
	1.0nm,0.8s,baz=82,slow=2.9,SNR=3.8						

*ISCJB **26** 11:46:45.0±0.3, 24°.32N±0°.04×122°.95E±0°.02, h47^{km}±6^{km}, Error ellipse: s-maj=5.9km s-min=2.7km az=175.8*
*JMA **26** 11:46:45.2±0.1, 24°.33N×122°.96E, h49^{km}±1^{km}, M2.8*
*TAP **26** 11:46:45.3, 24°.34N×122°.92E, h43^{km}, ML3.2, C*
ISC 26 11:46:45.5±1.2, **24°.32N**±0°.05×**122°.95E**±0°.02, **h45**^{km}±7^{km}, **n62,** σ**0^{s}.91**/90, **1D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JYNG	Yonagunijimaku	0.13	357	P	Pn	11 46 52.9	0.0
JYNG				S	Sn	11 46 58.2	+0.1
YOJ	Yonaguni jima	0.15	21	⇓P	Pn	11 46 53.0	0.0
	baz=30						
YOJ				S	Sn	11 46 58.4	+0.1
	baz=30						
YOJ	Yonaguni jima	0.15	21	P	Pn	11 46 53.0	0.0
YOJ				S	Sn	11 46 58.4	+0.1
IRIF	Iriomote-Funau	0.71	89	P	Pn	11 46 58.8	-0.4
IRIF				S	Sn	11 47 08.8	-0.3
EOS1	EOS1	0.78	287	P	Pn	11 46 59.6	-0.5
	baz=291						
EOS1				*e*S	Sn	11 47 10.0	-0.8
	baz=291						
HATJ	Hateruma jima	0.82	109	P	Pn	11 47 00.5	-0.2
HATJ				S	Sn	11 47 12.0	+0.2
JKRS	Kuro-shima	0.97	95	P	Pn	11 47 02.9	+0.2
JKRS				S	Sn	11 47 15.7	+0.4
TWC	Suao	1.04	286	*e*P	Pn	11 47 03.0	-0.7
	baz=295						
TWC				*e*S	Sn	11 47 15.4	-1.7
	baz=295						
ENAH	Nanao	1.05	277	*e*P	Pn	11 47 03.7	-0.1
	baz=286						
EGS		1.06	300	*e*P	Pn	11 47 03.8	-0.2
	baz=300						
JIJ	Ishigaki jima	1.09	88	P	Pn	11 47 03.8	-0.5
JIJ				S	Sn	11 47 17.2	-1.0
NANB	Nanao	1.10	276	*e*P	Pn	11 47 04.4	-0.1
	baz=285						
NANB				*e*S	Sn	11 47 18.1	-0.4
	baz=285						
TWB1	Santiao Chiao	1.11	308	*e*P	Pn	11 47 04.2	-0.4
	baz=318						
NTC	Toucheng	1.15	298	*e*P	Pn	11 47 04.3	-0.8
	baz=298						
TIPB	Shuangxi	1.21	303	*e*P	Pn	11 47 05.4	-0.6
	baz=312						
TIPB				*e*S	Sn	11 47 20.0	-1.3
	baz=312						
TWE	Neicheng	1.23	289	*e*P	Pn	11 47 06.3	0.0
	baz=289						
TWE				*e*S	Sn	11 47 20.8	-1.0
	baz=289						
NACB	Ninganchiao	1.25	263	P	Pn	11 47 06.1	-0.4
	baz=263						
JISG	Ishigakijimahi	1.27	78	P	Pn	11 47 06.4	-0.3
JISG				S	Sn	11 47 21.8	-0.8
ENTT	Nioudou	1.30	284	*e*P	Pn	11 47 07.9	+0.7
	baz=292						
NWLT	Wulai	1.40	289	*e*P	Pn	11 47 09.2	+0.6
	baz=289						
NNSB	Datong	1.43	275	*e*P	Pn	11 47 09.8	+0.6
	baz=274						
NNSH	Datong	1.43	275	*e*P	Pn	11 47 09.4	+0.3
	baz=274						
NNS	Nan Shan	1.44	275	*e*P	Pn	11 47 09.8	+0.5
	baz=275						
ESL	Shilin	1.48	250	*e*P	Pn	11 47 08.7	-0.9
	baz=239						
YHNB	Yeheng	1.48	284	*e*P	Pn	11 47 10.6	+0.9
	baz=293						
YM07	YM07	1.48	305	*e*P	Pn	11 47 09.3	-0.4
	baz=306						
TATO	Taipei	1.48	296	*e*P	Pn	11 47 09.2	-0.5
	baz=297						
NSK	Sanguang	1.49	284	*e*P	Pn	11 47 11.4	+1.5
	baz=293						
YM11	YM11	1.51	304	*e*P	Pn	11 47 10.9	+0.7
	baz=304						
EGFH	Guangfu	1.54	245	*e*P	Pn	11 47 10.0	-0.5
	baz=244						
WHF	Hehuan Shan	1.55	264	P	Pn	11 47 11.2	+0.2
	baz=251						
WHF				*e*S	Sn	11 47 29.3	-0.9
	baz=251						
TWS1	Kuangyinshan	1.60	299	*e*P	Pn	11 47 12.5	+1.3
	baz=300						
JTJ	Tarama	1.63	78	P	Pn	11 47 11.9	+0.2
JTJ				*e*S	Sn	11 47 31.5	+0.1
CHGB	Renai	1.64	261	*e*P	Pn	11 47 12.1	0.0
	baz=249						
CHGB				*e*S	Sn	11 47 31.7	-0.5
	baz=249						
EHY	Hungye	1.70	242	*e*P	Pn	11 47 11.9	-0.8
	baz=241						
YULB	Yu-li	1.77	239	*e*P	Pn	11 47 13.2	-0.5
	baz=238						
YULB				*e*S	Sn	11 47 34.3	-0.9
	baz=238						
LIOB	Emei	1.79	281	*e*P	Pn	11 47 15.0	+1.0
	baz=281						
TWF1	Yuli	1.80	238	*e*P	Pn	11 47 13.4	-0.6
	baz=237						
TWF1				*e*S	Sn	11 47 34.3	-1.4
	baz=237						
NSTT	Nanjuang	1.80	280	*e*P	Pn	11 47 14.7	+0.6
	baz=280						
DPDB	Guoxing	1.87	262	*e*P	Pn	11 47 15.7	+0.6
	baz=252						
FULB	Fuli	1.89	234	*e*P	Pn	11 47 14.1	-1.2
	baz=223						
FULB				*e*S	Sn	11 47 35.9	-2.0
	baz=223						
SSLB	Suanglung	1.90	254	*e*P	Pn	11 47 15.6	+0.1
	baz=243						
SMLT	Sun Moon Lake	1.93	257	*e*P	Pn	11 47 16.1	+0.2
	baz=247						
SMLT				*e*S	Sn	11 47 38.9	0.0
	baz=247						
TYC	Yuchr	1.96	258	*e*P	Pn	11 47 17.1	+0.9
	baz=248						
TYC				*e*S	Sn	11 47 39.3	-0.3
	baz=248						
YUS	Yu-Shan	2.01	246	*e*P	Pn	11 47 17.3	-0.1
	baz=245						
YUS				*e*S	Sn	11 47 39.9	-1.7
	baz=245						
JIRB	Irabujima	2.08	76	P	Pn	11 47 18.3	+0.3
JIRB				S	Sn	11 47 42.9	+0.2
WJS	Zhushan	2.09	257	*e*P	Pn	11 47 19.5	+1.4
	baz=256						
TWH	Lutao	2.10	220	*e*P	Pn	11 47 16.9	-1.3
	baz=218						
ELDTW	Lidau	2.10	238	*e*P	Pn	11 47 17.2	-1.1
	baz=237						
CHN5	Tsauling	2.20	251	*e*P	Pn	11 47 21.1	+1.4
	baz=251						
TWGBT	Beinan	2.28	229	*e*P	Pn	11 47 19.8	-0.9
	baz=220						
TWG	Pinlang	2.28	229	*e*P	Pn	11 47 19.8	-0.9
	baz=220						
STYT	Tauyuan	2.32	241	*e*P	Pn	11 47 21.2	0.0
	baz=230						
TPUB	Ta-pu	2.36	245	*e*P	Pn	11 47 23.1	+1.3
	baz=244						
TPUB				*e*S	Sn	11 47 50.1	+0.6
	baz=244						
WTP	Ta-pu	2.39	244	*e*P	Pn	11 47 23.0	+0.7
	baz=243						
RLNB	Erlin	2.41	260	*e*P	Pn	11 47 24.0	+1.6
	baz=260						
TWK	Hsinying	2.49	246	*e*P	Pn	11 47 25.2	+1.6
	baz=245						
TWK				*e*S	Sn	11 47 54.2	+1.4
	baz=245						
CHN1	Nanshi	2.49	243	*e*P	Pn	11 47 25.5	+1.9
	baz=243						
CHN1				*e*S	Sn	11 47 54.2	+1.4
	baz=243						
SLGT	Liugui	2.49	238	*e*P	Pn	11 47 24.7	+1.1
	baz=230						
SGST	Jiashian	2.50	241	*e*P	Pn	11 47 24.8	+1.1
	baz=240						
SGST				*e*S	Sn	11 47 55.2	+2.3
	baz=240						
SSD	Sandimen	2.64	234	*e*P	Pn	11 47 27.1	+1.4
	baz=227						
MASBT	Mashibuluo	2.73	232	*e*P	Pn	11 47 27.1	+0.3
	baz=227						
MASBT				*e*S	Sn	11 47 59.9	+1.4
	baz=227						

*NNC **26** 11:52:32.8±2.8, 43°.19N×81°.94E, h0^{km}, mb3.0, mpv2.7, Error ellipse: s-maj=27.2km s-min=8.9km az=143.0*
*SOME **26** 11:52:34.3, 43°.35N×81°.78E, h0^{km}*
ISC 26 11:52:31.0±2.6, **43°.1N**±0°.1×**81°.97E**±0°.10, **h7**^{km}±14^{km}, **n8,** σ**2^{s}.30**/14, **3C-3D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDGK	Podgornoye	1.82	277	⇓Pn	Pn	11 53 05.3	+2.5
	12nm,0.4s						
PDGK				⇑Sn	Sg	11 53 29.7	+0.3
	36nm,0.7s						
SHLS	Shalkode	1.83	271	*e*P	Pn	11 53 01.5	-1.5
	10nm,0.2s						
SHLS				*e*S	Sn	11 53 21.3	-5.2
	31nm,0.4s						
DJR	Jarkent	1.97	308	*e*P	Pn	11 53 07.1	+2.2
	3.6nm,0.5s						
DJR				*e*S	Sn	11 53 30.9	+1.0
	5.8nm,0.4s						
UZB	Uzynbulak	2.15	271	*e*P	Pb	11 53 12.3	+1.9
	5.7nm,0.3s						
UZB				*e*S	Sg	11 53 39.6	-0.6
	10nm,0.5s						
KPKS	Kokpek	2.42	279	*e*P	Pb	11 53 17.1	+2.3
	9.7nm,0.3s						
KPKS				*e*S	Sg	11 53 48.1	-0.5
	36nm,0.4s						
KAPS	Kapalarasan	2.85	320	*e*P	Pb	11 53 22.4	+0.3
	1.6nm,0.3s						
KAPS				*e*S	Sb	11 53 56.8	-0.3
	7.8nm,0.3s						
MK31	Makanchi Array	3.66	4	⇑Pg	Pg	11 53 39.6	-1.4
	0.7nm,0.6s,baz=184,slow=13,SNR=11						
MK31				⇓Lg	Lg	11 54 29.4	
	0.3nm,0.3s,baz=186,slow=26,SNR=4.3						
MAKZ	Makanchi	3.66	0	⇑Pg	Pb	11 53 36.9	+0.8
	0.3nm,0.3s						
MAKZ				⇓Lg	Lg	11 54 27.8	
	0.8nm,0.5s						

MAN 26 12:02:59.3, 10°.10N×125°.66E, h79^{km}, mb4.4, ML3.2, MS3.0, 2D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCPH	Surigao	0.35	208	⇓*i*P	Pn	12 03 11.6	-0.3
SCPH				*i* S	Sn	12 03 21.5	+0.4
MSLP	Maasin	0.79	273	*e*P	Pn	12 03 16.6	+0.7
MSLP				*e*S	Sn	12 03 30.5	+2.4
BUTP	Butuan	1.12	182	*e*P	Pn	12 03 19.9	+0.1
BUTP				*e*S	Sn	12 03 37.1	+2.0
PLP	Palo	1.25	328	⇓*e*P	Pn	12 03 21.9	+0.5
PLP				*e*S	Sn	12 03 39.9	+1.8
BESP	Borongan	1.51	352	*e*P	Pn	12 03 25.1	+0.4
BESP				*e*S	Sn	12 03 46.0	+2.1
CGP	Cagayan de Oro	1.89	210	*e*P	Sn	12 03 53.0	+0.1
BUKP	Musuan	2.28	195	*e*P	Pn	12 03 35.3	+0.3
BUKP				*e*S	Sn	12 04 04.1	+1.8
CNP	Catarman	2.59	338	*e*P	Pn	12 03 40.0	+0.9
CNP				*e*S	Sn	12 04 11.1	+1.5

*NNC **26** 12:04:36.8±2.8, 44°.26N×83°.17E, h0^{km}, mb2.5, mpv2.2, Error ellipse: s-maj=24.6km s-min=10.6km az=125.0*
*SOME **26** 12:04:41.4, 44°.45N×83°.02E, h15^{km}*
ISC 26 12:04:42.6±2.5, **44°.22N**±0°.09×**83°.0E**±0°.1, **h17**^{km}, **n8,** σ**1^{s}.12**/13, **4C-1D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen	2.09	249	*e*P	Pb	12 05 19.7	-0.4
	5.9nm,0.2s						
KTMS				*e*S	Sb	12 05 47.0	+1.2
	13nm,0.4s						
DJR	Jarkent	2.33	274	*e*P	Pb	12 05 23.5	-0.8
	4.9nm,0.3s						
DJR				*e*S	Sb	12 05 53.3	+0.4
	3.4nm,0.5s						
MK31	Makanchi Array	2.63	349	Pg	Pn	12 05 25.6	+1.2
	0.4nm,0.3s,baz=164,slow=17,SNR=53						
MK31				⇑Lg	Lg	12 06 00.2	
	1.9nm,0.3s,baz=166,slow=28,SNR=12						
MAKZ	Makanchi	2.70	344	⇑Pg	Pn	12 05 25.1	-0.2
	0.3nm,0.4s						
MAKZ				⇑Lg	Lg	12 06 00.9	
	1.0nm,0.3s						
PDGK	Podgornoye	2.72	252	⇓Pg	Pb	12 05 28.6	-2.3
	0.5nm,0.3s						
PDGK				⇑Lg	Lg	12 06 05.1	
	3.4nm,0.4s						
SHLS	Shalkode	2.80	249	*e*P	Pn	12 05 27.4	+0.6
	12nm,0.1s						
SHLS				*e*S	Sn	12 05 59.7	-0.5
	20nm,0.5s						
KAPS	Kapalarasan	2.83	293	*e*P	Pb	12 05 31.9	-0.9
	1.4nm,0.4s						
KAPS				*e*S	Sb	12 06 07.6	+0.5
	2.9nm,0.6s						
UZB	Uzynbulak	3.10	251	*e*P	Pb	12 05 37.0	-0.5
	0.8nm,0.2s						
UZB				*e*S	Sb	12 06 16.3	+1.3
	2.6nm,0.4s						

*JMA **26** 12:23:33.6±0.2, 22°.29N×121°.52E, h0^{km}, M2.9*
*ISCJB **26** 12:23:36.2±0.4, 22°.32N±0°.02×121°.42E±0°.03, h22^{km}±5^{km}, Error ellipse: s-maj=4.3km s-min=3.4km az=26.8*
*TAP **26** 12:23:36.1, 22°.36N×121°.35E, h11^{km}±1^{km}, ML2.7, C*
ISC 26 12:23:35.3±1.2, **22°.33N**±0°.03×**121°.42E**±0°.03, **h9**^{km}±10^{km}, **n35,** σ**0^{s}.66**/68, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAY	Lan-yu	0.31	157	P	Pn	12 23 44.5	-1.6
	baz=149						
LAY				S	Sb	12 23 50.5	+2.1
	baz=149						
TWH	Lutao	0.38	8	P	Pb	12 23 43.9	-0.5
	baz=21						
TWH				S	Sb	12 23 49.4	-1.0
	baz=21						
TAW	Tawu	0.48	274	P	Pb	12 23 45.5	-0.5
	baz=269						
TAW				S	Sg	12 23 51.9	+0.7
	baz=269						
TTN	Taitung	0.49	329	*e*P	Pn	12 23 47.5	-1.1
	baz=334						
TTN				*e*S	Sb	12 23 54.5	+1.0
	baz=334						
ECL	Taimali	0.51	302	*i* P	Pg	12 23 45.5	+0.3
	baz=302						
ECL				*i* S	Sg	12 23 52.4	+0.5
	baz=302						
EAST	Anshuo	0.53	276	P	Pg	12 23 46.2	+0.5
	baz=272						
EAST				S	Sg	12 23 53.4	+0.7
	baz=272						
TWGBT	Beinan	0.58	327	P	Pb	12 23 47.1	-0.6
	baz=330						
TWGBT				S	Sg	12 23 54.8	+0.6
	baz=330						
TWG	Pinlang	0.59	327	*e*P	Pb	12 23 47.1	-0.7
	baz=331						
TWG				S	Sg	12 23 54.5	+0.1
	baz=331						
TWKBT	Hengchun	0.68	236	*e*P	Pb	12 23 49.2	-0.2
	baz=230						
TWKBT				*e*S	Sb	12 23 59.1	+0.2
	baz=230						
TWK1	Hengchun	0.69	236	*e*P	Pb	12 23 49.4	-0.1
	baz=229						
TWK1				*e*S	Sb	12 23 58.9	-0.1
	baz=229						
HEN	Hengchun	0.71	243	*e*P	Pb	12 23 50.1	+0.2
	baz=237						
HEN				*e*S	Sb	12 23 59.5	-0.2
	baz=237						
SCZT	Fangliau	0.74	274	P	Pg	12 23 49.4	-0.2
	baz=270						
SCZT				*e*S	Sg	12 23 58.9	-0.4
	baz=270						
CHKT	Chengkung	0.77	356	*e*P	Pn	12 23 53.1	+0.7
	baz=1.0						
CHKT				S	Sb	12 24 01.3	-0.1
	baz=1.0						
MASBT	Mashibuluo	0.78	291	P	Pg	12 23 49.9	-0.5
	baz=290						
MASBT				*e*S	Sg	12 24 00.6	+0.1
	baz=290						
SSD	Sandimen	0.84	300	P	Pg	12 23 50.8	-0.7
	baz=300						
SSD				*e*S	Sg	12 24 02.4	-0.1
	baz=300						
FULB	Fuli	0.87	352	*e*P	Pb	12 23 52.3	-0.5
	baz=356						
FULB				*e*S	Sb	12 24 05.2	+0.7
	baz=356						
ELDTW	Lidau	0.93	337	*e*P	Pg	12 23 52.3	-1.1
	baz=339						
ELDTW				*e*S	Sg	12 24 05.3	-0.2
	baz=339						
SLGT	Liugui	0.97	313	*e*P	Pn	12 23 55.0	-0.2
	baz=313						
SLGT				*e*S	Sn	12 24 08.7	-0.4
	baz=313						
TWF1	Yuli	1.02	354	*e*P	Pb	12 23 55.1	-0.2
	baz=357						
TWF1				*e*S	Sb	12 24 09.3	+0.5
	baz=357						
TWM1	Shoushan	1.04	298	*e*S	Sg	12 24 08.3	-0.7
	baz=298						
YULB	Yu-li	1.06	354	*e*P	Pb	12 23 55.8	-0.2
	baz=357						
YULB				*e*S	Sb	12 24 10.7	+0.7
	baz=357						
SGST	Jiashian	1.08	314	*e*P	Pn	12 23 57.0	+0.4
	baz=315						
SGST				*e*S	Sb	12 24 10.4	0.0
	baz=315						
WTP	Ta-pu	1.18	321	*e*P	Pn	12 23 58.1	+0.1
	baz=322						
WTP				*e*S	Sb	12 24 13.4	+0.2
	baz=322						
CHN1	Nanshi	1.19	316	*e*P	Pn	12 23 58.8	+0.6
	baz=317						
CHN1				*e*S	Sn	12 24 15.4	+1.1
	baz=317						
TPUB	Ta-pu	1.21	323	*e*P	Pn	12 23 58.6	+0.1
	baz=324						
TPUB				*e*S	Sb	12 24 14.5	+0.2
	baz=324						
TWK	Hsinying	1.27	318	P	Pg	12 23 59.5	-0.3
	baz=318						
TWK				*e*S	Sb	12 24 16.3	+0.4
	baz=318						
CHN5	Tsauling	1.44	332	*e*P	Pg	12 24 02.5	-0.4
	baz=333						
CHN5				*e*S	Sg	12 24 23.0	+1.4
	baz=333						
JYNG	Yonagunijimaku	2.54	33	P	Pn	12 24 17.1	+0.4
JYNG				S	Sn	12 24 48.4	+0.7
YOJ	Yonaguni jima	2.58	34	S	Sn	12 24 49.1	+0.4
HATJ	Hateruma jima	2.79	51	P	Pn	12 24 20.8	+0.7
HATJ				S	Sn	12 24 54.3	+0.4
IRIF	Iriomote-Funau	2.92	46	P	Pn	12 24 22.4	+0.5
IRIF				S	Sn	12 24 57.2	+0.2
JKRS	Kuro-shima	3.05	51	P	Pn	12 24 24.2	+0.5
JKRS				S	Sn	12 25 00.6	+0.3
JIJ	Ishigaki jima	3.22	50	P	Pn	12 24 26.0	-0.1
JIJ				*e*S	Sn	12 25 03.5	-1.1
JISG	Ishigakijimahi	3.48	49	P	Pn	12 24 30.0	+0.4
JISG				S	Sn	12 25 10.6	-0.4
JTJ	Tarama	3.79	52	P	Pn	12 24 34.4	+0.5
JTJ				*e*S	Sn	12 25 17.3	-1.4

*DDA **26** 12:24:47.0, 38°.18N×35°.94E, h7^{km}, Ml2.7*
*CSEM **26** 12:24:47.0, 38°.18N×35°.94E, h7^{km}, ML2.7*
ISC 26 12:24:46.6±1.1, **38°.21N**±0°.03×**35°.92E**±0°.03, **h4**^{km}±10^{km},

n17,σ1^{s}00/31,Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAIM	ADANA	0.27	151	*i* P	Pg	12 24 51.8	0.0
SAIM				*i* S	Sg	12 24 56.2	+0.9
SAIM	ADANA	0.27	151	P	Pg	12 24 51.8	0.0
SAIM				S	Sg	12 24 56.2	+0.9
SARI	SarD1z-Kayseri	0.44	63	PG	Pg	12 24 55.1	0.0
SARI				SG	Sb	12 25 04.8	+0.8
YAHY	KAYSERI_Yahyal	0.45	255	*i* P	Pg	12 24 55.2	-0.1
YAHY				*i* S	Sg	12 25 01.6	+0.4
YAHY	KAYSERI_Yahyal	0.45	255	P	Pg	12 24 55.2	-0.1
YAHY				S	Sg	12 25 01.6	+0.4
BNN	Bunyan	0.64	355	*e*PG	Pg	12 24 58.4	-0.6
BNN				*e*SG	Sb	12 25 10.4	+0.6
ANDN	Andirin	0.71	152	*i* P	Pg	12 24 60.0	-0.3
ANDN				*i* S	Sb	12 25 11.1	-0.8
ANDN	Andirin	0.71	152	P	Pg	12 25 00.0	-0.3
ANDN				S	Sb	12 25 11.1	-0.8
KMRS	Kahramanmaras	1.05	132	*e*PG	Pg	12 25 05.6	-1.1
CUSAR	Sarkisla-SIVAS	1.23	12	*i* P	Pn	12 25 08.8	-1.9
CUSAR				*i* S	Sn	12 25 29.5	+1.6
CUSAR	Sarkisla-SIVAS	1.23	12	P	Pn	12 25 08.8	-1.9
CUSAR				S	Sn	12 25 29.5	+1.6
DARE	Darende-Malaty	1.28	73	*e*PG	Pn	12 25 10.2	-1.2
GULE	Gulek	1.29	225	*i* P	Pn	12 25 11.1	-0.5
GULE				*i* S	Sn	12 25 30.5	+1.1
GULE	Gulek	1.29	225	P	Pn	12 25 11.1	-0.5
GULE				S	Sn	12 25 30.5	+1.1
YOZ	Yozgat	1.50	342	*e*PG	Pn	12 25 13.3	-1.1
AKCD	Akcadag	1.58	86	*i* P	Pb	12 25 16.3	-0.1
AKCD				*i* S	Sg	12 25 38.6	+1.2
AKCD	Akcadag	1.58	86	P	Pb	12 25 16.3	-0.1
AKCD				S	Sg	12 25 38.6	+1.2

MEX 26 12:25:54.6±0.5**,17°.20N**×**95°.26W,h99^{km}**±12^{km}**,MD3.9, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VHO	Vista Hermosa	1.42	265	*e*P	Pn	12 26 18.8	-1.2
VHO				*e*S	Sn	12 26 37.9	-1.3
TGIG		2.08	101	*e*P	Pn	12 26 27.1	-1.2
TGIG				*i* S	Sn	12 26 52.6	-1.5
PCIG		2.46	127	*e*P	Pn	12 26 31.8	-1.3
PCIG				*e*S	Sn	12 27 01.1	-1.5
CCIG	Comitan	3.12	106	*e*P	Pn	12 26 41.6	-0.6
CCIG				*i* S	Sn	12 27 18.4	-0.4

*IDC **26** 12:51:50.9±6.6, 51°.77N×178°.51W, h0^{km}, mb3.2/5, mb1 3.8/6, mb1mx3.3/82, mbtmp3.4/6, ML4.2/1, Error ellipse: s-maj=123.5km s-min=58.0km az=90.0*

*ISCJB **26** 12:52:15.8±0.5, 52°.4N±0°.2×176°.80W±0°.09, h156^{km}±7^{km}, mb3.1/4, Error ellipse: s-maj=29.9km s-min=6.8km az=168.7*

*NEIC **26** 12:52:17.7±0.0, 51°.93N×176°.74W, h161^{km}, ML2.8(AEIC), After AEIC.*

ISC 26 12:52:16.2±0.8**,52°.5N**±0°.2×**176°.87W**±0°.06**,h150^{km}**±10^{km}**, n23,σ1^{s}33**/31**,mb3.2**/4**,Andreanof Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ADAG	Mount Adagdak	0.52	162	P	Pn	12 52 38.5	+0.8
GSSP	Great Sitkin S	0.57	132	P	Pn	12 52 38.7	+0.7
GSSP				S	Sn	12 52 54.9	+0.5
KICM	Kanaga Island	0.59	200	P	Pn	12 52 38.9	+0.8
KIKV	Kanaga Island	0.63	197	P	Pn	12 52 38.7	+0.5
GSCK	Great Sitkin C	0.64	137	P	Pn	12 52 39.0	+0.6
GSCK				S	Sn	12 52 55.7	+0.5
ETKA	Kagalaska Isla	0.68	155	P	Pn	12 52 38.5	0.0
ETKA				S	Sn	12 52 54.8	-0.8
KIMD	Kanaga Island	0.75	198	P	Pn	12 52 39.1	+0.1
KIMD				S	Sn	12 52 56.2	-0.2
TAPA	Tanaga Point A	0.88	222	P	Pn	12 52 40.6	+0.5
TAPA				S	Sn	12 52 58.8	+0.6
GALAA	Gareloi Lava P	1.38	239	P	Pn	12 52 45.3	+0.8
KOWE	Korovin West	1.61	93	P	Pn	12 52 48.3	+1.4
KOKL	Mount Kliuchef	1.64	94	P	Pn	12 52 48.6	+1.3
ATKA	Atka Island	1.66	98	P	Pn	12 52 47.9	+0.5
ATKA				S	Sn	12 53 11.1	-0.3
KOFP	Korovin Flat P	1.71	96	P	Pn	12 52 49.3	+1.2
CERAA	Semis’ Rag’d T	2.20	256	P	Pn	12 52 54.7	+1.1
CESW	Semis’ Southwe	2.27	257	P	Pn	12 52 55.5	+1.0
AMKA	Amchitka	2.61	247	P	Pn	12 52 58.5	-0.1
AMKA				S	Sn	12 53 29.0	-2.4
LSPA	Little Sitkin	2.85	261	P	Pn	12 53 03.0	+1.3
KDAK	Kodiak Island	14.83	59	Pn	Pn	12 55 36.7	-1.4
	0.9nm,0.3s,baz=259,slow=7.4,SNR=44						
KDAK				Sn	Sn	12 58 17.7	-4.8
	0.0nm,0.3s,baz=288,slow=20,SNR=2.8						
ILAR	Eielson Array	19.64	40	P	P	12 56 34.2	+1.4
	0.3nm,0.7s,baz=260,slow=12,SNR=4.7						
YKA	Yellowknife Ar	33.61	48	P	P	12 58 42.3	+0.6
	0.2nm,0.6s,baz=275,slow=9.2,SNR=3.3						
NVAR	Mina Array Bea	42.25	85	P	P	12 59 55.3	+0.7
	0.5nm,0.7s,baz=290,slow=7.8,SNR=4.7						
PDAR	Pinedale Array	44.85	74	P	P	13 00 15.5	+0.1
	0.5nm,0.6s,baz=308,slow=3.6,SNR=5.0						
TXAR	Lajitas Array	57.32	83	P	P	13 01 48.3	-0.1
	0.2nm,0.8s,baz=296,slow=4.0,SNR=3.6						

*IDC **26** 13:05:16.1±2.6, 37°.95S×179°.47W, h0^{km}, mb3.9/2, mb1 4.1/4, mb1mx3.7/41, mbtmp3.9/4, ML3.5/2, Error ellipse: s-maj=75.4km s-min=38.6km az=151.0*

*WEL **26** 13:05:21.3, 38°S±9°×18°0W±°, h33^{km}, ML4.3/32*

ISC 26 13:05:19.0±3.8**,37°.80S**±0°.07×**179°.6W**±0°.1**,h17^{km}**±23^{km}**, n97,σ1^{s}23**/110**,East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	Waiomatatini S	1.54	269	P	Pn	13 05 46.1	+0.4
WMGZ				S	Sn	13 06 04.5	-0.8
MXZ	Matakaoa Point	1.65	278	P	Pn	13 05 47.1	0.0
MXZ				S	Sn	13 06 05.7	-2.2
PUZ	Puketiti	1.69	260	P	Pn	13 05 48.4	+0.7
PUZ				S	Sn	13 06 08.2	-0.7
PKGZ	Pakihiroa	1.81	267	P	Pn	13 05 49.7	+0.3
CNGZ	Carnagh Statio	1.83	248	P	Pb	13 05 51.4	-0.6
TWGZ	Tauwhareparae	1.92	258	P	Pn	13 05 51.8	+1.0
TWGZ				S	Sn	13 06 14.6	0.0
HAZ	Te Kaha	2.05	270	P	Pn	13 05 52.8	+0.3
TKGZ	Te Karaka	2.08	251	P	Pn	13 05 54.4	+1.4
RUGZ	Raukumara Rang	2.13	265	P	Pn	13 05 54.2	+0.4
RIGZ	Rimuhau	2.24	245	P	Pn	13 05 56.3	+1.1
RIGZ				S	Sn	13 06 22.5	0.0
PRGZ	Paritu Road	2.25	239	P	Pn	13 05 57.3	+1.9
MWZ	Matawai	2.30	256	P	Pn	13 05 56.7	+0.6
MWZ				S	Sn	13 06 22.9	-1.1
MHGZ	Mahia Peninsul	2.35	234	P	Pn	13 05 58.5	+1.7
RAGZ	Rawiri	2.43	253	P	Pn	13 05 58.8	+1.0
KNZ	Kokohu	2.44	239	P	Pn	13 05 59.5	+1.5
SNGZ	Shannon Statio	2.57	247	P	Pn	13 06 01.2	+1.4
SNGZ				S	Sn	13 06 30.9	+0.2
URZ	Urewera	2.61	259	Pn	Pn	13 06 01.9	+1.6
	18nm,0.3s,baz=260,slow=4.6,SNR=252						
URZ				Sn	Sn	13 06 30.6	-1.0
	37nm,0.3s,baz=224,slow=22,SNR=39						
URZ	Urewera	2.61	259	P	Pn	13 06 01.6	+1.3
URZ				S	Sn	13 06 30.5	-1.0
WHRZ	Whale Island	2.69	268	P	Pn	13 06 02.9	+1.5
WHHZ	Waihua	2.77	242	P	Pn	13 06 04.2	+1.7
RTZ	Ruatahuna	2.79	252	P	Pn	13 06 04.5	+1.7
RAHZ	Arahi	2.81	246	P	Pn	13 06 04.5	+1.4
EDRZ	Edgecumbe	2.88	263	P	Pn	13 06 05.1	+1.0
MUGZ	Murupara	2.91	256	P	Pn	13 06 05.6	+1.1
MARZ	Manawahe	2.92	265	P	Pn	13 06 05.7	+1.0
MTHZ	Maungataniwha	2.96	248	P	Pn	13 06 06.7	+1.5
MTHZ				S	Sn	13 06 40.1	-0.3
OPRZ	Ohinepanea	3.02	268	P	Pn	13 06 06.1	+0.2
OPRZ				S	Sn	13 06 38.3	-3.4
ARHZ	Aropaoanui	3.02	240	P	Pn	13 06 07.9	+2.0
NMHZ	Naumai	3.08	244	P	Pn	13 06 08.4	+1.5
NMHZ				S	Sn	13 06 43.7	+0.5
TARZ	Mount Tarawera	3.08	261	P	Pn	13 06 07.8	+0.9
RRRZ	Republican Roa	3.09	259	P	Pn	13 06 07.9	+1.0
CKHZ	Cape Kidnapper	3.17	233	P	Pn	13 06 09.8	+1.8
OMRZ	Omania	3.17	263	P	Pn	13 06 08.8	+0.7
TGRZ	Tauranga	3.25	270	P	Pn	13 06 09.2	+0.1
KARZ	Kaharoa	3.27	265	P	Pn	13 06 09.8	+0.5
MRHZ	Matea Rd	3.27	250	P	Pn	13 06 10.8	+1.4
HRRZ	Handcock Road	3.27	258	P	Pn	13 06 10.2	+0.8
HSRZ	Hossack Road	3.29	260	P	Pn	13 06 10.9	+1.2
MCHZ	McNeill Hill	3.31	239	P	Pn	13 06 11.5	+1.6
NGRZ	Ngongotaha	3.32	264	P	Pn	13 06 11.3	+1.3
BKZ	Black Stump Fm	3.33	245	P	Pn	13 06 11.6	+1.3
KAHZ	Kahuranaki	3.37	233	P	Pn	13 06 12.3	+1.4
KWHZ	Kaweka Forest	3.49	241	P	Pn	13 06 13.6	+1.2
KMRZ	Kaimai	3.50	268	P	Pn	13 06 12.8	+0.2
PXZ	Pawanui	3.52	230	P	Pn	13 06 13.4	+0.6
KRHZ	Kereru	3.62	238	P	Pn	13 06 15.2	+0.9
KUTZ	Kaahu Road	3.65	258	P	Pn	13 06 15.3	+0.7
RITZ	Rihia Road	3.73	250	P	Pn	13 06 17.3	+1.6
BHHZ	Black Hill Sta	3.77	242	P	Pn	13 06 17.5	+1.2
WPHZ	Waipukurau	3.80	232	P	Pn	13 06 17.6	+0.9
PRHZ	Porangahau	3.81	229	P	Pn	13 06 17.2	+0.4
TLZ	Tolley Road	3.85	261	P	Pn	13 06 17.6	+0.3
KUZ	Kuaotunu	3.85	284	P	Pn	13 06 16.7	-0.7
KATZ	Kakaramea	3.85	251	P	Pn	13 06 19.1	+1.6
PNHZ	Pukenui	3.88	236	P	Pn	13 06 18.4	+0.7
KRVZ	Karewarewa	3.93	249	P	Pn	13 06 19.7	+1.1
MOVZ	Moawhango	3.95	245	P	Pn	13 06 20.0	+1.2
WTVZ	West Tongariro	3.97	249	P	Pn	13 06 20.5	+1.4
TUVZ	Tukino	3.97	247	P	Pn	13 06 20.8	+1.6
NGZ	Ngauruhoe	3.98	248	P	Pn	13 06 20.3	+1.0
ANWZ	Angora Road	4.02	228	P	Pn	13 06 19.9	+0.1
WHVZ	Whangaehu Hut	4.03	247	P	Pn	13 06 21.4	+1.4
FWVZ	Far West T-bar	4.04	247	P	Pn	13 06 21.5	+1.3
TRVZ	Turoa	4.06	247	P	Pn	13 06 21.6	+1.1
TWVZ	Taurewa	4.07	250	P	Pn	13 06 21.7	+1.2
TSZ	Takapari Road	4.11	235	P	Pn	13 06 21.0	0.0
DVHZ	Dannevirke	4.11	231	P	Pn	13 06 21.5	+0.5
MKAZ	Moumakai	4.20	278	P	Pn	13 06 22.1	0.0
PRWZ	Pori Road	4.38	230	P	Pn	13 06 25.3	+0.6
HIZ	Hauiti	4.40	259	P	Pn	13 06 26.3	+1.3
ETAZ	East Tamaki Re	4.41	279	P	Pn	13 06 25.5	+0.4
POWZ	Post Office Ro	4.41	233	P	Pn	13 06 26.0	+0.9
TIWZ	Tintock	4.57	228	P	Pn	13 06 27.2	-0.1
VRZ	Vera Road	4.59	252	P	Pn	13 06 29.3	+1.7
WAZ	Wanganui	4.63	243	P	Pn	13 06 29.6	+1.4
MRZ	Mangatainoka R	4.69	231	P	Pn	13 06 28.8	-0.1
RVAZ	Riverhead Bore	4.73	281	P	Pn	13 06 29.9	+0.5
OGWZ	Otaki Gorge	5.03	232	P	Pn	13 06 33.2	-0.3
PREZ	Palmer Road	5.10	251	P	Pn	13 06 37.9	+3.3
WCZ	Waipu Caves	5.17	289	P	Pn	13 06 36.0	+0.5
PKE	Pukeiti	5.19	253	P	Pn	13 06 38.5	+2.7
PKE				P	Pn	13 06 38.5	+2.7
KHEZ	Kahui Hut	5.20	251	P	Pn	13 06 38.6	+2.7
KIW	Kapiti Island	5.22	232	P	Pn	13 06 35.9	-0.2
CAW	Cannon Point	5.26	230	P	Pn	13 06 36.1	-0.6
TCW	Tory Channel	5.81	232	P	Pn	13 06 43.7	-0.6
DUWZ	D’Urville Isla	5.83	237	P	Pn	13 06 44.0	-0.5
OUZ	Omahuta	6.03	293	P	Pn	13 06 48.1	+0.8
CTZ	Chatham Island	6.35	160	P	Pn	13 06 58.0	+6.3
NNZ	Nelson	6.39	236	P	Pn	13 06 51.4	-0.8
KHZ	Kahutara	6.97	226	P	Pn	13 06 59.6	-0.6
LTZ	Lake Taylor	7.94	229	P	Pn	13 07 12.9	-0.6
OKCZ	Okains Bay	8.10	221	P	Pn	13 07 14.9	-0.9
RPZ	Rata Peaks	9.21	227	Pn	Pn	13 07 28.6	-2.3
	0.2nm,0.3s,baz=46,slow=10,SNR=2.5						
RPZ				Sn	Sn	13 09 04.6	-9.4
	1.7nm,0.3s,baz=14,slow=18,SNR=14						
JCZ	Jackson Bay	10.76	231	P	Pn	13 07 51.8	-0.5
ASAR	Alice Springs	41.93	276	P	P	13 13 09.5	+0.7
	1.1nm,0.7s,baz=116,slow=7.3,SNR=18						
ASAR				PcP	PcP	13 15 05.5	+1.3
	0.4nm,0.9s,baz=132,slow=3.9,SNR=3.1						
WRA	Warramunga Arr	43.58	281	P	P	13 13 22.4	+0.2
	0.8nm,0.4s,baz=123,slow=7.0,SNR=40						
ARCES	ARCESS Array B	145.44	345	PKPbc	PKPdf	13 24 54.7	-0.1
	1.4nm,0.7s,baz=27,slow=4.4,SNR=5.1						

MEX 26 13:05:56.7±0.5**,18°.04N**×**100°.09W,h15^{km}**±7^{km}**,MD3.5, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ARIG	Puente Sto Nin	0.34	315	*e*P	Pg	13 06 02.7	-1.1
ARIG				*e*S	Sg	13 06 08.0	-0.7
MEIG	Mezcala	0.46	103	*e*P	Pg	13 06 04.7	-1.3
MEIG				*i* S	Sg	13 06 11.1	-1.2
PLIG	Platanillo	0.66	58	*i* P	Pg	13 06 08.4	-1.4
PLIG				*i* S	Sg	13 06 16.1	-2.5
CAIG	El Cayaco	1.00	190	*e*P	Pb	13 06 12.1	-3.6
CAIG				*e*S	Sb	13 06 24.2	-4.4
ACX	Acapulco	1.18	169	*e*P	Pn	13 06 15.4	-3.3
ACX				*e*S	Sb	13 06 29.1	-4.9
ZIIG	Zihuatanejo	1.38	252	*e*P	Pn	13 06 18.2	-3.1
ZIIG				*i* S	Sn	13 06 34.3	-5.0

*ISK **26** 13:08:23.8, 38°.77N×38°.87E, h19^{km}, ML2.0/3*

*DDA **26** 13:08:25.7, 38°.74N×38°.98E, h7^{km}, Ml2.7*

*CSEM **26** 13:08:25.3±0.3, 38°.78N×38°.99E, h15^{km}, ML2.7, Error ellipse: s-maj=7.4km s-min=5.9km az=163.0*

ISC 26 13:08:25.3±1.2**,38°.78N**±0°.03×**38°.95E**±0°.03**,h15^{km}**±10^{km}**, n18,σ0^{s}66**/30**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ELZG	Elazig	0.28	175	*i* P	Pg	13 08 31.2	-0.3
ELZG				*i* S	Sb	13 08 36.6	-0.1
ELZG	Elazig	0.28	175	P	Pg	13 08 31.2	-0.3
ELZG				S	Sb	13 08 36.6	-0.1
PTK	Pertek	0.36	72	PG	Pg	13 08 33.1	+0.3
PTK				SG	Sb	13 08 39.5	+0.4
PTK	Pertek	0.36	72	*i* Pg	Pg	13 08 33.1	+0.3
PTK				*e*Sg	Sb	13 08 39.5	+0.4
SVRC	Sivrice-ELAZID	0.49	145	PG	Pg	13 08 34.6	-0.5
SVRC	Sivrice-ELAZID	0.49	145	*i* Pg	Pg	13 08 34.6	-0.5
TNCL	Tunceli-Merkez	0.57	54	*i* P	Pg	13 08 36.9	+0.2
TNCL				*i* S	Sb	13 08 46.0	+1.0
TNCL	Tunceli-Merkez	0.57	54	P	Pg	13 08 36.8	+0.2
TNCL				S	Sb	13 08 46.0	+1.0
KEMA	Kemaliye	0.60	324	*i* P	Pg	13 08 37.8	+0.6
KEMA				*i* S	Sn	13 08 48.4	-0.6
KEMA	Kemaliye	0.60	324	P	Pg	13 08 37.8	+0.6
KEMA				S	Sn	13 08 48.3	-0.6
ILIC	ilic-Erzincan	0.73	336	PG	Pg	13 08 38.2	-1.5
ILIC	ilic-Erzincan	0.73	336	*e*Pg	Pg	13 08 38.2	-1.5
HEKM	Malatya_Hekimh	0.78	278	*i* P	Pb	13 08 41.0	+0.4
HEKM				*i* S	Sn	13 08 54.1	+0.7
HEKM	Malatya_Hekimh	0.78	278	P	Pb	13 08 41.0	+0.4
HEKM				S	Sn	13 08 54.1	+0.7
AKCD	Akcadag	0.94	239	*i* P	Pb	13 08 43.4	+0.1
AKCD				*i* S	Sn	13 08 57.2	0.0
AKCD	Akcadag	0.94	239	P	Pb	13 08 43.4	+0.1
AKCD				S	Sn	13 08 57.2	0.0
ERZN	Erzincan	1.00	36	PG	Pb	13 08 43.9	-0.5
EZC	Erzincan	1.02	18	*e*Pg	Pb	13 08 43.9	-0.8

*CSEM **26** 13:08:54.8±0.5, 38°.87N×37°.18E, h5^{km}, ML2.5, Error ellipse: s-maj=8.9km s-min=5.3km az=120.0*

*ISK **26** 13:08:55.2, 38°.82N×37°.36E, h5^{km}, ML2.0/3*

*ISCJB **26** 13:08:56.5±1.0, 38°.84N±0°.06×37°.31E±0°.05, h7^{km}±9^{km}, Error ellipse: s-maj=10.8km s-min=6.1km az=165.6*

*DDA **26** 13:08:56.1, 38°.87N×37°.29E, h7^{km}, Ml2.5*

ISC 26 13:08:55.4±1.3**,38°.87N**±0°.06×**37°.29E**±0°.05**,h9^{km}**±9^{km}**, n15,σ0^{s}38**/25**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CUGUR	Gurin_S˜VAS	0.15	185	*i* P	Pg	13 08 58.7	0.0
CUGUR				*i* S	Sg	13 09 01.0	0.0
CUGUR	Gurin_S˜VAS	0.15	185	P	Pg	13 08 58.7	0.0
CUGUR				S	Sg	13 09 01.0	0.0
DARE	Darende-Malaty	0.34	153	PG	Pg	13 09 01.7	-0.4
DARE				SG	Sg	13 09 06.5	0.0
DARE	Darende-Malaty	0.34	153	*i* Pg	Pg	13 09 01.7	-0.4
HEKM	Malatya_Hekimh	0.52	89	*i* P	Pb	13 09 07.5	+0.6
HEKM				*i* S	Sb	13 09 14.1	-0.6
HEKM	Malatya_Hekimh	0.52	89	P	Pb	13 09 07.5	+0.6
HEKM				S	Sb	13 09 14.1	-0.6
AKCD	Akcadag	0.76	139	*i* P	Pb	13 09 11.1	+0.2
AKCD				*i* S	Sb	13 09 21.8	+0.4
AKCD	Akcadag	0.76	139	P	Pb	13 09 11.1	+0.2
AKCD				S	Sb	13 09 21.8	+0.4
SARI	SarD1z-Kayseri	0.82	236	PG	Pb	13 09 11.8	-0.2
SARI				SG	Sn	13 09 25.8	0.0
KEMA	Kemaliye	1.02	67	*i* P	Pn	13 09 16.1	+0.1
KEMA				*i* S	Sb	13 09 29.3	+0.5
KEMA	Kemaliye	1.02	67	P	Pn	13 09 16.1	+0.1
KEMA				S	Sb	13 09 29.3	+0.5
PTK	Pertek	1.64	89	PN	Pb	13 09 25.6	-0.4
PTK	Pertek	1.64	89	*e*Pn	Pb	13 09 25.6	-0.4
SVRC	Sivrice-ELAZID	1.66	107	PN	Pb	13 09 25.8	-0.4
SVRC	Sivrice-ELAZID	1.66	107	*e*Pn	Pb	13 09 25.8	-0.4

*ISCJB **26** 13:14:53.4±0.4, 19°.58S±0°.05×177°.78W±0°.09, h400^{km}, mb4.0/16, Error ellipse: s-maj=11.5km s-min=6.8km az=10.9*

*IDC **26** 13:14:56.6±2.1, 19°.62S×177°.74W, h423^{km}±22^{km}, mb3.7/16, mb1 3.9/17, mb1mx3.7/43, mbtmp4.5/17, Error ellipse: s-maj=14.8km s-min=10.0km az=146.0*

ISC 26 13:14:54.2±0.5**,19°.72S**±0°.08×**177°.7W**±0°.1**,h400^{km},n60, σ1^{s}87**/61**,mb4.0**/16**,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	8.06	45	P	Pn	13 16 45.2	-4.8
	10nm,0.3s,baz=220,slow=16,SNR=16						
AFI				S	S	13 18 12.4	-13
	6.5nm,0.3s,baz=98,slow=13,SNR=5.1						
GLKZ	Green Lake	9.50	181	S	S	13 18 50.6	-4.2
DZM	Mont Dzumac	15.05	258	P	P	13 18 08.4	+1.0
	1.5nm,0.3s,baz=89,slow=16,SNR=15						
OUZ	Omahuta	17.27	205	P	P	13 18 35.4	+4.5
GRZ	Great Barrier	17.54	199	P	P	13 18 40.4	+6.7
WCZ	Waipu Caves	17.62	202	P	P	13 18 38.8	+4.2
WIAZ	Waiheke Island	18.14	199	P	P	13 18 42.7	+2.6
WMGZ	Waiomatatini S	18.36	190	P	P	13 18 44.8	+2.5
ETAZ	East Tamaki Re	18.36	199	P	P	13 18 45.0	+2.6
HAZ	Te Kaha	18.40	192	P	P	13 18 43.3	+0.5
MKAZ	Moumakai	18.42	198	P	P	13 18 45.2	+2.1
WTAZ	Waiatarua	18.45	200	P	P	13 18 45.6	+2.2
AWAZ	Awhitu Peninsu	18.55	200	P	P	13 18 46.5	+2.2
PUZ	Puketiti	18.63	190	P	P	13 18 45.9	+0.7
RUGZ	Raukumara Rang	18.63	192	P	P	13 18 44.8	-0.5
TWGZ	Tauwhareparae	18.78	191	P	P	13 18 47.2	+0.4
MWZ	Matawai	19.01	192	P	P	13 18 48.6	-0.6
URZ	Urewera	19.02	193	P	P	13 18 46.8	-2.5
	1.5nm,0.3s,baz=4.4,slow=9.4,SNR=11						
URZ				S	S	13 21 59.9	-2.2
	1.3nm,0.3s,baz=128,slow=23,SNR=6.0						
URZ	Urewera	19.02	193	P	P	13 18 48.2	-1.1
CNGZ	Carnagh Statio	19.04	190	P	P	13 18 50.9	+1.5
RAGZ	Rawiri	19.19	192	P	P	13 18 50.5	-0.5
MUGZ	Murupara	19.31	193	P	P	13 18 51.0	-1.0
RIGZ	Rimuhau	19.33	191	P	P	13 18 52.9	+0.6
SNGZ	Shannon Statio	19.48	192	P	P	13 18 52.1	-1.6
MTHZ	Maungataniwha	19.65	193	P	P	13 18 55.5	+0.2
BKZ	Black Stump Fm	20.03	193	P	P	13 18 56.6	-2.2
TWVZ	Taurewa	20.19	196	P	P	13 19 00.1	-0.2
PKVZ	Pokaka	20.42	196	P	P	13 19 02.0	-0.3
VRZ	Vera Road	20.42	197	P	P	13 19 04.2	+1.9
KAHZ	Kahuranaki	20.55	192	P	P	13 19 06.1	+2.6
RPZ	Rata Peaks	25.73	199	P	P	13 19 50.7	+0.5
	4.6nm,0.4s,baz=20,slow=12,SNR=9.1						
STKA	Stephens Creek	38.43	243	P	P	13 21 40.1	+0.7
	8.1nm,0.5s,baz=89,slow=9.2,SNR=25						
ASAR	Alice Springs	45.02	256	P	P	13 22 32.1	-0.2
	14nm,0.5s,baz=96,slow=8.7,SNR=12						
ASAR				S	S	13 28 38.8	-1.8
	0.5nm,0.7s,baz=93,slow=15,SNR=4.5						
WRA	Warramunga Arr	45.04	261	P	P	13 22 31.9	-0.6
	4.7nm,0.4s,baz=94,slow=6.3,SNR=6.5						
WRA				S	S	13 28 39.8	-1.1
	0.8nm,0.9s,baz=99,slow=14,SNR=2.7						
GUMO	Guam	49.57	309	P	P	13 23 06.6	-0.2
	25nm,0.7s,baz=210,slow=20,SNR=2.7						
VNDA	Vanda	58.71	185	P	P	13 24 12.7	+1.6
	0.5nm,0.5s,baz=11,slow=7.3,SNR=6.0						
MJAR	Matsushiro Arr	69.79	323	P	P	13 25 22.3	-0.3
	2.0nm,0.5s,baz=160,slow=6.1,SNR=10						
QSPA	South Pole Qui	70.34	180	P	P	13 25 26.6	+0.9
	1.9nm,0.4s,baz=262,slow=2.5,SNR=10						
PETK	Petropavlovsk-	75.61	345	P	P	13 25 55.8	-0.3
	2.8nm,0.6s,baz=118,slow=7.8						
YBH	Yreka Blue Hor	79.48	39	P	P	13 26 18.3	+0.6
	1.9nm,0.6s,baz=202,slow=5.4,SNR=6.5						
NVAR	Mina Array Bea	80.23	43	P	P	13 26 22.5	+0.6
	1.6nm,0.7s,baz=223,slow=8.8,SNR=18						
TXAR	Lajitas Array	86.36	57	P	P	13 26 54.0	+1.2
	1.2nm,0.7s,baz=216,slow=6.3,SNR=17						
ANMO	Albuquerque	86.66	51	P	P	13 26 53.3	-1.0
	1.0nm,0.6s,baz=252,slow=3.4,SNR=4.0						
ILAR	Eielson Array	87.49	13	P	P	13 26 55.5	-1.7
	0.7nm,0.7s,baz=219,slow=5.1,SNR=13						
PDAR	Pinedale Array	88.17	43	P	P	13 27 00.7	-0.5
	0.6nm,0.6s,baz=237,slow=3.7,SNR=7.1						
PLCA	Paso Flores	89.56	133	P	P	13 27 10.1	+2.3
	7.5nm,1.2s,baz=26,slow=4.2,SNR=3.1						
BVAR	Borovoye Array	118.70	320	PKP	PKPdf	13 32 53.4	-1.9
	0.8nm,0.3s,baz=69,slow=3.8,SNR=3.4						
ARCES	ARCESS Array B	128.22	350	PKP	PKPdf	13 33 12.1	-1.0
	0.8nm,0.6s,baz=353,slow=3.6,SNR=3.3						
AKASG	Malin Array Be	142.49	332	PKhKP	PKPpre	13 33 34.7	
	1.2nm,0.4s,baz=45,slow=4.4,SNR=9.9						
EKA	Eskdalemuir Ar	144.20	5	PKP	PKPbc	13 33 40.6	-1.4
	1.7nm,0.6s,baz=347,slow=2.8,SNR=9.8						
BRTR	Keskin Array B	146.56	313	PKPbc	PKPbc	13 33 49.6	-0.2
	2.1nm,0.6s,baz=128,slow=4.0,SNR=11						
CLL	Collm	147.38	348	*i* PKPbc	PKPbc	13 33 51.9	+0.5
	comp=Z,6.0nm,0.5s						
CLL				*i* PKPab	PKPab	13 33 54.5	0.0
	comp=Z,5.0nm,0.8s						
DPC	Dobruska-Polom	147.49	343	*e*P	PKPab	13 33 55.7	+0.6
BRG	Berggiesshubel	147.59	346	*e*PKP	PKPbc	13 33 52.0	0.0
	comp=Z,3.4nm,0.8s						
BRG				*i*		13 33 55.4	
	comp=Z,3.4nm,0.8s						
KRLC	Kraliky	147.61	343	*e*P	PKPab	13 33 56.5	+0.9
MMAI	Mount Meron Ar	147.71	301	PKPbc	PKPbc	13 33 52.7	-0.3
	comp=Z,3.2nm,0.5s,baz=57,slow=5.8,SNR=6.2						
MLR	Muntele Rosu	147.75	328	PKPbc	PKPbc	13 33 51.6	-1.2
	comp=Z,2.6nm,0.4s,baz=28,slow=3.0,SNR=3.9						
VRAC	Vranov	148.35	342	PKPbc	PKPbc	13 33 52.9	-1.1
	comp=Z,1.3nm,0.4s,baz=180,slow=1.0,SNR=2.0						
KHC	Kasperske Hory	149.31	345	*e*P	PKPbc	13 33 56.9	+0.5
KHC				*e*x	x	13 34 03.6	
GERES	GERESS Array B	149.54	345	PKPbc	PKPbc	13 33 55.7	-1.4
	comp=Z,1.9nm,0.8s,baz=43,slow=2.5,SNR=9.0						

*ISCJB **26** 13:17:27.2±0.3, 5°.35S±0°.04×147°.18E±0°.07, h200^{km}, mb4.0/19, Error ellipse: s-maj=9.6km s-min=5.7km az=11.4*

*BJI **26** 13:17:27.2, 5°.51S×147°.22E, h207^{km}, mb4.4/5, mB4.4/3*

*IDC **26** 13:17:27.2±1.2, 5°.48S×147°.15E, h192^{km}±11^{km}, mb3.8/17, mb1 4.0/20, mb1mx3.9/44, mbtmp4.4/20, Error ellipse: s-maj=15.7km s-min=7.6km az=101.0*

*NEIC **26** 13:17:29.6±0.6, 5°.45S×147°.23E, h215^{km}±6^{km}, mb4.8/6, Error ellipse: s-maj=8.6km s-min=5.4km az=104.0*

ISC 26 13:17:28.3±0.4**,5°.49S**±0°.06×**147°.31E**±0°.08**,h200^{km},n52, σ1^{s}51**/56**,mb4.2**/19**,Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MANU	Manus Island	3.42	1	*e*Pn	Pn	13 18 25.5	+2.5
PMG	Port Moresby	3.90	182	P	Pn	13 18 29.0	+0.2
	26nm,0.3s,baz=330,slow=6.8,SNR=90						
PMG				S	Sn	13 19 13.4	-3.0
	80nm,0.3s,baz=201,slow=21,SNR=22						
RABL	Rabaul	5.01	75	*e*Pn	Pn	13 18 45.4	+2.5
COEN	Coen	9.35	206	*e*Pn	Pn	13 19 40.9	+1.8
HNR	Honiara	13.13	108	P	P	13 20 30.3	-0.2
	9.0nm,0.3s,baz=348,slow=5.0,SNR=4.2						
HNR	Honiara	13.13	108	*e*Pn	P	13 20 29.9	-0.6
CTAO	Charters Tower	14.55	184	*e*Pn	P	13 20 47.2	+1.0
MTN	Manton Dam	17.55	244	*e*P	P	13 21 19.0	-0.4
	45nm,0.7s						
WRAB	Tennant Creek	19.11	220	*e*P	P	13 21 36.5	+0.3
	15nm,0.4s						
WB2	Warramunga Arr	19.11	220	*e*P	P	13 21 36.8	+0.5
	57nm,0.8s						
WRA	Warramunga Arr	19.12	220	P	P	13 21 36.2	-0.1
	8.4nm,0.3s,baz=46,slow=11,SNR=434						
WRA				S	S	13 24 59.5	-3.0

	baz=40,slow=20,SNR=5.4						
EIDS	Eidsvold	20.10	170	*e*P	P	13 21 47.3	+0.6
	25nm,1.5s						
AS01	Alice Springs	22.18	214	*e*P	P	13 22 08.9	+0.6
AS31	Alice Springs	22.21	214	*e*P	P	13 22 09.2	+0.6
	12nm,0.8s						
ASAR	Alice Springs	22.21	214	P	P	13 22 09.4	+0.8
	35nm,0.8s,baz=48,slow=8.5,SNR=290						
ASAR				S	S	13 25 58.0	-0.4
	1.9nm,0.9s,baz=36,slow=16,SNR=5.2						
SOEI	Soe	23.22	258	*e*P	P	13 22 22.5	+4.5
DZM	Mont Dzumac	24.79	134	P	P	13 22 32.8	+0.7
	5.6nm,0.8s,baz=240,slow=9.8,SNR=6.2						
MMRI	Maumere	25.07	261	*e*P	P	13 22 38.3	+3.6
STKA	Stephens Creek	26.79	191	P	P	13 22 49.4	-0.5
	3.1nm,0.5s,baz=354,slow=8.6,SNR=4.2						
CBIJ	Chichi jima	32.77	352	P	P	13 23 41.7	-0.8
JCJ	Chichijima	32.77	352	P	P	13 23 41.7	-0.8
	29nm,0.4s,baz=268,slow=17,SNR=4.8						
JNU	Nakatsue	41.44	339	P	P	13 24 53.9	-1.6
	1.0nm,0.3s,baz=234,slow=2.3,SNR=3.8						
MJAR	Matsushiro Arr	42.67	349	P	P	13 25 04.0	-1.4
	2.2nm,0.8s,baz=185,slow=10.0,SNR=8.2						
KSRS	Korea Array	46.39	339	P	P	13 25 35.1	+0.5
	1.7nm,0.7s,baz=152,slow=9.1,SNR=10						
KSRS				PcP	PcP	13 27 05.5	-0.7
	0.8nm,0.8s,baz=160,slow=3.9,SNR=3.3						
KSAR	Wonju Array Be	46.39	339	P	P	13 25 35.1	+0.4
KSAR				PcP	PcP	13 27 05.5	-0.7
ASAJ	Asahikawa	49.56	356	P	P	13 25 57.5	-1.4
	3.0nm,0.8s,baz=180,slow=11,SNR=3.5						
USRK	Ussuriysk Ar.	51.35	346	P	P	13 26 10.3	-2.0
	2.7nm,0.8s,baz=177,slow=8.2						
CMAR	Chiang Mai Arr	53.28	298	PcP	PcP	13 27 31.9	-0.2
	2.1nm,1.1s,baz=94,slow=2.7,SNR=4.1						
PETK	Petropavlovsk-	59.04	7	P	P	13 27 06.8	-0.3
	4.5nm,0.9s,baz=177,slow=7.2						
SONM	Songino Array	64.11	331	P	P	13 27 41.4	+0.1
	3.1nm,0.8s,baz=147,slow=5.8,SNR=13						
SONA1	Songino Array	64.11	331	*e*P	P	13 27 41.9	+0.5
VNDA	Vanda	72.40	177	P	P	13 28 33.0	+0.9
	0.6nm,0.8s,baz=328,slow=5.2,SNR=4.1						
WMQ	Urumqi	72.61	319	P	P	13 28 34.3	+0.3
WMQ				LR	LR		
	comp=N,120nm,21.9s						
WMQ				LR	LR		
	comp=E,63nm,18.5s						
WMQ				LR	LR		
	comp=Z,72nm,18.5s						
MK01	Makanchi Array	77.28	320	*e*P	P	13 29 00.3	-0.3
MK31	Makanchi Array	77.30	320	*e*P	P	13 29 00.8	+0.1
MKAR	Makanchi Array	77.30	320	P	P	13 29 00.9	+0.2
	1.4nm,0.4s,baz=102,slow=7.3,SNR=15						
MKAR	Makanchi Array	77.30	320	*e*P	P	13 29 00.8	+0.1
	17nm,0.9s						
ZALV	Zalesovo Beam	78.74	328	P	P	13 29 06.1	-2.3
	2.8nm,0.5s,baz=113,slow=5.1,SNR=4.0						
KSH	Kashi	79.27	312	*e*P	P	13 29 15.3	+3.5
KURK	Kurchatov	80.98	323	P	P	13 29 19.6	-1.0
KURBB	Kurchatov Arra	81.01	323	P	P	13 29 19.6	-1.1
	0.6nm,0.6s,baz=99,slow=6.3,SNR=8.1						
ILAR	Eielson Array	84.89	23	P	P	13 29 39.5	-0.9
	3.1nm,0.6s,baz=253,slow=5.1,SNR=35						
BVAR	Borovoye Array	86.54	324	P	P	13 29 47.6	-1.1
	1.1nm,0.5s,baz=106,slow=6.0,SNR=4.8						
NVAR	Mina Array Bea	96.81	52	P	P	13 30 38.5	+1.5
	0.7nm,0.8s,baz=257,slow=7.1,SNR=7.2						
PDAR	Pinedale Array	103.35	47	Pdiff	Pdif	13 31 06.4	+0.3
	0.1nm,0.3s,baz=258,slow=4.5,SNR=3.6						
GERES	GERESS Array B	121.66	326	PKP	PKPdf	13 35 57.3	-1.2
	1.0nm,0.5s,baz=93,slow=2.9,SNR=7.8						
EKA	Eskdalemuir Ar	124.95	340	PKP	PKPdf	13 36 02.2	-2.3
	1.0nm,0.6s,baz=27,slow=3.7,SNR=5.7						
SIV	San Ignacio	144.72	128	PKP	PKPbc	13 36 41.5	-0.2
	9.1nm,0.7s,baz=243,slow=3.0,SNR=46						
TOA0	Torodi Ar. Sit	145.26	285	*e*PKPdf	PKPdf	13 36 41.9	-1.3
TORD	Torodi Ar. Bea	145.26	285	PKPbc	PKPdf	13 36 42.0	-1.2
	baz=73,slow=3.8						
KOWA	Kowa	150.41	290	PKPbc	PKPbc	13 36 56.3	-0.8
	3.1nm,0.5s,baz=35,slow=2.7,SNR=11						
PTGA	Pitinga	152.07	102	PKPbc	PKPbc	13 37 00.9	-0.2
	2.4nm,0.4s,baz=244,slow=23,SNR=5.5						

MAN 26 13:20:28.1, 5°.35N×126°.47E, h27^{km}, mb4.9, ML3.8, MS3.7, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	Don Marcelino,	1.06	315	*e*P	Pn	13 20 46.9	-0.3
DDMP				*e*S	Sb	13 21 01.6	+0.2
MATI	Mati	1.60	352	*e*P	Pn	13 20 54.4	-0.2
DMPH	Davao City--Mi	1.97	331⇑	*e*P	Pn	13 20 59.8	+0.1
DMPH				*e*S	Sb	13 21 28.4	+1.0
SKMP	Bagumbayan, Su	2.24	301	*e*P	Pn	13 21 04.2	+0.8
SKMP				*e*S	Sn	13 21 30.7	+0.4

MEX 26 13:23:54.4±0.4, 15°.76N×98°.21W, h10^{km}, MD3.8, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.64	7	*e*P	Pg	13 24 05.4	-1.3
PNIG				*e*S	Sg	13 24 14.3	-0.8
TLIG	Tlapa	1.82	349	*e*P	Pn	13 24 22.8	-3.2
TLIG				*i* S	Sn	13 24 44.3	-5.0

IDC ***26*** *13:31:20.9±0.7, 2°.42N×128°.60E, h229^{km}±6^{km}, mb4.2/24, mb1 4.3/28, mb1mx4.0/56, mbtmp4.8/28, Error ellipse: s-maj=13.1km s-min=6.7km az=81.0*

ISCJB ***26*** *13:31:21.0±0.4, 2°.49N±0°.03×128°.58E±0°.04, h242^{km}±4^{km}, mb4.6/60, Error ellipse: s-maj=6.4km s-min=3.9km az=160.7*

NEIC ***26*** *13:31:21.7±0.6, 2°.49N×128°.63E, h236^{km}±6^{km}, mb4.8/39, Error ellipse: s-maj=7.3km s-min=4.4km az=74.0*

BJI ***26*** *13:31:23.5, 2°.39N×128°.86E, h280^{km}, mb4.3/14, mB4.5/10*

DJA ***26*** *13:31:23.3±0.3, 2°N±3°×12°8E±°, h213^{km}±3^{km}, M4.6/19, mb5.0/18, mB5.1/17, MLv5.1/19, Mw(mB)4.4/17*

ISC 26 13:31:21.2±0.5**, 2°.45N**±0°.04×**128°.58E**±0°.06**, h230^{km}**±5^{km}**, h230^{km}:pP-P, n153, σ1ˢ.20**/164**, mb4.7**/58**, 2D, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TNTI	Ternate	2.06	216	P	Pn	13 32 03.1	+0.4
TNTI				S	S	13 32 32.7	-2.4
TNTI	Ternate	2.06	216	*e*Pn	Pn	13 32 03.5	+0.8
LBMI	Labuha	3.25	199	P	Pn	13 32 15.8	+0.4
LBMI				S	S	13 32 59.3	+1.3
SWI	Sorong	4.25	141	P	Pn	13 32 29.7	+2.5
DDMP	Don Marcelino,	4.62	322	*e*P	Pn	13 32 30.6	-1.1
KMSI	Cibinong	4.96	248	P	Pn	13 32 35.9	0.0
SANI	Sanana	5.17	210	P	Pn	13 32 37.3	-1.3
	1µm,0.5s,51µm11nm						
SANI				S	S	13 33 34.1	-5.8
	1µm,0.5s,51µm11nm						
DAV	Davao City (W)	5.47	327	P	Pn	13 32 42.6	+0.3
	75nm,0.3s,baz=117,slow=3.3,SNR=16						
SKMP	Bagumbayan, Su	5.70	315	*e*P	Pn	13 32 44.6	-0.6
MSAI	Masohi	5.77	176	P	Pn	13 32 48.1	+1.9
NLAI	Namlea	5.84	195	P	Pn	13 32 48.3	+1.2
	112nm,0.8s,2µm0.7nm						
AAI	Ambon	6.11	184	P	Pn	13 32 51.4	+0.9
BUKP	Musuan	6.42	327	*e*P	Pn	13 32 53.9	-0.6
FAKI	Fak Fak	6.48	145	P	Pn	13 32 56.9	+1.8
	496nm,1.1s,4µm1.6nm						
FAKI	Fak Fak	6.48	145	*e*Pn	Pn	13 32 56.3	+1.2
LUWI	Luwuk	6.76	239	P	Pn	13 32 59.0	+0.3
	615nm,0.7s,7µm2.4nm						
LUWI	Luwuk	6.76	239	*e*Pn	Pn	13 32 57.4	-1.3
RKPI	Ransiki, Papua	6.85	125	P	Pn	13 33 03.0	+3.2
	469nm,1.4s,6µm						
MRSI	Marisa	6.92	254	P	Pn	13 33 00.5	-0.2
	195nm,0.4s,2µm0.8nm						
BNDI	Bandanaira	7.06	169	P	Pn	13 33 04.0	+1.5
CGP	Cagayan de Oro	7.10	327⇓	*e*P	Pn	13 33 04.5	+1.4
BUTP	Butuan	7.11	336	*e*P	Pn	13 33 05.0	+1.9
PAGZ	Pagadian	7.45	316	*e*P	Pn	13 33 06.3	-1.2
APSI	Ampana	7.69	244	P	Pn	13 33 10.0	-0.6
	286nm,0.5s,4µm						
KDI	Kendari	8.72	223	P	Pn	13 33 29.9	+6.1
MPSI	Mapaga	8.93	257	P	Pn	13 33 27.0	+0.6
PCI	Palu	9.35	249	P	Pn	13 33 31.9	0.0
	102nm,0.9s,1µm						
TTSI	Tana Toraja	10.32	238	P	Pn	13 33 44.2	0.0
	244nm,0.7s,2µm						
MYLDM	Lahad Datu	10.41	285	*e*Pn	Pn	13 33 47.4	+2.0
RCP	Roxas	10.74	328⇓	*e*P	Pn	13 33 50.7	+1.2
SPSI	Sidrap Palu	10.87	234	P	Pn	13 33 52.2	+1.0
BKSI	Bulukumba	11.44	228	P	Pn	13 34 00.6	+2.2
	24nm,0.5s,465nm						
GENI	Genyem	12.63	113	P	P	13 34 15.8	-0.3
	576nm,1.1s,5µm						
MMRI	Maumere	12.70	210	P	P	13 34 23.0	+6.1
MMRI	Maumere	12.70	210	*e*Pn	P	13 34 19.4	+2.5
SOEI	Soe	12.87	199	P	P	13 34 18.9	0.0
	106nm,0.9s,1µm						
SOEI	Soe	12.87	199	*e*Pn	P	13 34 18.8	-0.1
EDFI	Ende, Flores	13.08	212	P	P	13 34 21.5	+0.3
BATI	Baumata	13.49	201	P	Pn	13 34 24.9	+0.8
	16nm,0.3s,baz=79,slow=4.0,SNR=12						
BATI				S	S	13 36 53.7	+0.3
	4.4nm,0.3s,baz=315,slow=19,SNR=2.6						
TGY	Tagaytay City	13.82	327	P	Pn	13 34 28.4	+0.4
	35nm,0.3s,baz=119,slow=10,SNR=2.8						
MTN	Manton Dam	15.41	171	*e*P	P	13 34 46.2	-0.7
	66nm,0.6s						
BOLP	Bolinao	16.25	329	*e*P	Pn	13 34 57.0	-0.3
SBUM	Sibu	16.34	270	*e*P	Pn	13 34 60.0	+1.5
	35nm,1.4s						
APYP	Conner	16.92	335	*e*P	P	13 35 04.3	+0.9
ABRA	Dolores	16.96	333	*e*P	P	13 35 04.5	+0.6
KSM	Kuching	18.28	267	*e*P	P	13 35 19.9	+1.5
	28nm,1.2s						
GUMO	Guam	19.54	55	P	P	13 35 31.8	-0.1
	11nm,0.3s,baz=187,slow=8.1,SNR=11						
GUMO	Guam	19.54	55	*e*P	P	13 35 32.6	+0.7
	157nm,1.2s						
COEN	Coen	21.80	139	*e*P	P	13 35 55.0	-0.3
	32nm,1.0s						
TPUB	Ta-pu	22.11	340	*e*P	P	13 35 57.2	-0.9
	20nm,1.0s						
LEM	Lembang	22.86	246	P	P	13 36 05.5	+0.3
	33nm,0.9s,baz=355,slow=6.3,SNR=4.4						
WRAB	Tennant Creek	22.96	166	*e*P	P	13 36 05.6	-0.2
	88nm,0.9s						
WRA	Warramunga Arr	22.96	166	P	P	13 36 05.5	-0.3
	82nm,0.8s,baz=345,slow=11,SNR=318						
WRA				S	S	13 39 55.7	-3.0
	2.4nm,0.8s,baz=341,slow=14,SNR=3.3						
WRA				ScP	ScP	13 43 04.0	-0.7
	2.7nm,0.7s,baz=342,slow=3.4,SNR=7.5						
WB2	Warramunga Arr	22.97	166	*e*P	P	13 36 05.7	-0.2
	91nm,0.8s						
JOW	Kunigami	24.24	359	P	P	13 36 17.1	-0.3
	6.4nm,0.6s,baz=144,slow=11,SNR=3.9						
AS31	Alice Springs	26.48	169	*e*P	P	13 36 37.7	+0.1
	11nm,0.6s						
ASAR	Alice Springs	26.48	169	P	P	13 36 37.7	+0.1
	21nm,0.6s,baz=357,slow=8.4,SNR=297						
ASAR				S	S	13 40 51.8	-2.6
	2.6nm,0.9s,baz=352,slow=21,SNR=4.5						
ASAR				ScP	ScP	13 43 14.0	-0.6
	5.6nm,0.8s,baz=349,slow=2.4,SNR=20						
AS01	Alice Springs	26.48	169	*e*P	P	13 36 36.9	-0.8
SKNT	Sakolnakorn	28.15	302	P	P	13 36 54.0	+1.5
	6.2nm,0.8s						
CTAO	Charters Tower	28.34	143	*e*P	P	13 36 55.7	+1.5
	12nm,0.8s						
JNU	Nakatsue	30.59	4	P	P	13 37 12.9	-0.9
	14nm,1.0s,baz=185,slow=7.2,SNR=7.0						
JNU	Nakatsue	30.59	4	*e*P	P	13 37 14.1	+0.3
	17nm,1.0s						
CM01	Chiang Mai Arr	33.07	301	*e*P	P	13 37 37.3	+1.6
CMAR	Chiang Mai Arr	33.10	301	P	P	13 37 37.4	+1.4
	3.9nm,0.8s,baz=118,slow=7.4,SNR=20						
CMMT	Chiang Mai	33.25	301	P	P	13 37 38.9	+1.6
	8.8nm,0.8s						
CHTO	Chiang Mai	33.26	301	*e*P	P	13 37 38.7	+1.5
	6.3nm,0.7s						
CHTO	Chiang Mai	33.26	301	P	P	13 37 39.0	+1.7
	39nm,0.8s						
INU	Inuyama	33.66	13	*e*P	P	13 37 40.7	+0.2
	25nm,1.0s						
KS15	Wonju Array Si	34.83	359	*e*P	P	13 37 51.3	+0.8
KSAR	Wonju Array Be	34.83	359	P	P	13 37 50.9	+0.4
KSAR				ScP	ScP	13 43 41.8	0.0
KSRS	Korea Array	34.84	359	P	P	13 37 50.9	+0.4
	5.8nm,0.7s,baz=175,slow=9.6,SNR=32						
KSRS				ScP	ScP	13 43 41.8	0.0
	0.6nm,0.7s,baz=181,slow=2.9,SNR=4.3						
KS01	Wonju Array Si	34.86	359	*e*P	P	13 37 50.9	+0.2
MJAR	Matsushiro Arr	35.07	14	P	P	13 37 51.6	-1.0
	20nm,0.8s,baz=191,slow=10.0,SNR=66						
MAJO	Matsushiro	35.07	14	*e*P	P	13 37 51.8	-0.8
	34nm,0.8s						
MAT	Matsushiro	35.07	14	P	P	13 37 51.2	-1.4
MAT				*e*S	S	13 42 50.6	-17
MJB9	Matsu-Tunnel	35.07	14	*e*P	P	13 37 51.8	-0.8
	35nm,0.8s						
EIDS	Eidsvold	35.22	143	*e*P	P	13 37 53.8	-0.3
	7.7nm,0.9s						
BBOO	Buckleboo	35.78	169	*e*P	P	13 37 59.0	+0.3
	71nm,0.6s						
STKA	Stephens Creek	36.31	161	P	P	13 38 03.5	+0.3
	30nm,0.7s,baz=326,slow=8.8,SNR=42						
STKA	Stephens Creek	36.31	161	*e*P	P	13 38 03.5	+0.3
	6.9nm,0.8s						
CD2	Chengdu	36.76	323	*e*P	P	13 38 07.5	+0.4
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
H11S3	WAKE ISLAND Hy	40.59	64	T	T	14 23 01.1	
	baz=253,slow=75,SNR=8.2						
H11S2	WAKE ISLAND Hy	40.60	64	T	T	14 22 33.7	
	baz=253,slow=75,SNR=8.6						
H11S1	WAKE ISLAND Hy	40.60	64	T	T	14 22 35.6	
	baz=253,slow=75,SNR=5.4						
H11N1	WAKE ISLAND Hy	41.17	63	T	T	14 23 34.2	
	baz=250,slow=75,SNR=16						
H11N2	WAKE ISLAND Hy	41.18	63	T	T	14 23 35.5	
	baz=250,slow=75,SNR=12						
H11N3	WAKE ISLAND Hy	41.19	63	T	T	14 23 37.4	
	baz=250,slow=75,SNR=15						
USRK	Ussuriysk Ar.	41.68	4	P	P	13 38 47.5	+0.1
	6.6nm,0.7s,baz=174,slow=5.8						
SHL	Shillong	42.11	306	*e*P	P	13 38 52.5	+1.1
	28nm,0.5s						
ASAJ	Asahikawa	43.31	15	P	P	13 39 01.1	+0.6
	11nm,0.8s,baz=217,slow=11,SNR=16						
ASAJ	Asahikawa	43.31	15	*e*P	P	13 39 01.5	+1.0
	17nm,1.0s						
GTA	Gaotai	45.14	328	*e*P	P	13 39 16.5	+1.2
GTA				pmax	pmax		
	comp=Z,4.0nm,0.6s						
ODAN	Odare	46.31	306	*e*P	P	13 39 25.3	+0.6
	17nm,0.6s						
ODAN	Odare	46.31	306	*e*P	P	13 39 25.4	+0.7
	17nm,0.6s						
RAMN	Ramite	46.99	305	*e*P	P	13 39 30.9	+0.9
	28nm,0.5s						
RAMN	Ramite	46.99	305	*e*P	P	13 39 30.8	+0.8
	28nm,0.5s						
JIRN	Jiri	47.61	306	*e*P	P	13 39 35.2	+0.3
	17nm,0.4s						
JIRN	Jiri	47.61	306	*e*P	P	13 39 34.5	-0.4
	17nm,0.4s						
GUN	Gumba	47.96	306	*e*P	P	13 39 38.1	+0.5
	22nm,0.5s						
GUN	Gumba	47.96	306	*e*P	P	13 39 36.2	-1.4
	21nm,0.5s						
PKI	Pulchoki	48.21	305	*e*P	P	13 39 38.9	-0.6
PKIN	Phulchoki	48.22	305	*e*P	P	13 39 40.3	+0.8
	4.5nm,0.4s						
KKN	Kakani	48.40	306	*e*P	P	13 39 40.8	0.0
DMN	Daman	48.47	305	*e*P	P	13 39 41.7	+0.3
DMN	Daman	48.47	305	*e*P	P	13 39 41.7	+0.3
	5.8nm,0.4s						
SONM	Songino Array	49.10	340	P	P	13 39 45.9	+0.3
	2.7nm,0.9s,baz=156,slow=8.8,SNR=13						
SONM				pP	pP	13 40 34.2	-1.3
	1.4nm,0.8s,baz=153,slow=10.0,SNR=2.7						
SONA1	Songino Array	49.11	340	*e*P	P	13 39 43.7	-2.0
KOLN	Koldanda	49.76	305	*e*P	P	13 39 51.7	+0.6
	19nm,0.5s						
KOLN	Koldanda	49.76	305	*e*P	P	13 39 51.7	+0.6
	19nm,0.5s						
DANN	Dangsing	49.85	306	*e*P	P	13 39 52.0	+0.1
	28nm,0.5s						
DANN	Dangsing	49.85	306	*e*P	P	13 39 51.5	-0.4
	28nm,0.5s						
PYUN	Piuthan	50.38	305	*e*P	P	13 39 56.4	+0.6
PYUN	Piuthan	50.38	305	*e*P	P	13 39 56.4	+0.6
	32nm,0.6s						
WMQ	Urumqi	54.82	325	P	P	13 40 28.5	+0.7
WMQ				pmax	pmax		
	comp=Z,23nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,250nm,7.9s						
WMQ				LR	LR		
	comp=N,130nm,29.9s						
WMQ				LR	LR		
	comp=E,62nm,20.5s						
WMQ				LR	LR		
	comp=Z,72nm,17.1s						
PETK	Petropavlovsk-	55.94	21	P	P	13 40 36.3	+0.8
	14nm,0.7s,baz=195,slow=4.5						
PETK	Petropavlovsk-	55.94	21	*e*P	P	13 40 33.8	-1.7
YAK	Yakutsk	59.44	1	*e*P	P	13 40 57.1	-2.5
	34nm,0.6s						
MA2	Magadan	59.51	13	*e*P	P	13 40 57.6	-2.6
	17nm,1.0s						
MK01	Makanchi Array	59.63	325	*e*P	P	13 40 59.6	-1.6
MK31	Makanchi Array	59.65	325	*e*P	P	13 41 00.8	-0.7
MKAR	Makanchi Array	59.65	325	P	P	13 41 01.7	+0.3
	2.8nm,0.4s,baz=119,slow=8.6,SNR=44						
MKAR				pP	pP	13 41 51.6	-1.6
	1.3nm,0.6s,baz=127,slow=7.8,SNR=3.2						
MKAR				ScP	ScP	13 45 24.1	-0.7
	0.7nm,0.7s,baz=118,slow=4.7,SNR=4.8						
MKAR	Makanchi Array	59.65	325	*e*P	P	13 41 00.7	-0.7
	25nm,0.4s						
MKAR				pP	pP	13 41 51.6	-1.6
MKAR				ScP	ScP	13 45 24.1	-0.7
MAKZ	Makanchi	59.84	325	*e*P	P	13 41 02.8	+0.1
	5.5nm,0.6s						
KSH	Kashi	60.24	315	*e*P	P	13 41 08.3	+2.6
KSH				*e*PcP	PcP	13 41 50.5	+1.8
ZALV	Zalesovo Beam	62.56	333	P	P	13 41 19.4	-1.3
	2.5nm,0.3s,baz=101,slow=7.5,SNR=2.3						
KURBB	Kurchatov Arra	63.80	327	P	P	13 41 28.7	-0.3
	6.4nm,0.5s,baz=125,slow=6.3,SNR=60						
KURBB				pP	pP	13 42 20.6	-0.9
	2.4nm,0.6s,baz=122,slow=7.0,SNR=4.4						
KURK	Kurchatov	63.80	327	*e*P	P	13 41 28.1	-0.8
	8.2nm,0.6s						
KURK				pP	pP	13 42 20.6	-0.9
BVAR	Borovoye Array	69.39	327	P	P	13 42 03.7	-0.6
	3.7nm,0.9s,baz=123,slow=5.5,SNR=12						
BVAR				pP	pP	13 42 57.1	-0.5
	2.3nm,0.7s,baz=126,slow=7.5,SNR=3.0						
CASY	Casey	69.79	188	*e*P	P	13 42 06.3	-0.1
	12nm,0.8s						
AKTO	Aktyubinsk	75.80	322	P	P	13 42 40.5	-1.5
	0.6nm,0.3s,baz=92,slow=4.7,SNR=4.3						
ARU	Arti	76.99	328	P	P	13 42 47.5	-1.0
	4.9nm,0.2s,baz=108,slow=3.2,SNR=3.7						
OHAK	Old Harbor	81.52	33	*e*P	P	13 43 12.4	-0.5
	25nm,1.0s						
VNDA	Vanda	81.94	173	P	P	13 43 14.9	+0.2
	7.0nm,0.8s,baz=312,slow=6.0,SNR=40						
VNDA	Vanda	81.94	173	*e*P	P	13 43 14.8	0.0
	6.9nm,0.8s						
KDAK	Kodiak Island	81.98	32	*e*P	P	13 43 15.9	+0.6
	22nm,0.8s						
RSO	Redoubt South	82.29	29	*e*P	P	13 43 16.9	-0.3
CNPM	China Poot	82.91	30	*e*P	P	13 43 19.0	-1.2
	13nm,0.9s						
SKT	Skwentna	83.09	28	*e*P	P	13 43 20.3	-0.8
	16nm,1.0s						
SUA	Susitna One	83.40	28	*e*P	P	13 43 23.2	+0.4
	27nm,0.9s						
RC01	Rabbit Creek A	83.84	29	*e*P	P	13 43 24.5	-0.4
	18nm,0.9s						
TRF	Thorofare Moun	83.85	27	*e*P	P	13 43 23.9	-1.1
	13nm,1.2s						
MLY	Manley	83.85	25	*e*P	P	13 43 24.4	-0.5
	2.6nm,0.8s						
PMR	Palmer	84.18	28	*e*P	P	13 43 25.7	-0.8
	23nm,1.0s						
GHO	Glory Hole Cre	84.30	28	*e*P	P	13 43 26.3	-0.9
	14nm,1.1s						
GLI	Glacier Island	85.10	29	*e*P	P	13 43 30.4	-0.8
	14nm,0.8s						
FID	Port Fidalgo	85.40	29	*e*P	P	13 43 33.9	+1.3
	15nm,1.1s						
ILAR	Eielson Array	85.46	25	P	P	13 43 31.9	-1.0
	0.7nm,0.5s,baz=248,slow=5.1,SNR=11						
ARCES	ARCESS Array B	92.27	340	P	P	13 44 03.5	-1.4
	3.8nm,1.1s,baz=53,slow=8.0,SNR=4.2						
QSPA	South Pole Qui	92.37	180	P	P	13 44 06.2	+0.7
	3.5nm,0.8s,baz=304,slow=3.2,SNR=8.6						
YKA	Yellowknife Ar	99.88	25	P	Pdif	13 44 39.6	+0.2
	0.4nm,0.8s,baz=298,slow=4.5,SNR=3.5						
HFS	Hagfors	100.00	333	P	Pdif	13 44 39.0	-1.0
	0.6nm,0.5s,baz=53,slow=7.4,SNR=4.1						
NOA	NORSAR Array B	100.74	334	P	Pdif	13 44 41.7	-1.7
	0.8nm,0.9s,baz=267,slow=2.8,SNR=2.4						
TXAR	Lajitas Array	120.89	54	PKP	PKPdf	13 49 47.7	+0.6
	0.3nm,0.7s,baz=333,slow=0.4,SNR=4.9						

DDA ***26*** *13:35:40.0, 35°.19N×27°.07E, h11^{km}, Ml2.9*

ATH ***26*** *13:35:40.5, 35°.13N×27°.30E, h21^{km}±2^{km}, ML2.4/2, Error ellipse: s-maj=5.8km s-min=1.7km az=325.0*

CSEM ***26*** *13:35:42.5±0.9, 35°.13N×27°.24E, h20^{km}, ML2.4, Error ellipse: s-maj=24.4km s-min=9.5km az=148.0*

ISC 26 13:35:39.4±1.8**, 35°.04N**±0°.08×**27°.29E**±0°.05**, h12^{km}**±10^{km}**, n24, σ0ˢ.88**/37**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	Karpathos	0.51	348	P	Pg	13 35 48.5	-1.0
KARP				S	Sg	13 35 57.5	+1.1
KARP				AML	AML	13 35 59.3	
	comp=E,1613µm,0.1s						
KARP				AML	AML	13 35 59.3	
	comp=N,2308µm,0.1s						
KARP	Karpathos	0.51	348	P	Pg	13 35 48.9	-0.6
KARP				S	Sg	13 35 56.7	+0.3
ZKR	Zakros	0.88	275	P	Pn	13 35 57.2	-0.4
ZKR				S	Sn	13 36 09.8	-0.5
ZKR				AML	AML	13 36 16.0	
	comp=E,514µm,0.6s						
ZKR				AML	AML	13 36 16.3	
	comp=N,275µm,0.4s						
ZKR	Zakros	0.88	275	P	Pn	13 35 57.4	-0.2
ZKR				S	Sn	13 36 09.9	-0.5
ARG	Arkhangelos	1.35	30	P	Pb	13 36 05.2	+0.5
ARG	Arkhangelos	1.35	30	P	Pb	13 36 04.9	+0.2
NPS	Neapolis	1.39	280	P	Pg	13 36 07.0	+0.8
NPS	Neapolis	1.39	280	P	Pg	13 36 06.8	+0.6
LAST	Lasithi	1.49	275	P	Pg	13 36 08.8	+0.7
LAST	Lasithi	1.49	275	P	Pg	13 36 08.5	+0.4
DAT	Datca	1.70	8	*i* P	Pn	13 36 08.9	-0.1
DAT				*i* S	Sb	13 36 32.5	+0.5
DAT	Datca	1.70	8	P	Pn	13 36 08.9	-0.1
DAT				S	Sb	13 36 32.5	+0.5
ANAF	Anafi Island	1.80	317	P	Pb	13 36 11.6	-0.8
ANAF	Anafi Island	1.80	317	P	Pb	13 36 11.6	-0.8
BDRM	Kayabasi	2.02	3	*i* P	Pb	13 36 16.4	+0.3
BDRM				*i* S	Sn	13 36 39.9	+1.4
BDRM	Kayabasi	2.02	3	P	Pb	13 36 16.4	+0.3
BDRM				S	Sn	13 36 39.9	+1.4
DALY	Dalyan (Mu˜la	2.09	32	*i* P	Pb	13 36 17.4	+0.2
DALY				*i* S	Sg	13 36 46.3	-0.3
DALY	Dalyan (Mu˜la	2.09	32	P	Pb	13 36 17.4	+0.2
TURN	Turunc	2.11	30	*i* P	Pn	13 36 14.5	0.0
TURN				*i* S	Sn	13 36 41.4	+0.7
TURN	Turunc	2.11	30	P	Pn	13 36 14.5	0.0
TURN				S	Sn	13 36 41.4	+0.7
AMGA	Amorgos Island	2.11	328	P	Pn	13 36 14.5	-0.1
AMGA	Amorgos Island	2.11	328	P	Pn	13 36 15.2	+0.6
TAVA	DENIZLI_Tavas	2.75	28	*i* P	Pn	13 36 23.6	+0.2
TAVA				*i* S	Sb	13 36 59.7	-2.5
TAVA	DENIZLI_Tavas	2.75	28	P	Pn	13 36 23.6	+0.2
TAVA				S	Sb	13 36 59.7	-2.5

ISCJB ***26*** *13:36:27.9±0.7, 14°.36S±0°.07×76°.5W±0°.1, h30^{km}, mb4.0/13, MS3.6/2, Error ellipse: s-maj=17.2km s-min=7.8km az=155.5*

IDC ***26*** *13:36:32.5±2.5, 14°.22S×76°.46W, h52^{km}±21^{km}, mb3.6/11, mb1 3.8/14, mb1mx3.6/42, mbtmp3.8/14, ML3.6/3, MS3.3/5, Ms1 3.3/5, ms1mx3.0/31, Error ellipse: s-maj=27.0km*

s-min=13.5km az=60.0

ISC 26 13:36:30.0±0.8**,14°.19S**±0°.09×**76°.5W**±0°.1**,h30^{km},n28,**
σ1^{s}.25/20**,mb3.9**/13**,Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	2.22	351	P	Pb	13 37 08.0	-1.4
	18nm,0.3s,baz=173,slow=15,SNR=22						
NNA				S	Sb	13 37 34.6	-1.9
	63nm,0.3s,baz=196,slow=15,SNR=14						
NNA				LR	LR	13 37 35.2	
	comp=Z,76nm,21.4s,baz=140,slow=28						
ATAH	Atahualpa	7.26	345	P	Pn	13 38 17.6	+3.2
	0.8nm,0.3s,baz=201,slow=17,SNR=3.0						
ATAH				S	Sn	13 39 45.4	+9.3
	baz=16,slow=15,SNR=2.0						
LPAZ	La Paz	8.33	106	LR	LR	13 42 33.0	
	comp=Z,138nm,21.9s,baz=299,slow=43						
SIV	San Ignacio	15.00	99	P	Pn	13 39 60.0	0.0
	0.3nm,0.3s,baz=296,slow=14,SNR=3.4						
ROSC	El Rosal	19.03	7	LR	LR	13 49 36.1	
	comp=Z,141nm,19.3s,baz=199,slow=41						
PTGA	Pitinga	21.12	52	P	P	13 41 14.6	+2.1
	2.0nm,0.6s,baz=236,slow=16,SNR=4.6						
PTGA				LR	LR	13 49 55.0	
	comp=Z,292nm,19.4s,baz=170,slow=38						
CPUP	Villa Florida	21.62	127	P	P	13 41 18.0	+0.3
	1.9nm,0.8s,baz=285,slow=12,SNR=2.2						
PCRV	Puerto La Cruz	26.91	27	P	P	13 42 08.6	-0.1
	3.3nm,0.4s,baz=253,slow=11,SNR=2.1						
PLCA	Paso Flores	26.95	170	P	P	13 42 08.4	-0.4
	3.6nm,1.1s,baz=342,slow=8.2,SNR=2.8						
BDFB	Brasilia	27.55	97	LR	LR	13 54 06.3	
	comp=Z,139nm,21.0s,baz=189,slow=38						
TXAR	Lajitas Array	50.61	329	P	P	13 45 26.6	+0.2
	0.3nm,0.8s,baz=139,slow=7.2,SNR=3.3						
PDAR	Pinedale Array	64.30	334	P	P	13 47 03.2	+0.3
	0.2nm,0.5s,baz=146,slow=6.6,SNR=2.2						
NVAR	Mina Array Bea	65.36	325	P	P	13 47 10.6	+0.7
	0.3nm,0.7s,baz=134,slow=6.0,SNR=4.0						
SNAA	Sanae	71.49	161	P	P	13 47 47.2	-0.3
	1.2nm,0.8s,baz=278,slow=7.1,SNR=6.4						
LIC	Lamto	73.72	79	eP	P	13 48 00.5	-1.2
	33nm,1.3s						
TIC	Toumodi	73.85	79	eP	P	13 48 02.0	-0.5
DBIC	Dimbokro	74.01	79	P	P	13 48 04.2	+0.8
	2.2nm,0.6s,baz=227,slow=5.4,SNR=4.4						
KIC	Kosan Boka	74.03	79	eP	P	13 48 03.8	+0.2
	54nm,1.7s						
YKA	Yellowknife Ar	82.04	343	P	P	13 48 45.8	-1.1
	0.4nm,0.7s,baz=139,slow=5.7,SNR=3.5						
TORD	Torodi Ar. Bea	82.05	74	P	P	13 48 46.8	-1.2
	2.7nm,0.9s,baz=258,slow=3.8						
H11N3	WAKE ISLAND Hy	119.39	285	T	T	16 05 52.5	
	baz=96,slow=74,SNR=71						
H11N2	WAKE ISLAND Hy	119.41	285	T	T	16 05 50.2	
	baz=96,slow=74,SNR=91						
H11N1	WAKE ISLAND Hy	119.41	285	T	T	16 05 53.5	
	baz=96,slow=74,SNR=31						
H11S2	WAKE ISLAND Hy	119.46	283	T	T	16 05 56.7	
	baz=97,slow=75,SNR=28						
H11S1	WAKE ISLAND Hy	119.47	283	T	T	16 05 48.2	
	baz=97,slow=75,SNR=21						
H11S3	WAKE ISLAND Hy	119.48	283	T	T	16 05 49.1	
	baz=97,slow=75,SNR=19						
WRA	Warramunga Arr	134.50	223	PKP	PKPdf	13 55 46.1	-0.1
	0.2nm,0.9s,baz=127,slow=2.1,SNR=4.1						
SONM	Songino Array	146.37	356	PKPbc	PKPab	13 56 08.9	-0.1
	0.6nm,0.5s,baz=332,slow=2.5,SNR=3.4						

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*ISCJB **26** 13:43:34.6±0.4, 18°.61S±0°.04×69°.41W±0°.06, h135^{km}±3^{km}, mb3.7/9, Error ellipse: s-maj=10.3km s-min=6.1km az=17.4*

*IDC **26** 13:43:36.9±2.3, 18°.46S×69°.19W, h133^{km}±19^{km}, mb3.6/10, mb1 3.8/13, mb1mx3.6/42, mbtmp4.1/13, Error ellipse: s-maj=23.0km s-min=16.0km az=77.0*

*GUC **26** 13:43:36.9±0.6, 18°.65S×69°.29W, h111^{km}±4^{km}, ML3.8*

ISC 26 13:43:35.7±0.7**,18°.60S**±0°.05×**69°.33W**±0°.07**,h125**^{km}±6^{km}**,**
n24,σ1^{s}.29/32**,mb3.9**/9**,6C-1D,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB16	IPOC Station P	0.31	327	⇓iP	Pn	13 43 54.9	+0.9
PB16				iS	Sn	13 44 07.8	0.0
PB16				IAML		13 44 09.2	
	comp=E,5µm,0.7s						
MNMC	Minye Minye	0.59	205	⇑iP	Pn	13 43 54.9	-0.2
MNMC				iS	Sn	13 44 09.0	-0.8
MNMC				IAML		13 44 14.3	
	comp=E,7µm,0.4s						
PB12	IPOC Station P	0.95	269	⇑iP	Pn	13 43 58.5	+0.7
PB12				iS	Sn	13 44 15.2	+0.7
PB12				IAML		13 44 16.0	
	comp=E,3µm,0.3s						
PSGC	Pisagua	1.25	217	⇑iP	Pn	13 44 01.1	+0.3
PSGC				iS	Sn	13 44 19.5	-0.3
PSGC				IAML		13 44 23.4	
	comp=E,773nm,0.3s						
PB08	IPOC Station P	1.54	174	⇑iP	Pn	13 44 05.0	+0.6
PB08				iS	Sn	13 44 26.6	+0.4
PB08				IAML		13 44 28.1	
	comp=E,827nm,0.4s						
PB01	IPOC Station P	2.44	183	⇑iP	Pn	13 44 14.9	-0.1
PB01				iS	Sn	13 44 44.1	-1.1
PB01				IAML		13 44 46.2	
	comp=E,424nm,0.3s						
LPAZ	La Paz	2.57	27	P	Pn	13 44 17.6	+0.5
	comp=E,25nm,0.3s,baz=191,slow=3.8,SNR=326						
LPAZ				S	Sn	13 44 49.8	+0.8
	comp=E,2.6nm,0.3s,baz=244,slow=14,SNR=2.3						
PB02	IPOC Station P	2.76	191	⇑iP	Pn	13 44 19.2	+0.1
PB02				iS	Sn	13 44 51.3	-1.3
PB02				IAML		13 45 02.1	
	comp=E,840nm,0.6s						
SIV	San Ignacio	8.30	73	P	Pn	13 45 30.8	-2.6
	comp=E,9.4nm,0.3s,baz=270,slow=11,SNR=52						
SIV				S	Sn	13 47 08.6	+3.1
	baz=262,slow=23,SNR=0.9						
PTGA	Pitinga	19.99	28	P	P	13 47 56.6	-1.9
	comp=E,3.6nm,0.3s,baz=278,slow=22,SNR=29						
BDFB	Brasilia	20.58	85	P	Pn	13 48 05.8	-2.7
	comp=E,6.7nm,0.4s,baz=247,slow=9.1,SNR=7.2						
PLCA	Paso Flores	22.09	182	P	P	13 48 22.1	+1.4
	comp=E,1.5nm,0.7s,baz=22,slow=11,SNR=3.4						
TXAR	Lajitas Array	58.04	325	P	P	13 53 14.7	-1.2
	comp=E,0.3nm,0.6s,baz=123,slow=4.6,SNR=3.4						
SNAA	Sanae	65.14	161	P	P	13 54 03.1	+0.2
	comp=E,0.6nm,0.6s,baz=270,slow=7.6,SNR=6.7						
PDAR	Pinedale Array	71.41	330	P	P	13 54 41.4	-1.1
	comp=E,0.2nm,0.4s,baz=102,slow=6.7,SNR=3.9						
QSPA	South Pole Qui	71.58	180	P	P	13 54 44.8	+1.7
	comp=E,1.0nm,0.5s,baz=124,slow=3.6,SNR=5.7						
KOWA	Kowa	72.25	68	P	P	13 54 46.5	-1.3
	comp=E,1.5nm,0.7s,baz=239,slow=8.2,SNR=3.6						
ULM	Lac du Bonnet	72.44	342	P	P	13 54 46.5	-1.7
	comp=E,2.5nm,0.5s,baz=160,slow=5.6,SNR=3.3						
TORD	Torodi Ar. Bea	76.78	71	P	P	13 55 12.7	-1.3
	comp=E,1.4nm,0.4s,baz=258,slow=5.7						
YKA	Yellowknife Ar	88.33	341	P	P	13 56 13.9	+1.2
	comp=E,1.1nm,0.3s,baz=133,slow=4.7,SNR=29						
ASAR	Alice Springs	132.26	209	PKP	PKPdf	14 02 36.3	+0.5
	comp=E,0.2nm,0.5s,baz=146,slow=1.4,SNR=4.8						
WRA	Warramunga Arr	135.21	212	PKP	PKPdf	14 02 42.8	+1.4
	comp=E,0.3nm,0.6s,baz=144,slow=1.5,SNR=7.2						
MJAR	Matsushiro Arr	149.90	312	PKPbc	PKPbc	14 03 12.8	+1.2
	comp=E,1.2nm,0.6s,baz=116,slow=1.1,SNR=5.6						
SONM	Songino Array	150.63	6	PKPbc	PKPbc	14 03 14.3	+1.1
	comp=E,0.6nm,0.5s,baz=180,slow=0.7,SNR=4.0						

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*ISCJB **26** 14:05:52.2±0.5, 18°.74S±0°.04×69°.32W±0°.09, h139^{km}±5^{km}, mb3.6/5, Error ellipse: s-maj=14.5km s-min=6.2km az=8.5*

*GUC **26** 14:05:53.8±0.7, 18°.75S×69°.33W, h121^{km}±4^{km}, ML3.8*

*IDC **26** 14:05:56.1±1.9, 18°.73S×68°.87W, h143^{km}±16^{km}, mb3.5/6, mb1 3.6/9, mb1mx3.4/44, mbtmp4.0/9, MS2.3/1, Ms1 2.5/1, ms1mx2.3/30, Error ellipse: s-maj=23.3km s-min=18.4km az=85.0*

ISC 26 14:05:53.3±0.7**,18°.73S**±0°.04×**69°.21W**±0°.08**,h123**^{km}±7^{km}**,**
n20,σ1^{s}.35/29**,mb3.6**/5**,8C,Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB16	IPOC Station P	0.48	324	⇑iP	Pn	14 06 13.1	+1.0
PB16				iS	Sn	14 06 27.4	+1.1
PB16				IAML		14 06 27.7	
	comp=E,5µm,0.3s						
MNMC	Minye Minye	0.54	222	⇑iP	Pn	14 06 12.7	+0.6
MNMC				iS	Sn	14 06 27.0	+0.7
PB12	IPOC Station P	1.06	276	⇑iP	Pn	14 06 16.1	-0.1
PB12				iS	Sn	14 06 32.8	-0.8
PB12				IAML		14 06 34.6	
	comp=E,3µm,0.2s						
PB11	IPOC Station P	1.11	202	⇑iP	Pn	14 06 17.5	+0.7
PB11				iS	Sn	14 06 34.8	+0.1
PB11				IAML		14 06 35.8	
	comp=E,5µm,0.5s						
PSGC	Pisagua	1.22	225	⇑iP	Pn	14 06 17.8	-0.1
PSGC				iS	Sn	14 06 35.8	-0.7
PSGC				IAML		14 06 36.9	
	comp=E,1µm,0.1s						
PB08	IPOC Station P	1.41	178	⇑iP	Pn	14 06 21.7	+1.4
PB08				iS	Sn	14 06 42.2	+1.5
PB08				IAML		14 06 42.8	
	comp=E,871nm,0.2s						
PB01	IPOC Station P	2.32	186	⇑iP	Pn	14 06 31.6	+0.7
PB01				iS	Sn	14 06 59.5	-0.4
LPAZ	La Paz	2.64	23	P	Pn	14 06 37.5	+1.9
	comp=E,5.0nm,0.3s,baz=201,slow=14,SNR=87						
LPAZ				S	Sn	14 07 10.7	+2.8
	comp=E,2.4nm,0.3s,baz=29,slow=21,SNR=4.4						
LPAZ				LR	LR	14 07 29.4	
	comp=E,69nm,21.4s,baz=118,slow=37						
PB07	IPOC Station P	3.05	192	IAML		14 07 21.0	
	comp=E,244nm,0.3s						
PB09	IPOC Station P	3.05	181	⇑iP	Pn	14 06 41.8	+1.3
PB09				iS	Sn	14 07 17.2	+0.2
PB09				IAML		14 07 21.2	
	comp=E,228nm,0.3s						
SIV	San Ignacio	8.23	72	P	Pn	14 07 49.2	-0.8
	comp=E,2.2nm,0.3s,baz=269,slow=13,SNR=18						
SIV				S	Sn	14 09 18.5	-3.0
	comp=E,0.2nm,0.3s,baz=222,slow=20,SNR=3.0						
PTGA	Pitinga	20.05	28	P	P	14 10 15.9	-1.1
	comp=E,5.1nm,0.3s,baz=325,slow=23,SNR=38						
BDFB	Brasilia	20.48	85	P	P	14 10 20.3	-1.4
	comp=E,2.6nm,0.3s,baz=243,slow=9.0,SNR=3.7						
PLCA	Paso Flores	21.96	183	P	P	14 10 38.6	+1.4
	comp=E,2.1nm,0.8s,baz=9.1,slow=12,SNR=3.2						
SNAA	Sanae	64.98	161	P	P	14 16 19.6	-0.2
	comp=E,0.7nm,0.7s,baz=300,slow=8.1,SNR=3.9						
DBIC	Dimbokro	68.25	75	P	P	14 16 40.3	-1.0
	comp=E,2.3nm,0.6s,baz=254,slow=6.3,SNR=3.7						
TORD	Torodi Ar. Bea	76.71	71	P	P	14 17 29.4	-2.1
	comp=E,0.6nm,0.6s,baz=260,slow=5.3						
YKA	Yellowknife Ar	88.49	341	P	P	14 18 33.0	+1.6
	comp=E,0.2nm,0.3s,baz=134,slow=6.0,SNR=3.6						
WRA	Warramunga Arr	135.16	212	PKP	PKPdf	14 24 59.5	+0.3
	comp=E,0.4nm,1.0s,baz=134,slow=1.9,SNR=3.1						
SONM	Songino Array	150.75	6	PKPbc	PKPbc	14 25 31.8	+0.5
	comp=E,0.5nm,0.4s,baz=336,slow=3.2,SNR=2.7						

KRSC 26 14:07:24.1±1.9**,49°.10N**×**157°.20E,h8**^{km}±41^{km}**,ML3.8,**
East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.73	337	eP	Pn	14 07 54.2	-0.3
SKR				eS	Sn	14 08 15.6	-1.1
PAU	Pauzhetka	2.38	354	eP	Pb	14 08 06.0	-1.2
PAU				eS	Sb	14 08 35.7	-1.1
KDTR	Khodutka, Kamc	2.77	11	eP	Pn	14 08 10.5	+1.8
KDTR				eS	Sb	14 08 45.8	-2.0
MIPR	Malaya Ipel'ka	3.19	355	eP	Pn	14 08 16.8	+2.3
ASAK	Asacha	3.32	7	eP	Pb	14 08 20.1	-3.1
RUS	Russkaya	3.44	13	eP	Pn	14 08 20.9	+3.0
RUS				eS	Sn	14 09 02.9	+4.1
MTVR	Mutnovka	3.45	10	eP	Pn	14 08 20.8	+2.7
PET	Petropavlovsk	4.04	13	eP	Pn	14 08 29.9	+3.8
PET				S	Sb	14 09 19.4	-4.8
DALK	Dalny	4.06	13	eP	Pn	14 08 29.6	+3.2
UGLR	Uglovaya	4.24	13	eP	Pn	14 08 33.7	+4.7
AVH	Avacha	4.28	12	eP	Pb	14 08 34.8	-4.8
SDLR	Sedlovina	4.32	14	eP	Pn	14 08 33.9	+3.8
SPN	Mys Shipunski	4.38	23	eP	Pn	14 08 35.3	+4.5
SPN				eS	Sn	14 09 27.7	+5.7
GNL	Ganaly	4.63	5	eP	Pn	14 08 39.2	+4.9
KBTR	Krutoberegovo	7.89	23	eP	Pn	14 09 22.5	+3.5

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*ISCJB **26** 14:45:47.3±0.5, 5°.68S±0°.07×154°.21E±0°.07, h100^{km}, mb4.0/15, Error ellipse: s-maj=10.6km s-min=8.7km az=37.1*

*IDC **26** 14:45:48.5±3.5, 5°.65S×154°.19E, h93^{km}±32^{km}, mb3.8/14, mb1 3.9/15, mb1mx3.7/48, mbtmp4.2/15, MS2.9/7, Ms1 2.9/7, ms1mx2.7/40, Error ellipse: s-maj=18.6km s-min=15.5km az=76.0*

ISC 26 14:45:48.6±0.7**,5°.77S**±0°.09×**154°.27E**±0°.10**,h100^{km},n26,**
σ1^{s}.22/20**,mb3.9**/15**,Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	6.70	123	LR	LR	14 50 08.4	
	comp=Z,91nm,19.2s,baz=16,slow=38						
PMG	Port Moresby	7.92	242	P	Pn	14 47 39.8	-1.3
	19nm,0.3s,baz=51,slow=12,SNR=44						
PMG				S	Sn	14 49 09.6	+0.5
	5.1nm,0.3s,baz=81,slow=22,SNR=5.7						
PMG				LR	LR	14 50 10.0	
	comp=Z,119nm,20.5s,baz=44,slow=33						
DZM	Mont Dzumac	20.03	145	P	Pn	14 50 15.6	-0.9
	3.8nm,0.5s,baz=171,slow=19,SNR=6.5						
DZM				S	S	14 53 50.5	-3.3
	2.4nm,0.8s,baz=136,slow=19,SNR=4.2						
GUMO	Guam	21.38	334	LR	LR	14 59 05.6	
	comp=Z,9.7nm,19.8s,baz=129,slow=38						
WRA	Warramunga Arr	23.96	232	P	P	14 50 55.0	+1.1
	4.4nm,0.8s,baz=53,slow=9.8,SNR=57						
ASAR	Alice Springs	26.48	226	P	P	14 51 18.2	+1.6
	1.1nm,0.6s,baz=56,slow=8.8,SNR=22						
ASAR				LR	LR	15 01 08.8	
	comp=Z,59nm,20.6s,baz=124,slow=35						
H11S3	WAKE ISLAND Hy	27.04	27	T	T	15 19 45.8	
	baz=204,slow=76						
H11S2	WAKE ISLAND Hy	27.05	27	T	T	15 19 47.2	
	baz=204,slow=76						
H11S1	WAKE ISLAND Hy	27.06	27	T	T	15 19 47.8	
	baz=204,slow=76						
H11N1	WAKE ISLAND Hy	28.20	26	T	T	15 21 13.1	
	baz=204						
H11N3	WAKE ISLAND Hy	28.22	26	T	T	15 21 10.6	
	baz=204						
H11N2	WAKE ISLAND Hy	28.22	26	T	T	15 21 13.2	
	baz=204						
STKA	Stephens Creek	28.55	203	P	P	14 51 36.2	+1.1
	4.0nm,0.8s,baz=37,slow=14,SNR=5.7						
JNU	Nakatsue	44.60	332	P	P	14 53 50.7	-0.3
	4.6nm,0.6s,baz=174,slow=10,SNR=7.3						
KSRS	Korea Array	49.52	332	P	P	14 54 28.8	-0.4
	1.1nm,0.7s,baz=152,slow=9.0,SNR=5.5						
KSRS				LR	LR	15 14 22.6	
	comp=Z,7.9nm,18.5s,baz=225,slow=35						
ASAJ	Asahikawa	50.76	349	P	P	14 54 38.8	+0.4
	2.3nm,0.8s,baz=197,slow=11,SNR=5.1						
ASAJ				LR	LR	15 13 39.5	
	comp=Z,15nm,21.2s,baz=172,slow=33						
PPT	Papeete	56.04	107	P	P	14 55 19.3	+1.6
	33nm,0.8s,baz=241,slow=19,SNR=2.6						
KLR	Kul'dur	58.19	343	P	P	14 55 32.4	+0.3
	0.2nm,0.6s,baz=171,slow=3.4,SNR=3.4						
PETK	Petropavlovsk-	58.73	2	P	P	14 55 35.2	-0.6
	7.4nm,1.2s,baz=163,slow=8.2						
PETK				LR	LR	15 15 49.4	
	comp=Z,15nm,21.1s,baz=149,slow=31						
CMAR	Chiang Mai Arr	59.61	295	P	P	14 55 42.5	-0.1
	0.7nm,0.4s,baz=127,slow=5.3,SNR=4.5						
SONM	Songino Array	67.92	327	P	P	14 56 36.5	-0.3
	0.6nm,0.4s,baz=133,slow=6.1,SNR=2.5						
MKAR	Makanchi Array	82.01	319	P	P	14 57 57.9	+0.2
	0.7nm,0.6s,baz=97,slow=6.7,SNR=9.7						
ILAR	Eielson Array	82.51	22	P	P	14 58 00.2	+0.3
	0.7nm,0.6s,baz=240,slow=5.6,SNR=7.8						
ZALV	Zalesovo Beam	82.77	326	P	P	14 58 01.5	+0.1
	0.7nm,0.5s,baz=117,slow=5.7,SNR=3.0						
KURBB	Kurchatov Arra	85.46	322	P	P	14 58 13.5	-1.7
	0.3nm,0.4s,baz=102,slow=5.1,SNR=4.3						
TORD	Torodi Ar. Bea	151.99	287	PKPbc	PKPbc	15 05 33.5	+0.3
	baz=63,slow=3.6						
TORD				PKPab	PKPab	15 05 41.8	-1.0
	baz=63,slow=3.8						

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*ISCJB **26** 14:50:44.1±0.9, 55°.6S±0°.1×28°.2W±0°.4, h45^{km}, mb4.2/6, MS3.1/1, Error ellipse: s-maj=35.4km s-min=15.7km az=159.1*

*IDC **26** 14:50:49.2±8.3, 55°.63S×28°.28W, h75^{km}±74^{km}, mb4.0/6, mb1 4.1/7, mb1mx3.8/31, mbtmp4.3/7, ML4.7/1, MS3.1/1, Ms1 3.3/1, ms1mx2.7/33, Error ellipse: s-maj=36.7km s-min=24.5km az=74.0*

ISC 26 14:50:45.7±0.8**,55°.6S**±0°.1×**28°.3W**±0°.3**,h45^{km},n19,**
σ0^{s}.94/13**,mb4.3**/5**,South Sandwich Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VNA3	Neumayer Olymp	17.66	160	P	P	14 54 48.8	+0.4
SNAA	Sanae	19.44	156	P	P	14 55 08.3	+0.2
SNAA	Sanae	19.44	156	P	P	14 55 08.2	+0.2
	2.4nm,0.3s,baz=301,slow=13,SNR=142						
QSPA	South Pole Qui	34.68	180	P	P	14 57 31.0	+0.2
	3.6nm,0.5s,baz=214,slow=2.4,SNR=26						
MAW	Mawson	40.91	144	P	P	14 58 22.3	-0.7
	1.3nm,0.5s,baz=233,slow=5.1,SNR=3.6						
VNDA	Vanda	47.02	183	P	P	14 59 12.3	+0.5
	2.7nm,0.6s,baz=189,slow=5.7,SNR=17						
H10S2	ASCENSION HYDR	47.73	18	T	T	15 50 59.1	
	baz=192						
H10S3	ASCENSION HYDR	47.74	18	T	T	15 50 58.9	
	baz=192						
H10S1	ASCENSION HYDR	47.75	18	T	T	15 51 07.5	
	baz=192						
H10N1	ASCENSION HYDR	48.85	18	T	T	15 52 42.2	
	baz=190						
H10N3	ASCENSION HYDR	48.85	18	T	T	15 52 37.4	
	baz=190						
H10N2	ASCENSION HYDR	48.87	18	T	T	15 52 37.2	
	baz=190						
LPAZ	La Paz	49.58	306	P	P	14 59 33.2	+0.2
	0.8nm,0.4s,baz=152,slow=9.2,SNR=3.9						
LPAZ				LR	LR	15 22 52.9	
	comp=Z,20nm,18.9s,baz=138,slow=39						
TORD	Torodi Ar. Bea	72.96	31	P	P	15 02 11.0	+0.7
	2.2nm,0.5s,baz=199,slow=7.0						
ASAR	Alice Springs	99.63	163	P	Pdif	15 04 22.3	-2.1
	0.5nm,0.8s,baz=203,slow=2.5,SNR=5.1						
YKA	Yellowknife Ar	135.39	319	PKP	PKPdf	15 09 57.9	-1.1
	0.3nm,0.4s,baz=131,slow=2.2,SNR=4.8						
MKAR	Makanchi Array	137.34	72	PKP	PKPdf	15 10 04.2	+1.0
	0.2nm,0.7s,baz=299,slow=1.5,SNR=3.1						
ILAR	Eielson Array	149.32	312	PKPbc	PKPbc	15 10 27.4	-0.6
	1.9nm,0.8s,baz=120,slow=1.7,SNR=18						
SONM	Songino Array	151.33	86	PKPbc	PKPbc	15 10 32.8	-0.7
	1.4nm,0.6s,baz=230,slow=2.4,SNR=6.6						

MAN 26 14:52:20.6,11°.42N×**125°.38E,h1^{km},mb3.8,ML2.6,MS2.1,**
1D,Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	Borongan	0.19	18	eP	Pg	14 52 24.1	-0.1
PLP	Palo	0.47	237	⇓eP	Pg	14 52 29.6	0.0
PLP				eS	Sb	14 52 38.8	-0.3
CNP	Catarman	1.29	327	eP	Pg	14 52 45.2	-0.1
CNP				eS	Sn	14 53 04.1	+0.5

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*IDC **26** 15:02:06.2±9.8, 15°.52N×96°.43W, h0^{km}, mb3.4/3, mb1 3.8/4, mb1mx3.5/47, mbtmp3.4/4, ML3.7/1, MS2.9/3, Ms1 2.9/3, ms1mx2.6/23, Error ellipse: s-maj=183.3km s-min=124.2km az=17.0*

*ISCJB **26** 15:02:16.9±0.7, 16°.23N±0°.06×97°.46W±0°.04, h38^{km}±7^{km}, mb3.9/13, MS2.6/1, Error ellipse: s-maj=9.8km s-min=5.5km az=11.0*

*NEIC **26** 15:02:19.6±0.0, 16°.22N×97°.47W, h24^{km}, mb4.0/16, MD4.4(MEX), After MEX.*

*MEX **26** 15:02:19.6±0.5, 16°.22N×97°.47W, h27^{km}±10^{km}, MD4.3*

ISC 26 15:02:15.7±1.4**,16°.24N**±0°.06×**97°.44W**±0°.04**,h20**^{km}±6^{km}**,**
n42,σ1^{s}.70/48**,mb4.1**/13**,Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.68	283	eP	Pn	15 02 30.3	+0.1
PNIG				eS	Sg	15 02 39.0	+0.7
PNIG	Pinotepa	0.68	283	ePg	Pn	15 02 30.3	+0.1
PNIG				eSn	Sg	15 02 39.0	+0.7
VHO	Vista Hermosa	1.07	39	eP	Pg	15 02 36.6	-0.1
VHO				eS	Sn	15 02 50.2	-0.1
VHO	Vista Hermosa	1.07	39	ePn	Pg	15 02 36.6	-0.1
VHO				eSn	Sn	15 02 50.2	-0.1
HUIG	Huatulco	1.36	110	eP	Pb	15 02 40.9	+0.2
HUIG				iS	Sb	15 02 57.9	+0.2
HUIG	Huatulco	1.36	110	ePn	Pb	15 02 40.9	+0.2
TLIG	Tlapa	1.70	321	eP	Pn	15 02 45.5	+1.0
TLIG				iS	Sn	15 03 05.7	-0.1
TLIG	Tlapa	1.70	321	ePn	Pn	15 02 45.5	+1.0
TPIG	Tehuac#an	2.17	2	iP	Pn	15 02 52.8	+1.8
TPIG				iS	Sn	15 03 18.0	+0.5
TPIG	Tehuac#an	2.17	2	ePn	Pb	15 02 53.9	-0.7
CAIG	El Cayaco	2.83	287	eP	Pn	15 03 00.5	+0.7
CAIG				iS	Sn	15 03 32.9	-0.4
CAIG	El Cayaco	2.83	287	ePn	Pn	15 03 00.5	+0.7
UNM	Universidad Na	3.49	332	ePn	Pn	15 03 05.7	-3.5
LVIG	Laguna Verde	3.60	16	ePn	Pn	15 03 10.2	-0.3
LVIG				eLg	Lg	15 04 10.8	
MOIG	Morelia	4.94	314	ePn	Pn	15 03 27.9	-1.3
MOIG				eLg	Lg	15 04 52.0	
CCIG	Comitan	5.09	89	ePn	Pn	15 03 31.5	+0.3
CCIG				eLg	Lg	15 04 58.4	
ZAIG	Zacatecas	8.10	324	ePn	Pn	15 04 13.2	+0.6
ESPN	Las Esperanzas	13.36	106	ePn	Pn	15 05 21.7	-2.6
SLBS	Sierra La Lagu	13.89	304	ePn	Pn	15 05 28.3	-3.4
TXAR	Lajitas Array	14.24	337	Pn	P	15 05 45.7	+2.0
	0.1nm,0.3s,baz=156,slow=12,SNR=7.1						
TXAR				LR	LR	15 11 39.6	
	comp=Z,55nm,18.1s,baz=0.0,slow=38						
TX31	Lajitas Ar. Si	14.24	337	ePn	Pn	15 05 34.1	-2.3
LPIG	La Paz	14.39	305	LR	LR	15 11 20.5	
	comp=Z,32nm,21.2s,baz=130,slow=36						
ABTX	Abilene, Hawle	16.44	353	ePn	P	15 06 07.7	-0.3
	11nm,1.1s						
MSTX	Muleshoe	18.30	346	eP	Pn	15 06 28.0	-0.6
	20nm,1.7s						
MIAR	Mount Ida	18.56	10	eP	Pn	15 06 32.1	+0.4
	8.2nm,1.0s						
Z50A	Ashland	19.89	29	eP	P	15 06 46.3	+0.4
	3.8nm,0.6s						
152A	Waverly Hall	20.01	33	eP	Pn	15 06 51.5	+2.4
	17nm,1.4s						
Y49A	Blount Mountai	20.16	28	eP	P	15 06 48.0	-1.0
	5.5nm,0.8s						
T42A	Van Buren	21.46	14	eP	P	15 06 58.1	-4.8
	26nm,1.9s						
SWET	Sewanee	21.53	26	eP	P	15 07 03.4	-0.3
	13nm,0.9s						
V48A	Smith Brothers	21.61	24	eP	P	15 07 04.0	-0.6
	6.6nm,0.8s						
S39A	Bolivar	21.68	9	eP	P	15 07 06.2	+0.9
	4.6nm,0.9s						
T25A	Trinidad	21.72	345	eP	P	15 07 08.4	+2.5
	5.3nm,0.9s						
R40A	Maddies Statio	22.44	11	eP	P	15 07 14.1	+0.6
	18nm,1.5s						
SDCO	Great Sand Dun	22.58	343	eP	P	15 07 17.2	+1.9
	2.3nm,0.8s						
TKL	Tuckaleechee C	22.87	30	LR	LR	15 17 42.9	
	comp=Z,22nm,19.5s,baz=358,slow=41						
WUAZ	Wupatki	22.88	330	eP	P	15 07 21.4	+3.1
	6.1nm,1.0s						
MVCO	Mesa Verde	23.07	337	eP	P	15 07 22.7	+2.3
	14nm,1.6s						
PDAR	Pinedale Array	28.40	341	P	P	15 08 11.8	+2.6
	0.2nm,0.4s,baz=130,slow=8.4,SNR=2.2						
NVAR	Mina Array Bea	28.72	324	P	P	15 08 15.5	+3.5
	0.1nm,0.3s,baz=134,slow=7.7,SNR=3.7						
C09A	Chrisman Ranch	35.85	336	eP	P	15 09 13.9	-0.2
	4.7nm,0.4s						
YKA	Yellowknife Ar	47.76	349	P	P	15 10 51.5	+0.2
	0.3nm,0.5s,baz=154,slow=7.6,SNR=2.9						

MEX 26 15:13:13.0±0.3**,14°.91N**×**93°.15W,h73**^{km}±7^{km}**,MD3.7,**
Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.80	355	*e*P	Pn	15 13 28.0	-1.3
PCIG				*e*S	Sn	15 13 39.5	-1.8
THIG		0.85	90	*e*P	Pn	15 13 28.4	-1.5
THIG				*i* S	Sn	15 13 40.8	-1.6
CCIG	**Comitan**	1.68	35	*i* P	Pn	15 13 39.7	-0.9
CCIG				*i* S	Sn	15 13 59.8	-1.7
TGIG		1.86	1	*e*P	Pn	15 13 41.6	-1.4
TGIG				*e*S	Sn	15 14 03.6	-2.0

MEX 26 15:55:37.1±0.8**,18°.18N×101°.78W,h8^{km}**±10^{km}**,MD3.8, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	**Zihuatanejo**	0.64	152	*i* P	Pg	15 55 48.4	-1.1
ZIIG				*i* S	Sg	15 55 57.4	-0.5
ARIG	**Puente Sto Nin**	1.37	85	*e*P	Pn	15 55 58.5	-4.1
ARIG				*i* S	Sb	15 56 16.2	-4.5
MMIG	**Aquila**	1.49	275	*i* P	Pn	15 56 01.3	-2.9
MMIG				*i* S	Sn	15 56 18.1	-5.8

MEX 26 16:10:51.1±0.3**,14°.97N×93°.15W,h60^{km}**±8^{km}**,MD3.6, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.74	355	*e*P	Pn	16 11 04.5	-1.3
PCIG				*e*S	Sn	16 11 14.7	-1.9
THIG		0.86	94	*i* P	Pn	16 11 05.4	-1.9
THIG				*e*S	Sn	16 11 17.5	-1.7
CCIG	**Comitan**	1.63	37	*e*P	Pn	16 11 16.2	-1.5
CCIG				*i* S	Sn	16 11 36.5	-1.4
TGIG		1.80	1	*e*P	Pn	16 11 18.4	-1.5
TGIG				*i* S	Sn	16 11 39.5	-2.3

*IDC **26** 16:24:52.4±54.0, 19°.64S×179°.19E, h0^{km}, mb4.5/3, mb1 4.7/3, mb1mx3.8/38, mbtmp4.5/3, MS3.5/1, Ms1 3.5/1, ms1mx2.6/39, Error ellipse: s-maj=972.9km s-min=144.3km az=81.0*

*NEIC **26** 16:25:32.3±2.7, 20°.28S×179°.06W, h578^{km}±41^{km}, mb4.6/12, Error ellipse: s-maj=18.2km s-min=9.7km az=147.0*

*ISCJB **26** 16:25:34.4±0.7, 20°.4S±0°.1×179°.0W±0°.1, h645^{km}, mb4.7/18, Error ellipse: s-maj=20.4km s-min=11.0km az=43.6*

ISC 26 16:25:36.8±1.0**,20°.4S**±0°.2×**179°.1W**±0°.2**,h645^{km},n23, σ0^{s}.89**/22**,mb4.7**/18**,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNZO	**South Karori**	21.51	193	*e*P	P	16 29 42.3	+0.5
	139nm,1.3s						
RPZ	**Rata Peaks**	24.68	197	*e*P	P	16 30 08.7	-1.2
	118nm,2.0s						
WHZ	**Wether Hill Ro**	27.58	200	*e*P	P	16 30 30.8	-4.5
	97nm,1.7s						
EIDS	**Eidsvold**	27.92	254	*e*P	P	16 30 38.1	-0.3
	4.1nm,0.8s						
ARMA	**Armidale**	28.22	243	*e*P	P	16 30 40.3	-0.8
	25nm,1.4s						
CAN	**Canberra**	31.75	235	*e*P	P	16 31 11.5	+0.4
	50nm,1.7s						
CTAO	**Charters Tower**	32.51	264	*e*P	P	16 31 18.0	+0.3
	8.5nm,1.0s						
STKA	**Stephens Creek**	36.94	244	P	P	16 31 53.4	-0.6
	2.0nm,0.8s,baz=75,slow=12,SNR=5.3						
STKA	**Stephens Creek**	36.94	244	*e*P	P	16 31 53.5	-0.6
	7.4nm,1.8s						
AS01	**Alice Springs**	43.53	257	*e*P	P	16 32 46.3	-0.1
AS31	**Alice Springs**	43.58	257	*e*P	P	16 32 46.4	-0.3
AS31				*e*		16 49 59.3	
ASAR	**Alice Springs**	43.58	257	P	P	16 32 46.6	-0.1
	11nm,0.5s,baz=91,slow=7.9,SNR=428						
ASAR				LR	LR	16 49 59.3	
	comp=Z,52nm,18.2s,baz=147,slow=36						
WB2	**Warramunga Arr**	43.62	262	*e*P	P	16 32 46.6	-0.4
WRAB	**Tennant Creek**	43.62	262	*e*P	P	16 32 46.8	-0.3
	11nm,1.1s						
WR1	**Warramunga Arr**	43.63	262	*e*P	P	16 32 46.8	-0.3
	7.1nm,0.6s						
WRA	**Warramunga Arr**	43.63	262	P	P	16 32 46.8	-0.3
	4.8nm,0.5s,baz=96,slow=7.7,SNR=145						
HLP	**Hilina Pali**	45.80	32	*e*P	P	16 33 01.6	-2.0
	207nm,1.1s						
STCH	**Steam Cracks**	45.97	32	*e*P	P	16 33 03.7	-1.1
	128nm,0.6s						
MTN	**Manton Dam**	48.17	271	*e*P	P	16 33 21.2	-0.2
	7.4nm,0.8s						
MIDW	**Midway**	48.35	2	*e*P	P	16 33 22.4	+0.1
	185nm,1.1s						
FORT	**Forrest**	48.43	247	*e*P	P	16 33 22.5	-0.5
	36nm,0.9s						
MNAI	**Manna**	77.24	270	*e*P	P	16 36 28.7	+1.5
	371nm,1.1s						
SCKWR	**San Luis Creek**	79.12	44	*e*P	P	16 36 38.3	+1.8

*ISN **26** 16:27:04.6±0.3, 36°.77N×42°.77E, h0^{km}, ML2.5*

*CSEM **26** 16:27:07.1±0.5, 36°.92N×42°.60E, h5^{km}, ML2.2, Error ellipse: s-maj=13.7km s-min=8.2km az=21.0*

*ISK **26** 16:27:08.7, 37°.27N×42°.54E, h5^{km}, ML2.5/6*

*ISCJB **26** 16:27:09.8±1.0, 37°.26N±0°.06×42°.59E±0°.04, h3^{km}±7^{km}, Error ellipse: s-maj=10.8km s-min=5.0km az=18.9*

*DDA **26** 16:27:10.9, 37°.35N×42°.62E, h6^{km}, Ml2.2*

ISC 26 16:27:10.0±1.3**,37°.29N**±0°.06×**42°.66E**±0°.03**,h5^{km}**±10^{km}**, n22,σ0^{s}.72**/36**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIRT	**Sirnak**	0.28	320	PG	Pg	16 27 14.4	-1.0
SIRT				SG	Sg	16 27 19.2	+0.2
SIRN	**S˜–rnak**	0.29	317	*i* P	Pg	16 27 14.7	-0.8
SIRN				*i* S	Sg	16 27 19.3	-0.1
CUKT	**Cukurca**	0.76	93	PG	Pb	16 27 26.1	+0.4
CUKT				SG	Sn	16 27 39.3	0.0
CUKT	**Cukurca**	0.76	93	*i* P	Pb	16 27 25.7	0.0
CUKT				*i* S	Sn	16 27 38.8	-0.5
CUKT	**Cukurca**	0.76	93	P	Pb	16 27 25.7	0.0
CUKT	**Cukurca**	0.76	93	*e*Pg	Pb	16 27 26.1	+0.4
CUKT				S	Sn	16 27 38.8	-0.5
CUKT				*e*Sg	Sn	16 27 39.3	0.0
HAKT	**HAKKARI**	0.88	72	*i* P	Pg	16 27 27.0	+0.2
HAKT				*i* S	Sn	16 27 41.3	-1.1
HAKT	**HAKKARI**	0.88	72	P	Pg	16 27 27.0	+0.2
HAKT				S	Sn	16 27 41.3	-1.1
SRTM	**Siirt_Merkez**	0.91	320	*i* P	Pg	16 27 26.9	-0.7
SRTM				*i* S	Sn	16 27 43.9	+0.8
BTMN	**Batman**	1.26	299	*i* P	Pg	16 27 34.3	+0.2
BTMN				*i* S	Sn	16 27 52.4	+0.8
BTMN	**Batman**	1.26	299	P	Pg	16 27 34.3	+0.2
BTMN				S	Sn	16 27 52.4	+0.8
GURO	**Guroymak-BITLI**	1.35	339	PN	Pb	16 27 35.5	-0.4
GURO				SN	Sg	16 27 54.9	+1.4
GURO	**Guroymak-BITLI**	1.35	339	*e*Pn	Pb	16 27 35.5	-0.4
GURO				*e*Sn	Sg	16 27 54.9	+1.4
MARD	**Mardin**	1.50	272	*i* P	Pg	16 27 38.0	-0.8
MARD				*i* S	Sg	16 27 59.9	+1.8
MAZI	**Mazidag**	1.77	276	PN	Pn	16 27 40.5	-0.8
MAZI	**Mazidag**	1.77	276	*e*Pn	Pn	16 27 40.5	-0.8
BNGB	**Bingˆ¶l**	2.31	318	PN	Pn	16 27 48.8	+0.1
BINT	**Bingol**	2.33	313	*e*Pn	Pn	16 27 48.8	-0.3
SVRC	**Sivrice-ELAZID**	2.87	293	PN	Pn	16 27 56.2	-0.3
SVRC	**Sivrice-ELAZID**	2.87	293	*e*Pn	Pn	16 27 56.2	-0.3
PTK	**Pertek**	3.04	303	PN	Pn	16 27 58.6	-0.2
PTK	**Pertek**	3.04	303	*e*Pn	Pn	16 27 58.6	-0.2

*DDA **26** 16:40:20.5, 40°.08N×35°.18E, h8^{km}, Ml3.5*

*ISK **26** 16:40:20.5, 40°.12N×35°.21E, h5^{km}, ML2.9/12*

*CSEM **26** 16:40:21.1±0.1, 40°.11N×35°.21E, h2^{km}, ML3.5*

ISC 26 16:40:21.2±0.9**,40°.11N**±0°.02×**35°.19E**±0°.01**,h9^{km}**±8^{km}**, n78,σ0^{s}.74**/120**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
COAL	**Corum-Alaca**	0.21	313	*i* P	Pg	16 40 25.3	-0.2
COAL				*i* S	Sg	16 40 28.6	+0.1
COAL	**Corum-Alaca**	0.21	313	P	Pg	16 40 25.3	-0.2
COAL				S	Sg	16 40 28.6	+0.1
CORM	**Corum**	0.43	279	PG	Pg	16 40 29.7	+0.1
CORM				SG	Sg	16 40 36.2	+0.9
CORM	**Corum**	0.43	279	*e*Pg	Pg	16 40 29.7	+0.1
CORM				*e*Sg	Sg	16 40 36.2	+0.9
YOZ	**Yozgat**	0.48	168	PG	Pg	16 40 30.4	-0.2
YOZ				SG	Sg	16 40 37.4	+0.5
YOZ	**Yozgat**	0.48	168	*e*Pg	Pg	16 40 30.4	-0.2
YOZ				*e*Sg	Sg	16 40 37.4	+0.5
CTAK	**Corum_Osmancik**	0.61	331	*i* P	Pg	16 40 32.9	-0.2
CTAK				*i* S	Sb	16 40 43.1	0.0
CTAK	**Corum_Osmancik**	0.61	331	P	Pg	16 40 32.9	-0.2
CTAK				S	Sb	16 40 43.1	0.0
CDAG	**Cicekdag**	0.79	232	*i* P	Pg	16 40 35.8	-0.7
CDAG				*i* S	Sg	16 40 45.6	-1.2
CDAG	**Cicekdag**	0.79	232	P	Pg	16 40 35.8	-0.7
CDAG				S	Sg	16 40 45.6	-1.2
TOKA	**Tokat**	1.01	78	*i* P	Pg	16 40 39.8	-0.8
TOKA				*i* S	Sn	16 40 55.7	-0.3
TOKA	**Tokat**	1.01	78	P	Pg	16 40 39.8	-0.8
HAVZ	**Havza**	1.04	23	*i* P	Pg	16 40 40.8	-0.4
HAVZ				*i* S	Sn	16 40 56.0	-0.8
HAVZ	**Havza**	1.04	23	P	Pg	16 40 40.8	-0.4
HAVZ				S	Sn	16 40 56.0	-0.8
TOKT	**Tokat**	1.06	78	PG	Pg	16 40 41.1	-0.5
TOKT				SG	Sb	16 40 55.8	0.0
TOKT	**Tokat**	1.06	78	*e*Pg	Pg	16 40 41.1	-0.5
TOKT				*e*Sg	Sb	16 40 55.8	0.0
CUSAR	**Sarkisla-SIVAS**	1.07	130	*i* P	Pg	16 40 40.7	-1.0
CUSAR				*i* S	Sb	16 40 56.0	-0.1
CUSAR	**Sarkisla-SIVAS**	1.07	130	P	Pg	16 40 40.7	-1.0
CUSAR				S	Sb	16 40 56.0	-0.1
KVT	**Kavak**	1.17	34	PN	Pb	16 40 42.6	-1.0
KVT				SN	Sg	16 40 58.9	+0.1
KVT	**Kavak**	1.17	34	*e*Pn	Pb	16 40 42.6	-1.0
KVT				*e*Sn	Sg	16 40 58.9	+0.1
TOS	**Tosya**	1.28	317	PN	Pg	16 40 45.8	0.0
TOS	**Tosya**	1.28	317	*e*Pn	Pg	16 40 45.8	0.0
CANT	**Cankiri**	1.29	293	PN	Pg	16 40 45.9	-0.1
ERBA	**Erbaa**	1.33	64	*i* P	Pn	16 40 45.6	-0.4
ERBA				*i* S	Sg	16 41 06.0	+2.2
ERBA	**Erbaa**	1.33	64	P	Pn	16 40 45.6	-0.4
AVNS	**Nevsehir-Avano**	1.33	192	*i* P	Pb	16 40 46.1	-0.3
AVNS				*i* S	Sg	16 41 03.9	0.0
AVNS	**Nevsehir-Avano**	1.33	192	P	Pb	16 40 46.1	-0.3
AVNS				S	Sg	16 41 03.9	0.0
BNN	**Bunyan**	1.36	158	PN	Pb	16 40 46.8	-0.1
BNN	**Bunyan**	1.36	158	*e*Pn	Pb	16 40 46.8	-0.1
KAMT	**Kaman**	1.36	237	PN	Pn	16 40 46.1	-0.4
KAMT	**Kaman**	1.36	237	*e*Pn	Pn	16 40 46.1	-0.4
ELDT	**Eldivan**	1.40	286	*i* P	Pb	16 40 47.2	-0.4
ELDT				*i* S	Sg	16 41 06.4	+0.3
ELDT	**Eldivan**	1.40	286	P	Pb	16 40 47.2	-0.4
ELDT				S	Sg	16 41 06.4	+0.3
SVSK	**Karacayir**	1.40	97	PN	Pb	16 40 47.1	-0.5
SVSK	**Karacayir**	1.40	97	*e*Pn	Pb	16 40 47.1	-0.5
SAMS	**Samsun-Alacam**	1.46	31	*i* P	Pb	16 40 48.2	-0.4
SAMS				*i* S	Sg	16 41 07.9	-0.3
SAMS	**Samsun-Alacam**	1.46	31	P	Pb	16 40 48.2	-0.4
SAMS				S	Sg	16 41 07.9	-0.3
ILGA	**Ilgaz**	1.46	310	*i* P	Pg	16 40 48.9	-0.3
ILGA				*i* S	Sg	16 41 08.3	+0.1
ILGA	**Ilgaz**	1.46	310	P	Pg	16 40 48.9	-0.3
ILGA				S	Sg	16 41 08.3	+0.1
CUALT	**Altinyayla-SIV**	1.47	124	*i* P	Pb	16 40 48.5	-0.4
CUALT				*i* S	Sg	16 41 09.9	+1.3
CUALT	**Altinyayla-SIV**	1.47	124	P	Pb	16 40 48.5	-0.4
CUALT				S	Sg	16 41 09.9	+1.3
SCER	**sogukcermik**	1.51	99	*i* P	Pb	16 40 49.4	-0.2
SCER				*i* S	Sg	16 41 10.9	+1.1
SCER	**sogukcermik**	1.51	99	P	Pb	16 40 49.3	-0.2
SCER				S	Sg	16 41 10.9	+1.1
DIKM	**Dikmen**	1.54	2	PN	Pb	16 40 49.3	-0.6
DIKM	**Dikmen**	1.54	2	*e*Pn	Pb	16 40 49.3	-0.6
KAST	**KASTAMONU**	1.68	326	*i* P	Pb	16 40 52.3	0.0
KAST				*i* S	Sg	16 41 15.5	+0.4
KAST	**KASTAMONU**	1.68	326	P	Pb	16 40 52.3	0.0
KAST				S	Sg	16 41 15.5	+0.4
BBAL	**Bala**	1.69	251	*i* P	Pb	16 40 52.1	-0.4
BBAL				*i* S	Sg	16 41 15.6	+0.1
BBAL	**Bala**	1.69	251	P	Pb	16 40 52.1	-0.4
BBAL				S	Sg	16 41 15.6	+0.1
AFSR	**Af¯ar-Bala (A**	1.76	249	PN	Pb	16 40 53.1	-0.6
AFSR	**Af¯ar-Bala (A**	1.76	249	*e*Pn	Pb	16 40 53.1	-0.6
AKSY	**AKSARAY - Alti**	1.83	218	*i* P	Pb	16 40 54.5	-0.4
AKSY				*i* S	Sg	16 41 19.1	-0.9
AKSY	**AKSARAY - Alti**	1.83	218	P	Pb	16 40 54.5	-0.4
AKSY				S	Sg	16 41 19.1	-0.9
ANTO	**Ankara**	1.85	263	PN	Pb	16 40 54.4	-0.9
ANTO	**Ankara**	1.85	263	*e*Pn	Pb	16 40 54.4	-0.9
LOD	**Lodumlu**	1.87	264	PN	Pb	16 40 54.4	-1.3
LOD	**Lodumlu**	1.87	264	*e*Pn	Pb	16 40 54.4	-1.3
SINO	**SINOP_Merkez**	1.91	0	*i* P	Pb	16 40 55.2	-0.9
SINO				*i* S	Sb	16 41 20.9	+0.8
SINO	**SINOP_Merkez**	1.91	0	P	Pb	16 40 55.2	-0.9
SINO				S	Sb	16 41 20.9	+0.8
SNOP	**Sinop**	1.91	0	PN	Pn	16 40 54.5	+0.6
SNOP	**Sinop**	1.91	0	*e*Pn	Pn	16 40 54.5	+0.6
SARI	**SarD1z-Kayseri**	1.95	150	PN	Pn	16 40 55.4	+0.7
CMDR	**Camlidere-ANKA**	2.11	281	*i* P	Pb	16 40 58.7	-1.0
CMDR				*i* S	Sb	16 41 27.1	+1.0
CMDR	**Camlidere-ANKA**	2.11	281	P	Pb	16 40 58.7	-1.0
CMDR				S	Sb	16 41 27.0	+1.0
SULT	**Sultanhani-AKS**	2.31	215	PN	Pn	16 41 00.3	+0.8
SULT	**Sultanhani-AKS**	2.31	215	*e*Pn	Pn	16 41 00.3	+0.8
DARE	**Darende-Malaty**	2.35	130	PN	Pn	16 41 00.8	+0.7
DARE	**Darende-Malaty**	2.35	130	*e*Pn	Pn	16 41 00.8	+0.7
KIZT	**Kizilcal**	2.84	245	PN	Pn	16 41 07.6	+0.8
KIZT	**Kizilcal**	2.84	245	*e*Pn	Pn	16 41 07.6	+0.8
KARA	**Karaisali**	2.85	182	PN	Pn	16 41 08.1	+1.2
KARA	**Karaisali**	2.85	182	*e*Pn	Pn	16 41 08.1	+1.2
AUMIH	**MIHALICIK**	2.86	266	PN	Pn	16 41 08.4	+1.3
AUMIH	**MIHALICIK**	2.86	266	*e*Pn	Pn	16 41 08.4	+1.3
LADK	**Ladik-KONYA**	2.91	230	PN	Pn	16 41 09.1	+1.3
LADK	**Ladik-KONYA**	2.91	230	*e*Pn	Pn	16 41 09.1	+1.3
KONT	**Konya--Tatoy**	3.09	226	PN	Pn	16 41 11.8	+1.6
KONT	**Konya--Tatoy**	3.09	226	*e*Pn	Pn	16 41 11.8	+1.6

*ISCJB **26** 16:48:11.8±0.7, 36°.41N±0°.05×142°.40E±0°.06, h15^{km}, mb3.5/6, Error ellipse: s-maj=7.3km s-min=6.2km az=142.7*

*IDC **26** 16:48:11.5±1.3, 36°.25N×142°.55E, h0^{km}, mb3.5/5, mb1 3.6/7, mb1mx3.4/70, mbtmp3.6/7, ML3.6/2, Error ellipse: s-maj=35.0km s-min=19.9km az=79.0*

*JMA **26** 16:48:13.7±0.2, 36°.45N×142°.38E, h58^{km}, M3.4*

ISC 26 16:48:11.8±1.0**,36°.34N**±0°.05×**142°.55E**±0°.08**,h15^{km},n28, σ2^{s}.74**/30**,mb3.6**/6**,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	**Chosi**	1.51	246	P	Pn	16 48 38.1	-0.3
JHYU	**Hitachinakayam**	1.59	271	P	Pn	16 48 38.3	-1.1
JHYU				*e*S	Sn	16 48 56.2	-3.4
ONAJ	**Iwakimizuishiy**	1.60	299	P	Pn	16 48 37.9	-1.8
JHO	**Hitachi**	1.62	280	P	Pn	16 48 38.2	-1.7
JHO				*e*S	Sn	16 48 56.6	-3.9
JMM	**Marumori**	2.07	318	P	Pn	16 48 44.6	-1.5
BSO1	**Boso 1**	2.12	218	P	Pn	16 48 47.3	+1.1
JFT	**Otama**	2.13	304	P	Pn	16 48 46.2	-0.7
JAG	**Ashikaga**	2.50	273	P	Pn	16 48 51.1	-0.9
JMK	**Ichinoseki**	2.81	338	P	Pn	16 48 55.5	-0.8
JMK				*e*S	Sn	16 49 26.7	-3.2
JRY	**Ryogami san**	2.97	265	P	Pn	16 48 57.8	-0.7
JRY				S	Sn	16 49 30.8	-3.1
JYK	**Kaneyama**	3.11	327	P	Pn	16 48 59.7	-0.6
MJAR	**Matsushiro Arr**	3.51	275	Pn	Pn	16 49 05.9	0.0
	4.0nm,0.3s,baz=102,slow=11,SNR=38						
MJAR				Sn	Sn	16 49 47.4	+0.2
	2.3nm,0.3s,baz=71,slow=19,SNR=4.9						
MAT	**Matsushiro**	3.51	275	P	Pn	16 49 06.4	+0.5
MAT				*e*S	Sn	16 49 44.3	-2.8
JHJ	**Hachijo jima 2**	3.94	216	Pn	Pn	16 49 11.7	0.0
	18nm,0.3s,baz=353,slow=21,SNR=30						
JHJ				Sn	Sn	16 49 52.4	-5.4
	62nm,0.3s,baz=292,slow=23,SNR=11						
ASAJ	**Asahikawa**	7.77	0	Pn	Pn	16 50 03.5	-0.8
	0.6nm,0.3s,baz=213,slow=12,SNR=15						
ASAJ				Sn	Sn	16 51 25.8	-6.2
	0.2nm,0.3s,baz=108,slow=19,SNR=1.6						
JCJ	**Chichijima**	9.22	182	Sn	Sn	16 52 01.9	-5.9
	4.2nm,0.3s,baz=285,slow=20,SNR=4.5						
H11N2	**WAKE ISLAND Hy**	27.01	121	T	T	17 22 31.2	
	baz=313,slow=75,SNR=14						
H11N1	**WAKE ISLAND Hy**	27.01	121	T	T	17 22 21.3	
	baz=313,slow=75,SNR=15						
H11N3	**WAKE ISLAND Hy**	27.02	121	T	T	17 22 26.3	
	baz=313,slow=75,SNR=13						
SEY	**Seymchan**	27.30	10	P	P	16 53 57.8	+2.2
	0.9nm,0.6s,baz=194,slow=12,SNR=5.0						
H11S1	**WAKE ISLAND Hy**	27.71	123	T	T	17 23 21.4	
	baz=316,slow=76,SNR=9.4						
H11S3	**WAKE ISLAND Hy**	27.71	123	T	T	17 23 16.3	
	baz=316,slow=76,SNR=8.4						
H11S2	**WAKE ISLAND Hy**	27.73	123	T	T	17 23 23.5	
	baz=316,slow=76,SNR=10						
SONM	**Songino Array**	28.93	305	P	P	16 54 12.2	+1.7
	0.3nm,0.4s,baz=91,slow=12,SNR=2.5						
MKAR	**Makanchi Array**	45.26	303	P	P	16 56 31.8	+3.2
	0.2nm,0.5s,baz=89,slow=9.8,SNR=3.5						
KURBB	**Kurchatov Arra**	47.15	309	P	P	16 56 46.5	+3.1
	0.3nm,0.2s,baz=85,slow=8.8,SNR=3.1						
WRA	**Warramunga Arr**	56.51	189	P	P	16 57 54.7	+1.2
	0.4nm,0.3s,baz=7.7,slow=7.0,SNR=17						
ASAR	**Alice Springs**	60.24	189	P	P	16 58 21.1	+1.6
	0.3nm,0.7s,baz=2.8,slow=6.8,SNR=5.9						

*IDC **26** 16:51:40.0±0.8, 85°.50N×85°.74E, h0^{km}, mb3.7/11, mb1 3.8/13, mb1mx3.5/76, mbtmp3.7/13, ML3.3/2, MS3.2/25, Ms1 3.2/25, ms1mx3.0/74, Error ellipse: s-maj=20.3km s-min=17.0km az=157.0*

*ISCJB **26** 16:51:40.2±0.6, 85°.52N±0°.10×84°.8E±1°.0, h14^{km}, mb3.6/11, MS3.2/22, Error ellipse: s-maj=14.5km s-min=10.8km az=166.3*

ISC 26 16:51:42.1±0.7**,85°.5N**±0°.1×**85°.5E**±0°.1**,h14^{km},n31, σ1^{s}.04**/13**,mb3.6**/11**,MS3.1**/22**,North of Severnaya Zemlya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SPITS	**Spitsbergen Ar**	11.11	271	Pn	Pn	16 54 19.3	-0.9
	baz=36,slow=15,SNR=2.1						
SPITS				Sn	Sn	16 56 12.8	-11
	baz=57,slow=19,SNR=1.7						
SPITS				LR	LR	16 58 10.2	
	comp=Z,64nm,18.8s,baz=225,slow=35						
TIXI	**Tiksi**	15.48	125	LR	LR	17 00 53.0	
	comp=Z,25nm,20.2s,baz=53,slow=36						
ARCES	**ARCESS Array B**	18.72	252	P	P	16 55 58.6	-1.2
	0.1nm,0.3s,baz=24,slow=16,SNR=2.1						
JMIC	**Jan Mayen**	19.94	287	LR	LR	17 02 24.6	
	comp=Z,22nm,19.4s,baz=250,slow=32						
YAK	**Yakutsk**	25.07	129	P	P	16 57 05.4	-0.1
	6.3nm,0.3s,baz=229,slow=19,SNR=27						
YAK				LR	LR	17 07 15.1	
	comp=Z,40nm,18.9s,baz=302,slow=37						
INK	**Inuvik**	25.49	33	P	P	16 57 09.9	+0.7
	0.9nm,0.4s,baz=351,slow=11,SNR=4.1						
INK				LR	LR	17 09 48.8	
	comp=Z,32nm,18.1s,baz=232,slow=43						
SEY	**Seymchan**	25.76	104	P	P	16 57 11.0	-0.8
	0.4nm,0.5s,baz=312,slow=15,SNR=1.9						
FINES	**FINESS Array B**	26.68	247	P	P	16 57 19.9	-0.2
	1.0nm,0.7s,baz=8.9,slow=9.8,SNR=3.4						
FINES				LR	LR	17 08 28.0	
	comp=Z,57nm,18.4s,baz=10,slow=38						
NOA	**NORSAR Array B**	28.20	262	LR	LR	17 09 52.5	
	comp=Z,16nm,18.0s,baz=60,slow=39						
HFS	**Hagfors**	28.91	260	LR	LR	17 08 32.0	
	comp=Z,39nm,21.1s,baz=354,slow=35						
ARU	**Arti**	29.77	210	LR	LR	17 11 19.7	
	comp=Z,93nm,20.8s,baz=0.0,slow=40						
ZALV	**Zalesovo Beam**	31.71	181	LR	LR	17 11 52.8	
	comp=Z,32nm,19.7s,baz=83,slow=38						
YKA	**Yellowknife Ar**	31.95	18	P	P	16 58 06.1	-0.7
	0.6nm,1.0s,baz=360,slow=8.8,SNR=3.5						
BVAR	**Borovoye Array**	32.81	197	LR	LR	17 14 21.4	
	comp=Z,39nm,18.7s,baz=45,slow=42						
AKTO	**Aktyubinsk**	35.79	210	LR	LR	17 14 47.6	
	comp=Z,46nm,20.7s,baz=353,slow=39						
SONM	**Songino Array**	38.16	157	P	P	16 59 00.7	+0.1
	0.5nm,0.4s,baz=345,slow=5.1,SNR=1.5						
MKAR	**Makanchi Array**	38.88	183	P	P	16 59 06.1	-0.4
	0.2nm,0.7s,baz=14,slow=6.5,SNR=3.6						
MKAR				LR	LR	17 16 29.1	
	comp=Z,43nm,18.7s,baz=348,slow=38						
VRAC	**Vranov**	39.44	254	LR	LR	17 15 20.1	
	comp=Z,32nm,21.5s,baz=352,slow=36						
GERES	**GERESS Array B**	40.12	257	LR	LR	17 16 41.7	
	comp=Z,27nm,19.6s,baz=292,slow=37						
KBZ	**Khabaz**	43.22	226	LR	LR	17 20 28.6	
	comp=Z,22nm,18.6s,baz=53,slow=40						
ASAJ	**Asahikawa**	43.75	119	LR	LR	17 18 08.7	
	comp=Z,31nm,18.7s,baz=37,slow=36						
ULM	**Lac du Bonnet**	44.46	1	LR	LR	17 17 49.8	
	comp=Z,42nm,19.5s,baz=94,slow=35						
BRTR	**Keskin Array B**	47.77	235	P	P	17 00 19.4	+1.0
	0.9nm,0.8s,baz=1.2,slow=7.4,SNR=4.9						
BRTR				LR	LR	17 25 46.4	
	comp=Z,14nm,18.2s,baz=74,slow=43						
PDAR	**Pinedale Array**	51.80	14	LR	LR	17 23 29.9	
	comp=Z,13nm,19.3s,baz=40,slow=37						
KEST	**Kesra**	53.49	259	P	P	17 01 03.6	+2.1
	2.4nm,0.8s,baz=346,slow=8.0,SNR=3.6						
NVAR	**Mina Array Bea**	55.92	22	LR	LR	17 26 07.5	
	comp=Z,29nm,18.5s,baz=28,slow=37						
ANMO	**Albuquerque**	59.67	11	LR	LR	17 27 56.3	
	comp=Z,33nm,18.9s,baz=53,slow=36						
TXAR	**Lajitas Array**	65.30	9	P	P	17 02 23.7	+0.5
	0.2nm,0.6s,baz=3.8,slow=2.7,SNR=3.4						
TXAR				LR	LR	17 31 41.9	
	comp=Z,34nm,19.1s,baz=0.0,slow=37						
CMAR	**Chiang Mai Arr**	67.26	166	LR	LR	17 33 42.2	
	comp=Z,22nm,19.7s,baz=260,slow=38						
TORD	**Torodi Ar. Bea**	76.49	265	P	P	17 03 30.2	-0.9
	1.3nm,0.9s,baz=356,slow=4.9						
PALK	**Pallekele**	78.27	185	LR	LR	17 43 21.8	
	comp=Z,36nm,18.2s,baz=212,slow=40						

*IDC **26** 16:57:51.8±2.9, 36°.12N×142°.21E, h0^{km}, mb3.3/2, mb1 3.4/4, mb1mx3.2/73, mbtmp3.3/4, ML3.1/2, Error ellipse: s-maj=53.6km s-min=31.7km az=77.0*

*JMA **26** 16:57:52.7±0.2, 36°.36N×142°.27E, h37^{km}, M2.9*

ISC 26 16:57:50.8±2.6**,36°.35N**±0°.05×**142°.27E**±0°.09**,h8^{km}**±14^{km}**, n24,σ1^{s}.82**/26**,Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHYU	**Hitachinakayam**	1.36	270	P	Pg	16 58 16.1	-0.8
JHYU				*e*S	Sn	16 58 33.2	-1.0
JHO	**Hitachi**	1.40	281	P	Pn	16 58 16.3	-0.2
ONAJ	**Iwakimizuishiy**	1.40	303	P	Pn	16 58 16.5	-0.2
JFK	**Kawauchi**	1.51	313	P	Pn	16 58 17.9	-0.3
JFK				*e*S	Sn	16 58 37.2	-0.9
JFFD	**Fukushimafurud**	1.56	299	P	Pn	16 58 18.6	-0.2
JMM	**Marumori**	1.92	323	P	Pn	16 58 23.8	0.0
JMM				*e*S	Sn	16 58 46.7	-1.4
JFT	**Otama**	1.94	308	P	Pn	16 58 24.7	+0.6
BSO1	**Boso 1**	1.99	212	P	Pn	16 58 25.2	+1.0
BSO1				*e*S	Sn	16 58 49.7	+0.6
JAG	**Ashikaga**	2.27	273	P	Pn	16 58 29.1	+0.5
JOU	**Okura**	2.39	328	P	Pn	16 58 32.3	+2.1
JOU				S	Sn	16 59 00.2	+0.6
JKT	**Katashina**	2.47	281	P	Pn	16 58 32.6	+1.2
JYS	**Shirataka**	2.57	317	*e*S	Sn	16 59 03.1	-0.9
MJAR	**Matsushiro Arr**	3.28	275	Pn	Pn	16 58 43.6	+1.2
	1.4nm,0.3s,baz=102,slow=7.8,SNR=10						
MAT	**Matsushiro**	3.28	275	P	Pn	16 58 44.1	+1.6
MAT				*e*S	Sn	16 59 18.6	-3.1
JHJ	**Hachijo jima 2**	3.82	213	Pn	Pn	16 58 49.9	0.0
	6.3nm,0.3s,baz=351,slow=21,SNR=11						
JHJ				Sn	Sn	16 59 31.1	-3.8
	12nm,0.3s,baz=259,slow=23,SNR=6.2						
ASAJ	**Asahikawa**	7.76	2	Pn	Pn	16 59 43.0	-1.1
	0.1nm,0.3s,baz=294,slow=19,SNR=1.2						
ASAJ				Sn	Sn	17 01 07.4	-4.7
	0.2nm,0.3s,baz=260,slow=18,SNR=1.2						
H11N2	**WAKE ISLAND Hy**	27.21	121	T	T	17 32 15.5	
	baz=323						
H11N1	**WAKE ISLAND Hy**	27.21	121	T	T	17 32 15.1	
	baz=323						
H11N3	**WAKE ISLAND Hy**	27.22	121	T	T	17 32 10.2	

	baz=323						
H11S1	**WAKE ISLAND Hy**	**27.91**	**123**	T	T	17 33 04.5	
	baz=317						
H11S3	**WAKE ISLAND Hy**	**27.91**	**123**	T	T	17 33 04.0	
	baz=317						
H11S2	**WAKE ISLAND Hy**	**27.93**	**123**	T	T	17 33 08.3	
	baz=317						
MKAR	**Makanchi Array**	**45.07**	**303**	P	**P**	**17 06 10.0**	**+2.8**
	0.3nm,0.6s,baz=87,slow=9.2,SNR=4.1						
WRA	**Warramunga Arr**	**56.48**	**189**	P	**P**	**17 07 33.7**	**+0.4**
	0.2nm,0.6s,baz=6.7,slow=7.7,SNR=1.7						

ISCJB ***26*** *17:00:37.8±0.3, 67°.08N±0°.02×20°.98E±0°.06, h0^{km}, Error ellipse: s-maj=3.2km s-min=2.4km az=1.1*
UPP ***26*** *17:00:38.6±0.1, 67°.08N×20°.98E, h0^{km}, ML2.3*
CSEM ***26*** *17:00:38.6±0.1, 67°.10N×20°.96E, h2^{km}, ML2.3, Error ellipse: s-maj=4.2km s-min=3.0km az=97.0, Mining explosion.*
IDC ***26*** *17:00:39.1±0.9, 67°.08N×21°.33E, h0^{km}, mb1 2.9/4, mb1mx2.7/72, mbtmp2.8/4, ML2.1/4, Error ellipse: s-maj=14.9km s-min=6.8km az=115.0*
HEL ***26*** *17:00:39.1±0.0, 67°.09N×20°.98E, h0^{km}, ML2.4, ML2.3(UPP), Explosion*
NAO ***26*** *17:00:39.4±0.8, 67°.05N×21°.35E, ML2.7*
BER ***26*** *17:00:41.0±3.5, 67°.09N×20°.95E, h0^{km}, ML2.0, ML2.7(NAO), Suspected explosion*
ISC 26 17:00:38.7±0.7**, 67°.07N**±0°.02×**20°.94E**±0°.02**, h0**^{km}**, n91, σ0^{s}.92**/135**, Sweden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUNU	**Dundret**	**0.15**	**289**	P	**Pg**	**17 00 41.9**	**+0.3**
DUNU				S	**Sg**	**17 00 44.5**	**+0.8**
DUNU	**Dundret**	**0.15**	**289**	*i* P	**Pg**	**17 00 41.9**	**+0.3**
DUNU				*i* S	**Sg**	**17 00 44.5**	**+0.8**
DUNU	**Dundret**	**0.15**	**289**	P	**Pg**	**17 00 41.9**	**+0.3**
DUNU				S	**Sg**	**17 00 44.5**	**+0.8**
ERTU	**Ertsjaerv**	**0.72**	**136**	P	**Pg**	**17 00 52.0**	**-0.4**
ERTU				S	**Sg**	**17 01 01.6**	**-0.1**
ERTU	**Ertsjaerv**	**0.72**	**136**	P	**Pg**	**17 00 52.0**	**-0.4**
ERTU				S	**Sg**	**17 01 01.6**	**-0.1**
RATU	**Laukkuluspa**	**0.92**	**326**	P	**Pg**	**17 00 55.8**	**-0.5**
RATU	**Laukkuluspa**	**0.92**	**326**	*e*P	**Pg**	**17 00 55.8**	**-0.5**
RATU	**Laukkuluspa**	**0.92**	**326**	P	**Pg**	**17 00 55.8**	**-0.5**
LANU	**Lannavaara**	**1.06**	**22**	P	**Pg**	**17 00 58.2**	**-0.9**
LANU	**Lannavaara**	**1.06**	**22**	*e*PB	**Pg**	**17 00 58.1**	**-0.9**
LANU				*e*SN	**Sn**	**17 01 16.4**	**+0.1**
LANU	**Lannavaara**	**1.06**	**22**	P	**Pg**	**17 00 58.2**	**-0.9**
LANU				*e*Sn	**Sn**	**17 01 16.4**	**+0.1**
NIKU	**Nikkaluokta**	**1.09**	**318**	P	**Pg**	**17 00 58.8**	**-0.7**
NIKU	**Nikkaluokta**	**1.09**	**318**	*e*P	**Pg**	**17 00 58.8**	**-0.7**
NIKU	**Nikkaluokta**	**1.09**	**318**	P	**Pg**	**17 00 58.8**	**-0.7**
KALU	**Kalix**	**1.56**	**140**	P	**Pn**	**17 01 06.9**	**-0.7**
KALU	**Kalix**	**1.56**	**140**	*e*P	**Pn**	**17 01 06.8**	**-0.8**
KALU				*e*SN	**Sg**	**17 01 29.4**	**+0.7**
KALU	**Kalix**	**1.56**	**140**	P	**Pn**	**17 01 06.9**	**-0.7**
KALU				*e*Sn	**Sg**	**17 01 29.4**	**+0.7**
SJUU	**Sjulsmark**	**1.59**	**170**	P	**Pn**	**17 01 07.6**	**-0.5**
SJUU				S	**Sg**	**17 01 30.3**	**+0.4**
SJUU	**Sjulsmark**	**1.59**	**170**	*e*P	**Pn**	**17 01 07.6**	**-0.5**
SJUU				*e*S	**Sg**	**17 01 30.3**	**+0.4**
SJUU	**Sjulsmark**	**1.59**	**170**	P	**Pn**	**17 01 07.6**	**-0.5**
SJUU				S	**Sg**	**17 01 30.3**	**+0.4**
HEF	**Hetta**	**1.69**	**36**	*e*PG	**Pn**	**17 01 09.1**	**-0.5**
HEF				MSG		17 01 28.7	
	comp=Z,24nm,0.2s						
HEF				*e*SN	**Sn**	**17 01 31.9**	**0.0**
HEF	**Hetta**	**1.69**	**36**	*e*Pg	**Pn**	**17 01 09.1**	**-0.5**
HEF				*e*Sn	**Sn**	**17 01 31.9**	**0.0**
HEF	**Hetta**	**1.69**	**36**	*e*P	**Pn**	**17 01 08.8**	**-0.7**
HEF				*e*S	**Sn**	**17 01 31.6**	**-0.3**
HEF				*e*S	**Sb**	**17 01 32.4**	**-0.2**
KIF	**Kilpisjarvi**	**1.94**	**358**	Pn	**Pb**	**17 01 14.4**	**-0.6**
KIF				Sn	**Sg**	**17 01 41.2**	**+0.2**
KIF	**Kilpisjarvi**	**1.94**	**358**	*e*PG	**Pb**	**17 01 14.2**	**-0.7**
KIF				MSG		17 01 38.0	
	comp=Z,67nm,0.2s						
KIF				*e*SG	**Sg**	**17 01 41.3**	**+0.2**
KIF	**Kilpisjarvi**	**1.94**	**358**	*e*Pg	**Pb**	**17 01 14.2**	**-0.7**
KIF				*e*Sg	**Sg**	**17 01 41.3**	**+0.2**
	comp=Z,67nm,0.2s						
KIF	**Kilpisjarvi**	**1.94**	**358**	*e*P	**Pb**	**17 01 14.3**	**-0.6**
KIF				*e*S	**Sn**	**17 01 35.5**	**-2.4**
RNF	**Rovaniemi**	**2.06**	**101**	*e*PB	**Pn**	**17 01 15.1**	**+0.6**
RNF				*e*SG	**Sb**	**17 01 43.2**	**+0.2**
RNF	**Rovaniemi**	**2.06**	**101**	*e*Pb	**Pn**	**17 01 15.1**	**+0.6**
RNF				*e*Sg	**Sb**	**17 01 43.2**	**+0.2**
KTK1	**Kautokeino**	**2.13**	**23**	*e*P	**Pn**	**17 01 16.8**	**+1.3**
KTK1				IAML		17 01 55.0	
	comp=Z,22nm,0.2s						
SGF	**Sodankyl**	**2.20**	**78**	*e*PB	**Pn**	**17 01 17.0**	**+0.5**
	baz=259						
SGF				*e*SG	**Sb**	**17 01 47.5**	**+0.4**
SGF	**Sodankyl**	**2.20**	**78**	*e*Pb	**Pn**	**17 01 17.0**	**+0.5**
SGF				*e*Sg	**Sb**	**17 01 47.5**	**+0.4**
BURU	**Burvik**	**2.51**	**176**	P	**Pn**	**17 01 21.4**	**+0.8**
BURU				S	**Sn**	**17 01 52.9**	**+1.0**
BURU	**Burvik**	**2.51**	**176**	*e*P	**Pn**	**17 01 21.4**	**+0.8**
	baz=1.0						
BURU	**Burvik**	**2.51**	**176**	P	**Pn**	**17 01 21.4**	**+0.8**
BURU				S	**Sn**	**17 01 52.9**	**+1.0**
SVAU	**Svanoeiden**	**2.65**	**193**	P	**Pn**	**17 01 23.1**	**+0.5**
SVAU	**Svanoeiden**	**2.65**	**193**	*e*P	**Pn**	**17 01 23.1**	**+0.5**
SVAU	**Svanoeiden**	**2.65**	**193**	P	**Pn**	**17 01 23.1**	**+0.5**
ODEU	**Stanfors**	**2.68**	**182**	P	**Pn**	**17 01 23.7**	**+0.7**
ODEU	**Stanfors**	**2.68**	**182**	*e*P	**Pn**	**17 01 23.7**	**+0.7**
ODEU	**Stanfors**	**2.68**	**182**	P	**Pn**	**17 01 23.7**	**+0.7**
TRO	**Tromso**	**2.68**	**345**	*e*P	**Pn**	**17 01 24.0**	**+1.0**
TRO				IAML		17 02 05.8	
	comp=Z,16nm,0.2s						
MOR8	**Moi Rana**	**2.75**	**254**	*e*P	**Pn**	**17 01 23.8**	**-0.2**
OUL	**Oulu**	**2.84**	**132**	*e*P	**Pn**	**17 01 26.0**	**+0.8**
OUL	**Oulu**	**2.84**	**132**	*e*P	**Pn**	**17 01 26.0**	**+0.8**
ARA0	**ARCESS Array S**	**3.00**	**32**	Pn	**Pn**	**17 01 27.8**	**+0.4**
	baz=213,slow=16						
ARA0				Sn	**Sn**	**17 02 04.9**	**+0.8**
	baz=210,slow=28						
ARA0				Lg	Lg	17 02 09.0	
	baz=215,slow=37						
ARA0	**ARCESS Array S**	**3.00**	**32**	Pn	**Pn**	**17 01 27.8**	**+0.4**
	SNR=165						
ARA0				Sn	**Sn**	**17 02 04.9**	**+0.8**
	SNR=4.9						
ARA0				Lg	Lg	17 02 09.0	
	SNR=9.3						
ARA0	**ARCESS Array S**	**3.00**	**32**	Pn	**Pn**	**17 01 27.8**	**+0.4**
	baz=213,slow=16						
ARA0				Sn	**Sn**	**17 02 04.9**	**+0.8**
	baz=210,slow=28						
ARA0				Lg	Lg	17 02 09.0	
	baz=215,slow=37						
ARCES	**ARCESS Array B**	**3.00**	**32**	Pn	**Pn**	**17 01 27.8**	**+0.4**
	comp=Z,0.7nm,0.3s,baz=216,slow=14,SNR=56						
ARCES				Lg	Lg	17 02 08.4	
	comp=Z,1.2nm,0.3s,baz=216,slow=21,SNR=6.6						
ARE0	**ARCESS Array S**	**3.00**	**32**	*e*P	**Pn**	**17 01 27.7**	**+0.3**
	baz=212						
ARE0				*e*SB	**Sn**	**17 02 05.8**	**+1.8**
ARE0	**ARCESS Array S**	**3.00**	**32**	*e*P	**Pn**	**17 01 27.7**	**+0.3**
ARE0				*e*Sb	**Sn**	**17 02 05.8**	**+1.8**
LOF	**Lofoten**	**3.03**	**294**	*e*P	**Pn**	**17 01 27.6**	**-0.2**
OUF	**Merijarvi**	**3.13**	**148**	*e*P	**Pn**	**17 01 29.8**	**+0.5**
OUF				MSG		17 02 11.4	
	comp=Z,9.1nm,0.2s						
OUF				*e*SG	**Sb**	**17 02 15.5**	**+1.6**
OUF	**Merijarvi**	**3.13**	**148**	*e*P	**Pn**	**17 01 29.8**	**+0.5**
KONS	**Konsvik**	**3.15**	**263**	*e*P	**Pn**	**17 01 30.4**	**+0.9**
UMAU	**Umeaa**	**3.21**	**182**	P	**Pn**	**17 01 30.7**	**+0.4**
UMAU	**Umeaa**	**3.21**	**182**	*e*P	**Pn**	**17 01 30.7**	**+0.4**
UMAU				*e*S	**Sn**	**17 02 11.7**	**+2.6**
UMAU	**Umeaa**	**3.21**	**182**	P	**Pn**	**17 01 30.7**	**+0.4**
UMAU				*e*S	**Sn**	**17 02 11.7**	**+2.6**
VRF	**Varrio**	**3.41**	**75**	*e*P	**Pn**	**17 01 33.2**	**+0.1**
VRF	**Varrio**	**3.41**	**75**	*e*P	**Pn**	**17 01 33.2**	**+0.1**
MSF	**Maaselka**	**3.45**	**106**	*e*P	**Pn**	**17 01 34.3**	**+0.7**
MSF	**Maaselka**	**3.45**	**106**	*e*P	**Pn**	**17 01 34.3**	**+0.7**
KEV	**Kevo**	**3.50**	**37**	*e*P	**Pn**	**17 01 34.9**	**+0.6**
	baz=223						
KEV	**Kevo**	**3.50**	**37**	*e*P	**Pn**	**17 01 34.9**	**+0.6**
HAMF	**Hammerfest**	**3.72**	**14**	*e*P	**Pn**	**17 01 39.4**	**+2.1**
KU6	**Riekki**	**3.73**	**102**	*e*P	**Pn**	**17 01 37.6**	**+0.2**
	baz=292						
KU6				*e*S	**Sn**	**17 02 22.8**	**+0.8**
KU6	**Riekki**	**3.73**	**102**	*e*P	**Pn**	**17 01 37.6**	**+0.2**
KU6				*e*S	**Sn**	**17 02 22.8**	**+0.8**
HUSU	**Husum**	**3.82**	**192**	P	**Pn**	**17 01 39.0**	**+0.3**
HUSU	**Husum**	**3.82**	**192**	*e*P	**Pn**	**17 01 39.0**	**+0.3**
HUSU	**Husum**	**3.82**	**192**	P	**Pn**	**17 01 39.0**	**+0.3**
VAF	**Ylistaro**	**4.11**	**169**	*e*P	**Pn**	**17 01 43.3**	**+0.6**
VAF	**Ylistaro**	**4.11**	**169**	*e*P	**Pn**	**17 01 43.3**	**+0.6**
SOLU	**Sollefteaa**	**4.14**	**204**	P	**Pn**	**17 01 43.3**	**+0.1**
SOLU				S	**Sn**	**17 02 31.6**	**-0.6**
SOLU	**Sollefteaa**	**4.14**	**204**	*e*P	**Pn**	**17 01 43.3**	**+0.1**
SOLU				*e*S	**Sn**	**17 02 31.6**	**-0.6**
HEMU	**Hemsoen**	**4.58**	**197**	P	**Pn**	**17 01 48.8**	**-0.4**
HEMU	**Hemsoen**	**4.58**	**197**	*e*P	**Pn**	**17 01 49.0**	**-0.2**
HEMU				*e*S	**Sn**	**17 02 41.0**	**-2.1**
HEMU	**Hemsoen**	**4.58**	**197**	*e*P	**Pn**	**17 01 49.0**	**-0.2**
HEMU				*e*S	**Sn**	**17 02 41.0**	**-2.1**
FIA0	**FINESS Array S**	**6.08**	**156**	Pn	**Pn**	**17 02 10.6**	**+0.9**
	baz=343,slow=12						
FIA0				Sn	**Sn**	**17 03 17.9**	**-1.9**
	baz=343,slow=28						
FIA0	**FINESS Array S**	**6.08**	**156**	Pn	**Pn**	**17 02 10.6**	**+0.9**
	SNR=1.7						
FIA0	**FINESS Array S**	**6.08**	**156**	Pn	**Pn**	**17 02 10.6**	**+0.9**
	baz=343,slow=12						
FIA0				Sn	**Sn**	**17 03 17.9**	**-1.9**
	baz=343,slow=28						
FINES	**FINESS Array B**	**6.08**	**156**	Pn	**Pn**	**17 02 10.6**	**+0.9**
	comp=Z,0.1nm,0.3s,baz=352,slow=14,SNR=14						
FINES				Sn	**Sn**	**17 03 17.9**	**-1.9**
	comp=Z,0.3nm,0.3s,baz=349,slow=21,SNR=9.1						
FINES				Lg	Lg	17 03 46.9	
	comp=Z,0.2nm,0.3s,baz=347,slow=30,SNR=2.0						
NB2	**NORSAR Subarra**	**7.40**	**220**	Pn	**Pn**	**17 02 27.4**	**-0.4**
	baz=28,slow=14						
NB2	**NORSAR Subarra**	**7.40**	**220**	Pn	**Pn**	**17 02 27.4**	**-0.4**
	baz=28,slow=14						
NRA0	**NORESS Array S**	**7.58**	**217**	Pn	**Pn**	**17 02 29.8**	**-0.5**
	baz=28,slow=11						
NRA0	**NORESS Array S**	**7.58**	**217**	Pn	**Pn**	**17 02 29.8**	**-0.5**
	SNR=4.3						
NRA0	**NORESS Array S**	**7.58**	**217**	Pn	**Pn**	**17 02 29.8**	**-0.5**
	baz=28,slow=11						
HFS	**Hagfors**	**7.67**	**208**	Pn	**Pn**	**17 02 30.6**	**-0.9**
	baz=26,slow=12						
HFS	**Hagfors**	**7.67**	**208**	Pn	**Pn**	**17 02 30.6**	**-0.9**
	comp=Z,0.1nm,0.3s,baz=30,slow=14,SNR=9.5						
HFS				Sn	**Sn**	**17 03 55.0**	**-4.0**
	comp=Z,0.1nm,0.3s,baz=28,slow=25,SNR=1.4						
HFS				Lg	Lg	17 04 34.2	
	comp=Z,0.1nm,0.3s,baz=31,slow=29,SNR=1.9						
HFS	**Hagfors**	**7.67**	**208**	Pn	**Pn**	**17 02 30.6**	**-0.9**
	baz=26,slow=12						
SPA0	**Spitsbergen Ar**	**11.24**	**355**	Pn	**Pn**	**17 03 20.7**	**+0.4**
	baz=151,slow=9.3						
SPA0	**Spitsbergen Ar**	**11.24**	**355**	Pn	**Pn**	**17 03 20.7**	**+0.4**
	baz=151,slow=9.3						

NIED ***26*** *17:04:00, 35°.80N×140°.40E, h53^{km}, Mw3.8 Best double couple: M$_0$5.10000×10^{14} NP1:φ$_s$248.00000°, δ76.00000°, λ-171.00000°. NP2:φ$_s$156.00000°, δ81.00000°, λ-14.00000°.*
ISCJB ***26*** *17:04:02.4±0.7, 35°.77N±0°.04×140°.54E±0°.08, h76^{km}±5^{km}, mb3.7/6, Error ellipse: s-maj=10.3km s-min=6.7km az=167.1*
IDC ***26*** *17:04:03.0±2.4, 35°.80N×140°.64E, h65^{km}±18^{km}, mb3.5/5, mb1 3.7/9, mb1mx3.3/66, mbtmp3.9/9, MS2.1/1, Ms1 2.1/1, ms1mx1.9/45, Error ellipse: s-maj=26.6km s-min=8.6km az=68.0*
JMA ***26*** *17:04:04.6±0.1, 35°.77N×140°.34E, h65^{km}±1^{km}, M3.5 Broadband fault plane solution: P waves. NP1: φ$_s$259.00000°, δ89.00000°, λ-169.00000°. NP2: φ$_s$168.00000°, δ79.00000°, λ-1.00000°. Principal axes: T Plg7.0000°, Azm33.0000°; N Plg79.0000°, Azm262.0000°; P Plg8.0000°, Azm124.0000°;*
JMA Felt I J1.
ISC 26 17:04:03.0±0.9**, 35°.79N**±0°.05×**140°.60E**±0°.07**, h65**^{km}±9^{km}**, n29, σ2^{s}.00**/30**, mb3.8**/6**, 2C-5D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIHU	**Itakohorinouch**	**0.19**	**341**	P	**Pn**	**17 04 15.2**	**+2.2**
JYT	**Yasato**	**0.55**	**323**	⇓P	**Pn**	**17 04 16.7**	**+0.8**
JYT				S	**Sn**	**17 04 26.0**	**+0.7**
BSO3	**Boso 3**	**0.99**	**184**	⇑P	**Pn**	**17 04 22.1**	**+1.2**
JAG	**Ashikaga**	**1.13**	**305**	⇓P	**Pn**	**17 04 22.6**	**-0.3**
JOD2	**Odawara 2**	**1.34**	**247**	⇑P	**Pn**	**17 04 24.4**	**-1.3**
JRY	**Ryogami san**	**1.40**	**280**	⇓P	**Pn**	**17 04 25.9**	**-0.6**
JIM2	**Oshima 3**	**1.44**	**222**	P	**Pn**	**17 04 26.1**	**-0.9**
JIM2				S	**Sn**	**17 04 42.9**	**-2.1**
JKT	**Katashina**	**1.47**	**312**	⇓P	**Pn**	**17 04 27.5**	**0.0**
JYN	**Shimob**	**1.70**	**261**	⇓P	**Pn**	**17 04 29.5**	**-1.1**
JYN				S	**Sn**	**17 04 48.2**	**-3.2**
MJAR	**Matsushiro Arr**	**2.08**	**292**	P	**Pn**	**17 04 35.4**	**-0.2**
	43nm,0.3s,baz=99,slow=14,SNR=454						
MJAR				S	**Sn**	**17 05 01.0**	**+0.5**
	22nm,0.3s,baz=73,slow=28,SNR=4.4						
MAT	**Matsushiro**	**2.08**	**292**	P	**Pn**	**17 04 35.7**	**0.0**
MAT				*e*S	**Sn**	**17 05 00.2**	**-0.3**
JHJ	**Hachijo jima 2**	**2.75**	**194**	P	**Pn**	**17 04 45.0**	**+0.3**
	194nm,0.3s,baz=341,slow=21,SNR=126						
JHJ				S	**Sn**	**17 05 17.5**	**+0.7**
	168nm,0.3s,baz=47,slow=23,SNR=11						
ASAJ	**Asahikawa**	**8.46**	**10**	P	**Pn**	**17 06 02.3**	**-0.5**
	1.5nm,0.3s,baz=216,slow=12,SNR=26						
ASAJ				S	**Sn**	**17 07 31.3**	**-5.4**
	0.4nm,0.3s,baz=74,slow=19,SNR=2.5						
JNU	**Nakatsue**	**8.46**	**254**	P	**Pn**	**17 06 04.0**	**+1.1**
	0.4nm,0.3s,baz=44,slow=5.1,SNR=5.2						
JNU				LR	LR	17 09 52.2	
	comp=Z,14nm,20.8s,baz=128,slow=41						
JCJ	**Chichijima**	**8.77**	**171**	P	**Pn**	**17 06 03.5**	**-3.7**
	4.7nm,0.3s,baz=292,slow=16,SNR=2.3						
JCJ				S	Sn	17 07 32.7	-12
	3.2nm,0.3s,baz=300,slow=20,SNR=2.1						
KSRS	**Korea Array**	**10.33**	**283**	P	**Pn**	**17 06 31.4**	**+3.1**
	0.4nm,0.3s,baz=94,slow=14,SNR=12						
H11N2	**WAKE ISLAND Hy**	**28.11**	**118**	T	T	17 39 42.5	
	baz=308,slow=75,SNR=35						
H11N1	**WAKE ISLAND Hy**	**28.12**	**118**	T	T	17 39 36.5	
	baz=308,slow=75,SNR=33						
H11N3	**WAKE ISLAND Hy**	**28.13**	**118**	T	T	17 39 41.8	
	baz=308,slow=75,SNR=30						
H11S3	**WAKE ISLAND Hy**	**28.77**	**120**	T	T	17 39 52.8	
	baz=312,slow=75,SNR=18						
H11S1	**WAKE ISLAND Hy**	**28.77**	**120**	T	T	17 40 08.9	
	baz=312,slow=75,SNR=30						
H11S2	**WAKE ISLAND Hy**	**28.79**	**120**	T	T	17 40 07.3	
	baz=312,slow=75,SNR=16						
MKAR	**Makanchi Array**	**44.24**	**303**	P	**P**	**17 12 04.8**	**-1.1**
	0.4nm,0.6s,baz=89,slow=11,SNR=5.1						
KURBB	**Kurchatov Arra**	**46.26**	**309**	P	**P**	**17 12 22.0**	**+0.3**
	0.6nm,0.3s,baz=85,slow=8.4,SNR=3.6						
BVAR	**Borovoye Array**	**50.93**	**313**	P	**P**	**17 13 02.2**	**+4.6**
	0.2nm,0.3s,baz=61,slow=6.8,SNR=1.9						
WRA	**Warramunga Arr**	**55.74**	**187**	P	**P**	**17 13 33.2**	**+0.1**
	0.8nm,0.6s,baz=1.6,slow=7.6,SNR=12						
ARU	**Arti**	**56.86**	**319**	P	**P**	**17 13 40.4**	**-0.3**
	baz=90,slow=20						
ASAR	**Alice Springs**	**59.47**	**187**	P	**P**	**17 13 59.9**	**+0.6**
	0.2nm,0.5s,baz=17,slow=9.5,SNR=8.7						
STKA	**Stephens Creek**	**67.32**	**179**	P	**P**	**17 14 51.2**	**+0.3**
	2.4nm,0.7s,baz=333,slow=11,SNR=3.9						

JMA ***26*** *17:07:00.7±0.3, 22°.14N×121°.41E, h10^{km}, M3.4*
ISCJB ***26*** *17:07:01.0±0.5, 22°.14N±0°.03×121°.48E±0°.02, h15^{km}±4^{km}, Error ellipse: s-maj=4.5km s-min=3.6km az=166.6*
TAP ***26*** *17:07:02.5, 22°.21N×121°.38E, h14^{km}, ML3.1, C*
ISC 26 17:07:02.0±0.9**, 22°.20N**±0°.03×**121°.40E**±0°.02**, h17**^{km}±7^{km}**, n80, σ1^{s}.05**/119**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LAY	**Lan-yu**	**0.21**	**138**	P	**Pb**	**17 07 08.0**	**+0.5**
	baz=132						
LAY				S	**Sg**	**17 07 11.9**	**+1.6**
	baz=132						
TAW	**Tawu**	**0.49**	**289**	*e*P	**Pb**	**17 07 11.8**	**-0.4**
	baz=288						
TAW				*e*S	**Sg**	**17 07 18.2**	**-0.3**
	baz=288						
TWH	**Lutao**	**0.52**	**8**	P	**Pg**	**17 07 12.0**	**-0.3**
	baz=12						
TWH				S	**Sg**	**17 07 18.9**	**-0.4**
	baz=12						
EAST	**Anshuo**	**0.54**	**290**	*e*P	**Pg**	**17 07 12.5**	**-0.3**
	baz=290						
EAST				*e*S	**Sg**	**17 07 19.8**	**-0.3**
	baz=290						
TSEB	**Hengchuen, Pin**	**0.55**	**238**	*e*S	**Sb**	**17 07 22.2**	**+1.5**
	baz=237						
ECL	**Taimali**	**0.57**	**314**	*e*P	**Pg**	**17 07 13.0**	**-0.4**
	baz=315						
ECL				*e*S	**Sg**	**17 07 20.2**	**-0.8**
	baz=315						
TWKBT	**Hengchun**	**0.60**	**245**	*e*P	**Pb**	**17 07 13.7**	**-0.4**
	baz=230						
TWKBT				*e*S	**Sg**	**17 07 21.4**	**-0.5**
	baz=230						
TTN	**Taitung**	**0.60**	**337**	*e*P	**Pn**	**17 07 15.4**	**-0.5**
	baz=347						
TWK1	**Hengchun**	**0.60**	**246**	*e*P	**Pb**	**17 07 13.7**	**-0.4**
	baz=230						
TWK1				*e*S	**Sg**	**17 07 21.6**	**-0.4**
	baz=230						
HEN	**Hengchun**	**0.64**	**253**	*e*P	**Pb**	**17 07 14.8**	**0.0**
	baz=250						
HEN				*e*S	**Sb**	**17 07 23.4**	**0.0**
	baz=250						
TWGBT	**Beinan**	**0.69**	**335**	*e*P	**Pg**	**17 07 14.9**	**-0.6**
	baz=321						
TWG	**Pinlang**	**0.69**	**334**	*e*P	**Pg**	**17 07 14.9**	**-0.7**
	baz=321						
SCZT	**Fangliau**	**0.74**	**284**	*e*P	**Pg**	**17 07 15.9**	**-0.6**
	baz=283						
MASBT	**Mashibuluo**	**0.82**	**301**	*e*P	**Pg**	**17 07 17.1**	**-0.9**
	baz=300						
SSD	**Sandimen**	**0.90**	**308**	*e*P	**Pg**	**17 07 18.6**	**-0.8**
	baz=317						
CHKT	**Chengkung**	**0.90**	**358**	*e*P	**Pg**	**17 07 18.9**	**-0.6**
	baz=10.0						
WLCH	**Liuqiu**	**0.96**	**280**	*e*P	**Pn**	**17 07 22.5**	**+1.8**
	baz=279						
SGLT	**Jiouru**	**0.99**	**302**	*e*P	**Pn**	**17 07 21.4**	**+0.3**
	baz=314						
FULB	**Fuli**	**1.00**	**355**	*e*P	**Pb**	**17 07 20.8**	**-0.2**
	baz=5.0						
ELDTW	**Lidau**	**1.05**	**340**	*e*P	**Pb**	**17 07 20.2**	**-1.6**
	baz=342						
SLGT	**Liugui**	**1.05**	**319**	*e*P	**Pb**	**17 07 21.4**	**-0.4**
	baz=319						
TWM1	**Shoushan**	**1.10**	**305**	*e*P	**Pn**	**17 07 23.7**	**+1.0**
	baz=315						
STYT	**Tauyuan**	**1.13**	**329**	*e*P	**Pb**	**17 07 22.6**	**-0.6**
	baz=339						
TWF1	**Yuli**	**1.16**	**355**	*e*P	**Pb**	**17 07 22.6**	**-1.0**
	baz=343						
SGST	**Jiashian**	**1.16**	**320**	*e*P	**Pb**	**17 07 23.7**	**0.0**
	baz=320						
YULB	**Yu-li**	**1.20**	**356**	*e*P	**Pn**	**17 07 22.6**	**-1.5**
	baz=344						
CHN1	**Nanshi**	**1.27**	**321**	*e*P	**Pg**	**17 07 26.4**	**-0.1**
	baz=323						
CHN1				*e*S	**Sg**	**17 07 44.5**	**+1.3**
	baz=323						
WTP	**Ta-pu**	**1.27**	**325**	*e*P	**Pg**	**17 07 26.5**	**-0.1**
	baz=327						
WTP				*e*S	**Sg**	**17 07 44.2**	**+1.0**
	baz=327						
EHY	**Hungye**	**1.31**	**357**	*e*P	**Pn**	**17 07 24.9**	**-0.6**
	baz=347						
TPUB	**Ta-pu**	**1.31**	**327**	*e*P	**Pg**	**17 07 26.9**	**-0.3**
	baz=329						
TPUB				*e*S	**Sg**	**17 07 44.9**	**+0.6**
	baz=329						
YUS	**Yu-Shan**	**1.35**	**342**	*e*P	**Pn**	**17 07 26.2**	**-0.4**
	baz=355						
TWK	**Hsinying**	**1.36**	**322**	*e*P	**Pb**	**17 07 27.2**	**+0.1**
	baz=324						
TWK				*e*S	**Sg**	**17 07 45.8**	**-0.2**
	baz=324						
EGFH	**Guangfu**	**1.47**	**1**	*e*P	**Pn**	**17 07 27.7**	**0.0**
	baz=3.0						
CHN5	**Tsauling**	**1.54**	**335**	*e*P	**Pb**	**17 07 30.0**	**-0.3**
	baz=337						
CHN5				*e*S	**Sg**	**17 07 51.1**	**-0.8**
	baz=337						
CHY	**Chiayi**	**1.58**	**325**	*e*S	**Sb**	**17 07 51.2**	**+0.8**
	baz=328						
ESL	**Shilin**	**1.61**	**1**	*e*P	**Pn**	**17 07 29.6**	**-0.2**
	baz=3.0						
SSLB	**Suanglung**	**1.64**	**346**	*e*P	**Pb**	**17 07 31.4**	**-0.4**
	baz=357						
SSLB				*e*S	**Sb**	**17 07 52.9**	**+0.7**
	baz=357						
WGK	**Gukeng**	**1.67**	**333**	*e*P	**Pb**	**17 07 31.8**	**-0.6**
	baz=335						
WDLH	**Douliu**	**1.69**	**332**	*e*P	**Pn**	**17 07 31.8**	**+1.1**
	baz=334						
WDLH				*e*S	**Sb**	**17 07 54.3**	**+0.8**
	baz=334						
ENLB	**Shoufeng**	**1.71**	**6**	*e*S	**Sn**	**17 07 54.3**	**+1.7**
	baz=20						
WJS	**Zhushan**	**1.73**	**339**	*e*P	**Pb**	**17 07 33.4**	**0.0**
	baz=341						
WJS				*e*S	**Sb**	**17 07 56.2**	**+1.2**
	baz=341						
SMLT	**Sun Moon Lake**	**1.74**	**345**	*e*P	**Pb**	**17 07 33.1**	**-0.5**
	baz=1.0						
SMLT				*e*S	**Sb**	**17 07 56.2**	**+0.9**
	baz=1.0						
TYC	**Yuchr**	**1.77**	**344**	*e*P	**Pb**	**17 07 33.6**	**-0.5**
	baz=360						
TYC				*e*S	**Sb**	**17 07 57.9**	**+1.8**
	baz=360						
WNT	**Mingjian**	**1.80**	**339**	*e*P	**Pb**	**17 07 34.0**	**-0.5**
	baz=341						
WNT				*e*S	**Sb**	**17 07 57.5**	**+0.7**
	baz=341						
CHGB	**Renai**	**1.87**	**354**	*e*P	**Pn**	**17 07 34.2**	**+0.7**
	baz=9.0						
CHGB				*e*S	**Sn**	**17 07 58.1**	**+1.3**
	baz=9.0						
DPDB	**Guoxing**	**1.88**	**347**	*e*P	**Pb**	**17 07 35.6**	**-0.4**
	baz=2.0						
DPDB				*e*S	**Sb**	**17 07 59.9**	**+0.6**
	baz=2.0						
TWD	**Chiawan**	**1.89**	**6**	*e*P	**Pn**	**17 07 33.8**	**+0.3**
	baz=19						
WDGT	**Dungji**	**1.92**	**304**	*e*P	**Pn**	**17 07 33.3**	**-0.7**
	baz=305						
WDGT				*e*S	**Sn**	**17 07 57.2**	**-0.6**
	baz=305						
WHF	**Hehuan Shan**	**1.94**	**356**	*e*P	**Pn**	**17 07 34.6**	**-0.1**
	baz=358						
WHF				*e*S	**Sn**	**17 07 58.4**	**-0.6**
	baz=358						
NACB	**Ninganchiao**	**1.98**	**5**	*e*P	**Pn**	**17 07 34.1**	**-0.6**
	baz=18						
TCU	**Taichung**	**2.05**	**341**	*e*S	**Sn**	**17 08 03.2**	**+2.1**
	baz=344						
TWT	**Tachien**	**2.06**	**354**	*e*P	**Pn**	**17 07 37.0**	**+0.9**
	baz=8.0						
TDCB	**Techi**	**2.06**	**354**	*e*P	**Pn**	**17 07 36.4**	**+0.4**
	baz=7.0						
VCHM	**Qimei**	**2.08**	**299**	*e*P	**Pn**	**17 07 35.7**	**-0.4**
	baz=300						
VCHM				*e*S	**Sn**	**17 08 00.7**	**-1.0**
	baz=300						
PHUB	**P'eng-hu**	**2.13**	**308**	*e*P	**Pn**	**17 07 35.9**	**-1.0**
	baz=309						
PHUB				*e*S	**Sn**	**17 08 01.0**	**-2.0**
	baz=309						
PNG	**Penghu**	**2.18**	**309**	*e*P	**Pn**	**17 07 37.1**	**-0.4**
	baz=310						
PNG				*e*S	**Sn**	**17 08 02.5**	**-1.7**
	baz=310						
NNSB	**Datong**	**2.22**	**360**	*e*P	**Pn**	**17 07 38.6**	**+0.4**
	baz=13						
NNSH	**Datong**	**2.22**	**360**	*e*P	**Pn**	**17 07 38.9**	**+0.7**
	baz=13						
NNS	**Nan Shan**	**2.23**	**359**	*e*P	**Pn**	**17 07 39.3**	**+0.9**
	baz=14						
NNS				*e*S	**Sn**	**17 08 06.5**	**+0.7**
	baz=14						
ENA	**Nanau**	**2.25**	**8**	*e*P	**Pn**	**17 07 39.6**	**+1.2**
	baz=359						

NANB	**Nanao**	**2.25**	**8**	*e*P	**Pn**	**17 07 38.2**	**-0.2**
	baz=359						
NSY	**Sanyi**	**2.29**	**345**	*e*S	**Sb**	**17 08 10.6**	**-0.4**
	baz=348						
EOS1	**EOS1**	**2.44**	**16**	*e*P	**Pn**	**17 07 41.4**	**+0.4**
	baz=18						
EOS1				*e*S	**Sn**	**17 08 10.8**	**+0.3**
	baz=18						
TWC	**Suao**	**2.44**	**10**	*e*S	**Sn**	**17 08 12.5**	**+1.9**
	baz=23						
ENTT	**Nioudou**	**2.44**	**4**	*e*P	**Pn**	**17 07 42.0**	**+0.9**
	baz=6.0						
ENTT				*e*S	**Sn**	**17 08 11.2**	**+0.6**
	baz=6.0						
NSTT	**Nanjuang**	**2.45**	**352**	*e*P	**Pn**	**17 07 43.7**	**+2.4**
	baz=338						
NSTT				*e*S	**Sn**	**17 08 13.6**	**+2.7**
	baz=338						
YHNB	**Yeheng**	**2.46**	**360**	*e*P	**Pn**	**17 07 41.9**	**+0.3**
	baz=14						
YHNB				*e*S	**Sn**	**17 08 11.6**	**+0.3**
	baz=14						
LIOB	**Emei**	**2.46**	**352**	*e*P	**Pn**	**17 07 43.8**	**+2.3**
	baz=354						
NSK	**Sanguang**	**2.47**	**359**	*e*P	**Pn**	**17 07 43.3**	**+1.7**
	baz=14						
NSK				*e*S	**Sn**	**17 08 12.8**	**+1.3**
	baz=14						
NWLT	**Wulai**	**2.57**	**2**	*e*P	**Pn**	**17 07 44.4**	**+1.4**
	baz=5.0						
NWLT				*e*S	**Sn**	**17 08 14.8**	**+0.9**
	baz=5.0						
JYNG	**Yonagunijimaku**	**2.66**	**32**	P	**Pn**	**17 07 45.7**	**+1.6**
JYNG				*e*S	**Sn**	**17 08 17.2**	**+1.2**
YOJ	**Yonaguni jima**	**2.70**	**33**	P	**Pn**	**17 07 45.4**	**+0.7**
TIPB	**Shuangxi**	**2.79**	**8**	*e*P	**Pn**	**17 07 47.3**	**+1.3**
	baz=360						
TIPB				*e*S	**Sn**	**17 08 20.2**	**+0.8**
	baz=360						
HATJ	**Hateruma jima**	**2.89**	**50**	P	**Pn**	**17 07 47.0**	**-0.3**
IRIF	**Iriomote-Funau**	**3.02**	**45**	P	**Pn**	**17 07 49.3**	**+0.2**
JKRS	**Kuro-shima**	**3.15**	**49**	P	**Pn**	**17 07 51.0**	**+0.2**
JKRS				S	**Sn**	**17 08 25.8**	**-2.2**
JIJ	**Ishigaki jima**	**3.32**	**49**	P	**Pn**	**17 07 52.7**	**-0.5**
JIJ				S	**Sn**	**17 08 29.1**	**-3.2**
JISG	**Ishigakijimahi**	**3.58**	**48**	P	**Pn**	**17 07 56.5**	**-0.3**
JISG				*e*S	**Sn**	**17 08 35.7**	**-3.1**
JTJ	**Tarama**	**3.89**	**51**	P	**Pn**	**17 08 01.1**	**0.0**
JTJ				*e*S	**Sn**	**17 08 45.2**	**-1.2**
JIRB	**Irabujima**	**4.34**	**52**	*e*S	**Sn**	**17 08 57.0**	**-0.6**

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*IDC **26** 17:07:23.2±1.9, 36.°28N×141.°13E, h0^{km}, mb3.2/2, mb1 3.3/5, mb1mx3.1/69, mbtmp3.3/5, ML3.0/3, MS2.1/1, Ms1 2.1/1, ms1mx1.7/25, Error ellipse: s-maj=34.2km s-min=24.9km az=87.0*

*ISCJB **26** 17:07:24.4±1.0, 36.°21N±0.°04×141.°17E±0.°07, h27^{km}±6^{km}, mb3.2/2, Error ellipse: s-maj=9.4km s-min=6.5km az=179.3*

*JMA **26** 17:07:26.3, 36.°12N×140.°97E, h37^{km}±1^{km}, M3.2*

JMA Felt I J1.

ISC 26 17:07:25.3±1.3, **36.°21N**±0.°04×**141.°08E**±0.°05, **h13**^{km}±9^{km}, **n17**, σ**0^{s}98**/18, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHYU	**Hitachinakayam**	**0.42**	**288**	P	**Pb**	**17 07 35.3**	**+0.7**
JHYU				S	**Sb**	**17 07 41.5**	**+0.7**
CHOJ	**Chosi**	**0.54**	**199**	P	**Pg**	**17 07 35.7**	**-0.2**
CHOJ				S	**Sg**	**17 07 42.3**	**-0.7**
JHO	**Hitachi**	**0.57**	**314**	P	**Pb**	**17 07 37.8**	**+0.6**
JYT	**Yasato**	**0.71**	**272**	P	**Pg**	**17 07 38.8**	**-0.4**
JYT				*e*S	**Sg**	**17 07 48.1**	**-0.5**
ONAJ	**Iwakimizuishiy**	**0.92**	**346**	P	**Pg**	**17 07 43.5**	**+0.4**
MJAR	**Matsushiro Arr**	**2.34**	**279**	Pn	**Pn**	**17 08 02.8**	**-0.7**
	4.7nm,0.3s,baz=133,slow=15,SNR=6.4						
MJAR				Sn	**Sn**	**17 08 33.6**	**+1.6**
	2.5nm,0.3s,baz=106,slow=9.0,SNR=3.6						
MJAR				LR	LR	17 09 06.5	
	comp=Z,33nm,18.2s,baz=245,slow=44						
MAT	**Matsushiro**	**2.34**	**279**	P	**Pn**	**17 08 03.3**	**-0.2**
MAT				*e*S	**Sn**	**17 08 31.0**	**-1.1**
JHJ	**Hachijo jima 2**	**3.26**	**199**	Pn	**Pn**	**17 08 17.7**	**+1.5**
	3.5nm,0.3s,baz=52,slow=19,SNR=2.4						
JHJ				Sn	**Sn**	**17 08 53.9**	**-0.9**
	3.6nm,0.3s,baz=53,slow=20,SNR=1.3						
ASAJ	**Asahikawa**	**7.98**	**8**	Pn	**Pn**	**17 09 20.2**	**-0.7**
	0.2nm,0.3s,baz=328,slow=19,SNR=1.3						
ASAJ				Sn	**Sn**	**17 10 49.4**	**-1.7**
	0.0nm,0.3s,baz=276,slow=19,SNR=1.7						
H11N2	**WAKE ISLAND Hy**	**27.97**	**119**	T	T	17 42 32.8	
	baz=312,slow=75,SNR=20						
H11N1	**WAKE ISLAND Hy**	**27.98**	**119**	T	T	17 42 33.4	
	baz=312,slow=75,SNR=19						
H11N3	**WAKE ISLAND Hy**	**27.99**	**119**	T	T	17 42 34.2	
	baz=312,slow=75,SNR=21						
H11S1	**WAKE ISLAND Hy**	**28.65**	**121**	T	T	17 43 16.4	
	baz=314,slow=76,SNR=70						
H11S3	**WAKE ISLAND Hy**	**28.65**	**121**	T	T	17 43 17.6	
	baz=314,slow=76,SNR=48						
H11S2	**WAKE ISLAND Hy**	**28.67**	**121**	T	T	17 43 20.9	
	baz=314,slow=76,SNR=56						
MKAR	**Makanchi Array**	**44.33**	**303**	P	**P**	**17 15 34.9**	**-0.1**
	0.3nm,0.7s,baz=84,slow=5.2,SNR=2.4						
WRA	**Warramunga Arr**	**56.21**	**188**	P	**P**	**17 17 05.0**	**-0.1**
	0.2nm,0.8s,baz=3.2,slow=7.8,SNR=2.0						

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*SOME **26** 17:07:45.8, 44.°12N×81.°15E, h5^{km}*

*NNC **26** 17:07:47.2±999.0, 44.°21N×81.°39E, h40^{km}±999^{km}, mb2.7, mpv2.0, Error ellipse: s-maj=10000.0km s-min=10000.0km az=143.0*

ISC 26 17:07:47.0±1.6, **44.°10N**±0.°05×**81.°21E**±0.°07, **h28**^{km}±15^{km}, **n12**, σ**1^{s}45**/22, **5C-1D**, **Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	**0.90**	**224**	*e*P	**Pb**	**17 08 03.3**	**-0.9**
	4.3nm,0.1s						
KTMS				*e*S	**Sb**	**17 08 16.3**	**+0.3**
	7.9nm,0.2s						
DJR	**Jarkent**	**1.05**	**283**	*e*P	**Pn**	**17 08 05.5**	**-0.5**
	7.1nm,0.1s						
DJR				*e*S	**Sb**	**17 08 20.2**	**+0.1**
	13nm,0.2s						
PDGK	**Podgornoye**	**1.47**	**239**	⇑Pn	**Pn**	**17 08 12.4**	**+0.6**
	1.1nm,0.3s						
PDGK				⇓Sn	**Sn**	**17 08 32.2**	**+2.1**
	13nm,0.5s						
SHLS	**Shalkode**	**1.58**	**234**	*e*P	**Pn**	**17 08 11.5**	**-1.9**
	2.7nm,0.1s						
SHLS				*e*S	**Sn**	**17 08 29.7**	**-3.3**
	15nm,0.2s						
KAPS	**Kapalarasan**	**1.78**	**312**	*e*P	**Pb**	**17 08 17.7**	**-1.3**
	2.7nm,0.2s						
KAPS				*e*S	**Sb**	**17 08 40.6**	**-0.3**
	9.7nm,0.4s						
UZB	**Uzynbulak**	**1.85**	**240**	*e*P	**Pn**	**17 08 19.2**	**+2.0**
	1.2nm,0.1s						
UZB				*e*S	**Sb**	**17 08 43.6**	**+0.4**
	8.7nm,0.2s						
KPKS	**Kokpek**	**1.94**	**252**	*e*P	**Pb**	**17 08 20.8**	**-0.9**
	5.1nm,0.1s						
KPKS				*e*S	**Sb**	**17 08 46.3**	**+0.7**
	33nm,0.2s						
MNBS	**Baschi**	**2.03**	**270**	*e*P	**Pb**	**17 08 22.6**	**-0.7**
	0.1nm,0.2s						
MNBS				*e*S	**Sb**	**17 08 49.2**	**+1.1**
	9.0nm,0.2s						
MAKZ	**Makanchi**	**2.76**	**11**	⇑Pg	**Pb**	**17 08 35.6**	**-0.1**
	0.3nm,0.4s						
MAKZ				⇑Lg	Lg	17 09 09.8	
	0.5nm,0.5s						
MK31	**Makanchi Array**	**2.80**	**15**	⇑Pg	**Pb**	**17 08 36.5**	**+0.1**
	0.2nm,0.4s,baz=187,slow=16,SNR=10.0						
MK31				⇑Lg	Lg	17 09 12.4	
	0.3nm,0.3s,baz=195,slow=27,SNR=7.4						
KOTS	**Kotyrbulak**	**3.10**	**255**	*e*P	**Pb**	**17 08 41.4**	**-0.1**
	1.5nm,0.6s						
KOTS				*e*S	**Sb**	**17 09 21.1**	**+2.2**
	4.3nm,0.7s						
KTBS	**Karatobe**	**3.30**	**265**	*e*P	**Pb**	**17 08 44.6**	**-0.2**
	0.7nm,0.5s						
KTBS				*e*S	**Sb**	**17 09 26.6**	**+2.0**
	1.6nm,0.4s						

MEX 26 17:49:48.0±0.9, **18.°10N**×**98.°48W**, **h64**^{km}±9^{km}, **MD3.8**, **Central Mexico**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TLIG	**Tlapa**	**0.54**	**189**	*i* P	Pn	17 49 59.5	-1.4
TLIG				*i* S	Sn	17 50 08.8	-1.5
YAIG	**Yautepec**	**0.94**	**324**	*e*P	Pn	17 50 04.1	-1.5
YAIG				*e*S	Sn	17 50 16.3	-2.4
PPM	**Popocatepetl**	**0.97**	**352**	*e*P	Pn	17 50 05.1	-1.3
PPM				*i* S	Sn	17 50 18.2	-1.7
PLIG	**Platanillo**	**1.01**	**287**	*e*P	Pn	17 50 05.3	-1.2
PLIG				*e*S	Sn	17 50 18.7	-1.5
MEIG	**Mezcala**	**1.10**	**261**	*e*P	Pn	17 50 05.7	-1.9
MEIG				*e*S	Sn	17 50 21.0	-1.1
TPIG	**Tehuac#an**	**1.11**	**73**	*e*P	Pn	17 50 06.9	-0.9
TPIG				*i* S	Sn	17 50 21.1	-1.4
MAVM	**Malinalco, Edo**	**1.29**	**312**	*i* P	Pn	17 50 08.1	-2.0
MAVM				*i* S	Sn	17 50 24.7	-2.0
ARIG	**Puente Sto Nin**	**1.78**	**276**	*e*P	Pn	17 50 15.9	-0.7
ARIG				*i* S	Sn	17 50 36.8	-1.5
CAIG	**El Cayaco**	**2.00**	**239**	*e*P	Pn	17 50 17.4	-2.1
CAIG				*e*S	Sn	17 50 41.8	-1.7

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*ISCJB **26** 17:57:09.9±0.6, 8.°24N±0.°08×93.°61E±0.°07, h26^{km}, mb3.9/21, Error ellipse: s-maj=11.9km s-min=9.6km az=177.9*

*IDC **26** 17:57:21.5±3.6, 8.°70N×93.°84E, h103^{km}±31^{km}, mb3.6/21, mb1 3.7/23, mb1mx3.5/61, mbtmp3.9/23, Error ellipse: s-maj=22.0km s-min=13.2km az=46.0*

ISC 26 17:57:12.3±0.7, **8.°43N**±0.°10×**93.°58E**±0.°08, **h26**^{km}, **n41**, σ**1^{s}81**/38, **mb3.9**/21, **Nicobar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**11.25**	**27**	P	**Pn**	**17 59 55.7**	**+4.1**
	0.2nm,0.3s,baz=222,slow=15,SNR=3.3						
CHTO	**Chiang Mai**	**11.56**	**26**	P	Pn	18 00 07.2	+11
	21nm,0.8s						
CMMT	**Chiang Mai**	**11.56**	**26**	P	Pn	18 00 07.1	+11
	4.4nm,0.6s						
PALK	**Pallekele**	**12.81**	**266**	P	**P**	**18 00 25.1**	**+1.4**
	0.7nm,0.3s,baz=114,slow=11,SNR=6.8						
PALK				S	**Sn**	**18 02 36.1**	**+1.2**
	3.3nm,0.3s,baz=116,slow=22,SNR=12						
VIS	**Vishakhapatnam**	**13.60**	**314**	*i* P	**P**	**18 00 32.9**	**+0.5**
VIS				*i* S	**Sn**	**18 02 49.0**	**-5.0**
VIS				*i* S	**Sn**	**18 02 51.7**	**-2.3**
ODAN	**Odare**	**19.25**	**343**	*e*P	**Pn**	**18 01 39.0**	**+2.7**
	25nm,0.3s						
RAMN	**Ramite**	**19.58**	**341**	*e*P	**Pn**	**18 01 42.9**	**+2.7**
	56nm,0.3s						
JIRN	**Jiri**	**20.37**	**341**	*e*P	Pn	18 01 50.0	+0.4
	37nm,0.3s						
PKIN	**Phulchoki**	**20.56**	**339**	*e*P	Pn	18 01 51.7	-0.1
	49nm,0.3s						
DMN	**Daman**	**20.70**	**338**	*e*P	Pn	18 01 53.3	-0.1
	75nm,0.7s						
GUN	**Gumba**	**20.70**	**340**	*e*P	Pn	18 01 53.1	-0.4
	22nm,0.6s						
KKN	**Kakani**	**20.80**	**339**	*e*P	**P**	**18 01 53.9**	**+1.9**
GKN	**Gorkha**	**21.23**	**338**	*e*P	**P**	**18 01 58.7**	**+2.2**
	53nm,0.3s						
KOLN	**Koldanda**	**21.43**	**335**	*e*P	**P**	**18 02 01.7**	**+2.9**
	40nm,0.5s						
DANN	**Dangsing**	**21.88**	**336**	*e*P	**P**	**18 02 04.5**	**+0.8**
	25nm,0.5s						
PYUN	**Piuthan**	**21.98**	**334**	*e*P	**P**	**18 02 07.1**	**+2.5**
	27nm,0.3s						
H08S3	**Diego Garcia H**	**26.39**	**233**	T	T	18 29 53.5	
	baz=50,slow=75,SNR=80						
H08S2	**Diego Garcia H**	**26.39**	**233**	T	T	18 29 53.0	
	baz=50,slow=75,SNR=4.4						
H08S1	**Diego Carcia H**	**26.41**	**233**	T	T	18 29 53.7	
	baz=50,slow=75,SNR=38						
MKAR	**Makanchi Array**	**39.43**	**348**	P	**P**	**18 04 39.9**	**-0.3**
	0.2nm,0.4s,baz=167,slow=9.2,SNR=5.5						
SONM	**Songino Array**	**40.75**	**13**	P	**P**	**18 04 48.3**	**-3.0**
	0.8nm,0.5s,baz=187,slow=7.1,SNR=5.3						
SONM				PcP	**PcP**	**18 06 51.8**	**-0.5**
	0.6nm,0.5s,baz=235,slow=3.1,SNR=3.5						
KSRS	**Korea Array**	**42.42**	**42**	P	**P**	**18 05 03.7**	**-1.2**
	0.5nm,0.6s,baz=246,slow=9.4,SNR=3.6						
GEYT	**Alibeck**	**43.42**	**318**	P	**P**	**18 05 13.2**	**+0.1**
	0.8nm,0.3s,baz=134,slow=8.3,SNR=5.6						
KURBB	**Kurchatov Arra**	**43.88**	**346**	P	**P**	**18 05 16.1**	**-0.4**
	0.4nm,0.3s,baz=163,slow=6.7,SNR=4.3						
ZALV	**Zalesovo Beam**	**45.94**	**353**	P	**P**	**18 05 31.5**	**-1.4**
	3.3nm,0.4s,baz=176,slow=7.9,SNR=17						
BVAR	**Borovoye Array**	**48.29**	**341**	P	**P**	**18 05 51.0**	**-0.3**
	0.3nm,0.4s,baz=135,slow=7.0,SNR=3.2						
WRA	**Warramunga Arr**	**49.03**	**126**	P	**P**	**18 05 57.5**	**0.0**
	0.6nm,0.5s,baz=304,slow=8.9,SNR=21						
WRA				PcP	**PcP**	**18 07 21.2**	**+0.1**
	0.3nm,0.5s,baz=313,slow=2.9,SNR=7.8						
MJAR	**Matsushiro Arr**	**49.21**	**48**	PcP	**PcP**	**18 07 20.9**	**-0.6**
	1.6nm,0.7s,baz=226,slow=3.8,SNR=6.6						
ASAR	**Alice Springs**	**50.69**	**130**	P	**P**	**18 06 09.8**	**-0.2**
	0.5nm,0.8s,baz=301,slow=7.4,SNR=8.2						
ASAR				PcP	**PcP**	**18 07 27.6**	**+0.3**
	0.4nm,0.4s,baz=315,slow=3.4,SNR=7.9						
BRTR	**Keskin Array B**	**61.65**	**311**	P	**P**	**18 07 27.4**	**-0.9**
	0.6nm,0.8s,baz=133,slow=9.0,SNR=4.4						
FINES	**FINESS Array B**	**71.97**	**332**	P	**P**	**18 08 32.7**	**-0.7**
	0.9nm,0.4s,baz=112,slow=8.5,SNR=6.9						
ARCES	**ARCESS Array B**	**74.56**	**340**	P	**P**	**18 08 48.3**	**-0.3**
	1.4nm,0.7s,baz=93,slow=5.4,SNR=3.8						
GERES	**GERESS Array B**	**77.05**	**318**	P	**P**	**18 09 03.5**	**+0.1**
	0.6nm,0.4s,baz=91,slow=5.5,SNR=7.6						
HFS	**Hagfors**	**77.70**	**330**	P	**P**	**18 09 06.3**	**-0.4**
	0.8nm,0.4s,baz=94,slow=5.8,SNR=9.5						
NOA	**NORSAR Array B**	**78.98**	**331**	P	**P**	**18 09 13.1**	**-0.6**
	0.6nm,0.6s,baz=93,slow=5.7,SNR=4.6						
SPITS	**Spitsbergen Ar**	**79.19**	**348**	P	**P**	**18 09 14.1**	**-0.5**
	2.0nm,0.5s,baz=44,slow=8.5,SNR=8.4						
DAVOX	**Davos/Dischmat**	**79.61**	**316**	P	**P**	**18 09 17.6**	**-0.1**
	1.0nm,0.4s,baz=180,slow=6.1,SNR=3.4						
EKA	**Eskdalemuir Ar**	**86.96**	**325**	P	**P**	**18 09 55.4**	**+0.3**
	0.4nm,0.4s,baz=88,slow=5.2,SNR=4.4						
TORD	**Torodi Ar. Bea**	**89.93**	**283**	P	**P**	**18 10 11.3**	**+1.3**
	0.3nm,0.6s,baz=47,slow=6.3						
ESDC	**Sonseca Array**	**90.44**	**310**	P	**P**	**18 10 12.3**	**+0.2**
	0.2nm,0.4s,baz=81,slow=4.3,SNR=4.8						
ILAR	**Eielson Array**	**94.44**	**22**	P	**P**	**18 10 27.2**	**-2.7**
	0.3nm,0.5s,baz=282,slow=4.2,SNR=3.1						

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*ISK **26** 18:25:47.9, 38.°83N×43.°46E, h5^{km}, ML2.0/2*

*DDA **26** 18:25:49.0, 38.°76N×43.°59E, h7^{km}, Ml2.6*

*ISCJB **26** 18:25:49.3±1.1, 38.°80N±0.°05×43.°60E±0.°09, h25^{km}±7^{km}, Error ellipse: s-maj=12.9km s-min=6.1km az=34.8*

*CSEM **26** 18:25:49.5±0.4, 38.°87N×43.°43E, h5^{km}, ML2.6, Error ellipse: s-maj=13.0km s-min=8.0km az=132.0*

ISC 26 18:25:49.7±1.0, **38.°84N**±0.°04×**43.°48E**±0.°05, **h19**^{km}±2^{km}, **n13**, σ**0^{s}80**/26, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VMUR	**Van-Muradiye**	**0.17**	**26**	*i* P	**Pb**	**18 25 53.6**	**+0.2**
VMUR				*i* S	**Sg**	**18 25 58.2**	**+0.6**
VMUR	**Van-Muradiye**	**0.17**	**26**	P	**Pb**	**18 25 53.6**	**+0.2**
VMUR				S	**Sg**	**18 25 58.2**	**+0.6**
VANB	**Van**	**0.26**	**196**	PG	**Pg**	**18 25 55.5**	**-0.1**
VANB				SG	**Sg**	**18 26 01.1**	**+1.5**
VANB	**Van**	**0.26**	**196**	*e*Pg	**Pg**	**18 25 55.5**	**-0.1**
VANB				*e*Sg	**Sg**	**18 26 01.1**	**+1.5**
TVAN	**Van**	**0.32**	**190**	*i* P	**Pg**	**18 25 55.1**	**-1.6**
TVAN				*i* S	**Sb**	**18 26 01.5**	**-0.1**
TVAN	**Van**	**0.32**	**190**	P	**Pg**	**18 25 55.1**	**-1.6**
TVAN				S	**Sb**	**18 26 01.5**	**-0.1**
CLDR	**Caldiran**	**0.46**	**48**	PG	**Pg**	**18 25 58.2**	**-0.9**
CLDR				SG	**Sb**	**18 26 06.1**	**+0.2**
CLDR	**Caldiran**	**0.46**	**48**	*i* P	**Pg**	**18 25 58.3**	**-0.9**
CLDR				*i* S	**Sb**	**18 26 06.9**	**+1.0**
CLDR	**Caldiran**	**0.46**	**48**	P	**Pg**	**18 25 58.3**	**-0.9**
CLDR				*e*Sg	**Sb**	**18 26 06.1**	**+0.2**
ADCV	**BITLIS_Adilcev**	**0.59**	**267**	*i* P	**Pb**	**18 26 01.6**	**+0.2**
ADCV				*i* S	**Sn**	**18 26 12.3**	**-0.2**
ADCV	**BITLIS_Adilcev**	**0.59**	**267**	P	**Pb**	**18 26 01.6**	**+0.2**
ADCV				S	**Sn**	**18 26 12.3**	**-0.2**
GURO	**Guroymak-BITLI**	**1.17**	**256**	PN	**Pn**	**18 26 11.0**	**-0.2**
GURO				SN	**Sg**	**18 26 28.2**	**+0.6**
GURO	**Guroymak-BITLI**	**1.17**	**256**	*e*Pn	**Pn**	**18 26 11.0**	**-0.2**
GURO				*e*Sn	**Sg**	**18 26 28.2**	**+0.6**

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*IDC **26** 18:28:39.7±1.5, 37.°75S×179.°99W, h0^{km}, mb4.3/2, mb1 4.3/5, mb1mx3.9/43, mbtmp4.1/5, ML3.7/3, MS3.4/2, Ms1 3.3/2, ms1mx2.7/43, Error ellipse: s-maj=47.8km s-min=25.2km az=153.0*

*NEIC **26** 18:28:41.6±0.0, 37.°53S×179.°69W, h45^{km}, ML4.4(WEL), After WEL.*

*WEL **26** 18:29:36.1, 41°S±38°×17°6E±1°1, h39^{km}±11^{km}*

ISC 26 18:28:42.2±1.1, **37.°99S**±0.°07×**179.°81W**±0.°08, **h27**^{km}, **n80**, σ**1^{s}43**/87, **East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**1.41**	**276**	Pn	**Pn**	**18 29 06.3**	**+0.2**
WMGZ				Sn	**Sb**	**18 29 24.8**	**-0.6**
PUZ	**Puketiti**	**1.53**	**266**	Pn	**Pn**	**18 29 08.4**	**+0.7**
MXZ	**Matakaoa Point**	**1.55**	**285**	Pn	**Pn**	**18 29 07.1**	**-0.9**
MXZ				Sn	**Sn**	**18 29 26.0**	**-1.2**
CNGZ	**Carnagh Statio**	**1.64**	**252**	Pn	**Pb**	**18 29 11.8**	**+0.1**
CNGZ				Sn	**Sb**	**18 29 34.1**	**+2.2**
TWGZ	**Tauwhareparae**	**1.75**	**263**	Pn	**Pn**	**18 29 12.1**	**+1.2**
TKGZ	**Te Karaka**	**1.90**	**255**	Pn	**Pb**	**18 29 14.6**	**-1.5**
PRGZ	**Paritu Road**	**2.04**	**242**	Pn	**Pb**	**18 29 17.5**	**-1.0**
MWZ	**Matawai**	**2.12**	**260**	Pn	**Pn**	**18 29 16.9**	**+0.9**
MHGZ	**Mahia Peninsul**	**2.13**	**236**	Pn	**Pb**	**18 29 18.8**	**-1.4**
KNZ	**Kokohu**	**2.23**	**242**	Pn	**Pn**	**18 29 19.7**	**+2.4**
RAGZ	**Rawiri**	**2.24**	**256**	Pn	**Pn**	**18 29 19.3**	**+1.7**
SNGZ	**Shannon Statio**	**2.37**	**250**	Pn	**Pn**	**18 29 21.5**	**+2.1**
URZ	**Urewera**	**2.44**	**263**	Pn	**Pn**	**18 29 21.6**	**+1.4**
	18nm,0.3s,baz=259,slow=3.9,SNR=148						
URZ				Sn	**Sn**	**18 29 49.5**	**+0.3**
	80nm,0.3s,baz=338,slow=24,SNR=49						
ARHZ	**Aropaoanui**	**2.81**	**242**	Pn	**Pn**	**18 29 28.1**	**+2.8**
NMHZ	**Naumai**	**2.87**	**246**	Pn	**Pn**	**18 29 28.6**	**+2.3**
OPRZ	**Ohinepanea**	**2.88**	**272**	Pn	**Pn**	**18 29 26.3**	**0.0**
TARZ	**Mount Tarawera**	**2.91**	**264**	Pn	**Pn**	**18 29 27.9**	**+1.1**
MCHZ	**McNeill Hill**	**3.10**	**241**	Pn	**Pn**	**18 29 31.7**	**+2.4**
BKZ	**Black Stump Fm**	**3.13**	**247**	Pn	**Pn**	**18 29 31.7**	**+1.9**
KAHZ	**Kahuranaki**	**3.15**	**234**	Pn	**Pn**	**18 29 32.3**	**+2.2**
PXZ	**Pawanui**	**3.30**	**231**	Pn	**Pn**	**18 29 33.6**	**+1.6**
BHHZ	**Black Hill Sta**	**3.56**	**244**	Pn	**Pn**	**18 29 37.8**	**+2.1**
PRHZ	**Porangahau**	**3.58**	**229**	Pn	**Pn**	**18 29 37.5**	**+1.6**
WPHZ	**Waipukurau**	**3.58**	**233**	Pn	**Pn**	**18 29 37.6**	**+1.7**
PNHZ	**Pukenui**	**3.66**	**237**	Pn	**Pn**	**18 29 38.9**	**+1.9**
KRVZ	**Karewarewa**	**3.73**	**251**	Pn	**Pn**	**18 29 40.2**	**+2.1**
OTVZ	**Oturere**	**3.73**	**250**	Pn	**Pn**	**18 29 39.7**	**+1.5**
MOVZ	**Moawhango**	**3.75**	**246**	Pn	**Pn**	**18 29 40.3**	**+1.9**
KUZ	**Kuaotunu**	**3.77**	**288**	Pn	**Pn**	**18 29 37.0**	**-1.5**
TUVZ	**Tukino**	**3.77**	**249**	Pn	**Pn**	**18 29 41.1**	**+2.3**
NGZ	**Ngauruhoe**	**3.79**	**250**	Pn	**Pn**	**18 29 40.6**	**+1.7**
WHVZ	**Whangaehu Hut**	**3.83**	**249**	Pn	**Pn**	**18 29 42.2**	**+2.7**
WNVZ	**Wahianoa**	**3.83**	**248**	Pn	**Pn**	**18 29 41.3**	**+1.8**
DVHZ	**Dannevirke**	**3.89**	**232**	Pn	**Pn**	**18 29 41.7**	**+1.5**
TSZ	**Takapari Road**	**3.89**	**237**	Pn	**Pn**	**18 29 41.5**	**+1.3**
MTVZ	**Mangateitei**	**3.95**	**248**	Pn	**Pn**	**18 29 43.3**	**+2.3**
PKVZ	**Pokaka**	**4.01**	**250**	Pn	**Pn**	**18 29 44.3**	**+2.4**
BFZ	**Birch Farm**	**4.07**	**227**	Pn	**Pn**	**18 29 43.1**	**+0.4**
BFZ	**Birch Farm**	**4.07**	**227**	P	**Pn**	**18 29 43.2**	**+0.5**
MKAZ	**Moumakai**	**4.09**	**281**	Pn	**Pn**	**18 29 42.1**	**-0.8**
PRWZ	**Pori Road**	**4.16**	**231**	Pn	**Pn**	**18 29 45.6**	**+1.7**
POWZ	**Post Office Ro**	**4.19**	**234**	Pn	**Pn**	**18 29 46.4**	**+2.0**
TIWZ	**Tintock**	**4.34**	**229**	Pn	**Pn**	**18 29 47.5**	**+1.0**
VRZ	**Vera Road**	**4.41**	**253**	Pn	**Pn**	**18 29 49.8**	**+2.5**
MRZ	**Mangatainoka R**	**4.46**	**232**	Pn	**Pn**	**18 29 49.1**	**+1.0**
TMWZ	**Te Maipa**	**4.55**	**225**	Pn	**Pn**	**18 29 49.4**	**0.0**
TMWZ	**Te Maipa**	**4.55**	**225**	P	**Pn**	**18 29 49.1**	**-0.2**
HOWZ	**Holdsworth Sta**	**4.64**	**230**	Pn	**Pn**	**18 29 50.8**	**+0.2**
HOWZ	**Holdsworth Sta**	**4.64**	**230**	P	**Pn**	**18 29 50.9**	**+0.3**
OGWZ	**Otaki Gorge**	**4.80**	**232**	P	**Pn**	**18 29 54.0**	**+1.2**
MTW	**Mount Morrison**	**4.81**	**227**	P	**Pn**	**18 29 52.4**	**-0.4**
TRWZ	**Traveller**	**4.86**	**224**	P	**Pn**	**18 29 53.9**	**+0.3**
KIW	**Kapiti Island**	**4.99**	**233**	P	**Pn**	**18 29 56.3**	**+1.0**
PAWZ	**Paruwai Farm**	**5.00**	**226**	P	**Pn**	**18 29 55.4**	**-0.1**
CAW	**Cannon Point**	**5.04**	**230**	P	**Pn**	**18 29 56.5**	**+0.5**
MSWZ	**Moikau Station**	**5.12**	**226**	P	**Pn**	**18 29 56.3**	**-0.8**
PLWZ	**Palliser**	**5.22**	**225**	P	**Pn**	**18 29 57.9**	**-0.6**
TCW	**Tory Channel**	**5.59**	**233**	P	**Pn**	**18 30 04.1**	**+0.6**
TUWZ	**Tuamarina**	**5.92**	**233**	P	**Pn**	**18 30 07.8**	**-0.2**
QRZ	**Quartz Range**	**6.57**	**242**	P	**Pn**	**18 30 16.5**	**-0.6**
THZ	**Tophouse**	**6.75**	**234**	P	**Pn**	**18 30 19.2**	**-0.3**
LTZ	**Lake Taylor**	**7.71**	**229**	P	**Pn**	**18 30 31.9**	**-0.8**
OKCZ	**Okains Bay**	**7.87**	**221**	P	**Pn**	**18 30 35.3**	**+0.4**
AKCZ	**Akaroa Harbour**	**8.06**	**221**	P	**Pn**	**18 30 37.8**	**+0.4**
MQZ	**McQueen's Vall**	**8.08**	**223**	P	**Pn**	**18 30 37.4**	**-0.2**
OXZ	**Oxford**	**8.17**	**227**	P	**Pn**	**18 30 39.1**	**+0.1**
INZ	**Inchbonnie**	**8.18**	**232**	P	**Pn**	**18 30 39.6**	**+0.5**
WVZ	**Waitaha Valley**	**8.81**	**232**	P	**Pn**	**18 30 48.1**	**+0.5**
RPZ	**Rata Peaks**	**8.98**	**228**	Pn	**Pn**	**18 30 50.2**	**+0.2**
	0.8nm,0.3s,baz=34,slow=15,SNR=5.9						
RPZ				Sn	**Sn**	**18 32 26.3**	**-3.9**
	2.5nm,0.3s,baz=142,slow=22,SNR=19						
RPZ	**Rata Peaks**	**8.98**	**228**	P	**Pn**	**18 30 50.4**	**+0.4**
ODZ	**Otahua Downs**	**10.04**	**222**	P	**Pn**	**18 31 04.5**	**-0.1**
TUZ	**Tuapeka**	**11.18**	**221**	P	**Pn**	**18 31 20.6**	**+0.4**
DZM	**Mont Dzumac**	**19.79**	**319**	P	**Pn**	**18 33 10.3**	**-1.8**
	0.2nm,0.3s,baz=153,slow=11,SNR=3.1						
DZM				LR	LR	18 39 48.8	
	comp=Z,79nm,18.5s,baz=144,slow=34						
STKA	**Stephens Creek**	**32.05**	**269**	LR	LR	18 48 27.0	
	comp=Z,64nm,18.3s,baz=194,slow=37						
ASAR	**Alice Springs**	**41.81**	**276**	P	**P**	**18 36 29.6**	**-0.2**
	3.4nm,0.7s,baz=120,slow=8.2,SNR=61						
ASAR				PcP	**PcP**	**18 38 26.2**	**+0.7**
	0.5nm,0.7s,baz=110,slow=3.9,SNR=4.5						
WRA	**Warramunga Arr**	**43.48**	**281**	P	**P**	**18 36 42.6**	**-0.7**
	2.2nm,0.4s,baz=121,slow=7.8,SNR=68						
WRA				PcP	**PcP**	**18 38 32.4**	**+1.3**
	0.6nm,0.7s,baz=131,slow=3.1,SNR=3.7						
KURK	**Kurchatov**	**125.02**	**310**	PKP	**PKPdf**	**18 47 40.5**	**+1.2**
KURBB	**Kurchatov Arra**	**125.04**	**310**	PKP	**PKPdf**	**18 47 40.4**	**+1.2**
	0.2nm,0.3s,baz=123,slow=2.8,SNR=3.6						
ARCES	**ARCESS Array B**	**145.58**	**345**	PKPbc	**PKPab**	**18 48 18.0**	**+0.6**
	1.8nm,0.5s,baz=35,slow=4.4,SNR=12						
FINES	**FINESS Array B**	**151.53**	**334**	PKPbc	**PKPbc**	**18 48 34.3**	**+1.5**
	1.5nm,0.6s,baz=58,slow=3.4,SNR=8.6						
FINES				PKPab	**pPKPbc**	**18 48 40.9**	**-0.9**
	1.3nm,0.6s,baz=39,slow=5.3,SNR=6.9						

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*IDC **26** 18:42:16.6±1.7, 37.°72N×144.°45E, h0^{km}, mb3.4/3, mb1 3.5/6, mb1mx3.3/64, mbtmp3.5/6, ML3.2/3, Error ellipse: s-maj=38.1km s-min=24.6km az=78.0*

*ISCJB **26** 18:42:18.7±0.8, 37.°88N±0.°04×144.°42E±0.°06, h33^{km}, mb3.4/3, Error ellipse: s-maj=7.2km s-min=6.3km az=176.4*

*JMA **26** 18:42:21.0±0.2, 37.°92N×144.°27E, h45^{km}, M3.2*

ISC 26 18:42:21.2±1.4, **37.°89N**±0.°06×**144.°3E**±0.°1, **h35**^{km}, **n19**, σ**1^{s}98**/30, **mb3.4**/3, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**2.41**	**300**	P	**Pn**	**18 42 58.3**	**+0.2**
OFUJ				*e*S	**Sn**	**18 43 26.3**	**-0.1**
JIO	**Ouri**	**2.42**	**284**	P	**Pn**	**18 42 58.7**	**+0.4**
JIO				*e*S	**Sn**	**18 43 26.1**	**-0.7**
MIYJ	**Miyakonagasawa**	**2.59**	**311**	P	**Pn**	**18 43 00.5**	**-0.2**
MIYJ				*e*S	**Sn**	**18 43 30.3**	**-0.6**
JMK	**Ichinoseki**	**2.67**	**294**	P	**Pn**	**18 43 02.3**	**+0.6**
JOM	**Ohasama**	**2.86**	**304**	P	**Pn**	**18 43 05.0**	**+0.6**
JOM				*e*S	**Sn**	**18 43 38.3**	**+0.7**
JFT	**Otama**	**3.20**	**265**	*e*S	**Sn**	**18 43 46.0**	**+0.1**
JYK	**Kaneyama**	**3.29**	**289**	P	**Pn**	**18 43 11.9**	**+1.6**
JYK				*e*S	**Sn**	**18 43 49.3**	**+1.1**
JANG	**Nango**	**3.31**	**319**	P	**Pn**	**18 43 11.2**	**+0.6**
JANG				*e*S	**Sn**	**18 43 47.8**	**-0.9**
JRY	**Ryogami san**	**4.74**	**248**	P	**Pn**	**18 43 30.1**	**-0.1**
JRY				*e*S	**Sn**	**18 44 20.9**	**-3.1**
JCH	**Churui**	**4.78**	**351**	P	**Pn**	**18 43 30.2**	**-0.5**
JOD2	**Odawara 2**	**4.97**	**240**	P	**Pn**	**18 43 33.8**	**+0.4**
MJAR	**Matsushiro Arr**	**5.08**	**256**	Pn	**Pn**	**18 43 34.0**	**-0.8**
	0.6nm,0.3s,baz=75,slow=15,SNR=7.2						
MJAR				Sn	**Sn**	**18 44 34.9**	**+2.6**
	0.5nm,0.3s,baz=59,slow=45,SNR=3.4						
NEM2	**Nemuro 2**	**5.57**	**11**	*e*S	**Sn**	**18 44 38.8**	**-5.5**
JHJ	**Hachijo jima 2**	**6.04**	**219**	Pn	**Pn**	**18 43 46.2**	**-1.9**
	3.0nm,0.3s,baz=55,slow=18,SNR=4.2						
JHJ				Sn	**Sn**	**18 44 51.0**	**-5.0**
	4.7nm,0.3s,baz=60,slow=20,SNR=4.2						

JTKR	**Abashiri--Toko**	**6.08**	**357**	P	**Pn**	**18 43 47.9**	**-0.7**
JTKR				*e*S	**Sn**	**18 44 53.2**	**-3.7**
ASAJ	**Asahikawa**	**6.36**	**349**	Pn	**Pn**	**18 43 53.5**	**+1.1**
	0.4nm,0.3s,baz=213,slow=9.1,SNR=8.8						
ASAJ				Sn	**Sn**	**18 45 02.4**	**-1.3**
	0.2nm,0.3s,baz=41,slow=19,SNR=2.8						
KURBB	**Kurchatov Arra**	**47.32**	**308**	P	**P**	**18 50 53.5**	**+2.3**
	0.4nm,0.5s,baz=86,slow=8.6,SNR=5.4						
WRA	**Warramunga Arr**	**58.29**	**191**	P	**P**	**18 52 11.8**	**-0.6**
	0.1nm,0.3s,baz=8.3,slow=6.9,SNR=6.1						
ASAR	**Alice Springs**	**62.01**	**191**	P	**P**	**18 52 37.8**	**-0.1**
	0.3nm,1.0s,baz=8.3,slow=7.7,SNR=3.7						

MEX 26 18:49:21.6±0.6, 16°.27N×98°.27W, h5^{km}, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.18**	**47**	*i* P	Pg	18 49 24.8	-0.5
PNIG				*i* S	Sg	18 49 27.8	+0.1
TLIG	**Tlapa**	**1.32**	**348**	*e*P	Pn	18 49 42.8	-4.1
TLIG				*e*S	Sg	18 49 59.5	-4.6

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*ISCJB **26** 19:07:08.5±0.5, 38°.28N±0°.04×29°.68E±0°.04, h5^{km}±5^{km}, Error ellipse: s-maj=6.9km s-min=3.9km az=35.2*

*ISK **26** 19:07:08.8, 38°.31N×29°.65E, h5^{km}, ML2.1/5*

*CSEM **26** 19:07:08.5±0.1, 38°.28N×29°.69E, h5^{km}, ML2.1, Error ellipse: s-maj=2.9km s-min=1.7km az=37.0*

*DDA **26** 19:07:08.3, 38°.27N×29°.67E, h11^{km}, Ml2.6*

ISC 26 19:07:07.8±1.0, **38°.26N**±0°.03×**29°.71E**±0°.03, **h9**^{km}±8^{km}, **n24**, σ**0^{s}.28**/44, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KHL	**Karahalli**	**0.16**	**293**	PG	**Pg**	**19 07 11.2**	**-0.1**
KHL				SG	**Sg**	**19 07 13.5**	**-0.2**
KHL	**Karahalli**	**0.16**	**293**	*e*Pg	**Pg**	**19 07 11.2**	**-0.1**
KHL				*e*Sg	**Sg**	**19 07 13.5**	**-0.2**
KHAL	**Karahalli**	**0.20**	**303**	*i* P	**Pg**	**19 07 12.4**	**+0.4**
KHAL				*i* S	**Sg**	**19 07 15.2**	**+0.2**
KHAL	**Karahalli**	**0.20**	**303**	P	**Pg**	**19 07 12.4**	**+0.4**
KHAL				S	**Sg**	**19 07 15.2**	**+0.2**
KZIL	**AFYON_Kizioren**	**0.34**	**90**	*i* P	**Pb**	**19 07 15.5**	**-0.5**
KZIL				*i* S	**Sb**	**19 07 21.4**	**-0.1**
KZIL	**AFYON_Kizioren**	**0.34**	**90**	P	**Pb**	**19 07 15.5**	**-0.5**
KZIL				S	**Sb**	**19 07 21.5**	**-0.1**
BRDR	**BURDUR-Merkez**	**0.63**	**154**	*i* P	**Pb**	**19 07 20.9**	**0.0**
BRDR				*i* S	**Sb**	**19 07 30.4**	**+0.6**
BRDR	**BURDUR-Merkez**	**0.63**	**154**	P	**Pb**	**19 07 20.9**	**0.0**
BRDR				S	**Sb**	**19 07 30.4**	**+0.6**
GDZ	**Gediz**	**0.85**	**348**	*i* P	**Pb**	**19 07 25.1**	**+0.3**
GDZ				*i* S	**Sb**	**19 07 36.4**	**+0.2**
GDZ	**Gediz**	**0.85**	**348**	P	**Pb**	**19 07 25.0**	**+0.3**
GDZ				S	**Sb**	**19 07 36.4**	**+0.2**
KULA	**Kula-Manisa**	**0.86**	**287**	PG	**Pb**	**19 07 24.8**	**-0.1**
KULA				SG	**Sb**	**19 07 36.2**	**-0.4**
KULA	**Kula-Manisa**	**0.86**	**287**	*e*Pg	**Pb**	**19 07 24.8**	**-0.1**
KULA				*e*Sg	**Sb**	**19 07 36.2**	**-0.4**
MANT	**Manisa**	**0.93**	**285**	*i* P	**Pb**	**19 07 26.4**	**+0.2**
MANT				*i* S	**Sb**	**19 07 38.5**	**-0.3**
MANT	**Manisa**	**0.93**	**285**	P	**Pb**	**19 07 26.4**	**+0.2**
MANT				S	**Sb**	**19 07 38.5**	**-0.3**
SIMA	**Simav-Kutahya**	**1.00**	**326**	PG	**Pb**	**19 07 27.2**	**-0.1**
SIMA				SG	**Sb**	**19 07 40.4**	**-0.2**
SIMA	**Simav-Kutahya**	**1.00**	**326**	*e*Pg	**Pb**	**19 07 27.2**	**-0.1**
SIMA				*e*Sg	**Sb**	**19 07 40.4**	**-0.2**
DEMI	**Demirci**	**1.10**	**315**	*i* P	**Pn**	**19 07 29.3**	**-0.1**
DEMI				*i* S	**Sg**	**19 07 43.2**	**-0.1**
DEMI	**Demirci**	**1.10**	**315**	P	**Pn**	**19 07 29.3**	**-0.1**
DEMI				S	**Sg**	**19 07 43.2**	**-0.1**
TVSB	**Tavsanli**	**1.20**	**351**	PN	**Pg**	**19 07 31.2**	**+0.3**
TVSB	**Tavsanli**	**1.20**	**351**	*e*Pn	**Pg**	**19 07 31.2**	**+0.3**
AYDB	**Zeytinkoy-Aydi**	**1.47**	**258**	PN	**Pg**	**19 07 36.1**	**+0.2**
AYDB	**Zeytinkoy-Aydi**	**1.47**	**258**	*e*Pn	**Pg**	**19 07 36.1**	**+0.2**
DURS	**Dursunbey**	**1.65**	**325**	*i* P	**Pb**	**19 07 38.1**	**-0.3**
DURS				*i* S	**Sb**	**19 07 59.5**	**+0.2**
DURS	**Dursunbey**	**1.65**	**325**	P	**Pb**	**19 07 38.1**	**-0.3**
DURS				S	**Sb**	**19 07 59.5**	**+0.2**

MAN 26 19:09:25.5, 10°.25N×126°.03E, h23^{km}, mb4.7, ML3.6, MS3.5, 1D, Philippine Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**0.71**	**229**	*i* P	Pb	19 09 39.2	0.0
SCPH				*i* S	Sn	19 09 49.8	-0.6
MSLP	**Maasin**	**1.16**	**264**	*e*P	Pn	19 09 46.1	-0.3
MSLP				*e*S	Sb	19 10 02.0	+0.5
BUTP	**Butuan**	**1.34**	**198**	*e*P	Pn	19 09 48.6	-0.2
BUTP				*e*S	Sb	19 10 10.5	+3.8
PLP	**Palo**	**1.38**	**311**	⇓*e*P	Pn	19 09 49.0	-0.3
PLP				*e*S	Sn	19 10 07.0	+0.2
BESP	**Borongan**	**1.46**	**337**	*e*P	Pn	19 09 50.6	+0.1
BESP				*e*S	Sb	19 10 09.8	-0.3
BUKP	**Musuan**	**2.55**	**202**	*e*P	Pn	19 10 06.1	+0.6
CNP	**Catarman**	**2.61**	**329**	*e*P	Pn	19 10 06.1	-0.2
CNP				*e*S	Sn	19 10 36.7	-0.7

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*ISN **26** 19:27:09.5±1.1, 37°.05N×42°.68E, h3^{km}±8^{km}, ML2.9*

*CSEM **26** 19:27:17.8±0.4, 37°.24N×42°.52E, h5^{km}, ML2.8, Error ellipse: s-maj=9.0km s-min=4.4km az=6.0*

*DDA **26** 19:27:17.7, 37°.25N×42°.52E, h5^{km}, Ml3.2*

*ISK **26** 19:27:17.8, 37°.33N×42°.54E, h13^{km}, ML2.8/8*

ISC 26 19:27:17.6±1.1, **37°.26N**±0°.04×**42°.53E**±0°.02, **h8**^{km}±8^{km}, **n58**, σ**0^{s}.85**/95, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIRT	**Sirnak**	**0.25**	**343**	PG	**Pg**	**19 27 22.5**	**-0.2**
SIRT				SG	**Sg**	**19 27 25.7**	**-0.4**
SIRT	**Sirnak**	**0.25**	**343**	*i* Pg	**Pg**	**19 27 22.5**	**-0.2**
SIRT				*e*Sg	**Sg**	**19 27 25.7**	**-0.4**
SIRN	**S˜–rnak**	**0.25**	**338**	*i* P	**Pg**	**19 27 22.3**	**-0.4**
SIRN				*i* S	**Sg**	**19 27 26.4**	**+0.3**
SIRN	**S˜–rnak**	**0.25**	**338**	P	**Pg**	**19 27 22.3**	**-0.4**
SIRN				S	**Sg**	**19 27 26.5**	**+0.3**
CUKT	**Cukurca**	**0.86**	**91**	PG	**Pb**	**19 27 34.3**	**-0.6**
CUKT				SG	**Sn**	**19 27 47.3**	**-1.7**
CUKT	**Cukurca**	**0.86**	**91**	*i* P	**Pb**	**19 27 34.7**	**-0.1**
CUKT				*i* S	**Sn**	**19 27 48.2**	**-0.8**
CUKT	**Cukurca**	**0.86**	**91**	*e*Pg	**Pb**	**19 27 34.3**	**-0.6**
CUKT	**Cukurca**	**0.86**	**91**	P	**Pb**	**19 27 34.7**	**-0.1**
CUKT				*e*Sg	**Sn**	**19 27 47.3**	**-1.7**
CUKT				S	**Sn**	**19 27 48.2**	**-0.8**
SRTM	**Siirt_Merkez**	**0.88**	**327**	*i* P	**Pg**	**19 27 34.3**	**-0.1**
SRTM				*i* S	**Sb**	**19 27 47.5**	**+0.4**
SRTM	**Siirt_Merkez**	**0.88**	**327**	P	**Pg**	**19 27 34.3**	**-0.1**
SRTM				S	**Sb**	**19 27 47.5**	**+0.4**
HAKT	**HAKKARI**	**0.98**	**72**	*i* P	**Pb**	**19 27 36.5**	**-0.5**
HAKT				*i* S	**Sb**	**19 27 50.0**	**-0.2**
HAKT	**HAKKARI**	**0.98**	**72**	P	**Pb**	**19 27 36.5**	**-0.5**
HAKT				S	**Sb**	**19 27 50.0**	**-0.2**
GEVA	**Gevas**	**1.13**	**21**	*i* P	**Pn**	**19 27 39.9**	**0.0**
GEVA				*i* S	**Sn**	**19 27 55.8**	**0.0**
GEVA	**Gevas**	**1.13**	**21**	P	**Pn**	**19 27 39.9**	**0.0**
GEVA				S	**Sn**	**19 27 55.8**	**0.0**
BTMN	**Batman**	**1.18**	**302**	*i* P	**Pg**	**19 27 40.2**	**-0.1**
BTMN				*i* S	**Sn**	**19 27 58.2**	**+1.2**
BTMN	**Batman**	**1.18**	**302**	P	**Pg**	**19 27 40.2**	**-0.1**
BTMN				S	**Sn**	**19 27 58.2**	**+1.2**
GURO	**Guroymak-BITLI**	**1.35**	**343**	PN	**Pb**	**19 27 42.9**	**-0.3**
GURO				SN	**Sb**	**19 27 59.0**	**-1.7**
GURO	**Guroymak-BITLI**	**1.35**	**343**	*e*Pn	**Pb**	**19 27 42.9**	**-0.3**
SVAN	**Silvan-Diyarba**	**1.38**	**310**	PN	**Pn**	**19 27 42.6**	**-0.7**
SVAN				SN	**Sb**	**19 28 00.8**	**-0.8**
SVAN	**Silvan-Diyarba**	**1.38**	**310**	*i* P	**Pg**	**19 27 43.7**	**-0.4**
SVAN				*i* S	**Sg**	**19 28 03.1**	**+1.1**
SVAN	**Silvan-Diyarba**	**1.38**	**310**	*e*Pn	**Pn**	**19 27 42.6**	**-0.7**
SVAN	**Silvan-Diyarba**	**1.38**	**310**	P	**Pg**	**19 27 43.7**	**-0.4**
SVAN				*e*Sn	**Sb**	**19 28 00.8**	**-0.8**
SVAN				S	**Sg**	**19 28 03.1**	**+1.1**
MARD	**Mardin**	**1.40**	**273**	*i* P	**Pn**	**19 27 43.3**	**-0.3**
MARD				*i* S	**Sg**	**19 28 02.6**	**0.0**
YOVA	**Hakkari_Yˆ…kse**	**1.44**	**76**	*i* P	**Pg**	**19 27 45.2**	**0.0**
YOVA				*i* S	**Sg**	**19 28 06.3**	**+2.5**
YOVA	**Hakkari_Yˆ…kse**	**1.44**	**76**	P	**Pg**	**19 27 45.2**	**0.0**
YOVA				S	**Sg**	**19 28 06.3**	**+2.5**
TVAN	**Van**	**1.44**	**28**	*i* P	**Pg**	**19 27 46.6**	**+1.4**
TVAN				*i* S	**Sg**	**19 28 03.7**	**-0.3**
TVAN	**Van**	**1.44**	**28**	P	**Pg**	**19 27 46.7**	**+1.4**
TVAN				S	**Sg**	**19 28 03.7**	**-0.3**
VANB	**Van**	**1.50**	**27**	PN	**Pn**	**19 27 43.6**	**-1.3**
VANB	**Van**	**1.50**	**27**	*e*Pn	**Pn**	**19 27 43.6**	**-1.3**
ADCV	**BITLIS_Adilcev**	**1.55**	**6**	*i* P	**Pg**	**19 27 48.1**	**+0.7**
ADCV				*i* S	**Sg**	**19 28 09.4**	**+1.8**
ADCV	**BITLIS_Adilcev**	**1.55**	**6**	P	**Pg**	**19 27 48.1**	**+0.7**
ADCV				S	**Sg**	**19 28 09.4**	**+1.8**
MAZI	**Mazidag**	**1.67**	**277**	PN	**Pn**	**19 27 47.2**	**-0.1**
MAZI				SN	**Sb**	**19 28 09.9**	**-0.1**
MAZI	**Mazidag**	**1.67**	**277**	*e*Pn	**Pn**	**19 27 47.2**	**-0.1**
MAZI				*e*Sn	**Sb**	**19 28 09.9**	**-0.1**
DIY	**Diyarbakir**	**1.94**	**290**	*e*Pn	**Pb**	**19 27 52.6**	**-0.7**
BNGL	**BINGOL**	**2.01**	**328**	*i* P	**Pb**	**19 27 53.9**	**-0.7**
BNGL				*i* S	**Sg**	**19 28 21.9**	**-0.3**
DYBB	**Diyarbakir**	**2.02**	**291**	PN	**Pn**	**19 27 52.6**	**+0.5**
EKAR	**Karacoban**	**2.03**	**350**	*i* P	**Pg**	**19 27 55.9**	**-0.6**
EKAR				*i* S	**Sg**	**19 28 25.5**	**+2.8**
EKAR	**Karacoban**	**2.03**	**350**	P	**Pg**	**19 27 55.9**	**-0.6**
DIYA	**Diyarbakir**	**2.03**	**290**	*i* P	**Pb**	**19 27 54.3**	**-0.5**
DIYA				*i* S	**Sb**	**19 28 21.1**	**+0.9**
DIYA	**Diyarbakir**	**2.03**	**290**	P	**Pb**	**19 27 54.3**	**-0.5**
DIYA				S	**Sb**	**19 28 21.1**	**+0.9**
HANI	**Diyarbakir_Han**	**2.04**	**305**	*i* P	**Pn**	**19 27 51.6**	**-0.8**
HANI				*i* S	**Sb**	**19 28 21.4**	**+0.8**
HANI	**Diyarbakir_Han**	**2.04**	**305**	P	**Pn**	**19 27 51.6**	**-0.8**
HANI				S	**Sb**	**19 28 21.5**	**+0.8**
VRTB	**Varto-Mus**	**2.08**	**336**	PN	**Pn**	**19 27 53.2**	**+0.3**
VRTB	**Varto-Mus**	**2.08**	**336**	*e*Pn	**Pn**	**19 27 53.2**	**+0.3**
TUTA	**Tutak**	**2.15**	**6**	*i* P	**Pb**	**19 27 56.3**	**-0.6**
TUTA				*i* S	**Sg**	**19 28 27.8**	**+1.1**
TUTA	**Tutak**	**2.15**	**6**	P	**Pb**	**19 27 56.3**	**-0.6**
CLDR	**Caldiran**	**2.17**	**30**	PN	**Pn**	**19 27 53.9**	**-0.4**
CLDR	**Caldiran**	**2.17**	**30**	*e*Pn	**Pn**	**19 27 53.9**	**-0.4**
BNGB	**Bingˆ¶l**	**2.26**	**320**	PN	**Pn**	**19 27 55.4**	**-0.1**
BINT	**Bingol**	**2.28**	**316**	*e*Pn	**Pn**	**19 27 55.4**	**-0.3**
AGRB	**Hanur-Agry**	**2.34**	**9**	PN	**Pn**	**19 27 56.2**	**-0.4**
AGRB	**Hanur-Agry**	**2.34**	**9**	*e*Pn	**Pn**	**19 27 56.2**	**-0.4**
YEDI	**Yedisu-Bingol**	**2.68**	**325**	PN	**Pn**	**19 28 00.9**	**-0.3**
YEDI	**Yedisu-Bingol**	**2.68**	**325**	*e*Pn	**Pn**	**19 28 00.9**	**-0.3**
URFA	**Urfa**	**2.96**	**275**	PN	**Pn**	**19 28 05.8**	**+0.8**
URFA	**Urfa**	**2.96**	**275**	*e*Pn	**Pn**	**19 28 05.8**	**+0.8**
PTK	**Pertek**	**2.96**	**304**	PN	**Pn**	**19 28 05.2**	**0.0**
PTK	**Pertek**	**2.96**	**304**	*e*Pn	**Pn**	**19 28 05.2**	**0.0**

IDC 26 19:36:51.3±4.0, **24°.09N×94°.80E, h0**^{km}**, mb3.4**/3, **mb1 3.6**/3, **mb1mx3.2**/70, **mbtmp3.4**/3, **Error ellipse: s-maj=359.1km s-min=28.4km az=60.0, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHL	**Shillong**	**3.03**	**300**	*e*P	Pn	19 37 40.5	-0.2
MKAR	**Makanchi Array**	**24.78**	**339**	P	P	19 42 14.8	0.0
	0.2nm,0.5s,baz=153,slow=8.3,SNR=4.9						
WRA	**Warramunga Arr**	**58.30**	**135**	P	P	19 46 48.2	0.0
	0.2nm,0.5s,baz=323,slow=7.3,SNR=12						
ASAR	**Alice Springs**	**60.77**	**138**	P	P	19 47 05.2	-0.1
	0.3nm,0.3s,baz=319,slow=6.8,SNR=8.0						

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*ISCJB **26** 19:45:57.5±0.4, 7°.38S±0°.05×129°.29E±0°.05, h100^{km}, mb3.8/5, Error ellipse: s-maj=8.3km s-min=4.9km az=139.9*

*IDC **26** 19:45:58.7±2.0, 7°.48S×129°.37E, h105^{km}±22^{km}, mb3.8/4, mb1 4.1/9, mb1mx3.6/52, mbtmp4.4/9, MS3.3/2, Ms1 3.3/2, ms1mx2.5/45, Error ellipse: s-maj=26.0km s-min=18.2km az=141.0*

*NEIC **26** 19:45:59.9±1.4, 7°.38S×129°.33E, h110^{km}±16^{km}, mb4.6/2, Error ellipse: s-maj=14.2km s-min=12.4km az=138.0*

*DJA **26** 19:45:59.1±0.3, 7°S±2°×12°9E±°, h102^{km}±16^{km}, M4.5/13, mb4.6/9, mB5.1/5, MLv4.5/13, Mw(mB)4.5/5*

ISC 26 19:45:59.1±0.7, **7°.29S**±0°.06×**129°.23E**±0°.06, **h100**^{km}, **n25**, σ**1^{s}.29**/27, **mb3.9**/5, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SAUI	**Saumlaki**	**2.17**	**109**	P	**Pn**	**19 46 32.6**	**-1.2**
SAUI				S	**Sn**	**19 47 02.8**	**+2.4**
SAUI				Sg	Sn	19 47 10.9	+10
BNDI	**Bandanaira**	**2.83**	**14**	P	**Pn**	**19 46 42.8**	**+0.2**
AAI	**Ambon**	**3.72**	**344**	P	**Pn**	**19 46 55.6**	**+1.0**
FAKI	**Fak Fak**	**5.28**	**35**	P	**Pn**	**19 47 15.8**	**+0.1**
FAKI				S	**Sn**	**19 48 12.6**	**-2.7**
SOEI	**Soe**	**5.49**	**243**	P	**Pn**	**19 47 19.8**	**+1.2**
	103nm,0.9s,4μm						
SOEI				S	**Sn**	**19 48 19.8**	**-0.7**
	103nm,0.9s,4μm						
BATI	**Baumata**	**6.22**	**242**	P	**Pn**	**19 47 29.8**	**+1.4**
	95nm,0.3s,baz=81,slow=5.6,SNR=120						
BATI				S	**Sn**	**19 48 37.8**	**-0.4**
	20nm,0.3s,baz=315,slow=20,SNR=3.2						
BATI	**Baumata**	**6.22**	**242**	P	**Pn**	**19 47 29.4**	**+1.0**
	80nm,0.4s,2μm						
SIJI	**Sorong**	**6.69**	**18**	P	**Pn**	**19 47 36.0**	**+1.1**
	3.3nm,0.3s,baz=80,slow=3.1,SNR=26						
SIJI				S	**Sn**	**19 48 47.7**	**-2.0**
	4.0nm,0.3s,baz=93,slow=23,SNR=6.7						
SWI	**Sorong**	**6.70**	**18**	P	**Pn**	**19 47 35.9**	**+1.0**
MMRI	**Maumere**	**7.05**	**259**	P	**Pn**	**19 47 40.4**	**+0.6**
	50nm,0.7s						
RKPI	**Ransiki, Papua**	**7.57**	**41**	P	**Pn**	**19 47 48.3**	**+1.5**
EDFI	**Ende, Flores**	**7.61**	**258**	P	**Pn**	**19 47 48.7**	**+1.3**
WBSI	**Waikabubak, Su**	**10.01**	**256**	P	**Pn**	**19 48 20.8**	**+0.8**
JAY	**Jayapura**	**12.38**	**68**	P	**Pn**	**19 48 51.9**	**0.0**
	0.7nm,0.3s,baz=221,slow=11,SNR=5.1						
WRAB	**Tennant Creek**	**13.52**	**159**	*e*P	Pn	19 49 01.4	-5.5
	11nm,0.5s						
WRA	**Warramunga Arr**	**13.52**	**159**	P	Pn	19 49 02.0	-4.9
	6.4nm,0.3s,baz=348,slow=13,SNR=147						
WRA				S	Sn	19 51 23.8	-12
	3.0nm,0.3s,baz=328,slow=22,SNR=8.0						
MBWA	**Marble Bar**	**16.57**	**213**	*e*P	**P**	**19 49 46.3**	**0.0**
	20nm,0.4s						
ASAR	**Alice Springs**	**16.89**	**165**	P	**Pn**	**19 49 47.1**	**-2.4**
	1.9nm,0.3s,baz=342,slow=11,SNR=98						
ASAR				S	Sn	19 52 44.5	-13
	1.0nm,0.3s,baz=337,slow=24,SNR=5.1						
STKA	**Stephens Creek**	**27.05**	**156**	P	**P**	**19 51 31.8**	**-0.4**
	2.3nm,0.5s,baz=335,slow=8.2,SNR=7.2						
HNR	**Honiara**	**30.46**	**96**	LR	LR	20 04 10.6	
	comp=Z,32nm,20.1s,baz=350,slow=36						
SONM	**Songino Array**	**58.48**	**342**	P	**P**	**19 55 45.9**	**+1.1**
	0.2nm,0.4s,baz=144,slow=5.4,SNR=2.4						
SONM				LR	LR	20 23 31.1	
	comp=Z,36nm,18.2s,baz=212,slow=38						
MKAR	**Makanchi Array**	**68.05**	**327**	P	**P**	**19 56 48.7**	**+0.8**
	0.8nm,0.6s,baz=129,slow=7.9,SNR=11						
ZALV	**Zalesovo Beam**	**71.50**	**334**	P	**P**	**19 57 08.5**	**-0.4**
	0.3nm,0.3s,baz=131,slow=5.9,SNR=2.9						
KURBB	**Kurchatov Arra**	**72.36**	**329**	P	**P**	**19 57 14.2**	**+0.1**
	0.9nm,0.2s,baz=123,slow=5.0,SNR=5.3						
KURK	**Kurchatov**	**72.37**	**329**	P	**P**	**19 57 14.2**	**+0.1**

IDC 26 19:49:27.8±4.1, **20°.29S×176°.24W, h234**^{km}±38^{km}, **mb3.7**/2, **mb1 4.0**/2, **mb1mx3.1**/45, **mbtmp4.3**/2, **Error ellipse: s-maj=160.2km s-min=23.9km az=154.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ASAR	**Alice Springs**	**46.17**	**256**	P	P	19 57 30.0	+0.4
	3.8nm,0.7s,baz=98,slow=7.9,SNR=15						
ASAR				PcP	PcP	19 58 59.6	-1.8
	0.5nm,0.6s,baz=106,slow=4.4,SNR=4.9						
ASAR				S	S	20 03 58.8	+0.9
	0.1nm,0.3s,baz=215,slow=38,SNR=3.5						
WRA	**Warramunga Arr**	**46.26**	**261**	P	P	19 57 29.6	-0.6
	1.9nm,0.5s,baz=96,slow=7.6,SNR=11						
ARCES	**ARCESS Array B**	**129.00**	**350**	PKP	PKPdf	20 08 07.7	+0.7
	2.7nm,0.8s,baz=58,slow=2.2,SNR=2.8						
BRTR	**Keskin Array B**	**147.90**	**314**	PKPbc	PKPbc	20 08 44.5	-1.2
	0.8nm,0.6s,baz=154,slow=4.9,SNR=4.0						
MMAI	**Mount Meron Ar**	**149.13**	**301**	PKPbc	PKPbc	20 08 48.7	-0.2
	1.0nm,0.5s,baz=46,slow=4.2,SNR=3.1						
GERES	**GERESS Array B**	**150.41**	**347**	PKPbc	PKPbc	20 08 51.8	+0.3
	0.9nm,0.8s,baz=25,slow=3.2,SNR=7.6						

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*ISCJB **26** 20:28:06.9±0.4, 38°.44N±0°.02×42°.88E±0°.03, h6^{km}±5^{km}, Error ellipse: s-maj=4.5km s-min=3.8km az=27.4*

*CSEM **26** 20:28:06.5±0.2, 38°.48N×42°.91E, h10^{km}, ML2.6, Error ellipse: s-maj=5.2km s-min=4.3km az=135.0*

*ISK **26** 20:28:06.2, 38°.50N×42°.86E, h9^{km}, ML2.0/7*

*DDA **26** 20:28:06.8, 38°.42N×42°.93E, h7^{km}, Ml2.6*

ISC 26 20:28:06.4±1.0, **38°.47N**±0°.02×**42°.91E**±0°.02, **h6**^{km}±9^{km}, **n32**, σ**0^{s}.55**/49, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GEVA	**Gevas**	**0.20**	**143**	*i* P	**Pg**	**20 28 10.0**	**-0.4**
GEVA				*i* S	**Sg**	**20 28 13.2**	**+0.1**
GEVA	**Gevas**	**0.20**	**143**	P	**Pg**	**20 28 10.0**	**-0.4**
GEVA				S	**Sg**	**20 28 13.2**	**+0.1**
ADCV	**BITLIS_Adilcev**	**0.36**	**337**	*i* P	**Pb**	**20 28 15.0**	**-0.4**
ADCV				*i* S	**Sb**	**20 28 22.0**	**+0.6**
ADCV	**BITLIS_Adilcev**	**0.36**	**337**	P	**Pb**	**20 28 15.0**	**-0.4**
TVAN	**Van**	**0.40**	**82**	*i* P	**Pg**	**20 28 14.6**	**+0.4**
TVAN				*i* S	**Sb**	**20 28 23.4**	**+1.0**
TVAN	**Van**	**0.40**	**82**	P	**Pg**	**20 28 14.6**	**+0.4**
VANB	**Van**	**0.40**	**72**	PG	**Pg**	**20 28 14.2**	**0.0**
VANB				SG	**Sb**	**20 28 22.1**	**-0.3**
VANB	**Van**	**0.40**	**72**	*e*Pg	**Pg**	**20 28 14.2**	**0.0**
VANB				*e*Sg	**Sb**	**20 28 22.1**	**-0.3**
GURO	**Guroymak-BITLI**	**0.69**	**277**	PG	**Pg**	**20 28 19.6**	**-0.1**
GURO				SG	**Sg**	**20 28 28.7**	**+0.1**
GURO	**Guroymak-BITLI**	**0.69**	**277**	*e*Pg	**Pg**	**20 28 19.6**	**-0.1**
GURO				*e*Sg	**Sg**	**20 28 28.7**	**+0.1**
VMUR	**Van-Muradiye**	**0.73**	**45**	*i* P	**Pb**	**20 28 21.5**	**-0.2**
VMUR				*i* S	**Sn**	**20 28 34.9**	**-0.2**
VMUR	**Van-Muradiye**	**0.73**	**45**	P	**Pb**	**20 28 21.5**	**-0.2**
SRTM	**Siirt_Merkez**	**0.91**	**238**	*i* P	**Pg**	**20 28 24.2**	**+0.3**
SRTM				*i* S	**Sb**	**20 28 37.2**	**+0.1**
SRTM	**Siirt_Merkez**	**0.91**	**238**	P	**Pg**	**20 28 24.2**	**+0.3**
SRTM				S	**Sb**	**20 28 37.2**	**+0.1**
TUTA	**Tutak**	**0.93**	**356**	*i* P	**Pb**	**20 28 25.2**	**+0.1**
TUTA				*i* S	**Sn**	**20 28 39.7**	**-0.4**
TUTA	**Tutak**	**0.93**	**356**	P	**Pb**	**20 28 25.2**	**+0.1**
EKAR	**Karacoban**	**1.02**	**320**	*i* P	**Pg**	**20 28 25.9**	**-0.2**
EKAR				*i* S	**Sn**	**20 28 44.1**	**+1.8**
EKAR	**Karacoban**	**1.02**	**320**	P	**Pg**	**20 28 25.9**	**-0.2**
CLDR	**Caldiran**	**1.04**	**49**	PG	**Pg**	**20 28 26.4**	**+0.1**
CLDR	**Caldiran**	**1.04**	**49**	*e*Pg	**Pg**	**20 28 26.4**	**+0.1**
SIRT	**Sirnak**	**1.04**	**201**	PG	**Pb**	**20 28 26.9**	**+0.1**
SIRT				SG	**Sn**	**20 28 41.5**	**-0.9**
SIRT	**Sirnak**	**1.04**	**201**	*e*Pg	**Pb**	**20 28 26.9**	**+0.1**
SIRT				*e*Sg	**Sn**	**20 28 41.5**	**-0.9**
SIRN	**S˜–rnak**	**1.05**	**202**	*i* P	**Pn**	**20 28 28.6**	**+0.9**
SIRN				*i* S	**Sg**	**20 28 40.5**	**+0.4**
SIRN	**S˜–rnak**	**1.05**	**202**	P	**Pn**	**20 28 28.6**	**+0.9**
SIRN				S	**Sg**	**20 28 40.5**	**+0.4**
AGRB	**Hanur-Agry**	**1.10**	**4**	PN	**Pg**	**20 28 27.4**	**-0.2**
AGRB	**Hanur-Agry**	**1.10**	**4**	*e*Pn	**Pg**	**20 28 27.4**	**-0.2**
HAKT	**HAKKARI**	**1.11**	**145**	*i* P	**Pg**	**20 28 27.1**	**-0.6**
HAKT	**HAKKARI**	**1.11**	**145**	P	**Pg**	**20 28 27.1**	**-0.6**
CUKT	**Cukurca**	**1.34**	**155**	PN	**Pb**	**20 28 32.2**	**+0.1**
CUKT	**Cukurca**	**1.34**	**155**	*e*Pn	**Pb**	**20 28 32.2**	**+0.1**
BNGB	**Bingˆ¶l**	**1.82**	**287**	PN	**Pn**	**20 28 38.3**	**0.0**
BINT	**Bingol**	**1.93**	**283**	*e*Pn	**Pn**	**20 28 38.3**	**-1.7**

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*ROM **26** 20:34:05.3±0.3, 39°.25N±0°.02×14°.56E±0°.03, h395^{km}±2^{km}, ML3.5/14*

*LDG **26** 20:34:06.0±0.1, 39°.35N×14°.44E, h400^{km}, Error ellipse: s-maj=5.4km s-min=3.0km az=44.0*

*ISCJB **26** 20:34:08.3±0.4, 39°.47N±0°.05×14°.29E±0°.05, h377^{km}±4^{km}, mb3.1/5, Error ellipse: s-maj=7.8km s-min=5.6km az=12.2*

*IDC **26** 20:34:09.2±0.8, 39°.51N×14°.07E, h378^{km}±15^{km}, mb2.9/6, mb1 2.8/15, mb1mx2.7/70, mbtmp3.6/15, Error ellipse: s-maj=26.4km s-min=14.3km az=38.0*

*CSEM **26** 20:34:12.4±0.7, 39°.73N×14°.07E, h389^{km}±4^{km}, mb3.1, Error ellipse: s-maj=21.7km s-min=6.7km az=176.0*

ISC 26 20:34:09.4±0.7, **39°.51N**±0°.08×**14°.32E**±0°.06, **h368**^{km}±7^{km}, **n114**, σ**1^{s}.29**/120, **mb3.2**/5, **3C-8D, Tyrrhenian Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IFIL	**Filicudi I Eol**	**0.97**	**169**	*i* P	**Pn**	**20 34 57.2**	**+0.1**
IACL	**Alicudi**	**0.98**	**178**	P	**Pn**	**20 34 57.8**	**+0.7**
BULG	**Bulgheria - Ca**	**0.99**	**55**	P	**Pn**	**20 34 58.2**	**+1.2**
CMPR	**Campora**	**1.10**	**43**	P	**Pn**	**20 34 58.6**	**+1.1**
MGR	**Morigerati**	**1.14**	**56**	*i* P	**Pn**	**20 34 58.7**	**+1.2**
CDRU	**Civita di Ruta**	**1.23**	**37**	P	**Pn**	**20 34 59.5**	**+1.4**
VPL	**Vulcano Piano**	**1.25**	**155**	*i* P	**Pn**	**20 34 58.1**	**-0.1**
VPL				AML	AML		
	comp=E,688μm,1.3s						
VPL				AML	AML		
	comp=N,710μm,0.8s						
VPL				AML	AML		
	comp=E,688μm,1.3s						
VPL				AML	AML		
	comp=N,710μm,0.8s						
VPL				AML	AML		
	comp=N,710μm,0.8s						
VPL				AML	AML		
	comp=E,688μm,1.3s						
CUC	**Castrocucco**	**1.25**	**67**	*i* P	**Pn**	**20 34 58.8**	**+0.7**
CUC				AML	AML		
	comp=E,28μm,1.6s						
CUC				AML	AML		
	comp=N,21μm,0.7s						
CUC				AML	AML		
	comp=E,28μm,1.6s						
CUC				AML	AML		
	comp=N,21μm,0.7s						
CUC				AML	AML		
	comp=N,21μm,0.7s						
CUC				AML	AML		
	comp=E,28μm,1.6s						
CET2	**Cetraro**	**1.26**	**89**	*i* P	**Pn**	**20 34 58.5**	**+0.2**
CET2				AML	AML		
	comp=E,154μm,0.9s						
CET2				AML	AML		
	comp=N,262μm,0.8s						
CET2				AML	AML		
	comp=E,155μm,0.9s						
CET2				AML	AML		
	comp=N,262μm,0.8s						
CET2				AML	AML		
	comp=N,262μm,0.8s						
CET2				AML	AML		
	comp=E,155μm,0.9s						
MTSN	**Montesano sull**	**1.33**	**55**	P	**Pn**	**20 34 59.2**	**+0.6**
MMN	**Mormanno**	**1.34**	**73**	P	**Pn**	**20 34 59.5**	**+1.0**
SIRI	**Monte Sirino -**	**1.36**	**60**	P	**Pn**	**20 34 59.6**	**+0.8**
MILZ	**Milazzo**	**1.43**	**150**	P	**Pn**	**20 34 58.3**	**-0.7**
CAR1	**CAROLEI**	**1.49**	**99**	*i* P	**Pn**	**20 34 58.8**	**-0.5**
CAR1				S	**S**	**20 35 37.8**	**-1.7**
CAR1				AML	AML		
	comp=E,149μm,0.6s						
CAR1				AML	AML		
	comp=N,140μm,0.5s						
CAR1				AML	AML		
	comp=N,140μm,0.5s						
CAR1				AML	AML		
	comp=E,149μm,0.6s						
MSFR	**San Fratello**	**1.49**	**172**	P	**Pn**	**20 34 59.9**	**+0.4**
SCHR	**S. Chirico Rap**	**1.51**	**63**	P	**Pn**	**20 35 00.9**	**+1.4**
JOPP	**Joppolo**	**1.52**	**126**	*i* P	**Pn**	**20 34 58.7**	**-0.8**
JOPP				AML	AML		
	comp=E,78μm,0.3s						
JOPP				AML	AML		
	comp=N,109μm,0.8s						
JOPP				AML	AML		
	comp=E,78μm,0.3s						
JOPP				AML	AML		
	comp=N,109μm,0.8s						
JOPP				AML	AML		
	comp=N,109μm,0.8s						
JOPP				AML	AML		
	comp=E,78μm,0.3s						
PLLN	**Pollina**	**1.53**	**185**	P	**Pn**	**20 34 59.0**	**-0.7**
GIB	**Gibilmanna**	**1.54**	**189**	*i* P	**Pn**	**20 34 59.0**	**-0.8**
GIB				S	**S**	**20 35 39.5**	**-0.8**
MPG	**Monte Pellegri**	**1.54**	**209**	*i* P	**Pn**	**20 34 59.5**	**-0.2**
MPG				S	**S**	**20 35 40.6**	**+0.4**
SOLUN	**Solunto**	**1.55**	**204**	*i* P	**Pn**	**20 34 59.2**	**-0.5**
SOLUN				AML	AML		
	comp=E,56μm,0.3s						
SOLUN				AML	AML		
	comp=N,41μm,1.1s						

SOLUN				AML	AML		
	comp=E,56µm,0.3s						
SOLUN				AML	AML		
	comp=N,41µm,1.1s						
SOLUN				AML	AML		
	comp=E,56µm,0.3s						
SOLUN				AML	AML		
	comp=N,41µm,1.1s						
MSRU	**Castanea**	1.56	143	P	Pn	20 34 58.5	-1.3
MSRU				AML	AML		
	comp=E,154µm,1.2s						
MSRU				AML	AML		
	comp=N,159µm,0.3s						
MSRU				AML	AML		
	comp=E,154µm,1.2s						
MSRU				AML	AML		
	comp=N,159µm,0.3s						
MSRU				AML	AML		
	comp=E,154µm,1.2s						
MSRU				AML	AML		
	comp=N,159µm,0.3s						
MPNC	**Port Mandanici**	1.59	149	P	Pn	20 34 58.9	-1.1
MNO	**Monte Soro**	1.60	169	P	Pn	20 35 01.3	+1.0
NOV	**Novara**	1.61	157	P	Pn	20 35 00.2	+0.1
MCSR	**Castroreale**	1.62	153	P	Pn	20 34 59.5	-0.8
MCSR				AML	AML		
	comp=E,187µm,0.3s						
MCSR				AML	AML		
	comp=N,314µm,0.3s						
MCSR				AML	AML		
	comp=E,187µm,0.3s						
MCSR				AML	AML		
	comp=N,314µm,0.3s						
MCSR				AML	AML		
	comp=N,314µm,0.3s						
MCSR				AML	AML		
	comp=E,187µm,0.3s						
CELI	**Celico**	1.70	93	*i*P	Pn	20 35 01.1	+0.5
CELI				S	S	20 35 41.4	-0.5
CELI				AML	AML		
	comp=E,150µm,1.0s						
CELI				AML	AML		
	comp=N,158µm,0.5s						
CELI				AML	AML		
	comp=E,150µm,1.0s						
CELI				AML	AML		
	comp=N,158µm,0.5s						
CELI				AML	AML		
	comp=N,158µm,0.5s						
CELI				AML	AML		
	comp=E,150µm,1.0s						
MSCL	**Scilla**	1.72	138	AML	AML		
	comp=N,278µm,0.6s						
MSCL				AML	AML		
	comp=E,282µm,1.0s						
MSCL				AML	AML		
	comp=E,282µm,1.0s						
MSCL				AML	AML		
	comp=N,278µm,0.6s						
MSCL				AML	AML		
	comp=E,282µm,1.0s						
MSCL				AML	AML		
	comp=N,278µm,0.6s						
CEL	**Celeste**	1.75	135	P	Pn	20 34 59.7	-1.3
CEL				S	S	20 35 39.7	-2.7
GRI	**Girifalco**	1.77	112	P	Pn	20 35 00.6	-0.4
CORL	**Corleone**	1.80	207	P	Pn	20 35 00.9	-0.4
CORL				S	S	20 35 43.0	+0.1
CORL				AML	AML		
	comp=E,112µm,0.3s						
CORL				AML	AML		
	comp=N,110µm,0.9s						
CORL				AML	AML		
	comp=E,112µm,0.3s						
CORL				AML	AML		
	comp=N,110µm,0.9s						
CORL				AML	AML		
	comp=E,112µm,0.3s						
CORL				AML	AML		
	comp=N,110µm,0.9s						
ALJA	**Alia**	1.82	194	P	Pn	20 35 01.3	-0.1
ALJA				AML	AML		
	comp=E,282µm,1.1s						
ALJA				AML	AML		
	comp=N,257µm,1.0s						
ALJA				AML	AML		
	comp=E,282µm,1.1s						
ALJA				AML	AML		
	comp=N,257µm,1.0s						
ALJA				AML	AML		
	comp=N,257µm,1.0s						
ALJA				AML	AML		
	comp=E,282µm,1.1s						
SERS	**Sersale**	1.90	104	*i*P	Pn	20 35 01.4	-0.4
SERS				S	S	20 35 41.5	-2.6
TIP	**Timpagrande**	1.92	99	*i*P	Pn	20 35 01.7	-0.2
TIP				S	S	20 35 42.2	-2.0
PIPA	**Pietrapaola**	1.93	90	AML	AML		
	comp=E,103µm,0.7s						
PIPA				AML	AML		
	comp=E,103µm,0.7s						
PIPA				AML	AML		
	comp=N,85µm,0.7s						
PIPA				AML	AML		
	comp=N,85µm,0.7s						
PLAC	**Placanica**	1.96	122	P	Pn	20 35 01.1	-1.1
PLAC				AML	AML		
	comp=E,216µm,0.7s						
PLAC				AML	AML		
	comp=N,107µm,0.5s						
PLAC				AML	AML		
	comp=E,216µm,0.7s						
PLAC				AML	AML		
	comp=N,107µm,0.5s						
PLAC				AML	AML		
	comp=N,107µm,0.5s						
PLAC				AML	AML		
	comp=E,216µm,0.7s						
VAE	**Valguarnera**	2.03	178	P	Pn	20 35 02.9	+0.1
	comp=E,1.0nm,0.3s,baz=356,slow=14,SNR=2.4						
VAE				S	S	20 35 47.4	+1.7
	comp=E,1.3nm,0.3s,baz=35,slow=22,SNR=1.6						
LADO	**San Nicola del**	2.07	96	P	Pn	20 35 02.6	-0.2
MMGO	**Monte Magaggia**	2.13	210	P	Pn	20 35 02.9	-0.5
PGF	**Pioggiola**	5.04	309	*e*P	Pn	20 35 31.7	+1.4
PGF	**Pioggiola**	5.04	309	*e*P	Pn	20 35 31.7	+1.4
KEST	**Kesra**	5.46	228	P	Pn	20 35 35.0	-0.1
	comp=E,0.6nm,0.3s,baz=34,slow=7.3,SNR=10						
SBF	**Sospel**	6.74	312	*e*P	Pn	20 35 49.4	+0.2
SBF	**Sospel**	6.74	312	*e*P	Pn	20 35 49.4	+0.2
FRF	**La Foret Royal**	7.04	308	*e*P	Pn	20 35 52.6	+0.1
FRF	**La Foret Royal**	7.04	308	*e*P	Pn	20 35 52.6	+0.1
ABTA	**Abfaltersbach**	7.35	350	*i*P	P	20 35 57.7	+0.4
	comp=E,3.9nm,0.5s						
ABTA	**Abfaltersbach**	7.35	350	P	P	20 35 57.7	+0.4
	comp=E,3.9nm,0.5s						
ABTA	**Abfaltersbach**	7.35	350	Pn	P	20 35 57.7	+0.4
	comp=E,3.9nm,0.5s						
MBDF	**Montbardon**	7.66	315	*e*P	P	20 36 00.7	-0.2
MBDF	**Montbardon**	7.66	315	*e*P	P	20 36 00.7	-0.2
SMRF	**Simiane la Rot**	7.91	307	*e*P	P	20 36 03.7	0.0
SMRF	**Simiane la Rot**	7.91	307	*e*P	P	20 36 03.7	0.0
FETA	**Feichten**	7.95	342	*i*P	Pn	20 36 04.2	+1.0
	comp=E,3.8nm,0.8s						
FETA	**Feichten**	7.95	342	P	Pn	20 36 04.2	+1.0
	comp=E,3.8nm,0.8s						
FETA	**Feichten**	7.95	342	Pn	Pn	20 36 04.2	+1.0
	comp=E,3.8nm,0.8s						
DAVOX	**Davos/Dischmat**	7.96	337	P	Pn	20 36 03.8	+0.4
	comp=E,0.4nm,0.3s,baz=173,slow=7.8,SNR=5.1						
WTTA	**Wattenberg**	7.99	347	*i*P	Pn	20 36 04.7	+1.0
	comp=E,3.1nm,0.5s						
WTTA	**Wattenberg**	7.99	347	P	Pn	20 36 04.7	+1.0
	comp=E,3.1nm,0.5s						
WTTA	**Wattenberg**	7.99	347	Pn	Pn	20 36 04.7	+1.0
	comp=E,3.1nm,0.5s						
MOTA	**Moosalm**	8.17	344	*i*P	Pn	20 36 05.2	-0.6
	comp=E,2.6nm,0.5s						
MOTA	**Moosalm**	8.17	344	P	Pn	20 36 05.2	-0.6
	comp=E,2.6nm,0.5s						
MOTA	**Moosalm**	8.17	344	Pn	Pn	20 36 05.2	-0.6
	comp=E,2.6nm,0.5s						
LPG	**La Plagne**	8.19	319	*e*P	P	20 36 07.8	-0.2
LPG	**La Plagne**	8.19	319	*e*P	P	20 36 07.8	-0.2
LPL	**La Plagne**	8.21	319	*e*P	P	20 36 07.1	-1.1
LPL	**La Plagne**	8.21	319	*e*P	P	20 36 07.1	-1.1
ORIF	**Oris-en-Rattie**	8.27	314	*e*P	Pn	20 36 07.1	+0.2
ORIF	**Oris-en-Rattie**	8.27	314	*e*P	Pn	20 36 07.1	+0.2
VIVF	**Saint-Julien-l**	8.93	310	*e*P	Pn	20 36 14.1	-0.6
VIVF	**Saint-Julien-l**	8.93	310	*e*P	Pn	20 36 14.1	-0.6
CABF	**La Chapelle**	9.30	322	*e*P	Pn	20 36 17.1	-2.0
GERES	**GERESS Array B**	9.34	357	P	Pn	20 36 19.1	-0.4
	comp=E,0.1nm,0.3s,baz=179,slow=11,SNR=5.0						
IDI	**Anoyia**	9.40	113	P	P	20 36 22.0	+0.5
	comp=E,0.3nm,0.3s,baz=295,slow=14,SNR=1.3						
VOIR		9.89	50	⇑*i*P	Pn	20 36 18.9	-7.1
CDF	**Champ du Feu**	10.24	333	*e*P	Pn	20 36 30.8	+0.7
CDF	**Champ du Feu**	10.24	333	*e*P	Pn	20 36 30.8	+0.7
HAU	**Haudompre**	10.26	328	*e*P	Pn	20 36 31.7	+1.5
HAU	**Haudompre**	10.26	328	*e*P	Pn	20 36 31.7	+1.5
DOPR	**Dopca**	10.38	48	⇑*i*P	Pn	20 36 33.8	+2.1
DOPR	**Dopca**	10.38	48	⇑*i*P	Pn	20 36 33.8	+2.1
MLR	**Muntele Rosu**	10.45	51	P	Pn	20 36 35.2	+2.5
	baz=306,slow=8.7						
MLR	**Muntele Rosu**	10.45	51	⇓*i*P	Pn	20 36 36.3	+3.6
MLR	**Muntele Rosu**	10.45	51	⇓*i*P	Pn	20 36 36.3	+3.6
SMF	**Signal de Mont**	10.46	316	*e*P	P	20 36 31.5	-1.5
SMF	**Signal de Mont**	10.46	316	*e*P	P	20 36 31.5	-1.5
PLOR	**Plostina**	11.06	51	⇓*i*P	Pn	20 36 43.2	+3.4
PLOR	**Plostina**	11.06	51	⇓*i*P	Pn	20 36 43.2	+3.4
VRI	**Vrincioaia**	11.11	51	⇓*i*P	Pn	20 36 43.4	+3.0
VRI	**Vrincioaia**	11.11	51	⇓*i*P	Pn	20 36 43.4	+3.0
CFR	**Carcaliu**	11.68	57	⇓*i*P	Pn	20 36 48.8	+1.8
CFR	**Carcaliu**	11.68	57	⇓*i*P	Pn	20 36 48.8	+1.8
ETSF	**Etsaut**	11.71	292	*e*P	Pn	20 36 47.2	-0.3
ETSF	**Etsaut**	11.71	292	*e*P	Pn	20 36 47.2	-0.3
LDF	**La Druitiere**	13.77	316	*e*P	P	20 37 08.7	-0.9
LDF	**La Druitiere**	13.77	316	*e*P	P	20 37 08.7	-0.9
FLN	**La Foliniere**	14.07	316	*e*P	P	20 37 11.6	-1.2
FLN	**La Foliniere**	14.07	316	*e*P	P	20 37 11.6	-1.2
ESDC	**Sonseca Array**	14.11	276	P	Pn	20 37 15.7	+0.3
	comp=E,0.2nm,0.3s,baz=74,slow=11,SNR=6.6						
BRTR	**Keskin Array B**	14.89	83	P	Pn	20 37 23.6	-1.0
	comp=E,0.2nm,0.3s,baz=269,slow=8.8,SNR=13						
SGMF	**Saint Gilles**	14.96	311	*e*P	P	20 37 21.6	-0.9
SGMF	**Saint Gilles**	14.96	311	*e*P	P	20 37 21.6	-0.9
QUIF	**Quistinic**	15.15	309	*e*P	P	20 37 23.1	-1.6
QUIF	**Quistinic**	15.15	309	*e*P	P	20 37 23.1	-1.6
AKASG	**Malin Array Be**	15.32	38	P	P	20 37 26.1	-0.3
	comp=E,1.5nm,0.3s,baz=234,slow=9.2,SNR=4.5						
MMAI	**Mount Meron Ar**	18.18	104	P	P	20 37 59.6	+2.2
	comp=E,0.6nm,0.3s,baz=297,slow=9.5,SNR=5.8						
EKA	**Eskdalemuir Ar**	19.67	329	P	P	20 38 10.3	-2.3
	baz=140,slow=11,SNR=5.3						
HFS	**Hagfors**	20.65	359	P	P	20 38 20.3	-1.4
	comp=E,2.3nm,0.6s,baz=186,slow=12,SNR=15						
NB2	**NORSAR Subarra**	21.64	356	P	P	20 38 30.1	-0.6
	comp=Z,0.7nm,0.6s,baz=170,slow=11						
NOA	**NORSAR Array B**	21.64	356	P	P	20 38 30.0	-0.6
	comp=Z,0.6nm,0.8s,baz=171,slow=11,SNR=7.1						
FINES	**FINESS Array B**	23.12	14	P	P	20 38 43.4	-0.7
	comp=Z,0.7nm,0.4s,baz=197,slow=8.3,SNR=8.5						
ARCES	**ARCESS Array B**	30.67	8	P	P	20 39 49.9	-1.0
	comp=Z,1.6nm,0.9s,baz=186,slow=9.8,SNR=6.5						
BVAR	**Borovoye Array**	40.01	51	P	P	20 41 10.3	+0.5
	comp=Z,0.3nm,0.4s,baz=256,slow=4.3,SNR=3.9						
MKAR	**Makanchi Array**	48.71	58	P	P	20 42 17.5	-0.5
	comp=Z,0.6nm,0.5s,baz=288,slow=6.0,SNR=12						

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*IDC **26** 20:59:36.9±1.1, 15.°14S×173.°96W, h0^{km}, mb4.1/4, mb1 4.3/5, mb1mx3.8/53, mbtmp4.1/5, ML4.5/1, Error ellipse: s-maj=38.0km s-min=25.7km az=154.0*

ISC 26 20:59:42.9±2.0**, 15.°2S**±0.°4×**173.°6W**±0.°4**, h35**^{km}**, n6, σ1**^{s}**61**/5**, mb4.1**/4**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	2.17	53	Pn	Pn	21 00 18.1	+1.5
	106nm,0.3s,baz=234,slow=8.7,SNR=44						
AFI				Sn	Sn	21 00 40.8	-1.5
	373nm,0.3s,baz=53,slow=21,SNR=76						
WRA	**Warramunga Arr**	49.73	257	P	P	21 08 28.5	-3.7
	1.1nm,0.5s,baz=93,slow=7.5,SNR=48						
ASAR	**Alice Springs**	50.02	252	P	P	21 08 30.9	-3.4
	6.0nm,0.6s,baz=86,slow=8.1,SNR=97						
VNDA	**Vanda**	63.52	186	P	P	21 10 09.3	+0.1
	0.6nm,0.8s,baz=23,slow=7.7,SNR=3.0						
QSPA	**South Pole Qui**	74.81	180	P	P	21 11 19.2	-0.3
	1.1nm,0.6s,baz=81,slow=1.5,SNR=5.1						
GERES	**GERESS Array B**	145.96	351	PKPbc	PKPdf	21 19 17.5	-0.8
	0.6nm,0.8s,baz=350,slow=4.0,SNR=5.1						

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*MOS **26** 21:00:10.9±1.4, 52.°26N×105.°86E, h10^{km}, mb4.2/1, Error ellipse: s-maj=24.1km s-min=9.9km az=51.1*

BYKL 26 21:00:10.3±0.1**, 52.°24N×105.°87E, h20**^{km}±2^{km}**, 7C-4D, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BGT	**Bolshoye Golou**	0.35	236	⇓*i*Pg	Pb	21 00 17.9	+0.2
BGT				*e*Sg	Sb	21 00 22.8	0.0
BGT				Pmax			
	225nm,0.1s						
BGT				Smax			
	1µm,0.2s						
BGT	**Bolshoye Golou**	0.35	236	⇑*i*PG	Pb	21 00 17.9	+0.2
BGT				*e*		21 00 22.9	
BGT				pmax	pmax		
	comp=Z,233nm,0.2s						
BGT				smax	smax		
	comp=N,2µm,0.3s						
KAB	**Kabansk**	0.52	111	⇑*i*Pg	Pb	21 00 20.3	-0.4
KAB				*e*Sg	Sb	21 00 27.9	+0.1
KAB				Pmax			
	comp=N,511nm,0.2s						
KAB				Smax			
	comp=N,3µm,0.4s						
FFNB	**Fofonovo**	0.58	109	⇑*i*Pg	Pb	21 00 21.3	-0.6
FFNB				*e*Sg	Sb	21 00 28.9	-0.8
FFNB				*e*Sb	Sn	21 00 31.8	-0.7
FFNB				Pmax			
	comp=N,198nm,0.2s						
FFNB				Smax			
	comp=N,1µm,0.2s						
TRG	**Tyrgan**	0.60	29	⇑*i*Pg	Pb	21 00 21.7	-0.4
TRG				*e*Sg	Sb	21 00 30.0	-0.2
TRG				Pmax			
	comp=N,197nm,0.1s						
TRG				Smax			
	comp=N,2µm,0.1s						
TRG	**Tyrgan**	0.60	29	⇑*i*PG	Pb	21 00 21.7	-0.4
TRG				*e*		21 00 30.0	
TRG				pmax	pmax		
	comp=Z,197nm,0.1s						
TRG				smax	smax		
	comp=E,2µm,0.1s						
LSTR	**Listvyanka**	0.74	240	⇓*i*Pg	Pb	21 00 24.6	+0.1
LSTR				*e*Sg	Sb	21 00 34.2	0.0
LSTR				*e*Sb	Sn	21 00 38.7	+2.4
LSTR				Pmax			
	comp=E,29nm,0.1s						
LSTR				Smax			
	comp=E,267nm,0.3s						
LSTR	**Listvyanka**	0.74	240	⇓*i*PG	Pb	21 00 24.6	+0.1
LSTR				*e*		21 00 34.2	
LSTR				pmax	pmax		
	comp=Z,24nm,0.2s						
LSTR				smax	smax		
	comp=N,267nm,0.4s						
ZRHB	**Zarechye**	0.85	68	*e*Pg	Pb	21 00 26.6	+0.3
ZRHB				*e*Pb	Pn	21 00 27.4	+0.3
ZRHB				*e*Sg	Sn	21 00 38.2	-0.7
ZRHB				*e*Sb	Sb	21 00 42.6	+5.4
ZRHB				max			
	comp=N,97nm,0.1s						
ZRHB				max			
	comp=N,1µm,0.4s						
HRMR	**Khuramsha**	0.91	132	⇑*i*Pg	Pb	21 00 27.1	-0.3
HRMR				*e*Sg	Sb	21 00 39.1	0.0
HRMR				Pmax			
	comp=N,855nm,0.2s						
HRMR				Smax			
	comp=N,3µm,0.2s						
IRK	**Irkutsk**	0.98	271	*e*PG	Pn	21 00 29.4	+0.4
IRK				*e*		21 00 42.4	
IRK				pmax	pmax		
	comp=Z,225nm,0.2s						
IRK				smax	smax		
	comp=E,1µm,0.3s						
IVK	**Ivanovka**	1.00	245	*e*Pg	Pn	21 00 29.2	0.0
IVK				*e*Sg	Sb	21 00 42.1	+0.4
IVK				*e*Sb	Sn	21 00 45.5	+2.8
IVK				Pmax			
	comp=E,55nm,0.1s						
IVK				max			
	comp=E,420nm,0.1s						
IVK	**Ivanovka**	1.00	245	*e*PG	Pn	21 00 29.4	+0.2
IVK				*e*		21 00 42.0	
IVK				pmax	pmax		
	comp=Z,54nm,0.1s						
IVK				smax	smax		
	comp=N,470nm,0.2s						
UUDB	**Ulan-Yde**	1.17	108	⇑*i*Pg	Pn	21 00 31.5	0.0
UUDB				*e*Sg	Sb	21 00 46.7	+0.2
UUDB				Pmax			
	comp=N,125nm,0.3s						
UUDB				Smax			
	comp=N,475nm,0.2s						
KELR	**Kotokel**	1.45	68	*e*Pg	Pn	21 00 35.8	+0.4
KELR				*e*Sg	Sb	21 00 54.7	+0.2
TLY	**Talaya**	1.49	249	*e*Pg	Pb	21 00 37.7	+0.5
TLY				*e*Sg	Sb	21 00 57.2	+1.5
TLY				Pmax			
	comp=N,38nm,0.1s						
TLY				Smax			
	comp=N,261nm,0.2s						
TLY	**Talaya**	1.49	249	⇓*i*PG	Pb	21 00 37.7	+0.5
TLY				*e*		21 00 56.9	
TLY				pmax	pmax		
	comp=Z,37nm,0.2s						
TLY				smax	smax		
	comp=N,313nm,0.2s						
OGRR	**Ongureny**	1.75	36	*e*Pg	Pb	21 00 42.1	+0.4
OGRR				*e*		21 00 43.7	
OGRR				*e*Sg	Sb	21 01 05.3	+2.0
OGRR				max			
	comp=N,30nm,0.1s						
OGRR				Smax			
	comp=N,335nm,0.2s						
OGRR	**Ongureny**	1.75	36	*e*PN	Pb	21 00 42.2	+0.5
OGRR				*e*		21 01 04.8	
OGRR				pmax	pmax		
	comp=Z,36nm,0.3s						
OGRR				smax	smax		
	comp=E,334nm,0.2s						
MXMB	**Maximikha**	2.03	58	*e*Pn	Pn	21 00 44.8	+1.5
MXMB				*e*Pg	Pb	21 00 47.3	+0.9
MXMB				*e*Sn	Sn	21 01 08.7	+0.7
MXMB				*e*Sg	Sb	21 01 13.8	+2.6
ARS	**Arshan**	2.15	263	*e*Pg	Pb	21 00 48.0	-0.6
ARS				*e*Sg	Sb	21 01 16.7	+1.9
ARS				Pmax			
	comp=E,34nm,0.2s						
ARS				Smax			
	comp=E,633nm,0.3s						
ARS	**Arshan**	2.15	263	*e*PN	Pb	21 00 47.9	-0.7
ARS				*e*		21 01 17.0	
ARS				pmax	pmax		
	comp=Z,34nm,0.2s						
ARS				smax	smax		
	comp=E,633nm,0.3s						
ZAK	**Zakamensk**	2.47	222	*e*Pn	Pn	21 00 49.9	+0.4
ZAK				*e*Pg	Pb	21 00 54.8	+0.8
ZAK				*e*Sg	Sb	21 01 27.7	+3.7
ZAK				Pmax			
	comp=E,9.0nm,0.1s						
ZAK				Smax			
	comp=E,55nm,0.2s						
ZAK	**Zakamensk**	2.47	222	*e*PN	Pb	21 00 55.7	+1.7
ZAK				*e*		21 01 28.1	
ZAK				pmax	pmax		
	comp=Z,8.0nm,0.1s						
ZAK				smax	smax		
	comp=E,55nm,0.3s						
SYVR	**Suvo**	2.87	59	*e*Pn	Pn	21 00 55.7	+0.8
SYVR				*e*Pg	Pb	21 01 01.4	+0.6
SYVR				*e*Sn	Sn	21 01 28.7	-0.2
SYVR				*e*Sg	Sb	21 01 39.7	+4.2
SYVR				Pmax			
	comp=E,7.0nm,0.3s						
SYVR				Smax			
	comp=E,37nm,0.3s						
MOY	**Mondy**	3.07	261	*e*	Pb	21 01 02.3	-2.0
MOY				*e*Pg	Pn	21 01 04.7	+6.9
MOY				*e*		21 01 40.8	
MOY				*e*Sg	Sb	21 01 44.9	+3.5
MOY				Pmax			
	comp=E,14nm,0.4s						
MOY				Smax			
	comp=E,93nm,0.8s						
ORL	**Orlik**	3.73	277	*e*Pn	Pn	21 01 09.3	+2.6
ORL				*e*Pg	Pb	21 01 17.2	+1.8
ORL				*e*		21 01 54.3	
ORL				*e*Sg	Sb	21 02 05.1	+5.0
ORL				Pmax			
	comp=E,7.0nm,0.6s						
ORL				Smax			
	comp=E,62nm,0.8s						
ORL	**Orlik**	3.73	277	*e*PN	Pn	21 01 09.6	+2.9
ORL				*e*		21 01 18.2	
ORL				*e*		21 02 05.8	
ORL				pmax	pmax		
	comp=Z,98nm,0.4s						
ORL				smax	smax		
	comp=N,620nm,0.7s						
YLYR	**Ulyunkhan**	4.11	48	*e*Pn	Pn	21 01 13.1	+1.1
YLYR				*e*Pg	Pb	21 01 23.9	+1.9
YLYR				*e*Sn	Sn	21 01 59.2	-0.3
YLYR				*e*Sg	Sb	21 02 17.2	+6.0
YLYR				Pmax			
	comp=N,3.0nm,0.4s						
YLYR				Smax			
	comp=N,18nm,0.3s						
NIZ	**Nizh Angarsk**	4.15	30	*e*Pn	Pn	21 01 14.1	+1.6
NIZ				*e*Pg	Pb	21 01 25.1	+2.5
NIZ				*e*Sn	Sn	21 02 00.4	0.0
NIZ				*e*Sg	Sb	21 02 18.2	+5.9
NIZ				Pmax			
	comp=N,5.0nm,0.3s						
NIZ				Smax			
	comp=N,55nm,0.4s						
NIZ	**Nizh Angarsk**	4.15	30	*e*PN	Pn	21 01 13.9	+1.4
NIZ				*e*		21 01 25.8	
NIZ				*e*S	Sn	21 02 00.3	-0.1
NIZ				*e*		21 02 18.8	
NIZ				pmax	pmax		
	comp=Z,4.0nm,0.6s						
NIZ				smax	smax		
	comp=N,66nm,0.6s						
KMO	**Kumora**	4.82	39	*e*Pn	Pn	21 01 23.3	+1.7
KMO				*e*Pg	Pb	21 01 37.2	+3.3
KMO				*e*Sn	Sn	21 02 15.0	-1.8
KMO				*e*Sg	Sb	21 02 38.3	+6.9
KMO				Pmax			
	comp=N,4.0nm,0.3s						
KMO				Smax			
	comp=N,34nm,1.1s						
KPC	**Khapcheranga**	4.83	119	*e*Pn	Pn	21 01 21.2	-0.7
KPC				*e*Pg	Pb	21 01 36.1	+1.8
KPC				*e*Sn	Sn	21 02 16.5	-0.8
KPC				*e*Sg	Sb	21 02 39.4	+7.4
KPC				Pmax			
	comp=N,4.0nm,0.4s						
KPC				Smax			
	comp=N,45nm,0.7s						
UKT	**Uakit**	5.63	52	*e*Pn	Pn	21 01 34.0	+1.2
UKT				*e*Pn	Pb	21 01 51.7	+3.9
UKT				*e*Sn	Sn	21 02 34.1	-2.7
UKT				*e*Sg	Sb	21 03 03.8	+9.1
UKT				Smax			
	comp=N,10.0nm,1.1s						
NLYR	**Nelyaty**	7.15	50	*e*Sg	Sb	21 03 51.7	+13
NLYR				Smax			
	comp=N,25nm,1.0s						
BOD	**Bodaibo**	7.28	37	*e*Sn	Sn	21 03 15.8	-1.6
BOD				*e*Sg	Sb	21 03 54.6	+12
BOD				Smax			
	comp=N,8.0nm,0.7s						
TUP	**Tupik**	8.71	70	*e*Sg	Sn	21 04 39.9	+47
TUP				Smax			
	comp=N,16nm,1.1s						

MEX 26 21:03:26.7±1.1, 16°.83N×94°.96W, h126km±20km, MD3.9, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
HUIG	Huatulco	1.53	227	eP	Pn	21 03 52.9	-1.9
HUIG				i S	Sn	21 04 15.1	-1.2
VHO	Vista Hermosa	1.72	278	eP	Pn	21 03 56.6	-0.6
VHO				eS	Sn	21 04 18.5	-2.0
TGIG		1.76	91	eP	Pn	21 03 57.2	-0.4
TGIG				i S	Sn	21 04 18.7	-2.4
PCIG		2.01	124	eP	Pn	21 03 58.7	-1.8
PCIG				i S	Sn	21 04 25.1	-1.3
PNIG	Pinotepa	3.07	262	eP	Pn	21 04 12.1	-2.0
PNIG				eS	Sn	21 04 48.5	-2.2

KRSC 26 21:22:07.8±1.8, 51°.28N×160°.73E, h65km±29km, ML3.5, Off east coast of Kamchatka Peninsula

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
KDTR	Khodutka, Kamc	1.74	289	eP	Pn	21 22 36.7	+0.9
KDTR				eS	Sn	21 22 58.2	+1.2
RUS	Russkaya	1.80	311	eP	Pn	21 22 37.7	+1.2
RUS				eS	Sn	21 23 00.7	+2.4
SPN	Mys Shipunski	1.87	347	eP	Pn	21 22 39.2	+1.6
SPN				eS	Sn	21 23 02.2	+2.0
MTVR	Mutnovka	1.99	308	eP	Pn	21 22 41.0	+1.7
MTVR				eS	Sn	21 23 06.1	+2.9
ASAK	Asacha	2.08	303	eP	Pn	21 22 42.4	+2.0
ASAK				eS	Sn	21 23 08.4	+3.1
NLC	Nalytchevo	2.08	336	eP	Pn	21 22 42.5	+2.2
NLC				eS	Sn	21 23 08.7	+3.6
DALK	Dalny	2.14	326	eS	Sn	21 23 10.2	+3.6
UGLR	Uglovaya	2.26	329	eP	Pn	21 22 45.5	+2.6
SDLR	Sedlovina	2.30	331	eP	Pn	21 22 45.6	+2.1
SMAR	Somma	2.31	330	eP	Pn	21 22 47.1	+3.3
AVH	Avacha	2.34	329	eP	Pn	21 22 46.8	+2.9
KRX	Arik	2.44	329	eP	Pn	21 22 48.7	+3.2
PAU	Pauzhetka	2.46	276	eS	Sn	21 23 15.9	+1.3
MIPR	Malaya Ipel'ka	2.66	294	eP	Pn	21 22 50.8	+2.5
MIPR				eS	Sn	21 23 23.1	+3.7
KII	Karymskiy	2.87	345	eP	Pn	21 22 54.7	+3.5
GNL	Ganaly	2.96	326	eP	Pn	21 22 56.0	+3.5
MKZ	Mys Kozlova	3.34	10	eP	Pn	21 22 59.1	+1.6
MKZ				eS	Sn	21 23 36.8	+1.0
KZV	Kizimen	3.85	356	eP	Pn	21 23 07.9	+3.3
KZV				eS	Sn	21 23 51.9	+3.3
TUMD	Tumrok D	3.94	357	eP	Pn	21 23 08.6	+2.9
TUMD				eS	Sn	21 23 53.4	+2.8
TUMR	Tumrok	4.03	355	eP	Pn	21 23 10.9	+3.9
KMNR	Kamenistaya	4.50	356	eP	Pn	21 23 17.5	+4.1
BZGR	Bezymyannyi-Gr	4.67	360	eP	Pn	21 23 19.9	+4.1
ZLN	Zelenaya	4.75	0	eP	Pn	21 23 20.5	+3.7
LGNR	Loginova	4.81	360	eP	Pn	21 23 22.5	+4.6
KBTR	Krutoberegovo	5.09	13	eP	Pn	21 23 23.8	+2.4
KBTR				eS	Sn	21 24 20.5	+1.7

KRSC 26 21:30:52.2±1.4, 54°.15N×168°.45E, h15km±28km, ML3.7, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
BKI	Bering	1.79	307	eP	Pn	21 31 23.3	+0.8
BKI				eS	Sb	21 31 47.5	+0.7
KBTR	Krutoberegovo	3.83	305	P	Pn	21 31 53.6	+3.0
MKZ	Mys Kozlova	3.95	279	eP	Pn	21 31 55.8	+3.6
MKZ				eS	Sn	21 32 41.7	+3.5
ZLN	Zelenaya	4.77	296	S	Sn	21 33 03.7	+5.0
AVH	Avacha	5.83	265	eP	Pn	21 32 23.2	+5.0
RUS	Russkaya	6.20	258	eP	Pn	21 32 27.4	+4.3
GNL	Ganaly	6.22	270	P	Pn	21 32 28.4	+4.9

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*ISCJB **26** 21:41:10.2±0.8, 20°.83S±0°.03×69°.3W±0°.1, h121km±7km, mb3.7/1, Error ellipse: s-maj=18.1km s-min=5.1km az=2.1*
*GUC **26** 21:41:10.2±0.7, 20°.83S×69°.16W, h112km±3km, ML4.0*
*IDC **26** 21:41:51.6±4.8, 17°.65S×66°.71W, h51km±33km, mb3.9/3, mb1 4.0/4, mb1mx3.4/40, mbtmp4.1/4, ML3.8/1, Error ellipse: s-maj=87.5km s-min=22.8km az=21.0*
ISC 26 21:41:10.1±1.2**, 20°.83S**±0°.04×**69°.2W**±0°.1**, h116**km±10km**, n15, σ1ˢ06**/25**, 7C-4D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
PB01	IPOC Station P	0.37	234	⇓iP	Pn	21 41 27.0	-0.1
PB01				i S	Sn	21 41 39.5	-0.3
PB08	IPOC Station P	0.68	1	⇓iP	Pn	21 41 29.8	+0.4
PB08				i S	Sn	21 41 44.3	+0.4
PB08				IAML		21 41 44.9	
	comp=E,5µm,0.7s						
PB02	IPOC Station P	0.84	234	⇓iP	Pn	21 41 30.9	+0.5
PB02				i S	Sn	21 41 46.1	+0.4
PB02				IAML		21 41 47.8	
	comp=E,8µm,0.7s						
PB09	IPOC Station P	0.97	184	eP	Pn	21 41 32.1	+0.4
PB09				eS	Sn	21 41 48.6	+0.6
PB09				IAML		21 41 50.4	
	comp=N,5µm,0.2s						
PB07	IPOC Station P	1.12	217	⇑iP	Pn	21 41 33.7	+0.4
PB07				IAML		21 41 51.6	
	comp=E,5µm,0.2s						
PB11	IPOC Station P	1.16	337	⇓iP	Pn	21 41 34.2	+0.5
PB11				i S	Sn	21 41 51.8	+0.4
PB03	IPOC Station P	1.33	204	⇑iP	Pn	21 41 35.9	+0.4
PB03				i S	Sn	21 41 54.6	-0.2
PB03				IAML		21 41 55.6	
	comp=N,2µm,0.2s						
PSGC	Pisagua	1.52	324	⇑iP	Pn	21 41 37.9	+0.2
MNMC	Minye Minye	1.73	347	⇑iP	Pn	21 41 41.3	+0.8
MNMC				i S	Sn	21 42 04.5	+1.0
MNMC				IAML		21 42 07.0	
	comp=E,4µm,0.2s						
PB04	IPOC Station P	1.75	211	⇑iP	Pn	21 41 40.8	+0.3
PB04				i S	Sn	21 42 03.0	-0.7
PB06	IPOC Station P	1.91	191	⇑iP	Pn	21 41 42.7	+0.3
PB06				i S	Sn	21 42 06.7	-0.3
PB06				IAML		21 42 09.3	
	comp=N,964nm,0.6s						
PB12	IPOC Station P	2.46	333	⇑iP	Pn	21 41 49.2	-0.2
PB12				i S	Sn	21 42 17.9	-1.6
LPAZ	La Paz	4.62	12	P	Pn	21 42 21.2	+2.6
	comp=N,5.2nm,0.3s,baz=73,slow=13,SNR=31						
SIV	San Ignacio	9.07	59	P	Pn	21 43 15.1	-3.1
	comp=N,2.8nm,0.3s,baz=266,slow=13,SNR=40						
PTGA	Pitinga	21.91	25	P	P	21 45 53.8	-0.3
	comp=N,1.3nm,0.3s,baz=181,slow=18,SNR=9.2						

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*GUC **26** 21:51:04.1±0.5, 30°.00S×71°.79W, h54km±13km, ML3.4*
*SJA **26** 21:51:06.7±0.8, 30°.06S×71°.72W, h13km±46km, ML3.2, MW3.6*
ISC 26 21:51:03.4±2.5**, 29°.98S**±0°.05×**71°.77W**±0°.10**, h8**km±14km**, n17, σ1ˢ36**/19**, 1C, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
TLL	Tololo Astrono	0.86	103	eP	Pn	21 51 21.9	-0.1
TLL				i S	Sn	21 51 35.1	+0.3
TLL				IAML		21 51 37.2	
	comp=E,2µm,0.7s						
GO04	Tololo Observa	0.86	103	eP	Pn	21 51 21.8	-0.2
GO04				i S	Sn	21 51 35.5	+0.6
LCO	Las Campanas	1.34	44	⇑iP	Pn	21 51 28.9	+0.3
LCO				i S	Sn	21 51 48.0	+1.3
AROD	Rodeo	2.00	96	eP	Pg	21 51 42.0	+0.2
AROD				eS	Sg	21 52 09.2	+1.5
GO03	Copiap	2.73	30	eP	Pn	21 51 47.2	-0.3
GO03				IAML		21 52 38.5	
	comp=N,108nm,0.3s						
RTLS	Leoncito	2.79	131	eP	Pb	21 51 53.6	-0.1
RTLS				eS	Sb	21 52 27.5	-0.8
RTLS				IAML		21 52 38.8	
	comp=Z,99nm,0.6s						
AGUA	GUANDACOL	2.89	81	eP	Pb	21 51 55.0	-0.2
AMOG	MOGNA	2.99	110	eP	Pb	21 51 56.5	-0.4
AUSP	Uspallata	3.03	138	eP	Pb	21 51 56.3	-1.5
ROCH	El Roble	3.06	168	eP	Pn	21 51 52.5	+0.3
ROCH				IAML		21 52 43.3	
	comp=E,152nm,0.8s						
ROC1	El Roble	3.06	168	eP	Pn	21 51 54.7	+2.4
ZON	Zonda	3.08	121	IAML		21 52 49.7	
	comp=Z,33nm,0.6s						
RTLL	Cerro Villicun	3.14	116	eP	Pb	21 51 57.7	-1.8
RTLL				IAML		21 52 55.6	
	comp=Z,54nm,0.4s						
VCA	Vinchina	3.35	69	eP	Pb	21 52 01.6	-1.5
VCA				IAML		21 52 08.6	
	comp=Z,108nm,0.3s						
ASAL	Salagasta	3.62	137	eP	Pb	21 52 04.8	-2.9
ARCO	CERRO ARCO	3.75	140	IAML		21 53 14.1	
	comp=Z,54nm,0.8s						
TCA	Tanti	6.33	104	IAML		21 52 44.0	
	comp=Z,9.9nm,0.6s						

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*MAN **26** 22:03:40.6, 18°.67N×120°.83E, h5km, mb4.6, ML3.5, MS3.3*
*BJI **26** 22:03:41.3, 18°.27N×120°.92E, h41km, mb4.1/21, mB4.3/9, ML3.9/1, Ms3.8/5, Ms7 3.7/6*
*ISCJB **26** 22:03:43.5±0.4, 18°.64N±0°.02×120°.94E±0°.05, h54km±5km, mb4.1/36, MS3.2/10, Error ellipse: s-maj=7.3km s-min=4.0km az=5.2*
*NEIC **26** 22:03:43.8±0.8, 18°.58N×120°.91E, h39km±7km, mb4.4/16, Error ellipse: s-maj=7.5km s-min=6.9km az=117.0*
*IDC **26** 22:03:44.8±1.9, 18°.59N×121°.07E, h60km±18km, mb3.7/20, mb1 3.9/23, mb1mx3.7/63, mbtmp4.0/23, MS3.3/13, Ms1 3.3/13, ms1mx3.0/56, Error ellipse: s-maj=17.1km s-min=9.9km az=85.0*
ISC 26 22:03:45.1±0.8**, 18°.62N**±0°.04×**120°.91E**±0°.05**, h53**km±8km**, n93, σ1ˢ84**/101**, mb4.2**/36**, MS3.1**/10**, 1C, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
APYP	Conner	0.82	157	eP	Pn	22 03 58.2	-2.3
APYP				eS	Sn	22 04 10.8	-0.9
ABRA	Dolores	0.98	191	eP	Pn	22 03 58.9	-3.8
ABRA				eS	Sn	22 04 13.2	-2.5
SGCP	Mt. Cagua	1.14	109	eP	Pn	22 04 04.4	-0.4
SGCP				eS	Sn	22 04 21.2	+1.8
CVP	Callao Caves	1.26	136	eP	Pn	22 04 05.4	-1.0
CVP				eS	Sn	22 04 23.1	+0.9
CAUP	Cauayan	1.88	152	eP	Pn	22 04 16.1	+1.3
CAUP				eS	Sn	22 04 45.6	+8.2
BBP	Basco	2.07	29	eP	Pn	22 04 16.1	-1.2
BBP				eS	Sn	22 04 43.0	+1.0
BBP	Basco	2.07	29	⇑iP	Pn	22 04 17.7	+0.4
BBP				i S	Sn	22 04 43.2	+1.3
BOLP	Bolinao	2.42	203	eP	Pn	22 04 19.3	-2.9
BOLP				eS	Sn	22 04 53.9	+3.2
SCZP	Santa Cruz	2.99	199	eP	Pn	22 04 29.1	-0.8
SCZP				eS	Sn	22 05 11.0	+6.5
PCPH	Palayan	3.05	177	eP	Pn	22 04 30.9	+0.1
PCPH				eS	Sn	22 05 09.7	+3.6
TWG	Pinlang	4.18	2	ePn	Pn	22 04 44.3	-2.1
TGY	Tagaytay City	4.49	180	P	Pn	22 04 50.7	0.0
	105nm,0.3s,baz=18,slow=15,SNR=3.5						
TGY				S	Sn	22 05 42.2	+0.4
	56nm,0.3s,baz=302,slow=13,SNR=2.1						
TGY				LR	LR	22 06 52.8	
	comp=Z,521nm,18.8s,baz=85,slow=42						
TPUB	Ta-pu	4.66	357	ePn	Pn	22 04 51.9	-1.1
YULB	Yu-li	4.76	4	ePn	Pn	22 04 53.9	-0.5
LUBP	Lubang	4.90	188	eP	Pn	22 04 58.1	+1.9
SSLB	Suanglung	5.14	0	ePn	Pn	22 04 57.7	-1.8
NACB	Ninganchiao	5.56	6	ePn	Pn	22 05 04.1	-1.2
YHNB	Yeheng	6.04	4	ePn	Pn	22 05 11.5	-0.3
YOJ	Yonaguni jima	6.13	18	ePn	Pn	22 05 12.8	-0.3
TATO	Taipei	6.35	5	ePn	Pn	22 05 16.2	+0.2
JOW	Kunigami	10.63	38	P	Pn	22 06 11.5	-3.1
	1.3nm,0.3s,baz=228,slow=14,SNR=4.2						
JOW	Kunigami	10.63	38	ePn	Pn	22 06 14.0	-0.7
DAV	Davao City (W)	12.35	158	LR	LR	22 12 12.3	
	comp=Z,142nm,20.2s,baz=354,slow=41						
GYA	Guiyang	15.29	303	eP	Pn	22 07 18.5	+0.8
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
JNU	Nakatsue	16.98	30	P	Pn	22 07 36.9	-2.1
	0.4nm,0.3s,baz=222,slow=8.1,SNR=7.6						
JNU				LR	LR	22 13 53.4	
	comp=Z,118nm,21.8s,baz=124,slow=36						
JNU	Nakatsue	16.98	30	ePn	P	22 07 39.6	-0.6
	12nm,0.8s						
TIA	Tai'an	17.84	350	P	P	22 07 52.3	+2.7
TIA				pmax	pmax		
	comp=Z,8.0nm,1.3s						
KMI	Kunming	18.05	294	P	Pn	22 07 53.8	+1.4
KMI				pmax	pmax		
	comp=Z,5.0nm,0.5s						
XAN	Xi'an	18.71	327	P	Pn	22 08 02.5	+2.3
XAN				pmax	pmax		
	comp=Z,5.0nm,1.1s						
KSRS	Korea Array	19.75	17	P	P	22 08 09.8	-0.7
	0.7nm,0.3s,baz=199,slow=11,SNR=16						
KSRS				LR	LR	22 16 44.8	
	comp=Z,82nm,18.6s,baz=176,slow=40						
KS01	Wonju Array Si	19.76	17	eP	P	22 08 10.8	+0.2
CMMT	Chiang Mai	20.80	274	P	Pn	22 08 25.1	+0.1
	8.5nm,1.3s						
CHTO	Chiang Mai	20.80	274	eP	P	22 08 22.6	+0.5
	6.9nm,0.9s						
CHTO	Chiang Mai	20.80	274	P	Pn	22 08 25.2	+0.1
	38nm,1.3s						
CM01	Chiang Mai Arr	20.82	273	eP	P	22 08 23.1	+0.8
CMAR	Chiang Mai Arr	20.83	273	P	P	22 08 23.5	+1.1
	1.7nm,0.6s,baz=79,slow=8.5,SNR=13						
CMAR				LR	LR	22 16 22.4	
	comp=Z,60nm,18.9s,baz=105,slow=36						
INU	Inuyama	21.94	37	eP	P	22 08 35.1	+0.9
	15nm,0.9s						
JHJ	Hachijo jima 2	22.24	46	LR	LR	22 15 50.2	
	comp=Z,56nm,21.5s,baz=137,slow=33						
LZH	Lanzhou	23.01	323	eP	P	22 08 45.0	-0.7
LZH				pP	pP	22 08 56.5	-1.5
LZH				sP	sP	22 09 02.3	-2.3
LZH				ePP	PnPn	22 09 16.5	+4.1
LZH				pmax	pmax		
	comp=Z,19nm,1.1s						
LZH				pmax	pmax		
	comp=Z,65nm,4.6s						
LZH				LR	LR		
	comp=N,230nm,11.5s						
LZH				LR	LR		
	comp=E,250nm,12.0s						
LZH				LR	LR		
	comp=Z,280nm,13.7s						
MJAR	Matsushiro Arr	23.47	37	P	P	22 08 48.7	-1.3
	0.6nm,0.4s,baz=220,slow=11,SNR=2.6						
MJAR				LR	LR	22 17 14.8	
	comp=Z,39nm,20.4s,baz=265,slow=35						
GUMO	Guam	23.55	99	LR	LR	22 16 06.0	
	comp=Z,42nm,20.6s,baz=269,slow=32						
HHC	Hu-ho-hao-te	23.56	342	eP	P	22 08 52.5	+1.6
HHC				S	S	22 13 03.8	+2.6
HHC				pmax	pmax		
	comp=Z,19nm,1.0s						
HHC				pmax	pmax		
	comp=Z,73nm,5.1s						
KULM	Kulim	23.80	239	eP	P	22 08 52.8	-0.4
	11nm,1.0s						
PSI	Prapat	26.66	236	eP	P	22 09 19.3	+0.1
	17nm,1.3s						
USRK	Ussuriysk Ar.	27.15	18	P	P	22 09 22.8	-0.4
	1.7nm,0.6s,baz=195,slow=9.0						
ASAJ	Asahikawa	31.26	31	LR	LR	22 24 14.4	
	comp=Z,43nm,18.5s,baz=237,slow=39						
SONM	Songino Array	31.45	341	P	P	22 10 02.1	+0.6
	0.3nm,0.3s,baz=166,slow=7.3,SNR=5.9						
SONM				LR	LR	22 24 40.7	
	comp=Z,86nm,18.2s,baz=152,slow=40						
KLR	Kul'dur	31.76	14	P	P	22 10 02.5	-1.6
	0.1nm,0.7s,baz=215,slow=5.6,SNR=5.6						
WMQ	Urumqi	37.51	319	P	P	22 10 55.5	+1.6
WRAB	Tennant Creek	40.52	160	eP	P	22 11 18.7	-0.5
	7.4nm,1.0s						
WRA	Warramunga Arr	40.53	160	P	P	22 11 16.0	-3.2
	1.1nm,0.5s,baz=341,slow=9.0,SNR=10						
WRA				PcP	PcP	22 13 20.6	-0.4
	1.2nm,0.8s,baz=339,slow=3.4,SNR=6.6						
WB2	Warramunga Arr	40.53	160	eP	P	22 11 19.6	+0.3
	15nm,1.5s						
MK01	Makanchi Array	42.28	320	eP	P	22 11 34.1	+0.7
MK31	Makanchi Array	42.30	320	eP	P	22 11 34.7	+1.2
MKAR	Makanchi Array	42.30	320	P	P	22 11 34.3	+0.8
	2.1nm,0.7s,baz=114,slow=9.0,SNR=18						
MKAR				PcP	PcP	22 13 26.6	+0.2
	1.1nm,0.7s,baz=100,slow=4.3,SNR=5.2						
MKAR	Makanchi Array	42.30	320	eP	P	22 11 34.7	+1.2
	15nm,0.7s						
MAKZ	Makanchi	42.49	320	eP	P	22 11 35.8	+0.7
	5.3nm,1.4s						
H11S3	WAKE ISLAND Hy	43.30	83	T	T	22 57 02.7	
	baz=276,slow=75,SNR=28						
H11S1	WAKE ISLAND Hy	43.32	83	T	T	22 57 04.1	
	baz=276,slow=75,SNR=11						
H11S2	WAKE ISLAND Hy	43.32	83	T	T	22 57 10.0	
	baz=276,slow=75,SNR=13						
H11N1	WAKE ISLAND Hy	43.35	81	T	T	22 57 25.0	
	baz=277,slow=75,SNR=9.2						
H11N2	WAKE ISLAND Hy	43.35	81	T	T	22 57 23.7	
	baz=277,slow=75,SNR=5.8						
H11N3	WAKE ISLAND Hy	43.36	81	T	T	22 57 28.5	
	baz=277,slow=75,SNR=8.1						
ASAR	Alice Springs	43.90	163	P	P	22 11 44.7	-1.9
	1.7nm,0.7s,baz=348,slow=7.4,SNR=12						
ASAR				PcP	PcP	22 13 30.8	-1.3
	0.2nm,0.5s,baz=347,slow=3.3,SNR=2.9						
KSH	Kashi	43.91	308	P	P	22 11 49.8	+3.0
KSH				sP	sP	22 12 07.5	+0.5
KSH				ePcP	PcP	22 13 34.3	+2.2
KSH				PcS	PcS	22 17 25.0	-0.3
KSH				S	S	22 18 18.0	+3.4
KSH				ScS	ScS	22 21 40.0	-1.3
KSH				pmax	pmax		
	comp=Z,4.0nm,0.6s						
AS01	Alice Springs	43.91	163	eP	P	22 11 46.3	-0.5
PETK	Petropavlovsk-	44.68	31	LR	LR	22 30 14.3	
	comp=Z,23nm,21.1s,baz=264,slow=36						
ZALV	Zalesovo Beam	44.85	330	P	P	22 11 52.8	-1.1
	0.4nm,0.4s,baz=147,slow=8.4,SNR=2.3						
NIL	Nilore	44.94	299	eP	P	22 11 55.2	+0.3
	10nm,0.8s						
KURK	Kurchatov	46.29	324	eP	P	22 12 06.2	+0.9
	5.5nm,1.1s						
KURBB	Kurchatov Arra	46.30	324	P	P	22 12 06.0	+0.6
	2.1nm,0.7s,baz=118,slow=8.9,SNR=19						
BVAR	Borovoye Array	51.89	324	P	P	22 12 48.8	+0.7
	1.2nm,0.7s,baz=115,slow=6.8,SNR=10.0						
BVAR				PcP	PcP	22 13 59.3	-1.0
	1.6nm,0.7s,baz=108,slow=3.6,SNR=7.8						
BRVK	Borovoye	51.96	324	eP	P	22 12 49.2	+0.6
	4.4nm,0.9s						
STKA	Stephens Creek	53.99	158	P	P	22 13 01.4	-2.3
	1.1nm,0.5s,baz=343,slow=5.9,SNR=4.1						
ARU	Arti	59.44	325	eP	P	22 13 41.9	-0.3
	2.7nm,0.8s						
KBZ	Khabaz	68.81	310	P	P	22 14 43.5	-0.3
	2.4nm,0.8s,baz=219,slow=1.3,SNR=6.7						
KBZ				LR	LR	22 49 09.0	
	comp=Z,22nm,18.9s,baz=144,slow=40						
RAYN	Ar Rayn	69.80	289	eP	P	22 14 49.9	-0.5
	3.8nm,0.8s						
MLY	Manley	72.61	26	eP	P	22 15 07.4	+0.8
	2.7nm,0.8s						
SUA	Susitna One	73.05	30	eP	P	22 15 09.2	-0.2
	18nm,1.8s						
ILAR	Eielson Array	74.27	26	P	P	22 15 16.0	-0.3
	0.6nm,0.8s,baz=260,slow=3.6,SNR=4.0						
ASF	Jabal al Asfar	75.40	299	P	P	22 15 23.2	-0.4
	2.0nm,0.9s,baz=317,slow=11,SNR=3.8						
FINES	FINESS Array B	76.11	330	P	P	22 15 26.1	-0.8
	1.4nm,0.7s,baz=106,slow=4.8,SNR=6.9						
AKASG	Malin Array Be	76.87	319	P	P	22 15 29.7	-1.8
	0.8nm,0.6s,baz=65,slow=6.0,SNR=3.4						
BUR04	Bucovina Ar. S	80.21	317	eP	P	22 15 50.0	-0.1
BUR08	Bucovina Ar. S	80.21	317	eP	P	22 15 50.1	+0.1
MLR	Muntele Rosu	80.34	315	P	P	22 15 50.6	-0.3
	1.7nm,0.8s,baz=156,slow=12,SNR=4.6						
HFS	Hagfors	82.28	331	P	P	22 15 59.5	-1.1
	1.7nm,0.8s,baz=159,slow=14,SNR=4.3						
NC405	NORSAR Array S	82.76	332	eP	P	22 16 02.5	-0.6
NB2	NORSAR Subarra	83.01	333	P	P	22 16 03.1	-1.4
	comp=Z,2.5nm,1.1s,baz=63,slow=5.3						
NOA	NORSAR Array B	83.01	333	P	P	22 16 03.2	-1.4
	comp=Z,0.9nm,0.7s,baz=64,slow=5.0,SNR=8.1						
NOA				LR	LR	22 57 44.5	
	comp=Z,28nm,18.1s,baz=0.0,slow=39						
VYHS	Vyhne	83.97	319	eP	P	22 16 09.1	-0.6
YKA	Yellowknife Ar	88.18	23	P	P	22 16 29.8	-0.2
	comp=Z,1.0nm,0.7s,baz=312,slow=4.1,SNR=5.1						
SDV	Santo Domingo	150.39	24	PKPbc	PKPbc	22 23 31.1	-0.7
	comp=Z,6.4nm,0.8s,baz=351,slow=4.1,SNR=8.0						

MAN 26 22:04:12.4, 7°.13N×126°.93E, h112km, mb4.5, ML3.4, MS3.2, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
DDMP	Don Marcelino,	1.58	230	eP	Pn	22 04 41.9	+1.6
DDMP				eS	Sn	22 05 02.5	+0.9
GSPH	General Santos	2.22	242	⇑iP	Pn	22 04 44.5	-4.0
GSPH				i S	Sn	22 05 08.6	-7.4
SKMP	Bagumbayan, Su	2.44	256	eP	Pn	22 04 51.9	+0.8
SKMP				eS	Sn	22 05 22.0	+1.1

SJA 26 22:12:06.0±0.6, 31°.60S×67°.99W, h111km±3km, ML3.4, MW3.7, San Juan Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
SJA	San Juan	0.50	278	eP	Pn	22 12 24.0	+1.0
SJA				eS	Sn	22 12 36.4	+0.7
RTLL	Cerro Villicun	0.50	303	eP	Pn	22 12 23.7	+0.7
RTLL				IAML		22 12 23.8	
	comp=Z,1µm,0.3s						
RTLL				AMSG		22 12 36.7	
	comp=Z,25µm,0.0s						
RTLL				AMSG		22 12 37.3	
	comp=N,47µm,0.2s						
RTLL				AMSG		22 12 37.4	
	comp=E,50µm,0.2s						
RTCV	Cerro Valdivia	0.54	241	eP	Pn	22 12 24.1	+0.8
RTCV				eS	Sn	22 12 37.2	+0.9
ZON	Zonda	0.59	275	eP	Pn	22 12 24.4	+0.7
ZON				eS	Sn	22 12 38.0	+1.0
ZON				IAML		22 12 38.2	
	comp=Z,843nm,0.2s						
AMOG	MOGNA	0.79	327	eP	Pn	22 12 26.3	+0.9
ACAN	Cantantal	0.95	135	eP	Pn	22 12 28.0	+1.2
RTLS	Leoncito	1.14	260	eP	Pn	22 12 30.3	+1.3
RTLS				IAML		22 12 49.4	
	comp=Z,699nm,0.3s						
ASAL	Salagasta	1.22	216	eP	Pn	22 12 30.7	+1.0
AUSP	Uspallata	1.34	242	eP	Pn	22 12 32.5	+1.2
ARCO	CERRO ARCO	1.47	213	eP	Pn	22 12 33.8	+1.1
ARCO				IAML		22 12 56.0	
	comp=Z,614nm,0.5s						
AAGR	Agrelo	1.64	206	eP	Pn	22 12 35.9	+1.2
ACDV	Cuesta del Vie	1.73	325	eP	Pn	22 12 36.9	+1.1
ACDV				IAML		22 13 00.7	
	comp=Z,146nm,0.2s						
AROD	Rodeo	1.92	318	eP	Pn	22 12 39.7	+1.4
MRA	San Martin	2.09	114	eP	Pn	22 12 40.9	+0.6
MRA				IAML		22 13 08.0	
	comp=Z,215nm,0.5s						
VCA	Vinchina	2.86	356	eP	Pn	22 12 51.9	+1.5
VCA				IAML		22 13 57.3	
	comp=Z,62nm,0.5s						
TCA	Tanti	2.91	86	eP	Pn	22 12 51.0	+0.1
TCA				IAML		22 13 25.7	
	comp=Z,74nm,0.5s						

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*SOME **26** 22:17:21.6, 41°.92N×77°.37E, h10km*
*KRNET **26** 22:17:21.9±0.1, 41°.96N×77°.35E, h14km, mb2.6*
*NNC **26** 22:17:24.1±2.9, 44°.15N×76°.93E, h2km±20km, mb2.9, mpv2.5, Error ellipse: s-maj=22.5km s-min=7.0km az=163.0*
ISC 26 22:17:21.7±1.4**, 41°.92N**±0°.05×**77°.32E**±0°.02**, h9**km±10km**, n33, σ1ˢ31**/64**, 22C-12D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time	Res
				Op	ISC	h m s	ISC
ULHL	Ulahol	0.86	293	⇓iP	Pg	22 17 38.7	+0.3
	baz=89						
ULHL				⇓iS	Sg	22 17 50.3	+0.7
	baz=89						
PRZ	Przheval'sk	0.98	55	⇑iP	Pg	22 17 40.1	-0.6
	baz=56						

PRZ				⇑iS	Sb	22 17 52.8	-1.4
	baz=56						
BOOM	Boomskoye usch	1.17	300	⇑iP	Pg	22 17 44.5	+0.3
	baz=97						
BOOM				⇑eS	Sn	22 18 00.4	-0.2
	baz=97						
IZV	Izvestkoviy	1.23	335	eP	Pb	22 17 44.2	-1.1
	38nm,0.3s						
IZV				eS	Sg	22 18 01.0	-0.4
	30nm,0.2s						
AAA	Alma-Ata	1.32	347	eP	Pg	22 17 47.0	-0.2
	60nm,0.1s						
AAA				eS	Sn	22 18 05.4	+1.2
	18nm,0.3s						
KOTS	Kotyrbulak	1.32	354	eP	Pb	22 17 46.3	-0.5
	71nm,0.1s						
KOTS				eS	Sn	22 18 04.1	-0.3
	34nm,0.5s						
ZHN	Zhinishke	1.50	33	eP	Pb	22 17 48.7	-1.1
	14nm,0.1s						
ZHN				eS	Sg	22 18 08.1	-1.8
	94nm,0.4s						
KST	Kastek	1.51	319	eP	Pb	22 17 50.0	+0.2
	12nm,0.2s						
KST				eS	Sg	22 18 10.6	+0.4
	22nm,0.3s						
KZA	Kyzart	1.55	277	⇑iP	Pn	22 17 50.7	+0.9
	baz=75						
KZA				⇑iS	Sg	22 18 12.2	+0.7
	baz=75						
TKM2	Tokmak 2	1.62	309	⇑P	Pb	22 17 52.0	+0.1
	3.0nm,0.3s						
TKM2				⇓S	Sg	22 18 14.4	+0.5
	15nm,0.3s						
TKM2	Tokmak 2	1.62	309	⇓iP	Pb	22 17 52.0	+0.1
	baz=7.0						
TKM2				⇓iS	Sg	22 18 13.9	+0.1
	baz=7.0						
KURS	Kuram	1.69	22	eP	Pb	22 17 52.2	-0.8
	3.0nm,0.2s						
KURS				eS	Sg	22 18 14.2	-1.9
	7.4nm,0.5s						
DGS	Degeres	1.75	320	eP	Pb	22 17 54.4	+0.4
	4.8nm,0.4s						
DGS				eS	Sg	22 18 17.9	0.0
	21nm,0.4s						
UZB	Uzynbulak	1.76	45	eP	Pb	22 17 53.4	-0.9
	4.4nm,0.2s						
UZB				eS	Sb	22 18 15.8	-0.7
	46nm,0.2s						
KPKS	Kokpek	1.85	33	eP	Pb	22 17 55.2	-0.5
	22nm,0.1s						
KPKS				eS	Sg	22 18 18.8	-2.3
	67nm,0.2s						
KBK	Karagaybulak	1.91	294	⇓iP	Pb	22 17 57.3	+0.6
	baz=92						
KBK				⇓iS	Sg	22 18 23.0	0.0
	baz=92						
CHKK	Chushkaly	1.95	353	eP	Pb	22 17 57.5	+0.1
	28nm,0.2s						
CHKK				eS	Sg	22 18 23.4	-1.0
	85nm,0.2s						
SHLS	Shalkode	2.01	51	eP	Pg	22 18 02.7	+2.4
	9.5nm,0.3s						
SHLS				eS	Sg	22 18 32.2	+5.8
	70nm,0.5s						
KUU	Kurty	2.10	340	eP	Pb	22 18 00.1	+0.2
	14nm,0.5s						
KUU				eS	Sg	22 18 27.8	-1.4
	11nm,0.6s						
UCH	Uchtor	2.11	279	⇑iP	Pb	22 18 00.0	-0.4
	baz=78						
UCH				⇑iS	Sb	22 18 27.9	+1.1
	baz=78						
PDGK	Podgornoye	2.14	48	⇑Pn	Pb	22 17 59.0	-1.6
	1.9nm,0.5s						
PDGK				⇑Sn	Sb	22 18 26.5	-0.8
	17nm,0.4s						
PDGK	Podgornoye	2.14	48	⇓iP	Pb	22 17 59.5	-1.1
	baz=48						
PDGK				⇓iS	Sb	22 18 27.0	-0.3
	baz=48						
CHMS	Chumysh	2.18	301	⇑eP	Pb	22 18 00.9	-0.5
	baz=99						
CHMS				⇑iS	Sb	22 18 29.3	+0.8
	baz=99						
AAK	Ala-Archa	2.21	290	⇓Pn	Pb	22 18 02.7	+0.7
	1.4nm,0.3s						
AAK				⇑Sn	Sg	22 18 33.2	+0.3
	11nm,0.3s						
MNBS	Baschi	2.30	20	eP	Pb	22 18 02.5	-0.9
	0.2nm,0.2s						
MNBS				eS	Sb	22 18 32.2	+0.1
	29nm,0.3s						
USP	Ospenovka	2.48	304	⇑iP	Pb	22 18 05.0	-1.4
	baz=3.0						
USP				⇑iS	Sb	22 18 36.2	-0.8
	baz=3.0						
AML	Almayashu	2.71	276	⇑eP	Pb	22 18 08.9	-1.6
	baz=75						
AML				⇑iS	Sb	22 18 42.2	-1.7
	baz=75						
KTMS	Ketmen	2.71	55	eP	Pb	22 18 09.0	-1.4
	2.0nm,0.4s						
KTMS				eS	Sb	22 18 43.4	-0.4
	11nm,0.5s						
EKS2	Erkin-Say	2.73	287	⇑eP	Pb	22 18 09.0	-1.7
	baz=86						
EKS2				⇑iS	Sb	22 18 42.5	-1.8
	baz=86						
DJR	Jarkent	3.02	36	eP	Pb	22 18 14.8	-0.8
	0.8nm,0.2s						
DJR				eS	Sb	22 18 53.2	+0.6
	5.7nm,0.2s						
MNAS	Manas	3.62	281	⇑Pn	Pb	22 18 23.2	-2.7
	0.6nm,0.5s						
MNAS				⇓Lg	Lg	22 19 17.7	
	1.0nm,0.4s						
KAPS	Kapalarasan	3.68	23	eP	Pb	22 18 26.8	-0.1
	1.6nm,0.4s						
KAPS				eS	Sb	22 19 13.4	+1.8
	3.8nm,0.6s						
KK31	Karatay Array	5.17	286	⇓Pn	Pn	22 18 39.6	+0.5
	0.2nm,0.3s,baz=69,slow=13						
KK31				⇑Lg	Lg	22 19 58.6	
	0.8nm,0.4s,baz=75,slow=33,SNR=6.6						

MAN 26 22:22:28.1, 18°.12N×120°.97E, h29^{km}, mb4.1, ML2.9, MS2.5, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
APYP	Conner	0.36	134	eP	Pn	22 22 37.3	-0.1
APYP				eS	Sn	22 22 44.6	+0.9
ABRA	Dolores	0.52	208	eP	Pb	22 22 39.2	+0.3
ABRA				eS	Sn	22 22 49.1	+1.6
CVP	Callao Caves	0.91	117	eP	Pn	22 22 45.1	+0.1
CVP				eS	Sb	22 22 57.8	+0.7
SGCP	Mt. Cagua	1.03	83	eP	Pn	22 22 46.4	-0.3
SGCP				eS	Sb	22 23 00.7	+0.1
CAUP	Cauayan	1.42	145	eP	Pb	22 22 55.9	+1.9

MAN 26 22:32:25.6, 11°.10N×124°.70E, h12^{km}, mb4.0, ML2.8, MS2.4, 1D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OCLP	Ormoc	0.10	243	eP	Pb	22 32 29.4	-0.2
OCLP				eS	Sg	22 32 31.7	+1.1
PLP	Palo	0.28	76	⇓eP	Pb	22 32 33.2	+0.6
PLP				eS	Sg	22 32 36.1	+0.8
BESP	Borongan	0.88	55	eP	Pg	22 32 41.0	-1.6
BESP				eS	Sn	22 32 56.7	+0.2
MSLP	Maasin	0.97	171	eP	Pn	22 32 44.8	-0.3
MSLP				eS	Sn	22 32 59.2	+0.4
LLP	Lapu-Lapu	1.06	223	eP	Pb	22 32 46.0	0.0
LLP				eS	Sn	22 33 00.6	-0.4

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*ISCJB **26** 22:38:13.5±0.6, 8°.26S±0°.06×107°.36E±0°.04, h62^{km}, mb3.8/12, Error ellipse: s-maj=9.8km s-min=5.1km az=22.9*

*DJA **26** 22:38:14.5±1.0, 8°S±3°×10°7E±°, h15^{km}±7^{km}, M4.3/17, mb4.5/3, MLv4.2/17*

*IDC **26** 22:38:17.2±3.1, 8°.02S×107°.34E, h85^{km}±23^{km}, mb3.6/12, mb1 3.7/12, mb1mx3.5/56, mbtmp3.9/12, Error ellipse: s-maj=47.3km s-min=13.6km az=52.0*

ISC 26 22:38:14.6±0.7**, 8°.20S**±0°.08×**107°.34E**±0°.06**, h62^{km}, n37, σ1^{s}.47**/37**, mb3.9**/12**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMJI	Cimerak	1.17	69	P	Pn	22 38 34.2	-0.8
CMJI				S	Sn	22 38 48.1	-2.1
LEM	Lembang	1.39	11	P	Pn	22 38 38.4	+0.4
	350nm,0.3s,baz=56,slow=6.8,SNR=101						
LEM				S	Sn	22 38 56.1	+0.5
	326nm,0.3s,baz=189,slow=21,SNR=7.2						
LEM				LR	LR	22 39 13.9	
	comp=Z,170nm,18.1s,baz=156,slow=47						
LEM	Lembang	1.39	11	P	Pn	22 38 38.5	+0.4
LEM				S	Sn	22 38 56.8	+1.2
SKJI	Sukabumi	1.42	327	P	Pn	22 38 38.5	+0.2
DBJI	Dramaga	1.74	340	P	Pn	22 38 43.5	+0.9
KPJI	Karang Pucung	1.79	61	P	Pn	22 38 44.0	+0.7
CGJI	Cibinong	2.27	314	P	Pn	22 38 49.9	+0.1
SBJI	Serang	2.39	330	P	Pn	22 38 53.1	+1.7
UGM	Wanagama	3.16	85	P	Pn	22 39 02.7	+0.7
SMRI	Semarang	3.28	70	P	Pn	22 39 08.2	+4.6
WOJI	Wonogiri, Jawa	3.57	84	P	Pn	22 39 08.1	+0.6
PCJI	Pacitan	3.80	90	P	Pn	22 39 10.5	-0.1
KASI	Kota Agung	3.88	313	P	Pn	22 39 14.7	+2.9
NGJI	Ngawi	4.17	79	P	Pn	22 39 20.8	+5.1
PWJI	Pagerwojo	4.42	88	P	Pn	22 39 19.8	+0.6
LWLI	Liwa	4.54	314	P	Pn	22 39 23.2	+2.2
MDSI	Maura Dua	4.85	319	P	Pn	22 39 26.8	+1.8
MNAI	Manna	5.79	311	P	Pn	22 39 40.2	+2.2
GMJI	Gumukmas	6.04	91	P	Pn	22 39 42.5	+1.1
JAGI	Jajag, Banyuwa	6.75	93	P	Pn	22 39 52.2	+1.1
WRA	Warramunga Arr	28.62	117	P	P	22 44 05.8	+0.4
	0.4nm,0.9s,baz=287,slow=10,SNR=4.2						
WRA				PcP	PcP	22 47 16.0	+0.7
	0.6nm,1.0s,baz=314,slow=2.0,SNR=4.2						
ASAR	Alice Springs	29.73	124	P	P	22 44 16.3	+1.0
	0.1nm,0.3s,baz=297,slow=9.2,SNR=2.7						
H08S2	Diego Garcia H	34.51	268	T	T	23 21 56.9	
	baz=95						
H08S3	Diego Garcia H	34.52	268	T	T	23 22 05.3	
	baz=95						
H08S1	Diego Carcia H	34.53	268	T	T	23 22 01.9	
	baz=95						
STKA	Stephens Creek	39.59	131	P	P	22 45 42.0	+1.8
	1.7nm,0.6s,baz=320,slow=10,SNR=5.4						
SONM	Songino Array	55.80	359	P	P	22 47 44.9	-0.5
	0.4nm,0.3s,baz=170,slow=8.7,SNR=4.6						
MKAR	Makanchi Array	59.12	340	P	P	22 48 07.0	-1.7
	0.5nm,0.4s,baz=150,slow=8.5,SNR=14						
KURBB	Kurchatov Arra	63.69	340	P	P	22 48 38.1	-1.3
	0.3nm,0.3s,baz=145,slow=6.4,SNR=4.7						
ZALV	Zalesovo Beam	64.77	346	P	P	22 48 44.6	-1.8
	0.5nm,0.3s,baz=122,slow=6.6,SNR=3.8						
BVAR	Borovoye Array	68.60	337	P	P	22 49 09.9	-0.9
	1.3nm,0.5s,baz=144,slow=11,SNR=8.8						
KBZ	Khabaz	77.76	318	P	P	22 50 05.2	+0.1
	0.7nm,0.5s,baz=209,slow=4.4,SNR=3.0						
MMAI	Mount Meron Ar	79.57	306	P	P	22 50 14.7	-0.7
	0.8nm,0.6s,baz=88,slow=9.4,SNR=4.0						
BRTR	Keskin Array B	82.87	312	P	P	22 50 32.7	-0.2
	0.6nm,0.7s,baz=122,slow=6.0,SNR=5.4						
ARCES	ARCESS Array B	94.77	340	P	P	22 51 28.4	-0.6
	1.7nm,0.8s,baz=98,slow=5.5,SNR=3.1						
TXAR	Lajitas Array	144.09	50	PKP	PKPdf	22 57 43.3	-0.8
	0.3nm,0.5s,baz=183,slow=0.8,SNR=5.5						
TKL	Tuckaleechee C	150.84	19	PKPbc	PKPbc	22 57 59.8	-0.8
	3.0nm,0.8s,baz=170,slow=3.9,SNR=4.4						

IDC 26 22:52:06.3±1.9**, 10°.97N×86°.13W, h157^{km}**±25^{km}**, mb2.8**/2**, mb1 3.3**/3**, mb1mx2.9**/45**, mbtmp3.3**/3**, Error ellipse: s-maj=149.0km s-min=33.8km az=38.0, Off coast of Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTS	JuntasAbangare	1.34	120	P	Pn	22 52 35.7	+0.8
	29nm,0.3s,baz=31,slow=15,SNR=46						
JTS				S	Sn	22 52 56.6	-0.1
	221nm,0.3s,baz=205,slow=22,SNR=40						
CMIG	Matias Romero	10.45	307	P	Pn	22 54 31.6	-0.6
	0.4nm,0.3s,baz=113,slow=9.8,SNR=4.5						
TXAR	Lajitas Array	24.53	321	P	P	22 57 12.0	+0.5
	0.2nm,0.5s,baz=138,slow=9.5,SNR=4.3						
NVAR	Mina Array Bea	39.66	319	P	P	22 59 22.7	-0.5
	0.2nm,0.5s,baz=143,slow=3.3,SNR=4.0						
ASAR	Alice Springs	139.89	246	PKP	PKPdf	23 11 15.5	-1.2
	0.2nm,0.4s,baz=98,slow=1.8,SNR=3.0						
WRA	Warramunga Arr	140.07	252	PKP	PKPdf	23 11 16.3	-0.8
	0.4nm,0.5s,baz=90,slow=2.3,SNR=8.4						

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*IDC **26** 22:56:00.8±4.3, 45°.52N×150°.04E, h92^{km}±31^{km}, mb3.0/2, mb1 3.2/5, mb1mx3.0/69, mbtmp3.5/5, MS2.7/2, Ms1 2.7/2, ms1mx2.3/13, Error ellipse: s-maj=98.0km s-min=21.8km az=150.0*

*SKHL **26** 22:56:01.0±0.7, 45°.10N×150°.23E, h79^{km}±1^{km}, mb4.4/3*

*JMA **26** 22:56:03.9±0.7, 44°.73N×149°.99E, h102^{km}, M4.0*

ISC 26 22:55:54.5±1.2**, 44°.9N**±0°.1×**150°.65E**±0°.10**, h51^{km}, n34, σ3^{s}.36**/39**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.01	282	iP	Pn	22 56 27.0	+1.1
KUR				AMB	AMB	22 56 28.0	
	32nm,0.3s						
KUR				AMB	AMB	22 56 28.0	
	148nm,0.3s						
KUR				AMB	AMB	22 56 28.0	
	60nm,0.3s						
KUR				iS	Sn	22 56 47.0	-2.9
KUR				A	A	22 56 48.0	
	98nm,0.4s						
KUR				A	A	22 56 48.0	
	713nm,0.4s						
SHO	Shikotan	2.91	252	iP	Pn	22 56 43.0	+4.7
SHO				AMB	AMB	22 56 45.0	
	4.0nm,0.2s						
SHO				AMB	AMB	22 56 45.0	
	23nm,0.2s						
SHO				AMB	AMB	22 56 45.0	
	33nm,0.2s						
SHO				iS	Sn	22 57 14.0	+1.9
SHO				A	A	22 57 18.0	
	80nm,0.4s						
SHO				A	A	22 57 18.0	
	263nm,0.4s						
YUK	Yuzh-Kuril'sk	3.53	258	iP	Pn	22 56 51.0	+4.3
YUK				AMB	AMB	22 56 52.0	
	24nm,0.4s						
YUK				AMB	AMB	22 56 52.0	
	46nm,0.4s						
YUK				AMB	AMB	22 56 52.0	
	107nm,0.4s						
YUK				iS	Sn	22 57 27.3	+0.1
YUK				A	A	22 57 34.0	
	314nm,0.4s						
YUK				A	A	22 57 34.0	
	38nm,0.4s						
LAGR	Lagunnoye	3.58	259	iP	Pn	22 56 52.0	+4.6
LAGR				iS	Sn	22 57 29.0	+0.7
LAGR				A	A	22 57 40.0	
	49nm,0.4s						
LAGR				A	A	22 57 40.0	
	56nm,0.4s						
GRPR	Tuman	3.60	258	eP	Pn	22 56 52.0	+4.3
GRPR				iS	Sn	22 57 29.0	0.0
GRPR				A	A	22 57 31.0	
	28nm,0.3s						
GRPR				A	A	22 57 31.0	
	162nm,0.3s						
NEM2	Nemuro 2	3.84	249	P	Pn	22 56 54.8	+3.8
NEM2				eS	Sn	22 57 34.2	-0.6
GLVR	Golovnino	3.85	255	iP	Pn	22 56 55.0	+3.8
GLVR				iS	Sn	22 57 36.0	+0.9
GLVR				A	A	22 57 40.0	
	35nm,0.2s						
GLVR				A	A	22 57 40.0	
	150nm,0.2s						
JRA	Rausu	4.07	259	P	Pn	22 56 58.2	+4.1
JRA				eS	Sn	22 57 41.6	+1.1
JNK	Nakash	4.45	255	P	Pn	22 57 03.5	+4.1
JAK	Akkeshi	4.69	249	P	Pn	22 57 06.2	+3.6
JAK				eS	Sn	22 57 54.7	-1.0
JAR	Ashorobuto	5.20	255	P	Pn	22 57 13.7	+4.0
JOB	Onbets	5.30	251	P	Pn	22 57 14.9	+3.9
JCH	Churui	5.74	250	P	Pn	22 57 21.0	+4.0
JCH				eS	Sn	22 58 19.2	-2.3
ASAJ	Asahikawa	5.81	265	P	Pn	22 57 20.9	+2.9
	0.9nm,0.3s,baz=69,slow=14,SNR=5.7						
ASAJ				S	Sn	22 58 34.8	+12
	0.7nm,0.3s,baz=198,slow=20,SNR=2.7						
ASAJ	Asahikawa	5.81	265	P	Pn	22 57 22.2	+4.2
MYR	Moyori	5.94	247	eP	Pn	22 57 23.9	+4.2
MYR				eS	Sn	22 58 25.2	-1.2
JNBK	Urakawa-nobuka	6.29	249	P	Pn	22 57 27.3	+2.7
JKB	Kayabe	7.61	250	P	Pn	22 57 44.6	+1.9
JKB				eS	Sn	22 59 02.2	-5.3
JANG	Nango	8.09	240	P	Pn	22 57 51.7	+2.4
JANG				eS	Sn	22 59 14.5	-4.8
JTM	Tenmabayashi	8.13	243	eS	Sn	22 59 15.2	-5.2
JTH	Tanohata	8.15	236	eS	Sn	22 59 15.9	-4.9
JRG	Rokugo	9.23	237	eS	Sn	22 59 44.6	-2.6
PETK	Petropavlovsk-	9.46	27	P	Pn	22 58 08.1	+0.1
	baz=205,slow=15						
JHJ	Hachijo jima 2	14.43	219	LR	LR	23 03 31.2	
	comp=Z,14nm,21.8s,baz=166,slow=31						
KSRS	Korea Array	18.61	254	P	P	23 00 07.5	0.0
	0.1nm,0.3s,baz=45,slow=12,SNR=4.2						
H11N2	WAKE ISLAND Hy	28.46	146	T	T	23 33 25.9	
	baz=335,slow=76,SNR=48						
H11N1	WAKE ISLAND Hy	28.48	146	T	T	23 32 58.1	
	baz=335,slow=76,SNR=60						
H11N3	WAKE ISLAND Hy	28.48	146	T	T	23 33 08.9	
	baz=335,slow=76,SNR=73						
H11S1	WAKE ISLAND Hy	29.50	148	T	T	23 34 11.9	
	baz=336,slow=76,SNR=182						
H11S3	WAKE ISLAND Hy	29.50	148	T	T	23 34 33.8	
	baz=336,slow=76,SNR=91						
H11S2	WAKE ISLAND Hy	29.51	148	T	T	23 34 08.6	
	baz=336,slow=76,SNR=99						
ILAR	Eielson Array	39.10	37	P	P	23 03 16.7	+0.4
	0.4nm,0.7s,baz=264,slow=8.6,SNR=4.3						
ZALV	Zalesovo Beam	42.34	307	LR	LR	23 22 10.0	
	comp=Z,25nm,18.1s,baz=243,slow=38						
MKAR	Makanchi Array	46.29	298	P	P	23 04 11.5	-3.4
	0.3nm,0.6s,baz=75,slow=9.1,SNR=4.1						

MEX 26 23:00:56.8±0.6**, 17°.95N×101°.91W, h25^{km}**±44^{km}**, MD3.7, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.54	129	eP	Pb	23 01 06.5	-1.2
ZIIG				eS	Sb	23 01 12.6	-2.6
MMIG	Aquila	1.41	284	eP	Pn	23 01 18.3	-2.5
MMIG				eS	Sn	23 01 34.6	-4.0
ARIG	Puente Sto Nin	1.52	77	eP	Pn	23 01 19.9	-2.6
ARIG				eS	Sn	23 01 37.6	-4.0

IDC 26 23:09:43.1±2.0**, 6°.50S×129°.52E, h0^{km}, mb3.7**/1**, mb1 3.9**/4**, mb1mx3.5**/48**, mbtmp3.7**/4**, ML3.5**/3**, Error ellipse: s-maj=54.7km s-min=30.1km az=77.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	6.86	237	Pn	Pn	23 11 25.7	+0.7
	4.3nm,0.3s,baz=5.8,slow=4.7,SNR=3.8						
BATI				Sn	Sn	23 12 30.2	-14
	4.4nm,0.3s,baz=343,slow=18,SNR=5.8						
WRA	Warramunga Arr	14.15	161	Pn	Pn	23 13 04.7	-0.3
	0.1nm,0.3s,baz=342,slow=12,SNR=7.5						
WRA				Sn	Sn	23 15 27.8	-15
	0.5nm,0.3s,baz=336,slow=22,SNR=10						
ASAR	Alice Springs	17.58	167	P	Pn	23 13 49.4	-0.3
	0.1nm,0.3s,baz=339,slow=11,SNR=14						
ASAR				S	Sn	23 16 53.0	-13
	0.1nm,0.3s,baz=356,slow=28,SNR=4.1						
MKAR	Makanchi Array	67.55	327	P	P	23 20 41.3	0.0
	0.3nm,0.3s,baz=112,slow=9.5,SNR=8.8						

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*ISCJB **26** 23:26:06.6±2.6, 27°.1S±0°.1×177°.1W±0°.4, h90^{km}, mb3.8/3, Error ellipse: s-maj=52.7km s-min=15.0km az=1.3*

*IDC **26** 23:26:06.5±5.4, 27°.07S×176°.99W, h75^{km}±45^{km}, mb3.7/3, mb1 3.9/3, mb1mx3.4/42, mbtmp4.0/3, ML4.8/1, MS2.9/1, Ms1 2.9/1, ms1mx2.4/45, Error ellipse: s-maj=45.3km s-min=40.8km az=81.0*

ISC 26 23:26:08.2±1.7**, 27°.1S**±0°.1×**177°.0W**±0°.3**, h90^{km}, n8, σ0^{s}.54**/8**, mb3.9**/3**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	2.24	200	P	Pn	23 26 42.9	-0.6
	236nm,0.3s,baz=134,slow=19,SNR=12						
RAO				S	Sn	23 27 10.9	+0.4
	368nm,0.3s,baz=180,slow=23,SNR=15						
DZM	Mont Dzumac	15.84	285	LR	LR	23 33 34.1	
	comp=Z,42nm,19.9s,baz=27,slow=28						
ASAR	Alice Springs	44.23	263	P	P	23 34 08.9	+0.1
	0.8nm,0.6s,baz=101,slow=7.3,SNR=12						
WRA	Warramunga Arr	44.92	268	P	P	23 34 14.2	-0.1
	1.2nm,0.6s,baz=108,slow=7.6,SNR=4.7						
MAW	Mawson	75.64	200	P	P	23 37 43.6	+0.6
	1.4nm,0.5s,baz=139,slow=11,SNR=3.5						
HFS	Hagfors	146.21	350	PKPbc	PKPdf	23 45 36.5	+0.1
	0.5nm,0.4s,baz=45,slow=6.3,SNR=5.4						
AKASG	Malin Array Be	149.13	327	PKPbc	PKPbc	23 45 45.1	-0.6
	0.2nm,0.3s,baz=49,slow=4.6,SNR=2.5						
BRTR	Keskin Array B	151.63	304	PKPab	PKPab	23 46 01.6	+0.3
	0.6nm,0.8s,baz=99,slow=5.9,SNR=4.3						

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*IDC **26** 23:40:16.0±1.2, 3°.40N×126°.47E, h0^{km}, mb3.7/7, mb1 3.8/7, mb1mx3.6/56, mbtmp3.7/7, Error ellipse: s-maj=131.9km s-min=18.5km az=68.0*

ISC 26 23:40:22.6±1.5**, 3°.6N**±0°.4×**12°7E**±°**, h53^{km}, n7, σ0^{s}.54**/7**, mb3.7**/7**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	24.47	163	P	P	23 45 36.6	-0.2
	0.4nm,0.4s,baz=340,slow=11,SNR=13						
ASAR	Alice Springs	27.91	166	P	P	23 46 08.3	+0.3
	0.3nm,0.6s,baz=344,slow=11,SNR=3.8						
SONM	Songino Array	47.52	341	P	P	23 48 53.4	+0.7
	0.4nm,0.5s,baz=164,slow=8.2,SNR=3.1						
MKAR	Makanchi Array	57.83	325	P	P	23 50 08.8	0.0
	0.4nm,0.4s,baz=120,slow=7.5,SNR=10						
KURBB	Kurchatov Arra	62.01	327	P	P	23 50 37.4	0.0
	0.9nm,0.7s,baz=122,slow=6.8,SNR=6.9						
BVAR	Borovoye Array	67.59	327	P	P	23 51 13.5	-0.1
	0.5nm,0.6s,baz=125,slow=7.6,SNR=6.7						
ARCES	ARCESS Array B	90.67	340	P	P	23 53 18.5	-0.7
	1.8nm,0.9s,baz=71,slow=6.0,SNR=4.3						

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*IDC **26** 23:48:29.8±1.4, 15°.63S×175°.14W, h281^{km}±17^{km}, mb3.4/6, mb1 3.7/7, mb1mx3.3/48, mbtmp4.0/7, Error ellipse: s-maj=114.3km s-min=14.9km az=151.0*

ISC 26 23:48:31.4±1.7**, 15°.5S**±0°.8×**175°.1W**±0°.3**, h300^{km}, n8, σ1^{s}.42**/8**, mb3.6**/6**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	3.57	64	P	Pn	23 49 33.2	0.0
	4.5nm,0.3s,baz=209,slow=16,SNR=4.8						
AFI				S	S	23 50 20.6	-2.0
	28nm,0.3s,baz=124,slow=23,SNR=12						
WRA	Warramunga Arr	48.24	257	P	P	23 56 42.5	-0.5
	1.4nm,0.6s,baz=93,slow=6.7,SNR=21						
ASAR	Alice Springs	48.53	252	P	P	23 56 44.4	-0.8
	11nm,0.6s,baz=86,slow=8.1,SNR=111						
NVAR	Mina Array Bea	75.50	43	P	P	23 59 44.8	+1.3
	0.9nm,0.6s,baz=224,slow=7.6,SNR=5.7						
TXAR	Lajitas Array	82.02	57	P	P	00 00 20.0	+1.2
	0.2nm,0.5s,baz=224,slow=7.5,SNR=3.0						
ILAR	Eielson Array	82.86	12	P	P	00 00 23.6	+1.4
	0.3nm,0.5s,baz=230,slow=5.5,SNR=4.5						
PDAR	Pinedale Array	83.43	42	P	P	00 00 26.8	+0.8
	0.8nm,0.6s,baz=203,slow=4.0,SNR=7.3						
GERES	GERESS Array B	145.97	350	PKPbc	PKPab	00 07 36.0	-1.2
	0.1nm,0.4s,baz=15,slow=4.1,SNR=2.8						

DJA **26** *23:58:21.3±1.1, 4°S±6°×15°3E±°, h79^{km}±12^{km}, M5.2/12, mb5.2/12, mB5.6/5, Mw(mB)5.1/5*
MOS **26** *23:58:36.3±0.9, 4°.16S×152°.22E, h174^{km}, mb4.9/30, Error ellipse: s-maj=9.6km s-min=7.0km az=93.0*
ISCJB **26** *23:58:36.7±0.6, 4°.26S±0°.03×152°.23E±0°.03, h179^{km}±5^{km}, mb4.8/157, Error ellipse: s-maj=5.1km s-min=4.3km az=17.3*
NEIC **26** *23:58:37.8±0.5, 4°.23S×152°.23E, h178^{km}±4^{km}, mb4.9/125, Error ellipse: s-maj=4.3km s-min=3.5km az=92.0*
IDC **26** *23:58:37.8±0.6, 4°.26S×152°.23E, h180^{km}±4^{km}, mb4.3/26, mb1 4.5/28, mb1mx4.3/50, mbtmp4.8/28, MS3.5/2, Ms1 3.5/2, ms1mx2.7/51, Error ellipse: s-maj=11.2km s-min=6.9km az=97.0*
BJI **26** *23:58:38.7, 3°.62S×152°.34E, h174^{km}, mb4.7/30, mB4.9/18*
ISC 26 23:58:37.7±0.5, **4°.28S**±0°.04×**152°.31E**±0°.05, **h179**^{km}±3^{km}, **h179**^{km}**:pP-P, n495, σ0^{s}.83**/516, **mb4.8**/148, **21C-6D, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	Rabaul	0.16	300	ePn	Pn	23 58 59.9	-1.5
MANU	Manus Island	5.41	294	ePn	Pn	23 59 56.2	-0.8
PMG	Port Moresby	7.22	225	P	Pn	00 00 20.0	-0.7
	14nm,0.3s,baz=40,slow=6.0,SNR=15						
PMG				S	Sn	00 01 41.4	-0.8
	33nm,0.3s,baz=174,slow=19,SNR=6.3						
PMG				LR	LR	00 02 42.5	
	comp=Z,212nm,18.6s,baz=210,slow=34						
HNR	Honiara	9.15	124	eP	Pn	00 00 46.0	-0.2
HNR	Honiara	9.15	124	ePn	Pn	00 00 46.9	+0.7
HNR	Honiara	9.15	124	eP	Pn	00 00 46.9	+0.7
JAY	Jayapura	11.71	278	P	Pn	00 01 18.8	-0.8
	10µm938nm,1.3s						
JAY				S	P	00 01 27.0	+1.4
	10µm938nm,1.3s						
JAY	Jayapura	11.71	278	P	Pn	00 01 19.5	-0.1
JAY				pmax	pmax		
	comp=Z,59nm,1.3s						
GENI	Genyem	12.23	277	P	Pn	00 01 26.2	0.0
	comp=Z,3µmcomp=Z,175nm,0.7s						
COEN	Coen	13.18	223	P	Pn	00 01 38.7	+0.4
	baz=13,SNR=35						
COEN	Coen	13.18	223	ePn	Pn	00 01 39.7	+1.4
MTSU	Mount Surprise	15.84	209	P	P	00 02 12.0	+0.6
	baz=16,SNR=10.0						
CTAO	Charters Tower	16.79	200	eP	Pn	00 02 23.8	+1.2
	comp=Z,11nm,0.8s						
CTAO	Charters Tower	16.79	200	eP	Pn	00 02 23.8	+1.2
CTAO				pmax	pmax		
	comp=Z,11nm,0.8s						
RKPI	Ransiki, Papua	18.31	278	P	Pn	00 02 39.5	-1.2
	comp=Z,176nm,1.2s						
GUMO	Guam	19.22	338	P	P	00 02 49.5	+1.1
	comp=Z,4.2nm,0.3s,baz=178,slow=14,SNR=4.2						
GUMO	Guam	19.22	338	eP	P	00 02 48.1	-0.3
	comp=Z,165nm,1.2s						
GUMO	Guam	19.22	338	eP	P	00 02 48.1	-0.3
GUMO				pmax	pmax		
	comp=Z,165nm,1.2s						
FAKI	Fak Fak	20.06	273	P	P	00 02 56.8	-0.6
	comp=Z,105nm,0.9s						
FAKI	Fak Fak	20.06	273	eP	P	00 02 56.9	-0.6
	comp=Z,76nm,0.7s						
QIS	Mount Isa	20.36	216	P	P	00 03 00.8	+0.2
	baz=20,SNR=9.8						
EIDS	Eidsvold	21.01	183	P	P	00 03 07.4	0.0
	baz=21,SNR=6.6						
EIDS	Eidsvold	21.01	183	eP	P	00 03 08.0	+0.7
	comp=Z,25nm,1.0s						
SWI	Sorong	21.29	279	P	P	00 03 10.8	+0.2
	comp=Z,78nm,0.7s						
KDU	Kakadu	21.31	246	P	P	00 03 09.8	-0.9
	baz=21,SNR=22						
DZM	Mont Dzumac	22.38	143	P	P	00 03 22.3	+0.9
	comp=Z,90nm,0.7s,baz=319,slow=6.3,SNR=88						
DZM	Mont Dzumac	22.38	143	eP	P	00 03 22.1	+0.7
	comp=Z,82nm,0.7s						
MTN	Manton Dam	22.58	247	P	P	00 03 23.5	+0.1
	baz=23,SNR=7.2						
MTN	Manton Dam	22.58	247	eP	P	00 03 22.6	-0.7
	comp=Z,70nm,1.3s						
MTN				eS	S	00 07 20.8	+3.4
WRAB	Tennant Creek	23.42	227	eP	P	00 03 31.4	+0.6
	comp=Z,93nm,0.6s						
WRAB	Tennant Creek	23.42	227	ceP	P	00 03 31.0	+0.1
WRAB				pmax	pmax		
	comp=Z,71nm,0.6s						
WB2	Warramunga Arr	23.42	227	eP	P	00 03 31.3	+0.4
WRA	Warramunga Arr	23.43	227	P	P	00 03 31.2	+0.2
	comp=Z,89nm,0.7s,baz=51,slow=9.8,SNR=240						
WRA				PcP	PcP	00 07 12.5	+0.3
	comp=Z,0.9nm,0.5s,baz=43,slow=2.3,SNR=4.6						
WRA				S	S	00 07 29.8	-1.3
	comp=Z,28nm,1.0s,baz=44,slow=16,SNR=7.5						
QLP	Quilpie	23.49	198	P	P	00 03 31.7	+0.3
	baz=24,SNR=22						
KNRA	Kununurra	25.77	242	P	P	00 03 51.8	-0.4
	baz=26,SNR=27						
ARMA	Armidale	26.01	181	P	P	00 03 54.7	+0.3
	baz=26,SNR=12						
ARMA	Armidale	26.01	181	eP	P	00 03 55.6	+1.2
	comp=Z,20nm,0.6s						
AS01	Alice Springs	26.18	221	eP	P	00 03 55.5	-0.4
AS31	Alice Springs	26.21	221	eP	P	00 03 56.0	-0.2
	comp=Z,11nm,0.7s						
ASAR	Alice Springs	26.21	221	P	P	00 03 56.0	-0.2
	comp=Z,5.4nm,0.4s,baz=56,slow=8.7,SNR=60						
ASAR				pP	pP	00 04 31.6	-1.1
	comp=Z,37nm,0.8s,baz=55,slow=9.2,SNR=17						
ASAR				PcP	PcP	00 07 18.6	+0.3
	comp=Z,3.1nm,0.7s,baz=43,slow=2.4,SNR=5.4						
ASAR				S	S	00 08 13.5	-1.7
	comp=Z,4.2nm,0.8s,baz=44,slow=14,SNR=6.7						
SANI	Sanana	26.37	274	P	P	00 03 59.4	+1.7
CMSA	Cobar Meteorol	27.82	192	P	P	00 04 10.5	+0.1
	baz=28,SNR=6.0						
LHI	Lord Howe Isla	27.84	168	eP	P	00 04 11.4	+0.9
	comp=Z,142nm,1.3s						
STKA	Stephens Creek	29.24	199	P	P	00 04 22.6	-0.3
	comp=Z,4.9nm,0.6s,baz=11,slow=8.9,SNR=8.7						
STKA				pP	pP	00 05 00.0	+0.1
	comp=Z,4.5nm,0.7s,baz=19,slow=5.4,SNR=3.1						
STKA	Stephens Creek	29.24	199	P	P	00 04 22.7	-0.3
	baz=29,SNR=7.9						
STKA	Stephens Creek	29.24	199	eP	P	00 04 22.9	-0.1
	comp=Z,6.0nm,1.7s						
STKA				pP	pP	00 05 00.0	+0.1
STKA	Stephens Creek	29.24	199	eP	P	00 04 22.9	-0.1
STKA				*PP	pP	00 05 00.0	+0.1
STKA				pmax	pmax		
	comp=Z,6.0nm,1.7s						
WRKA	Warakurna	30.96	226	P	P	00 04 37.5	-0.8
	baz=31,SNR=83						
CNB	Canberra Magne	31.01	185	P	P	00 04 39.8	+1.3
	baz=31,SNR=6.3						
HTT	Hallett	31.58	202	P	P	00 04 43.6	0.0
	baz=32,SNR=9.8						
BBOO	Buckleboo	32.20	206	P	P	00 04 48.4	-0.5
	baz=32,SNR=13						
FORT	Forrest	34.89	218	P	P	00 05 11.8	-0.4
	baz=35,SNR=24						
FORT	Forrest	34.89	218	eP	P	00 05 12.0	-0.2
	comp=Z,35nm,0.7s						
MBWA	Marble Bar	35.81	239	eP	P	00 05 20.0	-0.3
	comp=Z,64nm,1.4s						
JOW	Kunigami	38.68	324	eP	P	00 05 44.0	-0.3
	comp=Z,31nm,1.0s						
TAU	Tasmania Unive	38.73	186	eP	P	00 05 45.2	+0.8
	comp=Z,94nm,1.6s						
TAU	Tasmania Unive	38.73	186	eP	P	00 05 45.2	+0.8
TAU				pmax	pmax		
	comp=Z,94nm,1.6s						
MEEK	Meekatharra	39.13	232	P	P	00 05 47.5	-0.6
	baz=39,SNR=66						
KMBL	Kambalda	39.29	223	P	P	00 05 48.4	-0.9
	baz=39,SNR=6.6						
URZ	Urewera	40.69	150	P	P	00 06 01.6	+0.9
	comp=Z,12nm,0.6s,baz=311,slow=2.9,SNR=11						
URZ				PcP	PcP	00 07 57.3	-1.5
	comp=Z,15nm,0.7s,baz=344,slow=3.6,SNR=6.4						
URZ	Urewera	40.69	150	eP	P	00 06 02.1	+1.4
	comp=Z,53nm,1.5s						
URZ				PcP	PcP	00 07 57.3	-1.5
MXZ	Matakaoa Point	40.78	148	eP	P	00 06 02.2	+0.7
	comp=Z,339nm,2.0s						
YULB	Yu-li	40.88	314	eP	P	00 06 02.3	-0.2
	comp=Z,32nm,1.6s						
BKZ	Black Stump Fm	41.08	151	eP	P	00 06 04.6	+0.6
	comp=Z,52nm,1.6s						
NACB	Ninganchiao	41.16	315	eP	P	00 06 05.3	+0.6
	comp=Z,18nm,0.9s						
THZ	Tophouse	41.62	157	eP	P	00 06 08.6	+0.2
	comp=Z,23nm,1.0s						
FOZ	Fox Glacier	42.05	161	eP	P	00 06 12.4	+0.6
	comp=Z,58nm,1.4s						
LTZ	Lake Taylor	42.25	158	eP	P	00 06 13.7	+0.2
	comp=Z,99nm,1.9s						
MORW	Morawa	42.30	230	P	P	00 06 14.7	+0.8
	baz=42,SNR=5.7						
KLBR	Kellerberrin	42.31	226	P	P	00 06 12.7	-1.3
	baz=42,SNR=13						
JNU	Nakatsue	42.37	333	P	P	00 06 14.3	-0.2
	comp=Z,39nm,0.8s,baz=128,slow=2.0,SNR=30						
JNU	Nakatsue	42.37	333	eP	P	00 06 14.4	-0.1
	comp=Z,45nm,0.8s						
KHZ	Kahutara	42.43	157	eP	P	00 06 15.6	+0.8
	comp=Z,61nm,1.5s						
BLDU	Ballidu	42.56	228	P	P	00 06 15.0	-1.0
	baz=43,SNR=7.8						
RPZ	Rata Peaks	42.63	160	eP	P	00 06 16.1	-0.4
	comp=Z,25nm,0.7s						
OXZ	Oxford	42.64	159	eP	P	00 06 17.1	+0.6
	comp=Z,86nm,1.8s						
MJAR	Matsushiro Arr	42.69	343	P	P	00 06 14.8	-2.2
	comp=Z,2.7nm,0.9s,baz=170,slow=9.6,SNR=6.3						
MJAR				PcP	PcP	00 08 05.3	-0.2
	comp=Z,2.8nm,0.6s,baz=178,slow=3.7,SNR=5.8						
LBZ	Lake Benmore	42.94	161	eP	P	00 06 20.5	+1.6
	comp=Z,83nm,1.9s						
WKZ	Wanaka	42.97	163	eP	P	00 06 20.3	+1.1
	comp=Z,137nm,1.8s						
DCZ	Deep Cove	43.03	165	eP	P	00 06 19.8	+0.2
	comp=Z,34nm,1.4s						
MLZ	Mavora Lakes	43.20	164	eP	P	00 06 20.5	-0.5
	comp=Z,29nm,0.9s						
RKGY	Rocky Gully	44.52	223	P	P	00 06 31.7	0.0
	baz=45,SNR=10.0						
TJN	Taejon	46.68	332	ceP	P	00 06 48.4	-0.1
KSRS	Korea Array	47.31	333	P	P	00 06 53.2	-0.1
	comp=Z,3.9nm,0.7s,baz=149,slow=8.2,SNR=18						
KSRS				pP	pP	00 07 33.5	+0.6
	comp=Z,0.7nm,0.4s,baz=156,slow=9.6,SNR=2.0						
KSAR	Wonju Array Be	47.32	333	P	P	00 06 53.2	-0.2
KSAR				pP	pP	00 07 33.5	+0.5
KSAR	Wonju Array Be	47.32	333	P	P	00 06 53.3	-0.2
KSAR				*PP	pP	00 07 33.5	+0.5
KS01	Wonju Array Si	47.34	333	eP	P	00 06 52.8	-0.9
NJ2	Nanjing	48.13	321	eP	P	00 07 00.5	+0.7
NJ2				pmax	pmax		
	comp=Z,16nm,0.5s						
ASAJ	Asahikawa	48.96	351	P	P	00 07 05.4	-0.5
	comp=Z,9.6nm,0.7s,baz=206,slow=8.1,SNR=9.5						
ASAJ	Asahikawa	48.96	351	eP	P	00 07 05.6	-0.3
	comp=Z,18nm,1.0s						
KUR	Kuril'sk	49.45	356	eP	P	00 07 09.6	+0.1
MSHR	Mys Shultsa	50.43	340	i P	P	00 07 16.0	-1.0
USRK	Ussuriysk Ar.	51.59	341	P	P	00 07 25.4	-0.2
	comp=Z,6.0nm,0.8s,baz=189,slow=7.4						
YSS	Yuzh-Sakhalins	51.70	352	i P	P	00 07 25.3	-1.1
YSS				pmax	pmax		
	comp=Z,10.0nm,1.1s						
KULM	Kulim	52.46	280	eP	P	00 07 31.9	-0.8
	comp=Z,20nm,1.3s						
GYA	Guiyang	53.69	307	eP	P	00 07 43.0	+1.5
GYA				pP	pP	00 08 22.5	+0.5
GYA				PP	PP	00 09 47.3	+2.9
GYA				S	S	00 15 02.0	+0.1
GYA				sS	sS	00 16 11.8	-0.6
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
XAN	Xi'an	55.90	316	P	P	00 07 57.0	-0.3
XAN				pmax	pmax		
	comp=Z,8.0nm,0.6s						
KLR	Kul'dur	56.21	344	P	P	00 07 58.5	-0.5
	comp=Z,0.4nm,0.7s,baz=166,slow=5.0,SNR=22						
SUKH	Sukhothai	56.29	294	P	P	00 08 02.1	+1.9
	comp=Z,3.9nm,0.8s						
PUH	Pauahi	56.70	64	eP	P	00 08 03.7	+0.5
	comp=Z,111nm,1.2s						
CM01	Chiang Mai Arr	57.18	295	eP	P	00 08 07.5	+1.0
CM01				epP	pP	00 08 46.6	-0.9
CMAR	Chiang Mai Arr	57.21	295	P	P	00 08 07.5	+0.8
	comp=Z,4.0nm,0.7s,baz=115,slow=5.4,SNR=14						
CMAR				pP	pP	00 08 48.2	+0.6
	comp=Z,7.8nm,1.1s,baz=112,slow=5.9,SNR=4.9						
CMAR	Chiang Mai Arr	57.21	295	ceP	P	00 08 08.0	+1.3
CMAR				pmax	pmax		
	comp=Z,5.0nm,0.7s						
PETK	Petropavlovsk-	57.35	4	P	P	00 08 06.5	-0.5
	comp=Z,2.4nm,0.5s,baz=136,slow=6.8						
CD2	Chengdu	58.02	311	eP	P	00 08 12.0	-0.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.0s						
HHC	Hu-ho-hao-te	58.34	324	eP	P	00 08 16.3	+2.0
HHC				S	S	00 16 05.5	+2.7
HHC				sS	sS	00 17 12.0	-2.4
HHC				SS	SS	00 19 56.0	-2.1
HHC				pmax	pmax		
	comp=Z,10.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,100nm,5.8s						
LZH	Lanzhou	60.51	316	⇑P	P	00 08 29.5	+0.2
LZH				pP	pP	00 09 09.8	-1.0
LZH				sP	sP	00 09 28.0	-2.2
LZH				PP	PP	00 10 47.5	+2.5
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				pmax	pmax		
	comp=Z,93nm,8.2s						
MA2	Magadan	63.66	359	⇑eP	P	00 08 49.9	+0.3
MA2				pmax	pmax		
	comp=Z,11nm,1.3s						
SONM	Songino Array	65.62	328	P	P	00 09 03.0	+0.2
	comp=Z,1.9nm,0.9s,baz=136,slow=6.2,SNR=9.0						
SONM				pP	pP	00 09 45.7	+0.9
	comp=Z,2.2nm,0.8s,baz=142,slow=5.4,SNR=4.6						
SONA1	Songino Array	65.62	328	eP	P	00 09 02.9	+0.1
SONA1				epP	pP	00 09 45.4	+0.5
SEY	Seymchan	67.02	0	i P	P	00 09 09.8	-1.3
YAK	Yakutsk	68.37	349	i P	P	00 09 20.5	+1.0
YAK				pmax	pmax		
	comp=Z,10.0nm,0.4s						
ZAK	Zakamensk	68.79	329	eP	P	00 09 16.1	-6.5
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TLY	Talaya	69.38	330	eP	P	00 09 25.8	-0.3
TLY				pmax	pmax		
	comp=Z,4.0nm,1.2s						
VNDA	Vanda	73.37	178	P	P	00 09 50.0	+0.4
	comp=Z,5.0nm,0.5s,baz=331,slow=6.9,SNR=56						
VNDA	Vanda	73.37	178	eP	P	00 09 49.9	+0.4
	comp=Z,7.1nm,0.6s						
VNDA	Vanda	73.37	178	eP	P	00 09 49.9	+0.4
VNDA				pmax	pmax		
	comp=Z,7.0nm,0.6s						
SBA	Scott Base	73.92	177	eP	P	00 09 54.2	+1.5
	comp=Z,13nm,1.2s						
SBA	Scott Base	73.92	177	eP	P	00 09 54.2	+1.5
SBA				pmax	pmax		
	comp=Z,13nm,1.2s						
MIR	Mirnyy	74.24	201	eP	P	00 09 53.0	-1.7
SII	Sitkinak Islan	74.53	28	eP	P	00 09 56.7	0.0
	comp=Z,31nm,0.8s						
WMQ	Urumqi	75.02	317	P	P	00 10 01.0	+1.2
WMQ				pP	pP	00 10 46.0	+3.1
WMQ				pmax	pmax		
	comp=Z,19nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,140nm,4.5s						
WMQ				LR	LR		
	comp=Z,500nm,28.7s						
WMQ				LR	LR		
	comp=Z,55nm,25.5s						
WMQ				LR	LR		
	comp=Z,63nm,19.3s						
KDAK	Kodiak Island	75.93	27	eP	P	00 10 04.4	-0.1
	comp=Z,8.8nm,0.8s						
KDAK	Kodiak Island	75.93	27	eP	P	00 10 04.4	-0.1
KDAK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
SVW2	Sparrevohn	76.54	23	eP	P	00 10 08.7	+0.8
	comp=Z,8.9nm,1.0s						
TIXI	Tiksi	77.31	353	i P	P	00 10 12.9	+0.9
TIXI				pmax	pmax		
	comp=Z,11nm,1.0s						
CNPM	China Poot	77.46	26	eP	P	00 10 12.9	-0.2
	comp=Z,50nm,0.8s						
RDOG	Red Dog Mine	78.61	16	eP	P	00 10 20.0	+0.7
	comp=Z,23nm,0.7s						
RC01	Rabbit Creek A	78.91	25	eP	P	00 10 20.8	-0.2
	comp=Z,34nm,1.1s						
MK01	Makanchi Array	79.59	319	eP	P	00 10 25.0	-0.1
MK31	Makanchi Array	79.61	319	eP	P	00 10 24.9	-0.3
MK31	Makanchi Array	79.61	319	eP	P	00 10 24.9	-0.3
MKAR	Makanchi Array	79.61	319	P	P	00 10 25.1	-0.1
	comp=Z,4.3nm,0.9s,baz=101,slow=6.7,SNR=21						
MKAR	Makanchi Array	79.61	319	eP	P	00 10 24.9	-0.3
	comp=Z,34nm,1.0s						
MKAR	Makanchi Array	79.61	319	eP	P	00 10 24.9	-0.3
MKAR				pmax	pmax		
	comp=Z,35nm,1.0s						
MAKZ	Makanchi	79.82	319	eP	P	00 10 26.6	+0.3
	comp=Z,8.0nm,0.8s						
MAKZ	Makanchi	79.82	319	eP	P	00 10 26.6	+0.3
MAKZ				pmax	pmax		
	comp=Z,8.0nm,0.8s						
GLI	Glacier Island	79.93	26	eP	P	00 10 26.5	0.0
	comp=Z,27nm,0.8s						
FID	Port Fidalgo	80.13	26	eP	P	00 10 27.5	-0.2
	comp=Z,22nm,0.9s						
SCM	Sheep Creek Mo	80.28	25	eP	P	00 10 28.6	+0.1
	comp=Z,22nm,1.0s						
EYAK	Cordova Ski Ar	80.36	26	eP	P	00 10 28.9	+0.1
	comp=Z,21nm,1.3s						
ZALV	Zalesovo Beam	80.44	326	P	P	00 10 28.6	-0.9
	comp=Z,1.7nm,0.4s,baz=118,slow=6.8,SNR=8.6						
ZALV				pP	pP	00 11 12.2	-0.9
	comp=Z,3.1nm,0.8s,baz=104,slow=6.3,SNR=4.2						
PDGK	Podgornoye	80.54	315	P	P	00 10 30.4	0.0
PDGK				pmax	pmax		
	comp=Z,7.0nm,0.8s						
DIV	Divide	80.61	26	eP	P	00 10 30.5	+0.2
	comp=Z,16nm,0.8s						
KLU	Klutina	80.72	25	eP	P	00 10 31.3	+0.4
	comp=Z,27nm,1.0s						
RAGM	Ragged Mountai	80.77	27	eP	P	00 10 31.5	+0.4
	comp=Z,28nm,1.2s						
BMRM	Bremner River	81.05	26	eP	P	00 10 32.7	+0.1
	comp=Z,28nm,1.2s						
HARP	HAARP	81.45	25	eP	P	00 10 35.3	+0.7
	comp=Z,15nm,0.8s						
NVS	Novosibirsk	81.62	327	eP	P	00 10 35.1	-0.5
ILAR	Eielson Array	81.86	22	P	P	00 10 34.9	-1.8
	comp=Z,9.7nm,0.9s,baz=253,slow=5.4,SNR=51						
COLD	Coldfoot	81.93	19	eP	P	00 10 37.5	+0.5
	comp=Z,8.3nm,1.0s						
KSH	Kashi	82.22	311	eP	P	00 10 41.5	+2.2
KSH				epP	pP	00 11 23.5	+0.3
KSH				sP	sP	00 11 42.8	+0.8
KSH				PP	PP	00 13 53.8	+3.4
KSH				S	S	00 20 38.0	-1.9
KSH				SS	SS	00 26 07.0	+2.8
KSH				pmax	pmax		
	comp=Z,10.0nm,1.3s						
KSH				pmax	pmax		
	comp=Z,53nm,5.3s						
SCRK	Sand Creek	82.62	24	eP	P	00 10 40.7	-0.2
	comp=Z,11nm,0.9s						
KURK	Kurchatov	83.05	322	eP	P	00 10 42.9	-0.3
	comp=Z,14nm,1.4s						
KURK				epP	pP	00 11 27.0	-0.1
KURK	Kurchatov	83.05	322	ceP	P	00 10 42.5	-0.6
KURK				pmax	pmax		
	comp=Z,12nm,1.3s						
KURBB	Kurchatov Arra	83.08	322	P	P	00 10 42.7	-0.6
	comp=Z,3.3nm,1.0s,baz=105,slow=4.6,SNR=16						
KURBB				pP	pP	00 11 26.8	-0.5
	comp=Z,1.8nm,1.0s,baz=104,slow=4.8,SNR=3.2						
NIL	Nilore	83.27	304	eP	P	00 10 44.8	+0.1
	comp=Z,9.3nm,0.8s						
NIL	Nilore	83.27	304	eP	P	00 10 44.8	+0.1
NIL				pmax	pmax		
	comp=Z,9.0nm,0.8s						
FYU	Fort Yukon	83.31	21	eP	P	00 10 44.6	+0.6
	comp=Z,17nm,1.0s						
AAK	Ala-Archa	83.95	314	P	P	00 10 48.8	+0.6
	comp=Z,4.7nm,0.5s,baz=132,slow=3.2,SNR=7.7						
AAK	Ala-Archa	83.95	314	eP	P	00 10 48.9	+0.7
	comp=Z,6.1nm,0.6s						
AAK	Ala-Archa	83.95	314	c iP	P	00 10 48.4	+0.3
AAK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
EGAK	Eagle	84.07	23	eP	P	00 10 48.3	+0.3
	comp=Z,17nm,0.9s						
SIT	Sitka	84.09	32	eP	P	00 10 49.0	+0.8
	comp=Z,13nm,0.9s						
SIT	Sitka	84.09	32	eP	P	00 10 49.0	+0.8
SIT				pmax	pmax		
	comp=Z,13nm,0.9s						
DAWY	Dawson	84.51	24	eP	P	00 10 51.0	+0.6
	comp=Z,27nm,1.5s						
BESE	Bessie Mountai	84.78	30	eP	P	00 10 52.6	+0.8
	comp=Z,25nm,1.1s						
WHY	Whitehorse	85.37	28	eP	P	00 10 55.4	+0.6
	comp=Z,12nm,1.0s						
QSPA	South Pole Qui	85.68	180	P	P	00 10 56.2	-0.1
	comp=Z,28nm,0.8s,baz=353,slow=0.8,SNR=75						
QSPA	South Pole Qui	85.68	180	eP	P	00 10 56.1	-0.1
	comp=Z,109nm,0.8s						
DLBC	Dease Lake	87.19	31	eP	P	00 11 03.6	0.0
	comp=Z,28nm,1.0s						
INK	Inuvik	88.14	21	eP	P	00 11 07.3	-0.5
	comp=Z,10nm,1.0s						
INK	Inuvik	88.14	21	eP	P	00 11 07.3	-0.5
INK				pmax	pmax		
	comp=Z,10.0nm,1.0s						
L02D	Cave Junction,	88.46	48	P	P	00 11 10.0	0.0
	baz=263						
BVAR	Borovoye Array	88.53	323	P	P	00 11 08.8	-1.2
	comp=Z,6.9nm,0.8s,baz=104,slow=6.3,SNR=40						
BVAR				pP	pP	00 11 52.5	-2.0
	comp=Z,1.9nm,0.8s,baz=108,slow=7.7,SNR=2.9						
BRVK	Borovoye	88.60	323	eP	P	00 11 08.9	-1.5
	comp=Z,17nm,0.9s						
BRVK	Borovoye	88.60	323	ceP	P	00 11 08.8	-1.5
BRVK				pmax	pmax		
	comp=Z,10.0nm,1.1s						
I03D	Drain, OR	88.84	46	P	P	00 11 11.8	+0.2
	baz=263						
M02C	Callahan	88.93	49	P	P	00 11 12.6	+0.4
	baz=264,SNR=8.7						
NLWA	Neilton Lookou	88.94	43	eP	P	00 11 12.7	+0.5
	comp=Z,16nm,1.3s						
HUMO	Hull Mountain	88.99	47	eP	P	00 11 13.2	+0.7
	comp=Z,14nm,0.9s						
N02D	Trinity Center	88.99	49	P	P	00 11 12.8	+0.2
	baz=264,SNR=5.1						
E03A	Lebam	89.04	43	eP	P	00 11 13.1	+0.6
	comp=Z,19nm,0.8s						
YBH	Yreka Blue Hor	89.07	48	P	P	00 11 13.5	+0.5
	comp=Z,14nm,1.2s,baz=173,slow=4.2,SNR=10						
YBH	Yreka Blue Hor	89.07	48	eP	P	00 11 13.3	+0.3
	comp=Z,22nm,1.4s						
YBH	Yreka Blue Hor	89.07	48	eP	P	00 11 13.3	+0.3
YBH				pmax	pmax		
	comp=Z,22nm,1.4s						
G03D	McMinnville, O	89.08	45	P	P	00 11 13.6	+0.8
	baz=263						
I04A	Tendick Farm,	89.52	46	P	P	00 11 14.7	-0.3
	baz=264						
O03D	Paynes Creek	89.60	50	P	P	00 11 15.2	-0.3
	baz=264						
J04D	Umpqua Nationa	89.68	47	P	P	00 11 15.9	0.0
	baz=264						
M04C	Macdoel	89.73	48	P	P	00 11 16.0	-0.1
	baz=264,SNR=7.9						
A04D	Lummi Island	89.87	41	P	P	00 11 16.9	+0.6
	baz=264						
K04D	Chiloquin, OR	89.88	47	P	P	00 11 17.2	+0.4
	baz=264						
AFDM	Forest Hills D	90.11	51	eP	P	00 11 18.0	+0.2
	comp=Z,4.7nm,0.9s						
B05A	Bryant	90.23	42	P	P	00 11 18.8	+0.8
	baz=264						
J05D	Fort Rock, OR	90.32	47	P	P	00 11 19.2	+0.3

	baz=264						
CMB	Columbia Colle	90.48	52	*e*P	P	00 11 20.4	+0.9
	comp=Z,16nm,1.7s						
CMB	Columbia Colle	90.48	52	*e*P	P	00 11 20.4	+0.9
CMB				pmax	pmax		
	comp=Z,16nm,1.7s						
K05A	Summer Lake	90.52	47	*e*P	P	00 11 20.5	+0.7
	comp=Z,21nm,0.9s						
PINE	Pine Mountain	90.58	46	*e*P	P	00 11 20.4	+0.3
	comp=Z,18nm,0.9s						
LLLB	Lillooet	90.61	39	*e*P	P	00 11 20.1	+0.2
	comp=Z,6.5nm,0.9s						
BEKR	Beckworth	90.66	50	*e*P	P	00 11 20.1	-0.5
	comp=Z,27nm,1.8s						
PKM	Mcpherson Peak	90.68	55	P	P	00 11 21.0	+0.3
	baz=265						
MOD	Modoc Plateau	90.88	48	*e*P	P	00 11 21.8	+0.3
	comp=Z,16nm,1.0s						
PNTR	Pine Nut	91.19	51	*e*P	P	00 11 24.3	+1.3
	comp=Z,12nm,1.1s						
BLG	Laguna Peak, P	91.23	56	P	P	00 11 23.1	0.0
	baz=266						
WAKR	Walker	91.27	52	*e*P	P	00 11 24.2	+0.9
	comp=Z,5.0nm,0.9s						
PAHR	Pah Rah Range	91.40	50	*e*P	P	00 11 24.3	+0.4
	comp=Z,8.7nm,1.2s						
YERR	Yerington	91.46	51	*e*P	P	00 11 24.8	+0.5
	comp=Z,7.1nm,1.1s						
MDPB	Devils Postpil	91.48	53	*e*P	P	00 11 25.2	+0.7
	comp=Z,32nm,1.5s						
OMMB	Old Mammoth Mi	91.54	53	*e*P	P	00 11 25.8	+1.0
	comp=Z,6.6nm,1.1s						
CIS	Catalina Islan	91.72	57	P	P	00 11 25.5	+0.1
	baz=266						
ISA	Isabella, Lake	91.83	55	P	P	00 11 25.9	0.0
	baz=266						
RYN	Ryan	91.99	52	*e*P	P	00 11 27.2	+0.5
	comp=Z,8.2nm,1.1s						
B08A	Colville Reser	92.07	42	*e*P	P	00 11 26.4	-0.2
	comp=Z,4.9nm,0.7s						
MWC	Mount Wilson	92.08	56	*e*P	P	00 11 27.9	+0.7
	comp=Z,21nm,1.0s						
MWC	Mount Wilson	92.08	56	*e*P	P	00 11 27.9	+0.7
MWC				pmax	pmax		
	comp=Z,21nm,1.0s						
G08A	Pilot Rock	92.11	45	*e*P	P	00 11 27.2	+0.2
	comp=Z,8.8nm,1.1s						
NV01	Mina Array Sit	92.15	52	*e*P	P	00 11 27.4	0.0
NVAR	Mina Array Bea	92.15	52	P	P	00 11 28.0	+0.5
	comp=Z,6.1nm,0.8s,baz=255,slow=5.9,SNR=35						
EDW2	Edwards Air Fo	92.17	55	P	P	00 11 27.8	+0.3
	baz=266						
CWC	Cottonwood Cre	92.20	54	P	P	00 11 27.8	+0.1
	baz=266						
NV11	Mina Array Sit	92.27	52	*e*P	P	00 11 27.9	0.0
	comp=Z,0.8nm,1.0s						
J08A	Circle Bar Ran	92.33	47	*e*P	P	00 11 28.4	+0.3
	comp=Z,10.0nm,0.8s						
KVN	Kaiserville	92.35	51	*e*P	P	00 11 28.8	+0.4
	comp=Z,18nm,1.5s						
KVN	Kaiserville	92.35	51	*e*P	P	00 11 28.8	+0.4
KVN				pmax	pmax		
	comp=Z,18nm,1.5s						
BFSC	Mount Baldy Ra	92.41	56	P	P	00 11 28.6	0.0
	baz=267						
DAC	Darwin (Calif)	92.58	54	*e*P	P	00 11 30.1	+0.7
	comp=Z,14nm,1.0s						
DAC	Darwin (Calif)	92.58	54	*e*P	P	00 11 30.2	+0.7
DAC				pmax	pmax		
	comp=Z,14nm,1.0s						
MPMC	Manual Prospec	92.65	54	P	P	00 11 30.0	+0.1
	baz=267,SNR=12						
MURC	Murrieta	92.75	57	P	P	00 11 30.1	0.0
	baz=267						
E09A	Wood Farm, Sta	92.76	44	*e*P	P	00 11 30.1	+0.3
	comp=Z,14nm,1.0s						
GRAC	Grapevine Rang	92.81	53	P	P	00 11 30.6	+0.3
	baz=267						
BMN	Battle Mountai	93.10	50	*e*P	P	00 11 32.2	+0.5
	comp=Z,5.5nm,1.0s						
GSC	Goldstone, Bar	93.17	55	P	P	00 11 32.4	+0.3
	baz=267						
GSC	Goldstone, Bar	93.17	55	*e*P	P	00 11 32.0	-0.1
	comp=Z,6.3nm,1.1s						
FURC	Furnace Creek,	93.18	54	P	P	00 11 32.2	+0.2
	baz=267,SNR=7.1						
FRD	Ford Ranch, An	93.24	57	P	P	00 11 32.5	+0.1
	baz=267						
BMO	Blue Mountains	93.26	45	*e*P	P	00 11 32.0	-0.3
	comp=Z,9.2nm,1.0s						
BMO	Blue Mountains	93.26	45	*e*P	P	00 11 32.0	-0.3
BMO				pmax	pmax		
	comp=Z,9.0nm,1.0s						
MONP2	Monument Peak	93.36	57	P	P	00 11 32.7	-0.5
	baz=267						
F10A	Beach Ranch, E	93.37	44	*e*P	P	00 11 32.6	-0.2
	comp=Z,8.7nm,0.8s						
PFO	Pinyon Flats O	93.37	57	P	P	00 11 33.2	+0.1
	baz=267						
PFO	Pinyon Flats O	93.37	57	*e*P	P	00 11 33.8	+0.7
	comp=Z,6.6nm,0.9s						
PFO	Pinyon Flats O	93.37	57	*e*P	P	00 11 33.8	+0.7
PFO				pmax	pmax		
	comp=Z,7.0nm,0.9s						
XPFO	Piæon Flat	93.37	57	*e*P	P	00 11 33.9	+0.8
	comp=Z,6.6nm,1.0s						
HEC	Hector,Ludlow	93.53	55	P	P	00 11 33.9	+0.2
	baz=267,SNR=5.6						
IKP	In-Ko-Pah, Jac	93.61	58	P	P	00 11 34.7	+0.5
	baz=267						
SHOC	Shoshone, Teco	93.63	54	P	P	00 11 34.4	+0.3
	baz=267						
TPNV	Topopah Spring	93.70	53	P	P	00 11 34.7	+0.1
	baz=268,SNR=11						
TPNV	Topopah Spring	93.70	53	*e*P	P	00 11 34.1	-0.5
	comp=Z,12nm,0.8s						
TPNV	Topopah Spring	93.70	53	*e*P	P	00 11 34.1	-0.5
TPNV				pmax	pmax		
	comp=Z,12nm,0.8s						
BELC	Belle Mtn. Jos	93.77	56	P	P	00 11 35.2	+0.2
	baz=268,SNR=5.6						
SWSC	Sam W. Stewart	93.89	57	P	P	00 11 35.9	+0.6
	baz=268						
TUQ	Turquoise Moun	93.89	55	P	P	00 11 35.6	+0.1
	baz=268						
SYO	Syowa Base	94.00	199⇑	*e*X	P	00 11 33.3	-1.7
GMRC	Granite Mounta	94.08	56	P	P	00 11 36.5	+0.1
	baz=268,SNR=10.0						
BC3	Big Chuckawall	94.21	57	P	P	00 11 37.3	+0.3
	baz=268						
MFID	Camas Ranch	94.27	47	*e*P	P	00 11 37.8	+0.8
	comp=Z,7.8nm,1.4s						
R11A	Troy Canyon, C	94.28	52	P	P	00 11 37.4	+0.1
	baz=268						
R11A	Troy Canyon, C	94.28	52	*e*P	P	00 11 37.6	+0.4
	comp=Z,8.3nm,1.2s						
IRM	Iron Mountain	94.48	56	P	P	00 11 38.5	+0.4
	baz=268,SNR=7.1						
SHPR	Sheep Range	94.55	54	*e*P	P	00 11 39.5	+1.0
	comp=Z,6.9nm,0.9s						
GLA	Glamis	94.71	57	P	P	00 11 40.2	+1.0
	baz=268						
NEE2	Needles Airpor	94.94	56	P	P	00 11 40.6	+0.5
	baz=268						
YKA	Yellowknife Ar	95.19	28	P	P	00 11 40.4	-0.1
	comp=Z,4.8nm,0.7s,baz=270,slow=4.7,SNR=22						
HLID	Hailey	95.30	47	P	P	00 11 41.5	-0.3
	baz=269						
HLID	Hailey	95.30	47	*e*P	P	00 11 42.0	+0.2
	comp=Z,14nm,2.0s						
ARU	Arti	95.61	326	P	P	00 11 40.6	-2.0
	comp=Z,1.8nm,0.6s,baz=101,slow=4.1,SNR=6.5						
ARU	Arti	95.61	326*c*	*i*P	P	00 11 40.2	-2.4
ARU						00 15 34.5	
ARU				S	SKSac	00 21 59.8	-1.8
ARU				SS	SS	00 29 11.8	-5.0
ARU				pmax	pmax		
	comp=Z,6.0nm,1.2s						
PSUT	Pine Spring	95.64	52	*e*P	P	00 11 44.0	+0.5
	comp=Z,5.3nm,1.0s						
WALA	Waterton Lakes	95.68	41	*e*P	P	00 11 44.0	+0.6
	comp=Z,14nm,0.9s						
CCUT	Cedar City	96.02	53	*e*P	P	00 11 46.2	+1.0
	comp=Z,5.4nm,1.0s						
LCMT	Little Creek M	96.10	53	*e*P	P	00 11 44.5	-1.1
	comp=Z,7.7nm,1.0s						
DUG	Dugway, Tooele	96.47	50	*e*P	P	00 11 47.2	+0.1
	comp=Z,3.9nm,0.7s						
DUG	Dugway, Tooele	96.47	50	*e*P	P	00 11 47.2	+0.1
DUG				pmax	pmax		
	comp=Z,4.0nm,0.7s						
PKCU	Pink Cliffs	96.85	53	*e*P	P	00 11 49.2	+0.1
	comp=Z,14nm,1.1s						
BOZ	Bozeman (W)	97.28	45	P	P	00 11 50.6	-0.1
	baz=271						
BOZ	Bozeman (W)	97.28	45	*e*P	P	00 11 50.7	0.0
	comp=Z,2.5nm,0.9s						
BOZ	Bozeman (W)	97.28	45	*e*P	P	00 11 50.7	0.0
BOZ				pmax	pmax		
	comp=Z,3.0nm,0.9s						
WUAZ	Wupatki	97.61	55	P	Pdif	00 11 53.1	+0.7
	baz=270						
WUAZ	Wupatki	97.61	55	*e*P	P	00 11 52.2	-0.2
	comp=Z,6.6nm,0.9s						
TMUT	Trail Mountain	97.71	51	*e*P	Pdif	00 11 53.5	+0.5
	comp=Z,12nm,1.2s						
Q16A	Castle Valley	97.74	51	*e*P	Pdif	00 11 54.0	+1.0
	comp=Z,2.5nm,0.8s						
FXWY	Fox Creek	97.76	47	*e*P	P	00 11 53.0	0.0
	comp=Z,2.5nm,0.8s						
TPAW	Teton Pass	97.82	47	*e*P	Pdif	00 11 53.9	+0.6
	comp=Z,3.3nm,0.8s						
MOOW	Moose Ponds	97.96	47	*e*P	P	00 11 53.8	-0.1
	comp=Z,1.6nm,0.8s						
SRU	San Rafael Swe	98.24	51	*e*P	P	00 11 55.1	-0.1
	comp=Z,2.3nm,0.7s						
SRU	San Rafael Swe	98.24	51	*e*P	P	00 11 55.1	-0.1
SRU				pmax	pmax		
	comp=Z,2.0nm,0.7s						
LPIG	La Paz	98.47	66	LR	LR	00 51 37.1	
	comp=Z,28nm,18.2s,baz=205,slow=32						
BW06	Boulder Array	98.86	48	P	P	00 11 57.3	-0.7
	baz=272						
BW06	Boulder Array	98.86	48	*e*P	P	00 11 57.3	-0.7
	comp=Z,4.1nm,0.8s						
PD31	Pinedale Array	98.86	48	*e*P	P	00 11 57.2	-0.7
PDAR	Pinedale Array	98.86	48	P	P	00 11 56.9	-1.0
	comp=Z,3.2nm,0.7s,baz=246,slow=2.6,SNR=19						
PDAR	Pinedale Array	98.86	48	*e*P	P	00 11 56.7	-1.2
W18A	Petrified Fore	98.95	55	P	P	00 11 58.3	-0.1
	baz=271						
W18A	Petrified Fore	98.95	55	*e*P	Pdif	00 11 59.8	+1.4
	comp=Z,8.7nm,1.1s						
PV23	Carpenter Ridg	99.44	52	*e*Pdif	Pdif	00 12 01.1	+0.4
	comp=Z,8.0nm,0.8s						
PV21	Cone Mtn., Par	99.47	52	*e*Pdif	Pdif	00 12 01.1	+0.4
	comp=Z,4.9nm,0.8s						
PV12	Saucer Basin,	99.61	52	*e*Pdif	Pdif	00 12 01.8	+0.4
	comp=Z,7.7nm,0.8s						
PV22	Blue Mesa, Par	99.61	52	*e*Pdif	Pdif	00 12 01.9	+0.5
	comp=Z,3.2nm,0.8s						
MVCO	Mesa Verde	99.89	53	P	Pdif	00 12 02.7	+0.1
	baz=272						
MVCO	Mesa Verde	99.89	53	*e*Pdif	Pdif	00 12 03.3	+0.6
	comp=Z,3.7nm,0.8s						
O20A	White River Ci	99.97	50	P	Pdif	00 12 02.5	-0.4
	baz=273						
SMCO	Snowmass	101.00	51	*e*Pdif	Pdif	00 12 08.1	+0.4
K22A	Casper	101.10	48	P	Pdif	00 12 07.2	-0.6
	baz=274						
S22A	4UR Ranch, Cre	101.19	53	P	Pdif	00 12 08.3	-0.2
	baz=273						
N23A	Red Feather La	101.67	49	P	Pdif	00 12 10.6	0.0
	baz=275						
N23A	Red Feather La	101.67	49	*e*Pdif	Pdif	00 12 10.8	+0.3
ISCO	Idaho Springs	102.00	50	P	Pdif	00 12 12.1	0.0
	baz=275						
SDCO	Great Sand Dun	102.25	52	P	Pdif	00 12 12.9	-0.2
	baz=274						
SNAA	Sanae	102.48	188	P	Pdif	00 12 12.2	-1.0
	comp=Z,0.8nm,0.7s,baz=201,slow=9.5,SNR=4.1						
RSSD	Black Hills	102.77	46	P	Pdif	00 12 14.9	-0.4
	baz=277						
TXAR	Lajitas Array	104.31	61	Pdiff	Pdif	00 12 26.9	+4.6
	comp=Z,0.2nm,0.6s,baz=264,slow=9.0,SNR=3.2						
ARCES	ARCESS Array B	106.22	343	PKiKP	PKiKP	00 16 38.9	-1.5
	comp=Z,2.2nm,0.9s,baz=90,slow=1.0,SNR=6.9						
FINES	FINESS Array B	110.37	336	PKiKP	PKiKP	00 16 47.7	-0.6
	comp=Z,2.7nm,0.8s,baz=87,slow=2.9,SNR=9.1						
Q39A	Willow Grove F	111.79	50	P	PKiKP	00 16 51.0	-0.7
	baz=283						
X39A	Fountain Ranch	111.79	55	P	PKiKP	00 16 51.8	0.0
	baz=280						
S39A	Bolivar	111.81	51	P	PKiKP	00 16 51.0	-0.8
	baz=282						
P39B	Salisbury	111.86	49	P	PKiKP	00 16 51.3	-0.5
	baz=283						
R39A	Chumby, Stover	111.90	50	P	PKiKP	00 16 51.4	-0.5
	baz=282						
T39A	Clever	111.90	52	P	PKiKP	00 16 51.4	-0.6
	baz=282						
U39A	Green Forest	111.95	53	P	PKiKP	00 16 51.2	-0.9
	baz=281						
U40A	Yellville	112.45	52	P	PKiKP	00 16 52.6	-0.5
	baz=282						
Q40A	Laux Farm, Aux	112.48	50	P	PKiKP	00 16 52.4	-0.6
	baz=283						
V40A	Witts Springs	112.58	53	P	PKiKP	00 16 52.5	-0.8
	baz=282						
L41A	Preston	112.88	46	P	PKiKP	00 16 52.6	-1.1
	baz=286						
Q41A	Truxton	113.13	49	P	PKiKP	00 16 53.7	-0.5
	baz=284						
W41B	Gary Mavity, V	113.17	54	P	PKiKP	00 16 53.6	-0.8
	baz=282						
R41A	Rosebud	113.17	50	P	PKiKP	00 16 53.6	-0.8
	baz=284						
U41A	Viola	113.19	52	P	PKiKP	00 16 53.9	-0.6
	baz=282						
P42A	Winchester	113.64	49	P	PKiKP	00 16 54.6	-0.6
	baz=285						
AKASG	Malin Array Be	113.78	324	PKiKP	PKiKP	00 16 54.3	-0.8
	comp=Z,2.2nm,0.5s,baz=56,slow=2.4,SNR=7.7						
P43A	Skaggs, Pawnee	114.24	48	P	PKPdf	00 16 56.0	-0.3
	baz=286						
R43A	Red Bud	114.29	50	P	PKPdf	00 16 55.8	-0.7
	baz=285						
343A	Vidalia	114.43	58	P	PKPdf	00 16 55.9	-1.0
	baz=280						
BRTR	Keskin Array B	114.59	312	PKP	PKPdf	00 16 55.9	-1.3
	comp=Z,0.7nm,0.6s,baz=130,slow=2.1,SNR=6.5						
MMAI	Mount Meron Ar	114.79	304	PKP	PKPdf	00 16 57.2	-0.5
	comp=Z,0.7nm,0.5s,baz=20,slow=6.3,SNR=3.4						
O44A	Mansfield	114.88	48	P	PKPdf	00 16 57.3	-0.3
	baz=286						
SORM	Soroca	115.35	322	⇓PKIKP	PKPdf	00 16 57.6	-0.6
Q45A	Warren Harvey,	115.47	49	P	PKPdf	00 16 58.4	-0.3
	baz=286						
SUW	Suwalki	115.54	330	*e*PKP	PKPdf	00 16 58.1	-0.3
SUW	Suwalki	115.54	330	*e*PKIKP	PKPdf	00 16 58.1	-0.3
HFS	Hagfors	116.01	338	PKP	PKPdf	00 16 57.8	-1.4
	comp=Z,1.7nm,0.6s,baz=142,slow=4.9,SNR=9.4						
T46A	Princeton	116.17	51	P	PKPdf	00 16 59.7	-0.4
	baz=286						
TLCR		116.20	319	⇓PKIKP	PKPdf	00 16 59.6	-0.3
NB2	NORSAR Subarra	116.25	340	PKPdf	PKPdf	00 16 58.3	-1.3
	comp=Z,1.4nm,0.7s,baz=45,slow=1.9						
NOA	NORSAR Array B	116.25	340	PKP	PKPdf	00 16 58.9	-0.7
	comp=Z,1.7nm,0.7s,baz=46,slow=1.8,SNR=18						
V46A	Holladay	116.31	52	P	PKPdf	00 16 59.2	-1.3
	baz=285						
WVT	Waverly	116.45	52	P	PKPdf	00 16 59.6	-1.1
	baz=285						
O47A	Sheridan	116.53	47	P	PKPdf	00 17 00.7	0.0
	baz=288						
P47A	Martinsville	116.70	48	P	PKPdf	00 17 00.7	-0.4
	baz=288						
T47A	Sharon Grove	116.79	51	P	PKPdf	00 17 00.9	-0.5
	baz=286						
U47A	Clarksville	116.79	51	P	PKPdf	00 17 00.8	-0.5
	baz=286						
R47A	Wooly Knot Far	116.86	49	P	PKPdf	00 17 00.9	-0.6
	baz=287						
W47A	Westpoint	116.86	53	P	PKPdf	00 17 00.6	-1.0
	baz=285						
WCI	Wyandotte Cave	117.05	49	P	PKPdf	00 17 01.2	-0.6
	baz=287						
L48A	N Adams	117.22	45	P	PKPdf	00 17 01.4	-0.6
	baz=290						
Q48A	North Vernon	117.27	48	P	PKPdf	00 17 01.6	-0.6
	baz=288						
O48A	Farmland	117.27	47	P	PKPdf	00 17 01.6	-0.5
	baz=289						
T48A	Bowling Green	117.30	50	P	PKPdf	00 17 01.8	-0.5
	baz=287						
P48A	Milroy	117.33	47	P	PKPdf	00 17 01.9	-0.4
	baz=288						
V48A	Smith Brothers	117.34	52	P	PKPdf	00 17 01.2	-1.2
	baz=286						
U48A	Cassie Pea, Po	117.36	51	P	PKPdf	00 17 01.7	-0.8
	baz=286						
S48A	Wiedeman Farm,	117.40	50	P	PKPdf	00 17 02.0	-0.5
	baz=287						
W48A	Pulaski	117.42	53	P	PKPdf	00 17 01.5	-1.1
	baz=285						
BURAR	Bucovina Array	117.48	323	⇑PKIKP	PKPdf	00 17 02.9	+0.4
P49A	Miami Univ. Ec	117.82	47	P	PKPdf	00 17 02.7	-0.5
	baz=289						
R49A	Shelbyville	117.88	49	P	PKPdf	00 17 02.9	-0.5
	baz=288						
O49A	Covington	117.88	46	P	PKPdf	00 17 02.8	-0.6
	baz=290						
LRAL	Lakeview Retre	117.89	55	P	PKPdf	00 17 03.0	-0.6
	baz=284						
MLR	Muntele Rosu	117.94	320	⇑PKIKP	PKPdf	00 17 01.6	-1.9
S49A	Springfield	117.94	49	P	PKPdf	00 17 02.8	-0.7
	baz=288						
W49A	Belvidere	117.95	52	P	PKPdf	00 17 02.8	-0.9
	baz=286						
T49A	Edmonton	117.96	50	P	PKPdf	00 17 02.8	-0.8
	baz=287						
KWP	Kalwaria Pacla	118.01	325	*e*PKP	PKPdf	00 17 03.0	-0.3
KWP	Kalwaria Pacla	118.01	325	*e*PKIKP	PKPdf	00 17 03.0	-0.3
V49A	McMinnville	118.06	52	P	PKPdf	00 17 02.9	-0.9
	baz=286						
X49A	Woodville	118.06	53	P	PKPdf	00 17 03.1	-0.7
	baz=285						
Y49A	Blount Mountai	118.16	54	P	PKPdf	00 17 03.2	-0.9
	baz=285						
Z49A	Columbiana	118.23	55	P	PKPdf	00 17 03.7	-0.5
	baz=285						
O50A	Cable	118.41	46	P	PKPdf	00 17 03.9	-0.5
	baz=290						
R50A	Paris	118.51	48	P	PKPdf	00 17 04.1	-0.5
	baz=289						
T50A	Nancy	118.52	50	P	PKPdf	00 17 03.8	-0.8
	baz=288						
X50B	Fort Payne	118.61	53	P	PKPdf	00 17 04.2	-0.8
	baz=286						
S50A	Richmond	118.65	49	P	PKPdf	00 17 04.4	-0.5
	baz=288						
W50A	Signal Mountai	118.68	52	P	PKPdf	00 17 04.4	-0.7
	baz=286						
U50A	Jamestown	118.69	51	P	PKPdf	00 17 04.5	-0.6
	baz=287						
V50A	Pikevile	118.71	51	P	PKPdf	00 17 04.2	-0.9
	baz=287						
Z50A	Ashland	118.71	54	P	PKPdf	00 17 04.4	-0.8
	baz=285						
150A	Eclectic	118.79	55	P	PKPdf	00 17 04.8	-0.5
	baz=285						
W51A	Cleveland	119.12	52	P	PKPdf	00 17 04.9	-1.0
	baz=287						
T51A	Gray	119.21	50	P	PKPdf	00 17 05.5	-0.5
	baz=288						
V51A	Loudon	119.25	51	P	PKPdf	00 17 05.4	-0.7
	baz=287						
S51A	Beattyville	119.27	49	P	PKPdf	00 17 05.6	-0.4
	baz=289						
Z51A	Franklin	119.30	54	P	PKPdf	00 17 05.7	-0.5
	baz=286						
151A	Opelika	119.38	55	P	PKPdf	00 17 06.2	-0.2
	baz=285						
251A	Midway	119.42	55	P	PKPdf	00 17 06.3	-0.2
	baz=285						
NIE	Niedzica	119.47	326	*e*PKP	PKPdf	00 17 05.9	-0.3
NIE	Niedzica	119.47	326	*e*PKIKP	PKPdf	00 17 05.9	-0.3
BORG	Borgarnes	119.47	357	PKP	PKPdf	00 17 06.0	+0.4
	comp=Z,7.2nm,0.8s,baz=268,slow=8.8,SNR=2.6						
BORG	Borgarnes	119.47	357	PKIKP	PKPdf	00 17 06.0	+0.4
BOSA	Boshof	119.54	234	PKP	PKPdf	00 17 06.9	-0.2
	comp=Z,0.9nm,0.6s,baz=214,slow=12,SNR=3.1						
TZTN	Tazewell	119.65	50	P	PKPdf	00 17 06.4	-0.4
	baz=288						
TKL	Tuckaleechee C	119.75	51	PKP	PKPdf	00 17 06.6	-0.5
	comp=Z,4.2nm,0.7s,baz=173,slow=7.2,SNR=7.6						
W52A	Murphy	119.80	52	P	PKPdf	00 17 07.1	-0.1
	baz=287						
V52A	Sevierville	119.83	51	P	PKPdf	00 17 07.2	-0.1
	baz=288						
152A	Waverly Hall	119.84	55	P	PKPdf	00 17 07.1	-0.2
	baz=286						
Z52A	Williamson	119.94	54	P	PKPdf	00 17 07.3	-0.2
	baz=286						
X52A	Dahlonega	119.97	52	P	PKPdf	00 17 07.2	-0.4
	baz=287						
Y52A	Lilburn	120.04	53	P	PKPdf	00 17 07.5	-0.2
	baz=287						
W53A	Cullowhee	120.37	51	P	PKPdf	00 17 08.6	+0.1
	baz=288						
Y53A	Monroe	120.43	53	P	PKPdf	00 17 08.3	-0.2
	baz=287						
U53A	Fall Branch	120.45	50	P	PKPdf	00 17 08.4	0.0
	baz=289						
X53A	Estanollee	120.46	52	P	PKPdf	00 17 08.1	-0.3
	baz=288						
V53A	Saluda	120.49	51	P	PKPdf	00 17 08.5	-0.1
	baz=288						
PLCA	Paso Flores	120.49	143	PKP	PKPdf	00 17 08.7	+0.2
	comp=Z,2.1nm,0.6s,baz=248,slow=4.1,SNR=10						
353A	Camilla	120.59	56	P	PKPdf	00 17 08.6	-0.2
	baz=285						
BZS	Buzias	120.60	322	⇓PKIKP	PKPdf	00 17 08.1	-0.3
Z53A	Monticello	120.60	54	P	PKPdf	00 17 08.6	-0.2
	baz=287						
GOGA	Godfrey	120.65	54	P	PKPdf	00 17 08.6	-0.2
	baz=287						
N54A	Moraine State	120.68	44	P	PKPdf	00 17 08.6	-0.1
	baz=294						
M54A	Oil Creek Stat	120.69	43	P	PKPdf	00 17 08.5	-0.2
	baz=294						
MORC	Moravsky Berou	120.77	328	⇑PKIKP	PKPdf	00 17 09.2	+0.5
MORC	Moravsky Berou	120.77	328	*e*PKP	PKPdf	00 17 08.7	0.0
KSP	Ksiaz	120.81	329	*e*PKP	PKPdf	00 17 08.8	+0.2
KSP	Ksiaz	120.81	329	*e*PKIKP	PKPdf	00 17 08.8	+0.2
VTS	Vitosha	120.95	318	⇓PKIKP	PKPdf	00 17 09.4	0.0
TIGA	Tifton	121.09	56	P	PKPdf	00 17 09.6	-0.1
	baz=286						
Y54A	Tignall	121.14	53	P	PKPdf	00 17 09.8	0.0
	baz=288						
Z54A	Sparta	121.20	54	P	PKPdf	00 17 09.6	-0.4
	baz=287						
JAVC	Velka Javorina	121.22	327	*e*PKP	PKPdf	00 17 10.4	+0.8
VRAC	Vranov	121.55	328	⇓PKIKP	PKPdf	00 17 09.1	-1.0
VRAC	Vranov	121.55	328	*e*PKP	PKPdf	00 17 10.0	-0.1
BLA	Blacksburg	121.79	48	P	PKPdf	00 17 10.7	-0.3
	baz=291						
KRUC	Moravsky	121.80	327	*e*PKP	PKPdf	00 17 10.4	-0.2
KMSC	Kings Mountain	121.80	51	P	PKPdf	00 17 11.0	-0.1
	baz=289						
O56A	Blue Knob Stat	121.95	44	P	PKPdf	00 17 11.1	-0.1
	baz=294						
BRG	Berggiesshubel	121.97	330	*i* PKP	PKPdf	00 17 10.7	-0.2
	comp=Z,5.4nm,0.8s						
BRG	Berggiesshubel	121.97	330	*i* PKIKP	PKPdf	00 17 10.7	-0.2
BRG				pmax	pmax		
	comp=Z,5.0nm,0.8s						
CLL	Collm	122.16	331⇑	*i*PKPdf	PKPdf	00 17 11.0	-0.2
	comp=Z,6.0nm,0.7s						
CLL	Collm	122.16	331⇑	*i*PKIKP	PKPdf	00 17 11.0	-0.2
CLL				pmax	pmax		
	comp=Z,6.0nm,0.7s						
SSPA	Standing Stone	122.27	44	P	PKPdf	00 17 11.5	-0.3
	baz=295						
IDI	Anoyia	122.57	310	PKP	PKPdf	00 17 12.0	-0.5
	comp=Z,5.3nm,0.6s,baz=270,slow=5.1,SNR=5.6						
CONA	Conrad Observa	122.74	327	*i* PKiKP	PKPdf	00 17 12.3	-0.3
	comp=Z,4.5nm,0.7s,SNR=6.3						
JTS	JuntasAbangare	122.95	81	PKP	PKPdf	00 17 12.5	-1.3
	comp=Z,6.2nm,0.8s,baz=324,slow=14,SNR=4.3						
GERES	GERESS Array B	123.35	328	PKP	PKPdf	00 17 13.6	-0.2
	comp=Z,4.5nm,0.6s,baz=72,slow=1.9,SNR=54						
MOA	Molln	123.66	327	*i* PKPdf	PKPdf	00 17 13.5	-0.8
	comp=Z,2.8nm,0.7s						
SOKA	Soboth	123.92	326	*i* PKPdf	PKPdf	00 17 13.9	-1.0
	comp=Z,4.1nm,0.9s						
859A	Kempfer Cattle	124.23	59	P	PKPdf	00 17 15.9	0.0
	baz=285						
OBKA	Obir	124.29	326	*i* PKPdf	PKPdf	00 17 14.3	-1.3
	comp=Z,2.0nm,0.7s						
ABTA	Abfaltersbach	125.27	327	*i* PKPdf	PKPdf	00 17 16.4	-1.1
	comp=Z,5.3nm,0.7s						
EKA	Eskdalemuir Ar	125.39	343	PKP	PKPdf	00 17 16.6	-0.7

	comp=Z,1.3nm,0.5s,baz=30,slow=3.3,SNR=7.5						
WTTA	Wattenberg	125.42	328	*i* PKiKP	PKPdf	00 17 17.7	-0.2
	comp=Z,4.9nm,0.6s						
MOTA	Moosalm	125.65	328	*i* PKiKP	PKPdf	00 17 18.0	-0.3
	comp=Z,6.6nm,0.6s,SNR=10						
RETA	Reutte	125.74	329	*i* PKiKP	PKPdf	00 17 18.0	-0.4
	comp=Z,4.1nm,1.1s						
MEM	Membach	125.85	334	⇑PKIKP	PKPdf	00 17 17.3	-1.0
FETA	Feichten	126.05	328	*i* PKiKP	PKPdf	00 17 19.2	+0.1
	comp=Z,8.8nm,0.9s,SNR=5.9						
BCLA	Clavier	126.30	334	⇑PKIKP	PKPdf	00 17 18.9	-0.2
DAVA	Damuels	126.32	329	*i* PKiKP	PKPdf	00 17 19.3	-0.3
	comp=Z,5.0nm,0.7s						
BFO	Black Forest	126.40	331	c *i*PKIKP	PKPdf	00 17 19.5	0.0
UCC	Uccle	126.41	335	⇑PKIKP	PKPdf	00 17 19.3	-0.1
WLF	Walferdange	126.47	333	⇑PKIKP	PKPdf	00 17 20.1	+0.6
DAVOX	Davos/Dischmat	126.65	329	PKP	PKPdf	00 17 20.4	+0.2
	comp=Z,5.2nm,0.6s,baz=190,slow=6.1,SNR=14						
SNF	Seneffe	126.66	335	⇑PKIKP	PKPdf	00 17 20.4	+0.5
DOU	Dourbes	126.84	335	⇓PKIKP	PKPdf	00 17 20.6	+0.4
ROSC	El Rosal	133.53	87	PKP	PKPdf	00 17 34.9	+0.4
	comp=Z,3.9nm,0.4s,baz=252,slow=20,SNR=3.2						
KEST	Kesra	133.69	317	PKP	PKPdf	00 17 34.0	+0.2
	comp=Z,2.5nm,0.7s,baz=243,slow=4.0,SNR=5.2						
LPAZ	La Paz	135.10	118	PKP	PKPdf	00 17 38.7	+1.1
	comp=Z,7.9nm,0.8s,baz=357,slow=2.5,SNR=26						
SDV	Santo Domingo	137.12	82	PKP	PKPdf	00 17 41.3	+0.5
	comp=Z,25nm,0.9s,baz=15,slow=1.1,SNR=16						
CPUP	Villa Florida	138.18	138	PKP	PKPdf	00 17 42.9	+0.6
	comp=Z,2.8nm,0.7s,baz=266,slow=3.6,SNR=6.5						
ESDC	Sonseca Array	138.74	332	PKP	PKPdf	00 17 43.4	+0.4
	comp=Z,0.2nm,0.4s,baz=28,slow=3.4,SNR=4.3						
PCAB	Cabril	138.78	338	*e*PKPdf	PKPdf	00 17 43.4	+0.4
MVO	Moncorvo	138.85	336	*e*PKPdf	PKPdf	00 17 43.9	+0.7
POLO	Lamas de Olo	138.98	337	*e*PKPdf	PKPdf	00 17 43.7	+0.2
MTE	Manteigas	139.71	336	*e*PKPdf	PKPdf	00 17 45.1	+0.3
PCBR	Castelo Branco	140.15	335	*e*PKPdf	PKPdf	00 17 46.3	+0.8
PMRV	Marv??o	140.47	335	*e*PKPdf	PKPdf	00 17 46.4	+0.3
PTOM	Tomar	140.72	336	*e*PKPdf	PKPdf	00 17 47.2	+0.7
PMTG	Montargil	141.12	336	*e*PKPdf	PKPdf	00 17 47.6	+0.4
ALMR	Almeirim	141.19	336	*e*PKPdf	PKPdf	00 17 48.1	+0.7
EVO	Evora	141.48	335	*e*PKPdf	PKPdf	00 17 48.9	+1.0
PCVE	Castro Verde	142.25	334	*e*PKPdf	PKPdf	00 17 50.0	+0.7
PTEO	Sao Teotonio	142.61	335	*e*PKPdf	PKPdf	00 17 51.0	+1.0
PCRV	Puerto La Cruz	142.91	79	PKhKP	PKPpre	00 17 46.2	
	comp=Z,8.1nm,0.6s,baz=14,slow=15,SNR=4.1						
MDT	Midelt	144.34	326	PKP	PKPbc	00 17 52.0	-0.1
	comp=Z,2.5nm,0.6s,baz=73,slow=6.5,SNR=13						
TORD	Torodi Ar. Bea	149.67	289	PKPbc	PKPdf	00 18 04.7	+2.2
	baz=45,slow=2.7						
PMOZ	Porto Moniz, M	149.95	342	*e*PKPbc	PKPbc	00 18 07.5	-0.2
PMAR	Madeira	149.95	342	*e*PKPbc	PKPbc	00 18 08.1	+0.3
BDFB	Brasilia	151.78	135	PKPbc	PKPbc	00 18 12.4	0.0
	comp=Z,26nm,0.5s,baz=241,slow=1.4,SNR=47						
KOWA	Kowa	154.56	295	PKPbc	PKPbc	00 18 17.0	-1.4
	comp=Z,2.4nm,0.6s,baz=94,slow=7.9,SNR=6.9						
KOWA				PKPab	PKPab	00 18 32.8	-0.8
	comp=Z,3.4nm,0.6s,baz=39,slow=6.5,SNR=9.2						
KIC	Kosan Boka	157.05	276	*e*PKP2	PKPab	00 18 43.5	-0.9
	comp=Z,19nm,0.8s						
DBIC	Dimbokro	157.14	277	PKPbc	PKPbc	00 18 25.6	
	comp=Z,2.5nm,1.0s,baz=107,slow=4.8,SNR=4.0						
DBIC				PKPab	PKPab	00 18 44.2	-0.6
	comp=Z,8.1nm,0.9s,baz=72,slow=3.8,SNR=6.2						
TIC	Toumodi	157.31	277	*e*PKP2	PKPab	00 18 44.5	-1.1
LIC	Lamto	157.35	276	*e*PKP2	PKPab	00 18 44.7	-1.0
	comp=Z,38nm,1.2s						

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*ISCJB **26** 23:59:54.4±0.7, 25°.71N±0°.06×100°.13E±0°.05, h10^{km}, mb3.9/6, MS3.5/2, Error ellipse: s-maj=8.6km s-min=6.7km az=24.9*

*BJI **26** 23:59:54.2, 25°.59N×99°.97E, h6^{km}, mb4.0/2, ML3.7/10, Ms3.5/2, Ms7 3.5/1*

*IDC **26** 23:59:56.0±1.8, 25°.83N×99°.81E, h0^{km}, mb4.0/6, mb1 4.0/7, mb1mx3.6/70, mbtmp4.0/7, ML4.1/1, MS3.5/2, Ms1 3.5/2, ms1mx2.6/64, Error ellipse: s-maj=51.2km s-min=23.8km az=89.0*

ISC 26 23:59:54.8±0.9**, 25°.66N**±0°.05×**100°.03E**±0°.07**, h10**^{km}**, n17, σ2^s.58**/19**, mb3.9**/6**, Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMI	Kunming	2.51	102	Pg	Pb	00 00 41.0	+0.9
KMI				Sg	Sg	00 01 15.5	+0.1
KMI				smax	smax		
	comp=N,380nm,0.9s						
KMI				smax	smax		
	comp=E,410nm,0.9s						
CD2	Chengdu	6.17	31	Pn	Pn	00 01 28.0	+1.9
CD2				Pg	Pg	00 01 50.0	-3.0
CD2				Sn	Sn	00 02 34.8	-2.0
CD2				Sg	Sg	00 03 09.5	-3.5
CD2				smax	smax		
	comp=N,90nm,0.8s						
CD2				smax	smax		
	comp=E,80nm,0.8s						
CHTO	Chiang Mai	6.89	189	P	Pg	00 02 05.2	-1.6
	46nm,0.7s,0.6nm						
CMMT	Chiang Mai	6.89	189	P	Pg	00 02 05.1	-1.7
	10nm,0.6s,0.1nm						
CMAR	Chiang Mai Arr	7.24	188	Pn	Pn	00 01 44.8	+4.0
	0.8nm,0.3s,baz=1.4,slow=13,SNR=7.1						
CMAR				Pg	Pg	00 02 10.9	-2.6
	1.0nm,0.3s,baz=357,slow=17,SNR=15						
CMAR				Lg	Lg	00 03 42.0	
	0.5nm,0.3s,baz=1.9,slow=30,SNR=4.1						
UTTA	Uttaradit	7.90	176	P	Pg	00 02 32.5	+6.5
XAN	Xi'an	11.36	41	P	Pn	00 02 40.0	+2.8
XAN				pP		00 02 45.8	
HHC	Hu-ho-hao-te	17.93	30	*e*P	P	00 04 06.8	+1.9
HHC				sP	sP	00 04 16.5	+7.5
HHC				S	Sn	00 07 22.5	-1.8
HHC				sS	sS	00 07 38.3	+3.0
HHC				SS	SnSn	00 07 44.8	+6.7
WMQ	Urumqi	20.71	334	*e*P	Pn	00 04 37.8	+0.1
SONM	Songino Array	22.69	11	P	P	00 04 57.6	+1.0
	1.1nm,0.7s,baz=199,slow=12,SNR=7.8						
MKAR	Makanchi Array	25.37	331	P	P	00 05 23.4	+1.2
	7.6nm,0.7s,baz=140,slow=10,SNR=53						
JNU	Nakatsue	27.81	67	LR	LR	00 17 11.4	
	comp=Z,55nm,19.5s,baz=122,slow=37						
KURBB	Kurchatov Arra	29.90	332	P	P	00 06 02.8	+0.2
	1.6nm,0.8s,baz=139,slow=10,SNR=14						
ZALV	Zalesovo Beam	30.44	342	P	P	00 06 08.2	+0.9
	3.9nm,0.8s,baz=152,slow=8.9,SNR=13						
BVAR	Borovoye Array	35.21	329	P	P	00 06 49.4	+0.3
	0.8nm,0.6s,baz=133,slow=10,SNR=7.5						
AKTO	Aktyubinsk	40.54	319	P	P	00 07 35.0	+0.8
	1.2nm,0.5s,baz=119,slow=13,SNR=5.6						
TORD	Torodi Ar. Bea	91.73	285	LR	LR	01 01 33.6	
	comp=Z,34nm,18.1s,baz=270,slow=40						

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*ISCJB **27** 00:11:48.4±0.8, 38°.00S±0°.05×179°.53W±0°.09, h31^{km}, mb4.7/12, MS3.3/4, Error ellipse: s-maj=10.9km s-min=7.0km az=19.0*

*IDC **27** 00:11:50.7±2.5, 37°.47S×179°.79E, h0^{km}, mb4.4/2, mb1 4.5/3, mb1mx3.9/36, mbtmp4.3/3, ML3.9/1, MS3.4/5, Ms1 3.4/5, ms1mx2.9/34, Error ellipse: s-maj=102.8km s-min=28.3km az=156.0*

*NEIC **27** 00:11:51.0±0.0, 37°.61S×179°.72W, h32^{km}, mb4.7/9, ML4.3(WEL), After WEL.*

*WEL **27** 00:12:42.6±0.4, 40°S±5°×17°7E±°, h35^{km}±5^{km}*

ISC 27 00:11:52.3±0.8**, 37°.88S**±0°.08×**179°.75W**±0°.09**, h31**^{km}**, n114, σ1^s.71**/109**, mb4.6**/12**, MS3.4**/4**, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	Waiomatatini S	1.45	272	Pn	Pn	00 12 15.0	-1.4
MXZ	Matakaoa Point	1.57	281	Pn	Pn	00 12 16.1	-1.9
PUZ	Puketiti	1.58	262	Pn	Pn	00 12 17.2	-1.1
CNGZ	Carnagh Statio	1.72	249	Pn	Pn	00 12 20.4	+0.3
TWGZ	Tauwhareparae	1.82	260	Pn	Pn	00 12 20.8	-0.7
TKGZ	Te Karaka	1.97	253	Pn	Pn	00 12 23.4	-0.2
PRGZ	Paritu Road	2.13	240	Pn	Pn	00 12 26.3	+0.5
MWZ	Matawai	2.19	257	Pn	Pn	00 12 25.6	-1.0
MHGZ	Mahia Peninsul	2.23	235	Pn	Pn	00 12 27.6	+0.4
RAGZ	Rawiri	2.32	254	Pn	Pn	00 12 28.0	-0.3
KNZ	Kokohu	2.32	240	Pn	Pn	00 12 28.5	+0.2
SNGZ	Shannon Statio	2.46	248	Pn	Pn	00 12 30.3	0.0
URZ	Urewera	2.50	260	Pn	Pn	00 12 30.6	-0.3
	29nm,0.3s,baz=260,slow=2.9,SNR=111						
URZ				Sn	Sn	00 12 59.4	-1.0
	90nm,0.3s,baz=16,slow=23,SNR=26						
WHHZ	Waihua	2.65	242	P	Sn	00 13 06.1	+2.1
RAHZ	Arahi	2.69	246	P	Sn	00 13 06.1	+1.1
MTHZ	Maungataniwha	2.85	249	P	Sn	00 13 09.6	+0.7
ARHZ	Aropaoanui	2.90	241	Pn	Pn	00 12 37.0	+0.7
OPRZ	Ohinepanea	2.92	270	Pn	Pn	00 12 33.0	-3.6
NMHZ	Naumai	2.96	245	Pn	Pn	00 12 37.6	+0.3
TARZ	Mount Tarawera	2.98	262	Pn	Pn	00 12 31.8	-5.6
CKHZ	Cape Kidnapper	3.05	233	Pn	Pn	00 12 38.7	+0.4
MCHZ	McNeill Hill	3.19	240	Pn	Pn	00 12 40.5	+0.2
BKZ	Black Stump Fm	3.21	245	Pn	Pn	00 12 40.5	-0.2
KAHZ	Kahuranaki	3.25	233	Pn	Pn	00 12 41.3	0.0
PXZ	Pawanui	3.40	230	Pn	Pn	00 12 42.5	-0.7
BHHZ	Black Hill Sta	3.65	243	Pn	Pn	00 12 46.5	-0.2
WPHZ	Waipukurau	3.68	233	Pn	Pn	00 12 46.5	-0.6
PRHZ	Porangahau	3.69	229	Pn	Pn	00 12 46.3	-0.8
PNHZ	Pukenui	3.75	236	Pn	Pn	00 12 47.5	-0.6
KUZ	Kuaotunu	3.78	286	Pn	Pn	00 12 46.4	-2.1
KRVZ	Karewarewa	3.81	250	Pn	Pn	00 12 48.9	-0.1
OTVZ	Oturere	3.82	249	Pn	Pn	00 12 48.7	-0.4
MOVZ	Moawhango	3.84	245	Pn	Pn	00 12 50.3	+1.0
TUVZ	Tukino	3.86	248	Pn	Pn	00 12 50.2	+0.6
NGZ	Ngauruhoe	3.87	249	Pn	Pn	00 12 49.5	-0.3
ANWZ	Angora Road	3.90	228	P	Pn	00 12 49.1	-1.0
WHVZ	Whangaehu Hut	3.91	248	Pn	Pn	00 12 51.4	+1.0
WNVZ	Wahianoa	3.92	247	Pn	Pn	00 12 50.1	-0.4
TSZ	Takapari Road	3.99	236	Pn	Pn	00 12 50.5	-0.8
DVHZ	Dannevirke	3.99	231	Pn	Pn	00 12 50.5	-0.8
MKAZ	Moumakai	4.12	279	Pn	Pn	00 12 51.2	-1.9
BFZ	Birch Farm	4.18	227	Pn	Pn	00 12 51.9	-2.1
BFZ	Birch Farm	4.18	227	P	Pn	00 12 51.9	-2.1
PRWZ	Pori Road	4.26	230	Pn	Pn	00 12 54.6	-0.5
POWZ	Post Office Ro	4.29	233	Pn	Pn	00 12 55.7	+0.2
TIWZ	Tintock	4.45	228	Pn	Pn	00 12 56.4	-1.3
TIWZ	Tintock	4.45	228	P	Pn	00 12 56.5	-1.1
VRZ	Vera Road	4.48	252	Pn	Pn	00 12 59.3	+1.2
WAZ	Wanganui	4.52	244	Pn	Pn	00 13 00.1	+1.6
MRZ	Mangatainoka R	4.56	231	Pn	Pn	00 12 57.9	-1.3
MRZ	Mangatainoka R	4.56	231	P	Pn	00 12 57.9	-1.3
TMWZ	Te Maipa	4.66	225	Pn	Pn	00 12 58.6	-2.0
TMWZ	Te Maipa	4.66	225	P	Pn	00 12 58.7	-1.9
HOWZ	Holdsworth Sta	4.75	229	Pn	Pn	00 12 59.7	-2.1
HOWZ	Holdsworth Sta	4.75	229	P	Pn	00 12 59.8	-1.9
OGWZ	Otaki Gorge	4.91	232	Pn	Pn	00 13 02.6	-1.3
OGWZ	Otaki Gorge	4.91	232	P	Pn	00 13 02.6	-1.3
MTW	Mount Morrison	4.92	227	Pn	Pn	00 13 01.5	-2.6
MTW	Mount Morrison	4.92	227	P	Pn	00 13 01.7	-2.3
TRWZ	Traveller	4.97	224	Pn	Pn	00 13 02.8	-2.1
TRWZ	Traveller	4.97	224	P	Pn	00 13 02.8	-2.0
KIW	Kapiti Island	5.10	233	Pn	Pn	00 13 05.1	-1.4
KIW	Kapiti Island	5.10	233	P	Pn	00 13 05.2	-1.4
PAWZ	Paruwai Farm	5.11	225	Pn	Pn	00 13 04.3	-2.4
PAWZ	Paruwai Farm	5.11	225	P	Pn	00 13 04.1	-2.6
CAW	Cannon Point	5.14	230	Pn	Pn	00 13 05.2	-1.9
CAW	Cannon Point	5.14	230	P	Pn	00 13 05.4	-1.8
MSWZ	Moikau Station	5.23	226	Pn	Pn	00 13 05.2	-3.1
MSWZ	Moikau Station	5.23	226	P	Pn	00 13 05.3	-3.0
PLWZ	Palliser	5.33	225	Pn	Pn	00 13 07.0	-2.7
PLWZ	Palliser	5.33	225	P	Pn	00 13 07.1	-2.6
BHW	Baring Head	5.44	228	P	Pn	00 13 08.5	-2.7
SNZO	South Karori	5.48	230	Pn	Pn	00 13 13.8	+2.1
TCW	Tory Channel	5.69	232	Pn	Pn	00 13 12.9	-1.8
TCW	Tory Channel	5.69	232	P	Pn	00 13 12.9	-1.7
DUWZ	D'Urville Isla	5.71	237	Pn	Pn	00 13 12.9	-2.0
DUWZ	D'Urville Isla	5.71	237	P	Pn	00 13 13.5	-1.4
BSWZ	Blackbirch Sta	6.22	230	Pn	Pn	00 13 20.2	-1.7
BSWZ	Blackbirch Sta	6.22	230	P	Pn	00 13 19.2	-2.8
NNZ	Nelson	6.27	236	Pn	Pn	00 13 20.8	-1.8
NNZ	Nelson	6.27	236	P	Pn	00 13 20.8	-1.7
CTZ	Chatham Island	6.31	159	Pn	Pn	00 13 27.6	+4.4
QRZ	Quartz Range	6.67	241	Pn	Pn	00 13 26.4	-1.7
QRZ	Quartz Range	6.67	241	P	Pn	00 13 26.5	-1.6
THZ	Tophouse	6.85	233	Pn	Pn	00 13 28.1	-2.5
THZ	Tophouse	6.85	233	P	Pn	00 13 28.2	-2.5
LTZ	Lake Taylor	7.81	229	Pn	Pn	00 13 41.1	-2.7
LTZ	Lake Taylor	7.81	229	P	Pn	00 13 41.9	-2.0
LTZ				P	Pn	00 13 41.9	-2.0
MQZ	McQueen's Vall	8.19	222	Pn	Pn	00 13 46.1	-2.7
MQZ	McQueen's Vall	8.19	222	P	Pn	00 13 46.0	-2.9
RPZ	Rata Peaks	9.08	227	Pn	Pn	00 14 00.3	-0.9
	0.5nm,0.3s,baz=274,slow=1.0,SNR=4.1						
RPZ				Sn	Sn	00 15 33.6	-8.8
	2.6nm,0.3s,baz=4.6,slow=12,SNR=19						
LBZ	Lake Benmore	9.99	226	Pn	Pn	00 14 10.6	-3.1
JCZ	Jackson Bay	10.64	231	Pn	Pn	00 14 20.0	-2.6
TUZ	Tuapeka	11.29	221	Pn	Pn	00 14 27.8	-3.6
DZM	Mont Dzumac	19.74	319	LR	LR	00 22 50.3	
	comp=Z,161nm,18.8s,baz=80,slow=34						
RAR	Rarotonga	23.96	52	P	P	00 17 06.8	+3.0
	4.2nm,0.3s						
AFI	Afiamalu	24.91	19	P	P	00 17 11.2	-1.5
	6.0nm,0.4s						
TAU	Tasmania Unive	25.48	248	P	P	00 17 18.9	+1.4
	2.0nm,0.9s						
STKA	Stephens Creek	32.11	269	LR	LR	00 29 48.7	
	comp=Z,59nm,19.0s,baz=29,slow=34						
HNR	Honiara	33.72	322	P	P	00 18 29.0	-1.9
	6.1nm,0.3s						
CTAO	Charters Tower	34.37	291	P	P	00 18 35.5	-1.1
	3.6nm,0.4s						
PMG	Port Moresby	41.11	305	LR	LR	00 34 14.0	
	comp=Z,58nm,20.0s,baz=104,slow=33						
ASAR	Alice Springs	41.85	276	P	P	00 19 38.6	-1.0
	3.4nm,0.8s,baz=123,slow=7.9,SNR=21						
ASAR				PcP	PcP	00 21 36.5	+1.3
	0.4nm,0.4s,baz=122,slow=3.5,SNR=4.1						
WRAB	Tennant Creek	43.51	281	*e*P	P	00 19 52.0	-1.1
	2.2nm,0.5s						
WRA	Warramunga Arr	43.51	281	P	P	00 19 52.3	-0.8
	2.4nm,0.4s,baz=120,slow=7.9,SNR=39						
QSPA	South Pole Qui	52.25	180	LR	LR	00 39 05.7	
	comp=Z,44nm,18.4s,baz=317,slow=31						
MBWA	Marble Bar	54.34	270	P	P	00 21 15.7	-0.5
	16nm,0.9s						
PMSA	Palmer Station	66.08	155	P	P	00 22 38.5	+2.6
	9.8nm,0.4s						
COCO	West Island	77.47	264	P	P	00 23 46.5	+1.6
	80nm,0.6s						
TATO	Taipei	83.36	309	P	P	00 24 16.6	+0.3
	9.8nm,0.4s						
CMAR	Chiang Mai Arr	94.52	290	LR	LR	01 07 55.6	
	comp=Z,5.5nm,21.5s,baz=205,slow=36						
ARCES	ARCESS Array B	145.50	345	PKPbc	PKPab	00 31 27.9	+1.4
	5.1nm,1.0s,baz=25,slow=4.0,SNR=4.6						
KBZ	Khabaz	147.47	294	PKPbc	PKPab	00 31 35.0	+0.1
	0.9nm,0.7s,baz=150,slow=4.0,SNR=4.0						
FINES	FINESS Array B	151.46	334	PKPbc	PKPbc	00 31 43.8	+1.7
	4.6nm,0.9s,baz=65,slow=6.6,SNR=11						

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*NEIC **27** 00:16:58.9±0.0, 37°.61S×179°.74W, h30^{km}, ML4.1(WEL), After WEL.*

*IDC **27** 00:16:59.5±2.7, 37°.08S×179°.62E, h0^{km}, mb4.0/2, mb1 4.3/3, mb1mx3.9/37, mbtmp4.0/3, ML3.7/1, Error ellipse: s-maj=84.2km s-min=31.0km az=146.0*

ISC 27 00:17:01.8±1.3**, 38°.00S**±0°.07×**179°.87E**±0°.07**, h29**^{km}**, n49, σ1^s.72**/52**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	Waiomatatini S	1.17	278	Pn	Pb	00 17 22.8	-0.5
WMGZ				Sn	Sb	00 17 40.2	+2.1
PUZ	Puketiti	1.28	266	Pn	Pb	00 17 25.0	-0.2
MXZ	Matakaoa Point	1.31	289	Pn	Pn	00 17 24.0	-0.2
MXZ				Sn	Sb	00 17 42.8	+0.5
CNGZ	Carnagh Statio	1.40	249	Pn	Pb	00 17 28.2	+0.9
TWGZ	Tauwhareparae	1.50	262	Pn	Pb	00 17 28.6	-0.4
TKGZ	Te Karaka	1.66	254	Pn	Pb	00 17 31.2	-0.4
PRGZ	Paritu Road	1.82	239	Pn	Pb	00 17 34.0	-0.3
MWZ	Matawai	1.88	259	Pn	Pn	00 17 33.5	+1.5
MHGZ	Mahia Peninsul	1.93	233	Pn	Pb	00 17 35.6	-0.6
RAGZ	Rawiri	2.00	255	Pn	Pn	00 17 35.6	+1.9
SNGZ	Shannon Statio	2.14	248	Pn	Pn	00 17 38.1	+2.5
URZ	Urewera	2.19	262	Pn	Pn	00 17 38.5	+2.3
	21nm,0.3s,baz=246,slow=2.1,SNR=62						
URZ				Sn	Sb	00 18 07.3	-0.2
	38nm,0.3s,baz=291,slow=24,SNR=6.4						
ARHZ	Aropaoanui	2.58	240	Pn	Pn	00 17 44.7	+3.1
OPRZ	Ohinepanea	2.63	272	Pn	Pn	00 17 42.9	+0.7
NMHZ	Naumai	2.65	244	Pn	Pn	00 17 45.2	+2.7
TARZ	Mount Tarawera	2.67	264	Pn	Pn	00 17 44.6	+1.7
MCHZ	McNeill Hill	2.88	239	Pn	Pn	00 17 48.3	+2.7
BKZ	Black Stump Fm	2.90	245	Pn	Pn	00 17 48.3	+2.3
KAHZ	Kahuranaki	2.95	232	Pn	Pn	00 17 49.1	+2.4
PXZ	Pawanui	3.10	228	Pn	Pn	00 17 50.3	+1.5
BHHZ	Black Hill Sta	3.33	242	Pn	Pn	00 17 54.3	+2.3
PRHZ	Porangahau	3.39	227	Pn	Pn	00 17 53.8	+1.1
PNHZ	Pukenui	3.45	235	Pn	Pn	00 17 55.5	+1.9
OTVZ	Oturere	3.50	249	Pn	Pn	00 17 56.4	+2.0
MOVZ	Moawhango	3.52	245	Pn	Pn	00 17 56.2	+1.6
TUVZ	Tukino	3.54	248	Pn	Pn	00 17 57.2	+2.2
WHVZ	Whangaehu Hut	3.59	248	Pn	Pn	00 17 57.9	+2.1
WNVZ	Wahianoa	3.60	247	Pn	Pn	00 17 57.8	+2.0
TSZ	Takapari Road	3.68	235	Pn	Pn	00 17 57.8	+1.1
DVHZ	Dannevirke	3.69	230	Pn	Pn	00 17 58.4	+1.6
MTVZ	Mangateitei	3.71	247	Pn	Pn	00 18 00.4	+3.2
BFZ	Birch Farm	3.89	225	Pn	Pn	00 17 59.7	+0.1
PRWZ	Pori Road	3.96	229	Pn	Pn	00 18 02.1	+1.6
TIWZ	Tintock	4.15	227	Pn	Pn	00 18 04.2	+0.9
WAZ	Wanganui	4.20	244	Pn	Pn	00 18 06.9	+3.0
MRZ	Mangatainoka R	4.26	230	Pn	Pn	00 18 05.8	+1.1
HOWZ	Holdsworth Sta	4.45	228	Pn	Pn	00 18 07.7	+0.4
OGWZ	Otaki Gorge	4.61	231	Pn	Pn	00 18 10.2	+0.8
MTW	Mount Morrison	4.62	226	Pn	Pn	00 18 09.7	0.0
KIW	Kapiti Island	4.79	232	Pn	Pn	00 18 13.2	+1.3
CAW	Cannon Point	4.84	229	Pn	Pn	00 18 13.2	+0.5
PLWZ	Palliser	5.04	223	Pn	Pn	00 18 14.8	-0.7
DUWZ	D'Urville Isla	5.39	237	Pn	Pn	00 18 20.9	+0.6
CTZ	Chatham Island	6.32	156	Pn	Pn	00 18 35.1	+2.2
RPZ	Rata Peaks	8.79	227	Sn	Sn	00 20 41.3	-3.6
	2.5nm,0.3s,baz=8.5,slow=22,SNR=12						
ASAR	Alice Springs	41.57	277	P	P	00 24 46.8	-0.3
	1.9nm,0.6s,baz=123,slow=8.3,SNR=20						
WRA	Warramunga Arr	43.24	281	P	P	00 24 59.9	-0.8
	1.1nm,0.5s,baz=121,slow=7.9,SNR=13						
ARCES	ARCESS Array B	145.53	344	PKP	PKPab	00 36 35.9	-0.5
	2.6nm,0.8s,baz=26,slow=6.7,SNR=5.5						
FINES	FINESS Array B	151.43	334	PKPbc	PKPbc	00 36 51.6	-0.2
	1.0nm,0.8s,baz=47,slow=2.9,SNR=3.2						

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*IDC **27** 00:33:35.8±2.6, 62°.35N×151°.31W, h68^{km}±40^{km}, mb3.6/2, mb1 3.9/5, mb1mx3.1/78, mbtmp4.0/5, ML3.8/3, MS3.1/1, Ms1 3.1/1, ms1mx2.2/67, Error ellipse: s-maj=53.8km s-min=17.9km az=114.0*

*ISCJB **27** 00:33:36.1±0.3, 62°.22N±0°.02×150°.92W±0°.06, h101^{km}±3^{km}, mb3.9/2, Error ellipse: s-maj=4.5km s-min=3.3km az=25.8*

*NEIC **27** 00:33:38.2±0.0, 62°.23N×150°.99W, h88^{km}, ML3.2(AEIC), After AEIC.*

ISC 27 00:33:36.8±1.0**, 62°.21N**±0°.03×**150°.93W**±0°.03**, h97**^{km}±6^{km}**, n72, σ0^s.91**/85**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TRAP	Trapper Creek	0.34	69	P	Pn	00 33 51.1	-0.2
TRAP				S	Sn	00 34 01.4	-0.6
SKT	Skwentna	0.37	230	P	Pn	00 33 51.0	-0.5
SKT				S	Sn	00 34 01.3	-1.1
SUA	Susitna One	0.76	173	P	Pn	00 33 54.9	+0.3
SUA				S	Sn	00 34 08.0	0.0
PPLA	Purkeypile	0.90	320	P	Pn	00 33 55.8	-0.3
PPLA				S	Sn	00 34 09.7	-0.8
HUR	Hurricane	0.97	37	P	Pn	00 33 56.8	+0.1
HUR				S	Sn	00 34 11.2	-0.4
GHO	Glory Hole Cre	1.05	114	P	Pn	00 33 58.0	+0.4
GHO				S	Sn	00 34 14.3	+1.0
PMR	Palmer	1.06	125	P	Pn	00 33 57.7	+0.1
PMR				S	Sn	00 34 13.5	+0.2
SPCG	Spurr Capps Gl	1.06	210	P	Pn	00 33 58.0	+0.2
SPCG				S	Sn	00 34 13.5	-0.1
FIB	Fire Island	1.11	161	P	Pn	00 33 59.6	+1.4
SPCP	Crater Peak Br	1.11	212	P	Pn	00 33 58.8	+0.3
SPCP				S	Sn	00 34 15.2	+0.4
SPCR	Spurr Chakacha	1.19	211	P	Pn	00 33 59.3	+0.1
SPCR				S	Sn	00 34 15.8	-0.2
RC01	Rabbit Creek A	1.27	153	P	Pn	00 34 00.0	0.0
TRF	Thorofare Moun	1.28	13	P	Pn	00 34 00.6	+0.3
TRF				S	Sn	00 34 17.9	-0.2
SML	Sawmill	1.29	107	P	Pn	00 34 00.7	+0.3
CAST	Castle Rocks	1.32	337	P	Pn	00 34 00.5	-0.2
KTH	Kantishna Hill	1.34	0	P	Pn	00 34 01.4	+0.3
KNK	Knik Glacier	1.42	123	P	Pn	00 34 02.3	+0.3
PTE	Portage	1.63	145	P	Pn	00 34 04.5	0.0
SCM	Sheep Creek Mo	1.74	101	P	Pn	00 34 06.1	+0.1
MCK	McKinley	1.78	30	P	Pn	00 34 07.0	+0.6
DFR	Drift River	1.83	208	P	Pn	00 34 07.6	+0.4
RDJH	Redoubt Jeurge	1.86	210	P	Pn	00 34 08.4	+0.8
BPAW	Bear Paw Mtn.	1.89	359	P	Pn	00 34 07.7	-0.2
RDWB	Redoubt West	1.96	209	P	Pn	00 34 09.5	+0.6
BWN	Browne	2.07	18	P	Pn	00 34 10.9	+0.7
GLI	Glacier Island	2.27	124	P	Pn	00 34 12.5	-0.3
JPK	Jack Peak	2.37	117	P	Pn	00 34 14.7	+0.5
TT01	Tatalina	2.46	289	P	Pn	00 34 15.4	+0.3
KLU	Klutina	2.48	105	P	Pn	00 34 15.5	-0.1
SVW2	Sparrevohn	2.49	245	P	Pn	00 34 15.9	+0.3
NEA	Nenana	2.52	19	P	Pn	00 34 16.1	+0.2
FID	Port Fidalgo	2.59	123	P	Pn	00 34 16.5	-0.5
WRH	Wood River Hil	2.60	28	P	Pn	00 34 17.3	+0.2
PAX	Paxson	2.64	71	P	Pn	00 34 18.5	+0.8
PS10	TAPS Pump St10	2.66	61	P	Pn	00 34 19.8	+1.9
DIV	Divide	2.69	112	P	Pn	00 34 18.1	-0.2
HARP	HAARP	2.70	83	P	Pn	00 34 19.5	+1.0
HIN	Hinchinbrook I	2.81	129	P	Pn	00 34 19.6	-0.3
CCB	Clear Creek Bu	2.82	29	P	Pn	00 34 20.0	+0.1
MLY	Manley	2.83	2	P	Pn	00 34 20.5	+0.3
PS08	TAPS Pump Stn8	2.98	37	P	Pn	00 34 22.6	+0.4
MDM	Murphy Dome	3.01	22	P	Pn	00 34 22.9	+0.3
AUW	Augustine West	3.11	205	P	Pn	00 34 25.2	+1.3
AUJK	Augustine Jueg	3.12	204	P	Pn	00 34 25.2	+1.2
ILAR	Eielson Array	3.14	33	P	Pn	00 34 24.2	-0.2
	18nm,0.3s,baz=219,slow=14,SNR=334						
ILAR				S	Sn	00 34 58.8	-2.1
	7.7nm,0.3s,baz=223,slow=22,SNR=5.8						
ILB	Eielson Array	3.14	33	P	Pn	00 34 24.5	+0.2
RIDG	Independ'e Rid	3.17	58	P	Pn	00 34 26.3	+1.5
GLM	Gilmore Dome	3.20	28	P	Pn	00 34 25.8	+0.6
BMRM	Bremner River	3.27	110	P	Pn	00 34 26.0	-0.1
GOAT	Goat Mountain	3.40	116	P	Pn	00 34 27.6	-0.3
GLB	Gilahina Butte	3.46	100	P	Pn	00 34 28.7	0.0
RAGM	Ragged Mountai	3.53	119	P	Pn	00 34 30.5	+0.9
SCRK	Sand Creek	3.62	58	P	Pn	00 34 31.4	+0.5
VRDI	Verde Repeater	3.69	102	P	Pn	00 34 31.8	-0.1
IM05	Indian Mountai	3.97	343	P	Pn	00 34 35.9	+0.5
PRP	Porcupine Dome	4.09	33	P	Pn	00 34 38.2	+1.0
KAHG	Katmai Hook Gl	4.14	207	P	Pn	00 34 39.5	+1.7
KIAG	Kiagna River	4.30	104	P	Pn	00 34 39.7	-0.4
BCA3	Beaver Creek A	4.31	75	P	Pn	00 34 40.3	+0.3
KAKN	Katmai Knife C	4.43	209	P	Pn	00 34 42.7	+0.8
KABU	Katmai Buttres	4.51	211	P	Pn	00 34 43.2	+0.4
KDAK	Kodiak Island	4.52	191	P	Pn	00 34 42.4	-0.5
	3.8nm,0.3s,baz=49,slow=6.9,SNR=91						
KDAK				S	Sn	00 35 29.6	-4.7
	0.7nm,0.3s,baz=157,slow=18,SNR=3.7						
CAHL	Cahill	4.71	210	P	Pn	00 34 47.2	+1.6
EGAK	Eagle	5.08	55	*e*Pn	Pn	00 34 50.6	+0.3
	14nm,0.6s						
OHAK	Old Harbor	5.15	194	P	Pn	00 34 49.8	-1.6
DAWY	Dawson	5.55	65	*e*Pn	Pn	00 34 57.4	+0.5
	6.3nm,0.4s						
DAWY				*e*Sn	Sn	00 35 57.3	-2.0
BM3	Burnt Mountain	5.88	25	P	Pn	00 35 01.5	+0.2
SII	Sitkinak Islan	5.91	198	P	Pn	00 35 00.9	-0.9
INK	Inuvik	9.49	42	P	Pn	00 35 51.2	+1.0
	0.5nm,0.3s,baz=234,slow=15,SNR=4.1						
YAK	Yakutsk	34.94	306	LR	LR	00 56 30.2	
	comp=Z,30nm,18.8s,baz=292,slow=40						
ZALV	Zalesovo Beam	56.18	324	P	P	00 43 06.9	+1.0
	0.8nm,0.3s,baz=33,slow=7.7,SNR=4.0						
MKAR	Makanchi Array	63.31	322	P	P	00 43 55.2	+0.3
	0.3nm,0.4s,baz=33,slow=6.4,SNR=5.6						

CASC 27 00:47:37.9±1.3**, 12°.56N**×**87°.76W, h76**^{km}±13^{km}**, ML3.6, 2D, Near coast of Nicaragua**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CSGN	Cosiguina Volc	0.46	25	⇓*e*P	Pn	00 47 51.4	+0.3
CSGN				*e*S	Sn	00 48 01.4	+0.7
CRIN	San Cristobal	0.70	79	*e*P	Pn	00 47 54.1	+0.7
CRIN				*e*S	Sn	00 48 06.3	+1.4

CRIN				IAML		00 48 07.4	
	comp=N,2μm,0.3s						
LCND	La Caˆ–ada	0.75	350	⇓*i*P	Pn	00 47 54.2	+0.3
LCND				*e*S	Sn	00 48 06.0	+0.3
LCND				IAML		00 48 10.7	
	comp=Z,2μm,0.3s						
VSM	San Miguel	1.00	330	*e*P	Pn	00 47 57.5	+0.5
LCY	Lacayo	1.00	329	*e*P	Pn	00 47 57.4	+0.4
CNGN	Cerro Negro	1.03	93	*e*P	Pn	00 47 57.4	+0.1
CNGN				*e*S	Sn	00 48 11.4	-0.2
CNGN				IAML		00 48 14.5	
	comp=N,188nm,0.4s						
PACA	Pacayal	1.06	329	*e*P	Pn	00 47 57.4	-0.2
PACA				*e*S	Sn	00 48 12.8	+0.6
PACA				IAML		00 48 14.8	
	comp=E,4μm,0.2s						
TECA	Tecapa	1.18	322	*e*P	Pn	00 47 59.8	+0.6
MOMN	Momotombo	1.20	97	*e*P	Pn	00 47 59.5	+0.2
COPN	Copaltepe	1.20	108	*e*P	Pn	00 47 59.0	-0.2
ESTN	Estel	1.46	68	*e*P	Pn	00 48 03.6	+1.0
LFRS	El Faro	1.65	310	*e*P	Pn	00 48 04.9	-0.3
MATN	Matagalpa	1.82	78	*e*P	Pn	00 48 07.1	-0.4

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*ISCJB **27** 01:00:22.8±0.6, 44°.85N±0°.07×141°.8E±0°.1, h279km, mb3.3/3, Error ellipse: s-maj=12.5km s-min=8.3km az=140.2*

*IDC **27** 01:00:23.2±1.3, 45°.18N×141°.98E, h259km±47km, mb3.0/3, mb1 3.1/3, mb1mx2.6/58, mbtmp3.6/3, Error ellipse: s-maj=112.8km s-min=49.3km az=161.0*

*JMA **27** 01:00:23.2±0.3, 44°.99N×141°.77E, h268km±3km, M2.8*

ISC 27 01:00:23.5±1.0**, 44°.83N**±0°.09×**141°.84E**±0°.09**, h279**km**, n15, σ1ˢ.02**/20**, mb3.5**/3**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSE	Soyaes	0.54	76	P	Pn	01 00 58.2	-1.6
ASAJ	Asahikawa	0.89	143	P	Pn	01 01 00.5	-0.8
	6.0nm,0.3s,baz=338,slow=5.5,SNR=20						
ASAJ				S	S	01 01 29.3	-1.7
	0.3nm,0.3s,baz=106,slow=29,SNR=3.4						
ASAJ	Asahikawa	0.89	143	P	Pn	01 01 00.4	-0.8
JMP	Maruseppu	1.36	127	P	Pn	01 01 03.4	-0.4
JTKR	Abashiri--Toko	1.71	119	P	Pn	01 01 06.0	-0.1
JTKR				*e*S	S	01 01 39.5	-0.4
JAR	Ashorobuto	2.07	137	P	Pn	01 01 09.4	+0.3
JAR				*e*S	S	01 01 45.8	+0.6
JCH	Churui	2.47	153	*e*S	S	01 01 50.3	-1.5
JRA	Rausu	2.51	110	P	Pn	01 01 13.7	+0.7
JNBK	Urakawa-nobuka	2.63	165	P	Pn	01 01 14.6	+0.4
JNBK				*e*S	S	01 01 54.6	+0.1
JAK	Akkeshi	2.76	131	*e*S	S	01 01 54.8	-1.9
JKB	Kayabe	3.00	192	P	Pn	01 01 17.7	-0.2
JKB				*e*S	S	01 01 59.7	-1.4
NEM2	Nemuro 2	3.17	116	P	Pn	01 01 19.9	+0.3
SONM	Songino Array	24.53	290	P	P	01 05 18.9	+0.9
	0.8nm,0.5s,baz=79,slow=8.6,SNR=4.7						
MKAR	Makanchi Array	40.69	295	P	P	01 07 38.1	+1.1
	0.5nm,0.6s,baz=78,slow=11,SNR=5.3						
FINES	FINESS Array B	62.12	331	P	P	01 10 14.6	-0.2
	2.1nm,1.2s,baz=56,slow=14,SNR=2.6						

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*DDA **27** 01:02:15.0, 39°.11N×29°.16E, h7km, Ml2.5*

*ISCJB **27** 01:02:15.6±0.4, 39°.07N±0°.03×29°.15E±0°.03, h9km±3km, Error ellipse: s-maj=5.6km s-min=3.5km az=172.8*

*CSEM **27** 01:02:15.5±0.2, 39°.08N×29°.15E, h8km, ML1.8, Error ellipse: s-maj=4.2km s-min=3.2km az=167.0*

*ISK **27** 01:02:15.3, 39°.10N×29°.15E, h5km, ML1.8/5*

ISC 27 01:02:15.4±0.8**, 39°.09N**±0°.03×**29°.14E**±0°.02**, h11**km±5km**, n35, σ0ˢ.43**/53**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SHAP	Saphane-Kutahy	0.09	138	PG	Pg	01 02 18.1	-0.1
SHAP				SG	Sg	01 02 19.9	-0.2
SHAP	Saphane-Kutahy	0.09	138	*e*Pg	Pg	01 02 18.1	-0.1
SHAP				*e*Sg	Sg	01 02 19.9	-0.2
SIMA	Simav-Kutahya	0.12	266	PG	Pg	01 02 18.5	-0.1
SIMA				SG	Sg	01 02 20.6	-0.2
SIMA	Simav-Kutahya	0.12	266	*e*Pg	Pg	01 02 18.5	-0.1
SIMA				*e*Sg	Sg	01 02 20.6	-0.2
SMAA	Simav-Kutahya	0.13	274	PG	Pg	01 02 18.6	0.0
SMAA				SG	Sg	01 02 21.2	+0.4
SMAA	Simav-Kutahya	0.13	274	*e*Pg	Pg	01 02 18.6	0.0
SMAA				*e*Sg	Sg	01 02 21.2	+0.4
GDZ	Gediz	0.26	91	*i* P	Pg	01 02 20.6	-0.3
GDZ				*i* S	Sg	01 02 24.3	-0.3
GDZ	Gediz	0.26	91	P	Pg	01 02 20.6	-0.3
GDZ				S	Sg	01 02 24.3	-0.3
DEMI	Demirci	0.34	262	*i* P	Pg	01 02 22.3	+0.1
DEMI				*i* S	Sg	01 02 26.5	-0.2
DEMI	Demirci	0.34	262	P	Pg	01 02 22.3	+0.1
KULA	Kula-Manisa	0.69	213	PG	Pg	01 02 28.7	-0.1
KULA	Kula-Manisa	0.69	213	*e*Pg	Pg	01 02 28.7	-0.1
DURS	Dursunbey	0.72	315	*i* P	Pb	01 02 30.2	0.0
DURS	Dursunbey	0.72	315	P	Pb	01 02 30.2	0.0
MANT	Manisa	0.76	217	*i* P	Pg	01 02 29.8	-0.3
MANT				*i* S	Sg	01 02 39.3	-0.7
MANT	Manisa	0.76	217	P	Pg	01 02 29.8	-0.3
MANT				S	Sg	01 02 39.3	-0.7
KHAL	Karahalli	0.77	159	*i* P	Pg	01 02 30.4	0.0
KHAL	Karahalli	0.77	159	P	Pg	01 02 30.4	0.0
BALB	Balikesir	1.12	300	PN	Pn	01 02 37.5	+0.4
BALB	Balikesir	1.12	300	*e*Pn	Pn	01 02 37.5	+0.4
STEP	BALIKESIR_Sava	1.14	285	*i* P	Pg	01 02 36.7	-0.7
STEP				*i* S	Sn	01 02 53.6	+0.5
STEP	BALIKESIR_Sava	1.14	285	P	Pg	01 02 36.7	-0.7
STEP				S	Sn	01 02 53.6	+0.5
IGD	Bursa	1.17	2	*i* P	Pg	01 02 37.2	-0.7
IGD				*i* S	Sg	01 02 52.9	-0.3
BORA	Eskisehir	1.28	52	PN	Pn	01 02 39.6	+0.2
BORA	Eskisehir	1.28	52	*i* P	Pn	01 02 38.6	-0.8
BORA				*i* S	Sg	01 02 56.5	-0.3
BORA	Eskisehir	1.28	52	P	Pn	01 02 38.6	-0.8
BORA	Eskisehir	1.28	52	*e*Pn	Pn	01 02 39.6	+0.2
BORA				S	Sg	01 02 56.5	-0.3
KCTX	Karacabey (Bur	1.32	333	PN	Pg	01 02 40.9	+0.1
KCTX	Karacabey (Bur	1.32	333	*e*Pn	Pg	01 02 40.9	+0.1
ESKT	Eskisehir	1.39	72	*i* P	Pg	01 02 43.3	+1.1
ESKT				*i* S	Sb	01 02 59.0	-0.4
SEYT	Eskypehyr	1.39	72	P	Pg	01 02 43.3	+1.1
SEYT				S	Sb	01 02 59.0	-0.4
YLV	Yalova	1.48	7	PN	Pb	01 02 43.3	+0.2
YLV	Yalova	1.48	7	*e*Pn	Pb	01 02 43.3	+0.2
AYDB	Zeytinkoy-Aydi	1.51	221	PN	Pb	01 02 43.9	+0.4
AYDB	Zeytinkoy-Aydi	1.51	221	*e*Pn	Pb	01 02 43.9	+0.4

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*IDC **27** 01:29:42.9±3.3, 37°.44S×179°.90E, h0km, mb4.5/2, mb1 4.7/3, mb1mx3.9/36, mbtmp4.4/3, ML3.9/1, MS3.5/1, Ms1 3.5/1, ms1mx2.5/41, Error ellipse: s-maj=122.9km s-min=28.8km az=154.0*

*NEIC **27** 01:29:44.0±0.0, 37°.61S×179°.70W, h33km, ML4.4(WEL), After WEL.*

ISC 27 01:29:42.6±1.5**, 37°.9S**±0°.2×**179°.92W**±0°.09**, h10**km**, n10, σ1ˢ.29**/10**, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.32	274	Sn	Sn	01 30 26.8	+1.9
PUZ	Puketiti	1.45	264	Sn	Sg	01 30 30.8	+1.6
MXZ	Matakaoa Point	1.45	284	Sn	Sn	01 30 27.8	-0.3
URZ	Urewera	2.37	261	Pn	Pb	01 30 23.9	-1.5
	32nm,0.3s,baz=236,slow=2.2,SNR=171						
URZ				Sn	Sb	01 30 53.5	-1.1
	106nm,0.3s,baz=164,slow=23,SNR=26						
RPZ	Rata Peaks	8.95	227	Pn	Pn	01 31 52.3	+0.3
	0.9nm,0.3s,baz=67,slow=1.4,SNR=5.8						
RPZ				Sn	Sn	01 33 27.9	-4.9
	4.1nm,0.3s,baz=2.2,slow=21,SNR=18						
DZM	Mont Dzumac	19.70	320	LR	LR	01 40 30.6	
	comp=Z,117nm,18.1s,baz=96,slow=34						
ASAR	Alice Springs	41.72	276	P	P	01 37 31.7	-0.2
	5.3nm,0.7s,baz=120,slow=8.2,SNR=48						
WRA	Warramunga Arr	43.39	281	P	P	01 37 44.6	-0.9
	2.7nm,0.4s,baz=122,slow=7.7,SNR=40						
ARCES	ARCESS Array B	145.51	345	PKPbc	PKPdf	01 49 20.7	+0.8
	3.3nm,0.8s,baz=30,slow=3.2,SNR=12						
FINES	FINESS Array B	151.45	334	PKPbc	PKPbc	01 49 36.5	+0.7
	1.7nm,0.6s,baz=51,slow=2.7,SNR=8.7						

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*ISCJB **27** 01:40:02.9±1.4, 37°.89S±0°.09×179°.75W±0°.10, h30km, mb3.9/2, Error ellipse: s-maj=14.5km s-min=8.0km az=39.7*

*NEIC **27** 01:40:03.9±0.0, 37°.60S×179°.75W, h33km, ML4.2(WEL), After WEL.*

*IDC **27** 01:40:04.0±2.9, 37°.05S×179°.63E, h0km, mb4.1/2, mb1 4.3/3, mb1mx3.8/36, mbtmp4.0/3, ML3.7/1, Error ellipse: s-maj=84.6km s-min=32.2km az=144.0*

ISC 27 01:40:05.9±1.3**, 37°.81S**±0°.10×**179°.96W**±0°.08**, h30**km**, n50, σ1ˢ.13**/54**, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.29	269	Pn	Pn	01 40 27.6	-0.3
WMGZ				Sn	Sn	01 40 45.2	+1.2
MXZ	Matakaoa Point	1.40	280	Pn	Pn	01 40 28.6	-0.7
MXZ				Sn	Sn	01 40 46.8	0.0
PUZ	Puketiti	1.43	259	Pn	Pn	01 40 29.7	-0.2
PUZ				Sn	Sn	01 40 49.9	+2.1
CNGZ	Carnagh Statio	1.59	245	Pn	Pn	01 40 33.1	+1.1
TWGZ	Tauwhareparae	1.67	257	Pn	Pn	01 40 33.4	+0.2
TKGZ	Te Karaka	1.84	249	Pn	Pn	01 40 35.9	+0.5
PRGZ	Paritu Road	2.03	236	Pn	Pn	01 40 39.1	+1.0
MWZ	Matawai	2.05	255	Pn	Pn	01 40 38.3	-0.1
MHGZ	Mahia Peninsul	2.14	231	Pn	Pn	01 40 40.3	+0.6
RAGZ	Rawiri	2.18	251	Pn	Pn	01 40 40.3	+0.1
KNZ	Kokohu	2.22	236	Pn	Pn	01 40 41.2	+0.6
SNGZ	Shannon Statio	2.33	245	Pn	Pn	01 40 42.8	+0.5
URZ	Urewera	2.36	258	Pn	Pn	01 40 43.2	+0.7
	19nm,0.3s,baz=244,slow=2.5,SNR=146						
URZ				Sn	Sn	01 41 12.2	+1.7
	15nm,0.3s,baz=45,slow=9.8,SNR=6.7						
OPRZ	Ohinepanea	2.76	268	Pn	Pn	01 40 47.8	-0.3
ARHZ	Aropaoanui	2.79	238	Pn	Pn	01 40 49.7	+1.2
TARZ	Mount Tarawera	2.82	260	Pn	Pn	01 40 49.3	+0.2
NMHZ	Naumai	2.84	242	Pn	Pn	01 40 50.1	+0.7
MCHZ	McNeill Hill	3.08	237	Pn	Pn	01 40 53.1	+0.6
BKZ	Black Stump Fm	3.09	243	Pn	Pn	01 40 53.4	+0.6
KAHZ	Kahuranaki	3.17	230	Pn	Pn	01 40 54.2	+0.5
PXZ	Pawanui	3.32	227	Pn	Pn	01 40 55.4	-0.4
BHHZ	Black Hill Sta	3.54	241	Pn	Pn	01 40 59.1	+0.2
PRHZ	Porangahau	3.61	226	Pn	Pn	01 40 58.8	-1.0
PNHZ	Pukenui	3.66	234	Pn	Pn	01 41 00.3	-0.2
OTVZ	Oturere	3.69	247	Pn	Pn	01 41 01.1	+0.1
MOVZ	Moawhango	3.72	243	Pn	Pn	01 41 02.6	+1.3
TUVZ	Tukino	3.73	246	Pn	Pn	01 41 02.9	+1.3
WHVZ	Whangaehu Hut	3.79	246	Pn	Pn	01 41 02.8	+0.3
WNVZ	Wahianoa	3.80	245	Pn	Pn	01 41 02.6	+0.1
TSZ	Takapari Road	3.89	234	Pn	Pn	01 41 03.1	-0.6
DVHZ	Dannevirke	3.91	229	Pn	Pn	01 41 03.3	-0.6
BFZ	Birch Farm	4.11	225	Pn	Pn	01 41 04.4	-2.3
PRWZ	Pori Road	4.18	228	Pn	Pn	01 41 07.2	-0.5
POWZ	Post Office Ro	4.20	231	Pn	Pn	01 41 08.5	+0.5
TIWZ	Tintock	4.38	226	Pn	Pn	01 41 08.9	-1.4
MRZ	Mangatainoka R	4.48	229	Pn	Pn	01 41 10.5	-1.3
TMWZ	Te Maipa	4.60	223	Pn	Pn	01 41 12.1	-1.3
HOWZ	Holdsworth Sta	4.67	227	Pn	Pn	01 41 12.4	-2.0
MTW	Mount Morrison	4.85	225	Pn	Pn	01 41 14.4	-2.4
KIW	Kapiti Island	5.01	231	Pn	Pn	01 41 17.9	-1.2
PAWZ	Paruwai Farm	5.04	224	Pn	Pn	01 41 17.0	-2.4
DUWZ	D'Urville Isla	5.61	236	Pn	Pn	01 41 25.7	-1.5
NNZ	Nelson	6.17	235	Pn	Pn	01 41 32.9	-2.1
CTZ	Chatham Island	6.44	158	Pn	Pn	01 41 39.7	+1.1
QRZ	Quartz Range	6.55	240	Pn	Pn	01 41 39.8	-0.5
THZ	Tophouse	6.76	232	Pn	Pn	01 41 40.7	-2.4
ASAR	Alice Springs	41.68	276	P	P	01 47 51.5	-0.5
	2.2nm,0.7s,baz=120,slow=8.2,SNR=18						
WRA	Warramunga Arr	43.33	281	P	P	01 48 04.3	-1.1
	1.1nm,0.4s,baz=120,slow=7.8,SNR=15						
ARCES	ARCESS Array B	145.39	345	PKP	PKPab	01 59 40.1	+0.2
	1.0nm,0.7s,baz=56,slow=4.5,SNR=4.4						
FINES	FINESS Array B	151.32	334	PKPbc	PKPbc	01 59 56.1	+0.5
	0.4nm,0.5s,baz=60,slow=3.4,SNR=3.9						

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*ISCJB **27** 02:06:54.0±0.2, 14°.65N±0°.02×90°.72W±0°.03, h200km, mb4.5/146, Error ellipse: s-maj=4.0km s-min=2.4km az=139.5*

*CASC **27** 02:06:56.8±0.5, 14°.70N×90°.63W, h188km±6km, ML3.3, mb4.7(NEIC)*

*NEIC **27** 02:06:56.6±0.6, 14°.59N×90°.61W, h216km±5km, mb4.7/174, Error ellipse: s-maj=5.7km s-min=3.7km az=220.0*

*IDC **27** 02:06:57.1±1.6, 14°.77N×90°.44W, h216km±14km, mb3.9/18, mb1 4.0/20, mb1mx3.8/49, mbtmp4.4/20, Error ellipse: s-maj=18.0km s-min=8.0km az=59.0*

ISC 27 02:06:55.2±0.4**, 14°.64N**±0°.06×**90°.62W**±0°.06**, h200**km**, n658, σ1ˢ.14**/670**, mb4.5**/146**, 3C, Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RTR	El Retiro	1.20	128	⇑*i*P	Pn	02 07 28.1	+1.4
MTO3	Montecristo	1.24	101	*i* P	Pn	02 07 28.4	+1.4
MTO3				*e*S	Sn	02 07 53.2	+1.7
MTO3				IAML		02 07 59.2	
	comp=Z,97nm,0.7s						
SNJE	San Jose	1.25	128	⇑*i*P	Pn	02 07 28.4	+1.4
SBLS	San Blas	1.25	129	*e*P	Pn	02 07 28.4	+1.2
CEDA	San Andres	1.45	125	*e*P	Pn	02 07 29.8	+1.3
CEDA				IAML		02 08 00.0	
	comp=Z,523nm,0.4s						
BOQS	Boqueron	1.58	125	*e*P	Pn	02 07 31.4	+1.4
SNET	Serv Nac Est T	1.65	125	*e*P	Pn	02 07 31.8	+1.4
SNET				*e*S	Sn	02 07 59.1	+1.5
SNET				IAML		02 08 08.3	
	comp=Z,610nm,0.2s						
LFU	La Fuente	1.71	121	*e*P	Pn	02 07 32.7	+1.7
LBRS	Las Brisas	1.77	120	*e*P	Pn	02 07 33.5	+1.9
LFRS	El Faro	1.82	124	*e*P	Pn	02 07 33.6	+1.5
CCIG	Comitan	2.19	318	*e*Pn	Pn	02 07 35.6	-0.3
TECA	Tecapa	2.35	119	*e*P	Pn	02 07 39.4	+1.7
ESTN	Estel	4.40	110	*e*Pn	Pn	02 08 03.6	+1.5
CMIG	Matias Romero	4.77	301	P	Pn	02 08 04.5	-2.2
	comp=Z,22nm,0.3s,baz=102,slow=7.4,SNR=202						
CMIG				S	Sn	02 08 53.8	-9.3
	comp=Z,20nm,0.3s,baz=95,slow=14,SNR=17						
MYIG	MØrida	6.34	7	*e*Pn	Pn	02 08 26.6	-0.2
JTS	JuntasAbangare	7.02	127	P	Pn	02 08 37.9	+2.1
	comp=Z,16nm,0.3s,baz=28,slow=13,SNR=61						
JTS				S	Sn	02 09 52.5	-3.2
	comp=Z,4.5nm,0.3s,baz=19,slow=20,SNR=3.1						
JTS	JuntasAbangare	7.02	127	*e*Pn	Pn	02 08 37.3	+1.5
	comp=Z,37nm,0.3s						
JTS				*e*Sn	Sn	02 09 52.4	-3.2
TLIG	Tlapa	8.17	292	*e*Pn	Pn	02 08 50.2	-0.6
CBCY	The Bluff, Cay	11.55	62	*e*Pn	Pn	02 09 33.6	-0.8
MTDJ	Mount Denham	13.05	72	*e*Pn	Pn	02 09 53.8	+0.3
LNIG	Linares	13.16	322	*e*Pn	Pn	02 09 55.2	+0.4
061Z	Ochoppi	14.40	38	P	P	02 10 12.4	+0.9
	baz=221,SNR=8.8						
061Z	Ochoppi	14.40	38	*e*Pn	P	02 10 12.1	+0.6
059Z	Ave Maria	14.46	35	P	P	02 10 13.3	+1.3
	baz=218,SNR=16						
058A	Arcadia	14.84	32	P	P	02 10 18.0	+1.7
	baz=215,SNR=7.9						
060Z	West Palm Beac	15.02	37	P	P	02 10 20.4	+2.1
	baz=220						
059A	Moore Haven	15.12	34	P	P	02 10 21.2	+1.8
	baz=217,SNR=8.5						
958A	Wauchula	15.29	31	P	P	02 10 23.5	+2.2
	baz=214						
060A	Indiantown	15.61	36	P	P	02 10 26.2	+1.5
	baz=220						
857A	Zephyrhills	15.63	29	P	P	02 10 27.1	+2.0
	baz=211						
833A	Chaparral WMA,	15.86	331	P	Pn	02 10 29.1	+1.2
	baz=148						
833A	Chaparral WMA,	15.86	331	*e*P	Pn	02 10 29.1	+1.2
	comp=Z,72nm,1.4s						
DWPF	Disney Wildern	15.89	31	P	Pn	02 10 29.7	+1.6
	baz=214						
DWPF	Disney Wildern	15.89	31	*e*P	Pn	02 10 31.0	+2.9
	comp=Z,62nm,0.7s						
HKT	Hockley	15.97	343	*e*P	P	02 10 29.4	+0.7
	comp=Z,10nm,1.2s						
858A	St. Cloud	16.01	31	P	Pn	02 10 30.8	+1.2
	baz=214,SNR=6.8						
DBBC	Dabeiba	16.05	117	*e*P	Pn	02 10 32.6	+2.3
446A	Poplarville	16.11	4	P	Pn	02 10 33.0	+2.2
	baz=184						
859A	Kempfer Cattle	16.12	33	P	Pn	02 10 32.6	+1.6
	baz=216,SNR=5.7						
447A	Lucedale	16.18	6	P	Pn	02 10 33.3	+1.7
	baz=187,SNR=12						
757A	Oxford	16.28	28	P	Pn	02 10 34.0	+1.1
	baz=211						
655A	Horseshoe Beac	16.29	23	P	Pn	02 10 34.1	+1.2
	baz=206						
UREC	San Josˆ' de U	16.30	113	*e*P	P	02 10 30.6	-2.0
656A	Willston	16.45	26	P	Pn	02 10 36.3	+1.4
	baz=208						
656A	Willston	16.45	26	*e*P	Pn	02 10 37.5	+2.6
	comp=Z,51nm,0.6s						
553A	Crawfordville	16.49	19	P	Pn	02 10 36.6	+1.3
	baz=201						
758A	Lake Helen	16.70	30	P	P	02 10 38.3	+1.4
	baz=213						
342A	Flagon Creek P	16.73	355	P	Pn	02 10 39.4	+1.2
	baz=174,SNR=7.7						
342A	Flagon Creek P	16.73	355	*e*P	Pn	02 10 40.4	+2.2
	comp=Z,48nm,0.8s						
344A	Westbrook Farm	16.73	360	P	Pn	02 10 39.5	+1.3
	baz=180						
BRAL	Brewton	16.77	11	P	Pn	02 10 40.0	+1.3
	baz=192						
341A	Kurthwood	16.78	352	P	Pn	02 10 39.9	+1.1
	baz=171,SNR=7.9						
341A	Kurthwood	16.78	352	*e*P	P	02 10 38.8	+1.1
	comp=Z,34nm,0.9s						
347A	Saraland	16.79	6	P	Pn	02 10 40.5	+1.6
	baz=187,SNR=12						
348A	Jackson	16.88	8	P	Pn	02 10 41.6	+1.6
	baz=189,SNR=9.1						
452A	Marianna	16.89	16	P	Pn	02 10 41.5	+1.4
	baz=198						
349A	Repton	16.92	10	P	Pn	02 10 41.6	+1.1
	baz=191						
657A	Interlachen	16.92	27	P	Pn	02 10 41.1	+0.5
	baz=210						
555A	McAlpin	16.94	23	P	Pn	02 10 42.0	+1.3
	baz=206						
555A	McAlpin	16.94	23	*e*P	Pn	02 10 42.5	+1.8
	comp=Z,110nm,0.9s						
ZARC	Zaragoza, Cauc	17.01	113	*e*P	P	02 10 39.2	-1.2
HELC	Santa Helena	17.04	118	*e*P	P	02 10 42.7	+1.6
	comp=Z,23nm,0.7s						
HELC	Santa Helena	17.04	118	*e*P	P	02 10 40.5	-0.6
556A	Lake Butler	17.06	25	P	P	02 10 42.5	+1.8
	baz=208						
PLMC	San Josˆ' del	17.11	123	*e*P	P	02 10 41.9	+0.3
453A	Whigham	17.14	19	P	Pn	02 10 44.6	+1.5
	baz=201,SNR=7.7						
453A	Whigham	17.14	19	*e*P	Pn	02 10 45.0	+1.9
	comp=Z,95nm,0.8s						
350A	Dozier	17.16	13	P	Pn	02 10 43.9	+0.6
	baz=194,SNR=5.0						
243A	Waterproof	17.18	358	P	P	02 10 43.6	+1.7
	baz=177						
351A	Pinckard	17.18	15	P	P	02 10 43.8	+1.7
	baz=196,SNR=7.3						
454A	Quitman	17.24	21	P	Pn	02 10 45.0	+0.8
	baz=203,SNR=6.0						
435B	Jarrell	17.29	339	P	P	02 10 44.3	+1.0
	baz=157,SNR=5.5						
435B	Jarrell	17.29	339	*e*P	P	02 10 44.0	+0.7
	comp=Z,22nm,0.6s						
244A	Avery, Jackson	17.32	360	P	P	02 10 44.9	+1.3
	baz=180						
245A	Little AP, Sta	17.32	2	P	P	02 10 45.3	+1.7
	baz=182						
246A	Jackson Lee, B	17.35	4	P	P	02 10 45.4	+1.5
	baz=185						
557A	Orange Park	17.36	27	P	P	02 10 45.6	+1.6
	baz=210						
242A	Grayson	17.40	356	P	Pn	02 10 46.3	+0.2
	baz=175,SNR=9.1						
241A	Mo Tay, Goldon	17.43	353	P	P	02 10 46.3	+1.6
	baz=173,SNR=6.2						
241A	Mo Tay, Goldon	17.43	353	*e*P	Pn	02 10 46.9	+0.4
	comp=Z,50nm,0.7s						
247A	Quitman	17.43	6	P	Pn	02 10 47.2	+0.8
	baz=186,SNR=19						
NATX	Nacogdoches	17.43	348	P	P	02 10 45.8	+1.0
	baz=167,SNR=14						
NATX	Nacogdoches	17.43	348	*e*P	P	02 10 46.0	+1.2
VBMS	Vicksburg	17.50	0	P	Pn	02 10 47.4	+0.2
	baz=180						
VBMS	Vicksburg	17.50	0	*e*P	Pn	02 10 47.5	+0.2
	comp=Z,55nm,0.6s						
249A	Camden	17.55	10	P	Pn	02 10 48.4	+0.6
	baz=191,SNR=15						
352A	Blakely	17.55	16	P	Pn	02 10 48.7	+0.8
	baz=198,SNR=26						
352A	Blakely	17.55	16	*e*P	Pn	02 10 48.9	+1.0
	comp=Z,172nm,0.8s						
240A	Hunter Patters	17.55	351	P	Pn	02 10 48.2	+0.2
	baz=170						
248A	Dixon Mills	17.57	8	P	Pn	02 10 48.5	+0.4
	baz=189						
YOTC	Yotoco, Valle	17.61	126	*e*P	P	02 10 48.5	+1.5
353A	Camilla	17.63	18	P	Pn	02 10 49.4	+0.6
	baz=201,SNR=18						
HORQ	Saladito	17.70	127	*e*P	P	02 10 49.8	+1.6
250A	Grady	17.71	12	P	P	02 10 49.5	+1.7
	baz=194						
250A	Grady	17.71	12	*e*P	Pn	02 10 50.6	+0.9
	comp=Z,44nm,1.0s						
PTBC	PUERTO BERRIO,	17.80	115	*e*P	P	02 10 47.9	-1.2
142A	Monroe	17.87	356	P	P	02 10 51.0	+1.5
	baz=176						
JCT	Junction City	17.88	333	P	P	02 10 51.4	+1.6
	baz=150						
JCT	Junction City	17.88	333	*e*P	P	02 10 50.7	+0.9
	comp=Z,8.4nm,0.8s						
145A	Houston Renfro	17.89	2	P	P	02 10 51.0	+1.2
	baz=182						
TIGA	Tifton	17.91	20	P	P	02 10 52.2	+2.1
	baz=202,SNR=10						
NORC	Norcasia	17.93	119	*e*P	P	02 10 51.2	+0.7
146A	Union	17.97	4	P	P	02 10 52.1	+1.4
	baz=185						
143A	Socs Landing,	17.99	358	P	P	02 10 51.9	+1.0
	baz=178						
141A	Papa Simpson,	18.00	354	P	P	02 10 52.4	+1.4
	baz=173,SNR=6.6						
251A	Midway	18.01	14	P	P	02 10 52.9	+1.8
	baz=196,SNR=32						
ANIL	Santa Ana	18.06	122	*e*P	P	02 10 54.5	+2.3
147A	Livingston	18.08	6	P	Pn	02 10 54.2	+0.2
	baz=187,SNR=13						
TOLC	Tolima	18.08	122	*e*P	Pn	02 10 57.8	+3.2
355A	Pearson	18.08	22	P	P	02 10 52.9	+1.0
	baz=205						
252A	Lumpkin	18.09	16	P	Pn	02 10 54.2	0.0
	baz=198,SNR=68						
140A	Cam and Jess,	18.12	352	P	P	02 10 53.8	+1.6
	baz=171,SNR=5.6						
148A	Greensboro	18.14	8	P	Pn	02 10 54.8	+0.1
	baz=189,SNR=39						
149A	Jones	18.21	10	P	Pn	02 10 55.6	0.0
	baz=192,SNR=13						
POPC	Popayan, Colom	18.27	130	*e*P	P	02 10 56.5	+2.1
253A	Americus	18.32	18	P	P	02 10 56.0	+1.5
	baz=200,SNR=6.4						
253A	Americus	18.32	18	*e*P	P	02 10 56.4	+1.9
	comp=Z,61nm,0.8s						
356A	Blackshear	18.34	24	P	P	02 10 55.9	+1.2
	baz=207						
WHTX	Lake Whitney,	18.36	341	P	P	02 10 55.2	+0.2
	baz=159						
WHTX	Lake Whitney,	18.36	341	*e*P	P	02 10 55.5	+0.5
	comp=Z,63nm,0.6s						
150A	Eclectic	18.37	12	P	Pn	02 10 57.6	+0.1
	baz=194,SNR=73						
151A	Opelika	18.45	14	P	Pn	02 10 58.2	-0.2
	baz=196,SNR=135						
Z46A	Louisville	18.53	4	P	Pn	02 10 59.4	0.0
	baz=185,SNR=9.4						
Z44A	Pea Ridge, Bel	18.55	0	P	P	02 10 58.4	+1.4
	baz=180						
Z42A	Norrel Spur, H	18.59	357	P	P	02 10 58.4	+1.1
	baz=176						
SOTA	Rioblanco	18.60	131	*e*P	P	02 11 00.5	+2.3
LRAL	Lakeview Retre	18.60	10	P	P	02 10 59.8	+2.2
	baz=191,SNR=22						
LRAL	Lakeview Retre	18.60	10	*e*P	P	02 10 59.8	+2.2
	comp=Z,42nm,1.0s						
Z47A	Carrollton	18.62	7	P	P	02 10 59.5	+1.9
	baz=188,SNR=29						
MARP	Paez Belalcaza	18.62	128	*e*P	Pn	02 11 01.8	+0.8

PCON	**Cinco Dias**	**18.62**	**130**	*e*P	**Pn**	**02 11 02.5**	**+1.2**
Z41A	**Richland Creek**	**18.64**	**354**	P	**P**	**02 10 59.0**	**+1.1**
	baz=173						
Z41A	**Richland Creek**	**18.64**	**354**	*e*P	**Pn**	**02 11 03.6**	**+3.0**
	comp=Z,42nm,0.8s						
Z45A	**Winona**	**18.66**	**2**	P	**P**	**02 10 59.2**	**+1.1**
	baz=183						
Z45A	**Winona**	**18.66**	**2**	*e*P	**Pn**	**02 11 03.6**	**+2.7**
	comp=Z,73nm,0.8s						
OTAV	**Otavalo**	**18.70**	**139**	*e*P	**P**	**02 11 00.7**	**+1.5**
	comp=Z,4.2nm,0.6s						
Z40A	**Long Farm, Mag**	**18.70**	**353**	P	**P**	**02 10 59.8**	**+1.2**
	baz=172,SNR=9.2						
152A	**Waverly Hall**	**18.73**	**16**	P	**P**	**02 11 01.1**	**+2.2**
	baz=198,SNR=62						
152A	**Waverly Hall**	**18.73**	**16**	*e*P	**P**	**02 11 01.1**	**+2.2**
	comp=Z,89nm,0.7s						
CRUC	**La Cruz**	**18.74**	**133**	*e*P	**Pn**	**02 11 03.8**	**+1.4**
255A	**Hazlehurst**	**18.75**	**22**	P	**P**	**02 11 00.4**	**+1.4**
	baz=205						
255A	**Hazlehurst**	**18.75**	**22**	*e*P	**P**	**02 11 00.7**	**+1.7**
	comp=Z,33nm,0.8s						
ROSC	**El Rosal**	**18.77**	**120**	*e*P	**P**	**02 11 02.4**	**+2.4**
	comp=Z,10nm,0.7s						
Z49A	**Columbiana**	**18.84**	**11**	P	**P**	**02 11 02.4**	**+2.3**
	baz=192,SNR=47						
Z48A	**Northport**	**18.86**	**8**	P	**P**	**02 11 02.0**	**+1.8**
	baz=189,SNR=14						
BARC	**Barichara**	**18.90**	**113**	*e*P	**P**	**02 11 01.8**	**+0.6**
PRAC	**Prado**	**18.93**	**123**	*e*P	**P**	**02 11 04.1**	**+2.8**
	comp=Z,23nm,0.4s						
PRAC	**Prado**	**18.93**	**123**	*e*P	**P**	**02 11 03.1**	**+1.8**
TXAR	**Lajitas Array**	**18.95**	**323**	P	**P**	**02 11 02.2**	**+0.8**
	comp=Z,0.6nm,0.3s,baz=145,slow=10.0,SNR=48						
TXAR				ScP	**ScP**	**02 18 35.3**	**+0.1**
	comp=Z,0.0nm,0.3s,baz=152,slow=5.7,SNR=6.9						
TX31	**Lajitas Ar. Si**	**18.95**	**323**	*e*P	**P**	**02 11 03.1**	**+1.7**
153A	**Fort Valley**	**18.96**	**18**	P	**P**	**02 11 02.7**	**+1.3**
	baz=200,SNR=5.6						
256A	**Glennville**	**19.01**	**23**	P	**P**	**02 11 03.5**	**+1.6**
	baz=207,SNR=5.3						
Z50A	**Ashland**	**19.01**	**12**	P	**P**	**02 11 03.9**	**+1.9**
	baz=194,SNR=98						
Z50A	**Ashland**	**19.01**	**12**	*e*P	**P**	**02 11 04.2**	**+2.2**
	comp=Z,116nm,0.6s						
Y42A	**Garnett, Star**	**19.14**	**357**	P	**P**	**02 11 04.7**	**+1.4**
	baz=176						
154A	**Montrose**	**19.15**	**20**	P	**P**	**02 11 04.8**	**+1.3**
	baz=202,SNR=8.1						
154A	**Montrose**	**19.15**	**20**	*e*P	**P**	**02 11 05.3**	**+1.8**
	comp=Z,75nm,0.8s						
Y45A	**Yeager Farm, C**	**19.16**	**3**	P	**P**	**02 11 04.9**	**+1.4**
	baz=183,SNR=11						
Y46A	**Houston**	**19.22**	**4**	P	**P**	**02 11 05.7**	**+1.5**
	baz=185,SNR=20						
Z51A	**Franklin**	**19.24**	**14**	P	**P**	**02 11 06.1**	**+1.7**
	baz=196,SNR=19						
Y41A	**Eaglette Beard**	**19.24**	**355**	P	**P**	**02 11 05.1**	**+0.7**
	baz=174,SNR=8.6						
Y44A	**Strider, Charl**	**19.24**	**1**	P	**P**	**02 11 05.2**	**+0.9**
	baz=181						
Z52A	**Williamson**	**19.30**	**16**	P	**P**	**02 11 06.9**	**+1.8**
	baz=198,SNR=29						
RUSC	**La Rusia**	**19.31**	**115**	*e*P	**P**	**02 11 05.8**	**-0.1**
	comp=Z,6.4nm,0.5s						
RUSC	**La Rusia**	**19.31**	**115**	*e*P	**P**	**02 11 07.1**	**+1.3**
Y47A	**UCPARC, Winfie**	**19.34**	**7**	P	**P**	**02 11 07.2**	**+1.8**
	baz=188,SNR=22						
CHIC	**Chingaza**	**19.38**	**119**	*e*P	**P**	**02 11 07.1**	**+0.6**
155A	**Kite**	**19.38**	**21**	P	**P**	**02 11 07.2**	**+1.4**
	baz=204,SNR=15						
Y40A	**Okolona**	**19.43**	**353**	P	**P**	**02 11 07.0**	**+0.5**
	baz=172,SNR=10						
Y48A	**Jasper**	**19.44**	**9**	P	**P**	**02 11 08.1**	**+1.6**
	baz=190,SNR=9.5						
Y49A	**Blount Mountai**	**19.51**	**11**	P	**P**	**02 11 09.0**	**+1.8**
	baz=192,SNR=14						
Y49A	**Blount Mountai**	**19.51**	**11**	*e*P	**P**	**02 11 09.3**	**+2.0**
	comp=Z,44nm,0.8s						
Z53A	**Monticello**	**19.63**	**18**	P	**P**	**02 11 09.9**	**+1.3**
	baz=200,SNR=36						
Y50A	**Piedmont**	**19.67**	**12**	P	**P**	**02 11 10.4**	**+1.4**
	baz=194,SNR=38						
VILC	**Villavicencio,**	**19.69**	**120**	*e*P	**Pn**	**02 11 13.8**	**+0.3**
ABTX	**Abilene, Hawle**	**19.70**	**337**	P	**P**	**02 11 10.3**	**+0.9**
	baz=153,SNR=7.0						
ABTX	**Abilene, Hawle**	**19.70**	**337**	*e*P	**P**	**02 11 11.0**	**+1.6**
	comp=Z,16nm,0.8s						
X45A	**UM Field Stati**	**19.73**	**3**	P	**P**	**02 11 10.0**	**+0.4**
	baz=184,SNR=7.0						
156A	**Sylvania**	**19.76**	**23**	P	**P**	**02 11 11.0**	**+1.0**
	baz=207						
GOGA	**Godfrey**	**19.78**	**18**	P	**P**	**02 11 11.4**	**+1.2**
	baz=201,SNR=34						
GOGA	**Godfrey**	**19.78**	**18**	*e*P	**P**	**02 11 11.6**	**+1.4**
	comp=Z,46nm,0.6s						
X43A	**Marvell**	**19.79**	**359**	P	**P**	**02 11 11.2**	**+1.0**
	baz=179						
OXF	**Oxford**	**19.81**	**3**	P	**P**	**02 11 10.4**	**-0.1**
	baz=183,SNR=5.5						
OXF	**Oxford**	**19.81**	**3**	*e*P	**P**	**02 11 10.9**	**+0.4**
	comp=Z,45nm,0.6s						
Z54A	**Sparta**	**19.81**	**20**	P	**P**	**02 11 11.3**	**+0.8**
	baz=203,SNR=15						
Y51A	**Rockmart**	**19.82**	**14**	P	**P**	**02 11 12.4**	**+1.7**
	baz=196,SNR=72						
X41A	**Kaden, Bauxite**	**19.84**	**355**	P	**P**	**02 11 11.0**	**+0.2**
	baz=175						
X42A	**Stuttgart**	**19.84**	**358**	P	**P**	**02 11 11.0**	**+0.2**
	baz=177						
X40A	**Basin Creek Fa**	**19.86**	**355**	P	**P**	**02 11 11.1**	**0.0**
	baz=174						
X40A	**Basin Creek Fa**	**19.86**	**355**	*e*P	**P**	**02 11 11.3**	**+0.3**
	comp=Z,43nm,1.9s						
X46A	**Booneville**	**19.91**	**5**	P	**P**	**02 11 14.0**	**+2.4**
	baz=186,SNR=36						
X47A	**Russelville**	**19.95**	**7**	P	**P**	**02 11 12.9**	**+1.0**
	baz=188,SNR=24						
SJAC	**San Juan de Ar**	**19.95**	**123**	*e*P	**P**	**02 11 16.4**	**+4.1**
X48A	**Hartselle**	**19.98**	**9**	P	**P**	**02 11 13.5**	**+1.1**
	baz=190,SNR=15						
X48A	**Hartselle**	**19.98**	**9**	*e*P	**P**	**02 11 13.7**	**+1.3**
	comp=Z,26nm,0.8s						
MIAR	**Mount Ida**	**20.00**	**353**	P	**P**	**02 11 12.2**	**-0.3**
	baz=172,SNR=13						
MIAR	**Mount Ida**	**20.00**	**353**	*e*P	**P**	**02 11 12.4**	**-0.1**
	comp=Z,14nm,0.8s						
X39A	**Fountain Ranch**	**20.03**	**352**	P	**P**	**02 11 11.9**	**-1.0**
	baz=170						
Y52A	**Lilburn**	**20.04**	**16**	P	**P**	**02 11 14.5**	**+1.5**
	baz=199,SNR=38						
Z55A	**Blythe**	**20.04**	**21**	P	**P**	**02 11 14.0**	**+1.1**
	baz=204,SNR=8.8						
UALR	**University of**	**20.11**	**356**	*e*P	**P**	**02 11 14.1**	**+0.5**
	comp=Z,25nm,0.8s						
YOPC	**Yopal, Colombi**	**20.14**	**115**	*e*P	**P**	**02 11 14.4**	**0.0**
X49A	**Woodville**	**20.16**	**10**	P	**P**	**02 11 15.6**	**+1.3**
	baz=192,SNR=23						
Y53A	**Monroe**	**20.16**	**17**	P	**P**	**02 11 15.5**	**+1.2**
	baz=200,SNR=44						
TAMC	**Tame, Arauca**	**20.21**	**112**	*e*P	**P**	**02 11 14.4**	**-0.7**
X50B	**Fort Payne**	**20.24**	**12**	P	**P**	**02 11 16.5**	**+1.4**
	baz=194,SNR=45						
SDV	**Santo Domingo**	**20.38**	**104**	P	**P**	**02 11 16.9**	**-0.1**
	comp=Z,15nm,0.5s,baz=286,slow=6.9,SNR=23						
SDV	**Santo Domingo**	**20.38**	**104**	*e*P	**P**	**02 11 16.9**	**-0.1**
	comp=Z,24nm,0.7s						
PLAL	**Pickwick Lake**	**20.38**	**6**	*e*P	**P**	**02 11 16.9**	**+0.3**
	comp=Z,20nm,0.6s						
Y54A	**Tignall**	**20.44**	**19**	P	**P**	**02 11 18.0**	**+0.8**
	baz=202,SNR=20						
W45A	**Hickory Valley**	**20.47**	**3**	P	**P**	**02 11 18.2**	**+0.7**
	baz=184,SNR=5.7						
W41B	**Gary Mavity, V**	**20.50**	**356**	P	**P**	**02 11 17.5**	**-0.3**
	baz=176,SNR=8.0						
W41B	**Gary Mavity, V**	**20.50**	**356**	*e*P	**P**	**02 11 17.9**	**+0.1**
	comp=Z,9.3nm,0.8s						
W46A	**Michie**	**20.50**	**5**	P	**P**	**02 11 19.4**	**+1.5**
	baz=186,SNR=8.8						
X51A	**Calhoun**	**20.51**	**14**	P	**P**	**02 11 18.7**	**+0.8**
	baz=196,SNR=15						
X51A	**Calhoun**	**20.51**	**14**	*e*P	**P**	**02 11 19.2**	**+1.3**
	comp=Z,50nm,0.9s						
W40A	**Ferguson Farm,**	**20.58**	**354**	P	**P**	**02 11 18.9**	**+0.2**
	baz=173						
WHAR	**Wooly Hollow**	**20.61**	**356**	*e*P	**P**	**02 11 19.3**	**+0.2**
	comp=Z,16nm,0.9s						
W39A	**Magazine**	**20.66**	**353**	P	**P**	**02 11 19.5**	**-0.1**
	baz=171,SNR=14						
W39A	**Magazine**	**20.66**	**353**	*e*P	**P**	**02 11 19.6**	**0.0**
	comp=Z,106nm,1.9s						
W48A	**Pulaski**	**20.68**	**9**	P	**P**	**02 11 20.7**	**+1.0**
	baz=190,SNR=27						
NHSC	**New Hope**	**20.69**	**26**	P	**P**	**02 11 20.7**	**+0.9**
	baz=210,SNR=6.2						
NHSC	**New Hope**	**20.69**	**26**	*e*P	**P**	**02 11 21.1**	**+1.3**
W47A	**Westpoint**	**20.70**	**7**	P	**P**	**02 11 20.4**	**+0.4**
	baz=188,SNR=20						
W49A	**Belvidere**	**20.76**	**10**	P	**P**	**02 11 21.8**	**+1.1**
	baz=192,SNR=18						
X52A	**Dahlonega**	**20.78**	**16**	P	**P**	**02 11 21.9**	**+1.0**
	baz=198,SNR=87						
X53A	**Estanollee**	**20.85**	**17**	P	**P**	**02 11 22.3**	**+0.8**
	baz=200,SNR=36						
SWET	**Sewanee**	**20.91**	**11**	*e*P	**P**	**02 11 23.3**	**+1.0**
	comp=Z,44nm,0.8s						
W50A	**Signal Mountai**	**21.02**	**12**	P	**P**	**02 11 24.1**	**+0.7**
	baz=194,SNR=28						
W50A	**Signal Mountai**	**21.02**	**12**	*e*P	**P**	**02 11 24.4**	**+0.9**
	comp=Z,47nm,0.7s						
V45A	**Humboldt**	**21.06**	**4**	P	**P**	**02 11 23.8**	**0.0**
	baz=184						
V42A	**Cord**	**21.09**	**358**	P	**P**	**02 11 23.1**	**-1.0**
	baz=178,SNR=10						
V41A	**Mountainview**	**21.10**	**357**	P	**P**	**02 11 23.5**	**-0.7**
	baz=176,SNR=16						
W51A	**Cleveland**	**21.10**	**13**	P	**P**	**02 11 25.2**	**+1.0**
	baz=196,SNR=41						
V44A	**Blytheville**	**21.11**	**2**	P	**P**	**02 11 24.6**	**+0.4**
	baz=182						
V40A	**Witts Springs**	**21.16**	**355**	P	**P**	**02 11 24.4**	**-0.6**
	baz=174,SNR=26						
V40A	**Witts Springs**	**21.16**	**355**	*e*P	**P**	**02 11 24.5**	**-0.4**
	comp=Z,25nm,0.7s						
V46A	**Holladay**	**21.19**	**6**	P	**P**	**02 11 24.6**	**-0.6**
	baz=187,SNR=21						
W52A	**Murphy**	**21.24**	**15**	P	**P**	**02 11 26.6**	**+0.9**
	baz=198,SNR=12						
V47A	**Nunnelly**	**21.28**	**7**	P	**P**	**02 11 26.1**	**+0.1**
	baz=188,SNR=24						
V39A	**Pettigrew**	**21.28**	**353**	P	**P**	**02 11 25.3**	**-0.8**
	baz=172,SNR=26						
V48A	**Smith Brothers**	**21.28**	**9**	P	**P**	**02 11 26.6**	**+0.4**
	baz=190,SNR=27						
V48A	**Smith Brothers**	**21.28**	**9**	*e*P	**P**	**02 11 26.9**	**+0.8**
	comp=Z,27nm,0.6s						
JSC	**Jenkinsville**	**21.30**	**22**	*e*P	**P**	**02 11 27.3**	**+0.9**
	comp=Z,101nm,1.5s						
WMOK	**Wichita Mounta**	**21.32**	**341**	P	**P**	**02 11 25.7**	**-0.8**
	baz=158,SNR=16						
WMOK	**Wichita Mounta**	**21.32**	**341**	*e*P	**P**	**02 11 25.1**	**-1.5**
	comp=Z,12nm,0.9s						
BG3	**Lake Jocassee**	**21.41**	**18**	*e*P	**P**	**02 11 28.8**	**+1.3**
	comp=Z,66nm,0.9s						
CPCT	**Cooper Cave**	**21.43**	**14**	*e*P	**P**	**02 11 28.8**	**+1.1**
	comp=Z,31nm,0.9s						
V49A	**McMinnville**	**21.46**	**11**	P	**P**	**02 11 28.3**	**+0.3**
	baz=192,SNR=46						
W53A	**Cullowhee**	**21.51**	**17**	P	**P**	**02 11 29.1**	**+0.5**
	baz=200,SNR=15						
V50A	**Pikevile**	**21.52**	**12**	P	**P**	**02 11 29.1**	**+0.5**
	baz=195,SNR=33						
WVT	**Waverly**	**21.54**	**6**	P	**P**	**02 11 28.6**	**-0.2**
	baz=187						
WVT	**Waverly**	**21.54**	**6**	*e*P	**P**	**02 11 29.1**	**+0.3**
	comp=Z,31nm,0.9s						
U42A	**Revenden**	**21.63**	**359**	P	**P**	**02 11 28.8**	**-0.8**
	baz=178,SNR=6.8						
U44B	**Burton Farm, H**	**21.64**	**3**	P	**P**	**02 11 29.5**	**-0.2**
	baz=183						
U41A	**Viola**	**21.64**	**357**	P	**P**	**02 11 28.9**	**-0.9**
	baz=177						
TUL1	**Leonard**	**21.68**	**349**	P	**P**	**02 11 28.9**	**-1.2**
	baz=166,SNR=31						
TUL1	**Leonard**	**21.68**	**349**	*e*P	**P**	**02 11 29.0**	**-1.2**
	comp=Z,63nm,0.6s						
MNTX	**Cornudas Mount**	**21.69**	**324**	P	**P**	**02 11 29.2**	**-1.2**
	baz=138						
MNTX	**Cornudas Mount**	**21.69**	**324**	*e*P	**P**	**02 11 30.6**	**+0.2**
	comp=Z,3.8nm,1.0s						
U40A	**Yellville**	**21.72**	**355**	P	**P**	**02 11 30.0**	**-0.5**
	baz=174,SNR=16						
U46A	**Springville**	**21.74**	**5**	P	**P**	**02 11 30.9**	**+0.1**
	baz=186,SNR=13						
U39A	**Green Forest**	**21.80**	**354**	P	**P**	**02 11 30.6**	**-0.8**
	baz=172						
V51A	**Loudon**	**21.81**	**14**	P	**P**	**02 11 32.4**	**+0.9**
	baz=196,SNR=20						
V51A	**Loudon**	**21.81**	**14**	*e*P	**P**	**02 11 32.5**	**+1.0**
	comp=Z,125nm,1.5s						
TKL	**Tuckaleechee C**	**21.81**	**15**	P	**P**	**02 11 32.8**	**+1.3**
	comp=Z,98nm,0.8s,baz=188,slow=10,SNR=99						
U47A	**Clarksville**	**21.91**	**7**	P	**P**	**02 11 32.5**	**+0.1**
	baz=189,SNR=34						
V52A	**Sevierville**	**22.03**	**15**	P	**P**	**02 11 34.7**	**+1.0**
	baz=198,SNR=26						
V52A	**Sevierville**	**22.03**	**15**	*e*P	**P**	**02 11 34.6**	**+1.0**
	comp=Z,97nm,1.1s						
KMSC	**Kings Mountain**	**22.06**	**21**	P	**P**	**02 11 34.9**	**+1.0**
	baz=204,SNR=23						
KMSC	**Kings Mountain**	**22.06**	**21**	*e*P	**P**	**02 11 34.9**	**+1.0**
	comp=Z,53nm,0.8s						
V53A	**Saluda**	**22.08**	**17**	P	**P**	**02 11 35.2**	**+1.0**
	baz=200,SNR=37						
V53A	**Saluda**	**22.08**	**17**	*e*P	**P**	**02 11 35.2**	**+1.0**
	comp=Z,46nm,0.7s						
U48A	**Cassie Pea, Po**	**22.08**	**9**	P	**P**	**02 11 34.3**	**+0.1**
	baz=190,SNR=14						
MSTX	**Muleshoe**	**22.16**	**332**	P	**P**	**02 11 33.8**	**-1.3**
	baz=148,SNR=5.6						
MSTX	**Muleshoe**	**22.16**	**332**	*e*P	**P**	**02 11 34.2**	**-0.9**
	comp=Z,10nm,0.9s						
U49A	**Red Boiling Sp**	**22.20**	**10**	P	**P**	**02 11 35.8**	**+0.5**
	baz=192,SNR=37						
U50A	**Jamestown**	**22.29**	**12**	P	**P**	**02 11 36.9**	**+0.7**
	baz=195,SNR=30						
T42A	**Van Buren**	**22.30**	**359**	P	**P**	**02 11 35.2**	**-1.0**
	baz=179,SNR=7.1						
T41A	**Mountain View**	**22.33**	**358**	P	**P**	**02 11 35.9**	**-0.6**
	baz=177,SNR=7.3						
T43A	**Greenville**	**22.35**	**1**	P	**P**	**02 11 35.9**	**-0.7**
	baz=181,SNR=9.7						
T44A	**Benton**	**22.37**	**2**	P	**P**	**02 11 36.4**	**-0.4**
	baz=183						
T39A	**Clever**	**22.43**	**354**	P	**P**	**02 11 36.7**	**-0.6**
	baz=173,SNR=10						
U51A	**La Follette**	**22.44**	**14**	P	**P**	**02 11 38.2**	**+0.8**
	baz=197,SNR=51						
T46A	**Princeton**	**22.44**	**6**	P	**P**	**02 11 37.6**	**+0.1**
	baz=187,SNR=13						
T47A	**Sharon Grove**	**22.47**	**7**	P	**P**	**02 11 38.1**	**+0.4**
	baz=189,SNR=35						
AMTX	**Amarillo**	**22.48**	**336**	P	**P**	**02 11 36.9**	**-1.1**
	baz=151						
T38A	**Diamond**	**22.54**	**352**	P	**P**	**02 11 37.6**	**-0.7**
	baz=171,SNR=11						
T48A	**Bowling Green**	**22.69**	**9**	P	**P**	**02 11 40.9**	**+1.2**
	baz=191,SNR=12						
TZTN	**Tazewell**	**22.71**	**15**	P	**P**	**02 11 40.8**	**+0.9**
	baz=198,SNR=30						
TZTN	**Tazewell**	**22.71**	**15**	*e*P	**P**	**02 11 40.8**	**+0.9**
U53A	**Fall Branch**	**22.80**	**17**	P	**P**	**02 11 41.5**	**+0.8**
	baz=200,SNR=52						
T49A	**Edmonton**	**22.82**	**11**	P	**P**	**02 11 41.4**	**+0.5**
	baz=193,SNR=41						
T49A	**Edmonton**	**22.82**	**11**	*e*P	**P**	**02 11 41.5**	**+0.6**
	comp=Z,60nm,1.0s						
S43A	**Fulton Ridge,**	**22.84**	**1**	P	**P**	**02 11 40.2**	**-0.9**
	baz=181,SNR=5.9						
S41A	**Jillco Farms,**	**22.87**	**358**	P	**P**	**02 11 40.6**	**-0.8**
	baz=177,SNR=8.4						
T50A	**Nancy**	**22.87**	**12**	P	**P**	**02 11 41.8**	**+0.4**
	baz=194,SNR=39						
S40A	**Lebanon**	**22.93**	**356**	P	**P**	**02 11 41.6**	**-0.2**
	baz=175,SNR=6.7						
S44A	**Carbondale**	**22.99**	**3**	P	**P**	**02 11 42.5**	**+0.1**
	baz=183						
S45A	**Carrier Mills**	**23.01**	**4**	P	**P**	**02 11 42.0**	**-0.6**
	baz=185						
T51A	**Gray**	**23.01**	**14**	P	**P**	**02 11 43.6**	**+1.0**
	baz=197,SNR=36						
S42A	**Caledonia**	**23.04**	**360**	P	**P**	**02 11 42.2**	**-0.6**
	baz=180						
S38A	**Stockton**	**23.08**	**353**	P	**P**	**02 11 42.5**	**-0.7**
	baz=172,SNR=19						
S39A	**Bolivar**	**23.08**	**355**	P	**P**	**02 11 42.5**	**-0.7**
	baz=173,SNR=25						
S39A	**Bolivar**	**23.08**	**355**	*e*P	**P**	**02 11 42.8**	**-0.4**
	comp=Z,27nm,0.8s						
S46A	**Don Dixon Farm**	**23.09**	**6**	P	**P**	**02 11 42.8**	**-0.5**
	baz=187,SNR=9.5						
S47A	**Hartford**	**23.10**	**8**	P	**P**	**02 11 43.2**	**-0.2**
	baz=189						
S48A	**Wiedeman Farm,**	**23.28**	**9**	P	**P**	**02 11 45.0**	**0.0**
	baz=191,SNR=12						
OBIP	**Obispado Ponce**	**23.28**	**78**	*e*P	**P**	**02 11 45.6**	**+0.3**
	comp=Z,18nm,0.8s						
CCM	**Cathedral Cave**	**23.33**	**359**	P	**P**	**02 11 45.7**	**+0.3**
	baz=178						
CCM	**Cathedral Cave**	**23.33**	**359**	*e*P	**P**	**02 11 45.7**	**+0.3**
	comp=Z,16nm,0.8s						
USIN	**University of**	**23.38**	**6**	*e*P	**P**	**02 11 46.4**	**+0.5**
	comp=Z,67nm,0.8s						
T52A	**Hallie**	**23.38**	**16**	P	**P**	**02 11 46.5**	**+0.5**
	baz=199,SNR=9.6						
NCAT	**North Carolina**	**23.45**	**23**	*e*P	**P**	**02 11 47.5**	**+0.9**
	comp=Z,35nm,1.0s						
S49A	**Springfield**	**23.53**	**11**	P	**P**	**02 11 47.5**	**+0.2**
	baz=193,SNR=21						
R42A	**Luebbering**	**23.55**	**360**	P	**P**	**02 11 46.9**	**-0.5**
	baz=180						
R43A	**Red Bud**	**23.55**	**1**	P	**P**	**02 11 46.8**	**-0.6**
	baz=182						
R44A	**Waltonville**	**23.55**	**3**	P	**P**	**02 11 47.3**	**-0.1**
	baz=184						
R41A	**Rosebud**	**23.57**	**359**	P	**P**	**02 11 47.7**	**+0.1**
	baz=178,SNR=14						
R40A	**Maddies Statio**	**23.60**	**357**	P	**P**	**02 11 47.3**	**-0.6**
	baz=176,SNR=6.7						
R40A	**Maddies Statio**	**23.60**	**357**	*e*P	**P**	**02 11 48.1**	**+0.2**
R40A				*e*pP	**pP**	**02 12 26.0**	**+0.9**
R38A	**Fenwick Farm,**	**23.63**	**354**	P	**P**	**02 11 47.2**	**-0.9**
	baz=172,SNR=14						
R46A	**Gibon Southern**	**23.64**	**6**	P	**P**	**02 11 48.5**	**+0.3**
	baz=187,SNR=13						
R45A	**Skylar, Fairfi**	**23.65**	**5**	P	**P**	**02 11 48.1**	**-0.2**
	baz=186,SNR=13						
R39A	**Chumby, Stover**	**23.67**	**355**	P	**P**	**02 11 48.0**	**-0.6**
	baz=174,SNR=14						
121A	**Cookes Peak, D**	**23.70**	**322**	P	**P**	**02 11 48.7**	**-0.4**
	baz=135,SNR=8.6						
S51A	**Beattyville**	**23.74**	**14**	P	**P**	**02 11 49.7**	**+0.5**
	baz=197,SNR=17						
S51A	**Beattyville**	**23.74**	**14**	*e*P	**P**	**02 11 50.0**	**+0.8**
	comp=Z,42nm,0.8s						
WCI	**Wyandotte Cave**	**23.80**	**8**	P	**P**	**02 11 50.1**	**+0.4**
	baz=190						
WCI	**Wyandotte Cave**	**23.80**	**8**	*e*P	**P**	**02 11 50.2**	**+0.4**
R47A	**Wooly Knot Far**	**23.84**	**8**	P	**P**	**02 11 50.1**	**0.0**
	baz=190,SNR=31						
S52A	**Salyersville**	**23.90**	**15**	P	**P**	**02 11 51.4**	**+0.7**
	baz=198,SNR=5.3						
R48A	**Northridge Ran**	**24.03**	**9**	P	**P**	**02 11 52.0**	**+0.1**
	baz=191,SNR=18						
R49A	**Shelbyville**	**24.04**	**11**	P	**P**	**02 11 52.1**	**+0.1**
	baz=193,SNR=15						
OLIL	**Olney**	**24.10**	**5**	*e*P	**P**	**02 11 52.7**	**+0.3**
	comp=Z,45nm,0.8s						
Q42A	**Golden Eagle**	**24.18**	**0**	P	**P**	**02 11 52.8**	**-0.3**
	baz=180						
R50A	**Paris**	**24.20**	**12**	P	**P**	**02 11 53.7**	**+0.3**
	baz=195,SNR=17						
Q44A	**Meyer Farm, Va**	**24.21**	**3**	P	**P**	**02 11 53.1**	**-0.3**
	baz=184						
Q43A	**New Douglas**	**24.22**	**2**	P	**P**	**02 11 53.2**	**-0.3**
	baz=182						
Q41A	**Truxton**	**24.22**	**359**	P	**P**	**02 11 53.3**	**-0.2**
	baz=178,SNR=8.6						
BLA	**Blacksburg**	**24.24**	**20**	P	**P**	**02 11 54.8**	**+0.9**
	baz=204,SNR=7.3						
BLA	**Blacksburg**	**24.24**	**20**	*e*P	**P**	**02 11 54.4**	**+0.6**
	comp=Z,23nm,0.8s						
Q45A	**Warren Harvey,**	**24.25**	**5**	P	**P**	**02 11 54.0**	**+0.1**
	baz=186,SNR=7.8						
MTP	**Monte Pirata**	**24.29**	**78**	*e*P	**P**	**02 11 53.2**	**-1.2**
	comp=Z,29nm,1.1s						
Q38A	**Cooks Store, C**	**24.37**	**354**	P	**P**	**02 11 54.1**	**-0.8**
	baz=173,SNR=8.4						
R51A	**Hillsboro**	**24.37**	**14**	P	**P**	**02 11 55.4**	**+0.5**
	baz=197,SNR=15						
Q39A	**Willow Grove F**	**24.40**	**356**	P	**P**	**02 11 54.7**	**-0.5**
	baz=174						
Q47A	**Bedord North L**	**24.48**	**8**	P	**P**	**02 11 55.9**	**0.0**
	baz=190,SNR=12						
Q48A	**North Vernon**	**24.57**	**9**	P	**P**	**02 11 56.8**	**+0.1**
	baz=191,SNR=9.2						
R52A	**Catlettsburg**	**24.63**	**15**	P	**P**	**02 11 56.9**	**-0.4**
	baz=199						
Q49A	**Aurora**	**24.79**	**11**	P	**P**	**02 11 58.8**	**+0.1**
	baz=193,SNR=9.2						
P44A	**Sand Creek, Wi**	**24.79**	**4**	P	**P**	**02 11 58.5**	**-0.2**
	baz=185						
Q50A	**Georgetown**	**24.81**	**12**	P	**P**	**02 11 58.9**	**0.0**
	baz=195,SNR=7.2						
P39B	**Salisbury**	**24.82**	**356**	P	**P**	**02 11 56.5**	**-2.4**
	baz=175						
P40A	**Paris**	**24.82**	**357**	P	**P**	**02 11 58.0**	**-1.0**
	baz=177						
P40A	**Paris**	**24.82**	**357**	*e*P	**P**	**02 11 58.5**	**-0.5**
	comp=Z,6.0nm,0.8s						
P42A	**Winchester**	**24.85**	**1**	P	**P**	**02 11 58.3**	**-1.0**
	baz=181						
P42A	**Winchester**	**24.85**	**1**	*e*P	**P**	**02 11 59.0**	**-0.3**
	comp=Z,22nm,1.3s						
STVI	**Saint Thomas**	**24.87**	**78**	*e*P	**P**	**02 11 58.5**	**-1.2**
	comp=Z,24nm,0.8s						
P45A	**Graceland, Par**	**24.92**	**5**	P	**P**	**02 11 58.9**	**-0.9**
	baz=187						
P45A	**Graceland, Par**	**24.92**	**5**	*e*P	**P**	**02 12 00.2**	**+0.3**
	comp=Z,17nm,0.6s						
P43A	**Skaggs, Pawnee**	**24.92**	**2**	P	**P**	**02 11 59.0**	**-0.9**
	baz=182						
KSU1	**Kansas State U**	**24.93**	**349**	P	**P**	**02 11 58.8**	**-1.2**
	baz=166						
KSU1	**Kansas State U**	**24.93**	**349**	*e*P	**P**	**02 11 59.5**	**-0.5**
P41A	**Barry, Barry**	**24.94**	**359**	P	**P**	**02 11 59.2**	**-0.9**
	baz=179						
CDVI	**St. Croix**	**25.01**	**79**	*e*P	**P**	**02 12 01.3**	**+0.4**
	comp=Z,42nm,0.9s						
P38A	**Dawn**	**25.02**	**355**	P	**P**	**02 11 59.8**	**-1.0**
	baz=173						
P38A	**Dawn**	**25.02**	**355**	*e*P	**P**	**02 12 00.7**	**-0.1**
	comp=Z,9.7nm,0.6s						
P47A	**Martinsville**	**25.04**	**8**	P	**P**	**02 12 00.8**	**-0.2**
	baz=190,SNR=7.0						
P46A	**Rosedale**	**25.06**	**6**	P	**P**	**02 12 01.2**	**+0.1**
	baz=188,SNR=5.9						
P37A	**Lathrop**	**25.07**	**353**	P	**P**	**02 12 00.1**	**-1.1**
	baz=172						
Q51A	**Peebles**	**25.12**	**13**	P	**P**	**02 12 02.4**	**+0.6**
	baz=197,SNR=24						
P48A	**Milroy**	**25.14**	**9**	P	**P**	**02 12 01.5**	**-0.4**
	baz=192,SNR=11						
P49A	**Miami Univ. Ec**	**25.33**	**11**	P	**P**	**02 12 03.1**	**-0.6**
	baz=193,SNR=6.2						
O41A	**Passleys Farm,**	**25.38**	**360**	P	**P**	**02 12 03.0**	**-1.0**
	baz=179						
CBKS	**Cedar Bluff**	**25.39**	**343**	P	**P**	**02 12 03.2**	**-1.0**
	baz=159						
O40A	**La Belle**	**25.41**	**358**	P	**P**	**02 12 03.5**	**-0.8**
	baz=177,SNR=6.4						
TUC	**Tucson**	**25.44**	**317**	*e*P	**P**	**02 12 06.0**	**+1.2**
	comp=Z,5.5nm,1.1s						
O44A	**Mansfield**	**25.48**	**4**	P	**P**	**02 12 04.4**	**-0.5**
	baz=185						
T25A	**Trinidad**	**25.55**	**334**	P	**P**	**02 12 06.1**	**+0.2**
	baz=148						
T25A	**Trinidad**	**25.55**	**334**	*e*P	**P**	**02 12 07.8**	**+1.9**
T25A				*e*pP	**pP**	**02 12 49.1**	**+3.3**
P50A	**Jamestown**	**25.58**	**12**	P	**P**	**02 12 05.6**	**-0.3**
	baz=195,SNR=8.8						
O45A	**Potomac**	**25.64**	**5**	P	**P**	**02 12 06.1**	**-0.2**
	baz=186,SNR=6.0						
O47A	**Sheridan**	**25.79**	**8**	P	**P**	**02 12 06.9**	**-0.8**
	baz=190,SNR=13						
O48A	**Farmland**	**25.96**	**10**	P	**P**	**02 12 08.6**	**-0.7**
	baz=192,SNR=8.2						
N41A	**Harden Midland**	**25.97**	**360**	P	**P**	**02 12 09.2**	**-0.2**
	baz=180						
O49A	**Covington**	**26.04**	**11**	P	**P**	**02 12 09.7**	**-0.3**
	baz=194						
N42A	**Yates City**	**26.09**	**1**	P	**P**	**02 12 09.6**	**-0.9**
	baz=181						
O50A	**Cable**	**26.14**	**12**	P	**P**	**02 12 10.2**	**-0.6**

	baz=195,SNR=14						
N44A	**Piper City**	**26.15**	**4**	P	**P**	**02 12 09.9**	**-1.0**
	baz=185						
N39A	**Derby Farms, D**	**26.19**	**357**	P	**P**	**02 12 10.6**	**-0.7**
	baz=176						
N37A	**Lee Faris, Mou**	**26.21**	**354**	P	**P**	**02 12 10.4**	**-1.0**
	baz=172						
CBN	**Corbin Frederi**	**26.23**	**24**	P	**P**	**02 12 10.7**	**-1.0**
	baz=210						
CBN	**Corbin Frederi**	**26.23**	**24**	*e*P	**P**	**02 12 12.7**	**+1.0**
	comp=Z,26nm,0.4s						
N45A	**Kentland**	**26.25**	**5**	P	**P**	**02 12 10.7**	**-1.1**
	baz=187						
M41A	**Milan**	**26.64**	**0**	P	**P**	**02 12 14.5**	**-0.7**
	baz=180						
M40A	**Post Highland**	**26.68**	**359**	P	**P**	**02 12 14.7**	**-1.0**
	baz=178						
M42A	**Sheffield**	**26.73**	**1**	P	**P**	**02 12 15.1**	**-1.0**
	baz=182						
M43A	**Waltham Townsh**	**26.73**	**3**	P	**P**	**02 12 15.6**	**-0.6**
	baz=184						
M44A	**Midewin, Midew**	**26.74**	**4**	P	**P**	**02 12 14.2**	**-2.0**
	baz=186						
M44A	**Midewin, Midew**	**26.74**	**4**	*e*P	**P**	**02 12 15.8**	**-0.5**
	comp=Z,45nm,1.0s						
M38A	**Pleasantville**	**26.77**	**356**	P	**P**	**02 12 15.9**	**-0.6**
	baz=174						
M39A	**Webster**	**26.77**	**357**	P	**P**	**02 12 15.5**	**-1.0**
	baz=177						
M45A	**Boilermakers S**	**26.81**	**6**	P	**P**	**02 12 15.9**	**-1.0**
	baz=187						
M37A	**Trindle Farm,**	**26.83**	**354**	P	**P**	**02 12 16.6**	**-0.4**
	baz=173						
N50A	**Nevada**	**26.84**	**13**	P	**P**	**02 12 17.2**	**+0.1**
	baz=196						
M46A	**Old House Fiel**	**26.92**	**7**	P	**P**	**02 12 18.1**	**+0.3**
	baz=189						
M36A	**Felix, Anita**	**26.96**	**353**	P	**P**	**02 12 17.6**	**-0.6**
	baz=171						
S22A	**4UR Ranch, Cre**	**27.14**	**331**	P	**P**	**02 12 19.9**	**-0.2**
	baz=144,SNR=5.4						
S22A	**4UR Ranch, Cre**	**27.14**	**331**	*e*P	**P**	**02 12 21.5**	**+1.3**
	comp=Z,6.0nm,1.3s						
L42A	**Oliver, Polo**	**27.28**	**2**	P	**P**	**02 12 20.2**	**-0.8**
	baz=182						
L40A	**Anamosa**	**27.33**	**359**	P	**P**	**02 12 20.9**	**-0.6**
	baz=179						
L40A	**Anamosa**	**27.33**	**359**	*e*P	**P**	**02 12 21.4**	**-0.1**
	comp=Z,41nm,1.5s						
L41A	**Preston**	**27.34**	**0**	P	**P**	**02 12 20.8**	**-0.7**
	baz=180						
L39A	**Vinton**	**27.41**	**358**	P	**P**	**02 12 21.6**	**-0.6**
	baz=177						
BGNE	**Belgrade**	**27.46**	**348**	P	**P**	**02 12 22.0**	**-0.6**
	baz=164						
M50A	**Fremont**	**27.46**	**12**	P	**P**	**02 12 21.9**	**-0.7**
	baz=196						
L38A	**Oak Wood Farm,**	**27.48**	**356**	P	**P**	**02 12 22.5**	**-0.3**
	baz=175						
SDMD	**Soldier’s Deli**	**27.48**	**24**	*e*P	**P**	**02 12 24.0**	**+1.2**
	comp=Z,16nm,0.6s						
L43A	**Garden Prairie**	**27.49**	**3**	P	**P**	**02 12 22.3**	**-0.6**
	baz=184						
L37A	**Phoenix Point,**	**27.52**	**355**	P	**P**	**02 12 22.6**	**-0.5**
	baz=173						
MVCO	**Mesa Verde**	**27.54**	**328**	P	**P**	**02 12 23.6**	**-0.1**
	baz=140						
MVCO	**Mesa Verde**	**27.54**	**328**	*e*P	**P**	**02 12 25.2**	**+1.5**
	comp=Z,2.8nm,0.7s						
L36A	**Harm Buss Farm**	**27.58**	**353**	P	**P**	**02 12 23.2**	**-0.5**
	baz=172						
O56A	**Blue Knob Stat**	**27.62**	**20**	P	**P**	**02 12 23.6**	**-0.5**
	baz=206,SNR=6.8						
O56A	**Blue Knob Stat**	**27.62**	**20**	*e*P	**P**	**02 12 25.1**	**+0.9**
	comp=Z,28nm,0.9s						
L48A	**N Adams**	**27.73**	**10**	P	**P**	**02 12 24.1**	**-0.8**
	baz=193,SNR=7.4						
N54A	**Moraine State**	**27.81**	**17**	P	**P**	**02 12 24.6**	**-1.2**
	baz=202,SNR=15						
N54A	**Moraine State**	**27.81**	**17**	*e*P	**P**	**02 12 26.4**	**+0.7**
	comp=Z,37nm,0.6s						
K41A	**Shullsburg**	**27.87**	**0**	P	**P**	**02 12 25.4**	**-0.8**
	baz=181,SNR=5.9						
K40A	**Colesburg**	**27.96**	**359**	P	**P**	**02 12 26.1**	**-0.9**
	baz=179						
K38A	**Parkersburg**	**27.97**	**357**	P	**P**	**02 12 26.6**	**-0.6**
	baz=176						
K39A	**Oelwein**	**27.98**	**358**	P	**P**	**02 12 26.3**	**-0.9**
	baz=177,SNR=5.3						
K43A	**Burlington**	**28.03**	**4**	P	**P**	**02 12 27.0**	**-0.7**
	baz=185						
K37A	**Belmond**	**28.15**	**355**	P	**P**	**02 12 28.2**	**-0.5**
	baz=174						
JFWS	**Jewell Farm**	**28.18**	**1**	P	**P**	**02 12 28.4**	**-0.6**
	baz=181						
JFWS	**Jewell Farm**	**28.18**	**1**	*e*P	**P**	**02 12 28.7**	**-0.3**
	comp=Z,9.7nm,0.7s						
SSPA	**Standing Stone**	**28.18**	**21**	P	**P**	**02 12 29.4**	**+0.4**
	baz=207						
SSPA	**Standing Stone**	**28.18**	**21**	*e*P	**P**	**02 12 30.0**	**+1.0**
	comp=Z,62nm,1.6s						
MVL	**Millersville**	**28.18**	**24**	*e*P	**P**	**02 12 30.4**	**+1.4**
	comp=Z,20nm,0.9s						
SMCO	**Snowmass**	**28.36**	**333**	*e*P	**P**	**02 12 31.5**	**+0.3**
	comp=Z,7.7nm,1.4s						
M54A	**Oil Creek Stat**	**28.41**	**17**	P	**P**	**02 12 30.2**	**-0.9**
	baz=203						
M54A	**Oil Creek Stat**	**28.41**	**17**	*e*P	**P**	**02 12 31.6**	**+0.5**
	comp=Z,13nm,0.6s						
PV13	**Radium Mtn., P**	**28.43**	**329**	*e*P	**P**	**02 12 33.4**	**+1.8**
	comp=Z,14nm,1.6s						
PV03	**Paradox Valley**	**28.52**	**329**	*e*P	**P**	**02 12 33.9**	**+1.6**
PV18	**Skein Mesa, Pa**	**28.54**	**329**	*e*P	**P**	**02 12 34.1**	**+1.6**
	comp=Z,6.2nm,0.8s						
PV12	**Saucer Basin,**	**28.54**	**329**	*e*P	**P**	**02 12 34.5**	**+1.9**
	comp=Z,14nm,0.7s						
PV11	**David Mesa, Pa**	**28.56**	**329**	*e*P	**P**	**02 12 34.4**	**+1.7**
	comp=Z,7.4nm,0.7s						
PV17	**East Wray Mesa**	**28.59**	**329**	*e*P	**P**	**02 12 34.5**	**+1.6**
	comp=Z,8.2nm,0.7s						
PV16	**Nyswonger Mesa**	**28.59**	**329**	*e*P	**P**	**02 12 33.6**	**+0.6**
	comp=Z,4.7nm,0.7s						
J42A	**Columbus**	**28.61**	**2**	P	**P**	**02 12 32.0**	**-0.7**
	baz=183						
J39A	**Decorah**	**28.61**	**358**	P	**P**	**02 12 31.8**	**-1.0**
	baz=178						
J38A	**Wedel Dairy, R**	**28.62**	**357**	P	**P**	**02 12 32.2**	**-0.7**
	baz=176						
J41A	**Loganville**	**28.63**	**1**	P	**P**	**02 12 32.2**	**-0.8**
	baz=181,SNR=7.7						
PV20	**West Nyswonger**	**28.64**	**329**	*e*P	**P**	**02 12 35.1**	**+1.7**
	comp=Z,8.9nm,0.9s						
J37A	**Redenius Farm,**	**28.68**	**356**	P	**P**	**02 12 33.7**	**+0.3**
	baz=174,SNR=5.1						
PV14	**Lion Creek, Pa**	**28.69**	**329**	*e*P	**P**	**02 12 34.3**	**+0.4**
	comp=Z,6.5nm,0.8s						
J43A	**Natural Harves**	**28.70**	**3**	P	**P**	**02 12 32.6**	**-1.0**
	baz=184						
PV22	**Blue Mesa, Par**	**28.70**	**329**	*e*P	**P**	**02 12 35.5**	**+1.6**
	comp=Z,4.7nm,0.7s						
PV23	**Carpenter Ridg**	**28.75**	**329**	*e*P	**P**	**02 12 36.0**	**+1.6**
	comp=Z,9.0nm,0.8s						
J36A	**Seneca 1, Swea**	**28.77**	**354**	P	**P**	**02 12 33.6**	**-0.6**
	baz=172						
ERPA	**Erie**	**28.88**	**17**	P	**P**	**02 12 35.0**	**-0.1**
	baz=202,SNR=7.0						
LUPA	**Lehigh Univers**	**29.08**	**24**	*e*P	**P**	**02 12 38.5**	**+1.4**
	comp=Z,3.9nm,0.7s						
I39A	**Houston**	**29.12**	**359**	P	**P**	**02 12 36.2**	**-1.1**
	baz=178						
I39A	**Houston**	**29.12**	**359**	*e*P	**P**	**02 12 36.9**	**-0.5**
	comp=Z,8.3nm,0.6s						
I40A	**Norwalk**	**29.15**	**0**	P	**P**	**02 12 36.5**	**-1.1**
	baz=180						
I42A	**Draeger Farm,**	**29.19**	**3**	P	**P**	**02 12 36.2**	**-1.6**
	baz=183						
I42A	**Draeger Farm,**	**29.19**	**3**	*e*P	**P**	**02 12 37.8**	**-0.1**
	comp=Z,21nm,1.0s						
N59A	**State Game Lan**	**29.20**	**23**	P	**P**	**02 12 38.4**	**+0.4**
	baz=210						
I43A	**Langenfeld Bro**	**29.22**	**4**	P	**P**	**02 12 37.7**	**-0.5**
	baz=185,SNR=6.6						
I41A	**Arkdale**	**29.32**	**1**	P	**P**	**02 12 38.4**	**-0.8**
	baz=181,SNR=6.9						
I38A	**Scanlan Farm,**	**29.34**	**357**	P	**P**	**02 12 38.5**	**-0.7**
	baz=177,SNR=9.1						
N23A	**Red Feather La**	**29.36**	**336**	P	**P**	**02 12 40.2**	**+0.3**
	baz=149						
I37A	**Lemond, Waseca**	**29.37**	**356**	P	**P**	**02 12 38.4**	**-1.1**
	baz=174,SNR=8.1						
I37A	**Lemond, Waseca**	**29.37**	**356**	*e*P	**P**	**02 12 39.4**	**-0.2**
	comp=Z,21nm,0.8s						
BC3	**Big Chuckawall**	**29.39**	**314**	P	**P**	**02 12 40.4**	**+0.4**
	baz=124						
ECSD	**EROS Data Cent**	**29.44**	**351**	P	**P**	**02 12 39.3**	**-0.9**
	baz=168,SNR=7.2						
ECSD	**EROS Data Cent**	**29.44**	**351**	*e*P	**P**	**02 12 39.7**	**-0.5**
	comp=Z,5.9nm,0.7s						
MONP2	**Monument Peak**	**29.66**	**312**	P	**P**	**02 12 42.9**	**+0.4**
	baz=122						
O20A	**White River Ci**	**29.71**	**332**	P	**P**	**02 12 43.6**	**+0.8**
	baz=144						
H42A	**Shiocton**	**29.82**	**3**	P	**P**	**02 12 43.1**	**-0.3**
	baz=184						
H40A	**Chili**	**29.88**	**0**	P	**P**	**02 12 43.4**	**-0.7**
	baz=180						
H41A	**Junction City**	**29.89**	**1**	P	**P**	**02 12 43.3**	**-0.8**
	baz=182						
H37A	**Dierke Farm, C**	**29.90**	**357**	P	**P**	**02 12 43.9**	**-0.3**
	baz=176						
H39A	**Augusta**	**29.94**	**359**	P	**P**	**02 12 43.0**	**-1.5**
	baz=179						
H38A	**Maiden Rock**	**29.97**	**358**	P	**P**	**02 12 44.1**	**-0.6**
	baz=177,SNR=9.2						
H36A	**Jessenland, He**	**29.97**	**355**	P	**P**	**02 12 44.3**	**-0.5**
	baz=174						
PAL	**Palisades**	**30.02**	**26**	P	**P**	**02 12 44.8**	**-0.5**
	baz=214						
LCMT	**Little Creek M**	**30.03**	**322**	*e*P	**P**	**02 12 47.3**	**+1.6**
	comp=Z,2.5nm,0.8s						
MMNY	**Mt. Morris Dam**	**30.05**	**19**	*e*P	**P**	**02 12 46.3**	**+0.8**
	comp=Z,38nm,0.9s						
H35A	**Sunnyside Ranc**	**30.17**	**354**	P	**P**	**02 12 46.7**	**+0.1**
	baz=172						
BINY	**Binghamton**	**30.23**	**22**	P	**P**	**02 12 47.5**	**+0.3**
	baz=209,SNR=6.2						
BINY	**Binghamton**	**30.23**	**22**	*e*P	**P**	**02 12 47.8**	**+0.7**
	comp=Z,24nm,0.6s						
P18A	**Preston Nutter**	**30.27**	**329**	*e*P	**P**	**02 12 49.4**	**+1.5**
	comp=Z,3.4nm,0.8s						
P17A	**Butcher Ranch,**	**30.40**	**328**	*e*P	**P**	**02 12 50.4**	**+1.5**
	comp=Z,7.7nm,0.8s						
G38A	**Ridgeland**	**30.45**	**358**	P	**P**	**02 12 47.9**	**-1.1**
	baz=178						
MSU	**Marysvale**	**30.46**	**325**	*e*P	**P**	**02 12 51.3**	**+1.9**
CCUT	**Cedar City**	**30.46**	**323**	*e*P	**P**	**02 12 51.6**	**+2.0**
	comp=Z,2.8nm,0.9s						
G41A	**Antigo**	**30.49**	**2**	P	**P**	**02 12 48.4**	**-1.0**
	baz=183						
SUSD	**Miller**	**30.54**	**348**	P	**P**	**02 12 48.9**	**-0.9**
	baz=164						
SPMN	**Marine on St.**	**30.54**	**357**	P	**P**	**02 12 48.9**	**-0.9**
	baz=176,SNR=12						
RWWY	**Rawlins**	**30.55**	**335**	*e*P	**P**	**02 12 50.8**	**+0.6**
	comp=Z,7.7nm,0.8s						
G39A	**Holcombe**	**30.55**	**359**	P	**P**	**02 12 48.9**	**-1.0**
	baz=179,SNR=12						
G42A	**Mountain**	**30.56**	**3**	P	**P**	**02 12 47.9**	**-2.1**
	baz=184						
G42A	**Mountain**	**30.56**	**3**	*e*P	**P**	**02 12 49.2**	**-0.7**
	comp=Z,12nm,0.9s						
G43A	**Wallace**	**30.62**	**4**	P	**P**	**02 12 48.5**	**-1.9**
	baz=186,SNR=5.1						
G43A	**Wallace**	**30.62**	**4**	*e*P	**P**	**02 12 49.5**	**-1.0**
	comp=Z,15nm,0.7s						
F41A	**Three Lakes**	**31.02**	**2**	P	**P**	**02 12 52.4**	**-1.6**
	baz=183						
F39A	**Loretta**	**31.18**	**360**	P	**P**	**02 12 53.5**	**-1.9**
	baz=179						
F40A	**Park Falls**	**31.18**	**1**	P	**P**	**02 12 54.1**	**-1.3**
	baz=181						
F36A	**Milaca**	**31.22**	**356**	P	**P**	**02 12 54.8**	**-1.0**
	baz=175,SNR=5.8						
F36A	**Milaca**	**31.22**	**356**	*e*P	**P**	**02 12 55.1**	**-0.6**
	comp=Z,6.0nm,0.8s						
F43A	**Flat Rock, Esc**	**31.23**	**5**	P	**P**	**02 12 54.6**	**-1.2**
	baz=186,SNR=6.3						
F38A	**Pierce - Schro**	**31.23**	**358**	P	**P**	**02 12 54.7**	**-1.2**
	baz=178,SNR=12						
F45A	**CMU Biological**	**31.24**	**7**	P	**P**	**02 12 54.8**	**-1.1**
	baz=190						
F35A	**Swanville**	**31.29**	**355**	P	**P**	**02 12 55.4**	**-1.0**
	baz=173						
COWI	**Conover**	**31.38**	**2**	*e*P	**P**	**02 12 56.0**	**-1.2**
	comp=Z,15nm,0.7s						
PSUT	**Pine Spring**	**31.42**	**324**	*e*P	**P**	**02 12 59.8**	**+2.0**
	comp=Z,2.6nm,0.7s						
F46A	**Macinaw City C**	**31.42**	**8**	P	**P**	**02 12 56.5**	**-1.0**
	baz=191						
F44A	**Big Bay de Noc**	**31.43**	**6**	P	**P**	**02 12 56.5**	**-1.1**
	baz=188,SNR=6.1						
TRY	**Troy**	**31.57**	**24**	*e*P	**P**	**02 13 00.1**	**+1.3**
	comp=Z,31nm,0.6s						
SADO	**Sadowa**	**31.57**	**16**	P	**P**	**02 12 58.8**	**-0.1**
	comp=Z,30nm,0.6s,baz=223,slow=9.1,SNR=44						
SADO	**Sadowa**	**31.57**	**16**	*e*P	**P**	**02 12 58.4**	**-0.5**
	comp=Z,32nm,0.7s						
E39A	**Mellen**	**31.64**	**0**	P	**P**	**02 12 58.8**	**-0.6**
	baz=180						
E40A	**Wakefield**	**31.71**	**1**	P	**P**	**02 12 59.3**	**-0.8**
	baz=181,SNR=9.8						
E41A	**Kenton**	**31.75**	**2**	P	**P**	**02 12 59.2**	**-1.2**
	baz=183						
E42A	**Champion**	**31.77**	**4**	P	**P**	**02 12 59.4**	**-1.2**
	baz=185,SNR=5.2						
E43A	**Lone Tree Farm**	**31.78**	**5**	P	**P**	**02 12 59.6**	**-1.0**
	baz=187,SNR=6.1						
E43A	**Lone Tree Farm**	**31.78**	**5**	*e*P	**P**	**02 12 59.2**	**-1.4**
	comp=Z,25nm,0.7s						
E36A	**McGregor**	**31.85**	**357**	P	**P**	**02 13 00.2**	**-1.1**
	baz=175						
E38A	**The Farm, Brul**	**31.87**	**359**	P	**P**	**02 13 00.7**	**-0.8**
	baz=178,SNR=6.3						
E45A	**Wooded Hills,**	**31.94**	**7**	P	**P**	**02 13 01.3**	**-0.8**
	baz=190						
E35A	**Pequot Lakes**	**31.97**	**355**	P	**P**	**02 13 01.5**	**-0.8**
	baz=173						
E34A	**Wadena**	**32.00**	**354**	P	**P**	**02 13 01.8**	**-0.8**
	baz=172						
R11A	**Troy Canyon, C**	**32.31**	**322**	P	**P**	**02 13 07.0**	**+1.4**
	baz=130,SNR=5.1						
R11A	**Troy Canyon, C**	**32.31**	**322**	*e*P	**P**	**02 13 07.4**	**+1.8**
	comp=Z,1.8nm,0.8s						
D41A	**Chassel**	**32.37**	**3**	P	**P**	**02 13 04.3**	**-1.5**
	baz=184						
PLVO	**Plevna**	**32.40**	**18**	*e*P	**P**	**02 13 06.6**	**+0.5**
	comp=Z,22nm,0.7s						
NCB	**Newcomb**	**32.41**	**22**	*e*P	**P**	**02 13 06.7**	**+0.5**
	comp=Z,14nm,0.6s						
PDAR	**Pinedale Array**	**32.42**	**334**	P	**P**	**02 13 07.1**	**+0.5**
	comp=Z,0.4nm,0.4s,baz=129,slow=9.4,SNR=5.3						
PDAR				ScP	**ScP**	**02 19 12.0**	**-1.9**
	comp=Z,0.5nm,0.7s,baz=132,slow=1.3,SNR=4.6						
HWUT	**Hardware Ranch**	**32.42**	**330**	*e*P	**P**	**02 13 07.7**	**+1.1**
	comp=Z,4.0nm,1.0s						
D37A	**Cotton**	**32.45**	**358**	P	**P**	**02 13 05.4**	**-1.1**
	baz=177,SNR=6.3						
D35A	**Remer**	**32.47**	**356**	P	**P**	**02 13 05.4**	**-1.3**
	baz=174,SNR=8.6						
D36A	**Goodland**	**32.51**	**357**	P	**P**	**02 13 05.9**	**-1.0**
	baz=175,SNR=6.5						
D36A	**Goodland**	**32.51**	**357**	*e*P	**P**	**02 13 06.1**	**-0.9**
	comp=Z,20nm,0.6s						
SPUT	**South Promonto**	**32.64**	**329**	*e*P	**P**	**02 13 09.8**	**+1.4**
	comp=Z,2.7nm,0.8s						
LONY	**Lake Ozonia**	**32.84**	**21**	P	**P**	**02 13 09.8**	**-0.1**
	baz=209,SNR=9.0						
LONY	**Lake Ozonia**	**32.84**	**21**	*e*P	**P**	**02 13 10.3**	**+0.4**
	comp=Z,38nm,1.1s						
C38A	**Sawbill Land.**	**32.98**	**359**	P	**P**	**02 13 09.5**	**-1.6**
	baz=179						
C36A	**Pine Crest Far**	**33.07**	**357**	P	**P**	**02 13 10.8**	**-1.0**
	baz=176,SNR=8.2						
C35A	**Jirik Farms, M**	**33.08**	**356**	P	**P**	**02 13 10.7**	**-1.2**
	baz=174,SNR=17						
C34A	**RKJ Ranch, Bem**	**33.10**	**355**	P	**P**	**02 13 10.8**	**-1.3**
	baz=172						
C40A	**Isle Royale Na**	**33.20**	**2**	P	**P**	**02 13 11.7**	**-1.3**
	baz=183						
EYMN	**Ely**	**33.21**	**359**	P	**P**	**02 13 11.8**	**-1.3**
	baz=178						
EYMN	**Ely**	**33.21**	**359**	*e*P	**P**	**02 13 11.8**	**-1.3**
	comp=Z,13nm,0.7s						
FRNY	**Flat Rock**	**33.38**	**22**	*e*P	**P**	**02 13 14.9**	**+0.3**
	comp=Z,15nm,1.0s						
REDW	**Red Top Meadow**	**33.46**	**333**	*e*P	**P**	**02 13 16.2**	**+0.5**
	comp=Z,17nm,1.3s						
SNOW	**Snow King Moun**	**33.50**	**333**	*e*P	**P**	**02 13 16.7**	**+0.7**
	comp=Z,8.8nm,0.6s						
LOHW	**Long Hollow**	**33.55**	**333**	*e*P	**P**	**02 13 16.9**	**+0.6**
	comp=Z,7.2nm,1.4s						
TPAW	**Teton Pass**	**33.61**	**333**	*e*P	**P**	**02 13 16.1**	**-0.8**
	comp=Z,18nm,1.8s						
B35A	**Bob, Littlefor**	**33.72**	**356**	P	**P**	**02 13 15.8**	**-1.6**
	baz=175,SNR=7.4						
B35A	**Bob, Littlefor**	**33.72**	**356**	*e*P	**P**	**02 13 16.1**	**-1.3**
	comp=Z,13nm,0.6s						
MOOW	**Moose Ponds**	**33.72**	**333**	*e*P	**P**	**02 13 18.0**	**+0.2**
	comp=Z,14nm,2.0s						
AGMN	**Agassiz Nation**	**33.84**	**354**	P	**P**	**02 13 17.4**	**-1.1**
	baz=171,SNR=13						
AGMN	**Agassiz Nation**	**33.84**	**354**	*e*P	**P**	**02 13 17.5**	**-0.9**
	comp=Z,21nm,0.9s						
B34A	**Aery, Baudette**	**33.91**	**355**	P	**P**	**02 13 18.0**	**-1.1**
	baz=173,SNR=15						
IMW	**Indian Meadow**	**33.93**	**333**	*e*P	**P**	**02 13 20.4**	**+0.8**
	comp=Z,1.9nm,0.6s						
MDND	**Maddock**	**33.94**	**349**	P	**P**	**02 13 19.0**	**-0.4**
	baz=164,SNR=11						
MDND	**Maddock**	**33.94**	**349**	*e*P	**P**	**02 13 19.4**	**+0.1**
	comp=Z,64nm,0.7s						
NV11	**Mina Array Sit**	**33.95**	**319**	*e*P	**P**	**02 13 21.5**	**+1.7**
	comp=Z,0.5nm,0.9s						
PTGA	**Pitinga**	**33.96**	**114**	*e*P	**P**	**02 13 19.1**	**-0.9**
	comp=Z,9.4nm,0.9s						
NV01	**Mina Array Sit**	**34.04**	**319**	*e*P	**P**	**02 13 21.8**	**+1.1**
NVAR	**Mina Array Bea**	**34.04**	**319**	P	**P**	**02 13 22.3**	**+1.7**
	comp=Z,6.3nm,0.7s,baz=135,slow=8.5,SNR=45						
NVAR				PcP	**PcP**	**02 15 53.7**	**0.0**
	comp=Z,0.2nm,0.5s,baz=160,slow=3.9,SNR=4.3						
NVAR				ScP	**ScP**	**02 19 19.1**	**-0.5**
	comp=Z,1.0nm,0.7s,baz=130,slow=4.1,SNR=7.9						
TRQ	**Mont Tremblant**	**34.25**	**20**	*e*P	**P**	**02 13 22.8**	**+0.6**
KVN	**Kaiserville**	**34.28**	**320**	*e*P	**P**	**02 13 24.0**	**+1.3**
	comp=Z,6.0nm,1.0s						
A33A	**Warroad**	**34.42**	**354**	P	**P**	**02 13 22.8**	**-0.7**
	baz=172,SNR=23						
LAO	**LASA Array**	**34.52**	**341**	P	**P**	**02 13 24.1**	**-0.3**
	baz=153						
WAKR	**Walker**	**34.80**	**318**	*e*P	**P**	**02 13 29.2**	**+2.0**
	comp=Z,16nm,1.8s						
CMB	**Columbia Colle**	**35.16**	**317**	*e*P	**P**	**02 13 31.0**	**+1.0**
	comp=Z,1.9nm,0.8s						
PNTR	**Pine Nut**	**35.24**	**319**	*e*P	**P**	**02 13 33.2**	**+2.2**
	comp=Z,7.3nm,0.7s						
HLID	**Hailey**	**35.28**	**329**	P	**P**	**02 13 31.1**	**-0.1**
	baz=138						
PKME	**Peaks-Kenny Pk**	**35.45**	**26**	P	**P**	**02 13 32.6**	**+0.3**
	baz=217						
PKME	**Peaks-Kenny Pk**	**35.45**	**26**	*e*P	**P**	**02 13 31.9**	**-0.4**
	comp=Z,19nm,1.0s						
PAHR	**Pah Rah Range**	**35.47**	**320**	*e*P	**P**	**02 13 34.4**	**+1.6**
	comp=Z,3.4nm,0.8s						
MCMT	**McKenzie Canyo**	**35.50**	**332**	*e*P	**P**	**02 13 34.6**	**+1.5**
DGMT	**Dagmar**	**35.54**	**344**	P	**P**	**02 13 33.1**	**0.0**
	baz=157						
DGMT	**Dagmar**	**35.54**	**344**	*e*P	**P**	**02 13 33.9**	**+0.8**
	comp=Z,25nm,0.8s						
BOZ	**Bozeman (W)**	**35.58**	**334**	P	**P**	**02 13 33.6**	**0.0**
	baz=144,SNR=5.2						
BOZ	**Bozeman (W)**	**35.58**	**334**	*e*P	**P**	**02 13 34.3**	**+0.6**
	comp=Z,2.8nm,0.8s						
ULM	**Lac du Bonnet**	**35.77**	**354**	P	**P**	**02 13 33.9**	**-1.1**
	comp=Z,20nm,0.7s,baz=171,slow=9.2,SNR=23						
ULM	**Lac du Bonnet**	**35.77**	**354**	*e*P	**P**	**02 13 33.8**	**-1.2**
	comp=Z,27nm,0.8s						
EMMW	**East Machias**	**35.84**	**29**	*e*P	**P**	**02 13 35.0**	**-0.6**
	comp=Z,58nm,1.7s						
SAML	**Samuel**	**35.91**	**129**	*e*P	**P**	**02 13 35.0**	**-1.6**
	comp=Z,16nm,0.7s						
LRM	**Limekiln Ridge**	**36.11**	**334**	*e*P	**P**	**02 13 38.9**	**+0.7**
EGMT	**Eagleton**	**36.86**	**338**	P	**P**	**02 13 44.5**	**+0.1**
	baz=148						
EGMT	**Eagleton**	**36.86**	**338**	*e*P	**P**	**02 13 44.9**	**+0.5**
	comp=Z,7.0nm,0.7s						
PQI	**Presque Isle**	**37.11**	**26**	*e*P	**P**	**02 13 46.0**	**-0.4**
	comp=Z,8.3nm,0.8s						
J08A	**Circle Bar Ran**	**37.25**	**326**	*e*P	**P**	**02 13 48.5**	**+0.8**
	comp=Z,7.6nm,1.0s						
O03D	**Paynes Creek**	**37.33**	**319**	P	**P**	**02 13 47.9**	**-0.5**
	baz=124						
MOD	**Modoc Plateau**	**37.35**	**322**	*e*P	**P**	**02 13 49.0**	**+0.3**
	comp=Z,3.6nm,1.0s						
MSO	**Missoula**	**37.54**	**334**	P	**P**	**02 13 49.9**	**-0.2**
	baz=141						
LPAZ	**La Paz**	**37.92**	**143**	P	**P**	**02 13 54.9**	**+0.7**
	comp=Z,2.4nm,0.7s,baz=317,slow=7.8,SNR=9.7						
LPAZ	**La Paz**	**37.92**	**143**	*e*P	**P**	**02 13 55.4**	**+1.2**
	comp=Z,2.5nm,0.8s						
M04C	**Macdoel**	**38.20**	**321**	P	**P**	**02 13 55.4**	**-0.4**
	baz=126						
F10A	**Beach Ranch, E**	**38.41**	**330**	*e*P	**P**	**02 13 57.2**	**-0.2**
	comp=Z,7.5nm,0.8s						
M02C	**Callahan**	**38.60**	**320**	P	**P**	**02 13 58.6**	**-0.5**
	baz=124						
PINE	**Pine Mountain**	**38.89**	**324**	*e*P	**P**	**02 14 01.8**	**+0.2**
	comp=Z,4.7nm,0.8s						
L02D	**Cave Junction,**	**39.49**	**320**	P	**P**	**02 14 06.3**	**-0.1**
	baz=124						
I04A	**Tendick Farm,**	**39.73**	**323**	P	**P**	**02 14 08.4**	**+0.1**
	baz=127						
G05D	**Wamic, OR**	**40.02**	**326**	P	**P**	**02 14 10.9**	**+0.3**
	baz=130						
I03D	**Drain, OR**	**40.22**	**323**	P	**P**	**02 14 12.3**	**0.0**
	baz=126						
FFC	**Flin Flon**	**40.97**	**350**	*e*P	**P**	**02 14 18.0**	**-0.2**
	comp=Z,12nm,0.6s						
G03D	**McMinnville, O**	**41.08**	**325**	P	**P**	**02 14 19.5**	**+0.2**
	baz=128						
LLLB	**Lillooet**	**43.88**	**332**	*e*P	**P**	**02 14 42.5**	**+0.7**
	comp=Z,4.4nm,0.8s						
SCHQ	**Schefferville**	**44.16**	**20**	P	**P**	**02 14 43.9**	**-0.1**
	comp=Z,80nm,0.8s,baz=219,slow=6.5,SNR=30						
SCHQ	**Schefferville**	**44.16**	**20**	*e*P	**P**	**02 14 43.9**	**-0.1**
	comp=Z,76nm,0.8s						
YKA	**Yellowknife Ar**	**50.72**	**346**	P	**P**	**02 15 33.2**	**-1.0**
	comp=Z,3.9nm,0.7s,baz=149,slow=7.7,SNR=16						
YKA				pP	**pP**	**02 16 19.2**	**+0.7**
	comp=Z,1.1nm,0.7s,baz=145,slow=7.6,SNR=2.4						
YKW3	**Yellowknife Ar**	**50.78**	**346**	*e*P	**P**	**02 15 34.7**	**0.0**
	comp=Z,8.0nm,0.9s						
BDFB	**Brasilia**	**51.75**	**124**	P	**P**	**02 15 41.8**	**-1.0**
	comp=Z,4.2nm,0.7s,baz=290,slow=9.0,SNR=7.7						
BDFB	**Brasilia**	**51.75**	**124**	*e*P	**P**	**02 15 42.5**	**-0.3**
	comp=Z,16nm,1.2s						
CPUP	**Villa Florida**	**52.03**	**141**	P	**P**	**02 15 43.7**	**-0.7**
	comp=Z,4.0nm,0.8s,baz=341,slow=7.7,SNR=9.1						
CPUP				PcP	**sP**	**02 16 54.2**	**+3.1**
	comp=Z,1.3nm,0.6s,baz=312,slow=4.3,SNR=3.3						
DLBC	**Dease Lake**	**52.62**	**335**	*e*P	**P**	**02 15 49.6**	**+1.0**
	comp=Z,3.7nm,0.8s						
PLCA	**Paso Flores**	**58.16**	**162**	P	**P**	**02 16 29.2**	**+1.0**
	comp=Z,0.9nm,0.3s,baz=355,slow=10.0,SNR=8.8						
PLCA				PcP	**PcP**	**02 17 18.4**	**+1.0**
	comp=Z,1.7nm,0.7s,baz=313,slow=5.9,SNR=4.1						
INK	**Inuvik**	**60.21**	**343**	P	**P**	**02 16 41.1**	**-0.6**
	comp=Z,5.5nm,0.6s,baz=128,slow=9.1,SNR=11						
KLU	**Klutina**	**61.00**	**333**	*e*P	**P**	**02 16 47.4**	**0.0**
	comp=Z,4.4nm,0.8s						
IL1	**Eielson Array**	**62.78**	**336**	*e*P	**P**	**02 16 57.7**	**-1.3**
ILAR	**Eielson Array**	**62.78**	**336**	P	**P**	**02 16 57.9**	**-1.2**
	comp=Z,1.8nm,0.7s,baz=169,slow=4.8,SNR=19						
ILB	**Eielson Array**	**62.78**	**336**	*e*P	**P**	**02 16 58.1**	**-1.0**
CCB	**Clear Creek Bu**	**63.09**	**336**	*e*P	**P**	**02 16 59.7**	**-1.4**
	comp=Z,8.7nm,1.7s						
WRH	**Wood River Hil**	**63.13**	**336**	*e*P	**P**	**02 16 59.9**	**-1.5**
	comp=Z,16nm,1.9s						
TRF	**Thorofare Moun**	**63.64**	**334**	*e*P	**P**	**02 17 04.5**	**-0.4**
	comp=Z,4.4nm,0.8s						
BPAW	**Bear Paw Mtn.**	**64.16**	**335**	*e*P	**P**	**02 17 07.1**	**-1.0**
	comp=Z,2.9nm,0.7s						
MLY	**Manley**	**64.40**	**336**	*e*P	**P**	**02 17 08.9**	**-0.7**
	comp=Z,7.0nm,0.6s						
SUMG	**Summit**	**65.27**	**15**	*e*P	**P**	**02 17 15.3**	**-0.2**
	comp=Z,14nm,0.7s						
SUMG	**Summit**	**65.27**	**15**	*i* P	**P**	**02 17 15.2**	**-0.4**
	comp=Z,14nm,0.8s						
DAG	**Danmarks Havn**	**71.73**	**13**	⇑*i*P	**P**	**02 17 53.5**	**-1.5**
	comp=Z,5.6nm,0.6s						
ESK	**Eskdalemuir**	**76.64**	**36**	*e*P	**P**	**02 18 21.9**	**-1.9**
	comp=Z,9.7nm,0.7s						
EKA	**Eskdalemuir Ar**	**76.66**	**36**	P	**P**	**02 18 22.3**	**-1.6**
	comp=Z,5.1nm,0.7s,baz=272,slow=5.7,SNR=24						
ESDC	**Sonseca Array**	**78.27**	**52**	P	**P**	**02 18 31.8**	**-1.4**

	comp=Z,1.2nm,0.5s,baz=290,slow=4.7,SNR=17						
ES19	SONSECA Array	78.31	52	*e*P	P	02 18 32.0	-1.4
NB2	NORSAR Subarra	82.94	29	P	P	02 18 57.2	-0.4
	comp=Z,0.4nm,0.5s,baz=289,slow=5.1						
NOA	NORSAR Array B	82.94	29	P	P	02 18 57.2	-0.4
	comp=Z,1.0nm,0.7s,baz=288,slow=5.2,SNR=8.6						
HFS	Hagfors	84.39	29	P	P	02 19 04.2	-0.7
	comp=Z,2.5nm,0.6s,baz=259,slow=3.0,SNR=12						
SENIN	Lac Senin/Sane	84.90	44	*e*P	P	02 19 07.7	-0.3
	comp=Z,2.9nm,0.7s						
ARCES	ARCESS Array B	85.11	18	P	P	02 19 07.2	-1.1
	comp=Z,3.6nm,0.8s,baz=281,slow=4.5,SNR=13						
TUE	Stuetta	86.23	43	*e*P	P	02 19 13.9	-0.7
	comp=Z,3.9nm,0.7s						
FUORN	Ofenpass-Fuorn	86.79	43	*e*P	P	02 19 16.7	-0.6
	comp=Z,3.9nm,0.7s						
GERES	GERESS Array B	88.26	40	P	P	02 19 22.9	-1.2
	comp=Z,0.3nm,0.5s,baz=264,slow=1.3,SNR=4.1						
TORD	Torodi Ar. Bea	88.93	77	P	P	02 19 24.7	-3.0
	comp=Z,0.1nm,0.4s,baz=278,slow=4.3						
SONM	Songino Array	115.97	347	PKKPbc	PKKPbc	02 35 45.5	-2.1
	comp=Z,0.9nm,0.5s,baz=200,slow=3.9,SNR=5.3						
MKAR	Makanchi Array	118.52	6	PKP	PKPdf	02 25 16.8	-2.5
	comp=Z,0.2nm,0.3s,baz=343,slow=3.3,SNR=3.5						
BOSA	Boshof	119.41	115	PKP	PKPdf	02 25 20.5	-1.0
	comp=Z,1.2nm,0.8s,baz=203,slow=1.9,SNR=5.5						
CTAO	Charters Tower	125.66	256	*e*PKPdf	PKPdf	02 25 33.5	-0.1
LZH	Lanzhou	127.72	345	*e*PKP	PKPdf	02 25 36.8	-0.7
LZH				pPKP	pPKPdf	02 26 34.3	+5.0
LZH				sPKP		02 27 01.0	
WRAB	Tennant Creek	136.84	256	*e*PKPdf	PKPdf	02 25 54.8	0.0
WRA	Warramunga Arr	136.85	256	PKhKP	PKPpre	02 25 45.8	
	comp=Z,0.4nm,0.5s,baz=90,slow=3.9,SNR=8.1						
WRA				PKP	PKPdf	02 25 55.1	+0.3
	comp=Z,8.6nm,0.8s,baz=88,slow=2.5,SNR=48						
ASAR	Alice Springs	137.14	251	PKhKP	PKPpre	02 25 46.1	
	comp=Z,1.1nm,0.7s,baz=103,slow=3.6,SNR=10						
ASAR				PKP	PKPdf	02 25 55.5	+0.2
	comp=Z,2.8nm,0.8s,baz=103,slow=2.3,SNR=17						
MBWA	Marble Bar	150.44	253	*e*PKPbc	PKPbc	02 26 23.1	-0.7

*IDC **27** 02:23:27.6±4.6, 15°.93N×98°.12W, h0^{km}, mb3.9/5, mb1 4.2/7, mb1mx3.8/54, mbtmp3.9/7, ML3.5/2, MS3.7/29, Ms1 3.7/29, ms1mx3.6/44, Error ellipse: s-maj=83.5km s-min=26.5km az=5.0*

*MEX **27** 02:23:30.6±0.8, 15°.95N×98°.32W, h16^{km}±5^{km}, MD4.2*

*NEIC **27** 02:23:30.0±0.0, 15°.95N×98°.32W, h20^{km}, mb4.4/71, MD4.5(MEX), After MEX.*

NEIC Felt at Pinotepa Nacional.

ISC 27 02:23:32.1±1.2**, 16°.07N**±0°.07×**98°.22W**±0°.05**, h24**^{km}±7^{km}**, n324,** σ1^{s}**30**/309**, mb4.4**/59**, MS3.7**/28**, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.33	15	*i* P	Pb	02 23 38.5	-1.1
PNIG				*i* S	Sb	02 23 44.8	+0.1
TLIG	Tlapa	1.52	347	*e*P	Pn	02 23 56.0	-1.9
TLIG				*e*S	Sn	02 24 14.4	-2.5
TLIG	Tlapa	1.52	347	*e*Pn	Pn	02 23 56.3	-1.6
TLIG				*e*Sn	Sn	02 24 16.9	-0.1
VHO	Vista Hermosa	1.74	55	*e*P	Pn	02 23 59.5	-1.5
VHO				*e*S	Sn	02 24 21.2	-1.3
HUIG	Huatulco	2.05	98	*e*P	Pn	02 24 02.4	-2.7
HUIG				*i* S	Sn	02 24 27.2	-2.7
CAIG	El Cayaco	2.19	297	*e*P	Pn	02 24 02.6	-4.4
CAIG				*i* S	Sn	02 24 27.5	-5.9
CMIG	Matias Romero	3.35	72	Pn	Pn	02 24 21.2	-1.8
	16nm,0.3s,baz=252,slow=14,SNR=296						
CMIG				Sn	Sn	02 25 01.0	-1.1
	34nm,0.3s,baz=250,slow=9.3,SNR=4.7						
UNM	Universidad Na	3.37	344	*e*Pg	Pb	02 24 31.5	+0.2
UNM				*e*Sg	Sb	02 25 14.8	+2.9
LVIG	Laguna Verde	4.01	25	*e*Pn	Pn	02 24 29.3	-2.8
MOIG	Morelia	4.57	322	*e*Pg	Pb	02 24 50.4	-1.3
CCIG	Comitan	5.85	87	*e*Pn	Pn	02 24 58.3	+0.8
833A	Chaparral WMA,	12.24	355	P	Pn	02 26 25.2	+0.2
	baz=175						
H06N1	SOCORRO T-PHAS	12.49	285	T	T	02 38 42.2	
	SNR=3.4						
LPIG	La Paz	13.88	307	LR	LR	02 31 28.1	
	comp=Z,560nm,19.4s,baz=152,slow=34						
TXAR	Lajitas Array	14.12	340	Pn	Pn	02 26 51.7	+1.0
	0.0nm,0.3s,baz=155,slow=11,SNR=7.1						
TXAR				LR	LR	02 32 04.6	
	comp=Z,282nm,20.0s,baz=0.0,slow=36						
JTS	JuntasAbangare	14.13	112	Pn	Pn	02 26 53.5	+2.6
	3.2nm,0.3s,baz=23,slow=12,SNR=18						
JTS	JuntasAbangare	14.13	112	*e*Pn	Pn	02 26 50.3	-0.6
	13nm,0.7s						
WHTX	Lake Whitney,	15.86	2	P	Pn	02 27 14.1	+0.2
	baz=183						
WHTX	Lake Whitney,	15.86	2	*e*Pn	P	02 27 17.9	+0.5
	17nm,0.9s						
341A	Kurthwood	15.88	16	P	Pn	02 27 13.7	-0.3
	baz=198						
445A	Amite	16.27	25	P	Pn	02 27 18.4	-0.7
	baz=208						
ABTX	Abilene, Hawle	16.53	356	P	Pn	02 27 23.7	+1.3
	baz=176,SNR=18						
ABTX	Abilene, Hawle	16.53	356	*e*Pn	P	02 27 25.8	+0.9
	26nm,0.7s						
344A	Westbrook Farm	16.76	23	P	Pn	02 27 25.0	-0.3
	baz=206						
MNTX	Cornudas Mount	16.87	339	P	Pn	02 27 26.8	+0.1
	baz=156,SNR=5.3						
MNTX	Cornudas Mount	16.87	339	*e*Pn	Pn	02 27 26.7	0.0
	12nm,1.5s						
346A	Big Creek Wild	17.21	26	P	Pn	02 27 29.6	-1.3
	baz=210						
HSIG		17.42	320	*e*Pn	P	02 27 37.6	+2.9
	28nm,1.4s						
Z40A	Long Farm, Mag	17.66	13	P	Pn	02 27 36.3	-0.2
	baz=196						
MSTX	Muleshoe	18.29	348	P	P	02 27 43.6	-0.8
	baz=166						
MSTX	Muleshoe	18.29	348	*e*Pn	P	02 27 44.0	-0.4
	10nm,1.0s						
121A	Cookes Peak, D	18.54	334	P	P	02 27 46.7	-0.5
	baz=150						
248A	Dixon Mills	18.58	29	P	P	02 27 46.5	-0.9
	baz=213						
WMOK	Wichita Mounta	18.59	359	P	P	02 27 46.2	-1.4
	baz=179						
WMOK	Wichita Mounta	18.59	359	*e*P	P	02 27 46.3	-1.3
	12nm,1.6s						
X39A	Fountain Ranch	18.73	11	P	P	02 27 48.9	-0.2
	baz=193						
MIAR	Mount Ida	18.86	12	P	P	02 27 49.4	-1.2
	baz=194,SNR=5.2						
MIAR	Mount Ida	18.86	12	*e*P	P	02 27 49.8	-0.7
	13nm,1.2s						
X40A	Basin Creek Fa	18.96	14	P	P	02 27 51.2	-0.4
	baz=196						
AMTX	Amarillo	18.99	351	P	P	02 27 50.8	-1.3
	baz=170						
AMTX	Amarillo	18.99	351	*e*P	P	02 27 50.6	-1.4
	11nm,1.0s						
X41A	Kaden, Bauxite	19.05	15	P	P	02 27 50.5	-2.1
	baz=197						
857A	Zephyrhills	19.12	48	P	P	02 27 52.2	-1.2
	baz=234						
Z47A	Carrollton	19.36	26	P	P	02 27 55.0	-1.1
	baz=211						
Y45A	Yeager Farm, C	19.37	22	P	P	02 27 55.5	-0.6
	baz=206						
W39A	Magazine	19.45	11	P	P	02 27 57.0	0.0
	baz=193						
W39A	Magazine	19.45	11	*e*P	P	02 27 57.9	+0.9
	7.6nm,0.8s						
757A	Oxford	19.63	47	P	P	02 27 57.1	-2.0
	baz=232						
Y46A	Houston	19.64	24	P	P	02 27 57.5	-1.5
	baz=208,SNR=9.2						
LRAL	Lakeview Retre	19.71	29	P	P	02 27 57.8	-2.0
	baz=214						
Z48A	Northport	19.74	27	P	P	02 27 58.6	-1.6
	baz=212,SNR=5.3						
251A	Midway	19.75	34	P	P	02 27 58.9	-1.4
	baz=219						
W41B	Gary Mavity, V	19.76	15	P	P	02 27 59.4	-0.9
	baz=197						
TUC	Tucson	19.79	327	P	P	02 28 01.6	+0.8
	baz=142						
TUC	Tucson	19.79	327	*e*P	P	02 28 02.6	+1.8
	8.8nm,1.3s						
150A	Eclectic	19.83	32	P	P	02 28 00.1	-1.1
	baz=217						
TUL1	Leonard	19.88	6	P	P	02 28 00.4	-1.2
	baz=187						
TUL1	Leonard	19.88	6	*e*P	P	02 28 00.8	-0.9
	9.8nm,0.7s						
X45A	UM Field Stati	19.92	22	P	P	02 28 01.0	-1.2
	baz=206						
OXF	Oxford	20.00	22	P	P	02 28 00.9	-2.0
	baz=206						
252A	Lumpkin	20.04	35	P	P	02 28 01.1	-2.4
	baz=221						
Z49A	Columbiana	20.06	30	P	P	02 28 02.0	-1.6
	baz=215,SNR=5.4						
Y47A	UCPARC, Winfie	20.06	26	P	P	02 28 02.2	-1.5
	baz=210						
V39A	Pettigrew	20.11	11	P	P	02 28 03.6	-0.5
	baz=193						
151A	Opelika	20.13	33	P	P	02 28 02.9	-1.5
	baz=218						
ANMO	Albuquerque	20.19	340	P	P	02 28 06.6	+1.3
	3.1nm,0.7s,baz=150,slow=12,SNR=18						
ANMO				LR	LR	02 36 03.9	
	comp=Z,391nm,21.0s,baz=156,slow=37						
ANMO	Albuquerque	20.19	340	P	P	02 28 06.3	+1.0
	baz=157						
ANMO	Albuquerque	20.19	340	*e*P	P	02 28 06.6	+1.3
	13nm,1.3s						
TASL	Snake Pit, Alb	20.19	340	P	P	02 28 05.3	0.0
	baz=157,SNR=8.6						
TASM	ASL Pad, Albuq	20.20	340	P	P	02 28 05.6	+0.3
	baz=157,SNR=8.8						
V40A	Witts Springs	20.23	13	P	P	02 28 05.0	-0.6
	baz=195						
V40A	Witts Springs	20.23	13	*e*P	P	02 28 05.6	+0.1
	8.6nm,1.0s						
X46A	Booneville	20.34	23	P	P	02 28 05.9	-0.8
	baz=208						
Y48A	Jasper	20.36	27	P	P	02 28 06.0	-0.9
	baz=212						
V41A	Mountainview	20.36	14	P	P	02 28 06.2	-0.8
	baz=197						
Z50A	Ashland	20.40	31	P	P	02 28 06.1	-1.2
	baz=216						
Z50A	Ashland	20.40	31	*e*P	P	02 28 07.2	-0.2
	20nm,1.5s						
HHAR	Hobbs	20.48	10	*e*P	P	02 28 10.1	+1.9
	5.2nm,0.8s						
V42A	Cord	20.58	16	P	P	02 28 08.9	-0.3
	baz=199						
X47A	Russelville	20.59	25	P	P	02 28 07.6	-1.8
	baz=209,SNR=5.2						
214A	Organ Pipe Nat	20.64	323	P	P	02 28 10.2	+0.1
	baz=137						
Y49A	Blount Mountai	20.66	29	P	P	02 28 09.2	-1.0
	baz=214						
U39A	Green Forest	20.66	11	P	P	02 28 09.4	-0.8
	baz=193						
U40A	Yellville	20.76	12	P	P	02 28 10.6	-0.7
	baz=195						
X48A	Hartselle	20.88	27	P	P	02 28 11.4	-1.1
	baz=212						
PLAL	Pickwick Lake	20.91	24	*e*P	P	02 28 11.8	-1.0
	10nm,1.0s						
U41A	Viola	20.95	14	P	P	02 28 12.7	-0.6
	baz=197						
Z52A	Williamson	21.12	34	P	P	02 28 13.0	-2.1
	baz=219						
U42A	Revenden	21.13	16	P	P	02 28 13.6	-1.6
	baz=199						
T38A	Diamond	21.17	9	P	P	02 28 15.1	-0.5
	baz=191						
X49A	Woodville	21.24	28	P	P	02 28 15.1	-1.4
	baz=213						
T39A	Clever	21.31	11	P	P	02 28 16.4	-0.8
	baz=193						
W47A	Westpoint	21.34	25	P	P	02 28 16.3	-1.1
	baz=209						
154A	Montrose	21.42	37	P	P	02 28 16.8	-1.6
	baz=223						
W48A	Pulaski	21.51	26	P	P	02 28 17.6	-1.7
	baz=211,SNR=6.2						
X50B	Fort Payne	21.51	29	P	P	02 28 18.4	-1.0
	baz=215						
V46A	Holladay	21.62	23	P	P	02 28 18.7	-1.8
	baz=207,SNR=6.8						
Z53A	Monticello	21.65	35	P	P	02 28 19.0	-1.8
	baz=221						
T41A	Mountain View	21.66	14	P	P	02 28 20.2	-0.7
	baz=197						
T25A	Trinidad	21.69	347	P	P	02 28 20.7	-0.7
	baz=164,SNR=14						
T25A	Trinidad	21.69	347	*e*P	P	02 28 23.5	+2.0
	72nm,1.5s						
PBMO	Poplar Bluff	21.75	17	*e*P	P	02 28 23.9	+2.0
	41nm,1.5s						
W49A	Belvidere	21.78	27	P	P	02 28 21.0	-1.2
	baz=212						
GOGA	Godfrey	21.81	35	P	P	02 28 21.0	-1.5
	baz=221						
GOGA	Godfrey	21.81	35	*e*P	P	02 28 20.6	-1.9
	11nm,1.1s						
S38A	Stockton	21.81	9	P	P	02 28 21.2	-1.3
	baz=191,SNR=5.5						
T42A	Van Buren	21.81	15	P	P	02 28 21.9	-0.6
	baz=199						
T42A	Van Buren	21.81	15	*e*P	P	02 28 24.6	+2.0
	14nm,1.3s						
Y52A	Lilburn	21.83	33	P	P	02 28 21.6	-1.1
	baz=219						
Y52A	Lilburn	21.83	33	*e*P	P	02 28 21.9	-0.9
	10nm,1.0s						
V47A	Nunnelly	21.87	24	P	P	02 28 21.6	-1.5
	baz=209						
S39A	Bolivar	21.96	10	P	P	02 28 23.6	-0.6
	baz=193,SNR=6.6						
S39A	Bolivar	21.96	10	*e*P	P	02 28 23.6	-0.6
	17nm,1.1s						
X51A	Calhoun	21.98	31	P	P	02 28 22.9	-1.5
	baz=216						
SWET	Sewanee	22.01	28	*e*P	P	02 28 24.1	-0.7
	15nm,1.0s						
WVT	Waverly	22.02	23	P	P	02 28 23.2	-1.5
	baz=208						
WVT	Waverly	22.02	23	*e*P	P	02 28 23.4	-1.3
	17nm,1.4s						
Z54A	Sparta	22.03	36	P	P	02 28 23.6	-1.2
	baz=223						
S40A	Lebanon	22.03	12	P	P	02 28 24.0	-0.9
	baz=195,SNR=8.2						
V48A	Smith Brothers	22.07	25	P	P	02 28 23.8	-1.5
	baz=210,SNR=6.5						
V48A	Smith Brothers	22.07	25	*e*P	P	02 28 24.4	-1.0
	44nm,1.6s						
T43A	Greenville	22.08	17	P	P	02 28 24.4	-1.0
	baz=201						
Y53A	Monroe	22.08	34	P	P	02 28 23.6	-1.8
	baz=220						
S41A	Jillco Farms,	22.18	14	P	P	02 28 25.3	-1.2
	baz=197,SNR=5.2						
W50A	Signal Mountai	22.28	29	P	P	02 28 25.8	-1.8
	baz=214,SNR=6.8						
W50A	Signal Mountai	22.28	29	*e*P	P	02 28 27.1	-0.5
	11nm,0.7s						
R38A	Fenwick Farm,	22.36	9	P	P	02 28 26.8	-1.5
	baz=191						
V49A	McMinnville	22.48	27	P	P	02 28 28.4	-1.4
	baz=212						
X52A	Dahlonega	22.49	32	P	P	02 28 28.1	-1.8
	baz=218						
U47A	Clarksville	22.50	24	P	P	02 28 28.3	-1.6
	baz=208						
SDCO	Great Sand Dun	22.53	345	P	P	02 28 30.6	+0.1
	baz=162						
SDCO	Great Sand Dun	22.53	345	*e*P	P	02 28 31.4	+0.8
	7.1nm,1.3s						
Y54A	Tignall	22.57	35	P	P	02 28 28.6	-2.1
	baz=222,SNR=5.3						
S42A	Caledonia	22.59	15	P	P	02 28 29.8	-1.1
	baz=199						
S43A	Fulton Ridge,	22.59	17	P	P	02 28 30.4	-0.5
	baz=201						
R39A	Chumby, Stover	22.62	11	P	P	02 28 30.4	-0.8
	baz=193						
WUAZ	Wupatki	22.66	331	P	P	02 28 32.3	+0.6
	baz=146,SNR=8.1						
WUAZ	Wupatki	22.66	331	*e*P	P	02 28 33.6	+1.8
	21nm,1.1s						
CBKS	Cedar Bluff	22.70	357	P	P	02 28 32.0	-0.1
	baz=176						
X53A	Estanollee	22.72	33	P	P	02 28 31.0	-1.3
	baz=220						
CCM	Cathedral Cave	22.75	14	P	P	02 28 32.6	+0.1
	baz=198						
CCM	Cathedral Cave	22.75	14	*e*P	P	02 28 33.6	+1.1
	12nm,0.8s						
R40A	Maddies Statio	22.75	12	P	P	02 28 32.5	0.0
	baz=195						
R40A	Maddies Statio	22.75	12	*e*P	P	02 28 33.2	+0.7
	18nm,1.2s						
V50A	Pikevile	22.76	29	P	P	02 28 31.6	-1.1
	baz=214						
T46A	Princeton	22.80	22	P	P	02 28 32.3	-0.8
	baz=206						
U48A	Cassie Pea, Po	22.85	25	P	P	02 28 32.3	-1.3
	baz=210						
CPCT	Cooper Cave	22.85	30	*e*P	P	02 28 32.9	-0.8
	8.4nm,0.9s						
S22A	4UR Ranch, Cre	22.89	342	P	P	02 28 33.9	-0.4
	baz=159						
S22A	4UR Ranch, Cre	22.89	342	*e*P	P	02 28 36.4	+2.0
	7.6nm,1.1s						
Y12C	Blythe	22.93	323	P	P	02 28 35.0	+0.4
	baz=137						
Y12C	Blythe	22.93	323	*e*P	P	02 28 36.5	+2.0
	13nm,1.3s						
MVCO	Mesa Verde	22.94	339	*e*P	P	02 28 36.2	+1.4
	19nm,1.2s						
R41A	Rosebud	22.94	14	P	P	02 28 33.2	-1.4
	baz=197						
S44A	Carbondale	22.95	18	P	P	02 28 33.9	-0.7
	baz=203						
T47A	Sharon Grove	23.05	23	P	P	02 28 34.1	-1.6
	baz=208						
R42A	Luebbering	23.07	15	P	P	02 28 35.5	-0.4
	baz=199						
PDMCI	Parker Dam,Lak	23.12	325	P	P	02 28 37.2	+0.8
	baz=138						
SWSC	Sam W. Stewart	23.14	320	P	P	02 28 36.7	+0.1
	baz=133						
S45A	Carrier Mills	23.14	20	P	P	02 28 35.7	-1.0
	baz=204						
Q38A	Cooks Store, C	23.16	9	P	P	02 28 36.6	-0.1
	baz=192						
U49A	Red Boiling Sp	23.17	26	P	P	02 28 36.0	-0.9
	baz=212						
KSCO	Kaye Shedlock'	23.18	351	P	P	02 28 37.4	+0.3
	baz=170						
V51A	Loudon	23.22	30	P	P	02 28 36.4	-1.0
	baz=216						
V51A	Loudon	23.22	30	*e*P	P	02 28 36.8	-0.7
	11nm,1.0s						
R43A	Red Bud	23.29	17	P	P	02 28 37.3	-0.8
	baz=201						
W53A	Cullowhee	23.31	33	P	P	02 28 37.4	-1.1
	baz=219						
Q39A	Willow Grove F	23.34	10	P	P	02 28 37.6	-1.0
	baz=193						
TKL	Tuckaleechee C	23.38	31	P	P	02 28 38.9	-0.1
	5.0nm,0.9s,baz=200,slow=9.2,SNR=4.2						
BC3	Big Chuckawall	23.41	322	P	P	02 28 40.1	+0.6
	baz=135						
T48A	Bowling Green	23.43	24	P	P	02 28 37.8	-1.7
	baz=210						
Q40A	Laux Farm, Aux	23.46	12	P	P	02 28 38.7	-1.1
	baz=195						
MONP2	Monument Peak	23.49	319	P	P	02 28 40.7	+0.3
	baz=132						
U50A	Jamestown	23.50	28	P	P	02 28 38.8	-1.4
	baz=214						
R44A	Waltonville	23.51	18	P	P	02 28 39.8	-0.4
	baz=203						
IRM	Iron Mountain	23.58	323	P	P	02 28 41.9	+0.8
	baz=136,SNR=5.6						
Q41A	Truxton	23.61	14	P	P	02 28 40.5	-0.7
	baz=197						
V52A	Sevierville	23.62	31	P	P	02 28 40.2	-1.1
	baz=217						
P37A	Lathrop	23.67	7	P	P	02 28 41.8	0.0
	baz=190						
Q42A	Golden Eagle	23.73	15	P	P	02 28 41.3	-1.1
	baz=199						
T49A	Edmonton	23.77	26	P	P	02 28 41.7	-1.2
	baz=212						
PV01	Paradox Valley	23.80	339	*e*P	P	02 28 47.2	+3.9
R45A	Skylar, Fairfi	23.80	20	P	P	02 28 42.2	-0.9
	baz=204						
P39B	Salisbury	23.81	11	P	P	02 28 43.0	-0.2
	baz=193						
U51A	La Follette	23.85	29	P	P	02 28 42.5	-1.0
	baz=216						
V53A	Saluda	23.88	32	P	P	02 28 42.9	-1.0
	baz=219						
P40A	Paris	23.98	12	P	P	02 28 44.5	-0.3
	baz=195						
P40A	Paris	23.98	12	*e*P	P	02 28 45.1	+0.3
	19nm,1.3s						
PFO	Pinyon Flats O	23.99	320	P	P	02 28 45.7	+0.6
	baz=133						
T50A	Nancy	24.00	27	P	P	02 28 44.0	-1.0
	baz=213						
FRD	Ford Ranch, An	24.00	320	P	P	02 28 45.8	+0.7
	baz=132						
S48A	Wiedeman Farm,	24.04	24	P	P	02 28 44.6	-0.7
	baz=210						
Q44A	Meyer Farm, Va	24.14	18	P	P	02 28 45.9	-0.3
	baz=202						
SMCO	Snowmass	24.26	343	*e*P	P	02 28 49.4	+1.5
	23nm,1.3s						
O38A	Galt	24.32	9	P	P	02 28 47.6	-0.2
	baz=191						
GMRC	Granite Mounta	24.33	323	P	P	02 28 48.8	+0.6
	baz=136						
P41A	Barry, Barry	24.33	13	P	P	02 28 47.0	-1.0
	baz=197						
T51A	Gray	24.36	29	P	P	02 28 47.9	-0.4
	baz=215						
Q45A	Warren Harvey,	24.39	19	P	P	02 28 47.0	-1.5
	baz=204						
R47A	Wooly Knot Far	24.41	23	P	P	02 28 47.2	-1.5
	baz=208						
P42A	Winchester	24.42	15	P	P	02 28 47.6	-1.1
	baz=199						
P42A	Winchester	24.42	15	*e*P	P	02 28 49.2	+0.5
	62nm,1.8s						
WCI	Wyandotte Cave	24.44	23	P	P	02 28 47.5	-1.5
	baz=209						
WCI	Wyandotte Cave	24.44	23	*e*P	P	02 28 48.7	-0.3
	17nm,1.1s						
MURC	Murrieta	24.45	319	P	P	02 28 50.0	+0.9
	baz=131						
S49A	Springfield	24.46	25	P	P	02 28 48.2	-0.9
	baz=211						
ISCO	Idaho Springs	24.50	346	P	P	02 28 50.5	+0.6
	baz=163,SNR=11						
ISCO	Idaho Springs	24.50	346	*e*P	P	02 28 51.2	+1.2
	42nm,1.8s						
O40A	La Belle	24.59	12	P	P	02 28 50.1	-0.2
	baz=195						
PKCU	Pink Cliffs	24.67	332	*e*P	P	02 28 54.0	+2.6
	39nm,1.5s						
LCMT	Little Creek M	24.75	330	*e*P	P	02 28 53.7	+1.7
	3.6nm,1.1s						
P44A	Sand Creek, Wi	24.77	18	P	P	02 28 52.0	0.0
	baz=202						
O41A	Passleys Farm,	24.79	14	P	P	02 28 52.0	-0.2
	baz=197						
R49A	Shelbyville	24.94	25	P	P	02 28 52.6	-0.9
	baz=211						
TUQ	Turquoise Moun	24.95	324	P	P	02 28 54.6	+0.8
	baz=137,SNR=10						
OGNE	Ogallala	25.00	353	P	P	02 28 53.9	-0.3
	baz=172						
Q47A	Bedord North L	25.02	22	P	P	02 28 54.2	0.0
	baz=208						
OTAV	Otavalo	25.06	127	*e*P	P	02 28 56.0	+0.7
	2.6nm,0.6s						
S51A	Beattyville	25.07	28	P	P	02 28 54.2	-0.5
	baz=215						
P45A	Graceland, Par	25.10	19	P	P	02 28 54.0	-0.9
	baz=204						
CIS	Catalina Islan	25.10	317	P	P	02 28 54.9	-0.2
	baz=129						
BFSC	Mount Baldy Ra	25.16	320	P	P	02 28 55.7	0.0
	baz=132						
N39A	Derby Farms, D	25.21	10	P	P	02 28 55.4	-0.5

	baz=193						
FMP	Fort Macarthur	25.22	318	P	P	02 28 56.0	-0.1
	baz=130						
CCUT	Cedar City	25.24	331	eP	P	02 28 58.8	+2.3
	6.1nm,1.5s						
Q48A	North Vernon	25.27	23	P	P	02 28 56.0	-0.5
	baz=209						
R50A	Paris	25.28	26	P	P	02 28 56.0	-0.6
	baz=213						
GSC	Goldstone, Bar	25.36	322	P	P	02 28 58.0	+0.5
	baz=135						
GSC	Goldstone, Bar	25.36	322	eP	P	02 29 00.5	+3.1
	7.4nm,1.2s						
N41A	Harden Midland	25.36	13	P	P	02 28 57.6	+0.2
	baz=197						
O44A	Mansfield	25.45	18	P	P	02 28 57.7	-0.4
	baz=202						
M37A	Trindle Farm,	25.50	7	P	P	02 28 59.1	+0.5
	baz=190						
MSU	Marysvale	25.50	334	eP	P	02 29 00.4	+1.5
O20A	White River Ci	25.52	342	P	P	02 28 59.0	0.0
	baz=158						
O20A	White River Ci	25.52	342	eP	P	02 29 01.9	+3.0
	26nm,1.4s						
P47A	Martinsville	25.56	22	P	P	02 28 58.9	-0.2
	baz=208						
R51A	Hillsboro	25.62	27	P	P	02 28 59.2	-0.5
	baz=214						
N23A	Red Feather La	25.62	346	P	P	02 29 00.6	+0.5
	baz=163						
M38A	Pleasantville	25.63	9	P	P	02 28 59.4	-0.3
	baz=191						
Q49A	Aurora	25.66	24	P	P	02 28 59.0	-1.0
	baz=211						
P18A	Preston Nutter	25.71	338	eP	P	02 29 03.6	+2.7
	32nm,1.5s						
O45A	Potomac	25.76	19	P	P	02 29 00.6	-0.3
	baz=204						
M39A	Webster	25.85	10	P	P	02 29 01.8	+0.1
	baz=194						
Q50A	Georgetown	25.90	26	P	P	02 29 01.8	-0.5
	baz=213						
ROSC	El Rosal	25.98	113	LR	LR	02 39 02.2	
	comp=Z,20nm,20.7s,baz=342,slow=36						
P49A	Miami Univ. Ec	26.18	24	P	P	02 29 04.3	-0.5
	baz=211						
TPNV	Topopah Spring	26.23	326	P	P	02 29 06.8	+1.4
	baz=138						
TPNV	Topopah Spring	26.23	326	eP	P	02 29 09.6	+4.1
	15nm,1.3s						
L37A	Phoenix Point,	26.25	8	P	P	02 29 05.5	+0.2
	baz=190						
O47A	Sheridan	26.26	21	P	P	02 29 05.2	-0.2
	baz=207						
MPMC	Manual Prospec	26.28	323	P	P	02 29 06.7	+0.7
	baz=135						
Q51A	Peebles	26.32	27	P	P	02 29 05.6	-0.5
	baz=214						
L38A	Oak Wood Farm,	26.37	9	P	P	02 29 07.1	+0.7
	baz=192						
N45A	Kentland	26.38	18	P	P	02 29 06.0	-0.5
	baz=204						
L39A	Vinton	26.51	10	P	P	02 29 07.3	-0.3
	baz=194						
SBC	Santa Barbara	26.59	317	P	P	02 29 10.0	+1.5
	baz=129						
P50A	Jamestown	26.62	25	P	P	02 29 08.2	-0.6
	baz=212						
O48A	Farmland	26.64	23	P	P	02 29 09.0	0.0
	baz=209						
L41A	Preston	26.75	13	P	P	02 29 09.9	+0.1
	baz=197						
CWC	Cottonwood Cre	26.89	323	P	P	02 29 11.8	+0.4
	baz=134						
K37A	Belmond	26.89	7	P	P	02 29 11.4	+0.2
	baz=190						
O49A	Covington	26.89	24	P	P	02 29 11.0	-0.2
	baz=211						
PKM	Mcpherson Peak	26.93	318	P	P	02 29 12.6	+0.7
	baz=129						
R11A	Troy Canyon, C	26.94	329	P	P	02 29 12.4	+0.5
	baz=141						
O50A	Cable	27.15	25	P	P	02 29 13.3	-0.2
	baz=212						
DUG	Dugway, Tooele	27.18	335	P	P	02 29 15.0	+1.0
	baz=148						
DUG	Dugway, Tooele	27.18	335	eP	P	02 29 14.8	+0.8
	7.6nm,1.3s						
J36A	Seneca 1, Swea	27.37	6	P	P	02 29 15.0	-0.4
	baz=188						
J36A	Seneca 1, Swea	27.37	6	eP	P	02 29 15.2	-0.2
	6.9nm,0.8s						
K22A	Casper	27.43	347	P	P	02 29 16.9	+0.7
	baz=163						
TCUT	Toone Canyon	27.44	338	eP	P	02 29 18.7	+2.3
	18nm,1.1s						
SDV	Santo Domingo	27.84	102	LR	LR	02 40 52.7	
	comp=Z,117nm,20.8s,baz=63,slow=38						
BGU	Big Grassy Mou	27.89	336	eP	P	02 29 23.0	+2.7
	5.7nm,1.1s						
SPUT	South Promonto	28.00	337	eP	P	02 29 23.1	+1.9
	2.4nm,1.0s						
BW06	Boulder Array	28.32	342	eP	P	02 29 25.7	+1.5
	14nm,1.5s						
PDAR	Pinedale Array	28.32	342	P	P	02 29 25.1	+0.8
	0.5nm,0.7s,baz=140,slow=7.2,SNR=5.4						
PDAR				LR	LR	02 41 55.1	
	comp=Z,460nm,18.3s,baz=169,slow=39						
PDAR	Pinedale Array	28.32	342	eP	P	02 29 24.3	+0.1
NV01	Mina Array Sit	28.42	325	eP	P	02 29 26.4	+1.2
NV01				ePcP	PcP	02 32 39.0	+1.8
NVAR	Mina Array Bea	28.42	325	P	P	02 29 26.5	+1.4
	1.3nm,0.7s,baz=150,slow=9.1,SNR=9.6						
NVAR				LR	LR	02 40 08.9	
	comp=Z,157nm,20.2s,baz=225,slow=35						
HVU	Hansel Valley	28.52	337	eP	P	02 29 28.0	+2.0
	5.2nm,1.0s						
KVN	Kaiserville	28.76	327	eP	P	02 29 29.7	+1.6
	2.7nm,1.1s						
WAKR	Walker	29.10	324	eP	P	02 29 33.7	+2.5
	13nm,1.7s						
LOHW	Long Hollow	29.41	342	eP	P	02 29 35.0	+1.2
	14nm,1.6s						
MOOW	Moose Ponds	29.57	341	eP	P	02 29 37.0	+1.7
	9.5nm,1.8s						
RLMT	Red Lodge	30.42	344	P	P	02 29 42.6	-0.2
	baz=159						
DLMT	Dillon	31.60	340	eP	P	02 29 54.8	+1.7
	9.7nm,1.3s						
MOD	Modoc Plateau	31.99	328	eP	P	02 29 57.5	+0.8
	18nm,1.8s						
J08A	Circle Bar Ran	32.21	332	eP	P	02 29 59.6	+1.2
	11nm,1.3s						
YBH	Yreka Blue Hor	33.14	325	LR	LR	02 43 09.3	
	comp=Z,92nm,18.9s,baz=148,slow=36						
F10A	Beach Ranch, E	33.79	336	eP	P	02 30 12.9	+0.7
F10A				epP	pP	02 30 20.6	+1.1
F10A				ePcP	PcP	02 32 50.6	-0.6
ULM	Lac du Bonnet	34.14	3	LR	LR	02 44 34.0	
	comp=Z,86nm,18.8s,baz=154,slow=37						
NNA	Nana	34.99	142	LR	LR	02 41 43.9	
	comp=Z,195nm,20.8s,baz=326,slow=32						
MBW	Mount Baker	37.94	334	eP	P	02 30 52.2	+4.4
LPAZ	La Paz	43.76	136	LR	LR	02 48 43.5	
	comp=Z,147nm,18.3s,baz=308,slow=35						
RPN	Rapa Nui	44.28	194	LR	LR	02 45 36.8	
	comp=Z,77nm,20.8s,baz=88,slow=30						
SCHQ	Schefferville	45.63	25	LR	LR	02 53 53.0	
	comp=Z,113nm,18.5s,baz=52,slow=40						
YKA	Yellowknife Ar	47.78	350	LR	LR	02 55 18.7	
	comp=Z,10nm,19.3s,baz=166,slow=40						
FID	Port Fidalgo	56.36	334	eP	P	02 33 12.5	+1.5
	17nm,1.4s						
INK	Inuvik	56.83	345	eP	P	02 33 13.7	-0.5
	2.4nm,0.7s						
PAX	Paxson	57.12	336	eP	P	02 33 17.1	+0.6
	5.5nm,0.8s						
SCRK	Sand Creek	57.13	338	eP	P	02 33 17.7	+1.0
	12nm,1.6s						
RIDG	Independ'e Rid	57.31	337	eP	P	02 33 18.8	+1.0
	17nm,1.3s						
CPUP	Villa Florida	57.94	136	LR	LR	02 56 33.3	
	comp=Z,61nm,20.6s,baz=316,slow=34						
IL1	Eielson Array	58.62	338	eP	P	02 33 26.6	-0.3
ILAR	Eielson Array	58.62	338	P	P	02 33 26.5	-0.4
	2.4nm,1.1s,baz=147,slow=5.3,SNR=17						
ILAR				LR	LR	03 00 51.8	
	comp=Z,209nm,18.3s,baz=136,slow=38						
ILB	Eielson Array	58.62	338	eP	P	02 33 27.1	+0.2
BDFB	Brasilia	58.73	120	LR	LR	02 56 27.0	
	comp=Z,65nm,20.4s,baz=178,slow=34						
SKT	Skwentna	59.08	334	eP	P	02 33 30.7	+0.5
	34nm,2.0s						
TRF	Thorofare Moun	59.24	336	eP	P	02 33 31.8	+0.3
	13nm,1.2s						
BPAW	Bear Paw Mtn.	59.82	336	eP	P	02 33 35.9	+0.7
	10nm,1.4s						
MLY	Manley	60.17	337	eP	P	02 33 37.9	+0.3
	34nm,2.0s						
PLCA	Paso Flores	62.08	156	LR	LR	02 55 00.5	
	comp=Z,58nm,20.2s,baz=308,slow=31						
BORG	Borgarnes	70.00	26	LR	LR	03 06 54.9	
	comp=Z,24nm,18.8s,baz=287,slow=37						
SPITS	Spitsbergen Ar	79.24	11	LR	LR	03 13 33.0	
	comp=Z,61nm,18.2s,baz=320,slow=38						
MDT	Midelt	84.40	58	LR	LR	03 09 20.6	
	comp=Z,30nm,18.3s,baz=326,slow=33						
NOA	NORSAR Array B	85.14	27	LR	LR	03 13 33.0	
	comp=Z,16nm,22.0s,baz=265,slow=35						
PETK	Petropavlovsk-	85.50	324	LR	LR	03 14 25.5	
	comp=Z,20nm,18.7s,baz=67,slow=36						
HFS	Hagfors	86.64	28	LR	LR	03 18 24.3	
	comp=Z,24nm,18.1s,baz=304,slow=38						
KOWA	Kowa	89.99	75	LR	LR	03 12 17.4	
	comp=Z,52nm,19.2s,baz=222,slow=33						
FINES	FINESS Array B	91.09	23	LR	LR	03 19 19.3	
	comp=Z,39nm,19.3s,baz=314,slow=37						
DBIC	Dimbokro	91.39	83	LR	LR	03 11 11.0	
	comp=Z,19nm,21.1s,baz=234,slow=31						
GERES	GERESS Array B	91.75	38	LR	LR	03 19 16.5	
	comp=Z,49nm,18.9s,baz=289,slow=36						
TORD	Torodi Ar. Bea	95.68	75	LR	LR	03 15 31.0	
	comp=Z,45nm,21.9s,baz=305,slow=33						
LZH	Lanzhou	124.08	338	ePKP	PKPdf	02 42 27.5	-1.7
LZH				pPKP	pPKPdf	02 42 36.5	-0.9
LZH				sPKP		02 42 39.5	
LZH				LR	LR		
	comp=N,42nm,18.2s						
LZH				LR	LR		
	comp=E,47nm,18.0s						
LZH				LR	LR		
	comp=Z,53nm,20.1s						

JMA 27 02:32:16.4±0.3,**37°.25N**×**144°.22E**,**h46**^{km},**M3.7**,**Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIO	Ouri	2.57	299	P	Pn	02 32 56.9	+1.4
JIO				S	Sn	02 33 27.2	+1.7
JFK	Kawauchi	2.67	274	P	Pn	02 32 58.1	+1.2
JFK				S	Sn	02 33 29.0	+0.9
ONAJ	Iwakimizuishiy	2.74	268	P	Pn	02 32 59.0	+1.1
ONAJ				S	Sn	02 33 30.8	+1.1
JMM	Marumori	2.79	284	P	Pn	02 33 00.4	+1.8
JMM				S	Sn	02 33 32.8	+1.8
JMK	Ichinoseki	2.91	307	P	Pn	02 33 02.0	+1.8
JMK				S	Sn	02 33 35.9	+1.9
JFT	Otama	3.10	276	P	Pn	02 33 05.3	+2.4
JFT				S	Sn	02 33 40.5	+1.8
JOM	Ohasama	3.20	315	P	Pn	02 33 05.5	+1.4
JOM				S	Sn	02 33 42.4	+1.4
JAG	Ashikaga	3.91	259	P	Pn	02 33 15.2	+1.3

IDC ***27*** *02:58:47.0±2.3,4°.82N×126°.41E,h0^{km},mb3.8/3, mb1 4.0/3,mb1mx3.5/52,mbtmp3.8/3,MS2.4/1,Ms1 2.4/1, ms1mx2.1/49,Error ellipse: s-maj=177.2km s-min=27.7km az=65.0*

ISCJB ***27*** *02:58:50.9±0.9,4°.32N±0°.06×125°.0E±0°.1,h35^{km},mb3.7/3, Error ellipse: s-maj=19.1km s-min=7.9km az=176.1*

ISC 27 02:58:53.1±1.3,**4°.37N**±0°.09×**125°.0E**±0°.1,**h35**^{km},**n8**, σ**1^{s}69**/11,**mb3.7**/3,**Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	1.85	22	eP	Pn	02 59 20.8	-1.5
DDMP				eS	Sn	02 59 46.1	+1.5
SKMP	Bagumbayan, Su	2.19	347	eP	Pn	02 59 26.3	-0.7
SKMP				eS	Sn	02 59 53.7	+0.9
DAV	Davao City (W)	2.73	12	LR	LR	03 00 17.2	
	comp=Z,83nm,20.1s,baz=194,slow=38						
BUKP	Musuan	3.48	1	eP	Pn	02 59 45.1	+0.3
BUKP				eS	Sn	03 00 23.6	-1.4
PAGZ	Pagadian	3.82	335	eP	Pn	02 59 49.5	0.0
PAGZ				eS	Sn	03 00 30.5	-2.7
WRA	Warramunga Arr	25.84	160	P	P	03 04 19.6	-1.9
	2.4nm,0.8s,baz=342,slow=10,SNR=11						
ASAR	Alice Springs	29.18	163	P	P	03 04 51.4	0.0
	0.5nm,0.5s,baz=346,slow=8.7,SNR=4.0						
MKAR	Makanchi Array	56.07	326	P	P	03 08 30.8	+2.1
	0.4nm,0.6s,baz=123,slow=7.3,SNR=3.9						

NEIC ***27*** *03:02:37.9±0.7,28°.64S×178°.71W,h285^{km}±7^{km},mb4.1/4, Error ellipse: s-maj=15.0km s-min=10.0km az=133.0*

IDC ***27*** *03:02:38.1±0.5,28°.70S×178°.68W,h283^{km}±8^{km},mb3.8/6, mb1 4.0/8,mb1mx3.6/37,mbtmp4.5/8,Error ellipse: s-maj=30.4km s-min=17.6km az=147.0*

ISC 27 03:02:39.0±0.5,**28°.91S**±0°.07×**178°.6W**±0°.1,**h300**^{km},**n60**, σ**2^{s}16**/63,**mb4.1**/10,**Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.68	120	P	Pn	03 03 16.6	-1.4
	194nm,0.3s,baz=121,slow=10,SNR=19						
RAO				S	S	03 03 46.0	-3.0
	307nm,0.3s,baz=246,slow=16,SNR=4.9						
HAZ	Te Kaha	9.33	198	P	S	03 06 37.4	+3.0
PUZ	Puketiti	9.51	195	P	S	03 06 34.6	-4.0
RUGZ	Raukumara Rang	9.55	198	P	S	03 06 34.5	-5.2
TWGZ	Tauwhareparae	9.68	196	P	S	03 06 41.4	-1.0
MARZ	Manawahe	9.88	202	P	S	03 06 50.4	+3.4
MWZ	Matawai	9.94	198	P	S	03 06 46.0	-2.4
TKGZ	Te Karaka	9.96	196	P	S	03 06 46.9	-1.8
URZ	Urewera	9.99	200	P	Pn	03 04 58.2	+1.3
	2.3nm,0.3s,baz=330,slow=1.5,SNR=9.3						
URZ	Urewera	9.99	200	P	S	03 06 46.8	-2.6
RAGZ	Rawiri	10.12	198	P	S	03 06 48.7	-3.9
MUGZ	Murupara	10.29	201	P	S	03 06 53.4	-3.0
PRGZ	Paritu Road	10.41	195	P	S	03 06 50.6	-8.3
AFI	Afiamalu	16.21	24	P	P	03 06 06.5	-3.0
	5.9nm,0.3s,baz=285,slow=8.9,SNR=5.0						
AFI	Afiamalu	16.21	24	eP	P	03 06 06.0	-3.5
RPZ	Rata Peaks	16.95	207	S	S	03 09 14.9	-3.5
	0.7nm,0.3s,baz=310,slow=22,SNR=4.6						
CTAO	Charters Tower	33.08	277	eP	P	03 08 47.0	-0.3
ASAR	Alice Springs	42.70	266	P	P	03 10 07.2	0.0
	2.2nm,0.7s,baz=95,slow=7.2,SNR=22						
ASAR				PcP	PP	03 11 53.9	+0.7
	0.6nm,0.5s,baz=114,slow=4.0,SNR=6.1						
WRAB	Tennant Creek	43.54	271	eP	P	03 10 13.3	-0.6
	3.3nm,0.6s						
WRA	Warramunga Arr	43.55	271	P	P	03 10 13.6	-0.5
	5.2nm,0.6s,baz=108,slow=7.7,SNR=32						
WRA				PcP	PcP	03 11 56.8	+0.9
	2.6nm,0.8s,baz=112,slow=3.3,SNR=8.0						
SBA	Scott Base	49.48	184	eP	P	03 11 01.6	+2.7
	1.9nm,0.4s						
MBWA	Marble Bar	55.89	263	eP	P	03 11 44.5	-1.9
MJAR	Matsushiro Arr	76.73	325	P	P	03 13 56.4	-1.0
	5.1nm,0.8s,baz=169,slow=5.8,SNR=15						
MAJO	Matsushiro	76.73	325	eP	P	03 13 56.3	-1.1
	5.2nm,0.7s						
SNAA	Sanae	79.65	179	P	P	03 14 15.9	+2.8
VNA3	Neumayer Olymp	79.82	176	P	P	03 14 17.2	+3.3
VNA1	Neumayer--Stat	80.48	177	P	P	03 14 20.9	+3.5
KSRS	Korea Array	82.88	320	P	P	03 14 30.5	+0.3
	4.2nm,1.0s,baz=139,slow=5.8,SNR=11						
KSAR	Wonju Array Be	82.90	320	P	P	03 14 30.5	+0.2
USRK	Ussuriysk Ar.	85.64	327	P	P	03 14 44.7	+0.8
	4.0nm,0.7s,baz=132,slow=3.2						
CMB	Columbia Colle	86.00	42	eP	P	03 14 46.0	+0.1
	5.7nm,0.7s						
NVAR	Mina Array Bea	87.50	43	P	P	03 14 54.5	+1.3
	0.8nm,0.7s,baz=219,slow=7.1,SNR=6.0						
MKAR	Makanchi Array	116.42	311	PKP	PKPdf	03 20 46.7	-0.1
	0.5nm,0.6s,baz=231,slow=1.5,SNR=5.3						
KSH	Kashi	119.03	301	ePKP	PKPdf	03 20 54.5	+2.2
KURK	Kurchatov	119.65	314	PKP	PKPdf	03 20 53.0	+0.2
KURBB	Kurchatov Arra	119.69	314	PKP	PKPdf	03 20 53.0	+0.1
	1.5nm,0.7s,baz=105,slow=2.0,SNR=9.6						
BVAR	Borovoye Array	124.98	317	PKP	PKPdf	03 21 03.6	+0.5
	1.7nm,0.6s,baz=108,slow=1.8,SNR=11						
BRVK	Borovoye	125.04	317	ePKPdf	PKPdf	03 21 03.6	+0.4
ARCES	ARCESS Array B	137.03	348	PKhKP	PKPpre	03 21 20.1	
	4.8nm,0.9s,baz=0.0,slow=0.2,SNR=5.3						
FINES	FINESS Array B	143.57	340	PKP	PKPbc	03 21 35.2	-0.5
	3.4nm,0.4s,baz=54,slow=3.8,SNR=50						
KBZ	Khabaz	143.84	306	PKP	PKPbc	03 21 37.6	+0.6
	2.4nm,0.9s,baz=16,slow=1.4,SNR=4.3						
KIV	Kislovodsk	143.95	306	ePKPdf	PKPdf	03 21 39.2	+0.5
NB2	NORSAR Subarra	147.21	351	PKP	PKPbc	03 21 46.0	-0.4
	comp=Z,2.8nm,0.8s,baz=13,slow=2.9						
NOA	NORSAR Array B	147.21	351	PKPbc	PKPbc	03 21 46.2	-0.2
	comp=Z,2.7nm,0.7s,baz=16,slow=4.5,SNR=24						
HFS	Hagfors	147.69	349	PKPbc	PKPbc	03 21 47.5	-0.2
	comp=Z,4.9nm,0.5s,baz=58,slow=3.6,SNR=36						
AKASG	Malin Array Be	149.80	324	PKPbc	PKPbc	03 21 53.4	+0.2
	comp=Z,8.5nm,0.6s,baz=48,slow=3.0,SNR=22						
AKASG				PKPab	PKPab	03 21 59.4	-0.4
	comp=Z,3.8nm,0.5s,baz=45,slow=4.5,SNR=18						
KIEV	Kiev	149.81	324	ePKPbc	PKPbc	03 21 53.4	+0.1
KIEV				ePKPab	PKPab	03 21 59.2	-0.7
BRTR	Keskin Array B	151.42	301	PKPbc	PKPbc	03 21 58.0	+0.4
	comp=Z,2.1nm,0.5s,baz=124,slow=3.5,SNR=14						
BRTR				PKPab	PKPab	03 22 07.5	+0.3
	comp=Z,0.6nm,0.5s,baz=102,slow=3.5,SNR=5.1						
ANTO	Ankara	152.02	301	ePKPbc	PKPbc	03 21 59.8	+0.9
CLL	Collm	155.99	342	i PKPab	PKPab	03 22 26.4	+0.5
GRFO	Grafenberg	157.94	343	ePKPdf	PKPdf	03 21 60.0	+0.4
CONA	Conrad Observa	157.96	333	i PKPab	PKPab	03 22 35.2	+0.5
	comp=Z,4.3nm,1.1s						
GERES	GERESS Array B	157.97	338	PKPab	PKPab	03 22 34.6	-0.1
	comp=Z,1.0nm,0.7s,baz=34,slow=5.0,SNR=9.7						
MOA	Molln	158.63	336	i PKPab	PKPab	03 22 37.5	0.0
	comp=Z,2.6nm,0.9s						
SOKA	Soboth	159.31	333	i PKPab	PKPab	03 22 40.4	-0.2
	comp=Z,1.7nm,0.8s						
MYKA	Terra Mystica	159.88	335	i PKPab	PKPab	03 22 42.5	-0.6
	comp=Z,4.0nm,0.9s						
RETA	Reutte	160.08	341	PKPab	PKPab	03 22 44.3	+0.4
	comp=Z,2.6nm,0.5s						
MOTA	Moosalm	160.11	340	i PKPab	PKPab	03 22 45.1	+0.9
	comp=Z,3.3nm,0.8s						
ABTA	Abfaltersbach	160.19	337	i PKPab	PKPab	03 22 43.6	-0.8
	comp=Z,2.6nm,0.8s						
DAVA	Damuels	160.50	343	ePKPab	PKPab	03 22 46.6	+0.7
	comp=Z,3.7nm,0.8s						

JMA 27 03:36:40.6±0.1,**39°.76N**×**142°.20E**,**h47**^{km}±1^{km},**M2.2**,**Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	Tanohata	0.31	305	P	Pn	03 36 49.6	0.0
JTH				S	Sn	03 36 56.0	0.0
MIYJ	Miyakonagasawa	0.35	238	P	Pn	03 36 49.8	-0.1
MIYJ				S	Sn	03 36 56.6	+0.1
JKZ	Kuzumaki	0.71	289	P	Pn	03 36 54.4	0.0
JKZ				S	Sn	03 37 04.3	0.0
JOM	Ohasama	0.76	248	P	Pn	03 36 55.1	+0.1
JOM				S	Sn	03 37 05.5	+0.1
OFUJ	Ofunato	0.79	211	P	Pn	03 36 55.2	-0.3
OFUJ				S	Sn	03 37 05.9	-0.4
JANG	Nango	0.81	320	P	Pn	03 36 55.2	-0.5
JANG				S	Sn	03 37 05.9	-0.7
JMK	Ichinoseki	1.11	224	P	Pn	03 36 59.8	+0.1
JMK				S	Sn	03 37 14.1	+0.3
JRG	Rokugo	1.26	254	P	Pn	03 37 02.8	+1.0
JRG				S	Sn	03 37 19.3	+1.6
JAH	Hinai	1.28	290	P	Pn	03 37 02.6	+0.6
JAH				S	Sn	03 37 19.0	+1.0

MOS ***27*** *03:37:54.0±0.8,21°.66N×143°.00E,h288^{km},mb5.5/128, Error ellipse: s-maj=6.6km s-min=4.0km az=105.5*

ISCJB ***27*** *03:37:55.3±0.3,21°.68N±0°.01×143°.01E±0°.02, h300^{km}±2^{km},mb5.3/487,Error ellipse: s-maj=2.4km s-min=2.2km az=43.7*

NEIC ***27*** *03:37:56.7±0.5,21°.67N×142°.99E,h303^{km}±4^{km}, mb5.4/299,Error ellipse: s-maj=2.7km s-min=2.2km az=125.0*

IDC ***27*** *03:37:56.8±0.8,21°.67N×143°.06E,h303^{km}±6^{km},mb5.1/50, mb1 5.1/55,mb1mx5.0/68,mbtmp5.7/55,Error ellipse: s-maj=8.1km s-min=5.4km az=86.0*

GCMT ***27*** *03:37:56.7±0.2,21°.68N×142°.82E,h290^{km}±1^{km}, MW5.3/103,Moment Tensor Solution. s103,c169; Duration: 1^{s}1 Moment tensor: Scale 10^{17}Nm; M_{rr}0.95±.02; $M_{\theta\theta}$-0.97±.03; $M_{\phi\phi}$0.01±.04; $M_{r\theta}$0.69±.03; $M_{\theta\phi}$0.25±.03; $M_{\phi r}$0.23±.03; Best double couple: $M_0$1.23100×10^{17} NP1:ϕ_s86.00000°,δ63.00000°, λ72.00000°. NP2:ϕ_s301.00000°,δ31.00000°,λ121.00000°. Principal axes: T 1.2480, Plg67.0000°, Azm323.0000°; N -0.0340, Plg16.0000°, Azm94.0000°; P -1.2140, Plg17.0000°, Azm188.0000°; nsta1 refers to body waves, cutoff=40s.*

BJI ***27*** *03:37:58.2,22°.01N×142°.72E,h300^{km},mb5.3/79, mB5.0/51*

ISC 27 03:37:56.1±0.3,**21°.70N**±0°.03×**143°.02E**±0°.03,**h298**^{km}±2^{km}, **h299**^{km}**:pP-P**,**n1394**,σ**1^{s}19**/1590,**mb5.4**/507,**99C-37D**, **Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHHJ	Haha-jima-NKT	4.96	351	P	Pn	03 39 13.5	+0.4
JHHJ				eS	S	03 40 13.3	-1.7
CBIJ	Chichi jima	5.42	352	ePn	Pn	03 39 18.5	0.0
CBIJ				S	S	03 40 24.9	+0.2
CBIJ	Chichi jima	5.42	352	P	Pn	03 39 18.5	0.0
CBIJ				S	S	03 40 24.4	-0.3
JCJ	Chichijima	5.42	352	P	Pn	03 39 18.7	+0.2
JCJ				S	S	03 40 24.9	+0.2
	247nm,0.3s,baz=322,slow=23,SNR=4.7						
GUMO	Guam	8.26	167	P	Pn	03 39 54.0	+1.0
	136nm,0.3s,baz=151,slow=2.6,SNR=112						
GUMO	Guam	8.26	167	ePn	Pn	03 39 53.6	+0.6
GUMO	Guam	8.26	167	P	Pn	03 39 54.0	+1.0
GUMO				pmax	pmax		
	comp=Z,137nm,0.3s						
JAOM	Aogashimamukai	11.10	346	P	Pn	03 40 27.2	-0.5
JMZ	Minamidaito 2	11.55	293	P	Pn	03 40 34.1	+0.8
JHCJ	Hachijojimakas	11.68	347	P	Pn	03 40 34.4	-0.3
JHCJ				eS	S	03 42 39.5	-5.4
JHJ2	Mitsune	11.71	347	ePn	Pn	03 40 34.7	-0.4
JHJ2	Mitsune	11.71	347	P	Pn	03 40 34.7	-0.4
JHJ2				eS	S	03 42 39.7	-6.0
JHJ	Hachijo jima 2	11.73	347	P	Pn	03 40 34.8	-0.5
	comp=Z,80nm,0.3s,baz=175,slow=12,SNR=28						
JHJ				S	S	03 42 45.0	-1.0
	comp=Z,123nm,0.3s,baz=62,slow=22,SNR=6.2						
JMKN	Mikurajimanish	12.52	347	P	Pn	03 40 44.6	-0.3
JMKN				eS	S	03 42 58.1	-5.6
JKO	Kozu shima	12.90	345	P	P	03 40 50.3	+0.3
BSO1	Boso 1	13.03	353	P	P	03 40 50.8	-0.1
TTO3	TONANKAI O.B.S	13.09	339	P	P	03 40 53.4	+1.4
TTO4	TONANKAI O.B.S	13.18	340	P	P	03 40 54.0	+1.2
BSO3	Boso 3	13.24	351	P	P	03 40 53.6	+0.1
JWKM	Wakayamakushim	13.35	333	P	P	03 40 57.5	+2.5
JWZ	Kozaga	13.44	333	P	P	03 40 58.6	+2.6
BSO4	Boso 4	13.45	351	P	P	03 40 56.2	+0.2
JIZS	Izushimoda	13.47	345	P	P	03 40 56.1	-0.2
JIE	Ise	13.81	338	P	Pn	03 41 01.2	+0.8
JWM	Minabe	13.86	332	P	Pn	03 41 02.8	+1.7
JAA	Atsumi	13.88	339	P	Pn	03 41 01.6	+0.4
JOD2	Odawara 2	13.94	347	P	Pn	03 41 03.2	+1.2
JOD2				eS	S	03 43 30.5	-4.9
MRT2	Murotomisaki 2	14.04	328	P	Pn	03 41 06.0	+2.8
CHOJ	Chosi	14.08	353	P	Pn	03 41 04.6	+1.0
JAMN	Amaminishikomi	14.13	300	P	Pn	03 41 05.7	+1.3
JTK	Tokunoshima	14.14	298	P	Pn	03 41 05.9	+1.5
JAI	Aioi	14.22	330	P	Pn	03 41 07.4	+2.1
JYN	Shimob	14.29	345	P	Pn	03 41 05.9	-0.3
JNY	Yasuok	14.34	343	P	P	03 41 06.3	+0.3
JTO	Tosashimizu	14.34	323	P	Pn	03 41 08.7	+1.9
JNAR	Kushima--Naru	14.34	315	P	Pn	03 41 08.9	+2.1
JOW	Kunigami	14.38	294	P	Pn	03 41 08.0	+0.7
	comp=Z,14nm,0.3s,baz=129,slow=13,SNR=25						
INU	Inuyama	14.58	340	eP	Pn	03 41 09.1	-0.4
UWA2	Uwa jima 2	14.70	323	P	Pn	03 41 13.0	+1.9

JTZ	Takazaki	14.71	316	P	Pn	03 41 12.9	+1.8
JRY	Ryogami san	14.71	347	P	P	03 41 10.1	+0.1
JRY				S	S	03 43 43.9	-7.2
MJAR	Matsushiro Arr	15.37	345	P	P	03 41 16.7	-0.5
	comp=Z,16nm,0.3s,baz=162,slow=8.4,SNR=124						
MJAR				S	S	03 44 02.8	-1.4
	comp=Z,5.7nm,0.3s,baz=244,slow=11,SNR=8.2						
MJAR				ScP	ScP	03 49 05.9	-1.2
	baz=196,slow=2.9,SNR=15						
MAJO	Matsushiro	15.37	345	eP	P	03 41 16.9	-0.4
	comp=Z,113nm,0.6s						
MAJO				eS	S	03 43 58.3	-6.0
MAJO				eScP	ScP	03 49 05.7	-1.4
MAJO	Matsushiro	15.37	345	c iP	P	03 41 17.1	-0.2
MAT	Matsushiro	15.37	345	P	Pn	03 41 18.3	-0.6
MAT				S	S	03 44 00.6	-3.7
MJB9	Matsu-Tunnel	15.37	345	eP	P	03 41 17.3	0.0
	comp=Z,114nm,0.6s						
JNU	Nakatsue	15.65	319	P	Pn	03 41 23.2	+0.9
	comp=Z,23nm,0.3s,baz=121,slow=6.0,SNR=339						
JNU	Nakatsue	15.65	319	eP	Pn	03 41 22.2	-0.1
	comp=Z,730nm,0.9s						
YOJ	Yonaguni jima	18.61	282	eP	P	03 41 53.6	+1.1
	comp=Z,423nm,1.1s						
YOJ	Yonaguni jima	18.61	282	eP	P	03 41 53.6	+1.1
YOJ				pmax	pmax		
	comp=Z,423nm,1.1s						
BESP	Borongan	19.59	242	eP	Pn	03 42 05.8	-2.3
PVCP	Virac	19.68	249	eP	P	03 42 01.7	-2.3
NACB	Ninganchiao	19.88	281	eP	P	03 42 05.9	-0.1
	comp=Z,71nm,0.6s						
TJN	Taejon	19.99	320	ceP	P	03 42 05.2	-1.7
TATO	Taipei	20.03	284	eP	P	03 42 07.9	+0.4
	comp=Z,112nm,0.6s						
YHNB	Yeheng	20.11	283	eP	P	03 42 08.4	0.0
	comp=Z,261nm,0.7s						
YULB	Yu-li	20.13	279	eP	P	03 42 08.5	-0.1
	comp=Z,90nm,1.1s						
PLP	Palo	20.20	242	⇓eP	P	03 42 10.4	+1.0
ERM	Erimo	20.25	0	eP	P	03 42 10.7	+1.1
	comp=Z,280nm,0.8s						
ERM				eS	S	03 45 36.1	-2.5
ERM	Erimo	20.25	0	ceP	P	03 42 11.2	+1.6
ERM				pmax	pmax		
	comp=Z,363nm,0.9s						
KSRS	Korea Array	20.42	324	P	P	03 42 09.7	-1.6
	comp=Z,193nm,0.7s,baz=143,slow=5.9,SNR=173						
KSRS				S	S	03 45 43.4	+2.0
	comp=Z,6.0nm,1.0s,baz=147,slow=16,SNR=4.3						
KSRS				PcP	PcP	03 46 10.8	+0.8
	comp=Z,7.9nm,0.9s,baz=210,slow=0.6,SNR=6.0						
KSRS				ScP	ScP	03 49 17.9	+0.1
	comp=Z,28nm,1.0s,baz=138,slow=2.6,SNR=50						
KSRS				PKiKP	PKiKP	03 53 57.0	-1.1
	comp=Z,2.5nm,0.8s,baz=180,slow=0.6,SNR=12						
KS15	Wonju Array Si	20.43	323	eP	P	03 42 10.4	-1.0
KSAR	Wonju Array Be	20.43	323	P	P	03 42 09.7	-1.8
KSAR				S	S	03 45 43.4	+1.7
KSAR				PcP	PcP	03 46 10.8	+0.8
KSAR				ScP	ScP	03 49 17.9	+0.1
KSAR				PKiKP	PKiKP	03 53 57.0	-1.1
KSAR	Wonju Array Be	20.43	323	P	P	03 42 09.7	-1.8
KSAR				S	S	03 45 43.4	+1.7
KSAR						03 46 10.8	
KS01	Wonju Array Si	20.45	324	eP	P	03 42 10.4	-1.3
SSLB	Suanglung	20.45	280	eP	P	03 42 12.3	+0.4
	comp=Z,148nm,0.8s						
OCLP	Ormoc	20.57	242	eP	P	03 42 14.5	+1.4
TPUB	Ta-pu	20.74	279	eP	P	03 42 13.0	-1.8
	comp=Z,76nm,0.9s						
INCN	Inchon	21.17	322	eP	P	03 42 18.4	-0.3
	comp=Z,280nm,1.4s						
INCN	Inchon	21.17	322	P	P	03 42 18.7	+0.1
	SNR=16						
INCN	Inchon	21.17	322	eP	P	03 42 18.4	-0.3
INCN				pmax	pmax		
	comp=Z,280nm,1.4s						
LLP	Lapu-Lapu	21.50	241	eP	P	03 42 21.5	-0.4
LLP				eS	S	03 45 56.5	-2.9
RCP	Roxas	21.86	246	⇓eP	P	03 42 26.1	+1.0
OTRP	Odiongan	22.09	249	eP	P	03 42 27.8	+0.5
TGY	Tagaytay City	22.31	254	P	P	03 42 30.8	+1.4
	comp=Z,1µm,1.0s,baz=303,slow=3.0,SNR=26						
ASAJ	Asahikawa	22.36	359	P	P	03 42 30.8	+1.5
	comp=Z,50nm,0.5s,baz=182,slow=7.8,SNR=45						
ASAJ				S	S	03 46 13.5	+0.9
	comp=Z,30nm,0.8s,baz=150,slow=20,SNR=4.2						
ASAJ	Asahikawa	22.36	359	eP	P	03 42 30.8	+1.5
	comp=Z,138nm,1.0s						
ASAJ				S	S	03 46 13.5	+0.9
YUK	Yuzh-Kuril'sk	22.40	5	eP	P	03 42 29.2	-0.5
YUK				eS	S	03 46 03.1	-10
YUK				pmax	pmax		
	comp=Z,401nm,1.3s						
YUK				pmax	pmax		
	comp=Z,310nm,1.3s						
YUK				pmax	pmax		
	comp=E,128nm,0.8s						
YUK				pmax	pmax		
	comp=N,116nm,1.2s						
H11N1	WAKE ISLAND Hy	22.42	91	P	P	03 42 31.2	+1.2
	baz=262,slow=13,SNR=8.0						
H11N2	WAKE ISLAND Hy	22.42	91	P	P	03 42 31.0	+1.0
	baz=262,slow=13,SNR=6.5						
H11N3	WAKE ISLAND Hy	22.43	91	P	P	03 42 30.8	+0.7
	baz=262,slow=13,SNR=7.8						
GUIM	Jordan	22.47	244	eP	P	03 42 29.2	-1.5
QZH	Quanzhou	22.65	283	⇑iP	P	03 42 32.5	+0.2
QZH				sP	sP	03 43 59.5	-0.5
QZH				pmax	pmax		
	comp=N,39nm,0.5s						
QZH				pmax	pmax		
	comp=N,440nm,4.2s						
MSHR	Mys Shultsa	23.07	337	ceP	P	03 42 36.9	+1.1
KUR	Kuril'sk	23.81	9	c iP	P	03 42 43.9	+1.4
KUR				e		03 44 14.5	
KUR				i S	S	03 46 36.7	+1.1
KUR				pmax	pmax		
	comp=Z,571nm,1.0s						
KUR				pmax	pmax		
	comp=E,136nm,1.1s						
KUR				pmax	pmax		
	comp=N,111nm,0.8s						
KUR				MLR	MLR		
	comp=E,161nm,10.0s						
KUR				MLR	MLR		
	comp=Z,223nm,10.0s						
KUR				MLR	MLR		
	comp=N,157nm,11.0s						
NJ2	Nanjing	23.84	301	eP	P	03 42 43.0	0.0
NJ2				sP	sP	03 44 11.0	-1.7
NJ2				pmax	pmax		
	comp=N,110nm,1.0s						
TEY	Ternei	23.86	349	eP	P	03 42 40.0	-3.0
TEY				pmax	pmax		
	comp=Z,60nm,1.2s						
MANU	Manus Island	23.98	169	eP	P	03 42 44.5	+0.1
	comp=Z,152nm,0.7s						
JAY	Jayapura	24.17	186	P	P	03 42 45.6	-0.6
JAY	Jayapura	24.17	186	P	P	03 42 46.0	-0.2
JAY				pmax	pmax		
	comp=Z,54nm,1.0s						
USRK	Ussuriysk Ar.	24.22	340	P	P	03 42 47.3	+1.0
	comp=Z,59nm,0.7s,baz=162,slow=8.7						
USRK				PcP	PcP	03 46 17.9	+0.2
	baz=132,slow=2.1						
USRK				ScP	ScP	03 49 27.7	+0.1
	baz=186,slow=2.8						
GENI	Genyem	24.30	187	P	P	03 42 47.6	+0.3
	comp=Z,222nm,0.9s,comp=Z,2µm						
DL2	Dalian	25.10	318	⇑iP	P	03 42 53.8	-0.4
DL2				pP	pP	03 43 51.0	+2.7
DL2				S	S	03 46 54.8	-1.4
DL2				pmax	pmax		
	comp=Z,110nm,0.7s						
DL2				pmax	pmax		
	comp=Z,360nm,5.5s						
YSS	Yuzh-Sakhalins	25.19	360	eP	P	03 42 55.0	+0.1
	comp=Z,38nm,0.7s						
YSS	Yuzh-Sakhalins	25.19	360	⇑iP	P	03 42 55.4	+0.5
YSS				i		03 43 47.4	
YSS				i *SP	sP	03 44 23.3	-3.1
YSS				eS	S	03 47 00.0	+2.5
YSS				e*SS	sS	03 48 36.8	-1.6
YSS				MLR	MLR		
	comp=Z,280nm,16.0s						
MDJ	Mudanjiang	25.40	337	P	P	03 42 55.3	-1.5
MDJ				PP	PP	03 43 59.3	-1.9
MDJ				PcP	PcP	03 46 18.3	-2.1
MDJ				S	S	03 46 59.8	-1.0
MDJ				ScP	ScP	03 49 28.5	-2.4
MDJ				ScS	ScS	03 53 17.5	-2.6
MDJ				pmax	pmax		
	comp=Z,240nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,680nm,3.5s						
MDJ	Mudanjiang	25.40	337	eP	P	03 42 58.0	+1.2
	comp=Z,217nm,1.0s						
MDJ				ePcP	PcP	03 46 20.5	+0.2
MDJ				eScP	ScP	03 49 30.6	-0.3
SNY	Shenyang	25.88	325	⇑P	P	03 43 01.0	-0.2
SNY				S	S	03 47 07.3	-1.2
SNY				pmax	pmax		
	comp=Z,100nm,0.8s						
SNY				pmax	pmax		
	comp=Z,260nm,4.1s						
SNY				LR	LR		
	comp=Z,530nm,17.1s						
SNY				LR	LR		
	comp=Z,1µm,11.8s						
SNY				LR	LR		
	comp=Z,750nm,11.0s						
CN2	Changchun	26.43	331	eP	P	03 43 05.8	-0.2
CN2				epP	pP	03 44 04.5	+2.3
CN2				eS	S	03 47 15.3	-1.7
CN2				pmax	pmax		
	comp=Z,40nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
FAKI	Fak Fak	26.64	205	eP	P	03 43 06.9	-1.4
	comp=Z,74nm,1.1s						
TIA	Tai'an	26.77	308	P	P	03 43 09.8	+0.6
TIA				pP	pP	03 44 07.8	+2.0
TIA				sP	sP	03 44 37.3	-3.5
TIA				S	S	03 47 23.0	+0.4
TIA				pmax	pmax		
	comp=Z,290nm,0.9s						
TIA				LR	LR		
	comp=Z,380nm,19.5s						
TIA				LR	LR		
	comp=Z,380nm,9.1s						
TIA				LR	LR		
	comp=Z,220nm,5.6s						
WHN	Wuhan	27.14	295	P	P	03 43 13.0	+0.4
WHN				sP	sP	03 44 41.3	-2.9
WHN				S	S	03 47 25.0	-3.6
WHN				pmax	pmax		
	comp=Z,240nm,0.6s						
WHN				LR	LR		
	comp=Z,3µm,23.0s						
WHN				LR	LR		
	comp=Z,1µm,17.0s						
WHN				LR	LR		
	comp=Z,650nm,18.6s						
BATP	Bataraza	27.45	246	eP	P	03 43 10.7	-4.7
GZH	Guangzhou	27.45	279	P	P	03 43 13.3	-2.1
GZH				sP	sP	03 44 44.8	-2.3
GZH				S	S	03 47 28.5	-5.1
GZH				ScP	ScP	03 49 37.0	-0.4
GZH				pmax	pmax		
	comp=Z,35nm,0.9s						
KMSI	Cibinong	28.03	224	P	P	03 43 21.5	+1.0
MSAI	Masohi	28.46	211	P	P	03 43 25.0	+0.7
MYLDM	Lahad Datu	28.87	239	eP	P	03 43 30.6	+2.5
	comp=Z,124nm,1.0s						
KLR	Kul'dur	28.89	345	P	P	03 43 28.6	+0.8
	comp=Z,40nm,0.6s,baz=156,slow=7.2,SNR=1556						
KLR				PcP	PcP	03 46 29.7	+1.0
	comp=Z,4.0nm,0.6s,baz=206,slow=1.9,SNR=11						
KLR				ScP	ScP	03 49 41.1	-0.3
	comp=Z,2.8nm,0.9s,baz=215,slow=1.3,SNR=15						
KLR	Kul'dur	28.89	345	c iP	P	03 43 28.5	+0.7
TYV	Tymovskoe	29.11	360	eP	P	03 43 30.5	+0.9
TYV				eS	S	03 48 00.7	+1.8
TYV				pmax	pmax		
	comp=Z,55nm,0.7s						
TYV				pmax	pmax		
	comp=Z,200nm,3.0s						
TYV				smax	smax		
	comp=E,31nm,1.5s						
TYV				smax	smax		
	comp=N,1µm,4.3s						
BJT	Baijiatuau	29.23	315	eP	P	03 43 30.9	0.0
	comp=N,53nm,0.6s						
BJT				eScP	ScP	03 49 43.1	+0.4
BJT	Baijiatuau	29.23	315	eP	P	03 43 30.9	0.0
BJT				pmax	pmax		
	comp=Z,53nm,0.6s						
BJI	Beijing	29.24	315	⇑iP	P	03 43 31.0	+0.1
BJI				S	S	03 47 59.8	-1.4
BJI				pmax	pmax		
	comp=Z,97nm,0.9s						
BJI				pmax	pmax		
	comp=Z,340nm,3.2s						
BJI				LR	LR		
	comp=Z,620nm,24.5s						
BJI				LR	LR		
	comp=Z,340nm,11.4s						
MRSI	Marisa	29.45	227	P	P	03 43 33.9	+0.8
	comp=Z,109nm,0.8s,comp=Z,2µm						
GRNR	Gornyy	29.47	351	eP	P	03 43 36.0	+3.1
GRNR				e		03 46 34.2	
GRNR				e		03 48 09.1	
GRNR				pmax	pmax		
	comp=Z,130nm,1.0s						
LUWI	Luwuk	30.03	224	P	P	03 43 37.2	-1.0
LUWI	Luwuk	30.03	224	eP	P	03 43 37.5	-0.8
	comp=Z,109nm,0.8s						
KKM	Kota Kinabalu	30.23	243	eP	P	03 43 41.5	+1.4
	comp=Z,89nm,1.1s						
APSI	Ampana	30.67	226	P	P	03 43 44.5	+0.7
SKR	Severo-Kuril's	30.70	16	eP	P	03 43 44.8	+1.2
TIY	Taiyuan	30.81	308	eP	P	03 43 45.5	+0.6
TIY				PP	PP	03 45 04.3	+2.9
TIY				sP	sP	03 45 14.8	-2.3
TIY				S	S	03 48 26.5	+0.5
TIY				sS	sS	03 50 10.5	+0.1
TIY				pmax	pmax		
	comp=Z,78nm,0.8s						
TIY				LR	LR		
	comp=Z,230nm,13.4s						
TIY				LR	LR		
	comp=Z,200nm,12.6s						
TIY				LR	LR		
	comp=Z,250nm,11.3s						
MPSI	Mapaga	30.97	230	P	S	03 48 27.1	-1.7
MPSI	Mapaga	30.97	230	P	P	03 43 46.8	+0.4
PMG	Port Moresby	31.18	172	P	P	03 43 47.3	-0.9
	comp=Z,30nm,0.4s,baz=6.1,slow=12,SNR=16						
QIZ	Qiongzhong	31.18	271	eP	P	03 43 49.5	+1.3
	comp=Z,60nm,1.1s						
ENH	Enshi	31.23	293	eP	P	03 43 48.7	+0.1
	comp=Z,109nm,0.8s						
ENH				ePcP	PcP	03 46 35.5	+0.2
NKL	Nikolayevsk	31.45	357	i P	P	03 43 51.0	+0.9
NKL				e		03 45 05.0	
NKL				pmax	pmax		
	comp=N,60nm,1.0s						
NKL				pmax	pmax		
	comp=Z,200nm,1.0s						
NKL				pmax	pmax		
	comp=Z,500nm,3.0s						
NKL				smax	smax		
	comp=E,900nm,12.0s						
PCI	Palu	31.89	228	P	P	03 43 55.0	+0.5
	comp=E,100nm,0.8s						
PCI	Palu	31.89	228	P	P	03 43 55.0	+0.5
PCI				pmax	pmax		
	comp=Z,100nm,0.8s						
KDI	Kendari	32.39	220	P	P	03 44 00.0	+1.2
	comp=Z,97nm,1.1s,comp=Z,1µm						
XAN	Xi'an	32.40	300	⇑P	P	03 43 59.0	+0.3
XAN				pP	pP	03 45 00.3	+3.7
XAN				PP	PnPn	03 45 22.0	+2.5
XAN				PcP	PcP	03 46 39.3	+0.8
XAN				S	S	03 48 46.8	-3.9
XAN				ScP	ScP	03 49 53.0	-0.5
XAN				ScS	ScS	03 53 53.0	-0.6
XAN				pmax	pmax		
	comp=Z,120nm,0.9s						
XAN				pmax	pmax		
	comp=Z,460nm,4.1s						
XAN				LR	LR		
	comp=Z,370nm,15.2s						
XAN				LR	LR		
	comp=Z,330nm,12.8s						
XAN				LR	LR		
	comp=Z,260nm,14.7s						
HHC	Hu-ho-hao-te	32.72	313	eP	P	03 44 02.3	+0.8
HHC				sP	sP	03 45 30.5	-3.5
HHC				PcP	PcP	03 46 40.0	+0.7
HHC				S	S	03 48 55.0	-0.5
HHC				sS	sS	03 50 40.5	+0.1
HHC				pmax	pmax		
	comp=Z,93nm,0.6s						
HHC				pmax	pmax		
	comp=Z,200nm,4.1s						
HIA	Hailar	33.13	332	eP	P	03 44 05.7	+0.8
HIA	Hailar	33.13	332	eP	P	03 44 05.7	+0.8
PEA0B	Petropavlovsk-	33.31	16	eP	P	03 44 08.0	+1.7
	comp=Z,50nm,1.0s						
PETK	Petropavlovsk-	33.31	16	P	P	03 44 07.6	+1.3
	comp=Z,27nm,0.8s,baz=188,slow=7.4						
PETK	Petropavlovsk-	33.31	16	eP	P	03 44 06.6	+0.3
GYA	Guiyang	33.45	285	⇑iP	P	03 44 08.5	+0.5
GYA				pP	pP	03 45 09.3	+3.2
GYA				PP	PnPn	03 45 35.0	+2.7
GYA				PcP	PcP	03 46 43.3	+1.6
GYA				S	S	03 49 06.8	-0.4
GYA				ScP	ScP	03 49 57.3	-0.1
GYA				sS	sS	03 50 53.3	+1.0
GYA				pmax	pmax		
	comp=Z,90nm,0.8s						
GYA				pmax	pmax		
	comp=Z,140nm,6.0s						
GYA				LR	LR		
	comp=Z,390nm,16.8s						
GYA				LR	LR		
	comp=Z,360nm,17.2s						
GYA				LR	LR		
	comp=Z,370nm,17.0s						
SMKI	Samarinda	33.45	232	P	P	03 44 11.6	+3.7
TTSI	Tana Toraja	33.47	226	P	P	03 44 08.9	+0.8
	comp=Z,108nm,0.8s,comp=Z,1µm						
PET	Petropavlovsk	33.49	17	eP	P	03 44 09.0	+1.3
	comp=Z,105nm,1.1s						
PET	Petropavlovsk	33.49	17	eP	P	03 44 09.1	+1.3
PET				pmax	pmax		
	comp=Z,86nm,0.9s						
BTO	Baotou	33.67	312	eP	P	03 44 10.5	+0.8
ZEA	Zeya	34.17	343	ceP	P	03 44 14.2	+0.6
ZEA				eS	S	03 49 15.5	-1.7
ZEA				e		03 51 57.0	
ZEA				pmax	pmax		
	comp=E,62nm,0.8s						
ZEA				pmax	pmax		
	comp=N,150nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,230nm,1.0s						
ZEA				smax	smax		
	comp=N,400nm,8.0s						
SPSI	Sidrap Palu	34.19	224	P	P	03 44 14.8	+0.6
	comp=N,227nm,0.6s,comp=N,2µm						
BKB	Balikpapan	34.23	231	P	P	03 44 17.8	+3.2
BKSI	Bulukumba	34.99	222	P	P	03 44 22.3	+1.2
	comp=N,37nm,0.8s						
COEN	Coen	35.44	180	eP	P	03 44 24.8	0.0
	comp=N,173nm,0.8s						
TARA	Tarawa	35.46	121	eP	P	03 44 25.2	+0.1
MTKI	Muara Teweh, K	35.50	234	P	P	03 44 26.6	+1.2
	comp=N,150nm,0.8s						
SBUM	Sibu	35.54	242	eP	P	03 44 27.0	+1.2
	comp=N,98nm,1.5s						
SBUM	Sibu	35.54	242	P	P	03 44 27.0	+1.2
CD2	Chengdu	36.21	293	P	P	03 44 31.0	-0.4
CD2				pP	pP	03 45 30.5	+0.3
CD2				sP	sP	03 46 05.8	+1.3
CD2				S	S	03 49 48.5	-0.6
CD2				sS	sS	03 51 36.8	+1.7
CD2				pmax	pmax		
	comp=N,390nm,0.6s						
CD2				pmax	pmax		
	comp=N,360nm,3.4s						
CD2				LR	LR		
	comp=N,510nm,12.4s						
CD2				LR	LR		
	comp=N,580nm,14.9s						
CD2				LR	LR		
	comp=N,700nm,12.9s						
MTN	Manton Dam	36.26	200	eP	P	03 44 30.8	-0.9
	comp=N,59nm,0.8s						
SOEI	Soe	36.28	212	P	P	03 44 31.4	-0.7
	comp=N,55nm,0.6s						
SOEI	Soe	36.28	212	eP	P	03 44 30.8	-1.3
	comp=N,37nm,0.7s						
SOEI				eS	S	03 49 51.3	+0.9
MMRI	Maumere	36.40	216	P	P	03 44 36.8	+3.9
MMRI	Maumere	36.40	216	eP	P	03 44 33.2	+0.2
	comp=N,72nm,0.6s						
EDFI	Ende, Flores	36.80	217	P	P	03 44 35.8	-0.6
	comp=N,132nm,1.0s,comp=N,1µm						
LZH	Lanzhou	36.91	302	⇑P	P	03 44 38.5	+1.2
LZH				pP	pP	03 45 39.3	+3.0
LZH				sP	PP	03 46 09.5	+1.0
LZH				PP	PnPn	03 46 13.5	+0.5
LZH				PcP	PcP	03 46 53.0	+1.2
LZH				S	S	03 50 00.5	+0.8
LZH				sS	sS	03 51 47.0	+1.1
LZH				ScS	ScS	03 54 17.5	-0.7
LZH				pmax	pmax		
	comp=N,620nm,1.0s						
LZH				pmax	pmax		
	comp=N,1µm,4.6s						
LZH				LR	LR		
	comp=N,490nm,13.0s						
LZH				LR	LR		
	comp=N,630nm,13.2s						
LZH				LR	LR		
	comp=N,780nm,16.4s						
BATI	Baumata	36.97	213	P	P	03 44 36.8	-0.9
	comp=N,76nm,0.6s,comp=N,622nm						
KMI	Kunming	37.02	283	P	P	03 44 39.5	+1.1
KMI				pP	pP	03 45 38.3	+0.8
KMI				PP	PP	03 46 10.0	+0.1
KMI				sP	sP	03 46 14.8	+3.1
KMI				S	S	03 50 02.0	+0.3
KMI				sS	sS	03 51 43.8	-4.3
KMI				pmax	pmax		
	comp=N,78nm,1.3s						
KMI				pmax	pmax		
	comp=N,380nm,4.7s						
KMI				LR	LR		
	comp=N,180nm,13.6s						
KMI				LR	LR		
	comp=N,180nm,12.9s						
KMI				LR	LR		
	comp=N,180nm,11.1s						
SKNT	Sakolnakorn	37.06	270	P	P	03 44 39.8	+1.2
	comp=N,48nm,1.3s						
STKI	Sintang	37.53	239	P	P	03 44 43.3	+0.8
	comp=N,187nm,0.7s						
NONG	Nongkai	37.60	272	P	P	03 44 44.6	+1.6
	comp=N,4.4nm,1.1s,comp=N,57nm						
KSM	Kuching	37.66	242	eP	P	03 44 43.4	-0.2
	comp=N,38nm,0.8s						
KSM				ePcP	PcP	03 46 54.6	+0.4
KSM	Kuching	37.66	242	P	P	03 44 45.0	+1.4
MA2	Magadan	38.24	6	P	P	03 44 48.6	+0.8
	comp=N,58nm,0.6s,baz=188,slow=7.0,SNR=33						
MA2				PcP	PcP	03 46 55.6	+0.4
	comp=N,23nm,0.8s,baz=127,slow=3.2,SNR=4.4						
MA2	Magadan	38.24	6	eP	P	03 44 48.5	+0.8
MA2				ePcP	PcP	03 46 55.2	0.0
MA2	Magadan	38.24	6	⇑eP	P	03 44 48.7	+0.9
MA2				pmax	pmax		
	comp=Z,89nm,1.0s						
KHON	Khomkaen	38.30	269	P	P	03 44 50.0	+1.2
	comp=Z,67nm,0.7s,comp=Z,950nm						
WBSI	Waikabubak, Su	38.83	219	P	P	03 44 52.7	-0.6
	comp=Z,141nm,0.7s,comp=Z,1µm						
SMY	Shemya	39.09	30	eP	P	03 44 56.8	+2.0
	comp=Z,367nm,1.5s						
SMY	Shemya	39.09	30	eP	P	03 44 56.8	+2.0
SMY				pmax	pmax		
	comp=Z,367nm,1.5s						

PLAI	Plampang	39.17	222	P	P	03 44 55.7	-0.3
	comp=Z,248nm,0.8s,comp=Z,2µm						
SONM	Songino Array	39.24	321	P	P	03 44 57.2	+0.8
	comp=Z,30nm,0.4s,baz=132,slow=9.7,SNR=195						
SONM				PcP	PcP	03 46 59.2	+0.4
	comp=Z,13nm,0.7s,baz=134,slow=4.2,SNR=6.9						
SONM				ScP	ScP	03 50 18.3	-0.1
	comp=Z,8.6nm,1.1s,baz=90,slow=3.1,SNR=5.4						
SONM				PKiKP	PKiKP	03 54 09.8	-0.6
	comp=Z,1.3nm,0.6s,baz=137,slow=1.5,SNR=5.5						
SONM	Songino Array	39.24	321	P	P	03 44 57.2	+0.8
SONM						03 46 59.2	
SONM				pmax	pmax		
	comp=Z,31nm,0.4s						
SONA1	Songino Array	39.24	321	*e*P	P	03 44 56.2	-0.2
SRAK	Srakaew	39.65	266	P	P	03 44 57.1	-2.9
	comp=Z,324nm,1.0s,comp=Z,3µm						
TWSI	Taliwang, Sumb	39.66	223	P	P	03 44 59.9	-0.1
	comp=Z,64nm,0.6s						
PBKT	Sadao Pong	39.96	270	*e*P	P	03 45 04.1	+1.6
PBKT				*e*PcP	PcP	03 47 03.4	+2.0
PBKT	Sadao Pong	39.96	270	P	P	03 45 03.8	+1.3
	comp=Z,118nm,0.9s,comp=Z,2µm						
UTTA	Uttaradit	40.08	272	P	P	03 45 04.6	+1.1
	comp=Z,47nm,0.9s,comp=Z,396nm						
NAYO	Nakonayok	40.23	267	P	P	03 45 06.2	+1.5
	comp=Z,2.9nm,1.2s,comp=Z,42nm						
PHIT	Phitsanulok	40.33	271	P	P	03 45 07.0	+1.5
	comp=Z,80nm,0.8s,comp=Z,878nm						
GTA	Gaotai	40.74	306	⇑P	P	03 45 09.8	+1.0
GTA				pP	pP	03 46 13.8	+4.9
GTA				sP	PP	03 46 49.0	-0.7
GTA				PcP	PcP	03 47 04.8	+1.0
GTA				ScP	ScP	03 50 21.8	-2.7
GTA				PcS	PcS	03 50 54.5	-0.7
GTA				S	S	03 50 56.5	-0.1
GTA				pmax	pmax		
	comp=Z,130nm,1.4s						
GTA				pmax	pmax		
	comp=Z,420nm,8.3s						
GTA				LR	LR		
	comp=Z,430nm,18.9s						
GTA				LR	LR		
	comp=Z,230nm,15.3s						
GTA				LR	LR		
	comp=Z,350nm,15.5s						
LAMP	Lampang	40.77	274	P	P	03 45 10.5	+1.4
	comp=Z,21nm,0.8s,comp=Z,208nm						
SUKH	Sukhothai	40.99	272	P	P	03 45 12.3	+1.4
	comp=Z,29nm,0.8s						
PATY	Pattaya	41.07	265	P	P	03 45 13.6	+2.0
	comp=Z,39nm,0.8s						
BLJI	Banyuglugur	41.10	228	P	P	03 45 13.5	+1.7
	comp=Z,167nm,0.9s						
JAGI	Jajag, Banyuwa	41.25	226	P	P	03 45 13.1	+0.1
	comp=Z,127nm,0.8s						
JAGI	Jajag, Banyuwa	41.25	226	*e*P	P	03 45 12.1	-0.9
	comp=Z,95nm,0.8s						
YAK	Yakutsk	41.34	351	*e*P	P	03 45 12.5	-0.6
	comp=Z,659nm,0.8s						
YAK	Yakutsk	41.34	351	*e*P	P	03 45 10.9	-2.1
YAK				*e**PP	pP	03 46 05.1	-8.2
YAK				*e*		03 46 53.6	
YAK				*e*		03 47 04.2	
YAK				*e*S	S	03 51 01.1	-3.2
YAK				*e*		03 54 39.1	
YAK				pmax	pmax		
	comp=Z,460nm,0.9s						
YAK				pmax	pmax		
	comp=N,89nm,1.0s						
YAK				pmax	pmax		
	comp=E,15nm,0.8s						
YAK				smax	smax		
	comp=N,232nm,1.3s						
YAK				smax	smax		
	comp=E,211nm,1.3s						
CMMT	Chiang Mai	41.34	274	P	P	03 45 14.6	+0.8
	comp=E,84nm,1.2s,comp=E,928nm						
CHTO	Chiang Mai	41.35	274	*e*P	P	03 45 14.8	+1.0
	comp=E,80nm,1.0s						
CHTO	Chiang Mai	41.35	274	P	P	03 45 14.5	+0.7
	SNR=20						
CHTO	Chiang Mai	41.35	274	P	P	03 45 14.7	+0.9
	comp=E,375nm,1.2s,comp=E,4µm						
CM01	Chiang Mai Arr	41.41	274	*e*P	P	03 45 14.3	0.0
CM01				*e*PcP	PcP	03 47 07.0	+0.8
CM31	Chiang Mai Arr	41.42	274	*e*P	P	03 45 16.3	+1.9
CMAR	Chiang Mai Arr	41.42	274	P	P	03 45 15.8	+1.4
	comp=E,32nm,0.7s,baz=58,slow=7.9,SNR=118						
CMAR				PcP	PcP	03 47 07.0	+0.8
	comp=E,11nm,0.9s,baz=82,slow=2.0,SNR=8.0						
CMAR	Chiang Mai Arr	41.42	274	P	P	03 45 15.8	+1.4
CMAR						03 47 07.0	
CMAR				pmax	pmax		
	comp=Z,29nm,0.7s						
CTAO	Charters Tower	41.66	175	*e*P	P	03 45 16.3	+0.1
CTAO	Charters Tower	41.66	175	*e*P	P	03 45 16.3	+0.1
SEY	Seymchan	41.70	6	*ce*P	P	03 45 16.8	+0.9
BOD	Bodaibo	41.77	337	⇓*i*P	P	03 45 16.4	-0.2
BOD				pmax	pmax		
	comp=Z,70nm,1.7s						
UMPA	Umpang Tak	42.01	270	P	P	03 45 21.4	+2.2
	comp=Z,43nm,0.8s,comp=Z,469nm						
WRAB	Tennant Creek	42.24	192	*e*P	P	03 45 20.7	-0.2
	comp=Z,230nm,1.0s						
WRAB				*e*ScP	ScP	03 50 30.7	+0.2
WRAB				*e*S	S	03 51 16.8	-1.7
WRAB	Tennant Creek	42.24	192	*de*P	P	03 45 20.5	-0.3
WRAB				pmax	pmax		
	comp=Z,244nm,1.0s						
ZAK	Zakamensk	42.25	323	*e*P	P	03 45 21.2	+0.5
ZAK				*e*		03 47 07.5	
ZAK				pmax	pmax		
	comp=Z,139nm,1.4s						
WB2	Warramunga Arr	42.25	192	*e*P	P	03 45 19.2	-1.7
WB2				*e*S	S	03 51 16.9	-1.8
WRA	Warramunga Arr	42.25	192	P	P	03 45 20.8	-0.2
	comp=Z,146nm,0.7s,baz=14,slow=8.7,SNR=254						
WRA				PP	PP	03 47 07.1	+1.1
	comp=Z,19nm,1.0s,baz=15,slow=9.9,SNR=4.6						
WRA				ScP	ScP	03 50 31.6	+1.0
	comp=Z,23nm,0.9s,baz=12,slow=4.3,SNR=23						
WRA				S	S	03 51 16.4	-2.3
	comp=Z,15nm,1.0s,baz=14,slow=14,SNR=20						
WRA				PKiKP	PKiKP	03 54 12.6	-0.9
	comp=Z,1.6nm,0.7s,baz=325,slow=1.6,SNR=5.3						
SRDT	SRDT	42.26	268	P	P	03 45 22.7	+1.5
	comp=Z,226nm,1.1s						
NGJI	Ngawi	42.34	230	P	P	03 45 24.5	+2.8
	comp=Z,72nm,1.3s						
IRK	Irkutsk	42.62	325	*e*P	P	03 45 24.1	+0.6
IRK				pmax	pmax		
	comp=Z,186nm,2.0s						
TLY	Talaya	42.67	324	*e*P	P	03 45 24.9	+0.9
	comp=Z,110nm,1.0s						
TLY				*e*PcP	PcP	03 47 10.1	+0.3
TLY				*e*ScP	ScP	03 50 31.4	-0.4
TLY	Talaya	42.67	324	P	P	03 45 25.6	+1.6
	SNR=72						
TLY	Talaya	42.67	324	*c i*P	P	03 45 25.0	+1.0
TLY				*e*		03 47 10.2	
TLY				*e*S	S	03 51 24.9	+0.7
TLY				*e*SS	ScS	03 54 49.6	-2.0
TLY				pmax	pmax		
	comp=Z,161nm,1.4s						
MYKOM	Kota Tinggi	42.94	248	*e*P	P	03 45 27.0	+0.4
	comp=Z,48nm,0.7s						
MYKOM	Kota Tinggi	42.94	248	P	P	03 45 29.0	+2.4
PCJI	Pacitan	43.11	230	P	P	03 45 29.7	+1.8
	comp=Z,141nm,1.0s						
SKLT	Songkhla	43.36	257	P	P	03 45 31.8	+1.9
	comp=Z,231nm,1.1s,comp=Z,2µm						
UGM	Wanagama	43.39	231	*e*P	P	03 45 30.1	-0.1
	comp=Z,768nm,1.9s						
TRTT	Trang	43.94	258	P	P	03 45 36.4	+1.9
	comp=Z,46nm,1.1s,comp=Z,726nm						
KULM	Kulim	44.12	255	*e*P	P	03 45 37.9	+1.9
	comp=Z,122nm,0.7s						
KULM	Kulim	44.12	255	P	P	03 45 38.0	+2.0
MOY	Mondy	44.12	323	*e*P	P	03 45 36.5	+0.9
MOY				pmax	pmax		
	comp=Z,180nm,1.8s						
IPM	Ipoh	44.14	253	*e*P	P	03 45 37.6	+1.4
	comp=Z,112nm,0.9s						
KPJI	Karang Pucung	44.16	233	P	P	03 45 36.4	+0.2
	comp=Z,99nm,0.7s						
ATKA	Atka Island	44.78	36	*e*P	P	03 45 40.6	0.0
	comp=Z,383nm,0.6s						
PKDT	Phuket	45.15	259	P	P	03 45 45.9	+1.8
	comp=Z,87nm,1.0s						
DBJI	Dramaga	45.31	236	P	P	03 45 46.9	+1.6
	comp=Z,86nm,0.8s,comp=Z,13µm						
SBJI	Serang	45.52	237	P	P	03 45 47.9	+1.0
	comp=Z,453nm,1.0s,comp=Z,16µm						
AS01	Alice Springs	45.95	192	*e*P	P	03 45 48.7	-1.4
AS01				*e*S	S	03 52 10.0	-1.8
AS31	Alice Springs	45.96	192	*e*P	P	03 45 49.2	-0.9
	comp=Z,14nm,0.6s						
AS31				*e*S	S	03 52 10.5	-1.5
ASAR	Alice Springs	45.96	192	P	P	03 45 49.5	-0.6
	comp=Z,21nm,0.7s,baz=9.9,slow=8.0,SNR=148						
ASAR				ScP	ScP	03 50 46.8	+1.1
	comp=Z,6.6nm,0.8s,baz=6.9,slow=4.6,SNR=7.6						
ASAR				S	S	03 52 10.1	-1.9
	comp=Z,16nm,0.8s,baz=18,slow=19,SNR=28						
MDSI	Maura Dua	46.08	240	P	P	03 45 50.9	-0.4
	comp=Z,33nm,0.9s						
BKNI	Bangkinang	46.10	248	P	P	03 45 53.4	+2.0
	comp=Z,285nm,1.1s,comp=Z,3µm						
BKNI	Bangkinang	46.10	248	*e*P	P	03 45 53.5	+2.0
	comp=Z,208nm,0.8s						
CGJI	Cibinong	46.16	237	P	P	03 45 50.5	-1.4
KASI	Kota Agung	46.44	239	P	P	03 45 54.3	+0.3
	comp=Z,72nm,0.5s						
PSI	Prapat	46.77	253	*e*P	P	03 45 57.9	+1.2
	comp=Z,132nm,1.1s						
PSI	Prapat	46.77	253	*e*P	P	03 45 57.9	+1.2
PSI				pmax	pmax		
	comp=Z,132nm,1.1s						
SHL	Shillong	46.77	285	*e*P	P	03 45 57.0	+0.2
	comp=Z,124nm,1.0s						
SHL	Shillong	46.77	285	⇑*i*P	P	03 45 56.5	-0.3
SHL				*e*S	PcS	03 51 19.5	-1.0
SHL	Shillong	46.77	285	*e*P	P	03 45 57.0	+0.2
SHL				pmax	pmax		
	comp=Z,125nm,1.0s						
MASI	Maura Aman, Be	46.91	243	P	P	03 45 58.5	+0.8
	comp=Z,445nm,1.0s,comp=Z,4µm						
KRJI	Kerinci	46.99	245	P	P	03 46 01.6	+3.2
LSA	Lhasa	47.09	291	P	P	03 46 01.5	+2.0
LSA				pmax	pmax		
	comp=Z,130nm,0.8s						
LSA	Lhasa	47.09	291	*e*P	P	03 46 01.0	+1.5
	comp=Z,175nm,1.0s						
LSA	Lhasa	47.09	291	P	P	03 46 01.3	+1.9
LSA	Lhasa	47.09	291	*e*P	P	03 46 01.0	+1.5
LSA				pmax	pmax		
	comp=Z,175nm,1.0s						
MNSI	Mandailing Nat	47.13	250	P	P	03 46 00.3	+0.9
	comp=Z,153nm,1.0s,comp=Z,3µm						
BRDH	Bariadhala	47.38	281	P	P	03 46 02.5	+1.3
	comp=Z,88nm,0.4s,baz=54,slow=8.0,SNR=7.3						
EIDS	Eidsvold	47.44	170	*e*P	P	03 46 00.7	-0.8
	comp=Z,24nm,0.8s						
KCSI	Kotacane, Aceh	47.47	254	P	P	03 46 01.2	-0.8
LHMI	Lhok Sumawe	47.48	257	P	P	03 46 04.7	+2.6
	comp=Z,344nm,1.1s						
LHMI	Lhok Sumawe	47.48	257	*e*P	P	03 46 04.6	+2.6
	comp=Z,463nm,1.2s						
NIKH	Nikolski High	48.08	37	*e*P	P	03 46 06.3	+0.3
	comp=Z,294nm,0.7s						
TPTI		48.11	254	P	P	03 46 06.6	-0.3
MBWA	Marble Bar	48.29	210	*e*P	P	03 46 08.0	0.0
	comp=Z,52nm,0.8s						
MLSI	Meulaboh, Aceh	48.38	256	P	P	03 46 00.6	-8.3
SISI	Saibi	48.61	248	P	P	03 46 11.3	+0.6
GSI	Gunungsitoli	48.65	252	*e*P	P	03 46 11.1	+0.1
	comp=Z,133nm,0.6s						
SPIA	Saint Paul Isl	49.05	32	*e*P	P	03 46 15.0	+1.7
	comp=Z,282nm,0.7s						
DZM	Mont Dzumac	49.14	151	P	P	03 46 14.2	-0.4
	comp=Z,64nm,0.9s,baz=6.1,slow=6.5,SNR=22						
DZM	Mont Dzumac	49.14	151	*e*P	P	03 46 14.2	-0.4
	comp=Z,105nm,1.1s						
UNV	Unalaska Valle	49.70	37	*e*P	P	03 46 18.7	+0.4
	comp=Z,261nm,0.8s						
AKUT	Akutan	50.20	37	*e*P	P	03 46 22.8	+0.8
	comp=Z,724nm,1.0s						
AKUT				*e*S	S	03 53 11.4	+1.0
TAPN	Taplejung	50.30	288	*e*P	P	03 46 24.6	+1.0
	comp=Z,88nm,0.5s						
WMQ	Urumqi	50.46	309	P	P	03 46 25.5	+1.3
WMQ				pP	pP	03 47 30.8	+3.7
WMQ				PcP	PcP	03 47 38.3	+0.6
WMQ				sP	sP	03 47 57.5	-2.8
WMQ				S	S	03 53 16.0	+1.5
WMQ				sS	sS	03 55 08.8	+2.6
WMQ				ScS	ScS	03 55 42.5	-0.8
WMQ				pmax	pmax		
	comp=Z,320nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,1µm,3.6s						
WMQ				LR	LR		
	comp=Z,430nm,17.1s						
WMQ				LR	LR		
	comp=Z,620nm,22.1s						
WMQ				LR	LR		
	comp=Z,600nm,19.9s						
TIXI	Tiksi	50.63	354	*e*P	P	03 46 24.9	0.0
	comp=Z,93nm,0.9s						
TIXI	Tiksi	50.63	354	*ce*P	P	03 46 24.7	-0.2
TIXI				pmax	pmax		
	comp=Z,88nm,0.9s						
ODAN	Odare	50.63	288	*e*P	P	03 46 26.9	+0.9
	comp=Z,227nm,0.7s						
RAMN	Ramite	51.32	288	*e*P	P	03 46 31.8	+0.7
	comp=Z,214nm,0.9s						
JIRN	Jiri	51.60	289	*e*P	P	03 46 34.5	+1.2
	comp=Z,884nm,1.2s						
FALS	False Pass	51.74	36	*e*P	P	03 46 33.7	+0.4
	comp=Z,358nm,0.6s						
GUN	Gumba	51.85	289	*e*P	P	03 46 36.1	+1.0
	comp=Z,357nm,0.9s						
KKN	Kakani	52.39	289	*e*P	P	03 46 39.5	+0.6
	comp=Z,167nm,0.9s						
ARMA	Armidale	52.48	171	*e*P	P	03 46 39.5	+0.3
	comp=Z,31nm,1.0s						
DMN	Daman	52.56	289	*e*P	P	03 46 40.9	+0.7
	comp=Z,246nm,1.0s						
ZSN	Zaisan	52.91	314	⇑*i*P	P	03 46 43.4	+1.3
	comp=Z,9.1nm,1.2s						
ZSN				*i* pP	PcP	03 47 47.4	+0.6
ZSN				*i* S	S	03 53 49.6	+2.0
GKN	Gorkha	52.93	289	*e*P	P	03 46 43.5	+0.8
	comp=Z,671nm,1.1s						
STKA	Stephens Creek	53.29	182	P	P	03 46 44.6	-0.3
	comp=Z,102nm,0.7s,baz=2.3,slow=7.4,SNR=138						
STKA				S	S	03 53 51.1	-1.7
	comp=Z,5.0nm,0.9s,baz=308,slow=19,SNR=9.1						
STKA	Stephens Creek	53.29	182	*e*P	P	03 46 44.6	-0.3
	comp=Z,25nm,0.9s						
STKA				S	S	03 53 51.1	-1.7
SDPT	Sand Point	53.50	36	*e*P	P	03 46 46.4	+0.3
	comp=Z,439nm,0.7s						
DANN	Dangsing	53.65	290	*e*P	P	03 46 49.4	+1.2
	comp=Z,551nm,0.5s						
KOLN	Koldanda	53.87	289	*e*P	P	03 46 50.3	+0.7
ZAA0	Zalesovo Array	54.11	322	*e*P	P	03 46 51.0	+0.3
	comp=Z,168nm,0.9s						
ZALV	Zalesovo Beam	54.11	322	P	P	03 46 50.9	+0.2
	comp=Z,165nm,0.9s,baz=103,slow=6.7,SNR=197						
ZALV				PcP	PcP	03 47 50.9	-0.3
	comp=Z,63nm,0.6s,baz=123,slow=3.9,SNR=18						
ZALV	Zalesovo Beam	54.11	322	*e*P	P	03 46 50.1	-0.5
ZALV				PcP	PcP	03 47 50.9	-0.3
FORT	Forrest	54.12	196	*e*P	P	03 46 50.7	-0.2
	comp=Z,160nm,0.7s						
PYUN	Piuthan	54.36	290	*e*P	P	03 46 53.9	+0.8
	comp=Z,340nm,0.9s						
ANM	Nome	54.48	25	*e*P	P	03 46 52.7	-0.4
	comp=Z,114nm,1.0s						
ANM	Nome	54.48	25	*e*P	P	03 46 52.7	-0.4
ANM				pmax	pmax		
	comp=Z,114nm,1.0s						
OPA	Opana	54.49	78	*e*P	P	03 46 53.6	-0.3
	comp=Z,124nm,1.2s						
OPA	Opana	54.49	78	*e*P	P	03 46 53.6	-0.3
OPA				pmax	pmax		
	comp=Z,124nm,1.2s						
KIP	Kipapa	54.54	79	*e*P	P	03 46 55.6	+1.4
	comp=Z,135nm,0.8s						
KIP	Kipapa	54.54	79	*ce*P	P	03 46 55.9	+1.7
KIP				pmax	pmax		
	comp=Z,1µm,2.5s						
MK01	Makanchi Array	54.57	313	*e*P	P	03 46 54.2	+0.1
MK31	Makanchi Array	54.58	313	*e*P	P	03 46 55.0	+0.8
MK31	Makanchi Array	54.58	313	*i* P	P	03 46 54.6	+0.4
MK31				pmax	pmax		
	comp=Z,58nm,0.7s						
MKAR	Makanchi Array	54.58	313	P	P	03 46 55.0	+0.9
	comp=Z,63nm,0.6s,baz=91,slow=9.2,SNR=514						
MKAR				PcP	PcP	03 47 53.2	0.0
	comp=Z,28nm,0.5s,baz=76,slow=4.3,SNR=17						
MKAR				PKP2bc		04 17 16.0	
	comp=Z,2.9nm,1.0s,baz=294,slow=3.9,SNR=7.4						
BBOO	Buckleboo	54.61	187	*e*P	P	03 46 54.9	+0.5
	comp=Z,51nm,0.9s						
MAKZ	Makanchi	54.80	313	*e*P	P	03 46 56.7	+1.0
	comp=Z,124nm,0.9s						
MAKZ	Makanchi	54.80	313	*e*P	P	03 46 56.7	+1.0
MAKZ				pmax	pmax		
	comp=Z,124nm,0.9s						
CHGN	Chignik	54.86	36	*e*P	P	03 46 54.7	-1.3
	comp=Z,220nm,0.6s						
NVS	Novosibirsk	55.21	323	*e*P	P	03 46 59.1	+0.7
NVS				*e*		03 47 54.5	
NVS				*e*S	S	03 54 14.7	-3.1
NVS				pmax	pmax		
	comp=Z,222nm,1.4s						
NVS				pmax	pmax		
	comp=N,93nm,1.6s						
NVS				pmax	pmax		
	comp=E,200nm,1.6s						
NVS				smax	smax		
	comp=N,27nm,2.0s						
PDGK	Podgornoye	56.37	308	P	P	03 47 07.8	+0.8
PDGK				pmax	pmax		
	comp=Z,114nm,0.8s						
SHLS	Shalkode	56.38	308	⇑*i*P	P	03 47 06.1	-1.0
	comp=Z,49nm,1.4s						
SHLS				*e*S	S	03 54 31.6	-2.5
UZB	Uzynbulak	56.70	308	⇑*i*P	P	03 47 10.4	+1.0
	comp=Z,35nm,1.2s						
AFI	Afiamalu	56.74	125	P	P	03 47 10.3	+0.4
	comp=Z,54nm,0.7s,baz=315,slow=2.9,SNR=7.3						
AFI	Afiamalu	56.74	125	*e*P	P	03 47 09.9	0.0
	comp=Z,61nm,0.8s						
KHLU	Kahalu‘u	56.88	80	*e*P	P	03 47 10.0	-1.0
	comp=Z,212nm,1.3s						
RDOG	Red Dog Mine	56.92	21	*e*P	P	03 47 11.7	+1.4
	comp=Z,147nm,1.2s						
KPKS	Kokpek	56.95	308	⇑*i*P	P	03 47 12.1	+1.0
	comp=Z,30nm,0.7s						
KPKS				*i* S	S	03 54 43.0	+1.6
CAN	Canberra	56.99	174	*e*P	P	03 47 10.3	-1.0
	comp=Z,72nm,1.1s						
CAN	Canberra	56.99	174	*e*P	P	03 47 10.3	-1.0
CAN				pmax	pmax		
	comp=Z,72nm,1.1s						
SATY	Saty	57.16	308	⇑*i*P	P	03 47 13.9	+1.3
	comp=Z,84nm,1.4s						
SATY				*i* S	S	03 54 45.9	+1.7
TDK	Taldyqorghan	57.18	310	*i* P	P	03 47 14.0	+1.4
	comp=Z,124nm,1.1s						
TDK				*i* S	S	03 54 46.0	+1.8
SII	Sitkinak Islan	57.22	36	*e*P	P	03 47 13.7	+1.1
	comp=Z,356nm,0.6s						
KURK	Kurchatov	57.37	317	*e*P	P	03 47 14.1	+0.5
KURK				*e*PcP	PcP	03 48 03.7	-0.3
KURK				*e*ScP	ScP	03 51 34.2	-0.5
KURK	Kurchatov	57.37	317	P	P	03 47 14.3	+0.6
	SNR=84						
KURK	Kurchatov	57.37	317	*ce*P	P	03 47 14.0	+0.3
KURK				pmax	pmax		
	comp=Z,167nm,0.8s						
KURBB	Kurchatov Arra	57.41	317	P	P	03 47 14.5	+0.5
	comp=Z,193nm,0.6s,baz=95,slow=7.8,SNR=1446						
KURBB				PcP	PcP	03 48 03.8	-0.4
	comp=Z,27nm,0.7s,baz=92,slow=3.7,SNR=5.2						
SVW2	Sparrevohn	57.48	30	*e*P	P	03 47 15.8	+1.4
	comp=Z,150nm,0.7s						
OHAK	Old Harbor	57.81	35	*e*P	P	03 47 16.2	-0.5
	comp=Z,97nm,0.9s						
MDOK	Medeo	58.15	308	*i* P	P	03 47 21.1	+1.7
	comp=Z,2µm,0.9s						
MDOK				*e*S	S	03 54 59.1	+2.0
AAA	Alma-Ata	58.25	308	*e*P	P	03 47 22.1	+2.1
	comp=Z,109nm,0.7s						
KDAK	Kodiak Island	58.28	35	*e*P	P	03 47 20.4	+0.6
	comp=Z,98nm,0.6s						
KDAK				*e*S	S	03 54 59.2	+1.3
KDAK	Kodiak Island	58.28	35	*ce*P	P	03 47 20.0	+0.1
KUU	Kurty	58.66	309	*i* P	P	03 47 23.9	+1.1
	comp=Z,196nm,0.8s						
KUU				*e*S	S	03 55 04.9	+1.6
RSO	Redoubt South	58.69	31	*e*P	P	03 47 22.5	-0.4
ULHL	Ulahol	58.76	307	P	P	03 47 25.3	+1.5
	SNR=32						
HOM	Homer	59.09	33	*e*P	P	03 47 26.0	+0.7
	comp=Z,164nm,0.7s						
KSH	Kashi	59.10	304	P	P	03 47 29.8	+3.8
KSH				*e*PcP	PcP	03 48 13.8	+2.5
KSH				pP	pP	03 48 38.8	+7.7
KSH				PP	PP	03 49 46.5	+6.2
KSH				S	S	03 55 09.0	-0.3
KSH				ScS	ScS	03 56 40.8	-4.9
KSH				SS	SS	03 59 12.3	+3.7
KSH				pmax	pmax		
	comp=Z,73nm,0.9s						
KSH				pmax	pmax		
	comp=Z,370nm,4.2s						
KSH				LR	LR		
	comp=Z,960nm,12.7s						
KSH				LR	LR		
	comp=Z,1µm,7.8s						
KSH				LR	LR		
	comp=Z,3µm,8.5s						
SPU	Mount Spurr	59.17	31	*e*P	P	03 47 25.9	0.0
TKM2	Tokmak 2	59.22	308	P	P	03 47 28.4	+1.5
	SNR=88						
CNPM	China Poot	59.27	33	*e*P	P	03 47 26.4	-0.2
	comp=Z,211nm,0.7s						
CNPM				*e*S	S	03 55 10.4	-0.2
PPLA	Purkeypile	59.46	29	*e*P	P	03 47 29.1	+1.1
	comp=Z,403nm,1.8s						
BRLK	Bradley Lake	59.48	32	*e*P	P	03 47 27.3	-0.8
	comp=Z,147nm,0.7s						
KZA	Kyzart	59.51	307	P	P	03 47 31.2	+2.1
	SNR=52						
SKT	Skwentna	59.57	30	*e*P	P	03 47 28.5	-0.1
	comp=Z,141nm,0.8s						
CAST	Castle Rocks	59.62	28	*e*P	P	03 47 29.3	+0.4
	comp=Z,218nm,0.8s						
KBK	Karagaybulak	59.71	308	P	P	03 47 31.5	+1.4
	SNR=28						
CHMS	Chumysh	59.84	308	P	P	03 47 32.0	+1.1
	SNR=23						
SUA	Susitna One	59.84	31	*e*P	P	03 47 30.2	-0.4
	comp=Z,99nm,0.7s						
SUA				*e*S	S	03 55 18.5	+0.5
FRU	Bishkek	59.94	308	⇑*i*P	P	03 47 32.5	+1.0
FRU				*i*		03 48 14.5	
FRU				pmax	pmax		
	comp=Z,220nm,2.0s						
USP	Ospenovka	60.01	308	P	P	03 47 33.1	+1.1
	SNR=27						
AAK	Ala-Archa	60.04	308	P	P	03 47 33.5	+1.2
	comp=Z,28nm,0.6s,baz=114,slow=6.5,SNR=11						
AAK				PcP	PcP	03 48 15.4	+0.4
	comp=Z,13nm,0.8s,baz=103,slow=2.5,SNR=3.9						
AAK	Ala-Archa	60.04	308	P	P	03 47 33.6	+1.2
	SNR=23						
AAK	Ala-Archa	60.04	308	*e*P	P	03 47 33.5	+1.2
	comp=Z,39nm,0.8s						
AAK				PcP	PcP	03 48 15.4	+0.4
AAK	Ala-Archa	60.04	308	P	P	03 47 33.8	+1.4
	SNR=23						
AAK	Ala-Archa	60.04	308	*i* P	P	03 47 33.6	+1.2
	SNR=26						
AAK	Ala-Archa	60.04	308	*c i*P	P	03 47 33.3	+0.9
AAK				pmax	pmax		
	comp=Z,46nm,0.8s						
UCH	Uchtor	60.05	307	P	P	03 47 34.5	+1.8
	SNR=126						
KTH	Kantishna Hill	60.15	28	*e*P	P	03 47 32.6	0.0
	comp=Z,109nm,1.0s						
BPAW	Bear Paw Mtn.	60.24	28	*e*P	P	03 47 34.2	+1.1
	comp=Z,168nm,0.7s						

BPAW				eS	S	03 55 26.7	+3.9
RC01	Rabbit Creek A	60.26	31	eP	P	03 47 33.2	-0.1
	comp=Z,187nm,0.9s						
BTLS	Baital	60.27	310	⇑iP	P	03 47 34.7	+1.0
	comp=Z,62nm,1.1s						
BTLS				eS	S	03 55 25.3	+1.5
TRF	Thorofare Moun	60.41	28	eP	P	03 47 34.8	+0.3
	comp=Z,206nm,0.8s						
TRF				eS	S	03 55 27.9	+2.7
MLY	Manley	60.53	27	eP	P	03 47 36.3	+1.2
	comp=Z,176nm,1.0s						
EKS2	Erkin-Say	60.57	308	P	P	03 47 37.1	+1.3
	SNR=42						
PMR	Palmer	60.62	31	eP	P	03 47 35.1	-0.6
	comp=Z,153nm,0.9s						
PMR				eS	S	03 55 26.6	-0.9
PMR	Palmer	60.62	31	eP	P	03 47 35.1	-0.6
PMR				eS	S	03 55 26.6	-0.9
PMR				pmax	pmax		
	comp=Z,153nm,0.9s						
AML	Almayashu	60.66	307	P	P	03 47 38.6	+1.8
	SNR=114						
GHO	Glory Hole Cre	60.75	30	eP	P	03 47 36.9	+0.2
	comp=Z,174nm,0.7s						
SFK	Sufi-Kurgan	60.96	305	P	P	03 47 39.4	+0.7
SFK				pmax	pmax		
	comp=Z,76nm,0.9s						
SML	Sawmill	61.03	30	eP	P	03 47 38.9	+0.3
	comp=Z,303nm,0.8s						
MCK	McKinley	61.06	28	eP	P	03 47 38.7	0.0
	comp=Z,178nm,0.9s						
MCK	McKinley	61.06	28	eP	P	03 47 38.7	0.0
MCK				pmax	pmax		
	comp=Z,178nm,0.9s						
BRZS	Berezniki	61.13	316	⇑iP	P	03 47 39.9	+0.5
	comp=Z,55nm,1.0s						
BRZS				eS	S	03 55 35.3	+0.9
COLD	Coldfoot	61.23	24	eP	P	03 47 41.2	+1.5
	comp=Z,102nm,0.9s						
GLI	Glacier Island	61.51	32	eP	P	03 47 42.1	+0.4
	comp=Z,129nm,0.7s						
GLI				eS	S	03 55 39.7	+1.0
SCM	Sheep Creek Mo	61.51	30	eP	P	03 47 42.2	+0.5
	comp=Z,253nm,1.0s						
SCM				eS	S	03 55 40.7	+1.8
SCM	Sheep Creek Mo	61.51	30	eP	P	03 47 42.2	+0.5
SCM				eS	S	03 55 40.7	+1.8
SCM				pmax	pmax		
	comp=Z,253nm,1.0s						
MNAS	Manas	61.52	308	P	P	03 47 43.0	+0.7
MNAS				pmax	pmax		
	comp=Z,58nm,1.1s						
WRH	Wood River Hil	61.55	27	eP	P	03 47 41.5	-0.4
	comp=Z,72nm,0.8s						
MDM	Murphy Dome	61.57	27	eP	P	03 47 42.0	0.0
	comp=Z,52nm,0.9s						
PALK	Pallekele	61.65	267	P	P	03 47 44.3	+0.9
	comp=Z,56nm,1.0s,baz=116,slow=4.6,SNR=10						
PALK	Pallekele	61.65	267	eP	P	03 47 43.5	+0.1
	comp=Z,46nm,0.8s						
PALK	Pallekele	61.65	267	i P	P	03 47 44.0	+0.6
	SNR=6.4						
PALK	Pallekele	61.65	267	i P	P	03 47 44.6	+1.2
CCB	Clear Creek Bu	61.70	27	eP	P	03 47 42.3	-0.5
	comp=Z,36nm,0.7s						
COLA	College	61.71	27	eP	P	03 47 43.2	+0.3
COLA	College	61.71	27	eP	P	03 47 43.2	+0.3
MID	Middleton Isla	61.74	33	eP	P	03 47 44.4	+1.3
	comp=Z,284nm,0.8s						
MID	Middleton Isla	61.74	33	eP	P	03 47 44.4	+1.3
MID				pmax	pmax		
	comp=Z,284nm,0.8s						
TOLK	Toolik Lake Re	61.77	23	P	P	03 47 44.8	+1.5
	baz=257						
TOLK	Toolik Lake Re	61.77	23	eP	P	03 47 44.9	+1.6
	comp=Z,149nm,0.8s						
FID	Port Fidalgo	61.79	32	eP	P	03 47 43.9	+0.3
	comp=Z,184nm,0.7s						
FID				eS	S	03 55 42.9	+0.5
NIL	Nilore	61.90	297	eP	P	03 47 45.6	+0.9
IL1	Eielson Array	62.11	27	eP	P	03 47 43.7	-1.9
ILAR	Eielson Array	62.11	27	P	P	03 47 44.9	-0.6
	comp=Z,105nm,0.8s,baz=258,slow=5.3,SNR=790						
ILAR				S	S	03 55 44.2	-1.9
	comp=Z,1.6nm,0.9s,baz=261,slow=10,SNR=8.4						
ILB	Eielson Array	62.11	27	eP	P	03 47 45.0	-0.6
EYAK	Cordova Ski Ar	62.13	32	eP	P	03 47 46.7	+0.9
	comp=Z,95nm,0.8s						
EYAK				eS	S	03 55 49.8	+3.3
KLU	Klutina	62.14	31	eP	P	03 47 46.7	+0.8
	comp=Z,394nm,1.5s						
KLU				eS	S	03 55 50.3	+3.5
DIV	Divide	62.17	31	eP	P	03 47 47.0	+0.8
	comp=Z,288nm,1.7s						
PAX	Paxson	62.50	29	eP	P	03 47 48.9	+0.6
	comp=Z,75nm,0.7s						
PAX				eS	S	03 55 53.9	+2.6
PAX	Paxson	62.50	29	eP	P	03 47 48.9	+0.6
PAX				eS	S	03 55 53.9	+2.6
PAX				pmax	pmax		
	comp=Z,75nm,0.7s						
BVAR	Borovoye Array	62.57	319	P	P	03 47 49.6	+0.8
	comp=Z,182nm,0.4s,baz=92,slow=7.4,SNR=1123						
BVAR				PcP	PcP	03 48 25.0	+0.1
	comp=Z,36nm,0.7s,baz=98,slow=6.0,SNR=2.9						
BRVK	Borovoye	62.63	320	eP	P	03 47 50.1	+0.9
BRVK	Borovoye	62.63	320	P	P	03 47 50.2	+1.0
	SNR=118						
BRVK	Borovoye	62.63	320	ceP	P	03 47 49.9	+0.7
BRVK				pmax	pmax		
	comp=Z,300nm,1.0s						
RAGM	Ragged Mountai	62.65	32	eP	P	03 47 50.3	+1.0
	comp=Z,248nm,1.4s						
RIDG	Independ’e Rid	62.86	28	eP	P	03 47 50.9	+0.3
	comp=Z,175nm,0.8s						
RIDG				eS	S	03 55 59.2	+3.6
KK31	Karatay Array	62.93	308	eP	P	03 47 52.4	+1.0
KK31	Karatay Array	62.93	308	eP	P	03 47 52.4	+1.0
KKAR	Karatay Array	62.93	308	eP	P	03 47 52.4	+1.0
KKAR	Karatay Array	62.93	308	eP	P	03 47 52.4	+1.0
FYU	Fort Yukon	63.04	25	eP	P	03 47 53.0	+1.4
	comp=Z,185nm,0.9s						
DOT	Dot Lake	63.20	29	eP	P	03 47 53.2	+0.4
	comp=Z,302nm,1.4s						
SCRK	Sand Creek	63.26	28	eP	P	03 47 53.5	+0.2
	comp=Z,178nm,0.8s						
IUG	Iuzhnay	63.38	307	i P	P	03 47 55.7	+1.3
	comp=Z,84nm,1.3s						
TGL	Tana Glacier	63.58	32	eP	P	03 47 56.2	+0.8
	comp=Z,122nm,1.0s						
OUZ	Omahuta	63.61	152	P	P	03 47 56.7	+0.9
TAU	Tasmania Unive	64.41	176	eP	P	03 48 00.7	0.0
	comp=Z,70nm,1.3s						
TAU	Tasmania Unive	64.41	176	eP	P	03 48 00.7	0.0
TAU				pmax	pmax		
	comp=Z,70nm,1.3s						
POO	Poona	64.54	281	eP	P	03 47 57.5	-4.7
WCZ	Waipu Caves	64.54	152	P	P	03 48 02.5	+0.7
EGAK	Eagle	64.55	27	eP	P	03 48 01.6	+0.1
	comp=Z,40nm,0.8s						
EGAK				eS	S	03 56 14.8	-1.3
KBL	Kabul	65.20	299	eP	P	03 48 07.1	+0.6
	comp=Z,156nm,0.9s						
KBL	Kabul	65.20	299	eP	P	03 48 07.1	+0.6
KBL				pmax	pmax		
	comp=Z,156nm,0.9s						
DAWY	Dawson	65.29	28	eP	P	03 48 07.3	+1.0
	comp=Z,78nm,0.7s						
WIAZ	Waiheke Island	65.61	152	P	P	03 48 09.2	+0.7
KUZ	Kuaotunu	65.82	152	P	P	03 48 09.7	-0.2
MKAZ	Moumakai	65.88	152	P	P	03 48 10.5	+0.2
HIZ	Hauiti	66.93	153	eP	P	03 48 17.9	+1.0
	comp=Z,120nm,1.4s						
HIZ	Hauiti	66.93	153	P	P	03 48 17.7	+0.8
KHEZ	Kahui Hut	67.25	154	P	P	03 48 20.1	+1.1
VRZ	Vera Road	67.41	154	P	P	03 48 20.5	+0.7
WHY	Whitehorse	67.49	32	eP	P	03 48 21.6	+1.3
	comp=Z,63nm,0.8s						
SIT	Sitka	67.56	36	eP	P	03 48 21.8	+1.1
	comp=Z,51nm,1.2s						
SIT	Sitka	67.56	36	P	P	03 48 21.7	+1.1
SIT				pmax	pmax		
	comp=Z,51nm,1.2s						
HAZ	Te Kaha	67.58	151	P	P	03 48 19.7	-1.2
INK	Inuvik	67.63	24	P	P	03 48 21.0	+0.3
	comp=Z,68nm,0.6s,baz=267,slow=4.8,SNR=119						
INK	Inuvik	67.63	24	eP	P	03 48 21.1	+0.3
	comp=Z,101nm,0.9s						
INK	Inuvik	67.63	24	eP	P	03 48 21.1	+0.3
INK				pmax	pmax		
	comp=Z,101nm,0.9s						
MXZ	Matakaoa Point	67.66	150	P	P	03 48 19.6	-1.9
BESE	Bessie Mountai	67.67	34	eP	P	03 48 22.8	+1.4
	comp=Z,114nm,0.8s						
URZ	Urewera	67.69	152	eP	P	03 48 20.5	-1.1
	comp=Z,57nm,1.2s						
URZ	Urewera	67.69	152	P	P	03 48 20.7	-0.9
RUGZ	Raukumara Rang	67.71	151	P	P	03 48 20.2	-1.7
PKGZ	Pakihiroa	67.82	151	P	P	03 48 21.5	-1.1
WMGZ	Waiomatatini S	67.92	150	P	P	03 48 21.7	-1.3
RTZ	Ruatahuna	67.93	152	P	P	03 48 22.4	-0.8
MWZ	Matawai	67.94	151	P	P	03 48 22.6	-0.6
SVE	Sverdlovsk	67.98	324	d iP	P	03 48 24.0	+0.7
SVE				pmax	pmax		
	comp=Z,280nm,1.0s						
QRZ	Quartz Range	67.99	156	P	P	03 48 23.4	-0.1
MOVZ	Moawhango	68.06	153	P	P	03 48 23.6	-0.4
BKZ	Black Stump Fm	68.17	152	eP	P	03 48 23.8	-0.9
	comp=Z,40nm,0.8s						
NNZ	Nelson	68.65	156	P	P	03 48 26.3	-1.2
THZ	Tophouse	68.95	156	eP	P	03 48 28.9	-0.5
	comp=Z,16nm,0.8s						
CRAG	Craig	68.97	37	eP	P	03 48 30.0	+0.6
	comp=Z,60nm,0.9s						
ARU	Arti	69.17	324	P	P	03 48 30.8	+0.2
	comp=Z,81nm,0.5s,baz=90,slow=3.6,SNR=186						
ARU	Arti	69.17	324	c iP	P	03 48 30.8	+0.2
ARU						03 48 52.3	
ARU						03 51 05.9	
ARU				S	S	03 57 11.7	+0.2
ARU				pmax	pmax		
	comp=Z,374nm,1.7s						
SNZO	South Karori	69.25	155	eP	P	03 48 29.8	-1.3
	comp=Z,77nm,1.3s						
WRAK	Wrangell Islan	69.27	36	eP	P	03 48 32.4	+1.3
	comp=Z,73nm,0.9s						
FOZ	Fox Glacier	69.43	159	eP	P	03 48 31.9	-0.3
	comp=Z,42nm,1.0s						
AB31	Akbulak array	69.44	316	P	P	03 48 32.7	+0.3
AB31				pmax	pmax		
	comp=Z,147nm,0.6s						
ABKAR	Akbulak array	69.44	316	eP	P	03 48 31.9	-0.4
LTZ	Lake Taylor	69.60	157	eP	P	03 48 32.7	-0.6
	comp=Z,24nm,1.0s						
H02N1	VAN INLET T-PH	69.64	40	P	P	03 48 33.9	+0.3
	SNR=102						
DIB	Dawson Inlet,	69.68	40	eP	P	03 48 34.0	+0.3
	comp=Z,78nm,0.7s						
H02S1	DAWSON INLET T	69.68	40	P	P	03 48 34.0	+0.3
	SNR=144						
KHZ	Kahutara	69.75	156	eP	P	03 48 30.5	-3.6
	comp=Z,30nm,0.8s						
OXZ	Oxford	70.00	158	eP	P	03 48 34.4	-1.3
	comp=Z,29nm,0.9s						
RPZ	Rata Peaks	70.00	159	eP	P	03 48 34.5	-1.2
	comp=Z,52nm,0.9s						
DLBC	Dease Lake	70.21	34	eP	P	03 48 38.5	+1.5
	comp=Z,117nm,1.0s						
LBZ	Lake Benmore	70.31	160	eP	P	03 48 36.9	-0.6
	comp=Z,27nm,0.9s						
AKTO	Aktyubinsk	70.46	317	P	P	03 48 38.5	0.0
	comp=Z,48nm,0.7s,baz=87,slow=7.5,SNR=181						
MQZ	McQueen’s Vall	70.55	158	eP	P	03 48 38.9	-0.1
	comp=Z,48nm,1.1s						
MLZ	Mavora Lakes	70.55	162	eP	P	03 48 38.5	-0.5
	comp=Z,37nm,1.2s						
BBB	Bella Bella	72.48	40	eP	P	03 48 51.0	+0.6
	comp=Z,69nm,0.8s						
GEYT	Alibeck	73.12	305	P	P	03 48 54.8	+0.2
	comp=Z,37nm,0.9s,baz=260,slow=0.9,SNR=29						
GYA0B	ALIBECK ARRAY	73.12	305	eP	P	03 48 56.1	+1.5
	comp=Z,86nm,0.9s						
PHC	Port Hardy	73.24	42	eP	P	03 48 55.9	+1.0
PRGR	Permogore	74.58	331	⇑iP	P	03 49 02.7	+0.3
PRGR				pmax	pmax		
	comp=Z,186nm,0.9s						
SPA0	Spitsbergen Ar	75.80	350	eP	P	03 49 09.7	+0.6
SPA0	Spitsbergen Ar	75.80	350	eP	P	03 49 09.3	+0.1
SPA0				IAmb	IAmb	03 49 10.3	
	comp=Z,170nm,1.4s						
SPITS	Spitsbergen Ar	75.80	350	P	P	03 49 09.2	+0.1
	comp=Z,8.4nm,0.3s,baz=46,slow=7.1,SNR=84						
KBS	Kingsbay	75.96	351	eP	P	03 49 10.6	+0.6
	comp=Z,92nm,0.8s						
KBS	Kingsbay	75.96	351	eP	P	03 49 10.6	+0.6
KBS				pmax	pmax		
	comp=Z,92nm,0.8s						
KBS	Kingsbay	75.96	351	eP	P	03 49 10.5	+0.6
KBS				IAmb	IAmb	03 49 11.5	
	comp=Z,93nm,0.8s						
NLWA	Neilton Lookou	76.38	44	eP	P	03 49 14.5	+1.5
	comp=Z,95nm,0.7s						
YKW3	Yellowknife Ar	76.50	28	eP	P	03 49 13.0	-0.2
	comp=Z,131nm,0.7s						
YKA	Yellowknife Ar	76.52	28	P	P	03 49 13.6	+0.2
	comp=Z,118nm,0.6s,baz=292,slow=5.7,SNR=334						
LLLB	Lillooet	76.67	41	eP	P	03 49 15.2	+0.7
	comp=Z,92nm,0.8s						
HSPB	Hornsund (broa	76.70	349	eP	P	03 49 14.8	+0.7
HSPB				IAmb	IAmb	03 49 15.8	
	comp=Z,208nm,1.0s						
A04D	Lummi Island	76.73	43	P	P	03 49 16.3	+1.5
	baz=288						
E03A	Lebam	76.84	45	eP	P	03 49 17.0	+1.5
	comp=Z,169nm,0.8s						
BMW	Boistfort Moun	77.08	45	eP	P	03 49 18.2	+1.3
RES	Resolute Bay	77.11	13	eP	P	03 49 16.9	+0.5
	comp=Z,120nm,0.8s						
RES	Resolute Bay	77.11	13	eP	P	03 49 16.9	+0.5
RES				pmax	pmax		
	comp=Z,120nm,0.8s						
BIDO	Bidbid	77.18	290	P	P	03 49 20.0	+2.2
	SNR=7.4						
B05A	Bryant	77.26	43	P	P	03 49 18.9	+1.1
	baz=288						
APA	Apatity	77.31	338	⇑iP	P	03 49 17.1	-0.6
APA				pmax	pmax		
	comp=Z,30nm,0.7s						
APA				MLR	MLR		
	comp=Z,200nm,16.0s						
F04D	Rainier, OR	77.34	45	P	P	03 49 19.6	+1.3
	baz=288						
KEBM	Edson Butte	77.43	49	eP	P	03 49 20.5	+1.6
	comp=Z,208nm,1.0s						
G03D	McMinnville, O	77.44	46	P	P	03 49 20.1	+1.2
	baz=288						
B06A	Marblemount	77.56	43	eP	P	03 49 20.3	+0.8
	comp=Z,70nm,1.0s						
COR	Corvallis	77.61	47	eP	P	03 49 21.8	+2.0
	comp=Z,392nm,1.6s						
COR	Corvallis	77.61	47	eP	P	03 49 21.8	+2.0
COR				pmax	pmax		
	comp=Z,392nm,1.6s						
KLMR	Klimovskoe	77.62	331	eP	P	03 49 17.7	-1.8
KLMR				e		03 52 18.6	
KLMR				pmax	pmax		
	comp=Z,94nm,1.0s						
KLMR	Klimovskoe	77.62	331	eP	P	03 49 17.8	-1.8
KLMR				AMP		03 49 19.7	
	comp=Z,94nm,1.0s						
KLMR				ePP	PP	03 52 18.7	0.0
D05A	Enumclaw	77.67	44	eP	P	03 49 21.6	+1.5
	comp=Z,122nm,1.2s						
KBO	Bosley Butte	77.71	49	eP	P	03 49 22.4	+1.8
	comp=Z,100nm,1.1s						
I03D	Drain, OR	77.86	48	P	P	03 49 22.5	+1.3
	baz=288,SNR=25						
B202	Windy Ridge, M	77.87	45	eP	P	03 49 22.4	+1.1
HOQ	Hoqain	77.87	291	P	P	03 49 25.0	+3.3
	SNR=5.9						
LON	Longmire	77.92	44	eP	P	03 49 22.2	+0.6
	comp=Z,76nm,1.5s						
LON	Longmire	77.92	44	eP	P	03 49 22.2	+0.6
LON				pmax	pmax		
	comp=Z,76nm,1.5s						
BANOM	Banah	78.01	293	P	P	03 49 24.7	+2.3
	SNR=5.6						
BANOM	Banah	78.01	293	i P	P	03 49 23.3	+0.9
	SNR=8.6						
SHME	Shamm	78.10	293	i P	P	03 49 23.6	+0.7
	SNR=24						
C06D	Leavenworth	78.13	43	P	P	03 49 23.4	+0.8
	baz=289						
L02D	Cave Junction,	78.17	49	P	P	03 49 24.1	+1.2
	baz=288,SNR=20						
JCC	Jacoby Creek,	78.29	51	eP	P	03 49 25.2	+1.7
	comp=Z,119nm,1.1s						
MSFE	Esma-Masafi	78.30	293	i P	P	03 49 24.9	+0.9
	SNR=12						
KEV	Kevo	78.31	341	eP	P	03 49 22.7	-0.4
KEV	Kevo	78.31	341	eP	P	03 49 22.7	-0.4
H04A	Detroit Lake	78.34	47	eP	P	03 49 24.6	+0.8
	comp=Z,119nm,0.9s						
UOSS	Minazif	78.40	292	eP	P	03 49 24.9	+0.5
	comp=Z,83nm,1.1s						
UOSS	Minazif	78.40	292	i P	P	03 49 24.7	+0.2
	SNR=9.4						
I04A	Tendick Farm,	78.47	47	P	P	03 49 25.3	+0.7
	baz=289,SNR=53						
HUMO	Hull Mountain	78.48	49	eP	P	03 49 25.8	+1.1
	comp=Z,44nm,0.6s						
LTY	Liberty	78.49	44	eP	P	03 49 25.3	+0.6
	comp=Z,83nm,1.1s						
HATD	Hatta, Dubai	78.50	292	P	P	03 49 27.0	+2.0
	SNR=7.2						
HATD	Hatta, Dubai	78.50	292	i P	P	03 49 25.8	+0.7
	SNR=17						
IRO	Indian Ridge	78.51	47	eP	P	03 49 25.8	+0.8
ASHO	Ashiyiah	78.61	292	P	P	03 49 27.7	+2.0
	SNR=8.4						
ASHO	Ashiyiah	78.61	292	i P	P	03 49 26.1	+0.4
	SNR=20						
KMRM	Mail Ridge	78.71	51	eP	P	03 49 27.5	+1.5
	comp=Z,90nm,0.8s						
G05D	Wamic, OR	78.74	46	P	P	03 49 27.0	+1.0
	baz=289,SNR=16						
HAMF	Hammerfest	78.77	343	eP	P	03 49 25.6	0.0
HAMF				IAmb	IAmb	03 49 26.4	
	comp=Z,233nm,0.8s						
NAZ	Nazwa, Dubai	78.85	292	P	P	03 49 28.0	+1.1
	SNR=9.5						
NAZ	Nazwa, Dubai	78.85	292	i P	P	03 49 27.1	+0.2
	SNR=19						
J04D	Umpqua Nationa	78.86	48	P	P	03 49 27.9	+0.9
	baz=289,SNR=40						
ARCES	ARCESS Array B	78.87	341	P	P	03 49 26.7	+0.5
	comp=Z,349nm,0.7s,baz=73,slow=8.6,SNR=1006						
ARCES				PKiKP	PKiKP	03 54 57.5	-0.3
	comp=Z,3.0nm,0.8s,baz=105,slow=2.3,SNR=5.9						
YBH	Yreka Blue Hor	78.94	50	P	P	03 49 28.2	+1.0
	comp=Z,55nm,0.7s,baz=270,slow=1.6,SNR=164						
YBH	Yreka Blue Hor	78.94	50	eP	P	03 49 28.4	+1.2
	comp=Z,73nm,0.8s						
YBH	Yreka Blue Hor	78.94	50	eP	P	03 49 28.4	+1.2
YBH				pmax	pmax		
	comp=Z,73nm,0.8s						
M02C	Callahan	78.94	50	P	P	03 49 28.6	+1.3
	baz=289,SNR=60						
I05D	Terrebonne, OR	79.02	47	P	P	03 49 28.4	+0.8
	baz=290,SNR=19						
ALNE	Al Ain	79.07	292	i P	P	03 49 28.8	+0.6
	SNR=9.8						
N02D	Trinity Center	79.19	50	P	P	03 49 29.8	+1.2
	baz=289,SNR=54						
ASUD	Al Ashush, Dub	79.25	292	P	P	03 49 31.0	+1.9
	SNR=7.3						
ASUD	Al Ashush, Dub	79.25	292	i P	P	03 49 29.8	+0.7
	SNR=13						
E07A	Sunnyside	79.25	44	eP	P	03 49 29.9	+1.1
	comp=Z,106nm,1.0s						
K04D	Chiloquin, OR	79.31	48	P	P	03 49 30.3	+1.0
	baz=290,SNR=8.2						
F07A	Phinny Hill Vi	79.44	45	eP	P	03 49 30.8	+1.1
	comp=Z,70nm,0.9s						
WDC	Whiskeytown Da	79.44	51	eP	P	03 49 30.8	+1.0
	comp=Z,85nm,1.1s						
WDC	Whiskeytown Da	79.44	51	eP	P	03 49 30.8	+1.0
WDC				pmax	pmax		
	comp=Z,85nm,1.1s						
J05D	Fort Rock, OR	79.45	48	P	P	03 49 31.2	+1.2
	baz=290,SNR=120						
HAWA	Hanford	79.52	44	eP	P	03 49 31.0	+0.8
	comp=Z,71nm,0.9s						
M04C	Macdoel	79.53	49	P	P	03 49 31.4	+0.9
	baz=290,SNR=51						
AJN	Ajban	79.57	292	i P	P	03 49 30.9	+0.2
	SNR=9.8						
HOPS	Hopland Field	79.58	52	eP	P	03 49 31.4	+0.8
	comp=Z,48nm,0.9s						
GHLM	Highland Sprin	79.60	52	eP	P	03 49 31.5	+0.7
MSF	Maaselka	79.62	338	P	P	03 49 31.1	+0.8
MSF				pmax	pmax		
	comp=Z,204nm,1.0s						
SGF	Sodankyl	79.68	339	P	P	03 49 31.3	+0.7
SGF				pmax	pmax		
	comp=Z,1µm,1.1s						
D08A	Wollman Farm,	79.68	43	eP	P	03 49 31.8	+0.7
	comp=Z,134nm,1.0s						
AKT	Akhty	79.73	311	⇑iP	P	03 49 32.1	+0.6
AKT				e		03 49 37.0	
AKT				e*PP	pP	03 50 40.1	-0.8
AKT				e		03 52 37.8	
AKT				pmax	pmax		
	comp=Z,196nm,1.0s						
E08A	Dider Farm, El	79.79	44	eP	P	03 49 32.5	+0.9
	comp=Z,80nm,1.1s						
C09A	Chrisman Ranch	79.83	43	eP	P	03 49 32.5	+0.7
	comp=Z,96nm,0.7s						
KTK1	Kautokeino	79.83	341	eP	P	03 49 31.5	+0.2
GDXM	Geysers	79.84	52	eP	P	03 49 33.3	+1.2
	comp=Z,77nm,1.0s						
K05A	Summer Lake	79.87	48	eP	P	03 49 33.5	+1.2
	comp=Z,122nm,0.9s						
MCCM	Marconi Confer	80.00	53	eP	P	03 49 33.7	+0.9
	comp=Z,116nm,1.1s						
O03D	Paynes Creek	80.06	51	P	P	03 49 33.6	+0.3
	baz=290,SNR=73						
O03D	Paynes Creek	80.06	51	eP	P	03 49 33.6	+0.3
VRH	Novokhopyorsk	80.14	321	eP	P	03 49 33.1	-0.2
VRH				pmax	pmax		
	comp=Z,320nm,1.6s						
G08A	Pilot Rock	80.28	45	eP	P	03 49 35.1	+0.7
	comp=Z,56nm,1.1s						
I07A	Izee	80.35	46	eP	P	03 49 35.6	+0.8
	comp=Z,24nm,0.9s						
E09A	Wood Farm, Sta	80.38	44	eP	P	03 49 35.6	+0.9
	comp=Z,107nm,0.8s						
ORV	Oroville	80.53	51	eP	P	03 49 36.0	+0.3
	comp=Z,86nm,1.1s						
ORV	Oroville	80.53	51	eP	P	03 49 36.0	+0.3
ORV				pmax	pmax		
	comp=Z,86nm,1.1s						
MOD	Modoc Plateau	80.57	49	eP	P	03 49 36.4	+0.4
	comp=Z,47nm,1.0s						
MOS	Moscow	80.58	326	eP	P	03 49 35.0	-0.6
MOS				e*PP	pP	03 50 42.6	-2.5
MOS				e		03 52 42.9	
MOS				eS	S	03 59 17.6	+0.7
MOS				pmax	pmax		
	comp=Z,185nm,0.8s						
MOS				pmax	pmax		
	comp=Z,200nm,0.9s						
TRO	Tromso	80.68	343	eP	P	03 49 35.6	-0.2
TRO				IAmb	IAmb	03 49 36.4	
	comp=Z,193nm,0.9s						
DAG	Danmarks Havn	81.11	356	⇑iP	P	03 49 37.7	-0.3
	comp=Z,60nm,0.9s						
DAG	Danmarks Havn	81.11	356	⇑iP	P	03 49 37.7	-0.3
DAG				pmax	pmax		
	comp=Z,60nm,0.9s						
AFDM	Forest Hills D	81.13	52	eP	P	03 49 39.4	+0.5
	comp=Z,101nm,1.4s						
F10A	Beach Ranch, E	81.17	44	eP	P	03 49 39.3	+0.3
	comp=Z,31nm,0.7s						
LPSR	Galich’ya Gora	81.18	323	eP	P	03 49 39.0	+0.2
LPSR				pmax	pmax		
	comp=Z,540nm,1.1s						
BEKR	Beckworth	81.25	51	eP	P	03 49 40.1	+0.4
	comp=Z,97nm,0.8s						
BEKR				eS	S	03 59 24.5	-0.3
J08A	Circle Bar Ran	81.31	47	eP	P	03 49 40.5	+0.7
	comp=Z,108nm,0.8s						
HLPM	Lions Peak	81.31	54	eP	P	03 49 40.6	+0.8
MZR	Muzera	81.39	291	i P	P	03 49 41.0	+0.5
	SNR=19						
OBN	Obninsk	81.39	326	eP	P	03 49 40.0	+0.1
OBN	Obninsk	81.39	326	c iP	P	03 49 39.8	0.0
OBN				i		03 52 46.4	
OBN				i S	S	03 59 21.2	-4.0

OBN				pmax	pmax		
	comp=Z,251nm,1.1s						
VORR	Voronezh	81.41	322	⇑iP	P	03 49 38.0	-2.0
VORR				pmax	pmax		
	comp=Z,750nm,1.2s						
FRP	Fremont Peak	81.52	54	eP	P	03 49 41.3	+0.4
FRP	Fremont Peak	81.52	54	eP	P	03 49 41.3	+0.4
BMO	Blue Mountains	81.53	45	eP	P	03 49 41.5	+0.5
	comp=Z,95nm,0.8s						
BMO	Blue Mountains	81.53	45	eP	P	03 49 41.5	+0.5
BMO				pmax	pmax		
	comp=Z,95nm,0.8s						
WVOR	Wild Horse Val	81.53	48	eP	P	03 49 41.7	+0.6
	comp=Z,79nm,1.0s						
SAO	San Andreas Ge	81.55	54	eP	P	03 49 41.5	+0.5
	comp=Z,83nm,1.3s						
SAO	San Andreas Ge	81.55	54	eP	P	03 49 41.5	+0.5
SAO				pmax	pmax		
	comp=Z,83nm,1.3s						
VSR	Storozhevoye	81.62	322	eP	P	03 49 40.9	-0.2
VSR				pmax	pmax		
	comp=Z,510nm,0.9s						
PEAR	Peavine Mounta	81.63	51	eP	P	03 49 42.4	+0.7
VORD	Divnogorie	81.64	322	eP	P	03 49 41.2	0.0
VORD				pmax	pmax		
	comp=Z,250nm,0.8s						
GOF	Gofitskoye	81.65	315	⇑iP	P	03 49 42.3	+0.9
GOF				pmax	pmax		
	comp=Z,320nm,1.3s						
JHC	Johnson Canyon	81.66	54	eP	P	03 49 42.2	+0.5
JHC	Johnson Canyon	81.66	54	eP	P	03 49 42.2	+0.5
RUBR	Rubicon Trail	81.69	51	eP	P	03 49 43.2	+1.2
	comp=Z,95nm,0.9s						
BSMM	Soledad Missio	81.69	54	eP	P	03 49 42.8	+0.8
TBLG	Delisi	81.75	312	eP	P	03 49 42.9	+0.9
	comp=Z,125nm,1.1s						
TBLG	Delisi	81.75	312	eP	P	03 49 42.9	+0.9
TBLG				pmax	pmax		
	comp=Z,125nm,1.1s						
BVL	Bear Valley	81.81	54	eP	P	03 49 43.2	+0.8
EMT	Emmet	81.84	54	eP	P	03 49 43.6	+0.9
BPIM	Pinnacles	81.85	54	eP	P	03 49 43.2	+0.6
NCK	Nalchik	81.87	314	c iP	P	03 49 43.5	+0.9
NCK				pmax	pmax		
	comp=Z,234nm,1.0s						
CMB	Columbia Colle	81.88	52	eP	P	03 49 43.4	+0.5
CMB	Columbia Colle	81.88	52	eP	P	03 49 43.4	+0.5
BAVM	Antelope Valle	81.90	54	eP	P	03 49 43.6	+0.7
ZEI	Tsey	81.93	313	eP	P	03 49 38.2	-5.0
ZEI				pmax	pmax		
	comp=Z,108nm,0.7s						
VCNR	Virginia City	81.97	51	eP	P	03 49 44.2	+0.8
	comp=Z,50nm,0.9s						
PAHR	Pah Rah Range	82.01	51	eP	P	03 49 44.0	+0.4
	comp=Z,65nm,1.0s						
WALA	Waterton Lakes	82.04	40	eP	P	03 49 44.1	+0.6
	comp=Z,112nm,0.8s						
PNTR	Pine Nut	82.08	51	eP	P	03 49 44.9	+0.9
	comp=Z,97nm,0.8s						
PUL	Pulkovo	82.21	332	ceP	P	03 49 44.3	+0.3
PUL				pmax	pmax		
	comp=Z,330nm,1.2s						
PMPB	Monarch Peak	82.23	54	eP	P	03 49 45.6	+0.9
	comp=Z,82nm,1.0s						
KBZ	Khabaz	82.25	314	P	P	03 49 45.4	+0.9
	comp=Z,255nm,0.9s,baz=87,slow=3.5,SNR=385						
KVAR	Kislovodsk Arr	82.30	314	P	P	03 49 45.6	+0.6
	comp=Z,138nm,0.9s,baz=211,slow=4.2,SNR=41						
KIV	Kislovodsk	82.31	314	eP	P	03 49 45.5	+0.5
	comp=Z,335nm,1.1s						
KIV	Kislovodsk	82.31	314	c iP	P	03 49 45.6	+0.6
KIV				eSS	SS	04 05 10.4	+8.1
KIV				pmax	pmax		
	comp=Z,274nm,1.0s						
GNI	Garni	82.33	310	P	P	03 49 46.6	+1.4
	comp=Z,49nm,0.9s,baz=17,slow=0.9,SNR=52						
GNI	Garni	82.33	310	P	P	03 49 46.9	+1.6
	SNR=50						
GNI	Garni	82.33	310	i P	P	03 49 46.4	+1.1
	SNR=22						
GNI	Garni	82.33	310	ceP	P	03 49 46.5	+1.3
GNI				pmax	pmax		
	comp=Z,654nm,1.5s						
JTMT	Jette	82.34	42	eP	P	03 49 45.8	+0.7
	comp=Z,92nm,0.8s						
YERR	Yerington	82.38	51	eP	P	03 49 46.2	+0.6
	comp=Z,75nm,0.8s						
WAKR	Walker	82.41	52	eP	P	03 49 46.6	+0.9
	comp=Z,62nm,0.8s						
PVCM	Vineyard Canyo	82.53	54	eP	P	03 49 47.2	+0.9
NEY	Neytrino	82.56	314	c iP	P	03 49 47.2	+0.8
NEY				pmax	pmax		
	comp=Z,26nm,0.7s						
AKH	Akhalkalaki	82.73	312	eP	P	03 49 48.9	+1.6
	comp=Z,223nm,1.0s						
STEI	Steigen	82.81	342	eP	P	03 49 46.8	-0.1
STEI				IAmb	IAmb	03 49 47.6	
	comp=Z,312nm,0.7s						
PAGB	Antelope Grade	82.82	55	eP	P	03 49 48.7	+1.0
	comp=Z,94nm,0.8s						
IGDI	IGDIR	82.90	310	i P	P	03 49 46.8	-1.3
MSO	Missoula	82.92	42	P	P	03 49 47.7	-0.4
	baz=294						
MSO	Missoula	82.92	42	eP	P	03 49 47.9	-0.2
	comp=Z,16nm,0.9s						
EAK	Akyaka	82.93	311	i P	P	03 49 46.8	-1.5
MDPB	Devils Postpil	82.99	52	eP	P	03 49 49.4	+0.6
	comp=Z,50nm,1.0s						
RYN	Ryan	83.03	51	eP	P	03 49 49.6	+0.8
	comp=Z,74nm,0.9s						
OMMB	Old Mammoth Mi	83.06	52	eP	P	03 49 49.7	+0.5
	comp=Z,48nm,1.0s						
KULLO	Kullorsuaq	83.06	5	⇑iP	P	03 49 48.3	+0.2
	comp=Z,75nm,0.8s						
KULLO	Kullorsuaq	83.06	5	⇑iP	P	03 49 48.3	+0.2
KULLO				pmax	pmax		
	comp=Z,75nm,0.8s						
MFID	Camas Ranch	83.07	46	eP	P	03 49 49.5	+0.6
FIA1	FINESS Array S	83.11	334	eP	P	03 49 47.1	-1.5
FINES	FINESS Array B	83.11	334	P	P	03 49 47.9	-0.6
	comp=Z,115nm,0.5s,baz=66,slow=4.6,SNR=1058						
LOF	Lofoten	83.14	343	eP	P	03 49 47.5	-1.1
LOF				IAmb	IAmb	03 49 49.6	
	comp=Z,49nm,0.9s						
SMMC	Simmler	83.16	55	P	P	03 49 50.3	+0.8
	baz=292,SNR=11						
MLAC	Mammoth, Mammo	83.17	52	P	P	03 49 50.6	+0.9
	baz=292,SNR=9.4						
KVN	Kaiserville	83.17	51	eP	P	03 49 50.1	+0.5
	comp=Z,154nm,1.3s						
KVN	Kaiserville	83.17	51	eP	P	03 49 50.2	+0.5
KVN				pmax	pmax		
	comp=Z,154nm,1.3s						
EPOS	Posof	83.23	312	i P	P	03 49 51.3	+1.5
NV01	Mina Array Sit	83.26	51	eP	P	03 49 49.8	-0.3
NVAR	Mina Array Bea	83.26	51	P	P	03 49 50.7	+0.6
	comp=Z,84nm,0.7s,baz=273,slow=5.6,SNR=126						
BMN	Battle Mountai	83.27	49	eP	P	03 49 50.8	+0.7
	comp=Z,45nm,0.6s						
BMN	Battle Mountai	83.27	49	eP	P	03 49 50.8	+0.7
BMN				pmax	pmax		
	comp=Z,45nm,0.6s						
NV11	Mina Array Sit	83.37	51	eP	P	03 49 51.2	+0.6
	comp=Z,4.6nm,0.8s						
PKM	Mcpherson Peak	83.46	55	P	P	03 49 52.0	+0.8
	baz=292,SNR=48						
VES	Vestal, Richgr	83.66	54	P	P	03 49 51.8	-0.1
	baz=292,SNR=35						
SBC	Santa Barbara	83.70	56	P	P	03 49 53.0	+0.9
	baz=292						
TIN	Tinemaha, Big	83.84	53	P	P	03 49 53.8	+0.8
	baz=292,SNR=8.7						
ARTV	Artvin	83.91	312	i P	P	03 49 52.5	-0.8
SCZ2	Santa Cruz Isl	83.93	56	P	P	03 49 53.6	+0.3
	baz=292						
HLID	Hailey	83.95	46	P	P	03 49 54.1	+0.6
	baz=294						
HLID	Hailey	83.95	46	eP	P	03 49 54.0	+0.6
	comp=Z,70nm,1.0s						
DAGI	Agillar	83.96	312	i P	P	03 49 53.6	+0.2
DBOC	Borcka	84.02	312	i P	P	03 49 52.5	-1.2
EATA	Eleskirt	84.03	310	i P	P	03 49 54.7	+0.6
ARVC	Arvin	84.12	55	P	P	03 49 54.4	+0.2
	baz=292,SNR=6.0						
DBAD	Bademkaya	84.13	312	i P	P	03 49 53.6	-0.7
DDEM	Demirkent	84.14	312	i P	P	03 49 53.6	-0.8
CWC	Cottonwood Cre	84.18	53	P	P	03 49 55.0	+0.2
	baz=293						
ISA	Isabella, Lake	84.19	54	P	P	03 49 54.4	-0.2
	baz=292,SNR=19						
ISA	Isabella, Lake	84.19	54	eP	P	03 49 54.4	-0.2
	comp=Z,32nm,0.9s						
ISA	Isabella, Lake	84.19	54	eP	P	03 49 54.4	-0.2
ISA				pmax	pmax		
	comp=Z,33nm,0.9s						
MOR8	Moi Rana	84.24	341	eP	P	03 49 52.7	-1.5
MOR8				IAmb	IAmb	03 49 53.5	
	comp=Z,212nm,0.8s						
LRM	Limekiln Ridge	84.28	43	eP	P	03 49 55.5	+0.4
HRY	Holter Researc	84.29	42	eP	P	03 49 55.6	+0.6
SNCC	San Nicolas Is	84.29	57	P	P	03 49 55.3	+0.2
	baz=292						
BLG	Laguna Peak, P	84.32	56	P	P	03 49 55.3	0.0
	baz=292						
DLMT	Dillon	84.39	43	eP	P	03 49 55.9	+0.3
	comp=Z,62nm,0.8s						
OSI	Osito Audit: C	84.39	55	P	P	03 49 56.0	+0.3
	baz=292						
OSI	Osito Audit: C	84.39	55	eP	P	03 49 56.7	+1.0
	comp=Z,31nm,0.6s						
KONS	Konsvik	84.40	342	eP	P	03 49 54.6	-0.3
KONS				IAmb	IAmb	03 49 55.3	
	comp=Z,120nm,1.2s						
SOC	Sochi	84.43	315	c iP	P	03 49 54.8	-0.8
SOC				e*PP	pP	03 51 06.4	+0.7
SOC				e		03 53 12.1	
SOC				eS	SKSac	03 59 48.3	-2.2
SOC				pmax	pmax		
	comp=Z,36nm,0.7s						
MCMT	McKenzie Canyo	84.45	44	eP	P	03 49 56.3	+0.3
VSU	Vasula	84.47	332	ceP	P	03 49 54.8	-0.6
VSU				pmax	pmax		
	comp=Z,301nm,1.0s						
GRAC	Grapevine Rang	84.50	52	P	P	03 49 56.8	+0.6
	baz=293,SNR=5.4						
DAC	Darwin (Calif)	84.61	53	eP	P	03 49 57.1	+0.3
	comp=Z,61nm,1.2s						
DAC	Darwin (Calif)	84.61	53	eP	P	03 49 57.2	+0.3
DAC				pmax	pmax		
	comp=Z,61nm,1.2s						
LCCM	Lewis and Clar	84.64	43	eP	P	03 49 57.4	+0.6
MPMC	Manual Prospec	84.77	53	P	P	03 49 58.2	+0.5
	baz=293,SNR=127						
ERZM	Erzurum	84.81	311	i P	P	03 49 59.2	+1.3
DECC	Green Verdugo	84.83	55	P	P	03 49 58.0	+0.2
	baz=293						
EDW2	Edwards Air Fo	84.85	55	P	P	03 49 58.5	+0.5
	baz=293,SNR=32						
LRMC	Laurel Mtn Rad	84.85	54	P	P	03 49 58.5	+0.5
	baz=293,SNR=13						
BOZ	Bozeman (W)	84.90	43	P	P	03 49 58.6	+0.5
	baz=296						
BOZ	Bozeman (W)	84.90	43	eP	P	03 49 58.6	+0.5
BOZ	Bozeman (W)	84.90	43	eP	P	03 49 58.6	+0.5
PASC	Pasadena Art C	84.97	55	eP	P	03 49 58.9	+0.4
	comp=Z,44nm,1.1s						
EGMT	Eagleton	84.98	40	P	P	03 49 58.7	+0.3
	baz=297						
EGMT	Eagleton	84.98	40	eP	P	03 49 58.6	+0.3
MWC	Mount Wilson	85.05	55	eP	P	03 49 59.3	+0.2
	comp=Z,89nm,1.4s						
MWC	Mount Wilson	85.05	55	eP	P	03 49 59.3	+0.2
MWC				pmax	pmax		
	comp=Z,89nm,1.4s						
FMP	Fort Macarthur	85.07	56	P	P	03 49 59.1	+0.1
	baz=293						
FURC	Furnace Creek,	85.08	53	P	P	03 49 59.7	+0.8
	baz=293,SNR=97						
CIS	Catalina Islan	85.09	56	P	P	03 49 59.0	-0.2
	baz=293						
R11A	Troy Canyon, C	85.26	51	P	P	03 50 00.6	+0.5
	baz=294,SNR=130						
R11A	Troy Canyon, C	85.26	51	eP	P	03 50 00.6	+0.5
	comp=Z,77nm,1.0s						
R11A				eS	S	04 00 05.0	+0.1
TPNV	Topopah Spring	85.34	52	P	P	03 50 01.0	+0.5
	baz=294,SNR=151						
TPNV	Topopah Spring	85.34	52	eP	P	03 50 00.9	+0.5
	comp=Z,140nm,0.8s						
TPNV	Topopah Spring	85.34	52	eP	P	03 50 00.9	+0.5
TPNV				pmax	pmax		
	comp=Z,140nm,0.8s						
BNGL	BINGOL	85.35	310	i P	P	03 49 59.2	-1.3
BFSC	Mount Baldy Ra	85.35	55	P	P	03 50 00.3	-0.2
	baz=293,SNR=11						
QLMT	Earthquake Lak	85.36	43	eP	P	03 50 01.5	+1.0
KOPT	Kop Dagi	85.37	311	i P	P	03 50 00.4	-0.3
ANN	Anapa	85.39	317	c iP	P	03 49 59.4	-0.9
ANN				e*PP	pP	03 51 08.5	-2.1
ANN				e		03 53 25.8	
ANN				e		04 00 03.6	
ANN				pmax	pmax		
	comp=Z,97nm,1.0s						
YHB	Horse Butte	85.55	43	eP	P	03 50 02.7	+1.3
	comp=Z,160nm,0.8s						
GSC	Goldstone, Bar	85.58	54	P	P	03 50 02.1	+0.5
	baz=293,SNR=52						
GSC	Goldstone, Bar	85.58	54	eP	P	03 50 02.1	+0.5
	comp=Z,104nm,1.1s						
GSC	Goldstone, Bar	85.58	54	eP	P	03 50 02.1	+0.5
GSC				pmax	pmax		
	comp=Z,104nm,1.1s						
RRX	Edison Barstow	85.60	54	P	P	03 50 02.3	+0.7
	baz=293,SNR=5.3						
SHOC	Shoshone, Teco	85.74	53	P	P	03 50 02.8	+0.5
	baz=294,SNR=40						
HVU	Hansel Valley	85.80	47	eP	P	03 50 03.4	+0.7
	comp=Z,79nm,1.0s						
BBRC	Big Bear Solar	85.90	55	P	P	03 50 03.3	0.0
	baz=293						
FFC	Flin Flon	85.90	32	eP	P	03 50 02.7	0.0
	comp=Z,130nm,0.8s						
FFC				epP	pP	03 51 14.4	+1.4
FFC	Flin Flon	85.90	32	eP	P	03 50 02.7	0.0
FFC				e*PP	pP	03 51 14.4	+1.4
FFC				pmax	pmax		
	comp=Z,130nm,0.8s						
YFT	Old Faithful	85.91	44	eP	P	03 50 05.8	+2.5
	comp=Z,102nm,0.9s						
MURC	Murrieta	85.95	56	P	P	03 50 03.5	+0.1
	baz=293,SNR=19						
SUMG	Summit	85.96	0	⇑iP	P	03 50 03.9	+0.8
	comp=Z,173nm,0.9s						
SUMG	Summit	85.96	0	⇑iP	P	03 50 03.9	+0.8
SUMG				pmax	pmax		
	comp=Z,170nm,0.9s						
BGU	Big Grassy Mou	85.99	47	eP	P	03 50 03.9	+0.4
	comp=Z,42nm,0.8s						
YPP	Pitchstone Pla	86.01	44	eP	P	03 50 05.4	+1.7
	comp=Z,32nm,1.0s						
GCMT	Greycliff	86.05	42	eP	P	03 50 04.4	+0.7
MICGM	Minsk	86.09	328	e	P	03 50 06.0	+2.5
MNK	Minsk	86.09	328	eP	P	03 50 06.0	+2.5
IMW	Indian Meadow	86.09	44	eP	P	03 50 05.1	+0.9
	comp=Z,62nm,0.8s						
H17A	Grant Village	86.10	44	P	P	03 50 06.5	+2.4
	baz=297						
H17A	Grant Village	86.10	44	eP	P	03 50 06.5	+2.4
	comp=Z,68nm,0.9s						
HANI	Diyarbakir_Han	86.11	310	i P	P	03 50 03.8	-0.3
HEC	Hector,Ludlow	86.12	54	P	P	03 50 04.7	+0.5
	baz=294,SNR=27						
NSS	Namsos	86.13	341	eP	P	03 50 02.4	-1.1
NSS				IAmb	IAmb	03 50 03.4	
	comp=Z,164nm,0.8s						
LKWY	Lake	86.14	43	eP	P	03 50 06.5	+2.1
	comp=Z,94nm,0.9s						
FXWY	Fox Creek	86.15	44	eP	P	03 50 05.2	+0.8
	comp=Z,51nm,1.1s						
FLWY	Flagg Ranch	86.16	44	eP	P	03 50 05.7	+1.3
	comp=Z,96nm,0.9s						
KELT	Kelkit	86.18	312	i P	P	03 50 04.9	+0.3
TUQ	Turquoise Moun	86.19	53	P	P	03 50 05.1	+0.5
	baz=294,SNR=34						
IZAR	Zarasai	86.19	330	eP	P	03 50 04.0	0.0
IZAR				IAmb	IAmb	03 50 05.1	
	comp=Z,61nm,0.6s						
IDID	Didziasalis	86.20	329	eP	P	03 50 04.0	0.0
IDID				IAmb	IAmb	03 50 05.2	
	comp=Z,42nm,0.7s						
SPUT	South Promonto	86.22	47	eP	P	03 50 05.2	+0.5
	comp=Z,83nm,1.0s						
TPAW	Teton Pass	86.26	45	eP	P	03 50 05.7	+0.8
	comp=Z,47nm,1.0s						
MOOW	Moose Ponds	86.28	44	eP	P	03 50 05.8	+0.8
	comp=Z,37nm,1.0s						
109C	Camp Elliot, M	86.31	56	P	P	03 50 05.2	+0.1
	baz=293,SNR=10						
CPE	Camp Elliot	86.31	56	eP	P	03 50 05.3	+0.3
	comp=Z,84nm,1.1s						
SHPR	Sheep Range	86.32	52	eP	P	03 50 06.1	+0.8
	comp=Z,69nm,0.9s						
ISAL	Salakas	86.35	329	eP	P	03 50 04.8	+0.1
ISAL				IAmb	IAmb	03 50 05.2	
	comp=Z,33nm,0.7s						
REDW	Red Top Meadow	86.38	45	eP	P	03 50 06.1	+0.6
	comp=Z,29nm,1.0s						
SNOW	Snow King Moun	86.40	44	eP	P	03 50 06.8	+1.2
	comp=Z,27nm,1.0s						
NACGM	Naroch	86.40	329	eP	P	03 50 04.0	-1.0
NACGM				PM		03 50 05.0	
	comp=Z,0.6nm,1.0s						
NACGM				eLQ	LQ	04 20 16.0	
NACGM				eLR	LR	04 23 12.0	
PSUT	Pine Spring	86.42	50	eP	P	03 50 06.1	+0.3
	comp=Z,84nm,1.1s						
IIGN	Ignalina	86.43	329	eP	P	03 50 05.1	-0.1
IIGN				IAmb	IAmb	03 50 05.5	
	comp=Z,35nm,0.6s						
LOHW	Long Hollow	86.43	44	eP	P	03 50 06.3	+0.5
	comp=Z,30nm,1.0s						
DUG	Dugway, Tooele	86.45	48	P	P	03 50 06.2	+0.4
	baz=296						
DUG	Dugway, Tooele	86.45	48	eP	P	03 50 06.3	+0.5
	comp=Z,94nm,0.8s						
DUG	Dugway, Tooele	86.45	48	eP	P	03 50 06.3	+0.5
DUG				pmax	pmax		
	comp=Z,94nm,0.8s						
FRD	Ford Ranch, An	86.45	55	P	P	03 50 06.1	+0.2
	baz=294,SNR=24						
AHID	Auburn Hatcher	86.49	45	eP	P	03 50 06.0	0.0
	comp=Z,59nm,1.0s						
PFO	Pinyon Flats O	86.51	55	P	P	03 50 06.4	+0.3
	baz=294,SNR=61						
PFO	Pinyon Flats O	86.51	55	eP	P	03 50 06.5	+0.3
	comp=Z,98nm,0.9s						
PFO	Pinyon Flats O	86.51	55	eP	P	03 50 06.5	+0.3
PFO				pmax	pmax		
	comp=Z,98nm,0.9s						
XPFO	Piæon Flat	86.52	55	eP	P	03 50 06.5	+0.3
	comp=Z,98nm,0.9s						
RLMT	Red Lodge	86.60	42	P	P	03 50 07.6	+1.1
	baz=298						
RLMT	Red Lodge	86.60	42	eP	P	03 50 07.6	+1.1
GMRC	Granite Mounta	86.65	54	P	P	03 50 07.3	+0.5
	baz=294,SNR=76						
HWUT	Hardware Ranch	86.69	46	eP	P	03 50 07.4	+0.5
	comp=Z,94nm,1.0s						
BELC	Belle Mtn. Jos	86.71	55	P	P	03 50 07.3	+0.2
	baz=294,SNR=39						
BAR	Barrett	86.72	56	eP	P	03 50 07.2	+0.1
	comp=Z,54nm,1.1s						
MONP2	Monument Peak	86.83	56	P	P	03 50 08.1	+0.2
	baz=294,SNR=46						
CTU	Camp Tracy	86.96	47	eP	P	03 50 08.7	+0.4
	comp=Z,67nm,1.0s						
TCUT	Toone Canyon	87.01	47	eP	P	03 50 09.0	+0.4
	comp=Z,54nm,0.8s						
NLU	North Lily Min	87.06	48	eP	P	03 50 09.2	+0.4
	comp=Z,50nm,0.9s						
ELZG	Elazig	87.08	310	i P	P	03 50 08.3	-0.6
KEMA	Kemaliye	87.09	311	i P	P	03 50 09.4	+0.6
IKP	In-Ko-Pah, Jac	87.17	56	P	P	03 50 09.7	+0.4
	baz=294,SNR=17						
CCUT	Cedar City	87.19	51	eP	P	03 50 10.2	+0.7
	comp=Z,51nm,1.2s						
JLU	Jordanelle	87.21	47	eP	P	03 50 09.9	+0.4
	comp=Z,69nm,1.0s						
BC3	Big Chuckawall	87.26	55	P	P	03 50 10.3	+0.6
	baz=294,SNR=70						
SWSC	Sam W. Stewart	87.29	56	P	P	03 50 09.9	+0.2
	baz=294,SNR=12						
IRM	Iron Mountain	87.29	54	P	P	03 50 10.3	+0.5
	baz=294,SNR=64						
MPU	Maple Canyon	87.34	48	eP	P	03 50 10.6	+0.5
	comp=Z,50nm,1.0s						
SZCU	Shurtz Canyon	87.37	51	eP	P	03 50 10.9	+0.6
	comp=Z,29nm,1.1s						
AKASG	Malin Array Be	87.41	324	P	P	03 50 08.8	-1.1
	comp=Z,32nm,0.6s,baz=51,slow=4.9,SNR=159						
AKASG				PP	PP	03 53 37.3	-1.3
	comp=Z,9.4nm,1.0s,baz=49,slow=8.9,SNR=6.9						
AKBB	Malin Array Si	87.41	324	eP	P	03 50 08.9	-1.0
	comp=Z,70nm,0.8s						
KIEV	Kiev	87.42	324	eP	P	03 50 08.9	-1.0
	comp=Z,67nm,0.7s						
KIEV	Kiev	87.42	324	i P	P	03 50 09.0	-1.0
	SNR=55						
KIEV	Kiev	87.42	324	c iP	P	03 50 08.7	-1.3
KIEV				pmax	pmax		
	comp=Z,58nm,0.9s						
SIM	Simferopol’	87.42	318	d iP	P	03 50 09.0	-1.1
SIM				pmax	pmax		
	comp=Z,68nm,0.9s						
NEE2	Needles Airpor	87.44	54	P	P	03 50 11.0	+0.6
	baz=295,SNR=11						
AK11	Malin Array Si	87.45	324	eP	P	03 50 08.9	-1.2
BW06	Boulder Array	87.50	45	P	P	03 50 10.6	-0.3
	baz=297						
BW06	Boulder Array	87.50	45	eP	P	03 50 10.5	-0.3
	comp=Z,10nm,0.8s						
PD31	Pinedale Array	87.50	45	eP	P	03 50 10.6	-0.3
PDAR	Pinedale Array	87.50	45	P	P	03 50 10.6	-0.3
	comp=Z,10.0nm,0.8s,baz=207,slow=1.7,SNR=64						
PDAR				PP	PP	03 53 38.3	-1.6
	comp=Z,3.3nm,1.0s,baz=267,slow=3.0,SNR=5.2						
PDAR	Pinedale Array	87.50	45	eP	P	03 50 09.6	-1.2
PDAR				PP	PP	03 53 38.3	-1.6
LCMT	Little Creek M	87.50	51	eP	P	03 50 11.6	+0.7
	comp=Z,56nm,0.9s						
TBLU	Trondheim	87.58	341	eP	P	03 50 09.1	-1.4
TBLU				IAmb	IAmb	03 50 10.0	
	comp=Z,88nm,0.9s						
MSU	Marysvale	87.62	49	eP	P	03 50 12.2	+0.7
MSU	Marysvale	87.62	49	eP	P	03 50 12.2	+0.7
LAO	LASA Array	87.72	40	P	P	03 50 12.2	+0.6
	baz=300						
LAO	LASA Array	87.72	40	eP	P	03 50 12.3	+0.7
AKCD	Akcadag	87.92	311	i P	P	03 50 12.8	0.0
Y12C	Blythe	87.93	54	P	P	03 50 13.4	+0.7
	baz=295,SNR=37						
Y12C	Blythe	87.93	54	eP	P	03 50 13.5	+0.7
	comp=Z,67nm,0.9s						
TMUT	Trail Mountain	87.95	48	eP	P	03 50 13.6	+0.5
	comp=Z,24nm,0.8s						
PDMCI	Parker Dam,Lak	87.99	54	P	P	03 50 13.7	+0.7
	baz=295,SNR=24						
GLA	Glamis	87.99	55	P	P	03 50 13.9	+0.8
	baz=295,SNR=28						
GLA	Glamis	87.99	55	P	P	03 50 13.8	+0.7
PKCU	Pink Cliffs	87.99	50	eP	P	03 50 15.1	+1.7
	comp=Z,81nm,1.5s						
DGMT	Dagmar	88.01	38	P	P	03 50 12.9	0.0
	baz=301						
DGMT	Dagmar	88.01	38	eP	P	03 50 12.8	-0.1
	comp=Z,51nm,0.8s						
RAYN	Ar Rayn	88.03	294	eP	P	03 50 13.3	-0.2
	comp=Z,49nm,0.9s						
RAYN	Ar Rayn	88.03	294	i P	P	03 50 13.3	-0.2
	SNR=5.7						
RAYN	Ar Rayn	88.03	294	eP	P	03 50 13.3	-0.2
RAYN				pmax	pmax		
	comp=Z,49nm,0.9s						
Q16A	Castle Valley	88.15	49	eP	P	03 50 14.7	+0.8
	comp=Z,58nm,0.7s						
P17A	Butcher Ranch,	88.20	48	eP	P	03 50 14.1	0.0
	comp=Z,57nm,0.8s						
P18A	Preston Nutter	88.47	48	eP	P	03 50 16.0	+0.4
SRU	San Rafael Swe	88.51	48	eP	P	03 50 15.8	+0.2
	comp=Z,74nm,0.7s						
CUSAR	Sarkisla-SIVAS	88.59	312	i P	P	03 50 12.8	-3.1
SUW	Suwalki	88.64	329	i P	P	03 50 15.0	-0.6
SUW	Suwalki	88.64	329	⇑iP	P	03 50 15.0	-0.6
HFS	Hagfors	88.66	337	P	P	03 50 14.2	-1.4
	comp=Z,45nm,0.4s,baz=85,slow=3.4,SNR=842						
HFS				PP	PP	03 53 47.4	-0.8
	comp=Z,14nm,0.8s,baz=60,slow=7.0,SNR=8.3						
HFS	Hagfors	88.66	337	P	P	03 50 14.2	-1.4
HFS						03 53 47.4	

HFS				pmax	pmax		
	comp=Z,44nm,0.4s						
NC405	NORSAR Array S	88.66	339	eP	P	03 50 14.6	-1.1
NC303	NORSAR Array S	88.70	339	eP	P	03 50 14.8	-0.9
NC303	NORSAR Array S	88.70	339	eP	P	03 50 14.5	-1.2
NC303				IAmb	IAmb	03 50 15.8	
	comp=Z,211nm,1.1s						
ILULI	Ilulissat	88.77	5	i P	P	03 50 15.8	-0.1
	comp=Z,27nm,0.6s						
ILULI	Ilulissat	88.77	5	i P	P	03 50 15.8	-0.1
ILULI				pmax	pmax		
	comp=Z,27nm,0.6s						
DOMB	Dombas	88.85	340	eP	P	03 50 15.2	-1.3
DOMB				IAmb	IAmb	03 50 16.7	
	comp=Z,85nm,0.9s						
NB201	NORSAR Array S	88.85	339	eP	P	03 50 15.5	-1.1
NC204	NORSAR Array S	88.86	339	eP	P	03 50 15.8	-0.9
NB2	NORSAR Subarra	88.89	339	P	P	03 50 15.3	-1.4
	comp=Z,104nm,1.2s,baz=42,slow=4.6						
NB2	NORSAR Subarra	88.89	339	P	P	03 50 15.3	-1.4
	baz=42,slow=4.6						
NOA	NORSAR Array B	88.89	339	P	P	03 50 15.5	-1.2
	comp=Z,63nm,1.1s,baz=46,slow=4.5,SNR=158						
NOA				PP	PP	03 53 48.1	-1.9
	comp=Z,3.0nm,0.7s,baz=47,slow=8.5,SNR=7.2						
MOL	Molde	88.92	341	eP	P	03 50 16.4	-0.4
MOL				IAmb	IAmb	03 50 17.4	
	comp=Z,72nm,1.1s						
NC602	NORSAR Array S	88.99	338	eP	P	03 50 15.6	-1.6
CTAK	Corum_Osmancik	89.01	314	i P	P	03 50 17.3	-0.6
NBO00	NORSAR Array S	89.04	339	eP	P	03 50 16.4	-1.0
NAO01	NORSAR Array S	89.14	339	eP	P	03 50 16.5	-1.3
SORM	Soroca	89.25	322	⇓iP	P	03 50 17.7	-0.9
SORM	Soroca	89.25	322	⇓P	P	03 50 17.7	-0.9
AKN	Aaknes	89.39	341	eP	P	03 50 19.6	+0.7
AKN				IAmb	IAmb	03 50 20.4	
	comp=Z,67nm,1.1s						
WUAZ	Wupatki	89.51	52	P	P	03 50 21.1	+0.8
	baz=296,SNR=20						
WUAZ	Wupatki	89.51	52	eP	P	03 50 21.3	+0.9
	comp=Z,37nm,0.9s						
K22A	Casper	89.52	44	P	P	03 50 20.3	+0.1
	baz=300						
K22A	Casper	89.52	44	eP	P	03 50 20.4	+0.1
	comp=Z,38nm,0.8s						
ILGA	Ilgaz	89.54	314	eP	P	03 50 20.6	+0.2
	comp=Z,22nm,1.0s						
RWWY	Rawlins	89.54	45	eP	P	03 50 19.6	-0.9
	comp=Z,44nm,1.0s						
KIS	Kishinev	89.59	321	⇑iP	P	03 50 19.0	-1.2
KIS	Kishinev	89.59	321	⇑iP	P	03 50 19.0	-1.2
O20A	White River Ci	89.60	47	P	P	03 50 20.9	+0.2
	baz=298						
O20A	White River Ci	89.60	47	eP	P	03 50 20.8	+0.1
	comp=Z,59nm,0.8s						
KLNR	Kaliningrad	89.66	331	i P	P	03 50 19.8	-0.6
KLNR				pmax	pmax		
	comp=Z,154nm,1.7s						
HORU	Horodok	89.74	324	P	P	03 50 20.1	-0.8
PV09	Paradox Valley	89.76	48	eP	P	03 50 22.1	+0.5
PV21	Cone Mtn., Par	89.84	48	eP	P	03 50 22.1	+0.2
	comp=Z,84nm,0.9s						
OSL	Oslo	89.85	338	eP	P	03 50 20.2	-0.9
OSL				IAmb	IAmb	03 50 21.0	
	comp=Z,85nm,1.2s						
PV23	Carpenter Ridg	89.86	48	eP	P	03 50 22.4	+0.4
	comp=Z,110nm,0.8s						
PV17	East Wray Mesa	89.98	48	eP	P	03 50 22.9	+0.3
	comp=Z,99nm,0.9s						
PV22	Blue Mesa, Par	89.98	48	eP	P	03 50 22.8	+0.3
	comp=Z,46nm,1.3s						
214A	Organ Pipe Nat	90.00	56	P	P	03 50 23.3	+0.8
	baz=296						
PV16	Nyswonger Mesa	90.00	48	eP	P	03 50 22.9	+0.3
	comp=Z,78nm,0.9s						
PV16				eS	S	04 00 50.9	+1.1
ELDT	Eldivan	90.00	314	i P	P	03 50 20.7	-1.8
PV18	Skein Mesa, Pa	90.03	48	eP	P	03 50 22.9	+0.2
	comp=Z,74nm,0.9s						
PV11	David Mesa, Pa	90.03	48	eP	P	03 50 23.1	+0.4
	comp=Z,83nm,0.8s						
PV11				eS	S	04 00 51.5	+1.5
PV03	Paradox Valley	90.07	48	eP	P	03 50 23.1	+0.2
PV12	Saucer Basin,	90.07	48	eP	P	03 50 23.3	+0.4
	comp=Z,84nm,1.0s						
PV13	Radium Mtn., P	90.13	49	eP	P	03 50 23.4	+0.1
	comp=Z,58nm,0.8s						
PV02	Paradox Valley	90.17	48	eP	P	03 50 23.7	+0.2
	comp=Z,55nm,0.9s						
LEOM	Leova	90.20	321	⇓iP	P	03 50 22.9	-0.2
LEOM	Leova	90.20	321	⇓P	P	03 50 22.9	-0.2
BR131	Keskin Array S	90.22	313	eP	P	03 50 22.8	-0.7
BRTR	Keskin Array B	90.23	313	P	P	03 50 22.6	-0.9
	comp=Z,23nm,0.8s,baz=90,slow=3.3,SNR=133						
BRTR				PP	PP	03 54 01.9	+0.4
	comp=Z,2.5nm,0.8s,baz=69,slow=6.9,SNR=3.9						
RSSD	Black Hills	90.35	42	P	P	03 50 24.1	0.0
	baz=301						
RSSD	Black Hills	90.35	42	eP	P	03 50 24.0	-0.1
	comp=Z,58nm,0.6s						
KONO	Kongsberg	90.45	338	eP	P	03 50 22.5	-1.4
	comp=Z,35nm,1.2s						
KONO	Kongsberg	90.45	338	ceP	P	03 50 22.6	-1.4
KONO				pmax	pmax		
	comp=Z,25nm,1.2s						
KONO	Kongsberg	90.45	338	eP	P	03 50 22.6	-1.4
KONO				IAmb	IAmb	03 50 24.4	
	comp=Z,29nm,1.1s						
TLCR		90.55	320	⇓iP	P	03 50 24.5	-0.2
TLCR		90.55	320	⇓P	P	03 50 24.5	-0.2
CMDR	Camlidere-ANKA	90.63	314	i P	P	03 50 24.1	-1.3
ANTO	Ankara	90.73	314	⇓iP	P	03 50 25.7	-0.1
ANTO	Ankara	90.73	314	eP	P	03 50 25.3	-0.4
	comp=Z,25nm,0.7s						
ANTO	Ankara	90.73	314	P	P	03 50 25.5	-0.3
	SNR=9.0						
ANTO	Ankara	90.73	314	P	P	03 50 25.9	+0.1
BCAM	Yenicaga	90.75	315	i P	P	03 50 24.1	-1.8
N23A	Red Feather La	90.77	45	P	P	03 50 27.2	+1.0
	baz=300						
N23A	Red Feather La	90.77	45	eP	P	03 50 27.2	+1.0
	comp=Z,97nm,0.9s						
MVCO	Mesa Verde	90.80	49	P	P	03 50 26.6	+0.3
	baz=298,SNR=19						
MVCO	Mesa Verde	90.80	49	eP	P	03 50 26.7	+0.3
	comp=Z,50nm,1.4s						
PRAR	RASCA	90.88	323	⇑iP	P	03 50 25.8	-0.4
W18A	Petrified Fore	90.89	52	P	P	03 50 27.4	+0.6
	baz=297,SNR=7.7						
W18A	Petrified Fore	90.89	52	eP	P	03 50 27.6	+0.8
	comp=Z,16nm,0.7s						
SMCO	Snowmass	90.92	47	eP	P	03 50 27.2	+0.1
	comp=Z,70nm,0.8s						
MDND	Maddock	90.94	37	P	P	03 50 26.8	+0.3
	baz=304						
CFR	Carcaliu	90.97	320	⇑iP	P	03 50 25.7	-0.9
CFR	Carcaliu	90.97	320	⇑P	P	03 50 25.7	-0.9
SFJD	Kangerlussuaq	90.98	5	i P	P	03 50 26.2	0.0
	comp=Z,28nm,0.8s						
SFJD	Kangerlussuaq	90.98	5	i P	P	03 50 26.2	0.0
SFJD				pmax	pmax		
	comp=Z,28nm,0.8s						
TESR	Tescani	91.11	322	⇓iP	P	03 50 27.5	+0.2
BEL	Belsk	91.11	328	i P	P	03 50 27.1	-0.1
BEL	Belsk	91.11	328	⇑iP	P	03 50 27.1	-0.1
BIZ	Bicaz	91.18	322	⇑iP	P	03 50 27.9	+0.2
TIRR	Tirgusor	91.18	319	⇓iP	P	03 50 27.5	-0.1
TIRR	Tirgusor	91.18	319	⇓P	P	03 50 27.5	-0.1
PETR	Petresti	91.20	321	⇑iP	P	03 50 28.4	+0.7
ODD1	Odda	91.24	340	eP	P	03 50 27.1	-0.6
ODD1				IAmb	IAmb	03 50 30.6	
	comp=Z,18nm,1.0s						
ASK	Askoy	91.25	341	eP	P	03 50 27.2	-0.4
ASK				IAmb	IAmb	03 50 28.1	
	comp=Z,16nm,0.5s						
BER	Bergen	91.29	340	eP	P	03 50 27.5	-0.3
BER				IAmb	IAmb	03 50 29.9	
	comp=Z,12nm,0.9s						
BUR08	Bucovina Ar. S	91.30	323	eP	P	03 50 27.9	-0.4
BURAR	Bucovina Array	91.30	323	⇓iP	P	03 50 28.6	+0.3
BURAR	Bucovina Array	91.30	323	⇓P	P	03 50 28.6	+0.3
BUR04	Bucovina Ar. S	91.30	323	eP	P	03 50 27.3	-1.0
HARR	Harsova	91.35	320	⇓iP	P	03 50 28.5	+0.1
HARR	Harsova	91.35	320	P	P	03 50 29.2	+0.8
TUC	Tucson	91.38	54	P	P	03 50 29.8	+0.8
	baz=297						
TUC	Tucson	91.38	54	eP	P	03 50 29.9	+0.9
	comp=Z,30nm,1.1s						
ASF	Jabal al Asfar	91.38	305	P	P	03 50 28.7	-0.2
	comp=Z,17nm,1.0s,baz=31,slow=2.2,SNR=20						
VRI	Vrincioaia	91.42	321	⇓iP	P	03 50 29.5	+0.7
VRI	Vrincioaia	91.42	321	⇓P	P	03 50 29.5	+0.7
PLOR	Plostina	91.47	321	⇓iP	P	03 50 29.1	0.0
PLOR	Plostina	91.47	321	⇓P	P	03 50 29.1	0.0
KWP	Kalwaria Pacla	91.48	326	i P	P	03 50 28.7	-0.3
KWP	Kalwaria Pacla	91.48	326	⇑iP	P	03 50 28.7	-0.3
ULM	Lac du Bonnet	91.52	33	P	P	03 50 28.9	-0.3
	comp=Z,19nm,0.7s,baz=315,slow=4.7,SNR=19						
ULM	Lac du Bonnet	91.52	33	eP	P	03 50 29.2	+0.1
	comp=Z,24nm,0.8s						
ULM	Lac du Bonnet	91.52	33	eP	P	03 50 29.2	+0.1
ULM				pmax	pmax		
	comp=Z,24nm,0.8s						
ISCO	Idaho Springs	91.53	46	P	P	03 50 30.6	+0.7
	baz=300						
ISCO	Idaho Springs	91.53	46	eP	P	03 50 30.5	+0.7
	comp=Z,44nm,0.8s						
ISCO	Idaho Springs	91.53	46	eP	P	03 50 30.5	+0.7
ISCO				pmax	pmax		
	comp=Z,44nm,0.8s						
BSD	Bornholm Skovb	91.65	333	⇑iP	P	03 50 28.1	-1.5
	comp=Z,35nm,0.8s						
BSD	Bornholm Skovb	91.65	333	⇑iP	P	03 50 28.1	-1.5
BSD				pmax	pmax		
	comp=Z,35nm,0.8s						
S22A	4UR Ranch, Cre	91.71	48	P	P	03 50 31.2	+0.5
	baz=299,SNR=33						
ICOR	Ion Corvin	91.74	319	⇑iP	P	03 50 30.4	+0.2
HOMB	Homborsund	91.86	338	eP	P	03 50 29.2	-1.2
HOMB				IAmb	IAmb	03 50 30.1	
	comp=Z,79nm,1.4s						
GKP	Gorka Klasztor	91.87	331	eP	P	03 50 29.7	-0.9
GKP	Gorka Klasztor	91.87	331	eP	P	03 50 29.7	-0.9
MLR	Muntele Rosu	92.09	321	P	P	03 50 31.5	-0.5
	comp=Z,7.4nm,1.0s,baz=136,slow=4.3,SNR=8.1						
MLR	Muntele Rosu	92.09	321	⇓iP	P	03 50 31.8	-0.2
MLR	Muntele Rosu	92.09	321	eP	P	03 50 31.1	-0.9
	comp=Z,24nm,1.4s						
MLR	Muntele Rosu	92.09	321	⇓P	P	03 50 31.8	-0.2
MMAI	Mount Meron Ar	92.12	307	P	P	03 50 32.3	-0.1
	comp=Z,23nm,0.9s,baz=51,slow=5.7,SNR=24						
DOPR	Dopca	92.14	322	⇑iP	P	03 50 32.3	+0.2
BMR	Baia Mare	92.22	324	⇑iP	P	03 50 33.0	+0.6
BMR	Baia Mare	92.22	324	⇑P	P	03 50 33.0	+0.6
SNART	Snartemo	92.26	338	eP	P	03 50 31.5	-0.8
SNART				IAmb	IAmb	03 50 32.4	
	comp=Z,15nm,0.5s						
Q24A	Divide	92.26	46	P	P	03 50 33.7	+0.5
	baz=300,SNR=22						
COP	Copenhagen	92.27	335	⇑iP	P	03 50 31.5	-0.9
	comp=Z,26nm,0.8s						
COP	Copenhagen	92.27	335	⇑iP	P	03 50 31.5	-0.9
COP				pmax	pmax		
	comp=Z,26nm,0.8s						
UZH	Uzhgorod	92.30	325	eP	P	03 50 32.0	-0.7
TRPA	Tarpa	92.47	325	⇓iP	P	03 50 33.6	+0.1
DAMY	Dhamar	92.47	287	eP	P	03 50 35.5	+1.0
	comp=Z,30nm,1.1s						
A33A	Warroad	92.57	34	P	P	03 50 33.5	-0.5
	baz=308,SNR=5.9						
CRVS	Cervenica-Dubn	92.57	326	eP	P	03 50 33.8	-0.2
CRVS				pmax	pmax		
	comp=Z,29nm,1.1s						
CRVS	Cervenica-Dubn	92.57	326	eP	P	03 50 33.8	-0.2
CRVS				ePP	PP	03 54 19.5	+0.2
OJC	Ojcow	92.61	327	i P	P	03 50 33.4	-0.8
OJC	Ojcow	92.61	327	eP	P	03 50 33.5	-0.6
	comp=Z,14nm,0.7s						
OJC	Ojcow	92.61	327	eP	P	03 50 33.5	-0.6
OJC				pmax	pmax		
	comp=Z,15nm,0.7s						
SDCO	Great Sand Dun	92.63	48	P	P	03 50 35.2	+0.3
	baz=300,SNR=14						
SDCO	Great Sand Dun	92.63	48	eP	P	03 50 35.3	+0.3
	comp=Z,39nm,1.4s						
VOIR		92.64	322	⇑iP	P	03 50 33.9	-0.6
VOIR		92.64	322	⇑P	P	03 50 33.9	-0.6
RGN	Rugen	92.71	333	eP	P	03 50 34.0	-0.4
	comp=Z,29nm,0.7s						
AGMN	Agassiz Nation	92.71	35	P	P	03 50 34.2	-0.4
	baz=307,SNR=14						
AGMN	Agassiz Nation	92.71	35	eP	P	03 50 34.3	-0.4
	comp=Z,23nm,0.9s						
CJR	Cluj-Napoca	92.72	323	⇓iP	P	03 50 35.2	+0.4
CJR	Cluj-Napoca	92.72	323	P	P	03 50 35.1	+0.3
HSIG		92.73	57	eP	P	03 50 35.7	+0.6
	comp=Z,43nm,1.2s						
NIE	Niedzica	92.86	327	i P	P	03 50 35.1	-0.3
NIE	Niedzica	92.86	327	⇑iP	P	03 50 35.1	-0.3
ARR	Arges	92.92	322	⇑iP	P	03 50 36.1	+0.3
MUD	Monsted U’grnd	92.97	336	⇑iP	P	03 50 34.5	-1.1
	comp=Z,24nm,0.9s						
MUD	Monsted U’grnd	92.97	336	⇑iP	P	03 50 34.5	-1.1
MUD				pmax	pmax		
	comp=Z,24nm,0.9s						
DRGR		93.17	324	⇑iP	P	03 50 36.8	-0.1
DRGR		93.17	324	⇑P	P	03 50 36.8	-0.1
HUMR	Humele	93.19	321	⇑iP	P	03 50 36.3	-0.6
B34A	Aery, Baudette	93.24	34	P	P	03 50 36.4	-0.6
	baz=308,SNR=11						
SUSD	Miller	93.24	39	P	P	03 50 36.6	-0.5
	baz=305,SNR=6.6						
OGNE	Ogallala	93.28	43	P	P	03 50 36.9	-0.6
	baz=302,SNR=5.4						
OGNE	Ogallala	93.28	43	eP	P	03 50 37.6	+0.1
	comp=Z,34nm,0.8s						
TASM	ASL Pad, Albuq	93.34	50	P	P	03 50 38.4	+0.3
	baz=299						
ANMO	Albuquerque	93.34	50	P	P	03 50 38.5	+0.4
	comp=Z,15nm,0.9s,baz=276,slow=4.2,SNR=62						
ANMO	Albuquerque	93.34	50	P	P	03 50 38.5	+0.4
	baz=299						
ANMO	Albuquerque	93.34	50	eP	P	03 50 38.5	+0.4
	comp=Z,19nm,0.9s						
ANMO				ePP	PP	03 54 25.0	-1.0
KECS	Kecovo	93.34	326	eP	P	03 50 39.0	+1.5
KECS				e		03 54 28.0	
KECS	Kecovo	93.34	326	eP	P	03 50 39.0	+1.5
KECS				ePP	PP	03 54 28.0	+2.7
TASL	Snake Pit, Alb	93.34	50	P	P	03 50 38.5	+0.4
	baz=299						
LOT	Lotru	93.37	322	⇑iP	P	03 50 37.7	-0.2
Y22D	IRIS PASSCAL I	93.43	51	P	P	03 50 39.2	+0.8
	baz=299						
Y22E	IRIS PASSCAL I	93.43	51	P	P	03 50 39.2	+0.8
	baz=299						
LANS	Liptovska Anna	93.45	327	eP	P	03 50 37.6	-0.5
LANS	Liptovska Anna	93.45	327	eP	P	03 50 37.6	-0.5
121A	Cookes Peak, D	93.53	53	P	P	03 50 39.9	+0.9
	baz=298						
C34A	RKJ Ranch, Bem	93.61	35	P	P	03 50 39.4	+0.6
	baz=308						
G32A	Webster	93.61	38	P	P	03 50 38.5	-0.4
	baz=306						
G32A	Webster	93.61	38	eP	P	03 50 38.9	0.0
	comp=Z,87nm,0.8s						
OKC	Ostrava-Krasne	93.67	328	eP	P	03 50 38.6	-0.4
OKC	Ostrava-Krasne	93.67	328	eP	P	03 50 38.6	-0.4
T25A	Trinidad	93.68	48	P	P	03 50 40.0	+0.3
	baz=301,SNR=12						
T25A	Trinidad	93.68	48	eP	P	03 50 40.1	+0.5
	comp=Z,12nm,0.8s						
B35A	Bob, Littlefor	93.80	34	P	P	03 50 39.3	-0.3
	baz=309,SNR=7.7						
B35A	Bob, Littlefor	93.80	34	eP	P	03 50 39.3	-0.3
	comp=Z,25nm,1.1s						
KSP	Ksiaz	93.91	329	i P	P	03 50 39.7	-0.4
KSP	Ksiaz	93.91	329	⇑iP	P	03 50 39.7	-0.4
KSCO	Kaye Shedlock’	93.92	45	P	P	03 50 40.4	-0.2
	baz=302,SNR=6.9						
KSCO	Kaye Shedlock’	93.92	45	eP	P	03 50 40.8	+0.2
	comp=Z,26nm,0.9s						
PSZ	Piszkesteto	94.00	326	⇓iP	P	03 50 40.9	+0.2
PSZ	Piszkesteto	94.00	326	⇑ex	P	03 50 40.0	-0.6
PSZ	Piszkesteto	94.00	326	eP	P	03 50 40.1	-0.6
	comp=Z,16nm,1.0s						
PSZ	Piszkesteto	94.00	326	⇓P	P	03 50 40.9	+0.2
MORC	Moravsky Berou	94.01	328	⇑iP	P	03 50 40.4	-0.3
MORC	Moravsky Berou	94.01	328	eP	P	03 50 40.0	-0.7
	comp=Z,34nm,1.6s						
MORC	Moravsky Berou	94.01	328	P	P	03 50 42.8	+2.1
MORC	Moravsky Berou	94.01	328	eP	P	03 50 40.0	-0.7
MORC				ePP	PP	03 54 28.7	-1.8
C35A	Jirik Farms, M	94.08	35	P	P	03 50 40.2	-0.8
	baz=309						
E34A	Wadena	94.17	36	P	P	03 50 41.0	-0.4
	baz=308						
VYHS	Vyhne	94.19	327	eP	P	03 50 41.2	-0.2
VYHS				pmax	pmax		
	comp=Z,12nm,0.9s						
VYHS	Vyhne	94.19	327	eP	P	03 50 41.2	-0.2
VYHS				ePP	PP	03 54 31.7	-0.1
DPC	Dobruska-Polom	94.23	329	eP	P	03 50 41.5	-0.1
DPC	Dobruska-Polom	94.23	329	eP	P	03 50 41.5	-0.1
UPC	Upice	94.27	329	eP	P	03 50 41.6	-0.2
UPC				AMS	AMS	04 28 00.0	
	comp=Z,1µm,13.7s						
UPC	Upice	94.27	329	eP	P	03 50 41.6	-0.2
UPC				MLR	MLR		
	comp=Z,1µm,13.7s						
D35A	Remer	94.42	35	P	P	03 50 41.5	-1.1
	baz=309						
HERR	Herculane	94.47	322	⇑iP	P	03 50 42.0	-0.8
JAVC	Velka Javorina	94.55	327	eP	P	03 50 43.8	+0.7
JAVC				ePP	PP	03 54 32.1	-2.5
E35A	Pequot Lakes	94.56	36	P	P	03 50 42.6	-0.6
	baz=308						
C36A	Pine Crest Far	94.64	34	P	P	03 50 42.7	-0.8
	baz=310						
VRAC	Vranov	94.79	328	P	P	03 50 43.9	-0.3
	comp=Z,7.3nm,0.6s,baz=62,slow=3.5,SNR=11						
VRAC				PP	PP	03 54 35.3	-1.1
	comp=Z,3.6nm,0.4s,baz=53,slow=8.7,SNR=15						
VRAC	Vranov	94.79	328	eP	P	03 50 43.9	-0.3
SMOL	Smolenice	94.89	327	P	P	03 50 45.4	+0.8
F35A	Swanville	94.90	36	P	P	03 50 44.3	-0.4
	baz=308,SNR=6.4						
MDVR	Moldovita	94.93	322	⇑iP	P	03 50 44.4	-0.6
PVCC	Panska Ves	94.94	330	eP	P	03 50 44.3	-0.5
PVCC				AMS	AMS	04 28 30.0	
	comp=Z,1µm,14.1s						
PVCC	Panska Ves	94.94	330	eP	P	03 50 44.3	-0.5
PVCC				MLR	MLR		
	comp=Z,1µm,14.1s						
BRG	Berggiesshubel	94.99	330	eP	P	03 50 44.3	-0.7
	comp=Z,18nm,0.9s						
BRG				i PP	PP	03 54 37.5	-0.4
	comp=Z,34nm,1.1s						
BRG				SS	SS	04 08 05.0	+0.5
	comp=N,413nm,13.9s						
	comp=E,406nm,14.6s						
	comp=Z,751nm,14.4s						
BRG	Berggiesshubel	94.99	330	eP	P	03 50 44.3	-0.7
BRG				i		03 54 37.5	
BRG				SS	SS	04 08 05.0	+0.5
BRG				pmax	pmax		
	comp=Z,18nm,0.9s						
BRG				MLR	MLR		
	comp=N,413nm,13.9s						
BRG				MLR	MLR		
	comp=E,406nm,14.6s						
BRG				MLR	MLR		
	comp=Z,751nm,14.4s						
ECSD	EROS Data Cent	95.02	39	P	P	03 50 44.8	-0.5
	baz=306,SNR=15						
ECSD	EROS Data Cent	95.02	39	eP	P	03 50 45.1	-0.3
	comp=Z,14nm,1.0s						
KRUC	Moravsky	95.05	328	eP	P	03 50 44.8	-0.5
KRUC				ePP	PP	03 54 36.3	-2.1
MODS	Modra-Piesok	95.06	327	eP	P	03 50 45.6	+0.2
MODS				pmax	pmax		
	comp=Z,15nm,1.1s						
MODS	Modra-Piesok	95.06	327	eP	P	03 50 45.6	+0.2
MODS				ePP	PP	03 54 40.3	+1.8
CLL	Collm	95.11	331	⇑iP	P	03 50 44.6	-1.0
	comp=Z,75nm,1.7s						
CLL				i PP	PP	03 54 39.0	+0.2
	comp=Z,39nm,1.2s						
CLL				esPP		03 56 12.0	
CLL				esSKSac	sSKSac	04 02 53.0	-11
CLL				e(PS)		04 04 00.0	
CLL				epPS		04 04 24.0	
CLL				eSS	SS	04 08 10.0	+3.8
CLL				esSS		04 09 56.0	
CLL				eSSS	SSS	04 11 54.0	
CLL	Collm	95.11	331	eP	P	03 50 44.6	-1.0
	comp=Z,100nm,1.8s						
CLL	Collm	95.11	331	⇑iP	P	03 50 44.6	-1.0
CLL				i		03 54 39.0	
CLL				pmax	pmax		
	comp=Z,75nm,1.7s						
E36A	McGregor	95.20	35	P	P	03 50 45.5	-0.6
	baz=309						
GOPC	GO Pecny, Ondr	95.25	329	eP	P	03 50 45.8	-0.5
GOPC	GO Pecny, Ondr	95.25	329	eP	P	03 50 45.8	-0.5
PRU	Pruhonice	95.32	330	eP	P	03 50 45.6	-0.9
PRU				AMS	AMS	04 28 40.0	
	comp=Z,1µm,13.3s						
PRU	Pruhonice	95.32	330	eP	P	03 50 45.6	-0.9
PRU				MLR	MLR		
	comp=Z,1µm,13.3s						
G35A	Watkins	95.34	37	P	P	03 50 46.5	-0.2
	baz=308,SNR=5.5						
G35A	Watkins	95.34	37	eP	P	03 50 46.8	+0.1
	comp=Z,30nm,0.9s						
VTS	Vitosha	95.36	320	⇑iP	P	03 50 47.0	-0.1
VTS	Vitosha	95.36	320	eP	P	03 50 46.7	-0.4
	comp=Z,23nm,0.9s						
VTS	Vitosha	95.36	320	⇑P	P	03 50 47.1	-0.1
BGNE	Belgrade	95.46	41	eP	P	03 50 46.1	-1.3
	comp=Z,29nm,0.8s						
H35A	Sunnyside Ranc	95.47	37	P	P	03 50 47.0	-0.4
	baz=308,SNR=8.2						
F36A	Milaca	95.47	36	P	P	03 50 46.6	-0.7
	baz=309,SNR=7.6						
F36A	Milaca	95.47	36	eP	P	03 50 47.1	-0.3
	comp=Z,10.0nm,0.8s						
MNTX	Cornudas Mount	95.72	53	P	P	03 50 49.0	+0.3
	baz=300						
MNTX	Cornudas Mount	95.72	53	eP	P	03 50 49.1	+0.3
	comp=Z,8.3nm,0.8s						
MORH	Mˆ‡rˆ¡gy, Hung	95.74	325	⇑ex	P	03 50 47.5	-1.0
CBKS	Cedar Bluff	95.92	44	P	P	03 50 48.6	-0.9
	baz=304						
CBKS	Cedar Bluff	95.92	44	eP	P	03 50 49.2	-0.4
	comp=Z,24nm,1.1s						
CBKS	Cedar Bluff	95.92	44	eP	P	03 50 49.2	-0.4
CBKS				pmax	pmax		
	comp=Z,24nm,1.1s						
F37A	Hinrichs Farm,	96.04	36	P	P	03 50 49.3	-0.7
	baz=310						
H36A	Jessenland, He	96.05	37	P	P	03 50 50.1	+0.1
	baz=308,SNR=6.2						
E38A	The Farm, Brul	96.05	34	P	P	03 50 49.0	-0.9
	baz=310						
CONA	Conrad Observa	96.07	327	i PcP	P	03 50 49.9	-0.2
	comp=Z,17nm,1.0s,SNR=13						
CONA				i PP	PP	03 54 45.2	-1.2
	comp=Z,16nm,1.3s						
NKC	Novy Kostel	96.12	331	eP	P	03 50 49.7	-0.5
NKC				AMS	AMS	04 29 20.0	
	comp=Z,1µm,13.3s						
NKC	Novy Kostel	96.12	331	eP	P	03 50 49.7	-0.5
NKC				MLR	MLR		
	comp=Z,1µm,13.3s						
SPMN	Marine on St.	96.27	36	P	P	03 50 50.6	-0.4
	baz=309,SNR=6.3						
SPMN	Marine on St.	96.27	36	eP	P	03 50 51.0	0.0
	comp=Z,13nm,0.8s						
F38A	Pierce - Schro	96.30	35	P	P	03 50 50.9	-0.2
	baz=310						
DIVS	Divibare	96.33	323	eP	P	03 50 50.4	-1.0
	comp=Z,12nm,1.0s						
KHC	Kasperske Hory	96.36	329	eP	P	03 50 50.5	-0.8
KHC				AMS	AMS	04 29 20.0	
	comp=Z,900nm,13.3s						
KHC	Kasperske Hory	96.36	329	eP	P	03 50 50.1	-1.3
	comp=Z,3.9nm,0.7s						
KHC	Kasperske Hory	96.36	329	eP	P	03 50 50.5	-0.8
KHC				MLR	MLR		
	comp=Z,900nm,13.3s						
MSTX	Muleshoe	96.46	50	eP	P	03 50 52.0	-0.2
	comp=Z,13nm,1.3s						
VAY	Valandovo	96.50	319	i P	P	03 50 51.0	-1.0
GEC2	GERESS Array S	96.50	329	eP	P	03 50 51.2	-0.9
	comp=Z,10nm,0.8s						

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GEC2  GERESS Array S    96.50 329 eP       P        03 50 51.2 -0.9
GEC2                               pmax    pmax
      comp=Z,10.0nm,0.8s
GERES GERESS Array B    96.50 329  P       P        03 50 51.0 -1.0
      comp=Z,8.2nm,0.7s,baz=47,slow=4.5,SNR=91
GERES                              PP      PP       03 54 47.0 -2.6
      comp=Z,4.2nm,1.1s,baz=46,slow=7.6,SNR=7.1
GERES                              PKiKP   PKiKP    03 55 28.5 +0.9
      comp=Z,1.2nm,0.6s,baz=43,slow=2.4,SNR=3.9
GEA0  GERESS Array S    96.51 329 eP       P        03 50 51.0 -1.1
J36A  Seneca 1, Swea    96.59  38  P       P        03 50 51.8 -0.6
      baz=308,SNR=7.3
J36A  Seneca 1, Swea    96.59  38 eP       P        03 50 52.2 -0.2
      comp=Z,19nm,1.0s
H37A  Dierke Farm, C    96.61  37  P       P        03 50 52.4 -0.1
      baz=309
ARSA  Arzberg           96.69 327 i PcP    P        03 50 52.4 -0.5
      comp=Z,9.9nm,0.8s,SNR=7.0
ARSA                              i PP     PP       03 54 50.4 -0.7
      comp=Z,6.9nm,1.4s
I37A  Lemond, Waseca    96.69  37  P       P        03 50 52.7 -0.3
      baz=309
I37A  Lemond, Waseca    96.69  37 eP       P        03 50 53.1 +0.2
      comp=Z,14nm,0.9s
AMTX  Amarillo          96.75  48  P       P        03 50 53.4 -0.1
      baz=302
AMTX  Amarillo          96.75  48 eP       P        03 50 53.6 +0.1
      comp=Z,33nm,1.1s
SKO   Skopje            96.79 320 i P      P        03 50 53.2 -0.2
G38A  Ridgeland         96.82  36  P       P        03 50 52.7 -0.7
      baz=310
F39A  Loretta           96.83  35  P       P        03 50 52.9 -0.6
      baz=311
KOGS  Kog               96.85 326 eP       P        03 50 52.3 -1.2
H38A  Maiden Rock       96.90  36  P       P        03 50 53.5 -0.3
      baz=310
MOA   Molln             96.91 328 i PcP    P        03 50 53.4 -0.4
      comp=Z,9.6nm,0.7s,SNR=6.5
MOA                               i PP     PP       03 54 54.0 +1.2
      comp=Z,13nm,1.4s
K36A  Gilmore City      96.95  39  P       P        03 50 53.6 -0.5
      baz=308
E40A  Wakefield         97.02  34  P       P        03 50 53.8 -0.6
      baz=312
J37A  Redenius Farm,    97.05  38  P       P        03 50 54.1 -0.4
      baz=309
GRFO  Grafenberg        97.06 331 eP       Pdif     03 50 54.6 +0.1
      comp=Z,61nm,1.9s
GRFO                              ePP      PP       03 54 54.1 +0.3
GRFO  Grafenberg        97.06 331 eP       Pdif     03 50 54.6 +0.1
GRFO                              e                 03 54 54.1
GRFO                               pmax    pmax
      comp=Z,61nm,1.9s
G39A  Holcombe          97.11  35  P       P        03 50 54.0 -0.8
      baz=311
L36A  Harm Buss Farm    97.15  39  P       P        03 50 54.3 -0.7
      baz=308
PLE   Pljevlja          97.15 322  P       Pdif     03 50 56.1 +1.0
F40A  Park Falls        97.25  34  P       P        03 50 54.6 -0.8
      baz=312
KRUS  Krusevo           97.27 320 i P      P        03 50 54.7 -0.9
I38A  Scanlan Farm,     97.28  37  P       P        03 50 54.9 -0.6
      baz=310
PERS  Pernice           97.31 327 i P      P        03 50 54.4 -1.2
SOKA  Soboth            97.32 327 i PcP    P        03 50 54.9 -0.9
      comp=Z,11nm,0.9s,SNR=10
SOKA                              i PP     PP       03 54 55.6 -0.4
      comp=Z,14nm,0.9s,SNR=5.7
K37A  Belmond           97.34  38  P       P        03 50 55.0 -0.8
      baz=308
H39A  Augusta           97.44  36  P       P        03 50 55.3 -0.9
      baz=310
M36A  Felix, Anita      97.46  40  P       P        03 50 55.5 -0.9
      baz=308
BLY   Banja Luka        97.47 324⇑iP       Pdif     03 50 56.5 +0.1
BLY   Banja Luka        97.47 324 eP       P        03 50 55.9 -0.5
      comp=Z,10nm,0.7s
E41A  Kenton            97.49  33  P       P        03 50 56.1 -0.3
      baz=312
FNA   Florina           97.54 319  P       P        03 50 56.5 -0.3
G40A  Rib Lake          97.64  35  P       P        03 50 56.5 -0.6
      baz=311
G40A  Rib Lake          97.64  35 eP       P        03 50 57.1 -0.1
      comp=Z,8.1nm,0.6s
J38A  Wedel Dairy, R    97.65  37  P       P        03 50 55.8 -1.4
      baz=310
L37A  Phoenix Point,    97.67  39  P       P        03 50 56.5 -0.8
      baz=308
OBKA  Obir              97.68 327 i Pdiff  P        03 50 56.9 -0.5
      comp=Z,5.4nm,1.0s
OBKA                              i PP     PP       03 54 59.7 +1.0
      comp=Z,19nm,0.9s,SNR=6.7
OHR   Ohrid             97.69 320 i P      P        03 50 56.4 -1.2
OHR   Ohrid             97.69 320  P       P        03 50 57.3 -0.2
N36A  Muff Farm, Cla    97.75  40  P       P        03 50 57.0 -0.8
      baz=307
KSU1  Kansas State U    97.76  43  P       P        03 50 56.9 -0.8
      baz=306
KSU1  Kansas State U    97.76  43 eP       P        03 50 57.5 -0.3
      comp=Z,19nm,0.8s
PDG   Podgorica         97.79 322⇓iP       P        03 50 57.5 -0.3
TTG   Podgorica         97.79 322 eP       P        03 50 57.1 -0.7
      comp=Z,23nm,1.0s
TTG   Podgorica         97.79 322 eP       P        03 50 57.1 -0.7
TTG                                pmax    pmax
      comp=Z,23nm,1.0s
I39A  Houston           97.84  36  P       P        03 50 56.9 -1.1
      baz=310
I39A  Houston           97.84  36 eP       P        03 50 57.6 -0.5
      comp=Z,7.8nm,0.7s
KBA   Koelnbreinsper    97.90 328 i PP     PP       03 54 58.9 -1.5
      comp=Z,17nm,1.1s
M37A  Trindle Farm,     97.94  40  P       P        03 50 58.1 -0.4
      baz=308
H40A  Chili             97.96  35  P       P        03 50 57.9 -0.7
      baz=311
LJU   Ljubljana         98.01 327 i P      P        03 50 57.5 -1.2
EKA   Eskdalemuir Ar    98.03 341  P       P        03 50 58.0 -0.6
      comp=Z,11nm,0.8s,baz=37,slow=4.9,SNR=18
EKA   Eskdalemuir Ar    98.03 341  P       P        03 50 58.0 -0.6
EKA                                pmax    pmax
      comp=Z,11nm,0.8s
MYKA  Terra Mystica     98.06 327 i Pdiff  P        03 50 57.5 -1.6
      comp=Z,4.2nm,0.7s
MYKA                              i PP     PP       03 55 01.6 +0.1
      comp=Z,16nm,0.8s,SNR=7.4
ESK   Eskdalemuir       98.06 341 eP       P        03 50 58.0 -0.8
      comp=Z,21nm,0.9s
ESK   Eskdalemuir       98.06 341 eP       P        03 50 58.0 -0.8
ESK                                pmax    pmax
      comp=Z,21nm,0.9s
J39A  Decorah           98.08  37  P       P        03 50 58.2 -0.9
      baz=310
L38A  Oak Wood Farm,    98.12  39  P       P        03 50 58.3 -1.1
      baz=309
TX31  Lajitas Ar. Si    98.18  54 eP       Pdif     03 51 00.6 +0.6
TXAR  Lajitas Array     98.18  54  P       Pdif     03 51 00.1 +0.1
      comp=Z,5.2nm,0.8s,baz=308,slow=2.6,SNR=54
TXAR                               PP      PP       03 54 59.2 -4.0
      comp=Z,2.2nm,1.0s,baz=280,slow=8.5,SNR=5.9
TXAR                               PKKPbc  PKKPbc   04 07 31.6 +0.7
      comp=Z,0.7nm,0.7s,baz=132,slow=5.7,SNR=8.8
N37A  Lee Faris, Mou    98.24  40  P       P        03 50 59.3 -0.6
      baz=308
N37A  Lee Faris, Mou    98.24  40 eP       P        03 50 59.5 -0.4
      comp=Z,17nm,0.8s
JAVS  Javornik          98.35 327 i P      P        03 50 58.6 -1.8
K39A  Oelwein           98.38  38  P       P        03 50 59.5 -0.9
      baz=310
M38A  Pleasantville     98.44  39  P       Pdif     03 51 00.0 -0.7
      baz=309
ABTA  Abfaltersbach     98.54 328 i Pdiff  Pdif     03 50 59.3 -1.9
      comp=Z,14nm,1.1s,SNR=6.5
J40A  Soldiers Grove    98.57  36  P       Pdif     03 51 00.3 -1.0
      baz=311
G42A  Mountain          98.59  34  P       Pdif     03 51 00.7 -0.7
      baz=313
WTTA  Wattenberg        98.60 329 ePP      PP       03 55 07.7 +1.9
      comp=Z,8.4nm,0.7s
I41A  Arkdale           98.61  36  P       Pdif     03 51 00.7 -0.8
      baz=312
MEM   Membach           98.63 334 ⇑P       Pdif     03 51 00.4 -1.0
O37A  Wolven Farm, M    98.64  41  P       Pdif     03 51 00.6 -1.1
      baz=308
L39A  Vinton            98.68  38  P       Pdif     03 51 01.2 -0.6
      baz=310
MOTA  Moosalm           98.80 329 i Pdiff  Pdif     03 51 01.2 -1.3
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      comp=Z,6.4nm,0.8s,SNR=5.2
MOTA                              i PP     PP       03 55 06.7 -0.5
      comp=Z,13nm,1.0s
N38A  Joes South For    98.80  40  P       Pdif     03 51 01.5 -0.9
      baz=309
K40A  Colesburg         98.80  37  P       Pdif     03 51 01.6 -0.8
      baz=310
WMOK  Wichita Mounta    98.83  47  P       Pdif     03 51 02.2 -0.5
      baz=304
WMOK  Wichita Mounta    98.83  47 ePdif    Pdif     03 51 01.9 -0.7
      comp=Z,7.8nm,1.0s
WMOK                              ePP      PP       03 55 05.5 -2.4
WMOK  Wichita Mounta    98.83  47 eP       Pdif     03 51 01.9 -0.8
WMOK                              e                 03 55 05.5
WMOK                               pmax    pmax
      comp=Z,8.0nm,1.0s
F43A  Flat Rock, Esc    98.83  33  P       Pdif     03 51 01.7 -0.7
      baz=314
RETA  Reutte            98.86 329  PP      PP       03 55 07.4 -0.2
      comp=Z,12nm,1.1s
P37A  Lathrop           98.87  41  P       Pdif     03 51 01.6 -1.1
      baz=308
IGT   Igoumenitsa       98.93 319  P       Pdif     03 51 02.7 -0.3
J41A  Loganville        98.99  36  P       Pdif     03 51 02.2 -1.0
      baz=311
M39A  Webster           99.00  39  P       Pdif     03 51 02.6 -0.6
      baz=310
H42A  Shiocton          99.03  35  P       Pdif     03 51 02.2 -1.1
      baz=313
BCLA  Clavier           99.06 334 ⇑P       Pdif     03 51 02.3 -1.0
F44A  Big Bay de Noc    99.11  32  P       Pdif     03 51 02.7 -0.9
      baz=314
JFWS  Jewell Farm       99.16  37  P       Pdif     03 51 03.2 -0.8
      baz=311
L40A  Anamosa           99.17  38  P       Pdif     03 51 03.4 -0.6
      baz=310
N39A  Derby Farms, D    99.18  39  P       Pdif     03 51 03.4 -0.7
      baz=309
FETA  Feichten          99.21 329 i Pdiff  Pdif     03 51 03.4 -0.9
      comp=Z,6.8nm,0.7s,SNR=5.9
FETA                              i PP     PP       03 55 10.1 -0.2
      comp=Z,15nm,1.1s,SNR=5.9
I42A  Draeger Farm,     99.24  35  P       Pdif     03 51 03.6 -0.7
      baz=312
WLF   Walferdange       99.30 333 ⇓P       Pdif     03 51 04.1 -0.3
      comp=Z,19nm,1.3s
K41A  Shullsburg        99.33  37  P       Pdif     03 51 03.9 -0.8
      baz=311
P38A  Dawn              99.35  41  P       Pdif     03 51 03.9 -1.0
      baz=308
BFO   Black Forest      99.36 331 ePdif    Pdif     03 51 03.5 -1.3
      comp=Z,1.5nm,0.9s
BFO                               ePP      PP       03 55 07.2 -4.0
BFO   Black Forest      99.36 331 eP       Pdif     03 51 03.5 -1.3
BFO                               e                 03 55 07.2
BFO                                pmax    pmax
      comp=Z,1.0nm,0.9s
ABTX  Abilene, Hawle    99.39  49  P       Pdif     03 51 04.9 -0.4
      baz=303
DAVA  Damuels           99.42 330 i Pdiff  Pdif     03 51 04.4 -0.8
      comp=Z,7.3nm,0.8s
DAVA                              i PP     PP       03 55 11.7 -0.1
      SNR=5.0
M40A  Post Highland     99.42  38  P       Pdif     03 51 04.1 -1.0
      baz=310
E45A  Wooded Hills,     99.45  32  P       Pdif     03 51 04.7 -0.4
      baz=315
L41A  Preston           99.57  37  P       Pdif     03 51 04.6 -1.2
      baz=311
DOU   Dourbes           99.60 334 ⇑P       Pdif     03 51 04.7 -1.0
VNDA  Vanda             99.64 176  PP      PP       03 55 12.8 -0.9
      comp=Z,1.5nm,0.9s,baz=340,slow=9.2,SNR=4.2
VNDA                               PKKPbc  PKKPbc   04 07 26.6 -2.5
      comp=Z,1.2nm,0.7s,baz=241,slow=2.7,SNR=4.9
K42A  Prairie Point,    99.75  36  P       Pdif     03 51 05.4 -1.2
      baz=312
DAVOX Davos/Dischmat    99.78 329  P       Pdif     03 51 06.0 -0.9
      comp=Z,8.3nm,0.7s,baz=53,slow=9.1,SNR=16
R38A  Fenwick Farm,    100.00  42  P       Pdif     03 51 05.9 -1.9
      baz=308
O40A  La Belle         100.03  40  P       Pdif     03 51 06.8 -1.0
      baz=310
P40A  Paris            100.30  40  P       Pdif     03 51 07.8 -1.3
      baz=309
S38A  Stockton         100.34  43  P       Pdif     03 51 07.9 -1.4
      baz=308
JCT   Junction City    100.44  51  P       Pdif     03 51 08.7 -1.3
      baz=303
JCT   Junction City    100.44  51 ePdif    Pdif     03 51 09.7 -0.3
      comp=Z,4.4nm,0.6s
JCT   Junction City    100.44  51 eP       Pdif     03 51 09.7 -0.3
JCT                                pmax    pmax
      comp=Z,4.0nm,0.6s
R39A  Chumby, Stover   100.46  42  P       Pdif     03 51 08.4 -1.4
      baz=308
O41A  Passleys Farm,   100.62  39  P       Pdif     03 51 09.3 -1.2
      baz=310
Q40A  Laux Farm, Aux   100.62  41  P       Pdif     03 51 09.2 -1.4
      baz=309
N42A  Yates City       100.65  38  P       Pdif     03 51 09.2 -1.4
      baz=311
S39A  Bolivar          100.67  42  P       Pdif     03 51 09.5 -1.3
      baz=308
P41A  Barry, Barry     100.80  40  P       Pdif     03 51 10.4 -0.8
      baz=310
R40A  Maddies Statio   100.95  41  P       Pdif     03 51 10.6 -1.4
      baz=309
T39A  Clever           101.04  43  P       Pdif     03 51 11.2 -1.3
      baz=308
N43A  Stutzman Famil   101.07  38  P       Pdif     03 51 11.2 -1.2
      baz=312
Q41A  Truxton          101.16  40  P       Pdif     03 51 11.8 -1.1
      baz=310
S40A  Lebanon          101.23  42  P       Pdif     03 51 12.0 -1.3
      baz=309
P42A  Winchester       101.28  39  P       Pdif     03 51 12.6 -0.9
      baz=311
U39A  Green Forest     101.37  43  P       Pdif     03 51 12.8 -1.1
      baz=308
R41A  Rosebud          101.48  41  P       Pdif     03 51 13.1 -1.2
      baz=310
CCM   Cathedral Cave   101.72  41  P       Pdif     03 51 14.5 -0.9
      baz=310
CCM   Cathedral Cave   101.72  41 ePdif    Pdif     03 51 15.1 -0.3
CCM   Cathedral Cave   101.72  41 eP       Pdif     03 51 15.1 -0.3
U40A  Yellville        101.78  43  P       Pdif     03 51 14.5 -1.3
      baz=308
T41A  Mountain View    102.04  42  P       Pdif     03 51 15.6 -1.3
      baz=309
S42A  Caledonia        102.18  41  P       Pdif     03 51 16.1 -1.3
      baz=310
U41A  Viola            102.38  43  P       Pdif     03 51 16.9 -1.5
      baz=309
T42A  Van Buren        102.47  42  P       Pdif     03 51 17.2 -1.6
      baz=310
Q44A  Meyer Farm, Va   102.50  39  P       Pdif     03 51 17.9 -1.0
      baz=311
V41A  Mountainview     102.58  43  P       Pdif     03 51 17.7 -1.6
      baz=309
T43A  Greenville       102.93  41  P       Pdif     03 51 19.9 -0.9
      baz=310
X40A  Basin Creek Fa   102.94  45  P       Pdif     03 51 19.8 -1.2
      baz=308
Q45A  Warren Harvey,   103.01  39  P       Pdif     03 51 19.9 -1.2
      baz=312
M50A  Fremont          104.08  34  P       Pdif     03 51 24.6 -1.2
      baz=316
OXF   Oxford           105.13  43  P       Pdif     03 51 29.7 -0.9
      baz=310
W47A  Westpoint        105.77  41  P       PKiKP    03 55 43.3 -1.4
      baz=312
T50A  Nancy            106.20  38  P       PKiKP    03 55 44.5 -0.9
      baz=314
245A  Little AP, Sta   106.40  45  P       PKiKP    03 55 45.2 -0.7
      baz=310
V49A  McMinnville      106.44  40  P       PKiKP    03 55 45.3 -0.7
      baz=313
Y47A  UCPARC, Winfie   106.50  42  P       PKiKP    03 55 45.3 -0.8
      baz=311
U50A  Jamestown        106.62  39  P       PKiKP    03 55 45.3 -1.0
      baz=314
X48A  Hartselle        106.64  41  P       PKiKP    03 55 45.4 -0.9
      baz=312
W49A  Belvidere        106.67  40  P       PKiKP    03 55 45.3 -1.0
      baz=313
X49A  Woodville        107.04  41  P       PKiKP    03 55 46.0 -1.1
      baz=313
W50A  Signal Mountai   107.18  40  P       PKiKP    03 55 46.4 -0.9
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      baz=314
247A  Quitman          107.22  44  P       PKiKP    03 55 46.5 -0.9
      baz=310
TZTN  Tazewell         107.27  38  P       PKiKP    03 55 46.9 -0.6
      baz=315
LRAL  Lakeview Retre   107.61  42  P       PKiKP    03 55 47.3 -0.8
      baz=312
V52A  Sevierville      107.74  38  P       PKiKP    03 55 47.8 -0.6
      baz=315
Z49A  Columbiana       107.80  42  P       PKiKP    03 55 47.7 -0.8
      baz=312
149A  Jones            108.03  43  P       PKiKP    03 55 48.3 -0.7
      baz=312
W52A  Murphy           108.07  39  P       PKiKP    03 55 48.3 -0.7
      baz=314
Z50A  Ashland          108.13  42  P       PKiKP    03 55 48.4 -0.8
      baz=313
V53A  Saluda           108.31  38  P       PKiKP    03 55 48.6 -0.9
      baz=316
X52A  Dahlonega        108.44  39  P       PKiKP    03 55 48.9 -0.9
      baz=314
W53A  Cullowhee        108.47  39  P       PKiKP    03 55 49.3 -0.6
      baz=315
150A  Eclectic         108.51  42  P       PKiKP    03 55 49.1 -0.8
      baz=312
Y52A  Lilburn          108.85  40  P       PKiKP    03 55 49.9 -0.5
      baz=314
251A  Midway           109.23  42  P       PKiKP    03 55 50.8 -0.4
      baz=313
152A  Waverly Hall     109.27  41  P       PKiKP    03 55 50.7 -0.6
      baz=313
KMSC  Kings Mountain   109.53  37  P       PKiKP    03 55 50.8 -1.0
      baz=316
Z53A  Monticello       109.55  40  P       PKiKP    03 55 51.0 -0.8
      baz=314
Y54A  Tignall          109.67  39  P       PKiKP    03 55 51.5 -0.5
      baz=315
PGAV  Gavieira, Arco   111.31 337 ePKPdf   PKiKP    03 55 55.6 +0.6
PCAB  Cabril           111.44 337 ePKPdf   PKiKP    03 55 55.9 +0.7
QSPA  South Pole Qui   111.50 180 ePKP     PKiKP    03 55 53.9 -0.6
QSPA                              eSKPdf   SKPdf    03 59 00.5 -0.5
MVO   Moncorvo         111.55 336 ePKPdf   PKiKP    03 55 56.1 +0.6
ESDC  Sonseca Array    111.59 333  PKiKP   PKiKP    03 55 55.5  0.0
      comp=Z,0.7nm,0.4s,baz=26,slow=2.8,SNR=12
POLO  Lamas de Olo     111.65 337 ePKPdf   PKiKP    03 55 56.3 +0.6
PVIS  Viseu            112.26 336 ePKPdf   PKiKP    03 55 57.3 +0.5
MTE   Manteigas        112.41 336 ePKPdf   PKiKP    03 55 57.8 +0.7
PCBR  Castelo Branco   112.86 336 ePKPdf   PKiKP    03 55 58.5 +0.6
PCAS  Casmilo, Conde   113.06 337 ePKPdf   PKiKP    03 55 58.6 +0.3
PMRV  Marv??o          113.19 335 ePKPdf   PKiKP    03 55 59.0 +0.4
PTOM  Tomar            113.41 336 ePKPdf   PKiKP    03 55 59.6 +0.6
PESTR Estremoz         113.75 335 ePKPdf   PKiKP    03 55 59.8 +0.1
PMTG  Montargil        113.82 336 ePKPdf   PKiKP    03 56 00.1 +0.3
ALMR  Almeirim         113.88 336 ePKP     PKiKP    03 55 59.9 +0.1
ALMR                               AMS     AMS      04 42 47.8
      comp=Z,583nm,24.5s
ALMR  Almeirim         113.88 336 ePKPdf   PKiKP    03 56 00.2 +0.3
ALMR  Almeirim         113.88 336 ePKIKP   PKiKP    03 55 59.9 +0.1
PBAR  Barrancos        114.13 334 ePKPdf   PKPdf    03 56 00.8 +0.4
EVO   Evora            114.21 335 ePKPdf   PKPdf    03 56 01.0 +0.5
LIS   Lisbon           114.48 336 ePKP     PKPdf    03 56 01.2 +0.2
LIS                                AMS     AMS      04 42 54.4
      comp=E,980nm,26.7s
LIS   Lisbon           114.48 336 ePKIKP   PKPdf    03 56 01.1 +0.1
PBEJ  Beja             114.59 335 ePKPdf   PKPdf    03 56 03.0 +1.7
PNCL  Nicolau / Gran   114.77 336 ePKPdf   PKPdf    03 56 02.0 +0.4
859A  Kempfer Cattle   114.84  42  P       PKPdf    03 56 01.2 -0.8
      baz=315
SYO   Syowa Base       114.88 203⇓ePKPdf   PKPdf    03 56 00.0 -0.7
MESJ  Messejana        114.89 335 ePKP     PKPdf    03 56 02.0 +0.1
MESJ                               AMS     AMS      04 43 56.8
      comp=Z,367nm,24.9s
MESJ  Messejana        114.89 335 ePKPdf   PKPdf    03 56 02.6 +0.8
MESJ  Messejana        114.89 335 ePKIKP   PKPdf    03 56 01.9 +0.1
PCVE  Castro Verde     115.00 335 ePKPdf   PKPdf    03 56 02.9 +0.8
PTEO  Sao Teotonio     115.34 335 ePKPdf   PKPdf    03 56 03.4 +0.7
MORF  Marmelete        115.52 335 ePKP     PKPdf    03 56 03.0 -0.1
MORF                               AMS     AMS      04 41 51.1
      comp=E,263nm,19.8s
MORF  Marmelete        115.52 335 ePKPdf   PKPdf    03 56 03.8 +0.6
MORF  Marmelete        115.52 335 ePKIKP   PKPdf    03 56 03.0 -0.1
LSZ   Lusaka           118.24 264 ePKPdf   PKPdf    03 56 09.0 +0.1
LSZ                               eSKPdf   SKPdf    03 59 15.6  0.0
LSZ   Lusaka           118.24 264 ePKIKP   PKPdf    03 56 09.0 +0.1
TAM   Tamanrasset      119.41 314 ePKPdf   PKPdf    03 56 11.1 -0.1
TAM   Tamanrasset      119.41 314 ePKIKP   PKPdf    03 56 11.1 -0.1
PMPS  Porto Santo      122.09 340 ePKPdf   PKPdf    03 56 16.8 +1.0
PMAR  Madeira          122.58 340 ePKPdf   PKPdf    03 56 18.0 +1.0
FUL   Funchal          122.64 340 ePKPdf   PKPdf    03 56 17.5 +0.6
LBTB  Lobatse          122.90 254 ePKPdf   PKPdf    03 56 17.9 +0.3
JTS   JuntasAbangare   123.20  61  PKP     PKPdf    03 56 17.8 -0.6
      comp=E,9.6nm,0.7s,baz=21,slow=4.4,SNR=8.2
JTS   JuntasAbangare   123.20  61 ePKPdf   PKPdf    03 56 17.6 -0.8
SNAA  Sanae            126.32 193  P       PKPdf    03 56 22.7 -0.1
SNAA  Sanae            126.32 193 ePKPdf   PKPdf    03 56 22.7 -0.1
SNAA  Sanae            126.32 193 ePKIKP   PKPdf    03 56 22.7 -0.1
BCIP  Isla Barro Col   127.95  58 ePKPdf   PKPdf    03 56 26.9 -0.6
VNA3  Neumayer Olymp   127.96 191  P       PKPdf    03 56 26.5 +0.6
VNA1  Neumayer--Stat   128.20 192  P       PKPdf    03 56 25.4 -0.9
TOA0  Torodi Ar. Sit   128.62 309 ePKPpre  PKPpre   03 56 20.9
TOA0                              ePKPdf   PKPdf    03 56 28.8  0.0
TORD  Torodi Ar. Bea   128.62 309  PKP     PKPdf    03 56 28.4 -0.4
      comp=E,7.9nm,0.8s,baz=12,slow=2.3
TORD                               SKPbc   SKPbc    03 59 19.1
      baz=34,slow=3.9
TSUM  Tsumeb           129.03 262 ePKPdf   PKPdf    03 56 30.2 +0.6
TSUM                              ePKPdf   PKiKP    03 56 30.7 +0.4
SJCC  San Jacinto, C   131.10  54 eP       PKPdf    03 56 32.1 -1.4
KOWA  Kowa             131.62 315  PKP     PKPdf    03 56 35.7 +1.3
      comp=E,13nm,0.5s,baz=90,slow=2.7,SNR=31
KOWA                               SKPbc   SKPbc    03 59 31.4 -0.2
      comp=E,26nm,0.7s,baz=42,slow=4.5,SNR=13
KOWA  Kowa             131.62 315 ePKPdf   PKPdf    03 56 34.6 +0.2
KOWA                               SKPbc   SKPbc    03 59 31.4 -0.2
STVI  Saint Thomas     131.69  37 ePKPdf   PKPdf    03 56 34.2 -0.3
ZARC  Zaragoza, Cauc   132.87  56 eP       PKPdf    03 56 36.0 -0.8
HELC  Santa Helena     133.14  58 ePKPdf   PKPdf    03 56 37.9 +0.1
PLMC  San Jos˜' del    133.30  60 eP       PKPdf    03 56 36.5 -1.2
OCAC  Ocana            133.56  54 eP       PKPdf    03 56 38.1 -0.2
YOTC  Yotoco, Valle    133.78  61 eP       PKPdf    03 56 34.5 -4.3
HORQ  Saladito         133.84  62 eP       PKPdf    03 56 38.2 -0.8
BRRC  Barranca, Sant   133.99  56 eP       PKPdf    03 56 39.3 +0.4
OTAV  Otavalo          134.06  67 ePKPdf   PKPdf    03 56 38.5 -1.1
OTAV                              eSKPbc   SKPbc    03 59 40.1 -0.4
POPC  Popayan, Colom   134.32  63 eP       PKPdf    03 56 38.1 -1.8
GCUF  Volcan Galeras   134.48  65 eP       PKPdf    03 56 41.3 +0.8
ROSC  El Rosal         134.91  59  PKP     PKPdf    03 56 41.7 +0.5
      comp=E,10nm,0.6s,baz=252,slow=6.4,SNR=8.1
ROSC  El Rosal         134.91  59 ePKPdf   PKPdf    03 56 39.2 -2.0
SDV   Santo Domingo    135.12  51  PKP     PKPdf    03 56 41.4 +0.1
      comp=E,54nm,0.8s,baz=294,slow=1.8,SNR=31
SDV                                SKPbc   SKPbc    03 59 42.4 -1.2
      comp=E,20nm,0.7s,baz=279,slow=2.8,SNR=13
SDV   Santo Domingo    135.12  51 ePKPpre  PKPpre   03 56 25.7
SDV                               ePKPdf   PKPdf    03 56 41.1 -0.2
SDV                               eSKPbc   SKPbc    03 59 42.1 -1.5
SDV   Santo Domingo    135.12  51 eP       PKPdf    03 56 40.7 -0.6
PRAC  Prado            135.12  60 ePKPdf   PKPdf    03 56 39.7 -1.4
ATAH  Atahualpa        137.52  76  PKhKP   PKPpre   03 56 36.5
      comp=E,11nm,0.7s,baz=97,slow=0.7,SNR=5.1
ATAH                               SKPbc   SKPbc    03 59 51.5 +0.5
      comp=E,12nm,0.8s,baz=187,slow=1.5,SNR=5.2
DBIC  Dimbokro         137.72 308  PKhKP   PKPpre   03 56 33.4
      comp=E,1.8nm,0.4s,baz=47,slow=2.8,SNR=8.6
DBIC                               PKP     PKPdf    03 56 46.7 +0.8
      comp=E,7.9nm,0.6s,baz=41,slow=2.4,SNR=8.2
DBIC                               SKPbc   SKPbc    03 59 51.0 -0.1
      comp=E,17nm,0.9s,baz=35,slow=3.7,SNR=8.7
KIC   Kosan Boka       137.84 308 ePKP1    PKPpre   03 56 36.3
      comp=E,52nm,0.9s
TIC   Toumodi          137.86 308 ePKP1    PKPpre   03 56 35.7
LIC   Lamto            138.15 308 ePKP1    PKPpre   03 56 35.7
      comp=E,92nm,1.2s
GO06  Curarrehue       145.66 129 ePKPdf   PKPab    03 57 01.1 -0.1
PLCA  Paso Flores      145.88 131  PKPbc   PKPab    03 57 01.6 -0.3
      comp=E,53nm,0.6s,baz=263,slow=3.7,SNR=119
PLCA                               SKPbc   SKPbc    04 00 10.9  0.0
      comp=E,6.3nm,1.0s,baz=249,slow=5.2,SNR=3.2
PLCA  Paso Flores      145.88 131 ePKPdf   PKPbc    03 57 00.8 -0.1
PLCA                               SKPbc   SKPbc    04 00 10.9  0.0
PLCA  Paso Flores      145.88 131 ePKP2    PKPbc    03 57 00.8 -0.1
GO05  HualaæØ          146.69 121 ePKPbc   PKPbc    03 57 02.9 -0.4
ROC1  El Roble         147.88 118 ePKPbc   PKPbc    03 57 06.6 -0.3
PEL   Peldehue         148.12 118 ePKPbc   PKPbc    03 57 07.4 +0.2
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PEL	Peldehue	148.12	118	ePKP2	PKPbc	03 57 07.4	+0.2
GO04	Tololo Observa	148.53	113	ePKPbc	PKPbc	03 57 07.6	-1.0
LCO	Las Campanas	148.75	110	ePKPbc	PKPbc	03 57 09.9	+0.7
PB10	IPOC Station P	149.00	100	ePKPbc	PKPbc	03 57 10.6	+1.0
GO03	Copiap	149.28	108	ePKPbc	PKPbc	03 57 10.9	+0.5
PB04	IPOC Station P	149.28	97	ePKPbc	PKPbc	03 57 11.3	+0.7
MNMC	Minye Minye	149.36	91	ePKPdf	PKPdf	03 57 07.2	+1.0
MNMC				ePKPab	PKPab	03 57 18.3	+1.5
AUSP	Uspallata	149.38	117	eP	PKPbc	03 57 11.7	+0.9
PTGA	Pitinga	149.40	50	PKP	PKPdf	03 57 06.7	+0.5
	comp=E,81nm,0.7s,baz=353,slow=0.8,SNR=44						
PTGA				PKPbc	PKPbc	03 57 11.0	+0.1
	comp=E,81nm,0.7s,baz=322,slow=3.2,SNR=75						
PTGA	Pitinga	149.40	50	ePKPdf	PKPdf	03 57 06.6	+0.5
PTGA				ePKPbc	PKPbc	03 57 10.6	-0.3
PB11	IPOC Station P	149.41	92	ePKPdf	PKPdf	03 57 07.1	+0.9
PB11				ePKPbc	PKPbc	03 57 11.3	+0.3
PB11				ePKPab	PKPab	03 57 17.7	+0.9
RTLS	Leoncito	149.54	116	⇓eP	PKPbc	03 57 11.6	+0.4
ARCO	CERRO ARCO	149.62	118	eP	PKPbc	03 57 11.1	0.0
AAGR	Agrelo	149.65	119	eP	PKPbc	03 57 11.7	+0.5
AROD	Rodeo	149.67	113	⇓eP	PKPbc	03 57 12.4	+0.8
PB01	IPOC Station P	149.75	95	ePKPbc	PKPbc	03 57 12.2	+0.5
SHEL	Horse Pasture	149.92	276	i PKP2	PKPbc	03 57 14.4	+2.3
GO02	Mina Guanaco	149.93	103	ePKPbc	PKPbc	03 57 12.8	+0.5
ACDV	Cuesta del Vie	149.97	113	⇓eP	PKPbc	03 57 13.0	+0.9
LPAZ	La Paz	150.09	85	PKP	PKPdf	03 57 08.6	+0.6
	comp=E,16nm,0.8s,baz=319,slow=1.8,SNR=53						
LPAZ				PKPbc	PKiKP	03 57 14.1	+0.1
	comp=E,98nm,0.7s,baz=323,slow=3.4,SNR=140						
LPAZ	La Paz	150.09	85	ePKPdf	PKPdf	03 57 08.5	+0.6
LPAZ				ePKPbc	PKPbc	03 57 13.5	+0.2
LPAZ				ePKPab	PKPab	03 57 20.1	-0.2
LPAZ	La Paz	150.09	85	ePKIKP	PKPdf	03 57 08.5	+0.6
LPAZ				e		03 57 20.1	
RTCV	Cerro Valdivia	150.16	116	⇓eP	PKPbc	03 57 12.7	+0.3
RTLL	Cerro Villicun	150.32	115	eP	PKPbc	03 57 13.1	+0.4
AMOG	MOGNA	150.38	115	⇓eP	PKPbc	03 57 13.3	+0.4
AGUA	GUANDACOL	150.61	112	eP	PKPbc	03 57 14.5	+0.9
VCA	Vinchina	150.96	110	eP	PKPbc	03 57 15.1	+0.7
SAML	Samuel	151.79	67	ePKPdf	PKPdf	03 57 10.1	+0.3
SAML				ePKPbc	PKPbc	03 57 16.1	-0.4
SAML				ePKPab	PKPab	03 57 24.8	-1.8
SAML	Samuel	151.79	67	ePKIKP	PKPdf	03 57 10.1	+0.3
SAML				e		03 57 24.8	
TRQA	Tornquist	153.00	133	ePKPbc	PKPbc	03 57 18.4	-0.2
TRQA	Tornquist	153.00	133	ePKIKP	PKPbc	03 57 18.4	-0.2
YJA	Yavi	153.55	96	eP	PKPdf	03 57 13.7	+1.0
AHML	Horco Molle	153.69	107	eP	PKPdf	03 57 12.4	0.0
SIV	San Ignacio	156.52	80	PKP	PKPdf	03 57 16.5	+0.1
	comp=E,11nm,0.8s,baz=245,slow=0.8,SNR=57						
SIV				PKPab	PKPab	03 57 46.4	-0.5
	comp=E,5.7nm,0.7s,baz=280,slow=10,SNR=7.0						
CPUP	Villa Florida	160.86	108	PKP	PKPdf	03 57 21.4	+0.2
	comp=E,5.7nm,1.0s,baz=115,slow=2.0,SNR=5.5						
CPUP	Villa Florida	160.86	108	ePKPdf	PKPdf	03 57 22.1	+0.9
CPUP				ePKPab	PKPab	03 58 05.9	+0.5
RCBR	Riachuelo	164.18	356	ePKPdf	PKPdf	03 57 24.3	-0.6
RCBR				ePKPab	PKPab	03 58 20.2	+0.1
RCBR	Riachuelo	164.18	356	ePKIKP	PKPdf	03 57 24.3	-0.6
RCBR				e		03 58 20.2	
BDFB	Brasilia	167.94	62	PKP	PKPdf	03 57 28.5	+0.6
	comp=E,20nm,1.0s,baz=319,slow=1.4,SNR=26						
BDFB				PKPab	PKPab	03 58 36.6	-0.3
	comp=E,7.2nm,0.8s,baz=327,slow=1.3,SNR=4.4						
BDFB	Brasilia	167.94	62	ePKPdf	PKPdf	03 57 28.9	+1.0
BDFB				ePKPab	PKPab	03 58 35.9	-1.1

WEL 27 03:57:57.4, 38°S±7°×18°0W±°, h33^{km}, ML4.3/37, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	Waiomatatini S	1.54	270	P	Pn	03 58 22.9	+0.4
WMGZ				S	Sn	03 58 41.9	+0.7
MXZ	Matakaoa Point	1.65	279	P	Pn	03 58 24.0	0.0
PUZ	Puketiti	1.67	261	P	Pn	03 58 25.2	+0.8
PKGZ	Pakihiroa	1.80	268	P	Pn	03 58 26.5	+0.3
CNGZ	Carnagh Statio	1.81	249	P	Pb	03 58 28.3	-1.6
TWGZ	Tauwhareparae	1.91	259	P	Pn	03 58 28.8	+1.2
TWGZ				S	Sn	03 58 51.2	+0.7
HAZ	Te Kaha	2.04	272	P	Pn	03 58 30.2	+0.8
HAZ				S	Sn	03 58 54.1	+0.4
TKGZ	Te Karaka	2.06	252	P	Pn	03 58 31.3	+1.6
RUGZ	Raukumara Rang	2.12	266	P	Pn	03 58 31.0	+0.4
PRGZ	Paritu Road	2.22	240	P	Pn	03 58 33.9	+2.0
MWZ	Matawai	2.28	257	P	Pn	03 58 33.5	+0.7
MWZ				S	Sn	03 59 00.5	+0.7
MHGZ	Mahia Peninsul	2.32	235	P	Pn	03 58 35.6	+2.2
MHGZ				S	Sb	03 59 04.7	-2.2
RAGZ	Rawiri	2.41	253	P	Pn	03 58 35.7	+1.2
KNZ	Kokohu	2.41	240	P	Pn	03 58 36.4	+1.9
SNGZ	Shannon Statio	2.55	247	P	Pn	03 58 38.1	+1.6
SNGZ				S	Sn	03 59 07.9	+1.5
URZ	Urewera	2.59	260	P	Pn	03 58 38.6	+1.6
URZ				S	Sn	03 59 07.9	+0.5
WHHZ	Waihua	2.74	242	P	Pn	03 58 41.2	+2.2
WHHZ				S	Sn	03 59 13.3	+2.2
RTZ	Ruatahuna	2.77	253	P	Pn	03 58 41.4	+1.9
RTZ				S	Sn	03 59 13.1	+1.3
RAHZ	Arahi	2.78	246	P	Pn	03 58 41.9	+2.3
EDRZ	Edgecumbe	2.87	264	P	Pn	03 58 42.0	+1.1
MUGZ	Murupara	2.90	256	P	Pn	03 58 42.5	+1.4
MTHZ	Maungataniwha	2.94	249	P	Pn	03 58 43.5	+1.7
ARHZ	Aropaoanui	2.99	241	P	Pn	03 58 45.1	+2.6
OPRZ	Ohinepanea	3.01	269	P	Pn	03 58 43.0	+0.3
NMHZ	Naumai	3.05	245	P	Pn	03 58 45.2	+1.8
TARZ	Mount Tarawera	3.06	261	P	Pn	03 58 44.6	+1.0
MKRZ	Makatiti	3.08	263	P	Pn	03 58 45.5	+1.7
CKHZ	Cape Kidnapper	3.14	234	P	Pn	03 58 46.7	+2.1
MRHZ	Matea Rd	3.25	251	P	Pn	03 58 47.8	+1.7
KARZ	Kaharoa	3.25	266	P	Pn	03 58 46.8	+0.7
MCHZ	McNeill Hill	3.28	240	P	Pn	03 58 48.3	+1.8
BKZ	Black Stump Fm	3.31	245	P	Pn	03 58 48.5	+1.6
KAHZ	Kahuranaki	3.34	233	P	Pn	03 58 49.5	+2.1
KWHZ	Kaweka Forest	3.46	242	P	Pn	03 58 50.5	+1.5
PXZ	Pawanui	3.49	230	P	Pn	03 58 50.4	+1.0
KRHZ	Kereru	3.60	239	P	Pn	03 58 52.0	+1.2
KRHZ				P	Pn	03 58 52.1	+1.2
BHHZ	Black Hill Sta	3.74	243	P	Pn	03 58 54.5	+1.7
WPHZ	Waipukurau	3.77	233	P	Pn	03 58 54.6	+1.4
PRHZ	Porangahau	3.77	229	P	Pn	03 58 55.0	+1.7
PNHZ	Pukenui	3.85	236	P	Pn	03 58 55.6	+1.3
KUZ	Kuaotunu	3.85	285	P	Pn	03 58 53.6	-0.7
MOVZ	Moawhango	3.93	245	P	Pn	03 58 56.8	+1.3
WTVZ	West Tongariro	3.95	250	P	Pn	03 58 58.1	+2.3
TUVZ	Tukino	3.95	247	P	Pn	03 58 58.4	+2.5
NGZ	Ngauruhoe	3.96	249	P	Pn	03 58 57.6	+1.6
NGZ				P	Pb	03 58 58.7	-7.9
ANWZ	Angora Road	3.99	228	P	Pn	03 58 57.0	+0.8
WHVZ	Whangaehu Hut	4.00	247	P	Pn	03 59 00.4	+3.8
FWVZ	Far West T-bar	4.02	248	P	Pn	03 58 58.5	+1.6
TSZ	Takapari Road	4.08	236	P	Pn	03 58 58.5	+1.1
DVHZ	Dannevirke	4.08	232	P	Pn	03 58 58.7	+1.2
MKAZ	Moumakai	4.20	279	P	Pn	03 58 59.1	+0.1
BFZ	Birch Farm	4.27	227	P	Pn	03 59 00.1	0.0
PRWZ	Pori Road	4.35	230	P	Pn	03 59 02.9	+1.7
POWZ	Post Office Ro	4.38	233	P	Pn	03 59 03.1	+1.5
HIZ	Hauiti	4.38	260	P	Pn	03 59 03.1	+1.5
TIWZ	Tintock	4.54	228	P	Pn	03 59 04.8	+1.0
AWAZ	Awhitu Peninsu	4.61	278	P	Pn	03 59 05.6	+0.9
MRZ	Mangatainoka R	4.66	231	P	Pn	03 59 06.1	+0.7
HOWZ	Holdsworth Sta	4.83	229	P	Pn	03 59 07.9	+0.1
OGWZ	Otaki Gorge	5.00	232	P	Pn	03 59 10.5	+0.4
PKE	Pukeiti	5.17	253	P	Pn	03 59 15.8	+3.2
WCZ	Waipu Caves	5.18	290	P	Pn	03 59 13.0	+0.5
KIW	Kapiti Island	5.19	233	P	Pn	03 59 13.0	+0.4
DUWZ	D'Urville Isla	5.80	237	P	Pn	03 59 21.1	0.0
OUZ	Omahuta	6.04	294	P	Pn	03 59 25.1	+0.7
CTZ	Chatham Island	6.32	160	P	Pn	03 59 36.7	+8.5
NNZ	Nelson	6.36	236	P	Pn	03 59 29.4	+0.6

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*BJI **27** 03:58:09.5, 51°.79N×95°.82E, h6^{km}, mb4.5/50, mB4.7/37, ML5.2/2, Ms5.0/51, Ms7 4.7/46*

*IDC **27** 03:58:11.4±0.5, 51°.63N×96°.07E, h0^{km}, mb4.3/23, mb1 4.4/29, mb1mx4.2/73, mbtmp4.3/29, ML3.4/7, MS4.1/57, Ms1 4.1/57, ms1mx4.1/70, Error ellipse: s-maj=14.0km s-min=7.6km az=3.0*

*ISCJB **27** 03:58:12.1±0.1, 51°.62N±0°.02×95°.97E±0°.03, h10^{km}, mb4.6/114, MS4.2/71, Error ellipse: s-maj=3.2km s-min=2.5km az=20.6*

*MOS **27** 03:58:12.3±1.1, 51°.49N×96°.01E, h16^{km}, mb4.8/64, MS4.3/25, Error ellipse: s-maj=6.8km s-min=4.6km az=29.0*

*ASRS **27** 03:58:13.2±1.9, 51°.84N×95°.85E, h15^{km}, Ms4.8/3*

*GCMT **27** 03:58:13.3±0.2, 51°.73N×96°.03E, h18^{km}±1^{km}, MW4.9/83, Moment Tensor Solution. s12,c15; s83,c132; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.12±.11; M$_{\theta\theta}$-0.82±.10; M$_{\phi\phi}$0.93±.09; M$_{r\theta}$1.09±.25; M$_{\theta\phi}$2.02±.07; M$_{\phi r}$0.23±.19; Best double couple: M$_0$2.46900×10^{16} NP1:ϕ_s258.00000°, δ89.00000°, λ-27.00000°. NP2: ϕ_s348.00000°, δ63.00000°, λ-178.00000°. Principal axes: T 2.5100, Plg18.0000°, Azm306.0000°; N -0.0830, Plg63.0000°, Azm75.0000°; P -2.4270, Plg20.0000°, Azm210.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **27** 03:58:13.3±0.2, 51°.57N×95°.98E, h10^{km}, mb4.7/45 Error ellipse: s-maj=4.9km s-min=3.3km az=180.0*

*NNC **27** 03:58:16.1±3.6, 51°.52N×95°.49E, h0^{km}, mb5.0, mpv5.1, Error ellipse: s-maj=34.9km s-min=27.1km az=82.0*

ISC 27 03:58:13.8±0.3, 51°.71N±0°.03×95°.98E±0°.03, h10^{km}, n389, σ2^s.24/393, mb4.7/127, MS4.2/73, 39C-25D, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HVS	Khovu-Aksy	1.54	249	d iPG	Pn	03 58 38.7	-2.6
ORL	Orlik	2.50	69	ePN	Pn	03 58 54.4	-0.2
ORL				e		03 59 27.4	
ORL				pmax	pmax		
	comp=Z,2μm,0.5s						
ORL				smax	smax		
	comp=N,3μm,1.3s						
CERR	Cheremushki	3.02	294	ePn	Pn	03 59 01.7	0.0
CERR				ePg	Pb	03 59 05.9	-1.8
CERR				eSg	Sb	03 59 45.3	+0.7
CERR	Cheremushki	3.02	294	ePN	Pn	03 59 01.7	0.0
CERR				e		03 59 45.3	
MOY	Mondy	3.12	89	ePN	Pb	03 59 05.7	-3.7
MOY				e		03 59 46.0	
MOY				pmax	pmax		
	comp=Z,3μm,0.9s						
MOY				smax	smax		
	comp=N,4μm,1.0s						
ARS	Arshan	4.01	85	ePN	Pb	03 59 22.1	-2.3
ARS				e		04 00 15.3	
ARS				pmax	pmax		
	comp=Z,1μm,0.7s						
ARS				smax	smax		
	comp=N,30μm,1.1s						
TLY	Talaya	4.77	87	Pn	Pn	03 59 25.0	-0.6
	comp=N,0.0nm,0.3s,baz=98,slow=15,SNR=4.8						
TLY				Pg	Pb	03 59 34.2	-3.2
	comp=N,0.2nm,0.3s,baz=261,slow=10,SNR=62						
TLY				Lg	Lg	04 00 36.1	
	comp=N,1.7nm,0.3s,baz=357,slow=5.5,SNR=20						
TLY				LR	LR	04 01 18.3	
	comp=N,2μm,21.1s,baz=273,slow=40						
ZAK	Zakamensk	4.80	103	ePN	Pn	03 59 26.0	-0.1
ZAK				e		04 00 39.0	
ZAK				smax	smax		
	comp=N,6μm,1.2s						
TASR	Tashtagol	5.08	285	ePn	Pn	03 59 30.8	+0.8
TASR				ePg	Pb	03 59 43.0	+0.2
TASR				eSg	Sb	04 00 49.0	+5.1
TASR	Tashtagol	5.08	285	ePN	Pn	03 59 30.8	+0.8
TASR				e		04 00 49.0	
IRK	Irkutsk	5.16	81	ePN	Pb	03 59 43.7	-0.3
IRK				e		04 00 47.9	
IRK				pmax	pmax		
	comp=Z,604nm,1.1s						
IRK				smax	smax		
	comp=N,5μm,1.3s						
ELT	Eltsovka	6.15	288	ePn	Pn	03 59 44.4	-0.1
ELT				ePg	Pb	04 00 01.2	+0.4
ELT				eSn	Sn	04 00 47.1	-7.7
ELT				eSg	Sb	04 01 16.6	+2.2
ELT	Eltsovka	6.15	288	ePN	Pn	03 59 44.4	-0.1
TRG	Tyrgan	6.46	77	ePN	Pn	03 59 47.5	-1.4
UKR	Ust'-Kan	7.07	268	ePn	Pn	03 59 59.2	+2.0
UKR				ePg	Pb	04 00 18.5	+2.0
UKR				eSg	Sg	04 01 52.1	-8.3
UKR	Ust'-Kan	7.07	268	ePN	Pn	03 59 59.2	+2.0
ZAA0	Zalesovo Array	7.12	293	⇓Pn	Pn	03 59 59.6	+1.7
	comp=N,102nm,0.8s						
ZAA0				⇑Lg	Lg	04 01 56.4	
	comp=N,2μm,1.1s						
ZAA0	Zalesovo Array	7.12	293	ePn	Pn	03 59 59.0	+1.1
ZALV	Zalesovo Beam	7.12	293	Pn	Pn	03 59 58.8	+0.9
	comp=N,3.1nm,0.3s,baz=108,slow=13,SNR=19						
ZALV				Pg	Pb	04 00 17.8	+0.4
	comp=N,5.4nm,0.3s,baz=108,slow=14,SNR=14						
ZALV				Lg	Lg	04 01 51.6	
	comp=N,25nm,0.3s,baz=116,slow=23,SNR=11						
ZALV				LR	LR	04 02 51.7	
	comp=N,2μm,21.2s,baz=106,slow=39						
ZALV	Zalesovo Beam	7.12	293	i P	Pn	03 59 58.8	+0.9
ZALV				pmax	pmax		
	comp=Z,8.0nm,0.3s						
OGRR	Ongureny	7.33	70	eP	Pn	04 00 01.0	+0.3
SONA1	Songino Array	7.78	116	ePn	Pn	04 00 07.5	+0.4
SONM	Songino Array	7.78	116	Pn	Pn	04 00 05.8	-1.3
	comp=Z,0.4nm,0.3s,baz=299,slow=14,SNR=14						
SONM				Pg	Pb	04 00 28.0	-0.7
	comp=Z,6.5nm,0.3s,baz=305,slow=15,SNR=114						
SONM				Lg	Lg	04 02 12.7	
	comp=Z,24nm,0.3s,baz=293,slow=29,SNR=14						
SONM				LR	LR	04 03 07.2	
	comp=Z,3μm,19.0s,baz=320,slow=38						
ULN	Ulaanbaatar	8.14	114	ePn	Pn	04 00 10.5	-1.5
	comp=Z,95nm,0.7s						
ULN	Ulaanbaatar	8.14	114	eP	Pn	04 00 10.5	-1.5
ULN				pmax	pmax		
	comp=Z,95nm,0.7s						
NVS	Novosibirsk	8.25	297	ePn	Pn	04 00 12.4	-1.0
NVS				eSn	Sn	04 01 42.9	-3.7
NVS				eSg	Sg	04 02 27.1	-11
NVS	Novosibirsk	8.25	297	eP	Pn	04 00 12.4	-1.0
NVS				e		04 01 42.9	
SYVR	Suvo	8.74	72	eP	Pn	04 00 19.5	-0.6
NIZ	Nizh Angarsk	9.01	58	eP	Pn	04 00 32.2	+8.4
WMQ	Urumqi	9.66	218	P	Pn	04 00 33.5	+0.7
WMQ				pP		04 00 38.0	
WMQ				sP		04 00 43.0	
WMQ				S	Sn	04 02 21.3	0.0
WMQ				pmax	pmax		
	comp=Z,88nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,360nm,3.7s						
WMQ				LR	LR		
	comp=Z,4μm,5.5s						
WMQ				LR	LR		
	comp=Z,4μm,7.7s						
WMQ				LR	LR		
	comp=Z,4μm,15.5s						
MK31	Makanchi Array	10.21	247	⇓Pn	Pn	04 00 39.0	-1.3
	comp=Z,10.0nm,0.6s,baz=48,slow=15,SNR=44						
MK31				⇑Pg		04 01 14.0	
	comp=Z,42nm,0.8s,baz=68,slow=16,SNR=4.6						
MK31				⇑Lg	Lg	04 03 28.6	
	comp=Z,219nm,0.8s,baz=46,slow=28,SNR=3.5						
MK31	Makanchi Array	10.21	247	ePn	Pn	04 00 39.3	-1.0
MK31	Makanchi Array	10.21	247	eP	Pn	04 00 39.3	-1.0
MKAR	Makanchi Array	10.21	247	Pn	Pn	04 00 39.0	-1.2
	comp=Z,0.6nm,0.3s,baz=72,slow=12,SNR=38						
MKAR				Lg	Lg	04 03 33.2	
	comp=Z,5.2nm,0.3s,baz=47,slow=28,SNR=5.3						
MK01	Makanchi Array	10.21	246	ePn	Pn	04 00 38.9	-1.4
MAKZ	Makanchi	10.38	247	⇑Pn	Pn	04 00 41.1	-1.5
	comp=Z,19nm,0.8s						
MAKZ				⇑Pg		04 01 20.5	
	comp=Z,54nm,0.9s						
MAKZ				Lg	Lg	04 03 34.3	
	comp=Z,713nm,1.3s						
MAKZ	Makanchi	10.38	247	ePn	Pn	04 00 41.7	-0.9
MAKZ	Makanchi	10.38	247	eP	Pn	04 00 41.7	-0.9
KURK	Kurchatov	10.94	272	⇓Pn	Pn	04 00 50.8	+0.7
	comp=Z,30nm,1.0s						
KURK				⇓Lg	Lg	04 03 56.4	
	comp=Z,536nm,1.2s						
KURK	Kurchatov	10.94	272	ePn	Pn	04 00 50.1	0.0
KURK				eLg	Lg	04 03 48.4	
KURK				Lg	Lg	04 03 57.9	
KURK	Kurchatov	10.94	272	ceP	Pn	04 00 50.9	+0.7
KURK				pmax	pmax		
	comp=Z,14nm,1.3s						
KURBB	Kurchatov Arra	11.01	271	Pn	Pn	04 00 51.4	+0.3
	comp=Z,0.3nm,0.3s,baz=75,slow=16,SNR=29						
KURBB				Lg	Lg	04 03 57.9	
	comp=Z,0.8nm,0.3s,baz=80,slow=34,SNR=8.8						
KURBB	Kurchatov Arra	11.01	271	⇑Pn	Pn	04 00 51.8	+0.6
	comp=Z,36nm,0.8s						
KURBB				⇓Lg	Lg	04 03 58.1	
	comp=Z,1μm,1.1s						
BOD	Bodaibo	12.05	52	eP	Pn	04 01 02.7	-2.7
GTA	Gaotai	12.59	166	eP	Pn	04 01 14.0	+1.0
GTA				pP		04 01 17.5	
GTA				sP		04 01 20.3	
GTA				S	Sn	04 03 33.3	0.0
GTA				sS		04 03 41.5	
GTA				SS	SnSn	04 03 47.3	+2.2
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
GTA				pmax	pmax		
	comp=Z,220nm,5.5s						
GTA				LR	LR		
	comp=Z,4μm,6.7s						
GTA				LR	LR		
	comp=Z,10μm,6.2s						
GTA				LR	LR		
	comp=Z,2μm,7.0s						
PDGK	Podgornoye	13.92	239	⇓Pn	Pn	04 01 27.8	-3.3
	comp=Z,35nm,1.2s						
PDGK				⇑Lg	Lg	04 05 27.6	
	comp=Z,181nm,1.2s						
PDGK	Podgornoye	13.92	239	P	Pn	04 01 27.8	-3.3
PDGK				pmax	pmax		
	comp=Z,35nm,1.2s						
BTO	Baotou	14.74	133	eP	Pn	04 01 39.8	-2.5
HHC	Hu-ho-hao-te	15.27	129	eP	Pn	04 01 49.8	+0.5
HHC				pP	P	04 01 53.0	-1.3
HHC				sP	sP	04 01 58.0	-0.4
HHC				eS	Sn	04 04 34.0	-4.5
HHC				pmax	pmax		
	comp=Z,30nm,1.2s						
HHC				pmax	pmax		
	comp=Z,170nm,3.6s						
HHC				LR	LR		
	comp=Z,3μm,6.3s						
HHC				LR	LR		
	comp=Z,3μm,7.5s						
HHC				LR	LR		
	comp=Z,4μm,8.8s						
HIA	Hailar	15.31	90	ePn	Pn	04 01 49.4	-0.3
	comp=Z,38nm,0.9s						
HIA	Hailar	15.31	90	eP	Pn	04 01 49.4	-0.3
HIA				pmax	pmax		
	comp=Z,37nm,0.9s						
BVA0	Borovoye Array	15.66	285	⇓Pn	Pn	04 01 53.6	-0.7
	comp=Z,24nm,0.9s,baz=74,slow=15,SNR=10						
BVA0				⇓Lg	Lg	04 06 24.9	
	comp=Z,156nm,1.4s						
BVA0	Borovoye Array	15.66	285	P	Pn	04 01 53.6	-0.7
BVA0				pmax	pmax		
	comp=Z,24nm,1.0s						
BVAR	Borovoye Array	15.66	285	Pn	Pn	04 01 51.4	-2.9
	comp=Z,0.6nm,0.3s,baz=81,slow=14,SNR=17						
BVAR				LR	LR	04 08 06.7	
	comp=Z,927nm,21.7s,baz=82,slow=38						
BRVK	Borovoye	15.72	285	⇓Pn	Pn	04 01 54.2	-0.9
	comp=Z,30nm,0.9s						
BRVK				⇑Lg	Lg	04 06 28.3	
	comp=Z,152nm,1.3s						
BRVK	Borovoye	15.72	285	ePn	Pn	04 01 51.9	-3.2
	comp=Z,33nm,1.0s						
BRVK	Borovoye	15.72	285	ceP	Pn	04 01 53.2	-1.9
BRVK				pmax	pmax		
	comp=Z,18nm,1.5s						
TKM2	Tokmak 2	16.34	245	P	Pn	04 02 01.3	-2.0
	SNR=11						
LZH	Lanzhou	16.60	157	⇑P	Pn	04 02 05.5	-1.1
LZH				pP	P	04 02 10.0	+0.8
LZH				sP	sP	04 02 12.5	-0.8
LZH				PP	PnPn	04 02 20.0	+4.3
LZH				eS	Sn	04 05 07.8	-3.2
LZH				SS	SnSn	04 05 27.8	+3.9
LZH				pmax	pmax		
	comp=Z,110nm,1.1s						
LZH				pmax	pmax		
	comp=Z,350nm,4.0s						
LZH				LR	LR		
	comp=Z,8μm,11.4s						
LZH				LR	LR		
	comp=Z,12μm,11.4s						
LZH				LR	LR		
	comp=Z,4μm,13.6s						
KBK	Karagaybulak	16.87	246	P	Pn	04 02 08.0	-2.0
	SNR=9.3						
FRU	Bishkek	16.95	247	eP	Pn	04 02 08.5	-2.4
FRU				MLR	MLR		
	comp=E,9μm,10.0s						
KZA	Kyzart	17.08	244	P	Pn	04 02 12.4	-0.5
	SNR=6.9						
AAK	Ala-Archa	17.14	246	P	Pn	04 02 11.3	-2.1
	comp=E,0.5nm,0.3s,baz=63,slow=13,SNR=13						
AAK				Lg	Lg	04 07 06.4	
	comp=E,0.4nm,0.3s,baz=161,slow=23,SNR=2.4						
AAK				LR	LR	04 09 05.9	
	comp=E,610nm,22.0s,baz=30,slow=38						
AAK	Ala-Archa	17.14	246	ePn	Pn	04 02 11.5	-2.0
	comp=E,19nm,1.2s						
AAK				Lg	Lg	04 07 06.4	
AAK	Ala-Archa	17.14	246	i P	Pn	04 02 10.9	-2.5
AAK				pmax	pmax		
	comp=Z,25nm,1.8s						
UCH	Uchtor	17.39	245	P	Pn	04 02 15.9	-1.0
	SNR=11						
EKS2	Erkin-Say	17.54	248	P	Pn	04 02 16.4	-1.9
	SNR=12						
AML	Almayashu	17.92	246	P	Pn	04 02 22.2	-1.2
	SNR=16						
TIY	Taiyuan	18.18	134	eP	P	04 02 31.8	+5.3
TIY				PP	PnPn	04 02 53.3	+16
TIY				S	S	04 05 57.3	+2.7
TIY				SS	SnSn	04 06 15.8	+13
TIY	Taiyuan	18.18	134	ScS	ScS	04 14 30.3	+15
TIY				pmax	pmax		
	comp=Z,100nm,10.3s						
TIY				LR	LR		
	comp=N,2μm,9.8s						
TIY				LR	LR		
	comp=E,700nm,6.3s						
TIY				LR	LR		
	comp=Z,2μm,9.8s						
BJI	Beijing	18.21	122	P	Pn	04 02 25.3	-1.1
BJI				pmax	pmax		
	comp=Z,17nm,1.0s						
BJI				LR	LR		
	comp=Z,6μm,9.1s						
BJI				LR	LR		
	comp=Z,4μm,9.1s						
MNAS	Manas	18.38	249	P	P	04 02 26.6	-2.2
MNAS				pmax	pmax		
	comp=Z,12nm,1.3s						
KSH	Kashi	18.49	237	P	Pn	04 02 34.5	+4.5
KSH				sP	sP	04 02 42.3	+8.3
KSH				PP	PnPn	04 02 50.8	+9.3
KSH				S	S	04 05 59.8	-1.1
KSH				SS	SnSn	04 06 25.0	+15
KSH				PcS	PcS	04 10 38.0	+1.6
KSH				ScS	ScS	04 14 16.0	0.0
KSH				pmax	pmax		
	comp=Z,66nm,1.7s						
KSH				pmax	pmax		
	comp=Z,140nm,6.2s						
KSH				LR	LR		
	comp=Z,1μm,7.3s						
KSH				LR	LR		
	comp=Z,2μm,7.0s						
KSH				LR	LR		
	comp=Z,550nm,10.1s						
ZEA	Zeya	18.97	72	eP	Pn	04 02 37.0	+1.3
ZEA				pmax	pmax		
	comp=Z,17nm,1.0s						
ZEA				MLR	MLR		
	comp=E,900nm,8.0s						

ZEA				MLR	MLR		
	comp=Z,1µm,8.0s						
KK31	**Karatay Array**	19.19	253	⇑Pn	P	04 02 37.2	-0.3
	comp=Z,6.4nm,0.8s,baz=51,slow=14,SNR=31						
KK31				⇑Lg	Lg	04 08 14.3	
	comp=Z,42nm,1.1s						
KK31	**Karatay Array**	19.19	253	*e*P	P	04 02 35.7	-1.8
KK31	**Karatay Array**	19.19	253	*e*P	P	04 02 35.7	-1.8
KKAR	**Karatay Array**	19.19	253	*e*P	P	04 02 35.7	-1.8
KKAR	**Karatay Array**	19.19	253	*e*P	P	04 02 35.7	-1.8
SFK	**Sufi-Kurgan**	19.45	242	P	P	04 02 40.1	-0.5
SFK				pmax	pmax		
	comp=Z,16nm,1.1s						
XAN	**Xi’an**	20.00	147	P	P	04 02 45.8	-0.6
XAN				sP	sP	04 02 59.8	+9.3
XAN				pmax	pmax		
	comp=Z,10.0nm,1.4s						
XAN				pmax	pmax		
	comp=Z,130nm,4.5s						
XAN				LR	LR		
	comp=Z,2µm,12.6s						
XAN				LR	LR		
	comp=Z,4µm,13.3s						
XAN				LR	LR		
	comp=Z,2µm,13.5s						
YAK	**Yakutsk**	20.86	47	Lg	Lg	04 09 04.5	
	comp=Z,1.7nm,0.3s,baz=217,slow=23,SNR=7.6						
YAK				LR	LR	04 11 30.3	
	comp=Z,554nm,20.5s,baz=268,slow=38						
YAK	**Yakutsk**	20.86	47	*e*P	P	04 02 52.9	-2.6
YAK				*e**PP	Pn	04 02 56.9	-1.1
YAK				*e*PPP	PPP	04 03 27.1	
YAK				*e*S	S	04 06 46.6	-1.2
YAK				*e**SS	pS	04 06 55.3	-0.6
YAK				*e*SS	SnSn	04 07 12.7	+4.9
YAK				*e*SSS	SSS	04 07 25.3	
YAK				pmax	pmax		
	comp=Z,24nm,0.9s						
YAK				pmax	pmax		
	comp=N,5.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,18nm,1.1s						
YAK				smax	smax		
	comp=N,47nm,1.8s						
YAK				smax	smax		
	comp=E,36nm,1.8s						
YAK				MLR	MLR		
	comp=Z,1µm,18.0s						
YAK				MLR	MLR		
	comp=E,730nm,16.0s						
YAK				MLR	MLR		
	comp=N,610nm,16.0s						
SVE	**Sverdlovsk**	21.09	298	⇑*e*P	P	04 02 57.4	-0.7
SVE				*e*S	S	04 06 53.7	+1.1
SVE				pmax	pmax		
	comp=Z,64nm,1.1s						
SVE				MLR	MLR		
	comp=Z,2µm,13.0s						
SNY	**Shenyang**	21.22	107	⇓P	P	04 03 02.8	+3.3
SNY				S	Sn	04 07 00.5	-1.5
SNY				pmax	pmax		
	comp=Z,10.0nm,0.5s						
SNY				pmax	pmax		
	comp=Z,130nm,5.2s						
SNY				LR	LR		
	comp=Z,2µm,9.0s						
SNY				LR	LR		
	comp=Z,2µm,10.8s						
SNY				LR	LR		
	comp=Z,3µm,14.1s						
CN2	**Changchun**	21.22	100	*e*P	P	04 02 59.5	0.0
CN2				*e*sP	sP	04 03 06.5	+2.8
CN2				*e*S	S	04 06 48.0	-7.3
CN2				pmax	pmax		
	comp=Z,20nm,1.1s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,2µm,11.0s						
CN2				LR	LR		
	comp=Z,2µm,11.0s						
CN2				LR	LR		
	comp=Z,3µm,10.0s						
CD2	**Chengdu**	21.57	162	*e*P	P	04 03 01.5	-1.9
CD2				pP	pP	04 03 04.3	-1.9
CD2				S	S	04 07 00.3	-2.0
CD2				sS	sS	04 07 05.0	-1.8
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,160nm,4.2s						
CD2				LR	LR		
	comp=Z,2µm,9.5s						
CD2				LR	LR		
	comp=Z,4µm,8.1s						
CD2				LR	LR		
	comp=Z,2µm,9.7s						
DL2	**Dalian**	21.99	116	*e*P	P	04 03 11.5	+3.8
DL2				S	Sn	04 07 15.5	-5.0
DL2				pmax	pmax		
	comp=Z,58nm,6.4s						
DL2				LR	LR		
	comp=Z,2µm,11.2s						
DL2				LR	LR		
	comp=Z,1µm,13.5s						
DL2				LR	LR		
	comp=Z,3µm,11.8s						
ARU	**Arti**	22.26	297	P	P	04 03 08.8	-1.8
	comp=Z,5.5nm,0.3s,baz=64,slow=5.7,SNR=7.4						
ARU	**Arti**	22.26	297	*e*P	P	04 03 10.3	-0.3
	comp=Z,50nm,0.9s						
ARU	**Arti**	22.26	297	*c i*P	P	04 03 12.6	+2.1
ARU						04 03 34.2	
ARU				S	S	04 07 20.5	+5.3
ARU				SS	SnSn	04 07 50.6	+8.5
ARU				pmax	pmax		
	comp=Z,82nm,1.2s						
ARU				MLR	MLR		
	comp=Z,2µm,16.0s						
LSA	**Lhasa**	22.28	191	P	P	04 03 13.3	+1.8
LSA				pmax	pmax		
	comp=Z,9.0nm,0.7s						
LSA	**Lhasa**	22.28	191	*e*P	P	04 03 11.4	-0.1
	comp=Z,16nm,0.8s						
KLR	**Kul’dur**	22.76	82	P	P	04 03 14.8	-1.2
	comp=Z,0.5nm,0.9s,baz=277,slow=9.8,SNR=14						
KLR				Lg	Lg	04 10 02.1	
	comp=Z,1.5nm,1.1s,baz=338,slow=11,SNR=3.9						
KLR	**Kul’dur**	22.76	82	*i* P	P	04 03 16.1	+0.1
ABKAR	**Akbulak array**	22.91	278	*e*P	P	04 03 16.1	-1.4
AKTO	**Aktyubinsk**	23.71	282	P	P	04 03 24.9	-0.7
	comp=Z,24nm,0.8s,baz=84,slow=9.6,SNR=68						
AKTO				LR	LR	04 13 02.2	
	comp=Z,653nm,18.8s,baz=70,slow=37						
NIL	**Nilore**	24.43	231	*e*P	P	04 03 30.4	-2.0
NIL	**Nilore**	24.43	231	*e*P	P	04 03 30.4	-2.0
TIXI	**Tiksi**	24.76	24	P	P	04 03 34.2	-0.9
	comp=Z,126nm,0.9s,baz=264,slow=7.2,SNR=26						
TIXI				Lg	Lg	04 11 00.0	
	comp=Z,11nm,0.9s,baz=316,slow=22,SNR=6.0						
TIXI				LR	LR	04 13 30.6	
	comp=Z,1µm,18.2s,baz=240,slow=37						
TIXI	**Tiksi**	24.76	24	*de*P	P	04 03 34.4	-0.7
TIXI				pmax	pmax		
	comp=Z,171nm,1.1s						
USRK	**Ussuriysk Ar.**	25.06	93	LR	LR	04 14 15.5	
	comp=Z,268nm,20.9s,baz=294,slow=39						
DANN	**Dangsing**	25.07	206	*e*P	P	04 03 39.5	+0.9
	comp=Z,48nm,0.8s						
GRNR	**Gornyy**	25.12	76	*e*P	P	04 03 41.8	+3.3
JIRN	**Jiri**	25.13	201	*e*P	P	04 03 40.3	+1.1
	comp=Z,65nm,0.9s						
WHN	**Wuhan**	25.14	140	P	P	04 03 38.5	-0.3
WHN				LR	LR		
	comp=Z,1µm,12.7s						
WHN				LR	LR		
	comp=Z,4µm,14.0s						
WHN				LR	LR		
	comp=Z,4µm,15.3s						
GKN	**Gorkha**	25.17	204	*e*P	P	04 03 39.8	+0.5
	comp=Z,102nm,1.0s						
KKN	**Kakani**	25.21	203	*e*P	P	04 03 40.7	+0.9
	comp=Z,43nm,0.8s						
PKIN	**Phulchoki**	25.39	202	*e*P	P	04 03 41.9	+0.4
	comp=Z,37nm,0.9s						
DMN	**Daman**	25.43	203	*e*P	P	04 03 41.8	0.0
PYUN	**Piuthan**	25.52	207	*e*P	P	04 03 42.1	-0.5
	comp=Z,38nm,0.8s						
ODAN	**Odare**	25.66	198	*e*P	P	04 03 43.5	-0.3
KOLN	**Koldanda**	25.66	206	*e*P	P	04 03 43.4	-0.5
	comp=Z,59nm,1.1s						
RAMN	**Ramite**	25.73	200	*e*P	P	04 03 43.8	-0.7
NJ2	**Nanjing**	25.81	131	*e*P	P	04 03 44.3	-0.6
NJ2				pmax	pmax		
	comp=Z,17nm,1.1s						
NJ2				pmax	pmax		
	comp=Z,180nm,3.7s						
NJ2				LR	LR		
	comp=Z,1µm,12.3s						
NJ2				LR	LR		
	comp=Z,820nm,10.7s						
NJ2				LR	LR		
	comp=Z,2µm,10.7s						
KBL	**Kabul**	25.87	239	*e*P	P	04 03 44.6	-1.2
	comp=Z,18nm,1.1s						
KBL	**Kabul**	25.87	239	*e*P	P	04 03 44.6	-1.2
KBL				pmax	pmax		
	comp=Z,18nm,1.1s						
SHL	**Shillong**	26.30	188	P	P	04 03 50.5	+0.9
GYA	**Guiyang**	26.49	158	*e*P	P	04 03 51.0	-0.3
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
KS01	**Wonju Array Si**	26.56	110	*e*P	P	04 03 50.6	-1.0
KSAR	**Wonju Array Be**	26.58	110	P	P	04 03 50.8	-1.0
KSAR				Lg	Lg	04 12 07.7	
KSAR	**Wonju Array Be**	26.58	110	P	P	04 03 50.8	-1.0
KSRS	**Korea Array**	26.59	110	P	P	04 03 50.8	-1.1
	comp=Z,3.4nm,0.8s,baz=313,slow=8.2,SNR=11						
KSRS				Lg	Lg	04 12 07.7	
	comp=Z,0.4nm,0.3s,baz=298,slow=31,SNR=2.7						
KSRS				LR	LR	04 13 22.8	
	comp=Z,209nm,21.5s,baz=310,slow=34						
KMI	**Kunming**	27.05	166	P	P	04 03 56.0	-0.4
KMI				pP	sP	04 03 59.8	-0.9
KMI				sP	pP	04 04 02.5	+3.0
KMI				PP	PnPn	04 04 41.8	+2.9
KMI				S	S	04 08 30.5	-3.8
KMI				SS	SnSn	04 09 41.8	+1.5
KMI				pmax	pmax		
	comp=Z,11nm,0.5s						
KMI				pmax	pmax		
	comp=Z,130nm,5.1s						
KMI				LR	LR		
	comp=Z,770nm,9.3s						
KMI				LR	LR		
	comp=Z,2µm,15.1s						
KMI				LR	LR		
	comp=Z,780nm,9.2s						
PRGR	**Permogore**	28.66	310	*e*P	P	04 04 10.0	-0.3
PRGR				pmax	pmax		
	comp=Z,11nm,0.6s						
BRDH	**Bariadhala**	29.18	188	LR	LR	04 17 47.6	
	comp=Z,1µm,19.1s,baz=350,slow=40						
GEYT	**Alibeck**	29.81	257	LR	LR	04 15 53.8	
	comp=Z,101nm,19.1s,baz=55,slow=36						
MA2	**Magadan**	31.08	54	Lg	Lg	04 14 15.9	
	comp=Z,3.8nm,0.3s,baz=291,slow=20,SNR=2.0						
MA2				LR	LR	04 17 19.0	
	comp=Z,336nm,18.4s,baz=278,slow=37						
JNU	**Nakatsue**	31.35	113	LR	LR	04 18 01.5	
	comp=Z,822nm,18.5s,baz=302,slow=38						
SEY	**Seymchan**	31.39	47	Lg	Lg	04 14 31.5	
	comp=Z,0.8nm,0.7s,baz=52,slow=21,SNR=2.5						
SEY	**Seymchan**	31.39	47	*ce*P	P	04 04 36.1	+1.7
KLMR	**Klimovskoe**	31.68	309	*e*P	P	04 04 34.9	-2.1
KLMR				pmax	pmax		
	comp=Z,22nm,1.2s						
KLMR	**Klimovskoe**	31.68	309	*e*P	P	04 04 34.9	-2.1
KLMR				AMP		04 04 38.1	
	comp=Z,22nm,1.2s						
VRH	**Novokhopyorsk**	33.15	291	*e*P	P	04 04 49.7	-0.2
VRH				pmax	pmax		
	comp=Z,40nm,0.8s						
VRH				MLR	MLR		
	comp=Z,620nm,15.0s						
LAMP	**Lampang**	33.24	174	P	P	04 04 52.7	+1.7
	comp=Z,5.6nm,1.0s						
CMAR	**Chiang Mai Arr**	33.27	175	P	P	04 04 51.5	+0.3
	comp=Z,1.5nm,0.4s,baz=350,slow=9.1,SNR=6.1						
CMAR				LR	LR	04 19 15.3	
	comp=Z,232nm,21.8s,baz=354,slow=38						
MJAR	**Matsushiro Arr**	33.37	100	LR	LR	04 17 12.5	
	comp=Z,259nm,18.2s,baz=320,slow=34						
MAK	**Makhachkala**	33.44	274	*e*P	P	04 04 49.4	-3.2
MAK				*e*		04 06 02.1	
MAK				*e*S	S	04 10 11.3	-2.4
MAK				MLR	MLR		
	comp=Z,287nm,12.0s						
APA	**Apatity**	33.60	322	⇑*i*P	P	04 04 58.4	+4.7
APA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
MOS	**Moscow**	33.87	300	*e*P	P	04 04 56.8	+0.6
MOS				*e*		04 06 13.3	
MOS				pmax	pmax		
	comp=Z,34nm,0.9s						
MOS				MLR	MLR		
	comp=Z,1µm,16.0s						
NONG	**Nongkai**	34.05	168	P	P	04 04 59.8	+1.8
LPSR	**Galich’ya Gora**	34.23	295	*e*P	P	04 04 58.0	-1.3
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.8s						
QIZ	**Qiongzhong**	34.40	156	P	P	04 05 00.3	-0.7
QIZ				S	S	04 10 28.8	0.0
QIZ				pmax	pmax		
	comp=Z,120nm,3.1s						
QIZ				LR	LR		
	comp=Z,750nm,12.3s						
QIZ				LR	LR		
	comp=Z,2µm,12.3s						
QIZ				LR	LR		
	comp=Z,1µm,11.8s						
VSR	**Storozhevoye**	34.63	292	*e*P	P	04 05 02.0	-0.8
VSR				pmax	pmax		
	comp=Z,30nm,1.0s						
VSR				MLR	MLR		
	comp=Z,860nm,15.0s						
OBN	**Obninsk**	34.64	300	*i* P	P	04 05 01.5	-1.3
OBN				*i*		04 05 08.5	
OBN				*i*		04 06 21.5	
OBN				*i*		04 07 39.0	
OBN				*i* S	S	04 10 23.5	-8.5
OBN				pmax	pmax		
	comp=Z,36nm,1.1s						
OBN				MLR	MLR		
	comp=Z,943nm,15.0s						
VORD	**Divnogorie**	34.66	292	*e*P	P	04 05 02.8	-0.2
VORD				pmax	pmax		
	comp=Z,30nm,1.0s						
JOW	**Kunigami**	34.77	123	LR	LR	04 20 56.4	
	comp=Z,541nm,19.3s,baz=150,slow=39						
UMPA	**Umpang Tak**	35.50	175	P	P	04 05 14.2	+3.6
	comp=Z,6.0nm,0.9s,comp=Z,631nm						
ZEI	**Tsey**	35.77	277	*e*P	P	04 05 11.0	-2.0
KBZ	**Khabaz**	35.88	279	P	P	04 05 13.8	+0.2
	comp=Z,3.7nm,0.9s,baz=352,slow=5.5,SNR=6.2						
KBZ				LR	LR	04 21 29.1	
	comp=Z,359nm,19.0s,baz=66,slow=39						
KBZ	**Khabaz**	35.88	279	P	P	04 05 13.8	+0.2
KBZ				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KBZ				MLR	MLR		
	comp=Z,359nm,19.0s						
KIV	**Kislovodsk**	35.89	279	*e*P	P	04 05 14.1	+0.2
KIV				*e*		04 06 32.2	
KIV				*e*S	S	04 10 52.3	+0.6
KIV				*e*SS	SnSn	04 13 06.6	-8.0
KIV				pmax	pmax		
	comp=Z,21nm,0.9s						
KIV				MLR	MLR		
	comp=Z,233nm,17.0s						
NEY	**Neytrino**	36.25	278	*i* P	P	04 05 17.3	+0.3
NEY				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ARCES	**ARCESS Array B**	36.29	326	P	P	04 05 17.6	+0.7
	comp=Z,2.2nm,0.7s,baz=73,slow=9.0,SNR=6.3						
JHJ	**Hachijo jima 2**	36.63	103	LR	LR	04 19 55.4	
	comp=Z,187nm,20.0s,baz=241,slow=36						
PETK	**Petropavlovsk-**	36.65	63	LR	LR	04 20 59.0	
	comp=Z,390nm,19.2s,baz=289,slow=37						
GNI	**Garni**	36.74	272	LR	LR	04 22 15.3	
	comp=Z,389nm,18.6s,baz=66,slow=39						
GNI	**Garni**	36.74	272	*ce*P	P	04 05 22.6	+1.4
GNI				pmax	pmax		
	comp=Z,22nm,0.9s						
AKH	**Akhalkalaki**	36.79	275	⇓*i*P	P	04 05 23.5	+1.9
AKH	**Akhalkalaki**	36.79	275	P	P	04 05 23.5	+1.9
SUF	**Sumiainen**	37.47	315	P	P	04 05 29.8	+2.9
SUF				pmax	pmax		
	comp=Z,7.0nm,0.9s						
FIA1	**FINESS Array S**	37.88	313	*e*P	P	04 05 29.4	-1.0
FINES	**FINESS Array B**	37.88	313	P	P	04 05 30.0	-0.4
	comp=Z,4.9nm,0.7s,baz=88,slow=5.9,SNR=20						
FINES				LR	LR	04 22 20.0	
	comp=Z,394nm,18.5s,baz=80,slow=38						
FINES	**FINESS Array B**	37.88	313	*i* P	P	04 05 31.7	+1.3
FINES				pmax	pmax		
	comp=Z,5.0nm,0.6s						
SPITS	**Spitsbergen Ar**	37.89	341	LR	LR	04 24 41.8	
	comp=Z,267nm,19.1s,baz=355,slow=42						
VSU	**Vasula**	38.56	308	*de*P	P	04 05 35.7	-0.5
VSU				pmax	pmax		
	comp=Z,69nm,1.0s						
ANN	**Anapa**	38.65	284	*e*P	P	04 05 36.5	-0.6
ANN				pmax	pmax		
	comp=Z,41nm,1.1s						
ANN				MLR	MLR		
	comp=Z,267nm,12.0s						
IDID	**Didziasalis**	39.79	303	*e*P	P	04 05 46.4	0.0
IDID				IAmb	IAmb	04 05 48.8	
	comp=Z,12nm,0.9s						
IZAR	**Zarasai**	39.86	304	*e*P	P	04 05 47.4	+0.3
IZAR				IAmb	IAmb	04 05 49.4	
	comp=Z,14nm,0.9s						
NACGM	**Naroch**	39.94	303	*e*	P	04 05 46.0	-1.7
ISAL	**Salakas**	40.00	304	*e*P	P	04 05 48.2	0.0
ISAL				IAmb	IAmb	04 05 50.7	
	comp=Z,16nm,1.0s						
IIGN	**Ignalina**	40.04	304	*e*P	P	04 05 48.5	0.0
IIGN				IAmb	IAmb	04 05 51.1	
	comp=Z,25nm,1.4s						
WSAR	**Wadi Sarin**	40.35	240	LR	LR	04 23 40.5	
	comp=Z,162nm,19.6s,baz=74,slow=38						
AKASG	**Malin Array Be**	40.50	296	P	P	04 05 51.8	-0.6
	comp=Z,3.7nm,0.6s,baz=54,slow=8.8,SNR=18						
AKASG				LR	LR	04 23 41.9	
	comp=Z,936nm,18.1s,baz=60,slow=38						
AKASG	**Malin Array Be**	40.50	296	*ce*P	P	04 05 51.7	-0.8
AKASG				pmax	pmax		
	comp=Z,5.0nm,0.6s						
AKBB	**Malin Array Si**	40.50	296	*e*P	P	04 05 52.2	-0.3
	comp=Z,12nm,1.1s						
KIEV	**Kiev**	40.52	296	*e*P	P	04 05 51.5	-1.1
	comp=Z,12nm,1.1s						
KIEV	**Kiev**	40.52	296	*c i*P	P	04 05 52.4	-0.2
KIEV				pmax	pmax		
	comp=Z,11nm,1.1s						
SIM	**Simferopol’**	40.57	286	*e*P	P	04 05 52.0	-1.1
SIM				*e*S	S	04 12 07.0	+4.8
SIM				pmax	pmax		
	comp=Z,16nm,1.0s						
SIM				MLR	MLR		
	comp=Z,200nm,12.0s						
SORM	**Soroca**	42.27	293	⇑*i*P	P	04 06 07.8	+0.8
SORM	**Soroca**	42.27	293	⇑P	P	04 06 07.8	+0.8
TGY	**Tagaytay City**	42.54	143	LR	LR	04 24 47.5	
	comp=Z,291nm,19.2s,baz=272,slow=38						
KIS	**Kishinev**	42.60	291	*e*P	P	04 06 10.0	+0.3
	comp=Z,70nm,1.4s						
KIS				*e*LR	LR	04 23 26.0	
	comp=Z,500nm,14.0s						
KIS	**Kishinev**	42.60	291	*e*P	P	04 06 10.0	+0.3
KIS				*e*		04 06 20.0	
KIS				pmax	pmax		
	comp=Z,70nm,1.4s						
KIS				MLR	MLR		
	comp=N,300nm,12.0s						
KIS				MLR	MLR		
	comp=E,500nm,14.0s						
KIS				MLR	MLR		
	comp=Z,700nm,14.0s						
KLNR	**Kaliningrad**	43.47	305	*e*P	P	04 06 16.9	+0.3
KLNR				pmax	pmax		
	comp=Z,55nm,1.1s						
LVV	**L’vov**	43.83	297	*e*P	P	04 06 21.0	+1.3
LVV				MLR	MLR		
	comp=N,200nm,15.0s						
LVV				MLR	MLR		
	comp=E,600nm,15.0s						
LVV				MLR	MLR		
	comp=Z,600nm,15.0s						
BR131	**Keskin Array S**	43.85	280	*e*P	P	04 06 20.4	+0.3
BRTR	**Keskin Array B**	43.85	280	P	P	04 06 20.6	+0.5
	comp=Z,6.2nm,0.9s,baz=86,slow=6.8,SNR=25						
BRTR				LR	LR	04 27 11.6	
	comp=Z,182nm,18.0s,baz=22,slow=40						
BRTR	**Keskin Array B**	43.85	280	P	P	04 06 20.6	+0.5
BRTR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BRTR				MLR	MLR		
	comp=Z,182nm,18.0s						
HFS	**Hagfors**	43.98	314	P	P	04 06 20.0	-0.7
	comp=Z,8.6nm,0.8s,baz=64,slow=7.2,SNR=20						
HFS				LR	LR	04 26 43.2	
	comp=Z,488nm,19.3s,baz=56,slow=39						
CFR	**Carcaliu**	43.99	289	⇑*i*P	P	04 06 22.0	+1.0
CFR	**Carcaliu**	43.99	289	⇑P	P	04 06 22.0	+1.0
KSV	**Kosov**	44.05	295	P	P	04 06 21.9	+0.5
BIZ	**Bicaz**	44.20	293	⇑*i*P	P	04 06 24.3	+1.6
BUR08	**Bucovina Ar. S**	44.33	294	*e*P	P	04 06 24.0	+0.2
BURAR	**Bucovina Array**	44.34	294	⇑*i*P	P	04 06 25.4	+1.5
BURAR	**Bucovina Array**	44.34	294	⇑P	P	04 06 25.4	+1.5
BURAR						04 06 27.6	
BUR04	**Bucovina Ar. S**	44.34	294	*e*P	P	04 06 23.5	-0.4
NC405	**NORSAR Array S**	44.39	316	*e*P	P	04 06 23.9	-0.1
VRI	**Vrincioaia**	44.43	291	⇓*i*P	P	04 06 25.1	+0.6
VRI	**Vrincioaia**	44.43	291	⇓P	P	04 06 25.2	+0.7
NC303	**NORSAR Array S**	44.48	317	*e*P	P	04 06 25.8	+1.0
NB201	**NORSAR Array S**	44.60	316	*e*P	P	04 06 26.6	+0.9
NB2	**NORSAR Subarra**	44.64	316	P	P	04 06 25.1	-0.9
	comp=Z,8.2nm,0.9s,baz=60,slow=7.9						
NOA	**NORSAR Array B**	44.64	316	P	P	04 06 24.8	-1.2
	comp=Z,4.3nm,0.7s,baz=61,slow=7.9,SNR=27						
NOA				LR	LR	04 26 47.8	
	comp=Z,496nm,18.3s,baz=65,slow=38						
NC602	**NORSAR Array S**	44.64	316	*e*P	P	04 06 26.2	+0.2
KWP	**Kalwaria Pacla**	44.66	298	*e*P	P	04 06 27.0	+0.7
KWP	**Kalwaria Pacla**	44.66	298	*e*P	P	04 06 27.0	+0.7
NC204	**NORSAR Array S**	44.72	317	*e*P	P	04 06 27.2	+0.5
ICOR	**Ion Corvin**	44.79	288	⇑*i*P	P	04 06 29.4	+2.0
NBO00	**NORSAR Array S**	44.83	317	*e*P	P	04 06 27.9	+0.4
NAO01	**NORSAR Array S**	44.87	316	*e*P	P	04 06 28.7	+0.9
ISR	**Istrita**	44.96	290	⇓*i*P	P	04 06 31.8	+3.0
ISR	**Istrita**	44.96	290	⇓P	P	04 06 31.8	+3.0
MLR	**Muntele Rosu**	45.10	291	P	P	04 06 31.3	+1.3
	comp=Z,2.8nm,0.8s,baz=353,slow=8.1,SNR=4.2						
MLR				LR	LR	04 26 39.3	
	comp=Z,489nm,21.1s,baz=62,slow=38						
MLR	**Muntele Rosu**	45.10	291	⇑*i*P	P	04 06 31.6	+1.6
MLR	**Muntele Rosu**	45.10	291	*e*P	P	04 06 31.3	+1.3
	comp=Z,8.2nm,1.2s						
ARCR	**ARCALIA**	45.12	294	⇓*i*P	P	04 06 32.5	+2.5
DOPR	**Dopca**	45.15	292	⇓*i*P	P	04 06 32.4	+2.1
DAG	**Danmarks Havn**	45.40	343	P	P	04 06 34.0	+2.2
DAG				pmax	pmax		
	comp=Z,9.0nm,1.1s						
VOIR		45.65	291	⇑*i*P	P	04 06 36.0	+1.7
VOIR		45.65	291	⇑P	P	04 06 36.0	+1.7
CRVS	**Cervenica-Dubn**	45.74	297	*e*P	P	04 06 35.2	+0.3
CRVS				pmax	pmax		
	comp=Z,9.0nm,1.6s						
CRVS	**Cervenica-Dubn**	45.74	297	*e*P	P	04 06 35.2	+0.3
CRVS				*e*PP	PP	04 08 19.1	-2.6
ARR	**Arges**	45.93	292	⇓*i*P	P	04 06 38.2	+1.7
OJC	**Ojcow**	45.94	300	*e*P	P	04 06 36.4	0.0
OJC	**Ojcow**	45.94	300	*e*P	P	04 06 37.6	+1.2
	comp=Z,22nm,1.3s						
OJC	**Ojcow**	45.94	300	*e*P	P	04 06 37.6	+1.2
OJC				pmax	pmax		
	comp=Z,22nm,1.3s						
PALK	**Pallekele**	46.06	201	LR	LR	04 27 10.7	
	comp=Z,130nm,19.7s,baz=126,slow=38						
PALK	**Pallekele**	46.06	201	*e*P	P	04 06 35.8	-2.0
	comp=Z,12nm,0.7s						
PALK	**Pallekele**	46.06	201	*e*P	P	04 06 35.8	-2.0
PALK				pmax	pmax		
	comp=Z,12nm,0.7s						
NIE	**Niedzica**	46.10	299	*e*P	P	04 06 38.8	+1.1

NIE	Niedzica	46.10	299	eP	P	04 06 38.8	+1.1
LOT	Lotru	46.38	292	⇑iP	P	04 06 43.3	+3.2
KECS	Kecovo	46.51	297	eP	P	04 06 43.6	+2.6
KECS	Kecovo	46.51	297	eP	P	04 06 43.6	+2.6
MMAI	Mount Meron Ar	47.05	271	LR	LR	04 28 36.8	
	comp=Z,167nm,18.0s,baz=50,slow=39						
PSZ	Piszkesteto	47.16	297	⇓iP	P	04 06 48.4	+2.3
PSZ	Piszkesteto	47.16	297	eP	P	04 06 47.4	+1.3
	comp=Z,11nm,1.3s						
PSZ	Piszkesteto	47.16	297	eP	P	04 06 47.4	+1.3
PSZ				pmax	pmax		
	comp=Z,11nm,1.3s						
MORC	Moravsky Berou	47.39	300	⇓iP	P	04 06 49.7	+1.8
MORC	Moravsky Berou	47.39	300	eP	P	04 06 48.7	+0.8
	comp=Z,7.8nm,1.0s						
MORC	Moravsky Berou	47.39	300	eP	P	04 06 48.7	+0.8
MORC				pmax	pmax		
	comp=Z,8.0nm,1.0s						
MORC	Moravsky Berou	47.39	300	eP	P	04 06 48.5	+0.6
VYHS	Vyhne	47.42	298	eP	P	04 06 49.2	+1.2
VYHS				pmax	pmax		
	comp=Z,8.0nm,1.1s						
VYHS	Vyhne	47.42	298	eP	P	04 06 49.2	+1.2
VYHS				ePP	PP	04 08 37.5	-1.5
KSP	Ksiaz	47.46	302	eP	P	04 06 48.9	+0.6
KSP	Ksiaz	47.46	302	eP	P	04 06 48.9	+0.6
RAYN	Ar Rayn	47.61	253	eP	P	04 06 49.2	-0.7
RAYN	Ar Rayn	47.61	253	eP	P	04 06 49.2	-0.7
DPC	Dobruska-Polom	47.72	302	eP	P	04 06 52.3	+1.9
DPC	Dobruska-Polom	47.72	302	eP	P	04 06 52.3	+1.9
JAVC	Velka Javorina	47.84	299	eP	P	04 06 53.2	+1.8
MDVR	Moldovita	47.95	293	⇑iP	P	04 06 53.7	+1.4
VRAC	Vranov	48.17	300	P	P	04 06 54.3	+0.4
	comp=Z,3.8nm,0.6s,baz=69,slow=10,SNR=6.0						
VRAC	Vranov	48.17	300	⇑iP	P	04 06 55.9	+2.0
VRAC	Vranov	48.17	300	eP	P	04 06 54.9	+1.0
VTS	Vitosha	48.39	289	⇓iP	P	04 06 57.3	+1.5
VTS	Vitosha	48.39	289	⇓P	P	04 06 57.3	+1.5
KRUC	Moravsky	48.42	300	eP	P	04 06 56.8	+1.0
BRG	Berggiesshubel	48.67	303	eP	P	04 06 58.2	+0.5
	comp=Z,6.2nm,0.8s						
BRG	Berggiesshubel	48.67	303	eP	P	04 06 58.2	+0.5
BRG				pmax	pmax		
	comp=Z,6.0nm,0.9s						
PRU	Pruhonice	48.87	302	eP	P	04 07 00.4	+1.2
PRU	Pruhonice	48.87	302	eP	P	04 07 00.4	+1.2
CLL	Collm	48.91	304	eP	P	04 06 59.0	-0.5
	comp=Z,15nm,1.2s						
CLL				i sP	sP	04 07 04.2	+0.3
CLL				eS	S	04 14 12.0	+9.0
CLL				eSS	SS	04 17 42.0	+8.9
CLL				Lm	MLR	04 29 00.0	
	comp=N,600nm,18.0s						
CLL				Lm	MLR	04 29 00.0	
	comp=E,700nm,18.6s						
CLL				Lm	MLR	04 29 00.0	
	comp=Z,900nm,18.9s						
CLL	Collm	48.91	304	eP	P	04 06 59.8	+0.3
	comp=Z,16nm,1.2s						
CLL	Collm	48.91	304	eP	P	04 06 59.8	+0.3
CLL				pmax	pmax		
	comp=Z,16nm,1.2s						
CONA	Conrad Observa	49.37	299	i pP	P	04 07 04.9	+1.7
	comp=Z,11nm,1.6s,SNR=6.7						
NKC	Novy Kostel	49.82	303	P	P	04 07 09.8	+3.3
NKC				pmax	pmax		
	comp=Z,4.0nm,1.4s						
KHC	Kasperske Hory	49.88	302	eP	P	04 07 07.9	+0.9
KHC	Kasperske Hory	49.88	302	eP	P	04 07 08.0	+1.0
	comp=Z,5.8nm,1.4s						
KHC	Kasperske Hory	49.88	302	eP	P	04 07 08.0	+1.0
KHC				pmax	pmax		
	comp=Z,6.0nm,1.4s						
ARSA	Arzberg	49.95	299	i pP	P	04 07 08.8	+1.3
	comp=Z,6.5nm,1.1s						
GEC2	GERESS Array S	49.98	301	eP	P	04 07 09.3	+1.4
	comp=Z,11nm,1.5s						
GEC2	GERESS Array S	49.98	301	eP	P	04 07 09.3	+1.4
GEC2				pmax	pmax		
	comp=Z,11nm,1.5s						
GERES	GERESS Array B	49.98	301	P	P	04 07 08.5	+0.6
	comp=Z,1.8nm,0.7s,baz=60,slow=5.3,SNR=14						
GERES				LR	LR	04 30 02.7	
	comp=Z,372nm,21.8s,baz=68,slow=38						
GEA0	GERESS Array S	49.99	301	eP	P	04 07 07.8	-0.1
MOX	Moxa	50.01	304	P	P	04 07 10.1	+2.2
MYLDM	Lahad Datu	50.01	150	eP	P	04 07 06.3	-2.0
	comp=Z,20nm,1.2s						
WET	Wettzell	50.24	302	P	P	04 07 12.0	+2.3
WET				pmax	pmax		
	comp=Z,8.0nm,0.9s						
MOA	Molln	50.28	300	i pP	P	04 07 10.8	+0.8
	comp=Z,6.9nm,1.1s						
SOKA	Soboth	50.57	298	i P	P	04 07 14.8	+2.5
	comp=Z,7.8nm,1.3s						
DAV	Davao City (W)	50.76	141	LR	LR	04 29 59.2	
	comp=Z,314nm,20.6s,baz=338,slow=38						
GRFO	Grafenberg	50.78	303	eP	P	04 07 14.3	+0.5
GRFO	Grafenberg	50.78	303	eP	P	04 07 14.3	+0.5
OBKA	Obir	50.93	298	i pP	P	04 07 17.2	+2.1
	comp=Z,6.0nm,0.8s						
KBA	Koelnbreinsper	51.24	300	i pP	P	04 07 19.1	+1.6
	comp=Z,19nm,0.9s,SNR=14						
KBA	Koelnbreinsper	51.24	300	P	P	04 07 19.1	+1.6
MYKA	Terra Mystica	51.35	299	i P	P	04 07 20.7	+2.5
	comp=Z,12nm,0.8s						
COLD	Coldfoot	51.44	27	eP	P	04 07 18.7	+0.2
	comp=Z,8.3nm,0.9s						
IDI	Anoyia	52.03	281	LR	LR	04 32 59.2	
	comp=Z,150nm,18.8s,baz=63,slow=40						
WTTA	Wattenberg	52.05	301	i pP	P	04 07 24.8	+1.3
	comp=Z,7.8nm,0.7s						
MOTA	Moosalm	52.28	301	i pP	P	04 07 27.1	+1.9
	comp=Z,5.4nm,0.8s						
FETA	Feichten	52.68	301	i pP	P	04 07 29.5	+1.3
	comp=Z,6.6nm,1.0s						
MLY	Manley	52.81	29	eP	P	04 07 29.7	+0.9
	comp=Z,4.2nm,1.1s						
DAVA	Damuels	52.97	302	i pP	P	04 07 31.1	+0.8
	comp=Z,13nm,1.1s						
BFO	Black Forest	53.12	304	eP	P	04 07 32.4	+1.2
	comp=Z,25nm,1.8s						
BFO	Black Forest	53.12	304	ceP	P	04 07 32.8	+1.5
FUORN	Ofenpass-Fuorn	53.18	301	eP	P	04 07 33.6	+1.6
	comp=Z,13nm,1.1s						
DAVOX	Davos/Dischmat	53.29	301	LR	LR	04 34 24.5	
	comp=Z,222nm,18.2s,baz=44,slow=41						
BCLA	Clavier	53.34	307	⇑P	P	04 07 34.5	+1.8
	comp=Z,12nm,1.9s						
BPAW	Bear Paw Mtn.	53.39	30	eP	P	04 07 33.7	+0.7
	comp=Z,11nm,1.4s						
CAST	Castle Rocks	53.52	31	eP	P	04 07 34.1	+0.2
	comp=Z,5.5nm,0.9s						
CDF	Champ du Feu	53.61	304	eP	P	04 07 32.9	-2.0
CDF				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MDM	Murphy Dome	53.61	28	eP	P	04 07 35.8	+1.1
	comp=Z,7.0nm,1.2s						
ECH	Echery	53.80	304	eP	P	04 07 37.3	+1.0
	comp=Z,5.8nm,1.1s						
ECH	Echery	53.80	304	eP	P	04 07 37.3	+1.0
ECH				pmax	pmax		
	comp=Z,6.0nm,1.1s						
DOU	Dourbes	53.90	307	⇑P	P	04 07 38.8	+2.0
CCB	Clear Creek Bu	53.97	29	eP	P	04 07 37.6	+0.5
	comp=Z,23nm,2.0s						
WRH	Wood River Hil	54.01	29	eP	P	04 07 37.1	-0.4
	comp=Z,5.5nm,1.0s						
TRF	Thorofare Moun	54.07	31	eP	P	04 07 38.8	+0.7
	comp=Z,22nm,1.7s						
BAIF	Baives	54.11	307	eP	P	04 07 39.2	+0.8
BAIF				pmax	pmax		
	comp=Z,5.0nm,1.0s						
EKA	Eskdalemuir Ar	54.12	316	P	P	04 07 38.4	-0.1
	comp=Z,2.1nm,0.8s,baz=57,slow=6.9,SNR=4.8						
EKA				LR	LR	04 33 19.1	
	comp=Z,394nm,18.0s,baz=30,slow=39						
IL1	Eielson Array	54.15	28	eP	P	04 07 38.0	-0.5
ILAR	Eielson Array	54.15	28	P	P	04 07 37.9	-0.6
	comp=Z,1.9nm,0.9s,baz=318,slow=4.9,SNR=11						
ILAR				LR	LR	04 32 49.3	
	comp=Z,332nm,21.3s,baz=318,slow=38						
ILB	Eielson Array	54.15	28	eP	P	04 07 39.1	+0.6
BORG	Borgarnes	54.21	332	LR	LR	04 32 49.4	
	comp=Z,180nm,19.7s,baz=27,slow=38						
HAU	Haudompre	54.35	304	eP	P	04 07 40.7	+0.4
HAU				pmax	pmax		
	comp=Z,9.0nm,1.0s						
GUMO	Guam	54.51	116	LR	LR	04 32 06.4	
	comp=Z,89nm,19.3s,baz=337,slow=37						
INK	Inuvik	54.79	20	P	P	04 07 42.5	-0.6
	comp=Z,4.0nm,0.9s,baz=356,slow=6.3,SNR=4.4						
INK	Inuvik	54.79	20	eP	P	04 07 44.2	+1.1
	comp=Z,8.2nm,1.2s						
INK	Inuvik	54.79	20	eP	P	04 07 44.2	+1.1
INK				pmax	pmax		
	comp=Z,8.0nm,1.2s						
CABF	La Chapelle	55.39	303	eP	P	04 07 48.7	+0.8
CABF				pmax	pmax		
	comp=Z,11nm,1.4s						
LPL	La Plagne	55.77	302	eP	P	04 07 51.2	+0.4
LPL				pmax	pmax		
	comp=Z,3.0nm,0.7s						
BNI	Bardonecchia	56.11	301	eP	P	04 07 54.4	+1.3
	comp=Z,10nm,0.8s						
BNI	Bardonecchia	56.11	301	eP	P	04 07 54.4	+1.3
BNI				pmax	pmax		
	comp=Z,10.0nm,0.8s						
MBDF	Montbardon	56.27	301	eP	P	04 07 55.3	+1.0
SSF	Saint Saulge	56.43	305	eP	P	04 07 55.2	0.0
SSF				pmax	pmax		
	comp=Z,16nm,1.5s						
SBF	Sospel	56.49	300	eP	P	04 07 59.0	+3.2
SBF				pmax	pmax		
	comp=Z,10.0nm,0.9s						
PGF	Pioggiola	56.52	298	eP	P	04 07 59.4	+3.4
PGF				pmax	pmax		
	comp=Z,7.0nm,0.9s						
ORIF	Oris-en-Rattie	56.62	302	eP	P	04 07 57.0	+0.3
ORIF				pmax	pmax		
	comp=Z,5.0nm,0.8s						
AVF	Avril sur Loir	56.69	305	eP	P	04 07 57.1	+0.1
AVF				pmax	pmax		
	comp=Z,5.0nm,1.0s						
DAWY	Dawson	56.79	26	eP	P	04 07 57.1	-0.5
	comp=Z,8.4nm,1.4s						
VAE	Valguarnera	56.84	290	LR	LR	04 32 46.3	
	comp=Z,139nm,20.4s,baz=82,slow=36						
KLU	Klutina	56.89	30	eP	P	04 07 59.1	+0.8
	comp=Z,5.4nm,0.9s						
FRF	La Foret Royal	57.12	300	eP	P	04 08 00.0	-0.1
FRF				pmax	pmax		
	comp=Z,9.0nm,1.1s						
FLN	La Foliniere	57.27	309	eP	P	04 08 03.1	+2.0
FLN				pmax	pmax		
	comp=Z,22nm,1.3s						
FID	Port Fidalgo	57.27	31	eP	P	04 08 02.1	+1.1
	comp=Z,30nm,1.8s						
VIVF	Saint-Julien-l	57.30	302	eP	P	04 08 01.6	+0.2
VIVF				pmax	pmax		
	comp=Z,2.0nm,0.8s						
KDAK	Kodiak Island	57.37	36	ceP	P	04 08 02.0	+0.4
OHAK	Old Harbor	57.51	37	eP	P	04 08 01.9	-0.8
	comp=Z,12nm,1.0s						
GRR	Gorron	57.71	308	eP	P	04 08 08.3	+4.1
GRR				pmax	pmax		
	comp=Z,13nm,1.2s						
ATD	Arta Tunnel	58.58	247	LR	LR	04 34 41.6	
	comp=Z,173nm,19.1s,baz=332,slow=37						
MFF	Saint Martin d	58.58	307	eP	P	04 08 10.9	+0.5
MFF				pmax	pmax		
	comp=Z,26nm,1.6s						
KEST	Kesra	60.99	292	eP	P	04 08 28.4	+1.1
	comp=Z,22nm,1.7s						
ETSF	Etsaut	61.38	304	eP	P	04 08 30.5	+0.7
ETSF				pmax	pmax		
	comp=Z,11nm,1.4s						
YKA	Yellowknife Ar	63.60	15	P	P	04 08 44.4	+0.2
	comp=Z,1.2nm,0.8s,baz=347,slow=7.0,SNR=4.1						
YKA				LR	LR	04 37 42.8	
	comp=Z,9.8nm,20.1s,baz=332,slow=37						
ES19	SONSECA Array	65.43	303	eP	P	04 08 57.6	+1.0
ESDC	Sonseca Array	65.48	303	P	P	04 08 57.3	+0.4
	comp=Z,2.4nm,0.7s,baz=43,slow=6.7,SNR=17						
ESDC				LR	LR	04 40 20.8	
	comp=Z,234nm,18.3s,baz=40,slow=39						
MVO	Moncorvo	65.94	306	eLQ	LQ	04 34 09.7	
MVO				eLR	LR	04 37 01.0	
	comp=Z,469nm,18.0s						
MTE	Manteigas	66.78	306	eLQ	LQ	04 35 04.5	
MTE				eLR	LR	04 35 59.8	
	comp=Z,460nm,18.0s						
PMRV	Marv??o	67.43	305	eLQ	LQ	04 34 55.4	
PMRV				eLR	LR	04 37 09.9	
	comp=Z,334nm,20.0s						
PVAQ	Vaqueiros	69.13	304	eLQ	LQ	04 36 18.2	
PVAQ				eLR	LR	04 37 48.6	
	comp=Z,194nm,16.0s						
MDT	Midelt	70.97	299	LR	LR	04 43 14.3	
	comp=Z,94nm,20.1s,baz=38,slow=38						
TAM	Tamanrasset	72.72	285	eP	P	04 09 42.9	+0.7
	comp=Z,3.8nm,1.0s						
TAM	Tamanrasset	72.72	285	eP	P	04 09 42.9	+0.7
TAM				pmax	pmax		
	comp=Z,4.0nm,1.0s						
PMG	Port Moresby	75.07	127	LR	LR	04 42 13.0	
	comp=Z,88nm,21.3s,baz=300,slow=35						
JTMT	Jette	77.58	20	eP	P	04 10 11.3	+1.5
	comp=Z,3.7nm,0.8s						
ULM	Lac du Bonnet	77.92	8	LR	LR	04 44 54.1	
	comp=Z,104nm,21.6s,baz=6.0,slow=36						
WRAB	Tennant Creek	78.84	143	eP	P	04 10 14.8	-2.0
	comp=Z,4.2nm,0.9s						
WRA	Warramunga Arr	78.84	143	P	P	04 10 14.6	-2.2
	comp=Z,2.7nm,0.9s,baz=344,slow=6.0,SNR=11						
WRA	Warramunga Arr	78.84	143	i P	P	04 10 15.3	-1.5
WRA				pmax	pmax		
	comp=Z,3.0nm,0.9s						
YBH	Yreka Blue Hor	81.04	28	LR	LR	04 47 32.3	
	comp=Z,79nm,21.7s,baz=342,slow=36						
HNR	Honiara	81.84	116	LR	LR	04 47 40.9	
	comp=Z,39nm,18.4s,baz=307,slow=36						
IMW	Indian Meadow	81.96	19	eP	P	04 10 35.2	+1.4
	comp=Z,2.5nm,0.9s						
ASAR	Alice Springs	82.10	145	P	P	04 10 32.2	-2.1
	comp=Z,2.2nm,0.9s,baz=341,slow=5.5,SNR=16						
AS01	Alice Springs	82.11	145	eP	P	04 10 32.2	-2.2
FXWY	Fox Creek	82.19	19	eP	P	04 10 35.6	+0.6
	comp=Z,2.7nm,0.9s						
TOA0	Torodi Ar. Sit	82.43	281	eP	P	04 10 34.9	-1.5
TORD	Torodi Ar. Bea	82.43	281	P	P	04 10 34.8	-1.5
	comp=Z,2.4nm,0.8s,baz=33,slow=4.9						
PDAR	Pinedale Array	83.32	19	LR	LR	04 52 52.9	
	comp=Z,85nm,18.2s,baz=346,slow=39						
ECSD	EROS Data Cent	84.31	9	eP	P	04 10 45.1	-0.5
	comp=Z,6.9nm,1.1s						
KOWA	Kowa	84.83	287	LR	LR	04 53 08.1	
	comp=Z,101nm,18.2s,baz=34,slow=39						
NVAR	Mina Array Bea	85.36	26	P	P	04 10 50.0	-1.3
	comp=Z,0.5nm,0.7s,baz=312,slow=3.8,SNR=3.5						
NVAR				LR	LR	04 54 15.0	
	comp=Z,65nm,18.6s,baz=338,slow=39						
SMCO	Snowmass	87.29	18	eP	P	04 11 01.6	+0.6
	comp=Z,6.1nm,1.4s						
PV09	Paradox Valley	87.52	19	eP	P	04 11 03.8	+1.8
PV22	Blue Mesa, Par	87.56	19	eP	P	04 11 03.1	+1.1
	comp=Z,6.3nm,1.1s						
WCI	Wyandotte Cave	90.41	2	eP	P	04 11 15.9	+0.7
WCI	Wyandotte Cave	90.41	2	eP	P	04 11 15.9	+0.7
S39A	Bolivar	90.60	7	eP	P	04 11 16.0	-0.1
	comp=Z,6.6nm,1.0s						
DBIC	Dimbokro	91.48	283	LR	LR	04 58 32.2	
	comp=Z,67nm,19.4s,baz=16,slow=40						
ANMO	Albuquerque	91.49	18	LR	LR	04 55 17.0	
	comp=Z,104nm,20.6s,baz=6.0,slow=37						
ANMO	Albuquerque	91.49	18	eP	P	04 11 21.7	+1.1
	comp=Z,5.7nm,1.4s						
ANMO	Albuquerque	91.49	18	ceP	P	04 11 21.6	+1.1
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.2s						
TKL	Tuckaleechee C	93.00	360	LR	LR	04 55 48.0	
	comp=Z,97nm,18.2s,baz=10,slow=37						
DZM	Mont Dzumac	95.71	119	LR	LR	04 53 35.4	
	comp=Z,59nm,20.1s,baz=63,slow=35						
TXAR	Lajitas Array	97.47	17	LR	LR	05 01 23.3	
	comp=Z,80nm,19.5s,baz=0.0,slow=39						
TSUM	Tsumeb	97.91	249	LR	LR	04 59 41.1	
	comp=Z,60nm,19.8s,baz=350,slow=38						
CPUP	Villa Florida	147.59	311	PKPbc	PKPbc	04 17 56.5	-1.5
	comp=Z,2.8nm,0.9s,baz=89,slow=2.0,SNR=4.6						

CSEM 27 04:04:03.1, 37°.89N×26°.98E, h5^{km}, ML1.6

ISK 27 04:04:03.1, 37°.89N×26°.98E, h5^{km}, ML1.6/3, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GCAM	G?zelcaml?	0.27	132	PG	Pg	04 04 08.9	+0.5
GCAM				SG	Sg	04 04 13.4	+1.4
GCAM	G?zelcaml?	0.27	132	ePg	Pg	04 04 08.9	+0.5
GCAM				eSg	Sg	04 04 13.4	+1.4
BLCB	Balcova	0.50	6	PG	Pg	04 04 13.4	+0.6
BLCB				SG	Sb	04 04 20.9	-1.2
BLCB	Balcova	0.50	6	ePg	Pg	04 04 13.4	+0.6
BLCB				eSg	Sb	04 04 20.9	-1.2
URLA	Izmir	0.56	328	PG	Pg	04 04 14.6	+0.7
URLA				SG	Sb	04 04 22.7	-1.2
URLA	Izmir	0.56	328	ePg	Pg	04 04 14.6	+0.7
URLA				eSg	Sb	04 04 22.7	-1.2
AYDB	Zeytinkoy-Aydi	0.73	85	PG	Pb	04 04 17.7	-0.6
AYDB	Zeytinkoy-Aydi	0.73	85	ePg	Pb	04 04 17.7	-0.6
BODT	Bodrum	0.86	162	PG	Pb	04 04 20.2	-0.4
BODT	Bodrum	0.86	162	ePg	Pb	04 04 20.2	-0.4
CHOS	Chios island	0.88	305	PG	Pb	04 04 20.9	-0.1
CHOS	Chios island	0.88	305	ePg	Pb	04 04 20.9	-0.1

ISCJB 27 04:12:22.1±0.6, 21°.03S±0°.04×68°.6W±0°.1, h149^{km}±9^{km}, mb3.7/3, Error ellipse: s-maj=18.3km s-min=6.7km az=1.5

GUC 27 04:12:22.9±0.7, 21°.03S×68°.69W, h140^{km}±4^{km}, ML3.7

IDC 27 04:12:24.6±3.6, 21°.08S×68°.12W, h136^{km}±37^{km}, mb3.5/2, mb1 3.5/5, mb1mx3.2/41, mbtmp4.0/5, MS3.2/1, Ms1 3.2/1, ms1mx2.5/28, Error ellipse: s-maj=38.1km s-min=32.4km az=89.0

ISC 27 04:12:22.6±0.9, 21°.03S±0°.05×68°.6W±0°.1, h137^{km}±10^{km}, n17, σ1^s.35/27, mb3.9/3, 6C-3D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB01	IPOC Station P	0.87	269	⇑eP	Pn	04 12 45.2	0.0
PB01				i S	Sn	04 13 02.0	-0.3
PB01				IAML		04 13 04.5	
	comp=E,2µm,0.2s						
PB09	IPOC Station P	0.99	220	⇑eP	Pn	04 12 47.0	+0.6
PB09				i S	Sn	04 13 05.1	+0.7
PB09				IAML		04 13 06.4	
	comp=N,913nm,0.6s						
PB08	IPOC Station P	1.05	328	⇓eP	Pn	04 12 47.9	+0.8
PB08				i S	Sn	04 13 06.7	+1.0
PB08				IAML		04 13 07.0	
	comp=E,2µm,0.3s						
PB02	IPOC Station P	1.28	257	⇑eP	Pn	04 12 49.5	+0.4
PB02				i S	Sn	04 13 09.7	+0.5
PB02				IAML		04 13 11.2	
	comp=E,3µm,0.2s						
PB07	IPOC Station P	1.42	241	⇑eP	Pn	04 12 50.8	+0.3
PB07				i S	Sn	04 13 11.9	0.0
PB07				IAML		04 13 17.4	
	comp=E,1µm,0.3s						
PB03	IPOC Station P	1.51	228	⇑eP	Pn	04 12 51.7	+0.2
PB03				i S	Sn	04 13 13.3	-0.2
PB03				IAML		04 13 15.0	
	comp=N,718nm,0.4s						
PB11	IPOC Station P	1.63	321	⇓eP	Pn	04 12 53.4	+0.5
PB11				i S	Sn	04 13 16.7	+0.7
PB11				IAML		04 13 20.0	
	comp=N,1µm,0.2s						
PB04	IPOC Station P	1.97	229	eP	Pn	04 12 57.5	+0.7
PB04				i S	Sn	04 13 24.3	+1.3
PSGC	Pisagua	2.05	314	⇑iP	Pn	04 12 57.8	+0.1
PSGC				i S	Sn	04 13 24.1	-0.5
PSGC				IAML		04 13 28.0	
	comp=E,416nm,0.6s						
PB12	IPOC Station P	2.93	325	⇓eP	Pn	04 13 08.4	-0.3
PB12				i S	Sn	04 13 44.1	-0.1
PB12				IAML		04 13 52.1	
	comp=E,146nm,0.3s						
LPAZ	La Paz	4.74	5	P	Pn	04 13 34.7	+1.8
	comp=E,0.7nm,0.3s,baz=188,slow=4.5,SNR=28						
LPAZ				S	Sn	04 14 31.3	+3.8
	comp=E,0.3nm,0.3s,baz=210,slow=8.1,SNR=2.7						
SIV	San Ignacio	8.69	56	P	Pn	04 14 21.7	-3.7
	comp=E,8.4nm,0.3s,baz=261,slow=10,SNR=211						
BDFB	Brasilia	20.21	78	P	P	04 16 46.3	-0.8
	comp=E,0.8nm,0.3s,baz=264,slow=11,SNR=8.7						
PTGA	Pitinga	21.85	24	P	P	04 17 03.0	-1.4
	comp=E,1.7nm,0.3s,baz=324,slow=23,SNR=6.1						
JTS	JuntasAbangare	35.05	331	LR	LR	04 33 48.7	
	comp=E,43nm,21.5s,baz=25,slow=36						
SNAA	Sanae	62.61	161	P	P	04 22 33.1	+1.1
	comp=E,1.7nm,1.1s,baz=291,slow=8.6,SNR=4.1						
TORD	Torodi Ar. Bea	76.89	70	P	P	04 23 59.7	-0.4
	comp=E,0.4nm,0.4s,baz=258,slow=5.8						

IDC 27 04:12:31.7±1.8, 16°.68S×178°.31W, h0^{km}, mb4.1/4, mb1 4.4/4, mb1mx3.8/42, mbtmp4.1/4, Error ellipse: s-maj=161.7km s-min=31.7km az=156.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	39.31	240	P	P	04 20 03.0	+0.3
	0.8nm,0.4s,baz=78,slow=9.3,SNR=4.4						
WRA	Warramunga Arr	44.96	258	P	P	04 20 48.8	-0.2
	1.1nm,0.5s,baz=94,slow=7.3,SNR=31						
ASAR	Alice Springs	45.23	253	P	P	04 20 50.8	-0.4
	10.0nm,0.6s,baz=88,slow=8.4,SNR=136						
TXAR	Lajitas Array	85.26	58	P	P	04 25 10.9	0.0
	0.3nm,0.8s,baz=218,slow=5.7,SNR=4.2						

IDC 27 04:24:09.1±8.6, 18°.15S×170°.23E, h224^{km}±51^{km}, mb4.0/3, mb1 4.1/4, mb1mx3.3/43, mbtmp4.5/4, Error ellipse: s-maj=108.2km s-min=73.9km az=113.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	5.27	222	P	Pn	04 25 27.5	-0.1
	4.5nm,0.3s,baz=41,slow=12,SNR=39						
DZM				S	S	04 26 30.3	+0.5
	2.0nm,0.3s,baz=121,slow=21,SNR=2.4						
STKA	Stephens Creek	29.22	237	P	P	04 29 50.4	+0.3
	3.6nm,0.7s,baz=48,slow=9.0,SNR=6.5						
WRA	Warramunga Arr	33.93	261	P	P	04 30 31.1	-0.3
	1.9nm,0.6s,baz=95,slow=8.7,SNR=28						
ASAR	Alice Springs	34.31	254	P	P	04 30 34.5	-0.1
	14nm,0.5s,baz=82,slow=8.9,SNR=198						

IDC 27 04:52:56.1±7.3, 5°.85S×147°.15E, h139^{km}±77^{km}, mb3.3/2, mb1 3.7/4, mb1mx3.2/39, mbtmp3.9/4, Error ellipse: s-maj=102.5km s-min=30.9km az=134.0, Eastern New Guinea region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.54	180	P	Pn	04 53 50.0	0.0
	11nm,0.3s,baz=355,slow=7.1,SNR=14						
PMG				S	Sn	04 54 32.3	+0.5
	7.6nm,0.3s,baz=191,slow=22,SNR=9.5						
WRA	Warramunga Arr	18.75	220	P	P	04 57 04.0	-0.4
	0.8nm,0.3s,baz=41,slow=12,SNR=34						
ASAR	Alice Springs	21.83	214	P	P	04 57 37.7	+0.1
	1.6nm,0.4s,baz=49,slow=8.5,SNR=26						
ILAR	Eielson Array	85.28	23	P	P	05 05 17.1	+0.1
	0.4nm,0.7s,baz=252,slow=5.0,SNR=5.9						

MEX 27 05:09:17.8±0.7, 16°.80N×100°.12W, h5^{km}, MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ACP2	Acapulco	0.23	72	eP	Pg	05 09 21.8	-0.6
ACP2				eS	Sg	05 09 25.6	+0.1
ACX	Acapulco	0.26	75	eP	Pg	05 09 22.9	0.0
ACX				eS	Sg	05 09 26.8	+0.5
CAIG	El Cayaco	0.28	330	eP	Pg	05 09 23.0	-0.3
CAIG				eS	Sg	05 09 26.9	-0.2
MEIG	Mezcala	1.22	23	eP	Pg	05 09 37.7	-3.4
MEIG				eS	Sg	05 09 52.9	-4.0
ARIG	Puente Sto Nin	1.49	352	eP	Pn	05 09 42.2	-3.1

ARIG				eS	Sn	05 10 00.3	-4.8
ZIIG	Zihuatanejo	1.52	302	i P	Pn	05 09 42.5	-3.1
ZIIG				eS	Sn	05 10 01.2	-4.5

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*NEIC **27** 05:25:10.7±0.0, 37°.75S×179°.97W, h12km, ML4.0(WEL), After WEL.*

WEL 27 05:25:10.3, 38°S±8°×18°0W±°, h33km, ML4.2/29, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.39	272	Pn	Pn	05 25 33.7	+0.4
WMGZ				S*	Sn	05 25 51.0	+0.6
WMGZ	Waiomatatini S	1.39	272	P	Pn	05 25 33.7	+0.5
WMGZ				P	Pn	05 25 33.7	+0.5
WMGZ				S	Sn	05 25 51.0	+0.6
MXZ	Matakaoa Point	1.51	282	Pn	Pn	05 25 35.0	+0.1
MXZ				Sn	Sn	05 25 53.1	-0.4
MXZ	Matakaoa Point	1.51	282	P	Pn	05 25 35.0	0.0
MXZ				S	Sn	05 25 52.3	-1.1
PUZ	Puketiti	1.52	263	Pn	Pn	05 25 35.5	+0.4
PUZ	Puketiti	1.52	263	P	Pn	05 25 35.9	+0.8
PUZ				S	Sn	05 25 54.3	+0.6
PKGZ	Pakihiroa	1.65	269	P	Pn	05 25 37.3	+0.3
PKGZ				S	Sn	05 25 57.3	+0.2
CNGZ	Carnagh Statio	1.65	248	Pn	Pn	05 25 38.5	+1.6
CNGZ	Carnagh Statio	1.65	248	P	Pb	05 25 38.6	-1.5
TWGZ	Tauwhareparae	1.75	260	Pn	Pn	05 25 39.2	+0.9
TWGZ	Tauwhareparae	1.75	260	P	Pn	05 25 39.2	+0.9
TWGZ				S	Sn	05 26 00.9	+1.5
HAZ	Te Kaha	1.89	273	P	Pn	05 25 40.9	+0.7
HAZ				S	Sn	05 26 02.9	0.0
TKGZ	Te Karaka	1.91	253	Pn	Pn	05 25 41.7	+1.2
TKGZ	Te Karaka	1.91	253	P	Pn	05 25 41.7	+1.3
TKGZ				S	Sn	05 26 04.4	+1.1
RUGZ	Raukumara Rang	1.97	267	P	Pn	05 25 41.9	+0.5
RUGZ				S	Sn	05 26 05.1	+0.1
PRGZ	Paritu Road	2.07	239	Pn	Pn	05 25 44.3	+1.6
PRGZ	Paritu Road	2.07	239	P	Pn	05 25 44.3	+1.6
MWZ	Matawai	2.13	257	Pn	Pn	05 25 44.2	+0.7
MWZ	Matawai	2.13	257	P	Pn	05 25 44.2	+0.7
MWZ				S	Sn	05 26 08.8	0.0
MHGZ	Mahia Peninsul	2.17	234	Pn	Pn	05 25 45.6	+1.5
MHGZ	Mahia Peninsul	2.17	234	P	Pn	05 25 45.6	+1.5
RAGZ	Rawiri	2.25	254	Pn	Pn	05 25 46.2	+1.0
RAGZ	Rawiri	2.25	254	P	Pn	05 25 46.3	+1.1
RAGZ				S	Sn	05 26 12.6	+0.8
KNZ	Kokohu	2.26	239	Pn	Pn	05 25 46.5	+1.3
KNZ	Kokohu	2.26	239	P	Pn	05 25 46.7	+1.5
SNGZ	Shannon Statio	2.39	247	Pn	Pn	05 25 48.9	+1.8
SNGZ	Shannon Statio	2.39	247	P	Pn	05 25 48.4	+1.2
URZ	Urewera	2.44	260	Pn	Pn	05 25 49.5	+1.7
URZ	Urewera	2.44	260	P	Pn	05 25 49.5	+1.8
URZ				S	Sn	05 26 17.1	+0.7
WHHZ	Waihua	2.59	242	P	Pn	05 25 52.1	+2.3
RTZ	Ruatahuna	2.61	253	P	Pn	05 25 51.8	+1.7
RTZ				S	Sn	05 26 22.0	+1.2
RAHZ	Arahi	2.63	246	P	Pn	05 25 52.0	+1.7
RAHZ				S	Sn	05 26 21.9	+0.8
EDRZ	Edgecumbe	2.71	264	P	Pn	05 25 52.8	+1.2
MUGZ	Murupara	2.74	257	P	Pn	05 25 53.0	+1.2
MTHZ	Maungataniwha	2.78	249	P	Pn	05 25 53.8	+1.3
ARHZ	Aropaoanui	2.84	240	Pn	Pn	05 25 55.6	+2.4
ARHZ	Aropaoanui	2.84	240	P	Pn	05 25 55.6	+2.4
OPRZ	Ohinepanea	2.86	270	Pn	Pn	05 25 53.3	-0.2
OPRZ	Ohinepanea	2.86	270	P	Pn	05 25 53.6	+0.1
NMHZ	Naumai	2.90	244	Pn	Pn	05 25 55.8	+1.6
NMHZ	Naumai	2.90	244	P	Pn	05 25 55.8	+1.7
TARZ	Mount Tarawera	2.91	262	Pn	Pn	05 25 55.3	+1.0
TARZ	Mount Tarawera	2.91	262	P	Pn	05 25 55.5	+1.2
RRRZ	Republican Roa	2.91	260	P	Pn	05 25 55.9	+1.6
MKRZ	Makatiti	2.93	264	P	Pn	05 25 56.4	+1.8
CKHZ	Cape Kidnapper	2.99	233	P	Pn	05 25 57.6	+2.3
KARZ	Kaharoa	3.10	266	Pn	Pn	05 25 57.3	+0.4
KARZ	Kaharoa	3.10	266	P	Pn	05 25 57.6	+0.7
MCHZ	McNeill Hill	3.13	239	Pn	Pn	05 25 59.1	+1.9
MCHZ	McNeill Hill	3.13	239	P	Pn	05 25 59.1	+1.9
BKZ	Black Stump Fm	3.15	245	Pn	Pn	05 25 58.9	+1.3
BKZ	Black Stump Fm	3.15	245	P	Pn	05 25 59.0	+1.5
KAHZ	Kahuranaki	3.19	232	Pn	Pn	05 25 59.4	+1.2
KAHZ	Kahuranaki	3.19	232	P	Pn	05 25 59.5	+1.3
KWHZ	Kaweka Forest	3.31	241	P	Pn	05 26 00.9	+1.1
PXZ	Pawanui	3.35	229	P	Pn	05 26 00.2	0.0
KRHZ	Kereru	3.44	238	P	Pn	05 26 02.9	+1.3
BHHZ	Black Hill Sta	3.58	242	Pn	Pn	05 26 04.7	+1.1
BHHZ	Black Hill Sta	3.58	242	P	Pn	05 26 04.6	+1.1
WPHZ	Waipukurau	3.62	232	P	Pn	05 26 04.9	+0.8
PRHZ	Porangahau	3.63	228	Pn	Pn	05 26 04.3	+0.1
PRHZ	Porangahau	3.63	228	P	Pn	05 26 04.3	+0.2
PNHZ	Pukenui	3.69	236	Pn	Pn	05 26 05.7	+0.6
PNHZ	Pukenui	3.69	236	P	Pn	05 26 05.8	+0.7
KUZ	Kuaotunu	3.72	287	Pn	Pn	05 26 05.0	-0.3
KUZ	Kuaotunu	3.72	287	P	Pn	05 26 05.1	-0.2
KRVZ	Karewarewa	3.75	250	Pn	Pn	05 26 07.0	+1.2
KRVZ	Karewarewa	3.75	250	P	Pn	05 26 07.1	+1.3
OTVZ	Oturere	3.75	249	Pn	Pn	05 26 07.1	+1.1
MOVZ	Moawhango	3.77	245	Pn	Pn	05 26 08.1	+2.0
MOVZ	Moawhango	3.77	245	P	Pn	05 26 08.2	+2.1
WTVZ	West Tongariro	3.79	250	P	Pn	05 26 09.7	+3.2
TUVZ	Tukino	3.79	247	Pn	Pn	05 26 11.1	+4.6
TUVZ	Tukino	3.79	247	P	Pn	05 26 08.9	+2.4
NGZ	Ngauruhoe	3.80	249	P	Pn	05 26 07.8	+1.2
WHVZ	Whangaehu Hut	3.85	247	P	Pn	05 26 09.5	+2.2
ANWZ	Angora Road	3.85	227	P	Pn	05 26 07.0	-0.1
FWVZ	Far West T-bar	3.86	248	P	Pn	05 26 10.7	+3.2
TSZ	Takapari Road	3.93	235	Pn	Pn	05 26 08.5	+0.3
TSZ	Takapari Road	3.93	235	P	Pn	05 26 08.5	+0.3
DVHZ	Dannevirke	3.93	231	Pn	Pn	05 26 08.7	+0.3
DVHZ	Dannevirke	3.93	231	P	Pn	05 26 08.7	+0.4
MTVZ	Mangateitei	3.97	246	Pn	Pn	05 26 10.6	+1.7
MTVZ	Mangateitei	3.97	246	P	Pn	05 26 11.3	+2.5
MKAZ	Moumakai	4.05	280	Pn	Pn	05 26 10.1	+0.2
MKAZ	Moumakai	4.05	280	P	Pn	05 26 10.3	+0.3
BFZ	Birch Farm	4.13	226	Pn	Pn	05 26 09.7	-1.2
PRWZ	Pori Road	4.21	229	Pn	Pn	05 26 12.2	+0.2
PRWZ	Pori Road	4.21	229	P	Pn	05 26 12.4	+0.4
HIZ	Hauiti	4.23	260	P	Pn	05 26 13.9	+1.5
POWZ	Post Office Ro	4.23	232	Pn	Pn	05 26 13.7	+1.2
POWZ	Post Office Ro	4.23	232	P	Pn	05 26 13.6	+1.1
TIWZ	Tintock	4.39	228	Pn	Pn	05 26 14.1	-0.6
TIWZ	Tintock	4.39	228	P	Pn	05 26 14.3	-0.4
VRZ	Vera Road	4.42	252	P	Pn	05 26 18.3	+3.4
ABAZ	Army Bay	4.44	285	P	Pn	05 26 16.1	+0.8
WAZ	Wanganui	4.45	244	Pn	Pn	05 26 18.1	+2.6
WAZ	Wanganui	4.45	244	P	Pn	05 26 18.2	+2.8
MRZ	Mangatainoka R	4.51	231	Pn	Pn	05 26 15.9	-0.3
MRZ	Mangatainoka R	4.51	231	P	Pn	05 26 15.9	-0.3
TMWZ	Te Maipa	4.61	224	Pn	Pn	05 26 16.8	-0.8
HOWZ	Holdsworth Sta	4.69	229	Pn	Pn	05 26 17.6	-1.1
OGWZ	Otaki Gorge	4.85	231	Pn	Pn	05 26 20.3	-0.6
MTW	Mount Morrison	4.86	226	Pn	Pn	05 26 19.7	-1.3
TRWZ	Traveller	4.92	223	Pn	Pn	05 26 21.8	-0.1
PKE	Pukeiti	5.02	253	P	Pn	05 26 26.3	+3.1
KHEZ	Kahui Hut	5.02	252	P	Pn	05 26 26.2	+2.9
KIW	Kapiti Island	5.04	232	Pn	Pn	05 26 23.7	+0.2
KIW	Kapiti Island	5.04	232	P	Pn	05 26 23.3	-0.2
WCZ	Waipu Caves	5.05	291	P	Pn	05 26 24.5	+0.9
PAWZ	Paruwai Farm	5.05	225	Pn	Pn	05 26 22.6	-1.2
CAW	Cannon Point	5.09	229	Pn	Pn	05 26 23.8	-0.3
MSWZ	Moikau Station	5.18	226	Pn	Pn	05 26 23.3	-2.1
PLWZ	Palliser	5.28	224	Pn	Pn	05 26 25.1	-1.7
TCW	Tory Channel	5.63	232	Pn	Pn	05 26 30.6	-1.0
DUWZ	D'Urville Isla	5.65	237	Pn	Pn	05 26 32.4	+0.6
DUWZ	D'Urville Isla	5.65	237	P	Pn	05 26 32.4	+0.6
OUZ	Omahuta	5.92	295	P	Pn	05 26 36.7	+1.1
NNZ	Nelson	6.21	236	Pn	Pn	05 26 39.4	-0.2
CTZ	Chatham Island	6.33	158	Pn	Pn	05 26 45.0	+3.8

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*NIED **27** 05:32:00, 36°.90N×141°.10E, h50km, Mw3.7 Best double couple: M0 4.44000×10^{14} NP1:φs311.00000°, δ38.00000°, λ-175.00000°. NP2:φs217.00000°, δ87.00000°, λ-52.00000°.*

*IDC **27** 05:32:48.8±2.2, 37°.00N×141°.68E, h0km, mb3.7/4, mb1 3.8/6, mb1mx3.4/69, mbtmp3.7/6, ML3.3/2, MS2.8/3, Ms1 2.8/3, ms1mx2.4/60, Error ellipse: s-maj=53.8km s-min=27.3km az=60.0*

*ISCJB **27** 05:32:56.2±1.0, 36°.86N±0°.05×141°.11E±0°.09, h51km±5km, mb3.7/4, MS3.7/1, Error ellipse: s-maj=12.7km s-min=7.7km az=14.8*

*JMA **27** 05:32:57.0±0.1, 36°.88N×141°.06E, h50km±1km, M3.5*

JMA Felt I J1.

ISC 27 05:32:56.6±1.7, **36°.86N**±0°.06×**141°.2E**±0°.1, **h42**km±11km, **n22**, σ**1^{s}10**/23, **mb3.7**/4, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.39	309	P	Pn	05 33 06.1	0.0
ONAJ				S	Sn	05 33 12.5	-0.3
JFFD	Fukushimafurud	0.54	296	P	Pn	05 33 07.8	-0.3
JFFD				S	Sn	05 33 15.1	-1.0
JHO	Hitachi	0.54	243	P	Pn	05 33 07.9	-0.1
JHO				S	Sn	05 33 15.3	-0.8
JFK	Kawauchi	0.56	335	P	Pn	05 33 08.2	-0.2
JFK				S	Sn	05 33 16.1	-0.6
JHYU	Hitachinakayam	0.70	223	P	Pn	05 33 10.0	-0.1
JFT	Otama	0.94	315	P	Pn	05 33 13.7	+0.3
JFT				S	Sn	05 33 25.2	-0.5
JMM	Marumori	1.05	343	P	Pn	05 33 14.7	-0.2
JMM				S	Sn	05 33 27.7	-0.7
JFY	Yanaizu	1.30	296	P	Pn	05 33 18.0	-0.3
JFY				S	Sn	05 33 33.8	-0.6
MJAR	Matsushiro Arr	2.40	263	Pn	Pn	05 33 33.9	+0.4
	6.6nm,0.3s,baz=83,slow=15,SNR=31						
MJAR				LR	LR	05 34 51.2	
	comp=Z,61nm,21.9s,baz=70,slow=44						
MAT	Matsushiro	2.40	263	P	Pn	05 33 34.2	+0.7
MAT				S	Sn	05 33 59.8	-1.9
KSRS	Korea Array	10.59	277	Pn	Pn	05 35 29.1	+3.4
	0.2nm,0.3s,baz=93,slow=14,SNR=6.1						
KSRS				LR	LR	05 39 34.2	
	comp=Z,21nm,19.2s,baz=85,slow=37						
SONM	Songino Array	27.73	304	P	P	05 38 42.5	+1.4
	0.9nm,0.6s,baz=96,slow=9.3,SNR=5.7						
H11N2	WAKE ISLAND Hy	28.22	120	T	T	06 08 26.0	
	baz=314,slow=75,SNR=26						
H11N1	WAKE ISLAND Hy	28.23	120	T	T	06 08 53.7	
	baz=314,slow=75,SNR=31						
H11N3	WAKE ISLAND Hy	28.24	120	T	T	06 08 27.7	
	baz=314,slow=75,SNR=30						
H11S1	WAKE ISLAND Hy	28.93	122	T	T	06 09 35.9	
	baz=316,slow=74,SNR=37						
H11S3	WAKE ISLAND Hy	28.93	122	T	T	06 09 42.3	
	baz=316,slow=74,SNR=22						
H11S2	WAKE ISLAND Hy	28.94	122	T	T	06 09 38.5	
	baz=316						
MKAR	Makanchi Array	44.05	302	P	P	05 40 59.5	-0.7
	0.5nm,0.6s,baz=95,slow=8.7,SNR=2.9						
KURBB	Kurchatov Arra	45.96	308	P	P	05 41 14.2	-1.1
	0.6nm,0.5s,baz=84,slow=8.1,SNR=6.4						
WRA	Warramunga Arr	56.86	188	P	P	05 42 36.9	-0.2
	0.8nm,0.6s,baz=6.5,slow=7.3,SNR=8.7						
MLR	Muntele Rosu	79.40	320	LR	LR	06 22 23.4	
	comp=Z,30nm,18.2s,baz=359,slow=37						

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*WEL **27** 05:34:59.0, 38°S±9°×18°0W±°, h33km, ML4.4/48*

*NEIC **27** 05:35:00.4±0.0, 37°.62S×179°.80W, h33km, mb4.4/5, ML4.3(WEL), After WEL.*

*IDC **27** 05:35:00.8±4.0, 37°.06S×179°.53E, h0km, mb4.3/2, mb1 4.5/3, mb1mx3.8/38, mbtmp4.2/3, ML3.7/1, MS3.4/1, Ms1 3.4/1, ms1mx2.5/38, Error ellipse: s-maj=93.4km s-min=37.1km az=135.0*

ISC 27 05:34:56.3±1.9, **38°.08S**±0°.04×**179°.87W**±0°.06, **h2**km±10km, **n173**, σ**2^{s}21**/198, **mb4.4**/8, **East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.38	280	Pn	Pg	05 35 23.3	+0.5
WMGZ				Sn	Sg	05 35 41.3	+0.6
WMGZ	Waiomatatini S	1.38	280	P	Pg	05 35 23.4	+0.5
WMGZ				S	Sg	05 35 41.3	+0.6
PUZ	Puketiti	1.48	270	Pn	Pg	05 35 25.3	+0.7
PUZ				Sn	Sg	05 35 44.4	+0.6
PUZ	Puketiti	1.48	270	P	Pg	05 35 25.6	+1.0
PUZ				S	Sg	05 35 45.1	+1.3
MXZ	Matakaoa Point	1.54	289	ePn	Pb	05 35 24.5	-1.0
MXZ				eSn	Sn	05 35 42.7	-2.5
MXZ	Matakaoa Point	1.54	289	P	Pb	05 35 24.6	-0.8
MXZ				S	Sn	05 35 43.0	-2.2
CNGZ	Carnagh Statio	1.57	255	Pn	Pg	05 35 28.6	+2.4
CNGZ	Carnagh Statio	1.57	255	P	Pg	05 35 28.7	+2.4
PKGZ	Pakihiroa	1.64	276	P	Pb	05 35 27.0	-0.2
TWGZ	Tauwhareparae	1.70	266	Pn	Pg	05 35 29.2	+0.4
TWGZ	Tauwhareparae	1.70	266	P	Pg	05 35 29.2	+0.4
TWGZ				S	Sg	05 35 51.1	+0.2
TKGZ	Te Karaka	1.83	258	P	Pg	05 35 31.5	+0.1
TKGZ				S	Sg	05 35 55.7	+0.5
HAZ	Te Kaha	1.89	279	P	Pb	05 35 30.8	-0.7
RUGZ	Raukumara Rang	1.94	273	P	Pb	05 35 31.5	-1.0
PRGZ	Paritu Road	1.95	244	Pn	Pg	05 35 34.6	+0.9
PRGZ	Paritu Road	1.95	244	P	Pg	05 35 35.4	+1.7
RIGZ	Rimuhau	1.96	251	P	Pg	05 35 33.7	-0.2
RIGZ				S	Sg	05 35 59.5	+0.1
MHGZ	Mahia Peninsul	2.04	238	Pn	Pg	05 35 35.9	+0.4
MHGZ	Mahia Peninsul	2.04	238	P	Pg	05 35 35.9	+0.4
MWZ	Matawai	2.07	262	ePn	Pb	05 35 34.0	-0.6
MWZ				eSn	Sb	05 36 01.1	+0.4
MWZ	Matawai	2.07	262	P	Pb	05 35 34.0	-0.6
MWZ				S	Sb	05 35 59.9	-0.8
KNZ	Kokohu	2.14	243	ePn	Pg	05 35 36.7	-0.7
KNZ				eSn	Sg	05 36 05.1	-0.1
KNZ	Kokohu	2.14	243	P	Pg	05 35 36.8	-0.6
RAGZ	Rawiri	2.18	258	Pn	Pb	05 35 36.5	0.0
RAGZ	Rawiri	2.18	258	P	Pb	05 35 36.4	0.0
SNGZ	Shannon Statio	2.30	252	Pn	Pb	05 35 38.5	0.0
SNGZ	Shannon Statio	2.30	252	P	Pb	05 35 38.7	+0.1
SNGZ				S	Sb	05 36 07.4	-0.1
URZ	Urewera	2.39	265	Pn	Pb	05 35 39.1	-0.9
	21nm,0.3s,baz=320,slow=0.5,SNR=102						
URZ				Sn	Sb	05 36 07.4	-2.5
	63nm,0.3s,baz=272,slow=23,SNR=37						
URZ	Urewera	2.39	265	ePn	Pb	05 35 38.9	-1.0
URZ				eSn	Sb	05 36 09.3	-0.6
URZ	Urewera	2.39	265	P	Pb	05 35 39.1	-0.9
URZ				S	Sb	05 36 07.7	-2.1
WHHZ	Waihua	2.48	246	P	Pb	05 35 42.0	+0.5
WHHZ	Waihua	2.48	246	P	Sb	05 36 14.1	+1.6
WHRZ	Whale Island	2.50	274	P	Pb	05 35 40.2	-1.8
RAHZ	Arahi	2.53	250	P	Pb	05 35 42.2	-0.2
RAHZ	Arahi	2.53	250	P	Sb	05 36 14.4	+0.4
RTZ	Ruatahuna	2.53	257	P	Pb	05 35 41.9	-0.7
MUGZ	Murupara	2.67	261	P	Pb	05 35 43.1	-1.8
EDRZ	Edgecumbe	2.68	268	P	Pb	05 35 42.2	-2.8
MTHZ	Maungataniwha	2.69	252	P	Pb	05 35 44.3	-0.9
MTHZ	Maungataniwha	2.69	252	P	Sn	05 36 17.3	+3.4
ARHZ	Aropaoanui	2.72	243	Pn	Pb	05 35 45.4	-0.3
ARHZ	Aropaoanui	2.72	243	P	Pb	05 35 45.4	-0.3
NMHZ	Naumai	2.79	248	Pn	Pb	05 35 46.2	-0.8
NMHZ	Naumai	2.79	248	P	Pb	05 35 45.8	-1.2
OPRZ	Ohinepanea	2.84	274	P	Pn	05 35 43.5	+0.9
RRRZ	Republican Roa	2.86	264	P	Pn	05 35 44.8	+1.8
TARZ	Mount Tarawera	2.86	266	Pn	Pb	05 35 45.1	-3.1
TARZ	Mount Tarawera	2.86	266	P	Pb	05 35 45.4	-2.8
MCHZ	McNeill Hill	3.01	242	Pn	Pb	05 35 49.0	-1.6
MCHZ	McNeill Hill	3.01	242	P	Pb	05 35 49.0	-1.6
MRHZ	Matea Rd	3.01	254	P	Pb	05 35 48.3	-2.3
BKZ	Black Stump Fm	3.05	248	ePn	Pb	05 35 48.8	-2.5
BKZ				eSn	Sb	05 36 27.3	-1.6
BKZ	Black Stump Fm	3.05	248	P	Pb	05 35 48.9	-2.3
KAHZ	Kahuranaki	3.06	235	Pn	Pb	05 35 49.4	-2.0
KAHZ	Kahuranaki	3.06	235	P	Pb	05 35 49.6	-1.9
KARZ	Kaharoa	3.07	270	P	Pn	05 35 47.0	+1.2
TGRZ	Tauranga	3.08	275	P	Pn	05 35 46.8	+0.9
NGRZ	Ngongotaha	3.11	268	P	Pn	05 35 48.7	+2.3
KWHZ	Kaweka Forest	3.19	244	P	Pb	05 35 51.1	-2.7
PXZ	Pawanui	3.20	232	eSn	Sb	05 36 33.4	+0.1
PXZ	Pawanui	3.20	232	P	Pb	05 35 50.7	-3.1
KMRZ	Kaimai	3.32	273	P	Pn	05 35 50.5	+1.3
KRHZ	Kereru	3.32	241	P	Pb	05 35 52.8	-3.1
RITZ	Rihia Road	3.47	254	P	Pb	05 35 56.0	-2.4
BHHZ	Black Hill Sta	3.48	245	Pn	Pb	05 35 54.9	-3.7
BHHZ	Black Hill Sta	3.48	245	P	Pb	05 35 54.9	-3.7
PRHZ	Porangahau	3.48	230	Pn	Pn	05 35 54.6	+3.1
PRHZ	Porangahau	3.48	230	P	Pn	05 35 54.7	+3.1
WPHZ	Waipukurau	3.49	234	P	Pb	05 35 54.8	-3.9
RATZ	Rangitukua	3.51	256	P	Pb	05 35 57.9	-1.2
PNHZ	Pukenui	3.57	238	Pn	Pn	05 35 55.9	+3.2
PNHZ	Pukenui	3.57	238	P	Pb	05 35 56.0	-4.1
KRVZ	Karewarewa	3.66	253	Pn	Pn	05 35 56.8	+2.8
KRVZ	Karewarewa	3.66	253	P	Pn	05 35 56.9	+2.8
OTVZ	Oturere	3.66	252	ePn	Pn	05 35 57.0	+3.0
MOVZ	Moawhango	3.67	248	ePn	Pb	05 35 57.8	-4.0
MOVZ	Moawhango	3.67	248	P	Pn	05 35 57.4	+3.3
TUVZ	Tukino	3.70	250	P	Pb	05 35 58.2	-4.3
ANWZ	Angora Road	3.70	229	P	Pn	05 35 57.1	+2.7
WTVZ	West Tongariro	3.71	252	P	Pn	05 35 57.9	+3.2
NGZ	Ngauruhoe	3.71	252	P	Pb	05 35 59.0	-3.6
WHVZ	Whangaehu Hut	3.75	250	P	Pb	05 36 00.5	-2.9
KUZ	Kuaotunu	3.76	289	ePn	Pn	05 35 54.8	-0.5
KUZ	Kuaotunu	3.76	289	P	Pn	05 35 54.6	-0.7
WNVZ	Wahianoa	3.76	249	ePn	Pn	05 35 58.4	+3.0
COVZ	Chateau Observ	3.76	251	P	Pb	05 36 01.2	-2.2
FWVZ	Far West T-bar	3.77	251	P	Pb	05 35 59.7	-4.0
TRVZ	Turoa	3.79	250	P	Pb	05 36 00.3	-3.6
DVHZ	Dannevirke	3.79	233	Pn	Pn	05 35 58.5	+2.8
DVHZ	Dannevirke	3.79	233	P	Pn	05 35 58.6	+2.8
TSZ	Takapari Road	3.80	237	Pn	Pn	05 35 58.9	+3.1
TSZ	Takapari Road	3.80	237	P	Pn	05 35 59.0	+3.1
PKVZ	Pokaka	3.93	251	P	Pb	05 36 02.1	-4.3
BFZ	Birch Farm	3.97	228	ePn	Pn	05 36 00.0	+1.8
BFZ				eSn	Sn	05 36 47.7	+2.3
BFZ				eSn	Sb	05 36 48.9	-6.7
BFZ	Birch Farm	3.97	228	P	Pn	05 36 00.1	+1.8
PRWZ	Pori Road	4.06	231	Pn	Pn	05 36 02.3	+2.9
PRWZ	Pori Road	4.06	231	P	Pn	05 36 02.9	+3.4
MKAZ	Moumakai	4.07	282	ePn	Pn	05 35 59.0	-0.5
MKAZ	Moumakai	4.07	282	P	Pn	05 35 59.7	+0.2
POWZ	Post Office Ro	4.10	234	Pn	Pn	05 36 03.4	+3.5
POWZ	Post Office Ro	4.10	234	P	Pn	05 36 03.4	+3.5
HIZ	Hauiti	4.17	262	ePn	Pn	05 36 03.5	+2.6
HIZ	Hauiti	4.17	262	P	Pn	05 36 03.7	+2.8
WIAZ	Waiheke Island	4.18	286	P	Pn	05 36 01.2	+0.1
TIWZ	Tintock	4.25	229	Pn	Pn	05 36 04.1	+2.1
TIWZ	Tintock	4.25	229	P	Pn	05 36 04.7	+2.7
WAZ	Wanganui	4.35	246	Pn	Pb	05 36 09.0	-4.4
WAZ	Wanganui	4.35	246	P	Pb	05 36 08.2	-5.1
MRZ	Mangatainoka R	4.37	232	ePn	Pn	05 36 05.9	+2.3
MRZ	Mangatainoka R	4.37	232	P	Pn	05 36 06.1	+2.5
TMWZ	Te Maipa	4.46	226	Pn	Pn	05 36 06.2	+1.4
TMWZ	Te Maipa	4.46	226	P	Pn	05 36 07.0	+2.1
AWAZ	Awhitu Peninsu	4.48	281	P	Pn	05 36 06.3	+1.2
HOWZ	Holdsworth Sta	4.54	230	Pn	Pn	05 36 07.8	+1.8
HOWZ	Holdsworth Sta	4.54	230	P	Pn	05 36 08.0	+1.9
OGWZ	Otaki Gorge	4.71	233	Pn	Pn	05 36 10.9	+2.6
OGWZ	Otaki Gorge	4.71	233	P	Pn	05 36 11.0	+2.6
MTW	Mount Morrison	4.71	228	ePn	Pn	05 36 09.6	+1.2
MTW				eSn	Sn	05 37 05.8	+2.2
MTW	Mount Morrison	4.71	228	P	Pn	05 36 09.6	+1.2
TRWZ	Traveller	4.76	225	P	Pn	05 36 10.6	+1.5
PREZ	Palmer Road	4.84	253	P	Pb	05 36 16.0	-5.7
PAWZ	Paruwai Farm	4.90	226	eSn	Sn	05 37 12.2	+3.9
PAWZ	Paruwai Farm	4.90	226	P	Pn	05 36 12.8	+1.8
KIW	Kapiti Island	4.90	234	ePn	Pn	05 36 13.4	+2.5
KIW				eSn	Sn	05 37 11.4	+3.2
KIW	Kapiti Island	4.90	234	P	Pn	05 36 13.5	+2.5
KHEZ	Kahui Hut	4.94	254	P	Pn	05 36 15.6	+4.0
PKE	Pukeiti	4.94	255	P	Pb	05 36 17.4	-6.0
CAW	Cannon Point	4.94	231	ePn	Pn	05 36 13.4	+1.9
CAW				eSn	Sb	05 37 16.4	-7.0
CAW	Cannon Point	4.94	231	P	Pn	05 36 13.4	+1.9
MSWZ	Moikau Station	5.02	227	Pn	Pn	05 36 13.3	+0.7
MSWZ	Moikau Station	5.02	227	P	Pn	05 36 13.4	+0.7
WCZ	Waipu Caves	5.10	293	P	Pn	05 36 13.4	-0.3
PLWZ	Palliser	5.12	226	P	Pn	05 36 15.0	+1.0
BHW	Baring Head	5.24	229	P	Pn	05 36 16.3	+0.7
SNZO	South Karori	5.28	231	ePn	Pn	05 36 17.6	+1.4
SNZO				eSn	Sn	05 37 20.4	+2.9
TCW	Tory Channel	5.49	234	ePn	Pn	05 36 21.0	+2.0
TCW				eSn	Sn	05 37 27.6	+4.8
TCW	Tory Channel	5.49	234	P	Pn	05 36 21.1	+2.0
DUWZ	D'Urville Isla	5.52	239	ePn	Pn	05 36 21.7	+2.2
DUWZ	D'Urville Isla	5.52	239	P	Pn	05 36 21.5	+2.0
TUWZ	Tuamarina	5.82	233	ePn	Pn	05 36 24.9	+1.4
OUZ	Omahuta	5.98	297	ePn	Pn	05 36 25.8	0.0
BSWZ	Blackbirch Sta	6.02	231	P	Pn	05 36 28.6	+2.3
CTZ	Chatham Island	6.16	157	Pn	Pn	05 36 35.6	+7.3
QRZ	Quartz Range	6.49	243	ePn	Pn	05 36 33.7	+0.9
KHZ	Kahutara	6.64	227	ePn	Pn	05 36 36.5	+1.6
KHZ				eSn	Sn	05 37 51.5	+0.4
KHZ	Kahutara	6.64	227	P	Pn	05 36 36.3	+1.4
THZ	Tophouse	6.66	234	ePn	Pn	05 36 36.4	+1.2
THZ				eSn	Sn	05 37 48.3	-3.3
THZ	Tophouse	6.66	234	P	Pn	05 36 36.3	+1.2
LTZ	Lake Taylor	7.61	229	ePn	Pn	05 36 48.9	+0.7
LTZ	Lake Taylor	7.61	229	P	Pn	05 36 49.2	+1.0
AKCZ	Akaroa Harbour	7.95	221	P	Pn	05 36 55.1	+2.3
MQZ	McQueen's Vall	7.97	223	ePn	Pn	05 36 54.2	+1.1
MQZ				eSn	Sn	05 38 21.0	-2.8
MQZ	McQueen's Vall	7.97	223	P	Pn	05 36 54.3	+1.2
OXZ	Oxford	8.07	227	ePn	Pn	05 36 57.3	+2.8
OXZ				eSn	Sn	05 38 23.0	-3.3
RPZ	Rata Peaks	8.88	228	Pn	Pn	05 37 07.2	+1.6
	0.7nm,0.3s,baz=53,slow=5.9,SNR=2.8						
RPZ				Sn	Sn	05 38 41.6	-4.6
	3.2nm,0.3s,baz=360,slow=22,SNR=19						
RPZ	Rata Peaks	8.88	228	ePn	Pn	05 37 07.0	+1.4
RPZ				eSn	Sn	05 38 44.1	-2.1
LBZ	Lake Benmore	9.78	227	ePn	Pn	05 37 18.6	+0.6
ODZ	Otahua Downs	9.94	223	ePn	Pn	05 37 22.7	+2.6
DZM	Mont Dzumac	19.84	320	LR	LR	05 45 17.7	
	comp=Z,104nm,18.6s,baz=208,slow=33						
CTAO	Charters Tower	34.36	292	eP	P	05 41 45.2	+0.5
	3.3nm,0.9s						
COEN	Coen	40.59	296	eP	P	05 42 37.3	-0.2
	9.6nm,0.8s						
AS01	Alice Springs	41.74	276	eP	P	05 42 46.1	-0.9
AS31	Alice Springs	41.78	276	eP	P	05 42 47.6	+0.3
	1.3nm,0.6s						
ASAR	Alice Springs	41.78	276	P	P	05 42 47.4	+0.1
	2.8nm,0.6s,baz=122,slow=8.1,SNR=30						
FORT	Forrest	43.09	264	eP	P	05 42 59.3	+1.4
	32nm,1.2s						
WB2	Warramunga Arr	43.45	281	eP	P	05 43 00.8	-0.1
WRAB	Tennant Creek	43.45	281	eP	P	05 43 01.1	+0.2
	6.0nm,0.6s						
WR1	Warramunga Arr	43.46	281	eP	P	05 43 00.8	-0.2
WRA	Warramunga Arr	43.46	281	P	P	05 43 00.8	-0.2
	2.2nm,0.4s,baz=120,slow=7.8,SNR=40						
KHLU	Kahalu'u	61.64	26	eP	P	05 45 15.3	-0.3
	54nm,1.1s						
VPEM	Volcano Peak E	93.38	46	eP	P	05 48 14.1	+1.1
ARA0	ARCESS Array S	145.67	345	ePKPbc	PKPab	05 54 36.7	+0.8
ARCES	ARCESS Array B	145.67	345	PKP	PKPab	05 54 36.7	+0.9
	1.5nm,0.6s,baz=46,slow=2.6,SNR=9.5						

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*ISCJB **27** 06:10:49.8±0.2, 24°.19S±0°.02×67°.13W±0°.03, h178km±2km, mb4.3/130, Error ellipse: s-maj=4.7km s-min=2.7km az=166.0*

*NEIC **27** 06:10:49.8±0.4, 24°.19S×66°.97W, h157km±3km, mb4.4/129, Error ellipse: s-maj=5.3km s-min=3.5km az=80.0*

*SJA **27** 06:10:50.5±0.8, 24°.18S×67°.17W, h186km±8km, ML3.4, MW4.6*

*GUC **27** 06:10:51.9±0.6, 24°.17S×67°.42W, h189km±14km, ML4.9*

*IDC **27** 06:10:51.4±1.8, 24°.11S×66°.97W, h172km±15km, mb3.9/10, mb1 4.1/15, mb1mx3.9/43, mbtmp4.4/15, MS3.1/2, Ms1 3.1/2, ms1mx2.6/39, Error ellipse: s-maj=18.2km s-min=12.6km az=70.0*

ISC 27 06:10:50.6±0.7, **24°.23S**±0°.04×**67°.17W**±0°.04, **h168**km±6km, **n477**, σ**1^{s}09**/517, **mb4.4**/130, **10C-1D**, **Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLA	San Lorenzo	1.59	108	eP	Pn	06 11 25.4	+2.8
SLA				IAML		06 11 26.5	
	comp=Z,597nm,0.6s						
SLA				i S	Sn	06 11 50.5	+3.1
HJA	Humahuaca	1.91	58	i P	Pn	06 11 28.0	+1.8
HJA				IAML		06 11 30.6	
	comp=Z,289nm,0.5s						
GO02	Mina Guanaco	2.39	247	ePn	Pn	06 11 33.8	+2.2
GO02				eSn	Sn	06 12 06.0	+2.6
GO02	Mina Guanaco	2.39	247	eP	Pn	06 11 33.5	+1.9
GO02				eS	Sn	06 12 05.4	+2.0
GO02				IAML		06 12 06.9	

	comp=E,6μm,0.5s						
YJA	Yavi	2.55	37	*e*P	Pn	06 11 35.6	+1.9
YJA				*i* S	Sn	06 12 08.5	+1.5
YJA				IAML		06 12 11.8	
	comp=Z,51nm,0.7s						
PB06	IPOC Station P	2.68	304⇑	*e*P	Pn	06 11 36.4	+1.5
PB06				*i* S	Sn	06 12 09.9	+0.6
PB06				IAML		06 12 12.0	
	comp=N,3μm,0.2s						
PB14	IPOC Station P	2.98	262	*i* P	Pn	06 11 40.0	+1.3
PB14				*i* S	Sn	06 12 17.2	+1.2
PB14	IPOC Station P	2.98	262⇑	*i*P	Pn	06 11 40.0	+1.3
PB14				*i* S	Sn	06 12 16.0	0.0
PB14				IAML		06 12 18.0	
	comp=E,2μm,0.4s						
AHML	Horco Molle	3.04	147	*i* P	Pn	06 11 40.8	+1.6
AHML				*i* S	Sn	06 12 18.5	+1.4
AHML				IAML		06 12 21.1	
	comp=Z,56nm,0.9s						
PB09	IPOC Station P	3.08	321⇑	*e*P	Pn	06 11 41.8	+1.9
PB09				*i* S	Sn	06 12 19.6	+1.3
PB09				IAML		06 12 20.9	
	comp=N,2μm,0.5s						
PB05	IPOC Station P	3.10	296⇑	*i*P	Pn	06 11 41.3	+1.2
PB05				*i* S	Sn	06 12 17.7	-0.9
PB05				IAML		06 12 22.0	
	comp=E,1μm,0.4s						
PB10	IPOC Station P	3.18	282	*e*Pn	Pn	06 11 42.4	+1.5
PB10				*e*Sn	Sn	06 12 20.1	0.0
PB10	IPOC Station P	3.18	282	*e*P	Pn	06 11 42.4	+1.5
PB10				*i* S	Sn	06 12 20.1	0.0
PB10	IPOC Station P	3.18	282⇑	*e*P	Pn	06 11 42.1	+1.2
PB10				*e*S	Sn	06 12 20.3	+0.2
PB10				IAML		06 12 25.3	
	comp=E,1μm,0.3s						
PB03	IPOC Station P	3.22	312⇑	*i*P	Pn	06 11 42.9	+1.3
PB03				*i* S	Sn	06 12 20.5	-0.7
PB03				IAML		06 12 24.0	
	comp=N,2μm,0.2s						
PB04	IPOC Station P	3.33	304	*e*Pn	Pn	06 11 44.1	+1.1
PB04				*e*Sn	Sn	06 12 23.5	-0.2
PB04	IPOC Station P	3.33	304⇑	*e*P	Pn	06 11 44.0	+1.1
PB04				*i* S	Sn	06 12 22.8	-0.8
PB04				IAML		06 12 25.9	
	comp=E,3μm,0.4s						
PB07	IPOC Station P	3.53	314⇑	*e*P	Pn	06 11 46.5	+1.0
PB07				*i* S	Sn	06 12 26.9	-1.5
PB01	IPOC Station P	3.83	326	*e*Pn	Pn	06 11 49.8	+0.5
PB01				*e*Sn	Sn	06 12 33.5	-1.4
CPCH	Copiapo	4.24	222	*e*P	Pn	06 11 53.5	-0.9
CPCH				*e*S	Sn	06 12 43.0	-1.2
GO03	Copiap	4.34	219	*e*Pn	Pn	06 11 55.7	-0.1
GO03				*e*Sn	Sn	06 12 46.5	-0.3
GO03	Copiap	4.34	219	*e*P	Pn	06 11 55.7	-0.1
GO03				*i* S	Sn	06 12 46.0	-0.8
CYA	Choya	4.37	164	*i* P	Pn	06 11 57.7	+1.6
CYA				IAML		06 12 00.2	
	comp=Z,11nm,0.2s						
VCA	Vinchina	4.58	191	*e*P	Pn	06 12 01.4	+2.4
VCA				IAML		06 13 20.6	
	comp=Z,53nm,0.3s						
PB11	IPOC Station P	5.01	332	*e*Pn	Pn	06 12 04.0	-0.6
PB11				*e*Sn	Sn	06 12 58.0	-4.5
AGUA	GUANDACOL	5.37	192	*e*P	Pn	06 12 10.9	+1.7
AGUA				*e*S	Sn	06 13 12.3	+1.3
VACH	Vallenar	5.39	216	*i* P	Pn	06 12 08.7	-0.8
VACH				*i* S	Sn	06 13 09.6	-1.8
MNMC	Minye Minye	5.55	336	*e*Pn	Pn	06 12 11.6	-0.3
MNMC				*e*Sn	Sn	06 13 14.2	-1.3
LCO	Las Campanas	5.72	213	*e*Pn	Pn	06 12 12.9	-1.0
LCO				*e*Sn	Sn	06 13 16.8	-2.5
AROD	Rodeo	6.26	199	*e*P	Pn	06 12 22.6	+1.4
AROD				*e*S	Sn	06 13 31.0	-1.3
GO04	Tololo Observa	6.75	208	*e*Pn	Pn	06 12 25.8	-1.7
GO04				*e*Sn	Sn	06 13 40.7	-3.1
TCA	Tanti	7.44	163	*e*P	Pn	06 12 36.0	-0.6
TCA				*e*S	Sn	06 13 55.0	-5.1
RTCV	Cerro Valdivia	7.70	189	*e*P	Pn	06 12 39.8	-0.1
RTCV				*e*S	Sn	06 14 05.0	-1.3
RTLS	Leoncito	7.77	194	*e*P	Pn	06 12 41.6	+0.5
RTLS				*e*S	Sn	06 14 05.5	-2.9
LPAZ	La Paz	7.95	353	P	Pn	06 12 44.5	+0.6
	comp=Z,6.1nm,0.3s,baz=160,slow=6.0,SNR=196						
LPAZ				S	Sn	06 14 11.5	-1.8
	comp=Z,0.5nm,0.3s,baz=336,slow=20,SNR=4.0						
LPAZ				LR	LR	06 17 00.8	
	comp=Z,60nm,18.9s,baz=201,slow=47						
LPAZ	La Paz	7.95	353	*e*Pn	Pn	06 12 43.7	-0.2
LPAZ				S	Sn	06 14 11.5	-1.8
ACAN	Cantantal	8.02	180	*e*P	Pn	06 12 43.2	-0.9
ACAN				*e*S	Sn	06 14 08.7	-5.1
AUSP	Uspallata	8.20	193	*e*P	Pn	06 12 47.3	+0.5
MRA	San Martin	8.26	171	*e*P	Pn	06 12 46.1	-1.3
ARCO	CERRO ARCO	8.72	190	*e*P	Pn	06 12 53.9	+0.4
AAGR	Agrelo	8.94	189	*e*P	Pn	06 12 56.5	0.0
CPUP	Villa Florida	9.15	105	P	Pn	06 12 56.9	-2.2
	comp=Z,0.4nm,0.3s,baz=284,slow=12,SNR=15						
CPUP	Villa Florida	9.15	105	*e*Pn	Pn	06 12 57.1	-1.9
PEL	Peldehue	9.40	198	*e*Pn	Pn	06 13 04.3	+1.9
SIV	San Ignacio	9.99	36	P	Pn	06 13 07.9	-2.4
	comp=Z,3.8nm,0.3s,baz=225,slow=12,SNR=109						
GO05	HualaæØ	11.51	200	*e*Pn	Pn	06 13 31.0	+1.1
TRQA	Tornquist	14.48	163	*e*Pn	Pn	06 14 06.3	-1.4
SAML	Samuel	15.66	15	*e*Pn	Pn	06 14 20.9	-1.5
	comp=Z,4.1nm,0.6s						
GO06	Curarrehue	15.74	192	*e*Pn	P	06 14 24.2	+0.6
	comp=Z,21nm,0.8s						
PLCA	Paso Flores	16.70	189	P	Pn	06 14 35.4	+0.5
	comp=Z,0.4nm,0.3s,baz=25,slow=11,SNR=9.1						
PLCA	Paso Flores	16.70	189	*e*P	P	06 14 34.0	-0.3
	comp=Z,15nm,0.6s						
PLCA				*e*PcP	PcP	06 19 14.7	+1.2
SPB	Sao Paulo	18.06	92	*e*P	P	06 14 48.3	-0.9
	comp=Z,17nm,0.6s						
BDFB	Brasilia	19.91	68	P	P	06 15 08.6	-0.9
	comp=Z,5.3nm,0.3s,baz=244,slow=10,SNR=96						
BDFB	Brasilia	19.91	68	*e*P	P	06 15 08.7	-0.9
	comp=Z,113nm,0.8s						
PTGA	Pitinga	24.38	18	P	P	06 15 52.3	-1.1
	comp=Z,1.7nm,0.3s,baz=190,slow=9.0,SNR=8.3						
PTGA	Pitinga	24.38	18	*e*P	P	06 15 52.3	-1.1
	comp=Z,3.9nm,0.8s						
RUSC	La Rusia	30.49	348	*e*P	P	06 16 48.4	0.0
	comp=Z,2.8nm,0.9s						
RUSC				*e*PcP	PcP	06 19 42.5	-1.1
HELC	Santa Helena	31.31	344	*e*P	P	06 16 54.4	-1.1
	comp=Z,7.2nm,0.6s						
PAYG	Puerto Ayora	32.40	313	*e*P	P	06 17 04.0	-0.6
	comp=Z,66nm,1.1s						
RCBR	Riachuelo	35.16	64	*e*P	P	06 17 27.5	-1.1
	comp=Z,41nm,1.5s						
GRGR	Grenville	36.54	9	*e*P	P	06 17 40.1	0.0
	comp=Z,140nm,1.1s						
PMSA	Palmer Station	40.59	178	*e*P	P	06 18 12.9	-0.4
	comp=Z,72nm,1.4s						
OBIP	Obispado Ponce	42.02	1	*e*P	P	06 18 24.5	-1.0
	comp=Z,21nm,1.3s						
061Z	Ochoppi	51.54	344	*e*P	P	06 19 40.2	+0.9
	comp=Z,43nm,1.1s						
TLIG	Tlapa	51.61	321	*e*P	P	06 19 42.3	+2.2
	comp=Z,3.8nm,0.8s						
VNA3	Neumayer Olymp	56.99	161	P	P	06 20 18.7	+0.5
VNA1	Neumayer--Stat	57.19	160	P	P	06 20 20.2	+0.7
ZAIG	Zacatecas	58.01	321	*e*P	P	06 20 28.4	+2.2
	comp=Z,5.4nm,0.9s						
251A	Midway	58.66	342	P	P	06 20 29.4	-0.8
	baz=160						
Z55A	Blythe	58.88	345	P	P	06 20 31.7	0.0
	baz=164						
152A	Waverly Hall	59.01	343	*e*P	P	06 20 32.0	-0.6
	comp=Z,4.9nm,0.7s						
151A	Opelika	59.04	342	P	P	06 20 31.8	-1.0
	baz=160						
249A	Camden	59.05	340	P	P	06 20 32.2	-0.7
	baz=159						
Z54A	Sparta	59.06	345	P	P	06 20 32.6	-0.3
	baz=163						
SNAA	Sanae	59.19	161	P	P	06 20 34.0	+0.5
SNAA	Sanae	59.19	161	LR	LR	06 44 26.8	
	comp=Z,28nm,21.0s,baz=194,slow=34						
SNAA	Sanae	59.19	161	*e*P	P	06 20 33.6	+0.1
	comp=Z,16nm,1.5s						
SNAA				*e*PcP	PcP	06 21 20.6	+0.5
Z53A	Monticello	59.29	344	P	P	06 20 33.7	-0.7
	baz=162						
150A	Eclectic	59.31	342	P	P	06 20 33.8	-0.9
	baz=160						
GOGA	Godfrey	59.38	344	P	P	06 20 34.5	-0.6
	baz=162						
Z52A	Williamson	59.42	343	P	P	06 20 34.4	-1.0
	baz=162						
149A	Jones	59.53	341	P	P	06 20 35.1	-1.1
	baz=159						
Y54A	Tignall	59.63	345	P	P	06 20 36.5	-0.3
	baz=163						
JSC	Jenkinsville	59.71	346	*e*P	P	06 20 37.6	+0.3
	comp=Z,7.1nm,0.9s						
Y53A	Monroe	59.84	344	P	P	06 20 37.6	-0.7
	baz=162						
Z50A	Ashland	59.89	342	P	P	06 20 37.9	-0.8
	baz=160,SNR=5.4						
Z50A	Ashland	59.89	342	*e*P	P	06 20 38.2	-0.5
	comp=Z,7.2nm,1.0s						
Y52A	Lilburn	59.97	344	P	P	06 20 38.4	-0.7
	baz=162						
Y52A	Lilburn	59.97	344	*e*P	P	06 20 38.8	-0.3
	comp=Z,4.7nm,0.9s						
LRAL	Lakeview Retre	60.00	341	P	P	06 20 38.6	-0.8
	baz=159						
LRAL	Lakeview Retre	60.00	341	*e*P	P	06 20 38.7	-0.6
	comp=Z,2.6nm,0.7s						
Z49A	Columbiana	60.01	341	P	P	06 20 38.7	-0.7
	baz=159						
245A	Little AP, Sta	60.01	338	P	P	06 20 38.9	-0.6
	baz=156						
Y51A	Rockmart	60.26	343	P	P	06 20 40.6	-0.6
	baz=161						
244A	Avery, Jackson	60.30	337	P	P	06 20 41.3	-0.1
	baz=155						
342A	Flagon Creek P	60.30	335	P	P	06 20 41.7	+0.3
	baz=153						
X53A	Estanollee	60.38	345	P	P	06 20 41.9	-0.1
	baz=163						
Z47A	Carrollton	60.48	340	P	P	06 20 42.0	-0.7
	baz=158						
Z48A	Northport	60.49	340	P	P	06 20 41.8	-0.8
	baz=158						
KMSC	Kings Mountain	60.55	347	P	P	06 20 43.3	+0.2
	baz=165						
341A	Kurthwood	60.59	334	P	P	06 20 43.5	0.0
	baz=153						
341A	Kurthwood	60.59	334	*e*P	P	06 20 42.4	-1.0
	comp=Z,9.7nm,1.2s						
X52A	Dahlonega	60.62	344	P	P	06 20 43.4	-0.3
	baz=162						
833A	Chaparral WMA,	60.77	327	P	P	06 20 44.7	-0.1
	baz=146						
833A	Chaparral WMA,	60.77	327	*e*P	P	06 20 44.8	+0.1
	comp=Z,9.4nm,0.8s						
X51A	Calhoun	60.84	343	P	P	06 20 44.7	-0.3
	baz=161						
X51A	Calhoun	60.84	343	*e*P	P	06 20 45.3	+0.3
	comp=Z,10nm,0.7s						
242A	Grayson	60.85	336	P	P	06 20 45.5	+0.3
	baz=154						
Y48A	Jasper	60.87	341	P	P	06 20 45.1	-0.1
	baz=159						
X50B	Fort Payne	60.95	343	P	P	06 20 45.2	-0.7
	baz=160						
W53A	Cullowhee	60.99	345	P	P	06 20 45.8	-0.4
	baz=163						
Y47A	UCPARC, Winfie	61.06	340	P	P	06 20 46.4	-0.2
	baz=158						
W52A	Murphy	61.10	344	P	P	06 20 47.0	+0.2
	baz=162						
241A	Mo Tay, Goldon	61.11	335	P	P	06 20 47.8	+0.9
	baz=153						
X49A	Woodville	61.19	342	P	P	06 20 46.7	-0.7
	baz=160						
X48A	Hartselle	61.34	341	P	P	06 20 47.9	-0.4
	baz=159						
X48A	Hartselle	61.34	341	*e*P	P	06 20 48.5	+0.1
	comp=Z,6.5nm,1.0s						
W51A	Cleveland	61.37	344	P	P	06 20 48.2	-0.4
	baz=162						
V53A	Saluda	61.38	346	P	P	06 20 48.4	-0.4
	baz=164						
V53A	Saluda	61.38	346	*e*P	P	06 20 48.4	-0.4
	comp=Z,11nm,1.4s						
W50A	Signal Mountai	61.55	343	P	P	06 20 49.6	-0.3
	baz=161						
W50A	Signal Mountai	61.55	343	*e*P	P	06 20 50.1	+0.3
	comp=Z,8.3nm,0.9s						
CPCT	Cooper Cave	61.59	344	*e*P	P	06 20 50.7	+0.6
	comp=Z,2.7nm,0.8s						
TKL	Tuckaleechee C	61.60	345	*e*P	P	06 20 49.6	-0.6
	comp=Z,11nm,1.4s						
X47A	Russelville	61.64	341	P	P	06 20 49.7	-0.7
	baz=158						
V52A	Sevierville	61.73	345	P	P	06 20 50.4	-0.6
	baz=163						
V52A	Sevierville	61.73	345	*e*P	P	06 20 50.8	-0.3
	comp=Z,4.3nm,0.8s						
SWET	Sewanee	61.74	343	*e*P	P	06 20 50.9	-0.2
	comp=Z,7.4nm,0.8s						
W49A	Belvidere	61.74	342	P	P	06 20 50.4	-0.6
	baz=160						
140A	Cam and Jess,	61.91	335	P	P	06 20 52.2	0.0
	baz=152						
W48A	Pulaski	61.94	342	P	P	06 20 52.0	-0.5
	baz=159						
V50A	Pikevile	61.95	343	P	P	06 20 51.9	-0.5
	baz=161						
U53A	Fall Branch	62.00	346	P	P	06 20 52.6	-0.2
	baz=164						
X45A	UM Field Stati	62.03	339	P	P	06 20 52.4	-0.7
	baz=157						
OXF	Oxford	62.12	339	*e*P	P	06 20 52.8	-0.8
	comp=Z,7.0nm,0.6s						
W47A	Westpoint	62.24	341	P	P	06 20 53.7	-0.8
	baz=159						
V49A	McMinnville	62.25	343	P	P	06 20 53.5	-0.9
	baz=160						
Z40A	Long Farm, Mag	62.39	335	P	P	06 20 56.0	+0.5
	baz=153						
U50A	Jamestown	62.58	344	P	P	06 20 56.6	-0.1
	baz=162						
Y41A	Eaglette Beard	62.65	336	P	P	06 20 57.5	+0.3
	baz=154						
JCT	Junction City	62.76	328	P	P	06 20 58.0	0.0
	baz=146						
JCT	Junction City	62.76	328	*e*P	P	06 20 57.8	-0.2
	comp=Z,7.1nm,0.8s						
V47A	Nunnelly	62.76	341	P	P	06 20 57.0	-0.8
	baz=159						
T51A	Gray	62.89	345	P	P	06 20 57.8	-0.9
	baz=163						
V46A	Holladay	62.91	341	P	P	06 20 58.1	-0.7
	baz=158						
U49A	Red Boiling Sp	62.92	343	P	P	06 20 58.3	-0.5
	baz=161						
WHTX	Lake Whitney,	62.95	331	P	P	06 20 59.0	-0.2
	baz=149						
Y40A	Okolona	63.02	336	P	P	06 20 59.7	+0.1
	baz=153						
U48A	Cassie Pea, Po	63.12	343	P	P	06 20 59.6	-0.6
	baz=160						
WVT	Waverly	63.13	341	P	P	06 20 59.3	-1.0
	baz=159						
WVT	Waverly	63.13	341	*e*P	P	06 20 59.5	-0.8
	comp=Z,9.4nm,0.9s						
T50A	Nancy	63.16	344	P	P	06 20 59.6	-0.9
	baz=162						
U47A	Clarksville	63.26	342	P	P	06 21 00.2	-0.9
	baz=159,SNR=5.4						
T49A	Edmonton	63.41	344	P	P	06 21 01.4	-0.7
	baz=161						
T49A	Edmonton	63.41	344	*e*P	P	06 21 01.4	-0.7
	comp=Z,8.3nm,1.1s						
U46A	Springville	63.44	341	P	P	06 21 01.9	-0.4
	baz=158						
MIAR	Mount Ida	63.60	336	P	P	06 21 03.2	-0.2
	baz=153						
MIAR	Mount Ida	63.60	336	*e*P	P	06 21 03.5	0.0
	comp=Z,3.4nm,0.8s						
U45A	Rockin P Farm,	63.61	341	P	P	06 21 03.1	-0.3
	baz=158						
T48A	Bowling Green	63.64	343	P	P	06 21 02.7	-0.9
	baz=160						
S50A	Richmond	63.67	345	P	P	06 21 03.1	-0.7
	baz=162						
W41B	Gary Mavity, V	63.68	337	P	P	06 21 03.5	-0.4
	baz=154						
T47A	Sharon Grove	63.72	342	P	P	06 21 03.2	-1.0
	baz=160						
T47A	Sharon Grove	63.72	342	*e*P	P	06 21 03.7	-0.4
	comp=Z,7.8nm,0.9s						
TXAR	Lajitas Array	63.77	325	P	P	06 21 05.4	+0.6
	comp=Z,1.1nm,0.8s,baz=149,slow=8.2,SNR=14						
TX31	Lajitas Ar. Si	63.77	325	*e*P	P	06 21 05.5	+0.7
X39A	Fountain Ranch	63.77	335	P	P	06 21 04.7	+0.1
	baz=152,SNR=6.4						
WHAR	Wooly Hollow	63.80	337	*e*P	P	06 21 05.3	+0.6
	comp=Z,7.2nm,1.3s						
T46A	Princeton	64.00	342	P	P	06 21 05.2	-0.7
	baz=159						
S48A	Wiedeman Farm,	64.07	343	P	P	06 21 05.6	-0.8
	baz=161						
R51A	Hillsboro	64.08	346	P	P	06 21 05.8	-0.7
	baz=163						
V41A	Mountainview	64.20	338	P	P	06 21 06.7	-0.6
	baz=154						
S47A	Hartford	64.23	343	P	P	06 21 06.2	-1.3
	baz=160						
W39A	Magazine	64.26	336	P	P	06 21 07.9	+0.3
	baz=153,SNR=6.2						
W39A	Magazine	64.26	336	*e*P	P	06 21 08.6	+0.9
	comp=Z,7.7nm,0.8s						
U42A	Revenden	64.40	339	P	P	06 21 07.9	-0.7
	baz=156						
R49A	Shelbyville	64.44	344	P	P	06 21 07.8	-1.0
	baz=162						
V40A	Witts Springs	64.45	337	P	P	06 21 08.5	-0.4
	baz=154						
ABTX	Abilene, Hawle	64.47	330	P	P	06 21 08.6	-0.6
	baz=147						
PBMO	Poplar Bluff	64.52	339	*e*P	P	06 21 09.2	-0.1
	comp=Z,6.4nm,1.0s						
T44A	Benton	64.54	340	P	P	06 21 09.1	-0.3
	baz=157						
S46A	Don Dixon Farm	64.55	342	P	P	06 21 08.7	-0.8
	baz=159						
U41A	Viola	64.62	338	P	P	06 21 09.4	-0.7
	baz=155						
WCI	Wyandotte Cave	64.67	343	P	P	06 21 09.4	-0.9
	baz=160						
Q51A	Peebles	64.72	346	P	P	06 21 09.7	-0.9
	baz=164						
R48A	Northridge Ran	64.72	344	P	P	06 21 10.1	-0.5
	baz=161						
T43A	Greenville	64.76	340	P	P	06 21 10.1	-0.7
	baz=156,SNR=6.4						
V39A	Pettigrew	64.78	336	P	P	06 21 10.8	-0.4
	baz=153,SNR=5.6						
R47A	Wooly Knot Far	64.79	343	P	P	06 21 09.9	-1.2
	baz=160						
U40A	Yellville	64.96	337	P	P	06 21 11.7	-0.5
	baz=154						
T42A	Van Buren	64.97	339	P	P	06 21 11.4	-0.8
	baz=156						
Q49A	Aurora	65.06	345	P	P	06 21 11.8	-1.0
	baz=162						
S43A	Fulton Ridge,	65.14	340	P	P	06 21 12.3	-1.0
	baz=157						
Q48A	North Vernon	65.19	344	P	P	06 21 12.6	-1.0
	baz=161						
T41A	Mountain View	65.20	338	P	P	06 21 13.4	-0.4
	baz=155						
U39A	Green Forest	65.20	337	P	P	06 21 13.5	-0.4
	baz=153						
R44A	Waltonville	65.46	341	P	P	06 21 14.1	-1.2
	baz=158						
P49A	Miami Univ. Ec	65.52	345	P	P	06 21 14.6	-1.1
	baz=162						
S42A	Caledonia	65.55	340	P	P	06 21 14.9	-1.1
	baz=156						
P48A	Milroy	65.61	345	P	P	06 21 14.9	-1.5
	baz=162						
BLO	Bloomington	65.62	344	*e*P	P	06 21 16.0	-0.4
	comp=Z,7.2nm,0.7s						
S41A	Jillco Farms,	65.69	339	P	P	06 21 16.5	-0.4
	baz=155,SNR=7.7						
T39A	Clever	65.74	337	P	P	06 21 17.2	-0.1
	baz=154						
P47A	Martinsville	65.85	344	P	P	06 21 17.2	-0.6
	baz=161						
WMOK	Wichita Mounta	65.87	332	P	P	06 21 17.8	-0.4
	baz=148						
WMOK	Wichita Mounta	65.87	332	*e*P	P	06 21 18.2	0.0
	comp=Z,2.2nm,1.1s						
N54A	Moraine State	65.94	349	P	P	06 21 18.6	+0.2
	baz=167						
N54A	Moraine State	65.94	349	*e*P	P	06 21 18.9	+0.4
	comp=Z,6.0nm,1.2s						
CCM	Cathedral Cave	65.95	339	P	P	06 21 18.8	+0.2
	baz=156						
CCM	Cathedral Cave	65.95	339	*e*P	P	06 21 18.5	0.0
	comp=Z,5.1nm,0.8s						
S40A	Lebanon	65.95	338	P	P	06 21 18.3	-0.3
	baz=155						
QSPA	South Pole Qui	65.98	180	P	P	06 21 19.8	+1.2
	comp=Z,6.2nm,0.5s,baz=174,slow=2.5,SNR=38						
QSPA	South Pole Qui	65.98	180	*e*P	P	06 21 19.7	+1.2
	comp=Z,7.0nm,0.6s						
R42A	Luebbering	66.01	340	P	P	06 21 18.1	-0.8
	baz=156						
O49A	Covington	66.05	346	P	P	06 21 18.2	-1.0
	baz=163						
T38A	Diamond	66.08	336	P	P	06 21 19.4	0.0
	baz=153,SNR=6.8						
R41A	Rosebud	66.22	339	P	P	06 21 19.5	-0.7
	baz=156,SNR=6.0						
O48A	Farmland	66.31	345	P	P	06 21 19.7	-1.1
	baz=162						
S39A	Bolivar	66.32	338	P	P	06 21 20.7	-0.2
	baz=154,SNR=8.1						
S39A	Bolivar	66.32	338	*e*P	P	06 21 20.9	0.0
	comp=Z,11nm,1.0s						
M54A	Oil Creek Stat	66.42	350	P	P	06 21 21.4	-0.1
	baz=167						
S38A	Stockton	66.47	337	P	P	06 21 21.6	-0.2
	baz=153,SNR=5.0						
R40A	Maddies Statio	66.50	339	P	P	06 21 21.5	-0.6
	baz=155						
R40A	Maddies Statio	66.50	339	*e*P	P	06 21 21.9	-0.1
	comp=Z,14nm,1.5s						
Q42A	Golden Eagle	66.51	340	P	P	06 21 21.9	-0.2
	baz=157						
O47A	Sheridan	66.53	344	P	P	06 21 20.9	-1.3
	baz=161						
MNTX	Cornudas Mount	66.54	325	P	P	06 21 22.2	-0.3
	baz=142,SNR=5.9						
MNTX	Cornudas Mount	66.54	325	*e*P	P	06 21 22.5	+0.1
	comp=Z,3.6nm,0.9s						
Q41A	Truxton	66.77	340	P	P	06 21 23.1	-0.6
	baz=156						
R39A	Chumby, Stover	66.78	338	P	P	06 21 23.6	-0.2
	baz=154						
O45A	Potomac	66.94	343	P	P	06 21 23.3	-1.5
	baz=160						
R38A	Fenwick Farm,	66.97	337	P	P	06 21 24.8	-0.2
	baz=153,SNR=6.4						
MSTX	Muleshoe	67.05	328	P	P	06 21 25.9	+0.1
	baz=145,SNR=7.2						
MSTX	Muleshoe	67.05	328	*e*P	P	06 21 26.1	+0.3
	comp=Z,17nm,1.2s						
O44A	Mansfield	67.06	342	P	P	06 21 24.7	-0.8
	baz=159						
Q40A	Laux Farm, Aux	67.08	339	P	P	06 21 25.2	-0.4
	baz=155						
AMTX	Amarillo	67.29	330	P	P	06 21 26.1	-1.1
	baz=146						
Q39A	Willow Grove F	67.42	338	P	P	06 21 27.4	-0.4
	baz=154						
P40A	Paris	67.55	339	P	P	06 21 28.3	-0.4
	baz=155						
Q38A	Cooks Store, C	67.56	338	P	P	06 21 28.7	0.0
	baz=154						
P39B	Salisbury	67.74	339	P	P	06 21 29.2	-0.7
	baz=155						
L48A	N Adams	67.75	346	P	P	06 21 29.0	-0.9
	baz=163						
L49A	Milan	67.77	347	P	P	06 21 29.1	-0.8
	baz=164						
Q37A	Longview Farm,	67.78	337	P	P	06 21 29.5	-0.5
	baz=153						
N43A	Stutzman Famil	67.98	342	P	P	06 21 30.5	-0.8
	baz=158						
DBIC	Dimbokro	68.02	72	P	P	06 21 32.0	-0.1
	comp=Z,3.2nm,0.7s,baz=239,slow=2.7,SNR=4.5						
O40A	La Belle	68.03	340	P	P	06 21 30.8	-0.9

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          baz=156
N42A  Yates City        68.13 341   P      P       06 21 31.5 -0.7
          baz=157
P38A  Dawn              68.13 338   P      P       06 21 31.8 -0.4
          baz=154
P38A  Dawn              68.13 338  eP      P       06 21 32.1 -0.1
          comp=Z,9.4nm,0.4s
N41A  Harden Midland    68.26 341   P      P       06 21 32.1 -0.9
          baz=157
M43A  Waltham Townsh    68.39 343   P      P       06 21 32.6 -1.2
          baz=158
121A  Cookes Peak, D    68.47 324   P      P       06 21 33.8 -0.9
          baz=140
O38A  Galt              68.55 339   P      P       06 21 34.6 -0.3
          baz=154
N40A  Mertquake, Sal    68.64 340   P      P       06 21 34.4 -1.0
          baz=156
M41A  Milan             68.78 341   P      P       06 21 35.3 -0.9
          baz=157
O37A  Wolven Farm, M    68.82 338   P      P       06 21 36.2 -0.3
          baz=154
N39A  Derby Farms, D    68.92 340   P      P       06 21 36.4 -0.8
          baz=155
N39A  Derby Farms, D    68.92 340  eP      P       06 21 36.7 -0.5
          comp=Z,8.2nm,0.5s
L43A  Garden Prairie    69.02 343   P      P       06 21 37.0 -0.7
          baz=159
M40A  Post Highland     69.09 341   P      P       06 21 37.3 -0.9
          baz=156
L42A  Oliver, Polo      69.11 342   P      P       06 21 37.2 -1.0
          baz=158
K43A  Burlington        69.40 343   P      P       06 21 39.3 -0.7
          baz=159
K43A  Burlington        69.40 343  eP      P       06 21 39.7 -0.3
          comp=Z,26nm,1.1s
L41A  Preston           69.41 342   P      P       06 21 39.2 -0.9
          baz=157
SADO  Sadowa            69.53 351  eP      P       06 21 40.7 -0.1
          comp=Z,15nm,1.4s
L40A  Anamosa           69.61 341   P      P       06 21 40.7 -0.6
          baz=156
M38A  Pleasantville     69.63 339   P      P       06 21 40.5 -0.9
          baz=155
ANMO  Albuquerque       69.65 326   P      P       06 21 43.2 +1.2
          baz=142
ANMO  Albuquerque       69.65 326  eP      P       06 21 43.6 +1.6
          comp=Z,5.0nm,0.9s
TASL  Snake Pit, Alb    69.65 326   P      P       06 21 43.5 +1.5
          baz=142,SNR=7.0
TASM  ASL Pad, Albuq    69.65 326   P      P       06 21 43.3 +1.3
          baz=142,SNR=7.2
CBKS  Cedar Bluff       69.74 333   P      P       06 21 42.9 +0.7
          baz=148
K42A  Prairie Point,    69.74 343   P      P       06 21 41.6 -0.5
          baz=158
K41A  Shullsburg        69.85 342   P      P       06 21 41.9 -0.9
          baz=157
M37A  Trindle Farm,     69.90 339   P      P       06 21 42.9 -0.2
          baz=154
TUC   Tucson            69.96 322   P      P       06 21 45.2 +1.4
          baz=138
TUC   Tucson            69.96 322  eP      P       06 21 45.3 +1.4
          comp=Z,4.7nm,1.2s
J43A  Natural Harves    70.06 344   P      P       06 21 43.5 -0.5
          baz=159
JFWS  Jewell Farm       70.11 342   P      P       06 21 44.1 -0.3
          baz=158
JFWS  Jewell Farm       70.11 342  eP      P       06 21 44.2 -0.2
          comp=Z,11nm,0.6s
K40A  Colesburg         70.17 341   P      P       06 21 44.0 -0.7
          baz=157
J42A  Columbus          70.18 343   P      P       06 21 44.3 -0.5
          baz=159
K39A  Oelwein           70.40 341   P      P       06 21 45.2 -0.9
          baz=156
T25A  Trinidad          70.40 329   P      P       06 21 46.7 +0.1
          baz=144
T25A  Trinidad          70.40 329  eP      P       06 21 47.7 +1.1
          comp=Z,4.1nm,0.7s
L37A  Phoenix Point,    70.45 339   P      P       06 21 45.7 -0.7
          baz=154
I43A  Langenfeld Bro    70.46 344   P      P       06 21 45.8 -0.6
          baz=160
J41A  Loganville        70.47 343   P      P       06 21 46.2 -0.3
          baz=158
GLMI  Grayling          70.54 347   P      P       06 21 47.1 +0.1
          baz=163
I42A  Draeger Farm,     70.66 344   P      P       06 21 47.4 -0.2
          baz=159
I42A  Draeger Farm,     70.66 344  eP      P       06 21 47.5 -0.2
          comp=Z,6.0nm,0.6s
J40A  Soldiers Grove    70.70 342   P      P       06 21 47.5 -0.4
          baz=157
214A  Organ Pipe Nat    70.88 320   P      P       06 21 50.0 +0.7
          baz=136
H43A  Windswept, Lux    70.92 345   P      P       06 21 48.7 -0.5
          baz=160
H43A  Windswept, Lux    70.92 345  eP      P       06 21 49.0 -0.2
          comp=Z,11nm,0.8s
J39A  Decorah           70.92 341   P      P       06 21 48.5 -0.8
          baz=156
K37A  Belmond           70.99 340   P      P       06 21 48.9 -0.8
          baz=154
I41A  Arkdale           71.07 343   P      P       06 21 49.6 -0.5
          baz=158
KSCO  Kaye Shedlock'    71.12 331   P      P       06 21 51.6 +0.9
          baz=146
KSCO  Kaye Shedlock'    71.12 331  eP      P       06 21 52.4 +1.6
          comp=Z,8.2nm,0.6s
K36A  Gilmore City      71.14 339   P      P       06 21 50.3 -0.3
          baz=154
H42A  Shiocton          71.14 344   P      P       06 21 50.1 -0.4
          baz=159
BGNE  Belgrade          71.34 336   P      P       06 21 52.2 +0.3
          baz=150,SNR=5.9
BGNE  Belgrade          71.34 336  eP      P       06 21 52.1 +0.2
          comp=Z,33nm,0.8s
SDCO  Great Sand Dun    71.40 329   P      P       06 21 53.8 +1.1
          baz=143,SNR=9.1
SDCO  Great Sand Dun    71.40 329  eP      P       06 21 54.1 +1.4
          comp=Z,3.5nm,0.9s
J37A  Redenius Farm,    71.45 340   P      P       06 21 52.2 -0.3
          baz=155
F46A  Macinaw City C    71.48 347   P      P       06 21 52.2 -0.4
          baz=163
G43A  Wallace           71.64 345   P      P       06 21 53.3 -0.2
          baz=160
G43A  Wallace           71.64 345  eP      P       06 21 53.5  0.0
          comp=Z,18nm,1.4s
J36A  Seneca 1, Swea    71.72 339   P      P       06 21 53.5 -0.6
          baz=154
H40A  Chili             71.73 343   P      P       06 21 53.9 -0.2
          baz=158
I38A  Scanlan Farm,     71.75 341   P      P       06 21 54.1 -0.2
          baz=156
G42A  Mountain          71.80 344   P      P       06 21 54.6 +0.1
          baz=160
G42A  Mountain          71.80 344  eP      P       06 21 54.6 +0.1
          comp=Z,17nm,1.4s
G41A  Antigo            71.96 344   P      P       06 21 55.1 -0.4
          baz=159
S22A  4UR Ranch, Cre    72.04 328   P      P       06 21 57.5 +1.0
          baz=142
S22A  4UR Ranch, Cre    72.04 328  eP      P       06 21 57.9 +1.4
          comp=Z,1.8nm,0.8s
I37A  Lemond, Waseca    72.05 340   P      P       06 21 55.5 -0.5
          baz=155
I37A  Lemond, Waseca    72.05 340  eP      P       06 21 55.8 -0.2
          comp=Z,9.1nm,0.8s
F43A  Flat Rock, Esc    72.06 345   P      P       06 21 55.3 -0.7
          baz=161
Q24A  Divide            72.22 330   P      P       06 21 58.9 +1.3
          baz=144
H37A  Dierke Farm, C    72.41 341   P      P       06 21 57.8 -0.4
          baz=155
F41A  Three Lakes       72.44 344   P      P       06 21 58.2 -0.1
          baz=159
F41A  Three Lakes       72.44 344  eP      P       06 21 59.0 +0.7
          comp=Z,11nm,1.0s
MVCO  Mesa Verde        72.45 326   P      P       06 22 00.4 +1.5
          baz=141
MVCO  Mesa Verde        72.45 326  eP      P       06 22 00.6 +1.7
          comp=Z,3.6nm,0.8s
E43A  Lone Tree Farm    72.53 346   P      P       06 21 58.4 -0.4
          baz=161
E43A  Lone Tree Farm    72.53 346  eP      P       06 21 58.9  0.0
          comp=Z,11nm,0.9s
G39A  Holcombe          72.56 342   P      P       06 21 58.5 -0.5
          baz=157
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WUAZ  Wupatki           72.67 323   P      P       06 22 01.9 +1.8
          baz=138
WUAZ  Wupatki           72.67 323  eP      P       06 22 02.5 +2.3
          comp=Z,4.1nm,0.8s
H36A  Jessenland, He    72.72 340   P      P       06 21 59.9 -0.1
          baz=154
ECSD  EROS Data Cent    72.83 338   P      P       06 22 00.6 -0.1
          baz=152
ECSD  EROS Data Cent    72.83 338  eP      P       06 22 00.6 -0.1
          comp=Z,15nm,1.4s
F40A  Park Falls        72.86 343   P      P       06 22 00.6 -0.2
          baz=158
SPMN  Marine on St.     72.97 341   P      P       06 22 00.8 -0.6
          baz=156
F39A  Loretta           73.07 343   P      P       06 22 01.7 -0.3
          baz=157
E41A  Kenton            73.08 344   P      P       06 22 02.2 +0.2
          baz=159
ISCO  Idaho Springs     73.10 330   P      P       06 22 04.0 +1.3
          baz=144,SNR=5.3
ISCO  Idaho Springs     73.10 330  eP      P       06 22 04.4 +1.7
          comp=Z,3.3nm,1.0s
H35A  Sunnyside Ranc    73.11 340   P      P       06 22 02.0 -0.3
          baz=154
Y12C  Blythe            73.16 320   P      P       06 22 03.5 +0.7
          baz=135
PV01  Paradox Valley    73.20 327  eP      P       06 22 05.9 +2.6
SMCO  Snowmass          73.24 329  eP      P       06 22 05.3 +1.6
          comp=Z,3.9nm,0.8s
E40A  Wakefield         73.29 344   P      P       06 22 03.4 +0.1
          baz=158
F37A  Hinrichs Farm,    73.37 342   P      P       06 22 03.5 -0.2
          baz=156
F38A  Pierce - Schro    73.37 342   P      P       06 22 03.6 -0.2
          baz=156
SYO   Syowa Base        73.39 159⇑eP      P       06 22 02.9 -0.8
SYO   Syowa Base        73.39 159⇓ePcP    PcP     06 22 17.4 -1.6
E39A  Mellen            73.40 343   P      P       06 22 03.8 -0.2
          baz=158
SBA   Scott Base        73.44 190  eP      P       06 22 06.2 +2.3
          comp=Z,0.9nm,0.6s
D41A  Chassel           73.54 345   P      P       06 22 05.0 +0.3
          baz=160
D41A  Chassel           73.54 345  eP      P       06 22 05.0 +0.3
          comp=Z,16nm,0.8s
PV22  Blue Mesa, Par    73.62 327  eP      P       06 22 07.5 +1.9
          comp=Z,4.1nm,0.9s
BC3   Big Chuckawall    73.64 320   P      P       06 22 07.3 +1.5
          baz=135
MONP2 Monument Peak     73.69 318   P      P       06 22 06.8 +0.6
          baz=134
F36A  Milaca            73.75 341   P      P       06 22 05.6 -0.4
          baz=155
F36A  Milaca            73.75 341  eP      P       06 22 05.8 -0.2
          comp=Z,6.0nm,0.8s
IRM   Iron Mountain     73.82 320   P      P       06 22 08.3 +1.6
          baz=135
N23A  Red Feather La    74.13 330   P      P       06 22 09.6 +0.9
          baz=143
FRD   Ford Ranch, An    74.22 319   P      P       06 22 10.1 +1.0
          baz=134
E36A  McGregor          74.27 342   P      P       06 22 08.7 -0.3
          baz=155
VNDA  Vanda             74.45 190   P      P       06 22 12.0 +2.3
          comp=Z,2.1nm,0.9s,baz=139,slow=4.3,SNR=10.0
VNDA  Vanda             74.45 190  eP      P       06 22 12.2 +2.4
          comp=Z,2.9nm,1.0s
GMRC  Granite Mounta    74.56 320   P      P       06 22 12.9 +1.7
          baz=135,SNR=5.7
O20A  White River Ci    74.59 329   P      P       06 22 12.6 +1.3
          baz=141,SNR=5.8
O20A  White River Ci    74.59 329  eP      P       06 22 12.0 +0.7
          comp=Z,6.9nm,0.8s
D37A  Cotton            74.62 342   P      P       06 22 10.2 -0.8
          baz=156
LCMT  Little Creek M    74.79 323  eP      P       06 22 14.2 +1.8
          comp=Z,2.6nm,0.8s
SRU   San Rafael Swe    74.93 326  eP      P       06 22 14.6 +1.4
          comp=Z,5.4nm,0.6s
MTPU  Mount Pierson     74.98 325  eP      P       06 22 15.3 +1.6
          comp=Z,3.0nm,0.7s
D35A  Remer             75.02 341   P      P       06 22 13.3  0.0
          baz=155
EYMN  Ely               75.10 343   P      P       06 22 13.2 -0.5
          baz=157
EYMN  Ely               75.10 343  eP      P       06 22 13.6 -0.1
          comp=Z,22nm,1.3s
Q16A  Castle Valley     75.11 326  eP      P       06 22 16.0 +1.7
          comp=Z,2.4nm,0.7s
P18A  Preston Nutter    75.18 327  eP      P       06 22 16.8 +2.0
          comp=Z,4.5nm,0.7s
CCUT  Cedar City        75.25 324  eP      P       06 22 17.6 +2.5
          comp=Z,6.5nm,0.8s
MSU   Marysvale         75.33 325  eP      P       06 22 17.5 +1.9
RWWY  Rawlins           75.34 330  eP      P       06 22 16.3 +0.7
          comp=Z,4.7nm,0.9s
TMUT  Trail Mountain    75.41 326  eP      P       06 22 17.5 +1.4
          comp=Z,1.3nm,0.8s
SHPR  Sheep Range       75.49 322  eP      P       06 22 18.6 +2.1
          comp=Z,2.2nm,0.7s
C35A  Jirik Farms, M    75.55 342   P      P       06 22 15.5 -0.9
          baz=155
K22A  Casper            75.80 331   P      P       06 22 19.2 +1.2
          baz=143
RSSD  Black Hills       75.94 334   P      P       06 22 19.7 +0.8
          baz=146
EDW2  Edwards Air Fo    76.01 319   P      P       06 22 20.4 +1.1
          baz=133
B35A  Bob, Littlefor    76.08 342   P      P       06 22 19.1 -0.2
          baz=155
MPU   Maple Canyon      76.17 326  eP      P       06 22 22.2 +1.9
          comp=Z,3.2nm,0.8s
PSUT  Pine Spring       76.23 324  eP      P       06 22 22.9 +2.2
          comp=Z,4.0nm,0.7s
TPNV  Topopah Spring    76.42 321   P      P       06 22 23.5 +1.9
          baz=135,SNR=6.8
TPNV  Topopah Spring    76.42 321  eP      P       06 22 23.6 +1.9
          comp=Z,8.8nm,1.3s
FURC  Furnace Creek,    76.44 321   P      P       06 22 23.2 +1.6
          baz=134
MPMC  Manual Prospec    76.52 320   P      P       06 22 23.4 +1.1
          baz=134
JLU   Jordanelle        76.52 327  eP      P       06 22 23.9 +1.6
          comp=Z,3.7nm,0.8s
AGMN  Agassiz Nation    76.64 341   P      P       06 22 22.7 +0.2
          baz=153
DAC   Darwin (Calif)    76.73 320  eP      P       06 22 24.6 +1.1
          comp=Z,3.8nm,0.9s
TOA0  Torodi Ar. Sit    76.80  69  eP      P       06 22 23.6 -0.4
          comp=Z,10nm,1.4s
TORD  Torodi Ar. Bea    76.80  69   P      P       06 22 22.8 -1.3
          comp=Z,1.4nm,0.5s,baz=262,slow=5.8
ISA   Isabella, Lake    76.83 319   P      P       06 22 24.9 +1.0
          baz=133
DUG   Dugway, Tooele    76.91 326   P      P       06 22 25.8 +1.5
          baz=138
R11A  Troy Canyon, C    77.04 323   P      P       06 22 26.9 +1.7
          baz=136,SNR=8.2
R11A  Troy Canyon, C    77.04 323  eP      P       06 22 27.2 +2.0
          comp=Z,7.4nm,1.4s
A33A  Warroad           77.08 341   P      P       06 22 24.5 -0.3
          baz=154
PKM   Mcpherson Peak    77.11 318   P      P       06 22 26.7 +1.0
          baz=132
CWC   Cottonwood Cre    77.12 320   P      P       06 22 26.1 +0.4
          baz=133
PD31  Pinedale Array    77.26 329  eP      P       06 22 27.3 +0.9
PDAR  Pinedale Array    77.26 329   P      P       06 22 26.9 +0.6
          comp=Z,0.7nm,0.5s,baz=126,slow=7.1,SNR=12
BW06  Boulder Array     77.27 329   P      P       06 22 27.1 +0.6
          baz=141
BW06  Boulder Array     77.27 329  eP      P       06 22 27.0 +0.6
          comp=Z,1.3nm,0.6s
VES   Vestal, Richgr    77.31 319   P      P       06 22 27.6 +1.2
          baz=132
HWUT  Hardware Ranch    77.34 327  eP      P       06 22 27.9 +1.1
          comp=Z,3.9nm,0.9s
AHID  Auburn Hatcher    77.99 329  eP      P       06 22 31.6 +1.3
          comp=Z,8.2nm,1.0s
REDW  Red Top Meadow    78.33 329  eP      P       06 22 32.7 +0.5
          comp=Z,3.4nm,0.9s
ULM   Lac du Bonnet     78.39 342   P      P       06 22 32.2  0.0
          comp=Z,4.0nm,0.5s,baz=155,slow=4.9,SNR=4.5
ULM   Lac du Bonnet     78.39 342  eP      P       06 22 32.1  0.0
          comp=Z,5.1nm,0.8s
LOHW  Long Hollow       78.40 329  eP      P       06 22 33.9 +1.3
          comp=Z,2.3nm,0.7s
OMMB  Old Mammoth Mi    78.46 320  eP      P       06 22 34.6 +1.4
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          comp=Z,4.5nm,0.8s
MOOW  Moose Ponds       78.57 329  eP      P       06 22 34.9 +1.4
          comp=Z,1.3nm,0.8s
FXWY  Fox Creek         78.62 329  eP      P       06 22 35.5 +1.6
          comp=Z,1.6nm,0.9s
IMW   Indian Meadow     78.78 329  eP      P       06 22 36.4 +1.7
          comp=Z,4.9nm,1.0s
LAO   LASA Array        78.93 334   P      P       06 22 35.8 +0.6
          baz=144
LAO   LASA Array        78.93 334  eP      P       06 22 35.8 +0.6
          comp=Z,5.2nm,0.9s
KVN   Kaiserville       78.93 322  eP      P       06 22 36.4 +0.8
          comp=Z,4.6nm,0.7s
RLMT  Red Lodge         78.97 331   P      P       06 22 36.7 +1.1
          baz=141
RLMT  Red Lodge         78.97 331  eP      P       06 22 37.0 +1.3
          comp=Z,3.0nm,0.6s
YERR  Yerington         79.53 321  eP      P       06 22 40.6 +1.7
          comp=Z,3.2nm,0.8s
YHB   Horse Butte       79.55 330  eP      P       06 22 40.0 +1.2
          comp=Z,4.9nm,0.8s
DGMT  Dagmar            79.60 336   P      P       06 22 40.0 +1.2
          baz=146
DGMT  Dagmar            79.60 336  eP      P       06 22 40.1 +1.3
          comp=Z,12nm,0.6s
GCMT  Greycliff         79.67 331  eP      P       06 22 40.5 +1.2
PNTR  Pine Nut          79.81 321  eP      P       06 22 42.3 +1.9
          comp=Z,7.0nm,0.8s
HLID  Hailey            80.19 327   P      P       06 22 43.9 +1.6
          baz=137
HLID  Hailey            80.19 327  eP      P       06 22 44.1 +1.8
          comp=Z,7.1nm,0.9s
MCMT  McKenzie Canyo    80.38 329  eP      P       06 22 45.1 +1.8
BOZ   Bozeman (W)       80.39 330   P      P       06 22 44.3 +1.0
          baz=140
DLMT  Dillon            80.66 329  eP      P       06 22 46.1 +1.4
          comp=Z,8.7nm,1.4s
BEKR  Beckworth         80.77 321  eP      P       06 22 47.1 +1.7
          comp=Z,8.0nm,1.5s
BOSA  Boshof            80.77 117   P      P       06 22 45.7 -0.1
          comp=Z,1.6nm,0.4s,baz=281,slow=2.8,SNR=6.9
BOSA  Boshof            80.77 117  eP      P       06 22 46.1 +0.3
          comp=Z,28nm,1.4s
HRY   Holter Researc    81.33 331  eP      P       06 22 49.8 +1.6
EGMT  Eagleton          81.44 333   P      P       06 22 49.4 +0.7
          baz=141
EGMT  Eagleton          81.44 333  eP      P       06 22 49.6 +0.9
          comp=Z,10.0nm,1.2s
O03D  Paynes Creek      81.88 321   P      P       06 22 51.1  0.0
          baz=131
MOD   Modoc Plateau     82.11 323  eP      P       06 22 53.5 +1.1
          comp=Z,4.4nm,1.1s
J08A  Circle Bar Ran    82.12 325  eP      P       06 22 54.1 +1.7
          comp=Z,4.3nm,0.7s
MSO   Missoula          82.38 330   P      P       06 22 54.7 +1.1
          baz=138
LBTB  Lobatse           82.44 114  eP      P       06 22 54.7 +0.1
          comp=Z,14nm,1.5s
N02D  Trinity Center    82.84 321   P      P       06 22 56.9 +0.8
          baz=131
M04C  Macdoel           82.88 322   P      P       06 22 57.2 +0.8
          baz=131
K05A  Summer Lake       82.98 323  eP      P       06 22 58.8 +1.9
          comp=Z,9.9nm,0.9s
JTMT  Jette             83.21 330  eP      P       06 22 59.2 +1.3
          comp=Z,4.1nm,0.9s
F10A  Beach Ranch, E    83.32 327  eP      P       06 22 59.8 +1.3
          comp=Z,3.8nm,0.9s
J05D  Fort Rock, OR     83.54 323   P      P       06 23 00.8 +1.0
          baz=132
PINE  Pine Mountain     83.72 324  eP      P       06 23 01.9 +1.2
          comp=Z,4.9nm,0.8s
J04D  Umpqua Nationa    83.99 323   P      P       06 23 02.8 +0.7
          baz=131
WALA  Waterton Lakes    84.02 331  eP      P       06 23 02.5 +0.5
          comp=Z,2.9nm,0.9s
HUMO  Hull Mountain     84.05 322  eP      P       06 23 02.7 +0.5
          comp=Z,4.1nm,1.5s
I05D  Terrebonne, OR    84.30 324   P      P       06 23 04.6 +1.1
          baz=132
LTY   Liberty           85.92 327  eP      P       06 23 12.9 +1.5
          comp=Z,2.4nm,1.1s
E03A  Lebam             86.94 325  eP      P       06 23 17.4 +1.1
          comp=Z,29nm,1.4s
B05A  Bryant            87.31 327   P      P       06 23 18.4 +0.3
          baz=132
YKA   Yellowknife Ar    94.28 340   P      P       06 23 50.1  0.0
          comp=Z,1.9nm,0.6s,baz=132,slow=4.4,SNR=9.0
AS01  Alice Springs    128.17 205  ePKPdf  PKPdf   06 29 37.4 -0.1
ASAR  Alice Springs    128.18 205   PKP    PKPdf   06 29 37.3 -0.2
          comp=Z,2.1nm,0.5s,baz=133,slow=1.7,SNR=26
AS31  Alice Springs    128.19 205  ePKPdf  PKPdf   06 29 37.8 +0.2
WC3   Warramunga Arr   131.32 207  ePKPdf  PKPdf   06 29 43.7 +0.1
WB2   Warramunga Arr   131.35 207  ePKPdf  PKPdf   06 29 43.8 +0.2
WRA   Warramunga Arr   131.35 207   PKP    PKPdf   06 29 43.7 +0.1
          comp=Z,2.1nm,0.5s,baz=157,slow=1.7,SNR=48
WRA                                 SKPbc  SKPbc   06 32 52.2 -0.8
          comp=Z,0.5nm,0.5s,baz=151,slow=3.4,SNR=8.3
ZALV  Zalesovo Beam    143.67  28   PKP    PKPbc   06 30 03.5 +0.4
          comp=Z,2.8nm,0.5s,baz=304,slow=5.1,SNR=11
SOEI  Soe              144.43 200  ePKPdf  PKPdf   06 30 08.0 +0.2
KSH   Kashi            145.45  55  ePKPbc  PKPdf   06 30 07.8 -1.0
MAKZ  Makanchi         146.61  40  ePKPbc  PKPbc   06 30 12.5 +0.3
MK31  Makanchi Array   146.80  40  ePKPdf  PKPdf   06 30 11.5 +0.8
MK31                               ePKPbc  PKPbc   06 30 13.1 +0.4
MKAR  Makanchi Array   146.80  40   PKP    PKPdf   06 30 11.1 +0.4
          comp=Z,3.9nm,0.6s,baz=342,slow=2.0,SNR=33
MKAR                                PKPbc  PKPbc   06 30 13.0 +0.2
          comp=Z,3.8nm,0.6s,baz=298,slow=3.4,SNR=31
MKAR  Makanchi Array   146.80  40  ePKPdf  PKPdf   06 30 11.4 +0.7
MKAR                               ePKPbc  PKPbc   06 30 13.2 +0.4
LZH   Lanzhou          165.87  31 ⇑PKP    PKPdf   06 30 33.8 -1.9
LZH                                 pPKP   pPKPdf  06 31 16.5 -3.7
LZH                                 sPKP           06 31 33.3
LZH                                 PKP    PKPab   06 31 36.0 -0.2
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MAN 27 06:30:00.6, 7°.73N×126°.54E, h7km, mb4.7, ML3.6, MS3.5, 1D, Mindanao

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Code  Station Name       Δ°   AZ°     Phase ID          Time      Res
                                     Op     ISC       h  m  s    ISC
BIPH  Bislig            0.48 339⇓iP     Pb       06 30 11.8 +0.4
BIPH                              i S     Sb       06 30 18.8  0.0
MATI  Mati              0.83 200  eP     Pg       06 30 16.9 +0.3
MATI                              eS     Sb       06 30 28.6 -0.1
BUKP  Musuan            1.47 276  eP     Pb       06 30 28.5 +0.2
BUKP                              eS     Sb       06 30 47.2  0.0
DDMP  Don Marcelino,    1.81 207  eP     Pn       06 30 31.8 -0.4
DDMP                              eS     Sn       06 30 56.1 +0.6
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*DDA **27** 07:36:02.9, 37°.74N×32°.37E, h12km, Ml2.5*
*CSEM **27** 07:36:02.9±0.1, 37°.75N×32°.41E, h10km, ML1.8, Error ellipse: s-maj=3.2km s-min=1.5km az=74.0*
*ISK **27** 07:36:02.3, 37°.75N×32°.42E, h9km, ML1.8/8*
*ISCJB **27** 07:36:03.0±0.6, 37°.76N±0°.04×32°.43E±0°.07, h12km±4km, Error ellipse: s-maj=9.8km s-min=6.2km az=167.7*
ISC 27 07:36:03.1±0.9, 37°.75N±0°.03×32°.41E±0°.06, h11km±5km, n25, σ0s.25/33, Turkey

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Code  Station Name       Δ°   AZ°     Phase ID          Time      Res
                                     Op     ISC       h  m  s    ISC
KMER  Konya-Meram       0.04 300  i P    Pg       07 36 05.1 -0.2
KMER                              i S    Sg       07 36 06.8  0.0
KMER  Konya-Meram       0.04 300   P     Pg       07 36 05.1 -0.2
KMER                               S     Sg       07 36 06.8  0.0
KONT  Konya--Tatoy      0.20 349   PG    Pg       07 36 07.3 -0.1
KONT                               SG    Sg       07 36 10.9 +0.6
KONT  Konya--Tatoy      0.20 349  i P    Pg       07 36 07.8 +0.4
KONT  Konya--Tatoy      0.20 349  ePg    Pg       07 36 07.3 -0.1
KONT                              eSg    Sg       07 36 10.9 +0.6
LADK  Ladik-KONYA       0.45 356   PG    Pg       07 36 11.6 -0.4
LADK                               SG    Sg       07 36 18.2 +0.2
LADK  Ladik-KONYA       0.45 356  ePg    Pg       07 36 11.6 -0.4
LADK                              eSg    Sg       07 36 18.2 +0.2
KDHN  Kadinhani         0.80 343  i P    Pg       07 36 18.3 -0.3
KDHN  Kadinhani         0.80 343   P     Pg       07 36 18.3 -0.3
KEPZ  Antalya-Kepez     1.06 217  i P    Pg       07 36 23.5  0.0
KEPZ  Antalya-Kepez     1.06 217   P     Pg       07 36 23.5  0.0
SUTC  Sutluce-Ispart    1.15 257   PN    Pb       07 36 24.9 -0.2
SUTC                               SN    Sn       07 36 41.2 +0.1
SUTC  Sutluce-Ispart    1.15 257  ePn    Pb       07 36 24.9 -0.2
SUTC                              eSn    Sn       07 36 41.2 +0.1
ERMK  Ermenek           1.18 160  i P    Pb       07 36 25.4 -0.2
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ERMK	Ermenek	1.18	160	P	Pb	07 36 25.4	-0.2
KIZT	Kizilcal	1.20	340	PN	Pb	07 36 25.8	-0.2
KIZT	Kizilcal	1.20	340	*e*Pn	Pb	07 36 25.8	-0.2
BERE	Bereket-Mersin	1.54	155	PN	Pn	07 36 30.6	-0.1
BERE	Bereket-Mersin	1.54	155	*e*Pn	Pn	07 36 30.6	-0.1
KEBE	Keben-Mersin	1.67	141	PN	Pn	07 36 32.3	0.0
KEBE	Keben-Mersin	1.67	141	*e*Pn	Pn	07 36 32.3	0.0
TEKE	Tekeli-Mersin	1.70	160	PN	Pn	07 36 32.9	+0.2
TEKE	Tekeli-Mersin	1.70	160	*e*Pn	Pn	07 36 32.9	+0.2
IKL	Isikli	1.82	146	PN	Pn	07 36 34.5	+0.2
IKL	Isikli	1.82	146	*e*Pn	Pn	07 36 34.5	+0.2

IDC 27 07:36:37.8±5.2, **36°.18N**×**72°.59E**, **h0**^{km}, **mb3.7**/2, **mb1 3.8**/5, **mb1mx3.4**/61, **mbtmp3.8**/5, **ML3.5**/3, **MS2.9**/1, **Ms1 2.9**/1, **ms1mx2.1**/61, **Error ellipse: s-maj=93.9km s-min=32.8km az=141.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AAK	Ala-Archa	6.62	12	Pn	Pn	07 38 21.0	+4.6
	1.3nm,0.3s,baz=188,slow=11,SNR=6.3						
AAK				Sn	Sn	07 39 37.1	+4.5
	0.3nm,0.3s,baz=349,slow=20,SNR=3.9						
MKAR	Makanchi Array	12.85	31	Pn	Pn	07 39 42.8	+1.2
	0.1nm,0.3s,baz=204,slow=17,SNR=2.9						
KURBB	Kurchatov Arra	15.06	15	Pn	P	07 40 17.3	0.0
	0.1nm,0.3s,baz=203,slow=10,SNR=9.6						
ZALV	Zalesovo Beam	19.71	22	P	P	07 41 08.8	+0.3
	2.3nm,0.3s,baz=207,slow=9.1,SNR=4.6						
SONM	Songino Array	27.47	54	LR	LR	07 53 52.3	
	comp=Z,23nm,20.2s,baz=130,slow=38						
HFS	Hagfors	44.11	322	P	P	07 44 47.5	0.0
	1.5nm,0.5s,baz=97,slow=12,SNR=12						
NOA	NORSAR Array B	45.41	323	P	P	07 44 57.6	-0.3
	0.2nm,0.5s,baz=95,slow=7.7,SNR=3.8						

*ISK **27** 07:37:03.9, 39°.68N×29°.72E, h2^{km}, ML2.1/3*
*ISCJB **27** 07:37:04.9±0.7, 39°.63N±0°.06×29°.76E±0°.06, h6^{km}, Error ellipse: s-maj=10.3km s-min=4.0km az=141.4*
*CSEM **27** 07:37:04.9±0.2, 39°.65N×29°.76E, h2^{km}, ML2.1, Error ellipse: s-maj=6.8km s-min=3.2km az=143.0*
*DDA **27** 07:37:05.1, 39°.53N×29°.87E, h7^{km}, Ml2.5*
ISC 27 07:37:05.4±1.0, **39°.64N**±0°.04×**29°.76E**±0°.03, **h6**^{km}, **n20**, σ**0^{s}.75**/27, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TVSB	Tavsanli	0.30	231	PG	Pg	07 37 10.7	-0.5
TVSB				SG	Sg	07 37 15.7	+0.5
TVSB	Tavsanli	0.30	231	*e*Pg	Pg	07 37 10.7	-0.5
TVSB				*e*Sg	Sg	07 37 15.7	+0.5
KUTH	Kutahya	0.31	140	PG	Pg	07 37 12.2	+0.7
KUTH	Kutahya	0.31	140	*e*Pg	Pg	07 37 12.2	+0.7
BORA	Eskisehir	0.59	65	PG	Pg	07 37 16.0	-0.7
BORA	Eskisehir	0.59	65	*i* P	Pg	07 37 15.5	-1.2
BORA				*i* S	Sg	07 37 24.8	+0.4
BORA	Eskisehir	0.59	65	P	Pg	07 37 15.5	-1.2
BORA	Eskisehir	0.59	65	*e*Pg	Pg	07 37 16.0	-0.7
BORA				S	Sg	07 37 24.8	+0.4
GDZ	Gediz	0.59	202	*i* P	Pg	07 37 15.6	-1.1
GDZ				*i* S	Sg	07 37 23.6	-0.8
GDZ	Gediz	0.59	202	P	Pg	07 37 15.6	-1.1
GDZ				S	Sg	07 37 23.6	-0.8
GULT	Gulveren	0.98	36	PG	Pg	07 37 23.8	-0.5
GULT	Gulveren	0.98	36	*e*Pg	Pg	07 37 23.8	-0.5
DURS	Dursunbey	0.99	268	*i* P	Pg	07 37 24.5	0.0
DURS				*i* S	Sn	07 37 42.1	+1.7
DURS	Dursunbey	0.99	268	P	Pg	07 37 24.5	0.0
AUMIH	MIHALICIK	1.35	80	PN	Pg	07 37 31.2	0.0
AUMIH	MIHALICIK	1.35	80	*i* P	Pn	07 37 30.7	-0.2
AUMIH	MIHALICIK	1.35	80	P	Pn	07 37 30.7	-0.2
AUMIH	MIHALICIK	1.35	80	*e*Pn	Pg	07 37 31.2	0.0
MDUB	Mudurnu	1.38	52	PN	Pn	07 37 31.1	-0.2
MDUB	Mudurnu	1.38	52	*e*Pn	Pn	07 37 31.1	-0.2

*KRNET **27** 07:54:19.4±0.1, 39°.06N×70°.76E, mb3.6*
*NNC **27** 07:54:22.7±2.5, 38°.91N×70°.94E, h0^{km}, mb4.1, mpv3.7, Error ellipse: s-maj=18.3km s-min=14.8km az=30.0*
ISC 27 07:54:25.3±2.1, **39°.47N**±0°.08×**71°.02E**±0°.05, **h1**^{km}±13^{km}, **n25**, σ**2^{s}.45**/38, **33C-5D**, **Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DRK	Karamyk	0.61	88	⇑*e*P	Pg	07 54 36.8	-0.1
	baz=62						
DRK				⇑*i*S	Sn	07 54 49.8	-2.2
	baz=62						
BTK	Batken	0.61	346	⇑*i*P	Pb	07 54 38.5	-0.4
	baz=2.0						
BTK				⇑*i*S	Sn	07 54 52.4	+0.5
	baz=2.0						
SFK	Sufi-Kurgan	1.99	73	⇑Pn	Pb	07 55 02.0	-0.5
	40nm,0.6s						
SFK				⇑Lg	Lg	07 55 36.9	
	120nm,0.7s						
SFK	Sufi-Kurgan	1.99	73	⇑*i*P	Pb	07 55 01.2	-1.3
	baz=65						
SFK				⇑*i*S	Sg	07 55 31.0	+1.7
	baz=65						
TAS	Tashkent	2.28	325	⇑*i*P	Pn	07 55 03.9	-0.3
	baz=34						
TAS				⇑*i*S	Sb	07 55 36.5	+0.4
	baz=34						
ARSB	Arslanbob	2.39	38	⇑*i*P	Pb	07 55 08.0	-1.2
	baz=36						
ARSB				⇑*e*S	Sg	07 55 43.0	+1.0
	baz=36						
ARK	Arkit	2.44	17	⇓*i*P	Pb	07 55 08.5	-1.6
	baz=19						
ARK				⇓*i*S	Sg	07 55 44.2	+0.6
	baz=19						
TOKL	Toktogul	2.84	29	⇑*i*P	Pb	07 55 14.3	-2.7
	baz=29						
TOKL				⇑*i*S	Sb	07 55 54.0	+1.7
	baz=29						
MNAS	Manas	3.22	20	⇑Pn	Pb	07 55 21.7	-1.7
	13nm,0.5s						
MNAS				⇑Sn	Sg	07 56 09.4	+0.6
	34nm,0.5s						
MNAS				⇑Lg	Lg	07 56 22.0	
	144nm,1.5s						
MNAS	Manas	3.22	20	⇑*i*P	Pn	07 55 19.0	+1.8
	baz=21						
MNAS				⇑*i*S	Sb	07 56 02.2	-1.0
	baz=21						
AML	Almayashu	3.35	36	P	Pb	07 55 23.6	-2.2
	SNR=14						
AML	Almayashu	3.35	36	⇑*i*P	Pb	07 55 22.4	-3.3
	baz=35						
AML				⇑*i*S	Sb	07 56 08.7	+1.5
	baz=35						
KK31	Karatay Array	3.65	354	⇑Pn	Pb	07 55 27.0	-3.7
	3.2nm,0.5s,baz=173,slow=13,SNR=41						
KK31				⇑Sn	Sb	07 56 18.1	+2.6
	57nm,0.8s						
KK31				⇓Lg	Lg	07 56 38.0	
	66nm,0.8s,baz=170,slow=31						
EKS2	Erkin-Say	3.81	32	P	Pb	07 55 30.9	-2.6
	SNR=8.6						
UCH	Uchtor	3.83	43	P	Pb	07 55 29.2	-4.7
	SNR=28						
UCH	Uchtor	3.83	43	⇑*i*P	Pn	07 55 29.0	+3.2
	baz=41						
UCH				⇑*i*S	Sb	07 56 20.3	-0.6
	baz=41						
AAK	Ala-Archa	4.12	39	⇑Pn	Pb	07 55 33.8	-4.9
	7.8nm,0.5s						
AAK				⇑Sn	Sb	07 56 28.6	-0.4
	26nm,1.0s						
AAK				⇓Lg	Lg	07 56 49.4	
	39nm,0.9s						
AAK	Ala-Archa	4.12	39	P	Pb	07 55 34.9	-3.8
	SNR=10.0						
AAK	Ala-Archa	4.12	39	⇑*i*P	Pn	07 55 33.0	+3.5
	baz=37						
AAK				⇑*i*S	Sb	07 56 26.7	-2.3
	baz=37						
KZA	Kyzart	4.14	50	P	Pn	07 55 33.7	+3.6
	SNR=12						
KZA	Kyzart	4.14	50	⇑*i*P	Pn	07 55 33.6	+3.6
	baz=47						
KZA				⇑*i*S	Sb	07 56 27.8	-2.1
	baz=47						
KBK	Karagaybulak	4.36	42	P	Pb	07 55 37.3	-5.5
	SNR=16						
USP	Ospenovka	4.61	33	P	Pn	07 55 40.8	+4.5
	SNR=6.7						
TKM2	Tokmak 2	4.88	44	⇓Pn	Pn	07 55 43.3	+3.2
	5.8nm,0.5s						
TKM2				⇑Sn	Sb	07 56 47.9	-3.2
	16nm,1.1s						
TKM2				⇑Lg	Lg	07 57 12.7	
	18nm,1.5s						
TKM2	Tokmak 2	4.88	44	P	Pn	07 55 43.4	+3.3
	SNR=20						

*IDC **27** 07:55:39.6±0.9, 16°.05N×120°.08E, h0^{km}, mb3.8/8, mb1 4.0/8, mb1mx3.7/55, mbtmp3.8/8, MS3.2/9, Ms1 3.2/9, ms1mx2.8/54, Error ellipse: s-maj=49.0km s-min=17.3km az=72.0*
*MAN **27** 07:55:42.4, 16°.34N×120°.19E, h9^{km}, mb5.1, ML4.0, MS4.1*
*ISCJB **27** 07:55:43.5±0.6, 16°.32N±0°.04×120°.08E±0°.07, h27^{km}±5^{km}, mb3.7/8, MS3.1/7, Error ellipse: s-maj=10.7km s-min=6.1km az=179.0*
ISC 27 07:55:43.6±1.2, **16°.32N**±0°.03×**120°.13E**±0°.06, **h20**^{km}±5^{km}, **n24**, σ**1^{s}.57**/24, **mb3.8**/8, **MS3.1**/7, **1C-1D**, **Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOLP	Bolinao	0.22	286	*e*P	Pg	07 55 48.4	-0.6
BOLP				*e*S	Sg	07 55 53.4	+0.7
SCZP	Santa Cruz	0.58	202	*e*P	Pg	07 55 55.2	0.0
SCZP				*e*S	Sn	07 56 07.7	+1.9
PCPH	Palayan	1.19	129	*e*P	Pn	07 56 03.3	-1.9
PCPH				*e*S	Sn	07 56 21.2	+0.4
ABRA	Dolores	1.43	23	*e*P	Pn	07 56 07.0	-1.5
ABRA				*e*S	Sb	07 56 27.8	+0.3
CAUP	Cauayan	1.73	69	*e*P	Pb	07 56 14.9	+0.1
CAUP				*e*S	Sg	07 56 50.4	+11
APYP	Conner	1.86	35	*e*P	Pn	07 56 13.1	-1.3
APYP				*e*S	Sn	07 56 38.0	+0.5
TGY	Tagaytay City	2.34	161	Pg	Pb	07 56 24.1	-1.0
	226nm,0.3s,baz=153,slow=0.5,SNR=19						
TGY				LR	LR	07 57 21.3	
	comp=Z,502nm,20.2s,baz=312,slow=48						
TGY	Tagaytay City	2.34	161	⇑*i*P	Pb	07 56 24.4	-0.7
LUBP	Lubang	2.57	178	*e*P	Pn	07 56 25.5	+1.3
LUBP				*e*S	Sn	07 56 53.5	-1.5
GQP	Guinayangan	3.28	137	⇓*e*P	Pg	07 56 48.2	+1.8
DAV	Davao City (W)	10.62	149	LR	LR	08 03 31.4	
	comp=Z,189nm,18.6s,baz=6.0,slow=45						
CMAR	Chiang Mai Arr	20.33	279	LR	LR	08 08 15.5	
	comp=Z,39nm,18.9s,baz=144,slow=37						
KSRS	Korea Array	22.15	17	P	P	08 00 38.0	-0.1
	2.3nm,1.0s,baz=192,slow=10,SNR=5.5						
KSRS				LR	LR	08 09 45.9	
	comp=Z,32nm,19.0s,baz=168,slow=38						
GUMO	Guam	24.05	93	LR	LR	08 09 31.8	
	comp=Z,21nm,18.6s,baz=244,slow=34						
SONM	Songino Array	33.41	343	P	P	08 02 21.6	+0.6
	0.9nm,0.7s,baz=166,slow=13,SNR=3.8						
SONM				LR	LR	08 14 52.1	
	comp=Z,36nm,21.2s,baz=152,slow=34						
WRA	Warramunga Arr	38.65	158	P	P	08 03 02.7	-3.3
	1.2nm,0.7s,baz=328,slow=11,SNR=12						
ASAR	Alice Springs	41.96	161	P	P	08 03 30.3	-3.1
	1.0nm,0.6s,baz=339,slow=6.8,SNR=22						
MKAR	Makanchi Array	43.62	322	P	P	08 03 47.1	+0.4
	0.6nm,0.8s,baz=132,slow=10,SNR=4.0						
KURBB	Kurchatov Arra	47.73	325	P	P	08 04 19.1	+0.1
	0.7nm,0.7s,baz=122,slow=8.8,SNR=5.2						
AKTO	Aktyubinsk	59.88	319	LR	LR	08 32 42.3	
	comp=Z,26nm,20.1s,baz=79,slow=37						
ARCES	ARCESS Array B	76.46	339	P	P	08 07 33.4	+1.8
	1.9nm,0.8s,baz=52,slow=7.9,SNR=4.1						
ILAR	Eielson Array	76.65	26	P	P	08 07 34.9	+2.1
	0.5nm,0.7s,baz=269,slow=4.7,SNR=5.5						
SPITS	Spitsbergen Ar	76.93	348	LR	LR	08 44 13.5	
	comp=Z,25nm,20.3s,baz=185,slow=38						
NOA	NORSAR Array B	84.70	332	LR	LR	08 48 32.2	
	comp=Z,17nm,18.7s,baz=65,slow=37						

DJA 27 08:17:01.2±0.4, **8°S**±4°×**11°6E**±°, **h13**^{km}±3^{km}, **M3.2**/6, **MLv3.2**/6, **Bali region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DNP	Denpasar	0.67	246	P	Pb	08 17 14.8	0.0
DNP				S	Sb	08 17 24.8	+0.8
SRBI	Singaraja	0.69	297	P	Pb	08 17 15.3	+0.3
SRBI				S	Sb	08 17 24.8	+0.4
IGBI	Denpasar	0.79	238	P	Pb	08 17 16.9	0.0
IGBI				S	Sb	08 17 27.9	+0.3
TWSI	Taliwang, Sumb	1.09	108	P	Pb	08 17 21.8	-0.2
PLAI	Plampang	1.97	103	P	Pn	08 17 33.9	-0.4

MAN 27 08:30:15.3, **9°.52N**×**126°.17E**, **h56**^{km}, **mb4.7**, **ML3.6**, **MS3.5**, **3C-2D**, **Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	Surigao	0.72	291	⇑*i*P	Pn	08 30 30.1	+0.6
SCPH				*i* S	Sn	08 30 39.5	-0.4
BUTP	Butuan	0.77	224	*e*P	Pn	08 30 31.3	+1.1
BUTP				*e*S	Sn	08 30 43.6	+2.5
BIPH	Bislig	1.34	172	⇑*i*P	Pn	08 30 40.5	+2.7
BIPH				*i* S	Sn	08 30 57.4	+2.8
MSLP	Maasin	1.43	295	*e*P	Pn	08 30 40.1	+1.3
MSLP				*e*S	Sn	08 30 58.6	+2.0
CGP	Cagayan de Oro	1.80	234	⇑*e*P	Pn	08 30 45.5	+1.6
CGP				*i* S	Sn	08 31 05.6	-0.2
BUKP	Musuan	1.97	214	*e*P	Pn	08 30 48.1	+1.9
BUKP				*e*S	Sn	08 31 10.4	+0.5
PLP	Palo	2.01	324	⇓*e*P	Pn	08 30 48.1	+1.3
PLP				*e*S	Sn	08 31 11.6	+0.8
OCLP	Ormoc	2.16	315	*e*P	Pn	08 30 49.4	+0.5
OCLP				*e*S	Sn	08 31 14.1	-0.4
BESP	Borongan	2.19	341	*e*P	Pn	08 30 47.0	-2.2
BESP				*e*S	Sn	08 31 17.8	+2.7
TBP	Tagbilaran	2.28	274	*e*P	Pn	08 30 51.1	+0.6
LLP	Lapu-Lapu	2.31	290	⇓*e*P	Pn	08 30 52.4	+1.5
LLP				*e*S	Sn	08 31 19.0	+0.8
PAGZ	Pagadian	3.22	239	*e*P	Pn	08 31 03.9	+0.5
PAGZ				*e*S	Sn	08 31 19.0	-21
CNP	Catarman	3.32	334	*e*P	Pn	08 31 05.6	+0.9
CNP				*e*S	Sn	08 31 15.6	-27

*DDA **27** 08:39:50.8, 37°.19N×28°.07E, h7^{km}, Ml2.4, Suspected Mining explosion.*
*CSEM **27** 08:39:51.0±0.2, 37°.17N×28°.15E, h2^{km}, ML2.1, Error ellipse: s-maj=5.3km s-min=3.5km az=35.0, Suspected Mining explosion.*
ISK 27 08:39:50.4, **37°.18N**×**28°.16E**, **h4**^{km}, **ML2.1**/10, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
YER	Yerkesik	0.11	112	PG	Pg	08 39 53.5	+0.9
YER	Yerkesik	0.11	112	*e*Pg	Pg	08 39 53.5	+0.9
MLSB	Milas	0.33	292	PG	Pg	08 39 57.5	+0.8
MLSB				SG	Sb	08 40 03.3	-1.2
MLSB	Milas	0.33	292	*e*Pg	Pg	08 39 57.5	+0.8
MLSB				*e*Sg	Sb	08 40 03.3	-1.2
TURN	Turunc	0.47	130	PG	Pg	08 39 59.2	-0.2
TURN	Turunc	0.47	130	*i* P	Pg	08 39 59.7	+0.3
TURN				*i* S	Sg	08 40 06.8	+1.4
TURN	Turunc	0.47	130	*e*Pg	Pg	08 39 59.2	-0.2
TURN	Turunc	0.47	130	P	Pg	08 39 59.7	+0.3
TURN				S	Sg	08 40 06.8	+1.4
AYDN	Tasoluk	0.53	336	*i* P	Pg	08 40 00.9	+0.2
AYDN				*i* S	Sg	08 40 08.0	+0.4
AYDN	Tasoluk	0.53	336	P	Pg	08 40 00.9	+0.3
AYDN				S	Sg	08 40 08.0	+0.4
DALY	Dalyan (Mu˜la	0.54	132	PG	Pb	08 40 01.6	-0.7
DALY	Dalyan (Mu˜la	0.54	132	*i* P	Pb	08 40 01.6	-0.7
DALY				*i* S	Sb	08 40 11.9	+1.5
DALY	Dalyan (Mu˜la	0.54	132	P	Pb	08 40 01.6	-0.7
DALY				S	Sb	08 40 11.9	+1.5
DAT	Datca	0.64	226	PG	Pg	08 40 03.2	+0.4
DAT	Datca	0.64	226	*e*Pg	Pg	08 40 03.2	+0.4
TAVA	DENIZLI_Tavas	0.67	64	*i* P	Pg	08 40 03.4	+0.2
TAVA				*i* S	Sg	08 40 11.8	-0.2
TAVA	DENIZLI_Tavas	0.67	64	P	Pg	08 40 03.4	+0.2
TAVA				S	Sg	08 40 11.8	-0.1
BODT	Bodrum	0.69	261	PG	Pb	08 40 04.3	-0.7
BODT	Bodrum	0.69	261	*e*Pg	Pb	08 40 04.3	-0.7
AYDB	Zeytinkoy-Aydi	0.80	345	PG	Pg	08 40 06.1	+0.4
AYDB	Zeytinkoy-Aydi	0.80	345	*e*Pg	Pg	08 40 06.1	+0.4
GCAM	G?zelcaml?	0.90	306	PG	Pg	08 40 07.9	+0.2
GCAM	G?zelcaml?	0.90	306	*e*Pg	Pg	08 40 07.9	+0.2
FETY	Fethiye	0.92	126	PG	Pg	08 40 08.3	+0.3
FETY	Fethiye	0.92	126	*e*Pg	Pg	08 40 08.3	+0.3
ARG	Arkhangelos	0.96	182	PG	Pg	08 40 09.1	+0.3
ARG	Arkhangelos	0.96	182	*e*Pg	Pg	08 40 09.1	+0.3
GOLH	Golhisar	1.12	86	*i* P	Pn	08 40 15.2	+2.1
GOLH				*i* S	Sn	08 40 31.3	+2.3
GOLH	Golhisar	1.12	86	P	Pn	08 40 15.2	+2.2
GOLH				S	Sn	08 40 31.3	+2.3
DGB	˜zmir	1.34	311	*i* P	Pn	08 40 15.5	-0.3
AKAS	Kas	1.50	129	PN	Pb	08 40 18.8	0.0
AKAS	Kas	1.50	129	*i* P	Pg	08 40 20.2	+1.1
AKAS	Kas	1.50	129	*e*Pn	Pb	08 40 18.8	0.0
AKAS	Kas	1.50	129	P	Pg	08 40 20.2	+1.1

KRSC 27 08:58:19.6±1.8, **49°.05N**×**156°.49E**, **h7**^{km}±32^{km}, **ML3.7**, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SKR	Severo-Kuril's	1.66	352	*e*P	Pn	08 58 48.8	-0.2
SKR				*e*S	Sn	08 59 10.4	-0.1
PAU	Pauzhetka	2.43	5	*e*P	Pn	08 59 00.8	+1.1
PAU				*e*S	Sb	08 59 31.8	-1.9
KDTR	Khodutka, Kamc	2.95	20	*e*P	Pb	08 59 10.6	-1.7
KDTR				*e*S	Sb	08 59 46.6	-1.9
ASAK	Asacha	3.46	14	P	Pn	08 59 17.3	+3.5
RUS	Russkaya	3.63	20	*e*P	Pn	08 59 19.5	+3.5
UGLR	Uglovaya	4.42	19	*e*P	Pn	08 59 32.0	+4.9
AVH	Avacha	4.46	18	P	Pb	08 59 32.9	-5.2
SDLR	Sedlovina	4.50	19	*e*P	Pn	08 59 32.0	+3.9
SPN	Mys Shipunski	4.63	27	*e*P	Pn	08 59 34.2	+4.4
SPN				*e*S	Sn	09 00 29.9	+6.2
GNL	Ganaly	4.74	10	*e*P	Pn	08 59 35.8	+4.3
MKZ	Mys Kozlova	6.40	28	*e*P	Pn	08 59 57.6	+3.5

*UPP **27** 09:00:48.6±3.4, 64°.46N×31°.75E, h0^{km}, ML1.6*
*IDC **27** 09:00:53.8±3.2, 64°.73N×31°.68E, h0^{km}, mb1 3.0/4, mb1mx2.8/71, mbtmp2.9/4, ML2.3/4, Error ellipse: s-maj=45.1km s-min=11.9km az=100.0*
*CSEM **27** 09:00:54.5±0.8, 64°.72N×30°.50E, h1^{km}, ML2.0, Error ellipse: s-maj=17.4km s-min=6.6km az=100.0, Mining explosion.*
*ISCJB **27** 09:00:54.1±0.8, 64°.77N±0°.03×30°.3E±0°.1, h0^{km}, Error ellipse: s-maj=7.3km s-min=3.5km az=15.3*
*HEL **27** 09:00:55.1±0.2, 64°.77N×30°.62E, h0^{km}, ML2.0, Explosion*
*NAO **27** 09:00:57.2±1.8, 64°.80N×30°.36E, ML2.3*
ISC 27 09:00:56.4±1.1, **64°.83N**±0°.03×**30°.38E**±0°.07, **h0**^{km}, **n52**, σ**1^{s}.35**/69, **Finland-Karelia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KU6	Riekki	1.22	350	PG	Pg	09 01 18.4	-1.3
	baz=166						
KU6				MSG		09 01 34.5	
	comp=Z,9.1nm,0.2s						
KU6				SG	Sg	09 01 35.2	-0.3
KU6	Riekki	1.22	350	Pg	Pg	09 01 18.4	-1.3
KU6				Sg	Sg	09 01 35.2	-0.3
	comp=Z,9.1nm,0.2s						
MSF	Maaselka	1.22	333	PG	Pg	09 01 19.0	-0.8
MSF				SG	Sg	09 01 36.2	+0.6
MSF	Maaselka	1.22	333	Pg	Pg	09 01 19.0	-0.8
MSF				Sg	Sg	09 01 36.2	+0.6
OUL	Oulu	1.93	280	PG	Pn	09 01 31.8	+1.4
OUL				SG	Sb	09 01 58.1	+1.3
OUL	Oulu	1.93	280	Pg	Pn	09 01 31.8	+1.4
OUL				Sg	Sb	09 01 58.1	+1.3
OUF	Merijarvi	2.48	262	PB	Pn	09 01 38.9	+1.0
OUF				MSG		09 02 11.0	
	comp=Z,13nm,0.2s						
OUF				SG	Sb	09 02 14.2	+1.4
OUF	Merijarvi	2.48	262	Pb	Pn	09 01 38.9	+1.0
RNF	Rovaniemi	2.54	317	PB	Pn	09 01 40.5	+1.7
RNF				SG	Sb	09 02 15.2	+0.7
RNF	Rovaniemi	2.54	317	Pb	Pn	09 01 40.5	+1.7
SUF	Sumiainen	2.83	224	PB	Pn	09 01 43.9	+1.1
SUF				MSG		09 02 19.3	
	comp=Z,7.0nm,0.2s						
SUF				SG	Sb	09 02 22.6	-0.3
SUF	Sumiainen	2.83	224	Pb	Pn	09 01 43.9	+1.1
VRF	Varrio	2.95	354	PN	Pn	09 01 44.2	-0.2
	baz=167						
VRF				MSG		09 02 24.0	
	comp=Z,2.8nm,0.2s						
VRF				SG	Sb	09 02 26.9	+0.6
VRF	Varrio	2.95	354	Pn	Pn	09 01 44.2	-0.2
SGF	Sodankyl	3.06	331	PN	Pn	09 01 46.1	+0.3
SGF				SB	Sb	09 02 28.4	-1.0
SGF	Sodankyl	3.06	331	Pn	Pn	09 01 46.1	+0.3
KALU	Kalix	3.12	293	P	Pn	09 01 48.3	+1.5
KALU	Kalix	3.12	293	P	Pn	09 01 48.3	+1.5
KAF	Kangasniemi	3.28	216	PB	Pn	09 01 50.4	+1.4
	baz=30						
KAF	Kangasniemi	3.28	216	Pb	Pn	09 01 50.4	+1.4
KEF	Keuruu	3.64	225	PB	Pn	09 01 56.2	+2.4
KEF	Keuruu	3.64	225	Pb	Pn	09 01 56.2	+2.4
PAJU	Pajala	3.71	310	P	Pn	09 01 55.2	+0.4
PAJU	Pajala	3.71	310	P	Pn	09 01 55.2	+0.4
SJUU	Sjulsmark	3.77	284	P	Pn	09 01 56.1	+0.5
SJUU	Sjulsmark	3.77	284	P	Pn	09 01 56.1	+0.5
ERTU	Ertsjaerv	3.81	301	P	Pn	09 01 57.7	+1.6
ERTU	Ertsjaerv	3.81	301	PN	Pn	09 01 58.2	+2.0
ERTU	Ertsjaerv	3.81	301	P	Pn	09 01 57.7	+1.6
ERTU	Ertsjaerv	3.81	301	Pn	Pn	09 01 58.2	+2.0
VAF	Ylistaro	3.85	246	SG	Sg	09 02 57.9	-1.9
BURU	Burvik	3.87	270	P	Pn	09 01 56.9	-0.2
BURU	Burvik	3.87	270	P	Pn	09 01 56.9	-0.2
FIA0	FINESS Array S	3.92	212	Pn	Pn	09 01 57.3	-0.4
	baz=43,slow=12						
FIA0				Pg	Pb	09 02 06.8	+0.5
	baz=31,slow=16						
FIA0				Sn	Sn	09 02 43.1	-1.2
	baz=40,slow=22						
FIA0				Lg	Lg	09 02 58.0	
	baz=28,slow=28						
FIA0	FINESS Array S	3.92	212	Pn	Pn	09 01 57.3	-0.4
	baz=43,slow=12,SNR=4.4						
FIA0				Sn	Sn	09 02 43.1	-1.2
	baz=40,slow=22						
FIA0				Lg	Lg	09 02 58.0	
	baz=28,slow=26,SNR=1.4						
FINES	FINESS Array B	3.92	212	Pn	Pn	09 01 57.3	-0.4
	comp=Z,0.2nm,0.3s,baz=34,slow=13,SNR=8.3						
FINES				Lg	Lg	09 02 56.8	
	comp=Z,1.4nm,0.3s,baz=40,slow=33,SNR=15						
FINES				Rg	Rg	09 03 15.1	
	comp=Z,71nm,1.2s,baz=32,slow=16,SNR=10						
ODEU	Stanfors	4.18	269	P	Pn	09 02 00.9	-0.4
ODEU	Stanfors	4.18	269	P	Pn	09 02 00.9	-0.4
UMAU	Umeaa	4.32	262	P	Pn	09 02 02.3	-0.9
HEF	Hetta	4.48	326	SG	Sb	09 03 14.9	+4.6
VJF	Virojoki	4.50	198	SG	Sb	09 03 14.2	+3.5
SVAU	Svanoeiden	4.66	271	P	Pn	09 02 08.0	+0.2
LANU	Lannavaara	4.67	318	P	Pn	09 02 08.2	+0.2
ARA0	ARCESS Array S	5.09	340	Pn	Pn	09 02 13.2	-0.6
	baz=153,slow=14						
ARA0				Sn	Sn	09 03 12.1	-1.1
	baz=158,slow=28						
ARA0				Lg	Lg	09 03 33.7	
	baz=148,slow=37						
ARA0	ARCESS Array S	5.09	340	Pn	Pn	09 02 13.2	-0.6
	baz=153,slow=13,SNR=5.9						
ARA0				Sn	Sn	09 03 12.1	-1.1
	baz=158,slow=24,SNR=6.9						
ARA0				Lg	Lg	09 03 33.7	
	SNR=5.4						
ARCES	ARCESS Array B	5.09	340	Pn	Pn	09 02 13.3	-0.5
	comp=Z,0.4nm,0.3s,baz=154,slow=13,SNR=16						
ARCES				Sn	Sn	09 03 11.8	-1.4
	comp=Z,0.4nm,0.3s,baz=156,slow=25,SNR=6.0						
ARCES				Lg	Lg	09 03 34.6	

	comp=Z,1.5nm,0.3s,baz=149,slow=36,SNR=14						
SALU	**Saltoluokta**	**5.46**	**303**	P	**Pn**	**09 02 19.4**	**+0.5**
NIKU	**Nikkaluokta**	**5.49**	**309**	P	**Pn**	**09 02 20.2**	**+1.0**
NIKU	**Nikkaluokta**	**5.49**	**309**	P	**Pn**	**09 02 20.2**	**+1.0**
HFS	**Hagfors**	**9.03**	**246**	Pn	**Pn**	**09 03 05.7**	**-2.1**
	baz=63,slow=14						
HFS				Lg	Lg	09 05 37.2	
	baz=48,slow=37						
HFS	**Hagfors**	**9.03**	**246**	Pn	**Pn**	**09 03 07.6**	**-0.2**
	comp=Z,0.1nm,0.3s,baz=63,slow=13,SNR=3.5						
NRA0	**NORESS Array S**	**9.54**	**253**	Pn	**Pn**	**09 03 12.8**	**-2.0**
	baz=66,slow=9.3						

MAN 27 09:09:40.5, 17°.51N×120°.25E, h31km, mb4.7, ML3.6, MS3.5, Luzon

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABRA	**Dolores**	**0.46**	**73**	*e*P	Pn	09 09 51.1	0.0
ABRA				*e*S	Sn	09 09 59.1	+0.9
APYP	**Conner**	**1.01**	**70**	*e*P	Pn	09 09 58.4	-0.2
APYP				*e*S	Sb	09 10 12.3	-0.2
BOLP	**Bolinao**	**1.17**	**196**	*e*P	Pn	09 10 00.8	0.0
BOLP				*e*S	Sn	09 10 15.5	-0.2
CAUP	**Cauayan**	**1.61**	**110**	*e*P	Pb	09 10 08.4	-1.3
CAUP				*e*S	Sb	09 10 31.8	+2.2
SCZP	**Santa Cruz**	**1.76**	**191**	*e*P	Pb	09 10 12.9	+0.7
SCZP				*e*S	Sb	09 10 38.2	+4.4

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*ISN **27** 09:19:06.0±1.1, 32°.13N×49°.62E, h14km±5km, ML3.5*

*CSEM **27** 09:19:11.6±0.2, 32°.49N×49°.80E, h10km, ML3.5, Error ellipse: s-maj=5.8km s-min=4.1km az=23.0*

TEH 27 09:19:09.3, 32°.47N×49°.82E, h10km, ML3.5, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHGR	**Shooshtar-Gavs**	**0.94**	**248**	*e*Pg	Pn	09 19 30.5	+2.0
SHGR	**Shooshtar-Gavs**	**0.94**	**248**	*e*Pg	Pn	09 19 30.5	+2.0
ZNGN	**Zangian**	**0.94**	**112**	*e*Pg	Pg	09 19 26.9	-0.6
ZNGN				*e*		09 19 44.0	
	comp=N,99nm,0.2s						
ZNGN				*e*		09 19 46.7	
	comp=Z,99nm,0.2s						
ZNGN				*e*		09 19 50.5	
	comp=E,99nm,0.3s						
ROKH	**ROKH**	**1.03**	**97**	*e*Pg	Pg	09 19 27.0	-2.2
ROKH				*e*		09 19 44.4	
	comp=E,99nm,0.2s						
ROKH				*e*		09 19 47.0	
	comp=N,99nm,0.2s						
ROKH				*e*		09 19 48.6	
	comp=Z,99nm,0.2s						
KHMZ	**Khomeyn**	**1.27**	**5**	*e*Pg	Pn	09 19 30.6	-2.7
KHMZ	**Khomeyn**	**1.27**	**5**	*e*Pg	Pn	09 19 30.6	-2.7
IBRJ	**Brojen**	**1.34**	**114**	*e*Pn	Pn	09 19 33.5	-0.9
IBRJ				*e*		09 20 01.2	
	comp=E,6µm,0.2s						
IBRJ				*e*		09 20 07.6	
	comp=Z,3µm,0.3s						
IBRJ				*e*		09 20 09.1	
	comp=N,4µm,0.3s						
AHWZ	**Ahwaz**	**1.52**	**222**	*e*		09 20 11.4	
	comp=N,99nm,0.1s						
AHWZ				*e*		09 20 12.1	
	comp=E,99nm,0.1s						
IKLH	**Kolahrood**	**1.70**	**60**	*e*Pn	Pn	09 19 38.4	-0.9
IKLH				*e*		09 19 42.6	
	comp=Z,6µm,0.1s						
IKLH				*e*		09 20 06.5	
	comp=N,9µm,0.2s						
IKLH				*e*		09 20 08.3	
	comp=E,7µm,0.1s						
IGAR	**Gharneh**	**1.88**	**91**	*e*Pn	Pb	09 19 43.1	-0.8
IGAR				*e*		09 20 15.0	
	comp=N,5µm,0.2s						
IGAR				*e*		09 20 15.9	
	comp=Z,3µm,0.2s						
IKFM	**Kafar-mosalman**	**1.96**	**303**	*e*Pn	Pb	09 19 45.5	+0.4
IKFM				*e*		09 20 18.5	
	comp=Z,99nm,0.2s						
IKFM				*e*		09 20 22.1	
	comp=N,99nm,0.3s						
IKFM				*e*		09 20 23.7	
	comp=E,99nm,0.3s						
IKFM	**Kafar-mosalman**	**1.96**	**303**	*e*Pn	Pb	09 19 45.5	+0.4
HSAM	**Samen**	**2.01**	**330**	*e*Pn	Pb	09 19 44.9	-1.3
HSAM				*e*		09 19 48.0	
	comp=N,99nm,0.1s						
HSAM				*e*		09 20 19.7	
	comp=E,99nm,0.3s						
HSAM	**Samen**	**2.01**	**330**	*e*Pn	Pb	09 19 44.9	-1.3
ASAO	**Ashtian**	**2.08**	**5**	*e*Pg	Pn	09 19 44.9	+0.4
ASAO	**Ashtian**	**2.08**	**5**	*e*Pg	Pn	09 19 44.9	+0.4
IZEF	**Zefreh**	**2.16**	**78**	*e*Pn	Pn	09 19 46.5	+0.9
IZEF				*e*		09 19 53.7	
	comp=Z,2µm,0.2s						
IZEF				*e*		09 20 22.2	
	comp=N,3µm,0.2s						
IZEF				*e*		09 20 26.8	
	comp=E,2µm,0.3s						
IZEF	**Zefreh**	**2.16**	**78**	*e*Pn	Pn	09 19 46.5	+0.9
IRAM	**Ramesheh**	**2.27**	**106**	*e*Pn	Pb	09 19 49.3	-1.2
IRAM				*e*		09 20 31.7	
	comp=Z,2µm,0.3s						
IRAM				*e*		09 20 32.1	
	comp=N,2µm,0.2s						
IRAM				*e*		09 20 32.8	
	comp=E,2µm,0.2s						
IRAM	**Ramesheh**	**2.27**	**106**	*e*Pn	Pb	09 19 49.3	-1.2
GHVR	**GHOM**	**2.35**	**31**	*e*Pn	Pn	09 19 47.6	-0.5
GHVR	**GHOM**	**2.35**	**31**	*e*Pn	Pn	09 19 47.6	-0.5
HAGD	**Aghdareh**	**2.41**	**347**	*e*Pn	Pn	09 19 50.9	+1.8
HAGD				*e*		09 20 00.3	
	comp=Z,99nm,0.1s						
HAGD				*e*		09 20 28.2	
	comp=E,99nm,0.1s						
HAGD				*e*		09 20 32.3	
	comp=N,99nm,0.2s						
HAGD	**Aghdareh**	**2.41**	**347**	*e*Pn	Pn	09 19 50.9	+1.8
NASN	**Na'in**	**2.54**	**82**	*e*Pn	Pb	09 19 54.0	-1.2
NASN	**Na'in**	**2.54**	**82**	*e*Pg	Pb	09 19 54.0	-1.2
IKOM	**Komasi**	**2.58**	**312**	*e*Pn	Pb	09 19 53.6	-2.1
IKOM	**Komasi**	**2.58**	**312**	*e*Pn	Pb	09 19 53.6	-2.1
IBZA	**Bozab**	**2.58**	**321**	*e*Pn	Pn	09 19 53.5	+2.1
IBZA				*e*		09 20 00.2	
	comp=Z,99nm,0.1s						
IBZA	**Bozab**	**2.58**	**321**	*e*Pn	Pn	09 19 53.5	+2.1
IRAZ	**Razeghan**	**2.93**	**2**	*e*Pn	Pn	09 19 58.6	+2.5
IRAZ				*e*		09 20 48.4	
	comp=Z,3µm,0.4s						
IRAZ				*e*		09 20 50.8	
	comp=N,1µm,0.2s						
IRAZ	**Razeghan**	**2.93**	**2**	*e*Pn	Pn	09 19 58.6	+2.5
KCHF	**Cheshme Sefid,**	**2.94**	**308**	*e*Pn	Pn	09 19 58.1	+1.8
KCHF				*e*		09 20 07.6	
	comp=Z,99nm,0.2s						
KCHF	**Cheshme Sefid,**	**2.94**	**308**	*e*Pn	Pn	09 19 58.1	+1.8
HKZM	**Kohzaman**	**3.00**	**346**	*e*Pn	Pn	09 19 58.6	+1.5
HKZM				*e*		09 20 46.6	
	comp=N,99nm,0.2s						
HKZM				*e*		09 20 46.6	
	comp=Z,99nm,0.2s						
HKZM				*e*		09 20 54.2	
	comp=E,99nm,0.3s						
HKZM	**Kohzaman**	**3.00**	**346**	*e*Pn	Pn	09 19 58.6	+1.5
IVIS	**Veis**	**3.22**	**310**	*e*		09 20 03.2	
	comp=E,1µm,0.1s						
IVIS				*e*Pn	Pn	09 20 01.6	+1.6
IVIS				*e*		09 20 07.4	
	comp=Z,952nm,0.1s						
IVIS				*e*		09 20 14.0	
	comp=N,1µm,0.1s						
QABG	**Abgarm-Qazvin**	**3.23**	**357**	*e*Pn	Pn	09 20 03.5	+3.1
QABG				*e*		09 20 53.4	
	comp=N,99nm,0.4s						
QABG				*e*		09 20 58.7	
	comp=E,99nm,0.3s						
QABG				*e*		09 21 08.3	
	comp=Z,99nm,0.8s						
QABG	**Abgarm-Qazvin**	**3.23**	**357**	*e*Pn	Pn	09 20 03.5	+3.1
IMHD	**Mahdasht**	**3.28**	**12**	*e*		09 20 07.5	
	comp=Z,1µm,0.2s						
IMHD				*e*Pn	Pn	09 20 03.2	+2.3
IMHD				*e*		09 20 51.3	
	comp=N,2µm,0.2s						
IMHD				*e*		09 20 52.8	
	comp=E,3µm,0.2s						
ISAD	**Sadrabad**	**3.32**	**99**	*e*		09 21 04.9	
	comp=Z,552nm,0.4s						
ISAD				*e*		09 21 11.5	
	comp=N,805nm,0.2s						
ANAR	**Anarak**	**3.37**	**77**	*e*		09 20 13.5	
	comp=E,99nm,0.2s						
ANAR				*e*Pn	Pn	09 20 04.8	+2.7
ANAR				*e*		09 20 19.6	
	comp=Z,99nm,0.2s						
ANAR				*e*		09 21 02.8	
	comp=N,99nm,0.3s						
ILIN	**Lien**	**3.41**	**316**	*e*		09 20 05.2	
	comp=Z,1µm,0.1s						
ILIN				*e*Pn	Pn	09 20 04.4	+1.6
ILIN				*e*		09 20 09.0	
	comp=N,412nm,0.0s						
ILIN				*e*		09 21 04.9	
	comp=E,1µm,0.2s						
NSR	**Nassriya**	**3.46**	**246**	*e*Pg	Pn	09 20 01.0	-2.2
	SNR=9.0						
NSR				*e*Sg	Sn	09 20 42.0	-2.2
	SNR=9.0						
IDMV	**Damavand**	**3.60**	**30**	*e*		09 20 20.5	
	comp=Z,815nm,0.3s						
IDMV				*e*Pn	Pn	09 20 07.6	+2.1
IDMV				*e*		09 21 09.1	
	comp=E,2µm,0.3s						
IDMV				*e*		09 21 24.1	
	comp=N,999nm,0.2s						
IPAR	**Pars**	**3.81**	**133**	*e*Pn	Pn	09 20 11.1	+2.7
IPAR				*e*		09 21 35.4	
	comp=Z,382nm,0.4s						
IPAR				*e*		09 21 36.2	
	comp=N,551nm,0.4s						
IPAR				*e*		09 21 36.5	
	comp=E,683nm,0.4s						
IPAR	**Pars**	**3.81**	**133**	*e*Pn	Pn	09 20 11.1	+2.7
ICHK	**Chekchek**	**3.89**	**92**	*e*		09 21 21.9	
	comp=Z,655nm,0.3s						
ICHK				*e*		09 21 22.9	
	comp=E,541nm,0.3s						
ICHK				*e*		09 21 26.7	
	comp=N,657nm,0.3s						
ILAS	**Lasjerd**	**3.90**	**41**	*e*Pn	Pn	09 20 12.2	+2.6
ILAS				*e*		09 21 22.4	
	comp=E,1µm,0.3s						
ILAS	**Lasjerd**	**3.90**	**41**	*e*Pn	Pn	09 20 12.2	+2.6
IGZV	**Ghazvin**	**3.92**	**5**	*e*Pn	Pn	09 20 11.4	+1.6
IGZV				*e*		09 20 27.3	
	comp=Z,678nm,0.2s						
IGZV				*e*		09 21 16.2	
	comp=N,1µm,0.2s						
IGZV				*e*		09 21 25.7	
	comp=E,1µm,0.3s						
IGZV	**Ghazvin**	**3.92**	**5**	*e*Pn	Pn	09 20 11.4	+1.6
IFIR	**Firoozkooh**	**3.99**	**37**	*e*Pn	Pn	09 20 12.8	+2.0
IFIR				*e*		09 20 28.9	
	comp=Z,444nm,0.2s						
IFIR				*e*		09 21 13.8	
	comp=E,848nm,0.2s						
IFIR				*e*		09 21 23.5	
	comp=N,698nm,0.3s						
IFIR	**Firoozkooh**	**3.99**	**37**	*e*Pn	Pn	09 20 12.8	+2.0
ISRV	**Sarvestan**	**4.18**	**137**	*e*Pn	Pn	09 20 16.1	+2.6
ISRV				*e*		09 21 22.4	
	comp=N,966nm,0.3s						
ISRV				*e*		09 21 22.6	
	comp=E,502nm,0.2s						
ISRV				*e*		09 21 37.0	
	comp=Z,465nm,0.3s						
ISRV	**Sarvestan**	**4.18**	**137**	*e*Pn	Pn	09 20 16.1	+2.6
IMEH	**Mehriz**	**4.21**	**104**	*e*Pn	Pn	09 20 17.0	+3.2
IMEH				*e*		09 20 45.7	
	comp=Z,172nm,0.3s						
IMEH				*e*		09 21 37.6	
	comp=N,296nm,0.3s						
IMEH	**Mehriz**	**4.21**	**104**	*e*Pn	Pn	09 20 17.0	+3.2
IPRN	**Peran**	**4.30**	**28**	*e*Pn	Pn	09 20 18.6	+3.7
IPRN				*e*		09 20 38.6	
	comp=Z,724nm,0.2s						
IPRN				*e*		09 21 31.4	
	comp=N,2µm,0.3s						
IPRN				*e*		09 21 31.5	
	comp=E,2µm,0.2s						
IALA	**Alasht**	**4.37**	**34**	*e*Pn	Pn	09 20 19.0	+3.0
IALA				*e*		09 20 35.0	
	comp=Z,517nm,0.2s						
IALA				*e*		09 21 28.1	
	comp=E,854nm,0.2s						
IALA	**Alasht**	**4.37**	**34**	*e*Pn	Pn	09 20 19.0	+3.0
IANJ	**Anjilo**	**4.53**	**48**	*e*Pn	Pn	09 20 20.7	+2.6
IANJ				*e*		09 21 48.2	
	comp=Z,292nm,0.4s						
IANJ	**Anjilo**	**4.53**	**48**	*e*Pn	Pn	09 20 20.7	+2.6
BHD	**Baghdad**	**4.65**	**281**	*e*Pn	Pn	09 20 17.0	-2.5
	SNR=5.0						

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*KOLA **27** 09:20:28.9, 67°.65N×33°.97E, M1.6, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

*ISCJB **27** 09:20:29.6±1.1, 67°.57N±0°.04×33°.4E±0°.2, h0km, Error ellipse: s-maj=9.1km s-min=5.6km az=174.7*

*CSEM **27** 09:20:30.8±0.7, 67°.54N×33°.44E, h1km, ML2.3, Error ellipse: s-maj=13.8km s-min=7.2km az=88.0, Mining explosion.*

*HEL **27** 09:20:30.1±0.4, 67°.66N×33°.82E, h0km, ML2.3, Explosion*

*NAO **27** 09:20:31.9±1.8, 67°.62N×33°.33E, ML2.6*

*IDC **27** 09:20:33.0±2.8, 67°.70N×33°.40E, h0km, mb1 3.1/4, mb1mx2.9/70, mbtmp3.1/4, ML2.6/4, Error ellipse: s-maj=33.1km s-min=10.9km az=68.0*

ISC 27 09:20:28.9±1.7, 67°.59N±0°.05×33°.65E±0°.10, h0km, n39, σ1s.38/58, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VRF	**Varrio**	**1.55**	**278**	PG	**Pn**	**09 20 58.5**	**+0.8**
	baz=87						
VRF				MSG		09 21 18.3	
	comp=Z,33nm,0.2s						
VRF				SG	**Sn**	**09 21 19.7**	**+1.2**
VRF	**Varrio**	**1.55**	**278**	Pg	**Pn**	**09 20 58.5**	**+0.8**
VRF				Sg	**Sn**	**09 21 19.7**	**+1.2**
	comp=Z,33nm,0.2s						
KU6	**Riekki**	**2.17**	**225**	PB	**Pb**	**09 21 08.9**	**0.0**
KU6				MSG		09 21 37.0	
	comp=Z,13nm,0.2s						
KU6				SG	**Sg**	**09 21 39.1**	**+0.8**
KU6	**Riekki**	**2.17**	**225**	Pb	**Pb**	**09 21 08.9**	**0.0**
KU6				Sg	**Sg**	**09 21 39.2**	**+0.8**
	comp=Z,13nm,0.2s						
MSF	**Maaselka**	**2.49**	**229**	PB	**Pb**	**09 21 14.7**	**+0.3**
	baz=45						
MSF				SB	**Sg**	**09 21 48.2**	**-0.5**
MSF	**Maaselka**	**2.49**	**229**	Pb	**Pb**	**09 21 14.7**	**+0.3**
MSF				Sb	**Sg**	**09 21 48.2**	**-0.5**
SGF	**Sodankyl**	**2.74**	**270**	PN	**Pn**	**09 21 16.7**	**+2.6**
SGF				SG	**Sg**	**09 21 56.1**	**-0.8**
SGF	**Sodankyl**	**2.74**	**270**	Pn	**Pn**	**09 21 16.7**	**+2.6**
SGF				Sg	**Sg**	**09 21 56.1**	**-0.8**
RNF	**Rovaniemi**	**3.15**	**255**	PN	**Pn**	**09 21 21.4**	**+1.8**
RNF	**Rovaniemi**	**3.15**	**255**	Pn	**Pn**	**09 21 21.4**	**+1.8**
KEV	**Kevo**	**3.26**	**315**	PN	**Pn**	**09 21 22.5**	**+1.4**
KEV	**Kevo**	**3.26**	**315**	Pn	**Pn**	**09 21 22.5**	**+1.4**
KEV	**Kevo**	**3.26**	**315**	*e*P	**Pn**	**09 21 23.1**	**+2.0**
ARA0	**ARCESS Array S**	**3.57**	**307**	Pn	**Pn**	**09 21 26.2**	**+0.7**
	baz=122,slow=16						
ARA0				Sn	**Sn**	**09 22 09.1**	**+0.8**
	baz=123,slow=28						
ARA0				Lg	Lg	09 22 20.0	
	baz=119,slow=37						
ARA0	**ARCESS Array S**	**3.57**	**307**	Pn	**Pn**	**09 21 26.2**	**+0.7**
	SNR=239						
ARA0				Sn	**Sn**	**09 22 09.1**	**+0.8**
	SNR=7.9						
ARA0				Lg	Lg	09 22 20.0	
	SNR=6.0						
ARA0	**ARCESS Array S**	**3.57**	**307**	Pn	**Pn**	**09 21 26.2**	**+0.7**
	baz=122,slow=16						
ARA0				Sn	**Sn**	**09 22 09.1**	**+0.8**
	baz=123,slow=28						
ARA0				Lg	Lg	09 22 20.0	
	baz=119,slow=37						
ARCES	**ARCESS Array B**	**3.57**	**307**	Pn	**Pn**	**09 21 26.4**	**+0.9**
	comp=Z,5.3nm,0.3s,baz=122,slow=15,SNR=144						
ARCES				Sn	**Sn**	**09 22 09.0**	**+0.8**
	comp=Z,2.1nm,0.3s,baz=121,slow=24,SNR=10						
ARCES				Lg	Lg	09 22 19.6	
	comp=Z,7.4nm,0.3s,baz=124,slow=34,SNR=16						
ARE0	**ARCESS Array S**	**3.57**	**307**	PN	**Pn**	**09 21 26.2**	**+0.8**
	baz=121						
ARE0				SN	**Sn**	**09 22 09.1**	**+0.8**
ARE0	**ARCESS Array S**	**3.57**	**307**	Pn	**Pn**	**09 21 26.2**	**+0.8**
ARE0				Sn	**Sn**	**09 22 09.1**	**+0.8**
HEF	**Hetta**	**3.85**	**287**	PN	**Pn**	**09 21 31.4**	**+2.1**
	baz=97						
HEF	**Hetta**	**3.85**	**287**	Pn	**Pn**	**09 21 31.4**	**+2.1**
HEF	**Hetta**	**3.85**	**287**	*e*P	**Pn**	**09 21 31.6**	**+2.3**
OUL	**Oulu**	**4.01**	**235**	PG	**Pg**	**09 21 45.6**	**-0.1**
	baz=46						
OUL	**Oulu**	**4.01**	**235**	Pg	**Pg**	**09 21 45.6**	**-0.1**
KTK1	**Kautokeino**	**4.12**	**295**	*e*P	**Pn**	**09 21 34.6**	**+1.6**
KTK1				IAML		09 22 42.3	
	comp=Z,8.7nm,0.3s						
KALU	**Kalix**	**4.44**	**252**	PB	**Pb**	**09 21 48.1**	**+0.6**
	baz=64						
LANU	**Lannavaara**	**4.45**	**281**	PN	**Pn**	**09 21 38.5**	**+1.0**
LANU	**Lannavaara**	**4.45**	**281**	Pn	**Pn**	**09 21 38.5**	**+1.0**
ERTU	**Ertsjaerv**	**4.60**	**262**	PN	**Pn**	**09 21 41.0**	**+1.4**
	baz=71						
ERTU	**Ertsjaerv**	**4.60**	**262**	Pn	**Pn**	**09 21 41.0**	**+1.4**
FIA0	**FINESS Array S**	**6.98**	**211**	Pn	**Pn**	**09 22 13.7**	**+1.4**
	baz=30,slow=12						
FIA0				Sn	**Sn**	**09 23 30.3**	**-1.8**
	baz=33,slow=28						
FIA0				Lg	Lg	09 24 06.5	
	baz=28,slow=28						
FIA0	**FINESS Array S**	**6.98**	**211**	Pn	**Pn**	**09 22 13.6**	**+1.4**
FIA0				Sn	**Sn**	**09 23 30.3**	**-1.8**
FIA0				Lg	Lg	09 24 06.4	
	SNR=4.1						
FIA0	**FINESS Array S**	**6.98**	**211**	Pn	**Pn**	**09 22 13.7**	**+1.4**
	baz=30,slow=12						
FIA0				Sn	**Sn**	**09 23 30.3**	**-1.8**
	baz=33,slow=28						
FIA0				Lg	Lg	09 24 06.5	
	baz=28,slow=28						
FINES	**FINESS Array B**	**6.98**	**211**	Pn	**Pn**	**09 22 13.9**	**+1.7**
	comp=Z,0.1nm,0.3s,baz=29,slow=13,SNR=3.9						
HFS	**Hagfors**	**11.49**	**239**	Pn	**Pn**	**09 23 14.2**	**+0.1**
	comp=Z,0.1nm,0.3s,baz=36,slow=12,SNR=2.9						
SPA0	**Spitsbergen Ar**	**11.70**	**342**	Pn	**Pn**	**09 23 15.1**	**-1.7**
	baz=124,slow=14						
SPA0	**Spitsbergen Ar**	**11.70**	**342**	Pn	**Pn**	**09 23 15.1**	**-1.7**
	baz=124,slow=14						
NRA0	**NORESS Array S**	**11.78**	**245**	Pn	**Pn**	**09 23 17.6**	**-0.4**
	baz=39,slow=16						
NRA0				Sn	**Sn**	**09 25 27.3**	**-2.6**
	baz=68,slow=22						
NRA0	**NORESS Array S**	**11.78**	**245**	Pn	**Pn**	**09 23 17.6**	**-0.4**
	baz=39,slow=16						
NRA0				Sn	**Sn**	**09 25 27.3**	**-2.6**
	baz=68,slow=22						

KRSC 27 09:23:46.5±2.2, 55°.02N×165°.17E, h49km±42km, ML4.0, Komandorsky Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBTR	**Krutoberegovo**	**1.79**	**313**	*e*P	Pn	09 24 14.7	-0.1
KBTR				S	Sn	09 24 35.1	-1.2
KBG	**Krutoberegovo**	**1.86**	**312**	*e*P	Pn	09 24 17.5	+1.6
KBG				*e*S	Sn	09 24 37.7	-0.5
MKZ	**Mys Kozlova**	**2.05**	**258**	*e*P	Pn	09 24 21.4	+3.0
MKZ				*e*S	Sn	09 24 46.3	+3.6
SMKR	**Semkarok**	**2.61**	**308**	*e*P	Pn	09 24 28.1	+2.0
SMKR				*e*S	Sn	09 24 59.3	+2.7
ZLN	**Zelenaya**	**2.67**	**294**	*e*P	Pn	09 24 31.6	+4.5
ZLN				*e*S	Sn	09 25 03.8	+5.5
BZGR	**Bezymyannyi-Gr**	**2.71**	**292**	*e*P	Pn	09 24 30.7	+3.2
BZGR				*e*S	Sn	09 25 03.9	+4.8
BDR	**Baidarnaya**	**2.72**	**306**	*e*P	Pn	09 24 29.9	+2.2
BDR				*e*S	Sn	09 25 02.9	+3.5
CIRR	**Tsirk**	**2.74**	**295**	*e*P	Pn	09 24 30.7	+2.7
CIRR				*e*S	Sn	09 25 04.1	+4.2
TUMD	**Tumrok D**	**2.75**	**276**	*e*P	Pn	09 24 31.6	+3.6
TUMD				*e*S	Sn	09 25 04.3	+4.4
LGNR	**Loginova**	**2.76**	**294**	*e*P	Pn	09 24 32.0	+3.6
LGNR				*e*S	Sn	09 25 04.4	+3.8
SRKR	**Sorokina**	**2.79**	**308**	*e*P	Pn	09 24 31.0	+2.4
SRKR				*e*S	Sn	09 25 03.4	+2.4
KZV	**Kizimen**	**2.81**	**274**	*e*P	Pn	09 24 32.3	+3.4
KZV				*e*S	Sn	09 25 04.9	+3.3
BZMR	**Bezymyannaya**	**2.82**	**291**	*e*P	Pn	09 24 32.1	+3.0
BZMR				*e*S	Sn	09 25 05.9	+4.1
BZWR	**Bezymyannyi-We**	**2.82**	**291**	*e*P	Pn	09 24 32.7	+3.6
BZWR				*e*S	Sn	09 25 06.9	+4.9
KLY	**Klyuchi**	**2.87**	**299**	*e*P	Pn	09 24 31.0	+1.4
KLY				*e*S	Sn	09 25 03.9	+1.1
KRSR	**Krestovskiy**	**2.87**	**296**	*e*P	Pn	09 24 32.4	+2.6
KRSR				*e*S	Sn	09 25 05.6	+2.5
TUMR	**Tumrok**	**2.90**	**277**	*e*P	Pn	09 24 34.2	+4.1
TUMR				*e*S	Sn	09 25 08.1	+4.4
KIRR	**Kirishev**	**2.90**	**291**	*e*P	Pn	09 24 33.4	+3.2
KIRR				*e*S	Sn	09 25 08.3	+4.4
KMNR	**Kamenistaya**	**2.91**	**287**	*e*P	Pn	09 24 34.7	+4.4
KMNR				*e*S	Sn	09 25 09.5	+5.5
KPT	**Kopyto**	**2.97**	**291**	*e*P	Pn	09 24 34.9	+3.8
KPT				*e*S	Sn	09 25 11.0	+5.5
KOZ	**Kozyrevsk**	**3.18**	**291**	*e*P	Pn	09 24 38.8	+4.8
KOZ				*e*S	Sn	09 25 16.6	+5.9
KII	**Karymskiy**	**3.48**	**256**	*e*P	Pn	09 24 42.2	+4.1
KII				*e*S	Sn	09 25 22.4	+4.4
SPN	**Mys Shipunski**	**3.59**	**240**	*e*P	Pn	09 24 42.5	+2.9
SPN				*e*S	Sn	09 25 22.7	+2.0
ESO	**Esso**	**3.79**	**286**	*e*P	Pn	09 24 45.9	+3.6
NLC	**Nalytchevo**	**3.90**	**244**	*e*P	Pn	09 24 47.2	+3.5
NLC				*e*S	Sn	09 25 31.1	+2.9
SDLR	**Sedlovina**	**4.09**	**247**	*e*P	Pn	09 24 50.7	+4.2
SDLR				*e*S	Sn	09 25 37.2	+4.1
SMAR	**Somma**	**4.14**	**247**	*e*P	Pn	09 24 51.7	+4.4
SMAR				*e*S	Sn	09 25 38.5	+4.0
UGLR	**Uglovaya**	**4.15**	**247**	*e*P	Pn	09 24 51.6	+4.2
UGLR				*e*S	Sn	09 25 38.4	+3.7
AVH	**Avacha**	**4.17**	**248**	*e*P	Pn	09 24 52.2	+4.6
AVH				*e*S	Sn	09 25 39.7	+4.6
KRX	**Arik**	**4.18**	**249**	*e*S	Sn	09 25 39.6	+4.3
KOK	**Koryaka**	**4.21**	**248**	*e*P	Pn	09 24 52.8	+4.6
KOK				*e*S	Sn	09 25 40.4	+4.3
DALK	**Dalny**	**4.28**	**245**	*e*P	Pn	09 24 53.0	+4.1
DALK				*e*S	Sn	09 25 40.4	+2.9
PET	**Petropavlovsk**	**4.33**	**245**	*e*P	Pn	09 24 54.0	+4.3
PET				*e*S	Sn	09 25 41.1	+2.2
GNL	**Ganaly**	**4.43**	**255**	*e*P	Pn	09 24 56.0	+4.8
RUS	**Russkaya**	**4.73**	**239**	*e*P	Pn	09 24 58.6	+3.5
RUS				*e*S	Sn	09 25 50.6	+2.0
MTVR	**Mutnovka**	**4.87**	**241**	*e*P	Pn	09 25 00.9	+3.7
MTVR				*e*S	Sn	09 25 55.2	+3.0
ASAK	**Asacha**	**5.07**	**241**	*e*P	Pn	09 25 04.7	+4.9
KDTR	**Khodutka, Kamc**	**5.33**	**236**	*e*P	Pn	09 25 06.5	+3.2
KDTR				*e*S	Sn	09 26 04.5	+1.2
MIPR	**Malaya Ipel'ka**	**5.71**	**245**	*e*P	Pn	09 25 13.7	+5.1

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*WEL **27** 09:38:23.6, 38°S±11°×17°9W±°, h33km, ML4.2/24*

*IDC **27** 09:38:30.7±3.1, 36°.93S×179°.34E, h0km, mb4.1/2, mb1 4.3/3, mb1mx3.8/40, mbtmp4.1/3, ML3.9/1, Error ellipse: s-maj=78.8km s-min=32.1km az=135.0*

ISC 27 09:38:26.2±1.7, 37°.84S±0°.07×179°.67W±0°.10, h31km, n80, σ2s.53/86, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**1.52**	**270**	P	**Pn**	**09 38 51.9**	**+0.7**
WMGZ				S	**Sb**	**09 39 13.3**	**+0.7**
MXZ	**Matakaoa Point**	**1.63**	**279**	P	**Pn**	**09 38 52.8**	**0.0**
PUZ	**Puketiti**	**1.66**	**261**	P	**Pb**	**09 38 54.8**	**-1.3**
PKGZ	**Pakihiroa**	**1.78**	**268**	P	**Pn**	**09 38 55.2**	**+0.2**
CNGZ	**Carnagh Statio**	**1.79**	**248**	P	**Pb**	**09 38 57.5**	**-0.9**
TWGZ	**Tauwhareparae**	**1.89**	**259**	P	**Pn**	**09 38 57.5**	**+1.2**
TWGZ				S	**Sb**	**09 39 23.2**	**-0.1**

HAZ	Te Kaha	2.02	272	P	Pn	09 38 59.2	+1.1
TKGZ	Te Karaka	2.05	252	P	Pb	09 39 00.6	-2.1
RUGZ	Raukumara Rang	2.10	266	P	Pn	09 39 00.0	+0.6
MWZ	Matawai	2.27	257	P	Pn	09 39 02.3	+0.7
RAGZ	Rawiri	2.39	253	P	Pn	09 39 05.8	+2.6
URZ	Urewera	2.58	260	Pn	Pn	09 39 07.3	+1.5
	32nm,0.3s,baz=232,slow=0.8,SNR=130						
URZ				Sn	Sn	09 39 38.3	+2.3
	27nm,0.3s,baz=254,slow=17,SNR=9.1						
WHHZ	Waihua	2.73	242	P	Pb	09 39 11.5	-2.8
WHHZ	Waihua	2.73	242	P	Pb	09 39 11.5	-2.8
WHHZ	Waihua	2.73	242	S	Sb	09 39 44.0	-3.3
RTZ	Ruatahuna	2.75	253	P	Pn	09 39 10.1	+1.9
RTZ	Ruatahuna	2.75	253	P	Pn	09 39 10.1	+1.9
RTZ	Ruatahuna	2.75	253	S	Sb	09 39 44.4	-3.6
RAHZ	Arahi	2.77	246	P	Pn	09 39 11.4	+3.0
RAHZ	Arahi	2.77	246	P	Pn	09 39 11.4	+3.0
EDRZ	Edgecumbe	2.85	264	P	Pn	09 39 12.4	+2.8
EDRZ	Edgecumbe	2.85	264	P	Pn	09 39 12.4	+2.8
MARZ	Manawahe	2.89	266	P	Pb	09 39 14.2	-2.9
MARZ	Manawahe	2.89	266	P	Pb	09 39 14.2	-2.9
MTHZ	Maungataniwha	2.92	249	P	Pn	09 39 12.7	+2.1
ARHZ	Aropaoanui	2.98	240	P	Pn	09 39 14.4	+3.2
ARHZ	Aropaoanui	2.98	240	P	Pn	09 39 14.4	+3.2
ARHZ	Aropaoanui	2.98	240	S	Sn	09 39 49.9	+4.0
OPRZ	Ohinepanea	2.99	269	P	Pn	09 39 13.0	+1.6
OPRZ	Ohinepanea	2.99	269	P	Pn	09 39 13.0	+1.6
NMHZ	Naumai	3.04	245	P	Pn	09 39 14.5	+2.3
NMHZ	Naumai	3.04	245	P	Pn	09 39 14.5	+2.3
OMRZ	Omania	3.14	264	P	Pn	09 39 15.5	+1.9
OMRZ	Omania	3.14	264	P	Pn	09 39 15.5	+1.9
HSRZ	Hossack Road	3.26	260	P	Pn	09 39 18.4	+3.2
HSRZ	Hossack Road	3.26	260	P	Pn	09 39 18.4	+3.2
MCHZ	McNeill Hill	3.26	240	P	Pn	09 39 17.2	+2.0
NGRZ	Ngongotaha	3.28	264	P	Pn	09 39 18.7	+3.1
BKZ	Black Stump Fm	3.29	245	P	Pn	09 39 17.3	+1.6
BKZ	Black Stump Fm	3.29	245	P	Pn	09 39 17.3	+1.6
BKZ	Black Stump Fm	3.29	245	S	Sn	09 39 57.4	+3.7
KAHZ	Kahuranaki	3.33	233	P	Pn	09 39 18.8	+2.6
KAHZ	Kahuranaki	3.33	233	P	Pn	09 39 18.8	+2.6
GRRZ	Galatos Road	3.37	260	P	Pn	09 39 19.8	+3.1
KWHZ	Kaweka Forest	3.44	241	P	Pn	09 39 19.5	+1.7
KWHZ	Kaweka Forest	3.44	241	P	Pn	09 39 19.5	+1.7
KMRZ	Kaimai	3.47	269	P	Pn	09 39 20.7	+2.6
PXZ	Pawanui	3.48	230	P	Pn	09 39 20.0	+1.9
PXZ	Pawanui	3.48	230	P	Pn	09 39 20.0	+1.9
KRHZ	Kereru	3.58	239	P	Pn	09 39 21.1	+1.5
KRHZ				S	Sn	09 40 04.3	+3.4
KUTZ	Kaahu Road	3.61	258	P	Pn	09 39 22.8	+2.7
RITZ	Rihia Road	3.69	251	P	Pn	09 39 25.1	+4.0
BHHZ	Black Hill Sta	3.72	242	P	Pn	09 39 23.2	+1.5
WPHZ	Waipukurau	3.76	233	P	Pn	09 39 25.0	+2.9
PRHZ	Porangahau	3.76	229	P	Pn	09 39 24.2	+2.1
PRHZ				S	Sn	09 40 08.0	+2.7
KATZ	Kakaramea	3.81	251	P	Pb	09 39 28.4	-4.5
PNHZ	Pukenui	3.83	236	P	Pn	09 39 24.7	+1.6
KRVZ	Karewarewa	3.89	250	P	Pn	09 39 27.0	+3.1
MOVZ	Moawhango	3.91	245	P	Pn	09 39 27.6	+3.4
TUVZ	Tukino	3.93	247	P	Pb	09 39 30.3	-4.6
NGZ	Ngauruhoe	3.94	249	P	Pn	09 39 27.7	+2.9
ANWZ	Angora Road	3.98	228	P	Pn	09 39 27.8	+2.7
WHVZ	Whangaehu Hut	3.99	247	P	Pn	09 39 28.7	+3.3
TSZ	Takapari Road	4.06	236	P	Pn	09 39 28.6	+2.3
DVHZ	Dannevirke	4.07	232	P	Pn	09 39 27.9	+1.7
MKAZ	Moumakai	4.18	279	P	Pn	09 39 27.8	0.0
WIAZ	Waiheke Island	4.27	283	P	Pn	09 39 31.2	+2.1
PRWZ	Pori Road	4.34	230	P	Pn	09 39 32.4	+2.4
HIZ	Hauiti	4.37	259	P	Pn	09 39 32.7	+2.3
POWZ	Post Office Ro	4.37	233	P	Pn	09 39 32.8	+2.4
ETAZ	East Tamaki Re	4.39	280	P	Pn	09 39 31.1	+0.3
TIWZ	Tintock	4.53	228	P	Pn	09 39 34.2	+1.6
AWAZ	Awhitu Peninsu	4.59	278	P	Pn	09 39 36.5	+3.0
WAZ	Wanganui	4.59	244	P	Pn	09 39 37.7	+4.2
MRZ	Mangatainoka R	4.64	231	P	Pn	09 39 34.8	+0.6
OGWZ	Otaki Gorge	4.98	232	P	Pn	09 39 41.1	+2.3
RPZ	Rata Peaks	9.16	227	Pn	Pn	09 40 36.7	+0.5
	0.6nm,0.3s,baz=174,slow=3.2,SNR=3.4						
RPZ				Sn	Sn	09 42 13.2	-5.0
	1.6nm,0.3s,baz=353,slow=19,SNR=9.4						
ASAR	Alice Springs	41.91	276	P	P	09 46 15.9	+1.9
	2.1nm,0.6s,baz=122,slow=8.3,SNR=26						
WRA	Warramunga Arr	43.56	281	P	P	09 46 29.1	+1.7
	1.2nm,0.4s,baz=120,slow=7.9,SNR=30						
FINES	FINESS Array B	151.45	334	PKPbc	PKPab	09 58 22.5	-2.0
	0.6nm,0.6s,baz=57,slow=5.1,SNR=3.4						

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*ISCJB **27** 09:39:37.0±0.4, 63°.06N±0°.02×150°.94W±0°.07, h128^{km}±3^{km}, mb3.5/3, Error ellipse: s-maj=5.0km s-min=3.8km az=175.5*

*IDC **27** 09:39:36.9±2.4, 63°.07N×151°.29W, h109^{km}±21^{km}, mb3.2/3, mb1 3.3/7, mb1mx3.0/84, mbtmp3.5/7, Error ellipse: s-maj=33.2km s-min=21.7km az=85.0*

*NEIC **27** 09:39:38.2±0.0, 63°.07N×150°.96W, h122^{km}, ML3.3(AEIC), After AEIC.*

ISC 27 09:39:38.2±0.9**, 63°.05N**±0°.03×**151°.08W**±0°.04**, h122**^{km}±6^{km}**, n91, σ1^{s}.39**/105**, mb3.3**/3**, Central Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTH	Kantishna Hill	0.51	8	P	Pn	09 39 56.4	0.0
KTH				S	Sn	09 40 09.9	-0.4
PPLA	Purkeypile	0.53	253	P	Pn	09 39 57.3	+0.6
PPLA				S	Sn	09 40 11.6	+0.9
TRF	Thorofare Moun	0.54	42	P	Pn	09 39 56.4	-0.3
TRF				S	Sn	09 40 10.7	-0.2
CAST	Castle Rocks	0.58	309	P	Pn	09 39 56.9	0.0
CAST				S	Sn	09 40 11.2	+0.1
HUR	Hurricane	0.66	96	P	Pn	09 39 57.0	-0.5
HUR				S	Sn	09 40 11.5	-0.5
CHUM	Lake Minchumin	1.00	327	P	Pn	09 40 00.6	+0.3
CHUM				S	Sn	09 40 17.1	0.0
BPAW	Bear Paw Mtn.	1.05	2	P	Pn	09 40 00.5	-0.4
BPAW				S	Sn	09 40 17.2	-0.9
SKT	Skwentna	1.10	191	P	Pn	09 40 01.5	+0.1
SKT				S	Sn	09 40 19.2	+0.3
MCK	McKinley	1.18	54	P	Pn	09 40 01.7	-0.5
BWN	Browne	1.33	32	P	Pn	09 40 04.0	+0.2
SUA	Susitna One	1.60	174	P	Pn	09 40 07.2	+0.1
GHO	Glory Hole Cre	1.63	141	P	Pn	09 40 07.0	-0.3
GHO				S	Sn	09 40 30.1	+0.6
PMR	Palmer	1.73	147	P	Pn	09 40 07.7	-0.6
PMR				S	Sn	09 40 31.1	-0.2
NEA	Nenana	1.77	29	P	Pn	09 40 08.1	-0.7
SML	Sawmill	1.79	133	P	Pn	09 40 08.5	-0.6
SML				S	Sn	09 40 32.5	-0.2
SPCG	Spurr Capps Gl	1.82	194	P	Pn	09 40 09.9	+0.2
SPCP	Crater Peak Br	1.86	196	P	Pn	09 40 10.7	+0.5
SPCR	Spurr Chakacha	1.93	196	P	Pn	09 40 11.7	+0.8
FIB	Fire Island	1.94	167	P	Pn	09 40 11.5	+0.5
WRH	Wood River Hil	1.95	42	P	Pn	09 40 10.1	-0.9
MLY	Manley	1.99	4	P	Pn	09 40 11.2	-0.4
KNK	Knik Glacier	2.06	142	P	Pn	09 40 12.1	-0.3
RC01	Rabbit Creek A	2.07	162	P	Pn	09 40 12.2	-0.4
SCM	Sheep Creek Mo	2.13	123	P	Pn	09 40 12.5	-0.9
CCB	Clear Creek Bu	2.16	41	P	Pn	09 40 12.7	-0.9
TT01	Tatalina	2.26	268	P	Pn	09 40 15.0	+0.1
HDA	Harding Lake	2.29	52	P	Pn	09 40 14.5	-0.7
MDM	Murphy Dome	2.29	32	P	Pn	09 40 14.5	-0.8
PTE	Portage	2.40	155	P	Pn	09 40 16.3	-0.4
PS10	TAPS Pump St10	2.43	79	P	Pn	09 40 17.8	+0.6
ILAR	Eielson Array	2.53	45	P	Pn	09 40 17.4	-1.0
	4.7nm,0.3s,baz=225,slow=12,SNR=166						
ILAR				S	Sn	09 40 44.6	-4.7
	3.1nm,0.3s,baz=235,slow=15,SNR=9.0						
ILB	Eielson Array	2.53	45	P	Pn	09 40 17.3	-1.0
PAX	Paxson	2.56	89	P	Pn	09 40 18.3	-0.6
RDWB	Redoubt West	2.71	199	P	Pn	09 40 21.5	+0.7
PS11	TAPS Pump St11	2.77	108	P	Pn	09 40 21.5	0.0
HARP	HAARP	2.80	101	P	Pn	09 40 21.6	-0.4
KLU	Klutina	2.88	121	P	Pn	09 40 21.5	-1.4
GLI	Glacier Island	2.88	137	P	Pn	09 40 21.6	-1.3
SVW2	Sparrevohn	2.89	229	P	Pn	09 40 23.3	+0.3
RIDG	Independ'e Rid	2.89	73	P	Pn	09 40 22.9	-0.2
JPK	Jack Peak	2.91	132	P	Pn	09 40 21.8	-1.5
IM05	Indian Mountai	3.15	340	P	Pn	09 40 26.1	-0.2
DIV	Divide	3.16	125	P	Pn	09 40 24.7	-1.9
FID	Port Fidalgo	3.18	135	P	Pn	09 40 25.3	-1.5
DOT	Dot Lake	3.22	76	P	Pn	09 40 26.3	-1.0
BRLK	Bradley Lake	3.30	178	P	Pn	09 40 28.6	+0.1
SCRK	Sand Creek	3.31	71	P	Pn	09 40 27.7	-1.0
HOM	Homer	3.42	185	P	Pn	09 40 30.8	+0.8
HIN	Hinchinbrook I	3.44	139	P	Pn	09 40 29.1	-1.3
PRP	Porcupine Dome	3.46	42	P	Pn	09 40 30.1	-0.5
CNPM	China Poot	3.54	181	P	Pn	09 40 31.7	+0.1
EYAK	Cordova Ski Ar	3.57	132	P	Pn	09 40 31.0	-0.9
BMRM	Bremner River	3.70	122	P	Pn	09 40 32.0	-1.8
GLB	Gilahina Butte	3.77	112	P	Pn	09 40 33.6	-1.0
GOAT	Goat Mountain	3.90	127	P	Pn	09 40 34.9	-1.5
VRDI	Verde Repeater	4.02	114	P	Pn	09 40 36.6	-1.5
RAGM	Ragged Mountai	4.06	128	P	Pn	09 40 37.5	-1.0
MCARA	McCarthy VSAT	4.13	110	P	Pn	09 40 38.7	-0.7
COLD	Coldfoot	4.21	5	P	Pn	09 40 40.3	-0.1
BCA3	Beaver Creek A	4.23	86	P	Pn	09 40 39.3	-1.5
MID	Middleton Isla	4.30	146	P	Pn	09 40 41.4	-0.2
BERG	Berg Lake	4.41	124	P	Pn	09 40 41.8	-1.4
NICHA	Nichawak Mount	4.42	127	P	Pn	09 40 41.8	-1.4
PTPK	Patty Peak	4.46	111	P	Pn	09 40 42.9	-1.1
KAIM	Kayak Island	4.48	132	P	Pn	09 40 42.2	-1.8
KHIT	Khitrov Hills	4.55	122	P	Pn	09 40 43.6	-1.5
BALM	Baldy	4.58	112	P	Pn	09 40 44.1	-1.4
KIAG	Kiagna River	4.63	114	P	Pn	09 40 44.6	-1.7
WAX	Waxell Ridge	4.70	120	P	Pn	09 40 46.2	-0.9
EGAK	Eagle	4.71	64	P	Pn	09 40 46.3	-0.8
ISLE	Juniper Island	4.82	117	P	Pn	09 40 46.9	-1.8
BARN	Barnard Glacie	4.86	110	P	Pn	09 40 48.6	-0.8
BARK	Barkley Ridge	4.87	119	P	Pn	09 40 48.5	-0.9
KULT	Kultieth River	4.88	121	P	Pn	09 40 48.5	-1.0
YUK2	White River	4.93	100	P	Pn	09 40 49.7	-0.4
YUK1	Sand Pete Hill	4.96	96	P	Pn	09 40 50.1	-0.5
BAGL	Bagley Icefiel	4.98	117	P	Pn	09 40 49.3	-1.5
CTGM	Chitina Glacie	5.05	110	P	Pn	09 40 51.3	-0.5
BM3	Burnt Mountain	5.16	29	P	Pn	09 40 52.6	-0.5
YAH	Yahtse	5.20	117	P	Pn	09 40 52.4	-1.5
DAWY	Dawson	5.32	74	*e*Pn	Pn	09 40 54.2	-1.1
	18nm,0.5s						
DAWY				*e*Sn	Sn	09 42 03.2	+7.7
KDAK	Kodiak Island	5.34	189	P	Pn	09 40 54.4	-1.2
	1.1nm,0.3s,baz=13,slow=9.8,SNR=66						
KDAK				S	Sn	09 41 50.8	-5.1
	1.9nm,0.3s,baz=162,slow=17,SNR=14						
KDAK	Kodiak Island	5.34	189	P	Pn	09 40 54.6	-1.0
OHAK	Old Harbor	5.95	192	P	Pn	09 41 01.4	-2.5
PNL	Peninsula	6.56	116	P	Pn	09 41 11.2	-0.8
JIS	Juneau Island	9.48	113	P	Pn	09 41 49.9	-1.4
DLBC	Dease Lake	11.26	105	P	Pn	09 42 15.6	+0.2
	0.2nm,0.3s,baz=319,slow=11,SNR=3.2						
YKA	Yellowknife Ar	16.56	76	P	P	09 43 23.5	+0.3
	0.1nm,0.3s,baz=283,slow=9.3,SNR=3.4						
PDAR	Pinedale Array	31.41	111	P	P	09 45 48.6	+1.0
	0.4nm,0.7s,baz=339,slow=3.7,SNR=4.5						
SPITS	Spitsbergen Ar	38.80	4	P	P	09 46 49.5	-0.7
	3.5nm,1.0s,baz=13,slow=7.7,SNR=5.7						
TXAR	Lajitas Array	45.33	115	P	P	09 47 44.8	+1.0
	0.4nm,0.6s,baz=324,slow=6.7,SNR=4.8						

DJA 27 09:40:26.8±0.6**, 8°S**±6°×**10°8E**±°**, h10**^{km}**, M3.8**/8**, MLv3.8**/8**, Jawa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMJI	Cimerak	0.62	81	P	Pg	09 40 38.6	-0.2
CMJI				S	Sb	09 40 48.0	-0.5
KPJI	Karang Pucung	1.22	64	P	Pn	09 40 49.3	-0.6
KPJI				S	Sn	09 41 06.6	+0.1
SKJI	Sukabumi	1.53	304	P	Pn	09 40 54.1	-0.2
SKJI				S	Sn	09 41 14.2	-0.1
DBJI	Dramaga	1.70	321	P	Pn	09 40 56.6	+0.1
DBJI				S	Sn	09 41 18.0	-0.4
SMRI	Semarang	2.72	72	P	Pn	09 41 10.6	0.0
WOJI	Wonogiri, Jawa	3.06	89	P	Pn	09 41 16.1	+0.8
PWJI	Pagerwojo	3.94	92	P	Pn	09 41 27.0	-0.4

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*ISCJB **27** 09:44:37.4±0.3, 36°.45N±0°.03×27°.28E±0°.02, h125^{km}±4^{km}, Error ellipse: s-maj=4.4km s-min=2.6km az=171.1*

*CSEM **27** 09:44:38.5±0.2, 36°.51N×27°.25E, h117^{km}±2^{km}, ML3.4, Error ellipse: s-maj=4.6km s-min=2.7km az=170.0*

*ATH **27** 09:44:38.1, 36°.58N×27°.18E, h122^{km}±4^{km}, ML3.4/2, Error ellipse: s-maj=4.6km s-min=1.5km az=49.0*

*ISK **27** 09:44:39.1, 36°.58N×27°.17E, h101^{km}±1^{km}, ML3.4/18*

*GII **27** 09:44:40.1±0.4, 36°.25N×27°.44E, h40^{km}, MD3.5/1*

*DDA **27** 09:44:41.0, 36°.54N×27°.32E, h49^{km}, Ml3.4*

*THE **27** 09:44:41.1, 36°.56N×27°.18E, h116^{km}±3^{km}, ML3.3/8, Error ellipse: s-maj=3.6km s-min=0.7km az=358.0*

*HLW **27** 09:44:47.9, 35°.59N×27°.48E, h28^{km}±16^{km}, Md4.0, Ml4.0*

ISC 27 09:44:37.6±1.1**, 36°.53N**±0°.04×**27°.27E**±0°.04**, h117**^{km}±7^{km}**, n215, σ1^{s}.70**/267**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NISR	Nisiros	0.14	307	P	Pn	09 44 53.7	0.0
NISR	Nisiros	0.14	307	P	Pn	09 44 54.4	+0.8
DAT	Datca	0.32	51	PG	Pn	09 44 54.8	+0.5
DAT	Datca	0.32	51	*i* P	Pn	09 44 55.9	+1.5
DAT	Datca	0.32	51	*e*Pg	Pn	09 44 54.8	+0.5
DAT	Datca	0.32	51	P	Pn	09 44 55.9	+1.5
DATC	Datca-Mugla	0.39	54	PG	Pn	09 44 55.4	+0.9
DATC				SG	Sn	09 45 06.8	-0.5
DATC	Datca-Mugla	0.39	54	*e*Pg	Pn	09 44 55.4	+0.9
DATC				*e*Sg	Sn	09 45 06.8	-0.5
BODT	Bodrum	0.53	4	PG	Pn	09 44 55.8	+0.4
BODT				SG	Sn	09 45 08.9	+0.1
BODT	Bodrum	0.53	4	P	Pn	09 44 56.8	+1.4
BODT				S	Sn	09 45 08.3	-0.5
BODT	Bodrum	0.53	4	*e*Pg	Pn	09 44 55.8	+0.4
BODT	Bodrum	0.53	4	P	Pn	09 44 56.8	+1.4
BODT				S	Sn	09 45 08.3	-0.5
BDRM	Kayabasi	0.55	15	*i* P	Pn	09 44 56.9	+1.4
BDRM	Kayabasi	0.55	15	P	Pn	09 44 56.9	+1.4
ARG	Arkhangelos	0.76	114	PG	Pn	09 44 59.5	+2.4
ARG	Arkhangelos	0.76	114	P	Pn	09 45 00.2	+3.1
ARG				S	Sn	09 45 13.8	+2.0
ARG				AML	AML	09 45 15.2	
	comp=E,5664μm,0.2s						
ARG				AML	AML	09 45 15.6	
	comp=N,3729μm,0.2s						
ARG	Arkhangelos	0.76	114	P	Pn	09 44 59.8	+2.7
ARG	Arkhangelos	0.76	114	*e*Pg	Pn	09 44 59.5	+2.4
ARG	Arkhangelos	0.76	114	P	Pn	09 44 59.8	+2.7
ARG				S	Sn	09 45 14.3	+2.5
MRSB	Marmaris-Mugla	0.77	76	PG	Pn	09 44 58.7	+1.5
MRSB	Marmaris-Mugla	0.77	76	*e*Pg	Pn	09 44 58.7	+1.5
MLSB	Milas	0.87	28	PG	Pn	09 44 58.9	+0.8
MLSB	Milas	0.87	28	*e*Pg	Pn	09 44 58.9	+0.8
KARP	Karpathos	0.98	185	P	Pn	09 45 00.9	+1.8
KARP	Karpathos	0.98	185	P	Pn	09 45 01.0	+1.8
KARP	Karpathos	0.98	185	P	Pn	09 45 01.1	+1.9
YER	Yerkesik	1.01	53	PG	Pn	09 45 01.6	+2.1
YER	Yerkesik	1.01	53	P	Pn	09 45 01.8	+2.3
YER				S	Sn	09 45 17.6	+1.5
YER	Yerkesik	1.01	53	*e*Pg	Pn	09 45 01.6	+2.1
YER				S	Sn	09 45 17.6	+1.5
TURN	Turunc	1.13	72	PG	Pn	09 44 59.3	-1.3
TURN	Turunc	1.13	72	*i* P	Pn	09 44 59.5	-1.1
TURN	Turunc	1.13	72	P	Pn	09 44 59.5	-1.1
AMGA	Amorgos Island	1.14	286	P	Pn	09 45 01.9	+1.0
AMGA				S	Sn	09 45 17.7	-0.7
AMGA				AML	AML	09 45 18.9	
	comp=N,1443μm,0.8s						
AMGA				AML	AML	09 45 19.1	
	comp=E,835μm,0.6s						
AMGA	Amorgos Island	1.14	286	P	Pn	09 45 01.8	+1.0
AMGA				S	Sn	09 45 16.9	-1.5
AMGA	Amorgos Island	1.14	286	P	Pn	09 45 01.7	+0.9
AMGA				S	Sn	09 45 18.2	-0.2
DALY	Dalyan (Mu˜la	1.15	75	PN	Pn	09 45 03.6	+2.8
DALY	Dalyan (Mu˜la	1.15	75	*i* P	Pn	09 45 03.6	+2.8
DALY				*i* S	Sn	09 45 21.1	+2.6
DALY	Dalyan (Mu˜la	1.15	75	P	Pn	09 45 03.6	+2.8
DALY				S	Sn	09 45 21.1	+2.6
GCAM	G?zelcaml?	1.17	359	PN	Pn	09 45 01.8	+0.8
GCAM	G?zelcaml?	1.17	359	*i* P	Pn	09 45 02.4	+1.3
GCAM	G?zelcaml?	1.17	359	*e*Pn	Pn	09 45 01.8	+0.8
GCAM	G?zelcaml?	1.17	359	P	Pn	09 45 02.4	+1.3
ANAF	Anafi Island	1.22	262	P	Pn	09 45 03.1	+1.5
ANAF	Anafi Island	1.22	262	P	Pn	09 45 02.8	+1.2
ANAF				S	Sn	09 45 19.1	-0.7
ANAF	Anafi Island	1.22	262	P	Pn	09 45 02.8	+1.2
ANAF				S	Sn	09 45 19.1	-0.7
SMG	Samos	1.23	344	P	Pn	09 45 02.7	+1.0
SMG	Samos	1.23	344	P	Pn	09 45 02.5	+0.8
SMG	Samos	1.23	344	P	Pn	09 45 02.5	+0.8
AYDN	Tasoluk	1.23	23	*i* P	Pn	09 45 03.5	+1.7
AYDN				*i* S	Sn	09 45 19.7	-0.5
AYDN	Tasoluk	1.23	23	P	Pn	09 45 03.5	+1.7
AYDN				S	Sn	09 45 19.7	-0.5
FETY	Fethiye	1.47	85	PN	Pn	09 45 06.8	+2.4
FETY	Fethiye	1.47	85	P	Pn	09 45 06.5	+2.1
FETY				S	Sn	09 45 26.8	+2.0
FETY	Fethiye	1.47	85	P	Pn	09 45 06.5	+2.1
FETY	Fethiye	1.47	85	*e*Pn	Pn	09 45 06.8	+2.4
SANT	Santorini	1.47	264	PN	Pn	09 45 05.2	+0.8
SANT	Santorini	1.47	264	*e*Pn	Pn	09 45 05.2	+0.8
THR2	Thira island,	1.48	267	P	Pn	09 45 05.5	+1.0
THR2	Thira island,	1.48	267	P	Pn	09 45 05.5	+1.0
THT1	Athinios (Pele	1.49	265	P	Pn	09 45 05.4	+0.8
THT1	Athinios (Pele	1.49	265	P	Pn	09 45 05.5	+0.9
APE	Apeiranthos	1.49	292	P	Pn	09 45 06.0	+1.2
APE	Apeiranthos	1.49	292	P	Pn	09 45 05.8	+1.0
APE				S	Sn	09 45 25.2	-0.2
APE	Apeiranthos	1.49	292	P	Pn	09 45 05.7	+1.0
APE				S	Sn	09 45 25.2	-0.2
AYDB	Zeytinkoy-Aydi	1.50	19	PN	Pn	09 45 05.9	+1.0
AYDB	Zeytinkoy-Aydi	1.50	19	*e*Pn	Pn	09 45 05.9	+1.0
STAX	Taxiarchis Har	1.51	266	P	Pn	09 45 06.0	+1.2
STAX	Taxiarchis Har	1.51	266	P	Pn	09 45 05.9	+1.1
THR6	Thira Island,	1.52	264	P	Pn	09 45 06.6	+1.6
THR6	Thira Island,	1.52	264	P	Pn	09 45 06.3	+1.3
THR6	Thira Island,	1.52	264	P	Pn	09 45 06.3	+1.3
TAVA	DENIZLI_Tavas	1.62	54	*i* P	Pn	09 45 07.9	+1.7
TAVA				*i* S	Sn	09 45 28.6	+0.5
TAVA	DENIZLI_Tavas	1.62	54	P	Pn	09 45 07.9	+1.7
TAVA				S	Sn	09 45 28.6	+0.5
ZKR	Zakros	1.65	211	P	Pn	09 45 09.1	+2.5
ZKR	Zakros	1.65	211	P	Pn	09 45 08.8	+2.2
ZKR				S	Sn	09 45 30.2	+1.6
ZKR	Zakros	1.65	211	P	Pn	09 45 08.7	+2.2
ZKR				S	Sn	09 45 30.2	+1.6
DNZL	Cakiroluk	1.83	50	*i* P	Pn	09 45 10.4	+1.4
DNZL	Cakiroluk	1.83	50	P	Pn	09 45 10.4	+1.4
NPS	Neapolis	1.84	227	P	Pn	09 45 09.8	+0.9
NPS	Neapolis	1.84	227	P	Pn	09 45 10.2	+1.2
NPS				S	Sn	09 45 32.4	-0.5
NPS	Neapolis	1.84	227	P	Pn	09 45 10.2	+1.2
NPS				S	Sn	09 45 32.4	-0.5
BLCB	Balcova	1.86	355	PN	Pn	09 45 09.8	+0.7
BLCB	Balcova	1.86	355	*e*Pn	Pn	09 45 09.8	+0.7
DENT	Denizli	1.87	49	PN	Pn	09 45 11.0	+1.7
DENT	Denizli	1.87	49	*e*Pn	Pn	09 45 11.0	+1.7
URLA	Izmir	1.91	344	PN	Pn	09 45 10.2	+0.5
URLA	Izmir	1.91	344	*i* P	Pn	09 45 10.2	+0.5
URLA	Izmir	1.91	344	*e*Pn	Pn	09 45 10.2	+0.5
KSL	Kastellorizon	1.91	101	P	Pn	09 45 12.1	+2.4
KSL	Kastellorizon	1.91	101	P	Pn	09 45 12.2	+2.5
KSL				S	Sn	09 45 35.8	+1.6
KSL	Kastellorizon	1.91	101	P	Pn	09 45 12.2	+2.5
AKAS	Kas	1.91	98	PN	Pn	09 45 12.3	+2.4
AKAS	Kas	1.91	98	*i* P	Pn	09 45 11.9	+2.0
AKAS	Kas	1.91	98	P	Pn	09 45 11.9	+2.0
AKAS	Kas	1.91	98	*e*Pn	Pn	09 45 12.3	+2.4
GOLH	Golhisar	1.97	68	*i* P	Pn	09 45 13.0	+2.4
GOLH				*i* S	Sn	09 45 36.7	+0.9
GOLH	Golhisar	1.97	68	P	Pn	09 45 13.0	+2.4
LAST	Lasithi	1.99	227	P	Pn	09 45 12.0	+1.1
LAST	Lasithi	1.99	227	P	Pn	09 45 12.2	+1.3
LAST	Lasithi	1.99	227	P	Pn	09 45 12.2	+1.3
CHOS	Chios island	2.09	333	PN	Pn	09 45 12.5	+0.4
CHOS	Chios island	2.09	333	P	Pn	09 45 13.0	+0.9
CHOS	Chios island	2.09	333	*e*Pn	Pn	09 45 12.5	+0.4
CHOS	Chios island	2.09	333	P	Pn	09 45 13.0	+0.9
ELL	Elmali	2.14	83	PN	Pn	09 45 15.2	+2.5
ELL	Elmali	2.14	83	*e*Pn	Pn	09 45 15.2	+2.5
IACM	Heraklion	2.16	236	P	Pn	09 45 16.2	+3.4
IACM	Heraklion	2.16	236	P	Pn	09 45 15.3	+2.4
KULA	Kula-Manisa	2.27	29	PN	Pn	09 45 15.8	+1.4
KULA	Kula-Manisa	2.27	29	*e*Pn	Pn	09 45 15.8	+1.4
IDI	Anoyia	2.29	238	PN	Pn	09 45 15.4	+0.8
IDI	Anoyia	2.29	238	*e*Pn	Pn	09 45 15.4	+0.8
MHLO	Agia Marina, M	2.31	275	P	Pn	09 45 15.3	+0.5
MHLO	Agia Marina, M	2.31	275	P	Pn	09 45 16.4	+1.6
MHLO	Agia Marina, M	2.31	275	P	Pn	09 45 15.5	+0.7
SIVA	Sivas	2.50	234	P	Pn	09 45 19.4	+2.1
SIVA	Sivas	2.50	234	P	Pn	09 45 19.0	+1.7
SIVA				S	Sn	09 45 48.3	+0.6
SIVA	Sivas	2.50	234	P	Pn	09 45 19.0	+1.7
SIVA				S	Sn	09 45 48.3	+0.6
BRDR	BURDUR-Merkez	2.52	62	*i* P	Pn	09 45 19.7	+2.1
BRDR	BURDUR-Merkez	2.52	62	P	Pn	09 45 19.7	+2.1
KORT	Korkueli	2.52	78	PN	Pn	09 45 19.9	+2.3
KORT	Korkueli	2.52	78	*i* P	Pn	09 45 20.1	+2.5
KORT	Korkueli	2.52	78	*e*Pn	Pn	09 45 19.9	+2.3
KHAL	Karahalli	2.55	43	*i* P	Pn	09 45 19.8	+1.8
KHAL				*i* S	Sn	09 45 49.3	+0.2
KHAL	Karahalli	2.55	43	P	Pn	09 45 19.8	+1.8
KHAL				S	Sn	09 45 49.3	+0.2
VAM	Vamos	2.73	247	P	Pn	09 45 21.9	+1.7
VAM	Vamos	2.73	247	P	Pn	09 45 21.8	+1.6
PRK	Paraskevi	2.83	344	P	Pn	09 45 22.5	+1.1
PRK	Paraskevi	2.83	344	P	Pn	09 45 22.5	+1.1
IMMV	Iera Moni Meta	2.87	249	P	Pn	09 45 22.7	+0.7
IMMV	Iera Moni Meta	2.87	249	P	Pn	09 45 23.0	+1.0
IMMV				S	Sn	09 45 55.4	-0.9
IMMV	Iera Moni Meta	2.87	249	P	Pn	09 45 23.1	+1.0
IMMV				S	Sn	09 45 55.4	-0.9
ISP	Isparta	2.90	63	PN	Pn	09 45 24.9	+2.3
ISP	Isparta	2.90	63	Pn	Pn	09 45 24.2	+1.6
ISP	Isparta	2.90	63	Pn	Pn	09 45 24.2	+1.6
GVD	Gavdhos	3.09	238	P	Pn	09 45 26.4	+1.5
GVD	Gavdhos	3.09	238	P	Pn	09 45 26.5	+1.5
SUTC	Sutluce-Ispart	3.13	71	PN	Pn	09 45 28.2	+2.6
SUTC	Sutluce-Ispart	3.13	71	*e*Pn	Pn	09 45 28.2	+2.6
ANKY	Antikythira Is	3.27	260	P	Pn	09 45 27.1	-0.3
ANKY	Antikythira Is	3.27	260	P	Pn	09 45 27.9	+0.5
KYTH	Kithira	3.42	267	P	Pn	09 45 29.6	+0.4
KYTH	Kithira	3.42	267	P	Pn	09 45 30.1	+0.8
KTHR	Kythira	3.45	267	P	Pn	09 45 30.9	+1.2
KTHR				S	Sn	09 46 08.7	-1.3
KTHR	Kythira	3.45	267	P	Pn	09 45 30.9	+1.2
KTHR				S	Sn	09 46 08.7	-1.3
VLI	Veliai	3.49	274	P	Pn	09 45 29.8	-0.4
VLI	Veliai	3.49	274	P	Pn	09 45 31.3	+1.1
VLI	Veliai	3.49	274	P	Pn	09 45 31.3	+1.1
GAZI	Gazipasa	4.08	93	PN	Pn	09 45 38.6	+0.4
GAZI	Gazipasa	4.08	93	*e*Pn	Pn	09 45 38.6	+0.4
TRIP	Tripoli	4.12	285	P	Pn	09 45 41.3	+2.6
TRIP	Tripoli	4.12	285	P	Pn	09 45 40.6	+1.9
KONT	Konya--Tatoy	4.30	69	PN	Pn	09 45 43.6	+2.5
KONT	Konya--Tatoy	4.30	69	*e*Pn	Pn	09 45 43.6	+2.5
ITM	Ithomi	4.33	280	P	Pn	09 45 43.8	+2.3
ITM	Ithomi	4.33	280	P	Pn	09 45 43.3	+1.8
LADK	Ladik-KONYA	4.39	66	PN	Pn	09 45 44.7	+2.3
LADK	Ladik-KONYA	4.39	66	*e*Pn	Pn	09 45 44.7	+2.3
ERMK	Ermenek	4.54	87	*i* P	Pn	09 45 47.3	+2.7
ERMK	Ermenek	4.54	87	P	Pn	09 45 47.3	+2.7
TEKE	Tekeli-Mersin	4.74	93	PN	Pn	09 45 48.7	+1.8
TEKE	Tekeli-Mersin	4.74	93	*e*Pn	Pn	09 45 48.7	+1.8
LEF	Lefka	4.78	105	P	Pn	09 45 46.9	-0.6
BERE	Bereket-Mersin	4.81	90	PN	Pn	09 45 49.3	+1.3
BERE	Bereket-Mersin	4.81	90	*e*Pn	Pn	09 45 49.3	+1.3
GULN	MERSIN_Gulnar	5.08	92	*i* P	Pn	09 45 52.1	+0.6
GULN	MERSIN_Gulnar	5.08	92	P	Pn	09 45 52.1	+0.6
AKKU	Akkuyu-Mersin	5.09	92	PN	Pn	09 45 52.9	+1.3
AKKU	Akkuyu-Mersin	5.09	92	*e*Pn	Pn	09 45 52.9	+1.3
IKL	Isikli	5.19	91	PN	Pn	09 45 54.6	+1.6
IKL	Isikli	5.19	91	*e*Pn	Pn	09 45 54.6	+1.6
KEBE	Keben-Mersin	5.20	89	PN	Pn	09 45 56.2	+3.1
KEBE	Keben-Mersin	5.20	89	*e*Pn	Pn	09 45 56.2	+3.1
SLUM	Salum	5.31	199	P	Pn	09 45 55.2	+0.6
	baz=206						
SLUM				AMP		09 46 00.0	
	baz=206						
SLUM				S	Sn	09 46 43.8	-11
	baz=206						
SLUM	Salum	5.31	199	P	Pn	09 45 55.2	+0.6
KIZK	Mersin	5.54	88	PN	Pn	09 45 59.9	+2.2
EREN	Erenkoy	5.68	98	PN	Pn	09 46 03.0	+3.3
EREN	Erenkoy	5.68	98	*e*Pn	Pn	09 46 03.0	+3.3

MERS	**Mersin**	**5.84**	**85**	PN	**Pn**	**09 46 05.0**	**+3.1**
MERS	**Mersin**	**5.84**	**85**	*e*Pn	**Pn**	**09 46 05.0**	**+3.1**
HNTI	**Hanita**	**7.36**	**116**	Pn	**Pn**	**09 46 22.2**	**-0.1**
HNTI				Sn	**Sn**	**09 47 41.7**	**-2.5**
HNTI	**Hanita**	**7.36**	**116**	Pn	**Pn**	**09 46 22.2**	**-0.1**
HNTI				Sn	**Sn**	**09 47 41.7**	**-2.5**
SWA2		**7.42**	**192**	P	**Pn**	**09 46 23.0**	**-0.3**
	baz=196						
OFRI	**‘Ofer**	**7.46**	**119**	Sn	**Sn**	**09 47 44.8**	**-2.1**
OFRI	**‘Ofer**	**7.46**	**119**	Sn	**Sn**	**09 47 44.8**	**-2.1**
MMA0B	**Mount Meron ar**	**7.56**	**115**	Pn	**Pn**	**09 46 24.6**	**-0.5**
MMA0B				Sn	**Sn**	**09 47 46.9**	**-2.3**
MMA0B	**Mount Meron ar**	**7.56**	**115**	Pn	**Pn**	**09 46 24.6**	**-0.5**
MMA0B				Sn	**Sn**	**09 47 46.9**	**-2.3**
KOT	**Kottamia**	**7.61**	**149**	P	**Pn**	**09 46 26.2**	**+0.4**
	baz=145						
KSDI	**Kefar Szold**	**7.66**	**113**	Pn	**Pn**	**09 46 26.4**	**0.0**
KSDI	**Kefar Szold**	**7.66**	**113**	Pn	**Pn**	**09 46 26.4**	**0.0**
NATI	**Neve Ativ**	**7.68**	**113**	Pn	**Pn**	**09 46 26.6**	**-0.1**
NATI				Sn	**Sn**	**09 47 50.1**	**-2.0**
HHAG	**Hagoal**	**7.71**	**147**	P	**Pn**	**09 46 28.1**	**+1.0**
	baz=144						
SLTI	**Sal’it**	**7.72**	**121**	Sn	**Sn**	**09 47 50.9**	**-2.1**
SLTI	**Sal’it**	**7.72**	**121**	Sn	**Sn**	**09 47 50.9**	**-2.1**
KSHT	**Keshet**	**7.87**	**114**	Pn	**Pn**	**09 46 30.0**	**+0.7**
KSHT	**Keshet**	**7.87**	**114**	Pn	**Pn**	**09 46 30.0**	**+0.7**
MMLI	**Mount Malkishu**	**7.87**	**119**	Pn	**Pn**	**09 46 28.6**	**-0.7**
MMLI				Sn	**Sn**	**09 47 54.1**	**-2.7**
MMLI	**Mount Malkishu**	**7.87**	**119**	Pn	**Pn**	**09 46 28.6**	**-0.7**
MMLI				Sn	**Sn**	**09 47 54.1**	**-2.7**
HMDT	**Nahal Hemdat**	**8.05**	**120**	Pn	**Pn**	**09 46 31.5**	**-0.2**
HMDT				Sn	**Sn**	**09 47 59.2**	**-1.8**
HMDT	**Nahal Hemdat**	**8.05**	**120**	Pn	**Pn**	**09 46 31.5**	**-0.2**
HMDT				Sn	**Sn**	**09 47 59.2**	**-1.8**
AMAZ	**Amatzia**	**8.07**	**126**	Sn	**Sn**	**09 47 59.2**	**-2.4**
AMAZ	**Amatzia**	**8.07**	**126**	Sn	**Sn**	**09 47 59.2**	**-2.4**
KZIT	**Kziot**	**8.17**	**131**	Sn	**Sn**	**09 48 00.4**	**-3.5**
KZIT	**Kziot**	**8.17**	**131**	Sn	**Sn**	**09 48 00.4**	**-3.5**
DSI	**Dead Sea**	**8.35**	**124**	Pn	**Pn**	**09 46 36.4**	**+0.6**
DSI				Sn	**Sn**	**09 48 06.1**	**-2.3**
DSI	**Dead Sea**	**8.35**	**124**	Pn	**Pn**	**09 46 36.4**	**+0.6**
DSI				Sn	**Sn**	**09 48 06.1**	**-2.3**
MZDA	**Masada**	**8.50**	**125**	Sn	**Sn**	**09 48 09.9**	**-2.1**
MZDA	**Masada**	**8.50**	**125**	Sn	**Sn**	**09 48 09.9**	**-2.1**
PRNI	**Paran**	**8.93**	**131**	Pn	**Pn**	**09 46 43.1**	**-0.5**
PRNI	**Paran**	**8.93**	**131**	Pn	**Pn**	**09 46 43.1**	**-0.5**
MBRI	**Mt Berech**	**9.28**	**134**	Pn	**Pn**	**09 46 48.2**	**-0.3**
MBRI				Sn	**Sn**	**09 48 27.8**	**-3.3**
MBRI	**Mt Berech**	**9.28**	**134**	Pn	**Pn**	**09 46 48.2**	**-0.3**
MBRI				Sn	**Sn**	**09 48 27.8**	**-3.3**
TAMRE	**El Minia**	**9.35**	**160**	P	**Pn**	**09 46 48.9**	**-0.4**
	baz=158						
HFRF	**Wahat Farafira**	**9.39**	**174**	P	**Pn**	**09 46 49.3**	**-0.6**
	baz=174						
EIL	**Elat**	**9.39**	**135**	Pn	**Pn**	**09 46 49.4**	**-0.5**
EIL				Sn	**Sn**	**09 48 30.1**	**-3.7**
EIL	**Elat**	**9.39**	**135**	Pn	**Pn**	**09 46 49.4**	**-0.5**
EIL				Sn	**Sn**	**09 48 30.1**	**-3.7**

IDC 27 09:50:23.2±4.7**, 15°.85S**×**173°.79W, h84**^{km}±37^{km}**, mb3.8**/3**, mb1 4.1**/4**, mb1mx3.5**/45**, mbtmp4.2**/4**, MS4.1**/1**, Ms1 4.1**/1**, ms1mx2.5**/46**, Error ellipse: s-maj=284.6km s-min=24.5km az=142.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**2.74**	**45**	P	Pn	09 51 05.4	+0.2
	53nm,0.3s,baz=193,slow=2.6,SNR=99						
AFI				S	Sn	09 51 33.0	-4.4
	131nm,0.3s,baz=232,slow=14,SNR=17						
RAO	**Raoul Island**	**13.87**	**195**	LR	LR	09 57 38.8	
	comp=Z,728nm,19.3s,baz=134,slow=31						
H11S2	**WAKE ISLAND Hy**	**39.16**	**330**	T	T	10 38 19.8	
	baz=146,slow=76,SNR=6.3						
H11S3	**WAKE ISLAND Hy**	**39.17**	**330**	T	T	10 38 22.0	
	baz=146,slow=76,SNR=7.5						
H11S1	**WAKE ISLAND Hy**	**39.18**	**330**	T	T	10 38 22.1	
	baz=146,slow=76,SNR=6.3						
WRA	**Warramunga Arr**	**49.38**	**257**	P	P	09 59 04.2	-0.5
	1.0nm,0.3s,baz=96,slow=6.6,SNR=44						
ASAR	**Alice Springs**	**49.62**	**252**	P	P	09 59 06.6	+0.1
	5.7nm,0.4s,baz=86,slow=8.0,SNR=159						
ILAR	**Eielson Array**	**82.96**	**11**	P	P	10 02 37.7	-0.8
	0.4nm,0.5s,baz=234,slow=6.0,SNR=7.2						
BRTR	**Keskin Array B**	**146.27**	**320**	PKPbc	PKPbc	10 09 54.1	-0.5
	1.2nm,0.7s,baz=60,slow=1.1,SNR=8.6						
GERES	**GERESS Array B**	**146.53**	**351**	PKPbc	PKPbc	10 09 55.3	+0.3
	0.2nm,0.3s,baz=38,slow=5.0,SNR=3.7						

*ISCJB **27** 09:51:44.7±0.5, 32°.55N±0°.06×115°.69W±0°.04, h10^{km}±8^{km}, Error ellipse: s-maj=10.1km s-min=5.1km az=19.8*
*ECX **27** 09:51:45.8±0.5, 32°.56N×115°.68W, h4^{km}, MD2.3, ML2.5*
*MEX **27** 09:51:47.1±0.4, 32°.49N×115°.63W, h16^{km}±7^{km}, MD3.9*
ISC 27 09:51:43.7±1.3**, 32°.53N**±0°.05×**115°.67W**±0°.04**, h18**^{km}±8^{km}**, n17, σ0^{s}.50**/23**, 12C-1D, California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ERPC	**Ernies Place**	**0.21**	**1**	⇑*i*P	**Pb**	**09 51 49.4**	**+0.6**
WESC	**Westside Schoo**	**0.23**	**347**	⇑*i*P	**Pb**	**09 51 49.6**	**+0.3**
YUH	**Yuha Desert**	**0.25**	**299**	⇑*i*P	**Pb**	**09 51 49.7**	**+0.2**
COK	**Cook Ranch**	**0.32**	**351**	⇑*i*P	**Pb**	**09 51 51.3**	**+0.3**
DREC	**Desert Rsrch C**	**0.33**	**34**	⇑*e*P	**Pb**	**09 51 51.8**	**+0.7**
RMX	**La Rumorosa**	**0.35**	**282**	*e*P	**Pb**	**09 51 51.3**	**-0.3**
RMX				*e*S	**Sg**	**09 51 56.2**	**-0.2**
RMX				⇑*e*		09 51 56.4	
RMX				IAML		09 51 56.4	
	comp=E,394nm,0.1s						
IKP	**In-Ko-Pah, Jac**	**0.39**	**288**	⇑*i*P	**Pb**	**09 51 52.4**	**+0.2**
MBIG	**Mexicali**	**0.41**	**107**	*i* P	**Pn**	**09 51 53.8**	**-0.9**
MBIG				*e*S	**Sb**	**09 51 58.6**	**+0.1**
CRR	**Carrizo Plain**	**0.44**	**325**	⇑*i*P	**Pb**	**09 51 53.0**	**+0.1**
TJIG	**Tijuana**	**0.86**	**264**	*e*P	**Pn**	**09 52 00.8**	**0.0**
TJIG				*e*S	**Sg**	**09 52 11.8**	**0.0**
BAR	**Barrett**	**0.86**	**280**	⇑*i*P	**Pn**	**09 52 00.9**	**-0.1**
CBX	**Cerro Bola**	**0.87**	**256**	⇑*e*P	**Pn**	**09 52 01.4**	**+0.2**
CBX				*e*S	**Sn**	**09 52 12.9**	**-0.6**
CBX				IAML		09 52 15.3	
	comp=N,156nm,0.3s						
CBX				⇓*e*		09 52 15.3	
CBX	**Cerro Bola**	**0.87**	**256**	*e*P	**Pn**	**09 52 01.4**	**+0.2**
CBX				*e*S	**Sg**	**09 52 11.8**	**-0.4**
SDRC	**San Diego Road**	**1.09**	**281**	⇑*i*P	**Pg**	**09 52 04.8**	**-0.1**
ZAX	**El Zacaton**	**1.14**	**207**	*e*P	**Pg**	**09 52 06.3**	**+0.6**
ZAX				*e*S	**Sg**	**09 52 21.8**	**+1.2**
ZAX				⇑*e*		09 52 24.4	
ZAX				IAML		09 52 24.4	
	comp=N,78nm,0.3s						
PBX	**Punta Banda**	**1.19**	**229**	*e*P	**Pg**	**09 52 06.6**	**-0.1**
SPX	**San Pedro Mart**	**1.49**	**173**	*e*P	**Pg**	**09 52 12.0**	**-0.5**

*IDC **27** 10:10:55.2±3.9, 5°.32S×131°.64E, h0^{km}, mb3.6/1, mb1 4.0/3, mb1mx3.4/55, mbtmp3.8/3, ML4.1/2, Error ellipse: s-maj=252.8km s-min=32.1km az=73.0*
*ISCJB **27** 10:10:57.2±0.6, 5°.35S±0°.04×131°.95E±0°.08, h33^{km}, mb3.6/1, Error ellipse: s-maj=11.6km s-min=5.9km az=4.0*
*DJA **27** 10:11:02.1±1.6, 5°S±12°×13°2E±°, h30^{km}±35^{km}, M4.7/7, mB5.2/1, mb4.9/3, MLv4.6/7, Mw(mB)4.6/1*
ISC 27 10:10:58.1±0.9**, 5°.42S**±0°.06×**131°.97E**±0°.08**, h35**^{km}**, n9, σ2^{s}.59**/14**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BNDI	**Bandanaira**	**2.24**	**293**	P	**Pn**	**10 11 34.4**	**+1.7**
FAKI	**Fak Fak**	**2.50**	**6**	P	**Pn**	**10 11 36.1**	**-0.2**
FAKI				S	**Sn**	**10 12 03.3**	**-2.3**
RKPI	**Ransiki, Papua**	**4.46**	**30**	P	**Pn**	**10 12 04.7**	**+1.4**
RKPI				S	**Sn**	**10 12 54.5**	**+0.4**
SWI	**Sorong**	**4.58**	**351**	P	**Pn**	**10 12 05.4**	**+0.5**
SWI				S	**Sn**	**10 12 53.9**	**-3.1**
LBMI	**Labuha**	**6.52**	**317**	P	**Pn**	**10 12 31.6**	**0.0**
	154nm,0.8s,0.6nm						
SANI	**Sanana**	**6.84**	**299**	P	**Pn**	**10 12 36.2**	**+0.2**
WRA	**Warramunga Arr**	**14.62**	**171**	Pn	**Pn**	**10 14 24.5**	**+2.0**
	1.0nm,0.3s,baz=350,slow=11,SNR=34						
WRA				Sn	**Sn**	**10 16 58.1**	**-5.3**
	1.7nm,0.3s,baz=354,slow=24,SNR=8.3						
ASAR	**Alice Springs**	**18.24**	**174**	P	**Pn**	**10 15 12.2**	**+3.6**
	0.5nm,0.3s,baz=354,slow=13,SNR=18						
ASAR				S	**Sn**	**10 18 28.4**	**-2.9**
	0.4nm,0.3s,baz=0.9,slow=28,SNR=7.2						
MKAR	**Makanchi Array**	**68.01**	**326**	P	**P**	**10 21 54.7**	**+0.8**
	0.3nm,0.5s,baz=106,slow=7.7,SNR=3.7						

IDC 27 10:13:21.9±896.0**, 50°.45N**×**112°.32E, h0**^{km}**, Error ellipse: s-maj=386.5km s-min=100.3km az=63.0, Lake Baykal region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I34MN	**SONGINO INFRAS**	**4.70**	**238**	*i*		10 46 40.0	
	baz=54,slow=319,SNR=5.4						
I46RU	**ZALESOVO INFRA**	**17.17**	**292**	*i*		11 56 30.0	
	baz=95,slow=320,SNR=1.1						
I31KZ	**AKTYUBINSK INF**	**33.93**	**291**	*i*		13 38 10.0	
	baz=67,slow=310,SNR=0.2						

IDC 27 10:18:31.8±3.5**, 16°.44S**×**174°.42W, h155**^{km}±25^{km}**, mb3.1**/5**, mb1 3.5**/6**, mb1mx3.2**/45**, mbtmp3.6**/6**, Error ellipse: s-maj=132.6km s-min=18.3km az=148.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.58**	**46**	P	Pn	10 19 26.8	-0.1
	18nm,0.3s,baz=230,slow=3.3,SNR=50						
AFI				S	Sn	10 20 04.6	-4.9
	130nm,0.3s,baz=351,slow=23,SNR=23						
WRA	**Warramunga Arr**	**48.66**	**258**	P	P	10 27 00.3	-0.1
	0.3nm,0.9s,baz=92,slow=6.5,SNR=4.2						
ASAR	**Alice Springs**	**48.86**	**253**	P	P	10 27 01.9	-0.1
	0.6nm,0.5s,baz=88,slow=7.9,SNR=14						
NVAR	**Mina Array Bea**	**75.75**	**42**	P	P	10 30 01.1	+0.3
	0.5nm,0.6s,baz=227,slow=9.2,SNR=5.2						
ILAR	**Eielson Array**	**83.65**	**11**	P	P	10 30 42.6	+0.2
	0.1nm,0.4s,baz=224,slow=5.1,SNR=3.8						
PDAR	**Pinedale Array**	**83.69**	**42**	P	P	10 30 43.0	-0.5
	0.4nm,0.6s,baz=220,slow=4.3,SNR=5.4						

WEL 27 10:24:28.9, 38°S±9°×**18°0W**±°**, h33**^{km}**, ML3.5**/22**, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**1.54**	**270**	P	Pn	10 24 54.4	+0.4
WMGZ				S	Sn	10 25 13.1	+0.3
MXZ	**Matakaoa Point**	**1.65**	**279**	P	Pn	10 24 55.3	-0.2
MXZ				S	Sn	10 25 14.6	-1.0
PUZ	**Puketiti**	**1.67**	**261**	P	Pn	10 24 56.7	+0.8
PUZ				S	Sn	10 25 17.1	+0.8
PKGZ	**Pakihiroa**	**1.80**	**268**	P	Pn	10 24 58.0	+0.2
PKGZ				S	Sn	10 25 19.4	-0.1
CNGZ	**Carnagh Statio**	**1.81**	**249**	P	Pb	10 24 60.0	-1.5
TWGZ	**Tauwhareparae**	**1.91**	**259**	P	Pn	10 25 00.2	+1.0
TWGZ				S	Sn	10 25 23.6	+1.5
HAZ	**Te Kaha**	**2.04**	**272**	P	Pn	10 25 01.6	+0.7
TKGZ	**Te Karaka**	**2.06**	**252**	P	Pn	10 25 02.7	+1.5
RUGZ	**Raukumara Rang**	**2.12**	**266**	P	Pn	10 25 02.6	+0.4
RIGZ	**Rimuhau**	**2.21**	**246**	P	Pn	10 25 04.9	+1.5
RIGZ				S	Sn	10 25 31.3	+1.6
PRGZ	**Paritu Road**	**2.22**	**240**	P	Pb	10 25 06.0	-2.5
MWZ	**Matawai**	**2.28**	**257**	P	Pn	10 25 05.2	+0.9
MWZ				S	Sn	10 25 31.5	+0.2
MHGZ	**Mahia Peninsul**	**2.32**	**235**	P	Pn	10 25 07.3	+2.5
RAGZ	**Rawiri**	**2.41**	**253**	P	Pn	10 25 07.1	+1.0
SNGZ	**Shannon Statio**	**2.55**	**247**	P	Pn	10 25 09.6	+1.6
URZ	**Urewera**	**2.59**	**260**	P	Pn	10 25 10.0	+1.4
URZ				S	Sn	10 25 39.6	+0.7
RTZ	**Ruatahuna**	**2.77**	**253**	P	Pn	10 25 13.0	+2.0
RTZ				S	Sn	10 25 45.6	+2.3
RAHZ	**Arahi**	**2.78**	**246**	P	Pn	10 25 13.4	+2.2
MTHZ	**Maungataniwha**	**2.94**	**249**	P	Pn	10 25 15.1	+1.7
MTHZ				S	Sn	10 25 49.1	+1.5
OPRZ	**Ohinepanea**	**3.01**	**269**	P	Pn	10 25 14.9	+0.6
NMHZ	**Naumai**	**3.05**	**245**	P	Pn	10 25 16.9	+1.9
TARZ	**Mount Tarawera**	**3.06**	**261**	P	Pn	10 25 16.7	+1.6
MCHZ	**McNeill Hill**	**3.28**	**240**	P	Pn	10 25 20.0	+2.0
BKZ	**Black Stump Fm**	**3.31**	**245**	P	Pn	10 25 20.1	+1.7
KAHZ	**Kahuranaki**	**3.34**	**233**	P	Pn	10 25 21.5	+2.5
KWHZ	**Kaweka Forest**	**3.46**	**242**	P	Pn	10 25 22.2	+1.7
KRHZ	**Kereru**	**3.60**	**239**	P	Pn	10 25 23.9	+1.5
BHHZ	**Black Hill Sta**	**3.74**	**243**	P	Pn	10 25 25.9	+1.5
PNHZ	**Pukenui**	**3.85**	**236**	P	Pn	10 25 27.4	+1.6
MKAZ	**Moumakai**	**4.20**	**279**	P	Pn	10 25 30.4	-0.1
HIZ	**Hauiti**	**4.38**	**260**	P	Pn	10 25 34.7	+1.5
TIWZ	**Tintock**	**4.54**	**228**	P	Pn	10 25 36.7	+1.4
MRZ	**Mangatainoka R**	**4.66**	**231**	P	Pn	10 25 37.6	+0.7
WCZ	**Waipu Caves**	**5.18**	**290**	P	Pn	10 25 44.3	+0.2
CTZ	**Chatham Island**	**6.32**	**160**	P	Pn	10 26 06.7	+6.9

MOS 27 10:31:56.1±1.0**, 51°.75N**×**96°.15E, h18**^{km}**, mb4.1**/2**, 3C-4D, Error ellipse: s-maj=37.3km s-min=23.9km az=6.4, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HVS	**Khovu-Aksy**	**1.65**	**249**	*d i*PN	Pg	10 32 27.3	-0.5
ORL	**Orlik**	**2.39**	**69**	*e*PN	Pg	10 32 43.0	+1.0
ORL				*e*		10 33 14.6	
ORL				pmax	pmax		
	comp=Z,56nm,0.6s						
ORL				smax	smax		
	comp=N,110nm,1.2s						
MOY	**Mondy**	**3.02**	**90**	*e*PN	Pg	10 32 55.2	+1.3
MOY				*e*		10 33 36.2	
MOY				pmax	pmax		
	comp=Z,37nm,0.5s						
MOY				smax	smax		
	comp=N,164nm,1.2s						
ARS	**Arshan**	**3.90**	**85**	*e*PN	Pg	10 33 09.8	-0.9
ARS				pmax	pmax		
	comp=Z,28nm,0.3s						
TLY	**Talaya**	**4.66**	**88**	*i* PN	Pn	10 33 10.5	+4.9
ULN	**Ulaanbaatar**	**8.05**	**115**	⇑*e*P	Pn	10 33 53.8	+1.5
KURK	**Kurchatov**	**11.04**	**272**	*i* P	Pn	10 34 35.0	+2.1
BRVK	**Borovoye**	**15.81**	**285**	⇑*e*P	P	10 35 39.5	-1.8
AAK	**Ala-Archa**	**17.25**	**247**	⇓*e*P	Pn	10 35 56.2	+0.1
YAK	**Yakutsk**	**20.76**	**47**	⇓*e*P	P	10 36 36.3	+0.7
YAK				pmax	pmax		
	comp=Z,9.0nm,0.6s						
ARU	**Arti**	**22.33**	**297**	⇓*e*P	P	10 36 51.8	-0.8
ARU				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KLR	**Kul’dur**	**22.65**	**82**	⇑*e*P	P	10 36 57.0	+1.0

MEX 27 11:00:58.4±0.4**, 16°.02N**×**98°.31W, h2**^{km}±5^{km}**, MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.41**	**25**	*e*P	Pg	11 01 05.9	-0.4
PNIG				*i* S	Sg	11 01 12.2	+0.5
TLIG	**Tlapa**	**1.56**	**351**	*e*P	Pn	11 01 23.8	-3.4
TLIG				*i* S	Sn	11 01 42.8	-5.2

IDC 27 11:08:13.6±43.0**, 15°.63S**×**170°.54W, h0**^{km}**, mb4.2**/3**, mb1 4.4**/3**, mb1mx3.6**/52**, mbtmp4.2**/3**, Error ellipse: s-maj=846.9km s-min=185.8km az=80.0, Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	**Stephens Creek**	**46.32**	**241**	P	P	11 16 42.3	+0.9
	1.1nm,0.4s,baz=82,slow=7.1,SNR=4.7						
WRA	**Warramunga Arr**	**52.47**	**257**	P	P	11 17 28.0	-0.7
	0.8nm,0.5s,baz=97,slow=7.0,SNR=20						
ASAR	**Alice Springs**	**52.66**	**252**	P	P	11 17 29.9	-0.2
	7.6nm,0.6s,baz=89,slow=8.0,SNR=186						

MEX 27 11:11:12.0±0.3**, 16°.91N**×**96°.37W, h56**^{km}±3^{km}**, MD3.5, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VHO	**Vista Hermosa**	**0.38**	**296**	*e*P	Pn	11 11 21.4	-1.4
VHO				*e*S	Sn	11 11 28.7	-1.7
HUIG	**Huatulco**	**1.16**	**167**	*e*P	Pn	11 11 30.6	-1.5
HUIG				*i* S	Sn	11 11 44.9	-2.0
TLIG	**Tlapa**	**2.20**	**288**	*i* P	Pn	11 11 44.5	-1.7
TLIG				*i* S	Sn	11 12 10.5	-1.8
PCIG		**3.25**	**111**	*e*P	Pn	11 11 59.5	-1.1
PCIG				*e*S	Sn	11 12 35.9	-2.2

*MOS **27** 11:15:36.9±1.1, 23°.51N×142°.76E, h37^{km}, mb5.2/31, Error ellipse: s-maj=12.4km s-min=5.4km az=115.9*
*JMA **27** 11:15:38.6±0.1, 23°.53N×142°.92E, h136^{km}, M5.0*
*NEIC **27** 11:15:39.8±1.1, 23°.54N×142°.90E, h46^{km}±9^{km}, mb4.7/21, Error ellipse: s-maj=8.7km s-min=6.5km az=126.0*
*IDC **27** 11:15:39.0±1.9, 23°.47N×142°.82E, h43^{km}±16^{km}, mb4.2/27, mb1 4.3/31, mb1mx4.2/70, mbtmp4.5/31, ML4.3/4, MS3.5/41, Ms1 3.5/41, ms1mx3.4/59, Error ellipse: s-maj=17.4km s-min=11.5km az=88.0*
*ISCJB **27** 11:15:41.5±1.1, 23°.78N±0°.05×142°.84E±0°.05, h67^{km}±8^{km}, mb4.6/93, Error ellipse: s-maj=9.7km s-min=6.1km az=41.4*
*BJI **27** 11:15:47.2, 23°.93N×142°.59E, h105^{km}, mb4.8/50, mB4.7/30*
ISC 27 11:15:42.1±0.5**, 23°.62N**±0°.04×**142°.82E**±0°.07**, h67**^{km}±3^{km}**, h67**^{km}**:pP-P, n225, σ1^{s}.76**/219**, mb4.8**/93**, 14C-6D, Volcano Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JHHJ	**Haha-jima-NKT**	**3.06**	**349**	P	**Pn**	**11 16 28.3**	**+0.3**
JHHJ				S	**Sn**	**11 17 05.1**	**+1.7**
CBIJ	**Chichi jima**	**3.51**	**351**	*e*Pn	**Pn**	**11 16 33.9**	**-0.3**
CBIJ				S	**Sn**	**11 17 15.2**	**+0.7**
CBIJ	**Chichi jima**	**3.51**	**351**	P	**Pn**	**11 16 33.8**	**-0.4**
CBIJ				S	**Sn**	**11 17 16.9**	**+2.4**
JCJ	**Chichijima**	**3.51**	**351**	P	**Pn**	**11 16 33.9**	**-0.3**
	58nm,0.3s,baz=304,slow=23,SNR=88						
JCJ				S	**Sn**	**11 17 15.2**	**+0.7**
	216nm,0.3s,baz=294,slow=24,SNR=17						
JHJ2	**Mitsune**	**9.82**	**345**	*e*Pn	**Pn**	**11 17 59.4**	**-1.1**
JHJ2	**Mitsune**	**9.82**	**345**	P	**Pn**	**11 17 59.4**	**-1.1**
JHJ2				S	**Sn**	**11 19 48.9**	**-0.2**
JHJ	**Hachijo jima 2**	**9.84**	**345**	P	**Pn**	**11 17 59.6**	**-1.1**
	5.8nm,0.3s,baz=66,slow=19,SNR=5.8						
JHJ				S	**Sn**	**11 19 45.6**	**-3.9**
	15nm,0.3s,baz=74,slow=19,SNR=4.7						
JHJ				LR	LR	11 21 58.8	
	comp=Z,210nm,19.0s,baz=108,slow=38						
GUMO	**Guam**	**10.16**	**169**	LR	LR	11 20 30.4	
	comp=Z,97nm,18.9s,baz=359,slow=29						
JMZ	**Minamidaito 2**	**10.77**	**284**	P	**Pn**	**11 18 17.0**	**+3.5**
BSO1	**Boso 1**	**11.11**	**352**	P	**Pn**	**11 18 15.6**	**-2.0**
BSO3	**Boso 3**	**11.32**	**350**	P	**Pn**	**11 18 18.3**	**-2.4**
BSO3				S	**Sn**	**11 20 24.2**	**-1.3**
BSO4	**Boso 4**	**11.54**	**350**	S	**Sn**	**11 20 27.1**	**-3.8**
JOD2	**Odawara 2**	**12.05**	**345**	P	**Pn**	**11 18 27.3**	**-3.6**
JAO	**Obara**	**12.57**	**339**	P	**Pn**	**11 18 37.1**	**-1.0**
INU	**Inuyama**	**12.73**	**338**	*e*Pn	**Pn**	**11 18 39.6**	**-0.6**
JRY	**Ryogami san**	**12.81**	**346**	P	**Pn**	**11 18 38.3**	**-3.0**
JAG	**Ashikaga**	**13.09**	**348**	P	**Pn**	**11 18 40.6**	**-4.5**
JHO	**Hitachi**	**13.10**	**352**	P	**Pn**	**11 18 41.8**	**-3.3**
JAMN	**Amaminishikomi**	**13.11**	**293**	P	**Pn**	**11 18 47.8**	**+2.4**
MJAR	**Matsushiro Arr**	**13.48**	**344**	P	**Pn**	**11 18 47.4**	**-2.9**
	1.5nm,0.3s,baz=160,slow=11,SNR=12						
MJAR				LR	LR	11 23 60.0	
	comp=Z,260nm,20.1s,baz=160,slow=37						
MAJO	**Matsushiro**	**13.48**	**344**	*e*Pn	**Pn**	**11 18 50.0**	**-0.4**
MAJO				*e*Sn	**Sn**	**11 21 12.7**	**-5.8**
MAJO	**Matsushiro**	**13.48**	**344**	⇓*e*P	**Pn**	**11 18 49.9**	**-0.4**
MAT	**Matsushiro**	**13.48**	**344**	P	**Pn**	**11 18 47.8**	**-2.5**
MAT				*e*S	**Sn**	**11 21 13.7**	**-4.8**
MJB9	**Matsu-Tunnel**	**13.49**	**344**	*e*Pn	**Pn**	**11 18 47.7**	**-2.7**
JOW	**Kunigami**	**13.55**	**287**	LR	LR	11 23 22.1	
	comp=Z,496nm,21.5s,baz=134,slow=34						
JOW	**Kunigami**	**13.55**	**287**	*e*Pn	**Pn**	**11 18 54.0**	**+2.7**
JSJ	**Shimokoshiki**	**14.11**	**308**	P	**P**	**11 19 04.3**	**0.0**
JNU	**Nakatsue**	**14.14**	**315**	P	**Pn**	**11 19 01.5**	**+2.5**
	0.2nm,0.3s,baz=131,slow=3.0,SNR=5.0						
JNU				LR	LR	11 23 42.5	
	comp=Z,152nm,20.2s,baz=123,slow=34						
JNU	**Nakatsue**	**14.14**	**315**	*e*Pn	**Pn**	**11 18 58.1**	**-1.0**
JHS	**Saijyo**	**14.14**	**326**	P	**Pn**	**11 18 58.9**	**-0.2**
YOJ	**Yonaguni jima**	**18.11**	**277**	*e*P	**Pn**	**11 19 51.6**	**+2.4**
	123nm,0.8s						
YOJ	**Yonaguni jima**	**18.11**	**277**	P	**Pn**	**11 19 51.5**	**+2.4**
YOJ				pmax	pmax		
	comp=Z,120nm,0.8s						
ERM	**Erimo**	**18.35**	**1**	*e*P	**P**	**11 19 50.9**	**-0.2**
	comp=Z,22nm,0.9s						
ERM				*e*S	Sn	11 23 04.2	-12
ERM	**Erimo**	**18.35**	**1**	⇑*e*P	**Pn**	**11 19 53.2**	**+1.4**
ERM				pmax	pmax		
	comp=Z,11nm,1.0s						
TJN	**Taejon**	**18.43**	**317**	⇑*e*P	**P**	**11 19 49.5**	**-2.6**
KSRS	**Korea Array**	**18.80**	**321**	P	**P**	**11 19 56.0**	**-0.2**
	comp=Z,0.8nm,0.3s,baz=138,slow=12,SNR=42						
KSRS				LR	LR	11 26 17.6	
	comp=Z,153nm,21.4s,baz=143,slow=34						
KS15	**Wonju Array Si**	**18.82**	**321**	*e*P	**P**	**11 19 56.4**	**+0.1**
KSAR	**Wonju Array Be**	**18.82**	**321**	P	**P**	**11 19 56.0**	**-0.3**
KSAR	**Wonju Array Be**	**18.82**	**321**	P	**P**	**11 19 56.0**	**-0.3**
KS01	**Wonju Array Si**	**18.83**	**321**	*e*P	**P**	**11 19 55.9**	**-0.6**
INCN	**Inchon**	**19.59**	**319**	*e*P	**P**	**11 20 03.7**	**-1.1**
	comp=Z,31nm,1.4s						
INCN	**Inchon**	**19.59**	**319**	*e*P	**P**	**11 20 03.7**	**-1.1**
INCN				pmax	pmax		
	comp=Z,31nm,1.4s						
ASAJ	**Asahikawa**	**20.45**	**360**	P	Pn	11 20 16.9	+0.2
	comp=Z,17nm,0.7s,baz=218,slow=9.1,SNR=24						
ASAJ				LR	LR	11 28 19.4	
	comp=Z,88nm,20.6s,baz=163,slow=37						
ASAJ	**Asahikawa**	**20.45**	**360**	*e*P	Pn	11 20 15.6	-1.1
	comp=Z,20nm,0.8s						
MSHR	**Mys Shultsa**	**21.25**	**336**	⇑*e*P	**P**	**11 20 22.6**	**0.0**
USRK	**Ussuriysk Ar.**	**22.37**	**339**	P	**P**	**11 20 34.1**	**-0.5**
	comp=Z,7.5nm,0.6s,baz=146,slow=11						
USRK				LR	LR	11 28 54.8	
	comp=Z,63nm,18.1s,baz=151,slow=35						
H11N1	**WAKE ISLAND Hy**	**22.70**	**95**	T	T	11 44 34.3	
	baz=282,slow=74,SNR=73						
H11N2	**WAKE ISLAND Hy**	**22.70**	**95**	T	T	11 44 34.4	
	baz=282,slow=74,SNR=101						
H11N3	**WAKE ISLAND Hy**	**22.71**	**95**	T	T	11 44 35.5	
	baz=282,slow=74,SNR=60						
TGY	**Tagaytay City**	**22.74**	**249**	LR	LR	11 29 01.2	
	comp=Z,146nm,20.2s,baz=24,slow=35						
NJ2	**Nanjing**	**22.76**	**297**	*e*P	**P**	**11 20 38.8**	**-0.1**
NJ2				pmax	pmax		
	comp=Z,30nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**22.84**	**98**	T	T	11 44 22.6	
	baz=284,slow=75,SNR=87						
H11S1	**WAKE ISLAND Hy**	**22.85**	**98**	T	T	11 44 22.5	
	baz=284,slow=75,SNR=28						
H11S2	**WAKE ISLAND Hy**	**22.86**	**98**	T	T	11 44 27.2	
	baz=284,slow=75,SNR=25						
YSS	**Yuzh-Sakhalins**	**23.29**	**360**	*e*P	**P**	**11 20 45.5**	**+1.6**
	comp=Z,48nm,1.3s						
YSS				*e*pP	**pP**	**11 20 58.8**	**+0.1**
YSS	**Yuzh-Sakhalins**	**23.29**	**360**	*e*P	**P**	**11 20 46.1**	**+2.2**
YSS				*e*		11 20 58.8	
YSS				*e*		11 21 18.9	
YSS				*e*		11 24 54.6	
YSS				MLR	MLR		
	comp=Z,150nm,14.0s						
DAV	**Davao City (W)**	**23.34**	**228**	LR	LR	11 27 59.2	
	comp=Z,152nm,20.9s,baz=46,slow=32						
CN2	**Changchun**	**24.69**	**329**	*e*P	**P**	**11 20 56.5**	**-0.2**
CN2				*e*sP	sP	11 21 33.3	+13
CN2				*e*S	S	11 25 01.0	-13
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,80nm,18.0s						
CN2				LR	LR		
	comp=Z,90nm,18.0s						
CN2				LR	LR		
	comp=Z,110nm,20.0s						
TIA	**Tai’an**	**25.48**	**305**	P	**P**	**11 21 03.8**	**-0.2**
TIA				pmax	pmax		
	comp=Z,34nm,0.7s						
WHN	**Wuhan**	**26.23**	**291**	P	**P**	**11 21 12.0**	**+1.2**
WHN				LR	LR		

	comp=Z,470nm,15.7s						
WHN				LR	LR		
	comp=Z,490nm,16.3s						
WHN				LR	LR		
	comp=Z,360nm,19.7s						
KLR	**Kul'dur**	**27.01**	**344**	P	**P**	**11 21 18.6**	**+0.9**
	comp=Z,1.0nm,0.7s,baz=148,slow=8.5,SNR=38						
KLR				LR	LR	11 31 43.3	
	comp=Z,12nm,18.8s,baz=158,slow=36						
KLR	**Kul'dur**	**27.01**	**344***c*	*i*P	**P**	**11 21 18.4**	**+0.7**
GRNR	**Gornyy**	**27.56**	**351**	*e*P	**P**	**11 21 27.1**	**+4.5**
GRNR				pmax	pmax		
	comp=Z,39nm,1.0s						
MYLDM	**Lahad Datu**	**29.75**	**236**	*e*P	**P**	**11 21 43.8**	**+1.4**
	comp=Z,35nm,1.0s						
MRSI	**Marisa**	**30.66**	**224**	P	**P**	**11 21 51.1**	**+0.7**
	comp=Z,24nm,1.0s						
HHC	**Hu-ho-hao-te**	**31.31**	**311**	*e*P	**P**	**11 21 57.5**	**+1.4**
HHC				S	**S**	**11 26 50.5**	**-7.8**
HHC				pmax	pmax		
	comp=Z,26nm,1.3s						
HHC				pmax	pmax		
	comp=Z,100nm,4.4s						
HHC				LR	LR		
	comp=Z,170nm,8.6s						
HHC				LR	LR		
	comp=Z,120nm,10.2s						
XAN	**Xi'an**	**31.33**	**297**	P	**P**	**11 21 57.0**	**+0.7**
XAN				sP	sP	11 22 34.5	+14
XAN				pmax	pmax		
	comp=Z,10.0nm,0.5s						
XAN				pmax	pmax		
	comp=Z,80nm,9.3s						
XAN				LR	LR		
	comp=Z,130nm,17.2s						
XAN				LR	LR		
	comp=Z,120nm,23.0s						
PETK	**Petropavlovsk-**	**31.54**	**17**	LR	LR	11 33 40.9	
	comp=Z,46nm,20.9s,baz=192,slow=34						
ZEA	**Zeya**	**32.29**	**343**	*e*P	**P**	**11 22 05.2**	**+0.9**
ZEA				pmax	pmax		
	comp=N,47nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,52nm,1.0s						
GYA	**Guiyang**	**32.81**	**283**	*e*P	**P**	**11 22 11.8**	**+2.4**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CD2	**Chengdu**	**35.34**	**291**	*e*P	**P**	**11 22 31.0**	**-0.2**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,140nm,5.0s						
SPSI	**Sidrap Palu**	**35.45**	**222**	P	**P**	**11 22 30.5**	**-1.6**
LZH	**Lanzhou**	**35.79**	**299**	*e*P	**P**	**11 22 35.5**	**+0.4**
LZH				pP	sP	11 23 00.3	+1.1
LZH				sP	pP	11 23 13.5	+22
LZH				*e*PP	**PP**	**11 23 57.5**	**+0.1**
LZH				pmax	pmax		
	comp=Z,20nm,1.3s						
LZH				pmax	pmax		
	comp=Z,69nm,5.2s						
LZH				LR	LR		
	comp=Z,250nm,12.9s						
LZH				LR	LR		
	comp=Z,250nm,13.2s						
LZH				LR	LR		
	comp=Z,320nm,16.5s						
SBUM	**Sibu**	**36.32**	**239**	*e*P	**P**	**11 22 40.5**	**+0.8**
	comp=Z,3.1nm,0.7s						
KMI	**Kunming**	**36.45**	**281**	P	**P**	**11 22 43.0**	**+2.0**
KMI				pmax	pmax		
	comp=Z,11nm,0.6s						
KMI				pmax	pmax		
	comp=Z,65nm,4.4s						
ULN	**Ulaanbaatar**	**37.28**	**319***c*	*i*P	**P**	**11 22 46.9**	**-0.8**
ULN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
NONG	**Nongkai**	**37.40**	**269**	P	**P**	**11 22 50.2**	**+1.4**
	comp=Z,1.0nm,0.9s,comp=Z,51nm						
SONA1	**Songino Array**	**37.66**	**319**	*e*P	**P**	**11 22 49.9**	**-1.0**
SONM	**Songino Array**	**37.66**	**319**	P	**P**	**11 22 49.9**	**-0.9**
	comp=Z,2.2nm,0.7s,baz=132,slow=7.6,SNR=9.3						
SONM				LR	LR	11 38 49.6	
	comp=Z,71nm,18.2s,baz=108,slow=37						
EDFI	**Ende, Flores**	**38.23**	**215**	P	**P**	**11 22 54.5**	**-1.4**
YAK	**Yakutsk**	**39.43**	**350**	*e*P	**P**	**11 23 05.8**	**+0.6**
	comp=Z,38nm,0.7s						
YAK	**Yakutsk**	**39.43**	**350**	*e*P	**P**	**11 23 05.0**	**-0.2**
YAK				*e**PP	**pP**	**11 23 18.9**	**-2.8**
YAK				*e*		11 24 46.2	
YAK				*e*		11 25 06.6	
YAK				*e*S	**S**	**11 28 56.8**	**-5.1**
YAK				pmax	pmax		
	comp=Z,27nm,0.9s						
YAK				pmax	pmax		
	comp=N,6.0nm,1.0s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,95nm,4.1s						
YAK				pmax	pmax		
	comp=N,38nm,4.0s						
YAK				pmax	pmax		
	comp=E,49nm,4.0s						
YAK				smax	smax		
	comp=N,20nm,1.5s						
YAK				smax	smax		
	comp=E,9.0nm,1.6s						
YAK				MLR	MLR		
	comp=Z,98nm,19.0s						
YAK				MLR	MLR		
	comp=N,154nm,19.0s						
YAK				MLR	MLR		
	comp=E,31nm,18.0s						
PBKT	**Sadao Pong**	**39.81**	**268**	*e*P	**P**	**11 23 10.8**	**+1.8**
	comp=E,6.9nm,0.8s						
PBKT	**Sadao Pong**	**39.81**	**268**	P	**P**	**11 23 10.8**	**+1.8**
	comp=E,12nm,0.8s,comp=E,966nm						
SEY	**Seymchan**	**39.82**	**7**	P	**P**	**11 23 10.4**	**+1.9**
	comp=E,4.8nm,0.9s,baz=185,slow=5.3,SNR=12						
SEY	**Seymchan**	**39.82**	**7**⇓	*e*P	**P**	**11 23 10.2**	**+1.7**
UTTA	**Uttaradit**	**39.87**	**270**	P	**P**	**11 23 10.7**	**+1.2**
	comp=E,9.0nm,0.9s,comp=E,71nm						
BOD	**Bodaibo**	**39.95**	**336**	*e*	**P**	**11 23 08.1**	**-1.5**
BOD				pmax	pmax		
	comp=Z,6.0nm,0.9s						
PHIT	**Phitsanulok**	**40.14**	**269**	P	**P**	**11 23 13.5**	**+1.7**
	comp=Z,25nm,0.8s						
TLY	**Talaya**	**41.02**	**323**	*e*P	**P**	**11 23 18.7**	**0.0**
TLY				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CMMT	**Chiang Mai**	**41.06**	**272**	P	**P**	**11 23 20.2**	**+0.8**
	comp=Z,16nm,0.8s						
CHTO	**Chiang Mai**	**41.06**	**272**	*e*P	**P**	**11 23 20.0**	**+0.6**
	comp=Z,12nm,0.9s						
CHTO				*e*pP	sP	11 23 49.1	+5.4
CHTO	**Chiang Mai**	**41.06**	**272**	*e*P	**P**	**11 23 20.0**	**+0.6**
CHTO				pmax	pmax		
	comp=Z,12nm,0.9s						
CHTO	**Chiang Mai**	**41.06**	**272**	P	**P**	**11 23 20.3**	**+0.9**
	comp=Z,71nm,0.8s						
CM01	**Chiang Mai Arr**	**41.15**	**271**	*e*P	**P**	**11 23 21.1**	**+1.0**
CM31	**Chiang Mai Arr**	**41.15**	**271**	*e*P	**P**	**11 23 21.3**	**+1.1**
CMAR	**Chiang Mai Arr**	**41.15**	**271**	P	**P**	**11 23 21.2**	**+1.1**
	comp=Z,6.8nm,0.5s,baz=62,slow=7.4,SNR=28						
CMAR				LR	LR	11 38 44.4	
	comp=Z,61nm,21.9s,baz=94,slow=34						
CMAR	**Chiang Mai Arr**	**41.15**	**271**	*i* P	**P**	**11 23 21.2**	**+1.1**
CMAR				pmax	pmax		
	comp=Z,8.0nm,0.5s						
CTAO	**Charters Tower**	**43.57**	**175**	*e*P	**P**	**11 23 38.6**	**-1.0**
CTAO				*e*pP	**sP**	**11 23 59.8**	**-4.2**
CTAO	**Charters Tower**	**43.57**	**175**	*e*P	**P**	**11 23 38.6**	**-1.0**
WRAB	**Tennant Creek**	**44.07**	**191**	*e*P	**P**	**11 23 41.6**	**-2.0**
	comp=Z,8.4nm,0.5s						
WRAB				*e*pP	**pP**	**11 23 56.6**	**-3.8**
WRA	**Warramunga Arr**	**44.08**	**192**	P	**P**	**11 23 41.3**	**-2.4**
	comp=Z,6.1nm,0.6s,baz=12,slow=8.1,SNR=81						
WRA				PcP	**PcP**	**11 25 27.6**	**-0.4**
	comp=Z,0.9nm,0.5s,baz=5.6,slow=3.4,SNR=5.0						
WRA				ScP	**ScP**	**11 29 14.9**	**+0.8**
	comp=Z,1.4nm,0.8s,baz=6.7,slow=4.3,SNR=7.3						
SHL	**Shillong**	**46.13**	**283**	*e*P	**P**	**11 24 00.6**	**+0.4**
	comp=Z,32nm,0.7s						
SHL	**Shillong**	**46.13**	**283**	*e*P	**P**	**11 24 00.6**	**+0.4**
SHL				pmax	pmax		
	comp=Z,32nm,0.7s						
LSA	**Lhasa**	**46.27**	**289**	*e*P	**P**	**11 24 02.7**	**+1.1**
	comp=Z,13nm,0.8s						
LSA	**Lhasa**	**46.27**	**289**	*e*P	**P**	**11 24 02.7**	**+1.1**
LSA				pmax	pmax		
	comp=Z,13nm,0.8s						
PSI	**Prapat**	**47.20**	**251**	LR	LR	11 42 33.4	
	comp=Z,73nm,21.1s,baz=86,slow=34						
MNSI	**Mandailing Nat**	**47.65**	**248**	P	**P**	**11 24 13.0**	**+1.0**
	comp=Z,18nm,0.8s						
ASAR	**Alice Springs**	**47.79**	**191**	P	**P**	**11 24 10.6**	**-2.4**
	comp=Z,2.0nm,0.6s,baz=15,slow=10,SNR=38						
ASAR				ScP	**ScP**	**11 29 30.5**	**+0.9**
	comp=Z,0.9nm,0.8s,baz=12,slow=5.4,SNR=7.3						
TIXI	**Tiksi**	**48.71**	**354**⇑	*e*P	**P**	**11 24 21.5**	**+2.1**
TIXI				pmax	pmax		
	comp=Z,8.0nm,0.8s						
WMQ	**Urumqi**	**49.12**	**308**	P	**P**	**11 24 25.3**	**+2.3**
WMQ				pmax	pmax		
	comp=Z,34nm,1.3s						
WMQ				pmax	pmax		
	comp=Z,240nm,4.5s						
WMQ				LR	LR		
	comp=Z,110nm,20.3s						
WMQ				LR	LR		
	comp=Z,160nm,23.5s						
MBWA	**Marble Bar**	**49.87**	**209**	*e*P	**P**	**11 24 28.2**	**-0.6**
ODAN	**Odare**	**49.91**	**286**	*e*P	**P**	**11 24 30.8**	**+1.3**
	comp=Z,98nm,0.8s						
RAMN	**Ramite**	**50.59**	**286**	*e*P	**P**	**11 24 35.8**	**+1.1**
JIRN	**Jiri**	**50.84**	**287**	*e*P	**P**	**11 24 38.2**	**+1.5**
	comp=Z,119nm,0.7s						
DZM	**Mont Dzumac**	**50.90**	**151**	LR	LR	11 43 36.2	
	comp=Z,115nm,21.6s,baz=350,slow=33						
GUN	**Gumba**	**51.08**	**288**	*e*P	**P**	**11 24 39.9**	**+1.5**
	comp=Z,45nm,0.4s						
PKIN	**Phulchoki**	**51.55**	**287**	*e*P	**P**	**11 24 43.4**	**+1.5**
	comp=Z,35nm,0.7s						
DMN	**Daman**	**51.80**	**287**	*e*P	**P**	**11 24 44.7**	**+1.0**
GKN	**Gorkha**	**52.15**	**288**	*e*P	**P**	**11 24 47.4**	**+1.2**
ZALV	**Zalesovo Beam**	**52.51**	**321**	P	**P**	**11 24 48.0**	**-0.2**
	comp=Z,1.7nm,0.3s,baz=103,slow=6.4,SNR=3.6						
ZALV				LR	LR	11 47 16.4	
	comp=Z,46nm,18.0s,baz=70,slow=36						
DANN	**Dangsing**	**52.85**	**288**	*e*P	**P**	**11 24 53.2**	**+1.6**
	comp=Z,123nm,0.6s						
KOLN	**Koldanda**	**53.09**	**288**	*e*P	**P**	**11 24 54.2**	**+1.0**
	comp=Z,35nm,0.8s						
MK01	**Makanchi Array**	**53.16**	**312**	*e*P	**P**	**11 24 53.4**	**+0.2**
MK31	**Makanchi Array**	**53.17**	**312**	*e*P	**P**	**11 24 53.8**	**+0.5**
MK31	**Makanchi Array**	**53.17**	**312**	*e*P	**P**	**11 24 53.8**	**+0.5**
MKAR	**Makanchi Array**	**53.17**	**312**	P	**P**	**11 24 53.5**	**+0.3**
	comp=Z,10nm,0.6s,baz=92,slow=9.0,SNR=74						
MKAR	**Makanchi Array**	**53.17**	**312**	*e*P	**P**	**11 24 53.8**	**+0.5**
	comp=Z,59nm,0.7s						
CHGN	**Chignik**	**53.43**	**36**	*e*P	P	11 25 00.1	+5.2
	comp=Z,65nm,0.9s						
PYUN	**Piuthan**	**53.57**	**288**	*e*P	**P**	**11 24 58.0**	**+1.3**
	comp=Z,29nm,0.4s						
PDGK	**Podgornoye**	**55.05**	**307**	P	**P**	**11 25 08.2**	**+1.0**
PDGK				pmax	pmax		
	comp=Z,10.0nm,0.7s						
STKA	**Stephens Creek**	**55.19**	**181**	P	**P**	**11 25 06.1**	**-1.9**
	comp=Z,3.6nm,0.6s,baz=343,slow=8.4,SNR=13						
KURK	**Kurchatov**	**55.85**	**316**	*e*P	**P**	**11 25 12.3**	**-0.3**
	comp=Z,6.4nm,0.7s						
KURK	**Kurchatov**	**55.85**	**316***c*	*i*P	**P**	**11 25 12.1**	**-0.5**
KURK				pmax	pmax		
	comp=Z,6.0nm,0.7s						
KURBB	**Kurchatov Arra**	**55.91**	**316**	P	**P**	**11 25 12.8**	**-0.2**
	comp=Z,9.4nm,0.6s,baz=94,slow=7.8,SNR=74						
POHA	**Pohakuloa**	**57.04**	**81**	*e*P	**P**	**11 25 21.9**	**+0.1**
KSH	**Kashi**	**57.90**	**303**	P	**P**	**11 25 31.5**	**+4.0**
KSH				sP	PcP	11 26 10.8	-8.4
KSH				*e*PcP	sP	11 26 24.8	+32
KSH				pmax	pmax		
	comp=Z,12nm,1.1s						
KSH				pmax	pmax		
	comp=Z,83nm,4.8s						
AFI	**Afiamalu**	**57.98**	**125**	LR	LR	11 45 58.8	
	comp=Z,90nm,18.2s,baz=278,slow=31						
BPAW	**Bear Paw Mtn.**	**58.63**	**28**	*e*P	**P**	**11 25 34.1**	**+2.0**
	comp=Z,3.7nm,0.8s						
TRF	**Thorofare Moun**	**58.83**	**29**	*e*P	**P**	**11 25 34.5**	**+1.0**
	comp=Z,4.7nm,0.8s						
PMR	**Palmer**	**59.08**	**31**	*e*P	P	11 25 41.8	+6.7
	comp=Z,6.5nm,1.0s						
SML	**Sawmill**	**59.48**	**31**	*e*P	**P**	**11 25 39.4**	**+1.4**
	comp=Z,11nm,0.8s						
SML	**Sawmill**	**59.48**	**31**	*e*P	**P**	**11 25 39.4**	**+1.4**
SML				pmax	pmax		
	comp=Z,11nm,0.8s						
SFK	**Sufi-Kurgan**	**59.74**	**304**	P	**P**	**11 25 42.4**	**+2.0**
SCM	**Sheep Creek Mo**	**59.96**	**31**	*e*P	**P**	**11 25 42.5**	**+1.2**
	comp=Z,11nm,0.9s						
SCM	**Sheep Creek Mo**	**59.96**	**31**	*e*P	**P**	**11 25 42.5**	**+1.2**
SCM				pmax	pmax		
	comp=Z,11nm,0.9s						
GLI	**Glacier Island**	**59.98**	**32**	*e*P	**P**	**11 25 42.3**	**+0.9**
	comp=Z,7.8nm,0.8s						
ILAR	**Eielson Array**	**60.50**	**28**	P	**P**	**11 25 44.6**	**-0.2**
	comp=Z,1.7nm,0.8s,baz=258,slow=5.7,SNR=19						
ILB	**Eielson Array**	**60.50**	**28**	*e*P	**P**	**11 25 45.2**	**+0.4**
NIL	**Nilore**	**60.87**	**297**	*e*P	**P**	**11 25 49.4**	**+1.5**
	comp=Z,60nm,1.4s						
NIL	**Nilore**	**60.87**	**297**	P	**P**	**11 25 49.6**	**+1.7**
NIL				pmax	pmax		
	comp=Z,60nm,1.4s						
BVAR	**Borovoye Array**	**61.01**	**319**	P	**P**	**11 25 48.9**	**+0.5**
	comp=Z,8.2nm,0.5s,baz=88,slow=7.4,SNR=43						
BVAR				LR	LR	11 53 50.0	
	comp=Z,39nm,18.6s,baz=106,slow=38						
BVAR	**Borovoye Array**	**61.01**	**319**	P	**P**	**11 25 49.0**	**+0.5**
BRVK	**Borovoye**	**61.07**	**319**	*e*P	**P**	**11 25 49.1**	**+0.3**
	comp=Z,28nm,1.5s						
BRVK	**Borovoye**	**61.07**	**319***c*	*i*P	**P**	**11 25 49.2**	**+0.3**
BRVK				pmax	pmax		
	comp=Z,18nm,1.6s						
RIDG	**Independ'e Rid**	**61.28**	**29**	*e*P	**P**	**11 25 51.0**	**+0.8**
	comp=Z,5.1nm,0.9s						
PALK	**Pallekele**	**61.60**	**265**	LR	LR	11 52 43.4	
	comp=Z,25nm,19.8s,baz=179,slow=36						
KK31	**Karatay Array**	**61.62**	**308**	*e*P	**P**	**11 25 54.1**	**+1.4**
KK31	**Karatay Array**	**61.62**	**308**	*e*P	**P**	**11 25 54.2**	**+1.4**
KKAR	**Karatay Array**	**61.62**	**308**	*e*P	**P**	**11 25 54.1**	**+1.4**
KKAR	**Karatay Array**	**61.62**	**308**	*e*P	**P**	**11 25 54.2**	**+1.4**
SCRK	**Sand Creek**	**61.67**	**29**	*e*P	**P**	**11 25 53.9**	**+1.0**
	comp=Z,6.0nm,0.8s						
DAWY	**Dawson**	**63.70**	**29**	*e*P	**P**	**11 26 07.3**	**+1.0**
	comp=Z,3.4nm,1.0s						
DAWY				*e*pP	**sP**	**11 26 34.8**	**+3.3**
KBL	**Kabul**	**64.13**	**298**	*e*P	**P**	**11 26 11.0**	**+1.1**
	comp=Z,35nm,0.8s						
KBL	**Kabul**	**64.13**	**298**	*e*P	**P**	**11 26 11.0**	**+1.1**
KBL				pmax	pmax		
	comp=Z,35nm,0.8s						
INK	**Inuvik**	**65.95**	**24**	P	**P**	**11 26 21.8**	**+1.0**
	comp=Z,1.4nm,0.5s,baz=290,slow=3.3,SNR=9.4						
SVE	**Sverdlovsk**	**66.34**	**324**⇑	*i*P	**P**	**11 26 24.8**	**+1.3**
SVE				pmax	pmax		
	comp=Z,34nm,0.9s						
ARU	**Arti**	**67.53**	**323**	*e*P	**P**	**11 26 31.5**	**+0.5**
	comp=Z,40nm,0.9s						
ARU	**Arti**	**67.53**	**323***d*	*i*P	**P**	**11 26 31.1**	**0.0**
ARU				*PP	**PcP**	**11 26 57.7**	**-0.2**
ARU						11 28 56.0	
ARU				S	**S**	**11 35 14.9**	**-7.4**
ARU				pmax	pmax		
	comp=Z,60nm,1.2s						
AKTO	**Aktyubinsk**	**68.94**	**317**	P	**P**	**11 26 40.3**	**+0.3**
	comp=Z,6.1nm,0.7s,baz=75,slow=13,SNR=20						
AKTO				LR	LR	11 57 57.6	
	comp=Z,41nm,19.1s,baz=73,slow=37						
RAR	**Rarotonga**	**71.48**	**124**	LR	LR	11 52 09.3	
	comp=Z,144nm,20.2s,baz=288,slow=31						
GEYT	**Alibeck**	**71.89**	**304**	P	**P**	**11 26 59.1**	**+0.8**
	comp=Z,7.5nm,0.8s,baz=267,slow=2.5,SNR=17						
GEYT				LR	LR	12 03 31.3	
	comp=Z,40nm,18.1s,baz=250,slow=40						
GYA0B	**ALIBECK ARRAY**	**71.89**	**304**	*e*P	**P**	**11 27 00.2**	**+1.9**
	comp=Z,18nm,0.9s						
PRGR	**Permogore**	**72.83**	**330**	*e*P	**P**	**11 27 01.5**	**-1.8**
PRGR				pmax	pmax		
	comp=Z,12nm,0.8s						
SPITS	**Spitsbergen Ar**	**73.89**	**350**	P	**P**	**11 27 10.5**	**+1.1**
	comp=Z,5.1nm,0.8s,baz=40,slow=8.0,SNR=6.8						
SPITS				LR	LR	12 00 48.5	
	comp=Z,39nm,19.2s,baz=155,slow=37						
KBS	**Kingsbay**	**74.05**	**351**	*e*P	**P**	**11 27 11.5**	**+1.2**
KBS				pmax	pmax		
	comp=Z,27nm,0.7s						
YKA	**Yellowknife Ar**	**74.92**	**28**	P	**P**	**11 27 15.9**	**+0.4**
	comp=Z,1.7nm,0.6s,baz=292,slow=5.9,SNR=8.8						
YKA	**Yellowknife Ar**	**74.92**	**28**	*i* P	**P**	**11 27 15.8**	**+0.2**
YKA				pmax	pmax		
	comp=Z,2.0nm,0.6s						
KLMR	**Klimovskoe**	**75.87**	**331**	*e*P	**P**	**11 27 20.2**	**-0.8**
KLMR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KLMR	**Klimovskoe**	**75.87**	**331**	*e*P	**P**	**11 27 20.2**	**-0.8**
KLMR				AMP		11 27 21.3	
	comp=Z,5.0nm,0.8s						
ARCES	**ARCESS Array B**	**77.00**	**341**	P	**P**	**11 27 28.4**	**+1.1**
	comp=Z,3.3nm,0.6s,baz=64,slow=8.4,SNR=8.6						
MSF	**Maaselka**	**77.79**	**337**	P	**P**	**11 27 32.9**	**+1.1**
MSF				pmax	pmax		
	comp=Z,13nm,0.7s						
YBH	**Yreka Blue Hor**	**77.84**	**50**	LR	LR	11 54 01.4	
	comp=Z,36nm,20.6s,baz=311,slow=30						
OUL	**Oulu**	**79.34**	**337**	P	**P**	**11 27 41.2**	**+0.9**
OUL				pmax	pmax		
	comp=Z,14nm,0.8s						
OBN	**Obninsk**	**79.71**	**326**	*i* P	**P**	**11 27 42.2**	**-0.3**
OBN				pmax	pmax		
	comp=Z,8.0nm,1.5s						
NCK	**Nalchik**	**80.43**	**313**⇑	*e*P	**P**	**11 27 46.6**	**-0.1**
NCK				pmax	pmax		
	comp=Z,11nm,0.7s						
ZEI	**Tsey**	**80.50**	**312**	*e*P	**P**	**11 27 44.7**	**-2.6**
ZEI				pmax	pmax		
	comp=Z,14nm,0.8s						
SUF	**Sumiainen**	**80.57**	**335**	P	**P**	**11 27 46.6**	**-0.3**
SUF				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KBZ	**Khabaz**	**80.80**	**314**	P	**P**	**11 27 49.8**	**+1.2**
	comp=Z,6.6nm,0.8s,baz=85,slow=3.8,SNR=14						
KBZ				LR	LR	12 06 40.0	
	comp=Z,39nm,19.7s,baz=62,slow=38						
KIV	**Kislovodsk**	**80.85**	**314***d*	*e*P	**P**	**11 27 47.7**	**-1.3**
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GNI	**Garni**	**80.96**	**310**	LR	LR	12 08 10.5	
	comp=Z,18nm,19.6s,baz=96,slow=39						
NEY	**Neytrino**	**81.11**	**313**⇑	*e*P	**P**	**11 27 51.2**	**+0.7**
NEY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
FIA1	**FINESS Array S**	**81.31**	**334**	*e*P	**P**	**11 27 50.5**	**-0.4**
FINES	**FINESS Array B**	**81.31**	**334**	P	**P**	**11 27 50.6**	**-0.3**
	comp=Z,4.3nm,0.6s,baz=65,slow=5.2,SNR=26						
FINES				LR	LR	12 07 13.4	
	comp=Z,24nm,19.0s,baz=26,slow=38						
FINES	**FINESS Array B**	**81.31**	**334**	*i* P	**P**	**11 27 50.5**	**-0.4**
FINES				pmax	pmax		
	comp=Z,4.0nm,0.6s						
VAF	**Ylistaro**	**81.68**	**337**	P	**P**	**11 27 52.6**	**-0.2**
VAF				pmax	pmax		
	comp=Z,12nm,1.5s						
NVAR	**Mina Array Bea**	**82.22**	**52**	P	**P**	**11 27 57.3**	**+0.8**
	comp=Z,0.2nm,0.5s,baz=294,slow=6.8,SNR=3.3						
NVAR				LR	LR	11 57 31.0	
	comp=Z,49nm,21.1s,baz=94,slow=30						
NV01	**Mina Array Sit**	**82.22**	**52**	*e*P	P	11 28 03.1	+6.6
VSU	**Vasula**	**82.71**	**332**⇑	*i*P	**P**	**11 27 57.8**	**-0.5**
VSU				pmax	pmax		
	comp=Z,20nm,0.9s						
AKASG	**Malin Array Be**	**85.76**	**324**	P	**P**	**11 28 14.2**	**+0.2**
	comp=Z,1.0nm,0.4s,baz=48,slow=5.1,SNR=7.7						
AKASG				LR	LR	12 09 57.7	
	comp=Z,27nm,19.3s,baz=255,slow=38						
KIEV	**Kiev**	**85.77**	**324**⇓	*e*P	**P**	**11 28 13.5**	**-0.5**
KIEV				pmax	pmax		
	comp=Z,2.0nm,0.9s						
PDAR	**Pinedale Array**	**86.27**	**45**	LR	LR	12 00 42.4	
	comp=Z,58nm,21.0s,baz=300,slow=31						
HFS	**Hagfors**	**86.83**	**337**	P	**P**	**11 28 17.9**	**-1.1**
	comp=Z,3.5nm,0.7s,baz=86,slow=4.6,SNR=8.9						
HFS				LR	LR	12 09 33.6	
	comp=Z,41nm,19.4s,baz=34,slow=37						
NB2	**NORSAR Subarra**	**87.04**	**339**	P	**P**	**11 28 18.9**	**-1.2**
	comp=Z,0.8nm,0.6s,baz=48,slow=4.6						
NOA	**NORSAR Array B**	**87.04**	**339**	P	**P**	**11 28 18.8**	**-1.2**
	comp=Z,1.6nm,0.8s,baz=48,slow=4.7,SNR=7.3						
RAYN	**Ar Rayn**	**87.08**	**294**	*e*P	**P**	**11 28 21.5**	**+0.4**
	comp=Z,6.3nm,0.6s						
RAYN				*e*pP	**pP**	**11 28 39.4**	**-0.2**
RAYN				*e*sP	**sP**	**11 28 47.3**	**+0.5**
RAYN	**Ar Rayn**	**87.08**	**294**	*e*P	**P**	**11 28 21.5**	**+0.4**
RAYN				*e**PP	**pP**	**11 28 39.4**	**-0.2**
RAYN				pmax	pmax		
	comp=Z,6.0nm,0.6s						
KLNR	**Kaliningrad**	**87.91**	**331**⇓	*e*P	**P**	**11 28 24.1**	**-0.2**
KLNR				pmax	pmax		
	comp=Z,21nm,0.8s						
BRTR	**Keskin Array B**	**88.79**	**313**	P	**P**	**11 28 28.1**	**-0.9**
	comp=Z,2.5nm,0.7s,baz=89,slow=3.5,SNR=7.1						
BRTR				LR	LR	12 13 15.4	
	comp=Z,12nm,19.1s,baz=85,slow=39						
BRTR	**Keskin Array B**	**88.79**	**313***c*	*e*P	**P**	**11 28 28.6**	**-0.4**
BRTR				pmax	pmax		
	comp=Z,3.0nm,0.7s						
SFJD	**Kangerlussuaq**	**89.10**	**5**	LR	LR	12 13 51.7	
	comp=Z,7.7nm,18.2s,baz=335,slow=39						
ULM	**Lac du Bonnet**	**90.03**	**33**	LR	LR	12 06 38.6	
	comp=Z,15nm,21.6s,baz=318,slow=34						
MMAI	**Mount Meron Ar**	**90.84**	**307**	LR	LR	12 12 54.5	
	comp=Z,14nm,18.3s,baz=105,slow=38						
ANMO	**Albuquerque**	**92.26**	**50**	LR	LR	12 06 22.0	
	comp=Z,32nm,19.4s,baz=250,slow=33						
ANMO	**Albuquerque**	**92.26**	**50**⇑	*e*P	**P**	**11 28 46.3**	**+1.0**
ANMO				pmax	pmax		
	comp=Z,1.0nm,1.0s						
VYHS	**Vyhne**	**92.50**	**326**	*e*P	**P**	**11 28 45.8**	**-0.1**
VYHS	**Vyhne**	**92.50**	**326**	*e*P	**P**	**11 28 45.8**	**-0.1**
LPIG	**La Paz**	**94.67**	**61**	LR	LR	12 15 21.9	
	comp=Z,19nm,18.2s,baz=232,slow=38						
GERES	**GERESS Array B**	**94.77**	**329**	P	**P**	**11 28 56.6**	**+0.2**
	comp=Z,0.2nm,0.3s,baz=296,slow=10,SNR=3.4						
GERES				LR	LR	12 14 01.7	
	comp=Z,29nm,19.8s,baz=90,slow=37						
TXAR	**Lajitas Array**	**97.20**	**54**	LR	LR	12 06 13.2	
	comp=Z,39nm,21.9s,baz=0.0,slow=31						
DAVOX	**Davos/Dischmat**	**98.05**	**329**	LR	LR	12 16 40.3	
	comp=Z,23nm,20.3s,baz=83,slow=37						
PLCA	**Paso Flores**	**147.25**	**129**	PKPbc	**PKPbc**	**11 35 17.4**	**-0.7**
	comp=Z,3.3nm,0.5s,baz=241,slow=5.5,SNR=6.4						
LPAZ	**La Paz**	**150.05**	**82**	PKPbc	**PKPbc**	**11 35 26.7**	**0.0**
	comp=Z,2.8nm,0.8s,baz=282,slow=1.6,SNR=11						
SAML	**Samuel**	**151.17**	**64**	*e*PKPdf	**PKPdf**	**11 35 23.2**	**+0.5**
SAML	**Samuel**	**151.17**	**64**	*e*PKIKP	**PKPdf**	**11 35 23.2**	**+0.5**

ISCJB ***27*** *11:32:39.3±0.8, 41°.18N±0°.04×36°.13E±0°.07, h0km, Error ellipse: s-maj=8.8km s-min=4.8km az=26.7*

CSEM ***27*** *11:32:39.5, 41°.17N×36°.13E, h7km, ML2.9, Suspected Mining explosion.*

DDA ***27*** *11:32:39.5, 41°.17N×36°.13E, h7km, Ml2.9, Suspected Mining explosion.*

ISC 27 11:32:39.9±1.2**, 41°.18N**±0°.03×**36°.11E**±0°.04**, h0km, n11, σ1§11**/16**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KVT	**Kavak**	**0.11**	**206**	PG	**Pg**	**11 32 41.6**	**-0.5**
KVT				SG	**Sg**	**11 32 44.5**	**+1.0**
SAMS	**Samsun-Alacam**	**0.19**	**18**	*i* P	**Pg**	**11 32 43.5**	**-0.1**
SAMS				*i* S	**Sg**	**11 32 47.4**	**+1.4**
SAMS	**Samsun-Alacam**	**0.19**	**18**	P	**Pg**	**11 32 43.5**	**-0.1**
SAMS				S	**Sg**	**11 32 47.4**	**+1.4**
HAVZ	**Havza**	**0.32**	**250**	*i* P	**Pg**	**11 32 45.9**	**-0.1**
HAVZ				*i* S	**Sg**	**11 32 51.7**	**+1.6**
HAVZ	**Havza**	**0.32**	**250**	P	**Pg**	**11 32 45.9**	**-0.1**
HAVZ				S	**Sg**	**11 32 51.7**	**+1.6**
ERBA	**Erbaa**	**0.70**	**136**	*i* P	**Pg**	**11 32 52.9**	**-0.5**
ERBA	**Erbaa**	**0.70**	**136**	P	**Pg**	**11 32 52.8**	**-0.5**
SNOP	**Sinop**	**1.08**	**321**	*e*PG	**Pg**	**11 32 58.7**	**-1.9**
SINO	**SINOP_Merkez**	**1.08**	**321**	*i* P	**Pg**	**11 33 00.0**	**-0.6**
SINO	**SINOP_Merkez**	**1.08**	**321**	P	**Pg**	**11 33 00.0**	**-0.6**
CORM	**Corum**	**1.51**	**229**	*e*PG	**Pn**	**11 33 07.5**	**-0.8**

*CSEM **27** 11:50:58.4, 38°.29N×22°.11E, h8^{km}, ML1.0/4*

ATH 27 11:50:58.4, 38°.29N×22°.11E, h8^{km}±3^{km}, ML1.0/4, Error ellipse: s-maj=3.1km s-min=0.8km az=298.0, Greece

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Code  Station Name        Δ°  AZ°   Phase ID          Time    Res
                                    Op     ISC       h  m  s  ISC
TRIZ  Trizonia          0.09 338    P      Pg       11 50 59.9 -0.6
TRIZ                                S      Sg       11 51 01.2 -0.9
TRIZ  Trizonia          0.09 338    P      Pg       11 51 00.1 -0.4
TRIZ                                S      Sg       11 51 01.7 -0.3
TRIZ  Trizonia          0.09 338    P      Pg       11 51 00.3 -0.2
TRIZ                                S      Sg       11 51 01.9 -0.2
KALE  Kalithea          0.11  11    P      Pg       11 51 00.4 -0.5
KALE                                S      Sg       11 51 03.0 +0.3
KALE                                AML    AML      11 51 03.4
      comp=E,238µm,0.3s
KALE                                AML    AML      11 51 03.7
      comp=N,441µm,0.2s
KALE  Kalithea          0.11  11    P      Pg       11 51 00.5 -0.4
KALE                                S      Sg       11 51 03.4 +0.7
KALE                                AML    AML      11 51 03.4
      comp=E,238µm,0.3s
KALE                                AML    AML      11 51 03.7
      comp=N,441µm,0.2s
KALE  Kalithea          0.11  11    P      Pg       11 51 00.7 -0.2
KALE                                S      Sg       11 51 03.1 +0.4
LAKA  Lakka             0.12 247    P      Pg       11 51 00.7 -0.3
LAKA                                S      Sg       11 51 02.8  0.0
LAKA                                AML    AML      11 51 03.2
      comp=N,50µm,0.2s
LAKA                                AML    AML      11 51 04.5
      comp=E,46µm,0.3s
LAKA  Lakka             0.12 247    P      Pg       11 51 00.9 -0.1
LAKA                                S      Sg       11 51 03.4 +0.6
LAKA  Lakka             0.12 247    P      Pg       11 51 01.0  0.0
LAKA                                S      Sg       11 51 03.2 +0.4
SERG  Sergoula          0.14 341    P      Pg       11 51 00.9 -0.4
SERG                                S      Sg       11 51 03.4  0.0
SERG                                AML    AML      11 51 03.8
      comp=N,239µm,0.2s
SERG                                AML    AML      11 51 03.9
      comp=E,279µm,0.3s
SERG  Sergoula          0.14 341    P      Pg       11 51 00.8 -0.6
SERG                                AML    AML      11 51 03.8
      comp=N,239µm,0.2s
SERG                                S      Sg       11 51 03.8 +0.5
SERG                                AML    AML      11 51 03.9
      comp=E,279µm,0.3s
SERG  Sergoula          0.14 341    P      Pg       11 51 01.1 -0.2
SERG                                S      Sg       11 51 03.7 +0.3
TRAZ  Trapeza           0.14 146    P      Pg       11 50 59.6 -1.8
TRAZ                                S      Sg       11 51 03.2 -0.4
TRAZ  Trapeza           0.14 146    P      Pg       11 50 59.6 -1.8
TRAZ                                S      Sg       11 51 03.5  0.0
TRAZ  Trapeza           0.14 146    P      Pg       11 51 00.5 -0.9
TRAZ                                S      Sg       11 51 03.6 +0.1
EFP   Efpalio           0.21 311    P      Pg       11 51 02.4 -0.3
EFP                                 S      Sg       11 51 06.9 +1.2
EFP   Efpalio           0.21 311    P      Pg       11 51 02.1 -0.6
EFP                                 S      Sg       11 51 07.0 +1.4
EFP   Efpalio           0.21 311    P      Pg       11 51 02.5 -0.2
EFP                                 S      Sg       11 51 06.5 +0.8
KLV   Kalavryta, Ach    0.24 173    P      Pg       11 51 03.1 -0.2
KLV                                 S      Sg       11 51 07.7 +1.2
KLV                                 AML    AML      11 51 08.3
      comp=N,30µm,0.1s
KLV                                 AML    AML      11 51 08.4
      comp=E,22µm,0.2s
KLV   Kalavryta, Ach    0.24 173    P      Pg       11 51 03.4 +0.1
KLV                                 S      Sg       11 51 07.7 +1.2
KLV   Kalavryta, Ach    0.24 173    P      Pg       11 51 03.3 +0.1
KLV                                 S      Sg       11 51 07.3 +0.8
ANX   Ano Chora         0.34 334    P      Pg       11 51 04.4 -0.7
ANX                                 AML    AML      11 51 10.6
      comp=N,74µm,0.4s
ANX                                 AML    AML      11 51 11.2
      comp=E,48µm,0.2s
ANX                                 S      Sb       11 51 11.4 -1.0
ANX   Ano Chora         0.34 334    P      Pg       11 51 04.5 -0.6
ANX                                 S      Sg       11 51 10.8 +1.2
ANX   Ano Chora         0.34 334    P      Pg       11 51 04.8 -0.3
ANX                                 S      Sg       11 51 10.4 +0.7
DSF   Desfina           0.35  69    P      Pb       11 51 06.4 -0.5
DSF                                 S      Sg       11 51 11.0 +1.2
DSF                                 AML    AML      11 51 12.1
      comp=E,28µm,0.1s
DSF                                 AML    AML      11 51 12.8
      comp=N,59µm,0.1s
DSF   Desfina           0.35  69    P      Pg       11 51 05.5 +0.3
DSF                                 S      Sg       11 51 11.0 +1.1
DSF                                 AML    AML      11 51 12.1
      comp=E,28µm,0.1s
DSF                                 AML    AML      11 51 12.8
      comp=N,59µm,0.1s
DSF   Desfina           0.35  69    P      Pg       11 51 05.4 +0.2
DSF                                 S      Sg       11 51 10.6 +0.7
GUR   Goura             0.39 153    P      Pg       11 51 05.8 -0.3
GUR                                 AML    AML      11 51 12.4
      comp=N,45µm,0.3s
GUR                                 S      Sb       11 51 13.1 -0.8
GUR                                 AML    AML      11 51 13.3
      comp=E,47µm,0.2s
GUR   Goura             0.39 153    P      Pg       11 51 05.9 -0.2
GUR                                 S      Sg       11 51 12.3 +1.0
DRO   Drossia           0.46 224    P      Pg       11 51 07.9 +0.6
DRO                                 S      Sb       11 51 15.1 -0.6
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*SOME **27** 12:02:56.4, 44°.18N×81°.73E, h10^{km}*

*NNC **27** 12:02:58.6±1.1, 44°.34N×81°.51E, h0^{km}, mb2.8, mpv2.4, Error ellipse: s-maj=16.6km s-min=3.9km az=126.0*

ISC 27 12:02:58.0±2.0**, 44°.22N**±0°.06×**81°.58E**±0°.10**, h10^{km}, n7,** σ**0ˢ.86**/12**, 2C-4D, Northern Xinjiang**

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Code  Station Name        Δ°  AZ°   Phase ID          Time    Res
                                    Op     ISC       h  m  s  ISC
KTMS  Ketmen            1.18 230   eP      Pb       12 03 20.2 -0.3
      5.2nm,0.3s
KTMS                               eS      Sn       12 03 37.9 +1.1
      5.9nm,0.3s
PDGK  Podgornoye        1.76 240   ⇓P      Pb       12 03 30.5 +0.2
      0.9nm,0.3s
PDGK                               ⇑S      Sg       12 03 54.5 +0.1
      5.3nm,0.4s
KAPS  Kapalarasan       1.91 305   eP      Pb       12 03 33.0  0.0
      4.8nm,0.3s
KAPS                               eS      Sg       12 03 59.3 -0.2
      9.2nm,0.4s
UZB   Uzynbulak         2.14 241   eP      Pb       12 03 36.0 -1.0
      3.6nm,0.3s
UZB                                eS      Sb       12 04 04.6 +0.9
      3.6nm,0.4s
KPKS  Kokpek            2.23 251   eP      Pb       12 03 37.8 -0.5
      4.9nm,0.1s
KPKS                               eS      Sg       12 04 08.0 -1.6
      24nm,0.2s
MAKZ  Makanchi          2.61   6   ⇓Pg     Pb       12 03 45.1 +0.3
      6.1nm,0.6s
MAKZ                               ⇓Lg     Lg       12 04 17.2
      2.1nm,0.5s
MK31  Makanchi Array    2.63  11   ⇑Pg     Pb       12 03 44.3 -0.8
      0.2nm,0.3s,baz=196,slow=16,SNR=6.0
MK31                               ⇓Lg     Lg       12 04 17.4
      1.5nm,0.5s,baz=192,slow=29,SNR=6.7
```

GUC 27 12:03:50.9±0.6**, 22°.60S**×**68°.49W, h139^{km}**±6^{km}**, ML3.5, Northern Chile**

```
Code  Station Name        Δ°  AZ°   Phase ID          Time    Res
                                    Op     ISC       h  m  s  ISC
PB06  IPOC Station P    1.01 264   eP      Pn       12 04 15.2 +0.3
PB06                               i S     Sn       12 04 34.3 +1.2
PB06                                IAML            12 04 36.5
      comp=N,2µm,0.2s
PB09  IPOC Station P    1.06 319   eP      Pn       12 04 16.1 +0.7
PB09                               i S     Sn       12 04 35.0 +1.0
PB03  IPOC Station P    1.29 295   eP      Pn       12 04 18.4 +0.8
PB03                               i S     Sn       12 04 39.0 +1.1
PB03                                IAML            12 04 39.6
      comp=E,1µm,0.5s
PB07  IPOC Station P    1.56 303   eP      Pn       12 04 21.5 +1.0
PB07                               i S     Sn       12 04 44.6 +1.6
PB07                                IAML            12 04 46.1
      comp=E,750nm,0.4s
PB05  IPOC Station P    1.60 261   eP      Pn       12 04 21.6 +0.7
PB05                               i S     Sn       12 04 44.8 +1.0
PB05                                IAML            12 04 52.6
      comp=N,401nm,0.2s
PB08  IPOC Station P    2.52 346   eP      Pn       12 04 33.7 +1.6
PB08                               i S     Sn       12 05 05.7 +1.8
PB08                                IAML            12 05 09.7
      comp=E,121nm,0.8s
```

NNC 27 12:36:44.9±2.9**, 37°.02N**×**70°.69E, h0^{km}, mb3.7, mpv3.3, 4C-1D, Error ellipse: s-maj=22.4km s-min=18.9km az=171.0, Afghanistan-Tajikistan border region**

```
Code  Station Name        Δ°  AZ°   Phase ID          Time    Res
                                    Op     ISC       h  m  s  ISC
SFK   Sufi-Kurgan       3.71  36   ⇓Pn     Pn       12 37 43.3 -0.3
      5.6nm,0.3s
SFK                                ⇑Sn     Sn       12 38 30.0 +1.8
      2.9nm,0.3s
MNAS  Manas             5.63  14   ⇑Pn     Pn       12 38 10.0 +0.1
      1.2nm,0.6s
MNAS                               ⇑Sn     Sn       12 39 15.7 +0.2
      2.1nm,0.6s
KK31  Karatay Array     6.07 359    Pn     Pn       12 38 16.4 +0.5
      0.8nm,0.3s,baz=176,slow=12,SNR=31
KK31                               ⇑Sn     Sn       12 39 27.5 +1.4
      0.5nm,0.3s,baz=177,slow=23,SNR=4.6
```

IDC 27 12:44:21.9±999.0**, 46°.58N**×**47°.09E, h0^{km}, Error ellipse: s-maj=488.5km s-min=208.3km az=132.0, Ukraine-Moldova-Southwestern Russia region**

```
Code  Station Name        Δ°  AZ°   Phase ID          Time    Res
                                    Op     ISC       h  m  s  ISC
I43RU DUBNA INFRASON11.85 333   i                   14 02 30.0
      baz=144,slow=321,SNR=0.6
I26DE FREYUNG INFRAS22.47 288   i                   15 00 55.0
      baz=82,slow=302,SNR=5.7
I48TN KESRA INFRASON30.12 263   i                   15 48 20.0
      baz=56,slow=308,SNR=0.4
```

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*IDC **27** 13:15:49.8±1.4, 0°.11N×122°.85E, h0^{km}, mb3.7/4, mb1 3.9/4, mb1mx3.5/52, mbtmp3.7/4, Error ellipse: s-maj=66.4km s-min=21.7km az=72.0*

*ISCJB **27** 13:16:04.1±0.7, 0°.06S±0°.10×122°.81E±0°.09, h162^{km}, mb3.6/4, Error ellipse: s-maj=14.6km s-min=11.8km az=147.3*

*DJA **27** 13:16:06.1±0.6, 0°S±3°×12°3E±°, h120^{km}±6^{km}, M3.8/7, MLv3.8/7*

ISC 27 13:16:04.7±1.0**, 0°.11S**±0°.08×**122°.89E**±0°.08**, h162^{km}, n11,** σ**3ˢ.51**/14**, mb3.7**/4**, Minahassa Peninsula, Sulawesi**

```
Code  Station Name        Δ°  AZ°   Phase ID          Time    Res
                                    Op     ISC       h  m  s  ISC
LUWI  Luwuk             0.93 187    P      Pn       13 16 27.4 -2.8
LUWI                                S      Sn       13 16 44.2 -5.5
MRSI  Marisa            1.12 302    P      Pn       13 16 28.8 -2.8
MRSI                                S      Sn       13 16 46.4 -5.9
KMSI  Cibinong          1.28  58    P      Pn       13 16 31.9 -1.2
APSI  Ampana            1.48 237    P      Pn       13 16 33.1 -1.9
APSI                                S      Sn       13 16 54.2 -4.0
MPSI  Mapaga            3.03 278    P      Pn       13 16 53.0 +0.1
PCI   Palu              3.16 256    P      Pn       13 16 56.5 +1.9
TTSI  Tana Toraja       4.23 226    P      Pn       13 17 08.8 +0.4
WRA   Warramunga Arr   22.68 151    P      P        13 20 54.6 +2.0
      1.3nm,0.5s,baz=326,slow=11,SNR=16
ASAR  Alice Springs    25.74 156    P      P        13 21 24.7 +4.3
      0.4nm,0.6s,baz=334,slow=8.0,SNR=5.3
MJAR  Matsushiro Arr   39.14  20    P      P        13 23 17.4 +0.8
      1.3nm,0.7s,baz=193,slow=10,SNR=5.4
MKAR  Makanchi Array   58.65 328    P      P        13 25 47.7 +2.7
      0.6nm,0.3s,baz=126,slow=8.6,SNR=7.1
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*BJI **27** 13:25:23.1, 0°.05S×100°.47E, h163^{km}, mb4.7/11, mB4.9/6*

*ISCJB **27** 13:25:27.6±0.2, 0°.36N±0°.03×100°.04E±0°.03, h165^{km}±2^{km}, mb4.3/39, Error ellipse: s-maj=6.1km s-min=3.5km az=144.8*

*NEIC **27** 13:25:29.0±0.4, 0°.34N×100°.14E, h165^{km}±4^{km}, mb4.3/7, Error ellipse: s-maj=7.8km s-min=5.1km az=47.0*

*IDC **27** 13:25:28.1±0.7, 0°.40N×100°.20E, h155^{km}±5^{km}, mb4.1/30, mb1 4.2/32, mb1mx4.0/64, mbtmp4.6/32, MS3.1/2, Ms1 3.1/2, ms1mx2.5/65, Error ellipse: s-maj=12.9km s-min=7.9km az=50.0*

*DJA **27** 13:25:29.3±0.3, 0°N±2°×10°0E±°, h150^{km}±4^{km}, M4.9/18, mB5.2/2, mb5.1/2, MLv4.7/18, Mw(mB)4.6/2*

ISC 27 13:25:28.8±0.5**, 0°.35N**±0°.04×**100°.00E**±0°.04**, h160^{km}**±4^{km}**, h161^{km}:pP-P, n135,** σ**1ˢ.30**/151**, mb4.3**/42**, 1C, Northern Sumatera**

```
Code  Station Name        Δ°  AZ°   Phase ID          Time    Res
                                    Op     ISC       h  m  s  ISC
MNSI  Mandailing Nat    0.61 316    P      Pn       13 25 51.9  0.0
MNSI                                S      Sn       13 26 08.4 -1.2
BKNI  Bangkinang        1.04  91    P      Pn       13 25 55.3 +0.4
BKNI                                S      Sn       13 26 14.8  0.0
BKNI  Bangkinang        1.04  91   ePn     Pn       13 25 55.5 +0.6
PBSI  Pulau Batu        1.77 257    P      Pn       13 26 02.5 +0.5
PBSI                                S      Sn       13 26 27.3 -0.2
SISI  Saibi             1.90 209    P      Pn       13 26 03.1 -0.4
SISI                                S      Sn       13 26 29.6 -0.6
GSI   Gunungsitoli      2.60 291    P      Pn       13 26 11.7  0.0
GSI                                 S      Sn       13 26 44.3 -0.6
GSI   Gunungsitoli      2.60 291   ePn     Pn       13 26 12.1 +0.3
PSI   Prapat            2.66 336    P      Pn       13 26 11.9 -0.6
      26nm,0.3s,baz=180,slow=8.8,SNR=118
PSI                                 S      Sn       13 26 43.5 -2.9
      14nm,0.3s,baz=180,slow=15,SNR=13
PSI                                 LR     LR       13 27 28.6
      comp=Z,122nm,19.0s,baz=264,slow=46
KRJI  Kerinci           2.83 149    P      Pn       13 26 16.1 +1.5
KRJI                                S      Sn       13 26 51.2 +1.1
PPSI  Pulau Pagai       3.09 180    P      Pn       13 26 16.5 -1.3
PPSI                                S      Sn       13 26 53.9 -1.9
TSI   Tuntungan         3.44 335    P      Pn       13 26 22.9 +0.7
KCSI  Kotacane, Aceh    3.86 325    P      Pn       13 26 26.9 -0.7
TPTI                    4.04 316    P      Pn       13 26 29.3 -0.5
MYKOM Kota Tinggi       4.11  70   ePn     Pn       13 26 31.6 +0.9
MASI  Maura Aman, Be    4.13 147    P      Pn       13 26 31.9 +0.8
SNSI  Sinabang, Aceh    4.20 299    P      Pn       13 26 32.2 +0.2
IPM   Ipoh              4.23  14   ePn     Pn       13 26 33.7 +1.3
TPRI  Tanjung Pinang    4.56  83    P      Pn       13 26 38.0 +1.3
DSRI  Dabo              4.65 100    P      Pn       13 26 48.6  +11
KULM  Kulim             4.95   8   ePn     Pn       13 26 41.6 -0.2
MLSI  Meulaboh, Aceh    5.29 317    P      Pn       13 26 45.9 -0.4
MNAI  Manna             5.53 148   ePn     Pn       13 26 48.8 -0.7
LHMI  Lhok Sumawe       5.72 328   ePn     Pn       13 26 51.3 -0.7
MDSI  Maura Dua         6.36 139    P      Pn       13 27 00.2 -0.3
CMBY  CAMPBELL BAY      8.97 318   eP      Pn       13 27 35.4 +0.2
CMBY                               eS      Sn       13 29 06.5 -8.5
CMBY                                IAML            13 29 09.4
      comp=N,153nm,0.5s
CMBY                                IAML            13 29 12.8
      comp=E,216nm,0.4s
KKM   Kota Kinabalu    17.14  70   eP      Pn       13 29 20.3 +1.2
      comp=E,33nm,0.8s
CM01  Chiang Mai Arr   17.99 357   eP      P        13 29 23.4 -3.9
CMAR  Chiang Mai Arr   18.02 357    P      P        13 29 26.9 -0.8
      comp=E,0.5nm,0.3s,baz=186,slow=10,SNR=22
CMAR                                ScP    ScP      13 37 13.8 -1.9
      baz=225,slow=3.2,SNR=6.4
LAMP  Lampang          18.06 359    P      Pn       13 29 36.4 +6.6
PALK  Pallekele        20.44 290    P      P        13 29 56.6 +2.7
      comp=E,17nm,0.7s,baz=115,slow=10,SNR=9.9
SILR  SILCHAR          25.27 345   eP      P        13 30 39.6 -0.7
KOHI  KOHIMA           25.86 348   eP      P        13 30 45.0 -0.8
KOHI                                IAmb   IAmb     13 30 47.5
SHL   Shillong         26.27 343   eP      P        13 30 49.7 +0.2
MOKO  MOKOCHONG        26.36 349   eP      P        13 30 50.1 -0.1
GIRL  Giralia          26.73 150    P      P        13 30 55.2 +1.7
      baz=27,SNR=3.4
TEZP  TEZPUR           27.02 346   eP      P        13 30 54.5 -1.5
BOK   Bokaro           27.03 331   eP      P        13 30 57.7 +1.5
BOK                                 IAmb   IAmb     13 31 01.3
      comp=Z,15nm,1.5s
LKP   Lekhapani        27.12 352   eP      P        13 30 56.8 -0.1
ZIRO  ZIRO             27.66 348   eP      P        13 31 01.6 -0.4
H08S2 Diego Garcia H   28.56 253    T      T        13 59 17.1
      baz=73,slow=74,SNR=30
H08S3 Diego Garcia H   28.56 253    T      T        13 59 17.8
      baz=73,slow=74,SNR=114
H08S1 Diego Carcia H   28.57 253    T      T        13 59 04.5
      baz=73,slow=74,SNR=26
ODAN  Odare            29.01 336   eP      P        13 31 15.1 +1.0
      comp=Z,27nm,0.6s
JIRN  Jiri             30.21 335   eP      P        13 31 25.9 +1.1
PKIN  Phulchoki        30.48 334   eP      P        13 31 28.5 +1.4
      comp=Z,10nm,0.5s
GUN   Gumba            30.57 335   eP      P        13 31 29.0 +1.1
      comp=Z,52nm,0.5s
CD2   Chengdu          30.60   6   eP      P        13 31 28.5 +0.7
CD2                                 pmax   pmax
      comp=Z,10.0nm,0.5s
CD2                                 pmax   pmax
      comp=Z,140nm,4.6s
DMN   Daman            30.64 333   eP      P        13 31 29.1 +0.7
KKN   Kakani           30.72 334   eP      P        13 31 29.8 +0.7
GKN   Gorkha           31.19 333   eP      P        13 31 34.0 +0.9
      comp=Z,10nm,0.4s
KOLN  Koldanda         31.48 331   eP      P        13 31 36.7 +1.0
      comp=Z,20nm,0.6s
BHPL  Bhopal           31.60 318   eP      P        13 31 38.1 +1.4
BHPL                                IAmb   IAmb     13 31 40.8
DANN  Dangsing         31.89 332   eP      P        13 31 40.8 +1.4
PYUN  Piuthan          32.05 331   eP      P        13 31 41.3 +0.6
      comp=Z,5.2nm,0.2s
MEEK  Meekatharra      32.27 148    P      P        13 31 42.8 +0.4
      baz=32,SNR=9.5
MTN   Manton Dam       33.54 114    P      P        13 31 52.5 -1.2
      baz=34,SNR=11
XAN   Xi'an            34.54  13    P      P        13 32 00.0 -2.0
XAN                                 pmax   pmax
      comp=Z,13nm,0.7s
KDU   Kakadu           34.72 113    P      P        13 32 03.6 -0.1
      baz=35,SNR=4.0
MUN   Mundaring        35.62 156    P      P        13 32 12.7 +1.4
      baz=36,SNR=6.3
KLBR  Kellerberrin     35.95 154    P      P        13 32 15.0 +0.9
      baz=36,SNR=4.8
WRKA  Warakurna        37.23 135    P      P        13 32 23.4 -1.8
      baz=37,SNR=18
H01W3 Cape Leeuwin H   37.46 161    T      T        14 11 34.1
      baz=335,slow=75,SNR=14
H01W2 Cape Leeuwin H   37.48 161    T      T        14 11 35.1
      baz=335,slow=75,SNR=7.8
H01W1 Cape Leeuwin H   37.48 161    T      T        14 11 35.0
      baz=335,slow=75,SNR=8.5
KMBL  Kambalda         37.76 149    P      P        13 32 29.7 +0.4
      baz=38,SNR=11
DHRM  DHARAMSHALA      38.82 327   eP      P        13 32 39.6 +1.1
DHRM                                IAmb   IAmb     13 32 44.3
      comp=Z,7.6nm,0.9s
GTA   Gaotai           38.87 360   eP      P        13 32 38.3 -0.4
GTA                                 pmax   pmax
      comp=Z,4.0nm,0.6s
WRA   Warramunga Arr   39.22 123    P      P        13 32 39.8 -2.0
      comp=Z,2.8nm,0.4s,baz=309,slow=8.9,SNR=71
WRA                                 PcP    PcP      13 34 47.4 -0.4
      comp=Z,1.3nm,0.4s,baz=316,slow=2.6,SNR=5.5
WRA                                 ScP    ScP      13 38 19.5 -1.9
      comp=Z,1.1nm,0.7s,baz=307,slow=3.1,SNR=8.2
WRAB  Tennant Creek    39.22 123    P      P        13 32 39.9 -1.9
      comp=Z,1.5nm,0.3s
WB2   Warramunga Arr   39.23 123   eP      P        13 32 39.6 -2.2
      comp=Z,30nm,1.8s
AS31  Alice Springs    40.66 128   eP      P        13 32 51.8 -1.9
      comp=Z,2.6nm,0.3s
ASAR  Alice Springs    40.66 128    P      P        13 32 51.5 -2.2
      comp=Z,3.4nm,0.4s,baz=294,slow=7.5,SNR=46
ASAR                                pP     pP       13 33 26.0 -2.6
      comp=Z,1.6nm,0.8s,baz=304,slow=8.4,SNR=2.3
ASAR                                PcP    PcP      13 34 52.1 -0.3
      comp=Z,1.4nm,0.6s,baz=308,slow=2.5,SNR=7.7
ASAR                                ScP    ScP      13 38 25.0 -2.0
      comp=Z,1.3nm,0.8s,baz=303,slow=4.0,SNR=6.0
AS01  Alice Springs    40.70 128   eP      P        13 32 51.2 -2.8
FORT  Forrest          40.85 142    P      P        13 32 54.8 -0.2
      baz=41,SNR=23
JNU   Nakatsue         43.65  39    P      P        13 33 17.1 -0.6
      comp=Z,6.1nm,0.7s,baz=206,slow=7.8,SNR=5.8
QIS   Mount Isa        43.96 121    P      P        13 33 18.7 -1.7
      baz=44,SNR=4.1
WMQ   Urumqi           44.65 347    P      P        13 33 26.0 +0.5
WMQ                                 pP     pP       13 34 02.8 +1.7
WMQ                                 pmax   pmax
      comp=Z,110nm,0.9s
WMQ                                 pmax   pmax
      comp=Z,290nm,4.1s
KSH   Kashi            44.74 333    P      P        13 33 26.8 +0.5
KSH                                ePcP    PcP      13 35 04.8 -1.1
KSH                                 pmax   pmax
      comp=Z,7.0nm,0.5s
KS15  Wonju Array Si   44.99  32   eP      P        13 33 27.9 -0.3
KSAR  Wonju Array Be   44.99  32    P      P        13 33 27.5 -0.7
KSAR                                pP     pP       13 34 05.2 +1.4
KSAR                                PcP    PcP      13 35 06.3 -0.3
KSRS  Korea Array      45.02  32    P      P        13 33 27.5 -0.9
      comp=Z,6.3nm,0.6s,baz=222,slow=8.3,SNR=39
KSRS                                pP     pP       13 34 05.2 +1.2
      comp=Z,3.8nm,0.8s,baz=224,slow=8.9,SNR=6.3
KSRS                                PcP    PcP      13 35 06.3 -0.4
      comp=Z,0.5nm,0.6s,baz=255,slow=2.5,SNR=5.2
KS01  Wonju Array Si   45.02  32   eP      P        13 33 26.9 -1.5
WSAR  Wadi Sarin       46.16 303    P      P        13 33 39.0 +1.4
      comp=Z,2.6nm,0.6s,baz=139,slow=8.0,SNR=5.2
MTSU  Mount Surprise   47.27 115    P      P        13 33 46.6 +0.2
      baz=47,SNR=6.7
BBOO  Buckleboo        47.35 138    P      P        13 33 45.3 -1.4
      baz=48,SNR=14
SONM  Songino Array    47.62   6    P      P        13 33 48.4 -0.4
      comp=Z,7.0nm,0.6s,baz=188,slow=9.7,SNR=34
SONM                                ScP    ScP      13 38 52.1 -2.9
      comp=Z,0.7nm,0.5s,baz=218,slow=4.1,SNR=3.6
SONA1 Songino Array    47.63   6   eP      P        13 33 48.4 -0.4
ULN   Ulaanbaatar      47.72   6   eP      P        13 33 49.0 -0.5
      comp=Z,4.4nm,0.8s
AAK   Ala-Archa        47.93 335    P      P        13 33 52.8 +1.6
      comp=Z,2.5nm,0.4s,baz=158,slow=7.6,SNR=5.5
MK01  Makanchi Array   48.76 344   eP      P        13 33 57.5 +0.1
MK31  Makanchi Array   48.78 344   eP      P        13 33 57.8 +0.3
MKAR  Makanchi Array   48.78 344    P      P        13 33 57.9 +0.4
      comp=Z,34nm,0.5s,baz=157,slow=8.6,SNR=248
MKAR                                pP     pP       13 34 34.1 +0.5
      comp=Z,3.2nm,0.6s,baz=160,slow=7.6,SNR=2.4
HTT   Hallett          49.66 136    P      P        13 34 03.7 -0.8
      baz=50,SNR=10
QLP   Quilpie          50.29 126    P      P        13 34 08.7 -0.5
      baz=50,SNR=7.3
MJAR  Matsushiro Arr   50.48  40    P      P        13 34 09.0 -1.5
      comp=Z,3.2nm,0.9s,baz=221,slow=8.4,SNR=9.5
STKA  Stephens Creek   50.72 133    P      P        13 34 11.2 -1.2
      comp=Z,9.5nm,0.5s,baz=308,slow=7.4,SNR=27
STKA  Stephens Creek   50.72 133    P      P        13 34 11.2 -1.2
      baz=51,SNR=18
STKA  Stephens Creek   50.72 133   eP      P        13 34 11.3 -1.2
      comp=Z,2.4nm,0.7s
USRK  Ussuriysk Ar.    52.10  29    P      P        13 34 21.3 -1.2
      comp=Z,8.2nm,0.6s,baz=228,slow=3.7
KURBB Kurchatov Arra   53.31 343    P      P        13 34 31.3 +0.1
      comp=Z,19nm,0.7s,baz=161,slow=7.1,SNR=148
KURBB                               ScP    ScP      13 39 16.8 -2.5
      comp=Z,0.6nm,0.8s,baz=159,slow=3.5,SNR=4.8
ARPS  Mount Arapiles   53.52 138    P      P        13 34 33.0  0.0
      baz=54,SNR=5.4
CMSA  Cobar Meteorol   53.61 131    P      P        13 34 32.9 -0.8
      baz=54,SNR=47
GEYT  Alibeck          53.67 319    pP     pP       13 35 09.9 -1.0
      comp=Z,1.4nm,0.7s,baz=162,slow=5.5,SNR=2.6
ZALV  Zalesovo Beam    54.87 349    P      P        13 34 42.0 -0.5
      comp=Z,14nm,0.5s,baz=172,slow=5.8,SNR=57
ZALV  Zalesovo Beam    54.87 349   eP      P        13 34 41.9 -0.5
OPO   Ambohidratompo   55.15 247    P      P        13 34 47.3 +2.0
      comp=Z,6.9nm,0.8s,baz=70,slow=5.8,SNR=8.7
EIDS  Eidsvold         55.55 121    P      P        13 34 47.3 -0.5
      baz=56,SNR=3.9
ARMA  Armidale         57.78 127    P      P        13 35 03.9 +0.3
      baz=58,SNR=5.3
BVAR  Borovoye Array   57.99 339    P      P        13 35 04.0 -0.5
      comp=Z,3.5nm,0.5s,baz=144,slow=9.6,SNR=20
BVAR                                pP     pP       13 35 40.5 -1.3
      comp=Z,2.6nm,0.7s,baz=128,slow=9.3,SNR=4.4
BRVK  Borovoye         58.06 339   eP      P        13 35 04.8 -0.2
      comp=Z,5.5nm,0.8s
ABKAR Akbulak array    59.60 331   eP      P        13 35 15.6 -0.1
AKTO  Aktyubinsk       61.31 331    P      P        13 35 27.6 +0.3
      comp=Z,0.7nm,0.5s,baz=138,slow=11,SNR=2.5
```

AKTO				pP	pP	13 36 03.9	-1.2
	comp=Z,1.1nm,0.5s,baz=124,slow=7.2,SNR=2.8						
ARU	Arti	65.07	336	P	P	13 35 51.2	-0.7
	comp=Z,1.7nm,0.4s,baz=115,slow=1.3,SNR=5.0						
KBZ	Khabaz	66.55	318	P	P	13 36 02.1	+0.5
	comp=Z,1.1nm,0.5s,baz=134,slow=7.6,SNR=4.7						
MMAI	Mount Meron Ar	68.67	305	P	P	13 36 16.7	+1.4
	comp=Z,1.9nm,0.5s,baz=96,slow=8.7,SNR=5.2						
BRTR	Keskin Array B	71.75	312	P	P	13 36 33.3	-0.7
	comp=Z,4.3nm,0.6s,baz=134,slow=6.8,SNR=24						
BRTR				pP	pP	13 37 10.7	-2.1
	comp=Z,0.9nm,0.6s,baz=136,slow=7.0,SNR=2.6						
KLMR	Klimovskoe	75.73	334	*e*P	P	13 36 56.0	-0.5
KLMR				AMP		13 37 02.9	
	comp=Z,5.0nm,1.0s						
BOSA	Boshof	76.80	241	P	P	13 37 04.7	+1.3
	comp=Z,3.7nm,0.5s,baz=79,slow=6.4,SNR=3.2						
AKASG	Malin Array Be	77.64	322	P	P	13 37 06.7	-0.7
	comp=Z,0.6nm,0.5s,baz=81,slow=5.9,SNR=4.4						
IDI	Anoyia	77.66	306	P	P	13 37 08.5	+0.5
	comp=Z,9.1nm,0.6s,baz=118,slow=3.4,SNR=9.2						
MLR	Muntele Rosu	78.61	316	P	P	13 37 13.8	+0.8
	comp=Z,5.1nm,0.8s,baz=63,slow=2.3,SNR=5.6						
BUR04	Bucovina Ar. S	79.52	318	*e*P	P	13 37 17.9	0.0
SYO	Syowa Base	80.08	199	⇑*e*P	P	13 37 21.6	+1.3
FIA1	FINESS Array S	82.04	332	*e*P	P	13 37 30.8	-0.1
FINES	FINESS Array B	82.05	332	P	P	13 37 30.8	0.0
	comp=Z,2.3nm,0.4s,baz=109,slow=6.2,SNR=30						
TSUM	Tsumeb	82.95	251	LR	LR	14 09 42.7	
	comp=Z,26nm,20.5s,baz=352,slow=32						
VYHS	Vyhne	83.87	319	*e*P	P	13 37 41.6	+1.0
ARCES	ARCESS Array B	84.28	340	P	P	13 37 42.3	+0.1
	comp=Z,0.6nm,0.4s,baz=98,slow=8.7,SNR=12						
GEA0	GERESS Array S	87.29	319	*e*P	P	13 37 57.3	-0.3
GERES	GERESS Array B	87.29	319	P	P	13 37 58.1	+0.5
	comp=Z,0.9nm,0.6s,baz=87,slow=2.9,SNR=7.5						
HFS	Hagfors	87.85	330	P	P	13 38 00.5	+0.6
	comp=Z,1.3nm,0.5s,baz=111,slow=3.3,SNR=7.4						
SPITS	Spitsbergen Ar	88.35	348	P	P	13 38 01.9	0.0
	comp=Z,2.1nm,0.5s,baz=50,slow=9.5,SNR=9.9						
NVAR	Mina Array Bea	127.77	38	PKP	PKPdf	13 44 16.3	+0.3
	comp=Z,0.3nm,0.7s,baz=209,slow=1.5,SNR=4.2						
TXAR	Lajitas Array	142.82	35	PKhKP	PKPpre	13 44 40.2	
	comp=Z,1.0nm,0.7s,baz=312,slow=1.3,SNR=13						
TXAR				SKPbc	SKPbc	13 48 06.0	-1.4
	comp=Z,1.1nm,0.7s,baz=106,slow=0.2,SNR=8.7						
CPUP	Villa Florida	146.18	218	PKPbc	PKPbc	13 44 51.5	+0.4
	comp=Z,3.0nm,0.7s,baz=160,slow=4.3,SNR=7.3						

MEX 27 13:41:03.8±0.5, 16.°29N×98.°29W, h5km, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.18	58	*i* P	Pg	13 41 07.2	-0.3
PNIG				*e*S	Sg	13 41 09.9	-0.1
TLIG	Tlapa	1.29	348	*e*P	Pg	13 41 25.0	-3.5
TLIG				*i* S	Sg	13 41 40.4	-4.9

ISCJB ***27*** *13:47:05.0±0.4, 39.°20N±0.°03×29.°45E±0.°05, h10km±4km, Error ellipse: s-maj=6.9km s-min=3.8km az=34.1*

ISK ***27*** *13:47:04.2, 39.°17N×29.°51E, h5km, ML1.8/6*

CSEM ***27*** *13:47:04.9±0.1, 39.°18N×29.°48E, h10km, ML2.5, Error ellipse: s-maj=4.1km s-min=2.0km az=130.0*

DDA ***27*** *13:47:05.1, 39.°21N×29.°44E, h7km, Ml2.5*

ISC 27 13:47:05.2±0.9, 39.°18N±0.°03×29.°48E±0.°03, h15km±5km, n28, σ0.ˢ73/42, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GDZ	Gediz	0.09	177	*i* P	Pg	13 47 08.7	0.0
GDZ				*i* S	Sg	13 47 10.7	-0.2
GDZ	Gediz	0.09	177	P	Pg	13 47 08.7	0.0
GDZ				S	Sg	13 47 10.7	-0.2
SHAP	Saphane-Kutahy	0.25	231	PG	Pg	13 47 10.4	-0.4
SHAP				SG	Sg	13 47 13.9	-0.7
SHAP	Saphane-Kutahy	0.25	231	*e*Pg	Pg	13 47 10.4	-0.4
SHAP				*e*Sg	Sg	13 47 13.9	-0.7
TVSB	Tavsanli	0.27	358	PG	Pg	13 47 10.8	-0.3
TVSB				SG	Sg	13 47 14.3	-0.8
TVSB	Tavsanli	0.27	358	*e*Pg	Pg	13 47 10.8	-0.3
TVSB				*e*Sg	Sg	13 47 14.3	-0.8
SIMA	Simav-Kutahya	0.40	256	PG	Pg	13 47 12.9	-0.4
SIMA	Simav-Kutahya	0.40	256	*e*Pg	Pg	13 47 12.9	-0.4
KUTH	Kutahya	0.47	63	PG	Pg	13 47 13.5	-1.3
KUTH	Kutahya	0.47	63	*e*Pg	Pg	13 47 13.5	-1.3
DEMI	Demirci	0.61	257	*i* P	Pg	13 47 16.8	-0.4
DEMI				*i* S	Sg	13 47 24.7	-0.6
DEMI	Demirci	0.61	257	P	Pg	13 47 16.8	-0.4
DEMI				S	Sg	13 47 24.7	-0.6
KHAL	Karahalli	0.81	179	*i* P	Pb	13 47 21.2	+0.2
KHAL				*i* S	Sg	13 47 31.4	-0.3
KHAL	Karahalli	0.81	179	P	Pb	13 47 21.2	+0.2
KHAL				S	Sg	13 47 31.4	-0.3
KULA	Kula-Manisa	0.92	224	PG	Pg	13 47 22.3	-0.8
KULA	Kula-Manisa	0.92	224	*e*Pg	Pg	13 47 22.3	-0.8
MANT	Manisa	0.99	226	*i* P	Pg	13 47 23.8	-0.7
MANT				*i* S	Sg	13 47 36.4	-1.3
MANT	Manisa	0.99	226	P	Pg	13 47 23.8	-0.7
MANT				S	Sg	13 47 36.3	-1.3
BORA	Eskisehir	1.03	47	PG	Pg	13 47 24.1	-1.1
BORA	Eskisehir	1.03	47	*i* P	Pg	13 47 24.6	-0.6
BORA				*i* S	Sb	13 47 39.0	+0.9
BORA	Eskisehir	1.03	47	*e*Pg	Pg	13 47 24.1	-1.1
BORA	Eskisehir	1.03	47	P	Pg	13 47 24.6	-0.6
BORA				S	Sb	13 47 39.0	+0.9
CAVI	Cavuskoy	1.06	15	PG	Pg	13 47 25.1	-0.6
CAVI	Cavuskoy	1.06	15	*e*Pg	Pg	13 47 25.1	-0.6
YLV	Yalova	1.39	357	PN	Pb	13 47 31.1	+0.2
YLV	Yalova	1.39	357	*e*Pn	Pb	13 47 31.1	+0.2
GULT	Gulveren	1.48	32	PN	Pn	13 47 32.3	+0.9
GULT	Gulveren	1.48	32	*e*Pn	Pn	13 47 32.3	+0.9

WEL 27 13:53:58.3, 38°S±11°×18°0W±°, h33km, ML3.5/21, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.46	271	P	Pn	13 54 22.7	+0.3
WMGZ				S	Sn	13 54 40.6	+0.2
MXZ	Matakaoa Point	1.58	280	P	Pn	13 54 23.9	0.0
MXZ				S	Sn	13 54 42.4	-0.8
PUZ	Puketiti	1.60	262	P	Pn	13 54 25.1	+0.8
PUZ				S	Sn	13 54 44.6	+0.9
PKGZ	Pakihiroa	1.73	269	P	Pn	13 54 26.3	+0.2
CNGZ	Carnagh Statio	1.73	248	P	Pb	13 54 28.0	-1.4
TWGZ	Tauwhareparae	1.83	259	P	Pn	13 54 28.7	+1.2
TWGZ				S	Sn	13 54 51.2	+1.8
HAZ	Te Kaha	1.96	272	P	Pn	13 54 30.0	+0.7
TKGZ	Te Karaka	1.98	252	P	Pn	13 54 31.2	+1.7
TKGZ				S	Sn	13 54 55.3	+2.1
RUGZ	Raukumara Rang	2.04	266	P	Pn	13 54 31.0	+0.5
RIGZ	Rimuhau	2.14	246	P	Pn	13 54 33.0	+1.3
RIGZ				S	Sn	13 54 59.0	+1.9
PRGZ	Paritu Road	2.15	240	P	Pn	13 54 33.5	+1.7
PRGZ				S	Sb	13 55 01.1	-1.6
MWZ	Matawai	2.21	257	P	Pn	13 54 33.4	+0.8
MHGZ	Mahia Peninsul	2.25	234	P	Pn	13 54 35.2	+2.0
RAGZ	Rawiri	2.33	253	P	Pn	13 54 35.0	+0.7
KNZ	Kokohu	2.34	240	P	Pn	13 54 36.0	+1.7
SNGZ	Shannon Statio	2.47	247	P	Pn	13 54 37.0	+0.7
URZ	Urewera	2.52	260	P	Pn	13 54 38.0	+1.2
RAHZ	Arahi	2.71	246	P	Pn	13 54 41.3	+1.8
MUGZ	Murupara	2.82	256	P	Pn	13 54 42.5	+1.5
MTHZ	Maungataniwha	2.86	249	P	Pn	13 54 43.3	+1.7
ARHZ	Aropaoanui	2.91	240	P	Pn	13 54 44.9	+2.5
NMHZ	Naumai	2.98	245	P	Pn	13 54 44.8	+1.6
TARZ	Mount Tarawera	2.99	262	P	Pn	13 54 44.8	+1.4
MRHZ	Matea Rd	3.17	251	P	Pn	13 54 48.0	+2.1
MCHZ	McNeill Hill	3.20	239	P	Pn	13 54 48.1	+1.7
BKZ	Black Stump Fm	3.23	245	P	Pn	13 54 48.3	+1.6
KAHZ	Kahuranaki	3.27	233	P	Pn	13 54 48.8	+1.5
KWHZ	Kaweka Forest	3.38	241	P	Pn	13 54 50.5	+1.6
PXZ	Pawanui	3.42	230	P	Pn	13 54 49.9	+0.7
KRHZ	Kereru	3.52	239	P	Pn	13 54 52.0	+1.3
BHHZ	Black Hill Sta	3.66	242	P	Pn	13 54 54.2	+1.5
PRHZ	Porangahau	3.70	229	P	Pn	13 54 53.7	+0.6
PNHZ	Pukenui	3.77	236	P	Pn	13 54 55.6	+1.4
TSZ	Takapari Road	4.00	235	P	Pn	13 54 58.0	+0.7
DVHZ	Dannevirke	4.01	231	P	Pn	13 54 57.9	+0.6
MKAZ	Moumakai	4.12	279	P	Pn	13 54 59.0	+0.1
POWZ	Post Office Ro	4.31	233	P	Pn	13 55 02.7	+1.2
TIWZ	Tintock	4.47	228	P	Pn	13 55 03.9	+0.2
MRZ	Mangatainoka R	4.58	231	P	Pn	13 55 05.5	+0.3
CTZ	Chatham Island	6.33	159	P	Pn	13 55 35.3	+6.2

ISCJB ***27*** *14:01:25.6±0.2, 79.°21N±0.°04×124.°0E±0.°1, h10km, mb4.2/73, MS3.3/42, Error ellipse: s-maj=5.3km s-min=3.6km az=1.6*

IDC ***27*** *14:01:26.0±0.6, 79.°21N×124.°16E, h0km, mb3.9/21, mb1 4.1/23, mb1mx3.9/75, mbtmp3.9/23, ML3.4/2, MS3.4/43, Ms1 3.4/43, ms1mx3.2/80, Error ellipse: s-maj=15.7km s-min=13.5km az=4.0*

NEIC ***27*** *14:01:27.4±0.1, 79.°19N×123.°95E, h10km, mb4.4/52, Error ellipse: s-maj=4.0km s-min=2.7km az=183.0*

ISC 27 14:01:27.6±0.4, 79.°12N±0.°06×123.°98E±0.°07, h10km, n163, σ1.ˢ22/137, mb4.4/73, MS3.4/42, 1C, East of Severnaya Zemlya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIXI	Tiksi	7.61	168	Pn	Pn	14 03 16.1	-2.1
	0.3nm,0.3s,baz=36,slow=8.7,SNR=2.6						
TIXI				Sn	Sn	14 04 35.7	-8.6
	baz=90,slow=17,SNR=2.8						
TIXI	Tiksi	7.61	168	*e*Pn	Pn	14 03 16.6	-1.6
TIXI				*e*Sn	Sn	14 04 40.5	-3.8
YAK	Yakutsk	17.26	171	LR	LR	14 13 38.9	
	comp=Z,103nm,19.0s,baz=40,slow=42						
SEY	Seymchan	18.29	136	P	P	14 05 41.4	+0.4
	0.1nm,0.3s,baz=352,slow=15,SNR=8.3						
KBS	Kingsbay	18.29	325	*e*Pn	Pn	14 05 38.1	-2.7
	13nm,1.2s						
SPA0	Spitsbergen Ar	18.41	322	*e*P	P	14 05 46.6	+4.3
SPITS	Spitsbergen Ar	18.41	322	P	Pn	14 05 40.9	-1.5
	baz=52,slow=12,SNR=2.1						
SPITS				LR	LR	14 12 34.8	
	comp=Z,32nm,18.6s,baz=15,slow=36						
MA2	Magadan	21.34	141	P	P	14 06 19.0	+4.7
	7.4nm,0.7s,baz=0.0,slow=15,SNR=3.0						
MA2				LR	LR	14 15 27.6	
	comp=Z,42nm,20.4s,baz=346,slow=39						
MA2	Magadan	21.34	141	*e*P	P	14 06 19.4	+5.2
	49nm,1.5s						
RDOG	Red Dog Mine	21.48	79	*e*P	P	14 06 16.1	+0.3
	12nm,0.7s						
TOLK	Toolik Lake Re	23.39	67	*e*P	P	14 06 37.1	+1.1
	6.6nm,0.7s						
KEV	Kevo	24.17	302	*e*P	P	14 06 42.3	-1.0
	81nm,2.0s						
COLD	Coldfoot	24.53	69	*e*P	P	14 06 45.9	-0.8
	25nm,1.7s						
ARA0	ARCESS Array S	24.60	303	*e*P	P	14 06 46.8	-0.5
ARCES	ARCESS Array B	24.60	303	P	P	14 06 46.8	-0.5
	2.8nm,0.9s,baz=36,slow=11,SNR=6.2						
RES	Resolute Bay	24.89	23	LR	LR	14 16 35.7	
	comp=Z,49nm,18.6s,baz=330,slow=37						
FYU	Fort Yukon	26.00	66	*e*P	P	14 07 00.8	+0.8
	93nm,2.0s						
INK	Inuvik	26.35	55	LR	LR	14 18 50.6	
	comp=Z,36nm,20.5s,baz=264,slow=40						
INK	Inuvik	26.35	55	*e*P	P	14 07 01.5	-1.6
	3.7nm,0.8s						
MLY	Manley	26.42	72	*e*P	P	14 07 03.8	-0.1
	9.3nm,1.1s						
MDM	Murphy Dome	26.93	70	*e*P	P	14 07 09.1	+0.6
	6.1nm,1.1s						
COLA	College	27.08	70	*e*P	P	14 07 09.8	+0.1
	4.1nm,0.8s						
BPAW	Bear Paw Mtn.	27.22	73	*e*P	P	14 07 10.7	-0.3
	13nm,1.7s						
CCB	Clear Creek Bu	27.30	70	*e*P	P	14 07 11.4	-0.3
	8.7nm,1.5s						
IL1	Eielson Array	27.34	69	*e*P	P	14 07 11.7	-0.4
ILAR	Eielson Array	27.34	69	P	P	14 07 12.0	-0.1
	1.0nm,0.9s,baz=334,slow=9.3,SNR=14						
ILAR				LR	LR	14 21 35.5	
	comp=Z,53nm,18.3s,baz=328,slow=44						
ILB	Eielson Array	27.34	69	*e*P	P	14 07 11.7	-0.4
WRH	Wood River Hil	27.40	70	*e*P	P	14 07 11.9	-0.7
	5.0nm,1.0s						
CAST	Castle Rocks	27.64	75	*e*P	P	14 07 13.9	-1.0
	4.7nm,1.0s						
KTH	Kantishna Hill	27.73	73	*e*P	P	14 07 15.3	-0.3
	12nm,1.2s						
MCK	McKinley	27.93	72	*e*P	P	14 07 17.1	-0.3
	9.3nm,1.4s						
TRF	Thorofare Moun	27.94	73	*e*P	P	14 07 17.9	+0.2
	11nm,1.4s						
SUMG	Summit	28.17	349	*e*P	P	14 07 18.3	-1.6
	25nm,1.3s						
EGAK	Eagle	28.34	64	*e*P	P	14 07 21.0	+0.1
	7.0nm,1.1s						
TLY	Talaya	28.45	207	LR	LR	14 19 21.8	
	comp=Z,62nm,20.3s,baz=8.5,slow=38						
ZALV	Zalesovo Beam	28.48	232	LR	LR	14 20 03.7	
	comp=Z,118nm,19.3s,baz=66,slow=39						
PETK	Petropavlovsk-	28.53	136	LR	LR	14 19 16.3	
	comp=Z,54nm,18.8s,baz=17,slow=38						
SCRK	Sand Creek	28.59	67	*e*P	P	14 07 23.4	+0.1
	5.2nm,1.3s						
RIDG	Independ'e Rid	28.65	68	*e*P	P	14 07 24.1	+0.3
	17nm,1.8s						
PAX	Paxson	29.25	69	*e*P	P	14 07 28.5	-0.7
	6.5nm,0.8s						
SCO	Scoresbysund	29.34	337	*e*P	P	14 07 28.7	-1.1
	0.7nm,0.9s						
GHO	Glory Hole Cre	29.74	73	*e*P	P	14 07 32.1	-1.4
	4.1nm,0.9s						
SML	Sawmill	29.82	73	*e*P	P	14 07 33.0	-1.1
	6.0nm,1.0s						
HARP	HAARP	29.83	69	*e*P	P	14 07 33.9	-0.4
	5.8nm,0.7s						
SCM	Sheep Creek Mo	29.97	72	*e*P	P	14 07 34.0	-1.6
	9.3nm,1.3s						
HIA	Hailar	30.01	186	*e*P	P	14 07 36.1	+0.2
	7.3nm,0.4s						
KLR	Kul'dur	30.14	170	LR	LR	14 20 41.5	
	comp=Z,5.6nm,21.6s,baz=356,slow=38						
KLU	Klutina	30.54	71	*e*P	P	14 07 39.7	-0.9
	3.4nm,0.6s						
BMRM	Bremner River	31.27	70	*e*P	P	14 07 48.3	+1.3
	4.7nm,1.0s						
BRVK	Borovoye	31.71	248	*e*P	P	14 07 50.4	-0.5
	5.5nm,1.4s						
BVAR	Borovoye Array	31.73	248	P	P	14 07 51.9	+0.9
	0.9nm,0.7s,baz=15,slow=6.0,SNR=7.4						
BVAR				LR	LR	14 23 07.3	
	comp=Z,136nm,20.5s,baz=1.0,slow=41						
FIA0	FINESS Array S	31.96	296	*e*P	P	14 07 52.3	-0.6
FINES	FINESS Array B	31.96	296	P	P	14 07 52.3	-0.6
	1.0nm,0.8s,baz=15,slow=12,SNR=3.4						
FINES				LR	LR	14 24 17.3	
	comp=Z,76nm,18.1s,baz=22,slow=43						
SONA1	Songino Array	32.04	203	*e*P	P	14 07 55.1	+1.1
SONA0	Songino Array	32.05	203	*e*P	P	14 07 55.4	+1.3
SONM	Songino Array	32.05	203	P	P	14 07 55.4	+1.3
	0.8nm,0.8s,baz=6.7,slow=8.5,SNR=6.0						
SONM				LR	LR	14 21 17.7	
	comp=Z,36nm,19.1s,baz=12,slow=37						
KURK	Kurchatov	32.57	237	*e*P	P	14 07 59.6	+1.2
KURBB	Kurchatov Arra	32.67	237	P	P	14 07 59.6	+0.3
	2.2nm,0.2s,baz=26,slow=7.6,SNR=4.1						
KDAK	Kodiak Island	32.79	79	LR	LR	14 22 40.9	
	comp=Z,104nm,18.8s,baz=327,slow=39						
OHAK	Old Harbor	33.19	80	*e*P	P	14 08 01.8	-1.9
	32nm,1.5s						
WHY	Whitehorse	33.24	62	*e*P	P	14 08 04.4	+0.1
	9.5nm,1.4s						
SFJD	Kangerlussuaq	34.06	356	LR	LR	14 21 39.3	
	comp=Z,19nm,18.3s,baz=358,slow=36						
NC302	NORSAR Array S	34.51	308	*e*P	P	14 08 14.4	-0.8
NC205	NORSAR Array S	34.52	308	*e*P	P	14 08 15.3	-0.1
NC201	NORSAR Array S	34.53	308	*e*P	P	14 08 14.4	-1.0
NC303	NORSAR Array S	34.53	308	*e*P	P	14 08 14.8	-0.5
NC200	NORSAR Array S	34.55	308	*e*P	P	14 08 15.1	-0.6
YKA	Yellowknife Ar	34.56	44	P	P	14 08 15.0	-0.6
	1.8nm,0.9s,baz=342,slow=7.8,SNR=3.6						
NC202	NORSAR Array S	34.57	308	*e*P	P	14 08 14.1	-1.9
NC204	NORSAR Array S	34.57	309	*e*P	P	14 08 14.2	-1.6
NC405	NORSAR Array S	34.58	308	*e*P	P	14 08 14.6	-1.2
NC203	NORSAR Array S	34.59	308	*e*P	P	14 08 14.8	-1.1
NC401	NORSAR Array S	34.60	308	*e*P	P	14 08 15.8	-0.3
NC404	NORSAR Array S	34.61	308	*e*P	P	14 08 15.1	-0.9
NC400	NORSAR Array S	34.62	308	*e*P	P	14 08 14.9	-1.2
NC402	NORSAR Array S	34.64	308	*e*P	P	14 08 14.9	-1.5
NC403	NORSAR Array S	34.65	308	*e*P	P	14 08 16.1	-0.2
MDJ	Mudanjiang	34.69	173	*e*P	P	14 08 16.5	-0.4
	7.7nm,1.1s						
NB205	NORSAR Array S	34.70	308	*e*P	P	14 08 15.5	-1.4
NB201	NORSAR Array S	34.71	308	*e*P	P	14 08 15.2	-1.8
NB204	NORSAR Array S	34.73	308	*e*P	P	14 08 17.0	-0.2
NB2	NORSAR Subarra	34.73	308	P	P	14 08 16.5	-0.6
	comp=Z,1.6nm,0.6s,baz=18,slow=8.6						
NB200	NORSAR Array S	34.73	308	*e*P	P	14 08 17.0	-0.2
NOA	NORSAR Array B	34.73	308	P	P	14 08 16.8	-0.4
	comp=Z,2.2nm,0.7s,baz=18,slow=8.6,SNR=5.9						
NOA				LR	LR	14 24 13.2	
	comp=Z,26nm,20.1s,baz=15,slow=39						
NB202	NORSAR Array S	34.75	308	*e*P	P	14 08 16.9	-0.4
NB203	NORSAR Array S	34.76	308	*e*P	P	14 08 17.3	-0.2
NBO02	NORSAR Array S	34.77	308	*e*P	P	14 08 16.8	-0.7
NBO03	NORSAR Array S	34.81	308	*e*P	P	14 08 17.0	-0.8
NBO04	NORSAR Array S	34.82	308	*e*P	P	14 08 16.3	-1.6
NC601	NORSAR Array S	34.93	308	*e*P	P	14 08 18.3	-0.5
NC602	NORSAR Array S	34.97	308	*e*P	P	14 08 18.7	-0.5
NC600	NORSAR Array S	34.97	308	*e*P	P	14 08 18.9	-0.2
NAO02	NORSAR Array S	35.00	308	*e*P	P	14 08 19.7	+0.3
NC604	NORSAR Array s	35.00	308	*e*P	P	14 08 19.1	-0.4
NC603	NORSAR Array S	35.01	308	*e*P	P	14 08 19.1	-0.4
HFS	Hagfors	35.22	306	P	P	14 08 20.1	-1.2
	comp=Z,0.9nm,0.5s,baz=26,slow=7.0,SNR=3.9						
HFS				LR	LR	14 23 26.9	
	comp=Z,38nm,18.1s,baz=24,slow=38						
JIS	Juneau Island	35.58	63	*e*P	P	14 08 24.2	-0.2
	comp=Z,7.7nm,0.9s						
MK32	Makanchi Array	35.82	231	*e*P	P	14 08 26.5	-0.2
MKAR	Makanchi Array	35.82	231	P	P	14 08 26.5	-0.2
	comp=Z,1.1nm,0.8s,baz=350,slow=6.6,SNR=5.9						
MKAR				LR	LR	14 24 39.4	
	comp=Z,113nm,19.3s,baz=9.0,slow=39						
ASAJ	Asahikawa	35.83	157	LR	LR	14 25 14.7	
	comp=Z,50nm,18.3s,baz=318,slow=40						
MK01	Makanchi Array	35.84	231	*e*P	P	14 08 27.1	+0.3
MAKZ	Makanchi	35.85	232	*e*P	P	14 08 26.7	-0.2
	comp=Z,4.4nm,0.6s						
KONO	Kongsberg	36.30	309	*e*P	P	14 08 29.7	-0.9
	comp=Z,16nm,1.4s						
AKTO	Aktyubinsk	36.46	259	LR	LR	14 24 42.3	
	comp=Z,27nm,19.9s,baz=22,slow=38						
ABKAR	Akbulak array	37.23	257	*e*P	P	14 08 38.7	+0.1
BJT	Baijiatuau	39.34	189	*e*P	P	14 08 57.5	+1.1
	comp=Z,33nm,1.7s						
NRS	Narsarsuaq	39.82	352	*e*P	P	14 09 00.4	+0.2
	comp=Z,178nm,1.6s						
AAK	Ala-Archa	41.09	239	LR	LR	14 28 18.8	
	comp=Z,143nm,18.6s,baz=358,slow=39						
AAK	Ala-Archa	41.09	239	*e*P	P	14 09 11.3	+0.2
	comp=Z,4.1nm,1.0s						
KK31	Karatay Array	41.30	243	*e*P	P	14 09 13.2	+0.6
KKAR	Karatay Array	41.30	243	*e*P	P	14 09 13.2	+0.6
AKASG	Malin Array Be	41.61	287	P	P	14 09 14.7	-0.4
	comp=Z,0.3nm,0.2s,baz=20,slow=8.5,SNR=4.7						
AKASG				LR	LR	14 28 13.4	
	comp=Z,74nm,21.3s,baz=40,slow=39						
KSRS	Korea Array	41.81	175	P	P	14 09 17.1	+0.3
	comp=Z,0.5nm,0.8s,baz=357,slow=8.5,SNR=4.1						
KSRS				LR	LR	14 26 48.1	
	comp=Z,32nm,18.9s,baz=348,slow=36						
KSAR	Wonju Array Be	41.82	175	P	P	14 09 17.1	+0.2
EKA	Eskdalemuir Ar	42.26	317	P	P	14 09 19.7	-0.6
	comp=Z,2.1nm,0.7s,baz=9.6,slow=8.9,SNR=5.6						
MAJO	Matsushiro	43.08	163	*e*P	P	14 09 27.6	+0.3
MJAR	Matsushiro Arr	43.08	163	P	P	14 09 27.6	+0.3
	comp=Z,0.8nm,0.7s,baz=348,slow=10,SNR=4.2						
CLL	Collm	43.82	302	⇑*i*P	P	14 09 33.1	+0.1
	comp=Z,7.0nm,0.8s						
CLL				LmV		14 30 00.0	
	comp=Z,100nm,21.1s						
CLL	Collm	43.82	302	*e*P	P	14 09 32.8	-0.2
	comp=Z,6.0nm,0.8s						
BRG	Berggiesshubel	44.08	301	*e*(P)	P	14 09 35.3	+0.1
	comp=Z,3.5nm,1.1s						
INU	Inuyama	44.21	165	*e*P	P	14 09 36.2	-0.1
	comp=Z,23nm,1.7s						
MORC	Moravsky Berou	44.55	298	*e*P	P	14 09 38.9	-0.1
	comp=Z,2.8nm,1.0s						
VRAC	Vranov	45.16	298	LR	LR	14 33 03.0	
	comp=Z,88nm,18.3s,baz=23,slow=42						
BUR08	Bucovina Ar. S	45.28	290	*e*P	P	14 09 44.9	+0.1
BUR04	Bucovina Ar. S	45.30	290	*e*P	P	14 09 45.4	+0.4
KVAR	Kislovodsk Arr	45.58	272	LR	LR	14 30 45.2	
	comp=Z,48nm,20.6s,slow=39						
KIV	Kislovodsk	45.58	272	*e*P	P	14 09 48.8	+1.5
	comp=Z,11nm,0.9s						
KBZ	Khabaz	45.76	272	P	P	14 09 50.5	+1.9
	comp=Z,4.4nm,0.8s,baz=358,slow=5.6,SNR=9.9						
KBZ				LR	LR	14 30 40.6	
	comp=Z,58nm,21.9s,baz=5.0,slow=38						
KHC	Kasperske Hory	45.83	301	*e*P	P	14 09 49.7	+0.6
	comp=Z,1.3nm,0.9s						
GEC2	GERESS Array S	46.09	301	*e*P	P	14 09 51.2	0.0
	comp=Z,1.9nm,0.7s						
GERES	GERESS Array B	46.09	301	P	P	14 09 51.8	+0.5
	comp=Z,1.1nm,0.7s,baz=32,slow=7.8,SNR=9.2						
GERES				LR	LR	14 33 08.9	
	comp=Z,74nm,18.5s,baz=30,slow=41						
GEA0	GERESS Array S	46.10	301	*e*P	P	14 09 51.4	+0.1
MLR	Muntele Rosu	47.22	288	LR	LR	14 31 52.0	
	comp=Z,77nm,21.3s,baz=10.0,slow=39						
GEYT	Alibeck	48.51	254	LR	LR	14 34 46.3	
	comp=Z,66nm,18.4s,baz=305,slow=41						
DAVOX	Davos/Dischmat	48.71	303	LR	LR	14 32 06.8	
	comp=Z,40nm,20.1s,baz=74,slow=38						
LON	Longmire	48.76	57	*e*P	P	14 10 12.9	+1.0
	comp=Z,3.2nm,0.8s						
ULM	Lac du Bonnet	48.77	33	LR	LR	14 29 40.7	
	comp=Z,30nm,21.9s,baz=271,slow=35						
GNI	Garni	48.87	269	LR	LR	14 32 40.7	
	comp=Z,28nm,21.1s,baz=38,slow=38						
TUE	Stuetta	49.09	304	*e*P	P	14 10 15.1	+0.3
	comp=Z,4.8nm,0.8s						
KBL	Kabul	49.89	242	*e*P	P	14 10 20.6	-0.3
	comp=Z,4.1nm,0.9s						
NIL	Nilore	50.07	237	*e*P	P	14 10 22.6	+0.5
	comp=Z,20nm,1.6s						
BR101	Keskin Array S	51.38	279	*e*P	P	14 10 33.1	+1.1
BRTR	Keskin Array B	51.38	279	P	P	14 10 33.1	+1.1
	comp=Z,1.4nm,0.8s,baz=16,slow=6.4,SNR=6.5						
BRTR				LR	LR	14 37 22.9	
	comp=Z,39nm,18.4s,baz=0.0,slow=42						
YBH	Yreka Blue Hor	53.50	59	LR	LR	14 36 57.7	
	comp=Z,26nm,18.8s,baz=335,slow=40						
PDAR	Pinedale Array	54.48	47	P	P	14 10 57.5	+2.5
	comp=Z,0.5nm,0.9s,baz=57,slow=5.5,SNR=4.0						
PDAR				LR	LR	14 36 16.0	
	comp=Z,15nm,19.6s,baz=340,slow=38						
IDI	Anoyia	57.31	286	LR	LR	14 40 50.2	
	comp=Z,10nm,18.4s,baz=43,slow=41						
NV01	Mina Array Sit	57.43	56	*e*P	P	14 11 16.6	+0.4
NVAR	Mina Array Bea	57.43	56	P	P	14 11 17.2	+1.0
	comp=Z,0.4nm,0.7s,baz=0.0,slow=6.3,SNR=4.0						
NVAR				LR	LR	14 38 36.5	
	comp=Z,7.2nm,18.6s,baz=110,slow=39						
MMAI	Mount Meron Ar	57.56	276	LR	LR	14 40 57.6	
	comp=Z,27nm,18.1s,baz=315,slow=41						
KEST	Kesra	59.58	301	P	P	14 11 31.8	+0.9
	comp=Z,3.1nm,0.7s,baz=333,slow=5.1,SNR=6.5						
KEST	Kesra	59.58	301	*e*P	P	14 11 30.6	-0.3
	comp=Z,3.9nm,0.8s						
ANMO	Albuquerque	62.59	46	LR	LR	14 39 14.0	
	comp=Z,33nm,20.6s,baz=16,slow=36						
WSAR	Wadi Sarin	62.73	250	LR	LR	14 42 20.1	
	comp=Z,54nm,18.0s,baz=13,slow=39						
WMOK	Wichita Mounta	63.77	39	*e*P	P	14 11 57.5	-1.6
	comp=Z,4.2nm,1.1s						
MDT	Midelt	64.55	313	LR	LR	14 46 43.3	
	comp=Z,24nm,18.0s,baz=32,slow=42						
TX31	Lajitas Ar. Si	68.49	44	*e*P	P	14 12 28.5	-1.1
LTX	Lajitas	68.49	44	*e*P	P	14 12 28.1	-1.5
TXAR	Lajitas Array	68.49	44	P	P	14 12 28.1	-1.5
	comp=Z,2.0nm,0.8s,baz=2.9,slow=4.8,SNR=16						
TXAR				LR	LR	14 43 33.7	
	comp=Z,25nm,19.4s,baz=0.0,slow=37						
PALK	Pallekele	74.89	225	LR	LR	14 47 26.3	
	comp=Z,46nm,18.4s,baz=350,slow=37						
KOWA	Kowa	82.48	310	LR	LR	14 55 06.7	
	comp=Z,22nm,18.1s,baz=246,slow=39						
TOA1	Torodi Ar. Sit	82.93	304	*e*P	P	14 13 50.4	-1.8

TOA0	Torodi Ar. Sit	82.93	304	*e*P	P	14 13 50.4	-1.9
TORD	Torodi Ar. Bea	82.93	304	P	P	14 13 50.4	-1.9
	comp=Z,2.1nm,1.0s,baz=359,slow=5.0						

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*ISCJB **27** 14:06:27.1±0.3, 18°.40S±0°.08×177°.93W±0°.06, h600^{km}, mb4.0/23, Error ellipse: s-maj=11.3km s-min=6.5km az=150.9*

*IDC **27** 14:06:28.9±1.1, 18°.36S×177°.87W, h608^{km}±13^{km}, mb3.5/23, mb1 3.7/25, mb1mx3.5/51, mbtmp4.5/25, Error ellipse: s-maj=11.4km s-min=8.5km az=146.0*

ISC 27 14:06:28.2±0.5**, 18°.35S**±0°.10×**177°.88W**±0°.08**, h600**^{km}**, n46,** $\sigma 1^{s}$**02**/52**, mb4.0**/23**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	Afiamalu	7.34	54	P	P	14 08 22.1	+0.5
	3.0nm,0.3s,baz=301,slow=12,SNR=6.8						
AFI				S	S	14 09 53.5	-0.8
	1.7nm,0.3s,baz=29,slow=19,SNR=2.4						
DZM	Mont Dzumac	15.17	253	P	P	14 09 39.5	+1.4
	0.9nm,0.3s,baz=64,slow=20,SNR=9.7						
URZ	Urewera	20.31	191	P	P	14 10 23.5	-1.0
	8.8nm,0.9s,baz=266,slow=5.9,SNR=6.7						
PPT	Papeete	26.93	93	P	P	14 11 23.5	-0.1
	21nm,0.6s,baz=355,slow=4.7,SNR=5.3						
CNB	Canberra Magne	33.56	233	P	P	14 12 15.3	-4.8
	baz=35						
PMG	Port Moresby	35.03	280	P	P	14 12 34.1	+1.6
	20nm,0.8s,baz=72,slow=3.2,SNR=5.2						
CMSA	Cobar Meteorol	35.37	241	P	P	14 12 32.3	-2.9
	baz=37,SNR=11						
QLP	Quilpie	35.85	250	P	P	14 12 37.6	-1.6
	baz=37,SNR=8.7						
MTSU	Mount Surprise	35.86	264	P	P	14 12 39.4	0.0
	baz=38,SNR=16						
COEN	Coen	37.61	271	P	P	14 12 55.5	+1.8
	baz=39,SNR=52						
STKA	Stephens Creek	38.86	242	P	P	14 13 04.9	+1.3
	1.8nm,0.4s,baz=80,slow=6.5,SNR=8.8						
STKA	Stephens Creek	38.86	242	P	P	14 13 03.0	-0.6
	baz=40,SNR=6.8						
QIS	Mount Isa	40.06	260	P	P	14 13 16.0	+2.6
	baz=42,SNR=4.1						
HTT	Hallett	41.35	240	P	P	14 13 24.6	+1.1
	baz=43,SNR=6.0						
BBOO	Buckleboo	43.63	241	P	P	14 13 40.3	-0.9
	baz=45,SNR=19						
WRA	Warramunga Arr	45.05	260	P	P	14 13 52.5	+0.3
	9.0nm,0.4s,baz=97,slow=7.0,SNR=413						
WRA				PcP	PcP	14 15 19.7	-0.3
	0.6nm,0.4s,baz=94,slow=3.9,SNR=4.7						
WRA				ScP	ScP	14 18 16.6	+0.5
	1.0nm,0.9s,baz=89,slow=4.4,SNR=3.3						
WRA				S	S	14 19 46.6	-2.1
	1.0nm,0.7s,baz=96,slow=13,SNR=4.4						
ASAR	Alice Springs	45.15	255	P	P	14 13 53.6	+0.6
	15nm,0.7s,baz=91,slow=7.7,SNR=216						
ASAR				PcP	PcP	14 15 19.9	-0.5
	1.4nm,0.4s,baz=102,slow=4.0,SNR=6.9						
ASAR				ScP	ScP	14 18 16.9	+0.3
	0.8nm,0.9s,baz=103,slow=3.9,SNR=4.3						
ASAR				S	S	14 19 48.4	-1.8
	1.3nm,0.6s,baz=93,slow=16,SNR=12						
KDU	Kakadu	48.05	269	P	P	14 14 15.2	+0.3
	baz=50,SNR=18						
MTN	Manton Dam	49.29	269	P	P	14 14 24.0	0.0
	baz=51,SNR=13						
WRKA	Warakurna	50.19	252	P	P	14 14 31.0	+0.5
	baz=52,SNR=25						
FORT	Forrest	50.27	245	P	P	14 14 30.8	-0.1
	baz=52,SNR=9.0						
KNRA	Kununurra	50.94	264	P	P	14 14 36.2	+0.2
	baz=53,SNR=6.6						
MEEK	Meekatharra	58.75	250	P	P	14 15 29.9	-0.4
	baz=60,SNR=3.8						
KLBR	Kellerberrin	59.08	244	P	P	14 15 32.4	+0.1
	baz=60,SNR=7.8						
VNDA	Vanda	60.05	185	P	P	14 15 39.0	+1.1
	0.4nm,0.4s,baz=347,slow=7.1,SNR=4.9						
MUN	Mundaring	60.37	243	P	P	14 15 41.2	+0.3
	baz=62,SNR=3.7						
JHJ	Hachijo jima 2	65.23	322	P	P	14 16 11.9	+0.1
	46nm,0.3s,baz=72,slow=20,SNR=9.7						
MJAR	Matsushiro Arr	68.56	323	P	P	14 16 31.9	-0.4
	3.7nm,0.5s,baz=162,slow=6.0,SNR=12						
MAT	Matsushiro	68.56	323	P	P	14 16 31.9	-0.4
JNU	Nakatsue	70.80	316	P	P	14 16 45.3	-0.4
	2.8nm,0.8s,baz=93,slow=2.7,SNR=4.3						
QSPA	South Pole Qui	71.70	180	P	P	14 16 50.5	0.0
	2.1nm,0.5s,baz=293,slow=0.8,SNR=16						
ASAJ	Asahikawa	71.91	331	P	P	14 16 52.8	+1.1
	5.8nm,1.0s,baz=153,slow=2.3,SNR=6.3						
PETK	Petropavlovsk-	74.23	345	P	P	14 17 04.6	-0.3
	3.2nm,0.6s,baz=120,slow=8.5						
KSRS	Korea Array	75.36	318	P	P	14 17 12.3	+0.8
	0.7nm,0.5s,baz=123,slow=6.8,SNR=6.4						
YBH	Yreka Blue Hor	78.55	39	P	P	14 17 29.3	+0.4
	2.7nm,0.5s,baz=165,slow=2.9,SNR=10						
NVAR	Mina Array Bea	79.40	44	P	P	14 17 33.3	-0.3
	3.1nm,0.7s,baz=224,slow=9.0,SNR=28						
MAW	Mawson	83.61	200	P	P	14 17 54.2	0.0
	0.8nm,0.6s,baz=82,slow=7.1,SNR=7.1						
SEY	Seymchan	84.32	347	P	P	14 17 56.9	-0.7
	1.9nm,0.5s,baz=149,slow=5.9,SNR=16						
TXAR	Lajitas Array	85.81	57	P	P	14 18 06.6	+0.9
	6.2nm,0.8s,baz=219,slow=6.3,SNR=82						
ILAR	Eielson Array	86.21	13	P	P	14 18 05.0	-1.6
	0.5nm,0.4s,baz=215,slow=4.8,SNR=15						
PDAR	Pinedale Array	87.33	43	P	P	14 18 12.3	-0.5
	1.7nm,0.7s,baz=212,slow=3.9,SNR=20						
CMAR	Chiang Mai Arr	89.50	290	P	P	14 18 24.1	+1.0
	1.9nm,0.9s,baz=120,slow=3.1,SNR=7.3						
SNAA	Sanae	90.14	178	P	P	14 18 24.2	-0.9
	0.5nm,0.6s,baz=197,slow=11,SNR=5.0						
PLCA	Paso Flores	90.66	133	P	P	14 18 28.6	+0.4
	2.4nm,0.9s,baz=236,slow=3.6,SNR=3.5						
BRTR	Keskin Array B	145.45	315	PKPbc	PKPdf	14 25 00.0	+0.7
	1.9nm,0.8s,baz=60,slow=3.0,SNR=6.7						
MMAI	Mount Meron Ar	146.80	303	PKPbc	PKPbc	14 25 04.3	-0.3
	1.1nm,0.4s,baz=72,slow=4.7,SNR=6.5						

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*NIED **27** 14:11:00, 31°.60N×138°.60E, h400^{km}, Mw4.2 Best double couple: M₀2.65000×10^{15} NP1:ϕ_s107.00000°, δ51.00000°, λ-141.00000°. NP2:ϕ_s350.00000°, δ61.00000°, λ-46.00000°.*

*ISCJB **27** 14:11:11.5±0.4, 31°.31N±0°.04×138°.48E±0°.06, h381^{km}, mb3.5/11, Error ellipse: s-maj=7.3km s-min=5.5km az=156.3*

*JMA **27** 14:11:11.7±0.2, 31°.56N×138°.64E, h414^{km}, M3.6*

*IDC **27** 14:11:13.2±0.7, 31°.39N×138°.39E, h385^{km}±9^{km}, mb3.2/11, mb1 3.2/16, mb1mx3.0/71, mbtmp3.9/16, Error ellipse: s-maj=24.7km s-min=11.2km az=72.0*

ISC 27 14:11:12.4±0.7**, 31°.43N**±0°.07×**138°.50E**±0°.08**, h381**^{km}**, n33,** $\sigma 1^{s}$**77**/43**, mb3.5**/11**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAOM	Aogashimamukai	1.49	46	P	Pn	14 12 06.0	+2.4
JHCJ	Hachijojimakas	1.97	33	P	Pn	14 12 08.0	+1.6
JHCJ				*e*S	S	14 12 51.7	+1.8
JHJ	Hachijo jima 2	2.00	32	P	Pn	14 12 08.5	+1.9
	33nm,0.3s,baz=333,slow=17,SNR=95						
JHJ				S	S	14 12 53.1	+2.8
	25nm,0.3s,baz=73,slow=19,SNR=6.3						
JHJ2	Mitsune	2.01	33	P	Pn	14 12 08.4	+1.8
TTO2	TONANKAI O.B.S	2.62	332	P	Pn	14 12 13.3	+2.7
JMKN	Mikurajimanish	2.62	20	P	Pn	14 12 12.1	+1.1
JIE	Ise	3.32	333	P	Pn	14 12 18.8	+1.9
JIE				S	S	14 13 09.7	+0.7
BSO1	Boso 1	3.83	32	P	Pn	14 12 21.7	+0.7
BSO1				*e*S	S	14 13 15.9	-0.7
JOD2	Odawara 2	3.86	7	P	Pn	14 12 22.7	+0.8
JOD2				*e*S	S	14 13 18.3	+0.2
JRY	Ryogami san	4.59	4	S	S	14 13 30.3	-1.1
JTO	Tosashimizu	5.04	288	P	Pn	14 12 34.7	+0.8
MJAR	Matsushiro Arr	5.11	357	P	Pn	14 12 34.8	+0.3
	1.6nm,0.3s,baz=182,slow=12,SNR=24						
MJAR				S	S	14 13 36.6	-4.7
	0.3nm,0.3s,baz=130,slow=11,SNR=2.5						
MAT	Matsushiro	5.11	357	P	Pn	14 12 35.3	+0.7
MAT				S	S	14 13 37.4	-3.9
CBIJ	Chichi jima	5.38	142	*e*S	S	14 13 42.6	-4.3
JCJ	Chichijima	5.38	142	P	Pn	14 12 36.0	-1.7
	2.8nm,0.3s,baz=282,slow=20,SNR=7.2						
JCJ				S	S	14 13 42.8	-4.1
	baz=287,slow=19						
JHS	Saijyo	5.75	310	P	Pn	14 12 42.7	+1.1
JNU	Nakatsue	6.67	287	P	P	14 12 52.7	-0.2
	0.5nm,0.3s,baz=156,slow=7.9,SNR=9.4						
JSJ	Shimokoshiki	7.50	274	P	Pn	14 13 01.4	0.0
JMK	Ichinoseki	7.83	16	P	Pn	14 13 05.2	+0.3
JTU	Tsushima	8.25	294	P	P	14 13 10.7	-0.3
KSRS	Korea Array	10.60	307	P	Pn	14 13 37.9	+0.5
	0.1nm,0.3s,baz=121,slow=11,SNR=5.5						
ASAJ	Asahikawa	13.07	13	P	Pn	14 14 07.2	+1.0
	0.3nm,0.3s,baz=220,slow=7.9,SNR=4.3						
SONM	Songino Array	29.39	313	P	P	14 16 42.3	+0.1
	0.4nm,0.4s,baz=109,slow=7.8,SNR=3.4						
MKAR	Makanchi Array	45.28	307	P	P	14 18 53.3	-0.4
	0.3nm,0.4s,baz=67,slow=12,SNR=6.7						
KURBB	Kurchatov Arra	47.74	312	P	P	14 19 12.0	-0.5
	1.2nm,0.4s,baz=91,slow=9.8,SNR=10						
WRA	Warramunga Arr	51.23	185	P	P	14 19 38.6	-0.2
	1.2nm,0.3s,baz=0.5,slow=7.9,SNR=51						
WRA				PcP	PcP	14 20 49.2	+1.3
	0.7nm,0.5s,baz=358,slow=4.2,SNR=6.6						
BVAR	Borovoye Array	52.70	315	P	P	14 19 49.3	+0.1
	1.3nm,0.5s,baz=86,slow=7.5,SNR=9.6						
BVAR				PcP	PcP	14 20 53.3	+0.2
	0.9nm,0.5s,baz=57,slow=5.3,SNR=4.5						
ASAR	Alice Springs	54.96	185	P	P	14 20 05.5	-0.2
	0.9nm,0.4s,baz=22,slow=11,SNR=23						
ARCES	ARCESS Array B	68.39	340	P	P	14 21 34.6	+0.9
	0.9nm,0.8s,baz=73,slow=10,SNR=4.3						
FINES	FINESS Array B	72.64	332	P	P	14 21 59.4	+0.2
	0.8nm,0.4s,baz=66,slow=5.8,SNR=13						
AKASG	Malin Array Be	77.23	322	P	P	14 22 25.2	-0.2
	1.0nm,0.4s,baz=55,slow=4.8,SNR=3.7						
HFS	Hagfors	78.17	335	P	P	14 22 30.7	+0.3
	0.8nm,0.6s,baz=69,slow=8.2,SNR=3.9						
NOA	NORSAR Array B	78.39	337	P	P	14 22 31.6	0.0
	0.4nm,0.6s,baz=321,slow=20,SNR=1.7						

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*SOME **27** 14:18:41.1, 40°.83N×73°.27E, h0^{km}*

*KRNET **27** 14:18:41.5±0.1, 40°.83N×73°.25E, h15^{km}, mb2.9*

*NNC **27** 14:18:41.9±0.6, 40°.81N×73°.28E, h0^{km}, mb3.6, mpv3.2, Error ellipse: s-maj=13.3km s-min=3.1km az=79.0*

ISC 27 14:18:40.9±1.1**, 40°.85N**±0°.02×**73°.31E**±0°.02**, h3**^{km}±11^{km}**, n43,** $\sigma 1^{s}$**30**/74**, 30C-25D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OHH	Osh	0.51	231	⇑*i*P	Pg	14 18 50.1	-0.7
	baz=30						
OHH				⇑*i*S	Sg	14 18 57.0	-0.4
	baz=30						
ARSB	Arslanbob	0.54	333	⇓*i*P	Pg	14 18 51.7	+0.4
	baz=38						
ARSB				⇓*i*S	Sg	14 18 59.0	+0.7
	baz=38						
SFK	Sufi-Kurgan	0.84	170	⇓P	Pg	14 18 57.2	+0.1
	6.9nm,0.2s						
SFK				⇓S	Sg	14 19 09.1	+1.0
	68nm,0.3s						
SFK	Sufi-Kurgan	0.84	170	⇓*i*P	Pg	14 18 57.2	+0.1
	baz=67						
SFK				⇓*i*S	Sg	14 19 09.2	+1.1
	baz=67						
TOKL	Toktogul	1.14	343	⇑*i*P	Pb	14 19 03.4	0.0
	baz=46						
TOKL				⇑*i*S	Sn	14 19 19.7	-0.5
	baz=46						
AML	Almayashu	1.32	13	⇑P	Pn	14 19 06.5	-0.1
	78nm,0.2s,SNR=26						
AML	Almayashu	1.32	13	⇓*i*P	Pn	14 19 06.4	-0.2
	baz=14						
AML				⇓*i*S	Sn	14 19 24.6	-0.3
	baz=14						
ARK	Arkit	1.39	314	⇓*i*P	Pn	14 19 06.9	-0.5
	baz=15						
ARK				⇓*e*S	Sn	14 19 25.7	-0.7
	baz=15						
UCH	Uchtor	1.65	33	⇓P	Pb	14 19 13.2	+1.0
	7.6nm,0.2s,SNR=46						
UCH	Uchtor	1.65	33	⇑*i*P	Pb	14 19 13.0	+0.7
	baz=34						
UCH				⇑*i*S	Sg	14 19 35.3	+1.4
	baz=34						
MNAS	Manas	1.75	340	⇓P	Pb	14 19 13.9	+0.2
	17nm,0.5s						
MNAS				⇑S	Sg	14 19 38.3	+1.2
	60nm,0.5s						
MNAS	Manas	1.75	340	⇓*i*P	Pb	14 19 13.6	-0.2
	baz=42						
MNAS				⇓*i*S	Sg	14 19 37.2	+0.1
	baz=42						
EKS2	Erkin-Say	1.85	11	⇑P	Pb	14 19 16.1	+0.7
	9.9nm,0.2s,SNR=40						
EKS2	Erkin-Say	1.85	11	⇑*i*P	Pb	14 19 15.9	+0.5
	baz=12						
EKS2				⇑*i*S	Sg	14 19 41.1	+0.8
	baz=12						
MRKS	Merke	1.90	358	*e*P	Pb	14 19 16.8	+0.5
	69nm,0.3s						
MRKS				*e*S	Sg	14 19 42.5	+0.5
	68nm,0.2s						
KZA	Kyzart	1.91	49	⇑P	Pb	14 19 17.5	+0.9
	11nm,0.3s,SNR=7.5						
KZA	Kyzart	1.91	49	⇓*i*P	Pb	14 19 17.2	+0.6
	baz=50						
KZA				⇓*i*S	Sg	14 19 43.6	+1.4
	baz=50						
AAK	Ala-Archa	2.00	26	⇓Pg	Pb	14 19 19.1	+1.1
	8.7nm,0.5s						
AAK				⇑Lg	Lg	14 19 45.8	
	80nm,0.8s						
AAK	Ala-Archa	2.00	26	⇑P	Pb	14 19 19.0	+1.1
	8.5nm,0.2s,SNR=9.0						
AAK	Ala-Archa	2.00	26	⇓*i*P	Pb	14 19 18.6	+0.6
	baz=27						
AAK				⇓*i*S	Sg	14 19 45.6	+0.5
	baz=27						
BTK	Batken	2.06	248	⇑*i*P	Pb	14 19 17.8	-1.2
	baz=48						
BTK				⇑*i*S	Sb	14 19 44.6	-0.4
	baz=48						
KBK	Karagaybulak	2.18	34	⇑*i*P	Pb	14 19 21.1	-0.1
	baz=34						
KBK				⇑*i*S	Sb	14 19 50.2	+1.4
	baz=34						
FRU1	Bishkek	2.20	26	⇑*i*P	Pb	14 19 21.4	+0.1
	baz=27						
FRU1				⇑*i*S	Sb	14 19 50.3	+1.3
	baz=27						
CHMS	Chumysh	2.40	26	P	Sg	14 19 58.3	+0.1
	SNR=6.9						
CHMS	Chumysh	2.40	26	⇑*i*P	Pb	14 19 23.9	-1.0
	baz=27						
CHMS				⇑*i*S	Sb	14 19 55.2	+0.2
	baz=27						
BOOM	Boomskoye usch	2.56	49	⇓*e*P	Pb	14 19 26.7	-1.0
	baz=50						
BOOM				⇓*e*S	Sb	14 20 00.2	+0.5
	baz=50						
USP	Ospenovka	2.58	20	⇓P	Pb	14 19 29.7	+1.9
	2.7nm,0.1s,SNR=7.5						
USP	Ospenovka	2.58	20	⇑*i*P	Pb	14 19 26.1	-1.7
	baz=20						
USP				⇑*i*S	Sb	14 19 59.1	-0.8
	baz=20						
ULHL	Ulahol	2.61	57	⇓P	Pb	14 19 30.0	+1.6
	1.3nm,0.2s,SNR=6.3						
ULHL	Ulahol	2.61	57	⇑*i*P	Pb	14 19 26.8	-1.6
	baz=57						
ULHL				⇑*i*S	Sb	14 20 00.7	-0.2
	baz=57						
TKM2	Tokmak 2	2.69	39	⇑Pn	Pb	14 19 29.8	+0.1
	4.3nm,0.4s						
TKM2				⇓Lg	Lg	14 20 06.5	
	13nm,0.4s						
IUG	Iuzhnay	2.79	299	*e*P	Pb	14 19 31.9	+0.5
	21nm,0.1s						
IUG				*e*S	Sb	14 20 07.8	+1.8
	65nm,0.6s						
KST	Kastek	2.96	41	*e*P	Pb	14 19 36.2	+1.9
	5.0nm,0.3s						
KST				*e*S	Sg	14 20 15.2	-0.6
	26nm,0.4s						
DGS	Degeres	3.02	37	*e*P	Pb	14 19 37.0	+1.7
	4.4nm,0.3s						
DGS				*e*S	Sg	14 20 16.6	-1.2
	52nm,0.4s						
KK31	Karatay Array	3.07	318	⇑Pg	Pb	14 19 36.5	+0.2
	3.6nm,0.5s,baz=126,slow=17,SNR=10						
KK31				⇑Lg	Lg	14 20 22.5	
	26nm,0.6s,baz=134,slow=30,SNR=14						
IZV	Izvestkoviy	3.29	47	*e*P	Pb	14 19 42.6	+2.5
	8.5nm,0.5s						
IZV				*e*S	Sg	14 20 26.4	-0.3
	41nm,0.6s						
BRLS	Borolday	3.39	311	*e*P	Pb	14 19 42.1	+0.5
	0.4nm,0.2s						
BRLS				*e*S	Sb	14 20 25.0	+1.7
	5.8nm,0.4s						
TNSS	Tian-Shan	3.48	50	*e*P	Pb	14 19 46.5	+3.0
	7.6nm,0.5s						
TNSS				*e*S	Sg	14 20 32.7	-0.2
	23nm,0.5s						
KOTS	Kotyrbulak	3.70	49	*e*P	Pg	14 19 50.5	-1.4
	4.0nm,0.3s						
KOTS				*e*S	Sg	14 20 39.7	-0.2
	28nm,0.5s						
KUU	Kurty	3.78	35	*e*P	Pb	14 19 50.7	+2.3
	1.3nm,0.1s						
KUU				*e*S	Sg	14 20 39.9	-2.4
	27nm,0.4s						
KTBS	Karatobe	3.80	40	*e*P	Pb	14 19 51.2	+2.5
	1.6nm,0.2s						
KTBS				*e*S	Sg	14 20 41.0	-2.0
	17nm,0.6s						
ARXS	Arharly	4.74	43	*e*P	Pb	14 20 08.1	+3.4
	1.3nm,0.2s						
ARXS				*e*S	Sg	14 21 09.9	-3.2
	11nm,0.4s						
PDGK	Podgornoye	5.22	60	⇑Pg	Pg	14 20 18.7	-2.3
	2.4nm,0.7s						
PDGK				⇓Lg	Lg	14 21 28.0	
	8.1nm,0.8s						

IDC 27 14:23:28.7±1.1**, 49°.45S**×**106°.47E, h0**^{km}**, mb3.7**/5**, mb1 4.0**/5**, mb1mx3.7**/44**, mbtmp3.7**/5**, MS3.5**/9**, Ms1 3.5**/9**, ms1mx3.1**/36**, Error ellipse: s-maj=44.3km s-min=21.6km az=107.0, Southeast Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H01W2	Cape Leeuwin H	15.59	24	T	T	14 43 05.6	
	baz=199,slow=73,SNR=15						
H01W1	Cape Leeuwin H	15.60	24	T	T	14 43 12.5	
	baz=199,slow=73,SNR=18						
H01W3	Cape Leeuwin H	15.61	24	T	T	14 43 09.4	
	baz=199,slow=73,SNR=13						
NWAO	Narrogin (SRO)	18.35	30	LR	LR	14 32 47.6	
	comp=Z,244nm,18.3s,baz=321,slow=30						
STKA	Stephens Creek	31.53	69	LR	LR	14 40 19.7	
	comp=Z,58nm,19.7s,baz=207,slow=32						
ASAR	Alice Springs	33.53	50	P	P	14 30 09.7	-0.4
	0.6nm,0.6s,baz=209,slow=8.3,SNR=13						
ASAR				LR	LR	14 42 09.7	
	comp=Z,77nm,19.9s,baz=197,slow=33						
VNDA	Vanda	34.90	162	P	P	14 30 22.0	+0.6
	0.9nm,0.6s,baz=294,slow=9.6,SNR=9.2						
VNDA				LR	LR	14 43 39.8	
	comp=Z,77nm,18.2s,baz=304,slow=35						
WRA	Warramunga Arr	36.90	47	P	P	14 30 39.0	-0.1
	0.9nm,0.9s,baz=205,slow=9.5,SNR=5.3						
WRA				LR	LR	14 42 22.9	
	comp=Z,26nm,19.9s,baz=320,slow=31						
BATI	Baumata	41.65	26	LR	LR	14 47 00.5	
	comp=Z,106nm,18.1s,baz=148,slow=34						
LEM	Lembang	42.49	2	LR	LR	14 45 06.7	
	comp=Z,58nm,19.8s,baz=222,slow=31						
SNAA	Sanae	49.43	203	P	P	14 32 19.2	-0.7
	0.4nm,0.6s,baz=159,slow=10,SNR=5.4						
SNAA				LR	LR	14 52 15.5	
	comp=Z,61nm,18.2s,baz=161,slow=35						
CMAR	Chiang Mai Arr	67.93	352	P	P	14 34 29.5	+0.4
	1.3nm,0.9s,baz=198,slow=5.4,SNR=3.9						
TSUM	Tsumeb	74.95	258	LR	LR	15 03 39.0	
	comp=Z,29nm,18.4s,baz=162,slow=32						
NVAR	Mina Array Bea	146.39	92	PKPbc	PKPdf	14 43 10.6	+0.6
	0.6nm,0.6s,baz=233,slow=5.9,SNR=8.3						
TXAR	Lajitas Array	149.56	120	PKPbc	PKPbc	14 43 19.0	-0.9
	0.8nm,1.1s,baz=183,slow=5.1,SNR=5.1						

MAN 27 14:24:14.7, 7°.75N×**127°.63E, h5**^{km}**, mb5.1, ML4.0, MS4.1, 1D, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BIPH	Bislig	1.33	289	⇓*i*P	Pb	14 24 40.1	0.0
BIPH				*e*S	Sg	14 24 51.3	-6.1
MATI	Mati	1.57	240	*e*P	Pn	14 24 42.4	-1.0
MATI				*e*S	Sn	14 24 56.2	-8.0
DDMP	Don Marcelino,	2.51	229	*e*P	Pn	14 24 56.7	+0.5
DDMP				*e*S	Sn	14 25 16.8	-10
BUKP	Musuan	2.54	273	*e*P	Pn	14 24 58.1	+1.3
BUKP				*e*S	Sn	14 25 29.1	+0.9

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*BJI **27** 14:39:59.1, 35°.92N×140°.58E, h77^{km}, mb4.6/27, mB4.8/16, Ms4.1/4, Ms7 3.8/4*

*NIED **27** 14:40:00, 36°.00N×140°.10E, h65^{km}, Mw4.3 Best double couple: M₀2.96000×10^{15} NP1:ϕ_s189.00000°, δ26.00000°, λ86.00000°. NP2:ϕ_s14.00000°, δ64.00000°, λ92.00000°.*

*MOS **27** 14:40:01.4±1.1, 35°.98N×140°.35E, h64^{km}, mb4.5/40, Error ellipse: s-maj=9.2km s-min=5.6km az=111.4*

*ISCJB **27** 14:40:02.2±0.4, 35°.92N±0°.03×140°.21E±0°.04, h72^{km}±2^{km}, mb4.2/63, Error ellipse: s-maj=5.0km s-min=4.5km az=177.4*

*IDC **27** 14:40:04.4±1.2, 35°.86N×140°.07E, h75^{km}±11^{km}, mb3.8/24, mb1 4.0/28, mb1mx3.8/69, mbtmp4.2/28, MS3.0/17, Ms1 3.0/17, ms1mx2.8/62, Error ellipse: s-maj=15.6km s-min=6.4km az=64.0*

*NEIC **27** 14:40:04.1±0.5, 35°.93N×140°.16E, h73^{km}±4^{km}, mb4.5/8, Error ellipse: s-maj=6.4km s-min=5.3km az=87.0*

NEIC Felt at Kashiwa, Tokyo, Tsuchiara, Tsukuba and Utsunomiya.

*JMA **27** 14:40:04.5±0.1, 35°.97N×140°.10E, h63^{km}±1^{km}, M3.8 Broadband fault plane solution: P waves. NP1: ϕ_s6.00000°, δ62.00000°, λ86.00000°. NP2:ϕ_s195.00000°, δ28.00000°, λ98.00000°. Principal axes: T Plg73.0000°, Azm266.0000°; N Plg4.0000°, Azm8.0000°; P Plg17.0000°, Azm99.0000°;*

JMA Felt II J1.

ISC 27 14:40:02.5±0.6**, 35°.95N**±0°.04×**140°.26E**±0°.05**, h62**^{km}±5^{km}**, n152,** $\sigma 1^{s}$**63**/167**, mb4.3**/63**, 15C-6D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIHU	Itakohorinouch	0.21	87	P	Pn	14 40 15.7	+3.4
JYT	Yasato	0.28	348	⇑P	Pn	14 40 14.7	+2.0
JYT				S	Sn	14 40 22.2	+2.1
JAG	Ashikaga	0.81	306	⇓P	Pn	14 40 19.1	+0.9
JAG				S	Sn	14 40 29.6	-0.1
JRY	Ryogami san	1.11	274	⇓P	Pn	14 40 22.6	+0.6
JRY				S	Sn	14 40 36.2	-0.4
JKT	Katashina	1.15	315	⇓P	Pn	14 40 23.5	+0.8
JKT				S	Sn	14 40 38.1	+0.3
JOD2	Odawara 2	1.18	235	⇓P	Pn	14 40 23.4	+0.4
JOD2				S	Sn	14 40 37.0	-1.3
MJAR	Matsushiro Arr	1.76	290	P	Pn	14 40 31.4	+0.6
	152nm,0.3s,baz=99,slow=7.9,SNR=1632						
MJAR				S	Sn	14 40 51.5	-0.7
	49nm,0.3s,baz=85,slow=19,SNR=9.9						
MJAR				LR	LR	14 41 21.4	
	comp=Z,362nm,20.4s,baz=120,slow=48						
MAJO	Matsushiro	1.76	290	*e*Pn	Pn	14 40 32.0	+1.2
MAJO				*e*Sn	Sn	14 40 51.0	-1.2
MAJO	Matsushiro	1.76	290	*d* *i*P	Pn	14 40 31.8	+1.0
MAT	Matsushiro	1.76	290	P	Pn	14 40 31.9	+1.1
MAT				S	Sn	14 40 52.9	+0.6
MJB9	Matsu-Tunnel	1.77	290	*e*Pn	Pn	14 40 32.0	+1.1
MJB9				*e*Sn	Sn	14 40 51.1	-1.3
INU	Inuyama	2.71	258	*e*Pn	Pn	14 40 44.5	+0.9
INU				*e*Sn	Sn	14 41 14.1	-1.2
JHJ	Hachijo jima 2	2.86	188	P	Pn	14 40 47.0	+1.4
	71nm,0.3s,baz=300,slow=21,SNR=52						
JHJ				S	Sn	14 41 18.8	-0.1

	123nm,0.3s,baz=252,slow=19,SNR=10						
JHJ				LR	LR	14 41 38.0	
	comp=Z,110nm,18.2s,baz=278,slow=34						
JHJ2	Mitsune	2.86	188	*e*Pn	Pn	14 40 46.5	+0.8
ERM	Erimo	6.46	20	*e*Pn	Pn	14 41 36.0	+1.1
ERM				*e*Sn	Sn	14 42 46.0	-1.1
ERM	Erimo	6.46	20	*e*P	Pn	14 41 36.0	+1.1
ERM				*e*		14 42 46.0	
JNU	Nakatsue	8.24	253	P	Pn	14 42 00.6	+1.2
	0.9nm,0.3s,baz=60,slow=11,SNR=14						
JNU				LR	LR	14 45 38.1	
	comp=Z,150nm,18.1s,baz=124,slow=41						
JNU	Nakatsue	8.24	253	*e*Pn	Pn	14 42 01.0	+1.6
ASAJ	Asahikawa	8.35	12	P	Pn	14 42 01.2	+0.5
	1.3nm,0.3s,baz=214,slow=7.1,SNR=18						
ASAJ				S	Sn	14 43 31.6	-1.8
	0.5nm,0.3s,baz=17,slow=28,SNR=3.5						
ASAJ				LR	LR	14 46 06.2	
	comp=Z,27nm,20.6s,baz=171,slow=43						
ASAJ	Asahikawa	8.35	12	*e*Pn	Pn	14 42 01.7	+1.0
ASAJ				S	Sn	14 43 31.6	-1.8
CBIJ	Chichi jima	8.98	169	*e*Pn	Pn	14 42 09.2	-0.3
CBIJ				S	Sn	14 43 44.1	-5.0
JCJ	Chichijima	8.98	169	P	Pn	14 42 09.3	-0.2
	baz=310,slow=18						
JCJ				S	Sn	14 43 44.1	-5.0
	baz=287,slow=20						
YUK	Yuzh-Kuril'sk	9.14	26	⇑*i*P	Pn	14 42 11.0	-0.5
YUK				*e*S	Sn	14 43 47.9	-4.9
YUK				pmax	pmax		
	comp=Z,54nm,0.9s						
YUK				pmax	pmax		
	comp=E,37nm,1.0s						
YUK				pmax	pmax		
	comp=N,21nm,0.3s						
SHO	Shikotan	9.37	31	*e*P	Pn	14 42 13.7	-1.1
SHO				*i* S	Sn	14 43 52.7	-5.9
SHO				pmax	pmax		
	comp=Z,9.0nm,1.2s						
SHO				pmax	pmax		
	comp=N,4.0nm,0.8s						
SHO				pmax	pmax		
	comp=E,6.0nm,0.9s						
MSHR	Mys Shultsa	9.67	316	⇑*e*P	Pn	14 42 22.9	+4.1
KSRS	Korea Array	10.02	282	P	Pn	14 42 27.0	+3.3
	comp=E,0.9nm,0.3s,baz=96,slow=14,SNR=19						
KSRS				LR	LR	14 46 07.1	
	comp=E,93nm,20.1s,baz=80,slow=37						
KS01	Wonju Array Si	10.05	282	*e*Pn	Pn	14 42 25.3	+1.3
KS15	Wonju Array Si	10.05	282	*e*Pn	Pn	14 42 24.2	+0.2
KSAR	Wonju Array Be	10.05	282	P	Pn	14 42 27.0	+2.9
KSAR	Wonju Array Be	10.05	282	P	Pn	14 42 27.0	+2.9
USRK	Ussuriysk Ar.	10.39	325	P	Pn	14 42 32.0	+3.4
	baz=147,slow=14						
USRK				LR	LR	14 46 02.2	
	comp=E,41nm,21.5s,baz=146,slow=34						
USA0B	Ussuriysk Arra	10.39	325	*e*Pn	Pn	14 42 32.0	+3.4
KUR	Kuril'sk	10.92	30	*e*P	Pn	14 42 35.1	-0.7
KUR				*e*S	Sn	14 44 30.7	-5.6
KUR				pmax	pmax		
	comp=Z,20nm,0.9s						
KUR				pmax	pmax		
	comp=N,16nm,0.7s						
KUR				pmax	pmax		
	comp=E,12nm,0.8s						
YSS	Yuzh-Sakhalins	11.15	9	*e*P	Pn	14 42 41.0	+2.1
MDJ	Mudanjiang	11.88	320	P	Pn	14 42 50.0	+1.1
MDJ				pmax	pmax		
	comp=Z,6.0nm,0.4s						
MDJ				pmax	pmax		
	comp=Z,100nm,4.3s						
MDJ	Mudanjiang	11.88	320	P	Pn	14 42 49.3	+0.4
MDJ				pmax	pmax		
	comp=Z,7.0nm,0.5s						
MDJ				pmax	pmax		
	comp=Z,100nm,5.7s						
JOW	Kunigami	13.68	232	LR	LR	14 48 18.2	
	comp=Z,44nm,20.2s,baz=149,slow=37						
KLR	Kul'dur	14.66	337	P	Pn	14 43 25.5	-0.8
	comp=Z,0.1nm,0.3s,baz=188,slow=6.2,SNR=9.9						
KLR	Kul'dur	14.66	337	⇑*e*P	Pn	14 43 28.3	+2.0
NJ2	Nanjing	18.17	264	*e*P	P	14 44 09.5	-0.4
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
BJI	Beijing	19.40	289	*e*P	P	14 44 22.8	-0.6
ZEA	Zeya	19.98	337	*e*P	P	14 44 27.4	-2.1
ZEA				pmax	pmax		
	comp=Z,20nm,0.8s						
PETK	Petropavlovsk-	21.08	30	LR	LR	14 52 16.9	
	comp=Z,18nm,19.5s,baz=214,slow=34						
GUMO	Guam	22.65	168	LR	LR	14 51 34.3	
	comp=Z,27nm,20.6s,baz=1.5,slow=30						
HHC	Hu-ho-hao-te	22.96	291	*e*P	P	14 45 00.8	-1.0
HHC				pP	pP	14 45 14.0	-1.4
HHC				sP	sP	14 45 29.5	+6.3
HHC				S	S	14 49 02.0	-5.3
HHC				pmax	pmax		
	comp=Z,19nm,1.1s						
HHC				pmax	pmax		
	comp=Z,110nm,5.8s						
MA2	Magadan	24.61	13	P	P	14 45 16.9	+0.3
	comp=Z,7.5nm,0.8s,baz=220,slow=8.7,SNR=3.6						
ENH	Enshi	26.33	266	*e*P	P	14 45 30.7	-1.9
	comp=Z,19nm,0.7s						
YAK	Yakutsk	26.93	349	*e*P	P	14 45 38.5	+0.9
YAK				*e**PP	pP	14 45 49.9	-2.8
YAK				*e*		14 46 29.2	
YAK				*e*S	S	14 50 08.8	-1.1
YAK				pmax	pmax		
	comp=Z,8.0nm,1.1s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,2.0nm,0.9s						
YAK				pmax	pmax		
	comp=Z,14nm,2.0s						
YAK				pmax	pmax		
	comp=N,8.0nm,2.0s						
YAK				pmax	pmax		
	comp=E,22nm,2.1s						
YAK				smax	smax		
	comp=N,19nm,2.7s						
YAK				smax	smax		
	comp=E,14nm,2.5s						
YAK				MLR	MLR		
	comp=Z,35nm,17.0s						
ULN	Ulaanbaatar	27.22	306	⇑*e*P	P	14 45 42.2	+1.6
ULN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SONA1	Songino Array	27.64	306	*e*P	P	14 45 41.9	-2.5
SONA0	Songino Array	27.64	306	*e*P	P	14 45 43.5	-0.9
SONM	Songino Array	27.64	306	P	P	14 45 43.5	-0.9
	comp=Z,0.9nm,0.4s,baz=97,slow=8.8,SNR=9.3						
SONM				LR	LR	14 56 02.7	
	comp=Z,38nm,19.4s,baz=133,slow=35						
BOD	Bodaibo	27.97	330	*e*P	P	14 45 45.3	-1.6
BOD				pmax	pmax		
	comp=Z,4.0nm,0.9s						
H11N2	WAKE ISLAND Hy	28.43	118	T	T	15 15 56.4	
	baz=308,slow=75,SNR=31						
H11N1	WAKE ISLAND Hy	28.44	118	T	T	15 15 45.7	
	baz=308,slow=75,SNR=33						
H11N3	WAKE ISLAND Hy	28.45	118	T	T	15 15 46.5	
	baz=308,slow=75,SNR=36						
LZH	Lanzhou	29.35	281	*e*P	P	14 46 00.8	+1.1
LZH				pP	pP	14 46 19.0	+4.1
LZH				sP	sP	14 46 28.3	+6.1
LZH				*e*PP	PnPn	14 46 58.0	+2.2
LZH				pmax	pmax		
	comp=Z,21nm,1.0s						
LZH				pmax	pmax		
	comp=Z,83nm,5.4s						
LZH				LR	LR		
	comp=Z,370nm,13.0s						
LZH				LR	LR		
	comp=Z,370nm,13.3s						
LZH				LR	LR		
	comp=Z,450nm,16.8s						
GYA	Guiyang	30.13	261	⇑*i*P	P	14 46 05.3	-1.3
GYA				pP	pP	14 46 25.5	+3.6
GYA				PP	PnPn	14 47 06.8	+0.7
GYA				S	S	14 50 58.5	-2.7
GYA				sS	sS	14 51 30.0	+2.8
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
TLY	Talaya	30.36	313	*e*P	P	14 46 08.4	+0.1
TLY				pmax	pmax		
	comp=Z,2.0nm,0.7s						
CD2	Chengdu	30.76	271	*e*P	P	14 46 11.0	-1.0
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,160nm,4.8s						
GTA	Gaotai	32.01	289	*e*P	P	14 46 23.8	+0.7
GTA				pP	pP	14 46 41.5	+3.1
GTA				sP	sP	14 46 50.5	+4.8
GTA				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KMI	Kunming	33.89	262	P	P	14 46 40.0	+0.3
KMI				pmax	pmax		
	comp=Z,11nm,0.6s						
KMI				pmax	pmax		
	comp=Z,91nm,4.0s						
CMAR	Chiang Mai Arr	40.33	256	P	P	14 47 33.4	-0.7
	comp=Z,0.7nm,0.5s,baz=53,slow=6.7,SNR=4.7						
CMAR	Chiang Mai Arr	40.33	256	*ce*P	P	14 47 36.7	+2.6
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WMQ	Urumqi	40.51	298	P	P	14 47 36.0	+0.6
ZAA0	Zalesovo Array	41.97	313	*e*P	P	14 47 46.7	-0.4
	comp=Z,5.5nm,0.8s						
ZAA1	Zalesovo Array	41.97	313	*e*P	P	14 47 47.4	+0.3
ZALV	Zalesovo Beam	41.97	313	P	P	14 47 47.4	+0.3
	comp=Z,4.1nm,0.5s,baz=87,slow=6.4,SNR=17						
ZALV	Zalesovo Beam	41.97	313	*e*P	P	14 47 47.0	-0.1
MK01	Makanchi Array	43.91	303	*e*P	P	14 48 02.7	-0.3
MK31	Makanchi Array	43.92	303	*e*P	P	14 48 02.3	-0.7
MK31	Makanchi Array	43.92	303	*e*P	P	14 48 02.3	-0.7
MK32	Makanchi Array	43.92	303	*e*P	P	14 48 03.0	0.0
MKAR	Makanchi Array	43.92	303	P	P	14 48 03.0	0.0
	comp=Z,5.0nm,0.9s,baz=90,slow=9.9,SNR=20						
MKAR	Makanchi Array	43.92	303	*i* P	P	14 48 03.2	+0.2
MKAR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
MAKZ	Makanchi	44.13	303	*e*P	P	14 48 04.8	+0.1
	comp=Z,8.2nm,0.9s						
MAKZ	Makanchi	44.13	303	*e*P	P	14 48 04.8	+0.1
MAKZ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KURK	Kurchatov	45.88	309	*e*P	P	14 48 18.0	-0.4
	comp=Z,12nm,1.0s						
KURK	Kurchatov	45.88	309	*c i*P	P	14 48 17.9	-0.6
KURK				pmax	pmax		
	comp=Z,15nm,1.3s						
KURBB	Kurchatov Arra	45.94	309	P	P	14 48 18.7	-0.3
	comp=Z,4.8nm,0.4s,baz=79,slow=7.5,SNR=37						
PDGK	Podgornoye	46.47	299	P	P	14 48 23.5	+0.1
PDGK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KDAK	Kodiak Island	48.52	41	*i* P	P	14 48 42.0	+3.1
HNR	Honiara	48.81	154	LR	LR	15 08 52.7	
	comp=Z,14nm,20.2s,baz=234,slow=35						
KSH	Kashi	50.01	295	*e*P	P	14 48 53.5	+2.8
AAK	Ala-Archa	50.19	299	⇑*e*P	P	14 48 52.2	+0.1
AAK				pmax	pmax		
	comp=Z,4.0nm,1.2s						
MDM	Murphy Dome	50.32	32	*e*P	P	14 48 54.0	+1.4
	comp=Z,7.1nm,1.0s						
BVAR	Borovoye Array	50.62	313	P	P	14 48 55.1	+0.1
	comp=Z,1.1nm,0.5s,baz=73,slow=8.0,SNR=8.3						
BVAR				LR	LR	15 12 34.8	
	comp=Z,26nm,18.6s,baz=106,slow=39						
BRVK	Borovoye	50.67	313	⇑*e*P	P	14 48 58.0	+2.6
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
ILAR	Eielson Array	50.90	32	P	P	14 48 59.0	+2.1
	comp=Z,2.4nm,0.9s,baz=270,slow=6.3,SNR=28						
ILB	Eielson Array	50.90	32	*e*P	P	14 48 58.3	+1.4
IL1	Eielson Array	50.90	32	*e*P	P	14 48 57.8	+0.9
MNAS	Manas	51.65	299	P	P	14 49 03.7	+0.7
MNAS				pmax	pmax		
	comp=Z,2.0nm,1.2s						
SFK	Sufi-Kurgan	51.67	296	P	P	14 49 03.3	0.0
SFK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
INK	Inuvik	55.77	27	P	P	14 49 33.7	+1.2
	comp=Z,1.7nm,0.6s,baz=270,slow=4.8,SNR=3.6						
WB2	Warramunga Arr	55.87	187	*e*P	P	14 49 33.7	-0.1
	comp=Z,4.3nm,0.9s						
WR1	Warramunga Arr	55.87	187	*e*P	P	14 49 33.9	+0.1
	comp=Z,3.5nm,0.8s						
WRA	Warramunga Arr	55.87	187	P	P	14 49 33.9	+0.1
	comp=Z,1.2nm,0.5s,baz=0.4,slow=7.6,SNR=32						
WRA	Warramunga Arr	55.87	187	*i* P	P	14 49 34.0	+0.2
WRA				pmax	pmax		
	comp=Z,1.0nm,0.4s						
WC3	Warramunga Arr	55.89	187	*e*P	P	14 49 34.2	+0.3
	comp=Z,2.3nm,0.9s						
ARU	Arti	56.56	319	*c i*P	P	14 49 38.3	0.0
ARU				S	S	14 57 24.4	-0.7
ARU				pmax	pmax		
	comp=Z,6.0nm,1.2s						
ABKAR	Akbulak array	57.93	310	*e*P	P	14 49 48.2	+0.1
AKTO	Aktyubinsk	58.71	312	P	P	14 49 54.0	+0.4
	comp=Z,0.6nm,0.3s,baz=80,slow=12,SNR=5.3						
AKTO	Aktyubinsk	58.71	312	P	P	14 49 54.0	+0.4
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
ASAR	Alice Springs	59.60	187	P	P	14 50 00.3	+0.4
	comp=Z,0.4nm,0.5s,baz=10,slow=9.0,SNR=15						
SPITS	Spitsbergen Ar	61.40	349	LR	LR	15 18 01.8	
	comp=Z,14nm,19.2s,baz=120,slow=37						
KBS	Kingsbay	61.56	350	P	P	14 50 10.8	-1.8
KBS				pmax	pmax		
	comp=Z,36nm,1.1s						
DZM	Mont Dzumac	62.81	153	LR	LR	15 16 16.6	
	comp=Z,28nm,19.7s,baz=124,slow=35						
ARA0	ARCESS Array S	64.68	339	*e*P	P	14 50 33.6	+0.2
ARCES	ARCESS Array B	64.68	339	P	P	14 50 33.6	+0.2
	comp=Z,2.7nm,0.9s,baz=57,slow=7.9,SNR=12						
ARCES	ARCESS Array B	64.68	339	P	P	14 50 33.6	+0.2
ARCES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
SGF	Sodankyl	65.59	337	P	P	14 50 40.1	+0.8
SGF				pmax	pmax		
	comp=Z,7.0nm,1.3s						
MSF	Maaselka	65.64	335	P	P	14 50 40.3	+0.6
MSF				pmax	pmax		
	comp=Z,5.0nm,1.1s						
OUL	Oulu	67.19	335	P	P	14 50 50.1	+0.6
OUL				pmax	pmax		
	comp=Z,11nm,1.8s						
STKA	Stephens Creek	67.49	179	P	P	14 50 52.3	+0.6
	comp=Z,2.3nm,0.8s,baz=335,slow=8.0,SNR=3.7						
OBN	Obninsk	68.40	323	*i* P	P	14 50 58.1	+0.8
OBN				*i*		14 51 19.4	
OBN				pmax	pmax		
	comp=Z,4.0nm,0.7s						
OBN				MLR	MLR		
	comp=Z,16nm,16.0s						
SUF	Sumiainen	68.53	333	P	P	14 50 58.4	+0.4
SUF				pmax	pmax		
	comp=Z,6.0nm,0.9s						
FIA1	FINESS Array S	69.33	332	*e*P	P	14 51 02.8	-0.2
FIA0	FINESS Array S	69.33	332	*e*P	P	14 51 03.2	+0.2
FIA0	FINESS Array S	69.33	332	*e*P	P	14 51 03.2	+0.2
FINES	FINESS Array B	69.33	332	P	P	14 51 03.2	+0.2
	comp=Z,2.7nm,0.7s,baz=72,slow=6.2,SNR=11						
KBZ	Khabaz	70.90	310	P	P	14 51 13.0	+0.1
	comp=Z,2.9nm,0.8s,baz=79,slow=8.9,SNR=4.1						
KIV	Kislovodsk	70.91	311	*ce*P	P	14 51 14.6	+1.5
KIV				pmax	pmax		
	comp=Z,6.0nm,0.8s						
VSU	Vasula	70.91	329	⇓*e*P	P	14 51 13.5	+0.8
VSU				pmax	pmax		
	comp=Z,7.0nm,0.7s						
GNI	Garni	71.60	306	LR	LR	15 24 06.0	
	comp=Z,18nm,18.3s,baz=80,slow=37						
AKASG	Malin Array Be	74.58	322	P	P	14 51 34.2	-0.4
	comp=Z,1.7nm,0.5s,baz=48,slow=5.9,SNR=10						
AKASG	Malin Array Be	74.58	322	*ce*P	P	14 51 34.5	-0.1
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
KIEV	Kiev	74.59	322	*c i*P	P	14 51 34.4	-0.3
KIEV				pmax	pmax		
	comp=Z,4.0nm,0.9s						
HFS	Hagfors	74.69	335	P	P	14 51 35.5	+0.5
	comp=Z,0.9nm,0.6s,baz=56,slow=7.7,SNR=4.4						
HFS				LR	LR	15 26 59.7	
	comp=Z,19nm,19.7s,baz=94,slow=38						
NB2	NORSAR Subarra	74.82	337	P	P	14 51 36.2	+0.4
	comp=Z,3.0nm,0.9s,baz=41,slow=5.9						
NOA	NORSAR Array B	74.82	337	P	P	14 51 36.2	+0.4
	comp=Z,1.7nm,0.8s,baz=41,slow=5.8,SNR=6.1						
NOA				LR	LR	15 27 37.2	
	comp=Z,8.5nm,20.1s,baz=350,slow=38						
NVAR	Mina Array Bea	76.38	52	P	P	14 51 48.0	+2.5
	comp=Z,0.6nm,0.8s,baz=256,slow=4.1,SNR=4.8						
BUR04	Bucovina Ar. S	78.58	321	*e*P	P	14 51 57.5	+0.1
BR101	Keskin Array S	78.87	311	*e*P	P	14 51 59.4	+0.2
BRTR	Keskin Array B	78.87	311	P	P	14 51 59.4	+0.2
	comp=Z,1.0nm,0.6s,baz=72,slow=4.0,SNR=4.8						
BRTR	Keskin Array B	78.87	311	*ce*P	P	14 51 58.9	-0.3
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
VRI	Vrincioaia	78.94	319	P	P	14 52 00.6	+1.3
VRI				pmax	pmax		
	comp=Z,41nm,1.7s						
PDAR	Pinedale Array	79.08	45	P	P	14 52 02.5	+2.1
	comp=Z,0.5nm,0.8s,baz=288,slow=1.4,SNR=4.1						
OJC	Ojcow	79.41	326	P	P	14 52 02.4	+0.6
NIE	Niedzica	79.74	325	P	P	14 52 05.1	+1.5
NIE				pmax	pmax		
	comp=Z,2.0nm,1.1s						
BSEG	Bad Segeberg	80.60	333	P	P	14 52 09.9	+1.9
BSEG				pmax	pmax		
	comp=Z,7.0nm,0.6s						
PSZ	Piszkesteto	80.99	324	P	P	14 52 11.3	+0.9
PSZ				pmax	pmax		
	comp=Z,6.0nm,1.0s						
VYHS	Vyhne	81.08	325	*e*P	P	14 52 10.9	+0.1
VYHS	Vyhne	81.08	325	*e*P	P	14 52 10.9	+0.1
BRG	Berggiesshubel	81.50	329	*e*(P)	P	14 52 13.2	+0.3
	comp=Z,1.6nm,0.6s						
BRG	Berggiesshubel	81.50	329	*e*P	P	14 52 13.2	+0.3
BRG				pmax	pmax		
	comp=Z,2.0nm,0.6s						
CLL	Collm	81.56	330	*e*P	P	14 52 13.0	-0.3
	comp=Z,4.0nm,0.9s						
CLL	Collm	81.56	330	*e*P	P	14 52 13.0	-0.3
CLL				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MMAI	Mount Meron Ar	81.83	305	P	P	14 52 15.4	+0.3
	comp=Z,0.6nm,0.4s,baz=346,slow=3.7,SNR=3.9						
PRU	Pruhonice	81.91	328	P	P	14 52 15.5	+0.4
GERES	GERESS Array B	83.13	328	LR	LR	15 30 42.6	
	comp=Z,12nm,19.5s,baz=84,slow=36						
TXAR	Lajitas Array	91.51	52	P	P	14 53 04.5	+1.9
	comp=Z,0.3nm,0.7s,baz=270,slow=1.3,SNR=4.4						
LPAZ	La Paz	148.04	60	PKPbc	PKPbc	14 59 43.3	+1.1
	comp=Z,1.2nm,0.8s,baz=303,slow=1.7,SNR=3.8						

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*ISCJB **27** 15:19:32.1±0.9, 18°.5S±0°.2×177°.8W±0°.2, h600^{km}, mb3.9/4, Error ellipse: s-maj=34.7km s-min=15.7km az=145.7*

*IDC **27** 15:19:33.2±1.8, 18°.45S×177°.75W, h608^{km}±22^{km}, mb3.3/5, mb1 3.5/6, mb1mx3.0/48, mbtmp4.3/6, Error ellipse: s-maj=34.0km s-min=17.3km az=146.0*

ISC 27 15:19:32.7±0.8, **18°.4S**±0°.3×**177°.8W**±0°.2, **h600^{km}, n10, σ0ˢ.78**/12, **mb4.2**/4, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	7.32	53	P	P	15 21 26.3	+0.5
	3.8nm,0.3s,baz=114,slow=2.4,SNR=8.3						
URZ	Urewera	20.28	192	P	P	15 23 28.2	-0.5
	8.1nm,0.9s,baz=43,slow=4.3,SNR=5.6						
STKA	Stephens Creek	38.89	242	P	P	15 26 09.5	+1.2
	4.3nm,0.7s,baz=71,slow=11,SNR=6.5						
WRA	Warramunga Arr	45.09	260	P	P	15 26 57.0	0.0
	3.8nm,0.4s,baz=97,slow=7.0,SNR=147						
WRA				PcP	PcP	15 28 24.3	-0.3
	0.2nm,0.4s,baz=99,slow=3.5,SNR=3.4						
ASAR	Alice Springs	45.20	255	P	P	15 26 58.2	+0.3
	6.7nm,0.7s,baz=90,slow=8.0,SNR=85						
ASAR				PcP	PcP	15 28 24.3	-0.8
	0.7nm,0.5s,baz=100,slow=3.8,SNR=6.1						
TXAR	Lajitas Array	85.79	57	P	P	15 31 10.7	+0.6
	0.3nm,0.7s,baz=219,slow=5.8,SNR=4.4						
ARCES	ARCESS Array B	126.89	350	PKP	PKPdf	15 37 27.4	-1.2
	1.1nm,0.9s,baz=29,slow=2.1,SNR=4.5						
FINES	FINESS Array B	133.80	344	PKP	PKPdf	15 37 41.4	-0.5
	0.6nm,0.6s,baz=23,slow=11,SNR=3.0						
MMAI	Mount Meron Ar	146.87	303	PKPbc	PKPbc	15 38 08.9	-0.3
	0.7nm,0.4s,baz=57,slow=9.1,SNR=3.3						
GERES	GERESS Array B	148.22	345	PKPbc	PKPbc	15 38 11.4	-0.8
	0.4nm,0.6s,baz=35,slow=3.6,SNR=3.4						

MAN 27 15:28:05.8, 15°.58N×119°.66E, h31^{km}, mb4.9, ML3.8, MS3.8, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCZP	Santa Cruz	0.31	51	*e*P	Pn	15 28 14.7	+0.5
SCZP				*e*S	Sn	15 28 21.6	+1.9
BOLP	Bolinao	0.83	17	*e*P	Pn	15 28 20.5	-0.9
BOLP				*e*S	Sb	15 28 33.1	+0.4
LUBP	Lubang	1.92	163	*e*P	Pn	15 28 37.5	+1.1
LUBP				*e*S	Sn	15 28 59.5	-0.1
ABRA	Dolores	2.29	26	*e*P	Pn	15 28 42.8	+1.3
ABRA				*e*S	Sn	15 29 08.9	+0.3
CAUP	Cauayan	2.48	57	*e*P	Pb	15 28 48.1	-1.6
CAUP				*e*S	Sb	15 29 23.6	+3.8
APYP	Conner	2.73	34	*e*P	Pn	15 28 49.6	+2.1
APYP				*e*S	Sb	15 29 25.4	-1.5

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*IDC **27** 15:33:49.9±2.9, 3°.34S×148°.22E, h0^{km}, mb3.9/6, mb1 4.1/7, mb1mx3.8/46, mbtmp4.0/7, ML1.2/1, MS3.5/25, Ms1 3.5/25, ms1mx3.4/43, Error ellipse: s-maj=93.3km s-min=21.9km az=94.0*

ISC 27 15:33:54.8±2.3, **3°.26S**±0°.09×**148°.3E**±0°.5, **h35^{km}, n34, σ1ˢ.67**/9, **mb4.0**/6, **MS3.5**/22, **Bismarck Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	6.21	191	Pn	Pn	15 35 23.0	-1.1
	0.4nm,0.3s,baz=323,slow=10,SNR=2.5						
PMG				Sn	Sn	15 36 36.6	+2.8
	1.0nm,0.3s,baz=230,slow=17,SNR=3.6						
PMG				LR	LR	15 37 55.2	
	comp=Z,359nm,19.5s,baz=7.5,slow=40						
HNR	Honiara	13.07	119	LR	LR	15 41 39.6	
	comp=Z,180nm,19.4s,baz=308,slow=36						
GUMO	Guam	17.09	348	LR	LR	15 43 01.3	
	comp=Z,171nm,21.8s,baz=160,slow=32						
WRA	Warramunga Arr	21.48	218	P	P	15 38 39.1	-1.4
	3.0nm,0.6s,baz=40,slow=11,SNR=20						
ASAR	Alice Springs	24.61	213	P	P	15 39 10.8	-1.3
	3.7nm,0.8s,baz=47,slow=8.1,SNR=31						
ASAR				LR	LR	15 49 49.0	
	comp=Z,114nm,20.3s,baz=42,slow=39						
DAV	Davao City (W)	24.92	294	LR	LR	15 48 17.3	
	comp=Z,40nm,18.5s,baz=311,slow=35						
BATI	Baumata	25.43	253	LR	LR	15 49 49.5	
	comp=Z,293nm,19.3s,baz=111,slow=38						
DZM	Mont Dzumac	25.66	138	LR	LR	15 47 31.9	
	comp=Z,270nm,20.7s,baz=309,slow=32						
H11S3	WAKE ISLAND Hy	28.19	39	T	T	16 08 48.3	
	baz=220,slow=76,SNR=376						
H11S2	WAKE ISLAND Hy	28.19	39	T	T	16 08 46.8	
	baz=220,slow=76,SNR=518						
H11S1	WAKE ISLAND Hy	28.20	39	T	T	16 08 47.4	
	baz=220,slow=76,SNR=466						
STKA	Stephens Creek	29.16	192	LR	LR	15 52 22.7	
	comp=Z,132nm,19.0s,baz=22,slow=38						
H11N1	WAKE ISLAND Hy	29.23	38	T	T	16 10 06.1	
	baz=219,slow=76,SNR=146						
H11N3	WAKE ISLAND Hy	29.24	38	T	T	16 10 05.9	
	baz=219,slow=76,SNR=296						
H11N2	WAKE ISLAND Hy	29.24	38	T	T	16 10 07.6	
	baz=219,slow=76,SNR=308						
TGY	Tagaytay City	32.18	303	LR	LR	15 51 03.7	
	comp=Z,53nm,21.7s,baz=124,slow=32						
JOW	Kunigami	35.65	328	LR	LR	15 52 27.8	
	comp=Z,60nm,20.7s,baz=124,slow=31						
JHJ	Hachijo jima 2	37.08	348	LR	LR	15 54 29.8	
	comp=Z,42nm,21.7s,baz=118,slow=33						
JNU	Nakatsue	39.78	337	LR	LR	15 55 06.6	
	comp=Z,39nm,20.6s,baz=124,slow=32						
MJAR	Matsushiro Arr	40.71	347	LR	LR	15 56 34.4	
	comp=Z,49nm,18.6s,baz=210,slow=34						
NWAO	Narrogin (SRO)	41.44	221	LR	LR	16 00 47.6	
	comp=Z,115nm,19.7s,baz=272,slow=39						
ASAJ	Asahikawa	47.45	354	LR	LR	16 02 58.3	
	comp=Z,24nm,19.1s,baz=172,slow=37						
CMAR	Chiang Mai Arr	53.20	296	P	P	15 43 09.8	-0.2

	2.2nm,1.1s,baz=113,slow=6.0,SNR=6.5						
CMAR				LR	LR	16 06 17.1	
	comp=Z,14nm,19.6s,baz=205,slow=37						
PETK	Petropavlovsk-	56.72	7	LR	LR	16 04 10.2	
	comp=Z,39nm,21.6s,baz=205,slow=32						
SONM	Songino Array	62.70	330	P	P	15 44 17.6	+1.3
	0.5nm,0.5s,baz=144,slow=5.4,SNR=5.5						
SONM				LR	LR	16 10 51.2	
	comp=Z,41nm,21.1s,baz=114,slow=35						
VNDA	Vanda	74.55	177	LR	LR	16 14 28.9	
	comp=Z,18nm,20.1s,baz=258,slow=33						
MKAR	Makanchi Array	76.26	320	P	P	15 45 40.8	+0.8
	2.0nm,1.1s,baz=117,slow=5.0,SNR=6.5						
MKAR				LR	LR	16 20 17.6	
	comp=Z,24nm,18.5s,baz=68,slow=37						
ZALV	Zalesovo Beam	77.43	327	LR	LR	16 20 12.1	
	comp=Z,25nm,20.7s,baz=50,slow=36						
KURBB	Kurchatov Arra	79.86	323	P	P	15 46 00.2	+0.4
	1.0nm,0.9s,baz=114,slow=4.1,SNR=7.4						
BVAR	Borovoye Array	85.36	324	LR	LR	16 26 02.0	
	comp=Z,17nm,19.3s,baz=60,slow=37						
YBH	Yreka Blue Hor	91.37	48	LR	LR	16 22 22.8	
	comp=Z,21nm,18.5s,baz=298,slow=32						
AKTO	Aktyubinsk	92.69	320	LR	LR	16 28 10.7	
	comp=Z,32nm,21.7s,baz=92,slow=35						
OPO	Ambohidratompo	99.50	251	LR	LR	16 29 12.7	
	comp=Z,55nm,18.8s,baz=23,slow=33						
TORD	Torodi Ar. Bea	145.59	289	PKPbc	PKPdf	15 53 29.2	-1.3
	baz=50,slow=4.0						

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*IDC **27** 15:52:46.0±2.9, 3°.12S×136°.61E, h0^{km}, mb3.7/2, mb1 4.0/3, mb1mx3.5/43, mbtmp3.8/3, ML3.7/1, Error ellipse: s-maj=111.5km s-min=31.2km az=81.0*

*ISCJB **27** 15:52:50.6±0.7, 3°.28S±0°.06×135°.69E±0°.05, h35^{km}, mb3.6/1, Error ellipse: s-maj=7.9km s-min=6.8km az=176.5*

*DJA **27** 15:52:51.6±1.2, 3°S±4°×13°6E±°, h28^{km}±11^{km}, M4.2/8, mb4.5/1, MLv4.1/8*

ISC 27 15:52:52.7±1.0, **3°.23S**±0°.08×**135°.69E**±0°.06, **h35**^{km}, **n10, σ0^s.94**/13, **Irian Jaya region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRPI	Serui, Papua	1.46	22	P	Pn	15 53 15.6	-0.9
SRPI				S	Sn	15 53 34.8	+0.4
BAKI	Biak	2.06	12	P	Pn	15 53 24.0	-0.9
RKPI	Ransiki, Papua	2.28	318	P	Pn	15 53 26.7	-1.2
RKPI				S	Sn	15 53 54.8	+0.1
FAKI	Fak Fak	3.45	275	P	Pn	15 53 43.4	-0.6
FAKI				S	Sn	15 54 23.1	-0.6
GENI	Genyem	4.52	82	P	Pn	15 53 57.1	-1.5
SWI	Sorong	5.01	298	P	Pn	15 54 05.0	-0.5
JAY	Jayapura	5.06	82	P	Pn	15 54 06.0	-0.1
WRA	Warramunga Arr	16.67	184	Pn	Pn	15 56 43.6	-0.1
	0.3nm,0.3s,baz=9.2,slow=13,SNR=14						
WRA				Sn	Sn	15 59 36.4	-11
	0.2nm,0.3s,baz=9.8,slow=23,SNR=4.7						
ASAR	Alice Springs	20.39	185	P	P	15 57 26.8	+0.1
	2.9nm,0.7s,baz=8.1,slow=12,SNR=35						
MKAR	Makanchi Array	68.38	324	P	P	16 03 52.4	+1.6
	0.5nm,0.7s,baz=121,slow=7.5,SNR=4.0						

WEL 27 15:56:32.2, 38°S±9°×**18°0W**±°, **h33**^{km}, **ML3.5**/23, **East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.46	271	P	Pn	15 56 56.7	+0.4
WMGZ				S	Sn	15 57 14.0	-0.2
MXZ	Matakaoa Point	1.58	280	P	Pn	15 56 57.9	0.0
MXZ				S	Sn	15 57 16.5	-0.7
PUZ	Puketiti	1.60	262	P	Pn	15 56 59.0	+0.8
PUZ				S	Sn	15 57 18.7	+1.1
PKGZ	Pakihiroa	1.73	269	P	Pn	15 57 00.3	+0.3
CNGZ	Carnagh Statio	1.73	248	P	Pb	15 57 02.2	-1.2
TWGZ	Tauwhareparae	1.83	259	P	Pn	15 57 02.5	+1.2
TWGZ				S	Sn	15 57 25.1	+1.7
HAZ	Te Kaha	1.96	272	P	Pn	15 57 03.6	+0.4
TKGZ	Te Karaka	1.98	252	P	Pn	15 57 05.0	+1.5
TKGZ				S	Sn	15 57 29.2	+2.0
RUGZ	Raukumara Rang	2.04	266	P	Pn	15 57 04.9	+0.5
RIGZ	Rimuhau	2.14	246	P	Pn	15 57 07.0	+1.4
RIGZ				S	Sn	15 57 32.8	+1.7
MWZ	Matawai	2.21	257	P	Pn	15 57 07.3	+0.7
MWZ				S	Sn	15 57 33.1	+0.3
SNGZ	Shannon Statio	2.47	247	P	Pn	15 57 12.2	+1.9
SNGZ				S	Sn	15 57 40.9	+1.6
RAHZ	Arahi	2.71	246	P	Pn	15 57 15.5	+2.1
RAHZ				S	Sn	15 57 47.3	+2.3
MUGZ	Murupara	2.82	256	P	Pn	15 57 16.4	+1.5
MTHZ	Maungataniwha	2.86	249	P	Pn	15 57 17.4	+1.8
ARHZ	Aropaoanui	2.91	240	P	Pn	15 57 18.8	+2.5
OPRZ	Ohinepanea	2.93	269	P	Pn	15 57 17.1	+0.6
NMHZ	Naumai	2.98	245	P	Pn	15 57 19.1	+1.9
TARZ	Mount Tarawera	2.99	262	P	Pn	15 57 18.7	+1.4
MRHZ	Matea Rd	3.17	251	P	Pn	15 57 21.9	+2.0
MCHZ	McNeill Hill	3.20	239	P	Pn	15 57 22.4	+2.1
BKZ	Black Stump Fm	3.23	245	P	Pn	15 57 22.3	+1.7
KAHZ	Kahuranaki	3.27	233	P	Pn	15 57 23.2	+2.0
KWHZ	Kaweka Forest	3.38	241	P	Pn	15 57 24.3	+1.5
KRHZ	Kereru	3.52	239	P	Pn	15 57 25.9	+1.3
BHHZ	Black Hill Sta	3.66	242	P	Pn	15 57 28.2	+1.6
TSZ	Takapari Road	4.00	235	P	Pn	15 57 32.2	+0.9
MKAZ	Moumakai	4.12	279	P	Pn	15 57 33.1	+0.2
ETAZ	East Tamaki Re	4.34	280	P	Pn	15 57 36.5	+0.7
TIWZ	Tintock	4.47	228	P	Pn	15 57 38.0	+0.4
MRZ	Mangatainoka R	4.58	231	P	Pn	15 57 39.7	+0.5
RVAZ	Riverhead Bore	4.66	282	P	Pn	15 57 41.0	+0.8
CAW	Cannon Point	5.16	230	P	Pn	15 57 47.4	+0.2
OUZ	Omahuta	5.98	294	P	Pn	15 57 59.0	+0.6

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*ISCJB **27** 16:02:39.1±0.8, 38°.68N±0°.04×43°.19E±0°.05, h22^{km}±9^{km}, Error ellipse: s-maj=7.7km s-min=5.3km az=151.4*

*DDA **27** 16:02:39.4, 38°.68N×43°.20E, h7^{km}, Ml2.9*

*CSEM **27** 16:02:39.4, 38°.68N×43°.20E, h7^{km}, ML2.9*

ISC 27 16:02:37.9±0.9, **38°.70N**±0°.03×**43°.24E**±0°.03, **h26**^{km}±8^{km}, **n15, σ1^s.12**/30, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	Van	0.15	131	PG	Pn	16 02 43.8	-1.0
VANB				SG	Sb	16 02 48.0	+1.0
TVAN	Van	0.21	142	*i* P	Pb	16 02 43.7	-0.4
TVAN				*i* S	Sb	16 02 48.2	0.0
TVAN	Van	0.21	142	P	Pb	16 02 43.7	-0.4
TVAN				S	Sb	16 02 48.2	0.0
VMUR	Van-Muradiye	0.39	41	*i* P	Pn	16 02 47.3	-0.8
VMUR				*i* S	Sn	16 02 55.1	+0.3
VMUR	Van-Muradiye	0.39	41	P	Pn	16 02 47.3	-0.8
VMUR				S	Sn	16 02 55.1	+0.3
GEVA	Gevas	0.41	200	*i* P	Pb	16 02 46.5	-0.3
GEVA				*i* S	Sb	16 02 53.8	+0.9
GEVA	Gevas	0.41	200	P	Pb	16 02 46.5	-0.3
GEVA				S	Sb	16 02 53.8	+0.9
ADCV	BITLIS_Adilcev	0.42	286	*i* P	Pb	16 02 46.9	-0.1
ADCV				*i* S	Sb	16 02 53.9	+0.8
ADCV	BITLIS_Adilcev	0.42	286	P	Pb	16 02 46.9	-0.1
ADCV				S	Sb	16 02 53.9	+0.8
CLDR	Caldiran	0.69	50	*e*PG	Pn	16 02 52.9	+0.6
CLDR				*e*SG	Sn	16 03 03.8	+1.5
TUTA	Tutak	0.78	335	*i* P	Pn	16 02 52.5	-1.0
TUTA				*i* S	Sb	16 03 01.6	-1.8
TUTA	Tutak	0.78	335	P	Pn	16 02 52.5	-1.0
TUTA				S	Sb	16 03 01.5	-1.8
GURO	Guroymak-BITLI	0.96	262	PG	Pn	16 02 55.7	-0.1
GURO				SG	Sn	16 03 08.5	-0.2
EATA	Eleskirt	1.30	334	*i* P	Pb	16 03 01.6	-0.4
EATA				*i* S	Sb	16 03 21.0	+2.7
EATA	Eleskirt	1.30	334	P	Pb	16 03 01.5	-0.4
EATA				S	Sb	16 03 21.0	+2.7

IDC 27 16:09:12.0±2.8, **5°.79S**×**147°.59E**, **h236**^{km}±40^{km}, **mb3.3**/3, **mb1 3.5**/5, **mb1mx3.0**/44, **mbtmp3.9**/5, **MS3.7**/1, **Ms1 3.7**/1, **ms1mx2.4**/24, **Error ellipse: s-maj=93.1km s-min=18.4km az=123.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.62	187	P	Pn	16 10 11.3	+0.6
	1.3nm,0.3s,baz=296,slow=14,SNR=13						
PMG				S	S	16 10 57.6	+0.4
	16nm,0.3s,baz=323,slow=14,SNR=14						
WRA	Warramunga Arr	19.08	221	P	P	16 13 16.4	-0.8
	1.0nm,0.3s,baz=39,slow=11,SNR=91						
ASAR	Alice Springs	22.13	215	P	P	16 13 49.4	+0.9
	2.5nm,0.6s,baz=56,slow=9.4,SNR=63						
H11S3	WAKE ISLAND Hy	30.61	38	T	T	16 47 11.8	
	baz=220,slow=76,SNR=232						
H11S2	WAKE ISLAND Hy	30.61	38	T	T	16 47 13.4	
	baz=220,slow=76,SNR=226						
H11S1	WAKE ISLAND Hy	30.62	38	T	T	16 47 13.1	
	baz=220,slow=76,SNR=210						
H11N1	WAKE ISLAND Hy	31.67	36	T	T	16 48 31.1	
	baz=219,slow=76,SNR=59						
H11N3	WAKE ISLAND Hy	31.68	36	T	T	16 48 33.1	
	baz=219,slow=76,SNR=62						
H11N2	WAKE ISLAND Hy	31.68	36	T	T	16 48 32.4	
	baz=219,slow=76,SNR=108						
NWAO	Narrogin (SRO)	39.08	222	LR	LR	16 33 02.9	
	comp=Z,90nm,18.1s,baz=306,slow=37						
PETK	Petropavlovsk-	59.29	7	P	P	16 18 49.1	+0.2
	0.7nm,0.5s,baz=159,slow=5.2						
ILAR	Eielson Array	85.05	23	P	P	16 21 19.9	-0.9
	0.5nm,0.8s,baz=251,slow=4.6,SNR=4.7						

DJA 27 16:13:06.0±3.4, **4°S**±7°×**14°1E**±2°1, **h15**^{km}±50^{km}, **M3.6**/3, **MLv3.6**/3, **Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	1.23	349	P	Pn	16 13 28.4	-0.3
JAY				S	Sn	16 13 45.0	-0.1
GENI	Genyem	1.36	326	P	Pn	16 13 30.3	-0.2
GENI				S	Sb	16 13 48.5	0.0

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*ISCJB **27** 16:15:46.0±0.3, 9°.29N±0°.04×69°.64W±0°.04, h8^{km}, mb4.0/19, MS3.2/12, Error ellipse: s-maj=6.9km s-min=3.4km az=44.4*

*IDC **27** 16:15:46.0±0.5, 9°.20N×69°.67W, h0^{km}, mb4.1/19, mb1 4.3/21, mb1mx4.1/52, mbtmp4.1/21, ML4.4/3, MS3.2/17, Ms1 3.2/17, ms1mx3.0/55, Error ellipse: s-maj=13.4km s-min=8.9km az=155.0*

*NEIC **27** 16:15:49.0±0.0, 9°.22N×69°.67W, h5^{km}, mb4.4/2, MW4.2(CAR), After CAR.*

ISC 27 16:15:47.6±0.4, **9°.22N**±0°.05×**69°.66W**±0°.05, **h8**^{km}, **n71, σ1^s.52**/70, **mb4.1**/19, **MS3.2**/12, **Venezuela**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SDV	Santo Domingo	1.02	251	Pg	Pg	16 16 06.7	-0.5
	620nm,0.3s,baz=118,slow=5.0,SNR=358						
SDV				Lg	Lg	16 16 19.2	
	3μm,0.3s,baz=16,slow=18,SNR=26						
SDV				LR	LR	16 16 44.2	
	comp=Z,9μm,19.7s,baz=78,slow=58						
SDV	Santo Domingo	1.02	251	*e*Pg	Pg	16 16 07.0	-0.2
SDV	Santo Domingo	1.02	251	*e*P	Pg	16 16 06.6	-0.5
URIC	Uribia, Colomb	3.36	317	*e*P	Pn	16 16 44.0	+3.6
TAMC	Tame, Arauca	3.48	217	*e*P	Pn	16 16 42.0	-0.1
PAMC	Pamplona, Colo	3.54	238	*e*P	Pn	16 16 44.0	+0.6
OCAC	Ocana	3.75	255	*e*P	Pb	16 16 55.2	+1.0
BARC	Barichara	4.36	233	*e*P	Pn	16 16 55.3	+1.0
BRRC	Barranca, Sant	4.53	243	*e*P	Pn	16 16 57.3	+0.8
YOPC	Yopal, Colombi	4.72	216	*e*P	Pn	16 17 01.3	+2.1
RUSC	La Rusia	4.74	226	*e*Pn	Pn	16 17 00.4	+0.6
RUSC	La Rusia	4.74	226	*e*P	Pn	16 16 59.6	-0.3
PCRV	Puerto La Cruz	5.04	79	Pn	Pn	16 17 04.9	+1.2
	6.5nm,0.3s,baz=298,slow=2.3,SNR=28						
PCRV				Sn	Sn	16 18 03.1	+0.9
	53nm,0.3s,baz=74,slow=20,SNR=8.8						
ZARC	Zaragoza, Cauc	5.42	252	*e*P	Pn	16 17 10.6	+1.8
PTBC	PUERTO BERRIO,	5.45	241	*e*P	Pn	16 17 08.7	-0.4
SJCC	San Jacinto, C	5.48	277	*e*P	Pn	16 17 11.5	+1.8
UREC	San Jos˜' de U	5.99	256	*e*P	Pn	16 17 20.6	+4.0
NORC	Norcasia	6.32	235	*e*P	Pn	16 17 22.6	+1.5
ROSC	El Rosal	6.35	227	Pn	Pn	16 17 24.9	+2.9
	25nm,0.3s,baz=38,slow=4.8,SNR=42						
ROSC				Sn	Sn	16 18 35.8	+0.9
	11nm,0.3s,baz=225,slow=20,SNR=2.5						
ROSC				LR	LR	16 19 57.1	
	comp=Z,254nm,18.7s,baz=270,slow=40						
ROSC	El Rosal	6.35	227	*e*Pn	Pn	16 17 24.2	+2.3
ROSC				Sn	Sn	16 18 35.8	+0.9
VILC	Villavicencio,	6.47	219	*e*P	Pn	16 17 24.6	+1.3
HELC	Santa Helena	6.55	243	*e*Pn	Pn	16 17 25.4	+0.8
ANIL	Santa Ana	7.39	231	*e*P	Pn	16 17 37.2	+1.1
PRAC	Prado	7.54	224	*e*Pn	Pn	16 17 38.0	0.0
PRAC	Prado	7.54	224	*e*P	Pn	16 17 37.7	-0.3
YOTC	Yotoco, Valle	8.44	232	*e*P	Pn	16 17 49.2	-1.2
HORQ	Saladito	8.96	231	*e*P	Pn	16 17 55.8	-1.9
CRPR	Cabo Rojo, PR	9.08	16	*e*Pn	Pn	16 17 57.6	-1.4
OBIP	Obispado Ponce	9.26	18	*e*Pn	Pn	16 18 00.5	-1.0
MPR	Mayaguez	9.27	15	*e*Pn	Pn	16 18 01.2	-0.3
SJG	San Juan	9.47	21	Pn	Pn	16 18 05.2	+0.8
	14nm,0.3s,baz=192,slow=16,SNR=18						
SJG				Sn	Sn	16 19 41.6	-9.5
	2.4nm,0.3s,baz=16,slow=20,SNR=4.2						
SJG				LR	LR	16 22 05.3	
	comp=Z,108nm,19.6s,baz=116,slow=40						
SJG	San Juan	9.47	21	*e*Pn	Pn	16 18 03.9	-0.5
SJG				Sn	Sn	16 19 41.6	-9.5
AOPR	Arecibo Observ	9.50	17	*e*Pn	Pn	16 18 05.3	+0.5
HUMP	Col San Antoni	9.61	22	*e*Pn	Pn	16 18 05.9	-0.4
MTP	Monte Pirata	9.68	24	*e*Pn	Pn	16 18 07.6	+0.3
EMPR	Esperanza - Ma	9.69	18	*e*Pn	Pn	16 18 07.8	+0.4
CBYP	Canovanas	9.72	22	*e*Pn	Pn	16 18 08.1	+0.2
STVI	Saint Thomas	10.16	26	*e*Pn	Pn	16 18 13.8	-0.1
PTGA	Pitinga	13.82	135	Pn	Pn	16 19 02.5	-1.5
	1.0nm,0.3s,baz=322,slow=15,SNR=8.1						
PTGA				Sn	Sn	16 21 43.9	+6.0
	1.7nm,0.3s,baz=2.1,slow=18,SNR=3.7						
PTGA				Lg	Lg	16 22 56.1	
	9.2nm,0.3s,baz=46,slow=24,SNR=8.8						
PTGA				LR	LR	16 24 58.8	
	comp=Z,71nm,20.0s,baz=106,slow=40						
JTS	JuntasAbangare	15.11	275	LR	LR	16 27 11.7	
	comp=Z,50nm,19.2s,baz=145,slow=45						
ATAH	Atahualpa	18.43	208	P	P	16 20 05.9	+1.8
	1.2nm,0.3s,baz=2.6,slow=7.3,SNR=5.7						
ATAH				LR	LR	16 28 34.0	
	comp=Z,149nm,21.7s,baz=8.1,slow=42						
SAML	Samuel	19.17	160	*e*P	P	16 20 08.5	-3.3
	11nm,0.7s						
NNA	Nana	22.25	199	P	P	16 20 45.5	+0.4
	19nm,0.7s,baz=354,slow=7.9,SNR=5.3						
NNA				LR	LR	16 30 56.8	
	comp=Z,104nm,18.0s,baz=342,slow=41						
LPAZ	La Paz	25.39	177	P	P	16 21 16.5	+0.2
	12nm,0.8s,baz=352,slow=12,SNR=27						
LPAZ				LR	LR	16 32 21.1	
	comp=Z,52nm,21.0s,baz=346,slow=39						
LPAZ	La Paz	25.39	177	*e*P	P	16 21 16.9	+0.5
	11nm,0.8s						
CMIG	Matias Romero	25.75	290	LR	LR	16 33 28.6	
	comp=Z,90nm,19.0s,baz=12,slow=41						
SIV	San Ignacio	26.46	161	P	P	16 21 24.7	-0.7
	3.3nm,0.5s,baz=10,slow=9.4,SNR=18						
SIV				LR	LR	16 32 19.5	
	comp=Z,129nm,21.1s,baz=317,slow=38						
TKL	Tuckaleechee C	29.29	336	LR	LR	16 33 43.0	
	comp=Z,55nm,21.3s,baz=60,slow=37						
BDFB	Brasilia	32.71	139	P	P	16 22 20.5	-0.6
	3.8nm,0.8s,baz=305,slow=12,SNR=3.0						
TXAR	Lajitas Array	37.60	307	P	P	16 23 03.5	+0.4
	0.2nm,0.5s,baz=130,slow=8.3,SNR=3.4						
TXAR				PcP	PcP	16 25 20.1	-0.9
	0.5nm,0.6s,baz=123,slow=3.3,SNR=3.9						
ANMO	Albuquerque	42.25	313	LR	LR	16 42 53.8	
	comp=Z,31nm,21.0s,baz=66,slow=38						
SCHQ	Schefferville	45.54	2	LR	LR	16 42 01.2	
	comp=Z,44nm,18.5s,baz=256,slow=35						
PDAR	Pinedale Array	48.28	321	P	P	16 24 30.1	+0.5
	0.6nm,0.6s,baz=113,slow=10,SNR=2.6						
PLCA	Paso Flores	49.71	181	P	P	16 24 39.1	-1.2
	4.7nm,0.7s,baz=18,slow=8.8,SNR=18						
NVAR	Mina Array Bea	52.34	312	P	P	16 25 00.9	+0.4
	0.6nm,0.6s,baz=111,slow=6.6,SNR=6.6						
YKA	Yellowknife Ar	62.26	338	P	P	16 26 09.6	-0.2
	1.1nm,0.6s,baz=126,slow=7.5,SNR=4.4						
ESDC	Sonseca Array	65.49	51	P	P	16 26 32.8	+1.1
	0.2nm,0.3s,baz=274,slow=6.4,SNR=3.5						
TORD	Torodi Ar. Bea	69.92	79	P	P	16 27 01.5	+1.6
	0.3nm,0.5s,baz=291,slow=6.1						
TORD				LR	LR	16 57 12.3	
	comp=Z,11nm,19.8s,baz=270,slow=36						
ILAR	Eielson Array	76.27	335	P	P	16 27 34.6	-2.0
	0.5nm,0.7s,baz=117,slow=4.2,SNR=4.5						
NOA	NORSAR Array B	77.57	29	P	P	16 27 44.4	+0.3
	1.2nm,1.0s,baz=255,slow=5.2,SNR=2.5						
NOA				LR	LR	16 58 00.6	
	comp=Z,7.1nm,20.6s,baz=245,slow=33						
CLL	Collm	78.28	39	*e*P	P	16 27 49.0	+0.8
HFS	Hagfors	78.75	30	P	P	16 27 50.6	0.0
	0.7nm,0.8s,baz=290,slow=4.3,SNR=2.4						
HFS				LR	LR	16 56 12.0	
	comp=Z,13nm,20.2s,baz=348,slow=31						
GERES	GERESS Array B	78.76	42	P	P	16 27 50.7	-0.3
	0.8nm,0.6s,baz=252,slow=3.8,SNR=8.7						
SPITS	Spitsbergen Ar	80.22	12	P	P	16 27 58.4	+0.1
	5.1nm,0.8s,baz=1.0,slow=7.9,SNR=3.9						
SPITS				LR	LR	17 01 34.9	
	comp=Z,10nm,20.9s,baz=240,slow=34						
ARCES	ARCESS Array B	83.24	21	P	P	16 28 13.5	-0.8
	1.3nm,0.7s,baz=286,slow=4.4,SNR=9.4						
FINES	FINESS Array B	84.71	29	P	P	16 28 21.8	-0.2
	0.8nm,0.7s,baz=254,slow=3.4,SNR=4.6						
MLR	Muntele Rosu	87.40	44	P	P	16 28 35.9	+0.1
	2.6nm,0.5s,baz=164,slow=5.5,SNR=5.3						
TSUM	Tsumeb	90.41	109	LR	LR	17 09 42.2	
	comp=Z,15nm,18.1s,baz=164,slow=36						
CMAR	Chiang Mai Arr	150.28	22	PKPbc	PKPbc	16 35 39.2	-1.2
	0.5nm,0.7s,baz=305,slow=3.2,SNR=3.4						
ASAR	Alice Springs	153.28	235	PKPbc	PKPbc	16 35 44.9	-2.3
	1.1nm,0.7s,baz=109,slow=2.6,SNR=14						
WRA	Warramunga Arr	154.48	243	PKPbc	PKPbc	16 35 47.8	-2.1
	0.6nm,0.7s,baz=103,slow=2.3,SNR=6.9						

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*IDC **27** 16:21:52.7±1.0, 23°.00N×121°.78E, h0^{km}, mb3.5/9, mb1 3.6/10, mb1mx3.4/62, mbtmp3.5/10, ML2.7/1, MS3.0/4, Ms1 3.1/4, ms1mx2.6/49, Error ellipse: s-maj=33.4km s-min=20.2km az=68.0*

*ISCJB **27** 16:21:53.5±0.3, 22°.91N±0°.01×121°.29E±0°.02, h4^{km}±2^{km}, mb3.4/9, MS2.9/4, Error ellipse: s-maj=2.7km s-min=2.3km az=39.8*

*TAP **27** 16:21:54.1, 22°.97N×121°.20E, h9^{km}, ML3.8, C*

*JMA **27** 16:21:55.1±0.6, 22°.79N×121°.66E, h0^{km}, M3.4*

ISC 27 16:21:55.1±0.8, **22°.95N**±0°.02×**121°.26E**±0°.02, **h13**^{km}±4^{km}, **n123, σ1^s.23**/158, **mb3.5**/9, **MS2.9**/4, **10C-16D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHKT	Chengkung	0.18	33	⇓*i*P	Pb	16 21 59.4	-0.8
	baz=62						
CHKT				S	Sb	16 22 03.0	-0.7
	baz=62						
TWG	Pinlang	0.22	234	⇑*i*P	Pg	16 21 58.4	-1.4
	baz=224						
TWG				S	Sg	16 22 01.9	-1.1
	baz=224						
TTN	Taitung	0.22	209	⇓*i*P	Pg	16 22 00.0	+0.1
	baz=193						
FULB	Fuli	0.25	7	⇓P	Pg	16 22 00.3	-0.1
	baz=13						
FULB				S	Sb	16 22 05.9	+0.1
	baz=13						
TWH	Lutao	0.31	140	⇓*i*P	Pb	16 22 02.2	-0.3
	baz=120						
TWH				*e*S	Sb	16 22 08.9	+1.4
	baz=120						
ELDTW	Lidau	0.33	317	⇓*i*P	Pg	16 22 00.1	-1.7
	baz=322						
ELDTW				*i* S	Sg	16 22 04.2	-2.2
	baz=322						
TWF1	Yuli	0.40	5	⇑P	Pg	16 22 02.4	-0.7
	baz=3.0						
YULB	Yu-li	0.44	4	⇑P	Pg	16 22 02.9	-1.0
	baz=11						
YULB				*e*S	Sg	16 22 09.6	-0.2
	baz=11						
ECL	Taimali	0.45	219	⇑P	Pg	16 22 02.9	-1.2
	baz=225						
ECL				*e*S	Sg	16 22 10.2	+0.1
	baz=225						
STYT	Tauyuan	0.51	295	⇓*i*P	Pg	16 22 03.6	-1.5
	baz=296						
STYT				S	Sg	16 22 09.8	-2.1
	baz=296						
EHY	Hungye	0.56	6	⇓P	Pg	16 22 05.1	-0.9
	baz=11						
EHY				*e*S	Sg	16 22 13.1	-0.3
	baz=11						
SLGT	Liugui	0.57	274	*e*P	Pg	16 22 04.5	-1.7
	baz=268						
SLGT				*e*S	Sg	16 22 11.2	-2.6
	baz=268						
YUS	Yu-Shan	0.61	332	⇓*i*P	Pg	16 22 05.6	-1.5
	baz=336						
YUS				S	Sg	16 22 13.4	-1.9
	baz=336						
SSD	Sandimen	0.62	251	⇓*i*P	Pg	16 22 05.1	-2.0
	baz=248						
SSD				*e*S	Sg	16 22 12.1	-3.2
	baz=248						
SGST	Jiashian	0.64	282	⇓*i*P	Pg	16 22 06.6	-1.0
	baz=282						
SGST				*e*S	Sg	16 22 16.0	0.0
	baz=282						
MASBT	Mashibuluo	0.67	240	⇓P	Pg	16 22 06.4	-1.7
	baz=242						
MASBT				*e*S	Sg	16 22 14.6	-2.4
	baz=242						
TPUB	Ta-pu	0.68	301	⇑P	Pg	16 22 07.3	-1.0
	baz=303						
TPUB				S	Sg	16 22 16.6	-0.7
	baz=303						
TAW	Tawu	0.68	210	⇑P	Pg	16 22 07.0	-1.3
	baz=217						
TAW				*e*S	Sg	16 22 16.5	-0.7
	baz=217						
EAST	Anshuo	0.68	214	*e*P	Pg	16 22 07.0	-1.3
	baz=210						
CHN1	Nanshi	0.71	289	⇓*i*P	Pg	16 22 08.3	-0.7
	baz=294						
CHN1				*e*S	Sb	16 22 19.4	+0.2
	baz=294						
EGFH	Guangfu	0.73	12	*e*P	Pg	16 22 09.0	-0.3
	baz=16						
SGLT	Jiouru	0.75	253	*e*P	Pg	16 22 08.7	-0.9
	baz=251						
TWK	Hsinying	0.78	294	⇓*i*P	Pg	16 22 09.4	-0.8
	baz=295						
TWK				*e*S	Sg	16 22 20.1	-0.4
	baz=295						
TWM1	Shoushan	0.78	261	⇓P	Pg	16 22 09.8	-0.5
	baz=253						
SCZT	Fangliau	0.83	226	⇑P	Pg	16 22 09.6	-1.5
	baz=232						
CHN3	Shinhua	0.84	279	⇓P	Pn	16 22 12.0	-0.6
	baz=279						
CHN3				*e*S	Sn	16 22 25.5	+0.7
	baz=279						
CHN5	Tsauling	0.84	320	P	Pg	16 22 10.4	-0.9
	baz=322						
ESL	Shilin	0.87	10	*e*P	Pg	16 22 11.0	-1.1
	baz=14						
SSLB	Suanglung	0.88	341	P	Pg	16 22 10.2	-1.9
	baz=340						
SSLB				*e*S	Sb	16 22 23.9	-0.1
	baz=340						
CHY	Chiayi	0.94	305	*e*P	Pg	16 22 12.6	-0.7
	baz=307						
CHY				*e*S	Sn	16 22 26.9	-0.5
	baz=307						
LAY	Lan-yu	0.95	164	*e*P	Pg	16 22 11.3	-2.1
	baz=146						
TAI1	Yung-k'ang	0.96	276	*e*P	Pb	16 22 13.6	+0.1
	baz=276						
WGK	Gukeng	0.97	319	P	Pb	16 22 13.6	-0.2
	baz=321						
WGK				*e*S	Sn	16 22 27.6	-0.6
	baz=321						
SMLT	Sun Moon Lake	0.99	340	*e*P	Pg	16 22 12.4	-1.7
	baz=337						
WDLH	Douliu	0.99	318	*e*P	Pb	16 22 13.7	-0.5
	baz=320						
WJS	Zhushan	1.00	331	*e*P	Pg	16 22 14.2	-0.1

	baz=335						
WJS				*e*S	Sn	16 22 29.2	+0.4
	baz=335						
ENLB	Shoufeng	1.00	18	*e*P	Pb	16 22 13.0	-1.3
	baz=21						
SCLT	Jiali	1.01	283	*e*P	Pg	16 22 14.5	0.0
	baz=283						
SCLT				*e*S	Sn	16 22 30.0	+0.9
	baz=283						
WLCH	Liuqiu	1.01	234	*e*P	Pn	16 22 16.5	+1.5
	baz=227						
TYC	Yuchr	1.02	339	*e*P	Pb	16 22 13.4	-1.2
	baz=341						
TYC				*e*S	Sn	16 22 29.7	+0.4
	baz=341						
TWP	Hsiaoliuchiu	1.03	234	*e*P	Pn	16 22 16.6	+1.4
	baz=227						
WLGB	Puzi	1.03	301	*e*P	Pb	16 22 14.2	-0.6
	baz=302						
WLGB				*e*S	Sn	16 22 30.1	+0.5
	baz=302						
CHN8	Yiju	1.04	292	⇑P	Pb	16 22 14.6	-0.4
	baz=293						
CHN8				S	Sn	16 22 30.5	+0.6
	baz=293						
HEN	Hengchun	1.06	207	*e*P	Pb	16 22 15.4	+0.1
	baz=194						
WNT	Mingjian	1.06	330	⇑P	Pn	16 22 15.5	-0.3
	baz=332						
WNT				S	Sn	16 22 31.1	+0.6
	baz=332						
TWK1	Hengchun	1.09	203	*e*P	Pg	16 22 16.6	+0.5
	baz=202						
TWKBT	Hengchun	1.09	203	*e*P	Pb	16 22 14.3	-1.5
	baz=202						
TSEB	Hengchuen, Pin	1.10	198	*e*P	Pg	16 22 16.5	+0.2
	baz=181						
CHGB	Renai	1.11	356	⇓P	Pb	16 22 14.8	-1.5
	baz=10.0						
CHGB				*e*S	Sg	16 22 30.9	0.0
	baz=10.0						
DPDB	Guoxing	1.12	344	*e*P	Pb	16 22 15.3	-1.1
	baz=346						
DPDB				*e*S	Sn	16 22 33.2	+1.2
	baz=346						
TWD	Chiawan	1.17	15	*e*P	Pb	16 22 16.1	-1.1
	baz=19						
WSF	Szhu	1.18	306	*e*P	Pn	16 22 16.3	-1.0
	baz=307						
WSF				*e*S	Sn	16 22 33.6	+0.5
	baz=307						
WHF	Hehuan Shan	1.19	0	⇑P	Pb	16 22 16.6	-1.2
	baz=16						
WHF				*e*S	Sb	16 22 32.9	-0.4
	baz=16						
RLNB	Erlin	1.25	319	*e*P	Pn	16 22 18.0	-0.3
	baz=307						
NACB	Ninganchiao	1.26	14	*e*P	Pn	16 22 16.8	-1.6
	baz=17						
WTCT	Ta-ch’eng	1.28	315	*e*P	Pn	16 22 18.3	-0.4
	baz=304						
WTCT				*e*S	Sg	16 22 36.1	-0.3
	baz=304						
WCHH	Zhanghua	1.30	330	*e*P	Pg	16 22 19.7	-0.4
	baz=331						
WCHH				*e*S	Sg	16 22 38.4	+1.5
	baz=331						
TWT	Tachien	1.30	357	*e*P	Pn	16 22 18.7	-0.5
	baz=16						
TDCB	Techi	1.30	356	*e*P	Pn	16 22 17.9	-1.2
	baz=16						
TCU	Taichung	1.31	336	*e*P	Pg	16 22 19.8	-0.5
	baz=339						
NNSB	Datong	1.48	4	*e*P	Pn	16 22 21.1	-0.4
	baz=26						
NNS	Nan Shan	1.49	4	*e*P	Pb	16 22 22.2	-0.4
	baz=26						
WDGT	Dungji	1.51	282	*e*P	Pn	16 22 20.6	-1.2
	baz=282						
NSY	Sanyi	1.53	343	*e*P	Pb	16 22 23.3	0.0
	baz=346						
ENA	Nanau	1.54	17	*e*P	Pn	16 22 21.3	-1.0
	baz=21						
NANB	Nanao	1.54	17	*e*P	Pn	16 22 21.2	-1.1
	baz=21						
ENAH	Nanao	1.57	18	*e*P	Pn	16 22 21.8	-1.0
	baz=23						
PTSB	Yuanli	1.57	341	*e*P	Pb	16 22 24.0	-0.2
	baz=342						
PTSB				*e*S	Sg	16 22 45.8	0.0
	baz=342						
NMLH	Miaoli	1.64	345	*e*P	Pb	16 22 25.0	-0.2
	baz=351						
PHUB	P’eng-hu	1.65	290	*e*P	Pn	16 22 22.0	-1.8
	baz=290						
PHUB				*e*S	Sn	16 22 43.8	-1.1
	baz=290						
PNG	Penghu	1.69	292	*e*P	Pn	16 22 22.8	-1.5
	baz=291						
PNG				*e*S	Sn	16 22 45.1	-0.7
	baz=291						
NSTT	Nanjuang	1.69	352	*e*P	Pb	16 22 26.0	-0.1
	baz=7.0						
NSTT				*e*S	Sg	16 22 49.8	+0.3
	baz=7.0						
LIOB	Emei	1.70	352	*e*P	Pb	16 22 25.8	-0.5
	baz=11						
ENTT	Nioudou	1.71	9	*e*P	Pn	16 22 23.7	-0.9
	baz=30						
VCHM	Qimei	1.71	279	*e*P	Pn	16 22 23.9	-0.7
	baz=279						
YHNB	Yeheng	1.71	3	*e*P	Pn	16 22 24.5	-0.3
	baz=27						
NSK	Sanguang	1.72	3	*e*P	Pb	16 22 26.3	-0.4
	baz=28						
TWC	Suao	1.74	18	*e*P	Pn	16 22 25.4	+0.4
	baz=24						
EOS1	EOS1	1.78	26	*e*P	Pn	16 22 26.0	+0.5
	baz=41						
TWE	Neicheng	1.80	12	*e*P	Pn	16 22 25.8	-0.1
	baz=32						
WLTB	Daxi	1.89	360	*e*P	Pg	16 22 30.8	-0.7
	baz=15						
EGS		1.98	18	*e*P	Pb	16 22 29.9	-1.1
	baz=24						
TATO	Taipei	2.03	6	*e*P	Pb	16 22 30.8	-1.0
	baz=33						
TIPB	Shuangxi	2.08	14	*e*P	Pn	16 22 29.9	+0.2
	baz=20						
TWS1	Kuangyinshan	2.15	4	*e*P	Pb	16 22 33.2	-0.7
	baz=33						
JYNG	Yonagunijimaku	2.15	46	P	Pn	16 22 30.7	+0.1
JYNG				*e*S	Sn	16 22 57.7	+0.5
NWF	Wu-fen Shan	2.16	13	*e*P	Pb	16 22 32.6	-1.6
	baz=31						
WFSB	Wu-fen Shan	2.16	13	*e*P	Pb	16 22 32.4	-1.7
	baz=31						
YOJ	Yonaguni jima	2.20	46	*e*P	Pn	16 22 30.5	-0.8
	baz=42						
YOJ	Yonaguni jima	2.20	46	P	Pn	16 22 32.4	+1.1
YOJ				*e*S	Sn	16 22 58.6	+0.2
YM04	YM04	2.21	6	*e*P	Pn	16 22 32.3	+0.8
	baz=34						
YM10	YM10	2.21	7	*e*P	Pn	16 22 32.2	+0.6
	baz=34						
YM05	YM05	2.22	7	*e*P	Pn	16 22 32.4	+0.7
	baz=34						
YM11	YM11	2.22	7	*e*P	Pb	16 22 33.3	-1.9
	baz=34						
YM07	YM07	2.24	8	*e*P	Pn	16 22 32.9	+0.9
	baz=34						
YM08	YM08	2.25	8	*e*P	Pb	16 22 33.6	-2.0
	baz=34						
HATJ	Hateruma jima	2.58	64	*e*S	Sn	16 23 05.0	-2.9
VWUC	VWUC	2.62	321	*e*P	Pn	16 22 36.5	-0.7
	baz=320						
IRIF	Iriomote-Funau	2.65	58	P	Pn	16 22 37.6	+0.1
IRIF				S	Sn	16 23 10.7	+1.1
JKRS	Kuro-shima	2.83	63	P	Pn	16 22 39.7	-0.3
JKRS				*e*S	Sn	16 23 13.0	-0.9
JIJ	Ishigaki jima	2.99	61	P	Pn	16 22 42.1	-0.2
JIJ				*e*S	Sn	16 23 16.1	-1.9
JISG	Ishigakijimahi	3.23	59	P	Pn	16 22 44.4	-1.2
MATB	Ma-tsu	3.41	340	*e*P	Pn	16 22 47.4	-0.5
	baz=340						
JTJ	Tarama	3.57	61	P	Pn	16 22 50.5	+0.3
JOW	Kunigami	7.45	57	Pn	Pn	16 23 41.5	-2.1
	1.0nm,0.3s,baz=258,slow=18,SNR=3.7						
MJAR	Matsushiro Arr	19.96	43	P	P	16 26 24.0	-3.0
	0.0nm,0.3s,baz=230,slow=9.4,SNR=2.8						
CMAR	Chiang Mai Arr	21.34	262	P	P	16 26 48.2	+6.1
	1.5nm,0.9s,baz=67,slow=8.3,SNR=6.7						
CMAR				LR	LR	16 36 58.8	
	comp=Z,55nm,18.9s,baz=188,slow=42						
GUMO	Guam	24.24	108	LR	LR	16 37 15.6	
	comp=Z,15nm,18.0s,baz=271,slow=39						
SONM	Songino Array	27.53	338	P	P	16 27 43.9	+2.3
	0.7nm,0.7s,baz=166,slow=7.4,SNR=4.5						
SONM				LR	LR	16 39 56.7	
	comp=Z,33nm,20.1s,baz=159,slow=39						
MKAR	Makanchi Array	39.28	317	P	P	16 29 24.7	+1.1
	0.8nm,0.8s,baz=110,slow=9.2,SNR=5.5						
ZALV	Zalesovo Beam	41.32	328	P	P	16 29 40.4	+0.1
	0.9nm,0.6s,baz=100,slow=7.9,SNR=2.6						
H11N1	WAKE ISLAND Hy	42.50	85	T	T	17 15 03.5	
	baz=283,slow=74,SNR=24						
H11N2	WAKE ISLAND Hy	42.50	85	T	T	17 15 04.2	
	baz=283,slow=74,SNR=35						
H11N3	WAKE ISLAND Hy	42.52	85	T	T	17 15 05.4	
	baz=283,slow=74,SNR=37						
H11S3	WAKE ISLAND Hy	42.59	87	T	T	17 15 09.1	
	baz=284,slow=75,SNR=39						
H11S1	WAKE ISLAND Hy	42.60	87	T	T	17 15 13.8	
	baz=284,slow=75,SNR=22						
H11S2	WAKE ISLAND Hy	42.61	87	T	T	17 15 14.6	
	baz=284,slow=75,SNR=17						
KURBB	Kurchatov Arra	43.10	321	P	P	16 29 56.6	+1.7
	0.5nm,0.9s,baz=106,slow=6.8,SNR=3.8						
WRA	Warramunga Arr	44.50	162	P	P	16 30 04.7	-1.7
	0.3nm,0.6s,baz=345,slow=9.0,SNR=3.1						
ASAR	Alice Springs	47.94	164	P	P	16 30 32.6	-0.9
	0.2nm,0.8s,baz=341,slow=6.5,SNR=4.3						
ARCES	ARCESS Array B	70.70	338	P	P	16 33 10.9	+0.4
	2.0nm,1.1s,baz=76,slow=11,SNR=2.8						
FINES	FINESS Array B	72.54	330	P	P	16 33 22.2	+0.6
	0.4nm,0.7s,baz=72,slow=8.9,SNR=2.7						
NOA	NORSAR Array B	79.34	332	LR	LR	17 12 25.7	
	comp=Z,12nm,21.6s,baz=60,slow=38						

NIED ***27*** *16:51:00, 45°.30N×149°.60E, h5^{km}, Mw3.9 Best double couple: M$_0$6.91000×10^{14} NP1:ϕ_s251.00000°, δ22.00000°, λ-101.00000°. NP2:ϕ_s82.00000°, δ68.00000°, λ-85.00000°.*

ISCJB ***27*** *16:51:47.9±0.4, 45°.97N±0°.05×149°.44E±0°.07, h149^{km}, mb3.7/25, Error ellipse: s-maj=9.4km s-min=3.2km az=41.9*

MOS ***27*** *16:51:48.8±1.1, 46°.04N×149°.41E, h158^{km}, mb4.0/10, Error ellipse: s-maj=10.9km s-min=7.3km az=66.2*

SKHL ***27*** *16:51:48.8±0.8, 45°.86N×149°.39E, h156^{km}±4^{km}, mb4.8/7, msh5.4/6*

JMA ***27*** *16:51:51.1±0.6, 45°.31N×149°.60E, h169^{km}, M3.6*

IDC ***27*** *16:51:51.3±2.2, 46°.19N×149°.25E, h158^{km}±20^{km}, mb3.4/18, mb1 3.6/22, mb1mx3.4/65, mbtmp3.8/22, Error ellipse: s-maj=15.4km s-min=11.1km az=136.0*

ISC 27 16:51:48.8±0.6, **45°.82N**±0°.07×**149°.51E**±0°.07, **h149**^{km}, **n96,** σ**2**^{s}.**01**/117, **mb3.7**/25, **6C-6D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril’sk	1.29	244	*i* P	Pn	16 52 16.0	-0.1
KUR				AMB	AMB	16 52 20.0	
	67nm,0.3s						
KUR				AMB	AMB	16 52 20.0	
	33nm,0.3s						
KUR				AMB	AMB	16 52 20.0	
	196nm,0.3s						
KUR				*i* S	Sn	16 52 38.0	+1.0
KUR				A	A	16 52 44.0	
	423nm,0.4s						
KUR				A	A	16 52 44.0	
	407nm,0.4s						
KUR	Kuril’sk	1.29	244	*d i*PN	Pn	16 52 16.9	+0.8
KUR				*i* S	Sn	16 52 37.9	+1.0
KUR				pmax	pmax		
	comp=E,33nm,0.3s						
KUR				pmax	pmax		
	comp=Z,195nm,0.3s						
KUR				pmax	pmax		
	comp=N,67nm,0.2s						
KUR				smax	smax		
	comp=N,1.0nm,0.4s						
KUR				smax	smax		
	comp=E,416nm,0.4s						
SHO	Shikotan	2.72	225	*i* P	Pn	16 52 33.0	+0.4
SHO				AMB	AMB	16 52 42.0	
	comp=E,20nm,0.3s						
SHO				AMB	AMB	16 52 42.0	
	comp=E,31nm,0.3s						
SHO				AMB	AMB	16 52 42.0	
	comp=E,43nm,0.3s						
SHO				*i* S	Sn	16 53 08.0	+1.6
SHO				A	A	16 53 12.0	
	comp=E,170nm,0.4s						
SHO				A	A	16 53 12.0	
	comp=E,197nm,0.4s						
SHO	Shikotan	2.72	225	*d i*PN	Pn	16 52 33.4	+0.8
SHO				*i* S	Sn	16 53 05.9	-0.5
SHO				pmax	pmax		
	comp=N,20nm,0.3s						
SHO				pmax	pmax		
	comp=Z,43nm,0.3s						
SHO				pmax	pmax		
	comp=E,31nm,0.2s						
SHO				smax	smax		
	comp=N,170nm,0.4s						
SHO				smax	smax		
	comp=E,197nm,0.4s						
YUK	Yuzh-Kuril’sk	3.14	237	*e*P	Pn	16 52 39.0	+1.1
YUK				AMB	AMB	16 52 42.0	
	comp=E,37nm,0.3s						
YUK				AMB	AMB	16 52 42.0	
	comp=E,47nm,0.3s						
YUK				AMB	AMB	16 52 42.0	
	comp=E,91nm,0.3s						
YUK				*i* S	Sn	16 53 18.0	+2.2
YUK				A	A	16 53 22.0	
	comp=E,168nm,0.4s						
YUK				A	A	16 53 22.0	
	comp=E,137nm,0.4s						
YUK	Yuzh-Kuril’sk	3.14	237	*e*PN	Pn	16 52 39.8	+1.9
YUK				*i* S	Sn	16 53 18.7	+2.9
YUK				pmax	pmax		
	comp=E,47nm,0.3s						
YUK				pmax	pmax		
	comp=Z,91nm,0.3s						
YUK				pmax	pmax		
	comp=N,37nm,0.2s						
YUK				smax	smax		
	comp=N,168nm,0.5s						
YUK				smax	smax		
	comp=E,137nm,0.3s						
LAGR	Lagunnoye	3.17	238	*e*P	Pn	16 52 40.0	+1.7
LAGR				AMB	AMB	16 52 53.0	
	comp=E,93nm,0.4s						
LAGR				AMB	AMB	16 52 53.0	
	comp=E,88nm,0.4s						
LAGR				AMB	AMB	16 52 53.0	
	comp=E,108nm,0.4s						
LAGR				*i* S	Sn	16 53 20.0	+3.5
LAGR				A	A	16 53 35.0	
	comp=E,284nm,0.5s						
LAGR				A	A	16 53 35.0	
	comp=E,45nm,0.5s						
LAGR	Lagunnoye	3.17	238	*e*PN	Pn	16 52 40.6	+2.3
LAGR				*i* S	Sn	16 53 20.1	+3.5
LAGR				pmax	pmax		
	comp=Z,108nm,0.5s						
LAGR				pmax	pmax		
	comp=N,93nm,0.4s						
LAGR				pmax	pmax		
	comp=E,88nm,0.4s						
LAGR				smax	smax		
	comp=E,451nm,0.6s						
LAGR				smax	smax		
	comp=N,284nm,0.5s						
GRPR	Tuman	3.22	237	*e*P	Pn	16 52 40.0	+1.1
GRPR				AMB	AMB	16 52 43.0	
	comp=N,36nm,0.4s						
GRPR				AMB	AMB	16 52 43.0	
	comp=N,69nm,0.4s						
GRPR				AMB	AMB	16 52 43.0	
	comp=N,80nm,0.4s						
GRPR				*i* S	Sn	16 53 20.0	+2.4
GRPR				A	A	16 53 24.0	
	comp=N,208nm,0.4s						
GRPR				A	A	16 53 24.0	
	comp=N,18nm,0.4s						
GRPR	Tuman	3.22	237	*e*PN	Pn	16 52 40.7	+1.8
GRPR				*i* S	Sn	16 53 20.2	+2.6
GRPR				pmax	pmax		
	comp=E,69nm,0.4s						
GRPR				pmax	pmax		
	comp=Z,80nm,0.4s						
GRPR				pmax	pmax		
	comp=N,36nm,0.2s						
GRPR				smax	smax		
	comp=N,208nm,0.3s						
GRPR				smax	smax		
	comp=E,176nm,0.4s						
GLVR	Golovnino	3.52	235	*e*P	Pn	16 52 44.0	+1.3
GLVR				AMB	AMB	16 52 52.0	
	comp=E,37nm,0.4s						
GLVR				AMB	AMB	16 52 52.0	
	comp=E,49nm,0.4s						
GLVR				AMB	AMB	16 52 52.0	
	comp=E,82nm,0.4s						
GLVR				*i* S	Sn	16 53 27.0	+2.5
GLVR				A	A	16 53 36.0	
	comp=E,189nm,0.4s						
GLVR				A	A	16 53 36.0	
	comp=E,27nm,0.4s						
GLVR	Golovnino	3.52	235	*e*PN	Pn	16 52 44.7	+2.0
GLVR				*i* S	Sn	16 53 27.4	+2.9
GLVR				pmax	pmax		
	comp=Z,82nm,0.7s						
GLVR				pmax	pmax		
	comp=N,37nm,0.2s						
GLVR				pmax	pmax		
	comp=E,49nm,0.2s						
GLVR				smax	smax		
	comp=N,189nm,0.2s						
GLVR				smax	smax		
	comp=E,271nm,0.4s						
NEM2	Nemuro 2	3.64	229	P	Pn	16 52 44.1	-0.2
NEM2				*e*S	Sn	16 53 25.3	-2.0
JRA	Rausu	3.64	240	P	Pn	16 52 46.3	+2.0
JNK	Nakash	4.08	239	P	Pn	16 52 51.6	+1.6
JTKR	Abashiri--Toko	4.38	247	P	Pn	16 52 55.9	+1.9
JAK	Akkeshi	4.45	232	P	Pn	16 52 55.2	+0.3
JAK				*e*S	Sn	16 53 45.0	-1.3
JMP	Maruseppu	4.73	250	P	Pn	16 52 59.9	+1.3
YSS	Yuzh-Sakhalins	4.81	286	*e*P	Pn	16 53 00.0	+0.4
YSS				AMB	AMB	16 53 01.1	
	comp=E,18nm,0.8s						
YSS	Yuzh-Sakhalins	4.81	286	⇑*i*PN	Pn	16 53 00.4	+0.8
YSS				pmax	pmax		
	comp=Z,20nm,0.8s						
JAR	Ashorobuto	4.81	240	P	Pn	16 53 01.4	+1.7
JOB	Onbets	5.00	236	P	Pn	16 53 03.1	+0.9
JOB				*e*S	Sn	16 53 58.9	-0.5
JKK2	Kamakawa 2	5.18	250	P	Pn	16 53 06.9	+2.3
ASAJ	Asahikawa	5.19	253	P	Pn	16 53 07.1	+2.4
	comp=Z,0.9nm,0.3s,baz=77,slow=17,SNR=13						
ASAJ	Asahikawa	5.19	253	P	Pn	16 53 07.0	+2.4
JCH	Churui	5.45	236	P	Pn	16 53 08.6	+0.4
JCH				*e*S	Sn	16 54 08.1	-2.0
MYR	Moyori	5.70	234	*e*P	Pn	16 53 11.3	-0.2
MYR				*e*S	Sn	16 54 14.4	-1.7
JEM	Erimo	5.95	233	P	Pn	16 53 16.0	+1.2
JEM				*e*S	Sn	16 54 21.8	-0.3
ERM	Erimo	5.95	233	*e*P	Pn	16 53 16.0	+1.2
ERM	Erimo	5.95	233	⇑*e*PN	Pn	16 53 16.0	+1.2
JNBK	Urakawa-nobuka	6.01	236	P	Pn	16 53 14.8	-0.8
JNBK				*e*S	Sn	16 54 20.2	-3.3
SKR	Severo-Kuril’s	6.57	40	*e*P	Pn	16 53 21.9	-1.0
SKR	Severo-Kuril’s	6.57	40	⇓*e*PN	Pn	16 53 22.0	-1.0
JNB	Noboribetsu	6.95	244	P	Pn	16 53 30.5	+2.4
JNB				*e*S	Sn	16 54 47.3	+1.4
JKB	Kayabe	7.27	240	P	Pn	16 53 32.0	-0.4
JKB				*e*S	Sn	16 54 49.4	-4.3
JTM	Tenmabayashi	7.94	234	P	Pn	16 53 40.7	-0.7
JANG	Nango	7.98	230	*e*S	Sn	16 55 03.8	-7.1
JTH	Tanohata	8.12	226	*e*S	Sn	16 55 08.5	-5.7
OFUJ	Ofunato	8.88	223	P	Pn	16 53 52.8	-1.1
PETK	Petropavlovsk-	9.04	33	P	Pn	16 53 54.9	-0.9
	baz=181,slow=7.3						
JIO	Ouri	9.53	222	P	Pn	16 54 01.8	-0.7
JIO				*e*S	Sn	16 55 41.8	-6.2
KLR	Kul’dur	12.48	292	P	Pn	16 54 42.4	+1.3
	comp=Z,0.0nm,0.3s,baz=110,slow=15,SNR=10						
KLR	Kul’dur	12.48	292	*e*P	Pn	16 54 41.7	+0.6
KLR	Kul’dur	12.48	292	⇑*e*PN	Pn	16 54 41.7	+0.6
ZEA	Zeya	16.37	307	*e*P	Pn	16 55 29.8	0.0
ZEA				pmax	pmax		
	comp=Z,31nm,0.8s						
SEY	Seymchan	17.23	4	P	P	16 55 38.1	-1.2
	comp=Z,0.4nm,0.3s,baz=188,slow=9.5,SNR=15						
SEY	Seymchan	17.23	4	*e*P	P	16 55 36.8	-2.6
SEY	Seymchan	17.23	4	⇓*e*P	P	16 55 36.8	-2.6
KSRS	Korea Array	18.13	250	P	Pn	16 55 52.0	+1.0
	comp=Z,0.2nm,0.3s,baz=53,slow=11,SNR=5.5						
YAK	Yakutsk	19.86	332	*e*P	P	16 56 07.8	-0.1
YAK				pmax	pmax		
	comp=Z,22nm,0.9s						
YAK				pmax	pmax		
	comp=N,8.0nm,1.1s						
YAK				pmax	pmax		
	comp=E,5.0nm,1.0s						
TIXI	Tiksi	27.72	346	P	P	16 57 19.8	-2.9
	comp=E,1.1nm,0.4s,baz=166,slow=9.4,SNR=4.5						
ULN	Ulaanbaatar	28.85	290	*e*P	P	16 57 31.4	-1.8
ULN	Ulaanbaatar	28.85	290	⇓*e*P	P	16 57 31.4	-1.8
ULN				pmax	pmax		
	comp=Z,1.0nm,1.3s						
H11N2	WAKE ISLAND Hy	29.71	145	T	T	17 29 05.2	
	baz=335,slow=75,SNR=71						
H11N1	WAKE ISLAND Hy	29.72	145	T	T	17 28 55.5	
	baz=335,slow=75,SNR=48						
H11N3	WAKE ISLAND Hy	29.72	145	T	T	17 29 04.8	
	baz=335,slow=75,SNR=52						
TLY	Talaya	30.40	298	⇑*e*P	P	16 57 45.9	-0.7
TLY				pmax	pmax		
	comp=Z,2.0nm,0.6s						
H11S1	WAKE ISLAND Hy	30.74	147	T	T	17 30 08.4	
	baz=336,slow=76,SNR=70						
H11S3	WAKE ISLAND Hy	30.75	147	T	T	17 30 11.7	
	baz=336,slow=76,SNR=48						
H11S2	WAKE ISLAND Hy	30.76	147	T	T	17 30 10.4	
	baz=336,slow=76,SNR=42						
WHN	Wuhan	31.27	253	P	P	16 57 54.3	-0.2
GTA	Gaotai	36.63	278	*e*P	P	16 58 41.8	+0.9
GTA				pP	pP	16 58 51.0	-22
GTA				sP	sP	16 58 55.0	-35
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
COLA	College	38.41	38	*e*P	P	16 58 55.6	+0.3
COLA	College	38.41	38	⇓*e*P	P	16 58 55.7	+0.4
ILAR	Eielson Array	38.83	38	P	P	16 58 58.2	-0.5
	comp=Z,0.7nm,0.6s,baz=272,slow=8.2,SNR=8.5						
ILAR	Eielson Array	38.83	38	*e*P	P	16 58 59.3	+0.5
ILAR	Eielson Array	38.83	38	*e*P	P	16 58 59.3	+0.5
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
ZALV	Zalesovo Beam	41.13	306	PcP	PcP	17 01 15.4	+1.1
	comp=Z,1.3nm,0.6s,baz=100,slow=2.6,SNR=5.0						
INK	Inuvik	43.77	32	P	P	16 59 38.9	0.0
	comp=Z,1.4nm,0.3s,baz=271,slow=5.9,SNR=3.6						
MKAR	Makanchi Array	45.14	297	P	P	16 59 49.6	-0.6
	comp=Z,0.4nm,0.6s,baz=97,slow=6.3,SNR=4.0						
MKAR				PcP	PcP	17 01 28.8	+0.8
	comp=Z,1.0nm,0.6s,baz=64,slow=4.5,SNR=9.4						
MKAR	Makanchi Array	45.14	297	*e*P	P	16 59 50.0	-0.2
MKAR	Makanchi Array	45.14	297	*e*P	P	16 59 50.0	-0.2
KURK	Kurchatov	45.79	303	P	P	16 59 54.4	-0.8
KURK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURBB	Kurchatov Arra	45.88	303	P	P	16 59 54.4	-1.5
	comp=Z,1.3nm,0.7s,baz=74,slow=8.6,SNR=6.8						
BVAR	Borovoye Array	49.51	309	P	P	17 00 22.7	-1.2
	comp=Z,1.1nm,0.8s,baz=237,slow=38,SNR=3.1						
BVAR				PcP	PcP	17 01 43.8	+0.3
	comp=Z,0.4nm,0.3s,baz=58,slow=2.5,SNR=4.0						
BRVK	Borovoye	49.55	309	⇑*e*P	P	17 00 19.6	-4.5
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
CMAR	Chiang Mai Arr	49.71	254	P	P	17 00 28.2	+2.4
	comp=Z,0.6nm,0.5s,baz=35,slow=7.8,SNR=3.5						

YKA	**Yellowknife Ar**	53.15	35	P	P	17 00 51.3	+0.6
	comp=Z,1.6nm,0.8s,baz=301,slow=7.1,SNR=3.2						
ARU	**Arti**	53.99	317	c iP	P	17 00 55.2	-1.8
ARU				*PP	pP	17 01 32.2	+0.9
ARU						17 02 54.6	
ARU				S	S	17 08 19.2	-1.7
ARU				SS	SKiKP	17 11 57.1	+4.2
ARU				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ARCES	**ARCESS Array B**	57.89	340	P	P	17 01 23.0	-1.5
	comp=Z,0.6nm,0.6s,baz=42,slow=9.9,SNR=5.7						
ARCES				PcP	PcP	17 02 14.4	-0.7
	comp=Z,1.7nm,0.9s,baz=72,slow=3.9,SNR=4.3						
FINES	**FINESS Array B**	63.79	333	P	P	17 02 02.5	-1.9
	comp=Z,2.4nm,0.5s,baz=34,slow=8.3,SNR=23						
FINES	**FINESS Array B**	63.79	333	eP	P	17 02 03.2	-1.2
FINES	**FINESS Array B**	63.79	333	eP	P	17 02 03.2	-1.2
FINES				pmax	pmax		
	comp=Z,2.0nm,0.5s						
NVAR	**Mina Array Bea**	65.08	60	P	P	17 02 15.4	+1.9
	comp=Z,0.5nm,0.7s,baz=292,slow=7.2,SNR=3.6						
SFJD	**Kangerlussuaq**	66.47	8	P	P	17 02 16.2	-5.5
	comp=Z,29nm,0.6s,baz=270,slow=1.0,SNR=5.2						
WRA	**Warramunga Arr**	66.88	196	P	P	17 02 26.9	+2.2
	comp=Z,0.3nm,0.5s,baz=12,slow=6.6,SNR=4.2						
PDAR	**Pinedale Array**	67.30	52	P	P	17 02 29.1	+1.4
	comp=Z,1.0nm,0.6s,baz=272,slow=3.0,SNR=7.3						
NB2	**NORSAR Subarra**	68.27	340	P	P	17 02 32.2	-0.9
	comp=Z,0.4nm,0.5s,baz=35,slow=5.9						
NOA	**NORSAR Array B**	68.27	340	P	P	17 02 32.2	-0.8
	comp=Z,0.8nm,0.5s,baz=31,slow=6.6,SNR=6.9						
HFS	**Hagfors**	68.42	338	P	P	17 02 32.8	-1.2
	comp=Z,0.8nm,0.4s,baz=46,slow=6.2,SNR=9.9						
ASAR	**Alice Springs**	70.59	195	P	P	17 02 50.8	+3.1
	comp=Z,0.3nm,0.6s,baz=9.4,slow=6.3,SNR=11						
ASAR	**Alice Springs**	70.59	195	eP	P	17 02 51.0	+3.3
ASAR	**Alice Springs**	70.59	195	eP	P	17 02 51.0	+3.3
AKASG	**Malin Array Be**	70.89	324	P	P	17 02 47.6	-1.7
	comp=Z,0.7nm,0.5s,baz=37,slow=6.0,SNR=2.6						
TXAR	**Lajitas Array**	80.12	58	P	P	17 03 43.9	+1.6
	comp=Z,0.8nm,0.6s,baz=295,slow=3.8,SNR=10						
TXAR	**Lajitas Array**	80.12	58	eP	P	17 03 44.0	+1.6
TXAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						

JMA 27 16:52:35.7, 36°.69N×140°.64E, h5^{km}±1^{km}, M0.8, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHO	**Hitachi**	0.10	216	P	Pg	16 52 37.8	0.0
JHO				S	Sg	16 52 39.2	0.0
JFFD	**Fukushimafurud**	0.41	351	P	Pg	16 52 43.8	+0.3
ONAJ	**Iwakimizuishiy**	0.43	17	P	Pg	16 52 44.4	+0.4
ONAJ				eS	Sg	16 52 50.4	+0.7
JYT	**Yasato**	0.58	218	P	Pg	16 52 47.2	+0.3
JFT	**Otama**	0.86	344	P	Pg	16 52 52.3	+0.1
JFT				eS	Sg	16 53 04.0	+0.6

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*ISCJB **27** 17:41:54.0±0.4, 44°.76N±0°.07×146°.96E±0°.08, h141^{km}±4^{km}, mb3.3/11, Error ellipse: s-maj=13.8km s-min=5.9km az=143.1*

*SKHL **27** 17:41:54.5±1.0, 43°.84N×147°.97E, h67^{km}±4^{km}, mb4.2/5*

*IDC **27** 17:41:56.4±2.0, 44°.89N×146°.83E, h148^{km}±18^{km}, mb3.1/11, mb1 3.3/17, mb1mx3.1/73, mbtmp3.6/17, MS2.3/2, Ms1 2.4/2, ms1mx2.1/21, Error ellipse: s-maj=19.3km s-min=12.1km az=133.0*

*JMA **27** 17:41:56.0±0.5, 44°.63N×146°.96E, h130^{km}±5^{km}, M3.2*

ISC 27 17:41:55.1±0.7, **44°.73N**±0°.08×**146°.97E**±0°.07, **h138**^{km}±6^{km}, **n33, σ1^{s}02**/45, **mb3.4**/11, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	0.81	52	i P	Pn	17 42 17.3	+0.2
KUR				AMB	AMB	17 42 17.8	
	40nm,0.2s						
KUR				AMB	AMB	17 42 17.8	
	85nm,0.2s						
KUR				AMB	AMB	17 42 17.8	
	23nm,0.2s						
KUR				i S	Sn	17 42 33.4	-0.4
KUR				A	A	17 42 34.9	
	130nm,0.3s						
KUR				A	A	17 42 34.9	
	154nm,0.3s						
YUK	**Yuzh-Kuril'sk**	1.06	229	i P	Pn	17 42 19.0	-0.2
YUK				AMB	AMB	17 42 19.0	
	111nm,0.2s						
YUK				AMB	AMB	17 42 19.0	
	146nm,0.2s						
YUK				AMB	AMB	17 42 19.0	
	106nm,0.2s						
YUK				i S	Sn	17 42 38.0	+0.4
YUK				A	A	17 42 40.0	
	279nm,0.6s						
YUK				A	A	17 42 40.0	
	451nm,0.6s						
LAGR	**Lagunnoye**	1.09	232	i P	Pn	17 42 19.0	-0.5
LAGR				AMB	AMB	17 42 20.0	
	97nm,0.4s						
LAGR				AMB	AMB	17 42 20.0	
	55nm,0.4s						
LAGR				AMB	AMB	17 42 20.0	
	60nm,0.4s						
LAGR				eS	Sn	17 42 38.0	-0.1
LAGR				A	A	17 42 44.0	
	624nm,0.3s						
LAGR				A	A	17 42 44.0	
	239nm,0.3s						
GRPR	**Tuman**	1.14	230	i P	Pn	17 42 20.0	0.0
GRPR				AMB	AMB	17 42 20.0	
	52nm,0.4s						
GRPR				AMB	AMB	17 42 20.0	
	95nm,0.4s						
GRPR				AMB	AMB	17 42 20.0	
	74nm,0.4s						
GRPR				eS	Sn	17 42 39.0	+0.1
GRPR				A	A	17 42 43.0	
	148nm,0.4s						
GRPR				A	A	17 42 43.0	
	402nm,0.4s						
GLVR	**Golovnino**	1.44	227	i P	Pn	17 42 23.0	-0.1
GLVR				AMB	AMB	17 42 24.0	
	20nm,0.4s						
GLVR				AMB	AMB	17 42 24.0	
	48nm,0.4s						
GLVR				AMB	AMB	17 42 24.0	
	276nm,0.4s						
GLVR				i S	Sn	17 42 46.0	+1.6
GLVR				A	A	17 42 48.0	
	170nm,0.3s						
GLVR				A	A	17 42 48.0	
	514nm,0.3s						
JRA	**Rausu**	1.55	240	P	Pn	17 42 24.2	0.0
NEM2	**Nemuro 2**	1.63	213	P	Pn	17 42 24.5	-0.7
NEM2				eS	Sn	17 42 45.8	-2.3
JNK	**Nakash**	1.99	235	P	Pn	17 42 29.5	+0.2
JTKR	**Abashiri--Toko**	2.33	252	P	Pn	17 42 33.4	0.0
JTKR				eS	Sn	17 43 02.8	-0.1
JAK	**Akkeshi**	2.39	224	P	Pn	17 42 34.2	-0.1
JAK				eS	Sn	17 43 03.4	-1.0
JMP	**Maruseppu**	2.69	256	P	Pn	17 42 38.1	+0.1
JAR	**Ashorobuto**	2.72	239	P	Pn	17 42 39.4	+1.0
JOB	**Onbets**	2.92	232	P	Pn	17 42 41.8	+0.9
JOB				eS	Sn	17 43 16.5	+0.3
JKK2	**Kamakawa 2**	3.15	256	P	Pn	17 42 44.8	+0.9
JKK2				eS	Sn	17 43 22.7	+1.1
ASAJ	**Asahikawa**	3.19	260	P	Pn	17 42 45.5	+1.0
	3.2nm,0.3s,baz=70,slow=14,SNR=38						
ASAJ				LR	LR	17 43 40.0	
	comp=Z,30nm,18.3s,baz=144,slow=33						
JCH	**Churui**	3.37	232	P	Pn	17 42 46.9	+0.2
JCH				eS	Sn	17 43 25.3	-1.3
JNBK	**Urakawa-nobuka**	3.93	233	P	Pn	17 42 53.3	-0.7
JNBK				eS	Sn	17 43 37.0	-2.8
MJAR	**Matsushiro Arr**	10.54	222	P	Pn	17 44 23.9	+1.4
	0.1nm,0.3s,baz=117,slow=6.7,SNR=2.9						
USRK	**Ussuriysk Ar.**	10.73	272	P	Pn	17 44 23.9	-0.9
	baz=60,slow=12						
PETK	**Petropavlovsk-**	10.95	36	P	Pn	17 44 27.6	0.0
KSRS	**Korea Array**	16.08	250	P	P	17 45 35.5	+1.6
	0.1nm,0.3s,baz=46,slow=11,SNR=5.7						
SEY	**Seymchan**	18.50	8	P	P	17 45 59.9	-0.4
	0.2nm,0.3s,baz=180,slow=8.0,SNR=7.0						
ILAR	**Eielson Array**	40.77	37	P	P	17 49 21.2	-0.9
	0.6nm,0.5s,baz=263,slow=7.4,SNR=6.8						
MKAR	**Makanchi Array**	44.02	297	P	P	17 49 47.6	-1.1
	0.3nm,0.7s,baz=74,slow=7.9,SNR=3.2						
KURBB	**Kurchatov Arra**	44.96	303	P	P	17 49 55.2	-0.8
	0.2nm,0.4s,baz=76,slow=8.3,SNR=4.2						
INK	**Inuvik**	45.62	31	P	P	17 50 00.1	-0.9
	1.4nm,0.3s,baz=290,slow=3.8,SNR=6.6						
CMAR	**Chiang Mai Arr**	47.69	253	P	P	17 50 18.6	+0.9
	0.3nm,0.5s,baz=28,slow=6.6,SNR=3.7						
CMAR				LR	LR	18 09 56.7	
	comp=Z,5.0nm,19.3s,baz=215,slow=35						
FINES	**FINESS Array B**	63.94	333	P	P	17 52 10.9	-1.9
	0.4nm,0.8s,baz=34,slow=8.7,SNR=2.7						
WRA	**Warramunga Arr**	65.39	193	P	P	17 52 23.1	+0.4
	0.8nm,1.1s,baz=8.9,slow=6.5,SNR=4.2						
NVAR	**Mina Array Bea**	67.17	58	P	P	17 52 35.5	+1.2
	0.5nm,0.7s,baz=289,slow=5.7,SNR=4.8						
ASAR	**Alice Springs**	69.11	193	P	P	17 52 47.0	+0.9
	0.3nm,1.0s,baz=9.1,slow=6.0,SNR=3.6						
PDAR	**Pinedale Array**	69.37	50	P	P	17 52 48.8	+0.8
	0.5nm,0.5s,baz=288,slow=1.6,SNR=7.0						
TXAR	**Lajitas Array**	82.21	56	P	P	17 54 01.6	+0.7
	0.3nm,0.6s,baz=296,slow=3.7,SNR=3.6						

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*ISCJB **27** 17:45:04.3±0.8, 2°.8N±0°.2×128°.6E±0°.5, h250^{km}, mb3.4/9, Error ellipse: s-maj=73.0km s-min=14.5km az=164.5*

*IDC **27** 17:45:06.9±6.3, 2°.76N×128°.64E, h260^{km}±66^{km}, mb3.1/8, mb1 3.2/8, mb1mx3.0/55, mbtmp3.7/8, Error ellipse: s-maj=66.4km s-min=14.5km az=76.0*

ISC 27 17:45:05.8±1.0, **2°.8N**±0°.2×**128°.7E**±0°.6, **h250**^{km}, **n9, σ0^{s}64**/10, **mb3.4**/9, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	23.26	166	P	P	17 49 51.7	+0.3
	0.5nm,1.0s,baz=342,slow=10,SNR=5.5						
ASAR	**Alice Springs**	26.78	169	P	P	17 50 22.9	-0.2
	0.2nm,0.6s,baz=358,slow=8.4,SNR=8.4						
ASAR				PcP	PcP	17 53 39.9	+0.6
	0.1nm,0.4s,baz=0.3,slow=2.1,SNR=4.9						
KSRS	**Korea Array**	34.51	359	P	P	17 51 30.8	+0.3
	0.5nm,0.5s,baz=175,slow=9.7,SNR=3.8						
SONM	**Songino Array**	48.82	340	P	P	17 53 27.0	+0.8
	0.3nm,0.5s,baz=164,slow=5.7,SNR=3.3						
MKAR	**Makanchi Array**	59.44	325	P	P	17 54 42.2	-0.3
	0.3nm,0.4s,baz=120,slow=8.5,SNR=4.6						
KURBB	**Kurchatov Arra**	63.58	327	P	P	17 55 10.0	+0.1
	0.8nm,0.5s,baz=127,slow=6.0,SNR=12						
BVAR	**Borovoye Array**	69.17	327	P	P	17 55 45.7	+0.4
	0.4nm,0.5s,baz=144,slow=5.4,SNR=3.2						
SPITS	**Spitsbergen Ar**	91.78	349	P	P	17 57 43.9	-0.9
	3.2nm,0.8s,baz=336,slow=16,SNR=8.8						
ARCES	**ARCESS Array B**	92.00	340	P	P	17 57 45.2	-0.7
	3.3nm,1.1s,baz=82,slow=8.3,SNR=3.7						

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*ISCJB **27** 17:59:34.2±0.3, 23°.46N±0°.01×121°.67E±0°.01, h27^{km}±2^{km}, Error ellipse: s-maj=2.5km s-min=1.8km az=42.1*

*TAP **27** 17:59:34.7, 23°.49N×121°.60E, h39^{km}, ML3.9, C*

*JMA **27** 17:59:35.8±0.2, 23°.62N×121°.70E, h98^{km}, M3.6*

ISC 27 17:59:35.2±0.9, **23°.47N**±0°.02×**121°.63E**±0°.02, **h30**^{km}±8^{km}, **n105, σ1^{s}05**/165, **Taiwan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGFH	**Guangfu**	0.27	316	eP	Pn	17 59 42.1	-1.0
	baz=306						
EGFH				eS	Sn	17 59 48.1	-0.1
	baz=306						
EHY	**Hungye**	0.29	276	eP	Pn	17 59 41.9	-1.5
	baz=272						
YULB	**Yu-li**	0.32	255	eP	Pb	17 59 42.3	-0.7
	baz=258						
TWF1	**Yuli**	0.33	249	eP	Pb	17 59 42.5	-0.7
	baz=249						
ESL	**Shilin**	0.39	332	eP	Pb	17 59 43.1	-0.9
	baz=329						
ESL				eS	Sb	17 59 49.2	-0.7
	baz=329						
FULB	**Fuli**	0.41	229	eP	Pb	17 59 44.1	-0.3
	baz=216						
FULB				eS	Sb	17 59 52.4	+1.7
	baz=216						
ENLB	**Shoufeng**	0.43	356	eP	Pb	17 59 44.2	-0.3
	baz=7.0						
ENLB				eS	Sb	17 59 52.0	+1.0
	baz=7.0						
CHKT	**Chengkung**	0.45	213	eP	Pb	17 59 44.8	-0.1
	baz=201						
CHKT				eS	Sb	17 59 52.5	+1.1
	baz=201						
HWA	**Hwalien**	0.50	357	eP	Pb	17 59 45.5	-0.3
	baz=10.0						
HWA				eS	Sb	17 59 54.0	+1.1
	baz=10.0						
TWD	**Chiawan**	0.60	357	eP	Pn	17 59 46.3	-1.5
	baz=349						
TWD				eS	Sb	17 59 54.7	-1.0
	baz=349						
YUS	**Yu-Shan**	0.62	272	eP	Pn	17 59 47.0	-1.5
	baz=264						
ELDTW	**Lidau**	0.63	244	eP	Pn	17 59 46.2	-2.1
	baz=235						
ELDTW				eS	Sn	17 59 54.5	-2.8
	baz=235						
SSLB	**Suanglung**	0.70	297	eP	Pn	17 59 47.4	-1.6
	baz=296						
NACB	**Ninganchiao**	0.70	357	eP	Pn	17 59 47.3	-1.7
	baz=350						
CHGB	**Renai**	0.72	324	eP	Pn	17 59 48.1	-1.4
	baz=335						
CHGB				eS	Sn	17 59 57.5	-2.2
	baz=335						
WHF	**Hehuan Shan**	0.75	333	eP	Pn	17 59 48.3	-1.8
	baz=335						
WHF				eS	Sn	17 59 57.9	-2.7
	baz=335						
TWH	**Lutao**	0.77	191	eP	Pn	17 59 48.5	-1.6
	baz=180						
TWH				eS	Sn	17 59 59.5	-1.1
	baz=180						
SMLT	**Sun Moon Lake**	0.79	301	eP	Pn	17 59 49.4	-1.0
	baz=309						
SMLT				eS	Sn	18 00 00.5	-0.6
	baz=309						
TWG	**Pinlang**	0.83	219	eP	Pn	17 59 48.5	-2.4
	baz=215						
TTN	**Taitung**	0.84	212	eP	Pn	17 59 50.0	-1.0
	baz=209						
DPDB	**Guoxing**	0.85	311	eP	Pn	17 59 50.4	-0.9
	baz=316						
DPDB				eS	Sn	18 00 01.1	-1.6
	baz=316						
STYT	**Tauyuan**	0.86	249	eP	Pn	17 59 50.1	-1.3
	baz=241						
STYT				eS	Sn	18 00 02.0	-0.9
	baz=241						
TWT	**Tachien**	0.88	332	eP	Pn	17 59 51.1	-0.7
	baz=339						
TWT				eS	Sn	18 00 01.6	-2.0
	baz=339						
TDCB	**Techi**	0.89	331	eP	Pn	17 59 51.0	-0.9
	baz=324						
WJS	**Zhushan**	0.90	293	eP	Pn	17 59 51.4	-0.4
	baz=292						
WJS				eS	Sn	18 00 03.8	0.0
	baz=292						
TPUB	**Ta-pu**	0.94	260	eP	Pn	17 59 51.8	-0.6
	baz=257						
TPUB				eS	Sn	18 00 04.2	-0.5
	baz=257						
ENA	**Nanau**	0.95	6	eP	Pn	17 59 51.5	-1.1
	baz=9.0						
NANB	**Nanao**	0.96	6	eP	Pn	17 59 51.6	-1.0
	baz=9.0						
WNT	**Mingjian**	0.96	295	eP	Pn	17 59 52.4	-0.3
	baz=294						
WNT				eS	Sn	18 00 05.2	0.0
	baz=294						
WTP	**Ta-pu**	0.96	257	eP	Pn	17 59 52.0	-0.7
	baz=254						
WTP				eS	Sn	18 00 05.8	+0.4
	baz=254						
NNSB	**Datong**	0.98	347	eP	Pn	17 59 51.8	-1.2
	baz=348						
NNSH	**Datong**	0.98	347	eP	Pn	17 59 51.8	-1.2
	baz=348						
ENAH	**Nanao**	0.98	9	eP	Pn	17 59 52.7	-0.2
	baz=11						
NNS	**Nan Shan**	0.99	346	eP	Pn	17 59 51.9	-1.3
	baz=348						
WGK	**Gukeng**	1.00	282	eP	Pn	17 59 52.9	-0.4
	baz=281						
WGK				eS	Sn	18 00 06.4	0.0
	baz=281						
SLGT	**Liugui**	1.02	242	eP	Pn	17 59 53.8	+0.2
	baz=230						
SLGT				eS	Sn	18 00 07.5	+0.6
	baz=230						
SGST	**Jiashian**	1.04	248	eP	Pn	17 59 53.4	-0.4
	baz=245						
SGST				eS	Sn	18 00 08.6	+1.3
	baz=245						
CHN1	**Nanshi**	1.05	254	eP	Pn	17 59 54.0	0.0
	baz=252						
CHN1				eS	Sn	18 00 08.8	+1.1
	baz=252						
TWK	**Hsinying**	1.07	259	eP	Pn	17 59 53.8	-0.4
	baz=257						
TWK				eS	Sn	18 00 08.5	+0.3
	baz=257						
ECL	**Taimali**	1.07	216	eP	Pn	17 59 51.8	-2.4
	baz=213						
TCU	**Taichung**	1.10	308	eP	Pn	17 59 54.8	+0.2
	baz=308						
CHY	**Chiayi**	1.11	271	eP	Pn	17 59 54.7	0.0
	baz=270						
CHY				eS	Sn	18 00 09.7	+0.7
	baz=270						
TWC	**Suao**	1.15	10	eP	Pn	17 59 54.9	-0.3
	baz=13						
TWC				eS	Sn	18 00 10.0	+0.1
	baz=13						
WCHH	**Zhanghua**	1.15	302	eP	Pn	17 59 55.5	+0.2
	baz=301						
ENTT	**Nioudou**	1.16	357	eP	Pn	17 59 54.6	-0.9
	baz=359						
EOS1	**EOS1**	1.16	23	eP	Pn	17 59 54.7	-0.7
	baz=37						
SSD	**Sandimen**	1.17	232	eP	Pn	17 59 54.6	-0.9
	baz=223						
SSD				eS	Sn	18 00 10.3	-0.2
	baz=223						
YHNB	**Yeheng**	1.21	349	eP	Pn	17 59 55.7	-0.5
	baz=350						
YHNB				eS	Sn	18 00 10.4	-1.2
	baz=350						
NSK	**Sanguang**	1.22	348	eP	Pn	17 59 55.7	-0.6
	baz=350						
NSK				eS	Sn	18 00 10.7	-1.2
	baz=350						
WLGB	**Puzi**	1.22	270	eS	Sn	18 00 12.7	+0.9
	baz=269						
CHN3	**Shinhua**	1.23	251	eS	Sb	18 00 14.9	+1.5
	baz=249						
NSY	**Sanyi**	1.23	320	eP	Pn	17 59 57.0	+0.6
	baz=320						
NSY				eS	Sn	18 00 13.7	+1.7
	baz=320						
RLNB	**Erlin**	1.24	290	eP	Pn	17 59 56.5	0.0
	baz=289						
RLNB				eS	Sn	18 00 13.2	+1.0
	baz=289						
TWE	**Neicheng**	1.24	1	eP	Pn	17 59 56.1	-0.4
	baz=4.0						
MASBT	**Mashibuluo**	1.26	227	eP	Pn	17 59 56.9	+0.1
	baz=220						
MASBT				eS	Sn	18 00 13.4	+0.8
	baz=220						
PTSB	**Yuanli**	1.29	319	eP	Pn	17 59 57.2	0.0
	baz=319						
PTSB				eS	Sn	18 00 14.2	+0.8
	baz=319						
SGLT	**Jiouru**	1.29	235	eP	Pn	17 59 58.3	+1.2
	baz=232						
SGLT				eS	Sb	18 00 15.8	+0.7
	baz=232						
TWM1	**Shoushan**	1.29	240	eP	Pn	17 59 58.5	+1.4
	baz=238						
TWM1				eS	Sb	18 00 16.1	+1.1
	baz=238						
NSTT	**Nanjuang**	1.29	334	eP	Pn	17 59 57.5	+0.3
	baz=321						
NSTT				eS	Sn	18 00 13.7	+0.3
	baz=321						
LIOB	**Emei**	1.30	334	eP	Pn	17 59 57.7	+0.4
	baz=321						
LIOB				eS	Sn	18 00 13.6	0.0
	baz=321						
WTCT	**Ta-ch'eng**	1.30	288	eP	Pn	17 59 57.4	+0.1
	baz=286						
WTCT				eS	Sn	18 00 14.3	+0.7
	baz=286						
TAW	**Tawu**	1.30	212	eP	Pn	17 59 55.4	-2.0
	baz=200						
NWLT	**Wulai**	1.30	355	eP	Pn	17 59 56.9	-0.5
	baz=6.0						
EAST	**Anshuo**	1.30	214	eP	Pn	17 59 55.7	-1.7
	baz=202						
NMLH	**Miaoli**	1.31	324	eP	Pn	17 59 58.0	+0.5
	baz=324						
NMLH				eS	Sn	18 00 15.0	+1.1
	baz=324						
CHN8	**Yiju**	1.31	265	eP	Pn	17 59 57.3	-0.2
	baz=263						
CHN8				eS	Sn	18 00 14.6	+0.6
	baz=263						
SCLT	**Jiali**	1.35	258	eS	Sn	18 00 16.4	+1.4
	baz=255						
TAI1	**Yung-k'ang**	1.36	252	eS	Sn	18 00 16.8	+1.7
	baz=249						
NTC	**Toucheng**	1.39	7	eP	Pn	17 59 58.5	0.0
	baz=357						
NTC				eS	Sn	18 00 16.4	+0.6
	baz=357						
EGS		1.39	11	eP	Pn	17 59 58.8	+0.2
	baz=13						
WLTB	**Daxi**	1.42	346	eP	Pn	17 59 59.7	+0.8
	baz=353						
WLTB				eS	Sn	18 00 17.1	+0.5
	baz=353						
LAY	**Lan-yu**	1.43	183	eP	Pn	17 59 57.3	-1.8
	baz=173						
SBCB	**Hsinchu**	1.44	336	eP	Pn	18 00 00.6	+1.4
	baz=336						
SCZT	**Fangliau**	1.44	221	eP	Pn	17 59 58.4	-0.8
	baz=207						
SCZT				eS	Sn	18 00 18.9	+1.8
	baz=207						
HSN	**Hsinchu**	1.46	336	eS	Sn	18 00 19.3	+1.9
	baz=322						
TIPB	**Shuangxi**	1.50	7	eP	Pn	17 59 59.9	-0.3
	baz=357						
KAU	**Kaohsiung**	1.52	234	eS	Sn	18 00 21.5	+2.5
	baz=231						
NCUH	**Zhongli**	1.54	345	eP	Pn	18 00 02.1	+1.5
	baz=345						
NCU	**National Centr**	1.54	345	eS	Sn	18 00 21.8	+2.1
	baz=345						
JYNG	**Yonagunijimaku**	1.55	51	P	Pn	18 00 01.0	+0.3
JYNG				S	Sn	18 00 20.3	+0.6
TWB1	**Santiao Chiao**	1.56	12	eP	Pn	18 00 01.4	+0.5
	baz=30						
TWB1				eS	Sn	18 00 21.3	+1.1
	baz=30						
NWF	**Wu-fen Shan**	1.60	5	eS	Sn	18 00 21.4	+0.3
	baz=353						
WFSB	**Wu-fen Shan**	1.60	5	eS	Sn	18 00 20.7	-0.3
	baz=353						
YOJ	**Yonaguni jima**	1.60	52	eP	Pn	18 00 01.9	+0.5
	baz=54						
YOJ				eS	Sn	18 00 21.4	+0.4
	baz=54						
YOJ	**Yonaguni jima**	1.60	52	P	Pn	18 00 01.7	+0.3
YOJ				S	Sn	18 00 21.1	+0.1
WLCH	**Liuqiu**	1.61	226	eP	Pn	18 00 03.2	+1.7
	baz=224						
TWS1	**Kuangyinshan**	1.63	353	eP	Pn	18 00 02.1	+0.3
	baz=10.0						
TWS1				eS	Sn	18 00 23.4	+1.5
	baz=10.0						

NTST	**Danshui** baz=10.0	**1.69**	**354**	*e*P	**Pn**	**18 00 02.8**	**+0.1**
NTST	baz=10.0			*e*S	**Sn**	**18 00 23.7**	**+0.4**
TWKBT	**Hengchun** baz=198	**1.70**	**207**	*e*P	**Pn**	**18 00 01.9**	**-0.9**
TWK1	**Hengchun** baz=198	**1.70**	**207**	*e*P	**Pn**	**18 00 02.6**	**-0.3**
TSEB	**Hengchuen, Pin** baz=192	**1.71**	**204**	*e*P	**Pn**	**18 00 02.8**	**-0.1**
TSEB	baz=192			*e*S	**Sn**	**18 00 23.6**	**-0.1**
WDGT	**Dungji** baz=262	**1.82**	**264**	*e*P	**Pn**	**18 00 03.5**	**-1.0**
PHUB	**P’eng-hu** baz=270	**1.89**	**272**	*e*P	**Pn**	**18 00 04.7**	**-0.8**
PHUB	baz=270			*e*S	**Sn**	**18 00 26.7**	**-1.6**
PNG	**Penghu** baz=271	**1.91**	**273**	*e*P	**Pn**	**18 00 04.7**	**-1.0**
PNG	baz=271			*e*S	**Sn**	**18 00 27.1**	**-1.6**
VCHM	**Qimei** baz=261	**2.04**	**263**	*e*P	**Pn**	**18 00 06.6**	**-1.0**
HATJ	**Hateruma jima**	**2.07**	**73**	P	**Pn**	**18 00 08.1**	**+0.2**
HATJ				*e*S	**Sn**	**18 00 32.4**	**-0.3**
IRIF	**Iriomote-Funau**	**2.10**	**66**	P	**Pn**	**18 00 08.7**	**+0.4**
IRIF				*e*S	**Sn**	**18 00 34.4**	**+0.9**
JKRS	**Kuro-shima**	**2.31**	**70**	P	**Pn**	**18 00 11.6**	**+0.5**
JKRS				S	**Sn**	**18 00 38.9**	**+0.4**
JIJ	**Ishigaki jima**	**2.46**	**68**	P	**Pn**	**18 00 13.1**	**-0.2**
JIJ				*e*S	**Sn**	**18 00 41.4**	**-1.0**
JISG	**Ishigakijimahi**	**2.69**	**65**	P	**Pn**	**18 00 16.1**	**-0.3**
JISG				S	**Sn**	**18 00 46.9**	**-1.0**
JTJ	**Tarama**	**3.04**	**67**	P	**Pn**	**18 00 21.1**	**-0.1**
JTJ				*e*S	**Sn**	**18 00 56.2**	**-0.3**
JIRB	**Irabujima**	**3.50**	**67**	P	**Pn**	**18 00 27.5**	**-0.1**
JIRB				*e*S	**Sn**	**18 01 06.6**	**-1.5**
JMJ	**Miyako jima 2**	**3.60**	**68**	P	**Pn**	**18 00 29.2**	**+0.2**
JIKM	**Ikemajima**	**3.60**	**66**	P	**Pn**	**18 00 29.0**	**0.0**
JIKM				S	**Sn**	**18 01 10.0**	**-0.5**
JOGS	**Gusukube**	**3.68**	**69**	P	**Pn**	**18 00 30.5**	**+0.5**

IDC 27 18:23:49.0±4.3**, 5.°91S×147.°72E, h214^{km}**±47^{km}**, mb2.9**/2**, mb1 3.1**/4**, mb1mx2.8**/44**, mbtmp3.4**/4**, Error ellipse: s-maj=97.1km s-min=26.0km az=131.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby** 0.7nm,0.3s,baz=339,slow=8.6,SNR=3.4	**3.52**	**189**	P	Pn	18 24 46.1	+0.6
PMG	4.1nm,0.3s,baz=172,slow=22,SNR=12			S	S	18 25 30.3	+0.7
WRA	**Warramunga Arr** 0.3nm,0.3s,baz=47,slow=12,SNR=16	**19.07**	**222**	P	P	18 27 55.2	-0.4
ASAR	**Alice Springs** 0.6nm,0.7s,baz=50,slow=8.0,SNR=6.3	**22.10**	**216**	P	P	18 28 27.7	+0.6
ILAR	**Eielson Array** 0.3nm,0.7s,baz=233,slow=4.4,SNR=3.4	**85.12**	**23**	P	P	18 36 00.3	-0.2

MAN 27 18:41:25.0, 8.°79N×122.°69E, h2^{km}, mb4.6, ML3.5, MS3.3, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNPH	**Sibulan**	**0.77**	**44**	⇑*i*P	Pg	18 41 40.0	+0.2
SNPH				*i* S	Sn	18 41 54.6	-0.6
PAGZ	**Pagadian**	**1.16**	**144**	*e*P	Pg	18 41 46.8	-0.5
PAGZ				*e*S	Sn	18 42 04.6	-0.1
GUIM	**Jordan**	**1.83**	**357**	*e*P	Pn	18 41 57.4	-0.1
GUIM				*e*S	Sn	18 42 17.4	-3.9
BUKP	**Musuan**	**2.51**	**111**	*e*P	Pn	18 42 08.1	+1.1
BUKP				*e*S	Sn	18 42 33.3	-4.9
BUTP	**Butuan**	**2.90**	**86**	*e*P	Pn	18 42 12.5	+0.3
BUTP				*e*S	Sn	18 42 22.5	-25

DHMR 27 18:54:19.0±1.0**, 14.°14N×45.°13E, h2^{km}**±999^{km}**, ML3.5, 3D, Western Arabian Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LBOS		**0.29**	**156**	⇓*i*P	Pg	18 54 24.6	0.0
LBOS				*i* S	Sg	18 54 28.8	+0.5
BDHA	**Al Bayda’**	**0.45**	**111**	⇓*i*P	Pg	18 54 27.6	-0.1
BDHA				*i* S	Sg	18 54 34.1	+0.5
BDHA	comp=N,4µm,0.2s			AML	AML	18 54 34.3	
DHBB	**Dhamar BB**	**0.84**	**301**	⇓*i*P	Pg	18 54 35.5	+0.3
DHBB				*i* S	Sg	18 54 46.7	+0.7
DHBB	comp=N,956nm,0.5s			AML	AML	18 54 47.1	

MEX 27 18:55:57.4±0.8**, 16.°60N×96.°68W, h29^{km}**±24^{km}**, MD3.6, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VHO	**Vista Hermosa**	**0.48**	**353**	*i* P	Pb	18 56 05.2	-2.3
VHO				*e*S	Sb	18 56 13.3	-1.2
HUIG	**Huatulco**	**0.99**	**146**	*e*P	Pn	18 56 13.2	-2.1
HUIG				*e*S	Sn	18 56 24.9	-3.4
PNIG	**Pinotepa**	**1.41**	**262**	*e*P	Pn	18 56 19.3	-1.8
PNIG				*e*S	Sn	18 56 35.5	-3.3
TPIG	**Tehuac#an**	**1.93**	**340**	*i* P	Pn	18 56 26.9	-1.5
TPIG				*e*S	Sn	18 56 49.0	-2.8

MEX 27 19:05:40.6±0.5**, 16.°45N×98.°30W, h12^{km}**±6^{km}**, MD3.5, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.18**	**110**	*i* P	Pg	19 05 43.9	-0.8
PNIG				*i* S	Sg	19 05 47.2	-0.2
TLIG	**Tlapa**	**1.13**	**347**	*e*P	Pb	19 05 58.8	-3.4
TLIG				*e*S	Sb	19 06 12.1	-4.9
VHO	**Vista Hermosa**	**1.62**	**68**	*e*P	Pn	19 06 06.0	-3.2
VHO				*e*S	Sn	19 06 25.1	-5.1
CAIG	**El Cayaco**	**1.97**	**288**	*e*P	Pn	19 06 11.1	-2.8
CAIG				*i* S	Sn	19 06 33.9	-4.6
HUIG	**Huatulco**	**2.22**	**108**	*i* P	Pn	19 06 13.3	-3.9
HUIG				*i* S	Sn	19 06 40.4	-4.2

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*ISCJB **27** 19:12:48.4±0.3, 4.°60S±0.°05×152.°89E±0.°05, h55^{km}, mb4.5/31, MS4.3/5, Error ellipse: s-maj=7.4km s-min=6.6km az=19.2*

*IDC **27** 19:12:51.7±4.1, 4.°64S×152.°85E, h68^{km}±36^{km}, mb3.8/14, mb1 3.9/15, mb1mx3.7/48, mbtmp4.1/15, ML2.6/1, MS4.2/5, Ms1 4.3/5, ms1mx3.0/53, Error ellipse: s-maj=25.5km s-min=15.9km az=74.0*

*NEIC **27** 19:12:51.8±0.7, 4.°63S×152.°88E, h73^{km}±6^{km}, mb4.8/16, Error ellipse: s-maj=7.0km s-min=5.5km az=54.0*

ISC 27 19:12:50.1±0.5**, 4.°59S**±0.°06×**152.°91E**±0.°07**, h55^{km}, n73, σ1.^{s}71**/67**, mb4.6**/31**, MS4.5**/5**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	**0.85**	**298**	*e*Pn	**Pn**	**19 13 08.8**	**+2.8**
PMG	**Port Moresby** 6.0nm,0.3s,baz=44,slow=7.5,SNR=17	**7.45**	**230**	P	**Pn**	**19 14 38.0**	**+1.8**
PMG	7.2nm,0.3s,baz=142,slow=14,SNR=6.2			S	**Sn**	**19 15 58.9**	**-0.4**
PMG	**Port Moresby**	**7.45**	**230**	*e*Pn	**Pn**	**19 14 38.0**	**+1.8**
PMG				*e*		19 15 57.9	
PMG				*e*Sn	**Sn**	**19 15 58.9**	**-0.4**
HNR	**Honiara** comp=Z,65nm,21.4s,baz=294,slow=40	**8.48**	**125**	LR	LR	19 18 28.3	
HNR	**Honiara**	**8.48**	**125**	*e*Pn	**Pn**	**19 14 51.7**	**+1.4**
HNR				*e*		19 18 28.3	
COEN	**Coen**	**13.37**	**225**	*e*Pn	**Pn**	**19 15 57.9**	**+0.7**
QIS	**Mount Isa** baz=22,SNR=3.9	**20.48**	**218**	P	**P**	**19 17 24.1**	**+0.7**
FAKI	**Fak Fak** 100nm,1.5s	**20.68**	**274**	*e*P	**P**	**19 17 24.7**	**-1.1**
KDU	**Kakadu** baz=23,SNR=31	**21.73**	**247**	P	**P**	**19 17 36.3**	**-0.7**
DZM	**Mont Dzumac** 13nm,0.8s,baz=265,slow=5.3,SNR=11	**21.77**	**144**	P	**P**	**19 17 37.0**	**-0.3**
DZM	**Mont Dzumac** 35nm,1.3s	**21.77**	**144**	*e*P	**P**	**19 17 37.0**	**-0.3**
MTN	**Manton Dam** baz=24,SNR=10	**23.02**	**248**	P	**P**	**19 17 51.1**	**+0.5**
MTN	**Manton Dam** 55nm,1.6s	**23.02**	**248**	*e*P	**P**	**19 17 51.1**	**+0.5**
WRAB	**Tennant Creek** 12nm,0.5s	**23.65**	**228**	*e*P	**P**	**19 17 56.0**	**-0.6**
WB2	**Warramunga Arr**	**23.66**	**228**	*e*P	**P**	**19 17 55.5**	**-1.3**
WR1	**Warramunga Arr** 25nm,1.1s	**23.66**	**228**	*e*P	**P**	**19 17 56.1**	**-0.6**
WRA	**Warramunga Arr** 12nm,0.6s,baz=52,slow=9.9,SNR=148	**23.66**	**228**	P	**P**	**19 17 56.1**	**-0.6**
KNRA	**Kununurra** baz=27,SNR=13	**26.16**	**243**	P	**P**	**19 18 20.6**	**+1.0**
AS01	**Alice Springs**	**26.34**	**222**	*e*P	**P**	**19 18 21.0**	**-0.2**
AS31	**Alice Springs** 1.6nm,0.5s	**26.38**	**222**	*e*P	**P**	**19 18 21.3**	**-0.1**
ASAR	**Alice Springs** 2.1nm,0.6s,baz=55,slow=9.1,SNR=42	**26.38**	**222**	P	**P**	**19 18 21.1**	**-0.3**
SOEI	**Soe** 43nm,1.3s	**28.87**	**258**	*e*P	**P**	**19 18 44.3**	**+0.3**
STKA	**Stephens Creek** 1.1nm,0.7s,baz=39,slow=14,SNR=3.4	**29.14**	**200**	P	**P**	**19 18 46.2**	**+0.1**
STKA	**Stephens Creek** 4.9nm,1.8s	**29.14**	**200**	*e*P	**P**	**19 18 45.9**	**-0.1**
WRKA	**Warakurna** baz=32,SNR=21	**31.18**	**227**	P	**P**	**19 19 04.3**	**+0.1**
FORT	**Forrest** 19nm,1.0s	**35.02**	**219**	*e*P	**P**	**19 19 36.4**	**-1.1**
MBWA	**Marble Bar** 85nm,1.8s	**36.17**	**240**	*e*P	**P**	**19 19 47.0**	**-0.6**
MEEK	**Meekatharra** baz=41,SNR=19	**39.42**	**233**	P	**P**	**19 20 14.6**	**-0.3**
URZ	**Urewera** 45nm,1.4s	**40.11**	**150**	*e*P	**P**	**19 20 20.3**	**-0.2**
BKZ	**Black Stump Fm** 44nm,1.7s	**40.51**	**151**	*e*P	**P**	**19 20 24.3**	**+0.4**
DSZ	**Denniston Nort**	**40.66**	**158**	P	**S**	**19 26 31.8**	**+0.6**
YOJ	**Yonaguni jima** 108nm,1.0s	**41.00**	**316**	*e*P	**P**	**19 20 26.4**	**-1.5**
INZ	**Inchbonnie**	**41.39**	**159**	P	**S**	**19 26 39.6**	**-2.2**
SNZO	**South Karori** 90nm,1.1s	**41.45**	**155**	*e*P	**P**	**19 20 31.6**	**+0.2**
WVZ	**Waitaha Valley**	**41.45**	**160**	P	**S**	**19 26 44.3**	**+1.5**
FOZ	**Fox Glacier**	**41.56**	**161**	P	**S**	**19 26 52.1**	**+7.7**
BFZ	**Birch Farm** 68nm,1.4s	**41.60**	**153**	*e*P	**P**	**19 20 32.2**	**-0.5**
JCZ	**Jackson Bay**	**41.73**	**163**	P	S	19 27 00.3	+13
LTZ	**Lake Taylor**	**41.74**	**158**	P	**S**	**19 26 39.5**	**-7.6**
OXZ	**Oxford**	**42.13**	**159**	P	S	19 26 43.0	-10
RPZ	**Rata Peaks**	**42.13**	**160**	P	**S**	**19 26 49.9**	**-2.9**
LBZ	**Lake Benmore**	**42.44**	**162**	P	**S**	**19 26 57.7**	**+0.2**
MQZ	**McQueen’s Vall**	**42.68**	**159**	P	S	19 26 47.5	-13
MLZ	**Mavora Lakes** 65nm,1.5s	**42.73**	**164**	*e*P	**P**	**19 20 41.3**	**-0.6**
JNU	**Nakatsue** 6.8nm,0.9s,baz=85,slow=5.3,SNR=4.7	**42.93**	**332**	P	**P**	**19 20 44.3**	**+0.6**
JNU	**Nakatsue** 9.6nm,1.0s	**42.93**	**332**	*e*P	**P**	**19 20 44.4**	**+0.8**
KSM	**Kuching** 8.3nm,1.4s	**42.99**	**277**	*e*P	**P**	**19 20 44.7**	**+0.2**
ODZ	**Otahua Downs**	**43.18**	**162**	*e*P	**P**	**19 20 44.5**	**-1.0**
KSRS	**Korea Array** 0.9nm,0.7s,baz=152,slow=8.8,SNR=6.2	**47.87**	**333**	P	**P**	**19 21 22.9**	**+0.4**
KSAR	**Wonju Array Be**	**47.87**	**333**	P	**P**	**19 21 22.9**	**+0.3**
ENH	**Enshi** 40nm,1.8s	**54.10**	**313**	*e*P	**P**	**19 22 08.9**	**-0.7**
PSI	**Prapat** 23nm,1.7s	**54.44**	**277**	*e*P	**P**	**19 22 10.1**	**-2.4**
HON	**Honolulu** 199nm,1.0s	**54.55**	**60**	*e*P	**P**	**19 22 11.8**	**-1.2**
CMAR	**Chiang Mai Arr** 0.8nm,0.3s,baz=116,slow=5.5,SNR=5.0	**57.89**	**295**	P	**P**	**19 22 38.0**	**+1.1**
VNDA	**Vanda** 0.3nm,0.5s,baz=346,slow=6.6,SNR=2.0	**73.03**	**178**	P	**P**	**19 24 15.1**	**+1.4**
VNDA	comp=Z,117nm,18.9s,baz=32,slow=34			LR	LR	19 54 14.3	
VNDA	**Vanda**	**73.03**	**178**	*e*P	**P**	**19 24 15.4**	**+1.7**
MK01	**Makanchi Array**	**80.23**	**319**	*e*P	**P**	**19 24 55.8**	**+0.9**
MK32	**Makanchi Array**	**80.24**	**319**	*e*P	**P**	**19 24 55.5**	**+0.6**
MKAR	**Makanchi Array** 0.3nm,0.4s,baz=93,slow=7.2,SNR=11	**80.24**	**319**	P	**P**	**19 24 55.5**	**+0.6**
ZALV	**Zalesovo Beam** 0.8nm,0.6s,baz=119,slow=5.6,SNR=3.6	**81.04**	**326**	P	**P**	**19 24 58.7**	**-0.3**
ZAA1	**Zalesovo Array**	**81.05**	**326**	*e*P	**P**	**19 24 58.7**	**-0.3**
ILAR	**Eielson Array** 0.3nm,0.6s,baz=261,slow=5.2,SNR=2.7	**81.93**	**22**	P	**P**	**19 25 04.6**	**+1.1**
KURK	**Kurchatov**	**83.67**	**322**	*e*P	**P**	**19 25 12.2**	**-0.7**
KURBB	**Kurchatov Arra** 0.6nm,0.8s,baz=162,slow=8.7,SNR=4.5	**83.71**	**322**	P	**P**	**19 25 12.2**	**-0.8**
QSPA	**South Pole Qui** 1.0nm,0.6s,baz=2.6,slow=5.8,SNR=4.7	**85.37**	**180**	P	**P**	**19 25 21.0**	**-0.2**
YBH	**Yreka Blue Hor** comp=Z,244nm,18.2s,baz=228,slow=32	**88.83**	**48**	LR	LR	20 00 47.8	
BVAR	**Borovoye Array** 2.3nm,0.6s,baz=114,slow=5.6,SNR=19	**89.14**	**323**	P	**P**	**19 25 39.3**	**-0.3**
NVAR	**Mina Array Bea** comp=Z,200nm,19.0s,baz=112,slow=31	**91.87**	**52**	LR	LR	20 00 47.8	
GEYT	**Alibeck** comp=Z,31nm,20.7s,baz=225,slow=35	**96.58**	**308**	LR	LR	20 09 44.2	
PDAR	**Pinedale Array** comp=Z,130nm,18.5s,baz=260,slow=32	**98.63**	**48**	LR	LR	20 06 08.6	
MDT	**Midelt** 1.2nm,0.7s,baz=45,slow=2.9,SNR=3.3	**144.94**	**326**	PKP	**PKPdf**	**19 32 21.9**	**0.0**
TORD	**Torodi Ar. Bea** baz=98,slow=2.9	**150.35**	**289**	PKPbc	**PKPbc**	**19 32 35.1**	**-1.3**
TOA1	**Torodi Ar. Sit**	**150.35**	**289**	*e*PKPbc	**PKPbc**	**19 32 35.1**	**-1.3**

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*NEIC **27** 19:20:42.8±3.6, 17.°78S×172.°93W, h11^{km}±22^{km}, mb4.9/145, Error ellipse: s-maj=6.9km s-min=4.1km az=135.0*

*WEL **27** 19:20:42.0, 17.°78S×172.°93W, h11^{km}*

*GCMT **27** 19:20:42.8±0.3, 17.°98S×172.°38W, h22^{km}, MW4.9/85, Moment Tensor Solution. s33,c34; s85,c111; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-2.76±.18; M$_{\theta\theta}$0.52±.11; M$_{\phi\phi}$2.25±.12; M$_{r\theta}$-0.30±.20; M$_{\theta\phi}$0.18±.08; M$_{\phi r}$-0.86±.15; Best double couple: M$_0$2.67400×10^{16} NP1:ϕ_s10.00000°, δ55.00000°, λ-86.00000°. NP2: ϕ_s183.00000°, δ35.00000°, λ-96.00000°. Principal axes: T 2.4220, Plg10.0000°, Azm97.0000°; N 0.5100, Plg3.0000°, Azm187.0000°; P -2.9260, Plg80.0000°, Azm296.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*BJI **27** 19:20:43.9, 17.°90S×172.°85W, h26^{km}, mb5.0/13, mB5.3/10, Ms4.9/3, Ms7 4.5/2*

*ISCJB **27** 19:20:44.1±0.1, 17.°70S±0.°03×173.°02W±0.°04, h28^{km}, mb4.8/162, MS4.2/35, Error ellipse: s-maj=6.5km s-min=3.2km az=33.9*

*IDC **27** 19:20:46.6±4.0, 17.°86S×173.°05W, h33^{km}±29^{km}, mb4.3/16, mb1 4.5/16, mb1mx4.2/50, mbtmp4.5/16, MS4.1/34, Ms1 4.1/34, ms1mx4.0/50, Error ellipse: s-maj=20.8km s-min=13.4km az=128.0*

ISC 27 19:20:45.3±0.3**, 17.°75S**±0.°06×**172.°93W**±0.°07**, h28^{km}, n322, σ1.^{s}37**/294**, mb4.9**/162**, MS4.2**/35**, 5C-2D, Tonga Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu** 17nm,0.3s,baz=163,slow=11,SNR=11	**3.98**	**16**	Pn	**Pn**	**19 21 40.3**	**-4.3**
AFI	27nm,0.3s,baz=206,slow=23,SNR=5.3			Sn	**Sn**	**19 22 25.8**	**-4.6**
AFI	**Afiamalu**	**3.98**	**16**	*e*Pn	Pn	19 21 39.1	-5.5
AFI				*e*Pg	Pn	19 21 39.4	-5.2
AFI				Sn	**Sn**	**19 22 25.8**	**-4.6**
FUNA	**Funafuti**	**11.95**	**319**	*e*Pn	**Pn**	**19 23 32.3**	**-1.6**
RAO	**Raoul Island**	**12.32**	**201**	*e*Pn	**Pn**	**19 23 34.8**	**-4.1**
RAR	**Rarotonga** 11nm,0.3s,baz=238,slow=5.0,SNR=13	**12.88**	**108**	Pn	Pn	19 23 37.3	-9.3
RAR	comp=Z,880nm,18.5s,baz=277,slow=36			LR	LR	19 28 31.0	
RAR	**Rarotonga**	**12.88**	**108**	*e*Pn	Pn	19 23 37.1	-9.5
KNTN	**Kanton**	**14.93**	**5**	*e*Pn	**Pn**	**19 24 15.7**	**+1.1**
DZM	**Mont Dzumac** 74nm,1.5s	**19.86**	**254**	*e*P	**Pn**	**19 25 18.0**	**+1.9**
DZM	718nm,26.8s			*e*LR	LR	19 30 03.4	
DZM	**Mont Dzumac** 0.7nm,0.3s,baz=78,slow=18,SNR=6.2	**19.86**	**254**	P	**Pn**	**19 25 16.9**	**+0.7**
DZM	comp=Z,180nm,21.2s,baz=86,slow=34			LR	LR	19 31 50.0	
DZM	**Mont Dzumac** 50nm,1.3s	**19.86**	**254**	*e*P	**P**	**19 25 14.4**	**0.0**
OUZ	**Omahuta** 42nm,1.0s	**21.13**	**212**	*e*P	**P**	**19 25 28.9**	**+0.9**
MXZ	**Matakaoa Point** 65nm,0.8s	**21.18**	**200**	*e*P	**P**	**19 25 26.8**	**-1.7**
TWGZ	**Tauwhareparae**	**21.85**	**200**	P	**P**	**19 25 39.5**	**+3.8**
CNGZ	**Carnagh Statio**	**22.06**	**199**	P	**P**	**19 25 42.3**	**+4.3**
MWZ	**Matawai**	**22.14**	**200**	P	**P**	**19 25 41.5**	**+2.7**
URZ	**Urewera** 58nm,0.6s,baz=347,slow=4.2,SNR=13	**22.21**	**201**	P	**P**	**19 25 38.3**	**-1.3**
URZ	**Urewera**	**22.21**	**201**	P	**P**	**19 25 39.7**	**+0.1**
PAE	**Paea** 3.9nm,0.3s	**22.25**	**93**	*e*T	T	19 47 46.4	
PPT2	**Papeete2** 846nm,30.5s	**22.25**	**93**	*e*LR	LR	19 30 28.1	
PPT	**Papeete** comp=Z,718nm,18.2s,baz=277,slow=32	**22.26**	**93**	LR	LR	19 32 35.5	
RAGZ	**Rawiri**	**22.32**	**200**	P	**P**	**19 25 42.0**	**+1.1**
MUGZ	**Murupara**	**22.52**	**201**	P	**P**	**19 25 43.5**	**+0.5**
RTZ	**Ruatahuna**	**22.58**	**201**	P	**P**	**19 25 44.9**	**+1.4**
SNGZ	**Shannon Statio**	**22.61**	**200**	P	**P**	**19 25 47.7**	**+3.9**
TBI	**Tubuai** 769nm,31.8s,baz=284	**22.66**	**108**	*e*LR	LR	19 30 42.9	
RAHZ	**Arahi**	**22.81**	**200**	P	**P**	**19 25 47.8**	**+1.8**
MTHZ	**Maungataniwha**	**22.84**	**201**	P	**P**	**19 25 48.4**	**+2.1**
NMHZ	**Naumai**	**23.07**	**201**	P	**P**	**19 25 49.5**	**+0.8**
BKZ	**Black Stump Fm** 25nm,0.7s	**23.24**	**201**	*e*P	**P**	**19 25 49.8**	**-0.6**
BKZ	**Black Stump Fm**	**23.24**	**201**	P	**P**	**19 25 51.1**	**+0.7**
HIZ	**Hauiti**	**23.27**	**205**	*e*P	**P**	**19 25 51.7**	**+1.0**
HIZ	**Hauiti**	**23.27**	**205**	P	**P**	**19 25 51.7**	**+1.0**
NGZ	**Ngauruhoe**	**23.56**	**203**	P	**P**	**19 25 54.8**	**+1.1**
FWVZ	**Far West T-bar**	**23.65**	**203**	P	**P**	**19 25 54.1**	**-0.5**
WHVZ	**Whangaehu Hut**	**23.66**	**203**	P	**P**	**19 25 54.6**	**-0.2**
BHHZ	**Black Hill Sta**	**23.68**	**202**	P	**P**	**19 25 54.4**	**-0.3**
KAHZ	**Kahuranaki**	**23.68**	**200**	P	**P**	**19 25 56.9**	**+2.3**
KRHZ	**Kereru**	**23.71**	**201**	P	**P**	**19 25 55.1**	**+0.1**
VRZ	**Vera Road**	**23.84**	**204**	P	**P**	**19 25 57.8**	**+1.6**
PXZ	**Pawanui**	**23.89**	**200**	P	**P**	**19 25 57.9**	**+1.2**
WPHZ	**Waipukurau**	**24.06**	**200**	P	P	19 25 51.2	-7.0
BFZ	**Birch Farm**	**24.68**	**200**	*e*P	**P**	**19 26 04.2**	**+0.3**
XMAS	**Kiritimati** 388nm,1.9s	**24.90**	**39**	*e*P	**P**	**19 26 05.2**	**-0.8**
SNZO	**South Karori** 49nm,0.8s	**25.77**	**202**	*e*P	**P**	**19 26 12.4**	**-1.3**
THZ	**Tophouse** 27nm,0.6s	**26.83**	**204**	*e*P	**P**	**19 26 22.8**	**-0.6**
KHZ	**Kahutara** 219nm,1.9s	**27.15**	**202**	*e*P	**P**	**19 26 27.8**	**+1.6**
HNR	**Honiara** comp=Z,293nm,18.8s,baz=140,slow=36	**27.60**	**284**	LR	LR	19 37 22.9	
LTZ	**Lake Taylor** 67nm,0.6s	**27.94**	**204**	*e*P	**P**	**19 26 36.7**	**+3.4**
OXZ	**Oxford** 72nm,1.1s	**28.50**	**203**	*e*P	**P**	**19 26 38.6**	**+0.4**
MQZ	**McQueen’s Vall** 68nm,1.4s	**28.60**	**202**	*e*P	P	19 26 44.1	+5.1
RPZ	**Rata Peaks** 14nm,0.5s,baz=279,slow=2.3,SNR=13	**29.20**	**204**	P	**P**	**19 26 46.9**	**+2.4**
FOZ	**Fox Glacier** 51nm,0.6s	**29.55**	**206**	*e*P	**P**	**19 26 50.1**	**+2.5**
LBZ	**Lake Benmore** 15nm,0.7s	**30.11**	**205**	*e*P	**P**	**19 26 56.3**	**+3.8**
ODZ	**Otahua Downs** 21nm,1.1s	**30.48**	**203**	*e*P	**P**	**19 26 56.5**	**+0.7**
WKZ	**Wanaka** 118nm,1.7s	**30.94**	**205**	*e*P	**P**	**19 27 00.7**	**+0.8**
MLZ	**Mavora Lakes** 64nm,1.4s	**31.75**	**206**	*e*P	**P**	**19 27 06.4**	**-0.7**
DCZ	**Deep Cove** 76nm,1.6s	**32.24**	**207**	*e*P	**P**	**19 27 11.5**	**+0.2**
WHZ	**Wether Hill Ro** 47nm,1.1s	**32.25**	**205**	*e*P	**P**	**19 27 13.4**	**+2.1**
TAOE	**Nuku Hiva Isla** 372nm,28.6s	**33.06**	**79**	*e*LR	LR	19 35 22.8	
TAOE	**Nuku Hiva Isla** 24nm,0.2s	**33.06**	**79**	*e*T	T	20 01 33.5	
ARMA	**Armidale** 14nm,1.0s	**34.58**	**242**	*e*P	**P**	**19 27 30.3**	**-1.7**
CAN	**Canberra** 35nm,1.4s	**38.01**	**235**	*e*P	**P**	**19 28 01.4**	**+0.2**
CTAO	**Charters Tower** 14nm,0.8s	**38.61**	**260**	*e*P	**P**	**19 28 05.5**	**-0.9**
PMG	**Port Moresby** 32nm,1.3s	**39.60**	**277**	*e*P	**P**	**19 28 15.5**	**+0.8**
TAU	**Tasmania Unive** 149nm,1.6s	**41.93**	**225**	*e*P	**P**	**19 28 31.7**	**-1.9**
COEN	**Coen** 14nm,0.8s	**42.32**	**269**	*e*P	**P**	**19 28 35.5**	**-1.7**
STKA	**Stephens Creek** 4.6nm,0.7s,baz=47,slow=6.4,SNR=8.3	**43.30**	**242**	P	**P**	**19 28 43.5**	**-1.3**
STKA	comp=Z,352nm,18.3s,baz=45,slow=36			LR	LR	19 46 37.3	
STKA	**Stephens Creek** 7.4nm,1.8s	**43.30**	**242**	*e*P	**P**	**19 28 43.0**	**-1.9**
BBOO	**Buckleboo** 78nm,1.8s	**48.06**	**242**	*e*P	**P**	**19 29 20.2**	**-2.3**
WC3	**Warramunga Arr** 50nm,1.8s	**49.75**	**259**	*e*P	**P**	**19 29 33.3**	**-2.4**
WB2	**Warramunga Arr** 30nm,1.5s	**49.77**	**259**	*e*P	**P**	**19 29 33.4**	**-2.5**
WRAB	**Tennant Creek** 18nm,1.2s	**49.77**	**259**	*e*P	**P**	**19 29 34.8**	**-1.1**
WR1	**Warramunga Arr** 45nm,1.8s	**49.78**	**259**	*e*P	**P**	**19 29 34.1**	**-1.8**
WRA	**Warramunga Arr** 2.5nm,0.5s,baz=96,slow=8.2,SNR=33	**49.78**	**259**	P	**P**	**19 29 34.1**	**-1.8**
AS01	**Alice Springs**	**49.80**	**254**	*e*P	**P**	**19 29 34.1**	**-2.0**
AS31	**Alice Springs** 4.4nm,0.8s	**49.85**	**254**	*e*P	**P**	**19 29 34.6**	**-1.8**
AS31				*e*S	**S**	**19 36 41.6**	**-3.2**
ASAR	**Alice Springs** 18nm,0.7s,baz=89,slow=8.1,SNR=135	**49.85**	**254**	P	**P**	**19 29 34.4**	**-2.0**
ASAR	0.6nm,0.8s,baz=86,slow=16,SNR=4.4			S	**S**	**19 36 41.6**	**-3.2**
ASAR	comp=Z,77nm,18.0s,baz=122,slow=35			LR	LR	19 50 03.6	
GUMO	**Guam** comp=Z,89nm,19.1s,baz=88,slow=34	**52.00**	**304**	LR	LR	19 50 26.8	
GUMO	**Guam** 206nm,1.6s	**52.00**	**304**	*e*P	**P**	**19 29 51.4**	**-1.2**
MTN	**Manton Dam** 94nm,1.9s	**54.02**	**267**	*e*P	**P**	**19 30 06.1**	**-1.4**
FORT	**Forrest** 124nm,1.9s	**54.79**	**245**	*e*P	**P**	**19 30 09.8**	**-3.2**
RPN	**Rapa Nui** comp=Z,277nm,18.4s,baz=294,slow=32	**58.99**	**111**	LR	LR	19 52 03.8	
SBA	**Scott Base** 16nm,1.4s	**60.95**	**185**	*e*P	**P**	**19 30 57.1**	**+1.6**
VNDA	**Vanda** 5.2nm,1.1s,baz=3.6,slow=6.4,SNR=12	**61.09**	**186**	P	**P**	**19 30 57.6**	**+1.2**
VNDA	**Vanda** 7.7nm,1.3s	**61.09**	**186**	*e*P	**P**	**19 30 56.3**	**-0.1**
SOEI	**Soe** 52nm,1.2s	**61.29**	**268**	*e*P	**P**	**19 31 00.5**	**+1.6**
MBWA	**Marble Bar** 107nm,2.0s	**63.16**	**255**	*e*P	**P**	**19 31 11.5**	**+0.3**
DAV	**Davao City (W)** comp=Z,94nm,18.4s,baz=138,slow=36	**65.52**	**287**	LR	LR	19 59 33.0	
CASY	**Casey** 12nm,1.3s	**68.47**	**205**	*e*P	**P**	**19 31 43.6**	**-1.0**
NIKH	**Nikolski High** 52nm,1.0s	**70.52**	**3**	*e*P	**P**	**19 31 59.1**	**+1.8**
INU	**Inuyama** 6.3nm,0.8s	**70.99**	**318**	*e*P	**P**	**19 32 01.3**	**+0.7**
MJAR	**Matsushiro Arr** 2.9nm,0.8s,baz=161,slow=5.8,SNR=13	**71.02**	**320**	P	**P**	**19 32 00.9**	**+0.2**
MJAR	comp=Z,54nm,20.6s,baz=125,slow=33			LR	LR	19 59 18.2	
MAJO	**Matsushiro** 6.0nm,0.8s	**71.02**	**320**	*e*P	**P**	**19 32 01.8**	**+1.0**
MJB9	**Matsu-Tunnel** 6.2nm,0.8s	**71.02**	**320**	*e*P	**P**	**19 32 01.4**	**+0.6**
JAGI	**Jajag, Banyuwa** 61nm,1.3s	**71.26**	**267**	*e*P	**P**	**19 32 01.8**	**-0.9**
JOW	**Kunigami** comp=Z,98nm,21.7s,baz=100,slow=31	**72.23**	**307**	LR	LR	19 58 28.0	
JOW	**Kunigami** 55nm,1.4s	**72.23**	**307**	*e*P	**P**	**19 32 07.9**	**-0.4**
QSPA	**South Pole Qui** 3.9nm,1.0s,baz=12,slow=9.3,SNR=5.9	**72.31**	**180**	P	**P**	**19 32 08.4**	**+0.2**
QSPA	**South Pole Qui** 13nm,1.1s	**72.31**	**180**	*e*P	**P**	**19 32 08.3**	**+0.1**
SDPT	**Sand Point** 97nm,1.4s	**73.58**	**7**	*e*P	**P**	**19 32 16.9**	**+1.4**
KMRM	**Mail Ridge**	**73.64**	**37**	*e*P	**P**	**19 32 16.8**	**+0.4**

	26nm,1.2s						
JNU	Nakatsue	73.73	313	P	P	19 32 17.7	+0.6
	9.2nm,0.8s,baz=126,slow=3.1,SNR=8.5						
JNU				LR	LR	19 59 10.8	
	comp=Z,50nm,21.0s,baz=124,slow=31						
JNU	Nakatsue	73.73	313	*e*P	P	19 32 18.5	+1.5
	13nm,0.9s						
KKM	Kota Kinabalu	73.79	282	*e*P	P	19 32 19.1	+1.2
	32nm,1.2s						
LPIG	La Paz	73.90	58	LR	LR	20 00 12.1	
	comp=Z,142nm,18.0s,baz=228,slow=32						
PFO	Pinyon Flats O	74.20	46	*e*P	P	19 32 19.6	-0.3
	3.7nm,0.9s						
XPFO	Piæon Flat	74.20	46	*e*P	P	19 32 19.5	-0.4
	3.4nm,0.9s						
CMB	Columbia Colle	74.24	41	*e*P	P	19 32 20.1	+0.2
	9.1nm,1.4s						
AFDM	Forest Hills D	74.44	40	*e*P	P	19 32 21.6	+0.6
	5.3nm,1.1s						
WDC	Whiskeytown Da	74.55	38	*e*P	P	19 32 22.2	+0.6
	6.5nm,1.2s						
OMMB	Old Mammoth Mi	74.85	42	*e*P	P	19 32 23.0	-0.8
	6.2nm,1.5s						
PETK	Petropavlovsk-	75.00	342	P	P	19 32 26.5	+2.6
	3.5nm,0.9s,baz=134,slow=6.2						
PETK				LR	LR	20 03 53.9	
	comp=Z,73nm,18.8s,baz=148,slow=34						
PETK	Petropavlovsk-	75.00	342	*e*P	P	19 32 22.6	-1.3
PEA1	Petropavlovsk-	75.00	342	*e*P	P	19 32 26.4	+2.5
GLA	Glamis	75.03	48	*e*P	P	19 32 24.2	-0.4
	15nm,1.6s						
WAKR	Walker	75.11	41	*e*P	P	19 32 25.6	+0.5
	9.5nm,1.4s						
YBH	Yreka Blue Hor	75.20	37	*e*P	P	19 32 26.6	+1.1
	18nm,1.8s						
PNTR	Pine Nut	75.37	40	*e*P	P	19 32 25.4	-1.3
	5.9nm,0.8s						
BEKR	Beckworth	75.39	39	*e*P	P	19 32 26.4	-0.3
	15nm,1.5s						
VCNR	Virginia City	75.47	40	*e*P	P	19 32 26.6	-0.6
	5.4nm,1.0s						
YERR	Yerington	75.53	40	*e*P	P	19 32 26.4	-1.1
	17nm,1.7s						
YSS	Yuzh-Sakhalins	75.74	330	*e*P	P	19 32 30.2	+1.9
	54nm,1.7s						
RYN	Ryan	75.76	41	*e*P	P	19 32 28.4	-0.4
	3.2nm,1.0s						
NV01	Mina Array Sit	75.78	41	*e*P	P	19 32 28.9	-0.1
NVAR	Mina Array Bea	75.78	41	P	P	19 32 29.1	0.0
	2.6nm,0.8s,baz=225,slow=8.4,SNR=18						
NV11	Mina Array Sit	75.87	41	*e*P	P	19 32 29.7	+0.2
	0.6nm,1.3s						
PAHR	Pah Rah Range	75.88	40	*e*P	P	19 32 29.5	0.0
	24nm,2.0s						
TPNV	Topopah Spring	76.23	44	*e*P	P	19 32 31.3	-0.3
KVN	Kaiserville	76.28	41	*e*P	P	19 32 31.9	+0.1
	13nm,1.8s						
SBUM	Sibu	76.35	277	*e*P	P	19 32 32.5	-0.1
	3.9nm,1.2s						
OHAK	Old Harbor	76.47	11	*e*P	P	19 32 32.3	+0.1
	30nm,1.4s						
MOD	Modoc Plateau	76.69	38	*e*P	P	19 32 33.0	-1.1
	4.7nm,1.0s						
SHPR	Sheep Range	76.70	44	*e*P	P	19 32 32.8	-1.5
	12nm,1.8s						
K05A	Summer Lake	76.88	37	*e*P	P	19 32 35.6	+0.5
	15nm,1.2s						
KDAK	Kodiak Island	77.13	11	LR	LR	20 01 08.0	
	comp=Z,116nm,19.8s,baz=183,slow=31						
R11A	Troy Canyon, C	77.47	43	*e*P	P	19 32 39.4	+0.9
	5.5nm,1.5s						
PINE	Pine Mountain	77.53	36	*e*P	P	19 32 39.2	+0.4
	10.0nm,1.1s						
TUC	Tucson	77.54	50	*e*P	P	19 32 39.5	+0.5
	3.7nm,1.0s						
BMN	Battle Mountai	77.64	40	*e*P	P	19 32 39.8	+0.3
	9.3nm,1.5s						
KSM	Kuching	77.85	276	*e*P	P	19 32 42.1	+1.1
	20nm,0.9s						
LEM	Lembang	77.93	267	LR	LR	20 08 24.4	
	comp=Z,58nm,18.0s,baz=140,slow=37						
WVOR	Wild Horse Val	78.00	38	*e*P	P	19 32 41.1	-0.3
	5.1nm,1.0s						
KSRS	Korea Array	78.14	316	P	P	19 32 44.2	+2.2
	4.5nm,1.0s,baz=129,slow=6.2,SNR=18						
KSRS				LR	LR	20 03 00.4	
	comp=Z,33nm,18.4s,baz=128,slow=32						
KS15	Wonju Array Si	78.16	316	*e*P	P	19 32 44.0	+1.8
KSAR	Wonju Array Be	78.16	316	P	P	19 32 44.2	+2.1
KS01	Wonju Array Si	78.18	316	*e*P	P	19 32 44.2	+2.0
LCMT	Little Creek M	78.27	45	*e*P	P	19 32 43.5	+0.5
CCUT	Cedar City	78.48	44	*e*P	P	19 32 45.6	+1.3
	12nm,1.7s						
KNB	Kanab	78.56	45	*e*P	P	19 32 44.1	-0.5
	13nm,1.5s						
J08A	Circle Bar Ran	78.66	37	*e*P	P	19 32 44.3	-0.6
	7.9nm,1.3s						
SZCU	Shurtz Canyon	78.69	44	*e*P	P	19 32 45.4	0.0
	11nm,1.0s						
PSUT	Pine Spring	78.69	43	*e*P	P	19 32 43.8	-1.6
	16nm,1.9s						
WUAZ	Wupatki	78.76	47	*e*P	P	19 32 43.4	-2.3
	4.6nm,1.1s						
CNPM	China Poot	79.01	11	*e*P	P	19 32 47.1	+0.7
	15nm,1.2s						
G08A	Pilot Rock	79.57	35	*e*P	P	19 32 49.0	-0.9
	4.3nm,0.9s						
BBB	Bella Bella	79.78	26	LR	LR	20 02 39.4	
	comp=Z,153nm,18.9s,baz=204,slow=31						
MSU	Marysvale	79.79	44	*e*P	P	19 32 51.9	+0.6
MFID	Camas Ranch	80.23	38	*e*P	P	19 32 52.8	-0.8
	3.6nm,0.9s						
SUA	Susitna One	80.92	11	*e*P	P	19 32 57.0	+0.2
	11nm,0.8s						
F10A	Beach Ranch, E	80.95	36	*e*P	P	19 32 57.2	-0.1
	6.0nm,0.9s						
HLID	Hailey	81.16	39	*e*P	P	19 32 58.2	-0.4
	5.5nm,1.2s						
MNTX	Cornudas Mount	81.27	53	*e*P	P	19 32 59.1	-0.1
	8.4nm,1.4s						
B08A	Colville Reser	81.29	33	*e*P	P	19 32 58.4	-0.6
	3.0nm,0.8s						
GHO	Glory Hole Cre	81.53	11	*e*P	P	19 33 01.1	+1.1
	14nm,1.0s						
LPM	Los Pinos Moun	81.55	50	*e*P	P	19 33 00.3	-0.5
LTX	Lajitas	81.55	56	*e*P	P	19 33 01.9	+1.1
TX31	Lajitas Ar. Si	81.55	56	*e*P	P	19 33 00.7	-0.2
TXAR	Lajitas Array	81.55	56	P	P	19 33 01.9	+1.0
	1.3nm,1.0s,baz=235,slow=4.4,SNR=8.4						
TXAR				LR	LR	20 03 45.5	
	comp=Z,98nm,18.2s,baz=0.0,slow=32						
DIV	Divide	81.58	13	*e*P	P	19 33 00.7	+0.5
	12nm,0.9s						
PMSA	Palmer Station	81.86	156	LR	LR	20 02 08.0	
	comp=Z,164nm,19.2s,baz=297,slow=30						
PV23	Carpenter Ridg	81.88	45	*e*P	P	19 33 02.6	-0.1
	9.3nm,1.0s						
SCM	Sheep Creek Mo	81.89	12	*e*P	P	19 33 02.6	+0.7
	14nm,0.9s						
TGL	Tana Glacier	81.91	14	*e*P	P	19 33 02.9	+0.9
	9.8nm,0.8s						
ANMO	Albuquerque	81.97	50	LR	LR	20 04 23.8	
	comp=Z,120nm,18.6s,baz=238,slow=32						
ANMO	Albuquerque	81.97	50	*e*P	P	19 33 03.5	+0.5
	4.5nm,1.1s						
MA2	Magadan	82.53	342	LR	LR	20 08 07.9	
	comp=Z,84nm,19.6s,baz=148,slow=34						
CAST	Castle Rocks	82.53	9	*e*P	P	19 33 04.7	-0.4
	3.4nm,0.9s						
KTH	Kantishna Hill	82.84	10	*e*P	P	19 33 05.8	-1.0
	7.2nm,1.1s						
TRF	Thorofare Moun	82.85	10	*e*P	P	19 33 07.3	+0.3
	6.9nm,0.6s						
GO10	Punta Arenas	82.89	144	*e*P	P	19 33 06.6	-0.8
	527nm,1.8s						
S22A	4UR Ranch, Cre	83.03	47	*e*P	P	19 33 09.6	+0.9
	14nm,0.3s						
LNIG	Linares	83.14	61	*e*P	P	19 33 09.1	-0.1
	10nm,1.1s						
REDW	Red Top Meadow	83.22	40	*e*P	P	19 33 08.9	-0.5
	13nm,1.3s						
TPAW	Teton Pass	83.22	40	*e*P	P	19 33 09.1	-0.4
	25nm,1.9s						
O20A	White River Ci	83.24	44	*e*P	P	19 33 09.3	-0.3
	9.7nm,1.3s						
DLMT	Dillon	83.25	38	*e*P	P	19 33 09.5	0.0
	22nm,1.8s						
FXWY	Fox Creek	83.26	40	*e*P	P	19 33 09.7	0.0
	5.5nm,1.3s						
MSO	Missoula	83.30	36	*e*P	P	19 33 10.0	+0.4
	5.2nm,1.1s						
PAX	Paxson	83.30	12	*e*P	P	19 33 09.2	0.0
	5.0nm,1.0s						
SNOW	Snow King Moun	83.33	40	*e*P	P	19 33 10.8	+0.8
	26nm,1.4s						
MCK	McKinley	83.34	10	*e*P	P	19 33 09.9	+0.6
	14nm,1.0s						
BPAW	Bear Paw Mtn.	83.34	10	*e*P	P	19 33 11.3	+2.0
	6.2nm,1.4s						
IMW	Indian Meadow	83.45	40	*e*P	P	19 33 11.3	+0.6
	3.7nm,0.8s						
MOOW	Moose Ponds	83.49	40	*e*P	P	19 33 11.5	+0.7
	2.6nm,0.8s						
LOHW	Long Hollow	83.50	40	*e*P	P	19 33 11.5	+0.6
LRM	Limekiln Ridge	83.59	38	*e*P	P	19 33 11.6	+0.3
SMCO	Snowmass	83.62	46	*e*P	P	19 33 12.5	+0.7
	16nm,1.4s						
JTMT	Jette	83.63	35	*e*P	P	19 33 12.1	+0.8
	6.3nm,0.9s						
QLMT	Earthquake Lak	83.65	39	*e*P	P	19 33 12.6	+1.0
BWN	Browne	83.66	10	*e*P	P	19 33 11.2	+0.3
	21nm,1.1s						
FLWY	Flagg Ranch	83.69	40	*e*P	P	19 33 11.3	-0.5
	10.0nm,0.9s						
BW06	Boulder Array	83.72	41	*e*P	P	19 33 11.1	-1.0
PD31	Pinedale Array	83.72	41	*e*P	P	19 33 11.9	-0.1
PDAR	Pinedale Array	83.72	41	P	P	19 33 11.7	-0.4
	1.5nm,0.7s,baz=204,slow=3.3,SNR=13						
DLBC	Dease Lake	83.72	21	LR	LR	20 01 58.8	
	comp=Z,45nm,19.5s,baz=174,slow=30						
DLBC	Dease Lake	83.72	21	*e*P	P	19 33 12.3	+0.9
	14nm,1.8s						
YPP	Pitchstone Pla	83.73	40	*e*P	P	19 33 12.9	+0.8
	8.5nm,1.0s						
YHB	Horse Butte	83.75	39	*e*P	P	19 33 13.0	+0.9
	17nm,0.6s						
YFT	Old Faithful	83.81	40	*e*P	P	19 33 13.4	+1.0
	9.3nm,0.4s						
YMR	Madison River	83.84	39	*e*P	P	19 33 13.6	+1.0
	9.9nm,1.0s						
WHY	Whitehorse	83.92	18	*e*P	P	19 33 13.1	+0.6
	3.8nm,0.9s						
H17A	Grant Village	83.93	40	*e*P	P	19 33 14.5	+1.4
	9.1nm,0.9s						
BOZ	Bozeman (W)	83.94	38	*e*P	P	19 33 13.9	+0.8
	5.6nm,1.0s						
SDCO	Great Sand Dun	83.96	47	*e*P	P	19 33 14.5	+1.0
	10nm,1.8s						
RIDG	Independ'e Rid	84.11	12	*e*P	P	19 33 13.9	+0.6
	5.5nm,0.9s						
WRH	Wood River Hil	84.17	11	*e*P	P	19 33 13.9	+0.4
MSTX	Muleshoe	84.25	52	*e*P	P	19 33 14.3	-0.5
	12nm,1.3s						
MLY	Manley	84.25	9	*e*P	P	19 33 13.7	-0.3
	6.6nm,1.1s						
HDA	Harding Lake	84.31	11	*e*P	P	19 33 14.5	+0.3
CCB	Clear Creek Bu	84.38	11	*e*P	P	19 33 15.0	+0.4
HRY	Holter Researc	84.43	37	*e*P	P	19 33 15.0	-0.4
SCRK	Sand Creek	84.50	12	*e*P	P	19 33 15.7	+0.4
	5.8nm,0.9s						
833A	Chaparral WMA,	84.55	58	*e*P	P	19 33 15.7	-0.6
	12nm,0.7s						
WALA	Waterton Lakes	84.58	35	*e*P	P	19 33 16.0	-0.1
	30nm,1.9s						
MDM	Murphy Dome	84.59	10	*e*P	P	19 33 15.4	-0.3
ILAR	Eielson Array	84.66	11	P	P	19 33 16.4	+0.4
	2.9nm,0.8s,baz=221,slow=4.8,SNR=17						
ILB	Eielson Array	84.66	11	*e*P	P	19 33 15.7	-0.3
IL1	Eielson Array	84.66	11	*e*P	P	19 33 15.6	-0.4
RWWY	Rawlins	84.68	43	*e*P	P	19 33 16.4	-0.6
	13nm,1.3s						
Q24A	Divide	84.77	46	*e*P	P	19 33 16.8	-0.7
	10nm,1.2s						
ISCO	Idaho Springs	84.84	46	*e*P	P	19 33 18.1	+0.2
	11nm,1.9s						
SEY	Seymchan	84.89	345	P	P	19 33 17.5	+0.3
	4.9nm,1.0s,baz=142,slow=3.7,SNR=13						
JCT	Junction City	85.08	56	*e*P	P	19 33 21.4	+2.4
GCMT	Greycliff	85.21	39	*e*P	P	19 33 17.7	-1.7
AMTX	Amarillo	85.45	51	*e*P	P	19 33 21.2	+0.4
	8.8nm,1.1s						
DAWY	Dawson	85.58	14	*e*P	P	19 33 21.4	+0.7
	6.8nm,0.8s						
MAW	Mawson	85.72	199	LR	LR	20 11 09.2	
	comp=Z,271nm,18.4s,baz=64,slow=35						
EGAK	Eagle	85.80	13	*e*P	P	19 33 21.7	0.0
	8.8nm,1.2s						
RDOG	Red Dog Mine	85.88	4	*e*P	P	19 33 23.7	+1.7
	7.3nm,0.6s						
ABTX	Abilene, Hawle	86.06	54	*e*P	P	19 33 23.6	-0.2
	20nm,1.4s						
EGMT	Eagleton	86.33	37	*e*P	P	19 33 25.5	+0.7
COLD	Coldfoot	86.39	9	*e*P	P	19 33 26.3	+1.7
	5.7nm,1.1s						
PLCA	Paso Flores	87.61	132	LR	LR	20 06 09.1	
	comp=Z,215nm,18.1s,baz=271,slow=31						
TIY	Taiyuan	89.10	310	*e*P	P	19 33 38.0	-0.3
TIY				PP	PP	19 37 17.3	+8.4
TIY				pmax	pmax		
	comp=Z,120nm,3.9s						
TIY				LR	LR		
	comp=N,81nm,5.2s						
GYA	Guiyang	89.53	298	*e*P	P	19 33 42.0	+1.3
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
GSI	Gunungsitoli	89.91	271	*e*P	P	19 33 43.9	+1.3
	37nm,1.2s						
SYO	Syowa Base	90.39	191⇓	*e*P	P	19 33 42.6	-1.1
SYO	Syowa Base	90.39	191⇓	*e*PcP	P	19 33 44.1	+0.4
INK	Inuvik	90.44	14	LR	LR	20 13 19.6	
	comp=Z,154nm,18.1s,baz=321,slow=35						
SNAA	Sanae	90.55	177	LR	LR	20 13 17.7	
	comp=Z,123nm,18.3s,baz=168,slow=35						
HHC	Hu-ho-hao-te	90.94	313	*e*P	P	19 33 49.3	+2.4
HHC				pP	pP	19 33 56.0	0.0
HHC				sP	sP	19 34 05.8	+6.6
HHC				S	S	19 44 47.8	+5.3
HHC				sS	sS	19 44 59.5	+1.9
HHC				pmax	pmax		
	comp=Z,8.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,110nm,6.2s						
HHC				LR	LR		
	comp=N,150nm,14.1s						
HHC				LR	LR		
	comp=E,83nm,14.9s						
HHC				LR	LR		
	comp=Z,100nm,15.7s						
JTS	JuntasAbangare	91.19	80	LR	LR	20 06 40.1	
	comp=Z,197nm,18.0s,baz=72,slow=30						
YKA	Yellowknife Ar	92.07	23	LR	LR	20 10 30.6	
	comp=Z,9.7nm,18.6s,baz=241,slow=32						
NNA	Nana	92.08	103	LR	LR	20 06 47.8	
	comp=Z,80nm,18.1s,baz=214,slow=30						
V40A	Witts Springs	92.49	53	*e*P	P	19 33 53.7	-0.4
	6.5nm,1.0s						
CD2	Chengdu	93.41	301	*e*P	P	19 33 59.5	+1.0
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,140nm,5.0s						
CM01	Chiang Mai Arr	93.75	288	*e*P	P	19 34 00.3	+0.1
CMAR	Chiang Mai Arr	93.77	288	P	P	19 34 01.9	+1.6
	1.4nm,0.8s,baz=128,slow=2.9,SNR=7.3						
CMAR				LR	LR	20 15 03.6	
	comp=Z,36nm,19.0s,baz=122,slow=35						
ULM	Lac du Bonnet	95.47	39	LR	LR	20 14 30.2	
	comp=Z,272nm,18.0s,baz=264,slow=34						
LPAZ	La Paz	98.59	110	LR	LR	20 10 13.9	
	comp=Z,105nm,18.9s,baz=277,slow=30						
TKL	Tuckaleechee C	99.47	56	LR	LR	20 15 08.3	
	comp=Z,76nm,18.3s,baz=282,slow=33						
KURK	Kurchatov	115.19	318	*e*PKPdf	PKPdf	19 39 24.0	+0.1
KURBB	Kurchatov Arra	115.25	318	PKP	PKPdf	19 39 24.0	-0.1
	1.0nm,0.9s,baz=104,slow=1.8,SNR=7.5						
KSH	Kashi	117.22	306	*e*PKP	PKPdf	19 39 31.8	+3.4
BVAR	Borovoye Array	120.00	321	PKP	PKPdf	19 39 33.5	+0.3
	2.5nm,0.9s,baz=90,slow=2.9,SNR=11						
ARA0	ARCESS Array S	126.99	352	*e*PKPdf	PKPdf	19 39 46.9	+0.8
ARCES	ARCESS Array B	126.99	352	PKP	PKPdf	19 39 46.9	+0.9
	1.4nm,1.0s,baz=18,slow=4.3,SNR=5.5						
GEYT	Alibeck	131.24	305	PKP	PKPdf	19 39 57.4	+2.3
	0.8nm,0.7s,baz=318,slow=2.0,SNR=3.6						
FIA0	FINESS Array S	134.32	347	*e*PKPdf	PKPdf	19 39 59.2	-1.0
FINES	FINESS Array B	134.32	347	PKP	PKPdf	19 39 59.2	-1.0
	0.6nm,0.7s,baz=110,slow=4.5,SNR=3.5						
AKASG	Malin Array Be	142.67	337	PKP	PKPdf	19 40 15.6	-0.1
	0.2nm,0.3s,baz=42,slow=3.2,SNR=3.0						
AKBB	Malin Array Si	142.67	337	*e*PKPdf	PKPdf	19 40 15.4	-0.4
OJC	Ojcow	146.04	345	*e*PKP	PKPab	19 40 25.0	+1.9
KSP	Ksiaz	146.17	349	*e*PKP	PKPab	19 40 24.8	+1.2
CLL	Collm	146.19	353	⇑*i*PKPbc	PKPab	19 40 24.1	+0.5
	comp=Z,38nm,1.1s						
CLL				*e*		19 40 34.0	
CLL				LmV		20 52 00.0	
	comp=Z,100nm,18.2s						
CLL	Collm	146.19	353	*e*PKPdf	PKPab	19 40 23.4	-0.2
BRG	Berggiesshubel	146.50	352	*e*PKP	PKPab	19 40 26.0	+1.2
	comp=Z,15nm,1.1s						
DPC	Dobruska-Polom	146.64	349	*e*PKP	PKPab	19 40 26.3	+0.9
NIE	Niedzica	146.65	344	*e*PKP	PKPab	19 40 26.0	+0.5
CRVS	Cervenica-Dubn	146.80	343	*e*PKP	PKPab	19 40 28.5	+2.4
MORC	Moravsky Berou	146.96	348	*e*PKP	PKPab	19 40 26.8	+0.1
MEM	Membach	147.21	1	⇑PKP	PKPab	19 40 27.1	-0.5
PRU	Pruhonice	147.28	351	*e*PKP	PKPab	19 40 27.7	-0.2
PRU				AMS	AMS	20 50 20.0	
	comp=Z,100nm,21.0s						
GOPC	GO Pecny, Ondr	147.32	351	*e*PKP	PKPab	19 40 28.5	+0.4
GOPC				AMS	AMS	20 50 00.0	
	comp=Z,100nm,22.9s						
BCLA	Clavier	147.38	2	⇑PKP	PKPab	19 40 27.8	-0.5
VRAC	Vranov	147.59	348	*e*PKP	PKPab	19 40 28.9	-0.3
DOU	Dourbes	147.67	3	⇑PKP	PKPab	19 40 29.1	-0.3
KRUC	Moravsky	147.87	348	*e*PKP	PKPab	19 40 29.2	-1.0
VYHS	Vyhne	147.87	345	*e*PKP	PKPab	19 40 30.0	-0.3
PSZ	Piszkesteto	148.13	344	*e*PKPbc	PKPbc	19 40 29.9	+1.3
WLF	Walferdange	148.16	1	⇑PKP	PKPbc	19 40 29.8	+1.4
MLR	Muntele Rosu	148.18	334	PKPbc	PKPbc	19 40 30.2	+1.4
	comp=Z,1.6nm,0.9s,baz=142,slow=4.9,SNR=4.0						
BR101	Keskin Array S	148.24	319	*e*PKPbc	PKPbc	19 40 30.1	+0.9
BR131	Keskin Array S	148.24	319	*e*PKPbc	PKPbc	19 40 30.4	+1.2
BRTR	Keskin Array B	148.24	319	PKPbc	PKPbc	19 40 30.1	+0.9
	comp=Z,4.7nm,1.0s,baz=132,slow=1.8,SNR=16						
KHC	Kasperske Hory	148.26	352	*e*PKP	PKPab	19 40 30.5	-1.3
KHC	Kasperske Hory	148.26	352	*e*PKPbc	PKPbc	19 40 29.9	+1.1
MODS	Modra-Piesok	148.34	347	*e*PKP	PKPbc	19 40 27.9	-1.2
MODS				*e*		19 40 31.9	
GEC2	GERESS Array S	148.52	352	*e*PKPbc	PKPbc	19 40 30.5	+0.9
GERES	GERESS Array B	148.52	352	PKPbc	PKPbc	19 40 30.4	+0.9
	comp=Z,2.2nm,0.9s,baz=48,slow=2.0,SNR=14						
GEA0	GERESS Array S	148.53	352	*e*PKPbc	PKPbc	19 40 30.0	+0.4
CONA	Conrad Observa	149.06	348	PKiKP	PKiKP	19 40 32.4	+0.1
	comp=Z,11nm,1.1s						
MOA	Molln	149.41	350	*e*PKiKP	PKiKP	19 40 32.9	0.0
	comp=Z,4.1nm,1.1s						
BFO	Black Forest	149.49	358	*e*PKPbc	PKPbc	19 40 33.4	+1.4
ARSA	Arzberg	149.77	349	PKPdf	PKPdf	19 40 28.7	+0.7
	comp=Z,0.9nm,0.6s						
RETA	Reutte	150.19	355	*e*PKiKP	PKiKP	19 40 35.0	+0.4
	comp=Z,6.2nm,1.1s						
WATA	Walderalm	150.26	354	*e*PKiKP	PKiKP	19 40 35.8	+1.0
	comp=Z,2.9nm,0.6s						
KBA	Koelnbreinsper	150.30	351	PKPbc	PKPbc	19 40 33.9	-0.3
	comp=Z,3.8nm,0.8s						
MOTA	Moosalm	150.30	354	*e*PKiKP	PKiKP	19 40 35.4	+0.4
	comp=Z,7.7nm,1.0s						
WTTA	Wattenberg	150.33	354	pPKPbc	PKPbc	19 40 36.2	+1.9
	comp=Z,6.5nm,0.8s						
MMAI	Mount Meron Ar	150.35	306	PKPbc	PKPbc	19 40 36.5	+1.9
	comp=Z,6.6nm,0.8s,baz=18,slow=6.1,SNR=7.6						
SOKA	Soboth	150.41	349	PKiKP	PKiKP	19 40 35.0	-0.1
	comp=Z,7.8nm,1.0s						
DAVA	Damuels	150.46	356	*e*PKPbc	PKPbc	19 40 34.4	-0.2
	comp=Z,9.1nm,1.2s						
FETA	Feichten	150.66	355	PKPbc	PKPbc	19 40 34.3	-0.7
	comp=Z,6.5nm,1.1s						
OBKA	Obir	150.66	349	PKiKP	PKiKP	19 40 35.5	-0.1
	comp=Z,2.0nm,0.8s						
MYKA	Terra Mystica	150.69	351	*e*PKPbc	PKPbc	19 40 34.9	-0.1
	comp=Z,2.7nm,0.6s						
ABTA	Abfaltersbach	150.74	352	*e*PKPbc	PKPbc	19 40 34.0	-1.1
	comp=Z,11nm,1.1s						
FUORN	Ofenpass-Fuorn	151.09	355	*e*PKPbc	PKPbc	19 40 37.4	+1.2
TUE	Stuetta	151.30	357	*e*PKPbc	PKPbc	19 40 36.9	+0.3
DIVS	Divibare	151.57	340	*e*PKPbc	PKPbc	19 40 37.6	+0.5
ESDC	Sonseca Array	156.15	21	PKPab	PKPab	19 41 04.0	-1.1
	comp=Z,0.4nm,0.6s,baz=325,slow=4.6,SNR=2.8						
TOA0	Torodi Ar. Sit	173.09	131	*e*PKPdf	PKPdf	19 40 51.0	-1.9
TOA0				*e*PKPab	PKPab	19 42 19.1	-1.0

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*ISCJB **27** 19:30:36.0±0.7, 19°.03N±0°.05×145°.6E±0°.2, h214^{km}, mb3.5/11, Error ellipse: s-maj=24.0km s-min=7.6km az=177.1*

*IDC **27** 19:30:37.1±1.8, 19°.01N×145°.63E, h211^{km}±17^{km}, mb3.3/11, mb1 3.6/15, mb1mx3.3/64, mbtmp4.0/15, MS2.6/1, Ms1 2.6/1, ms1mx2.2/26, Error ellipse: s-maj=25.4km s-min=10.1km az=83.0*

ISC 27 19:30:37.5±0.8**, 19°.01N**±0°.07×**145°.5E**±0°.2**, h214^{km}, n17, σ0^{s}.76**/16**, mb3.6**/11**, Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	5.43	187	P	Pn	19 31 58.7	+0.9
	7.7nm,0.3s,baz=85,slow=4.1,SNR=9.6						
GUMO				S	S	19 32 59.7	-1.4
	13nm,0.3s,baz=13,slow=22,SNR=2.8						
JCJ	Chichijima	8.62	340	P	Pn	19 32 38.3	-0.4
	7.5nm,0.3s,baz=133,slow=18,SNR=16						
JOW	Kunigami	17.69	299	P	Pn	19 34 31.5	+0.3
	2.0nm,0.3s,baz=120,slow=14,SNR=6.9						
MJAR	Matsushiro Arr	18.62	341	P	P	19 34 39.5	+0.4
	0.8nm,0.3s,baz=169,slow=10,SNR=13						
KSRS	Korea Array	23.98	324	P	P	19 35 33.1	+0.7
	1.2nm,0.6s,baz=149,slow=8.2,SNR=6.3						
KSRS				LR	LR	19 42 57.0	
	comp=Z,16nm,20.5s,baz=86,slow=31						
KLR	Kul'dur	32.13	343	P	P	19 36 44.4	-0.3
	0.3nm,0.4s,baz=145,slow=9.1,SNR=11						
WRA	Warramunga Arr	40.24	196	P	P	19 37 53.8	+0.1
	3.3nm,0.6s,baz=5.8,slow=9.2,SNR=41						
SONM	Songino Array	42.81	321	P	P	19 38 14.5	+0.2
	0.4nm,0.7s,baz=130,slow=9.8,SNR=4.1						
ASAR	Alice Springs	43.91	195	P	P	19 38 23.2	-0.1
	1.3nm,0.7s,baz=14,slow=8.1,SNR=25						
KURBB	Kurchatov Arra	60.99	318	P	P	19 40 28.2	+0.1
	0.5nm,0.4s,baz=93,slow=7.4,SNR=6.9						
ILAR	Eielson Array	63.43	26	P	P	19 40 43.0	-1.2
	0.7nm,0.7s,baz=266,slow=4.4,SNR=5.3						
BVAR	Borovoye Array	66.14	320	P	P	19 41 01.8	0.0
	0.8nm,0.5s,baz=91,slow=6.3,SNR=7.2						
H02N1	VAN INLET T-PH	70.20	39	T	T	20 58 31.7	
H02S1	DAWSON INLET T	70.24	39	T	T	20 58 32.8	
	SNR=16						
ARCES	ARCESS Array B	82.15	342	P	P	19 42 34.3	+0.3
	1.5nm,0.9s,baz=79,slow=6.3,SNR=4.8						
NVAR	Mina Array Bea	83.07	52	P	P	19 42 40.8	+1.2
	1.2nm,0.7s,baz=267,slow=5.8,SNR=8.0						
FINES	FINESS Array B	86.54	335	P	P	19 42 55.1	-1.0
	0.3nm,0.3s,baz=57,slow=5.0,SNR=6.4						

WEL 27 19:31:04.7±1.3**, 38°S**±10°×**18°0W**±°**, h10^{km}, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.28	269	P	Pn	19 31 27.9	-0.7
WMGZ				S	Sn	19 31 45.7	-0.2
WMGZ	Waiomatatini S	1.28	269	P	Pn	19 31 28.1	-0.5
MXZ	Matakaoa Point	1.39	280	P	Pn	19 31 29.4	-0.8
MXZ				S	Sb	19 31 47.7	-0.8
MXZ	Matakaoa Point	1.39	280	P	Pn	19 31 29.5	-0.7
PUZ	Puketiti	1.43	259	P	Pn	19 31 30.1	-0.6
PUZ				S	Sn	19 31 49.3	-0.3
PUZ	Puketiti	1.43	259	P	Pn	19 31 30.1	-0.6
PKGZ	Pakihiroa	1.55	266	P	Pn	19 31 31.6	-0.8
PKGZ	Pakihiroa	1.55	266	P	Pn	19 31 31.8	-0.7
CNGZ	Carnagh Statio	1.59	244	P	Pn	19 31 32.7	-0.2
CNGZ	Carnagh Statio	1.59	244	P	Pn	19 31 33.0	+0.1
TWGZ	Tauwhareparae	1.66	257	P	Pn	19 31 33.9	-0.1
TWGZ	Tauwhareparae	1.66	257	P	Pn	19 31 33.8	-0.1
HAZ	Te Kaha	1.78	271	P	Pn	19 31 35.3	-0.2
HAZ	Te Kaha	1.78	271	P	Pn	19 31 35.5	-0.1
TKGZ	Te Karaka	1.83	249	P	Pn	19 31 35.9	-0.3
TKGZ	Te Karaka	1.83	249	P	Pn	19 31 36.0	-0.2
RUGZ	Raukumara Rang	1.87	264	P	Pn	19 31 36.4	-0.5
RUGZ	Raukumara Rang	1.87	264	P	Pn	19 31 36.4	-0.4
RUGZ				P	Pn	19 31 36.4	-0.4

PRGZ	**Paritu Road**	**2.02**	**236**	P	Pn	19 31 38.5	-0.4
PRGZ	**Paritu Road**	**2.02**	**236**	P	Pn	19 31 38.6	-0.3
MWZ	**Matawai**	**2.05**	**254**	P	Pn	19 31 38.9	-0.3
MWZ	**Matawai**	**2.05**	**254**	P	Pn	19 31 38.6	-0.6
MHGZ	**Mahia Peninsul**	**2.14**	**230**	P	Pn	19 31 39.8	-0.7
MHGZ	**Mahia Peninsul**	**2.14**	**230**	P	Pn	19 31 39.9	-0.7
RAGZ	**Rawiri**	**2.17**	**251**	P	Pn	19 31 40.8	-0.2
RAGZ				S	Sn	19 32 08.0	-0.1
RAGZ	**Rawiri**	**2.17**	**251**	P	Pn	19 31 40.9	-0.1
KNZ	**Kokohu**	**2.21**	**236**	P	Pn	19 31 40.7	-0.8
KNZ	**Kokohu**	**2.21**	**236**	P	Pn	19 31 40.7	-0.7
SNGZ	**Shannon Statio**	**2.33**	**244**	P	Pn	19 31 43.0	-0.2
SNGZ	**Shannon Statio**	**2.33**	**244**	P	Pn	19 31 42.8	-0.3
URZ	**Urewera**	**2.35**	**258**	P	Pn	19 31 43.6	+0.3
URZ	**Urewera**	**2.35**	**258**	P	Pn	19 31 43.6	+0.3
RTZ	**Ruatahuna**	**2.54**	**250**	P	Pn	19 31 46.3	+0.3
RTZ	**Ruatahuna**	**2.54**	**250**	P	Pn	19 31 46.4	+0.4
WHHZ	**Waihua**	**2.54**	**239**	P	Pn	19 31 45.6	-0.3
RAHZ	**Arahi**	**2.57**	**244**	P	Pn	19 31 46.5	+0.1
MUGZ	**Murupara**	**2.66**	**254**	P	Pn	19 31 47.7	+0.1
MTHZ	**Maungataniwha**	**2.72**	**246**	P	Pn	19 31 48.3	-0.1
OPRZ	**Ohinepanea**	**2.75**	**268**	P	Pn	19 31 48.2	-0.7
ARHZ	**Aropaoanui**	**2.79**	**238**	P	Pn	19 31 49.4	0.0
TARZ	**Mount Tarawera**	**2.82**	**260**	P	Pn	19 31 50.1	+0.2
NMHZ	**Naumai**	**2.84**	**242**	P	Pn	19 31 49.9	-0.2
MCHZ	**McNeill Hill**	**3.08**	**237**	P	Pn	19 31 53.1	-0.3
BKZ	**Black Stump Fm**	**3.09**	**243**	P	Pn	19 31 53.7	+0.1
KAHZ	**Kahuranaki**	**3.17**	**230**	P	Pn	19 31 53.4	-1.2
KWHZ	**Kaweka Forest**	**3.26**	**239**	P	Pn	19 31 55.1	-0.7
PXZ	**Pawanui**	**3.32**	**227**	P	Pn	19 31 54.1	-2.6
KRHZ	**Kereru**	**3.40**	**236**	P	Pn	19 31 56.9	-0.9
BHHZ	**Black Hill Sta**	**3.53**	**240**	P	Pn	19 31 59.0	-0.7
PNHZ	**Pukenui**	**3.66**	**234**	P	Pn	19 32 00.0	-1.4
MOVZ	**Moawhango**	**3.71**	**243**	P	Pn	19 32 02.8	+0.6
TUVZ	**Tukino**	**3.73**	**246**	P	Pn	19 32 02.6	+0.2
WHVZ	**Whangaehu Hut**	**3.78**	**246**	P	Pn	19 32 03.7	+0.4
TSZ	**Takapari Road**	**3.89**	**233**	P	Pn	19 32 02.8	-1.8
DVHZ	**Dannevirke**	**3.91**	**229**	P	Pn	19 32 02.8	-2.0
PRWZ	**Pori Road**	**4.18**	**228**	P	Pn	19 32 06.5	-2.0
POWZ	**Post Office Ro**	**4.20**	**231**	P	Pn	19 32 07.7	-1.1
TIWZ	**Tintock**	**4.38**	**226**	P	Pn	19 32 08.6	-2.6
WAZ	**Wanganui**	**4.40**	**242**	P	Pn	19 32 12.8	+1.3
MRZ	**Mangatainoka R**	**4.48**	**229**	P	Pn	19 32 09.9	-2.7
HOWZ	**Holdsworth Sta**	**4.67**	**227**	P	Pn	19 32 12.0	-3.2
CTZ	**Chatham Island**	**6.45**	**158**	P	Pn	19 32 39.6	+0.1

JMA 27 19:39:41.1±0.4, 37°.07N×142°.36E, h12^{km}±5^{km}, M3.6, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	**Kawauchi**	**1.22**	**284**	P	Pn	19 40 03.5	-0.5
JFK				S	Sb	19 40 20.2	+0.3
ONAJ	**Iwakimizuishiy**	**1.25**	**272**	P	Pn	19 40 04.2	-0.2
ONAJ				*e*S	Sn	19 40 21.1	-0.1
JFFD	**Fukushimafurud**	**1.44**	**271**	P	Pn	19 40 07.2	+0.2
JMM	**Marumori**	**1.48**	**303**	P	Pn	19 40 07.0	-0.5
JMM				S	Sn	19 40 26.4	-0.4
JHO	**Hitachi**	**1.51**	**253**	P	Pn	19 40 08.4	+0.5
JIO	**Ouri**	**1.60**	**330**	P	Pn	19 40 09.0	-0.2
JFT	**Otama**	**1.67**	**286**	P	Pn	19 40 10.5	+0.3
JFT				S	Sb	19 40 32.5	-0.4
JOU	**Okura**	**1.87**	**314**	P	Pb	19 40 14.1	-1.0
JFY	**Yanaizu**	**2.15**	**280**	P	Pb	19 40 19.0	-0.9
MAT	**Matsushiro**	**3.37**	**262**	P	Pn	19 40 37.1	+3.5
MAT				S	Sb	19 41 18.1	-3.8

ISCJB ***27*** *19:43:12.5±0.5, 33°.32N±0°.02×35°.33E±0°.04, h3^{km}±4^{km}, Error ellipse: s-maj=6.3km s-min=2.9km az=30.9*
GII ***27*** *19:43:12.6±0.0, 33°.26N×35°.37E, h2^{km}, MD1.6/4*
CSEM ***27*** *19:43:14.0, 33°.31N×35°.38E, h0^{km}, ML2.6*
GRAL ***27*** *19:43:14.0±0.2, 33°.31N×35°.38E, h0^{km}±72^{km}, MD2.6*
ISC 27 19:43:12.5±1.0, **33°.33N**±0°.03×**35°.39E**±0°.04, **h14**^{km}±9^{km}, **n27**, σ**0**^{s}**72**/46, **Jordan-Syria region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSDI	**Kefar Szold**	**0.27**	**121**	Pg	**Pg**	**19 43 18.7**	**+0.5**
KSDI				Sg	**Sg**	**19 43 23.2**	**+1.2**
SHBL	**Chebaa**	**0.30**	**87**	*e*P	**Pb**	**19 43 19.6**	**-0.2**
SHBL				*e*S	**Sb**	**19 43 23.6**	**-1.1**
SHBL	**Chebaa**	**0.30**	**87**	*e*P	**Pb**	**19 43 19.6**	**-0.2**
SHBL				*e*S	**Sb**	**19 43 23.6**	**-1.1**
NATI	**Neve Ativ**	**0.30**	**103**	Pg	**Pb**	**19 43 19.4**	**-0.3**
NATI				Sg	**Sb**	**19 43 24.4**	**-0.2**
HNTI	**Hanita**	**0.30**	**216**	Pg	**Pg**	**19 43 18.4**	**-0.5**
HNTI				Sg	**Sg**	**19 43 22.1**	**-1.0**
MMA0B	**Mount Meron ar**	**0.32**	**177**	Pg	**Pg**	**19 43 18.7**	**-0.4**
MMA0B				Sg	**Sb**	**19 43 23.8**	**-1.3**
QRWL	**Qaraoun**	**0.33**	**49**	*e*P	**Pb**	**19 43 20.3**	**0.0**
QRWL				*e*S	**Sb**	**19 43 25.0**	**-0.5**
QRWL	**Qaraoun**	**0.33**	**49**	*e*P	**Pb**	**19 43 20.3**	**0.0**
QRWL				*e*S	**Sb**	**19 43 25.0**	**-0.5**
DQRL	**Deir Qamar**	**0.40**	**22**	*e*P	**Pb**	**19 43 21.7**	**+0.1**
DQRL				*e*S	**Sb**	**19 43 27.4**	**-0.3**
DQRL	**Deir Qamar**	**0.40**	**22**	*e*P	**Pb**	**19 43 21.7**	**+0.1**
DQRL				*e*S	**Sb**	**19 43 27.4**	**-0.3**
RCY	**Rachaya**	**0.41**	**66**	*e*P	**Pb**	**19 43 21.7**	**-0.1**
RCY				*e*S	**Sb**	**19 43 27.4**	**-0.5**
KSHT	**Keshet**	**0.50**	**134**	Pg	**Pb**	**19 43 22.8**	**-0.3**
BHL	**Bhannes**	**0.61**	**21**	*e*P	**Pb**	**19 43 25.5**	**+0.3**
BHL	**Bhannes**	**0.61**	**21**	*e*P	**Pb**	**19 43 25.5**	**+0.3**
BLGI	**Bet Lehem HaGe**	**0.62**	**195**	Pg	**Pg**	**19 43 24.2**	**-0.4**
BLGI				Sg	**Sb**	**19 43 33.5**	**-0.2**
OFRI	**'Ofer**	**0.79**	**206**	Pg	**Pg**	**19 43 27.2**	**-0.6**
OFRI				Sg	**Sb**	**19 43 38.6**	**+0.1**
MMLI	**Mount Malkishu**	**0.89**	**178**	Pg	**Pg**	**19 43 29.1**	**-0.7**
MMLI				Sg	**Sb**	**19 43 41.5**	**-0.1**
HWQ	**Hawqa**	**1.05**	**26**	*e*P	**Pn**	**19 43 33.3**	**+0.2**
HWQ	**Hawqa**	**1.05**	**26**	*e*P	**Pn**	**19 43 33.3**	**+0.2**
HMDT	**Nahal Hemdat**	**1.08**	**174**	Pg	**Pg**	**19 43 32.4**	**-1.0**
HMDT				Sg	**Sb**	**19 43 47.1**	**+0.1**
SLTI	**Sal'it**	**1.13**	**195**	Pg	**Pg**	**19 43 33.0**	**-1.3**
SLTI				Sg	**Sg**	**19 43 48.4**	**-0.5**
DSI	**Dead Sea**	**1.76**	**180**	Pn	**Pn**	**19 43 43.6**	**+1.0**
DSI				Sn	**Sb**	**19 44 06.6**	**+0.1**
AMAZ	**Amatzia**	**1.84**	**193**	Pn	**Pn**	**19 43 45.0**	**+1.3**
AMAZ				Sn	**Sb**	**19 44 09.9**	**+1.1**
YTIR	**Yattir**	**1.98**	**187**	Pn	**Pn**	**19 43 47.1**	**+1.4**
MZDA	**Masada**	**2.02**	**181**	Pn	**Pn**	**19 43 46.7**	**+0.6**
MZDA				Sn	**Sb**	**19 44 13.8**	**-0.1**
KZIT	**Kziot**	**2.56**	**199**	Pn	**Pn**	**19 43 54.7**	**+1.0**
PRNI	**Paran**	**2.99**	**186**	Pn	**Pn**	**19 44 00.9**	**+1.3**

IDC 27 19:44:49.7±354.0, **57°.12N×29°.56E, h0**^{km}**, Error ellipse: s-maj=150.4km s-min=88.0km az=99.0, Baltic States-Belarus-Northwestern Russia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I43RU	**DUBNA INFRASON**	**4.22**	**92**	*i*		20 10 47.1	
	baz=278,slow=327,SNR=2.2						
I26DE	**FREYUNG INFRAS**	**12.61**	**236**	*i*		21 04 00.0	
	baz=40,slow=320,SNR=1.6						
I48TN	**KESRA INFRASON**	**25.29**	**221**	*i*		22 20 00.0	
	baz=27,slow=317,SNR=0.2						

IDC 27 19:49:50.8±1.8, **12°.03N×144°.51E, h115**^{km}±18^{km}**, mb3.2**/5, **mb1 3.4**/5, **mb1mx3.0**/67, **mbtmp3.6**/5, **Error ellipse: s-maj=63.8km s-min=21.0km az=98.0, South of Mariana Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GUMO	**Guam**	**1.59**	**13**	P	Pn	19 50 17.0	-2.0
	8.5nm,0.3s,baz=226,slow=22,SNR=3.2						
GUMO				S	Sn	19 50 40.9	+0.4
	30nm,0.3s,baz=176,slow=23,SNR=7.0						
WRA	**Warramunga Arr**	**33.31**	**198**	P	P	19 56 17.7	-0.1
	0.4nm,0.7s,baz=21,slow=9.7,SNR=2.2						
ASAR	**Alice Springs**	**36.96**	**196**	P	P	19 56 49.5	+0.4
	0.3nm,0.7s,baz=11,slow=10,SNR=2.6						
KURBB	**Kurchatov Arra**	**65.58**	**320**	P	P	20 00 21.6	-0.6
	0.4nm,0.5s,baz=103,slow=6.5,SNR=4.7						
ILAR	**Eielson Array**	**70.12**	**25**	P	P	20 00 50.0	-0.4
	0.3nm,0.6s,baz=246,slow=5.8,SNR=2.8						
FINES	**FINESS Array B**	**92.42**	**335**	P	P	20 02 49.4	+1.0
	0.4nm,0.5s,baz=62,slow=4.5,SNR=5.5						

MAN 27 19:49:54.2, 9°.42N×125°.71E, h33^{km}**, mb4.3, ML3.1, MS2.9, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SCPH	**Surigao**	**0.42**	**328**	*e*P	Pn	19 50 05.1	+1.0
SCPH				*e*S	Sn	19 50 12.3	+1.7
BUTP	**Butuan**	**0.46**	**192**	*e*P	Pn	19 50 05.3	+0.8
BUTP				*e*S	Sn	19 50 13.3	+1.8
BUKP	**Musuan**	**1.66**	**203**	*e*P	Pn	19 50 16.1	-5.0
BUKP				*e*S	Sb	19 50 48.5	+3.6
TBP	**Tagbilaran**	**1.85**	**279**	*e*P	Pn	19 50 24.4	+0.8
PAGZ	**Pagadian**	**2.79**	**236**	*e*P	Pn	19 50 37.2	+0.7
PAGZ				*e*S	Sn	19 51 09.9	+0.9

IDC ***27*** *19:51:56.7±1.1, 33°.44N×88°.89E, h0^{km}, mb3.7/7, mb1 3.8/10, mb1mx3.5/75, mbtmp3.7/10, ML3.5/2, MS2.9/4, Ms1 2.9/4, ms1mx2.5/63, Error ellipse: s-maj=49.4km s-min=16.9km az=58.0*
ISCJB ***27*** *19:51:60.0±0.8, 33°.6N±0°.1×89°.0E±0°.2, h33^{km}, mb3.7/6, MS3.3/3, Error ellipse: s-maj=29.5km s-min=10.6km az=151.6*
ISC 27 19:52:02.2±1.1, **33°.6N**±0°.1×**89°.1E**±0°.2, **h35**^{km}**, n15**, σ**1**^{s}**08**/12, **mb3.8**/6, **MS3.1**/3, **Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**14.19**	**341**	Pn	**Pn**	**19 55 20.0**	**-0.5**
	0.0nm,0.3s,baz=210,slow=17,SNR=3.9						
MKAR				LR	LR	20 01 01.3	
	comp=Z,19nm,20.1s,baz=168,slow=38						
AAK	**Ala-Archa**	**14.62**	**313**	LR	LR	20 02 17.5	
	comp=Z,49nm,18.8s,baz=130,slow=43						
CMAR	**Chiang Mai Arr**	**17.44**	**147**	P	**Pn**	**19 56 02.4**	**-0.3**
	0.3nm,0.3s,baz=325,slow=11,SNR=6.8						
KURBB	**Kurchatov Arra**	**18.73**	**339**	P	**P**	**19 56 17.6**	**-0.1**
	0.0nm,0.3s,baz=153,slow=12,SNR=13						
SONM	**Songino Array**	**19.31**	**37**	P	**Pn**	**19 56 25.7**	**+0.2**
	baz=222,slow=9.7,SNR=4.5						
ZALV	**Zalesovo Beam**	**20.60**	**353**	P	**P**	**19 56 39.0**	**+0.9**
	1.7nm,0.8s,baz=168,slow=11,SNR=6.3						
ZALV				LR	LR	20 05 45.8	
	comp=Z,28nm,20.8s,baz=67,slow=40						
BVAR	**Borovoye Array**	**23.61**	**331**	P	**P**	**19 57 10.5**	**+0.7**
	0.6nm,0.7s,baz=148,slow=12,SNR=4.6						
AKTO	**Aktyubinsk**	**28.31**	**316**	LR	LR	20 10 51.6	
	comp=Z,47nm,18.1s,baz=143,slow=40						
FINES	**FINESS Array B**	**48.34**	**325**	P	**P**	**20 00 39.8**	**-0.1**
	0.9nm,1.0s,baz=69,slow=7.6,SNR=2.2						
ARCES	**ARCESS Array B**	**49.78**	**336**	P	**P**	**20 00 49.3**	**-1.6**
	2.2nm,1.0s,baz=78,slow=6.6,SNR=3.7						
NB2	**NORSAR Subarra**	**55.52**	**325**	P	**P**	**20 01 36.0**	**+2.5**
	comp=Z,1.1nm,0.8s,baz=81,slow=7.4						
NOA	**NORSAR Array B**	**55.52**	**325**	P	**P**	**20 01 33.6**	**0.0**
	comp=Z,1.0nm,0.8s,baz=80,slow=7.2,SNR=3.9						
WRA	**Warramunga Arr**	**68.50**	**134**	P	**P**	**20 03 01.4**	**+0.2**
	comp=Z,0.6nm,0.6s,baz=326,slow=6.7,SNR=7.6						
ASAR	**Alice Springs**	**71.13**	**137**	P	**P**	**20 03 17.2**	**0.0**
	comp=Z,0.6nm,0.8s,baz=324,slow=5.5,SNR=6.9						
DBIC	**Dimbokro**	**89.63**	**278**	LR	LR	20 50 06.8	
	comp=Z,105nm,18.4s,baz=217,slow=39						

IDC 27 20:31:57.1±2.8, **7°.64S×146°.52E, h0**^{km}**, mb2.9**/1, **mb1 3.4**/2, **mb1mx3.1**/47, **mbtmp3.2**/2, **ML2.9**/1, **MS3.6**/1, **Ms1 3.6**/1, **ms1mx2.7**/8, **Error ellipse: s-maj=60.1km s-min=37.1km az=62.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**1.86**	**160**	Pn	Pn	20 32 30.4	+0.1
	8.0nm,0.3s,baz=0.3,slow=3.2,SNR=19						
PMG				Sn	Sn	20 32 51.0	-3.5
	7.8nm,0.3s,baz=353,slow=21,SNR=8.9						
PMG				LR	LR	20 33 37.3	
	comp=Z,88nm,21.7s,baz=112,slow=54						
WRA	**Warramunga Arr**	**17.00**	**223**	Pn	Pn	20 35 57.3	+0.8
	0.0nm,0.3s,baz=48,slow=11,SNR=2.9						
ASAR	**Alice Springs**	**20.01**	**216**	P	P	20 36 30.0	-1.6
	0.3nm,0.5s,baz=36,slow=12,SNR=4.2						
MJAR	**Matsushiro Arr**	**44.64**	**350**	LR	LR	20 57 39.9	
	comp=Z,77nm,21.2s,baz=210,slow=35						
TORD	**Torodi Ar. Bea**	**145.00**	**282**	PKPbc	PKPab	20 51 36.2	-0.6
	baz=98,slow=2.0						

IDC 27 20:35:51.4±13.0, **35°.13N×88°.06E, h0**^{km}**, mb3.1**/1, **mb1 3.2**/5, **mb1mx3.1**/70, **mbtmp3.2**/5, **ML2.7**/4, **MS3.3**/8, **Ms1 3.3**/8, **ms1mx3.1**/26, **Error ellipse: s-maj=191.0km s-min=50.9km az=10.0, Xizang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	**Makanchi Array**	**12.44**	**341**	Pn	Pn	20 38 48.7	-1.0
	0.1nm,0.3s,baz=146,slow=16,SNR=3.0						
MKAR				LR	LR	20 43 50.2	
	comp=Z,62nm,18.4s,baz=166,slow=38						
AAK	**Ala-Archa**	**12.95**	**309**	LR	LR	20 44 27.5	
	comp=Z,98nm,20.7s,baz=106,slow=40						
KURBB	**Kurchatov Arra**	**16.96**	**339**	Pn	Pn	20 39 45.7	-4.3
	0.0nm,0.3s,baz=153,slow=10,SNR=2.8						
SONM	**Songino Array**	**18.64**	**42**	P	P	20 40 10.5	-0.2
	0.0nm,0.3s,baz=236,slow=10,SNR=2.0						
SONM				LR	LR	20 47 52.8	
	comp=Z,70nm,20.1s,baz=236,slow=39						
ZALV	**Zalesovo Beam**	**18.95**	**354**	P	Pn	20 40 14.2	-0.3
	0.1nm,0.3s,baz=187,slow=10,SNR=3.6						
ZALV				LR	LR	20 48 25.3	
	comp=Z,66nm,18.8s,baz=244,slow=40						
CMAR	**Chiang Mai Arr**	**19.21**	**147**	LR	LR	20 49 05.0	
	comp=Z,25nm,18.1s,baz=210,slow=41						
BVAR	**Borovoye Array**	**21.83**	**330**	P	P	20 40 45.6	+0.4
	0.6nm,0.7s,baz=106,slow=5.3,SNR=4.8						
AKTO	**Aktyubinsk**	**26.60**	**314**	LR	LR	20 52 42.2	
	comp=Z,70nm,18.7s,baz=119,slow=38						
KSRS	**Korea Array**	**32.05**	**74**	LR	LR	20 55 15.2	
	comp=Z,171nm,19.0s,baz=184,slow=36						
ASAJ	**Asahikawa**	**42.28**	**61**	LR	LR	21 02 31.2	
	comp=Z,117nm,19.0s,baz=144,slow=38						

IDC 27 20:39:49.1±2.1, **17°.73S×167°.51E, h0**^{km}**, mb3.9**/3, **mb1 4.0**/4, **mb1mx3.6**/45, **mbtmp3.8**/4, **ML3.4**/1, **MS2.8**/1, **Ms1 2.8**/1, **ms1mx2.4**/45, **Error ellipse: s-maj=65.5km s-min=32.9km az=123.0, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**4.43**	**193**	Pn	Pn	20 40 56.5	-1.3
	1.8nm,0.3s,baz=77,slow=15,SNR=26						
DZM				Sn	Sn	20 41 43.0	-7.2
	2.5nm,0.3s,baz=129,slow=23,SNR=6.9						
HNR	**Honiara**	**11.04**	**317**	LR	LR	20 45 47.0	
	comp=Z,51nm,19.6s,baz=322,slow=32						
STKA	**Stephens Creek**	**27.33**	**234**	P	P	20 45 37.1	+1.3
	2.8nm,0.9s,baz=82,slow=15,SNR=3.6						
ASAR	**Alice Springs**	**31.93**	**254**	P	P	20 46 16.1	-0.7
	0.8nm,0.7s,baz=75,slow=8.8,SNR=7.8						
ILAR	**Eielson Array**	**89.29**	**18**	P	P	20 52 46.8	0.0
	0.4nm,0.6s,baz=237,slow=4.3,SNR=4.7						

NNC 27 20:47:09.2±8.7, **37°.85N×71°.30E, h0**^{km}**, mb3.6, mpv3.2, 5C-3D, Error ellipse: s-maj=65.8km s-min=50.8km az=174.0, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	**Sufi-Kurgan**	**2.76**	**38**	⇓Pn	Pn	20 47 55.2	+0.3
	3.8nm,0.3s						
SFK				⇓Sn	Sn	20 48 29.6	+0.5
	7.2nm,0.3s						
MNAS	**Manas**	**4.72**	**11**	⇑Pn	Pn	20 48 23.3	+1.4
	1.5nm,0.5s						
MNAS				⇑Sn	Sn	20 49 19.0	+1.6
	3.4nm,0.6s						
KK31	**Karatay Array**	**5.28**	**354**	⇑Pn	Pn	20 48 31.0	+1.5
	2.0nm,0.5s,baz=177,slow=13,SNR=13						
KK31				⇑Sn	Sn	20 49 33.5	+2.5
	0.6nm,0.2s,baz=186,slow=23,SNR=6.9						
AAK	**Ala-Archa**	**5.37**	**26**	⇑Pn	Pn	20 48 29.3	-1.5
	1.2nm,0.3s						
AAK				⇓Sn	Sn	20 49 32.9	-0.4
	1.4nm,0.4s						

AZER ***27*** *21:19:25.0±73.0, 36°.89N×51°.16E, h1^{km}, ml4.2/21, Error ellipse: s-maj=16.0km s-min=1.4km az=324.0*
THR ***27*** *21:19:26.9±0.4, 36°.82N×51°.30E, h6^{km}±4^{km}, ML4.1*
TEH ***27*** *21:19:26.7, 36°.79N×51°.30E, h6^{km}, ML4.1*
NEIC ***27*** *21:19:26.9±0.0, 36°.82N×51°.30E, h6^{km}, mb4.2/13, ML4.1(THR), After THR.*
ISCJB ***27*** *21:19:28.4±0.2, 36°.88N±0°.02×51°.30E±0°.02, h10^{km}, mb4.0/22, MS3.1/4, Error ellipse: s-maj=3.1km s-min=1.7km az=144.0*
IDC ***27*** *21:19:28.3±1.1, 36°.85N×51°.27E, h0^{km}, mb3.9/17, mb1 4.0/23, mb1mx3.8/74, mbtmp3.9/23, ML3.5/6, MS3.1/3, Ms1 3.1/3, ms1mx2.5/61, Error ellipse: s-maj=19.9km s-min=12.0km az=2.0*
CSEM ***27*** *21:19:28.7±0.1, 36°.83N×51°.28E, h2^{km}, mb4.1/18, Error ellipse: s-maj=4.0km s-min=2.5km az=57.0*
MOS ***27*** *21:19:32.8±1.6, 37°.30N×51°.36E, h19^{km}, mb4.2/23, Error ellipse: s-maj=8.4km s-min=4.4km az=116.3*
NNC ***27*** *21:19:47.7±4.4, 37°.52N×54°.51E, h0^{km}, mb4.1, Error ellipse: s-maj=71.8km s-min=33.0km az=85.0*
ISC 27 21:19:29.8±0.4, **36°.78N**±0°.04×**51°.30E**±0°.03, **h10**^{km}**, n299**, σ**1**^{s}**43**/308, **mb4.1**/27, **MS3.0**/4, **48C-74D, Northern and central Iran**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHTH	**Charan**	**0.88**	**189**	*e*Pg	Pg	21 19 44.7	-2.2
CHTH	**Charan**	**0.88**	**189**	*e*Pg	Pg	21 19 44.7	-2.1
CHTH	**Charan**	**0.88**	**189**	*e*Pg	Pg	21 19 44.7	-2.1
THKV	**Tehran--Karaj**	**0.93**	**202**	*e*Pg	**Pg**	**21 19 45.9**	**-1.8**
THKV				IAML		21 20 09.1	
	comp=N,4µm,0.4s						
THKV	**Tehran--Karaj**	**0.93**	**202**	*e*Pg	**Pg**	**21 19 45.9**	**-1.8**
THKV	**Tehran--Karaj**	**0.93**	**202**	*e*Pg	**Pg**	**21 19 45.9**	**-1.8**
IGZV	**Ghazvin**	**0.96**	**246**	*e*Pg	Pg	21 19 46.2	-2.1
IGZV				*e*		21 20 00.3	
	comp=E,49µm,0.2s						
IGZV				*e*		21 20 01.6	
	comp=N,29µm,0.2s						
IGZV				*e*		21 20 02.4	
	comp=Z,52µm,0.1s						
IGZV	**Ghazvin**	**0.96**	**246**	*e*Pg	Pg	21 19 46.2	-2.1
IAFJ	**Afjeh**	**0.98**	**160**	*e*Pg	**Pg**	**21 19 46.8**	**-1.9**
IAFJ				*e*		21 20 03.3	
	comp=Z,54µm,0.2s						
IAFJ				*e*		21 20 03.6	
	comp=N,44µm,0.1s						
IAFJ				*e*		21 20 06.3	
	comp=E,479nm,0.1s						
IAFJ	**Afjeh**	**0.98**	**160**	*e*Pg	**Pg**	**21 19 46.8**	**-1.9**
IPRN	**Peran**	**0.99**	**123**	*e*Pg	**Pg**	**21 19 47.5**	**-1.4**
IPRN				*e*		21 20 05.1	
	comp=N,95µm,0.3s						
IPRN				*e*		21 20 05.6	
	comp=Z,17µm,0.3s						
IPRN				*e*		21 20 05.9	
	comp=E,35µm,0.1s						
IMHD	**Mahdasht**	**1.21**	**205**	*e*Pg	**Pb**	**21 19 51.1**	**-1.7**
IMHD				*e*		21 19 52.1	
	comp=Z,43µm,0.1s						
IMHD				*e*		21 20 09.3	
	comp=E,96µm,0.1s						
IMHD				*e*		21 20 11.1	
	comp=N,64µm,0.1s						
IMHD	**Mahdasht**	**1.21**	**205**	*e*Pg	**Pb**	**21 19 51.1**	**-1.7**
DAMV	**Damavand**	**1.27**	**155**	*e*Pg	**Pn**	**21 19 52.2**	**-1.6**
DAMV	**Damavand**	**1.27**	**155**	*e*Pg	**Pn**	**21 19 52.2**	**-1.6**
DAMV	**Damavand**	**1.27**	**155**	*e*Pg	**Pn**	**21 19 52.2**	**-1.6**
IDMV	**Damavand**	**1.34**	**154**	*e*Pg	**Pn**	**21 19 53.8**	**-1.0**
IDMV				*e*		21 20 14.1	
	comp=E,99µm,0.1s						
IDMV				*e*		21 20 15.5	
	comp=N,88µm,0.2s						
IDMV				*e*		21 20 16.1	
	comp=Z,34µm,0.3s						
IDMV	**Damavand**	**1.34**	**154**	*e*Pg	**Pn**	**21 19 53.8**	**-1.0**
IALA	**Alasht**	**1.40**	**119**	*e*Pg	**Pn**	**21 19 54.7**	**-1.0**
IALA				*e*		21 20 20.2	
	comp=Z,59µm,0.1s						
IALA				*e*		21 20 20.7	
	comp=E,90µm,0.1s						
IALA	**Alasht**	**1.40**	**119**	*e*Pg	**Pn**	**21 19 54.7**	**-1.0**
IFIR	**Firoozkooh**	**1.63**	**134**	*e*Pg	**Pn**	**21 19 58.7**	**-0.1**
IFIR				*e*		21 20 01.9	
	comp=Z,30µm,0.1s						
IFIR				*e*		21 20 23.3	
	comp=E,35µm,0.3s						
IFIR				*e*		21 20 25.3	
	comp=N,26µm,0.1s						
IFIR	**Firoozkooh**	**1.63**	**134**	*e*Pg	**Pn**	**21 19 58.7**	**-0.1**
QABG	**Abgarm-Qazvin**	**1.76**	**233**	*e*		21 20 03.1	
	comp=Z,99nm,0.3s						
QABG				*e*Pn	**Pn**	**21 20 01.3**	**+0.8**
QABG				*e*		21 20 27.3	
	comp=E,99nm,0.2s						
QABG				*e*		21 20 28.6	
	comp=N,99nm,0.2s						
IRAZ	**Razeghan**	**1.77**	**219**	*e*Pn	**Pn**	**21 20 00.7**	**0.0**
IRAZ				*e*		21 20 02.5	
	comp=Z,26µm,0.1s						
IRAZ				*e*		21 20 28.7	
	comp=N,16µm,0.2s						
IRAZ				*e*		21 20 30.0	
	comp=E,47µm,0.3s						
IRAZ	**Razeghan**	**1.77**	**219**	*e*Pn	**Pn**	**21 20 00.7**	**0.0**
ISHM	**Shahmirzad**	**1.88**	**121**	*e*Pn	**Pn**	**21 20 03.4**	**+1.2**
ISHM				*e*		21 20 32.2	
	comp=N,118nm,0.1s						
ISHM				*e*		21 20 32.2	
	comp=E,9µm,0.1s						
ISHM				*e*		21 20 36.4	
	comp=Z,67µm,0.2s						
ILAS	**Lasjerd**	**1.94**	**136**	*e*		21 20 37.2	
	comp=E,22µm,0.2s						
ILAS				*e*Pn	**Pn**	**21 20 05.3**	**+2.3**
IGLO	**Ghaloghah**	**2.05**	**97**	*e*Pn	**Pn**	**21 20 04.5**	**0.0**
IGLO				*e*		21 20 43.1	
	comp=E,90µm,0.4s						
IGLO				*e*		21 20 44.0	
	comp=Z,82µm,0.3s						
IGLO				*e*		21 20 49.2	
	comp=N,49µm,0.3s						
GHVR	**GHOM**	**2.30**	**180**	IAML		21 20 48.6	
	comp=E,728nm,0.5s						
GHVR				IAML		21 20 48.7	
	comp=N,792nm,0.7s						
HKZM	**Kohzaman**	**2.40**	**235**	*e*Pn	**Pn**	**21 20 10.4**	**+1.1**
HKZM				*e*		21 20 13.8	
	comp=Z,99nm,0.2s						
HKZM				*e*		21 20 45.5	
	comp=E,99nm,0.3s						
HKZM				*e*		21 20 46.1	
	comp=N,99nm,0.2s						
HKZM	**Kohzaman**	**2.40**	**235**	*e*Pn	**Pn**	**21 20 10.4**	**+1.1**
ASAO	**Ashtian**	**2.46**	**205**	*e*Pn	**Pn**	**21 20 10.2**	**+0.1**
ASAO	**Ashtian**	**2.46**	**205**	*e*Pn	**Pn**	**21 20 10.3**	**+0.1**
ASAO	**Ashtian**	**2.46**	**205**	*e*Pn	**Pn**	**21 20 10.3**	**+0.1**
IANJ	**Anjilo**	**2.49**	**121**	*e*Pn	**Pn**	**21 20 12.5**	**+1.9**
IANJ				*e*		21 20 56.8	
	comp=Z,9µm,0.2s						
IANJ	**Anjilo**	**2.49**	**121**	*e*Pn	**Pn**	**21 20 12.5**	**+1.9**
HAGD	**Aghdareh**	**2.63**	**223**	*e*Pn	**Pn**	**21 20 13.6**	**+1.1**
HAGD				*e*		21 20 54.0	
	comp=E,99nm,0.1s						
HAGD				*e*		21 20 54.9	
	comp=Z,99nm,0.2s						
HAGD				*e*		21 20 55.1	
	comp=N,99nm,0.3s						
HAGD	**Aghdareh**	**2.63**	**223**	*e*Pn	**Pn**	**21 20 13.6**	**+1.1**
ASTR	**Astara**	**2.67**	**312**	⇓P	Pn	21 20 10.6	-2.2
	SNR=21						
ASTR				⇓S	**Sn**	**21 20 44.8**	**-0.5**
ASTR	**Astara**	**2.67**	**312**	⇓P	Pn	21 20 10.6	-2.3
	SNR=21						
ASTR				⇓S	**Sn**	**21 20 44.8**	**-0.5**
LKRN	**Lenkeran, Azer**	**2.78**	**315**	⇓P	**Pn**	**21 20 13.0**	**-1.3**
	SNR=7.0						
LKRN				⇓S	**Sn**	**21 20 44.7**	**-3.1**
LKRN	**Lenkeran, Azer**	**2.78**	**315**	⇓P	**Pn**	**21 20 13.0**	**-1.3**
	SNR=7.0						
LKRN				⇓S	**Sn**	**21 20 44.7**	**-3.1**
LRK	**Lerik**	**3.00**	**309**	⇓P	Pn	21 20 15.4	-2.1
	SNR=53						

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LRK                              ⇑S     Sn     21 20 53.0  -0.6
LRK   Lerik             3.00 309 ⇓P     Pn     21 20 15.4  -2.1
      SNR=53
LRK                              ⇑S     Sn     21 20 53.0  -0.6
ISRB  Sarab             3.08 291 ePn    Pn     21 20 19.0  +0.3
ISRB                             e             21 20 22.7
      comp=Z,6µm,0.2s
ISRB                             e             21 21 09.8
      comp=E,14µm,0.2s
ISRB                             e             21 21 11.6
      comp=N,10µm,0.2s
ISRB  Sarab             3.08 291 ePn    Pn     21 20 19.0  +0.3
KHMZ  Khomeyn           3.23 200 ePn    Pn     21 20 20.9  +0.1
KHMZ  Khomeyn           3.23 200 ePn    Pn     21 20 20.9  +0.1
KHMZ  Khomeyn           3.23 200 ePn    Pn     21 20 20.9  +0.1
GLBA  Clilabad          3.36 318  P     Pn     21 20 21.4  -1.0
      SNR=16
GLBA                             ⇓S     Sn     21 21 01.6  -0.8
GLBA  Clilabad          3.36 318  P     Pn     21 20 21.4  -1.0
      SNR=16
GLBA                             ⇓S     Sn     21 21 01.6  -0.8
GRMI  Germi             3.38 308 ePn    Pn     21 20 21.9  -0.8
GRMI                              IAML         21 21 04.1
      comp=E,639nm,0.3s
GRMI                              IAML         21 21 04.5
      comp=N,454nm,0.3s
GRMI  Germi             3.38 308 ePn    Pn     21 20 21.9  -0.8
GRMI  Germi             3.38 308 ePn    Pn     21 20 21.9  -0.8
HSAM  Samen             3.38 221 ePn    Pn     21 20 24.5  +1.6
HSAM                             e             21 21 16.6
      comp=N,99nm,0.4s
HSAM                             e             21 21 17.8
      comp=E,99nm,0.4s
HSAM  Samen             3.38 221 ePn    Pn     21 20 24.5  +1.6
IKLH  Kolahrood         3.46 176 ePn    Pn     21 20 25.0  +1.0
IKLH                             e             21 20 31.8
      comp=Z,7µm,0.2s
IKLH                             e             21 20 33.9
      comp=N,6µm,0.2s
IKLH                             e             21 21 22.3
      comp=E,6µm,0.3s
IKLH  Kolahrood         3.46 176 ePn    Pn     21 20 25.0  +1.0
IBZA  Bozab             3.63 232 ePn    Pn     21 20 26.2  -0.1
IBZA                             e             21 22 07.3
      comp=Z,99nm,1.4s
IBZA  Bozab             3.63 232 ePn    Pn     21 20 26.2  -0.1
IBST  Bostanabad        3.64 286 ePn    Pn     21 20 26.3  -0.1
IBST                             e             21 21 30.7
      comp=N,2µm,0.1s
IBST                             e             21 21 31.3
      comp=E,2µm,0.2s
IBST                             e             21 21 32.5
      comp=Z,2µm,0.3s
IBST  Bostanabad        3.64 286 ePn    Pn     21 20 26.3  -0.1
ALIB  &Auml;li-Bayra    3.65 331 ⇑P     Pn     21 20 24.5  -1.8
      SNR=10
ALIB                             ⇓S     Sn     21 21 08.4  -1.0
ALIB  &Auml;li-Bayra    3.65 331 ⇑P     Pn     21 20 24.5  -1.8
      SNR=10
ALIB                             ⇓S     Sn     21 21 08.4  -1.0
IHRS  Heris             3.72 296 ePn    Pn     21 20 27.5   0.0
IHRS                             e             21 21 13.6
      comp=N,4µm,0.2s
IHRS                             e             21 21 14.3
      comp=Z,2µm,0.2s
IHRS                             e             21 21 16.4
      comp=E,4µm,0.2s
IHRS  Heris             3.72 296 ePn    Pn     21 20 27.5   0.0
NDR   Nardaran          3.93 345 ⇓P     Pn     21 20 30.0  -0.2
      SNR=4.0
NDR                              ⇑S     Sn     21 21 15.1  -1.2
NDR   Nardaran          3.93 345 ⇓P     Pn     21 20 30.0  -0.2
      SNR=4.0
NDR                              ⇑S     Sn     21 21 15.1  -1.2
IZEF  Zefreh            3.97 167 ePn    Pn     21 20 31.2  +0.3
IZEF                             e             21 20 43.4
      comp=N,4µm,0.2s
IZEF                             e             21 20 43.4
      comp=Z,3µm,0.2s
IZEF                             e             21 21 42.0
      comp=E,5µm,0.3s
IZEF  Zefreh            3.97 167 ePn    Pn     21 20 31.2  +0.3
ILIN  Lien              3.99 243 ePn    Pn     21 20 31.7  +0.5
ILIN                             e             21 21 39.2
      comp=Z,2µm,0.3s
ILIN                             e             21 21 41.5
      comp=E,2µm,0.2s
ILIN  Lien              3.99 243 ePn    Pn     21 20 31.7  +0.5
IKOM  Komasi            4.04 231 ePn    Pn     21 20 34.1  +2.2
IKOM                             e             21 22 22.8
      comp=Z,99nm,1.5s
IKOM  Komasi            4.04 231 ePn    Pn     21 20 34.1  +2.2
ANAR  Anarak            4.10 150 ePn    Pn     21 20 33.5  +0.9
ANAR                             e             21 20 45.5
      comp=E,99nm,0.2s
ANAR                             e             21 21 48.2
      comp=Z,99nm,0.4s
ANAR                             e             21 21 48.6
      comp=N,99nm,0.3s
ANAR  Anarak            4.10 150 ePn    Pn     21 20 33.5  +0.9
GBS   Qobustan          4.18 334 ⇑P     Pn     21 20 32.1  -1.6
      SNR=30
GBS                              ⇓S     Sn     21 21 21.4  -1.2
GBS   Qobustan          4.18 334 ⇑P     Pn     21 20 32.1  -1.6
      SNR=30
GBS                              ⇓S     Sn     21 21 21.4  -1.2
IVIS  Veis              4.27 239 ePn    Pn     21 20 35.7  +0.8
IVIS                             e             21 21 54.9
      comp=Z,1µm,0.4s
IVIS                             e             21 21 56.2
      comp=N,1µm,0.4s
IVIS                             e             21 21 57.3
      comp=E,976nm,0.3s
IVIS  Veis              4.27 239 ePn    Pn     21 20 35.7  +0.8
KCHF  Cheshme Sefid,    4.28 236 ePn    Pn     21 20 37.3  +2.1
KCHF                             e             21 20 51.3
      comp=Z,99nm,0.3s
KCHF  Cheshme Sefid,    4.28 236 ePn    Pn     21 20 37.3  +2.1
KDMR  Kurdemir          4.34 327 ⇓P     Pn     21 20 33.7  -2.1
      SNR=18
KDMR                             ⇓S     Sn     21 21 25.8  -0.6
KDMR  Kurdemir          4.34 327 ⇓P     Pn     21 20 33.7  -2.1
      SNR=18
KDMR                             ⇓S     Sn     21 21 25.8  -0.6
ITBZ  Tabriz            4.35 291 ePn    Pn     21 20 37.1  +1.0
ITBZ                             e             21 20 50.7
      comp=Z,535nm,0.2s
ITBZ                             e             21 22 02.8
      comp=N,715nm,0.2s
ITBZ                             e             21 22 06.6
      comp=E,1µm,0.4s
ITBZ  Tabriz            4.35 291 ePn    Pn     21 20 37.1  +1.0
IGAR  Gharneh           4.41 172 ePn    Pn     21 20 39.2  +2.2
IGAR                             e             21 20 50.5
      comp=Z,2µm,0.3s
IGAR                             e             21 20 58.7
      comp=N,2µm,0.3s
ROKH  ROKH              4.43 183 ePn    Pn     21 20 39.9  +2.6
ROKH                             e             21 21 55.7
      comp=E,99nm,0.5s
ROKH                             e             21 22 01.2
      comp=N,99nm,0.8s
ROKH                             e             21 22 25.7
      comp=Z,99nm,0.8s
ROKH  ROKH              4.43 183 ePn    Pn     21 20 39.9  +2.6
ATGJ  Altiaghaj         4.47 336 ⇓P     Pn     21 20 36.1  -1.6
      SNR=35
ATGJ                             ⇓S     Sn     21 21 28.6  -1.3
ATGJ  Altiaghaj         4.47 336 ⇓P     Pn     21 20 36.1  -1.6
      SNR=35
ATGJ                             ⇓S     Sn     21 21 28.6  -1.3
ZRD   Zardab            4.50 322 ⇓P     Pn     21 20 35.6  -2.4
      SNR=5.6
ZRD                              ⇓S     Sn     21 21 29.6  -0.7
ZRD   Zardab            4.50 322 ⇓P     Pn     21 20 35.6  -2.4
      SNR=5.6
ZRD                              ⇓S     Sn     21 21 29.6  -0.7
PQL   Pirkuli           4.53 333 ⇓P     Pn     21 20 36.6  -1.9
      SNR=86
PQL                              ⇓S     Sn     21 21 30.0  -1.3
PQL   Pirkuli           4.53 333 ⇓P     Pn     21 20 36.6  -1.9
      SNR=86
PQL                              ⇓S     Sn     21 21 30.0  -1.3
ZNGN  Zangian           4.67 185 ePn    Pn     21 20 42.5  +1.9
ZNGN                             e             21 21 01.5
      comp=Z,99nm,0.2s
ZNGN                             e             21 22 10.4
      comp=E,99nm,0.5s
ZNGN                             e             21 22 17.1
      comp=N,99nm,0.4s
ZNGN  Zangian           4.67 185 ePn    Pn     21 20 42.5  +1.9
SIZA  Siyzn             4.68 337 ⇓P     Pn     21 20 39.1  -1.5
      SNR=25
SIZA                             ⇓S     Sn     21 21 33.8  -1.2
SIZA  Siyzn             4.68 337 ⇓P     Pn     21 20 39.1  -1.5
      SNR=25
SIZA                             ⇓S     Sn     21 21 33.8  -1.2
IML   Ismayilli         4.69 330 ⇓P     Pn     21 20 38.6  -2.1
      SNR=11
IML                              ⇑S     Sn     21 21 34.2  -0.9
IML   Ismayilli         4.69 330 ⇓P     Pn     21 20 38.6  -2.1
      SNR=11
IML                              ⇑S     Sn     21 21 34.2  -0.9
BRDA  Brd               4.75 318 ⇑P     Pn     21 20 38.9  -2.5
      SNR=4.4
BRDA                             ⇓S     Sn     21 21 35.9  -0.6
BRDA  Brd               4.75 318 ⇑P     Pn     21 20 38.9  -2.5
      SNR=4.4
BRDA                             ⇓S     Sn     21 21 35.9  -0.6
ISHB  Shabestar         4.76 290 ePn    Pn     21 20 43.1  +1.3
ISHB                             e             21 22 10.8
      comp=N,2µm,0.3s
ISHB                             e             21 22 12.9
      comp=Z,1µm,0.3s
ISHB                             e             21 22 15.6
      comp=E,2µm,0.4s
QBL   Gabala            4.96 328 ⇓P     Pn     21 20 42.2  -2.2
      SNR=20
QBL                              ⇑S     Sn     21 21 40.8  -1.0
QBL   Gabala            4.96 328 ⇓P     Pn     21 20 42.2  -2.1
      SNR=20
QBL                              ⇑S     Sn     21 21 40.8  -1.0
XNQ   Khinaliq          5.03 332 ⇓P     Pn     21 20 43.5  -2.0
      SNR=46
XNQ                              ⇓S     Sn     21 21 42.6  -1.1
XNQ   Khinaliq          5.03 332 ⇓P     Pn     21 20 43.5  -2.0
      SNR=46
XNQ                              ⇓S     Sn     21 21 42.6  -1.1
IRAM  Ramesheh          5.04 170 ePn    Pn     21 20 46.3  +0.6
IRAM                             e             21 21 06.5
      comp=Z,1µm,0.2s
IRAM                             e             21 21 07.2
      comp=N,842nm,0.2s
IRAM                             e             21 22 26.3
      comp=E,879nm,0.5s
IRAM  Ramesheh          5.04 170 ePn    Pn     21 20 46.3  +0.6
QUBA  Quba, Azerbaij    5.06 335 ⇓P     Pn     21 20 44.1  -1.7
      SNR=18
QUBA                             ⇓S     Sn     21 21 43.2  -1.1
QUBA  Quba, Azerbaij    5.06 335 ⇓P     Pn     21 20 44.1  -1.7
      SNR=18
QUBA                             ⇓S     Sn     21 21 43.2  -1.1
SHGR  Shooshtar-Gavs    5.10 205 ePn    Pn     21 20 47.1  +0.8
ISHV  Shirvan           5.17  80 ePn    Pn     21 20 47.1  -0.3
ISHV                             e             21 22 43.4
      comp=Z,3µm,0.6s
TNSJ  Nastanj           5.17 121 ePn    Pn     21 20 49.0  +1.7
TNSJ                             e             21 22 21.6
      comp=Z,99nm,0.3s
TNSJ  Nastanj           5.17 121 ePn    Pn     21 20 49.0  +1.7
MNGR  Mingechevir, A    5.17 322 ⇓P     Pn     21 20 44.8  -2.4
      SNR=3.2
MNGR                             ⇑S     Sn     21 21 46.1  -0.8
MNGR  Mingechevir, A    5.17 322 ⇓P     Pn     21 20 44.8  -2.4
      SNR=3.2
MNGR                             ⇑S     Sn     21 21 46.1  -0.8
ICHK  Chekchek          5.20 150 ePn    Pn     21 20 48.7  +0.8
ICHK                             e             21 21 13.7
      comp=Z,1µm,0.3s
ICHK                             e             21 21 13.7
      comp=Z,1µm,0.3s
ICHK                             e             21 22 22.1
      comp=N,2µm,0.4s
ICHK  Chekchek          5.20 150 ePn    Pn     21 20 48.7  +0.8
ISAD  Sadrabad          5.24 157 ePn    Pn     21 20 49.2  +0.7
ISAD                             e             21 21 12.6
      comp=Z,1µm,0.2s
ISAD                             e             21 21 15.5
      comp=N,934nm,0.2s
ISAD                             e             21 22 25.9
      comp=E,1µm,0.3s
ISAD  Sadrabad          5.24 157 ePn    Pn     21 20 49.2  +0.7
QSAR  Qusar             5.28 334 ⇑P     Pn     21 20 47.1  -1.7
      SNR=18
QSAR                             ⇓S     Sn     21 21 48.7  -1.1
QSAR  Qusar             5.28 334 ⇑P     Pn     21 20 47.1  -1.7
      SNR=18
QSAR                             ⇓S     Sn     21 21 48.7  -1.1
ISFR  Sfrayin           5.37  85 ePn    Pn     21 20 51.3  +1.1
ISFR                             e             21 22 00.2
      comp=Z,780nm,0.3s
ISFR                             e             21 22 04.9
      comp=N,2µm,0.2s
ISFR                             e             21 22 07.8
      comp=E,2µm,0.2s
ISFR  Sfrayin           5.37  85 ePn    Pn     21 20 51.3  +1.1
AKT   Akhty             5.45 330 eP     Pn     21 20 50.8  -0.4
AKT                              eS     Sn     21 21 54.9  +0.9
AKT                               pmax  pmax
      comp=Z,52nm,0.4s
AKT                               smax  smax
      comp=E,157nm,0.4s
AKT                               smax  smax
      comp=E,178nm,0.5s
AKT                               smax  smax
      comp=N,60nm,0.4s
AKT   Akhty             5.45 330 eP     Pn     21 20 50.8  -0.4
      comp=N,52nm,0.4s
AKT                              eS     Sn     21 21 54.9  +0.9
      comp=N,60nm,0.4s
SEKA  Sheki             5.46 325 ⇑P     Pn     21 20 48.3  -2.9
      SNR=25
SEKA                             ⇑S     Sn     21 21 52.1  -2.0
SEKA  Sheki             5.46 325 ⇑P     Pn     21 20 48.3  -2.9
      SNR=25
SEKA                             ⇑S     Sn     21 21 52.1  -2.0
GANJ  Ganja             5.48 316 ⇑P     Pn     21 20 49.1  -2.4
      SNR=18
GANJ                             ⇑S     Sn     21 21 54.0  -0.7
GANJ  Ganja             5.48 316 ⇑P     Pn     21 20 49.1  -2.4
      SNR=18
GANJ                             ⇑S     Sn     21 21 54.0  -0.7
GEYT  Alibeck           5.55  76  Pn    Pn     21 20 51.7  -0.8
      comp=N,1.2nm,0.3s,baz=268,slow=8.8,SNR=14
GYA0B ALIBECK ARRAY     5.55  76 ePn    Pn     21 20 52.5  +0.1
GYA0B ALIBECK ARRAY     5.55  76 ePn    Pn     21 20 52.5  +0.1
TKDS  Koohdasht(Taba    5.72 122 ePn    Pn     21 20 56.2  +1.4
TKDS                             e             21 22 44.9
      comp=Z,99nm,0.4s
TKDS  Koohdasht(Taba    5.72 122 ePn    Pn     21 20 56.2  +1.4
DRN   Derbent           5.72 337 eP     Pn     21 20 54.7  -0.1
DRN                              eS     Sn     21 21 59.2  -1.3
DRN                               pmax  pmax
      comp=Z,86nm,0.4s
DRN                               smax  smax
      comp=N,85nm,0.4s
DRN   Derbent           5.72 337 eP     Pn     21 20 54.7  -0.1
      comp=N,86nm,0.4s
DRN                              eS     Sn     21 21 59.2  -1.3
      comp=N,85nm,0.4s
IKRD  Kardeh            5.79  88 e             21 21 46.7
      comp=E,319nm,0.3s
IKRD                             ePn    Pb     21 21 08.1  -2.9
IKRD                             e             21 23 11.7
      comp=N,264nm,0.3s
IKRD                             e             21 23 23.7
      comp=Z,202nm,0.4s
TPRV  Parvadeh(Tabas    5.79 129 ePn    Pn     21 20 57.4  +1.5
TPRV                             e             21 22 57.5
      comp=Z,99nm,1.0s
TPRV  Parvadeh(Tabas    5.79 129 ePn    Pn     21 20 57.4  +1.5
GDB   GEDABAY           5.86 314 ⇓P     Pn     21 20 54.0  -2.8
      SNR=19
GDB                              ⇑S     Sn     21 22 03.1  -0.9
GDB   GEDABAY           5.86 314 ⇓P     Pn     21 20 54.0  -2.8
      SNR=19
GDB                              ⇑S     Sn     21 22 03.1  -0.9
IEMG  Emamgholi         5.91  82 ePn    Pn     21 20 57.8  +0.2
IEMG                             e             21 21 03.7
      comp=N,1µm,0.1s
IEMG                             e             21 21 05.8
      comp=Z,441nm,0.1s
IEMG                             e             21 21 09.9
      comp=E,1µm,0.2s
IEMG  Emamgholi         5.91  82 ePn    Pn     21 20 57.8  +0.2
IAKL  Akhelmad          5.99  89 ePn    Pn     21 20 59.2  +0.4
IAKL                             e             21 21 27.9
      comp=Z,236nm,0.2s
IAKL                             e             21 22 57.3
      comp=E,398nm,0.3s
IAKL                             e             21 23 05.8
      comp=N,418nm,0.3s
IMEH  Mehriz            6.04 152 ePn    Pn     21 21 00.3  +0.9
IMEH                             e             21 22 50.8
      comp=Z,482nm,0.5s
IMEH                             e             21 22 54.1
      comp=N,582nm,0.4s
IMEH  Mehriz            6.04 152 ePn    Pn     21 21 00.3  +0.9
ZKTA  Zakatala          6.06 325 ⇓P     Pn     21 20 57.2  -2.2
      SNR=46
ZKTA                             ⇓S     Sn     21 22 08.1  -0.7
GNI   Garni             6.15 305  Pn    Pn     21 21 05.3  +4.5
      comp=N,1.4nm,0.3s,baz=286,slow=1.0,SNR=6.7
GNI                               Sn    Sn     21 22 11.0  -0.3
      comp=N,1.3nm,0.3s,baz=216,slow=18,SNR=3.3
GNI   Garni             6.15 305 ePn    Pn     21 20 57.1  -3.7
GNI   Garni             6.15 305⇑eP     Pn     21 21 03.0  +2.2
GNI   Garni             6.15 305 ePn    Pn     21 20 57.1  -3.7
IPAY  Payeh             6.20  91 e             21 21 16.0
      comp=E,266nm,0.1s
IPAY                             ePn    Pn     21 21 02.7  +1.2
IPAY                             e             21 21 39.5
      comp=Z,293nm,0.3s
IPAY                             e             21 23 07.6
      comp=N,401nm,0.4s
QZX   Qazax, Azerbai    6.29 315 ⇑P     Pn     21 21 00.3  -2.4
      SNR=6.1
QZX                              ⇑S     Sn     21 22 13.9  -0.7
QZX   Qazax, Azerbai    6.29 315 ⇑P     Pn     21 21 00.3  -2.4
      SNR=6.1
QZX                              ⇑S     Sn     21 22 13.9  -0.7
IMOG  Moghan            6.51  94 e             21 21 12.6
      comp=E,200nm,0.2s
IMOG                             ePn    Pn     21 21 07.9  +2.0
IMOG                             e             21 21 18.4
      comp=N,205nm,0.2s
IMOG                             e             21 21 40.8
      comp=Z,191nm,0.2s
ISRO  Mashad            6.59  92 ePn    Pn     21 21 08.6  +1.8
ISRO                             e             21 23 16.3
      comp=N,2µm,0.7s
ISRO                             e             21 23 28.6
      comp=E,373nm,0.9s
ISRO                             e             21 23 33.3
      comp=Z,1µm,0.9s
ISRO  Mashad            6.59  92 ePn    Pn     21 21 08.6  +1.8
BTLR  Botlikh           7.06 328 eP     Pn     21 21 13.5  +0.3
BTLR                             eS     Sn     21 22 32.7  -0.8
BTLR                              pmax  pmax
      comp=Z,31nm,0.6s
BTLR                              smax  smax
      comp=N,45nm,0.5s
BTLR  Botlikh           7.06 328 eP     Pn     21 21 13.5  +0.3
      comp=N,31nm,0.6s
BTLR                             eS     Sn     21 22 32.7  -0.8
      comp=N,45nm,0.5s
IMYA  Miami             7.09  91 e      Pg     21 22 22.9  +37
      comp=Z,266nm,0.6s
IMYA                             e             21 23 26.4
      comp=E,326nm,0.4s
IMYA                             e             21 23 40.5
      comp=N,244nm,0.3s
DVE   Vedeno            7.34 329 i P    Pn     21 21 17.5  +0.5
DVE                              eS     Sn     21 22 38.9  -1.5
DVE                               pmax  pmax
      comp=Z,48nm,0.5s
DVE                               smax  smax
      comp=N,113nm,0.8s
DVE   Vedeno            7.34 329 i P    Pn     21 21 17.5  +0.5
      comp=N,48nm,0.5s
DVE                              eS     Sn     21 22 38.9  -1.5
      comp=N,113nm,0.8s
GROC  Groznyy           7.68 328 eP     Pn     21 21 20.9  -0.7
GROC                             eS     Sn     21 22 48.0  -0.7
GROC                              pmax  pmax
      comp=Z,27nm,0.4s
GROC                              smax  smax
      comp=E,64nm,0.6s
GROC  Groznyy           7.68 328 eP     Pn     21 21 20.9  -0.7
      comp=E,27nm,0.4s
GROC                             eS     Sn     21 22 48.0  -0.7
ZEI   Tsey              8.27 319 eP     Pn     21 21 29.7  -0.3
ZEI                               pmax  pmax
      comp=Z,10.0nm,0.4s
ZEI   Tsey              8.27 319 eP     Pn     21 21 29.7  -0.3
      comp=Z,10.0nm,0.4s
NCK   Nalchik           8.93 321⇓eP     Pn     21 21 40.5  +1.7
NEY   Neytrino          9.22 317⇑eP     Pn     21 21 44.5  +1.6
KBZ   Khabaz            9.45 320  Pn    Pn     21 21 48.7  +2.8
      comp=Z,0.2nm,0.3s,baz=114,slow=12,SNR=2.6
KBZ                               Sn    Sn     21 23 32.5  +0.2
      comp=Z,0.4nm,0.3s,baz=353,slow=12,SNR=2.6
KVAR  Kislovodsk Arr    9.72 320  Pn    Pn     21 21 49.8  +0.2
      baz=90,slow=8.1,SNR=4.1
KVAR                              Sn    Sn     21 23 38.1  -0.8
      baz=0.0,slow=20,SNR=2.0
KIV   Kislovodsk        9.72 320 ePn    Pn     21 21 47.0  -2.7
KIV   Kislovodsk        9.72 320⇑eP     Pn     21 21 50.9  +1.2
KIV                              i             21 23 37.8
KIV                               pmax  pmax
      comp=Z,6.0nm,0.7s
KIV   Kislovodsk        9.72 320 ePn    Pn     21 21 47.0  -2.7
KIV   Kislovodsk        9.72 320 eP     Pn     21 21 50.9  +1.2
      comp=Z,6.0nm,0.7s
KIV                              i S    Sn     21 23 37.8  -1.2
GOF   Gofitskoye       10.36 326 eP     Pn     21 21 51.6  -6.8
ASF   Jabal al Asfar   12.74 253  Pn    Pn     21 22 30.0  -1.1
      comp=Z,0.3nm,0.3s,baz=86,slow=18,SNR=2.7
ASF   Jabal al Asfar   12.74 253  P     Pn     21 22 30.0  -1.1
AB31  Akbulak array    13.96  24 ⇑Pn    Pn     21 22 43.3  -4.3
      comp=Z,1.2nm,0.5s,baz=203,slow=14,SNR=19
AB31                             ⇓Sn    Sn     21 25 05.9   -17
      comp=Z,3.3nm,0.8s,baz=200,slow=22
AB31  Akbulak array    13.96  24  P     Pn     21 22 43.3  -4.3
AB31                              pmax  pmax
      comp=Z,1.0nm,0.5s
AB31  Akbulak array    13.96  24  Pn    Pn     21 22 43.3  -4.3
      comp=Z,1.2nm,0.5s,SNR=19
AB31                              Sn    Sn     21 25 05.9   -17
      comp=Z,3.3nm,0.8s
ABKAR Akbulak array    13.96  24 ePn    Pn     21 22 43.4  -4.2
ABKAR Akbulak array    13.96  24 ePn    Pn     21 22 43.3  -4.3
RAYN  Ar Rayn          14.13 202 ePn    Pn     21 22 45.4  -4.6
RAYN  Ar Rayn          14.13 202 ePn    Pn     21 22 45.4  -4.7
BRTR  Keskin Array B   14.19 287  Pn    Pn     21 22 54.4  +3.5
      comp=Z,0.1nm,0.3s,baz=110,slow=15,SNR=5.5
AKTO  Aktyubinsk       14.48  17  Pn    Pn     21 22 49.6  -5.0
      comp=Z,0.6nm,0.3s,baz=206,slow=13,SNR=15
AKTO  Aktyubinsk       14.48  17 ⇓Pn    Pn     21 22 55.9  +1.3
      comp=Z,6.2nm,0.7s
AKTO                             ⇓Sn    Sn     21 25 23.5   -12
      comp=Z,3.4nm,0.6s
AKTO  Aktyubinsk       14.48  17  Pn    Pn     21 22 55.9  +1.3
      comp=Z,6.2nm,0.7s
AKTO                              Sn    Sn     21 25 23.5   -12
      comp=Z,3.4nm,0.6s
VRH   Novokhopyorsk    15.96 338 eP     Pn     21 23 11.9  -2.3
VRH                               pmax  pmax
      comp=Z,10.0nm,0.6s
VORD  Divnogorie       16.58 333 eP     Pn     21 23 17.0  -5.2
VORD                              pmax  pmax
      comp=Z,10.0nm,0.6s
VSR   Storozhevoye     16.83 333 eP     Pn     21 23 20.3  -5.1
VSR                               pmax  pmax
      comp=Z,20nm,0.7s
SFK   Sufi-Kurgan      17.69  73  P     Pn     21 23 39.4  +2.9
SFK                               pmax  pmax
      comp=Z,4.0nm,1.2s
SFK   Sufi-Kurgan      17.69  73  P     Pn     21 23 39.4  +2.9
      comp=Z,4.0nm,1.2s
LPSR  Galich'ya Gora   18.06 335 eP     Pn     21 23 36.2  -4.4
LPSR                              pmax  pmax
      comp=Z,40nm,0.7s
AAK   Ala-Archa        18.75  65  LR    LR     21 32 30.5
      comp=Z,60nm,18.1s,baz=262,slow=42
AAK   Ala-Archa        18.75  65⇓eP     P      21 23 49.6  +0.6
AAK   Ala-Archa        18.75  65 eP     P      21 23 49.6  +0.6
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TLB	Topalu	19.24	301	⇑ *i*P	P	21 23 54.7	+0.6
TLB	Topalu	19.24	301	⇑ P	P	21 23 54.7	+0.6
TLB	Topalu	19.24	301	P	P	21 23 54.7	+0.6
KSH	Kashi	19.58	74	P	P	21 23 55.5	-2.5
KSH				pP	Pn	21 23 59.5	+0.2
KSH				PP	PnPn	21 24 12.8	+0.2
KSH				S	S	21 27 25.0	-14
KSH				SS	SnSn	21 27 51.3	-1.9
KSH				*e*PcP	PcP	21 28 18.5	+0.6
KSH				PcS	PcS	21 31 53.5	-1.7
KSH				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KSH				pmax	pmax		
	comp=Z,110nm,4.4s						
ARU	Arti	20.25	12	P	P	21 24 03.4	-1.7
	comp=Z,9.2nm,0.7s,baz=197,slow=6.0,SNR=26						
ARU	Arti	20.25	12	*e*P	P	21 24 02.9	-2.2
	comp=Z,11nm,0.8s						
ARU	Arti	20.25	12	*c i*P	P	21 24 03.4	-1.7
ARU				pmax	pmax		
	comp=Z,11nm,0.7s						
PLOR	Plostina	20.55	304	⇑ *i*P	P	21 24 12.1	+3.7
PLOR	Plostina	20.55	304	⇑ P	P	21 24 12.1	+3.7
MLR	Muntele Rosu	20.92	302	P	P	21 24 13.6	+1.1
	comp=Z,3.9nm,0.8s,baz=179,slow=4.2,SNR=9.8						
MLR	Muntele Rosu	20.92	302	⇓ *i*P	P	21 24 14.0	+1.4
MLR	Muntele Rosu	20.92	302	*e*P	P	21 24 15.1	+2.5
	comp=Z,5.8nm,0.6s						
OBN	Obninsk	20.92	336	*e*P	P	21 24 14.8	+2.5
	comp=Z,13nm,0.5s						
OBN	Obninsk	20.92	336	⇑ *e*P	P	21 24 10.7	-1.6
OBN				*i*		21 24 20.4	
OBN				*i*		21 24 40.9	
OBN				*i*		21 28 26.2	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,58nm,18.0s						
OBN	Obninsk	20.92	336	*e*P	P	21 24 10.7	-1.6
	comp=Z,6.0nm,0.8s						
BRVK	Borovoye	21.00	33	⇑ Pn	P	21 24 11.9	-1.2
	comp=Z,5.7nm,0.8s						
BRVK	Borovoye	21.00	33	*e*P	P	21 24 10.7	-2.5
	comp=Z,5.6nm,0.8s						
BRVK	Borovoye	21.00	33	⇓ *e*P	P	21 24 12.3	-0.9
BRVK				pmax	pmax		
	comp=Z,12nm,2.5s						
SVE	Sverdlovsk	21.01	14	*e*P	P	21 24 13.2	0.0
BVA0	Borovoye Array	21.02	33	⇑ Pn	P	21 24 12.5	-0.9
	comp=Z,5.9nm,0.8s,baz=225,slow=8.8,SNR=32						
BVA0	Borovoye Array	21.02	33	P	P	21 24 12.5	-0.9
BVA0				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BVAR	Borovoye Array	21.02	33	P	P	21 24 12.7	-0.8
	comp=Z,3.4nm,0.6s,baz=225,slow=9.2,SNR=34						
BVAR				LR	LR	21 33 52.4	
	comp=Z,39nm,18.3s,baz=208,slow=41						
AKASG	Malin Array Be	21.06	318	P	P	21 24 13.9	0.0
	comp=Z,2.0nm,0.5s,baz=122,slow=8.3,SNR=8.5						
AKASG	Malin Array Be	21.06	318	*ce*P	P	21 24 16.7	+2.9
AKASG				pmax	pmax		
	comp=Z,2.0nm,0.5s						
AKBB	Malin Array Si	21.06	318	*e*P	P	21 24 16.2	+2.4
	comp=Z,7.7nm,0.6s						
AKBB	Malin Array Si	21.06	318	*e*P	P	21 24 16.3	+2.4
AKBB				pmax	pmax		
	comp=Z,8.0nm,0.6s						
AKBB	Malin Array Si	21.06	318	*e*P	P	21 24 16.2	+2.4
	comp=Z,7.7nm,0.6s						
KIEV	Kiev	21.06	318	*e*P	P	21 24 11.1	-2.8
	comp=Z,7.3nm,0.6s						
KIEV	Kiev	21.06	318	⇓ *e*P	P	21 24 16.3	+2.4
KIEV				pmax	pmax		
	comp=Z,6.0nm,0.6s						
AK11	Malin Array Si	21.08	318	*e*P	P	21 24 16.4	+2.4
BIZ	Bicaz	21.25	306	⇑ *i*P	P	21 24 15.4	-0.6
DOPR	Dopca	21.43	303	⇓ *i*P	P	21 24 18.4	+0.5
VOIR		21.52	302	⇓ *i*P	P	21 24 17.1	-1.8
VOIR		21.52	302	⇓ P	P	21 24 17.1	-1.8
VOIR		21.52	302	P	P	21 24 17.1	-1.8
BURAR	Bucovina Array	22.05	308	⇑ *i*P	P	21 24 23.3	-1.3
BURAR	Bucovina Array	22.05	308	⇑ P	P	21 24 23.3	-1.3
BUR04	Bucovina Ar. S	22.05	308	*e*P	P	21 24 25.8	+1.1
BUR04	Bucovina Ar. S	22.05	308	*e*P	P	21 24 25.8	+1.1
BUR08	Bucovina Ar. S	22.07	308	*e*P	P	21 24 26.1	+1.2
LOT	Lotru	22.39	301	⇓ *i*P	P	21 24 29.5	+1.1
KURBB	Kurchatov Arra	23.89	46	P	P	21 24 43.6	+0.2
	comp=Z,1.5nm,0.6s,baz=249,slow=10.0,SNR=12						
KURK	Kurchatov	23.98	46	*e*P	P	21 24 42.9	-1.4
	comp=Z,4.7nm,0.8s						
KURK	Kurchatov	23.98	46	*d i*P	P	21 24 44.8	+0.5
KURK				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MAKZ	Makanchi	24.82	57	*e*P	P	21 24 52.8	+0.7
MAKZ	Makanchi	24.82	57	*e*P	P	21 24 52.8	+0.7
MAKZ	Makanchi	24.82	57	*e*P	P	21 24 52.8	+0.7
CRVS	Cervenica-Dubn	24.84	309	*e*P	P	21 24 58.0	+5.8
CRVS	Cervenica-Dubn	24.84	309	*e*sP	P	21 24 58.0	+5.8
MK31	Makanchi Array	25.03	57	*e*P	P	21 24 54.3	+0.3
MK31	Makanchi Array	25.03	57	*e*P	P	21 24 54.3	+0.3
MK31	Makanchi Array	25.03	57	*e*P	P	21 24 54.3	+0.3
MKAR	Makanchi Array	25.03	57	P	P	21 24 54.7	+0.7
	comp=Z,4.9nm,0.6s,baz=245,slow=8.1,SNR=58						
MKAR	Makanchi Array	25.03	57	*e*P	P	21 24 54.5	+0.5
	comp=Z,47nm,0.6s						
MKAR	Makanchi Array	25.03	57	*e*P	P	21 24 54.5	+0.5
MKAR				pmax	pmax		
	comp=Z,47nm,0.6s						
MKAR	Makanchi Array	25.03	57	*e*P	P	21 24 54.5	+0.5
	comp=Z,47nm,0.6s						
MK01	Makanchi Array	25.03	57	*e*P	P	21 24 54.5	+0.5
MK01	Makanchi Array	25.03	57	*e*P	P	21 24 54.5	+0.5
PRGR	Permogore	25.13	354	*e*P	P	21 24 54.0	-0.6
PRGR				pmax	pmax		
	comp=Z,11nm,0.8s						
PSZ	Piszkesteto	25.57	306	*e*P	P	21 25 01.6	+2.7
	comp=Z,20nm,2.0s						
PSZ	Piszkesteto	25.57	306	*e*P	P	21 25 01.6	+2.7
PSZ				pmax	pmax		
	comp=Z,20nm,2.0s						
OJC	Ojcow	26.28	311	*e*P	P	21 25 06.8	+1.6
	comp=Z,8.2nm,1.3s						
OJC	Ojcow	26.28	311	*e*P	P	21 25 06.9	+1.6
OJC				pmax	pmax		
	comp=Z,8.0nm,1.3s						
VYHS	Vyhne	26.40	307	*e*P	P	21 25 06.9	+0.6
VYHS	Vyhne	26.40	307	*e*P	P	21 25 06.9	+0.6
VYHS	Vyhne	26.40	307	*e*P	P	21 25 06.9	+0.6
BLY	Banja Luka	26.89	298	*e*P	P	21 25 11.9	+1.1
	comp=Z,3.9nm,0.8s						
BLY	Banja Luka	26.89	298	*e*P	P	21 25 11.9	+1.1
	comp=Z,3.9nm,0.8s						
VSU	Vasula	27.00	331	⇓ *e*P	P	21 25 13.1	+1.5
VSU				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MORC	Moravsky Berou	27.55	309	*e*P	P	21 25 17.2	+0.5
	comp=Z,3.7nm,1.3s						
MORC	Moravsky Berou	27.55	309	*e*P	P	21 25 17.2	+0.5
MORC				pmax	pmax		
	comp=Z,4.0nm,1.3s						
WMQ	Urumqi	28.46	64	P	P	21 25 26.8	+1.9
WMQ				LR	LR		
	comp=N,200nm,25.3s						
WMQ				LR	LR		
	comp=E,94nm,22.3s						
WMQ				LR	LR		
	comp=Z,110nm,19.1s						
ZALV	Zalesovo Beam	28.77	43	P	P	21 25 26.8	-0.7
	comp=Z,0.5nm,0.3s,baz=283,slow=9.7,SNR=2.5						
ZALV				LR	LR	21 38 58.6	
	comp=Z,46nm,20.2s,baz=16,slow=41						
FINES	FINESS Array B	29.33	335	P	P	21 25 31.7	-0.6
	comp=Z,0.5nm,0.5s,baz=134,slow=14,SNR=5.0						
GEA0	GERESS Array S	29.80	306	*e*P	P	21 25 36.7	-0.1
GEC2	GERESS Array S	29.80	306	*e*P	P	21 25 37.6	+0.8
	comp=Z,8.7nm,1.7s						
GEC2	GERESS Array S	29.80	306	*e*P	P	21 25 37.6	+0.8
GEC2				pmax	pmax		
	comp=Z,9.0nm,1.7s						
GERES	GERESS Array B	29.80	306	P	P	21 25 36.5	-0.3
	comp=Z,0.8nm,0.7s,baz=95,slow=11,SNR=7.1						
CLL	Collm	30.73	310	*e*P	P	21 25 44.0	-0.9
CLL	Collm	30.73	310	*e*P	P	21 25 44.0	-0.9
FUORN	Ofenpass-Fuorn	31.86	301	*e*P	P	21 25 57.0	+1.8
	comp=Z,4.3nm,0.8s						
DAVOX	Davos/Dischmat	32.13	301	P	P	21 25 56.7	-0.8
	comp=Z,3.5nm,0.6s,baz=140,slow=7.9,SNR=3.9						
HFS	Hagfors	33.44	326	P	P	21 26 07.9	-0.6
	comp=Z,1.1nm,0.5s,baz=121,slow=11,SNR=9.3						
NC405	NORSAR Array S	34.75	327	*e*P	P	21 26 21.6	+1.7
NOA	NORSAR Array B	34.94	327	P	P	21 26 20.4	-1.2
	comp=Z,0.2nm,0.5s,baz=187,slow=3.4,SNR=3.4						
NAO01	NORSAR Array S	35.00	326	*e*P	P	21 26 23.3	+1.2
NC204	NORSAR Array S	35.24	327	*e*P	P	21 26 24.8	+0.6
ARCES	ARCESS Array B	35.68	345	P	P	21 26 27.3	-0.5
	comp=Z,1.6nm,0.9s,baz=128,slow=7.9,SNR=5.5						
ARCES	ARCESS Array B	35.68	345	P	P	21 26 27.3	-0.5
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
EKA	Eskdalemuir Ar	40.90	315	P	P	21 27 10.7	-1.1
	comp=Z,1.5nm,0.7s,baz=102,slow=9.0,SNR=6.6						
ESDC	Sonseca Array	42.93	291	P	P	21 27 27.7	-1.1
	comp=Z,0.4nm,0.6s,baz=68,slow=9.1,SNR=4.8						
SPA0	Spitsbergen Ar	44.02	350	*e*P	P	21 27 38.7	+1.7
SPITS	Spitsbergen Ar	44.02	350	P	P	21 27 36.9	-0.1
	comp=Z,2.9nm,0.6s,baz=110,slow=7.2,SNR=4.7						
HHC	Hu-ho-hao-te	46.32	66	*e*P	P	21 27 55.0	-0.9
HHC				pmax	pmax		
	comp=Z,12nm,0.9s						
HHC				pmax	pmax		
	comp=Z,70nm,6.7s						
TORD	Torodi Ar. Bea	50.09	255	P	P	21 28 25.0	-0.2
	comp=Z,0.7nm,0.9s,baz=58,slow=8.3						
TORD	Torodi Ar. Bea	50.09	255	P	P	21 28 25.0	-0.2
SUMG	Summit	55.28	338	*i* P	P	21 29 05.1	+1.8
SUMG	Summit	55.28	338	*i* P	P	21 29 05.1	+1.8
ELW	Echo Lake	95.88	355	*e*P	P	21 32 57.3	+0.8

*IDC **27** 21:28:12.9±0.6, 30°.84N×103°.50E, h0km, mb4.1/26, mb1 4.2/28, mb1mx4.0/79, mbtmp4.1/28, ML3.6/2, MS3.3/7, Ms1 3.2/7, ms1mx2.8/62, Error ellipse: s-maj=20.0km s-min=12.5km az=43.0*

*ISCJB **27** 21:28:13.9±1.0, 30°.82N±0°.02×103°.47E±0°.03, h15km±6km, mb4.4/58, MS3.2/11, Error ellipse: s-maj=4.4km s-min=4.0km az=149.8*

*BJI **27** 21:28:15.5, 30°.84N×103°.37E, h15km, mb4.3/17, mB4.4/6, ML4.2/24, Ms3.9/28, Ms7 3.7/23*

*NEIC **27** 21:28:15.0±0.2, 30°.88N×103°.51E, h10km, mb4.6/21, Error ellipse: s-maj=4.9km s-min=4.2km az=81.0*

*MOS **27** 21:28:16.2±1.0, 30°.81N×103°.52E, h33km, mb4.4/31, Error ellipse: s-maj=9.2km s-min=6.0km az=107.8*

ISC 27 21:28:14.8±1.1, **30°.89N**±0°.03×**103°.47E**±0°.04, **h5**km±7km, **n147, σ2s.15**/166, **mb4.4**/58, **MS3.2**/11, **11C-4D, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CD2	Chengdu	0.25	86	⇓ *i*Pg	Pg	21 28 21.5	+1.9
CD2				Sg	Sg	21 28 26.8	+4.0
CD2				smax	smax		
	comp=N,38µm,0.7s						
CD2				smax	smax		
	comp=E,20µm,0.9s						
LZH	Lanzhou	5.19	3	*e*Pn	Pn	21 29 36.5	+3.3
LZH				Pg	Pg	21 29 51.8	-2.4
LZH				Sn	Sn	21 30 38.3	+4.8
LZH				Sg	Sg	21 30 59.3	-2.1
LZH				smax	smax		
	comp=N,170nm,1.2s						
LZH				smax	smax		
	comp=E,180nm,1.2s						
LZH				LR	LR		
	comp=N,3µm,6.5s						
LZH				LR	LR		
	comp=E,3µm,6.5s						
LZH				LR	LR		
	comp=Z,2µm,7.2s						
ENH	Enshi	5.22	95	*e*Pn	Pn	21 29 33.0	-0.5
GYA	Guiyang	5.23	147	⇑ *i*Pn	Pn	21 29 33.5	-0.3
GYA				Pg	Pg	21 29 51.3	-3.8
GYA				Sn	Sn	21 30 32.5	-2.1
GYA				Sg	Sg	21 31 04.3	+1.4
GYA				smax	smax		
	comp=N,710nm,1.0s						
GYA				smax	smax		
	comp=E,430nm,1.0s						
GYA				LR	LR		
	comp=N,580nm,7.7s						
GYA				LR	LR		
	comp=E,580nm,7.4s						
GYA				LR	LR		
	comp=Z,620nm,9.4s						
XAN	Xi’an	5.57	54	Pn	Pn	21 29 38.0	-0.3
XAN				Pg	Pg	21 29 59.0	-2.5
XAN				Sn	Sn	21 30 41.3	-1.4
XAN				Sg	Sg	21 31 12.3	-1.4
XAN				smax	smax		
	comp=N,420nm,1.1s						
XAN				smax	smax		
	comp=E,360nm,0.9s						
XAN				LR	LR		
	comp=Z,510nm,7.2s						
KMI	Kunming	5.79	187	Pn	Pn	21 29 42.0	+0.5
KMI				Sg	Sg	21 31 23.3	+2.7
KMI				smax	smax		
	comp=N,81nm,1.4s						
KMI				smax	smax		
	comp=E,76nm,1.3s						
KMI				LR	LR		
	comp=N,610nm,6.8s						
KMI				LR	LR		
	comp=Z,370nm,6.7s						
GTA	Gaotai	9.01	342	*e*P	Pn	21 30 36.5	+11
GTA				pP		21 30 40.5	
GTA				sP		21 30 42.8	
GTA				S	Sn	21 32 19.0	+12
GTA				sS		21 32 24.0	
GTA				pmax	pmax		
	comp=Z,2.0nm,0.7s						
GTA				pmax	pmax		
	comp=Z,65nm,4.1s						
GTA				LR	LR		
	comp=N,310nm,10.3s						
GTA				LR	LR		
	comp=E,630nm,10.6s						
GTA				LR	LR		
	comp=Z,300nm,11.3s						
WHN	Wuhan	9.37	89	P	Pn	21 30 33.5	+3.1
WHN				LR	LR		
	comp=Z,1µm,10.8s						
WHN				LR	LR		
	comp=Z,870nm,8.2s						
WHN				LR	LR		
	comp=Z,950nm,4.0s						
LSA	Lhasa	10.72	267	*e*Pn	Pn	21 30 49.7	+0.3
LSA	Lhasa	10.72	267	*e*P	Pn	21 30 49.7	+0.3
SHL	Shillong	11.51	245	P	Pn	21 31 03.7	+3.7
SHL				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HHC	Hu-ho-hao-te	11.90	31	*e*P	Pn	21 31 06.3	+1.2
HHC				PP	PnPn	21 31 15.3	+2.3
HHC				S	Sn	21 33 21.5	+3.2
HHC				pmax	pmax		
	comp=Z,8.0nm,1.1s						
HHC				pmax	pmax		
	comp=Z,53nm,5.3s						
HHC				LR	LR		
	comp=Z,150nm,4.3s						
HHC				LR	LR		
	comp=Z,300nm,5.1s						
HHC				LR	LR		
	comp=Z,140nm,5.9s						
CHTO	Chiang Mai	12.71	200	*e*Pn	Pn	21 31 16.7	+0.5
CHTO	Chiang Mai	12.71	200	*e*P	Pn	21 31 16.7	+0.5
CM31	Chiang Mai Arr	13.05	199	*e*Pn	Pn	21 31 21.9	+1.0
CMAR	Chiang Mai Arr	13.05	199	Pn	Pn	21 31 20.5	-0.4
	comp=Z,0.1nm,0.3s,baz=6.9,slow=11,SNR=15						
CMAR	Chiang Mai Arr	13.05	199	⇑ *e*P	Pn	21 31 21.9	+1.1
CMAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CM01	Chiang Mai Arr	13.08	199	*e*Pn	Pn	21 31 21.8	+0.5
QIZ	Qiongzhong	13.14	153	P	Pn	21 31 21.8	-0.4
QIZ				S	Sn	21 33 49.8	+1.0
QIZ				LR	LR		
	comp=Z,470nm,7.1s						
QIZ				LR	LR		
	comp=Z,640nm,6.1s						
QIZ				LR	LR		
	comp=Z,200nm,7.9s						
NJ2	Nanjing	13.18	81	*e*P	Pn	21 31 21.0	-1.6
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
NJ2				LR	LR		
	comp=N,370nm,5.9s						
NJ2				LR	LR		
	comp=E,410nm,9.6s						
NJ2				LR	LR		
	comp=Z,490nm,7.5s						
UTTA	Uttaradit	13.36	192	P	P	21 31 39.2	+4.4
	comp=Z,2.4nm,0.7s						
SKNT	Sakolnakorn	13.87	178	P	P	21 31 40.7	+0.2
	comp=Z,6.1nm,0.8s						
PHIT	Phitsanulok	13.93	192	P	P	21 31 48.7	+7.6
	comp=Z,15nm,0.8s						
PBKT	Sadao Pong	14.44	190	*e*Pn	Pn	21 31 42.0	+2.1
PBKT	Sadao Pong	14.44	190	P	P	21 31 46.9	+0.1
	comp=Z,17nm,0.6s,comp=Z,751nm						
KHON	Khomkaen	14.50	182	P	P	21 31 47.7	+0.2
	comp=Z,9.4nm,0.6s						
QZH	Quanzhou	14.62	110	*e*P	Pn	21 31 43.0	+0.8
QZH				S	Sn	21 34 31.3	+6.7
QZH				LR	LR		
	comp=Z,400nm,7.6s						
ODAN	Odare	14.65	258	*e*P	Pn	21 31 40.7	-2.2
	comp=Z,10nm,0.5s						
PKIN	Phulchoki	16.12	263	*e*P	Pn	21 32 00.4	-2.0
	comp=Z,28nm,0.6s						
KKN	Kakani	16.16	264	*e*P	Pn	21 32 01.1	-1.8
	comp=Z,52nm,0.7s						
DMN	Daman	16.36	263	*e*P	Pn	21 32 03.0	-2.5
NAYO	Nakonayok	16.62	187	P	P	21 32 15.6	+4.6
	comp=Z,0.3nm,1.0s,comp=Z,148nm						
SRAK	Srakaew	16.86	185	P	Pn	21 32 12.4	+0.9
	comp=Z,36nm,0.8s						
SONM	Songino Array	17.07	7	P	Pn	21 32 15.0	+0.8
	comp=Z,0.2nm,0.3s,baz=187,slow=11,SNR=12						
SONM	Songino Array	17.07	7	P	Pn	21 32 15.0	+0.8
SONA1	Songino Array	17.08	7	*e*Pn	P	21 32 15.8	-0.4
ULN	Ulaanbaatar	17.17	8	*e*Pn	Pn	21 32 15.7	+0.2
	comp=Z,2.0nm,0.8s						
ULN	Ulaanbaatar	17.17	8	⇑ *e*P	P	21 32 17.6	+0.5
DANN	Dangsing	17.33	267	*e*P	Pn	21 32 15.0	-2.7
	comp=Z,29nm,0.5s						
KOLN	Koldanda	17.61	265	*e*P	Pn	21 32 18.3	-2.8
WMQ	Urumqi	17.95	320	P	P	21 32 26.0	+0.2
WMQ				pP	sP	21 32 30.5	+2.5
WMQ				sP	pP	21 32 33.0	+5.7
WMQ				pmax	pmax		
	comp=Z,21nm,0.8s						
WMQ				LR	LR		
	comp=Z,410nm,9.3s						
WMQ				LR	LR		
	comp=Z,320nm,8.9s						
WMQ				LR	LR		
	comp=Z,110nm,16.7s						
PYUN	Piuthan	18.05	266	*e*P	Pn	21 32 23.6	-2.9
	comp=Z,29nm,0.8s						
ZAK	Zakamensk	19.47	360	*e*P	Pn	21 32 43.5	0.0
ZAK				pmax	pmax		
	comp=Z,5.0nm,1.1s						
TLY	Talaya	20.77	0	*e*P	Pn	21 33 02.2	+3.4
TLY				pmax	pmax		
	comp=Z,5.0nm,1.2s						
TLY				MLR	MLR		
	comp=Z,102nm,12.0s						
MOY	Mondy	20.84	356	*e*P	Pn	21 32 59.5	-0.2
MOY				pmax	pmax		
	comp=Z,9.0nm,2.0s						
KSAR	Wonju Array Be	21.20	65	P	P	21 33 01.5	+0.4
KSAR	Wonju Array Be	21.20	65	P	P	21 33 01.5	+0.4
KS01	Wonju Array Si	21.21	65	*e*P	P	21 33 01.7	+0.4
KSRS	Korea Array	21.23	65	P	P	21 33 01.5	0.0
	comp=Z,4.1nm,0.8s,baz=247,slow=9.7,SNR=23						
KSRS				LR	LR	21 41 08.0	
	comp=Z,53nm,19.9s,baz=251,slow=37						
HVS	Khovu-Aksy	21.49	343	*c i*P	P	21 33 05.3	+1.1
HVS				pmax	pmax		
	comp=Z,20nm,0.9s						
CN2	Changchun	21.63	47	*e*P	P	21 33 05.5	-0.2
CN2				*e*S	S	21 36 59.5	-6.1
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,70nm,10.0s						
CN2				LR	LR		
	comp=Z,50nm,10.0s						
CN2				LR	LR		
	comp=Z,40nm,10.0s						
JOW	Kunigami	22.08	94	LR	LR	21 42 51.7	
	comp=Z,51nm,18.9s,baz=294,slow=40						
PDGK	Podgornoye	22.71	310	P	P	21 33 18.9	+1.4
PDGK				pmax	pmax		
	comp=Z,18nm,1.0s						
MK01	Makanchi Array	22.77	320	*e*P	P	21 33 18.2	+0.3
MK31	Makanchi Array	22.79	320	*e*P	P	21 33 18.8	+0.6
MK31	Makanchi Array	22.79	320	*e*P	P	21 33 18.8	+0.6
MKAR	Makanchi Array	22.79	320	P	P	21 33 18.4	+0.2
	comp=Z,2.8nm,0.9s,baz=124,slow=12,SNR=14						
MKAR				PcP	PcP	21 37 07.6	-2.0
	comp=Z,0.7nm,0.8s,baz=151,slow=2.8,SNR=3.6						
MKAR				LR	LR	21 43 09.8	
	comp=Z,84nm,18.6s,baz=149,slow=39						
MKAR	Makanchi Array	22.79	320	*e*P	P	21 33 18.8	+0.6
	comp=Z,14nm,0.9s						
MKAR				PcP	PcP	21 37 07.6	-2.0
MKAR	Makanchi Array	22.79	320	*ce*P	P	21 33 19.8	+1.7
MKAR				pmax	pmax		
	comp=Z,3.0nm,0.9s						
MAKZ	Makanchi	22.97	320	*e*P	P	21 33 20.6	+0.6
	comp=Z,21nm,2.0s						
MAKZ	Makanchi	22.97	320	*e*P	P	21 33 20.6	+0.6
MAKZ				pmax	pmax		
	comp=Z,21nm,2.0s						
TGY	Tagaytay City	23.18	132	P	P	21 33 20.9	-1.6
	comp=Z,123nm,0.3s,baz=256,slow=4.2,SNR=2.8						
JNU	Nakatsue	23.32	77	LR	LR	21 42 51.5	
	comp=Z,60nm,20.4s,baz=218,slow=38						
SKLT	Songkhla	23.75	187	P	P	21 33 29.7	+1.6
	comp=Z,15nm,0.8s,comp=Z,1µm						
KSH	Kashi	23.99	299	P	P	21 33 33.3	+2.9
KSH				sP	sP	21 33 40.0	+7.3
KSH				PP	PnPn	21 34 08.5	+10
KSH				*e*PcP	PcP	21 37 15.3	+2.9
KSH				S	S	21 37 48.5	+0.7
KSH				SS	SnSn	21 38 41.0	+14
KSH				PcS	PcS	21 40 53.3	+1.1
KSH				pmax	pmax		
	comp=Z,6.0nm,1.1s						
NIL	Nilore	25.66	284	*e*P	P	21 33 46.4	+0.9
	comp=Z,14nm,0.6s						
NIL	Nilore	25.66	284	*e*P	P	21 33 46.4	+0.9
NIL				pmax	pmax		
	comp=Z,14nm,0.6s						
AAK	Ala-Archa	25.88	305	P	P	21 33 48.2	+0.6
	comp=Z,1.8nm,0.4s,baz=90,slow=7.4,SNR=6.3						
AAK	Ala-Archa	25.88	305	⇑ *i*P	P	21 33 49.4	+1.8
AAK				pmax	pmax		
	comp=Z,7.0nm,1.1s						
SFK	Sufi-Kurgan	25.95	299	P	P	21 33 51.8	+3.4
SFK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
LHMI	Lhok Sumawe	26.26	195	*e*P	P	21 33 50.0	-1.0
	comp=Z,109nm,1.3s						
ZAA0	Zalesovo Array	26.68	335	*e*P	P	21 33 54.8	+0.3
	comp=Z,4.9nm,0.9s						
ZALV	Zalesovo Beam	26.68	335	P	P	21 33 54.8	+0.3
	comp=Z,2.9nm,0.7s,baz=138,slow=9.4,SNR=10.0						
ZALV	Zalesovo Beam	26.68	335	*e*P	P	21 33 54.3	-0.2
ZALV	Zalesovo Beam	26.68	335	*e*P	P	21 33 54.3	-0.2
KURBB	Kurchatov Arra	27.08	324	P	P	21 33 58.0	-0.1
	comp=Z,3.1nm,0.9s,baz=131,slow=9.4,SNR=4.2						
KURBB				PcP	PcP	21 37 17.3	-1.7
	comp=Z,0.7nm,0.6s,baz=114,slow=2.0,SNR=5.6						
KURK	Kurchatov	27.09	324	*e*P	P	21 33 58.6	+0.3
	comp=Z,4.9nm,0.9s						
KURK				PcP	PcP	21 37 17.3	-1.7
KURK	Kurchatov	27.09	324	*ce*P	P	21 33 57.8	-0.5
KURK				pmax	pmax		
	comp=Z,4.0nm,1.0s						
JHJ	Hachijo jima 2	30.78	76	LR	LR	21 46 49.0	
	comp=Z,47nm,18.4s,baz=78,slow=36						
JHJ2	Mitsune	30.80	76	*e*P	P	21 34 31.1	-0.4
	comp=Z,97nm,1.0s						

PALK	Pallekele	31.72	227	LR	LR	21 49 24.4	
	comp=Z,34nm,18.1s,baz=54,slow=40						
BVAR	Borovoye Array	32.62	322	P	P	21 34 47.2	0.0
	comp=Z,0.8nm,0.8s,baz=116,slow=11,SNR=3.6						
BVAR				PcP	PcP	21 37 32.2	-1.0
	comp=Z,1.9nm,0.7s,baz=134,slow=3.5,SNR=10						
BRVK	Borovoye	32.69	322	⇑*e*P	P	21 34 47.7	-0.2
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ERM	Erimo	33.52	60	*e*P	P	21 34 54.1	-1.1
	comp=Z,19nm,1.1s						
ERM	Erimo	33.52	60	*e*P	P	21 34 54.1	-1.1
ERM				pmax	pmax		
	comp=Z,19nm,1.1s						
YAK	Yakutsk	35.49	21	*e*P	P	21 35 12.5	+0.5
YAK				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HMDM	Hanimaadhoo	37.15	236	*e*P	P	21 35 25.9	-0.8
	comp=Z,224nm,1.3s						
GEYT	Alibeck	37.78	293	P	P	21 35 31.9	0.0
	comp=Z,2.4nm,0.7s,baz=115,slow=5.6,SNR=9.4						
GYA0B	ALIBECK ARRAY	37.78	293	*e*P	P	21 35 33.1	+1.2
	comp=Z,7.2nm,1.0s						
ARU	Arti	40.27	323	P	P	21 35 52.2	-0.3
	comp=Z,3.4nm,0.8s,baz=83,slow=5.6,SNR=4.9						
ARU	Arti	40.27	323	*e*P	P	21 35 52.6	+0.2
	comp=Z,4.1nm,0.8s						
ARU	Arti	40.27	323	*d i*P	P	21 35 52.4	0.0
ARU				S	S	21 42 02.6	+2.6
ARU				pmax	pmax		
	comp=Z,10.0nm,1.7s						
TIXI	Tiksi	43.06	11	P	P	21 36 14.1	-1.0
	comp=Z,2.0nm,0.5s,baz=221,slow=8.3,SNR=4.4						
TIXI	Tiksi	43.06	11	⇑*e*P	P	21 36 16.8	+1.7
TIXI				pmax	pmax		
	comp=Z,3.0nm,1.0s						
SEY	Seymchan	44.54	29	⇑*e*P	P	21 36 26.5	-0.6
PRGR	Permogore	48.13	327	*e*P	P	21 36 55.1	-0.3
PRGR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
KVAR	Kislovodsk Arr	48.97	303	P	P	21 37 02.4	+0.2
	comp=Z,4.1nm,0.8s,baz=139,slow=4.6,SNR=3.8						
KIV	Kislovodsk	48.97	303	*e*P	P	21 37 02.2	0.0
	comp=Z,6.3nm,0.9s						
KIV	Kislovodsk	48.97	303	*de*P	P	21 37 02.6	+0.3
KIV				pmax	pmax		
	comp=Z,7.0nm,1.2s						
KIV				MLR	MLR		
	comp=Z,25nm,16.0s						
KLMR	Klimovskoe	50.93	325	*e*P	P	21 37 14.9	-1.7
KLMR				pmax	pmax		
	comp=Z,8.0nm,1.0s						
KLMR	Klimovskoe	50.93	325	*e*P	P	21 37 15.0	-1.7
KLMR				AMP		21 37 16.6	
	comp=Z,8.0nm,1.0s						
OBN	Obninsk	52.27	318	*i* P	P	21 37 26.3	-0.5
OBN				*i*		21 38 37.0	
OBN				*i*		21 39 24.6	
OBN				pmax	pmax		
	comp=Z,6.0nm,0.8s						
OBN				MLR	MLR		
	comp=Z,38nm,16.0s						
ASF	Jabal al Asfar	55.91	290	P	P	21 37 52.5	-1.4
	comp=Z,1.4nm,0.7s,baz=66,slow=6.4,SNR=4.4						
BRTR	Keskin Array B	56.37	300	P	P	21 37 56.1	-1.1
	comp=Z,1.2nm,0.9s,baz=111,slow=6.8,SNR=6.4						
AKASG	Malin Array Be	57.13	313	P	P	21 38 00.4	-1.7
	comp=Z,0.4nm,0.3s,baz=71,slow=6.6,SNR=4.3						
AKASG	Malin Array Be	57.13	313	*ce*P	P	21 38 01.1	-1.1
ARCES	ARCESS Array B	57.23	336	P	P	21 38 02.0	-0.6
	comp=Z,1.8nm,0.8s,baz=62,slow=8.4,SNR=4.3						
ARCES				PcP	PcP	21 38 55.7	-1.3
	comp=Z,0.4nm,0.5s,baz=74,slow=4.4,SNR=7.1						
VSU	Vasula	57.43	323	*de*P	P	21 38 03.7	-0.4
VSU				pmax	pmax		
	comp=Z,13nm,1.0s						
FIA1	FINESS Array S	57.44	326	*e*P	P	21 38 03.7	-0.4
FINES	FINESS Array B	57.44	326	P	P	21 38 03.4	-0.8
	comp=Z,1.4nm,0.6s,baz=96,slow=9.8,SNR=11						
PMG	Port Moresby	57.97	126	*e*P	P	21 38 06.5	-2.0
	comp=Z,40nm,1.3s						
PMG	Port Moresby	57.97	126	*e*P	P	21 38 06.5	-2.0
PMG				pmax	pmax		
	comp=Z,40nm,1.3s						
WRA	Warramunga Arr	58.60	146	P	P	21 38 11.6	-1.3
	comp=Z,3.0nm,0.8s,baz=337,slow=7.5,SNR=21						
WB2	Warramunga Arr	58.61	146	*e*P	P	21 38 11.9	-1.0
BUR04	Bucovina Ar. S	60.36	310	*e*P	P	21 38 24.1	-0.7
MLR	Muntele Rosu	60.41	308	P	P	21 38 25.5	+0.2
	comp=Z,1.5nm,0.8s,baz=287,slow=18,SNR=3.8						
ASAR	Alice Springs	61.60	148	P	P	21 38 32.1	-1.3
	comp=Z,0.8nm,0.8s,baz=324,slow=6.2,SNR=5.4						
AS01	Alice Springs	61.62	148	*e*P	P	21 38 31.4	-2.1
VTS	Vitosha	63.14	305	*e*P	P	21 38 41.7	-2.0
	comp=Z,2.1nm,0.8s						
VTS	Vitosha	63.14	305	*e*P	P	21 38 41.7	-2.0
VTS				pmax	pmax		
	comp=Z,2.0nm,0.8s						
HFS	Hagfors	63.64	326	P	P	21 38 45.0	-1.5
	comp=Z,1.3nm,0.5s,baz=108,slow=4.8,SNR=8.4						
NC405	NORSAR Array S	64.29	327	*e*P	P	21 38 50.0	-0.8
NC303	NORSAR Array S	64.41	328	*e*P	P	21 38 50.6	-1.0
NB2	NORSAR Subarra	64.54	327	P	P	21 38 50.9	-1.6
	comp=Z,3.9nm,1.0s,baz=75,slow=6.9						
NOA	NORSAR Array B	64.54	327	P	P	21 38 51.0	-1.5
	comp=Z,1.7nm,0.8s,baz=74,slow=6.5,SNR=8.3						
NC204	NORSAR Array S	64.68	328	*e*P	P	21 38 52.5	-0.9
NBO00	NORSAR Array S	64.75	327	*e*P	P	21 38 52.5	-1.3
CLL	Collm	66.84	317	*i* P	P	21 39 06.7	-0.7
CLL	Collm	66.84	317	*i* P	P	21 39 06.7	-0.7
GERES	GERESS Array B	67.31	314	P	P	21 39 09.7	-0.9
	comp=Z,0.7nm,0.7s,baz=73,slow=4.5,SNR=6.2						
GEA0	GERESS Array S	67.31	314	*e*P	P	21 39 09.6	-1.0
COLD	Coldfoot	67.88	24	*e*P	P	21 39 13.8	0.0
	comp=Z,3.9nm,0.9s						
MDM	Murphy Dome	69.67	26	*e*P	P	21 39 25.2	+0.2
	comp=Z,4.4nm,0.7s						
IL1	Eielson Array	70.26	25	*e*P	P	21 39 27.2	-1.4
ILAR	Eielson Array	70.26	25	P	P	21 39 27.4	-1.2
	comp=Z,1.9nm,1.0s,baz=286,slow=5.9,SNR=10						
DAVOX	Davos/Dischmat	70.48	313	P	P	21 39 29.3	-1.2
	comp=Z,2.1nm,0.6s,baz=110,slow=7.6,SNR=3.4						
SML	Sawmill	71.21	28	*e*P	P	21 39 34.8	+0.4
	comp=Z,7.1nm,0.9s						
SML	Sawmill	71.21	28	*e*P	P	21 39 34.8	+0.4
SML				pmax	pmax		
	comp=Z,7.0nm,0.9s						
RIDG	Independ’e Rid	71.56	26	*e*P	P	21 39 35.7	-0.9
	comp=Z,6.7nm,1.0s						
SCRK	Sand Creek	71.75	25	*e*P	P	21 39 37.2	-0.6
	comp=Z,4.4nm,0.8s						
KLU	Klutina	72.35	28	*e*P	P	21 39 41.8	+0.4
	comp=Z,7.1nm,0.8s						
INK	Inuvik	72.53	19	P	P	21 39 41.6	-0.6
	comp=Z,3.3nm,0.6s,baz=352,slow=7.4,SNR=6.7						
INK	Inuvik	72.53	19	*e*P	P	21 39 41.8	-0.5
	comp=Z,4.9nm,0.9s						
BMRM	Bremner River	73.17	28	*e*P	P	21 39 45.9	-0.4
	comp=Z,6.1nm,0.8s						
YKA	Yellowknife Ar	82.05	17	P	P	21 40 35.3	-0.4
	comp=Z,2.3nm,0.7s,baz=327,slow=4.9,SNR=6.1						
ESDC	Sonseca Array	82.76	312	P	P	21 40 39.2	-0.7
	comp=Z,0.5nm,0.7s,baz=62,slow=7.0,SNR=4.1						
BOSA	Boshof	95.11	240	LR	LR	22 21 53.0	
	comp=Z,26nm,21.4s,baz=33,slow=34						

IDC 27 21:38:43.3±351.0, 56°.91N×29°.80E, h0^{km}, Error ellipse: s-maj=147.9km s-min=84.7km az=95.0, Baltic States-Belarus-Northwestern Russia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	DUBNA INFRASON	4.08	90	*i*		22 04 35.1	
	baz=276,slow=324,SNR=1.1						
I26DE	FREYUNG INFRAS	12.61	237	*i*		22 57 40.0	
	baz=40,slow=318,SNR=1.7						

AZER ***27*** *21:39:03.7±99.0, 36°.65N×51°.09E, h10^{km}, ml4.6/17, Error ellipse: s-maj=21.2km s-min=1.7km az=328.0*

NEIC ***27*** *21:39:04.5±0.0, 36°.82N×51°.34E, h6^{km}, mb4.4/25, ML4.2(THR), MN4.2(TEH), After THR.*

NEIC Felt at Now Shahr and Tonekabon.

THR ***27*** *21:39:04.5±0.7, 36°.82N×51°.34E, h6^{km}±5^{km}, ML4.2*

TEH ***27*** *21:39:05.6, 36°.80N×51°.32E, h10^{km}, ML4.2*

IDC ***27*** *21:39:05.1±0.8, 36°.80N×51°.29E, h0^{km}, mb4.0/21, mb1 4.1/30, mb1mx4.0/69, mbtmp4.0/30, ML3.8/7, MS3.2/12, Ms1 3.2/12, ms1mx2.8/59, Error ellipse: s-maj=15.8km s-min=9.2km az=9.0*

ISCJB ***27*** *21:39:05.8±0.1, 36°.83N±0°.02×51°.36E±0°.02, h10^{km}, mb4.2/58, MS3.4/10, Error ellipse: s-maj=2.7km s-min=1.7km az=43.7*

CSEM ***27*** *21:39:06.3±0.1, 36°.81N×51°.33E, h2^{km}, mb4.3/35, Error ellipse: s-maj=3.2km s-min=2.2km az=51.0*

BJI ***27*** *21:39:06.9, 37°.34N×51°.31E, h6^{km}, mb4.5/15, mB4.5/7, Ms4.0/4, Ms7 3.9/3*

MOS ***27*** *21:39:07.8±1.3, 37°.19N×51°.38E, h12^{km}, mb4.3/35, Error ellipse: s-maj=6.7km s-min=4.2km az=116.9*

NNC ***27*** *21:39:15.7±10.0, 37°.80N×51°.90E, h0^{km}, mb4.4, mpv4.2, Error ellipse: s-maj=86.0km s-min=54.7km az=57.0*

ISC 27 21:39:06.2±0.3, 36°.82N±0°.03×51°.32E±0°.02, h10^{km}, n379, σ2^{s}.26/388, mb4.3/63, MS3.5/10, 47C-65D, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHTH	Charan	0.92	190	*e*Pg	Pg	21 39 22.1	-1.9
CHTH	Charan	0.92	190	*e*Pg	Pg	21 39 22.1	-1.9
CHTH	Charan	0.92	190	*e*Pg	Pg	21 39 22.1	-1.9
THKV	Tehran--Karaj	0.97	201	*e*Pg	Pb	21 39 23.5	-1.7
THKV				IAML		21 39 45.6	
	comp=N,5μm,0.3s						
THKV	Tehran--Karaj	0.97	201	*e*Pg	Pb	21 39 23.5	-1.7
THKV	Tehran--Karaj	0.97	201	*e*Pg	Pb	21 39 23.5	-1.7
IGZV	Ghazvin	0.98	244	Pg	Pg	21 39 23.6	-1.6
IGZV	Ghazvin	0.98	244	*e*Pg	Pg	21 39 23.1	-2.1
IGZV				*e*		21 39 37.8	
	comp=E,80μm,0.3s						
IGZV				*e*		21 39 39.1	
	comp=N,29μm,0.2s						
IGZV				*e*		21 39 41.6	
	comp=Z,58μm,0.3s						
IGZV	Ghazvin	0.98	244	Pg	Pg	21 39 23.6	-1.6
IPRN	Peran	1.00	125	*e*Pg	Pn	21 39 24.2	-2.3
IPRN				*e*		21 39 42.2	
	comp=N,66μm,0.2s						
IPRN				*e*		21 39 42.6	
	comp=Z,83μm,0.2s						
IPRN				*e*		21 39 42.9	
	comp=E,60μm,0.2s						
IAFJ	Afjeh	1.01	161	Pg	Pg	21 39 24.0	-1.8
IAFJ	Afjeh	1.01	161	*e*Pg	Pg	21 39 24.0	-1.8
IAFJ				*e*		21 39 41.5	
	comp=E,250nm,0.1s						
IAFJ				*e*		21 39 41.8	
	comp=Z,86μm,0.3s						
IAFJ				*e*		21 39 43.0	
	comp=N,30μm,0.3s						
IAFJ	Afjeh	1.01	161	*e*Pg	Pg	21 39 24.0	-1.8
IMHD	Mahdasht	1.25	205	*e*Pg	Pb	21 39 28.4	-1.5
IMHD				*e*		21 39 29.5	
	comp=Z,30μm,0.1s						
IMHD				*e*		21 39 49.3	
	comp=E,51μm,0.2s						
IMHD				*e*		21 39 54.6	
	comp=N,54μm,0.1s						
IMHD	Mahdasht	1.25	205	*e*Pg	Pb	21 39 28.4	-1.5
DAMV	Damavand	1.30	156	*e*Pg	Pg	21 39 29.4	-1.8
DAMV	Damavand	1.30	156	*e*Pg	Pg	21 39 29.4	-1.8
DAMV	Damavand	1.30	156	*e*Pg	Pg	21 39 29.4	-1.8
IDMV	Damavand	1.37	155	*e*Pg	Pb	21 39 30.4	-1.7
IDMV				*e*		21 39 51.7	
	comp=E,90μm,0.4s						
IDMV				*e*		21 39 52.8	
	comp=N,8μm,0.3s						
IDMV				*e*		21 39 53.4	
	comp=Z,57μm,0.3s						
IALA	Alasht	1.41	121	*e*Pg	Pg	21 39 32.4	-0.9
IALA				*e*		21 39 56.0	
	comp=E,14μm,0.2s						
IALA				*e*		21 39 57.0	
	comp=Z,100μm,0.2s						
IALA	Alasht	1.41	121	*e*Pg	Pg	21 39 32.4	-0.9
IFIR	Firoozkooh	1.65	135	*e*Pg	Pg	21 39 36.0	-2.0
IFIR				*e*		21 40 00.7	
	comp=E,45μm,0.3s						
IFIR				*e*		21 40 05.6	
	comp=Z,35μm,0.2s						
IFIR				*e*		21 40 07.7	
	comp=N,45μm,0.2s						
QABG	Abgarm-Qazvin	1.79	232	*e*Pn	Pg	21 39 38.7	-1.8
QABG				*e*		21 39 40.5	
	comp=E,99nm,0.3s						
QABG				*e*		21 39 40.5	
	comp=Z,99nm,0.4s						
QABG				*e*		21 40 06.5	
	comp=N,99nm,0.3s						
QABG	Abgarm-Qazvin	1.79	232	*e*Pn	Pg	21 39 38.7	-1.8
IRAZ	Razeghan	1.80	219	Pn	Pb	21 39 37.7	-1.8
IRAZ	Razeghan	1.80	219	*e*Pn	Pb	21 39 37.9	-1.6
IRAZ				*e*		21 39 40.5	
	comp=Z,22μm,0.1s						
IRAZ				*e*		21 40 07.5	
	comp=E,52μm,0.3s						
IRAZ				*e*		21 40 08.2	
	comp=N,14μm,0.3s						
IRAZ	Razeghan	1.80	219	*e*Pn	Pb	21 39 37.9	-1.6
ISHM	Shahmirzad	1.89	122	*e*Pn	Pg	21 39 40.6	-1.9
ISHM				*e*		21 40 10.5	
	comp=E,13μm,0.1s						
ISHM				*e*		21 40 11.5	
	comp=Z,97μm,0.2s						
ISHM				*e*		21 40 11.5	
	comp=N,200nm,0.2s						
ILAS	Lasjerd	1.96	137	*e*Pg	Pg	21 39 42.0	-1.7
ILAS				*e*		21 40 13.9	
	comp=E,44μm,0.3s						
ILAS	Lasjerd	1.96	137	*e*Pg	Pg	21 39 42.0	-1.7
IGLO	Ghaloghah	2.05	98	*e*Pn	Pb	21 39 42.1	-1.5
IGLO				*e*		21 40 21.6	
	comp=E,100μm,0.3s						
IGLO				*e*		21 40 22.0	
	comp=Z,17μm,0.3s						
IGLO				*e*		21 40 22.6	
	comp=N,73μm,0.2s						
ZNJK	Zanjan	2.12	267	*e*Pn	Pb	21 39 43.0	-1.8
ZNJK	Zanjan	2.12	267	*e*Pn	Pb	21 39 43.1	-1.8
ZNJK	Zanjan	2.12	267	*e*Pn	Pb	21 39 43.0	-1.8
GHVR	GHOM	2.33	180	*e*Pn	Pb	21 39 45.7	-2.7
GHVR				IAML		21 40 22.8	
	comp=N,721nm,0.5s						
GHVR				IAML		21 40 34.3	
	comp=E,622nm,0.5s						
GHVR	GHOM	2.33	180	*e*Pn	Pb	21 39 45.7	-2.7
GHVR	GHOM	2.33	180	*e*Pn	Pb	21 39 45.7	-2.7
HKZM	Kohzaman	2.43	234	*e*Pn	Pb	21 39 47.9	-2.2
HKZM				*e*		21 40 23.6	
	comp=N,99nm,0.2s						
HKZM				*e*		21 40 30.8	
	comp=E,99nm,0.3s						
HKZM				*e*		21 40 33.3	
	comp=Z,99nm,0.3s						
HKZM	Kohzaman	2.43	234	*e*Pn	Pb	21 39 47.9	-2.2
ASAO	Ashtian	2.50	205	*e*Pn	Pb	21 39 48.2	-3.1
ASAO	Ashtian	2.50	205	*e*Pn	Pb	21 39 48.2	-3.1
ASAO	Ashtian	2.50	205	*e*Pn	Pb	21 39 48.2	-3.1
IANJ	Anjilo	2.50	122	Pn	Pb	21 39 48.8	-2.5
IANJ	Anjilo	2.50	122	*e*		21 40 32.4	
	comp=Z,18μm,0.4s						
IANJ	Anjilo	2.50	122	Pn	Pb	21 39 48.8	-2.5
ASTR	Astara	2.65	312	⇓P	Pn	21 39 49.7	+0.7
	SNR=87						
ASTR				⇑S	Sb	21 40 23.8	-2.6
ASTR	Astara	2.65	312	⇓P	Pn	21 39 49.7	+0.7
	SNR=87						
ASTR				⇑S	Sb	21 40 23.8	-2.6
HAGD	Aghdareh	2.67	222	*e*Pn	Pb	21 39 50.7	-3.5
HAGD				*e*		21 40 30.5	
	comp=Z,99nm,0.3s						
HAGD				*e*		21 40 34.5	
	comp=N,99nm,0.5s						
HAGD				*e*		21 40 35.6	
	comp=E,99nm,0.3s						
HAGD	Aghdareh	2.67	222	*e*Pn	Pb	21 39 50.7	-3.5
LRK	Lerik	2.98	309	⇓P	Pn	21 39 54.0	+0.3
	SNR=105						
LRK				⇑S	Sn	21 40 31.3	+1.8
LRK	Lerik	2.98	309	⇓P	Pn	21 39 54.0	+0.3
	SNR=105						
LRK				⇑S	Sn	21 40 31.3	+1.8
ISRB	Sarab	3.08	290	*e*Pn	Pn	21 39 56.4	+1.3
ISRB				*e*		21 40 01.3	
	comp=Z,9μm,0.1s						
ISRB				*e*		21 40 37.9	
	comp=N,15μm,0.2s						
ISRB				*e*		21 40 47.3	
	comp=E,20μm,0.2s						
ISRB	Sarab	3.08	290	*e*Pn	Pn	21 39 56.4	+1.3
KHMZ	Khomeyn	3.27	200	*e*Pn	Pn	21 39 58.6	+0.9
KHMZ	Khomeyn	3.27	200	*e*Pn	Pn	21 39 58.6	+0.9
KHMZ	Khomeyn	3.27	200	*e*Pn	Pn	21 39 58.6	+0.9
GLBA	Clilabad	3.34	317	⇓P	Pn	21 39 59.4	+0.9
	SNR=39						
GLBA				⇓S	Sb	21 40 41.3	-5.0
GLBA	Clilabad	3.34	317	⇓P	Pn	21 39 59.4	+0.9
	SNR=39						
GLBA				⇓S	Sb	21 40 41.3	-5.0
GRMI	Germi	3.36	307	*e*Pn	Pn	21 39 59.5	+0.7
GRMI				IAML		21 40 41.7	
	comp=E,1μm,0.3s						
GRMI				IAML		21 40 42.0	
	comp=N,781nm,0.3s						
GRMI	Germi	3.36	307	*e*Pn	Pn	21 39 59.6	+0.7
GRMI	Germi	3.36	307	*e*Pn	Pn	21 39 59.6	+0.7
HSAM	Samen	3.42	221	*e*Pn	Pn	21 40 01.7	+1.9
HSAM				*e*		21 41 00.9	
	comp=E,99nm,0.7s						
HSAM				*e*		21 41 05.2	
	comp=N,99nm,0.5s						
HSAM	Samen	3.42	221	*e*Pn	Pn	21 40 01.7	+1.9
IKLH	Kolahrood	3.50	176	*e*		21 40 11.4	
	comp=N,7μm,0.2s						
IKLH				*e*Pn	Pn	21 40 02.2	+1.3
IKLH				*e*		21 40 17.4	
	comp=Z,7μm,0.2s						
IKLH				*e*		21 41 03.0	
	comp=E,8μm,0.5s						
ALIB	Äli-Bayra	3.62	331	⇓P	Pn	21 40 03.8	+1.5
	SNR=25						
ALIB				⇓S	Sb	21 40 49.5	-4.8
ALIB	Äli-Bayra	3.62	331	⇓P	Pn	21 40 03.8	+1.5
	SNR=25						
ALIB				⇓S	Sb	21 40 49.5	-4.8
IBST	Bostanabad	3.64	285	*e*Pn	Pn	21 40 03.5	+0.7
IBST				*e*		21 41 07.0	
	comp=N,3μm,0.1s						
IBST				*e*		21 41 11.6	
	comp=E,3μm,0.3s						
IBST				*e*		21 41 14.7	
	comp=Z,4μm,0.4s						
IBST	Bostanabad	3.64	285	*e*Pn	Pn	21 40 03.5	+0.7
IBZA	Bozab	3.66	231	*e*Pn	Pn	21 40 05.4	+2.2
IBZA				*e*		21 41 41.6	
	comp=Z,99nm,1.6s						
IBZA	Bozab	3.66	231	*e*Pn	Pn	21 40 05.4	+2.2
NDR	Nardaran	3.90	345	⇑P	Pn	21 40 08.7	+2.6
	SNR=5.0						
NDR				⇑S	Sb	21 40 57.2	-5.0
NDR	Nardaran	3.90	345	⇑P	Pn	21 40 08.7	+2.6
	SNR=5.0						
NDR				⇑S	Sb	21 40 57.2	-5.0
IZEF	Zefreh	4.00	168	*e*		21 40 20.7	
	comp=N,7μm,0.5s						
IZEF				*e*Pn	Pn	21 40 09.0	+1.1
IZEF				*e*		21 40 21.1	
	comp=Z,7μm,0.5s						
IZEF				*e*		21 41 19.4	
	comp=E,5μm,0.4s						
ILIN	Lien	4.01	243	*e*Pn	Pn	21 40 10.1	+2.1
ILIN				*e*		21 41 16.6	
	comp=Z,2μm,0.3s						
ILIN				*e*		21 41 26.2	
	comp=E,5μm,0.5s						
ILIN	Lien	4.01	243	*e*Pn	Pn	21 40 10.1	+2.1
IKOM	Komasi	4.08	231	*e*Pn	Pn	21 40 11.6	+2.9
IKOM				*e*		21 40 25.8	
	comp=Z,99nm,1.2s						
IKOM	Komasi	4.08	231	*e*Pn	Pn	21 40 11.6	+2.9
ANAR	Anarak	4.13	151	*e*Pn	Pn	21 40 10.6	+1.1
ANAR				*e*		21 40 22.9	
	comp=E,99nm,0.3s						
ANAR				*e*		21 41 25.9	
	comp=N,99nm,0.4s						
ANAR				*e*		21 41 30.4	
	comp=Z,99nm,0.6s						
ANAR	Anarak	4.13	151	*e*Pn	Pn	21 40 10.6	+1.1
GBS	Qobustan	4.15	334	⇑P	Pn	21 40 11.4	+1.7
	SNR=37						
GBS				⇓S	Sb	21 41 02.6	-6.9
GBS	Qobustan	4.15	334	⇑P	Pn	21 40 11.4	+1.7
	SNR=37						
GBS				⇓S	Sb	21 41 02.6	-6.9
IVIS	Veis	4.30	239	*e*Pn	Pn	21 40 14.7	+3.0
IVIS				*e*		21 40 32.9	
	comp=Z,1μm,0.3s						
IVIS				*e*		21 41 33.7	
	comp=N,2μm,0.3s						
IVIS				*e*		21 41 34.8	
	comp=E,2μm,0.3s						
IVIS	Veis	4.30	239	*e*Pn	Pn	21 40 14.7	+3.0
KCHF	Cheshme Sefid,	4.31	235	*e*Pn	Pn	21 40 14.3	+2.3
KCHF				*e*		21 40 28.7	
	comp=Z,99nm,0.4s						
KCHF	Cheshme Sefid,	4.31	235	*e*Pn	Pn	21 40 14.3	+2.3
ITBZ	Tabriz	4.34	291	*e*Pn	Pn	21 40 13.4	+0.9
ITBZ				*e*		21 41 08.9	
	comp=N,1μm,0.2s						
ITBZ				*e*		21 41 26.5	
	comp=Z,889nm,0.2s						
ITBZ				*e*		21 41 44.1	
	comp=E,1μm,0.3s						
ITBZ	Tabriz	4.34	291	*e*Pn	Pn	21 40 13.4	+0.9
ATGJ	Altiaghaj	4.44	336	P	Pn	21 40 15.5	+1.8
	SNR=80						
ATGJ				⇓S	Sn	21 41 10.0	+4.5
ATGJ	Altiaghaj	4.44	336	P	Pn	21 40 15.5	+1.8
	SNR=80						
ATGJ				⇓S	Sn	21 41 10.0	+4.5
IGAR	Gharneh	4.45	172	*e*Pn	Pn	21 40 16.0	+2.1
IGAR				*e*		21 40 27.9	
	comp=Z,2μm,0.3s						
IGAR				*e*		21 41 38.6	
	comp=N,3μm,0.5s						
ROKH	ROKH	4.47	183	*e*Pn	Pn	21 40 16.7	+2.5
ROKH				*e*		21 41 27.8	
	comp=N,99nm,0.7s						
ROKH				*e*		21 41 32.1	
	comp=E,99nm,1.1s						
ROKH				*e*		21 42 26.0	
	comp=Z,99nm,1.5s						
ROKH	ROKH	4.47	183	*e*Pn	Pn	21 40 16.7	+2.5
ZRD	Zardab	4.47	322	⇓P	Pn	21 40 15.1	+1.0
	SNR=3.0						
ZRD				⇑S	Sn	21 41 09.5	+3.3
ZRD	Zardab	4.47	322	⇓P	Pn	21 40 15.1	+1.0
	SNR=3.0						
ZRD				⇑S	Sn	21 41 09.5	+3.3
PQL	Pirkuli	4.50	333	P	Pn	21 40 16.0	+1.5
	SNR=332						
PQL				⇓S	Sn	21 41 11.1	+4.1
PQL	Pirkuli	4.50	333	P	Pn	21 40 16.0	+1.5
	SNR=332						
PQL				⇓S	Sn	21 41 11.1	+4.1
SIZA	Siyzn	4.65	337	⇑P	Pn	21 40 18.4	+1.8
	SNR=68						
SIZA				⇓S	Sn	21 41 15.2	+4.6
SIZA	Siyzn	4.65	337	⇑P	Pn	21 40 18.4	+1.8
	SNR=68						
SIZA				⇓S	Sn	21 41 15.2	+4.6
IML	Ismayilli	4.66	329	⇑P	Pn	21 40 18.1	+1.4
	SNR=97						
IML				⇓S	Sn	21 41 14.9	+4.0
IML	Ismayilli	4.66	329	⇑P	Pn	21 40 18.1	+1.4
	SNR=97						
IML				⇓S	Sn	21 41 14.9	+4.0
ZNGN	Zangian	4.71	185	*e*Pn	Pn	21 40 20.1	+2.5
ZNGN				*e*		21 41 43.2	
	comp=Z,99nm,0.6s						
ZNGN				*e*		21 41 52.2	
	comp=E,99nm,0.8s						
ZNGN				*e*		21 41 54.5	
	comp=N,99nm,0.4s						

ZNGN	**Zangian**	**4.71**	**185**	*e*Pn	**Pn**	**21 40 20.1**	**+2.5**
BRDA	**Brd**	**4.73**	**318**	⇓P	**Pn**	**21 40 18.4**	**+0.9**
	SNR=3.7						
BRDA				⇓S	**Sn**	**21 41 15.2**	**+2.9**
BRDA	**Brd**	**4.73**	**318**	⇓P	**Pn**	**21 40 18.4**	**+0.9**
	SNR=3.7						
BRDA				⇓S	**Sn**	**21 41 15.2**	**+2.9**
ISHB	**Shabestar**	**4.76**	**290**	*e*Pn	**Pn**	**21 40 19.9**	**+1.7**
ISHB				*e*		21 41 48.3	
	comp=N,3µm,0.3s						
ISHB				*e*		21 41 50.4	
	comp=Z,1µm,0.3s						
ISHB				*e*		21 41 53.1	
	comp=E,3µm,0.4s						
QBL	**Gabala**	**4.93**	**328**	⇓P	**Pn**	**21 40 21.7**	**+1.3**
	SNR=35						
QBL				⇓S	**Sn**	**21 41 21.3**	**+3.7**
QBL	**Gabala**	**4.93**	**328**	⇓P	**Pn**	**21 40 21.7**	**+1.3**
	SNR=35						
QBL				⇓S	**Sn**	**21 41 21.3**	**+3.7**
XNQ	**Khinaliq**	**5.00**	**331**	⇓P	**Pn**	**21 40 22.9**	**+1.4**
	SNR=96						
XNQ				⇑S	**Sn**	**21 41 23.5**	**+4.0**
XNQ	**Khinaliq**	**5.00**	**331**	⇓P	**Pn**	**21 40 22.9**	**+1.4**
	SNR=96						
XNQ				⇑S	**Sn**	**21 41 23.5**	**+4.0**
QUBA	**Quba, Azerbaij**	**5.03**	**335**	⇑P	**Pn**	**21 40 23.6**	**+1.8**
	SNR=14						
QUBA				⇑S	**Sn**	**21 41 24.3**	**+4.3**
QUBA	**Quba, Azerbaij**	**5.03**	**335**	⇑P	**Pn**	**21 40 23.6**	**+1.8**
	SNR=14						
QUBA				⇑S	**Sn**	**21 41 24.3**	**+4.3**
IRAM	**Ramesheh**	**5.08**	**170**	*e*Pn	**Pn**	**21 40 23.8**	**+1.2**
IRAM				*e*		21 40 46.5	
	comp=Z,2µm,0.6s						
IRAM				*e*		21 40 59.5	
	comp=N,995nm,0.3s						
IRAM				*e*		21 42 01.9	
	comp=E,2µm,0.6s						
IRAM	**Ramesheh**	**5.08**	**170**	*e*Pn	**Pn**	**21 40 23.8**	**+1.2**
SHGR	**Shooshtar-Gavs**	**5.14**	**205**	*e*Pn	**Pn**	**21 40 24.5**	**+1.3**
MNGR	**Mingechevir, A**	**5.15**	**321**	⇑P	**Pn**	**21 40 24.3**	**+1.0**
	SNR=3.2						
MNGR	**Mingechevir, A**	**5.15**	**321**	⇑P	**Pn**	**21 40 24.3**	**+1.0**
	SNR=3.2						
ISHV	**Shirvan**	**5.15**	**80**	*e*Pn	**Pn**	**21 40 24.5**	**+0.9**
ISHV				*e*		21 42 13.1	
	comp=Z,6µm,0.5s						
TNSJ	**Nastanj**	**5.18**	**122**	*e*Pn	**Pn**	**21 40 25.6**	**+1.7**
TNSJ				*e*		21 42 03.5	
	comp=Z,99nm,0.6s						
TNSJ	**Nastanj**	**5.18**	**122**	*e*Pn	**Pn**	**21 40 25.6**	**+1.7**
ICHK	**Chekchek**	**5.23**	**150**	*e*Pn	**Pn**	**21 40 26.2**	**+1.5**
ICHK				*e*		21 40 51.1	
	comp=Z,2µm,0.3s						
ICHK				*e*		21 41 59.9	
	comp=N,2µm,0.3s						
ICHK				*e*		21 42 09.2	
	comp=E,3µm,0.5s						
ICHK	**Chekchek**	**5.23**	**150**	*e*Pn	**Pn**	**21 40 26.2**	**+1.5**
QSAR	**Qusar**	**5.25**	**334**	⇓P	**Pn**	**21 40 26.4**	**+1.6**
	SNR=34						
QSAR	**Qusar**	**5.25**	**334**	⇓P	**Pn**	**21 40 26.4**	**+1.6**
	SNR=34						
ISAD	**Sadrabad**	**5.27**	**157**	*e*Pn	**Pn**	**21 40 27.2**	**+1.9**
ISAD				*e*		21 40 50.0	
	comp=Z,2µm,0.3s						
ISAD				*e*		21 40 53.0	
	comp=N,1µm,0.2s						
ISAD				*e*		21 42 03.3	
	comp=E,2µm,0.3s						
ISAD	**Sadrabad**	**5.27**	**157**	*e*Pn	**Pn**	**21 40 27.2**	**+1.9**
ISFR	**Sfrayin**	**5.36**	**86**	*e*Pn	**Pn**	**21 40 28.3**	**+1.8**
ISFR				*e*		21 41 37.8	
	comp=Z,2µm,0.3s						
ISFR				*e*		21 42 16.2	
	comp=E,4µm,0.3s						
ISFR				*e*		21 42 23.8	
	comp=N,2µm,0.3s						
ISFR	**Sfrayin**	**5.36**	**86**	*e*Pn	**Pn**	**21 40 28.3**	**+1.8**
AKT	**Akhty**	**5.42**	**330**	*e*P	**Pn**	**21 40 28.0**	**+0.8**
AKT				*e*S	**Sn**	**21 41 28.9**	**-0.8**
AKT				pmax	pmax		
	comp=Z,83nm,0.4s						
AKT				smax	smax		
	comp=N,289nm,0.4s						
AKT				smax	smax		
	comp=N,297nm,0.4s						
AKT				smax	smax		
	comp=E,194nm,0.4s						
AKT	**Akhty**	**5.42**	**330**	*e*P	**Pn**	**21 40 28.0**	**+0.8**
	comp=E,289nm,0.4s						
AKT				*e*S	**Sn**	**21 41 28.9**	**-0.8**
SEKA	**Sheki**	**5.43**	**325**	⇑P	**Pn**	**21 40 27.8**	**+0.5**
	SNR=32						
SEKA	**Sheki**	**5.43**	**325**	⇑P	**Pn**	**21 40 27.8**	**+0.5**
	SNR=32						
GANJ	**Ganja**	**5.46**	**316**	⇓P	**Pn**	**21 40 28.4**	**+0.7**
	SNR=38						
GANJ	**Ganja**	**5.46**	**316**	⇓P	**Pn**	**21 40 28.4**	**+0.7**
	SNR=38						
GEYT	**Alibeck**	**5.53**	**76**	Pn	**Pn**	**21 40 29.2**	**+0.6**
	comp=E,2.9nm,0.3s,baz=229,slow=11,SNR=24						
GEYT				Sn	**Sn**	**21 41 31.8**	**-0.5**
	comp=E,2.0nm,0.3s,baz=256,slow=10.0,SNR=3.7						
GYA0B	**ALIBECK ARRAY**	**5.53**	**76**	⇓Pn	**Pn**	**21 40 30.0**	**+1.4**
	comp=E,18nm,0.5s						
GYA0B				⇓Sn	**Sn**	**21 41 31.6**	**-0.7**
	comp=E,154nm,1.4s						
GYA0B	**ALIBECK ARRAY**	**5.53**	**76**	*e*Pn	**Pn**	**21 40 30.3**	**+1.7**
GYA0B	**ALIBECK ARRAY**	**5.53**	**76**	*e*Pn	**Pn**	**21 40 30.3**	**+1.7**
TKDS	**Koohdasht(Taba**	**5.73**	**122**	*e*Pn	**Pn**	**21 40 33.2**	**+1.8**
TKDS				*e*		21 42 30.3	
	comp=Z,99nm,1.0s						
TKDS	**Koohdasht(Taba**	**5.73**	**122**	*e*Pn	**Pn**	**21 40 33.2**	**+1.8**
IKRD	**Kardeh**	**5.78**	**88**	*e*Pn	**Pb**	**21 40 45.3**	**-1.9**
IKRD				*e*		21 41 24.2	
	comp=Z,342nm,0.2s						
IKRD				*e*		21 42 09.7	
	comp=E,483nm,0.3s						
IKRD				*e*		21 42 48.7	
	comp=N,459nm,0.3s						
TPRV	**Parvadeh(Tabas**	**5.81**	**129**	*e*Pn	**Pn**	**21 40 34.2**	**+1.7**
TPRV				*e*		21 42 24.8	
	comp=Z,99nm,0.6s						
TPRV	**Parvadeh(Tabas**	**5.81**	**129**	*e*Pn	**Pn**	**21 40 34.2**	**+1.7**
GDB	**GEDABAY**	**5.83**	**314**	⇓P	**Pn**	**21 40 33.2**	**+0.3**
	SNR=63						
GDB	**GEDABAY**	**5.83**	**314**	⇓P	**Pn**	**21 40 33.2**	**+0.3**
	SNR=63						
IEMG	**Emamgholi**	**5.89**	**82**	*e*Pn	**Pn**	**21 40 34.6**	**+0.8**
IEMG				*e*		21 40 40.7	
	comp=E,2µm,0.1s						
IEMG				*e*		21 40 42.0	
	comp=Z,528nm,0.2s						
IEMG				*e*		21 41 53.8	
	comp=N,2µm,0.2s						
IEMG	**Emamgholi**	**5.89**	**82**	*e*Pn	**Pn**	**21 40 34.6**	**+0.8**
IAKL	**Akhelmad**	**5.98**	**90**	*e*Pn	**Pn**	**21 40 36.6**	**+1.5**
IAKL				*e*		21 42 34.7	
	comp=E,741nm,0.3s						
IAKL				*e*		21 42 36.7	
	comp=Z,429nm,0.3s						
IAKL				*e*		21 42 43.5	
	comp=N,807nm,0.3s						
ZKTA	**Zakatala**	**6.03**	**324**	⇓P	**Pn**	**21 40 36.6**	**+1.1**
	SNR=21						
IMEH	**Mehriz**	**6.07**	**152**	*e*Pn	**Pn**	**21 40 37.3**	**+1.1**
IMEH				*e*		21 42 28.3	
	comp=Z,713nm,0.4s						
IMEH				*e*		21 42 34.9	
	comp=N,805nm,0.4s						
IMEH	**Mehriz**	**6.07**	**152**	*e*Pn	**Pn**	**21 40 37.3**	**+1.1**
GNI	**Garni**	**6.13**	**305**	Pn	Pn	21 40 42.1	+5.0
	comp=N,2.1nm,0.3s,baz=60,slow=5.1,SNR=11						
GNI				Lg	Lg	21 42 19.7	
	comp=N,1.3nm,0.3s,baz=258,slow=15,SNR=3.1						
GNI				LR	LR	21 42 31.4	
	comp=N,32nm,21.6s,baz=90,slow=34						
GNI	**Garni**	**6.13**	**305**	*e*Pn	**Pn**	**21 40 39.4**	**+2.3**
GNI	**Garni**	**6.13**	**305**	⇑*e*P	**Pn**	**21 40 38.4**	**+1.4**
GNI	**Garni**	**6.13**	**305**	*e*P	**Pn**	**21 40 38.4**	**+1.4**
GNI	**Garni**	**6.13**	**305**	*e*Pn	**Pn**	**21 40 39.4**	**+2.3**
IPAY	**Payeh**	**6.19**	**91**	*e*Pn	**Pn**	**21 40 39.5**	**+1.7**
IPAY				*e*		21 41 01.1	
	comp=E,367nm,0.1s						
IPAY				*e*		21 41 16.8	
	comp=Z,410nm,0.3s						
IPAY				*e*		21 42 44.4	
	comp=N,716nm,0.3s						
IPAY	**Payeh**	**6.19**	**91**	*e*Pn	**Pn**	**21 40 39.5**	**+1.7**
QZX	**Qazax, Azerbai**	**6.27**	**314**	⇑P	**Pn**	**21 40 39.4**	**+0.6**
	SNR=11						
QZX	**Qazax, Azerbai**	**6.27**	**314**	⇑P	**Pn**	**21 40 39.4**	**+0.6**
	SNR=11						
IMOG	**Moghan**	**6.50**	**94**	*e*Pn	**Pn**	**21 40 44.0**	**+1.7**
IMOG				*e*		21 40 49.7	
	comp=E,373nm,0.2s						
IMOG				*e*		21 42 24.1	
	comp=Z,404nm,0.4s						
IMOG				*e*		21 42 36.4	
	comp=N,320nm,0.3s						
IMOG	**Moghan**	**6.50**	**94**	*e*Pn	**Pn**	**21 40 44.0**	**+1.7**
ISRO	**Mashad**	**6.58**	**92**	*e*Pn	**Pn**	**21 40 44.7**	**+1.5**
ISRO				*e*		21 42 53.2	
	comp=N,2µm,0.8s						
ISRO				*e*		21 43 05.6	
	comp=E,826nm,1.0s						
ISRO				*e*		21 43 10.3	
	comp=Z,3µm,0.9s						
ISRO	**Mashad**	**6.58**	**92**	*e*Pn	**Pn**	**21 40 44.7**	**+1.5**
MAK	**Makhachkala**	**6.80**	**336**	*e*P	**Pn**	**21 40 47.7**	**+1.8**
MAK				*e*S	**Sn**	**21 42 05.7**	**+2.4**
MAK				pmax	pmax		
	comp=Z,108nm,0.3s						
MAK				smax	smax		
	comp=N,291nm,0.7s						
MAK				smax	smax		
	comp=N,310nm,0.5s						
MAK	**Makhachkala**	**6.80**	**336**	*e*P	**Pn**	**21 40 47.7**	**+1.8**
	comp=N,108nm,0.3s						
MAK				*e*S	**Sn**	**21 42 05.7**	**+2.4**
	comp=N,310nm,0.5s						
TBLG	**Delisi**	**7.08**	**316**	*e*Pn	**Pn**	**21 40 51.6**	**+1.8**
TBLG	**Delisi**	**7.08**	**316**	*e*P	**Pn**	**21 40 51.6**	**+1.8**
TBLG	**Delisi**	**7.08**	**316**	*e*P	**Pn**	**21 40 51.6**	**+1.8**
IMYA	**Miami**	**7.09**	**91**	*e*Pn	**Pn**	**21 40 52.0**	**+1.9**
IMYA				*e*		21 43 09.5	
	comp=Z,421nm,0.4s						
IMYA				*e*		21 43 16.9	
	comp=E,547nm,0.4s						
IMYA				*e*		21 43 17.5	
	comp=N,541nm,0.4s						
IMYA	**Miami**	**7.09**	**91**	*e*Pn	**Pn**	**21 40 52.0**	**+1.9**
ITEG	**Tejag**	**7.25**	**120**	*e*Pn	**Pn**	**21 40 54.5**	**+2.0**
ITEG				*e*		21 43 19.4	
	comp=N,833nm,0.3s						
ITEG				*e*		21 43 19.7	
	comp=E,772nm,0.4s						
ITEG				*e*		21 43 30.9	
	comp=Z,2µm,0.5s						
ITEG	**Tejag**	**7.25**	**120**	*e*Pn	**Pn**	**21 40 54.5**	**+2.0**
JRKH	**Jarkhoshk**	**7.34**	**94**	*e*Pn	**Pn**	**21 40 55.1**	**+1.5**
JRKH	**Jarkhoshk**	**7.34**	**94**	*e*Pn	**Pn**	**21 40 55.1**	**+1.5**
ISRV	**Sarvestan**	**7.57**	**168**	*e*Pn	**Pn**	**21 40 58.6**	**+1.7**
ISRV				*e*		21 43 35.2	
	comp=Z,730nm,0.6s						
ISRV				*e*		21 43 40.4	
	comp=N,1µm,0.5s						
ISRV	**Sarvestan**	**7.57**	**168**	*e*Pn	**Pn**	**21 40 58.6**	**+1.7**
GROC	**Groznyy**	**7.65**	**328**	*e*P	**Pn**	**21 40 58.9**	**+1.2**
GROC				*e*S	**Sn**	**21 42 25.4**	**+1.0**
GROC				pmax	pmax		
	comp=Z,57nm,0.6s						
GROC				smax	smax		
	comp=N,210nm,0.7s						
GROC	**Groznyy**	**7.65**	**328**	*e*P	**Pn**	**21 40 58.9**	**+1.2**
	comp=N,57nm,0.6s						
GROC				*e*S	**Sn**	**21 42 25.4**	**+1.0**
	comp=N,210nm,0.7s						
IKOO	**Kooshah**	**7.71**	**122**	*e*Pn	**Pn**	**21 41 00.7**	**+2.0**
IKOO				*e*		21 41 17.7	
	comp=Z,376nm,0.2s						
IKOO				*e*		21 41 17.9	
	comp=E,387nm,0.2s						
IKOO				*e*		21 43 22.6	
	comp=N,394nm,0.4s						
IKOO	**Kooshah**	**7.71**	**122**	*e*Pn	**Pn**	**21 41 00.7**	**+2.0**
IMON	**Monand**	**7.75**	**115**	*e*		21 41 07.2	
	comp=Z,407nm,0.2s						
IMON				*e*Pn	Pn	21 41 02.3	+3.0
IMON				*e*		21 41 20.1	
	comp=E,845nm,0.3s						
ZEI	**Tsey**	**8.25**	**319**	*e*P	**Pn**	**21 41 06.9**	**+0.8**
ZEI				pmax	pmax		
	comp=Z,21nm,0.4s						
NCK	**Nalchik**	**8.91**	**321**	⇓*e*P	**Pn**	**21 41 16.2**	**+1.3**
NCK	**Nalchik**	**8.91**	**321**	*e*P	**Pn**	**21 41 16.2**	**+1.3**
NEY	**Neytrino**	**9.20**	**317**	⇑*e*P	**Pn**	**21 41 20.7**	**+1.6**
NEY	**Neytrino**	**9.20**	**317**	*e*P	**Pn**	**21 41 20.7**	**+1.6**
KBZ	**Khabaz**	**9.43**	**320**	Pn	Pn	21 41 25.4	+3.3
	comp=Z,0.6nm,0.3s,baz=259,slow=6.8,SNR=6.2						
KBZ				Sn	**Sn**	**21 43 10.0**	**+1.9**
	comp=Z,0.8nm,0.3s,baz=221,slow=11,SNR=3.1						
KVAR	**Kislovodsk Arr**	**9.69**	**320**	Pn	**Pn**	**21 41 27.2**	**+1.4**
	baz=84,slow=10,SNR=12						
KVAR				Sn	**Sn**	**21 43 16.4**	**+1.7**
	baz=180,slow=18,SNR=4.2						
KIV	**Kislovodsk**	**9.70**	**320**	*e*Pn	**Pn**	**21 41 27.0**	**+1.2**
KIV	**Kislovodsk**	**9.70**	**320**	⇑*e*P	**Pn**	**21 41 26.8**	**+1.0**
KIV				*e*		21 43 12.6	
KIV				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KIV				smax	smax		
	comp=E,8.0nm,0.6s						
KIV	**Kislovodsk**	**9.70**	**320**	*e*Pn	**Pn**	**21 41 27.0**	**+1.2**
GOF	**Gofitskoye**	**10.33**	**325**	*e*P	**Pn**	**21 41 34.3**	**-0.1**
GOF				*e*S	**Sn**	**21 43 27.5**	**-2.8**
GOF				pmax	pmax		
	comp=Z,40nm,0.8s						
GOF				smax	smax		
	comp=E,90nm,0.6s						
GOF	**Gofitskoye**	**10.33**	**325**	*e*P	**Pn**	**21 41 34.3**	**-0.1**
	comp=E,40nm,0.8s						
ASF	**Jabal al Asfar**	**12.76**	**253**	Pn	**Pn**	**21 42 07.4**	**-0.4**
	comp=E,0.4nm,0.3s,baz=353,slow=8.9,SNR=5.1						
MMAI	**Mount Meron Ar**	**13.60**	**258**	Pn	**Pn**	**21 42 20.5**	**+1.3**
	comp=E,0.2nm,0.3s,baz=99,slow=9.2,SNR=2.6						
MMAI				LR	LR	21 47 39.2	
	comp=E,63nm,18.1s,baz=55,slow=38						
AB31	**Akbulak array**	**13.93**	**24**	⇓Pn	**Pn**	**21 42 20.0**	**-3.5**
	comp=E,3.9nm,0.7s,baz=201,slow=14						
AB31				⇑Sn	Sn	21 44 44.0	-14
	comp=E,4.8nm,0.7s,baz=193,slow=22,SNR=9.3						
AB31	**Akbulak array**	**13.93**	**24**	P	**Pn**	**21 42 20.0**	**-3.5**
AB31				pmax	pmax		
	comp=Z,4.0nm,0.7s						
ABKAR	**Akbulak array**	**13.93**	**24**	*e*Pn	**Pn**	**21 42 20.8**	**-2.7**
RAYN	**Ar Rayn**	**14.17**	**202**	*e*Pn	**Pn**	**21 42 23.1**	**-3.9**
	comp=Z,32nm,0.9s						
RAYN	**Ar Rayn**	**14.17**	**202**	*e*P	**Pn**	**21 42 23.1**	**-3.9**
RAYN				pmax	pmax		
	comp=Z,32nm,0.9s						
BRTR	**Keskin Array B**	**14.19**	**287**	Pn	**Pn**	**21 42 29.6**	**+2.2**
	comp=Z,0.0nm,0.3s,baz=108,slow=12,SNR=7.1						
AKTO	**Aktyubinsk**	**14.44**	**17**	Pn	**Pn**	**21 42 27.0**	**-3.6**
	comp=Z,1.2nm,0.3s,baz=208,slow=12,SNR=24						
AKTO				Sn	Sn	21 45 00.6	-10
	comp=Z,2.0nm,0.3s,baz=56,slow=23,SNR=9.2						
AKTO				LR	LR	21 50 03.7	
	comp=Z,88nm,20.4s,baz=187,slow=46						
AKTO	**Aktyubinsk**	**14.44**	**17**	⇓Pn	**Pn**	**21 42 26.3**	**-4.2**
	comp=Z,12nm,0.6s						
AKTO				⇑Sn	Sn	21 44 60.0	-11
	comp=Z,9.3nm,0.5s						
VRH	**Novokhopyorsk**	**15.93**	**338**	*e*P	**Pn**	**21 42 49.1**	**-1.2**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KK31	**Karatay Array**	**15.99**	**61**	*e*Pn	**Pn**	**21 42 50.7**	**-0.4**
KK31	**Karatay Array**	**15.99**	**61**	*e*P	**Pn**	**21 42 50.7**	**-0.4**
KK31	**Karatay Array**	**15.99**	**61**	*e*Pn	**Pn**	**21 42 50.7**	**-0.4**
KKAR	**Karatay Array**	**15.99**	**61**	*e*Pn	**Pn**	**21 42 50.7**	**-0.4**
KKAR	**Karatay Array**	**15.99**	**61**	*e*P	**Pn**	**21 42 50.7**	**-0.4**
KKAR	**Karatay Array**	**15.99**	**61**	*e*Pn	**Pn**	**21 42 50.7**	**-0.4**
VORD	**Divnogorie**	**16.55**	**332**	*e*P	**Pn**	**21 42 55.2**	**-3.1**
VORD				pmax	pmax		
	comp=Z,20nm,0.8s						
VSR	**Storozhevoye**	**16.80**	**333**	*e*P	**Pn**	**21 42 58.0**	**-3.4**
VSR				pmax	pmax		
	comp=Z,40nm,0.7s						
MNAS	**Manas**	**17.25**	**64**	P	**P**	**21 43 13.2**	**+4.3**
MNAS				pmax	pmax		
	comp=Z,4.0nm,0.8s						
MNAS	**Manas**	**17.25**	**64**	P	**P**	**21 43 13.2**	**+4.3**
	comp=Z,4.0nm,0.8s						
SFK	**Sufi-Kurgan**	**17.67**	**73**	P	**P**	**21 43 15.7**	**+2.1**
SFK				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SFK	**Sufi-Kurgan**	**17.67**	**73**	P	**P**	**21 43 15.7**	**+2.1**
	comp=Z,6.0nm,0.8s						
LPSR	**Galich'ya Gora**	**18.02**	**335**	*e*P	**Pn**	**21 43 13.8**	**-2.9**
LPSR				pmax	pmax		
	comp=Z,70nm,0.7s						
NIL	**Nilore**	**18.19**	**94**	*e*Pn	**P**	**21 43 21.5**	**+2.3**
	comp=Z,5.5nm,0.8s						
NIL	**Nilore**	**18.19**	**94**	*e*P	**P**	**21 43 21.5**	**+2.3**
NIL				pmax	pmax		
	comp=Z,6.0nm,0.8s						
NIL	**Nilore**	**18.19**	**94**	*e*P	**P**	**21 43 21.5**	**+2.3**
	comp=Z,6.0nm,0.8s						
AAK	**Ala-Archa**	**18.73**	**65**	P	**Pn**	**21 43 26.5**	**+1.1**
	comp=Z,0.3nm,0.3s,baz=219,slow=5.3,SNR=5.3						
AAK				LR	LR	21 51 34.3	
	comp=Z,117nm,20.2s,baz=223,slow=40						
AAK	**Ala-Archa**	**18.73**	**65**	*e*P	**Pn**	**21 43 26.0**	**+0.5**
	comp=Z,5.8nm,0.8s						
AAK	**Ala-Archa**	**18.73**	**65**	⇑*e*P	**Pn**	**21 43 26.7**	**+1.2**
AAK	**Ala-Archa**	**18.73**	**65**	*e*P	**Pn**	**21 43 26.7**	**+1.2**
TLB	**Topalu**	**19.23**	**301**	⇓*i*P	**Pn**	**21 43 31.7**	**+0.3**
TLB	**Topalu**	**19.23**	**301**	⇓P	**Pn**	**21 43 31.7**	**+0.3**
TLB	**Topalu**	**19.23**	**301**	P	**Pn**	**21 43 31.7**	**+0.3**
KSH	**Kashi**	**19.56**	**75**	P	**P**	**21 43 32.5**	**-1.7**
KSH				pP	sP	21 43 36.0	-2.4
KSH				PP	**PnPn**	**21 43 48.0**	**-0.8**
KSH				S	Sn	21 47 00.5	-15
KSH				SS	**SnSn**	**21 47 26.3**	**-2.9**
KSH				*e*PcP	**PcP**	**21 47 57.8**	**+3.6**
KSH				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KSH				pmax	pmax		
	comp=Z,130nm,6.8s						
ARU	**Arti**	**20.21**	**12**	P	Pn	21 43 40.8	-2.2
	comp=Z,21nm,0.7s,baz=197,slow=6.1,SNR=41						
ARU				S	S	21 47 15.0	-13
	comp=Z,1.5nm,0.4s,baz=295,slow=20,SNR=6.3						
ARU	**Arti**	**20.21**	**12**	*e*P	Pn	21 43 40.3	-2.7
	comp=Z,23nm,0.6s						
ARU				S	S	21 47 15.0	-13
ARU	**Arti**	**20.21**	**12***c*	*i*P	Pn	21 43 40.8	-2.2
ARU				S	**S**	**21 47 25.8**	**-1.9**
ARU				pmax	pmax		
	comp=Z,21nm,0.7s						
SORM	**Soroca**	**20.28**	**311**	⇓*i*P	**P**	**21 43 41.1**	**-0.8**
SORM	**Soroca**	**20.28**	**311**	⇓P	**P**	**21 43 41.1**	**-0.8**
SORM	**Soroca**	**20.28**	**311**	P	**P**	**21 43 41.1**	**-0.8**
VRI	**Vrincioaia**	**20.49**	**304**	⇓*i*P	Pn	21 43 46.1	-0.2
VRI	**Vrincioaia**	**20.49**	**304**	⇓P	Pn	21 43 46.1	-0.2
VRI	**Vrincioaia**	**20.49**	**304**	P	Pn	21 43 46.1	-0.2
PLOR	**Plostina**	**20.54**	**304**	⇓*i*P	Pn	21 43 46.7	-0.2
PLOR	**Plostina**	**20.54**	**304**	⇓P	Pn	21 43 46.7	-0.2
TESR	**Tescani**	**20.74**	**306**	⇑*i*P	Pn	21 43 47.7	-1.6
TESR	**Tescani**	**20.74**	**306**	⇑*i*P	Pn	21 43 47.7	-1.6
OBN	**Obninsk**	**20.89**	**336**	*e*P	Pn	21 43 48.8	-2.1
	comp=Z,20nm,0.5s						
OBN	**Obninsk**	**20.89**	**336**	*i* P	Pn	21 43 48.3	-2.6
OBN				*i*		21 43 54.7	
OBN				*i*		21 47 59.3	
OBN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
OBN	**Obninsk**	**20.89**	**336**	*e*P	Pn	21 43 48.8	-2.1
	comp=Z,20nm,0.5s						
OBN	**Obninsk**	**20.89**	**336**	*i* PcP	**PcP**	**21 47 59.3**	**+3.1**
MLR	**Muntele Rosu**	**20.91**	**302**	P	Pn	21 43 51.0	-0.3
	comp=Z,7.8nm,0.8s,baz=161,slow=8.4,SNR=14						
MLR	**Muntele Rosu**	**20.91**	**302**	⇓*i*P	Pn	21 43 51.7	+0.3
MLR	**Muntele Rosu**	**20.91**	**302**	*e*P	Pn	21 43 51.5	+0.1
	comp=Z,8.0nm,0.6s						
BRVK	**Borovoye**	**20.96**	**33**	⇑Pn	Pn	21 43 49.7	-2.1
	comp=Z,12nm,0.8s						
BRVK	**Borovoye**	**20.96**	**33**	*e*P	Pn	21 43 50.1	-1.7
	comp=Z,12nm,0.8s						
BRVK	**Borovoye**	**20.96**	**33***d*	*e*P	Pn	21 43 49.6	-2.2
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
SVE	**Sverdlovsk**	**20.97**	**14**	*e*P	Pn	21 43 49.3	-2.5
SVE				*e*S	**S**	**21 47 35.2**	**-7.5**
SVE				pmax	pmax		
	comp=Z,12nm,0.9s						
BVA0	**Borovoye Array**	**20.99**	**33**	⇑Pn	Pn	21 43 49.7	-2.3
	comp=Z,7.9nm,0.6s,baz=229,slow=8.3,SNR=51						
BVA0				⇓Sn	**S**	**21 47 35.3**	**-7.8**
	comp=Z,2.3nm,0.8s						
BVA0	**Borovoye Array**	**20.99**	**33**	P	Pn	21 43 49.7	-2.4
BVA0				S	**S**	**21 47 35.3**	**-7.8**
BVA0				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BVA0				smax	smax		
	comp=Z,2.0nm,0.8s						
BVAR	**Borovoye Array**	**20.99**	**33**	P	Pn	21 43 50.1	-2.0
	comp=Z,7.2nm,0.7s,baz=228,slow=9.5,SNR=49						
AKASG	**Malin Array Be**	**21.04**	**318**	P	**P**	**21 43 49.5**	**-0.5**
	comp=Z,3.6nm,0.6s,baz=116,slow=12,SNR=6.1						
AKASG	**Malin Array Be**	**21.04**	**318**	*i* P	**P**	**21 43 52.0**	**+2.0**
AKASG				pmax	pmax		
	comp=Z,4.0nm,0.6s						
AKBB	**Malin Array Si**	**21.04**	**318**	*e*P	**P**	**21 43 52.8**	**+2.8**
	comp=Z,13nm,0.6s						
KIEV	**Kiev**	**21.04**	**318**	*e*P	**P**	**21 43 52.8**	**+2.7**
	comp=Z,13nm,0.5s						
KIEV	**Kiev**	**21.04**	**318**	⇑*e*P	**P**	**21 43 51.7**	**+1.6**
KIEV				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KIEV	**Kiev**	**21.04**	**318**	*e*P	**P**	**21 43 51.7**	**+1.6**
	comp=Z,10.0nm,0.6s						
MOS	**Moscow**	**21.08**	**338**	*e*P	**P**	**21 43 52.9**	**+2.4**
MOS				pmax	pmax		
	comp=Z,32nm,1.2s						
MOS	**Moscow**	**21.08**	**338**	*e*P	**P**	**21 43 52.9**	**+2.4**
	comp=Z,32nm,1.2s						
IDI	**Anoyia**	**21.40**	**274**	P	**P**	**21 43 56.7**	**+2.5**
	comp=Z,5.8nm,0.9s,baz=65,slow=11,SNR=4.2						
IDI	**Anoyia**	**21.40**	**274**	*e*P	**P**	**21 43 58.8**	**+4.6**
	comp=Z,20nm,1.1s						
DOPR	**Dopca**	**21.41**	**303**	⇓*i*P	**P**	**21 43 55.7**	**+1.5**
DOPR	**Dopca**	**21.41**	**303**	⇓*i*P	**P**	**21 43 55.7**	**+1.5**
VOIR		**21.50**	**302**	⇓*i*P	**P**	**21 43 58.0**	**+2.8**
VOIR		**21.50**	**302**	⇓P	**P**	**21 43 58.0**	**+2.8**
VOIR		**21.50**	**302**	⇓*i*P	**P**	**21 43 58.0**	**+2.8**
PRZ	**Przheval'sk**	**21.56**	**66**	*e*P	**P**	**21 43 57.1**	**+1.1**
	comp=Z,16nm,1.1s						
PRZ	**Przheval'sk**	**21.56**	**66**	*e*P	**P**	**21 43 57.1**	**+1.1**
PRZ				pmax	pmax		
	comp=Z,16nm,1.1s						
BURAR	**Bucovina Array**	**22.03**	**307**	⇑*i*P	**P**	**21 44 02.2**	**+1.3**
BURAR	**Bucovina Array**	**22.03**	**307**	⇑P	**P**	**21 44 02.2**	**+1.3**
BURAR	**Bucovina Array**	**22.03**	**307**	⇑*i*P	**P**	**21 44 02.2**	**+1.3**
BUR04	**Bucovina Ar. S**	**22.04**	**307**	*e*P	**P**	**21 44 02.5**	**+1.6**
BUR08	**Bucovina Ar. S**	**22.05**	**308**	*e*P	**P**	**21 44 02.2**	**+1.1**
VTS	**Vitosha**	**22.32**	**294**	*e*P	**P**	**21 44 07.1**	**+3.0**
	comp=Z,2.5nm,0.9s						
VTS	**Vitosha**	**22.32**	**294**	*e*P	**P**	**21 44 07.1**	**+3.0**
VTS				pmax	pmax		
	comp=Z,3.0nm,0.9s						
LOT	**Lotru**	**22.38**	**301**	⇓*i*P	**P**	**21 44 08.4**	**+3.7**
LOT	**Lotru**	**22.38**	**301**	⇓*i*P	**P**	**21 44 08.4**	**+3.7**
PDGK	**Podgornoye**	**22.45**	**64**	P	**P**	**21 44 08.6**	**+3.1**
PDGK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
NDI	**New Delhi**	**23.20**	**103**	*e*P	**P**	**21 44 15.0**	**+1.8**
KURBB	**Kurchatov Arra**	**23.86**	**46**	P	**P**	**21 44 20.6**	**+1.0**
	comp=Z,3.9nm,0.7s,baz=248,slow=10.0,SNR=29						
KURK	**Kurchatov**	**23.95**	**46**	*e*P	**P**	**21 44 22.2**	**+1.8**
	comp=Z,8.9nm,0.8s						
KURK	**Kurchatov**	**23.95**	**46***c*	*i*P	**P**	**21 44 22.6**	**+2.2**
KURK				pmax	pmax		
	comp=Z,8.0nm,0.7s						
MAKZ	**Makanchi**	**24.80**	**57**	*e*P	**P**	**21 44 30.2**	**+1.9**
	comp=Z,13nm,0.8s						
MAKZ	**Makanchi**	**24.80**	**57**	*e*P	**P**	**21 44 30.2**	**+1.9**
MAKZ				pmax	pmax		
	comp=Z,13nm,0.8s						
CRVS	**Cervenica-Dubn**	**24.82**	**309**	*e*P	**P**	**21 44 32.5**	**+4.0**
CRVS				pmax	pmax		
	comp=Z,9.0nm,1.4s						
CRVS	**Cervenica-Dubn**	**24.82**	**309**	*e*P	**P**	**21 44 32.5**	**+4.0**
IDID	**Didziasalis**	**24.94**	**326**	*e*P	P	21 44 35.3	+5.9
IDID				IAmb	IAmb	21 44 47.9	

	comp=Z,4.1nm,0.7s						
MK31	Makanchi Array	25.00	57	eP	P	21 44 32.0	+1.9
MK31	Makanchi Array	25.00	57	eP	P	21 44 32.0	+1.9
MKAR	Makanchi Array	25.00	57	P	P	21 44 32.0	+1.9
	comp=Z,9.0nm,0.6s,baz=246,slow=7.9,SNR=110						
MKAR				LR	LR	21 56 03.1	
	comp=Z,49nm,20.2s,baz=248,slow=41						
MKAR	Makanchi Array	25.00	57	eP	P	21 44 32.0	+1.9
	comp=Z,80nm,0.6s						
MK01	Makanchi Array	25.00	57	eP	P	21 44 31.9	+1.8
PRGR	Permogore	25.10	354	eP	P	21 44 30.8	+0.1
PRGR				pmax	pmax		
	comp=Z,15nm,0.6s						
IIGN	Ignalina	25.19	325	eP	P	21 44 33.0	+1.3
IIGN				IAmb	IAmb	21 44 47.3	
	comp=Z,4.7nm,0.6s						
KLMR	Klimovskoe	25.20	346	eP	P	21 44 30.6	-1.0
KLMR				pmax	pmax		
	comp=Z,14nm,0.7s						
KLMR	Klimovskoe	25.20	346	eP	P	21 44 30.6	-1.0
KLMR				AMP		21 44 39.8	
	comp=Z,14nm,0.7s						
PSZ	Piszkesteto	25.56	306	eP	P	21 44 37.8	+2.6
	comp=Z,4.7nm,0.9s						
PSZ	Piszkesteto	25.56	306	eP	P	21 44 37.8	+2.6
PSZ				pmax	pmax		
	comp=Z,5.0nm,0.9s						
NIE	Niedzica	25.71	309	P	P	21 44 42.4	+5.9
NIE				pmax	pmax		
	comp=Z,2.0nm,1.5s						
OJC	Ojcow	26.27	311	eP	P	21 44 44.7	+3.2
	comp=Z,7.1nm,1.0s						
OJC	Ojcow	26.27	311	eP	P	21 44 44.7	+3.2
OJC				pmax	pmax		
	comp=Z,7.0nm,1.0s						
VYHS	Vyhne	26.38	306	eP	P	21 44 44.4	+1.8
VYHS				pmax	pmax		
	comp=Z,9.0nm,1.9s						
VYHS	Vyhne	26.38	306	eP	P	21 44 44.4	+1.8
VSU	Vasula	26.98	331	ceP	P	21 44 48.3	+0.5
VSU				pmax	pmax		
	comp=Z,18nm,1.0s						
CONA	Conrad Observa	28.21	304	P	P	21 45 01.0	+1.9
	comp=Z,1.7nm,0.9s						
ARSA	Arzberg	28.33	303	P	P	21 45 06.0	+5.9
	comp=Z,3.5nm,1.1s						
WMQ	Urumqi	28.43	64	P	P	21 45 01.3	+0.2
WMQ				pP	sP	21 45 05.5	+0.1
WMQ				pmax	pmax		
	comp=Z,36nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,190nm,4.7s						
WMQ				LR	LR		
	comp=Z,94nm,25.1s						
WMQ				LR	LR		
	comp=Z,140nm,23.3s						
SOKA	Soboth	28.58	302	eP	P	21 45 07.4	+5.0
	comp=Z,5.5nm,1.6s						
ZALV	Zalesovo Beam	28.74	43	P	P	21 45 04.0	+0.4
	comp=Z,1.6nm,0.7s,baz=238,slow=10.0,SNR=6.6						
MOA	Molln	29.26	304	P	P	21 45 09.3	+0.9
	comp=Z,1.9nm,1.0s						
FIA1	FINESS Array S	29.30	335	eP	P	21 45 10.1	+1.6
FINES	FINESS Array B	29.30	335	P	P	21 45 09.1	+0.7
	comp=Z,0.8nm,0.4s,baz=136,slow=12,SNR=8.2						
FINES				LR	LR	21 59 26.4	
	comp=Z,93nm,18.1s,baz=116,slow=42						
KBA	Koelnbreinsper	29.78	302	P	P	21 45 14.8	+1.6
	comp=Z,2.6nm,0.7s						
GEA0	GERESS Array S	29.78	306	eP	P	21 45 14.1	+1.0
GEA0	GERESS Array S	29.78	306	eP	P	21 45 14.1	+1.0
GEC2	GERESS Array S	29.79	306	eP	P	21 45 16.0	+2.9
	comp=Z,3.6nm,1.1s						
GEC2	GERESS Array S	29.79	306	eP	P	21 45 16.0	+2.9
GEC2				pmax	pmax		
	comp=Z,4.0nm,1.1s						
GERES	GERESS Array B	29.79	306	P	P	21 45 13.9	+0.8
	comp=Z,1.3nm,0.6s,baz=104,slow=9.8,SNR=14						
CLL	Collm	30.71	310	eP	P	21 45 21.0	-0.1
	comp=Z,3.0nm,0.6s						
CLL				e(PP)		21 46 29.0	
CLL	Collm	30.71	310	eP	P	21 45 23.3	+2.2
	comp=Z,7.7nm,1.3s						
CLL	Collm	30.71	310	eP	P	21 45 23.3	+2.2
CLL				pmax	pmax		
	comp=Z,8.0nm,1.3s						
WTTA	Wattenberg	30.96	302	epP	pP	21 45 24.1	-2.6
	comp=Z,13nm,1.4s						
WATA	Walderalm	31.00	302	eP	P	21 45 27.2	+3.2
	comp=Z,5.5nm,0.5s						
WATA	Walderalm	31.00	302	P	P	21 45 27.2	+3.3
	comp=Z,5.5nm,0.5s						
MOTA	Moosalm	31.32	302	epP	P	21 45 26.9	+0.1
	comp=Z,2.6nm,0.5s						
MOTA	Moosalm	31.32	302	P	P	21 45 26.9	+0.1
	comp=Z,2.6nm,0.5s						
FETA	Feichten	31.55	302	eP	P	21 45 29.4	+0.6
	comp=Z,6.7nm,0.7s						
FETA	Feichten	31.55	302	P	P	21 45 29.4	+0.6
	comp=Z,6.7nm,0.7s						
RETA	Reutte	31.57	303	epP	P	21 45 28.9	+0.1
	comp=Z,2.8nm,0.6s						
FUORN	Ofenpass-Fuorn	31.85	301	eP	P	21 45 34.4	+2.9
	comp=Z,4.7nm,0.8s						
DAVOX	Davos/Dischmat	32.12	301	P	P	21 45 35.0	+1.2
	comp=Z,4.4nm,0.7s,baz=88,slow=3.4,SNR=9.0						
DAVA	Damuels	32.15	302	epP	P	21 45 34.4	+0.4
	comp=Z,5.6nm,0.6s						
TUE	Stuetta	32.48	301	eP	P	21 45 39.0	+2.0
	comp=Z,3.8nm,0.8s						
HVS	Khovu-Aksy	33.20	51	⇑eP	P	21 45 44.5	+1.4
HVS				pmax	pmax		
	comp=Z,2.0nm,0.6s						
HFS	Hagfors	33.41	326	P	P	21 45 45.4	+0.7
	comp=Z,1.8nm,0.5s,baz=125,slow=10.0,SNR=13						
SENIN	Lac Senin/Sane	33.89	300	eP	P	21 45 50.7	+1.4
	comp=Z,3.7nm,0.8s						
BNI	Bardonecchia	34.34	298	eP	P	21 45 53.5	+0.3
	comp=Z,7.1nm,1.1s						
BNI	Bardonecchia	34.34	298	eP	P	21 45 53.5	+0.3
BNI				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BNI	Bardonecchia	34.34	298	eP	P	21 45 53.5	+0.3
	comp=Z,7.1nm,1.1s						
NC405	NORSAR Array S	34.73	327	eP	P	21 45 56.9	+0.8
NB2	NORSAR Subarra	34.91	327	P	P	21 45 57.9	+0.1
	comp=Z,0.7nm,0.5s,baz=119,slow=8.6						
NOA	NORSAR Array B	34.91	327	P	P	21 45 57.9	+0.1
	comp=Z,0.2nm,0.5s,baz=112,slow=9.6,SNR=5.0						
NBO00	NORSAR Array S	35.10	327	eP	P	21 46 01.8	+2.4
KEV	Kevo	35.52	346	eP	P	21 46 04.0	+1.2
	comp=Z,31nm,1.7s						
KEV	Kevo	35.52	346	eP	P	21 46 04.0	+1.2
KEV				pmax	pmax		
	comp=Z,31nm,1.7s						
ARCES	ARCESS Array B	35.64	345	P	P	21 46 04.2	+0.3
	comp=Z,1.5nm,0.9s,baz=145,slow=8.6,SNR=7.9						
ARCES	ARCESS Array B	35.64	345	eP	P	21 46 04.9	+1.0
SSB	Saint Sauveur	35.84	299	eP	P	21 46 08.7	+2.7
	comp=Z,7.8nm,1.3s						
SSB	Saint Sauveur	35.84	299	eP	P	21 46 08.7	+2.7
SSB				pmax	pmax		
	comp=Z,8.0nm,1.3s						
SSB	Saint Sauveur	35.84	299	eP	P	21 46 08.7	+2.7
	comp=Z,7.8nm,1.3s						
EKA	Eskdalemuir Ar	40.88	315	P	P	21 46 48.9	+0.8
	comp=Z,1.2nm,0.5s,baz=102,slow=8.9,SNR=12						
SONM	Songino Array	41.37	57	P	P	21 46 53.7	+1.2
	comp=Z,0.4nm,0.7s,baz=258,slow=7.2,SNR=3.5						
SONM				LR	LR	22 05 57.2	
	comp=Z,56nm,18.8s,baz=275,slow=39						
ULN	Ulaanbaatar	41.81	57	eP	P	21 46 58.0	+2.0
	comp=Z,4.1nm,1.1s						
ULN	Ulaanbaatar	41.81	57	deP	P	21 46 58.1	+2.0
ULN				pmax	pmax		
	comp=Z,4.0nm,1.7s						
LZH	Lanzhou	41.81	75	eP	P	21 46 59.3	+3.0
LZH				pP	sP	21 47 02.5	+1.9
LZH				sP	pP	21 47 04.0	+4.6
LZH				pmax	pmax		
	comp=Z,18nm,1.1s						
LZH				pmax	pmax		
	comp=Z,46nm,5.5s						
LZH				LR	LR		
	comp=Z,97nm,13.6s						
LZH				LR	LR		
	comp=Z,100nm,13.5s						
LZH				LR	LR		
	comp=Z,140nm,16.9s						
ES19	SONSECA Array	42.88	291	eP	P	21 47 07.7	+2.9
ES19	SONSECA Array	42.88	291	eP	P	21 47 07.7	+2.9
ESDC	Sonseca Array	42.93	291	P	P	21 47 03.7	-1.6
	comp=Z,0.2nm,0.4s,baz=64,slow=8.3,SNR=5.6						
SPA0	Spitsbergen Ar	43.98	350	eP	P	21 47 15.4	+2.2
SPITS	Spitsbergen Ar	43.98	350	P	P	21 47 14.0	+0.9
	comp=Z,5.2nm,0.7s,baz=76,slow=4.4,SNR=9.7						
CMAR	Chiang Mai Arr	45.48	100	P	P	21 47 26.3	+0.5
	comp=Z,0.3nm,0.3s,baz=303,slow=8.4,SNR=2.9						
CMAR				LR	LR	22 12 00.6	
	comp=Z,13nm,18.2s,baz=195,slow=43						
CMAR	Chiang Mai Arr	45.48	100	P	P	21 47 26.3	+0.5
CMAR				pmax	pmax		
	comp=Z,1.0nm,0.5s						
CMAR				MLR	MLR		
	comp=Z,13nm,18.2s						
HHC	Hu-ho-hao-te	46.30	66	eP	P	21 47 33.5	+1.3
HHC				pmax	pmax		
	comp=Z,9.0nm,0.9s						
HHC				pmax	pmax		
	comp=Z,32nm,4.9s						
GYA	Guiyang	47.67	86	eP	P	21 47 47.0	+4.0
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BORG	Borgarnes	50.08	328	LR	LR	22 11 02.1	
	comp=Z,22nm,21.0s,baz=52,slow=38						
TORD	Torodi Ar. Bea	50.11	255	P	P	21 48 00.7	-1.0
	comp=Z,0.8nm,0.9s,baz=52,slow=9.3						
TIXI	Tiksi	51.63	23	⇑eP	P	21 48 12.1	-0.3
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.9s						
KSAR	Wonju Array Be	59.36	64	P	P	21 49 08.4	-0.2
KSAR	Wonju Array Be	59.36	64	P	P	21 49 08.4	-0.2
KSRS	Korea Array	59.39	64	P	P	21 49 08.4	-0.3
	comp=Z,0.8nm,0.5s,baz=290,slow=6.9,SNR=4.6						
ASAJ	Asahikawa	66.36	52	LR	LR	22 20 33.8	
	comp=Z,29nm,18.6s,baz=120,slow=38						
JHJ	Hachijo jima 2	69.97	63	LR	LR	22 21 05.4	
	comp=Z,36nm,21.6s,baz=101,slow=36						
PETK	Petropavlovsk-	70.15	38	LR	LR	22 24 55.9	
	comp=Z,20nm,18.4s,baz=281,slow=39						
ILAR	Eielson Array	77.73	8	P	P	21 51 03.2	+0.3
	comp=Z,0.5nm,0.8s,baz=347,slow=3.7,SNR=3.6						
CAST	Castle Rocks	78.37	11	eP	P	21 51 08.2	+1.7
	comp=Z,4.7nm,1.1s						

IDC 27 21:42:05.8±59.0, 17°.51S×178°.90E, h0km, mb4.0/3, mb1 4.2/3, mb1mx3.6/46, mbtmp4.0/3, Error ellipse: s-maj=1051.0km s-min=160.0km az=77.0, Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	36.59	240	P	P	21 49 13.9	+0.1
	0.5nm,0.3s,baz=104,slow=12,SNR=1.5						
WRA	Warramunga Arr	42.18	259	P	P	21 50 00.1	-0.6
	0.9nm,0.4s,baz=96,slow=7.5,SNR=14						
ASAR	Alice Springs	42.43	254	P	P	21 50 02.9	+0.2
	2.6nm,0.6s,baz=86,slow=8.9,SNR=30						

WEL 27 21:46:38.0, 38°S±9°×18°0W±°, h33km, ML3.6/21, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.39	279	P	Pn	21 47 01.3	+0.2
WMGZ				S	Sn	21 47 17.8	-0.5
PUZ	Puketiti	1.50	269	P	Pn	21 47 02.9	+0.3
PUZ				S	Sn	21 47 21.0	0.0
MXZ	Matakaoa Point	1.54	288	P	Pn	21 47 02.5	-0.6
CNGZ	Carnagh Statio	1.59	254	P	Pn	21 47 05.2	+1.4
PKGZ	Pakihiroa	1.65	275	P	Pn	21 47 04.7	-0.1
TWGZ	Tauwhareparae	1.72	265	P	Pn	21 47 06.5	+0.8
TWGZ				S	Sn	21 47 27.2	+0.7
TKGZ	Te Karaka	1.86	257	P	Pn	21 47 08.7	+1.2
TKGZ				S	Sn	21 47 31.3	+1.5
HAZ	Te Kaha	1.90	278	P	Pn	21 47 08.3	+0.2
HAZ				S	Sn	21 47 29.5	-1.4
RUGZ	Raukumara Rang	1.96	272	P	Pn	21 47 09.5	+0.5
PRGZ	Paritu Road	1.98	243	P	Pn	21 47 11.1	+1.8
RIGZ	Rimuhau	1.99	250	P	Pn	21 47 10.2	+0.8
RIGZ				S	Sn	21 47 34.8	+1.6
MHGZ	Mahia Peninsul	2.08	237	P	Pn	21 47 12.5	+1.9
MWZ	Matawai	2.09	261	P	Pn	21 47 11.4	+0.7
MWZ				S	Sn	21 47 35.6	-0.1
KNZ	Kokohu	2.17	243	P	Pn	21 47 13.2	+1.3
RAGZ	Rawiri	2.20	257	P	Pn	21 47 13.6	+1.3
RAGZ				S	Sn	21 47 39.7	+1.3
SNGZ	Shannon Statio	2.33	251	P	Pn	21 47 15.2	+1.2
SNGZ				S	Sn	21 47 43.4	+1.9
URZ	Urewera	2.41	264	P	Pn	21 47 16.6	+1.5
URZ				S	Sn	21 47 44.2	+0.8
RAHZ	Arahi	2.56	249	P	Pn	21 47 19.2	+2.0
RAHZ				S	Sn	21 47 49.3	+2.1
MUGZ	Murupara	2.70	260	P	Pn	21 47 20.4	+1.3
MTHZ	Maungataniwha	2.72	252	P	Pn	21 47 21.0	+1.6
MTHZ				S	Sn	21 47 52.8	+1.5
ARHZ	Aropaoanui	2.75	243	P	Pn	21 47 22.5	+2.7
NMHZ	Naumai	2.83	247	P	Pn	21 47 22.7	+1.8
TARZ	Mount Tarawera	2.88	265	P	Pn	21 47 22.7	+1.0
MCHZ	McNeill Hill	3.04	242	P	Pn	21 47 25.9	+2.1
BKZ	Black Stump Fm	3.08	248	P	Pn	21 47 25.9	+1.6
BKZ				P	Pn	21 47 25.9	+1.6
BKZ				S	Sn	21 48 01.3	+1.2
KWHZ	Kaweka Forest	3.23	244	P	Pn	21 47 27.8	+1.4
BHHZ	Black Hill Sta	3.51	245	P	Pn	21 47 31.6	+1.3
TSZ	Takapari Road	3.83	237	P	Pn	21 47 35.3	+0.6
TIWZ	Tintock	4.28	229	P	Pn	21 47 41.1	+0.2
CTZ	Chatham Island	6.18	158	P	Pn	21 48 12.2	+5.2

NNC 27 22:21:55.3±2.9, 37°.82N×71°.34E, h0km, mb4.2, mpv3.8, 5C-4D, Error ellipse: s-maj=21.9km s-min=17.6km az=166.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	2.77	37	⇓Pn	Pn	22 22 41.2	+0.1
	10nm,0.3s						
SFK				⇑Sn	Sn	22 23 17.1	+1.7
	18nm,0.3s						
AML	Almayashu	4.67	22	P	Pn	22 23 07.0	-0.4
	SNR=16						
MNAS	Manas	4.75	10	⇓Pn	Pn	22 23 08.9	+0.6
	5.6nm,0.5s						
MNAS				⇑Sn	Sn	22 24 05.3	+1.2
	16nm,0.5s						
UCH	Uchtor	5.03	28	P	Pn	22 23 11.5	-0.9
	SNR=16						
EKS2	Erkin-Say	5.18	20	P	Pn	22 23 14.1	-0.2
	SNR=13						
KK31	Karatay Array	5.32	353	Pn	Pn	22 23 17.4	+1.5
	3.5nm,0.3s,baz=183,slow=14,SNR=50						
KK31				⇑Sn	Sn	22 24 19.4	+1.5
	11nm,0.5s,baz=175,slow=22						
AAK	Ala-Archa	5.38	26	⇑Pn	Pn	22 23 16.4	-0.7
	7.6nm,0.4s						
AAK				⇓Sn	Sn	22 24 19.4	-0.4
	4.7nm,0.5s						
AAK	Ala-Archa	5.38	26	P	Pn	22 23 16.7	-0.3
	SNR=6.9						
CHMS	Chumysh	5.79	26	P	Pn	22 23 21.7	-0.8
	SNR=14						
TKM2	Tokmak 2	6.04	31	⇓Pn	Pn	22 23 24.3	-1.8
	7.1nm,0.6s						
TKM2				⇑Sn	Sn	22 24 36.3	+0.2
	2.7nm,0.7s						
TKM2	Tokmak 2	6.04	31	P	Pn	22 23 24.7	-1.4
	SNR=14						

CSEM ***27*** *22:47:14.3±0.3, 38°.72N×43°.54E, h30km, ML1.9, Error ellipse: s-maj=11.5km s-min=6.3km az=127.0*

ISK ***27*** *22:47:14.8, 38°.75N×43°.42E, h22km, ML1.9/4*

DDA ***27*** *22:47:15.7, 38°.77N×43°.50E, h7km, Ml2.7*

ISC 27 22:47:14.7±1.0, 38°.74N±0°.04×43°.55E±0°.05, h30km±7km, n16, $\sigma 0^{s}.64$/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	Van	0.19	222	PG	Pb	22 47 21.1	+0.1
VANB				SG	Sb	22 47 25.8	+0.6
VANB	Van	0.19	222	ePg	Pb	22 47 21.1	+0.1
VANB				eSg	Sb	22 47 25.8	+0.6
TVAN	Van	0.24	209	i P	Pb	22 47 21.0	-0.6
TVAN				i S	Sb	22 47 26.0	-0.3
TVAN	Van	0.24	209	P	Pb	22 47 21.0	-0.6
TVAN				S	Sb	22 47 26.0	-0.3
VMUR	Van-Muradiye	0.25	3	i P	Pb	22 47 21.5	-0.3
VMUR				i S	Sb	22 47 26.8	+0.3
VMUR	Van-Muradiye	0.25	3	P	Pb	22 47 21.5	-0.3
VMUR				S	Sb	22 47 26.8	+0.3
ERCV	ERCIS-VAN	0.33	329	PG	Pb	22 47 21.7	-1.0
ERCV	ERCIS-VAN	0.33	329	ePg	Pb	22 47 21.7	-1.0
CLDR	Caldiran	0.49	35	PG	Pn	22 47 25.9	-0.1
CLDR				SG	Sn	22 47 35.1	+1.4
CLDR	Caldiran	0.49	35	i P	Pb	22 47 24.5	-0.7
CLDR				i S	Sn	22 47 33.6	-0.1
CLDR	Caldiran	0.49	35	P	Pb	22 47 24.5	-0.7
CLDR	Caldiran	0.49	35	ePg	Pn	22 47 25.9	-0.1
CLDR				S	Sn	22 47 33.6	-0.1
CLDR				eSg	Sn	22 47 35.1	+1.4
TUTA	Tutak	0.88	319	i P	Pn	22 47 31.3	0.0
TUTA				i S	Sb	22 47 43.7	+0.6
TUTA	Tutak	0.88	319	P	Pn	22 47 31.3	0.0
TUTA				S	Sb	22 47 43.7	+0.6
GURO	Guroymak-BITLI	1.21	262	PN	Pn	22 47 35.5	-0.2
GURO	Guroymak-BITLI	1.21	262	ePn	Pn	22 47 35.5	-0.2

ISCJB ***27*** *23:00:46.3±0.6, 2°.13N±0°.08×127°.82E±0°.09, h134km, mb4.0/11, Error ellipse: s-maj=13.5km s-min=10.4km az=29.3*

DJA ***27*** *23:00:48.7±1.5, 2°N±14°×12°8E±1°4, h180km±14km, M4.4/7, mB5.0/4, mb4.7/5, MLv4.3/7, Mw(mB)4.3/4*

IDC ***27*** *23:01:04.5±11.0, 1°.92N×127°.93E, h304km±124km, mb3.5/11, mb1 3.6/11, mb1mx3.2/58, mbtmp4.1/11, MS3.3/1, Ms1 3.3/1, ms1mx2.3/32, Error ellipse: s-maj=40.2km s-min=22.1km az=78.0*

ISC 27 23:00:48.8±0.8, 2°.22N±0°.09×127°.7E±0°.1, h134km, n18, $\sigma 1^{s}.91$/18, mb4.0/11, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.47	192	P	Pn	23 01 19.4	+2.6
TNTI				S	Sn	23 01 42.1	+3.9
KMSI	Cibinong	4.04	246	P	Pn	23 01 49.8	+0.7
LUWI	Luwuk	5.87	237	P	Pn	23 02 11.8	-1.8
MRSI	Marisa	5.99	253	P	Pn	23 02 17.3	+2.2
	59nm,0.6s,668nm0.2nm						
APSI	Ampana	6.78	243	P	Pn	23 02 25.1	-0.7
TTSI	Tana Toraja	9.43	236	P	Pn	23 03 00.2	-1.3
PMG	Port Moresby	22.59	121	LR	LR	23 17 09.3	
	comp=Z,83nm,20.4s,baz=78,slow=43						
WRA	Warramunga Arr	22.98	164	P	P	23 05 39.7	-2.2
	3.1nm,0.6s,baz=340,slow=11,SNR=23						
ASAR	Alice Springs	26.43	167	P	P	23 06 11.0	-2.2
	1.0nm,0.3s,baz=340,slow=11,SNR=16						
STKA	Stephens Creek	36.39	160	P	P	23 07 38.8	-1.5
	2.6nm,0.7s,baz=2.5,slow=9.4,SNR=3.1						
SONM	Songino Array	49.02	341	P	P	23 09 24.2	+2.1
	1.2nm,0.7s,baz=157,slow=7.7,SNR=6.6						
PETK	Petropavlovsk-	56.48	21	P	P	23 10 16.4	-0.2
	0.9nm,0.5s,baz=194,slow=5.2						
MKAR	Makanchi Array	59.33	325	P	P	23 10 38.1	+1.4
	2.9nm,0.4s,baz=115,slow=8.1,SNR=79						
ZALV	Zalesovo Beam	62.35	333	P	P	23 10 57.1	+0.2
	0.4nm,0.4s,baz=122,slow=7.0,SNR=2.9						
KURBB	Kurchatov Arra	63.51	327	P	P	23 11 05.5	+0.9
	3.6nm,0.6s,baz=129,slow=6.1,SNR=32						
BVAR	Borovoye Array	69.09	327	P	P	23 11 40.4	+0.2
	1.0nm,0.4s,baz=127,slow=7.3,SNR=11						
AKTO	Aktyubinsk	75.42	322	P	P	23 12 17.0	-0.9
	0.7nm,0.4s,baz=113,slow=6.8,SNR=4.2						
ARCES	ARCESS Array B	92.18	340	P	P	23 13 41.4	-1.5
	2.0nm,0.9s,baz=92,slow=6.6,SNR=6.8						

IDC 27 23:01:14.1±2.8, 18°.30S×173°.01E, h0km, mb4.0/4, mb1 4.3/5, mb1mx3.8/44, mbtmp4.0/5, ML2.9/1, MS3.6/8, Ms1 3.6/8, ms1mx3.1/40, Error ellipse: s-maj=120.8km s-min=29.6km az=143.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	7.21	238	eLR	LR	23 04 48.0	
	622nm,25.6s						
DZM	Mont Dzumac	7.21	238	Pn	Pn	23 03 00.7	-0.3
	0.2nm,0.3s,baz=108,slow=20,SNR=2.2						
AFI	Afiamalu	15.26	76	LR	LR	23 09 06.6	
	comp=Z,210nm,21.5s,baz=184,slow=31						
RPZ	Rata Peaks	25.39	183	LR	LR	23 15 30.4	
	comp=Z,222nm,18.8s,baz=10.0,slow=34						
STKA	Stephens Creek	31.37	238	LR	LR	23 19 11.9	
	comp=Z,78nm,19.5s,baz=31,slow=34						
PPT	Papeete	35.57	95	LR	LR	23 19 04.3	
	comp=Z,59nm,19.0s,baz=187,slow=30						
WRA	Warramunga Arr	36.52	261	P	P	23 08 20.9	-0.7
	1.9nm,0.8s,baz=95,slow=8.9,SNR=5.6						
ASAR	Alice Springs	36.82	255	P	P	23 08 23.4	-0.8
	3.9nm,0.8s,baz=84,slow=9.1,SNR=29						
ASAR				PcP	PcP	23 10 47.5	+1.0
	0.8nm,0.8s,baz=90,slow=2.0,SNR=3.1						
ASAR				LR	LR	23 23 25.9	
	comp=Z,82nm,18.2s,baz=96,slow=36						
GUMO	Guam	42.12	317	LR	LR	23 27 52.5	
	comp=Z,18nm,18.2s,baz=102,slow=38						
PSI	Prapat	75.81	278	LR	LR	23 47 43.2	
	comp=Z,84nm,18.6s,baz=288,slow=37						
CMAR	Chiang Mai Arr	81.41	293	P	P	23 13 35.0	+1.6
	0.6nm,0.3s,baz=140,slow=5.7,SNR=2.3						
ILAR	Eielson Array	88.31	16	P	P	23 14 05.8	-1.4
	0.4nm,0.8s,baz=231,slow=4.3,SNR=3.8						
PALK	Pallekele	94.42	276	LR	LR	23 59 11.2	
	comp=Z,39nm,18.3s,baz=24,slow=37						
GERES	GERESS Array B	145.22	336	PKPbc	PKPbc	23 20 53.3	-0.2
	1.3nm,0.9s,baz=87,slow=5.0,SNR=2.1						

ISCJB ***27*** *23:02:13.9±0.4, 41°.11S±0°.07×43°.43E±0°.10, h9km, mb4.3/27, MS3.7/21, Error ellipse: s-maj=11.8km s-min=9.2km az=139.4*

IDC ***27*** *23:02:14.1±0.6, 41°.12S×43°.43E, h0km, mb4.0/11, mb1 4.1/12, mb1mx3.8/59, mbtmp4.0/12, ML3.4/1, MS3.7/22, Ms1 3.7/22, ms1mx3.5/51, Error ellipse: s-maj=26.0km s-min=16.9km az=50.0*

NEIC ***27*** *23:02:15.8±0.2, 41°.10S×43°.45E, h10km, mb4.6/10, Error ellipse: s-maj=6.9km s-min=5.4km az=49.0*

ISC 27 23:02:15.5±0.4, 41°.09S±0°.09×43°.43E±0°.09, h9km, n51, $\sigma 0^{s}.44$/34, mb4.3/27, MS3.7/21, Prince Edward Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOSA	Boshof	19.38	304	P	Pn	23 06 43.2	+0.4
	0.1nm,0.3s,baz=145,slow=15,SNR=2.9						
BOSA				LR	LR	23 12 36.6	
	comp=Z,139nm,21.6s,baz=134,slow=32						
SUR	Sutherland	20.06	288	LR	LR	23 12 58.1	
	comp=Z,140nm,19.3s,baz=116,slow=32						
LBTB	Lobatse	21.85	312	P	P	23 07 08.4	-0.1
	6.9nm,1.1s,baz=143,slow=5.1,SNR=2.3						
LBTB				LR	LR	23 14 04.1	
	comp=Z,145nm,21.4s,baz=140,slow=32						
ABPO	Ambohimpanom	22.24	10	eP	P	23 07 13.0	+0.2
	5.8nm,0.6s						
MAW	Mawson	28.61	165	LR	LR	23 17 21.0	
	comp=Z,90nm,18.6s,baz=327,slow=32						
LSZ	Lusaka	28.92	328	P	P	23 08 14.3	-0.8
	1.5nm,0.6s,baz=140,slow=5.9,SNR=4.9						
LSZ				LR	LR	23 18 18.2	
	comp=Z,216nm,20.3s,baz=152,slow=33						
TSUM	Tsumeb	31.02	307	LR	LR	23 20 00.6	
	comp=Z,86nm,20.1s,baz=140,slow=34						
MSEY	Mahe Island	37.83	20	P	P	23 09 32.4	-0.2
	17nm,0.7s						
SNAA	Sanae	38.15	202	P	P	23 09 34.8	0.0
	1.5nm,0.9s,baz=48,slow=12,SNR=4.8						
SNAA				LR	LR	23 23 05.7	
	comp=Z,84nm,19.7s,baz=101,slow=33						
CASY	Casey	44.14	148	P	P	23 10 23.6	-0.3
	0.3nm,0.9s						
QSPA	South Pole Qui	49.12	180	P	P	23 11 03.0	-0.2
	0.7nm,0.6s,baz=254,slow=7.5,SNR=2.9						
QSPA				LR	LR	23 30 34.4	

	comp=Z,180nm,21.9s,baz=69,slow=35						
SHEL	Horse Pasture	49.13	286	P	P	23 11 03.5	-0.2
	7.0nm,0.6s						
H01W2	Cape Leeuwin H	54.68	108	T	T	00 10 50.0	
	baz=241,slow=75,SNR=39						
H01W3	Cape Leeuwin H	54.69	108	T	T	00 10 55.2	
	baz=241,slow=75,SNR=41						
COCO	West Island	54.70	74	eP	P	23 11 45.0	-0.2
	45nm,0.3s						
H01W1	Cape Leeuwin H	54.70	108	T	T	00 10 51.3	
	baz=241,slow=75,SNR=34						
SBA	Scott Base	56.51	168	P	P	23 11 58.4	+1.0
	0.4nm,0.8s						
NWAO	Narrogin (SRO)	57.90	108	P	P	23 12 07.8	-0.1
	5.5nm,0.7s						
PALK	Pallekele	59.05	44	LR	LR	23 31 08.1	
	comp=Z,64nm,21.6s,baz=326,slow=29						
PMSA	Palmer Station	60.38	208	LR	LR	23 33 10.8	
	comp=Z,32nm,18.5s,baz=356,slow=31						
PMSA	Palmer Station	60.38	208	P	P	23 12 24.4	-0.1
	15nm,0.6s						
EFI	East Falkland	65.26	222	P	P	23 12 57.2	-0.1
	4.7nm,0.6s						
WSAR	Wadi Sarin	65.54	15	LR	LR	23 35 50.3	
	comp=Z,124nm,21.7s,baz=214,slow=31						
MBWA	Marble Bar	66.30	98	P	P	23 13 04.4	-0.1
	9.7nm,0.8s						
TORD	Torodi Ar. Bea	66.33	315	P	P	23 13 04.5	0.0
	1.2nm,1.0s,baz=143,slow=7.9						
TAU	Tasmania Unive	71.89	131	P	P	23 13 39.0	+0.2
	8.0nm,1.0s						
ASAR	Alice Springs	75.19	108	P	P	23 13 58.3	-0.4
	1.1nm,0.8s,baz=220,slow=5.4,SNR=7.0						
STKA	Stephens Creek	75.36	119	P	P	23 13 59.7	+0.2
	2.8nm,0.8s,baz=247,slow=8.7,SNR=5.6						
STKA				LR	LR	23 41 01.7	
	comp=Z,52nm,20.2s,baz=207,slow=31						
WRA	Warramunga Arr	77.84	106	P	P	23 14 13.4	-0.2
	2.5nm,0.9s,baz=215,slow=4.1,SNR=8.1						
WRAB	Tennant Creek	77.85	106	P	P	23 14 13.7	0.0
	1.1nm,0.6s						
RCBR	Riachuelo	78.15	273	P	P	23 14 15.6	+0.1
	16nm,0.6s						
CMAR	Chiang Mai Arr	78.45	53	LR	LR	23 44 51.1	
	comp=Z,34nm,18.9s,baz=284,slow=33						
PLCA	Paso Flores	78.92	225	LR	LR	23 42 59.4	
	comp=Z,52nm,21.0s,baz=172,slow=31						
CPUP	Villa Florida	80.66	243	P	P	23 14 28.4	-0.6
	2.5nm,0.7s,baz=123,slow=3.0,SNR=7.5						
GNI	Garni	80.87	1	LR	LR	23 49 18.3	
	comp=Z,22nm,21.3s,baz=198,slow=35						
GNI	Garni	80.87	1	P	P	23 14 30.0	+0.3
	3.6nm,0.4s						
BRTR	Keskin Array B	80.92	352	P	P	23 14 30.7	+0.7
	0.1nm,0.5s,baz=149,slow=5.9,SNR=2.4						
VAE	Valguarnera	82.58	337	LR	LR	23 52 49.9	
	comp=Z,72nm,19.1s,baz=138,slow=37						
KEST	Kesra	82.60	333	LR	LR	23 51 52.7	
	comp=Z,82nm,20.5s,baz=290,slow=36						
KVAR	Kislovodsk Arr	84.66	359	LR	LR	23 52 04.3	
	comp=Z,25nm,19.3s,baz=221,slow=35						
MDT	Midelt	85.85	321	LR	LR	23 54 02.0	
	comp=Z,60nm,19.7s,baz=160,slow=36						
CTAO	Charters Tower	86.23	113	P	P	23 14 57.3	-0.5
	6.9nm,0.3s						
ESDC	Sonseca Array	91.22	325	LR	LR	23 57 16.5	
	comp=Z,28nm,20.6s,baz=300,slow=36						
AKTO	Aktyubinsk	92.04	9	LR	LR	23 55 08.5	
	comp=Z,50nm,21.8s,baz=214,slow=34						
DAVOX	Davos/Dischmat	92.44	338	LR	LR	00 00 58.0	
	comp=Z,21nm,18.4s,baz=84,slow=38						
MKAR	Makanchi Array	94.09	26	P	P	23 15 34.8	+0.9
	0.2nm,0.7s,baz=198,slow=4.2,SNR=3.0						
SAML	Samuel	96.45	252	P	P	23 15 46.5	+1.0
	0.3nm,0.6s						
CCM	Cathedral Cave	145.22	280	ePKPbc	PKPdf	23 21 53.5	+0.2
ULM	Lac du Bonnet	150.44	302	PKPbc	PKPbc	23 22 06.3	-0.5
	6.0nm,0.7s,baz=83,slow=4.5,SNR=8.2						
ECSD	EROS Data Cent	150.57	289	ePKPdf	PKPdf	23 22 01.7	-0.3
ECSD				ePKPbc	PKPbc	23 22 07.2	-0.1
ECSD				ePKPab	PKPab	23 22 13.8	-0.4
TXAR	Lajitas Array	150.84	257	PKPbc	PKPbc	23 22 08.4	-0.1
	2.5nm,0.8s,baz=282,slow=1.2,SNR=3.5						

NNC 27 23:06:03.6±3.0,35°.43N×71°.40E,h0^{km},mb3.7,mpv3.3, 5C-1D,Error ellipse: s-maj=33.0km s-min=22.0km az=107.0,Pakistan

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	4.87	19	⇑Pn	Pn	23 07 18.1	-0.3
	1.0nm,0.3s						
SFK				⇑Sn	Sn	23 08 17.2	+1.6
	1.9nm,0.3s						
MNAS	Manas	7.10	7	⇓Pn	Pn	23 07 48.6	-0.4
	3.2nm,1.2s						
MNAS				⇑Sn	Sn	23 09 10.9	+0.5
	1.9nm,0.7s						
KK31	Karatay Array	7.70	355	⇑Pn	Pn	23 07 58.1	+1.1
	0.8nm,0.3s,baz=177,slow=13,SNR=14						
KK31				⇑Sn	Sn	23 09 26.4	+1.5
	0.7nm,0.4s,baz=170,slow=22,SNR=3.6						

ISCJB ***27*** *23:12:20.7±0.3,44°.215N±0°.007×17°.90E±0°.01,h0^{km}±2^{km}, mb4.6/62,MS3.9/38,Error ellipse: s-maj=1.4km s-min=1.1km az=43.8*

LDG ***27*** *23:12:21.9±0.1,44°.26N×17°.97E,h2^{km},Ml4.6/18,Error ellipse: s-maj=4.1km s-min=2.6km az=33.0*

IDC ***27*** *23:12:22.0±0.5,44°.19N×17°.84E,h0^{km},mb4.3/28, mb1 4.4/43,mb1mx4.3/78,mbtmp4.3/43,ML4.0/15, MS3.7/44,Ms1 3.7/44,ms1mx3.6/72,Error ellipse: s-maj=9.0km s-min=6.7km az=38.0*

PDG ***27*** *23:12:22.4±1.0,44°.20N×17°.91E,h14^{km}±1^{km},MD4.7/14, ML4.8/13,Error ellipse: s-maj=0.8km s-min=1.1km az=0.0*

MOS ***27*** *23:12:22.3±1.0,44°.20N×17°.84E,h17^{km},mb4.6/32,Error ellipse: s-maj=3.0km s-min=2.4km az=109.1*

ROM ***27*** *23:12:22.2±0.3,44°.24N±0°.01×18°.00E±0°.04,h10^{km}, ML4.8/39*

CSEM ***27*** *23:12:22.8±0.0,44°.19N×17°.91E,h3^{km},mb4.7/34, ML4.8/13,Mw4.5,Error ellipse: s-maj=1.5km s-min=1.1km az=39.0*

GCMT ***27*** *23:12:23.8±0.5,44°.20N×17°.83E,h23^{km}±2^{km},MW4.7/64, Moment Tensor Solution. s15,c18; s64,c96; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.54±.11; $M_{\theta\theta}$-1.07±.08; $M_{\phi\phi}$0.53±.06; $M_{r\theta}$-0.48±.12; $M_{\theta\phi}$0.70±.05; $M_{\phi r}$-0.04±.10; Best double couple: $M_0$1.18300×10^{16} NP1:ϕ_s252.00000°,δ76.00000°,λ34.00000°. NP2: ϕ_s153.00000°,δ57.00000°,λ164.00000°. Principal axes: T 0.9360, Plg33.0000°, Azm118.0000°; N 0.4930, Plg54.0000°, Azm272.0000°; P -1.4300, Plg13.0000°, Azm19.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

BJI ***27*** *23:12:23.2,44°.20N×17°.90E,h10^{km},mb4.6/24,mB4.9/19, Ms4.7/10,Ms7 4.4/5*

NEIC ***27*** *23:12:23.7±0.1,44°.17N×17°.88E,h10^{km},mb4.6/27, MW4.5,ML4.6(PDG),ML4.7(ZAG),ML4.8(BEO),Error ellipse: s-maj=2.4km s-min=1.5km az=218.0,Moment Tensor Solution. s19 Moment tensor: Scale 10^{15}Nm; M_{rr}-0.23; $M_{\theta\theta}$-3.93; $M_{\phi\phi}$4.15; $M_{r\theta}$-2.39; $M_{\theta\phi}$3.88; $M_{\phi r}$-0.87; Best double couple: $M_0$6.20000×10^{15} NP1:ϕ_s66.00000°, δ88.00000°,λ-24.00000°. NP2:ϕ_s157.00000°,δ66.00000°, λ-178.00000°. Principal axes: T 6.1900, Plg16.0000°, Azm114.0000°; N -0.0700, Plg65.0000°, Azm242.0000°; P -6.1200, Plg18.0000°, Azm19.0000°;*

NEIC Felt [V] at Zenica; [IV] at Banja Luka, Prnjavor, Travnik and Tuzla; [III] at Bugojno, Kobilja Glava and Sarajevo. Felt in much of Bosnia and Herzegovina. Felt [II] at Belgrade, Serbia. Also felt at Loznica and Novi Sad. Felt at Slavonski Brod, Croatia and at Ulcinj, Montenegro.

BEO ***27*** *23:12:23.2±0.3,44°.24N×17°.90E,h7^{km}±2^{km},ML4.8/12*

BGR ***27*** *23:12:24.5±1.0,44°.29N×18°.30E,h10^{km},ML4.9/3,Error ellipse: s-maj=23.3km s-min=12.2km az=62.0*

PRU ***27*** *23:12:24.2,44°.21N×17°.92E,h9^{km}*

TIR ***27*** *23:12:26.7,44°.20N×17°.92E,h6^{km},Md4.5/4*

ISC 27 23:12:22.9±0.8,**44°.24N**±0°.02×**17°.95E**±0°.02,**h2**^{km}±5^{km}, **n1281,**σ1§**38**/1468,**mb4.6**/62,**MS3.9**/38,**105C-73D,**

Northwestern Balkan Peninsula

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DOB	Doboj	0.50	12	⇑iPg	Pg	23 12 32.7	+0.1
DOB				eSg	Sb	23 12 41.3	-0.9
DOB	Doboj	0.50	12	⇑iPg	Pg	23 12 32.7	+0.1
DOB				eSg	Sb	23 12 41.3	-0.9
HAPS	Han Pijesak,Bl	0.74	102	ePg	Pg	23 12 36.8	-0.3
HAPS				eSg	Sg	23 12 47.6	+1.0
HAPS	Han Pijesak,Bl	0.74	102	ePg	Pg	23 12 36.8	-0.3
HAPS				eSg	Sg	23 12 47.6	+1.0
HAPS	Han Pijesak,Bl	0.74	102	⇓iPg	Pg	23 12 36.5	-0.6
HAPS				eSg	Sg	23 12 47.8	+1.2
BLY	Banja Luka	0.75	313	ePg	Pg	23 12 37.7	+0.5
BLY				eSg	Sg	23 12 46.9	0.0
BLY	Banja Luka	0.75	313	⇑iP	Pg	23 12 37.5	+0.3
BLY				S	Sb	23 12 48.8	-0.4
BLY	Banja Luka	0.75	313	ePg	Pb	23 12 38.0	-0.6
BLY	Banja Luka	0.75	313	ePg	Pb	23 12 38.0	-0.6
BLY				eSg	Sg	23 12 46.9	0.0
BLY	Banja Luka	0.75	313	P	Pg	23 12 37.3	0.0
BLY				S	Sg	23 12 47.6	+0.7
BLY	Banja Luka	0.75	313	⇑iPg	Pg	23 12 36.8	-0.4
BLY				eSg	Sg	23 12 47.4	+0.5
BLJ	Bijeljina	1.09	60	ePg	Pg	23 12 43.2	-0.6
BLJ				eSg	Sg	23 12 58.0	+0.1
BLJ	Bijeljina	1.09	60	ePg	Pg	23 12 43.2	-0.6
BLJ				eSg	Sg	23 12 58.0	+0.1
BBLS	Lazići	1.12	109	ePg	Pg	23 12 44.2	-0.1
BBLS				eSg	Sb	23 13 00.3	+0.4
BBLS	Lazići	1.12	109	ePg	Pg	23 12 44.2	-0.1
BBLS				eSg	Sb	23 12 59.6	-0.3
BBLS	Lazići	1.12	109	⇑iPg	Pg	23 12 44.1	-0.2
BBLS				eSg	Sb	23 12 59.6	-0.3
TEKS	Tekeris	1.17	74	ePg	Pn	23 12 46.2	-0.2
TEKS				eSg	Sb	23 13 02.2	+0.6
TEKS	Tekeris	1.17	74	ePg	Pn	23 12 46.2	-0.2
TEKS				eSg	Sb	23 13 02.1	+0.5
TEKS	Tekeris	1.17	74	eSg	Sb	23 13 02.1	+0.5
UPM	Unac-Piva	1.25	146	⇑iPg	Pg	23 12 45.4	-1.5
UPM				i Sg	Sn	23 13 04.8	-0.2
UPM	Unac-Piva	1.25	146	⇑iPg	Pg	23 12 45.4	-1.5
UPM				eSg	Sg	23 13 02.9	-0.1
UPM	Unac-Piva	1.25	146	⇑iPg	Pg	23 12 45.4	-1.5
UPM				eSg	Sg	23 13 02.9	-0.1
STON	Ston	1.38	188	ePg	Pn	23 12 47.3	-1.8
STON				eSg	Sg	23 13 07.0	-0.3
STON	Ston	1.38	188	⇓iPn	Pn	23 12 46.7	-2.5
STON				Sn	Sg	23 13 07.1	-0.2
STON	Ston	1.38	188	ePg	Pn	23 12 47.3	-1.8
STON				eSg	Sg	23 13 05.3	-2.0
STON	Ston	1.38	188	P	Pn	23 12 46.6	-2.5
STON				S	Sg	23 13 07.0	-0.3
STON				AML	AML		
	comp=E,23300µm,0.6s						
STON				AML	AML		
	comp=N,19750µm,1.6s						
STON				AML	AML		
	comp=E,23300µm,0.6s						
STON				AML	AML		
	comp=N,19750µm,1.6s						
STON				AML	AML		
	comp=E,23300µm,0.6s						
STON				AML	AML		
	comp=N,19750µm,1.6s						
STON	Ston	1.38	188	⇓iPg	Pn	23 12 46.6	-2.5
STON				eSg	Sg	23 13 05.3	-2.0
PLE	Pljevlja	1.39	131	⇑iPg	Pn	23 12 47.9	-1.4
PLE				i Sg	Sn	23 13 08.2	-0.1
PLE	Pljevlja	1.39	131	⇓P	Pn	23 12 46.7	-2.6
PLE				S	Sg	23 13 00.1	-7.2
PLE	Pljevlja	1.39	131	⇓P	Pn	23 12 46.7	-2.6
PLE				S	Sg	23 13 00.2	-7.2
PLE	Pljevlja	1.39	131	P	Pn	23 12 46.7	-2.6
PLE	Pljevlja	1.39	131	⇑iPg	Pn	23 12 47.9	-1.4
PLE				S	Sg	23 13 00.2	-7.2
PLE				i Sg	Sn	23 13 08.2	-0.1
BRY	Bratogost	1.41	162	⇑iPg	Pn	23 12 48.0	-1.7
BRY				i Sg	Sg	23 13 05.6	-2.5
BRY	Bratogost	1.41	162	⇑P	Pn	23 12 47.6	-2.1
BRY				S	Sg	23 13 02.0	-6.1
BRY	Bratogost	1.41	162	eP	Pn	23 12 47.0	-2.7
BRY	Bratogost	1.41	162	eP	Pn	23 12 47.0	-2.7
BRY	Bratogost	1.41	162	⇑iPg	Pn	23 12 48.0	-1.7
BRY				S	Sg	23 13 02.0	-6.1
BRY				eSg	Sb	23 13 06.8	-1.6
BRY	Bratogost	1.41	162	ePg	Pn	23 12 47.6	-2.1
BRY				eSg	Sg	23 13 06.8	-1.3
DIVS	Divibare	1.48	95	ePg	Pn	23 12 50.4	-0.2
DIVS				eSg	Sn	23 13 11.6	+1.1
DIVS	Divibare	1.48	95	ePg	Pn	23 12 50.4	-0.2
DIVS				eSg	Sn	23 13 10.7	+0.2
DIVS	Divibare	1.48	95	⇑iPg	Pn	23 12 50.1	-0.5
DIVS				eSg	Sn	23 13 10.7	+0.2
TREB	Trebinje	1.55	169	ePg	Pn	23 12 50.7	-0.8
TREB				eSg	Sb	23 13 12.5	+0.1
TREB	Trebinje	1.55	169	⇑iPn	Pn	23 12 50.0	-1.5
TREB	Trebinje	1.55	169	ePg	Pn	23 12 50.7	-0.8
TREB				eSn	Sn	23 13 11.0	-1.2
TREB				eSg	Sb	23 13 12.5	+0.1
TREB	Trebinje	1.55	169	⇑iPn	Pn	23 12 50.0	-1.5
TREB				eSn	Sn	23 13 11.0	-1.2
UDBI	Udbina	1.59	281	⇑iPn	Pn	23 12 50.7	-1.4
UDBI				Sn	Sn	23 13 12.9	-0.4
FGSL	Fruska Gora	1.61	55	ePn	Pn	23 12 51.8	-0.6
FGSL				eSn	Sb	23 13 14.3	+0.1
FRGS	Fruska Gora	1.61	55	ePn	Pn	23 12 51.8	-0.6
FRGS				eSn	Sb	23 13 14.3	+0.1
FRGS	Fruska Gora	1.61	55	ePn	Pn	23 12 51.8	-0.6
FRGS				eSn	Sn	23 13 13.9	+0.2
NKY	Niksic	1.62	152	⇑iPn	Pn	23 12 51.4	-1.1
NKY				i Sn	Sb	23 13 14.7	+0.3
NKY	Niksic	1.62	152	P	Pn	23 12 50.7	-1.8
NKY	Niksic	1.62	152	P	Pn	23 12 50.7	-1.8
NKY	Niksic	1.62	152	⇑iPn	Pn	23 12 51.4	-1.1
NKY				i Sn	Sb	23 13 14.7	+0.3
NKME	Niksic	1.65	153	⇑iPn	Pn	23 12 51.7	-1.2
NKME				i Sn	Sn	23 13 13.8	-0.8
NKME	Niksic	1.65	153	⇑iPn	Pn	23 12 51.7	-1.2
NKME				i Sn	Sn	23 13 13.8	-0.8
IVAS	Ivanjica	1.73	112	ePn	Pn	23 12 53.7	-0.3
IVAS				eSn	Sb	23 13 17.2	-0.3
IVAS	Ivanjica	1.73	112	ePn	Pn	23 12 53.7	-0.3
IVAS				eSn	Sb	23 13 17.2	-0.3
SJES	Sjenica	1.77	123	ePn	Pn	23 12 54.7	+0.1
SJES				eSn	Sn	23 13 17.6	0.0
TRUS	Trudelj	1.77	90	ePn	Pn	23 12 54.3	-0.2
TRUS				eSn	Sn	23 13 17.7	+0.2
TRUS	Trudelj	1.77	90	ePn	Pn	23 12 54.3	-0.2
TRUS				eSn	Sn	23 13 17.7	+0.2
KOME	Kolasin	1.80	140	⇑iPn	Pn	23 12 54.5	-0.5
KOME				i Sn	Sb	23 13 19.4	-0.2
KOME	Kolasin	1.80	140	⇑iPn	Pn	23 12 54.5	-0.5
KOME				i Sn	Sb	23 13 19.4	-0.2
CEME	Cevo	1.84	157	⇓iPn	Pn	23 12 54.9	-0.6
CEME				i Sn	Sn	23 13 19.9	+0.6
CEME	Cevo	1.84	157	⇓iPn	Pn	23 12 54.9	-0.6
CEME				i Sn	Sn	23 13 19.9	+0.6
HCY	Herceg Novi	1.84	167	ePn	Pn	23 12 54.9	-0.5
HCY				i Sn	Sn	23 13 19.7	+0.5
HCY	Herceg Novi	1.84	167	P	Pn	23 12 55.8	+0.4
HCY				S	Sn	23 13 17.0	-2.2
HCY	Herceg Novi	1.84	167	ePn	Pn	23 12 54.9	-0.5
HCY	Herceg Novi	1.84	167	P	Pn	23 12 55.8	+0.4
HCY				S	Sn	23 13 17.0	-2.2
HCY				eSn	Sb	23 13 18.3	-2.3
HCY	Herceg Novi	1.84	167	ePn	Pn	23 12 54.8	-0.6
HCY				eSn	Sn	23 13 18.3	-0.9
BEO	Beograd	1.89	72	ePn	Pn	23 12 55.9	-0.3
BEO	Beograd	1.89	72	eP	Pn	23 12 54.3	-1.9
BEO	Beograd	1.89	72	eP	Pn	23 12 54.3	-1.9
BEO	Beograd	1.89	72	ePn	Pn	23 12 55.9	-0.3
BEY	Berane	1.97	133	⇓iPn	Pn	23 12 57.2	-0.1
BEY				i Sn	Sn	23 13 23.5	+0.9
IVA	Berane	1.97	133	⇓iPn	Pn	23 12 57.2	-0.1
IVA				i Sn	Sn	23 13 23.5	+0.9
GRUS	Gruza	2.03	99	ePn	Pn	23 12 57.8	-0.2
GRUS				eSn	Sb	23 13 25.2	-0.8
GRUS	Gruza	2.03	99	ePn	Pn	23 12 57.8	-0.2
GRUS				eSn	Sb	23 13 25.2	-0.8
MORH	Mˆ‡rˆ¡gy, Hung	2.03	14	⇓ePn	Pn	23 12 58.0	-0.2
MORH				ePb	Pg	23 13 02.9	+1.0
MORH				eSn	Sb	23 13 25.5	-0.8
MORH	Mˆ‡rˆ¡gy, Hung	2.03	14	⇓iPn	Pn	23 12 57.9	-0.2
MORH				eSn	Sn	23 13 24.9	+0.8
MORH	Mˆ‡rˆ¡gy, Hung	2.03	14	⇓iPn	Pn	23 12 57.9	-0.2
MORH				eSn	Sn	23 13 24.9	+0.8
PDG	Podgorica	2.05	152	ePn	Pn	23 12 58.8	+0.5
PDG	Podgorica	2.05	152	⇑iP	Pn	23 12 58.9	+0.6
PDG	Podgorica	2.05	152	ePn	Pn	23 12 58.0	-0.2
PDG	Podgorica	2.05	152	⇑iP	Pn	23 12 58.9	+0.6
PDG				eSn	Sn	23 13 23.7	-0.7
PDG				S	Sb	23 13 24.8	-1.8
PDG	Podgorica	2.05	152	P	Pn	23 12 58.6	+0.3
PDG	Podgorica	2.05	152	ePn	Pn	23 12 58.0	-0.3
PDG				eSn	Sn	23 13 23.7	-0.7
TTG	Podgorica	2.05	152	⇓iPn	Pn	23 12 58.1	-0.2
TTG				i Sn	Sn	23 13 25.2	+0.8
TTG	Podgorica	2.05	152	ePn	Pn	23 12 58.3	0.0
TTG				eSn	Sb	23 13 26.0	-0.6
TTG	Podgorica	2.05	152	eP	Pn	23 12 58.3	0.0
TTG				e		23 13 26.0	
TTG	Podgorica	2.05	152	eP	Pn	23 12 58.3	0.0
TTG				eS	Sb	23 13 26.0	-0.6
BUM	Brajici-Budva	2.06	160	⇓iPn	Pn	23 12 59.5	+0.9
BUM				i Sn	Sn	23 13 25.2	+0.4
BUM	Brajici-Budva	2.06	160	⇓iPn	Pn	23 12 59.5	+0.9
BUM				i Sn	Sn	23 13 25.2	+0.4
ZAG	Zagreb	2.11	319	i P	Pn	23 12 58.9	-0.3
ZAG				eSG	Sg	23 13 30.0	-0.6
ZAG	Zagreb	2.11	319	⇓iPn	Pn	23 12 58.9	-0.3
ZAG				eSn	Sn	23 13 25.6	-0.3
ZAG				eS	Sg	23 13 30.0	-0.6
ZAG	Zagreb	2.11	319	⇓iPn	Pn	23 12 58.9	-0.3
ZAG				eSn	Sn	23 13 25.6	-0.3
PTJ	Puntijarka	2.18	321	i P	Pn	23 12 59.5	-0.7
PTJ	Puntijarka	2.18	321	i P	Pn	23 12 59.5	-0.7
PVY	Plav	2.20	138	⇓iPn	Pn	23 13 00.8	+0.2
PVY				i Sn	Sn	23 13 29.3	+0.8
PVY	Plav	2.20	138	⇓iPn	Pn	23 13 00.8	+0.2
PVY				i Sn	Sn	23 13 29.3	+0.8
NVLJ	Novalja	2.23	279	⇑iPn	Pn	23 13 01.3	+0.5
NVLJ				Sn	Sn	23 13 28.5	-0.4
OZLJ	Ozalj	2.23	309	⇓iPn	Pn	23 13 00.7	-0.2
DRME	Dracevica, Mon	2.24	156	⇓iPn	Pn	23 13 02.1	+1.1
DRME				i Sn	Sn	23 13 29.8	+0.5
DRME	Dracevica, Mon	2.24	156	ePn	Pn	23 13 01.2	+0.2
DRME				eSn	Sn	23 13 28.4	-0.9
DRME	Dracevica, Mon	2.24	156	ePn	Pn	23 13 01.2	+0.2
DRME				eSn	Sn	23 13 28.4	-0.9
BOJS	Bojanci	2.29	304	i Pn	Pn	23 13 01.7	-0.1
BOJS				eSn	Sn	23 13 29.8	-0.7
	comp=Z,4µm,0.7s						
BOJS	Bojanci	2.29	304	i Pn	Pn	23 13 01.7	-0.1
BOJS				eSn	Sn	23 13 29.8	-0.7
	comp=Z,4µm,0.7s						
SVIS	Svilajnac	2.35	88	ePn	Pn	23 13 01.4	-1.0
SVIS	Svilajnac	2.35	88	ePn	Pn	23 13 01.4	-1.0
CRES	Cresnjev	2.37	313	⇓iPn	Pn	23 13 02.4	-0.4
CRES				eSn	Sn	23 13 32.4	-0.1
CRES	Cresnjev	2.37	313	⇓iPn	Pn	23 13 02.4	-0.4
CRES				eSn	Sn	23 13 32.4	-0.1
BEHE	Becsehely	2.38	340	⇓ePn	Pn	23 13 03.4	+0.5
BEHE				eSb	Sb	23 13 35.5	-0.7
BEHE	Becsehely	2.38	340	⇓iPn	Pn	23 13 03.3	+0.4
BEHE				eSn	Sn	23 13 33.0	+0.4
BEHE	Becsehely	2.38	340	⇓iPn	Pn	23 13 03.3	+0.4
BEHE				eSn	Sn	23 13 33.0	+0.4
BCI	Bajram Curri	2.43	140	i Pn	Pn	23 13 04.2	+0.6
BCI	Bajram Curri	2.43	140	i PN	Pn	23 13 04.2	+0.6
BCI				i SN	Sg	23 13 41.1	+0.1
ULC	Ulcinj	2.47	157	⇑iPn	Pn	23 13 05.0	+0.9
ULC				i Sn	Sn	23 13 35.1	+0.3
ULC	Ulcinj	2.47	157	⇑iPn	Pn	23 13 05.0	+0.9
ULC				i Sn	Sn	23 13 35.1	+0.3
SELS	Selova	2.52	113	ePn	Pn	23 13 04.2	-0.6
SELS	Selova	2.52	113	ePn	Pn	23 13 04.2	-0.6
BANR	Banloc	2.54	62	⇑iP	Pn	23 13 04.9	-0.2
BANR	Banloc	2.54	62	⇑iP	Pn	23 13 04.9	-0.2
PUK	Puka	2.62	146	i Pn	Pn	23 13 07.2	+0.9
PUK	Puka	2.62	146	i PN	Pn	23 13 07.2	+0.9
PUK				i SN	Sb	23 13 43.6	+0.4
KUBS	Kucevo	2.68	85	ePn	Pn	23 13 05.9	-1.1
KUBS	Kucevo	2.68	85	ePn	Pn	23 13 05.9	-1.1
RIY	Rijeka	2.69	295	ePn	Pn	23 13 07.8	+0.6
RIY	Rijeka	2.69	295	ePn	Pn	23 13 07.0	-0.2
RIY				eSn	Sn	23 13 40.1	-0.3
MDVR	Moldovita	2.75	77	⇑iP	Pn	23 13 07.6	-0.4
MDVR	Moldovita	2.75	77	⇑iP	Pn	23 13 07.6	-0.4
TIM	Timisoara	2.76	56	⇑iP	Pn	23 13 08.0	-0.1
TIM	Timisoara	2.76	56	⇑P	Pn	23 13 08.0	-0.1
TIM	Timisoara	2.76	56	P	Pn	23 13 08.0	-0.1
BOVS	Bovan	2.78	101	ePn	Pn	23 13 08.2	-0.2
BOVS	Bovan	2.78	101	ePn	Pn	23 13 08.2	-0.2
CEY	Cerknica	2.91	302	ePn	Pn	23 13 09.8	-0.5
CEY				eSn	Sn	23 13 45.6	-0.2
CEY	Cerknica	2.91	302	ePn	Pn	23 13 09.8	-0.5
CEY				eSn	Sn	23 13 45.6	-0.2
MSAG	Monte S. Angel	2.94	211	P	Pn	23 13 09.6	-1.1
MSAG				AML	AML		
	comp=E,9335µm,0.5s						
MSAG				AML	AML		
	comp=N,11700µm,0.6s						
MSAG				AML	AML		
	comp=E,9610µm,0.5s						
MSAG				AML	AML		
	comp=N,12100µm,0.6s						
MSAG				AML	AML		
	comp=N,12100µm,0.6s						
MSAG				AML	AML		
	comp=E,9610µm,0.5s						
MSAG				AML	AML		
	comp=E,9335µm,0.5s						
MSAG				AML	AML		
	comp=N,11700µm,0.6s						
BZS	Buzias	2.95	61	⇑iP	Pn	23 13 10.2	-0.5
BZS	Buzias	2.95	61	⇑P	Pn	23 13 10.2	-0.5
BZS	Buzias	2.95	61	P	Pn	23 13 10.2	-0.5
BZS				S	Sn	23 13 47.8	+1.2
SGRT	San Giovanni R	2.97	214	P	Pn	23 13 09.4	-1.7
SGRT				AML	AML		
	comp=E,7725µm,0.6s						
SGRT				AML	AML		
	comp=N,6415µm,1.0s						
SGRT				AML	AML		
	comp=N,6415µm,1.0s						
SGRT				AML	AML		
	comp=E,7725µm,0.6s						
LJU	Ljubljana	3.02	308	i Pn	Pn	23 13 12.1	+0.4
LJU				eSn	Sn	23 13 46.6	-1.8
LJU				i Sg	Sg	23 14 00.4	+0.6
	comp=Z,6µm,1.3s						
LJU	Ljubljana	3.02	308	ePn	Pn	23 13 11.7	0.0
LJU				eSn	Sn	23 13 47.8	-0.6
LJU				i Sg	Sg	23 14 00.4	+0.6
	comp=Z,6µm,1.3s						
LJU	Ljubljana	3.02	308	ePn	Pn	23 13 11.7	0.0
LJU				eSn	Sn	23 13 47.8	-0.6
ZAGS	Zajecar	3.12	96	ePn	Pn	23 13 12.8	-0.3
ZAGS	Zajecar	3.12	96	ePn	Pn	23 13 12.8	-0.3
CSKK	Csˆ‡kako	3.13	4	⇓ePn	Pn	23 13 13.6	+0.4
CSKK				eSn	Sb	23 13 55.1	-2.7
PHP	Peshkopia	3.14	144	P	Pn	23 13 14.4	+1.0
PHP	Peshkopia	3.14	144	P	Pn	23 13 14.4	+1.0
PHP	Peshkopia	3.14	144	P	Pn	23 13 14.4	+1.0
PHP	Peshkopia	3.14	144	P	Pn	23 13 14.4	+1.0
PHP	Peshkopia	3.14	144	i Pn	Pn	23 13 15.6	+2.2
PHP				i Sn	Sn	23 13 51.3	-0.2
PHP	Peshkopia	3.14	144	i PN	Pn	23 13 15.7	+2.2
PHP				i SN	Sn	23 13 51.3	-0.2
BARS	Barje	3.15	116	ePn	Pn	23 13 13.3	-0.2
BARS	Barje	3.15	116	ePn	Pn	23 13 13.3	-0.2
SOKA	Soboth	3.19	321	i Pn	Pn	23 13 13.9	-0.2
	comp=Z,28nm,0.2s,SNR=194						
SOKA				eSn	Sn	23 13 53.3	+0.7
	comp=Z,377nm,0.7s						
SOKA	Soboth	3.19	321	Pn	Pn	23 13 13.9	-0.2
	comp=Z,28nm,0.2s,SNR=194						
SOKA				Sn	Sn	23 13 53.3	+0.7
	comp=Z,377nm,0.7s						
BAI	Bari	3.23	194	i Pn	Pn	23 13 13.1	-1.5

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BAI  Bari            3.23 194⇑iPn  Pn   23 13 13.1 -1.5
HERR Herculane       3.26  77⇓iP   Pn   23 13 15.1 +0.2
HERR Herculane       3.26  77⇓iP   Pn   23 13 15.1 +0.2
MELA Melanico ??? S  3.27 220  P   Pn   23 13 14.3 -0.9
MELA                           AML  AML
     comp=E,11320µm,1.5s
MELA                           AML  AML
     comp=N,11425µm,1.5s
MELA                           AML  AML
     comp=E,11835µm,0.8s
MELA                           AML  AML
     comp=N,11660µm,1.5s
MELA                           AML  AML
     comp=N,11425µm,1.5s
MELA                           AML  AML
     comp=N,11660µm,1.5s
MELA                           AML  AML
     comp=E,11835µm,0.8s
MELA                           AML  AML
     comp=E,11320µm,1.5s
OBKA Obir            3.30 315 ePn  Pn   23 13 15.8 +0.2
OBKA Obir            3.30 315 ePn  Pn   23 13 15.7  0.0
     comp=E,49nm,0.3s,SNR=74
OBKA                          eSn  Sn   23 13 55.9 +0.5
     comp=E,856nm,0.7s
OBKA Obir            3.30 315  Pn  Pn   23 13 15.8 +0.2
OBKA                           Sn  Sn   23 13 55.9 +0.5
     comp=E,856nm,0.7s
DJES Djerdap         3.30  81 ePn  Pn   23 13 15.9 +0.3
DJES Djerdap         3.30  81 ePn  Pn   23 13 15.9 +0.3
FRES Fresagrandinar  3.30 228  P   Pn   23 13 15.9 +0.3
FRES                           AML  AML
     comp=E,7685µm,0.8s
FRES                           AML  AML
     comp=N,6605µm,1.4s
FRES                           AML  AML
     comp=E,7685µm,0.8s
FRES                           AML  AML
     comp=N,6605µm,1.4s
TRI  Trieste         3.31 298 ePn  Pn   23 13 15.9 +0.2
TRI  Trieste         3.31 298 eP   Pn   23 13 15.9 +0.2
TRI  Trieste         3.31 298 eP   Pn   23 13 15.9 +0.2
BUD  Budapest        3.33  13⇓ePn  Pn   23 13 15.8 -0.1
BUD                           eSb  Sg   23 14 11.1 +1.3
VOJS Vojsko          3.39 303 i Pn Pn   23 13 16.8  0.0
VOJS                          eSn  Sn   23 13 59.2 +1.6
     comp=Z,1µm,0.8s
VOJS Vojsko          3.39 303 i Pn Pn   23 13 16.8  0.0
VOJS                          eSn  Sn   23 13 59.2 +1.6
     comp=Z,1µm,0.8s
CIGN Sant'Elia a Pi  3.42 222  P   Pn   23 13 16.6 -0.6
CIGN                           AML  AML
     comp=E,2725µm,0.6s
CIGN                           AML  AML
     comp=N,3535µm,1.0s
CIGN                           AML  AML
     comp=N,3535µm,1.0s
CIGN                           AML  AML
     comp=E,2725µm,0.6s
SKO  Skopje          3.42 130 ePn  Pn   23 13 16.9 -0.3
SKO  Skopje          3.42 130  P   Pn   23 13 16.9 -0.3
SKO  Skopje          3.42 130  P   Pn   23 13 16.9 -0.3
SKO  Skopje          3.42 130⇑iPn  Pn   23 13 17.1 -0.1
SKO  Skopje          3.42 130  P   Pn   23 13 16.9 -0.3
SKO  Skopje          3.42 130  P   Pn   23 13 16.9 -0.3
FASA Fasano          3.45 188 ePn  Pn   23 13 16.3 -1.3
FASA Fasano          3.45 188 ePn  Pn   23 13 16.3 -1.3
ARSA Arzberg         3.46 331 ePn  Pn   23 13 18.0 +0.2
ARSA                          eSn  Sn   23 13 56.0 -3.2
ARSA Arzberg         3.46 331 ePn  Pn   23 13 17.9 +0.2
     comp=E,420nm,0.5s,SNR=639
ARSA Arzberg         3.46 331  Pn  Pn   23 13 18.0 +0.2
ARSA                           Sn  Sn   23 13 56.0 -3.2
AMUR Altamura        3.48 197  P   Pn   23 13 17.4 -0.7
AMUR                           AML  AML
     comp=E,4680µm,0.8s
AMUR                           AML  AML
     comp=N,2205µm,0.5s
AMUR                           AML  AML
     comp=N,2205µm,0.5s
AMUR                           AML  AML
     comp=E,4680µm,0.8s
NOCI Noci            3.51 191  P   Pn   23 13 17.3 -1.2
NOCI                           AML  AML
     comp=E,3790µm,0.7s
NOCI                           AML  AML
     comp=N,5740µm,0.8s
NOCI                           AML  AML
     comp=E,3790µm,0.7s
NOCI                           AML  AML
     comp=N,5740µm,0.8s
TRIV Trivento        3.51 226  P   Pn   23 13 18.1 -0.4
TRIV                           AML  AML
     comp=E,4620µm,1.2s
TRIV                           AML  AML
     comp=N,4715µm,1.4s
TRIV                           AML  AML
     comp=N,4715µm,1.4s
TRIV                           AML  AML
     comp=E,4620µm,1.2s
GATE Gambatesa       3.52 220  P   Pn   23 13 18.8 +0.2
GATE                           AML  AML
     comp=E,4695µm,0.7s
GATE                           AML  AML
     comp=N,5155µm,0.7s
GATE                           AML  AML
     comp=E,2745µm,1.6s
GATE                           AML  AML
     comp=N,5175µm,0.7s
GATE                           AML  AML
     comp=E,4695µm,0.7s
GATE                           AML  AML
     comp=E,2745µm,1.6s
GATE                           AML  AML
     comp=N,5175µm,0.7s
GATE                           AML  AML
     comp=N,5155µm,0.7s
SG1  Sgolgore (BA)   3.53 196 i Pn Pn   23 13 17.4 -1.3
SG1  Sgolgore (BA)   3.53 196⇑iPn  Pn   23 13 17.4 -1.3
MOCO Biccari - m.te  3.53 217  P   Pn   23 13 19.1 +0.3
MOCO                           AML  AML
     comp=E,3530µm,1.4s
MOCO                           AML  AML
     comp=N,2255µm,0.9s
MOCO                           AML  AML
     comp=E,3550µm,1.4s
MOCO                           AML  AML
     comp=N,2490µm,0.9s
MOCO                           AML  AML
     comp=E,3530µm,1.4s
MOCO                           AML  AML
     comp=N,2255µm,0.9s
MOCO                           AML  AML
     comp=N,2490µm,0.9s
MOCO                           AML  AML
     comp=E,3550µm,1.4s
ZAPS Zavoj           3.53 104 ePn  Pn   23 13 18.9 +0.2
SOP  Sopron          3.58 345⇓ePn  Pn   23 13 19.5 +0.1
SOP                           eSn  Sn   23 14 00.5 -1.6
SOP  Sopron          3.58 345  P   Pn   23 13 19.4 +0.1
SOP  Sopron          3.58 345  P   Pn   23 13 19.4 +0.1
CADS Cadrg           3.58 305 i Pn Pn   23 13 19.3 -0.1
CADS                          i Sn Sn   23 14 06.1 +3.9
     comp=Z,3µm,1.4s
CADS Cadrg           3.58 305 i Pn Pn   23 13 19.3 -0.1
CADS                          i Sn Sn   23 14 06.1 +3.9
     comp=Z,3µm,1.4s
CGL1 Ceglie Messapi  3.60 186 i Pn Pn   23 13 18.6 -1.1
CGL1 Ceglie Messapi  3.60 186⇑iPn  Pn   23 13 18.6 -1.1
PALZ Palazzo San Ge  3.61 205  P   Pn   23 13 18.6 -1.2
PALZ                           AML  AML
     comp=E,10065µm,0.9s
PALZ                           AML  AML
     comp=N,10600µm,0.9s
PALZ                           AML  AML
     comp=E,10065µm,0.9s
PALZ                           AML  AML
     comp=N,10600µm,0.9s
SGTA Sant Agata di   3.64 212  P   Pn   23 13 20.8 +0.5
SGTA                           AML  AML
     comp=E,4050µm,0.7s
SGTA                           AML  AML
     comp=N,4155µm,0.5s
SGTA                           AML  AML
     comp=E,4170µm,0.7s
SGTA                           AML  AML
     comp=N,4225µm,0.4s
SGTA                           AML  AML
     comp=E,4050µm,0.7s
SGTA                           AML  AML
     comp=N,4225µm,0.4s
SGTA                           AML  AML
     comp=N,4155µm,0.5s
SGTA                           AML  AML
     comp=E,4170µm,0.7s
MASS Massafra        3.66 190 ePn  Pn   23 13 19.7 -0.7
MASS Massafra        3.66 190 ePn  Pn   23 13 19.7 -0.7
MATE Matera          3.71 195⇑iP   Pn   23 13 19.9 -1.2
MATE Matera          3.71 195⇑iP   Pn   23 13 19.9 -1.2
MATE                           S   Sn   23 14 02.3 -3.0
VULT Monte Vulture   3.71 208  AML  AML
     comp=E,4720µm,0.8s
VULT                           AML  AML
     comp=E,4720µm,0.8s
VULT                           AML  AML
     comp=N,8245µm,1.6s
VULT                           AML  AML
     comp=N,8245µm,1.6s
SACR S. Croce Del S  3.71 221  P   Pn   23 13 20.5 -0.8
SACR                           AML  AML
     comp=E,2670µm,1.3s
SACR                           AML  AML
     comp=N,1810µm,1.3s
SACR                           AML  AML
     comp=E,2310µm,1.1s
SACR                           AML  AML
     comp=N,1915µm,1.3s
SACR                           AML  AML
     comp=E,2670µm,1.3s
SACR                           AML  AML
     comp=N,1915µm,1.3s
SACR                           AML  AML
     comp=N,1810µm,1.3s
SACR                           AML  AML
     comp=E,2310µm,1.1s
TAR1 Taranto         3.75 188 ePn  Pn   23 13 20.9 -0.8
TAR1 Taranto         3.75 188 ePn  Pn   23 13 20.9 -0.8
MIDA Miranda         3.76 227  P   Pn   23 13 21.4 -0.5
MIDA                           AML  AML
     comp=E,3025µm,1.3s
MIDA                           AML  AML
     comp=N,2655µm,0.6s
MIDA                           AML  AML
     comp=E,3025µm,1.3s
MIDA                           AML  AML
     comp=N,2655µm,0.6s
ACER Acerenza        3.76 204  P   Pn   23 13 21.3 -0.6
ACER                           AML  AML
     comp=E,9125µm,0.6s
ACER                           AML  AML
     comp=N,9045µm,0.8s
ACER                           AML  AML
     comp=E,9475µm,0.6s
ACER                           AML  AML
     comp=N,9480µm,0.8s
ACER                           AML  AML
     comp=N,9480µm,0.8s
ACER                           AML  AML
     comp=N,9045µm,0.8s
ACER                           AML  AML
     comp=E,9125µm,0.6s
ACER                           AML  AML
     comp=E,9475µm,0.6s
KRUS Krusevo         3.76 139 i Pn Pn   23 13 22.0 +0.1
RNI2 Rionero Sannit  3.77 229  P   Pn   23 13 22.2 +0.2
RNI2                           AML  AML
     comp=E,3970µm,1.0s
RNI2                           AML  AML
     comp=N,3435µm,1.6s
RNI2                           AML  AML
     comp=E,4065µm,1.0s
RNI2                           AML  AML
     comp=N,3545µm,1.5s
RNI2                           AML  AML
     comp=E,3970µm,1.0s
RNI2                           AML  AML
     comp=N,3435µm,1.6s
RNI2                           AML  AML
     comp=N,3545µm,1.5s
RNI2                           AML  AML
     comp=E,4065µm,1.0s
OHR  Ohrid           3.77 145 i Pn Pn   23 13 22.5 +0.4
CAFE Carife          3.78 213  P   Pn   23 13 21.9 -0.4
CAFE                           AML  AML
     comp=E,3550µm,1.4s
CAFE                           AML  AML
     comp=N,3200µm,0.9s
CAFE                           AML  AML
     comp=E,3575µm,1.4s
CAFE                           AML  AML
     comp=N,3165µm,0.9s
CAFE                           AML  AML
     comp=E,3575µm,1.4s
CAFE                           AML  AML
     comp=E,3550µm,1.4s
CAFE                           AML  AML
     comp=N,3165µm,0.9s
CAFE                           AML  AML
     comp=N,3200µm,0.9s
SRE  Strehaia        3.79  82⇑iP   Pn   23 13 23.3 +1.0
SRE  Strehaia        3.79  82 ⇑P   Pn   23 13 23.3 +1.0
SRE  Strehaia        3.79  82  P   Pn   23 13 23.3 +1.0
PSB1 Pescosannita    3.80 219  P   Pn   23 13 21.2 -1.3
PSB1                           AML  AML
     comp=E,2185µm,1.2s
PSB1                           AML  AML
     comp=N,2635µm,0.8s
PSB1                           AML  AML
     comp=E,2330µm,1.3s
PSB1                           AML  AML
     comp=N,2725µm,0.8s
PSB1                           AML  AML
     comp=E,2330µm,1.3s
PSB1                           AML  AML
     comp=N,2725µm,0.8s
PSB1                           AML  AML
     comp=E,2185µm,1.2s
PSB1                           AML  AML
     comp=N,2635µm,0.8s
AQU  L'Aquila        3.82 242 ePn  Pn   23 13 22.5 -0.2
AQU  L'Aquila        3.82 242 eP   Pn   23 13 22.5 -0.2
AQU  L'Aquila        3.82 242 ePn  Pn   23 13 22.0 -0.7
AQU  L'Aquila        3.82 242 eP   Pn   23 13 22.5 -0.2
AQU                           eSn  Sn   23 14 05.9 -2.3
AQU  L'Aquila        3.82 242 ePn  Pn   23 13 22.0 -0.7
AQU                           eSn  Sn   23 14 05.9 -2.3
PTRJ Pietraroja      3.82 222  P   Pn   23 13 22.2 -0.6
PTRJ                           AML  AML
     comp=E,6045µm,1.2s
PTRJ                           AML  AML
     comp=N,6535µm,0.5s
PTRJ                           AML  AML
     comp=E,6045µm,1.2s
PTRJ                           AML  AML
     comp=N,6535µm,0.5s
MYKA Terra Mystica   3.86 310 ePn  Pn   23 13 24.0 +0.7
     comp=N,19nm,0.3s,SNR=64
MYKA                           Sn  Sn   23 14 10.9 +1.7
     comp=N,162nm,0.6s
MYKA Terra Mystica   3.86 310  Pn  Pn   23 13 24.0 +0.7
     comp=N,19nm,0.3s,SNR=64
MYKA                           Sn  Sn   23 14 10.9 +1.7
     comp=N,162nm,0.6s
DEV  Deva            3.88  63⇓iP   Pn   23 13 23.1 -0.3
DEV  Deva            3.88  63 ⇓P   Pn   23 13 23.1 -0.3
DEV  Deva            3.88  63  P   Pn   23 13 23.1 -0.3
SGG  Gregorio Mates  3.88 224  P   Pn   23 13 23.6  0.0
SGG                            AML  AML
     comp=E,2445µm,0.6s
SGG                            AML  AML
     comp=N,2070µm,1.5s
SGG                            AML  AML
     comp=E,2445µm,0.6s
SGG                            AML  AML
     comp=N,2070µm,1.5s
SNAL S. Angelo Dei   3.88 212  P   Pn   23 13 22.8 -0.9
SNAL                           AML  AML
     comp=E,3395µm,0.8s
SNAL                           AML  AML
     comp=N,3985µm,1.1s
SNAL                           AML  AML
     comp=N,3985µm,1.1s
SNAL                           AML  AML
     comp=E,3395µm,0.8s
PSZ  Piszkesteto     3.92  20⇓iP   Pn   23 13 23.7 -0.4
PSZ  Piszkesteto     3.92  20⇓ePn  Pn   23 13 23.8 -0.4
PSZ                           eSn  Sn   23 14 09.2 -1.5
PSZ  Piszkesteto     3.92  20 ePn  Pn   23 13 23.7 -0.4
PSZ  Piszkesteto     3.92  20 ⇓P   Pn   23 13 23.7 -0.4
PSZ  Piszkesteto     3.92  20  P   Pn   23 13 23.7 -0.4
MRLC Muro Lucano     3.93 208  P   Pn   23 13 23.9 -0.4
MRLC                           AML  AML
     comp=E,3275µm,0.8s
MRLC                           AML  AML
     comp=N,2530µm,1.0s
MRLC                           AML  AML
     comp=E,3225µm,0.8s
MRLC                           AML  AML
     comp=N,2665µm,1.0s
MRLC                           AML  AML
     comp=N,2665µm,1.0s
MRLC                           AML  AML
     comp=E,3225µm,0.8s
MRLC                           AML  AML
     comp=E,3275µm,0.8s
MRLC                           AML  AML
     comp=N,2530µm,1.0s
CONA Conrad Observa  3.96 339 ePn  Pn   23 13 24.7  0.0
     comp=N,108nm,0.6s,SNR=305
CONA                          eSn  Sn   23 14 09.9 -1.9
     comp=N,634nm,0.6s
CONA Conrad Observa  3.96 339  Pn  Pn   23 13 24.7  0.0
     comp=N,108nm,0.6s,SNR=305
CONA                           Sn  Sn   23 14 09.9 -1.9
     comp=N,634nm,0.6s
MCRV Calabrutti - M  4.02 212  P   Pn   23 13 24.7 -0.9
MCRV                           AML  AML
     comp=E,1610µm,0.5s
MCRV                           AML  AML
     comp=N,1900µm,1.5s
MCRV                           AML  AML
     comp=N,1900µm,1.5s
MCRV                           AML  AML
     comp=E,1610µm,0.5s
MODS Modra-Piesok    4.16 354 eP   Pn   23 13 27.1 -0.3
MODS                          e         23 14 13.4
MODS                           smax smax
     comp=N,919nm,0.5s
MODS Modra-Piesok    4.16 354 ePN  Pn   23 13 27.1 -0.3
MODS                          eSN  Sn   23 14 13.4 -3.1
MODS                          eLG  Lg   23 14 19.2
MODS Modra-Piesok    4.16 354 ePn  Pn   23 13 27.1 -0.3
MODS                          eS   Sn   23 14 13.4 -3.1
VTS  Vitosha         4.17 111⇑iP   Pn   23 13 27.6 -0.1
VTS  Vitosha         4.17 111  S   Sn   23 14 01.5  -16
VTS  Vitosha         4.17 111 ePn  Pn   23 13 27.2 -0.5
VTS  Vitosha         4.17 111  P   Pn   23 13 27.6 -0.1
VTS  Vitosha         4.17 111 eP   Pn   23 13 27.2 -0.5
VTS  Vitosha         4.17 111 eP   Pn   23 13 27.2 -0.5
KBN  Korca           4.18 149  P   Pn   23 13 29.1 +1.4
KBN  Korca           4.18 149  P   Pn   23 13 29.1 +1.4
KBN  Korca           4.18 149 i Pn Pn   23 13 28.4 +0.7
KBN  Korca           4.18 149  P   Pn   23 13 29.1 +1.4
KBN  Korca           4.18 149 i PN Pn   23 13 28.4 +0.7
KBN                           i SN Sn   23 13 54.3  -23
SCTE Santa Cesarea   4.18 175  P   Pn   23 13 26.3 -1.4
SCTE                           AML  AML
     comp=E,988µm,1.1s
SCTE                           AML  AML
     comp=N,1535µm,0.9s
SCTE                           AML  AML
     comp=E,988µm,1.1s
SCTE                           AML  AML
     comp=N,1535µm,0.9s
CRAR CRAIOVA         4.20  87⇑iP   Pn   23 13 28.1 +0.2
CRAR CRAIOVA         4.20  87 ⇑P   Pn   23 13 28.1 +0.2
CRAR CRAIOVA         4.20  87  P   Pn   23 13 28.1 +0.2
DRGR                 4.21  51⇑iP   Pn   23 13 28.2 +0.1
DRGR                 4.21  51 ⇑P   Pn   23 13 28.2 +0.1
DRGR                 4.21  51  P   Pn   23 13 28.2 +0.1
SLCN Sala Consilina  4.21 205  P   Pn   23 13 27.0 -1.2
SLCN                           AML  AML
     comp=E,3415µm,0.7s
SLCN                           AML  AML
     comp=N,2385µm,1.3s
SLCN                           AML  AML
     comp=E,3475µm,0.7s
SLCN                           AML  AML
     comp=N,2440µm,1.3s
SLCN                           AML  AML
     comp=N,2385µm,1.3s
SLCN                           AML  AML
     comp=E,3415µm,0.7s
SLCN                           AML  AML
     comp=E,3475µm,0.7s
SLCN                           AML  AML
     comp=N,2440µm,1.3s
CDRU Civita di Ruta  4.23 208  P   Pn   23 13 27.3 -1.1
CDRU                           AML  AML
     comp=E,916µm,1.4s
CDRU                           AML  AML
     comp=N,885µm,1.5s
CDRU                           AML  AML
     comp=N,885µm,1.5s
CDRU                           AML  AML
     comp=E,916µm,1.4s
SCHR S. Chirico Rap  4.27 200  P   Pn   23 13 27.4 -1.6
SCHR                           AML  AML
     comp=E,1445µm,0.7s
SCHR                           AML  AML
     comp=N,1415µm,0.7s
SCHR                           AML  AML
     comp=E,1445µm,0.7s
SCHR                           AML  AML
     comp=N,1415µm,0.7s
FNA  Florina         4.29 143 ePn  Pn   23 13 29.5 +0.4
FNA  Florina         4.29 143  P   Pn   23 13 29.8 +0.7
FNA  Florina         4.29 143 eP   Pn   23 13 29.5 +0.4
FNA  Florina         4.29 143 eP   Pn   23 13 29.5 +0.4
SMOL Smolenice       4.29 355 eP   Pn   23 13 29.0 -0.1
SMOL                          e         23 14 17.2
SMOL Smolenice       4.29 355 ePN  Pn   23 13 29.0 -0.1
SMOL                          eSN  Sn   23 14 17.2 -2.5
SMOL Smolenice       4.29 355 ePn  Pn   23 13 29.0 -0.1
SMOL                          eS   Sn   23 14 17.2 -2.5
MTSN Montesano sull  4.29 203  P   Pn   23 13 28.1 -1.2
MTSN                           AML  AML
     comp=E,1615µm,0.6s
MTSN                           AML  AML
     comp=N,1560µm,0.9s
MTSN                           AML  AML
     comp=E,1615µm,0.6s
MTSN                           AML  AML
     comp=N,1560µm,0.9s
KBA  Koelnbreinsper  4.30 313 ePn  Pn   23 13 30.3 +0.8
KBA                           eSn  Sn   23 14 17.8 -2.3
KBA  Koelnbreinsper  4.30 313 ePn  Pn   23 13 30.1 +0.7
     comp=N,26nm,0.3s,SNR=107
KBA                           eSn  Sn   23 14 18.6 -1.6
     comp=N,109nm,0.3s
KBA  Koelnbreinsper  4.30 313  P   Pn   23 13 30.2 +0.8
KBA                            SN  Sn   23 14 17.8 -2.3
KBA  Koelnbreinsper  4.30 313  P   Pn   23 13 30.2 +0.8
KBA                            Sn  Sn   23 14 17.8 -2.3
VYHS Vyhne           4.30   8 eP   Pn   23 13 29.5 +0.2
VYHS                          e         23 14 18.6
VYHS                           smax smax
     comp=N,879nm,0.6s
VYHS Vyhne           4.30   8 ePN  Pn   23 13 29.5 +0.2
VYHS                          eSN  Sn   23 14 18.6 -1.3
VYHS                          eLG  Lg   23 14 21.9
VYHS Vyhne           4.30   8 ePn  Pn   23 13 29.5 +0.2
VYHS                          eS   Sn   23 14 18.6 -1.3
LOT  Lotru           4.31  72⇓iP   Pn   23 13 30.8 +1.2
LOT  Lotru           4.31  72⇓iP   Pn   23 13 30.8 +1.2
SIRI Monte Sirino -  4.34 202  P   Pn   23 13 28.6 -1.4
SIRI                           AML  AML
     comp=E,2245µm,0.3s
SIRI                           AML  AML
     comp=N,1520µm,0.4s
SIRI                           AML  AML
     comp=E,2335µm,0.4s
SIRI                           AML  AML
     comp=N,1560µm,0.4s
SIRI                           AML  AML
     comp=E,2245µm,0.3s
SIRI                           AML  AML
     comp=E,2335µm,0.4s
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SIRI				AML	AML		
	comp=N,1560µm,0.4s						
SIRI				AML	AML		
	comp=N,1520µm,0.4s						
MOA	**Molln**	**4.43**	**326**	*e*Pn	**Pn**	**23 13 32.0**	**+1.0**
MOA				*e*Sn	**Sn**	**23 14 21.5**	**-1.6**
MOA	**Molln**	**4.43**	**326**	*i* Pn	**Pn**	**23 13 31.8**	**+0.7**
	comp=N,67nm,0.4s,SNR=234						
MOA				*e*Sn	**Sn**	**23 14 22.2**	**-0.9**
	comp=N,469nm,0.6s						
MOA	**Molln**	**4.43**	**326**	Pn	**Pn**	**23 13 32.0**	**+1.0**
MOA				Sn	**Sn**	**23 14 21.5**	**-1.6**
NEST	**Nestorio**	**4.46**	**148**	P	**Pn**	**23 13 32.3**	**+0.7**
NEST	**Nestorio**	**4.46**	**148**	P	**Pn**	**23 13 32.3**	**+0.7**
MGR	**Morigerati**	**4.47**	**204**	P	**Pn**	**23 13 30.6**	**-1.0**
MGR				AML	AML		
	comp=E,1070µm,0.6s						
MGR				AML	AML		
	comp=N,1155µm,0.6s						
MGR				AML	AML		
	comp=N,1155µm,0.6s						
MGR				AML	AML		
	comp=E,1070µm,0.6s						
VAY	**Valandovo**	**4.48**	**129**	*e*Pn	**Pn**	**23 13 31.6**	**-0.2**
VAY	**Valandovo**	**4.48**	**129**	P	**Pn**	**23 13 31.6**	**-0.2**
VAY	**Valandovo**	**4.48**	**129**	P	**Pn**	**23 13 31.6**	**-0.2**
VAY	**Valandovo**	**4.48**	**129**	*i* Pn	**Pn**	**23 13 31.9**	**+0.1**
VAY	**Valandovo**	**4.48**	**129**	P	**Pn**	**23 13 31.6**	**-0.2**
VAY	**Valandovo**	**4.48**	**129**	*e*Pn	**Pn**	**23 13 31.6**	**-0.2**
SALB	**San Lorenzo Be**	**4.52**	**196**	P	**Pn**	**23 13 31.4**	**-1.1**
SALB				AML	AML		
	comp=E,1422µm,0.8s						
SALB				AML	AML		
	comp=N,1189µm,1.0s						
SALB				AML	AML		
	comp=E,1520µm,0.8s						
SALB				AML	AML		
	comp=N,1260µm,1.0s						
SALB				AML	AML		
	comp=N,1189µm,1.0s						
SALB				AML	AML		
	comp=N,1260µm,1.0s						
SALB				AML	AML		
	comp=E,1520µm,0.8s						
SALB				AML	AML		
	comp=E,1422µm,0.8s						
CUC	**Castrocucco**	**4.53**	**201**	*e*Pn	**Pn**	**23 13 31.5**	**-1.0**
CUC	**Castrocucco**	**4.53**	**201**	*e*Pn	**Pn**	**23 13 31.5**	**-1.0**
CUC	**Castrocucco**	**4.53**	**201**	P	**Pn**	**23 13 31.6**	**-1.0**
CUC				AML	AML		
	comp=E,1495µm,0.6s						
CUC				AML	AML		
	comp=N,1665µm,0.6s						
CUC				AML	AML		
	comp=E,1495µm,0.6s						
CUC				AML	AML		
	comp=N,1665µm,0.6s						
ABTA	**Abfaltersbach**	**4.57**	**305**	*i* Pn	**Pn**	**23 13 34.2**	**+1.1**
	comp=N,47nm,0.3s,SNR=112						
ABTA				*e*Sn	**Sn**	**23 14 27.0**	**+0.3**
	comp=N,199nm,0.7s						
ABTA	**Abfaltersbach**	**4.57**	**305**	Pn	**Pn**	**23 13 34.2**	**+1.1**
	comp=N,47nm,0.3s,SNR=112						
ABTA				Sn	**Sn**	**23 14 27.0**	**+0.3**
	comp=N,199nm,0.7s						
BULG	**Bulgheria - Ca**	**4.58**	**206**	P	**Pn**	**23 13 32.3**	**-0.9**
BULG				AML	AML		
	comp=E,1365µm,0.9s						
BULG				AML	AML		
	comp=N,2175µm,0.7s						
BULG				AML	AML		
	comp=E,1400µm,0.9s						
BULG				AML	AML		
	comp=N,2260µm,0.7s						
BULG				AML	AML		
	comp=N,2260µm,0.7s						
BULG				AML	AML		
	comp=N,2175µm,0.7s						
BULG				AML	AML		
	comp=E,1365µm,0.9s						
BULG				AML	AML		
	comp=E,1400µm,0.9s						
KECS	**Kecovo**	**4.59**	**22**	*e*P	**Pn**	**23 13 33.7**	**+0.4**
KECS	**Kecovo**	**4.59**	**22**	*e*PN	**Pn**	**23 13 33.7**	**+0.4**
KECS	**Kecovo**	**4.59**	**22**	*e*Pn	**Pn**	**23 13 33.7**	**+0.4**
SRN	**Sarande**	**4.62**	**160**	P	**Pn**	**23 13 33.1**	**-0.6**
SRN	**Sarande**	**4.62**	**160**	P	**Pn**	**23 13 33.1**	**-0.6**
SRN	**Sarande**	**4.62**	**160**	*i* Pn	**Pn**	**23 13 30.1**	**-3.5**
SRN	**Sarande**	**4.62**	**160**	P	**Pn**	**23 13 33.1**	**-0.6**
SRN	**Sarande**	**4.62**	**160**	*i* PN	**Pn**	**23 13 30.1**	**-3.5**
SRN				*i* SN	Sn	23 14 07.3	-20
JAVC	**Velka Javorina**	**4.62**	**358**	*e*Pn	**Pn**	**23 13 34.0**	**+0.2**
JAVC	**Velka Javorina**	**4.62**	**358**	*e*PN	**Pn**	**23 13 34.0**	**+0.2**
GRG	**Griva**	**4.64**	**133**	P	**Pn**	**23 13 33.6**	**-0.5**
GRG	**Griva**	**4.64**	**133**	P	**Pn**	**23 13 33.6**	**-0.5**
GRG	**Griva**	**4.64**	**133**	P	**Pn**	**23 13 33.6**	**-0.5**
GRG	**Griva**	**4.64**	**133**	P	**Pn**	**23 13 33.6**	**-0.5**
CJR	**Cluj-Napoca**	**4.68**	**56**	⇓*i*P	**Pn**	**23 13 34.6**	**+0.1**
CJR	**Cluj-Napoca**	**4.68**	**56**	⇓P	**Pn**	**23 13 34.6**	**+0.1**
CJR	**Cluj-Napoca**	**4.68**	**56**	P	**Pn**	**23 13 34.6**	**+0.1**
KEK	**Kerkira**	**4.73**	**162**	P	**Pn**	**23 13 34.3**	**-0.9**
KEK	**Kerkira**	**4.73**	**162**	P	**Pn**	**23 13 34.3**	**-0.9**
KEK	**Kerkira**	**4.73**	**162**	P	**Pn**	**23 13 34.3**	**-0.9**
KEK	**Kerkira**	**4.73**	**162**	P	**Pn**	**23 13 33.9**	**-1.3**
KEK				AML	AML		
	comp=E,440µm,0.8s						
KEK				AML	AML		
	comp=N,271µm,1.2s						
KEK				AML	AML		
	comp=N,271µm,1.2s						
KEK				AML	AML		
	comp=E,440µm,0.8s						
KNT	**Kendrikon**	**4.77**	**128**	P	**Pn**	**23 13 35.1**	**-0.7**
KNT	**Kendrikon**	**4.77**	**128**	P	**Pn**	**23 13 35.1**	**-0.7**
KNT	**Kendrikon**	**4.77**	**128**	P	**Pn**	**23 13 35.1**	**-0.7**
KNT	**Kendrikon**	**4.77**	**128**	P	**Pn**	**23 13 35.1**	**-0.7**
KZN	**Kozani**	**4.85**	**143**	P	**Pn**	**23 13 37.4**	**+0.5**
KZN	**Kozani**	**4.85**	**143**	P	**Pn**	**23 13 37.4**	**+0.5**
KZN	**Kozani**	**4.85**	**143**	P	**Pn**	**23 13 37.4**	**+0.5**
KZN	**Kozani**	**4.85**	**143**	P	**Pn**	**23 13 37.4**	**+0.5**
ARR	**Arges**	**4.89**	**74**	⇑*i*P	**Pn**	**23 13 39.5**	**+2.1**
ARR	**Arges**	**4.89**	**74**	⇑*i*P	**Pn**	**23 13 39.5**	**+2.1**
SGD	**Sagiada**	**4.93**	**159**	P	**Pn**	**23 13 37.7**	**-0.2**
SGD	**Sagiada**	**4.93**	**159**	P	**Pn**	**23 13 37.7**	**-0.2**
CET2	**Cetraro**	**4.94**	**198**	P	**Pn**	**23 13 37.9**	**-0.2**
KRUC	**Moravsky**	**4.94**	**348**	*e*Pn	**Pn**	**23 13 37.3**	**-0.8**
KRUC				*e*Sn	**Sn**	**23 14 33.1**	**-2.6**
KRUC	**Moravsky**	**4.94**	**348**	*e*PN	**Pn**	**23 13 37.3**	**-0.8**
KRUC				*e*SN	**Sn**	**23 14 33.1**	**-2.6**
KPRO	**Kipourio**	**4.98**	**148**	P	**Pn**	**23 13 39.1**	**+0.4**
KPRO	**Kipourio**	**4.98**	**148**	P	**Pn**	**23 13 39.1**	**+0.4**
LANS	**Liptovska Anna**	**5.02**	**11**	*e*P	**Pn**	**23 13 40.2**	**+1.0**
LANS	**Liptovska Anna**	**5.02**	**11**	*e*PN	**Pn**	**23 13 40.2**	**+1.0**
LANS	**Liptovska Anna**	**5.02**	**11**	*e*Pn	**Pn**	**23 13 40.2**	**+1.0**
IGT	**Igoumenitsa**	**5.03**	**158**	P	**Pn**	**23 13 38.5**	**-0.8**
IGT	**Igoumenitsa**	**5.03**	**158**	P	**Pn**	**23 13 38.5**	**-0.8**
IGT	**Igoumenitsa**	**5.03**	**158**	P	**Pn**	**23 13 38.5**	**-0.8**
IGT	**Igoumenitsa**	**5.03**	**158**	P	**Pn**	**23 13 38.5**	**-0.8**
HUMR	**Humele**	**5.05**	**84**	⇑*i*P	**Pn**	**23 13 39.7**	**+0.1**
HUMR	**Humele**	**5.05**	**84**	⇑*i*P	**Pn**	**23 13 39.7**	**+0.1**
GOLR		**5.05**	**81**	⇑*i*P	**Pn**	**23 13 39.8**	**+0.2**
GOLR		**5.05**	**81**	⇑*i*P	**Pn**	**23 13 39.8**	**+0.2**
JAN	**Janina**	**5.07**	**154**	P	**Pn**	**23 13 40.2**	**+0.3**
JAN	**Janina**	**5.07**	**154**	P	**Pn**	**23 13 40.2**	**+0.3**
JAN	**Janina**	**5.07**	**154**	P	**Pn**	**23 13 40.2**	**+0.3**
JAN	**Janina**	**5.07**	**154**	P	**Pn**	**23 13 40.2**	**+0.3**
TIP	**Timpagrande**	**5.14**	**190**	⇑*i*P	**Pn**	**23 13 40.4**	**-0.5**
TIP	**Timpagrande**	**5.14**	**190**	*e*Pn	**Pn**	**23 13 39.9**	**-1.0**
TIP	**Timpagrande**	**5.14**	**190**	P	**Pn**	**23 13 40.6**	**-0.3**
TIP	**Timpagrande**	**5.14**	**190**	*e*Pn	**Pn**	**23 13 39.9**	**-1.0**
TIP	**Timpagrande**	**5.14**	**190**	P	**Pn**	**23 13 40.6**	**-0.3**
TIP	**Timpagrande**	**5.14**	**190**	P	**Pn**	**23 13 39.4**	**-1.4**
TIP				AML	AML		
	comp=E,858µm,1.1s						
TIP				AML	AML		
	comp=N,884µm,1.1s						
TIP				AML	AML		
	comp=E,858µm,1.1s						
TIP				AML	AML		
	comp=N,884µm,1.1s						
CAR1	**CAROLEI**	**5.15**	**195**	P	**Pn**	**23 13 40.7**	**-0.4**
CAR1				AML	AML		
	comp=E,1525µm,0.7s						
CAR1				AML	AML		
	comp=N,1965µm,0.7s						
CAR1				AML	AML		
	comp=N,1965µm,0.7s						
CAR1				AML	AML		
	comp=E,1525µm,0.7s						
VRAC	**Vranov**	**5.15**	**350**	Pn	**Pn**	**23 13 40.3**	**-0.7**
	comp=E,6.1nm,0.3s,baz=186,slow=13,SNR=45						
VRAC				Sn	**Sn**	**23 14 39.5**	**-1.5**
	comp=E,52nm,0.3s,baz=210,slow=12,SNR=9.8						
VRAC	**Vranov**	**5.15**	**350**	⇓*i*P	**Pn**	**23 13 40.3**	**-0.7**
VRAC	**Vranov**	**5.15**	**350**	*e*PN	**Pn**	**23 13 40.3**	**-0.7**
VRAC				*e*SN	**Sn**	**23 14 40.0**	**-1.0**
BMR	**Baia Mare**	**5.17**	**46**	⇓*i*P	**Pn**	**23 13 42.7**	**+1.5**
BMR	**Baia Mare**	**5.17**	**46**	⇓P	**Pn**	**23 13 42.7**	**+1.5**
BMR	**Baia Mare**	**5.17**	**46**	P	**Pn**	**23 13 42.7**	**+1.5**
THE	**Thessaloniki**	**5.18**	**132**	P	**Pn**	**23 13 41.2**	**-0.1**
THE	**Thessaloniki**	**5.18**	**132**	P	**Pn**	**23 13 41.2**	**-0.1**
THE	**Thessaloniki**	**5.18**	**132**	P	**Pn**	**23 13 41.2**	**-0.1**
VOIR		**5.19**	**74**	⇑*i*P	**Pn**	**23 13 43.6**	**+2.0**
VOIR		**5.19**	**74**	⇑P	**Pn**	**23 13 43.6**	**+2.0**
VOIR		**5.19**	**74**	P	**Pn**	**23 13 43.6**	**+2.0**
SRS	**Serrai**	**5.20**	**125**	P	**Pn**	**23 13 41.1**	**-0.6**
SRS	**Serrai**	**5.20**	**125**	P	**Pn**	**23 13 41.1**	**-0.6**
SRS	**Serrai**	**5.20**	**125**	P	**Pn**	**23 13 41.1**	**-0.6**
NVR	**Nevrokopi**	**5.22**	**122**	P	**Pn**	**23 13 42.3**	**+0.3**
NVR	**Nevrokopi**	**5.22**	**122**	P	**Pn**	**23 13 42.3**	**+0.3**
NVR	**Nevrokopi**	**5.22**	**122**	P	**Pn**	**23 13 42.3**	**+0.3**
CRVS	**Cervenica-Dubn**	**5.25**	**26**	*e*P	**Pn**	**23 13 42.8**	**+0.4**
CRVS	**Cervenica-Dubn**	**5.25**	**26**	*e*PN	**Pn**	**23 13 42.8**	**+0.4**
CRVS	**Cervenica-Dubn**	**5.25**	**26**	*e*Pn	**Pn**	**23 13 42.8**	**+0.4**
SOH	**Sokhos**	**5.26**	**129**	P	**Pn**	**23 13 42.5**	**0.0**
SOH	**Sokhos**	**5.26**	**129**	P	**Pn**	**23 13 42.5**	**0.0**
SOH	**Sokhos**	**5.26**	**129**	P	**Pn**	**23 13 42.5**	**0.0**
SOH	**Sokhos**	**5.26**	**129**	P	**Pn**	**23 13 42.5**	**0.0**
HORT	**Hortiatis**	**5.27**	**132**	P	**Pn**	**23 13 42.5**	**-0.2**
HORT	**Hortiatis**	**5.27**	**132**	P	**Pn**	**23 13 42.5**	**-0.2**
HORT	**Hortiatis**	**5.27**	**132**	P	**Pn**	**23 13 42.5**	**-0.2**
SERS	**Sersale**	**5.29**	**191**	P	**Pn**	**23 13 42.2**	**-0.8**
SERS				AML	AML		
	comp=E,580µm,0.8s						
SERS				AML	AML		
	comp=N,716µm,0.9s						
SERS				AML	AML		
	comp=E,692µm,0.9s						
SERS				AML	AML		
	comp=N,620µm,0.8s						
SERS				AML	AML		
	comp=N,620µm,0.8s						
SERS				AML	AML		
	comp=E,580µm,0.8s						
SERS				AML	AML		
	comp=E,692µm,0.9s						
SERS				AML	AML		
	comp=N,716µm,0.9s						
ARCR	**ARCALIA**	**5.31**	**55**	⇑*i*P	**Pn**	**23 13 43.2**	**0.0**
ARCR	**ARCALIA**	**5.31**	**55**	⇑*i*P	**Pn**	**23 13 43.2**	**0.0**
UZH	**Uzhgorod**	**5.32**	**33**	⇓*i*P	**Pn**	**23 13 43.6**	**+0.4**
UZH				*e*S	**Sn**	**23 14 45.8**	**+0.8**
UZH				MLR	MLR		
	comp=N,600nm,9.0s						
UZH				MLR	MLR		
	comp=Z,300nm,9.0s						
UZH	**Uzhgorod**	**5.32**	**33**	*i* P	**Pn**	**23 13 43.6**	**+0.4**
UZH				*e*S	**Sn**	**23 14 45.8**	**+0.8**
LIT	**Litokhoron**	**5.34**	**139**	*e*Pn	**Pn**	**23 13 43.9**	**+0.3**
LIT	**Litokhoron**	**5.34**	**139**	P	**Pn**	**23 13 43.7**	**+0.1**
LIT	**Litokhoron**	**5.34**	**139**	*e*P	**Pn**	**23 13 43.9**	**+0.3**
LIT	**Litokhoron**	**5.34**	**139**	*e*P	**Pn**	**23 13 43.9**	**+0.3**
WTTA	**Wattenberg**	**5.35**	**307**	*e*Pn	**Pn**	**23 13 45.7**	**+1.8**
WTTA	**Wattenberg**	**5.35**	**307**	*i* Pn	**Pn**	**23 13 45.5**	**+1.6**
	comp=Z,9.1nm,0.2s,SNR=58						
WTTA				Sn	**Sn**	**23 14 46.0**	**-0.1**
	comp=Z,84nm,0.4s						
WTTA	**Wattenberg**	**5.35**	**307**	Pn	**Pn**	**23 13 45.7**	**+1.8**
WTTA				Sn	**Sn**	**23 14 46.0**	**-0.1**
	comp=Z,84nm,0.4s						
ZIMR		**5.39**	**94**	⇓*i*P	**Pn**	**23 13 43.7**	**-0.5**
ZIMR		**5.39**	**94**	⇓P	**Pn**	**23 13 43.7**	**-0.5**
ZIMR		**5.39**	**94**	P	**Pn**	**23 13 43.7**	**-0.5**
NIE	**Niedzica**	**5.42**	**16**	*e*P	**Pn**	**23 13 46.3**	**+1.6**
NIE	**Niedzica**	**5.42**	**16**	*e*P	**Pn**	**23 13 46.3**	**+1.6**
NIE	**Niedzica**	**5.42**	**16**	*e*P	**Pn**	**23 13 46.3**	**+1.6**
WATA	**Walderalm**	**5.42**	**307**	*e*Pn	**Pn**	**23 13 46.9**	**+2.0**
	comp=Z,19nm,0.2s,SNR=118						
WATA				Sn	**Sn**	**23 14 49.0**	**+1.1**
	comp=Z,78nm,0.5s						
WATA	**Walderalm**	**5.42**	**307**	Pn	**Pn**	**23 13 46.9**	**+2.0**
	comp=Z,19nm,0.2s,SNR=118						
WATA				Sn	**Sn**	**23 14 49.0**	**+1.1**
	comp=Z,78nm,0.5s						
VLC	**Villacollemand**	**5.44**	**272**	*e*Pn	**Pn**	**23 13 45.9**	**+0.9**
VLC	**Villacollemand**	**5.44**	**272**	*e*Pn	**Pn**	**23 13 45.9**	**+0.9**
GEA0	**GERESS Array S**	**5.45**	**329**	*e*Pn	**Pn**	**23 13 45.2**	**+0.1**
GEA0	**GERESS Array S**	**5.45**	**329**	*e*Pn	**Pn**	**23 13 45.2**	**+0.1**
GEC2	**GERESS Array S**	**5.46**	**329**	*e*Pn	**Pn**	**23 13 45.6**	**+0.4**
GEC2	**GERESS Array S**	**5.46**	**329**	*e*Pn	**Pn**	**23 13 45.7**	**+0.4**
GEC2	**GERESS Array S**	**5.46**	**329**	*e*P	**Pn**	**23 13 45.7**	**+0.4**
GEC2	**GERESS Array S**	**5.46**	**329**	Pn	**Pn**	**23 13 45.6**	**+0.4**
GERES	**GERESS Array B**	**5.46**	**329**	Pn	**Pn**	**23 13 45.5**	**+0.2**
	comp=Z,17nm,0.3s,baz=151,slow=14,SNR=310						
GERES				Sn	**Sn**	**23 14 45.5**	**-3.1**
	comp=Z,25nm,0.3s,baz=142,slow=22,SNR=5.3						
GERES				Lg	Lg	23 15 16.8	
	comp=Z,4.7nm,0.3s,baz=144,slow=27,SNR=2.9						
DOPR	**Dopca**	**5.54**	**69**	⇓*i*P	**Pn**	**23 13 47.5**	**+1.1**
MORC	**Moravsky Berou**	**5.54**	**357**	⇓*i*P	**Pn**	**23 13 46.6**	**+0.2**
MORC	**Moravsky Berou**	**5.54**	**357**	*e*Pn	**Pn**	**23 13 46.6**	**+0.2**
MORC	**Moravsky Berou**	**5.54**	**357**	⇓P	**Pn**	**23 13 46.6**	**+0.2**
MORC	**Moravsky Berou**	**5.54**	**357**	P	**Pn**	**23 13 46.6**	**+0.2**
MORC	**Moravsky Berou**	**5.54**	**357**	*e*PN	**Pn**	**23 13 46.5**	**+0.2**
MORC				*e*SN	**Sn**	**23 14 48.5**	**-2.2**
THL	**Klokotos Trika**	**5.57**	**146**	P	**Pn**	**23 13 46.5**	**-0.2**
OKC	**Ostrava-Krasne**	**5.60**	**1**	*e*PN	**Pn**	**23 13 47.7**	**+0.6**
OKC				*e*SN	**Sn**	**23 14 50.2**	**-1.8**
OKC				AMS	AMS	23 16 40.0	
	comp=Z,2µm,10.2s						
OKC	**Ostrava-Krasne**	**5.60**	**1**	*e*P	**Pn**	**23 13 47.7**	**+0.6**
OKC				*e*		23 14 50.2	
OKC				MLR	MLR		
	comp=Z,2µm,10.2s						
OKC	**Ostrava-Krasne**	**5.60**	**1**	Pn	**Pn**	**23 13 47.7**	**+0.6**
OKC				Sn	**Sn**	**23 14 50.2**	**-1.8**
PLG	**Polygyros**	**5.62**	**132**	P	**Pn**	**23 13 47.5**	**+0.1**
PLG	**Polygyros**	**5.62**	**132**	P	**Pn**	**23 13 47.5**	**+0.1**
PLG	**Polygyros**	**5.62**	**132**	P	**Pn**	**23 13 47.5**	**+0.1**
DSL	**Palaion Diasel**	**5.62**	**154**	P	**Pn**	**23 13 47.1**	**-0.4**
DSL	**Palaion Diasel**	**5.62**	**154**	P	**Pn**	**23 13 47.1**	**-0.4**
DSL	**Palaion Diasel**	**5.62**	**154**	P	**Pn**	**23 13 47.1**	**-0.4**
LRSO	**Larissa Observ**	**5.64**	**143**	P	**Pn**	**23 13 48.0**	**+0.3**
MOTA	**Moosalm**	**5.70**	**305**	*i* Pn	**Pn**	**23 13 50.1**	**+1.4**
	comp=Z,56nm,0.4s,SNR=463						
MOTA	**Moosalm**	**5.70**	**305**	Pn	**Pn**	**23 13 50.1**	**+1.4**
	comp=Z,56nm,0.4s,SNR=463						
KHC	**Kasperske Hory**	**5.74**	**330**	*e*PN	**Pn**	**23 13 49.4**	**+0.3**
KHC				*e*SN	**Sn**	**23 14 54.3**	**-1.2**
KHC				AMS	AMS	23 16 00.0	
	comp=Z,2µm,8.6s						
KHC	**Kasperske Hory**	**5.74**	**330**	*e*Pn	**Pn**	**23 13 48.9**	**-0.2**
KHC	**Kasperske Hory**	**5.74**	**330**	*e*P	**Pn**	**23 13 49.4**	**+0.3**
KHC				*e*		23 14 54.3	
KHC				MLR	MLR		
	comp=Z,2µm,8.6s						
KHC	**Kasperske Hory**	**5.74**	**330**	*e*Pn	**Pn**	**23 13 48.9**	**-0.2**
KHC				Sn	**Sn**	**23 14 54.3**	**-1.2**
SGRR	**Singureni**	**5.77**	**87**	⇑*i*P	**Pn**	**23 13 50.0**	**+0.6**
FETA	**Feichten**	**5.78**	**301**	*e*Pn	**Pn**	**23 13 50.8**	**+1.1**
	comp=Z,52nm,0.6s,SNR=51						
FETA				Sn	**Sn**	**23 14 56.6**	**+0.1**
	comp=Z,142nm,0.7s						
FETA	**Feichten**	**5.78**	**301**	Pn	**Pn**	**23 13 50.8**	**+1.1**
	comp=Z,52nm,0.6s,SNR=51						
FETA				Sn	**Sn**	**23 14 56.6**	**+0.1**
	comp=Z,142nm,0.7s						
LKD2	**Lefkada island**	**5.81**	**159**	P	**Pn**	**23 13 48.4**	**-1.7**
LKD2	**Lefkada island**	**5.81**	**159**	P	**Pn**	**23 13 48.4**	**-1.7**
LKD2	**Lefkada island**	**5.81**	**159**	P	**Pn**	**23 13 48.4**	**-1.7**
MLR	**Muntele Rosu**	**5.82**	**75**	Pn	**Pn**	**23 13 51.6**	**+1.3**
	comp=Z,1.8nm,0.3s,baz=253,slow=5.8,SNR=23						
MLR				Sn	**Sn**	**23 14 57.5**	**-0.1**
	comp=Z,4.1nm,0.3s,baz=129,slow=21,SNR=1.9						
MLR				Lg	Lg	23 15 32.3	
	comp=Z,4.2nm,0.3s,baz=256,slow=17,SNR=3.2						
MLR				LR	LR	23 16 17.1	
	comp=Z,1µm,20.1s,baz=272,slow=40						
MLR	**Muntele Rosu**	**5.82**	**75**	⇑*i*P	**Pn**	**23 13 52.0**	**+1.7**
MLR	**Muntele Rosu**	**5.82**	**75**	*e*Pn	**Pn**	**23 13 52.0**	**+1.7**
MLR				Sn	**Sn**	**23 14 57.5**	**-0.1**
MLR	**Muntele Rosu**	**5.82**	**75**	⇑P	**Pn**	**23 13 52.0**	**+1.7**
MLR	**Muntele Rosu**	**5.82**	**75**	P	**Pn**	**23 13 52.0**	**+1.7**
MLR				Sn	**Sn**	**23 14 57.5**	**-0.1**
KAVA	**Kavala**	**5.83**	**122**	P	**Pn**	**23 13 50.8**	**+0.5**
KAVA	**Kavala**	**5.83**	**122**	P	**Pn**	**23 13 50.8**	**+0.5**
KAVA	**Kavala**	**5.83**	**122**	P	**Pn**	**23 13 50.8**	**+0.5**
RAC	**Raciborz**	**5.85**	**2**	*e*P	**Pn**	**23 13 51.8**	**+1.3**
RAC				*e*		23 15 01.5	
RAC				MLR	MLR		
	comp=Z,1µm,14.6s						
RAC	**Raciborz**	**5.85**	**2**	*e*P	**Pn**	**23 13 51.8**	**+1.3**
JOSR	**Joseni**	**5.86**	**63**	⇑*i*P	**Pn**	**23 13 50.4**	**-0.4**
JOSR	**Joseni**	**5.86**	**63**	⇑*i*P	**Pn**	**23 13 50.4**	**-0.4**
KRLC	**Kraliky**	**5.89**	**353**	*e*PN	**Pn**	**23 13 51.8**	**+0.6**
KRLC	**Kraliky**	**5.89**	**353**	*e*P	**Pn**	**23 13 51.8**	**+0.6**
KRLC	**Kraliky**	**5.89**	**353**	Pn	**Pn**	**23 13 51.8**	**+0.6**
PLAC	**Placanica**	**5.90**	**192**	P	**Pn**	**23 13 50.2**	**-1.1**
FUORN	**Ofenpass-Fuorn**	**5.91**	**296**	*e*Pn	**Pn**	**23 13 52.3**	**+0.7**
FUORN	**Ofenpass-Fuorn**	**5.91**	**296**	*e*Pn	**Pn**	**23 13 52.3**	**+0.7**
OUR	**Ouranopolis**	**5.94**	**129**	P	**Pn**	**23 13 51.9**	**+0.1**
OUR	**Ouranopolis**	**5.94**	**129**	P	**Pn**	**23 13 51.9**	**+0.1**
OUR	**Ouranopolis**	**5.94**	**129**	P	**Pn**	**23 13 51.9**	**+0.1**
OUR	**Ouranopolis**	**5.94**	**129**	P	**Pn**	**23 13 51.9**	**+0.1**
SULR		**5.96**	**83**	⇓*i*P	**Pn**	**23 13 52.7**	**+0.6**
SULR		**5.96**	**83**	⇓*i*P	**Pn**	**23 13 52.7**	**+0.6**
EVGI	**Lefkada island**	**5.97**	**159**	P	**Pn**	**23 13 50.7**	**-1.6**
EVGI	**Lefkada island**	**5.97**	**159**	P	**Pn**	**23 13 50.7**	**-1.6**
RETA	**Reutte**	**5.97**	**305**	*i* Pn	**Pn**	**23 13 53.2**	**+0.8**
	comp=Z,20nm,0.5s,SNR=37						
RETA				Sn	**Sn**	**23 14 59.5**	**-1.8**
	comp=Z,136nm,0.6s						
RETA	**Reutte**	**5.97**	**305**	Pn	**Pn**	**23 13 53.2**	**+0.8**
	comp=Z,20nm,0.5s,SNR=37						
RETA				Sn	**Sn**	**23 14 59.5**	**-1.8**
	comp=Z,136nm,0.6s						
EVR	**Evrytania**	**6.06**	**150**	P	**Pn**	**23 13 54.0**	**+0.5**
EVR	**Evrytania**	**6.06**	**150**	P	**Pn**	**23 13 54.0**	**+0.5**
EVR	**Evrytania**	**6.06**	**150**	P	**Pn**	**23 13 54.0**	**+0.5**
PAIG	**Paliouri**	**6.06**	**133**	P	**Pn**	**23 13 53.4**	**-0.1**
PAIG	**Paliouri**	**6.06**	**133**	P	**Pn**	**23 13 53.4**	**-0.1**
PAIG	**Paliouri**	**6.06**	**133**	P	**Pn**	**23 13 53.4**	**-0.1**
PAIG	**Paliouri**	**6.06**	**133**	P	**Pn**	**23 13 53.4**	**-0.1**
FUR	**Furstenfeldbru**	**6.07**	**313**	*e*Pn	**Pn**	**23 13 54.1**	**+0.5**
FUR	**Furstenfeldbru**	**6.07**	**313**	Pn	**Pn**	**23 13 54.1**	**+0.5**
GOPC	**GO Pecny, Ondr**	**6.07**	**340**	*e*PN	**Pn**	**23 13 53.3**	**-0.3**
GOPC				AMS	AMS	23 16 20.0	
	comp=Z,2µm,9.1s						
GOPC	**GO Pecny, Ondr**	**6.07**	**340**	*e*P	**Pn**	**23 13 53.3**	**-0.3**
GOPC				MLR	MLR		
	comp=Z,2µm,9.1s						
GOPC	**GO Pecny, Ondr**	**6.07**	**340**	Pn	**Pn**	**23 13 53.3**	**-0.3**
BUR04	**Bucovina Ar. S**	**6.09**	**54**	*e*Pn	**Pn**	**23 13 55.5**	**+1.5**
BUR04	**Bucovina Ar. S**	**6.09**	**54**	*e*Pn	**Pn**	**23 13 55.5**	**+1.5**
BURAR	**Bucovina Array**	**6.09**	**54**	⇑*i*P	**Pn**	**23 13 55.8**	**+1.9**
BURAR	**Bucovina Array**	**6.09**	**54**	⇑P	**Pn**	**23 13 55.8**	**+1.9**
BURAR	**Bucovina Array**	**6.09**	**54**	⇑*i*P	**Pn**	**23 13 55.8**	**+1.9**
BUR08	**Bucovina Ar. S**	**6.09**	**54**	*e*Pn	**Pn**	**23 13 56.1**	**+2.1**
BUR08	**Bucovina Ar. S**	**6.09**	**54**	*e*Pn	**Pn**	**23 13 56.1**	**+2.1**
FYTO	**Fytoko, Volos**	**6.10**	**141**	P	**Pn**	**23 13 54.0**	**0.0**
FYTO	**Fytoko, Volos**	**6.10**	**141**	P	**Pn**	**23 13 54.0**	**0.0**
FYTO	**Fytoko, Volos**	**6.10**	**141**	P	**Pn**	**23 13 54.0**	**0.0**
FSK	**Fiskardo**	**6.10**	**160**	P	**Pn**	**23 13 52.0**	**-2.0**
OJC	**Ojcow**	**6.11**	**11**	*e*P	**Pn**	**23 13 55.0**	**+0.8**
OJC				*e*S	**Sn**	**23 15 04.3**	**-0.3**
OJC	**Ojcow**	**6.11**	**11**	*e*Pn	**Pn**	**23 13 54.9**	**+0.8**
OJC	**Ojcow**	**6.11**	**11**	*e*P	**Pn**	**23 13 55.0**	**+0.8**
OJC				*e*S	**Sn**	**23 15 04.3**	**-0.3**
OJC	**Ojcow**	**6.11**	**11**	*e*Pn	**Pn**	**23 13 54.9**	**+0.8**
OJC				*e*S	**Sn**	**23 15 04.3**	**-0.3**
PDO	**Prodromos**	**6.14**	**156**	P	**Pn**	**23 13 53.4**	**-1.2**
PDO	**Prodromos**	**6.14**	**156**	P	**Pn**	**23 13 53.4**	**-1.2**
AGG	**Agios Georgios**	**6.16**	**146**	*e*Pn	**Pn**	**23 13 54.7**	**-0.2**
AGG	**Agios Georgios**	**6.16**	**146**	P	**Pn**	**23 13 54.4**	**-0.5**
AGG	**Agios Georgios**	**6.16**	**146**	*e*P	**Pn**	**23 13 54.7**	**-0.2**
AGG	**Agios Georgios**	**6.16**	**146**	*e*P	**Pn**	**23 13 54.7**	**-0.2**
CEL	**Celeste**	**6.17**	**195**	*e*Pn	**Pn**	**23 13 53.5**	**-1.6**
CEL	**Celeste**	**6.17**	**195**	*e*Pn	**Pn**	**23 13 53.5**	**-1.6**
THAS	**Thassos island**	**6.19**	**124**	P	**Pn**	**23 13 54.8**	**-0.4**
THAS	**Thassos island**	**6.19**	**124**	P	**Pn**	**23 13 54.8**	**-0.4**
ISR	**Istrita**	**6.19**	**79**	⇓*i*P	**Pn**	**23 13 54.6**	**-0.7**
ISR	**Istrita**	**6.19**	**79**	⇓P	**Pn**	**23 13 54.6**	**-0.7**
ISR	**Istrita**	**6.19**	**79**	P	**Pn**	**23 13 54.6**	**-0.7**
PRU	**Pruhonice**	**6.20**	**339**	*e*PN	**Pn**	**23 13 55.3**	**-0.1**
PRU				*e*SN	**Sn**	**23 15 03.8**	**-3.0**
PRU				AMS	AMS	23 16 30.0	
	comp=Z,2µm,9.4s						
PRU	**Pruhonice**	**6.20**	**339**	*e*P	**Pn**	**23 13 55.3**	**-0.1**
PRU				*e*		23 15 03.8	
PRU				MLR	MLR		
	comp=Z,2µm,9.4s						
PRU	**Pruhonice**	**6.20**	**339**	Pn	**Pn**	**23 13 55.3**	**-0.1**
DPC	**Dobruska-Polom**	**6.21**	**350**	AMS	AMS	23 16 50.0	
	comp=Z,2µm,8.8s						
DAVOX	**Davos/Dischmat**	**6.21**	**297**	Pn	**Pn**	**23 13 56.3**	**+0.6**
	comp=Z,7.9nm,0.3s,baz=102,slow=15,SNR=65						
DAVOX				Lg	Lg	23 15 36.2	
	comp=Z,6.2nm,0.3s,baz=51,slow=13,SNR=4.8						
DAVOX				LR	LR	23 16 49.2	
	comp=Z,1µm,21.2s,baz=104,slow=43						
PVO	**Paravola**	**6.23**	**153**	P	**Pn**	**23 13 55.4**	**-0.4**
PVO	**Paravola**	**6.23**	**153**	P	**Pn**	**23 13 55.4**	**-0.4**
XOR	**Xorichti**	**6.25**	**139**	P	**Pn**	**23 13 55.6**	**-0.5**
XOR	**Xorichti**	**6.25**	**139**	P	**Pn**	**23 13 55.6**	**-0.5**
XOR	**Xorichti**	**6.25**	**139**	P	**Pn**	**23 13 55.6**	**-0.5**
KWP	**Kalwaria Pacla**	**6.30**	**29**	*e*P	**Pn**	**23 13 59.0**	**+2.2**
KWP	**Kalwaria Pacla**	**6.30**	**29**	*e*Pn	**Pn**	**23 13 58.9**	**+2.2**
KWP	**Kalwaria Pacla**	**6.30**	**29**	*e*P	**Pn**	**23 13 59.0**	**+2.2**
KWP	**Kalwaria Pacla**	**6.30**	**29**	*e*Pn	**Pn**	**23 13 58.9**	**+2.2**
NEO	**Neokhori**	**6.31**	**140**	P	**Pn**	**23 13 56.5**	**-0.5**
NEO	**Neokhori**	**6.31**	**140**	P	**Pn**	**23 13 56.5**	**-0.5**
NEO	**Neokhori**	**6.31**	**140**	P	**Pn**	**23 13 56.5**	**-0.5**
BIZ	**Bicaz**	**6.33**	**62**	⇓*i*P	**Pn**	**23 13 58.6**	**+1.5**
BIZ	**Bicaz**	**6.33**	**62**	⇓*i*P	**Pn**	**23 13 58.6**	**+1.5**
PLOR	**Plostina**	**6.37**	**72**	⇑*i*P	**Pn**	**23 13 59.0**	**+1.2**
PLOR	**Plostina**	**6.37**	**72**	⇑P	**Pn**	**23 13 59.0**	**+1.2**
PLOR	**Plostina**	**6.37**	**72**	P	**Pn**	**23 13 59.0**	**+1.2**
VLS	**Valsamata**	**6.38**	**161**	P	**Pn**	**23 13 55.7**	**-2.2**
VLS	**Valsamata**	**6.38**	**161**	P	**Pn**	**23 13 55.7**	**-2.2**
VLS	**Valsamata**	**6.38**	**161**	P	**Pn**	**23 13 55.7**	**-2.2**
VLS	**Valsamata**	**6.38**	**161**	P	**Pn**	**23 13 55.7**	**-2.2**
ANX	**Ano Chora**	**6.38**	**151**	P	**Pn**	**23 13 58.3**	**+0.3**
ANX	**Ano Chora**	**6.38**	**151**	P	**Pn**	**23 13 58.3**	**+0.3**
RDO	**Rodhopi**	**6.39**	**116**	*e*P	**Pn**	**23 13 58.6**	**+0.6**
RDO	**Rodhopi**	**6.39**	**116**	P	**Pn**	**23 13 58.2**	**+0.2**
RDO	**Rodhopi**	**6.39**	**116**	P	**Pn**	**23 13 58.2**	**+0.2**
RDO	**Rodhopi**	**6.39**	**116**	P	**Pn**	**23 13 58.2**	**+0.2**
UPC	**Upice**	**6.41**	**349**	*e*PN	**Pn**	**23 13 58.4**	**+0.2**
UPC				*e*SN	**Sn**	**23 15 09.4**	**-2.4**
UPC				AMS	AMS	23 16 20.0	
	comp=Z,2µm,12.1s						
UPC	**Upice**	**6.41**	**349**	*e*P	**Pn**	**23 13 58.4**	**+0.2**
UPC				*e*		23 15 09.4	
UPC				MLR	MLR		
	comp=Z,2µm,12.1s						
UPC	**Upice**	**6.41**	**349**	Pn	**Pn**	**23 13 58.4**	**+0.2**
DAVA	**Damuels**	**6.41**	**301**	*e*Pn	**Pn**	**23 13 59.6**	**+1.2**
DAVA	**Damuels**	**6.41**	**301**	*e*Pn	**Pn**	**23 13 59.4**	**+0.9**
	comp=Z,15nm,0.4s,SNR=20						
DAVA				Sn	**Sn**	**23 15 10.4**	**-1.8**
	comp=Z,157nm,0.6s						
DAVA	**Damuels**	**6.41**	**301**	Pn	**Pn**	**23 13 59.6**	**+1.2**
DAVA				Sn	**Sn**	**23 15 10.4**	**-1.8**
	comp=Z,157nm,0.6s						
VRI	**Vrincioaia**	**6.43**	**72**	⇓*i*P	**Pn**	**23 13 59.8**	**+1.3**
VRI	**Vrincioaia**	**6.43**	**72**	⇓P	**Pn**	**23 13 59.8**	**+1.3**
VRI	**Vrincioaia**	**6.43**	**72**	P	**Pn**	**23 13 59.8**	**+1.3**
UBR	**Ueberruh**	**6.46**	**305**	*e*Pn	**Pn**	**23 13 59.9**	**+1.0**
UBR	**Ueberruh**	**6.46**	**305**	Pn	**Pn**	**23 13 59.9**	**+1.0**
TUE	**Stuetta**	**6.46**	**293**	*e*Pn	**Pn**	**23 13 59.8**	**+0.7**
TUE	**Stuetta**	**6.46**	**293**	*e*Pn	**Pn**	**23 13 59.8**	**+0.7**
KFL	**Anninata**	**6.49**	**160**	P	**Pn**	**23 13 57.3**	**-2.1**
KFL	**Anninata**	**6.49**	**160**	P	**Pn**	**23 13 57.3**	**-2.1**
EFP	**Efpalio**	**6.53**	**152**	P	**Pn**	**23 13 59.8**	**-0.1**
EFP	**Efpalio**	**6.53**	**152**	P	**Pn**	**23 13 59.8**	**-0.1**
TESR	**Tescani**	**6.54**	**67**	⇑*i*P	**Pn**	**23 14 01.1**	**+1.1**
TESR	**Tescani**	**6.54**	**67**	⇑*i*P	**Pn**	**23 14 01.1**	**+1.1**
PRAR	**RASCA**	**6.57**	**59**	⇓*i*P	**Pn**	**23 14 04.5**	**+4.0**

GIRR	Girov	6.58	63	⇑iP	Pn	23 14 02.1	+1.4
GIRR	Girov	6.58	63	⇑iP	Pn	23 14 02.1	+1.4
SERG	Sergoula	6.59	151	P	Pn	23 14 00.5	-0.3
SERG	Sergoula	6.59	151	P	Pn	23 14 00.5	-0.3
TRIZ	Trizonia	6.64	151	P	Pn	23 14 01.1	-0.3
TRIZ	Trizonia	6.64	151	P	Pn	23 14 01.1	-0.3
KALE	Kalithea	6.64	150	P	Pn	23 14 01.0	-0.5
KALE	Kalithea	6.64	150	P	Pn	23 14 01.0	-0.5
KALE	Kalithea	6.64	150	P	Pn	23 14 01.0	-0.5
SMIA	Simia	6.65	142	P	Pn	23 14 01.0	-0.6
SMIA	Simia	6.65	142	P	Pn	23 14 01.0	-0.6
PVCC	Panska Ves	6.69	341	ePN	Pn	23 14 01.8	-0.3
PVCC				AMS	AMS	23 16 40.0	
	comp=Z,2µm,11.6s						
PVCC	Panska Ves	6.69	341	eP	Pn	23 14 01.8	-0.3
PVCC				MLR	MLR		
	comp=Z,2µm,11.6s						
PVCC	Panska Ves	6.69	341	Pn	Pn	23 14 01.8	-0.3
KSP	Ksiaz	6.70	351	eP	Pn	23 14 02.0	-0.2
KSP	Ksiaz	6.70	351	eP	Pn	23 14 02.0	-0.2
KSP	Ksiaz	6.70	351	eP	Pn	23 14 02.0	-0.2
LAKA	Lakka	6.72	152	P	Pn	23 14 02.3	-0.3
LAKA	Lakka	6.72	152	P	Pn	23 14 02.3	-0.3
LAKA	Lakka	6.72	152	P	Pn	23 14 02.3	-0.3
RLS	Riolos of Patr	6.72	156	P	Pn	23 14 01.6	-1.0
RLS	Riolos of Patr	6.72	156	P	Pn	23 14 01.6	-1.0
RLS	Riolos of Patr	6.72	156	P	Pn	23 14 01.6	-1.0
AOS	Alonnisos	6.74	137	P	Pn	23 14 01.7	-1.0
AOS	Alonnisos	6.74	137	P	Pn	23 14 01.7	-1.0
AOS	Alonnisos	6.74	137	P	Pn	23 14 01.7	-1.0
PGF	Pioggiola	6.74	259	ePn	Pn	23 14 03.1	+0.3
PGF	Pioggiola	6.74	259	ePn	Pn	23 14 03.1	+0.3
PGF	Pioggiola	6.74	259	eP	Pn	23 14 03.1	+0.3
PGF	Pioggiola	6.74	259	ePn	Pn	23 14 03.1	+0.3
ALIK	Aliki, Aigiali	6.75	151	P	Pn	23 14 03.2	+0.3
ALIK	Aliki, Aigiali	6.75	151	P	Pn	23 14 03.2	+0.3
LKR	Lokris	6.75	144	P	Pn	23 14 02.2	-0.8
LKR	Lokris	6.75	144	P	Pn	23 14 02.2	-0.8
LKR	Lokris	6.75	144	P	Pn	23 14 02.2	-0.8
SMTH	Samothraki Isl	6.76	121	P	Pn	23 14 02.8	-0.3
SMTH	Samothraki Isl	6.76	121	P	Pn	23 14 02.8	-0.3
SMTH	Samothraki Isl	6.76	121	P	Pn	23 14 02.8	-0.3
DSF	Desfina	6.77	148	P	Pn	23 14 02.2	-1.0
DSF	Desfina	6.77	148	P	Pn	23 14 02.2	-1.0
DSF	Desfina	6.77	148	P	Pn	23 14 02.2	-1.0
ALN	Alexandroupoli	6.85	116	eP	Pn	23 14 04.4	+0.2
ALN	Alexandroupoli	6.85	116	ePn	Pn	23 14 04.9	+0.6
ALN	Alexandroupoli	6.85	116	P	Pn	23 14 04.5	+0.2
ALN	Alexandroupoli	6.85	116	eP	Pn	23 14 04.9	+0.6
ALN	Alexandroupoli	6.85	116	eP	Pn	23 14 04.9	+0.6
EDRB	Edirne	6.87	107	eP	Pn	23 14 04.0	-0.6
DRO	Drossia	6.89	154	P	Pn	23 14 03.7	-1.3
DRO	Drossia	6.89	154	P	Pn	23 14 03.7	-1.3
LIA	Limnos Island	6.91	126	P	Pn	23 14 05.2	0.0
LIA	Limnos Island	6.91	126	P	Pn	23 14 05.2	0.0
LIA	Limnos Island	6.91	126	P	Pn	23 14 05.2	0.0
LVV	L’vov	6.96	35	diP	Pn	23 14 09.0	+3.3
LVV				eS	Sn	23 15 27.3	+1.9
LVV				MLR	MLR		
	comp=Z,400nm,8.0s						
KLV	Kalavryta, Ach	6.96	151	P	Pn	23 14 05.2	-0.6
KLV	Kalavryta, Ach	6.96	151	P	Pn	23 14 05.2	-0.6
KLV	Kalavryta, Ach	6.96	151	P	Pn	23 14 05.2	-0.6
ENEZ	Enez	7.00	117	eP	Pn	23 14 06.7	+0.3
PROD	Prodromos	7.04	146	P	Pn	23 14 05.7	-1.3
PROD	Prodromos	7.04	146	P	Pn	23 14 05.7	-1.3
NKC	Novy Kostel	7.07	330	ePN	Pn	23 14 07.6	+0.3
NKC	Novy Kostel	7.07	330	eP	Pn	23 14 07.6	+0.3
NKC	Novy Kostel	7.07	330	Pn	Pn	23 14 07.6	+0.3
ICOR	Ion Corvin	7.09	88	⇓iP	Pn	23 14 07.4	-0.1
ICOR	Ion Corvin	7.09	88	⇓iP	Pn	23 14 07.4	-0.1
GUR	Goura	7.12	151	P	Pn	23 14 06.5	-1.6
GUR	Goura	7.12	151	P	Pn	23 14 06.5	-1.6
GUR	Goura	7.12	151	P	Pn	23 14 06.5	-1.6
GRA1	Grafenberg Arr	7.13	322	Pn	Pn	23 14 07.7	-0.5
GRF	Grafenberg Arr	7.13	322	ePn	Pn	23 14 07.7	-0.5
GRF	Grafenberg Arr	7.13	322	P	Pn	23 14 07.6	-0.5
GRFO	Grafenberg	7.13	322	ePn	Pn	23 14 07.7	-0.5
GRFO	Grafenberg	7.13	322	eP	Pn	23 14 07.7	-0.5
GRFO	Grafenberg	7.13	322	eP	Pn	23 14 07.7	-0.5
THAL	Thalero	7.15	149	P	Pn	23 14 06.9	-1.5
THAL	Thalero	7.15	149	P	Pn	23 14 06.9	-1.5
HARR	Harsova	7.16	83	⇓iP	Pn	23 14 08.5	0.0
HARR	Harsova	7.16	83	⇓P	Pn	23 14 08.5	0.0
HARR	Harsova	7.16	83	P	Pn	23 14 08.5	0.0
BRG	Berggiesshubel	7.17	339	PG	Pn	23 14 08.2	-0.4
BRG				SG	Sb	23 15 43.7	-10
	comp=Z,211nm,1.0s comp=N,1µm,10.8s comp=E,1µm,6.7s comp=Z,1µm,10.4s						
BRG	Berggiesshubel	7.17	339	P	Pn	23 14 08.2	-0.4
BRG				MLR	MLR		
	comp=N,1µm,10.8s						
BRG				MLR	MLR		
	comp=E,1µm,6.7s						
BRG				MLR	MLR		
	comp=Z,1µm,10.4s						
BRG	Berggiesshubel	7.17	339	P	Pn	23 14 08.2	-0.4
	comp=Z,1µm,10.4s						
GUT	Gutenstein	7.23	305	P	Pn	23 14 09.7	+0.2
TLB	Topalu	7.24	84	⇑iP	Pn	23 14 09.1	-0.5
TLB	Topalu	7.24	84	⇑P	Pn	23 14 09.1	-0.5
TLB	Topalu	7.24	84	P	Pn	23 14 09.1	-0.5
CVDA	Cernavoda	7.24	86	⇑iP	Pn	23 14 09.9	+0.2
CVDA	Cernavoda	7.24	86	⇑iP	Pn	23 14 09.9	+0.2
VAE	Valguarnera	7.27	203	Pn	Pn	23 14 13.1	+3.0
	comp=Z,1.1nm,0.3s,baz=330,slow=12,SNR=5.4						
ERIK	Erikli-Kesan	7.27	116	eP	Pn	23 14 10.3	+0.3
LTK	Loutraki	7.28	147	P	Pn	23 14 08.7	-1.5
LTK	Loutraki	7.28	147	P	Pn	23 14 08.7	-1.5
LTK	Loutraki	7.28	147	P	Pn	23 14 08.7	-1.5
AMT	Artemida-Makis	7.28	156	P	Pn	23 14 09.3	-1.0
AMT	Artemida-Makis	7.28	156	P	Pn	23 14 09.3	-1.0
KESN	Edirne-Kesan	7.30	115	i P	Pn	23 14 10.5	-0.3
KESN	Edirne-Kesan	7.30	115	P	Pn	23 14 10.5	-0.3
LOUT	Loutraki	7.31	147	P	Pn	23 14 09.2	-1.4
LOUT	Loutraki	7.31	147	P	Pn	23 14 09.2	-1.4
CFR	Carcaliu	7.32	79	⇑iP	Pn	23 14 10.1	-0.6
CFR	Carcaliu	7.32	79	P	Pn	23 14 14.7	+4.0
CFR				pmax	pmax		
	comp=Z,23nm,0.7s						
CFR	Carcaliu	7.32	79	⇑iP	Pn	23 14 10.1	-0.6
GELI	Tayfur-Gelibol	7.39	118	eP	Pn	23 14 12.6	+0.8
BOZC	Bozcaada	7.46	123	eP	Pn	23 14 13.6	+0.9
BOZC	Bozcaada	7.46	123	i P	Pn	23 14 13.2	+0.5
TIRR	Tirgusor	7.51	85	⇓iP	Pn	23 14 12.7	-0.5
TIRR	Tirgusor	7.51	85	ePn	Pn	23 14 12.8	-0.5
TIRR	Tirgusor	7.51	85	eP	Pn	23 14 12.8	-0.5
TIRR	Tirgusor	7.51	85	eP	Pn	23 14 12.8	-0.5
STU	Stuttgart	7.55	310	ePn	Pn	23 14 14.2	+0.3
STU	Stuttgart	7.55	310	ePn	Pn	23 14 13.6	-0.3
STU	Stuttgart	7.55	310	eP	Pn	23 14 13.6	-0.3
STU	Stuttgart	7.55	310	eP	Pn	23 14 13.6	-0.3
CLTB	Caltabellotta	7.56	210	ePn	Pn	23 14 16.9	+2.7
CLTB	Caltabellotta	7.56	210	ePn	Pn	23 14 16.9	+2.7
SBF	Sospel	7.58	271	ePn	Pn	23 14 12.8	-1.7
SBF				eSn	Sn	23 15 18.8	-22
	comp=Z,246nm,0.8s						
SBF	Sospel	7.58	271	ePn	Pn	23 14 12.8	-1.7
SBF				eSn	Sn	23 15 18.8	-22
SBF	Sospel	7.58	271	eP	Pn	23 14 12.8	-1.7
SBF	Sospel	7.58	271	ePn	Pn	23 14 12.8	-1.7
LPK	Lapseki	7.59	118	eP	Pn	23 14 15.4	+1.0
ATH	Athens Observa	7.63	143	P	Pn	23 14 14.3	-0.7
ATH	Athens Observa	7.63	143	P	Pn	23 14 14.3	-0.7
ATH	Athens Observa	7.63	143	P	Pn	23 14 14.3	-0.7
ATH	Athens Observa	7.63	143	P	Pn	23 14 14.3	-0.7
PTL	Penteli	7.63	142	P	Pn	23 14 14.4	-0.6
PTL	Penteli	7.63	142	P	Pn	23 14 14.4	-0.6
PTL	Penteli	7.63	142	P	Pn	23 14 14.4	-0.6
VLX	Vlachokerasia	7.64	152	P	Pn	23 14 13.9	-1.4
VLX	Vlachokerasia	7.64	152	P	Pn	23 14 13.9	-1.4
VLX	Vlachokerasia	7.64	152	P	Pn	23 14 13.9	-1.4
LUCF	Luceram	7.64	271	P	Pn	23 14 14.3	-1.0
ATHU	Athens Univers	7.66	143	P	Pn	23 14 14.6	-0.9
ATHU	Athens Univers	7.66	143	P	Pn	23 14 14.6	-0.9
ATHU	Athens Univers	7.66	143	P	Pn	23 14 14.6	-0.9
ITM	Ithomi	7.67	155	ePn	Pn	23 14 14.3	-1.4
ITM	Ithomi	7.67	155	P	Pn	23 14 13.6	-2.0
ITM	Ithomi	7.67	155	P	Pn	23 14 13.6	-2.0
ITM	Ithomi	7.67	155	ePn	Pn	23 14 14.3	-1.4
RKY	Sarkoy-Tekirda	7.69	114	eP	Pn	23 14 15.9	0.0
MOX	Moxa	7.71	328	P	Pn	23 14 16.3	+0.2
MOX				pmax	pmax		
	comp=Z,78nm,0.9s						
MOX	Moxa	7.71	328	P	Pn	23 14 16.3	+0.2
	comp=Z,78nm,0.9s						
SIGR	SIGRI	7.76	128	eP	Pn	23 14 18.5	+1.7
SIGR	SIGRI	7.76	128	P	Pn	23 14 17.3	+0.5
SIGR	SIGRI	7.76	128	P	Pn	23 14 17.3	+0.5
SIGR	SIGRI	7.76	128	P	Pn	23 14 17.3	+0.5
VLY	Voula,Athens	7.76	143	P	Pn	23 14 15.1	-1.7
VLY	Voula,Athens	7.76	143	P	Pn	23 14 15.1	-1.7
VLY	Voula,Athens	7.76	143	P	Pn	23 14 15.1	-1.7
TLCR		7.80	79	⇑iP	Pn	23 14 18.5	+1.2
TLCR		7.80	79	⇑P	Pn	23 14 18.5	+1.2
TLCR		7.80	79	P	Pn	23 14 18.5	+1.2
SENIN	Lac Senin/Sane	7.80	289	ePn	Pn	23 14 18.2	+0.6
SENIN	Lac Senin/Sane	7.80	289	ePn	Pn	23 14 18.2	+0.6
CLL	Collm	7.81	337	ePn	Pn	23 14 17.0	-0.5
CLL				e		23 14 23.0	
CLL				e		23 14 27.0	
CLL				e		23 14 31.0	
CLL				ePg	Pg	23 14 48.0	-4.5
CLL				eSn	Sn	23 15 38.0	-8.4
CLL				Lmax		23 16 00.0	
CLL				e		23 16 06.0	
CLL				eSb	Sb	23 16 13.0	+0.6
CLL				eSg	Sg	23 16 30.0	-3.6
CLL				eSglp		23 16 30.0	
	comp=N,2µm,17.4s						
CLL				eSglp		23 16 30.0	
	comp=E,3µm,16.6s						
CLL				eSglp		23 16 30.0	
	comp=Z,400nm,24.6s						
CLL	Collm	7.81	337	ePn	Pn	23 14 17.1	-0.3
CLL	Collm	7.81	337	eP	Pn	23 14 17.0	-0.5
CLL	Collm	7.81	337	ePn	Pn	23 14 17.1	-0.5
BFO	Black Forest	7.81	305	ePn	Pn	23 14 17.1	-0.4
BFO	Black Forest	7.81	305	ePn	Pn	23 14 17.2	-0.4
BFO	Black Forest	7.81	305	ceP	Pn	23 14 17.3	-0.3
BFO	Black Forest	7.81	305	eP	Pn	23 14 17.3	-0.3
BAYC	CANAKKALE_Bayr	7.82	122	i P	Pn	23 14 18.8	+1.1
BAYC	CANAKKALE_Bayr	7.82	122	P	Pn	23 14 18.8	+1.1
DID	Didima	7.83	147	P	Pn	23 14 15.5	-2.3
DID	Didima	7.83	147	P	Pn	23 14 15.5	-2.3
DID	Didima	7.83	147	P	Pn	23 14 15.5	-2.3
ISO	Isola	7.83	273	P	Pn	23 14 17.1	-0.7
BEL	Belsk	7.83	13	eP	Pn	23 14 20.2	+2.5
BEL				eS	Sn	23 15 48.1	+1.3
BEL	Belsk	7.83	13	eP	Pn	23 14 20.2	+2.5
BEL				eS	Sn	23 15 48.2	+1.3
BEL	Belsk	7.83	13	eP	Pn	23 14 20.2	+2.5
BEL				eS	Sn	23 15 48.2	+1.3
PYL	PYLOS	7.88	157	P	Pn	23 14 16.1	-2.4
PYL	PYLOS	7.88	157	P	Pn	23 14 16.1	-2.4
PYL	PYLOS	7.88	157	P	Pn	23 14 16.1	-2.4
KIZ	Kirchzarten	7.90	302	P	Pn	23 14 18.5	-0.2
KRND	KRANIDI	7.90	148	P	Pn	23 14 16.4	-2.4
KRND	KRANIDI	7.90	148	P	Pn	23 14 16.4	-2.4
CALF	Calern	7.97	270	P	Pn	23 14 18.9	-0.8
PRK	Paraskevi	7.97	126	P	Pn	23 14 20.5	+0.8
PRK	Paraskevi	7.97	126	P	Pn	23 14 20.5	+0.8
PRK	Paraskevi	7.97	126	P	Pn	23 14 20.5	+0.8
OPP	Oppenau	7.98	306	P	Pn	23 14 19.5	-0.3
MBDF	Montbardon	8.01	277	ePn	Pn	23 14 17.7	-2.7
MBDF				eSn	Sn	23 15 28.8	-23
	comp=Z,203nm,0.7s						
MBDF	Montbardon	8.01	277	ePn	Pn	23 14 17.7	-2.7
MBDF				eSn	Sn	23 15 28.8	-23
MBDF	Montbardon	8.01	277	eP	Pn	23 14 17.7	-2.7
MBDF	Montbardon	8.01	277	ePn	Pn	23 14 17.7	-2.7
LPG	La Plagne	8.05	283	ePn	Pn	23 14 20.4	-0.7
LPG				eSn	Sn	23 15 29.9	-23
	comp=Z,226nm,0.7s						
LPG	La Plagne	8.05	283	ePn	Pn	23 14 20.4	-0.7
LPG				eSn	Sn	23 15 29.9	-23
LPG	La Plagne	8.05	283	eP	Pn	23 14 19.9	-1.2
LPG				pmax	pmax		
	comp=Z,80nm,0.7s						
LPG	La Plagne	8.05	283	eP	Pn	23 14 19.9	-1.2
	comp=Z,80nm,0.7s						
LPG	La Plagne	8.05	283	ePn	Pn	23 14 20.4	-0.7
LPL	La Plagne	8.07	283	ePn	Pn	23 14 20.7	-0.5
LPL				eSn	Sn	23 15 30.4	-23
	comp=Z,162nm,0.6s						
LPL	La Plagne	8.07	283	ePn	Pn	23 14 20.7	-0.5
LPL				eSn	Sn	23 15 30.4	-23
LPL	La Plagne	8.07	283	eP	Pn	23 14 20.7	-0.5
LPL	La Plagne	8.07	283	ePn	Pn	23 14 20.7	-0.5
BNI	Bardonecchia	8.08	280	ePn	Pn	23 14 19.7	-1.6
BNI	Bardonecchia	8.08	280	eP	Pn	23 14 19.7	-1.6
BNI	Bardonecchia	8.08	280	eP	Pn	23 14 19.7	-1.6
MILM	Milestii Mici	8.08	67	⇓iP	Pn	23 14 23.9	+2.8
MILM	Milestii Mici	8.08	67	⇓iP	Pn	23 14 23.9	+2.8
KIS	Kishinev	8.10	66	e	Pn	23 14 24.0	+2.5
KIS				LRM	MLR	23 17 52.0	
	comp=Z,700nm,14.0s						
RSL	Roselend	8.16	284	P	Pn	23 14 22.5	+0.1
OGAG	Argentiere	8.18	275	P	Pn	23 14 22.8	+0.1
AYVA	Ayvalik	8.18	124	i P	Pn	23 14 23.7	+1.2
AYVA	Ayvalik	8.18	124	P	Pn	23 14 23.7	+1.2
FRF	La Foret Royal	8.19	269	ePn	Pn	23 14 21.3	-1.4
FRF				eSn	Sn	23 15 33.4	-22
	comp=Z,89nm,0.7s						
FRF	La Foret Royal	8.19	269	ePn	Pn	23 14 21.3	-1.4
FRF				eSn	Sn	23 15 33.4	-22
FRF	La Foret Royal	8.19	269	eP	Pn	23 14 21.3	-1.4
FRF	La Foret Royal	8.19	269	ePn	Pn	23 14 21.3	-1.4
SORM	Soroca	8.20	58	⇑iP	Pn	23 14 25.1	+2.3
SORM	Soroca	8.20	58	⇑P	Pn	23 14 25.2	+2.4
SORM	Soroca	8.20	58	P	Pn	23 14 25.2	+2.4
EDC	Edincik	8.31	114	eP	Pn	23 14 24.6	+0.2
LMR	La Mourre	8.33	268	ePn	Pn	23 14 23.2	-1.4
LMR				eSn	Sn	23 15 36.5	-23
	comp=Z,37nm,0.6s						
LMR	La Mourre	8.33	268	ePn	Pn	23 14 23.2	-1.4
LMR				eSn	Sn	23 15 36.5	-23
LMR	La Mourre	8.33	268	eP	Pn	23 14 23.2	-1.4
LMR	La Mourre	8.33	268	ePn	Pn	23 14 23.2	-1.4
MOF	Molkenrain	8.34	299	P	Pn	23 14 24.3	-0.6
VLI	Veliai	8.42	151	P	Pn	23 14 23.2	-2.7
VLI	Veliai	8.42	151	P	Pn	23 14 23.2	-2.7
VLI	Veliai	8.42	151	P	Pn	23 14 23.2	-2.7
CHOS	Chios island	8.45	131	eP	Pn	23 14 27.7	+1.4
DKL	Dikili	8.46	125	eP	Pn	23 14 27.8	+1.4
ECH	Echery	8.47	302	ePn	Pn	23 14 25.9	-0.6
ECH	Echery	8.47	302	eP	Pn	23 14 25.9	-0.6
ECH	Echery	8.47	302	eP	Pn	23 14 25.9	-0.6
CDF	Champ du Feu	8.48	303	ePn	Pn	23 14 26.1	-0.6
CDF	Champ du Feu	8.48	303	ePn	Pn	23 14 26.1	-0.6
CDF	Champ du Feu	8.48	303	eP	Pn	23 14 26.1	-0.6
CDF	Champ du Feu	8.48	303	ePn	Pn	23 14 26.1	-0.6
BALY	Balya	8.49	119	i P	Pn	23 14 28.2	+1.3
BALY	Balya	8.49	119	P	Pn	23 14 28.2	+1.3
HINF	Hinteralfeld	8.51	299	ePn	Pn	23 14 26.2	-0.9
HINF	Hinteralfeld	8.51	299	ePn	Pn	23 14 26.2	-0.9
HINF	Hinteralfeld	8.51	299	eP	Pn	23 14 26.2	-0.9
HINF	Hinteralfeld	8.51	299	ePn	Pn	23 14 26.2	-0.9
SERI	Serifos	8.64	143	P	Pn	23 14 28.3	-0.6
SERI	Serifos	8.64	143	P	Pn	23 14 28.3	-0.6
ORIF	Oris-en-Rattie	8.64	279	ePn	Pn	23 14 28.1	-0.9
ORIF	Oris-en-Rattie	8.64	279	ePn	Pn	23 14 28.1	-0.9
ORIF	Oris-en-Rattie	8.64	279	eP	Pn	23 14 28.1	-0.9
ORIF	Oris-en-Rattie	8.64	279	ePn	Pn	23 14 28.1	-0.9
CABF	La Chapelle	8.67	290	ePn	Pn	23 14 28.8	-0.6
CABF	La Chapelle	8.67	290	ePn	Pn	23 14 28.8	-0.6
CABF	La Chapelle	8.67	290	eP	Pn	23 14 28.8	-0.6
CABF	La Chapelle	8.67	290	ePn	Pn	23 14 28.8	-0.6
KCTX	Karacabey (Bur	8.68	114	eP	Pn	23 14 30.4	+1.0
BALB	Balikesir	8.71	118	eP	Pn	23 14 30.7	+0.9
STEP	BALIKESIR_Sava	8.77	120	i P	Pn	23 14 32.0	+1.4
STEP	BALIKESIR_Sava	8.77	120	P	Pn	23 14 32.0	+1.4
URLA	Izmir	8.77	129	eP	Pn	23 14 32.1	+1.5
TNS	Taunus Mts	8.80	316	ePn	Pn	23 14 31.4	+0.2
TNS				eSn	Sn	23 16 03.3	-7.6
TNS	Taunus Mts	8.80	316	Pn	Pn	23 14 31.4	+0.2
SBT5	Esenkoy-Cinarc	8.85	110	eP	Pn	23 14 31.3	-0.4
KTHR	Kythira	8.86	152	P	Pn	23 14 30.9	-1.0
KTHR	Kythira	8.86	152	P	Pn	23 14 30.9	-1.0
KYTH	Kithira	8.87	152	P	Pn	23 14 30.5	-1.5
KYTH	Kithira	8.87	152	P	Pn	23 14 30.5	-1.5
HAU	Haudompre	8.89	299	ePn	Pn	23 14 31.7	-0.6
HAU	Haudompre	8.89	299	ePn	Pn	23 14 31.7	-0.6
HAU	Haudompre	8.89	299	eP	Pn	23 14 31.7	-0.6
HAU	Haudompre	8.89	299	ePn	Pn	23 14 31.7	-0.6
SMRF	Simiane la Rot	8.91	273	ePn	Pn	23 14 31.6	-1.0
SMRF				eSn	Sn	23 15 50.4	-23
	comp=Z,42nm,0.8s						
SMRF	Simiane la Rot	8.91	273	ePn	Pn	23 14 31.6	-1.0
SMRF				eSn	Sn	23 15 50.4	-23
SMRF	Simiane la Rot	8.91	273	ePn	Pn	23 14 31.6	-1.0
OG35	Corcelles	8.93	286	P	Pn	23 14 32.8	-0.1
BLCB	Balcova	9.00	127	eP	Pn	23 14 35.3	+1.5
GKP	Gorka Klasztor	9.05	357	eP	Pn	23 14 36.4	+2.0
GKP	Gorka Klasztor	9.05	357	eP	Pn	23 14 36.4	+2.0
GKP	Gorka Klasztor	9.05	357	eP	Pn	23 14 36.4	+2.0
ABH	Alteburg	9.06	312	P	Pn	23 14 35.6	+0.9
ANKY	Antikythira Is	9.31	152	P	Pn	23 14 36.1	-2.0
ANKY	Antikythira Is	9.31	152	P	Pn	23 14 36.1	-2.0
ANKY	Antikythira Is	9.31	152	P	Pn	23 14 36.1	-2.0
PAGF	Fort de Pagny	9.48	301	ePn	Pn	23 14 40.9	+0.5
	baz=126						
PAGF	Fort de Pagny	9.48	301	ePn	Pn	23 14 40.9	+0.5
PAGF	Fort de Pagny	9.48	301	ePn	Pn	23 14 40.9	+0.5
VIVF	Saint-Julien-l	9.50	278	ePn	Pn	23 14 38.6	-2.1
VIVF				eSn	Sn	23 16 04.0	-24
	comp=Z,37nm,0.9s						
VIVF	Saint-Julien-l	9.50	278	ePn	Pn	23 14 38.6	-2.1
VIVF				eSn	Sn	23 16 04.0	-24
VIVF	Saint-Julien-l	9.50	278	eP	Pn	23 14 38.6	-2.1
VIVF	Saint-Julien-l	9.50	278	ePn	Pn	23 14 38.6	-2.1
GCAM	G?zelcaml?	9.59	130	eP	Pn	23 14 42.9	+1.1
SSB	Saint Sauveur	9.60	281	ePn	Pn	23 14 40.2	-1.8
SSB	Saint Sauveur	9.60	281	eP	Pn	23 14 40.2	-1.8
SSB	Saint Sauveur	9.60	281	eP	Pn	23 14 40.2	-1.8
WLF	Walferdange	9.71	308	⇑P	Pn	23 14 45.0	+1.5
WLF	Walferdange	9.71	308	ePn	Pn	23 14 45.1	+1.5
WLF	Walferdange	9.71	308	ePn	Pn	23 14 43.8	+0.2
WLF	Walferdange	9.71	308	ePn	Pn	23 14 43.8	+0.2
WLF	Walferdange	9.71	308	P	Pn	23 14 45.0	+1.5
SANT	Santorini	9.73	141	ePn	Pn	23 14 44.0	+0.2
SANT	Santorini	9.73	141	ePn	Pn	23 14 44.0	+0.2
SFTF	Sexfontaines	9.78	298	ePn	Pn	23 14 44.2	-0.3
	baz=116						
SFTF	Sexfontaines	9.78	298	ePn	Pn	23 14 44.2	-0.3
SFTF	Sexfontaines	9.78	298	ePn	Pn	23 14 44.2	-0.3
AYDB	Zeytinkoy-Aydi	9.79	127	eP	Pn	23 14 46.2	+1.5
TVSB	Tavsanli	9.83	115	eP	Pn	23 14 45.9	+0.6
KULA	Kula-Manisa	9.87	122	eP	Pn	23 14 46.3	+0.4
MEZF	Maizieres J’vi	9.88	300	ePn	Pn	23 14 46.2	+0.4
	baz=120						
MEZF	Maizieres J’vi	9.88	300	ePn	Pn	23 14 46.2	+0.4
MEZF	Maizieres J’vi	9.88	300	ePn	Pn	23 14 46.2	+0.4
IMMV	Iera Moni Meta	9.92	150	P	Pn	23 14 42.6	-3.8
KIEV	Kiev	9.98	46	ePn	Pn	23 14 49.3	+2.1
KIEV	Kiev	9.98	46	P	Pn	23 14 49.5	+2.3
KIEV	Kiev	9.98	46	deP	Pn	23 14 48.1	+0.9
KIEV	Kiev	9.98	46	eP	Pn	23 14 48.1	+0.9
KIEV	Kiev	9.98	46	ePn	Pn	23 14 49.3	+2.1
AKASG	Malin Array Be	9.99	46	Pn	Pn	23 14 49.5	+2.1
	comp=Z,0.7nm,0.3s,baz=230,slow=13,SNR=17						
AKASG				Sn	Sn	23 16 34.1	-5.9
	comp=Z,1.9nm,0.3s,baz=235,slow=23,SNR=6.7						
AKASG				LR	LR	23 19 17.5	
	comp=Z,295nm,21.3s,baz=245,slow=41						
AKBB	Malin Array Si	9.99	46	ePn	Pn	23 14 49.9	+2.5
VAM	Vamos	10.04	149	P	Pn	23 14 43.6	-4.5
VAM	Vamos	10.04	149	P	Pn	23 14 43.6	-4.5
VAM	Vamos	10.04	149	P	Pn	23 14 43.6	-4.5
VAM	Vamos	10.04	149	P	Pn	23 14 43.6	-4.5
BODT	Bodrum	10.10	132	eP	Pn	23 14 50.6	+1.8
LASF	Ste Croix	10.13	274	ePn	Pn	23 14 46.8	-2.5
LASF				eSn	Sn	23 16 19.3	-24
	comp=Z,28nm,0.7s						
LASF	Ste Croix	10.13	274	ePn	Pn	23 14 46.8	-2.5
LASF				eSn	Sn	23 16 19.3	-24
LASF	Ste Croix	10.13	274	ePn	Pn	23 14 46.8	-2.5
SMF	Signal de Mont	10.20	289	ePn	Pn	23 14 48.8	-1.5
SMF				eSn	Sn	23 16 21.1	-24
	comp=Z,72nm,0.7s						
SMF	Signal de Mont	10.20	289	ePn	Pn	23 14 48.8	-1.5
SMF				eSn	Sn	23 16 21.1	-24
SMF	Signal de Mont	10.20	289	eP	Pn	23 14 48.8	-1.5
SMF	Signal de Mont	10.20	289	ePn	Pn	23 14 48.8	-1.5
MEM	Membach	10.29	312	⇑P	Pn	23 14 53.0	+1.5
	comp=Z,42nm,0.7s						
MEM	Membach	10.29	312	P	Pn	23 14 53.8	+2.4
MEM				pmax	pmax		
	comp=Z,60nm,0.7s						
MEM	Membach	10.29	312	P	Pn	23 14 53.8	+2.4
	comp=Z,60nm,0.7s						
LOR	Lormes	10.30	292	ePn	Pn	23 14 50.2	-1.4
	baz=115						
LOR				eSn	Sn	23 16 24.6	-23
	comp=Z,49nm,0.6s						
LOR	Lormes	10.30	292	ePn	Pn	23 14 50.2	-1.4
LOR				eSn	Sn	23 16 24.6	-23
LOR	Lormes	10.30	292	eP	Pn	23 14 50.2	-1.4
LOR	Lormes	10.30	292	ePn	Pn	23 14 50.2	-1.4
SUW	Suwalki	10.36	17	eP	Pn	23 14 53.5	+1.1
SUW	Suwalki	10.36	17	ePn	Pn	23 14 53.7	+1.3
SUW	Suwalki	10.36	17	eP	Pn	23 14 53.5	+1.1
SUW	Suwalki	10.36	17	eP	Pn	23 14 53.5	+1.1
IDI	Anoyia	10.41	147	Pn	Pn	23 14 48.9	-4.3
	comp=Z,2.1nm,0.3s,baz=327,slow=14,SNR=17						
IDI				Sn	Sn	23 16 40.4	-10
	comp=Z,2.1nm,0.3s,baz=72,slow=20,SNR=2.7						
IDI	Anoyia	10.41	147	ePn	Pn	23 14 52.0	-1.2
IDI				Sn	Sn	23 16 40.4	-10
IDI				eSn	Sn	23 16 47.2	-3.3
IDI	Anoyia	10.41	147	ePn	Pn	23 14 52.0	-1.2
IDI				Sn	Sn	23 16 40.4	-10
HGN	Heimansgroeve	10.42	313	ePn	Pn	23 14 54.7	+1.6
	comp=Z,36nm,1.1s						
HGN				eSn	Sn	23 16 39.9	-10
DAT	Datca	10.49	132	eP	Pn	23 14 55.7	+1.4
SSF	Saint Saulge	10.50	291	ePn	Pn	23 14 53.4	-0.9
SSF				eSn	Sn	23 16 29.3	-23
	comp=Z,62nm,0.9s						
SSF	Saint Saulge	10.50	291	ePn	Pn	23 14 53.4	-0.9
SSF				eSn	Sn	23 16 29.3	-23
SSF	Saint Saulge	10.50	291	eP	Pn	23 14 53.4	-0.9
MDUB	Mudurnu	10.50	106	eP	Pn	23 14 55.1	+0.6
GVD	Gavdhos	10.52	151	P	Pn	23 14 50.9	-3.7
GVD	Gavdhos	10.52	151	P	Pn	23 14 50.9	-3.7
GVD	Gavdhos	10.52	151	P	Pn	23 14 50.9	-3.7
AVF	Avril sur Loir	10.56	289	ePn	Pn	23 14 53.9	-1.2
AVF	Avril sur Loir	10.56	289	ePn	Pn	23 14 53.9	-1.2
AVF	Avril sur Loir	10.56	289	eP	Pn	23 14 53.9	-1.2
AVF	Avril sur Loir	10.56	289	ePn	Pn	23 14 53.9	-1.2
BCLA	Clavier	10.57	310	⇑P	Pn	23 14 56.3	+1.1
	comp=Z,23nm,0.7s						
BEBN	Eben Emael	10.57	313	⇑P	Pn	23 14 56.9	+1.7
BEBN	Eben Emael	10.57	313	P	Pn	23 14 56.9	+1.7
YER	Yerkesik	10.58	129	eP	Pn	23 14 57.2	+1.7
GIVF	Givet	10.68	308	ePn	Pn	23 14 58.4	+1.6
GIVF	Givet	10.68	308	ePn	Pn	23 14 58.4	+1.6
GIVF	Givet	10.68	308	ePn	Pn	23 14 58.4	+1.6
WTSB	Winterswijk	10.73	320	ePn	Pn	23 14 57.6	+0.2
	comp=Z,28nm,0.9s						
WTSB				eSn	Sn	23 17 00.9	+2.9
KEST	Kesra	10.75	221	Pn	Pn	23 15 02.1	+4.2
	comp=Z,2.4nm,0.3s,baz=305,slow=6.9,SNR=27						
KEST				LR	LR	23 19 12.6	
	comp=Z,316nm,19.0s,baz=252,slow=38						
KEST	Kesra	10.75	221	ePn	Pn	23 14 57.9	0.0
KEST	Kesra	10.75	221	ePn	Pn	23 14 57.9	0.0
DOU	Dourbes	10.81	308	⇑P	Pn	23 14 59.4	+0.8
	comp=Z,18nm,0.7s						
DOU	Dourbes	10.81	308	P	Pn	23 14 59.3	+0.8
	comp=Z,18nm,0.7s						
BGF	Bois d’Agland	10.87	288	ePn	Pn	23 14 58.2	-1.2
BGF				eSn	Sn	23 16 37.2	-24
	comp=Z,110nm,0.7s						
BGF	Bois d’Agland	10.87	288	ePn	Pn	23 14 58.2	-1.2
BGF				eSn	Sn	23 16 37.2	-24
BGF	Bois d’Agland	10.87	288	eP	Pn	23 14 58.2	-1.2
DALY	Dalyan (Mu˜la	11.01	129	eP	Pn	23 15 02.1	+0.8
BAIF	Baives	11.01	307	ePn	Pn	23 15 02.7	+1.4
BAIF	Baives	11.01	307	ePn	Pn	23 15 02.7	+1.4
BAIF	Baives	11.01	307	eP	Pn	23 15 02.7	+1.4
BSD	Bornholm Skovb	11.06	351	i P	Pn	23 15 04.6	+2.7

BSD	Bornholm Skovb	11.06	351	*i* P	Pn	23 15 04.6	+2.7
BSD	Bornholm Skovb	11.06	351	*i* P	Pn	23 15 04.6	+2.7
HYF	Humbligny	11.12	291	*e*Pn	Pn	23 15 01.5	-1.3
HYF	Humbligny	11.12	291	*e*Pn	Pn	23 15 01.5	-1.3
HYF	Humbligny	11.12	291	*e*Pn	Pn	23 15 01.5	-1.3
THTN	Thala	11.21	222	*e*Pn	Pn	23 15 05.4	+1.3
THTN	Thala	11.21	222	*e*Pn	Pn	23 15 05.4	+1.3
TCF	Toulx Ste Croi	11.28	286	*e*Pn	Pn	23 15 04.0	-1.1
TCF				*e*Sn	Sn	23 16 47.2	-24
	comp=Z,38nm,0.7s						
TCF	Toulx Ste Croi	11.28	286	*e*Pn	Pn	23 15 04.0	-1.1
TCF				*e*Sn	Sn	23 16 47.2	-24
TCF	Toulx Ste Croi	11.28	286	*e*P	Pn	23 15 04.0	-1.1
TCF	Toulx Ste Croi	11.28	286	*e*Pn	Pn	23 15 04.0	-1.1
CAF	Calviac	11.35	279	*e*Pn	Pn	23 15 04.6	-1.4
CAF	Calviac	11.35	279	*e*Pn	Pn	23 15 04.6	-1.4
CAF	Calviac	11.35	279	*e*P	Pn	23 15 04.6	-1.4
CAF	Calviac	11.35	279	*e*Pn	Pn	23 15 04.6	-1.4
FETY	Fethiye	11.38	128	*e*P	Pn	23 15 08.2	+1.7
MTLF	Montolieu	11.41	271	*e*Pn	Pn	23 15 05.4	-1.4
MTLF				*e*Sn	Sn	23 16 48.3	-26
	comp=Z,14nm,1.1s						
MTLF	Montolieu	11.41	271	*e*Pn	Pn	23 15 05.4	-1.4
MTLF				*e*Sn	Sn	23 16 48.3	-26
MTLF	Montolieu	11.41	271	*e*P	Pn	23 15 05.4	-1.4
MTLF	Montolieu	11.41	271	*e*Pn	Pn	23 15 05.4	-1.4
ISP	Isparta	11.45	120	⇑*e*P	Pn	23 15 07.5	0.0
ISP	Isparta	11.45	120	*e*P	Pn	23 15 07.5	0.0
SIM	Simferopol’	11.55	81	*e*P	Pn	23 15 09.1	+0.4
SIM				*e*S	Sn	23 17 18.0	-0.3
SIM				MLR	MLR		
	comp=Z,200nm,12.0s						
SIM	Simferopol’	11.55	81	*e*P	Pn	23 15 09.1	+0.4
	comp=Z,200nm,12.0s						
SIM				*e*S	Sn	23 17 18.0	-0.3
RJF	Les Rejaudoux	11.73	281	*e*Pn	Pn	23 15 09.4	-1.8
RJF	Les Rejaudoux	11.73	281	*e*Pn	Pn	23 15 09.4	-1.8
RJF	Les Rejaudoux	11.73	281	*e*P	Pn	23 15 09.4	-1.8
RJF	Les Rejaudoux	11.73	281	*e*Pn	Pn	23 15 09.4	-1.8
ELL	Elmali	11.78	125	*e*P	Pn	23 15 12.4	+0.4
NACGM	Naroch	12.10	25	*e*P	Pn	23 15 17.0	+0.8
NACGM				PM		23 15 18.0	
	comp=Z,0.4nm,0.8s						
LFF	La Frestale	12.29	279	*e*Pn	Pn	23 15 17.0	-1.8
LFF	La Frestale	12.29	279	*e*Pn	Pn	23 15 17.0	-1.8
LFF	La Frestale	12.29	279	*e*P	Pn	23 15 17.0	-1.8
LFF	La Frestale	12.29	279	*e*Pn	Pn	23 15 17.0	-1.8
IIGN	Ignalina	12.32	23	*e*P	Pn	23 15 20.1	+0.8
IIGN				IAmb	IAmb	23 15 21.3	
	comp=Z,24nm,0.9s						
IDID	Didziasalis	12.44	24	*e*P	Pn	23 15 21.0	+0.2
IDID				IAmb	IAmb	23 15 22.4	
	comp=Z,18nm,1.1s						
ISAL	Salakas	12.49	22	*e*P	Pn	23 15 21.8	+0.3
ISAL				IAmb	IAmb	23 15 23.5	
	comp=Z,18nm,0.9s						
BR131	Keskin Array S	12.51	106	*e*Pn	Pn	23 15 23.2	+1.1
BR131	Keskin Array S	12.51	106	*e*Pn	Pn	23 15 23.2	+1.1
BRTR	Keskin Array B	12.51	106	Pn	Pn	23 15 21.2	-0.8
	comp=Z,0.1nm,0.3s,baz=298,slow=10,SNR=32						
BRTR				LR	LR	23 21 19.3	
	comp=Z,98nm,18.7s,baz=294,slow=43						
BRTR	Keskin Array B	12.51	106	*ce*P	Pn	23 15 23.2	+1.1
BRTR				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BRTR	Keskin Array B	12.51	106	*e*P	Pn	23 15 23.2	+1.1
	comp=Z,8.0nm,0.9s						
IZAR	Zarasai	12.68	22	*e*P	Pn	23 15 24.4	+0.3
IZAR				IAmb	IAmb	23 15 26.9	
	comp=Z,23nm,0.9s						
EPF	Esparros	12.82	271	*e*Pn	Pn	23 15 24.5	-1.6
EPF	Esparros	12.82	271	*e*Pn	Pn	23 15 24.5	-1.6
EPF	Esparros	12.82	271	*e*P	Pn	23 15 24.5	-1.6
EPF	Esparros	12.82	271	*e*Pn	Pn	23 15 24.5	-1.6
LDF	La Druitiere	13.20	296	*e*Pn	Pn	23 15 30.6	-0.6
LDF	La Druitiere	13.20	296	*e*Pn	Pn	23 15 30.6	-0.6
LDF	La Druitiere	13.20	296	*e*P	Pn	23 15 30.6	-0.6
LDF	La Druitiere	13.20	296	*e*Pn	Pn	23 15 30.6	-0.6
FLN	La Foliniere	13.47	296	*e*P	Pn	23 15 35.0	+0.1
FLN				pmax	pmax		
	comp=Z,16nm,1.0s						
FLN	La Foliniere	13.47	296	*e*P	Pn	23 15 35.0	+0.1
	comp=Z,16nm,1.0s						
ETSF	Etsaut	13.49	271	*e*Pn	Pn	23 15 33.6	-1.7
ETSF	Etsaut	13.49	271	*e*Pn	Pn	23 15 33.6	-1.7
ETSF	Etsaut	13.49	271	*e*P	Pn	23 15 33.6	-1.7
ETSF	Etsaut	13.49	271	*e*Pn	Pn	23 15 33.6	-1.7
GRR	Gorron	13.64	294	*e*Pn	Pn	23 15 36.4	-0.8
GRR	Gorron	13.64	294	*e*Pn	Pn	23 15 36.4	-0.8
GRR	Gorron	13.64	294	*e*P	Pn	23 15 36.4	-0.8
GRR	Gorron	13.64	294	*e*Pn	Pn	23 15 36.4	-0.8
ANN	Anapa	13.92	81	*e*P	P	23 15 50.3	+0.9
ANN				pmax	pmax		
	comp=Z,19nm,1.0s						
ANN				MLR	MLR		
	comp=Z,288nm,11.0s						
ANN				MLR	MLR		
	comp=N,244nm,11.0s						
SJPF	Ste Jean	13.93	272	*e*Pn	Pn	23 15 39.6	-1.6
SJPF	Ste Jean	13.93	272	*e*Pn	Pn	23 15 39.6	-1.6
SJPF	Ste Jean	13.93	272	*e*P	Pn	23 15 39.6	-1.6
SJPF	Ste Jean	13.93	272	*e*Pn	Pn	23 15 39.6	-1.6
SGMF	Saint Gilles	14.73	293	*e*Pn	Pn	23 15 51.2	-1.0
SGMF	Saint Gilles	14.73	293	*e*Pn	Pn	23 15 51.2	-1.0
SGMF	Saint Gilles	14.73	293	*e*P	Pn	23 15 51.2	-1.0
SGMF	Saint Gilles	14.73	293	*e*Pn	Pn	23 15 51.2	-1.0
QUIF	Quistinic	15.10	292	*e*Pn	Pn	23 15 55.8	-1.3
QUIF	Quistinic	15.10	292	*e*Pn	Pn	23 15 55.8	-1.3
QUIF	Quistinic	15.10	292	*e*P	Pn	23 15 55.8	-1.3
ROSF	Rostrenen	15.22	293	*e*Pn	Pn	23 15 57.7	-1.0
ROSF	Rostrenen	15.22	293	*e*Pn	Pn	23 15 57.7	-1.0
ROSF	Rostrenen	15.22	293	*e*P	Pn	23 15 57.7	-1.0
ROSF	Rostrenen	15.22	293	*e*Pn	Pn	23 15 57.7	-1.0
VSU	Vasula	15.24	18	*de*P	Pn	23 15 57.5	-1.4
VSR	Storozhevoye	15.86	56	*e*P	Pn	23 16 06.3	-0.7
VSR				pmax	pmax		
	comp=Z,20nm,1.1s						
VSR				MLR	MLR		
	comp=Z,250nm,8.0s						
VORD	Divnogorie	15.86	57	*e*P	Pn	23 16 07.0	0.0
VORD				pmax	pmax		
	comp=Z,10.0nm,1.4s						
VORR	Voronezh	16.03	55	P	Pn	23 16 08.0	-1.2
VORR				pmax	pmax		
	comp=Z,300nm,1.4s						
HFS	Hagfors	16.12	352	Pn	Pn	23 16 10.1	-0.3
	comp=Z,0.8nm,0.3s,baz=163,slow=12,SNR=20						
HFS				LR	LR	23 23 50.9	
	comp=Z,174nm,18.6s,baz=175,slow=43						
OBN	Obninsk	16.18	41	*e*Pn	Pn	23 16 09.3	-1.8
	comp=Z,37nm,1.0s						
OBN	Obninsk	16.18	41	*d i*P	Pn	23 16 08.4	-2.7
OBN				pmax	pmax		
	comp=Z,25nm,1.0s						
OBN				MLR	MLR		
	comp=Z,300nm,18.0s						
LPSR	Galich’ya Gora	16.20	52	*e*P	Pn	23 16 10.7	-0.7
LPSR				pmax	pmax		
	comp=Z,40nm,1.3s						
KONO	Kongsberg	16.24	345	⇑*e*P	Pn	23 16 11.2	-0.7
ES19	SONSECA Array	16.86	262	*e*Pn	Pn	23 16 20.5	+0.6
ESDC	Sonseca Array	16.91	262	Pn	Pn	23 16 20.5	-0.2
	comp=Z,0.5nm,0.3s,baz=70,slow=12,SNR=22						
ESDC				LR	LR	23 22 38.4	
	comp=Z,96nm,19.3s,baz=95,slow=37						
ESLA	Sonseca Array	16.91	262	*e*Pn	P	23 16 21.8	-0.9
	comp=Z,22nm,1.1s						
ESLA	Sonseca Array	16.91	262	*e*Pn	P	23 16 21.8	-0.9
	comp=Z,22nm,1.1s						
NC602	NORSAR Array S	16.96	349	*e*Pn	Pn	23 16 21.2	+0.2
MOS	Moscow	17.03	41	*e*P	Pn	23 16 20.8	-1.1
MOS				*e*S	Sn	23 19 30.0	-1.5
MOS				pmax	pmax		
	comp=Z,200nm,1.9s						
MOS				pmax	pmax		
	comp=Z,81nm,1.4s						
NAO01	NORSAR Array S	17.16	348	*e*Pn	Pn	23 16 23.8	+0.3
PAB	San Pablo	17.23	262	*e*Pn	Pn	23 16 24.8	+0.1
	comp=Z,26nm,1.2s						
PAB	San Pablo	17.23	262	*e*P	Pn	23 16 24.8	+0.1
PAB				pmax	pmax		
	comp=Z,26nm,1.2s						
NB201	NORSAR Array S	17.30	349	*e*Pn	Pn	23 16 25.5	+0.2
NB2	NORSAR Subarra	17.30	349	P	Pn	23 16 23.2	-2.1
	comp=Z,11nm,2.0s,baz=164,slow=14						
NOA	NORSAR Array B	17.30	349	P	Pn	23 16 25.1	-0.2
	comp=Z,0.0nm,0.3s,baz=154,slow=11,SNR=8.6						
NOA				LR	LR	23 22 57.9	
	comp=Z,145nm,21.1s,baz=175,slow=37						
NC405	NORSAR Array S	17.30	350	*e*Pn	Pn	23 16 24.1	-1.2
NBO00	NORSAR Array S	17.35	348	*e*Pn	Pn	23 16 26.5	+0.6
VRH	Novokhopyorsk	17.40	58	*e*P	Pn	23 16 25.5	-1.1
VRH				pmax	pmax		
	comp=Z,20nm,0.8s						
VRH				MLR	MLR		
	comp=Z,170nm,8.0s						
NC303	NORSAR Array S	17.46	349	*e*Pn	P	23 16 29.0	+0.4
EKA	Eskdalemuir Ar	17.50	317	P	P	23 16 29.6	+0.6
	baz=118,slow=13,SNR=13						
NC204	NORSAR Array S	17.59	348	*e*Pn	Pn	23 16 28.8	-0.1
MMAI	Mount Meron Ar	17.61	124	P	Pn	23 16 28.8	-0.7
	comp=Z,1.2nm,0.3s,baz=322,slow=11,SNR=15						
MMAI				LR	LR	23 24 31.6	
	comp=Z,132nm,19.1s,baz=320,slow=41						
KIV	Kislovodsk	17.76	82	*e*Pn	Pn	23 16 31.2	0.0
	comp=Z,17nm,0.9s						
KIV	Kislovodsk	17.76	82	P	P	23 16 32.3	+0.2
KIV	Kislovodsk	17.76	82	*ce*P	P	23 16 32.3	+0.2
KIV				pmax	pmax		
	comp=Z,19nm,1.5s						
KIV				MLR	MLR		
	comp=Z,260nm,19.0s						
KVAR	Kislovodsk Arr	17.77	82	P	Pn	23 16 30.0	-1.3
	baz=212,slow=6.9,SNR=4.9						
KVAR				LR	LR	23 24 37.8	
	comp=Z,304nm,20.2s,baz=278,slow=41						
GOF	Gofitskoye	17.86	79	*e*P	P	23 16 33.0	-0.1
ARTV	Artvin	17.87	91	*i* P	P	23 16 33.2	-0.3
ARTV	Artvin	17.87	91	P	P	23 16 33.2	-0.3
FINES	FINESS Array B	17.89	13	P	Pn	23 16 31.0	-1.6
	comp=Z,1.0nm,0.3s,baz=187,slow=12,SNR=38						
FINES				S	Sn	23 19 39.8	-12
	comp=Z,0.2nm,0.3s,baz=194,slow=23,SNR=2.8						
FINES				LR	LR	23 23 23.6	
	comp=Z,131nm,20.6s,baz=196,slow=37						
FIA1	FINESS Array S	17.89	13	*e*Pn	Pn	23 16 30.8	-1.9
NEY	Neytrino	17.91	85	⇑*e*P	Pn	23 16 31.3	-1.9
KBZ	Khabaz	17.95	83	P	P	23 16 34.5	+0.5
	comp=Z,0.2nm,0.3s,baz=285,slow=5.3,SNR=9.2						
KBZ				LR	LR	23 24 45.3	
	comp=Z,392nm,18.4s,baz=292,slow=41						
PBRG	Braganca	18.20	271	*e*P	Pn	23 16 36.8	+0.2
	comp=Z,19nm,1.7s						
PBRG	Braganca	18.20	271	*e*P	Pn	23 16 36.8	+0.2
NCK	Nalchik	18.49	83	⇓*e*P	P	23 16 37.5	-2.6
MVO	Moncorvo	18.59	269	*e*LR	LR	23 23 18.8	
	comp=Z,213nm,16.0s						
ZEI	Tsey	18.86	85	*e*P	Pn	23 16 45.7	+0.9
ASF	Jabal al Asfar	19.10	123	P	Pn	23 16 47.7	0.0
	comp=Z,0.3nm,0.3s,baz=248,slow=5.7,SNR=21						
MTE	Manteigas	19.21	267	*e*P	Pn	23 16 50.1	+1.2
	comp=Z,30nm,1.9s						
MTE				*e*LR	LR	23 23 58.0	
	comp=Z,149nm,18.0s						
MTE	Manteigas	19.21	267	*e*P	P	23 16 48.1	0.0
	comp=Z,12nm,0.9s						
PGAV	Gavieira, Arco	19.25	272	*e*LR	LR	23 23 51.2	
	comp=Z,251nm,18.0s						
PVIS	Viseu	19.36	269	*e*P	Pn	23 16 50.9	+0.2
	comp=Z,31nm,1.3s						
PVIS	Viseu	19.36	269	*e*P	Pn	23 16 50.9	+0.2
PCBR	Castelo Branco	19.36	266	*e*P	Pn	23 16 50.6	-0.1
	comp=Z,19nm,1.3s						
PCBR	Castelo Branco	19.36	266	*e*P	Pn	23 16 50.6	-0.1
PMRV	Marv??o	19.45	264	*e*P	P	23 16 50.6	-0.1
	comp=Z,16nm,2.2s						
PMRV				*e*LR	LR	23 24 48.0	
	comp=Z,154nm,18.0s						
PMRV	Marv??o	19.45	264	*e*P	P	23 16 50.6	-0.1
PBAR	Barrancos	19.71	261	*e*P	P	23 16 52.9	-0.6
	comp=Z,39nm,1.0s						
PBAR	Barrancos	19.71	261	*e*P	P	23 16 52.9	-0.6
TBLG	Delisi	19.73	88	*e*P	Pn	23 16 55.7	+0.6
	comp=Z,26nm,1.2s						
TBLG				*e*S	Sn	23 20 37.7	+0.6
TBLG	Delisi	19.73	88	*e*P	Pn	23 16 55.7	+0.6
TBLG				*e*S	Sn	23 20 37.7	+0.6
TBLG				pmax	pmax		
	comp=Z,26nm,1.2s						
TBLG	Delisi	19.73	88	*e*P	Pn	23 16 55.7	+0.6
	comp=Z,26nm,1.2s						
TBLG				*e*S	Sn	23 20 37.7	+0.6
PESTR	Estremoz	19.82	263	*e*P	P	23 16 54.3	-0.3
	comp=Z,36nm,1.3s						
PESTR	Estremoz	19.82	263	*e*P	P	23 16 53.7	-0.9
	comp=Z,18nm,1.3s						
EIL	Elat	19.85	131	P	Pn	23 16 56.5	-0.1
	comp=Z,1.6nm,0.3s,baz=339,slow=8.7,SNR=24						
EIL				LR	LR	23 28 01.1	
	comp=Z,60nm,18.4s,baz=250,slow=47						
PCAS	Casmilo, Conde	20.02	267	*e*P	Pn	23 16 58.1	-0.4
	comp=Z,36nm,1.5s						
PCAS	Casmilo, Conde	20.02	267	*e*P	Pn	23 16 58.1	-0.4
GROC	Groznyy	20.12	83	*e*P	P	23 16 57.3	-0.6
GROC				*e*		23 17 14.2	
GROC				*e*S	S	23 20 44.5	+0.1
GROC				pmax	pmax		
	comp=Z,9.0nm,0.6s						
GROC	Groznyy	20.12	83	*e*P	P	23 16 57.3	-0.6
	comp=Z,9.0nm,0.6s						
GROC				*e*S	S	23 20 44.5	+0.1
PMTG	Montargil	20.19	264	*e*P	P	23 16 58.7	0.0
	comp=Z,22nm,2.2s						
PMTG	Montargil	20.19	264	*e*P	P	23 16 58.7	0.0
GNI	Garni	20.23	92	P	Pn	23 17 00.7	-0.5
	comp=Z,25nm,0.8s,baz=184,slow=0.5,SNR=11						
GNI				LR	LR	23 27 05.2	
	comp=Z,168nm,18.1s,baz=308,slow=44						
GNI	Garni	20.23	92	*e*P	Pn	23 17 01.0	-0.2
	comp=Z,30nm,0.8s						
GNI	Garni	20.23	92	*i* P	Pn	23 17 00.6	-0.6
	SNR=11						
GNI	Garni	20.23	92	*ce*P	Pn	23 17 00.6	-0.6
GNI				pmax	pmax		
	comp=Z,183nm,1.7s						
EVO	Evora	20.25	263	*e*P	P	23 16 57.2	-2.2
	comp=Z,33nm,1.3s						
ALMR	Almeirim	20.41	265	*e*P	P	23 17 00.8	-0.2
ALMR				AMb	AMB	23 17 02.2	
	comp=Z,23nm,0.9s						
ALMR	Almeirim	20.41	265	*e*P	P	23 17 00.8	-0.2
	comp=Z,64nm,1.0s						
ALMR	Almeirim	20.41	265	*e*P	P	23 17 00.8	-0.2
ALMR	Almeirim	20.41	265	*e*P	P	23 17 00.8	-0.2
PVAQ	Vaqueiros	20.54	259	*e*P	P	23 17 02.5	0.0
	comp=Z,37nm,1.6s						
PVAQ				*e*LR	LR	23 24 00.7	
	comp=Z,234nm,18.0s						
PVAQ	Vaqueiros	20.54	259	*e*P	P	23 17 02.5	0.0
PCVE	Castro Verde	20.66	260	*e*P	P	23 17 03.3	-0.6
	comp=Z,38nm,2.1s						
PCVE	Castro Verde	20.66	260	*e*P	P	23 17 03.3	-0.6
MESJ	Messejana	20.70	261	*e*P	P	23 17 03.9	-0.4
MESJ				AMb	AMB	23 17 06.3	
	comp=Z,16nm,1.3s						
MESJ	Messejana	20.70	261	*e*P	P	23 17 03.6	-0.6
	comp=Z,28nm,1.5s						
MESJ	Messejana	20.70	261	*e*P	P	23 17 03.8	-0.4
MESJ	Messejana	20.70	261	*e*P	P	23 17 03.6	-0.6
PBDV	Barranco-do-Ve	20.77	259	*e*P	P	23 17 04.7	-0.3
	comp=Z,33nm,1.8s						
PBDV	Barranco-do-Ve	20.77	259	*e*P	P	23 17 04.7	-0.3
PNCL	Nicolau / Gran	20.80	262	*e*P	P	23 17 04.8	-0.5
	comp=Z,29nm,1.0s						
PNCL	Nicolau / Gran	20.80	262	*e*P	P	23 17 04.8	-0.5
MDT	Midelt	20.95	245	P	P	23 17 05.1	-1.9
	comp=Z,2.2nm,0.6s,baz=96,slow=10,SNR=5.7						
MDT				LR	LR	23 26 08.7	
	comp=Z,78nm,18.0s,baz=63,slow=40						
PMAFR	Mafra	20.99	265	*e*P	P	23 17 07.9	+0.5
	comp=Z,78nm,1.2s						
PMAFR	Mafra	20.99	265	*e*P	P	23 17 07.9	+0.5
ZKTA	Zakatala	21.11	87	P	P	23 17 12.7	+4.0
NAX	Nakhchivan	21.13	94	P	P	23 17 11.6	+2.6
GANJ	Ganja	21.20	90	P	P	23 17 13.2	+3.5
MORF	Marmelete	21.25	260	*e*P	P	23 17 12.0	+1.8
	comp=Z,28nm,1.3s						
MORF	Marmelete	21.25	260	*e*P	P	23 17 12.0	+1.8
MAK	Makhachkala	21.39	83	*e*P	P	23 17 16.4	+4.7
MAK				*e*		23 17 33.3	
MAK				*e*S	Sn	23 21 21.9	+4.9
MAK				pmax	pmax		
	comp=Z,138nm,1.1s						
MAK				MLR	MLR		
	comp=Z,220nm,13.0s						
PFVI	Vila Bisbo	21.45	260	*e*P	P	23 17 11.7	-0.6
	comp=Z,46nm,1.7s						
PFVI	Vila Bisbo	21.45	260	*e*P	P	23 17 11.7	-0.6
AKT	Akhty	21.95	87	*e*P	P	23 17 18.5	+0.7
AKT				*e*		23 17 39.2	
AKT				pmax	pmax		
	comp=Z,23nm,0.8s						
TAM	Tamanrasset	23.72	210	*e*P	P	23 17 36.0	-0.4
	comp=Z,7.0nm,1.0s						
TAM	Tamanrasset	23.72	210	*e*P	P	23 17 36.0	-0.4
TAM				pmax	pmax		
	comp=Z,7.0nm,1.0s						
TAM	Tamanrasset	23.72	210	*e*P	P	23 17 36.0	-0.4
	comp=Z,7.0nm,1.0s						
APA	Apatity	24.78	14	⇑*i*P	P	23 17 45.9	+0.2
APA				pmax	pmax		
	comp=Z,16nm,0.8s						
APA				MLR	MLR		
	comp=Z,700nm,11.0s						
ARCES	ARCESS Array B	25.65	6	P	P	23 17 53.4	-0.2
	comp=Z,5.2nm,0.7s,baz=188,slow=7.2,SNR=15						
ARCES	ARCESS Array B	25.65	6	*e*P	P	23 17 55.0	+1.5
ARCES	ARCESS Array B	25.65	6	*e*P	P	23 17 55.0	+1.5
KEV	Kevo	25.99	7	*e*P	P	23 17 57.0	+0.4
	comp=Z,31nm,1.4s						
KEV	Kevo	25.99	7	*e*P	P	23 17 57.0	+0.4
KEV				pmax	pmax		
	comp=Z,31nm,1.4s						
AKTO	Aktyubinsk	27.59	63	P	P	23 18 11.1	-0.2
	comp=Z,1.6nm,0.5s,baz=274,slow=13,SNR=5.6						
AKTO				LR	LR	23 30 59.1	
	comp=Z,166nm,19.1s,baz=265,slow=40						
ARU	Arti	28.21	50	P	P	23 18 16.8	+0.1
	comp=Z,3.5nm,0.6s,baz=268,slow=4.1,SNR=9.9						
ARU				LR	LR	23 30 23.1	
	comp=Z,204nm,18.3s,baz=333,slow=38						
ARU	Arti	28.21	50	*e*P	P	23 18 16.8	+0.1
	comp=Z,7.5nm,0.9s						
ARU	Arti	28.21	50	*c i*P	P	23 18 16.1	-0.6
ARU						23 19 02.0	
ARU				PPP	PPP	23 19 14.7	
ARU				S	S	23 23 04.4	+1.5
ARU				SS	SnSn	23 24 21.7	+3.4
ARU				pmax	pmax		
	comp=Z,11nm,1.2s						
ARU				MLR	MLR		
	comp=Z,184nm,19.0s						
JMIC	Jan Mayen	29.80	343	LR	LR	23 30 42.8	
	comp=Z,77nm,19.2s,baz=146,slow=37						
BORG	Borgarnes	29.92	327	LR	LR	23 31 12.3	
	comp=Z,80nm,18.5s,baz=135,slow=38						
RAYN	Ar Rayn	30.59	123	P	P	23 18 37.0	-1.2
RAYN	Ar Rayn	30.59	123	P	P	23 18 37.0	-1.2
GEYT	Alibeck	30.70	88	P	P	23 18 39.0	+0.1
	comp=Z,1.0nm,0.6s,baz=47,slow=2.8,SNR=4.2						
GEYT				LR	LR	23 34 52.2	
	comp=Z,66nm,18.9s,baz=355,slow=44						
GYA0B	ALIBECK ARRAY	30.70	88	*e*P	P	23 18 39.9	+0.9
	comp=Z,5.0nm,0.8s						
TOA0	Torodi Ar. Sit	33.97	209	*e*P	P	23 19 07.5	-0.3
TOA0				*e*pP	pP	23 19 08.5	0.0
TORD	Torodi Ar. Bea	33.97	209	P	P	23 19 05.7	-2.1
	comp=Z,1.7nm,0.5s,baz=25,slow=7.7						
TORD				LR	LR	23 34 59.9	
	comp=Z,88nm,18.9s,baz=5.0,slow=40						
SPITS	Spitsbergen Ar	34.06	359	P	P	23 19 08.7	+0.7
	comp=Z,2.7nm,0.8s,baz=159,slow=7.1,SNR=4.9						
SPITS				LR	LR	23 33 39.7	
	comp=Z,152nm,20.3s,baz=175,slow=38						
KBS	Kingsbay	34.88	358	*e*P	P	23 19 15.7	+0.6
	comp=Z,19nm,1.3s						
KBS	Kingsbay	34.88	358	*e*P	P	23 19 15.7	+0.6
KBS				pmax	pmax		
	comp=Z,19nm,1.3s						
BRVK	Borovoye	34.97	56	*e*P	P	23 19 17.1	+0.9
	comp=Z,8.9nm,0.7s						
BRVK				*e*S	S	23 24 51.4	+2.9
BRVK	Borovoye	34.97	56	*c i*P	P	23 19 17.0	+0.9
BRVK				pmax	pmax		
	comp=Z,8.0nm,0.6s						
BVAR	Borovoye Array	35.04	57	P	P	23 19 17.1	+0.3
	comp=Z,6.2nm,0.9s,baz=274,slow=8.9,SNR=22						
BVAR				LR	LR	23 35 01.4	
	comp=Z,138nm,19.4s,baz=274,slow=39						
KOWA	Kowa	35.06	219	LR	LR	23 35 42.2	
	comp=Z,81nm,18.1s,baz=66,slow=40						
SHME	Shamm	35.73	108	P	P	23 19 20.9	-2.0
BANOM	Banah	35.91	108	P	P	23 19 23.3	-1.3
BANOM	Banah	35.91	108	P	P	23 19 23.3	-1.3
NAZ	Nazwa, Dubai	36.09	110	P	P	23 19 24.7	-1.4
NAZ	Nazwa, Dubai	36.09	110	P	P	23 19 24.7	-1.4
ASUD	Al Ashush, Dub	36.11	110	P	P	23 19 25.4	-0.8
ASUD	Al Ashush, Dub	36.11	110	P	P	23 19 25.4	-0.8
MSFE	Esma-Masafi	36.19	109	P	P	23 19 25.1	-1.8
MDH	Madha	36.32	109	P	P	23 19 25.9	-2.1
MDH	Madha	36.32	109	P	P	23 19 25.9	-2.1
UOSS	Minazif	36.49	109	*e*P	P	23 19 27.8	-1.6
	comp=Z,20nm,1.4s						
UOSS	Minazif	36.49	109	P	P	23 19 27.7	-1.8
UOSS	Minazif	36.49	109	*e*P	P	23 19 27.8	-1.6
	comp=Z,20nm,1.4s						
HATD	Hatta, Dubai	36.52	109	*i* P	P	23 19 28.1	-1.6
	SNR=6.3						
HATD	Hatta, Dubai	36.52	109	P	P	23 19 28.1	-1.6
	SNR=6.3						
ASHO	Ashiyiah	36.56	110	*i* P	P	23 19 28.1	-2.0
	SNR=6.1						
ASHO	Ashiyiah	36.56	110	P	P	23 19 28.1	-2.0
	SNR=6.1						
ALNE	Al Ain	36.78	111	*i* P	P	23 19 30.3	-1.6
	SNR=7.9						
KK31	Karatay Array	37.50	73	*e*P	P	23 19 38.3	+0.4
KK31	Karatay Array	37.50	73	*e*P	P	23 19 38.3	+0.4
KKAR	Karatay Array	37.50	73	*e*P	P	23 19 38.3	+0.4
KKAR	Karatay Array	37.50	73	*e*P	P	23 19 38.3	+0.4
SUMG	Summit	38.48	336	*e*P	P	23 19 46.1	-0.2
	comp=Z,14nm,1.0s						
SUMG	Summit	38.48	336	*e*P	P	23 19 46.1	-0.2
SUMG				pmax	pmax		
	comp=Z,14nm,1.0s						
WSAR	Wadi Sarin	39.27	109	P	P	23 19 51.8	-1.2
	comp=Z,4.9nm,0.7s,baz=354,slow=6.2,SNR=4.0						
AAK	Ala-Archa	40.39	72	P	P	23 20 01.3	-1.0
	comp=Z,6.2nm,1.0s						
AAK	Ala-Archa	40.39	72	⇑*e*P	P	23 20 02.6	+0.3
AAK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KURBB	Kurchatov Arra	40.46	59	P	P	23 20 02.0	-0.5
	comp=Z,2.3nm,0.9s,baz=286,slow=9.2,SNR=6.1						
KURK	Kurchatov	40.49	59	*e*P	P	23 20 03.5	+0.7
	comp=Z,7.8nm,1.0s						
KURK	Kurchatov	40.49	59	⇑*e*P	P	23 20 03.7	+0.9
KURK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
SFJD	Kangerlussuaq	42.05	327	LR	LR	23 38 19.5	
	comp=Z,106nm,18.2s,baz=97,slow=37						
ILULI	Ilulissat	42.17	330	*e*P	P	23 20 17.2	+0.9
	comp=Z,31nm,1.1s						
ILULI	Ilulissat	42.17	330	*e*P	P	23 20 17.2	+0.9
ILULI				pmax	pmax		
	comp=Z,31nm,1.1s						
NVS	Novosibirsk	42.19	51	*e*P	P	23 20 16.6	-0.1
DBIC	Dimbokro	42.41	215	P	P	23 20 17.0	-1.8
	comp=Z,6.2nm,0.7s,baz=10,slow=11,SNR=6.8						
DBIC	Dimbokro	42.41	215	*e*P	P	23 20 18.9	0.0
	comp=Z,19nm,1.1s						
DBIC	Dimbokro	42.41	215	*e*P	P	23 20 18.9	0.0
DBIC				pmax	pmax		
	comp=Z,19nm,1.1s						
TIC	Toumodi	42.50	215	*e*P	P	23 20 17.1	-2.5
KIC	Kosan Boka	42.64	214	*e*P	P	23 20 17.4	-3.4
	comp=Z,52nm,1.4s						
KSH	Kashi	42.69	75	P	P	23 20 21.8	+0.6
KSH				PP	PP	23 22 02.8	+2.9
KSH				*e*PcP	PcP	23 22 15.8	+2.8
KSH				PcS	PcS	23 26 05.8	+0.6
KSH				S	S	23 26 43.8	-1.5
KSH				SS	SS	23 29 47.0	-8.1
KSH				pmax	pmax		
	comp=Z,6.0nm,0.7s						

KSH				pmax	pmax		
	comp=Z,96nm,5.2s						
KSH				LR	LR		
	comp=Z,140nm,13.5s						
KSH				LR	LR		
	comp=Z,99nm,10.9s						
LIC	Lamto	42.88	215	*e*P	P	23 20 20.4	-2.3
	comp=Z,35nm,0.7s						
ZAA0	Zalesovo Array	43.31	52	*e*P	P	23 20 27.0	+1.2
ZALV	Zalesovo Beam	43.31	52	P	P	23 20 24.2	-1.6
	comp=Z,2.0nm,0.6s,baz=284,slow=8.3,SNR=9.3						
ZALV				LR	LR	23 39 32.9	
	comp=Z,206nm,19.6s,baz=250,slow=38						
ZALV	Zalesovo Beam	43.31	52	*e*P	P	23 20 24.4	-1.4
MAKZ	Makanchi	43.82	63	*e*P	P	23 20 30.6	+0.5
	comp=Z,7.7nm,1.3s						
MAKZ	Makanchi	43.82	63	*e*P	P	23 20 30.6	+0.5
MAKZ				pmax	pmax		
	comp=Z,8.0nm,1.3s						
MK31	Makanchi Array	44.03	63	*e*P	P	23 20 31.9	+0.2
MK31	Makanchi Array	44.03	63	*e*P	P	23 20 31.9	+0.2
MKAR	Makanchi Array	44.03	63	P	P	23 20 31.9	+0.1
	comp=Z,3.6nm,0.6s,baz=286,slow=7.1,SNR=43						
MKAR				PcP	PcP	23 22 16.5	-0.7
	comp=Z,1.9nm,0.6s,baz=288,slow=3.8,SNR=6.3						
MKAR				LR	LR	23 42 33.5	
	comp=Z,98nm,19.0s,baz=288,slow=41						
MKAR	Makanchi Array	44.03	63	*e*P	P	23 20 31.9	+0.1
	comp=Z,25nm,0.8s						
MKAR				PcP	PcP	23 22 16.5	-0.7
MK01	Makanchi Array	44.04	63	*e*P	P	23 20 31.9	0.0
WMQ	Urumqi	48.71	65	P	P	23 21 12.0	+3.3
WMQ				pP	sP	23 21 15.5	+5.8
WMQ				sP	pP	23 21 21.0	+12
WMQ				pmax	pmax		
	comp=Z,14nm,0.9s						
WMQ				pmax	pmax		
	comp=Z,160nm,5.1s						
WMQ				LR	LR		
	comp=Z,890nm,15.9s						
WMQ				LR	LR		
	comp=Z,490nm,19.5s						
HVS	Khovu-Aksy	49.35	54	⇑*e*P	P	23 21 14.9	+1.4
HVS				pmax	pmax		
	comp=Z,9.0nm,0.9s						
SCHQ	Schefferville	52.78	314	LR	LR	23 43 03.5	
	comp=Z,80nm,18.7s,baz=4.0,slow=35						
SCHQ	Schefferville	52.78	314	*e*P	P	23 21 39.8	+0.7
	comp=Z,9.3nm,0.8s						
MOY	Mondy	53.26	50	*e*P	P	23 21 45.5	+2.7
TIXI	Tiksi	54.68	21	⇓*e*P	P	23 21 48.6	-4.1
TIXI				pmax	pmax		
	comp=Z,2.0nm,0.8s						
TLY	Talaya	54.71	50	⇑*e*P	P	23 21 50.2	-3.1
TLY				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SONA1	Songino Array	58.20	52	*e*P	P	23 22 19.2	+0.8
SONM	Songino Array	58.20	52	P	P	23 22 19.2	+0.8
	comp=Z,9.0nm,1.0s,baz=291,slow=8.7,SNR=24						
ULN	Ulaanbaatar	58.56	52	*e*P	P	23 22 21.9	+1.0
	comp=Z,11nm,1.4s						
ULN	Ulaanbaatar	58.56	52	*de*P	P	23 22 19.8	-1.1
ULN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
PKME	Peaks-Kenny Pk	58.89	305	*e*P	P	23 22 23.3	+0.3
	comp=Z,44nm,1.8s						
LSZ	Lusaka	59.96	169	P	P	23 22 29.8	-1.0
	comp=Z,3.3nm,1.0s,baz=2.7,slow=6.1,SNR=6.6						
YAK	Yakutsk	60.81	30	⇑*e*P	P	23 22 35.4	-0.5
YAK				pmax	pmax		
	comp=Z,13nm,1.0s						
TRQ	Mont Tremblant	61.41	308	*e*P	P	23 22 39.7	-0.6
LZH	Lanzhou	63.30	65	*e*P	P	23 22 56.0	+2.7
LZH				pP	sP	23 22 57.5	+3.1
LZH				*e*PP	PP	23 25 17.3	+5.2
LZH				pmax	pmax		
	comp=Z,21nm,1.3s						
LZH				pmax	pmax		
	comp=Z,82nm,7.6s						
LZH				LR	LR		
	comp=Z,220nm,15.5s						
LZH				LR	LR		
	comp=Z,220nm,15.7s						
LZH				LR	LR		
	comp=Z,390nm,19.3s						
PLVO	Plevna	63.53	308	*e*P	P	23 22 54.1	-0.4
HHC	Hu-ho-hao-te	65.25	56	*e*P	P	23 23 05.3	-0.7
HHC				S	S	23 31 44.5	-5.7
HHC				pmax	pmax		
	comp=Z,17nm,1.0s						
HHC				pmax	pmax		
	comp=Z,92nm,5.3s						
HHC				LR	LR		
	comp=Z,180nm,14.1s						
HHC				LR	LR		
	comp=Z,130nm,13.3s						
HHC				LR	LR		
	comp=Z,100nm,13.2s						
YKA	Yellowknife Ar	67.04	338	P	P	23 23 17.7	+0.8
	comp=Z,1.5nm,0.7s,baz=36,slow=5.4,SNR=5.7						
YKA				LR	LR	23 53 43.5	
	comp=Z,7.8nm,18.3s,baz=29,slow=37						
SEY	Seymchan	67.17	21	P	P	23 23 18.5	+0.8
	comp=Z,1.3nm,0.5s,baz=308,slow=3.5,SNR=4.8						
SEY	Seymchan	67.17	21	⇓*e*P	P	23 23 17.2	-0.5
XAN	Xi’an	67.84	64	P	P	23 23 25.5	+3.0
XAN				pP	sP	23 23 29.5	+5.9
XAN				pmax	pmax		
	comp=Z,8.0nm,1.2s						
XAN				LR	LR		
	comp=Z,160nm,14.7s						
XAN				LR	LR		
	comp=Z,120nm,17.2s						
ULM	Lac du Bonnet	69.71	321	P	P	23 23 33.5	-0.4
	comp=Z,1.6nm,0.5s,baz=339,slow=8.6,SNR=3.1						
ULM				LR	LR	23 53 15.0	
	comp=Z,99nm,18.8s,baz=20,slow=35						
KLR	Kul’dur	70.43	40	P	P	23 23 39.2	+0.9
	comp=Z,0.3nm,0.9s,baz=324,slow=6.5,SNR=5.1						
KLR	Kul’dur	70.43	40	⇑*e*P	P	23 23 38.5	+0.2
DAWY	Dawson	70.56	350	*e*P	P	23 23 42.0	+3.1
ILAR	Eielson Array	70.68	353	P	P	23 23 40.2	+0.6
	comp=Z,0.5nm,0.6s,baz=1.3,slow=4.3,SNR=4.5						
CMAR	Chiang Mai Arr	71.00	83	P	P	23 23 41.5	-0.8
	comp=Z,2.0nm,0.7s,baz=304,slow=7.4,SNR=11						
CMAR				LR	LR	00 03 19.7	
	comp=Z,31nm,18.7s,baz=250,slow=43						
GYA	Guiyang	71.18	71	*e*P	P	23 23 45.0	+1.6
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
RIDG	Independ’e Rid	71.50	352	*e*P	P	23 23 48.3	+3.6
BPAW	Bear Paw Mtn.	71.65	355	*e*P	P	23 23 46.8	+1.3
CAST	Castle Rocks	72.39	355	*e*P	P	23 23 52.0	+2.0
BOSA	Boshof	72.81	173	P	P	23 23 51.7	-1.1
	comp=Z,2.9nm,0.7s,baz=0.8,slow=6.0,SNR=4.9						
BOSA				LR	LR	23 57 29.1	
	comp=Z,80nm,20.1s,baz=358,slow=37						
SCM	Sheep Creek Mo	73.61	353	*e*P	P	23 24 00.5	+3.2
SCM	Sheep Creek Mo	73.61	353	*e*P	P	23 24 00.5	+3.2
J36A	Seneca 1, Swea	73.95	315	*e*P	P	23 23 59.6	+0.1
G32A	Webster	74.09	318	*e*P	P	23 24 03.5	+3.1
USRK	Ussuriysk Ar.	74.19	43	P	P	23 24 01.6	+0.7
	comp=Z,2.1nm,0.6s,baz=280,slow=4.1						
T47A	Sharon Grove	74.51	307	*e*P	P	23 24 02.9	0.0
RC01	Rabbit Creek A	74.55	354	*e*P	P	23 24 06.3	+3.6
ECSD	EROS Data Cent	74.79	317	*e*P	P	23 24 04.5	+0.1
NJ2	Nanjing	75.42	59	*e*P	P	23 24 09.0	+0.8
NJ2				pmax	pmax		
	comp=Z,17nm,0.5s						
P40A	Paris	75.48	311	*e*P	P	23 24 08.1	-0.4
N37A	Lee Faris, Mou	75.74	313	*e*P	P	23 24 12.5	+2.6
CCM	Cathedral Cave	76.10	310	*e*P	P	23 24 12.1	+0.1
CCM	Cathedral Cave	76.10	310	*e*P	P	23 24 12.1	+0.1
X48A	Hartselle	76.24	305	*e*P	P	23 24 12.9	0.0
PLAL	Pickwick Lake	76.47	306	*e*P	P	23 24 13.7	-0.5
R40A	Maddies Statio	76.49	311	*e*P	P	23 24 14.2	0.0
KSAR	Wonju Array Be	76.95	50	P	P	23 24 17.1	+0.3
KSAR	Wonju Array Be	76.95	50	P	P	23 24 17.1	+0.3
KSRS	Korea Array	76.96	50	P	P	23 24 17.1	+0.3
	comp=Z,4.5nm,0.8s,baz=320,slow=5.0,SNR=11						
KSRS				LR	LR	00 00 05.4	
	comp=Z,57nm,20.2s,baz=310,slow=37						
YSS	Yuzh-Sakhalins	76.97	35	*e*P	P	23 24 18.1	+1.4
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
PETK	Petropavlovsk-	77.06	24	LR	LR	00 02 43.0	
	comp=Z,73nm,18.1s,baz=318,slow=39						
S39A	Bolivar	77.50	311	*e*P	P	23 24 19.7	-0.2
KSU1	Kansas State U	78.21	314	*e*P	P	23 24 23.7	-0.2
	comp=Z,27nm,0.9s						
WHAR	Wooly Hollow	78.67	308	*e*P	P	23 24 26.8	+0.4
HHAR	Hobbs	78.86	310	*e*P	P	23 24 27.5	0.0
ASAJ	Asahikawa	79.16	37	LR	LR	00 03 02.0	
	comp=Z,125nm,18.6s,baz=99,slow=38						
MIAR	Mount Ida	79.93	309	*e*P	P	23 24 34.1	+0.7
MIAR	Mount Ida	79.93	309	*e*P	P	23 24 34.1	+0.7
PHWY	Pilot Hill	80.85	320	*e*P	P	23 24 39.2	+0.6
FLWY	Flagg Ranch	80.88	325	*e*P	P	23 24 41.6	+3.0
PDAR	Pinedale Array	81.48	324	P	P	23 24 41.4	-0.4
	comp=Z,0.7nm,0.6s,baz=39,slow=5.4,SNR=6.9						
PDAR				LR	LR	00 00 40.9	
	comp=Z,71nm,19.3s,baz=49,slow=36						
JNU	Nakatsue	81.77	51	P	P	23 24 44.4	+1.1
	comp=Z,8.1nm,0.9s,baz=321,slow=4.5,SNR=5.1						
JNU				LR	LR	00 03 19.1	
	comp=Z,53nm,20.7s,baz=303,slow=37						
ISCO	Idaho Springs	82.11	320	*e*P	P	23 24 46.1	+0.8
ISCO	Idaho Springs	82.11	320	*e*P	P	23 24 46.1	+0.8
WMOK	Wichita Mounta	82.64	312	*e*P	P	23 24 48.3	+0.5
WMOK	Wichita Mounta	82.64	312	*e*P	P	23 24 48.3	+0.5
BMO	Blue Mountains	82.78	330	*e*P	P	23 24 48.7	+0.3
BMO	Blue Mountains	82.78	330	*e*P	P	23 24 48.7	+0.3
MJAR	Matsushiro Arr	83.08	44	P	P	23 24 50.5	+0.5
	comp=Z,2.0nm,0.9s,baz=301,slow=7.9,SNR=7.8						
MJAR				LR	LR	00 04 36.9	
	comp=Z,63nm,19.5s,baz=20,slow=38						
HWUT	Hardware Ranch	83.28	324	*e*P	P	23 24 51.6	+0.4
MFID	Camas Ranch	83.47	328	*e*P	P	23 24 53.0	+1.0
SDCO	Great Sand Dun	83.70	318	*e*P	P	23 24 54.0	+0.5
PV14	Lion Creek, Pa	84.83	321	*e*P	P	23 24 59.9	+0.7
DUG	Dugway, Tooele	84.98	324	*e*P	P	23 25 02.8	+3.0
DUG	Dugway, Tooele	84.98	324	*e*P	P	23 25 02.8	+3.0
ANMO	Albuquerque	86.40	317	LR	LR	00 04 30.1	
	comp=Z,91nm,18.3s,baz=54,slow=36						
MNTX	Cornudas Mount	88.46	315	*e*P	P	23 25 16.2	-0.6
	comp=Z,4.4nm,1.0s						
TXAR	Lajitas Array	89.43	312	P	P	23 25 21.1	-0.4
	comp=Z,3.2nm,0.9s,baz=71,slow=4.0,SNR=17						
TXAR				LR	LR	00 05 44.4	
	comp=Z,76nm,19.0s,baz=0.0,slow=36						
JTS	JuntasAbangare	91.98	286	LR	LR	23 59 36.7	
	comp=Z,70nm,21.1s,baz=28,slow=31						
LPIG	La Paz	97.14	314	LR	LR	00 11 09.9	
	comp=Z,54nm,18.1s,baz=30,slow=36						
DAV	Davao City (W)	97.53	73	LR	LR	00 16 27.6	
	comp=Z,33nm,18.5s,baz=353,slow=39						
CPUP	Villa Florida	98.21	241	LR	LR	00 09 53.8	
	comp=Z,39nm,19.2s,baz=60,slow=35						
ASAR	Alice Springs	124.47	91	PKP	PKPdf	23 31 21.6	-2.1
	comp=Z,0.9nm,0.7s,baz=335,slow=1.7,SNR=9.0						
DZM	Mont Dzumac	145.91	60	PKPbc	PKPab	23 32 04.5	-0.1
	comp=Z,6.3nm,0.7s,baz=50,slow=7.9,SNR=5.9						

*ISCJB **27** 23:20:11.3±2.1, 46°.8N±0°.4×151°.5E±0°.3, h250^{km}, mb3.2/8, Error ellipse: s-maj=52.1km s-min=20.8km az=164.2*

*IDC **27** 23:20:11.5±10.0, 46°.78N×151°.55E, h240^{km}±122^{km}, mb3.1/8, mb1 3.2/9, mb1mx2.9/67, mbtmp3.7/9, Error ellipse: s-maj=91.1km s-min=30.5km az=18.0*

ISC 27 23:20:12.2±2.3**, 46°.7N**±0°.4×**151°.5E**±0°.2**, h250^{km}, n9, σ0^{s}52**/9**, mb3.1**/8**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
USRK	Ussuriysk Ar.	13.92	267	P	Pn	23 23 19.2	-0.1
	baz=59,slow=12						
ZALV	Zalesovo Beam	41.72	305	P	P	23 27 36.8	+0.3
	0.4nm,0.5s,baz=32,slow=8.5,SNR=2.8						
MKAR	Makanchi Array	45.96	297	P	P	23 28 10.8	+0.5
	0.2nm,0.4s,baz=63,slow=6.8,SNR=6.5						
KURBB	Kurchatov Arra	46.54	303	P	P	23 28 14.0	-0.7
	0.3nm,0.4s,baz=63,slow=8.5,SNR=2.0						
ARCES	ARCESS Array B	57.51	340	P	P	23 29 35.4	+0.5
	1.8nm,1.0s,baz=20,slow=11,SNR=2.0						
FINES	FINESS Array B	63.58	334	P	P	23 30 15.2	-0.7
	0.4nm,0.4s,baz=41,slow=7.4,SNR=7.0						
NOA	NORSAR Array B	67.89	340	P	P	23 30 43.5	+0.1
	0.2nm,0.5s,baz=30,slow=6.7,SNR=4.2						
HFS	Hagfors	68.08	339	P	P	23 30 44.9	+0.3
	0.9nm,0.3s,baz=52,slow=5.7,SNR=2.8						
TXAR	Lajitas Array	78.47	59	P	P	23 31 45.8	0.0
	0.2nm,0.5s,baz=306,slow=3.2,SNR=4.3						

WEL 27 23:31:21.2, 38°S±7°×**18°0W**±°**, h33^{km}, ML3.7**/22**, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.47	268	P	Pn	23 31 45.8	+0.5
MXZ	Matakaoa Point	1.57	278	P	Pn	23 31 46.9	+0.2
MXZ				S	Sn	23 32 05.7	-0.2
PUZ	Puketiti	1.61	259	P	Pn	23 31 48.2	+0.8
PUZ				S	Sn	23 32 08.4	+1.4
PKGZ	Pakihiroa	1.73	266	P	Pn	23 31 49.5	+0.4
CNGZ	Carnagh Statio	1.77	246	P	Pb	23 31 51.4	-1.5
TWGZ	Tauwhareparae	1.85	257	P	Pn	23 31 51.7	+1.1
TWGZ				S	Sn	23 32 14.6	+1.8
HAZ	Te Kaha	1.97	270	P	Pn	23 31 52.8	+0.6
TKGZ	Te Karaka	2.01	250	P	Pn	23 31 54.2	+1.4
TKGZ				S	Sn	23 32 18.9	+2.0
RUGZ	Raukumara Rang	2.06	264	P	Pn	23 31 54.0	+0.5
RIGZ	Rimuhau	2.17	244	P	Pn	23 31 56.3	+1.2
RIGZ				S	Sn	23 32 22.4	+1.5
PRGZ	Paritu Road	2.19	238	P	Pn	23 31 57.5	+2.2
MWZ	Matawai	2.23	255	P	Pn	23 31 56.5	+0.6
MWZ				S	Sn	23 32 22.9	+0.6
MHGZ	Mahia Peninsul	2.30	233	P	Pn	23 31 58.7	+1.9
MHGZ				S	Sb	23 32 27.8	-2.2
RAGZ	Rawiri	2.35	252	P	Pn	23 31 58.7	+1.1
KNZ	Kokohu	2.38	238	P	Pn	23 31 59.5	+1.7
KNZ				S	Sn	23 32 27.7	+1.8
SNGZ	Shannon Statio	2.51	246	P	Pn	23 32 01.3	+1.6
SNGZ				S	Sn	23 32 30.7	+1.6
URZ	Urewera	2.54	258	P	Pn	23 32 01.5	+1.5
URZ				S	Sn	23 32 30.4	+0.6
RTZ	Ruatahuna	2.72	251	P	Pn	23 32 04.5	+1.9
RAHZ	Arahi	2.74	245	P	Pn	23 32 04.8	+1.9
MUGZ	Murupara	2.84	255	P	Pn	23 32 05.4	+1.2
MTHZ	Maungataniwha	2.90	247	P	Pn	23 32 06.5	+1.5
OPRZ	Ohinepanea	2.94	268	P	Pn	23 32 06.0	+0.5
ARHZ	Aropaoanui	2.96	239	P	Pn	23 32 08.1	+2.3
TARZ	Mount Tarawera	3.00	260	P	Pn	23 32 07.6	+1.1
NMHZ	Naumai	3.01	243	P	Pn	23 32 08.9	+2.2
MRHZ	Matea Rd	3.20	250	P	Pn	23 32 10.9	+1.6
MCHZ	McNeill Hill	3.25	238	P	Pn	23 32 11.5	+1.7
BKZ	Black Stump Fm	3.27	244	P	Pn	23 32 11.7	+1.6
KWHZ	Kaweka Forest	3.42	240	P	Pn	23 32 13.6	+1.3
KRHZ	Kereru	3.57	237	P	Pn	23 32 15.4	+1.1
BHHZ	Black Hill Sta	3.70	241	P	Pn	23 32 17.5	+1.3
PRHZ	Porangahau	3.76	228	P	Pn	23 32 17.8	+1.0
KUZ	Kuaotunu	3.77	285	P	Pn	23 32 16.8	-0.2
PNHZ	Pukenui	3.82	235	P	Pn	23 32 18.6	+0.9
MOVZ	Moawhango	3.89	244	P	Pn	23 32 19.6	+0.9
ANWZ	Angora Road	3.98	227	P	Pn	23 32 21.5	+1.6
TSZ	Takapari Road	4.05	235	P	Pn	23 32 21.4	+0.5
DVHZ	Dannevirke	4.06	231	P	Pn	23 32 21.4	+0.4
MKAZ	Moumakai	4.12	278	P	Pn	23 32 22.1	+0.3
MRZ	Mangatainoka R	4.63	230	P	Pn	23 32 29.1	+0.2
CTZ	Chatham Island	6.40	159	P	Pn	23 32 58.8	+5.8

WEL 27 23:36:11.7, 43°.5S±0°.8×**172°.8E**±0°.8**, h12^{km}, ML3.7**/24**, South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MQZ	McQueen’s Vall	0.21	201	P	Pb	23 36 17.5	+0.1
MQZ				S	Sg	23 36 20.9	+1.6
EYCZ	Eyrewell	0.30	287	P	Pg	23 36 19.3	+1.3
EYCZ				P	Pb	23 36 19.2	+0.2
EYCZ				S	Sb	23 36 23.7	-0.2
AKCZ	Akaroa Harbour	0.38	163	P	Pb	23 36 20.9	+0.6
OXZ	Oxford	0.55	289	P	Pb	23 36 23.7	+0.4
OXZ				S	Sb	23 36 31.6	+0.4
LTZ	Lake Taylor	0.81	334	P	Pn	23 36 28.6	-0.4
KHZ	Kahutara	1.24	28	P	Pn	23 36 34.3	-0.5
INZ	Inchbonnie	1.24	309	P	Pb	23 36 34.9	-0.1
RPZ	Rata Peaks	1.25	260	P	Pb	23 36 35.3	0.0
WVZ	Waitaha Valley	1.54	286	P	Pb	23 36 39.5	-0.5
THZ	Tophouse	1.75	4	P	Pn	23 36 42.0	+0.1
DSZ	Denniston Nort	1.90	338	P	Pn	23 36 44.7	+0.8
BSWZ	Blackbirch Sta	1.98	25	P	Pn	23 36 45.2	+0.2
LBZ	Lake Benmore	2.05	244	P	Pn	23 36 46.8	+0.9
FOZ	Fox Glacier	2.14	268	P	Pb	23 36 49.2	-1.1
ODZ	Otahua Downs	2.15	224	P	Pn	23 36 47.9	+0.5
TUWZ	Tuamarina	2.26	23	P	Pn	23 36 48.6	-0.2
NNZ	Nelson	2.34	12	P	Pn	23 36 50.7	+0.8
TCW	Tory Channel	2.56	27	P	Pn	23 36 52.3	-0.7
BHW	Baring Head	2.62	37	P	Pn	23 36 53.2	-0.6
PLWZ	Palliser	2.68	44	P	Pn	23 36 53.8	-0.8
QRZ	Quartz Range	2.69	356	P	Pn	23 36 55.0	+0.3
MSWZ	Moikau Station	2.79	42	P	Pn	23 36 55.0	-1.1
HHSZ	Highcliff Hill	2.83	212	P	Pn	23 36 57.0	+0.4
DUWZ	D’Urville Isla	2.84	18	P	Pn	23 36 57.5	+0.6
JCZ	Jackson Bay	2.93	258	P	Pn	23 36 58.8	+0.7
CAW	Cannon Point	2.95	36	P	Pn	23 36 57.6	-0.8
WKZ	Wanaka	2.99	243	P	Pn	23 36 58.7	-0.2
EAZ	Earnscleugh	3.01	234	P	Pn	23 36 59.8	+0.7
KIW	Kapiti Island	3.10	32	P	Pn	23 37 00.1	-0.3
OGWZ	Otaki Gorge	3.24	35	P	Pn	23 37 01.6	-0.7
TUZ	Tuapeka	3.30	221	P	Pn	23 37 03.7	+0.5
MRZ	Mangatainoka R	3.54	37	P	Pn	23 37 05.3	-1.2
MLZ	Mavora Lakes	3.80	239	P	Pn	23 37 10.2	+0.1
BFZ	Birch Farm	3.84	44	P	Pn	23 37 09.1	-1.5
WHZ	Wether Hill Ro	4.17	234	P	Pn	23 37 14.6	-0.5
TSZ	Takapari Road	4.20	36	P	Pn	23 37 15.4	-0.2
KHEZ	Kahui Hut	4.32	13	P	Pn	23 37 19.5	+2.3
PKE	Pukeiti	4.41	13	P	Pn	23 37 20.8	+2.3
DREZ	Durham Road	4.46	15	P	Pn	23 37 20.6	+1.6
DCZ	Deep Cove	4.46	242	P	Pn	23 37 19.4	+0.4
MOVZ	Moawhango	4.68	30	P	Pn	23 37 22.7	+0.5
APZ	The Paps	4.73	224	P	Pn	23 37 22.8	0.0
WHVZ	Whangaehu Hut	4.73	28	P	Pn	23 37 22.8	-0.2
NGZ	Ngauruhoe	4.83	27	P	Pn	23 37 25.1	+0.7
WTVZ	West Tongariro	4.88	27	P	Pn	23 37 25.6	+0.5
PYZ	Puysegur Point	5.07	236	P	Pn	23 37 27.3	-0.1
HIZ	Hauiti	5.24	18	P	Pn	23 37 30.3	+0.5
TLZ	Tolley Road	5.59	23	P	Pn	23 37 36.0	+1.4

*CSEM **27** 23:42:43.2±0.1, 44°.19N×17°.92E, h5^{km}, ML3.4/8, Error ellipse: s-maj=3.0km s-min=1.9km az=43.0*

*LDG **27** 23:42:43.5±0.1, 44°.30N×18°.02E, h2^{km}, Ml3.5/8, Error ellipse: s-maj=2.3km s-min=1.5km az=20.0*

*BEO **27** 23:42:43.1±0.3, 44°.23N×17°.88E, h9^{km}±2^{km}, ML3.3/12*

*PDG **27** 23:42:43.0±0.7, 44°.20N×18°.00E, h10^{km}±1^{km}, MD3.6/2, ML3.5/13, Error ellipse: s-maj=0.8km s-min=1.5km az=0.0*

*BGR **27** 23:42:45.0±1.2, 44°.22N×18°.26E, h10^{km}, ML3.4/5, Error ellipse: s-maj=34.5km s-min=16.7km az=65.0*

*PRU **27** 23:42:46.1, 44°.21N×17°.97E, h21^{km}*

ISC 27 23:42:42.9±1.0**, 44°.21N**±0°.02×**17°.92E**±0°.02**, h8^{km}**±8^{km}**, n245, σ1^{s}45**/388**, 44C-36D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DOB	Doboj	0.54	13	⇑*i*Pg	Pg	23 42 52.9	-0.4
DOB				*e*Sg	Sg	23 43 01.5	+1.1
DOB	Doboj	0.54	13	⇑*i*Pg	Pg	23 42 52.9	-0.4
DOB				*e*Sg	Sg	23 43 01.5	+1.1
HAPS	Han Pijesak,Bl	0.75	99	*e*Pg	Pg	23 42 56.8	-0.5
HAPS				*e*Sg	Sg	23 43 08.1	+1.0
HAPS	Han Pijesak,Bl	0.75	99	*e*Pg	Pg	23 42 56.8	-0.5
HAPS				*e*Sg	Sg	23 43 07.6	+0.5
HAPS	Han Pijesak,Bl	0.75	99	⇓*i*Pg	Pg	23 42 56.5	-0.8
HAPS				*e*Sg	Sg	23 43 07.6	+0.5
BLY	Banja Luka	0.76	316	*e*Pg	Pg	23 42 57.8	+0.4
BLY				*e*Sg	Sg	23 43 07.1	-0.2
BLY	Banja Luka	0.76	316	⇑*i*P	Pg	23 42 57.8	+0.4
BLY				S	Sb	23 43 09.0	+0.2
BLY	Banja Luka	0.76	316	⇑*i*Pg	Pg	23 42 57.6	+0.2
BLY				*e*Sg	Sg	23 43 07.1	-0.2
BLY				S	Sb	23 43 09.0	+0.2
BLY	Banja Luka	0.76	316	⇑*i*Pg	Pg	23 42 57.6	+0.2
BLY				*e*Sg	Sb	23 43 08.0	-0.8
BBLS	Lazići	1.12	107	*e*Pg	Pg	23 43 04.3	-0.1
BBLS				*e*Sg	Sn	23 43 20.4	-0.2
BBLS	Lazići	1.12	107	⇑*i*Pg	Pg	23 43 04.3	-0.1
BBLS				*e*Sg	Sg	23 43 18.9	0.0
BBLS	Lazići	1.12	107	⇑*i*Pg	Pg	23 43 04.3	-0.1
BBLS				*e*Sg	Sg	23 43 18.9	0.0
TEKS	Tekeris	1.20	73	*e*Pg	Pg	23 43 05.0	-0.9
TEKS				*e*Sg	Sn	23 43 22.9	+0.4
TEKS	Tekeris	1.20	73	*e*Pg	Pg	23 43 05.0	-0.9
TEKS				*e*Sg	Sg	23 43 21.9	+0.4
TEKS	Tekeris	1.20	73	*e*Pg	Pg	23 43 04.8	-1.1
TEKS				*e*Sg	Sg	23 43 21.9	+0.4
UPM	Unac-Piva	1.23	144	⇑*i*Pg	Pg	23 43 05.5	-1.0
UPM				*i* Sg	Sn	23 43 24.5	+1.1
UPM	Unac-Piva	1.23	144	⇑*i*Pg	Pg	23 43 05.5	-1.0
UPM				*e*Sg	Sb	23 43 22.9	+0.4
UPM	Unac-Piva	1.23	144	⇑*i*Pg	Pg	23 43 05.5	-1.0
UPM				*e*Sg	Sb	23 43 22.9	+0.4
STON	Ston	1.34	187	*e*Pg	Pn	23 43 07.4	-0.5
STON				*e*Sg	Sn	23 43 26.4	+0.5
STON	Ston	1.34	187	*e*Pn	Pn	23 43 07.3	-0.5
STON				Sn	Sn	23 43 26.0	0.0
STON	Ston	1.34	187	*e*Pg	Pn	23 43 07.4	-0.5
STON				*e*Sg	Sn	23 43 26.4	+0.5
STON	Ston	1.34	187	⇓*i*Pg	Pn	23 43 07.1	-0.8
STON				*e*Sg	Sn	23 43 26.1	+0.2
PLE	Pljevlja	1.38	129	⇑*i*Pg	Pn	23 43 08.4	-0.1
PLE				*i* Sg	Sn	23 43 29.2	+2.3
PLE	Pljevlja	1.38	129	⇑*i*Pg	Pn	23 43 08.4	-0.1
PLE				*i* Sg	Sn	23 43 29.2	+2.3
BRY	Bratogost	1.38	161	⇑*i*Pg	Pn	23 43 08.1	-0.4
BRY				*i* Sg	Sb	23 43 26.2	-0.6
BRY	Bratogost	1.38	161	⇑*i*Pg	Pn	23 43 08.1	-0.4
BRY				*e*Sg	Sb	23 43 26.8	0.0
BRY	Bratogost	1.38	161	⇑*i*Pg	Pn	23 43 08.1	-0.4
BRY				*e*Sg	Sb	23 43 26.8	0.0
DIVS	Divibare	1.49	93	*e*Pg	Pn	23 43 10.3	+0.2
DIVS				*e*Sg	Sg	23 43 31.1	+0.3
DIVS	Divibare	1.49	93	⇑*i*Pg	Pn	23 43 10.3	+0.2
DIVS				*e*Sg	Sb	23 43 30.7	+0.7
DIVS	Divibare	1.49	93	⇑*i*Pg	Pn	23 43 10.3	+0.2
DIVS				*e*Sg	Sb	23 43 30.7	+0.7
TREB	Trebinje	1.52	168	*e*Pg	Pb	23 43 10.8	-0.5
TREB				*e*Sg	Sg	23 43 32.6	+0.9
TREB	Trebinje	1.52	168	*e*Pn	Pn	23 43 10.5	+0.1
TREB	Trebinje	1.52	168	*e*Pg	Pb	23 43 10.8	-0.5
TREB				*e*Sn	Sg	23 43 31.9	+0.2
TREB				*e*Sg	Sg	23 43 32.6	+0.9
TREB	Trebinje	1.52	168	*e*Pn	Pn	23 43 10.5	+0.1
TREB				*e*Sn	Sg	23 43 31.9	+0.2
UDBI	Udbina	1.58	282	*e*Pn	Pn	23 43 11.2	-0.1
NKY	Niksic	1.60	150	⇑*i*Pg	Pb	23 43 12.5	-0.1
NKY				*i* Sg	Sg	23 43 35.4	+1.3
NKY	Niksic	1.60	150	⇑*i*Pg	Pb	23 43 12.5	-0.1
NKY				*i* Sg	Sg	23 43 35.4	+1.3
NKME	Niksic	1.62	152	⇑*i*Pn	Pn	23 43 11.7	-0.1
NKME				*i* Sn	Sg	23 43 35.0	0.0
NKME	Niksic	1.62	152	⇑*i*Pn	Pn	23 43 11.7	-0.1
NKME				*i* Sn	Sg	23 43 35.0	0.0
FGSL	Fruska Gora	1.65	54	*e*Pn	Pn	23 43 12.0	-0.1
FGSL				*e*Sn	Sb	23 43 34.6	+0.2
FRGS	Fruska Gora	1.65	54	*e*Pn	Pn	23 43 12.0	-0.1
FRGS				*e*Sn	Sb	23 43 34.6	+0.2
FRGS	Fruska Gora	1.65	54	*e*Pn	Pn	23 43 12.1	-0.1
FRGS				*e*Sn	Sn	23 43 33.9	+0.4
FRGS	Fruska Gora	1.65	54	*e*Pn	Pn	23 43 12.1	0.0
FRGS				*e*Sn	Sn	23 43 33.9	+0.4
IVAS	Ivanjica	1.73	111	*e*Pn	Pn	23 43 13.2	-0.1
IVAS				*e*Sn	Sn	23 43 36.5	+0.9
IVAS	Ivanjica	1.73	111	*e*Pn	Pn	23 43 13.2	-0.1
IVAS				*e*Sn	Sn	23 43 36.5	+0.9
SJES	Sjenica	1.76	122	*e*Pn	Pn	23 43 14.3	+0.5
SJES				*e*Sn	Sb	23 43 37.4	-0.4
KOME	Kolasin	1.78	139	⇓*i*Pn	Pb	23 43 15.2	-0.6
KOME				*i* Sn	Sg	23 43 39.8	-0.3
KOME	Kolasin	1.78	139	⇓*i*Pn	Pb	23 43 15.2	-0.6
KOME				*i* Sn	Sg	23 43 39.8	-0.3
TRUS	Trudelj	1.79	89	*e*Pn	Pn	23 43 14.2	+0.2
TRUS				*e*Sn	Sb	23 43 38.1	-0.3
TRUS	Trudelj	1.79	89	*e*Pn	Pn	23 43 14.2	+0.2

TRUS				*e*Sn	Sb	23 43 38.1	-0.3
HCY	Herceg Novi	1.81	166	⇑*i*Pn	Pb	23 43 16.0	-0.2
HCY				*i* Sn	Sg	23 43 41.0	+0.1
HCY	Herceg Novi	1.81	166	⇑*i*Pn	Pb	23 43 16.0	-0.2
HCY				*e*Sn	Sb	23 43 38.9	-0.1
HCY	Herceg Novi	1.81	166	*e*Pn	Pn	23 43 14.7	+0.4
HCY				*e*Sn	Sb	23 43 38.9	-0.1
CEME	Cevo	1.81	156	⇑*i*Pn	Pn	23 43 15.3	+0.9
CEME				*i* Sn	Sg	23 43 40.7	-0.3
CEME	Cevo	1.81	156	⇑*i*Pn	Pn	23 43 15.3	+0.9
CEME				*i* Sn	Sg	23 43 40.7	-0.3
BEO	Beograd	1.92	71	*e*Pn	Pn	23 43 15.4	-0.4
BEO	Beograd	1.92	71	*e*Pn	Pn	23 43 15.4	-0.4
BEY	Berane	1.96	132	⇑*i*Pn	Pn	23 43 17.6	+1.2
BEY				*i* Sn	Sb	23 43 44.1	+0.7
IVA	Berane	1.96	132	⇑*i*Pn	Pn	23 43 17.6	+1.2
IVA				*i* Sn	Sb	23 43 44.1	+0.7
PDG	Podgorica	2.02	151	*e*Pn	Pn	23 43 18.1	+0.8
PDG	Podgorica	2.02	151	⇓*i*P	Pb	23 43 19.6	-0.3
PDG	Podgorica	2.02	151	⇑*i*Pn	Pn	23 43 18.4	+1.1
PDG	Podgorica	2.02	151	⇓*i*P	Pb	23 43 19.6	-0.3
PDG				*e*Sn	Sb	23 43 44.2	-1.0
PDG				S	Sg	23 43 48.2	+0.3
PDG	Podgorica	2.02	151	*e*Pn	Pn	23 43 18.2	+0.9
PDG				*e*Sn	Sb	23 43 44.2	-1.0
TTG	Podgorica	2.02	151	⇑*i*Pn	Pn	23 43 18.4	+1.1
TTG				*i* Sn	Sb	23 43 45.8	+0.6
BUM	Brajici-Budva	2.03	159	⇑*i*Pn	Pb	23 43 18.9	-1.2
BUM				*i* Sn	Sb	23 43 46.3	+0.8
BUM	Brajici-Budva	2.03	159	⇑*i*Pn	Pb	23 43 18.9	-1.2
BUM				*i* Sn	Sb	23 43 46.3	+0.8
GRUS	Gruza	2.04	98	*e*Pn	Pn	23 43 17.8	+0.3
GRUS				*e*Sn	Sn	23 43 43.7	+0.6
GRUS	Gruza	2.04	98	*e*Pn	Pn	23 43 17.8	+0.3
GRUS				*e*Sn	Sn	23 43 43.7	+0.6
MORH	Mˆ‡rˆ¡gy, Hung	2.07	14	⇓*e*Pn	Pn	23 43 18.2	+0.3
MORH				*e*Sn	Sg	23 43 49.1	-0.3
MORH	Mˆ‡rˆ¡gy, Hung	2.07	14	*e*Pn	Pn	23 43 18.2	+0.3
MORH				*e*Sn	Sn	23 43 45.1	+1.2
MORH	Mˆ‡rˆ¡gy, Hung	2.07	14	*e*Pn	Pn	23 43 18.2	+0.3
MORH				*e*Sn	Sn	23 43 45.1	+1.2
ZAG	Zagreb	2.12	320	*e*Pn	Pn	23 43 19.7	+1.1
ZAG				*e*Sn	Sn	23 43 46.7	+1.5
ZAG	Zagreb	2.12	320	*e*Pn	Pn	23 43 19.7	+1.1
ZAG				*e*Sn	Sn	23 43 46.7	+1.5
PVY	Plav	2.19	137	⇑*i*Pn	Pn	23 43 20.9	+1.2
PVY				*i* Sn	Sb	23 43 50.1	0.0
PVY	Plav	2.19	137	⇑*i*Pn	Pn	23 43 20.9	+1.2
PVY				*i* Sn	Sb	23 43 50.1	0.0
NVLJ	Novalja	2.22	280	*e*Pn	Pb	23 43 21.8	-1.3
DRME	Dracevica, Mon	2.22	155	⇓*i*Pn	Pn	23 43 21.4	+1.5
DRME				*i* Sn	Sb	23 43 50.5	-0.3
DRME	Dracevica, Mon	2.22	155	⇓*i*Pn	Pn	23 43 21.4	+1.5
DRME				*e*Sn	Sn	23 43 48.6	+1.0
DRME	Dracevica, Mon	2.22	155	*e*Pn	Pn	23 43 21.5	+1.5
DRME				*e*Sn	Sn	23 43 48.6	+1.0
BOJS	Bojanci	2.30	305	*i* Pn	Pn	23 43 22.5	+1.5
BOJS				*i* Sn	Sn	23 43 50.5	+1.0
	comp=Z,91nm,0.4s						
SVIS	Svilajnac	2.37	87	*e*Pn	Pn	23 43 22.8	+0.8
SVIS	Svilajnac	2.37	87	*e*Pn	Pn	23 43 22.8	+0.8
CRES	Cresnjev	2.38	314	*e*Pn	Pn	23 43 23.6	+1.4
CRES				*e*Sn	Sn	23 43 53.4	+1.8
CRES	Cresnjev	2.38	314	*e*Pn	Pn	23 43 23.6	+1.4
CRES				*e*Sn	Sn	23 43 53.4	+1.8
BEHE	Becsehely	2.40	341	⇓*e*Pn	Pn	23 43 23.6	+1.1
BEHE				*e*Sn	Sn	23 43 52.4	+0.3
BEHE	Becsehely	2.40	341	⇓*i*Pn	Pn	23 43 23.6	+1.1
BEHE				*e*Sn	Sb	23 43 54.4	-1.8
BEHE	Becsehely	2.40	341	⇓*i*Pn	Pn	23 43 23.6	+1.1
BEHE				*e*Sn	Sb	23 43 54.4	-1.8
ULC	Ulcinj	2.44	156	⇓*i*Pn	Pn	23 43 24.8	+1.8
ULC				*i* Sn	Sb	23 43 55.8	-1.5
ULC	Ulcinj	2.44	156	⇓*i*Pn	Pn	23 43 24.8	+1.8
ULC				*i* Sn	Sb	23 43 55.8	-1.5
SELS	Selova	2.52	112	*e*Pn	Pn	23 43 24.5	+0.4
BANR	Banloc	2.57	62	⇓*i*P	Pg	23 43 31.2	-0.9
RIY	Rijeka	2.69	296	*e*Pn	Pn	23 43 28.4	+1.9
RIY				*e*Sn	Sn	23 44 01.3	+2.1
KUBS	Kucevo	2.70	84	*e*Pn	Pn	23 43 26.5	-0.1
KUBS	Kucevo	2.70	84	*e*Pn	Pn	23 43 26.5	-0.1
MDVR	Moldovita	2.77	77	⇑*i*P	Pb	23 43 31.9	-0.8
MDVR	Moldovita	2.77	77	⇑*i*P	Pb	23 43 31.9	-0.8
BOVS	Bovan	2.79	100	*e*Pn	Pn	23 43 28.0	+0.2
BOVS	Bovan	2.79	100	*e*Pn	Pn	23 43 28.0	+0.2
CEY	Cerknica	2.92	303	*e*Pn	Pn	23 43 31.2	+1.6
CEY				*e*Sn	Sn	23 44 06.9	+2.1
CEY	Cerknica	2.92	303	*e*Pn	Pn	23 43 31.2	+1.6
CEY				*e*Sn	Sn	23 44 06.9	+2.1
BZS	Buzias	2.98	60	⇓*i*P	Pn	23 43 30.5	+0.1
BZS	Buzias	2.98	60	⇓*i*P	Pn	23 43 30.5	+0.1
LJU	Ljubljana	3.02	309	*e*Pn	Pn	23 43 32.7	+1.7
LJU				*e*Sn	Sn	23 44 08.9	+1.4
LJU	Ljubljana	3.02	309	*e*Pn	Pn	23 43 32.7	+1.7
LJU				*e*Sn	Sn	23 44 08.9	+1.4
ZAGS	Zajecar	3.13	96	*e*Pn	Pn	23 43 33.5	+1.0
ZAGS	Zajecar	3.13	96	*e*Pn	Pn	23 43 33.5	+1.0
BARS	Barje	3.15	115	*e*Pn	Pn	23 43 33.1	+0.3
BARS	Barje	3.15	115	*e*Pn	Pn	23 43 33.1	+0.3
CSKK	Csˆ‡kako	3.17	4	*e*Pn	Pn	23 43 33.8	+0.8
CSKK				*e*Sn	Sg	23 44 25.0	+0.5
SOKA	Soboth	3.20	322	*i* Pn	Pn	23 43 34.4	+0.9
	comp=Z,0.7nm,0.2s,SNR=19						
SOKA				Sn	Sn	23 44 10.8	-1.1
	comp=Z,23nm,0.3s						
SOKA	Soboth	3.20	322	Pn	Pn	23 43 34.4	+0.9
	comp=Z,0.7nm,0.2s,SNR=19						
SOKA				Sn	Sn	23 44 10.8	-1.1
	comp=Z,23nm,0.3s						
HERR	Herculane	3.28	77	⇓*i*P	Pn	23 43 35.7	+1.1
HERR	Herculane	3.28	77	⇓*i*P	Pn	23 43 35.7	+1.1
OBKA	Obir	3.31	315	*e*Pn	Pn	23 43 37.4	+2.3
OBKA	Obir	3.31	315	*e*Pn	Pn	23 43 36.8	+1.7
	comp=Z,0.6nm,0.1s,SNR=11						
OBKA				*e*Sn	Sn	23 44 15.6	+1.0
	comp=Z,28nm,0.4s						
OBKA	Obir	3.31	315	Pn	Pn	23 43 37.4	+2.3
OBKA				Sn	Sn	23 44 15.6	+1.0
	comp=Z,28nm,0.4s						
BUD	Budapest	3.37	13	⇓*e*Pn	Pn	23 43 36.3	+0.6
BUD				*e*Sn	Sg	23 44 32.8	+1.9
ARSA	Arzberg	3.48	332	*e*Pn	Pn	23 43 38.3	+1.0
ARSA				*e*Sn	Sn	23 44 16.9	-1.8
ARSA	Arzberg	3.48	332	*e*Pn	Pn	23 43 37.6	+0.3
	comp=Z,15nm,0.4s,SNR=33						
ARSA				*e*Sn	Sn	23 44 19.1	+0.4
	comp=Z,10nm,0.4s						
ARSA	Arzberg	3.48	332	Pn	Pn	23 43 38.3	+1.0
ARSA				Sn	Sn	23 44 19.0	+0.4
	comp=Z,10nm,0.4s						
ZAPS	Zavoj	3.54	104	*e*Pn	Pn	23 43 39.3	+1.2
SOP	Sopron	3.60	345	⇓*e*Pn	Pn	23 43 39.7	+0.7
SOP				*e*Sn	Sn	23 44 19.8	-1.9
MATE	Matera	3.67	195	⇓*i*P	Pn	23 43 38.9	-0.9
MATE	Matera	3.67	195	⇓*i*P	Pn	23 43 38.9	-0.9
KRUS	Krusevo	3.75	138	*i* Pn	Pn	23 43 42.8	+1.7
OHR	Ohrid	3.75	145	*i* Pn	Pb	23 43 47.8	-1.6
AQU	L’Aquila	3.79	242	*e*Pn	Pn	23 43 43.0	+1.5
AQU				*e*Sn	Sn	23 44 27.0	+0.7
AQU	L’Aquila	3.79	242	*e*Pn	Pn	23 43 43.0	+1.5
AQU				*e*Sn	Sn	23 44 27.0	+0.7
SRE	Strehaia	3.81	81	⇑*i*P	Pn	23 43 43.1	+1.3
SRE	Strehaia	3.81	81	⇑*i*P	Pn	23 43 43.1	+1.3
MYKA	Terra Mystica	3.87	310	*i* Pn	Pn	23 43 45.4	+2.7
	comp=Z,1.2nm,0.2s						
MYKA				*e*Sn	Sn	23 44 28.3	-0.1
	comp=Z,11nm,0.4s						
MYKA	Terra Mystica	3.87	310	Pn	Pn	23 43 45.4	+2.7
	comp=Z,1.2nm,0.2s						
MYKA				Sn	Sn	23 44 28.3	-0.1
	comp=Z,11nm,0.4s						
DEV	Deva	3.91	63	⇓*i*P	Pn	23 43 43.4	+0.2
DEV	Deva	3.91	63	⇓*i*P	Pn	23 43 43.4	+0.2
PSZ	Piszkesteto	3.96	20	⇑*i*P	Pn	23 43 43.9	0.0
PSZ	Piszkesteto	3.96	20	S	Sg	23 44 52.8	+2.9
PSZ	Piszkesteto	3.96	20	⇓*e*Pn	Pn	23 43 44.0	0.0
PSZ				*e*Sn	Sn	23 44 30.4	-0.1
PSZ	Piszkesteto	3.96	20	⇑*i*P	Pn	23 43 43.9	0.0
CONA	Conrad Observa	3.99	340	*i* Pn	Pn	23 43 45.3	+0.9
	comp=Z,1.2nm,0.1s,SNR=16						
CONA				*e*Sn	Sn	23 44 31.7	+0.4
	comp=Z,18nm,0.4s						
CONA	Conrad Observa	3.99	340	Pn	Pn	23 43 45.3	+0.9
	comp=Z,1.2nm,0.1s,SNR=16						
CONA				Sn	Sn	23 44 31.7	+0.4
	comp=Z,18nm,0.4s						
VTS	Vitosha	4.18	111	⇑*i*P	Pn	23 43 47.8	+0.8
VTS	Vitosha	4.18	111	⇑*i*P	Pn	23 43 47.8	+0.8
MODS	Modra-Piesok	4.19	354	*e*PN	Pn	23 43 47.6	+0.5
MODS				*e*SN	Sn	23 44 35.0	-1.2
MODS				*e*LG	Lg	23 44 38.6	
MODS	Modra-Piesok	4.19	354	*e*Pn	Pn	23 43 47.6	+0.5
MODS				*e*Sn	Sn	23 44 35.0	-1.2
DRGR		4.24	51	⇓*i*P	Pn	23 43 51.5	+3.6
DRGR		4.24	51	⇓*i*P	Pn	23 43 51.5	+3.6
KBA	Koelnbreinsper	4.31	313	*e*Pn	Pn	23 43 50.8	+2.0
KBA				*e*Sn	Sn	23 44 38.8	-0.5
KBA	Koelnbreinsper	4.31	313	*e*Pn	Pn	23 43 50.8	+2.0
	comp=Z,1.7nm,0.3s,SNR=8.3						
KBA				*e*Sn	Sn	23 44 39.3	0.0
	comp=Z,4.3nm,0.4s						
KBA	Koelnbreinsper	4.31	313	Pn	Pn	23 43 50.8	+2.0
KBA				Sn	Sn	23 44 38.8	-0.5
SMOL	Smolenice	4.32	356	*e*PN	Pn	23 43 50.2	+1.3
SMOL				*e*SN	Sn	23 44 38.1	-1.3
SMOL	Smolenice	4.32	356	*e*Pn	Pn	23 43 50.2	+1.3
SMOL				*e*Sn	Sn	23 44 38.1	-1.3
VYHS	Vyhne	4.33	8	*e*PN	Pn	23 43 49.8	+0.8
VYHS				*e*SN	Sn	23 44 39.2	-0.6
VYHS				*e*LG	Lg	23 44 41.3	
VYHS	Vyhne	4.33	8	*e*Pn	Pn	23 43 49.8	+0.8
VYHS				*e*Sn	Sn	23 44 39.2	-0.6
LOT	Lotru	4.34	71	⇑*i*P	Pn	23 43 51.5	+2.3
LOT	Lotru	4.34	71	⇑*i*P	Pn	23 43 51.5	+2.3
MOA	Molln	4.45	326	*e*Pn	Pn	23 43 52.4	+1.8
MOA				*e*Sn	Sn	23 44 42.0	-0.5
MOA	Molln	4.45	326	*e*Pn	Pn	23 43 52.3	+1.8
	comp=Z,0.4nm,0.1s,SNR=30						
MOA				*e*Sn	Sn	23 44 43.3	+0.8
	comp=Z,13nm,0.3s						
MOA	Molln	4.45	326	Pn	Pn	23 43 52.4	+1.8
MOA				Sn	Sn	23 44 42.0	-0.5
ABTA	Abfaltersbach	4.58	306	*i* Pn	Pn	23 43 54.6	+2.2
	comp=Z,2.4nm,0.3s,SNR=9.1						
ABTA				Sn	Sn	23 44 46.8	+1.0
	comp=Z,7.6nm,0.4s						
ABTA	Abfaltersbach	4.58	306	Pn	Pn	23 43 54.6	+2.2
	comp=Z,2.4nm,0.3s,SNR=9.1						
ABTA				Sn	Sn	23 44 46.8	+1.0
	comp=Z,7.6nm,0.4s						
JAVC	Velka Javorina	4.66	358	*e*Pn	Pn	23 43 54.8	+1.3
JAVC	Velka Javorina	4.66	358	*e*PN	Pn	23 43 54.8	+1.3
CJR	Cluj-Napoca	4.71	56	⇓*i*P	Pn	23 43 59.7	+5.4
CJR	Cluj-Napoca	4.71	56	⇓*i*P	Pn	23 43 59.7	+5.4
KRUC	Moravsky	4.97	348	*e*Pn	Pn	23 43 58.5	+0.8
KRUC				*e*Sn	Sn	23 44 54.5	-0.9
KRUC	Moravsky	4.97	348	*e*PN	Pn	23 43 58.5	+0.8
KRUC				*e*SN	Sn	23 44 54.5	-0.9
LANS	Liptovska Anna	5.06	12	*e*PN	Pn	23 44 00.5	+1.5
LANS	Liptovska Anna	5.06	12	*e*Pn	Pn	23 44 00.5	+1.5
VRAC	Vranov	5.18	350	⇓*i*P	Pn	23 43 58.3	-2.4
VRAC	Vranov	5.18	350	⇓*i*P	Pn	23 43 58.3	-2.4
VRAC	Vranov	5.18	350	*e*Pn	Pn	23 44 00.8	+0.1
VRAC				*e*Sn	Sn	23 45 00.5	-0.2
VRAC	Vranov	5.18	350	*e*PN	Pn	23 44 00.8	+0.1
VRAC				*e*SN	Sn	23 45 00.5	-0.2
VOIR		5.22	74	⇓*i*P	Pn	23 44 04.2	+3.0
VOIR		5.22	74	⇓*i*P	Pn	23 44 04.2	+3.0
CRVS	Cervenica-Dubn	5.29	26	*e*PN	Pn	23 44 03.7	+1.5
CRVS	Cervenica-Dubn	5.29	26	*e*Pn	Pn	23 44 03.7	+1.5
WTTA	Wattenberg	5.36	307	*e*Pn	Pn	23 44 07.0	+3.7
WTTA	Wattenberg	5.36	307	*i* Pn	Pn	23 44 03.3	0.0
	comp=Z,3.5nm,0.2s,SNR=5.2						
WTTA				*e*Sn	Sn	23 45 07.5	+2.3
	comp=Z,3.4nm,0.3s						
WTTA	Wattenberg	5.36	307	Pn	Pn	23 44 07.0	+3.7
WTTA				Sn	Sn	23 45 07.5	+2.3
	comp=Z,3.4nm,0.3s						
WATA	Walderalm	5.43	307	*e*Pn	Pn	23 44 07.4	+3.2
	comp=Z,2.4nm,0.2s						
WATA				*e*Sn	Sn	23 45 09.3	+2.3
	comp=Z,2.6nm,0.2s						
WATA	Walderalm	5.43	307	Pn	Pn	23 44 07.4	+3.2
	comp=Z,2.4nm,0.2s						
WATA				Sn	Sn	23 45 09.3	+2.3
	comp=Z,2.6nm,0.2s						
GEC2	GERESS Array S	5.48	329	*e*Pn	Pn	23 44 07.2	+2.4
GEC2				*e*Sn	Sn	23 45 06.9	-1.1
GEC2	GERESS Array S	5.48	329	Pn	Pn	23 44 07.2	+2.4
GEC2				Sn	Sn	23 45 06.9	-1.1
MORC	Moravsky Berou	5.58	357	⇓*i*P	Pn	23 44 07.9	+1.7
MORC	Moravsky Berou	5.58	357	*e*Pn	Pn	23 44 07.6	+1.4
MORC	Moravsky Berou	5.58	357	⇓*i*P	Pn	23 44 07.9	+1.7
MORC				*e*Sn	Sn	23 45 09.3	-1.1
MORC	Moravsky Berou	5.58	357	*e*PN	Pn	23 44 07.6	+1.4
MORC				*e*SN	Sn	23 45 09.3	-1.1
OKC	Ostrava-Krasne	5.63	1	*e*PN	Pn	23 44 08.3	+1.4
OKC				*e*SN	Sn	23 45 10.6	-1.1
OKC	Ostrava-Krasne	5.63	1	Pn	Pn	23 44 08.3	+1.4
OKC				Sn	Sn	23 45 10.6	-1.1
MOTA	Moosalm	5.71	306	*e*Pn	Pn	23 44 10.7	+2.6
	comp=Z,6.7nm,0.5s,SNR=19						
MOTA	Moosalm	5.71	306	Pn	Pn	23 44 10.7	+2.6
	comp=Z,6.7nm,0.5s,SNR=19						
KHC	Kasperske Hory	5.76	330	*e*PN	Pn	23 44 10.8	+2.1
KHC				*e*SN	Sn	23 45 13.0	-1.9
KHC	Kasperske Hory	5.76	330	Pn	Pn	23 44 10.8	+2.1
FETA	Feichten	5.78	302	*i* Pn	Pn	23 44 12.4	+3.4
	comp=Z,2.0nm,0.6s						
FETA				*e*Sn	Sn	23 45 20.9	+5.4
	comp=Z,1.9nm,0.4s						
FETA	Feichten	5.78	302	Pn	Pn	23 44 12.4	+3.4
	comp=Z,2.0nm,0.6s						
KRLC	Kraliky	5.92	353	*e*PN	Pn	23 44 13.2	+2.3
KRLC	Kraliky	5.92	353	Pn	Pn	23 44 13.2	+2.3
BURAR	Bucovina Array	6.12	54	⇑*i*P	Pn	23 44 21.1	+7.4
PRU	Pruhonice	6.23	339	*e*PN	Pn	23 44 16.5	+1.5
PRU	Pruhonice	6.23	339	Pn	Pn	23 44 16.5	+1.5
DPC	Dobruska-Polom	6.24	351	*e*PN	Pn	23 44 16.1	+0.8
DPC	Dobruska-Polom	6.24	351	Pn	Pn	23 44 16.1	+0.8
DAVA	Damuels	6.42	302	*i* Pn	Pn	23 44 18.4	+0.7
	comp=Z,0.3nm,0.1s						
DAVA				*e*Sn	Sn	23 45 35.2	+4.0
	comp=Z,6.5nm,0.5s						
DAVA	Damuels	6.42	302	Pn	Pn	23 44 18.4	+0.7
	comp=Z,0.3nm,0.1s						
DAVA				Sn	Sn	23 45 35.2	+4.0
	comp=Z,6.5nm,0.5s						
UBR	Ueberruh	6.46	305	*e*Pn	Pn	23 44 20.1	+1.8
UBR	Ueberruh	6.46	305	Pn	Pn	23 44 20.1	+1.8
PGF	Pioggiola	6.71	259	*e*Pn	Pn	23 44 22.1	+0.3
PGF	Pioggiola	6.71	259	*e*Pn	Pn	23 44 22.1	+0.3
BRG	Berggiesshubel	7.19	339	SG	Sb	23 46 11.5	-2.3
	comp=Z,3.6nm,0.6s						
SBF	Sospel	7.57	271	*e*Pn	Pn	23 44 33.4	-0.1
SBF				*e*Sn	Sn	23 45 55.1	-4.3
	comp=Z,13nm,0.6s						
SBF	Sospel	7.57	271	*e*Pn	Pn	23 44 33.4	-0.1
CLL	Collm	7.84	337	*e*Sb	Sb	23 46 32.0	-0.4
CLL				*e*Sg	Sg	23 46 56.0	+1.7
MBDF	Montbardon	8.00	278	*e*Pn	Pn	23 44 38.7	-0.7
MBDF				*e*Sn	Sn	23 46 05.4	-4.7
	comp=Z,5.8nm,0.5s						
MBDF	Montbardon	8.00	278	*e*Pn	Pn	23 44 38.7	-0.7
LPG	La Plagne	8.04	283	*e*Pn	Pn	23 44 40.0	-0.2
LPG				*e*Sn	Sn	23 46 06.5	-5.0
	comp=Z,12nm,0.6s						
LPG	La Plagne	8.04	283	*e*Pn	Pn	23 44 40.0	-0.2
LPL	La Plagne	8.06	283	*e*Pn	Pn	23 44 40.0	-0.4
LPL				*e*Sn	Sn	23 46 06.2	-5.6
	comp=Z,8.8nm,0.5s						
LPL	La Plagne	8.06	283	*e*Pn	Pn	23 44 40.0	-0.4
FRF	La Foret Royal	8.17	269	*e*Pn	Pn	23 44 41.8	+0.1
FRF				*e*Sn	Sn	23 46 09.8	-4.4
	comp=Z,3.5nm,0.5s						
FRF	La Foret Royal	8.17	269	*e*Pn	Pn	23 44 41.8	+0.1
LMR	La Mourre	8.31	268	*e*Pn	Pn	23 44 43.7	+0.1
LMR				*e*Sn	Sn	23 46 13.1	-4.4
	comp=Z,2.8nm,0.5s						
LMR	La Mourre	8.31	268	*e*Pn	Pn	23 44 43.7	+0.1
HINF	Hinteralfeld	8.51	299	*e*Pn	Pn	23 44 45.5	-0.8
HINF	Hinteralfeld	8.51	299	*e*Pn	Pn	23 44 45.5	-0.8
ORIF	Oris-en-Rattie	8.63	279	*e*Pn	Pn	23 44 48.0	-0.1
ORIF				*e*Sn	Sn	23 46 20.4	-5.2
	comp=Z,7.2nm,0.6s						
ORIF	Oris-en-Rattie	8.63	279	*e*Pn	Pn	23 44 48.0	-0.1
SMRF	Simiane la Rot	8.89	273	*e*Pn	Pn	23 44 51.6	0.0
SMRF				*e*Sn	Sn	23 46 26.8	-5.2
	comp=Z,3.4nm,0.7s						
SMRF	Simiane la Rot	8.89	273	*e*Pn	Pn	23 44 51.6	0.0
HAU	Haudompre	8.89	299	*e*Pn	Pn	23 44 50.8	-0.8
HAU	Haudompre	8.89	299	*e*Pn	Pn	23 44 50.8	-0.8
VIVF	Saint-Julien-l	9.49	279	*e*Pn	Pn	23 44 59.4	-0.4
VIVF	Saint-Julien-l	9.49	279	*e*Pn	Pn	23 44 59.4	-0.4
SMF	Signal de Mont	10.20	289	*e*Pn	Pn	23 45 08.9	-0.6
SMF	Signal de Mont	10.20	289	*e*Pn	Pn	23 45 08.9	-0.6
LOR	Lormes	10.30	292	*e*Pn	Pn	23 45 10.2	-0.7
LOR	Lormes	10.30	292	*e*Pn	Pn	23 45 10.2	-0.7
SSF	Saint Saulge	10.49	291	*e*Pn	Pn	23 45 12.8	-0.7
SSF	Saint Saulge	10.49	291	*e*Pn	Pn	23 45 12.8	-0.7
AVF	Avril sur Loir	10.55	289	*e*Pn	Pn	23 45 13.5	-0.8
AVF	Avril sur Loir	10.55	289	*e*Pn	Pn	23 45 13.5	-0.8
BGF	Bois d’Agland	10.87	288	*e*Pn	Pn	23 45 17.9	-0.7
BGF	Bois d’Agland	10.87	288	*e*Pn	Pn	23 45 17.9	-0.7
HYF	Humbligny	11.11	291	*e*Pn	Pn	23 45 21.2	-0.8
HYF	Humbligny	11.11	291	*e*Pn	Pn	23 45 21.2	-0.8

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*IDC **27** 23:52:58.9±2.1, 14°.45N×91°.24W, h0^{km}, mb4.0/7, mb1 4.2/10, mb1mx3.9/49, mbtmp4.0/10, ML3.5/3, MS3.5/12, Ms1 3.5/12, ms1mx3.1/45, Error ellipse: s-maj=75.9km s-min=17.3km az=38.0*

*CASC **27** 23:53:01.5±0.7, 15°.22N×91°.44W, h16^{km}±13^{km}, ML3.5, mb4.2(NEIC)*

*NEIC **27** 23:53:07.9±0.9, 14°.19N×91°.55W, h74^{km}±8^{km}, mb4.2/41, Error ellipse: s-maj=12.4km s-min=5.3km az=213.0*

ISC 27 23:53:04.2±0.9**, 13°.9N**±0°.1×**91°.80W**±0°.09**, h61**^{km}**, n95,** σ**1**^{s}**.81**/84**, mb4.2**/43**, Near coast of Guatemala**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IXG	Ixpaco	1.34	78	*e*P	Pn	23 53 26.3	-0.6
RTR	El Retiro	2.10	90	*e*P	Pn	23 53 37.7	+0.5
RTR				*e*S	Sn	23 54 04.7	+2.4
SBLS	San Blas	2.12	92	*e*P	Pn	23 53 37.7	+0.1
SNJE	San Jose	2.14	91	*e*P	Pn	23 53 38.0	+0.2
CCIG	Comitan	2.38	352	*e*Pn	Pn	23 53 42.0	+0.9
BOQS	Boqueron	2.46	94	*e*P	Pn	23 53 42.5	+0.3
SNET	Serv Nac Est T	2.51	95	IAML		23 54 22.3	
	comp=Z,381nm,0.4s						
LFRS	El Faro	2.68	96	*e*P	Pn	23 53 45.5	+0.4
TECA	Tecapa	3.24	97	*e*P	Pn	23 53 53.2	+0.5
LCND	La Caˆ–ada	3.85	98	IAML		23 54 54.6	
	comp=Z,146nm,0.6s						
CMIG	Matias Romero	4.34	317	Pn	Pn	23 54 03.5	-4.2
	comp=Z,2.0nm,0.3s,baz=146,slow=11,SNR=15						
CMIG				Sn	Sn	23 54 54.2	-2.9
	comp=Z,9.8nm,0.3s,baz=271,slow=12,SNR=5.4						
CMIG				Lg	Lg	23 55 08.9	
	comp=Z,22nm,0.3s,baz=242,slow=21,SNR=9.0						
ESTN	Estel	5.35	98	*e*Pn	Pn	23 54 22.3	+0.7
ESPN	Las Esperanzas	7.51	102	*e*Pn	Pn	23 54 54.0	+2.9
JTS	JuntasAbangare	7.60	117	Pn	Pn	23 54 48.9	-3.6
	comp=Z,1.8nm,0.3s,baz=9.5,slow=16,SNR=2.6						
JTS				Lg	Lg	23 56 54.6	
	comp=Z,2.0nm,0.3s,baz=43,slow=6.3,SNR=4.1						
833A	Chaparral WMA,	15.99	335	*e*Pn	Pn	23 56 46.4	+1.1
	comp=Z,24nm,1.6s						
HKT	Hockley	16.39	348	*e*Pn	Pn	23 56 49.1	-1.2
	comp=Z,7.2nm,1.3s						
060A	Indiantown	16.88	38	*e*Pn	Pn	23 56 54.0	-2.5
	comp=Z,181nm,1.2s						
TXAR	Lajitas Array	18.88	326	P	P	23 57 20.7	+0.9
	comp=Z,0.1nm,0.3s,baz=152,slow=11,SNR=19						
TX31	Lajitas Ar. Si	18.88	326	*e*P	Pn	23 57 21.5	+0.5
ROSC	El Rosal	19.45	116	P	P	23 57 24.9	-1.5
	comp=Z,0.9nm,0.3s,baz=114,slow=19,SNR=2.0						
ABTX	Abilene, Hawle	19.96	340	*e*P	P	23 57 32.2	+0.7
	comp=Z,5.7nm,1.0s						
RUSC	La Rusia	20.07	112	*e*P	Pn	23 57 35.5	-0.1
	comp=Z,3.6nm,0.9s						
GOGA	Godfrey	20.84	20	*e*P	P	23 57 40.1	-0.9
	comp=Z,9.3nm,1.3s						
X48A	Hartselle	20.90	11	*e*P	P	23 57 41.2	-0.5
	comp=Z,6.3nm,0.8s						
MNTX	Cornudas Mount	21.64	327	*e*P	P	23 57 49.9	+0.3
	comp=Z,4.9nm,0.8s						
WMOK	Wichita Mounta	21.68	344	*e*P	P	23 57 49.4	-0.5
	comp=Z,5.5nm,1.2s						
TKL	Tuckaleechee C	22.83	17	LR	LR	00 07 59.7	
	comp=Z,128nm,19.9s,baz=216,slow=41						
T47A	Sharon Grove	23.36	10	*e*P	P	23 58 06.3	-1.1
	comp=Z,9.0nm,0.9s						
S39A	Bolivar	23.73	357	*e*P	P	23 58 10.7	-0.1
SIUC	Southern Illin	23.82	5	*e*P	P	23 58 11.6	-0.1
	comp=Z,17nm,1.0s						
BNM	Barren Site	24.22	329	*e*P	P	23 58 17.7	+2.1
LENM	Lemitar	24.41	328	*e*P	P	23 58 20.0	+2.8
LAZ	Ladron	24.68	328	*e*P	P	23 58 20.1	+0.4
EMPR	Esperanza - Ma	24.68	76	*e*P	P	23 58 21.5	+1.8
	comp=Z,109nm,0.9s						
WCI	Wyandotte Cave	24.71	10	*e*P	P	23 58 20.4	+0.7
	comp=Z,26nm,1.5s						
ANMO	Albuquerque	24.77	330	P	P	23 58 21.7	+1.1
	comp=Z,1.8nm,0.7s,baz=147,slow=12,SNR=7.5						
ANMO	Albuquerque	24.77	330	*e*P	P	23 58 22.1	+1.5
	comp=Z,2.1nm,0.8s						
ATAH	Atahualpa	24.79	147	LR	LR	00 06 39.9	
	comp=Z,78nm,18.1s,baz=7.1,slow=33						
T25A	Trinidad	25.73	336	*e*P	P	23 58 31.3	+2.1
	comp=Z,6.0nm,1.2s						
M44A	Midewin, Midew	27.57	6	*e*P	P	23 58 45.8	+0.3
	comp=Z,32nm,1.1s						
MVCO	Mesa Verde	27.57	330	*e*P	P	23 58 47.3	+1.4
	comp=Z,7.1nm,1.1s						
PV02	Paradox Valley	28.48	331	*e*P	P	23 58 56.0	+1.9
	comp=Z,6.3nm,0.9s						
PV13	Radium Mtn., P	28.48	331	*e*P	P	23 58 56.2	+2.2
	comp=Z,4.4nm,0.9s						
PV05	Paradox Valley	28.55	331	*e*P	P	23 58 55.8	+1.2
PV03	Paradox Valley	28.57	331	*e*P	P	23 58 56.3	+1.5
PV18	Skein Mesa, Pa	28.60	331	*e*P	P	23 58 57.0	+2.0
	comp=Z,7.1nm,1.1s						
PV12	Saucer Basin,	28.60	331	*e*P	P	23 58 57.2	+2.2
	comp=Z,11nm,1.2s						
PV11	David Mesa, Pa	28.62	331	*e*P	P	23 58 56.7	+1.5
	comp=Z,26nm,2.0s						
PV17	East Wray Mesa	28.65	331	*e*P	P	23 58 57.8	+2.3
	comp=Z,5.2nm,1.0s						
PV16	Nyswonger Mesa	28.65	331	*e*P	P	23 58 57.8	+2.3
	comp=Z,8.4nm,1.3s						
PV19	Morning Glory	28.68	331	*e*P	P	23 58 56.6	+0.9
	comp=Z,8.0nm,1.3s						
KNB	Kanab	29.69	325	*e*P	P	23 59 05.2	+0.5
	comp=Z,3.8nm,1.0s						
NNA	Nana	29.70	149	LR	LR	00 08 55.0	
	comp=Z,33nm,18.2s,baz=332,slow=32						
PHWY	Pilot Hill	29.77	339	*e*P	P	23 59 06.0	+0.6
	comp=Z,11nm,1.1s						
I42A	Draeger Farm,	29.98	4	*e*P	P	23 59 06.3	-0.6
	comp=Z,17nm,1.2s						
CCUT	Cedar City	30.37	325	*e*P	P	23 59 13.3	+2.6
	comp=Z,3.6nm,1.1s						
P17A	Butcher Ranch,	30.44	330	*e*P	P	23 59 12.6	+1.4
R11A	Troy Canyon, C	32.19	323	*e*P	P	23 59 28.8	+2.1
	comp=Z,4.0nm,1.4s						
HWUT	Hardware Ranch	32.51	332	*e*P	P	23 59 30.7	+1.3
	comp=Z,5.5nm,1.3s						
BW06	Boulder Array	32.58	335	*e*P	P	23 59 31.8	+1.7
	comp=Z,9.7nm,1.3s						
SADO	Sadowa	32.59	17	LR	LR	00 13 43.5	
	comp=Z,61nm,19.7s,baz=240,slow=39						
E43A	Lone Tree Farm	32.62	6	*e*P	P	23 59 30.3	+0.2
	comp=Z,11nm,1.0s						
TRY	Troy	32.71	25	*e*P	P	23 59 30.7	-0.2
	comp=Z,46nm,1.6s						
NV11	Mina Array Sit	33.77	321	*e*P	P	23 59 42.9	+2.4
	comp=Z,0.4nm,1.2s						
NV01	Mina Array Sit	33.86	321	*e*P	P	23 59 42.9	+1.6
NVAR	Mina Array Bea	33.86	321	P	P	23 59 42.6	+1.3
	comp=Z,1.8nm,0.9s,baz=141,slow=8.7,SNR=8.9						
KVN	Kaiserville	34.13	322	*e*P	P	23 59 46.0	+2.4
	comp=Z,3.2nm,1.2s						
HLID	Hailey	35.35	331	*e*P	P	23 59 55.7	+1.7
	comp=Z,2.5nm,0.9s						
MCMT	McKenzie Canyo	35.64	334	*e*P	P	23 59 58.9	+2.4
BOZ	Bozeman (W)	35.76	336	*e*P	P	23 59 59.9	+2.3
	comp=Z,14nm,0.8s						
LRM	Limekiln Ridge	36.28	335	*e*P	P	00 00 03.6	+1.6

ULM	Lac du Bonnet	36.39	356	LR	LR	00 17 47.8	
	comp=Z,40nm,18.1s,baz=268,slow=42						
PKME	Peaks-Kenny Pk	36.62	27	eP	P	00 00 04.5	-0.2
	comp=Z,26nm,1.4s						
FTR	Fort Ross	37.00	317	eP	P	00 00 05.4	-2.6
J08A	Circle Bar Ran	37.22	327	eP	P	00 00 11.3	+1.3
	comp=Z,12nm,1.4s						
JTMT	Jette	38.57	336	eP	P	00 00 21.7	+0.5
	comp=Z,3.4nm,0.8s						
SCHQ	Schefferville	45.24	20	LR	LR	00 22 09.8	
	comp=Z,132nm,18.2s,baz=215,slow=39						
YKA	Yellowknife Ar	51.16	347	P	P	00 02 00.1	-0.7
	comp=Z,1.0nm,0.8s,baz=132,slow=8.2,SNR=3.9						
SFJD	Kangerlussuaq	59.55	17	LR	LR	00 29 37.3	
	comp=Z,56nm,20.1s,baz=247,slow=37						
IL1	Eielson Array	63.00	337	eP	P	00 03 24.9	+0.4
ILAR	Eielson Array	63.00	337	P	P	00 03 25.1	+0.6
	comp=Z,2.2nm,1.0s,baz=128,slow=4.5,SNR=14						
SKT	Skwentna	63.79	333	eP	P	00 03 31.9	+2.2
	comp=Z,12nm,1.7s						
TRF	Thorofare Moun	63.80	335	eP	P	00 03 31.3	+1.3
	comp=Z,8.9nm,1.6s						
MLY	Manley	64.60	336	eP	P	00 03 36.5	+1.4
	comp=Z,15nm,1.7s						
BORG	Borgarnes	69.21	26	LR	LR	00 34 31.8	
	comp=Z,33nm,18.3s,baz=262,slow=36						
EKA	Eskdalemuir Ar	77.93	36	P	P	00 04 54.2	-1.4
	comp=Z,3.3nm,0.9s,baz=277,slow=5.7,SNR=4.9						
AFI	Afiamalu	83.85	254	LR	LR	00 34 48.9	
	comp=Z,79nm,19.5s,baz=182,slow=30						
NOA	NORSAR Array B	84.14	28	LR	LR	00 41 25.3	
	comp=Z,11nm,21.3s,baz=65,slow=35						
HFS	Hagfors	85.59	29	P	P	00 05 35.7	-0.1
	comp=Z,1.1nm,0.8s,baz=215,slow=1.8,SNR=2.5						
HFS				LR	LR	00 41 59.1	
	comp=Z,18nm,21.7s,baz=280,slow=35						
ARCES	ARCESS Array B	86.16	18	P	P	00 05 38.4	-0.2
	comp=Z,0.8nm,0.8s,baz=319,slow=4.0,SNR=3.3						
FINES	FINESS Array B	90.50	25	LR	LR	00 46 47.4	
	comp=Z,16nm,19.4s,baz=259,slow=36						
HHC	Hu-ho-hao-te	121.37	339	eP	PKPdf	00 11 57.0	+5.9
KSH	Kashi	125.64	12	ePKP	PKPdf	00 11 52.8	-6.6
KSH				PP	PP	00 13 49.5	-0.7
LZH	Lanzhou	128.12	344	ePKP	PKPdf	00 12 05.3	+1.0
LZH				pPKP	sPKPdf	00 12 26.5	-2.2
LZH				sPKP		00 12 33.3	
CMAR	Chiang Mai Arr	146.14	341	PKPbc	PKPab	00 12 39.6	+0.5
	comp=Z,3.5nm,0.8s,baz=342,slow=4.9,SNR=16						

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*ISK **27** 23:56:03.7, 39°.06N×25°.72E, h13^{km}, ML2.4/5*
*ATH **27** 23:56:03.3, 39°.05N×25°.76E, h29^{km}±2^{km}, ML2.2/5, Error ellipse: s-maj=3.0km s-min=1.3km az=124.0*
*DDA **27** 23:56:03.3, 39°.01N×25°.71E, h7^{km}, Ml3.2*
*CSEM **27** 23:56:04.2±0.1, 39°.05N×25°.74E, h15^{km}, ML2.2, Error ellipse: s-maj=2.7km s-min=2.1km az=93.0*
*ISCJB **27** 23:56:04.8±0.4, 39°.04N±0°.03×25°.74E±0°.04, h16^{km}±10^{km}, Error ellipse: s-maj=5.1km s-min=4.1km az=19.9*
*THE **27** 23:56:04.2, 39°.03N×25°.75E, h12^{km}±1^{km}, ML2.1/4, Error ellipse: s-maj=1.8km s-min=0.5km az=85.0*
ISC 27 23:56:03.9±0.8**, 39°.06N**±0°.02×**25°.74E**±0°.02**, h16**^{km}±6^{km}**, n40, σ0^{s}.29**/61**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIGR	SIGRI	0.18	29	PG	Pg	23 56 08.5	+0.2
SIGR				SG	Sg	23 56 11.4	+0.1
SIGR	SIGRI	0.18	29	P	Pg	23 56 07.8	-0.5
SIGR	SIGRI	0.18	29	P	Pg	23 56 08.6	+0.2
SIGR				S	Sb	23 56 11.7	-0.4
SIGR	SIGRI	0.18	29	ePg	Pg	23 56 08.5	+0.2
SIGR				eSg	Sg	23 56 11.4	+0.1
PRK	Paraskevi	0.45	65	P	Pb	23 56 13.4	-0.1
PRK				S	Sb	23 56 20.1	+0.1
PRK				AML	AML	23 56 22.0	
	comp=E,365µm,0.2s						
PRK				AML	AML	23 56 22.7	
	comp=N,434µm,0.2s						
PRK	Paraskevi	0.45	65	P	Pb	23 56 13.2	-0.3
PRK				S	Sb	23 56 19.9	-0.1
PRK	Paraskevi	0.45	65	P	Pg	23 56 13.1	+0.1
PRK				S	Sb	23 56 19.9	-0.1
PSRA	Psara	0.53	195	P	Pb	23 56 15.1	+0.2
PSRA				S	Sb	23 56 22.3	0.0
PSRA				AML	AML	23 56 22.6	
	comp=E,1671µm,0.3s						
PSRA				AML	AML	23 56 23.8	
	comp=N,1558µm,0.1s						
PSRA	Psara	0.53	195	P	Pb	23 56 14.8	-0.1
PSRA				S	Sb	23 56 22.5	+0.2
CHOS	Chios island	0.71	160	PG	Pb	23 56 18.3	+0.3
CHOS	Chios island	0.71	160	P	Pg	23 56 17.8	-0.1
CHOS				S	Sg	23 56 26.7	-0.6
CHOS				AML	AML	23 56 29.6	
	comp=N,547µm,0.4s						
CHOS				AML	AML	23 56 30.2	
	comp=E,862µm,0.2s						
CHOS	Chios island	0.71	160	P	Pg	23 56 17.6	-0.3
CHOS				S	Sg	23 56 27.2	-0.1
CHOS	Chios island	0.71	160	P	Pg	23 56 17.6	-0.3
CHOS	Chios island	0.71	160	ePg	Pb	23 56 18.3	+0.3
CHOS				S	Sg	23 56 27.2	-0.1
AYVA	Ayvalik	0.78	71	i P	Pg	23 56 19.5	+0.4
AYVA				i S	Sn	23 56 31.2	-0.3
AYVA	Ayvalik	0.78	71	P	Pg	23 56 19.5	+0.4
AYVA				S	Sn	23 56 31.2	-0.3
KRBN	Karaburun	0.78	126	PG	Pg	23 56 19.4	+0.2
KRBN	Karaburun	0.78	126	ePg	Pg	23 56 19.4	+0.2
BOZC	Bozcaada	0.82	17	PG	Pb	23 56 19.7	-0.1
BOZC	Bozcaada	0.82	17	i P	Pb	23 56 19.5	-0.3
BOZC				i S	Sn	23 56 33.4	+0.8
BOZC	Bozcaada	0.82	17	ePg	Pb	23 56 19.7	-0.1
FOCM	Foˆ§a	0.84	114	PG	Pn	23 56 20.8	-0.3
FOCM	Foˆ§a	0.84	114	ePg	Pn	23 56 20.8	-0.3
DKL	Dikili	0.90	89	PG	Pn	23 56 21.9	-0.1
DKL	Dikili	0.90	89	ePg	Pn	23 56 21.9	-0.1
BAYC	CANAKKALE_Bayr	0.92	42	i P	Pn	23 56 22.2	-0.1
BAYC				i S	Sn	23 56 35.5	+0.3
BAYC	CANAKKALE_Bayr	0.92	42	P	Pn	23 56 22.2	-0.1
BAYC				S	Sn	23 56 35.5	+0.3
LIA	Limnos Island	0.95	333	P	Pn	23 56 22.4	-0.1
LIA				AML	AML	23 56 36.1	
	comp=E,219µm,0.4s						
LIA				S	Sn	23 56 36.5	+0.8
LIA				AML	AML	23 56 37.0	
	comp=N,180µm,0.4s						
LIA	Limnos Island	0.95	333	P	Pg	23 56 22.1	-0.2
LIA				S	Sn	23 56 36.1	+0.3
LIA	Limnos Island	0.95	333	P	Pg	23 56 22.2	-0.1
LIA				S	Sn	23 56 36.0	+0.3
SKY	Skiros Island	0.95	259	P	Pn	23 56 22.5	-0.1
SKY				S	Sb	23 56 34.4	+0.1
SKY				AML	AML	23 56 36.6	
	comp=N,220µm,0.2s						
SKY				AML	AML	23 56 36.7	
	comp=E,319µm,0.3s						
SKY	Skiros Island	0.95	259	P	Pg	23 56 22.2	-0.1
SKY				S	Sg	23 56 35.0	+0.3
URLA	Izmir	0.96	136	PG	Pb	23 56 22.2	-0.1
URLA	Izmir	0.96	136	ePg	Pb	23 56 22.2	-0.1
BLCB	Balcova	1.22	123	PN	Pb	23 56 26.7	+0.2
BLCB	Balcova	1.22	123	ePn	Pb	23 56 26.7	+0.2
SMTH	Samothraki Isl	1.42	353	P	Pn	23 56 28.4	-0.7
SMTH	Samothraki Isl	1.42	353	P	Pn	23 56 28.8	-0.3
LPK	Lapseki	1.53	30	PN	Pb	23 56 31.9	0.0
LPK	Lapseki	1.53	30	ePn	Pb	23 56 31.9	0.0

IDC 27 23:56:32.1±6.8**, 30°.12S×177°.28W, h0**^{km}**, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.6**/42**, mbtmp3.8**/3**, Error ellipse: s-maj=278.8km s-min=51.5km az=150.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	35.15	256	P	P	00 03 27.3	-0.3
	1.9nm,0.7s,baz=117,slow=18,SNR=3.9						
ASAR	Alice Springs	43.75	266	P	P	00 04 39.8	+0.2
	0.2nm,0.4s,baz=106,slow=7.3,SNR=2.1						
WRA	Warramunga Arr	44.71	271	P	P	00 04 47.0	-0.3
	1.3nm,0.7s,baz=109,slow=8.5,SNR=4.7						
FINES	FINESS Array B	145.09	341	PKPbc	PKPbc	00 16 09.3	-0.9
	1.4nm,0.8s,baz=50,slow=4.3,SNR=9.3						

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*ISK **27** 23:56:48.9, 38°.95N×26°.31E, h13^{km}±6^{km}, ML2.4/4*
*ISCJB **27** 23:56:49.3±0.7, 38°.95N±0°.03×26°.28E±0°.07, h11^{km}, Error ellipse: s-maj=7.7km s-min=4.3km az=2.3*
*CSEM **27** 23:56:49.4±0.2, 38°.95N×26°.29E, h15^{km}, MD2.3, Error ellipse: s-maj=4.9km s-min=2.8km az=80.0*
*DDA **27** 23:56:51.4, 38°.95N×26°.81E, h7^{km}, Ml2.8*
ISC 27 23:56:48.6±1.0**, 38°.95N**±0°.03×**26°.28E**±0°.04**, h11**^{km}**, n17, σ0^{s}.35**/24**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIGR	SIGRI	0.42	308	PG	Pb	23 56 58.1	+0.1
SIGR	SIGRI	0.42	308	ePg	Pb	23 56 58.1	+0.1
KRBN	Karaburun	0.42	149	PG	Pg	23 56 57.2	+0.3
KRBN	Karaburun	0.42	149	ePg	Pg	23 56 57.2	+0.3
AYVA	Ayvalik	0.48	42	i P	Pb	23 56 59.3	+0.3
AYVA				i S	Sb	23 57 06.1	0.0
AYVA	Ayvalik	0.48	42	P	Pb	23 56 59.3	+0.3
AYVA				S	Sb	23 57 06.1	0.0
CHOS	Chios island	0.59	197	PG	Pb	23 57 01.0	-0.1
CHOS				SG	Sb	23 57 10.0	+0.5
CHOS	Chios island	0.59	197	ePg	Pb	23 57 01.0	-0.1
CHOS				eSg	Sb	23 57 10.0	+0.5
URLA	Izmir	0.64	157	PG	Pb	23 57 01.5	-0.4
URLA				SG	Sb	23 57 10.9	0.0
URLA	Izmir	0.64	157	i P	Pb	23 57 02.5	+0.6
URLA	Izmir	0.64	157	ePg	Pb	23 57 01.5	-0.4
URLA	Izmir	0.64	157	P	Pb	23 57 02.5	+0.6
URLA				eSg	Sb	23 57 10.9	0.0
BLCB	Balcova	0.82	133	PG	Pb	23 57 04.9	0.0
BLCB	Balcova	0.82	133	ePg	Pb	23 57 04.9	0.0
BOZC	Bozcaada	0.90	349	PG	Pn	23 57 06.9	-0.4
BOZC	Bozcaada	0.90	349	ePg	Pn	23 57 06.9	-0.4
DGB	˜zmir	1.02	152	i P	Pn	23 57 08.4	-0.4
DGB				i S	Sn	23 57 22.6	-0.5

IDC 28 00:06:49.9±19.0**, 26°.15N×92°.67E, h0**^{km}**, mb3.3**/4**, mb1 3.3**/4**, mb1mx3.1**/65**, mbtmp3.3**/4**, Error ellipse: s-maj=322.7km s-min=72.6km az=6.0, Northeastern India**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	22.19	341	P	P	00 11 47.1	-0.6
	0.4nm,0.8s,baz=161,slow=9.2,SNR=3.4						
SONM	Songino Array	24.19	23	P	P	00 12 07.6	-0.5
	0.6nm,0.6s,baz=198,slow=8.3,SNR=3.7						
KURBB	Kurchatov Arra	26.74	340	P	P	00 12 30.4	-0.6
	0.3nm,0.5s,baz=171,slow=7.3,SNR=3.1						
ZALV	Zalesovo Beam	28.37	350	P	P	00 12 46.9	+1.3
	0.5nm,0.4s,baz=179,slow=11,SNR=3.0						

JMA 28 00:08:29.9±0.1**, 37°.38N×141°.41E, h33**^{km}±1^{km}**, M3.5, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	0.43	268	P	Pb	00 08 39.1	-0.3
JFK				S	Sb	00 08 45.4	-0.6
ONAJ	Iwakimizuishiy	0.56	241	P	Pb	00 08 41.0	-0.5
ONAJ				S	Sb	00 08 48.8	-0.7
JMM	Marumori	0.69	315	P	Pn	00 08 42.8	-0.5
JMM				S	Sb	00 08 52.1	-0.8
JFFD	Fukushimafurud	0.74	247	P	Pn	00 08 43.7	-0.3
JFFD				S	Sn	00 08 53.4	-0.7
JFT	Otama	0.86	279	P	Pb	00 08 46.4	-0.1
JFT				S	Sb	00 08 58.0	+0.2
JHO	Hitachi	1.02	222	P	Pn	00 08 47.1	-0.8
JHO				eS	Sn	00 09 00.0	-1.1
JIO	Ouri	1.07	357	P	Pn	00 08 48.2	-0.4
JIO				S	Sn	00 09 00.9	-1.5
JOU	Okura	1.15	329	P	Pn	00 08 50.3	+0.6
JOU				S	Sb	00 09 05.1	-0.7
JYS	Shirataka	1.36	309	P	Pb	00 08 53.8	-0.9
JYS				S	Sb	00 09 12.1	+0.3
JFY	Yanaizu	1.36	272	P	Pb	00 08 53.8	-1.0
JFY				S	Sb	00 09 12.1	+0.3
MAT	Matsushiro	2.70	253	P	Pb	00 09 14.7	-2.8
MAT				S	Sb	00 09 47.9	-2.3

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*IDC **28** 00:27:55.2±1.0, 32°.24N×139°.48E, h0^{km}, mb3.6/8, mb1 3.7/11, mb1mx3.5/68, mbtmp3.6/11, ML3.3/3, MS3.3/1, Ms1 3.3/1, ms1mx2.2/59, Error ellipse: s-maj=27.6km s-min=15.8km az=82.0*
*JMA **28** 00:28:00.2±0.2, 32°.86N×140°.64E, h66^{km}, M3.6*
*NIED **28** 00:28:00, 32°.90N×140°.60E, h5^{km}, Mw3.7 Best double couple: $M_0$4.73000×10^{14} NP1:ϕ_s160.00000°, δ30.00000°, λ-153.00000°. NP2:ϕ_s46.00000°, δ77.00000°, λ-63.00000°.*
ISC 28 00:27:57.4±1.5**, 32°.75N**±0°.05×**140°.89E**±0°.08**, h43**^{km}±15^{km}**, n29, σ1^{s}.65**/31**, mb3.6**/8**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	0.98	292	P	Pn	00 28 15.5	+0.9
JHCJ	Hachijojimakas	0.98	290	P	Pn	00 28 15.4	+0.7
JHCJ				S	Sn	00 28 25.9	-1.5
JAOM	Aogashimamukai	0.99	254	P	Pn	00 28 16.7	+1.8
JAOM				S	Sn	00 28 28.8	+1.0
JHJ	Hachijo jima 2	1.01	292	Pn	Pn	00 28 15.6	+0.5
	320nm,0.3s,baz=248,slow=19,SNR=107						
JHJ				Sn	Sn	00 28 25.1	-2.9
	730nm,0.3s,baz=253,slow=19,SNR=27						
JHJ				LR	LR	00 28 42.5	
	comp=Z,198nm,19.3s,baz=87,slow=52						
JMKN	Mikurajimanish	1.58	317	P	Pn	00 28 23.4	+0.5
JMKN				S	Sn	00 28 40.5	-1.7
BSO3	Boso 3	2.08	351	P	Pn	00 28 30.7	+1.2
BSO3				eS	Sn	00 28 54.0	0.0
JIM2	Oshima 3	2.31	329	P	Pn	00 28 33.6	+0.6
JIM2				eS	Sn	00 28 57.7	-2.6
JIZS	Izushimoda	2.59	320	P	Pn	00 28 38.0	+1.3
JOD2	Odawara 2	2.93	330	P	Pn	00 28 42.3	+0.9
JOD2				S	Sn	00 29 12.5	-2.8
SHZ3	Shizuoka 3	3.22	317	P	Pn	00 28 47.7	+2.3
MJAR	Matsushiro Arr	4.39	330	Pn	Pn	00 29 04.3	+2.8
	2.8nm,0.3s,baz=164,slow=13,SNR=23						
MJAR				Sn	Sn	00 29 51.4	+0.1
	1.5nm,0.3s,baz=180,slow=19,SNR=4.4						
MAT	Matsushiro	4.39	330	P	Pn	00 29 03.7	+2.2
MAT				eS	Sn	00 29 50.4	-1.0
JCJ	Chichijima	5.74	168	Pn	Pn	00 29 21.0	+0.9
	2.7nm,0.3s,baz=270,slow=20,SNR=2.8						
JCJ				Sn	Sn	00 30 22.4	-2.3
	baz=286,slow=18						
JNU	Nakatsue	8.43	275	Pn	Pn	00 29 42.6	-14
	0.2nm,0.3s,baz=350,slow=17,SNR=2.0						
H11N2	WAKE ISLAND Hy	26.60	113	T	T	01 02 36.6	
	baz=304,slow=75,SNR=34						
H11N1	WAKE ISLAND Hy	26.60	113	T	T	01 02 37.9	
	baz=304,slow=75,SNR=36						
H11N3	WAKE ISLAND Hy	26.62	113	T	T	01 02 34.4	
	baz=304,slow=75,SNR=29						
H11S3	WAKE ISLAND Hy	27.15	115	T	T	01 03 13.7	
	baz=306,slow=75,SNR=6.0						
H11S1	WAKE ISLAND Hy	27.15	115	T	T	01 03 08.0	
	baz=306,slow=75,SNR=7.7						
H11S2	WAKE ISLAND Hy	27.17	115	T	T	01 03 06.3	
	baz=306,slow=75,SNR=3.1						
SONM	Songino Array	30.03	310	P	P	00 34 02.2	-0.1
	0.2nm,0.4s,baz=177,slow=8.7,SNR=2.4						
ZALV	Zalesovo Beam	44.58	316	P	P	00 36 05.7	+0.7
	0.6nm,0.5s,baz=110,slow=8.3,SNR=2.6						
MKAR	Makanchi Array	46.15	306	P	P	00 36 15.8	-1.9
	0.1nm,0.4s,baz=219,slow=34,SNR=4.1						
KURBB	Kurchatov Arra	48.40	311	P	P	00 36 34.9	-0.1
	0.4nm,0.5s,baz=90,slow=7.7,SNR=5.1						
WRA	Warramunga Arr	52.76	188	P	P	00 37 06.8	-1.4
	0.5nm,0.3s,baz=6.9,slow=7.6,SNR=5.4						
BVAR	Borovoye Array	53.21	315	P	P	00 37 10.2	-1.0
	0.4nm,0.6s,baz=81,slow=6.8,SNR=3.0						
ASAR	Alice Springs	56.49	188	P	P	00 37 35.0	-0.2
	0.2nm,0.3s,baz=357,slow=5.9,SNR=4.2						
FINES	FINESS Array B	72.41	333	P	P	00 39 20.7	+1.9
	0.3nm,0.6s,baz=37,slow=6.0,SNR=3.2						
AKASG	Malin Array Be	77.43	323	LR	LR	01 16 53.4	
	comp=Z,17nm,18.4s,baz=270,slow=38						

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*IDC **28** 00:35:06.0±1.1, 38°.66N×71°.83E, h0^{km}, mb3.8/10, mb1 3.9/16, mb1mx3.6/72, mbtmp3.7/16, ML3.1/6, Error ellipse: s-maj=22.5km s-min=13.5km az=141.0*
*ISCJB **28** 00:35:10.7±0.6, 38°.57N±0°.05×71°.59E±0°.06, h47^{km}, mb3.7/10, Error ellipse: s-maj=7.8km s-min=5.3km az=141.5*
*NNC **28** 00:35:11.2±3.2, 38°.42N×71°.75E, h102^{km}±61^{km}, mb3.4, mpv4.0, Error ellipse: s-maj=27.8km s-min=20.5km az=10.0*
*NEIC **28** 00:35:11.3±0.8, 38°.76N×71°.93E, h35^{km}, mb4.0/1, Error ellipse: s-maj=15.8km s-min=12.5km az=96.0*
ISC 28 00:35:11.8±0.8**, 38°.54N**±0°.07×**71°.74E**±0°.06**, h47**^{km}**, n36, σ2^{s}.25**/44**, mb3.8**/10**, 5C-8D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	2.01	42	⇓P	Pn	00 35 39.5	-3.9
	70nm,0.4s						
SFK				⇓S	Sn	00 36 05.3	-2.2
	266nm,0.7s						
AML	Almayashu	3.89	22	P	Pn	00 36 09.8	+0.5
	SNR=23						
MNAS	Manas	3.99	8	⇓P	Pn	00 36 10.7	+0.2
	13nm,0.4s						
MNAS				⇑S	Sn	00 36 59.0	+2.9
	71nm,0.9s						
UCH	Uchtor	4.25	29	P	Pn	00 36 16.1	+1.7
	SNR=6.5						
EKS2	Erkin-Say	4.40	20	P	Pn	00 36 16.7	+0.6
	SNR=7.0						
AAK	Ala-Archa	4.60	26	Pn	Pn	00 36 18.3	-0.6
	0.9nm,0.3s,baz=333,slow=2.3,SNR=2.8						
AAK				Sn	Sn	00 37 14.1	+3.0
	3.4nm,0.3s,baz=355,slow=14,SNR=7.3						
AAK	Ala-Archa	4.60	26	⇓P	Pn	00 36 21.2	+2.3
	15nm,0.5s						
AAK				⇓S	Sn	00 37 14.8	+3.6
	45nm,0.8s						
AAK	Ala-Archa	4.60	26	ePn	Pn	00 36 14.9	-4.0
AAK				Sn	Sn	00 37 14.1	+3.0
KK31	Karatay Array	4.66	349	P	Pn	00 36 20.6	+1.0
	13nm,0.4s,baz=161,slow=12,SNR=210						
KK31				⇑S	Sn	00 37 16.9	+4.6
	10nm,0.5s,baz=168,slow=24,SNR=3.6						
NIL	Nilore	5.03	165	ePn	Pn	00 36 26.0	+1.3
	61nm,0.6s						
USP	Ospenovka	5.17	23	P	Pn	00 36 28.6	+2.0
	SNR=6.7						
TKM2	Tokmak 2	5.27	33	⇑P	Pn	00 36 29.6	+1.5
	10nm,0.8s						
TKM2				⇓S	Sn	00 37 29.3	+1.7
	1.8nm,0.5s						
TKM2	Tokmak 2	5.27	33	P	Pn	00 36 30.4	+2.3
	SNR=7.5						
GEYT	Alibeck	10.74	271	Pn	Pn	00 37 42.1	-0.8
	0.2nm,0.3s,baz=60,slow=35,SNR=4.1						
GEYT				Sn	Sn	00 39 41.3	-0.4
	0.4nm,0.3s,baz=92,slow=38,SNR=5.1						
MKAR	Makanchi Array	11.32	40	Pn	Pn	00 37 48.9	-2.0
	0.1nm,0.3s,baz=223,slow=12,SNR=15						
KURBB	Kurchatov Arra	13.01	20	Pn	Pn	00 38 08.8	-5.0
	0.0nm,0.3s,baz=215,slow=12,SNR=4.2						
KURK	Kurchatov	13.12	20	Pn	Pn	00 38 08.8	-6.5
AB31	Akbulak array	13.66	325	⇓P	Pn	00 38 21.1	-1.7
	2.8nm,0.8s,baz=92,slow=7.7,SNR=10						
AB31				⇓S	Sn	00 40 51.0	-1.9
	4.7nm,0.9s,baz=136,slow=23,SNR=8.7						
BVA0	Borovoye Array	14.52	357	P	Pn	00 38 32.6	-1.6
	4.3nm,1.2s,baz=167,slow=14,SNR=12						
BVAR	Borovoye Array	14.52	357	Pn	Pn	00 38 29.2	-5.1
	0.1nm,0.3s,baz=354,slow=10,SNR=5.3						
AKTO	Aktyubinsk	15.38	325	Pn	Pn	00 38 47.0	+1.5
	0.9nm,0.3s,baz=115,slow=11,SNR=11						
AKTO				Sn	Sn	00 41 27.9	-6.7
	0.1nm,0.3s,baz=259,slow=16,SNR=2.4						
AKTO	Aktyubinsk	15.38	325	⇑P	Pn	00 38 46.8	+1.4
	5.7nm,0.7s						
AKTO				⇑S	Sn	00 41 32.8	-1.8
	3.2nm,1.1s						
ZALV	Zalesovo Beam	17.82	26	P	Pn	00 39 13.4	-2.7
	0.6nm,0.3s,baz=218,slow=9.5,SNR=8.7						
ARU	Arti	19.93	338	P	Pn	00 39 41.5	+0.1
	0.0nm,0.3s,baz=139,slow=5.8,SNR=10						
ARU	Arti	19.93	338	eP	P	00 39 38.2	-1.3
	5.5nm,0.7s						
FINES	FINESS Array B	36.15	324	P	P	00 42 10.2	+1.0
	2.1nm,0.4s,baz=115,slow=9.0,SNR=39						
ARCES	ARCESS Array B	39.50	336	P	P	00 42 38.1	+0.8
	0.6nm,0.3s,baz=112,slow=8.2,SNR=25						
HFS	Hagfors	41.85	320	P	P	00 42 57.1	+0.2
	2.1nm,0.7s,baz=96,slow=12,SNR=7.8						
GERES	GERESS Array B	42.27	304	P	P	00 43 01.3	+0.8
	0.1nm,0.3s,baz=76,slow=10.0,SNR=2.7						
NB2	NORSAR Subarra	43.13	322	P	P	00 43 07.1	-0.2
	comp=Z,0.6nm,0.6s,baz=91,slow=8.6						
NOA	NORSAR Array B	43.13	322	P	P	00 43 07.1	-0.2
	comp=Z,1.5nm,0.9s,baz=92,slow=8.0,SNR=6.7						
EKA	Eskdalemuir Ar	51.25	315	P	P	00 44 10.5	0.0
	comp=Z,0.7nm,0.7s,baz=86,slow=10.0,SNR=2.8						
TORD	Torodi Ar. Bea	66.36	268	P	P	00 45 55.9	-0.1
	comp=Z,0.5nm,0.5s,baz=49,slow=5.6						
ILAR	Eielson Array	72.66	16	P	P	00 46 33.1	-0.9
	comp=Z,0.5nm,0.8s,baz=305,slow=6.9,SNR=5.6						
YKA	Yellowknife Ar	79.19	3	P	P	00 47 11.3	0.0
	comp=Z,0.6nm,0.7s,baz=288,slow=17,SNR=2.8						
WRA	Warramunga Arr	82.58	123	P	P	00 47 32.6	+2.7
	comp=Z,0.9nm,0.9s,baz=318,slow=4.3,SNR=3.1						

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*BEO **28** 00:35:24.5±0.3, 44°.21N×17°.87E, h2^{km}±2^{km}, ML2.7/12*
*CSEM **28** 00:35:24.5±0.1, 44°.23N×17°.92E, h2^{km}, ML2.8/7, Error ellipse: s-maj=3.0km s-min=1.8km az=46.0*
*PDG **28** 00:35:24.5±0.4, 44°.19N×17°.89E, h7^{km}, ML2.8/13, Error ellipse: s-maj=0.6km s-min=0.9km az=0.0*
*LDG **28** 00:35:25.2±0.1, 44°.32N×17°.94E, h2^{km}, Ml3.1/4, Error ellipse: s-maj=5.5km s-min=3.1km az=26.0*
*PRU **28** 00:35:28.7, 44°.36N×17°.74E, h0^{km}*
ISC 28 00:35:24.6±1.0**, 44°.22N**±0°.01×**17°.94E**±0°.02**, h8**^{km}±9^{km}**, n164, σ1^{s}.31**/279**, 27C-16D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DOB	Doboj	0.53	13	ePg	Pg	00 35 34.3	-0.5
DOB				eSg	Sb	00 35 42.8	-1.0
DOB	Doboj	0.53	13	ePg	Pg	00 35 34.3	-0.5
DOB				eSg	Sb	00 35 42.8	-1.0
HAPS	Han Pijesak,Bl	0.74	100	ePg	Pg	00 35 38.1	-0.8
HAPS				eSg	Sg	00 35 48.2	-0.4
HAPS	Han Pijesak,Bl	0.74	100	ePg	Pg	00 35 38.1	-0.8
HAPS				eSg	Sg	00 35 49.3	+0.7
HAPS	Han Pijesak,Bl	0.74	100	ePg	Pg	00 35 38.0	-0.8
HAPS				eSg	Sg	00 35 49.3	+0.7
BLY	Banja Luka	0.76	315	ePg	Pg	00 35 39.3	+0.2
BLY				eSg	Sg	00 35 48.7	-0.2
BLY	Banja Luka	0.76	315	⇑iP	Pg	00 35 39.1	0.0
BLY				S	Sb	00 35 49.9	-0.5
BLY	Banja Luka	0.76	315	⇑iP	Pg	00 35 39.1	0.0
BLY				eSg	Sg	00 35 48.7	-0.2
BLY				S	Sb	00 35 49.9	-0.5
BLY	Banja Luka	0.76	315	⇑iPg	Pg	00 35 39.1	0.0
BLY				eSg	Sg	00 35 49.2	+0.3
BLJ	Bijeljina	1.11	59	ePg	Pg	00 35 44.6	-1.2
BLJ				eSg	Sg	00 35 59.4	-0.8
BLJ	Bijeljina	1.11	59	ePg	Pg	00 35 44.6	-1.2
BLJ				eSg	Sg	00 35 59.4	-0.8
BBLS	Lazići	1.12	108	ePg	Pg	00 35 45.7	-0.2
BBLS				eSg	Sn	00 36 02.7	+0.5
BBLS	Lazići	1.12	108	⇑iPg	Pg	00 35 45.8	-0.2
BBLS				eSg	Sb	00 36 01.4	+0.5
BBLS	Lazići	1.12	108	⇑iPg	Pg	00 35 45.8	-0.2
BBLS				eSg	Sb	00 36 01.4	+0.5
TEKS	Tekeris	1.19	73	ePg	Pg	00 35 47.0	-0.4
TEKS				eSg	Sn	00 36 04.4	+0.5
TEKS	Tekeris	1.19	73	ePg	Pg	00 35 47.3	-0.1
TEKS				eSg	Sn	00 36 03.7	-0.2
TEKS	Tekeris	1.19	73	ePg	Pg	00 35 47.3	-0.1
TEKS				eSg	Sn	00 36 03.7	-0.2
UPM	Unac-Piva	1.24	145	⇑iPg	Pg	00 35 47.0	-1.3
UPM				i Sg	Sn	00 36 07.0	+1.7
UPM	Unac-Piva	1.24	145	⇑iPg	Pg	00 35 47.0	-1.3

UPM				eSg	Sn	00 36 05.2	-0.1
UPM	Unac-Piva	1.24	145	⇑iPg	Pg	00 35 47.0	-1.3
UPM				eSg	Sn	00 36 05.2	-0.1
STON	Ston	1.36	187	ePg	Pn	00 35 48.4	-1.4
STON				eSg	Sn	00 36 08.0	0.0
STON	Ston	1.36	187	ePg	Pn	00 35 48.4	-1.4
STON				eSg	Sn	00 36 08.0	0.0
STON	Ston	1.36	187	ePg	Pn	00 35 48.8	-1.0
STON				eSg	Sn	00 36 07.9	0.0
PLE	Pljevlja	1.38	130	⇓iPg	Pn	00 35 50.5	+0.3
PLE				i Sg	Sg	00 36 10.8	+1.9
PLE	Pljevlja	1.38	130	⇓iPg	Pn	00 35 50.5	+0.3
PLE				i Sg	Sg	00 36 10.8	+1.9
BRY	Bratogost	1.39	161	⇓iPg	Pn	00 35 50.2	-0.2
BRY				i Sg	Sb	00 36 08.7	-0.1
BRY	Bratogost	1.39	161	⇓iPg	Pn	00 35 50.2	-0.2
BRY				eSg	Sb	00 36 08.9	+0.1
BRY	Bratogost	1.39	161	⇑iPg	Pn	00 35 49.4	-1.0
BRY				eSg	Sb	00 36 08.9	+0.1
DIVS	Divibare	1.48	94	ePg	Pg	00 35 53.1	+0.1
DIVS				eSg	Sg	00 36 12.6	+0.3
DIVS	Divibare	1.48	94	ePg	Pg	00 35 53.1	+0.1
DIVS				eSg	Sg	00 36 12.6	+0.3
DIVS	Divibare	1.48	94	ePg	Pb	00 35 52.4	-0.1
DIVS				eSg	Sg	00 36 12.6	+0.3
TREB	Trebinje	1.53	169	ePn	Pn	00 35 51.9	-0.3
TREB				eSn	Sg	00 36 13.5	-0.3
TREB	Trebinje	1.53	169	ePn	Pn	00 35 52.4	+0.2
TREB				eSn	Sg	00 36 13.5	-0.3
TREB	Trebinje	1.53	169	ePn	Pn	00 35 52.4	+0.2
TREB				eSg	Sg	00 36 13.6	-0.3
NKY	Niksic	1.60	151	⇑iPn	Pb	00 35 54.2	-0.3
NKY				i Sn	Sg	00 36 18.8	+2.7
NKY	Niksic	1.60	151	⇑iPn	Pb	00 35 54.2	-0.3
NKY				i Sn	Sg	00 36 18.8	+2.7
NKME	Niksic	1.63	153	ePn	Pn	00 35 54.3	+0.7
NKME				i Sn	Sg	00 36 16.6	-0.4
NKME	Niksic	1.63	153	ePn	Pn	00 35 54.3	+0.7
NKME				i Sn	Sg	00 36 16.6	-0.4
FGSL	Fruska Gora	1.63	54	ePn	Pn	00 35 53.6	0.0
FGSL				eSn	Sg	00 36 17.7	+0.6
FRGS	Fruska Gora	1.63	54	ePn	Pn	00 35 53.6	0.0
FRGS				eSn	Sg	00 36 17.7	+0.6
FRGS	Fruska Gora	1.63	54	ePn	Pb	00 35 54.5	-0.4
FRGS				eSn	Sg	00 36 16.6	-0.5
FRGS	Fruska Gora	1.63	54	ePn	Pb	00 35 54.5	-0.4
FRGS				eSn	Sg	00 36 16.6	-0.5
IVAS	Ivanjica	1.73	111	ePn	Pn	00 35 55.6	+0.7
IVAS				eSn	Sb	00 36 19.1	+0.7
IVAS	Ivanjica	1.73	111	ePn	Pn	00 35 55.6	+0.7
IVAS				eSn	Sb	00 36 19.1	+0.7
SJES	Sjenica	1.76	122	ePn	Pn	00 35 56.4	+0.9
SJES				eSn	Sb	00 36 20.5	+1.1
TRUS	Trudelj	1.78	89	ePn	Pn	00 35 56.1	+0.5
TRUS				eSn	Sg	00 36 22.4	+0.8
TRUS	Trudelj	1.78	89	ePn	Pn	00 35 56.1	+0.5
TRUS				eSn	Sg	00 36 22.4	+0.8
KOME	Kolasin	1.79	139	⇑iPn	Pb	00 35 57.4	-0.2
KOME				i Sn	Sg	00 36 23.4	+1.4
KOME	Kolasin	1.79	139	⇑iPn	Pb	00 35 57.4	-0.2
KOME				i Sn	Sg	00 36 23.4	+1.4
HCY	Herceg Novi	1.82	167	⇑iPn	Pb	00 35 57.9	-0.2
HCY				i Sn	Sg	00 36 23.8	+0.8
HCY	Herceg Novi	1.82	167	ePn	Pb	00 35 57.6	-0.5
HCY				eSn	Sb	00 36 21.2	+0.2
HCY	Herceg Novi	1.82	167	ePn	Pb	00 35 57.6	-0.5
HCY				eSn	Sb	00 36 21.2	+0.2
CEME	Cevo	1.82	156	⇑iPn	Pb	00 35 57.8	-0.3
CEME				i Sn	Sg	00 36 22.8	-0.2
CEME	Cevo	1.82	156	⇑iPn	Pb	00 35 57.8	-0.3
CEME				i Sn	Sg	00 36 22.8	-0.2
BEY	Berane	1.96	133	⇓iPn	Pb	00 35 59.9	-0.7
BEY				i Sn	Sg	00 36 27.5	0.0
IVA	Berane	1.96	133	⇓iPn	Pb	00 35 59.9	-0.7
IVA				i Sn	Sg	00 36 27.5	0.0
GRUS	Gruza	2.03	98	ePn	Pn	00 36 00.2	+1.1
GRUS				eSn	Sb	00 36 26.7	-0.4
GRUS	Gruza	2.03	98	ePn	Pn	00 36 00.2	+1.1
GRUS				eSn	Sb	00 36 26.7	-0.4
PDG	Podgorica	2.03	151	ePn	Pn	00 35 59.9	+0.8
PDG	Podgorica	2.03	151	⇑iP	Pn	00 35 57.3	-1.8
PDG	Podgorica	2.03	151	S	Sg	00 36 32.2	+2.4
PDG	Podgorica	2.03	151	⇑iP	Pn	00 35 57.3	-1.8
PDG	Podgorica	2.03	151	ePn	Pb	00 36 00.5	-1.2
PDG				eSn	Sb	00 36 26.7	-0.4
PDG	Podgorica	2.03	151	ePn	Pb	00 36 00.5	-1.2
PDG				eSn	Sb	00 36 26.7	-0.4
TTG	Podgorica	2.03	151	⇓iPn	Pb	00 36 01.0	-0.7
TTG				i Sn	Sg	00 36 29.4	-0.4
BUM	Brajici-Budva	2.04	160	⇑iPn	Pb	00 36 02.0	+0.1
BUM				i Sn	Sg	00 36 29.7	-0.5
BUM	Brajici-Budva	2.04	160	⇑iPn	Pb	00 36 02.0	+0.1
BUM				i Sn	Sg	00 36 29.7	-0.5
MORH	Mˆ‡rˆ¡gy, Hung	2.06	14	⇑ePn	Pn	00 35 59.8	+0.3
MORH				eSn	Sg	00 36 31.0	+0.3
MORH	Mˆ‡rˆ¡gy, Hung	2.06	14	ePn	Pn	00 35 59.7	+0.3
MORH				eSn	Sn	00 36 26.1	+0.9
MORH	Mˆ‡rˆ¡gy, Hung	2.06	14	ePn	Pn	00 35 59.7	+0.3
MORH				eSn	Sn	00 36 26.1	+0.9
PVY	Plav	2.19	137	⇑iPn	Pn	00 36 03.1	+1.7
PVY				i Sn	Sb	00 36 33.1	+1.2
PVY	Plav	2.19	137	⇑iPn	Pn	00 36 03.1	+1.7
PVY				i Sn	Sb	00 36 33.1	+1.2
DRME	Dracevica, Mon	2.23	155	⇓iPn	Pn	00 36 03.3	+1.5
DRME				i Sn	Sb	00 36 33.9	+1.1
DRME	Dracevica, Mon	2.23	155	ePn	Pn	00 36 03.3	+1.5
DRME				eSn	Sn	00 36 31.0	+1.5
DRME	Dracevica, Mon	2.23	155	ePn	Pn	00 36 03.3	+1.5
DRME				eSn	Sn	00 36 31.0	+1.5
SVIS	Svilajnac	2.36	88	ePn	Pn	00 36 04.5	+1.0
SVIS	Svilajnac	2.36	88	ePn	Pn	00 36 04.5	+1.0
CRES	Cresnjev	2.38	313	ePn	Pn	00 36 04.6	+0.7
CRES				eSn	Sn	00 36 34.4	+1.1
CRES	Cresnjev	2.38	313	ePn	Pn	00 36 04.6	+0.7
CRES				eSn	Sn	00 36 34.4	+1.1
BEHE	Becsehely	2.40	340	⇑ePn	Pn	00 36 05.6	+1.5
BEHE				eSn	Sn	00 36 33.1	-0.5
BEHE	Becsehely	2.40	340	ePn	Pn	00 36 05.1	+1.0
BEHE				eSn	Sn	00 36 34.7	+1.1
BEHE	Becsehely	2.40	340	ePn	Pn	00 36 05.1	+1.0
BEHE				eSn	Sn	00 36 34.7	+1.1
ULC	Ulcinj	2.45	157	⇓iPn	Pn	00 36 06.7	+1.8
ULC				i Sn	Sb	00 36 39.1	-0.1
ULC	Ulcinj	2.45	157	⇓iPn	Pn	00 36 06.7	+1.8
ULC				i Sn	Sb	00 36 39.1	-0.1
SELS	Selova	2.52	112	ePn	Pn	00 36 06.4	+0.6
SELS	Selova	2.52	112	ePn	Pn	00 36 06.4	+0.6
KUBS	Kucevo	2.69	85	ePn	Pn	00 36 09.0	+0.8
KUBS	Kucevo	2.69	85	ePn	Pn	00 36 09.0	+0.8
RIY	Rijeka	2.70	295	ePn	Pn	00 36 09.9	+1.7
RIY				eSn	Sn	00 36 42.9	+1.9
MDVR	Moldovita	2.76	77	⇓iP	Pg	00 36 18.6	+1.1
MDVR	Moldovita	2.76	77	S	Sg	00 36 52.5	-0.7
BOVS	Bovan	2.79	101	ePn	Pn	00 36 10.2	+0.8
BOVS	Bovan	2.79	101	ePn	Pn	00 36 10.2	+0.8
CEY	Cerknica	2.92	303	ePn	Pn	00 36 12.6	+1.3
CEY				eSn	Sn	00 36 48.1	+1.6
CEY	Cerknica	2.92	303	ePn	Pn	00 36 12.6	+1.3
CEY				eSn	Sn	00 36 48.1	+1.6
BZS	Buzias	2.96	61	⇓iP	Pg	00 36 20.9	-0.5
BZS	Buzias	2.96	61	S	Sn	00 36 48.2	+0.6
BZS	Buzias	2.96	61	S	Sn	00 36 48.2	+0.6
LJU	Ljubljana	3.02	308	ePn	Pn	00 36 13.6	+0.9
LJU	Ljubljana	3.02	308	ePn	Pn	00 36 13.6	+0.9
ZAGS	Zajecar	3.13	96	ePn	Pn	00 36 15.3	+1.2
ZAGS	Zajecar	3.13	96	ePn	Pn	00 36 15.3	+1.2
BARS	Barje	3.15	115	ePn	Pn	00 36 15.3	+0.8
BARS	Barje	3.15	115	ePn	Pn	00 36 15.3	+0.8
CSKK	Csˆ‡kako	3.15	4	ePn	Pn	00 36 15.8	+1.3
SOKA	Soboth	3.20	321	i Pn	Pn	00 36 16.0	+0.8
	0.2nm,0.1s						
SOKA				i Sn	Sn	00 36 52.3	-1.2
	6.9nm,0.4s						
SOKA	Soboth	3.20	321	Pn	Pn	00 36 16.0	+0.8
	0.2nm,0.1s						
SOKA				Sn	Sn	00 36 52.3	-1.2
	6.9nm,0.4s						
HERR	Herculane	3.27	77	⇓iP	Pn	00 36 16.7	+0.6
HERR	Herculane	3.27	77	⇓iP	Pn	00 36 16.7	+0.6
OBKA	Obir	3.31	315	ePn	Pn	00 36 18.1	+1.4
	0.9nm,0.2s						
OBKA				eSn	Sn	00 36 55.7	-0.5
	2.9nm,0.2s						
OBKA	Obir	3.31	315	Pn	Pn	00 36 18.1	+1.4
	0.9nm,0.2s						
OBKA				Sn	Sn	00 36 55.7	-0.5
	2.9nm,0.2s						
ARSA	Arzberg	3.47	332	ePn	Pn	00 36 20.0	+1.1
	3.5nm,0.4s						
ARSA				eSn	Sn	00 36 57.8	-2.4
	1.6nm,0.2s						
ARSA	Arzberg	3.47	332	Pn	Pn	00 36 20.0	+1.1
	3.5nm,0.4s						
ARSA				Sn	Sn	00 36 57.8	-2.4
	1.6nm,0.2s						
ZAPS	Zavoj	3.53	104	ePn	Pn	00 36 21.0	+1.2
SOP	Sopron	3.59	345	⇓ePn	Pn	00 36 21.9	+1.3
SOP				eSn	Sn	00 37 04.7	+1.5
MYKA	Terra Mystica	3.87	310	ePn	Pn	00 36 24.5	+0.1
	2.0nm,0.4s						
MYKA				eSn	Sn	00 37 10.5	+0.5
	0.8nm,0.2s						
MYKA	Terra Mystica	3.87	310	Pn	Pn	00 36 24.5	+0.1
	2.0nm,0.4s						
MYKA				Sn	Sn	00 37 10.5	+0.5
	0.8nm,0.2s						
PSZ	Piszkesteto	3.94	20	⇑iP	Pn	00 36 25.7	+0.3
PSZ	Piszkesteto	3.94	20	⇓ex	Pn	00 36 25.8	+0.3
PSZ	Piszkesteto	3.94	20	⇑iP	Pn	00 36 25.7	+0.3
CONA	Conrad Observa	3.98	339	i Pn	Pn	00 36 26.4	+0.5
	0.1nm,0.1s						
CONA				eSn	Sn	00 37 11.7	-1.1
	2.8nm,0.3s						
CONA	Conrad Observa	3.98	339	Pn	Pn	00 36 26.4	+0.5
	0.1nm,0.1s						
CONA				Sn	Sn	00 37 11.7	-1.1
	2.8nm,0.3s						
VTS	Vitosha	4.17	111	⇑iP	Pb	00 36 37.5	-0.8
MODS	Modra-Piesok	4.18	354	ePN	Pn	00 36 30.3	+1.7
MODS				eSN	Sn	00 37 16.4	-1.2
MODS				eLG	Lg	00 37 19.1	
KBA	Koelnbreinsper	4.30	313	i Pn	Pn	00 36 31.6	+1.1
	0.2nm,0.1s						
KBA				i Sn	Sn	00 37 19.9	-1.0
	0.8nm,0.2s						
KBA	Koelnbreinsper	4.30	313	Pn	Pn	00 36 31.6	+1.1
	0.2nm,0.1s						
KBA				Sn	Sn	00 37 19.9	-1.0
	0.8nm,0.2s						
SMOL	Smolenice	4.31	356	ePN	Pn	00 36 31.3	+0.9
SMOL				eSN	Sn	00 37 19.0	-1.8
SMOL	Smolenice	4.31	356	ePn	Pn	00 36 31.3	+0.9
SMOL				eSn	Sn	00 37 19.0	-1.8
VYHS	Vyhne	4.32	8	ePN	Pn	00 36 31.7	+1.1
VYHS				eSN	Sn	00 37 20.8	-0.3
VYHS				eLG	Lg	00 37 22.9	
VYHS	Vyhne	4.32	8	ePn	Pn	00 36 31.7	+1.1
VYHS				eSn	Sn	00 37 20.8	-0.3
MOA	Molln	4.44	326	i Pn	Pn	00 36 33.7	+1.5
	0.1nm,0.1s						
MOA				eSn	Sn	00 37 24.2	+0.2
	2.6nm,0.3s						
MOA	Molln	4.44	326	Pn	Pn	00 36 33.7	+1.5
	0.1nm,0.1s						
MOA				Sn	Sn	00 37 24.2	+0.2
	2.6nm,0.3s						
ABTA	Abfaltersbach	4.58	305	i Pn	Pn	00 36 36.0	+1.9
	0.5nm,0.2s						
ABTA				eSn	Sn	00 37 27.4	-0.1
	1.4nm,0.3s						
ABTA	Abfaltersbach	4.58	305	Pn	Pn	00 36 36.0	+1.9
	0.5nm,0.2s						
ABTA				Sn	Sn	00 37 27.4	-0.1
	1.4nm,0.3s						
KRUC	Moravsky	4.96	348	ePN	Pn	00 36 39.5	+0.2
KRUC				eSN	Sn	00 37 35.6	-1.2
VRAC	Vranov	5.17	350	ePn	Pn	00 36 42.2	-0.1
VRAC				eSn	Sn	00 37 41.6	-0.5
VRAC	Vranov	5.17	350	ePN	Pn	00 36 42.2	-0.1
VRAC				eSN	Sn	00 37 41.6	-0.5
CRVS	Cervenica-Dubn	5.28	26	ePN	Pn	00 36 45.0	+1.3
CRVS	Cervenica-Dubn	5.28	26	ePn	Pn	00 36 45.0	+1.3
OKC	Ostrava-Krasne	5.62	1	eSN	Sn	00 37 52.4	-0.7
OKC	Ostrava-Krasne	5.62	1	Sn	Sn	00 37 52.4	-0.7
MOTA	Moosalm	5.71	306	ePn	Pn	00 36 51.5	+1.8
	2.0nm,0.4s						
MOTA				eSn	Sb	00 38 18.4	+5.3
	1.8nm,0.5s						
MOTA	Moosalm	5.71	306	Pn	Pn	00 36 51.5	+1.8
	2.0nm,0.4s						
KHC	Kasperske Hory	5.75	330	ePN	Pn	00 36 52.9	+2.6
KHC				ex	x	00 37 01.4	
KHC				eSN	Sn	00 37 55.0	-1.5
KHC				ex	x	00 38 05.2	
KHC	Kasperske Hory	5.75	330	Pn	Pn	00 36 52.9	+2.6
KHC				Sn	Sn	00 37 55.0	-1.5
FETA	Feichten	5.78	302	ePn	Pn	00 36 49.8	-0.9
	1.3nm,0.3s						
FETA				Sn	Sb	00 38 18.2	+3.1
	0.4nm,0.4s						
FETA	Feichten	5.78	302	Pn	Pn	00 36 49.8	-0.9
	1.3nm,0.3s						
RETA	Reutte	5.98	306	i Pn	Pn	00 36 53.7	+0.3
RETA	Reutte	5.98	306	Pn	Pn	00 36 53.7	+0.3
PRU	Pruhonice	6.22	339	eSN	Sn	00 38 07.3	-0.5
PRU				ex	x	00 38 19.3	
PRU	Pruhonice	6.22	339	Sn	Sn	00 38 07.3	-0.5
DPC	Dobruska-Polom	6.23	350	eSN	Sn	00 38 05.9	-2.3
DPC				ex	x	00 38 19.3	
SBF	Sospel	7.58	271	ePn	Pn	00 37 12.6	-2.7
MBDF	Montbardon	8.00	278	ePn	Pn	00 37 19.6	-1.6
MBDF				eSn	Sn	00 38 44.3	-7.7
	2.3nm,0.5s						
LPL	La Plagne	8.06	283	ePn	Pn	00 37 22.7	+0.5
LPL				eSn	Sn	00 38 47.3	-6.3
	1.4nm,0.4s						
LPL	La Plagne	8.06	283	ePn	Pn	00 37 22.7	+0.5
FRF	La Foret Royal	8.18	269	ePn	Pn	00 37 23.7	+0.1
FRF				eSn	Sn	00 38 50.3	-5.9
	1.8nm,0.4s						
FRF	La Foret Royal	8.18	269	ePn	Pn	00 37 23.7	+0.1
LMR	La Mourre	8.32	268	ePn	Pn	00 37 24.7	-0.7
LMR				eSn	Sn	00 38 53.9	-5.6
	4.6nm,0.8s						
LMR	La Mourre	8.32	268	ePn	Pn	00 37 24.7	-0.7
ORIF	Oris-en-Rattie	8.64	279	ePn	Pn	00 37 30.2	+0.3
ORIF	Oris-en-Rattie	8.64	279	ePn	Pn	00 37 30.2	+0.3
SMRF	Simiane la Rot	8.90	273	ePn	Pn	00 37 32.8	-0.7
SMRF	Simiane la Rot	8.90	273	ePn	Pn	00 37 32.8	-0.7

*IDC **28** 00:35:39.5±0.7, 30°.38S×177°.24W, h0^{km}, mb4.4/8, mb1 4.5/8, mb1mx4.1/42, mbtmp4.4/8, MS3.7/10, Ms1 3.7/10, ms1mx3.3/46, Error ellipse: s-maj=24.9km s-min=16.4km az=72.0*

*NEIC **28** 00:35:40.9±0.6, 30°.52S×177°.42W, h10^{km}, mb4.7/3, Error ellipse: s-maj=20.5km s-min=11.2km az=94.0*

*ISCJB **28** 00:35:43.3±0.7, 30°.48S±0°.06×177°.4W±0°.2, h33^{km}, mb4.4/10, MS3.7/9, Error ellipse: s-maj=20.7km s-min=7.8km az=165.7*

ISC 28 00:35:44.6±0.6**, 30°.53S**±0°.06×**177°.4W**±0°.1**, h33^{km}, n45,** σ**1^{s}57**/43**, mb4.4**/10**, MS3.6**/9**, 1D, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	1.35	341	Pn	Pn	00 36 05.0	-2.1
	821nm,0.3s,baz=81,slow=19,SNR=32						
RAO				Sn	Sn	00 36 22.6	-1.1
	2µm,0.3s,baz=128,slow=17,SNR=13						
RAO	Raoul Island	1.35	341	ePg	Pn	00 36 04.9	-2.2
RAO				Pn	Pn	00 36 05.0	-2.1
RAO				Sn	Sn	00 36 22.6	-1.1
URZ	Urewera	8.94	209	Pn	Pn	00 37 47.3	-4.0
	0.6nm,0.3s,baz=56,slow=3.6,SNR=3.2						
URZ				Sn	Sn	00 39 27.5	-3.3
	5.1nm,0.3s,baz=96,slow=24,SNR=13						
RPZ	Rata Peaks	16.04	212	Pn	Pn	00 39 23.7	-3.8
	0.8nm,0.3s,baz=22,slow=5.4,SNR=4.1						
DZM	Mont Dzumac	16.73	296	eP	P	00 39 41.3	+2.7
	81nm,1.4s						
DZM				eLR	LR	00 43 27.9	
	398nm,25.0s						
DZM	Mont Dzumac	16.73	296	Pn	P	00 39 40.4	+1.7
	0.2nm,0.3s,baz=267,slow=18,SNR=2.6						
DZM				LR	LR	00 45 13.9	
	comp=Z,434nm,18.1s,baz=65,slow=34						
PPT2	Papeete2	28.40	69	eLR	LR	00 48 30.7	
	90nm,21.8s						
PPT	Papeete	28.42	69	LR	LR	00 50 49.6	
	comp=Z,72nm,20.0s,baz=190,slow=32						
STKA	Stephens Creek	34.95	257	P	P	00 42 35.6	+2.1
	13nm,0.8s,baz=97,slow=10,SNR=20						
PMG	Port Moresby	39.12	295	LR	LR	00 56 36.9	
	comp=Z,103nm,19.0s,baz=155,slow=32						
ASAR	Alice Springs	43.61	267	P	P	00 43 46.5	+0.6
	1.7nm,0.4s,baz=107,slow=7.3,SNR=14						
ASAR				PcP	PcP	00 45 33.8	+0.7
	0.7nm,0.6s,baz=124,slow=4.9,SNR=3.4						
ASAR				ScP	ScP	00 49 25.7	+3.5
	0.3nm,0.6s,baz=140,slow=4.5,SNR=3.8						
WRAB	Tennant Creek	44.60	272	eP	P	00 43 54.5	+0.6
	9.4nm,0.8s						
WRA	Warramunga Arr	44.61	272	P	P	00 43 53.8	-0.3
	13nm,0.8s,baz=111,slow=7.8,SNR=26						
WRA				PcP	PcP	00 45 37.0	+0.4
	0.9nm,0.9s,baz=122,slow=3.1,SNR=2.8						
WRA				LR	LR	01 02 13.6	
	comp=Z,183nm,18.1s,baz=120,slow=36						
VNDA	Vanda	48.02	186	LR	LR	01 01 27.2	
	comp=Z,45nm,20.8s,baz=7.0,slow=32						
CASY	Casey	55.27	208	eP	P	00 45 14.9	+0.7
	6.0nm,1.0s						
GUMO	Guam	56.93	315	LR	LR	01 10 23.5	
	comp=Z,34nm,18.1s,baz=134,slow=37						
QSPA	South Pole Qui	59.58	180	P	P	00 45 46.7	+1.8
	4.6nm,0.8s,baz=54,slow=2.2,SNR=12						
QSPA	South Pole Qui	59.58	180	eP	P	00 45 46.6	+1.7
	4.9nm,0.5s						
PMSA	Palmer Station	71.94	156	LR	LR	01 10 52.9	
	comp=Z,36nm,19.4s,baz=85,slow=29						
MAW	Mawson	72.37	200	P	P	00 47 08.6	+1.9
	2.5nm,0.8s,baz=80,slow=5.8,SNR=4.1						
LEM	Lembang	73.63	272	LR	LR	01 20 42.9	
	comp=Z,77nm,18.5s,baz=244,slow=37						
SYO	Syowa Base	77.10	193	⇓eP	P	00 47 31.2	-2.9
SNAA	Sanae	78.01	178	P	P	00 47 39.7	+0.4
SNAA	Sanae	78.01	178	P	P	00 47 39.7	+0.4
	1.6nm,0.8s,baz=337,slow=3.1,SNR=5.7						
VNA3	Neumayer Olymp	78.14	176	P	P	00 47 40.1	+0.1
VNA1	Neumayer--Stat	78.81	176	P	P	00 47 44.1	+0.5
KSRS	Korea Array	84.78	319	P	P	00 48 16.1	+0.7
	0.4nm,0.4s,baz=140,slow=6.0,SNR=4.0						
KSAR	Wonju Array Be	84.79	319	P	P	00 48 16.1	+0.6
NVAR	Mina Array Bea	87.99	42	P	P	00 48 30.9	-0.5
	1.2nm,0.8s,baz=229,slow=6.8,SNR=6.3						
NVAR				LR	LR	01 21 38.8	
	comp=Z,38nm,19.1s,baz=103,slow=31						
CMAR	Chiang Mai Arr	93.92	289	LR	LR	01 33 57.2	
	comp=Z,19nm,18.1s,baz=200,slow=37						
MKAR	Makanchi Array	118.24	310	PKP	PKPdf	00 54 27.7	-0.4
	0.4nm,0.6s,baz=190,slow=23,SNR=5.4						
KURK	Kurchatov	121.50	314	PKP	PKPdf	00 54 33.5	-0.6
KURBB	Kurchatov Arra	121.54	314	PKP	PKPdf	00 54 33.5	-0.7
	0.5nm,0.6s,baz=115,slow=1.8,SNR=5.4						
BVAR	Borovoye Array	126.85	316	PKP	PKPdf	00 54 44.3	-0.1
	0.7nm,0.5s,baz=138,slow=2.7,SNR=5.2						
ARCES	ARCESS Array B	138.82	348	PKP	PKPdf	00 55 07.2	+0.8
	2.4nm,1.1s,baz=6.3,slow=4.8,SNR=2.9						
RAYN	Ar Rayn	141.32	270	ePKPdf	PKPdf	00 55 11.6	-0.8
FINES	FINESS Array B	145.44	340	PKPbc	PKPbc	00 55 17.9	-0.6
	8.7nm,0.8s,baz=64,slow=4.4,SNR=31						
KBZ	Khabaz	145.60	304	PKPbc	PKPbc	00 55 19.4	-0.1
	3.7nm,0.9s,baz=226,slow=1.5,SNR=5.9						
NB2	NORSAR Subarra	148.95	352	PKP	PKPbc	00 55 27.7	-0.7
	comp=Z,0.7nm,0.7s,baz=9.7,slow=2.6						
NOA	NORSAR Array B	148.95	352	PKPbc	PKPbc	00 55 27.5	-0.9
	comp=Z,1.5nm,0.8s,baz=14,slow=4.3,SNR=5.7						
HFS	Hagfors	149.47	349	PKPbc	PKPbc	00 55 28.9	-0.7
	comp=Z,2.4nm,0.8s,baz=90,slow=3.0,SNR=4.7						
ASF	Jabal al Asfar	150.72	282	PKPbc	PKPbc	00 55 34.4	+0.7
	comp=Z,2.2nm,0.9s,baz=91,slow=22,SNR=4.2						
AKASG	Malin Array Be	151.71	323	PKPbc	PKPbc	00 55 34.8	-0.5
	comp=Z,1.0nm,0.4s,baz=51,slow=2.2,SNR=5.3						
MMAI	Mount Meron Ar	152.05	284	PKPbc	PKPbc	00 55 38.2	+1.5
	comp=Z,1.0nm,0.4s,baz=91,slow=7.5,SNR=12						
TORD	Torodi Ar. Bea	162.68	177	PKPab	PKPab	00 56 31.2	-0.9
	baz=174,slow=2.9						

*SOME **28** 00:38:01.8, 38°.97N×71°.53E, h0^{km}*

*NNC **28** 00:38:04.4±4.2, 38°.49N×72°.03E, h0^{km}, mb4.0, mpv3.6, Error ellipse: s-maj=35.0km s-min=21.1km az=161.0*

*IDC **28** 00:38:12.5±4.0, 38°.24N×73°.28E, h154^{km}±28^{km}, mb3.3/7, mb1 3.2/10, mb1mx2.9/70, mbtmp3.6/10, Error ellipse: s-maj=41.9km s-min=22.8km az=145.0*

ISC 28 00:38:04.4±1.1**, 38°.53N**±0°.08×**72°.00E**±0°.06**, h10^{km}, n32,** σ**3^{s}59**/52**, mb3.6**/7**, 5C-4D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	1.89	38	⇑P	Pn	00 38 37.8	+0.9
	20nm,0.4s						
SFK				⇓S	Sb	00 39 03.7	+0.8
	89nm,0.6s						
IUG	Iuzhnay	3.92	338	eP	Pn	00 39 06.2	+1.5
	21nm,0.1s						
IUG				eS	Sn	00 39 53.1	+2.3
	112nm,0.8s						
IUG	Iuzhnay	3.92	338	eP	Pn	00 39 06.2	+1.5
	21nm,0.1s						
IUG				eS	Sn	00 39 53.1	+2.3
	112nm,0.8s						
MNAS	Manas	3.98	5	⇓P	Pn	00 39 08.2	+2.6
	6.7nm,0.4s						
MNAS				⇓S	Sn	00 39 57.2	+5.0
	12nm,0.5s						
MRKS	Merke	4.32	12	eP	Pn	00 39 14.6	+4.5
	11nm,0.5s						
MRKS				eS	Sn	00 40 07.3	+6.7
	26nm,0.5s						
MRKS	Merke	4.32	12	eP	Pn	00 39 14.6	+4.5
	11nm,0.5s						
MRKS				eS	Sn	00 40 07.3	+6.7
	26nm,0.5s						
AAK	Ala-Archa	4.52	24	P	Pb	00 39 19.5	-4.5
	0.9nm,0.3s,baz=56,slow=18,SNR=2.3						
AAK				S	Sn	00 40 11.7	+5.9
	1.3nm,0.3s,baz=350,slow=17,SNR=3.8						
AAK	Ala-Archa	4.52	24	⇑P	Pn	00 39 15.1	+2.0
	5.3nm,0.5s						
AAK				⇑S	Sn	00 40 10.5	+4.6
	10nm,0.6s						
KK31	Karatay Array	4.71	347	P	Pn	00 39 18.2	+2.7
	5.7nm,0.4s,baz=164,slow=12,SNR=34						
KK31				⇑S	Sn	00 40 12.4	+2.2
	6.8nm,0.5s,baz=172,slow=23						
BRLS	Borolday	4.79	341	eP	Pn	00 39 16.9	+0.3
BRLS				eS	Sn	00 40 12.7	+0.5
	6.1nm,0.3s						
BRLS	Borolday	4.79	341	eP	Pn	00 39 16.9	+0.3
BRLS				eS	Sn	00 40 12.7	+0.5
	6.1nm,0.3s						
TKM2	Tokmak 2	5.17	31	⇓P	Pn	00 39 24.8	+2.8
	3.0nm,0.5s						
TKM2				⇑S	Sn	00 40 25.7	+3.9
	7.7nm,0.7s						
KST	Kastek	5.42	32	eP	Pb	00 39 39.6	+0.3
	8.1nm,0.7s						
KST				eS	Sg	00 40 52.9	-5.6
	8.0nm,0.7s						
KST	Kastek	5.42	32	eP	Pb	00 39 39.6	+0.3
	8.1nm,0.7s						
KST				eS	Sg	00 40 52.9	-5.6
	8.0nm,0.7s						
DGS	Degeres	5.51	30	eP	Pb	00 39 41.2	+0.5
	3.3nm,0.4s						
DGS				eS	Sg	00 40 56.4	-4.8
	8.3nm,0.7s						
DGS	Degeres	5.51	30	eP	Pb	00 39 41.2	+0.5
	3.3nm,0.4s						
DGS				eS	Sg	00 40 56.4	-4.8
	8.3nm,0.7s						
KOTS	Kotyrbulak	6.09	38	eP	Pb	00 39 53.1	+2.4
	2.1nm,0.6s						
KOTS				eS	Sg	00 41 16.3	-3.6
	12nm,0.7s						
KOTS	Kotyrbulak	6.09	38	eP	Pb	00 39 53.1	+2.4
	2.1nm,0.6s						
KOTS				eS	Sg	00 41 16.3	-3.6
	12nm,0.7s						
KTBS	Karatobe	6.27	33	eP	Pb	00 39 54.5	+0.9

	3.0nm,0.4s						
KTBS				*e*S	Sg	00 41 19.1	-6.5
	6.7nm,1.0s						
KTBS	Karatobe	6.27	33	*e*P	Pb	00 39 54.5	+0.9
	3.0nm,0.4s						
KTBS				*e*S	Sg	00 41 19.1	-6.5
	6.7nm,1.0s						
KUU	Kurty	6.28	30	*e*P	Pb	00 39 55.9	+2.1
	2.9nm,0.2s						
KUU				*e*S	Sg	00 41 20.3	-5.6
	6.6nm,0.4s						
KUU	Kurty	6.28	30	*e*P	Pb	00 39 55.9	+2.1
	2.9nm,0.2s						
KUU				*e*S	Sg	00 41 20.3	-5.6
	6.6nm,0.4s						
MKAR	Makanchi Array	11.20	39	P	Pn	00 40 44.0	-0.5
	0.1nm,0.3s,baz=227,slow=27,SNR=2.5						
BVAR	Borovoye Array	14.54	356	P	Pn	00 41 31.9	+1.7
	0.1nm,0.3s,baz=173,slow=13,SNR=3.5						
ZALV	Zalesovo Beam	17.75	25	P	Pn	00 42 05.8	-5.6
	0.2nm,0.3s,baz=200,slow=12,SNR=2.5						
MMAI	Mount Meron Ar	30.07	271	P	P	00 44 16.5	+2.6
	2.6nm,1.0s,baz=253,slow=15,SNR=3.5						
FINES	FINESS Array B	36.28	324	P	P	00 45 07.7	+0.1
	0.6nm,0.3s,baz=114,slow=7.9,SNR=10						
ARCES	ARCESS Array B	39.59	336	P	P	00 45 34.0	-1.5
	1.0nm,0.9s,baz=106,slow=8.9,SNR=6.1						
HFS	Hagfors	41.99	320	P	P	00 45 54.6	-0.7
	0.6nm,0.7s,baz=311,slow=13,SNR=2.7						
EKA	Eskdalemuir Ar	51.40	315	P	P	00 47 07.9	-1.3
	1.2nm,0.9s,baz=59,slow=6.2,SNR=2.7						
TORD	Torodi Ar. Bea	66.57	268	P	P	00 48 52.1	-2.9
	0.4nm,0.8s,baz=64,slow=4.9						
ILAR	Eielson Array	72.61	16	P	P	00 49 22.7	-8.9
	0.1nm,0.4s,baz=1.9,slow=2.8,SNR=2.8						

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*IDC **28** 00:49:18.2±2.7, 12°.04N×47°.53E, h0km, mb3.6/9, mb1 3.6/10, mb1mx3.4/66, mbtmp3.6/10, ML3.3/1, MS3.4/16, Ms1 3.4/16, ms1mx3.1/47, Error ellipse: s-maj=66.7km s-min=22.4km az=160.0*

ISC 28 00:49:19.2±2.4**, 11°.9N**±0°.4×**47°.5E**±0°.2**, h10km, n25, σ1s.31**/10**, mb3.7**/9**, MS3.4**/15**, 2C, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BDHA	Al Bayda’	2.77	317⇑	*i*P	Pn	00 49 55.9	-8.0
BDHA				*e*		00 49 56.1	
	baz=136,slow=16						
BDHA				*i* S	Sn	00 50 21.6	-16
BDHA				AML	AML	00 50 24.3	
	comp=N,2μm,0.3s						
LBOS		2.92	312⇑	*i*P	Pn	00 49 58.1	-7.9
LBOS				*i* S	Sn	00 50 25.9	-15
ATD	Arta Tunnel	4.57	265	Pn	Pn	00 50 27.8	-0.7
	comp=N,1.4nm,0.3s,baz=68,slow=10,SNR=6.1						
WSAR	Wadi Sarin	15.46	42	LR	LR	00 58 47.9	
	comp=N,82nm,19.1s,baz=240,slow=37						
MMAI	Mount Meron Ar	23.73	334	LR	LR	01 03 10.2	
	comp=N,60nm,18.4s,baz=150,slow=35						
GEYT	Alibeck	27.58	18	LR	LR	01 07 41.7	
	comp=N,85nm,18.4s,baz=265,slow=40						
BRTR	Keskin Array B	30.28	339	P	P	00 55 32.3	+1.5
	comp=N,0.2nm,0.3s,baz=149,slow=6.2,SNR=3.5						
BRTR				LR	LR	01 08 07.8	
	comp=N,94nm,18.7s,baz=126,slow=37						
OPO	Ambohidratompo	30.31	181	LR	LR	01 07 38.4	
	comp=N,139nm,19.4s,baz=4.0,slow=36						
AKTO	Aktyubinsk	39.35	11	LR	LR	01 15 26.6	
	comp=N,42nm,19.3s,baz=181,slow=40						
KEST	Kesra	41.79	311	LR	LR	01 14 39.2	
	comp=N,65nm,19.4s,baz=310,slow=36						
TORD	Torodi Ar. Bea	44.67	277	P	P	00 57 34.0	+1.2
	comp=N,1.4nm,1.0s,baz=97,slow=6.7						
BVAR	Borovoye Array	44.91	19	P	P	00 57 33.9	-0.1
	comp=N,0.2nm,0.5s,baz=193,slow=5.8,SNR=2.4						
BVAR				LR	LR	01 19 07.3	
	comp=N,74nm,18.7s,baz=234,slow=40						
MKAR	Makanchi Array	45.46	33	P	P	00 57 37.7	-0.9
	comp=N,1.0nm,0.9s,baz=222,slow=6.5,SNR=6.9						
BOSA	Boshof	45.68	208	LR	LR	01 16 00.3	
	comp=N,50nm,19.1s,baz=32,slow=35						
KURBB	Kurchatov Arra	46.17	27	P	P	00 57 43.5	-0.5
	comp=N,0.7nm,0.8s,baz=228,slow=7.6,SNR=6.7						
GERES	GERESS Array B	46.25	329	P	P	00 57 43.8	-1.0
	comp=N,0.2nm,0.6s,baz=111,slow=7.3,SNR=4.2						
DAVOX	Davos/Dischmat	47.00	325	LR	LR	01 20 13.7	
	comp=N,23nm,19.4s,baz=70,slow=40						
ZALV	Zalesovo Beam	51.27	27	P	P	00 58 21.1	-2.1
	comp=N,1.0nm,0.5s,baz=231,slow=7.7,SNR=3.6						
FINES	FINESS Array B	51.84	347	P	P	00 58 26.6	-0.7
	comp=N,0.4nm,0.7s,baz=161,slow=7.2,SNR=2.6						
FINES				LR	LR	01 21 02.1	
	comp=N,22nm,21.9s,baz=138,slow=37						
MDT	Midelt	51.91	302	LR	LR	01 20 39.0	
	comp=N,37nm,18.6s,baz=118,slow=36						
HFS	Hagfors	54.21	340	LR	LR	01 24 18.6	
	comp=N,30nm,18.4s,baz=143,slow=39						
NOA	NORSAR Array B	55.71	340	LR	LR	01 25 24.8	
	comp=N,16nm,18.4s,baz=270,slow=39						
SONM	Songino Array	60.51	42	P	P	00 59 30.6	+0.9
	comp=N,0.5nm,0.5s,baz=234,slow=6.9,SNR=5.3						
BORG	Borgarnes	70.29	335	LR	LR	01 33 37.1	
	comp=N,16nm,19.2s,baz=161,slow=38						
NWAO	Narrogin (SRO)	79.99	127	LR	LR	01 30 25.8	
	comp=N,51nm,18.4s,baz=214,slow=31						

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*ISCJB **28** 00:54:06.5±0.9, 16°.42N±0°.04×119°.59E±0°.08, h38km±10km, mb3.9/14, MS3.1/2, Error ellipse: s-maj=13.4km s-min=6.5km az=4.3*

*MAN **28** 00:54:07.0, 16°.36N×119°.70E, h28km, mb4.9, ML3.8, MS3.7*

*IDC **28** 00:54:14.8±1.5, 16°.18N×119°.90E, h120km±16km, mb3.5/15, mb1 3.6/16, mb1mx3.4/71, mbtmp3.9/16, MS3.0/5, Ms1 3.1/5, ms1mx2.7/47, Error ellipse: s-maj=39.6km s-min=13.5km az=60.0*

ISC 28 00:54:06.5±1.2**, 16°.32N**±0°.04×**119°.74E**±0°.07**, h33km**±8km**, n26, σ1s.69**/33**, mb3.9**/14**, 1C, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BOLP	Bolinao	0.18	71	*e*P	Pn	00 54 14.4	+2.2
BOLP				*e*S	Sb	00 54 17.9	+0.7
SCZP	Santa Cruz	0.57	163	*e*P	Pn	00 54 19.6	+1.4
SCZP				*e*S	Sn	00 54 29.4	+2.9
PCPH	Palayan	1.51	120⇑	*e*P	Pb	00 54 32.7	-1.2
PCPH				*e*S	Sb	00 54 52.8	0.0
ABRA	Dolores	1.61	35	*e*P	Pb	00 54 34.2	-1.5
ABRA				*e*S	Sn	00 54 54.2	+1.9
CAUP	Cauayan	2.09	73	*e*P	Pb	00 54 42.8	-1.1
CAUP				*e*S	Sb	00 55 24.4	+15
QVPH	Quezon City--P	2.09	142	*e*P	Pb	00 54 43.0	-0.8
QVPH				*e*S	Sb	00 55 09.9	+0.4
APYP	Conner	2.10	43	*e*P	Pn	00 54 40.2	+0.9
APYP				*e*S	Sn	00 55 06.1	+1.8
TGY	Tagaytay City	2.49	152	P	Pb	00 54 50.9	+0.2
	80nm,0.3s,baz=14,slow=2.6,SNR=11						
TGY				S	Sb	00 55 21.8	+0.7
	108nm,0.3s,baz=14,slow=22,SNR=5.9						
TGY				LR	LR	00 56 11.2	
	comp=Z,154nm,18.1s,baz=46,slow=51						
LUBP	Lubang	2.62	169	*e*P	Pb	00 54 49.3	-3.6
LUBP				*e*S	Sb	00 55 28.0	+3.4
JNU	Nakatsue	19.52	29	LR	LR	01 06 11.2	
	comp=Z,29nm,19.2s,baz=112,slow=37						
CMAR	Chiang Mai Arr	19.96	279	P	Pn	00 58 40.0	+2.2
	3.7nm,0.8s,baz=89,slow=7.6,SNR=14						
CMAR				LR	LR	01 06 29.0	
	comp=Z,82nm,18.8s,baz=91,slow=36						
SONM	Songino Array	33.29	344	P	P	01 00 42.1	+1.0
	1.0nm,0.5s,baz=167,slow=11,SNR=4.7						
SONM				LR	LR	01 13 38.4	
	comp=Z,21nm,19.1s,baz=232,slow=35						
WRA	Warramunga Arr	38.79	158	P	P	01 01 25.1	-3.3
	0.5nm,0.5s,baz=341,slow=8.9,SNR=5.1						
ASAR	Alice Springs	42.09	160	P	P	01 01 53.0	-2.6
	1.2nm,0.7s,baz=338,slow=6.6,SNR=9.4						
ASAR				PcP	PcP	01 03 48.1	-1.9
	0.2nm,0.6s,baz=351,slow=4.1,SNR=2.9						
MKAR	Makanchi Array	43.39	323	P	P	01 02 07.3	+1.4
	1.1nm,0.8s,baz=128,slow=8.0,SNR=9.2						
MKAR				PcP	PcP	01 03 54.2	+0.2
	0.4nm,0.6s,baz=149,slow=2.8,SNR=3.5						
PETK	Petropavlovsk-	47.21	30	LR	LR	01 25 05.3	
	comp=Z,29nm,18.3s,baz=131,slow=39						
KURBB	Kurchatov Arra	47.51	325	P	P	01 02 39.1	+0.7
	1.3nm,0.8s,baz=121,slow=8.2,SNR=8.8						
BVAR	Borovoye Array	53.10	325	P	P	01 03 20.4	-0.3
	0.3nm,0.5s,baz=87,slow=5.9,SNR=3.5						
ARU	Arti	60.70	326	P	P	01 04 14.0	-0.5
	1.6nm,0.4s,baz=118,slow=5.2,SNR=4.3						
ARCES	ARCESS Array B	76.32	339	P	P	01 05 51.7	-0.1
	2.2nm,1.0s,baz=81,slow=7.5,SNR=6.6						
BRTR	Keskin Array B	76.81	308	P	P	01 05 54.9	-0.4
	0.5nm,0.9s,baz=352,slow=2.2,SNR=3.5						
SPITS	Spitsbergen Ar	76.85	348	P	P	01 05 55.2	+0.5
	3.5nm,0.7s,baz=31,slow=12,SNR=5.1						
FINES	FINESS Array B	77.55	331	P	P	01 05 58.5	-0.4
	0.5nm,0.5s,baz=50,slow=6.0,SNR=13						
MLR	Muntele Rosu	81.15	315	P	P	01 06 19.0	0.0
	1.0nm,0.7s,baz=158,slow=7.4,SNR=3.5						
HFS	Hagfors	83.74	331	P	P	01 06 30.8	-1.3
	1.4nm,0.8s,baz=264,slow=3.0,SNR=4.5						
NOA	NORSAR Array B	84.52	332	P	P	01 06 34.7	-1.4
	0.3nm,0.6s,baz=76,slow=7.7,SNR=3.4						

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*IDC **28** 01:04:52.5±1.2, 30°.36S×177°.31W, h0km, mb4.0/4, mb1 4.2/5, mb1mx3.8/42, mbtmp4.1/5, ML3.9/1, MS3.4/1, Ms1 3.4/1, ms1mx2.5/44, Error ellipse: s-maj=32.6km s-min=19.1km az=79.0*

*ISCJB **28** 01:04:56.8±1.6, 30°.49S±0°.06×177°.5W±0°.3, h33km, mb4.0/4, Error ellipse: s-maj=31.8km s-min=7.7km az=4.7*

ISC 28 01:04:57.1±1.4**, 30°.55S**±0°.07×**177°.5W**±0°.2**, h33km, n11, σ1s.91**/13**, mb4.1**/4**, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	1.33	345	Pn	Pn	01 05 17.8	-1.6
	348nm,0.3s,baz=9.4,slow=1.7,SNR=16						
RAO				Sn	Sn	01 05 35.1	-0.8
	676nm,0.3s,baz=74,slow=20,SNR=15						
URZ	Urewera	8.88	208	Pn	Pn	01 07 00.1	-2.9
	0.3nm,0.3s,baz=176,slow=19,SNR=2.6						
URZ				Sn	Sn	01 08 39.4	-2.4
	0.5nm,0.3s,baz=288,slow=19,SNR=8.3						
RPZ	Rata Peaks	15.97	211	Pn	P	01 08 41.9	-0.5
	0.5nm,0.3s,baz=105,slow=18,SNR=2.5						
RPZ				Sn	Sn	01 11 36.4	+1.3
	0.5nm,0.3s,baz=221,slow=11,SNR=3.8						
DZM	Mont Dzumac	16.65	297	LR	LR	01 13 58.3	
	comp=Z,128nm,19.6s,baz=58,slow=33						
STKA	Stephens Creek	34.84	257	P	P	01 11 48.3	+3.1
	2.6nm,0.5s,baz=109,slow=12,SNR=5.8						
ASAR	Alice Springs	43.50	267	P	P	01 12 59.1	+1.5
	0.7nm,0.6s,baz=108,slow=7.2,SNR=7.8						
WRA	Warramunga Arr	44.51	272	P	P	01 13 06.2	+0.5
	2.2nm,0.7s,baz=111,slow=7.9,SNR=7.6						
QSPA	South Pole Qui	59.57	180	P	P	01 14 59.3	+2.0
	1.1nm,0.8s,baz=95,slow=4.1,SNR=2.9						
FINES	FINESS Array B	145.42	340	PKPbc	PKPbc	01 24 30.5	-0.4
	3.3nm,1.0s,baz=100,slow=5.8,SNR=7.8						
NOA	NORSAR Array B	148.95	352	PKPbc	PKPbc	01 24 40.8	-0.1
	0.3nm,0.7s,baz=16,slow=3.2,SNR=2.3						
HFS	Hagfors	149.47	349	PKPbc	PKPbc	01 24 41.4	-0.7
	1.0nm,0.9s,baz=351,slow=7.6,SNR=2.3						

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*DDA **28** 01:24:14.9, 36°.39N×31°.04E, h10km, Ml3.5*

*ISK **28** 01:24:14.6, 36°.44N×30°.90E, h5km, ML3.5/27*

*THE **28** 01:24:15.7, 36°.16N×31°.26E, h27km±37km, ML3.2/1, Error ellipse: s-maj=38.0km s-min=1.9km az=128.0*

*ISCJB **28** 01:24:15.3±0.6, 36°.32N±0°.02×30°.92E±0°.02, h8km±4km, mb3.3/7, MS2.5/1, Error ellipse: s-maj=3.8km s-min=2.1km az=39.1*

*CSEM **28** 01:24:16.3±0.1, 36°.36N×30°.89E, h5km, ML3.5, Error ellipse: s-maj=4.4km s-min=2.4km az=31.0*

*NIC **28** 01:24:17.7±0.4, 36°.19N×31°.09E, h5km, ML3.5*

*IDC **28** 01:24:19.6±1.7, 36°.50N×30°.89E, h39km±20km, mb3.2/7, mb1 3.4/15, mb1mx3.3/64, mbtmp3.4/15, ML3.4/8, MS2.6/5, Ms1 2.7/5, ms1mx2.3/30, Error ellipse: s-maj=17.4km s-min=13.1km az=38.0*

*GII **28** 01:25:19.6±0.0, 36°.34N×30°.84E, h30km, MD3.1/3*

ISC 28 01:24:15.2±1.2**, 36°.36N**±0°.03×**30°.96E**±0°.02**, h5km**±8km**, n183, σ1s.59**/226**, mb3.4**/7**, 5C-2D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ANTB	Antalya	0.59	335	PG	Pg	01 24 26.5	0.0
ANTB				SG	Sg	01 24 33.6	-0.5
ANTB	Antalya	0.59	335	*e*Pg	Pg	01 24 26.5	0.0
ANTB				*e*Sg	Sg	01 24 33.6	-0.5
KORT	Korkueli	0.80	323	PG	Pg	01 24 29.0	-1.6
KORT	Korkueli	0.80	323	*e*Pg	Pg	01 24 29.0	-1.6
ELL	Elmali	0.93	295	PG	Pg	01 24 31.3	-1.7
ELL	Elmali	0.93	295	*e*Pg	Pg	01 24 31.3	-1.7
AKAS	Kas	1.10	264	PG	Pg	01 24 35.9	-0.4
AKAS	Kas	1.10	264	*i* P	Pb	01 24 36.8	0.0
AKAS				*i* S	Sn	01 24 54.0	+0.9
AKAS	Kas	1.10	264	*e*Pg	Pg	01 24 35.9	-0.4
AKAS	Kas	1.10	264	P	Pb	01 24 36.8	0.0
AKAS				S	Sn	01 24 54.0	+0.9
GAZI	Gazipasa	1.10	96	PN	Pg	01 24 36.5	+0.2
SUTC	Sutluce-Ispart	1.11	2	PG	Pg	01 24 34.9	-1.6
KSL	Kastellorizon	1.13	260	P	Pg	01 24 36.8	-0.1
KSL				S	Sn	01 24 53.9	+0.3
KSL	Kastellorizon	1.13	260	P	Pg	01 24 36.8	-0.1
KSL				S	Sn	01 24 53.9	+0.3
ISP	Isparta	1.50	347	PN	Pn	01 24 42.2	-0.6
ISP	Isparta	1.50	347	P	Pn	01 24 43.2	+0.4
ISP				S	Sg	01 25 04.4	+1.1
ISP	Isparta	1.50	347	Pn	Pg	01 24 44.2	+0.3
ISP	Isparta	1.50	347	*e*Pn	Pn	01 24 42.2	-0.6
ISP				S	Sg	01 25 04.4	+1.1
BRDR	BURDUR-Merkez	1.51	332	*i* P	Pb	01 24 43.8	0.0
BRDR	BURDUR-Merkez	1.51	332	P	Pb	01 24 43.8	0.0
FETY	Fethiye	1.54	281	PN	Pb	01 24 44.1	-0.1
FETY	Fethiye	1.54	281	P	Pb	01 24 44.0	-0.1
FETY				S	Sg	01 25 05.7	+1.2
FETY	Fethiye	1.54	281	*e*Pn	Pb	01 24 44.1	-0.1
FETY				S	Sg	01 25 05.7	+1.2
BAGO	Egridir - ISPA	1.63	355	*i* P	Pn	01 24 44.9	+0.3
BAGO				*i* S	Sg	01 25 07.5	0.0
BOZY	Bozyazi-Mersin	1.65	98	PN	Pg	01 24 46.9	+0.1
BOZY	Bozyazi-Mersin	1.65	98	*e*Pn	Pg	01 24 46.9	+0.1
AKMC	Akamas	1.74	140	P	Pn	01 24 45.9	-0.2
	baz=319						
AKMC	Akamas	1.74	140	P	Pn	01 24 45.9	-0.2
TEKE	Tekeli-Mersin	1.76	97	PN	Pn	01 24 46.8	+0.5
TEKE	Tekeli-Mersin	1.76	97	*e*Pn	Pn	01 24 46.8	+0.5
ALFC	Alefka	1.80	132	P	Pn	01 24 46.1	-0.8
	baz=310						
ALFC				S	Sn	01 25 08.0	-2.1
ALFC	Alefka	1.80	132	P	Pn	01 24 46.1	-0.8
ALFC				S	Sn	01 25 08.0	-2.1
BERE	Bereket-Mersin	1.83	90	PN	Pb	01 24 48.8	-0.4
BERE	Bereket-Mersin	1.83	90	*e*Pn	Pb	01 24 48.8	-0.4
PPCY	Paphos	1.86	142	P	Pn	01 24 46.9	-0.8
	baz=322						
PPCY	Paphos	1.86	142	P	Pn	01 24 46.9	-0.8
DALY	Dalyan (Mu˜la	1.91	284	PN	Pn	01 24 49.0	+0.6
DALY	Dalyan (Mu˜la	1.91	284	*e*Pn	Pn	01 24 49.0	+0.6
KONT	Konya--Tatoy	1.94	35	PN	Pn	01 24 49.9	+1.1
KONT	Konya--Tatoy	1.94	35	*e*Pn	Pn	01 24 49.9	+1.1
AKDN	Akdeniz- K˜–br	1.95	123	PN	Pb	01 24 51.5	+0.4
AKDN	Akdeniz- K˜–br	1.95	123	*e*Pn	Pb	01 24 51.5	+0.4
TURN	Turunc	1.96	286	PN	Pg	01 24 53.7	+0.9
LEF	Lefka	2.00	128	PN	Pn	01 24 47.7	-1.9
DENT	Denizli	2.07	313	PN	Pn	01 24 51.3	+0.6
DENT	Denizli	2.07	313	*e*Pn	Pn	01 24 51.3	+0.6
AKK2	Akkuyu-Mersin	2.10	95	PN	Pb	01 24 53.5	-0.3
AKK2	Akkuyu-Mersin	2.10	95	*e*Pn	Pb	01 24 53.5	-0.3
AKKU	Akkuyu-Mersin	2.10	95	PN	Pb	01 24 52.7	-1.1
AKKU	Akkuyu-Mersin	2.10	95	*e*Pn	Pb	01 24 52.7	-1.1
LADK	Ladik-KONYA	2.15	31	PN	Pn	01 24 52.6	+0.8
LADK	Ladik-KONYA	2.15	31	*e*Pn	Pn	01 24 52.6	+0.8
MAMC	Mammari	2.19	122	P	Pn	01 24 52.0	-0.2
	baz=300						
MAMC	Mammari	2.19	122	P	Pn	01 24 52.0	-0.2
IKL	Isikli	2.21	92	PN	Pb	01 24 54.3	-1.2
IKL	Isikli	2.21	92	*e*Pn	Pb	01 24 54.3	-1.2
KEBE	Keben-Mersin	2.22	87	PN	Pb	01 24 54.9	-1.0
KEBE	Keben-Mersin	2.22	87	*e*Pn	Pb	01 24 54.9	-1.0
SZAC	Souni	2.24	135	P	Pn	01 24 52.3	-0.7
	baz=314						
SZAC				S	Sn	01 25 18.4	-2.7
SZAC	Souni	2.24	135	P	Pn	01 24 52.3	-0.7
YER	Yerkesik	2.28	290	PN	Pn	01 24 54.3	+0.7
YER	Yerkesik	2.28	290	P	Pn	01 24 55.0	+1.4
YER				S	Sb	01 25 25.3	-0.2
YER	Yerkesik	2.28	290	*e*Pn	Pn	01 24 54.3	+0.7
YER	Yerkesik	2.28	290	P	Pn	01 24 55.0	+1.4
YER				S	Sb	01 25 25.3	-0.2
ARG	Arkhangelos	2.29	267	PN	Pn	01 24 53.8	+0.1
ARG	Arkhangelos	2.29	267	P	Pn	01 24 53.8	+0.1
ARG	Arkhangelos	2.29	267	P	Pn	01 24 53.8	+0.1
BOLV	Bolvadin	2.35	360	*i* P	Pb	01 24 57.4	-0.7
BOLV				*i* S	Sb	01 25 26.7	-0.8
BOLV	Bolvadin	2.35	360	P	Pb	01 24 57.4	-0.7
BOLV				S	Sb	01 25 26.7	-0.8
CSS	Mathiatis	2.38	125	P	Pn	01 24 53.8	-1.1
	baz=304						
CSS				S	Sn	01 25 23.5	-1.1
CSS	Mathiatis	2.38	125	P	Pn	01 24 53.8	-1.1
CSS				S	Sn	01 25 23.5	-1.1
KIZK	Mersin	2.57	86	PN	Pn	01 24 59.5	+2.0
KIZT	Kizilcal	2.62	16	PN	Pn	01 24 57.9	-0.3
KIZT	Kizilcal	2.62	16	*e*Pn	Pn	01 24 59.5	+1.3
DATC	Datca-Mugla	2.69	279	PN	Pn	01 25 00.2	+1.2
DATC	Datca-Mugla	2.69	279	*e*Pn	Pn	01 25 00.2	+1.2
EREN	Erenkoy	2.73	107	PN	Pb	01 25 02.8	-1.8
EREN	Erenkoy	2.73	107	*e*Pn	Pb	01 25 02.8	-1.8
SULT	Sultanhani-AKS	2.74	47	PN	Pn	01 25 01.4	+1.5
SULT	Sultanhani-AKS	2.74	47	*e*Pn	Pn	01 25 01.4	+1.5
DAT	Datca	2.75	279	PN	Pn	01 25 00.7	+0.7
DAT	Datca	2.75	279	*e*Pn	Pn	01 25 00.7	+0.7
AYDN	Tasoluk	2.78	299	*i* P	Pn	01 25 00.8	+0.3
AYDN				*i* S	Sn	01 25 33.5	-1.0
AYDN	Tasoluk	2.78	299	P	Pn	01 25 00.8	+0.3
AYDN				S	Sn	01 25 33.5	-1.0
KULA	Kula-Manisa	2.82	320	PN	Pn	01 25 01.0	0.0
KULA	Kula-Manisa	2.82	320	*e*Pn	Pn	01 25 01.0	0.0
BDRM	Kayabasi	2.91	285	*i* S	Sn	01 25 39.1	+1.7
BDRM	Kayabasi	2.91	285	S	Sn	01 25 39.2	+1.7
MERS	Mersin	2.91	79	PN	Pn	01 25 04.9	+2.7
MERS	Mersin	2.91	79	*e*Pn	Pn	01 25 04.9	+2.7
AYDB	Zeytinkoy-Aydi	2.92	304	PN	Pn	01 25 02.7	+0.4
AYDB	Zeytinkoy-Aydi	2.92	304	*e*Pn	Pn	01 25 02.7	+0.4
BODT	Bodrum	3.01	284	PN	Pn	01 25 04.4	+0.8
BODT	Bodrum	3.01	284	P	Pn	01 25 04.4	+0.8
BODT				S	Sn	01 25 40.7	+0.6
BODT	Bodrum	3.01	284	P	Pn	01 25 04.4	+0.8
BODT				S	Sn	01 25 40.7	+0.6
SIMA	Simav-Kutahya	3.13	331	PN	Pn	01 25 06.5	+1.2
SIMA	Simav-Kutahya	3.13	331	*e*Pn	Pn	01 25 06.5	+1.2
GCAM	G?zelcaml?	3.27	295	PN	Pn	01 25 07.5	+0.5
GCAM	G?zelcaml?	3.27	295	*e*Pn	Pn	01 25 07.5	+0.5
KARA	Karaisali	3.41	74	PN	Pn	01 25 11.9	+2.9
KARA	Karaisali	3.41	74	*e*Pn	Pn	01 25 11.9	+2.9
SMG	Samos	3.56	293	P	Pn	01 25 11.4	+0.3
SMG	Samos	3.56	293	P	Pn	01 25 11.4	+0.3
KRTS	Karatas	3.56	85	PN	Pn	01 25 14.4	+3.3
KRTS	Karatas	3.56	85	*e*Pn	Pn	01 25 14.4	+3.3
BLCB	Balcova	3.71	304	PN	Pn	01 25 14.1	+0.9
BLCB	Balcova	3.71	304	*e*Pn	Pn	01 25 14.1	+0.9
YURE	YUREGIR	3.79	82	PN	Pn	01 25 17.5	+3.2
YURE	YUREGIR	3.79	82	*e*Pn	Pn	01 25 17.5	+3.2
BRTR	Keskin Array B	3.97	31	Pn	Pn	01 25 17.3	+0.5
	1.3nm,0.3s,baz=65,slow=19,SNR=37						
BRTR				Sn	Sn	01 26 01.4	-2.4
	3.1nm,0.3s,baz=202,slow=25,SNR=16						
URLA	Izmir	4.01	301	PN	Pn	01 25 18.3	+1.1
URLA	Izmir	4.01	301	*e*Pn	Pn	01 25 18.3	+1.1
YAYL	Yayladag	4.18	93	PN	Pn	01 25 22.9	+3.2
YAYL	Yayladag	4.18	93	*e*Pn	Pn	01 25 22.9	+3.2
DKL	Dikili	4.20	311	PN	Pn	01 25 20.6	+0.8
DKL	Dikili	4.20	311	*e*Pn	Pn	01 25 20.6	+0.8
TAHT	Tahtakopru-Hat	4.22	88	PN	Pn	01 25 23.6	+3.5
TAHT	Tahtakopru-Hat	4.22	88	*e*Pn	Pn	01 25 23.6	+3.5
CDAG	Cicekdag	4.23	39	*i* P	Pn	01 25 22.2	+1.9
CDAG				*i* S	Sn	01 26 10.8	+0.7
CDAG	Cicekdag	4.23	39	P	Pn	01 25 22.2	+1.9
CDAG				S	Sn	01 26 10.8	+0.7
BALY	Balya	4.28	323	*i* P	Pn	01 25 22.2	+1.2
BALY	Balya	4.28	323	P	Pn	01 25 22.2	+1.2
CHOS	Chios island	4.40	299	PN	Pn	01 25 23.3	+0.6
CHOS	Chios island	4.40	299	*e*Pn	Pn	01 25 23.3	+0.6
HNTI	Hanita	4.77	132	Pn	Pn	01 25 30.4	+2.7
HNTI				Sn	Sn	01 26 25.5	+2.1
HNTI	Hanita	4.77	132	Pn	Pn	01 25 30.4	+2.7
HNTI				Sn	Sn	01 26 25.5	+2.1
BAYC	CANAKKALE_Bayr	4.85	315	*i* P	Pn	01 25 30.1	+1.3
BAYC	CANAKKALE_Bayr	4.85	315	P	Pn	01 25 30.1	+1.3
MMA0B	Mount Meron ar	4.96	131	Pn	Pn	01 25 32.3	+2.0
MMA0B	Mount Meron ar	4.96	131	Pn	Pn	01 25 32.3	+2.0
MMAI	Mount Meron Ar	4.96	131	Pn	Pn	01 25 32.4	+2.1
	4.8nm,0.3s,baz=303,slow=12,SNR=60						
MMAI				Sn	Sn	01 26 29.4	+1.3
	5.6nm,0.3s,baz=314,slow=22,SNR=6.5						
MMAI				LR	LR	01 27 49.0	
	comp=Z,56nm,20.1s,baz=40,slow=41						
KSDI	Kefar Szold	5.00	128	Pn	Pn	01 25 33.1	+2.3
KSDI	Kefar Szold	5.00	128	Pn	Pn	01 25 33.1	+2.3
OFRI	‘Ofer	5.00	137	Pn	Pn	01 25 33.0	+2.1
OFRI				Sn	Sn	01 26 30.4	+1.3
OFRI	‘Ofer	5.00	137	Pn	Pn	01 25 33.0	+2.1
OFRI				Sn	Sn	01 26 30.4	+1.3
NATI	Neve Ativ	5.00	127	Pn	Pn	01 25 33.1	+2.2
NATI				Sn	Sn	01 26 31.4	+2.3
BLGI	Bet Lehem HaGe	5.03	135	Pn	Pn	01 25 33.9	+2.6
BLGI	Bet Lehem HaGe	5.03	135	Pn	Pn	01 25 33.9	+2.6
IDI	Anoyia	5.05	259	Pn	Pn	01 25 31.0	-0.5
	2.7nm,0.3s,baz=338,slow=8.6,SNR=29						
IDI				Sn	Sn	01 26 29.6	-0.7
	2.6nm,0.3s,baz=225,slow=3.2,SNR=3.5						
IDI	Anoyia	5.05	259⇑	*i*P	Pn	01 25 34.7	+3.1
IDI	Anoyia	5.05	259	S	Sn	01 26 29.6	-0.7
KSHT	Keshet	5.23	129	Pn	Pn	01 25 36.6	+2.5
KSHT	Keshet	5.23	129	Pn	Pn	01 25 36.6	+2.5
SLTI	Sal’it	5.32	139	Pn	Pn	01 25 36.9	+1.6
SLTI				Sn	Sn	01 26 37.7	+0.7
SLTI	Sal’it	5.32	139	Pn	Pn	01 25 36.9	+1.6
SLTI				Sn	Sn	01 26 37.7	+0.7
MMLI	Mount Malkishu	5.38	135	Pn	Pn	01 25 38.4	+2.3
MMLI	Mount Malkishu	5.38	135	Pn	Pn	01 25 38.4	+2.3
HMDT	Nahal Hemdat	5.58	136	Pn	Pn	01 25 41.3	+2.5
HMDT				Sn	Sn	01 26 45.2	+1.9
HMDT	Nahal Hemdat	5.58	136	Pn	Pn	01 25 41.3	+2.5
HMDT				Sn	Sn	01 26 45.2	+1.9
AMAZ	Amatzia	5.83	145	Pn	Pn	01 25 44.3	+1.9
AMAZ	Amatzia	5.83	145	Pn	Pn	01 25 44.3	+1.9
DSI	Dead Sea	6.03	141	Pn	Pn	01 25 47.1	+2.1
DSI				Sn	Sn	01 26 56.1	+1.7
DSI	Dead Sea	6.03	141	Pn	Pn	01 25 47.1	+2.1
DSI				Sn	Sn	01 26 56.1	+1.7
KZIT	Kziot	6.15	151	Pn	Pn	01 25 48.0	+1.3
KZIT	Kziot	6.15	151	Pn	Pn	01 25 48.0	+1.3
MZDA	Masada	6.23	143	Pn	Pn	01 25 49.7	+2.0
MZDA	Masada	6.23	143	Pn	Pn	01 25 49.7	+2.0
ASF	Jabal al Asfar	6.45	129	Pn	Pn	01 25 55.8	+4.9
	0.6nm,0.3s,baz=90,slow=22,SNR=6.9						
ASF				Sn	Sn	01 27 07.0	+1.9
	0.1nm,0.3s,baz=127,slow=18,SNR=2.2						
PRNI	Paran	6.88	149	Pn	Pn	01 25 58.2	+1.4
PRNI				Sn	Sn	01 27 16.5	+0.9
PRNI	Paran	6.88	149	Pn	Pn	01 25 58.2	+1.4
PRNI				Sn	Sn	01 27 16.5	+0.9
MBRI	Mt Berech	7.34	152	Pn	Pn	01 26 04.9	+1.7
MBRI				Sn	Sn	01 27 28.6	+1.7
MBRI	Mt Berech	7.34	152	Pn	Pn	01 26 04.9	+1.7
MBRI				Sn	Sn	01 27 28.6	+1.7
EIL	Elat	7.47	152	Pn	Pn	01 26 08.4	+3.6
	0.2nm,0.3s,baz=86,slow=18,SNR=2.2						
EIL				Sn	Sn	01 27 33.6	+3.7
	0.4nm,0.3s,baz=23,slow=18,SNR=1.8						
EIL	Elat	7.47	152	Pn	Pn	01 26 06.8	+2.0
EIL	Elat	7.47	152	Pn	Pn	01 26 06.8	+2.0
TIRR	Tirgusor	8.31	347⇑	*i*P	Pn	01 26 19.6	+3.3
TLB	Topalu	8.51	346⇓	*i*P	Pn	01 26 22.6	+3.6
VTS	Vitosha	8.63	318⇑	*i*P	Pn	01 26 22.9	+2.0
MLR	Muntele Rosu	9.87	339	Pn	Pn	01 26 38.8	+1.0
	0.1nm,0.3s,baz=169,slow=16,SNR=2.8						
MLR				LR	LR	01 31 12.0	
	comp=Z,44nm,18.1s,baz=215,slow=42						
MLR	Muntele Rosu	9.87	339⇑	*i*P	Pn	01 26 39.2	+1.4
VRI	Vrincioaia	10.01	343⇓	*i*P	Pn	01 26 43.2	+3.5

PLOR	Plostina	10.02	342	⇑iP	Pn	01 26 43.7	+4.0
AKASG	Malin Array Be	14.39	356	Pn	Pn	01 27 38.3	-1.1
	0.2nm,0.3s,baz=178,slow=9.7,SNR=4.1						
VRAC	Vranov	16.64	325	LR	LR	01 36 13.4	
	comp=Z,19nm,18.2s,baz=136,slow=43						
GERES	GERESS Array B	17.75	320	Pn	P	01 28 25.1	+1.1
	0.1nm,0.3s,baz=221,slow=38,SNR=3.9						
GERES				LR	LR	01 36 04.6	
	comp=Z,23nm,19.2s,baz=94,slow=40						
GEYT	Alibeck	21.68	78	P	P	01 29 06.7	-0.1
	0.6nm,0.5s,baz=263,slow=24,SNR=2.7						
FINES	FINESS Array B	25.29	355	P	P	01 29 39.8	-2.4
	0.8nm,0.6s,baz=150,slow=20,SNR=7.1						
HFS	Hagfors	26.25	340	P	P	01 29 48.4	-2.6
	0.8nm,0.8s,baz=110,slow=11,SNR=2.6						
ESDC	Sonseca Array	27.61	288	P	P	01 30 02.5	-1.0
	0.3nm,0.7s,baz=78,slow=10,SNR=2.6						
NOA	NORSAR Array B	27.69	339	LR	LR	01 42 59.9	
	comp=Z,13nm,20.6s,baz=155,slow=41						
ARCES	ARCESS Array B	33.36	357	P	P	01 30 53.0	-0.9
	1.0nm,0.8s,baz=168,slow=8.8,SNR=4.0						
KURBB	Kurchatov Arra	36.68	52	P	P	01 31 21.7	-1.1
	0.4nm,0.6s,baz=275,slow=9.1,SNR=3.5						
MKAR	Makanchi Array	39.16	58	P	P	01 31 43.9	+0.1
	0.1nm,0.5s,baz=293,slow=7.4,SNR=2.8						

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*IDC **28** 01:26:43.4±1.7, 36°.58N×30°.78E, h0^{km}, mb3.4/3, mb1 3.4/6, mb1mx3.2/59, mbtmp3.4/6, ML3.3/3, Error ellipse: s-maj=30.1km s-min=22.0km az=150.0*

*ISK **28** 01:26:43.5, 36°.43N×30°.90E, h5^{km}, ML3.3/15*

*ISCJB **28** 01:26:44.2±0.7, 36°.36N±0°.03×30°.89E±0°.03, h2^{km}±5^{km}, mb3.3/3, Error ellipse: s-maj=4.8km s-min=3.1km az=29.2*

*GII **28** 01:26:45.6±0.0, 36°.45N×30°.88E, h2^{km}*

*CSEM **28** 01:26:45.3±0.2, 36°.40N×30°.91E, h2^{km}, ML3.3, Error ellipse: s-maj=6.4km s-min=3.4km az=7.0*

*DDA **28** 01:26:46.6, 36°.38N×30°.98E, h37^{km}, Ml3.3*

ISC 28 01:26:45.6±1.1, **36°.41N**±0°.03×**30°.91E**±0°.02, **h12**^{km}±8^{km}, **n112**, σ1^{s}.**34**/128, **mb3.4**/3, **2C, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANTB	Antalya	0.53	337	PG	Pg	01 26 55.7	-0.4
ANTB				SG	Sg	01 27 03.3	+0.2
ANTB	Antalya	0.53	337	ePg	Pg	01 26 55.7	-0.4
ANTB				eSg	Sg	01 27 03.3	+0.2
KORT	Korkueli	0.74	323	PG	Pg	01 26 58.2	-1.9
KORT	Korkueli	0.74	323	ePg	Pg	01 26 58.2	-1.9
ELL	Elmali	0.88	293	PG	Pg	01 27 00.9	-1.7
ELL	Elmali	0.88	293	ePg	Pg	01 27 00.9	-1.7
SUTC	Sutluce-Ispart	1.07	4	PG	Pg	01 27 04.4	-1.8
SUTC	Sutluce-Ispart	1.07	4	ePg	Pg	01 27 04.4	-1.8
AKAS	Kas	1.07	261	PG	Pg	01 27 05.5	-0.8
AKAS	Kas	1.07	261	iP	Pb	01 27 06.0	-0.3
AKAS				iS	Sn	01 27 23.4	+2.0
AKAS	Kas	1.07	261	ePg	Pg	01 27 05.5	-0.8
AKAS	Kas	1.07	261	P	Pb	01 27 05.9	-0.3
AKAS				S	Sn	01 27 23.4	+2.0
GAZI	Gazipasa	1.15	98	PN	Pg	01 27 06.5	-1.2
GAZI	Gazipasa	1.15	98	ePn	Pg	01 27 06.5	-1.2
ISP	Isparta	1.44	348	PN	Pn	01 27 11.3	-0.4
ISP	Isparta	1.44	348	⇑iP	Pn	01 27 11.5	-0.2
ISP	Isparta	1.44	348	Pn	Pn	01 27 11.3	-0.4
ISP	Isparta	1.44	348	⇑iP	Pn	01 27 11.5	-0.2
BRDR	BURDUR-Merkez	1.45	332	iP	Pg	01 27 14.0	+0.4
BRDR				iS	Sg	01 27 36.6	+4.1
BRDR	BURDUR-Merkez	1.45	332	P	Pg	01 27 14.0	+0.4
BRDR				S	Sg	01 27 36.6	+4.1
FETY	Fethiye	1.49	279	PN	Pn	01 27 12.2	0.0
FETY	Fethiye	1.49	279	ePn	Pn	01 27 12.2	0.0
BAGO	Egridir - ISPA	1.58	356	iP	Pg	01 27 16.3	+0.3
BAGO				iS	Sg	01 27 37.7	+1.2
DOGA	KONYA_Doganhis	1.80	19	iP	Pn	01 27 17.4	+0.8
DOGA				iS	Sb	01 27 41.1	0.0
DOGA	KONYA_Doganhis	1.80	19	P	Pn	01 27 17.4	+0.8
DOGA				S	Sb	01 27 41.1	0.0
TEKE	Tekeli-Mersin	1.80	98	PN	Pn	01 27 17.0	+0.6
TEKE	Tekeli-Mersin	1.80	98	ePn	Pn	01 27 17.0	+0.6
BERE	Bereket-Mersin	1.86	91	PN	Pn	01 27 18.0	+0.5
BERE	Bereket-Mersin	1.86	91	ePn	Pn	01 27 18.0	+0.5
DALY	Dalyan (Mu˜la	1.86	283	PN	Pn	01 27 18.3	+1.0
DALY	Dalyan (Mu˜la	1.86	283	ePn	Pn	01 27 18.3	+1.0
TURN	Turunc	1.92	285	PN	Pg	01 27 22.7	+0.3
KONT	Konya--Tatoy	1.92	37	PN	Pn	01 27 18.8	+0.7
KONT	Konya--Tatoy	1.92	37	ePn	Pn	01 27 18.8	+0.7
DNZL	Cakiroluk	1.96	311	iP	Pb	01 27 21.9	+0.5
DNZL				iS	Sg	01 27 50.1	+1.2
DNZL	Cakiroluk	1.96	311	P	Pb	01 27 21.9	+0.5
DNZL				S	Sg	01 27 50.1	+1.2
LADK	Ladik-KONYA	2.13	32	PN	Pn	01 27 21.2	+0.1
LADK	Ladik-KONYA	2.13	32	ePn	Pn	01 27 21.2	+0.1
AKKU	Akkuyu-Mersin	2.15	96	PN	Pn	01 27 21.4	+0.2
AKKU	Akkuyu-Mersin	2.15	96	ePn	Pn	01 27 21.4	+0.2
YER	Yerkesik	2.23	290	PN	Pn	01 27 23.7	+1.2
YER	Yerkesik	2.23	290	ePn	Pn	01 27 23.7	+1.2
IKL	Isikli	2.24	94	PN	Pn	01 27 23.2	+0.6
IKL	Isikli	2.24	94	ePn	Pn	01 27 23.2	+0.6
KEBE	Keben-Mersin	2.26	88	PN	Pn	01 27 23.4	+0.6
KEBE	Keben-Mersin	2.26	88	ePn	Pn	01 27 23.4	+0.6
ARG	Arkhangelos	2.26	266	PN	Pn	01 27 22.9	+0.1
ARG	Arkhangelos	2.26	266	ePn	Pn	01 27 22.9	+0.1
BOLV	Bolvadin	2.30	1	iP	Pb	01 27 26.4	-0.8
BOLV	Bolvadin	2.30	1	P	Pb	01 27 26.4	-0.8
KIZT	Kizilcal	2.58	17	PN	Pn	01 27 27.2	-0.1
KIZT	Kizilcal	2.58	17	ePn	Pn	01 27 28.6	+1.3
KIZK	Mersin	2.60	88	PN	Pn	01 27 28.6	+1.1
DATC	Datca-Mugla	2.64	279	PN	Pn	01 27 28.8	+0.8
DATC	Datca-Mugla	2.64	279	ePn	Pn	01 27 28.8	+0.8
DAT	Datca	2.71	278	PN	Pn	01 27 29.5	+0.5
DAT	Datca	2.71	278	iP	Pb	01 27 32.1	-1.9
DAT				iS	Sn	01 28 02.6	+0.9
DAT	Datca	2.71	278	ePn	Pn	01 27 29.5	+0.5
DAT	Datca	2.71	278	P	Pb	01 27 32.1	-1.9
DAT				S	Sn	01 28 02.6	+0.9
SULT	Sultanhani-AKS	2.74	49	PN	Pn	01 27 30.9	+1.5
SULT	Sultanhani-AKS	2.74	49	ePn	Pn	01 27 30.9	+1.5
KULA	Kula-Manisa	2.76	320	PN	Pn	01 27 29.9	+0.1
KULA	Kula-Manisa	2.76	320	ePn	Pn	01 27 29.9	+0.1
EREN	Erenkoy	2.78	107	PN	Pn	01 27 31.9	+1.9
EREN	Erenkoy	2.78	107	ePn	Pn	01 27 31.9	+1.9
AYDB	Zeytinkoy-Aydi	2.86	303	PN	Pn	01 27 31.7	+0.5
AYDB	Zeytinkoy-Aydi	2.86	303	ePn	Pn	01 27 31.7	+0.5
BDRM	Kayabasi	2.86	284	iS	Sn	01 28 05.9	+0.5
BDRM	Kayabasi	2.86	284	S	Sn	01 28 05.9	+0.5
MERS	Mersin	2.94	80	PN	Pn	01 27 33.8	+1.6
MERS	Mersin	2.94	80	ePn	Pn	01 27 33.8	+1.6
BODT	Bodrum	2.97	284	PN	Pn	01 27 33.4	+0.9
BODT	Bodrum	2.97	284	ePn	Pn	01 27 33.4	+0.9
SIMA	Simav-Kutahya	3.08	331	PN	Pn	01 27 34.3	+0.2
SIMA	Simav-Kutahya	3.08	331	ePn	Pn	01 27 34.3	+0.2
DEMI	Demirci	3.15	327	iP	Pn	01 27 37.7	+2.6
DEMI	Demirci	3.15	327	P	Pn	01 27 37.7	+2.6
GCAM	G?zelcaml?	3.21	295	PN	Pn	01 27 36.6	+0.7
GCAM	G?zelcaml?	3.21	295	ePn	Pn	01 27 36.6	+0.7
KARA	Karaisali	3.43	74	PN	Pn	01 27 40.5	+1.6
KARA	Karaisali	3.43	74	ePn	Pn	01 27 40.5	+1.6
KRTS	Karatas	3.60	86	PN	Pn	01 27 42.9	+1.7
KRTS	Karatas	3.60	86	ePn	Pn	01 27 42.9	+1.7
DGB	˜zmir	3.61	298	iP	Pn	01 27 41.1	-0.2
BLCB	Balcova	3.66	304	PN	Pn	01 27 42.7	+0.7
BLCB	Balcova	3.66	304	ePn	Pn	01 27 42.7	+0.7
DURS	Dursunbey	3.72	330	iP	Pn	01 27 44.5	+1.5
DURS	Dursunbey	3.72	330	P	Pn	01 27 44.5	+1.5
BRTR	Keskin Array B	3.95	32	Pn	Pn	01 27 46.3	+0.2
	0.8nm,0.3s,baz=212,slow=14,SNR=15						
BRTR				Sn	Sn	01 28 31.6	-0.8
	1.6nm,0.3s,baz=202,slow=25,SNR=10.0						
URLA	Izmir	3.95	301	PN	Pn	01 27 47.6	+1.5
URLA	Izmir	3.95	301	ePn	Pn	01 27 47.6	+1.5
DKL	Dikili	4.14	311	PN	Pn	01 27 50.3	+1.7
DKL	Dikili	4.14	311	ePn	Pn	01 27 50.3	+1.7
TAHT	Tahtakopru-Hat	4.25	89	PN	Pn	01 27 52.2	+2.0
TAHT	Tahtakopru-Hat	4.25	89	ePn	Pn	01 27 52.2	+2.0
CHOS	Chios island	4.34	298	PN	Pn	01 27 53.1	+1.6
CHOS	Chios island	4.34	298	ePn	Pn	01 27 53.1	+1.6
HNTI	Hanita	4.83	132	Pn	Pn	01 27 59.9	+1.8
MMAI	Mount Meron Ar	5.01	131	Pn	Pn	01 28 02.2	+1.5
	4.1nm,0.3s,baz=319,slow=11,SNR=5.9						
MMAI				Sn	Sn	01 28 59.2	+0.6
	1.3nm,0.3s,baz=309,slow=24,SNR=3.0						
IDI	Anoyia	5.02	259	Pn	Pn	01 28 00.2	-0.6
	0.9nm,0.3s,baz=68,slow=11,SNR=4.4						
IDI				Sn	Sn	01 28 56.8	-1.9
	1.0nm,0.3s,baz=256,slow=8.3,SNR=3.0						
KSDI	Kefar Szold	5.05	128	Pn	Pn	01 28 02.6	+1.4
NATI	Neve Ativ	5.06	127	Pn	Pn	01 28 02.7	+1.5
OFRI	‘Ofer	5.06	137	Pn	Pn	01 28 02.5	+1.2
KSHT	Keshet	5.29	129	Pn	Pn	01 28 06.1	+1.6
MMLI	Mount Malkishu	5.44	135	Pn	Pn	01 28 08.6	+2.1
HMDT	Nahal Hemdat	5.63	136	Pn	Pn	01 28 10.8	+1.6
DSI	Dead Sea	6.09	141	Pn	Pn	01 28 18.2	+2.8
KZIT	Kziot	6.21	151	Pn	Pn	01 28 18.7	+1.6
EIL	Elat	7.53	152	Sn	Sn	01 30 02.7	+2.3
	0.1nm,0.3s,baz=252,slow=20,SNR=1.6						
FINES	FINESS Array B	25.24	355	P	P	01 32 08.9	-2.2
	0.4nm,0.5s,baz=165,slow=11,SNR=3.0						
ARCES	ARCESS Array B	33.31	357	P	P	01 33 20.7	-2.2
	0.7nm,0.8s,baz=170,slow=11,SNR=2.7						
KURBB	Kurchatov Arra	36.68	52	P	P	01 33 51.8	-0.3
	0.2nm,0.5s,baz=276,slow=9.0,SNR=2.7						

MEX 28 01:33:26.6±0.5, **16°.33N**×**98°.38W**, **h6**^{km}±5^{km}, **MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.25	77	iP	Pg	01 33 31.2	-0.4
PNIG				iS	Sg	01 33 35.0	0.0
TLIG	Tlapa	1.23	352	eP	Pg	01 33 46.6	-3.7
TLIG				eS	Sg	01 34 01.7	-4.7
VHO	Vista Hermosa	1.74	65	eP	Pn	01 33 53.9	-3.6
VHO				iS	Sn	01 34 14.5	-5.7
CAIG	El Cayaco	1.94	292	iP	Pn	01 33 56.3	-3.8
CAIG				iS	Sn	01 34 20.4	-4.3
HUIG	Huatulco	2.26	104	iP	Pn	01 34 01.9	-2.5
HUIG				iS	Sn	01 34 28.1	-4.5

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*IDC **28** 01:45:07.9±10.0, 37°.43S×179°.98W, h0^{km}, mb3.7/3, mb1 3.9/4, mb1mx3.6/41, mbtmp3.7/4, ML3.2/1, Error ellipse: s-maj=246.0km s-min=49.8km az=140.0*

*WEL **28** 01:45:09.7, 38°S±9°×18°0W±°, h33^{km}, ML3.6/20*

ISC 28 01:45:07.7±3.3, **37°.7S**±0°.1×**179°.8W**±0°.1, **h6**^{km}±16^{km}, **n32**, σ**0**^{s}.**87**/41, **mb3.6**/3, **East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.39	266	P	Pb	01 45 34.1	+0.1
WMGZ				S	Sg	01 45 52.3	0.0
MXZ	Matakaoa Point	1.48	276	P	Pb	01 45 35.3	-0.3
MXZ				S	Sb	01 45 54.2	-0.4
PUZ	Puketiti	1.54	257	P	Pb	01 45 36.4	-0.3
PUZ				S	Sn	01 45 56.0	-0.1
PKGZ	Pakihiroa	1.66	264	P	Pn	01 45 37.7	+0.4
PKGZ				S	Sn	01 45 58.0	-1.0
CNGZ	Carnagh Statio	1.71	244	P	Pb	01 45 39.5	0.0
TWGZ	Tauwhareparae	1.78	255	P	Pb	01 45 40.0	-0.7
TWGZ				S	Sn	01 46 02.3	+0.3
HAZ	Te Kaha	1.89	269	P	Pb	01 45 41.3	-1.2
TKGZ	Te Karaka	1.96	248	P	Pn	01 45 42.4	+1.1
TKGZ				S	Sn	01 46 06.8	+0.6
RUGZ	Raukumara Rang	1.98	263	P	Pn	01 45 42.3	+0.5
RIGZ	Rimuhau	2.12	242	P	Pn	01 45 44.5	+0.7
RIGZ				S	Sn	01 46 10.1	-0.3
PRGZ	Paritu Road	2.15	236	P	Pn	01 45 45.3	+1.2
MWZ	Matawai	2.16	253	P	Pn	01 45 44.8	+0.5
MWZ				S	Sn	01 46 10.4	-1.0
RAGZ	Rawiri	2.29	250	P	Pn	01 45 46.8	+0.7
URZ	Urewera	2.47	257	Pn	Pn	01 45 49.8	+1.4
	5.7nm,0.3s,baz=237,slow=2.7,SNR=32						
URZ				Sn	Sn	01 46 18.9	+0.1
	12nm,0.3s,baz=316,slow=15,SNR=21						
MTHZ	Maungataniwha	2.84	246	P	Pn	01 45 54.7	+1.1
ARHZ	Aropaoanui	2.92	237	P	Pn	01 45 56.2	+1.6
TARZ	Mount Tarawera	2.93	259	P	Pn	01 45 55.8	+1.0
MRHZ	Matea Rd	3.14	248	P	Pn	01 45 59.0	+1.3
MCHZ	McNeill Hill	3.21	237	P	Pn	01 45 59.5	+1.0
BKZ	Black Stump Fm	3.21	242	P	Pn	01 45 59.8	+1.0
KWHZ	Kaweka Forest	3.38	239	P	Pn	01 46 01.9	+0.9
KRHZ	Kereru	3.52	236	P	Pn	01 46 03.5	+0.5
BHHZ	Black Hill Sta	3.66	240	P	Pn	01 46 05.7	+0.8
PNHZ	Pukenui	3.78	234	P	Pn	01 46 07.1	+0.6
MOVZ	Moawhango	3.84	243	P	Pn	01 46 08.8	+1.5
WHVZ	Whangaehu Hut	3.91	245	P	Pn	01 46 09.8	+1.4
TSZ	Takapari Road	4.01	233	P	Pn	01 46 09.3	-0.4
MKAZ	Moumakai	4.03	277	P	Pn	01 46 10.5	+0.7
BFZ	Birch Farm	4.23	225	P	Pn	01 46 11.5	-1.2
STKA	Stephens Creek	32.04	269	P	P	01 51 35.1	0.0
	0.6nm,0.3s,baz=88,slow=8.1,SNR=2.6						
ASAR	Alice Springs	41.77	276	P	P	01 52 58.0	+0.1
	0.6nm,0.6s,baz=120,slow=8.0,SNR=7.2						
WRA	Warramunga Arr	43.41	281	P	P	01 53 11.1	-0.3
	0.4nm,0.4s,baz=123,slow=7.0,SNR=5.1						

WEL 28 01:59:47.1, 38°S±8°×**18°0W**±°, **h33**^{km}, **ML3.6**/22, **East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.47	268	P	Pn	02 00 11.8	+0.5
WMGZ				S	Sn	02 00 30.3	+1.0
MXZ	Matakaoa Point	1.57	278	P	Pn	02 00 12.8	+0.1
MXZ				S	Sn	02 00 31.6	-0.3
PUZ	Puketiti	1.61	259	P	Pn	02 00 14.1	+0.7
PUZ				S	Sn	02 00 33.4	+0.4
PKGZ	Pakihiroa	1.73	266	P	Pn	02 00 15.3	+0.3
PKGZ				S	Sn	02 00 36.1	+0.1
CNGZ	Carnagh Statio	1.77	246	P	Pb	02 00 17.5	-1.3
TWGZ	Tauwhareparae	1.85	257	P	Pn	02 00 18.0	+1.5
TWGZ				S	Sn	02 00 40.7	+1.9
HAZ	Te Kaha	1.97	270	P	Pn	02 00 19.2	+1.1
TKGZ	Te Karaka	2.01	250	P	Pn	02 00 20.1	+1.3
TKGZ				S	Sn	02 00 44.7	+1.9
RUGZ	Raukumara Rang	2.06	264	P	Pn	02 00 20.2	+0.7
RIGZ	Rimuhau	2.17	244	P	Pn	02 00 22.1	+1.1
RIGZ				S	Sn	02 00 48.3	+1.5
PRGZ	Paritu Road	2.19	238	P	Pn	02 00 23.4	+2.2
PRGZ				S	Sb	02 00 50.7	-2.2
MWZ	Matawai	2.23	255	P	Pn	02 00 22.4	+0.6
MWZ				S	Sn	02 00 48.9	+0.7
MHGZ	Mahia Peninsul	2.30	233	P	Pn	02 00 24.8	+2.1
RAGZ	Rawiri	2.35	252	P	Pn	02 00 24.8	+1.2
KNZ	Kokohu	2.38	238	P	Pn	02 00 25.4	+1.6
URZ	Urewera	2.54	258	P	Pn	02 00 27.4	+1.4
URZ				S	Sn	02 00 56.4	+0.7
RTZ	Ruatahuna	2.72	251	P	Pn	02 00 30.3	+1.8
RTZ				S	Sn	02 01 03.1	+2.8
MUGZ	Murupara	2.84	255	P	Pn	02 00 31.4	+1.2
MTHZ	Maungataniwha	2.90	247	P	Pn	02 00 32.4	+1.5
ARHZ	Aropaoanui	2.96	239	P	Pn	02 00 33.9	+2.1
TARZ	Mount Tarawera	3.00	260	P	Pn	02 00 34.3	+1.8
NMHZ	Naumai	3.01	243	P	Pn	02 00 34.7	+2.1
MCHZ	McNeill Hill	3.25	238	P	Pn	02 00 37.7	+1.9
BKZ	Black Stump Fm	3.27	244	P	Pn	02 00 37.6	+1.5
KWHZ	Kaweka Forest	3.42	240	P	Pn	02 00 39.8	+1.5
KWHZ				S	Sn	02 01 19.3	+1.5
KRHZ	Kereru	3.57	237	P	Pn	02 00 41.5	+1.3
BHHZ	Black Hill Sta	3.70	241	P	Pn	02 00 43.4	+1.3
TSZ	Takapari Road	4.05	235	P	Pn	02 00 47.3	+0.4
MKAZ	Moumakai	4.12	278	P	Pn	02 00 48.0	+0.3
POWZ	Post Office Ro	4.36	232	P	Pn	02 00 52.5	+1.5
TIWZ	Tintock	4.52	227	P	Pn	02 00 53.6	+0.2
MRZ	Mangatainoka R	4.63	230	P	Pn	02 00 55.0	+0.1
CTZ	Chatham Island	6.40	159	P	Pn	02 01 23.4	+4.4

LDG 28 02:04:39.9±0.5, **40°.81N**×**11°.61E, h2**^{km}, **Ml2.6**/5, **Error ellipse: s-maj=18.5km s-min=8.6km az=37.0, Tyrrhenian Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PGF	Pioggiola	2.62	313	ePn	Pn	02 05 21.5	-1.8
PGF				eSn	Sn	02 05 51.9	-3.8
	3.5nm,0.2s						
SBF	Sospel	4.35	316	eSn	Sn	02 06 32.6	-5.7
	1.9nm,0.3s						
LMR	La Mourre	4.56	305	ePn	Pn	02 05 48.2	-1.7
LMR				eSn	Sn	02 06 38.4	-5.0
	1.4nm,0.3s						
FRF	La Foret Royal	4.60	308	eP	Pn	02 05 52.1	+1.7
FRF				eSn	Sn	02 06 39.6	-4.8
	0.6nm,0.2s						
MBDF	Montbardon	5.29	319	eP	Pn	02 06 02.4	+2.3
LPL	La Plagne	5.90	324	eP	Pn	02 06 10.7	+2.1

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*CSEM **28** 02:06:23.4±0.1, 44°.20N×17°.95E, h2^{km}, ML2.7, Error ellipse: s-maj=3.3km s-min=2.0km az=49.0*

*PDG **28** 02:06:23.3±0.1, 44°.16N×17°.89E, h9^{km}, ML2.7/8, Error ellipse: s-maj=0.2km s-min=0.3km az=0.0*

*BEO **28** 02:06:23.4±0.3, 44°.23N×17°.91E, h0^{km}±2^{km}, ML2.6/13*

*PRU **28** 02:06:28.8, 44°.29N×17°.74E, h16^{km}*

ISC 28 02:06:23.3±1.1, **44°.22N**±0°.01×**17°.95E**±0°.02, **h3**^{km}±9^{km}, **n127**, σ**0**^{s}.**86**/208, **21C-14D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DOB	Doboj	0.53	12	ePg	Pg	02 06 33.4	0.0
DOB				eSg	Sb	02 06 41.9	-1.3
DOB	Doboj	0.53	12	ePg	Pg	02 06 33.4	0.0
DOB				eSg	Sb	02 06 41.9	-1.3
HAPS	Han Pijesak,BI	0.74	100	ePg	Pg	02 06 36.9	-0.5
HAPS				eSg	Sg	02 06 47.1	+0.2
HAPS	Han Pijesak,BI	0.74	100	⇑iPg	Pg	02 06 36.9	-0.5
HAPS				eSg	Sg	02 06 47.1	+0.2
HAPS	Han Pijesak,BI	0.74	100	⇑iPg	Pg	02 06 36.9	-0.5
HAPS				eSg	Sg	02 06 48.1	+1.2
BLY	Banja Luka	0.76	315	ePg	Pg	02 06 38.0	+0.1
BLY				eSg	Sg	02 06 47.1	-0.6
BLY	Banja Luka	0.76	315	⇓iP	Pg	02 06 37.9	+0.1
BLY				S	Sg	02 06 48.1	+0.4
BLY	Banja Luka	0.76	315	⇑iPg	Pg	02 06 37.9	+0.1
BLY				S	Sg	02 06 48.1	+0.4
BLY	Banja Luka	0.76	315	⇑iPg	Pg	02 06 37.9	+0.1
BLY				eSg	Sg	02 06 48.1	+0.4
BLJ	Bijeljina	1.10	59	ePg	Pg	02 06 43.3	-1.1
BLJ	Bijeljina	1.10	59	ePg	Pg	02 06 43.3	-1.1
BBLS	Lazići	1.11	108	ePg	Pg	02 06 44.5	0.0
BBLS				eSg	Sb	02 07 00.5	+0.5
BBLS	Lazići	1.11	108	⇑iPg	Pg	02 06 44.5	0.0
BBLS				eSg	Sb	02 06 59.9	-0.1
BBLS	Lazići	1.11	108	⇑iPg	Pg	02 06 44.5	0.0
BBLS				eSg	Sb	02 06 59.9	-0.1
TEKS	Tekeris	1.18	73	ePg	Pg	02 06 44.9	-1.0
TEKS				eSg	Sg	02 07 01.6	+0.3
TEKS	Tekeris	1.18	73	ePg	Pg	02 06 44.9	-1.0
TEKS				eSg	Sb	02 07 02.1	0.0
TEKS	Tekeris	1.18	73	eSg	Sb	02 07 02.1	0.0
UPM	Unac-Piva	1.23	145	⇑iPg	Pg	02 06 45.7	-1.1
UPM				iSg	Sn	02 07 04.8	+0.1
UPM	Unac-Piva	1.23	145	⇑iPg	Pg	02 06 45.7	-1.1
UPM				eSg	Sg	02 07 03.1	+0.4
UPM	Unac-Piva	1.23	145	⇑iPg	Pg	02 06 45.6	-1.2
UPM				eSg	Sg	02 07 03.1	+0.4
STON	Ston	1.36	188	ePg	Pn	02 06 47.3	-1.8
STON				eSg	Sb	02 07 07.2	+0.2
STON	Ston	1.36	188	ePg	Pn	02 06 47.5	-1.6
STON				Sg	Sg	02 07 05.4	-1.4
STON	Ston	1.36	188	ePg	Pn	02 06 47.4	-1.6
STON				eSg	Sb	02 07 07.2	+0.2
STON	Ston	1.36	188	ePg	Pn	02 06 47.4	-1.6
STON				eSg	Sg	02 07 06.1	-0.7
PLE	Pljevlja	1.37	130	⇓iPg	Pn	02 06 48.8	-0.6
PLE				iSg	Sn	02 07 09.2	+1.1
PLE	Pljevlja	1.37	130	⇓iPg	Pn	02 06 48.8	-0.6
PLE				iSg	Sn	02 07 09.2	+1.1
BRY	Bratogost	1.38	162	⇑iPg	Pn	02 06 48.3	-1.3
BRY				iSg	Sb	02 07 08.0	0.0
BRY	Bratogost	1.38	162	⇑iPg	Pn	02 06 48.3	-1.3
BRY				iSg	Sb	02 07 08.0	0.0
BRY	Bratogost	1.38	162	ePg	Pn	02 06 48.2	-1.4
BRY				eSg	Sg	02 07 07.6	-0.1
DIVS	Divibare	1.48	94	ePg	Pn	02 06 50.7	-0.2
DIVS				eSg	Sn	02 07 10.7	0.0
DIVS	Divibare	1.48	94	ePg	Pn	02 06 50.7	-0.2
DIVS				eSg	Sg	02 07 11.5	+0.8
DIVS	Divibare	1.48	94	⇑iPg	Pn	02 06 50.5	-0.4
DIVS				eSg	Sg	02 07 11.5	+0.8
TREB	Trebinje	1.53	169	ePg	Pn	02 06 51.5	0.0
TREB				eSg	Sn	02 07 11.8	0.0
TREB	Trebinje	1.53	169	ePn	Pn	02 06 51.1	-0.4
TREB				eSg	Sb	02 07 11.9	-0.1
TREB	Trebinje	1.53	169	ePn	Pn	02 06 51.1	-0.4
TREB				eSg	Sb	02 07 11.9	-0.1
UDBI	Udbina	1.59	282	ePn	Pn	02 06 51.2	-1.2
NKY	Niksic	1.60	151	⇓iPg	Pn	02 06 52.3	-0.2
NKY				iSg	Sg	02 07 16.5	+2.0
NKY	Niksic	1.60	151	⇓iPg	Pn	02 06 52.3	-0.2
NKY				iSg	Sg	02 07 16.5	+2.0
NKME	Niksic	1.62	153	⇑iPn	Pn	02 06 52.9	+0.1
NKME				iSn	Sg	02 07 16.2	+0.8
NKME	Niksic	1.62	153	⇑iPn	Pn	02 06 52.9	+0.1
NKME				iSn	Sg	02 07 16.2	+0.8
FGSL	Fruska Gora	1.63	54	ePn	Pb	02 06 54.1	+0.1
FGSL				eSn	Sb	02 07 15.1	+0.2
FRGS	Fruska Gora	1.63	54	ePn	Pb	02 06 54.1	+0.1
FRGS				eSn	Sb	02 07 15.1	+0.2
FRGS	Fruska Gora	1.63	54	ePn	Pn	02 06 53.0	+0.1
FRGS				eSn	Sb	02 07 15.1	+0.2
IVAS	Ivanjica	1.72	111	ePn	Pn	02 06 54.4	+0.2
IVAS				eSn	Sg	02 07 18.4	-0.1
IVAS	Ivanjica	1.72	111	ePn	Pn	02 06 54.4	+0.2
IVAS				eSn	Sg	02 07 18.4	-0.1
SJES	Sjenica	1.75	122	ePn	Pn	02 06 54.5	-0.2
SJES				eSn	Sb	02 07 18.9	+0.3
TRUS	Trudelj	1.77	89	ePn	Pb	02 06 56.0	-0.3
TRUS				eSn	Sb	02 07 18.9	-0.1
TRUS	Trudelj	1.77	89	ePn	Pb	02 06 56.0	-0.3
TRUS				eSn	Sb	02 07 18.9	-0.1
KOME	Kolasin	1.78	140	⇓iPn	Pn	02 06 55.5	+0.5
KOME				iSn	Sg	02 07 21.0	+0.6
KOME	Kolasin	1.78	140	⇓iPn	Pn	02 06 55.5	+0.5
KOME				iSn	Sg	02 07 21.0	+0.6
HCY	Herceg Novi	1.81	167	ePn	Pn	02 06 55.7	+0.3
HCY				iSn	Sg	02 07 21.4	-0.1
HCY	Herceg Novi	1.81	167	ePn	Pn	02 06 55.6	+0.2
HCY				eSn	Sn	02 07 19.0	+0.1
HCY	Herceg Novi	1.81	167	ePn	Pn	02 06 55.6	+0.2
HCY				eSn	Sn	02 07 19.0	+0.1
CEME	Cevo	1.81	157	⇑iPn	Pn	02 06 55.8	+0.4
CEME				iSn	Sg	02 07 21.4	-0.1
BEY	Berane	1.95	133	⇑iPn	Pn	02 06 58.1	+0.7
BEY				iSn	Sg	02 07 25.7	-0.3
IVA	Berane	1.95	133	⇑iPn	Pn	02 06 58.1	+0.7
IVA				iSn	Sg	02 07 25.7	-0.3
GRUS	Gruza	2.02	98	ePn	Pn	02 06 58.4	+0.1
GRUS				eSn	Sn	02 07 25.1	+1.0
GRUS	Gruza	2.02	98	ePn	Pn	02 06 58.4	+0.1
GRUS				eSn	Sn	02 07 25.1	+1.0
PDG	Podgorica	2.03	151	ePn	Pn	02 06 59.2	+0.9
PDG				eSn	Sb	02 07 25.8	-0.5
PDG	Podgorica	2.03	151	⇓iP	Pb	02 07 00.9	+0.2
PDG	Podgorica	2.03	151	S	Sg	02 07 30.3	+2.0
PDG	Podgorica	2.03	151	ePn	Pn	02 06 59.0	+0.7
PDG				eSn	Sn	02 07 23.9	-0.2
PDG	Podgorica	2.03	151	ePn	Pn	02 06 59.0	+0.7
PDG				eSn	Sn	02 07 23.9	-0.2
TTG	Podgorica	2.03	151	⇑iPn	Pn	02 06 59.0	+0.7
TTG				iSn	Sb	02 07 26.5	+0.2
BUM	Brajici-Budva	2.04	160	⇑iPn	Pn	02 06 58.9	+0.4
BUM				iSn	Sb	02 07 26.6	-0.1
MORH	Mˆ‡rˆ¡gy, Hung	2.06	14	⇑ePn	Pn	02 06 58.5	-0.3
MORH				eSn	Sg	02 07 29.8	+0.4
MORH	Mˆ‡rˆ¡gy, Hung	2.06	14	ePn	Pn	02 06 58.4	-0.3
MORH				eSn	Sn	02 07 24.7	-0.2
MORH	Mˆ‡rˆ¡gy, Hung	2.06	14	ePn	Pn	02 06 58.4	-0.3
MORH				eSn	Sn	02 07 24.7	-0.2
DRME	Dracevica, Mon	2.22	156	⇓iPn	Pn	02 07 01.6	+0.6
DRME				iSn	Sb	02 07 31.3	-0.7
DRME	Dracevica, Mon	2.22	156	ePn	Pn	02 07 01.8	+0.8
DRME				eSn	Sn	02 07 28.8	-0.2
DRME	Dracevica, Mon	2.22	156	ePn	Pn	02 07 01.8	+0.8
DRME				eSn	Sn	02 07 28.8	-0.2
NVLJ	Novalja	2.23	280	ePn	Pn	02 07 01.8	+0.7
OZLJ	Ozalj	2.25	309	iPn	Pn	02 07 02.5	+1.2
SVIS	Svilajnac	2.35	88	ePn	Pn	02 07 03.6	+0.8
SVIS	Svilajnac	2.35	88	ePn	Pn	02 07 03.6	+0.8

CRES	**Cresnjev**	**2.39**	**313**	*e*Pn	**Pn**	**02 07 03.5**	**+0.2**
CRES				*e*Sn	**Sn**	**02 07 33.8**	**+0.7**
CRES	**Cresnjev**	**2.39**	**313**	*e*Pn	**Pn**	**02 07 03.5**	**+0.2**
CRES				*e*Sn	**Sn**	**02 07 33.8**	**+0.7**
BEHE	**Becsehely**	**2.40**	**340**	*e*Pn	**Pn**	**02 07 04.2**	**+0.7**
BEHE				*e*Sn	**Sn**	**02 07 32.4**	**-1.0**
BEHE	**Becsehely**	**2.40**	**340**	*e*Pn	**Pn**	**02 07 04.2**	**+0.7**
BEHE				*e*Sn	**Sn**	**02 07 33.8**	**+0.4**
BEHE	**Becsehely**	**2.40**	**340**	*e*Pn	**Pn**	**02 07 04.2**	**+0.7**
BEHE				*e*Sn	**Sn**	**02 07 33.8**	**+0.4**
SELS	**Selova**	**2.51**	**112**	*e*Pn	**Pn**	**02 07 04.9**	**-0.1**
KUBS	**Kucevo**	**2.69**	**85**	*e*Pn	**Pn**	**02 07 09.0**	**+1.6**
KUBS	**Kucevo**	**2.69**	**85**	*e*Pn	**Pn**	**02 07 09.0**	**+1.6**
RIY	**Rijeka**	**2.70**	**295**	*e*Pn	**Pn**	**02 07 08.3**	**+0.7**
RIY				*e*Sn	**Sn**	**02 07 41.3**	**+0.5**
MDVR	**Moldovita**	**2.75**	**77**	⇓*i*P	**Pg**	**02 07 16.0**	**0.0**
MDVR	**Moldovita**	**2.75**	**77**	S	**Sg**	**02 07 51.2**	**-0.5**
CEY	**Cerknica**	**2.92**	**303**	*e*Pn	**Pn**	**02 07 11.4**	**+0.7**
CEY				*e*Sn	**Sn**	**02 07 46.5**	**+0.2**
CEY	**Cerknica**	**2.92**	**303**	*e*Pn	**Pn**	**02 07 11.4**	**+0.7**
CEY				*e*Sn	**Sn**	**02 07 46.5**	**+0.2**
BZS	**Buzias**	**2.96**	**60**	⇓*i*P	**Pg**	**02 07 19.4**	**-0.6**
BZS	**Buzias**	**2.96**	**60**	S	**Sn**	**02 07 46.1**	**-1.1**
BZS	**Buzias**	**2.96**	**60**	S	**Sn**	**02 07 46.1**	**-1.1**
LJU	**Ljubljana**	**3.03**	**308**	*e*Pn	**Pn**	**02 07 12.7**	**+0.6**
LJU				*e*Sn	**Sn**	**02 07 49.5**	**+0.6**
LJU	**Ljubljana**	**3.03**	**308**	*e*Pn	**Pn**	**02 07 12.7**	**+0.6**
LJU				*e*Sn	**Sn**	**02 07 49.5**	**+0.6**
SOKA	**Soboth**	**3.20**	**321**	*e*Pn	**Pn**	**02 07 14.7**	**+0.1**
	0.4nm,0.2s						
SOKA	**Soboth**	**3.20**	**321**	Pn	**Pn**	**02 07 14.7**	**+0.1**
	0.4nm,0.2s						
HERR	**Herculane**	**3.27**	**77**	⇓*i*P	**Pb**	**02 07 23.8**	**+2.0**
OBKA	**Obir**	**3.31**	**315**	*e*Pn	**Pn**	**02 07 17.5**	**+1.4**
	0.4nm,0.2s						
OBKA	**Obir**	**3.31**	**315**	Pn	**Pn**	**02 07 17.5**	**+1.4**
	0.4nm,0.2s						
ARSA	**Arzberg**	**3.48**	**332**	*e*Pn	**Pn**	**02 07 18.8**	**+0.5**
	2.6nm,0.4s						
ARSA	**Arzberg**	**3.48**	**332**	Pn	**Pn**	**02 07 18.8**	**+0.5**
	2.6nm,0.4s						
ZAPS	**Zavoj**	**3.53**	**104**	*e*Pn	**Pn**	**02 07 19.6**	**+0.6**
SOP	**Sopron**	**3.60**	**345**	*e*x	**Sn**	**02 08 02.4**	**-0.5**
PSZ	**Piszkesteto**	**3.94**	**19**	⇓*e*x	**Pn**	**02 07 24.5**	**-0.2**
CONA	**Conrad Observa**	**3.98**	**339**	*e*Pn	**Pn**	**02 07 26.0**	**+0.7**
	0.5nm,0.2s						
CONA	**Conrad Observa**	**3.98**	**339**	Pn	**Pn**	**02 07 26.0**	**+0.7**
	0.5nm,0.2s						
MODS	**Modra-Piesok**	**4.18**	**354**	*e*PN	**Pn**	**02 07 28.9**	**+0.9**
MODS				*e*SN	**Sn**	**02 08 15.5**	**-1.9**
MODS	**Modra-Piesok**	**4.18**	**354**	*e*Pn	**Pn**	**02 07 28.9**	**+0.9**
DRGR		**4.23**	**51**	⇓*i*P	**Pb**	**02 07 36.3**	**-1.9**
KBA	**Koelnbreinsper**	**4.31**	**313**	*i* Pn	**Pn**	**02 07 29.7**	**-0.2**
	0.5nm,0.1s						
KBA	**Koelnbreinsper**	**4.31**	**313**	Pn	**Pn**	**02 07 29.7**	**-0.2**
	0.5nm,0.1s						
SMOL	**Smolenice**	**4.31**	**355**	*e*PN	**Pn**	**02 07 31.1**	**+1.4**
SMOL				*e*SN	**Sn**	**02 08 19.5**	**-1.1**
SMOL	**Smolenice**	**4.31**	**355**	*e*Pn	**Pn**	**02 07 31.1**	**+1.4**
LOT	**Lotru**	**4.32**	**71**	⇑*i*P	**Pb**	**02 07 39.5**	**-0.4**
VYHS	**Vyhne**	**4.32**	**8**	*e*PN	**Pn**	**02 07 30.2**	**+0.3**
VYHS				*e*SN	**Sn**	**02 08 19.1**	**-1.7**
VYHS				*e*LG	Lg	02 08 21.5	
VYHS	**Vyhne**	**4.32**	**8**	*e*Pn	**Pn**	**02 07 30.2**	**+0.3**
VYHS				*e*Sn	**Sn**	**02 08 19.1**	**-1.7**
MOA	**Molln**	**4.45**	**326**	*e*Pn	**Pn**	**02 07 32.3**	**+0.7**
	0.3nm,0.1s						
MOA	**Molln**	**4.45**	**326**	Pn	**Pn**	**02 07 32.3**	**+0.7**
	0.3nm,0.1s						
ABTA	**Abfaltersbach**	**4.58**	**305**	*i* Pn	**Pn**	**02 07 34.3**	**+0.8**
	0.7nm,0.4s						
ABTA	**Abfaltersbach**	**4.58**	**305**	Pn	**Pn**	**02 07 34.3**	**+0.8**
	0.7nm,0.4s						
WTTA	**Wattenberg**	**5.36**	**307**	*e*Pn	**Pn**	**02 07 45.7**	**+1.3**
	0.5nm,0.2s						
WTTA	**Wattenberg**	**5.36**	**307**	Pn	**Pn**	**02 07 45.7**	**+1.3**
	0.5nm,0.2s						
MOTA	**Moosalm**	**5.72**	**306**	*e*Pn	**Pn**	**02 07 51.5**	**+2.4**
	1.3nm,0.4s						
MOTA	**Moosalm**	**5.72**	**306**	Pn	**Pn**	**02 07 51.5**	**+2.4**
	1.3nm,0.4s						
KHC	**Kasperske Hory**	**5.76**	**330**	*e*PN	**Pn**	**02 07 52.0**	**+2.3**
KHC				*e*SN	**Sn**	**02 08 54.5**	**-1.8**
KHC				*e*x	x	02 09 03.6	
KHC	**Kasperske Hory**	**5.76**	**330**	Pn	**Pn**	**02 07 52.0**	**+2.3**
KHC				Sn	**Sn**	**02 08 54.5**	**-1.8**
FETA	**Feichten**	**5.79**	**302**	*e*Pn	**Pn**	**02 07 51.2**	**+1.1**
	2.1nm,0.6s						
FETA	**Feichten**	**5.79**	**302**	Pn	**Pn**	**02 07 51.2**	**+1.1**
	2.1nm,0.6s						

IDC ***28*** *02:29:39.3±1.3, 35°.32N×22°.58E, h0^{km}, mb3.6/4, mb1 3.5/5, mb1mx3.2/60, mbtmp3.6/5, ML2.7/1, MS2.9/4, Ms1 3.0/4, ms1mx2.4/56, Error ellipse: s-maj=30.9km s-min=23.3km az=151.0*

ISCJB ***28*** *02:29:40.9±1.5, 35°.17N±0°.05×22°.58E±0°.08, h15^{km}±11^{km}, mb3.5/4, MS3.5/2, Error ellipse: s-maj=13.3km s-min=6.2km az=146.2*

ATH ***28*** *02:29:41.8, 35°.24N×22°.73E, h11^{km}±2^{km}, ML2.9/4, Error ellipse: s-maj=3.9km s-min=1.2km az=48.0*

CSEM ***28*** *02:29:42.6±0.4, 35°.27N×22°.76E, h2^{km}, ML2.9, Error ellipse: s-maj=9.1km s-min=3.9km az=47.0*

THE ***28*** *02:29:43.1, 35°.27N×22°.78E, h0^{km}±3^{km}, ML2.9/3, Error ellipse: s-maj=3.8km s-min=1.0km az=245.0*

ISC 28 02:29:40.9±1.5**, 35°.24N**±0°.04×**22°.69E**±0°.05**, h8**^{km}±9^{km}**, n53, σ0ˢ.86**/61**, mb3.5**/4**, Central Mediterranean Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ANKY	**Antikythira Is**	**0.80**	**38**	P	**Pg**	**02 29 56.2**	**-0.1**
ANKY				S	**Sb**	**02 30 08.8**	**+0.8**
ANKY				AML	AML	02 30 09.1	
	comp=N,2087µm,0.2s						
ANKY				AML	AML	02 30 11.2	
	comp=E,2157µm,0.3s						
ANKY	**Antikythira Is**	**0.80**	**38**	P	**Pg**	**02 29 56.5**	**+0.2**
ANKY				S	**Sb**	**02 30 08.4**	**+0.4**
ANKY	**Antikythira Is**	**0.80**	**38**	P	**Pg**	**02 29 56.5**	**+0.2**
ANKY				S	**Sb**	**02 30 08.1**	**+0.1**
KTHR	**Kythira**	**1.05**	**14**	P	**Pg**	**02 30 00.8**	**-0.3**
KTHR	**Kythira**	**1.05**	**14**	P	**Pg**	**02 30 00.8**	**-0.3**
KYTH	**Kithira**	**1.06**	**16**	P	**Pg**	**02 30 01.1**	**-0.2**
KYTH				S	**Sn**	**02 30 18.1**	**+1.0**
KYTH				AML	AML	02 30 23.6	
	comp=E,1069µm,0.5s						
KYTH				AML	AML	02 30 24.7	
	comp=N,1146µm,0.5s						
KYTH	**Kithira**	**1.06**	**16**	P	**Pg**	**02 30 01.6**	**+0.2**
IMMV	**Iera Moni Meta**	**1.08**	**78**	P	**Pn**	**02 30 02.7**	**+0.4**
IMMV				S	**Sg**	**02 30 14.1**	**-1.4**
IMMV				AML	AML	02 30 23.4	
	comp=N,1439µm,0.9s						
IMMV				AML	AML	02 30 26.6	
	comp=E,1590µm,0.6s						
IMMV	**Iera Moni Meta**	**1.08**	**78**	P	**Pg**	**02 30 01.4**	**-0.2**
IMMV				S	**Sb**	**02 30 17.1**	**+1.1**
IMMV	**Iera Moni Meta**	**1.08**	**78**	P	**Pb**	**02 30 02.1**	**+0.3**
IMMV				S	**Sg**	**02 30 15.0**	**-0.6**
CHAN	**Chania**	**1.14**	**75**	P	**Pb**	**02 30 03.2**	**+0.4**
CHAN	**Chania**	**1.14**	**75**	P	**Pb**	**02 30 03.2**	**+0.4**
GVD	**Gavdhos**	**1.21**	**109**	P	**Pg**	**02 30 04.3**	**+0.1**
GVD				S	**Sg**	**02 30 19.5**	**-0.4**
GVD				AML	AML	02 30 28.2	
	comp=E,1055µm,0.3s						
GVD				AML	AML	02 30 30.7	
	comp=N,996µm,0.3s						
GVD	**Gavdhos**	**1.21**	**109**	P	**Pb**	**02 30 04.2**	**+0.1**
GVD				S	**Sn**	**02 30 21.4**	**+0.7**
GVD	**Gavdhos**	**1.21**	**109**	P	**Pb**	**02 30 04.2**	**+0.1**
GVD				S	**Sg**	**02 30 19.9**	**0.0**
GVDS	**Gavdos**	**1.21**	**109**	P	**Pb**	**02 30 04.3**	**+0.2**
GVDS				S	**Sn**	**02 30 21.3**	**+0.6**
GVDS	**Gavdos**	**1.21**	**109**	P	**Pb**	**02 30 04.3**	**+0.2**
GVDS				S	**Sn**	**02 30 21.3**	**+0.6**
VAM	**Vamos**	**1.24**	**82**	P	**Pg**	**02 30 05.0**	**+0.2**
VAM	**Vamos**	**1.24**	**82**	P	**Pg**	**02 30 04.9**	**+0.2**
VAM	**Vamos**	**1.24**	**82**	P	**Pg**	**02 30 04.9**	**+0.2**
VLI	**Veliai**	**1.49**	**8**	P	**Pg**	**02 30 10.2**	**+0.7**
VLI	**Veliai**	**1.49**	**8**	P	**Pg**	**02 30 09.9**	**+0.4**
VLI	**Veliai**	**1.49**	**8**	P	**Pg**	**02 30 09.9**	**+0.4**
DYR	**Agios Nikonas**	**1.55**	**349**	P	**Pg**	**02 30 11.0**	**+0.4**
DYR	**Agios Nikonas**	**1.55**	**349**	P	**Pg**	**02 30 11.1**	**+0.5**
DYR	**Agios Nikonas**	**1.55**	**349**	P	**Pg**	**02 30 11.1**	**+0.5**
SIVA	**Sivas**	**1.75**	**97**	P	**Pb**	**02 30 13.9**	**+0.7**
SIVA	**Sivas**	**1.75**	**97**	P	**Pb**	**02 30 13.5**	**+0.3**
SIVA	**Sivas**	**1.75**	**97**	P	**Pb**	**02 30 13.5**	**+0.3**
IDI	**Anoyia**	**1.80**	**88**	Pn	**Pb**	**02 30 14.4**	**+0.3**
	comp=N,3.1nm,0.3s,baz=260,slow=12,SNR=25						
PYL	**PYLOS**	**1.82**	**335**	P	**Pb**	**02 30 14.3**	**-0.2**
PYL	**PYLOS**	**1.82**	**335**	P	**Pb**	**02 30 15.0**	**+0.5**
PYL	**PYLOS**	**1.82**	**335**	P	**Pb**	**02 30 15.0**	**+0.5**
LAST	**Lasithi**	**2.28**	**91**	P	**Pb**	**02 30 21.5**	**-0.9**
LAST	**Lasithi**	**2.28**	**91**	P	**Pn**	**02 30 20.8**	**+1.9**
LAST	**Lasithi**	**2.28**	**91**	P	**Pn**	**02 30 20.8**	**+1.9**
DID	**Didima**	**2.31**	**11**	P	**Pb**	**02 30 21.4**	**-1.4**
DID	**Didima**	**2.31**	**11**	P	**Pb**	**02 30 22.6**	**-0.2**
DID	**Didima**	**2.31**	**11**	P	**Pb**	**02 30 21.7**	**-1.1**
NPS	**Neapolis**	**2.39**	**89**	P	**Pb**	**02 30 24.0**	**-0.2**
NPS	**Neapolis**	**2.39**	**89**	P	**Pb**	**02 30 23.4**	**-0.8**
VLY	**Voula,Athens**	**2.76**	**18**	P	**Pn**	**02 30 27.4**	**+2.0**
VLY	**Voula,Athens**	**2.76**	**18**	P	**Pn**	**02 30 27.7**	**+2.3**
VLY	**Voula,Athens**	**2.76**	**18**	P	**Pn**	**02 30 27.7**	**+2.3**
BRTR	**Keskin Array B**	**9.78**	**60**	Pn	**Pn**	**02 32 03.0**	**+1.0**
	comp=N,0.1nm,0.3s,baz=230,slow=13,SNR=9.8						
MLR	**Muntele Rosu**	**10.54**	**13**	LR	LR	02 36 11.5	
	comp=N,14nm,21.0s,baz=9.5,slow=38						
GERES	**GERESS Array B**	**15.13**	**337**	LR	LR	02 41 01.7	
	comp=N,25nm,18.2s,baz=298,slow=45						
HFS	**Hagfors**	**25.59**	**350**	P	**P**	**02 35 08.9**	**-1.3**
	comp=N,0.7nm,0.7s,baz=158,slow=12,SNR=4.6						
TORD	**Torodi Ar. Bea**	**29.04**	**226**	P	**P**	**02 35 41.0**	**-0.6**
	comp=N,0.3nm,0.8s,baz=25,slow=10						
SPITS	**Spitsbergen Ar**	**43.13**	**358**	P	**P**	**02 37 40.8**	**-0.5**
	comp=N,2.5nm,0.9s,baz=185,slow=8.5,SNR=3.1						
MKAR	**Makanchi Array**	**45.41**	**56**	P	**P**	**02 37 58.4**	**-1.7**
	comp=N,0.2nm,0.4s,baz=262,slow=9.2,SNR=4.5						
OPO	**Ambohidratompo**	**58.35**	**152**	LR	LR	03 05 01.1	
	comp=N,50nm,19.8s,baz=178,slow=36						
PDAR	**Pinedale Array**	**90.96**	**327**	LR	LR	03 24 00.6	
	comp=N,13nm,19.7s,baz=236,slow=36						

KRNET ***28*** *02:36:42.7±0.1, 42°.23N×74°.42E, h17^{km}, mb3.0*

SOME ***28*** *02:36:42.3, 42°.20N×74°.42E, h10^{km}*

NNC ***28*** *02:36:43.7±0.7, 42°.34N×74°.45E, h13^{km}±6^{km}, mb3.1, mpv2.5, Error ellipse: s-maj=9.7km s-min=3.6km az=161.0*

ISC 28 02:36:42.8±0.9**, 42°.23N**±0°.02×**74°.41E**±0°.02**, h9**^{km}±6^{km}**, n58, σ1ˢ.42**/105**, 44C-13D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
UCH	**Uchtor**	**0.08**	**90**	⇑P	**Pg**	**02 36 45.4**	**-0.2**
	525nm,0.1s,SNR=1323						
UCH	**Uchtor**	**0.08**	**90**	⇑*i*P	**Pg**	**02 36 45.3**	**-0.2**
	baz=91						
UCH				⇑*i*S	**Sg**	**02 36 47.4**	**0.0**
	baz=91						
AAK	**Ala-Archa**	**0.41**	**9**	⇑P	**Pg**	**02 36 51.0**	**+0.1**
	21nm,0.3s						
AAK				⇑S	**Sg**	**02 36 56.9**	**+0.4**
	428nm,0.1s						
AAK	**Ala-Archa**	**0.41**	**9**	⇓P	**Pg**	**02 36 51.1**	**+0.1**
	28nm,0.1s,SNR=30						
AAK	**Ala-Archa**	**0.41**	**9**	⇑*i*P	**Pg**	**02 36 51.1**	**+0.1**
	baz=8.0						
AAK				⇑*i*S	**Sg**	**02 36 56.9**	**+0.4**
	baz=8.0						
AML	**Almayashu**	**0.54**	**260**	⇓P	**Pg**	**02 36 53.1**	**-0.3**
	13nm,0.2s,SNR=40						
AML	**Almayashu**	**0.54**	**260**	⇑*i*P	**Pg**	**02 36 53.1**	**-0.3**
	baz=60						
AML				⇑*i*S	**Sg**	**02 37 00.8**	**+0.2**
	baz=60						
KBK	**Karagaybulak**	**0.58**	**43**	P	**Pg**	**02 36 54.2**	**-0.1**
	28nm,0.2s,SNR=44						
KBK	**Karagaybulak**	**0.58**	**43**	⇓*i*P	**Pg**	**02 36 54.1**	**-0.1**
	baz=42						
KBK				⇓*i*S	**Sg**	**02 37 02.0**	**+0.1**
	baz=42						
FRU1	**Bishkek**	**0.60**	**15**	⇑*i*P	**Pg**	**02 36 54.5**	**-0.1**
	baz=15						
FRU1				⇑*i*S	**Sg**	**02 37 03.0**	**+0.5**
	baz=15						
EKS2	**Erkin-Say**	**0.64**	**313**	P	**Pg**	**02 36 55.1**	**-0.1**
	2.3nm,0.1s,SNR=17						
EKS2	**Erkin-Say**	**0.64**	**313**	⇑*i*P	**Pg**	**02 36 55.1**	**-0.1**
	baz=13						
EKS2				⇑*i*S	**Sg**	**02 37 03.8**	**+0.2**
	baz=13						
KZA	**Kyzart**	**0.64**	**103**	P	**Pg**	**02 36 55.0**	**-0.3**
	8.5nm,0.1s,SNR=42						
KZA	**Kyzart**	**0.64**	**103**	⇑*i*P	**Pg**	**02 36 55.0**	**-0.3**
	baz=3.0						
KZA				⇑*i*S	**Sg**	**02 37 03.7**	**-0.1**
	baz=3.0						
CHMS	**Chumysh**	**0.81**	**18**	⇓P	**Pg**	**02 36 58.1**	**-0.3**
	8.4nm,0.1s,SNR=8.3						
CHMS	**Chumysh**	**0.81**	**18**	⇓*i*P	**Pg**	**02 36 58.1**	**-0.3**
	baz=18						
CHMS				⇓*i*S	**Sg**	**02 37 09.0**	**0.0**
	baz=18						
MRKS	**Merke**	**1.02**	**301**	*e*P	**Pb**	**02 37 01.8**	**-0.9**
	baz=1.0						
MRKS				⇑*i*S	**Sb**	**02 37 15.5**	**-0.7**
	baz=1.0						
MRKS	**Merke**	**1.02**	**301**	*e*P	**Pb**	**02 37 01.8**	**-0.9**
	16nm,0.1s						
MRKS				⇑*i*S	**Sb**	**02 37 15.4**	**-0.7**
	54nm,0.2s						
USP	**Ospenovka**	**1.04**	**4**	⇑P	**Pb**	**02 37 02.3**	**-0.8**
	16nm,0.1s,SNR=53						
USP	**Ospenovka**	**1.04**	**4**	⇑*i*P	**Pb**	**02 37 02.1**	**-0.9**
	baz=3.0						
USP				⇑*i*S	**Sb**	**02 37 15.9**	**-0.9**
	baz=3.0						
TKM2	**Tokmak 2**	**1.12**	**51**	⇑P	**Pb**	**02 37 03.3**	**-1.1**
	3.7nm,0.3s						
TKM2				⇓S	**Sb**	**02 37 17.8**	**-1.3**
	17nm,0.2s						
TKM2	**Tokmak 2**	**1.12**	**51**	⇓P	**Pb**	**02 37 03.5**	**-1.0**
	9.1nm,0.1s,SNR=29						
TKM2	**Tokmak 2**	**1.12**	**51**	⇓*i*P	**Pb**	**02 37 03.4**	**-1.0**
	baz=51						
TKM2				⇓*i*S	**Sb**	**02 37 18.0**	**-1.1**
	baz=51						
BOOM	**Boomskoye usch**	**1.16**	**76**	⇑*i*P	**Pb**	**02 37 04.4**	**-0.8**
	baz=76						
BOOM				⇑*i*S	**Sb**	**02 37 19.7**	**-0.7**
	baz=76						
ULHL	**Ulahol**	**1.36**	**89**	⇑P	**Pn**	**02 37 07.5**	**-0.6**
	5.0nm,0.1s,SNR=30						
ULHL	**Ulahol**	**1.36**	**89**	⇑*i*P	**Pn**	**02 37 07.4**	**-0.7**
	baz=89						
ULHL				⇑*i*S	**Sb**	**02 37 25.4**	**-0.7**
	baz=89						
ARSB	**Arslanbob**	**1.40**	**230**	⇑*i*P	**Pb**	**02 37 08.8**	**-0.4**
	baz=30						
ARSB				⇑*i*S	**Sg**	**02 37 28.2**	**+0.4**
	baz=30						
KST	**Kastek**	**1.41**	**54**	*e*P	**Pb**	**02 37 08.8**	**-0.5**
	baz=54						
KST				*e*S	**Sg**	**02 37 27.5**	**-0.5**
	baz=54						
KST	**Kastek**	**1.41**	**54**	*e*P	**Pb**	**02 37 08.8**	**-0.5**
	11nm,0.2s						
KST				*e*S	**Sg**	**02 37 27.6**	**-0.5**
	16nm,0.3s						
DGS	**Degeres**	**1.43**	**44**	*e*P	**Pb**	**02 37 09.4**	**-0.2**
	baz=44						
DGS				*e*S	**Sg**	**02 37 29.0**	**+0.3**
	baz=44						
DGS	**Degeres**	**1.43**	**44**	*e*P	**Pb**	**02 37 09.4**	**-0.2**
	5.6nm,0.3s						
DGS				*e*S	**Sg**	**02 37 29.0**	**+0.3**
	22nm,0.3s						
MNAS	**Manas**	**1.44**	**281**	⇑P	**Pb**	**02 37 09.4**	**-0.4**
	1.1nm,0.3s						
MNAS				⇑S	**Sb**	**02 37 28.2**	**0.0**
	4.4nm,0.3s						
MNAS	**Manas**	**1.44**	**281**	⇑*i*P	**Pb**	**02 37 09.2**	**-0.6**
	baz=81						
MNAS				⇑*i*S	**Sg**	**02 37 28.7**	**-0.4**
	baz=81						
MTBS	**Maitube**	**1.74**	**58**	*e*P	**Pb**	**02 37 14.4**	**-0.6**
	baz=58						
MTBS				*e*S	**Sg**	**02 37 37.5**	**-1.3**
	baz=58						
MTBS	**Maitube**	**1.74**	**58**	*e*P	**Pb**	**02 37 14.4**	**-0.6**
	7.1nm,0.2s						
MTBS				*e*S	**Sg**	**02 37 37.5**	**-1.3**
	22nm,0.2s						
IZV	**Izvestkoviy**	**1.81**	**63**	*e*P	**Pb**	**02 37 16.2**	**-0.1**
	baz=63						
IZV				*e*S	**Sg**	**02 37 40.4**	**-0.8**
	baz=63						
IZV	**Izvestkoviy**	**1.81**	**63**	*e*P	**Pb**	**02 37 16.2**	**-0.1**
	9.2nm,0.2s						
IZV				*e*S	**Sg**	**02 37 40.4**	**-0.8**
	25nm,0.2s						
ARK	**Arkit**	**1.87**	**258**	⇑*i*P	**Pn**	**02 37 15.4**	**+0.3**
	baz=57						
ARK				⇑*i*S	**Sb**	**02 37 40.7**	**-0.1**
	baz=57						
TNSS	**Tian-Shan**	**2.04**	**66**	⇑*i*P	**Pg**	**02 37 21.6**	**-0.3**
	baz=66						
TNSS				⇑*e*S	**Sg**	**02 37 49.8**	**+1.4**
	baz=66						
TNSS	**Tian-Shan**	**2.04**	**66**	⇑*i*P	**Pg**	**02 37 21.6**	**-0.3**
	15nm,0.3s						
TNSS				*e*S	**Sg**	**02 37 49.9**	**+1.4**
	20nm,0.2s						
MDOK	**Medeo**	**2.16**	**63**	⇑*i*P	**Pg**	**02 37 22.9**	**-1.3**
	baz=63						
MDOK				⇑*e*S	**Sg**	**02 37 51.9**	**-0.2**
	baz=63						
MDOK	**Medeo**	**2.16**	**63**	⇑*i*P	**Pg**	**02 37 22.9**	**-1.3**
	12nm,0.5s						
MDOK				*e*S	**Sg**	**02 37 52.0**	**-0.2**
	16nm,0.6s						
KUU	**Kurty**	**2.18**	**40**	*e*P	**Pb**	**02 37 22.5**	**0.0**
	baz=40						
KUU				*e*S	**Sg**	**02 37 51.4**	**-1.6**
	baz=40						
KUU	**Kurty**	**2.18**	**40**	*e*P	**Pb**	**02 37 22.5**	**0.0**
	24nm,0.4s						
KUU				*e*S	**Sg**	**02 37 51.4**	**-1.6**
	33nm,0.3s						
KOTS	**Kotyrbulak**	**2.23**	**62**	*e*P	**Pb**	**02 37 23.9**	**+0.6**
	11nm,0.2s						
KOTS				*e*S	**Sg**	**02 37 53.7**	**-0.8**
	36nm,0.4s						
KTBS	**Karatobe**	**2.23**	**48**	*e*P	**Pb**	**02 37 23.4**	**+0.1**
	baz=45						
KTBS				*e*S	**Sg**	**02 37 53.0**	**-1.6**
	baz=45						
KTBS	**Karatobe**	**2.23**	**48**	*e*P	**Pb**	**02 37 23.4**	**+0.1**
	21nm,0.2s						
KTBS				*e*S	**Sg**	**02 37 52.9**	**-1.6**
	28nm,0.5s						
SFK	**Sufi-Kurgan**	**2.32**	**198**	⇑Pn	**Pb**	**02 37 24.2**	**-0.6**
	0.8nm,0.2s						
SFK				⇑Sn	**Sg**	**02 37 55.3**	**-2.0**
	5.7nm,0.3s						
CHKK	**Chushkaly**	**2.49**	**48**	*e*P	**Pb**	**02 37 27.5**	**-0.2**
	baz=48						
CHKK				*e*S	**Sb**	**02 38 00.0**	**+1.5**
	baz=48						
CHKK	**Chushkaly**	**2.49**	**48**	*e*P	**Pb**	**02 37 27.5**	**-0.2**
	9.8nm,0.3s						
CHKK				*e*S	**Sb**	**02 38 00.0**	**+1.5**
	115nm,0.3s						
KK31	**Karatay Array**	**3.01**	**288**	⇑Pn	**Pn**	**02 37 32.5**	**+1.9**
	0.2nm,0.3s,baz=99,slow=16,SNR=13						
KK31				⇓Pg	**Pb**	**02 37 38.0**	**+1.5**
	0.8nm,0.5s,baz=101,slow=15,SNR=3.9						
KK31				Lg	Lg	02 38 16.7	
	1.9nm,0.3s,baz=100,slow=30,SNR=13						
ARXS	**Arharly**	**3.19**	**50**	*e*P	**Pb**	**02 37 41.0**	**+1.4**
	3.3nm,0.3s						
ARXS				*e*S	**Sg**	**02 38 22.8**	**-2.4**
	15nm,0.3s						
KPKS	**Kokpek**	**3.38**	**67**	*e*P	**Pb**	**02 37 43.2**	**+0.3**
	24nm,0.6s						
KPKS				*e*S	**Sg**	**02 38 27.2**	**-4.0**
UZB	**Uzynbulak**	**3.52**	**73**	*e*P	**Pb**	**02 37 46.7**	**+1.4**
	baz=73						
UZB				*e*S	**Sg**	**02 38 32.6**	**-3.3**
	baz=73						
UZB	**Uzynbulak**	**3.52**	**73**	*e*P	**Pb**	**02 37 46.7**	**+1.4**
	1.9nm,0.2s						
UZB				*e*S	**Sg**	**02 38 32.6**	**-3.3**
	6.9nm,0.4s						
SHLS	**Shalkode**	**3.84**	**74**	*e*P	**Pg**	**02 37 58.3**	**+2.0**
	baz=75						
SHLS				*e*S	**Sg**	**02 38 52.7**	**+6.7**
	baz=75						
SHLS	**Shalkode**	**3.84**	**74**	*e*P	**Pg**	**02 37 58.3**	**+2.0**
	4.2nm,0.2s						
SHLS				*e*S	**Sg**	**02 38 52.7**	**+6.7**
	8.1nm,0.3s						
PDGK	**Podgornoye**	**3.90**	**72**	⇓Pg	**Pb**	**02 37 52.6**	**+0.9**
	1.6nm,0.6s						
PDGK				⇑Lg	Lg	02 38 44.0	
	4.9nm,0.6s						

IDC 28 02:37:40.9±3.5**, 4°.46S**×**153°.20E, h0**^{km}**, mb3.5**/3**, mb1 3.7**/3**, mb1mx3.4**/43**, mbtmp3.5**/3**, Error ellipse: s-maj=124.7km s-min=33.2km az=110.0, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**23.97**	**228**	P	P	02 42 57.6	+0.4
	0.9nm,0.4s,baz=54,slow=10.0,SNR=13						
H11S3	**WAKE ISLAND Hy**	**26.40**	**30**	T	T	03 10 52.8	
	baz=210,slow=76,SNR=10						
H11S2	**WAKE ISLAND Hy**	**26.41**	**30**	T	T	03 10 53.5	
	baz=210,slow=76,SNR=8.2						
H11S1	**WAKE ISLAND Hy**	**26.42**	**30**	T	T	03 10 52.2	
	baz=210,slow=76,SNR=5.3						
ASAR	**Alice Springs**	**26.67**	**222**	P	P	02 43 21.8	0.0
	0.4nm,0.6s,baz=54,slow=9.1,SNR=5.0						
H11N1	**WAKE ISLAND Hy**	**27.54**	**29**	T	T	03 12 27.0	
	baz=208						
H11N3	**WAKE ISLAND Hy**	**27.55**	**29**	T	T	03 12 32.9	
	baz=208						
H11N2	**WAKE ISLAND Hy**	**27.56**	**29**	T	T	03 12 27.4	
	baz=208						
MKAR	**Makanchi Array**	**80.33**	**319**	P	P	02 49 54.2	+0.1
	0.1nm,0.4s,baz=94,slow=5.9,SNR=3.1						
TORD	**Torodi Ar. Bea**	**150.58**	**289**	PKPbc	PKPbc	02 57 35.3	-0.7
	baz=81,slow=2.2						

SJA 28 03:13:03.1±1.0**, 32°.67S**×**69°.91W, h119**^{km}±6^{km}**, ML2.9, MW3.5, Mendoza Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AUSP	**Uspallata**	**0.63**	**45**	*e*P	Pn	03 13 22.7	+0.6
AUSP				*e*S	Sn	03 13 36.0	-0.5
ARCO	**CERRO ARCO**	**0.84**	**102**	*e*P	Pn	03 13 24.7	+0.9
ARCO				*e*S	Sn	03 13 40.7	+1.3
ARCO				IAML		03 13 43.0	
	comp=Z,285nm,0.3s						
ASAL	**Salagasta**	**0.91**	**85**	*e*P	Pn	03 13 25.5	+1.2
ASAL				*e*S	Sn	03 13 42.1	+1.8
ROC1	**El Roble**	**0.98**	**251**	*e*P	Pn	03 13 26.0	+0.9
ROC1				*e*S	Sn	03 13 42.5	+0.8
AAGR	**Agrelo**	**1.00**	**115**	*e*P	Pn	03 13 26.4	+1.2
AAGR				*e*S	Sn	03 13 42.7	+0.8
RTLS	**Leoncito**	**1.01**	**31**	*e*P	Pn	03 13 26.6	+1.0
RTLS				*e*S	Sn	03 13 43.8	+1.3
RTLS				IAML		03 13 45.5	
	comp=Z,91nm,0.2s						
RTCV	**Cerro Valdivia**	**1.42**	**56**	*e*P	Pn	03 13 30.1	+0.5
AVIZ	**Vizcacheras**	**1.42**	**125**	*e*P	Pn	03 13 30.7	+1.1
RTLL	**Cerro Villicun**	**1.81**	**43**	*e*P	Pn	03 13 35.0	+0.8
RTLL				*e*S	Sn	03 13 58.5	+0.5
ACAN	**Cantantal**	**2.34**	**81**	*e*P	Pn	03 13 41.2	+0.4
ACAN				*e*S	Sn	03 14 07.9	-1.8
AROD	**Rodeo**	**2.52**	**9**	*e*P	Pn	03 13 45.4	+1.9
AROD				*e*S	Sn	03 14 16.3	+1.9
ACDV	**Cuesta del Vie**	**2.58**	**15**	*e*P	Pn	03 13 45.7	+1.6
ACDV				*e*S	Sn	03 14 17.2	+1.6

DDA ***28*** *03:13:45.6, 38°.68N×43°.72E, h7^{km}, Ml2.7*

CSEM ***28*** *03:13:45.3±0.3, 38°.64N×43°.72E, h15^{km}, ML2.1, Error ellipse: s-maj=6.8km s-min=4.1km az=126.0*

ISK ***28*** *03:13:45.3, 38°.63N×43°.71E, h15^{km}, ML2.1/4*

ISC 28 03:13:45.1±1.4**, 38°.71N**±0°.04×**43°.71E**±0°.05**, h7**^{km}±11^{km}**,**

n21, σ1^{s}.49/33, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VANB	Van	0.27	246	PG	Pb	03 13 51.4	-1.0
VANB				SG	Sb	03 13 56.1	-1.2
VANB	Van	0.27	246	*e*Pg	Pb	03 13 51.4	-1.0
VANB				*e*Sg	Sb	03 13 56.1	-1.2
TVAN	Van	0.29	233	*i* P	Pb	03 13 51.6	-1.2
TVAN				*i* S	Sb	03 13 57.1	-0.9
TVAN	Van	0.29	233	P	Pb	03 13 51.6	-1.2
TVAN				S	Sb	03 13 57.1	-0.9
VMUR	Van-Muradiye	0.30	339	*i* P	Pg	03 13 48.7	-2.4
VMUR	Van-Muradiye	0.30	339	P	Pg	03 13 48.7	-2.4
CLDR	Caldiran	0.47	20	PG	Pb	03 13 56.1	+0.3
CLDR				SG	Sb	03 14 04.5	+1.5
CLDR	Caldiran	0.47	20	*i* P	Pb	03 13 55.9	0.0
CLDR	Caldiran	0.47	20	P	Pb	03 13 55.8	0.0
CLDR	Caldiran	0.47	20	*e*Pg	Pb	03 13 56.1	+0.3
CLDR				*e*Sg	Sb	03 14 04.5	+1.5
GEVA	Gevas	0.64	233	*i* P	Pg	03 13 56.7	-0.8
GEVA				*i* S	Sn	03 14 11.5	+0.1
GEVA	Gevas	0.64	233	P	Pg	03 13 56.7	-0.8
ADCV	BITLIS_Adilcev	0.78	278	*i* P	Pb	03 14 00.9	-0.1
ADCV				*i* S	Sb	03 14 12.0	+0.1
ADCV	BITLIS_Adilcev	0.78	278	P	Pb	03 14 00.9	-0.1
ADCV				S	Sb	03 14 12.0	+0.1
TUTA	Tutak	0.98	315	*i* P	Pb	03 14 04.3	-0.3
TUTA				*i* S	Sn	03 14 19.8	-0.1
TUTA	Tutak	0.98	315	P	Pb	03 14 04.3	-0.3
TUTA				S	Sn	03 14 19.8	-0.1
GURO	Guroymak-BITLI	1.32	264	PN	Pn	03 14 09.6	-0.5
GURO	Guroymak-BITLI	1.32	264	*e*Pn	Pn	03 14 09.6	-0.5
CUKT	Cukurca	1.46	183	PN	Pn	03 14 10.9	-1.1
CUKT	Cukurca	1.46	183	*e*Pn	Pn	03 14 10.9	-1.1
SRTM	Siirt_Merkez	1.57	244	*i* P	Pg	03 14 18.5	+3.2
SRTM				*i* S	Sg	03 14 40.5	+4.9

ISCJB ***28*** *03:22:37.4±1.6, 38°.58N±0°.07×43°.53E±0°.10, h40^{km}±11^{km}, Error ellipse: s-maj=15.8km s-min=8.0km az=41.5*
CSEM ***28*** *03:22:39.4, 38°.69N×43°.35E, h7^{km}, ML2.6*
DDA ***28*** *03:22:39.4, 38°.69N×43°.35E, h7^{km}, Ml2.6*
ISC 28 03:22:38.5±1.3, **38°.67N**±0°.08×**43°.46E**±0°.08, **h33**^{km}±5^{km}, **n15, σ0^{s}.92**/20, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VANB	Van	0.09	217	PG	Pb	03 22 43.5	-0.8
VANB				SG	Sb	03 22 49.6	+1.3
TVAN	Van	0.14	196	*i* P	Pn	03 22 43.3	-0.3
TVAN	Van	0.14	196	P	Pn	03 22 43.3	-0.3
VMUR	Van-Muradiye	0.34	15	*i* P	Pb	03 22 46.0	-0.9
VMUR				*i* S	Sn	03 22 52.5	-0.2
VMUR	Van-Muradiye	0.34	15	P	Pb	03 22 46.0	-0.9
VMUR				S	Sn	03 22 52.5	-0.2
GEVA	Gevas	0.47	222	*i* P	Pb	03 22 48.1	-0.7
GEVA	Gevas	0.47	222	P	Pb	03 22 48.1	-0.7
ADCV	BITLIS_Adilcev	0.59	284	*i* P	Pn	03 22 50.0	-0.7
ADCV				*i* S	Sn	03 23 00.3	+1.0
ADCV	BITLIS_Adilcev	0.59	284	P	Pn	03 22 50.0	-0.7
ADCV				S	Sn	03 23 00.3	+1.0
CLDR	Caldiran	0.60	37	*i* S	Sn	03 23 00.9	+1.4
CLDR	Caldiran	0.60	37	S	Sn	03 23 00.9	+1.4
TUTA	Tutak	0.89	326	*i* P	Pn	03 22 54.8	-0.1
TUTA	Tutak	0.89	326	P	Pn	03 22 54.8	-0.1
AGRB	Hanur-Agry	0.98	338	*e*PG	Pn	03 22 56.1	0.0
AGRB				SG	Sn	03 23 10.2	+1.3
GURO	Guroymak-BITLI	1.12	265	*e*PG	Pn	03 22 57.6	-0.4
GURO				SG	Sn	03 23 12.9	+0.5

CSEM ***28*** *03:29:19.0, 38°.14N×26°.40W, h4^{km}, ML2.0*
PDA 28 03:29:19.0±0.4, **38°.14N×26°.40W, h4**^{km}±2^{km}, **MD3.6, ML2.0, 2C, Error ellipse: s-maj=2.3km s-min=1.3km az=35.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSET	Sete Cidades	0.62	120	*e*P	Pg	03 29 29.5	-1.4
PSET				*e*S	Sg	03 29 37.6	-1.3
PSET				A	A	03 29 39.9	
	53nm,0.2s						
PSET	Sete Cidades	0.62	120	*e*P	Pg	03 29 29.5	-1.4
PSET				*e*S	Sg	03 29 37.6	-1.3
PDA	Ponta Delgada	0.70	124	*e*P	Pg	03 29 30.6	-1.8
PDA				*e*S	Sg	03 29 39.6	-1.9
PDA				A	A	03 29 41.2	
	18nm,0.1s						
PDA	Ponta Delgada	0.70	124	*e*P	Pg	03 29 30.6	-1.8
PDA				*e*S	Sg	03 29 39.6	-1.9
GRON	Grota Negra	0.78	118	*e*P	Pg	03 29 33.2	-0.7
GRON				*e*S	Sg	03 29 43.8	-0.1
GRON				A	A	03 29 45.7	
	5.7nm,0.1s						
PSCM	Serra do Cume	0.80	315	⇑*i*P	Pg	03 29 31.9	-2.4
PSCM				*e*S	Sg	03 29 41.9	-2.8
PSCM				A	A	03 29 43.6	
	59nm,0.1s						
PSCM	Serra do Cume	0.80	315	⇑*i*P	Pg	03 29 31.9	-2.4
PSCM				*e*S	Sg	03 29 41.9	-2.8
ADH	Angra Heroismo	0.84	308	*e*P	Pg	03 29 32.5	-2.6
ADH				*e*S	Sg	03 29 42.7	-3.2
ADH				A	A	03 29 44.2	
	32nm,0.2s						
ADH	Angra Heroismo	0.84	308	*e*P	Pg	03 29 32.5	-2.6
ADH				*e*S	Sg	03 29 42.7	-3.2
BART	Pico Bartolome	1.03	110	*e*S	Sg	03 29 47.6	-4.6
BART				A	A	03 29 49.7	
	15nm,0.3s						
BART	Pico Bartolome	1.03	110	*e*S	Sg	03 29 47.6	-4.6
PMAN	Manadas	1.42	291	*e*P	Pn	03 29 40.8	-4.8
PMAN				*e*S	Sb	03 29 57.0	-7.5
PMAN				A	A	03 29 58.5	
	9.8nm,0.2s						
PMAN	Manadas	1.42	291	*e*P	Pn	03 29 40.8	-4.8
PMAN				*e*S	Sb	03 29 57.0	-7.5
PSMA	Santa Maria	1.52	138	*e*S	Sn	03 29 59.4	-7.8
PSMA				A	A	03 30 01.2	
	12nm,0.1s						
PSMN	Pico do Norte,	1.55	137	*e*S	Sn	03 30 00.1	-7.8
PSMN				A	A	03 30 03.6	
	16nm,0.4s						
PSMN	Pico do Norte,	1.55	137	*e*S	Sn	03 30 00.1	-7.8
ROSA	Rosais	1.56	292	*e*P	Pn	03 29 42.8	-4.7
ROSA				*e*S	Sn	03 30 00.5	-7.7
ROSA				A	A	03 30 01.9	
	10.0nm,0.1s						
ROSA	Rosais	1.56	292	*e*P	Pn	03 29 42.8	-4.7
ROSA				*e*S	Sn	03 30 00.5	-7.7
PICO	Pico	1.64	283	*e*P	Pn	03 29 43.8	-4.8
PICO				*e*S	Sn	03 30 02.3	-7.9
PICO				A	A	03 30 06.3	
	11nm,0.2s						
PICO	Pico	1.64	283	*e*P	Pn	03 29 43.8	-4.8
PICO				*e*S	Sn	03 30 02.3	-7.9
PCAN	Candelaria	1.68	282	*e*P	Pn	03 29 44.2	-4.9
PCAN				*e*S	Sn	03 30 03.2	-7.9
PCAN				A	A	03 30 05.8	
	8.0nm,0.1s						
PCAN	Candelaria	1.68	282	*e*P	Pn	03 29 44.2	-4.9
PCAN				*e*S	Sn	03 30 03.2	-7.9

ISK ***28*** *03:53:28.5, 34°.86N×32°.46E, h10^{km}, ML2.4/6*
ISCJB ***28*** *03:53:28.2±0.6, 34°.71N±0°.02×32°.48E±0°.05, h23^{km}±4^{km}, Error ellipse: s-maj=6.9km s-min=3.2km az=163.0*
NIC ***28*** *03:53:29.3±0.4, 34°.79N×32°.51E, h20^{km}, ML3.0*
CSEM ***28*** *03:53:29.4±0.3, 34°.80N×32°.51E, h15^{km}, ML3.0, Error ellipse: s-maj=5.7km s-min=4.2km az=18.0*
GII ***28*** *03:53:30.2±0.0, 34°.52N×32°.79E, h1^{km}*
DDA ***28*** *03:53:32.5, 35°.09N×32°.65E, h33^{km}, Ml2.7*
ISC 28 03:53:28.3±1.3, **34°.76N**±0°.03×**32°.52E**±0°.04, **h12**^{km}±9^{km}, **n52, σ0^{s}.69**/83, **Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PPCY	Paphos	0.19	312	P	Pb	03 53 34.4	+0.6
	baz=123						
PPCY	Paphos	0.19	312	P	Pb	03 53 34.4	+0.6
SZAC	Souni	0.30	90	P	Pb	03 53 35.7	+0.1
	baz=276						
SZAC				S	Sb	03 53 41.4	+0.8
SZAC	Souni	0.30	90	P	Pb	03 53 35.7	+0.1
SZAC				S	Sb	03 53 41.4	+0.8
AKMC	Akamas	0.31	330	P	Pb	03 53 36.1	+0.3
	baz=147						
AKMC	Akamas	0.31	330	P	Pb	03 53 36.1	+0.3
ALFC	Alefka	0.40	9	P	Pg	03 53 36.6	+0.3
	baz=190						
ALFC				S	Sb	03 53 43.2	-0.4
ALFC	Alefka	0.40	9	P	Pg	03 53 36.6	+0.3
ALFC				S	Sb	03 53 43.2	-0.4
LEF	Lefka	0.47	40	PG	Pg	03 53 37.7	+0.2
LEF				SG	Sg	03 53 42.8	-1.1
LEF	Lefka	0.47	40	P	Pg	03 53 37.8	+0.2
LEF				*e*Sg	Sg	03 53 42.8	-1.1
LEF				S	Sb	03 53 44.3	-1.2
CSS	Mathiatis	0.70	73	S	Sb	03 53 53.2	+1.2
	baz=255						
CSS	Mathiatis	0.70	73	S	Sb	03 53 53.2	+1.2
MAMC	Mammari	0.71	54	P	Pb	03 53 43.0	+0.4
	baz=236						
MAMC	Mammari	0.71	54	P	Pb	03 53 43.0	+0.4
PHNC	Paralimni	1.27	78	P	Pg	03 53 53.3	+0.6
	baz=260						
PHNC	Paralimni	1.27	78	P	Pg	03 53 53.3	+0.6
TEKE	Tekeli-Mersin	1.47	19	PN	Pn	03 53 53.7	-0.9
TEKE				SN	Sn	03 54 12.8	-0.9
TEKE	Tekeli-Mersin	1.47	19	*e*Pn	Pn	03 53 53.7	-0.9
TEKE				*e*Sn	Sn	03 54 12.8	-0.9
GAZI	Gazipasa	1.48	354	PN	Pn	03 53 55.1	+0.3
GAZI				SN	Sn	03 54 13.4	-0.8
GAZI	Gazipasa	1.48	354	*i* P	Pn	03 53 54.5	-0.3
GAZI				*i* S	Sn	03 54 13.9	-0.3
GAZI	Gazipasa	1.48	354	P	Pn	03 53 54.5	-0.3
GAZI	Gazipasa	1.48	354	*e*Pn	Pn	03 53 55.1	+0.3
GAZI				*e*Sn	Sn	03 54 13.4	-0.8
AKKU	Akkuyu-Mersin	1.63	31	PN	Pn	03 53 56.2	-0.7
AKKU				SN	Sn	03 54 17.9	+0.1
AKKU	Akkuyu-Mersin	1.63	31	*e*Pn	Pn	03 53 56.2	-0.7
AKKU				*e*Sn	Sn	03 54 17.9	+0.1
GULN	MERSIN_Gulnar	1.65	30	*i* P	Pn	03 53 56.9	-0.2
GULN				*i* S	Sn	03 54 18.9	+0.7
GULN	MERSIN_Gulnar	1.65	30	P	Pn	03 53 56.9	-0.2
GULN				S	Sn	03 54 18.9	+0.7
BERE	Bereket-Mersin	1.69	20	PN	Pn	03 53 57.4	-0.4
BERE				SN	Sn	03 54 19.6	+0.2
BERE	Bereket-Mersin	1.69	20	*e*Pn	Pn	03 53 57.4	-0.4
BERE				*e*Sn	Sn	03 54 19.6	+0.2
IKL	Isikli	1.76	32	PN	Pn	03 53 58.5	-0.1
IKL				SN	Sb	03 54 21.9	-0.6
IKL	Isikli	1.76	32	*e*Pn	Pn	03 53 58.5	-0.1
IKL				*e*Sn	Sb	03 54 21.9	-0.6
KEBE	Keben-Mersin	1.95	30	PN	Pn	03 54 02.3	+1.0
KEBE	Keben-Mersin	1.95	30	*e*Pn	Pn	03 54 02.3	+1.0
KIZK	Mersin	2.17	37	PN	Pn	03 54 04.9	+0.7
KIZK	Mersin	2.17	37	*i* P	Pn	03 54 04.7	+0.4
KIZK				*i* S	Sb	03 54 34.5	+0.1
KIZK	Mersin	2.17	37	P	Pn	03 54 04.7	+0.4
KIZK				S	Sb	03 54 34.5	+0.1
KEPZ	Antalya-Kepez	2.26	341	*i* P	Pn	03 54 06.0	+0.4
KEPZ				*i* S	Sn	03 54 33.2	-0.3
KEPZ	Antalya-Kepez	2.26	341	P	Pn	03 54 06.0	+0.4
KEPZ				S	Sn	03 54 33.2	-0.3
MERS	Mersin	2.66	37	PN	Pn	03 54 12.4	+1.3
MERS	Mersin	2.66	37	*e*Pn	Pn	03 54 12.4	+1.3
HNTI	Hanita	2.77	126	Pn	Pn	03 54 12.0	-0.5
HNTI				Sn	Sn	03 54 44.4	-1.5
OFRI	‘Ofer	2.96	135	Pn	Pn	03 54 15.3	+0.1
OFRI				Sn	Sn	03 54 49.2	-1.5
MMA0B	Mount Meron ar	2.96	125	Pn	Pn	03 54 15.6	+0.4
MMA0B				Sn	Sn	03 54 49.0	-1.8
KSDI	Kefar Szold	3.04	120	Pn	Pn	03 54 16.4	+0.2
KSDI				Sn	Sn	03 54 51.5	-1.1
NATI	Neve Ativ	3.06	118	Pn	Pn	03 54 16.6	+0.1
KSHT	Keshet	3.26	122	Pn	Pn	03 54 19.7	+0.4
MMLI	Mount Malkishu	3.35	133	Pn	Pn	03 54 20.8	+0.3
MMLI				Sn	Sn	03 54 59.3	-1.0
HMDT	Nahal Hemdat	3.54	134	Pn	Pn	03 54 23.1	0.0
HMDT				Sn	Sn	03 55 05.4	+0.4
DSI	Dead Sea	3.98	142	Pn	Pn	03 54 29.6	+0.4
DSI				Sn	Sn	03 55 15.0	-0.8
KZIT	Kziot	4.15	157	Pn	Pn	03 54 31.3	-0.2
PRNI	Paran	4.87	154	Pn	Pn	03 54 42.1	+0.7
MBRI	Mt Berech	5.35	157	Pn	Pn	03 54 48.6	+0.5
EIL	Elat	5.48	157	Pn	Pn	03 54 49.9	+0.2

IPEC ***28*** *04:07:45.4±0.2, 49°.96N×18°.65E, h2^{km}±2^{km}, ML1.1/3, Error ellipse: s-maj=2.0km s-min=1.1km az=165.0*
CSEM ***28*** *04:07:45.3±0.2, 49°.99N×18°.59E, h1^{km}, ML1.8/6, Error ellipse: s-maj=4.8km s-min=2.2km az=14.0*
PRU 28 04:07:46.2, 50°.00N×18°.59E, h0^{km}**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	Ostrava-Krasne	0.33	241	*e*PG	Pg	04 07 52.6	+0.1
OKC				*e*SG	Sg	04 07 58.0	+1.3
	comp=Z,11nm,0.6s						
OKC	Ostrava-Krasne	0.33	241	Pg	Pg	04 07 52.6	+0.1
OKC				Sg	Sg	04 07 58.0	+1.3
	11nm,0.6s						
MORC	Moravsky Berou	0.71	252	*e*Pg	Pg	04 07 59.2	-0.7
MORC				*e*Sg	Sg	04 08 08.7	-0.4
	3.9nm,0.4s,baz=75						
MORC	Moravsky Berou	0.71	252	*e*PG	Pg	04 07 59.7	-0.2
MORC				*e*SG	Sg	04 08 08.8	-0.3
MORC	Moravsky Berou	0.71	252	*e*Pg	Pg	04 07 59.6	-0.3
	baz=75						
MORC				*e*Sg	Sg	04 08 08.7	-0.4
	3.9nm,0.4s,baz=75						
OJC	Ojcow	0.81	74	*e*Pg	Pg	04 08 00.7	-1.0
OJC				*e*Sg	Sg	04 08 11.6	-0.5
LANS	Liptovska Anna	1.02	146	*e*PG	Pg	04 08 04.7	-1.1
LANS				*e*SG	Sg	04 08 18.7	-0.4
LANS	Liptovska Anna	1.02	146	*e*Pg	Pg	04 08 04.7	-1.1
LANS				*e*Sg	Sg	04 08 18.7	-0.4
KRLC	Kraliky	1.17	274	*e*PG	Pg	04 08 07.8	-0.8
KRLC				*e*SG	Sg	04 08 23.8	+0.1
	comp=Z,1.3nm,0.3s						
KRLC	Kraliky	1.17	274	Pg	Pg	04 08 07.8	-0.8
KRLC				Sg	Sg	04 08 23.8	+0.1
	1.3nm,0.3s						
NIE	Niedzica	1.25	117	*e*Pg	Pg	04 08 09.5	-0.7
NIE				*e*Sg	Sb	04 08 27.4	0.0
NIE	Niedzica	1.25	117	*e*Pg	Pg	04 08 09.5	-0.7
NIE				*e*Sg	Sb	04 08 27.4	0.0
JAVC	Velka Javorina	1.29	208	*e*Pg	Pg	04 08 09.8	-1.1
	baz=30						
JAVC	Velka Javorina	1.29	208	*e*Pn	Pg	04 08 10.4	-0.5
JAVC	Velka Javorina	1.29	208	*e*PG	Pg	04 08 09.9	-1.0
JAVC	Velka Javorina	1.29	208	*e*Pg	Pg	04 08 09.8	-1.1
	baz=30						
VRAC	Vranov	1.47	243	*e*Pn	Pn	04 08 12.8	-1.2
VRAC				*e*Sg	Sg	04 08 32.0	-1.4
	2.8nm,0.4s,baz=63						
VRAC	Vranov	1.47	243	*e*PG	Pn	04 08 12.6	-1.4
VRAC				*e*SG	Sg	04 08 32.1	-1.3
VRAC	Vranov	1.47	243	*e*Pg	Pn	04 08 12.6	-1.4
	baz=63						
VRAC				*e*Sg	Sg	04 08 32.0	-1.4
	2.8nm,0.4s,baz=63						
DPC	Dobruska-Polom	1.50	284	*e*PG	Pn	04 08 13.6	-0.8
DPC				*e*SG	Sg	04 08 34.4	0.0
	comp=Z,2.5nm,0.4s						
DPC	Dobruska-Polom	1.50	284	Pg	Pn	04 08 13.6	-0.8
DPC				Sg	Sg	04 08 34.4	0.0
	2.5nm,0.4s						
VYHS	Vyhne	1.52	174	*e*PN	Pn	04 08 12.7	-1.9
VYHS				*e*SN	Sg	04 08 34.0	-0.9
VYHS				*e*LG	Lg	04 08 37.6	
VYHS	Vyhne	1.52	174	*e*Pn	Pn	04 08 12.7	-1.9
VYHS				*e*Sn	Sg	04 08 34.0	-0.9
KRUC	Moravsky	1.71	238	*e*Pn	Pn	04 08 16.4	-0.9
KRUC				*e*Sg	Sn	04 08 39.3	-0.5
	1.0nm,0.2s,baz=58						
KRUC	Moravsky	1.71	238	*e*PN	Pn	04 08 16.4	-0.9
KRUC				*e*SG	Sn	04 08 39.4	-0.4
KRUC	Moravsky	1.71	238	*e*Pn	Pn	04 08 16.4	-0.9
	baz=58						
KRUC				*e*Sg	Sn	04 08 39.3	-0.5
	1.0nm,0.2s,baz=58						
UPC	Upice	1.73	288	*e*SG	Sg	04 08 41.6	-0.2
UPC	Upice	1.73	288	Sg	Sg	04 08 41.6	-0.2
KHC	Kasperske Hory	3.38	257	*e*SG	Sg	04 09 33.0	-1.6
KHC	Kasperske Hory	3.38	257	Sg	Sg	04 09 33.0	-1.6

CSEM ***28*** *04:08:53.9±0.4, 50°.31N×19°.02E, h1^{km}, Error ellipse: s-maj=9.7km s-min=3.8km az=12.0*
PRU 28 04:08:55.1, 50°.26N×19°.03E, h0^{km}**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CHZP	Chorzow	0.04	322	*e*Pg	Pg	04 08 57.5	+1.6
CHZP				*e*Sg	Sg	04 08 59.4	+3.0
OJC	Ojcow	0.49	94	*e*Pg	Pg	04 09 04.1	-0.5
OJC				*e*Sg	Sg	04 09 10.9	0.0
OJC	Ojcow	0.49	94	*e*Pg	Pg	04 09 04.1	-0.5
OJC				*e*Sg	Sg	04 09 10.9	-0.1
MORC	Moravsky Berou	1.07	244	*e*Pg	Pg	04 09 15.9	+0.2
MORC				*e*Sg	Sg	04 09 30.2	+0.6
MORC	Moravsky Berou	1.07	244	*e*PG	Pg	04 09 15.9	+0.2
MORC				*e*SG	Sg	04 09 30.2	+0.6
LANS	Liptovska Anna	1.15	165	*e*Pg	Pg	04 09 16.5	-0.5
LANS				*e*Sg	Sg	04 09 31.3	-0.6
LANS	Liptovska Anna	1.15	165	*e*PG	Pg	04 09 16.5	-0.5
LANS				*e*SG	Sg	04 09 31.3	-0.6
NIE	Niedzica	1.18	135	*e*Pg	Pg	04 09 17.3	-0.3
NIE				*e*Sg	Sb	04 09 33.8	-0.4
NIE	Niedzica	1.18	135	*e*Pg	Pg	04 09 17.3	-0.3
NIE				*e*Sg	Sb	04 09 33.8	-0.3
KRLC	Kraliky	1.46	264	*e*PG	Pn	04 09 21.4	-1.3
KRLC				*e*SG	Sg	04 09 41.3	-0.6
KRLC	Kraliky	1.46	264	Pg	Pn	04 09 21.4	-1.3
KRLC				Sg	Sg	04 09 41.3	-0.6
DPC	Dobruska-Polom	1.74	274	*e*PG	Pn	04 09 26.2	-0.4
DPC				*e*SG	Sb	04 09 50.4	+0.1
DPC	Dobruska-Polom	1.74	274	Pg	Pn	04 09 26.2	-0.4
DPC				Sg	Sb	04 09 50.4	+0.1

IDC ***28*** *04:09:21.0±1.1, 7°.76S×124°.34E, h0^{km}, mb3.7/4, mb1 4.1/7, mb1mx3.7/52, mbtmp3.9/7, ML3.7/3, MS2.7/2, Ms1 2.9/2, ms1mx2.4/48, Error ellipse: s-maj=43.9km s-min=19.0km az=79.0*
ISCJB ***28*** *04:09:22.9±0.7, 7°.72S±0°.06×124°.2E±0°.1, h26^{km}, mb3.7/4, MS3.0/1, Error ellipse: s-maj=14.9km s-min=7.0km az=161.0*
DJA ***28*** *04:09:23.0±0.5, 8°S±4°×12°4E±°, h10^{km}, M4.2/7, mb4.7/1, MLv3.9/7*
ISC 28 04:09:24.6±1.0, **7°.75S**±0°.07×**124°.3E**±0°.1, **h26**^{km}**, n14, σ1^{s}.15**/14, **mb3.8**/4, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SOEI	Soe	1.99	181	P	Pn	04 09 58.2	+1.5
MMRI	Maumere	2.23	247	P	Pn	04 09 54.7	-5.2
BATI	Baumata	2.52	195	Pn	Pn	04 10 02.8	-1.1
	38nm,0.3s,baz=22,slow=0.9,SNR=35						
BATI				Sn	Sn	04 10 34.2	+0.4
	16nm,0.3s,baz=19,slow=23,SNR=10.0						
BATI				LR	LR	04 10 57.3	
	comp=Z,88nm,21.5s,baz=136,slow=38						
BATI	Baumata	2.52	195	P	Pn	04 10 03.1	-0.8
BATI				S	Sn	04 10 34.2	+0.4
EDFI	Ende, Flores	2.78	249	P	Pn	04 09 59.8	-7.7
BKSI	Bulukumba	4.81	300	P	Pn	04 10 30.4	-5.0
BNSI	Bone	5.35	308	P	Pn	04 10 41.9	-0.9
WRA	Warramunga Arr	15.53	142	Pn	Pn	04 13 01.0	-1.0
	0.2nm,0.3s,baz=317,slow=13,SNR=25						
WRA				Sn	Sn	04 15 51.6	-1.8
	0.1nm,0.3s,baz=308,slow=23,SNR=4.3						
ASAR	Alice Springs	18.30	151	P	Pn	04 13 38.0	+1.2
	0.2nm,0.3s,baz=326,slow=11,SNR=22						
ASAR				S	Sn	04 16 59.1	-1.6
	0.1nm,0.3s,baz=321,slow=22,SNR=3.5						
CMAR	Chiang Mai Arr	36.12	316	LR	LR	04 35 42.3	
	comp=Z,24nm,19.5s,baz=208,slow=44						
SONM	Songino Array	57.57	346	P	P	04 19 12.5	+0.3
	0.2nm,0.3s,baz=170,slow=8.8,SNR=2.1						
MKAR	Makanchi Array	65.89	330	P	P	04 20 08.7	+0.5
	0.6nm,0.8s,baz=134,slow=6.9,SNR=4.2						
ZALV	Zalesovo Beam	69.88	336	P	P	04 20 33.6	+0.6
	0.5nm,0.3s,baz=122,slow=1.9,SNR=3.0						
KURBB	Kurchatov Arra	70.31	331	P	P	04 20 36.5	+0.8
	0.2nm,0.3s,baz=121,slow=4.8,SNR=3.1						

IDC ***28*** *04:16:42.4±1.5, 1°.31N×125°.26E, h0^{km}, mb4.0/4, mb1 4.1/4, mb1mx3.6/56, mbtmp4.0/4, Error ellipse: s-maj=167.5km s-min=20.7km az=65.0*
ISCJB ***28*** *04:17:04.6±0.8, 0°.29N±0°.10×123°.95E±0°.06, h200^{km}, mb3.8/4, Error ellipse: s-maj=13.5km s-min=7.7km az=10.5*
DJA ***28*** *04:17:05.7±0.6, 0°N±5°×12°4E±°, h202^{km}±6^{km}, M3.6/7, MLv3.6/7*
ISC 28 04:17:05.4±1.0, **0°.23N**±0°.09×**123°.95E**±0°.06, **h200**^{km}**, n10, σ1^{s}.57**/15, **mb3.9**/4, **Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	Cibinong	0.35	5	P	Pn	04 17 32.3	+0.2
KMSI				S	Sn	04 17 56.2	+3.4
LUWI	Luwuk	1.72	223	P	Pn	04 17 42.6	+1.4
LUWI				S	Sn	04 18 09.2	+0.2
MRSI	Marisa	2.02	277	P	Pn	04 17 44.2	0.0
MRSI				S	Sn	04 18 13.2	-1.1
APSI	Ampana	2.56	244	P	Pn	04 17 50.8	+0.8
APSI				S	Sn	04 18 25.1	+0.3
SANI	Sanana	3.04	138	P	Pn	04 17 55.9	+0.3
SANI				S	Sn	04 18 32.4	-2.5
LBMI	Labuha	3.65	104	P	Pn	04 18 04.0	+1.0
WRA	Warramunga Arr	22.48	154	P	P	04 21 49.5	+1.2
	3.1nm,0.4s,baz=336,slow=10,SNR=39						
ASAR	Alice Springs	25.64	159	P	P	04 22 17.5	+0.6
	0.5nm,0.4s,baz=339,slow=8.0,SNR=6.4						
MKAR	Makanchi Array	58.92	328	P	P	04 26 41.5	-2.2
	0.6nm,0.5s,baz=123,slow=8.5,SNR=9.9						
KURBB	Kurchatov Arra	63.25	329	P	P	04 27 11.8	-0.8
	1.1nm,0.2s,baz=141,slow=6.4,SNR=3.9						

ISCJB ***28*** *04:24:45.1±0.2, 40°.50N±0°.02×116°.28W±0°.02, h10^{km}, Error ellipse: s-maj=2.6km s-min=1.9km az=152.2*
IDC ***28*** *04:24:45.6±1.4, 40°.59N×116°.18W, h21^{km}±13^{km}, mb1 3.3/4, mb1mx3.1/66, mbtmp2.9/4, ML3.6/2, Error ellipse: s-maj=11.6km s-min=8.4km az=149.0*
NEIC ***28*** *04:24:45.9±0.0, 40°.50N×116°.24W, h8^{km}, ML3.7(REN), After REN.*
ISC 28 04:24:42.6±0.5, **40°.59N**±0°.02×**116°.14W**±0°.02, **h10**^{km}**, n106, σ2^{s}.43**/175, **Nevada**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BMN	Battle Mountai	0.84	260	*e*Pg	Pn	04 25 00.0	-0.6
BMN				*e*Sg	Sg	04 25 09.6	-0.3
KVN	Kaiserville	2.15	225	*e*Pn	Pb	04 25 20.1	-1.7
R11A	Troy Canyon, C	2.27	169	P	Pb	04 25 22.2	-1.7
	baz=347						
R11A				S	Sb	04 25 50.4	-1.7
	baz=347						
R11A	Troy Canyon, C	2.27	169	*e*Pn	Pb	04 25 21.9	-1.9
R11A				*e*Sn	Sg	04 25 54.6	-1.1
BGU	Big Grassy Mou	2.38	81	*e*Pn	Pb	04 25 24.9	-0.8
BGU				*e*Sn	Sg	04 25 56.8	-2.3
DUG	Dugway, Tooele	2.57	98	P	Pb	04 25 28.3	-0.5
	baz=278						
DUG				S	Sg	04 26 01.6	-3.5
	baz=278						
DUG	Dugway, Tooele	2.57	98	*e*Pn	Pb	04 25 27.4	-1.4
DUG				*e*Sn	Sb	04 26 01.3	+0.8
WVOR	Wild Horse Val	2.63	315	*e*Pn	Pb	04 25 30.2	+0.2
WVOR				*e*Sn	Sb	04 26 00.6	-1.8
WVOR				*e*Sg	Sg	04 26 08.5	+1.3
PAHR	Pah Rah Range	2.64	252	*e*Pn	Pb	04 25 27.9	-2.2
PAHR				*e*Sn	Sg	04 26 06.5	-0.9
NV11	Mina Array Sit	2.66	217	*e*Pn	Pn	04 25 27.2	+1.6
RYN	Ryan	2.69	224	*e*Pn	Pn	04 25 27.9	+1.8
PSUT	Pine Spring	2.70	139	*e*Pn	Pg	04 25 32.0	-2.4
PSUT				*e*Sn	Sg	04 26 06.9	-2.5
NV01	Mina Array Sit	2.73	219	*e*Pn	Pn	04 25 27.4	+0.8
NV01				*e*Pg	Pg	04 25 36.5	+1.6
NV01				*e*Sn	Sg	04 26 09.3	-0.9

NVAR	Mina Array Bea	2.73	219	Pn	Pn	04 25 28.1	+1.5
	6.9nm,0.3s,baz=45,slow=10,SNR=107						
NVAR				Pg	Pg	04 25 36.5	+1.6
	23nm,0.3s,baz=41,slow=18,SNR=39						
NVAR				Lg	Lg	04 26 10.3	
	30nm,0.3s,baz=37,slow=33,SNR=7.1						
HVU	Hansel Valley	2.80	64	ePn	Pb	04 25 30.5	-2.3
HVU				eSn	Sg	04 26 11.6	-1.1
MFID	Camas Ranch	2.84	5	ePn	Pb	04 25 32.1	-1.3
MFID				eSn	Sb	04 26 08.3	+0.1
YERR	Yerington	2.88	237	ePn	Pn	04 25 30.0	+1.3
YERR				eSn	Sn	04 26 03.6	+0.2
SPUT	South Promonto	2.88	74	ePn	Pb	04 25 32.7	-1.6
SPUT				eSn	Sg	04 26 12.2	-3.0
VCNR	Virginia City	2.99	246	ePn	Pn	04 25 32.0	+1.7
VCNR				eSn	Sg	04 26 17.7	-1.0
PNTR	Pine Nut	3.06	242	ePn	Pn	04 25 32.7	+1.6
PNTR				eSn	Sg	04 26 20.2	-0.6
NLU	North Lily Min	3.17	100	ePn	Pb	04 25 39.5	+0.4
NLU				eSg	Sg	04 26 21.7	-2.7
HLID	Hailey	3.24	23	P	Pb	04 25 37.4	-2.9
	baz=204						
HLID	Hailey	3.24	23	ePn	Pb	04 25 37.0	-3.3
HLID				eSn	Sb	04 26 18.6	-1.2
HLID				eSb	Sg	04 26 25.1	-1.5
HLID				eSg	Sn	04 26 31.1	+19
J08A	Circle Bar Ran	3.27	329	ePn	Pb	04 25 40.3	-0.5
J08A				eSn	Sg	04 26 23.8	-3.9
WAKR	Walker	3.29	232	ePn	Pn	04 25 35.6	+1.2
WAKR				eSg	Sg	04 26 29.7	+1.4
BEKR	Beckworth	3.31	259	ePn	Pn	04 25 36.9	+2.2
BEKR				eSg	Sg	04 26 27.2	-1.8
CTU	Camp Tracy	3.34	87	ePn	Pb	04 25 41.4	-0.6
CTU				eSg	Sg	04 26 28.7	-1.1
MOD	Modoc Plateau	3.41	294	ePn	Pb	04 25 39.8	-3.3
MOD				ePb	Pg	04 25 45.4	-2.4
MOD				ePg	Pn	04 25 50.4	+15
MOD				eSg	Sg	04 26 32.6	+0.7
RUBR	Rubicon Trail	3.45	245	ePn	Pn	04 25 39.2	+2.6
RUBR				eSg	Sg	04 26 34.2	+0.7
TCRU	Three Creeks R	3.47	124	ePn	Pb	04 25 41.1	-3.0
TCRU				ePg	Pg	04 25 48.9	-0.1
EBP	Ebbets Pass	3.47	236	ePn	Pn	04 25 38.6	+1.7
MPU	Maple Canyon	3.49	98	ePn	Pb	04 25 41.9	-2.7
MPU				ePg	Pg	04 25 52.6	+3.1
MPU				eSn	Sb	04 26 27.2	+0.2
JLU	Jordanelle	3.57	88	ePn	Pb	04 25 45.5	-0.4
JLU				eSn	Sb	04 26 29.0	-0.4
HWUT	Hardware Ranch	3.60	72	ePn	Pb	04 25 43.4	-3.0
HWUT				ePg	Pg	04 25 54.5	+3.0
HWUT				eSn	Sb	04 26 27.0	-3.3
MLAC	Mammoth, Mammo	3.62	216	P	Pn	04 25 41.0	+2.0
	baz=34						
TCUT	Toone Canyon	3.62	80	ePn	Pb	04 25 47.5	+0.6
TCUT				eSn	Sb	04 26 29.9	-1.2
TPNV	Topopah Spring	3.63	181	P	Pn	04 25 41.5	+2.5
	baz=0.1						
TPNV				S	Sn	04 26 24.7	+2.7
	baz=0.1						
TPNV	Topopah Spring	3.63	181	ePn	Pn	04 25 41.6	+2.6
TPNV				eSn	Sn	04 26 24.9	+2.9
MSU	Marysvale	3.69	123	ePn	Pb	04 25 44.6	-3.4
MSU				ePg	Pg	04 25 55.0	+1.7
GRAC	Grapevine Rang	3.71	195	P	Pn	04 25 42.9	+2.9
	baz=14						
OMMB	Old Mammoth Mi	3.71	218	ePn	Pn	04 25 41.3	+1.1
OMMB				ePg	Pg	04 25 53.3	-0.4
CCUT	Cedar City	3.72	144	ePn	Pb	04 25 44.1	-4.4
CCUT				ePg	Pg	04 25 54.0	+0.1
CCUT				eSg	Sg	04 26 41.8	-0.3
MDPB	Devils Postpil	3.73	219	ePn	Pn	04 25 42.6	+2.1
MDPB				ePg	Pg	04 25 54.3	+0.2
MDPB				eSg	Sg	04 26 40.8	-1.7
SZCU	Shurtz Canyon	3.81	141	ePn	Pb	04 25 47.9	-2.2
TIN	Tinemaha, Big	3.89	206	P	Pn	04 25 44.9	+2.4
	baz=24						
TMUT	Trail Mountain	4.00	107	ePn	Pb	04 25 53.8	+0.4
TMUT				eSg	Sg	04 26 51.1	+0.1
AFDM	Forest Hills D	4.07	248	ePn	Pn	04 25 47.5	+2.5
AFDM				eSg	Sg	04 26 50.8	-2.5
SHPR	Sheep Range	4.14	169	ePn	Pn	04 25 49.2	+3.1
SHPR				eSn	Sn	04 26 35.5	+0.9
FURC	Furnace Creek,	4.15	188	P	Pn	04 25 49.5	+3.5
	baz=6.7						
K05A	Summer Lake	4.16	303	ePn	Pb	04 25 53.4	-2.6
CMB	Columbia Colle	4.17	234	ePn	Pn	04 25 47.6	+1.3
CMB				ePb	Pb	04 25 57.0	+1.0
CMB				ePg	Pg	04 26 02.8	+0.4
CMB				eSn	Sn	04 26 35.0	0.0
CMB				eSg	Sg	04 26 54.6	-1.7
LCMT	Little Creek M	4.22	147	ePn	Pn	04 25 51.0	+3.9
LCMT				ePg	Pg	04 26 03.5	0.0
P17A	Butcher Ranch,	4.29	103	ePn	Pb	04 25 53.7	-4.4
I07A	Izee	4.29	326	ePn	Pb	04 25 56.1	-2.1
I07A				eSg	Sg	04 27 01.6	+1.1
PKCU	Pink Cliffs	4.33	135	ePn	Pn	04 25 52.5	+3.8
BMO	Blue Mountains	4.35	349	ePn	Pb	04 25 53.4	-5.8
BMO				ePg	Pg	04 26 08.0	+2.1
BMO				eSn	Sb	04 26 45.4	-6.3
BMO				eSg	Sg	04 27 06.7	+4.4
KNB	Kanab	4.40	143	ePn	Pn	04 25 53.7	+4.1
KNB				ePg	Pg	04 26 06.3	-0.6
CWC	Cottonwood Cre	4.41	201	P	Pn	04 25 52.5	+2.7
	baz=19						
DAC	Darwin (Calif)	4.45	195	ePn	Pn	04 25 52.6	+2.3
DAC				ePg	Pg	04 26 06.7	-1.2
DAC				eSg	Sg	04 27 04.3	-1.2
SRU	San Rafael Swe	4.56	107	ePn	Pb	04 25 57.6	-5.2
SRU				eSg	Sg	04 27 07.6	-1.5
P18A	Preston Nutter	4.62	100	ePn	Pb	04 26 00.2	-3.6
MPMC	Manual Prospec	4.64	194	P	Pn	04 25 55.3	+2.3
	baz=12						
PINE	Pine Mountain	4.80	313	ePn	Pb	04 26 03.1	-3.7
REDW	Red Top Meadow	4.82	53	ePn	Pb	04 26 05.4	-1.8
TPAW	Teton Pass	4.83	51	ePn	Pb	04 26 04.5	-2.9
FXWY	Fox Creek	4.87	50	ePn	Pb	04 26 02.9	-5.3
MCMT	McKenzie Canyo	4.88	29	ePn	Pb	04 26 05.5	-2.8
IMW	Indian Meadow	5.08	48	ePn	Pb	04 26 09.3	-2.4
YBH	Yreka Blue Hor	5.09	285	Pn	Pn	04 26 00.6	+1.6
	0.1nm,0.3s,baz=148,slow=13,SNR=2.0						
YBH				Pg	Pg	04 26 15.7	-4.4
	0.2nm,0.3s,baz=132,slow=16,SNR=5.1						
YBH				Lg	Lg	04 27 24.6	
	0.1nm,0.3s,baz=210,slow=8.1,SNR=2.8						
MOOW	Moose Ponds	5.10	50	ePn	Pb	04 26 08.4	-3.6
LOHW	Long Hollow	5.11	52	ePn	Pb	04 26 07.8	-4.3
G08A	Pilot Rock	5.14	337	ePn	Pb	04 26 09.6	-3.0
FLWY	Flagg Ranch	5.33	47	ePn	Pb	04 26 13.4	-2.6
BW06	Boulder Array	5.38	64	ePn	Pb	04 26 09.3	-7.5
PD31	Pinedale Array	5.39	64	ePn	Pb	04 26 09.7	-7.2
PDAR	Pinedale Array	5.39	64	Pn	Pn	04 26 08.3	+5.1
	0.3nm,0.3s,baz=244,slow=13,SNR=12						
PDAR				Lg	Lg	04 27 32.1	
	0.4nm,0.3s,baz=240,slow=25,SNR=3.2						
PDAR	Pinedale Array	5.39	64	ePn	Pb	04 26 08.9	-8.0
PDAR				Lg	Lg	04 27 32.1	
DLMT	Dillon	5.43	27	ePn	Pb	04 26 14.7	-2.9
F10A	Beach Ranch, E	5.44	352	ePn	Pb	04 26 15.4	-2.4
HUMO	Hull Mountain	5.50	294	ePn	Pn	04 26 07.3	+2.8
HUMO				ePg	Pg	04 26 27.8	0.0
HUMO				eSg	Sg	04 27 39.3	+0.3
YHB	Horse Butte	5.53	40	ePn	Pb	04 26 16.8	-2.5
LDFC	Landfair	5.56	171	ePn	Pn	04 26 06.7	+1.2
LDFC				ePg	Pg	04 26 29.1	0.0
LDFC				eSg	Sg	04 27 37.2	-3.9
PV09	Paradox Valley	5.80	109	ePn	Pb	04 26 16.0	-8.0
PV09				eSg	Sg	04 27 47.3	-1.5
LRM	Limekiln Ridge	5.88	26	ePn	Pb	04 26 17.0	-8.4
LRM				eSg	Sg	04 27 46.6	-4.8
PV21	Cone Mtn., Par	5.89	108	ePn	Pb	04 26 17.5	-8.0
PV21				ePg	Pg	04 26 33.5	-1.9
PV23	Carpenter Ridg	5.91	109	ePn	Pb	04 26 17.8	-8.0
PV23				ePg	Pg	04 26 34.3	-1.4
PV23				eSg	Sg	04 27 49.3	-2.9
PV14	Lion Creek, Pa	5.93	110	ePn	Pn	04 26 16.7	+6.0
PV14				ePg	Pg	04 26 34.3	-1.9
PV14				eSg	Sg	04 27 49.2	-3.7
PV20	West Nyswonger	5.98	110	ePg	Pg	04 26 35.6	-1.5
PV20				eSg	Sg	04 27 50.5	-4.2
PV19	Morning Glory	5.98	110	ePn	Pn	04 26 17.7	+6.3
PV19				ePg	Pg	04 26 37.9	+0.7
PV19				eSg	Sg	04 27 50.8	-3.9
BOZ	Bozeman (W)	6.00	32	ePn	Pn	04 26 16.2	+4.7
	1.7nm,0.6s						
BOZ				eSn	Sn	04 27 27.3	+7.1
BOZ				eSg	Sg	04 27 52.2	-2.8
PV17	East Wray Mesa	6.01	110	ePg	Pg	04 26 37.3	-0.4
PV17				eSg	Sg	04 27 51.3	-4.3
PV16	Nyswonger Mesa	6.03	110	ePn	Pn	04 26 18.1	+6.0
PV16				ePg	Pg	04 26 37.6	-0.5
PV16				eSg	Sg	04 27 52.7	-3.5
PV22	Blue Mesa, Par	6.04	107	ePn	Pb	04 26 20.1	-7.9
PV22				ePg	Pg	04 26 39.2	+1.1
PV22				eSg	Sg	04 27 53.9	-2.5
PV18	Skein Mesa, Pa	6.06	110	ePn	Pb	04 26 19.6	-8.8
PV18				ePg	Pg	04 26 39.3	+0.6
PV18				eSg	Sg	04 27 52.7	-4.6
PV11	David Mesa, Pa	6.07	110	ePn	Pb	04 26 20.0	-8.5
PV11				ePg	Pg	04 26 39.1	+0.3
PV11				eSg	Sg	04 27 53.7	-3.6
PV03	Paradox Valley	6.10	110	ePn	Pn	04 26 18.2	+5.2
PV03				ePg	Pg	04 26 37.3	-2.2
PV03				eSg	Sg	04 27 54.9	-3.7
PV12	Saucer Basin,	6.11	109	ePn	Pb	04 26 20.4	-8.8
PV12				ePg	Pg	04 26 38.9	-0.7
PV12				eSg	Sg	04 27 53.8	-4.9
PV02	Paradox Valley	6.20	110	ePn	Pn	04 26 19.3	+4.9
WUAZ	Wupatki	6.30	142	ePn	Pn	04 26 19.1	+3.4
WUAZ				ePg	Pg	04 26 41.4	-1.9
WUAZ				eSg	Sg	04 28 04.0	-0.9
PV01	Paradox Valley	6.35	110	ePn	Pn	04 26 21.8	+5.3
PV01				ePg	Pg	04 26 44.6	+0.4
PV01				eSg	Sg	04 28 02.5	-4.0
MVCO	Mesa Verde	6.84	117	ePn	Pn	04 26 27.5	+4.3
MVCO				ePg	Pg	04 26 51.8	-1.8
MVCO				eSg	Sg	04 28 18.2	-4.0
HRY	Holter Researc	6.87	26	ePn	Pb	04 26 31.3	-11
GCMT	Greycliff	7.03	40	ePn	Pn	04 26 32.9	+7.3
JTMT	Jette	7.28	10	eSg	Sg	04 28 39.0	+2.8
W18A	Petrified Fore	7.44	135	ePn	Pn	04 26 35.2	+3.8
TXAR	Lajitas Array	15.16	134	Pn	P	04 28 22.2	+0.2
	baz=330,slow=14,SNR=5.0						

MEX 28 04:32:09.6±0.5, 16°.37N×98°.46W, h5^{km}, MD4.0, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.32	86	iP	Pg	04 32 15.1	-0.6
PNIG				eS	Sg	04 32 20.4	+0.5
TLIG	Tlapa	1.19	355	eP	Pg	04 32 29.3	-3.2
TLIG				eS	Sg	04 32 44.2	-3.8
VHO	Vista Hermosa	1.79	67	eP	Pn	04 32 37.9	-3.5
VHO				eS	Sn	04 32 59.9	-4.7
CAIG	El Cayaco	1.86	291	eP	Pn	04 32 38.9	-3.2
CAIG				eS	Sn	04 33 02.3	-3.8
HUIG	Huatulco	2.33	105	eP	Pn	04 32 46.3	-2.4
HUIG				iS	Sn	04 33 14.0	-3.8

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*ISCJB **28** 04:36:21.4±0.8, 23°.87S±0°.06×66°.8W±0°.1, h195^{km}, mb3.7/3, Error ellipse: s-maj=14.9km s-min=8.1km az=1.8*

*IDC **28** 04:36:21.9±2.2, 23°.84S×66°.82W, h184^{km}±21^{km}, mb3.5/3, mb1 3.4/8, mb1mx3.2/44, mbtmp3.9/8, Error ellipse: s-maj=23.4km s-min=17.0km az=92.0*

ISC 28 04:36:22.9±0.8, **23°.80S**±0°.08×**66°.7W**±0°.1, **h195^{km}, n11, σ1^{s}.44**/13, **mb3.8**/3, **Jujuy Province**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LPAZ	La Paz	7.58	350	P	Pn	04 38 12.1	+0.7
	0.6nm,0.3s,baz=156,slow=8.6,SNR=25						
LPAZ				S	Sn	04 39 35.8	-1.7
	0.1nm,0.3s,baz=0.0,slow=3.0,SNR=2.0						
CPUP	Villa Florida	8.89	108	P	Pn	04 38 26.6	-1.2
	0.1nm,0.3s,baz=306,slow=14,SNR=2.5						
SIV	San Ignacio	9.41	35	P	Pn	04 38 35.7	+0.9
	0.7nm,0.3s,baz=222,slow=13,SNR=17						
SIV				S	Sn	04 40 18.0	-2.1
	baz=255,slow=15,SNR=3.4						
PLCA	Paso Flores	17.19	190	P	P	04 40 09.1	-1.1
	0.2nm,0.3s,baz=20,slow=12,SNR=2.6						
BDFB	Brasilia	19.39	69	P	P	04 40 36.7	+2.4
	0.8nm,0.3s,baz=237,slow=13,SNR=18						
SNAA	Sanae	59.46	161	P	P	04 46 04.8	-0.1
	1.0nm,0.6s,baz=284,slow=7.7,SNR=9.4						
QSPA	South Pole Qui	66.41	180	P	P	04 46 51.0	+0.1
	1.4nm,0.5s,baz=273,slow=1.2,SNR=7.4						
TORD	Torodi Ar. Bea	76.27	69	P	P	04 47 50.6	+0.1
	0.5nm,0.4s,baz=253,slow=5.6						
ASAR	Alice Springs	128.74	204	PKP	PKPdf	04 55 07.0	-0.7
	0.7nm,1.1s,baz=225,slow=1.0,SNR=5.1						
WRA	Warramunga Arr	131.92	207	PKP	PKPdf	04 55 13.7	-0.1
	0.3nm,0.5s,baz=151,slow=1.2,SNR=4.6						
MKAR	Makanchi Array	146.21	39	PKPbc	PKPdf	04 55 40.6	+1.7
	0.5nm,0.6s,baz=294,slow=3.4,SNR=5.2						

IDC 28 04:51:14.0±1.9, **0°.37N**×**126°.02E, h0^{km}, mb3.3**/3, **mb1 3.6**/3, **mb1mx3.4**/54, **mbtmp3.4**/3, **MS3.8**/1, **Ms1 3.8**/1, **ms1mx2.4**/31, **Error ellipse: s-maj=180.6km s-min=25.2km az=65.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	Warramunga Arr	21.78	158	P	P	04 56 07.0	-0.6
	1.0nm,0.6s,baz=337,slow=11,SNR=5.9						
ASAR	Alice Springs	25.09	163	P	P	04 56 41.0	+0.4
	0.2nm,0.3s,baz=342,slow=8.8,SNR=8.7						
PSI	Prapat	27.19	275	LR	LR	05 07 04.0	
	comp=Z,184nm,18.8s,baz=268,slow=35						
MKAR	Makanchi Array	59.92	327	P	P	05 01 21.9	-0.1
	0.2nm,0.4s,baz=112,slow=7.8,SNR=2.9						

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*ISCJB **28** 04:54:29.6±0.7, 12°.55N±0°.10×47°.20E±0°.05, h10^{km}, mb3.9/13, MS3.0/2, Error ellipse: s-maj=14.6km s-min=6.6km az=14.6*

*IDC **28** 04:54:29.5±1.3, 12°.52N×47°.23E, h0^{km}, mb3.8/12, mb1 3.9/13, mb1mx3.7/66, mbtmp3.8/13, ML3.2/1, MS3.1/2, Ms1 3.1/2, ms1mx2.6/59, Error ellipse: s-maj=29.7km s-min=19.7km az=1.0*

*CSEM **28** 04:54:31.0, 12°.50N×47°.21E, h10^{km}, mb4.3/1*

*NEIC **28** 04:54:31.0±0.8, 12°.50N×47°.21E, h10^{km}, mb4.3/1, Error ellipse: s-maj=18.1km s-min=10.1km az=172.0*

ISC 28 04:54:31.0±0.9, **12°.5N**±0°.1×**47°.15E**±0°.09, **h10^{km}, n39, σ1^{s}.17**/39, **mb4.0**/13, **1C, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BDHA	Al Bayda’	2.12	314	⇑iP	Pn	04 55 05.7	-1.1
BDHA				e		04 55 05.9	
	baz=138,slow=18						
BDHA				iS	Sn	04 55 31.7	-1.7
BDHA				AML	AML	04 55 34.0	
	comp=N,1μm,0.7s						
LBOS		2.29	306	iP	Pn	04 55 07.9	-1.3
LBOS				iS	Sn	04 55 37.0	-0.7
DAMY	Dhamar	3.38	308	ePn	Pn	04 55 25.8	+1.7
DAMY	Dhamar	3.38	308	ePn	Pn	04 55 25.8	+1.7
ATD	Arta Tunnel	4.32	257	Pn	Pn	04 55 35.9	-0.9
	comp=N,1.4nm,0.3s,baz=74,slow=14,SNR=7.2						
EIL	Elat	20.50	328	LR	LR	05 06 32.1	
	comp=N,94nm,20.5s,baz=97,slow=35						
MMAI	Mount Meron Ar	23.07	334	P	P	04 59 37.7	+0.7
	comp=N,2.0nm,0.7s,baz=148,slow=12,SNR=2.0						
BR101	Keskin Array S	29.63	339	eP	P	05 00 37.4	+0.6
BRTR	Keskin Array B	29.63	339	P	P	05 00 37.3	+0.6
	comp=N,0.4nm,0.7s,baz=158,slow=16,SNR=2.9						
AAK	Ala-Archa	38.25	33	LR	LR	05 19 55.9	
	comp=N,15nm,18.3s,baz=122,slow=40						
TORD	Torodi Ar. Bea	44.28	276	P	P	05 02 43.3	+2.0
	comp=N,2.2nm,1.0s,baz=91,slow=6.3						
TOA1	Torodi Ar. Sit	44.28	276	eP	P	05 02 43.4	+2.0
BRVK	Borovoye	44.47	20	eP	P	05 02 41.1	-1.2
	comp=N,1.6nm,0.3s						
BRVK	Borovoye	44.47	20	eP	P	05 02 41.1	-1.2
	comp=N,1.6nm,0.3s						
MK01	Makanchi Array	45.16	34	eP	P	05 02 48.6	+0.7
MK01	Makanchi Array	45.16	34	eP	P	05 02 48.6	+0.7
MK31	Makanchi Array	45.17	34	eP	P	05 02 49.4	+1.4
MK31	Makanchi Array	45.17	34	eP	P	05 02 49.4	+1.4
MK32	Makanchi Array	45.17	34	eP	P	05 02 47.8	-0.2
MK32	Makanchi Array	45.17	34	eP	P	05 02 47.8	-0.2
MKAR	Makanchi Array	45.17	34	P	P	05 02 47.8	-0.2
	comp=N,2.3nm,0.9s,baz=220,slow=6.3,SNR=11						
GERES	GERESS Array B	45.59	329	P	P	05 02 51.5	+0.2
	comp=N,0.4nm,0.6s,baz=122,slow=7.0,SNR=5.8						
KURBB	Kurchatov Arra	45.82	28	P	P	05 02 54.0	+0.9
	comp=N,0.5nm,0.3s,baz=228,slow=7.7,SNR=6.6						
KURK	Kurchatov	45.93	28	eP	P	05 02 54.0	+0.1
KURK	Kurchatov	45.93	28	eP	P	05 02 54.0	+0.1
CMAR	Chiang Mai Arr	50.13	76	P	P	05 03 26.5	-0.5
	comp=N,1.7nm,0.4s,baz=280,slow=8.6,SNR=4.2						
ZALV	Zalesovo Beam	50.92	28	P	P	05 03 30.4	-1.9
	comp=N,1.8nm,0.7s,baz=221,slow=8.8,SNR=5.6						
ZAA1	Zalesovo Array	50.92	28	eP	P	05 03 30.4	-1.9
ZAA1	Zalesovo Array	50.92	28	eP	P	05 03 30.5	-1.9
FIA0	FINESS Array S	51.20	347	eP	P	05 03 33.5	-0.8
FIA0	FINESS Array S	51.20	347	eP	P	05 03 33.5	-0.8
FINES	FINESS Array B	51.20	347	P	P	05 03 33.5	-0.8
	comp=N,0.9nm,0.9s,baz=138,slow=8.9,SNR=2.4						
HFS	Hagfors	53.55	340	P	P	05 03 50.8	-1.0
	comp=N,0.7nm,0.6s,baz=160,slow=14,SNR=3.0						
SONA0	Songino Array	60.30	42	eP	P	05 04 40.3	+0.2
SONA0	Songino Array	60.30	42	eP	P	05 04 40.3	+0.2
SONM	Songino Array	60.30	42	P	P	05 04 40.3	+0.2
	comp=N,0.6nm,0.5s,baz=247,slow=7.7,SNR=5.7						
SONA1	Songino Array	60.31	42	eP	P	05 04 41.6	+1.4
SONA1	Songino Array	60.31	42	eP	P	05 04 41.6	+1.4
WRA	Warramunga Arr	91.60	110	P	P	05 07 38.3	-0.6
	comp=N,0.8nm,0.8s,baz=302,slow=3.3,SNR=4.2						

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*BJI **28** 05:00:53.4, 12°.20N×47°.40E, h10^{km}, mb4.6/10, mB4.9/9, Ms4.6/4, Ms7 4.4/3*

*IDC **28** 05:00:53.5±1.1, 12°.39N×47°.24E, h0^{km}, mb3.9/12, mb1 4.0/13, mb1mx3.7/63, mbtmp3.9/13, ML3.5/1, MS3.5/27, Ms1 3.5/27, ms1mx3.3/60, Error ellipse: s-maj=27.4km s-min=20.2km az=178.0*

*ISCJB **28** 05:00:53.8±0.6, 12°.50N±0°.08×47°.12E±0°.04, h10^{km}, mb4.2/18, MS3.6/28, Error ellipse: s-maj=12.5km s-min=5.1km az=12.0*

*NEIC **28** 05:00:55.2±0.7, 12°.36N×47°.35E, h10^{km}, mb4.5/2, Error ellipse: s-maj=18.1km s-min=10.5km az=170.0*

*CSEM **28** 05:00:57.4±0.3, 12°.57N×47°.16E, h20^{km}, ML3.9, Error ellipse: s-maj=16.0km s-min=7.8km az=4.0*

*DHMR **28** 05:00:57.2±1.0, 12°.56N×46°.81E, h15^{km}±13^{km}, ML3.9*

ISC 28 05:00:55.6±0.7, **12°.50N**±0°.09×**47°.12E**±0°.06, **h10^{km}, n65, σ1^{s}.90**/52, **mb4.1**/18, **MS3.5**/28, **2C-1D, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ADEN	Aden	2.10	278	iP	Pn	05 01 28.5	-2.4
ADEN				iS	Sn	05 01 53.5	-3.5
ADEN				AML	AML	05 01 54.6	
	comp=E,711nm,0.4s						
BDHA	Al Bayda’	2.10	314	iP	Pn	05 01 30.0	-1.1
BDHA				iS	Sn	05 01 55.9	-1.6
BDHA				AML	AML	05 01 58.5	
	comp=N,3μm,0.7s						
BDHA	Al Bayda’	2.10	314	iP	Pn	05 01 30.0	-1.1
BDHA				iS	Sn	05 01 55.9	-1.6
LBOS		2.27	307	⇑iP	Pn	05 01 32.0	-1.5
LBOS				iS	Sn	05 01 59.2	-2.5
DAMY	Dhamar	3.35	308	ePn	Pn	05 01 53.0	+4.6
UDYN	Al ‘Udayn	3.39	296	⇓iP	Pn	05 01 48.6	-0.2
UDYN				iS	Sn	05 02 27.8	-1.4
ATD	Arta Tunnel	4.29	257	Pn	Pn	05 02 00.3	-0.7
	comp=N,2.3nm,0.3s,baz=52,slow=11,SNR=7.0						
ATD	Arta Tunnel	4.29	257	ePn	Pn	05 02 02.8	+1.8
ATD	Arta Tunnel	4.29	257	ePn	Pn	05 02 02.8	+1.8
UOSS	Minazif	15.07	33	eP	P	05 04 34.6	+0.5
WSAR	Wadi Sarin	15.29	44	LR	LR	05 10 12.1	
	comp=N,90nm,18.5s,baz=247,slow=36						
MMAI	Mount Meron Ar	23.06	334	LR	LR	05 14 43.9	
	comp=N,95nm,18.3s,baz=150,slow=36						
GNI	Garni	27.62	356	LR	LR	05 19 08.6	
	comp=N,136nm,18.4s,baz=167,slow=40						
BRTR	Keskin Array B	29.62	339	LR	LR	05 19 41.9	
	comp=N,137nm,19.1s,baz=130,slow=38						
OPO	Ambohidratompo	30.88	180	LR	LR	05 19 31.6	
	comp=N,145nm,18.6s,baz=0.5,slow=36						
KBZ	Khabaz	31.33	354	LR	LR	05 21 13.7	
	comp=N,43nm,18.7s,baz=180,slow=39						
MLR	Muntele Rosu	37.49	335	LR	LR	05 25 14.8	
	comp=N,110nm,19.5s,baz=173,slow=39						
ABKAR	Akbulak array	38.15	14	eP	P	05 08 16.4	+1.4
AKTO	Aktyubinsk	38.87	11	P	P	05 08 22.8	+1.7
	comp=N,0.9nm,0.5s,baz=194,slow=4.2,SNR=4.5						
AKTO				LR	LR	05 26 59.7	
	comp=N,67nm,19.2s,baz=183,slow=40						
AKASG	Malin Array Be	40.80	343	LR	LR	05 27 53.1	
	comp=N,45nm,18.6s,baz=180,slow=40						
KEST	Kesra	41.14	311	LR	LR	05 26 03.2	
	comp=N,76nm,20.9s,baz=316,slow=37						
CRVS	Cervenica-Dubn	42.06	335	eP	P	05 08 48.9	+1.4
CRVS	Cervenica-Dubn	42.06	335	eP	P	05 08 48.9	+1.4
TSUM	Tsumeb	42.89	223	LR	LR	05 27 59.2	
	comp=N,74nm,18.6s,baz=150,slow=38						
VYHS	Vyhne	42.89	332	eP	P	05 08 56.8	+2.5
BRDH	Bariadhala	43.49	70	LR	LR	05 25 46.3	
	comp=N,132nm,18.0s,baz=24,slow=34						
TOA0	Torodi Ar. Sit	44.25	276	eP	P	05 09 09.3	+3.6
TORD	Torodi Ar. Bea	44.25	276	P	P	05 09 06.9	+1.2
	comp=N,1.9nm,1.1s,baz=81,slow=7.8						
TORD				LR	LR	05 27 03.1	
	comp=N,42nm,18.6s,baz=25,slow=35						
MAKZ	Makanchi	45.03	34	eP	P	05 09 11.6	0.0
	comp=N,2.2nm,1.0s						
MAKZ	Makanchi	45.03	34	eP	P	05 09 11.6	0.0
	comp=N,2.2nm,1.0s						
MK01	Makanchi Array	45.18	34	eP	P	05 09 11.3	-1.5
MKAR	Makanchi Array	45.19	34	P	P	05 09 11.9	-1.0
	comp=N,2.0nm,0.9s,baz=219,slow=7.5,SNR=10						
MKAR				LR	LR	05 30 16.8	
	comp=N,37nm,19.3s,baz=223,slow=39						
MKAR	Makanchi Array	45.19	34	eP	P	05 09 11.3	-1.5
	comp=N,13nm,0.9s						
MK31	Makanchi Array	45.19	34	eP	P	05 09 11.2	-1.6
GEA0	GERESS Array S	45.57	329	eP	P	05 09 17.6	+1.8
GEA0	GERESS Array S	45.57	329	eP	P	05 09 17.6	+1.8
GERES	GERESS Array B	45.58	329	P	P	05 09 15.3	-0.6
	comp=N,0.2nm,0.5s,baz=126,slow=5.0,SNR=4.3						
KURBB	Kurchatov Arra	45.84	28	P	P	05 09 17.8	0.0
	comp=N,1.3nm,0.9s,baz=228,slow=7.9,SNR=5.7						
KURK	Kurchatov	45.95	28	P	P	05 09 17.8	-0.8
BOSA	Boshof	46.02	207	LR	LR	05 27 34.8	
	comp=N,75nm,18.2s,baz=32,slow=35						
DAVOX	Davos/Dischmat	46.32	325	LR	LR	05 30 49.2	
	comp=N,34nm,18.8s,baz=96,slow=39						
WMQ	Urumqi	46.74	40	P	P	05 09 26.8	+1.6
WMQ				pP	sP	05 09 31.3	+1.8
WMQ				sP	pP	05 09 34.8	+6.5
WMQ				pmax	pmax		
	comp=N,15nm,1.1s						
WMQ				pmax	pmax		
	comp=N,180nm,4.7s						
CLL	Collm	47.55	332	⇑iP	P	05 09 32.7	+1.5
	comp=Z,9.0nm,1.6s						
CLL				eS	S	05 16 42.0	+16
KOWA	Kowa	49.68	278	LR	LR	05 31 44.6	
	comp=Z,44nm,19.8s,baz=60,slow=37						
CMAR	Chiang Mai Arr	50.16	76	P	P	05 09 50.5	-1.4
	comp=Z,0.6nm,0.3s,baz=265,slow=8.7,SNR=5.9						
CMAR				LR	LR	05 30 50.7	
	comp=Z,24nm,18.2s,baz=205,slow=36						
ZALV	Zalesovo Beam	50.93	28	P	P	05 09 55.8	-1.3
	comp=Z,1.2nm,0.7s,baz=247,slow=7.8,SNR=3.9						
ZALV	Zalesovo Beam	50.93	28	eP	P	05 09 57.7	+0.6
ZALV	Zalesovo Beam	50.93	28	eP	P	05 09 57.7	+0.6
FINES	FINESS Array B	51.20	347	LR	LR	05 34 10.0	
	comp=Z,33nm,18.4s,baz=174,slow=39						
MDT	Midelt	51.29	302	LR	LR	05 30 52.7	
	comp=Z,57nm,19.1s,baz=114,slow=35						
DBIC	Dimbokro	51.51	269	LR	LR	05 30 18.0	
	comp=Z,40nm,18.2s,baz=66,slow=34						
ESDC	Sonseca Array	52.39	311	LR	LR	05 32 29.8	
	comp=Z,23nm,19.8s,baz=100,slow=36						
HFS	Hagfors	53.55	340	P	P	05 10 16.5	+0.1
	comp=Z,1.1nm,0.8s,baz=150,slow=18,SNR=2.4						
HFS				LR	LR	05 36 02.1	
	comp=Z,52nm,18.9s,baz=145,slow=39						
NOA	NORSAR Array B	55.05	340	LR	LR	05 36 49.4	
	comp=Z,24nm,18.2s,baz=125,slow=39						
LZH	Lanzhou	55.94	55	eP	P	05 10 35.5	+1.1

LZH				pP	sP	05 10 38.5	-0.3
LZH				sP	pP	05 10 40.3	+2.7
LZH				*e*PP	**PP**	**05 12 41.5**	**+2.4**
LZH				pmax	pmax		
	comp=Z,20nm,1.1s						
LZH				pmax	pmax		
	comp=Z,75nm,5.2s						
LZH				LR	LR		
	comp=Z,220nm,14.8s						
LZH				LR	LR		
	comp=Z,220nm,15.0s						
LZH				LR	LR		
	comp=Z,290nm,18.5s						
SONM	**Songino Array**	**60.33**	**42**	P	**P**	**05 11 04.2**	**-0.7**
	comp=Z,1.6nm,0.9s,baz=255,slow=5.8,SNR=6.4						
SONM				LR	LR	05 38 19.1	
	comp=Z,25nm,19.3s,baz=216,slow=37						
SONA1	**Songino Array**	**60.33**	**42**	*e*P	**P**	**05 11 05.5**	**+0.5**
HHC	**Hu-ho-hao-te**	**62.63**	**50**	*e*P	**P**	**05 11 19.0**	**-1.6**
HHC				pP	pP	05 11 23.8	0.0
HHC				S	**S**	**05 19 42.8**	**-6.3**
HHC				sS	pS	05 19 52.8	-0.2
HHC				pmax	pmax		
	comp=Z,14nm,1.1s						
HHC				pmax	pmax		
	comp=Z,91nm,5.0s						
WHN	**Wuhan**	**64.23**	**62**	P	**P**	**05 11 31.5**	**+0.3**
WHN				LR	LR		
	comp=Z,640nm,6.3s						
WHN				LR	LR		
	comp=Z,950nm,11.7s						
WHN				LR	LR		
	comp=Z,900nm,12.8s						
SPITS	**Spitsbergen Ar**	**67.45**	**353**	P	**P**	**05 11 51.5**	**+0.4**
	comp=Z,2.1nm,0.8s,baz=157,slow=7.3,SNR=2.5						
SPITS				LR	LR	05 42 47.6	
	comp=Z,36nm,19.0s,baz=165,slow=37						
NJ2	**Nanjing**	**68.07**	**60**	*e*P	**P**	**05 11 55.5**	**-0.4**
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.5s						
BORG	**Borgarnes**	**69.62**	**335**	LR	LR	05 47 46.4	
	comp=Z,12nm,18.8s,baz=97,slow=40						
WRA	**Warramunga Arr**	**91.63**	**110**	P	**P**	**05 14 01.8**	**-1.9**
	comp=Z,1.1nm,0.8s,baz=292,slow=4.4,SNR=4.3						
ASAR	**Alice Springs**	**92.05**	**114**	P	**P**	**05 14 04.9**	**-0.6**
	comp=Z,0.4nm,0.9s,baz=283,slow=5.0,SNR=2.6						
OGNE	**Ogallala**	**119.65**	**333**	*e*PKPdf	**PKPdf**	**05 19 44.3**	**-2.1**

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*IDC **28** 05:09:12.0±0.8, 28°.43N×104°.97E, h0km, mb3.8/14, mb1 3.9/16, mb1mx3.7/72, mbtmp3.8/16, ML4.4/1, MS3.1/6, Ms1 3.1/6, ms1mx2.7/65, Error ellipse: s-maj=22.7km s-min=16.5km az=50.0*

*ISCJB **28** 05:09:12.9±0.3, 28°.39N±0°.04×104°.88E±0°.05, h19km, mb4.0/19, Error ellipse: s-maj=6.7km s-min=5.3km az=159.9*

*NEIC **28** 05:09:13.8±0.3, 28°.45N×104°.88E, h10km, mb4.6/7, Error ellipse: s-maj=9.1km s-min=6.8km az=87.0*

*BJI **28** 05:09:15.3, 28°.41N×104°.84E, h12km, mB4.0/1, ML4.1/16, Ms3.9/5, Ms7 3.8/6*

ISC 28 05:09:15.1±0.5**, 28°.40N**±0°.04×**104°.87E**±0°.04**, h19**km**, n46,** σ**1s.42**/51**, mb4.0**/19**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GYA	**Guiyang**	**2.51**	**140**	Pn	**Pb**	**05 09 58.3**	**-1.3**
GYA				Pg	**Pg**	**05 10 04.5**	**+1.2**
GYA				Sn	**Sb**	**05 10 29.5**	**-0.7**
GYA				Sg	**Sg**	**05 10 35.0**	**-0.9**
GYA				smax	smax		
	comp=N,350nm,0.7s						
GYA				smax	smax		
	comp=E,260nm,0.8s						
CD2	**Chengdu**	**2.68**	**339**	Pn	**Pn**	**05 09 58.5**	**+1.3**
CD2				Pg	**Pb**	**05 10 03.5**	**+1.1**
CD2				Sn	**Sn**	**05 10 25.8**	**-3.4**
CD2				Sg	**Sb**	**05 10 36.0**	**+1.0**
CD2				smax	smax		
	comp=N,1μm,0.7s						
CD2				smax	smax		
	comp=E,2μm,0.8s						
KMI	**Kunming**	**3.78**	**211**	Pg	**Pg**	**05 10 27.0**	**-0.5**
KMI				Sg	**Sg**	**05 11 15.5**	**-1.0**
KMI				smax	smax		
	comp=N,60nm,1.4s						
KMI				smax	smax		
	comp=E,50nm,1.6s						
KMI				LR	LR		
	comp=N,560nm,3.8s						
KMI				LR	LR		
	comp=E,350nm,4.0s						
KMI				LR	LR		
	comp=Z,320nm,3.8s						
ENH	**Enshi**	**4.44**	**64**	*e*Pn	**Pn**	**05 10 24.0**	**+2.5**
XAN	**Xi'an**	**6.60**	**31**	Pn	**Pn**	**05 10 52.3**	**+1.1**
XAN				Pg	Pg	05 11 15.5	-6.0
XAN				Sn	**Sn**	**05 12 09.0**	**+3.0**
XAN				Sg	**Sg**	**05 12 42.0**	**-5.0**
XAN				smax	smax		
	comp=Z,130nm,1.2s						
XAN				smax	smax		
	comp=Z,110nm,1.2s						
XAN				LR	LR		
	comp=Z,490nm,4.6s						
XAN				LR	LR		
	comp=Z,420nm,4.3s						
XAN				LR	LR		
	comp=Z,460nm,5.3s						
LZH	**Lanzhou**	**7.71**	**354**	*e*Pg	Pb	05 11 36.0	+7.8
LZH				Sg	Sb	05 13 16.8	+17
LZH				smax	smax		
	comp=Z,94nm,1.0s						
LZH				smax	smax		
	comp=Z,110nm,1.0s						
LZH				LR	LR		
	comp=Z,420nm,6.2s						
LZH				LR	LR		
	comp=Z,400nm,6.8s						
GZH	**Guangzhou**	**9.29**	**123**	P	**Pn**	**05 11 28.0**	**-0.1**
GZH				S	**Sn**	**05 13 14.8**	**+2.7**
GZH				smax	smax		
	comp=Z,43nm,1.3s						
GZH				smax	smax		
	comp=Z,29nm,1.3s						
CM31	**Chiang Mai Arr**	**11.29**	**210**	*e*Pn	**Pn**	**05 11 56.5**	**+1.0**
CMAR	**Chiang Mai Arr**	**11.29**	**210**	Pn	**Pn**	**05 11 57.5**	**+2.0**
	comp=Z,0.7nm,0.3s,baz=16,slow=11,SNR=12						
CMAR				LR	LR	05 16 53.3	
	comp=Z,76nm,21.4s,baz=12,slow=41						
CM01	**Chiang Mai Arr**	**11.32**	**210**	*e*Pn	**Pn**	**05 11 57.9**	**+2.1**
SONA0	**Songino Array**	**19.44**	**3**	*e*P	**P**	**05 13 39.8**	**-0.7**
SONM	**Songino Array**	**19.44**	**3**	P	**P**	**05 13 39.8**	**-0.7**
	baz=170,slow=9.6,SNR=2.4						
SONM				LR	LR	05 20 56.8	
	comp=Z,24nm,20.7s,baz=170,slow=36						
WMQ	**Urumqi**	**20.65**	**323**	*e*P	Pn	05 13 55.3	-0.7
KSAR	**Wonju Array Be**	**21.28**	**59**	P	**P**	**05 14 00.2**	**-0.1**
KS01	**Wonju Array Si**	**21.30**	**59**	*e*P	**P**	**05 14 00.7**	**+0.1**
KSRS	**Korea Array**	**21.31**	**59**	P	**P**	**05 14 00.2**	**-0.5**
	comp=Z,2.4nm,0.7s,baz=245,slow=10.0,SNR=13						
KSRS				LR	LR	05 22 39.5	
	comp=Z,35nm,18.5s,baz=253,slow=38						
JNU	**Nakatsue**	**22.82**	**72**	LR	LR	05 23 04.1	
	comp=Z,47nm,18.9s,baz=302,slow=37						
MK01	**Makanchi Array**	**25.46**	**322**	*e*P	**P**	**05 14 42.1**	**+0.2**
MK31	**Makanchi Array**	**25.48**	**322**	*e*P	**P**	**05 14 40.4**	**-1.6**
MK32	**Makanchi Array**	**25.48**	**322**	*e*P	**P**	**05 14 42.1**	**+0.1**
MKAR	**Makanchi Array**	**25.48**	**322**	P	**P**	**05 14 42.1**	**+0.1**
	comp=Z,1.1nm,0.8s,baz=125,slow=12,SNR=9.0						
MKAR	**Makanchi Array**	**25.48**	**322**	*e*P	**P**	**05 14 40.5**	**-1.5**
	comp=Z,8.7nm,0.8s						
USRK	**Ussuriysk Ar.**	**26.79**	**47**	P	**P**	**05 14 53.2**	**-0.6**
	comp=Z,2.2nm,0.6s,baz=251,slow=8.1						
MJAR	**Matsushiro Arr**	**29.17**	**65**	LR	LR	05 28 31.8	
	comp=Z,26nm,18.5s,baz=250,slow=40						
ZALV	**Zalesovo Beam**	**29.44**	**336**	P	**P**	**05 15 18.6**	**+1.2**
	comp=Z,0.6nm,0.5s,baz=161,slow=9.2,SNR=2.3						
ZAA1	**Zalesovo Array**	**29.44**	**336**	*e*P	**P**	**05 15 18.6**	**+1.2**
KURBB	**Kurchatov Arra**	**29.81**	**325**	P	**P**	**05 15 21.3**	**+0.6**
	comp=Z,0.7nm,0.6s,baz=131,slow=8.8,SNR=8.7						
KURK	**Kurchatov**	**29.82**	**326**	*e*P	**P**	**05 15 21.3**	**+0.5**
BVAR	**Borovoye Array**	**35.34**	**324**	LR	LR	05 30 41.5	
	comp=Z,84nm,19.6s,baz=222,slow=36						
GEYT	**Alibeck**	**39.92**	**296**	P	**P**	**05 16 49.2**	**+1.2**
	comp=Z,2.7nm,0.4s,baz=71,slow=7.9,SNR=1.7						
WRA	**Warramunga Arr**	**55.87**	**146**	P	**P**	**05 18 51.1**	**-0.5**
	comp=Z,0.6nm,0.3s,baz=318,slow=12,SNR=4.8						
WR1	**Warramunga Arr**	**55.87**	**146**	*e*P	**P**	**05 18 51.1**	**-0.5**
	comp=Z,17nm,1.4s						
WB2	**Warramunga Arr**	**55.88**	**146**	*e*P	**P**	**05 18 51.5**	**-0.1**
	comp=Z,6.3nm,1.0s						
WC3	**Warramunga Arr**	**55.90**	**146**	*e*P	**P**	**05 18 51.7**	**-0.2**
	comp=Z,11nm,1.4s						
AS31	**Alice Springs**	**58.85**	**149**	*e*P	**P**	**05 19 11.6**	**-1.0**
	comp=Z,1.0nm,0.9s						
ASAR	**Alice Springs**	**58.85**	**149**	P	**P**	**05 19 12.2**	**-0.4**
	comp=Z,0.6nm,0.6s,baz=334,slow=7.2,SNR=6.8						
AKASG	**Malin Array Be**	**59.73**	**314**	P	**P**	**05 19 17.7**	**-0.7**
	comp=Z,0.5nm,0.4s,baz=72,slow=6.6,SNR=2.6						
ARA0	**ARCESS Array S**	**59.99**	**336**	*e*P	**P**	**05 19 19.2**	**-0.8**
ARCES	**ARCESS Array B**	**59.99**	**336**	P	**P**	**05 19 19.2**	**-0.8**
	comp=Z,0.9nm,0.9s,baz=91,slow=8.1,SNR=3.0						
FIA0	**FINESS Array S**	**60.18**	**327**	*e*P	**P**	**05 19 20.9**	**-0.5**
FINES	**FINESS Array B**	**60.18**	**327**	P	**P**	**05 19 20.8**	**-0.5**
	comp=Z,0.5nm,0.6s,baz=46,slow=6.0,SNR=2.5						
HFS	**Hagfors**	**66.38**	**327**	P	**P**	**05 20 03.0**	**+0.5**
	comp=Z,3.2nm,1.1s,baz=104,slow=4.6,SNR=3.7						
GEC2	**GERESS Array S**	**69.92**	**315**	*e*P	**P**	**05 20 25.0**	**0.0**
	comp=Z,1.4nm,0.9s						
GERES	**GERESS Array B**	**69.92**	**315**	P	**P**	**05 20 25.0**	**0.0**
	comp=Z,0.3nm,0.6s,baz=10,slow=3.0,SNR=3.7						
PAX	**Paxson**	**73.41**	**27**	*e*P	**P**	**05 20 44.7**	**-1.1**
	comp=Z,10nm,0.8s						
YKA	**Yellowknife Ar**	**84.07**	**17**	P	**P**	**05 21 43.4**	**-0.8**
	comp=Z,0.3nm,0.7s,baz=352,slow=25,SNR=3.5						

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*CSEM **28** 05:20:22.2, 37°.58N×24°.78W, h1km, ML1.8*

PDA 28 05:20:22.2±0.3**, 37°.58N×24°.78W, h1**km±5km**, MD3.6, ML1.8, Error ellipse: s-maj=9.1km s-min=0.9km az=72.0, Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BART	**Pico Bartolome**	**0.36**	**302**	*e*P	Pg	05 20 28.9	-0.3
BART				*e*S	Sg	05 20 34.2	+0.3
BART				A	A	05 20 36.6	
	40nm,0.1s						
BART	**Pico Bartolome**	**0.36**	**302**	*e*P	Pg	05 20 28.9	-0.3
BART				*e*S	Sg	05 20 34.2	+0.3
PSMN	**Pico do Norte,**	**0.62**	**202**	*e*S	Sg	05 20 41.3	-0.9
PSMN				A	A	05 20 43.7	
	8.2nm,0.2s						
PSMN	**Pico do Norte,**	**0.62**	**202**	*e*S	Sg	05 20 41.3	-0.9
GRON	**Grota Negra**	**0.63**	**287**	*e*S	Sg	05 20 38.4	-3.9
GRON				A	A	05 20 42.1	
	8.5nm,0.1s						
PSMA	**Santa Maria**	**0.65**	**205**	*e*P	Pg	05 20 33.6	-1.1
PSMA				*e*S	Sg	05 20 42.0	-1.1
PSMA				A	A	05 20 44.0	
	14nm,0.1s						
PDA	**Ponta Delgada**	**0.72**	**283**	*e*P	Pg	05 20 34.5	-1.5
PDA				*e*S	Sg	05 20 43.8	-1.5
PDA				A	A	05 20 46.5	
	16nm,0.2s						
PDA	**Ponta Delgada**	**0.72**	**283**	*e*P	Pg	05 20 34.5	-1.5
PDA				*e*S	Sg	05 20 43.8	-1.5
PSET	**Sete Cidades**	**0.78**	**288**	*e*P	Pg	05 20 35.4	-1.8
PSET				*e*S	Sg	05 20 45.5	-1.9
PSET				A	A	05 20 48.5	
	18nm,0.1s						
PSET	**Sete Cidades**	**0.78**	**288**	*e*P	Pg	05 20 35.4	-1.8
PSET				*e*S	Sg	05 20 45.5	-1.9

SJA 28 05:20:22.8±0.9**, 28°.38S×67°.48W, h136**km±5km**, ML3.6, MW3.4, 4D, La Rioja Province**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VCA	**Vinchina**	**0.73**	**241**	*e*P	Pn	05 20 45.1	+0.9
VCA				*e*S	Sn	05 21 00.5	0.0
VCA				IAML		05 21 03.7	
	comp=Z,1μm,0.6s						
AGUA	**GUANDACOL**	**1.41**	**219**	⇓*e*P	Pn	05 20 51.6	+1.1
AGUA				*e*S	Sn	05 21 12.3	+0.6
CYA	**Choya**	**1.48**	**93**	*e*P	Pn	05 20 52.5	+1.4
CYA				IAML		05 20 52.8	
	comp=Z,259nm,0.3s						
CYA				⇓*e*S	Sn	05 21 13.2	+0.5
ACDV	**Cuesta del Vie**	**2.29**	**218**	*e*P	Pn	05 21 02.0	+1.3
AHML	**Horco Molle**	**2.48**	**51**	*e*P	Pn	05 21 03.8	+0.6
AHML				IAML		05 21 03.9	
	comp=Z,40nm,0.4s						
AROD	**Rodeo**	**2.49**	**224**	⇓*e*P	Pn	05 21 04.8	+1.4
AROD				*e*S	Sn	05 21 36.5	+1.8
AMOG	**MOGNA**	**2.70**	**199**	*e*P	Pn	05 21 06.8	+0.9
AMOG				*e*S	Sn	05 21 39.4	+0.4
RTLL	**Cerro Villicun**	**3.06**	**196**	*e*P	Pn	05 21 11.4	+0.9
RTLL				IAML		05 21 49.2	
	comp=N,879nm,0.6s						
RTLL				IAML		05 21 49.4	
	comp=Z,170nm,0.4s						
RTCV	**Cerro Valdivia**	**3.59**	**195**	*e*P	Pn	05 21 18.2	+0.9
RTLS	**Leoncito**	**3.75**	**204**	⇓*e*P	Pn	05 21 20.7	+1.0
TCA	**Tanti**	**3.87**	**140**	*e*P	Pn	05 21 21.9	+0.9
TCA				IAML		05 22 22.7	
	comp=Z,34nm,0.5s						
ACAN	**Cantantal**	**3.89**	**176**	*e*P	Pn	05 21 22.7	+1.5
AUSP	**Uspallata**	**4.17**	**203**	*e*P	Pn	05 21 26.2	+1.0
MRA	**San Martin**	**4.30**	**160**	*e*P	Pn	05 21 27.7	+0.9
MRA				IAML		05 22 16.6	
	comp=Z,87nm,0.4s						
ASAL	**Salagasta**	**4.36**	**195**	*e*P	Pn	05 21 28.4	+0.9
ARCO	**CERRO ARCO**	**4.62**	**195**	*e*P	Pn	05 21 31.7	+0.7
ARCO				IAML		05 22 26.4	
	comp=Z,44nm,0.4s						
AAGR	**Agrelo**	**4.83**	**194**	*e*P	Pn	05 21 34.4	+0.6

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*ISCJB **28** 05:25:40.1±0.5, 50°.17N±0°.03×19°.16E±0°.03, h0km, Error ellipse: s-maj=4.7km s-min=2.4km az=13.6*

*CSEM **28** 05:25:40.9±0.2, 50°.19N×19°.22E, h2km, ML2.8/12, Error ellipse: s-maj=5.1km s-min=3.1km az=2.0*

*IPEC **28** 05:25:41.9±0.2, 50°.08N×19°.29E, h0km±1km, ML1.8/3, Error ellipse: s-maj=2.7km s-min=1.1km az=162.0*

*PRU **28** 05:25:42.1, 50°.14N×19°.22E, h0km*

*WAR **28** 05:25:42.6, 50°.09N×19°.34E, h1km, Mw2.3*

ISC 28 05:25:41.0±0.8**, 50°.11N**±0°.03×**19°.24E**±0°.02**, h0**km**, n48,** σ**0s.63**/82**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	**Ojcow**	**0.38**	**73**	*e*Pg	**Pg**	**05 25 48.7**	**+0.4**
OJC				*e*Sg	**Sg**	**05 25 53.7**	**+0.5**
OJC	**Ojcow**	**0.38**	**73**	*e*Pg	**Pg**	**05 25 48.7**	**+0.4**
OJC				*e*Sg	**Sg**	**05 25 53.7**	**+0.5**
OJC	**Ojcow**	**0.38**	**73**	*e*Pg	**Pg**	**05 25 48.7**	**+0.4**
OJC				*e*Sg	**Sg**	**05 25 53.7**	**+0.5**
OKC	**Ostrava-Krasne**	**0.75**	**249**	*e*PG	**Pb**	**05 25 57.4**	**+0.4**
OKC				*e*SG	**Sg**	**05 26 06.7**	**+1.5**
	comp=Z,23nm,0.4s						
OKC	**Ostrava-Krasne**	**0.75**	**249**	Pg	**Pb**	**05 25 57.4**	**+0.4**
OKC				Sg	**Sg**	**05 26 06.7**	**+1.5**
	23nm,0.4s						
LANS	**Liptovska Anna**	**0.97**	**171**	*e*PG	**Pb**	**05 26 00.5**	**-0.2**
LANS				*e*SG	**Sb**	**05 26 14.4**	**+0.3**
LANS	**Liptovska Anna**	**0.97**	**171**	*e*Pg	**Pb**	**05 26 00.5**	**-0.2**
LANS				*e*Sg	**Sb**	**05 26 14.4**	**+0.3**
NIE	**Niedzica**	**0.98**	**135**	*e*Pg	**Pg**	**05 26 00.1**	**+0.4**
NIE				*e*Sg	**Sb**	**05 26 14.2**	**-0.1**
NIE	**Niedzica**	**0.98**	**135**	*e*Pg	**Pg**	**05 26 00.1**	**+0.4**
NIE				*e*Sg	**Sb**	**05 26 14.2**	**-0.1**
NIE	**Niedzica**	**0.98**	**135**	*e*Pg	**Pg**	**05 26 00.1**	**+0.4**
NIE				*e*Sg	**Sb**	**05 26 14.2**	**-0.1**
MORC	**Moravsky Berou**	**1.14**	**254**	*e*Pg	**Pb**	**05 26 03.8**	**+0.1**
MORC				*e*Sg	**Sb**	**05 26 18.7**	**-0.4**
	19nm,0.4s,baz=74						
MORC	**Moravsky Berou**	**1.14**	**254**	*e*PG	**Pn**	**05 26 04.5**	**+0.1**
MORC				*e*SG	**Sb**	**05 26 18.7**	**-0.4**
MORC	**Moravsky Berou**	**1.14**	**254**	*e*Pg	**Pn**	**05 26 04.4**	**+0.1**
	baz=74						
MORC				*e*Sg	**Sb**	**05 26 18.7**	**-0.4**
	19nm,0.4s,baz=74						
KRLC	**Kraliky**	**1.58**	**270**	*e*PG	**Pn**	**05 26 10.7**	**+0.3**
KRLC				*e*SG	**Sg**	**05 26 32.1**	**+0.3**
	comp=Z,2.4nm,0.3s						
KRLC	**Kraliky**	**1.58**	**270**	Pg	**Pn**	**05 26 10.7**	**+0.3**
KRLC				Sg	**Sg**	**05 26 32.1**	**+0.3**
	2.4nm,0.3s						
JAVC	**Velka Javorina**	**1.61**	**220**	*e*Pn	**Pb**	**05 26 11.7**	**0.0**
	baz=40						
JAVC	**Velka Javorina**	**1.61**	**220**	*e*PN	**Pb**	**05 26 11.7**	**0.0**
JAVC	**Velka Javorina**	**1.61**	**220**	*e*Pn	**Pb**	**05 26 11.7**	**0.0**
	baz=40						
VYHS	**Vyhne**	**1.64**	**189**	*e*PN	**Pn**	**05 26 11.2**	**+0.1**
VYHS				*e*SN	**Sn**	**05 26 32.2**	**-0.7**
VYHS				*e*LG	Lg	05 26 33.0	
VYHS	**Vyhne**	**1.64**	**189**	*e*Pn	**Pn**	**05 26 11.2**	**+0.1**
VYHS				*e*Sn	**Sn**	**05 26 32.2**	**-0.7**
CRVS	**Cervenica-Dubn**	**1.89**	**129**	*e*PN	**Pb**	**05 26 16.8**	**+0.4**
CRVS				*e*SN	**Sg**	**05 26 41.6**	**0.0**
CRVS				*e*LG	Lg	05 26 44.4	
CRVS	**Cervenica-Dubn**	**1.89**	**129**	*e*Pn	**Pb**	**05 26 16.8**	**+0.4**
CRVS				*e*Sn	**Sg**	**05 26 41.6**	**0.0**
DPC	**Dobruska-Polom**	**1.89**	**278**	*e*PG	**Pb**	**05 26 17.0**	**+0.6**
DPC				*e*SG	**Sb**	**05 26 41.3**	**+0.8**
	comp=Z,12nm,0.3s						
DPC	**Dobruska-Polom**	**1.89**	**278**	Pg	**Pb**	**05 26 17.0**	**+0.6**
DPC				Sg	**Sb**	**05 26 41.3**	**+0.8**
	12nm,0.3s						
VRAC	**Vranov**	**1.89**	**246**	*e*Pn	**Pb**	**05 26 16.4**	**-0.1**
VRAC				*e*Sg	**Sg**	**05 26 41.9**	**+0.1**
	8.1nm,0.3s,baz=65						
VRAC	**Vranov**	**1.89**	**246**	*e*SG	**Sg**	**05 26 41.9**	**+0.1**
KSP	**Ksiaz**	**2.02**	**292**	*e*Pn	**Pg**	**05 26 20.4**	**+0.7**
KSP				*e*Pg	Pb	05 26 24.3	+5.7
KSP				*e*Sg	**Sg**	**05 26 46.7**	**+0.8**
KSP	**Ksiaz**	**2.02**	**292**	*e*Pn	**Pg**	**05 26 20.4**	**+0.7**
KSP				*e*Pg	Pb	05 26 24.3	+5.7
KSP				*e*Sg	**Sg**	**05 26 46.7**	**+0.8**
UPC	**Upice**	**2.10**	**282**	*e*PG	**Pb**	**05 26 20.5**	**+0.4**
UPC				*e*SG	**Sg**	**05 26 48.8**	**+0.2**
	comp=Z,7.6nm,0.5s						
UPC	**Upice**	**2.10**	**282**	Pg	**Pb**	**05 26 20.5**	**+0.4**
UPC				Sg	**Sg**	**05 26 48.8**	**+0.2**
	7.6nm,0.5s						
KRUC	**Moravsky**	**2.12**	**242**	*e*Pn	**Pn**	**05 26 18.5**	**+0.7**
KRUC	**Moravsky**	**2.12**	**242**	*e*Pg	**Pb**	**05 26 21.1**	**+0.7**
	baz=60						
KRUC				*e*Sg	**Sg**	**05 26 48.9**	**-0.3**
	3.6nm,0.3s,baz=60						
KRUC	**Moravsky**	**2.12**	**242**	*e*PN	**Pn**	**05 26 18.7**	**+0.9**
KRUC				*e*PG	**Pb**	**05 26 21.1**	**+0.7**
KRUC				*e*SG	**Sg**	**05 26 49.0**	**-0.3**
KRUC	**Moravsky**	**2.12**	**242**	*e*Pn	**Pn**	**05 26 18.7**	**+0.9**
	baz=60						
KRUC	**Moravsky**	**2.12**	**242**	*e*Pg	**Pb**	**05 26 21.1**	**+0.7**
	baz=60						
KRUC				*e*Sg	**Sg**	**05 26 48.9**	**-0.3**
	3.6nm,0.3s,baz=60						
WAR	**Warsaw**	**2.41**	**27**	*e*Pn	**Pn**	**05 26 20.4**	**-1.3**
WAR	**Warsaw**	**2.41**	**27**	*e*Pg	**Pb**	**05 26 24.3**	**-1.0**
GOPC	**GO Pecny, Ondr**	**2.88**	**268**	*e*PG	**Pg**	**05 26 35.2**	**-0.9**
GOPC				*e*SG	**Sg**	**05 27 12.2**	**-1.2**
	comp=Z,4.6nm,0.4s						
GOPC	**GO Pecny, Ondr**	**2.88**	**268**	Pg	**Pg**	**05 26 35.2**	**-0.9**
GOPC				Sg	**Sg**	**05 27 12.2**	**-1.2**
	4.6nm,0.4s						
PVCC	**Panska Ves**	**3.02**	**280**	*e*SG	**Sg**	**05 27 18.2**	**+0.2**
	comp=Z,7.8nm,0.2s						
PVCC	**Panska Ves**	**3.02**	**280**	Sg	**Sg**	**05 27 18.2**	**+0.2**
	7.8nm,0.2s						
PRU	**Pruhonice**	**3.03**	**270**	*e*SG	**Sg**	**05 27 17.3**	**-1.0**
	comp=Z,2.7nm,0.3s						
PRU	**Pruhonice**	**3.03**	**270**	Sg	**Sg**	**05 27 17.3**	**-1.0**
	2.7nm,0.3s						
BRG	**Berggiesshubel**	**3.47**	**285**	SG	**Sg**	**05 27 32.1**	**-0.2**
	3.0nm,0.6s						
KHC	**Kasperske Hory**	**3.81**	**257**	*e*PN	**Pn**	**05 26 41.1**	**+0.2**
KHC				*e*PG	**Pg**	**05 26 52.6**	**-1.4**
KHC				*e*x	x	05 27 38.4	
KHC				*e*SG	**Sg**	**05 27 42.1**	**-1.2**
	comp=Z,2.8nm,0.4s						
KHC	**Kasperske Hory**	**3.81**	**257**	Pn	**Pn**	**05 26 41.1**	**+0.2**
NKC	**Novy Kostel**	**4.37**	**274**	*e*SG	**Sg**	**05 28 01.9**	**+0.7**
	comp=Z,3.8nm,0.5s						
NKC	**Novy Kostel**	**4.37**	**274**	Sg	**Sg**	**05 28 01.9**	**+0.7**
	3.8nm,0.5s						

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*IDC **28** 05:48:04.0±0.5, 29°.80N×80°.62E, h0km, mb4.3/34, mb1 4.4/36, mb1mx4.2/74, mbtmp4.3/36, ML4.3/2, MS3.4/20, Ms1 3.4/20, ms1mx3.1/72, Error ellipse: s-maj=16.3km s-min=11.3km az=31.0*

*BJI **28** 05:48:05.9, 29°.87N×80°.72E, h12km, mb4.4/33, mB4.5/23, ML4.3/1, Ms4.1/25, Ms7 3.8/23*

*ISCJB **28** 05:48:06.2±0.1, 29°.86N±0°.02×80°.59E±0°.02, h23km, mb4.3/101, MS3.5/24, Error ellipse: s-maj=3.9km s-min=2.1km az=27.6*

*MOS **28** 05:48:06.1±1.1, 29°.87N×80°.65E, h24km, mb4.5/38, Error ellipse: s-maj=9.3km s-min=4.7km az=120.3*

*NDI **28** 05:48:07.7±2.3, 29°.86N×80°.71E, h17km, ML4.5, mb4.6(NEIC)*

*NEIC **28** 05:48:07.3±1.9, 29°.92N×80°.65E, h16km±11km, mb4.6/42, Error ellipse: s-maj=6.0km s-min=3.5km az=216.0*

*DMN **28** 05:48:07.9±0.3, 30°.12N×80°.54E, h10km, Ml5.2/9, Error ellipse: s-maj=12.7km s-min=5.5km az=33.0*

ISC 28 05:48:07.8±0.3**, 29°.85N**±0°.04×**80°.60E**±0°.03**, h23**km**, n261,** σ**2s.13**/285**, mb4.4**/101**, MS3.6**/25**, 12C-12D, Nepal-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOSI	**Joshimath**	**1.14**	**308**	*e*P	**Pn**	**05 48 28.6**	**0.0**
JOSI				*e*S	**Sn**	**05 48 45.4**	**+1.7**
DDI	**Dehra Dun**	**2.25**	**283**	*e*P	**Pb**	**05 48 46.7**	**-1.1**
DDI				*e*S	**Sb**	**05 49 15.7**	**+0.3**
DDI				IAML		05 49 17.2	
	comp=N,3μm,0.6s						
DDI				IAML		05 49 18.0	
	comp=E,3μm,0.9s						
PYUN	**Piuthan**	**2.73**	**129**	*e*Pn	**Pn**	**05 48 52.8**	**+2.4**
PYUN				*e*Sn	**Sb**	**05 49 26.3**	**-2.8**
	comp=E,1μm,0.3s						
DANN	**Dangsing**	**3.15**	**118**	*e*Pn	**Pn**	**05 48 58.6**	**+2.4**
NDI	**New Delhi**	**3.18**	**249**	*e*P	**Pn**	**05 48 59.0**	**+2.6**
NDI				*e*S	**Sn**	**05 49 34.0**	**+0.4**
SMLA	**Simla**	**3.22**	**294**	*e*P	**Pn**	**05 48 59.5**	**+2.5**
SMLA				*e*S	**Sn**	**05 49 37.8**	**+3.1**
SMLA				IAML		05 49 56.0	
	comp=E,2μm,0.5s						
SMLA				IAML		05 49 56.9	
	comp=N,2μm,2.9s						
KOLN	**Koldanda**	**3.35**	**127**	*e*Pn	**Pn**	**05 49 01.5**	**+2.5**
KOLN				*e*Sn	**Sn**	**05 49 42.1**	**+3.9**
	comp=N,868nm,0.3s						
BHGR	**Bahadurgarh**	**3.40**	**251**	*e*x	Pb	05 49 12.7	+5.3
SONA	**Sohna**	**3.47**	**243**	*e*P	**Pn**	**05 49 02.5**	**+2.1**
SONA				*e*S	**Sn**	**05 49 43.6**	**+2.9**
GKN	**Gorkha**	**3.99**	**117**	*e*Pn	**Pn**	**05 49 09.7**	**+2.0**
GKN				*e*Sn	**Sn**	**05 49 55.8**	**+1.9**
	comp=N,1μm,0.3s						
DHRM	**DHARAMSHALA**	**4.40**	**304**	*e*P	**Pn**	**05 49 15.1**	**+1.7**
DHRM				*e*S	**Sn**	**05 50 03.5**	**-0.5**
DHRM				IAML		05 50 31.6	
	comp=E,955nm,0.5s						
DMN	**Daman**	**4.54**	**118**	*e*Pn	**Pn**	**05 49 17.4**	**+2.0**
DMN				*e*Sn	**Sn**	**05 50 08.7**	**+1.0**
	comp=E,447nm,0.4s						
KHET	**Khetri**	**4.56**	**248**	*e*P	**Pn**	**05 49 16.1**	**+0.8**
KHET				*e*S	**Sn**	**05 50 08.4**	**+0.8**
KKN	**Kakani**	**4.59**	**115**	*e*Pn	**Pn**	**05 49 17.6**	**+1.5**
KKN				*e*Sn	**Sn**	**05 50 09.1**	**+0.3**
	comp=E,377nm,0.2s						
PKIN	**Phulchoki**	**4.78**	**117**	*e*Pn	**Pn**	**05 49 20.6**	**+1.9**
PKIN				*e*Sn	**Sn**	**05 50 14.3**	**+0.7**
	comp=E,695nm,0.3s						
GUN	**Gumba**	**5.02**	**111**	*e*Pn	**Pn**	**05 49 23.5**	**+1.5**
GUN				*e*Sn	**Sn**	**05 50 19.9**	**+0.4**
	comp=E,420nm,0.3s						
JIRN	**Jiri**	**5.37**	**113**	*e*Pn	**Pn**	**05 49 28.8**	**+1.9**
RAMN	**Ramite**	**6.02**	**117**	*e*Pn	**Pn**	**05 49 36.8**	**+1.0**
RAMN				*e*Sn	**Sn**	**05 50 43.2**	**-1.0**
	comp=E,644nm,0.3s						
ODAN	**Odare**	**6.68**	**115**	*e*Pn	**Pn**	**05 49 46.2**	**+1.4**
ODAN				*e*Sn	**Sn**	**05 50 59.5**	**-0.9**
	comp=E,301nm,0.3s						
TAPN	**Taplejung**	**6.73**	**110**	*e*Pn	**Pn**	**05 49 47.1**	**+1.6**
SARP	**Sargodha**	**7.12**	**289**	P	**Pn**	**05 49 50.7**	**+0.2**

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BHPL  Bhopal             7.17 204 eP     Pn      05 49 50.5  -0.8
BHPL                              eS     Sn      05 51 08.6  -3.6
CHCP  Chirah Chowk       7.31 303  P     Pn      05 49 53.7  +0.5
NIL   Nilore             7.31 303 ePn    Pn      05 49 53.2  -0.1
NIL   Nilore             7.31 303 eP     Pn      05 49 53.2  -0.1
GTK   Tadong             7.47 108 eP     Pn      05 49 55.0  -0.6
BOK   Bokaro             7.66 141 eP     Pn      05 49 58.0   0.0
THW   Thamme Wali        8.12 293  P     Pn      05 50 04.7  +0.3
CEP   Cherat             8.38 300  P     Pn      05 50 08.8  +0.7
NGP   Nagpur             8.78 190 eP     Pn      05 50 12.1  -1.3
NGP                               eS     Sn      05 51 46.4  -5.2
LSA   Lhasa              9.17  88  P     Pn      05 50 21.3  +2.1
LSA                                pmax  pmax
      comp=E,9.0nm,0.4s
TURI  Tura               9.63 114 eP     Pn      05 50 23.3  -1.7
KSH   Kashi             10.36 340  P     Pn      05 50 33.5  -1.7
KSH                                PP    PnPn    05 50 40.8  -2.2
KSH                                sP            05 50 42.5
KSH                                S     Sn      05 52 24.8  -5.8
KSH                                SS    SnSn    05 52 38.3  -4.5
KSH                                pmax  pmax
      comp=E,57nm,4.5s
KSH                                LR    LR
      comp=E,250nm,8.8s
KSH                                LR    LR
      comp=E,570nm,7.2s
GUWA  GUWAHATI          10.46 108 eP     Pn      05 50 35.2  -1.1
BWNR  Bhubaneshwar      10.62 152 eP     Pn      05 50 38.0  -0.5
KBL   Kabul             10.85 299 ePn    Pn      05 50 42.5  +0.6
KBL   Kabul             10.85 299  P     Pn      05 50 42.4  +0.6
SHL   Shillong          10.87 110 ePn    Pn      05 50 40.5  -1.7
SHL   Shillong          10.87 110 eP     Pn      05 50 40.7  -1.5
SHL   Shillong          10.87 110 eP     Pn      05 50 40.5  -1.7
RPR   Rampur            11.01 186 eP     Pn      05 50 40.8  -3.1
SRSP  Sriramsagar       11.07 191 eP     Pn      05 50 41.6  -3.1
TEZP  TEZPUR            11.23 104 eP     Pn      05 50 45.4  -1.5
BRDH  Bariadhala        12.21 123  LR    LR      05 56 16.2
      comp=E,96nm,19.1s,baz=77,slow=40
VIS   Vishakhapatnam    12.33 168 i x    Sn      05 53 12.1  -6.7
VIS                               i x    x       05 54 31.9
VIS                               ex     x       05 54 33.4
      comp=E,528nm,0.9s
VIS                               ex     x       05 54 34.8
      comp=N,370nm,0.7s
HYBB  Hyderabad (bro    12.52 189 eP     Pn      05 51 01.1  -3.5
HYB   Hyderabad         12.52 189 i P    Pn      05 51 01.0  -3.6
HYB                               eS     Sn      05 53 26.0  +2.5
HYB   Hyderabad         12.52 189 ex     Pn      05 51 01.3  -3.4
HYB                               eS     Sn      05 53 12.9   -11
PVM   Polavaram         12.58 175 eP     Pn      05 51 01.7  -3.7
KOHI  KOHIMA            12.65 106 eP     Pn      05 51 07.8  +1.3
KOHI                              eS     Sn      05 53 21.1  -5.6
KOHI                               IAML          05 53 42.3
      comp=E,29nm,0.0s
KOHI                               IAML          05 53 46.1
      comp=N,29nm,0.2s
POO   Poona             12.84 210 eP     Pn      05 51 07.7  -1.3
POO                               eS     Sn      05 53 21.8   -10
POO                                IAML          05 54 57.3
      comp=N,47nm,0.8s
POO                                IAML          05 54 57.6
      comp=E,42nm,1.0s
BOM   Bombay            13.01 215 ex     P       05 51 29.8  +8.3
BOM                               eS     Sn      05 53 25.3   -10
SAIH  SAIHA             13.32 121 eP     Pn      05 51 13.7  -1.9
AAK   Ala-Archa         13.67 341  Pn    Pn      05 51 20.2  -0.1
      comp=E,0.6nm,0.3s,baz=201,slow=8.7,SNR=5.8
AAK                                Sn    Sn      05 53 41.3   -10
      comp=E,0.6nm,0.3s,baz=166,slow=8.3,SNR=1.9
AAK                                LR    LR      05 57 20.6
      comp=E,236nm,19.0s,baz=146,slow=41
AAK   Ala-Archa         13.67 341 i P    Pn      05 51 19.8  -0.6
SRLM  Srisailam         13.78 187 eP     Pn      05 51 17.8  -4.1
ADKI  Addanki           13.95 183 eP     Pn      05 51 20.4  -3.7
WMQ   Urumqi            15.05  20  P     Pn      05 51 41.0  +2.0
WMQ                                pP    P       05 51 45.5  +1.3
WMQ                                sP    pP      05 51 51.8  +1.3
WMQ                                pmax  pmax
      comp=E,50nm,1.1s
WMQ                                pmax  pmax
      comp=E,220nm,4.9s
WMQ                                LR    LR
      comp=E,840nm,14.1s
WMQ                                LR    LR
      comp=E,430nm,10.9s
WMQ                                LR    LR
      comp=E,840nm,11.7s
URV   Uravakonda        15.15 192 eP     Pn      05 51 35.5  -5.0
KK31  Karatay Array     15.50 331 ePn    Pn      05 51 42.7  -2.2
KK31  Karatay Array     15.50 331 eP     Pn      05 51 42.7  -2.2
KKAR  Karatay Array     15.50 331 ePn    Pn      05 51 43.0  -1.9
KKAR  Karatay Array     15.50 331 eP     Pn      05 51 43.0  -1.9
SKHT  Srikalahasti      16.05 183 eP     Pn      05 51 48.4  -3.8
MK01  Makanchi Array    16.94   4 ePn    Pn      05 52 01.3  -2.0
MAKZ  Makanchi          16.96   3 ePn    P       05 52 04.7  -0.7
      comp=E,8.5nm,0.8s
MAKZ  Makanchi          16.96   3 eP     P       05 52 04.7  -0.7
MAKZ                               pmax  pmax
      comp=Z,9.0nm,0.8s
MK31  Makanchi Array    16.97   4 ePn    Pn      05 52 03.1  -0.5
MK31  Makanchi Array    16.97   4 eP     Pn      05 52 03.1  -0.5
MKAR  Makanchi Array    16.97   4  P     Pn      05 52 03.7  +0.1
      comp=Z,2.5nm,0.3s,baz=179,slow=12,SNR=57
MKAR                               S     Sn      05 55 02.7  -8.8
      comp=Z,0.0nm,0.3s,baz=184,slow=19,SNR=3.3
MKAR                               LR    LR      05 59 00.3
      comp=Z,91nm,21.9s,baz=184,slow=39
MKAR  Makanchi Array    16.97   4 ePn    Pn      05 52 03.1  -0.5
      comp=Z,88nm,0.9s
MKAR                               S     Sn      05 55 02.7  -8.8
MKAR  Makanchi Array    16.97   4 eP     Pn      05 52 03.1  -0.5
MKAR                               S     Sn      05 55 02.7  -8.8
MKAR                               pmax  pmax
      comp=Z,88nm,0.9s
GTA   Gaotai            18.43  54 eP     Pn      05 52 26.0  +4.1
GTA                                pP    sP      05 52 33.0  +1.9
GTA                                pmax  pmax
      comp=Z,4.0nm,0.8s
CHTO  Chiang Mai        19.98 119 eP     Pn      05 52 39.4  -1.0
      comp=Z,28nm,1.5s
CHTO  Chiang Mai        19.98 119 eP     Pn      05 52 39.4  -1.0
CHTO                               pmax  pmax
      comp=Z,28nm,1.5s
CHTO  Chiang Mai        19.98 119  P     Pn      05 52 41.0  +0.6
      comp=Z,63nm,1.2s
CMMT  Chiang Mai        19.98 119  P     Pn      05 52 40.7  +0.2
      comp=Z,14nm,1.2s
CD2   Chengdu           20.00  81 eP     P       05 52 38.0  -1.0
CD2                                pP    Pn      05 52 41.3  +0.5
CD2                                S     S       05 56 22.5  -0.4
CD2                                sS    Sn      05 56 28.3  +3.1
CD2                                pmax  pmax
      comp=Z,20nm,0.5s
CD2                                pmax  pmax
      comp=Z,160nm,4.2s
CD2                                LR    LR
      comp=Z,460nm,10.9s
CD2                                LR    LR
      comp=Z,410nm,9.1s
CD2                                LR    LR
      comp=Z,420nm,9.5s
CM31  Chiang Mai Arr    20.19 120 eP     Pn      05 52 42.4  -0.5
CMAR  Chiang Mai Arr    20.19 120  P     P       05 52 41.4  +0.4
      comp=Z,4.7nm,0.5s,baz=326,slow=10,SNR=18
KMI   Kunming           20.19  98  P     Pn      05 52 42.8  -0.4
KMI                                pP    sP      05 52 49.3  -1.2
KMI                                sP    pP      05 52 55.0  +7.4
KMI                                PP    PnPn    05 53 03.5  +5.6
KMI                                S     S       05 56 22.8  -4.2
KMI                                sS    Sn      05 56 33.0  +3.0
KMI                                SS    SnSn    05 56 51.0  +6.5
KMI                                pmax  pmax
      comp=Z,10.0nm,0.5s
KMI                                pmax  pmax
      comp=Z,120nm,6.3s
KMI                                LR    LR
      comp=Z,120nm,7.4s
KMI                                LR    LR
      comp=Z,120nm,7.9s
KMI                                LR    LR
      comp=Z,53nm,8.1s
CM01  Chiang Mai Arr    20.22 120 eP     Pn      05 52 42.4  -0.9
GEYT  Alibeck           20.30 299  P     P       05 52 42.3  +0.3
      comp=Z,2.7nm,0.3s,baz=94,slow=10,SNR=3.0
GEYT                               LR    LR      06 01 51.2
      comp=Z,115nm,18.5s,baz=280,slow=41
LZH   Lanzhou           20.45  66 eP     Pn      05 52 46.0   0.0
LZH                                pP    sP      05 52 53.0  -0.2
LZH                                sP    pP      05 52 57.0  +6.8
LZH                                PP    PnPn    05 53 05.3  +4.0
LZH                               eS     S       05 56 26.3  -5.6
LZH                                sS    Sn      05 56 37.5  +1.6
LZH                                SS    SnSn    05 56 56.5  +5.9
LZH                                pmax  pmax
      comp=Z,29nm,1.0s
LZH                                pmax  pmax
      comp=Z,230nm,4.8s
LZH                                LR    LR
      comp=Z,1µm,12.1s
LZH                                LR    LR
      comp=Z,780nm,12.0s
LZH                                LR    LR
      comp=Z,1µm,13.0s
WSAR  Wadi Sarin        20.71 257  LR    LR      06 02 54.8
      comp=Z,82nm,18.7s,baz=98,slow=43
KURBB Kurchatov Arra    20.81 356  P     P       05 52 46.9  -0.5
      comp=Z,11nm,0.7s,baz=182,slow=10,SNR=93
KURK  Kurchatov         20.89 356 eP     P       05 52 47.8  -0.5
      comp=Z,48nm,1.2s
KURK  Kurchatov         20.89 356ceP     P       05 52 47.8  -0.5
KURK                               pmax  pmax
      comp=Z,45nm,1.3s
SUKH  Sukhothai         21.30 121  P     P       05 52 54.3  +1.3
      comp=Z,3.7nm,0.7s
NANT  Nan               21.33 116  P     P       05 52 56.5  +3.2
PHIT  Phitsanulok       22.07 120  P     P       05 53 03.3  +2.0
      comp=Z,17nm,1.0s
PALK  Pallekele         22.46 180  LR    LR      06 02 14.4
      comp=Z,122nm,19.2s,baz=295,slow=38
PBKT  Sadao Pong        22.87 121 eP     P       05 53 10.6  +0.8
      comp=Z,14nm,1.0s
PBKT  Sadao Pong        22.87 121  P     P       05 53 12.1  +2.4
      comp=Z,15nm,1.3s
GYA   Guiyang           23.21  92 eP     P       05 53 14.0  +0.6
GYA                                pmax  pmax
      comp=Z,10.0nm,0.8s
CHAI  Chaiyaphum        24.05 121  P     P       05 53 23.3  +1.9
      comp=Z,12nm,1.1s,comp=Z,198nm
ZAA0  Zalesovo Array    24.27   6 eP     P       05 53 22.7  -0.4
      comp=Z,7.7nm,0.8s
ZALV  Zalesovo Beam     24.27   6  P     P       05 53 23.0  -0.1
      comp=Z,6.5nm,0.7s,baz=198,slow=8.8,SNR=12
ZALV                               LR    LR      06 04 36.5
      comp=Z,67nm,18.2s,baz=268,slow=41
ZALV  Zalesovo Beam     24.27   6 eP     P       05 53 22.7  -0.4
BVA0  Borovoye Array    24.34 345 i P    P       05 53 23.2  -0.5
BVA0                               pmax  pmax
      comp=Z,3.0nm,0.7s
BVAR  Borovoye Array    24.34 345  P     P       05 53 23.9  +0.2
      comp=Z,2.6nm,0.5s,baz=149,slow=9.7,SNR=20
BVAR                               LR    LR      06 04 41.4
      comp=Z,14nm,21.6s,baz=154,slow=41
XAN   Xi’an             24.36  73  P     P       05 53 27.0  +2.8
XAN                                pmax  pmax
      comp=Z,8.0nm,1.1s
XAN                                LR    LR
      comp=Z,220nm,14.9s
XAN                                LR    LR
      comp=Z,95nm,15.4s
XAN                                LR    LR
      comp=Z,140nm,12.0s
BRVK  Borovoye          24.39 345 eP     P       05 53 24.5  +0.3
      comp=Z,8.3nm,1.2s
BRVK  Borovoye          24.39 345 i P    P       05 53 23.9  -0.3
BRVK                               pmax  pmax
      comp=Z,4.0nm,1.1s
KHON  Khomkaen          24.41 119  P     P       05 53 26.5  +1.8
SKNT  Sakolnakorn       24.93 116  P     P       05 53 33.2  +3.8
      comp=Z,4.4nm,0.8s
AB31  Akbulak array     24.94 327 i P    P       05 53 30.1  +0.9
AB31                               pmax  pmax
      comp=Z,5.0nm,0.6s
ABKAR Akbulak array     24.94 327 eP     P       05 53 30.2  +1.0
SRAK  Srakaew           25.31 124  P     P       05 53 44.2   +11
AKTO  Aktyubinsk        26.66 327  P     P       05 53 45.7  +0.9
      comp=Z,3.1nm,0.7s,baz=137,slow=9.1,SNR=11
AKTO                               LR    LR      06 05 15.2
      comp=Z,198nm,18.8s,baz=138,slow=39
SONM  Songino Array     26.75  41  P     P       05 53 47.6  +1.8
      comp=Z,1.9nm,0.5s,baz=234,slow=9.1,SNR=18
SONA1 Songino Array     26.76  41 eP     P       05 53 47.3  +1.4
ULN   Ulaanbaatar       27.14  41ceP     P       05 53 48.5  -0.9
ULN                                pmax  pmax
      comp=Z,4.0nm,1.3s
HHC   Hu-ho-hao-te      27.40  58 eP     P       05 53 51.0  -0.7
HHC                                sP    pP      05 53 58.5  -0.1
HHC                                S     S       05 58 28.0  -2.7
HHC                                SS    SnSn    05 59 50.8   +10
HHC                                pmax  pmax
      comp=Z,13nm,0.9s
HHC                                pmax  pmax
      comp=Z,140nm,7.9s
HHC                                LR    LR
      comp=Z,250nm,12.5s
HHC                                LR    LR
      comp=Z,220nm,10.4s
HHC                                LR    LR
      comp=Z,190nm,10.4s
TLY   Talaya            27.71  32 i P    P       05 53 55.6  +1.3
TLY                                pmax  pmax
      comp=Z,2.0nm,1.0s
ARU   Arti              30.78 336  P     P       05 54 21.0  -0.3
      comp=Z,2.2nm,0.3s,baz=131,slow=3.3,SNR=5.6
ARU   Arti              30.78 336d iP    P       05 54 21.8  +0.4
ARU                                              05 55 19.7
ARU                                S     S       05 59 25.8  +2.6
ARU                                SS    SnSn    06 01 04.2  +1.8
ARU                                pmax  pmax
      comp=Z,9.0nm,1.7s
ARU                                MLR   MLR
      comp=Z,79nm,15.0s
GNI   Garni             30.93 299  LR    LR      06 10 02.2
      comp=Z,22nm,19.8s,baz=118,slow=43
GNI   Garni             30.93 299ceP     P       05 54 23.4  +0.2
GNI                                pmax  pmax
      comp=Z,20nm,0.7s
ZEI   Tsey              32.01 304 eP     P       05 54 33.5  +0.9
AKH   Akhalkalaki       32.06 301 eP     P       05 54 35.6  +2.5
      comp=Z,15nm,1.3s
AKH   Akhalkalaki       32.06 301 eP     P       05 54 35.6  +2.5
AKH                                pmax  pmax
      comp=Z,15nm,1.3s
GSI   Gunungsitoli      32.66 147 eP     P       05 54 40.3  +2.0
      comp=Z,30nm,0.8s
NJ2   Nanjing           32.77  76 eP     P       05 54 38.8  -0.3
NJ2                                pmax  pmax
      comp=Z,8.0nm,0.5s
KBZ   Khabaz            32.92 305  P     P       05 54 40.8  +0.5
      comp=Z,2.7nm,0.9s,baz=133,slow=5.9,SNR=5.3
NEY   Neytrino          32.95 304 i P    P       05 54 40.4  -0.4
NEY                                pmax  pmax
      comp=Z,1.0nm,0.8s
KIV   Kislovodsk        33.12 306⇑eP     P       05 54 41.7  -0.5
KIV                                *PP   sP      05 54 51.0  -1.0
KIV                               ePPP   PPP     05 56 05.6
KIV                                              05 57 27.0
KIV                                pmax  pmax
      comp=Z,4.0nm,0.8s
KIV                                MLR   MLR
      comp=Z,64nm,16.0s
VRH   Novokhopyorsk     35.86 318 eP     P       05 55 05.2  -0.5
VRH                                pmax  pmax
      comp=Z,20nm,0.7s
BOD   Bodaibo           36.25  30 eP     P       05 55 02.4  -6.5
BOD                                pmax  pmax
      comp=Z,5.0nm,2.0s
VSR   Storozhevoye      37.38 317 eP     P       05 55 17.6  -1.0
VSR                                pmax  pmax
      comp=Z,9.0nm,0.9s
LPSR  Galich’ya Gora    37.98 319 eP     P       05 55 23.1  -0.6
LPSR                               pmax  pmax
      comp=Z,10.0nm,0.9s
CN2   Changchun         38.04  56 eP     P       05 55 25.0  +0.6
CN2                               eS     S       06 01 14.8  -0.7
CN2                                pmax  pmax
      comp=Z,10.0nm,0.8s
CN2                                pmax  pmax
      comp=Z,200nm,3.0s
CN2                                LR    LR
      comp=Z,90nm,10.0s
CN2                                LR    LR
      comp=Z,10.0nm,10.0s
CN2                                LR    LR
      comp=Z,200nm,10.0s
MMAI  Mount Meron Ar    38.47 287  LR    LR      06 13 26.9
      comp=Z,53nm,19.1s,baz=210,slow=40
PRGR  Permogore         39.19 334 eP     P       05 55 34.2  +0.5
PRGR                               pmax  pmax
      comp=Z,8.0nm,0.5s
BR131 Keskin Array S    39.42 297 eP     P       05 55 37.0  +0.8
BRTR  Keskin Array B    39.42 297  P     P       05 55 36.7  +0.6
      comp=Z,1.4nm,0.8s,baz=106,slow=7.1,SNR=7.9
KSAR  Wonju Array Be    39.75  66  P     P       05 55 39.6  +0.9
KSAR  Wonju Array Be    39.75  66  P     P       05 55 39.6  +0.9
KSRS  Korea Array       39.78  66  P     P       05 55 39.6  +0.6
      comp=Z,0.7nm,0.4s,baz=274,slow=8.6,SNR=4.2
KSRS                               LR    LR      06 11 44.2
      comp=Z,20nm,20.3s,baz=185,slow=36
OBN   Obninsk           40.16 322⇑eP     P       05 55 42.3  +0.4
OBN                                *PP   pP      05 55 50.0  +1.1
OBN                                              05 57 47.0
OBN                               e              06 05 40.2
OBN                                pmax  pmax
      comp=Z,13nm,0.8s
OBN                                MLR   MLR
      comp=Z,71nm,15.0s
KLMR  Klimovskoe        41.20 331 eP     P       05 55 49.7  -0.6
KLMR                               pmax  pmax
      comp=Z,7.0nm,0.9s
KLMR  Klimovskoe        41.20 331 eP     P       05 55 49.8  -0.6
KLMR                               AMP           05 55 50.8
      comp=Z,7.0nm,0.9s
JNU   Nakatsue          42.67  72  LR    LR      06 16 13.8
      comp=Z,68nm,18.1s,baz=303,slow=40
KLR   Kul’dur           43.01  48  P     P       05 56 04.8  -0.5
      comp=Z,0.1nm,0.4s,baz=258,slow=7.1,SNR=4.9
KLR   Kul’dur           43.01  48 i P    P       05 56 04.7  -0.7
AKASG Malin Array Be    43.36 314  P     P       05 56 08.0  -0.1
      comp=Z,2.4nm,0.7s,baz=59,slow=26,SNR=12
AKASG Malin Array Be    43.36 314  P     P       05 56 08.0  -0.1
AKASG                              pmax  pmax
      comp=Z,2.0nm,0.7s
AKBB  Malin Array Si    43.36 314 eP     P       05 56 08.2  +0.1
      comp=Z,6.8nm,0.8s
KIEV  Kiev              43.37 314 eP     P       05 56 08.2   0.0
      comp=Z,6.5nm,0.7s
KIEV  Kiev              43.37 314 i P    P       05 56 07.8  -0.4
KIEV                               pmax  pmax
      comp=Z,7.0nm,0.8s
AK11  Malin Array Si    43.39 314 eP     P       05 56 08.1  -0.3
CFR   Carcaliu          43.58 306⇓iP     P       05 56 10.7  +0.8
CFR   Carcaliu          43.58 306 ⇓P     P       05 56 10.7  +0.8
VRI   Vrincioaia        44.59 306⇑iP     P       05 56 20.3  +2.2
VRI   Vrincioaia        44.59 306 ⇑P     P       05 56 20.3  +2.2
PLOR  Plostina          44.64 306⇓iP     P       05 56 20.7  +2.1
PLOR  Plostina          44.64 306 ⇓P     P       05 56 20.7  +2.1
MLR   Muntele Rosu      45.13 306  P     P       05 56 24.4  +1.9
      comp=Z,10.0nm,0.7s,baz=254,slow=18,SNR=20
MLR   Muntele Rosu      45.13 306⇑iP     P       05 56 24.7  +2.1
MLR   Muntele Rosu      45.13 306 eP     P       05 56 24.4  +1.9
      comp=Z,12nm,0.7s
DOPR  Dopca             45.52 307⇑iP     P       05 56 27.2  +1.6
BURAR Bucovina Array    45.69 309⇓iP     P       05 56 28.1  +1.2
BURAR Bucovina Array    45.69 309 ⇓P     P       05 56 28.1  +1.2
BUR04 Bucovina Ar. S    45.69 309 eP     P       05 56 27.5  +0.5
BUR08 Bucovina Ar. S    45.70 309 eP     P       05 56 27.8  +0.8
VOIR                    45.76 306⇑iP     P       05 56 28.8  +1.3
VOIR                    45.76 306 ⇑P     P       05 56 28.8  +1.3
CJR   Cluj-Napoca       46.77 308⇓iP     P       05 56 37.3  +1.9
CJR   Cluj-Napoca       46.77 308 ⇓P     P       05 56 37.3  +1.9
FIA1  FINESS Array S    47.42 328 eP     P       05 56 40.6  +0.4
      comp=Z,10nm,0.6s
FINES FINESS Array B    47.42 328  P     P       05 56 40.7  +0.6
      comp=Z,8.1nm,0.5s,baz=113,slow=8.6,SNR=94
FINES                              LR    LR      06 17 56.0
      comp=Z,120nm,18.7s,baz=60,slow=38
MDVR  Moldovita         48.13 305⇓iP     P       05 56 47.5  +1.4
AGG   Agios Georgios    48.20 297 eP     P       05 56 46.8  +0.2
      comp=Z,13nm,0.8s
AGG   Agios Georgios    48.20 297 eP     P       05 56 46.8  +0.2
AGG                                pmax  pmax
      comp=Z,13nm,0.8s
TIXI  Tiksi             49.24  18  P     P       05 56 53.2  -0.8
      comp=Z,7.7nm,0.7s,baz=308,slow=14,SNR=3.2
TIXI                               LR    LR      06 19 48.7
      comp=Z,122nm,18.6s,baz=292,slow=39
DIVS  Divibare          49.41 304 eP     P       05 56 56.4  +0.5
      comp=Z,3.7nm,1.2s
KEV   Kevo              49.93 339 eP     P       05 57 00.1  +0.8
      comp=Z,11nm,0.6s
KEV   Kevo              49.93 339 eP     P       05 57 00.1  +0.8
KEV                                pmax  pmax
      comp=Z,11nm,0.6s
ARCES ARCESS Array B    50.32 338  P     P       05 57 03.2  +0.9
      comp=Z,12nm,0.6s,baz=107,slow=7.8,SNR=74
MORC  Moravsky Berou    50.78 312⇓iP     P       05 57 07.4  +1.2
MORC  Moravsky Berou    50.78 312 ⇓P     P       05 57 07.4  +1.2
CONA  Conrad Observa    51.99 309 eP     P       05 57 11.9  -3.4
      comp=Z,3.1nm,0.9s
SOKA  Soboth            52.66 308 eP     P       05 57 19.5  -0.7
      comp=Z,4.0nm,1.0s
OBKA  Obir              53.01 308  P     P       05 57 18.7  -4.1
      comp=Z,1.9nm,0.8s
BRG   Berggiesshubel    53.04 313 eP     P       05 57 23.6  +0.7
      comp=Z,4.1nm,0.9s
BRG   Berggiesshubel    53.04 313 eP     P       05 57 23.6  +0.7
BRG                                pmax  pmax
      comp=Z,4.0nm,0.9s
MOA   Molln             53.06 309 eP     P       05 57 20.7  -2.4
      comp=Z,2.3nm,0.7s
HFS   Hagfors           53.18 325  P     P       05 57 23.2  -0.6
      comp=Z,2.8nm,0.7s,baz=68,slow=8.0,SNR=10.0
GEA0  GERESS Array S    53.35 311 eP     P       05 57 25.9  +0.6
GERES GERESS Array B    53.35 311  P     P       05 57 24.9  -0.4
      comp=Z,0.7nm,0.6s,baz=79,slow=6.9,SNR=8.4
CLL   Collm             53.60 314 eP     P       05 57 28.0  +1.0
CLL                                LmV           07 34 00.0
      comp=Z,100nm,21.9s
KBA   Koelnbreinsper    53.77 309 eP     P       05 57 28.2  -0.3
      comp=Z,3.0nm,1.1s
NC405 NORSAR Array S    54.20 326 eP     P       05 57 31.8  +0.5
ABTA  Abfaltersbach     54.37 308  P     P       05 57 30.5  -2.3
      comp=Z,3.5nm,1.2s
NB2   NORSAR Subarra    54.44 326  P     P       05 57 32.8  -0.3
      comp=Z,0.4nm,0.5s,baz=89,slow=7.4
NOA   NORSAR Array B    54.44 326  P     P       05 57 32.7  -0.3
      comp=Z,1.4nm,0.8s,baz=90,slow=7.4,SNR=7.3
NOA                                LR    LR      06 21 55.4
      comp=Z,82nm,18.9s,baz=95,slow=37
MA2   Magadan           54.81  36  LR    LR      06 22 19.5
      comp=Z,47nm,19.3s,baz=258,slow=38
WTTA  Wattenberg        54.90 309 eP     P       05 57 36.5  -0.3
      comp=Z,3.8nm,0.5s
MOTA  Moosalm           55.25 309  P     P       05 57 38.0  -1.2
      comp=Z,1.9nm,0.5s
RETA  Reutte            55.46 309 eP     P       05 57 39.5  -1.2
      comp=Z,2.3nm,0.6s
FETA  Feichten          55.55 309 eP     P       05 57 41.4   0.0
      comp=Z,1.3nm,0.5s
SEY   Seymchan          55.62  32ceP     P       05 57 40.5  -1.0
SPA0  Spitsbergen Ar    55.77 347 eP     P       05 57 43.1  +0.7
SPITS Spitsbergen Ar    55.77 347  P     P       05 57 42.7  +0.3
      comp=Z,2.4nm,0.6s,baz=318,slow=6.2,SNR=4.5
DAVA  Damuels           56.08 309 eP     P       05 57 44.7  -0.5
      comp=Z,6.7nm,0.9s
DAVOX Davos/Dischmat    56.16 309  P     P       05 57 45.5  -0.3
      comp=Z,1.8nm,0.5s,baz=148,slow=17,SNR=5.3
TUE   Stuetta           56.57 308 eP     P       05 57 49.9  +1.1
      comp=Z,2.0nm,0.9s
KBS   Kingsbay          56.84 348 eP     P       05 57 50.3  +0.4
      comp=Z,17nm,1.4s
KBS   Kingsbay          56.84 348 eP     P       05 57 50.3  +0.4
KBS                                pmax  pmax
      comp=Z,17nm,1.4s
SENIN Lac Senin/Sane    57.98 309 eP     P       05 57 59.4  +0.6
      comp=Z,3.5nm,0.8s
BNI   Bardonecchia      58.67 307 eP     P       05 58 03.9  +0.3
      comp=Z,6.8nm,1.4s
BNI   Bardonecchia      58.67 307 eP     P       05 58 03.9  +0.3
BNI                                pmax  pmax
      comp=Z,7.0nm,1.4s
KEST  Kesra             58.99 296  P     P       05 58 06.0  +0.1
      comp=Z,3.7nm,0.7s,baz=60,slow=6.8,SNR=5.6
KEST  Kesra             58.99 296 eP     P       05 58 07.0  +1.1
      comp=Z,3.8nm,0.6s
SSB   Saint Sauveur     60.10 308 eP     P       05 58 13.8  +0.5
```

	comp=Z,3.8nm,0.7s						
SSB	**Saint Sauveur**	**60.10**	**308**	*e*P	**P**	**05 58 13.8**	**+0.5**
SSB				pmax	pmax		
	comp=Z,4.0nm,0.7s						
EKA	**Eskdalemuir Ar**	**62.59**	**320**	P	**P**	**05 58 28.9**	**-1.0**
	comp=Z,1.1nm,0.6s,baz=84,slow=7.2,SNR=6.8						
ESDC	**Sonseca Array**	**67.76**	**304**	P	**P**	**05 59 03.5**	**-0.4**
	comp=Z,0.7nm,0.7s,baz=49,slow=6.0,SNR=5.6						
WRA	**Warramunga Arr**	**71.61**	**127**	P	**P**	**05 59 27.4**	**-0.2**
	comp=Z,2.2nm,0.5s,baz=321,slow=5.9,SNR=30						
WB2	**Warramunga Arr**	**71.62**	**127**	*e*P	**P**	**05 59 27.4**	**-0.3**
	comp=Z,7.8nm,1.0s						
AS31	**Alice Springs**	**73.84**	**130**	*e*P	**P**	**05 59 40.7**	**-0.1**
	comp=Z,1.0nm,0.8s						
ASAR	**Alice Springs**	**73.84**	**130**	P	**P**	**05 59 40.5**	**-0.4**
	comp=Z,1.2nm,0.6s,baz=314,slow=6.0,SNR=15						
AS01	**Alice Springs**	**73.87**	**130**	*e*P	**P**	**05 59 41.3**	**+0.3**
TOA0	**Torodi Ar. Sit**	**74.05**	**276**	*e*P	**P**	**05 59 42.7**	**+0.4**
	comp=Z,4.3nm,1.0s						
TORD	**Torodi Ar. Bea**	**74.05**	**276**	P	**P**	**05 59 41.6**	**-0.8**
	comp=Z,1.1nm,0.7s,baz=91,slow=5.5						
TORD				LR	LR	06 36 33.9	
	comp=Z,30nm,18.4s,baz=350,slow=39						
TOLK	**Toolik Lake Re**	**75.11**	**17**	*e*P	**P**	**05 59 48.0**	**+0.4**
	comp=Z,6.3nm,0.7s						
RABL	**Rabaul**	**76.23**	**103**	*e*P	**P**	**05 59 55.0**	**+0.1**
	comp=Z,29nm,0.5s						
MLY	**Manley**	**77.41**	**20**	*e*P	**P**	**06 00 01.3**	**+0.5**
	comp=Z,3.4nm,0.6s						
TSUM	**Tsumeb**	**77.84**	**239**	LR	LR	06 32 50.1	
	comp=Z,36nm,19.6s,baz=240,slow=34						
BPAW	**Bear Paw Mtn.**	**78.00**	**21**	*e*P	**P**	**06 00 04.0**	**-0.1**
	comp=Z,2.6nm,0.9s						
CAST	**Castle Rocks**	**78.15**	**21**	*e*P	**P**	**06 00 05.5**	**+0.7**
	comp=Z,8.0nm,0.7s						
MDM	**Murphy Dome**	**78.19**	**19**	*e*P	**P**	**06 00 05.0**	**-0.1**
	comp=Z,12nm,1.4s						
KOWA	**Kowa**	**78.34**	**280**	P	**P**	**06 00 07.3**	**+0.6**
	comp=Z,3.5nm,0.8s,baz=81,slow=5.5,SNR=10						
KOWA	**Kowa**	**78.34**	**280**	*e*P	**P**	**06 00 07.8**	**+1.1**
	comp=Z,23nm,1.5s						
PPLA	**Purkeypile**	**78.49**	**22**	*e*P	**P**	**06 00 07.3**	**+0.4**
	comp=Z,6.6nm,1.2s						
BOSA	**Boshof**	**78.56**	**228**	P	**P**	**06 00 10.8**	**+3.1**
	comp=Z,2.5nm,0.7s,baz=48,slow=6.8,SNR=4.2						
BOSA				LR	LR	06 30 55.2	
	comp=Z,24nm,20.3s,baz=207,slow=33						
WRH	**Wood River Hil**	**78.59**	**19**	*e*P	**P**	**06 00 06.8**	**-0.5**
	comp=Z,5.1nm,1.4s						
IL1	**Eielson Array**	**78.71**	**19**	*e*P	**P**	**06 00 07.3**	**-0.6**
ILAR	**Eielson Array**	**78.71**	**19**	P	**P**	**06 00 07.5**	**-0.4**
	comp=Z,1.4nm,0.9s,baz=308,slow=4.4,SNR=14						
INK	**Inuvik**	**78.91**	**12**	P	**P**	**06 00 07.3**	**-1.5**
	comp=Z,1.3nm,0.5s,baz=312,slow=3.1,SNR=7.2						
INK	**Inuvik**	**78.91**	**12**	*e*P	**P**	**06 00 08.8**	**-0.1**
	comp=Z,6.5nm,1.3s						
INK	**Inuvik**	**78.91**	**12**	*e*P	**P**	**06 00 08.8**	**-0.1**
INK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
SKT	**Skwentna**	**79.36**	**22**	*e*P	**P**	**06 00 11.6**	**0.0**
	comp=Z,8.5nm,1.1s						
RIDG	**Independ'e Rid**	**80.07**	**19**	*e*P	**P**	**06 00 14.8**	**-0.6**
	comp=Z,3.6nm,0.6s						
SCRK	**Sand Creek**	**80.12**	**18**	*e*P	**P**	**06 00 15.9**	**+0.1**
	comp=Z,4.8nm,1.1s						
CHGN	**Chignik**	**80.69**	**29**	*e*P	**P**	**06 00 18.4**	**-0.3**
	comp=Z,15nm,1.0s						
DAWY	**Dawson**	**81.25**	**17**	*e*P	**P**	**06 00 21.5**	**-0.2**
	comp=Z,8.8nm,1.4s						
FID	**Port Fidalgo**	**81.90**	**21**	*e*P	**P**	**06 00 25.6**	**+0.4**
	comp=Z,5.6nm,1.1s						
DBIC	**Dimbokro**	**82.79**	**274**	P	**P**	**06 00 31.7**	**+1.1**
	comp=Z,4.5nm,0.9s,baz=240,slow=8.1,SNR=3.5						
STKA	**Stephens Creek**	**84.37**	**132**	P	**P**	**06 00 36.6**	**-1.6**
	comp=Z,2.4nm,0.9s,baz=139,slow=9.3,SNR=2.5						
WHY	**Whitehorse**	**85.26**	**17**	*e*P	**P**	**06 00 42.7**	**+0.2**
	comp=Z,2.3nm,0.8s						
YKA	**Yellowknife Ar**	**87.17**	**7**	P	**P**	**06 00 51.2**	**-0.5**
	comp=Z,1.1nm,0.7s,baz=338,slow=4.9,SNR=7.0						
DLBC	**Dease Lake**	**88.40**	**16**	P	**P**	**06 00 57.9**	**+0.1**
	comp=Z,1.5nm,0.5s,baz=11,slow=6.6,SNR=5.5						
TX31	**Lajitas Ar. Si**	**121.00**	**4**	*e*PKPdf	**PKPdf**	**06 06 59.9**	**+0.9**
TXAR	**Lajitas Array**	**121.00**	**4**	PKP	**PKPdf**	**06 06 59.4**	**+0.4**
	comp=Z,0.4nm,0.5s,baz=182,slow=0.5,SNR=18						
TRQA	**Tornquist**	**148.07**	**245**	*e*PKPbc	**PKPbc**	**06 07 52.6**	**+1.1**
TRQA	**Tornquist**	**148.07**	**245**	*e*PKP2	**PKPbc**	**06 07 52.7**	**+1.1**
LPAZ	**La Paz**	**148.34**	**288**	PKPbc	**PKPbc**	**06 07 53.4**	**-0.2**
	comp=Z,2.0nm,0.9s,baz=309,slow=4.1,SNR=5.5						
LPAZ	**La Paz**	**148.34**	**288**	*e*PKPbc	**PKPbc**	**06 07 53.9**	**+0.3**
MNMC	**Minye Minye**	**150.93**	**285**	*e*PKPbc	**PKPbc**	**06 08 00.7**	**+1.1**
PB11	**IPOC Station P**	**151.26**	**284**	*e*PKPbc	**PKPbc**	**06 08 01.2**	**+1.0**

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*ISCJB **28** 06:01:34.6±0.2, 60°.95N±0°.02×150°.91W±0°.03, h78^{km}±2^{km}, mb4.0/29, Error ellipse: s-maj=2.8km s-min=2.3km az=161.5*

*IDC **28** 06:01:35.0±1.3, 60°.98N×151°.30W, h65^{km}±14^{km}, mb3.6/14, mb1 3.8/18, mb1mx3.5/79, mbtmp3.9/18, MS3.3/4, Ms1 3.3/4, ms1mx2.5/75, Error ellipse: s-maj=14.7km s-min=8.7km az=108.0*

*NEIC **28** 06:01:36.6±0.0, 60°.98N×150°.96W, h68^{km}, mb4.2/15, ML3.9(AEIC), After AEIC.*

NEIC Felt [IV] at Soldotna, [III] at Anchorage and [II] at Kenai. Also felt at Chugiak, Eagle River, Girdwood, Sterling and Willow.

ISC 28 06:01:36.3±0.7**, 60°.94N**±0°.03×**150°.92W**±0°.03**, h75**^{km}±6^{km}**, n143,** σ1^{s}**46**/177**, mb4.2**/29**, Kenai Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FIB	**Fire Island**	**0.43**	**58**	P	**Pn**	**06 01 48.7**	**-0.2**
RC01	**Rabbit Creek A**	**0.60**	**75**	P	**Pn**	**06 01 49.7**	**-0.8**
RC01				S	**Sn**	**06 02 00.2**	**-0.8**
SPU	**Mount Spurr**	**0.60**	**294**	*e*Pn	**Pn**	**06 01 48.9**	**-1.7**
SPCG	**Spurr Capps Gl**	**0.64**	**304**	P	**Pn**	**06 01 49.3**	**-1.7**
SPCG				S	**Sn**	**06 01 59.3**	**-2.7**
SPCP	**Crater Peak Br**	**0.68**	**299**	P	**Pn**	**06 01 50.0**	**-1.6**
SPCP				S	**Sn**	**06 02 00.4**	**-2.4**
PTE	**Portage**	**0.93**	**94**	P	**Pn**	**06 01 54.0**	**-0.1**
DFR	**Drift River**	**0.94**	**249**	P	**Pn**	**06 01 53.3**	**-1.0**
DFR				S	**Sn**	**06 02 06.6**	**-1.2**
RDJH	**Redoubt Jeurge**	**0.99**	**250**	P	**Pn**	**06 01 54.2**	**-0.8**
RDJH				S	**Sn**	**06 02 08.0**	**-1.1**
RSO	**Redoubt South**	**1.02**	**243**	*e*Pn	**Pn**	**06 01 54.8**	**-0.7**
RDWB	**Redoubt West**	**1.05**	**245**	P	**Pn**	**06 01 55.0**	**-0.8**
RDWB				S	**Sn**	**06 02 09.4**	**-0.9**
SKT	**Skwentna**	**1.08**	**345**	P	**Pn**	**06 01 54.8**	**-1.3**
SKT				S	**Sn**	**06 02 09.1**	**-1.7**
PMR	**Palmer**	**1.08**	**52**	P	**Pn**	**06 01 55.2**	**-0.8**
PMR				S	**Sn**	**06 02 09.3**	**-1.5**
BRLK	**Bradley Lake**	**1.18**	**179**	P	**Pn**	**06 01 57.5**	**+0.1**
BRLK				*e*Sn	**Sn**	**06 02 13.8**	**+0.6**
GHO	**Glory Hole Cre**	**1.27**	**48**	*e*Pn	**Pn**	**06 01 57.9**	**-0.6**
GHO				*e*Sn	**Sn**	**06 02 14.8**	**-0.4**
KNK	**Knik Glacier**	**1.28**	**67**	P	**Pn**	**06 01 58.2**	**-0.4**
KNK				S	**Sn**	**06 02 14.8**	**-0.6**
ILIM	**Iliamna**	**1.33**	**230**	P	**Pn**	**06 01 59.0**	**-0.2**
HOM	**Homer**	**1.34**	**196**	P	**Pn**	**06 01 60.0**	**+0.7**
HOM				*e*Sn	**Sn**	**06 02 16.5**	**-0.1**
CNPM	**China Poot**	**1.43**	**186**	P	**Pn**	**06 02 00.6**	**+0.1**
CNPM				S	**Sn**	**06 02 18.6**	**-0.2**
TRAP	**Trapper Creek**	**1.43**	**13**	P	**Pn**	**06 01 59.8**	**-0.7**
SML	**Sawmill**	**1.52**	**54**	P	**Pn**	**06 02 01.0**	**-0.7**
SML				S	**Sn**	**06 02 19.6**	**-1.2**
GLI	**Glacier Island**	**1.87**	**90**	P	**Pn**	**06 02 04.9**	**-1.4**
GLI				*e*Sn	**Sn**	**06 02 28.2**	**-0.9**
AUW	**Augustine West**	**2.03**	**220**	P	**Pn**	**06 02 09.1**	**+0.7**
AUI	**Augustine Isla**	**2.04**	**219**	P	**Pn**	**06 02 09.3**	**+0.7**
PPLA	**Purkeypile**	**2.05**	**344**	P	**Pn**	**06 02 07.8**	**-1.0**
FID	**Port Fidalgo**	**2.18**	**93**	P	**Pn**	**06 02 08.7**	**-1.8**
FID				S	**Sn**	**06 02 34.5**	**-2.2**
VMT	**TAPS Tl Valdez**	**2.22**	**84**	P	**Pn**	**06 02 10.2**	**-0.8**
HIN	**Hinchinbrook I**	**2.24**	**102**	P	**Pn**	**06 02 10.1**	**-1.2**
SVW2	**Sparrevohn**	**2.27**	**276**	P	**Pn**	**06 02 10.2**	**-1.5**
SVW2				S	**Sn**	**06 02 36.1**	**-2.6**
CDD	**Cape Douglas**	**2.44**	**215**	P	**Pn**	**06 02 14.4**	**+0.5**
MCNL	**McNeil River**	**2.46**	**226**	P	**Pn**	**06 02 14.2**	**0.0**
KLU	**Klutina**	**2.48**	**75**	P	**Pn**	**06 02 13.8**	**-0.7**
KLU				*e*Sn	**Sn**	**06 02 43.2**	**-0.6**
DIV	**Divide**	**2.51**	**84**	P	**Pn**	**06 02 14.2**	**-0.8**
DIV				S	**Sn**	**06 02 42.8**	**-1.9**
TRF	**Thorofare Moun**	**2.53**	**6**	P	**Pn**	**06 02 14.9**	**-0.5**
CAST	**Castle Rocks**	**2.54**	**348**	P	**Pn**	**06 02 14.2**	**-1.1**
CAST				*e*Sn	**Sn**	**06 02 46.4**	**+1.1**
EYAK	**Cordova Ski Ar**	**2.57**	**97**	P	**Pn**	**06 02 14.3**	**-1.4**
EYAK				S	**Sn**	**06 02 44.9**	**-1.0**
KTH	**Kantishna Hill**	**2.62**	**0**	P	**Pn**	**06 02 16.5**	**+0.1**
KTH				*e*Sn	**Sn**	**06 02 47.2**	**0.0**
DHY	**Denali Highway**	**2.72**	**36**	P	**Pn**	**06 02 17.3**	**-0.5**
MID	**Middleton Isla**	**2.75**	**122**	P	**Pn**	**06 02 17.4**	**-0.7**
MID				S	**Sn**	**06 02 49.2**	**-1.0**
MCK	**McKinley**	**2.95**	**17**	P	**Pn**	**06 02 20.9**	**+0.1**
MCK				*e*Sn	**Sn**	**06 02 57.3**	**+2.3**
CHUM	**Lake Minchumin**	**3.02**	**348**	P	**Pn**	**06 02 20.8**	**-0.9**
GOAT	**Goat Mountain**	**3.06**	**94**	P	**Pn**	**06 02 21.2**	**-1.2**
GOAT				S	**Sn**	**06 02 56.5**	**-1.4**
BMRM	**Bremner River**	**3.08**	**87**	P	**Pn**	**06 02 21.4**	**-1.3**
HARP	**HAARP**	**3.12**	**59**	*e*Pn	**Pn**	**06 02 22.8**	**-0.3**
RAGM	**Ragged Mountai**	**3.13**	**98**	*e*Pn	**Pn**	**06 02 21.4**	**-1.9**
RAGM				*e*Sn	**Sn**	**06 02 59.4**	**-0.1**
BPAW	**Bear Paw Mtn.**	**3.17**	**360**	*e*Pn	**Pn**	**06 02 23.0**	**-0.8**
PAX	**Paxson**	**3.28**	**49**	P	**Pn**	**06 02 25.4**	**0.0**
KDAK	**Kodiak Island**	**3.28**	**196**	P	**Pn**	**06 02 24.3**	**-1.0**
	6.3nm,0.3s,baz=52,slow=21,SNR=204						
KDAK				S	**Sn**	**06 03 01.3**	**-1.9**
	30nm,0.3s,baz=9.9,slow=5.6,SNR=5.6						
KAIM	**Kayak Island**	**3.38**	**105**	P	**Pn**	**06 02 24.8**	**-1.9**
PS10	**TAPS Pump St10**	**3.47**	**42**	P	**Pn**	**06 02 29.3**	**+1.5**
GLB	**Gilahina Butte**	**3.48**	**79**	P	**Pn**	**06 02 27.3**	**-0.7**
KELA	**Mount Kelaz**	**3.50**	**226**	P	**Pn**	**06 02 28.6**	**+0.2**
VRDI	**Verde Repeater**	**3.64**	**82**	P	**Pn**	**06 02 29.4**	**-1.0**
WRH	**Wood River Hil**	**3.77**	**19**	*e*Pn	**Pn**	**06 02 31.0**	**-0.9**
CRQM	**Cirque**	**3.81**	**89**	P	**Pn**	**06 02 31.5**	**-1.2**
OHAK	**Old Harbor**	**3.93**	**199**	P	**Pn**	**06 02 31.7**	**-2.4**
TGL	**Tana Glacier**	**3.96**	**89**	*e*Pn	**Pn**	**06 02 33.5**	**-1.2**
CCB	**Clear Creek Bu**	**3.98**	**20**	P	**Pn**	**06 02 33.8**	**-1.0**
RIDG	**Independ'e Rid**	**3.99**	**43**	*e*Pn	**Pn**	**06 02 35.2**	**+0.2**
WAX	**Waxell Ridge**	**4.00**	**94**	P	**Pn**	**06 02 33.5**	**-1.6**
MLY	**Manley**	**4.10**	**1**	P	**Pn**	**06 02 35.8**	**-0.7**
BALM	**Baldy**	**4.18**	**85**	*e*Pn	**Pn**	**06 02 36.6**	**-1.1**
BARK	**Barkley Ridge**	**4.18**	**94**	P	**Pn**	**06 02 36.4**	**-1.3**
COLA	**College**	**4.19**	**18**	*e*Pn	**Pn**	**06 02 36.9**	**-0.7**
DOT	**Dot Lake**	**4.20**	**47**	*e*Pn	**Pn**	**06 02 37.1**	**-0.7**
MDM	**Murphy Dome**	**4.21**	**16**	P	**Pn**	**06 02 36.9**	**-1.1**
ISLE	**Juniper Island**	**4.22**	**91**	P	**Pn**	**06 02 36.7**	**-1.6**
IL1	**Eielson Array**	**4.26**	**24**	*e*Pn	**Pn**	**06 02 38.5**	**-0.2**
IL1				*e*Sn	**Sn**	**06 03 29.3**	**+2.3**
ILAR	**Eielson Array**	**4.26**	**24**	P	**Pn**	**06 02 38.1**	**-0.5**
	18nm,0.3s,baz=208,slow=14,SNR=372						
ILAR				S	**Sn**	**06 03 28.4**	**+1.3**
	29nm,0.3s,baz=106,slow=15,SNR=20						
ILB	**Eielson Array**	**4.26**	**24**	*e*Pn	**Pn**	**06 02 38.1**	**-0.5**
BAGL	**Bagley Icefiel**	**4.36**	**92**	P	**Pn**	**06 02 38.9**	**-1.1**
SCRK	**Sand Creek**	**4.43**	**44**	*e*Pn	**Pn**	**06 02 40.4**	**-0.6**
GRNC	**Granite Creek**	**4.49**	**89**	P	**Pn**	**06 02 40.8**	**-1.2**
CTGM	**Chitina Glacie**	**4.68**	**86**	P	**Pn**	**06 02 44.3**	**-0.1**
GCSA	**Galena City Sc**	**4.69**	**327**	P	**Pn**	**06 02 43.4**	**-1.0**
SII	**Sitkinak Islan**	**4.71**	**203**	P	**Pn**	**06 02 44.9**	**+0.1**
YUK2	**White River**	**4.92**	**76**	P	**Pn**	**06 02 47.2**	**-0.6**
IM01	**Indian Mountai**	**5.22**	**347**	P	**Pn**	**06 02 51.0**	**-0.7**
PNL	**Peninsula**	**5.87**	**98**	P	**Pn**	**06 02 59.0**	**-1.6**
EGAK	**Eagle**	**5.89**	**45**	P	**Pn**	**06 03 00.5**	**-0.3**
CHGN	**Chignik**	**6.08**	**223**	*e*Pn	**Pn**	**06 03 03.2**	**-0.2**
FYU	**Fort Yukon**	**6.18**	**22**	*e*Pn	**Pn**	**06 03 04.9**	**+0.1**
DAWY	**Dawson**	**6.19**	**55**	*e*Pn	**Pn**	**06 03 04.7**	**-0.3**
COLD	**Coldfoot**	**6.32**	**3**	*e*Pn	**Pn**	**06 03 06.4**	**-0.2**
HYT	**Haines Junctio**	**6.55**	**85**	P	**Pn**	**06 03 09.8**	**-0.2**
ANM	**Nome**	**7.55**	**305**	*e*Pn	**Pn**	**06 03 23.9**	**+0.4**
TOLK	**Toolik Lake Re**	**7.75**	**4**	*e*Pn	**Pn**	**06 03 28.1**	**+1.9**
TOLK				*e*Sn	**Sn**	**06 04 55.0**	**+2.7**
WHY	**Whitehorse**	**7.85**	**85**	P	**Pn**	**06 03 26.9**	**-0.8**
BESE	**Bessie Mountai**	**8.45**	**99**	*e*Pn	**Pn**	**06 03 35.5**	**-0.3**
BESE				*e*Sn	**Sn**	**06 05 07.7**	**-1.8**
JIS	**Juneau Island**	**8.80**	**100**	*e*Pn	**Pn**	**06 03 39.5**	**-1.0**
JIS				*e*Sn	**Sn**	**06 05 12.4**	**-5.5**
SIT	**Sitka**	**8.94**	**109**	*e*Pn	**Pn**	**06 03 41.3**	**-1.1**
INK	**Inuvik**	**10.46**	**38**	P	**Pn**	**06 04 01.7**	**-1.4**
	0.7nm,0.3s,baz=246,slow=15,SNR=20						
INK				S	**Sn**	**06 06 00.7**	**+2.4**
	0.2nm,0.3s,baz=287,slow=28,SNR=1.1						
INK	**Inuvik**	**10.46**	**38**	*e*Pn	**Pn**	**06 04 02.2**	**-0.8**
INK				S	**Sn**	**06 06 00.7**	**+2.4**
DLBC	**Dease Lake**	**10.84**	**94**	P	**Pn**	**06 04 08.9**	**+0.5**
	0.2nm,0.3s,baz=157,slow=14,SNR=2.3						
DLBC				LR	LR	06 08 20.7	
	comp=Z,79nm,19.2s,baz=292,slow=37						
DLBC	**Dease Lake**	**10.84**	**94**	*e*Pn	**Pn**	**06 04 10.7**	**+2.3**
CRAG	**Craig**	**10.86**	**112**	*e*Pn	**Pn**	**06 04 08.0**	**-0.6**
CRAG				*e*Sn	**Sn**	**06 06 03.9**	**-4.2**
UNV	**Unalaska Valle**	**10.99**	**237**	*e*Pn	**Pn**	**06 04 11.9**	**+1.6**
DIB	**Dawson Inlet,**	**12.64**	**120**	*e*Pn	**Pn**	**06 04 32.5**	**-0.3**
YKW3	**Yellowknife Ar**	**17.12**	**69**	*e*Pn	**P**	**06 05 30.6**	**-0.2**
	5.5nm,1.0s						
YKA	**Yellowknife Ar**	**17.14**	**69**	P	**P**	**06 05 31.2**	**+0.2**
	0.8nm,0.3s,baz=280,slow=9.9,SNR=40						
WALA	**Waterton Lakes**	**23.97**	**103**	*e*P	**P**	**06 06 46.0**	**+2.6**
	1.9nm,1.1s						
K05A	**Summer Lake**	**25.65**	**122**	*e*P	**P**	**06 07 02.8**	**+3.9**
	1.6nm,0.9s						
SAC	**San Andreas**	**29.44**	**130**	*e*pP	pP	06 07 47.9	-2.3
NVAR	**Mina Array Bea**	**30.33**	**123**	P	**P**	**06 07 42.9**	**+2.3**
	0.6nm,0.6s,baz=305,slow=9.5,SNR=3.2						
PDAR	**Pinedale Array**	**30.65**	**107**	P	**P**	**06 07 45.5**	**+2.0**
	0.3nm,0.5s,baz=323,slow=5.2,SNR=5.0						
PDAR	**Pinedale Array**	**30.65**	**107**	*e*P	**P**	**06 07 46.1**	**+2.6**
DAC	**Darwin (Calif)**	**32.46**	**124**	*e*P	**P**	**06 07 59.7**	**+0.3**
	3.4nm,1.1s						
WASM	**Alta Sierra Ca**	**32.55**	**126**	*e*P	**P**	**06 08 01.3**	**+1.1**
WASM				*e*PcP	**PcP**	**06 10 43.6**	**-1.3**
WASM				*e*S	**S**	**06 13 07.8**	**-2.1**
RWWY	**Rawlins**	**32.59**	**106**	*e*P	**P**	**06 08 01.8**	**+1.3**
	5.4nm,1.0s						
AGMN	**Agassiz Nation**	**33.24**	**87**	*e*P	**P**	**06 08 07.9**	**+2.1**
	2.6nm,0.5s						
EYMN	**Ely**	**35.61**	**84**	*e*P	**P**	**06 08 27.9**	**+1.6**
	4.8nm,1.0s						
ECSD	**EROS Data Cent**	**36.13**	**93**	*e*P	**P**	**06 08 32.2**	**+1.5**
	0.6nm,0.6s						
E38A	**The Farm, Brul**	**36.52**	**85**	*e*P	**P**	**06 08 35.5**	**+1.4**
	3.8nm,0.8s						
G40A	**Rib Lake**	**38.14**	**86**	*e*P	**P**	**06 08 49.4**	**+1.7**
	3.2nm,1.0s						
SPA0	**Spitsbergen Ar**	**40.90**	**4**	*e*P	**P**	**06 09 10.3**	**0.0**
SPITS	**Spitsbergen Ar**	**40.90**	**4**	LR	LR	06 25 19.3	
	comp=Z,54nm,20.9s,baz=200,slow=35						
ERM	**Erimo**	**43.08**	**275**	*e*P	**P**	**06 09 30.0**	**+1.6**
	23nm,1.1s						
TXAR	**Lajitas Array**	**44.38**	**114**	P	**P**	**06 09 40.5**	**+1.4**
	0.2nm,0.6s,baz=339,slow=7.2,SNR=2.9						
TRQ	**Mont Tremblant**	**44.93**	**73**	*e*P	**P**	**06 09 44.1**	**+0.9**
FRNY	**Flat Rock**	**46.41**	**73**	*e*P	**P**	**06 09 54.9**	**+0.1**
	2.2nm,0.8s						
TKL	**Tuckaleechee C**	**48.63**	**89**	LR	LR	06 31 42.3	
	comp=Z,36nm,19.6s,baz=336,slow=37						
ODNJ	**Ogdensburg**	**48.80**	**77**	*e*P	**P**	**06 10 14.5**	**+1.1**
	3.7nm,0.5s						
Z50A	**Ashland**	**49.52**	**93**	*e*P	**P**	**06 10 20.2**	**+1.3**
	3.2nm,0.7s						
KSRS	**Korea Array**	**53.97**	**284**	P	**P**	**06 10 52.2**	**+0.3**
	2.9nm,0.8s,baz=35,slow=6.5,SNR=10						
KSAR	**Wonju Array Be**	**54.00**	**284**	P	**P**	**06 10 52.2**	**0.0**
ULN	**Ulaanbaatar**	**54.78**	**306**	*e*P	**P**	**06 10 58.5**	**+0.6**
	4.1nm,0.6s						
SONA1	**Songino Array**	**55.05**	**307**	*e*P	**P**	**06 11 00.7**	**+0.8**
SONM	**Songino Array**	**55.06**	**307**	P	**P**	**06 10 59.4**	**-0.5**
	7.7nm,0.7s,baz=38,slow=7.2,SNR=36						
SONM				LR	LR	06 35 55.1	
	comp=Z,25nm,18.4s,baz=65,slow=38						
ZALV	**Zalesovo Beam**	**57.21**	**324**	P	**P**	**06 11 14.2**	**-0.9**
	1.8nm,0.3s,baz=28,slow=7.3,SNR=2.5						
NOA	**NORSAR Array B**	**57.57**	**10**	P	**P**	**06 11 17.2**	**-0.3**
	0.2nm,0.6s,baz=351,slow=7.7,SNR=2.5						
FIA1	**FINESS Array S**	**57.91**	**2**	*e*P	**P**	**06 11 19.1**	**-0.7**
FINES	**FINESS Array B**	**57.92**	**2**	P	**P**	**06 11 18.7**	**-1.1**
	0.9nm,0.7s,baz=14,slow=8.6,SNR=8.0						
HHC	**Hu-ho-hao-te**	**58.65**	**298**	*e*P	**P**	**06 11 24.8**	**-0.6**
HHC				pP	pP	06 11 40.8	-3.9
HHC				sP	sP	06 11 51.3	-1.8
HHC				S	**S**	**06 19 16.5**	**-7.4**
HHC				sS	pS	06 19 48.5	+2.8
HHC				pmax	pmax		
	comp=Z,11nm,1.1s						
HHC				pmax	pmax		
	comp=Z,220nm,8.0s						
HFS	**Hagfors**	**58.67**	**9**	P	**P**	**06 11 23.8**	**-1.3**
	comp=Z,0.7nm,0.6s,baz=15,slow=7.4,SNR=4.0						
BVAR	**Borovoye Array**	**61.70**	**333**	P	**P**	**06 11 44.2**	**-1.7**
	comp=Z,1.2nm,0.6s,baz=54,slow=7.7,SNR=4.2						
KURK	**Kurchatov**	**61.81**	**327**	P	**P**	**06 11 46.1**	**-0.6**
KURBB	**Kurchatov Arra**	**61.92**	**327**	P	**P**	**06 11 46.1**	**-1.3**
	comp=Z,0.8nm,0.4s,baz=29,slow=6.7,SNR=7.7						
MK31	**Makanchi Array**	**64.32**	**322**	*e*P	**P**	**06 12 02.3**	**-1.2**
MKAR	**Makanchi Array**	**64.32**	**322**	P	**P**	**06 12 02.0**	**-1.5**
	comp=Z,0.4nm,0.4s,baz=28,slow=7.3,SNR=9.0						
MK01	**Makanchi Array**	**64.34**	**322**	*e*P	**P**	**06 12 02.4**	**-1.1**
WMQ	**Urumqi**	**65.28**	**317**	P	P	06 12 14.0	+4.3
AKTO	**Aktyubinsk**	**66.56**	**340**	P	**P**	**06 12 16.6**	**-1.2**
	comp=Z,2.4nm,0.5s,baz=38,slow=7.6,SNR=6.6						
ABKAR	**Akbulak array**	**67.37**	**339**	*e*P	**P**	**06 12 22.4**	**-0.5**
AKASG	**Malin Array Be**	**68.71**	**360**	P	**P**	**06 12 29.9**	**-1.3**
	comp=Z,0.7nm,0.3s,baz=1.2,slow=6.7,SNR=5.0						

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*ISN **28** 06:09:52.2±0.7, 32°.48N×46°.97E, h0^{km}±3^{km}, ML3.1*

*CSEM **28** 06:09:54.5±0.3, 32°.39N×46°.96E, h10^{km}, ML3.1, Error ellipse: s-maj=10.0km s-min=5.4km az=174.0*

TEH 28 06:09:56.2, 32°.51N×47°.13E, h18^{km}, ML3.1, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IKFM	**Kafar-mosalman**	**1.18**	**31**	*e*Pg	Pb	06 10 18.2	+0.2
IKFM				*e*		06 10 42.9	
	comp=E,99nm,0.3s						
IKFM				*e*		06 10 45.5	
	comp=Z,99nm,0.2s						
IKFM				*e*		06 10 49.1	
	comp=N,99nm,0.2s						
SHGR	**Shooshtar-Gavs**	**1.47**	**105**	*e*Pg	Pg	06 10 24.2	-0.3
SHGR	**Shooshtar-Gavs**	**1.47**	**105**	*e*Pg	Pg	06 10 24.2	-0.3
SHGR				*e*Sg	Sg	06 10 46.0	+2.3
NSR	**Nassriya**	**1.72**	**210**	*e*Pn	Pn	06 10 22.0	-3.2
	SNR=3.0						
NSR				*e*Sn	Sn	06 10 43.0	-3.7
	SNR=3.0						
KCHF	**Cheshme Sefid,**	**1.76**	**358**	*e*Pn	Pb	06 10 27.7	-0.4
KCHF				*e*		06 11 00.0	
	comp=Z,99nm,0.2s						
IVIS	**Veis**	**2.02**	**353**	*e*Pn	Pn	06 10 30.9	+1.3
IVIS				*e*		06 11 07.2	
	comp=Z,2µm,0.2s						
IVIS				*e*		06 11 08.1	
	comp=N,4µm,0.2s						
IVIS				*e*		06 11 10.8	
	comp=E,2µm,0.2s						
IBZA	**Bozab**	**2.05**	**17**	*e*Pn	Pb	06 10 32.6	-0.4
IBZA				*e*		06 11 09.6	
	comp=Z,99nm,0.3s						
HSAM	**Samen**	**2.10**	**36**	*e*Pn	Pb	06 10 32.4	-1.5
HSAM				*e*		06 11 08.7	
	comp=N,99nm,0.3s						
HSAM				*e*		06 11 22.4	
	comp=E,99nm,0.5s						
ILIN	**Lien**	**2.41**	**357**	*e*Pn	Pn	06 10 36.9	+1.9
ILIN				*e*		06 10 39.9	
	comp=N,611nm,0.0s						
ILIN				*e*		06 11 15.3	
	comp=Z,801nm,0.3s						
ILIN				*e*		06 11 19.1	
	comp=E,1µm,0.4s						
BHD	**Baghdad**	**2.44**	**289**	*e*Pn	Pn	06 10 33.0	-2.1
	SNR=3.0						
BHD				*e*Sn	Sn	06 11 01.0	-3.4
	SNR=3.0						
KHMZ	**Khomeyn**	**2.67**	**62**	*e*Pn	Pn	06 10 40.8	+2.2
KHMZ	**Khomeyn**	**2.67**	**62**	*e*Pn	Pn	06 10 40.8	+2.2
ASAO	**Ashtian**	**3.16**	**49**	*e*Pn	Pn	06 10 47.3	+2.0
ASAO	**Ashtian**	**3.16**	**49**	*e*Pn	Pn	06 10 47.2	+1.9
HKZM	**Kohzaman**	**3.22**	**27**	*e*Pn	Pn	06 10 48.5	+2.4
HKZM				*e*		06 10 55.9	
	comp=N,99nm,0.1s						
HKZM				*e*		06 11 35.4	
	comp=Z,99nm,0.2s						
HKZM				*e*		06 11 51.5	
	comp=E,99nm,0.3s						
IKLH	**Kolahrood**	**3.83**	**77**	*e*Pn	Pn	06 10 56.6	+2.1
IKLH				*e*		06 10 59.8	
	comp=Z,198nm,0.1s						
IKLH				*e*		06 12 07.0	
	comp=N,292nm,0.2s						
IKLH				*e*		06 12 07.3	
	comp=E,285nm,0.2s						
GHVR	**GHOM**	**4.00**	**59**	*e*Pn	Pn	06 10 58.8	+2.1
GHVR	**GHOM**	**4.00**	**59**	*e*Pn	Pn	06 10 58.8	+2.1
IRAM	**Ramesheh**	**4.51**	**98**	*e*		06 12 06.0	
	comp=E,90nm,0.1s						
IRAM				*e*		06 12 16.1	
	comp=Z,60nm,0.3s						
ANAR	**Anarak**	**5.59**	**81**	*e*Pn	Pn	06 11 19.6	+0.9
ANAR				*e*		06 11 20.0	
	comp=E,99nm,0.1s						
ANAR				*e*		06 11 25.9	
	comp=N,99nm,0.1s						
ANAR				*e*		06 12 04.3	
	comp=Z,99nm,0.2s						
RTB	**Rutbah**	**5.77**	**277**	*e*Pn	Pn	06 11 19.5	-1.5
	SNR=3.0						
RTB				*e*Sn	Sn	06 12 21.0	-5.8
	SNR=3.0						

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*KRNET **28** 06:12:05.9±0.1, 39°.09N×73°.44E, mb3.1*

*NNC **28** 06:12:05.8±1.6, 39°.20N×74°.11E, h0^{km}, mb3.4, mpv3.1, Error ellipse: s-maj=14.7km s-min=8.3km az=42.0*

*SOME **28** 06:12:11.8, 39°.52N×73°.93E, h25^{km}*

ISC 28 06:12:07.5±2.2**, 39°.3N**±0°.1×**74°.25E**±0°.04**, h10**^{km}**, n22,** σ1^{s}**91**/39**, 22C-10D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**0.89**	**320**	⇓P	**Pg**	**06 12 23.6**	**-1.1**
	13nm,0.3s						
SFK				⇓S	**Sb**	**06 12 37.1**	**-0.2**
	54nm,0.7s						
SFK	**Sufi-Kurgan**	**0.89**	**320**	⇓*i*P	**Pg**	**06 12 23.6**	**-1.1**
	baz=3.0						
SFK				⇓*i*S	**Sb**	**06 12 36.8**	**-0.4**
	baz=3.0						
KSH	**Kashi**	**1.34**	**82**	Pg	Pn	06 12 24.8	-7.7
KSH				Sg	Sb	06 12 37.8	-12
KSH				smax	smax		
	comp=N,240nm,0.7s						
KSH				smax	smax		
	comp=E,220nm,1.0s						
ARSB	**Arslanbob**	**2.21**	**334**	⇑*i*P	**Pb**	**06 12 46.9**	**-0.8**
	baz=51						
ARSB				⇑*i*S	**Sb**	**06 13 16.0**	**+0.8**
	baz=51						
AML	**Almayashu**	**2.82**	**352**	⇑*i*P	**Pb**	**06 12 57.6**	**-0.7**
	baz=4.0						
AML				⇑*i*S	**Sb**	**06 13 35.6**	**+2.6**
	baz=4.0						
KZA	**Kyzart**	**2.84**	**15**	⇑*i*P	**Pg**	**06 13 00.2**	**-1.8**
	baz=24						
KZA				⇑*i*S	**Sg**	**06 13 40.2**	**+1.4**
	baz=24						
UCH	**Uchtor**	**2.90**	**4**	⇓*i*P	**Pb**	**06 12 59.6**	**+0.1**
	baz=14						
UCH				⇓*i*S	**Sg**	**06 13 39.6**	**-0.9**
	baz=14						
ULHL	**Ulahol**	**3.27**	**27**	⇑*i*P	**Pb**	**06 13 07.0**	**+1.2**
	baz=33						
ULHL				⇑*i*S	**Sg**	**06 13 52.0**	**-0.7**
	baz=33						
AAK	**Ala-Archa**	**3.30**	**3**	⇑Pg	**Pg**	**06 13 09.4**	**-1.4**
	comp=E,8.4nm,0.8s						
AAK				⇑Lg	Lg	06 13 55.2	
	comp=E,14nm,1.2s						
EKS2	**Erkin-Say**	**3.34**	**354**	⇑*i*P	**Pb**	**06 13 04.6**	**-2.3**
	baz=4.0						
EKS2				⇑*i*S	**Sb**	**06 13 47.8**	**+0.1**
	baz=4.0						
MNAS	**Manas**	**3.42**	**338**	⇑Pn	**Pn**	**06 13 03.2**	**+2.2**
	comp=E,3.0nm,0.5s						
MNAS				⇑Lg	Lg	06 13 57.2	
	comp=E,5.7nm,0.8s						
MNAS	**Manas**	**3.42**	**338**	⇑*i*P	**Pn**	**06 13 03.7**	**+2.7**
	baz=49						
MNAS				⇑*i*S	**Sb**	**06 13 45.6**	**-4.2**
	baz=49						
MRKS	**Merke**	**3.49**	**347**	*e*P	**Pb**	**06 13 09.1**	**-0.4**
	comp=E,8.8nm,0.5s						

MRKS				eS	Sb	06 13 53.1	+1.1
	comp=E,8.1nm,0.5s						
TKM2	Tokmak 2	3.72	15	⇓Pn	Pn	06 13 06.3	+1.1
	comp=E,1.2nm,0.5s						
TKM2				⇑Pg	Pg	06 13 16.3	-2.5
	comp=E,6.4nm,1.1s						
TKM2				⇓Lg	Lg	06 14 08.8	
	comp=E,5.4nm,0.6s						
KST	Kastek	3.92	19	eP	Pb	06 13 16.7	-0.1
	comp=E,3.5nm,0.2s						
KST				eS	Sb	06 14 07.0	+2.7
	comp=E,8.1nm,0.7s						
TNSS	Tian-Shan	4.22	28	eP	Pg	06 13 26.2	-2.1
	comp=E,6.2nm,0.5s						
MDOK	Medeo	4.36	28	eP	Pg	06 13 28.1	-3.1
	comp=E,3.8nm,0.3s						
MDOK				eS	Sg	06 14 27.0	-0.7
	comp=E,5.0nm,0.6s						
KK31	Karatay Array	4.70	324	⇓Pn	Pn	06 13 18.6	0.0
	comp=E,0.8nm,0.4s,baz=134,slow=13,SNR=9.2						
KK31				⇑Pg	Pb	06 13 32.8	+2.7
	comp=E,0.4nm,0.3s,baz=149,slow=19						
KK31				⇓Sn	Sn	06 14 15.9	+2.7
	comp=E,0.9nm,0.3s,baz=142,slow=23						
KK31				⇑Lg	Lg	06 14 37.2	
	comp=E,2.2nm,0.5s,baz=144,slow=30						
KUU	Kurty	4.81	18	eP	Pg	06 13 36.6	-3.1
	comp=E,2.4nm,0.4s						
KUU				⇑iS	Sg	06 14 41.5	-0.5
	comp=E,5.0nm,0.6s						
BRLS	Borolday	4.97	319	eP	Pb	06 13 32.1	-2.6
	comp=E,0.8nm,0.3s						
BRLS				eS	Sb	06 14 34.3	-0.2
	comp=E,2.4nm,0.3s						
KPKS	Kokpek	5.30	37	eP	Pg	06 13 46.3	-2.8
	comp=E,6.7nm,0.7s						
KPKS				eS	Sg	06 14 59.2	+1.5
	comp=E,6.4nm,0.4s						
PDGK	Podgornoye	5.61	43	⇑Pg	Pg	06 13 53.2	-1.7
	comp=E,1.9nm,0.7s						
PDGK				⇑Lg	Lg	06 15 10.1	
	comp=E,6.1nm,1.0s						

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*KRNET **28** 06:22:36.9±0.1, 42°.06N×77°.45E, h19km, mb2.2*
*SOME **28** 06:22:36.4, 41°.98N×77°.52E, h15km*
*NNC **28** 06:22:37.5±1.8, 44°.15N×77°.07E, h0km, mb2.6, mpv2.3, Error ellipse: s-maj=22.8km s-min=5.3km az=160.0*
ISC 28 06:22:37.2±1.4**, 42°.05N**±0°.05×**77°.44E**±0°.02**, h15**km±10km**, n31, σ1ˢ37**/59**, 14C-13D, Lake Issyk-Kul region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ULHL	Ulahol	0.91	283	⇓iP	Pb	06 22 54.4	-0.4
	baz=82						
ULHL				⇓iS	Sg	06 23 07.0	+0.2
	baz=82						
TNSS	Tian-Shan	1.05	340	eP	Pn	06 22 57.8	0.0
	6.5nm,0.1s						
TNSS				eS	Sn	06 23 13.0	+0.7
	63nm,0.2s						
MDOK	Medeo	1.15	346	⇑iP	Pg	06 22 59.3	-0.1
	8.7nm,0.2s						
MDOK				⇓iS	Sn	06 23 15.6	+1.1
	31nm,0.3s						
IZV	Izvestkoviy	1.15	329	eP	Pb	06 22 58.5	-0.5
	6.5nm,0.1s						
IZV				eS	Sn	06 23 14.4	-0.3
	87nm,0.2s						
BOOM	Boomskoye usch	1.19	292	⇑iP	Pn	06 22 59.2	-0.4
	baz=91						
BOOM				⇑iS	Sn	06 23 15.5	-0.1
	baz=91						
KOTS	Kotyrbulak	1.20	349	eP	Pg	06 23 00.5	0.0
	17nm,0.2s						
KOTS				eS	Sg	06 23 17.9	+1.7
	79nm,0.3s						
AAA	Alma-Ata	1.22	342	eP	Pg	06 23 01.1	+0.4
	37nm,0.1s						
AAA				eS	Sg	06 23 18.6	+2.0
	150nm,0.1s						
SATY	Saty	1.23	35	eP	Pg	06 23 00.3	-0.8
	31nm,0.1s						
SATY				eS	Sg	06 23 16.9	-0.3
	148nm,0.1s						
MTBS	Maitube	1.31	326	eP	Pg	06 23 02.1	-0.4
	3.8nm,0.1s						
MTBS				eS	Sg	06 23 20.3	+0.8
	42nm,0.2s						
ZHN	Zhinishke	1.34	33	⇓iP	Pb	06 23 01.8	-0.3
	8.8nm,0.1s						
ZHN				⇑iS	Sg	06 23 20.4	0.0
	110nm,0.2s						
KST	Kastek	1.47	313	⇓iP	Pg	06 23 05.2	-0.4
	7.8nm,0.3s						
KST				⇓iS	Sg	06 23 25.5	+0.8
	28nm,0.7s						
KURS	Kuram	1.53	20	eP	Pg	06 23 05.5	-1.2
	2.7nm,0.5s						
KURS				eS	Sg	06 23 26.2	-0.4
	18nm,0.4s						
UZB	Uzynbulak	1.60	46	⇓iP	Pb	06 23 06.2	-0.5
	4.8nm,0.2s						
UZB				eS	Sg	06 23 27.5	-1.4
	22nm,0.2s						
TKM2	Tokmak 2	1.61	303	⇓P	Pb	06 23 07.0	+0.2
	0.8nm,0.3s,baz=63,slow=35						
TKM2				⇓S	Sg	06 23 29.5	+0.3
	19nm,0.6s,baz=63,slow=35						
TKM2	Tokmak 2	1.61	303	⇑iP	Pb	06 23 06.5	-0.3
	baz=3.0						
TKM2				⇑iS	Sg	06 23 28.9	-0.3
	baz=3.0						
KZA	Kyzart	1.63	272	⇑iP	Pb	06 23 07.3	+0.1
	baz=71						
KZA				⇑iS	Sg	06 23 29.2	-0.5
	baz=71						
KPKS	Kokpek	1.69	33	eP	Pb	06 23 08.0	-0.1
	15nm,0.2s						
KPKS				eS	Sg	06 23 30.9	-0.6
	70nm,0.4s						
DGS	Degeres	1.71	315	eP	Pg	06 23 09.2	-0.8
	4.7nm,0.3s						
DGS				eS	Sg	06 23 32.8	+0.5
	23nm,0.2s						
KTBS	Karatobe	1.75	342	eP	Pg	06 23 09.7	-1.1
	6.4nm,0.2s						
KTBS				eS	Sg	06 23 33.9	+0.4
	47nm,0.2s						
CHKK	Chushkaly	1.83	350	eP	Pg	06 23 11.1	-1.3
	12nm,0.3s						
CHKK				eS	Sg	06 23 36.3	+0.2
	84nm,0.2s						
SHLS	Shalkode	1.86	53	eP	Pg	06 23 15.3	+2.3
	6.1nm,0.1s						
SHLS				⇑iS	Sg	06 23 43.2	+6.1
	35nm,0.7s						
PDGK	Podgornoye	1.98	49	⇑Pn	Pb	06 23 12.0	-1.1
	1.6nm,0.5s,baz=63,slow=35						
PDGK				⇑Lg	Lg	06 23 38.8	
	15nm,0.5s,baz=63,slow=35						
PDGK	Podgornoye	1.98	49	⇓iP	Pb	06 23 12.1	-1.0
	baz=49						
PDGK				⇓iS	Sg	06 23 38.6	-2.4
	baz=49						
KUU	Kurty	2.01	337	eP	Pb	06 23 14.1	+0.7
	5.2nm,0.2s						
KUU				eS	Sg	06 23 41.4	-0.4
	19nm,0.5s						
ARXS	Arharly	2.18	7	eP	Pb	06 23 16.9	+0.5
	2.4nm,0.2s						
ARXS				eS	Sg	06 23 46.1	-1.1
	33nm,0.4s						
UCH	Uchtor	2.18	276	⇓iP	Pb	06 23 15.9	-0.7
	baz=75						
UCH				⇓iS	Sb	06 23 44.3	+0.7
	baz=75						
CHMS	Chumysh	2.20	296	⇑iP	Pb	06 23 15.9	-0.8
	baz=96						
CHMS				⇑iS	Sb	06 23 44.3	+0.6
	baz=96						
AAK	Ala-Archa	2.26	286	⇑Lg	Lg	06 23 54.8	
	5.5nm,0.6s,baz=63,slow=35						
DJR	Jarkent	2.85	36	eP	Pb	06 23 28.1	+0.1
	0.9nm,0.1s						
DJR				eS	Sg	06 24 05.6	-3.4
	3.8nm,0.2s						
MRKS	Merke	3.19	284	eP	Pb	06 23 35.4	+1.7
	3.2nm,0.1s						
MRKS				eS	Sg	06 24 18.1	-1.6
	3.5nm,0.2s						
KAPS	Kapalarasan	3.52	23	eP	Pb	06 23 40.7	+1.5
	2.3nm,0.5s						
KAPS				eS	Sg	06 24 27.1	-3.1
	6.1nm,0.3s						

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*ISCJB **28** 06:22:51.8±0.7, 32°.66N±0°.06×140°.5E±0°.1, h97km, mb3.7/2, Error ellipse: s-maj=18.3km s-min=6.4km az=162.1*
*IDC **28** 06:22:51.8±2.6, 32°.34N×139°.38E, h86km±52km, mb3.3/2, mb1 3.4/4, mb1mx3.0/65, mbtmp3.6/4, ML3.3/2, Error ellipse: s-maj=123.0km s-min=16.5km az=71.0*
*JMA **28** 06:22:53.3±0.1, 32°.77N×140°.14E, h117km, M2.9*
ISC 28 06:22:51.9±1.1**, 32°.66N**±0°.06×**140°.4E**±0°.1**, h97**km**, n14, σ1ˢ93**/17**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	0.53	248	P	Pn	06 23 10.8	+3.2
JHCJ	Hachijojimakas	0.62	312	P	Pn	06 23 10.3	+1.9
JHJ2	Mitsune	0.63	316	P	Pn	06 23 10.7	+2.2
JHJ	Hachijo jima 2	0.66	314	P	Pn	06 23 10.7	+1.9
	305nm,0.3s,baz=137,slow=0.3,SNR=51						
JHJ				S	Sn	06 23 23.5	+2.2
	38nm,0.3s,baz=270,slow=20,SNR=3.1						
JMKN	Mikurajimanish	1.38	333	P	Pn	06 23 17.7	+1.1
BSO1	Boso 1	2.06	15	P	Pn	06 23 27.0	+2.4
BSO3	Boso 3	2.14	4	P	Pn	06 23 28.5	+2.5
JOD2	Odawara 2	2.80	338	P	Pn	06 23 35.3	+0.3
JOD2				S	Sn	06 24 07.1	-0.9
JYN	Shimob	3.20	333	P	Pn	06 23 40.6	+0.2
JRY	Ryogami san	3.56	341	P	Pn	06 23 45.7	+0.6
MJAR	Matsushiro Arr	4.25	336	P	Pn	06 23 54.7	+0.1
	0.7nm,0.3s,baz=180,slow=12,SNR=6.5						
JCJ	Chichijima	5.77	163	P	Pn	06 24 15.4	+0.3
	2.3nm,0.3s,baz=26,slow=20,SNR=6.5						
JCJ				S	Sn	06 25 20.0	0.0
	2.1nm,0.3s,baz=287,slow=19,SNR=3.4						
WRA	Warramunga Arr	52.62	187	P	P	06 31 53.7	-2.3
	0.3nm,0.3s,baz=4.9,slow=7.9,SNR=9.2						
ASAR	Alice Springs	56.35	187	P	P	06 32 20.9	-2.1
	0.3nm,0.6s,baz=2.1,slow=6.7,SNR=5.2						

MAN 28 06:44:31.7, 8°.46N×126°.58E, h27km, mb5.0, ML3.9, MS3.9, 1D, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	Bislig	0.35	218	⇓iP	Pn	06 44 41.7	+0.6
BIPH				i S	Sn	06 44 46.8	-0.5
BUTP	Butuan	1.08	298	eP	Pn	06 44 49.6	-1.4
BUTP				eS	Sb	06 45 06.0	+0.6
MATI	Mati	1.54	192	eP	Pn	06 44 58.1	+0.6
MATI				eS	Sn	06 45 16.8	+0.2
BUKP	Musuan	1.61	249	eP	Pb	06 45 00.8	-0.1
BUKP				eS	Sn	06 45 18.7	+0.3

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*ISCJB **28** 06:53:51.0±0.5, 0°.05S±0°.07×123°.12E±0°.06, h157km, mb3.3/5, Error ellipse: s-maj=9.3km s-min=8.0km az=177.2*
*IDC **28** 06:53:50.6±10.0, 0°.16N×123°.35E, h139km±99km, mb3.0/5, mb1 3.1/5, mb1mx2.9/56, mbtmp3.4/5, Error ellipse: s-maj=141.8km s-min=18.9km az=66.0*
*DJA **28** 06:53:52.6±0.5, 0°S±4°×12°3E±°, h139km±6km, M3.9/9, MLv3.9/9*
ISC 28 06:53:51.7±0.8**, 0°.14S**±0°.07×**123°.20E**±0°.05**, h157**km**, n14, σ1ˢ94**/18**, mb3.4**/5**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUWI	Luwuk	1.00	205	P	Pn	06 54 17.1	0.0
LUWI				S	Sn	06 54 35.5	-1.1
KMSI	Cibinong	1.05	48	P	Pn	06 54 18.7	+1.1
KMSI				S	Sn	06 54 38.8	+1.4
MRSI	Marisa	1.40	296	P	Pn	06 54 19.6	-1.1
MRSI				S	Sn	06 54 39.6	-3.4
APSI	Ampana	1.73	244	P	Pn	06 54 24.7	+0.5
MPSI	Mapaga	3.33	278	P	Pn	06 54 44.3	+0.7
SANI	Sanana	3.38	124	P	Pn	06 54 43.6	-0.5
SANI				S	Sn	06 55 20.2	-4.6
LBMI	Labuha	4.33	97	P	Pn	06 54 56.7	+0.2
TTSI	Tana Toraja	4.45	229	P	Pn	06 54 59.4	+1.4
WSI	Waingapu	9.90	197	P	Pn	06 55 47.4	-23
WRA	Warramunga Arr	22.51	152	P	P	06 58 40.8	+2.3
	0.5nm,0.4s,baz=333,slow=9.9,SNR=13						
ASAR	Alice Springs	25.60	157	P	P	06 59 08.7	+2.1
	0.3nm,0.9s,baz=333,slow=8.5,SNR=3.3						
ASAR				PcP	PcP	07 02 35.2	+1.6
	0.3nm,0.4s,baz=341,slow=1.9,SNR=4.8						
SONM	Songino Array	49.97	345	P	P	07 02 28.8	-1.0
	0.4nm,0.4s,baz=157,slow=7.8,SNR=3.5						
MKAR	Makanchi Array	58.83	328	P	P	07 03 34.0	+0.2
	0.2nm,0.4s,baz=119,slow=8.3,SNR=6.3						
KURBB	Kurchatov Arra	63.18	330	P	P	07 04 02.0	-1.0
	0.2nm,0.4s,baz=131,slow=7.0,SNR=3.5						

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*ISCJB **28** 07:08:28.6±0.3, 25°.95N±0°.06×44°.97W±0°.05, h12km, mb4.4/103, MS3.6/28, Error ellipse: s-maj=8.8km s-min=5.8km az=171.0*
*IDC **28** 07:08:28.3±0.6, 25°.92N×45°.08W, h0km, mb4.0/20, mb1 4.1/20, mb1mx3.9/66, mbtmp4.0/20, MS3.7/28, Ms1 3.7/28, ms1mx3.5/50, Error ellipse: s-maj=19.2km s-min=14.2km az=144.0*
*NEIC **28** 07:08:30.1±0.2, 25°.95N×44°.97W, h10km, mb4.5/90, Error ellipse: s-maj=5.8km s-min=3.8km az=170.0*
ISC 28 07:08:30.5±0.6**, 25°.9N**±0°.1×**44°.99W**±0°.08**, h12**km**, n153, σ0ˢ78**/130**, mb4.5**/103**, MS3.6**/28**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SEUS	St. Eustatius	18.69	247	eP	Pn	07 12 50.4	+1.2
	169nm,1.0s						
SABA	Saba	18.85	248	eP	Pn	07 12 51.9	+0.8
	210nm,1.3s						
MTP	Monte Pirata	20.58	252	eP	Pn	07 13 11.0	-0.7
	26nm,1.0s						
HUMP	Col San Antoni	20.82	252	eP	P	07 13 11.6	-0.4
	30nm,1.2s						
SJG	San Juan	21.09	253	LR	LR	07 19 32.8	
	comp=Z,222nm,21.9s,baz=79,slow=32						
NCB	Newcomb	29.74	315	eP	P	07 14 37.2	+0.6
	2.3nm,0.8s						
FRNY	Flat Rock	29.75	317	eP	P	07 14 36.8	0.0
	5.2nm,0.8s						
PTGA	Pitinga	30.20	211	P	P	07 14 40.6	-0.4
	1.1nm,0.3s,baz=0.0,slow=8.4,SNR=4.0						
PTGA				LR	LR	07 24 56.4	
	comp=Z,80nm,21.6s,baz=33,slow=33						
PTGA	Pitinga	30.20	211	eP	P	07 14 40.7	-0.3
LONY	Lake Ozonia	30.27	316	eP	P	07 14 42.7	+1.4
	14nm,1.5s						
SCHQ	Schefferville	33.03	337	LR	LR	07 27 41.9	
	comp=Z,94nm,21.0s,baz=89,slow=35						
RUSC	La Rusia	33.43	238	eP	P	07 15 09.8	-0.2
	2.7nm,1.2s						
TKL	Tuckaleechee C	34.51	296	LR	LR	07 26 27.1	
	comp=Z,229nm,21.8s,baz=68,slow=31						
ROSC	El Rosal	35.05	238	LR	LR	07 29 24.2	
	comp=Z,99nm,21.4s,baz=60,slow=36						
MDT	Midelt	35.68	69	LR	LR	07 26 55.5	
	comp=Z,118nm,19.2s,baz=288,slow=31						
ESDC	Sonseca Array	36.78	58	LR	LR	07 26 51.1	
	comp=Z,62nm,21.9s,baz=305,slow=30						
X48A	Hartselle	37.11	293	eP	P	07 15 41.2	+0.2
	11nm,1.4s						
WVT	Waverly	37.83	296	eP	P	07 15 47.4	+0.4
	7.8nm,1.1s						
PLAL	Pickwick Lake	37.98	294	eP	P	07 15 48.9	+0.6
	7.6nm,1.0s						
P45A	Graceland, Par	38.08	302	eP	P	07 15 50.1	+0.9
	22nm,1.4s						
SAML	Samuel	38.93	209	eP	P	07 15 57.8	+1.4
	4.4nm,1.3s						
SLM	Saint Louis	39.91	300	eP	P	07 16 05.1	+0.6
	11nm,0.7s						
KOWA	Kowa	39.94	98	LR	LR	07 32 16.0	
	comp=Z,188nm,19.6s,baz=245,slow=36						
PBMO	Poplar Bluff	39.95	297	eP	P	07 16 05.2	+0.4
	3.3nm,0.8s						
FVM	French Village	40.02	299	eP	P	07 16 05.8	+0.5
	6.6nm,1.1s						
T42A	Van Buren	40.49	297	eP	P	07 16 09.1	-0.2
	7.7nm,1.2s						
CCM	Cathedral Cave	40.66	299	eP	P	07 16 11.6	+0.9
	8.0nm,1.0s						
JTS	JuntasAbangare	40.85	255	LR	LR	07 31 10.6	
	comp=Z,104nm,21.9s,baz=150,slow=33						
P40A	Paris	41.39	301	eP	P	07 16 16.5	-0.1
	9.3nm,0.9s						
W41B	Gary Mavity, V	41.40	295	eP	P	07 16 16.2	-0.5
	7.6nm,1.0s						
WHAR	Wooly Hollow	41.43	295	eP	P	07 16 16.6	-0.5
	7.0nm,0.9s						
BDFB	Brasilia	41.43	184	LR	LR	07 31 36.0	
	comp=Z,70nm,18.7s,baz=47,slow=34						
UALR	University of	41.48	294	eP	P	07 16 17.7	+0.2
	10nm,1.0s						
BORG	Borgarnes	41.69	15	LR	LR	07 29 43.9	
	comp=Z,20nm,21.9s,baz=236,slow=31						
N39A	Derby Farms, D	41.86	303	eP	P	07 16 21.1	+0.6
	11nm,1.0s						
W40A	Ferguson Farm,	42.07	295	eP	P	07 16 22.7	+0.4
	16nm,1.1s						
S39A	Bolivar	42.29	298	eP	P	07 16 23.6	-0.5
	9.1nm,1.5s						
P38A	Dawn	42.54	301	eP	P	07 16 26.1	0.0
	22nm,1.4s						
W39A	Magazine	42.66	295	eP	P	07 16 26.7	-0.3
	14nm,1.3s						
HHAR	Hobbs	42.77	296	eP	P	07 16 26.5	-1.5
	2.6nm,0.9s						
DBIC	Dimbokro	42.78	109	LR	LR	07 32 56.0	
	comp=Z,188nm,20.5s,baz=270,slow=34						
TUL1	Leonard	44.27	296	eP	P	07 16 39.7	-0.4
	9.3nm,1.0s						
SIV	San Ignacio	44.52	202	P	P	07 16 41.5	-0.7
	0.6nm,0.7s,baz=47,slow=6.6,SNR=4.6						
H10N2	ASCENSION HYDR	44.78	134	T	T	08 04 15.0	
	baz=319,slow=75						
H10N3	ASCENSION HYDR	44.78	134	T	T	08 04 15.0	
	baz=319,slow=75						
H10N1	ASCENSION HYDR	44.80	134	T	T	08 04 16.4	
	baz=319,slow=75						
AGMN	Agassiz Nation	45.31	313	eP	P	07 16 47.9	-0.3
	5.5nm,1.2s						
H10S1	ASCENSION HYDR	45.52	136	T	T	08 05 11.1	
	baz=320,slow=75						
H10S3	ASCENSION HYDR	45.52	136	T	T	08 05 11.1	
	baz=320,slow=75						
H10S2	ASCENSION HYDR	45.54	136	T	T	08 05 11.6	
	baz=320,slow=75						
TOA1	Torodi Ar. Sit	45.56	97	eP	P	07 16 49.2	-1.4
TOA0	Torodi Ar. Sit	45.57	97	eP	P	07 16 50.1	-0.6
	7.4nm,1.4s						
TORD	Torodi Ar. Bea	45.57	97	P	P	07 16 49.2	-1.4
	1.7nm,0.6s,baz=297,slow=9.4						
TORD				LR	LR	07 36 00.2	
	comp=Z,194nm,19.7s,baz=305,slow=36						
ULM	Lac du Bonnet	45.72	316	P	P	07 16 50.4	-1.1
	4.5nm,0.7s,baz=78,slow=5.2,SNR=4.0						
ULM				LR	LR	07 34 27.4	
	comp=Z,116nm,21.5s,baz=119,slow=34						
ULM	Lac du Bonnet	45.72	316	eP	P	07 16 50.2	-1.1
	10.0nm,1.1s						
WHTX	Lake Whitney,	45.93	290	eP	P	07 16 52.0	-1.3
	15nm,1.3s						
435B	Jarrell	46.19	289	eP	P	07 16 55.8	+0.4
	6.0nm,0.4s						
WMOK	Wichita Mounta	46.78	294	eP	P	07 17 00.0	0.0
	8.2nm,1.0s						
KEST	Kesra	47.15	64	P	P	07 17 04.2	+1.2
	2.4nm,0.8s,baz=257,slow=5.8,SNR=3.7						
KEST				LR	LR	07 34 58.0	
	comp=Z,76nm,21.0s,baz=180,slow=34						
LPAZ	La Paz	47.63	211	P	P	07 17 06.7	-0.7
	2.0nm,0.4s,baz=17,slow=6.3,SNR=24						
LPAZ				LR	LR	07 38 20.7	
	comp=Z,62nm,18.1s,baz=22,slow=38						
LPAZ	La Paz	47.63	211	eP	P	07 17 06.6	-0.8
	9.7nm,1.3s						
ABTX	Abilene, Hawle	47.70	291	eP	P	07 17 06.8	-0.4
	6.3nm,0.9s						
DAVOX	Davos/Dischmat	47.77	49	LR	LR	07 33 14.0	
	comp=Z,44nm,21.7s,baz=265,slow=31						
OGNE	Ogallala	49.08	303	eP	P	07 17 19.2	+1.4
	14nm,0.8s						
AMTX	Amarillo	49.14	295	eP	P	07 17 17.9	-0.5
	18nm,1.3s						
MSTX	Muleshoe	50.14	294	eP	P	07 17 26.0	-0.1
	5.5nm,1.0s						
NB200	NORSAR Array S	51.41	31	eP	P	07 17 34.3	-0.8
NOA	NORSAR Array B	51.41	31	P	P	07 17 34.3	-0.8
	0.9nm,0.9s,baz=254,slow=7.8,SNR=3.4						
NOA				LR	LR	07 37 17.7	
	comp=Z,52nm,19.3s,baz=250,slow=34						
Q24A	Divide	51.56	300	eP	P	07 17 37.5	+0.6
	14nm,1.4s						
TXAR	Lajitas Array	51.63	288	P	P	07 17 36.5	-0.8
	0.6nm,0.9s,baz=87,slow=6.4,SNR=5.7						
TXAR				LR	LR	07 39 20.6	
	comp=Z,47nm,20.7s,baz=0.0,slow=36						
TX31	Lajitas Ar. Si	51.63	288	eP	P	07 17 36.4	-0.9
HFS	Hagfors	52.35	33	P	P	07 17 43.5	+1.5
	1.5nm,0.7s,baz=289,slow=4.4,SNR=3.6						
HFS				LR	LR	07 37 01.1	
	comp=Z,81nm,20.8s,baz=258,slow=33						
S22A	4UR Ranch, Cre	52.98	299	eP	P	07 17 46.8	-0.7
	3.9nm,1.2s						
ANMO	Albuquerque	53.03	295	P	P	07 17 46.7	-1.1
	0.8nm,0.7s,baz=95,slow=15,SNR=5.2						
ANMO				LR	LR	07 40 01.6	
	comp=Z,150nm,19.8s,baz=84,slow=36						
ANMO	Albuquerque	53.03	295	eP	P	07 17 48.2	+0.4
	5.2nm,1.4s						
BNM	Barren Site	53.29	294	eP	P	07 17 50.2	+0.5
O20A	White River Ci	53.84	302	eP	P	07 17 54.1	+0.4
	6.9nm,1.3s						
RLMT	Red Lodge	54.27	308	eP	P	07 17 57.3	+0.5
	4.8nm,1.0s						
PV01	Paradox Valley	54.31	300	eP	P	07 17 58.1	+0.9
MVCO	Mesa Verde	54.37	298	eP	P	07 17 58.0	+0.4
	11nm,1.4s						
GCMT	Greycliff	54.53	309	eP	P	07 17 59.1	+0.5
EGMT	Eagleton	54.54	312	eP	P	07 17 58.5	0.0
	14nm,1.3s						
BW06	Boulder Array	54.62	305	eP	P	07 17 57.5	-1.8
	9.4nm,1.4s						
PD31	Pinedale Array	54.62	305	eP	P	07 17 58.3	-1.0
PDAR	Pinedale Array	54.62	305	P	P	07 17 58.5	-0.8
	1.7nm,0.8s,baz=76,slow=9.5,SNR=15						
PDAR				LR	LR	07 41 03.9	
	comp=Z,128nm,19.3s,baz=108,slow=36						
PDAR	Pinedale Array	54.62	305	eP	P	07 17 58.3	-1.0
LOHW	Long Hollow	55.32	306	eP	P	07 18 03.6	-0.7
	3.0nm,1.0s						
P18A	Preston Nutter	55.43	302	eP	P	07 18 05.2	-0.1
	5.5nm,1.0s						
SNOW	Snow King Moun	55.44	306	eP	P	07 18 05.2	-0.1
	3.3nm,0.8s						
YMR	Madison River	55.50	308	eP	P	07 18 05.8	+0.1
	8.5nm,1.3s						
REDW	Red Top Meadow	55.52	306	eP	P	07 18 06.1	+0.3
	5.5nm,1.2s						
IMW	Indian Meadow	55.54	307	eP	P	07 18 05.9	-0.1
	11nm,1.3s						
TPAW	Teton Pass	55.58	306	eP	P	07 18 06.6	+0.4
	12nm,1.4s						
FXWY	Fox Creek	55.62	306	eP	P	07 18 06.6	0.0
	4.0nm,1.1s						
YHB	Horse Butte	55.66	308	eP	P	07 18 07.4	+0.6
	12nm,1.4s						
SRU	San Rafael Swe	55.71	301	eP	P	07 18 07.6	+0.4
	5.2nm,0.9s						
P17A	Butcher Ranch,	55.83	301	eP	P	07 18 08.5	+0.5
	6.2nm,1.2s						
BOZ	Bozeman (W)	55.91	309	eP	P	07 18 07.9	-0.6
	3.9nm,1.3s						
MPU	Maple Canyon	56.44	302	eP	P	07 18 12.2	-0.2
	4.0nm,1.0s						
NLU	North Lily Min	56.79	302	eP	P	07 18 15.0	+0.1
	7.3nm,1.2s						
MCMT	McKenzie Canyo	56.83	308	eP	P	07 18 15.9	+0.8
WUAZ	Wupatki	56.92	297	eP	P	07 18 15.4	-0.4
	9.1nm,1.3s						

TUC	**Tucson**	**57.04**	**293**	*e*P	**P**	**07 18 15.9**	**-0.8**
	2.4nm,0.9s						
MSU	**Marysvale**	**57.07**	**301**	*e*P	**P**	**07 18 17.9**	**+1.0**
DUG	**Dugway, Tooele**	**57.32**	**303**	*e*P	**P**	**07 18 18.0**	**-0.5**
	3.6nm,0.9s						
KNB	**Kanab**	**57.81**	**299**	*e*P	**P**	**07 18 22.3**	**+0.2**
	6.7nm,1.4s						
YKA	**Yellowknife Ar**	**57.93**	**329**	P	**P**	**07 18 20.7**	**-1.6**
	1.0nm,0.8s,baz=95,slow=7.9,SNR=5.3						
YKA				LR	LR	07 43 52.8	
	comp=Z,10nm,20.6s,baz=92,slow=37						
HLID	**Hailey**	**58.08**	**307**	*e*P	**P**	**07 18 23.1**	**-0.8**
	3.6nm,1.0s						
CCUT	**Cedar City**	**58.15**	**300**	*e*P	**P**	**07 18 25.5**	**+0.9**
	5.2nm,1.1s						
BUR04	**Bucovina Ar. S**	**58.22**	**48**	*e*P	**P**	**07 18 26.0**	**+1.3**
FIA0	**FINESS Array S**	**58.54**	**32**	*e*P	**P**	**07 18 26.7**	**+0.2**
FINES	**FINESS Array B**	**58.54**	**32**	P	**P**	**07 18 26.7**	**+0.2**
	2.4nm,0.8s,baz=267,slow=7.6,SNR=7.6						
LPIG	**La Paz**	**58.65**	**284**	LR	LR	07 42 59.1	
	comp=Z,51nm,21.8s,baz=94,slow=35						
MFID	**Camas Ranch**	**59.12**	**307**	*e*P	**P**	**07 18 30.9**	**-0.2**
	8.5nm,1.3s						
ARA0	**ARCESS Array S**	**59.14**	**23**	*e*P	**P**	**07 18 31.4**	**+0.7**
ARCES	**ARCESS Array B**	**59.14**	**23**	P	**P**	**07 18 31.4**	**+0.7**
	1.6nm,0.5s,baz=263,slow=4.9,SNR=13						
TPNV	**Topopah Spring**	**60.52**	**299**	*e*P	**P**	**07 18 40.0**	**-1.0**
	3.2nm,1.1s						
AKASG	**Malin Array Be**	**60.56**	**45**	P	**P**	**07 18 40.1**	**-0.6**
	0.9nm,0.6s,baz=279,slow=5.3,SNR=4.6						
AKASG				LR	LR	07 43 20.8	
	comp=Z,30nm,19.2s,baz=280,slow=34						
AKBB	**Malin Array Si**	**60.56**	**45**	*e*P	**P**	**07 18 40.2**	**-0.4**
	2.9nm,0.9s						
D08A	**Wollman Farm,**	**60.80**	**311**	*e*P	**P**	**07 18 42.6**	**+0.2**
	6.8nm,1.0s						
J08A	**Circle Bar Ran**	**61.03**	**307**	*e*P	**P**	**07 18 44.5**	**+0.3**
	2.9nm,1.1s						
MJ2	**May Junction 2**	**61.17**	**311**	*e*P	**P**	**07 18 45.1**	**+0.2**
HAWA	**Hanford**	**61.31**	**310**	*e*P	**P**	**07 18 45.7**	**-0.2**
	4.8nm,0.9s						
NV01	**Mina Array Sit**	**61.81**	**301**	*e*P	**P**	**07 18 49.4**	**-0.3**
LLLB	**Lillooet**	**62.26**	**315**	*e*P	**P**	**07 18 52.3**	**0.0**
	9.9nm,1.4s						
MOD	**Modoc Plateau**	**62.62**	**306**	*e*P	**P**	**07 18 55.6**	**+0.6**
	4.3nm,1.1s						
K05A	**Summer Lake**	**62.89**	**307**	*e*P	**P**	**07 18 57.5**	**+0.7**
	11nm,1.0s						
H04A	**Detroit Lake**	**63.44**	**309**	*e*P	**P**	**07 19 00.3**	**+0.1**
	5.8nm,1.1s						
NLWA	**Neilton Lookou**	**64.08**	**312**	*e*P	**P**	**07 19 04.4**	**0.0**
	11nm,1.3s						
YBH	**Yreka Blue Hor**	**64.42**	**306**	LR	LR	07 46 02.6	
	comp=Z,113nm,21.8s,baz=93,slow=35						
BR101	**Keskin Array S**	**65.55**	**56**	*e*P	**P**	**07 19 14.9**	**+0.7**
BRTR	**Keskin Array B**	**65.55**	**56**	P	**P**	**07 19 14.9**	**+0.7**
	1.1nm,0.7s,baz=261,slow=4.9,SNR=5.9						
INK	**Inuvik**	**65.64**	**336**	*e*P	**P**	**07 19 13.6**	**-0.6**
	9.8nm,1.2s						
KSMM	**Slide Mountain**	**65.86**	**304**	*e*P	**P**	**07 19 20.0**	**+3.8**
DAWY	**Dawson**	**68.88**	**332**	*e*P	**P**	**07 19 34.3**	**-0.5**
	4.4nm,0.9s						
IL1	**Eielson Array**	**71.73**	**334**	*e*P	**P**	**07 19 51.5**	**-0.7**
ILAR	**Eielson Array**	**71.73**	**334**	P	**P**	**07 19 51.8**	**-0.4**
	2.6nm,0.8s,baz=72,slow=4.6,SNR=31						
ILB	**Eielson Array**	**71.73**	**334**	*e*P	**P**	**07 19 51.6**	**-0.6**
COLA	**College**	**72.07**	**334**	*e*P	**P**	**07 19 54.1**	**-0.1**
	3.8nm,0.8s						
CCB	**Clear Creek Bu**	**72.14**	**334**	*e*P	**P**	**07 19 54.2**	**-0.5**
	6.0nm,1.1s						
MDM	**Murphy Dome**	**72.19**	**334**	*e*P	**P**	**07 19 54.3**	**-0.7**
	5.3nm,1.2s						
WRH	**Wood River Hil**	**72.32**	**334**	*e*P	**P**	**07 19 55.8**	**0.0**
	5.0nm,1.0s						
KLU	**Klutina**	**72.56**	**330**	*e*P	**P**	**07 19 56.4**	**-0.9**
	6.6nm,1.0s						
BPAW	**Bear Paw Mtn.**	**73.63**	**334**	*e*P	**P**	**07 20 03.1**	**-0.4**
	3.3nm,0.8s						
KTH	**Kantishna Hill**	**73.84**	**333**	*e*P	**P**	**07 20 04.3**	**-0.5**
	8.4nm,1.0s						
PMR	**Palmer**	**73.93**	**331**	*e*P	**P**	**07 20 04.8**	**-0.5**
	4.6nm,0.9s						
SKT	**Skwentna**	**74.79**	**332**	*e*P	**P**	**07 20 09.7**	**-0.6**
	6.6nm,1.1s						
TSUM	**Tsumeb**	**75.54**	**120**	LR	LR	07 46 02.5	
	comp=Z,86nm,19.7s,baz=144,slow=30						
AKTO	**Aktyubinsk**	**78.18**	**40**	P	**P**	**07 20 30.1**	**+0.3**
	1.4nm,0.5s,baz=277,slow=2.6,SNR=4.5						
BVAR	**Borovoye Array**	**83.48**	**33**	P	**P**	**07 20 58.1**	**+0.1**
	1.1nm,0.8s,baz=250,slow=4.2,SNR=6.3						
BOSA	**Boshof**	**86.54**	**124**	LR	LR	07 51 46.1	
	comp=Z,69nm,20.4s,baz=246,slow=30						
KURK	**Kurchatov**	**88.91**	**32**	*e*P	**P**	**07 21 24.5**	**-0.3**
KURBB	**Kurchatov Arra**	**88.93**	**32**	P	**P**	**07 21 24.5**	**-0.4**
	0.5nm,0.7s,baz=301,slow=4.1,SNR=5.0						

MOS ***28*** *07:08:35.5±1.8, 52.°56N×159.°79E, h46^{km}, mb4.2/1, Error ellipse: s-maj=12.2km s-min=5.3km az=91.5*

KRSC 28 07:08:35.5±0.9**, 52.°56N×159.°79E, h46**^{km}±14^{km}**, ML4.0, Off east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NLC	**Nalytchevo**	**0.67**	**337**	*e*P	Pn	07 08 49.8	+1.1
NLC				*e*S	Sn	07 08 59.9	+1.7
NLC	**Nalytchevo**	**0.67**	**337**	PN	Pn	07 08 49.8	+1.1
NLC				S	Sn	07 08 59.9	+1.7
DALK	**Dalny**	**0.79**	**308**	*e*P	Pn	07 08 51.2	+1.0
DALK				*e*S	Sn	07 09 01.5	+0.6
DALK	**Dalny**	**0.79**	**308**	PN	Pn	07 08 51.2	+1.0
DALK				S	Sn	07 09 01.5	+0.6
RUS	**Russkaya**	**0.79**	**262**	*e*P	Pn	07 08 50.9	+0.7
RUS				*e*S	Sn	07 09 01.4	+0.5
RUS	**Russkaya**	**0.79**	**262**	PN	Pn	07 08 50.9	+0.7
RUS				S	Sn	07 09 01.4	+0.5
PET	**Petropavlovsk**	**0.83**	**305**	*e*P	Pn	07 08 51.8	+1.0
PET				*e*S	Sn	07 09 02.8	+0.8
PET	**Petropavlovsk**	**0.83**	**305**	PN	Pn	07 08 51.8	+1.0
PET				S	Sn	07 09 02.8	+0.8
UGLR	**Uglovaya**	**0.88**	**319**	*e*P	Pn	07 08 53.0	+1.5
UGLR				*e*S	Sn	07 09 04.9	+1.6
UGLR	**Uglovaya**	**0.88**	**319**	PN	Pn	07 08 53.0	+1.5
UGLR				S	Sn	07 09 04.9	+1.6
SDLR	**Sedlovina**	**0.91**	**323**	*i* P	Pn	07 08 53.2	+1.2
SDLR	**Sedlovina**	**0.91**	**323**	PN	Pn	07 08 53.2	+1.2
SMAR	**Somma**	**0.93**	**320**	*e*P	Pn	07 08 53.4	+1.1
SMAR	**Somma**	**0.93**	**320**	PN	Pn	07 08 53.4	+1.1
AVH	**Avacha**	**0.95**	**319**	*e*P	Pn	07 08 54.2	+1.7
AVH	**Avacha**	**0.95**	**319**	PN	Pn	07 08 54.2	+1.7
MTVR	**Mutnovka**	**0.98**	**266**	*e*P	Pn	07 08 54.0	+1.0
MTVR				*e*S	Sn	07 09 06.4	+0.6
MTVR	**Mutnovka**	**0.98**	**266**	PN	Pn	07 08 54.0	+1.0
MTVR				S	Sn	07 09 06.4	+0.6
KOK	**Koryaka**	**1.01**	**317**	*e*P	Pn	07 08 54.3	+0.9
KOK	**Koryaka**	**1.01**	**317**	PN	Pn	07 08 54.3	+0.9
GRL	**Gorelyy**	**1.05**	**270**	*e*P	Pn	07 08 55.5	+1.7
GRL	**Gorelyy**	**1.05**	**270**	PN	Pn	07 08 55.5	+1.7
KRX	**Arik**	**1.06**	**320**	*e*P	Pn	07 08 55.0	+1.0
KRX				*e*S	Sn	07 09 08.6	+0.9
KRX	**Arik**	**1.06**	**320**	PN	Pn	07 08 55.0	+1.0
KRX				S	Sn	07 09 08.6	+0.9
ASAK	**Asacha**	**1.17**	**262**	*e*P	Pn	07 08 57.0	+1.6
ASAK				*e*S	Sn	07 09 12.1	+1.9
ASAK	**Asacha**	**1.17**	**262**	PN	Pn	07 08 57.0	+1.6
ASAK				S	Sn	07 09 12.1	+1.9
KDTR	**Khodutka, Kamc**	**1.29**	**235**	*e*P	Pn	07 08 58.4	+1.4
KDTR				*e*S	Sn	07 09 14.1	+1.0
KII	**Karymskiy**	**1.50**	**352**	*e*P	Pn	07 09 02.7	+2.8
KII				*e*S	Sn	07 09 21.2	+2.9
KII	**Karymskiy**	**1.50**	**352**	PN	Pn	07 09 02.7	+2.8
KII				S	Sn	07 09 21.2	+2.9
GNL	**Ganaly**	**1.59**	**316**	*e*P	Pn	07 09 03.6	+2.3
GNL				*e*S	Sn	07 09 22.9	+2.2
GNL	**Ganaly**	**1.59**	**316**	PN	Pn	07 09 03.6	+2.3
GNL				S	Sn	07 09 22.9	+2.2
MIPR	**Malaya Ipel'ka**	**1.88**	**263**	*e*P	Pn	07 09 07.1	+2.0
MIPR	**Malaya Ipel'ka**	**1.88**	**263**	PN	Pn	07 09 07.1	+2.0
MKZ	**Mys Kozlova**	**2.31**	**29**	*e*P	Pn	07 09 12.0	+1.0
MKZ				*e*S	Sn	07 09 40.3	+2.1
MKZ	**Mys Kozlova**	**2.31**	**29**	PN	Pn	07 09 12.0	+1.0
MKZ				S	Sn	07 09 40.3	+2.1
KZV	**Kizimen**	**2.58**	**6**	*e*P	Pn	07 09 18.3	+3.5
KZV	**Kizimen**	**2.58**	**6**	PN	Pn	07 09 18.3	+3.5
TUMR	**Tumrok**	**2.74**	**4**	*e*P	Pn	07 09 21.2	+4.2
TUMR	**Tumrok**	**2.74**	**4**	PN	Pn	07 09 21.2	+4.2
SKR	**Severo-Kuril's**	**2.96**	**232**	*e*PN	Pn	07 09 26.3	+6.4
SKR				*e*S	Sn	07 09 56.8	+2.7
SKR				smax	smax		
	comp=N,145nm,0.6s						
SKR				smax	smax		
	comp=E,206nm,0.7s						
KMNR	**Kamenistaya**	**3.22**	**5**	P	Pn	07 09 26.7	+3.2
KMNR	**Kamenistaya**	**3.22**	**5**	PN	Pn	07 09 26.7	+3.2
KPT	**Kopyto**	**3.43**	**4**	*e*P	Pn	07 09 28.6	+2.2
KPT	**Kopyto**	**3.43**	**4**	PN	Pn	07 09 28.6	+2.2
ZLN	**Zelenaya**	**3.52**	**9**	*e*P	Pn	07 09 31.6	+3.9
ZLN	**Zelenaya**	**3.52**	**9**	PN	Pn	07 09 31.6	+3.9
LGNR	**Loginova**	**3.57**	**8**	*e*P	Pn	07 09 32.0	+3.4
LGNR	**Loginova**	**3.57**	**8**	PN	Pn	07 09 32.0	+3.4
KRSR	**Krestovskiy**	**3.70**	**7**	*e*P	Pn	07 09 33.9	+3.8
KRSR	**Krestovskiy**	**3.70**	**7**	PN	Pn	07 09 33.9	+3.8
KBTR	**Krutoberegovo**	**4.07**	**25**	*e*P	Pn	07 09 38.1	+3.0
KBTR	**Krutoberegovo**	**4.07**	**25**	PN	Pn	07 09 38.1	+3.0
BDR	**Baidarnaya**	**4.11**	**11**	*e*P	Pn	07 09 40.3	+4.6
BDR	**Baidarnaya**	**4.11**	**11**	PN	Pn	07 09 40.3	+4.6
SMKR	**Semkarok**	**4.15**	**13**	*e*P	Pn	07 09 40.8	+4.5
SMKR	**Semkarok**	**4.15**	**13**	PN	Pn	07 09 40.8	+4.5
SRKR	**Sorokina**	**4.18**	**11**	*e*P	Pn	07 09 41.5	+4.7
SRKR	**Sorokina**	**4.18**	**11**	PN	Pn	07 09 41.5	+4.7

ISCJB ***28*** *07:10:41.8±0.4, 25.°78N±0.°09×45.°02W±0.°08, h12^{km}, mb4.0/21, MS3.7/3, Error ellipse: s-maj=12.9km s-min=9.7km az=156.9*

IDC ***28*** *07:10:41.5±0.6, 25.°79N×45.°15W, h0^{km}, mb3.9/16, mb1 4.0/16, mb1mx3.8/66, mbtmp3.9/16, MS3.7/3, Ms1 3.7/3, ms1mx3.0/48, Error ellipse: s-maj=22.3km s-min=15.4km az=134.0*

NEIC ***28*** *07:10:43.4±0.4, 25.°80N×45.°02W, h10^{km}, mb4.4/8, Error ellipse: s-maj=10.6km s-min=7.9km az=159.0*

ISC 28 07:10:43.5±0.6**, 25.°8N**±0.°1×**45.°1W**±0.°1**, h12**^{km}**, n43,** σ**0**^{s}**77**/34**, mb4.2**/21**, MS3.8**/3**, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STVI	**Saint Thomas**	**19.86**	**252**	*e*P	**Pn**	**07 15 17.6**	**+1.5**
	16nm,0.8s						
MTP	**Monte Pirata**	**20.48**	**252**	*e*P	Pn	07 15 27.7	+4.2
	66nm,1.5s						
PQI	**Presque Isle**	**27.73**	**325**	*e*P	**P**	**07 16 32.7**	**+1.0**
	15nm,1.4s						
FRNY	**Flat Rock**	**29.84**	**317**	*e*P	**P**	**07 16 51.0**	**+0.4**
	8.7nm,1.2s						
PTGA	**Pitinga**	**30.03**	**211**	P	**P**	**07 16 52.0**	**-0.5**
	1.3nm,0.3s,baz=342,slow=20,SNR=2.1						
PTGA	**Pitinga**	**30.03**	**211**	*e*P	**P**	**07 16 52.5**	**+0.1**
SIV	**San Ignacio**	**44.34**	**202**	P	**P**	**07 18 53.9**	**+0.1**
	0.7nm,0.7s,baz=212,slow=9.5,SNR=3.7						
H10N2	**ASCENSION HYDR**	**44.70**	**134**	T	T	08 06 27.3	
	baz=319,slow=75,SNR=30						
H10N3	**ASCENSION HYDR**	**44.70**	**134**	T	T	08 06 27.6	
	baz=319,slow=75,SNR=24						
H10N1	**ASCENSION HYDR**	**44.71**	**134**	T	T	08 06 28.3	
	baz=319,slow=75,SNR=28						
H10S1	**ASCENSION HYDR**	**45.44**	**135**	T	T	08 07 24.8	
	baz=320,slow=75,SNR=22						
H10S3	**ASCENSION HYDR**	**45.44**	**135**	T	T	08 07 24.6	
	baz=320,slow=75,SNR=21						
H10S2	**ASCENSION HYDR**	**45.45**	**135**	T	T	08 07 25.8	
	baz=320,slow=75,SNR=22						
TOA1	**Torodi Ar. Sit**	**45.60**	**97**	*e*P	**P**	**07 19 03.4**	**-0.5**
TORD	**Torodi Ar. Bea**	**45.60**	**97**	P	**P**	**07 19 03.4**	**-0.5**
	0.9nm,0.8s,baz=295,slow=8.4						
ULM	**Lac du Bonnet**	**45.80**	**316**	P	**P**	**07 19 03.1**	**-2.0**
	2.4nm,0.7s,baz=114,slow=4.9,SNR=3.1						
WMOK	**Wichita Mounta**	**46.80**	**294**	*e*P	**P**	**07 19 13.6**	**+0.3**
	3.3nm,1.0s						
LPAZ	**La Paz**	**47.46**	**211**	P	**P**	**07 19 18.5**	**-0.5**
	2.5nm,0.9s,baz=30,slow=4.3,SNR=5.3						
LPAZ	**La Paz**	**47.46**	**211**	*e*P	**P**	**07 19 19.6**	**+0.6**
	4.9nm,1.2s						
TXAR	**Lajitas Array**	**51.63**	**288**	P	**P**	**07 19 48.4**	**-2.0**
	0.2nm,0.7s,baz=41,slow=11,SNR=3.1						
HFS	**Hagfors**	**52.52**	**33**	P	**P**	**07 19 56.6**	**+0.3**
	0.9nm,0.8s,baz=293,slow=11,SNR=2.4						
PD31	**Pinedale Array**	**54.67**	**305**	*e*P	**P**	**07 20 12.6**	**-0.2**
PDAR	**Pinedale Array**	**54.67**	**305**	P	**P**	**07 20 12.6**	**-0.2**
	0.7nm,0.7s,baz=79,slow=7.7,SNR=5.3						
SRU	**San Rafael Swe**	**55.75**	**301**	*e*P	**P**	**07 20 21.3**	**+0.8**
	2.0nm,0.9s						
FIA0	**FINESS Array S**	**58.72**	**32**	*e*P	**P**	**07 20 40.6**	**-0.2**
FINES	**FINESS Array B**	**58.72**	**32**	P	**P**	**07 20 40.6**	**-0.2**
	1.8nm,0.9s,baz=244,slow=7.4,SNR=3.4						
FINES				LR	LR	07 42 56.1	
	comp=Z,46nm,18.9s,baz=188,slow=33						
FIA1	**FINESS Array S**	**58.72**	**32**	*e*P	**P**	**07 20 40.7**	**-0.2**
MLR	**Muntele Rosu**	**59.08**	**51**	LR	LR	07 42 36.9	
	comp=Z,72nm,20.6s,baz=249,slow=32						
ARA0	**ARCESS Array S**	**59.32**	**23**	*e*P	**P**	**07 20 44.8**	**-0.1**
ARCES	**ARCESS Array B**	**59.32**	**23**	P	**P**	**07 20 44.8**	**-0.2**
	1.4nm,0.7s,baz=282,slow=5.7,SNR=5.3						
AKASG	**Malin Array Be**	**60.72**	**45**	P	**P**	**07 20 54.7**	**-0.1**
	0.8nm,0.6s,baz=275,slow=5.8,SNR=3.4						
AKBB	**Malin Array Si**	**60.72**	**45**	*e*P	**P**	**07 20 54.7**	**-0.1**
	5.5nm,1.5s						
BR101	**Keskin Array S**	**65.69**	**56**	*e*P	**P**	**07 21 28.2**	**0.0**
BRTR	**Keskin Array B**	**65.69**	**56**	P	**P**	**07 21 28.3**	**0.0**
	0.4nm,0.5s,baz=284,slow=5.8,SNR=2.4						
IL1	**Eielson Array**	**71.86**	**334**	*e*P	**P**	**07 22 05.6**	**-0.4**
ILAR	**Eielson Array**	**71.86**	**334**	P	**P**	**07 22 06.0**	**-0.1**
	1.3nm,0.7s,baz=72,slow=4.5,SNR=8.6						
ILB	**Eielson Array**	**71.86**	**334**	*e*P	**P**	**07 22 05.9**	**-0.1**
PAX	**Paxson**	**71.94**	**332**	*e*P	**P**	**07 22 08.0**	**+1.4**
AKTO	**Aktyubinsk**	**78.35**	**39**	P	**P**	**07 22 45.0**	**+1.3**
	0.9nm,0.4s,baz=270,slow=2.0,SNR=2.4						
BVAR	**Borovoye Array**	**83.65**	**33**	P	**P**	**07 23 12.2**	**+0.2**
	0.3nm,0.4s,baz=269,slow=7.2,SNR=3.3						
KURK	**Kurchatov**	**89.09**	**32**	*e*P	**P**	**07 23 39.4**	**+0.8**
KURBB	**Kurchatov Arra**	**89.11**	**32**	P	**P**	**07 23 39.4**	**+0.7**
	0.3nm,0.2s,baz=304,slow=6.6,SNR=3.4						
PMSA	**Palmer Station**	**91.45**	**188**	LR	LR	08 06 36.4	
	comp=Z,33nm,18.2s,baz=52,slow=37						

ISK ***28*** *07:58:10.6, 38.°51N×40.°58E, h4^{km}±1^{km}, ML1.8/1*

ISCJB ***28*** *07:58:11.2±0.7, 38.°51N±0.°04×40.°60E±0.°07, h5^{km}±12^{km}, Error ellipse: s-maj=9.5km s-min=6.4km az=14.5*

DDA ***28*** *07:58:11.1, 38.°51N×40.°64E, h6^{km}, Ml2.5*

CSEM ***28*** *07:58:11.3±0.3, 38.°48N×40.°57E, h12^{km}, ML1.8, Error ellipse: s-maj=8.6km s-min=6.8km az=25.0*

ISC 28 07:58:11.8±1.0**, 38.°48N**±0.°03×**40.°61E**±0.°03**, h11**^{km}±8^{km}**, n15,** σ**1**^{s}**30**/24**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HANI	**Diyarbakir_Han**	**0.18**	**248**	*i* P	**Pg**	**07 58 14.4**	**-1.3**
HANI				*i* S	**Sg**	**07 58 20.2**	**+1.8**
HANI	**Diyarbakir_Han**	**0.18**	**248**	P	**Pg**	**07 58 14.4**	**-1.3**
HANI				S	**Sg**	**07 58 20.2**	**+1.8**
BINT	**Bingol**	**0.41**	**346**	*e*Pg	**Pb**	**07 58 20.4**	**-0.7**
BNGB	**Bingˆ¶l**	**0.51**	**6**	PG	**Pg**	**07 58 20.4**	**-1.4**
MAZI	**Mazidag**	**1.03**	**187**	PG	**Pb**	**07 58 31.5**	**-0.2**
MAZI				SG	**Sb**	**07 58 46.3**	**+1.1**
MAZI	**Mazidag**	**1.03**	**187**	*e*Pg	**Pb**	**07 58 31.5**	**-0.2**
MAZI				*e*Sg	**Sb**	**07 58 46.3**	**+1.1**
SVRC	**Sivrice-ELAZID**	**1.03**	**265**	PG	**Pg**	**07 58 30.5**	**-1.1**
SVRC				SG	**Sb**	**07 58 45.6**	**+0.3**
SVRC	**Sivrice-ELAZID**	**1.03**	**265**	*e*Pg	**Pg**	**07 58 30.5**	**-1.1**
SVRC				*e*Sg	**Sb**	**07 58 45.6**	**+0.3**
PTK	**Pertek**	**1.04**	**294**	PG	**Pg**	**07 58 30.7**	**-1.1**
PTK	**Pertek**	**1.04**	**294**	*e*Pg	**Pg**	**07 58 30.7**	**-1.1**
GURO	**Guroymak-BITLI**	**1.12**	**86**	PN	**Pn**	**07 58 33.7**	**+0.2**
GURO	**Guroymak-BITLI**	**1.12**	**86**	*e*Pn	**Pn**	**07 58 33.7**	**+0.2**
SRTM	**Siirt_Merkez**	**1.14**	**115**	*i* P	**Pg**	**07 58 32.9**	**-0.8**
SRTM				*i* S	**Sb**	**07 58 49.6**	**+1.1**
SRTM	**Siirt_Merkez**	**1.14**	**115**	P	**Pg**	**07 58 32.9**	**-0.8**
SRTM				S	**Sb**	**07 58 49.6**	**+1.1**
MARD	**Mardin**	**1.17**	**173**	*i* P	**Pg**	**07 58 31.1**	**-3.3**
MARD				*i* S	**Sn**	**07 58 50.8**	**+0.4**

MEX 28 08:07:43.5±0.3**, 15.°65N×96.°15W, h13**^{km}±2^{km}**, MD3.9, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	**Huatulco**	**0.12**	**21**	*e*P	Pg	08 07 46.2	-0.6
HUIG				*e*S	Sg	08 07 48.5	-0.7
VHO	**Vista Hermosa**	**1.52**	**339**	*e*P	Pn	08 08 07.3	-3.2
VHO				*e*S	Sn	08 08 25.2	-5.0
PNIG	**Pinotepa**	**2.04**	**291**	*e*P	Pn	08 08 14.3	-3.2
PNIG				*e*S	Sn	08 08 38.5	-4.4
TPIG	**Tehuac#an**	**2.98**	**337**	*e*P	Pn	08 08 28.4	-2.3
TPIG				*i* S	Sn	08 09 02.5	-3.9
TGIG		**3.12**	**69**	*e*P	Pn	08 08 29.6	-2.9
TGIG				*e*S	Sn	08 09 06.5	-3.2

IDC ***28*** *08:10:40.9±2.7, 12.°13N×92.°59E, h0^{km}, mb3.6/5, mb1 3.7/5, mb1mx3.4/66, mbtmp3.6/5, Error ellipse: s-maj=168.3km s-min=21.5km az=57.0*

ISCJB ***28*** *08:10:43.8±0.8, 12.°51N±0.°08×93.°2E±0.°2, h23^{km}, mb3.6/5, Error ellipse: s-maj=22.3km s-min=9.0km az=19.6*

ISC 28 08:10:45.5±1.0**, 12.°44N**±0.°10×**93.°0E**±0.°2**, h23**^{km}**, n6,** σ**0**^{s}**55**/7**, mb3.5**/5**, Andaman Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PBA	**Port Blair**	**0.83**	**200**	*e*P	**Pn**	**08 11 01.7**	**-0.1**
PBA				*e*S	**Sn**	**08 11 13.6**	**+0.2**
PBA				AML	AML	08 11 15.9	
	comp=N,9µm,0.3s						
PBA				AML	AML	08 11 16.1	
	comp=E,12µm,0.3s						
MKAR	**Makanchi Array**	**35.42**	**347**	P	**P**	**08 17 40.4**	**+0.5**
	comp=E,0.4nm,0.4s,baz=154,slow=7.7,SNR=6.1						
KURBB	**Kurchatov Arra**	**39.88**	**346**	P	**P**	**08 18 17.9**	**+0.5**
	comp=E,0.3nm,0.3s,baz=159,slow=8.2,SNR=5.5						
WRA	**Warramunga Arr**	**51.84**	**128**	P	**P**	**08 19 52.0**	**-0.3**
	comp=E,0.5nm,0.8s,baz=301,slow=10.0,SNR=3.4						
ASAR	**Alice Springs**	**53.71**	**132**	P	**P**	**08 20 06.4**	**+0.3**
	comp=E,0.6nm,1.0s,baz=310,slow=7.4,SNR=5.1						
FINES	**FINESS Array B**	**68.20**	**332**	P	**P**	**08 21 43.2**	**-0.7**
	comp=E,0.6nm,0.6s,baz=83,slow=6.5,SNR=4.2						

IDC ***28*** *08:52:39.1±0.8, 35.°20N×27.°37E, h0^{km}, mb3.8/14, mb1 3.8/20, mb1mx3.8/63, mbtmp3.8/20, ML3.4/5, MS2.9/8, Ms1 2.9/8, ms1mx2.6/63, Error ellipse: s-maj=16.8km s-min=12.7km az=166.0*

MOS ***28*** *08:52:41.9±1.5, 35.°02N×27.°42E, h33^{km}, mb4.2/18, Error ellipse: s-maj=6.4km s-min=4.3km az=110.1*

CSEM ***28*** *08:52:41.5±0.1, 35.°11N×27.°55E, h10^{km}, mb4.1/12, Error ellipse: s-maj=5.0km s-min=3.2km az=23.0*

NEIC ***28*** *08:52:41.2±0.0, 35.°13N×27.°55E, h17^{km}, mb4.0/10, ML3.8(THE), ML3.8(ATH), After ATH.*

ATH ***28*** *08:52:41.3, 35.°13N×27.°55E, h17^{km}±1^{km}, ML3.8/6, Error ellipse: s-maj=2.3km s-min=0.8km az=336.0*

THE ***28*** *08:52:43.9, 35.°23N×27.°50E, h0^{km}, ML3.8/7, Error ellipse: s-maj=2.2km s-min=0.8km az=149.0*

HLW ***28*** *08:52:45.1, 34.°84N×27.°71E, h17^{km}±6^{km}, Md3.8, Ml4.2*

GII ***28*** *08:52:45.1±0.0, 34.°86N×27.°84E, h1^{km}, MD3.4/2*

DDA ***28*** *08:52:54.6, 35.°27N×27.°48E, h11^{km}, Ml3.4*

ISC 28 08:52:41.8±0.8**, 35.°12N**±0.°03×**27.°52E**±0.°02**, h15**^{km}±5^{km}**, n391,** σ**1**^{s}**55**/449**, mb4.1**/30**, MS3.2**/5**, 1C-1D, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KARP	**Karpathos**	**0.52**	**325**	P	**Pg**	**08 52 51.0**	**-1.1**
KARP				S	**Sb**	**08 53 00.3**	**+0.4**
KARP				AML	AML	08 53 03.8	
	comp=E,20846µm,0.4s						
KARP				AML	AML	08 53 04.5	
	comp=N,38040µm,0.5s						
KARP	**Karpathos**	**0.52**	**325**	P	**Pg**	**08 52 51.1**	**-1.0**
ZKR	**Zakros**	**1.07**	**270**	P	**Pb**	**08 53 01.1**	**-0.9**
ZKR				S	**Sb**	**08 53 17.4**	**+1.7**
ZKR				AML	AML	08 53 20.3	
	comp=E,18184µm,0.6s						
ZKR				AML	AML	08 53 22.6	
	comp=N,8490µm,0.4s						
ZKR	**Zakros**	**1.07**	**270**	P	**Pb**	**08 53 01.3**	**-0.7**
ZKR				S	**Sn**	**08 53 17.9**	**+1.1**
ZKR	**Zakros**	**1.07**	**270**	P	**Pb**	**08 53 01.5**	**-0.5**
ZKR				S	**Sn**	**08 53 17.9**	**+1.1**
ARG	**Arkhangelos**	**1.20**	**24**	*i* P	**Pb**	**08 53 04.4**	**+0.2**
ARG	**Arkhangelos**	**1.20**	**24**	P	**Pg**	**08 53 05.2**	**+0.2**
ARG				S	**Sb**	**08 53 19.0**	**-0.4**
ARG				AML	AML	08 53 31.2	
	comp=E,4938µm,0.8s						
ARG				AML	AML	08 53 33.8	
	comp=N,4542µm,0.9s						
ARG	**Arkhangelos**	**1.20**	**24**	P	**Pb**	**08 53 04.2**	**0.0**
ARG				S	**Sn**	**08 53 21.8**	**+1.8**
ARG	**Arkhangelos**	**1.20**	**24**	P	**Pb**	**08 53 04.2**	**0.0**
ARG				S	**Sn**	**08 53 21.8**	**+1.8**
ARG	**Arkhangelos**	**1.20**	**24**	P	**Pb**	**08 53 04.4**	**+0.2**
ARG				S	**Sn**	**08 53 21.8**	**+1.8**
NISR	**Nisiros**	**1.52**	**348**	P	**Pn**	**08 53 08.8**	**+0.4**
NISR				S	**Sg**	**08 53 30.7**	**-0.1**
NISR				AML	AML	08 53 36.0	
	comp=E,7006µm,0.6s						
NISR				AML	AML	08 53 44.5	
	comp=N,3132µm,0.7s						
NISR	**Nisiros**	**1.52**	**348**	P	**Pn**	**08 53 09.3**	**+0.9**
NISR				S	**Sg**	**08 53 30.7**	**-0.1**
NPS	**Neapolis**	**1.57**	**276**	P	**Pb**	**08 53 11.1**	**+0.6**
NPS				S	**Sg**	**08 53 33.1**	**+0.7**
NPS				AML	AML	08 53 38.0	
	comp=N,10217µm,0.5s						
NPS				AML	AML	08 53 44.8	
	comp=E,10633µm,0.5s						
NPS	**Neapolis**	**1.57**	**276**	P	**Pn**	**08 53 10.4**	**+1.3**
NPS				S	**Sg**	**08 53 33.0**	**+0.6**
NPS	**Neapolis**	**1.57**	**276**	P	**Pn**	**08 53 10.4**	**+1.3**
NPS				S	**Sg**	**08 53 33.0**	**+0.6**
NPS	**Neapolis**	**1.57**	**276**	P	**Pn**	**08 53 10.4**	**+1.3**
NPS				S	**Sg**	**08 53 32.8**	**+0.4**
DAT	**Datca**	**1.60**	**2**	*i* P	**Pn**	**08 53 10.4**	**+0.7**
DAT	**Datca**	**1.60**	**2**	*i* P	**Pn**	**08 53 10.4**	**+0.7**
DAT				*i* S	**Sn**	**08 53 31.2**	**+1.0**
DAT	**Datca**	**1.60**	**2**	P	**Pn**	**08 53 10.4**	**+0.7**
DAT				S	**Sn**	**08 53 31.2**	**+1.0**
LAST	**Lasithi**	**1.67**	**272**	P	**Pb**	**08 53 12.8**	**+0.5**
LAST				S	**Sg**	**08 53 35.9**	**+0.1**
LAST				AML	AML	08 53 43.6	
	comp=E,3125µm,0.5s						
LAST				AML	AML	08 53 46.7	
	comp=N,4155µm,0.7s						
LAST	**Lasithi**	**1.67**	**272**	P	**Pb**	**08 53 12.5**	**+0.1**
LAST				S	**Sg**	**08 53 35.7**	**-0.1**
LAST	**Lasithi**	**1.67**	**272**	P	**Pb**	**08 53 12.5**	**+0.1**
LAST				S	**Sb**	**08 53 35.4**	**+2.1**
MRSB	**Marmaris-Mugla**	**1.68**	**19**	*e*P	**Pn**	**08 53 11.7**	**+1.0**
ANAF	**Anafi Island**	**1.88**	**311**	P	**Pn**	**08 53 14.4**	**+1.0**
ANAF	**Anafi Island**	**1.88**	**311**	P	**Pn**	**08 53 14.7**	**+1.3**
ANAF				S	**Sn**	**08 53 38.8**	**+2.0**
ANAF	**Anafi Island**	**1.88**	**311**	P	**Pn**	**08 53 14.8**	**+1.3**
ANAF				S	**Sn**	**08 53 38.8**	**+2.0**
DALY	**Dalyan (Mu˜la**	**1.92**	**28**	P	**Pn**	**08 53 15.4**	**+1.4**
DALY	**Dalyan (Mu˜la**	**1.92**	**28**	*i* P	**Pn**	**08 53 15.3**	**+1.4**
DALY				*i* S	**Sg**	**08 53 43.5**	**-0.3**
DALY	**Dalyan (Mu˜la**	**1.92**	**28**	P	**Pn**	**08 53 15.3**	**+1.4**
BDRM	**Kayabasi**	**1.94**	**358**	*i* P	**Pn**	**08 53 14.6**	**+0.4**
BDRM				*i* S	**Sb**	**08 53 41.1**	**+0.2**
BDRM	**Kayabasi**	**1.94**	**358**	P	**Pn**	**08 53 14.6**	**+0.4**
BDRM				S	**Sb**	**08 53 41.1**	**+0.2**
BODT	**Bodrum**	**1.94**	**355**	P	**Pn**	**08 53 15.3**	**+1.0**
BODT	**Bodrum**	**1.94**	**355**	P	**Pn**	**08 53 14.7**	**+0.4**
BODT				S	**Sn**	**08 53 40.4**	**+2.0**
BODT	**Bodrum**	**1.94**	**355**	P	**Pn**	**08 53 14.7**	**+0.4**
BODT				S	**Sn**	**08 53 40.4**	**+2.0**
TURN	**Turunc**	**1.96**	**26**	*e*P	**Pn**	**08 53 13.6**	**-0.8**
TURN	**Turunc**	**1.96**	**26**	*i* P	**Pn**	**08 53 12.9**	**-1.5**
TURN				*i* S	**Sn**	**08 53 38.1**	**-0.5**
TURN	**Turunc**	**1.96**	**26**	P	**Pn**	**08 53 12.9**	**-1.5**
TURN				S	**Sn**	**08 53 38.1**	**-0.5**
KSL	**Kastellorizon**	**1.97**	**58**	P	**Pn**	**08 53 15.3**	**+0.7**
KSL	**Kastellorizon**	**1.97**	**58**	P	**Pn**	**08 53 15.6**	**+1.0**
FETY	**Fethiye**	**1.97**	**40**	P	**Pb**	**08 53 17.1**	**-0.3**
FETY	**Fethiye**	**1.97**	**40**	P	**Pn**	**08 53 16.1**	**+1.4**
FETY	**Fethiye**	**1.97**	**40**	P	**Pn**	**08 53 16.0**	**+1.4**
KSTL	**Kastelli Herak**	**2.01**	**276**	P	**Pn**	**08 53 15.0**	**-0.2**

KSTL				S	Sn	08 53 37.9	-2.2
KSTL	Kastelli Herak	2.01	276	P	Pn	08 53 15.0	-0.2
AKAS	Kas	2.03	56	P	Pn	08 53 17.2	+1.7
SANT	Santorini	2.09	307	eP	Pn	08 53 17.4	+1.1
SANT	Santorini	2.09	307	P	Pn	08 53 17.5	+1.2
SANT	Santorini	2.09	307	ePn	Pn	08 53 16.8	+0.5
SANT				eSn	Sg	08 53 50.0	+1.0
SANT	Santorini	2.09	307	ePn	Pn	08 53 16.8	+0.5
SANT	Santorini	2.09	307	P	Pn	08 53 17.8	+1.5
SANT				eSn	Sg	08 53 50.0	+1.0
YER	Yerkesik	2.10	17	eP	Pn	08 53 17.9	+1.4
YER	Yerkesik	2.10	17	P	Pn	08 53 17.5	+1.0
YER				S	Sb	08 53 44.8	-0.7
YER	Yerkesik	2.10	17	P	Pn	08 53 17.5	+1.0
YER				S	Sb	08 53 44.8	-0.7
YER	Yerkesik	2.10	17	P	Pn	08 53 17.5	+1.0
YER				S	Sb	08 53 44.8	-0.7
THR6	Thira Island,	2.12	306	P	Pn	08 53 18.2	+1.5
THR6	Thira Island,	2.12	306	P	Pn	08 53 18.2	+1.5
SAP1	Santorini-Akro	2.12	306	P	Pn	08 53 17.6	+0.9
SAP1	Santorini-Akro	2.12	306	P	Pn	08 53 18.2	+1.5
SAP1	Santorini-Akro	2.12	306	P	Pn	08 53 18.2	+1.5
THR7	Fira-Santorini	2.14	308	P	Pn	08 53 18.2	+1.2
THR7	Fira-Santorini	2.14	308	P	Pn	08 53 18.2	+1.2
STAX	Taxiarchis Har	2.14	307	P	Pn	08 53 18.0	+1.0
STAX	Taxiarchis Har	2.14	307	P	Pn	08 53 18.4	+1.5
STAX	Taxiarchis Har	2.14	307	P	Pn	08 53 18.4	+1.5
THR9	Santorini-Faro	2.15	306	P	Pn	08 53 18.7	+1.6
THR9	Santorini-Faro	2.15	306	P	Pn	08 53 18.8	+1.7
THR9	Santorini-Faro	2.15	306	P	Pn	08 53 18.8	+1.7
THR2	Thira island,	2.15	309	P	Pn	08 53 18.5	+1.4
THR2	Thira island,	2.15	309	P	Pn	08 53 18.5	+1.4
THR3	Thira Island,	2.15	307	P	Pn	08 53 18.2	+1.1
THR3	Thira Island,	2.15	307	P	Pn	08 53 18.2	+1.1
AMGA	Amorgos Island	2.16	323	P	Pn	08 53 17.3	+0.1
AMGA	Amorgos Island	2.16	323	P	Pn	08 53 17.5	+0.3
AMGA				S	Sn	08 53 44.4	+0.8
AMGA	Amorgos Island	2.16	323	P	Pn	08 53 18.1	+0.9
AMGA				S	Sn	08 53 44.4	+0.8
IDI	Anoyia	2.16	275	Pn	Pn	08 53 17.6	+0.3
	comp=N,18nm,0.3s,baz=71,slow=12,SNR=69						
IDI				LR	LR	08 53 45.5	
	comp=N,77nm,21.7s,baz=86,slow=33						
IDI				Lg	Lg	08 53 50.6	
	comp=N,75nm,0.3s,baz=139,slow=10,SNR=4.9						
IDI	Anoyia	2.16	275	eP	Pb	08 53 20.3	-0.3
IDI	Anoyia	2.16	275	ePn	Pn	08 53 19.1	+1.8
IDI				Lg	Lg	08 53 50.6	
IDI	Anoyia	2.16	275	ePn	Pn	08 53 19.1	+1.8
IDI				Lg	Lg	08 53 50.6	
MLSB	Milas	2.18	5	eP	Pn	08 53 18.5	+1.0
CMBO	Columbo, Santo	2.18	309	P	Pn	08 53 18.6	+1.0
CMBO	Columbo, Santo	2.18	309	P	Pn	08 53 18.9	+1.4
CMBO				S	Sn	08 53 46.1	+1.8
CMBO	Columbo, Santo	2.18	309	P	Pn	08 53 19.0	+1.4
CMBO				S	Sn	08 53 46.1	+1.8
THR5	Thira Island,	2.19	307	P	Pn	08 53 19.5	+1.8
THR5	Thira Island,	2.19	307	P	Pn	08 53 18.9	+1.3
THR5	Thira Island,	2.19	307	P	Pn	08 53 18.9	+1.3
SIVA	Sivas	2.23	268	P	Pb	08 53 21.6	-0.1
SIVA	Sivas	2.23	268	P	Pn	08 53 20.6	+2.5
SIVA	Sivas	2.23	268	P	Pn	08 53 20.6	+2.5
APE	Apeiranthos	2.52	321	P	Pn	08 53 22.1	-0.1
APE	Apeiranthos	2.52	321	P	Pn	08 53 23.0	+0.7
APE				S	Sn	08 53 53.5	+0.7
APE	Apeiranthos	2.52	321	P	Pn	08 53 23.0	+0.7
APE				S	Sn	08 53 53.5	+0.7
APE	Apeiranthos	2.52	321	P	Pn	08 53 23.2	+0.9
APE				S	Sn	08 53 53.5	+0.7
ELL	Elmali	2.53	49	eP	Pn	08 53 24.6	+2.2
ELL	Elmali	2.53	49	P	Pn	08 53 24.6	+2.2
ELL	Elmali	2.53	49	P	Pn	08 53 24.6	+2.2
AYDN	Tasoluk	2.55	6	i P	Pn	08 53 23.5	+0.8
AYDN				i S	Sn	08 53 46.9	-6.5
AYDN	Tasoluk	2.55	6	P	Pn	08 53 23.5	+0.8
GCAM	G?zelcaml?	2.58	355	eP	Pn	08 53 24.0	+1.0
GCAM	G?zelcaml?	2.58	355	i P	Pn	08 53 24.2	+1.2
GCAM				i S	Sg	08 54 02.5	-2.4
GCAM	G?zelcaml?	2.58	355	P	Pn	08 53 24.2	+1.2
TAVA	DENIZLI_Tavas	2.59	25	i P	Pn	08 53 24.4	+1.2
TAVA				i S	Sg	08 54 04.9	-0.4
TAVA	DENIZLI_Tavas	2.59	25	P	Pn	08 53 24.5	+1.2
SMG	Samos	2.64	348	P	Pn	08 53 24.4	+0.5
SMG	Samos	2.64	348	P	Pn	08 53 25.0	+1.2
SMG	Samos	2.64	348	P	Pn	08 53 25.0	+1.2
VAM	Vamos	2.73	277	P	Pn	08 53 28.3	+3.2
VAM	Vamos	2.73	277	P	Pn	08 53 27.5	+2.4
VAM	Vamos	2.73	277	P	Pn	08 53 27.5	+2.4
VAM	Vamos	2.73	277	P	Pn	08 53 27.5	+2.4
GVDS	Gavdos	2.83	265	P	Pn	08 53 28.8	+2.4
GVDS	Gavdos	2.83	265	P	Pn	08 53 28.8	+2.4
GVD	Gavdhos	2.83	265	P	Pn	08 53 28.5	+2.0
GVD	Gavdhos	2.83	265	P	Pn	08 53 28.5	+2.0
AYDB	Zeytinkoy-Aydi	2.83	6	eP	Pn	08 53 28.5	+1.9
CHAN	Chania	2.87	279	P	Pn	08 53 30.6	+3.6
CHAN	Chania	2.87	279	P	Pn	08 53 30.6	+3.6
IMMV	Iera Moni Meta	2.91	278	P	Pn	08 53 30.8	+3.2
IMMV	Iera Moni Meta	2.91	278	P	Pn	08 53 30.6	+3.0
IMMV	Iera Moni Meta	2.91	278	P	Pn	08 53 30.3	+2.7
DGB	˜zmir	2.97	350	i P	Pn	08 53 29.0	+0.7
DGB				i S	Sn	08 54 05.8	+2.2
URLA	Izmir	3.31	347	eP	Pn	08 53 34.2	+1.1
CHOS	Chios island	3.46	341	eP	Pn	08 53 37.7	+2.5
CHOS	Chios island	3.46	341	P	Pn	08 53 37.2	+2.0
CHOS	Chios island	3.46	341	P	Pn	08 53 36.4	+1.2
CHOS	Chios island	3.46	341	P	Pn	08 53 36.4	+1.2
ANKY	Antikythira Is	3.52	283	P	Pn	08 53 36.4	+0.4
ANKY	Antikythira Is	3.52	283	P	Pn	08 53 37.4	+1.5
ANKY	Antikythira Is	3.52	283	P	Pn	08 53 37.4	+1.5
ISP	Isparta	3.62	41	eP	Pn	08 53 40.3	+2.9
ISP	Isparta	3.62	41	ePn	Pn	08 53 38.8	+1.4
ISP	Isparta	3.62	41	eP	Pn	08 53 38.8	+1.4
ISP	Isparta	3.62	41	eP	Pn	08 53 38.8	+1.4
KYTH	Kithira	3.81	289	P	Pn	08 53 40.8	+0.8
KYTH	Kithira	3.81	289	P	Pn	08 53 41.5	+1.5
KYTH	Kithira	3.81	289	P	Pn	08 53 41.5	+1.5
KTHR	Kythira	3.85	288	P	Pn	08 53 41.8	+1.4
KTHR	Kythira	3.85	288	P	Pn	08 53 41.8	+1.4
VLI	Veliai	4.05	294	P	Pn	08 53 43.1	-0.1
VLI	Veliai	4.05	294	P	Pn	08 53 44.2	+1.1
VLI	Veliai	4.05	294	P	Pn	08 53 44.3	+1.1
VLY	Voula,Athens	4.05	313	P	Pn	08 53 44.6	+1.3
VLY	Voula,Athens	4.05	313	P	Pn	08 53 45.1	+1.8
VLY	Voula,Athens	4.05	313	P	Pn	08 53 45.1	+1.8
SLUM	Salum	4.11	209	P	Pn	08 53 45.0	+1.0
	baz=213						
SLUM				AMP		08 54 00.0	
	baz=213						
SLUM				S	Sn	08 54 29.2	-2.5
	baz=213						
SLUM	Salum	4.11	209	P	Pn	08 53 45.0	+1.0
ATHU	Athens Univers	4.13	314	P	Pn	08 53 46.5	+2.1
ATHU	Athens Univers	4.13	314	P	Pn	08 53 46.5	+2.1
PTL	Penteli	4.14	316	P	Pn	08 53 46.4	+1.9
PTL	Penteli	4.14	316	P	Pn	08 53 46.7	+2.2
KRND	KRANIDI	4.19	304	P	Pn	08 53 46.5	+1.3
KRND	KRANIDI	4.19	304	P	Pn	08 53 47.1	+2.0
DID	Didima	4.20	306	P	Pn	08 53 46.3	+1.0
DID	Didima	4.20	306	P	Pn	08 53 46.7	+1.4
DID	Didima	4.20	306	P	Pn	08 53 46.7	+1.4
SIGR	SIGRI	4.29	342	P	Pn	08 53 48.2	+1.7
SIGR	SIGRI	4.29	342	P	Pn	08 53 48.2	+1.7
DYR	Agios Nikonas	4.51	293	P	Pn	08 53 51.9	+2.3
DYR	Agios Nikonas	4.51	293	P	Pn	08 53 51.9	+2.3
LTK	Loutraki	4.67	310	P	Pn	08 53 53.8	+2.1
LTK	Loutraki	4.67	310	P	Pn	08 53 53.8	+2.1
VLX	Vlachokerasia	4.72	300	P	Pn	08 53 55.0	+2.5
VLX	Vlachokerasia	4.72	300	P	Pn	08 53 55.0	+2.5
ITM	Ithomi	4.97	296	ePn	Pn	08 53 57.5	+1.6
ITM	Ithomi	4.97	296	ePn	Pn	08 53 57.5	+1.6
GUR	Goura	5.03	305	P	Pn	08 53 59.3	+2.6
GUR	Goura	5.03	305	P	Pn	08 53 59.3	+2.6
DSF	Desfina	5.18	311	P	Pn	08 54 00.8	+2.0
DSF	Desfina	5.18	311	P	Pn	08 54 00.8	+2.0
KLV	Kalavryta, Ach	5.21	306	P	Pn	08 54 01.7	+2.5
KLV				S	Sn	08 55 01.4	+2.3
KLV	Kalavryta, Ach	5.21	306	P	Pn	08 54 01.7	+2.5
KLV				S	Sn	08 55 01.4	+2.3
SERG	Sergoula	5.48	308	P	Pn	08 54 05.2	+2.3
SERG	Sergoula	5.48	308	P	Pn	08 54 05.2	+2.3
ANX	Ano Chora	5.67	309	P	Pn	08 54 08.8	+3.2
ANX	Ano Chora	5.67	309	P	Pn	08 54 08.8	+3.2
AGG	Agios Georgios	5.69	315	ePn	Pn	08 54 08.6	+2.8
AGG	Agios Georgios	5.69	315	P	Pn	08 54 08.2	+2.4
AGG	Agios Georgios	5.69	315	eP	Pn	08 54 08.6	+2.8
AGG	Agios Georgios	5.69	315	P	Pn	08 54 08.2	+2.4
AGG	Agios Georgios	5.69	315	ePn	Pn	08 54 08.6	+2.8
ALN	Alexandroupoli	5.88	349	ePn	Pn	08 54 10.6	+2.3
ALN	Alexandroupoli	5.88	349	eP	Pn	08 54 10.6	+2.3
ALN	Alexandroupoli	5.88	349	eP	Pn	08 54 10.6	+2.3
SWA2		6.12	197	P	Pn	08 54 13.0	+1.3
	baz=200						
SWA2		6.12	197	P	Pn	08 54 13.0	+1.3
KOT	Kottamia	6.33	144	P	Pn	08 54 14.1	-0.5
	baz=143						
LIT	Litokhoron	6.37	323	ePn	Pn	08 54 17.8	+2.6
LIT	Litokhoron	6.37	323	eP	Pn	08 54 17.8	+2.6
LIT	Litokhoron	6.37	323	eP	Pn	08 54 17.8	+2.6
RSH		6.66	127	P	Pn	08 54 19.1	0.0
	baz=125						
RSH		6.66	127	P	Pn	08 54 19.1	0.0
HNTI	Hanita	6.67	106	Pn	Pn	08 54 20.1	+0.9
HNTI	Hanita	6.67	106	Pn	Pn	08 54 20.1	+0.9
OFRI	‘Ofer	6.69	110	Pn	Pn	08 54 20.6	+1.0
OFRI	‘Ofer	6.69	110	Pn	Pn	08 54 20.6	+1.0
BR101	Keskin Array S	6.69	45	ePn	Pn	08 54 21.4	+1.7
BR101				eSn	Sn	08 55 37.7	+2.0
BR101	Keskin Array S	6.69	45	ePn	Pn	08 54 21.4	+1.7
BR101				eSn	Sn	08 55 37.7	+2.0
BR131	Keskin Array S	6.69	45	ePn	Pn	08 54 21.0	+1.4
BR131	Keskin Array S	6.69	45	ePn	Pn	08 54 21.0	+1.4
BRTR	Keskin Array B	6.69	45	Pn	Pn	08 54 21.4	+1.7
	comp=N,0.4nm,0.3s,baz=220,slow=13,SNR=32						
BRTR				Sn	Sn	08 55 37.7	+2.0
	comp=N,0.3nm,0.3s,baz=208,slow=28,SNR=4.4						
BRTR	Keskin Array B	6.69	45	i P	Pn	08 54 21.3	+1.7
BRTR				pmax	pmax		
	comp=Z,6.0nm,0.8s						
BRTR	Keskin Array B	6.69	45	i P	Pn	08 54 21.3	+1.7
	comp=Z,6.0nm,0.8s						
BRTR				Sn	Sn	08 55 37.7	+2.0
SRS	Serrai	6.74	334	ePn	Pn	08 54 22.4	+2.3
MMA0B	Mount Meron ar	6.87	106	Pn	Pn	08 54 22.6	+0.5
MMA0B	Mount Meron ar	6.87	106	Pn	Pn	08 54 22.6	+0.5
MMAI	Mount Meron Ar	6.87	106	Pn	Pn	08 54 22.8	+0.7
	comp=Z,4.3nm,0.3s,baz=310,slow=12,SNR=21						
MMAI				Sn	Sn	08 55 41.3	+1.3
	comp=Z,3.5nm,0.3s,baz=291,slow=20,SNR=4.1						
KSDI	Kefar Szold	7.02	104	Pn	Pn	08 54 23.7	-0.3
KSDI				Sn	Sn	08 55 43.1	-0.4
KSDI	Kefar Szold	7.02	104	Pn	Pn	08 54 23.7	-0.3
KSDI				Sn	Sn	08 55 43.1	-0.4
NATI	Neve Ativ	7.06	103	Pn	Pn	08 54 24.5	0.0
GRG	Griva	7.09	327	P	Pn	08 54 30.7	+5.8
GRG				pmax	pmax		
	comp=Z,26nm,0.9s						
MMLI	Mount Malkishu	7.10	110	Pn	Pn	08 54 26.2	+1.0
MMLI	Mount Malkishu	7.10	110	Pn	Pn	08 54 26.2	+1.0
KZIT	Kziot	7.14	124	Pn	Pn	08 54 25.6	-0.1
KZIT				Sn	Sn	08 55 44.9	-1.7
KZIT	Kziot	7.14	124	Pn	Pn	08 54 25.6	-0.1
KZIT				Sn	Sn	08 55 44.9	-1.7
AMAZ	Amatzia	7.15	118	Pn	Pn	08 54 26.8	+1.0
AMAZ	Amatzia	7.15	118	Pn	Pn	08 54 26.8	+1.0
IGT	Igoumenitsa	7.22	310	ePn	Pn	08 54 29.3	+2.5
HMDT	Nahal Hemdat	7.26	111	Pn	Pn	08 54 27.9	+0.6
HMDT	Nahal Hemdat	7.26	111	Pn	Pn	08 54 27.9	+0.6
YTIR	Yattir	7.38	118	Pn	Pn	08 54 29.6	+0.5
YTIR	Yattir	7.38	118	Pn	Pn	08 54 29.6	+0.5
FNA	Florina	7.45	321	ePn	Pn	08 54 33.2	+3.3
FNA	Florina	7.45	321	eP	Pn	08 54 33.2	+3.3
FNA	Florina	7.45	321	eP	Pn	08 54 33.2	+3.3
DSI	Dead Sea	7.47	116	Pn	Pn	08 54 30.7	+0.5
DSI				Sn	Sn	08 55 53.7	-0.9
DSI	Dead Sea	7.47	116	Pn	Pn	08 54 30.7	+0.5
DSI				Sn	Sn	08 55 53.7	-0.9
KRMI	Paran Flat	7.86	127	Pn	Pn	08 54 35.8	+0.2
KRMI	Paran Flat	7.86	127	Pn	Pn	08 54 35.8	+0.2
PRNI	Paran	7.90	125	Pn	Pn	08 54 36.3	+0.2
PRNI	Paran	7.90	125	Pn	Pn	08 54 36.3	+0.2
HRFI	Mount Harif	8.12	127	Pn	Pn	08 54 39.2	0.0
HRFI	Mount Harif	8.12	127	Pn	Pn	08 54 39.2	0.0
VTS	Vitosha	8.18	337	ePn	Pn	08 54 42.1	+2.0
VTS	Vitosha	8.18	337	eP	Pn	08 54 42.1	+2.0
VTS	Vitosha	8.18	337	eP	Pn	08 54 42.1	+2.0
MBRI	Mt Berech	8.20	128	Pn	Pn	08 54 40.4	+0.1
MBRI				Sn	Sn	08 56 10.4	-2.3
MBRI	Mt Berech	8.20	128	Pn	Pn	08 54 40.4	+0.1
MBRI				Sn	Sn	08 56 10.4	-2.3
EIL	Elat	8.31	129	Pn	Pn	08 54 50.9	+9.1
	comp=Z,0.6nm,0.3s,baz=343,slow=5.9,SNR=10						
EIL				Sn	Sn	08 56 19.3	+4.0
	comp=Z,2.7nm,0.3s,baz=122,slow=4.5,SNR=6.1						
EIL				LR	LR	08 59 28.5	
	comp=Z,16nm,19.7s,baz=146,slow=48						
EIL	Elat	8.31	129	Pn	Pn	08 54 41.4	-0.3
EIL	Elat	8.31	129	Pn	Pn	08 54 41.4	-0.3
EIL				eSn	Sn	08 56 19.3	+4.0
ASF	Jabal al Asfar	8.35	108	Pn	Pn	08 54 43.8	+1.4
	comp=Z,0.4nm,0.3s,baz=322,slow=17,SNR=3.1						
ASF				Sn	Sn	08 56 22.0	+5.5
	comp=Z,0.3nm,0.3s,baz=300,slow=20,SNR=3.1						
TIP	Timpagrande	9.49	298	ePn	Pn	08 54 56.4	-1.6
TIP	Timpagrande	9.49	298	ePn	Pn	08 54 56.4	-1.6
HDK1	Dakhla	9.69	170	P	Pn	08 55 00.7	0.0
	baz=170						
HDK1	Dakhla	9.69	170	P	Pn	08 55 00.6	0.0
TTG	Podgorica	9.73	321	ePn	Pn	08 55 02.4	+1.2
TTG	Podgorica	9.73	321	eP	Pn	08 55 02.4	+1.2
TTG	Podgorica	9.73	321	eP	Pn	08 55 02.4	+1.2
IVAS	Ivanjica	10.18	328	ePn	Pn	08 55 10.3	+2.9
TREB	Trebinje	10.41	319	ePn	Pn	08 55 10.5	0.0
MLR	Muntele Rosu	10.43	354	LR	LR	08 59 52.8	
	comp=Z,45nm,21.6s,baz=140,slow=42						
CUC	Castrocucco	10.48	301	ePn	Pn	08 55 10.6	-1.0
CUC	Castrocucco	10.48	301	ePn	Pn	08 55 10.6	-1.0
WDD	Wied Dalam	10.62	278	ePn	Pn	08 55 12.3	-1.1
WDD	Wied Dalam	10.62	278	ePn	Pn	08 55 12.3	-1.1
DIVS	Divibare	10.67	329	ePn	Pn	08 55 17.2	+3.0
BBLS	Lazići	10.74	327	ePn	Pn	08 55 17.0	+1.9
VAE	Valguarnera	10.84	286	Pn	Pn	08 55 15.8	-0.7
	comp=Z,0.8nm,0.3s,baz=196,slow=15,SNR=2.1						
VAE				Sn	Sn	08 57 15.7	-1.8
	comp=Z,1.2nm,0.3s,baz=307,slow=20,SNR=1.9						
NEY	Neytrino	14.30	51	i P	Pn	08 56 06.0	+2.2
GNI	Garni	14.53	65	i P	Pn	08 56 08.5	+1.5
KIV	Kislovodsk	14.63	48⇓	eP	Pn	08 56 11.2	+2.9
KIV				eS	Sn	08 58 52.6	+2.4
KIV				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KIV				MLR	MLR		
	comp=Z,47nm,16.0s						
KIV	Kislovodsk	14.63	48	eP	Pn	08 56 11.2	+2.9
	comp=Z,5.0nm,0.9s						
KBZ	Khabaz	14.65	49	Pn	P	08 56 12.6	-2.1
	comp=Z,0.1nm,0.3s,baz=224,slow=4.3,SNR=7.9						
KEST	Kesra	14.83	278	ePn	Pn	08 56 11.8	+0.7
KEST				epP	P	08 56 17.9	+1.0
KEST	Kesra	14.83	278	ePn	Pn	08 56 11.8	+0.7
ZEI	Tsey	14.85	54	eP	P	08 56 18.0	+0.9
ZEI	Tsey	14.85	54	eP	P	08 56 18.0	+0.9
SOKA	Soboth	14.89	325	ePn	Pn	08 56 11.8	+0.1
	comp=Z,4.4nm,1.0s						
SOKA	Soboth	14.89	325	Pn	Pn	08 56 11.8	+0.1
	comp=Z,4.4nm,1.0s						
NCK	Nalchik	14.97	51	i P	Pn	08 56 12.8	0.0
OBKA	Obir	15.00	323	ePn	Pn	08 56 13.3	0.0
	comp=Z,3.2nm,0.8s						
OBKA	Obir	15.00	323	Pn	Pn	08 56 13.3	0.0
	comp=Z,3.2nm,0.8s						
TAMR	Tamra	15.01	283	ePn	P	08 56 19.3	+0.6
	comp=Z,24nm,0.9s						
TAMR	Tamra	15.01	283	ePn	P	08 56 19.3	+0.6
	comp=Z,24nm,0.9s						
ARSA	Arzberg	15.09	327	ePn	Pn	08 56 12.7	-1.7
	comp=Z,4.4nm,1.1s						
ARSA	Arzberg	15.09	327	Pn	Pn	08 56 12.7	-1.7
	comp=Z,4.4nm,1.1s						
CONA	Conrad Observa	15.46	329	ePn	Pn	08 56 18.9	-0.5
	comp=Z,1.0nm,0.5s						
CONA	Conrad Observa	15.46	329	Pn	Pn	08 56 18.9	-0.5
	comp=Z,1.0nm,0.5s						
KIEV	Kiev	15.61	4	i P	P	08 56 24.2	-1.1
KIEV				pmax	pmax		
	comp=Z,2.0nm,1.0s						
KIEV	Kiev	15.61	4	i P	P	08 56 24.2	-1.1
	comp=Z,2.0nm,1.0s						
KBA	Koelnbreinsper	15.99	323	ePn	Pn	08 56 24.7	-1.6
	comp=Z,5.3nm,1.1s						
KBA	Koelnbreinsper	15.99	323	Pn	Pn	08 56 24.7	-1.6
	comp=Z,5.3nm,1.1s						
MOA	Molln	16.10	326	Pn	Pn	08 56 28.0	+0.5
	comp=Z,3.1nm,1.2s						
MOA	Molln	16.10	326	P	Pn	08 56 28.0	+0.5
	comp=Z,3.1nm,1.2s						
ABTA	Abfaltersbach	16.20	320	ePn	Pn	08 56 26.9	-1.9
	comp=Z,4.2nm,0.9s						
ABTA	Abfaltersbach	16.20	320	Pn	Pn	08 56 26.9	-1.9
	comp=Z,4.2nm,0.9s						
OKC	Ostrava-Krasne	16.23	338	AMS	AMS	09 04 20.0	
	comp=Z,100nm,10.5s						
WTTA	Wattenberg	16.99	320	eP	P	08 56 41.2	+0.4
	comp=Z,3.4nm,0.5s						
WTTA	Wattenberg	16.99	320	P	P	08 56 41.2	+0.4
	comp=Z,3.4nm,0.5s						
WATA	Walderalm	17.07	320	ePn	Pn	08 56 39.4	-0.5
	comp=Z,2.9nm,0.6s						
WATA	Walderalm	17.07	320	P	Pn	08 56 39.4	-0.5
	comp=Z,2.9nm,0.6s						
GEA0	GERESS Array S	17.09	328	ePn	Pn	08 56 39.3	-0.8
GEA0	GERESS Array S	17.09	328	ePn	Pn	08 56 39.3	-0.8
GEC2	GERESS Array S	17.09	328	ePn	Pn	08 56 40.8	+0.6
	comp=Z,3.1nm,0.8s						
GEC2	GERESS Array S	17.09	328	eP	Pn	08 56 40.8	+0.6
GEC2				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GEC2	GERESS Array S	17.09	328	eP	Pn	08 56 40.8	+0.6
	comp=Z,3.0nm,0.8s						
GERES	GERESS Array B	17.09	328	Pn	Pn	08 56 39.3	-0.8
	baz=134,slow=11,SNR=9.5						
MOTA	Moosalm	17.32	320	P	Pn	08 56 43.0	-0.1
	comp=Z,1.1nm,0.5s						
MOTA	Moosalm	17.32	320	P	Pn	08 56 43.0	-0.1
	comp=Z,1.1nm,0.5s						
FETA	Feichten	17.32	318	P	Pn	08 56 43.9	+0.8
	comp=Z,10nm,1.0s						
FETA	Feichten	17.32	318	P	Pn	08 56 43.9	+0.8
	comp=Z,10nm,1.0s						
FUORN	Ofenpass-Fuorn	17.34	317	ePn	Pn	08 56 43.7	+0.2
	comp=Z,4.7nm,0.8s						
FUORN	Ofenpass-Fuorn	17.34	317	ePn	Pn	08 56 43.7	+0.2
	comp=Z,4.7nm,0.8s						
KHC	Kasperske Hory	17.36	328	eP	Pn	08 56 43.1	-0.4
KHC				AMS	AMS	09 04 20.0	
	comp=Z,100nm,9.1s						
KHC	Kasperske Hory	17.36	328	ePn	Pn	08 56 43.0	-0.4
	comp=Z,2.7nm,1.0s						
KHC	Kasperske Hory	17.36	328	eP	Pn	08 56 43.1	-0.4
KHC				MLR	MLR		
	comp=Z,100nm,9.1s						
KHC	Kasperske Hory	17.36	328	ePn	Pn	08 56 43.0	-0.4
	comp=Z,2.7nm,1.0s						
UPC	Upice	17.51	335	AMS	AMS	09 05 20.0	
	comp=Z,100nm,11.1s						
RETA	Reutte	17.59	320	ePn	Pn	08 56 45.2	-1.1
	comp=Z,4.4nm,1.1s						
RETA	Reutte	17.59	320	P	Pn	08 56 45.2	-1.1
	comp=Z,4.4nm,1.1s						
PRU	Pruhonice	17.63	331	AMS	AMS	09 05 40.0	
	comp=Z,100nm,6.8s						
DAVOX	Davos/Dischmat	17.65	317	LR	LR	09 04 29.6	
	comp=Z,45nm,20.7s,baz=269,slow=41						
WET	Wettzell	17.68	327	P	Pn	08 56 47.6	+0.2
WET				pmax	pmax		
	comp=Z,70nm,1.1s						
WET	Wettzell	17.68	327	P	Pn	08 56 47.6	+0.2
	comp=Z,70nm,1.1s						
SBF	Sospel	17.76	305	eP	Pn	08 56 48.1	-0.3
SBF				pmax	pmax		
	comp=Z,26nm,0.9s						
SBF	Sospel	17.76	305	eP	Pn	08 56 48.1	-0.3
	comp=Z,26nm,0.9s						
TUE	Stuetta	17.78	315	ePn	Pn	08 56 48.7	-0.1
	comp=Z,6.0nm,1.0s						
TUE	Stuetta	17.78	315	ePn	Pn	08 56 48.7	-0.1
	comp=Z,6.0nm,1.0s						
DAVA	Damuels	17.95	318	ePn	Pn	08 56 50.2	-0.6
	comp=Z,2.1nm,0.6s						
DAVA	Damuels	17.95	318	P	Pn	08 56 50.2	-0.6
	comp=Z,2.1nm,0.6s						
LPG	La Plagne	18.88	310	eP	P	08 57 00.4	-1.3
LPG				pmax	pmax		
	comp=Z,12nm,1.0s						
LPG	La Plagne	18.88	310	eP	P	08 57 00.4	-1.3
	comp=Z,12nm,1.0s						
LPL	La Plagne	18.90	310	eP	P	08 56 59.0	-2.9
LPL				pmax	pmax		
	comp=Z,9.0nm,0.4s						
LPL	La Plagne	18.90	310	eP	P	08 56 59.0	-2.9
	comp=Z,9.0nm,0.4s						
SENIN	Lac Senin/Sane	18.94	312	eP	P	08 57 00.9	-1.4
	comp=Z,11nm,1.3s						
SENIN	Lac Senin/Sane	18.94	312	eP	P	08 57 00.9	-1.4
	comp=Z,11nm,1.3s						
ORIF	Oris-en-Rattie	19.20	307	eP	P	08 57 05.1	+0.1
ORIF				pmax	pmax		
	comp=Z,23nm,1.7s						
ORIF	Oris-en-Rattie	19.20	307	eP	P	08 57 05.1	+0.1
	comp=Z,23nm,1.7s						
CLL	Collm	19.27	332	eP	P	08 57 07.0	+1.3
CLL				esP	sP	08 57 12.0	-0.1
CLL				ePP	PnPn	08 57 20.0	+0.4
CLL	Collm	19.27	332	eP	P	08 57 07.0	+1.3
CLL	Collm	19.27	332	eP	P	08 57 07.0	+1.3
BFO	Black Forest	19.41	319	i P	Pn	08 57 10.3	+1.9
CABF	La Chapelle	19.79	312	eP	P	08 57 09.8	-1.7
CABF				pmax	pmax		
	comp=Z,11nm,1.0s						
CABF	La Chapelle	19.79	312	eP	P	08 57 09.8	-1.7
	comp=Z,11nm,1.0s						
VIVF	Saint-Julien-l	19.97	306	eP	P	08 57 11.8	-1.6
VIVF				pmax	pmax		
	comp=Z,2.0nm,0.6s						
VIVF	Saint-Julien-l	19.97	306	eP	P	08 57 11.8	-1.6
	comp=Z,2.0nm,0.6s						
HAU	Haudompre	20.33	316	eP	Pn	08 57 20.1	+0.7
HAU				pmax	pmax		
	comp=Z,4.0nm,0.7s						
OBN	Obninsk	20.95	15⇑	eP	Pn	08 57 26.9	+0.4
OBN				e		08 57 40.8	
OBN				PPP	PPP	08 57 53.0	
OBN						09 01 36.0	
OBN				pmax	pmax		
	comp=Z,7.0nm,0.4s						
OBN				MLR	MLR		
	comp=Z,27nm,16.0s						
SMF	Signal de Mont	21.20	310	eP	P	08 57 24.4	-2.3
SMF				pmax	pmax		
	comp=Z,5.0nm,0.7s						
SMF	Signal de Mont	21.20	310	eP	P	08 57 24.4	-2.3
	comp=Z,5.0nm,0.7s						
AVF	Avril sur Loir	21.56	310	eP	P	08 57 28.6	-2.0
AVF				pmax	pmax		
	comp=Z,14nm,1.2s						
SSF	Saint Saulge	21.58	311	eP	P	08 57 28.6	-2.2
SSF				pmax	pmax		
	comp=Z,20nm,1.3s						
SSF	Saint Saulge	21.58	311	eP	P	08 57 28.6	-2.2
	comp=Z,20nm,1.3s						
CAF	Calviac	21.74	304	eP	P	08 57 31.1	-1.4
CAF				pmax	pmax		
	comp=Z,14nm,1.4s						
CAF	Calviac	21.74	304	eP	P	08 57 31.1	-1.4
	comp=Z,14nm,1.4s						
BGF	Bois d’Agland	21.79	309	eP	P	08 57 32.7	-0.4
BGF				pmax	pmax		
	comp=Z,17nm,1.2s						
BGF	Bois d’Agland	21.79	309	eP	P	08 57 32.7	-0.4
	comp=Z,17nm,1.2s						
GIVF	Givet	22.30	319	eP	P	08 57 39.5	+1.0
GIVF				pmax	pmax		
	comp=Z,3.0nm,0.4s						
BAIF	Baives	22.61	318	eP	P	08 57 40.6	-1.2
BAIF				pmax	pmax		
	comp=Z,7.0nm,0.9s						
BAIF	Baives	22.61	318	eP	P	08 57 40.6	-1.2
	comp=Z,7.0nm,0.9s						
TAM	Tamanrasset	22.78	243	P	P	08 57 46.3	+2.4
TAM				pmax	pmax		
	comp=Z,5.0nm,1.6s						

FLN	La Foliniere	24.72	312	eP	P	08 58 00.2	-2.1
FLN				pmax	pmax		
	comp=Z,80nm,1.9s						
GRR	Gorron	24.81	311	eP	P	08 58 00.1	-3.0
GRR				pmax	pmax		
	comp=Z,19nm,1.2s						
ESDC	Sonseca Array	25.35	290	P	P	08 58 06.7	-1.5
	comp=Z,0.9nm,0.5s,baz=81,slow=10,SNR=8.8						
ROSF	Rostrenen	26.30	310	eP	P	08 58 14.8	-1.9
ROSF				pmax	pmax		
	comp=Z,75nm,1.8s						
FIA0	FINESS Array S	26.36	358	eP	P	08 58 15.7	-1.2
FIA0	FINESS Array S	26.36	358	eP	P	08 58 15.7	-1.2
FINES	FINESS Array B	26.36	358	P	P	08 58 15.7	-1.2
	comp=Z,0.3nm,0.3s,baz=167,slow=10,SNR=5.6						
FIA1	FINESS Array S	26.36	358	eP	P	08 58 16.7	-0.3
HFS	Hagfors	26.59	345	P	P	08 58 17.7	-1.4
	comp=Z,1.2nm,0.7s,baz=134,slow=8.6,SNR=5.5						
HFS				LR	LR	09 09 25.2	
	comp=Z,53nm,20.6s,baz=162,slow=38						
MDT	Midelt	26.69	274	P	P	08 58 19.1	-1.4
	comp=Z,1.6nm,0.7s,baz=66,slow=12,SNR=2.9						
AKTO	Aktyubinsk	26.87	46	P	P	08 58 21.1	-0.6
	comp=Z,1.5nm,0.6s,baz=258,slow=12,SNR=4.9						
NB200	NORSAR Array S	27.96	343	eP	P	08 58 29.7	-1.8
NOA	NORSAR Array B	27.96	343	P	P	08 58 29.7	-1.8
	comp=Z,0.4nm,0.7s,baz=157,slow=7.8,SNR=3.3						
TOA1	Torodi Ar. Sit	31.98	233	eP	P	08 59 05.8	-1.6
TOA0	Torodi Ar. Sit	31.98	233	eP	P	08 59 07.8	+0.4
	comp=Z,4.4nm,0.6s						
TORD	Torodi Ar. Bea	31.98	233	P	P	08 59 05.8	-1.6
	comp=Z,4.2nm,0.8s,baz=32,slow=8.5						
ARA0	ARCESS Array S	34.48	359	eP	P	08 59 26.8	-2.0
ARCES	ARCESS Array B	34.48	359	P	P	08 59 26.8	-2.0
	comp=Z,1.1nm,0.8s,baz=162,slow=8.3,SNR=4.4						
BVAR	Borovoye Array	34.98	46	P	P	08 59 33.0	-0.2
	comp=Z,0.4nm,0.5s,baz=251,slow=4.4,SNR=3.6						
BVAR	Borovoye Array	34.98	46	P	P	08 59 33.0	-0.2
KOWA	Kowa	35.00	242	LR	LR	09 14 28.2	
	comp=Z,46nm,19.3s,baz=41,slow=38						
SFK	Sufi-Kurgan	36.46	68	P	P	08 59 48.1	+1.7
SFK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KURBB	Kurchatov Arra	39.64	51	P	P	09 00 12.9	+0.2
	comp=Z,1.2nm,0.8s,baz=274,slow=8.9,SNR=7.4						
KURK	Kurchatov	39.70	51	eP	P	09 00 12.9	-0.3
KURK	Kurchatov	39.70	51	P	P	09 00 12.9	-0.3
KURK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
MAKZ	Makanchi	41.96	57	eP	P	09 00 30.9	-1.1
	comp=Z,3.0nm,1.4s						
MAKZ	Makanchi	41.96	57	eP	P	09 00 30.9	-1.1
MAKZ				pmax	pmax		
	comp=Z,3.0nm,1.4s						
MK31	Makanchi Array	42.18	57	eP	P	09 00 34.2	+0.4
MK31	Makanchi Array	42.18	57	eP	P	09 00 34.2	+0.4
MK32	Makanchi Array	42.18	57	eP	P	09 00 34.4	+0.6
MKAR	Makanchi Array	42.18	57	P	P	09 00 34.4	+0.6
	comp=Z,0.8nm,0.6s,baz=280,slow=7.3,SNR=8.3						
MKAR	Makanchi Array	42.18	57	eP	P	09 00 34.2	+0.4
	comp=Z,9.8nm,0.6s						
MKAR	Makanchi Array	42.18	57	eP	P	09 00 34.2	+0.4
MKAR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MK01	Makanchi Array	42.19	57	eP	P	09 00 34.4	+0.6
SPITS	Spitsbergen Ar	43.42	357	P	P	09 00 42.6	-0.9
	comp=Z,0.4nm,0.4s,baz=181,slow=7.2,SNR=4.3						
SPITS				LR	LR	09 19 26.1	
	comp=Z,30nm,19.5s,baz=270,slow=37						
ZALV	Zalesovo Beam	43.63	46	LR	LR	09 21 48.6	
	comp=Z,30nm,18.9s,baz=246,slow=40						
BOSA	Boshof	63.43	182	P	P	09 03 11.4	+0.5
	comp=Z,1.5nm,0.8s,baz=8.1,slow=7.1,SNR=3.1						
KSAR	Wonju Array Be	76.74	54	P	P	09 04 32.6	0.0
KSAR	Wonju Array Be	76.74	54	P	P	09 04 32.6	0.0
KSRS	Korea Array	76.76	54	P	P	09 04 32.6	0.0
	comp=Z,0.4nm,0.6s,baz=278,slow=4.4,SNR=4.0						
SSPA	Standing Stone	78.12	311	eP	P	09 04 38.5	-1.8
	comp=Z,8.9nm,1.4s						

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*CSEM **28** 09:01:48.8, 37°.12N×27°.94E, h24^{km}, ML1.9, Suspected Mining explosion.*

ISK 28 09:01:48.8, 37°.12N×27°.94E, h24^{km}, ML1.9/4**, Suspected Mining explosion., Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MLSB	Milas	0.22	324	PG	Pb	09 01 54.2	-0.4
MLSB				SG	Sb	09 01 59.6	+1.1
MLSB	Milas	0.22	324	ePg	Pb	09 01 54.2	-0.4
MLSB				eSg	Sb	09 01 59.6	+1.1
YER	Yerkesik	0.28	87	PG	Pb	09 01 55.2	-0.2
YER				SG	Sb	09 02 01.1	+1.1
YER	Yerkesik	0.28	87	ePg	Pb	09 01 55.2	-0.2
YER				eSg	Sb	09 02 01.1	+1.1
DAT	Datca	0.48	216	PG	Pb	09 01 59.4	+0.6
DAT				SG	Sb	09 02 06.8	+1.2
DAT	Datca	0.48	216	ePg	Pb	09 01 59.4	+0.6
DAT				eSg	Sb	09 02 06.8	+1.2
BODT	Bodrum	0.50	264	PG	Pb	09 01 59.2	+0.2
BODT				SG	Sn	09 02 07.6	-0.9
BODT	Bodrum	0.50	264	ePg	Pb	09 01 59.2	+0.2
BODT				eSg	Sn	09 02 07.6	-0.9
TURN	Turunc	0.59	115	PG	Pb	09 01 58.9	-1.5
TURN	Turunc	0.59	115	ePg	Pb	09 01 58.9	-1.5
AYDB	Zeytinkoy-Aydi	0.82	358	PG	Pn	09 02 06.2	+1.1
AYDB	Zeytinkoy-Aydi	0.82	358	ePg	Pn	09 02 06.2	+1.1

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*ISCJB **28** 09:02:15.8±0.9, 35°.25N±0°.07×102°.68E±0°.05, h10^{km}, mb3.5/3, MS3.0/4, Error ellipse: s-maj=10.7km s-min=5.2km az=16.7*

*IDC **28** 09:02:16.5±7.9, 35°.19N×102°.53E, h0^{km}, mb3.6/3, mb1 3.6/5, mb1mx3.3/68, mbtmp3.6/5, ML3.5/2, MS3.1/6, Ms1 3.2/6, ms1mx2.7/57, Error ellipse: s-maj=132.5km s-min=69.5km az=156.0*

*BJI **28** 09:02:19.9, 35°.29N×102°.56E, h8^{km}, mb3.9/3, mB4.0/1, ML3.8/13, Ms3.6/9, Ms7 3.4/8*

ISC 28 09:02:19.8±1.1**, 35°.4N**±0°.1×**102°.66E**±0°.06**, h10^{km}, n14, σ1^{s}68**/16**, mb3.6**/3**, MS3.0**/4**, Qinghai**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LZH	Lanzhou	1.19	54	Pg	Pn	09 02 40.5	-2.2
LZH				Sg	Sb	09 02 58.0	0.0
LZH				smax	smax		
	comp=N,2µm,0.9s						
LZH				smax	smax		
	comp=E,2µm,0.7s						
GTA	Gaotai	4.61	331	Pn	Pn	09 03 30.0	+0.4
GTA				Pg	Pb	09 03 43.0	+2.2
GTA				Sn	Sn	09 04 25.5	+2.3
GTA				Sg	Sg	09 04 45.8	-1.9
GTA				smax	smax		
	comp=N,24nm,1.6s						
GTA				smax	smax		
	comp=E,25nm,1.3s						
GTA				LR	LR		
	comp=E,520nm,10.2s						
GTA				LR	LR		
	comp=Z,360nm,11.1s						
XAN	Xi'an	5.33	103	Pn	Pn	09 03 40.5	+1.0
XAN				Pg	Pb	09 03 55.5	+2.4
XAN				Sn	Sn	09 04 39.8	-1.3
XAN				Sg	Sg	09 05 10.5	-0.5
XAN				smax	smax		
	comp=N,74nm,0.9s						
XAN				smax	smax		
	comp=E,62nm,1.1s						
XAN				LR	LR		
	comp=N,550nm,8.4s						
XAN				LR	LR		
	comp=E,270nm,5.0s						
XAN				LR	LR		
	comp=Z,360nm,12.0s						
SONM	Songino Array	12.74	11	Pn	Pn	09 05 21.9	+0.8
	0.4nm,0.3s,baz=193,slow=13,SNR=5.0						
SONM				LR	LR	09 10 46.3	
	comp=Z,103nm,19.7s,baz=130,slow=39						
WMQ	Urumqi	14.26	311	eP	Pn	09 05 40.0	-1.9
WMQ				sP	P	09 05 49.0	-0.2
WMQ				LR	LR		
	comp=N,740nm,12.7s						
WMQ				LR	LR		
	comp=E,360nm,13.9s						
WMQ				LR	LR		
	comp=Z,430nm,11.1s						
CMAR	Chiang Mai Arr	17.19	192	LR	LR	09 13 15.7	
	comp=Z,78nm,18.8s,baz=19,slow=39						
MKAR	Makanchi Array	19.05	313	P	P	09 06 41.0	-1.2
	0.1nm,0.3s,baz=114,slow=14,SNR=5.4						
KSRS	Korea Array	20.42	77	LR	LR	09 16 01.9	
	comp=Z,30nm,18.6s,baz=255,slow=40						
KURBB	Kurchatov Arra	23.15	319	P	P	09 07 25.3	-0.9
	1.2nm,0.8s,baz=122,slow=11,SNR=8.9						
JNU	Nakatsue	23.41	87	LR	LR	09 17 25.8	
	comp=Z,41nm,18.1s,baz=302,slow=39						
AKTO	Aktyubinsk	35.41	309	LR	LR	09 23 49.7	
	comp=Z,27nm,19.6s,baz=116,slow=36						
ARCES	ARCESS Array B	52.87	335	P	P	09 11 35.2	-0.1
	0.5nm,0.5s,baz=81,slow=7.5,SNR=5.8						
FINES	FINESS Array B	53.36	324	P	P	09 11 37.2	-1.8
	0.4nm,0.6s,baz=80,slow=7.8,SNR=4.1						
SPITS	Spitsbergen Ar	54.89	345	LR	LR	09 38 05.0	
	comp=Z,36nm,19.5s,baz=235,slow=39						

MEX 28 09:08:34.1±0.5**, 16°.51N×98°.58W, h5^{km}**±6^{km}**, MD3.7, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.45	106	eP	Pg	09 08 42.5	-0.3
PNIG				i S	Sg	09 08 48.7	0.0
TLIG	Tlapa	1.04	1	eP	Pg	09 08 51.4	-2.7
TLIG				eS	Sg	09 09 04.7	-3.0
CAIG	El Cayaco	1.70	288	eP	Pn	09 09 01.0	-3.5
CAIG				eS	Sn	09 09 21.7	-4.9
VHO	Vista Hermosa	1.85	72	eP	Pn	09 09 03.6	-3.2
VHO				eS	Sn	09 09 25.6	-5.1
HUIG	Huatulco	2.49	107	eP	Pn	09 09 12.8	-2.5
HUIG				eS	Sn	09 09 41.4	-4.6

MAN 28 09:46:44.5, 13°.68N×120°.59E, h96^{km}, mb4.7, ML3.6, MS3.5, 1D, Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	Lubang	0.34	279	eP	Pn	09 47 00.5	+1.7
LUBP				eS	Sn	09 47 12.0	+2.5
PGP	Puerto Galera	0.40	116⇓	eP	Pn	09 47 01.2	+2.0
PGP				i S	Sn	09 47 13.2	+2.9
SJMP	San Jose	1.32	157	eP	Pn	09 47 09.2	+0.8
SJMP				eS	Sn	09 47 27.4	+1.0
BUSP	Coron	1.71	193	eP	Pn	09 47 13.4	+0.1
BUSP				eS	Sn	09 47 35.9	+0.8

DJA 28 09:48:20.3±0.5**, 1°N**±4°×**12°3E**±°**, h10^{km}, M3.5**/7**, MLv3.5**/7**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KMSI	Cibinong	1.02	113	P	Pn	09 48 42.0	+1.3
KMSI				S	Sg	09 48 51.9	-1.4
MRSI	Marisa	1.21	246	P	Pn	09 48 41.3	-2.0
MRSI				S	Sb	09 48 58.3	-0.6
LUWI	Luwuk	2.03	188	P	Pn	09 48 55.1	+0.6
LUWI				S	Sb	09 49 21.3	-1.2
APSI	Ampana	2.34	217	P	Pn	09 48 59.0	+0.2
APSI				S	Sn	09 49 28.5	+0.9
MPSI	Mapaga	3.21	259	P	Pn	09 49 11.3	+0.5

DJA 28 09:51:04.5±0.9**, 10°S**±4°×**11°7E**±°**, h16^{km}**±7^{km}**, M3.7**/13**, mb3.6**/1**, MLv3.7**/13**, Sumbawa region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWSI	Taliwang, Sumb	1.09	8	P	Pb	09 51 24.6	-0.4
TWSI				S	Sb	09 51 39.2	+0.3
PLAI	Plampang	1.44	47	P	Pn	09 51 28.5	-1.4
PLAI				S	Sn	09 51 45.7	-2.7
IGBI	Denpasar	1.84	303	P	Pn	09 51 34.7	-0.8
IGBI				S	Sn	09 51 56.3	-2.2
DNP	Denpasar	1.87	307	P	Pn	09 51 36.1	+0.2
DNP				S	Sn	09 51 58.8	-0.4
SRBI	Singaraja	2.28	319	P	Pn	09 51 43.0	+1.5
SRBI				S	Sb	09 52 11.6	-1.6
WBSI	Waikabubak, Su	2.64	86	P	Pn	09 51 46.0	-0.5
JAGI	Jajag, Banyuwa	2.87	298	P	Pn	09 51 48.7	-0.9
JAGI				S	Sn	09 52 21.4	-2.5
GMJI	Gumukmas	3.58	295	P	Pn	09 51 59.2	-0.2
BLJI	Banyuglugur	3.71	303	P	Pn	09 52 01.1	-0.1
EDFI	Ende, Flores	5.02	78	P	Pn	09 52 19.8	+0.5

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*NIED **28** 10:07:00, 32°.50N×140°.30E, h23^{km}, Mw3.8 Best double couple: M$_0$5.68000×10^{14} NP1:φ$_s$219.00000°, δ51.00000°, λ32.00000°. NP2:φ$_s$108.00000°, δ66.00000°, λ137.00000°.*

*IDC **28** 10:07:40.5±1.1, 32°.24N×140°.07E, h0^{km}, mb3.5/5, mb1 3.7/7, mb1mx3.5/69, mbtmp3.5/7, ML3.8/3, MS2.6/3, Ms1 2.6/3, ms1mx2.4/47, Error ellipse: s-maj=40.0km s-min=15.0km az=74.0*

*JMA **28** 10:07:45.8±0.1, 32°.53N×140°.26E, h37^{km}±4^{km}, M3.7*

ISC 28 10:07:40.1±2.5**, 32°.35N**±0°.05×**140°.44E**±0°.09**, h4^{km}**±15^{km}**, n36, σ1^{s}79**/39**, mb3.4**/5**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAOM	Aogashimamukai	0.58	281	P	Pn	10 07 55.2	0.0
JHCJ	Hachijojimakas	0.90	323	P	Pb	10 07 58.6	+0.3
JHCJ				S	Sg	10 08 08.0	-1.0
JHJ2	Mitsune	0.92	325	P	Pb	10 07 59.0	+0.4
JHJ2				eS	Sg	10 08 08.7	-1.0
JHJ	Hachijo jima 2	0.94	324	Pn	Pb	10 07 59.1	+0.1
	150nm,0.3s,baz=3.9,slow=18,SNR=577						
JHJ				Sn	Sg	10 08 09.2	-1.2
	347nm,0.3s,baz=105,slow=20,SNR=17						
JMKN	Mikurajimanish	1.69	335	P	Pn	10 08 10.1	-0.4
JKO	Kozu shima	2.13	330	P	Pn	10 08 17.2	+0.7
JSKK	Shikinejimakit	2.23	333	P	Pn	10 08 18.7	+0.9
BSO1	Boso 1	2.34	11	P	Pn	10 08 18.3	-0.5
JTHY	Toshimahigashi	2.37	336	P	Pn	10 08 20.7	+0.9
BSO3	Boso 3	2.44	1	P	Pn	10 08 20.6	+0.1
JIM2	Oshima 3	2.50	341	P	Pn	10 08 21.9	+0.3
JIZS	Izushimoda	2.69	331	P	Pn	10 08 25.2	+1.0
TATJ	Tateyama 2	2.71	350	P	Pn	10 08 25.5	+1.1
JYO	Yokosk	2.93	348	P	Pn	10 08 28.7	+1.2
JYO				S	Sn	10 09 00.3	-2.9
JSG	Sagara	2.98	321	P	Pn	10 08 30.5	+2.3
JCN	Nagara	3.06	356	P	Pn	10 08 29.9	+0.6
JCN				S	Sn	10 09 03.3	-3.1
JOD2	Odawara 2	3.11	339	P	Pn	10 08 30.7	+0.7
JOD2				S	Sn	10 09 04.2	-3.5
HMMJ	Hamamatsu 2	3.37	318	P	Pn	10 08 34.9	+1.3
JYN	Shimob	3.51	334	P	Pn	10 08 37.7	+2.2
JHU	Hanno	3.62	345	P	Pn	10 08 37.7	+0.7
JHU				S	Sn	10 09 16.4	-3.8
MJAR	Matsushiro Arr	4.57	337	Pn	Pn	10 08 52.6	+2.6
	29nm,0.3s,baz=165,slow=13,SNR=463						
MJAR				Sn	Sn	10 09 44.0	+0.4
	baz=164,slow=29,SNR=2.2						
MJAR				LR	LR	10 10 42.7	
	comp=Z,136nm,18.5s,baz=150,slow=40						
MAT	Matsushiro	4.57	337	P	Pn	10 08 53.1	+3.1
MAT				S	Sn	10 09 43.9	+0.3
JCJ	Chichijima	5.46	163	Pn	Pn	10 09 03.2	+1.0
	3.2nm,0.3s,baz=24,slow=20,SNR=9.4						
JCJ				Sn	Sn	10 10 01.6	-3.8
	baz=221,slow=20						
JNU	Nakatsue	8.09	278	LR	LR	10 12 12.3	
	comp=Z,31nm,21.0s,baz=124,slow=35						
KSRS	Korea Array	11.46	300	Pn	Pn	10 10 23.6	-0.9
	0.1nm,0.3s,baz=116,slow=15,SNR=3.3						
KSRS				LR	LR	10 14 42.0	
	comp=Z,27nm,19.0s,baz=129,slow=37						
H11N2	WAKE ISLAND Hy	26.81	111	T	T	10 42 02.2	
	baz=304,slow=75,SNR=224						
H11N1	WAKE ISLAND Hy	26.81	112	T	T	10 42 04.8	
	baz=304,slow=75,SNR=196						
H11N3	WAKE ISLAND Hy	26.83	111	T	T	10 42 05.7	
	baz=304,slow=75,SNR=163						
H11S3	WAKE ISLAND Hy	27.34	114	T	T	10 42 41.8	
	baz=305,slow=75,SNR=62						
H11S1	WAKE ISLAND Hy	27.34	114	T	T	10 42 28.9	
	baz=305,slow=75,SNR=53						
H11S2	WAKE ISLAND Hy	27.36	114	T	T	10 42 30.0	
	baz=305,slow=75,SNR=72						
MKAR	Makanchi Array	46.06	306	P	P	10 16 04.8	-0.2
	0.2nm,0.5s,baz=99,slow=7.4,SNR=2.8						
KURBB	Kurchatov Arra	48.36	311	P	P	10 16 22.8	-0.1
	0.4nm,0.5s,baz=89,slow=7.5,SNR=4.1						
WRA	Warramunga Arr	52.33	187	P	P	10 16 52.1	-1.0
	0.3nm,0.4s,baz=3.4,slow=7.7,SNR=14						
ASAR	Alice Springs	56.05	187	P	P	10 17 20.4	+0.2
	0.3nm,0.8s,baz=7.9,slow=8.9,SNR=5.2						
TXAR	Lajitas Array	93.62	52	P	P	10 21 01.4	+3.3
	0.1nm,0.7s,baz=310,slow=4.4,SNR=2.8						

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*BER **28** 10:14:40.2±4.5, 80°.04N×3°.59E, h10^{km}, ML3.7, ML4.2(NAO)*

*MOS **28** 10:14:42.7±1.4, 79°.54N×3°.50E, h10^{km}, mb4.6/35, Error ellipse: s-maj=34.5km s-min=5.4km az=95.1*

*IDC **28** 10:14:43.3±0.5, 79°.68N×3°.84E, h0^{km}, mb4.0/24, mb1 4.1/30, mb1mx4.0/76, mbtmp4.0/30, ML3.4/5, MS3.9/52, Ms1 3.9/52, ms1mx3.8/71, Error ellipse: s-maj=13.7km s-min=9.0km az=42.0*

*BJI **28** 10:14:44.4, 79°.93N×4°.90E, h12^{km}, mb4.7/29, mB4.9/18, Ms4.7/17, Ms7 4.4/17*

*NEIC **28** 10:14:45.6±0.2, 79°.67N×4°.38E, h10^{km}, mb4.6/51, Error ellipse: s-maj=5.7km s-min=3.5km az=60.0*

*CSEM **28** 10:14:45.0±0.1, 79°.66N×4°.51E, h10^{km}, mb4.6/58, Error ellipse: s-maj=7.6km s-min=4.1km az=52.0*

*NAO **28** 10:14:45.1±3.4, 79°.54N×4°.71E, ML4.2*

*GCMT **28** 10:14:45.6±0.3, 79°.78N×3°.03E, h16^{km}±1^{km}, MW4.8/82, Moment Tensor Solution. s23,c25; s82,c120; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-0.44±.09; M$_{θθ}$-1.69±.07; M$_{φφ}$2.13±.08; M$_{rθ}$0.34±.21; M$_{θφ}$-0.46±.06; M$_{φr}$-1.40±.26; Best double couple: M$_0$2.29700×10^{16} NP1:φ$_s$128.00000°, δ82.00000°, λ154.00000°. NP2: φ$_s$222.00000°, δ65.00000°, λ9.00000°. Principal axes: T 2.8150, Plg24.0000°, Azm82.0000°; N -1.0330, Plg63.0000°, Azm291.0000°; P -1.7800, Plg12.0000°, Azm177.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 28 10:14:44.6±0.8**, 79°.48N**±0°.04×**3°.81E**±0°.04**, h6^{km}**±4^{km}**, n269, σ2^{s}38**/250**, mb4.5**/108**, MS3.9**/60**, 4C-2D, Greenland Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KBS	Kingsbay	1.63	106	Pg	Pn	10 15 11.2	-2.6
KBS				Lg	Lg	10 15 31.7	
KBS	Kingsbay	1.63	106	ePn	Pn	10 15 11.4	-2.4
KBS				eSn	Sn	10 15 31.7	-3.3
KBS	Kingsbay	1.63	106	eP	Pn	10 15 11.4	-2.4
KBS				e		10 15 31.7	
KBS	Kingsbay	1.63	106	eP	Pn	10 15 11.4	-2.4
KBS				eSn	Sn	10 15 31.7	-3.3
KBS	Kingsbay	1.63	106	eP	Pn	10 15 11.8	-2.0
KBS				eS	Sn	10 15 30.8	-4.2
KBS				IAML		10 15 36.4	
	comp=Z,929nm,0.4s						
BRBA	Barentsburg A	2.48	120	Pn	Pn	10 15 25.4	-0.1
BRBA	Barentsburg A	2.48	120	Pg	Pb	10 15 27.3	-2.3
BRBA				Sn	Sn	10 15 54.5	-1.6
SPA0	Spitsbergen Ar	2.77	112	Pn	Pn	10 15 28.3	-1.2
	baz=322,slow=14						
SPA0				Sn	Sn	10 16 00.1	-3.1
	baz=329,slow=16						
SPA0	Spitsbergen Ar	2.77	112	ePn	Pn	10 15 28.5	-0.9
SPA0	Spitsbergen Ar	2.77	112	Pn	Pn	10 15 28.3	-1.2
	SNR=999						
SPA0				Sn	Sn	10 16 00.1	-3.1
	SNR=9.8						
SPA0	Spitsbergen Ar	2.77	112	Pn	Pn	10 15 28.3	-1.2
	baz=322,slow=14						
SPA0				Sn	Sn	10 16 00.1	-3.1
	baz=329,slow=16						
SPITS	Spitsbergen Ar	2.77	112	Pn	Pn	10 15 27.9	-1.5
	baz=329,slow=14,SNR=2907						
SPITS				Sn	Sn	10 16 00.4	-2.7
	baz=335,slow=25,SNR=8.0						
SPITS				LR	LR	10 16 46.7	
	comp=Z,4µm,18.2s,baz=320,slow=43						
HSP	Hornsund	3.45	130	Pn	Pn	10 15 37.8	-0.9
HSP				Sn	Sn	10 16 16.6	-3.2
HSPB	Hornsund (broa	3.45	130	eP	Pn	10 15 38.6	-0.2
HSPB				e		10 16 19.2	
HSPB	Hornsund (broa	3.45	130	eP	Pn	10 15 39.8	+1.0
HSPB				eS	Sn	10 16 17.7	-2.1
HSPB				IAML		10 16 24.2	
	comp=Z,446nm,0.6s						
HOPEN	Hopen	5.30	113	eP	Pn	10 16 03.3	-0.8
HOPEN				eS	Sn	10 17 00.3	-5.1
HOPEN				IAML		10 17 02.6	
	comp=Z,262nm,0.3s						
DAG	Danmarks Havn	5.34	251⇑	iP	Pn	10 16 01.0	-3.7
DAG				i S	Sn	10 16 56.5	-10
DAG	Danmarks Havn	5.34	251⇑	iP	Pn	10 16 01.0	-3.7
DAG	Danmarks Havn	5.34	251	eP	Pn	10 16 00.9	-3.8
DAG				eS	Sn	10 16 56.5	-10
JNW	Jan Mayen West	9.01	206	eP	Pn	10 16 54.7	-0.3
JNW				eS	Sn	10 18 31.1	-5.4
JNE	Jan Mayen East	9.04	206	eP	Pn	10 16 54.9	-0.4
JNE				eS	Sn	10 18 31.5	-5.8
JMIC	Jan Mayen	9.06	206	Pn	Pn	10 16 54.8	-0.9
JMIC	Jan Mayen	9.06	206	Pn	Pn	10 16 54.8	-0.9
	comp=Z,46nm,0.3s,baz=38,slow=2.7,SNR=225						
JMIC				Sn	Sn	10 18 31.5	-6.3
	comp=Z,17nm,0.3s,baz=131,slow=21,SNR=18						
JMIC				LR	LR	10 19 32.7	
	comp=Z,563nm,21.6s,baz=30,slow=31						
JMIC	Jan Mayen	9.06	206	eP	Pn	10 16 54.4	-1.2
JMIC				eP		10 16 54.9	
JMIC				eS	Sn	10 18 31.4	-6.4
JMIC				eS		10 18 31.6	
JMIC				IAML		10 18 35.9	
	comp=Z,89nm,0.6s						
JMI	Jan Mayen	9.13	207	eP	Pn	10 16 56.4	-0.3
HAMF	Hammerfest	10.15	140	eP	Pn	10 17 10.6	0.0
HAMF				eS	Sn	10 18 56.6	-7.9
HAMF				IAML		10 19 23.1	
	comp=Z,10.0nm,0.5s						
TRO	Tromso	10.62	150	ePn	Pn	10 17 18.8	+1.8
KEV	Kevo	11.39	136	ePn	Pn	10 17 29.6	+2.1
KEV				eSn	Sn	10 19 30.6	-4.2
KEV	Kevo	11.39	136	P	Pn	10 17 28.2	+0.7
KEV				pmax	pmax		
	comp=Z,27nm,1.1s						
ARA0	ARCESS Array S	11.41	139	P	Pn	10 17 28.4	+0.6
	baz=344,slow=12						
ARA0				Sn	Sn	10 19 29.6	-5.8
	baz=3.4,slow=22						
ARA0	ARCESS Array S	11.41	139	Pn	Pn	10 17 28.4	+0.6
	baz=344,slow=12						
ARA0				Sn	Sn	10 19 29.6	-5.8
	baz=3.4,slow=22						
ARCES	ARCESS Array B	11.41	139	Pn	Pn	10 17 27.9	0.0
	comp=Z,0.8nm,0.3s,baz=343,slow=12,SNR=28						
ARCES				Sn	Sn	10 19 29.7	-5.8
	comp=Z,1.5nm,0.3s,baz=5.6,slow=19,SNR=7.0						
ARCES	ARCESS Array B	11.41	139	ePn	Pn	10 17 28.7	+0.8
ARCES				Sn	Sn	10 19 29.7	-5.8
ARCES	ARCESS Array B	11.41	139	eP	Pn	10 17 28.7	+0.8
SUMG	Summit	11.96	258	ePn	Pn	10 17 30.4	-5.4
SUMG	Summit	11.96	258	i P	Pn	10 17 30.4	-5.4
SUMG	Summit	11.96	258	i P	Pn	10 17 30.4	-5.4
SUMG	Summit	11.96	258	ePn	Pn	10 17 30.7	-5.1
SUMG				eSn	Sn	10 19 33.1	-16
STEI	Steigen	12.00	159	ePn	Pn	10 17 38.3	+2.5
HEF	Hetta	12.27	144	ePn	Pn	10 17 39.9	+0.3
KONS	Konsvik	13.29	164	ePn	Pn	10 17 57.4	+3.9
SGF	Sodankyl	13.52	140	P	Pn	10 17 55.1	-1.5
SGF				pmax	pmax		
	comp=Z,13nm,0.9s						
MOR8	Moi Rana	13.69	162	ePn	Pn	10 17 59.4	+0.4
KULLO	Kullorsuaq	13.85	282	i P	Pn	10 17 52.3	-8.7
KULLO	Kullorsuaq	13.85	282	i P	Pn	10 17 52.3	-8.7
KULLO	Kullorsuaq	13.85	282	ePn	Pn	10 17 52.7	-8.2
KULLO				eSn	Sn	10 20 13.0	-22
APA	Apatity	14.29	130⇓	iP	Pn	10 18 04.7	-2.5
APA				pmax	pmax		
	comp=Z,7.0nm,0.7s						

APA				MLR	MLR		
	comp=Z,500nm,13.0s						
BORG	Borgarnes	16.40	220	LR	LR	10 23 10.6	
	comp=Z,273nm,21.7s,baz=15,slow=31						
ILULI	Ilulissat	17.08	264	*e*Pn	Pn	10 18 34.8	-8.7
ILULI	Ilulissat	17.08	264	*e*P	Pn	10 18 34.8	-8.7
VAF	Ylistaro	17.41	150	P	P	10 18 49.7	+0.8
VAF				pmax	pmax		
	comp=Z,15nm,1.6s						
AKN	Aaknes	17.41	175	*e*Pn	P	10 18 53.7	+4.6
DOMB	Dombas	17.59	172	*e*Pn	P	10 18 57.0	+5.9
SUF	Sumiainen	18.06	146	P	Pn	10 18 54.5	-1.2
SUF				pmax	pmax		
	comp=Z,14nm,0.9s						
NC204	NORSAR Array S	18.41	169	*e*P	Pn	10 19 02.4	+2.2
NC303	NORSAR Array S	18.48	168	*e*P	Pn	10 19 03.2	+2.2
NC405	NORSAR Array S	18.61	168	*e*P	Pn	10 19 04.7	+2.2
NB201	NORSAR Array S	18.66	169	*e*P	Pn	10 19 06.4	+3.3
NBO00	NORSAR Array S	18.66	169	*e*P	Pn	10 19 06.8	+3.7
NB2	NORSAR Subarra	18.66	169	P	Pn	10 19 05.8	+2.6
	baz=359,slow=11						
NB2	NORSAR Subarra	18.66	169	Pn	Pn	10 19 05.8	+2.6
	baz=359,slow=11						
NOA	NORSAR Array B	18.66	169	P	Pn	10 19 04.3	+1.1
	comp=Z,0.0nm,0.3s,baz=351,slow=12,SNR=9.5						
NOA				LR	LR	10 25 25.8	
	comp=Z,66nm,20.8s,baz=350,slow=34						
NAO01	NORSAR Array S	18.85	169	*e*P	Pn	10 19 08.4	+3.1
SFJD	Kangerlussuaq	18.94	260	P	P	10 19 00.2	-5.6
	comp=Z,7.2nm,0.3s,baz=34,slow=12,SNR=7.4						
SFJD				LR	LR	10 26 41.8	
	comp=Z,572nm,19.0s,baz=42,slow=38						
NC602	NORSAR Array S	18.98	168	*e*P	P	10 19 07.2	+0.8
NRA0	NORESS Array S	18.98	168	P	Pn	10 19 08.4	+1.4
	baz=355,slow=10						
NRA0	NORESS Array S	18.98	168	Pn	Pn	10 19 08.4	+1.4
	baz=355,slow=10						
ASK	Askoy	19.09	178	*e*Pn	Pn	10 19 16.1	+7.8
FIA1	FINESS Array S	19.30	147	*e*P	Pn	10 19 12.0	+1.2
	comp=Z,9.1nm,1.0s						
FIA0	FINESS Array S	19.30	147	P	Pn	10 19 12.2	+1.3
	baz=352,slow=10						
FIA0	FINESS Array S	19.30	147	Pn	Pn	10 19 12.2	+1.3
	baz=352,slow=10						
FINES	FINESS Array B	19.30	147	P	P	10 19 10.4	+0.6
	comp=Z,0.2nm,0.3s,baz=344,slow=11,SNR=12						
FINES				LR	LR	10 26 22.7	
	comp=Z,381nm,21.2s,baz=358,slow=36						
HFS	Hagfors	19.67	165	P	Pn	10 19 15.5	+0.2
	slow=12						
HFS	Hagfors	19.67	165	P	P	10 19 15.2	+1.3
	comp=Z,0.3nm,0.3s,baz=4.1,slow=10,SNR=16						
HFS				LR	LR	10 26 06.8	
	comp=Z,132nm,21.0s,baz=12,slow=34						
HFS	Hagfors	19.67	165	Pn	Pn	10 19 15.5	+0.2
	slow=12						
RES	Resolute Bay	19.91	310	P	P	10 19 13.8	-2.6
	comp=Z,0.5nm,0.3s,baz=64,slow=11,SNR=6.1						
RES				LR	LR	10 25 42.5	
	comp=Z,244nm,18.8s,baz=10,slow=33						
KONO	Kongsberg	20.01	171	*i* P	P	10 19 18.0	+0.5
KONO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
KLMR	Klimovskoe	21.54	129	*e*P	P	10 19 33.3	-0.7
KLMR				*e*S	S	10 23 30.4	-2.2
KLMR				pmax	pmax		
	comp=Z,32nm,1.2s						
KLMR	Klimovskoe	21.54	129	*e*P	P	10 19 33.4	-0.6
KLMR				AMP		10 19 47.1	
	comp=Z,32nm,1.2s						
KLMR				*e*S	S	10 23 30.4	-2.2
KLMR				*e*S	S	10 23 30.4	-2.2
KLMR				LQ	LQ	10 25 43.9	
KLMR				LQ	LQ	10 25 43.9	
KLMR				LR	LR	10 26 34.4	
PRGR	Permogore	21.71	121	*e*P	P	10 19 35.4	-0.5
PRGR				pmax	pmax		
	comp=Z,31nm,0.9s						
VSU	Vasula	22.30	147	*i* P	P	10 19 43.2	+1.0
VSU				pmax	pmax		
	comp=Z,54nm,1.1s						
EKA	Eskdalemuir Ar	24.36	190	P	P	10 20 03.5	+0.6
	comp=Z,1.9nm,0.8s,baz=7.0,slow=7.6,SNR=3.9						
ESK	Eskdalemuir	24.38	190	*e*P	P	10 20 05.5	+2.4
	comp=Z,27nm,1.4s						
ESK	Eskdalemuir	24.38	190	*e*P	P	10 20 05.5	+2.4
ESK				pmax	pmax		
	comp=Z,27nm,1.4s						
IZAR	Zarasai	24.93	149	*e*P	P	10 20 09.9	+1.9
IZAR				IAmb	IAmb	10 20 12.8	
	comp=Z,12nm,0.4s						
FRB	Frobisher Bay	25.15	274	P	P	10 20 10.1	+0.2
	comp=Z,5.3nm,0.7s,baz=19,slow=8.5,SNR=7.0						
FRB				LR	LR	10 30 00.3	
	comp=Z,292nm,18.3s,baz=20,slow=36						
IIGN	Ignalina	25.32	149	*e*P	P	10 20 13.3	+1.8
IIGN				IAmb	IAmb	10 20 17.9	
	comp=Z,6.3nm,1.0s						
IDID	Didziasalis	25.41	149	*e*P	P	10 20 14.2	+1.9
IDID				IAmb	IAmb	10 20 17.2	
	comp=Z,3.2nm,0.7s						
KLNR	Kaliningrad	25.57	158	*i* P	P	10 20 14.4	+0.6
KLNR				pmax	pmax		
	comp=Z,36nm,0.9s						
OBN	Obninsk	26.70	136⇓	*e*P	P	10 20 25.3	+1.3
OBN				*e**PP	sP	10 20 27.4	+0.8
OBN				*e**SP	pP	10 20 28.7	+2.9
OBN				PPP	PPP	10 21 12.0	
OBN				*e*S	S	10 25 07.5	+8.1
OBN				pmax	pmax		
	comp=Z,6.0nm,0.4s						
OBN				MLR	MLR		
	comp=Z,140nm,16.0s						
CLL	Collm	28.47	168	*e*S	S	10 25 24.0	-3.3
CLL				*e*		10 26 00.0	
SVE	Sverdlovsk	28.79	107	*e*P	P	10 20 44.1	+1.4
ARU	Arti	28.81	110	P	P	10 20 42.4	-0.4
	comp=Z,2.9nm,0.5s,baz=325,slow=5.2,SNR=6.3						
ARU				LR	LR	10 33 23.1	
	comp=Z,403nm,20.1s,baz=338,slow=39						
ARU	Arti	28.81	110	*e*P	P	10 20 44.1	+1.2
	comp=Z,6.3nm,0.9s						
ARU	Arti	28.81	110*c*	*i*P	P	10 20 43.7	+0.8
ARU						10 21 32.0	
ARU				PPP	PPP	10 21 43.1	
ARU				S	S	10 25 34.8	+2.3
ARU				pmax	pmax		
	comp=Z,21nm,1.7s						
ARU				MLR	MLR		
	comp=Z,333nm,15.0s						
PVCC	Panska Ves	29.31	166	AMS	AMS	10 36 40.0	
	comp=Z,100nm,11.8s						
UPC	Upice	29.40	164	AMS	AMS	10 39 50.0	
	comp=Z,100nm,15.4s						
LPSR	Galich'ya Gora	29.46	134	*e*P	P	10 20 49.7	+1.0
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
DPC	Dobruska-Polom	29.57	164	AMS	AMS	10 36 00.0	
	comp=Z,100nm,16.2s						
PRU	Pruhonice	29.85	166	*e*S	S	10 25 56.1	+7.1
PRU				AMS	AMS	10 36 50.0	
	comp=Z,100nm,15.3s						
OJC	Ojcow	29.91	159	*e*P	P	10 20 54.2	+1.6
	comp=Z,4.9nm,1.0s						
OJC	Ojcow	29.91	159	*e*P	P	10 20 54.3	+1.6
OJC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
GOPC	GO Pecny, Ondr	29.93	166	*e*S	S	10 25 57.4	+7.0
GOPC				AMS	AMS	10 37 00.0	
	comp=Z,100nm,14.4s						
OKC	Ostrava-Krasne	30.18	161	AMS	AMS	10 36 10.0	
	comp=Z,100nm,11.9s						
AKASG	Malin Array Be	30.21	147	P	P	10 20 56.5	+1.1
	comp=Z,0.5nm,0.5s,baz=346,slow=9.2,SNR=3.0						
AKASG				LR	LR	10 33 06.5	
	comp=Z,191nm,21.7s,baz=355,slow=36						
AKBB	Malin Array Si	30.21	147	*e*P	P	10 20 57.9	+2.6
	comp=Z,4.3nm,1.0s						
MORC	Moravsky Berou	30.21	162	*e*P	P	10 20 57.9	+2.5
	comp=Z,3.6nm,0.9s						
MORC	Moravsky Berou	30.21	162	*e*P	P	10 20 57.9	+2.5
MORC				pmax	pmax		
	comp=Z,4.0nm,0.9s						
MORC	Moravsky Berou	30.21	162	*e*P	P	10 20 56.8	+1.4
MORC				*e*		10 21 07.3	
KIEV	Kiev	30.21	147	*i* P	P	10 20 57.1	+1.7
KIEV				pmax	pmax		
	comp=Z,3.0nm,1.0s						
INK	Inuvik	30.43	330	P	P	10 20 55.3	-1.8
	comp=Z,3.0nm,1.0s,baz=45,slow=2.9,SNR=2.3						
VRAC	Vranov	30.63	163	P	P	10 21 00.0	+1.0
	comp=Z,2.1nm,0.5s,baz=344,slow=9.6,SNR=6.2						
VRAC	Vranov	30.63	163	P	P	10 21 00.0	+1.0
VRAC				pmax	pmax		
	comp=Z,3.0nm,0.8s						
VRAC	Vranov	30.63	163	*e*P	P	10 21 00.8	+1.7
VRAC				*e*		10 21 11.1	
KHC	Kasperske Hory	30.66	167	*e*S	S	10 26 03.8	+1.9
KHC				AMS	AMS	10 38 40.0	
	comp=Z,100nm,12.3s						
KHC	Kasperske Hory	30.66	167	*e*P	P	10 21 01.9	+2.5
	comp=Z,2.6nm,1.5s						
KHC	Kasperske Hory	30.66	167	*e*P	P	10 21 01.9	+2.5
KHC				pmax	pmax		
	comp=Z,3.0nm,1.5s						
VSR	Storozhevoye	30.85	135	*e*P	P	10 21 00.6	-0.4
VSR				pmax	pmax		
	comp=Z,5.0nm,0.4s						
VSR				MLR	MLR		
	comp=Z,390nm,22.0s						
KRUC	Moravsky	30.86	164	*e*P	P	10 21 03.0	+1.9
STU	Stuttgart	30.89	173	*e*P	P	10 21 03.2	+1.8
	comp=Z,9.1nm,0.8s						
STU	Stuttgart	30.89	173	*e*P	P	10 21 03.2	+1.8
STU				pmax	pmax		
	comp=Z,9.0nm,0.8s						
GEC2	GERESS Array S	30.95	167	*e*P	P	10 21 04.8	+2.7
	comp=Z,3.4nm,1.0s						
GEC2	GERESS Array S	30.95	167	*e*P	P	10 21 04.8	+2.7
GEC2				pmax	pmax		
	comp=Z,3.0nm,1.0s						
GERES	GERESS Array B	30.95	167	P	P	10 21 03.9	+1.9
	comp=Z,1.2nm,0.8s,baz=19,slow=8.5,SNR=8.7						
GEA0	GERESS Array S	30.96	167	*e*P	P	10 21 04.5	+2.4
VRH	Novokhopyorsk	31.21	132	*e*P	P	10 21 04.5	+0.4
VRH				pmax	pmax		
	comp=Z,10.0nm,0.5s						
VRH				MLR	MLR		
	comp=Z,460nm,20.0s						
BFO	Black Forest	31.31	174	*e*P	P	10 21 07.0	+1.9
	comp=Z,4.9nm,1.2s						
BFO	Black Forest	31.31	174	*e*P	P	10 21 07.0	+1.9
BFO				pmax	pmax		
	comp=Z,5.0nm,1.2s						
CONA	Conrad Observa	31.97	165	*e*P	P	10 21 12.1	+1.1
	comp=Z,4.5nm,1.1s						
MOA	Molln	31.97	167	*e*P	P	10 21 10.4	-0.5
	comp=Z,3.6nm,1.5s						
PSZ	Piszkesteto	32.20	160	*e*P	P	10 21 15.7	+2.7
	comp=Z,8.9nm,1.4s						
PSZ	Piszkesteto	32.20	160	*e*P	P	10 21 15.7	+2.7
PSZ				pmax	pmax		
	comp=Z,9.0nm,1.4s						
MOTA	Moosalm	32.36	171	pP	P	10 21 17.3	+2.8
	comp=Z,1.0nm,0.5s						
DAVA	Damuels	32.39	172	*e*pP	P	10 21 17.6	+2.8
	comp=Z,4.9nm,1.4s						
WTTA	Wattenberg	32.46	170	*e*P	P	10 21 17.2	+1.7
	comp=Z,2.6nm,0.5s						
RDOG	Red Dog Mine	32.48	351	*e*P	P	10 21 14.3	-0.8
	comp=Z,48nm,1.4s						
FETA	Feichten	32.68	171	*e*P	P	10 21 18.0	+0.7
	comp=Z,2.8nm,1.3s						
KBA	Koelnbreinsper	32.71	168	*e*P	P	10 21 17.1	-0.5
	comp=Z,1.4nm,0.6s						
COLD	Coldfoot	32.74	342	*e*P	P	10 21 16.0	-1.5
	comp=Z,8.2nm,1.0s						
DAVOX	Davos/Dischmat	32.89	172	LR	LR	10 36 23.5	
	comp=Z,115nm,18.5s,baz=80,slow=39						
BUR04	Bucovina Ar. S	32.90	153	*e*P	P	10 21 21.1	+2.0
ABTA	Abfaltersbach	33.01	169	*e*P	P	10 21 22.6	+2.5
	comp=Z,5.2nm,1.6s						
FYU	Fort Yukon	33.08	338	*e*P	P	10 21 19.4	-1.0
	comp=Z,40nm,1.4s						
MYKA	Terra Mystica	33.16	168	*e*pP	P	10 21 24.3	+2.9
	comp=Z,1.6nm,0.5s						
SOKA	Soboth	33.18	166	*e*P	P	10 21 22.5	+0.9
	comp=Z,3.9nm,1.3s						
SCHQ	Schefferville	33.18	266	LR	LR	10 35 08.7	
	comp=Z,322nm,18.1s,baz=26,slow=37						
TUE	Stuetta	33.19	173	*e*P	P	10 21 24.0	+2.1
	comp=Z,2.2nm,0.7s						
SENIN	Lac Senin/Sane	33.26	176	*e*P	P	10 21 24.6	+2.2
	comp=Z,6.1nm,1.2s						
OBKA	Obir	33.32	166	*e*P	P	10 21 24.1	+1.2
	comp=Z,4.6nm,0.9s						
YKA	Yellowknife Ar	33.90	313	LR	LR	10 34 55.9	
	comp=Z,34nm,20.3s,baz=20,slow=36						
TRI	Trieste	34.09	168	P	P	10 21 28.0	-1.4
TRI				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BRVK	Borovoye	34.11	99	*e*P	P	10 21 30.4	+1.0
	comp=Z,7.2nm,1.0s						
BRVK	Borovoye	34.11	99	*i* P	P	10 21 30.2	+0.7
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
BVAR	Borovoye Array	34.16	99	P	P	10 21 30.1	+0.2
	comp=Z,1.3nm,0.5s,baz=258,slow=40,SNR=12						
BVAR				LR	LR	10 38 29.1	
	comp=Z,597nm,18.3s,baz=332,slow=42						
AKTO	Aktyubinsk	34.47	114	P	P	10 21 33.8	+1.1
	comp=Z,2.3nm,0.9s,baz=344,slow=12,SNR=9.5						
AKTO				LR	LR	10 38 39.1	
	comp=Z,263nm,18.0s,baz=348,slow=42						
MDM	Murphy Dome	34.88	340	*e*P	P	10 21 34.9	-1.2
	comp=Z,18nm,1.4s						
COLA	College	34.94	339	*e*P	P	10 21 37.0	+0.5
	comp=Z,16nm,1.3s						
IL1	Eielson Array	34.97	339	*e*P	P	10 21 35.6	-1.3
ILAR	Eielson Array	34.97	339	P	P	10 21 35.4	-1.5
	comp=Z,0.9nm,0.9s,baz=10,slow=6.4,SNR=8.7						
MLR	Muntele Rosu	35.07	153	LR	LR	10 36 26.8	
	comp=Z,283nm,20.4s,baz=6.5,slow=37						
YAK	Yakutsk	35.31	41	*e*P	P	10 21 36.6	-3.1
YAK				pmax	pmax		
	comp=Z,16nm,1.1s						
YAK				pmax	pmax		
	comp=N,9.0nm,1.2s						
ZALV	Zalesovo Beam	35.92	84	P	P	10 21 44.1	-1.0
	comp=N,0.6nm,0.3s,baz=358,slow=9.2,SNR=4.0						
ZALV				LR	LR	10 41 14.7	
	comp=N,276nm,18.4s,baz=266,slow=44						
ABKAR	Akbulak array	35.93	112	*e*P	P	10 21 45.7	+0.5
CAST	Castle Rocks	36.64	342	*e*P	P	10 21 49.6	-1.6
	comp=N,9.7nm,1.1s						
SEY	Seymchan	36.65	24	*i* P	P	10 21 53.4	+2.2
PAX	Paxson	36.66	337	*e*P	P	10 21 52.2	+0.7
	comp=N,8.2nm,0.8s						
PAX	Paxson	36.66	337	*e*P	P	10 21 52.2	+0.7
PAX				pmax	pmax		
	comp=Z,8.0nm,0.8s						
KURK	Kurchatov	37.87	92	*e*P	P	10 22 02.2	+0.5
	comp=Z,16nm,1.0s						
KURK	Kurchatov	37.87	92	*e*P	P	10 22 02.2	+0.5
KURK				pmax	pmax		
	comp=Z,16nm,1.0s						
KURBB	Kurchatov Arra	37.94	92	P	P	10 22 01.9	-0.4
	comp=Z,7.9nm,0.9s,baz=340,slow=7.9,SNR=28						
SKT	Skwentna	38.04	341	*e*P	P	10 22 00.6	-2.5
	comp=Z,10nm,1.2s						
KBZ	Khabaz	38.69	133	P	P	10 22 10.6	+1.9
	comp=Z,3.5nm,0.8s,baz=350,slow=6.8,SNR=7.9						
MA2	Magadan	39.85	26	LR	LR	10 38 28.0	
	comp=Z,120nm,18.0s,baz=348,slow=36						
ESDC	Sonseca Array	40.04	189	P	P	10 22 21.1	+1.1
	comp=Z,1.4nm,0.9s,baz=0.9,slow=9.7,SNR=6.7						
ESDC				LR	LR	10 37 10.5	
	comp=Z,73nm,20.2s,baz=25,slow=34						
MAK	Makhachkala	40.09	128	*e*P	P	10 22 22.1	+1.8
MAK				*e*		10 23 55.4	
MAK				*e*S	S	10 28 30.5	+4.1
MAK				pmax	pmax		
	comp=Z,59nm,0.6s						
MOY	Mondy	41.00	70	*e*P	P	10 22 28.5	+0.6
MOY				pmax	pmax		
	comp=Z,21nm,1.5s						
BRTR	Keskin Array B	41.52	145	P	P	10 22 33.6	+1.3
	comp=Z,0.6nm,0.9s,baz=29,slow=8.8,SNR=2.6						
BRTR				LR	LR	10 41 28.9	
	comp=Z,36nm,19.2s,baz=7.0,slow=38						
KDAK	Kodiak Island	42.29	341	LR	LR	10 39 13.2	
	comp=Z,52nm,21.3s,baz=34,slow=35						
KDAK	Kodiak Island	42.29	341	*e*P	P	10 22 36.8	-1.4
	comp=Z,29nm,0.9s						
KDAK	Kodiak Island	42.29	341	*e*P	P	10 22 36.8	-1.4
KDAK				pmax	pmax		
	comp=Z,29nm,0.9s						
MK31	Makanchi Array	42.32	90	*e*P	P	10 22 38.8	+0.1
MK31	Makanchi Array	42.32	90	*e*P	P	10 22 38.8	+0.1
MKAR	Makanchi Array	42.32	90	P	P	10 22 38.7	+0.1
	comp=Z,4.4nm,0.7s,baz=347,slow=7.4,SNR=41						
MKAR				LR	LR	10 43 15.8	
	comp=Z,183nm,18.8s,baz=328,slow=40						
MKAR	Makanchi Array	42.32	90	*e*P	P	10 22 38.8	+0.1
	comp=Z,33nm,0.6s						
MKAR	Makanchi Array	42.32	90	*e*P	P	10 22 38.8	+0.1
MKAR				pmax	pmax		
	comp=Z,33nm,0.6s						
MK01	Makanchi Array	42.34	90	*e*P	P	10 22 38.8	-0.1
ULM	Lac du Bonnet	42.79	291	LR	LR	10 40 37.7	
	comp=Z,304nm,18.9s,baz=356,slow=36						
KEST	Kesra	43.92	174	LR	LR	10 41 39.3	
	comp=Z,81nm,19.2s,baz=264,slow=37						
AAK	Ala-Archa	44.91	99	*e*P	P	10 23 01.1	+1.4
	comp=Z,5.0nm,0.8s						
AAK	Ala-Archa	44.91	99	*e*P	P	10 23 01.1	+1.4
AAK				pmax	pmax		
	comp=Z,5.0nm,0.8s						
IDI	Anoyia	45.12	155	LR	LR	10 43 56.0	
	comp=Z,89nm,18.9s,baz=44,slow=39						
PDGK	Podgornoye	45.15	94	P	P	10 23 02.1	+0.5
PDGK				pmax	pmax		
	comp=Z,15nm,1.1s						
D36A	Goodland	45.29	288	*e*P	P	10 23 03.3	+0.8
	comp=Z,9.5nm,1.1s						
SONA1	Songino Array	45.61	67	*e*P	P	10 23 04.6	-0.7
SONM	Songino Array	45.62	67	P	P	10 23 03.7	-1.6
	comp=Z,1.6nm,0.8s,baz=330,slow=7.5,SNR=9.1						
SONM				LR	LR	10 44 23.2	
	comp=Z,342nm,18.4s,baz=344,slow=39						
ULN	Ulaanbaatar	45.70	66	*e*P	P	10 23 05.8	-0.2
	comp=Z,8.9nm,0.9s						
ULN	Ulaanbaatar	45.70	66*c*	*e*P	P	10 23 05.4	-0.6
ULN				pmax	pmax		
	comp=Z,18nm,1.7s						
WMQ	Urumqi	46.18	86	P	P	10 23 11.0	+1.3
WMQ				pP	sP	10 23 15.5	+3.2
WMQ				sP	pP	10 23 19.0	+7.5
WMQ				pmax	pmax		
	comp=Z,24nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,220nm,5.7s						
WMQ				LR	LR		
	comp=Z,1µm,20.7s						
WMQ				LR	LR		
	comp=Z,1µm,18.5s						
WMQ				LR	LR		
	comp=Z,530nm,19.1s						
GEYT	Alibeck	46.65	118	LR	LR	10 45 29.2	
	comp=Z,97nm,19.2s,baz=305,slow=40						
PETK	Petropavlovsk-	46.79	21	LR	LR	10 41 15.0	
	comp=Z,100nm,21.5s,baz=353,slow=34						
MDT	Midelt	46.90	190	LR	LR	10 41 24.4	
	comp=Z,74nm,19.5s,baz=352,slow=34						
SFK	Sufi-Kurgan	47.27	101	P	P	10 23 19.3	+0.8
SFK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KSH	Kashi	48.20	99	*e*P	P	10 23 26.8	+1.2
MMAI	Mount Meron Ar	48.35	144	LR	LR	10 46 06.6	
	comp=Z,31nm,21.6s,baz=115,slow=39						
HRY	Holter Researc	48.81	304	*e*P	P	10 23 27.6	-2.6
ECSD	EROS Data Cent	49.23	290	*e*P	P	10 23 33.4	+0.1
	comp=Z,13nm,1.3s						
IMW	Indian Meadow	51.42	303	*e*P	P	10 23 53.6	+3.4
	comp=Z,5.5nm,1.1s						
MOOW	Moose Ponds	51.54	303	*e*P	P	10 23 56.8	+5.8
	comp=Z,4.1nm,1.4s						
BW06	Boulder Array	52.31	301	*e*P	P	10 24 02.5	+5.7
	comp=Z,6.6nm,1.5s						
PDAR	Pinedale Array	52.31	301	P	P	10 23 56.5	-0.3
	comp=Z,0.1nm,0.5s,baz=5.2,slow=3.0,SNR=3.0						
PDAR				LR	LR	10 46 23.0	
	comp=Z,179nm,19.8s,baz=18,slow=36						
PDAR	Pinedale Array	52.31	301	*e*P	P	10 24 01.2	+4.4
CN2	Changchun	52.54	51	*e*P	P	10 23 58.5	+0.3
CN2				*e*S	S	10 31 23.3	-1.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CN2				pmax	pmax		
	comp=Z,200nm,3.0s						
CN2				LR	LR		
	comp=Z,100nm,12.0s						
CN2				LR	LR		
	comp=Z,300nm,12.0s						
CN2				LR	LR		
	comp=Z,200nm,13.0s						
GTA	Gaotai	52.65	76	*e*P	P	10 23 59.0	-0.2
GTA				pP	sP	10 24 04.0	+2.2
GTA				sP	pP	10 24 06.3	+5.2
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
USRK	Ussuriysk Ar.	53.05	45	LR	LR	10 47 35.4	
	comp=Z,50nm,18.9s,baz=343,slow=37						
HHC	Hu-ho-hao-te	53.28	64	*e*P	P	10 24 00.0	-3.8
HHC				pP	pP	10 24 04.3	-1.4
HHC				S	S	10 31 22.3	-13
HHC				pmax	pmax		
	comp=Z,20nm,1.0s						
HHC				pmax	pmax		
	comp=Z,88nm,6.1s						
HHC				LR	LR		
	comp=Z,280nm,15.9s						
HHC				LR	LR		
	comp=Z,360nm,14.3s						
HHC				LR	LR		
	comp=Z,270nm,15.1s						
N23A	Red Feather La	53.56	298	*e*P	P	10 24 10.9	+4.9
	comp=Z,13nm,1.3s						
R40A	Maddies Statio	53.75	284	*e*P	P	10 24 04.8	-2.4
	comp=Z,8.3nm,1.0s						
ASAJ	Asahikawa	54.39	36	LR	LR	10 49 24.2	
	comp=Z,143nm,18.1s,baz=353,slow=38						
O20A	White River Ci	54.68	299	*e*P	P	10 24 14.6	+0.5
	comp=Z,23nm,1.2s						
TKL	Tuckaleechee C	54.78	275	LR	LR	10 48 04.4	
	comp=Z,178nm,18.5s,baz=10,slow=36						
YBH	Yreka Blue Hor	55.25	313	LR	LR	10 47 54.3	
	comp=Z,167nm,18.5s,baz=2.5,slow=36						
SMCO	Snowmass	55.41	298	*e*P	P	10 24 19.8	+0.1
	comp=Z,13nm,1.4s						
PV22	Blue Mesa, Par	56.33	300	*e*P	P	10 24 28.9	+2.9
	comp=Z,4.3nm,0.9s						
PV21	Cone Mtn., Par	56.33	300	*e*P	P	10 24 26.5	+0.4
	comp=Z,14nm,1.2s						
PV23	Carpenter Ridg	56.44	300	*e*P	P	10 24 29.9	+3.0
	comp=Z,14nm,1.2s						
PV14	Lion Creek, Pa	56.52	300	*e*P	P	10 24 30.5	+3.1
	comp=Z,7.4nm,0.9s						
PV12	Saucer Basin,	56.54	299	*e*P	P	10 24 33.2	+5.6
	comp=Z,16nm,1.4s						
SDCO	Great Sand Dun	56.56	296	*e*P	P	10 24 29.0	+1.1
	comp=Z,6.9nm,1.4s						
PV16	Nyswonger Mesa	56.57	300	*e*P	P	10 24 30.9	+3.2
	comp=Z,15nm,1.4s						
LZH	Lanzhou	56.60	73	*e*P	P	10 24 28.0	+0.1
LZH				pP	sP	10 24 31.0	+0.5
LZH				sP	pP	10 24 32.8	+3.0
LZH				*e*PP	PP	10 26 35.0	+1.6
LZH				pmax	pmax		
	comp=Z,21nm,1.2s						
LZH				pmax	pmax		
	comp=Z,75nm,7.4s						
LZH				LR	LR		
	comp=Z,220nm,14.9s						
LZH				LR	LR		
	comp=Z,230nm,15.2s						
LZH				LR	LR		
	comp=Z,290nm,18.7s						
PV17	East Wray Mesa	56.60	300	*e*P	P	10 24 30.7	+2.7
	comp=Z,6.8nm,0.9s						
PV18	Skein Mesa, Pa	56.63	300	*e*P	P	10 24 30.8	+2.6
	comp=Z,14nm,1.3s						
PV13	Radium Mtn., P	56.70	299	*e*P	P	10 24 29.4	+0.7
	comp=Z,14nm,1.1s						
S22A	4UR Ranch, Cre	56.78	298	*e*P	P	10 24 32.0	+2.6
	comp=Z,9.1nm,1.4s						
R11A	Troy Canyon, C	57.56	306	*e*P	P	10 24 40.0	+5.3
	comp=Z,6.8nm,1.5s						
MVCO	Mesa Verde	57.58	299	*e*P	P	10 24 35.6	+0.7
	comp=Z,10nm,1.2s						

MIAR	**Mount Ida**	**57.63**	**284**	*e*P	**P**	**10 24 33.0**	**-2.0**
	comp=Z,4.8nm,0.9s						
MIAR	**Mount Ida**	**57.63**	**284**	*e*P	**P**	**10 24 33.0**	**-2.0**
MIAR				pmax	pmax		
	comp=Z,5.0nm,0.9s						
NVAR	**Mina Array Bea**	**57.88**	**308**	P	**P**	**10 24 34.7**	**-2.4**
	comp=Z,0.1nm,0.5s,baz=10,slow=5.5,SNR=2.6						
PKCU	**Pink Cliffs**	**57.95**	**303**	*e*P	**P**	**10 24 39.5**	**+1.9**
	comp=Z,10nm,1.2s						
WMOK	**Wichita Mounta**	**58.36**	**289**	P	**P**	**10 24 37.3**	**-2.9**
WMOK				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KSRS	**Korea Array**	**59.12**	**50**	P	**P**	**10 24 43.5**	**-1.8**
	comp=Z,1.3nm,1.0s,baz=354,slow=6.3,SNR=5.4						
KSRS				LR	LR	10 51 21.4	
	comp=Z,97nm,18.0s,baz=350,slow=37						
KSAR	**Wonju Array Be**	**59.13**	**50**	P	**P**	**10 24 43.5**	**-1.9**
KSAR	**Wonju Array Be**	**59.13**	**50**	P	**P**	**10 24 43.6**	**-1.9**
ANMO	**Albuquerque**	**59.46**	**297**	LR	LR	10 50 43.7	
	comp=Z,235nm,18.7s,baz=22,slow=36						
MJAR	**Matsushiro Arr**	**61.37**	**41**	P	**P**	**10 24 59.7**	**-1.1**
	comp=Z,3.1nm,1.1s,baz=339,slow=6.5,SNR=7.7						
MJAR				LR	LR	10 55 26.4	
	comp=Z,37nm,18.0s,baz=310,slow=40						
NJ2	**Nanjing**	**63.06**	**60**	*e*P	**P**	**10 25 10.8**	**-1.4**
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
JNU	**Nakatsue**	**63.79**	**48**	LR	LR	10 56 16.7	
	comp=Z,56nm,18.2s,baz=305,slow=39						
WHN	**Wuhan**	**63.81**	**64**	*e*P	**P**	**10 25 21.3**	**+4.2**
WHN				S	**S**	**10 33 56.0**	**+3.8**
WHN				LR	LR		
	comp=Z,330nm,11.2s						
WHN				LR	LR		
	comp=Z,620nm,10.9s						
WHN				LR	LR		
	comp=Z,520nm,17.9s						
TXAR	**Lajitas Array**	**64.48**	**293**	P	**P**	**10 25 20.1**	**-1.6**
	comp=Z,0.6nm,0.9s,baz=42,slow=4.3,SNR=5.8						
TXAR				LR	LR	10 52 13.8	
	comp=Z,141nm,20.3s,baz=0.0,slow=35						
JHJ	**Hachijo jima 2**	**64.94**	**40**	LR	LR	10 54 29.7	
	comp=Z,37nm,20.9s,baz=98,slow=37						
KOWA	**Kowa**	**65.11**	**188**	LR	LR	10 54 48.9	
	comp=Z,58nm,18.5s,baz=37,slow=37						
TORD	**Torodi Ar. Bea**	**66.35**	**182**	P	**P**	**10 25 33.9**	**+0.1**
	comp=Z,0.9nm,0.8s,baz=360,slow=6.2						
TORD				LR	LR	10 54 35.3	
	comp=Z,42nm,19.0s,baz=335,slow=36						
GYA	**Guiyang**	**66.49**	**72**	*e*P	**P**	**10 25 35.3**	**+0.6**
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BRDH	**Bariadhala**	**67.47**	**88**	LR	LR	11 00 42.4	
	comp=Z,197nm,18.5s,baz=87,slow=41						
JOW	**Kunigami**	**69.61**	**52**	LR	LR	10 57 39.9	
	comp=Z,90nm,20.0s,baz=132,slow=37						
LPIG	**La Paz**	**70.70**	**298**	LR	LR	10 57 47.9	
	comp=Z,227nm,19.0s,baz=15,slow=37						
DBIC	**Dimbokro**	**72.91**	**189**	LR	LR	10 58 51.3	
	comp=Z,44nm,18.5s,baz=4.0,slow=36						
CMAR	**Chiang Mai Arr**	**72.92**	**81**	P	**P**	**10 26 13.1**	**-1.2**
	comp=Z,2.8nm,0.8s,baz=344,slow=7.4,SNR=13						
CMAR				LR	LR	11 00 55.2	
	comp=Z,103nm,22.0s,baz=356,slow=38						
CMAR	**Chiang Mai Arr**	**72.92**	**81**	*i* P	**P**	**10 26 13.5**	**-0.8**
CMAR				pmax	pmax		
	comp=Z,2.0nm,0.7s						
CM01	**Chiang Mai Arr**	**72.96**	**81**	*e*P	**P**	**10 26 13.1**	**-1.4**
QIZ	**Qiongzhong**	**74.30**	**71**	P	**P**	**10 26 21.5**	**-0.9**
QIZ				S	**S**	**10 35 55.5**	**-1.1**
QIZ				LR	LR		
	comp=Z,240nm,20.1s						
QIZ				LR	LR		
	comp=Z,280nm,17.2s						
JTS	**JuntasAbangare**	**79.72**	**271**	LR	LR	11 04 04.5	
	comp=Z,71nm,19.9s,baz=182,slow=37						
ROSC	**El Rosal**	**83.10**	**259**	LR	LR	11 03 47.5	
	comp=Z,52nm,20.0s,baz=52,slow=35						
LEM	**Lembang**	**99.19**	**78**	LR	LR	11 17 16.7	
	comp=Z,89nm,21.4s,baz=181,slow=38						
VNA1	**Neumayer--Stat**	**150.09**	**188**	PKP	**PKPdf**	**10 34 30.9**	**+2.1**
	baz=80,slow=4.4						
VNA3	**Neumayer Olymp**	**150.72**	**189**	PKP	**PKPdf**	**10 34 32.7**	**+2.8**
	baz=80,slow=4.4						
SNAA	**Sanae**	**151.01**	**184**	PKP	**PKPdf**	**10 34 33.1**	**+2.7**
	baz=80,slow=4.4						
SNAA	**Sanae**	**151.01**	**184**	PKPbc	**PKPbc**	**10 34 36.8**	**+0.6**
	comp=Z,1.1nm,0.9s,baz=63,slow=2.3,SNR=4.7						

ISCJB ***28*** *10:29:00.2±0.6, 44°.43N±0°.10×141°.3E±0°.1, h261^{km}, mb3.2/2, Error ellipse: s-maj=14.2km s-min=9.7km az=27.7*

JMA ***28*** *10:29:01.4±0.4, 44°.36N×140°.96E, h245^{km}±4^{km}, M2.9*

IDC ***28*** *10:29:02.8±4.2, 44°.18N×140°.94E, h230^{km}±44^{km}, mb3.0/2, mb1 3.2/3, mb1mx2.7/68, mbtmp3.6/3, Error ellipse: s-maj=193.1km s-min=26.6km az=16.0*

ISC 28 10:29:01.3±1.1**, 44°.40N**±0°.10×**141°.20E**±0°.08**, h261**^{km}**, n15, σ2^{s}.17**/19**, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYG	**Yagishiri**	**0.17**	**79**	P	**Pn**	**10 29 33.3**	**-1.4**
JSS	**Shosan**	**0.47**	**89**	P	**Pn**	**10 29 34.5**	**-0.8**
ASAJ	**Asahikawa**	**1.04**	**105**	P	**Pn**	**10 29 36.4**	**-1.3**
	2.8nm,0.3s,baz=241,slow=11,SNR=15						
ASAJ				S	**S**	**10 30 03.8**	**-2.6**
	0.5nm,0.3s,baz=90,slow=20,SNR=6.8						
ASAJ	**Asahikawa**	**1.04**	**105**	P	**Pn**	**10 29 36.8**	**-0.9**
JWK2	**Keihoku**	**1.05**	**28**	P	**Pn**	**10 29 37.0**	**-0.6**
JWK2				*e*S	**S**	**10 30 04.1**	**-2.3**
JSE	**Soyaes**	**1.14**	**60**	P	**Pn**	**10 29 37.5**	**-0.6**
JKK2	**Kamakawa 2**	**1.23**	**115**	P	**Pn**	**10 29 38.2**	**-0.6**
JKK2				*e*S	**S**	**10 30 06.1**	**-2.4**
JTKR	**Abashiri--Toko**	**2.00**	**101**	P	**Pn**	**10 29 45.3**	**+0.7**
JAR	**Ashorobuto**	**2.16**	**120**	P	**Pn**	**10 29 46.4**	**+0.3**
JAR				*e*S	**S**	**10 30 21.7**	**+0.1**
JCH	**Churui**	**2.38**	**138**	*e*S	**S**	**10 30 20.8**	**-4.4**
JAK	**Akkeshi**	**2.90**	**118**	*e*S	**S**	**10 30 32.0**	**-2.6**
JOT	**Ohata**	**3.02**	**182**	P	**Pn**	**10 29 53.3**	**-1.3**
USRK	**Ussuriysk Ar.**	**6.61**	**272**	P	**Pn**	**10 30 36.2**	**-1.0**
	baz=85,slow=13						
WRA	**Warramunga Arr**	**64.33**	**187**	P	**P**	**10 39 12.0**	**+2.8**
	0.2nm,0.3s,baz=1.2,slow=6.8,SNR=9.0						
ASAR	**Alice Springs**	**68.06**	**187**	P	**P**	**10 39 36.5**	**+3.7**
	0.4nm,0.8s,baz=6.7,slow=7.5,SNR=5.5						

WEL 28 10:40:39.3, 38°S±8°×**18°0W**±°**, h33**^{km}**, ML3.5**/18**, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	**1.47**	**268**	P	Pn	10 41 04.0	+0.6
MXZ	**Matakaoa Point**	**1.57**	**278**	P	Pn	10 41 05.3	+0.4
MXZ				S	Sn	10 41 23.2	-0.8
PUZ	**Puketiti**	**1.61**	**259**	P	Pn	10 41 06.2	+0.8
PUZ				S	Sn	10 41 25.6	+0.5
PKGZ	**Pakihiroa**	**1.73**	**266**	P	Pn	10 41 07.5	+0.4
CNGZ	**Carnagh Statio**	**1.77**	**246**	P	Pb	10 41 09.4	-1.6
TWGZ	**Tauwhareparae**	**1.85**	**257**	P	Pn	10 41 09.8	+1.1
TWGZ				S	Sn	10 41 31.9	+0.9
HAZ	**Te Kaha**	**1.97**	**270**	P	Pn	10 41 10.9	+0.6
TKGZ	**Te Karaka**	**2.01**	**250**	P	Pn	10 41 12.3	+1.4
TKGZ				S	Sn	10 41 36.6	+1.6
RUGZ	**Raukumara Rang**	**2.06**	**264**	P	Pn	10 41 12.1	+0.4
RIGZ	**Rimuhau**	**2.17**	**244**	P	Pn	10 41 14.4	+1.2
RIGZ				S	Sn	10 41 40.1	+1.1
PRGZ	**Paritu Road**	**2.19**	**238**	P	Pn	10 41 15.5	+2.1
MWZ	**Matawai**	**2.23**	**255**	P	Pn	10 41 14.6	+0.6
MWZ				S	Sn	10 41 40.7	+0.3
MHGZ	**Mahia Peninsul**	**2.30**	**233**	P	Pn	10 41 16.8	+1.9
RAGZ	**Rawiri**	**2.35**	**252**	P	Pn	10 41 16.8	+1.1
RAGZ				S	Sn	10 41 44.2	+0.6
KNZ	**Kokohu**	**2.38**	**238**	P	Pn	10 41 17.4	+1.4
SNGZ	**Shannon Statio**	**2.51**	**246**	P	Pn	10 41 19.4	+1.7
SNGZ				S	Sn	10 41 48.2	+1.0
URZ	**Urewera**	**2.54**	**258**	P	Pn	10 41 19.6	+1.5
URZ				S	Sn	10 41 48.5	+0.6
WHHZ	**Waihua**	**2.71**	**241**	P	Pn	10 41 22.6	+2.1
WHHZ				S	Sn	10 41 54.0	+1.9
RTZ	**Ruatahuna**	**2.72**	**251**	P	Pn	10 41 22.4	+1.7
RTZ				S	Sn	10 41 53.9	+1.4
MTHZ	**Maungataniwha**	**2.90**	**247**	P	Pn	10 41 24.8	+1.6
ARHZ	**Aropaoanui**	**2.96**	**239**	P	Pn	10 41 26.6	+2.7
TARZ	**Mount Tarawera**	**3.00**	**260**	P	Pn	10 41 25.7	+1.1
NMHZ	**Naumai**	**3.01**	**243**	P	Pn	10 41 26.5	+1.7
NMHZ				S	Sn	10 42 01.1	+1.3
KARZ	**Kaharoa**	**3.19**	**265**	P	Pn	10 41 27.8	+0.7
MCHZ	**McNeill Hill**	**3.25**	**238**	P	Pn	10 41 29.4	+1.4
BKZ	**Black Stump Fm**	**3.27**	**244**	P	Pn	10 41 29.7	+1.5
KWHZ	**Kaweka Forest**	**3.42**	**240**	P	Pn	10 41 31.9	+1.5
KRHZ	**Kereru**	**3.57**	**237**	P	Pn	10 41 33.4	+1.0
BHHZ	**Black Hill Sta**	**3.70**	**241**	P	Pn	10 41 35.5	+1.2
PNHZ	**Pukenui**	**3.82**	**235**	P	Pn	10 41 36.5	+0.7
TSZ	**Takapari Road**	**4.05**	**235**	P	Pn	10 41 39.5	+0.5
MKAZ	**Moumakai**	**4.12**	**278**	P	Pn	10 41 40.3	+0.4
POWZ	**Post Office Ro**	**4.36**	**232**	P	Pn	10 41 44.3	+1.1
TIWZ	**Tintock**	**4.52**	**227**	P	Pn	10 41 45.8	+0.3
MRZ	**Mangatainoka R**	**4.63**	**230**	P	Pn	10 41 47.0	0.0
CTZ	**Chatham Island**	**6.40**	**159**	P	Pn	10 42 16.4	+5.2

BJI ***28*** *11:23:40.9, 81°.30N×4°.00W, h10^{km}, mb4.8/49, mB5.0/36, Ms4.7/31, Ms7 4.5/31*

MOS ***28*** *11:23:41.7±1.0, 81°.29N×3°.98W, h10^{km}, mb5.1/87, MS4.0/27, Error ellipse: s-maj=29.0km s-min=4.6km az=94.0*

CSEM ***28*** *11:23:41.9±0.1, 81°.35N×3°.75W, h2^{km}, mb5.0/99, Error ellipse: s-maj=3.7km s-min=2.0km az=34.0*

ISCJB ***28*** *11:23:41.7±0.1, 81°.29N±0°.02×4°.30W±0°.09, h10^{km}, mb4.9/364, MS4.1/83, Error ellipse: s-maj=2.8km s-min=1.7km az=22.2*

IDC ***28*** *11:23:41.8±0.3, 81°.32N×4°.25W, h0^{km}, mb4.4/45, mb1 4.5/48, mb1mx4.5/72, mbtmp4.4/48, ML4.4/2, MS4.1/62, Ms1 4.1/62, ms1mx4.0/73, Error ellipse: s-maj=10.0km s-min=7.6km az=34.0*

GCMT ***28*** *11:23:43.8±0.2, 81°.31N×4°.18W, h12^{km}, MW5.0/97, Moment Tensor Solution. s40,c58; s97,c157; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.18±.10; $M_{\theta\theta}$-0.94±.12; $M_{\phi\phi}$4.13±.07; $M_{r\theta}$-0.29±.37; $M_{\theta\phi}$0.37±.08; $M_{\phi r}$-2.03±.25; Best double couple: $M_0$4.20400×10^{16} NP1:ϕ_s7.00000°, δ60.00000°, λ-87.00000°. NP2: ϕ_s181.00000°, δ31.00000°, λ-95.00000°. Principal axes: T 4.6890, Plg15.0000°, Azm95.0000°; N -0.9650, Plg3.0000°, Azm185.0000°; P -3.7190, Plg75.0000°, Azm285.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

NEIC ***28*** *11:23:43.8±0.1, 81°.29N×3°.97W, h10^{km}, mb5.0/271 Error ellipse: s-maj=3.3km s-min=2.0km az=216.0*

BER ***28*** *11:23:46.1±3.3, 81°.23N×0°.86W, h10^{km}, mb5.1, mb5.0(NEIC)*

ISC 28 11:23:43.4±0.5**, 81°.28N**±0°.04×**4°.13W**±0°.03**, h11**^{km}±2^{km}**, h11**^{km}**:pP-P, n1048, σ1^{s}.45**/1062**, mb5.0**/373**, MS4.1**/84**, 28C-8D, North of Svalbard**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBS	**Kingsbay**	**3.63**	**122**	Pn	**Pn**	**11 24 36.1**	**-3.3**
KBS				Sn	**Sn**	**11 25 15.1**	**-7.1**
KBS	**Kingsbay**	**3.63**	**122**	*e*Pn	**Pn**	**11 24 36.0**	**-3.4**
KBS				*e*Sn	**Sn**	**11 25 19.2**	**-3.0**
KBS	**Kingsbay**	**3.63**	**122**	*e*P	**Pn**	**11 24 36.0**	**-3.4**
KBS				*e*		11 25 19.2	
KBS	**Kingsbay**	**3.63**	**122**	*e*P	**Pn**	**11 24 36.0**	**-3.4**
KBS				IAmb	IAmb	11 24 37.4	
	comp=Z,402nm,0.2s						
KBS				*e*S	**Sn**	**11 25 14.7**	**-7.5**
BRBA	**Barentsburg A**	**4.59**	**125**	Pn	**Pn**	**11 24 50.6**	**-2.0**
SPA0	**Spitsbergen Ar**	**4.78**	**120**	Pn	**Pn**	**11 24 52.4**	**-2.8**
	baz=342,slow=16						
SPA0	**Spitsbergen Ar**	**4.78**	**120**	*e*Pn	**Pn**	**11 24 52.4**	**-2.8**
SPA0	**Spitsbergen Ar**	**4.78**	**120**	Pn	**Pn**	**11 24 52.4**	**-2.8**
	baz=342,slow=16						
SPA0				IAmb	IAmb	11 24 54.2	
	comp=Z,552nm,0.4s						
SPA0				*e*S	**Sn**	**11 25 44.6**	**-5.9**
SPITS	**Spitsbergen Ar**	**4.78**	**120**	Pn	**Pn**	**11 24 52.3**	**-2.9**
	baz=332,slow=14,SNR=1501						
SPITS				Sn	**Sn**	**11 25 43.4**	**-7.1**
	baz=354,slow=22,SNR=1.6						
SPITS				LR	LR	11 26 35.8	
	comp=Z,4μm,20.4s,baz=10.0,slow=36						
DAG	**Danmarks Havn**	**5.29**	**219**	⇑*i*P	**Pn**	**11 24 59.8**	**-2.3**
DAG				*e*S	**Sn**	**11 25 58.1**	**-4.8**
DAG	**Danmarks Havn**	**5.29**	**219**	⇑*i*P	**Pn**	**11 24 59.8**	**-2.3**
DAG				*e*S	**Sn**	**11 25 58.1**	**-4.8**
DAG	**Danmarks Havn**	**5.29**	**219**	*i* P	**Pn**	**11 24 59.8**	**-2.3**
DAG				*e*S	**Sn**	**11 25 58.1**	**-4.8**
HSP	**Hornsund**	**5.63**	**129**	Pn	**Pn**	**11 25 04.2**	**-2.6**
HSPB	**Hornsund (broa**	**5.64**	**129**	*e*P	**Pn**	**11 25 05.2**	**-1.7**
HSPB	**Hornsund (broa**	**5.64**	**129**	*e*P	**Pn**	**11 25 04.3**	**-2.6**
HSPB				IAmb	IAmb	11 25 05.6	
	comp=Z,255nm,0.5s						
HOPEN	**Hopen**	**7.27**	**115**	Pn	**Pn**	**11 25 27.4**	**-1.9**
HOPEN	**Hopen**	**7.27**	**115**	*e*P	**Pn**	**11 25 27.2**	**-2.1**
JNW	**Jan Mayen West**	**10.36**	**188**	*e*P	**Pn**	**11 26 11.9**	**+0.3**
JNW				*e*S		11 26 19.4	
JNW				IAML		11 26 21.3	
	comp=Z,95nm,0.3s						
JNE	**Jan Mayen East**	**10.39**	**188**	*e*P	**Pn**	**11 26 12.0**	**0.0**
JNE				*e*S		11 26 19.9	
JNE				IAML		11 26 21.3	
	comp=Z,95nm,0.2s						
JMIC	**Jan Mayen**	**10.40**	**188**	Pn	**Pn**	**11 26 12.1**	**-0.1**
JMIC	**Jan Mayen**	**10.40**	**188**	Pn	**Pn**	**11 26 10.7**	**-1.5**
	comp=Z,11nm,0.3s,baz=174,slow=1.7,SNR=97						
JMIC				Sn	**Sn**	**11 28 01.4**	**-7.0**
	comp=Z,2.6nm,0.3s,baz=140,slow=16,SNR=3.3						
JMIC	**Jan Mayen**	**10.40**	**188**	*e*P	**Pn**	**11 26 12.1**	**-0.1**
JMIC				*e*S		11 26 19.9	
JMIC				IAML		11 26 21.3	
	comp=Z,74nm,0.3s						
JMI	**Jan Mayen**	**10.46**	**188**	*e*P	**Pn**	**11 26 12.8**	**-0.2**
JMI				*e*S		11 26 20.9	
JMI				IAML		11 26 21.1	
	comp=Z,49nm,0.3s						
SUMG	**Summit**	**11.38**	**239**	*e*Pn	Pn	11 26 21.1	-4.8
SUMG	**Summit**	**11.38**	**239**	*i* P	Pn	11 26 21.0	-4.9
SUMG				*e*		11 28 23.5	
SUMG				*i*		11 29 15.2	
SUMG	**Summit**	**11.38**	**239**	*e*P	Pn	11 26 21.1	-4.8
SCO	**Scoresbysund**	**11.58**	**211**	*e*Pn	**Pn**	**11 26 30.1**	**+1.8**
SCO	**Scoresbysund**	**11.58**	**211**	*e*P	**Pn**	**11 26 30.1**	**+1.8**
KULLO	**Kullorsuaq**	**12.37**	**267**	*i* P	Pn	11 26 33.7	-5.3
KULLO				*i*		11 29 45.1	
KULLO	**Kullorsuaq**	**12.37**	**267**	*i* P	Pn	11 26 33.7	-5.3
HAMF	**Hammerfest**	**12.38**	**133**	*e*P	**Pn**	**11 26 36.7**	**-2.6**
HAMF				IAmb	IAmb	11 26 39.2	
	comp=Z,11nm,0.6s						
TULEG	**Thule**	**12.56**	**283**	*e*Pn	Pn	11 26 35.5	-6.1
TULEG				*e*Sn	Sn	11 28 46.0	-15
TRO	**Tromso**	**12.86**	**142**	P	**Pn**	**11 26 45.9**	**+0.1**
TRO	**Tromso**	**12.86**	**142**	*e*P	**Pn**	**11 26 44.7**	**-1.1**
TRO				IAmb	IAmb	11 26 48.4	
	comp=Z,43nm,1.7s						
KEV	**Kevo**	**13.60**	**130**	*e*Pn	**Pn**	**11 26 52.8**	**-3.0**
KEV	**Kevo**	**13.60**	**130**	*e*P	**Pn**	**11 26 52.8**	**-3.0**
ARA0	**ARCESS Array S**	**13.64**	**132**	P	**Pn**	**11 26 54.7**	**-1.7**
	baz=351,slow=14						
ARA0	**ARCESS Array S**	**13.64**	**132**	P	**Pn**	**11 26 54.7**	**-1.7**
	baz=351,slow=14						
ARCES	**ARCESS Array B**	**13.64**	**132**	Pn	**Pn**	**11 26 54.3**	**-2.1**
	comp=Z,1.6nm,0.3s,baz=352,slow=12,SNR=33						
ARCES				PcP	**PcP**	**11 32 20.3**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=333,slow=1.4,SNR=4.6						
ARCES	**ARCESS Array B**	**13.64**	**132**	*e*Pn	**Pn**	**11 26 55.0**	**-1.4**
ARCES				PcP	**PcP**	**11 32 20.3**	**-0.5**
ARCES	**ARCESS Array B**	**13.64**	**132**	*e*P	**Pn**	**11 26 55.0**	**-1.4**
LOF	**Lofoten**	**13.88**	**152**	*e*P	**Pn**	**11 26 58.3**	**-1.4**
LOF				IAmb	IAmb	11 27 02.4	
	comp=Z,75nm,1.6s						
STEI	**Steigen**	**14.21**	**149**	*e*P	**Pn**	**11 27 01.9**	**-2.2**
STEI				IAmb	IAmb	11 27 05.6	
	comp=Z,58nm,1.6s						
HEF	**Hetta**	**14.52**	**136**	*e*P	**Pn**	**11 27 05.8**	**-2.6**
SGF	**Sodankyl**	**15.76**	**134**	P	**Pn**	**11 27 26.7**	**+1.9**
MOR8	**Moi Rana**	**15.88**	**152**	*e*P	**Pn**	**11 27 24.4**	**-2.1**
MOR8				IAmb	IAmb	11 27 31.1	
	comp=Z,65nm,1.4s						
ILULI	**Ilulissat**	**16.19**	**249**	*e*Pn	**Pn**	**11 27 24.8**	**-5.6**
	comp=Z,72nm,1.2s						
ILULI	**Ilulissat**	**16.19**	**249**	*e*P	**Pn**	**11 27 24.8**	**-5.6**
ILULI				pmax	pmax		
	comp=Z,72nm,1.2s						
APA	**Apatity**	**16.45**	**124**	⇑*i*P	**Pn**	**11 27 29.3**	**-4.4**
APA				pmax	pmax		
	comp=Z,13nm,0.9s						
APA				MLR	MLR		
	comp=Z,800nm,12.0s						
BORG	**Borgarnes**	**17.20**	**205**	LR	LR	11 33 52.0	
	comp=Z,207nm,19.4s,baz=5.1,slow=35						
NSS	**Namsos**	**17.34**	**156**	*e*P	**P**	**11 27 49.4**	**+3.1**
RES	**Resolute Bay**	**17.79**	**300**	P	**Pn**	**11 27 44.7**	**-5.6**
	comp=Z,6.3nm,0.3s,baz=31,slow=12,SNR=32						
RES				S	Sn	11 30 50.5	-18
	comp=Z,1.7nm,0.3s,baz=320,slow=23,SNR=7.2						
RES				LR	LR	11 34 43.2	
	comp=Z,1μm,19.6s,baz=40,slow=37						
RES	**Resolute Bay**	**17.79**	**300**	*e*Pn	**Pn**	**11 27 44.8**	**-5.6**
	comp=Z,92nm,1.3s						
RES				*e*Sn	Sn	11 30 51.2	-17
RES	**Resolute Bay**	**17.79**	**300**	*e*P	**Pn**	**11 27 44.8**	**-5.6**
RES				pmax	pmax		
	comp=Z,92nm,1.3s						
ANGG	**Ammassalik, Gr**	**17.84**	**228**	*e*Pn	**Pn**	**11 27 47.3**	**-3.8**
	comp=Z,35nm,0.8s						
OUL	**Oulu**	**17.97**	**137**	P	**Pn**	**11 27 51.1**	**-1.6**
OUL				pmax	pmax		
	comp=Z,27nm,0.9s						
SFJD	**Kangerlussuaq**	**18.18**	**246**	P	**Pn**	**11 27 50.3**	**-5.0**
	comp=Z,12nm,0.3s,baz=12,slow=13,SNR=13						
SFJD				S	Sn	11 31 00.0	-18
	comp=Z,10nm,0.3s,baz=103,slow=15,SNR=6.4						
SFJD				LR	LR	11 35 22.1	
	comp=Z,1μm,20.8s,baz=18,slow=38						
SFJD	**Kangerlussuaq**	**18.18**	**246**	*e*Pn	**Pn**	**11 27 48.8**	**-6.5**
	comp=Z,66nm,0.8s						
SFJD				S	Sn	11 31 00.0	-18
NC204	**NORSAR Array S**	**20.52**	**159**	*e*P	Pn	11 28 22.9	-0.5
NC303	**NORSAR Array S**	**20.60**	**158**	*e*P	Pn	11 28 25.2	+0.9
NC405	**NORSAR Array S**	**20.73**	**158**	*e*P	**P**	**11 28 24.1**	**+0.7**
NBO00	**NORSAR Array S**	**20.76**	**159**	*e*P	Pn	11 28 25.5	-0.7
NB201	**NORSAR Array S**	**20.77**	**159**	*e*P	Pn	11 28 26.1	-0.2
NB2	**NORSAR Subarra**	**20.78**	**159**	P	Pn	11 28 26.4	0.0
	baz=345,slow=6.9						
NB2	**NORSAR Subarra**	**20.78**	**159**	P	**P**	**11 28 24.1**	**+0.1**
	comp=Z,164nm,2.0s,baz=354,slow=11						
NB2	**NORSAR Subarra**	**20.78**	**159**	P	**P**	**11 28 24.1**	**+0.1**
	baz=354,slow=11						
NB2				P	Pn	11 28 26.4	0.0
	baz=345,slow=6.9						
NOA	**NORSAR Array B**	**20.78**	**159**	P	**P**	**11 28 23.9**	**-0.1**
	comp=Z,3.4nm,1.1s,baz=349,slow=11,SNR=9.1						
NOA				LR	LR	11 35 07.7	
	comp=Z,209nm,18.6s,baz=345,slow=33						
NAO01	**NORSAR Array S**	**20.95**	**159**	*e*P	Pn	11 28 31.2	+2.8
NRA0	**NORESS Array S**	**21.10**	**158**	P	**P**	**11 28 28.0**	**+0.6**
	baz=3.1,slow=7.4						
NRA0	**NORESS Array S**	**21.10**	**158**	P	**P**	**11 28 28.0**	**+0.6**
	baz=3.1,slow=7.4						
NC602	**NORSAR Array S**	**21.10**	**158**	*e*P	**P**	**11 28 28.0**	**+0.6**
FIA0	**FINESS Array S**	**21.55**	**139**	P	**P**	**11 28 31.9**	**-0.3**
	baz=346,slow=14						
FIA0	**FINESS Array S**	**21.55**	**139**	P	**P**	**11 28 31.9**	**-0.3**
	baz=346,slow=14						
FIA1	**FINESS Array S**	**21.55**	**139**	*e*P	**P**	**11 28 32.2**	**0.0**
FINES	**FINESS Array B**	**21.55**	**139**	P	**P**	**11 28 32.1**	**-0.1**
	comp=Z,48nm,1.1s,baz=349,slow=11,SNR=43						
FINES				PcP	**PcP**	**11 32 33.2**	**-0.5**
	comp=Z,1.7nm,0.5s,baz=12,slow=2.6,SNR=8.6						
FINES				LR	LR	11 36 24.2	
	comp=Z,488nm,21.6s,baz=350,slow=35						
HFS	**Hagfors**	**21.83**	**156**	P	**P**	**11 28 35.2**	**0.0**
	baz=11,slow=10						
HFS	**Hagfors**	**21.83**	**156**	P	**P**	**11 28 35.1**	**0.0**
	comp=Z,6.0nm,0.9s,baz=19,slow=9.4,SNR=10						
HFS				PcP	**PcP**	**11 32 34.0**	**-0.3**
	comp=Z,1.0nm,0.7s,baz=338,slow=3.2,SNR=3.9						
HFS				LR	LR	11 36 08.1	
	comp=Z,315nm,19.6s,baz=344,slow=34						
HFS	**Hagfors**	**21.83**	**156**	P	**P**	**11 28 35.2**	**0.0**
	baz=11,slow=10						
KONO	**Kongsberg**	**22.08**	**161**	*i* P	**P**	**11 28 38.7**	**+0.8**
KONO				pmax	pmax		
	comp=Z,7.0nm,0.8s						
NRS	**Narsarsuaq**	**23.08**	**235**	*e*P	**P**	**11 28 49.7**	**+1.2**
	comp=Z,79nm,0.9s						
NRS	**Narsarsuaq**	**23.08**	**235**	*e*P	**P**	**11 28 49.7**	**+1.2**
NRS				pmax	pmax		
	comp=Z,79nm,0.9s						
IVI	**Ivigtut**	**23.39**	**238**	*e*P	**P**	**11 28 52.2**	**+0.7**
	comp=Z,58nm,0.9s						
KLMR	**Klimovskoe**	**23.68**	**123**	*e*P	**P**	**11 28 53.4**	**-1.0**
KLMR				*e*S	**S**	**11 33 07.5**	**-1.1**
KLMR				pmax	pmax		
	comp=Z,139nm,1.5s						
KLMR	**Klimovskoe**	**23.68**	**123**	*e*P	**P**	**11 28 53.4**	**-1.0**
KLMR				AMP		11 29 02.8	
	comp=Z,139nm,1.5s						
KLMR				*e*S	**S**	**11 33 07.6**	**-1.1**
KLMR				*e*S	**S**	**11 33 07.6**	**-1.1**
KLMR				LQ	LQ	11 35 39.1	
KLMR				LQ	LQ	11 35 39.1	
KLMR				LR	LR	11 36 18.8	
PRGR	**Permogore**	**23.74**	**115**	*e*P	**P**	**11 28 54.3**	**-0.7**
PRGR				pmax	pmax		
	comp=Z,72nm,1.0s						
FRB	**Frobisher Bay**	**23.87**	**262**	P	**P**	**11 28 55.3**	**-0.9**
	comp=Z,50nm,0.9s,baz=19,slow=10,SNR=27						
FRB				LR	LR	11 38 41.7	
	comp=Z,670nm,18.6s,baz=17,slow=38						
VSU	**Vasula**	**24.55**	**140**	*i* P	**P**	**11 29 02.4**	**-0.1**
VSU				pmax	pmax		
	comp=Z,62nm,1.1s						
TIXI	**Tiksi**	**25.25**	**33**	P	**P**	**11 29 09.0**	**+0.2**
	comp=Z,42nm,0.9s,baz=358,slow=7.9,SNR=11						
TIXI				LR	LR	11 38 03.2	
	comp=Z,82nm,19.2s,baz=335,slow=34						
TIXI	**Tiksi**	**25.25**	**33**	*e*P	**P**	**11 29 09.7**	**+0.9**
	comp=Z,54nm,1.0s						
TIXI	**Tiksi**	**25.25**	**33**	*i* P	**P**	**11 29 09.3**	**+0.5**
TIXI				pmax	pmax		
	comp=Z,42nm,1.0s						
EKA	**Eskdalemuir Ar**	**26.07**	**179**	P	**P**	**11 29 17.6**	**+1.3**
	comp=Z,0.6nm,0.6s,baz=11,slow=12,SNR=4.1						
IZAR	**Zarasai**	**27.18**	**141**	*e*P	**P**	**11 29 26.9**	**+0.6**
IZAR				IAmb	IAmb	11 29 37.4	
	comp=Z,9.4nm,0.7s						
ISAL	**Salakas**	**27.34**	**141**	*e*P	**P**	**11 29 28.5**	**+0.7**
ISAL				IAmb	IAmb	11 29 39.2	
	comp=Z,20nm,0.9s						
RGN	**Rugen**	**27.37**	**158**	*e*P	**P**	**11 29 30.2**	**+2.2**
	comp=Z,71nm,1.0s						
IIGN	**Ignalina**	**27.57**	**141**	*e*P	**P**	**11 29 30.6**	**+0.8**
IIGN				IAmb	IAmb	11 29 41.4	
	comp=Z,15nm,0.9s						
IDID	**Didziasalis**	**27.65**	**141**	*e*P	**P**	**11 29 31.2**	**+0.6**
IDID				IAmb	IAmb	11 29 42.3	
	comp=Z,19nm,1.0s						
INK	**Inuvik**	**28.18**	**323**	P	**P**	**11 29 34.6**	**-0.5**
	comp=Z,4.7nm,0.6s,baz=23,slow=7.2,SNR=14						
INK				PcP	**PcP**	**11 32 48.6**	**+0.3**
	comp=Z,4.2nm,0.9s,baz=58,slow=5.9,SNR=3.7						
INK				LR	LR	11 42 56.0	
	comp=Z,187nm,20.0s,baz=20,slow=41						
INK	**Inuvik**	**28.18**	**323**	*e*P	**P**	**11 29 34.7**	**-0.5**
	comp=Z,21nm,1.4s						
INK				PcP	**PcP**	**11 32 48.6**	**+0.3**
INK	**Inuvik**	**28.18**	**323**	*e*P	**P**	**11 29 34.7**	**-0.5**
INK						11 32 48.6	
INK				pmax	pmax		
	comp=Z,21nm,1.4s						
MOS	**Moscow**	**28.43**	**128**	*e*P	P	11 29 31.5	-6.0
MOS				*e*		11 30 39.9	
MICGM	**Minsk**	**28.57**	**140**	*e*	P	11 29 44.0	+5.2
MNK	**Minsk**	**28.57**	**140**	*e*P	P	11 29 44.0	+5.2
OBN	**Obninsk**	**28.91**	**129**	*e*P	**P**	**11 29 42.6**	**+0.8**
	comp=Z,58nm,1.2s						
OBN	**Obninsk**	**28.91**	**129**	⇓*e*P	**P**	**11 29 42.0**	**+0.2**
OBN				*i* *PP	**pP**	**11 29 43.6**	**-1.4**
OBN				*e**SP	**sP**	**11 29 44.5**	**-1.9**
OBN				PPP	PPP	11 30 44.0	
OBN				*e*S	**S**	**11 34 39.2**	**+7.6**
OBN				*e*SS	**SnSn**	**11 35 53.2**	**-0.3**
OBN				SSS	SSS	11 36 14.0	
OBN				pmax	pmax		
	comp=Z,19nm,0.9s						
OBN				MLR	MLR		

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        comp=Z,177nm,14.0s
TOLK  Toolik Lake Re    29.13 335   P      P      11 29 43.9 +0.2
        baz=10,SNR=8.9
TOLK  Toolik Lake Re    29.13 335  eP      P      11 29 44.0 +0.3
        comp=Z,18nm,0.8s
RDOG  Red Dog Mine      30.42 344  eP      P      11 29 54.9  -0.1
        comp=Z,22nm,0.9s
SVE   Sverdlovsk        30.54 102  eP      P      11 29 57.4 +1.2
SVE                                eS      S      11 34 59.3 +2.1
SVE                                 pmax   pmax
        comp=Z,35nm,1.4s
SVE                                 MLR    MLR
        comp=Z,834nm,18.0s
COLD  Coldfoot          30.57 335  eP      P      11 29 56.5 +0.1
        comp=Z,28nm,0.9s
BEL   Belsk             30.58 149   P      P      11 29 57.0 +0.4
BEL                                 pmax   pmax
        comp=Z,93nm,0.7s
CLL   Collm             30.58 159  eP      P      11 29 58.0 +1.4
CLL                                i sP    sP     11 30 03.9 +2.7
        comp=Z,16nm,1.3s
CLL                                e(PP)          11 31 07.0
CLL                                eS      S      11 34 57.0  -1.0
CLL                                e              11 35 30.0
CLL                                eSSS    SSS    11 36 54.0
CLL                                 Lm     MLR    11 41 00.0
        comp=Z,200nm,18.6s
CLL   Collm             30.58 159  eP      P      11 29 58.0 +1.4
CLL                                i              11 30 03.9
CLL                                eS      S      11 34 57.0  -1.0
CLL                                 pmax   pmax
        comp=Z,16nm,1.3s
ARU   Arti              30.61 104   P      P      11 29 57.5 +0.7
        comp=Z,1.9nm,0.4s,baz=336,slow=5.0,SNR=7.1
ARU                                 LR     LR     11 44 55.3
        comp=Z,308nm,19.5s,baz=0.0,slow=42
ARU   Arti              30.61 104  eP      P      11 29 57.5 +0.7
        comp=Z,98nm,1.9s
ARU   Arti              30.61 104c iP      P      11 29 57.6 +0.7
ARU                                               11 30 55.2
ARU                                               11 32 54.3
ARU                                 S      S      11 35 02.6 +4.3
ARU                                 SS     ScP    11 36 37.7 +1.1
ARU                                 pmax   pmax
        comp=Z,12nm,1.2s
ARU                                 MLR    MLR
        comp=Z,575nm,16.0s
FYU   Fort Yukon        30.87 331  eP      P      11 30 00.4 +1.4
        comp=Z,169nm,1.6s
BRG   Berggiesshubel    31.07 158  eP      P      11 30 08.4 +7.5
        comp=Z,22nm,1.6s
BRG                                 S      S      11 35 09.0 +3.4
BRG                                 SS     ScP    11 36 39.0 +0.8
        comp=N,199nm,13.6s
        comp=E,101nm,13.0s
        comp=Z,248nm,14.4s
BRG   Berggiesshubel    31.07 158  eP      P      11 30 08.4 +7.5
BRG                                 S      S      11 35 09.0 +3.4
BRG                                 pmax   pmax
        comp=Z,22nm,1.6s
BRG                                 MLR    MLR
        comp=N,199nm,13.6s
BRG                                 MLR    MLR
        comp=E,101nm,13.0s
BRG                                 MLR    MLR
        comp=Z,248nm,14.4s
MOX   Moxa              31.17 160   P      P      11 30 02.3 +0.5
MOX                                 pmax   pmax
        comp=Z,10.0nm,1.8s
KSP   Ksiaz             31.25 155  eP      P      11 30 10.7 +8.2
KSP   Ksiaz             31.25 155  eP      P      11 30 10.7 +8.2
PVCC  Panska Ves        31.45 157   AMS    AMS    11 41 40.0
        comp=Z,200nm,17.0s
UPC   Upice             31.56 155   AMS    AMS    11 41 40.0
        comp=Z,200nm,19.2s
NKC   Novy Kostel       31.62 160  eP      P      11 30 07.7 +1.8
NKC                                 AMS    AMS    11 43 10.0
        comp=Z,200nm,12.8s
NKC   Novy Kostel       31.62 160  eP      P      11 30 07.7 +1.8
NKC                                 MLR    MLR
        comp=Z,200nm,12.8s
LPSR  Galich'ya Gora    31.66 127  eP      P      11 30 07.0 +0.9
LPSR                                pmax   pmax
        comp=Z,50nm,0.9s
YKW3  Yellowknife Ar    31.67 304  eP      P      11 30 05.8  -0.3
        comp=Z,10nm,1.0s
YKA   Yellowknife Ar    31.73 304   P      P      11 30 06.2  -0.4
        comp=Z,5.3nm,0.9s,baz=10,slow=8.9,SNR=12
YKA                                 PcP    PcP    11 32 57.3  -0.2
        comp=Z,2.5nm,0.7s,baz=8.8,slow=2.6,SNR=7.1
YKA                                 LR     LR     11 42 55.4
        comp=Z,96nm,20.4s,baz=18,slow=36
DPC   Dobruska-Polom    31.74 155   AMS    AMS    11 42 00.0
        comp=Z,200nm,19.0s
PRU   Pruhonice         31.99 157   AMS    AMS    11 42 00.0
        comp=Z,200nm,21.5s
GOPC  GO Pecny, Ondr    32.08 157   AMS    AMS    11 42 00.0
        comp=Z,300nm,16.7s
GRFO  Grafenberg        32.10 161  eP      P      11 30 13.0 +3.0
        comp=Z,9.2nm,1.0s
OJC   Ojcow             32.11 151  eP      P      11 30 18.4 +8.3
OJC   Ojcow             32.11 151  eP      P      11 30 12.5 +2.4
        comp=Z,18nm,1.2s
OJC   Ojcow             32.11 151  eP      P      11 30 12.5 +2.4
OJC                                 pmax   pmax
        comp=Z,18nm,1.2s
SCHQ  Schefferville     32.16 255   P      P      11 30 11.0 +0.5
        comp=Z,5.3nm,0.5s,baz=17,slow=12,SNR=4.6
SCHQ                                LR     LR     11 43 32.0
        comp=Z,800nm,19.2s,baz=24,slow=37
SCHQ  Schefferville     32.16 255  eP      P      11 30 11.6 +1.1
        comp=Z,32nm,1.3s
EGAK  Eagle             32.32 327  eP      P      11 30 12.0 +0.2
        comp=Z,73nm,1.8s
EGAK                               ePcP    PcP    11 32 59.6 +0.5
OKC   Ostrava-Krasne    32.37 153   AMS    AMS    11 45 50.0
        comp=Z,300nm,13.7s
MORC  Moravsky Berou    32.39 153  eP      P      11 30 14.2 +1.6
        comp=Z,23nm,1.4s
MORC  Moravsky Berou    32.39 153  eP      P      11 30 15.2 +2.6
AKASG Malin Array Be    32.46 139   P      P      11 30 13.4 +0.3
        comp=Z,2.6nm,0.6s,baz=351,slow=9.5,SNR=12
AKASG                               PcP    PcP    11 32 59.0  -0.7
        comp=Z,5.4nm,0.9s,baz=354,slow=2.5,SNR=8.2
AKASG                               LR     LR     11 44 10.3
        comp=Z,189nm,19.1s,baz=345,slow=38
AKASG Malin Array Be    32.46 139  i P     P      11 30 13.0  -0.1
AKASG                               pmax   pmax
        comp=Z,2.0nm,0.5s
AKBB  Malin Array Si    32.46 139  eP      P      11 30 13.1   0.0
        comp=Z,60nm,1.7s
KIEV  Kiev              32.46 139  eP      P      11 30 12.8  -0.4
        comp=Z,58nm,1.7s
KIEV  Kiev              32.46 139  i P     P      11 30 12.9  -0.2
KIEV                                pmax   pmax
        comp=Z,6.0nm,1.1s
AK11  Malin Array Si    32.48 139  eP      P      11 30 14.1 +0.8
MDM   Murphy Dome       32.68 332  eP      P      11 30 16.1 +1.1
        comp=Z,58nm,1.2s
COLA  College           32.74 332  eP      P      11 30 16.2 +0.8
        comp=Z,37nm,1.1s
COLA  College           32.74 332  eP      P      11 30 16.2 +0.8
COLA                                pmax   pmax
        comp=Z,37nm,1.1s
IL1   Eielson Array     32.77 331  eP      P      11 30 16.2 +0.4
ILAR  Eielson Array     32.77 331   P      P      11 30 16.6 +0.8
        comp=Z,12nm,1.0s,baz=6.4,slow=7.5,SNR=86
ILAR                                PcP    PcP    11 32 59.8  -0.6
        comp=Z,1.9nm,0.7s,baz=339,slow=3.7,SNR=11
ILAR                                LR     LR     11 44 29.6
        comp=Z,100nm,19.7s,baz=20,slow=38
ILB   Eielson Array     32.77 331  eP      P      11 30 16.6 +0.8
MLY   Manley            32.78 334  eP      P      11 30 16.9 +1.0
        comp=Z,31nm,1.3s
KHC   Kasperske Hory    32.79 158   AMS    AMS    11 42 50.0
        comp=Z,200nm,16.3s
VRAC  Vranov            32.79 155   P      P      11 30 16.5 +0.4
        comp=Z,1.6nm,0.4s,baz=358,slow=12,SNR=5.4
VRAC                                LR     LR     11 43 00.3
        comp=Z,205nm,19.1s,baz=350,slow=35
VRAC  Vranov            32.79 155  eP      P      11 30 19.4 +3.3
LVV   L'vov             32.85 146  eP      P      11 30 21.7 +5.1
DAWY  Dawson            32.87 325  eP      P      11 30 16.4  -0.2
        comp=Z,8.0nm,0.8s
KWP   Kalwaria Pacla    32.92 147  eP      P      11 30 18.3 +1.0
        comp=Z,776nm,0.5s
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KWP   Kalwaria Pacla    32.92 147  eP      P      11 30 18.3 +1.0
NIE   Niedzica          32.95 150  eP      P      11 30 20.7 +3.3
NIE   Niedzica          32.95 150  eP      P      11 30 20.7 +3.3
CCB   Clear Creek Bu    32.96 332  eP      P      11 30 18.1 +0.7
        comp=Z,41nm,1.3s
KRUC  Moravsky          33.03 155  eP      P      11 30 20.4 +2.3
VSR   Storozhevoye      33.05 128  eP      P      11 30 18.3   0.0
VSR                                 pmax   pmax
        comp=Z,10.0nm,0.9s
VSR                                 MLR    MLR
        comp=Z,470nm,21.0s
GEC2  GERESS Array S    33.08 158  eP      P      11 30 20.7 +2.0
        comp=Z,45nm,1.9s
GEC2  GERESS Array S    33.08 158  eP      P      11 30 20.7 +2.0
GEC2                                pmax   pmax
        comp=Z,45nm,1.9s
GERES GERESS Array B    33.08 158   P      P      11 30 20.0 +1.3
        comp=Z,2.9nm,1.1s,baz=12,slow=7.1,SNR=10
GERES                               PcP    PcP    11 33 02.0 +0.4
        comp=Z,0.8nm,0.8s,baz=15,slow=5.7,SNR=3.5
GEA0  GERESS Array S    33.09 158  eP      P      11 30 20.0 +1.2
HDA   Harding Lake      33.13 331  eP      P      11 30 19.9 +1.0
        comp=Z,19nm,0.9s
WRH   Wood River Hil    33.15 332  eP      P      11 30 19.3 +0.2
        comp=Z,39nm,1.2s
VORD  Divnogorie        33.31 128  eP      P      11 30 19.9  -0.6
VORD                                pmax   pmax
        comp=Z,10.0nm,0.4s
SCRK  Sand Creek        33.34 329  eP      P      11 30 20.9 +0.1
        comp=Z,6.4nm,0.9s
VRH   Novokhopyorsk     33.38 125  eP      P      11 30 21.9 +0.8
VRH                                 pmax   pmax
        comp=Z,30nm,0.9s
VRH                                 MLR    MLR
        comp=Z,480nm,17.0s
ECH   Echery            33.40 166  eP      P      11 30 22.5 +1.1
        comp=Z,15nm,1.3s
ECH   Echery            33.40 166  eP      P      11 30 22.5 +1.1
ECH                                 pmax   pmax
        comp=Z,15nm,1.3s
CRVS  Cervenica-Dubn    33.55 149  eP      P      11 30 29.9 +7.2
CRVS  Cervenica-Dubn    33.55 149  epP     pP     11 30 29.9 +3.9
RIDG  Independ'e Rid    33.63 329  eP      P      11 30 24.6 +1.3
        comp=Z,24nm,1.3s
DOT   Dot Lake          33.66 329  eP      P      11 30 24.5 +0.9
        comp=Z,44nm,1.2s
BPAW  Bear Paw Mtn.     33.72 334  eP      P      11 30 24.3 +0.3
        comp=Z,42nm,1.2s
VYHS  Vyhne             33.76 152  eP      P      11 30 25.1 +0.6
VYHS                               e              11 30 32.7
VYHS  Vyhne             33.76 152  eP      P      11 30 25.1 +0.6
VYHS                               esP     sP     11 30 32.7 +3.6
UZH   Uzhgorod          33.88 148  eP      P      11 30 27.9 +2.3
UZH                                i              11 30 32.9
MCK   McKinley          33.95 333  eP      P      11 30 27.0 +1.0
        comp=Z,55nm,1.7s
MCK   McKinley          33.95 333  eP      P      11 30 27.0 +1.0
MCK                                 pmax   pmax
        comp=Z,55nm,1.7s
MOA   Molln             34.10 158  epP     pP     11 30 30.6  -0.2
        comp=Z,8.2nm,1.1s
CONA  Conrad Observa    34.12 156  epP     P      11 30 29.3 +1.5
        comp=Z,22nm,2.0s,SNR=7.6
KTH   Kantishna Hill    34.26 334  eP      P      11 30 29.1 +0.3
        comp=Z,49nm,1.2s
RETA  Reutte            34.28 162  eP      P      11 30 33.2 +4.0
        comp=Z,2.6nm,0.5s
TRF   Thorofare Moun    34.32 334  eP      P      11 30 29.9 +0.5
        comp=Z,22nm,1.2s
TRPA  Tarpa             34.40 148  eP      P      11 30 38.4 +8.4
PSZ   Piszkesteto       34.41 151  eP      P      11 30 39.0 +8.8
PSZ   Piszkesteto       34.41 151  eP      P      11 30 33.9 +3.7
        comp=Z,41nm,1.4s
DAVA  Damuels           34.44 163  eP      P      11 30 35.0 +4.4
        comp=Z,13nm,1.2s
PAX   Paxson            34.45 330  eP      P      11 30 31.2 +0.8
        comp=Z,20nm,1.0s
PAX   Paxson            34.45 330  eP      P      11 30 31.2 +0.8
PAX                                 pmax   pmax
        comp=Z,20nm,1.0s
CAST  Castle Rocks      34.47 335  eP      P      11 30 31.3 +0.7
        comp=Z,58nm,1.1s
DHY   Denali Highway    34.48 331  eP      P      11 30 31.4 +0.6
        comp=Z,41nm,0.9s
WTTA  Wattenberg        34.55 161  eP      P      11 30 36.8 +5.2
        comp=Z,10nm,1.7s
YAK   Yakutsk           34.74  37  eP      P      11 30 31.9  -1.0
        comp=Z,68nm,1.0s
YAK   Yakutsk           34.74  37  eP      P      11 30 30.8  -2.0
YAK                                e              11 31 45.3
YAK                                ePPP    PPP    11 32 02.0
YAK                                e              11 33 09.5
YAK                                eS      S      11 35 57.1  -5.3
YAK                                eSSS    SSS    11 38 21.5
YAK                                e              11 40 48.7
YAK                                 pmax   pmax
        comp=Z,51nm,0.9s
YAK                                 pmax   pmax
        comp=N,14nm,1.0s
YAK                                 pmax   pmax
        comp=E,7.0nm,1.3s
YAK                                 pmax   pmax
        comp=Z,48nm,3.3s
YAK                                 pmax   pmax
        comp=N,62nm,2.8s
YAK                                 pmax   pmax
        comp=E,39nm,3.3s
YAK                                 smax   smax
        comp=N,41nm,2.3s
YAK                                 smax   smax
        comp=E,15nm,2.0s
FETA  Feichten          34.74 162  eP      P      11 30 37.1 +3.8
        comp=E,5.4nm,1.4s
ARSA  Arzberg           34.78 156  eP      P      11 30 38.3 +5.0
        comp=E,3.4nm,0.9s
KBA   Koelnbreinsper    34.82 159   P      P      11 30 38.6 +4.7
        comp=E,6.1nm,1.0s
CSKK  Cs^‡kako          34.84 153  eP      P      11 30 43.1 +9.2
SORM  Soroca            34.91 141⇑iP      P      11 30 34.7 +0.2
SORM  Soroca            34.91 141 ⇑P      P      11 30 34.7 +0.2
DAVOX Davos/Dischmat    34.95 163   LR     LR     11 43 59.2
        comp=E,229nm,20.8s,baz=40,slow=35
HARP  HAARP             34.98 329  eP      P      11 30 35.9 +0.9
        comp=E,124nm,1.9s
PPLA  Purkeypile        34.99 335  eP      P      11 30 35.7 +0.5
        comp=E,60nm,1.3s
ABTA  Abfaltersbach     35.11 160   pP     P      11 30 37.7 +1.4
        comp=E,9.0nm,1.8s
BUR08 Bucovina Ar. S    35.11 145  eP      P      11 30 37.4 +1.0
BUR04 Bucovina Ar. S    35.14 145  eP      P      11 30 37.1 +0.6
BURAR Bucovina Array    35.14 145⇓iP      P      11 30 37.3 +0.7
BURAR Bucovina Array    35.14 145 ⇓P      P      11 30 37.3 +0.7
MYKA  Terra Mystica     35.28 159   P      P      11 30 41.7 +3.9
        comp=E,0.2nm,0.2s
SOKA  Soboth            35.32 157  epP     P      11 30 39.4 +1.3
        comp=E,12nm,1.2s,SNR=5.8
SEY   Seymchan          35.44  18ceP      P      11 30 38.4  -0.4
OBKA  Obir              35.46 158   pP     P      11 30 41.1 +1.8
        comp=E,20nm,1.3s,SNR=5.1
BRVK  Borovoye          35.64  94  eP      P      11 30 42.3 +1.6
        comp=E,33nm,1.9s
BRVK  Borovoye          35.64  94   P      P      11 30 42.2 +1.6
        SNR=9.4
BRVK  Borovoye          35.64  94⇑iP      P      11 30 41.5 +0.8
BRVK                                pmax   pmax
        comp=Z,13nm,1.7s
BVAR  Borovoye Array    35.69  94   P      P      11 30 42.7 +1.6
        comp=Z,2.4nm,0.7s,baz=342,slow=9.3,SNR=17
BVAR                                PcP    PcP    11 33 08.7  -0.2
        comp=Z,2.1nm,0.8s,baz=337,slow=3.4,SNR=2.9
BVAR                                LR     LR     11 48 28.1
        comp=Z,655nm,18.7s,baz=334,slow=42
WHY   Whitehorse        35.80 320  eP      P      11 30 42.6 +0.5
        comp=Z,9.4nm,0.9s
SML   Sawmill           35.81 332  eP      P      11 30 42.4 +0.3
        comp=Z,62nm,1.1s
SML   Sawmill           35.81 332  eP      P      11 30 42.4 +0.3
SML                                 pmax   pmax
        comp=Z,62nm,1.1s
SKT   Skwentna          35.86 334  eP      P      11 30 42.1  -0.5
        comp=Z,71nm,1.2s
NVS   Novosibirsk       35.88  80  eP      P      11 30 45.3 +2.6
NVS                                e              11 32 06.3
NVS                                 pmax   pmax
        comp=N,9.0nm,1.5s
NVS                                 pmax   pmax
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        comp=Z,21nm,1.5s
BIZ   Bicaz             35.89 144⇑iP      P      11 30 42.2  -0.7
KLU   Klutina           35.94 330  eP      P      11 30 43.9 +0.5
        comp=Z,6.6nm,0.8s
PMR   Palmer            36.08 332  eP      P      11 30 44.5 +0.1
        comp=Z,20nm,1.2s
PMR   Palmer            36.08 332  eP      P      11 30 44.5 +0.1
PMR                                 pmax   pmax
        comp=Z,20nm,1.2s
DIV   Divide            36.29 329  eP      P      11 30 46.7 +0.4
        comp=Z,40nm,1.5s
AKTO  Aktyubinsk        36.35 107   P      P      11 30 47.8 +0.9
        comp=Z,5.2nm,0.7s,baz=356,slow=9.3,SNR=10
AKTO                                LR     LR     11 48 30.2
        comp=Z,525nm,18.6s,baz=352,slow=41
BMRM  Bremner River     36.36 328  eP      P      11 30 47.4 +0.6
        comp=Z,16nm,1.0s
TESR  Tescani           36.36 143⇑iP      P      11 30 46.4  -0.5
RC01  Rabbit Creek A    36.62 333  eP      P      11 30 49.4 +0.4
        comp=Z,59nm,1.4s
DOPR  Dopca             36.79 145⇑iP      P      11 30 51.7 +1.1
BZS   Buzias            36.83 149⇑iP      P      11 30 52.4 +1.5
BZS   Buzias            36.83 149 ⇑P      P      11 30 52.4 +1.5
ZAA0  Zalesovo Array    36.98  79  eP      P      11 30 54.2 +2.0
        comp=Z,11nm,1.4s
ZALV  Zalesovo Beam     36.98  79   P      P      11 30 52.6 +0.4
        comp=Z,2.9nm,0.8s,baz=354,slow=8.8,SNR=8.6
ZALV                                PcP    PcP    11 33 12.3  -0.4
        comp=Z,3.0nm,0.7s,baz=292,slow=4.6,SNR=6.1
ZALV                                LR     LR     11 49 58.1
        comp=Z,577nm,18.7s,baz=276,slow=43
ZALV  Zalesovo Beam     36.98  79  eP      P      11 30 53.5 +1.4
ZALV                                PcP    PcP    11 33 12.3  -0.4
ZALV  Zalesovo Beam     36.98  79  eP      P      11 30 53.5 +1.4
ZALV                                              11 33 12.4
SVW2  Sparrevohn        36.99 337  eP      P      11 30 53.0 +0.8
        comp=Z,42nm,1.0s
VRI   Vrincioaia        37.01 143⇑iP      P      11 30 55.5 +3.0
VRI   Vrincioaia        37.01 143 ⇑P      P      11 30 55.5 +3.0
PLOR  Plostina          37.02 144⇑iP      P      11 30 56.2 +3.6
PLOR  Plostina          37.02 144 ⇑P      P      11 30 56.2 +3.6
BOD   Bodaibo           37.22  51  eP      P      11 30 51.9  -2.2
BOD                                 pmax   pmax
        comp=Z,18nm,1.5s
VOIR                    37.29 145⇑iP      P      11 31 08.0  +13
VOIR                    37.29 145 ⇑P      P      11 31 08.0  +13
MLR   Muntele Rosu      37.31 144   P      P      11 30 57.5 +2.3
        comp=Z,2.0nm,0.7s,baz=96,slow=23,SNR=2.6
MLR                                 LR     LR     11 47 31.8
        comp=Z,114nm,20.3s,baz=4.0,slow=38
MLR   Muntele Rosu      37.31 144⇑iP      P      11 31 01.7 +6.5
DLBC  Dease Lake        37.49 316  eP      P      11 30 58.5 +2.0
        comp=Z,14nm,1.2s
FFC   Flin Flon         37.54 289  eP      P      11 30 56.8  -0.1
        comp=Z,6.1nm,0.8s
FFC   Flin Flon         37.54 289  eP      P      11 30 56.8  -0.1
FFC                                 pmax   pmax
        comp=Z,6.0nm,0.8s
HERR  Herculane         37.62 149⇓iP      P      11 31 06.6 +9.0
MDVR  Moldovita         37.66 149⇓iP      P      11 30 59.6 +1.5
ABKAR Akbulak array     37.78 106  eP      P      11 30 59.9 +0.9
CFR   Carcaliu          37.82 142⇑iP      P      11 31 00.2 +0.9
CFR   Carcaliu          37.82 142 ⇑P      P      11 31 00.2 +0.9
JIS   Juneau Island     38.10 319  eP      P      11 31 03.1 +1.6
        comp=Z,14nm,0.9s
DIVS  Divibare          38.21 152  eP      P      11 31 05.7 +3.0
        comp=Z,23nm,1.6s
TLB   Topalu            38.40 142⇓iP      P      11 31 00.2  -4.0
TLB   Topalu            38.40 142   P      P      11 31 00.2  -4.0
MA2   Magadan           38.70  20  eP      P      11 31 06.3  -0.3
        comp=Z,20nm,0.9s
MA2   Magadan           38.70  20⇑eP      P      11 31 07.0 +0.4
MA2                                 pmax   pmax
        comp=Z,32nm,2.5s
ANN   Anapa             39.17 132  eP      P      11 31 13.7 +3.1
ANN                                 pmax   pmax
        comp=Z,57nm,1.8s
KURK  Kurchatov         39.19  86  eP      P      11 31 12.2 +1.5
        comp=Z,19nm,0.9s
KURK                                PcP    PcP    11 33 19.4  -0.3
KURK  Kurchatov         39.19  86   P      P      11 31 12.0 +1.2
        SNR=11
KURK  Kurchatov         39.19  86  i P     P      11 31 09.7  -1.0
KURK                                pmax   pmax
        comp=Z,30nm,1.2s
KURBB Kurchatov Arra    39.26  87   P      P      11 31 12.5 +1.1
        comp=Z,15nm,0.9s,baz=345,slow=7.8,SNR=37
KURBB                               PcP    PcP    11 33 19.4  -0.5
        comp=Z,1.8nm,0.5s,baz=342,slow=3.2,SNR=8.8
KDAK  Kodiak Island     40.11 334  eP      P      11 31 18.5 +0.2
        comp=Z,84nm,0.8s
KDAK  Kodiak Island     40.11 334  i P     P      11 31 18.0  -0.3
KIV   Kislovodsk        40.62 126⇑eP      P      11 31 22.8  -0.1
KIV                                 *PP    pP     11 31 26.0  -0.2
KIV                                 *SP    sP     11 31 28.0 +0.5
KIV                                               11 32 54.0
KIV                                eS      S      11 37 41.2 +9.1
KIV                                 SSS    SSS    11 41 04.0
KIV                                 pmax   pmax
        comp=Z,3.0nm,1.1s
KIV                                 MLR    MLR
        comp=Z,171nm,17.0s
OHAK  Old Harbor        40.71 335  eP      P      11 31 22.6  -0.7
        comp=Z,70nm,1.0s
KBZ   Khabaz            40.87 126   P      P      11 31 27.0 +2.2
        comp=Z,7.5nm,0.9s,baz=347,slow=4.9,SNR=15
KBZ                                 LR     LR     11 49 29.9
        comp=Z,219nm,19.1s,baz=344,slow=38
ULM   Lac du Bonnet     40.99 282   P      P      11 31 26.1 +0.4
        comp=Z,12nm,0.7s,baz=13,slow=8.5,SNR=15
ULM                                 LR     LR     11 48 21.2
        comp=Z,679nm,19.7s,baz=7.0,slow=36
ULM   Lac du Bonnet     40.99 282  eP      P      11 31 26.1 +0.4
        comp=Z,30nm,1.1s
ULM   Lac du Bonnet     40.99 282  eP      P      11 31 26.2 +0.5
ULM                                 pmax   pmax
        comp=Z,30nm,1.1s
HVS   Khovu-Aksy        41.03  72  i P     P      11 31 25.1  -1.0
HVS                                 pmax   pmax
        comp=Z,30nm,1.0s
NCK   Nalchik           41.19 125  i P     P      11 31 26.6  -0.9
NCK                                 pmax   pmax
        comp=Z,6.0nm,1.0s
NEY   Neytrino          41.32 126  i P     P      11 31 28.5  -0.2
NEY                                 pmax   pmax
        comp=Z,2.0nm,1.0s
IRK   Irkutsk           41.43  62  eP      P      11 31 28.1  -1.2
IRK                                 pmax   pmax
        comp=Z,49nm,1.6s
GRG   Griva             41.52 149   P      P      11 31 33.6 +3.4
GRG                                 pmax   pmax
        comp=Z,30nm,1.7s
FNA   Florina           41.61 150  eP      P      11 31 31.6 +0.6
        comp=Z,30nm,0.9s
FNA   Florina           41.61 150  eP      P      11 31 31.6 +0.6
FNA                                 pmax   pmax
        comp=Z,30nm,0.9s
TRQ   Mont Tremblant    41.69 260  eP      P      11 31 32.2 +0.7
ESDC  Sonseca Array     41.74 180   P      P      11 31 32.1 +0.1
        comp=Z,0.3nm,0.5s,baz=358,slow=8.5,SNR=4.4
ESDC                                LR     LR     11 48 43.2
        comp=Z,80nm,19.3s,baz=350,slow=36
GROC  Groznyy           41.76 123  eP      P      11 31 33.4 +1.3
GROC                               e              11 33 26.5
GROC                               eS      S      11 37 49.2 +0.5
GROC                                pmax   pmax
        comp=Z,108nm,1.7s
PKME  Peaks-Kenny Pk    41.84 254   P      P      11 31 33.3 +0.6
        baz=12
PKME  Peaks-Kenny Pk    41.84 254  eP      P      11 31 33.4 +0.6
        comp=Z,22nm,0.9s
TLY   Talaya            41.90  63   P      P      11 31 33.1  -0.1
        SNR=6.0
TLY   Talaya            41.90  63  eP      P      11 31 33.3 +0.1
TLY                                eS      S      11 37 53.3 +2.6
TLY                                eSS     SS     11 40 53.9  -2.6
TLY                                 pmax   pmax
        comp=Z,12nm,1.8s
TLY                                 MLR    MLR
        comp=Z,589nm,20.0s
ZEI   Tsey              41.92 125  eP      P      11 31 35.6 +1.9
CHGN  Chignik           41.94 339  eP      P      11 31 32.7  -0.7
        comp=Z,51nm,1.1s
EMMW  East Machias      42.12 252  eP      P      11 31 35.9 +1.0
        comp=Z,20nm,0.8s
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A33A	Warroad	42.20	281	P	P	11 31 35.9	+0.2
	baz=13,SNR=11						
MAK	Makhachkala	42.22	121	*e*P	P	11 31 33.2	-2.6
MAK				*e*S	S	11 37 54.1	-1.4
MAK				pmax	pmax		
	comp=Z,123nm,1.1s						
C40A	Isle Royale Na	42.26	275	P	P	11 31 36.5	+0.4
	baz=13						
B35A	Bob, Littlefor	42.51	279	P	P	11 31 38.5	+0.3
	baz=13,SNR=11						
B35A	Bob, Littlefor	42.51	279	*e*P	P	11 31 38.7	+0.5
	comp=Z,12nm,0.6s						
B34A	Aery, Baudette	42.53	280	P	P	11 31 38.7	+0.3
	baz=13,SNR=6.6						
WVL	Waterville	42.58	254	*e*P	P	11 31 40.3	+1.6
	comp=Z,26nm,1.0s						
EYMN	Ely	42.58	277	P	P	11 31 39.4	+0.6
	baz=13,SNR=18						
EYMN	Ely	42.58	277	*e*P	P	11 31 39.5	+0.7
	comp=Z,26nm,0.9s						
ZEA	Zeya	42.69	41	*e*P	P	11 31 40.2	+0.7
ZEA				pmax	pmax		
	comp=Z,43nm,1.2s						
ZEA				MLR	MLR		
	comp=Z,400nm,16.0s						
C38A	Sawbill Land.	42.77	277	P	P	11 31 40.6	+0.3
	baz=13,SNR=11						
AGMN	Agassiz Nation	42.90	281	P	P	11 31 41.8	+0.5
	baz=13,SNR=18						
AGMN	Agassiz Nation	42.90	281	*e*P	P	11 31 41.8	+0.5
	comp=Z,52nm,1.3s						
C37A	Embarrass	42.90	278	P	P	11 31 41.5	+0.2
	baz=13						
FRNY	Flat Rock	42.90	258	*e*P	P	11 31 43.4	+2.1
	comp=Z,18nm,1.1s						
C36A	Pine Crest Far	42.97	278	P	P	11 31 42.5	+0.6
	baz=13						
D41A	Chassel	43.00	274	P	P	11 31 42.8	+0.7
	baz=13						
ZAK	Zakamensk	43.12	63	*e*P	P	11 31 43.1	-0.1
ZAK				pmax	pmax		
	comp=Z,4.0nm,1.7s						
E45A	Wooded Hills,	43.17	270	P	P	11 31 44.2	+0.7
	baz=13						
C35A	Jirik Farms, M	43.20	279	P	P	11 31 44.1	+0.3
	baz=13,SNR=18						
PLVO	Plevna	43.22	262	*e*P	P	11 31 45.1	+1.2
	comp=Z,22nm,0.9s						
AKH	Akhalkalaki	43.23	126	*e*P	P	11 31 48.7	+4.4
	comp=Z,38nm,1.4s						
LBNH	Lisbon	43.23	256	P	P	11 31 44.9	+0.8
	baz=12						
LBNH	Lisbon	43.23	256	*e*P	P	11 31 46.9	+2.8
	comp=Z,15nm,1.0s						
LONY	Lake Ozonia	43.26	259	P	P	11 31 44.7	+0.5
	baz=12,SNR=9.1						
LONY	Lake Ozonia	43.26	259	*e*P	P	11 31 45.4	+1.1
	comp=Z,18nm,1.0s						
C34A	RKJ Ranch, Bem	43.38	280	P	P	11 31 45.7	+0.4
	baz=13						
C33A	Trail	43.41	281	P	P	11 31 45.8	+0.4
	baz=13,SNR=11						
E43A	Lone Tree Farm	43.43	272	P	P	11 31 46.1	+0.5
	baz=13						
D37A	Cotton	43.49	278	P	P	11 31 46.6	+0.4
	baz=13,SNR=18						
MAKZ	Makanchi	43.50	85	*e*P	P	11 31 43.9	-2.3
	comp=Z,35nm,0.5s						
MAKZ	Makanchi	43.50	85	*e*P	P	11 31 43.9	-2.3
MAKZ				pmax	pmax		
	comp=Z,35nm,0.5s						
E42A	Champion	43.52	273	P	P	11 31 46.6	+0.3
	baz=13						
MKAR	Makanchi Array	43.56	84	P	P	11 31 47.5	+0.8
	comp=Z,3.8nm,0.8s,baz=348,slow=7.0,SNR=17						
MKAR				PcP	PcP	11 33 33.3	-0.8
	comp=Z,0.6nm,0.4s,baz=334,slow=2.7,SNR=5.3						
MKAR				LR	LR	11 55 16.7	
	comp=Z,254nm,18.7s,baz=337,slow=44						
D36A	Goodland	43.58	278	P	P	11 31 47.2	+0.3
	baz=13,SNR=11						
D36A	Goodland	43.58	278	*e*P	P	11 31 47.6	+0.7
	comp=Z,27nm,0.9s						
E41A	Kenton	43.64	274	P	P	11 31 47.3	0.0
	baz=13						
F46A	Macinaw City C	43.67	270	P	P	11 31 47.6	0.0
	baz=12						
AKT	Akhty	43.70	121	*e*P	P	11 31 51.0	+3.0
AKT				*e*		11 33 33.0	
AKT				*e*S	S	11 38 20.4	+2.8
AKT				pmax	pmax		
	comp=Z,42nm,1.3s						
F44A	Big Bay de Noc	43.73	271	P	P	11 31 48.2	+0.1
	baz=13						
BR131	Keskin Array S	43.77	137	*e*P	P	11 31 50.0	+1.4
BRTR	Keskin Array B	43.77	137	P	P	11 31 49.8	+1.2
	comp=Z,2.9nm,0.9s,baz=339,slow=6.6,SNR=13						
BRTR				PcP	PcP	11 33 36.4	+1.3
	comp=Z,1.2nm,0.9s,baz=352,slow=3.2,SNR=2.6						
BRTR				LR	LR	11 51 09.7	
	comp=Z,96nm,20.8s,baz=350,slow=38						
SADO	Sadowa	43.80	264	*e*P	P	11 31 50.2	+1.6
	comp=Z,18nm,1.1s						
E40A	Wakefield	43.80	275	P	P	11 31 48.8	+0.1
	baz=13						
D35A	Remer	43.81	279	P	P	11 31 48.9	+0.2
	baz=13,SNR=12						
MDND	Maddock	43.89	285	P	P	11 31 49.4	+0.1
	baz=13						
MDND	Maddock	43.89	285	*e*P	P	11 31 50.3	+1.0
	comp=Z,75nm,1.1s						
E38A	The Farm, Brul	43.90	277	P	P	11 31 49.7	+0.3
	baz=13,SNR=8.5						
E38A	The Farm, Brul	43.90	277	*e*P	P	11 31 49.8	+0.3
	comp=Z,34nm,0.9s						
DGMT	Dagmar	43.95	289	P	P	11 31 49.9	+0.1
	baz=12						
DGMT	Dagmar	43.95	289	*e*P	P	11 31 50.9	+1.1
	comp=Z,20nm,0.8s						
E39A	Mellen	43.97	276	P	P	11 31 50.3	+0.4
	baz=13						
F43A	Flat Rock, Esc	43.99	272	P	P	11 31 50.2	+0.1
	baz=12						
COWI	Conover	44.02	274	*e*P	P	11 31 50.7	+0.3
	comp=Z,13nm,1.0s						
LLLB	Lillooet	44.24	306	*e*P	P	11 31 53.4	+1.3
	comp=Z,16nm,1.0s						
E36A	McGregor	44.24	278	P	P	11 31 52.7	+0.5
	baz=13,SNR=10.0						
ACCN	Adirondack Com	44.33	258	*e*P	P	11 31 56.1	+3.2
	comp=Z,40nm,1.8s						
F40A	Park Falls	44.35	275	P	P	11 31 53.4	+0.4
	baz=12						
F41A	Three Lakes	44.37	274	P	P	11 31 53.4	+0.2
	baz=12						
E35A	Pequot Lakes	44.38	279	P	P	11 31 53.4	+0.2
	baz=12						
F39A	Loretta	44.48	276	P	P	11 31 54.5	+0.5
	baz=12,SNR=10						
E34A	Wadena	44.53	280	P	P	11 31 54.7	+0.3
	baz=12						
F38A	Pierce - Schro	44.58	277	P	P	11 31 55.0	+0.2
	baz=12						
G43A	Wallace	44.62	272	P	P	11 31 54.9	-0.3
	baz=12						
GNI	Garni	44.63	125	LR	LR	11 51 40.9	
	comp=Z,116nm,18.9s,baz=348,slow=38						
GNI	Garni	44.63	125	*e*P	P	11 31 56.6	+1.1
	comp=Z,103nm,1.2s						
GNI	Garni	44.63	125	*c**e*P	P	11 31 55.5	0.0
GNI				pmax	pmax		
	comp=Z,80nm,1.7s						
WALA	Waterton Lakes	44.73	298	*e*P	P	11 31 56.5	+0.3
	comp=Z,13nm,0.8s						
G42A	Mountain	44.75	273	P	P	11 31 56.2	0.0
	baz=12						
HRV	Adam Dziewonsk	44.88	255	P	P	11 31 58.0	+0.8
	baz=12						
G41A	Antigo	44.90	274	P	P	11 31 57.8	+0.4
	baz=12						
F37A	Hinrichs Farm,	44.92	277	P	P	11 31 58.3	+0.8
	baz=12,SNR=11						
G40A	Rib Lake	45.00	275	P	P	11 31 58.6	+0.4
	baz=12						
G40A	Rib Lake	45.00	275	*e*P	P	11 31 58.9	+0.7
	comp=Z,21nm,1.0s						
G39A	Holcombe	45.13	276	P	P	11 31 59.6	+0.4
	baz=12						
EGMT	Eagleton	45.18	294	P	P	11 31 59.9	+0.2
	baz=12						
EGMT	Eagleton	45.18	294	*e*P	P	11 32 01.6	+1.9
	comp=Z,8.1nm,0.8s						
ISP	Isparta	45.34	141	*i* P	P	11 32 00.2	-0.9
ISP				pmax	pmax		
	comp=Z,9.0nm,0.6s						
G38A	Ridgeland	45.34	276	P	P	11 32 01.6	+0.6
	baz=12,SNR=14						
KK31	Karatay Array	45.37	97	*e*P	P	11 32 03.1	+1.9
KKAR	Karatay Array	45.37	97	*e*P	P	11 32 03.1	+1.9
H43A	Windswept, Lux	45.41	272	P	P	11 32 01.4	0.0
	baz=12						
SPMN	Marine on St.	45.44	277	P	P	11 32 02.1	+0.4
	baz=12						
SPMN	Marine on St.	45.44	277	*e*P	P	11 32 02.8	+1.2
	comp=Z,23nm,0.9s						
H42A	Shiocton	45.48	273	P	P	11 32 02.3	+0.3
	baz=12						
H42A	Shiocton	45.48	273	*e*P	P	11 32 03.0	+1.0
	comp=Z,26nm,0.9s						
PETK	Petropavlovsk-	45.49	15	P	P	11 32 01.3	-0.7
	comp=Z,8.3nm,0.9s						
PETK				LR	LR	11 50 30.3	
	comp=Z,109nm,19.9s,baz=350,slow=35						
H41A	Junction City	45.55	274	P	P	11 32 03.1	+0.5
	baz=12						
MMNY	Mt. Morris Dam	45.60	262	*e*P	P	11 32 04.3	+1.3
	comp=Z,25nm,0.9s						
H40A	Chili	45.66	275	P	P	11 32 03.9	+0.4
	baz=12						
H39A	Augusta	45.74	276	P	P	11 32 04.7	+0.6
	baz=12,SNR=7.6						
BINY	Binghamton	45.84	260	P	P	11 32 05.6	+0.7
	baz=12						
BINY	Binghamton	45.84	260	*e*P	P	11 32 06.6	+1.7
	comp=Z,22nm,0.8s						
H38A	Maiden Rock	45.89	277	P	P	11 32 05.5	+0.2
	baz=12						
KEST	Kesra	45.95	165	P	P	11 32 06.8	+0.9
	comp=Z,1.4nm,0.5s,baz=79,slow=10,SNR=3.5						
LAO	LASA Array	45.99	291	P	P	11 32 06.0	-0.1
	baz=12						
LAO	LASA Array	45.99	291	*e*P	P	11 32 07.5	+1.4
	comp=Z,25nm,0.8s						
SONA1	Songino Array	46.02	61	*e*P	P	11 32 06.6	+0.1
SONA1				*e*PcP	PcP	11 33 42.8	+0.1
SONM	Songino Array	46.03	61	P	P	11 32 07.0	+0.4
	comp=Z,4.4nm,1.0s,baz=328,slow=7.4,SNR=22						
SONM				PcP	PcP	11 33 42.9	+0.1
	comp=Z,2.9nm,0.7s,baz=331,slow=1.6,SNR=6.6						
SONM				LR	LR	11 52 02.8	
	comp=Z,583nm,21.5s,baz=351,slow=37						
JTMT	Jette	46.07	298	*e*P	P	11 32 07.3	+0.5
	comp=Z,17nm,1.1s						
ULN	Ulaanbaatar	46.09	61	*e*P	P	11 32 07.5	+0.4
	comp=Z,45nm,1.4s						
ULN	Ulaanbaatar	46.09	61	P	P	11 32 07.9	+0.9
	SNR=20						
ULN	Ulaanbaatar	46.09	61	*i* P	P	11 32 07.7	+0.7
ULN				pmax	pmax		
	comp=Z,36nm,1.4s						
G32A	Webster	46.11	282	P	P	11 32 06.9	-0.1
	baz=12						
I41A	Arkdale	46.13	274	P	P	11 32 07.3	+0.2
	baz=12						
I41A	Arkdale	46.13	274	*e*P	P	11 32 11.7	+4.5
	comp=Z,18nm,1.0s						
B08A	Colville Reser	46.13	303	*e*P	P	11 32 08.2	+1.0
	comp=Z,21nm,1.0s						
I42A	Draeger Farm,	46.15	273	P	P	11 32 08.0	+0.7
	baz=12						
I42A	Draeger Farm,	46.15	273	*e*P	P	11 32 08.3	+1.0
	comp=Z,24nm,0.9s						
H35A	Sunnyside Ranc	46.26	279	P	P	11 32 08.4	+0.3
	baz=12,SNR=16						
FRU	Bishkek	46.26	93	*e*P	P	11 32 11.0	+2.7
FRU				*e*		11 32 17.0	
MNAS	Manas	46.28	95	P	P	11 32 09.8	+1.3
MNAS				pmax	pmax		
	comp=Z,6.0nm,1.0s						
I40A	Norwalk	46.41	275	P	P	11 32 09.6	+0.3
	baz=12						
AAK	Ala-Archa	46.43	93	*e*P	P	11 32 12.0	+2.3
	comp=Z,14nm,1.0s						
AAK	Ala-Archa	46.43	93	P	P	11 32 12.1	+2.3
	SNR=12						
AAK	Ala-Archa	46.43	93	*i* P	P	11 32 07.5	-2.3
AAK				pmax	pmax		
	comp=Z,8.0nm,1.0s						
I38A	Scanlan Farm,	46.52	277	P	P	11 32 10.8	+0.6
	baz=12						
PDGK	Podgornoye	46.52	88	P	P	11 32 11.8	+1.4
PDGK				pmax	pmax		
	comp=Z,19nm,0.8s						
C09A	Chrisman Ranch	46.54	302	*e*P	P	11 32 11.1	+0.7
	comp=Z,11nm,1.1s						
J43A	Natural Harves	46.57	273	P	P	11 32 10.9	+0.2
	baz=12						
B05A	Bryant	46.57	306	P	P	11 32 10.5	-0.1
	baz=11						
I39A	Houston	46.58	276	P	P	11 32 10.9	+0.2
	baz=12						
I39A	Houston	46.58	276	*e*P	P	11 32 11.9	+1.2
	comp=Z,14nm,0.9s						
PAL	Palisades	46.69	257	P	P	11 32 12.1	+0.6
	baz=11						
I37A	Lemond, Waseca	46.71	278	P	P	11 32 12.1	+0.4
	baz=12						
I37A	Lemond, Waseca	46.71	278	*e*P	P	11 32 12.8	+1.1
	comp=Z,25nm,1.0s						
J42A	Columbus	46.74	273	P	P	11 32 12.2	+0.3
	baz=12						
HRY	Holter Researc	46.75	296	*e*P	P	11 32 12.3	+0.1
I36A	Fitzsimmons Fa	46.80	278	P	P	11 32 13.0	+0.6
	baz=12						
J41A	Loganville	46.83	274	P	P	11 32 13.3	+0.6
	baz=12						
J40A	Soldiers Grove	46.91	275	P	P	11 32 14.0	+0.7
	baz=12,SNR=7.1						
ALLY	Alegheny Colle	47.00	264	*e*P	P	11 32 15.5	+1.5
	comp=Z,53nm,1.0s						
N59A	State Game Lan	47.06	259	P	P	11 32 14.8	+0.3
	baz=11						
N59A	State Game Lan	47.06	259	*e*P	P	11 32 18.1	+3.5
	comp=Z,14nm,1.0s						
M54A	Oil Creek Stat	47.07	263	P	P	11 32 14.9	+0.3
	baz=12						
M54A	Oil Creek Stat	47.07	263	*e*P	P	11 32 15.6	+1.0
	comp=Z,16nm,0.8s						
J39A	Decorah	47.12	276	P	P	11 32 15.0	+0.1
	baz=12						
K43A	Burlington	47.22	272	P	P	11 32 16.0	+0.3
	baz=12						
J38A	Wedel Dairy, R	47.25	277	P	P	11 32 16.0	+0.1
	baz=12						
WMQ	Urumqi	47.28	80	P	P	11 32 18.3	+2.0
WMQ				sP	sP	11 32 25.5	+4.5
WMQ				S	S	11 39 12.0	+2.9
WMQ				pmax	pmax		
	comp=Z,33nm,1.5s						
WMQ				pmax	pmax		
	comp=Z,290nm,5.5s						
WMQ				LR	LR		
	comp=Z,1µm,20.1s						
WMQ				LR	LR		
	comp=Z,1µm,15.5s						
WMQ				LR	LR		
	comp=Z,790nm,19.3s						
K42A	Prairie Point,	47.30	273	P	P	11 32 16.1	-0.2
	baz=12						
JFWS	Jewell Farm	47.30	274	P	P	11 32 16.6	+0.2
	baz=12						
JFWS	Jewell Farm	47.30	274	*e*P	P	11 32 17.1	+0.7
	comp=Z,28nm,0.8s						
JFWS	Jewell Farm	47.30	274	*e*P	P	11 32 17.1	+0.7
JFWS				pmax	pmax		
	comp=Z,28nm,0.8s						
IDI	Anoyia	47.35	147	P	P	11 32 17.6	+0.8
	comp=Z,6.7nm,0.9s,baz=288,slow=22,SNR=2.4						
IDI				LR	LR	11 54 06.8	
	comp=Z,60nm,18.3s,baz=16,slow=38						
GNW	Green Mountain	47.35	306	*e*P	P	11 32 17.5	+0.8
GCMT	Greycliff	47.35	294	*e*P	P	11 32 22.5	+5.6
D08A	Wollman Farm,	47.35	302	*e*P	P	11 32 16.9	+0.1
	comp=Z,9.1nm,1.0s						
L48A	N Adams	47.37	268	P	P	11 32 16.9	0.0
	baz=12						
J37A	Redenius Farm,	47.42	278	P	P	11 32 17.6	+0.3
	baz=12,SNR=6.6						
L47A	Sherwood	47.45	269	P	P	11 32 18.5	+1.0
	baz=12						
ECSD	EROS Data Cent	47.47	281	P	P	11 32 17.8	+0.2
	baz=12,SNR=37						
ECSD	EROS Data Cent	47.47	281	*e*P	P	11 32 18.1	+0.5
	comp=Z,104nm,1.6s						
J36A	Seneca 1, Swea	47.52	278	P	P	11 32 18.4	+0.3
	baz=12						
J36A	Seneca 1, Swea	47.52	278	*e*P	P	11 32 19.2	+1.2
	comp=Z,21nm,0.9s						
KLR	Kul’dur	47.59	38	*i* P	P	11 32 17.8	-0.7
K41A	Shullsburg	47.61	274	P	P	11 32 19.0	+0.2
	baz=12						
NLWA	Neilton Lookou	47.65	307	*e*P	P	11 32 20.0	+1.0
	comp=Z,23nm,1.3s						
K40A	Colesburg	47.65	275	P	P	11 32 19.6	+0.6
	baz=12						
N54A	Moraine State	47.65	264	P	P	11 32 19.6	+0.5
	baz=12						
N54A	Moraine State	47.65	264	*e*P	P	11 32 20.3	+1.2
	comp=Z,33nm,0.9s						
SSPA	Standing Stone	47.65	261	P	P	11 32 20.0	+0.9
	baz=11						
SSPA	Standing Stone	47.65	261	*e*P	P	11 32 20.2	+1.1
	comp=Z,10.0nm,0.9s						
M50A	Fremont	47.68	267	P	P	11 32 19.7	+0.4
	baz=12						
LRM	Limekiln Ridge	47.71	296	*e*P	P	11 32 20.0	+0.2
M49A	Liberty Center	47.76	268	P	P	11 32 20.1	+0.2
	baz=12						
K39A	Oelwein	47.76	276	P	P	11 32 20.1	+0.1
	baz=12						
L43A	Garden Prairie	47.79	273	P	P	11 32 20.9	+0.8
	baz=12						
BOZ	Bozeman (W)	47.81	295	P	P	11 32 20.3	-0.2
	baz=11						
BOZ	Bozeman (W)	47.81	295	*e*P	P	11 32 20.9	+0.4
	comp=Z,32nm,1.9s						
BOZ	Bozeman (W)	47.81	295	*e*P	P	11 32 20.9	+0.4
BOZ				pmax	pmax		
	comp=Z,32nm,1.9s						
PAGS	Pennsylvania G	47.88	260	*e*P	P	11 32 22.2	+1.4
	comp=Z,22nm,0.9s						
K38A	Parkersburg	47.95	277	P	P	11 32 21.9	+0.5
	baz=12						
RLMT	Red Lodge	47.95	293	P	P	11 32 21.3	-0.3
	baz=11						
RLMT	Red Lodge	47.95	293	*e*P	P	11 32 22.4	+0.7
	comp=Z,15nm,1.2s						
K37A	Belmond	47.96	278	P	P	11 32 22.0	+0.5
	baz=12						
LON	Longmire	48.02	305	*e*P	P	11 32 22.2	+0.2
	comp=Z,13nm,0.9s						
LON	Longmire	48.02	305	*e*P	P	11 32 22.2	+0.2
LON				pmax	pmax		
	comp=Z,13nm,0.9s						
HAWA	Hanford	48.09	303	*e*P	P	11 32 23.1	+0.7
	comp=Z,14nm,1.0s						
L42A	Oliver, Polo	48.11	273	P	P	11 32 22.7	+0.1
	baz=12						
O56A	Blue Knob Stat	48.12	262	P	P	11 32 23.5	+0.7
	baz=11						
O56A	Blue Knob Stat	48.12	262	*e*P	P	11 32 23.6	+0.9
	comp=Z,15nm,0.8s						
L41A	Preston	48.16	274	P	P	11 32 23.6	+0.5
	baz=12						
DLMT	Dillon	48.18	296	*e*P	P	11 32 23.6	+0.3
	comp=Z,12nm,1.1s						
RSSD	Black Hills	48.18	288	P	P	11 32 23.3	-0.2
	baz=12						
RSSD	Black Hills	48.18	288	*e*P	P	11 32 24.0	+0.5
	comp=Z,15nm,0.8s						
RSSD	Black Hills	48.18	288	*e*P	P	11 32 24.0	+0.5
RSSD				pmax	pmax		
	comp=Z,15nm,0.8s						
F10A	Beach Ranch, E	48.20	301	*e*P	P	11 32 28.9	+5.4
	comp=Z,6.1nm,0.9s						
K36A	Gilmore City	48.21	278	P	P	11 32 23.9	+0.4
	baz=12,SNR=17						
L40A	Anamosa	48.29	275	P	P	11 32 24.7	+0.7
	baz=12						
L40A	Anamosa	48.29	275	*e*P	P	11 32 25.0	+1.0
	comp=Z,31nm,1.0s						
N50A	Nevada	48.32	267	P	P	11 32 24.7	+0.5
	baz=12						
L39A	Vinton	48.34	276	P	P	11 32 24.7	+0.3
	baz=12						
E03A	Lebam	48.44	307	*e*P	P	11 32 26.4	+1.3
	comp=Z,36nm,1.0s						
L38A	Oak Wood Farm,	48.47	277	P	P	11 32 25.5	+0.1
	baz=12						
M43A	Waltham Townsh	48.55	273	P	P	11 32 26.8	+0.7
	baz=12						
MDT	Midelt	48.58	181	LR	LR	11 51 44.6	
	comp=Z,116nm,21.9s,baz=343,slow=35						
YHB	Horse Butte	48.59	295	*e*P	P	11 32 26.9	+0.4
	comp=Z,12nm,0.8s						
L37A	Phoenix Point,	48.61	277	P	P	11 32 26.7	+0.2
	baz=12						
GEYT	Alibeck	48.61	111	P	P	11 32 25.8	-0.8
	comp=Z,1.8nm,0.3s,baz=358,slow=8.9,SNR=4.4						
GEYT				LR	LR	11 56 48.1	
	comp=Z,212nm,18.0s,baz=55,slow=41						
GYA0B	ALIBECK ARRAY	48.61	111	*e*P	P	11 32 30.8	+4.2
	comp=Z,67nm,1.6s						
SDMD	Soldier’s Deli	48.70	260	*e*P	P	11 32 28.9	+1.8
	comp=Z,14nm,1.0s						
MCMT	McKenzie Canyo	48.74	296	*e*P	P	11 32 28.6	+0.9
SCIA	State Center	48.74	277	P	P	11 32 28.0	+0.5
	baz=12						
SCIA	State Center	48.74	277	*e*P	P	11 32 32.1	+4.7
	comp=Z,53nm,1.3s						
N46A	Monticello	48.74	270	P	P	11 32 27.9	+0.4
	baz=12						
L36A	Harm Buss Farm	48.77	278	P	P	11 32 28.1	+0.4
	baz=12						
H17A	Grant Village	48.85	294	P	P	11 32 28.5	-0.1
	baz=11						
H17A	Grant Village	48.85	294	*e*P	P	11 32 31.1	+2.5
	comp=Z,14nm,0.9s						
SFK	Sufi-Kurgan	48.85	95	P	P	11 32 30.0	+1.4
SFK				pmax	pmax		
	comp=Z,7.0nm,1.4s						
M41A	Milan	48.85	274	P	P	11 32 28.6	+0.2
	baz=12						
MCWV	Mont Chateau	48.91	263	P	P	11 32 29.0	+0.2
	baz=11						
N45A	Kentland	48.91	271	P	P	11 32 29.0	+0.2
	baz=12						
M40A	Post Highland	48.97	275	P	P	11 32 29.2	-0.1
	baz=12						
O50A	Cable	49.00	267	P	P	11 32 29.7	+0.2
	baz=11						
YPP	Pitchstone Pla	49.00	294	*e*P	P	11 32 31.9	+2.1
	comp=Z,19nm,1.0s						
M39A	Webster	49.00	276	P	P	11 32 29.7	+0.2
	baz=12						
N44A	Piper City	49.05	272	P	P	11 32 29.9	0.0
	baz=12						
O49A	Covington	49.07	268	P	P	11 32 30.3	+0.2
	baz=11						
N43A	Stutzman Famil	49.07	273	P	P	11 32 30.3	+0.3
	baz=12						
G08A	Pilot Rock	49.10	302	*e*P	P	11 32 31.5	+1.1
	comp=Z,21nm,1.2s						
O48A	Farmland	49.13	268	P	P	11 32 30.7	+0.2
	baz=11						
FLWY	Flagg Ranch	49.17	294	*e*P	P	11 32 33.7	+2.7
	comp=Z,23nm,1.1s						
M38A	Pleasantville	49.22	277	P	P	11 32 31.4	+0.3
	baz=12,SNR=6.4						
O47A	Sheridan	49.30	270	P	P	11 32 32.1	+0.3
	baz=11						
SFIN	Lafayette	49.30	270	P	P	11 32 31.6	-0.2
	baz=12						
BMO	Blue Mountains	49.31	300	*e*P	P	11 32 32.2	+0.2
	comp=Z,15nm,1.0s						
BMO	Blue Mountains	49.31	300	*e*P	P	11 32 32.2	+0.2
BMO				pmax	pmax		
	comp=Z,15nm,1.0s						
N42A	Yates City	49.31	273	P	P	11 32 31.8	-0.1
	baz=12						
M37A	Trindle Farm,	49.36	278	P	P	11 32 32.6	+0.3
	baz=12						
IMW	Indian Meadow	49.39	294	*e*P	P	11 32 33.9	+1.1

	comp=Z,18nm,0.9s						
M36A	Felix, Anita	49.42	278	P	P	11 32 32.8	0.0
	baz=12						
N40A	Mertquake, Sal	49.49	275	P	P	11 32 33.1	-0.1
	baz=12						
MOOW	Moose Ponds	49.51	294	*e*P	P	11 32 31.2	-2.4
	comp=Z,14nm,1.1s						
O45A	Potomac	49.53	271	P	P	11 32 33.6	+0.1
	baz=11						
P50A	Jamestown	49.56	267	P	P	11 32 34.3	+0.6
	baz=11,SNR=6.9						
LOHW	Long Hollow	49.62	294	*e*P	P	11 32 35.2	+0.7
	comp=Z,13nm,1.1s						
N39A	Derby Farms, D	49.64	276	P	P	11 32 34.5	+0.2
	baz=12						
N39A	Derby Farms, D	49.64	276	*e*P	P	11 32 34.6	+0.2
	comp=Z,19nm,0.8s						
FXWY	Fox Creek	49.65	294	*e*P	P	11 32 35.9	+1.2
	comp=Z,17nm,1.1s						
KSH	Kashi	49.71	93	P	P	11 32 36.5	+1.4
KSH				sP	sP	11 32 44.0	+4.2
KSH				*e*PcP	PcP	11 33 57.5	+1.5
KSH				PP	PP	11 34 33.0	+3.7
KSH				S	S	11 39 42.8	-0.8
KSH				ScS	ScS	11 42 23.0	-3.2
KSH				pmax	pmax		
	comp=Z,15nm,1.5s						
KSH				pmax	pmax		
	comp=Z,100nm,4.7s						
KSH				LR	LR		
	comp=Z,280nm,12.3s						
KSH				LR	LR		
	comp=Z,730nm,16.9s						
KSH				LR	LR		
	comp=Z,420nm,23.3s						
G03D	McMinnville, O	49.72	306	P	P	11 32 34.6	-0.3
	baz=10.0						
O43A	Sugar Creek Fa	49.73	273	P	P	11 32 35.5	+0.4
	baz=11						
O44A	Mansfield	49.73	272	P	P	11 32 35.3	+0.2
	baz=11						
P49A	Miami Univ. Ec	49.77	268	P	P	11 32 35.6	+0.2
	baz=11						
SNOW	Snow King Moun	49.79	294	*e*P	P	11 32 37.1	+1.3
	comp=Z,11nm,0.8s						
TPAW	Teton Pass	49.79	294	*e*P	P	11 32 36.0	+0.2
	comp=Z,20nm,1.2s						
N38A	Joes South For	49.83	277	P	P	11 32 36.4	+0.6
	baz=11						
REDW	Red Top Meadow	49.90	294	*e*P	P	11 32 37.6	+0.9
	comp=Z,18nm,1.1s						
P48A	Milroy	49.95	269	P	P	11 32 37.0	+0.3
	baz=11						
CBN	Corbin Frederi	49.96	260	P	P	11 32 37.1	+0.3
	baz=11						
BGNE	Belgrade	49.97	281	P	P	11 32 35.7	-1.3
	baz=11						
K22A	Casper	49.98	290	P	P	11 32 36.8	-0.4
	baz=11,SNR=12						
K22A	Casper	49.98	290	*e*P	P	11 32 36.7	-0.4
	comp=Z,17nm,0.8s						
Q51A	Peebles	50.06	266	P	P	11 32 38.2	+0.6
	baz=11						
P46A	Rosedale	50.07	270	P	P	11 32 37.8	+0.1
	baz=11						
N36A	Muff Farm, Cla	50.07	278	P	P	11 32 37.8	+0.1
	baz=11						
O41A	Passleys Farm,	50.14	274	P	P	11 32 38.1	0.0
	baz=11						
CVRD	Centerville Ro	50.16	261	*e*P	P	11 32 39.7	+1.4
	comp=Z,19nm,1.0s						
HLID	Hailey	50.19	297	P	P	11 32 38.6	-0.2
	baz=11						
HLID	Hailey	50.19	297	*e*P	P	11 32 39.1	+0.3
	comp=Z,11nm,1.2s						
P45A	Graceland, Par	50.24	271	P	P	11 32 39.1	+0.2
	baz=11						
P45A	Graceland, Par	50.24	271	*e*P	P	11 32 42.9	+4.0
	comp=Z,18nm,1.0s						
O39A	Kirksville	50.26	276	P	P	11 32 39.2	+0.1
	baz=11						
O40A	La Belle	50.28	275	P	P	11 32 39.2	-0.1
	baz=11						
BW06	Boulder Array	50.30	293	P	P	11 32 39.6	-0.1
	baz=11						
BW06	Boulder Array	50.30	293	*e*P	P	11 32 40.5	+0.8
	comp=Z,15nm,1.4s						
PD31	Pinedale Array	50.30	293	*e*P	P	11 32 41.0	+1.3
PDAR	Pinedale Array	50.30	293	P	P	11 32 40.3	+0.6
	comp=Z,0.7nm,0.6s,baz=21,slow=4.9,SNR=8.8						
PDAR				LR	LR	11 54 11.5	
	comp=Z,786nm,18.9s,baz=14,slow=36						
PDAR	Pinedale Array	50.30	293	*e*P	P	11 32 38.7	-0.9
Q49A	Aurora	50.31	268	P	P	11 32 39.6	+0.1
	baz=11						
Q50A	Georgetown	50.33	267	P	P	11 32 39.9	+0.2
	baz=11						
I05D	Terrebonne, OR	50.34	304	P	P	11 32 39.4	-0.3
	baz=10						
COR	Corvallis	50.34	306	*e*P	P	11 32 41.2	+1.6
	comp=Z,29nm,1.2s						
COR	Corvallis	50.34	306	*e*P	P	11 32 41.2	+1.6
COR				pmax	pmax		
	comp=Z,29nm,1.2s						
P43A	Skaggs, Pawnee	50.40	273	P	P	11 32 40.2	0.0
	baz=11						
P44A	Sand Creek, Wi	50.43	272	P	P	11 32 40.9	+0.6
	baz=11						
Q48A	North Vernon	50.52	269	P	P	11 32 41.2	+0.2
	baz=11						
AHID	Auburn Hatcher	50.52	294	*e*P	P	11 32 42.4	+1.1
	comp=Z,13nm,1.0s						
O38A	Galt	50.53	277	P	P	11 32 41.0	-0.1
	baz=11						
MFID	Camas Ranch	50.53	299	*e*P	P	11 32 41.0	-0.3
	comp=Z,7.2nm,1.0s						
P42A	Winchester	50.58	273	P	P	11 32 41.2	-0.3
	baz=11						
P42A	Winchester	50.58	273	*e*P	P	11 32 45.1	+3.6
	comp=Z,28nm,1.5s						
O37A	Wolven Farm, M	50.59	277	P	P	11 32 41.5	-0.1
	baz=11						
MMAI	Mount Meron Ar	50.59	136	P	P	11 32 42.8	+1.0
	comp=Z,1.5nm,0.5s,baz=351,slow=8.8,SNR=5.0						
MMAI				LR	LR	11 56 03.9	
	comp=Z,37nm,18.7s,baz=180,slow=38						
P41A	Barry, Barry	50.60	274	P	P	11 32 41.7	0.0
	baz=11						
Q47A	Bedord North L	50.62	269	P	P	11 32 42.1	+0.4
	baz=11						
R52A	Catlettsburg	50.62	266	P	P	11 32 42.4	+0.5
	baz=11						
R51A	Hillsboro	50.80	266	P	P	11 32 43.5	+0.3
	baz=11						
PINE	Pine Mountain	50.83	304	*e*P	P	11 32 45.2	+1.7
	comp=Z,14nm,1.3s						
P40A	Paris	50.89	275	P	P	11 32 43.2	-0.7
	baz=11						
Q45A	Warren Harvey,	50.92	271	P	P	11 32 44.4	+0.3
	baz=11						
J08A	Circle Bar Ran	50.93	301	*e*P	P	11 32 46.0	+1.7
	comp=Z,10nm,0.9s						
R50A	Paris	50.94	267	P	P	11 32 44.5	+0.3
	baz=11						
OGNE	Ogallala	51.00	285	P	P	11 32 44.8	0.0
	baz=11						
OGNE	Ogallala	51.00	285	*e*P	P	11 32 48.5	+3.7
	comp=Z,62nm,1.1s						
I04A	Tendick Farm,	51.01	305	P	P	11 32 44.4	-0.4
	baz=9.9						
P38A	Dawn	51.02	277	P	P	11 32 44.7	-0.1
	baz=11						
P38A	Dawn	51.02	277	*e*P	P	11 32 44.7	-0.1
	comp=Z,18nm,1.0s						
RWWY	Rawlins	51.03	290	*e*P	P	11 32 44.4	-0.8
	comp=Z,23nm,1.0s						
P39B	Salisbury	51.04	276	P	P	11 32 44.7	-0.3
	baz=11						
Q44A	Meyer Farm, Va	51.04	272	P	P	11 32 44.8	-0.2
	baz=11						
R48A	Northridge Ran	51.05	269	P	P	11 32 45.5	+0.4
	baz=11						
R49A	Shelbyville	51.05	268	P	P	11 32 45.7	+0.6
	baz=11						
Q43A	New Douglas	51.11	273	P	P	11 32 45.9	+0.4
	baz=11						
P37A	Lathrop	51.18	277	P	P	11 32 46.1	0.0
	baz=11						
I03D	Drain, OR	51.22	306	P	P	11 32 46.3	0.0
	baz=9.8						
R47A	Wooly Knot Far	51.26	269	P	P	11 32 46.9	+0.2
	baz=11						
Q42A	Golden Eagle	51.27	273	P	P	11 32 46.7	0.0
	baz=11						
WCI	Wyandotte Cave	51.29	269	P	P	11 32 47.4	+0.5
	baz=11						
Q41A	Truxton	51.33	274	P	P	11 32 47.2	0.0
	baz=11						
S52A	Salyersville	51.34	266	P	P	11 32 47.8	+0.5
	baz=11,SNR=6.5						
J05D	Fort Rock, OR	51.36	304	P	P	11 32 47.6	+0.1
	baz=9.9,SNR=16						
BLA	Blacksburg	51.39	263	P	P	11 32 48.2	+0.5
	baz=11						
BLA	Blacksburg	51.39	263	*e*P	P	11 32 48.5	+0.8
	comp=Z,52nm,0.9s						
BLA	Blacksburg	51.39	263	*e*P	P	11 32 48.5	+0.8
BLA				pmax	pmax		
	comp=Z,52nm,0.9s						
Q40A	Laux Farm, Aux	51.42	275	P	P	11 32 47.5	-0.3
	baz=11						
S51A	Beattyville	51.45	266	P	P	11 32 48.2	+0.1
	baz=11						
S51A	Beattyville	51.45	266	*e*P	P	11 32 48.3	+0.2
	comp=Z,13nm,0.8s						
R46A	Gibon Southern	51.49	270	P	P	11 32 48.1	-0.2
	baz=11						
Q39A	Willow Grove F	51.51	276	P	P	11 32 48.3	-0.2
	baz=11,SNR=6.2						
J04D	Umpqua Nationa	51.52	304	P	P	11 32 48.2	-0.5
	baz=9.8						
R45A	Skylar, Fairfi	51.53	271	P	P	11 32 48.9	+0.3
	baz=11						
S50A	Richmond	51.54	267	P	P	11 32 48.9	+0.2
	baz=11,SNR=8.4						
S49A	Springfield	51.57	268	P	P	11 32 49.0	+0.1
	baz=11						
ASF	Jabal al Asfar	51.59	135	P	P	11 32 50.4	+1.1
	comp=Z,1.8nm,0.5s,baz=324,slow=4.1,SNR=3.2						
N23A	Red Feather La	51.62	289	P	P	11 32 49.2	-0.5
	baz=11,SNR=19						
N23A	Red Feather La	51.62	289	*e*P	P	11 32 50.4	+0.7
	comp=Z,32nm,1.1s						
Q38A	Cooks Store, C	51.69	276	P	P	11 32 49.4	-0.4
	baz=11						
R44A	Waltonville	51.69	272	P	P	11 32 50.1	+0.2
	baz=11						
HWUT	Hardware Ranch	51.72	294	*e*P	P	11 32 50.7	+0.4
	comp=Z,16nm,1.1s						
R43A	Red Bud	51.80	273	P	P	11 32 50.7	+0.1
	baz=11						
S48A	Wiedeman Farm,	51.81	269	P	P	11 32 51.0	+0.2
	baz=11						
K05A	Summer Lake	51.87	303	*e*P	P	11 32 53.4	+2.0
	comp=Z,45nm,1.4s						
T52A	Hallie	51.88	266	P	P	11 32 51.7	+0.3
	baz=11						
Q37A	Longview Farm,	51.90	277	P	P	11 32 51.3	-0.1
	baz=11						
R42A	Luebbering	51.92	274	P	P	11 32 51.1	-0.5
	baz=11						
MDJ	Mudanjiang	51.95	41	P	P	11 32 48.5	-3.2
MDJ				pmax	pmax		
	comp=Z,18nm,1.0s						
MDJ				pmax	pmax		
	comp=Z,120nm,3.3s						
R41A	Rosebud	52.00	274	P	P	11 32 51.5	-0.6
	baz=11						
S47A	Hartford	52.00	270	P	P	11 32 51.7	-0.5
	baz=11						
KSU1	Kansas State U	52.00	279	P	P	11 32 51.7	-0.5
	baz=11						
KSU1	Kansas State U	52.00	279	*e*P	P	11 32 56.1	+3.9
	comp=Z,62nm,1.5s						
S46A	Don Dixon Farm	52.04	270	P	P	11 32 52.1	-0.3
	baz=11						
K04D	Chiloquin, OR	52.08	304	P	P	11 32 51.8	-1.0
	baz=9.8						
R40A	Maddies Statio	52.14	275	P	P	11 32 52.8	-0.3
	baz=11,SNR=11						
R40A	Maddies Statio	52.14	275	*e*P	P	11 32 52.9	-0.3
	comp=Z,25nm,0.9s						
T51A	Gray	52.17	266	P	P	11 32 53.1	-0.3
	baz=11						
S45A	Carrier Mills	52.18	271	P	P	11 32 53.2	-0.3
	baz=11						
CCM	Cathedral Cave	52.21	274	P	P	11 32 53.4	-0.4
	baz=11						
CCM	Cathedral Cave	52.21	274	*e*P	P	11 32 51.2	-2.6
	comp=Z,36nm,0.8s						
CCM	Cathedral Cave	52.21	274	*e*P	P	11 32 51.2	-2.6
CCM				pmax	pmax		
	comp=Z,36nm,0.8s						
R39A	Chumby, Stover	52.23	276	P	P	11 32 53.5	-0.4
	baz=11						
HUMO	Hull Mountain	52.25	305	*e*P	P	11 32 54.5	+0.5
	comp=Z,8.0nm,1.0s						
T50A	Nancy	52.25	267	P	P	11 32 53.8	-0.2
	baz=11,SNR=5.8						
S44A	Carbondale	52.26	272	P	P	11 32 53.9	-0.2
	baz=11						
T49A	Edmonton	52.27	268	P	P	11 32 54.0	-0.2
	baz=11						
CN2	Changchun	52.32	45	*e*P	P	11 32 54.0	-0.5
CN2				*e*S	S	11 40 16.5	-2.8
CN2				pmax	pmax		
	comp=Z,10.0nm,1.0s						
CN2				pmax	pmax		
	comp=Z,200nm,4.0s						
CN2				LR	LR		
	comp=Z,200nm,16.0s						
CN2				LR	LR		
	comp=Z,200nm,16.0s						
CN2				LR	LR		
	comp=Z,200nm,18.0s						
T48A	Bowling Green	52.40	269	P	P	11 32 54.9	-0.3
	baz=11						
NCAT	North Carolina	52.40	262	*e*P	P	11 32 56.0	+0.8
	comp=Z,30nm,1.0s						
S42A	Caledonia	52.42	273	P	P	11 32 54.8	-0.5
	baz=11						
R38A	Fenwick Farm,	52.49	277	P	P	11 32 55.1	-0.7
	baz=11						
S43A	Fulton Ridge,	52.51	273	P	P	11 32 55.4	-0.6
	baz=11						
TZTN	Tazewell	52.52	266	P	P	11 32 56.2	+0.1
	baz=11						
TZTN	Tazewell	52.52	266	*e*P	P	11 32 58.5	+2.5
	comp=Z,19nm,1.0s						
U53A	Fall Branch	52.55	265	P	P	11 32 56.4	+0.1
	baz=11,SNR=7.1						
USRK	Ussuriysk Ar.	52.59	39	P	P	11 32 56.0	-0.4
	comp=Z,3.8nm,0.8s						
USRK				PcP	PcP	11 34 06.8	+0.4
	baz=328,slow=2.1						
MOD	Modoc Plateau	52.60	303	*e*P	P	11 32 58.1	+1.3
	comp=Z,17nm,1.2s						
T47A	Sharon Grove	52.63	270	P	P	11 32 56.3	-0.6
	baz=11						
T47A	Sharon Grove	52.63	270	*e*P	P	11 32 59.3	+2.5
	comp=Z,14nm,1.2s						
U52A	Thorn Hill	52.64	266	P	P	11 32 56.7	-0.3
	baz=11						
ISCO	Idaho Springs	52.65	288	P	P	11 32 56.2	-1.2
	baz=11						
ISCO	Idaho Springs	52.65	288	*e*P	P	11 32 58.1	+0.7
	comp=Z,9.0nm,1.1s						
ISCO	Idaho Springs	52.65	288	*e*P	P	11 32 58.1	+0.7
ISCO				pmax	pmax		
	comp=Z,9.0nm,1.1s						
T46A	Princeton	52.70	270	P	P	11 32 57.7	+0.4
	baz=11						
O20A	White River Ci	52.70	291	P	P	11 32 57.2	-0.4
	baz=11,SNR=17						
O20A	White River Ci	52.70	291	*e*P	P	11 32 58.3	+0.7
	comp=Z,57nm,1.0s						
S41A	Jillco Farms,	52.75	274	P	P	11 32 57.2	-0.5
	baz=11,SNR=7.0						
CBKS	Cedar Bluff	52.75	282	P	P	11 32 57.8	0.0
	baz=11						
CBKS	Cedar Bluff	52.75	282	*e*P	P	11 32 58.5	+0.7
	comp=Z,32nm,1.0s						
CBKS	Cedar Bluff	52.75	282	*e*P	P	11 32 58.5	+0.7
CBKS				pmax	pmax		
	comp=Z,32nm,1.0s						
U51A	La Follette	52.75	266	P	P	11 32 58.0	+0.2
	baz=11						
L02D	Cave Junction,	52.77	306	P	P	11 32 56.8	-1.0
	baz=9.5						
U50A	Jamestown	52.84	267	P	P	11 32 58.1	-0.4
	baz=11						
S40A	Lebanon	52.85	275	P	P	11 32 58.0	-0.5
	baz=11,SNR=8.4						
S39A	Bolivar	52.88	276	P	P	11 32 58.3	-0.4
	baz=11,SNR=11						
S39A	Bolivar	52.88	276	*e*P	P	11 32 57.8	-0.9
	comp=Z,21nm,1.1s						
U49A	Red Boiling Sp	52.89	268	P	P	11 32 58.4	-0.3
	baz=11						
M04C	Macdoel	52.92	304	P	P	11 32 58.1	-1.0
	baz=9.7,SNR=6.3						
KSCO	Kaye Shedlock’	52.99	285	P	P	11 32 58.9	-0.8
	baz=11						
U48A	Cassie Pea, Po	53.01	269	P	P	11 32 59.4	-0.3
	baz=11						
T43A	Greenville	53.02	273	P	P	11 32 59.4	-0.3
	baz=11						
S38A	Stockton	53.03	276	P	P	11 32 59.1	-0.8
	baz=11,SNR=19						
YBH	Yreka Blue Hor	53.08	305	P	P	11 32 59.9	-0.3
	comp=Z,1.1nm,0.8s,baz=37,slow=7.7,SNR=4.6						
YBH				LR	LR	11 55 54.0	
	comp=Z,337nm,19.4s,baz=5.5,slow=36						
U47A	Clarksville	53.19	270	P	P	11 33 00.1	-0.9
	baz=11						
T42A	Van Buren	53.19	274	P	P	11 33 00.3	-0.7
	baz=11						
T42A	Van Buren	53.19	274	*e*P	P	11 33 00.5	-0.5
	comp=Z,9.7nm,1.1s						
V52A	Sevierville	53.22	266	P	P	11 33 00.7	-0.5
	baz=11						
V52A	Sevierville	53.22	266	*e*P	P	11 33 01.9	+0.6
	comp=Z,14nm,0.9s						
V53A	Saluda	53.27	265	P	P	11 33 01.2	-0.4
	baz=11,SNR=7.8						
V53A	Saluda	53.27	265	*e*P	P	11 33 02.4	+0.8
	comp=Z,25nm,0.9s						
DUG	Dugway, Tooele	53.28	295	P	P	11 33 00.6	-1.3
	baz=10						
DUG	Dugway, Tooele	53.28	295	*e*P	P	11 33 02.9	+1.1
	comp=Z,8.0nm,1.0s						
DUG	Dugway, Tooele	53.28	295	*e*P	P	11 33 02.9	+1.1
DUG				pmax	pmax		
	comp=Z,8.0nm,1.0s						
T41A	Mountain View	53.28	274	P	P	11 33 01.0	-0.7
	baz=11,SNR=8.2						
T40A	Mansfield	53.29	275	P	P	11 33 00.9	-0.9
	baz=11						
MPU	Maple Canyon	53.29	294	*e*P	P	11 33 05.5	+3.6
	comp=Z,13nm,1.6s						
V51A	Loudon	53.37	267	P	P	11 33 01.8	-0.5
	baz=11						
V51A	Loudon	53.37	267	*e*P	P	11 33 03.1	+0.8
	comp=Z,18nm,1.0s						
GTA	Gaotai	53.39	70	⇑P	P	11 33 03.3	+0.7
GTA				pP	sP	11 33 07.8	+0.5
GTA				sP	pP	11 33 10.3	+4.3
GTA				S	S	11 40 34.5	+0.3
GTA				pmax	pmax		
	comp=Z,12nm,1.1s						
GTA				pmax	pmax		
	comp=Z,62nm,6.7s						
GTA				LR	LR		
	comp=Z,370nm,20.3s						
GTA				LR	LR		
	comp=Z,330nm,18.1s						
GTA				LR	LR		
	comp=Z,350nm,21.3s						
Q24A	Divide	53.40	288	P	P	11 33 02.7	-0.3
	baz=11,SNR=11						
U46A	Springville	53.41	271	P	P	11 33 03.4	+0.9
	baz=11						
NLU	North Lily Min	53.41	294	*e*P	P	11 33 03.2	+0.3
	comp=Z,12nm,1.2s						
TKL	Tuckaleechee C	53.42	266	P	P	11 33 02.7	0.0
	comp=Z,7.6nm,0.9s,baz=86,slow=5.7,SNR=7.4						
TKL				LR	LR	11 56 09.0	
	comp=Z,303nm,18.2s,baz=14,slow=36						
TKL	Tuckaleechee C	53.42	266	*e*P	P	11 33 03.1	+0.4
	comp=Z,19nm,1.0s						
TKL	Tuckaleechee C	53.42	266	*e*P	P	11 33 03.2	+0.4
TKL				pmax	pmax		
	comp=Z,19nm,1.0s						
M02C	Callahan	53.43	305	P	P	11 33 01.2	-1.6
	baz=9.5						
SMCO	Snowmass	53.46	289	*e*P	P	11 33 04.2	+0.8
	comp=Z,24nm,0.9s						
P18A	Preston Nutter	53.48	293	*e*P	P	11 33 03.8	+0.4
	comp=Z,28nm,1.7s						
U45A	Rockin P Farm,	53.51	271	P	P	11 33 03.0	-0.3
	baz=11						
KBL	Kabul	53.54	101	P	P	11 33 03.8	-0.1
KBL				pmax	pmax		
	comp=Z,13nm,1.8s						
T39A	Clever	53.55	276	P	P	11 33 03.2	-0.5
	baz=11						
KMSC	Kings Mountain	53.56	263	P	P	11 33 03.5	-0.2
	baz=11,SNR=6.9						
KMSC	Kings Mountain	53.56	263	*e*P	P	11 33 04.3	+0.6
	comp=Z,17nm,0.8s						
WVT	Waverly	53.58	270	P	P	11 33 03.3	-0.5
	baz=11						
WVT	Waverly	53.58	270	*e*P	P	11 33 04.8	+0.9
	comp=Z,14nm,1.4s						
WVT	Waverly	53.58	270	*e*P	P	11 33 04.8	+0.9
WVT				pmax	pmax		
	comp=Z,14nm,1.4s						
HHC	Hu-ho-hao-te	53.58	58	*e*P	P	11 33 01.5	-2.4
HHC				S	S	11 40 37.0	+0.3
HHC				sS	sS	11 40 43.8	+1.5
HHC				SS	SKiKP	11 44 19.5	+1.3
HHC				pmax	pmax		
	comp=Z,15nm,1.1s						
HHC				pmax	pmax		
	comp=Z,58nm,4.8s						
HHC				LR	LR		
	comp=Z,240nm,14.5s						
HHC				LR	LR		
	comp=Z,260nm,13.7s						
HHC				LR	LR		
	comp=Z,560nm,15.5s						
ASAJ	Asahikawa	53.58	29	LR	LR	11 55 17.5	
	comp=Z,122nm,20.1s,baz=358,slow=35						
U44B	Burton Farm, H	53.60	272	P	P	11 33 03.6	-0.4
	baz=11						
V50A	Pikevile	53.61	267	P	P	11 33 03.5	-0.6
	baz=11						
V49A	McMinnville	53.64	268	P	P	11 33 04.1	-0.2
	baz=11						
BMN	Battle Mountai	53.65	299	*e*P	P	11 33 05.3	+0.8
	comp=Z,6.9nm,0.8s						
BMN	Battle Mountai	53.65	299	*e*P	P	11 33 05.3	+0.8
BMN				pmax	pmax		
	comp=Z,7.0nm,0.8s						
T38A	Diamond	53.67	277	P	P	11 33 03.5	-1.0
	baz=11						
U43A	Rector	53.74	273	P	P	11 33 03.9	-1.1
	baz=11						
V48A	Smith Brothers	53.81	269	P	P	11 33 05.2	-0.3
	baz=11						
V48A	Smith Brothers	53.81	269	*e*P	P	11 33 05.2	-0.3
	comp=Z,11nm,0.8s						
W53A	Cullowhee	53.81	265	P	P	11 33 05.1	-0.6
	baz=11						
N02D	Trinity Center	53.82	305	P	P	11 33 04.1	-1.6
	baz=9.5						
V47A	Nunnelly	53.83	270	P	P	11 33 04.8	-0.8
	baz=11						
U42A	Revenden	53.88	274	P	P	11 33 05.3	-0.8
	baz=11,SNR=14						
TMUT	Trail Mountain	53.94	293	*e*P	P	11 33 07.9	+1.0
	comp=Z,11nm,1.1s						
PAULI	Pauline	53.95	264	*e*P	P	11 33 07.4	+0.9
	comp=Z,19nm,0.9s						
V46A	Holladay	53.95	270	P	P	11 33 05.9	-0.7
	baz=11						
BG3	Lake Jocassee	53.95	265	*e*P	P	11 33 09.2	+2.6
	comp=Z,14nm,0.8s						
U41A	Viola	53.99	274	P	P	11 33 06.3	-0.6
	baz=11						
W52A	Murphy	54.00	266	P	P	11 33 06.5	-0.5
	baz=11						
W51A	Cleveland	54.06	267	P	P	11 33 06.7	-0.7
	baz=11						

W50A	Signal Mountai	54.10	267	P	P	11 33 06.9	-0.8
	baz=11						
W50A	Signal Mountai	54.10	267	*e*P	P	11 33 07.8	+0.1
	comp=Z,12nm,0.9s						
U40A	Yellville	54.12	275	P	P	11 33 06.9	-1.0
	baz=11						
SWET	Sewanee	54.18	268	*e*P	P	11 33 09.4	+1.1
	comp=Z,7.1nm,0.8s						
U39A	Green Forest	54.19	276	P	P	11 33 07.4	-1.0
	baz=11,SNR=6.1						
W49A	Belvidere	54.33	268	P	P	11 33 08.1	-1.2
	baz=11						
PV22	Blue Mesa, Par	54.35	291	*e*P	P	11 33 10.4	+0.7
	comp=Z,27nm,1.1s						
PV21	Cone Mtn., Par	54.35	291	*e*P	P	11 33 10.6	+0.8
	comp=Z,26nm,0.9s						
HHAR	Hobbs	54.36	276	*e*P	P	11 33 08.7	-0.9
	comp=Z,10.0nm,1.0s						
O03D	Paynes Creek	54.38	304	P	P	11 33 08.8	-0.9
	baz=9.5,SNR=6.8						
JSC	Jenkinsville	54.39	263	*e*P	P	11 33 10.6	+0.8
	comp=Z,20nm,0.9s						
JSC	Jenkinsville	54.39	263	*e*P	P	11 33 10.6	+0.8
JSC				pmax	pmax		
	comp=Z,21nm,0.9s						
W47A	Westpoint	54.40	270	P	P	11 33 09.3	-0.6
	baz=11						
W48A	Pulaski	54.41	269	P	P	11 33 09.1	-0.9
	baz=11						
PV09	Paradox Valley	54.43	291	*e*P	P	11 33 08.5	-1.9
V42A	Cord	54.44	274	P	P	11 33 09.7	-0.5
	baz=11,SNR=12						
PV23	Carpenter Ridg	54.46	291	*e*P	P	11 33 11.4	+0.8
	comp=Z,41nm,1.0s						
X52A	Dahlonega	54.48	266	P	P	11 33 10.0	-0.5
	baz=11						
X53A	Estanollee	54.48	265	P	P	11 33 10.1	-0.4
	baz=11						
PV14	Lion Creek, Pa	54.54	291	*e*P	P	11 33 12.0	+0.8
	comp=Z,60nm,1.2s						
PV12	Saucer Basin,	54.56	291	*e*P	P	11 33 12.2	+0.9
	comp=Z,55nm,1.3s						
PV20	West Nyswonger	54.56	291	*e*P	P	11 33 12.4	+1.1
	comp=Z,22nm,1.0s						
V41A	Mountainview	54.58	274	P	P	11 33 10.3	-0.9
	baz=11						
PV16	Nyswonger Mesa	54.59	291	*e*P	P	11 33 12.3	+0.9
	comp=Z,48nm,1.2s						
HODGE	Hodges	54.59	264	*e*P	P	11 33 11.7	+0.4
	comp=Z,19nm,1.0s						
PV11	David Mesa, Pa	54.59	291	*e*P	P	11 33 12.4	+0.9
	comp=Z,50nm,1.2s						
PV19	Morning Glory	54.59	291	*e*P	P	11 33 12.1	+0.6
	comp=Z,51nm,1.3s						
PV17	East Wray Mesa	54.62	291	*e*P	P	11 33 12.6	+0.9
	comp=Z,30nm,0.9s						
PV03	Paradox Valley	54.63	291	*e*P	P	11 33 12.2	+0.5
W46A	Michie	54.64	270	P	P	11 33 12.0	+0.4
	baz=11						
PAHR	Pah Rah Range	54.65	301	*e*P	P	11 33 13.0	+1.2
	comp=Z,12nm,1.3s						
PV18	Skein Mesa, Pa	54.65	291	*e*P	P	11 33 12.8	+0.9
	comp=Z,38nm,1.2s						
SDCO	Great Sand Dun	54.65	288	P	P	11 33 11.7	-0.3
	baz=10,SNR=24						
SDCO	Great Sand Dun	54.65	288	*e*P	P	11 33 12.3	+0.3
	comp=Z,16nm,0.9s						
V40A	Witts Springs	54.66	275	P	P	11 33 11.0	-0.8
	baz=11						
V40A	Witts Springs	54.66	275	*e*P	P	11 33 11.0	-0.8
	comp=Z,6.5nm,0.8s						
X51A	Calhoun	54.66	267	P	P	11 33 11.4	-0.4
	baz=11						
PV02	Paradox Valley	54.66	291	*e*P	P	11 33 13.0	+1.0
	comp=Z,22nm,1.0s						
PV13	Radium Mtn., P	54.72	291	*e*P	P	11 33 13.2	+0.8
	comp=Z,60nm,1.2s						
PLAL	Pickwick Lake	54.74	270	*e*P	P	11 33 13.1	+0.7
	comp=Z,11nm,1.1s						
V39A	Pettigrew	54.75	276	P	P	11 33 11.8	-0.7
	baz=11						
S22A	4UR Ranch, Cre	54.84	289	P	P	11 33 13.0	-0.4
	baz=10,SNR=15						
S22A	4UR Ranch, Cre	54.84	289	*e*P	P	11 33 14.2	+0.8
	comp=Z,14nm,0.9s						
MSU	Marysvale	54.85	294	*e*P	P	11 33 14.7	+1.3
MSU	Marysvale	54.85	294	*e*P	P	11 33 14.7	+1.3
X50B	Fort Payne	54.88	268	P	P	11 33 12.7	-0.7
	baz=11						
X49A	Woodville	54.93	268	P	P	11 33 13.2	-0.5
	baz=11						
TUL1	Leonard	55.01	278	P	P	11 33 13.5	-0.8
	baz=11						
TUL1	Leonard	55.01	278	*e*P	P	11 33 16.2	+1.9
	comp=Z,18nm,1.1s						
Y54A	Tignall	55.02	264	P	P	11 33 14.6	+0.2
	baz=10						
NIL	Nilore	55.05	97	P	P	11 33 15.5	+0.9
NIL				pmax	pmax		
	comp=Z,12nm,1.1s						
PSUT	Pine Spring	55.06	296	*e*P	P	11 33 15.9	+1.0
	comp=Z,8.3nm,0.9s						
WHAR	Wooly Hollow	55.08	274	*e*P	P	11 33 14.5	-0.3
	comp=Z,34nm,1.6s						
T25A	Trinidad	55.08	286	P	P	11 33 14.7	-0.4
	baz=10						
T25A	Trinidad	55.08	286	*e*P	P	11 33 15.2	+0.1
	comp=Z,15nm,1.1s						
VCNR	Virginia City	55.09	301	*e*P	P	11 33 16.2	+1.2
	comp=Z,9.4nm,1.1s						
X48A	Hartselle	55.10	269	P	P	11 33 14.3	-0.6
	baz=11						
KVN	Kaiserville	55.12	300	*e*P	P	11 33 16.0	+0.7
	comp=Z,21nm,1.3s						
KVN	Kaiserville	55.12	300	*e*P	P	11 33 16.0	+0.7
KVN				pmax	pmax		
	comp=Z,21nm,1.3s						
Y53A	Monroe	55.16	265	P	P	11 33 14.9	-0.5
	baz=10						
X47A	Russelville	55.16	270	P	P	11 33 14.8	-0.6
	baz=11,SNR=8.0						
W41B	Gary Mavity, V	55.19	274	P	P	11 33 14.8	-0.8
	baz=11						
W41B	Gary Mavity, V	55.19	274	*e*P	P	11 33 15.3	-0.2
	comp=Z,31nm,1.8s						
Y52A	Lilburn	55.23	266	P	P	11 33 15.4	-0.4
	baz=10						
Y52A	Lilburn	55.23	266	*e*P	P	11 33 16.5	+0.6
	comp=Z,20nm,0.9s						
X46A	Booneville	55.24	271	P	P	11 33 15.3	-0.6
	baz=11						
PNTR	Pine Nut	55.28	301	*e*P	P	11 33 17.7	+1.2
	comp=Z,19nm,0.9s						
W40A	Ferguson Farm,	55.30	275	P	P	11 33 15.7	-0.6
	baz=11						
YERR	Yerington	55.34	301	*e*P	P	11 33 18.1	+1.2
	comp=Z,14nm,1.1s						
Y51A	Rockmart	55.34	267	P	P	11 33 16.3	-0.5
	baz=10						
NHSC	New Hope	55.38	262	P	P	11 33 16.6	-0.4
	baz=10						
W39A	Magazine	55.40	276	P	P	11 33 16.4	-0.7
	baz=11						
OXF	Oxford	55.41	271	P	P	11 33 16.7	-0.4
	baz=11						
OXF	Oxford	55.41	271	*e*P	P	11 33 16.4	-0.7
	comp=Z,12nm,0.8s						
OXF	Oxford	55.41	271	*e*P	P	11 33 16.4	-0.7
OXF				pmax	pmax		
	comp=Z,12nm,0.8s						
Y50A	Piedmont	55.45	268	P	P	11 33 17.1	-0.4
	baz=10						
R11A	Troy Canyon, C	55.48	297	P	P	11 33 17.4	-0.4
	baz=9.9,SNR=14						
R11A	Troy Canyon, C	55.48	297	*e*P	P	11 33 18.1	+0.2
	comp=Z,6.7nm,0.9s						
X45A	UM Field Stati	55.49	271	P	P	11 33 17.4	-0.3
	baz=11						
GOGA	Godfrey	55.58	265	P	P	11 33 18.1	-0.3
	baz=10						
GOGA	Godfrey	55.58	265	*e*P	P	11 33 18.9	+0.5
	comp=Z,18nm,0.9s						
GOGA	Godfrey	55.58	265	*e*P	P	11 33 18.9	+0.5
GOGA				pmax	pmax		
	comp=Z,18nm,0.9s						
Y49A	Blount Mountai	55.59	268	P	P	11 33 18.7	+0.2
	baz=10						
RYN	Ryan	55.59	300	*e*P	P	11 33 19.7	+1.0
	comp=Z,13nm,1.1s						
AFDM	Forest Hills D	55.60	303	*e*P	P	11 33 18.8	+0.2
	comp=Z,24nm,1.4s						
MVCO	Mesa Verde	55.61	290	P	P	11 33 18.0	-0.9
	baz=10,SNR=6.5						
MVCO	Mesa Verde	55.61	290	*e*P	P	11 33 20.1	+1.2
	comp=Z,22nm,1.1s						
X43A	Marvell	55.62	273	P	P	11 33 18.5	-0.2
	baz=11						
Y48A	Jasper	55.65	269	P	P	11 33 18.5	-0.4
	baz=10						
Z54A	Sparta	55.66	265	P	P	11 33 18.4	-0.5
	baz=10						
ERM	Erimo	55.71	29	*i* P	P	11 33 18.7	-0.5
ERM				pmax	pmax		
	comp=Z,32nm,1.1s						
Z53A	Monticello	55.72	265	P	P	11 33 19.0	-0.4
	baz=10,SNR=6.6						
NV11	Mina Array Sit	55.74	300	*e*P	P	11 33 20.0	+0.3
	comp=Z,0.6nm,0.9s						
NV01	Mina Array Sit	55.76	300	*e*P	P	11 33 20.0	+0.1
NVAR	Mina Array Bea	55.76	300	P	P	11 33 20.6	+0.6
	comp=Z,3.3nm,0.9s,baz=12,slow=4.2,SNR=22						
NVAR				LR	LR	11 57 29.3	
	comp=Z,529nm,18.8s,baz=344,slow=36						
Y47A	UCPARC, Winfie	55.77	270	P	P	11 33 19.0	-0.8
	baz=10						
WAKR	Walker	55.84	301	*e*P	P	11 33 21.6	+1.1
	comp=Z,11nm,1.4s						
X41A	Kaden, Bauxite	55.90	274	P	P	11 33 20.1	-0.5
	baz=11						
PKCU	Pink Cliffs	55.91	294	*e*P	P	11 33 23.1	+1.9
	comp=Z,65nm,1.3s						
Y46A	Houston	55.94	271	P	P	11 33 20.4	-0.6
	baz=10						
Z52A	Williamson	55.94	266	P	P	11 33 20.8	-0.2
	baz=10						
X40A	Basin Creek Fa	55.95	275	P	P	11 33 20.8	-0.3
	baz=10						
CCUT	Cedar City	55.96	295	*e*P	P	11 33 22.4	+1.1
	comp=Z,12nm,1.3s						
MIAR	Mount Ida	56.01	275	P	P	11 33 21.6	+0.1
	baz=10,SNR=8.6						
MIAR	Mount Ida	56.01	275	*e*P	P	11 33 21.5	+0.1
	comp=Z,66nm,1.8s						
MIAR	Mount Ida	56.01	275	*e*P	P	11 33 21.5	+0.1
MIAR				pmax	pmax		
	comp=Z,66nm,1.8s						
Y45A	Yeager Farm, C	56.06	271	P	P	11 33 21.4	-0.4
	baz=10						
Y44A	Strider, Charl	56.07	272	P	P	11 33 21.6	-0.2
	baz=10						
Z50A	Ashland	56.11	268	P	P	11 33 21.8	-0.4
	baz=10						
Z50A	Ashland	56.11	268	*e*P	P	11 33 21.3	-0.9
	comp=Z,7.4nm,0.9s						
X39A	Fountain Ranch	56.12	276	P	P	11 33 22.0	-0.3
	baz=10						
155A	Kite	56.20	264	P	P	11 33 22.5	-0.3
	baz=10						
Y43A	Makayla and Ka	56.23	273	P	P	11 33 22.6	-0.4
	baz=10						
Z48A	Northport	56.24	269	P	P	11 33 22.6	-0.5
	baz=10						
Z49A	Columbiana	56.26	268	P	P	11 33 22.7	-0.6
	baz=10						
154A	Montrose	56.31	265	P	P	11 33 23.5	-0.1
	baz=10						
153A	Fort Valley	56.38	265	P	P	11 33 24.3	+0.2
	baz=10						
KNB	Kanab	56.41	294	*e*P	P	11 33 25.7	+1.2
	comp=Z,25nm,1.2s						
KNB	Kanab	56.41	294	*e*P	P	11 33 25.7	+1.2
KNB				pmax	pmax		
	comp=Z,25nm,1.2s						
LCMT	Little Creek M	56.47	295	*e*P	P	11 33 26.2	+1.2
	comp=Z,14nm,1.1s						
Y40A	Okolona	56.48	275	P	P	11 33 23.6	-1.2
	baz=10						
LRAL	Lakeview Retre	56.49	269	P	P	11 33 24.8	-0.1
	baz=10						
Z47A	Carrollton	56.49	270	P	P	11 33 24.2	-0.7
	baz=10						
152A	Waverly Hall	56.50	266	P	P	11 33 24.7	-0.2
	baz=10						
152A	Waverly Hall	56.50	266	*e*P	P	11 33 26.2	+1.2
	comp=Z,15nm,1.1s						
Y41A	Eaglette Beard	56.51	274	P	P	11 33 24.5	-0.6
	baz=10						
WMOK	Wichita Mounta	56.60	281	P	P	11 33 25.8	0.0
	baz=10,SNR=21						
WMOK	Wichita Mounta	56.60	281	*e*P	P	11 33 26.0	+0.3
	comp=Z,36nm,1.4s						
WMOK	Wichita Mounta	56.60	281	*e*P	P	11 33 26.0	+0.3
WMOK				pmax	pmax		
	comp=Z,36nm,1.4s						
MLAC	Mammoth, Mammo	56.62	300	P	P	11 33 25.2	-0.9
	baz=9.5						
MDPB	Devils Postpil	56.65	300	*e*P	P	11 33 27.9	+1.6
	comp=Z,9.8nm,1.0s						
OMMB	Old Mammoth Mi	56.66	300	*e*P	P	11 33 28.2	+1.8
	comp=Z,10nm,1.1s						
151A	Opelika	56.73	267	P	P	11 33 26.4	-0.2
	baz=10						
150A	Eclectic	56.76	268	P	P	11 33 26.6	-0.2
	baz=10						
Z44A	Pea Ridge, Bel	56.77	272	P	P	11 33 26.6	-0.3
	baz=10						
149A	Jones	56.88	268	P	P	11 33 27.3	-0.4
	baz=10						
AMTX	Amarillo	56.90	283	P	P	11 33 27.3	-0.6
	baz=10						
AMTX	Amarillo	56.90	283	*e*P	P	11 33 28.3	+0.4
	comp=Z,10nm,0.8s						
TPNV	Topopah Spring	56.94	298	P	P	11 33 27.3	-1.0
	baz=9.6						
TPNV	Topopah Spring	56.94	298	*e*P	P	11 33 28.0	-0.3
	comp=Z,9.9nm,1.1s						
TPNV	Topopah Spring	56.94	298	*e*P	P	11 33 28.0	-0.3
TPNV				pmax	pmax		
	comp=Z,10.0nm,1.1s						
254A	Abbeville	56.99	265	P	P	11 33 28.2	-0.2
	baz=10						
253A	Americus	57.00	266	P	P	11 33 28.8	+0.2
	baz=10						
TIN	Tinemaha, Big	57.10	300	P	P	11 33 29.2	-0.2
	baz=9.5						
Z41A	Richland Creek	57.15	274	P	P	11 33 29.5	-0.1
	baz=10						
252A	Lumpkin	57.16	266	P	P	11 33 29.7	0.0
	baz=10						
251A	Midway	57.17	267	P	P	11 33 29.6	-0.1
	baz=10						
146A	Union	57.19	271	P	P	11 33 29.1	-0.8
	baz=10						
LZH	Lanzhou	57.22	66	*e*P	P	11 33 31.5	+1.2
LZH				pP	sP	11 33 34.8	-0.2
LZH				sP	pP	11 33 36.3	+2.6
LZH				PP	PP	11 35 39.5	+2.6
LZH				*e*S	S	11 41 23.8	-1.8
LZH				sS	sS	11 41 30.8	-0.5
LZH				SS	SS	11 45 15.0	+1.1
LZH				pmax	pmax		
	comp=Z,24nm,1.1s						
LZH				pmax	pmax		
	comp=Z,150nm,5.6s						
LZH				LR	LR		
	comp=Z,640nm,14.2s						
LZH				LR	LR		
	comp=Z,670nm,14.6s						
LZH				LR	LR		
	comp=Z,750nm,16.8s						
SHPR	Sheep Range	57.23	297	*e*P	P	11 33 31.6	+1.2
	comp=Z,7.4nm,1.1s						
Z40A	Long Farm, Mag	57.24	275	P	P	11 33 29.8	-0.5
	baz=10						
145A	Houston Renfro	57.36	271	P	P	11 33 30.7	-0.3
	baz=10						
FURC	Furnace Creek,	57.50	298	P	P	11 33 31.4	-0.6
	baz=9.5						
TIGA	Tifton	57.53	265	P	P	11 33 32.3	0.0
	baz=10						
ANMO	Albuquerque	57.53	288	P	P	11 33 32.6	0.0
	comp=Z,2.9nm,0.9s,baz=24,slow=6.4,SNR=14						
ANMO				LR	LR	11 58 03.3	
	comp=Z,381nm,19.7s,baz=22,slow=36						
ANMO	Albuquerque	57.53	288	P	P	11 33 32.2	-0.3
	baz=10						
ANMO	Albuquerque	57.53	288	*e*P	P	11 33 32.7	+0.1
	comp=Z,15nm,1.3s						
ANMO	Albuquerque	57.53	288	*e*P	P	11 33 32.7	+0.1
ANMO				pmax	pmax		
	comp=Z,15nm,1.3s						
TASL	Snake Pit, Alb	57.54	288	P	P	11 33 32.4	-0.2
	baz=10,SNR=8.7						
WUAZ	Wupatki	57.68	293	P	P	11 33 33.5	0.0
	baz=9.9,SNR=8.1						
WUAZ	Wupatki	57.68	293	*e*P	P	11 33 34.5	+1.0
	comp=Z,13nm,0.9s						
CWC	Cottonwood Cre	57.69	299	P	P	11 33 33.2	-0.4
	baz=9.4						
353A	Camilla	57.72	265	P	P	11 33 34.0	+0.4
	baz=10						
DAC	Darwin (Calif)	57.78	299	*e*P	P	11 33 35.2	+1.0
	comp=Z,21nm,1.1s						
DAC	Darwin (Calif)	57.78	299	*e*P	P	11 33 35.3	+1.0
DAC				pmax	pmax		
	comp=Z,21nm,1.1s						
141A	Papa Simpson,	57.81	274	P	P	11 33 33.9	-0.3
	baz=10						
W18A	Petrified Fore	57.84	291	P	P	11 33 33.9	-0.8
	baz=9.9						
140A	Cam and Jess,	57.88	275	P	P	11 33 35.2	+0.5
	baz=10						
MSTX	Muleshoe	57.95	284	P	P	11 33 35.5	+0.1
	baz=10						
MSTX	Muleshoe	57.95	284	*e*P	P	11 33 35.8	+0.4
	comp=Z,16nm,0.9s						
SHOC	Shoshone, Teco	57.98	298	P	P	11 33 36.3	+0.9
	baz=9.5						
MPMC	Manual Prospec	57.99	299	P	P	11 33 35.7	0.0
	baz=9.4,SNR=25						
244A	Avery, Jackson	58.02	272	P	P	11 33 35.6	-0.2
	baz=10						
LAZ	Ladron	58.17	289	*e*P	P	11 33 37.6	+0.6
348A	Jackson	58.21	269	P	P	11 33 37.5	+0.4
	baz=10						
347A	Saraland	58.32	270	P	P	11 33 37.7	-0.2
	baz=10						
BNM	Barren Site	58.34	288	*e*P	P	11 33 38.8	+0.5
452A	Marianna	58.35	266	P	P	11 33 38.6	+0.5
	baz=10						
LENM	Lemitar	58.38	288	*e*P	P	11 33 38.9	+0.5
TUQ	Turquoise Moun	58.39	297	P	P	11 33 38.1	-0.3
	baz=9.5						
ISA	Isabella, Lake	58.51	300	P	P	11 33 39.1	-0.1
	baz=9.3,SNR=6.9						
ISA	Isabella, Lake	58.51	300	*e*P	P	11 33 40.2	+1.0
	comp=Z,18nm,1.3s						
ISA	Isabella, Lake	58.51	300	*e*P	P	11 33 40.2	+1.0
ISA				pmax	pmax		
	comp=Z,18nm,1.3s						
LRMC	Laurel Mtn Rad	58.58	299	P	P	11 33 39.2	-0.6
	baz=9.4						
344A	Westbrook Farm	58.61	272	P	P	11 33 40.0	+0.2
	baz=10						
GSC	Goldstone, Bar	58.64	298	P	P	11 33 40.1	-0.1
	baz=9.4						
GSC	Goldstone, Bar	58.64	298	*e*P	P	11 33 41.4	+1.2
	comp=Z,18nm,1.3s						
556A	Lake Butler	58.76	263	P	P	11 33 41.5	+0.6
	baz=10.0						
ABTX	Abilene, Hawle	58.81	281	P	P	11 33 41.4	+0.1
	baz=10						
ABTX	Abilene, Hawle	58.81	281	*e*P	P	11 33 41.5	+0.2
	comp=Z,16nm,1.0s						
KS01	Wonju Array Si	58.84	44	*e*P	P	11 33 39.2	-2.1
TIA	Tai’an	58.85	54	P	P	11 33 41.5	0.0
TIA				pmax	pmax		
	comp=Z,22nm,0.9s						
KSRS	Korea Array	58.86	44	P	P	11 33 40.8	-0.7
	comp=Z,3.7nm,1.0s,baz=351,slow=6.3,SNR=16						
KSRS				PcP	PcP	11 34 30.6	-0.2
	comp=Z,0.9nm,0.9s,baz=332,slow=4.8,SNR=2.9						
KSRS				PP	PP	11 35 50.0	-1.1
	comp=Z,0.4nm,0.6s,baz=345,slow=9.1,SNR=4.1						
KSRS				LR	LR	12 00 06.4	
	comp=Z,83nm,18.7s,baz=350,slow=37						
KSAR	Wonju Array Be	58.87	44	P	P	11 33 40.8	-0.8
KSAR				PcP	PcP	11 34 30.6	-0.2
KSAR				PP	PP	11 35 50.0	-1.2
KSAR	Wonju Array Be	58.87	44	P	P	11 33 40.8	-0.8
KSAR						11 34 30.6	
KSAR						11 35 50.1	
NATX	Nacogdoches	58.90	276	P	P	11 33 42.2	+0.3
	baz=10						
NATX	Nacogdoches	58.90	276	*e*P	P	11 33 43.1	+1.2
	comp=Z,27nm,0.7s						
GMRC	Granite Mounta	58.99	297	P	P	11 33 42.7	0.0
	baz=9.5,SNR=6.5						
HEC	Hector,Ludlow	59.04	297	P	P	11 33 42.7	-0.2
	baz=9.4						
446A	Poplarville	59.05	270	P	P	11 33 43.6	+0.7
	baz=10						
341A	Kurthwood	59.09	274	P	P	11 33 43.0	-0.2
	baz=10						
341A	Kurthwood	59.09	274	*e*P	P	11 33 44.3	+1.1
	comp=Z,126nm,1.8s						
EDW2	Edwards Air Fo	59.21	299	P	P	11 33 44.1	0.0
	baz=9.3						
PDMCI	Parker Dam,Lak	59.26	295	P	P	11 33 43.7	-0.6
	baz=9.5						
IRM	Iron Mountain	59.54	296	P	P	11 33 45.8	-0.6
	baz=9.4						
BBRC	Big Bear Solar	59.68	298	P	P	11 33 47.1	-0.5
	baz=9.3						
BELC	Belle Mtn. Jos	59.81	297	P	P	11 33 48.2	-0.1
	baz=9.4,SNR=5.6						
Y12C	Blythe	59.85	295	P	P	11 33 48.5	+0.1
	baz=9.4						
Y12C	Blythe	59.85	295	*e*P	P	11 33 49.8	+1.3
	comp=Z,14nm,1.0s						
TJN	Taejon	59.87	44	*ce*P	P	11 33 47.7	-0.8
XAN	Xi’an	59.93	62	P	P	11 33 48.8	-0.3
XAN				pP	sP	11 33 57.3	+3.5
XAN				pmax	pmax		
	comp=Z,10.0nm,1.3s						
BC3	Big Chuckawall	60.08	296	P	P	11 33 49.9	-0.2
	baz=9.4						
121A	Cookes Peak, D	60.10	289	P	P	11 33 49.6	-0.7
	baz=9.8						
PFO	Pinyon Flats O	60.26	297	P	P	11 33 50.7	-0.7
	baz=9.3						
435B	Jarrell	60.30	279	P	P	11 33 52.1	+0.5
	baz=10.0						
435B	Jarrell	60.30	279	*e*P	P	11 33 56.1	+4.6
	comp=Z,40nm,1.4s						
FRD	Ford Ranch, An	60.39	297	P	P	11 33 51.8	-0.4
	baz=9.3						
MNTX	Cornudas Mount	60.57	286	P	P	11 33 53.3	-0.1
	baz=9.8,SNR=11						
MNTX	Cornudas Mount	60.57	286	*e*P	P	11 33 53.3	-0.1
	comp=Z,8.6nm,0.9s						
TUC	Tucson	60.75	292	P	P	11 33 54.7	0.0
	baz=9.6						
TUC	Tucson	60.75	292	*e*P	P	11 33 55.7	+1.0
	comp=Z,21nm,1.1s						
TUC	Tucson	60.75	292	*e*P	P	11 33 55.7	+1.0
TUC				pmax	pmax		
	comp=Z,21nm,1.1s						
MAJO	Matsushiro	60.75	34	*i* P	P	11 33 54.0	-0.6
MAJO				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MJAR	Matsushiro Arr	60.75	34	P	P	11 33 53.6	-1.0
	comp=Z,4.6nm,0.9s,baz=357,slow=6.9,SNR=10						
MJAR				PcP	PcP	11 34 37.5	-0.9
	comp=Z,1.3nm,0.5s,baz=312,slow=5.0,SNR=4.3						
MJAR				LR	LR	12 00 16.2	
	comp=Z,36nm,19.1s,baz=330,slow=36						
HKT	Hockley	60.86	277	*e*P	P	11 33 60.0	+4.7
	comp=Z,36nm,1.7s						
JCT	Junction City	60.94	281	P	P	11 33 56.1	+0.1
	baz=9.9,SNR=15						
JCT	Junction City	60.94	281	*e*P	P	11 33 56.4	+0.5
	comp=Z,51nm,1.1s						
JCT	Junction City	60.94	281	*e*P	P	11 33 56.4	+0.5
JCT				pmax	pmax		
	comp=Z,51nm,1.1s						
MONP2	Monument Peak	60.96	297	P	P	11 33 55.4	-0.8
	baz=9.2						
109C	Camp Elliot, M	61.05	298	P	P	11 33 57.0	+0.3
	baz=9.2						
RAYN	Ar Rayn	61.12	127	*e*P	P	11 33 58.4	+1.1
	comp=Z,19nm,1.3s						
RAYN	Ar Rayn	61.12	127	*e*P	P	11 33 58.4	+1.1

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RAYN                                   pmax     pmax
      comp=Z,19nm,1.3s
IKP   In-Ko-Pah, Jac     61.15 297    P        P          11 33 57.0 -0.4
      baz=9.2
214A  Organ Pipe Nat     61.38 293    P        P          11 33 58.4 -0.5
      baz=9.4
LSA   Lhasa              61.64  80   eP        P          11 34 03.0 +1.7
      comp=Z,21nm,1.1s
LSA   Lhasa              61.64  80   eP        P          11 34 03.0 +1.7
LSA                                   pmax     pmax
      comp=Z,21nm,1.1s
CD2   Chengdu            62.30  67   eP        P          11 34 04.8 -0.3
CD2                                   pP       pP         11 34 08.0 -0.6
CD2                                   PP       PP         11 36 21.3 -0.5
CD2                                   S        S          11 42 30.3 -0.6
CD2                                   sS       sS         11 42 36.0 -0.6
CD2                                   SS       SS         11 46 34.3 +0.8
CD2                                   pmax     pmax
      comp=Z,10.0nm,0.5s
CD2                                   pmax     pmax
      comp=Z,140nm,5.0s
CD2                                   LR       LR
      comp=Z,560nm,17.4s
CD2                                   LR       LR
      comp=Z,580nm,16.9s
CD2                                   LR       LR
      comp=Z,430nm,18.4s
TX31  Lajitas Ar. Si     62.64 284   eP        P          11 34 07.4 -0.1
TXAR  Lajitas Array      62.64 284    P        P          11 34 07.5 +0.1
      comp=Z,4.8nm,0.8s,baz=44,slow=4.7,SNR=58
TXAR                                  LR       LR         12 02 02.4
      comp=Z,413nm,19.3s,baz=0.0,slow=37
833A  Chaparral WMA,     62.99 280    P        P          11 34 09.6 -0.1
      baz=9.8
833A  Chaparral WMA,     62.99 280   eP        P          11 34 14.5 +4.8
      comp=Z,24nm,1.0s
WSAR  Wadi Sarin         63.13 114    P        P          11 34 10.9 +0.2
      comp=Z,4.0nm,0.8s,baz=31,slow=6.6,SNR=2.5
NJ2   Nanjing            63.17  53   eP        P          11 34 09.5 -1.3
NJ2                                   pmax     pmax
      comp=Z,9.0nm,0.7s
JNU   Nakatsue           63.46  42    P        P          11 34 12.5 -0.3
      comp=Z,16nm,1.1s,baz=298,slow=12,SNR=4.3
JNU                                   LR       LR         12 03 18.1
      comp=Z,46nm,18.1s,baz=302,slow=38
ENH   Enshi              63.72  62   eP        P          11 34 15.1 +0.5
      comp=Z,33nm,1.2s
HSIG                     64.00 291   eP        P          11 34 20.5 +4.1
      comp=Z,18nm,1.1s
WHN   Wuhan              64.09  57   eP        P          11 34 16.8 -0.1
WHN                                   S        S          11 42 53.5 +0.4
WHN                                   LR       LR
      comp=Z,870nm,18.8s
WHN                                   LR       LR
      comp=Z,780nm,17.5s
WHN                                   LR       LR
      comp=Z,370nm,18.7s
JHJ   Hachijo jima 2     64.28  33    LR       LR         12 03 51.4
      comp=Z,43nm,18.8s,baz=88,slow=38
LNIG  Linares            66.37 279   eP        P          11 34 31.2 -0.6
      comp=Z,21nm,1.3s
KOWA  Kowa               66.82 180    LR       LR         12 03 50.3
      comp=Z,123nm,19.7s,baz=37,slow=36
GYA   Guiyang            67.08  65   eP        P          11 34 38.0 +1.5
GYA                                   pmax     pmax
      comp=Z,10.0nm,1.0s
KMI   Kunming            67.84  69    P        P          11 34 43.3 +1.9
KMI                                   pmax     pmax
      comp=Z,8.0nm,0.5s
KMI                                   pmax     pmax
      comp=Z,76nm,4.0s
TORD  Torodi Ar. Bea     68.21 174    P        P          11 34 42.0 -1.5
      comp=Z,1.2nm,0.7s,baz=358,slow=6.3
TORD                                  LR       LR         12 05 09.6
      comp=Z,137nm,18.2s,baz=335,slow=36
BRDH  Bariadhala         68.61  81    LR       LR         12 09 30.7
      comp=Z,408nm,18.8s,baz=5.0,slow=40
LPIG  La Paz             68.75 290    LR       LR         12 05 47.8
      comp=Z,365nm,18.4s,baz=16,slow=37
ZAIG  Zacatecas          68.92 282   eP        P          11 34 49.7 +1.4
      comp=Z,14nm,1.3s
SLBS  Sierra La Lagu     69.11 289   eP        P          11 34 50.3 +1.2
      comp=Z,44nm,1.6s
JOW   Kunigami           69.41  45    LR       LR         12 09 22.1
      comp=Z,67nm,18.2s,baz=142,slow=40
HYB   Hyderabad          71.79  95   i P       P          11 35 06.0 +0.5
ATD   Arta Tunnel        72.64 131    LR       LR         12 09 19.1
      comp=Z,49nm,18.7s,baz=270,slow=38
CHTO  Chiang Mai         73.50  74   eP        P          11 35 14.7 -1.0
      comp=Z,10nm,1.0s
CHTO  Chiang Mai         73.50  74   eP        P          11 35 14.7 -1.0
CHTO                                  pmax     pmax
      comp=Z,10.0nm,1.0s
CHTO  Chiang Mai         73.50  74    P        P          11 35 15.1 -0.6
      comp=Z,43nm,1.1s
CMMT  Chiang Mai         73.50  74    P        P          11 35 15.0 -0.7
      comp=Z,9.5nm,1.0s
CMAR  Chiang Mai Arr     73.85  74    P        P          11 35 17.1 -0.6
      comp=Z,9.6nm,1.0s,baz=348,slow=7.1,SNR=31
CMAR                                  LR       LR         12 11 08.7
      comp=Z,164nm,18.9s,baz=312,slow=38
CMAR  Chiang Mai Arr     73.85  74    P        P          11 35 17.1 -0.6
CMAR                                  pmax     pmax
      comp=Z,9.0nm,1.0s
CMAR                                  MLR      MLR
      comp=Z,164nm,18.9s
CM01  Chiang Mai Arr     73.88  74   eP        P          11 35 15.8 -2.1
DBIC  Dimbokro           74.60 181    LR       LR         12 08 14.0
      comp=Z,76nm,20.3s,baz=9.5,slow=36
QIZ   Qiongzhong         74.83  64    P        P          11 35 22.3 -1.1
QIZ                                   S        S          11 45 00.5 +0.6
QIZ                                   LR       LR
      comp=Z,170nm,14.2s
QIZ                                   LR       LR
      comp=Z,230nm,15.7s
QIZ                                   LR       LR
      comp=Z,260nm,18.6s
PCRV  Puerto La Cruz     75.67 242    P        P          11 35 28.8 +0.4
      comp=Z,8.5nm,0.7s,baz=106,slow=3.8,SNR=4.8
PCRV                                  LR       LR         12 05 48.8
      comp=Z,251nm,21.9s,baz=346,slow=33
PBKT  Sadao Pong         76.00  73   eP        P          11 35 30.1  0.0
      comp=Z,17nm,1.3s
PBKT  Sadao Pong         76.00  73    P        P          11 35 30.3 +0.2
      comp=Z,11nm,1.7s
CHAI  Chaiyaphum         76.80  72    P        P          11 35 35.1 +0.4
      comp=Z,3.3nm,1.1s,comp=Z,167nm
NAYO  Nakonayok          78.26  73    P        P          11 35 42.9  0.0
      comp=Z,0.2nm,1.4s,comp=Z,228nm
JTS   JuntasAbangare     78.50 262    LR       LR         12 10 47.2
      comp=Z,369nm,21.1s,baz=30,slow=36
RUSC  La Rusia           81.06 250   eP        P          11 35 58.7  0.0
      comp=Z,16nm,1.1s
TGY   Tagaytay City      81.13  53    LR       LR         12 15 34.8
      comp=Z,113nm,18.1s,baz=174,slow=38
PALK  Pallekele          82.07  94    LR       LR         12 16 13.3
      comp=Z,252nm,20.6s,baz=252,slow=38
GUMO  Guam               84.06  30    LR       LR         12 14 28.9
      comp=Z,14nm,19.6s,baz=359,slow=36
PTGA  Pitinga            85.80 236   eP        P          11 36 22.7 +0.3
OTAV  Otavalo            87.40 255   eP        P          11 36 33.1 +2.3
OTAV  Otavalo            87.40 255    P        P          11 36 33.1 +2.3
IPM   Ipoh               87.89  74   eP        P          11 36 31.3 -1.4
DAV   Davao City (W)     88.62  50    LR       LR         12 18 41.6
      comp=Z,48nm,19.8s,baz=344,slow=37
PSI   Prapat             89.22  77    LR       LR         12 22 28.5
      comp=Z,215nm,18.6s,baz=87,slow=40
PSI   Prapat             89.22  77   eP        P          11 36 37.9 -1.2
PSI   Prapat             89.22  77    P        P          11 36 37.9 -1.2
BDFB  Brasilia           99.14 223    LR       LR         12 15 11.0
      comp=Z,74nm,22.0s,baz=167,slow=31
NNA   Nana               99.18 251    LR       LR         12 24 25.1
      comp=Z,51nm,20.4s,baz=351,slow=37
LEM   Lembang            99.95  69    LR       LR         12 26 16.9
      comp=Z,103nm,20.1s,baz=325,slow=38
WRA   Warramunga Arr    116.27  44    PKP      PKPdf      11 42 24.8 -1.3
      comp=Z,1.2nm,0.8s,baz=341,slow=2.1,SNR=5.5
ASAR  Alice Springs     119.90  45    PKP      PKPdf      11 42 31.9 -1.2
      comp=Z,2.2nm,0.8s,baz=335,slow=1.8,SNR=18
SYO   Syowa Base        151.90 148⇑ePKPdf     PKPdf      11 43 29.4 -0.1
SYO   Syowa Base        151.90 148⇓epPKPdf    PKPbc      11 43 35.8 -0.2
SYO   Syowa Base        151.90 148⇓epPKPbc    pPKPbc     11 43 41.1 +1.4
SNAA  Sanae             152.78 179    PKPbc    PKPbc      11 43 37.9 -0.2
      comp=Z,2.2nm,0.9s,baz=311,slow=3.6,SNR=6.5
SNAA                                  PKPab    PKPab      11 43 47.3 -1.9
      comp=Z,2.5nm,0.7s,baz=189,slow=3.2,SNR=11
MAW   Mawson            152.87 129    PKPbc    PKPbc      11 43 38.5 +0.3
      comp=Z,4.4nm,0.8s,baz=294,slow=4.8,SNR=11
QSPA  South Pole Qui    171.28 180    PKPab    PKPab      11 45 10.1 -0.1
      comp=Z,1.9nm,0.9s,baz=290,slow=5.4,SNR=4.3
VNDA  Vanda             175.44  41    PKP      PKPdf      11 43 53.0 +2.1
      comp=Z,0.5nm,0.7s,baz=110,slow=10,SNR=4.2
VNDA                                  PKPab    PKPab      11 45 27.6 -0.7
      comp=Z,1.9nm,1.0s,baz=311,slow=5.4,SNR=7.0
VNDA  Vanda             175.44  41    PKIKP    PKPdf      11 43 53.0 +2.1
VNDA                                  pmax     pmax
      comp=Z,1.0nm,0.7s
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*CSEM **28** 11:28:48.3, 38°.38N×21°.80E, h17km, ML0.8/6*

ATH 28 11:28:48.3, 38°.38N×21°.80E, h17km±3km, ML0.8/6, Error ellipse: s-maj=3.7km s-min=1.1km az=47.0, Greece

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Code  Station Name        Δ°   AZ°    Phase ID             Time      Res
                                      Op       ISC        h  m  s    ISC
EFP   Efpalio             0.09  60    P        Pg         11 28 50.8 -0.9
EFP                                   S        Sg         11 28 53.4 -0.6
EFP                                   AML      AML        11 28 54.6
      comp=E,90μm,0.1s
EFP                                   AML      AML        11 28 55.0
      comp=N,143μm,0.1s
EFP   Efpalio             0.09  60    P        Pg         11 28 51.2 -0.5
EFP                                   S        Sg         11 28 53.7 -0.3
LAKA  Lakka               0.20 136    P        Pg         11 28 52.7 -0.4
LAKA  Lakka               0.20 136    P        Pg         11 28 52.8 -0.3
SERG  Sergoula            0.20  81    P        Pg         11 28 53.2 +0.1
SERG                                  S        Sg         11 28 56.7 +0.3
SERG                                  AML      AML        11 28 56.9
      comp=N,250μm,0.2s
SERG                                  AML      AML        11 28 57.6
      comp=E,156μm,0.2s
SERG  Sergoula            0.20  81    P        Pg         11 28 53.1  0.0
SERG                                  S        Sg         11 28 56.6 +0.2
TRIZ  Trizonia            0.21  94    P        Pg         11 28 53.4 +0.2
TRIZ                                  S        Sb         11 28 57.7 +0.4
TRIZ  Trizonia            0.21  94    P        Pg         11 28 53.3 +0.1
TRIZ                                  S        Sb         11 28 57.3  0.0
ANX   Ano Chora           0.23  23    P        Pg         11 28 53.7  0.0
ANX                                   S        Sg         11 28 57.5 +0.2
ANX                                   AML      AML        11 28 58.2
      comp=E,70μm,0.3s
ANX                                   AML      AML        11 28 59.6
      comp=N,44μm,0.3s
ANX   Ano Chora           0.23  23    P        Pg         11 28 53.6 -0.1
ANX                                   S        Sg         11 28 57.4 +0.1
KALE  Kalithea            0.26  88    P        Pg         11 28 54.2  0.0
KALE                                  S        Sb         11 28 58.9  0.0
KALE                                  AML      AML        11 28 59.1
      comp=N,86μm,0.2s
KALE                                  AML      AML        11 29 00.8
      comp=E,53μm,0.2s
KALE  Kalithea            0.26  88    P        Pg         11 28 54.1 -0.1
KALE                                  S        Sb         11 28 58.6 -0.3
PVO   Paravola            0.32 317    P        Pg         11 28 54.9 -0.1
PVO                                   S        Sb         11 29 01.9 +1.4
PVO   Paravola            0.32 317    P        Pg         11 28 55.0 -0.1
PVO                                   S        Sb         11 29 00.9 +0.4
KLV   Kalavryta, Ach      0.43 141    P        Pg         11 28 56.7 -0.4
KLV                                   S        Sb         11 29 04.9 +1.1
KLV                                   AML      AML        11 29 05.9
      comp=N,10μm,0.2s
KLV                                   AML      AML        11 29 06.1
      comp=E,13μm,0.3s
KLV   Kalavryta, Ach      0.43 141    P        Pg         11 28 56.8 -0.3
KLV                                   S        Sb         11 29 04.1 +0.3
DRO   Drossia             0.43 190    P        Pg         11 28 56.8 -0.3
DRO                                   S        Sb         11 29 04.3 +0.5
DRO   Drossia             0.43 190    P        Pg         11 28 56.9 -0.2
DRO                                   S        Sb         11 29 03.8  0.0
PDO   Prodromos           0.53 294    P        Pg         11 28 58.5 -0.4
PDO   Prodromos           0.53 294    P        Pg         11 28 58.6 -0.3
DSF   Desfina             0.57  87    P        Pg         11 28 57.8 -1.7
DSF                                   S        Sb         11 29 07.8 +0.2
DSF                                   AML      AML        11 29 09.2
      comp=N,43μm,0.2s
DSF                                   AML      AML        11 29 09.8
      comp=E,22μm,0.1s
DSF   Desfina             0.57  87    P        Pg         11 28 58.6 -1.0
DSF                                   S        Sb         11 29 07.7  0.0
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*KRNET **28** 11:42:29.5±0.1, 40°.98N×69°.13E, mb3.0*
*SOME **28** 11:42:34.1, 40°.93N×69°.75E, h5km*
*NNC **28** 11:42:35.3±2.2, 40°.82N×69°.92E, h0km, mb3.4, mpv3.0, Error ellipse: s-maj=17.7km s-min=8.5km az=53.0*

ISC 28 11:42:32.1±2.1, 40°.96N±0°.06×69°.32E±0°.10, h2km±13km, n18, σ1s.62/32, 14C-10D, Tajikistan

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Code  Station Name        Δ°   AZ°    Phase ID             Time      Res
                                      Op       ISC        h  m  s    ISC
IUG   Iuzhnay             1.30  24   eP        Pg         11 42 57.1  0.0
      198nm,0.2s
IUG                                  eS        Sb         11 43 13.2 -1.3
      136nm,0.5s
BTK   Batken              1.46 128⇑iP        Pn         11 42 58.3 -1.2
      baz=25
BTK                               ⇑iS        Sg         11 43 19.5 +0.6
      baz=25
BRLS  Borolday            2.10  10   eP        Pn         11 43 08.4  0.0
      0.5nm,0.1s
BRLS                                 eS        Sn         11 43 32.7 -2.4
      47nm,0.4s
ARK   Arkit               2.16  66⇓iP        Pn         11 43 08.6 -0.6
      baz=69
ARK                               ⇓iS        Sb         11 43 36.9 -2.3
      baz=69
KK31  Karatay Array       2.32  22 ⇑Pn       Pb         11 43 15.0 +0.3
      1.6nm,0.2s,baz=205,slow=15,SNR=29
KK31                                  Sn       Sg         11 43 45.4 -1.2
      27nm,0.6s,baz=200,slow=22,SNR=17
DZA   Taraz               2.44  37   eP        Pb         11 43 17.4 +0.6
      140nm,0.1s
DZA                                  eS        Sb         11 43 47.5 +0.1
      121nm,0.1s
ARSB  Arslanbob           2.79  81⇑iP        Pn         11 43 17.7 -0.2
      baz=82
ARSB                              ⇑iS        Sn         11 43 52.5 +0.3
      baz=82
MNAS  Manas               2.83  56 ⇑Pg       Pb         11 43 21.4 -2.0
      3.6nm,0.5s
MNAS                               ⇑Lg       Lg         11 43 54.7
      6.5nm,0.5s
MNAS  Manas               2.83  56⇓iP        Pn         11 43 17.7 -0.8
      baz=58
MNAS                              ⇓iS        Sn         11 43 53.6 +0.4
      baz=58
SFK   Sufi-Kurgan         3.33 105 ⇑Pg       Pn         11 43 26.8 +1.4
      1.2nm,0.2s
SFK                                ⇑Lg       Lg         11 44 08.1
      5.8nm,0.5s
MRKS  Merke               3.42  57   eP        Pb         11 43 32.3 -1.2
      7.0nm,0.5s
MRKS                                 eS        Sb         11 44 13.2 -2.3
      18nm,0.6s
AML   Almayashu           3.48  69⇑eP        Pn         11 43 27.5 -0.2
      baz=70
AML                               ⇑iS        Sn         11 44 10.3 +0.6
      baz=70
EKS2  Erkin-Say           3.74  62⇑iP        Pn         11 43 30.5 -0.4
      baz=63
EKS2                              ⇑iS        Sn         11 44 15.6  0.0
      baz=63
UCH   Uchtor              4.09  70⇓iP        Pn         11 43 36.2 +0.1
      baz=71
UCH                               ⇓iS        Sn         11 44 24.9 +0.1
      baz=71
AAK   Ala-Archa           4.21  65 ⇓Pg       Pb         11 43 46.8 -0.3
      4.0nm,0.7s
AAK                                ⇓Lg       Lg         11 44 41.0
      6.6nm,0.8s
TKM2  Tokmak 2            5.07  65 ⇑Pg       Pb         11 44 01.3 -0.4
      2.7nm,0.7s
TKM2                               ⇓Lg       Lg         11 45 04.4
      5.3nm,0.7s
BTLS  Baital              5.35  39   eP        Pb         11 44 09.1 +2.8
      4.2nm,0.3s
BTLS                                 eS        Sb         11 45 16.5 +5.5
      6.3nm,0.6s
KST   Kastek              5.37  65⇓iP        Pb         11 44 07.2 +0.5
      7.3nm,3.1s
KST                                  eS        Sb         11 45 13.6 +2.0
      7.4nm,0.8s
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*ISCJB **28** 11:48:05.3±0.2, 18°.14S±0°.03×69°.49W±0°.05, h136km±3km, mb4.4/43, Error ellipse: s-maj=7.2km s-min=4.5km az=175.1*
*GUC **28** 11:48:06.5±0.7, 18°.16S×69°.52W, h124km±4km, ML4.5*
*NEIC **28** 11:48:06.6±0.3, 18°.20S×69°.39W, mb4.6/21, ML4.3(GUC), Error ellipse: s-maj=10.0km s-min=5.9km az=83.0*
*IDC **28** 11:48:08.7±0.4, 18°.02S×69°.24W, h135km±3km, mb3.9/20, mb1 4.1/24, mb1mx4.0/45, mbtmp4.4/24, Error ellipse: s-maj=10.8km s-min=7.9km az=121.0*

ISC 28 11:48:07.1±0.3, 18°.14S±0°.04×69°.39W±0°.06, h132km±3km, h132km:pP-P, n244, σ1s.51/286, mb4.6/43, 6C-7D, Northern Chile

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Code  Station Name        Δ°   AZ°    Phase ID             Time      Res
                                      Op       ISC        h  m  s    ISC
PB16  IPOC Station P      0.22 211⇑eP        Pn         11 48 25.3 -0.7
PB16                                 i S       Sn         11 48 39.0 -1.2
PB16                                  IAML                11 48 39.6
      comp=N,15μm,0.6s
MNMC  Minye Minye         1.00 191   ePn       Pn         11 48 30.2 -0.3
MNMC                                 eSn       Sn         11 48 47.5 -0.7
MNMC  Minye Minye         1.00 191⇑eP        Pn         11 48 29.8 -0.7
MNMC                                 i S       Sn         11 48 47.2 -1.1
PB12  IPOC Station P      1.01 242⇑eP        Pn         11 48 28.5 -1.8
PB12                                 i S       Sn         11 48 45.1 -2.9
PB12                                  IAML                11 48 46.2
      comp=N,5μm,0.1s
PSGC  Pisagua             1.60 206⇑eP        Pn         11 48 35.1 -1.5
PSGC                                 i S       Sn         11 48 56.9 -2.3
PSGC                                  IAML                11 48 58.1
      comp=E,6μm,0.3s
PSGC                                  IAML                11 48 58.2
      comp=N,7μm,0.5s
PB08  IPOC Station P      2.00 174   eP        Pn         11 48 42.0 +0.4
PB08                                 i S       Sn         11 49 08.6 +0.7
PB08                                  IAML                11 49 08.9
      comp=E,2μm,0.7s
LPAZ  La Paz              2.20  33    P        Pn         11 48 45.8 +1.5
      comp=E,224nm,0.3s,baz=218,slow=2.3,SNR=6783
LPAZ                                  S        Sn         11 49 13.1 +0.5
      comp=E,54nm,0.3s,baz=262,slow=12,SNR=8.8
LPAZ  La Paz              2.20  33⇓iP        Pn         11 48 45.8 +1.5
PB01  IPOC Station P      2.89 182   ePn       Pn         11 48 52.0 -0.4
PB01                                 eSn       Sn         11 49 25.3 -2.0
PB01  IPOC Station P      2.89 182⇓eP        Pn         11 48 52.0 -0.4
PB01                                 i S       Sn         11 49 25.2 -2.2
PB01                                  IAML                11 49 29.6
      comp=N,859nm,0.3s
PB02  IPOC Station P      3.20 189⇓eP        Pn         11 48 55.5 -0.9
PB02                                 i S       Sn         11 49 32.9 -1.7
PB02                                  IAML                11 49 40.8
      comp=N,1μm,0.3s
PB02                                  IAML                11 49 47.0
      comp=E,1μm,0.4s
PB07  IPOC Station P      3.59 187⇑iP        Pn         11 49 01.0 -0.7
PB07                                  IAML                11 49 48.2
      comp=E,624nm,0.4s
PB07                                  IAML                11 49 51.0
      comp=N,487nm,0.3s
PB07                                  IAML                11 49 56.3
      comp=N,468nm,0.4s
PB09  IPOC Station P      3.64 178⇓iP        Pn         11 49 02.6 +0.3
PB03  IPOC Station P      3.90 185⇑iP        Pn         11 49 04.8 -1.0
PB04  IPOC Station P      4.23 190   ePn       Pn         11 49 08.8 -1.3
PB04  IPOC Station P      4.23 190⇓iP        Pn         11 49 08.7 -1.5
PB04                                 i S       Sn         11 49 53.0 -6.1
PB06  IPOC Station P      4.54 182⇓iP        Pn         11 49 13.1 -1.2
PB05  IPOC Station P      4.75 189⇓iP        Pn         11 49 15.1 -1.9
PB05                                 i S       Sn         11 50 03.5 -7.9
PB10  IPOC Station P      5.45 191   ePn       Pn         11 49 23.9 -2.5
SIV   San Ignacio         8.23  76    P        Pn         11 50 01.7 -2.1
      comp=N,14nm,0.3s,baz=279,slow=9.5,SNR=121
SIV                                   S        Sn         11 51 31.0 -4.4
      comp=N,2.1nm,0.3s,baz=356,slow=23,SNR=7.6
GO03  Copiap              9.44 185   ePn       Pn         11 50 15.8 -4.1
GO03                                 eSn       Sn         11 51 58.0 -6.3
NNA   Nana                9.45 309    P        Pn         11 50 17.8 -2.4
      comp=N,9.0nm,0.3s,baz=127,slow=12,SNR=16
NNA                                   S        Sn         11 51 58.0 -6.8
      comp=N,4.3nm,0.3s,baz=186,slow=18,SNR=5.0
LCO   Las Campanas       10.88 186   ePn       Pn         11 50 34.4 -5.1
LCO                                  eSn       Sn         11 52 33.4 -6.3
SAML  Samuel             10.95  34   ePn       Pn         11 50 37.4 -2.8
SAML                                 eSn       Sn         11 52 33.0 -8.0
GO04  Tololo Observa     12.04 186   ePn       Pn         11 50 50.2 -4.5
CPUP  Villa Florida      13.81 128    P        Pn         11 51 17.6 +0.2
      comp=N,0.3nm,0.3s,baz=297,slow=14,SNR=6.5
CPUP  Villa Florida      13.81 128   ePn       Pn         11 51 16.1 -1.4
ROC1  El Roble           14.84 185   ePn       Pn         11 51 29.0 -1.6
PTGA  Pitinga            19.62  29    P        P          11 52 24.4 -1.1
      comp=N,11nm,0.3s,baz=328,slow=22,SNR=40
PTGA                                  S        S          11 55 54.7 -5.3
      comp=N,0.6nm,0.3s,baz=357,slow=23,SNR=2.4
PTGA  Pitinga            19.62  29   eP        P          11 52 24.5 -1.0
      comp=N,25nm,0.8s
PTGA                                  S        S          11 55 54.7 -5.3
BDFB  Brasilia           20.60  86    P        P          11 52 35.9 -0.3
      comp=N,23nm,0.4s,baz=268,slow=12,SNR=23
BDFB  Brasilia           20.60  86   eP        P          11 52 36.0 -0.2
      comp=N,55nm,0.5s
TRQA  Tornquist          20.87 163   eP        P          11 52 38.1 -0.7
      comp=N,22nm,1.1s
SPB   Sao Paulo          21.21 109   eP        P          11 52 41.0 -1.5
      comp=N,21nm,0.9s
GO06  Curarrehue         21.44 184   eP        P          11 52 43.3 -1.6
      comp=N,72nm,1.8s
PLCA  Paso Flores        22.54 182    P        P          11 52 57.4 +1.2
      comp=N,8.8nm,0.8s,baz=37,slow=11,SNR=9.4
PLCA  Paso Flores        22.54 182   eP        P          11 52 56.5 +0.3
      comp=N,19nm,1.0s
ROSC  El Rosal           23.35 348   eP        P          11 53 03.4 -1.0
      comp=N,6.3nm,0.4s
RUSC  La Rusia           24.16 351   eP        P          11 53 10.6 -1.2
      comp=N,3.7nm,1.1s
351A  Pinckard           51.55 342    P        P          11 57 00.2 +0.5
      baz=160
349A  Repton             52.10 341    P        P          11 57 04.3 +0.6
      baz=158
251A  Midway             52.26 343    P        P          11 57 04.5 -0.4
      baz=161
152A  Waverly Hall       52.61 344    P        P          11 57 07.2 -0.3
      baz=162
151A  Opelika            52.64 343    P        P          11 57 07.2 -0.5
      baz=161
249A  Camden             52.66 341    P        P          11 57 07.9 +0.1
      baz=159
Z50A  Ashland            53.49 343    P        P          11 57 13.7 -0.3
      baz=160
Z50A  Ashland            53.49 343   eP        P          11 57 13.4 -0.6
      comp=N,7.5nm,0.7s
LRAL  Lakeview Retre     53.60 342    P        P          11 57 14.2 -0.6
      baz=159
Z49A  Columbiana         53.61 342    P        P          11 57 14.3 -0.5
      baz=160
245A  Little AP, Sta     53.62 338    P        P          11 57 14.5 -0.4
      baz=156
Y51A  Rockmart           53.87 344    P        P          11 57 16.3 -0.4
      baz=162
Z48A  Northport          54.09 341    P        P          11 57 17.8 -0.5
      baz=159
Y49A  Blount Mountai     54.20 343    P        P          11 57 18.7 -0.4
      baz=160
X50B  Fort Payne         54.55 343    P        P          11 57 21.2 -0.5
      baz=161
W53A  Cullowhee          54.61 346    P        P          11 57 21.9 -0.3
      baz=164
Y47A  UCPARC, Winfie     54.67 341    P        P          11 57 22.0 -0.5
      baz=158,SNR=6.2
X49A  Woodville          54.79 343    P        P          11 57 23.1 -0.3
      baz=160
X48A  Hartselle          54.94 342    P        P          11 57 23.9 -0.5
      baz=160
X48A  Hartselle          54.94 342   eP        P          11 57 24.0 -0.5
      comp=N,7.7nm,0.8s
TKL   Tuckaleechee C     55.22 346    P        P          11 57 25.9 -0.5
      comp=N,1.5nm,0.5s,baz=135,slow=8.5,SNR=3.6
X47A  Russelville        55.24 341    P        P          11 57 25.8 -0.8
      baz=159
SWET  Sewanee            55.34 344   eP        P          11 57 26.9 -0.5
      comp=N,5.4nm,0.6s
W48A  Pulaski            55.55 343    P        P          11 57 28.5 -0.3
      baz=160,SNR=7.9
V50A  Pikevile           55.55 344    P        P          11 57 28.3 -0.5
      baz=162
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V49A	McMinnville	55.85	344	P	P	11 57 30.3	-0.6
	baz=161						
V48A	Smith Brothers	56.08	343	P	P	11 57 31.9	-0.6
	baz=160						
V48A	Smith Brothers	56.08	343	*e*P	P	11 57 31.9	-0.6
	comp=N,8.1nm,0.7s						
U50A	Jamestown	56.20	345	P	P	11 57 32.8	-0.6
	baz=162						
V47A	Nunnelly	56.36	342	P	P	11 57 33.8	-0.7
	baz=159						
T51A	Gray	56.51	346	P	P	11 57 35.2	-0.4
	baz=163						
V46A	Holladay	56.51	342	P	P	11 57 34.9	-0.7
	baz=159						
U49A	Red Boiling Sp	56.53	344	P	P	11 57 35.0	-0.7
	baz=161						
U48A	Cassie Pea, Po	56.73	343	P	P	11 57 36.7	-0.5
	baz=160						
WVT	Waverly	56.73	342	P	P	11 57 36.4	-0.8
	baz=159						
WVT	Waverly	56.73	342	*e*P	P	11 57 36.2	-1.0
	comp=N,7.4nm,0.6s						
T50A	Nancy	56.77	345	P	P	11 57 36.7	-0.8
	baz=162						
U47A	Clarksville	56.87	343	P	P	11 57 37.3	-0.8
	baz=160						
T49A	Edmonton	57.02	345	P	P	11 57 38.6	-0.6
	baz=162,SNR=5.5						
T49A	Edmonton	57.02	345	*e*P	P	11 57 38.3	-0.9
	comp=N,9.3nm,1.0s						
MIAR	Mount Ida	57.23	336	P	P	11 57 40.7	0.0
	baz=152						
T48A	Bowling Green	57.25	344	P	P	11 57 40.1	-0.7
	baz=161						
W41B	Gary Mavity, V	57.30	338	P	P	11 57 40.6	-0.5
	baz=154						
T47A	Sharon Grove	57.33	343	P	P	11 57 41.1	-0.3
	baz=160,SNR=5.7						
T47A	Sharon Grove	57.33	343	*e*P	P	11 57 40.2	-1.2
	comp=N,11nm,0.6s						
X39A	Fountain Ranch	57.41	336	P	P	11 57 41.9	-0.1
	baz=152						
T46A	Princeton	57.60	342	P	P	11 57 42.6	-0.6
	baz=159						
S49A	Springfield	57.61	345	P	P	11 57 42.5	-0.8
	baz=162						
TXAR	Lajitas Array	57.64	324	P	P	11 57 45.8	+1.9
	comp=N,0.3nm,0.6s,baz=150,slow=8.7,SNR=4.7						
TXAR				pP	pP	11 58 16.1	+1.0
	comp=N,0.5nm,0.8s,baz=153,slow=8.7,SNR=4.0						
S48A	Wiedeman Farm,	57.68	344	P	P	11 57 42.8	-1.0
	baz=161						
V41A	Mountainview	57.81	338	P	P	11 57 44.3	-0.5
	baz=154						
S47A	Hartford	57.84	344	P	P	11 57 44.0	-0.9
	baz=160						
W39A	Magazine	57.88	336	P	P	11 57 45.8	+0.5
	baz=152						
U42A	Revenden	58.01	339	P	P	11 57 45.9	-0.2
	baz=155,SNR=5.4						
R49A	Shelbyville	58.06	345	P	P	11 57 46.6	+0.2
	baz=162						
V40A	Witts Springs	58.07	338	P	P	11 57 46.5	-0.1
	baz=154						
PBMO	Poplar Bluff	58.13	340	*e*P	P	11 57 46.6	-0.3
	comp=N,16nm,0.4s						
S46A	Don Dixon Farm	58.15	343	P	P	11 57 46.3	-0.7
	baz=160						
U41A	Viola	58.23	339	P	P	11 57 47.3	-0.4
	baz=155						
WCI	Wyandotte Cave	58.28	344	P	P	11 57 47.3	-0.6
	baz=161						
Q50A	Georgetown	58.31	347	P	P	11 57 47.6	-0.6
	baz=164						
T43A	Greenville	58.36	340	P	P	11 57 48.6	0.0
	baz=157,SNR=8.0						
S45A	Carrier Mills	58.39	342	P	P	11 57 48.4	-0.4
	baz=159						
V39A	Pettigrew	58.40	337	P	P	11 57 49.1	+0.1
	baz=153,SNR=7.2						
R47A	Wooly Knot Far	58.40	344	P	P	11 57 48.1	-0.7
	baz=161						
U40A	Yellville	58.57	338	P	P	11 57 50.3	+0.2
	baz=154						
T42A	Van Buren	58.57	340	P	P	11 57 49.5	-0.5
	baz=156						
T42A	Van Buren	58.57	340	*e*P	P	11 57 49.9	-0.1
	comp=N,6.3nm,1.2s						
T42A				*e*pP	pP	11 58 19.9	-1.4
SIUC	Southern Illin	58.61	342	*e*P	P	11 57 49.9	-0.4
	comp=N,24nm,0.6s						
SIUC				*e*pP	pP	11 58 21.4	-0.2
S43A	Fulton Ridge,	58.74	341	P	P	11 57 50.8	-0.4
	baz=157,SNR=9.2						
Q48A	North Vernon	58.80	345	P	P	11 57 50.7	-0.8
	baz=162						
T41A	Mountain View	58.81	339	P	P	11 57 51.3	-0.4
	baz=155						
U39A	Green Forest	58.82	337	P	P	11 57 51.1	-0.7
	baz=153						
R45A	Skylar, Fairfi	58.88	343	P	P	11 57 51.6	-0.5
	baz=159						
Q47A	Bedord North L	58.98	345	P	P	11 57 52.3	-0.5
	baz=161						
S42A	Caledonia	59.15	340	P	P	11 57 53.7	-0.3
	baz=156,SNR=5.3						
T40A	Mansfield	59.17	339	P	P	11 57 54.2	0.0
	baz=154						
FVM	French Village	59.23	341	*e*P	P	11 57 55.6	+1.1
FVM				*e*pP	pP	11 58 26.5	+0.5
P48A	Milroy	59.23	346	P	P	11 57 54.2	-0.3
	baz=162						
S41A	Jillco Farms,	59.30	339	P	P	11 57 54.9	-0.2
	baz=155						
Q45A	Warren Harvey,	59.40	343	P	P	11 57 55.6	-0.1
	baz=159						
P47A	Martinsville	59.46	345	P	P	11 57 55.7	-0.4
	baz=161						
CCM	Cathedral Cave	59.56	340	P	P	11 57 57.0	+0.2
	baz=156						
S40A	Lebanon	59.56	339	P	P	11 57 56.8	0.0
	baz=154						
R42A	Luebbering	59.62	341	P	P	11 57 57.3	+0.1
	baz=156,SNR=11						
T38A	Diamond	59.70	337	P	P	11 57 57.5	-0.3
	baz=152						
R41A	Rosebud	59.82	340	P	P	11 57 58.8	+0.2
	baz=156,SNR=11						
S39A	Bolivar	59.93	338	P	P	11 57 59.6	+0.2
	baz=154						
S39A	Bolivar	59.93	338	*e*P	P	11 57 59.2	-0.1
S39A				*e*pP	pP	11 58 30.8	0.0
S38A	Stockton	60.09	338	P	P	11 58 00.3	-0.1
	baz=153						
R40A	Maddies Statio	60.11	339	P	P	11 58 00.1	-0.5
	baz=155						
R40A	Maddies Statio	60.11	339	*e*P	P	11 58 00.1	-0.5
	comp=N,4.1nm,0.8s						
Q42A	Golden Eagle	60.11	341	P	P	11 58 00.2	-0.4
	baz=157						
O47A	Sheridan	60.15	345	P	P	11 57 59.9	-0.9
	baz=162						
Q41A	Truxton	60.37	341	P	P	11 58 02.1	-0.2
	baz=156,SNR=6.1						
R39A	Chumby, Stover	60.39	339	P	P	11 58 02.9	+0.4
	baz=154						
P43A	Skaggs, Pawnee	60.48	342	P	P	11 58 02.6	-0.6
	baz=158						
SFIN	Lafayette	60.51	345	P	P	11 58 02.3	-0.9
	baz=161						
O45A	Potomac	60.55	344	P	P	11 58 02.5	-1.0
	baz=160,SNR=5.8						
P42A	Winchester	60.67	342	P	P	11 58 03.9	-0.5
	baz=157						
P42A	Winchester	60.67	342	*e*P	P	11 58 03.5	-0.9
	comp=N,6.5nm,0.7s						
Q40A	Laux Farm, Aux	60.68	340	P	P	11 58 04.5	0.0
	baz=155						
P41A	Barry, Barry	60.98	341	P	P	11 58 06.0	-0.4
	baz=156						
Q39A	Willow Grove F	61.03	339	P	P	11 58 06.6	-0.1
	baz=154						
P40A	Paris	61.16	340	P	P	11 58 07.2	-0.4
	baz=155						
Q38A	Cooks Store, C	61.17	339	P	P	11 58 07.4	-0.3
	baz=154						
O41A	Passleys Farm,	61.33	341	P	P	11 58 08.2	-0.6
	baz=157						
P39B	Salisbury	61.35	340	P	P	11 58 08.4	-0.5
	baz=155						
N43A	Stutzman Famil	61.59	343	P	P	11 58 10.0	-0.5
	baz=159,SNR=5.3						
O40A	La Belle	61.64	341	P	P	11 58 10.7	-0.2
	baz=156						
N42A	Yates City	61.73	342	P	P	11 58 10.7	-0.7
	baz=158						
M43A	Waltham Townsh	61.99	343	P	P	11 58 12.5	-0.7
	baz=159						
L43A	Garden Prairie	62.63	344	P	P	11 58 16.9	-0.6
	baz=159						
M40A	Post Highland	62.70	341	P	P	11 58 17.7	-0.2
	baz=156						
L41A	Preston	63.01	342	P	P	11 58 19.5	-0.4
	baz=158						
M38A	Pleasantville	63.24	340	P	P	11 58 21.2	-0.3
	baz=155						
K42A	Prairie Point,	63.35	344	P	P	11 58 22.0	-0.2
	baz=159						
VNA3	Neumayer Olymp	63.38	162	P	P	11 58 23.7	+1.6
K41A	Shullsburg	63.45	343	P	P	11 58 22.9	+0.1
	baz=158						
ANMO	Albuquerque	63.46	326	P	P	11 58 24.5	+1.2
	comp=N,0.3nm,0.5s,baz=63,slow=2.6,SNR=3.6						
VNA1	Neumayer--Stat	63.58	161	P	P	11 58 21.5	-1.9
JFWS	Jewell Farm	63.72	343	P	P	11 58 24.6	0.0
	baz=158						
M36A	Felix, Anita	63.80	339	P	P	11 58 25.9	+0.7
	baz=153						
J41A	Loganville	64.07	343	P	P	11 58 27.1	+0.2
	baz=158						
I43A	Langenfeld Bro	64.07	345	P	P	11 58 26.7	-0.2
	baz=160						
I42A	Draeger Farm,	64.27	344	P	P	11 58 28.2	0.0
	baz=159						
J40A	Soldiers Grove	64.30	343	P	P	11 58 28.2	-0.2
	baz=158						
J39A	Decorah	64.52	342	P	P	11 58 29.8	-0.1
	baz=156,SNR=5.2						
H43A	Windswept, Lux	64.53	346	P	P	11 58 29.8	-0.1
	baz=161						
I41A	Arkdale	64.68	344	P	P	11 58 30.6	-0.2
	baz=158						
I40A	Norwalk	64.72	343	P	P	11 58 31.1	-0.1
	baz=158						
K36A	Gilmore City	64.74	340	P	P	11 58 31.1	-0.3
	baz=154,SNR=5.4						
H42A	Shiocton	64.75	345	P	P	11 58 31.2	-0.1
	baz=160						
H42A	Shiocton	64.75	345	*e*P	P	11 58 31.5	+0.1
	comp=N,18nm,0.6s						
I39A	Houston	64.94	342	P	P	11 58 32.6	0.0
	baz=157						
BGNE	Belgrade	64.97	336	P	P	11 58 32.8	-0.1
	baz=150						
J37A	Redenius Farm,	65.06	341	P	P	11 58 33.1	-0.3
	baz=155						
H41A	Junction City	65.14	344	P	P	11 58 33.7	-0.1
	baz=159						
F45A	CMU Biological	65.19	348	P	P	11 58 33.9	-0.2
	baz=163						
J36A	Seneca 1, Swea	65.32	340	P	P	11 58 35.1	0.0
	baz=154						
J36A	Seneca 1, Swea	65.32	340	*e*P	P	11 58 35.4	+0.3
	comp=N,9.9nm,1.0s						
H40A	Chili	65.34	344	P	P	11 58 35.1	-0.1
	baz=158,SNR=5.4						
G42A	Mountain	65.42	345	P	P	11 58 35.6	0.0
	baz=160						
SNAA	Sanae	65.58	161	P	P	11 58 38.0	+1.5
SNAA	Sanae	65.58	161	P	P	11 58 38.8	+2.2
	comp=N,1.4nm,0.9s,baz=352,slow=23,SNR=12						
I37A	Lemond, Waseca	65.65	341	*e*P	P	11 58 35.5	-1.7
	comp=N,59nm,0.6s						
F43A	Flat Rock, Esc	65.68	346	P	P	11 58 37.1	-0.1
	baz=162,SNR=6.1						
G40A	Rib Lake	65.89	344	P	P	11 58 38.7	0.0
	baz=158						
F41A	Three Lakes	66.05	345	P	P	11 58 39.6	-0.1
	baz=160,SNR=6.2						
F41A	Three Lakes	66.05	345	*e*P	P	11 58 39.3	-0.4
	comp=N,11nm,0.6s						
E43A	Lone Tree Farm	66.16	347	P	P	11 58 40.1	-0.3
	baz=162						
G39A	Holcombe	66.16	343	P	P	11 58 40.2	-0.2
	baz=157						
G38A	Ridgeland	66.25	343	P	P	11 58 40.9	0.0
	baz=157						
E42A	Champion	66.42	346	P	P	11 58 42.1	+0.1
	baz=161						
ECSD	EROS Data Cent	66.44	339	P	P	11 58 42.7	+0.5
	baz=152						
ECSD	EROS Data Cent	66.44	339	*e*P	P	11 58 42.6	+0.5
	comp=N,1.6nm,0.4s						
ECSD				*e*pP	pP	11 59 14.6	+0.4
ECSD				*e*sP	sP	11 59 29.1	+0.6
F40A	Park Falls	66.47	344	P	P	11 58 42.5	+0.2
	baz=158,SNR=14						
SPMN	Marine on St.	66.57	342	P	P	11 58 43.0	+0.1
	baz=156						
SPMN	Marine on St.	66.57	342	*e*P	P	11 58 43.1	+0.1
	comp=N,7.9nm,0.4s						
F39A	Loretta	66.68	344	P	P	11 58 43.7	+0.1
	baz=158,SNR=5.6						
E41A	Kenton	66.69	345	P	P	11 58 43.7	-0.1
	baz=160						
H35A	Sunnyside Ranc	66.71	341	P	P	11 58 43.9	+0.1
	baz=154						
E40A	Wakefield	66.91	345	P	P	11 58 45.4	+0.3
	baz=159,SNR=7.7						
F38A	Pierce - Schro	66.98	343	P	P	11 58 45.7	+0.2
	baz=157,SNR=5.1						
E39A	Mellen	67.01	344	P	P	11 58 45.8	0.0
	baz=158,SNR=5.7						
D41A	Chassel	67.16	346	P	P	11 58 47.1	+0.4
	baz=160						
E38A	The Farm, Brul	67.48	344	P	P	11 58 49.0	+0.3
	baz=157						
E36A	McGregor	67.88	342	P	P	11 58 51.6	+0.4
	baz=156						
LIC	Lamto	67.93	75	*e*P	P	11 58 51.6	-0.6
	comp=N,58nm,0.9s						
TIC	Toumodi	68.09	75	*e*P	P	11 58 53.7	+0.4
KIC	Kosan Boka	68.24	75	*e*P	P	11 58 53.8	-0.4
	comp=N,57nm,0.7s						
DBIC	Dimbokro	68.25	75	P	P	11 58 54.2	0.0
	comp=N,19nm,0.7s,baz=228,slow=7.0,SNR=17						
DBIC	Dimbokro	68.25	75	*e*P	P	11 58 54.4	+0.1
	comp=N,29nm,0.8s						
D35A	Remer	68.62	342	P	P	11 58 56.6	+0.8
	baz=155						
C37A	Embarrass	68.69	344	P	P	11 58 56.5	+0.3
	baz=157						
EYMN	Ely	68.71	344	P	P	11 58 56.5	+0.1
	baz=158						
C36A	Pine Crest Far	68.89	343	P	P	11 58 57.6	+0.1
	baz=156						
C35A	Jirik Farms, M	69.16	342	P	P	11 58 59.6	+0.5
	baz=155						
B35A	Bob, Littlefor	69.69	343	P	P	11 59 02.5	+0.1
	baz=155						
PDAR	Pinedale Array	71.00	330	P	P	11 59 11.1	+0.3
	comp=N,0.2nm,0.6s,baz=224,slow=32,SNR=2.4						
PDAR				pP	pP	11 59 43.6	+0.4
	comp=N,0.6nm,0.7s,baz=124,slow=7.7,SNR=4.4						
ULM	Lac du Bonnet	72.00	342	P	P	11 59 16.4	+0.2
	comp=N,4.1nm,0.3s,baz=155,slow=5.3,SNR=12						
ULM				pP	pP	11 59 48.9	+0.2
	comp=N,5.2nm,0.6s,baz=168,slow=3.6,SNR=5.2						
ULM	Lac du Bonnet	72.00	342	*e*P	P	11 59 16.8	+0.5
	comp=N,6.0nm,0.6s						
ULM				pP	pP	11 59 48.9	+0.2
QSPA	South Pole Qui	72.03	180	P	P	11 59 18.7	+2.1
	comp=N,1.1nm,0.5s,baz=301,slow=1.3,SNR=8.0						
QSPA	South Pole Qui	72.03	180	*e*P	P	11 59 18.4	+1.8
QSPA				*e*pP	pP	11 59 50.4	+1.4
KOWA	Kowa	72.13	68	P	P	11 59 17.8	-0.1
	comp=N,9.5nm,0.3s,baz=253,slow=7.7,SNR=30						
KOWA	Kowa	72.13	68	*e*P	P	11 59 17.7	-0.1
	comp=N,14nm,1.0s						
NVAR	Mina Array Bea	72.59	322	P	P	11 59 22.5	+2.1
	comp=N,0.3nm,0.7s,baz=251,slow=2.5,SNR=3.9						
NVAR				pP	pP	11 59 53.9	+1.0
	comp=N,0.7nm,0.9s,baz=134,slow=8.5,SNR=3.0						
NVAR				sP	sP	12 00 09.0	+1.9
	comp=N,0.8nm,0.9s,baz=140,slow=4.9,SNR=3.0						
TORD	Torodi Ar. Bea	76.68	71	P	P	11 59 42.8	-1.4
	comp=N,8.8nm,0.5s,baz=243,slow=4.7						
MDT	Midelt	79.96	51	P	P	12 00 02.2	+0.2
	comp=N,2.7nm,0.9s,baz=248,slow=5.3,SNR=5.7						
VNDA	Vanda	80.06	190	P	P	12 00 04.4	+2.7
	comp=N,0.7nm,0.8s,baz=109,slow=9.2,SNR=5.2						
TSUM	Tsumeb	81.45	107	P	P	12 00 11.9	+1.5
	comp=N,3.3nm,0.9s,baz=262,slow=6.9,SNR=3.2						
ESDC	Sonseca Array	83.78	45	P	P	12 00 23.0	+1.2
	comp=N,2.5nm,0.8s,baz=249,slow=4.9,SNR=12						
BOSA	Boshof	85.42	118	P	P	12 00 31.4	+0.8
	comp=N,3.9nm,1.0s,baz=256,slow=7.5,SNR=3.1						
YKA	Yellowknife Ar	87.89	341	P	P	12 00 42.3	+1.0
	comp=N,0.7nm,0.4s,baz=134,slow=4.7,SNR=15						
YKA				pP	pP	12 01 17.3	+2.3
	comp=N,3.2nm,0.7s,baz=133,slow=4.8,SNR=8.3						
EKA	Eskdalemuir Ar	92.00	32	P	P	12 01 01.8	+1.1
	comp=N,0.3nm,0.3s,baz=238,slow=5.5,SNR=3.5						
SEY	Seymchan	126.85	338	PKP	PKPdf	12 06 56.1	+1.3
	comp=N,0.7nm,0.5s,baz=148,slow=6.5,SNR=3.1						
SEY				pPKP	pPKPdf	12 07 31.6	+1.6
	comp=N,2.0nm,0.9s,baz=102,slow=4.0,SNR=3.5						
ASAR	Alice Springs	132.63	210	PKP	PKPdf	12 07 07.8	+0.7
	comp=N,0.3nm,0.7s,baz=130,slow=2.0,SNR=4.7						
ASAR				pPKP	pPKPdf	12 07 44.3	+1.9
	comp=N,0.2nm,0.6s,baz=136,slow=1.4,SNR=2.2						
WRA	Warramunga Arr	135.56	213	PKP	PKPdf	12 07 14.0	+1.3
	comp=N,0.6nm,0.8s,baz=137,slow=1.5,SNR=7.2						
WRA				pPKP	pPKPdf	12 07 49.7	+1.7
	comp=N,0.3nm,0.4s,baz=139,slow=1.8,SNR=1.8						
KURK	Kurchatov	138.73	31	PKP	PKPdf	12 07 19.2	+1.7
KURK				pPKP	pPKPdf	12 07 55.2	+2.4
KURBB	Kurchatov Arra	138.75	31	PKP	PKPdf	12 07 19.2	+1.6
	comp=N,0.6nm,0.5s,baz=310,slow=2.4,SNR=8.0						
KURBB				pPKP	pPKPdf	12 07 55.2	+2.4
	comp=N,0.2nm,0.5s,baz=252,slow=15,SNR=2.4						
ZALV	Zalesovo Beam	139.09	23	PKP	PKPdf	12 07 19.6	+1.6
	comp=N,2.4nm,0.4s,baz=297,slow=4.5,SNR=4.7						
ZALV				pPKP	pPKPdf	12 07 55.1	+1.8
	comp=N,2.3nm,0.7s,baz=275,slow=3.7,SNR=1.4						
USRK	Ussuriysk Ar.	148.42	330	PKPbc	PKPab	12 07 41.7	-0.1
	baz=51,slow=5.7						
USRK				pPKPbc	pPKPab	12 08 14.8	-1.3
	baz=39,slow=0.9						
MJAR	Matsushiro Arr	149.56	313	PKPbc	PKPbc	12 07 43.3	+1.9
	comp=N,1.2nm,0.7s,baz=160,slow=0.7,SNR=5.4						
MJAR				pPKPbc	pPKPbc	12 08 17.2	+0.7
	comp=N,1.7nm,0.9s,baz=277,slow=2.1,SNR=4.0						
SONM	Songino Array	150.19	6	PKPbc	PKPbc	12 07 44.3	+1.6
	comp=N,4.0nm,0.6s,baz=308,slow=1.3,SNR=19						
SONM				pPKPbc	pPKPbc	12 08 19.3	+1.4
	comp=N,3.3nm,0.8s,baz=328,slow=1.8,SNR=7.0						
LZH	Lanzhou	161.15	17	*e*PKP	PKPdf	12 07 51.5	-1.0
LZH				pPKP	pPKPdf	12 08 25.8	-2.2
LZH				PKP	PKPab	12 08 37.5	+1.2
LZH				sPKP		12 08 40.3	

DDA ***28*** *11:51:53.7, 39°.60N×44°.67E, h10^{km}, Ml3.4*

NSSP ***28*** *11:51:53.5, 39°.58N×44°.63E, h10^{km}, Ms3.6*

ISCJB ***28*** *11:51:54.4±0.4, 39°.54N±0°.02×44°.66E±0°.02, h4^{km}±3^{km}, Error ellipse: s-maj=2.9km s-min=2.5km az=24.2*

TEH ***28*** *11:51:54.5, 39°.54N×44°.63E, h18^{km}, ML3.9*

AZER ***28*** *11:51:54.6±0.8, 39°.54N×44°.65E, h11^{km}±2^{km}, ml3.8/19, Error ellipse: s-maj=5.8km s-min=2.0km az=70.0*

CSEM ***28*** *11:51:54.6±0.1, 39°.57N×44°.64E, h5^{km}, ML3.9, Error ellipse: s-maj=3.0km s-min=2.4km az=163.0*

ISK ***28*** *11:51:55.2, 39°.58N×44°.57E, h18^{km}, ML3.1/5*

THR ***28*** *11:51:55.7±0.4, 39°.35N×44°.65E, h14^{km}±2^{km}, ML3.7*

ISC 28 11:51:54.7±1.0**, 39°.58N**±0°.01×**44°.64E**±0°.01**, h7**^{km}±8^{km}**, n107,** σ1^{s}.**01**/168**, 40C-32D, Iran-Armenia-Azerbaijan border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HYR	Heyderabad	0.21	49	*e*Pg	Pg	11 51 59.3	+0.3
HYR	Heyderabad	0.21	49	⇑P	Pg	11 51 59.4	+0.3
HYR				⇓S	Sg	11 52 03.0	+1.1
HYR	Heyderabad	0.21	49	⇑P	Pg	11 51 59.4	+0.3
HYR				⇓S	Sg	11 52 03.0	+1.1
MAKU	Maku	0.23	172	*e*Pg	Pg	11 51 58.5	-0.7
MAKU				IAML		11 52 01.6	
	comp=N,28μm,0.2s						
MAKU	Maku	0.23	172	*e*Pg	Pg	11 51 58.5	-0.7
MAKU	Maku	0.23	172	*e*Pg	Pg	11 51 58.5	-0.7
ARRZ	Ararat	0.28	9	*e*P	Pn	11 52 04.0	-1.3
ARRZ				*e*S	Sb	11 52 10.0	+2.9
TASB	TASBURUN-IGDIR	0.51	323	PG	Pg	11 52 04.8	+0.2
TASB				SG	Sb	11 52 12.8	-0.9
TASB	TASBURUN-IGDIR	0.51	323	*e*Pg	Pg	11 52 04.8	+0.2
TASB	TASBURUN-IGDIR	0.51	323	*e*Pg	Pg	11 52 04.8	+0.2
TASB				*e*Sg	Sb	11 52 12.8	-0.9
IGDI	IGDIR	0.52	304	*i* P	Pg	11 52 04.4	-0.4
IGDI				*i* S	Sg	11 52 12.0	+0.3
GNI	Garni	0.58	8	PG	Pb	11 52 07.4	+0.2
GNI				SG	Sb	11 52 16.4	+0.7
GNI	Garni	0.58	8	*e*Pg	Pb	11 52 07.4	+0.2
GNI				*e*Sg	Sb	11 52 16.4	+0.7
CLDR	Caldiran	0.71	233	PG	Pg	11 52 08.0	-0.5
CLDR				SG	Sb	11 52 19.1	-0.5
CLDR	Caldiran	0.71	233	*i* P	Pg	11 52 07.9	-0.5
CLDR				*i* S	Sg	11 52 18.0	+0.4
CLDR	Caldiran	0.71	233	*e*Pg	Pg	11 52 08.2	-0.2
CLDR	Caldiran	0.71	233	P	Pg	11 52 07.9	-0.5
CLDR	Caldiran	0.71	233	*e*Pg	Pg	11 52 08.2	-0.2
CLDR				S	Sg	11 52 18.0	+0.4
CLDR				*e*Sg	Sb	11 52 19.1	-0.5
SBZ	Shahbuz	0.73	104	*e*Pg	Pg	11 52 08.4	-0.2
SBZ	Shahbuz	0.73	104	⇓P	Pg	11 52 08.5	-0.2
SBZ				⇓S	Sb	11 52 19.5	-0.5
SBZ	Shahbuz	0.73	104	⇓P	Pg	11 52 08.5	-0.2
SBZ				⇓S	Sb	11 52 19.5	-0.5
DYDN	Diyadin	0.74	268	*i* P	Pg	11 52 09.0	+0.1
DYDN				*i* S	Sn	11 52 24.7	+1.3
DYDN	Diyadin	0.74	268	P	Pg	11 52 09.0	+0.1
NAX	Nakhchivan	0.77	121	*e*Pg	Pg	11 52 09.0	-0.6
NAX	Nakhchivan	0.77	121	⇑P	Pg	11 52 09.2	-0.4
	SNR=456						
NAX				⇑S	Sb	11 52 20.3	-1.0
NAX	Nakhchivan	0.77	121	⇑P	Pg	11 52 09.2	-0.4
	SNR=456						
NAX				⇑S	Sb	11 52 20.3	-1.0
VMUR	Van-Muradiye	1.02	235	*i* P	Pg	11 52 13.4	-0.8
VMUR				*i* S	Sn	11 52 28.5	-1.7
VADZ	Vardenis	1.03	55	⇑*i*P	Pg	11 52 14.3	-0.3
VADZ				⇑*i*S	Sn	11 52 29.5	-1.2
VADZ	Vardenis	1.03	55	⇑P	Pg	11 52 14.3	-0.3
VADZ				S	Sn	11 52 29.5	-1.2
ORD	Ordubad	1.23	121	*e*Pg	Pn	11 52 17.0	-1.4
ORD	Ordubad	1.23	121	*e*Pg	Pn	11 52 17.0	-1.4
ORD	Ordubad	1.23	121	⇓P	Pn	11 52 17.4	-1.0
ORD				⇓S	Sb	11 52 33.8	-0.7
ORD	Ordubad	1.23	121	⇓P	Pn	11 52 17.4	-1.0
ORD				⇓S	Sb	11 52 33.8	-0.7
AGRB	Hanur-Agry	1.28	270	PN	Pn	11 52 18.3	-0.8
AGRB	Hanur-Agry	1.28	270	*e*Pn	Pg	11 52 19.6	+0.4
AGRB	Hanur-Agry	1.28	270	*e*Pn	Pg	11 52 19.6	+0.4
GRS	Goris	1.31	93	⇑*i*P	Pn	11 52 18.0	-1.5
GRS				⇓*i*S	Sg	11 52 37.0	+0.2
GRS	Goris	1.31	93	⇑P	Pn	11 52 18.0	-1.5
GRS				S	Sg	11 52 37.0	+0.2
GMRZ	Gyumri	1.38	333	*e*P	Pn	11 52 20.0	-0.5
GMRZ				*e*S	Sb	11 52 38.0	-0.8
VANB	Van	1.38	225	PN	Pg	11 52 21.0	-0.2
VANB	Van	1.38	225	*e*Pg	Pg	11 52 23.3	+2.1
VANB	Van	1.38	225	*e*Pn	Pg	11 52 21.0	-0.2
VANB	Van	1.38	225	*e*Pg	Pg	11 52 23.3	+2.1
TVAN	Van	1.42	223	*i* P	Pg	11 52 21.6	-0.4
TVAN				*i* S	Sg	11 52 43.9	+3.4
TVAN	Van	1.42	223	P	Pg	11 52 21.6	-0.4
TVAN				S	Sg	11 52 43.9	+3.4
GDB	GEDABAY	1.43	36	⇑P	Pb	11 52 21.1	-0.6
	SNR=105						
GDB				⇓S	Sg	11 52 40.8	+0.3
GDB	GEDABAY	1.43	36	⇑P	Pb	11 52 21.1	-0.6
	SNR=105						
GDB				⇓S	Sg	11 52 40.8	+0.3
ISHB	Shabestar	1.50	149	*e*Pg	Pn	11 52 20.8	-1.4
ISHB				*e*		11 52 44.6	
	comp=E,71μm,0.1s						
ISHB				*e*		11 52 45.9	
	comp=Z,38μm,0.2s						
ISHB				*e*		11 52 46.7	

	comp=N,58µm,0.1s						
QZX	Qazax, Azerbai SNR=347	1.58	20	⇑P	Pb	11 52 24.1	-0.2
QZX				⇓S	Sg	11 52 46.3	+0.8
KARS	Kars	1.59	312	PN	Pn	11 52 22.4	-1.1
KARS	Kars	1.59	312	*e*Pn	Pn	11 52 22.4	-1.1
GANJ	Ganja SNR=73	1.67	50	⇑P	Pn	11 52 24.7	+0.3
GANJ				⇑S	Sb	11 52 47.6	+0.5
GANJ	Ganja SNR=73	1.67	50	⇑P	Pn	11 52 24.7	+0.3
GANJ				⇑S	Sb	11 52 47.6	+0.5
GEVA	Gevas	1.77	225	*i* P	Pb	11 52 27.0	-0.5
GEVA				*i* S	Sg	11 52 53.8	+2.3
GEVA	Gevas	1.77	225	P	Pb	11 52 27.0	-0.5
ITBZ	Tabriz	1.78	138	*e*Pn	Pn	11 52 26.0	-0.1
ITBZ	comp=E,14µm,0.1s			*e*		11 52 51.9	
ITBZ	comp=N,16µm,0.1s			*e*		11 52 52.6	
ITBZ	comp=Z,8µm,0.1s			*e*		11 52 53.4	
ITBZ	Tabriz	1.78	138	*e*Pn	Pn	11 52 26.0	-0.1
KZR	Kazreti	1.81	355	P	Pb	11 52 27.6	-0.6
KZR				S	Sb	11 52 51.6	+0.5
BGD	Bogdanovka	1.86	335	P	Pb	11 52 28.5	-0.7
BGD				S	Sg	11 52 54.4	-0.2
SENK	Senkaya-Erzuru	2.02	300	PN	Pn	11 52 28.6	-0.7
SENK	Senkaya-Erzuru	2.02	300	*e*Pn	Pn	11 52 28.6	-0.7
AKH	Akhalkalaki	2.03	335	PN	Pn	11 52 28.9	-0.6
AKH	Akhalkalaki	2.03	335	P	Pb	11 52 31.6	-0.4
AKH				S	Sg	11 52 59.1	-0.8
AKH	Akhalkalaki	2.03	335	*e*Pn	Pn	11 52 28.9	-0.6
BRDA	Brd	2.07	70	*e*Pn	Pb	11 52 32.0	-0.5
BRDA	Brd	2.07	70	⇓P	Pn	11 52 29.2	-0.6
BRDA	Brd	2.07	70	*e*Pn	Pb	11 52 32.0	-0.5
BRDA				⇓S	Sn	11 52 56.1	+0.3
BRDA	Brd	2.07	70	⇓P	Pn	11 52 29.2	-0.6
BRDA				⇓S	Sn	11 52 56.1	+0.3
TBLG	Delisi	2.15	2	PN	Pn	11 52 30.6	-0.4
TBLG	Delisi	2.15	2	P	Pb	11 52 33.2	-0.8
TBLG				S	Sg	11 53 02.6	-1.2
TBLG	Delisi	2.15	2	*e*Pn	Pn	11 52 30.6	-0.4
TBLG	Delisi	2.15	2	P	Pn	11 52 31.1	+0.1
TBLG				S	Sb	11 52 59.4	-1.5
DDFL	Dedoflistskaro	2.18	31	P	Pg	11 52 37.0	+0.6
SEAG	Tbilisi Sea	2.19	3	P	Pg	11 52 35.9	-0.7
SEAG				S	Sg	11 53 05.0	0.0
MNGR	Mingechevir, A SNR=10	2.22	57	⇑P	Pn	11 52 31.7	-0.2
MNGR				⇑S	Sn	11 53 00.4	+0.8
MNGR	Mingechevir, A SNR=10	2.22	57	⇑P	Pn	11 52 31.7	-0.2
MNGR				⇑S	Sn	11 53 00.4	+0.8
IHRS	Heris	2.25	123	*e*Pn	Pn	11 52 33.6	+1.0
IHRS	comp=Z,10µm,0.1s			*e*		11 53 06.3	
IHRS	comp=N,17µm,0.1s			*e*		11 53 06.6	
IHRS	comp=E,9µm,0.2s			*e*		11 53 13.4	
IHRS	Heris	2.25	123	*e*Pn	Pn	11 52 33.6	+1.0
GURO	Guroymak-BITLI	2.28	244	PN	Pn	11 52 32.0	-0.8
GURO	Guroymak-BITLI	2.28	244	*e*Pn	Pn	11 52 32.0	-0.8
ZRD	Zardab SNR=5.7	2.44	72	⇓P	Pn	11 52 34.6	-0.4
ZRD				⇓S	Sn	11 53 06.4	+1.4
ZRD	Zardab SNR=5.7	2.44	72	⇓P	Pn	11 52 34.6	-0.4
ZRD				⇓S	Sn	11 53 06.4	+1.4
SEKA	Sheki SNR=28	2.54	49	⇑P	Pn	11 52 37.3	+0.8
SEKA				⇓S	Sb	11 53 09.8	-2.4
ZKTA	Zakatala SNR=13	2.55	36	⇓P	Pn	11 52 36.1	-0.4
ZKTA				⇑S	Sn	11 53 09.3	+1.5
IBST	Bostanabad	2.57	136	*e*Pn	Pn	11 52 38.3	+1.3
IBST	comp=Z,2µm,0.2s			*e*		11 53 19.2	
IBST	comp=E,2µm,0.3s			*e*		11 53 20.5	
IBST	comp=N,2µm,0.2s			*e*		11 53 22.1	
IBST	Bostanabad	2.57	136	*e*Pn	Pn	11 52 38.3	+1.3
GRMI	Germi	2.64	106	*e*Pn	Pn	11 52 39.3	+1.5
GRMI				*e*Sg	Sb	11 53 16.5	+1.4
GRMI	comp=E,374nm,0.5s			IAML		11 53 19.0	
GRMI	Germi	2.64	106	*e*Pn	Pn	11 52 39.3	+1.5
GRMI	Germi	2.64	106	*e*Pn	Pn	11 52 39.3	+1.5
GRMI				*e*Sg	Sb	11 53 16.5	+1.4
QBL	Gabala SNR=11	2.80	60	⇑P	Pn	11 52 39.9	-0.1
QBL				⇓S	Sn	11 53 14.4	+0.4
QBL	Gabala SNR=11	2.80	60	⇑P	Pn	11 52 39.9	-0.1
QBL				⇓S	Sn	11 53 14.4	+0.4
GLBA	Clilabad SNR=3.0	2.92	95	⇑P	Pn	11 52 40.9	-0.7
GLBA				⇓S	Sn	11 53 18.9	+1.9
GLBA	Clilabad SNR=3.0	2.92	95	⇑P	Pn	11 52 40.9	-0.7
GLBA				⇓S	Sn	11 53 18.9	+1.9
LRK	Lerik SNR=28	3.02	107	⇑P	Pn	11 52 42.9	-0.2
LRK				⇓S	Sn	11 53 21.1	+1.4
LRK	Lerik SNR=28	3.02	107	⇑P	Pn	11 52 42.9	-0.2
LRK				⇓S	Sn	11 53 21.1	+1.4
XNQ	Khinaliq SNR=6.6	3.11	58	⇑P	Pn	11 52 45.0	+0.6
XNQ				⇑S	Sn	11 53 23.6	+1.7
ONI	Oni	3.14	344	P	Pb	11 52 51.1	+0.2
ONI				S	Sg	11 53 34.6	-1.0
PQL	Pirkuli SNR=4.8	3.26	67	⇓P	Pn	11 52 45.8	-0.5
PQL	Pirkuli SNR=4.8	3.26	67	⇓P	Pn	11 52 45.8	-0.5
LKRN	Lenkeran, Azer SNR=4.0	3.33	104	⇑P	Pn	11 52 47.3	+0.1
LKRN				⇑S	Sn	11 53 27.8	+0.8
LKRN	Lenkeran, Azer SNR=4.0	3.33	104	⇑P	Pn	11 52 47.3	+0.1
LKRN				⇑S	Sn	11 53 27.8	+0.8
ASTR	Astara	3.38	106	*e*Pn	Pb	11 52 51.4	-3.6
ASTR	Astara SNR=20	3.38	106	⇑P	Pn	11 52 48.8	+0.9
ASTR				⇑S	Sn	11 53 29.6	+1.3
ASTR	Astara SNR=20	3.38	106	⇑P	Pn	11 52 48.8	+0.9
ASTR				⇑S	Sn	11 53 29.6	+1.3
ZNJK	Zanjan	4.31	131	*e*Pn	Pn	11 53 01.1	+0.2
ZNJK	Zanjan	4.31	131	*e*Pn	Pn	11 53 01.1	+0.2
ZNJK	Zanjan	4.31	131	*e*Pn	Pn	11 53 01.1	+0.2

JMA ***28*** *12:08:51.6±0.2, 24°.95N×122°.23E, h103^{km}±3^{km}, M2.0*

ISCJB ***28*** *12:08:52.2±0.5, 24°.87N±0°.02×122°.22E±0°.02, h104^{km}±3^{km}, Error ellipse: s-maj=4.2km s-min=2.8km az=164.8*

TAP ***28*** *12:08:52.4, 24°.89N×122°.20E, h106^{km}, ML3.1, C*

ISC 28 12:08:52.1±1.4**, 24°.90N**±0°.05×**122°.23E**±0°.03**, h107**^{km}±7^{km}**, n77,** σ**0^{s}.44**/141**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao baz=302	0.24	296	*e*P	Pn	12 09 07.3	+0.1
TWB1	baz=302			*e*S	Sn	12 09 18.3	-0.2
EOS1	EOS1 baz=190	0.36	195	*e*P	Pn	12 09 08.2	+0.5
EOS1	baz=190			*e*S	Sn	12 09 19.6	+0.2
NTC	Toucheng baz=263	0.36	263	*e*S	Sn	12 09 19.3	-0.2
TIPB	Shuangxi baz=283	0.37	281	*e*P	Pn	12 09 08.0	+0.2
TIPB	baz=283			*e*S	Sn	12 09 19.5	-0.1
NWF	Wu-fen Shan baz=295	0.44	293	*e*P	Pn	12 09 08.4	+0.1
NWF	baz=295			*e*S	Sn	12 09 20.2	-0.2
WFSB	Wu-fen Shan baz=295	0.44	293	*e*P	Pn	12 09 08.6	+0.4
WFSB	baz=295			*e*S	Sn	12 09 20.1	-0.2
TWC	Suao baz=227	0.45	230	*e*P	Pn	12 09 08.4	+0.2
TWC	baz=227			*e*S	Sn	12 09 20.2	-0.1
ILA	Ilan baz=252	0.46	253	*e*S	Sn	12 09 20.3	-0.1
TWE	Neicheng baz=249	0.54	251	*e*P	Pn	12 09 09.0	+0.2
TWE	baz=249			*e*S	Sn	12 09 21.2	-0.2
NANB	Nanao baz=221	0.64	223	*e*P	Pn	12 09 09.7	0.0
NANB	baz=221			*e*S	Sn	12 09 22.7	-0.1
ENA	Nanau baz=221	0.65	224	*e*P	Pn	12 09 09.7	0.0
ENA	baz=221			*e*S	Sn	12 09 22.9	0.0
YM08	YM08 baz=298	0.65	296	*e*S	Sn	12 09 22.9	0.0
YM11	YM11 baz=295	0.65	294	*e*P	Pn	12 09 09.9	+0.2
YM11	baz=295			*e*S	Sn	12 09 22.9	-0.2
ENTT	Nioudou baz=246	0.66	247	*e*P	Pn	12 09 09.9	+0.2
ENTT	baz=246			*e*S	Sn	12 09 22.8	-0.2
YM05	YM05 baz=295	0.66	294	*e*P	Pn	12 09 10.1	+0.3
YM05	baz=295			*e*S	Sn	12 09 23.2	+0.1
YM10	YM10 baz=294	0.66	293	*e*P	Pn	12 09 10.0	+0.2
YM10	baz=294			*e*S	Sn	12 09 23.0	-0.1
NWLT	Wulai baz=259	0.67	260	*e*P	Pn	12 09 10.3	+0.4
NWLT	baz=259			*e*S	Sn	12 09 23.0	-0.2
TATO	Taipei baz=277	0.68	277	*e*P	Pn	12 09 10.2	+0.3
TATO	baz=277			*e*S	Sn	12 09 22.9	-0.4
YM04	YM04 baz=293	0.68	292	*e*P	Pn	12 09 10.1	+0.2
YM04	baz=293			*e*S	Sn	12 09 23.2	-0.2
YM03	YM03 baz=295	0.68	294	*e*S	Sn	12 09 23.7	+0.2
NTST	Danshui baz=291	0.76	291	*e*S	Sn	12 09 24.6	+0.1
JYNG	Yonagunijimaku	0.79	124	P	Pn	12 09 10.5	-0.4
JYNG				S	Sn	12 09 24.5	-0.5
YHNB	Yeheng baz=253	0.81	254	*e*P	Pn	12 09 11.2	+0.1
YHNB	baz=253			*e*S	Sn	12 09 25.2	-0.3
NSK	Sanguang baz=254	0.82	254	*e*P	Pn	12 09 11.4	+0.1
NSK	baz=254			*e*S	Sn	12 09 25.3	-0.4
YOJ	Yonaguni jima baz=119	0.83	121	*e*P	Pn	12 09 11.1	-0.3
YOJ	baz=119			*e*S	Sn	12 09 26.2	+0.4
YOJ	Yonaguni jima	0.83	121	P	Pn	12 09 11.0	-0.3
YOJ				*e*S	Sn	12 09 25.4	-0.4
NNSB	Datong baz=238	0.90	239	*e*P	Pn	12 09 12.4	+0.2
NNSB	baz=238			*e*S	Sn	12 09 26.9	-0.3
NNSH	Datong baz=238	0.90	239	*e*P	Pn	12 09 12.1	-0.1
NNSH	baz=238			*e*S	Sn	12 09 26.7	-0.5
NNS	Nan Shan baz=238	0.90	240	*e*P	Pn	12 09 12.3	+0.1
NNS	baz=238			*e*S	Sn	12 09 27.1	-0.2
NACB	Ninganchiao baz=217	0.93	219	*e*P	Pn	12 09 12.5	+0.3
NACB	baz=217			*e*S	Sn	12 09 27.3	-0.1
NCUH	Zhongli baz=274	0.95	274	*e*S	Sn	12 09 27.5	-0.4
TWD	Chiawan baz=213	1.00	215	*e*P	Pn	12 09 13.3	+0.4
TWD	baz=213			*e*S	Sn	12 09 28.6	-0.1
LIOB	Emei baz=257	1.13	257	*e*P	Pn	12 09 14.7	+0.2
LIOB	baz=257			*e*S	Sn	12 09 31.1	-0.3
SBCB	Hsinchu baz=264	1.14	265	*e*P	Pn	12 09 14.8	+0.4
SBCB	baz=264			*e*S	Sn	12 09 31.2	-0.2
ENLB	Shoufeng baz=208	1.15	210	*e*S	Sn	12 09 31.6	+0.1
HSN	Hsinchu baz=266	1.15	265	*e*P	Pn	12 09 14.4	-0.2
HSN	baz=266			*e*S	Sn	12 09 30.5	-1.1
NSTT	Nanjuang baz=256	1.15	257	*e*P	Pn	12 09 14.8	+0.2
NSTT	baz=256			*e*S	Sn	12 09 31.2	-0.4
TWT	Tachien baz=235	1.16	236	*e*P	Pn	12 09 15.3	+0.4
TWT	baz=235			*e*S	Sn	12 09 31.7	-0.4
WHF	Hehuan Shan baz=228	1.16	230	*e*P	Pn	12 09 15.0	-0.1
WHF	baz=228			*e*S	Sn	12 09 31.6	-0.9
TDCB	Techi baz=236	1.17	237	*e*P	Pn	12 09 15.3	+0.3
TDCB	baz=236			*e*S	Sn	12 09 32.0	-0.3
CHGB	Renai baz=228	1.27	229	*e*P	Pn	12 09 16.4	+0.2
CHGB	baz=228			*e*S	Sn	12 09 34.0	-0.5
ESL	Shilin baz=212	1.30	214	*e*P	Pn	12 09 16.8	+0.4
ESL	baz=212			*e*S	Sn	12 09 34.6	-0.2
NMLH	Miaoli baz=254	1.36	255	*e*P	Pn	12 09 17.6	+0.6
NMLH	baz=254			*e*S	Sn	12 09 35.5	-0.3
NSY	Sanyi baz=249	1.42	250	*e*P	Pn	12 09 18.5	+0.8
NSY	baz=249			*e*S	Sn	12 09 37.0	-0.2
EGFH	Guangfu baz=209	1.43	211	*e*P	Pn	12 09 18.6	+0.8
EGFH	baz=209			*e*S	Sn	12 09 37.7	+0.3
DPDB	Guoxing baz=233	1.47	234	*e*P	Pn	12 09 18.7	+0.3
DPDB	baz=233			*e*S	Sn	12 09 38.0	-0.3
IRIF	Iriomote-Funau	1.48	112	P	Pn	12 09 17.8	-0.6
IRIF				*e*S	Sn	12 09 38.0	-0.4
SMLT	Sun Moon Lake baz=229	1.58	230	*e*P	Pn	12 09 20.2	+0.5
SMLT	baz=229			*e*S	Sn	12 09 40.2	-0.6
TYC	Yuchr baz=230	1.60	232	*e*P	Pn	12 09 20.2	+0.4
TYC	baz=230			*e*S	Sn	12 09 40.6	-0.4
SSLB	Suanglung baz=225	1.61	227	*e*P	Pn	12 09 20.5	+0.5
SSLB	baz=225			*e*S	Sn	12 09 41.0	-0.3
EHY	Hungye baz=209	1.62	211	*e*P	Pn	12 09 20.8	+0.6
EHY	baz=209			*e*S	Sn	12 09 41.5	0.0
YULB	Yu-li baz=208	1.73	210	*e*P	Pn	12 09 22.2	+0.7
YULB	baz=208			*e*S	Sn	12 09 44.0	+0.1
WNT	Mingjian baz=233	1.74	234	*e*P	Pn	12 09 21.9	+0.3
WNT	baz=233			*e*S	Sn	12 09 43.9	-0.2
WJS	Zhushan baz=231	1.74	232	*e*P	Pn	12 09 22.2	+0.5
WJS	baz=231			*e*S	Sn	12 09 44.0	-0.2
JKRS	Kuro-shima	1.75	112	P	Pn	12 09 21.7	0.0
JKRS				*e*S	Sn	12 09 44.8	+0.5
JIJ	Ishigaki jima	1.82	107	P	Pn	12 09 22.2	-0.4
JIJ				S	Sn	12 09 45.3	-0.7
FULB	Fuli baz=206	1.90	207	*e*P	Pn	12 09 24.2	+0.5
FULB	baz=206			*e*S	Sn	12 09 47.7	0.0
JISG	Ishigakijimahi	1.92	99	P	Pn	12 09 23.8	-0.1
JISG				*e*S	Sn	12 09 48.1	0.0
CHN5	Tsauling baz=227	1.92	228	*e*P	Pn	12 09 24.4	+0.4
CHN5	baz=227			*e*S	Sn	12 09 47.8	-0.5
WDLH	Douliu baz=231	1.96	232	*e*P	Pn	12 09 25.0	+0.7
WDLH	baz=231			*e*S	Sn	12 09 48.6	-0.4
RLNB	Erlin baz=239	1.98	240	*e*S	Sn	12 09 49.5	0.0
ELDTW	Lidau baz=212	2.03	213	*e*P	Pn	12 09 25.9	+0.5
ELDTW	baz=212			*e*S	Sn	12 09 50.4	-0.5
CHY	Chiayi baz=229	2.16	230	*e*S	Sn	12 09 53.1	-0.5
TPUB	Ta-pu baz=222	2.16	223	*e*P	Pn	12 09 27.8	+0.7
TPUB	baz=222			*e*S	Sn	12 09 53.3	-0.5
WTP	Ta-pu baz=221	2.21	222	*e*S	Sn	12 09 54.5	-0.5
WSF	Szhu baz=235	2.22	236	*e*S	Sn	12 09 54.5	-0.6
JTJ	Tarama	2.26	96	P	Pn	12 09 28.7	+0.4
JTJ				S	Sn	12 09 57.1	+1.1
TWK	Hsinying baz=223	2.27	225	*e*P	Pn	12 09 28.9	+0.4
TWK	baz=223			*e*S	Sn	12 09 55.8	-0.7
CHN1	Nanshi baz=221	2.31	223	*e*S	Sn	12 09 56.5	-0.6
TWGBT	Beinan baz=206	2.32	207	*e*P	Pn	12 09 30.0	+0.9
TWGBT	baz=206			*e*S	Sn	12 09 57.1	-0.4
TWG	Pinlang baz=206	2.33	207	*e*P	Pn	12 09 29.9	+0.7
TWG	baz=206			*e*S	Sn	12 09 56.9	-0.6
SGST	Jiashian baz=219	2.35	220	*e*S	Sn	12 09 57.5	-0.6
SLGT	Liugui baz=216	2.39	218	*e*P	Pn	12 09 30.4	+0.5
SLGT	baz=216			*e*S	Sn	12 09 58.6	-0.3
VWUC	VWUC baz=272	2.52	273	*e*P	Pn	12 09 32.1	+0.4
VWUC	baz=272			*e*S	Sn	12 10 01.6	-0.5
MASBT	Mashibuluo baz=212	2.71	213	*e*P	Pn	12 09 34.5	+0.4
MASBT	baz=212			*e*S	Sn	12 10 05.7	-0.7
PNG	Penghu baz=241	2.78	242	*e*P	Pn	12 09 35.5	+0.5
PNG	baz=241			*e*S	Sn	12 10 07.1	-1.0
VCHM	Qimei baz=236	3.06	237	*e*P	Pn	12 09 39.5	+0.6
VCHM	baz=236			*e*S	Sn	12 10 13.6	-1.3

SOME ***28*** *12:26:24.1, 43°.57N×84°.80E, h5^{km}*

IDC ***28*** *12:26:28.2±5.2, 43°.62N×84°.55E, h24^{km}±25^{km}, mb1 3.2/4, mb1mx3.0/72, mbtmp3.3/4, ML2.6/4, Error ellipse: s-maj=43.3km s-min=29.0km az=37.0*

NNC ***28*** *12:26:30.9±2.5, 43°.64N×84°.48E, h20^{km}±9^{km}, mb3.6, mpv3.0, Error ellipse: s-maj=19.0km s-min=6.6km az=121.0*

ISC 28 12:26:27.2±1.6**, 43°.61N**±0°.07×**84°.70E**±0°.07**, h10**^{km}**, n21,** σ**2^{s}.74**/32**, 11C-2D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	Ketmen 16nm,0.2s	3.17	269	*e*P	Pb	12 27 22.6	-1.0
KTMS	80nm,0.4s			*e*S	Sg	12 28 05.0	-3.9
MK31	Makanchi Array 0.1nm,0.1s,baz=148,slow=15,SNR=102	3.61	333	⇑Pn	Pn	12 27 23.9	+0.7
MK31	2.3nm,0.3s,baz=152,slow=15,SNR=46			⇑Pg	Pb	12 27 35.1	+3.9
MK31	41nm,0.7s,baz=147,slow=28,SNR=12			Lg	Lg	12 28 21.9	
MKAR	Makanchi Array 0.4nm,0.3s,baz=149,slow=14,SNR=23	3.61	333	Pn	Pn	12 27 23.7	+0.5
MKAR	2.6nm,0.3s,baz=155,slow=17,SNR=31			Pg	Pb	12 27 32.7	+1.5
MKAR	3.9nm,0.3s,baz=155,slow=19,SNR=6.6			Sn	Sn	12 28 04.6	-1.4
MKAR	18nm,0.3s,baz=148,slow=46,SNR=18			Lg	Lg	12 28 21.6	
MAKZ	Makanchi 2.8nm,0.8s	3.73	330	⇑Pn	Pn	12 27 26.6	+1.7
MAKZ	4.2nm,0.4s			⇑Pg	Pg	12 27 38.0	-0.7
MAKZ	33nm,0.8s			⇓Lg	Lg	12 28 26.3	
PDGK	Podgornoye 2.0nm,0.4s	3.80	268	⇑Pn	Pn	12 27 26.4	+0.5
PDGK	5.7nm,0.4s			⇑Pg	Pb	12 27 36.9	+2.4
PDGK	62nm,0.9s			⇑Lg	Lg	12 28 26.4	
SHLS	Shalkode 25nm,0.4s	3.84	265	*e*P	Pn	12 27 31.0	+4.5
SHLS	107nm,0.6s			*e*S	Sb	12 28 20.0	-1.8
ZSN	Zaisan 2.1nm,0.4s	3.84	2	*e*P	Pb	12 27 34.4	-0.8
ZSN	19nm,0.6s			*e*S	Sb	12 28 25.4	+3.6
UZB	Uzynbulak 4.5nm,0.4s	4.16	266	*e*P	Pb	12 27 42.0	+1.3
UZB	25nm,0.5s			*e*S	Sg	12 28 39.3	-1.6
KAPS	Kapalarasan 7.7nm,0.4s	4.18	296	*e*P	Pb	12 27 43.5	+2.7
KAPS	38nm,0.6s			*e*S	Sg	12 28 41.7	+0.4
TDK	Taldyqorghan 65nm,0.4s	4.73	289	*e*P	Pb	12 27 53.4	+3.3
TDK	120nm,0.9s			*e*S	Sg	12 28 58.4	-0.5
KURS	Kuram	4.75	271	*e*P	Pb	12 27 53.5	+3.0
KURS				*e*S	Sg	12 28 58.8	-0.8
MDOK	Medeo 3.7nm,0.4s	5.59	268	*e*P	Pb	12 28 10.0	+5.0
MDOK	15nm,0.6s			*e*S	Sg	12 29 26.1	-0.6
KUU	Kurty 2.9nm,0.6s	6.06	276	*e*P	Pb	12 28 17.1	+4.2
KUU	22nm,0.5s			*e*S	Sg	12 29 37.9	-3.9
KST	Kastek 5.3nm,0.5s	6.40	268	*e*P	Pb	12 28 22.8	+4.1
KST	12nm,0.5s			⇑*i*S	Sg	12 29 47.8	-4.7
TKM2	Tokmak 2 13nm,1.0s	6.68	267	⇑Lg	Lg	12 29 59.9	
AAK	Ala-Archa 12nm,1.4s	7.53	266	⇑Lg	Lg	12 30 27.7	
KURBB	Kurchatov Arra 0.1nm,0.3s,baz=145,slow=13,SNR=2.9	8.18	331	Pn	Pn	12 28 25.3	-0.6
KURBB				Lg	Lg	12 30 46.9	

	0.2nm,0.3s,baz=149,slow=30,SNR=5.9						
KURBB	**Kurchatov Arra**	**8.18**	**331**	⇓Lg	Lg	12 30 46.7	
	26nm,0.8s						
KURK	**Kurchatov**	**8.23**	**332**	⇑Lg	Lg	12 30 47.7	
	15nm,0.6s						
ZALV	**Zalesovo Beam**	**10.35**	**0**	Pn	**Pn**	**12 28 56.7**	**+1.1**
	0.1nm,0.3s,baz=181,slow=7.1,SNR=2.3						
ZALV				Sn	**Sn**	**12 30 46.2**	**-5.4**
	0.6nm,0.3s,baz=182,slow=18,SNR=5.9						
ZALV				Lg	Lg	12 31 56.0	
	baz=189,slow=27,SNR=2.5						
SONM	**Songino Array**	**15.72**	**67**	Pn	**Pn**	**12 30 08.7**	**0.0**
	0.2nm,0.3s,baz=267,slow=11,SNR=7.8						

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*IDC **28** 12:39:04.9±4.1, 9°.64S×159°.80E, h20^{km}±27^{km}, mb3.6/8, mb1 3.8/8, mb1mx3.6/43, mbtmp3.7/8, MS2.9/2, Ms1 2.9/2, ms1mx2.6/37, Error ellipse: s-maj=31.9km s-min=8.6km az=129.0*

*ISCJB **28** 12:39:05.4±0.7, 9°.7S±0°.1×159°.7E±0°.2, h34^{km}, mb3.6/8, MS2.4/1, Error ellipse: s-maj=28.0km s-min=9.8km az=42.9*

ISC 28 12:39:06.9±1.0**, 9°.7S**±0°.2×**159°.8E**±0°.2**, h34**^{km}**, n12, σ1^{s}34**/12**, mb3.7**/8**, Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	**Honiara**	**0.26**	**30**	Pn	**Pb**	**12 39 13.5**	**-0.8**
	3µm,0.3s,baz=199,slow=5.5,SNR=1217						
HNR				Sn	**Sb**	**12 39 19.3**	**0.0**
	8µm,0.3s,baz=191,slow=22,SNR=96						
HNR	**Honiara**	**0.26**	**30**	*i* P	**Pn**	**12 39 13.0**	**-1.0**
HNR				*i* S	**Sb**	**12 39 22.5**	**+3.2**
DZM	**Mont Dzumac**	**13.89**	**153**	LR	LR	12 47 04.5	
	comp=Z,86nm,18.3s,baz=356,slow=34						
WRA	**Warramunga Arr**	**26.63**	**245**	P	**P**	**12 44 42.2**	**-0.3**
	1.0nm,0.6s,baz=72,slow=9.7,SNR=9.3						
GUMO	**Guam**	**27.45**	**327**	LR	LR	12 55 50.4	
	comp=Z,10nm,18.1s,baz=141,slow=37						
STKA	**Stephens Creek**	**27.82**	**215**	P	**P**	**12 44 53.6**	**+0.5**
	1.2nm,0.4s,baz=41,slow=15,SNR=5.7						
ASAR	**Alice Springs**	**28.39**	**237**	P	**P**	**12 44 57.0**	**-1.3**
	0.2nm,0.6s,baz=71,slow=9.0,SNR=2.9						
KSRS	**Korea Array**	**55.58**	**329**	P	**P**	**12 48 39.6**	**+0.5**
	0.5nm,0.8s,baz=141,slow=6.2,SNR=3.0						
VNDA	**Vanda**	**67.85**	**180**	P	**P**	**12 50 01.5**	**+0.3**
	0.6nm,0.7s,baz=334,slow=7.6,SNR=7.5						
SONM	**Songino Array**	**74.17**	**326**	P	**P**	**12 50 39.6**	**-0.6**
	0.4nm,0.6s,baz=140,slow=5.4,SNR=2.3						
ILAR	**Eielson Array**	**84.15**	**20**	P	**P**	**12 51 34.1**	**-0.1**
	0.3nm,0.5s,baz=232,slow=4.4,SNR=5.8						
MKAR	**Makanchi Array**	**88.55**	**318**	P	**P**	**12 51 57.5**	**+1.2**
	0.6nm,0.6s,baz=110,slow=6.6,SNR=5.4						

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*ISCJB **28** 12:54:19.9±0.4, 33°.81N±0°.07×38°.62W±0°.07, h10^{km}, mb4.1/37, MS3.8/45, Error ellipse: s-maj=9.9km s-min=8.1km az=173.7*

*IDC **28** 12:54:20.1±0.6, 33°.80N×38°.61W, h0^{km}, mb4.0/33, mb1 4.2/33, mb1mx4.0/70, mbtmp4.0/33, MS3.8/45, Ms1 3.8/45, ms1mx3.8/58, Error ellipse: s-maj=15.4km s-min=12.4km az=173.0*

*CSEM **28** 12:54:21.8±0.2, 33°.85N×38°.62W, h10^{km}, mb4.4, Error ellipse: s-maj=11.6km s-min=8.6km az=168.0*

*NEIC **28** 12:54:21.8±0.3, 33°.81N×38°.62W, h10^{km}, mb4.4/2, Error ellipse: s-maj=9.5km s-min=7.3km az=171.0*

*GCMT **28** 12:54:21.8±0.2, 33°.71N×38°.66W, h12^{km}, MW5.0/106, Moment Tensor Solution. s29,c32; s106,c168; Duration: 0 Moment tensor: Scale 10^{16}Nm; M$_{rr}$-1.08±.10; M$_{\theta\theta}$2.07±.10; M$_{\phi\phi}$-0.99±.09; M$_{r\theta}$-0.60±.26; M$_{\theta\phi}$2.97±.07; M$_{\phi r}$-0.78±.25; Best double couple: M$_0$3.46000×10^{16} NP1:φ$_s$14.00000°, δ89.00000°, λ-164.00000°. NP2: φ$_s$284.00000°, δ74.00000°, λ-1.00000°. Principal axes: T 4.0460, Plg10.0000°, Azm148.0000°; N -1.1730, Plg74.0000°, Azm18.0000°; P -2.8750, Plg12.0000°, Azm240.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 28 12:54:21.8±0.5**, 33°.79N**±0°.10×**38°.66W**±0°.08**, h10**^{km}**, n80, σ1^{s}78**/53**, mb4.1**/37**, MS3.8**/45**, 3C-4D, Northern Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ESDC	**Sonseca Array**	**28.30**	**68**	P	**P**	**13 00 14.6**	**-1.0**
	0.2nm,0.4s,baz=289,slow=8.2,SNR=6.1						
ESDC				LR	LR	13 09 11.7	
	comp=Z,96nm,19.1s,baz=275,slow=32						
MDT	**Midelt**	**28.40**	**82**	P	**P**	**13 00 16.7**	**+0.1**
	0.5nm,0.4s,baz=293,slow=6.5,SNR=2.5						
MDT				LR	LR	13 09 51.5	
	comp=Z,201nm,18.6s,baz=292,slow=33						
SCHQ	**Schefferville**	**28.80**	**325**	LR	LR	13 10 18.2	
	comp=Z,257nm,21.5s,baz=126,slow=33						
SJG	**San Juan**	**29.11**	**244**	LR	LR	13 09 11.3	
	comp=Z,131nm,21.5s,baz=96,slow=31						
BORG	**Borgarnes**	**32.74**	**14**	LR	LR	13 09 16.9	
	comp=Z,136nm,19.6s,baz=216,slow=27						
SFJD	**Kangerlussuaq**	**33.98**	**352**	LR	LR	13 11 28.3	
	comp=Z,196nm,20.8s,baz=170,slow=30						
FRB	**Frobisher Bay**	**35.22**	**337**	P	**P**	**13 01 15.1**	**-0.8**
	9.4nm,1.1s,baz=124,slow=6.0,SNR=3.6						
KOWA	**Kowa**	**36.74**	**113**	P	**P**	**13 01 28.0**	**-1.5**
	9.6nm,0.7s,baz=317,slow=7.3,SNR=20						
KOWA				LR	LR	13 14 13.4	
	comp=Z,81nm,20.5s,baz=222,slow=32						
TKL	**Tuckaleechee C**	**36.88**	**286**	LR	LR	13 13 36.8	
	comp=Z,174nm,20.8s,baz=84,slow=31						
DAVOX	**Davos/Dischmat**	**38.64**	**56**	P	**P**	**13 01 46.1**	**+0.6**
	2.3nm,0.7s,baz=251,slow=8.7,SNR=4.7						
DAVOX				LR	LR	13 14 40.4	
	comp=Z,254nm,21.6s,baz=263,slow=32						
KEST	**Kesra**	**39.18**	**73**	P	**P**	**13 01 50.8**	**+0.8**
	1.4nm,0.7s,baz=71,slow=14,SNR=3.0						
KEST				LR	LR	13 15 31.6	
	comp=Z,110nm,20.8s,baz=236,slow=32						
PTGA	**Pitinga**	**39.76**	**215**	P	**P**	**13 01 55.5**	**+0.6**
	1.1nm,0.3s,baz=20,slow=14,SNR=3.6						
JMIC	**Jan Mayen**	**40.62**	**15**	P	**P**	**13 02 01.2**	**-0.2**
	4.2nm,0.5s,baz=179,slow=8.8,SNR=2.1						
CLL	**Collm**	**40.96**	**49**	*e*P	**P**	**13 02 04.0**	**-0.5**
CLL				*e*S	**S**	**13 08 13.0**	**-3.2**
CLL				*e*SS	**SnSn**	**13 11 33.0**	**+8.0**
TIC	**Toumodi**	**41.20**	**123**	*e*P	**P**	**13 02 08.8**	**+1.9**
GERES	**GERESS Array B**	**41.27**	**52**	P	**P**	**13 02 06.7**	**-0.6**
	0.8nm,0.6s,baz=269,slow=7.7,SNR=8.4						
DBIC	**Dimbokro**	**41.30**	**123**	P	**P**	**13 02 06.3**	**-1.3**
	10nm,0.6s,baz=298,slow=7.4,SNR=14						
DBIC				LR	LR	13 16 27.5	
	comp=Z,137nm,21.6s,baz=290,slow=32						
LIC	**Lamto**	**41.50**	**124**	*e*P	**P**	**13 02 07.3**	**-2.0**
	58nm,0.8s						
BRG	**Berggiesshubel**	**41.52**	**49**	*e*(P)	**P**	**13 02 13.8**	**+4.7**
	5.1nm,1.5s						
KIC	**Kosan Boka**	**41.60**	**123**	*e*P	**P**	**13 02 08.6**	**-1.6**
	24nm,0.7s						
NB2	**NORSAR Subarra**	**41.86**	**34**	P	**P**	**13 02 11.6**	**-0.1**
	comp=Z,2.8nm,1.0s,baz=254,slow=8.6						
NOA	**NORSAR Array B**	**41.86**	**34**	P	**P**	**13 02 11.7**	**-0.1**
	comp=Z,1.7nm,0.9s,baz=254,slow=8.5,SNR=4.8						
NOA				LR	LR	13 16 32.4	
	comp=Z,131nm,21.7s,baz=250,slow=32						
TORD	**Torodi Ar. Bea**	**41.98**	**109**	P	**P**	**13 02 11.1**	**-2.2**
	comp=Z,5.2nm,1.0s,baz=304,slow=6.2						
HFS	**Hagfors**	**42.79**	**36**	P	**P**	**13 02 17.9**	**-1.5**
	comp=Z,2.2nm,0.9s,baz=243,slow=13,SNR=3.2						
HFS				LR	LR	13 16 49.3	
	comp=Z,173nm,21.8s,baz=244,slow=32						
VAE	**Valguarnera**	**42.82**	**69**	LR	LR	13 18 16.1	
	comp=Z,233nm,18.3s,baz=133,slow=34						
ROSC	**El Rosal**	**43.89**	**237**	LR	LR	13 19 22.4	
	comp=Z,83nm,21.2s,baz=90,slow=34						
ULM	**Lac du Bonnet**	**44.44**	**310**	P	**P**	**13 02 31.1**	**-1.7**
	comp=Z,3.1nm,0.7s,baz=106,slow=5.1,SNR=4.4						
ULM				LR	LR	13 19 44.1	
	comp=Z,291nm,21.0s,baz=122,slow=34						
AGMN	**Agassiz Nation**	**44.49**	**307**	*e*P	**P**	**13 02 33.8**	**+0.6**
	comp=Z,1.3nm,0.3s						
VYHS	**Vyhne**	**44.68**	**53**	*e*P	**P**	**13 02 37.3**	**+2.6**
BZS	**Buzias**	**46.83**	**57**	⇓*i*P	**P**	**13 02 52.5**	**+0.7**
H10N2	**ASCENSION HYDR**	**47.32**	**147**	T	T	13 53 01.2	
	baz=332,slow=75,SNR=1742						
H10N3	**ASCENSION HYDR**	**47.33**	**147**	T	T	13 53 01.7	
	baz=332,slow=75,SNR=1752						
H10N1	**ASCENSION HYDR**	**47.34**	**147**	T	T	13 53 02.7	
	baz=332,slow=75,SNR=3370						
H10S1	**ASCENSION HYDR**	**48.23**	**147**	T	T	13 54 04.1	
	baz=333,slow=75,SNR=1900						
H10S3	**ASCENSION HYDR**	**48.24**	**147**	T	T	13 54 04.4	
	baz=333,slow=75,SNR=1348						
H10S2	**ASCENSION HYDR**	**48.25**	**147**	T	T	13 54 05.4	
	baz=333,slow=75,SNR=2198						
JTS	**JuntasAbangare**	**48.35**	**252**	LR	LR	13 20 43.8	
	comp=Z,172nm,21.6s,baz=152,slow=33						
FINES	**FINESS Array B**	**48.98**	**35**	P	**P**	**13 03 07.0**	**-1.2**
	comp=Z,1.2nm,0.8s,baz=256,slow=0.8,SNR=4.6						
FINES				LR	LR	13 21 12.1	
	comp=Z,136nm,18.6s,baz=245,slow=33						
VOIR		**49.24**	**56**	⇑*i*P	**P**	**13 03 09.5**	**-1.0**
ARCES	**ARCESS Array B**	**49.77**	**24**	P	**P**	**13 03 12.3**	**-1.8**
	comp=Z,0.2nm,22.1s,baz=15,slow=25,SNR=2.6						
MLR	**Muntele Rosu**	**49.86**	**56**	P	**P**	**13 03 15.7**	**+0.5**
	comp=Z,5.4nm,0.7s,baz=187,slow=8.7,SNR=5.3						
MLR				LR	LR	13 22 56.8	
	comp=Z,99nm,19.7s,baz=284,slow=34						
MLR	**Muntele Rosu**	**49.86**	**56**	⇑*i*P	**P**	**13 03 15.7**	**+0.5**
BDFB	**Brasilia**	**49.96**	**192**	P	**P**	**13 03 16.8**	**+0.6**
	comp=Z,1.9nm,0.5s,baz=56,slow=8.6,SNR=3.2						
BDFB				LR	LR	13 21 48.4	
	comp=Z,162nm,18.0s,baz=106,slow=33						
SPITS	**Spitsbergen Ar**	**50.20**	**13**	LR	LR	13 18 50.3	
	comp=Z,125nm,20.1s,baz=285,slow=29						
PLOR	**Plostina**	**50.28**	**56**	⇓*i*P	**P**	**13 03 19.2**	**+0.8**
VRI	**Vrincioaia**	**50.33**	**56**	⇑*i*P	**P**	**13 03 20.5**	**+1.8**
SORM	**Soroca**	**51.03**	**52**	⇓*i*P	**P**	**13 03 21.0**	**-2.9**
KIEV	**Kiev**	**51.19**	**49**	*e*P	**P**	**13 03 24.5**	**-0.6**
	comp=Z,6.2nm,1.0s						
AKASG	**Malin Array Be**	**51.20**	**49**	P	**P**	**13 03 24.5**	**-0.6**
	comp=Z,6.3nm,0.9s,baz=273,slow=7.2,SNR=14						
TLB	**Topalu**	**51.49**	**57**	⇓*i*P	**P**	**13 03 26.4**	**-1.0**
IDI	**Anoyia**	**51.55**	**69**	LR	LR	13 23 47.7	
	comp=Z,12nm,20.2s,baz=256,slow=34						
YKA	**Yellowknife Ar**	**54.25**	**326**	LR	LR	13 26 10.5	
	comp=Z,30nm,19.5s,baz=82,slow=35						
TXAR	**Lajitas Array**	**54.76**	**284**	P	**P**	**13 03 51.8**	**-0.1**
	comp=Z,0.5nm,0.8s,baz=92,slow=7.5,SNR=4.3						
TXAR				LR	LR	13 24 12.6	
	comp=Z,128nm,21.8s,baz=0.0,slow=33						
PDAR	**Pinedale Array**	**54.88**	**302**	P	**P**	**13 03 52.5**	**-0.2**
	comp=Z,0.6nm,0.7s,baz=70,slow=10,SNR=6.8						
PDAR				LR	LR	13 25 15.4	
	comp=Z,101nm,21.9s,baz=89,slow=34						
ANMO	**Albuquerque**	**54.96**	**292**	P	**P**	**13 03 53.7**	**+0.3**
	comp=Z,0.2nm,0.3s,baz=309,slow=9.9,SNR=2.0						
ANMO				LR	LR	13 25 25.0	
	comp=Z,125nm,20.3s,baz=72,slow=34						
BRTR	**Keskin Array B**	**56.79**	**61**	P	**P**	**13 04 06.6**	**+0.2**
	comp=Z,2.0nm,0.8s,baz=277,slow=4.0,SNR=8.5						
BRTR				LR	LR	13 27 24.0	
	comp=Z,26nm,20.0s,baz=279,slow=35						
LPAZ	**La Paz**	**57.18**	**214**	P	**P**	**13 04 11.1**	**+1.3**
	comp=Z,1.4nm,0.9s,baz=38,slow=8.4,SNR=3.3						
LPAZ				LR	LR	13 25 55.8	
	comp=Z,196nm,21.9s,baz=30,slow=33						
NNA	**Nana**	**58.25**	**225**	LR	LR	13 28 42.6	
	comp=Z,86nm,20.6s,baz=17,slow=35						
KBZ	**Khabaz**	**61.97**	**54**	P	**P**	**13 04 42.1**	**+0.3**
	comp=Z,3.8nm,0.9s,baz=276,slow=7.3,SNR=5.7						
KBZ				LR	LR	13 30 26.7	
	comp=Z,59nm,19.2s,baz=328,slow=35						
LPIG	**La Paz**	**62.33**	**282**	LR	LR	13 29 31.8	
	comp=Z,68nm,20.8s,baz=256,slow=34						
CPUP	**Villa Florida**	**62.37**	**199**	LR	LR	13 28 25.0	
	comp=Z,64nm,21.9s,baz=23,slow=33						
NVAR	**Mina Array Bea**	**62.60**	**300**	P	**P**	**13 04 46.3**	**-0.2**
	comp=Z,0.3nm,0.8s,baz=89,slow=4.1,SNR=2.9						
NVAR				LR	LR	13 32 01.1	
	comp=Z,146nm,18.9s,baz=288,slow=36						
YBH	**Yreka Blue Hor**	**64.42**	**304**	LR	LR	13 33 49.0	
	comp=Z,115nm,18.1s,baz=59,slow=37						
GNI	**Garni**	**64.60**	**57**	LR	LR	13 33 45.7	
	comp=Z,42nm,18.8s,baz=292,slow=37						
ARU	**Arti**	**66.29**	**37**	P	**P**	**13 05 10.7**	**+0.6**
	comp=Z,1.0nm,0.3s,baz=261,slow=8.5,SNR=2.2						
ILAR	**Eielson Array**	**67.14**	**334**	P	**P**	**13 05 15.9**	**+0.5**
	comp=Z,0.4nm,1.0s,baz=68,slow=5.0,SNR=3.4						
ILAR				LR	LR	13 34 39.3	
	comp=Z,52nm,18.2s,baz=88,slow=36						
AKTO	**Aktyubinsk**	**68.67**	**43**	P	**P**	**13 05 25.6**	**+0.3**
	comp=Z,1.9nm,0.7s,baz=305,slow=7.9,SNR=4.4						
AKTO				LR	LR	13 34 51.1	
	comp=Z,125nm,18.8s,baz=304,slow=35						
BVAR	**Borovoye Array**	**73.92**	**36**	P	**P**	**13 05 56.4**	**-0.6**
	comp=Z,0.5nm,0.5s,baz=254,slow=9.1,SNR=4.5						
BVAR				LR	LR	13 36 02.0	
	comp=Z,126nm,21.4s,baz=300,slow=34						
H09N1	**TRISTAN DA CUN**	**74.65**	**158**	T	T	14 27 13.6	
	SNR=9.2						
H09W1	**TRISTAN DA CUN**	**74.67**	**158**	T	T	14 27 16.9	
GEYT	**Alibeck**	**74.86**	**54**	LR	LR	13 39 09.5	
	comp=Z,35nm,18.5s,baz=270,slow=36						
ATD	**Arta Tunnel**	**76.67**	**85**	LR	LR	13 39 36.5	
	comp=Z,118nm,19.2s,baz=275,slow=35						
KURK	**Kurchatov**	**79.36**	**35**	P	**P**	**13 06 27.5**	**-0.2**
KURBB	**Kurchatov Arra**	**79.38**	**35**	P	**P**	**13 06 27.5**	**-0.3**
	comp=Z,0.9nm,0.3s,baz=317,slow=5.9,SNR=4.8						
ZALV	**Zalesovo Beam**	**79.92**	**30**	P	**P**	**13 06 31.6**	**+0.9**
	comp=Z,0.3nm,0.2s,baz=162,slow=31,SNR=2.8						
ZALV				LR	LR	13 41 50.3	
	comp=Z,23nm,18.4s,baz=72,slow=36						
MKAR	**Makanchi Array**	**83.80**	**36**	P	**P**	**13 06 51.6**	**+0.2**
	comp=Z,1.1nm,0.9s,baz=196,slow=30,SNR=4.5						
MKAR				LR	LR	13 43 28.1	
	comp=Z,114nm,19.9s,baz=295,slow=35						
BOSA	**Boshof**	**86.67**	**128**	LR	LR	13 44 04.8	
	comp=Z,77nm,18.7s,baz=248,slow=34						
PETK	**Petropavlovsk-**	**92.30**	**350**	LR	LR	13 48 59.8	
	comp=Z,76nm,19.3s,baz=14,slow=36						
SONM	**Songino Array**	**92.91**	**23**	LR	LR	13 49 28.4	
	comp=Z,33nm,20.4s,baz=338,slow=36						
ASAR	**Alice Springs**	**167.99**	**35**	PKPab	**PKPab**	**13 15 37.4**	**+1.2**
	comp=Z,0.5nm,0.9s,baz=345,slow=3.9,SNR=4.8						

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*ISCJB **28** 12:56:48.5±0.7, 39°.72N±0°.07×88°.26E±0°.08, h10^{km}, mb3.6/8, MS3.3/2, Error ellipse: s-maj=12.3km s-min=6.7km az=37.4*

*BJI **28** 12:56:49.5, 39°.57N×88°.29E, h8^{km}, mb3.9/2, ML3.8/12*

*IDC **28** 12:56:49.0±1.1, 39°.68N×88°.44E, h0^{km}, mb3.7/8, mb1 3.8/13, mb1mx3.5/75, mbtmp3.7/13, ML3.5/5, MS3.0/3, Ms1 3.0/3, ms1mx2.5/68, Error ellipse: s-maj=34.7km s-min=16.5km az=51.0*

*NNC **28** 12:56:50.4±3.9, 39°.65N×88°.39E, h22^{km}±39^{km}, mb4.1, mpv3.9, Error ellipse: s-maj=41.6km s-min=27.3km az=143.0*

ISC 28 12:56:49.9±1.0**, 39°.57N**±0°.08×**88°.28E**±0°.08**, h10**^{km}**, n22, σ1^{s}30**/22**, mb3.7**/8**, 5C-4D, Southern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMQ	**Urumqi**	**4.28**	**354**	*e*Pn	**Pn**	**12 57 55.8**	**+0.7**
WMQ				Sg	**Sb**	**12 58 59.5**	**+2.6**
WMQ				smax	smax		
	comp=N,440nm,1.1s						
WMQ				smax	smax		
	comp=E,440nm,0.7s						
PDGK	**Podgornoye**	**7.60**	**302**	⇑Pn	**Pn**	**12 58 41.0**	**+0.2**
	3.4nm,0.4s						
PDGK				⇑Sn	**Sn**	**13 00 07.6**	**+0.6**
	26nm,0.7s						
PDGK				⇓Lg	Lg	13 00 52.5	
	25nm,0.9s						
MK31	**Makanchi Array**	**8.45**	**331**	Pn	**Pn**	**12 58 51.4**	**-0.9**
	1.5nm,0.3s,baz=145,slow=14,SNR=71						
MK31				⇑Sn	**Sn**	**13 00 27.9**	**+0.2**
	4.8nm,0.7s						
MKAR	**Makanchi Array**	**8.45**	**331**	Pn	**Pn**	**12 58 51.2**	**-1.1**
	1.6nm,0.3s,baz=147,slow=14,SNR=65						
MKAR				Sn	**Sn**	**13 00 26.7**	**-0.9**
	0.6nm,0.3s,baz=165,slow=22,SNR=3.3						
MKAR				Lg	Lg	13 01 11.9	
	0.5nm,0.3s,baz=147,slow=29,SNR=3.7						
MKAR				LR	LR	13 01 47.1	
	comp=Z,19nm,19.6s,baz=188,slow=36						
MAKZ	**Makanchi**	**8.58**	**330**	⇑Pn	**Pn**	**12 58 52.7**	**-1.5**
	2.1nm,0.5s						
MAKZ				⇓Sn	**Sn**	**13 00 28.4**	**-2.6**
	2.3nm,0.3s						
GTA	**Gaotai**	**8.92**	**87**	*e*P	Pg	12 59 36.8	-3.9
GTA				pP	Pn	12 59 41.3	+42
GTA				sP		12 59 44.0	
GTA				S	Sg	13 01 51.0	+15
GTA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
GTA				pmax	pmax		
	comp=Z,71nm,5.1s						
GTA				LR	LR		
	comp=N,210nm,13.0s						
GTA				LR	LR		
	comp=E,170nm,14.3s						
GTA				LR	LR		
	comp=Z,240nm,12.4s						
TKM2	**Tokmak 2**	**10.12**	**293**	⇓Pn	**Pn**	**12 59 15.5**	**0.0**
	comp=Z,3.8nm,0.5s						
TKM2				⇑Sn	**Sn**	**13 01 07.8**	**-1.4**
	comp=Z,5.6nm,0.6s						
KURBB	**Kurchatov Arra**	**13.01**	**331**	Pn	Pn	12 59 52.0	-2.7
	comp=Z,0.1nm,0.3s,baz=143,slow=13,SNR=6.4						
KURBB	**Kurchatov Arra**	**13.01**	**331**	⇓Pn	Pn	12 59 51.0	-3.7
	comp=Z,1.5nm,0.8s						
ZALV	**Zalesovo Beam**	**14.58**	**352**	Pn	Pn	13 00 13.5	-2.6
	comp=Z,0.3nm,0.3s,baz=182,slow=11,SNR=3.1						
SONM	**Songino Array**	**15.46**	**52**	Pn	**Pn**	**13 00 25.9**	**-2.2**
	comp=Z,0.3nm,0.3s,baz=241,slow=15,SNR=3.1						
SONM				Lg	Lg	13 04 55.8	
	comp=Z,0.0nm,0.3s,baz=237,slow=27,SNR=3.0						
BVAR	**Borovoye Array**	**18.21**	**324**	P	**Pn**	**13 01 01.2**	**-1.4**
	comp=Z,0.3nm,0.3s,baz=131,slow=9.8,SNR=9.4						
ARU	**Arti**	**25.78**	**321**	P	**P**	**13 02 22.2**	**+1.5**
	comp=Z,2.2nm,0.4s,baz=104,slow=5.7,SNR=5.6						
FINES	**FINESS Array B**	**43.15**	**322**	P	**P**	**13 04 50.7**	**+0.4**
	comp=Z,0.6nm,0.6s,baz=109,slow=10,SNR=4.1						
MA2	**Magadan**	**43.29**	**41**	LR	LR	13 25 38.3	
	comp=Z,23nm,18.4s,baz=222,slow=40						
ARCES	**ARCESS Array B**	**44.09**	**333**	P	**P**	**13 04 58.6**	**+0.8**
	comp=Z,1.6nm,1.1s,baz=96,slow=6.1,SNR=3.6						
DAV	**Davao City (W)**	**46.54**	**124**	LR	LR	13 25 00.1	
	comp=Z,52nm,19.2s,baz=176,slow=36						
HFS	**Hagfors**	**49.30**	**320**	P	**P**	**13 05 39.2**	**+0.5**
	comp=Z,0.6nm,0.5s,baz=90,slow=5.9,SNR=5.6						
NOA	**NORSAR Array B**	**50.33**	**322**	P	**P**	**13 05 46.8**	**+0.2**
	comp=Z,0.6nm,0.7s,baz=77,slow=7.7,SNR=4.6						
ILAR	**Eielson Array**	**67.42**	**22**	P	**P**	**13 07 45.3**	**+0.1**
	comp=Z,0.2nm,0.7s,baz=338,slow=6.8,SNR=3.2						
WRA	**Warramunga Arr**	**73.17**	**135**	P	**P**	**13 08 21.6**	**+0.6**
	comp=Z,0.7nm,0.9s,baz=332,slow=5.9,SNR=5.3						
ASAR	**Alice Springs**	**75.97**	**138**	P	**P**	**13 08 37.4**	**+0.2**
	comp=Z,0.4nm,0.7s,baz=349,slow=9.4,SNR=3.9						

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*CSEM **28** 13:10:29.8±0.4, 35°.15N×27°.54E, h2^{km}, ML2.6, Error ellipse: s-maj=12.3km s-min=5.0km az=159.0*

*ATH **28** 13:10:29.9, 35°.16N×27°.48E, h14^{km}±2^{km}, ML2.7/4, Error ellipse: s-maj=4.2km s-min=1.3km az=329.0*

*THE **28** 13:10:32.0, 35°.25N×27°.40E, h0^{km}±2^{km}, ML2.6/2, Error ellipse: s-maj=3.9km s-min=1.4km az=186.0*

*DDA **28** 13:11:38.4, 35°.60N×28°.04E, h16^{km}, Ml2.9*

ISC 28 13:10:27.9±1.4**, 35°.18N**±0°.06×**27°.55E**±0°.03**, h3**^{km}±12^{km}**, n37, σ1^{s}93**/58**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KARP	**Karpathos**	**0.48**	**319**	P	**Pb**	**13 10 38.8**	**-0.2**
KARP				S	**Sb**	**13 10 46.2**	**-0.4**
KARP				AML	AML	13 10 51.1	
	comp=E,3719µm,0.4s						
KARP				AML	AML	13 10 52.6	
	comp=N,3878µm,0.6s						
KARP	**Karpathos**	**0.48**	**319**	P	**Pb**	**13 10 38.8**	**-0.2**
KARP				S	**Sb**	**13 10 46.0**	**-0.6**
KARP	**Karpathos**	**0.48**	**319**	P	**Pb**	**13 10 38.9**	**-0.2**
KARP				S	**Sb**	**13 10 46.0**	**-0.6**
ZKR	**Zakros**	**1.10**	**267**	P	**Pg**	**13 10 49.0**	**+0.1**
ZKR				S	**Sb**	**13 11 04.2**	**+0.1**
ZKR				AML	AML	13 11 11.1	
	comp=N,639µm,0.6s						
ZKR				AML	AML	13 11 12.4	
	comp=E,925µm,0.6s						
ZKR	**Zakros**	**1.10**	**267**	P	**Pb**	**13 10 49.2**	**-0.3**
ZKR	**Zakros**	**1.10**	**267**	P	**Pb**	**13 10 49.2**	**-0.3**
ZKR				S	**Sb**	**13 11 04.0**	**-0.2**
ARG	**Arkhangelos**	**1.13**	**24**	P	**Pn**	**13 10 52.8**	**+2.2**
ARG				S	**Sn**	**13 11 07.2**	**+0.5**
ARG				AML	AML	13 11 23.4	
	comp=N,418µm,0.6s						
ARG				AML	AML	13 11 26.4	
	comp=E,591µm,0.9s						
ARG	**Arkhangelos**	**1.13**	**24**	P	**Pn**	**13 10 53.5**	**+2.9**
ARG				S	**Sn**	**13 11 09.8**	**+3.1**
ARG	**Arkhangelos**	**1.13**	**24**	P	**Pn**	**13 10 52.4**	**+1.8**
ARG				S	**Sn**	**13 11 07.7**	**+1.0**
NPS	**Neapolis**	**1.59**	**273**	P	**Pg**	**13 10 58.6**	**+0.2**
NPS	**Neapolis**	**1.59**	**273**	P	**Pg**	**13 10 58.2**	**-0.2**
NPS	**Neapolis**	**1.59**	**273**	P	**Pg**	**13 10 58.6**	**+0.2**
LAST	**Lasithi**	**1.70**	**270**	P	**Pb**	**13 10 59.6**	**-0.2**
LAST				S	**Sg**	**13 11 22.1**	**-0.4**
LAST				AML	AML	13 11 32.8	
	comp=E,191µm,0.6s						
LAST				AML	AML	13 11 41.5	
	comp=N,218µm,1.4s						
LAST	**Lasithi**	**1.70**	**270**	P	**Pg**	**13 11 00.1**	**-0.4**
LAST	**Lasithi**	**1.70**	**270**	P	**Pg**	**13 11 00.1**	**-0.4**
LAST				S	**Sg**	**13 11 22.4**	**-0.1**
TURN	**Turunc**	**1.89**	**26**	*i* P	**Pn**	**13 10 59.5**	**-1.5**
TURN				*i* S	**Sn**	**13 11 23.3**	**-2.0**
TURN	**Turunc**	**1.89**	**26**	P	**Pn**	**13 10 59.5**	**-1.5**
AKAS	**Kas**	**1.97**	**57**	*i* P	**Pb**	**13 11 03.8**	**-0.7**
AKAS				*i* S	**Sn**	**13 11 28.1**	**+0.6**
AKAS	**Kas**	**1.97**	**57**	*i* P	**Pb**	**13 11 04.0**	**-0.5**
AKAS				*i* S	**Sn**	**13 11 26.6**	**-1.0**
AKAS	**Kas**	**1.97**	**57**	P	**Pb**	**13 11 03.8**	**-0.7**
AKAS				S	**Sn**	**13 11 26.6**	**-1.0**
ELL	**Elmali**	**2.47**	**50**	*e*PG	Pg	13 11 24.9	+10
ELL				SG	**Sn**	**13 11 31.9**	**-7.9**
TAVA	**DENIZLI_Tavas**	**2.53**	**25**	*i* P	**Pn**	**13 11 11.9**	**+2.0**
TAVA				*i* S	**Sb**	**13 11 45.3**	**-0.2**
TAVA	**DENIZLI_Tavas**	**2.53**	**25**	P	**Pn**	**13 11 11.9**	**+2.0**
TAVA				S	**Sb**	**13 11 45.3**	**-0.2**
VAM	**Vamos**	**2.75**	**276**	P	**Pb**	**13 11 16.2**	**-1.5**
VAM	**Vamos**	**2.75**	**276**	P	**Pb**	**13 11 15.8**	**-1.9**
KORT	**Korkueli**	**2.90**	**50**	PG	**Pb**	**13 11 19.3**	**-1.1**
KORT				SG	**Pg**	**13 11 22.6**	**-1.0**
KORT	**Korkueli**	**2.90**	**50**	*i* P	**Pb**	**13 11 19.2**	**-1.2**
KORT				*i* S	**Pg**	**13 11 22.9**	**-0.6**
KORT	**Korkueli**	**2.90**	**50**	P	**Pb**	**13 11 19.2**	**-1.2**
IMMV	**Iera Moni Meta**	**2.93**	**276**	P	**Pb**	**13 11 19.1**	**-1.8**
IMMV	**Iera Moni Meta**	**2.93**	**276**	P	**Pb**	**13 11 18.5**	**-2.3**
ANKY	**Antikythira Is**	**3.53**	**282**	P	**Pb**	**13 11 27.8**	**-3.3**
ANKY	**Antikythira Is**	**3.53**	**282**	P	**Pn**	**13 11 27.1**	**+3.5**
SUTC	**Sutluce-Ispart**	**3.60**	**50**	*e*PG	**Pb**	**13 11 28.8**	**-3.5**
SUTC				SG	**Pg**	**13 11 41.4**	**+4.4**
KEPZ	**Antalya-Kepez**	**3.70**	**61**	*i* P	**Pn**	**13 11 27.9**	**+1.8**
KEPZ				*i* S	**Sn**	**13 12 11.2**	**+1.0**
KEPZ	**Antalya-Kepez**	**3.70**	**61**	P	**Pn**	**13 11 27.9**	**+1.8**
KEPZ				S	**Sn**	**13 12 11.2**	**+1.0**
VLI	**Veliai**	**4.05**	**294**	P	**Pn**	**13 11 32.1**	**+1.4**
VLI	**Veliai**	**4.05**	**294**	P	**Pn**	**13 11 32.9**	**+2.2**

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*NIED **28** 13:17:00, 36°.30N×139°.40E, h145^{km}, Mw3.9 Best double couple: M$_0$8.94000×10^{14} NP1:φ$_s$296.00000°, δ39.00000°, λ143.00000°. NP2:φ$_s$56.00000°, δ68.00000°, λ57.00000°.*

*ISCJB **28** 13:17:35.1±0.3, 36°.25N±0°.04×139°.38E±0°.06, h147^{km}±2^{km}, mb3.8/24, Error ellipse: s-maj=8.6km s-min=6.0km az=178.4*

*JMA **28** 13:17:36.8±0.1, 36°.26N×139°.42E, h137^{km}±1^{km}, M3.9 Broadband fault plane solution: P waves. NP1: φ$_s$52.00000°, δ73.00000°, λ62.00000°. NP2:φ$_s$293.00000°, δ32.00000°, λ146.00000°. Principal axes: T Plg54.0000°, Azm288.0000°; N Plg26.0000°, Azm61.0000°; P Plg23.0000°, Azm163.0000°;*

JMA Felt I J1.

*IDC **28** 13:17:36.3±0.6, 36°.22N×139°.32E, h143^{km}±5^{km}, mb3.6/23, mb1 3.7/26, mb1mx3.6/69, mbtmp4.0/26 Error ellipse: s-maj=15.7km s-min=7.6km az=66.0*

ISC 28 13:17:36.3±0.7**, 36°.30N**±0°.05×**139°.38E**±0°.06**, h141**^{km}±5^{km}**, n46, σ1^{s}01**/59**, mb3.9**/24**, 5C-5D, Eastern Honshu**

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

JAG	Ashikaga	0.13	26	⇑P	Pn	13 17 55.6	+0.3
JAG				S	Sn	13 18 09.6	-0.2
JHU	Hanno	0.46	190	⇑P	Pn	13 17 56.9	+0.5
JHU				S	Sn	13 18 11.6	0.0
JKT	Katashina	0.47	347	⇓P	Pn	13 17 57.2	+0.7
JKT				S	Sn	13 18 12.7	+0.7
JRY	Ryogami san	0.48	234	⇑P	Pn	13 17 57.0	+0.5
JRY				S	Sn	13 18 12.2	+0.4
MJAR	Matsushiro Arr	0.97	284	P	Pn	13 17 59.7	-0.2
	84nm,0.3s,baz=220,slow=6.0,SNR=164						
MJAR				S	Sn	13 18 18.1	+0.2
	55nm,0.3s,baz=90,slow=14,SNR=25						
MAT	Matsushiro	0.98	284	P	Pn	13 18 00.4	+0.4
MAT				S	Sn	13 18 18.2	+0.2
MAT	Matsushiro	0.98	284	P	Pn	13 18 00.3	+0.3
MAT				S	Sn	13 18 18.1	+0.1
JYN	Shimob	1.05	220	⇑P	Pn	13 18 00.7	0.0
JYN				S	Sn	13 18 19.2	-0.1
JOD2	Odawara 2	1.07	193	⇑P	Pn	13 18 00.2	-0.6
JOD2				S	Sn	13 18 18.1	-1.3
JFT	Otama	1.43	32	⇓P	Pn	13 18 05.4	+1.0
JFT				S	Sn	13 18 26.7	+0.7
JNS	Sasagawa	1.51	358	⇓P	Pn	13 18 05.9	+0.7
JSD	Sado	1.95	333	⇓P	Pn	13 18 10.4	+0.2
JSZ	Suzu	1.98	306	⇓P	Pn	13 18 10.7	+0.2
BSO1	Boso 1	2.10	141	P	Pn	13 18 11.6	+0.1
JHJ	Hachijo jima 2	3.19	174	P	Pn	13 18 25.1	-0.7
	175nm,0.3s,baz=82,slow=23,SNR=86						
JHJ				S	Sn	13 19 02.2	-1.8
	155nm,0.3s,baz=72,slow=23,SNR=15						
ASAJ	Asahikawa	8.18	16	P	Pn	13 19 29.8	-2.2
	5.8nm,0.3s,baz=216,slow=12,SNR=71						
ASAJ				S	Sn	13 20 58.5	-4.4
	0.6nm,0.3s,baz=68,slow=33,SNR=2.7						
KSRS	Korea Array	9.25	281	P	Pn	13 19 47.6	+1.2
	0.2nm,0.3s,baz=94,slow=13,SNR=15						
USRK	Ussuriysk Ar.	9.70	327	P	Pn	13 19 54.6	+2.4
	baz=128,slow=12						
KLR	Kul’dur	14.07	339	P	Pn	13 20 49.1	-0.1
	0.0nm,0.3s,baz=144,slow=16,SNR=6.4						
SONM	Songino Array	26.86	306	P	P	13 23 02.5	-1.3
	1.8nm,0.6s,baz=118,slow=10.0,SNR=7.2						
GTA	Gaotai	31.22	288	*e*P	P	13 23 42.8	+0.4
GTA				pP	pP	13 23 47.5	-25
GTA				sP	sP	13 23 50.0	-39
GTA				pmax	pmax		
	comp=Z,5.0nm,0.9s						
ZALV	Zalesovo Beam	41.21	313	P	P	13 25 06.6	-0.2
	comp=Z,4.4nm,0.5s,baz=94,slow=6.2,SNR=17						
ZALV				PcP	PcP	13 27 02.6	-0.5
	comp=Z,1.1nm,0.5s,baz=111,slow=3.3,SNR=3.8						
MKAR	Makanchi Array	43.13	302	P	P	13 25 22.3	-0.3
	comp=Z,3.2nm,0.8s,baz=92,slow=10,SNR=15						
KURBB	Kurchatov Arra	45.17	308	P	P	13 25 38.4	-0.3
	comp=Z,4.2nm,0.4s,baz=86,slow=7.9,SNR=60						
KDAK	Kodiak Island	48.73	41	P	P	13 26 07.0	+0.8
	comp=Z,3.2nm,1.1s,baz=295,slow=1.7,SNR=4.4						
KSH	Kashi	49.21	294	*e*P	P	13 26 10.5	+0.2
BVAR	Borovoye Array	49.86	312	P	P	13 26 14.7	-0.2
	comp=Z,1.1nm,0.4s,baz=104,slow=12,SNR=6.2						
ILAR	Eielson Array	50.98	32	P	P	13 26 23.6	+0.4
	comp=Z,0.8nm,0.6s,baz=272,slow=5.0,SNR=9.8						
WRA	Warramunga Arr	56.14	186	P	P	13 27 00.3	-0.9
	comp=Z,1.1nm,0.6s,baz=0.8,slow=7.6,SNR=41						
AKTO	Aktyubinsk	57.94	312	P	P	13 27 13.9	+0.3
	comp=Z,1.6nm,0.7s,baz=76,slow=13,SNR=6.8						
ASAR	Alice Springs	59.87	186	P	P	13 27 27.7	+0.6
	comp=Z,0.7nm,0.7s,baz=8.2,slow=7.0,SNR=8.1						
SPITS	Spitsbergen Ar	60.92	349	P	P	13 27 34.4	+0.8
	comp=Z,1.1nm,0.5s,baz=34,slow=10,SNR=5.2						
ARCES	ARCESS Array B	64.10	339	P	P	13 27 54.4	-0.4
	comp=Z,1.4nm,0.7s,baz=53,slow=7.3,SNR=8.6						
FINES	FINESS Array B	68.69	332	P	P	13 28 23.7	-0.4
	comp=Z,2.5nm,0.7s,baz=61,slow=6.2,SNR=18						
KBZ	Khabaz	70.13	310	P	P	13 28 34.0	+0.8
	comp=Z,2.0nm,0.8s,baz=14,slow=2.2,SNR=4.5						
AKASG	Malin Array Be	73.86	322	P	P	13 28 54.5	-0.9
	comp=Z,1.0nm,0.5s,baz=52,slow=5.7,SNR=4.2						
HFS	Hagfors	74.07	335	P	P	13 28 56.1	-0.3
	comp=Z,0.8nm,0.5s,baz=46,slow=4.2,SNR=7.6						
NB2	NORSAR Subarra	74.22	337	P	P	13 28 56.5	-0.8
	comp=Z,0.9nm,0.5s,baz=42,slow=5.9						
NOA	NORSAR Array B	74.22	337	P	P	13 28 56.9	-0.4
	comp=Z,2.0nm,0.7s,baz=41,slow=5.8,SNR=10						
NVAR	Mina Array Bea	76.73	52	P	P	13 29 13.0	+0.7
	comp=Z,0.2nm,0.5s,baz=277,slow=6.9,SNR=3.7						
BRTR	Keskin Array B	78.10	311	P	P	13 29 20.2	+0.4
	comp=Z,0.7nm,0.8s,baz=130,slow=3.9,SNR=4.0						
PDAR	Pinedale Array	79.34	44	P	P	13 29 26.8	+0.2
	comp=Z,0.3nm,0.5s,baz=266,slow=2.0,SNR=4.9						
CLL	Collm	80.90	329	*e*P	P	13 29 32.0	-2.5
GERES	GERESS Array B	82.45	327	P	P	13 29 42.9	+0.1
	comp=Z,0.3nm,0.4s,baz=51,slow=5.3,SNR=3.8						
EKA	Eskdalemuir Ar	83.26	340	P	P	13 29 46.6	-0.1
	comp=Z,0.4nm,0.4s,baz=35,slow=6.5,SNR=3.7						
TXAR	Lajitas Array	91.86	51	P	P	13 30 29.4	+0.6
	comp=Z,0.2nm,0.5s,baz=304,slow=3.6,SNR=5.9						

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*PDG **28** 13:22:03.6±0.2, 44°.25N×18°.01E, h13^{km}, ML2.7/9, Error ellipse: s-maj=0.3km s-min=0.6km az=0.0*
*CSEM **28** 13:22:04.2±0.1, 44°.20N×17°.93E, h2^{km}, ML2.7, Error ellipse: s-maj=3.6km s-min=2.2km az=52.0*
*BEO **28** 13:22:04.6±0.3, 44°.21N×17°.88E, h4^{km}±2^{km}, ML2.6/12*
ISC 28 13:22:04.0±1.1**, 44°.20N**±0°.02×**17°.92E**±0°.02**, h3**^{km}±9^{km}**, n106, σ0^{s}70**/179**, 25C-7D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DOB	Doboj	0.55	13	*e*Pg	Pg	13 22 14.1	-0.5
DOB				*e*Sg	Sg	13 22 22.2	+0.5
DOB	Doboj	0.55	13	*e*Pg	Pg	13 22 14.1	-0.5
DOB				*e*Sg	Sg	13 22 22.2	+0.5
HAPS	Han Pijesak,BI	0.75	98	*e*Pg	Pg	13 22 18.1	-0.3
HAPS				*e*Sg	Sg	13 22 28.5	+0.5
HAPS	Han Pijesak,BI	0.75	98	*e*Pg	Pg	13 22 18.1	-0.3
	baz=5.0						
HAPS				*e*Sg	Sg	13 22 28.5	+0.5
	baz=2.0						
HAPS	Han Pijesak,BI	0.75	98	⇑*i*Pg	Pg	13 22 18.0	-0.3
HAPS				*e*Sg	Sg	13 22 29.1	+1.1
BLY	Banja Luka	0.77	317	*e*Pg	Pg	13 22 18.7	0.0
BLY				*e*Sg	Sg	13 22 28.8	+0.2
BLY	Banja Luka	0.77	317	⇑*i*Pg	Pg	13 22 18.6	-0.1
BLY				*e*Sg	Sg	13 22 28.5	-0.1
BLY	Banja Luka	0.77	317	⇑*i*Pg	Pg	13 22 18.6	-0.1
BLY				*e*Sg	Sg	13 22 28.5	-0.1
MRAK	Mrakovica	1.09	319	*e*Sg	Sg	13 22 39.6	+0.4
MRAK	Mrakovica	1.09	319	*e*Sg	Sg	13 22 39.6	+0.4
BBLS	Lazići	1.12	107	*e*Pg	Pg	13 22 25.7	+0.3
BBLS				*e*Sg	Sn	13 22 42.2	-0.4
BBLS	Lazići	1.12	107	*e*Pg	Pg	13 22 25.7	+0.3
	baz=4.0						
BBLS				*e*Sg	Sb	13 22 41.1	+0.1
BBLS	Lazići	1.12	107	⇑*i*Pg	Pg	13 22 25.4	0.0
BBLS				*e*Sg	Sb	13 22 41.1	+0.1
TEKS	Tekeris	1.21	72	*e*Sg	Pg	13 22 27.5	+0.4
TEKS	Tekeris	1.21	72	*e*Pg	Sn	13 22 44.8	+0.1
TEKS	Tekeris	1.21	72	*e*Pg	Pg	13 22 26.8	-0.3
TEKS				*e*Sg	Sn	13 22 44.2	-0.5
TEKS	Tekeris	1.21	72	*e*Pg	Pg	13 22 26.8	-0.3
TEKS				*e*Sg	Sn	13 22 44.2	-0.5
UPM	Unac-Piva	1.22	144	⇓*i*Pg	Pg	13 22 26.5	-0.9
UPM				*i* Sg	Sn	13 22 45.7	+0.4
UPM	Unac-Piva	1.22	144	⇑*i*Pg	Pg	13 22 26.5	-0.9
UPM				*e*Sg	Sb	13 22 44.7	+0.6
UPM	Unac-Piva	1.22	144	⇑*i*Pg	Pg	13 22 26.5	-0.9
UPM				*e*Sg	Sb	13 22 44.7	+0.6
STON	Ston	1.33	187	*e*Pg	Pn	13 22 28.7	-0.8
STON				*e*Sg	Sb	13 22 47.2	+0.1
STON	Ston	1.33	187	*i* Pg	Pn	13 22 28.6	-0.9
STON				Sg	Sb	13 22 47.3	+0.2
STON	Ston	1.33	187	*e*Pg	Pn	13 22 28.7	-0.8
	baz=1.0						
STON				*e*Sg	Sb	13 22 47.2	+0.1
	baz=1.0						
STON	Ston	1.33	187	*e*Pg	Pn	13 22 28.2	-1.3
STON				*e*Sg	Sg	13 22 47.0	+0.2
BRY	Bratogost	1.37	161	⇑*i*Pg	Pn	13 22 29.5	-0.7
BRY				*i* Sg	Sn	13 22 51.5	+2.6
BRY	Bratogost	1.37	161	⇑*i*Pg	Pn	13 22 29.5	-0.7
BRY				*e*Sg	Sn	13 22 49.2	+0.3
BRY	Bratogost	1.37	161	⇑*i*Pg	Pn	13 22 29.4	-0.8
BRY				*e*Sg	Sn	13 22 49.2	+0.3
PLE	Pljevlja	1.37	129	⇑*i*Pg	Pn	13 22 28.9	-1.2
PLE				*i* Sg	Sn	13 22 50.1	+1.2
PLE	Pljevlja	1.37	129	⇑*i*Pg	Pn	13 22 28.9	-1.2
PLE				*i* Sg	Sn	13 22 50.1	+1.2
DIVS	Divibare	1.49	93	*e*Pg	Pn	13 22 31.4	-0.4
DIVS				*e*Sg	Sg	13 22 53.0	+1.1
DIVS	Divibare	1.49	93	*e*Pg	Pb	13 22 32.3	-0.1
DIVS				*e*Sg	Sg	13 22 52.4	+0.5
DIVS	Divibare	1.49	93	*e*Pg	Pb	13 22 32.3	-0.1
DIVS				*e*Sg	Sg	13 22 52.4	+0.5
TREB	Trebinje	1.51	168	*e*Pg	Pn	13 22 31.9	-0.1
TREB				*e*Sg	Sg	13 22 53.3	+0.7
TREB	Trebinje	1.51	168	*e*Pn	Pn	13 22 32.1	+0.1
TREB				*e*Sg	Sg	13 22 53.2	+0.7
TREB	Trebinje	1.51	168	*e*Pn	Pn	13 22 32.1	+0.1
TREB				*e*Sg	Sg	13 22 53.2	+0.7
UDBI	Udbina	1.58	283	*e*Pn	Pn	13 22 32.1	-0.9
UDBI				Sn	Sg	13 22 56.2	+1.4
NKY	Niksic	1.59	150	⇑*i*Pn	Pn	13 22 33.2	+0.1
NKY				*i* Sn	Sg	13 22 56.5	+1.5
NKY	Niksic	1.59	150	⇑*i*Pn	Pn	13 22 33.2	+0.1
NKY				*i* Sn	Sg	13 22 56.5	+1.5
NKME	Niksic	1.61	152	⇑*i*Pn	Pn	13 22 33.6	+0.2
NKME				*i* Sn	Sg	13 22 57.1	+1.3
NKME	Niksic	1.61	152	⇑*i*Pn	Pn	13 22 33.6	+0.2
NKME				*i* Sn	Sg	13 22 57.1	+1.3
FGSL	Fruska Gora	1.66	54	*e*Pn	Pb	13 22 35.4	+0.3
	baz=9.0						
FGSL				*e*Sn	Sg	13 22 57.0	-0.1
	baz=3.0						
FRGS	Fruska Gora	1.66	54	*e*Pn	Pb	13 22 35.4	+0.3
FRGS				*e*Sn	Sg	13 22 57.0	-0.1
FRGS	Fruska Gora	1.66	54	*e*Pn	Pn	13 22 34.4	+0.4
FRGS				*e*Sn	Sb	13 22 56.5	+0.1
FRGS	Fruska Gora	1.66	54	*e*Pn	Pn	13 22 34.4	+0.4
FRGS				*e*Sn	Sb	13 22 56.5	+0.1
IVAS	Ivanjica	1.73	110	*e*Pn	Pb	13 22 36.5	+0.1
IVAS				*e*Sn	Sg	13 22 59.5	0.0
IVAS	Ivanjica	1.73	110	*e*Pn	Pb	13 22 36.5	+0.1
	baz=8.0						
IVAS				*e*Sn	Sg	13 22 59.5	0.0
	baz=8.0						
SJES	Sjenica	1.76	121	*e*Pn	Pn	13 22 35.8	+0.4
SJES				*e*Sn	Sn	13 22 58.1	-0.3
KOME	Kolasin	1.77	139	⇑*i*Pn	Pn	13 22 35.9	+0.2
KOME				*i* Sn	Sg	13 23 00.7	-0.3
KOME	Kolasin	1.77	139	⇑*i*Pn	Pn	13 22 35.9	+0.2
KOME				*i* Sn	Sg	13 23 00.7	-0.3
TRUS	Trudelj	1.79	88	*e*Pn	Pn	13 22 35.9	+0.1
TRUS				*e*Sn	Sb	13 22 59.8	-0.4
TRUS	Trudelj	1.79	88	*e*Pn	Pn	13 22 35.9	+0.1
	baz=5.0						
TRUS				*e*Sn	Sb	13 22 59.8	-0.4
	baz=3.0						
HCY	Herceg Novi	1.80	166	⇓*i*Pn	Pb	13 22 36.8	-0.7
HCY				*i* Sn	Sg	13 23 02.1	+0.4
HCY	Herceg Novi	1.80	166	⇓*i*Pn	Pb	13 22 36.8	-0.7
HCY				*e*Sn	Sb	13 22 59.9	-0.6
HCY	Herceg Novi	1.80	166	⇑*i*Pn	Pb	13 22 36.9	-0.6
HCY				*e*Sn	Sb	13 22 59.9	-0.6
CEME	Cevo	1.80	156	⇓*i*Pn	Pn	13 22 36.3	+0.3
CEME				*i* Sn	Sg	13 23 01.9	+0.1
CEME	Cevo	1.80	156	⇓*i*Pn	Pn	13 22 36.3	+0.3
CEME				*i* Sn	Sg	13 23 01.9	+0.1
BEY	Berane	1.95	132	⇑*i*Pn	Pn	13 22 38.0	-0.1
BEY				*i* Sn	Sb	13 23 04.6	-0.4
IVA	Berane	1.95	132	⇑*i*Pn	Pn	13 22 38.0	-0.1
IVA				*i* Sn	Sb	13 23 04.6	-0.4
PDG	Podgorica	2.02	151	*e*Pn	Pb	13 22 40.2	-1.1
PDG				*e*Sn	Sb	13 23 06.3	-0.4
PDG	Podgorica	2.02	151	⇑*i*Pn	Pn	13 22 39.1	+0.2
PDG				*e*Sn	Sn	13 23 05.4	+0.8
PDG	Podgorica	2.02	151	*e*Pn	Pb	13 22 40.1	-1.2
PDG				*e*Sn	Sn	13 23 05.4	+0.8
TTG	Podgorica	2.02	151	⇑*i*Pn	Pn	13 22 39.1	+0.2
TTG				*i* Sn	Sb	13 23 06.8	+0.1
BUM	Brajici-Budva	2.02	159	⇓*i*Pn	Pb	13 22 40.5	-0.9
BUM				*i* Sn	Sb	13 23 07.3	+0.3
BUM	Brajici-Budva	2.02	159	⇓*i*Pn	Pb	13 22 40.5	-0.9
BUM				*i* Sn	Sb	13 23 07.3	+0.3
GRUS	Gruza	2.04	98	*e*Pn	Pn	13 22 39.2	0.0
GRUS	Gruza	2.04	98	*e*Pn	Pn	13 22 39.2	0.0
	baz=8.0						
DRME	Dracevica, Mon	2.21	155	⇑*i*Pn	Pb	13 22 43.4	-1.2
DRME				*i* Sn	Sb	13 23 12.0	-0.4
DRME	Dracevica, Mon	2.21	155	*e*Pn	Pn	13 22 42.8	+1.2
DRME				*e*Sn	Sn	13 23 10.3	+0.9
DRME	Dracevica, Mon	2.21	155	*e*Pn	Pn	13 22 42.8	+1.2
DRME				*e*Sn	Sn	13 23 10.3	+0.9
NVLJ	Novalja	2.22	281	*e*Pn	Pn	13 22 42.5	+0.8
NVLJ				Sn	Sb	13 23 12.4	-0.2
OZLJ	Ozalj	2.25	310	*e*Pn	Pn	13 22 41.9	-0.2
CRES	Cresnjev	2.39	314	*e*Pn	Pn	13 22 44.1	0.0
CRES				*e*Sn	Sn	13 23 13.7	-0.2
CRES	Cresnjev	2.39	314	*e*Pn	Pn	13 22 44.1	0.0
CRES				*e*Sn	Sn	13 23 13.7	-0.2
ULC	Ulcinj	2.43	156	⇑*i*Pn	Pn	13 22 45.0	+0.3
ULC				*i* Sn	Sb	13 23 17.1	-1.7
ULC	Ulcinj	2.43	156	⇑*i*Pn	Pn	13 22 45.0	+0.3
ULC				*i* Sn	Sb	13 23 17.1	-1.7
SELS	Selova	2.52	112	*e*Pn	Pn	13 22 46.1	+0.3
SELS	Selova	2.52	112	*e*Pn	Pn	13 22 46.1	+0.3
	baz=7.0						
KUBS	Kucevo	2.70	84	*e*Pn	Pn	13 22 48.7	+0.3
KUBS	Kucevo	2.70	84	*e*Pn	Pn	13 22 48.7	+0.3
	baz=6.0						
BOVS	Bovan	2.79	100	*e*Pn	Pn	13 22 49.7	+0.1
BOVS	Bovan	2.79	100	*e*Pn	Pn	13 22 49.7	+0.1
	baz=8.0						
CEY	Cerknica	2.92	303	*e*Pn	Pn	13 22 51.9	+0.5
CEY				*e*Sn	Sn	13 23 27.0	0.0
CEY	Cerknica	2.92	303	*e*Pn	Pn	13 22 51.9	+0.5
CEY				*e*Sn	Sn	13 23 27.0	0.0
SOKA	Soboth	3.21	322	*e*Pn	Pn	13 22 55.4	0.0
	0.3nm,0.1s						
SOKA	Soboth	3.21	322	Pn	Pn	13 22 55.4	0.0
	0.3nm,0.1s						
OBKA	Obir	3.32	315	*i* Pn	Pn	13 22 58.8	+1.9
	0.3nm,0.1s						
OBKA	Obir	3.32	315	Pn	Pn	13 22 58.8	+1.9
	0.3nm,0.1s						
ARSA	Arzberg	3.49	332	*i* Pn	Pn	13 22 59.1	0.0
	3.1nm,0.3s						
ARSA	Arzberg	3.49	332	Pn	Pn	13 22 59.1	0.0
	3.1nm,0.3s						
PSZ	Piszkesteto	3.97	20	*e*x	Pn	13 23 05.1	-0.7
CONA	Conrad Observa	4.00	340	*i* Pn	Pn	13 23 06.5	+0.3
	0.4nm,0.1s						
CONA	Conrad Observa	4.00	340	Pn	Pn	13 23 06.5	+0.3
	0.4nm,0.1s						
MODS	Modra-Piesok	4.20	354	*e*PN	Pn	13 23 08.8	-0.2
MODS				*e*SN	Sn	13 23 58.1	-0.5
MODS				*e*LG	Lg	13 23 59.1	
MODS	Modra-Piesok	4.20	354	*e*Pn	Pn	13 23 08.8	-0.2
MODS				*e*Sn	Sn	13 23 58.2	-0.4
VYHS	Vyhne	4.34	8	*e*PN	Pn	13 23 11.2	+0.3
VYHS				*e*SN	Sn	13 24 00.1	-2.0
VYHS				*e*LG	Lg	13 24 02.4	
VYHS	Vyhne	4.34	8	*e*Pn	Pn	13 23 11.2	+0.3
MOA	Molln	4.45	326	*i* Pn	Pn	13 23 13.2	+0.8
	0.3nm,0.1s						
MOA	Molln	4.45	326	Pn	Pn	13 23 13.2	+0.8
	0.3nm,0.1s						
ABTA	Abfaltersbach	4.58	306	*i* Pn	Pn	13 23 15.2	+0.9
	0.2nm,0.1s						
ABTA	Abfaltersbach	4.58	306	Pn	Pn	13 23 15.2	+0.9
	0.2nm,0.1s						
MOTA	Moosalm	5.71	306	*i* Pn	Pn	13 23 31.3	+1.4
	0.9nm,0.4s						
MOTA	Moosalm	5.71	306	Pn	Pn	13 23 31.3	+1.4
	0.9nm,0.4s						
FETA	Feichten	5.78	302	*e*Pn	Pn	13 23 31.5	+0.7
FETA	Feichten	5.78	302	Pn	Pn	13 23 31.5	+0.7
RETA	Reutte	5.99	306	*e*Pn	Pn	13 23 33.8	+0.3
	0.1nm,0.1s						
RETA	Reutte	5.99	306	Pn	Pn	13 23 33.8	+0.3
	0.1nm,0.1s						

MEX 28 13:35:48.7±0.5**, 16°.08N×98°.27W, h5**^{km}**, MD3.6, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.34	24	*e*P	Pg	13 35 54.7	-0.5
PNIG				*i* S	Sg	13 35 59.9	+0.2
TLIG	Tlapa	1.50	349	*i* P	Pn	13 36 12.5	-3.9
TLIG				*e*S	Sn	13 36 31.4	-5.0

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*CSEM **28** 13:44:34.2±0.1, 44°.19N×17°.93E, h2^{km}, ML2.6, Error ellipse: s-maj=3.7km s-min=2.2km az=52.0*
*BEO **28** 13:44:34.5±0.3, 44°.22N×17°.88E, h0^{km}, ML2.5/11*
*PDG **28** 13:44:34.2±0.4, 44°.15N×17°.87E, h21^{km}±1^{km}, ML2.6/9, Error ellipse: s-maj=0.9km s-min=2.0km az=0.0*
ISC 28 13:44:34.0±1.1**, 44°.20N**±0°.02×**17°.91E**±0°.02**, h5**^{km}±9^{km}**, n113, σ0^{s}89**/184**, 28C-7D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DOB	Doboj	0.55	14	*e*Pg	Pg	13 44 44.3	-0.3
DOB				*e*Sg	Sg	13 44 52.3	+0.5
DOB	Doboj	0.55	14	*e*Pg	Pg	13 44 44.3	-0.3
DOB				*e*Sg	Sg	13 44 52.3	+0.5
HAPS	Han Pijesak,BI	0.76	98	*e*Pg	Pg	13 44 47.7	-0.8
HAPS				*e*Sg	Sg	13 44 58.9	+0.6
HAPS	Han Pijesak,BI	0.76	98	*e*Pg	Pg	13 44 47.7	-0.8
HAPS				*e*Sg	Sg	13 44 58.9	+0.6
HAPS	Han Pijesak,BI	0.76	98	⇑*i*Pg	Pg	13 44 47.6	-0.9
HAPS				*e*Sg	Sg	13 44 58.9	+0.6
BLY	Banja Luka	0.76	317	*e*Pg	Pg	13 44 48.5	-0.1
BLY				*e*Sg	Sg	13 44 57.8	-0.6
BLY	Banja Luka	0.76	317	*e*Pg	Pg	13 44 48.5	-0.1
BLY				*e*Sg	Sg	13 44 58.5	+0.1
BLY	Banja Luka	0.76	317	⇑*i*Pg	Pg	13 44 48.3	-0.3
BLY				*e*Sg	Sg	13 44 58.5	+0.1
MRAK	Mrakovica	1.09	319	*e*Sg	Sg	13 45 08.3	-0.7
MRAK	Mrakovica	1.09	319	*e*Sg	Sg	13 45 08.3	-0.7
BBLS	Lazići	1.13	107	*e*Pg	Pg	13 44 55.1	-0.5
BBLS				*e*Sg	Sb	13 45 11.3	+0.3
BBLS	Lazići	1.13	107	⇑*i*Pg	Pg	13 44 55.2	-0.4
BBLS				*e*Sg	Sb	13 45 11.2	+0.3
BBLS	Lazići	1.13	107	⇑*i*Pg	Pg	13 44 55.2	-0.4
BBLS				*e*Sg	Sb	13 45 11.2	+0.3
TEKS	Tekeris	1.21	73	*e*Sg	Pg	13 44 56.9	-0.3
TEKS	Tekeris	1.21	73	*e*Pg	Sg	13 45 12.8	-0.1
TEKS	Tekeris	1.21	73	*e*Pg	Pg	13 44 56.6	-0.6
TEKS				*e*Sg	Sg	13 45 13.2	+0.3
TEKS	Tekeris	1.21	73	*e*Pg	Pg	13 44 56.6	-0.6
TEKS				*e*Sg	Sg	13 45 13.2	+0.3
UPM	Unac-Piva	1.23	144	⇑*i*Pg	Pg	13 44 56.3	-1.3
UPM				*i* Sg	Sn	13 45 16.1	+1.1
UPM	Unac-Piva	1.23	144	⇑*i*Pg	Pg	13 44 56.4	-1.2
UPM				*e*Sg	Sb	13 45 14.2	+0.2
UPM	Unac-Piva	1.23	144	⇑*i*Pg	Pg	13 44 56.4	-1.2
UPM				*e*Sg	Sb	13 45 14.2	+0.2
STON	Ston	1.34	187	*e*Pg	Pn	13 44 58.8	-0.4
STON				*e*Sg	Sn	13 45 17.3	0.0
STON	Ston	1.34	187	*e*Pg	Pn	13 44 58.2	-1.1
STON				Sg	Sb	13 45 17.0	+0.1
STON	Ston	1.34	187	*e*Pg	Pn	13 44 58.8	-0.4
STON				*e*Sg	Sn	13 45 17.4	+0.1
STON	Ston	1.34	187	*e*Pg	Pn	13 44 58.1	-1.1
STON				*e*Sg	Sn	13 45 17.4	+0.1
BRY	Bratogost	1.37	160	⇑*i*Pg	Pn	13 44 59.2	-0.7
BRY				*i* Sg	Sg	13 45 18.1	-0.1
BRY	Bratogost	1.37	160	⇑*i*Pg	Pn	13 44 59.2	-0.7
BRY				*e*Sg	Sg	13 45 17.8	-0.4
BRY	Bratogost	1.37	160	*e*Pg	Pn	13 44 58.8	-1.1
BRY				*e*Sg	Sg	13 45 17.8	-0.4
PLE	Pljevlja	1.38	129	⇑*i*Pg	Pg	13 45 00.5	+0.1
PLE				*i* Sg	Sn	13 45 19.9	+1.3
PLE	Pljevlja	1.38	129	⇑*i*Pg	Pg	13 45 00.5	+0.1
PLE				*i* Sg	Sn	13 45 19.9	+1.3
DIVS	Divibare	1.50	93	*e*Pg	Pn	13 45 02.1	+0.5
DIVS				*e*Sg	Sg	13 45 22.6	+0.4
DIVS	Divibare	1.50	93	*e*Pg	Pn	13 45 02.1	+0.5
DIVS				*e*Sg	Sb	13 45 22.0	+0.3
DIVS	Divibare	1.50	93	*e*Pg	Pn	13 45 02.1	+0.5
DIVS				*e*Sg	Sb	13 45 22.0	+0.3
TREB	Trebinje	1.52	168	*e*Pg	Pb	13 45 02.3	-0.3
TREB				*e*Sg	Sg	13 45 23.3	+0.6
TREB	Trebinje	1.52	168	⇑*i*Pg	Pb	13 45 02.3	-0.3
TREB				*e*Sg	Sg	13 45 22.6	-0.1
TREB	Trebinje	1.52	168	⇑*i*Pg	Pb	13 45 02.3	-0.3
TREB				*e*Sg	Sg	13 45 22.6	-0.1
UDBI	Udbina	1.58	283	*i* Pn	Pn	13 45 02.1	-0.5
NKY	Niksic	1.59	150	⇑*i*Pg	Pn	13 45 02.3	-0.6
NKY				*i* Sg	Sn	13 45 24.2	+0.3
NKY	Niksic	1.59	150	⇑*i*Pg	Pn	13 45 02.3	-0.6
NKY				*i* Sg	Sn	13 45 24.2	+0.3
NKME	Niksic	1.62	152	⇓*i*Pn	Pn	13 45 03.0	-0.2
NKME				*i* Sn	Sb	13 45 25.2	+0.1
NKME	Niksic	1.62	152	⇓*i*Pn	Pn	13 45 03.0	-0.2
NKME				*i* Sn	Sb	13 45 25.2	+0.1
FGSL	Fruska Gora	1.66	54	*e*Pn	Pb	13 45 04.9	-0.1
FGSL				*e*Sn	Sg	13 45 27.8	+0.5
FRGS	Fruska Gora	1.66	54	*e*Pn	Pb	13 45 04.9	-0.1
FRGS				*e*Sn	Sg	13 45 27.8	+0.5
FRGS	Fruska Gora	1.66	54	*e*Pn	Pn	13 45 04.3	+0.6
FRGS				*e*Sn	Sn	13 45 25.4	0.0
IVAS	Ivanjica	1.73	110	*e*Pn	Pn	13 45 05.5	+0.7
IVAS				*e*Sn	Sg	13 45 29.3	-0.4
IVAS	Ivanjica	1.73	110	*e*Pn	Pn	13 45 05.5	+0.7
IVAS				*e*Sn	Sg	13 45 29.3	-0.4
SJES	Sjenica	1.76	121	*e*Pn	Pb	13 45 06.9	0.0
SJES				*e*Sn	Sb	13 45 30.1	+0.8
KOME	Kolasin	1.78	139	⇑*i*Pn	Pn	13 45 06.1	+0.6
KOME				*i* Sn	Sb	13 45 29.4	-0.4
KOME	Kolasin	1.78	139	⇑*i*Pn	Pn	13 45 06.1	+0.6
KOME				*i* Sn	Sb	13 45 29.4	-0.4
TRUS	Trudelj	1.79	88	*e*Pn	Pb	13 45 07.3	0.0
TRUS	Trudelj	1.79	88	*e*Pn	Pb	13 45 07.3	0.0
HCY	Herceg Novi	1.80	166	⇑*i*Pn	Pn	13 45 06.0	+0.3
HCY				*i* Sn	Sn	13 45 29.3	+0.4
HCY	Herceg Novi	1.80	166	⇑*i*Pn	Pn	13 45 06.0	+0.3
HCY				*e*Sn	Sb	13 45 29.8	-0.5
HCY	Herceg Novi	1.80	166	*e*Pn	Pn	13 45 06.5	+0.8
HCY				*e*Sn	Sb	13 45 29.8	-0.5
CEME	Cevo	1.81	156	⇑*i*Pn	Pn	13 45 05.8	0.0
CEME				*i* Sn	Sn	13 45 29.6	+0.5
CEME	Cevo	1.81	156	⇑*i*Pn	Pn	13 45 05.8	0.0
CEME				*i* Sn	Sn	13 45 29.6	+0.5
BEY	Berane	1.96	132	⇓*i*Pn	Pn	13 45 07.4	-0.5
BEY				*i* Sn	Sn	13 45 34.0	+1.1
IVA	Berane	1.96	132	⇓*i*Pn	Pn	13 45 07.4	-0.5
IVA				*i* Sn	Sn	13 45 34.0	+1.1
PDG	Podgorica	2.02	151	*e*Pn	Pb	13 45 10.1	-1.1
PDG				*e*Sn	Sb	13 45 36.0	-0.6
PDG	Podgorica	2.02	151	⇑*i*P	Pb	13 45 11.9	+0.7
PDG	Podgorica	2.02	151	*e*Pn	Pn	13 45 09.0	+0.3
PDG	Podgorica	2.02	151	⇑*i*P	Pb	13 45 11.9	+0.7
PDG				*e*Sn	Sn	13 45 34.5	+0.2
PDG				S	Sg	13 45 38.9	0.0
PDG	Podgorica	2.02	151	*e*Pn	Pn	13 45 09.0	+0.3
PDG				*e*Sn	Sn	13 45 34.5	+0.2
TTG	Podgorica	2.02	151	⇑*i*Pn	Pn	13 45 08.4	-0.3
TTG				*i* Sn	Sn	13 45 34.9	+0.6
BUM	Brajici-Budva	2.03	159	⇓*i*Pn	Pb	13 45 11.2	-0.1
BUM				*i* Sn	Sn	13 45 34.8	+0.2
BUM	Brajici-Budva	2.03	159	⇓*i*Pn	Pb	13 45 11.2	-0.1
BUM				*i* Sn	Sn	13 45 34.8	+0.2
GRUS	Gruza	2.04	98	*e*Pn	Pb	13 45 10.5	-1.1
GRUS	Gruza	2.04	98	*e*Pn	Pb	13 45 10.5	-1.1
NVLJ	Novalja	2.21	281	*e*Pn	Pn	13 45 12.6	+1.3
NVLJ				Sn	Sb	13 45 41.6	-0.5
DRME	Dracevica, Mon	2.22	155	⇓*i*Pn	Pb	13 45 13.6	-0.9
DRME				*i* Sn	Sn	13 45 39.5	+0.4
DRME	Dracevica, Mon	2.22	155	*e*Pn	Pn	13 45 12.2	+0.8
DRME				*e*Sn	Sn	13 45 39.5	+0.4
DRME	Dracevica, Mon	2.22	155	*e*Pn	Pn	13 45 12.2	+0.8
DRME				*e*Sn	Sn	13 45 39.5	+0.4
OZLJ	Ozalj	2.24	310	*i* Pn	Pn	13 45 12.7	+1.0
CRES	Cresnjev	2.38	314	*e*Pn	Pn	13 45 14.3	+0.6
CRES				*e*Sn	Sn	13 45 43.1	-0.2
CRES	Cresnjev	2.38	314	*e*Pn	Pn	13 45 14.3	+0.6
CRES				*e*Sn	Sn	13 45 43.1	-0.2
ULC	Ulcinj	2.44	156	⇑*i*Pn	Pn	13 45 16.3	+1.9
ULC				*i* Sn	Sn	13 45 44.7	+0.1

ULC	Ulcinj	2.44	156	⇑iPn	Pn	13 45 16.3	+1.9
ULC				i Sn	Sn	13 45 44.7	+0.1
MDVR	Moldovita	2.78	77	⇑iP	Pg	13 45 27.9	+0.6
MDVR	Moldovita	2.78	77	S	Sn	13 45 50.5	-2.6
MDVR	Moldovita	2.78	77	S	Sn	13 45 50.5	-2.6
CEY	Cerknica	2.91	303	ePn	Pn	13 45 21.3	+0.3
CEY				eSn	Sn	13 45 56.0	-0.4
CEY	Cerknica	2.91	303	ePn	Pn	13 45 21.3	+0.3
CEY				eSn	Sn	13 45 56.0	-0.4
BZS	Buzias	2.99	60	⇑iP	Pg	13 45 30.9	-0.4
BZS	Buzias	2.99	60	S	Sn	13 45 57.0	-1.2
BZS	Buzias	2.99	60	S	Sn	13 45 57.0	-1.2
SOKA	Soboth	3.20	322	ePn	Pn	13 45 25.8	+0.8
	0.6nm,0.2s						
SOKA	Soboth	3.20	322	Pn	Pn	13 45 25.8	+0.8
	0.6nm,0.2s						
OBKA	Obir	3.31	315	ePn	Pn	13 45 27.9	+1.4
	0.9nm,0.2s						
OBKA	Obir	3.31	315	Pn	Pn	13 45 27.9	+1.4
	0.9nm,0.2s						
ARSA	Arzberg	3.48	332	i Pn	Pn	13 45 29.4	+0.6
	2.3nm,0.4s						
ARSA	Arzberg	3.48	332	Pn	Pn	13 45 29.4	+0.6
	2.3nm,0.4s						
MYKA	Terra Mystica	3.87	310	ePn	Pn	13 45 35.9	+1.8
	0.7nm,0.2s						
MYKA	Terra Mystica	3.87	310	Pn	Pn	13 45 35.9	+1.8
	0.7nm,0.2s						
CONA	Conrad Observa	3.99	340	ePn	Pn	13 45 37.2	+1.3
	0.5nm,0.3s						
CONA	Conrad Observa	3.99	340	Pn	Pn	13 45 37.2	+1.3
	0.5nm,0.3s						
MODS	Modra-Piesok	4.20	354	ePN	Pn	13 45 39.2	+0.6
MODS				eSN	Sn	13 46 25.6	-2.5
MODS	Modra-Piesok	4.20	354	ePn	Pn	13 45 39.2	+0.6
MODS				eSn	Sn	13 46 25.6	-2.5
VYHS	Vyhne	4.34	8	ePN	Pn	13 45 40.9	+0.3
VYHS				eSN	Sn	13 46 30.0	-1.6
VYHS				eLG	Lg	13 46 32.4	
VYHS	Vyhne	4.34	8	ePn	Pn	13 45 40.9	+0.3
VYHS				eSn	Sn	13 46 30.0	-1.6
MOA	Molln	4.45	326	ePn	Pn	13 45 43.3	+1.3
	0.5nm,0.1s						
MOA	Molln	4.45	326	Pn	Pn	13 45 43.3	+1.3
	0.5nm,0.1s						
WTTA	Wattenberg	5.36	307	ePn	Pn	13 45 55.2	+0.5
	1.8nm,0.4s						
WTTA	Wattenberg	5.36	307	Pn	Pn	13 45 55.2	+0.5
	1.8nm,0.4s						
WATA	Walderalm	5.43	308	ePn	Pn	13 45 56.8	+1.1
	0.8nm,0.2s						
WATA	Walderalm	5.43	308	Pn	Pn	13 45 56.8	+1.1
	0.8nm,0.2s						
MOTA	Moosalm	5.71	306	ePn	Pn	13 46 01.4	+1.9
	0.3nm,0.2s						
MOTA	Moosalm	5.71	306	Pn	Pn	13 46 01.4	+1.9
	0.3nm,0.2s						
FETA	Feichten	5.78	302	ePn	Pn	13 46 02.2	+1.8
	0.9nm,0.5s						
FETA	Feichten	5.78	302	Pn	Pn	13 46 02.2	+1.8
	0.9nm,0.5s						
RETA	Reutte	5.98	306	ePn	Pn	13 46 04.7	+1.6
	0.4nm,0.2s						
RETA	Reutte	5.98	306	Pn	Pn	13 46 04.7	+1.6
	0.4nm,0.2s						
DAVA	Damuels	6.41	302	ePn	Pn	13 46 09.9	+0.7
	0.6nm,0.1s						
DAVA	Damuels	6.41	302	Pn	Pn	13 46 09.9	+0.7
	0.6nm,0.1s						
CLL	Collm	7.84	337	eSg	Sg	13 48 49.0	+3.4

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*ISCJB **28** 14:01:02.1±0.5, 22°.23S±0°.08×179°.44W±0°.08, h550^{km}, mb4.0/13, Error ellipse: s-maj=13.1km s-min=6.9km az=137.1*

*IDC **28** 14:01:03.3±2.2, 22°.16S×179°.52W, h549^{km}±26^{km}, mb3.6/13, mb1 3.8/16, mb1mx3.4/50, mbtmp4.5/16, Error ellipse: s-maj=31.3km s-min=13.7km az=153.0*

ISC 28 14:01:03.3±0.8**, 22°.4S**±0°.1×**179°.5W**±0°.1**, h550**^{km}**, n37, σ1^{s}.16**/36**, mb4.1**/13**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	11.13	42	P	P	14 03 31.1	-2.0
	1.5nm,0.3s,baz=273,slow=19,SNR=2.9						
AFI				S	S	14 05 29.1	-7.1
	1.0nm,0.3s,baz=18,slow=19,SNR=2.6						
DZM	Mont Dzumac	13.07	269	P	P	14 03 53.8	+0.7
	0.3nm,0.3s,baz=103,slow=17,SNR=3.7						
URZ	Urewera	16.11	190	P	P	14 04 23.9	+0.2
	0.8nm,0.3s,baz=319,slow=11,SNR=2.8						
URZ				S	S	14 07 04.6	-2.6
	0.8nm,0.3s,baz=103,slow=20,SNR=7.3						
ARMA	Armidale	27.06	247	P	P	14 06 04.5	+2.1
	baz=31,SNR=14						
EIDS	Eidsvold	27.09	258	P	P	14 06 03.3	+0.8
	baz=31,SNR=4.7						
MGCD	Mangrove Creek	28.11	241	P	P	14 06 12.1	+0.8
	baz=32,SNR=6.8						
RMQ	Roma	29.20	255	P	P	14 06 22.6	+1.7
	baz=33,SNR=9.9						
CNB	Canberra Magne	30.07	238	P	P	14 06 30.1	+1.6
	baz=34,SNR=29						
CMSA	Cobar Meteorol	32.27	246	P	P	14 06 48.2	+1.0
	baz=36,SNR=19						
QLP	Quilpie	33.25	255	P	P	14 06 55.8	+0.3
	baz=37,SNR=7.6						
TOO	Toolangi	33.72	235	P	P	14 07 01.0	+1.6
	baz=38,SNR=18						
MTSU	Mount Surprise	34.20	270	P	P	14 07 03.7	0.0
	baz=38,SNR=6.1						
PMG	Port Moresby	34.52	287	P	P	14 07 05.6	-0.7
	22nm,0.8s,baz=160,slow=10.0,SNR=3.7						
STKA	Stephens Creek	35.78	246	P	P	14 07 17.6	+0.9
	11nm,0.6s,baz=93,slow=11,SNR=34						
STKA	Stephens Creek	35.78	246	P	P	14 07 17.6	+0.9
	baz=40,SNR=16						
COEN	Coen	36.41	277	P	P	14 07 21.3	-0.7
	baz=40,SNR=4.9						
HTT	Hallett	38.18	244	P	P	14 07 36.8	+0.5
	baz=42,SNR=7.1						
BBOO	Buckleboo	40.52	245	P	P	14 07 55.2	+0.1
	baz=45,SNR=23						
ASAR	Alice Springs	42.81	259	P	P	14 08 12.8	-0.5
	16nm,0.8s,baz=98,slow=7.7,SNR=107						
WRA	Warramunga Arr	43.04	264	P	P	14 08 13.9	-1.2
	3.5nm,0.3s,baz=95,slow=7.8,SNR=156						
FORT	Forrest	47.33	248	P	P	14 08 47.5	-0.3
	baz=51,SNR=23						
WRKA	Warakurna	47.68	256	P	P	14 08 50.0	-0.6
	baz=52,SNR=28						
BATI	Baumata	55.64	273	P	P	14 09 48.6	+0.6
	17nm,0.6s,baz=104,slow=4.4,SNR=2.1						
MEEK	Meekatharra	56.05	252	P	P	14 09 49.6	-1.1
	baz=60,SNR=6.4						
KLBR	Kellerberrin	56.06	246	P	P	14 09 50.4	-0.2
	baz=60,SNR=6.8						
NWAO	Narrogin (SRO)	56.34	245	P	P	14 09 52.9	+0.3
	4.9nm,0.7s,baz=153,slow=2.3,SNR=2.8						
MORW	Morawa	57.88	249	P	P	14 10 02.8	-0.4
	baz=62,SNR=4.2						
MJAR	Matsushiro Arr	70.94	325	P	P	14 11 23.8	-1.8
	1.4nm,0.7s,baz=165,slow=6.9,SNR=5.1						
LEM	Lembang	71.68	270	P	P	14 11 29.6	-0.9
	17nm,0.6s,baz=351,slow=19,SNR=5.0						
YBH	Yreka Blue Hor	82.59	39	P	P	14 12 28.6	-0.5
	1.3nm,0.7s,baz=231,slow=6.0,SNR=4.5						
NVAR	Mina Array Bea	83.31	44	P	P	14 12 32.9	-0.1
	1.0nm,0.9s,baz=219,slow=6.5,SNR=6.4						
TXAR	Lajitas Array	89.19	58	P	P	14 13 01.5	+0.4
	1.0nm,0.9s,baz=205,slow=5.5,SNR=9.6						
CMAR	Chiang Mai Arr	89.48	290	P	P	14 13 02.9	+0.4
	2.2nm,0.8s,baz=131,slow=3.2,SNR=10						
PDAR	Pinedale Array	91.24	44	P	P	14 13 10.5	0.0
	0.3nm,0.8s,baz=227,slow=3.4,SNR=3.9						
AKASG	Malin Array Be	143.96	329	PKP	PKPbc	14 19 33.3	-2.1
	2.2nm,0.7s,baz=43,slow=4.7,SNR=6.7						
BRTR	Keskin Array B	147.04	309	PKPbc	PKPdf	14 19 43.4	+1.4
	0.5nm,0.6s,baz=92,slow=1.3,SNR=4.3						
MMAI	Mount Meron Ar	147.51	297	PKPbc	PKPdf	14 19 45.8	+3.0
	1.4nm,0.6s,baz=76,slow=6.1,SNR=3.5						

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*IDC **28** 14:04:06.7±0.9, 4°.84N×126°.28E, h131^{km}±8^{km}, mb3.7/12, mb1 3.8/13, mb1mx3.5/58, mbtmp4.1/13, MS2.9/2, Ms1 3.0/2, ms1mx2.5/54, Error ellipse: s-maj=47.9km s-min=10.7km az=64.0*

*ISCJB **28** 14:04:07.2±0.6, 4°.48N±0°.05×125°.8E±0°.1, h150^{km}, mb3.9/12, Error ellipse: s-maj=17.7km s-min=6.4km az=168.8*

ISC 28 14:04:08.7±0.6**, 4°.57N**±0°.07×**125°.9E**±0°.1**, h150**^{km}**, n23, σ1^{s}.79**/26**, mb4.0**/12**, 1C-1D, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	1.53	355	eP	Pn	14 04 38.9	+0.4
GSPH	General Santos	1.75	329	⇓iP	Pn	14 04 42.5	+1.4
GSPH				i S	Sn	14 05 04.7	-1.4
SKMP	Bagumbayan, Su	2.33	326	eP	Pn	14 04 49.5	+1.8
SKMP				eS	Sn	14 05 34.6	+17
MATI	Mati	2.39	10	eP	Pn	14 04 50.0	+1.5
MATI				eS	Sn	14 05 19.9	+0.6
DAV	Davao City (W)	2.50	354	S	Sn	14 05 22.8	+1.3
	49nm,0.3s,baz=240,slow=20,SNR=4.4						
DMPH	Davao City--Mi	2.52	352	⇑iP	Pn	14 04 56.3	+6.3
DMPH				i S	Sn	14 05 35.4	+13
BUKP	Musuan	3.38	347	eP	Pn	14 05 01.9	+1.0
BUKP				eS	Sn	14 05 55.1	+14
BUTP	Butuan	4.37	357	eP	Pn	14 05 20.2	+6.4
BUTP				eS	Sn	14 06 07.2	+2.5
BATI	Baumata	14.84	188	P	P	14 07 36.1	+2.8
	6.2nm,0.3s,baz=41,slow=0.5,SNR=6.8						
GUMO	Guam	20.79	63	LR	LR	14 15 19.4	
	comp=Z,36nm,21.8s,baz=221,slow=33						
PMG	Port Moresby	25.37	123	P	P	14 09 20.0	-2.2
	14nm,0.7s,baz=358,slow=4.0,SNR=5.2						
WRA	Warramunga Arr	25.75	161	P	P	14 09 26.0	+0.5
	1.9nm,0.5s,baz=344,slow=10,SNR=4.9						
ASAR	Alice Springs	29.15	165	P	P	14 09 56.5	+0.6
	1.2nm,0.6s,baz=348,slow=7.5,SNR=11						
ASAR				pP	pP	14 10 24.6	-2.9
	0.4nm,0.7s,baz=347,slow=7.6,SNR=1.8						
CMAR	Chiang Mai Arr	29.69	300	LR	LR	14 22 52.7	
	comp=Z,23nm,20.2s,baz=205,slow=38						
STKA	Stephens Creek	39.23	159	P	P	14 11 23.9	+1.4
	5.9nm,0.7s,baz=333,slow=8.7,SNR=9.3						
SONM	Songino Array	46.23	342	P	P	14 12 18.5	-0.4
	0.4nm,0.6s,baz=167,slow=7.1,SNR=3.4						
MKAR	Makanchi Array	56.37	325	P	P	14 13 34.4	+0.1
	0.9nm,0.4s,baz=120,slow=8.1,SNR=15						
MKAR				pP	pP	14 14 06.0	-3.2
	0.8nm,0.7s,baz=120,slow=8.0,SNR=3.3						
MKAR				PcP	PcP	14 14 30.0	+0.3
	1.0nm,0.6s,baz=126,slow=4.1,SNR=6.8						
ZALV	Zalesovo Beam	59.45	333	P	P	14 13 55.7	+0.1
	0.8nm,0.5s,baz=126,slow=2.5,SNR=3.0						
KURBB	Kurchatov Arra	60.56	327	P	P	14 14 02.6	-0.6
	0.7nm,0.5s,baz=126,slow=5.7,SNR=9.6						
KURBB				pP	pP	14 14 34.2	-4.4
	1.2nm,0.7s,baz=126,slow=6.2,SNR=4.0						
BVAR	Borovoye Array	66.14	327	P	P	14 14 39.8	0.0
	0.3nm,0.3s,baz=161,slow=9.2,SNR=4.5						
AKTO	Aktyubinsk	72.46	322	P	P	14 15 19.1	+0.4
	0.7nm,0.3s,baz=102,slow=13,SNR=3.6						
ARCES	ARCESS Array B	89.36	340	P	P	14 16 47.6	-0.3
	1.1nm,0.7s,baz=52,slow=10,SNR=3.5						
FINES	FINESS Array B	90.68	332	P	P	14 16 53.6	-0.5
	1.1nm,0.9s,baz=116,slow=4.4,SNR=4.1						

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*ISK **28** 14:25:10.8, 37°.24N×28°.18E, h5^{km}, ML2.3/4*

*ISCJB **28** 14:25:11.6±0.4, 37°.25N±0°.02×28°.20E±0°.03, h0^{km}, Error ellipse: s-maj=3.7km s-min=2.9km az=26.4*

*CSEM **28** 14:25:11.6±0.2, 37°.24N×28°.21E, h2^{km}, ML2.3, Error ellipse: s-maj=3.6km s-min=2.6km az=34.0, Suspected Mining explosion.*

*DDA **28** 14:25:11.1, 37°.21N×28°.20E, h7^{km}, Ml2.7, Suspected Mining explosion.*

ISC 28 14:25:11.4±0.8**, 37°.21N**±0°.02×**28°.19E**±0°.02**, h0**^{km}**, n34, σ0^{s}.79**/60**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	Yerkesik	0.11	136	PG	Pg	14 25 14.2	+0.7
YER				SG	Sg	14 25 16.7	+1.8
YER	Yerkesik	0.11	136	ePg	Pg	14 25 14.2	+0.7
YER				eSg	Sg	14 25 16.7	+1.8
MLSB	Milas	0.34	284	PG	Pg	14 25 18.4	+0.5
MLSB				SG	Sg	14 25 23.9	+1.6
MLSB	Milas	0.34	284	ePg	Pg	14 25 18.4	+0.5
MLSB				eSg	Sg	14 25 23.9	+1.6
TURN	Turunc	0.48	136	PG	Pg	14 25 20.2	-0.3
TURN				SG	Sg	14 25 28.2	+1.5
TURN	Turunc	0.48	136	i P	Pg	14 25 19.9	-0.6
TURN				i S	Sg	14 25 27.1	+0.4
TURN	Turunc	0.48	136	P	Pg	14 25 19.9	-0.6
TURN	Turunc	0.48	136	ePg	Pg	14 25 20.2	-0.3
TURN				S	Sg	14 25 27.1	+0.4
TURN				eSg	Sg	14 25 28.2	+1.5
AYDN	Tasoluk	0.51	331	i P	Pg	14 25 21.2	0.0
AYDN				i S	Sg	14 25 28.7	+0.9
AYDN	Tasoluk	0.51	331	P	Pg	14 25 21.2	0.0
AYDN				S	Sg	14 25 28.7	+0.9
DALY	Dalyan (Mu˜la	0.54	137	PG	Pg	14 25 22.5	+0.7
DALY				SG	Sb	14 25 31.8	-0.4
DALY	Dalyan (Mu˜la	0.54	137	i P	Pg	14 25 21.0	-0.8
DALY				i S	Sb	14 25 32.7	+0.5
DALY	Dalyan (Mu˜la	0.54	137	P	Pg	14 25 21.0	-0.8
DALY	Dalyan (Mu˜la	0.54	137	ePg	Pg	14 25 22.5	+0.7
DALY				eSg	Sb	14 25 31.8	-0.4
DALY				S	Sb	14 25 32.7	+0.5
BDRM	Kayabasi	0.61	256	i P	Pg	14 25 23.2	0.0
BDRM				i S	Sg	14 25 32.5	+1.4
BDRM	Kayabasi	0.61	256	P	Pg	14 25 23.2	0.0
BDRM				S	Sg	14 25 32.5	+1.4
TAVA	DENIZLI_Tavas	0.63	66	i P	Pg	14 25 23.4	-0.2
TAVA				i S	Sg	14 25 32.5	+0.8
TAVA	DENIZLI_Tavas	0.63	66	P	Pg	14 25 23.4	-0.2
TAVA				S	Sg	14 25 32.5	+0.8
DAT	Datca	0.69	225	PG	Pb	14 25 25.7	-0.7
DAT				SG	Sb	14 25 36.6	+0.2
DAT	Datca	0.69	225	i P	Pg	14 25 24.6	-0.1
DAT				i S	Sn	14 25 38.4	-1.5
DAT	Datca	0.69	225	P	Pg	14 25 24.5	-0.1
DAT	Datca	0.69	225	ePg	Pb	14 25 25.7	-0.7
DAT				eSg	Sb	14 25 36.6	+0.2
DAT				S	Sn	14 25 38.4	-1.5
BODT	Bodrum	0.72	258	PG	Pg	14 25 25.4	+0.2
BODT				SG	Sb	14 25 36.8	-0.4
BODT	Bodrum	0.72	258	ePg	Pg	14 25 25.4	+0.2
BODT				eSg	Sb	14 25 36.8	-0.4
AYDB	Zeytinkoy-Aydi	0.77	342	PG	Pg	14 25 25.9	-0.3
AYDB	Zeytinkoy-Aydi	0.77	342	ePg	Pg	14 25 25.9	-0.3
GCAM	G?zelcaml?	0.90	303	PG	Pg	14 25 28.6	-0.1
GCAM	G?zelcaml?	0.90	303	ePg	Pg	14 25 28.6	-0.1
ARG	Arkhangelos	1.00	183	PG	Pn	14 25 32.4	-0.3
ARG	Arkhangelos	1.00	183	ePg	Pn	14 25 32.4	-0.3
KULA	Kula-Manisa	1.35	16	PN	Pg	14 25 37.1	-0.2
KULA				SN	Sn	14 25 56.8	+0.5
KULA	Kula-Manisa	1.35	16	ePn	Pg	14 25 37.1	-0.2
KULA				eSn	Sn	14 25 56.8	+0.5
AKAS	Kas	1.50	130	PN	Pg	14 25 40.3	+0.1
AKAS	Kas	1.50	130	ePn	Pg	14 25 40.3	+0.1

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*IDC **28** 14:27:04.5±3.0, 17°.49S×174°.41W, h89^{km}±26^{km}, mb3.9/13, mb1 4.1/14, mb1mx3.9/46, mbtmp4.3/14, MS3.6/3, Ms1 3.6/3, ms1mx2.8/46, Error ellipse: s-maj=28.2km s-min=14.0km az=139.0*

*NEIC **28** 14:27:04.9±1.4, 17°.46S×174°.44W, h93^{km}±12^{km}, mb4.1/1, Error ellipse: s-maj=20.8km s-min=9.7km az=134.0*

*ISCJB **28** 14:27:08.6±0.7, 17°.5S±0°.1×174°.5W±0°.1, h139^{km}, mb3.9/14, Error ellipse: s-maj=24.3km s-min=13.6km az=135.2*

ISC 28 14:27:09.9±0.8**, 17°.6S**±0°.2×**174°.5W**±0°.2**, h139**^{km}**, n40, σ0^{s}.87**/34**, mb4.0**/14**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	4.46	36	P	Pn	14 28 08.9	-7.1
	7.2nm,0.3s,baz=239,slow=4.2,SNR=24						
AFI				S	Sn	14 28 53.5	-14
	66nm,0.3s,baz=233,slow=23,SNR=17						
URZ	Urewera	21.90	198	P	P	14 31 52.6	+0.7
	3.6nm,0.4s,baz=32,slow=1.8,SNR=7.3						
RPZ	Rata Peaks	28.80	202	LR	LR	14 43 57.5	
	comp=Z,81nm,19.9s,baz=206,slow=35						
H11S2	WAKE ISLAND Hy	40.34	332	T	T	15 18 20.9	
	baz=155						
H11S3	WAKE ISLAND Hy	40.35	332	T	T	15 18 26.5	
	baz=155						
H11S1	WAKE ISLAND Hy	40.36	332	T	T	15 18 20.3	
	baz=155						
STKA	Stephens Creek	42.11	242	P	P	14 34 47.0	-1.5
	2.1nm,0.9s,baz=85,slow=13,SNR=4.7						
WRAB	Tennant Creek	48.39	259	eP	P	14 35 38.0	-0.2
	1.2nm,0.4s						
WRA	Warramunga Arr	48.40	259	P	P	14 35 37.9	-0.4
	1.7nm,0.3s,baz=98,slow=6.8,SNR=75						
ASAR	Alice Springs	48.51	254	P	P	14 35 39.0	-0.1
	14nm,0.6s,baz=93,slow=7.6,SNR=319						
ASAR				PcP	PcP	14 37 03.5	+0.4
	0.8nm,0.6s,baz=103,slow=4.1,SNR=3.8						
BATI	Baumata	60.31	268	LR	LR	15 02 11.0	
	comp=Z,57nm,18.3s,baz=230,slow=35						
QSPA	South Pole Qui	72.49	180	LR	LR	15 10 14.4	
	comp=Z,54nm,18.0s,baz=286,slow=36						
JNU	Nakatsue	72.56	314	P	P	14 38 22.3	+0.2
	4.1nm,0.8s,baz=146,slow=3.6,SNR=4.7						
ASAJ	Asahikawa	72.86	329	P	P	14 38 24.4	+0.9
	5.3nm,0.8s,baz=225,slow=1.4,SNR=6.3						
PETK	Petropavlovsk-	74.39	343	P	P	14 38 32.4	+0.2
	3.9nm,0.6s,baz=141,slow=7.7						
YBH	Yreka Blue Hor	75.92	37	P	P	14 38 39.2	-2.2
	1.7nm,0.8s,baz=221,slow=11,SNR=4.1						
NVAR	Mina Array Bea	76.60	42	P	P	14 38 45.8	+0.3
	1.2nm,0.9s,baz=229,slow=9.1,SNR=7.0						
KSRS	Korea Array	77.01	316	P	P	14 38 47.9	+0.4
	1.0nm,0.8s,baz=123,slow=4.5,SNR=5.1						
KSAR	Wonju Array Be	77.03	316	P	P	14 38 47.9	+0.2
ANMO	Albuquerque	82.96	50	P	P	14 39 20.3	+0.5
	0.9nm,0.8s,baz=173,slow=4.4,SNR=3.3						
PDAR	Pinedale Array	84.54	42	P	P	14 39 27.6	-0.1
	1.3nm,0.6s,baz=210,slow=3.5,SNR=15						
ILAR	Eielson Array	84.76	11	P	P	14 39 27.2	-0.8
	0.7nm,0.6s,baz=226,slow=6.2,SNR=14						
BVAR	Borovoye Array	118.95	321	PKP	PKPdf	14 45 42.3	+0.5
	0.4nm,0.5s,baz=90,slow=2.9,SNR=3.3						
ARCES	ARCESS Array B	126.60	351	PKP	PKPdf	14 45 56.0	0.0
	1.2nm,0.9s,baz=0.0,slow=2.7,SNR=3.7						
CLL	Collm	145.82	352	i PKPbc	PKPbc	14 46 32.8	+0.1
	comp=Z,7.0nm,0.9s						
BRTR	Keskin Array B	147.14	318	PKPbc	PKPbc	14 46 36.7	-0.4
	comp=Z,1.7nm,0.8s,baz=90,slow=2.2,SNR=8.4						
GERES	GERESS Array B	148.11	350	PKPbc	PKPbc	14 46 39.9	+0.6
	comp=Z,0.7nm,0.5s,baz=27,slow=3.3,SNR=7.5						
CONA	Conrad Observa	148.56	347	ePKiKP	PKPbc	14 46 41.2	+0.7
	comp=Z,1.6nm,0.6s						
MOA	Molln	148.97	349	ePKPbc	PKPdf	14 46 39.1	+1.8
	comp=Z,5.4nm,1.6s						
ARSA	Arzberg	149.28	347	ePKPdf	PKPdf	14 46 37.5	-0.4
	comp=Z,2.0nm,0.6s						
KBA	Koelnbreinsper	149.88	349	ePKiKP	PKiKP	14 46 45.4	+0.5
	comp=Z,2.3nm,0.5s						
WATA	Walderalm	149.90	352	ePKPbc	PKPbc	14 46 44.1	+0.1
	comp=Z,1.9nm,0.5s						
SOKA	Soboth	149.93	347	PKPdf	PKPdf	14 46 39.9	+0.9
	comp=Z,1.6nm,1.1s						
MOTA	Moosalm	149.96	352	ePKPab	PKPab	14 46 49.4	-0.8
	comp=Z,1.2nm,0.5s						
DAVA	Damuels	150.15	354	ePKiKP	PKPbc	14 46 45.0	+0.5
	comp=Z,5.8nm,1.1s						
OBKA	Obir	150.19	347	ePKPbc	PKPdf	14 46 41.8	+2.4
	comp=Z,1.4nm,0.5s						
MYKA	Terra Mystica	150.26	349	ePKPdf	PKPdf	14 46 39.7	+0.3
	comp=Z,0.6nm,0.4s						
FETA	Feichten	150.32	353	ePKPdf	PKPdf	14 46 39.4	-0.3
	comp=Z,2.2nm,0.9s						
ABTA	Abfaltersbach	150.34	350	ePKPdf	PKPdf	14 46 40.1	+0.5
	comp=Z,2.4nm,0.6s						
DAVOX	Davos/Dischmat	150.65	354	PKPbc	PKPbc	14 46 46.8	+1.0
	comp=Z,5.2nm,0.9s,baz=297,slow=4.5,SNR=5.1						

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*IDC **28** 14:53:57.3±9.8, 1°.75N×96°.45E, h0^{km}, mb3.7/4, mb1 3.8/5, mb1mx3.4/63, mbtmp3.7/5, ML4.0/1, MS3.1/1, Ms1 3.1/1, ms1mx2.4/65, Error ellipse: s-maj=194.2km s-min=105.4km az=149.0*

*ISCJB **28** 14:54:06.8±1.0, 2°.48N±0°.04×96°.02E±0°.07, h37^{km}±10^{km}, mb3.8/4, Error ellipse: s-maj=12.1km s-min=7.5km az=173.2*

*DJA **28** 14:54:07.4±0.6, 3°N±3°×9°6E±°, h21^{km}±3^{km}, M3.6/11, mb3.9/1, MLv3.5/11*

ISC 28 14:54:08.5±1.5**, 2°.55N**±0°.05×**96°.18E**±0°.09**, h29**^{km}±9^{km}**, n22, σ1^{s}.53**/21**, mb3.8**/4**, Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNSI	Sinabang, Aceh	0.20	133	P	Pn	14 54 15.1	-0.5
SNSI				S	Sn	14 54 20.0	+1.2
TPTI		1.22	55	P	Pn	14 54 30.3	+0.6
TPTI				S	Sb	14 54 47.8	+1.3
MLSI	Meulaboh, Aceh	1.72	7	P	Pn	14 54 36.1	-0.4
MLSI				S	Sn	14 54 59.1	+1.5
KCSI	Kotacane, Aceh	1.86	59	P	Pn	14 54 38.6	+0.2
KCSI				S	Sb	14 55 04.0	-0.8
GSI	Gunungsitoli	1.86	132	P	Pn	14 54 38.7	+0.2
GSI				S	Sn	14 55 03.1	+2.1
TSI	Tuntungan	2.56	68	P	Pn	14 54 49.2	+1.1
TSI				S	Sb	14 55 20.5	-4.4
LHMI	Lhok Sumawe	2.77	16	P	Pn	14 54 51.5	+0.5
PBSI	Pulau Batu	3.33	141	P	Pn	14 54 58.3	-0.3
MNSI	Mandailing Nat	3.82	117	P	Pn	14 55 05.6	+0.3
SISI	Saibi	4.82	143	P	Pn	14 55 20.1	+0.9
LEM	Lembang	14.73	129	LR	LR	15 03 28.7	
	comp=Z,78nm,21.9s,baz=318,slow=41						
CMAR	Chiang Mai Arr	16.04	10	Pn	Pn	14 57 53.9	+1.7
	0.2nm,0.3s,baz=194,slow=11,SNR=5.5						
H08S2	Diego Garcia H	25.71	247	T	T	15 25 57.3	
	baz=67,slow=74,SNR=12						
H08S3	Diego Garcia H	25.71	247	T	T	15 26 04.6	
	baz=67,slow=74,SNR=68						
H08S1	Diego Carcia H	25.73	247	T	T	15 25 56.8	
	baz=67,slow=74,SNR=6.1						
H01W3	Cape Leeuwin H	40.87	157	T	T	15 45 07.5	
	baz=332,slow=76,SNR=70						
H01W2	Cape Leeuwin H	40.88	157	T	T	15 45 09.3	
	baz=332,slow=76,SNR=77						
H01W1	Cape Leeuwin H	40.89	157	T	T	15 45 09.3	
	baz=332,slow=76,SNR=76						
MKAR	Makanchi Array	45.70	347	P	P	15 02 26.1	-0.8
	0.9nm,0.6s,baz=165,slow=8.1,SNR=9.0						
SONM	Songino Array	45.97	10	P	P	15 02 28.2	-0.9
	0.6nm,0.7s,baz=185,slow=9.8,SNR=3.2						
KURBB	Kurchatov Arra	50.18	345	P	P	15 03 01.6	+0.2
	0.4nm,0.6s,baz=169,slow=6.9,SNR=6.9						
ZALV	Zalesovo Beam	52.08	352	P	P	15 03 14.1	-1.5
	1.1nm,0.5s,baz=173,slow=5.4,SNR=4.6						

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*KRNET **28** 15:10:19.7±0.1, 41°.41N×73°.26E, h11^{km}, mb2.0*

*NNC **28** 15:10:21.1±0.5, 41°.44N×73°.23E, h9^{km}±7^{km}, mb2.7, mpv2.2, Error ellipse: s-maj=4.9km s-min=1.4km az=63.0*

ISC 28 15:10:20.0±1.1**, 41°.43N**±0°.03×**73°.26E**±0°.04**, h7**^{km}±12^{km}**, n9, σ0^{s}.64**/16**, 14C-3D, Kyrgyzstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ARSB	Arslanbob	0.23	243	⇑iP	Pg	15 10 24.2	-0.5
	baz=47						
ARSB				⇑iS	Sg	15 10 27.8	-0.1
	baz=47						
AML	Almayashu	0.77	25	⇑iP	Pg	15 10 34.8	-0.2
	baz=24						
AML				⇑iS	Sg	15 10 45.5	+0.4
	baz=24						
MNAS	Manas	1.20	332	⇓P	Pn	15 10 43.3	-0.1
	0.7nm,0.4s						
MNAS				⇑S	Sn	15 10 59.8	-0.2
	2.4nm,0.5s						
MNAS	Manas	1.20	332	⇑iP	Pb	15 10 42.8	-0.4
	baz=33						
MNAS				⇑iS	Sg	15 10 59.0	+0.4
	baz=33						
UCH	Uchtor	1.23	49	⇑iP	Pb	15 10 42.9	-1.0
	baz=49						
UCH				⇑iS	Sg	15 10 59.9	+0.2
	baz=49						
EKS2	Erkin-Say	1.29	17	⇑iP	Pn	15 10 44.3	-0.4
	baz=17						
EKS2				⇑iS	Sg	15 11 02.1	+0.5
	baz=17						

SFK	Sufi-Kurgan	1.43	172	⇑P	Pb	15 10 47.4	+0.3
	0.6nm,0.3s						
SFK				⇑S	Sg	15 11 06.5	+0.6
	5.1nm,0.3s						
TKM2	Tokmak 2	2.29	49	⇓Pg	Pb	15 11 02.9	+1.1
	1.6nm,0.5s						
TKM2				⇑Lg	Lg	15 11 34.8	
	2.9nm,0.6s						
KK31	Karatay Array	2.64	310	⇓Pg	Pb	15 11 08.6	+1.0
	0.5nm,0.4s,baz=138,slow=15,SNR=4.3						
KK31				Lg	Lg	15 11 44.8	
	0.8nm,0.3s,baz=129,slow=29,SNR=6.8						

IDC 28 15:20:17.8±4.4, 3°.85N×32°.71W, h0^{km}, mb3.7/7, mb1 3.8/7, mb1mx3.6/60, mbtmp3.6/7, MS3.5/2, Ms1 3.5/2, ms1mx2.9/58, Error ellipse: s-maj=110.7km s-min=50.6km az=12.0, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N3	ASCENSION HYDR	21.56	123	T	T	15 47 59.1	
	baz=303,slow=75,SNR=36						
H10N2	ASCENSION HYDR	21.56	123	T	T	15 47 59.4	
	baz=303,slow=75,SNR=32						
H10N1	ASCENSION HYDR	21.58	123	T	T	15 47 55.2	
	baz=303,slow=75,SNR=35						
H10S3	ASCENSION HYDR	22.03	125	T	T	15 48 33.7	
	baz=306,slow=75,SNR=43						
H10S1	ASCENSION HYDR	22.03	125	T	T	15 48 36.7	
	baz=306,slow=75,SNR=52						
H10S2	ASCENSION HYDR	22.05	125	T	T	15 48 37.7	
	baz=306,slow=75,SNR=46						
H05S1	Guadeloupe/Mar	29.65	293	T	T	15 57 17.7	
	SNR=8.4						
H05N1	Guadeloupe/Mar	30.48	296	T	T	15 58 14.2	
TORD	Torodi Ar. Bea	35.21	73	P	P	15 27 14.0	-0.2
	0.7nm,0.7s,baz=258,slow=7.2						
ESDC	Sonseca Array	44.15	32	P	P	15 28 28.2	-0.2
	0.1nm,0.4s,baz=244,slow=8.1,SNR=3.0						
TKL	Tuckaleechee C	56.68	311	LR	LR	15 48 45.8	
	comp=Z,53nm,21.4s,baz=92,slow=30						
GERES	GERESS Array B	59.70	34	P	P	15 30 24.6	+0.2
	0.5nm,0.7s,baz=262,slow=6.8,SNR=4.2						
BORG	Borgarnes	61.33	6	LR	LR	15 51 37.2	
	comp=Z,26nm,19.8s,baz=328,slow=31						
BRTR	Keskin Array B	69.44	49	P	P	15 31 28.8	+0.5
	1.3nm,1.0s,baz=243,slow=5.4,SNR=5.2						
AKASG	Malin Array Be	69.52	37	P	P	15 31 27.8	-0.5
	0.2nm,0.3s,baz=251,slow=4.8,SNR=4.5						
FINES	FINESS Array B	72.13	26	P	P	15 31 44.1	+0.1
	1.0nm,0.7s,baz=216,slow=6.9,SNR=2.4						
ILAR	Eielson Array	96.60	337	P	P	15 33 49.3	-0.2
	0.5nm,1.0s,baz=46,slow=5.2,SNR=4.1						

IDC 28 15:23:42.5±2.6, 4°.31N×32°.75W, h0^{km}, mb3.8/13, mb1 4.1/13, mb1mx3.8/61, mbtmp3.8/13, MS3.8/8, Ms1 3.8/8, ms1mx3.2/61, Error ellipse: s-maj=85.7km s-min=24.0km az=173.0, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N3	ASCENSION HYDR	21.84	123	T	T	15 51 18.0	
	baz=304,slow=75,SNR=30						
H10N2	ASCENSION HYDR	21.85	123	T	T	15 51 18.3	
	baz=304,slow=75,SNR=32						
H10N1	ASCENSION HYDR	21.86	123	T	T	15 51 19.5	
	baz=304,slow=75,SNR=38						
H10S3	ASCENSION HYDR	22.33	126	T	T	15 51 58.4	
	baz=306,slow=75,SNR=45						
H10S1	ASCENSION HYDR	22.34	126	T	T	15 51 58.4	
	baz=306,slow=75,SNR=65						
H10S2	ASCENSION HYDR	22.35	126	T	T	15 51 53.9	
	baz=306,slow=75,SNR=64						
BDFB	Brasilia	24.92	217	LR	LR	15 38 10.4	
	comp=Z,151nm,19.6s,baz=91,slow=35						
DBIC	Dimbokro	27.86	84	LR	LR	15 38 15.8	
	comp=Z,126nm,18.6s,baz=224,slow=31						
H05S1	Guadeloupe/Mar	29.44	292	T	T	16 00 45.6	
	SNR=8.5						
KOWA	Kowa	30.06	68	LR	LR	15 40 33.8	
	comp=Z,299nm,19.2s,baz=218,slow=34						
H05N1	Guadeloupe/Mar	30.24	295	T	T	16 01 27.0	
PCRV	Puerto La Cruz	32.15	282	LR	LR	15 42 17.3	
	comp=Z,188nm,20.5s,baz=168,slow=35						
TORD	Torodi Ar. Bea	35.12	73	P	P	15 30 37.6	-0.5
	0.9nm,0.7s,baz=288,slow=10						
TORD				LR	LR	15 42 27.6	
	comp=Z,176nm,21.2s,baz=280,slow=32						
CPUP	Villa Florida	38.65	217	LR	LR	15 46 56.5	
	comp=Z,111nm,19.1s,baz=66,slow=36						
MDT	Midelt	38.67	39	LR	LR	15 45 21.7	
	comp=Z,133nm,19.9s,baz=232,slow=34						
LPAZ	La Paz	40.53	239	LR	LR	15 47 05.6	
	comp=Z,95nm,20.0s,baz=98,slow=35						
ESDC	Sonseca Array	43.78	32	P	P	15 31 50.7	+0.5
	0.5nm,0.7s,baz=230,slow=8.7,SNR=4.2						
KEST	Kesra	49.80	46	P	P	15 32 37.4	0.0
	2.8nm,0.9s,baz=12,slow=13,SNR=3.0						
GERES	GERESS Array B	59.35	34	P	P	15 33 46.6	0.0
	0.1nm,0.3s,baz=231,slow=6.4,SNR=4.9						
MLR	Muntele Rosu	65.33	41	P	P	15 34 27.5	+0.8
	4.4nm,0.7s,baz=344,slow=7.3,SNR=4.5						
NOA	NORSAR Array B	65.51	22	P	P	15 34 27.1	-0.5
	0.7nm,0.9s,baz=227,slow=6.5,SNR=2.9						
AKASG	Malin Array Be	69.18	37	P	P	15 34 49.6	-1.4
	0.8nm,0.6s,baz=251,slow=7.5,SNR=4.8						
BRTR	Keskin Array B	69.18	49	P	P	15 34 52.1	+0.8
	1.3nm,0.8s,baz=241,slow=4.1,SNR=6.6						
TXAR	Lajitas Array	71.27	299	P	P	15 35 04.0	-0.4
	0.1nm,0.6s,baz=99,slow=5.9,SNR=2.5						
FINES	FINESS Array B	71.73	26	P	P	15 35 06.1	-0.3
	1.5nm,0.9s,baz=213,slow=15,SNR=2.3						
ANMO	Albuquerque	74.19	305	P	P	15 35 21.1	-0.7
	0.5nm,0.3s,baz=56,slow=3.6,SNR=1.7						
NVAR	Mina Array Bea	83.86	308	P	P	15 36 16.2	+1.4
	0.1nm,0.4s,baz=86,slow=3.8,SNR=3.5						
ILAR	Eielson Array	96.16	337	P	P	15 37 12.1	-0.1
	0.6nm,1.0s,baz=60,slow=3.6,SNR=3.6						

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*NIED **28** 15:27:00, 36°.60N×141°.10E, h5^{km}, Mw3.7 Best double couple: M$_0$3.86000×10^{14} NP1:ϕ_s237.00000°, δ62.00000°, λ-14.00000°. NP2:ϕ_s334.00000°, δ77.00000°, λ-152.00000°.*

*IDC **28** 15:27:18.4±1.1, 36°.47N×141°.09E, h0^{km}, mb3.6/7, mb1 3.7/9, mb1mx3.5/66, mbtmp3.6/9, ML3.4/2, MS2.5/1, Ms1 2.5/1, ms1mx2.1/65, Error ellipse: s-maj=28.4km s-min=20.0km az=93.0*

*ISCJB **28** 15:27:20.1±1.0, 36°.58N±0°.03×141°.19E±0°.07, h20^{km}±6^{km}, mb3.5/8, Error ellipse: s-maj=9.2km s-min=5.1km az=18.1*

*JMA **28** 15:27:21.3±0.1, 36°.58N×141°.07E, h26^{km}±1^{km}, M3.9*

JMA Felt I J1.

ISC 28 15:27:19.9±2.6, 36°.56N±0°.04×141°.19E±0°.07, h13^{km}±15^{km}, n29, σ2^{s}.17/32, mb3.7/8, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHO	Hitachi	0.50	277	P	Pb	15 27 29.6	-0.9
JHO				S	Sg	15 27 35.8	-0.6
JHYU	Hitachinakayam	0.53	246	P	Pb	15 27 30.7	-0.3
JHYU				S	Sb	15 27 37.8	-0.7
ONAJ	Iwakimizuishiy	0.63	330	P	Pb	15 27 32.3	-0.5
ONAJ				S	Sb	15 27 40.5	-1.0
JIHU	Itakohorinouch	0.79	222	P	Pn	15 27 36.3	-0.4
JFK	Kawauchi	0.85	343	P	Pb	15 27 35.7	-0.8
JFK				S	Sb	15 27 46.6	-1.2
JYT	Yasato	0.86	248	P	Pb	15 27 36.1	-0.6
JYT				*e*S	Sb	15 27 47.3	-0.9
JSB	Shiboa	1.10	292	P	Pb	15 27 40.1	-0.6
JFT	Otama	1.18	325	P	Pn	15 27 41.5	-0.6
JFT				S	Sb	15 27 56.2	-1.1
MJAR	Matsushiro Arr	2.40	271	Pn	Pn	15 27 59.0	+0.1
	6.3nm,0.3s,baz=85,slow=9.8,SNR=76						
MJAR				Sn	Sb	15 28 30.6	-1.8
	21nm,0.3s,baz=82,slow=28,SNR=16						
MAT	Matsushiro	2.40	271	P	Pn	15 27 59.3	+0.4
MAT				*e*S	Sn	15 28 27.1	-1.0
JHJ	Hachijo jima 2	3.62	199	Pn	Pn	15 28 18.7	+3.1
	9.9nm,0.3s,baz=66,slow=20,SNR=12						
JHJ				Sn	Sn	15 29 00.5	+2.3
	26nm,0.3s,baz=72,slow=23,SNR=4.2						
ASAJ	Asahikawa	7.63	8	Pn	Pn	15 29 10.2	-0.5
	0.7nm,0.3s,baz=205,slow=14,SNR=14						
ASAJ				Sn	Sn	15 30 35.0	-1.9
	0.1nm,0.3s,baz=30,slow=20,SNR=2.2						
JCJ	Chichijima	9.47	175	Sn	Sn	15 31 14.2	-8.0
	3.5nm,0.3s,baz=252,slow=20,SNR=2.1						
KSRS	Korea Array	10.65	279	Pn	Pn	15 29 55.6	+3.5
	0.1nm,0.3s,baz=98,slow=14,SNR=3.8						
KSRS				LR	LR	15 33 37.6	
	comp=Z,27nm,20.3s,baz=65,slow=36						
SEY	Seymchan	27.30	11	P	P	15 33 06.8	+2.9
	1.5nm,0.9s,baz=219,slow=18,SNR=4.6						
SONM	Songino Array	27.91	305	P	P	15 33 12.8	+3.1
	0.5nm,0.5s,baz=99,slow=7.4,SNR=2.9						
H11N2	WAKE ISLAND Hy	28.06	120	T	T	16 02 36.4	
	baz=313,slow=75,SNR=525						
H11N1	WAKE ISLAND Hy	28.07	120	T	T	16 02 36.9	
	baz=313,slow=75,SNR=415						
H11N3	WAKE ISLAND Hy	28.08	120	T	T	16 02 37.6	
	baz=313,slow=75,SNR=440						
H11S1	WAKE ISLAND Hy	28.76	122	T	T	16 03 28.7	
	baz=314,slow=76,SNR=508						
H11S3	WAKE ISLAND Hy	28.76	122	T	T	16 03 28.2	
	baz=314,slow=76,SNR=342						
H11S2	WAKE ISLAND Hy	28.77	122	T	T	16 03 29.4	
	baz=314,slow=76,SNR=226						
ZALV	Zalesovo Beam	42.10	313	P	P	15 35 11.7	+0.3
	1.1nm,0.5s,baz=119,slow=5.1,SNR=2.6						
MKAR	Makanchi Array	44.22	302	P	P	15 35 29.1	+0.4
	0.3nm,0.6s,baz=96,slow=11,SNR=3.7						
KURBB	Kurchatov Arra	46.15	308	P	P	15 35 43.1	-0.8
	0.3nm,0.4s,baz=82,slow=8.4,SNR=4.5						
ILAR	Eielson Array	50.00	32	P	P	15 36 14.9	+1.4
	0.2nm,0.8s,baz=298,slow=6.0,SNR=3.2						
WRA	Warramunga Arr	56.56	188	P	P	15 37 02.3	+0.1
	0.6nm,0.4s,baz=5.9,slow=7.5,SNR=9.3						
ASAR	Alice Springs	60.29	188	P	P	15 37 27.6	-0.5
	0.4nm,0.7s,baz=14,slow=6.9,SNR=5.1						
H06N1	SOCORRO T-PHAS	92.46	64	T	T	17 23 26.8	
	SNR=10.0						

IDC 28 15:38:02.0±2.0, 4°.72N×126°.15E, h0^{km}, mb3.4/4, mb1 3.6/4, mb1mx3.2/57, mbtmp3.4/4, Error ellipse: s-maj=190.6km s-min=23.1km az=66.0, Talaud Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	25.80	162	P	P	15 43 36.4	+1.3
	0.5nm,0.4s,baz=341,slow=10,SNR=5.6						
ASAR	Alice Springs	29.21	165	P	P	15 44 04.5	-1.2
	0.3nm,0.5s,baz=345,slow=7.1,SNR=8.7						
MKAR	Makanchi Array	56.42	325	P	P	15 47 45.8	+0.3
	0.3nm,0.5s,baz=122,slow=8.9,SNR=4.3						
KURBB	Kurchatov Arra	60.60	327	P	P	15 48 14.0	-0.5
	0.2nm,0.4s,baz=130,slow=6.5,SNR=2.3						

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*ISCJB **28** 15:51:30.9±0.8, 51°.44N±0°.03×16°.07E±0°.04, h0^{km}, Error ellipse: s-maj=4.9km s-min=3.1km az=16.1*

*CSEM **28** 15:51:31.4±0.4, 51°.50N×16°.10E, h2^{km}, ML2.6/13, Error ellipse: s-maj=6.7km s-min=4.1km az=179.0, Suspected Mining induced.*

*VIE **28** 15:51:34.0±0.5, 51°.32N×16°.09E, h0^{km}, mb2.1/3, ml2.2/6, Error ellipse: s-maj=3.9km s-min=3.1km az=158.0 69 km WNW of Wroclaw Suspected Mining induced.*

ISC 28 15:51:31.2±1.2, 51°.53N±0°.05×16°.15E±0°.03, h0^{km}, n37, σ0^{s}.60/71, Poland

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSP	Ksiaz	0.69	172	*e*Pg	Pg	15 51 45.1	+0.6
KSP				*e*Sg	Sg	15 51 54.2	+0.7
UPC	Upice	1.03	185	*e*PG	Pg	15 51 51.2	+0.3
UPC				*e*SG	Sg	15 52 04.4	+0.2
	comp=Z,17nm,0.3s						
UPC	Upice	1.03	185	Pg	Pg	15 51 51.2	+0.3
UPC				Sg	Sg	15 52 04.4	+0.2
	17nm,0.3s						
DPC	Dobruska-Polom	1.19	175	*e*PG	Pg	15 51 54.0	+0.1
DPC				*e*SG	Sg	15 52 08.7	-0.6
	comp=Z,9.3nm,0.3s						
DPC	Dobruska-Polom	1.19	175	Pg	Pg	15 51 54.0	+0.1
DPC				Sg	Sg	15 52 08.7	-0.6
	9.3nm,0.3s						
PVCC	Panska Ves	1.41	225	*e*PG	Pb	15 51 58.6	+0.1
PVCC				*e*SG	Sg	15 52 16.5	-0.1
	comp=Z,38nm,0.2s						
PVCC	Panska Ves	1.41	225	Pg	Pb	15 51 58.6	+0.1
PVCC				Sg	Sg	15 52 16.5	-0.1
	38nm,0.2s						
KRLC	Kraliky	1.51	164	*e*PG	Pg	15 52 00.0	-0.2
KRLC				*e*SG	Sb	15 52 19.6	-0.3
	comp=Z,3.1nm,0.3s						
KRLC	Kraliky	1.51	164	Pg	Pg	15 52 00.0	-0.2
KRLC				Sg	Sb	15 52 19.6	-0.3
	3.1nm,0.3s						
BRG	Berggiesshubel	1.53	246	PG	Pb	15 52 00.6	0.0
BRG				SG	Sn	15 52 20.2	-0.3
	13nm,0.3s						
GOPC	GO Pecny, Ondr	1.83	209	*e*PN	Pn	15 52 04.2	+0.2
GOPC				*e*PG	Pb	15 52 05.6	-0.1
GOPC				*e*SG	Sb	15 52 29.1	0.0
	comp=Z,4.0nm,0.2s						
GOPC	GO Pecny, Ondr	1.83	209	Pn	Pn	15 52 04.2	+0.2
PRU	Pruhonice	1.85	214	*e*PG	Pn	15 52 05.0	+0.8
PRU				*e*SG	Sn	15 52 28.1	-0.2
	comp=Z,3.8nm,0.3s						
PRU	Pruhonice	1.85	214	Pg	Pn	15 52 05.0	+0.8
PRU				Sg	Sn	15 52 28.1	-0.2
	3.8nm,0.3s						
MORC	Moravsky Berou	1.97	153	*e*Pn	Pn	15 52 05.7	-0.2
MORC				*e*Sg	Sb	15 52 32.7	-0.3
MORC	Moravsky Berou	1.97	153	*e*PN	Pn	15 52 05.7	-0.2
MORC				*e*SG	Sb	15 52 32.7	-0.3
CLL	Collm	1.98	265	*e*Pg	Pb	15 52 08.0	-0.1
CLL				*e*Sg	Sb	15 52 34.0	+0.6
OKC	Ostrava-Krasne	2.12	142	*e*PG	Pg	15 52 11.2	-0.6
OKC				*e*SG	Sg	15 52 38.9	-0.3
	comp=Z,8.3nm,0.6s						
OKC	Ostrava-Krasne	2.12	142	Pg	Pg	15 52 11.2	-0.6
OKC				Sg	Sg	15 52 38.9	-0.3
	8.3nm,0.6s						
VRAC	Vranov	2.24	173	*e*Pn	Pn	15 52 09.8	+0.2
VRAC				*e*Sg	Sb	15 52 41.8	+0.9
VRAC	Vranov	2.24	173	*e*PN	Pn	15 52 09.8	+0.2
VRAC				*e*SG	Sb	15 52 41.8	+0.9
KRUC	Moravsky	2.48	176	*e*Pn	Pn	15 52 13.2	+0.4
KRUC				*e*Sg	Sg	15 52 50.2	-0.5
KRUC	Moravsky	2.48	176	*e*PN	Pn	15 52 13.2	+0.4
KRUC				*e*SG	Sg	15 52 50.2	-0.5
OJC	Ojcow	2.66	118	*e*Pg	Pg	15 52 21.7	-0.5
OJC				*e*Sg	Sg	15 52 57.7	+1.1
OJC	Ojcow	2.66	118	*e*Pg	Pg	15 52 21.7	-0.5
OJC				*e*Sg	Sg	15 52 57.7	+1.1
NKC	Novy Kostel	2.68	242	*e*PG	Pg	15 52 21.7	-0.8
NKC				*e*SG	Sb	15 52 55.1	+1.6
	comp=Z,6.6nm,0.3s						
NKC	Novy Kostel	2.68	242	Pg	Pg	15 52 21.7	-0.8
NKC				Sg	Sb	15 52 55.1	+1.6
	6.6nm,0.3s						
KHC	Kasperske Hory	2.91	215	*e*PN	Pn	15 52 18.8	0.0
KHC				*e*PG	Pb	15 52 24.2	+0.2
KHC				*e*SN	Sn	15 52 53.2	-1.3
KHC				*e*SG	Sg	15 53 02.7	-2.0
	comp=Z,2.5nm,0.4s						
KHC	Kasperske Hory	2.91	215	Pn	Pn	15 52 18.8	0.0
CONA	Conrad Observa	3.61	183	*i* Pn	Pn	15 52 28.8	+0.3
	0.1nm,0.1s						
CONA				Sg	Sg	15 53 26.7	-0.4
	0.9nm,0.3s						
CONA	Conrad Observa	3.61	183	Pn	Pn	15 52 28.8	+0.3
	0.1nm,0.1s						
CONA				Sg	Sg	15 53 26.7	-0.4
	0.9nm,0.3s						
MOA	Molln	3.88	199	*i* Pn	Pn	15 52 32.3	+0.2
	0.6nm,0.2s						
MOA				*e*Sg	Sg	15 53 35.9	+0.1
	1.2nm,0.3s						
MOA	Molln	3.88	199	Pn	Pn	15 52 32.3	+0.2
	0.6nm,0.2s						
MOA				Sg	Sg	15 53 35.9	+0.1
	1.2nm,0.3s						
ARSA	Arzberg	4.30	186	*e*Sg	Sg	15 53 49.9	+0.5
	0.5nm,0.3s						
ARSA	Arzberg	4.30	186	Sg	Sg	15 53 49.9	+0.5
	0.5nm,0.3s						
KBA	Koelnbreinsper	4.82	203	Sg	Sg	15 54 06.0	+0.1
	0.2nm,0.1s						
KBA	Koelnbreinsper	4.82	203	Sg	Sg	15 54 06.0	+0.1
	0.2nm,0.1s						

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*MOS **28** 16:01:09.9±0.9, 4°.54N×32°.69W, h10^{km}, mb5.1/50, MS4.8/19, Error ellipse: s-maj=9.6km s-min=4.6km az=55.7*

*IDC **28** 16:01:09.7±0.4, 4°.52N×32°.70W, h0^{km}, mb4.4/44, mb1 4.5/45, mb1mx4.4/66, mbtmp4.4/45, ML4.3/1, Error ellipse: s-maj=12.0km s-min=9.4km az=149.0*

*ISCJB **28** 16:01:10.2±0.2, 4°.50N±0°.04×32°.66W±0°.03, h11^{km}, mb4.7/171, MS4.9/21, Error ellipse: s-maj=6.4km s-min=3.9km az=155.8*

*GCMT **28** 16:01:11.5±0.1, 4°.61N×32°.58W, h12^{km}, MW5.4/136, Moment Tensor Solution. s102,c169; s136,c278; Duration: 1^{s}.2 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.54±.02; M$_{\theta\theta}$0.04±.02; M$_{\phi\phi}$1.50±.02; M$_{r\theta}$0.22±.05; M$_{\theta\phi}$0.10±.01; M$_{\phi r}$-0.06±.04; Best double couple: M$_0$1.53900×10^{17} NP1:ϕ_s356.00000°, δ46.00000°, λ-101.00000°. NP2:ϕ_s192.00000°, δ45.00000°, λ-79.00000°. Principal axes: T 1.5070, Plg1.0000°, Azm94.0000°; N 0.0610, Plg8.0000°, Azm4.0000°; P -1.5710, Plg82.0000°, Azm190.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **28** 16:01:11.5±0.2, 4°.55N×32°.67W, h10^{km}, mb4.9/62 Error ellipse: s-maj=6.8km s-min=4.8km az=168.0*

*BJI **28** 16:01:12.6, 4°.60N×32°.60W, h10^{km}, mB5.3/2, Ms5.4/4, Ms7 5.3/4*

ISC 28 16:01:11.6±0.3, 4°.38N±0°.05×32°.74W±0°.07, h11^{km}, n373, σ1^{s}.95/407, mb4.8/172, MS4.9/21, 29C-20D, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RCBR	Riachuelo	10.62	197	Pn	Pn	16 03 45.2	+1.4
	2.2nm,0.3s,baz=24,slow=5.0,SNR=10						
RCBR				Sn	Sn	16 05 40.1	-2.7
	6.5nm,0.3s,baz=97,slow=5.3,SNR=9.6						
RCBR	Riachuelo	10.62	197	*e*Pn	Pn	16 03 47.1	+3.3
RCBR				Sn	Sn	16 05 40.1	-2.7
RCBR	Riachuelo	10.62	197	*e*P	Pn	16 03 47.1	+3.3
RCBR						16 05 40.1	
H10N3	ASCENSION HYDR	21.87	124	T	T	16 28 52.3	
	baz=304,slow=75						
H10N2	ASCENSION HYDR	21.87	124	T	T	16 28 59.9	
	baz=304,slow=75						
H10N1	ASCENSION HYDR	21.89	124	T	T	16 28 53.7	
	baz=304,slow=75						
H10S3	ASCENSION HYDR	22.36	126	T	T	16 29 09.6	
	baz=306,slow=75,SNR=2322						
H10S1	ASCENSION HYDR	22.37	126	T	T	16 29 09.8	
	baz=306,slow=75,SNR=3491						
H10S2	ASCENSION HYDR	22.38	126	T	T	16 29 10.9	
	baz=306,slow=75,SNR=3262						
BDFB	Brasilia	24.98	217	P	P	16 06 37.7	+2.0
	4.5nm,0.7s,baz=45,slow=9.9,SNR=3.7						
LIC	Lamto	27.65	85	*e*P	P	16 07 01.2	+1.5
	153nm,1.5s						
PTGA	Pitinga	27.68	260	P	P	16 07 01.8	+1.8
	4.6nm,0.9s,baz=76,slow=10,SNR=7.7						
TIC	Toumodi	27.68	84	*e*P	P	16 07 01.2	+1.2
DBIC	Dimbokro	27.84	84	P	P	16 06 59.5	-2.0
	6.2nm,0.9s,baz=246,slow=13,SNR=4.3						
KIC	Kosan Boka	27.94	85	*e*P	P	16 07 02.5	+0.2
	173nm,1.8s						
H05S1	Guadeloupe/Mar	29.43	292	T	T	16 38 20.7	
	SNR=55						
KOWA	Kowa	30.02	68	P	P	16 07 19.5	-1.4
	5.4nm,0.8s,baz=276,slow=6.4,SNR=7.3						
H05N1	Guadeloupe/Mar	30.23	295	T	T	16 39 09.1	
	SNR=19						
PMOZ	Porto Moniz, M	31.81	25	*e*LR	LR	16 15 35.8	
	1µm,18.0s						
SAML	Samuel	33.11	246	*e*P	P	16 07 50.0	+2.0
	20nm,1.0s						
SAML	Samuel	33.11	246	*e*P	P	16 07 50.0	+2.0
SAML				pmax	pmax		
	comp=Z,19nm,1.0s						
PSMA	Santa Maria	33.21	11	*e*T	T	16 42 03.5	
PSMN	Pico do Norte,	33.23	11	*e*P	P	16 07 49.8	+1.1
	comp=Z,69nm,0.6s						
PSMN	Pico do Norte,	33.23	11	*e*T	T	16 42 05.9	
PSET	Sete Cidades	33.90	10	*e*P	P	16 07 51.1	-3.6
	comp=Z,140nm,0.8s						
ROSA	Rosais	34.43	6	*e*P	P	16 08 00.8	+1.6
	comp=Z,74nm,1.3s						
SIV	San Ignacio	34.58	234	P	P	16 08 02.2	+1.5
	comp=Z,5.2nm,0.9s,baz=92,slow=9.9,SNR=23						
PGRA	Graciosa	34.77	7	*e*P	P	16 08 04.7	+2.6
	comp=Z,38nm,0.5s						
TOA0	Torodi Ar. Sit	35.09	73	*e*P	P	16 08 03.2	-2.0
TORD	Torodi Ar. Bea	35.09	73	P	P	16 08 03.6	-1.6
	comp=Z,7.6nm,1.0s,baz=262,slow=7.4						
SDV	Santo Domingo	37.89	279	P	P	16 08 29.3	-0.1
	comp=Z,9.0nm,0.3s,baz=319,slow=9.2,SNR=2.7						
MDT	Midelt	38.61	39	P	P	16 08 35.6	+0.4
	comp=Z,6.7nm,1.1s,baz=239,slow=8.5,SNR=9.8						
CPUP	Villa Florida	38.72	217	P	P	16 08 37.0	+1.1
	comp=Z,4.1nm,0.9s,baz=30,slow=8.0,SNR=7.4						
PFVI	Vila Bisbo	39.28	31	*e*S	S	16 14 47.3	+6.0
PFVI				*e*SS	SnSn	16 17 38.8	+3.6
MORF	Marmelete	39.50	31	*e*P	P	16 08 41.2	-1.2
MORF				AMb	AMB	16 08 47.1	
	comp=Z,64nm,1.8s						
MORF	Marmelete	39.50	31	*e*S	S	16 14 51.9	+7.1
MORF				*e*SS	SnSn	16 17 42.8	+2.1
MORF	Marmelete	39.50	31	*e*P	P	16 08 41.2	-1.2
PBDV	Barranco-do-Ve	39.83	32	*e*P	P	16 08 44.6	-0.5
	comp=Z,75nm,1.8s						
PBDV				*e*S	S	16 14 56.1	+6.5
PBDV				*e*SS	SnSn	16 17 47.3	-1.1
PVAQ	Vaqueiros	40.06	32	*e*P	P	16 08 46.2	-0.8
	comp=Z,66nm,1.6s						
PVAQ				*e*S	S	16 15 00.1	+7.1
PVAQ				*e*SS	SS	16 17 44.7	-5.7
PVAQ				*e*LR	LR	16 19 48.7	
	comp=Z,1µm,18.0s						
PCVE	Castro Verde	40.07	31	*e*P	P	16 08 47.1	0.0
PCVE				*e*S	S	16 15 00.7	+7.6
PCVE				*e*SS	SS	16 17 41.5	-9.1
MESJ	Messejana	40.13	31	*e*P	P	16 08 46.5	-1.1
MESJ				AMb	AMB	16 08 56.6	
	comp=Z,27nm,2.0s						
MESJ				*e*S	S	16 14 51.1	-2.9
MESJ	Messejana	40.13	31	*e*P	P	16 08 47.4	-0.2
	comp=Z,27nm,1.5s						
MESJ	Messejana	40.13	31	*e*P	P	16 08 46.5	-1.1
MESJ				*e*S	S	16 14 51.1	-2.9
PNCL	Nicolau / Gran	40.19	30	*e*P	P	16 08 50.9	+2.9
	comp=Z,67nm,1.6s						
PNCL				*e*S	S	16 15 00.9	+6.1
PNCL				*e*SS	SS	16 17 54.3	+1.4
RUSC	La Rusia	40.21	274	*e*P	P	16 08 49.8	+0.7
	comp=Z,22nm,1.5s						
LIS	Lisbon	40.35	29	*e*P	P	16 08 48.3	-1.1
LIS				AMb	AMB	16 08 50.6	
	comp=Z,57nm,1.5s						
LIS	Lisbon	40.35	29	*e*P	P	16 08 48.3	-1.1
PMAFR	Mafra	40.48	29	*e*S	S	16 15 08.0	+8.8
PMAFR				*e*SS	SS	16 17 58.2	-0.6
LPAZ	La Paz	40.58	239	P	P	16 08 54.1	+1.8
	comp=Z,2.9nm,0.8s,baz=76,slow=9.6,SNR=11						
LPAZ	La Paz	40.58	239	*e*P	P	16 08 54.1	+1.8
	comp=Z,13nm,1.0s						
LPAZ	La Paz	40.58	239	*e*P	P	16 08 54.1	+1.8
LPAZ				pmax	pmax		
	comp=Z,13nm,1.0s						
EVO	Evora	40.77	30	*e*P	P	16 08 52.2	-0.7
	comp=Z,57nm,1.8s						
ALMR	Almeirim	40.97	29	*e*P	P	16 08 53.5	-1.1
ALMR				AMb	AMB	16 08 54.9	
	comp=Z,52nm,1.0s						
ALMR	Almeirim	40.97	29	*e*P	P	16 08 53.4	-1.1
PMTG	Montargil	41.08	29	*e*P	P	16 08 57.1	+1.7
	comp=Z,80nm,1.7s						
PMTG				*e*S	S	16 15 14.1	+6.0
PMTG				*e*SS	SS	16 17 55.8	-15
PESTR	Estremoz	41.24	30	*e*S	S	16 15 15.5	+5.0

PESTR				*e*SS	SS	16 18 14.4	+0.5
ROSC	**El Rosal**	41.45	272	P	P	16 08 58.3	-1.0
	comp=Z,6.8nm,0.4s,baz=252,slow=19,SNR=1.9						
PCAS	**Casmilo, Conde**	41.72	28	*e*S	S	16 15 29.7	+12
PCAS				*e*SS	SS	16 18 25.7	+2.4
PMRV	**Marv??o**	41.77	30	*e*P	P	16 09 00.7	-0.4
	comp=Z,64nm,1.7s						
PMRV				*e*S	S	16 15 22.9	+4.5
PMRV				*e*SS	SS	16 18 25.8	+1.4
PMRV				*e*LR	LR	16 20 32.1	
	comp=Z,1µm,20.0s						
PCBR	**Castelo Branco**	42.04	29	*e*P	P	16 09 02.8	-0.5
	comp=Z,34nm,1.6s						
MTE	**Manteigas**	42.44	29	*e*P	P	16 09 05.8	-0.8
MTE				*e*S	S	16 15 28.2	-0.2
MTE				*e*SS	SS	16 18 41.9	+4.1
MTE				*e*LR	LR	16 20 31.7	
	comp=Z,2µm,18.0s						
PVIS	**Viseu**	42.52	28	*e*P	P	16 09 07.3	0.0
	comp=Z,59nm,1.8s						
POLO	**Lamas de Olo**	43.08	28	*e*P	P	16 09 11.9	0.0
	comp=Z,22nm,1.8s						
POLO				*e*S	S	16 15 42.2	+4.3
POLO				*e*SS	SS	16 18 49.8	-0.7
MVO	**Moncorvo**	43.28	29	*e*P	P	16 09 12.7	-0.7
	comp=Z,34nm,1.6s						
MVO				*e*S	S	16 15 46.1	+5.3
MVO				*e*SS	SS	16 18 57.6	+3.4
MVO				*e*LR	LR	16 21 04.8	
	comp=Z,2µm,18.0s						
PGAV	**Gavieira, Arco**	43.34	27	*e*S	S	16 15 45.2	+3.6
PGAV				*e*LR	LR	16 21 02.4	
	comp=Z,2µm,20.0s						
PAB	**San Pablo**	43.42	32	*e*P	P	16 09 14.4	-0.2
	comp=Z,42nm,1.5s						
PAB	**San Pablo**	43.42	32	*e*P	P	16 09 14.4	-0.2
PAB				pmax	pmax		
	comp=Z,42nm,1.5s						
ESDC	**Sonseca Array**	43.72	33	P	P	16 09 15.9	-1.1
	comp=Z,3.4nm,1.0s,baz=223,slow=8.1,SNR=15						
ES19	**SONSECA Array**	43.77	33	*e*P	P	16 09 15.4	-2.1
KEST	**Kesra**	49.75	46	P	P	16 10 04.7	+0.4
	comp=Z,9.2nm,0.9s,baz=339,slow=3.1,SNR=9.0						
ROSF	**Rostrenen**	50.53	25	*e*P	P	16 10 13.8	+3.9
ROSF				pmax	pmax		
	comp=Z,41nm,1.5s						
VAL	**Valentia**	50.96	18	*i* S	S	16 17 34.6	+4.8
VAL				*e*		16 24 16.2	
TCF	**Toulx Ste Croi**	51.58	30	*e*P	P	16 10 17.8	-0.2
TCF				pmax	pmax		
	comp=Z,32nm,1.6s						
SSB	**Saint Sauveur**	52.13	33	P	P	16 10 22.4	+0.3
MBDF	**Montbardon**	53.02	35	*e*P	P	16 10 32.4	+3.6
MBDF				pmax	pmax		
	comp=Z,16nm,1.1s						
SAOF	**Saorge**	53.03	36	P	P	16 10 30.5	+1.8
BLA	**Blacksburg**	54.44	313	*e*P	P	16 10 37.2	-2.0
	comp=Z,26nm,1.3s						
BLA	**Blacksburg**	54.44	313	*e*P	P	16 10 37.2	-2.0
BLA				pmax	pmax		
	comp=Z,26nm,1.3s						
TSUM	**Tsumeb**	54.77	117	P	P	16 10 41.6	-0.4
	comp=Z,12nm,1.1s,baz=276,slow=7.7,SNR=6.3						
HAU	**Haudompre**	54.84	31	*e*P	P	16 10 40.7	-1.2
HAU				pmax	pmax		
	comp=Z,37nm,1.4s						
HINF	**Hinteralfeld**	54.98	32	*e*P	P	16 10 41.9	-1.0
HINF				pmax	pmax		
	comp=Z,37nm,1.9s						
GOGA	**Godfrey**	55.29	308	P	P	16 10 46.3	+0.9
DOU	**Dourbes**	55.35	28	⇑P	P	16 10 44.1	-1.4
	comp=Z,14nm,1.4s						
ECH	**Echery**	55.39	31	P	P	16 10 50.0	+4.1
ECH				pmax	pmax		
	comp=Z,9.0nm,1.4s						
GIVF	**Givet**	55.46	28	*e*P	P	16 10 45.7	-0.6
GIVF				pmax	pmax		
	comp=Z,52nm,1.6s						
BCLA	**Clavier**	55.90	28	⇑P	P	16 10 48.6	-0.9
DAVOX	**Davos/Dischmat**	55.99	34	P	P	16 10 49.2	-1.2
	comp=Z,3.5nm,0.8s,baz=309,slow=6.5,SNR=5.3						
BFO	**Black Forest**	56.07	32	*i* P	P	16 10 51.2	+0.4
EKA	**Eskdalemuir Ar**	56.10	20	P	P	16 10 49.3	-1.5
	comp=Z,0.6nm,0.5s,baz=229,slow=6.1,SNR=3.4						
DAVA	**Damuels**	56.29	34	P	P	16 10 51.7	-0.8
	comp=Z,5.7nm,0.9s						
TKL	**Tuckaleechee C**	56.32	310	P	P	16 10 51.4	-1.3
	comp=Z,2.7nm,0.8s,baz=98,slow=9.3,SNR=1.8						
MEM	**Membach**	56.36	29	⇑P	P	16 10 51.5	-1.2
	comp=Z,18nm,1.7s						
FETA	**Feichten**	56.61	34	*e*P	P	16 10 53.6	-1.2
	comp=Z,7.0nm,1.0s						
RETA	**Reutte**	56.89	34	P	P	16 10 55.7	-1.0
	comp=Z,10nm,1.1s						
MOTA	**Moosalm**	57.00	34	P	P	16 10 56.2	-1.4
	comp=Z,11nm,1.1s						
WTTA	**Wattenberg**	57.25	34	P	P	16 10 59.5	+0.1
	comp=Z,9.8nm,1.1s						
WATA	**Walderalm**	57.26	34	P	P	16 10 58.6	-0.8
	comp=Z,4.1nm,0.5s						
SCHQ	**Schefferville**	57.35	337	P	P	16 10 57.9	-1.8
	comp=Z,6.7nm,0.8s,baz=152,slow=9.6,SNR=5.8						
ABTA	**Abfaltersbach**	57.47	35	*e*P	P	16 11 00.0	-0.8
	comp=Z,25nm,1.5s						
JAVS	**Javornik**	57.93	37	*e*P	P	16 11 03.7	-0.4
JAVS				*e*S	S	16 19 08.4	+4.2
MYKA	**Terra Mystica**	58.06	36	P	P	16 11 04.5	-0.5
	comp=Z,26nm,1.5s						
KBA	**Koelnbreinsper**	58.13	35	P	P	16 11 05.8	+0.3
	comp=Z,10nm,1.6s						
VISS	**Visnje**	58.35	37	*e*P	P	16 11 07.6	+0.7
VISS				S	S	16 19 12.9	+3.4
BOJS	**Bojanci**	58.45	38	*i* P	P	16 11 07.6	0.0
BOJS				*e*S	S	16 19 13.4	+2.6
OBKA	**Obir**	58.54	37	P	P	16 11 07.8	-0.5
	comp=Z,4.0nm,0.8s						
SOKA	**Soboth**	58.91	37	P	P	16 11 10.0	-0.9
	comp=Z,15nm,1.2s						
PERS	**Pernice**	58.94	37	*i* P	P	16 11 11.5	+0.4
PERS				S	S	16 19 20.1	+2.8
MOA	**Molln**	59.07	35	*e*P	P	16 11 10.6	-1.3
	comp=Z,8.1nm,1.2s						
WCI	**Wyandotte Cave**	59.12	312	P	P	16 11 13.3	+0.9
GEA0	**GERESS Array S**	59.28	34	*e*P	P	16 11 11.7	-1.7
GERES	**GERESS Array B**	59.28	34	P	P	16 11 11.5	-1.9
	comp=Z,1.6nm,0.9s,baz=230,slow=6.1,SNR=7.6						
BRY	**Bratogost**	59.35	42	⇑*i*P	P	16 11 13.5	-0.6
KHC	**Kasperske Hory**	59.37	34	*e*P	P	16 11 13.5	-0.5
KHC				*e*S	S	16 19 20.6	-2.1
KHC				AMS	AMS	16 34 00.0	
	comp=Z,1µm,17.2s						
KHC	**Kasperske Hory**	59.37	34	*e*P	P	16 11 12.8	-1.2
	comp=Z,12nm,1.5s						
KHC	**Kasperske Hory**	59.37	34	*e*P	P	16 11 13.5	-0.5
KHC				*e*S	S	16 19 20.6	-2.1
KHC				MLR	MLR		
	comp=Z,1µm,17.2s						
NKC	**Novy Kostel**	59.38	32	*e*P	P	16 11 13.9	-0.1
NKC				AMS	AMS	16 33 30.0	
	comp=Z,900nm,20.9s						
NKC	**Novy Kostel**	59.38	32	*e*P	P	16 11 13.9	-0.1
NKC				MLR	MLR		
	comp=Z,900nm,20.9s						
CEME	**Cevo**	59.46	42	⇑*i*P	P	16 11 15.0	+0.3
DRME	**Dracevica, Mon**	59.49	43	⇑*i*P	P	16 11 15.7	+0.8
ARSA	**Arzberg**	59.49	36	*e*P	P	16 11 14.1	-0.7
	comp=Z,3.2nm,0.9s						
NKME	**Niksic**	59.57	42	⇑*i*P	P	16 11 15.6	+0.1
TTG	**Podgorica**	59.63	43	⇓*i*P	P	16 11 16.7	+0.8
UPM	**Unac-Piva**	59.73	42	⇑*i*P	P	16 11 16.2	-0.5
KOME	**Kolasin**	59.98	42	⇑*i*P	P	16 11 18.5	+0.1
CONA	**Conrad Observa**	60.03	36	*e*P	P	16 11 17.3	-1.3
	comp=Z,7.7nm,1.4s						
PLE	**Pljevlja**	60.10	42	⇓*i*P	P	16 11 18.9	-0.3
OHR	**Ohrid**	60.17	44	*i* P	P	16 11 21.2	+1.5
IVA	**Berane**	60.24	42	⇑*i*P	P	16 11 20.3	+0.1
CLL	**Collm**	60.28	31	*e*P	P	16 11 19.0	-1.1
CLL				*i* sP	sP	16 11 26.0	+1.0
	comp=Z,18nm,1.6s						
CLL				*e*		16 12 07.0	
CLL				*i*		16 12 12.1	
CLL				*e*S	S	16 19 31.0	-3.2
	comp=N,400nm,24.7s						
CLL				*e*S	S	16 19 31.0	-3.2
	comp=E,400nm,22.2s						
CLL				*e*		16 22 36.0	
CLL				*e*SSS	SSS	16 26 12.0	
CLL				Lm	MLR	16 33 00.0	
	comp=N,700nm,20.0s						
CLL				Lm	MLR	16 33 00.0	
	comp=E,400nm,22.0s						
CLL				Lm	MLR	16 33 00.0	
	comp=Z,800nm,20.7s						
CLL	**Collm**	60.28	31	*e*P	P	16 11 19.0	-1.1
CLL				*i*		16 11 26.0	
CLL				*e*S	S	16 19 31.0	-3.2
CLL				MLR	MLR		
	comp=Z,800nm,20.7s						
SOP	**Sopron**	60.31	36	*e*P	P	16 11 20.8	+0.4
PRA	**Prague**	60.35	33	AMS	AMS	16 34 50.0	
	comp=Z,1µm,21.8s						
PRU	**Pruhonice**	60.36	33	*e*P	P	16 11 20.3	-0.4
PRU				*e*S	S	16 19 33.0	-2.4
PRU				AMS	AMS	16 34 40.0	
	comp=Z,1µm,19.0s						
PRU	**Pruhonice**	60.36	33	*e*P	P	16 11 20.3	-0.4
PRU				*e*S	S	16 19 33.0	-2.4
PRU				MLR	MLR		
	comp=Z,1µm,19.0s						
GOPC	**GO Pecny, Ondr**	60.45	33	*e*P	P	16 11 19.8	-1.6
GOPC				*e*S	S	16 19 33.8	-2.8
GOPC				AMS	AMS	16 34 30.0	
	comp=Z,1µm,19.7s						
GOPC	**GO Pecny, Ondr**	60.45	33	*e*P	P	16 11 19.8	-1.6
GOPC				*e*S	S	16 19 33.8	-2.8
GOPC				MLR	MLR		
	comp=Z,1µm,19.7s						
BRG	**Berggiesshubel**	60.52	32	*e*P	P	16 11 24.0	+2.2
	comp=Z,23nm,1.5s						
BRG				S	S	16 19 42.0	+4.6
	comp=N,691nm,18.3s						
	comp=E,249nm,15.8s						
	comp=Z,834nm,21.3s						
BRG	**Berggiesshubel**	60.52	32	*e*P	P	16 11 24.0	+2.2
BRG				S	S	16 19 42.0	+4.6
BRG				pmax	pmax		
	comp=Z,23nm,1.5s						
BRG				MLR	MLR		
	comp=N,691nm,18.3s						
BRG				MLR	MLR		
	comp=E,249nm,15.8s						
BRG				MLR	MLR		
	comp=Z,834nm,21.3s						
KRUS	**Krusevo**	60.58	44	*i* P	P	16 11 25.0	+2.5
PVCC	**Panska Ves**	60.67	33	*e*P	P	16 11 22.6	-0.2
PVCC				AMS	AMS	16 33 30.0	
	comp=Z,1µm,21.8s						
PVCC	**Panska Ves**	60.67	33	*e*P	P	16 11 22.6	-0.2
PVCC				MLR	MLR		
	comp=Z,1µm,21.8s						
KRUC	**Moravsky**	60.91	35	*e*P	P	16 11 23.6	-0.9
SKO	**Skopje**	60.94	44	*i* P	P	16 11 25.4	+0.5
MODS	**Modra-Piesok**	61.07	36	*e*P	P	16 11 25.0	-0.6
MODS				pmax	pmax		
	comp=Z,62nm,2.0s						
MODS	**Modra-Piesok**	61.07	36	*e*P	P	16 11 25.0	-0.6
VRAC	**Vranov**	61.15	35	⇑*i*P	P	16 11 25.4	-0.7
VRAC	**Vranov**	61.15	35	⇑P	P	16 11 25.4	-0.7
VRAC	**Vranov**	61.15	35	*e*P	P	16 11 25.0	-1.1
VRAC				*e*		16 11 31.3	
UPC	**Upice**	61.44	33	*e*P	P	16 11 27.7	-0.4
UPC				*e*S	S	16 19 48.3	-0.8
UPC				AMS	AMS	16 34 50.0	
	comp=Z,900nm,17.9s						
UPC	**Upice**	61.44	33	*e*P	P	16 11 27.7	-0.4
UPC				*e*S	S	16 19 48.3	-0.8
UPC				MLR	MLR		
	comp=Z,900nm,17.9s						
VAY	**Valandovo**	61.49	45	*i* P	P	16 11 29.3	+0.8
DPC	**Dobruska-Polom**	61.52	33	*e*P	P	16 11 28.7	0.0
DPC				AMS	AMS	16 35 20.0	
	comp=Z,900nm,19.1s						
DPC	**Dobruska-Polom**	61.52	33	*e*P	P	16 11 28.7	0.0
DPC				MLR	MLR		
	comp=Z,900nm,19.1s						
BUD	**Budapest**	61.69	37	*e*P	P	16 11 30.8	+1.0
KSP	**Ksiaz**	61.77	33	*e*P	P	16 11 31.2	+0.9
KSP	**Ksiaz**	61.77	33	*e*P	P	16 11 31.2	+0.9
MORC	**Moravsky Berou**	61.91	34	⇑*i*P	P	16 11 32.6	+1.3
MORC	**Moravsky Berou**	61.91	34	*e*P	P	16 11 29.9	-1.5
	comp=Z,11nm,1.4s						
MORC	**Moravsky Berou**	61.91	34	⇑P	P	16 11 32.6	+1.3
MORC	**Moravsky Berou**	61.91	34	*e*P	P	16 11 23.7	-7.6
MORC				*e*		16 11 30.6	
VYHS	**Vyhne**	62.04	36	*e*P	P	16 11 31.6	-0.6
VYHS				pmax	pmax		
	comp=Z,26nm,2.2s						
VYHS	**Vyhne**	62.04	36	*e*P	P	16 11 31.6	-0.6
MDVR	**Moldovita**	62.22	41	⇑*i*P	P	16 11 33.7	+0.2
OKC	**Ostrava-Krasne**	62.29	35	*e*P	P	16 11 33.6	-0.2
OKC				AMS	AMS	16 35 50.0	
	comp=Z,600nm,21.1s						
OKC	**Ostrava-Krasne**	62.29	35	*e*P	P	16 11 33.6	-0.2
OKC				MLR	MLR		
	comp=Z,600nm,21.1s						
PSZ	**Piszkesteto**	62.41	37	⇓*i*P	P	16 11 34.1	-0.6
PSZ	**Piszkesteto**	62.41	37	*e*P	P	16 11 35.7	+1.0
PSZ	**Piszkesteto**	62.41	37	*e*P	P	16 11 34.2	-0.5
	comp=Z,4.4nm,0.8s						
PSZ	**Piszkesteto**	62.41	37	*e*P	P	16 11 34.2	-0.5
PSZ				pmax	pmax		
	comp=Z,4.0nm,0.8s						
BZS	**Buzias**	62.49	40	⇓*i*P	P	16 11 35.4	+0.2
BZS	**Buzias**	62.49	40	⇓P	P	16 11 35.4	+0.2
SUR	**Sutherland**	62.56	130	P	P	16 11 36.3	+0.2
	comp=Z,10nm,0.9s,baz=297,slow=9.0,SNR=3.4						
CCM	**Cathedral Cave**	62.76	311	*e*P	P	16 11 36.6	-0.6
	comp=Z,16nm,1.1s						
CCM	**Cathedral Cave**	62.76	311	*e*P	P	16 11 36.6	-0.6
CCM				pmax	pmax		
	comp=Z,16nm,1.1s						
KECS	**Kecovo**	63.02	37	*e*P	P	16 11 39.6	+0.9
KECS				pmax	pmax		
	comp=Z,7.0nm,1.4s						
KECS	**Kecovo**	63.02	37	*e*P	P	16 11 39.6	+0.9
NIE	**Niedzica**	63.32	36	*e*P	P	16 11 41.5	+0.8
NIE	**Niedzica**	63.32	36	*e*P	P	16 11 41.5	+0.8
LSZ	**Lusaka**	63.40	109	P	P	16 11 42.2	+0.2
	comp=Z,3.6nm,0.9s,baz=267,slow=5.5,SNR=4.7						
OJC	**Ojcow**	63.40	35	*e*P	P	16 11 41.5	+0.3
OJC	**Ojcow**	63.40	35	*e*P	P	16 11 41.5	+0.3
JFWS	**Jewell Farm**	63.58	316	*e*P	P	16 11 38.7	-3.9
	comp=Z,17nm,1.0s						
JFWS	**Jewell Farm**	63.58	316	*e*P	P	16 11 38.7	-3.9
JFWS				pmax	pmax		
	comp=Z,17nm,1.0s						
R40A	**Maddies Statio**	63.60	311	*e*P	P	16 11 40.5	-2.2
	comp=Z,14nm,1.1s						
DRGR		63.66	39	P	P	16 11 42.8	-0.3
LBTB	**Lobatse**	63.70	121	P	P	16 11 43.5	-0.3
	comp=Z,8.6nm,1.1s,baz=252,slow=12,SNR=4.1						
CRVS	**Cervenica-Dubn**	63.78	37	*e*P	P	16 11 43.0	-0.7
CRVS				pmax	pmax		
	comp=Z,35nm,1.8s						
CRVS	**Cervenica-Dubn**	63.78	37	*e*P	P	16 11 43.0	-0.7
KONO	**Kongsberg**	63.92	22	*i* P	P	16 11 44.4	0.0
KONO				pmax	pmax		
	comp=Z,13nm,1.7s						
TRPA	**Tarpa**	64.10	38	⇓*i*P	P	16 11 45.7	-0.1
TRPA	**Tarpa**	64.10	38	*e*P	P	16 11 46.4	+0.6
UZH	**Uzhgorod**	64.16	37	*e*P	P	16 11 45.7	-0.5
UZH				*i*		16 11 49.4	
UZH				*e*		16 11 52.4	
ARR	**Arges**	64.36	41	⇑*i*P	P	16 11 47.3	-0.4
BOSA	**Boshof**	64.62	124	P	P	16 11 49.0	-0.7
	comp=Z,18nm,1.1s,baz=202,slow=5.1,SNR=8.2						
VOIR		64.66	41	P	P	16 11 49.2	-0.5
KWP	**Kalwaria Pacla**	64.83	36	*e*P	P	16 11 51.2	+0.6
KWP	**Kalwaria Pacla**	64.83	36	*e*P	P	16 11 51.2	+0.6
DOPR	**Dopca**	65.07	41	⇑*i*P	P	16 11 52.4	+0.1
MLR	**Muntele Rosu**	65.26	41	P	P	16 11 53.3	-0.3
	comp=Z,18nm,0.9s,baz=209,slow=5.3,SNR=20						
MLR	**Muntele Rosu**	65.26	41	⇓*i*P	P	16 11 53.7	0.0
MLR	**Muntele Rosu**	65.26	41	*e*P	P	16 11 52.6	-1.0
	comp=Z,243nm,1.5s						
MLR	**Muntele Rosu**	65.26	41	⇓P	P	16 11 53.7	0.0
NB2	**NORSAR Subarra**	65.44	22	P	P	16 11 52.7	-1.7
	comp=Z,92nm,2.5s,baz=228,slow=6.5						
NB2	**NORSAR Subarra**	65.44	22	P	P	16 11 52.7	-1.7
	baz=228,slow=6.5						
NOA	**NORSAR Array B**	65.44	22	P	P	16 11 52.7	-1.7
	comp=Z,1.9nm,0.9s,baz=230,slow=6.3,SNR=7.6						
ISR	**Istrita**	65.53	42	⇑*i*P	P	16 11 55.3	0.0
ISR	**Istrita**	65.53	42	⇑P	P	16 11 55.3	0.0
BUR04	**Bucovina Ar. S**	65.56	39	*e*P	P	16 11 54.5	-1.0
BUR08	**Bucovina Ar. S**	65.56	39	*e*P	P	16 11 54.9	-0.6
BURAR	**Bucovina Array**	65.56	39	⇓*i*P	P	16 11 55.1	-0.4
BURAR	**Bucovina Array**	65.56	39	⇓P	P	16 11 55.1	-0.4
LVV	**L’vov**	65.69	36	*e*P	P	16 11 58.8	+2.6
KLNR	**Kaliningrad**	65.72	31	*i* P	P	16 11 56.8	+0.6
KLNR				pmax	pmax		
	comp=Z,29nm,0.8s						
HFS	**Hagfors**	65.82	23	P	P	16 11 56.8	0.0
	comp=Z,1.7nm,0.7s,baz=227,slow=9.7,SNR=3.6						
PLOR	**Plostina**	65.85	41	⇑*i*P	P	16 11 57.2	-0.2
PLOR	**Plostina**	65.85	41	⇑P	P	16 11 57.2	-0.2
VRI	**Vrincioaia**	65.91	41	⇑*i*P	P	16 11 57.3	-0.4
VRI	**Vrincioaia**	65.91	41	⇑P	P	16 11 57.3	-0.4
TESR	**Tescani**	66.08	41	⇓*i*P	P	16 11 58.6	-0.1
ISP	**Isparta**	66.32	51	*i* P	P	16 11 59.7	-0.9
ISP				pmax	pmax		
	comp=Z,7.0nm,0.9s						
HARR	**Harsova**	66.33	43	⇓*i*P	P	16 11 59.7	-0.6
HARR	**Harsova**	66.33	43	⇓P	P	16 11 59.7	-0.6
TLB	**Topalu**	66.37	43	⇓*i*P	P	16 12 00.1	-0.5
TLB	**Topalu**	66.37	43	⇓P	P	16 12 00.1	-0.5
CFR	**Carcaliu**	66.62	42	⇑*i*P	P	16 12 01.1	-1.1
CFR	**Carcaliu**	66.62	42	⇑P	P	16 12 01.1	-1.1
KIS	**Kishinev**	67.65	41	*e*P	P	16 12 07.0	-1.7
KIS	**Kishinev**	67.65	41	*i* PcP	P	16 12 14.0	+5.3
KIS	**Kishinev**	67.65	41	*e*PP	PP	16 15 10.0	+32
KIS	**Kishinev**	67.65	41	*e*P	P	16 12 07.0	-1.7
KIS				*i*		16 12 14.0	
KIS				*e*PS	PnS	16 21 10.0	-18
SORM	**Soroca**	67.72	39	⇓*i*P	P	16 12 07.7	-1.4
SORM	**Soroca**	67.72	39	⇓P	P	16 12 07.7	-1.4
ECSD	**EROS Data Cent**	68.26	316	*e*P	P	16 12 11.2	-1.5
	comp=Z,12nm,1.2s						
KIEV	**Kiev**	69.10	37	*e*P	P	16 12 16.3	-1.4
	comp=Z,73nm,1.5s						
KIEV	**Kiev**	69.10	37*d*	*i*P	P	16 12 16.4	-1.3
KIEV				pmax	pmax		
	comp=Z,14nm,1.4s						
AKASG	**Malin Array Be**	69.11	37	P	P	16 12 16.7	-1.1
	comp=Z,2.8nm,0.7s,baz=250,slow=6.4,SNR=15						
AKBB	**Malin Array Si**	69.11	37	*e*P	P	16 12 16.6	-1.1
	comp=Z,52nm,1.5s						
AKBB	**Malin Array Si**	69.11	37	*e*P	P	16 12 16.7	-1.1
AKBB				pmax	pmax		
	comp=Z,52nm,1.5s						
BR131	**Keskin Array S**	69.12	49	*e*P	P	16 12 16.0	-2.3
BRTR	**Keskin Array B**	69.12	49	P	P	16 12 17.7	-0.6
	comp=Z,4.6nm,0.8s,baz=232,slow=5.3,SNR=25						
MMAI	**Mount Meron Ar**	69.33	56	P	P	16 12 19.3	-0.3
	comp=Z,3.5nm,0.9s,baz=291,slow=12,SNR=4.6						
ULM	**Lac du Bonnet**	69.67	322	P	P	16 12 19.7	-1.6
	comp=Z,5.8nm,0.8s,baz=110,slow=8.2,SNR=5.3						
ULM	**Lac du Bonnet**	69.67	322	*e*P	P	16 12 20.1	-1.2
	comp=Z,24nm,1.5s						
ULM	**Lac du Bonnet**	69.67	322	*e*P	P	16 12 20.1	-1.2
ULM				pmax	pmax		
	comp=Z,24nm,1.5s						
ASF	**Jabal al Asfar**	70.46	58	P	P	16 12 27.2	+0.5
	comp=Z,3.2nm,0.8s,baz=178,slow=2.6,SNR=6.7						
SIM	**Simferopol’**	70.63	44	P	P	16 12 21.7	-5.6
SIM				S	S	16 21 39.4	-1.9
SIM				pmax	pmax		
	comp=Z,68nm,9.8s						
SIM				MLR	MLR		
	comp=Z,200nm,15.0s						
VSU	**Vasula**	70.69	29	*i* P	P	16 12 27.2	-0.1
VSU				pmax	pmax		
	comp=Z,23nm,1.3s						
VAF	**Ylistaro**	71.01	23	P	P	16 12 29.1	-0.1
MSTX	**Muleshoe**	71.03	304	*e*P	P	16 12 31.7	+1.6
	comp=Z,13nm,1.0s						
TXAR	**Lajitas Array**	71.25	299	P	P	16 12 31.4	-0.1
	comp=Z,0.4nm,0.8s,baz=138,slow=9.6,SNR=5.8						
TX31	**Lajitas Ar. Si**	71.25	299	*e*P	P	16 12 30.9	-0.6
FINES	**FINESS Array B**	71.67	26	P	P	16 12 32.1	-1.1
	comp=Z,2.7nm,0.9s,baz=254,slow=6.9,SNR=9.0						
SUF	**Sumiainen**	72.26	24	P	P	16 12 35.9	-0.9
ANN	**Anapa**	72.90	44	*e*P	P	16 12 39.2	-1.7
ANN				*e*S	S	16 22 02.3	-5.1
ANN				pmax	pmax		
	comp=Z,72nm,1.8s						
ANN				MLR	MLR		
	comp=Z,435nm,22.0s						
ANN				MLR	MLR		
	comp=E,159nm,22.0s						
ANN				MLR	MLR		
	comp=N,729nm,22.0s						
MNTX	**Cornudas Mount**	72.95	302	*e*P	P	16 12 41.9	+0.3
	comp=N,4.0nm,1.0s						
SDCO	**Great Sand Dun**	73.72	308	*e*P	P	16 12 47.3	+1.0
	comp=N,8.2nm,1.1s						
ISCO	**Idaho Springs**	74.07	310	*e*P	P	16 12 49.5	+1.2
	comp=N,29nm,1.4s						
ISCO	**Idaho Springs**	74.07	310	P	P	16 12 49.6	+1.2
ANMO	**Albuquerque**	74.17	305	P	P	16 12 49.3	+0.4
	comp=N,0.9nm,0.7s,baz=124,slow=7.6,SNR=11						
ANMO	**Albuquerque**	74.17	305	*e*P	P	16 12 49.1	+0.3
	comp=N,16nm,1.4s						
ANMO	**Albuquerque**	74.17	305	*i* P	P	16 12 49.6	+0.7
ANMO				pmax	pmax		
	comp=Z,6.0nm,1.2s						
SOC	**Sochi**	74.31	46*c*	*i*P	P	16 12 49.4	+0.2
SOC				*e*		16 15 36.6	
SOC				*e*S	S	16 22 24.3	+0.9
SOC				*e*SS	SS	16 27 05.2	-4.1
SOC				pmax	pmax		
	comp=Z,9.0nm,0.7s						
SOC				MLR	MLR		
	comp=Z,246nm,20.0s						
DGMT	**Dagmar**	74.48	319	*e*P	P	16 12 48.3	-1.9
	comp=Z,111nm,1.4s						
FFC	**Flin Flon**	74.53	326	*e*P	P	16 12 49.4	-0.9
	comp=Z,21nm,1.1s						
FFC	**Flin Flon**	74.53	326	*e*P	P	16 12 49.4	-0.9
FFC				pmax	pmax		
	comp=Z,21nm,1.1s						
OBN	**Obninsk**	74.67	34	⇓*e*P	P	16 12 51.3	+0.3
OBN				*i*		16 12 56.9	
OBN				*e*		16 15 37.7	
OBN				*e*S	S	16 22 30.5	+3.6
OBN				*i*		16 23 11.4	
OBN				*e*SS	SS	16 27 07.9	-6.2
OBN				pmax	pmax		
	comp=Z,7.0nm,1.1s						
OBN				MLR	MLR		
	comp=Z,261nm,19.0s						
MSF	**Maaselka**	74.77	22	P	P	16 12 50.3	-1.2
ARCES	**ARCESS Array B**	75.20	18	P	P	16 12 52.2	-1.7
	comp=Z,2.2nm,0.9s,baz=258,slow=1.8,SNR=4.5						
VSR	**Storozhevoye**	75.30	38	*e*P	P	16 12 54.6	-0.2
VSR				pmax	pmax		
	comp=Z,40nm,1.3s						
VSR				MLR	MLR		
	comp=Z,1µm,26.0s						
VORD	**Divnogorie**	75.33	38	*e*P	P	16 12 53.8	-1.2
VORD				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MOS	**Moscow**	75.40	33	*e*P	P	16 13 02.1	+6.8
MOS				pmax	pmax		
	comp=Z,39nm,0.8s						
MOS				MLR	MLR		
	comp=Z,1µm,20.0s						
LPSR	**Galich’ya Gora**	75.44	37	*e*P	P	16 12 55.5	-0.1
LPSR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
LAO	**LASA Array**	75.52	317	*e*P	P	16 12 54.3	-2.0
	comp=Z,23nm,0.9s						
O20A	**White River Ci**	76.11	310	*e*P	P	16 12 58.3	-1.7
	comp=Z,15nm,1.1s						
NEY	**Neytrino**	76.43	47	*i* P	P	16 13 00.3	-1.4
NEY				pmax	pmax		
	comp=Z,3.0nm,1.0s						
KIV	**Kislovodsk**	76.49	46	⇓*e*P	P	16 13 01.9	0.0
KIV				*PP	pP	16 13 04.0	-1.5
KIV				*SP	sP	16 13 06.0	-0.9
KIV				*e*		16 13 13.6	
KIV				*e*		16 15 57.0	
KIV				*e*PPP	PPP	16 17 48.8	
KIV				*i* SS	SS	16 27 44.4	+1.8

KIV				eSSS	SSS	16 31 00.1	
KIV				pmax	pmax		
	comp=Z,17nm,1.3s						
KIV				MLR	MLR		
	comp=Z,213nm,20.0s						
KBZ	Khabaz	76.61	46	P	P	16 13 03.5	+1.1
	comp=Z,1.0nm,0.6s,baz=287,slow=4.5,SNR=9.0						
VNA1	Neumayer--Stat	76.64	172	P	P	16 13 04.0	+2.0
GOF	Gofitskoye	76.88	45	eP	P	16 13 04.6	+0.6
VRH	Novokhopyorsk	76.88	38	eP	P	16 12 55.2	-8.6
VRH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VRH				MLR	MLR		
	comp=Z,760nm,25.0s						
VNA3	Neumayer Olymp	76.99	173	P	P	16 13 05.2	+1.2
APA	Apatity	77.01	21	⇑iP	P	16 13 02.8	-1.4
APA				pmax	pmax		
	comp=Z,6.0nm,0.8s						
NCK	Nalchik	77.09	47	eP	P	16 13 05.4	+0.2
NCK				pmax	pmax		
	comp=Z,9.0nm,0.9s						
BW06	Boulder Array	77.37	313	eP	P	16 13 06.5	-0.6
	comp=Z,15nm,1.5s						
PDAR	Pinedale Array	77.37	313	P	P	16 13 05.4	-1.7
	comp=Z,0.9nm,0.7s,baz=85,slow=6.7,SNR=7.4						
PDAR	Pinedale Array	77.37	313	eP	P	16 13 06.3	-0.8
RLMT	Red Lodge	77.41	315	eP	P	16 13 07.2	-0.1
	comp=Z,8.9nm,1.1s						
RAYN	Ar Rayn	77.49	67	eP	P	16 13 08.2	+0.3
	comp=Z,18nm,1.4s						
RAYN	Ar Rayn	77.49	67	eP	P	16 13 08.2	+0.3
RAYN				pmax	pmax		
	comp=Z,18nm,1.4s						
TUC	Tucson	77.57	302	eP	P	16 13 09.3	+1.0
	comp=Z,4.8nm,1.0s						
TUC	Tucson	77.57	302	eP	P	16 13 09.3	+1.0
TUC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KLMR	Klimovskoe	77.59	29	eP	P	16 13 05.0	-2.6
KLMR				pmax	pmax		
	comp=Z,19nm,1.5s						
KLMR	Klimovskoe	77.59	29	eP	P	16 13 05.0	-2.6
KLMR				AMP		16 13 20.3	
	comp=Z,19nm,1.5s						
KLMR				LQ	LQ	16 42 01.4	
KLMR				LQ	LQ	16 42 01.4	
KLMR				LR	LR	16 43 28.0	
P18A	Preston Nutter	77.60	309	eP	P	16 13 08.4	-0.2
	comp=Z,18nm,1.3s						
GNI	Garni	77.62	50	P	P	16 13 09.2	+0.7
	comp=Z,6.0nm,0.5s,baz=142,slow=12,SNR=3.8						
GNI	Garni	77.62	50	iP	P	16 13 07.7	-0.8
GNI				pmax	pmax		
	comp=Z,38nm,1.2s						
GCMT	Greycliff	77.77	316	eP	P	16 13 07.4	-1.7
SRU	San Rafael Swe	77.78	309	eP	P	16 13 09.8	+0.4
	comp=Z,8.2nm,1.1s						
SRU	San Rafael Swe	77.78	309	eP	P	16 13 09.8	+0.4
SRU				pmax	pmax		
	comp=Z,8.0nm,1.1s						
LOHW	Long Hollow	78.21	313	eP	P	16 13 11.5	-0.3
	comp=Z,24nm,1.4s						
WUAZ	Wupatki	78.22	305	eP	P	16 13 11.6	-0.3
	comp=Z,12nm,1.2s						
FLWY	Flagg Ranch	78.32	314	eP	P	16 13 12.2	-0.2
	comp=Z,23nm,1.2s						
MOOW	Moose Ponds	78.32	314	eP	P	16 13 12.1	-0.3
	comp=Z,9.9nm,1.3s						
REDW	Red Top Meadow	78.37	313	eP	P	16 13 12.5	-0.2
	comp=Z,27nm,1.4s						
SNAA	Sanae	78.37	171	P	P	16 13 12.8	+0.9
SNAA	Sanae	78.37	171	P	P	16 13 12.7	+0.9
	comp=Z,6.6nm,1.0s,baz=327,slow=7.7,SNR=17						
SNAA	Sanae	78.37	171	eP	P	16 13 12.7	+0.9
	comp=Z,9.2nm,1.0s						
SNAA	Sanae	78.37	171	eP	P	16 13 12.7	+0.9
SNAA				pmax	pmax		
	comp=Z,9.0nm,1.0s						
TPAW	Teton Pass	78.45	313	eP	P	16 13 12.0	-1.1
	comp=Z,6.3nm,1.0s						
YHB	Horse Butte	78.73	315	eP	P	16 13 15.9	+1.2
	comp=Z,13nm,1.3s						
HWUT	Hardware Ranch	78.75	311	eP	P	16 13 13.6	-1.2
	comp=Z,19nm,1.1s						
MTPU	Mount Pierson	79.01	308	eP	P	16 13 16.9	+0.4
	comp=Z,25nm,1.4s						
MSU	Marysvale	79.03	308	eP	P	16 13 15.8	-0.6
BOZ	Bozeman (W)	79.11	315	eP	P	16 13 14.5	-2.1
	comp=Z,6.8nm,1.4s						
BOZ	Bozeman (W)	79.11	315	eP	P	16 13 14.5	-2.1
BOZ				pmax	pmax		
	comp=Z,7.0nm,1.4s						
DUG	Dugway, Tooele	79.61	310	eP	P	16 13 19.8	+0.4
	comp=Z,14nm,1.3s						
DUG	Dugway, Tooele	79.61	310	eP	P	16 13 19.8	+0.4
DUG				pmax	pmax		
	comp=Z,14nm,1.3s						
SZCU	Shurtz Canyon	79.70	307	eP	P	16 13 21.5	+1.4
	comp=Z,19nm,1.4s						
LRM	Limekiln Ridge	79.71	316	eP	P	16 13 19.4	-0.5
MAK	Makhachkala	79.89	47	eP	P	16 13 23.6	+3.0
MAK				e		16 16 17.8	
MAK				eS	S	16 23 27.3	+3.1
MAK				eSS	SS	16 28 36.0	+2.4
CCUT	Cedar City	79.92	307	eP	P	16 13 22.2	+0.9
	comp=Z,8.8nm,1.1s						
AKT	Akhty	79.97	49	eP	P	16 13 22.3	+1.0
AKT				e		16 13 29.0	
AKT				e		16 16 23.0	
AKT				pmax	pmax		
	comp=Z,6.0nm,1.0s						
PRGR	Permogore	80.64	28	eP	P	16 13 24.0	-0.3
PRGR				pmax	pmax		
	comp=Z,54nm,1.2s						
WALA	Waterton Lakes	80.92	319	eP	P	16 13 25.1	-1.2
	comp=Z,12nm,0.9s						
HLID	Hailey	80.97	313	eP	P	16 13 26.8	+0.1
	comp=Z,9.9nm,1.4s						
R11A	Troy Canyon, C	81.69	308	eP	P	16 13 32.1	+1.4
	comp=Z,2.1nm,1.0s						
YKA	Yellowknife Ar	82.38	332	P	P	16 13 32.6	-0.8
	comp=Z,1.5nm,0.8s,baz=93,slow=5.1,SNR=4.5						
BMN	Battle Mountai	82.98	310	eP	P	16 13 37.3	0.0
	comp=Z,4.6nm,1.1s						
BMO	Blue Mountains	83.08	314	eP	P	16 13 38.1	+0.4
	comp=Z,5.6nm,1.1s						
DAC	Darwin (Calif)	83.29	306	P	P	16 13 36.5	-2.6
	comp=Z,6.3nm,0.9s						
DAC	Darwin (Calif)	83.29	306	P	P	16 13 36.5	-2.6
DAC				pmax	pmax		
	comp=Z,6.0nm,0.9s						
NV01	Mina Array Sit	83.83	308	eP	P	16 13 42.3	+0.4
NVAR	Mina Array Bea	83.83	308	P	P	16 13 41.9	+0.1
	comp=Z,1.1nm,0.9s,baz=104,slow=6.4,SNR=8.4						
RYN	Ryan	84.00	308	eP	P	16 13 43.8	+1.1
	comp=Z,4.1nm,0.9s						
WVOR	Wild Horse Val	84.05	312	eP	P	16 13 43.5	+0.8
	comp=Z,12nm,1.5s						
WVOR	Wild Horse Val	84.05	312	eP	P	16 13 43.6	+0.8
WVOR				pmax	pmax		
	comp=Z,13nm,1.5s						
B08A	Colville Reser	84.49	318	eP	P	16 13 44.9	+0.1
	comp=Z,4.9nm,1.0s						
PAHR	Pah Rah Range	84.65	309	eP	P	16 13 44.4	-1.5
	comp=Z,3.3nm,1.4s						
WAKR	Walker	84.72	308	eP	P	16 13 49.2	+2.9
	comp=Z,5.5nm,1.2s						
PNTR	Pine Nut	84.83	309	eP	P	16 13 48.0	+1.0
	comp=Z,13nm,1.1s						
MOD	Modoc Plateau	85.29	312	eP	P	16 13 49.5	+0.4
	comp=Z,19nm,1.1s						
BEKR	Beckworth	85.40	310	eP	P	16 13 50.5	+0.8
	comp=Z,9.7nm,1.1s						
LTY	Liberty	85.41	317	eP	P	16 13 49.0	-0.5
	comp=Z,5.8nm,1.0s						
G06A	Carlson Farm,	85.44	315	eP	P	16 13 50.6	+1.0
	comp=Z,12nm,1.1s						
K05A	Summer Lake	85.70	312	eP	P	16 13 52.3	+1.1
	comp=Z,13nm,1.1s						
LRDM	Redding Peak	86.22	310	eP	P	16 13 54.5	+0.9
YBH	Yreka Blue Hor	87.10	311	P	P	16 13 55.9	-2.0
	comp=Z,0.4nm,0.3s,baz=27,slow=2.3,SNR=3.6						
ARU	Arti	87.11	34	eP	P	16 13 56.7	-0.8
ARU						16 17 19.1	
ARU				S	SKSac	16 24 23.0	-1.8
ARU				SS	SS	16 30 18.6	-1.1
AKTO	Aktyubinsk	87.14	40	P	P	16 13 57.1	-0.7
	comp=Z,1.0nm,0.7s,baz=324,slow=3.9,SNR=5.8						
COR	Corvallis	87.36	314	P	P	16 14 00.9	+1.9
NLWA	Neilton Lookou	87.58	317	eP	P	16 13 59.5	-0.6
	comp=Z,23nm,1.5s						
SYO	Syowa Base	87.80	160	⇑eP	P	16 14 01.0	+0.5
SYO	Syowa Base	87.80	160	⇑esP	sP	16 14 08.1	+2.6
QSPA	South Pole Qui	94.42	180	P	P	16 14 31.9	+0.4
	comp=Z,5.9nm,1.0s,baz=169,slow=3.9,SNR=8.1						
IL1	Eielson Array	96.11	337	eP	P	16 14 36.0	-3.2
ILAR	Eielson Array	96.11	337	P	P	16 14 37.9	-1.3
	comp=Z,1.2nm,0.9s,baz=53,slow=3.7,SNR=7.8						
AAK	Ala-Archa	99.60	46	iP	Pdif	16 14 54.5	-1.1
AAK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
KSH	Kashi	101.50	48	eP	Pdif	16 15 03.0	-1.1
RKT	Rikitea	102.95	247	eLR	LR	16 49 04.0	
	comp=Z,617nm,28.8s						
TAOE	Nuku Hiva Isla	107.84	262	eLR	LR	16 51 18.8	
	comp=Z,665nm,22.3s						
TBI	Tubuai	116.23	246	eSS	SS	16 37 04.1	-1.4
	comp=Z,685nm,36.8s						
TBI	Tubuai	116.23	246	eLR	LR	16 55 13.7	
	comp=Z,492nm,21.5s						
PPT2	Papeete2	116.88	253	eSS	SS	16 37 22.4	+7.9
	comp=Z,620nm,27.5s						
PPT2	Papeete2	116.88	253	eLR	LR	16 55 32.9	
	comp=Z,782nm,22.0s						
LZH	Lanzhou	122.83	41	ePKP	PKPdf	16 20 07.0	-1.6
LZH				sPKP		16 20 11.5	
LZH				LR	LR		
	comp=Z,130nm,18.1s						
LZH				LR	LR		
	comp=Z,130nm,18.0s						
LZH				LR	LR		
	comp=Z,170nm,20.2s						
HHC	Hu-ho-hao-te	124.40	32	ePKP	PKPdf	16 20 11.5	+0.1
HHC				PP	PP	16 21 57.5	+1.2
HHC				AMB	AMB		
	comp=Z,59nm,7.8s						
HHC				LR	LR		
	comp=Z,300nm,19.0s						
HHC				LR	LR		
	comp=Z,220nm,18.0s						
HHC				LR	LR		
	comp=Z,560nm,19.0s						
CD2	Chengdu	125.65	47	PKP	PKPdf	16 20 12.8	-1.2
CMAR	Chiang Mai Arr	127.27	63	PKP	PKPdf	16 20 15.8	-1.6
	comp=Z,0.8nm,0.6s,baz=283,slow=2.5,SNR=4.7						
GYA	Guiyang	130.18	50	ePdif	Pdif	16 17 10.0	-1.9
GYA				PKP	PKPdf	16 20 21.8	-1.0
GYA				AMB	AMB		
	comp=Z,120nm,7.8s						
NJ2	Nanjing	134.81	35	ePKP	PKPdf	16 20 30.3	-0.9
ASAR	Alice Springs	156.89	147	PKP	PKPdf	16 21 08.0	-0.2
	comp=Z,1.1nm,1.0s,baz=165,slow=3.8,SNR=7.0						
ASAR				PKPab	PKPab	16 21 36.0	-1.8
	comp=Z,3.0nm,1.1s,baz=217,slow=3.7,SNR=4.6						
ASAR	Alice Springs	156.89	147	PKIKP	PKPdf	16 21 08.0	-0.2
WRA	Warramunga Arr	160.05	142	PKP	PKPdf	16 21 11.3	-0.8
	comp=Z,1.2nm,1.0s,baz=244,slow=2.0,SNR=3.4						
WRA				PKPab	PKPab	16 21 51.2	-0.4
	comp=Z,5.6nm,1.3s,baz=215,slow=1.8,SNR=5.0						

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*ISCJB **28** 16:01:51.6±0.4, 4°.59N±0°.09×32°.61W±0°.09, h11^{km}, mb4.3/25, Error ellipse: s-maj=15.1km s-min=10.7km az=135.2*

*IDC **28** 16:01:51.6±0.5, 4°.58N×32°.66W, h0^{km}, mb4.3/25, mb1 4.5/25, mb1mx4.3/66, mbtmp4.3/25, Error ellipse: s-maj=18.4km s-min=13.2km az=131.0*

ISC 28 16:01:53.2±0.5, 4°.6N±0°.1×32°.7W±0°.1, h11^{km}, n33, σ0^{s}.86/25, mb4.3/25, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10N3	ASCENSION HYDR	21.91	124	T	T	16 29 53.8	
	baz=303						
H10N2	ASCENSION HYDR	21.91	124	T	T	16 29 54.2	
	baz=303						
H10N1	ASCENSION HYDR	21.93	124	T	T	16 29 55.4	
	baz=303						
H10S3	ASCENSION HYDR	22.41	127	T	T	16 30 31.6	
	baz=306,slow=74						
H10S1	ASCENSION HYDR	22.41	127	T	T	16 30 32.0	
	baz=306,slow=74						
H10S2	ASCENSION HYDR	22.43	127	T	T	16 30 33.1	
	baz=306						
H05S1	Guadeloupe/Mar	29.43	291	T	T	16 39 32.8	
KOWA	Kowa	29.88	69	P	P	16 08 02.5	+1.3
	6.0nm,0.9s,baz=265,slow=16,SNR=4.1						
H05N1	Guadeloupe/Mar	30.22	295	T	T	16 40 24.9	
SIV	San Ignacio	34.76	233	P	P	16 08 44.7	+0.8
	8.6nm,0.9s,baz=91,slow=13,SNR=3.8						
TORD	Torodi Ar. Bea	34.95	74	P	P	16 08 46.5	+0.8
	9.9nm,1.0s,baz=262,slow=9.5						
CPUP	Villa Florida	38.92	217	P	P	16 09 20.3	+1.0
	4.5nm,1.0s,baz=38,slow=13,SNR=1.6						
LPAZ	La Paz	40.75	239	P	P	16 09 36.3	+1.0
	3.8nm,0.8s,baz=114,slow=8.2,SNR=3.6						
ESDC	Sonseca Array	43.51	33	P	P	16 09 57.5	+0.5
	1.8nm,0.8s,baz=227,slow=8.0,SNR=4.0						
TSUM	Tsumeb	54.78	117	P	P	16 11 23.7	0.0
	3.1nm,0.9s,baz=329,slow=5.9,SNR=2.2						
DAVOX	Davos/Dischmat	55.78	34	P	P	16 11 30.3	-0.3
	3.9nm,0.9s,baz=234,slow=8.7,SNR=3.3						
EKA	Eskdalemuir Ar	55.90	20	P	P	16 11 29.3	-1.6
	2.2nm,0.9s,baz=207,slow=6.1,SNR=2.5						
PLCA	Paso Flores	56.88	214	P	P	16 11 36.7	-1.6
	1.8nm,0.8s,baz=345,slow=12,SNR=2.9						
SCHQ	Schefferville	57.20	337	P	P	16 11 40.9	+0.6
	5.2nm,0.8s,baz=125,slow=6.9,SNR=4.2						
GERES	GERESS Array B	59.08	34	P	P	16 11 54.0	+0.3
	2.2nm,0.9s,baz=245,slow=6.1,SNR=2.4						
BOSA	Boshof	64.67	124	P	P	16 12 30.5	-1.2
	6.0nm,0.8s,baz=243,slow=2.4,SNR=3.6						
MLR	Muntele Rosu	65.07	41	P	P	16 12 34.7	+0.7
	10.0nm,0.7s,baz=322,slow=16,SNR=5.2						
NOA	NORSAR Array B	65.23	22	P	P	16 12 34.9	+0.2
	1.5nm,0.8s,baz=231,slow=6.3,SNR=3.5						
HFS	Hagfors	65.61	23	P	P	16 12 36.7	-0.4
	1.6nm,0.7s,baz=200,slow=11,SNR=2.6						
AKASG	Malin Array Be	68.91	37	P	P	16 12 58.1	0.0
	3.9nm,0.8s,baz=251,slow=6.6,SNR=3.1						
BRTR	Keskin Array B	68.93	49	P	P	16 12 59.8	+1.0
	4.7nm,0.8s,baz=242,slow=5.6,SNR=5.7						
ULM	Lac du Bonnet	69.57	322	P	P	16 13 01.7	-0.6
	4.0nm,0.7s,baz=116,slow=5.4,SNR=4.3						
FINES	FINESS Array B	71.46	26	P	P	16 13 13.4	-0.1
	2.4nm,0.7s,baz=264,slow=1.9,SNR=4.5						
PDAR	Pinedale Array	77.30	313	P	P	16 13 48.5	+0.2
	1.6nm,0.8s,baz=104,slow=6.3,SNR=5.6						
SNAA	Sanae	78.55	171	P	P	16 13 54.2	-0.1
	1.8nm,0.8s,baz=332,slow=9.5,SNR=2.7						
YKA	Yellowknife Ar	82.25	332	P	P	16 14 13.7	-0.7
	1.4nm,0.6s,baz=102,slow=5.5,SNR=4.5						
NVAR	Mina Array Bea	83.78	308	P	P	16 14 24.2	+1.0
	0.8nm,0.7s,baz=91,slow=5.8,SNR=3.5						
ILAR	Eielson Array	95.96	337	P	P	16 15 19.9	-0.3
	1.7nm,0.8s,baz=57,slow=4.0,SNR=6.7						

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*IDC **28** 16:02:32.0±0.6, 4°.44N×32°.64W, h0^{km}, mb4.3/21, mb1 4.4/21, mb1mx4.2/64, mbtmp4.3/21, Error ellipse: s-maj=17.8km s-min=14.4km az=167.0*

*ISCJB **28** 16:02:32.1±0.5, 4°.5N±0°.1×32°.57W±0°.08, h11^{km}, mb4.2/22, Error ellipse: s-maj=15.2km s-min=11.2km az=158.7*

ISC 28 16:02:33.8±0.6, 4°.5N±0°.1×32°.6W±0°.1, h11^{km}, n22, σ0^{s}.98/22, mb4.4/22, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DBIC	Dimbokro	27.70	84	P	P	16 08 22.1	-0.3
	9.5nm,0.9s,baz=238,slow=12,SNR=3.8						
PTGA	Pitinga	27.82	260	P	P	16 08 23.9	+0.4
	7.3nm,0.9s,baz=80,slow=17,SNR=4.1						
SIV	San Ignacio	34.73	234	P	P	16 09 26.9	+2.5
	6.8nm,0.8s,baz=104,slow=9.3,SNR=7.1						
TORD	Torodi Ar. Bea	34.94	73	P	P	16 09 25.4	-0.7
	4.7nm,0.9s,baz=262,slow=8.6						
CPUP	Villa Florida	38.86	217	P	P	16 09 57.7	-1.6
	2.8nm,0.8s,baz=13,slow=9.0,SNR=3.6						
LPAZ	La Paz	40.73	239	P	P	16 10 15.0	-0.8
	3.8nm,0.8s,baz=72,slow=8.0,SNR=2.5						
EKA	Eskdalemuir Ar	55.98	20	P	P	16 12 11.9	-0.2
	0.3nm,0.5s,baz=222,slow=7.3,SNR=2.6						
SCHQ	Schefferville	57.32	337	P	P	16 12 21.8	+0.1
	4.6nm,0.8s,baz=168,slow=9.3,SNR=2.1						
GERES	GERESS Array B	59.14	34	P	P	16 12 34.0	-0.7
	2.1nm,1.0s,baz=232,slow=4.8,SNR=2.2						
LBTB	Lobatse	63.63	121	P	P	16 13 05.9	+0.4
	3.4nm,0.7s,baz=270,slow=7.1,SNR=4.2						
BOSA	Boshof	64.56	124	P	P	16 13 11.5	-0.1
	4.2nm,0.7s,baz=291,slow=6.7,SNR=6.2						
MLR	Muntele Rosu	65.11	41	P	P	16 13 16.1	+1.2
	12nm,1.1s,baz=294,slow=11,SNR=2.2						
AKASG	Malin Array Be	68.97	37	P	P	16 13 38.9	-0.2
	1.8nm,0.7s,baz=251,slow=6.0,SNR=2.6						
BRTR	Keskin Array B	68.97	49	P	P	16 13 40.3	+0.8
	3.0nm,0.9s,baz=220,slow=3.2,SNR=3.8						
ULM	Lac du Bonnet	69.69	322	P	P	16 13 42.8	-0.9
	2.6nm,0.8s,baz=116,slow=10,SNR=1.7						
ASF	Jabal al Asfar	70.31	58	P	P	16 13 49.5	+1.6
	1.2nm,0.4s,baz=239,slow=4.4,SNR=2.8						
TXAR	Lajitas Array	71.33	299	P	P	16 13 54.6	+0.4
	0.3nm,0.6s,baz=116,slow=6.1,SNR=2.9						
PDAR	Pinedale Array	77.41	313	P	P	16 14 29.4	-0.1
	1.6nm,0.7s,baz=90,slow=7.4,SNR=4.1						
SNAA	Sanae	78.43	171	P	P	16 14 34.7	+0.4
	3.1nm,0.8s,baz=327,slow=6.8,SNR=5.2						
YKA	Yellowknife Ar	82.37	332	P	P	16 14 56.0	+0.4
	0.9nm,0.6s,baz=95,slow=5.5,SNR=3.1						
NVAR	Mina Array Bea	83.88	308	P	P	16 15 04.6	+0.3
	0.7nm,0.8s,baz=92,slow=5.4,SNR=2.3						
ILAR	Eielson Array	96.08	337	P	P	16 16 00.2	-1.1
	0.9nm,0.7s,baz=48,slow=4.7,SNR=4.1						

IDC 28 16:03:59.1±3.1, 4°.32N×32°.84W, h0^{km}, mb3.9/9, mb1 4.2/9, mb1mx3.8/65, mbtmp3.9/9, Error ellipse: s-maj=93.2km s-min=32.7km az=177.0, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10N3	ASCENSION HYDR	21.92	123	T	T	16 31 36.6	
	baz=303,slow=75,SNR=6.4						
H10N2	ASCENSION HYDR	21.93	123	T	T	16 31 38.6	
	baz=303,slow=75,SNR=6.4						
H10N1	ASCENSION HYDR	21.94	123	T	T	16 31 40.0	
	baz=303,slow=75,SNR=7.2						
H10S3	ASCENSION HYDR	22.41	126	T	T	16 32 15.0	
	baz=307						
H10S1	ASCENSION HYDR	22.41	126	T	T	16 32 15.4	
	baz=307						
H10S2	ASCENSION HYDR	22.43	126	T	T	16 32 16.5	
	baz=307						
H05S1	Guadeloupe/Mar	29.35	292	T	T	16 41 03.8	
H05N1	Guadeloupe/Mar	30.16	295	T	T	16 42 01.7	
TORD	Torodi Ar. Bea	35.20	73	P	P	16 10 55.3	-0.1
	4.2nm,0.9s,baz=268,slow=8.6						
ESDC	Sonseca Array	43.82	33	P	P	16 12 07.4	+0.3
	2.5nm,1.2s,baz=230,slow=8.8,SNR=2.0						
GERES	GERESS Array B	59.38	34	P	P	16 14 03.8	+0.3
	0.6nm,0.8s,baz=243,slow=6.5,SNR=1.8						
MLR	Muntele Rosu	65.37	41	P	P	16 14 43.1	-0.6
	6.0nm,0.9s,baz=150,slow=16,SNR=2.5						
NOA	NORSAR Array B	65.53	22	P	P	16 14 43.8	-0.5
	0.8nm,0.9s,baz=231,slow=6.3,SNR=2.1						
AKASG	Malin Array Be	69.22	37	P	P	16 15 07.8	0.0
	0.2nm,0.3s,baz=243,slow=6.6,SNR=7.5						
BRTR	Keskin Array B	69.23	49	P	P	16 15 08.7	+0.3
	2.0nm,1.0s,baz=228,slow=3.8,SNR=4.0						
TXAR	Lajitas Array	71.19	299	P	P	16 15 20.5	0.0
	0.1nm,0.3s,baz=127,slow=10,SNR=1.7						
FINES	FINESS Array B	71.76	26	P	P	16 15 28.7	+5.6
	1.6nm,0.9s,baz=259,slow=5.1,SNR=3.7						
ILAR	Eielson Array	96.12	337	P	P	16 17 28.7	+0.1
	0.5nm,0.9s,baz=44,slow=6.6,SNR=2.1						

IDC 28 16:05:20.5±5.6, 4°.36S×142°.51E, h194^{km}±51^{km}, mb3.4/2, mb1 3.8/5, mb1mx3.2/45, mbtmp4.4/5, Error ellipse: s-maj=94.5km s-min=29.9km az=30.0, New Guinea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby	6.82	138	P	Pn	16 06 59.0	+0.6
	1.2nm,0.3s,baz=332,slow=15,SNR=3.2						
PMG				S	Sn	16 08 15.9	0.0
	0.3nm,0.3s,baz=330,slow=20,SNR=1.0						
WRA	Warramunga Arr	17.42	207	P	P	16 09 10.0	-0.5
	1.6nm,0.3s,baz=31,slow=11,SNR=57						
BATI	Baumata	19.57	252	P	P	16 09 33.2	-0.7
	5.4nm,0.3s,baz=90,slow=5.1,SNR=9.0						
ASAR	Alice Springs	20.92	203	P	P	16 09 48.9	+0.7
	2.2nm,0.5s,baz=28,slow=11,SNR=37						
STKA	Stephens Creek	27.39	182	P	P	16 10 48.0	0.0
	2.2nm,0.9s,baz=0.0,slow=5.1,SNR=3.2						

IDC 28 16:12:38.9±3.9, 3°.79N×32°.59W, h0^{km}, mb3.7/6, mb1 3.9/6, mb1mx3.5/64, mbtmp3.7/6, Error ellipse: s-maj=117.7km s-min=35.5km az=10.0, Central Mid-Atlantic Ridge

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
H10N3	ASCENSION HYDR	21.43	123	T	T	16 40 22.3	
	baz=303,slow=75,SNR=4.3						
H10N2	ASCENSION HYDR	21.43	123	T	T	16 40 28.8	
	baz=303,slow=75,SNR=5.9						
H10N1	ASCENSION HYDR	21.45	123	T	T	16 40 19.1	
	baz=303,slow=75,SNR=6.7						
H10S3	ASCENSION HYDR	21.90	125	T	T	16 40 49.2	
	baz=306,slow=75,SNR=3.9						
H10S1	ASCENSION HYDR	21.90	125	T	T	16 40 48.3	
	baz=306,slow=75,SNR=4.3						
H10S2	ASCENSION HYDR	21.92	125	T	T	16 40 47.7	
	baz=306,slow=75,SNR=3.4						
DBIC	Dimbokro	27.76	83	P	P	16 18 29.6	-0.1
	1.2nm,0.4s,baz=169,slow=5.2,SNR=1.6						
TORD	Torodi Ar. Bea	35.11	73	P	P	16 19 33.9	-0.5
	1.0nm,0.8s,baz=263,slow=9.0						
GERES	GERESS Array B	59.68	34	P	P	16 22 44.3	-1.0
	0.3nm,0.5s,baz=225,slow=11,SNR=1.6						
BRTR	Keskin Array B	69.39	49	P	P	16 23 49.8	+0.7
	1.1nm,0.8s,baz=255,slow=4.7,SNR=7.0						
AKASG	Malin Array Be	69.48	37	P	P	16 23 49.8	+0.6
	0.1nm,0.3s,baz=247,slow=8.8,SNR=4.0						
PDAR	Pinedale Array	77.87	313	P	P	16 24 38.9	-0.2
	0.3nm,0.7s,baz=104,slow=7.5,SNR=2.9						

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*JMA **28** 16:14:35.8±0.2, 24°.81N×122°.43E, h2^{km}, M2.5*

*TAP **28** 16:14:36.0, 24°.84N×122°.46E, h24^{km}, ML2.3, C*

*ISCJB **28** 16:14:36.0±0.5, 24°.86N±0°.03×122°.46E±0°.02, h10^{km}±3^{km}, Error ellipse: s-maj=6.0km s-min=2.9km az=15.1*

ISC 28 16:14:36.2±1.1, 24°.85N±0°.05×122°.45E±0°.02, h23^{km}±12^{km}, n25, σ0^{s}.52/45, Taiwan region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS1	EOS1	0.41	225	eP	Pb	16 14 45.1	+0.3
	baz=220						
EOS1				eS	Sb	16 14 51.9	+1.2
	baz=220						
TWB1	Santiao Chiao	0.45	291	eP	Pb	16 14 44.9	-0.6
	baz=291						
TWB1				eS	Sb	16 14 50.9	-0.9
	baz=291						
EGS		0.47	270	eP	Pb	16 14 45.8	0.0
	baz=264						
EGS				eS	Sb	16 14 52.2	-0.1
	baz=264						
TIPB	Shuangxi	0.58	283	P	Pb	16 14 47.7	0.0
	baz=282						
TIPB				eS	Sb	16 14 56.0	+0.4
	baz=282						
TWC	Suao	0.59	247	P	Pb	16 14 47.5	-0.4
	baz=247						
TWC				eS	Sn	16 14 57.2	-0.9
	baz=247						
JYNG	Yonagunijimaku	0.60	131	P	Pb	16 14 47.6	-0.4
JYNG				S	Sb	16 14 55.7	-0.4
YOJ	Yonaguni jima	0.64	127	iP	Pb	16 14 48.2	-0.6
	baz=120						
YOJ				S	Sb	16 14 56.8	-0.4
	baz=120						
YOJ	Yonaguni jima	0.64	127	P	Pb	16 14 48.1	-0.6
YOJ				eS	Sb	16 14 56.5	-0.7
NWF	Wu-fen Shan	0.65	291	eP	Pb	16 14 49.2	+0.3
	baz=290						

NWF				*e*S	Sb	16 14 57.7	+0.2
	baz=290						
WFSB	Wu-fen Shan	0.65	291	P	Pb	16 14 49.1	+0.3
	baz=290						
WFSB				*e*S	Sb	16 14 58.0	+0.6
	baz=290						
TWE	Neicheng	0.72	260	P	Pb	16 14 50.1	0.0
	baz=260						
TWE				*e*S	Sb	16 14 60.0	+0.4
	baz=260						
NANB	Nanao	0.76	237	*e*P	Pb	16 14 50.7	0.0
	baz=247						
NANB				*e*S	Sn	16 15 01.6	-0.6
	baz=247						
ENTT	Nioudou	0.83	256	*e*P	Pn	16 14 52.2	-0.2
	baz=256						
ENTT				*e*S	Sb	16 15 03.2	+0.6
	baz=256						
PCYT	Pengchaiyu	0.85	337	*e*P	Pn	16 14 52.8	0.0
	baz=335						
NWLT	Wulai	0.86	266	*e*P	Pn	16 14 52.7	-0.3
	baz=266						
NWLT				*e*S	Sb	16 15 03.6	-0.1
	baz=266						
TATO	Taipei	0.88	279	*e*P	Pb	16 14 52.4	-0.4
	baz=278						
TATO				*e*S	Sb	16 15 04.5	+0.3
	baz=278						
YM04	YM04	0.88	291	*e*P	Pn	16 14 53.2	-0.1
	baz=290						
YHNB	Yeheng	0.99	260	*e*P	Pb	16 14 55.1	+0.4
	baz=249						
YHNB				*e*S	Sn	16 15 07.8	-0.3
	baz=249						
NACB	Ninganchiao	1.02	229	*e*P	Pb	16 14 55.4	+0.2
	baz=238						
NACB				*e*S	Sn	16 15 09.3	+0.4
	baz=238						
NNSB	Datong	1.05	247	*e*P	Pb	16 14 56.0	+0.1
	baz=248						
NNSB				*e*S	Sn	16 15 09.9	+0.2
	baz=248						
NNSH	Datong	1.05	247	P	Pb	16 14 55.9	0.0
	baz=240						
NNSH				*e*S	Sn	16 15 09.6	-0.2
	baz=240						
IRIF	Iriomote-Funau	1.27	113	P	Pb	16 15 00.2	+0.7
CHGB	Renai	1.40	236	*e*P	Pb	16 15 02.2	+0.4
	baz=223						
JKRS	Kuro-shima	1.55	113	P	Pb	16 15 05.3	+1.2
JKRS				*e*S	Sb	16 15 23.7	+0.4
JISG	Ishigakijimahi	1.71	98	P	Pb	16 15 07.8	+0.8

MOS ***28*** *16:18:45.2±1.1, 4°.41N×32°.76W, h10^{km}, mb4.9/33, Error ellipse: s-maj=12.5km s-min=5.9km az=53.1*

BJI ***28*** *16:18:45.0, 4°.40N×32°.50W, h10^{km}, Ms5.2/2, Ms7 4.9/2*

IDC ***28*** *16:18:45.4±0.4, 4°.46N×32°.57W, h0^{km}, mb4.3/34, mb1 4.4/35, mb1mx4.3/67, mbtmp4.3/35, ML4.3/1, MS4.4/26, Ms1 4.4/26, ms1mx4.1/58, Error ellipse: s-maj=14.3km s-min=10.2km az=141.0*

ISCJB ***28*** *16:18:45.5±0.3, 4°.49N±0°.06×32°.70W±0°.04, h11^{km}, mb4.5/96, MS4.4/30, Error ellipse: s-maj=8.6km s-min=5.4km az=152.2*

NEIC ***28*** *16:18:46.4±0.3, 4°.51N×32°.64W, h10^{km}, mb4.8/29, Error ellipse: s-maj=8.3km s-min=6.1km az=155.0*

GCMT ***28*** *16:18:46.3±0.2, 4°.65N×32°.63W, h12^{km}, MW5.0/98, Moment Tensor Solution. s17,c21; s98,c142; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.27±.09; $M_{\theta\theta}$0.23±.09; $M_{\phi\phi}$3.04±.08; $M_{r\theta}$-0.07±.45; $M_{\theta\phi}$-0.40±.07; $M_{\phi r}$1.84±.35; Best double couple: $M_0$3.67700×10^{16} NP1:ϕ_s175.00000°,δ60.00000°,λ-87.00000°. NP2: ϕ_s350.00000°,δ30.00000°,λ-95.00000°. Principal axes: T 3.5860, Plg15.0000°, Azm263.0000°; N 0.1800, Plg2.0000°, Azm354.0000°; P -3.7680, Plg75.0000°, Azm92.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 28 16:18:46.6±0.3, **4°.49N**±0°.07×**32°.64W**±0°.07, **h11^{km}, n209,** σ**1^s.75**/201, **mb4.6**/96, **MS4.4**/30, **19C-18D, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RCBR	Riachuelo	10.75	198	Pn	Pn	16 21 20.8	+0.1
	2.1nm,0.3s,baz=148,slow=5.7,SNR=4.4						
RCBR	Riachuelo	10.75	198	*e*Pn	Pn	16 21 19.5	-1.2
RCBR	Riachuelo	10.75	198	*e*P	Pn	16 21 19.5	-1.2
H10N3	ASCENSION HYDR	21.85	124	T	T	16 46 15.0	
	baz=304,slow=75,SNR=53						
H10N2	ASCENSION HYDR	21.86	124	T	T	16 46 19.4	
	baz=304,slow=75,SNR=43						
H10N1	ASCENSION HYDR	21.87	124	T	T	16 46 16.0	
	baz=304,slow=75,SNR=49						
H10S3	ASCENSION HYDR	22.35	127	T	T	16 46 53.8	
	baz=306,slow=75,SNR=83						
H10S1	ASCENSION HYDR	22.36	127	T	T	16 46 56.5	
	baz=306,slow=75,SNR=66						
H10S2	ASCENSION HYDR	22.37	127	T	T	16 46 54.0	
	baz=306,slow=75,SNR=58						
BDFB	Brasilia	25.13	217	P	P	16 24 12.9	+0.8
	8.1nm,1.1s,baz=50,slow=14,SNR=2.8						
BDFB				LR	LR	16 33 00.8	
	comp=Z,830nm,20.9s,baz=34,slow=34						
DBIC	Dimbokro	27.74	84	P	P	16 24 36.4	+0.8
	3.1nm,0.8s,baz=252,slow=8.9,SNR=2.9						
DBIC				LR	LR	16 32 57.1	
	comp=Z,915nm,21.1s,baz=251,slow=31						
PTGA	Pitinga	27.79	260	P	P	16 24 36.4	+0.4
	2.2nm,0.3s,baz=93,slow=16,SNR=6.7						
H05S1	Guadeloupe/Mar	29.47	292	T	T	16 55 41.1	
	SNR=13						
KOWA	Kowa	29.89	69	P	P	16 24 54.0	-0.7
	2.8nm,0.7s,baz=238,slow=9.5,SNR=4.0						
KOWA				LR	LR	16 35 34.8	
	comp=Z,2µm,18.7s,baz=234,slow=34						
H05N1	Guadeloupe/Mar	30.27	295	T	T	16 56 42.4	
SAML	Samuel	33.24	246	*e*P	P	16 25 24.2	0.0
	11nm,1.3s						
SAML	Samuel	33.24	246	*e*P	P	16 25 24.2	0.0
SAML				pmax	pmax		
	comp=Z,11nm,1.3s						
SIV	San Ignacio	34.72	234	P	P	16 25 39.4	+2.3
	comp=Z,3.4nm,0.7s,baz=93,slow=11,SNR=14						
TOA0	Torodi Ar. Sit	34.97	73	*e*P	P	16 25 37.6	-1.6
TORD	Torodi Ar. Bea	34.97	73	P	P	16 25 38.3	-0.9
	comp=Z,3.5nm,0.9s,baz=271,slow=9.4						
TORD				PcP	PcP	16 28 11.1	-0.6
	baz=285,slow=2.8						
TORD				LR	LR	16 37 50.0	
	comp=Z,1µm,19.3s,baz=265,slow=33						
MDT	Midelt	38.47	40	LR	LR	16 40 53.1	
	comp=Z,828nm,19.0s,baz=232,slow=34						
CPUP	Villa Florida	38.86	217	P	P	16 26 12.9	+0.7
	comp=Z,2.6nm,0.9s,baz=20,slow=12,SNR=3.7						
CPUP				LR	LR	16 41 25.2	
	comp=Z,558nm,21.0s,baz=16,slow=35						
CPUP	Villa Florida	38.86	217	*e*P	P	16 26 11.9	-0.3
	comp=Z,14nm,1.4s						
CPUP	Villa Florida	38.86	217	*e*P	P	16 26 11.9	-0.3
CPUP				pmax	pmax		
	comp=Z,14nm,1.4s						
RUSC	La Rusia	40.29	274	*e*P	P	16 26 24.0	-0.9
	comp=Z,7.4nm,1.3s						
LPAZ	La Paz	40.72	239	P	P	16 26 29.5	+1.0
	comp=Z,2.2nm,0.9s,baz=76,slow=6.3,SNR=6.9						
LPAZ				LR	LR	16 42 39.8	
	comp=Z,654nm,19.5s,baz=26,slow=35						
LPAZ	La Paz	40.72	239	*e*P	P	16 26 26.9	-1.6
	comp=Z,6.3nm,1.1s						
LPAZ	La Paz	40.72	239	*e*P	P	16 26 26.9	-1.6
LPAZ				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TAM	Tamanrasset	41.12	60	P	P	16 26 33.8	+2.5
TAM				pmax	pmax		
	comp=Z,9.0nm,1.5s						
ROSC	El Rosal	41.54	272	LR	LR	16 42 13.2	
	comp=Z,535nm,21.2s,baz=82,slow=34						
ESDC	Sonseca Array	43.57	33	P	P	16 26 51.7	+0.8
	comp=Z,1.7nm,0.8s,baz=228,slow=8.6,SNR=12						
ESDC				LR	LR	16 43 01.5	
	comp=Z,138nm,18.6s,baz=195,slow=33						
ES19	SONSECA Array	43.63	33	*e*P	P	16 26 49.4	-1.9
NNA	Nana	46.90	249	LR	LR	16 46 52.7	
	comp=Z,488nm,18.5s,baz=34,slow=36						
KEST	Kesra	49.60	46	P	P	16 27 39.8	+1.6
	comp=Z,5.7nm,1.0s,baz=304,slow=7.3,SNR=5.5						
KEST				LR	LR	16 48 09.7	
	comp=Z,749nm,19.9s,baz=210,slow=36						
BNI	Bardonecchia	53.02	34	P	P	16 28 07.2	+3.4
BNI				pmax	pmax		
	comp=Z,12nm,1.1s						
TSUM	Tsumeb	54.73	117	P	P	16 28 16.1	-0.6
	comp=Z,5.6nm,1.1s,baz=236,slow=5.7,SNR=3.9						
TSUM				LR	LR	16 46 06.7	
	comp=Z,572nm,21.6s,baz=307,slow=30						
TRQ	Mont Tremblant	55.18	326	*e*P	P	16 28 18.7	-0.8
DOU	Dourbes	55.20	28	⇓P	P	16 28 20.3	+0.8
	comp=Z,10.0nm,1.2s						
ECH	Echery	55.24	31	P	P	16 28 23.8	+3.9
ECH				pmax	pmax		
	comp=Z,7.0nm,1.5s						
DAVOX	Davos/Dischmat	55.84	34	P	P	16 28 24.0	-0.4
	comp=Z,4.3nm,0.9s,baz=270,slow=9.1,SNR=6.2						
DAVOX				LR	LR	16 48 46.1	
	comp=Z,339nm,22.0s,baz=268,slow=32						
BFO	Black Forest	55.93	32	*i* P	P	16 28 28.1	+3.3
EKA	Eskdalemuir Ar	55.97	20	P	P	16 28 25.3	+0.4
	comp=Z,0.6nm,0.5s,baz=208,slow=7.2,SNR=4.1						
DAVA	Damuels	56.14	34	*e*P	P	16 28 24.6	-1.9
	comp=Z,7.1nm,1.0s						
MEM	Membach	56.22	29	⇓P	P	16 28 28.1	+1.3
TKL	Tuckaleechee C	56.32	310	P	P	16 28 28.8	+1.0
	comp=Z,2.9nm,0.8s,baz=121,slow=5.2,SNR=3.9						
TKL				LR	LR	16 47 42.5	
	comp=Z,293nm,21.0s,baz=136,slow=31						
FETA	Feichten	56.46	34	*e*P	P	16 28 29.7	+0.9
	comp=Z,5.8nm,1.0s						
RETA	Reutte	56.74	34	*e*P	P	16 28 26.7	-4.0
	comp=Z,0.1nm,0.2s						
PLCA	Paso Flores	56.82	214	LR	LR	16 52 32.4	
	comp=Z,579nm,20.8s,baz=69,slow=36						
MOTA	Moosalm	56.85	34	*e*P	P	16 28 32.5	+1.0
	comp=Z,2.5nm,0.6s						
WTTA	Wattenberg	57.11	34	P	P	16 28 28.9	-4.5
	comp=Z,2.7nm,0.4s						
SCHQ	Schefferville	57.28	337	P	P	16 28 35.0	+0.8
	comp=Z,5.5nm,0.8s,baz=98,slow=6.4,SNR=6.9						
SCHQ				LR	LR	16 48 34.6	
	comp=Z,138nm,21.3s,baz=112,slow=31						
ABTA	Abfaltersbach	57.32	35	*e*P	P	16 28 35.9	+1.1
	comp=Z,8.4nm,1.1s						
JAVS	Javornik	57.78	37	*e*P	P	16 28 39.7	+1.6
MYKA	Terra Mystica	57.92	36	*e*P	P	16 28 40.6	+1.6
	comp=Z,4.6nm,1.0s						
KBA	Koelnbreinsper	57.98	35	P	P	16 28 36.5	-3.1
	comp=Z,2.9nm,1.0s						
VISS	Visnje	58.20	37	*i* P	P	16 28 42.7	+1.8
BOJS	Bojanci	58.31	38	*e*P	P	16 28 44.0	+2.4
OBKA	Obir	58.39	37	*e*P	P	16 28 41.8	-0.5
	comp=Z,3.0nm,0.7s						
SOKA	Soboth	58.76	37	*e*P	P	16 28 46.0	+1.1
	comp=Z,5.7nm,0.8s						
PERS	Pernice	58.79	37	*i* P	P	16 28 46.6	+1.6
WET	Wettzell	58.85	33	P	P	16 28 47.9	+2.5
WET				pmax	pmax		
	comp=Z,6.0nm,1.2s						
MOA	Molln	58.92	35	*e*P	P	16 28 41.6	-4.3
	comp=Z,3.0nm,1.4s						
GEA0	GERESS Array S	59.13	34	*e*P	P	16 28 46.0	-1.4
GEC2	GERESS Array S	59.14	34	*e*P	P	16 28 45.9	-1.6
	comp=Z,9.8nm,1.2s						
GEC2	GERESS Array S	59.14	34	*e*P	P	16 28 45.9	-1.6
GEC2				pmax	pmax		
	comp=Z,10.0nm,1.2s						
GERES	GERESS Array B	59.14	34	P	P	16 28 47.6	+0.2
	comp=Z,4.2nm,1.1s,baz=237,slow=6.2,SNR=11						
KHC	Kasperske Hory	59.22	34	*e*P	P	16 28 46.9	-1.1
	comp=Z,3.8nm,1.3s						
KHC	Kasperske Hory	59.22	34	*e*P	P	16 28 46.9	-1.1
KHC				pmax	pmax		
	comp=Z,4.0nm,1.3s						
ARSA	Arzberg	59.34	36	*e*P	P	16 28 45.3	-3.6
	comp=Z,3.2nm,0.8s						
WVT	Waverly	59.58	310	*e*P	P	16 28 51.3	+0.7
	comp=Z,6.6nm,1.0s						
WVT	Waverly	59.58	310	*e*P	P	16 28 51.3	+0.7
WVT				pmax	pmax		
	comp=Z,7.0nm,1.0s						
CONA	Conrad Observa	59.88	36	*e*P	P	16 28 53.5	+0.8
	comp=Z,1.4nm,0.7s						
CLL	Collm	60.13	31	*e*(P)	P	16 28 56.0	+1.8
CLL				Lm	MLR	16 55 00.0	
	comp=N,200nm,18.9s						
CLL				Lm	MLR	16 55 00.0	
	comp=E,200nm,18.5s						
CLL				Lm	MLR	16 55 00.0	
	comp=Z,300nm,18.2s						
CLL	Collm	60.13	31	*e*P	P	16 28 56.0	+1.8
CLL				MLR	MLR		
	comp=Z,300nm,18.2s						
BRG	Berggiesshubel	60.38	32	*e*P	P	16 28 57.7	+1.8
	comp=Z,4.0nm,1.0s						
BRG	Berggiesshubel	60.38	32	*e*P	P	16 28 57.7	+1.8
BRG				pmax	pmax		
	comp=Z,4.0nm,1.0s						
BRG	Berggiesshubel	60.38	32	SS	P	16 28 57.0	+1.1
LIT	Litokhoron	60.85	46	P	P	16 29 02.2	+2.8
VRAC	Vranov	61.00	35	P	P	16 29 02.6	+2.4
VRAC				pmax	pmax		
	comp=Z,5.0nm,1.2s						
IDI	Anoyia	61.15	52	LR	LR	16 56 00.8	
	comp=Z,406nm,20.7s,baz=256,slow=37						
SOH	Sokhos	61.72	46	P	P	16 29 09.7	+4.4
SRS	Serrai	61.99	45	P	P	16 29 10.5	+3.5
MDVR	Moldovita	62.07	41	⇑*i*P	P	16 29 10.0	+2.4
PSZ	Piszkesteto	62.26	37	⇓*i*P	P	16 29 11.1	+2.3
PSZ	Piszkesteto	62.26	37	⇓P	P	16 29 11.1	+2.3
CCM	Cathedral Cave	62.76	311	*e*P	P	16 29 10.6	-1.6
	comp=Z,11nm,1.0s						
CCM	Cathedral Cave	62.76	311	*e*P	P	16 29 10.6	-1.6
CCM				pmax	pmax		
	comp=Z,11nm,1.0s						
I42A	Draeger Farm,	63.00	318	*e*P	P	16 29 12.3	-1.4
	comp=Z,17nm,1.0s						
OJC	Ojcow	63.26	35	*e*P	P	16 29 17.1	+1.8
OJC	Ojcow	63.26	35	*e*P	P	16 29 17.1	+1.8
N41A	Harden Midland	63.27	314	*e*P	P	16 29 14.1	-1.4
	comp=Z,21nm,1.0s						
DEV	Deva	63.28	40	P	P	16 29 18.9	+3.4
DEV				pmax	pmax		
	comp=Z,12nm,0.6s						
DRGR		63.52	39	⇑*i*P	P	16 29 19.4	+2.2
DRGR		63.52	39	P	P	16 29 21.1	+3.9
DRGR				pmax	pmax		
	comp=Z,24nm,1.1s						
SFJD	Kangerlussuaq	63.63	352	LR	LR	16 52 55.2	
	comp=Z,120nm,18.2s,baz=142,slow=32						
KONO	Kongsberg	63.78	22	*i* P	P	16 29 20.4	+1.9
KONO				pmax	pmax		
	comp=Z,27nm,2.5s						
TRPA	Tarpa	63.96	38	⇓*i*P	P	16 29 21.7	+1.8
UZH	Uzhgorod	64.02	37	*e*P	P	16 29 22.0	+1.7
UZH				*e*		16 29 24.4	
UZH				*e*		16 29 29.6	
CJR	Cluj-Napoca	64.05	40	⇓*i*P	P	16 29 23.0	+2.4
CJR	Cluj-Napoca	64.05	40	⇓P	P	16 29 23.0	+2.4
ARR	Arges	64.21	41	⇑*i*P	P	16 29 23.7	+1.9
VOIR		64.51	41	⇑*i*P	P	16 29 25.3	+1.6
VOIR		64.51	41	⇑P	P	16 29 25.3	+1.6
HKT	Hockley	64.60	301	*i* P	P	16 29 27.0	+2.6
HKT				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BOSA	Boshof	64.61	124	P	P	16 29 24.5	-0.2
	comp=Z,12nm,1.0s,baz=277,slow=5.5,SNR=8.3						
BOSA				LR	LR	16 51 48.2	
	comp=Z,278nm,21.4s,baz=324,slow=31						
MLR	Muntele Rosu	65.12	41	P	P	16 29 29.2	+1.4
	comp=Z,23nm,1.0s,baz=343,slow=5.4,SNR=24						
MLR				LR	LR	16 55 51.9	
	comp=Z,374nm,21.4s,baz=214,slow=34						
MLR	Muntele Rosu	65.12	41	⇑*i*P	P	16 29 29.5	+1.7
MLR	Muntele Rosu	65.12	41	*e*P	P	16 29 28.4	+0.6
	comp=Z,47nm,1.2s						
MLR	Muntele Rosu	65.12	41	⇑P	P	16 29 29.5	+1.7
NB2	NORSAR Subarra	65.31	22	P	P	16 29 28.7	+0.1
	comp=Z,1.3nm,0.8s,baz=228,slow=6.5						
NOA	NORSAR Array B	65.31	22	P	P	16 29 29.1	+0.6
	comp=Z,4.1nm,1.0s,baz=230,slow=6.3,SNR=8.6						
NOA				LR	LR	16 54 04.8	
	comp=Z,177nm,20.8s,baz=240,slow=32						
ISR	Istrita	65.39	42	⇑*i*P	P	16 29 31.6	+2.2
ISR	Istrita	65.39	42	⇑P	P	16 29 31.6	+2.2
BUR04	Bucovina Ar. S	65.41	39	*e*P	P	16 29 29.4	-0.2
BURAR	Bucovina Array	65.41	39	⇑*i*P	P	16 29 31.5	+1.9
BURAR	Bucovina Array	65.41	39	⇑P	P	16 29 31.5	+1.9
KLNR	Kaliningrad	65.58	31	*i* P	P	16 29 31.5	+1.2
KLNR				pmax	pmax		
	comp=Z,57nm,0.7s						
PLOR	Plostina	65.70	41	⇓*i*P	P	16 29 33.1	+1.7
PLOR	Plostina	65.70	41	⇓P	P	16 29 33.1	+1.7
BIZ	Bicaz	65.73	40	⇓*i*P	P	16 29 33.3	+1.8
VRI	Vrincioaia	65.76	41	⇑*i*P	P	16 29 33.9	+2.1
VRI	Vrincioaia	65.76	41	⇑P	P	16 29 33.9	+2.1
ILULI	Ilulissat	65.78	353	*e*P	P	16 29 30.4	-1.0
	comp=Z,23nm,0.8s						
ILULI	Ilulissat	65.78	353	*e*P	P	16 29 30.4	-1.0
ILULI				pmax	pmax		
	comp=Z,23nm,0.8s						
TESR	Tescani	65.93	41	⇓*i*P	P	16 29 34.5	+1.7
HARR	Harsova	66.18	43	⇓*i*P	P	16 29 36.4	+2.0
HARR	Harsova	66.18	43	⇓P	P	16 29 36.4	+2.0
TLB	Topalu	66.22	43	⇑*i*P	P	16 29 35.6	+0.9
TLB	Topalu	66.22	43	⇑P	P	16 29 35.6	+0.9
CFR	Carcaliu	66.47	42	⇑*i*P	P	16 29 37.1	+0.8
CFR	Carcaliu	66.47	42	⇑P	P	16 29 37.1	+0.8
SORM	Soroca	67.57	39	⇓*i*P	P	16 29 42.7	-0.5
SORM	Soroca	67.57	39	⇓P	P	16 29 42.7	-0.5
ECSD	EROS Data Cent	68.24	315	P	P	16 29 44.7	-2.9
ANTO	Ankara	68.37	49	*e*P	P	16 29 47.2	-1.4
	comp=Z,75nm,1.4s						
ANTO	Ankara	68.37	49	*e*P	P	16 29 47.2	-1.4
ANTO				pmax	pmax		
	comp=Z,75nm,1.4s						
KIEV	Kiev	68.95	37	P	P	16 29 50.9	-1.0
	comp=Z,27nm,1.7s						
KIEV	Kiev	68.95	37	*d i*P	P	16 29 53.7	+1.9
KIEV				pmax	pmax		
	comp=Z,16nm,1.6s						
AKASG	Malin Array Be	68.97	37	P	P	16 29 52.3	+0.3
	comp=Z,1.3nm,0.6s,baz=248,slow=6.8,SNR=12						
BRTR	Keskin Array B	68.97	49	P	P	16 29 53.8	+1.4
	comp=Z,7.3nm,0.9s,baz=238,slow=4.2,SNR=34						
BR131	Keskin Array S	68.98	49	*e*P	P	16 29 51.2	-1.2
AGMN	Agassiz Nation	69.03	320	*e*P	P	16 29 51.1	-1.4
	comp=Z,8.8nm,1.0s						
MMAI	Mount Meron Ar	69.19	56	P	P	16 29 56.0	+2.2
	comp=Z,6.0nm,0.9s,baz=251,slow=4.4,SNR=5.0						
ASF	Jabal al Asfar	70.32	58	P	P	16 30 01.5	+0.7
	comp=Z,5.0nm,1.0s,baz=252,slow=4.4,SNR=5.6						
TXAR	Lajitas Array	71.28	299	P	P	16 30 08.0	+1.2
	comp=Z,0.3nm,0.6s,baz=107,slow=4.2,SNR=5.3						
TXAR				LR	LR	17 03 04.6	
	comp=Z,38nm,19.4s,baz=0.0,slow=37						
TXAR	Lajitas Array	71.28	299	P	P	16 30 08.0	+1.2
FINES	FINESS Array B	71.52	26	P	P	16 30 08.0	+0.6
	comp=Z,3.3nm,0.9s,baz=256,slow=7.7,SNR=9.1						
FINES				LR	LR	16 56 34.0	
	comp=Z,172nm,20.8s,baz=219,slow=32						
FINES	FINESS Array B	71.52	26	P	P	16 30 08.0	+0.6
ANN	Anapa	72.75	44	*e*P	P	16 30 14.8	-0.3
ANN				pmax	pmax		
	comp=Z,37nm,1.6s						
SDCO	Great Sand Dun	73.72	308	*e*P	P	16 30 20.6	-0.8
	comp=Z,5.6nm,1.2s						
ISCO	Idaho Springs	74.07	310	*e*P	P	16 30 24.2	+0.8
	comp=Z,11nm,1.3s						
ANMO	Albuquerque	74.18	305	P	P	16 30 25.2	+1.2
	comp=Z,1.7nm,0.9s,baz=119,slow=13,SNR=5.6						
ANMO				LR	LR	16 59 20.4	
	comp=Z,405nm,20.4s,baz=90,slow=33						
ANMO	Albuquerque	74.18	305	⇑*i*P	P	16 30 24.9	+0.9
ANMO				pmax	pmax		
	comp=Z,6.0nm,1.5s						
DGMT	Dagmar	74.46	319	*e*P	P	16 30 24.6	-0.6
	comp=Z,26nm,0.9s						
N23A	Red Feather La	74.46	311	*e*P	P	16 30 26.5	+0.9
	comp=Z,18nm,1.1s						
FFC	Flin Flon	74.49	326	*e*P	P	16 30 23.3	-1.8
	comp=Z,17nm,1.1s						
FFC	Flin Flon	74.49	326	*e*P	P	16 30 23.3	-1.8
FFC				pmax	pmax		
	comp=Z,17nm,1.1s						
SMCO	Snowmass	75.04	309	*e*P	P	16 30 29.7	+0.6
	comp=Z,9.4nm,1.1s						
ARCES	ARCESS Array B	75.06	18	P	P	16 30 28.3	+0.1
	comp=Z,3.2nm,1.0s,baz=225,slow=1.5,SNR=5.1						
VSR	Storozhevoye	75.16	38	*e*P	P	16 30 29.9	+0.9
VSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
VORD	Divnogorie	75.18	38	*e*P	P	16 30 29.9	+0.7
VORD				pmax	pmax		
	comp=Z,9.0nm,0.7s						
LPSR	Galich'ya Gora	75.30	37	*e*P	P	16 30 31.4	+1.6
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
LAO	LASA Array	75.50	317	P	P	16 30 27.2	-4.0
	comp=Z,28nm,1.3s						
KIV	Kislovodsk	76.34	46	⇓*e*P	P	16 30 36.7	+0.6
KIV				*e*		16 30 43.7	
KIV						16 30 51.0	
KIV				S	S	16 40 16.0	-5.3
KIV				SSS	SSS	16 48 34.0	
KIV				pmax	pmax		
	comp=Z,7.0nm,1.1s						
KIV				MLR	MLR		
	comp=Z,81nm,17.0s						
KBZ	Khabaz	76.47	46	P	P	16 30 35.8	-0.9
	comp=Z,1.6nm,0.8s,baz=315,slow=1.4,SNR=1.8						
VRH	Novokhopyorsk	76.73	38	*e*P	P	16 30 38.7	+0.7
VRH				pmax	pmax		
	comp=Z,10.0nm,0.4s						
VNA1	Neumayer--Stat	76.74	172	P	P	16 30 39.3	+1.7
VNA3	Neumayer Olymp	77.09	173	P	P	16 30 41.1	+1.4
PDAR	Pinedale Array	77.36	313	P	P	16 30 42.6	+0.5
	comp=Z,1.6nm,0.9s,baz=94,slow=5.9,SNR=10						
PDAR	Pinedale Array	77.36	313	*e*P	P	16 30 41.4	-0.7
KLMR	Klimovskoe	77.45	29	*e*P	P	16 30 41.8	-0.1
KLMR				pmax	pmax		
	comp=Z,10.0nm,1.2s						
KLMR	Klimovskoe	77.45	29	*e*P	P	16 30 41.9	0.0
KLMR				AMP		16 30 43.8	
	comp=Z,10.0nm,1.2s						
LOHW	Long Hollow	78.20	313	*e*P	P	16 30 47.6	+0.8
	comp=Z,8.1nm,1.1s						
WUAZ	Wupatki	78.24	305	*e*P	P	16 30 46.7	-0.4
	comp=Z,9.9nm,1.3s						
MOOW	Moose Ponds	78.32	314	*e*P	P	16 30 47.6	+0.2
	comp=Z,11nm,1.4s						
TPAW	Teton Pass	78.44	313	*e*P	P	16 30 47.5	-0.6
	comp=Z,12nm,1.3s						
SNAA	Sanae	78.47	171	P	P	16 30 48.1	+0.7
SNAA	Sanae	78.47	171	P	P	16 30 47.7	+0.3
	comp=Z,3.3nm,1.0s,baz=339,slow=5.2,SNR=10						
FXWY	Fox Creek	78.51	313	*e*P	P	16 30 48.6	+0.1
	comp=Z,4.1nm,1.1s						
HWUT	Hardware Ranch	78.75	311	*e*P	P	16 30 48.3	-1.5
	comp=Z,7.8nm,0.9s						
DUG	Dugway, Tooele	79.61	310	*e*P	P	16 30 54.3	-0.2
	comp=Z,16nm,1.6s						
DUG	Dugway, Tooele	79.61	310	*e*P	P	16 30 54.3	-0.2
DUG				pmax	pmax		
	comp=Z,16nm,1.6s						
RPN	Rapa Nui	80.25	242	LR	LR	17 01 54.4	
	comp=Z,173nm,19.7s,baz=48,slow=32						
PRGR	Permogore	80.50	28	*e*P	P	16 31 00.0	+1.5
PRGR				pmax	pmax		
	comp=Z,9.0nm,0.5s						
NVL	N'lazarevskaya	80.65	166	*e*P	P	16 30 52.9	-6.3
NVL				pmax	pmax		
	comp=Z,4.0nm,0.6s						
YKA	Yellowknife Ar	82.32	332	P	P	16 31 08.9	+0.7
	comp=Z,2.8nm,1.1s,baz=96,slow=5.8,SNR=5.7						
NVAR	Mina Array Bea	83.84	308	P	P	16 31 18.7	+1.8
	comp=Z,1.5nm,1.0s,baz=102,slow=5.7,SNR=9.0						
NVAR				LR	LR	17 07 21.3	
	comp=Z,80nm,18.6s,baz=260,slow=35						
RCCR	Rock Creek Can	84.19	307	*e*P	P	16 31 18.9	0.0
ARU	Arti	86.96	34	*d i*P	P	16 31 32.1	+0.3
ARU				S	SKSac	16 41 58.9	0.0
ARU				SS	SS	16 47 53.0	+0.4
ARU				pmax	pmax		
	comp=Z,9.0nm,1.7s						
AKTO	Aktyubinsk	86.99	40	P	P	16 31 31.9	-0.2
	comp=Z,0.8nm,0.7s,baz=249,slow=8.6,SNR=2.5						
AKTO	Aktyubinsk	86.99	40	P	P	16 31 32.0	-0.2

SYO	Syowa Base	87.87	160	⇑epP	P	16 31 37.0	+1.1
BRVK	Borovoye	94.17	36	i P	P	16 32 06.6	+1.0
BRVK				pmax	pmax		
	comp=Z,4.0nm,1.7s						
QSPA	South Pole Qui	94.53	180	P	P	16 32 07.2	+0.2
	comp=Z,5.6nm,1.1s,baz=196,slow=3.2,SNR=5.3						
ILAR	Eielson Array	96.04	337	P	P	16 32 13.9	+0.1
	comp=Z,1.7nm,1.1s,baz=54,slow=4.0,SNR=9.1						
ILAR	Eielson Array	96.04	337	P	P	16 32 14.0	+0.1
KURK	Kurchatov	99.78	37	i P	Pdif	16 32 32.0	+1.0
KURK				pmax	pmax		
	comp=Z,7.0nm,2.4s						
KSH	Kashi	101.36	48	eP	Pdif	16 32 34.5	-4.0
LZH	Lanzhou	122.69	42	ePKP	PKPdf	16 37 39.0	-4.4
LZH				sPKP		16 37 43.8	
LZH				LR	LR		
	comp=Z,130nm,17.9s						
LZH				LR	LR		
	comp=Z,130nm,18.1s						
LZH				LR	LR		
	comp=Z,160nm,20.3s						
HHC	Hu-ho-hao-te	124.25	32	ePKP	PKPdf	16 37 44.3	-1.8
CD2	Chengdu	125.51	47	PKP	PKPdf	16 37 46.8	-2.0
CMAR	Chiang Mai Arr	127.13	63	PKP	PKPdf	16 37 51.0	-1.1
	comp=Z,2.2nm,1.1s,baz=281,slow=3.7,SNR=7.2						
CMAR	Chiang Mai Arr	127.13	63	PKP	PKPdf	16 37 51.0	-1.1
CMAR	Chiang Mai Arr	127.13	63	PKIKP	PKPdf	16 37 51.0	-1.1
GYA	Guiyang	130.03	50	ePdif	Pdif	16 34 44.0	-2.3
GYA				PKP	PKPdf	16 37 55.8	-1.8
GYA				PP	PP	16 40 11.0	+1.7
NJ2	Nanjing	134.66	35	ePKP	PKPdf	16 38 03.5	-2.5
QIZ	Qiongzhong	136.30	56	PKP	PKPdf	16 38 07.0	-2.4
QIZ				PP	PP	16 40 47.0	-2.5
QIZ				LR	LR		
	comp=Z,130nm,16.7s						
QIZ				LR	LR		
	comp=Z,270nm,19.6s						
QIZ				LR	LR		
	comp=Z,340nm,20.6s						
STKA	Stephens Creek	152.22	169	PKPbc	PKPbc	16 38 43.4	+0.2
	comp=Z,5.5nm,1.1s,baz=127,slow=10,SNR=3.6						
ASAR	Alice Springs	156.93	147	PKP	PKPdf	16 38 43.5	+0.2
	comp=Z,3.0nm,1.2s,baz=184,slow=1.6,SNR=8.0						
ASAR				PKPab	PKPab	16 39 13.2	+0.1
	comp=Z,0.6nm,0.9s,baz=190,slow=4.7,SNR=4.2						

WEL 28 16:19:52.7, 38˚S±8˚×18˚0W±˚, h33^{km}, ML3.8/24, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.54	270	P	Pn	16 20 18.2	+0.4
WMGZ				S	Sn	16 20 37.1	+0.5
MXZ	Matakaoa Point	1.65	279	P	Pn	16 20 19.2	-0.1
MXZ				S	Sn	16 20 38.2	-1.1
PUZ	Puketiti	1.67	261	P	Pn	16 20 20.4	+0.7
PUZ				S	Sn	16 20 40.2	+0.2
PKGZ	Pakihiroa	1.80	268	P	Pn	16 20 21.7	+0.2
PKGZ				S	Sn	16 20 42.9	-0.3
CNGZ	Carnagh Statio	1.81	249	P	Pb	16 20 24.0	-1.2
TWGZ	Tauwhareparae	1.91	259	P	Pn	16 20 24.2	+1.3
TWGZ				S	Sn	16 20 47.5	+1.7
HAZ	Te Kaha	2.04	272	P	Pn	16 20 25.2	+0.6
TKGZ	Te Karaka	2.06	252	P	Pn	16 20 26.5	+1.5
TKGZ				S	Sn	16 20 51.5	+1.9
RUGZ	Raukumara Rang	2.12	266	P	Pn	16 20 26.4	+0.5
RUGZ				S	Sn	16 20 51.1	-0.1
RIGZ	Rimuhau	2.21	246	P	Pn	16 20 28.5	+1.3
RIGZ				S	Sn	16 20 54.7	+1.3
PRGZ	Paritu Road	2.22	240	P	Pb	16 20 29.8	-2.4
MWZ	Matawai	2.28	257	P	Pn	16 20 28.7	+0.7
MWZ				S	Sn	16 20 55.1	0.0
MHGZ	Mahia Peninsul	2.32	235	P	Pn	16 20 30.8	+2.2
RAGZ	Rawiri	2.41	253	P	Pn	16 20 31.3	+1.5
KNZ	Kokohu	2.41	240	P	Pn	16 20 31.7	+1.9
KNZ				S	Sn	16 21 00.2	+2.0
SNGZ	Shannon Statio	2.55	247	P	Pn	16 20 33.6	+1.8
URZ	Urewera	2.59	260	P	Pn	16 20 34.0	+1.6
URZ				S	Sn	16 21 02.9	+0.2
WHHZ	Waihua	2.74	242	P	Pn	16 20 36.8	+2.5
WHHZ				S	Sn	16 21 08.9	+2.5
RTZ	Ruatahuna	2.77	253	P	Pn	16 20 36.8	+2.0
RTZ				S	Sn	16 21 08.8	+1.7
RAHZ	Arahi	2.78	246	P	Pn	16 20 37.1	+2.2
MUGZ	Murupara	2.90	256	P	Pn	16 20 37.7	+1.3
MTHZ	Maungataniwha	2.94	249	P	Pn	16 20 38.8	+1.7
MTHZ				S	Sn	16 21 12.9	+1.6
ARHZ	Aropaoanui	2.99	241	P	Pn	16 20 40.6	+2.8
NMHZ	Naumai	3.05	245	P	Pn	16 20 40.7	+1.9
RRRZ	Republican Roa	3.07	260	P	Pb	16 20 43.1	-3.6
MRHZ	Matea Rd	3.25	251	P	Pn	16 20 43.1	+1.7
MCHZ	McNeill Hill	3.28	240	P	Pn	16 20 43.7	+2.0
BKZ	Black Stump Fm	3.31	245	P	Pn	16 20 44.0	+1.8
KAHZ	Kahuranaki	3.34	233	P	Pn	16 20 44.8	+2.1
KWHZ	Kaweka Forest	3.46	242	P	Pn	16 20 46.3	+2.0
KRHZ	Kereru	3.60	239	P	Pn	16 20 47.7	+1.6
BHHZ	Black Hill Sta	3.74	243	P	Pn	16 20 49.7	+1.6
PNHZ	Pukenui	3.85	236	P	Pn	16 20 51.0	+1.4
TSZ	Takapari Road	4.08	236	P	Pn	16 20 53.7	+1.0
DVHZ	Dannevirke	4.08	232	P	Pn	16 20 53.7	+0.9
MKAZ	Moumakai	4.20	279	P	Pn	16 20 54.2	-0.2
POWZ	Post Office Ro	4.38	233	P	Pn	16 20 58.4	+1.5
HIZ	Hauiti	4.38	260	P	Pn	16 21 01.6	+4.7
ETAZ	East Tamaki Re	4.41	280	P	Pn	16 20 57.9	+0.6
TIWZ	Tintock	4.54	228	P	Pn	16 20 59.5	+0.4
WAZ	Wanganui	4.61	244	P	Pn	16 21 04.0	+3.9
MRZ	Mangatainoka R	4.66	231	P	Pn	16 21 00.9	+0.3
WCZ	Waipu Caves	5.18	290	P	Pn	16 21 08.0	+0.1
CTZ	Chatham Island	6.32	160	P	Pn	16 21 29.7	+6.2

MAN 28 16:23:49.4, 10.˚02N×123.˚13E, h34^{km}, mb4.1, ML2.9, MS2.6, 1D, Cebu

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNPH	Sibulan	0.68	171	⇓iP	Pb	16 24 03.5	+0.5
SNPH				i S	Sb	16 24 13.2	+1.0
GUIM	Jordan	0.81	319	eP	Pb	16 24 05.1	+0.1
GUIM				eS	Sb	16 24 16.0	+0.3
LLP	Lapu-Lapu	0.88	70	eP	Pb	16 24 05.9	-0.4
LLP				eS	Sb	16 24 17.7	-0.1
PAGZ	Pagadian	2.17	173	eP	Pn	16 24 17.1	-6.0
PAGZ				eS	Sb	16 24 55.6	+1.1
BESP	Borongan	2.76	55	eP	Pb	16 24 36.8	-1.4
BESP				eS	Sn	16 24 45.4	-18

ISCJB ***28*** *16:30:37.8±0.7, 13.˚25N±0.˚07×89.˚61W±0.˚05, h66^{km}±5^{km}, mb4.0/5, Error ellipse: s-maj=12.8km s-min=6.0km az=35.5*

CASC ***28*** *16:30:38.5±0.9, 13.˚19N×89.˚60W, h36^{km}±1^{km}, ML4.2*

NEIC ***28*** *16:30:39.3±1.6, 13.˚44N×89.˚57W, h35^{km}, MD4.3(SNET), Error ellipse: s-maj=35.8km s-min=14.2km az=35.0*

NEIC Felt [II] at San Salvador.

IDC ***28*** *16:30:42.9±2.9, 13.˚60N×88.˚96W, h92^{km}±31^{km}, mb3.7/6, mb1 3.9/7, mb1mx3.4/49, mbtmp4.0/7, Error ellipse: s-maj=42.6km s-min=20.0km az=47.0*

ISC 28 16:30:38.6±1.1, 13.˚28N±0.˚07×89.˚58W±0.˚07, h63^{km}±7^{km}, n41, σ1^{s}46/55, mb4.1/5, 1C-1D, El Salvador

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
COLS	Colinas	0.47	36	⇓iP	Pn	16 30 50.2	-0.4
SONS	Sonsonate	0.47	344	eP	Pn	16 30 50.0	-0.5
SONS				eS	Sn	16 30 58.8	-0.4
SONS				IAML		16 31 00.9	
	comp=Z,16µm,0.2s						
SNET	Serv Nac Est T	0.53	40	eP	Pn	16 30 50.8	-0.3
SNET				eS	Sn	16 31 00.2	-0.1
SNET				IAML		16 31 02.3	
	comp=Z,19µm,0.3s						
BOQS	Boqueron	0.54	33	⇑iP	Pn	16 30 51.3	-0.1
AIES	Las Flores	0.54	71	eP	Pn	16 30 50.6	-0.5
AIES				eS	Sn	16 30 58.7	-1.7
AIES				AML	AML	16 30 59.9	
	comp=Z,15µm,0.2s						
CEDA	San Andres	0.55	19	eP	Pn	16 30 51.3	0.0
CEDA				eS	Sn	16 31 01.4	+0.7
CEDA				IAML		16 31 05.8	
	comp=Z,23µm,0.2s						
UEES	San Salvador	0.55	36	eP	Pn	16 30 51.2	-0.2
UEES				eS	Sn	16 31 00.8	+0.1
UEES				IAML		16 31 03.1	
	comp=Z,18µm,0.3s						
UTEC	San Salvador	0.56	41	eP	Pn	16 30 51.2	-0.2
UTEC				eS	Sn	16 31 00.9	+0.1
UESS	San Salvador	0.56	41	eP	Pn	16 30 51.6	+0.1
UESS				eS	Sn	16 31 01.5	+0.6
UESS				IAML		16 31 03.9	
	comp=Z,20µm,0.2s						
OPAM	San Salvador	0.57	40	eS	Sn	16 31 01.3	+0.2
SNJE	San Jose	0.58	358	eP	Pn	16 30 51.9	0.0
CUSC	San Salvador	0.59	40	eP	Pn	16 30 51.8	0.0
CUSC				eS	Sn	16 31 02.2	+0.7
UDBS	Soyapango	0.60	43	eP	Pn	16 30 51.8	-0.2
UDBS				eS	Sn	16 31 02.0	+0.3
LFRS	El Faro	0.61	56	eP	Pn	16 30 51.8	-0.3
LFU	La Fuente	0.65	44	eP	Pn	16 30 52.7	+0.2
UESV	Ojushtada	0.78	82	eP	Pn	16 30 54.8	+0.9
UESV				eS	Sn	16 31 07.5	+2.3
UESV				IAML		16 31 10.3	
	comp=Z,7µm,0.4s						
LLGN	La Laguna	1.08	35	eP	Pn	16 30 58.1	+0.3
LLGN				eS	Sn	16 31 15.0	+2.9
MTO3	Montecristo	1.13	11	eP	Pn	16 30 59.2	+0.5
MTO3				IAML		16 31 19.4	
	comp=Z,812nm,0.4s						
IXG	Ixpaco	1.23	316	eP	Pn	16 30 59.8	-0.1
LCND	La Caˆ–ada	1.65	89	eP	Pn	16 31 05.4	+0.1
LCND				eS	Sn	16 31 26.7	+1.2
TGUH	Tegucigalpa,Un	2.37	71	ePn	Pn	16 31 15.7	+0.6
MOMN	Momotombo	3.09	106	eP	Pn	16 31 25.0	0.0
MOMN				eS	Sn	16 31 55.7	-5.1
COPN	Copaltepe	3.12	110	eP	Pn	16 31 25.4	+0.1
COPN				IAML		16 32 20.5	
	comp=Z,369nm,0.3s						
ESTN	Estel	3.13	93	ePn	Pn	16 31 24.8	-0.8
ESTN	Estel	3.13	93	eP	Pn	16 31 26.0	+0.4
RCON	San Juan de Ri	3.34	86	eP	Pn	16 31 28.6	+0.1
MATN	Matagalpa	3.58	95	eP	Pn	16 31 31.6	-0.2
JTS	JuntasAbangare	5.42	123	P	Pn	16 31 58.3	+1.5
	comp=Z,2.5nm,0.3s,baz=32,slow=13,SNR=12						
JTS				S	Sn	16 32 55.2	-2.8
	comp=Z,2.5nm,0.3s,baz=353,slow=16,SNR=1.4						
JTS	JuntasAbangare	5.42	123	ePn	Pn	16 31 58.8	+1.9
JTS				Sn	Sn	16 33 02.0	+4.1
BCIP	Isla Barro Col	10.39	112	Pn	Pn	16 33 07.5	+2.5
TXAR	Lajitas Array	20.64	323	P	Pn	16 35 16.0	0.0
	comp=Z,1.1nm,0.5s,baz=142,slow=11,SNR=29						
TX31	Lajitas Ar. Si	20.64	323	eP	Pn	16 35 14.7	-1.3
PDAR	Pinedale Array	34.08	333	PcP	PcP	16 39 54.0	+0.2
	comp=Z,0.3nm,0.5s,baz=128,slow=5.8,SNR=3.5						
NVAR	Mina Array Bea	35.72	320	P	P	16 37 34.6	+3.1
	comp=Z,0.6nm,0.6s,baz=136,slow=7.5,SNR=6.7						
NVAR				PcP	PcP	16 40 00.1	+1.5
	comp=Z,0.7nm,0.6s,baz=130,slow=3.9,SNR=6.4						
ULM	Lac du Bonnet	37.22	353	P	P	16 37 43.4	-0.5
	comp=Z,1.3nm,0.3s,baz=173,slow=8.9,SNR=3.8						
SCHQ	Schefferville	45.12	18	P	P	16 38 46.0	-2.6
	comp=Z,5.1nm,0.6s,baz=243,slow=17,SNR=3.8						
YKA	Yellowknife Ar	52.28	346	P	P	16 39 42.8	-0.5
	comp=Z,0.8nm,0.4s,baz=131,slow=7.6,SNR=8.7						
ARCES	ARCESS Array B	86.07	19	P	P	16 43 10.5	-1.7
	comp=Z,0.3nm,0.5s,baz=269,slow=4.5,SNR=3.2						
WRA	Warramunga Arr	137.49	255	PKP	PKPdf	16 49 56.8	+0.6
	comp=Z,0.3nm,0.5s,baz=88,slow=2.5,SNR=6.8						
ASAR	Alice Springs	137.63	249	PKP	PKPdf	16 49 55.8	-0.6
	comp=Z,0.6nm,0.8s,baz=91,slow=2.2,SNR=4.5						
CMAR	Chiang Mai Arr	147.36	345	PKPbc	PKPbc	16 50 16.4	+0.2
	comp=Z,0.8nm,0.5s,baz=350,slow=3.1,SNR=4.9						

ISCJB ***28*** *16:37:54.2±0.7, 28.˚76S±0.˚08×178.˚6W±0.˚1, h100^{km}, mb3.8/8, Error ellipse: s-maj=14.3km s-min=11.1km az=160.0*

IDC ***28*** *16:37:54.7±0.8, 28.˚66S×177.˚96W, h111^{km}±7^{km}, mb3.6/8, mb1 3.7/8, mb1mx3.5/46, mbtmp4.0/8, Error ellipse: s-maj=24.8km s-min=23.2km az=156.0*

ISC 28 16:37:54.4±0.6, 28.˚69S±0.˚09×178.˚4W±0.˚1, h100^{km}, n24, σ1^{s}43/24, mb3.9/8, Kermadec Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RAO	Raoul Island	0.69	144	P	Pn	16 38 13.3	+1.6
	4µm,0.3s,baz=33,slow=24,SNR=194						
RAO				S	Sn	16 38 27.0	+2.3
	3µm,0.3s,baz=86,slow=23,SNR=9.4						
URZ	Urewera	10.26	200	P	Pn	16 40 13.7	-4.8
	0.3nm,0.3s,baz=284,slow=5.4,SNR=7.8						
URZ				S	Sn	16 42 08.5	-3.0
	3.2nm,0.3s,baz=220,slow=21,SNR=12						
STKA	Stephens Creek	34.58	255	P	P	16 44 35.1	+1.5
	1.9nm,0.8s,baz=67,slow=7.7,SNR=3.3						
ASAR	Alice Springs	42.89	265	P	P	16 45 45.4	+2.1
	0.4nm,0.4s,baz=99,slow=6.5,SNR=22						
WRA	Warramunga Arr	43.73	271	P	P	16 45 52.2	+2.3
	1.0nm,0.5s,baz=110,slow=7.8,SNR=20						
MJAR	Matsushiro Arr	76.65	325	P	P	16 49 34.3	+0.1
	1.0nm,0.5s,baz=169,slow=4.8,SNR=6.1						
SNAA	Sanae	79.87	179	P	P	16 49 50.8	-0.9
	0.6nm,0.6s,baz=180,slow=12,SNR=5.9						
PETK	Petropavlovsk-	84.08	346	P	P	16 50 13.2	-0.4
	2.5nm,0.6s,baz=133,slow=8.5						
KLR	Kul'dur	89.40	330	P	P	16 50 40.3	+0.8
	0.1nm,0.7s,baz=214,slow=3.6,SNR=6.0						
SEY	Seymchan	94.24	347	P	P	16 50 59.7	-1.9
	1.3nm,0.9s,baz=134,slow=9.9,SNR=5.4						
MKAR	Makanchi Array	116.42	311	PKP	PKPdf	16 56 24.9	-1.3
	0.3nm,0.5s,baz=94,slow=1.7,SNR=3.9						
KURBB	Kurchatov Arra	119.67	314	PKP	PKPdf	16 56 31.2	-1.1
	0.8nm,0.6s,baz=108,slow=1.9,SNR=7.9						
BVAR	Borovoye Array	124.95	317	PKP	PKPdf	16 56 41.3	-1.1
	1.3nm,0.5s,baz=169,slow=1.3,SNR=11						
AKTO	Aktyubinsk	132.70	314	PKP	PKPdf	16 56 56.5	-0.7
	0.5nm,0.4s,baz=90,slow=6.1,SNR=3.5						
ARCES	ARCESS Array B	136.85	348	PKP	PKPdf	16 57 03.0	-1.5
	0.8nm,0.6s,baz=30,slow=5.6,SNR=4.8						
FINES	FINESS Array B	143.43	340	PKhKP	PKPpre	16 57 11.8	
	1.2nm,0.7s,baz=25,slow=6.3,SNR=5.4						
KBZ	Khabaz	143.87	306	PKP	PKPab	16 57 15.4	+0.3
	1.3nm,0.5s,baz=76,slow=4.2,SNR=2.5						
NB2	NORSAR Subarra	147.02	351	PKP	PKPdf	16 57 22.4	-0.3
	comp=Z,1.0nm,0.5s,baz=13,slow=2.9						
NOA	NORSAR Array B	147.02	351	PKPbc	PKPdf	16 57 22.7	-0.1
	comp=Z,1.0nm,0.4s,baz=15,slow=4.6,SNR=7.7						
HFS	Hagfors	147.51	349	PKPbc	PKPdf	16 57 23.7	+0.2
	comp=Z,3.4nm,0.6s,baz=62,slow=3.4,SNR=16						
AKASG	Malin Array Be	149.74	324	PKPbc	PKPbc	16 57 31.6	-0.6
	comp=Z,3.4nm,0.5s,baz=46,slow=3.3,SNR=18						
MMAI	Mount Meron Ar	150.75	287	PKPbc	PKPbc	16 57 36.2	+0.9
	comp=Z,3.5nm,0.6s,baz=72,slow=6.2,SNR=9.0						
BRTR	Keskin Array B	151.47	301	PKPbc	PKPbc	16 57 36.2	-0.6
	comp=Z,1.9nm,0.8s,baz=127,slow=3.6,SNR=9.7						
TORD	Torodi Ar. Bea	164.53	180	PKPab	PKPab	16 58 41.4	-0.7
	baz=197,slow=3.0						

ISK ***28*** *16:51:51.2, 40.˚09N×38.˚34E, h9^{km}, ML2.8/5*

ISCJB ***28*** *16:51:52.1±0.5, 40.˚10N±0.˚03×38.˚37E±0.˚04, h9^{km}±5^{km}, Error ellipse: s-maj=4.8km s-min=4.2km az=40.3*

CSEM ***28*** *16:51:52.0±0.2, 40.˚10N×38.˚34E, h10^{km}, ML3.0, Error ellipse: s-maj=4.0km s-min=3.4km az=119.0*

DDA ***28*** *16:51:52.0, 40.˚07N×38.˚33E, h7^{km}, Ml3.0*

ISC 28 16:51:52.4±0.9, 40.˚09N±0.˚02×38.˚35E±0.˚02, h17^{km}±8^{km}, n39, σ0^{s}57/53, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SUSE	Susehri	0.17	317	i P	Pg	16 51 56.8	-0.1
SUSE				i S	Sb	16 52 00.2	0.0
SUSE	Susehri	0.17	317	P	Pg	16 51 56.8	-0.1
SUSE				S	Sb	16 52 00.2	0.0
ILIC	ilic-Erzincan	0.66	165	PG	Pg	16 52 03.9	-1.5
ILIC				SG	Sb	16 52 14.7	+0.3
ILIC	ilic-Erzincan	0.66	165	ePg	Pg	16 52 03.9	-1.5
ILIC				eSg	Sb	16 52 14.7	+0.3
KELT	Kelkit	0.70	85	i P	Pg	16 52 05.7	-0.5
KELT				i S	Sg	16 52 15.7	+0.3
KELT	Kelkit	0.70	85	P	Pg	16 52 05.7	-0.5
KELT				S	Sg	16 52 15.7	+0.3
KEMA	Kemaliye	0.83	172	i P	Pb	16 52 07.5	-0.8
KEMA				i S	Sg	16 52 19.9	+0.5
KEMA	Kemaliye	0.83	172	P	Pb	16 52 07.5	-0.8
KEMA				S	Sg	16 52 19.9	+0.5
GRSN	GIRESUNGRSN	0.84	356	i P	Pb	16 52 08.2	-0.3
GRSN	GIRESUNGRSN	0.84	356	P	Pb	16 52 08.2	-0.3
ESPY	Espiye-Giresun	0.88	19	PG	Pb	16 52 09.0	-0.2
ESPY				SG	Sg	16 52 21.2	+0.2
ESPY	Espiye-Giresun	0.88	19	ePg	Pb	16 52 09.0	-0.2
ESPY				eSg	Sg	16 52 21.2	+0.2
GUMT	Gumushane	0.94	66	PG	Pb	16 52 09.5	-0.8
GUMT				SG	Sb	16 52 22.5	-0.1
GUMT	Gumushane	0.94	66	ePg	Pb	16 52 09.5	-0.8
GUMT				eSg	Sb	16 52 22.5	-0.1
SCER	sogukcermik	0.96	257	i P	Pb	16 52 10.7	0.0
SCER				i S	Sb	16 52 22.7	-0.5
SCER	sogukcermik	0.96	257	P	Pb	16 52 10.7	0.0
SCER				S	Sb	16 52 22.7	-0.5
ORDU	Ordu-Boztepe	0.98	338	i P	Pb	16 52 10.8	-0.1
ORDU	Ordu-Boztepe	0.98	338	P	Pb	16 52 10.8	-0.1
SVSK	Karacayir	1.05	261	PG	Pb	16 52 11.1	-1.0
SVSK	Karacayir	1.05	261	ePg	Pb	16 52 11.1	-1.0
HEKM	Malatya_Hekimh	1.24	194	i S	Sg	16 52 33.2	+0.5
HEKM	Malatya_Hekimh	1.24	194	S	Sg	16 52 33.2	+0.5
TNCL	Tunceli-Merkez	1.34	136	i P	Pg	16 52 18.8	+0.6
TNCL	Tunceli-Merkez	1.34	136	P	Pg	16 52 18.8	+0.6
BAYT	Ayd˜–ntepe-Bay	1.41	77	PN	Pn	16 52 17.9	+0.5
BAYT	Ayd˜–ntepe-Bay	1.41	77	ePn	Pn	16 52 17.9	+0.5
KTUT	Trabzon	1.41	50	PN	Pn	16 52 17.5	+0.3
KTUT	Trabzon	1.41	50	ePn	Pn	16 52 17.5	+0.3
PTK	Pertek	1.44	146	PN	Pn	16 52 17.7	-0.2
PTK	Pertek	1.44	146	ePn	Pn	16 52 17.7	-0.2
DARE	Darende-Malaty	1.66	204	PN	Pn	16 52 21.5	+0.7
DARE	Darende-Malaty	1.66	204	ePn	Pn	16 52 21.5	+0.7
ELZG	Elazig	1.66	163	i P	Pb	16 52 23.2	+0.5
ELZG	Elazig	1.66	163	P	Pb	16 52 23.2	+0.5
CUSAR	Sarkisla-SIVAS	1.75	248	i P	Pn	16 52 22.6	+0.5
CUSAR	Sarkisla-SIVAS	1.75	248	P	Pn	16 52 22.6	+0.5
AKCD	Akcadag	1.82	191	i S	Sg	16 52 51.9	+0.8
CHOM	Cayeli-Rize	2.10	60	PN	Pn	16 52 27.1	+0.4
CHOM	Cayeli-Rize	2.10	60	ePn	Pn	16 52 27.1	+0.4

MOS ***28*** *17:00:36.6±1.0, 5.˚07S×152.˚64E, h37^{km}, mb5.0/26, Error ellipse: s-maj=9.9km s-min=7.3km az=116.4*

ISCJB ***28*** *17:00:37.8±0.2, 5.˚20S±0.˚03×152.˚71E±0.˚04, h55^{km}, mb4.7/100, MS4.2/15, Error ellipse: s-maj=5.4km s-min=4.4km az=2.9*

NEIC ***28*** *17:00:39.2±0.7, 5.˚17S×152.˚63E, h55^{km}±6^{km}, mb4.8/57, Error ellipse: s-maj=4.9km s-min=4.3km az=108.0*

IDC ***28*** *17:00:39.3±2.2, 5.˚18S×152.˚64E, h53^{km}±19^{km}, mb4.2/28, mb1 4.4/29, mb1mx4.2/53, mbtmp4.5/29, ML2.8/1, MS4.0/10, Ms1 4.0/10, ms1mx3.6/49, Error ellipse: s-maj=15.2km s-min=9.4km az=107.0*

BJI ***28*** *17:00:40.6, 4.˚55S×152.˚72E, h55^{km}, mb4.8/37, mB4.9/23, Ms4.6/14, Ms7 4.4/15*

ISC 28 17:00:39.5±0.3, 5.˚21S±0.˚04×152.˚63E±0.˚05, h55^{km}, n243, σ1^{s}26/254, mb4.7/99, MS4.3/15, 7C-4D, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
RABL	Rabaul	1.12	335	ePn	Pn	17 00 58.6	-0.4
RABL				eSn	Sn	17 01 13.0	-0.4
MANU	Manus Island	6.13	301	ePn	Pn	17 02 10.9	+3.4
PMG	Port Moresby	6.84	232	P	Pn	17 02 19.4	+2.0
	10nm,0.3s,baz=69,slow=6.9,SNR=38						
PMG				S	Sn	17 03 33.5	-0.5
	13nm,0.3s,baz=352,slow=6.6,SNR=3.6						
PMG	Port Moresby	6.84	232	ePn	Pn	17 02 19.3	+2.0
PMG				eSn	Sn	17 03 29.0	-5.0
PMG	Port Moresby	6.84	232	eP	Pn	17 02 19.3	+2.0
PMG				e		17 03 29.0	
HNR	Honiara	8.38	120	LR	LR	17 06 16.4	
	comp=Z,638nm,18.5s,baz=296,slow=40						
HNR	Honiara	8.38	120	ePn	Pn	17 02 39.5	+1.1
HNR	Honiara	8.38	120	eP	Pn	17 02 39.5	+1.1
COEN	Coen	12.74	226	ePn	Pn	17 03 37.5	-0.6
CTAO	Charters Tower	16.04	202	ePn	Pn	17 04 20.8	-0.8
	13nm,1.0s						
CTAO	Charters Tower	16.04	202	eP	Pn	17 04 20.8	-0.8
CTAO				pmax	pmax		
	comp=Z,13nm,1.0s						
EIDS	Eidsvold	20.10	184	eP	P	17 05 08.8	0.0
	comp=Z,31nm,1.1s						
GUMO	Guam	20.21	338	P	Pn	17 05 11.5	-0.8
	comp=Z,51nm,0.8s,baz=204,slow=12,SNR=4.2						
GUMO				LR	LR	17 13 43.0	
	comp=Z,160nm,18.4s,baz=149,slow=39						
FAKI	Fak Fak	20.46	276	eP	Pn	17 05 15.6	+0.2
	comp=Z,219nm,2.0s						
TARA	Tarawa	21.29	73	eP	P	17 05 20.0	-1.8
	comp=Z,62nm,0.9s						
DZM	Mont Dzumac	21.44	143	P	P	17 05 22.5	-0.9
	comp=Z,11nm,0.8s,baz=231,slow=13,SNR=6.4						
DZM	Mont Dzumac	21.44	143	eP	P	17 05 22.9	-0.5
	comp=Z,46nm,1.2s						
MTN	Manton Dam	22.53	249	eP	P	17 05 33.2	-1.9
	comp=Z,55nm,1.3s						
WRAB	Tennant Creek	23.04	229	eP	P	17 05 39.8	-0.5
	comp=Z,34nm,1.0s						
WRAB	Tennant Creek	23.04	229	eP	P	17 05 39.8	-0.5
WRAB				pmax	pmax		
	comp=Z,34nm,1.0s						
WB2	Warramunga Arr	23.04	229	eP	P	17 05 38.0	-2.4
WR1	Warramunga Arr	23.05	229	eP	P	17 05 40.5	+0.1
	comp=Z,42nm,1.1s						
WR1				eS	S	17 09 47.0	-0.3
WRA	Warramunga Arr	23.05	229	P	P	17 05 40.5	0.0
	comp=Z,13nm,1.1s,baz=53,slow=10,SNR=23						
WRA				S	S	17 09 47.0	-0.4
	comp=Z,1.4nm,0.8s,baz=49,slow=16,SNR=3.4						
WRA	Warramunga Arr	23.05	229	i P	P	17 05 41.0	+0.6
WRA				pmax	pmax		
	comp=Z,13nm,1.1s						
ARMA	Armidale	25.09	182	eP	P	17 06 00.3	+1.0
	comp=Z,14nm,1.0s						
AS01	Alice Springs	25.70	223	eP	P	17 06 05.1	+0.3
AS31	Alice Springs	25.73	223	eP	P	17 06 04.3	-0.8
	comp=Z,3.5nm,0.6s						
ASAR	Alice Springs	25.74	223	P	P	17 06 05.7	+0.6
	comp=Z,9.7nm,0.7s,baz=60,slow=8.1,SNR=89						
STKA	Stephens Creek	28.47	200	P	P	17 06 28.6	-0.9
	comp=Z,2.9nm,0.7s,baz=19,slow=11,SNR=9.1						
STKA	Stephens Creek	28.47	200	eP	P	17 06 28.9	-0.7
	comp=Z,5.3nm,1.5s						
STKA	Stephens Creek	28.47	200	eP	P	17 06 28.9	-0.7
STKA				pmax	pmax		
	comp=Z,5.0nm,1.5s						
SOEI	Soe	28.48	259	eP	P	17 06 27.6	-2.3
	comp=Z,63nm,1.2s						
BATI	Baumata	29.12	258	LR	LR	17 21 55.0	
	comp=Z,412nm,19.1s,baz=46,slow=44						
DAV	Davao City (W)	29.63	294	P	P	17 06 39.6	-0.4
	comp=Z,253nm,0.4s,baz=128,slow=6.2,SNR=3.5						
DAV	Davao City (W)	29.63	294	eP	P	17 06 38.7	-1.3
	comp=Z,373nm,0.8s						
LUWI	Luwuk	30.10	277	eP	P	17 06 42.0	-2.2
	comp=Z,70nm,1.1s						
BBOO	Buckleboo	31.52	207	eP	P	17 06 55.9	-0.6
	comp=Z,29nm,1.4s						
PCI	Palu	33.02	276	P	P	17 07 10.4	+0.5
PCI				pmax	pmax		
	comp=Z,27nm,1.2s						
FORT	Forrest	34.37	219	eP	P	17 07 21.0	-0.3
	comp=Z,18nm,0.8s						
MBWA	Marble Bar	35.62	241	eP	P	17 07 32.8	+0.5
	comp=Z,15nm,1.0s						
AFI	Afiamalu	36.10	106	eP	P	17 07 37.9	+1.3
	comp=Z,96nm,1.6s						
AFI	Afiamalu	36.10	106	eP	P	17 07 37.9	+1.3
AFI				pmax	pmax		
	comp=Z,96nm,1.6s						
BKZ	Black Stump Fm	40.11	151	eP	P	17 08 11.8	+1.8
	comp=Z,27nm,1.1s						
SNZO	South Karori	41.01	154	eP	P	17 08 16.3	-1.0
	comp=Z,129nm,1.4s						
SBUM	Sibu	41.08	280	eP	P	17 08 17.8	-0.5
	comp=Z,5.3nm,1.4s						
KSM	Kuching	42.80	278	eP	P	17 08 32.2	-0.2
	comp=Z,11nm,1.1s						
INU	Inuyama	42.94	341	eP	P	17 08 32.8	-0.2
	comp=Z,6.9nm,1.1s						
NWAO	Narrogin (SRO)	42.98	226	LR	LR	17 29 24.2	
	comp=Z,247nm,18.1s,baz=120,slow=40						
JOHN	Johnston Islan	43.30	59	eP	P	17 08 35.1	-1.1
	comp=Z,668nm,1.8s						

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JNU   Nakatsue          43.35 333  P       P        17 08 34.7  -1.8
      comp=Z,24nm,0.8s,baz=80,slow=3.2,SNR=14
JNU   Nakatsue          43.35 333 eP       P        17 08 36.0  -0.5
      comp=Z,26nm,0.9s
MJAR  Matsushiro Arr    43.67 343  P       P        17 08 36.8  -2.2
      comp=Z,2.5nm,0.9s,baz=183,slow=8.9,SNR=9.4
MJAR                               PcP     PcP      17 10 25.7  +0.3
      comp=Z,1.9nm,0.8s,baz=185,slow=4.3,SNR=5.7
MAJO  Matsushiro        43.68 343 eP       P        17 08 36.7  -2.4
      comp=Z,5.4nm,1.1s
MAJO                              ePcP     PcP      17 10 25.7  +0.3
MAJO                              eS       S        17 15 05.1   0.0
MAJO  Matsushiro        43.68 343 eP       P        17 08 36.7  -2.4
MAJO                              e                 17 10 25.7
MAJO                              eS       S        17 15 05.1   0.0
MAJO                               pmax    pmax
      comp=Z,5.0nm,1.1s
MAT   Matsushiro        43.68 343  P       P        17 08 36.9  -2.2
MJB9  Matsu-Tunnel      43.68 343 eP       P        17 08 36.7  -2.4
      comp=Z,5.3nm,1.1s
MJB9                              eS       S        17 15 05.2   0.0
TJN   Taejon            47.66 332ceP       P        17 09 10.5   0.0
KSRS  Korea Array       48.29 334  P       P        17 09 14.8  -0.5
      comp=Z,2.4nm,0.8s,baz=149,slow=7.4,SNR=12
KSRS                               LR      LR       17 28 29.8
      comp=Z,58nm,19.3s,baz=280,slow=35
KS15  Wonju Array Si    48.30 333 eP       P        17 09 15.2  -0.2
KSAR  Wonju Array Be    48.30 333  P       P        17 09 14.8  -0.6
KSAR  Wonju Array Be    48.30 333  P       P        17 09 14.8  -0.6
KS01  Wonju Array Si    48.32 334 eP       P        17 09 15.3  -0.3
INCN  Inchon            48.90 332 eP       P        17 09 20.2  +0.1
      comp=Z,15nm,0.8s
INCN  Inchon            48.90 332 eP       P        17 09 20.2  +0.1
INCN                               pmax    pmax
      comp=Z,15nm,0.8s
NJ2   Nanjing           49.06 321 eP       P        17 09 21.8  +0.5
NJ2                                pmax    pmax
      comp=Z,18nm,0.5s
ASAJ  Asahikawa         49.93 351  P       P        17 09 27.3  -0.4
      comp=Z,12nm,0.8s,baz=220,slow=27,SNR=7.9
ASAJ  Asahikawa         49.93 351 eP       P        17 09 27.4  -0.4
      comp=Z,40nm,1.5s
IPM   Ipoh              52.44 280 eP       P        17 09 46.2  -1.0
      comp=Z,14nm,1.2s
USRK  Ussuriysk Ar.     52.58 341  P       P        17 09 47.3  -0.3
      comp=Z,3.4nm,0.8s,baz=178,slow=8.4
SKNT  Sakolnakorn       52.88 296  P       P        17 09 51.4  +1.0
      comp=Z,6.0nm,1.0s
KULM  Kulim             52.95 281 eP       P        17 09 50.1  -0.8
      comp=Z,21nm,1.4s
KEKH  Kekaha            53.91  58 eP       P        17 09 57.2  -0.6
      comp=Z,439nm,1.8s
NONG  Nongkai           54.01 297  P       P        17 09 59.4  +0.8
      comp=Z,0.4nm,0.9s,comp=Z,94nm
GYA   Guiyang           54.51 308 eP       P        17 10 04.0  +1.7
GYA                                pmax    pmax
      comp=Z,10.0nm,1.0s
XAN   Xi’an             56.80 317  P       P        17 10 18.3  -0.2
XAN                                pP      pP       17 10 31.3  -2.1
XAN                                pmax    pmax
      comp=Z,12nm,0.7s
XAN                                LR      LR
      comp=Z,290nm,21.1s
XAN                                LR      LR
      comp=Z,190nm,19.2s
XAN                                LR      LR
      comp=Z,370nm,24.0s
SUKH  Sukhothai         56.97 295  P       P        17 10 22.6  +2.7
      comp=Z,4.0nm,0.7s
KMI   Kunming           57.08 304  P       P        17 10 22.5  +1.7
KMI                                pP      pP       17 10 37.5  +1.8
KMI                                sP      sP       17 10 42.5  +0.5
KMI                                pmax    pmax
      comp=Z,9.0nm,1.0s
KMI                                pmax    pmax
      comp=Z,87nm,6.6s
KMI                                LR      LR
      comp=Z,180nm,18.0s
KMI                                LR      LR
      comp=Z,180nm,18.0s
KMI                                LR      LR
      comp=Z,170nm,16.2s
KLR   Kul’dur           57.19 344  P       P        17 10 20.1  -0.7
      comp=Z,0.4nm,0.9s,baz=147,slow=7.2,SNR=9.2
LAMP  Lampang           57.30 296  P       P        17 10 24.1  +1.9
      comp=Z,6.7nm,0.8s
PAYA  Payao             57.37 297  P       P        17 10 24.3  +1.6
      comp=Z,8.8nm,0.8s
CM01  Chiang Mai Arr    57.88 295 eP       P        17 10 25.9  -0.4
CM31  Chiang Mai Arr    57.90 295 eP       P        17 10 25.1  -1.3
CMAR  Chiang Mai Arr    57.90 295  P       P        17 10 27.5  +1.0
      comp=Z,8.4nm,0.9s,baz=107,slow=5.3,SNR=35
CMAR  Chiang Mai Arr    57.90 295ceP       P        17 10 27.8  +1.3
CMAR                               pmax    pmax
      comp=Z,8.0nm,0.9s
CMMT  Chiang Mai        58.01 296  P       P        17 10 28.8  +1.6
CHTO  Chiang Mai        58.02 296 eP       P        17 10 27.7  +0.4
      comp=Z,8.3nm,1.0s
CHTO  Chiang Mai        58.02 296 eP       P        17 10 27.7  +0.4
CHTO                               pmax    pmax
      comp=Z,8.0nm,1.0s
CHTO  Chiang Mai        58.02 296  P       P        17 10 28.9  +1.7
      comp=Z,46nm,1.2s
PETK  Petropavlovsk-    58.26   4  P       P        17 10 28.1  -0.2
      comp=Z,5.7nm,0.9s,baz=159,slow=6.3
PETK                               LR      LR       17 33 37.5
      comp=Z,101nm,19.7s,baz=208,slow=34
PEA1  Petropavlovsk-    58.26   4 eP       P        17 10 28.1  -0.2
CD2   Chengdu           58.88 311 eP       P        17 10 33.5  +0.4
HHC   Hu-ho-hao-te      59.28 325 eP       P        17 10 39.8  +4.0
HHC                                S       S        17 18 41.5  +1.3
HHC                                pmax    pmax
      comp=Z,12nm,0.9s
HHC                                pmax    pmax
      comp=Z,66nm,4.6s
HHC                                LR      LR
      comp=Z,180nm,15.2s
HHC                                LR      LR
      comp=Z,110nm,16.7s
HHC                                LR      LR
      comp=Z,210nm,17.1s
LZH   Lanzhou           61.41 316 eP       P        17 10 50.8  +0.3
LZH                                pP      pP       17 11 04.0  -1.5
LZH                                sP      sP       17 11 12.3  +0.5
LZH                               ePP      PP       17 13 09.0  +2.7
LZH                                pmax    pmax
      comp=Z,21nm,1.3s
LZH                                pmax    pmax
      comp=Z,93nm,8.2s
LZH                                LR      LR
      comp=Z,330nm,15.4s
LZH                                LR      LR
      comp=Z,350nm,15.6s
LZH                                LR      LR
      comp=Z,420nm,19.0s
MA2   Magadan           64.60 359  P       P        17 11 09.7  -1.2
      comp=Z,11nm,0.8s,baz=191,slow=6.2,SNR=6.3
MA2   Magadan           64.60 359⇑eP       P        17 11 11.4  +0.4
MA2                                pmax    pmax
      comp=Z,10.0nm,1.0s
GTA   Gaotai            65.84 317 ⇑P       P        17 11 20.5  +0.9
GTA                                pmax    pmax
      comp=Z,5.0nm,1.1s
GTA                                pmax    pmax
      comp=Z,49nm,6.3s
GTA                                LR      LR
      comp=Z,170nm,22.5s
GTA                                LR      LR
      comp=Z,310nm,22.8s
GTA                                LR      LR
      comp=Z,270nm,20.9s
ULN   Ulaanbaatar       66.26 328⇓eP       P        17 11 23.2  +1.1
ULN                                pmax    pmax
      comp=Z,12nm,2.5s
SHL   Shillong          66.37 301 eP       P        17 11 23.5  +0.1
      comp=Z,13nm,0.8s
SHL   Shillong          66.37 301 eP       P        17 11 23.5  +0.1
SHL                                pmax    pmax
      comp=Z,13nm,0.8s
SONA0 Songino Array     66.58 328 eP       P        17 11 24.5  +0.4
SONM  Songino Array     66.58 328  P       P        17 11 24.5  +0.4
      comp=Z,1.9nm,0.8s,baz=145,slow=6.8,SNR=11
SONA1 Songino Array     66.59 328 eP       P        17 11 24.2   0.0
SEY   Seymchan          67.95 360  P       P        17 11 32.2  -0.1
      comp=Z,0.6nm,0.3s,baz=156,slow=8.8,SNR=11
LSA   Lhasa             68.33 305 eP       P        17 11 36.8  +0.8
      comp=Z,6.0nm,0.8s
LSA   Lhasa             68.33 305 eP       P        17 11 36.8  +0.8
LSA                                pmax    pmax
      comp=Z,6.0nm,0.8s
ZAK   Zakamensk         69.76 329 eP       P        17 11 43.8  -0.2
ZAK                                pmax    pmax
      comp=Z,5.0nm,1.3s
ODAN  Odare             70.61 301 eP       P        17 11 50.9  +1.0
      comp=Z,15nm,0.7s
MOY   Mondy             71.68 329 eP       P        17 11 57.1  +1.4
VNDA  Vanda             72.43 178  P       P        17 12 00.5  +1.0
      comp=Z,0.9nm,0.7s,baz=325,slow=7.0,SNR=9.5
VNDA  Vanda             72.43 178 eP       P        17 12 00.3  +0.7
      comp=Z,4.3nm,0.9s
VNDA  Vanda             72.43 178 eP       P        17 12 00.3  +0.7
VNDA                               pmax    pmax
      comp=Z,4.0nm,0.9s
PKIN  Phulchoki         72.51 301 eP       P        17 12 01.8  +0.4
      comp=Z,17nm,1.0s
KKN   Kakani            72.67 301 eP       P        17 12 03.1  +0.9
      comp=Z,11nm,0.6s
DMN   Daman             72.77 301 eP       P        17 12 05.0  +2.1
SBA   Scott Base        72.98 177  P       P        17 12 04.4  +1.6
GKN   Gorkha            73.27 301 eP       P        17 12 06.6  +0.9
      comp=Z,31nm,1.0s
KOLN  Koldanda          74.10 301 eP       P        17 12 11.4  +0.8
      comp=Z,18nm,0.7s
PYUN  Piuthan           74.70 301 eP       P        17 12 14.6  +0.5
      comp=Z,26nm,0.9s
HVS   Khovu-Aksy        75.30 326⇑iP       P        17 12 18.3  +1.4
HVS                                pmax    pmax
      comp=Z,15nm,1.4s
WMQ   Urumqi            75.93 317  P       P        17 12 22.0  +1.3
WMQ                                pP      pP       17 12 37.3  +1.1
WMQ                                pmax    pmax
      comp=Z,18nm,1.1s
WMQ                                pmax    pmax
      comp=Z,440nm,4.7s
WMQ                                LR      LR
      comp=Z,150nm,19.5s
WMQ                                LR      LR
      comp=Z,190nm,21.5s
WMQ                                LR      LR
      comp=Z,180nm,21.5s
CAST  Castle Rocks      79.95  22 eP       P        17 12 41.6  -0.9
      comp=Z,8.6nm,0.8s
PMR   Palmer            80.13  24 eP       P        17 12 42.7  -0.7
      comp=Z,9.0nm,1.0s
PMR   Palmer            80.13  24 eP       P        17 12 42.7  -0.7
PMR                                pmax    pmax
      comp=Z,9.0nm,1.0s
MK01  Makanchi Array    80.51 319 eP       P        17 12 46.0  +0.1
MK31  Makanchi Array    80.53 319 eP       P        17 12 46.0  +0.1
MK32  Makanchi Array    80.53 319 eP       P        17 12 46.0   0.0
MKAR  Makanchi Array    80.53 319  P       P        17 12 46.0   0.0
      comp=Z,2.9nm,0.9s,baz=110,slow=6.6,SNR=18
MKAR  Makanchi Array    80.53 319 eP       P        17 12 46.0   0.0
      comp=Z,20nm,1.0s
MKAR  Makanchi Array    80.53 319 i P      P        17 12 46.9  +0.9
MKAR                               pmax    pmax
      comp=Z,3.0nm,0.9s
SML   Sawmill           80.56  24 eP       P        17 12 45.7  -0.1
      comp=Z,17nm,0.8s
SML   Sawmill           80.56  24 eP       P        17 12 45.7  -0.1
SML                                pmax    pmax
      comp=Z,17nm,0.8s
TRF   Thorofare Moun    80.64  22 eP       P        17 12 44.9  -1.5
      comp=Z,8.7nm,1.1s
BPAW  Bear Paw Mtn.     80.73  22 eP       P        17 12 45.1  -1.6
      comp=Z,25nm,1.9s
MAKZ  Makanchi          80.73 319 eP       P        17 12 47.1  +0.1
      comp=Z,6.5nm,1.1s
MAKZ  Makanchi          80.73 319 eP       P        17 12 47.2  +0.1
MAKZ                               pmax    pmax
      comp=Z,7.0nm,1.1s
MCK   McKinley          81.30  23 eP       P        17 12 48.9  -0.9
      comp=Z,24nm,1.0s
MCK   McKinley          81.30  23 eP       P        17 12 48.9  -0.9
MCK                                pmax    pmax
      comp=Z,24nm,1.0s
ZAA0  Zalesovo Array    81.40 326 eP       P        17 12 49.7  -0.7
      comp=Z,6.6nm,0.9s
ZALV  Zalesovo Beam     81.40 326  P       P        17 12 49.4  -1.0
      comp=Z,4.7nm,0.7s,baz=108,slow=5.3,SNR=21
ZALV  Zalesovo Beam     81.40 326 eP       P        17 12 49.2  -1.2
ZALV  Zalesovo Beam     81.40 326 eP       P        17 12 49.2  -1.2
ZAA1  Zalesovo Array    81.40 326 eP       P        17 12 49.5  -1.0
KLU   Klutina           81.42  25 eP       P        17 12 50.5  +0.1
      comp=Z,20nm,1.2s
PDGK  Podgornoye        81.43 315  P       P        17 12 52.1  +1.1
PDGK                               pmax    pmax
      comp=Z,5.0nm,0.8s
DHY   Denali Highway    81.58  23 eP       P        17 12 50.9  -0.5
      comp=Z,6.9nm,0.8s
WRH   Wood River Hil    82.00  22 eP       P        17 12 52.1  -1.2
      comp=Z,16nm,1.2s
CCB   Clear Creek Bu    82.19  22 eP       P        17 12 53.0  -1.3
      comp=Z,6.6nm,0.9s
MDM   Murphy Dome       82.19  22 eP       P        17 12 52.9  -1.5
      comp=Z,8.1nm,1.2s
NVS   Novosibirsk       82.58 327⇓iP       P        17 12 56.8  +0.2
NVS                                pmax    pmax
      comp=N,8.0nm,1.9s
NVS                                pmax    pmax
      comp=Z,14nm,1.9s
NVS                                pmax    pmax
      comp=E,10.0nm,1.7s
IL1   Eielson Array     82.60  22 eP       P        17 12 55.0  -1.5
ILAR  Eielson Array     82.60  22  P       P        17 12 55.2  -1.2
      comp=E,6.1nm,0.9s,baz=255,slow=5.0,SNR=32
ILAR                               LR      LR       17 45 33.8
      comp=E,72nm,20.9s,baz=273,slow=33
ILB   Eielson Array     82.60  22 eP       P        17 12 55.0  -1.5
COLD  Coldfoot          82.70  19 eP       P        17 12 57.3  +0.3
      comp=E,8.1nm,1.0s
RIDG  Independ’e Rid    82.90  23 eP       P        17 12 57.6  -0.5
      comp=E,13nm,1.2s
KSH   Kashi             83.08 311  P       P        17 13 02.5  +2.8
KSH                                sP      sP       17 13 26.8  +5.4
KSH                                PP      PP       17 16 17.5  +6.1
KSH                                SKS     S        17 23 14.8  -0.6
KSH                                S       SKSac    17 23 16.5  -0.8
KSH                                pmax    pmax
      comp=E,9.0nm,0.8s
KSH                                pmax    pmax
      comp=E,120nm,4.5s
SCRK  Sand Creek        83.35  23 eP       P        17 12 59.9  -0.6
      comp=E,4.6nm,0.9s
KURK  Kurchatov         83.99 322 eP       P        17 13 03.7  -0.2
      comp=E,11nm,1.0s
KURK  Kurchatov         83.99 322ceP       P        17 13 03.1  -0.8
KURK                               pmax    pmax
      comp=Z,12nm,1.0s
KURBB Kurchatov Arra    84.02 322  P       P        17 13 04.5  +0.4
      comp=Z,1.0nm,0.3s,baz=101,slow=4.6,SNR=10
NIL   Nilore            84.07 304 eP       P        17 13 04.9  +0.1
      comp=Z,24nm,0.8s
NIL   Nilore            84.07 304 eP       P        17 13 04.9  +0.1
NIL                                pmax    pmax
      comp=Z,24nm,0.8s
TKM2  Tokmak 2          84.09 314  P       P        17 13 06.5  +1.5
      SNR=9.4
KBK   Karagaybulak      84.50 314  P       P        17 13 08.4  +1.5
      SNR=5.5
CHMS  Chumysh           84.72 314  P       P        17 13 09.1  +1.2
      SNR=10
UCH   Uchtor            84.73 313  P       P        17 13 10.5  +2.1
      SNR=15
QSPA  South Pole Qui    84.75 180  P       P        17 13 08.6  +0.9
      comp=Z,1.3nm,0.6s,baz=315,slow=2.3,SNR=7.9
QSPA  South Pole Qui    84.75 180 eP       P        17 13 08.3  +0.7
      comp=Z,5.7nm,0.9s
FRU   Bishkek           84.78 314 eP       P        17 13 09.0  +0.8
EGAK  Eagle             84.80  23 eP       P        17 13 07.6  -0.1
      comp=Z,6.6nm,1.0s
AAK   Ala-Archa         84.83 314  P       P        17 13 10.0  +1.5
      comp=Z,3.5nm,0.6s,baz=118,slow=4.5,SNR=10
AAK   Ala-Archa         84.83 314 eP       P        17 13 09.6  +1.0
      comp=Z,9.8nm,1.0s
AAK   Ala-Archa         84.83 314⇓iP       P        17 13 10.1  +1.5
AAK                                pmax    pmax
      comp=Z,14nm,1.3s
USP   Ospenovka         84.95 314  P       P        17 13 10.5  +1.4
      SNR=5.1
SFK   Sufi-Kurgan       85.04 311  P       P        17 13 11.3  +1.5
SFK                                pmax    pmax
      comp=Z,21nm,1.1s
DAWY  Dawson            85.23  24 eP       P        17 13 10.2  +0.2
      comp=Z,22nm,1.8s
AML   Almayashu         85.31 313  P       P        17 13 13.1  +1.8
      SNR=7.2
EKS2  Erkin-Say         85.35 313  P       P        17 13 12.2  +1.0
      SNR=9.9
MNAS  Manas             86.24 313  P       P        17 13 16.8  +1.2
MNAS                               pmax    pmax
      comp=Z,19nm,1.0s
KBL   Kabul             87.66 305  P       P        17 13 22.1  -0.7
KBL                                pmax    pmax
      comp=Z,6.0nm,0.6s
KK31  Karatay Array     87.79 313 eP       P        17 13 22.7  -0.3
KK31  Karatay Array     87.79 313 eP       P        17 13 22.7  -0.3
KKAR  Karatay Array     87.79 313 eP       P        17 13 23.1  +0.1
KKAR  Karatay Array     87.79 313 eP       P        17 13 23.1  +0.1
INK   Inuvik            88.90  21  P       P        17 13 26.8  -0.8
      comp=Z,6.6nm,1.0s,baz=230,slow=7.2,SNR=3.9
INK   Inuvik            88.90  21 eP       P        17 13 27.4  -0.1
      comp=Z,13nm,1.3s
INK   Inuvik            88.90  21 eP       P        17 13 27.4  -0.1
INK                                pmax    pmax
      comp=Z,13nm,1.3s
YBH   Yreka Blue Hor    89.45  48  LR      LR       17 46 42.4
      comp=Z,127nm,20.6s,baz=306,slow=31
BVAR  Borovoye Array    89.47 323  P       P        17 13 30.2  -0.4
      comp=Z,4.2nm,0.7s,baz=105,slow=5.2,SNR=33
BRVK  Borovoye          89.54 323 eP       P        17 13 30.3  -0.6
BRVK  Borovoye          89.54 323ceP       P        17 13 29.9  -1.0
BRVK                               pmax    pmax
      comp=Z,3.0nm,1.0s
NVAR  Mina Array Bea    92.47  52  P       P        17 13 45.0  -0.2
      comp=Z,1.0nm,0.7s,baz=252,slow=7.4,SNR=9.4
NVAR                               LR      LR       17 49 41.6
      comp=Z,137nm,19.9s,baz=86,slow=32
NV01  Mina Array Sit    92.47  52 eP       P        17 13 44.3  -0.9
SYO   Syowa Base        93.23 199⇓eP       P        17 13 48.3  +0.6
ABKAR Akbulak array     95.67 319 eP       P        17 13 57.8  -1.5
YKA   Yellowknife Ar    95.86  28  P       P        17 13 58.8  -1.0
      comp=Z,1.4nm,0.8s,baz=269,slow=4.9,SNR=4.0
ARU   Arti              96.56 326  P       P        17 14 01.7  -1.5
ARU                                                 17 17 56.3
ARU                                S       SKSac    17 24 35.6  +0.4
ARU                                SS      SS       17 31 48.3  -6.2
AKTO  Aktyubinsk        96.93 320  P       P        17 14 04.0  -1.0
      comp=Z,0.5nm,0.5s,baz=89,slow=5.9,SNR=4.0
PD31  Pinedale Array    99.25  48 eP       Pdif     17 14 13.6  -2.3
PDAR  Pinedale Array    99.25  48  P       Pdif     17 14 13.9  -2.0
      comp=Z,0.1nm,0.3s,baz=332,slow=5.2,SNR=3.3
PDAR                               LR      LR       17 56 23.0
      comp=Z,112nm,18.2s,baz=288,slow=34
FIA0  FINESS Array S   111.36 336 ePdif    Pdif     17 15 07.5  -1.5
FIA0  FINESS Array S   111.36 336 eP       Pdif     17 15 07.5  -1.5
FINES FINESS Array B   111.36 336  Pdiff   Pdif     17 15 07.5  -1.5
      comp=Z,1.0nm,0.7s,baz=66,slow=4.8,SNR=4.8
AKASG Malin Array Be   114.73 324  PKP     PKPdf    17 19 13.0  -0.8
      comp=Z,0.5nm,0.5s,baz=59,slow=1.8,SNR=3.3
BR101 Keskin Array S   115.45 312 ePKPdf   PKPdf    17 19 16.3  +0.5
BRTR  Keskin Array B   115.45 312  PKP     PKPdf    17 19 16.3  +0.5
      comp=Z,0.4nm,0.7s,baz=215,slow=1.8,SNR=3.1
CLL   Collm            123.13 331 ePKPdf   PKPdf    17 19 31.0  +1.0
CLL   Collm            123.13 331 ePKIKP   PKPdf    17 19 31.0  +1.0
DIVS  Divibare         123.27 321 ePKPdf   PKPdf    17 19 30.1  -0.5
CONA  Conrad Observa   123.70 326  PKiKP   PKiKP    17 19 31.9  +0.3
      comp=Z,1.9nm,0.8s
FNA   Florina          123.88 317 ePKPdf   PKPdf    17 19 31.9   0.0
FNA   Florina          123.88 317 ePKIKP   PKPdf    17 19 31.9   0.0
KHC   Kasperske Hory   124.20 329 ePKPdf   PKPdf    17 19 33.4  +1.1
KHC   Kasperske Hory   124.20 329 ePKIKP   PKPdf    17 19 33.4  +1.1
GEC2  GERESS Array S   124.31 328 ePKPdf   PKPdf    17 19 32.4  -0.2
GEC2  GERESS Array S   124.31 328 ePKIKP   PKPdf    17 19 32.4  -0.2
GERES GERESS Array B   124.31 328  PKP     PKPdf    17 19 33.2  +0.6
      comp=Z,2.0nm,0.7s,baz=75,slow=1.5,SNR=21
GEA0  GERESS Array S   124.32 328 ePKPdf   PKPdf    17 19 32.4  -0.1
MOA   Molln            124.61 327 ePKPdf   PKPdf    17 19 31.8  -1.3
      comp=Z,3.0nm,1.4s
SOKA  Soboth           124.88 326  PKiKP   PKPdf    17 19 33.4  -0.3
      comp=Z,1.8nm,0.9s
OBKA  Obir             125.25 326 ePKPdf   PKPdf    17 19 32.9  -1.5
      comp=Z,6.5nm,1.2s
MYKA  Terra Mystica    125.68 326 ePKiKP   PKPdf    17 19 35.0  -0.3
      comp=Z,0.8nm,0.4s
LCO   Las Campanas     126.22 132 ePKPdf   PKPdf    17 19 37.4  +0.3
LCO   Las Campanas     126.22 132 ePKIKP   PKPdf    17 19 37.4  +0.3
ABTA  Abfaltersbach    126.23 327  PKiKP   PKPdf    17 19 35.8  -0.4
      comp=Z,2.1nm,0.7s
WATA  Walderalm        126.37 328 ePKiKP   PKiKP    17 19 37.3  +0.3
      comp=Z,1.7nm,0.5s
WTTA  Wattenberg       126.38 328 ePKiKP   PKiKP    17 19 37.4  +0.2
      comp=Z,5.3nm,0.9s
MOTA  Moosalm          126.61 328  PKPdf   PKPdf    17 19 35.1  -2.0
      comp=Z,3.6nm,0.7s
RETA  Reutte           126.70 329 ePKiKP   PKiKP    17 19 38.5  +0.9
      comp=Z,4.2nm,1.1s
FETA  Feichten         127.02 328 ePKiKP   PKPdf    17 19 38.0  +0.1
      comp=Z,3.0nm,0.8s
DAVA  Damuels          127.29 329 ePKiKP   PKPdf    17 19 38.5  +0.2
      comp=Z,3.5nm,0.8s
DAVOX Davos/Dischmat   127.62 328  PKP     PKPdf    17 19 39.6  +0.6
      comp=Z,2.1nm,0.6s,baz=17,slow=11,SNR=3.8
LPAZ  La Paz           134.37 119  PKP     PKPdf    17 19 52.7  -0.5
      comp=Z,1.7nm,0.8s,baz=33,slow=2.0,SNR=7.8
LPAZ  La Paz           134.37 119 ePKPdf   PKPdf    17 19 53.6  +0.4
LPAZ  La Paz           134.37 119 ePKIKP   PKPdf    17 19 53.6  +0.4
CPUP  Villa Florida    137.27 139  PKP     PKPdf    17 19 58.5  +0.9
      comp=Z,0.8nm,0.5s,baz=90,slow=9.1,SNR=3.0
MDT   Midelt           145.29 325  PKPbc   PKPdf    17 20 13.2  +1.2
      comp=Z,6.5nm,0.9s,baz=35,slow=2.9,SNR=14
PTGA  Pitinga          146.91  99 ePKPdf   PKPbc    17 20 16.5  -0.5
TOA0  Torodi Ar. Sit   150.27 287 ePKPdf   PKPbc    17 20 24.1  -1.5
TOA0                              ePKPbc   PKiKP    17 20 25.1  -1.4
TORD  Torodi Ar. Bea   150.27 287  PKPbc   PKPbc    17 20 24.9  -0.8
      baz=90,slow=2.9
TOA1  Torodi Ar. Sit   150.28 287 ePKPbc   PKPbc    17 20 24.9  -0.8
BDFB  Brasilia         150.89 136  PKPbc   PKPbc    17 20 27.5  +0.3
      comp=Z,3.8nm,0.6s,baz=225,slow=3.3,SNR=5.4
KOWA  Kowa             155.24 294  PKPab   PKPab    17 20 53.6  +0.8
      comp=Z,3.7nm,0.7s,baz=45,slow=4.3,SNR=4.5
DBIC  Dimbokro         157.56 275  PKPab   PKPab    17 21 02.6  -0.3
      comp=Z,3.2nm,0.8s,baz=86,slow=7.0,SNR=3.8
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IDC ***28*** *17:01:21.9±3.0, 44.°65N×149.°63E, h0km, mb3.9/6, mb1 3.9/7, mb1mx3.5/69, mbtmp3.8/7, ML2.5/1, MS4.2/1, Ms1 4.2/1, ms1mx2.7/72, Error ellipse: s-maj=82.1km s-min=30.8km az=173.0*

JMA ***28*** *17:01:25.3±0.5, 44.°33N×149.°36E, h30km, M3.7*

MOS ***28*** *17:01:25.2±0.8, 44.°28N×149.°43E, h67km, mb4.3/5, Error ellipse: s-maj=16.6km s-min=10.4km az=4.2*

SKHL ***28*** *17:01:26.0±0.8, 44.°23N×149.°38E, h69km±6km, mb4.5/6*

NEIC ***28*** *17:01:30.2±2.7, 44.°49N×149.°19E, h61km±26km, mb4.7/3, Error ellipse: s-maj=24.5km s-min=17.6km az=216.0*

ISC 28 17:01:26.9±2.3**, 44.°10N**±0.°07×**149.°4E**±0.°1**, h46**km±19km**,**
n69, σ**2.s12**/76**, mb4.3**/9**, 1C-1D, Kuril Islands**

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Code  Station Name       Δ°    AZ°    Phase ID          Time      Res
                                    Op       ISC      h  m  s    ISC
KUR   Kuril’sk           1.56 317 eP       Pn       17 01 50.0  -2.1
KUR                                AMB     AMB      17 01 51.0
      52nm,0.4s
KUR                                AMB     AMB      17 01 51.0
      65nm,0.4s
KUR                                AMB     AMB      17 01 51.0
      170nm,0.4s
KUR                               eS       Sn       17 02 08.0  -3.1
KUR                                A       A        17 02 12.0
      198nm,0.2s
KUR                                A       A        17 02 12.0
      246nm,0.2s
KUR   Kuril’sk           1.56 317c iPN     Pn       17 01 50.7  -1.4
KUR                               eS       Sn       17 02 11.1   0.0
KUR                                pmax    pmax
      comp=N,56nm,0.4s
KUR                                pmax    pmax
      comp=Z,178nm,0.4s
KUR                                pmax    pmax
      comp=E,37nm,0.3s
KUR                                smax    smax
      comp=N,141nm,0.2s
KUR                                smax    smax
      comp=E,246nm,0.2s
SHO   Shikotan           1.85 264 i P      Pn       17 01 55.0  -1.0
SHO                                AMB     AMB      17 01 57.0
      comp=E,8.0nm,0.1s
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SHO				AMB	AMB	17 01 57.0	
	comp=E,4.0nm,0.1s						
SHO				AMB	AMB	17 01 57.0	
	comp=E,17nm,0.1s						
SHO				iS	Sn	17 02 17.0	-1.2
SHO				A	A	17 02 22.0	
	comp=E,72nm,0.2s						
SHO				A	A	17 02 22.0	
	comp=E,147nm,0.2s						
SHO	Shikotan	1.85	264	d iPN	Pn	17 01 55.6	-0.4
SHO				iS	Sn	17 02 17.6	-0.6
SHO				pmax	pmax		
	comp=N,8.0nm,0.1s						
SHO				pmax	pmax		
	comp=E,4.0nm,0.1s						
SHO				pmax	pmax		
	comp=Z,17nm,0.1s						
SHO				smax	smax		
	comp=N,72nm,0.2s						
SHO				smax	smax		
	comp=E,147nm,0.2s						
YUK	Yuzh-Kuril'sk	2.53	270	eP	Pn	17 02 05.0	-0.4
YUK				AMB	AMB	17 02 10.0	
	comp=E,27nm,0.2s						
YUK				AMB	AMB	17 02 10.0	
	comp=E,29nm,0.2s						
YUK				AMB	AMB	17 02 10.0	
	comp=E,60nm,0.2s						
YUK				iS	Sn	17 02 35.0	+0.1
YUK				A	A	17 02 37.0	
	comp=E,76nm,0.2s						
YUK				A	A	17 02 37.0	
	comp=E,160nm,0.2s						
YUK	Yuzh-Kuril'sk	2.53	270	ePN	Pn	17 02 05.6	+0.2
YUK				iS	Sn	17 02 35.0	+0.1
YUK				pmax	pmax		
	comp=Z,60nm,0.2s						
YUK				pmax	pmax		
	comp=N,27nm,0.1s						
YUK				pmax	pmax		
	comp=E,29nm,0.1s						
YUK				smax	smax		
	comp=N,76nm,0.2s						
YUK				smax	smax		
	comp=E,160nm,0.2s						
LAGR	Lagunnoye	2.58	270	eP	Pn	17 02 06.0	-0.1
LAGR				AMB	AMB	17 02 07.0	
	comp=E,16nm,0.2s						
LAGR				AMB	AMB	17 02 07.0	
	comp=E,15nm,0.2s						
LAGR				AMB	AMB	17 02 07.0	
	comp=E,50nm,0.2s						
LAGR				eS	Sn	17 02 35.0	-1.2
LAGR				A	A	17 02 41.0	
	comp=E,155nm,0.2s						
LAGR				A	A	17 02 41.0	
	comp=E,179nm,0.2s						
LAGR	Lagunnoye	2.58	270	ePN	Pn	17 02 06.3	+0.2
LAGR				eS	Sn	17 02 35.5	-0.7
LAGR				pmax	pmax		
	comp=E,15nm,0.2s						
LAGR				pmax	pmax		
	comp=Z,50nm,0.2s						
LAGR				pmax	pmax		
	comp=N,16nm,0.1s						
LAGR				smax	smax		
	comp=N,155nm,0.2s						
LAGR				smax	smax		
	comp=E,179nm,0.2s						
GRPR	Tuman	2.59	269	eP	Pn	17 02 06.0	-0.3
GRPR				AMB	AMB	17 02 07.0	
	comp=E,25nm,0.2s						
GRPR				AMB	AMB	17 02 07.0	
	comp=E,24nm,0.2s						
GRPR				AMB	AMB	17 02 07.0	
	comp=E,47nm,0.2s						
GRPR				eS	Sn	17 02 36.0	-0.6
GRPR				A	A	17 02 39.0	
	comp=E,137nm,0.3s						
GRPR				A	A	17 02 39.0	
	comp=E,175nm,0.3s						
GRPR	Tuman	2.59	269	ePN	Pn	17 02 06.2	-0.1
GRPR				eS	Sn	17 02 36.2	-0.4
GRPR				pmax	pmax		
	comp=Z,47nm,0.2s						
GRPR				pmax	pmax		
	comp=N,25nm,0.1s						
GRPR				pmax	pmax		
	comp=E,24nm,0.1s						
GRPR				smax	smax		
	comp=N,137nm,0.1s						
GRPR				smax	smax		
	comp=E,175nm,0.3s						
NEM2	Nemuro 2	2.73	256	P	Pn	17 02 06.7	-1.4
NEM2				eS	Sn	17 02 37.3	-2.6
GLVR	Golovnino	2.80	264	eP	Pn	17 02 08.0	-1.2
GLVR				AMB	AMB	17 02 14.0	
	comp=E,28nm,0.2s						
GLVR				AMB	AMB	17 02 14.0	
	comp=E,22nm,0.2s						
GLVR				AMB	AMB	17 02 14.0	
	comp=E,58nm,0.2s						
GLVR				eS	Sn	17 02 40.0	-1.7
GLVR				A	A	17 02 43.0	
	comp=E,123nm,0.4s						
GLVR				A	A	17 02 43.0	
	comp=E,228nm,0.4s						
GLVR	Golovnino	2.80	264	ePN	Pn	17 02 08.9	-0.3
GLVR				eS	Sn	17 02 40.8	-0.9
GLVR				pmax	pmax		
	comp=Z,58nm,0.2s						
GLVR				pmax	pmax		
	comp=N,28nm,0.1s						
GLVR				pmax	pmax		
	comp=E,22nm,0.1s						
GLVR				smax	smax		
	comp=N,123nm,0.4s						
GLVR				smax	smax		
	comp=E,228nm,0.3s						
JRA	Rausu	3.07	268	P	Pn	17 02 13.0	+0.2
JRA				eS	Sn	17 02 49.1	+0.9
JNK	Nakash	3.40	263	P	Pn	17 02 16.7	-0.7
JNK				eS	Sn	17 02 55.3	-1.2
JAK	Akkeshi	3.57	254	P	Pn	17 02 18.7	-1.0
JAK				eS	Sn	17 02 58.0	-2.6
JAR	Ashorobuto	4.14	261	P	Pn	17 02 27.8	+0.3
JAR				eS	Sn	17 03 14.7	+0.1
JOB	Onbets	4.20	255	P	Pn	17 02 28.0	-0.3
JOB				eS	Sn	17 03 15.0	-1.1
JMP	Maruseppu	4.33	271	P	Pn	17 02 31.7	+1.5
JCH	Churui	4.62	253	P	Pn	17 02 34.3	+0.1
ASAJ	Asahikawa	4.88	273	Pn	Pn	17 02 40.0	+2.3
	comp=E,0.2nm,0.3s,baz=76,slow=17,SNR=1.3						
ASAJ				Sn	Sn	17 03 43.4	+11
	comp=E,0.2nm,0.3s,baz=340,slow=14,SNR=1.4						
ASAJ	Asahikawa	4.88	273	ePn	Pn	17 02 40.4	+2.8
ASAJ				Sn	Sn	17 03 43.4	+11
JEM	Erimo	5.00	248	P	Pn	17 02 40.6	+1.2
ERM	Erimo	5.00	248	ePn	Pn	17 02 41.5	+2.1
ERM	Erimo	5.00	248	ePN	Pn	17 02 40.8	+1.4
JFR	Furan	5.00	262	P	Pn	17 02 41.5	+2.1
JNBK	Urakawa-nobuka	5.17	252	P	Pn	17 02 41.4	-0.2
JBT2	Biratori 2	5.27	258	P	Pn	17 02 43.2	+0.2
JNB	Noboribetsu	6.29	258	eS	Sn	17 04 06.3	-1.3
JKB	Kayabe	6.50	253	P	Pn	17 02 59.3	-0.6
JKB				eS	Sn	17 04 08.8	-3.9
JANG	Nango	6.92	240	eS	Sn	17 04 16.0	-6.9
JTH	Tanohata	6.96	236	eS	Sn	17 04 16.0	-8.2
JTM	Tenmabayashi	6.97	244	eS	Sn	17 04 18.2	-6.2
OFUJ	Ofunato	7.64	232	eS	Sn	17 04 33.5	-7.3
JRG	Rokugo	8.04	237	eS	Sn	17 04 44.5	-6.2
JIO	Ouri	8.26	230	eS	Sn	17 04 47.7	-8.3
KLR	Kul'dur	13.13	299	iPN	Pn	17 04 31.5	+0.9
CBIJ	Chichi jima	17.93	201	eP	Pn	17 05 38.5	+5.7
	comp=E,380nm,1.6s						
H11N2	WAKE ISLAND Hy	28.37	143	T	T	17 38 24.3	
	baz=335,slow=74						
H11N1	WAKE ISLAND Hy	28.39	143	T	T	17 38 24.9	
	baz=335,slow=74						
H11N3	WAKE ISLAND Hy	28.39	143	T	T	17 38 23.1	
	baz=335						
YOJ	Yonaguni jima	29.09	236	eP	P	17 07 26.0	+3.0
	comp=E,75nm,1.0s						
YOJ	Yonaguni jima	29.09	236	eP	P	17 07 26.0	+3.0
H11S1	WAKE ISLAND Hy	29.38	145	T	T	17 39 34.7	
	baz=331						
H11S3	WAKE ISLAND Hy	29.38	145	T	T	17 39 36.7	
	baz=331						
H11S2	WAKE ISLAND Hy	29.39	145	T	T	17 39 37.5	
	baz=331						
SONA0	Songino Array	29.81	293	eP	P	17 07 30.2	+0.8
SONM	Songino Array	29.81	293	P	P	17 07 30.2	+0.8
	comp=E,0.5nm,0.7s,baz=90,slow=10,SNR=2.5						
MK31	Makanchi Array	45.84	298	eP	P	17 09 40.6	-3.6
MK31	Makanchi Array	45.84	298	eP	P	17 09 40.6	-3.6
MK32	Makanchi Array	45.84	298	eP	P	17 09 44.1	0.0
MKAR	Makanchi Array	45.84	298	P	P	17 09 44.1	0.0
	comp=E,0.9nm,0.7s,baz=71,slow=7.9,SNR=9.2						
MKAR	Makanchi Array	45.84	298	eP	P	17 09 40.5	-3.7
	comp=E,9.9nm,0.9s						
MK01	Makanchi Array	45.84	298	eP	P	17 09 41.5	-2.7
MAKZ	Makanchi	46.03	298	eP	P	17 09 45.4	-0.3
	comp=E,1.4nm,0.8s						
MAKZ	Makanchi	46.03	298	eP	P	17 09 45.4	-0.3
MAKZ				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MLOA	Mauna Loa Obse	51.71	100	eP	P	17 10 36.1	+6.2
	comp=Z,272nm,1.6s						
PMG	Port Moresby	53.29	183	LR	LR	17 33 20.7	
	comp=Z,225nm,20.0s,baz=220,slow=36						
ABKAR	Akbulak array	58.08	309	eP	P	17 11 14.4	-0.7
FIA0	FINESS Array S	65.28	334	eP	P	17 12 02.3	-1.1
FIA0	FINESS Array S	65.28	334	eP	P	17 12 02.3	-1.1
FINES	FINESS Array B	65.28	334	P	P	17 12 02.3	-1.1
	comp=Z,1.6nm,0.5s,baz=31,slow=7.8,SNR=15						
NB2	NORSAR Subarra	69.84	340	P	P	17 12 31.2	-1.0
	comp=Z,0.7nm,0.5s,baz=29,slow=6.5						
NOA	NORSAR Array B	69.84	340	P	P	17 12 31.3	-1.0
	comp=Z,1.2nm,0.5s,baz=31,slow=6.3,SNR=7.2						
HFS	Hagfors	69.97	338	P	P	17 12 32.4	-0.6
	comp=Z,1.2nm,0.3s,baz=44,slow=8.5,SNR=5.0						
LTX	Lajitas	81.11	58	eP	P	17 13 36.8	-0.7
LTX	Lajitas	81.11	58	eP	P	17 13 36.8	-0.7
TXAR	Lajitas Array	81.11	58	P	P	17 13 36.8	-0.7
	comp=Z,0.2nm,0.6s,baz=301,slow=4.1,SNR=4.1						
SHEL	Horse Pasture	144.90	315	iPKIKP	PKPdf	17 21 04.2	+5.1

IDC 28 17:10:04.7±2.4, 6°.19S×148°.05E, h0^{km}, mb3.8/3, mb1 4.0/5, mb1mx3.5/53, mbtmp3.8/5, ML3.7/1, MS3.1/1, Ms1 3.1/1, ms1mx2.7/46, Error ellipse: s-maj=75.9km s-min=24.8km az=96.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.32	195	Pn	Pn	17 10 59.0	+1.1
	5.9nm,0.3s,baz=350,slow=7.1,SNR=15						
PMG				Sn	Sn	17 11 38.8	+0.7
	4.4nm,0.3s,baz=193,slow=1.6,SNR=3.6						
PMG				LR	LR	17 12 32.4	
	comp=Z,286nm,20.7s,baz=298,slow=44						
WRA	Warramunga Arr	19.09	223	P	P	17 14 27.8	-1.4
	0.3nm,0.3s,baz=50,slow=11,SNR=9.7						
ASAR	Alice Springs	22.07	217	P	P	17 15 01.1	-0.4
	4.3nm,0.6s,baz=53,slow=8.9,SNR=88						
STKA	Stephens Creek	26.26	192	P	P	17 15 42.3	+0.5
	3.0nm,0.9s,baz=5.2,slow=11,SNR=3.4						
MKAR	Makanchi Array	78.31	320	P	P	17 22 05.7	-1.2
	0.2nm,0.4s,baz=127,slow=6.4,SNR=2.1						
TORD	Torodi Ar. Bea	146.15	284	PKPbc	PKPab	17 29 48.5	-0.2
	baz=73,slow=4.2						

MEX 28 17:17:04.1±0.5, 16°.08N×98°.15W, h13^{km}±3^{km}, MD3.7, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.31	3	eP	Pg	17 17 09.9	-0.6
PNIG				iS	Sg	17 17 15.0	+0.1
TLIG	Tlapa	1.53	345	eP	Pn	17 17 28.0	-3.3
TLIG				eS	Sn	17 17 45.8	-5.3

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*NIED **28** 17:26:00, 37°.20N×141°.40E, h32^{km}, Mw3.9 Best double couple: $M_0$7.48000×10^{14} NP1:ϕ_s149.00000°, δ16.00000°, λ-3.00000°. NP2:ϕ_s241.00000°, δ89.00000°, λ-106.00000°.*

*BJI **28** 17:26:27.3, 37°.30N×141°.20E, h36^{km}, mb4.4/19, mB4.9/9, Ms4.4/2, Ms7 4.2/2*

*ISCJB **28** 17:26:27.9±0.6, 37°.17N±0°.03×141°.45E±0°.05, h50^{km}±4^{km}, mb4.2/35, Error ellipse: s-maj=7.5km s-min=5.3km az=24.8*

*JMA **28** 17:26:29.0±0.1, 37°.19N×141°.37E, h48^{km}±1^{km}, M3.9*

JMA Felt II J1.

*NEIC **28** 17:26:29.8±1.0, 37°.38N×141°.22E, h38^{km}±10^{km}, mb4.6/13, Error ellipse: s-maj=13.3km s-min=8.5km az=140.0*

NEIC Felt at Iwaki, Namie and Sukagawa. Recorded [2 JMA] in Fukushima.

*IDC **28** 17:26:30.1±2.0, 37°.19N×141°.43E, h51^{km}±18^{km}, mb3.6/19, mb1 3.7/23, mb1mx3.6/72, mbtmp3.8/23, ML3.5/4, Error ellipse: s-maj=15.9km s-min=13.0km az=130.0*

ISC 28 17:26:28.5±0.7, 37°.17N±0°.04×141°.44E±0°.05, h36^{km}±1^{km}, n85, σ1^{s}52/89, mb4.2/35, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	0.49	294	P	Pn	17 26 39.3	+0.4
JFK				eS	Sn	17 26 46.3	0.0
ONAJ	Iwakimizuishiy	0.51	263	P	Pn	17 26 39.8	+0.4
ONAJ				eS	Sn	17 26 47.1	+0.2
JFFD	Fukushimafurud	0.70	264	P	Pn	17 26 42.2	+0.3
JFFD				eS	Sn	17 26 51.3	-0.2
JMM	Marumori	0.86	324	P	Pn	17 26 44.1	0.0
JMM				eS	Sn	17 26 54.9	-0.6
JHO	Hitachi	0.89	232	P	Pn	17 26 44.4	0.0
JHO				eS	Sn	17 26 55.3	-0.8
JFT	Otama	0.94	292	P	Pn	17 26 46.0	+0.8
JFT				eS	Sn	17 26 57.9	+0.4
JIO	Ouri	1.29	357	P	Pn	17 26 49.9	0.0
JOU	Okura	1.34	333	P	Pn	17 26 51.0	+0.3
JFY	Yanaizu	1.40	280	P	Pn	17 26 52.1	+0.6
JYS	Shirataka	1.51	314	P	Pn	17 26 53.8	+0.8
MJAR	Matsushiro Arr	2.66	257	P	Pn	17 27 10.4	+1.6
	7.6nm,0.3s,baz=85,slow=15,SNR=72						
MJAR				S	Sn	17 27 41.8	+2.0
	11nm,0.3s,baz=73,slow=15,SNR=9.5						
MAJO	Matsushiro	2.66	257	ePn	Pn	17 27 10.7	+1.8
MAT	Matsushiro	2.66	257	P	Pn	17 27 10.8	+2.0
MAT				S	Sn	17 27 42.5	+2.6
MJB9	Matsu-Tunnel	2.67	258	ePn	Pn	17 27 10.8	+1.9
INU	Inuyama	4.00	244	ePn	Pn	17 27 30.3	+3.0
JHJ2	Mitsune	4.26	199	ePn	Pn	17 27 31.9	+1.2
JHJ	Hachijo jima 2	4.26	199	P	Pn	17 27 31.9	+1.1
	17nm,0.3s,baz=315,slow=24,SNR=22						
JHJ				S	Sn	17 28 16.6	-2.6
	36nm,0.3s,baz=80,slow=22,SNR=8.3						
ERM	Erimo	5.02	15	ePn	Pn	17 27 38.5	-2.6
ASAJ	Asahikawa	7.00	7	P	Pn	17 28 08.3	-0.1
	1.1nm,0.3s,baz=234,slow=8.4,SNR=15						
ASAJ				S	Sn	17 29 26.3	-0.3
	0.4nm,0.3s,baz=45,slow=19,SNR=2.1						
ASAJ	Asahikawa	7.00	7	ePn	Pn	17 28 08.0	-0.3
JNU	Nakatsue	9.54	248	ePn	Pn	17 28 40.2	-3.1
USA0B	Ussuriysk Arra	10.04	317	ePn	Pn	17 28 47.5	-2.5
USRK	Ussuriysk Ar.	10.04	317	P	Pn	17 28 55.2	+5.2
	baz=131,slow=12						
CBIJ	Chichi jima	10.06	176	ePn	Pn	17 28 50.0	-0.4
JCJ	Chichijima	10.06	176	P	Pn	17 28 49.4	-1.0
	baz=299,slow=19						
JCJ				S	Sn	17 30 33.2	-8.8
	1.7nm,0.3s,baz=287,slow=19,SNR=2.3						
KSRS	Korea Array	10.77	276	P	Pn	17 29 02.4	+2.4
	0.2nm,0.3s,baz=88,slow=13,SNR=4.9						
KLR	Kul'dur	13.96	333	P	Pn	17 29 45.8	+2.2
	0.0nm,0.3s,baz=113,slow=13,SNR=4.2						
NJ2	Nanjing	19.26	261	eP	P	17 30 47.5	-2.3
NJ2				pmax	pmax		
	comp=Z,16nm,0.6s						
MA2	Magadan	23.22	12	eP	P	17 31 30.7	-1.3
	7.6nm,0.8s						
HHC	Hu-ho-hao-te	23.45	288	eP	P	17 31 33.5	-1.1
HHC				pP	pP	17 31 42.8	-1.7
HHC				S	S	17 35 39.0	-6.5
HHC				sS	sS	17 35 56.5	-6.0
HHC				pmax	pmax		
	comp=Z,17nm,1.1s						
HHC				pmax	pmax		
	comp=Z,79nm,5.6s						
SEY	Seymchan	26.66	11	P	P	17 32 04.1	+0.6
	1.1nm,0.9s,baz=239,slow=19,SNR=4.6						
SONA1	Songino Array	27.72	304	eP	P	17 32 12.7	-0.7
SONM	Songino Array	27.73	304	P	P	17 32 13.4	-0.1
	1.9nm,0.8s,baz=103,slow=8.9,SNR=8.8						
H11N2	WAKE ISLAND Hy	28.20	121	T	T	18 02 30.8	
	baz=314,slow=75,SNR=39						
H11N1	WAKE ISLAND Hy	28.21	121	T	T	18 02 31.4	
	baz=314,slow=75,SNR=54						
H11N3	WAKE ISLAND Hy	28.22	121	T	T	18 02 31.3	
	baz=314,slow=75,SNR=34						
H11S1	WAKE ISLAND Hy	28.92	123	T	T	18 03 20.9	
	baz=316,slow=76,SNR=44						
H11S3	WAKE ISLAND Hy	28.92	123	T	T	18 03 20.1	
	baz=316,slow=76,SNR=30						
H11S2	WAKE ISLAND Hy	28.93	123	T	T	18 03 20.7	
	baz=316,slow=76,SNR=19						
GYA	Guiyang	31.26	260	eP	P	17 32 45.8	+0.8
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CD2	Chengdu	31.69	270	eP	P	17 32 47.5	-1.2
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,140nm,5.0s						
KMI	Kunming	35.00	261	P	P	17 33 18.0	+0.3
KMI				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KMI				pmax	pmax		
	comp=Z,87nm,7.9s						
WMQ	Urumqi	40.80	297	P	P	17 34 06.5	+0.2
CMAR	Chiang Mai Arr	41.55	255	P	P	17 34 13.5	+0.9
	0.8nm,0.8s,baz=52,slow=5.8,SNR=4.4						
ZAA0	Zalesovo Array	41.84	312	eP	P	17 34 14.7	+0.1
	3.8nm,0.8s						
ZALV	Zalesovo Beam	41.84	312	P	P	17 34 14.0	-0.6
	3.0nm,0.7s,baz=92,slow=6.8,SNR=14						
ZALV	Zalesovo Beam	41.84	312	eP	P	17 34 14.0	-0.6
CHGN	Chignik	43.86	44	eP	P	17 34 33.1	+2.2
	42nm,1.6s						
MK01	Makanchi Array	44.06	302	eP	P	17 34 32.2	-0.5
MK31	Makanchi Array	44.06	302	eP	P	17 34 30.7	-2.0
MKAR	Makanchi Array	44.06	302	P	P	17 34 33.0	+0.2
	1.1nm,0.7s,baz=87,slow=10,SNR=8.7						
MKAR	Makanchi Array	44.06	302	eP	P	17 34 30.8	-1.9
	9.5nm,0.6s						
MAKZ	Makanchi	44.27	302	eP	P	17 34 33.1	-1.3
	2.0nm,0.9s						
KURK	Kurchatov	45.86	308	eP	P	17 34 46.2	-0.7
	5.2nm,0.8s						
KURBB	Kurchatov Arra	45.93	308	P	P	17 34 47.0	-0.5
	2.9nm,0.6s,baz=84,slow=8.1,SNR=19						
KDAK	Kodiak Island	46.99	42	P	P	17 34 55.1	-0.5
	2.4nm,0.6s,baz=229,slow=7.4,SNR=5.4						
KDAK	Kodiak Island	46.99	42	eP	P	17 34 55.3	-0.3
	19nm,1.4s						
CAST	Castle Rocks	47.11	34	eP	P	17 34 58.2	+1.6
	11nm,1.7s						
JOHN	Johnston Islan	47.63	102	eP	P	17 35 05.6	+4.5
	352nm,1.4s						
MDM	Murphy Dome	48.79	32	eP	P	17 35 11.1	+1.5
	5.6nm,1.4s						
WRH	Wood River Hil	48.86	33	eP	P	17 35 10.8	+0.7
	17nm,2.0s						
ILAR	Eielson Array	49.37	32	P	P	17 35 14.3	+0.4
	1.2nm,0.6s,baz=267,slow=6.7,SNR=12						
ILB	Eielson Array	49.37	32	eP	P	17 35 14.1	+0.1
IL1	Eielson Array	49.37	32	eP	P	17 35 14.3	+0.3
BVAR	Borovoye Array	50.49	312	P	P	17 35 22.6	-0.1
	0.7nm,0.5s,baz=87,slow=9.5,SNR=5.8						
SCRK	Sand Creek	50.69	33	eP	P	17 35 25.2	+1.1
	7.7nm,1.7s						
KK31	Karatay Array	53.07	300	eP	P	17 35 41.0	-1.1
KKAR	Karatay Array	53.07	300	eP	P	17 35 40.7	-1.4
GSI	Gunungsitoli	53.88	239	eP	P	17 35 48.7	+0.4
	15nm,1.1s						
ARU	Arti	56.27	318	eP	P	17 36 03.8	-1.2
	7.7nm,1.3s						
WRA	Warramunga Arr	57.20	188	P	P	17 36 11.4	-0.5
	0.4nm,0.6s,baz=4.8,slow=7.2,SNR=5.3						
ABKAR	Akbulak array	57.87	310	eP	P	17 36 15.1	-1.3
AKTO	Aktyubinsk	58.60	312	P	P	17 36 21.1	-0.4
	1.0nm,0.8s,baz=91,slow=14,SNR=3.6						
ASAR	Alice Springs	60.92	188	P	P	17 36 37.4	-0.3
	0.3nm,0.7s,baz=0.0,slow=5.9,SNR=3.3						
ARCES	ARCESS Array B	63.88	339	P	P	17 36 57.2	+0.2
	3.0nm,0.9s,baz=61,slow=9.4,SNR=3.2						
FINES	FINESS Array B	68.70	332	P	P	17 37 27.3	-0.6
	1.7nm,0.9s,baz=56,slow=7.6,SNR=4.2						
NB2	NORSAR Subarra	74.07	337	P	P	17 37 59.9	-0.5
	comp=Z,0.4nm,0.6s,baz=40,slow=6.2						
NOA	NORSAR Array B	74.07	337	P	P	17 37 60.0	-0.5
	comp=Z,0.7nm,0.7s,baz=40,slow=6.0,SNR=4.0						
AKASG	Malin Array Be	74.20	322	P	P	17 38 00.4	-0.9
	comp=Z,0.9nm,0.5s,baz=47,slow=5.6,SNR=4.9						
BRTR	Keskin Array B	78.78	312	P	P	17 38 27.5	-0.1
	comp=Z,0.4nm,0.7s,baz=139,slow=5.3,SNR=2.7						
CRVS	Cervenica-Dubn	79.12	324	eP	P	17 38 29.8	+0.6
VYHS	Vyhne	80.62	325	eP	P	17 38 39.8	+2.5
GERES	GERESS Array B	82.61	328	P	P	17 38 47.2	-0.6
	comp=Z,0.3nm,0.6s,baz=37,slow=6.7,SNR=3.7						
TXAR	Lajitas Array	90.03	52	P	P	17 39 25.3	+0.7
	comp=Z,0.2nm,0.6s,baz=298,slow=5.9,SNR=3.2						
LPAZ	La Paz	146.61	59	PKPbc	PKPbc	17 46 07.9	+0.5
	comp=Z,0.9nm,0.6s,baz=291,slow=2.4,SNR=4.1						

WEL 28 17:31:33.5, 38°S±8°×18°0W±°, h33^{km}, ML3.7/23, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.47	268	P	Pn	17 31 58.2	+0.5
WMGZ				S	Sn	17 32 16.4	+0.8
MXZ	Matakaoa Point	1.57	278	P	Pn	17 31 59.4	+0.4
MXZ				S	Sn	17 32 18.1	-0.1
PUZ	Puketiti	1.61	259	P	Pn	17 32 00.4	+0.7
PUZ				S	Sn	17 32 19.3	-0.1
PKGZ	Pakihiroa	1.73	266	P	Pn	17 32 01.8	+0.3
CNGZ	Carnagh Statio	1.77	246	P	Pb	17 32 03.6	-1.6
TWGZ	Tauwhareparae	1.85	257	P	Pn	17 32 04.1	+1.2
TWGZ				S	Sn	17 32 26.4	+1.2
HAZ	Te Kaha	1.97	270	P	Pn	17 32 05.3	+0.8
HAZ				S	Sn	17 32 28.1	+0.1
TKGZ	Te Karaka	2.01	250	P	Pn	17 32 06.5	+1.3
TKGZ				S	Sn	17 32 30.9	+1.7
RUGZ	Raukumara Rang	2.06	264	P	Pn	17 32 06.4	+0.6
RIGZ	Rimuhau	2.17	244	P	Pn	17 32 08.5	+1.0
RIGZ				S	Sn	17 32 34.3	+1.1
PRGZ	Paritu Road	2.19	238	P	Pn	17 32 10.0	+2.4
PRGZ				S	Sb	17 32 36.6	-2.7
MWZ	Matawai	2.23	255	P	Pn	17 32 08.7	+0.6
MWZ				S	Sn	17 32 34.9	+0.3
MHGZ	Mahia Peninsul	2.30	233	P	Pn	17 32 10.9	+1.8
MHGZ				S	Sb	17 32 39.7	-2.6
RAGZ	Rawiri	2.35	252	P	Pn	17 32 11.3	+1.4
KNZ	Kokohu	2.38	238	P	Pn	17 32 11.5	+1.3
SNGZ	Shannon Statio	2.51	246	P	Pn	17 32 13.4	+1.4
SNGZ				S	Sn	17 32 42.5	+1.1
URZ	Urewera	2.54	258	P	Pn	17 32 13.8	+1.5
URZ				S	Sn	17 32 42.9	+0.9
WHHZ	Waihua	2.71	241	P	Pn	17 32 16.6	+1.9
RTZ	Ruatahuna	2.72	251	P	Pn	17 32 16.9	+2.0
RTZ				S	Sn	17 32 48.4	+1.7
RAHZ	Arahi	2.74	245	P	Pn	17 32 17.9	+2.7
MUGZ	Murupara	2.84	255	P	Pn	17 32 17.8	+1.3
MTHZ	Maungataniwha	2.90	247	P	Pn	17 32 18.8	+1.4
ARHZ	Aropaoanui	2.96	239	P	Pn	17 32 20.6	+2.4
RRRZ	Republican Roa	3.01	258	P	Pn	17 32 21.4	+2.5
NMHZ	Naumai	3.01	243	P	Pn	17 32 20.6	+1.6
MRHZ	Matea Rd	3.20	250	P	Pn	17 32 23.5	+1.9
MCHZ	McNeill Hill	3.25	238	P	Pn	17 32 23.6	+1.5
BKZ	Black Stump Fm	3.27	244	P	Pn	17 32 23.6	+1.2
KAHZ	Kahuranaki	3.32	232	P	Pn	17 32 25.3	+2.1
BHHZ	Black Hill Sta	3.70	241	P	Pn	17 32 29.6	+1.1

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*IDC **28** 17:48:23.0±1.2, 2°.45N×127°.14E, h0^{km}, mb3.9/8, mb1 4.0/8, mb1mx3.7/52, mbtmp3.9/8, Error ellipse: s-maj=90.5km s-min=16.4km az=65.0*

*ISCJB **28** 17:48:28.1±0.5, 2°.49N±0°.07×127°.2E±0°.1, h53^{km}, mb4.1/15, Error ellipse: s-maj=17.3km s-min=7.5km* *az=158.9*

*NEIC **28** 17:48:33.6±0.8, 2°.37N×127°.16E, h91km±7km, mb4.5/6, Error ellipse: s-maj=11.4km s-min=5.4km az=64.0*

ISC 28 17:48:30.2±0.7**, 2°.51N**±0°.09×**127°.2E**±0°.1**, h53**km**, n23, σ1^{s}42**/23**, mb4.3**/15**, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.73	174	ePn	Pn	17 49 01.5	+3.6
LUWI	Luwuk	5.64	231	ePn	Pn	17 49 53.3	+1.8
LUWI				eSn	Sn	17 51 04.5	+10
FAKI	Fak Fak	7.40	137	ePn	Pn	17 50 17.3	+1.7
WRAB	Tennant Creek	23.38	163	eP	P	17 53 33.9	-0.5
	35nm,1.7s						
WR1	Warramunga Arr	23.39	163	eP	P	17 53 33.1	-1.4
	42nm,2.0s						
WRA	Warramunga Arr	23.39	163	P	P	17 53 33.1	-1.4
	0.7nm,0.4s,baz=338,slow=10,SNR=24						
WB2	Warramunga Arr	23.39	163	eP	P	17 53 32.3	-2.2
WC3	Warramunga Arr	23.41	163	eP	P	17 53 34.0	-0.7
	23nm,1.8s						
MBWA	Marble Bar	24.62	197	eP	P	17 53 44.4	-1.4
	62nm,2.0s						
AS31	Alice Springs	26.82	166	eP	P	17 54 04.6	-1.2
	2.5nm,1.6s						
ASAR	Alice Springs	26.82	166	P	P	17 54 04.9	-0.8
	0.2nm,0.3s,baz=342,slow=7.6,SNR=7.9						
AS01	Alice Springs	26.84	166	eP	P	17 54 04.8	-1.0
CMAR	Chiang Mai Arr	31.88	302	P	P	17 54 50.3	-0.3
	0.8nm,0.7s,baz=113,slow=6.6,SNR=4.9						
INU	Inuyama	33.93	14	eP	P	17 55 08.9	+0.5
	14nm,1.5s						
BBOO	Buckleboo	36.12	167	eP	P	17 55 25.0	-2.2
	70nm,1.8s						
STKA	Stephens Creek	36.83	159	P	P	17 55 32.5	-0.9
	1.8nm,1.0s,baz=338,slow=11,SNR=2.9						
SONA0	Songino Array	48.59	341	eP	P	17 57 08.9	+0.4
SONM	Songino Array	48.59	341	P	P	17 57 08.9	+0.4
	0.6nm,0.4s,baz=143,slow=5.2,SNR=3.5						
MK32	Makanchi Array	58.81	325	eP	P	17 58 23.7	+0.5
MKAR	Makanchi Array	58.81	325	P	P	17 58 23.7	+0.5
	0.9nm,0.4s,baz=118,slow=8.0,SNR=24						
KURBB	Kurchatov Arra	63.01	328	P	P	17 58 51.5	0.0
	2.6nm,0.8s,baz=124,slow=6.0,SNR=13						
KURK	Kurchatov	63.01	328	eP	P	17 58 51.5	-0.1
BVAR	Borovoye Array	68.58	327	P	P	17 59 27.9	+0.4
	0.4nm,0.4s,baz=106,slow=9.2,SNR=3.0						

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*IDC **28** 18:11:33.9±1.6, 64°.82S×174°.21E, h0km, mb4.1/3, mb1 4.1/4, mb1mx3.8/34, mbtmp4.0/4, ML2.7/1, MS3.9/18, Ms1 3.9/18, ms1mx3.7/36, Error ellipse: s-maj=54.6km s-min=31.2km az=93.0*

*ISCJB **28** 18:11:34.0±0.9, 64°.87S±0°.08×174°.0E±0°.5, h10km, mb4.3/6, MS3.9/17, Error ellipse: s-maj=32.6km s-min=10.9km az=176.1*

*NEIC **28** 18:11:35.3±0.9, 64°.87S×173°.81E, h10km, mb4.7/3, Error ellipse: s-maj=32.5km s-min=11.6km az=82.0*

ISC 28 18:11:35.7±1.0**, 64°.8S**±0°.1×**173°.6E**±0°.3**, h10**km**, n37, σ1^{s}36**/17**, mb4.3**/6**, MS3.9**/17**, Balleny Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MCQ	Macquarie Isla	12.68	318	ePn	Pn	18 14 34.3	-1.4
VNDA	Vanda	13.25	191	Pn	Pn	18 14 44.7	+1.2
	0.0nm,0.3s,baz=18,slow=9.6,SNR=3.1						
VNDA				LR	LR	18 18 41.0	
	comp=Z,479nm,21.2s,baz=28,slow=32						
VNDA	Vanda	13.25	191	ePn	Pn	18 14 41.1	-2.4
SBA	Scott Base	13.25	186	ePn	Pn	18 14 43.9	+0.3
RPZ	Rata Peaks	21.20	355	LR	LR	18 22 28.4	
	comp=Z,422nm,20.1s,baz=176,slow=31						
BFZ	Birch Farm	24.24	5	eP	P	18 16 53.0	+0.6
	53nm,1.2s						
QSPA	South Pole Qui	25.26	180	eP	P	18 17 01.5	-0.2
	6.3nm,1.1s						
URZ	Urewera	26.69	6	P	P	18 17 13.6	-1.0
	6.5nm,0.7s,baz=260,slow=6.0,SNR=7.8						
URZ				LR	LR	18 26 33.0	
	comp=Z,178nm,18.4s,baz=189,slow=34						
URZ	Urewera	26.69	6	P	P	18 17 13.7	-0.9
DZM	Mont Dzumac	43.00	350	LR	LR	18 36 28.9	
	comp=Z,116nm,18.0s,baz=211,slow=35						
SNAA	Sanae	43.74	182	LR	LR	18 37 03.0	
	comp=Z,135nm,18.6s,baz=164,slow=35						
PMSA	Palmer Station	44.06	149	LR	LR	18 34 40.3	
	comp=Z,205nm,18.9s,baz=216,slow=32						
H01W1	Cape Leeuwin H	46.08	281	T	T	19 10 55.9	
	baz=148,slow=76,SNR=59						
H01W2	Cape Leeuwin H	46.09	281	T	T	19 10 56.1	
	baz=148,slow=76,SNR=52						
H01W3	Cape Leeuwin H	46.10	281	T	T	19 10 57.1	
	baz=148,slow=76,SNR=49						
NWAO	Narrogin (SRO)	46.50	285	LR	LR	18 35 36.9	
	comp=Z,142nm,19.9s,baz=3.5,slow=31						
RAR	Rarotonga	47.01	35	LR	LR	18 33 37.2	
	comp=Z,68nm,21.0s,baz=165,slow=28						
AS01	Alice Springs	48.48	309	eP	P	18 20 21.0	+2.7
ASAR	Alice Springs	48.50	309	P	P	18 20 20.4	+2.0
	1.5nm,0.9s,baz=157,slow=6.7,SNR=12						
ASAR				LR	LR	18 37 33.4	
	comp=Z,83nm,20.6s,baz=167,slow=32						
WR1	Warramunga Arr	51.82	311	eP	P	18 20 44.6	+1.0
	18nm,1.4s						
WRA	Warramunga Arr	51.82	311	P	P	18 20 44.6	+1.0
	1.5nm,0.9s,baz=157,slow=6.6,SNR=6.1						
WRA				LR	LR	18 41 05.2	
	comp=Z,204nm,20.3s,baz=165,slow=34						
AFI	Afiamalu	51.85	18	LR	LR	18 41 31.0	
	comp=Z,34nm,18.6s,baz=114,slow=35						
PPT	Papeete	53.30	46	LR	LR	18 38 42.5	
	comp=Z,92nm,18.3s,baz=12,slow=31						
HNR	Honiara	56.13	344	LR	LR	18 41 18.9	
	comp=Z,132nm,21.1s,baz=193,slow=32						
PMG	Port Moresby	58.35	329	LR	LR	18 44 23.6	
	comp=Z,84nm,18.2s,baz=82,slow=34						
LEM	Lembang	73.75	289	LR	LR	18 51 08.9	
	comp=Z,51nm,20.8s,baz=119,slow=32						
BOSA	Boshof	83.65	208	LR	LR	18 59 52.4	
	comp=Z,103nm,18.2s,baz=196,slow=35						
PSI	Prapat	86.03	285	LR	LR	18 58 00.5	
	comp=Z,80nm,18.1s,baz=267,slow=32						
H08S2	Diego Garcia H	87.82	257	T	T	20 03 32.5	
	baz=154						
H08S1	Diego Carcia H	87.83	257	T	T	20 03 27.3	
	baz=154						
H08S3	Diego Garcia H	87.84	257	T	T	20 03 26.8	
	baz=154						
TSUM	Tsumeb	94.23	203	LR	LR	19 07 05.6	
	comp=Z,107nm,18.3s,baz=158,slow=35						
ILAR	Eielson Array	132.48	22	PKhKP	PKPpre	18 30 42.6	
	0.3nm,0.8s,baz=255,slow=2.7,SNR=3.0						
ILAR				PKP	PKiKP	18 30 50.0	+0.5
	0.5nm,0.9s,baz=205,slow=4.0,SNR=4.3						
AKTO	Aktyubinsk	144.38	278	PKP	PKPab	18 31 08.8	0.0
	1.0nm,0.4s,baz=142,slow=4.1,SNR=2.1						
KBZ	Khabaz	145.56	256	PKPbc	PKPbc	18 31 13.1	0.0
	1.7nm,0.7s,baz=107,slow=6.6,SNR=3.2						
BR101	Keskin Array S	145.88	242	ePKPdf	PKPdf	18 31 13.3	-0.5
BRTR	Keskin Array B	145.88	242	PKPbc	PKPdf	18 31 13.3	-0.5
	1.4nm,0.9s,baz=160,slow=5.1,SNR=9.6						

WEL 28 18:16:33.4, 38°S±11°×**18°0W**±°**, h33**km**, ML3.2**/13**, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.46	271	P	Pn	18 16 57.9	+0.4
WMGZ				S	Sn	18 17 15.9	+0.4
MXZ	Matakaoa Point	1.58	280	P	Pn	18 16 59.1	0.0
MXZ				S	Sn	18 17 18.4	0.0
PUZ	Puketiti	1.60	262	P	Pn	18 17 00.1	+0.7
PUZ				S	Sn	18 17 19.0	+0.1
PKGZ	Pakihiroa	1.73	269	P	Pn	18 17 01.4	+0.2
PKGZ				S	Sn	18 17 21.3	-0.8
CNGZ	Carnagh Statio	1.73	248	P	Pn	18 17 02.8	+1.6
TWGZ	Tauwhareparae	1.83	259	P	Pn	18 17 03.7	+1.1
TWGZ				S	Sn	18 17 26.1	+1.6
HAZ	Te Kaha	1.96	272	P	Pn	18 17 05.0	+0.6
TKGZ	Te Karaka	1.98	252	P	Pn	18 17 05.9	+1.3
TKGZ				S	Sn	18 17 30.1	+1.7
RUGZ	Raukumara Rang	2.04	266	P	Pn	18 17 06.3	+0.7
RIGZ	Rimuhau	2.14	246	P	Pn	18 17 07.8	+1.0
RIGZ				S	Sn	18 17 33.1	+0.9
MWZ	Matawai	2.21	257	P	Pn	18 17 08.5	+0.7
MWZ				S	Sn	18 17 34.1	+0.2
MHGZ	Mahia Peninsul	2.25	234	P	Pn	18 17 10.0	+1.7
RTZ	Ruatahuna	2.69	253	P	Pn	18 17 16.4	+1.9
MUGZ	Murupara	2.82	256	P	Pn	18 17 17.8	+1.7

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*NIED **28** 18:45:00, 45°.70N×152°.10E, h23km, Mw4.0 Best double couple: $M_0$1.03000×10^{15} NP1:ϕ_s148.00000°, δ53.00000°, λ2.00000°. NP2:ϕ_s57.00000°, δ88.00000°, λ143.00000°.*

*SKHL **28** 18:45:04.9±0.9, 45°.08N×152°.38E, h72km±5km, mb4.6/4*

*IDC **28** 18:45:04.4±0.9, 45°.42N×151°.79E, h0km, mb4.0/23, mb1 4.1/28, mb1mx4.0/73, mbtmp4.0/28, ML4.0/3, MS3.2/7, Ms1 3.3/7, ms1mx2.8/75, Error ellipse: s-maj=22.1km s-min=15.5km az=162.0*

*JMA **28** 18:45:05.0±0.7, 45°.66N×152°.08E, h30km, M4.1*

*ISCJB **28** 18:45:06.8±0.3, 45°.35N±0°.05×151°.87E±0°.05, h30km, mb4.3/43, MS3.7/3, Error ellipse: s-maj=8.9km s-min=2.9km az=150.5*

*NEIC **28** 18:45:06.7±2.2, 45°.48N×151°.82E, h13km±13km, mb4.6/19, Error ellipse: s-maj=8.4km s-min=4.7km az=148.0*

*MOS **28** 18:45:08.5±1.0, 45°.26N×151°.87E, h68km, mb4.5/21, Error ellipse: s-maj=8.5km s-min=8.0km az=151.1*

ISC 28 18:45:08.3±0.5**, 45°.31N**±0°.07×**151°.87E**±0°.05**, h30**km**, n174, σ1^{s}56**/180**, mb4.3**/52**, MS3.8**/3**, 7C-4D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	Kuril'sk	2.83	270	eP	Pn	18 45 53.0	+1.6
KUR				AMB	AMB	18 46 02.0	
	14nm,0.4s						
KUR				AMB	AMB	18 46 02.0	
	11nm,0.4s						
KUR				AMB	AMB	18 46 02.0	
	33nm,0.4s						
KUR				eS	Sn	18 46 28.0	+3.6
KUR				A	A	18 46 36.0	
	112nm,0.5s						
KUR				A	A	18 46 36.0	
	140nm,0.5s						
KUR	Kuril'sk	2.83	270	ePN	Pn	18 45 53.2	+1.8
KUR				eS	Sb	18 46 28.8	-3.5
KUR				pmax	pmax		
	comp=N,14nm,0.4s						
KUR				pmax	pmax		
	comp=Z,33nm,0.4s						
KUR				pmax	pmax		
	comp=E,11nm,0.3s						
KUR				smax	smax		
	comp=N,112nm,0.5s						
KUR				smax	smax		
	comp=E,140nm,0.6s						
SHO	Shikotan	3.88	250	eP	Pn	18 46 06.0	+0.1
SHO				AMB	AMB	18 46 09.0	
	comp=E,5.0nm,0.4s						
SHO				AMB	AMB	18 46 09.0	
	comp=E,25nm,0.4s						
SHO				eS	Sn	18 46 52.0	+1.6
SHO				A	A	18 47 00.0	
	comp=E,53nm,0.4s						
SHO				A	A	18 47 00.0	
	comp=E,14nm,0.4s						
SHO	Shikotan	3.88	250	ePN	Pn	18 46 06.3	+0.4
SHO				eS	Sn	18 46 52.5	+2.1
SHO				pmax	pmax		
	comp=Z,25nm,0.4s						
SHO				pmax	pmax		
	comp=N,5.0nm,0.2s						
SHO				smax	smax		
	comp=N,53nm,0.4s						
SHO				smax	smax		
	comp=E,14nm,0.4s						
YUK	Yuzh-Kuril'sk	4.47	256	eP	Pn	18 46 15.0	+1.0
YUK				AMB	AMB	18 46 25.0	
	comp=E,23nm,0.4s						
YUK				AMB	AMB	18 46 25.0	
	comp=E,31nm,0.4s						
YUK				AMB	AMB	18 46 25.0	
	comp=E,57nm,0.4s						
YUK				eS	Sn	18 47 08.0	+3.0
YUK				A	A	18 47 24.0	
	comp=E,227nm,0.5s						
YUK				A	A	18 47 24.0	
	comp=E,64nm,0.5s						
YUK	Yuzh-Kuril'sk	4.47	256	ePN	Pn	18 46 15.8	+1.8
YUK				S	Sn	18 47 08.2	+3.2
YUK				pmax	pmax		
	comp=Z,57nm,0.5s						
YUK				pmax	pmax		
	comp=N,23nm,0.4s						
YUK				pmax	pmax		
	comp=E,31nm,0.4s						
YUK				smax	smax		
	comp=N,227nm,0.6s						
YUK				smax	smax		
	comp=E,64nm,0.5s						
LAGR	Lagunnoye	4.52	256	eP	Pn	18 46 15.0	+0.4
LAGR				AMB	AMB	18 46 19.0	
	comp=E,29nm,0.3s						
LAGR				AMB	AMB	18 46 19.0	
	comp=E,42nm,0.3s						
LAGR				AMB	AMB	18 46 19.0	
	comp=E,80nm,0.3s						
LAGR				eS	Sn	18 47 08.0	+1.9
LAGR				A	A	18 47 23.0	
	comp=E,26nm,0.4s						
LAGR				A	A	18 47 23.0	
	comp=E,55nm,0.4s						
LAGR	Lagunnoye	4.52	256	ePN	Pn	18 46 15.8	+1.2
LAGR				S	Sn	18 47 08.0	+1.9
LAGR				pmax	pmax		
	comp=N,29nm,0.3s						
LAGR				pmax	pmax		
	comp=E,42nm,0.3s						
LAGR				pmax	pmax		
	comp=Z,80nm,0.3s						
LAGR				smax	smax		
	comp=N,263nm,0.4s						
LAGR				smax	smax		
	comp=E,55nm,0.3s						
GRPR	Tuman	4.55	255	eP	Pn	18 46 16.0	+1.0
GRPR				eS	Sn	18 47 10.0	+3.2
GRPR	Tuman	4.55	255	ePN	Pn	18 46 16.8	+1.8
GRPR				eS	Sn	18 47 10.1	+3.2
GLVR	Golovnino	4.81	253	eP	Pn	18 46 20.0	+1.5
GLVR				eS	Sn	18 47 16.0	+2.8
GLVR	Golovnino	4.81	253	ePN	Pn	18 46 20.1	+1.5
GLVR				eS	Sn	18 47 16.3	+3.1
NEM2	Nemuro 2	4.81	248	P	Pn	18 46 18.2	-0.4
NEM2				eS	Sn	18 47 12.7	-0.6
JRA	Rausu	5.01	256	P	Pn	18 46 23.4	+2.0
JNK	Nakash	5.41	254	P	Pn	18 46 27.9	+1.1
JAK	Akkeshi	5.66	248	P	Pn	18 46 29.7	-0.6
JAK				eS	Sn	18 47 34.1	-0.1
JTKR	Abashiri--Toko	5.84	260	P	Pn	18 46 34.7	+1.9
JAR	Ashorobuto	6.15	254	P	Pn	18 46 38.4	+1.3
JAR				eS	Sn	18 47 47.6	+1.2
JMP	Maruseppu	6.21	261	P	Pn	18 46 40.2	+2.3
JKK2	Kamakawa 2	6.67	261	P	Pn	18 46 46.6	+2.4
JCH	Churui	6.71	249	P	Pn	18 46 45.3	+0.6
JCH				eS	Sn	18 47 57.4	-2.6
ASAJ	Asahikawa	6.72	263	Pn	Pn	18 46 47.5	+2.7
	comp=E,0.6nm,0.3s,baz=58,slow=20,SNR=8.6						
ASAJ				LR	LR	18 49 47.9	
	comp=E,180nm,19.4s,baz=89,slow=42						
ASAJ	Asahikawa	6.72	263	ePn	Pn	18 46 47.7	+2.9
ERM	Erimo	7.13	246	ePn	Pn	18 46 52.4	+1.9
ERM	Erimo	7.13	246	ePN	Pn	18 46 52.4	+1.9
JEM	Erimo	7.13	246	eS	Sn	18 48 09.9	-0.5
JNBK	Urakawa-nobuka	7.26	249	P	Pn	18 46 52.9	+0.6
JBT2	Biratori 2	7.30	253	P	Pn	18 46 53.4	+0.5
JNB	Noboribetsu	8.32	254	P	Pn	18 47 08.3	+1.4
JKB	Kayabe	8.58	250	P	Pn	18 47 10.3	0.0
PEA0B	Petropavlovsk-	8.68	24	ePn	Pn	18 47 10.3	-1.4
PETK	Petropavlovsk-	8.68	24	Pn	Pn	18 47 11.1	-0.6
	baz=204,slow=13						
PETK	Petropavlovsk-	8.68	24	ePn	Pn	18 47 09.6	-2.1
PEA1	Petropavlovsk-	8.68	24	ePn	Pn	18 47 11.1	-0.7
PET	Petropavlovsk	8.90	27	ePn	Pn	18 47 13.0	-1.7
PET	Petropavlovsk	8.90	27	ePN	Pn	18 47 13.0	-1.7
JANG	Nango	9.07	241	eS	Sn	18 48 50.7	-7.4
JTM	Tenmabayashi	9.11	244	eS	Sn	18 48 52.6	-6.5
JTH	Tanohata	9.12	237	eS	Sn	18 48 52.0	-7.4
JOSM	Okushiri--Mats	9.54	255	P	Pn	18 47 24.1	+0.5
OFUJ	Ofunato	9.80	234	P	Pn	18 47 25.2	-1.9
JIO	Ouri	10.41	233	P	Pn	18 47 32.2	-3.3
MAJO	Matsushiro	13.53	234	ePn	Pn	18 48 17.3	-0.9
MAJO	Matsushiro	13.53	234	eP	Pn	18 48 17.3	-0.9
MAT	Matsushiro	13.53	234	P	P	18 48 24.9	-2.0
MJAR	Matsushiro Arr	13.53	234	Pn	Pn	18 48 17.5	-0.6
	comp=E,0.1nm,0.3s,baz=53,slow=8.7,SNR=3.9						
MJB9	Matsu-Tunnel	13.53	234	ePn	Pn	18 48 17.2	-1.0
USRK	Ussuriysk Ar.	14.17	273	Pn	Pn	18 48 26.0	-0.8
	baz=70,slow=12						
USRK				LR	LR	18 54 09.5	
	comp=E,72nm,18.8s,baz=23,slow=39						
KLR	Kul'dur	14.20	293	Pn	Pn	18 48 29.2	+2.0
	comp=E,0.0nm,0.3s,baz=31,slow=12,SNR=2.5						
KLR				LR	LR	18 54 42.2	
	comp=E,11nm,18.2s,baz=104,slow=41						
MA2	Magadan	14.30	358	Pn	P	18 48 31.7	-3.6
	comp=E,0.3nm,0.3s,baz=191,slow=16,SNR=3.1						
MA2				LR	LR	18 54 10.0	
	comp=E,80nm,18.2s,baz=198,slow=38						
MA2	Magadan	14.30	358	ePn	Pn	18 48 24.5	-4.0
MDJ	Mudanjiang	15.78	275	ePn	Pn	18 48 49.5	+1.3
	comp=E,18nm,1.1s						
SEY	Seymchan	17.66	1	P	P	18 49 09.4	-3.0
	comp=E,0.1nm,0.3s,baz=166,slow=8.7,SNR=6.2						
KSRS	Korea Array	19.56	255	P	Pn	18 49 36.4	+1.4
	comp=E,0.2nm,0.3s,baz=58,slow=11,SNR=6.4						
KSAR	Wonju Array Be	19.59	255	P	Pn	18 49 36.4	+1.0
KSAR	Wonju Array Be	19.59	255	P	Pn	18 49 36.4	+1.0
JNU	Nakatsue	20.25	240	eP	Pn	18 49 43.2	0.0
	comp=E,5.8nm,1.0s						
H11N2	WAKE ISLAND Hy	28.39	149	T	T	19 21 39.3	
	baz=336						
H11N1	WAKE ISLAND Hy	28.40	149	T	T	19 21 35.5	
	baz=336						
H11N3	WAKE ISLAND Hy	28.40	149	T	T	19 21 47.1	
	baz=336						
H11S1	WAKE ISLAND Hy	29.44	150	T	T	19 23 02.3	
	baz=337						
H11S3	WAKE ISLAND Hy	29.45	150	T	T	19 23 07.9	
	baz=337						
H11S2	WAKE ISLAND Hy	29.46	150	T	T	19 23 02.8	
	baz=337						
MIDW	Midway	29.73	114	eP	P	18 51 15.4	+3.6
	comp=E,92nm,0.8s						
ULN	Ulaanbaatar	30.58	291	eP	P	18 51 20.1	+0.7
	comp=E,1.8nm,0.9s						
ULN	Ulaanbaatar	30.58	291	eP	P	18 51 20.1	+0.7
ULN				pmax	pmax		
	comp=Z,2.0nm,0.9s						
SONA1	Songino Array	31.01	291	eP	P	18 51 23.0	-0.2
SONA0	Songino Array	31.02	291	eP	P	18 51 22.6	-0.6
SONM	Songino Array	31.02	291	P	P	18 51 22.6	-0.6
	comp=Z,1.1nm,0.7s,baz=75,slow=8.7,SNR=7.2						
SDPT	Sand Point	31.45	54	eP	P	18 51 25.5	-1.2
	comp=Z,199nm,1.9s						
TLY	Talaya	32.09	299	eP	P	18 51 29.4	-3.1
	comp=Z,7.7nm,0.9s						
TLY	Talaya	32.09	299	eP	P	18 51 29.4	-3.1
TLY				pmax	pmax		
	comp=Z,8.0nm,0.9s						
KDAK	Kodiak Island	35.69	49	P	P	18 52 04.4	+0.8
	comp=Z,2.9nm,0.7s,baz=139,slow=19,SNR=3.8						
KDAK	Kodiak Island	35.69	49	eP	P	18 52 02.9	-0.6
KDAK	Kodiak Island	35.69	49	eP	P	18 52 02.9	-0.6
ILAR	Eielson Array	38.21	37	P	P	18 52 25.0	0.0
	comp=Z,0.3nm,0.5s,baz=256,slow=7.3,SNR=3.7						
ILAR	Eielson Array	38.21	37	P	P	18 52 25.0	0.0
ILB	Eielson Array	38.21	37	eP	P	18 52 25.8	+0.9
MK31	Makanchi Array	46.84	298	eP	P	18 53 35.5	+0.2
MK31	Makanchi Array	46.84	298	eP	P	18 53 35.5	+0.2
MK32	Makanchi Array	46.84	298	eP	P	18 53 34.5	-0.9
MKAR	Makanchi Array	46.84	298	P	P	18 53 34.5	-0.9
	comp=Z,0.9nm,0.8s,baz=67,slow=7.9,SNR=9.2						
MKAR	Makanchi Array	46.84	298	eP	P	18 53 35.5	+0.2
	comp=Z,8.0nm,0.8s						
MKAR	Makanchi Array	46.84	298	eP	P	18 53 35.5	+0.2
MKAR				pmax	pmax		
	comp=Z,8.0nm,0.8s						
MK01	Makanchi Array	46.85	298	eP	P	18 53 34.9	-0.4
KURK	Kurchatov	47.45	304	eP	P	18 53 40.2	+0.3
KURK	Kurchatov	47.45	304	P	P	18 53 40.2	+0.3
KURK				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURBB	Kurchatov Arra	47.54	304	P	P	18 53 40.2	-0.4
	comp=Z,0.8nm,0.6s,baz=72,slow=8.6,SNR=8.3						
BVAR	Borovoye Array	51.11	310	P	P	18 54 06.5	-1.4
	comp=Z,0.3nm,0.5s,baz=33,slow=8.6,SNR=3.0						
AAK	Ala-Archa	53.70	297	eP	P	18 54 27.7	+0.3
	comp=Z,4.4nm,0.8s						
SPA0	Spitsbergen Ar	53.87	350	eP	P	18 54 27.8	-0.2
SPITS	Spitsbergen Ar	53.87	350	P	P	18 54 27.6	-0.4
	comp=Z,3.8nm,0.9s,baz=33,slow=19,SNR=4.2						
KK31	Karatay Array	55.94	299	eP	P	18 54 43.9	+0.4
KK31	Karatay Array	55.94	299	eP	P	18 54 43.9	+0.4
KKAR	Karatay Array	55.94	299	eP	P	18 54 43.9	+0.4
KKAR	Karatay Array	55.94	299	eP	P	18 54 43.9	+0.4
ABKAR	Akbulak array	58.68	310	eP	P	18 55 02.2	-0.4
ARA0	ARCESS Array S	58.92	341	eP	P	18 55 03.9	-0.1
ARCES	ARCESS Array B	58.92	341	P	P	18 55 03.9	-0.1
	comp=Z,4.2nm,0.8s,baz=78,slow=6.3,SNR=9.7						
AKTO	Aktyubinsk	59.04	312	P	P	18 55 04.9	-0.3
	comp=Z,0.8nm,0.5s,baz=45,slow=1.4,SNR=3.3						
AKTO				LR	LR	19 23 02.7	
	comp=Z,73nm,18.3s,baz=61,slow=39						
SUMG	Summit	62.19	4	eP	P	18 55 27.1	+0.3
	comp=Z,28nm,0.9s						
SUMG	Summit	62.19	4	iP	P	18 55 26.0	-0.7
	comp=Z,25nm,0.9s						
SUMG	Summit	62.19	4	eP	P	18 55 27.1	+0.3
SUMG				pmax	pmax		
	comp=Z,28nm,0.9s						
NV01	Mina Array Sit	63.88	61	eP	P	18 55 38.9	+0.7
NVAR	Mina Array Bea	63.88	61	P	P	18 55 38.8	+0.5
	comp=Z,0.3nm,0.5s,baz=286,slow=7.4,SNR=3.4						
FIA0	FINESS Array S	64.97	335	eP	P	18 55 43.9	-0.8
FIA0	FINESS Array S	64.97	335	eP	P	18 55 43.9	-0.8
FINES	FINESS Array B	64.97	335	P	P	18 55 43.9	-0.8
	comp=Z,2.8nm,0.4s,baz=31,slow=7.7,SNR=47						
GEYT	Alibeck	66.60	301	P	P	18 55 57.3	+1.6
	comp=Z,2.1nm,0.7s,baz=64,slow=9.8,SNR=7.8						
GYA0B	ALIBECK ARRAY	66.60	301	eP	P	18 55 56.9	+1.2
	comp=Z,4.3nm,0.8s						
TMUT	Trail Mountain	67.60	56	eP	P	18 56 04.9	+2.5
	comp=Z,43nm,0.5s						
NB2	NORSAR Subarra	69.30	341	P	P	18 56 12.1	-0.2
	comp=Z,6.7nm,1.4s,baz=30,slow=6.5						
NOA	NORSAR Array B	69.30	341	P	P	18 56 12.1	-0.2
	comp=Z,1.3nm,0.8s,baz=29,slow=6.4,SNR=5.8						
HFS	Hagfors	69.50	339	P	P	18 56 13.4	0.0
	comp=Z,3.1nm,0.5s,baz=60,slow=8.5,SNR=24						
PV16	Nyswonger Mesa	69.60	56	eP	P	18 56 15.4	+0.6
	comp=Z,6.9nm,1.0s						
PV11	David Mesa, Pa	69.63	56	eP	P	18 56 15.6	+0.7
	comp=Z,9.1nm,0.7s						
PV18	Skein Mesa, Pa	69.64	56	eP	P	18 56 15.3	+0.2
	comp=Z,4.2nm,0.8s						
PV12	Saucer Basin,	69.66	56	eP	P	18 56 16.4	+1.3
	comp=Z,5.5nm,0.7s						
PV03	Paradox Valley	69.67	56	eP	P	18 56 14.8	-0.4
PV13	Radium Mtn., P	69.75	56	eP	P	18 56 12.6	-3.2
	comp=Z,16nm,1.2s						
PV02	Paradox Valley	69.77	56	eP	P	18 56 11.8	-4.0
	comp=Z,14nm,1.3s						
AS31	Alice Springs	70.57	197	eP	P	18 56 20.6	+0.1
	comp=Z,1.4nm,0.6s						
ASAR	Alice Springs	70.58	197	P	P	18 56 21.9	+1.5
	comp=Z,0.6nm,1.0s,baz=15,slow=6.6,SNR=4.4						
ASAR	Alice Springs	70.58	197	P	P	18 56 22.0	+1.5
ASAR				pmax	pmax		
	comp=Z,1.0nm,1.0s						
KBZ	Khabaz	71.23	314	P	P	18 56 24.3	0.0
	comp=Z,4.8nm,0.8s,baz=45,slow=2.9,SNR=9.7						
AKASG	Malin Array Be	72.25	326	P	P	18 56 29.2	-1.1
	comp=Z,1.0nm,0.5s,baz=41,slow=7.1,SNR=6.6						
AKBB	Malin Array Si	72.25	326	eP	P	18 56 29.7	-0.6
	comp=Z,17nm,1.9s						
AKBB	Malin Array Si	72.25	326	eP	P	18 56 29.7	-0.6
AKBB				pmax	pmax		
	comp=Z,17nm,1.9s						
SORM	Soroca	74.63	325	⇑iP	P	18 56 45.3	+1.0
SORM	Soroca	74.63	325	⇑P	P	18 56 45.3	+1.0
SCHQ	Schefferville	74.97	22	LR	LR	19 34 49.2	
	comp=Z,46nm,18.4s,baz=251,slow=40						

BUR08	Bucovina Ar. S	76.29	326	*e*P	P	18 56 54.3	+0.3
BUR04	Bucovina Ar. S	76.30	326	*e*P	P	18 56 54.6	+0.5
BURAR	Bucovina Array	76.30	326	⇓*i*P	P	18 56 54.8	+0.7
BURAR	Bucovina Array	76.30	326	⇓P	P	18 56 54.9	+0.8
BIZ	Bicaz	76.50	325	⇑*i*P	P	18 56 56.2	+1.1
GDL2	Guadalupe Moun	76.50	58	*e*P	P	18 56 56.6	+1.0
TESR	Tescani	76.62	325	⇑*i*P	P	18 56 56.3	+0.5
TRPA	Tarpa	76.91	328	⇓*i*P	P	18 56 58.3	+0.9
MORC	Moravsky Berou	77.30	332	*e*P	P	18 57 00.3	+0.7
	comp=Z,4.4nm,1.1s						
MORC	Moravsky Berou	77.30	332	*e*P	P	18 57 00.3	+0.7
MORC				pmax	pmax		
	comp=Z,4.0nm,1.1s						
CLL	Collm	77.41	335	*e*P	P	18 57 00.0	-0.1
	comp=Z,4.0nm,1.1s						
EKA	Eskdalemuir Ar	77.52	346	P	P	18 57 00.7	0.0
	comp=Z,1.2nm,0.8s,baz=19,slow=4.6,SNR=3.3						
MLR	Muntele Rosu	77.73	324	P	P	18 57 03.4	+1.2
	comp=Z,1.0nm,0.6s,baz=74,slow=7.4,SNR=3.7						
MLR	Muntele Rosu	77.73	324	⇑*i*P	P	18 57 03.9	+1.6
MLR	Muntele Rosu	77.73	324	*e*P	P	18 57 02.4	+0.2
	comp=Z,16nm,1.8s						
MLR	Muntele Rosu	77.73	324	*e*P	P	18 57 02.4	+0.2
MLR				pmax	pmax		
	comp=Z,16nm,1.8s						
VYHS	Vyhne	77.95	330	*e*P	P	18 57 04.0	+0.7
VYHS	Vyhne	77.95	330	*e*P	P	18 57 04.0	+0.7
VOIR		78.14	325	⇑*i*P	P	18 57 05.1	+0.6
VOIR		78.14	325	⇑P	P	18 57 05.1	+0.6
BR101	Keskin Array S	78.83	316	*e*P	P	18 57 09.6	+1.1
BRTR	Keskin Array B	78.83	316	P	P	18 57 09.6	+1.1
	comp=Z,0.6nm,0.6s,baz=62,slow=4.8,SNR=5.3						
LTX	Lajitas	78.96	59	*e*P	P	18 57 09.4	+0.1
LTX	Lajitas	78.96	59	*e*P	P	18 57 09.4	+0.1
TXAR	Lajitas Array	78.96	59	P	P	18 57 09.4	+0.1
	comp=Z,0.3nm,0.6s,baz=298,slow=4.5,SNR=5.7						
TXAR				LR	LR	19 31 10.4	
	comp=Z,26nm,19.3s,baz=0.0,slow=35						
KHC	Kasperske Hory	79.15	334	*e*P	P	18 57 10.8	+0.9
KHC				*e*x	x	18 57 22.9	
KHC	Kasperske Hory	79.15	334	*e*P	P	18 57 10.8	+0.9
KHC				*e*		18 57 22.9	
GEC2	GERESS Array S	79.36	333	*e*P	P	18 57 10.7	-0.4
	comp=Z,4.4nm,1.4s						
GEC2	GERESS Array S	79.36	333	*e*P	P	18 57 10.7	-0.4
GEC2				pmax	pmax		
	comp=Z,4.0nm,1.4s						
GERES	GERESS Array B	79.36	333	P	P	18 57 11.5	+0.4
	comp=Z,0.7nm,0.7s,baz=33,slow=5.1,SNR=5.6						
CONA	Conrad Observa	79.46	332	*i* pP	P	18 57 12.7	+1.1
	comp=Z,2.9nm,1.0s						
MOA	Molln	80.05	333	*e*pP	P	18 57 15.8	+1.0
	comp=Z,3.0nm,1.3s						
SOKA	Soboth	80.82	332	*e*pP	P	18 57 19.7	+0.7
	comp=Z,1.7nm,0.8s						
KBA	Koelnbreinsper	81.03	333	*e*pP	P	18 57 21.6	+1.4
	comp=Z,4.4nm,0.9s						
VTS	Vitosha	81.24	324	⇓*i*P	P	18 57 21.9	+0.5
VTS	Vitosha	81.24	324	*e*P	P	18 57 21.4	+0.1
	comp=Z,3.3nm,0.8s						
VTS	Vitosha	81.24	324	*e*P	P	18 57 21.5	+0.1
VTS				pmax	pmax		
	comp=Z,3.0nm,0.8s						
WATA	Walderalm	81.36	334	*e*pP	P	18 57 23.6	+1.7
	comp=Z,1.8nm,0.5s						
MOTA	Moosalm	81.50	334	*e*pP	P	18 57 23.5	+0.8
	comp=Z,2.9nm,0.9s						
ABTA	Abfaltersbach	81.59	333	*e*pP	P	18 57 25.0	+1.9
	comp=Z,2.3nm,1.1s						
FETA	Feichten	81.90	334	*e*pP	P	18 57 26.6	+1.8
	comp=Z,2.6nm,1.1s						
DAVA	Damuels	81.92	335	*e*pP	P	18 57 27.0	+2.0
	comp=Z,2.2nm,0.8s						
MMAI	Mount Meron Ar	83.11	311	P	P	18 57 32.6	+1.3
	comp=Z,2.6nm,0.8s,baz=51,slow=9.6,SNR=3.4						

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*IDC **28** 18:53:29.2±1.2, 3.°18S×140.°51E, h0km, mb3.6/5, mb1 3.9/7, mb1mx3.6/51, mbtmp3.7/7, ML4.0/1, MS3.3/2, Ms1 3.3/2, ms1mx2.6/37, Error ellipse: s-maj=51.7km s-min=20.6km az=79.0*

*NEIC **28** 18:53:31.1±3.4, 3.°17S×140.°73E, h20km±27km, mb4.7/7, Error ellipse: s-maj=10.9km s-min=9.6km az=216.0*

ISC 28 18:53:33.7±0.8**, 3.°47S**±0.°07×**140.°56E**±0.°09**, h35km, n27, σ3.s04**/29**, mb3.7**/9**, Irian Jaya**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FAKI	Fak Fak	8.31	274	*e*Pn	Pn	18 55 33.0	+1.2
PMG	Port Moresby	8.82	132	Pn	Pn	18 55 39.1	+0.3
	0.4nm,0.3s,baz=272,slow=11,SNR=2.3						
PMG	Port Moresby	8.82	132	*e*Pn	Pn	18 55 38.8	0.0
COEN	Coen	10.74	166	*e*Pn	Pn	18 56 07.6	+2.5
RABL	Rabaul	11.61	94	*e*Pn	Pn	18 56 12.8	-4.2
MTN	Manton Dam	13.18	224	*e*Pn	Pn	18 56 36.5	-1.9
MTN				*e*Sn	Sn	18 58 51.6	-12
SOEI	Soe	17.34	248	*e*Pn	P	18 57 35.9	+1.6
	118nm,1.6s						
WRAB	Tennant Creek	17.45	200	*e*Pn	P	18 57 39.0	+3.6
	17nm,1.2s						
WB2	Warramunga Arr	17.46	200	*e*Pn	P	18 57 37.3	+1.8
WR1	Warramunga Arr	17.46	200	*e*Pn	P	18 57 37.6	+2.1
	50nm,1.8s						
WR1				*e*Sn	Sn	19 00 40.8	-7.3
WRA	Warramunga Arr	17.46	200	P	P	18 57 37.6	+2.1
	0.5nm,0.3s,baz=19,slow=13,SNR=19						
WRA				S	Sn	19 00 40.8	-7.3
	0.1nm,0.3s,baz=19,slow=21,SNR=3.4						
GUMO	Guam	17.48	14	LR	LR	19 03 20.9	
	comp=Z,37nm,20.9s,baz=341,slow=34						
LUWI	Luwuk	17.93	277	*e*Pn	Pn	18 57 40.0	-0.5
	82nm,1.1s						
AS01	Alice Springs	21.07	197	*e*P	P	18 58 17.5	+2.4
AS31	Alice Springs	21.09	197	*e*P	P	18 58 19.5	+4.3
	1.4nm,0.6s						
AS31				*e*S	S	19 02 06.1	-2.0
ASAR	Alice Springs	21.09	197	P	P	18 58 17.4	+2.2
	2.5nm,0.7s,baz=27,slow=11,SNR=27						
ASAR				S	S	19 02 08.0	-0.2
	0.5nm,0.7s,baz=14,slow=28,SNR=2.6						
KKM	Kota Kinabalu	26.08	291	*e*P	P	18 59 03.5	-0.9
	53nm,1.4s						
STKA	Stephens Creek	28.28	178	LR	LR	19 12 40.5	
	comp=Z,165nm,20.4s,baz=207,slow=40						
BBOO	Buckleboo	29.50	188	*e*P	P	18 59 37.5	+2.9
	61nm,1.8s						
FORT	Forrest	29.62	202	*e*P	P	18 59 35.0	-0.7
	13nm,1.0s						
KSAR	Wonju Array Be	42.37	345	P	P	19 01 23.6	-1.0
KSRS	Korea Array	42.37	345	P	P	19 01 23.6	-1.0
	0.6nm,0.5s,baz=159,slow=8.5,SNR=5.1						
MK32	Makanchi Array	71.51	322	*e*P	P	19 04 49.8	-1.3
MKAR	Makanchi Array	71.51	322	P	P	19 04 49.8	-1.3
	0.1nm,0.4s,baz=109,slow=7.2,SNR=4.1						
VNDA	Vanda	74.88	175	P	P	19 05 14.2	+3.9
	0.6nm,0.7s,baz=315,slow=6.8,SNR=6.9						
VNDA	Vanda	74.88	175	*e*P	P	19 05 13.9	+3.6
BVAR	Borovoye Array	80.98	325	P	P	19 05 44.1	-0.6
	0.4nm,0.5s,baz=98,slow=8.9,SNR=3.9						

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*MOS **28** 19:01:04.2±0.9, 59.°43N×152.°31W, h52km, mb4.8/61, Error ellipse: s-maj=9.8km s-min=4.2km az=88.4*

*ISCJB **28** 19:01:06.1±0.2, 59.°47N±0.°01×152.°06W±0.°02, h68km±1km, mb4.4/181, Error ellipse: s-maj=2.5km s-min=2.1km az=7.8*

*NEIC **28** 19:01:07.0±0.0, 59.°38N×152.°01W, h63km, mb4.4/104, ML4.3(AEIC), After AEIC.*

NEIC Felt [III] at Homer. Also felt at Anchor Point, Kasilof and Ninilchik.

*IDC **28** 19:01:07.5±0.5, 59.°52N×152.°23W, h62km±4km, mb4.1/34, mb1 4.2/37, mb1mx4.1/73, mbtmp4.3/37, MS3.1/9, Ms1 3.1/9, ms1mx2.9/70, Error ellipse: s-maj=12.1km s-min=8.7km az=25.0*

ISC 28 19:01:06.7±0.4**, 59.°40N**±0.°04×**152.°02W**±0.°03**, h63km**±3km**, h63km:pP-P, n600, σ1.s40**/660**, mb4.4**/181**, 6C-1D, Southern Alaska**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HOM	Homer	0.32	36	*e*Pn	Pn	19 01 18.2	+0.9
HOM				*e*Sn	Sn	19 01 26.6	+1.6
CNPM	China Poot	0.42	72	*e*Pn	Pn	19 01 18.9	+0.7
CNPM				*e*Sn	Sn	19 01 27.2	+0.7
BRLK	Bradley Lake	0.68	57	*e*Pn	Pn	19 01 21.1	+0.1
BRLK				*e*Sn	Sn	19 01 31.9	+0.5
AUE	Augustine Isla	0.69	267	*e*Pn	Pn	19 01 21.8	+0.8
AUI	Augustine Isla	0.72	265	P	Pn	19 01 22.1	+0.7
AUW	Augustine West	0.74	268	P	Pn	19 01 22.4	+0.8
CDD	Cape Douglas	0.96	241	P	Pn	19 01 24.9	+0.5
RSO	Redoubt South	1.13	341	*e*Pn	Pn	19 01 25.8	-0.9
RDWB	Redoubt West	1.17	340	P	Pn	19 01 27.4	+0.3
RDWB				S	Sn	19 01 42.5	+0.1
MCNL	McNeil River	1.21	261	P	Pn	19 01 27.6	+0.1
DFR	Drift River	1.24	345	P	Pn	19 01 28.5	+0.4
DFR				S	Sn	19 01 44.4	+0.3
RDJH	Redoubt Jeurge	1.26	342	P	Pn	19 01 29.0	+0.6
RDJH				S	Sn	19 01 45.0	+0.5
KDAK	Kodiak Island	1.65	191	P	Pn	19 01 33.6	+0.2
	373nm,0.3s,baz=43,slow=7.7,SNR=8202						
KDAK				S	Sn	19 01 50.6	-3.0
	361nm,0.3s,baz=37,slow=20,SNR=25						
KDAK	Kodiak Island	1.65	191	*e*Pn	Pn	19 01 33.4	0.0
KDAK				*e*Sn	Sn	19 01 52.1	-1.5
KDAK	Kodiak Island	1.65	191	*i* P	Pn	19 01 33.1	-0.3
KAWH	Katmai	1.77	236	P	Pn	19 01 35.5	+0.4
SPU	Mount Spurr	1.79	359	*e*Pn	Pn	19 01 35.8	+0.4
SPCR	Spurr Chakacha	1.81	357	P	Pn	19 01 36.5	+0.8
SPCR				S	Sn	19 01 58.3	+0.6
SPCP	Crater Peak Br	1.87	358	*e*Pn	Pn	19 01 37.7	+1.1
SPCP				*e*Sn	Sn	19 02 00.8	+1.5
SPCG	Spurr Capps Gl	1.90	360	P	Pn	19 01 38.0	+1.1
SPCG				S	Sn	19 02 00.8	+0.9
KAKN	Katmai Knife C	1.93	236	P	Pn	19 01 37.6	+0.3
FIB	Fire Island	2.00	27	*e*Pn	Pn	19 01 40.1	+2.0
FIB	Fire Island	2.00	27	*e*P	Pn	19 01 40.1	+2.0
KABU	Katmai Buttres	2.04	238	P	Pn	19 01 39.5	+0.7
RC01	Rabbit Creek A	2.04	33	*e*Pn	Pn	19 01 39.7	+1.0
RC01				*e*Sn	Sn	19 02 03.6	+0.5
MGLS	Mageik Landsli	2.07	234	P	Pn	19 01 39.9	+0.7
PTE	Portage	2.10	44	*e*Pn	Pn	19 01 40.0	+0.6
KELA	Mount Kelaz	2.16	245	P	Pn	19 01 40.4	0.0
ANCK	Angle Creek	2.17	238	P	Pn	19 01 41.4	+0.8
CAHL	Cahill	2.18	233	P	Pn	19 01 41.4	+0.7
OHAK	Old Harbor	2.29	198	*e*Pn	Pn	19 01 40.6	-1.4
SVW2	Sparrevohn	2.46	315	*e*Pn	Pn	19 01 44.6	+0.2
SKT	Skwentna	2.60	5	*e*Pn	Pn	19 01 47.2	+0.9
PMR	Palmer	2.62	32	*e*Pn	Pn	19 01 47.0	+0.4
PMR				*e*Sn	Sn	19 02 17.6	+0.4
PMR	Palmer	2.62	32	*e*P	Pn	19 01 47.0	+0.4
PMR				*e*		19 02 17.6	
KNK	Knik Glacier	2.68	40	*e*Pn	Pn	19 01 47.9	+0.4
PLK3	Peulik 3	2.81	234	P	Pn	19 01 50.2	+1.0
GHO	Glory Hole Cre	2.83	31	*e*Pn	Pn	19 01 49.9	+0.4
GLI	Glacier Island	2.88	57	*e*Pn	Pn	19 01 49.5	-0.6
GLI				*e*Sn	Sn	19 02 20.9	-2.5
PLK1	Peulik 1	2.89	238	P	Pn	19 01 51.1	+0.9
MID	Middleton Isla	2.90	87	*e*Pn	Pn	19 01 50.6	+0.2
MID	Middleton Isla	2.90	87	*e*P	Pn	19 01 50.6	+0.2
HIN	Hinchinbrook I	2.95	68	*e*Pn	Pn	19 01 51.0	-0.2
SML	Sawmill	3.02	35	*e*Pn	Pn	19 01 52.5	+0.4
SML	Sawmill	3.02	35	*e*P	Pn	19 01 52.5	+0.4
TRAP	Trapper Creek	3.07	16	*e*Pn	Pn	19 01 54.2	+1.5
SII	Sitkinak Islan	3.07	203	*e*Pn	Pn	19 01 52.3	-0.5
FID	Port Fidalgo	3.09	62	*e*Pn	Pn	19 01 52.1	-0.9
VMT	TAPS TI Valdez	3.29	57	*e*Pn	Pn	19 01 55.8	+0.1
EYAK	Cordova Ski Ar	3.36	67	*e*Pn	Pn	19 01 56.2	-0.4
EYAK				*e*Sn	Sn	19 02 32.8	-2.4
SCM	Sheep Creek Mo	3.36	41	*e*Pn	Pn	19 01 57.4	+0.6
SCM				*e*Sn	Sn	19 02 34.7	-0.7
SCM	Sheep Creek Mo	3.36	41	*e*P	Pn	19 01 57.4	+0.6
SCM				*e*		19 02 34.7	
PPLA	Purkeypile	3.51	359	*e*Pn	Pn	19 01 59.8	+0.9
DIV	Divide	3.56	58	*e*Pn	Pn	19 01 59.5	0.0
DIV				*e*Sn	Sn	19 02 39.2	-1.2
KLU	Klutina	3.68	53	*e*Pn	Pn	19 02 01.2	+0.2
KLU				*e*Sn	Sn	19 02 41.2	-2.0
HUR	Hurricane	3.77	17	*e*Pn	Pn	19 02 04.0	+1.8
RAGM	Ragged Mountai	3.83	72	*e*Pn	Pn	19 02 03.1	0.0
RAGM				*e*Sn	Sn	19 02 46.4	-0.5
KAIM	Kayak Island	3.89	79	*e*Pn	Pn	19 02 05.0	+1.1
TT01	Tatalina	4.02	333	*e*Pn	Pn	19 02 06.3	+0.7
BMRM	Bremner River	4.02	64	*e*Pn	Pn	19 02 05.6	-0.2
BMRM				*e*Sn	Sn	19 02 49.2	-2.4
CAST	Castle Rocks	4.03	360	*e*Pn	Pn	19 02 05.9	0.0
ANNE	Aniakchak Nort	4.06	235	P	Pn	19 02 06.4	+0.1
TRF	Thorofare Moun	4.15	11	*e*Pn	Pn	19 02 07.4	-0.2
NICHA	Nichawak Mount	4.15	75	P	Pn	19 02 08.1	+0.6
KTH	Kantishna Hill	4.20	7	*e*Pn	Pn	19 02 08.4	+0.2
SUCK	Suckling Hills	4.23	77	P	Pn	19 02 09.3	+0.8
BERG	Berg Lake	4.31	73	*e*Pn	Pn	19 02 09.6	0.0
DHY	Denali Highway	4.32	29	*e*Pn	Pn	19 02 10.6	+0.7
GRIN	Grindle Hills	4.48	75	P	Pn	19 02 12.7	+0.7
HARP	HAARP	4.51	45	*e*Pn	Pn	19 02 13.6	+1.2
KHIT	Khitrov Hills	4.54	73	P	Pn	19 02 12.6	-0.3
GLB	Gilahina Butte	4.55	60	*e*Pn	Pn	19 02 12.9	-0.2
MCK	McKinley	4.59	17	*e*Pn	Pn	19 02 14.7	+1.2
MCK	McKinley	4.59	17	*e*P	Pn	19 02 14.7	+1.2
CHGN	Chignik	4.62	230	*e*Pn	Pn	19 02 14.0	+0.2
VRDI	Verde Repeater	4.64	63	P	Pn	19 02 14.2	-0.1
CRQM	Cirque	4.65	69	*e*Pn	Pn	19 02 14.3	-0.2
CRQM				*e*Sn	Sn	19 03 03.3	-3.9
BPAW	Bear Paw Mtn.	4.74	6	*e*Pn	Pn	19 02 15.1	-0.4
KULT	Kultieth River	4.77	76	P	Pn	19 02 16.4	+0.4
PAX	Paxson	4.78	39	*e*Pn	Pn	19 02 16.9	+0.7
PAX				*e*Sn	Sn	19 03 08.5	-1.7
PAX	Paxson	4.78	39	*e*P	Pn	19 02 16.9	+0.7
PAX				*e*		19 03 08.5	
TGL	Tana Glacier	4.80	70	*e*Pn	Pn	19 02 16.4	0.0
TGL				*e*Sn	Sn	19 03 07.9	-2.8
MCARA	McCarthy VSAT	4.89	62	P	Pn	19 02 18.0	+0.5
BARK	Barkley Ridge	4.90	74	*e*Pn	Pn	19 02 18.0	+0.1
BWN	Browne	4.94	13	*e*Pn	Pn	19 02 18.9	+0.7
VNHG	Veniaminof 1	4.97	233	P	Pn	19 02 20.1	+1.2
ISLE	Juniper Island	5.01	72	P	Pn	19 02 19.2	-0.1
PS10	TAPS Pump St10	5.03	34	*e*Pn	Pn	19 02 21.1	+1.6
KIAG	Kiagna River	5.06	68	P	Pn	19 02 19.8	-0.3
PTPK	Patty Peak	5.08	65	P	Pn	19 02 20.5	+0.2
BALM	Baldy	5.09	67	*e*Pn	Pn	19 02 20.0	-0.5
BALM				*e*Sn	Sn	19 03 14.0	-4.0
BALM	Baldy	5.09	67	*e*P	Pn	19 02 20.0	-0.5
BALM				*e*		19 03 14.0	
BAGL	Bagley Icefiel	5.11	73	*e*Pn	Pn	19 02 21.3	+0.8
MESA	MESA	5.15	77	P	Pn	19 02 22.1	+0.9
GRNC	Granite Creek	5.31	71	P	Pn	19 02 23.5	0.0
NEA	Nenana	5.38	14	*e*Pn	Pn	19 02 24.5	+0.3
WRH	Wood River Hil	5.42	18	*e*Pn	Pn	19 02 24.7	0.0
BARN	Barnard Glacie	5.42	68	*e*Pn	Pn	19 02 25.0	0.0
PS09	TAPS Pump Stn9	5.43	31	*e*Pn	Pn	19 02 27.1	+2.1
RKAV	Rock Avalanche	5.46	76	P	Pn	19 02 27.0	+1.5
RIDG	Independ'e Rid	5.54	35	*e*Pn	Pn	19 02 27.1	+0.6
CHX	Chaix Hills	5.56	78	*e*Pn	Pn	19 02 28.1	+1.4
CTGM	Chitina Glacie	5.56	69	*e*Pn	Pn	19 02 27.5	+0.6
HDA	Harding Lake	5.57	23	*e*Pn	Pn	19 02 27.2	+0.3
TABL	Table Mountain	5.57	75	P	Pn	19 02 27.9	+0.8
CCB	Clear Creek Bu	5.62	19	*e*Pn	Pn	19 02 27.4	-0.2
MLY	Manley	5.68	5	*e*Pn	Pn	19 02 28.8	+0.4
DOT	Dot Lake	5.71	38	*e*Pn	Pn	19 02 29.5	+0.6
SAMH	Samovar Hills	5.73	78	P	Pn	19 02 30.5	+1.4
COLA	College	5.83	18	*e*Pn	Pn	19 02 30.6	+0.2
COLA				*e*Sn	Sn	19 03 33.7	-2.0
COLA	College	5.83	18	*e*P	Pn	19 02 30.6	+0.2
COLA				*e*		19 03 33.7	
GCSA	Galena City Sc	5.83	339	*e*Pn	Pn	19 02 31.6	+1.2
MDM	Murphy Dome	5.85	16	*e*Pn	Pn	19 02 30.7	0.0
IL1	Eielson Array	5.90	22	*e*Pn	Pn	19 02 31.1	-0.3
ILAR	Eielson Array	5.90	22	P	Pn	19 02 31.1	-0.3
	14nm,0.3s,baz=205,slow=14,SNR=409						
ILAR				S	Sn	19 03 33.1	-4.5
	16nm,0.3s,baz=212,slow=24,SNR=8.2						
ILB	Eielson Array	5.90	22	*e*Pn	Pn	19 02 31.4	-0.1
ILB				*e*Sn	Sn	19 03 33.4	-4.1
SCRK	Sand Creek	5.97	36	*e*Pn	Pn	19 02 31.9	-0.6
YUK2	White River	6.00	62	P	Pn	19 02 33.6	+0.7
SDPT	Sand Point	6.12	232	*e*Pn	Pn	19 02 33.8	-0.5
BCA3	Beaver Creek A	6.16	49	*e*Pn	Pn	19 02 35.4	+0.5
YUK1	Sand Pete Hill	6.27	59	P	Pn	19 02 37.4	+0.8
YKU2	Yakutat	6.30	84	*e*Pn	Pn	19 02 37.3	+0.5
PNL	Peninsula	6.43	82	*e*Pn	Pn	19 02 39.0	+0.4
IM3	Indian Mountai	6.66	354	*e*Pn	Pn	19 02 42.3	+0.6
PRP	Porcupine Dome	6.83	23	*e*Pn	Pn	19 02 44.8	+0.5
YUK4	Talbot Arm	6.91	68	*e*Pn	Pn	19 02 47.6	+2.2
YUK6	Outpost Mounta	6.99	71	P	Pn	19 02 47.6	+1.1
HYT	Haines Junctio	7.39	73	*e*Pn	Pn	19 02 52.6	+0.7
EGAK	Eagle	7.41	39	*e*Pn	Pn	19 02 52.5	+0.5
DAWY	Dawson	7.60	47	*e*Pn	Pn	19 02 54.9	+0.2
FALS	False Pass	7.69	239	*e*Pn	Pn	19 02 55.6	-0.2
FYU	Fort Yukon	7.82	20	*e*Pn	Pn	19 02 57.5	-0.1
COLD	Coldfoot	7.90	5	*e*Pn	Pn	19 02 58.5	-0.2
PLBC	Pleasant Camp	7.98	83	*e*Pn	Pn	19 03 00.5	+0.6
ANM	Nome	8.13	315	*e*Pn	Pn	19 03 02.8	+0.9
ANM				*e*Sn	Sn	19 04 30.4	-1.9
ANM	Nome	8.13	315	*e*P	Pn	19 03 02.8	+0.9
ANM				*e*		19 04 30.4	
WHY	Whitehorse	8.67	74	*e*Pn	Pn	19 03 09.9	+0.5
WHY				*e*Sn	Sn	19 04 36.5	-9.0
BM3	Burnt Mountain	8.70	19	*e*Pn	Pn	19 03 09.1	-0.6
BESE	Bessie Mountai	8.90	88	*e*Pn	Pn	19 03 12.6	+0.1
BESE				*e*Sn	Sn	19 04 45.1	-6.0
SIT	Sitka	9.11	98	*e*Pn	Pn	19 03 13.3	-2.0
SIT				*e*Sn	Sn	19 04 49.1	-7.0
SIT	Sitka	9.11	98	*e*P	Pn	19 03 13.3	-2.0
AKUT	Akutan	9.20	241	*e*Pn	Pn	19 03 15.9	-0.7
JIS	Juneau Island	9.21	89	*e*Pn	Pn	19 03 17.1	+0.5
TOLK	Toolik Lake Re	9.34	6	P	Pn	19 03 20.8	+2.5
	baz=188						
TOLK	Toolik Lake Re	9.34	6	*e*Pn	Pn	19 03 19.6	+1.2
UNV	Unalaska Valle	9.72	241	*e*Pn	Pn	19 03 23.7	+0.2
SPIA	Saint Paul Isl	9.85	265	*e*Pn	Pn	19 03 21.8	-3.5
RDOG	Red Dog Mine	9.92	336	*e*Pn	Pn	19 03 27.5	+1.3
WRAK	Wrangell Islan	10.87	97	*e*Pn	Pn	19 03 38.4	-0.9
CRAG	Craig	10.91	103	*e*Pn	Pn	19 03 37.2	-2.6
NIKH	Nikolski High	11.36	243	*e*Pn	Pn	19 03 45.4	-0.5
DLBC	Dease Lake	11.40	85	P	Pn	19 03 47.1	+0.6
	15nm,0.3s,baz=263,slow=4.7,SNR=63						
DLBC				S	Sn	19 05 48.1	-3.9
	0.9nm,0.3s,baz=108,slow=20,SNR=3.2						
DLBC	Dease Lake	11.40	85	*e*Pn	Pn	19 03 47.0	+0.4
DLBC				*e*Sn	Sn	19 05 48.3	-3.8
INK	Inuvik	12.04	34	P	Pn	19 03 53.8	-1.3
	0.4nm,0.3s,baz=254,slow=13,SNR=5.0						
INK				LR	LR	19 08 37.9	
	comp=Z,104nm,21.8s,baz=225,slow=38						
INK	Inuvik	12.04	34	*e*Pn	Pn	19 03 54.3	-0.8
INK	Inuvik	12.04	34	*e*P	Pn	19 03 54.3	-0.8
DIB	Dawson Inlet,	12.47	111	*e*Pn	Pn	19 03 59.0	-2.2
ATKA	Atka Island	14.35	250	*e*Pn	Pn	19 04 26.1	-0.2
BBB	Bella Bella	15.20	108	P	Pn	19 04 36.9	-0.4
	1.7nm,0.3s,baz=299,slow=6.9,SNR=24						
BBB				S	Sn	19 07 20.0	-4.4
	0.1nm,0.3s,baz=144,slow=19,SNR=3.5						
BBB				LR	LR	19 09 28.4	
	comp=Z,89nm,21.9s,baz=52,slow=33						
BBB	Bella Bella	15.20	108	*e*Pn	Pn	19 04 38.5	+1.2
	22nm,1.3s						
BBB				*e*Sn	Sn	19 07 20.1	-4.2
KIWB	Kanaga Island	16.00	253	*e*Pn	P	19 04 49.2	-0.7
YKW3	Yellowknife Ar	18.24	64	*e*P	Pn	19 05 15.2	+0.2
	8.9nm,0.7s						
YKA	Yellowknife Ar	18.26	64	P	Pn	19 05 15.8	+0.6
	0.7nm,0.3s,baz=276,slow=12,SNR=14						
YKA				PcP	PcP	19 09 44.3	+0.4
	0.2nm,0.3s,baz=273,slow=1.3,SNR=6.9						
YKA				LR	LR	19 12 39.4	
	comp=Z,5.6nm,21.3s,baz=278,slow=38						
YKA	Yellowknife Ar	18.26	64	*i* P	Pn	19 05 15.8	+0.6
YKA				pmax	pmax		
	comp=Z,8.0nm,0.8s						
LLLB	Lillooet	19.24	104	*e*P	Pn	19 05 29.6	+2.5
	comp=Z,18nm,1.3s						
SMY	Shemya	19.89	265	*e*P	P	19 05 30.9	-1.6
	comp=Z,205nm,1.5s						
SMY	Shemya	19.89	265	*e*P	P	19 05 30.9	-1.6
SMY				pmax	pmax		
	comp=Z,205nm,1.5s						
A04D	Lummi Island	20.08	109	P	Pn	19 05 36.7	-0.2
	baz=313						
NLWA	Neilton Lookou	20.46	114	*e*P	Pn	19 05 42.4	+0.9
	comp=Z,24nm,1.3s						
B05A	Bryant	20.69	109	P	Pn	19 05 44.5	+0.4
	baz=314						
B06A	Marblemount	20.81	108	*e*P	Pn	19 05 44.5	-1.1
	comp=Z,10nm,0.8s						
E03A	Lebam	21.22	115	*e*P	P	19 05 50.3	+3.4
	comp=Z,30nm,1.4s						
D05A	Enumclaw	21.50	111	*e*P	P	19 05 52.6	+2.7
	comp=Z,33nm,1.3s						
F03A	Seaside	21.68	116	*e*P	P	19 05 53.8	+1.9
	comp=Z,30nm,1.3s						
LON	Longmire	21.89	112	*e*P	P	19 05 56.1	+1.9
	comp=Z,5.8nm,1.0s						
LON	Longmire	21.89	112	*e*P	P	19 05 56.1	+1.9
LON				pmax	pmax		
	comp=Z,6.0nm,1.0s						
B08A	Colville Reser	21.97	106	*e*P	P	19 05 56.2	+1.2
	comp=Z,6.1nm,0.8s						
LTY	Liberty	22.08	109	*e*P	P	19 05 58.2	+2.0
	comp=Z,19nm,1.4s						
COR	Corvallis	22.82	118	*e*P	P	19 06 05.1	+1.0
	comp=Z,80nm,2.0s						
COR	Corvallis	22.82	118	*e*P	P	19 06 05.1	+1.0
COR				pmax	pmax		
	comp=Z,80nm,2.0s						
C09A	Chrisman Ranch	22.87	106	*e*P	P	19 06 06.0	+1.4
	comp=Z,6.7nm,1.0s						
E07A	Sunnyside	22.97	110	*e*P	P	19 06 07.0	+1.4
	comp=Z,18nm,0.8s						
D08A	Wollman Farm,	23.07	108	*e*P	P	19 06 08.3	+1.7
	comp=Z,10nm,1.2s						
HAWA	Hanford	23.24	110	*e*P	P	19 06 10.8	+2.6
	comp=Z,5.8nm,1.0s						
H04A	Detroit Lake	23.26	116	*e*P	P	19 06 11.4	+3.0
	comp=Z,11nm,0.9s						
E08A	Dider Farm, El	23.40	109	*e*P	P	19 06 11.6	+1.9
	comp=Z,10nm,1.2s						
F07A	Phinny Hill Vi	23.41	111	*e*P	P	19 06 10.4	+0.5
	comp=Z,10nm,0.6s						
I03D	Drain, OR	23.50	119	P	P	19 06 09.2	-1.4
	baz=322						
G06A	Carlson Farm,	23.56	113	*e*P	P	19 06 12.2	+0.9
	comp=Z,18nm,1.8s						
E09A	Wood Farm, Sta	23.83	108	*e*P	P	19 06 15.6	+2.0
	comp=Z,26nm,1.8s						
I04A	Tendick Farm,	23.84	118	P	P	19 06 13.5	-0.3
	baz=321						
WALA	Waterton Lakes	24.22	98	*e*P	P	19 06 16.5	-0.8
	comp=Z,6.8nm,0.8s						
G08A	Pilot Rock	24.32	111	*e*P	P	19 06 20.3	+2.1
	comp=Z,6.0nm,1.0s						
PINE	Pine Mountain	24.52	116	*e*P	P	19 06 22.3	+2.2
	comp=Z,15nm,1.2s						
HUMO	Hull Mountain	24.54	120	*e*P	P	19 06 23.0	+2.9
	comp=Z,5.9nm,1.0s						
F10A	Beach Ranch, E	24.66	108	*e*P	P	19 06 23.2	+1.9
	comp=Z,5.2nm,1.0s						
J05D	Fort Rock, OR	24.78	117	P	P	19 06 24.5	+2.1
	baz=321						
JTMT	Jette	24.89	101	*e*P	P	19 06 25.5	+2.1
	comp=Z,6.8nm,0.9s						
I07A	Izee	24.96	113	*e*P	P	19 06 25.9	+1.8
	comp=Z,3.3nm,0.8s						
YBH	Yreka Blue Hor	25.35	121	P	P	19 06 31.0	+3.4
	comp=Z,3.6nm,1.0s,baz=321,slow=3.1,SNR=8.0						
YBH	Yreka Blue Hor	25.35	121	*e*P	P	19 06 31.2	+3.6
	comp=Z,5.1nm,0.9s						
K05A	Summer Lake	25.37	117	*e*P	P	19 06 30.7	+2.8
	comp=Z,19nm,1.3s						
BMO	Blue Mountains	25.43	109	*e*P	P	19 06 31.1	+2.7
	comp=Z,5.6nm,1.0s						
BMO	Blue Mountains	25.43	109	*e*P	P	19 06 31.1	+2.7
BMO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
M02C	Callahan	25.57	122	P	P	19 06 32.7	+3.2
	baz=325						
KHMM	Horse Mountain	25.61	124	*e*P	P	19 06 32.6	+2.6
	comp=Z,15nm,1.1s						
N02D	Trinity Center	25.97	122	P	P	19 06 37.1	+3.9
	baz=325						
J08A	Circle Bar Ran	26.00	113	*e*P	P	19 06 36.6	+3.1
	comp=Z,20nm,1.7s						
KMRM	Mail Ridge	26.16	125	*e*P	P	19 06 38.2	+3.2
	comp=Z,79nm,1.8s						
MOD	Modoc Plateau	26.29	118	*e*P	P	19 06 38.0	+1.9
	comp=Z,14nm,1.7s						
SEY	Seymchan	26.33	302	P	P	19 06 35.4	-0.7
	comp=Z,2.6nm,0.5s,baz=79,slow=6.3,SNR=35						
SEY	Seymchan	26.33	302	*i* P	P	19 06 35.6	-0.5
WDC	Whiskeytown Da	26.37	122	*e*P	P	19 06 37.0	+0.3
	comp=Z,9.3nm,1.4s						

WDC	Whiskeytown Da	26.37	122	*e*P	P	19 06 37.0	+0.3
WDC				pmax	pmax		
	comp=Z,9.0nm,1.4s						
WVOR	Wild Horse Val	26.64	115	*e*P	P	19 06 38.8	-0.4
	comp=Z,3.8nm,1.1s						
WVOR	Wild Horse Val	26.64	115	*e*P	P	19 06 38.8	-0.4
WVOR				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KCPM	Cahto Peak	26.67	125	*e*P	P	19 06 40.8	+1.3
	comp=Z,269nm,0.6s						
O03D	Paynes Creek	26.92	122	P	P	19 06 44.8	+3.0
	baz=325						
EGMT	Eagleton	27.00	96	*e*P	P	19 06 42.8	+0.4
	comp=Z,20nm,1.4s						
LRM	Limekiln Ridge	27.13	102	*e*P	P	19 06 43.8	0.0
MFID	Camas Ranch	27.21	110	*e*P	P	19 06 45.2	+0.8
	comp=Z,12nm,1.8s						
PET	Petropavlovsk	27.61	279	*e*P	P	19 06 47.9	+0.2
	comp=Z,70nm,1.7s						
MCMT	McKenzie Canyo	27.64	104	*e*P	P	19 06 50.4	+2.0
BEKR	Beckworth	27.90	120	*e*P	P	19 06 53.2	+2.5
	comp=Z,3.3nm,1.0s						
PEA1	Petropavlovsk-	28.04	279	*e*P	P	19 06 51.1	-0.4
PETK	Petropavlovsk-	28.04	279	P	P	19 06 51.1	-0.4
	comp=Z,5.1nm,0.7s,baz=72,slow=11						
PETK	Petropavlovsk-	28.04	279	*e*P	P	19 06 51.3	-0.2
PETK	Petropavlovsk-	28.04	279	*e*P	P	19 06 51.3	-0.2
MA2	Magadan	28.28	295	P	P	19 06 53.4	-0.2
	comp=Z,13nm,0.8s,baz=73,slow=9.5,SNR=9.8						
MA2	Magadan	28.28	295	*e*P	P	19 06 53.3	-0.3
	comp=Z,11nm,0.7s						
MA2	Magadan	28.28	295⇑	*e*P	P	19 06 52.8	-0.8
MA2				pmax	pmax		
	comp=Z,15nm,1.3s						
QLMT	Earthquake Lak	28.34	103	*e*P	P	19 06 56.8	+2.2
PAHR	Pah Rah Range	28.47	119	*e*P	P	19 06 55.3	-0.4
	comp=Z,3.8nm,1.0s						
YHB	Horse Butte	28.51	103	*e*P	P	19 06 56.4	+0.3
	comp=Z,6.5nm,0.9s						
GCMT	Greycliff	28.55	99	*e*P	P	19 06 57.9	+1.6
VCNR	Virginia City	28.68	120	*e*P	P	19 06 59.4	+1.8
	comp=Z,5.5nm,1.0s						
YMR	Madison River	28.69	103	*e*P	P	19 07 00.5	+2.9
	comp=Z,14nm,0.5s						
BMN	Battle Mountai	28.87	116	*e*P	P	19 07 00.9	+1.7
	comp=Z,5.0nm,1.4s						
BMN	Battle Mountai	28.87	116	*e*P	P	19 07 00.9	+1.7
BMN				pmax	pmax		
	comp=Z,5.0nm,1.4s						
PNTR	Pine Nut	28.88	120	*e*P	P	19 06 59.2	-0.1
	comp=Z,5.2nm,0.9s						
YPP	Pitchstone Pla	29.05	103	*e*P	P	19 07 02.8	+1.8
	comp=Z,4.4nm,1.2s						
H17A	Grant Village	29.08	102	*e*P	P	19 07 03.5	+2.3
	comp=Z,5.7nm,1.1s						
YERR	Yerington	29.12	120	*e*P	P	19 07 03.4	+1.9
	comp=Z,10nm,1.6s						
RLMT	Red Lodge	29.22	100	P	P	19 07 02.4	0.0
	baz=315						
IMW	Indian Meadow	29.25	104	*e*P	P	19 07 05.6	+2.8
	comp=Z,5.8nm,0.9s						
LOHW	Long Hollow	29.63	104	*e*P	P	19 07 08.6	+2.6
	comp=Z,4.1nm,0.9s						
NV01	Mina Array Sit	30.00	119	*e*P	P	19 07 12.1	+2.9
NV01				*e*PcP	PcP	19 10 10.3	+0.3
NVAR	Mina Array Bea	30.00	119	P	P	19 07 12.5	+3.2
	comp=Z,1.7nm,0.8s,baz=312,slow=8.6,SNR=11						
NVAR				PcP	PcP	19 10 11.5	+1.5
	comp=Z,1.4nm,0.6s,baz=300,slow=1.9,SNR=12						
NVAR				LR	LR	19 18 37.9	
	comp=Z,58nm,18.5s,baz=296,slow=35						
OMMB	Old Mammoth Mi	30.36	121	*e*P	P	19 07 15.9	+3.3
	comp=Z,3.3nm,0.9s						
BPIM	Pinnacles	30.38	125	*e*pP	pP	19 07 25.8	-2.1
BW06	Boulder Array	30.77	104	P	P	19 07 16.0	0.0
	baz=318						
PD31	Pinedale Array	30.77	104	*e*P	P	19 07 16.6	+0.5
PDAR	Pinedale Array	30.77	104	P	P	19 07 18.0	+2.0
	comp=Z,0.6nm,0.6s,baz=307,slow=3.2,SNR=3.4						
PDAR				PcP	PcP	19 10 11.9	0.0
	comp=Z,0.6nm,0.7s,baz=336,slow=2.0,SNR=1.3						
R11A	Troy Canyon, C	31.29	116	P	P	19 07 20.6	0.0
	baz=324						
R11A	Troy Canyon, C	31.29	116	*e*P	P	19 07 23.0	+2.4
	comp=Z,6.6nm,1.5s						
R11A				*e*PcP	PcP	19 10 14.2	+0.8
CWC	Cottonwood Cre	31.75	121	P	P	19 07 27.2	+2.5
	baz=327						
VES	Vestal, Richgr	31.82	123	P	P	19 07 27.8	+2.8
	baz=328						
SMMC	Simmler	31.88	125	P	P	19 07 29.0	+3.3
	baz=329						
PSUT	Pine Spring	31.95	114	*e*P	P	19 07 28.4	+1.9
	comp=Z,4.3nm,1.0s						
TPNV	Topopah Spring	32.13	118	P	P	19 07 31.3	+3.2
	baz=326						
TPNV	Topopah Spring	32.13	118	*e*P	P	19 07 30.6	+2.5
	comp=Z,3.3nm,0.6s						
TPNV	Topopah Spring	32.13	118	*e*P	P	19 07 30.6	+2.5
TPNV				pmax	pmax		
	comp=Z,3.0nm,0.6s						
FURC	Furnace Creek,	32.26	120	P	P	19 07 32.0	+3.1
	baz=327						
PKM	Mcpherson Peak	32.32	125	P	P	19 07 32.1	+2.4
	baz=329						
MPMC	Manual Prospec	32.33	121	P	P	19 07 31.5	+1.8
	baz=327,SNR=6.7						
K22A	Casper	32.37	101	P	P	19 07 32.6	+2.5
	baz=317						
RSSD	Black Hills	32.57	96	P	P	19 07 32.2	+0.3
	baz=315						
RSSD	Black Hills	32.57	96	*e*P	P	19 07 34.1	+2.2
	comp=Z,13nm,0.6s						
TMUT	Trail Mountain	32.60	110	*e*P	P	19 07 34.2	+1.9
	comp=Z,5.0nm,0.9s						
TMUT				*e*PcP	PcP	19 10 17.9	+0.9
ULM	Lac du Bonnet	32.67	81	PcP	PcP	19 10 16.6	0.0
	comp=Z,2.3nm,0.6s,baz=337,slow=3.5,SNR=3.8						
LRMC	Laurel Mtn Rad	32.73	122	P	P	19 07 32.8	-0.4
	baz=328						
MSU	Marysvale	32.76	112	*e*P	P	19 07 32.0	-1.5
MSU				*e*PcP	PcP	19 10 18.5	+1.1
MSU	Marysvale	32.76	112	*e*P	P	19 07 32.0	-1.5
MSU				*e*		19 10 18.5	
SHOC	Shoshone, Teco	32.99	119	P	P	19 07 37.9	+2.5
	baz=327						
SZCU	Shurtz Canyon	33.06	114	*e*P	P	19 07 35.4	-0.8
GSC	Goldstone, Bar	33.26	121	P	P	19 07 38.1	+0.3
	baz=328						
GSC	Goldstone, Bar	33.26	121	*e*P	P	19 07 39.4	+1.6
	comp=Z,7.1nm,1.1s						
GSC	Goldstone, Bar	33.26	121	*e*P	P	19 07 39.4	+1.6
GSC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BLG	Laguna Peak, P	33.30	125	P	P	19 07 38.8	+0.7
	baz=330						
LCMT	Little Creek M	33.46	115	*e*P	P	19 07 42.5	+3.0
	comp=Z,2.7nm,1.0s						
LCMT				*e*PcP	PcP	19 10 20.4	+1.1
TUQ	Turquoise Moun	33.54	119	P	P	19 07 41.6	+1.3
	baz=327						
KNB	Kanab	33.65	114	*e*P	P	19 07 43.1	+1.8
	comp=Z,4.8nm,1.1s						
KNB	Kanab	33.65	114	*e*P	P	19 07 43.1	+1.8
KNB				pmax	pmax		
	comp=Z,5.0nm,1.1s						
BFSC	Mount Baldy Ra	33.79	123	P	P	19 07 42.6	+0.2
	baz=329						
GMRC	Granite Mounta	34.20	120	P	P	19 07 46.1	0.0
	baz=327						
PV22	Blue Mesa, Par	34.37	108	*e*P	P	19 07 47.3	-0.2
	comp=Z,4.9nm,1.0s						
PV18	Skein Mesa, Pa	34.54	108	*e*P	P	19 07 51.2	+2.2
	comp=Z,5.4nm,1.0s						
PV13	Radium Mtn., P	34.65	108	*e*P	P	19 07 51.9	+1.9
	comp=Z,6.5nm,0.9s						
BELC	Belle Mtn. Jos	34.71	121	P	P	19 07 50.8	+0.3
	baz=328						
FRD	Ford Ranch, An	34.88	122	P	P	19 07 54.6	+2.8
	baz=329						
IRM	Iron Mountain	34.96	120	P	P	19 07 55.5	+3.1
	baz=328,SNR=6.5						
MONP2	Monument Peak	35.47	122	P	P	19 07 60.0	+2.9
	baz=329						
WUAZ	Wupatki	35.55	114	P	P	19 08 00.5	+2.8
	baz=325						
WUAZ	Wupatki	35.55	114	*e*P	P	19 08 00.8	+3.2
Y12C	Blythe	35.58	119	P	P	19 07 59.4	+1.7
	baz=328						
Y12C	Blythe	35.58	119	*e*P	P	19 07 58.8	+1.1
	comp=Z,6.9nm,0.8s						
GLA	Glamis	36.03	120	P	P	19 08 05.1	+3.4
	baz=328						
YAK	Yakutsk	36.23	309	P	P	19 08 01.8	-1.1
	comp=Z,1.2nm,0.2s,baz=103,slow=18,SNR=6.2						
YAK	Yakutsk	36.23	309	*e*P	P	19 08 00.8	-2.2
	comp=Z,20nm,0.5s						
YAK	Yakutsk	36.23	309	*e*P	P	19 08 01.3	-1.6
YAK				pmax	pmax		
	comp=Z,11nm,0.9s						
SDCO	Great Sand Dun	36.60	105	P	P	19 08 06.7	-0.1
	baz=322						
SDCO	Great Sand Dun	36.60	105	*e*P	P	19 08 09.5	+2.8
	comp=Z,3.5nm,1.1s						
I37A	Lemond, Waseca	38.08	87	P	P	19 08 17.9	-1.0
	baz=315						
J36A	Seneca 1, Swea	38.09	89	P	P	19 08 19.0	+0.1
	baz=316						
TASM	ASL Pad, Albuq	38.35	109	P	P	19 08 23.5	+2.0
	baz=324						
ANMO	Albuquerque	38.35	109	P	P	19 08 23.9	+2.4
	comp=Z,0.8nm,0.5s,baz=331,slow=12,SNR=4.2						
ANMO				PcP	PcP	19 10 35.4	+1.5
	comp=Z,2.1nm,0.7s,baz=323,slow=4.3,SNR=7.2						
ANMO	Albuquerque	38.35	109	P	P	19 08 23.9	+2.4
	baz=324						
ANMO	Albuquerque	38.35	109	*e*P	P	19 08 24.4	+2.9
	comp=Z,6.6nm,1.7s						
ANMO				*e*PcP	PcP	19 10 35.0	+1.1
ANMO	Albuquerque	38.35	109	*e*P	P	19 08 24.4	+2.9
ANMO				*e*		19 10 35.1	
ANMO				pmax	pmax		
	comp=Z,7.0nm,1.7s						
TASL	Snake Pit, Alb	38.35	109	P	P	19 08 24.2	+2.7
	baz=324						
SHO	Shikotan	39.47	275	*e*P	P	19 08 30.2	-0.3
SHO				pmax	pmax		
	comp=N,5.0nm,0.7s						
SHO				pmax	pmax		
	comp=Z,14nm,0.7s						
SHO				pmax	pmax		
	comp=E,3.0nm,0.4s						
E43A	Lone Tree Farm	39.69	79	P	P	19 08 36.1	+3.9
	baz=314						
SUMG	Summit	40.74	25	P	P	19 08 43.7	+2.6
SUMG				pmax	pmax		
	comp=Z,21nm,0.8s						
N39A	Derby Farms, D	40.80	90	P	P	19 08 42.6	+1.1
	baz=318						
DAG	Danmarks Havn	40.95	15	P	P	19 08 42.6	+0.3
DAG				pmax	pmax		
	comp=Z,8.0nm,0.7s						
ASAJ	Asahikawa	41.45	278	P	P	19 08 47.0	+0.2
	comp=Z,7.2nm,0.7s,baz=53,slow=5.1,SNR=8.4						
ASAJ	Asahikawa	41.45	278	*e*P	P	19 08 47.2	+0.4
	comp=Z,12nm,0.8s						
MNTX	Cornudas Mount	41.52	111	P	P	19 08 48.7	+1.2
	baz=326						
MNTX	Cornudas Mount	41.52	111	*e*P	P	19 08 50.1	+2.5
	comp=Z,2.8nm,0.7s						
R38A	Fenwick Farm,	42.10	94	P	P	19 08 51.6	-0.6
	baz=320						
WMOK	Wichita Mounta	42.31	101	*e*P	P	19 08 55.9	+2.0
	comp=Z,6.1nm,1.0s						
R39A	Chumby, Stover	42.45	93	P	P	19 08 55.1	+0.1
	baz=320						
SPITS	Spitsbergen Ar	42.48	4	P	P	19 08 54.0	-0.9
	comp=Z,0.8nm,0.3s,baz=0.0,slow=12,SNR=11						
SPITS	Spitsbergen Ar	42.48	4	P	P	19 08 54.0	-0.9
SPITS	Spitsbergen Ar	42.48	4	P	P	19 08 54.0	-0.9
ERM	Erimo	42.68	276	*i* P	P	19 08 57.1	+0.3
ERM				pmax	pmax		
	comp=Z,5.0nm,1.0s						
R40A	Maddies Statio	42.86	92	P	P	19 08 58.2	-0.2
	baz=320						
R40A	Maddies Statio	42.86	92	*e*P	P	19 08 58.1	-0.3
	comp=Z,4.7nm,0.6s						
R40A				*e*PcP	PcP	19 10 48.1	-0.1
KLR	Kul'dur	43.22	292	*i* P	P	19 09 00.2	-1.0
T39A	Clever	43.26	94	P	P	19 09 00.8	-0.8
	baz=320						
S41A	Jillco Farms,	43.66	92	P	P	19 09 04.8	-0.1
	baz=320,SNR=6.2						
Q43A	New Douglas	43.68	89	P	P	19 09 05.4	+0.5
	baz=319						
U39A	Green Forest	43.70	95	P	P	19 09 05.4	+0.2
	baz=321						
S42A	Caledonia	44.01	91	P	P	19 09 07.6	0.0
	baz=320						
R43A	Red Bud	44.07	90	P	P	19 09 08.0	-0.1
	baz=320						
TX31	Lajitas Ar. Si	44.30	111	*e*P	P	19 09 12.1	+2.0
LTX	Lajitas	44.30	111	*e*P	P	19 09 12.4	+2.2
LTX	Lajitas	44.30	111	*e*P	P	19 09 12.4	+2.2
TXAR	Lajitas Array	44.30	111	P	P	19 09 12.4	+2.2
	comp=Z,1.8nm,0.8s,baz=329,slow=6.3,SNR=18						
T42A	Van Buren	44.42	92	*e*P	P	19 09 10.5	-0.4
T42A				*e*PcP	PcP	19 10 53.6	0.0
V40A	Witts Springs	44.49	95	P	P	19 09 11.3	-0.1
	baz=321,SNR=5.5						
V40A	Witts Springs	44.49	95	*e*P	P	19 09 11.4	-0.1
	comp=Z,5.7nm,0.7s						
S43A	Fulton Ridge,	44.53	91	P	P	19 09 11.1	-0.7
	baz=320						
T43A	Greenville	44.79	91	P	P	19 09 13.8	0.0
	baz=320						
PBMO	Poplar Bluff	44.96	92	*e*P	P	19 09 15.4	+0.3
	comp=Z,5.8nm,0.7s						
BOD	Bodaibo	45.02	311	*e*P	P	19 09 14.1	-1.3
BOD				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MIAR	Mount Ida	45.09	97	P	P	19 09 16.3	+0.1
	baz=322						
MIAR	Mount Ida	45.09	97	P	P	19 09 17.7	+1.5
JCT	Junction City	45.23	106	P	P	19 09 18.9	+1.4
	baz=325,SNR=5.2						
JCT	Junction City	45.23	106	*e*P	P	19 09 19.4	+1.9
JCT	Junction City	45.23	106	*e*P	P	19 09 19.4	+1.9
Q47A	Bedord North L	45.36	87	P	P	19 09 18.1	-0.2
	baz=319						
S48A	Wiedeman Farm,	46.52	87	P	P	19 09 28.0	+0.5
	baz=320,SNR=8.7						
WVT	Waverly	46.79	90	P	P	19 09 29.6	+0.1
	baz=321						
WVT	Waverly	46.79	90	*e*P	P	19 09 30.8	+1.2
WVT				*e*PcP	PcP	19 11 02.2	+0.5
WVT	Waverly	46.79	90	*e*P	P	19 09 30.8	+1.2
WVT				*e*		19 11 02.3	
Q51A	Peebles	46.86	84	P	P	19 09 30.3	+0.2
	baz=319						
V46A	Holladay	46.89	91	P	P	19 09 31.4	+1.0
	baz=321,SNR=5.9						
R50A	Paris	46.93	85	P	P	19 09 31.6	+1.0
	baz=320						
U48A	Cassie Pea, Po	47.15	89	P	P	19 09 32.3	-0.1
	baz=321						
V47A	Nunnelly	47.18	90	P	P	19 09 33.6	+0.9
	baz=321						
T49A	Edmonton	47.21	87	P	P	19 09 32.8	0.0
	baz=320						
OXF	Oxford	47.24	93	P	P	19 09 33.8	+0.7
	baz=322						
W46A	Michie	47.28	92	P	P	19 09 33.5	+0.1
	baz=322						
R51A	Hillsboro	47.29	85	P	P	19 09 34.3	+0.8
	baz=320						
S50A	Richmond	47.35	86	P	P	19 09 34.6	+0.6
	baz=320						
U49A	Red Boiling Sp	47.54	88	P	P	19 09 36.1	+0.7
	baz=321						
PLAL	Pickwick Lake	47.55	91	*e*P	P	19 09 36.5	+1.0
W47A	Westpoint	47.59	91	P	P	19 09 36.7	+0.9
	baz=321,SNR=5.3						
V48A	Smith Brothers	47.60	90	P	P	19 09 37.0	+1.1
	baz=321,SNR=8.1						
V48A	Smith Brothers	47.60	90	*e*P	P	19 09 37.0	+1.1
	comp=Z,10nm,0.6s						
V48A				*e*PcP	PcP	19 11 04.8	+0.1
X46A	Booneville	47.62	92	P	P	19 09 37.4	+1.3
	baz=322,SNR=9.6						
T50A	Nancy	47.63	87	P	P	19 09 37.0	+0.9
	baz=320						
W48A	Pulaski	48.01	90	P	P	19 09 39.6	+0.5
	baz=322,SNR=6.7						
Y46A	Houston	48.01	93	P	P	19 09 39.9	+0.8
	baz=322,SNR=7.5						
X47A	Russelville	48.03	92	P	P	19 09 40.1	+0.9
	baz=322						
V49A	McMinnville	48.05	89	P	P	19 09 40.1	+0.7
	baz=321						
U50A	Jamestown	48.09	87	P	P	19 09 40.5	+0.7
	baz=321						
T51A	Gray	48.13	86	P	P	19 09 40.3	+0.3
	baz=320						
W49A	Belvidere	48.37	90	P	P	19 09 42.1	+0.3
	baz=322						
SSPA	Standing Stone	48.41	78	*e*P	P	19 09 43.5	+1.5
	comp=Z,17nm,1.4s						
SWET	Sewanee	48.47	89	*e*P	P	19 09 43.6	+1.0
	comp=Z,9.2nm,0.6s						
X48A	Hartselle	48.49	91	P	P	19 09 43.5	+0.7
	baz=322,SNR=8.9						
X48A	Hartselle	48.49	91	*e*P	P	19 09 43.8	+1.0
	comp=Z,11nm,0.6s						
Y47A	UCPARC, Winfie	48.51	92	P	P	19 09 43.8	+0.9
	baz=322,SNR=8.6						
V50A	Pikevile	48.54	88	P	P	19 09 43.4	+0.2
	baz=321						
W50A	Signal Mountai	48.80	89	P	P	19 09 45.9	+0.8
	baz=321						
X49A	Woodville	48.81	90	P	P	19 09 45.9	+0.7
	baz=322						
146A	Union	48.90	94	P	P	19 09 46.5	+0.6
	baz=323,SNR=5.8						
146A	Union	48.90	94	*e*P	P	19 09 47.6	+1.7
	comp=Z,42nm,0.6s						
Z47A	Carrollton	48.96	93	P	P	19 09 47.7	+1.4
	baz=323,SNR=8.9						
Z48A	Northport	49.08	92	P	P	19 09 47.6	+0.3
	baz=322						
X50B	Fort Payne	49.20	90	P	P	19 09 48.8	+0.6
	baz=322,SNR=7.4						
TKL	Tuckaleechee C	49.23	87	P	P	19 09 49.3	+0.9
	comp=Z,3.4nm,0.8s,baz=310,slow=3.3,SNR=7.0						
TKL	Tuckaleechee C	49.23	87	*e*P	P	19 09 48.8	+0.4
	comp=Z,4.4nm,0.8s						
TKL	Tuckaleechee C	49.23	87	*e*P	P	19 09 48.8	+0.4
TKL				pmax	pmax		
	comp=Z,4.0nm,0.8s						
Y49A	Blount Mountai	49.28	91	P	P	19 09 49.5	+0.7
	baz=322,SNR=7.0						
Y49A	Blount Mountai	49.28	91	*e*P	P	19 09 49.4	+0.5
	comp=Z,10nm,0.6s						
MJB9	Matsu-Tunnel	49.32	275	*e*P	P	19 09 49.1	0.0
	comp=Z,5.8nm,0.8s						
MAJO	Matsushiro	49.32	275	*e*P	P	19 09 49.5	+0.4
	comp=Z,5.8nm,0.8s						
MAJO	Matsushiro	49.32	275	*i* P	P	19 09 48.9	-0.2
MAJO				pmax	pmax		
	comp=Z,6.0nm,1.0s						
MAT	Matsushiro	49.32	275	P	P	19 09 48.8	-0.3
MJAR	Matsushiro Arr	49.32	275	P	P	19 09 49.1	0.0
	comp=Z,1.6nm,0.8s,baz=14,slow=7.1,SNR=8.6						
X51A	Calhoun	49.52	89	P	P	19 09 50.5	-0.2
	baz=322						
Y50A	Piedmont	49.60	90	P	P	19 09 52.0	+0.7
	baz=322,SNR=5.3						
LRAL	Lakeview Retre	49.63	92	P	P	19 09 51.5	0.0
	baz=323						
V53A	Saluda	49.71	86	P	P	19 09 52.1	-0.1
	baz=321						
V53A	Saluda	49.71	86	*e*P	P	19 09 53.1	+1.0
	comp=Z,6.8nm,1.0s						
Z49A	Columbiana	49.75	92	P	P	19 09 53.0	+0.6
	baz=322						
Y51A	Rockmart	49.94	90	P	P	19 09 54.2	+0.3
	baz=322						
X52A	Dahlonega	49.99	88	P	P	19 09 54.7	+0.5
	baz=322,SNR=5.7						
Z50A	Ashland	50.01	91	P	P	19 09 54.7	+0.3
	baz=322						
Z50A	Ashland	50.01	91	*e*P	P	19 09 54.9	+0.4
	comp=Z,5.2nm,0.5s						
149A	Jones	50.09	92	P	P	19 09 55.2	+0.3
	baz=323						
Z51A	Franklin	50.34	90	P	P	19 09 56.9	0.0
	baz=322						
249A	Camden	50.41	93	P	P	19 09 57.8	+0.4
	baz=323						
150A	Eclectic	50.47	92	P	P	19 09 58.2	+0.3
	baz=323						
Y52A	Lilburn	50.48	89	P	P	19 09 58.3	+0.4
	baz=322,SNR=5.2						
Y52A	Lilburn	50.48	89	*e*P	P	19 09 58.5	+0.6
	comp=Z,18nm,1.3s						
BORG	Borgarnes	50.72	25	LR	LR	19 33 37.0	
	comp=Z,30nm,18.3s,baz=317,slow=38						
Y53A	Monroe	50.73	88	P	P	19 09 59.8	-0.1
	baz=322						
Z52A	Williamson	50.83	90	P	P	19 10 00.8	+0.3
	baz=322,SNR=5.6						
Y54A	Tignall	51.19	88	P	P	19 10 03.0	-0.2
	baz=322						
JHJ	Hachijo jima 2	51.19	271	LR	LR	19 27 41.7	
	comp=Z,9.2nm,21.9s,baz=292,slow=31						
Z53A	Monticello	51.19	89	P	P	19 10 03.9	+0.6
	baz=322,SNR=6.0						
ARA0	ARCESS Array S	51.35	1	*e*P	P	19 10 03.5	-0.4
ARCES	ARCESS Array B	51.35	1	P	P	19 10 03.5	-0.4
	comp=Z,2.2nm,0.6s,baz=2.3,slow=7.0,SNR=20						
Z54A	Sparta	51.60	88	P	P	19 10 06.4	+0.1
	baz=322,SNR=5.3						
252A	Lumpkin	51.62	91	P	P	19 10 06.6	+0.1
	baz=323						
254A	Abbeville	52.39	90	P	P	19 10 12.0	-0.2
	baz=323						
255A	Hazlehurst	52.83	89	P	P	19 10 15.0	-0.5
	baz=323						
SGF	Sodankyl	53.46	1	P	P	19 10 19.8	+0.2
SGF				pmax	pmax		
	comp=Z,15nm,0.6s						
KS01	Wonju Array Si	53.80	284	*e*P	P	19 10 21.9	-0.6
KS01				*e*PcP	PcP	19 11 27.1	-0.5
KS01				*e*S	S	19 17 53.8	+1.7
KSRS	Korea Array	53.80	284	P	P	19 10 22.4	0.0
	comp=Z,6.2nm,0.8s,baz=39,slow=6.5,SNR=26						
KSRS				PcP	PcP	19 11 28.1	+0.6
	comp=Z,0.9nm,0.6s,baz=39,slow=4.2,SNR=2.7						
KSRS				LR	LR	19 35 20.2	
	comp=Z,6.5nm,18.0s,baz=115,slow=38						
KS15	Wonju Array Si	53.83	284	*e*P	P	19 10 23.1	+0.3
KS15				*e*PKKSdf	PKKSdf	19 35 16.2	-31
KSAR	Wonju Array Be	53.83	284	P	P	19 10 22.4	-0.2
KSAR				PcP	PcP	19 11 28.1	+0.5
KSAR	Wonju Array Be	53.83	284	P	P	19 10 22.5	-0.2
KSAR						19 11 28.1	
TJN	Taejon	54.92	283	*ce*P	P	19 10 29.3	-1.3
MSF	Maaselka	55.00	359	P	P	19 10 31.0	+0.2
MSF				pmax	pmax		
	comp=Z,21nm,0.9s						
ULN	Ulaanbaatar	55.25	306	*e*P	P	19 10 32.8	-0.3
ULN				*e*PcP	PcP	19 11 33.7	+0.5
ULN	Ulaanbaatar	55.25	306	*e*P	P	19 10 32.8	-0.3
ULN				*e*		19 11 33.7	
SONA1	Songino Array	55.53	307	*e*P	P	19 10 35.5	+0.4
SONA1				*e*PcP	PcP	19 11 34.4	+0.1
SONA0	Songino Array	55.55	307	*e*P	P	19 10 35.7	+0.5
SONA0				*e*PcP	PcP	19 11 34.9	+0.6
SONA0				*e*		19 36 40.5	
SONM	Songino Array	55.55	307	P	P	19 10 35.7	+0.5
	comp=Z,3.7nm,0.6s,baz=46,slow=6.6,SNR=26						
SONM				pP	pP	19 10 51.4	-0.3
	comp=Z,1.7nm,0.5s,baz=42,slow=7.2,SNR=5.0						
SONM				PcP	PcP	19 11 34.9	+0.6
	comp=Z,4.7nm,0.6s,baz=70,slow=1.7,SNR=11						
SONM				LR	LR	19 36 40.5	
	comp=Z,36nm,18.8s,baz=16,slow=38						
OUL	Oulu	55.82	1	P	P	19 10 36.4	-0.3
OUL				pmax	pmax		
	comp=Z,11nm,1.0s						
NVS	Novosibirsk	57.84	326⇓	*i*P	pP	19 11 08.3	+0.5
NVS				pmax	pmax		
	comp=N,2.0nm,0.9s						
NVS				pmax	pmax		
	comp=E,4.0nm,0.9s						
NVS				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ZAA1	Zalesovo Array	58.15	324	*e*P	P	19 10 53.5	+0.2
ZAA0	Zalesovo Array	58.15	324	*e*P	P	19 10 53.3	0.0
	comp=Z,10nm,0.6s						
ZALV	Zalesovo Beam	58.15	324	P	P	19 10 53.5	+0.2

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           comp=Z,5.0nm,0.5s,baz=32,slow=6.5,SNR=23
ZALV                                 pP      pP      19 11 10.4 +0.4
           comp=Z,10.0nm,0.5s,baz=29,slow=6.9,SNR=15
ZALV   Zalesovo Beam    58.15 324  eP      P       19 10 52.9 -0.4
ZALV   Zalesovo Beam    58.15 324  eP      P       19 10 52.9 -0.4
SUF    Sumiainen        58.20   1   P      P       19 10 53.6 +0.1
SUF                                 pmax   pmax
           comp=Z,15nm,0.8s
PRGR   Permogore        58.52 350  eP      P       19 10 55.7 -0.1
PRGR                                pmax   pmax
           comp=Z,6.0nm,0.5s
HHC    Hu-ho-hao-te     58.90 298  eP      P       19 10 59.3 +0.4
HHC                                 S      S       19 18 55.0 -4.9
HHC                                 sS     pS      19 19 23.3 +4.2
HHC                                 pmax   pmax
           comp=Z,16nm,1.0s
HHC                                 pmax   pmax
           comp=Z,62nm,4.6s
HHC                                 LR     LR
           comp=N,81nm,16.4s
NB2    NORSAR Subarra   59.19   9   P      P       19 10 59.8 -0.7
           comp=Z,1.1nm,0.6s,baz=350,slow=6.9
NB2    NORSAR Subarra   59.19   9   P      P       19 11 00.3 -0.2
NOA    NORSAR Array B   59.19   9   P      P       19 11 00.8 +0.3
           comp=Z,1.6nm,0.7s,baz=351,slow=6.8,SNR=10
NOA                                 pP     pP      19 11 16.6 -0.5
           comp=Z,1.9nm,0.8s,baz=351,slow=7.0,SNR=5.5
FIA1   FINESS Array S   59.48   1  eP      P       19 11 01.8 -0.6
FIA0   FINESS Array S   59.48   1  eP      P       19 11 02.4  0.0
FIA0   FINESS Array S   59.48   1  eP      P       19 11 02.4  0.0
FINES  FINESS Array B   59.48   1   P      P       19 11 02.4  0.0
           comp=Z,3.9nm,0.5s,baz=2.2,slow=8.1,SNR=59
FINES                               pP     pP      19 11 18.0 -1.1
           comp=Z,5.0nm,0.6s,baz=12,slow=9.8,SNR=8.0
KLMR   Klimovskoe       59.74 353  eP      P       19 11 02.7 -1.5
KLMR                                pmax   pmax
           comp=Z,5.0nm,0.9s
KLMR   Klimovskoe       59.74 353  eP      P       19 11 02.7 -1.5
KLMR                                AMP            19 11 21.3
           comp=Z,5.0nm,0.9s
HFS    Hagfors          60.28   8   P      P       19 11 07.9 -0.1
           comp=Z,1.9nm,0.4s,baz=35,slow=5.3,SNR=20
ARU    Arti             61.98 341  eP      P       19 11 18.3 -1.2
           comp=Z,7.5nm,0.5s
ARU    Arti             61.98 341c iP      P       19 11 18.7 -0.8
ARU                                                19 11 57.0
ARU                                                19 13 33.3
ARU                                 S      S       19 19 40.8 +2.3
ARU                                 SS     SS      19 23 36.2 -4.4
ARU                                 pmax   pmax
           comp=Z,5.0nm,0.5s
VSU    Vasula           62.47   1c eP      P       19 11 21.8 -0.9
VSU                                 pmax   pmax
           comp=Z,23nm,0.6s
KURK   Kurchatov        62.81 326  eP      P       19 11 24.2 -0.8
           comp=Z,4.2nm,0.8s
KURK   Kurchatov        62.81 326c eP      P       19 11 24.6 -0.5
KURK                                pmax   pmax
           comp=Z,3.0nm,0.7s
BRVK   Borovoye         62.83 333c eP      P       19 11 24.0 -1.2
BRVK                                pmax   pmax
           comp=Z,3.0nm,0.8s
BVAR   Borovoye Array   62.83 333   P      P       19 11 24.6 -0.6
           comp=Z,5.8nm,0.5s,baz=43,slow=6.4,SNR=43
KURBB  Kurchatov Arra   62.91 326   P      P       19 11 25.8  0.0
           comp=Z,4.0nm,0.5s,baz=27,slow=6.7,SNR=40
EKA    Eskdalemuir Ar   62.94  19   P      P       19 11 26.3 +0.4
           comp=Z,4.0nm,0.7s,baz=340,slow=5.6,SNR=10
GUMO   Guam             64.81 253   LR     LR      19 35 51.4
           comp=Z,8.0nm,22.0s,baz=132,slow=32
MK31   Makanchi Array   65.21 322  eP      P       19 11 40.3 -0.7
MK31   Makanchi Array   65.21 322  eP      P       19 11 40.3 -0.7
MK32   Makanchi Array   65.21 322  eP      P       19 11 40.5 -0.5
MKAR   Makanchi Array   65.21 322   P      P       19 11 40.5 -0.5
           comp=Z,2.2nm,0.5s,baz=36,slow=6.4,SNR=58
MKAR                                pP     pP      19 11 57.9  0.0
           comp=Z,1.3nm,0.5s,baz=38,slow=7.5,SNR=5.1
MKAR   Makanchi Array   65.21 322  eP      P       19 11 40.3 -0.7
           comp=Z,13nm,0.5s
MK01   Makanchi Array   65.23 322  eP      P       19 11 40.1 -1.0
MAKZ   Makanchi         65.30 322  eP      P       19 11 40.8 -0.7
           comp=Z,3.7nm,0.4s
MAKZ   Makanchi         65.30 322  eP      P       19 11 40.8 -0.7
MAKZ                                pmax   pmax
           comp=Z,4.0nm,0.4s
WMQ    Urumqi           66.04 317   P      P       19 11 50.0 +3.6
ABKAR  Akbulak array    68.61 338  eP      P       19 12 01.6 -0.8
CLL    Collm            68.98  10  eP      P       19 12 05.0 +0.3
CLL                                epP     pP      19 12 22.0 +0.2
CLL    Collm            68.98  10  eP      P       19 12 05.0 +0.3
CLL                                e               19 12 22.0
BAIF   Baives           69.19  16   P      P       19 12 06.2 +0.2
BAIF                                pmax   pmax
           comp=Z,2.0nm,0.7s
PDGK   Podgornoye       69.20 322   P      P       19 12 06.8 +0.4
PDGK                                pmax   pmax
           comp=Z,3.0nm,1.2s
VSR    Storozhevoye     69.37 353  eP      P       19 12 05.3 -1.8
VSR                                 pmax   pmax
           comp=Z,2.0nm,0.4s
BRG    Berggiesshubel   69.49   9  eP      P       19 12 08.6 +0.7
           comp=Z,2.9nm,0.9s
BRG                                e               19 12 25.9
           comp=Z,7.5nm,1.1s
BRG    Berggiesshubel   69.49   9  eP      P       19 12 08.6 +0.7
BRG                                e               19 12 25.9
BRG                                 pmax   pmax
           comp=Z,3.0nm,0.9s
MOX    Moxa             69.51  11   P      P       19 12 09.0 +1.0
MOX                                 pmax   pmax
           comp=Z,10.0nm,1.1s
KSP    Ksiaz            69.70   8   P      P       19 12 10.2 +1.0
PVCC   Panska Ves       69.89   9  eP      P       19 12 11.8 +1.5
PVCC                               ex      x       19 12 28.6
PVCC   Panska Ves       69.89   9  eP      P       19 12 11.8 +1.5
PVCC                               e               19 12 28.6
LDF    La Druitiere     69.94  19  eP      P       19 12 10.2 -0.5
LDF                                 pmax   pmax
           comp=Z,16nm,1.4s
UPC    Upice            70.02   8  ex      pP      19 12 29.4 +1.2
DPC    Dobruska-Polom   70.20   8  eP      P       19 12 13.4 +1.1
DPC                                ex      x       19 12 30.7
DPC    Dobruska-Polom   70.20   8  eP      P       19 12 13.4 +1.1
DPC                                e               19 12 30.7
AKASG  Malin Array Be   70.25 359   P      P       19 12 11.9 -0.6
           comp=Z,4.0nm,0.5s,baz=5.4,slow=6.3,SNR=24
AKASG                               pP     pP      19 12 29.2 -0.4
           comp=Z,3.0nm,0.4s,baz=6.0,slow=6.4,SNR=5.9
AKBB   Malin Array Si   70.25 359  eP      P       19 12 11.6 -1.0
           comp=Z,6.6nm,0.6s
KIEV   Kiev             70.26 359  eP      P       19 12 11.4 -1.1
           comp=Z,6.8nm,0.5s
KIEV   Kiev             70.26 359  iP      P       19 12 11.2 -1.4
KIEV                                pmax   pmax
           comp=Z,4.0nm,0.5s
PRU    Pruhonice        70.42   9  eP      P       19 12 15.1 +1.5
PRU                                ex      x       19 12 31.9
PRU    Pruhonice        70.42   9  eP      P       19 12 15.1 +1.5
PRU                                e               19 12 31.9
KRLC   Kraliky          70.50   8  eP      P       19 12 15.1 +1.0
KRLC                               ex      x       19 12 32.4
KRLC   Kraliky          70.50   8  eP      P       19 12 15.1 +1.0
KRLC                               e               19 12 32.4
GOPC   GO Pecny, Ondr   70.52   9  eP      P       19 12 15.1 +0.9
GOPC   GO Pecny, Ondr   70.52   9  eP      P       19 12 15.1 +0.9
MORC   Moravsky Berou   70.85   7  eP      P       19 12 16.9 +0.6
MORC                               e               19 12 33.8
KHC    Kasperske Hory   71.19  10  eP      P       19 12 19.4 +1.1
KHC                                ex      x       19 12 36.4
KHC    Kasperske Hory   71.19  10  eP      P       19 12 18.8 +0.5
           comp=Z,2.1nm,1.0s
KHC    Kasperske Hory   71.19  10  eP      P       19 12 18.8 +0.5
KHC                                 pmax   pmax
           comp=Z,2.0nm,1.0s
CDF    Champ du Feu     71.22  14  eP      P       19 12 19.5 +0.9
CDF                                 pmax   pmax
           comp=Z,7.0nm,1.2s
VRAC   Vranov           71.25   8   P      P       19 12 19.0 +0.3
VRAC                                pmax   pmax
           comp=Z,8.0nm,0.8s
VRAC   Vranov           71.25   8  eP      P       19 12 19.0 +0.3
VRAC                               e               19 12 36.3
AAK    Ala-Archa        71.33 326  iP      P       19 12 18.9 -0.5
AAK                                 pmax   pmax
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           comp=Z,1.0nm,0.8s
NIE    Niedzica         71.36   5   P      P       19 12 20.4 +1.1
NIE                                 pmax   pmax
           comp=Z,3.0nm,0.9s
KRUC   Moravsky         71.48   8  eP      P       19 12 20.5 +0.5
KRUC                               e               19 12 37.7
GEC2   GERESS Array S   71.48  10  eP      P       19 12 21.0 +0.8
           comp=Z,2.4nm,0.8s
GEC2   GERESS Array S   71.48  10  eP      P       19 12 21.0 +0.8
GEC2                                pmax   pmax
           comp=Z,2.0nm,0.8s
GERES  GERESS Array B   71.48  10   P      P       19 12 21.2 +1.0
           comp=Z,1.2nm,0.6s,baz=352,slow=4.8,SNR=17
GERES                               pP     pP      19 12 38.0 +0.7
           comp=Z,1.6nm,0.8s,baz=358,slow=4.3,SNR=6.0
GEA0   GERESS Array S   71.49  10  eP      P       19 12 20.6 +0.4
HAU    Haudompre        71.50  15  eP      P       19 12 20.5 +0.3
HAU                                 pmax   pmax
           comp=Z,2.0nm,0.5s
LANS   Liptovska Anna   71.58   6  eP      P       19 12 22.1 +1.4
LANS                               e               19 12 39.1
LANS   Liptovska Anna   71.58   6  eP      P       19 12 22.1 +1.4
LANS                               epP     PcP     19 12 39.1 -0.6
HINF   Hinteralfeld     71.75  15  eP      P       19 12 22.9 +1.2
HINF                                pmax   pmax
           comp=Z,6.0nm,1.1s
MFF    Saint Martin d   71.86  20  eP      P       19 12 23.1 +0.7
MFF                                 pmax   pmax
           comp=Z,4.0nm,0.8s
KK31   Karatay Array    72.01 329  eP      P       19 12 22.5 -0.8
KK31   Karatay Array    72.01 329  eP      P       19 12 22.5 -0.8
KKAR   Karatay Array    72.01 329  eP      P       19 12 22.3 -1.0
KKAR   Karatay Array    72.01 329  eP      P       19 12 22.3 -1.0
SSF    Saint Saulge     72.02  17  eP      P       19 12 23.2 -0.1
SSF                                 pmax   pmax
           comp=Z,4.0nm,0.7s
MNAS   Manas            72.03 327   P      P       19 12 23.7  0.0
MNAS                                pmax   pmax
           comp=Z,1.0nm,0.8s
VYHS   Vyhne            72.21   6  eP      P       19 12 25.2 +0.8
VYHS                                pmax   pmax
           comp=Z,5.0nm,1.5s
VYHS   Vyhne            72.21   6  eP      P       19 12 25.2 +0.8
VYHS                               epP     PcP     19 12 42.2 -0.1
AVF    Avril sur Loir   72.26  17  eP      P       19 12 24.4 -0.3
AVF                                 pmax   pmax
           comp=Z,6.0nm,0.8s
SMF    Signal de Mont   72.47  17  eP      P       19 12 25.7 -0.3
SMF                                 pmax   pmax
           comp=Z,3.0nm,0.7s
MOA    Molln            72.52  10  eP      P       19 12 26.6 +0.3
           comp=Z,3.6nm,1.2s
RETA   Reutte           72.54  12  eP      P       19 12 26.6 +0.1
           comp=Z,1.3nm,0.4s
TCF    Toulx Ste Croi   72.56  18  eP      P       19 12 25.5 -1.1
TCF                                 pmax   pmax
           comp=Z,6.0nm,1.3s
CONA   Conrad Observa   72.57   9  eP      P       19 12 27.4 +0.7
           comp=Z,2.7nm,0.7s
DAVA   Damuels          72.64  13  eP      P       19 12 27.6 +0.4
           comp=Z,3.1nm,0.8s
MOTA   Moosalm          72.72  12  eP      P       19 12 28.7 +1.1
           comp=Z,15nm,1.6s
WATA   Walderalm        72.78  12   P      P       19 12 28.4 +0.5
           comp=Z,2.8nm,0.5s
PSZ    Piszkesteto      72.84   6  eP      P       19 12 28.4 +0.1
           comp=Z,7.6nm,0.9s
PSZ    Piszkesteto      72.84   6  eP      P       19 12 28.4 +0.1
PSZ                                 pmax   pmax
           comp=Z,8.0nm,0.9s
WTTA   Wattenberg       72.85  12  eP      P       19 12 29.7 +1.3
           comp=Z,3.0nm,0.5s
FETA   Feichten         73.00  12  eP      P       19 12 30.6 +1.3
           comp=Z,3.8nm,0.9s
KBA    Koelnbreinsper   73.20  10  eP      P       19 12 31.9 +1.4
           comp=Z,5.8nm,0.6s
KBA    Koelnbreinsper   73.20  10   P      P       19 12 31.6 +1.1
KBA                                 pmax   pmax
           comp=Z,14nm,1.0s
ARSA   Arzberg          73.22   9  eP      P       19 12 30.0 -0.4
           comp=Z,4.4nm,1.1s
BUR08  Bucovina Ar. S   73.29   2  eP      P       19 12 31.0 +0.1
BUR04  Bucovina Ar. S   73.32   2  eP      P       19 12 30.8 -0.3
ABTA   Abfaltersbach    73.45  11   P      P       19 12 31.5 -0.4
           comp=Z,1.9nm,0.5s
MYKA   Terra Mystica    73.68  10  eP      P       19 12 34.6 +1.4
           comp=Z,1.5nm,0.5s
SOKA   Soboth           73.75   9  eP      P       19 12 34.9 +1.2
           comp=Z,2.1nm,0.7s
KSH    Kashi            73.76 323   P      P       19 12 37.3 +3.4
KSH                                 sP     sP      19 12 59.5 +1.4
CAF    Calviac          73.87  19  eP      P       19 12 34.2 -0.1
CAF                                 pmax   pmax
           comp=Z,21nm,1.7s
OBKA   Obir             73.88  10  iP      P       19 12 35.1 +0.7
           comp=Z,12nm,0.7s
LPL    La Plagne        73.99  15  eP      P       19 12 38.3 +3.0
LPL                                 pmax   pmax
           comp=Z,2.0nm,0.6s
LPG    La Plagne        74.01  15  eP      P       19 12 37.1 +1.6
LPG                                 pmax   pmax
           comp=Z,8.0nm,1.2s
VIVF   Saint-Julien-l   74.34  17  eP      P       19 12 37.1  0.0
VIVF                                pmax   pmax
           comp=Z,4.0nm,1.0s
ORIF   Oris-en-Rattie   74.46  16  eP      P       19 12 39.4 +1.6
ORIF                                pmax   pmax
           comp=Z,10.0nm,1.3s
VRI    Vrincioaia       75.09   1   P      P       19 12 41.8 +0.5
VRI                                 pmax   pmax
           comp=Z,33nm,1.1s
BZS    Buzias           75.21   5   P      P       19 12 42.2 +0.2
BZS                                 pmax   pmax
           comp=Z,5.0nm,0.9s
ETSF   Etsaut           75.37  21  eP      P       19 12 43.6 +0.5
ETSF                                pmax   pmax
           comp=Z,41nm,2.1s
MTLF   Montolieu        75.43  19  eP      P       19 12 43.4 +0.1
MTLF                                pmax   pmax
           comp=Z,22nm,1.7s
CFR    Carcaliu         75.78 360   P      P       19 12 45.4 +0.1
KBZ    Khabaz           76.50 349   P      P       19 12 50.0 +0.7
           comp=Z,1.7nm,0.7s,baz=17,slow=8.2,SNR=4.2
KBZ    Khabaz           76.50 349  eP      P       19 12 50.0 +0.7
NCK    Nalchik          76.66 348  iP      P       19 12 49.8 -0.5
NCK                                 pmax   pmax
           comp=Z,5.0nm,1.0s
LSA    Lhasa            77.14 307  eP      P       19 12 52.9 -0.9
           comp=Z,8.1nm,0.4s
LSA    Lhasa            77.14 307  eP      P       19 12 52.9 -0.9
LSA                                 pmax   pmax
           comp=Z,8.0nm,0.4s
ES19   SONSECA Array    77.79  25  eP      P       19 12 57.5 +0.8
ESDC   Sonseca Array    77.80  25   P      P       19 12 57.6 +0.8
           comp=Z,1.4nm,0.6s,baz=341,slow=5.0,SNR=11
ESDC                                pP     pP      19 13 14.7 +0.6
           comp=Z,1.2nm,0.6s,baz=342,slow=5.0,SNR=4.4
SRS    Serrai           79.78   3   P      P       19 13 07.4 -0.2
GEYT   Alibeck          79.86 336   P      P       19 13 08.3 +0.2
           comp=Z,0.9nm,0.5s,baz=353,slow=3.6,SNR=5.1
GYA0B  ALIBECK ARRAY    79.86 336  eP      P       19 13 07.6 -0.5
           comp=Z,37nm,0.8s
GRG    Griva            79.89   4   P      P       19 13 09.0 +0.8
FNA    Florina          80.03   5  eP      P       19 13 08.9 -0.1
           comp=Z,7.7nm,0.6s
FNA    Florina          80.03   5  eP      P       19 13 08.9 -0.1
FNA                                 pmax   pmax
           comp=Z,8.0nm,0.6s
SOH    Sokhos           80.06   4   P      P       19 13 09.7 +0.5
LIT    Litokhoron       80.75   4  eP      P       19 13 12.8 -0.1
           comp=Z,6.0nm,0.7s
LIT    Litokhoron       80.75   4  eP      P       19 13 12.8 -0.1
LIT                                 pmax   pmax
           comp=Z,6.0nm,0.7s
BR101  Keskin Array S   81.12 356  eP      P       19 13 15.2 +0.2
BRTR   Keskin Array B   81.12 356   P      P       19 13 15.2 +0.2
           comp=Z,1.6nm,0.6s,baz=31,slow=1.9,SNR=5.1
AGG    Agios Georgios   81.82   4  eP      P       19 13 18.2 -0.4
           comp=Z,20nm,1.0s
AGG    Agios Georgios   81.82   4  eP      P       19 13 18.2 -0.4
AGG                                 pmax   pmax
           comp=Z,20nm,1.0s
CM31   Chiang Mai Arr   83.57 295  eP      P       19 13 27.6 -0.3
CMAR   Chiang Mai Arr   83.57 295   P      P       19 13 27.0 -0.9
           comp=Z,1.6nm,0.8s,baz=21,slow=5.4,SNR=10
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CM01   Chiang Mai Arr   83.59 295  eP      P       19 13 26.8 -1.2
KEST   Kesra            83.96  15   P      P       19 13 30.8 +1.0
           comp=Z,3.1nm,0.6s,baz=236,slow=3.3,SNR=9.3
KEST   Kesra            83.96  15  eP      P       19 13 30.4 +0.6
           comp=Z,16nm,1.4s
MDT    Midelt           84.23  27   P      P       19 13 32.5 +1.3
           comp=Z,5.5nm,0.8s,baz=336,slow=5.1,SNR=6.6
MMAI   Mount Meron Ar   87.72 354   P      P       19 13 49.0 +0.7
           comp=Z,0.7nm,0.4s,baz=23,slow=4.7,SNR=7.1
ATAH   Atahualpa        87.87 108   LR     LR      19 52 49.5
           comp=Z,28nm,21.1s,baz=91,slow=35
PTGA   Pitinga          91.67  89  eP      P       19 14 06.6 -0.4
           comp=Z,5.0nm,0.8s
BOSA   Boshof          149.16   5   PKPbc  PKPbc   19 20 47.3 -0.2
           comp=Z,2.2nm,0.5s,baz=351,slow=1.3,SNR=11
QSPA   South Pole Qui  149.20 180   PKPbc  PKPbc   19 20 46.4 +0.1
           comp=Z,6.3nm,0.8s,baz=195,slow=0.6,SNR=20
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*ISK **28** 19:09:19.1, 39°.74N×38°.86E, h5^{km}, ML3.3/20*
*DDA **28** 19:09:20.4, 39°.71N×38°.82E, h5^{km}, Ml3.5*
*CSEM **28** 19:09:20.6±0.1, 39°.72N×38°.89E, h2^{km}, ML3.5, Error ellipse: s-maj=3.1km s-min=2.9km az=133.0*
ISC 28 19:09:21.0±1.1**, 39°.72N**±0°.02×**38°.87E**±0°.02**, h6**^{km}±9^{km}**,**
n113, σ1§16/142**, Turkey**

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Code   Station Name       Δ°  AZ°   Phase ID            Time      Res
                                    Op     ISC       h  m  s     ISC
REFA   Refahiye_ERZ˜      0.33 194  iP      Pg      19 09 25.6 -1.9
REFA                                iS      Sg      19 09 29.2 -2.8
REFA   Refahiye_ERZ˜      0.33 194   P      Pg      19 09 25.6 -1.9
ILIC   ilic-Erzincan      0.35 221   PG     Pg      19 09 27.7 -0.2
ILIC                                 SG     Sb      19 09 33.7 -1.9
ILIC   ilic-Erzincan      0.35 221  ePg     Pg      19 09 27.7 -0.2
ILIC                                eSg     Sb      19 09 33.7 -1.9
KELT   Kelkit             0.52  35  iP      Pg      19 09 31.3 +0.2
KELT                                iS      Sb      19 09 39.6 -1.0
KELT   Kelkit             0.52  35   P      Pg      19 09 31.3 +0.2
KELT                                 S      Sb      19 09 39.6 -1.0
KEMA   Kemaliye           0.53 213  iP      Pg      19 09 31.0 -0.3
KEMA                                iS      Sb      19 09 39.4 -1.5
KEMA   Kemaliye           0.53 213   P      Pg      19 09 31.0 -0.3
KEMA                                 S      Sb      19 09 39.3 -1.5
EUZM   Uzumlu             0.64  91  iP      Pb      19 09 33.8 -0.8
EUZM                                iS      Sn      19 09 45.4 -1.8
EUZM   Uzumlu             0.64  91   P      Pb      19 09 33.8 -0.8
ERZN   Erzincan           0.67 101   PG     Pg      19 09 33.5 -0.5
ERZN                                 SG     Sb      19 09 43.8 -1.0
SUSE   Susehri            0.71 314  iP      Pb      19 09 34.7 -1.2
SUSE                                iS      Sb      19 09 45.4 -0.5
SUSE   Susehri            0.71 314   P      Pb      19 09 34.7 -1.2
SUSE                                 S      Sb      19 09 45.4 -0.5
TNCL   Tunceli-Merkez     0.80 139  iP      Pg      19 09 36.0 -0.3
TNCL                                iS      Sb      19 09 48.0 -0.4
TNCL   Tunceli-Merkez     0.80 139   P      Pg      19 09 36.0 -0.3
TNCL                                 S      Sb      19 09 48.0 -0.4
GUMT   Gumushane          0.88  32   PG     Pg      19 09 37.0 -0.9
GUMT   Gumushane          0.88  32  ePg     Pg      19 09 37.0 -0.9
PTK    Pertek             0.92 154   PG     Pg      19 09 37.7 -1.0
PTK    Pertek             0.92 154  ePg     Pg      19 09 37.7 -1.0
HEKM   Malatya_Hekimh     1.09 220  iP      Pb      19 09 41.9 -0.6
HEKM                                iS      Sn      19 09 57.5 -1.1
HEKM   Malatya_Hekimh     1.09 220   P      Pb      19 09 41.9 -0.6
HEKM                                 S      Sn      19 09 57.5 -1.1
BAYT   Ayd˜–ntepe-Bay     1.19  55   PN     Pg      19 09 42.4 -1.4
BAYT   Ayd˜–ntepe-Bay     1.19  55  ePn     Pg      19 09 42.4 -1.4
ESPY   Espiye-Giresun     1.20 355   PN     Pg      19 09 42.8 -1.3
ESPY   Espiye-Giresun     1.20 355  ePn     Pg      19 09 42.8 -1.3
ELZG   Elazig             1.22 176  iP      Pg      19 09 43.6 -0.8
ELZG                                iS      Sn      19 10 01.1 -0.6
ELZG   Elazig             1.22 176   P      Pg      19 09 43.7 -0.8
ELZG                                 S      Sn      19 10 01.1 -0.6
KOPT   Kop Dagi           1.29  76  iP      Pn      19 09 46.0 +0.2
KOPT   Kop Dagi           1.29  76   P      Pn      19 09 46.0 +0.2
GRSN   GIRESUNGRSN        1.29 339  iP      Pg      19 09 44.7 -1.1
GRSN   GIRESUNGRSN        1.29 339   P      Pg      19 09 44.7 -1.1
YEDI   Yedisu-Bingol      1.32 102   PN     Pn      19 09 45.7 -0.5
YEDI   Yedisu-Bingol      1.32 102  ePn     Pn      19 09 45.7 -0.5
SCER   sogukcermik        1.35 277  iP      Pn      19 09 46.0 -0.5
SCER                                iS      Sn      19 10 06.4 +1.6
SCER   sogukcermik        1.35 277   P      Pn      19 09 46.0 -0.5
SCER                                 S      Sn      19 10 06.4 +1.6
SVRC   Sivrice-ELAZID     1.38 166   PN     Pn      19 09 45.7 -1.2
SVRC                                 SN     Sn      19 10 07.1 +1.5
SVRC   Sivrice-ELAZID     1.38 166  ePn     Pn      19 09 45.7 -1.2
SVRC                                eSn     Sn      19 10 07.1 +1.5
MACK   Trabzon            1.40  29  iP      Pg      19 09 47.3 -0.7
MACK   Trabzon            1.40  29   P      Pg      19 09 47.3 -0.7
KTUT   Trabzon            1.44  28   PN     Pn      19 09 46.6 -1.0
KTUT   Trabzon            1.44  28  ePn     Pn      19 09 46.6 -1.0
SVSK   Karacayir          1.45 278   PN     Pn      19 09 46.1 -1.7
SVSK   Karacayir          1.45 278  ePn     Pn      19 09 46.1 -1.7
ORDU   Ordu-Boztepe       1.49 329  iP      Pb      19 09 48.5 -0.6
ORDU   Ordu-Boztepe       1.49 329   P      Pb      19 09 48.5 -0.6
BINT   Bingol             1.51 123  ePn     Pg      19 09 49.5 -0.5
DARE   Darende-Malaty     1.57 224   PN     Pn      19 09 48.9 -0.6
DARE   Darende-Malaty     1.57 224  ePn     Pn      19 09 48.9 -0.6
BNGB   Bingˆ¶l            1.58 117   PN     Pn      19 09 49.5 -0.1
CUGUR  Gurin_S˜VAS        1.59 232  iP      Pg      19 09 50.6 -0.9
CUGUR                               iS      Sg      19 10 15.0 +3.0
CUGUR  Gurin_S˜VAS        1.59 232   P      Pg      19 09 50.6 -0.9
AKCD   Akcadag            1.60 208  iP      Pb      19 09 50.5 -0.6
AKCD                                iS      Sg      19 10 12.9 +0.5
AKCD   Akcadag            1.60 208   P      Pb      19 09 50.5 -0.6
AKCD                                 S      Sg      19 10 12.9 +0.5
ECAT   Cat-ERZURUM        1.63  93  iP      Pb      19 09 50.9 -0.7
ECAT   Cat-ERZURUM        1.63  93   P      Pb      19 09 50.9 -0.7
CUALT  Altinyayla-SIV     1.69 255  iP      Pb      19 09 52.0 -0.6
CUALT                               iS      Sg      19 10 21.0 +5.6
CUALT  Altinyayla-SIV     1.69 255   P      Pb      19 09 52.0 -0.6
ERBA   Erbaa              1.88 301  iP      Pb      19 09 55.0 -0.8
ERBA   Erbaa              1.88 301   P      Pb      19 09 55.0 -0.8
TOKT   Tokat              1.88 289   PN     Pn      19 09 52.7 -1.1
TOKT   Tokat              1.88 289  ePn     Pn      19 09 52.7 -1.1
BNGL   BINGOL             1.93 113  iP      Pg      19 09 58.6 +0.6
TOKA   Tokat              1.93 289  iP      Pb      19 09 55.8 -0.9
TOKA                                iS      Sg      19 10 24.1 +1.0
TOKA   Tokat              1.93 289   P      Pb      19 09 55.8 -0.9
ERZM   Erzurum            1.93  84  iP      Pg      19 09 57.7 -0.4
ELBS   KAHRAMANMARAS_1.94 225       iP      Pb      19 09 55.8 -1.0
ELBS                                iS      Sg      19 10 24.3 +0.9
ELBS   KAHRAMANMARAS_1.94 225        P      Pb      19 09 55.8 -1.0
CHOM   Cayeli-Rize        2.00  46   PN     Pn      19 09 55.3  0.0
CHOM   Cayeli-Rize        2.00  46  ePn     Pn      19 09 55.3  0.0
DYBB   Diyarbakir         2.02 150   PN     Pn      19 09 55.8 +0.1
CUSAR  Sarkisla-SIVAS     2.05 262  iP      Pb      19 09 57.6 -1.1
CUSAR                               iS      Sg      19 10 29.0 +2.1
CUSAR  Sarkisla-SIVAS     2.05 262   P      Pb      19 09 57.6 -1.1
DIY    Diyarbakir         2.11 149  ePn     Pn      19 09 55.8 -1.0
URFA   Urfa               2.27 181   PN     Pn      19 09 59.5 +0.3
URFA   Urfa               2.27 181  ePn     Pn      19 09 59.5 +0.3
SARI   SarD1z-Kayseri     2.31 236   PN     Pn      19 10 00.5 +0.7
SVAN   Silvan-Diyarba     2.40 130   PN     Pn      19 10 01.3 +0.5
SVAN   Silvan-Diyarba     2.40 130  ePn     Pn      19 10 01.3 +0.5
DDEM   Demirkent          2.50  61  iP      Pb      19 10 06.7 +0.4
BNN    Bunyan             2.50 251   PN     Pn      19 10 02.6 +0.3
BNN    Bunyan             2.50 251  ePn     Pn      19 10 02.6 +0.3
EKAR   Karacoban          2.52 100  iP      Pg      19 10 09.7 +0.4
DBAD   Bademkaya          2.52  58  iP      Pb      19 10 06.7  0.0
KVT    Kavak              2.55 303   PN     Pn      19 10 03.4 +0.5
KVT    Kavak              2.55 303  ePn     Pn      19 10 03.4 +0.5
MAZI   Mazidag            2.57 151   PN     Pn      19 10 03.7 +0.4
MAZI   Mazidag            2.57 151  ePn     Pn      19 10 03.7 +0.4
BTMN   Batman             2.62 133  iP      Pb      19 10 08.4 +0.1
SAMS   Samsun-Alacam      2.62 310  iP      Pb      19 10 08.5 +0.1
DBOC   Borcka             2.68  52  iP      Pb      19 10 08.4 -1.0
DAGI   Agillar            2.69  59  iP      Pb      19 10 10.2 +0.6
KMRS   Kahramanmaras      2.69 216   PN     Pn      19 10 05.8 +0.9
KMRS   Kahramanmaras      2.69 216  ePn     Pn      19 10 05.8 +0.9
BCA    Borcka             2.72  50   PN     Pn      19 10 05.4 +0.2
BCA    Borcka             2.72  50  ePn     Pn      19 10 05.4 +0.2
GURO   Guroymak-BITLI     2.72 114   PN     Pn      19 10 06.3 +0.9
GURO   Guroymak-BITLI     2.72 114  ePn     Pn      19 10 06.3 +0.9
YOZ    Yozgat             2.74 270   PN     Pn      19 10 06.6 +1.0
YOZ    Yozgat             2.74 270  ePn     Pn      19 10 06.6 +1.0
ARTV   Artvin             2.76  57  iP      Pb      19 10 11.2 +0.4
SENK   Senkaya-Erzuru     2.80  71   PN     Pn      19 10 06.8 +0.3
SENK   Senkaya-Erzuru     2.80  71  ePn     Pn      19 10 06.8 +0.3
MARD   Mardin             2.83 147  iP      Pb      19 10 12.9 +0.9
GAZ    Gaziantep          2.85 208   PN     Pn      19 10 08.4 +1.3
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GAZ	**Gaziantep**	2.85	208	*e*Pn	Pn	19 10 08.4	+1.3
ANDN	**Andirin**	2.91	224	*i* P	Pg	19 10 15.3	-1.4
ANDN				*i* S	Sg	19 10 59.2	+4.8
SRTM	**Siirt_Merkez**	2.94	125	*i* P	Pb	19 10 14.1	+0.2
COAL	**Corum-Alaca**	3.03	281	*i* P	Pb	19 10 15.9	+0.5
YAHY	**KAYSERI_Yahyal**	3.18	240	*i* P	Pb	19 10 18.7	+0.8
AVNS	**Nevsehir-Avano**	3.25	255	*i* P	Pg	19 10 22.5	-0.9
AVNS				*i* S	Sg	19 11 15.6	+10
CORM	**Corum**	3.29	279	PN	Pn	19 10 13.9	+0.7
CORM	**Corum**	3.29	279	*e*Pn	Pn	19 10 13.9	+0.7
CDAG	**Cicekdag**	3.47	270	*i* P	Pb	19 10 23.9	+0.9

*TAP **28** 19:25:28.8, 24°.92N×122°.53E, h122^{km}, ML3.8, C*

*ISCJB **28** 19:25:29.1±0.4, 24°.85N±0°.03×122°.52E±0°.02, h120^{km}±3^{km}, Error ellipse: s-maj=4.3km s-min=2.5km az=170.2*

*JMA **28** 19:25:29.1±0.2, 24°.99N×122°.52E, h116^{km}±4^{km}, M2.7*

ISC 28 19:25:29.3±1.4**, 24°.86N**±0°.04×**122°.51E**±0°.02**, h122**^{km}±7^{km}**, n90, σ0°.79**/167**, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS1	**EOS1**	0.47	229	P	Pn	19 25 47.6	+0.4
	baz=216						
EOS1				*e*S	Sn	19 26 01.7	+1.0
	baz=216						
TWB1	**Santiao Chiao**	0.50	287	P	Pn	19 25 47.1	-0.3
	baz=280						
TWB1				*e*S	Sn	19 26 00.8	-0.3
	baz=280						
JYNG	**Yonagunijimaku**	0.56	136	P	Pn	19 25 47.9	0.0
JYNG				S	Sn	19 26 02.0	+0.2
YOJ	**Yonaguni jima**	0.60	131	*e*P	Pn	19 25 48.0	-0.1
	baz=142						
YOJ	**Yonaguni jima**	0.60	131	P	Pn	19 25 48.0	-0.1
YOJ				*e*S	Sn	19 26 02.8	+0.5
TIPB	**Shuangxi**	0.64	280	P	Pn	19 25 48.4	0.0
	baz=272						
TIPB				*e*S	Sn	19 26 02.8	0.0
	baz=272						
TWC	**Suao**	0.65	248	P	Pn	19 25 48.5	0.0
	baz=237						
TWC				*e*S	Sn	19 26 01.5	-1.4
	baz=237						
TWE	**Neicheng**	0.78	260	P	Pn	19 25 49.4	-0.1
	baz=255						
TWE				*e*S	Sn	19 26 04.5	-0.2
	baz=255						
NANB	**Nanao**	0.82	238	P	Pn	19 25 49.9	+0.1
	baz=232						
NANB				S	Sn	19 26 05.6	+0.3
	baz=232						
ENA	**Nanau**	0.82	239	*e*P	Pn	19 25 50.1	+0.2
	baz=232						
ENA				*e*S	Sn	19 26 05.6	+0.2
	baz=232						
ENTT	**Nioudou**	0.89	256	P	Pn	19 25 50.8	+0.3
	baz=252						
ENTT				*e*S	Sn	19 26 07.7	+1.2
	baz=252						
YM08	**YM08**	0.90	291	*e*P	Pn	19 25 50.6	+0.1
	baz=287						
YM08				*e*S	Sn	19 26 06.4	-0.2
	baz=287						
YM05	**YM05**	0.91	290	*e*P	Pn	19 25 50.8	0.0
	baz=285						
YM05				*e*S	Sn	19 26 06.5	-0.4
	baz=285						
YM10	**YM10**	0.91	289	*e*P	Pn	19 25 51.0	+0.3
	baz=285						
YM10				*e*S	Sn	19 26 06.9	0.0
	baz=285						
NWLT	**Wulai**	0.92	265	*e*P	Pn	19 25 50.5	-0.3
	baz=268						
NWLT				*e*S	Sn	19 26 05.6	-1.5
	baz=268						
TWY	**Chenhua**	0.93	297	P	Pn	19 25 51.2	+0.4
	baz=287						
TWY				*e*S	Sn	19 26 07.7	+0.7
	baz=287						
YM04	**YM04**	0.93	288	P	Pn	19 25 50.7	-0.2
	baz=284						
YM04				*e*S	Sn	19 26 06.3	-0.9
	baz=284						
TATO	**Taipei**	0.94	277	P	Pn	19 25 50.6	-0.3
	baz=266						
TATO				S	Sn	19 26 06.1	-1.1
	baz=266						
NTST	**Danshui**	1.01	288	*e*P	Pn	19 25 51.7	+0.2
	baz=284						
NTST				*e*S	Sn	19 26 07.8	-0.6
	baz=284						
TWS1	**Kuangyinshan**	1.02	284	P	Pn	19 25 51.9	+0.2
	baz=280						
TWS1				S	Sn	19 26 08.8	+0.1
	baz=280						
YHNB	**Yeheng**	1.05	260	P	Pn	19 25 52.1	+0.1
	baz=261						
YHNB				S	Sn	19 26 09.5	+0.2
	baz=261						
NSK	**Sanguang**	1.07	260	P	Pn	19 25 52.5	+0.3
	baz=262						
NSK				*e*S	Sn	19 26 09.3	-0.2
	baz=262						
NACB	**Ninganchiao**	1.08	231	*e*P	Pn	19 25 51.9	-0.4
	baz=223						
NACB				*e*S	Sn	19 26 08.9	-0.8
	baz=223						
NNSB	**Datong**	1.11	248	*e*P	Pn	19 25 53.0	+0.2
	baz=239						
NNSB				*e*S	Sn	19 26 10.2	-0.4
	baz=239						
NNSH	**Datong**	1.11	248	*e*P	Pn	19 25 52.7	-0.1
	baz=238						
NNSH				*e*S	Sn	19 26 10.7	+0.2
	baz=238						
NNS	**Nan Shan**	1.12	248	P	Pn	19 25 53.3	+0.5
	baz=238						
NNS				*e*S	Sn	19 26 10.9	+0.3
	baz=238						
TWD	**Chiawan**	1.14	227	S	Sn	19 26 10.7	-0.1
	baz=221						
WLTB	**Daxi**	1.15	270	*e*P	Pn	19 25 53.1	+0.2
	baz=266						
WLTB				*e*S	Sn	19 26 11.4	+0.6
	baz=266						
HWA	**Hwalien**	1.21	223	*e*S	Sn	19 26 12.4	+0.4
	baz=216						
NCU	**National Centr**	1.21	275	*e*S	Sn	19 26 12.6	+0.5
	baz=272						
NCUH	**Zhongli**	1.21	275	*e*P	Pn	19 25 54.0	+0.3
	baz=272						
NCUH				*e*S	Sn	19 26 12.8	+0.7
	baz=272						
IRIF	**Iriomote-Funau**	1.22	115	P	Pn	19 25 53.5	-0.3
IRIF				*e*S	Sn	19 26 12.2	-0.1
ENLB	**Shoufeng**	1.26	221	*e*P	Pn	19 25 54.7	+0.4
	baz=211						
ENLB				*e*S	Sn	19 26 13.0	-0.1
	baz=211						
WHF	**Hehuan Shan**	1.34	238	P	Pn	19 25 56.0	+0.5
	baz=231						
WHF				*e*S	Sn	19 26 15.3	0.0
	baz=231						
TWT	**Tachien**	1.36	244	P	Pn	19 25 56.6	+1.1
	baz=241						
TWT				*e*S	Sn	19 26 15.3	0.0
	baz=241						
TDCB	**Techi**	1.37	244	*e*P	Pn	19 25 56.3	+0.8
	baz=242						
TDCB				*e*S	Sn	19 26 15.6	+0.1
	baz=242						
LIOB	**Emei**	1.38	261	P	Pn	19 25 55.6	+0.1
	baz=258						
LIOB				*e*S	Sn	19 26 15.5	+0.1
	baz=258						
SBCB	**Hsinchu**	1.39	268	*e*P	Pn	19 25 55.6	+0.1
	baz=256						
SBCB				*e*S	Sn	19 26 15.5	-0.1
	baz=256						
NSTT	**Nanjuang**	1.39	261	P	Pn	19 25 55.7	+0.1
	baz=258						
NSTT				*e*S	Sn	19 26 15.7	0.0
	baz=258						
HSN	**Hsinchu**	1.40	268	*e*S	Sn	19 26 15.1	-0.8
	baz=257						
HATJ	**Hateruma jima**	1.42	124	P	Pn	19 25 56.7	+0.7
HATJ				*e*S	Sn	19 26 16.4	+0.2
ESL	**Shilin**	1.43	224	*e*P	Pn	19 25 55.6	-0.5
	baz=229						
ESL				*e*S	Sn	19 26 15.6	-0.8
	baz=229						
CHGB	**Renai**	1.46	237	*e*P	Pn	19 25 57.2	+0.6
	baz=228						
CHGB				*e*S	Sn	19 26 17.3	0.0
	baz=228						
JKRS	**Kuro-shima**	1.50	114	P	Pn	19 25 57.1	+0.3
JKRS				S	Sn	19 26 17.8	+0.1
EGFH	**Guangfu**	1.55	220	P	Pn	19 25 57.2	-0.2
	baz=226						
EGFH				*e*S	Sn	19 26 17.7	-1.0
	baz=226						
JIJ	**Ishigaki jima**	1.56	108	P	Pn	19 25 57.3	-0.3
JIJ				S	Sn	19 26 17.7	-1.4
NMLH	**Miaoli**	1.60	259	P	Pn	19 25 58.4	+0.4
	baz=256						
NMLH				*e*S	Sn	19 26 19.8	-0.1
	baz=256						
NSY	**Sanyi**	1.66	255	P	Pn	19 25 59.2	+0.5
	baz=252						
NSY				*e*S	Sn	19 26 21.2	+0.2
	baz=252						
JISG	**Ishigakijimahi**	1.66	99	P	Pn	19 25 58.6	-0.1
JISG				S	Sn	19 26 20.2	-0.8
DPDB	**Guoxing**	1.66	241	*e*P	Pn	19 25 59.3	+0.4
	baz=233						
DPDB				*e*S	Sn	19 26 22.9	+1.6
	baz=233						
EHY	**Hungye**	1.73	219	*e*P	Pn	19 25 59.1	-0.5
	baz=224						
SMLT	**Sun Moon Lake**	1.76	237	P	Pn	19 26 01.1	+1.0
	baz=231						
SMLT				*e*S	Sn	19 26 24.0	+0.5
	baz=231						
SSLB	**Suanglung**	1.78	233	*e*P	Pn	19 26 01.1	+0.9
	baz=228						
SSLB				*e*S	Sn	19 26 24.9	+1.1
	baz=228						
TYC	**Yuchr**	1.79	238	P	Pn	19 26 01.5	+1.3
	baz=242						
TYC				*e*S	Sn	19 26 24.6	+0.8
	baz=242						
TCU	**Taichung**	1.82	247	*e*P	Pn	19 26 00.8	+0.2
	baz=252						
TCU				*e*S	Sn	19 26 24.7	+0.2
	baz=252						
YULB	**Yu-li**	1.84	218	*e*P	Pn	19 25 59.5	-1.3
	baz=223						
YULB				*e*S	Sn	19 26 23.7	-1.2
	baz=223						
WJS	**Zhushan**	1.93	238	*e*P	Pn	19 26 02.6	+0.6
	baz=236						
WJS				*e*S	Sn	19 26 29.6	+2.7
	baz=236						
WNT	**Mingjian**	1.93	240	P	Pn	19 26 02.9	+0.9
	baz=238						
WNT				*e*S	Sn	19 26 28.2	+1.2
	baz=238						
WCHH	**Zhanghua**	1.94	247	*e*S	Sn	19 26 26.7	-0.6
	baz=244						
YUS	**Yu-Shan**	1.97	227	*e*P	Pn	19 26 03.9	+0.9
	baz=218						
YUS				*e*S	Sn	19 26 29.1	+0.3
	baz=218						
FULB	**Fuli**	2.00	214	*e*P	Pn	19 26 02.9	+0.1
	baz=208						
FULB				*e*S	Sn	19 26 28.9	+0.5
	baz=208						
JTJ	**Tarama**	2.00	96	P	Pn	19 26 03.3	+0.5
JTJ				*e*S	Sn	19 26 27.3	-1.2
CHKT	**Chengkung**	2.04	211	*e*P	Pn	19 26 02.5	-0.9
	baz=205						
CHKT				*e*S	Sn	19 26 28.5	-1.0
	baz=205						
CHN5	**Tsauling**	2.10	233	*e*P	Pn	19 26 04.9	+0.7
	baz=240						
CHN5				*e*S	Sn	19 26 32.0	+1.2
	baz=240						
WGK	**Gukeng**	2.13	237	*e*P	Pn	19 26 05.2	+0.7
	baz=235						
WGK				*e*S	Sn	19 26 32.8	+1.4
	baz=235						
WDLH	**Douliu**	2.15	238	*e*P	Pn	19 26 05.0	+0.3
	baz=235						
WDLH				*e*S	Sn	19 26 33.5	+1.7
	baz=235						
ELDTW	**Lidau**	2.15	220	*e*P	Pn	19 26 04.6	-0.3
	baz=218						
ELDTW				*e*S	Sn	19 26 31.0	-1.1
	baz=218						
RLNB	**Erlin**	2.19	244	*e*P	Pn	19 26 05.3	+0.1
	baz=242						
RLNB				*e*S	Sn	19 26 32.4	-0.3
	baz=242						
WTCT	**Ta-ch'eng**	2.27	244	P	Pn	19 26 06.1	0.0
	baz=242						
WTCT				*e*S	Sn	19 26 34.2	-0.2
	baz=242						
TPUB	**Ta-pu**	2.32	228	*e*P	Pn	19 26 07.4	+0.5
	baz=237						
STYT	**Tauyuan**	2.33	224	P	Pn	19 26 08.4	+1.3
	baz=222						
TWH	**Lutao**	2.34	204	*e*P	Pn	19 26 07.4	+0.2
	baz=202						
TWH				*e*S	Sn	19 26 34.6	-1.5
	baz=202						
WTP	**Ta-pu**	2.37	228	*e*P	Pn	19 26 08.2	+0.7
	baz=236						
WTP				*e*S	Sn	19 26 38.4	+1.6
	baz=236						
JIRB	**Irabujima**	2.42	90	P	Pn	19 26 08.8	+0.7
JIRB				*e*S	Sn	19 26 37.7	-0.1
TWGBT	**Beinan**	2.42	213	*e*P	Pn	19 26 07.0	-1.2
	baz=212						
TWGBT				*e*S	Sn	19 26 36.9	-1.1
	baz=212						
WSF	**Szhu**	2.42	240	*e*P	Pn	19 26 08.4	+0.2
	baz=238						
WSF				*e*S	Sn	19 26 38.6	+0.6
	baz=238						
TWG	**Pinlang**	2.42	213	*e*P	Pn	19 26 07.5	-0.7
	baz=212						
TWG				*e*S	Sn	19 26 37.0	-1.0
	baz=212						
TWK	**Hsinying**	2.44	230	*e*P	Pn	19 26 08.8	+0.3
	baz=237						
TWK				*e*S	Sn	19 26 39.1	+0.6
	baz=237						
WLGB	**Puzi**	2.45	236	*e*P	Pn	19 26 08.4	-0.1
	baz=234						
WLGB				*e*S	Sn	19 26 39.1	+0.6
	baz=234						
CHN1	**Nanshi**	2.46	228	*e*P	Pn	19 26 09.2	+0.4
	baz=226						
CHN1				*e*S	Sn	19 26 40.6	+1.6
	baz=226						
JIKM	**Ikemajima**	2.48	88	P	Pn	19 26 10.2	+1.3
JIKM				*e*S	Sn	19 26 39.3	-0.1
SGST	**Jiashian**	2.50	225	*e*P	Pn	19 26 10.2	+1.0
	baz=223						
SGST				*e*S	Sn	19 26 41.1	+1.2
	baz=223						
SLGT	**Liugui**	2.52	223	*e*P	Pn	19 26 10.6	+1.1
	baz=229						
JOGS	**Gusukube**	2.63	92	P	Pn	19 26 12.1	+1.3
SSD	**Sandimen**	2.72	220	*e*P	Pn	19 26 12.8	+0.8
	baz=228						
SSD				*e*S	Sn	19 26 46.1	+1.2
	baz=228						
VWUC	**VWUC**	2.79	273	*e*P	Pn	19 26 12.1	-0.7
	baz=271						
MASBT	**Mashibuluo**	2.83	218	*e*P	Pn	19 26 13.9	+0.6
	baz=217						
PNG	**Penghu**	2.99	245	*e*P	Pn	19 26 14.1	-1.5
	baz=243						
PNG				*e*S	Sn	19 26 48.8	-2.4
	baz=243						
PHUB	**P'eng-hu**	3.00	244	*e*P	Pn	19 26 14.2	-1.4
	baz=242						
PHUB				*e*S	Sn	19 26 48.9	-2.5
	baz=242						
WDGT	**Dungji**	3.06	239	P	Pn	19 26 15.9	-0.5
	baz=229						
WDGT				*e*S	Sn	19 26 51.7	-1.0
	baz=229						

IDC 28 19:25:38.1±3.6**, 30°.53S**×**177°.67W, h0**^{km}**, mb3.3**/2**, mb1 3.6**/2**, mb1mx3.3**/43**, mbtmp3.3**/2**, Error ellipse: s-maj=79.8km s-min=32.0km az=117.0, Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	**Raoul Island**	1.29	350	Pn	Pn	19 26 03.5	0.0
	35nm,0.3s,baz=90,slow=20,SNR=4.9						
RAO				Sn	Sg	19 26 15.8	-3.8
	108nm,0.3s,baz=105,slow=20,SNR=8.7						
ASAR	**Alice Springs**	43.38	267	P	P	19 33 42.3	-0.4
	0.4nm,0.9s,baz=104,slow=7.3,SNR=4.0						
WRA	**Warramunga Arr**	44.38	272	P	P	19 33 50.7	0.0
	0.3nm,0.4s,baz=111,slow=8.1,SNR=8.6						
FINES	**FINESS Array B**	145.37	340	PKPbc	PKPbc	19 45 16.3	-0.8
	0.4nm,0.3s,baz=20,slow=3.5,SNR=7.4						

MEX 28 19:37:59.2±0.9**, 15°.08N**×**92°.93W, h85**^{km}±13^{km}**, MD4.0, Mexico-Guatemala border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PCIG		0.68	336	*e*P	Pn	19 38 13.3	-1.7
PCIG				*e*S	Sn	19 38 25.5	-1.2
CCIG	**Comitan**	1.42	33	*e*P	Pn	19 38 22.8	-1.0
CCIG				*e*S	Sn	19 38 40.9	-1.5
TGIG		1.69	354	*e*P	Pn	19 38 25.8	-1.5
TGIG				*e*S	Sn	19 38 46.5	-2.2
CMIG	**Matias Romero**	2.74	317	*e*P	Pn	19 38 40.7	-0.4
CMIG				*i* S	Sn	19 39 11.5	-1.9

MEX 28 19:40:48.0±0.5**, 16°.04N**×**98°.46W, h6**^{km}±4^{km}**, MD3.7, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	0.47	42	*e*P	Pg	19 40 57.0	-0.2
PNIG				*e*S	Sg	19 41 03.6	+0.2
TLIG	**Tlapa**	1.52	356	*i* P	Pn	19 41 11.4	-4.5
TLIG				*i* S	Sn	19 41 31.5	-4.6
VHO	**Vista Hermosa**	1.95	58	*e*P	Pn	19 41 18.1	-3.7
VHO				*e*S	Sn	19 41 42.5	-4.3
CAIG	**El Cayaco**	2.00	300	*i* P	Pn	19 41 18.4	-4.0
CAIG				*i* S	Sn	19 41 44.1	-3.8

MEX 28 19:42:49.9±0.9**, 15°.82N**×**98°.26W, h15**^{km}**, MD3.7, Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	0.58	13	*e*P	Pg	19 42 59.3	-2.1
PNIG				*i* S	Sg	19 43 06.5	-2.8
TLIG	**Tlapa**	1.76	350	*e*P	Pn	19 43 16.8	-3.2
TLIG				*i* S	Sn	19 43 37.5	-4.7
CAIG	**El Cayaco**	2.28	303	*i* P	Pn	19 43 23.4	-3.6
CAIG				*i* S	Sn	19 43 49.9	-5.0

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*MOS **28** 20:01:09.6±1.8, 56°.04N×113°.57E, h10^{km}, mb4.2/1, Error ellipse: s-maj=39.9km s-min=24.6km az=95.3*

BYKL 28 20:01:09.1±0.2**, 55°.97N**×**113°.56E, h23**^{km}±3^{km}**, 3C-1D, East of Lake Baykal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SVKR	**Severomuysk**	0.15	360	⇓*i*Pg	Pb	20 01 14.0	0.0
SVKR				*e*Sg	Sb	20 01 17.8	+0.4
SVKR				Pmax			
	2μm,0.3s						
SVKR				Smax			
	14μm,0.3s						
SVKR	**Severomuysk**	0.15	360	*e*PG	Pb	20 01 14.0	0.0
SVKR				*e*S	Sb	20 01 17.5	+0.1
YOA	**Uoyan**	1.04	280	⇑*i*Pg	Pb	20 01 28.4	-0.1
YOA				*e*Sg	Sn	20 01 42.7	+0.5
YOA				*e*Sb	Sb	20 01 45.8	+4.1
YOA				Pmax			
	181nm,0.2s						
YOA				max			
	1μm,0.6s						
YOA	**Uoyan**	1.04	280	*e*PG	Pb	20 01 28.4	-0.1
YOA				*e*		20 01 42.6	
YOA				pmax	pmax		
	comp=Z,182nm,0.2s						
YOA				smax	smax		
	comp=N,1μm,0.8s						
NLYR	**Nelyaty**	1.31	66	*e*Pg	Pb	20 01 32.8	-0.1
NLYR				*e*Sg	Sb	20 01 50.4	+1.1
NLYR				Pmax			
	comp=N,59nm,0.3s						
NLYR				Smax			
	comp=N,402nm,0.8s						
KMO	**Kumora**	1.33	267	⇑*i*Pg	Pb	20 01 33.2	-0.2
KMO				*e*Sg	Sb	20 01 50.8	+0.8
KMO				Pmax			
	comp=N,114nm,0.3s						
KMO				Smax			
	comp=N,543nm,1.2s						
KMO	**Kumora**	1.33	267	*e*PG	Pb	20 01 33.1	-0.3
KMO				*e*		20 01 50.8	
KMO				pmax	pmax		
	comp=Z,114nm,0.3s						
KMO				smax	smax		
	comp=N,543nm,1.2s						
YLYR	**Ulyunkhan**	1.75	232	*e*Pn	Pb	20 01 39.7	-0.8
YLYR				*e*Pg	Pn	20 01 40.7	+2.6
YLYR				*e*Sg	Sb	20 02 04.5	+2.4
YLYR				Pmax			
	comp=N,16nm,0.3s						
YLYR				Smax			
	comp=N,117nm,0.1s						
BOD	**Bodaibo**	1.87	7	*e*Pn	Pn	20 01 40.5	+0.8
BOD				*e*Pg	Pb	20 01 41.9	-0.6
BOD				*e*		20 01 47.7	
BOD				*e*Sg	Sb	20 02 06.6	+1.2
BOD				Pmax			
	comp=N,32nm,0.3s						
BOD				Smax			
	comp=N,490nm,0.3s						
BOD	**Bodaibo**	1.87	7	*e*PN	Pb	20 01 42.0	-0.5
BOD				*e*		20 02 06.7	
BOD				pmax	pmax		
	comp=Z,34nm,0.3s						
BOD				smax	smax		
	comp=E,490nm,0.6s						
NIZ	**Nizh Angarsk**	2.27	267	*e*Pg	Pb	20 01 50.3	+0.9
NIZ				*e*Sg	Sb	20 02 19.6	+2.5
NIZ				Pmax			
	comp=E,17nm,0.2s						
NIZ				Smax			
	comp=E,69nm,0.3s						
SYVR	**Suvo**	3.10	223	*e*Pn	Pn	20 01 58.0	+1.4
SYVR				*e*Pg	Pb	20 02 05.3	+1.8
SYVR				*e*		20 02 14.1	
SYVR				*e*Sg	Sb	20 02 44.7	+3.8
SYVR				max			
	comp=E,12nm,0.5s						
SYVR				Smax			
	comp=E,60nm,1.2s						
MXMB	**Maximikha**	3.90	228	*e*Pg	Pb	20 02 19.3	+2.2
MXMB				*e*Sg	Sb	20 03 10.2	+6.4
TUP	**Tupik**	3.98	110	⇑*i*Pn	Pn	20 02 09.8	+1.1
TUP				*e*		20 02 17.0	
TUP				*e*Pg	Pb	20 02 21.1	+2.6
TUP				*e*		20 02 26.4	
TUP				*e*Sn	Sn	20 02 54.6	+0.1
TUP				*e*Sg	Sb	20 03 12.9	+6.8
TUP				max			
	comp=E,9.0nm,0.3s						
TUP				Smax			
	comp=E,96nm,0.5s						
TUP	**Tupik**	3.98	110	*e*PN	Pn	20 02 09.1	+0.4
TUP				*e*S	Sb	20 03 13.6	+7.5
TUP				smax	smax		
	comp=N,106nm,0.9s						
OGRR	**Ongureny**	4.17	238	*e*Pn	Pn	20 02 13.6	+2.4
OGRR				*e*Pg	Pb	20 02 24.9	+3.3
OGRR				*e*		20 02 28.6	

OGRR				*e*Sn	Sn	20 02 58.4	-0.7
OGRR				*e*Sg	Sb	20 03 19.1	+7.7
OGRR				max			
	comp=N,7.0nm,0.5s						
OGRR				Smax			
	comp=N,18nm,0.4s						
TRG	**Tyrgan**	5.30	236	*e*Pn	Pn	20 02 28.1	+1.2
TRG				*e*Pg	Pb	20 02 45.0	+4.0
TRG				*e*Sn	Sn	20 03 25.5	-1.7
TRG				*e*Sg	Sb	20 03 52.4	+8.2
TRG				Pmax			
	comp=N,3.0nm,0.3s						
TRG				Smax			
	comp=N,15nm,0.6s						
UUDB	**Ulan-Yde**	5.39	223	*e*Sg	Sb	20 03 55.8	+9.2
UUDB				Smax			
	comp=N,28nm,0.7s						
HRMR	**Khuramsha**	5.85	225	*e*Pn	Pn	20 02 34.7	+0.3
HRMR				*e*Pg	Pb	20 02 53.6	+3.3
HRMR				*e*Sn	Sn	20 03 39.3	-1.4
HRMR				*e*Sg	Sb	20 04 09.4	+9.5
HRMR				Pmax			
	comp=N,7.0nm,0.5s						
HRMR				Smax			
	comp=N,51nm,0.5s						
KPC	**Khapcheranga**	6.32	187	*e*Pn	Pn	20 02 40.8	0.0
KPC				*e*Pg	Pb	20 03 02.8	+4.5
KPC				*e*Sn	Sn	20 03 50.5	-1.8
KPC				*e*Sg	Sb	20 04 24.6	+11
KPC				Pmax			
	comp=N,1.0nm,0.3s						
KPC				Smax			
	comp=N,30nm,0.8s						
LSTR	**Listvyanka**	6.59	235	*e*Sg	Sb	20 04 33.2	+12
LSTR				Smax			
	comp=N,15nm,1.3s						
IVK	**Ivanovka**	6.83	236	*e*Sg	Sb	20 04 41.3	+13
IVK				Smax			
	comp=N,34nm,2.2s						
ARS	**Arshan**	7.72	243	*e*Sg	Sb	20 05 07.9	+14
ARS				Smax			
	comp=N,42nm,0.8s						
MOY	**Mondy**	8.59	245	*e*Pn	Pn	20 03 12.5	+0.5
MOY				*e*Pg		20 03 42.8	
MOY				*e*Sg	Sn	20 05 34.0	+46
MOY				Pmax			
	comp=N,1.0nm,0.3s						
MOY				Smax			
	comp=N,13nm,1.4s						
ORL	**Orlik**	8.75	253	*e*Pn	Pn	20 03 14.6	+0.4
ORL				*e*Sn	Sn	20 04 49.6	-2.5
ORL				*e*Sg		20 05 39.7	
ORL				Smax			
	comp=N,9.0nm,1.2s						

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*MOS **28** 20:03:55.2±0.8, 4°.64S×153°.21E, h37^{km}, mb6.4/62, MS6.2/40, Error ellipse: s-maj=5.8km s-min=4.8km az=98.0*

*IDC **28** 20:03:56.4±0.8, 4°.66S×153°.23E, h34^{km}±4^{km}, mb5.8/39, mb1 5.8/40, mb1mx5.8/43, mbtmp6.0/40, ML3.5/1, MS5.9/49, Ms1 5.9/49, ms1mx5.8/53, Error ellipse: s-maj=10.6km s-min=8.2km az=65.0*

*GCMT **28** 20:03:56.8±0.1, 4°.85S×153°.07E, h58^{km}, MW6.5/151, Moment Tensor Solution. s151,c388; s151,c635; Duration: 4^{s}5 Moment tensor: Scale 10^{19}Nm; M$_{rr}$0.60±.00; M$_{\theta\theta}$-0.70±.00; M$_{\phi\phi}$0.09±.00; M$_{r\theta}$0.33±.00; M$_{\theta\phi}$0.13±.00; M$_{\phi r}$0.18±.00; Best double couple: M$_0$0.76400×10^{19} NP1:φ$_s$81.00000°,δ60.00000°, λ68.00000°. NP2:φ$_s$299.00000°,δ36.00000°,λ123.00000°. Principal axes: T 0.7410, Plg67.0000°, Azm308.0000°; N 0.0440, Plg19.0000°, Azm92.0000°; P -0.7860, Plg13.0000°, Azm186.0000°; nsta1 refers to body waves, cutoff=50s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*NEIC **28** 20:03:56.8±0.1, 4°.65S×153°.17E, h41^{km}, mb6.1/293, ME5.9, MS6.3/125, MW6.5, MW6.5, MW6.5 Error ellipse: s-maj=2.8km s-min=2.5km az=154.0, Moment Tensor Solution. s59 Moment tensor: Scale 10^{18}Nm; M$_{rr}$6.96; M$_{\theta\theta}$-6.52; M$_{\phi\phi}$-0.44; M$_{r\theta}$3.85; M$_{\theta\phi}$1.08; M$_{\phi r}$1.78; Best double couple: M$_0$8.10000×10^{18} NP1:φ$_s$293.00000°, δ33.00000°,λ116.00000°. NP2:φ$_s$84.00000°,δ61.00000°, λ74.00000°. Principal axes: T 8.4300, Plg70.0000°, Azm319.0000°; N -0.8400, Plg14.0000°, Azm91.0000°; P -7.6000, Plg14.0000°, Azm185.0000°; Broadband fault plane solution: P waves. NP1:φ$_s$279.00000°,δ31.00000°, λ107.00000°. NP2:φ$_s$80.00000°,δ60.00000°,λ80.00000°. Principal axes: T Plg73.0000°, Azm325.0000°; N Plg0.0000°, Azm0.0000°; P Plg14.0000°, Azm177.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt at Kavieng and Namatanai. Also felt at Kokopo, New Britain.

*ISCJB **28** 20:03:56.4±0.5, 4°.63S±0°.02×153°.16E±0°.01, h49^{km}±4^{km}, mb6.1/465, MS6.2/224 Error ellipse: s-maj=2.9km s-min=2.3km az=13.5*

*BJI **28** 20:03:57.0, 4°.66S×153°.12E, h50^{km}, mb6.2/91, mB6.5/81, Ms6.4/99, Ms7 6.3/92*

*NEIC **28** 20:04:00.0±0.0, 4°.63S×153°.27E, h60^{km}, Moment Tensor Solution. s34 Moment tensor: Scale 10^{18}Nm; M$_{rr}$5.68; M$_{\theta\theta}$-6.36; M$_{\phi\phi}$0.68; M$_{r\theta}$4.43; M$_{\theta\phi}$1.15; M$_{\phi r}$2.53; Best double couple: M$_0$8.00000×10^{18} NP1:φ$_s$76.00000°, δ66.00000°,λ68.00000°. NP2:φ$_s$300.00000°,δ32.00000°, λ130.00000°. Principal axes: T 8.1600, Plg62.0000°, Azm310.0000°; N -0.3300, Plg19.0000°, Azm85.0000°; P -7.8300, Plg17.0000°, Azm182.0000°;*

*DJA **28** 20:04:03.6±0.7, 5°S±3°×15°3E±°, h92^{km}±6^{km}, M6.3/117, mb6.1/117, mB6.5/107, MLv6.6/1, Mw(mB)6.2/107, Mwp6.3/48*

*NEIC **28** 20:04:17.2±0.0, 4°.80S×152°.94E, h59^{km}, Moment Tensor Solution. s104 Moment tensor: Scale 10^{18}Nm; M$_{rr}$6.20; M$_{\theta\theta}$-6.76; M$_{\phi\phi}$0.57; M$_{r\theta}$2.84; M$_{\theta\phi}$1.56; M$_{\phi r}$1.76; Best double couple: M$_0$7.50000×10^{18} NP1:φ$_s$300.00000°, δ38.00000°,λ121.00000°. NP2:φ$_s$83.00000°,δ58.00000°, λ68.00000°. Principal axes: T 7.4100, Plg69.0000°, Azm307.0000°; N 0.1200, Plg18.0000°, Azm95.0000°; P -7.5300, Plg10.0000°, Azm189.0000°;*

ISC 28 20:03:59.1±0.3, **4°.65S**±0°.03×**153°.17E**±0°.03, **h59**^{km}±1^{km}, **h59**^{km}**:pP-P, n2388,** σ**1^{s}92**/2756, **mb6.1**/461, **MS6.3**/261, **139C-103D, New Ireland region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RABL	**Rabaul**	1.10	295	*e*Pn	Pn	20 04 20.7	+2.2
RABL				*e*Sn	Sn	20 04 40.5	+7.6
MANU	**Manus Island**	6.34	294	*e*Pn	Pn	20 05 32.5	+2.5
PMG	**Port Moresby**	7.61	231	Pn	Pn	20 05 46.3	-1.0
	40nm,0.3s,baz=44,slow=4.7,SNR=62						
PMG				Sn	Sn	20 07 11.9	-0.3
	62nm,0.3s,baz=31,slow=9.3,SNR=3.0						
PMG				ScS	ScS	20 19 29.0	+2.8
	0.3nm,0.3s,baz=163,slow=20,SNR=5.5						
PMG	**Port Moresby**	7.61	231	*e*P	Pn	20 05 46.5	-0.8
HNR	**Honiara**	8.23	126	Pn	Pn	20 05 56.4	+0.5
	53nm,0.3s,baz=258,slow=3.5,SNR=18						
HNR				Sn	Sn	20 07 27.7	+0.1
	baz=305,slow=19,SNR=1.8						
HNR	**Honiara**	8.23	126	*e*Pn	Pn	20 05 55.0	-0.8
HNR				*e*Sn	Sn	20 07 27.7	+0.1
HNR	**Honiara**	8.23	126	*e*P	Pn	20 05 55.1	-0.8
HNR				*e*		20 07 27.7	
JAY	**Jayapura**	12.62	279	P	Pn	20 06 58.7	+2.8
	6µm,1.1s,142µm						
JAY	**Jayapura**	12.62	279	P	Pn	20 06 57.1	+1.2
JAY				pmax	pmax		
	comp=Z,364nm,1.1s						
GENI	**Genyem**	13.13	279	P	Pn	20 07 04.8	+1.9
	comp=Z,1µm,0.6s,comp=Z,38µmcomp=Z,141µm						
COEN	**Coen**	13.51	226	P	Pn	20 07 09.1	+1.0
	baz=14,SNR=21						
COEN	**Coen**	13.51	226	*e*Pn	Pn	20 07 06.8	-1.2
MTSU	**Mount Surprise**	15.95	212	P	Pn	20 07 40.9	+1.0
	baz=16,SNR=41						
CTAO	**Charters Tower**	16.75	203	*e*Pn	Pn	20 07 49.9	-0.1
	comp=Z,594nm,1.3s						
CTAO	**Charters Tower**	16.75	203	*e*P	Pn	20 07 49.9	-0.1
CTAO				pmax	pmax		
	comp=Z,594nm,1.3s						
SRPI	**Serui, Papua**	17.12	279	P	Pn	20 07 54.2	-0.4
	comp=Z,1µm,0.8s,comp=Z,28µmcomp=Z,102µm						
BAKI	**Biak**	17.38	281	P	P	20 07 59.7	+1.4
	comp=Z,2µm,1.3s,comp=Z,34µmcomp=Z,211µm						
RKPI	**Ransiki, Papua**	19.22	279	P	Pn	20 08 20.4	+0.4
	comp=Z,3µm,1.7s,comp=Z,39µmcomp=Z,127µm						
GUMO	**Guam**	19.91	336	P	Pn	20 08 28.2	+0.1
	comp=Z,98nm,0.3s,baz=172,slow=7.8,SNR=184						
GUMO				S	Sn	20 12 10.7	-0.8
	comp=Z,4.3nm,0.3s,baz=177,slow=10,SNR=1.5						
GUMO				LR	LR	20 15 14.5	
	comp=Z,31µm,21.7s,baz=160,slow=34						
GUMO				ScP	ScP	20 16 14.4	+1.7
	comp=Z,4.7nm,0.3s,baz=6.2,slow=0.4,SNR=8.6						
GUMO				ScS	ScS	20 19 56.0	+0.6
	comp=Z,1.9nm,0.3s,baz=295,slow=19,SNR=9.2						
GUMO	**Guam**	19.91	336	*e*P	Pn	20 08 28.6	+0.5
	comp=Z,21µm,1.3s						
GUMO				*e*ScS	ScS	20 19 56.0	+0.6
GUMO	**Guam**	19.91	336	*e*P	Pn	20 08 28.6	+0.5
GUMO				pmax	pmax		
	comp=Z,10µm,1.3s						
QIS	**Mount Isa**	20.59	219	P	P	20 08 33.4	0.0
	baz=21,SNR=86						
TARA	**Tarawa**	20.62	74	*e*P	Pn	20 08 35.5	-1.1
	comp=Z,2µm,1.2s						
TARA				LR	LR		
	comp=Z,6µm,19.0s						
EIDS	**Eidsvold**	20.70	185	P	P	20 08 35.1	+0.6
	baz=21,SNR=40						
EIDS	**Eidsvold**	20.70	185	*e*P	P	20 08 33.9	-0.6
	comp=Z,414nm,0.9s						
FAKI	**Fak Fak**	20.94	274	P	P	20 08 38.1	+0.8
	comp=Z,998nm,1.6s,comp=Z,26µmcomp=Z,116µm						
FAKI	**Fak Fak**	20.94	274	*e*P	P	20 08 36.1	-1.2
	comp=Z,7µm,2.0s						
DZM	**Mont Dzumac**	21.57	145	*e*P	P	20 08 43.6	-0.4
	comp=Z,2µm,1.1s						
DZM				*e*S	S	20 12 35.9	-4.1
	comp=Z,93µm,25.0s						
DZM				*e*LR	LR	20 13 59.0	
	comp=Z,290µm,30.4s						
DZM	**Mont Dzumac**	21.57	145	P	P	20 08 43.2	-0.8
	comp=Z,732nm,1.0s,baz=313,slow=8.4,SNR=122						
DZM				S	S	20 12 36.4	-3.7
	comp=Z,39nm,1.0s,baz=279,slow=18,SNR=1.9						
DZM				LR	LR	20 16 14.8	
	comp=Z,71µm,21.1s,baz=328,slow=34						
DZM				ScP	ScP	20 16 18.6	+1.8
	comp=Z,77nm,1.1s,baz=82,slow=9.3,SNR=6.5						
DZM				ScS	ScS	20 20 04.0	+2.8
	comp=Z,7.4nm,0.8s,baz=218,slow=12,SNR=2.5						
DZM	**Mont Dzumac**	21.57	145	*e*P	P	20 08 42.5	-1.5
	comp=Z,791nm,1.0s						
DZM				S	S	20 12 36.4	-3.7
DZM				*e*ScP	ScP	20 16 20.6	+3.8
DZM				ScS	ScS	20 20 04.0	+2.8
KDU	**Kakadu**	21.94	247	P	P	20 08 46.8	-1.2
	baz=22,SNR=1000						
SAUI	**Saumlaki**	21.98	260	P	P	20 08 48.5	+0.1
	comp=Z,773nm,0.7s,comp=Z,20µm						
SAUI	**Saumlaki**	21.98	260	*e*P	P	20 08 46.0	-2.5
	comp=Z,4µm,1.7s						
RMQ	**Roma**	22.11	191	P	P	20 08 50.0	+0.3
	baz=22,SNR=67						
PALU	**Palau**	22.14	302	P	P	20 08 51.3	+1.3
	baz=22,SNR=134						
SWI	**Sorong**	22.20	279	P	P	20 08 51.6	+0.8
	comp=Z,792nm,0.6s,comp=Z,15µm						
SWI	**Sorong**	22.20	279	P	P	20 08 50.7	-0.1
SWI				pmax	pmax		
	comp=Z,800nm,0.6s						
BNDI	**Bandanaira**	23.19	269	P	P	20 09 01.3	+0.2
MTN	**Manton Dam**	23.23	248	P	P	20 09 00.9	-0.6
	baz=23,SNR=429						
MTN	**Manton Dam**	23.23	248	*e*P	P	20 09 00.1	-1.4
	comp=Z,3µm,1.4s						
QLP	**Quilpie**	23.42	200	P	P	20 09 02.4	-0.7
	baz=24,SNR=91						
WC3	**Warramunga Arr**	23.80	229	*e*P	P	20 09 06.2	-0.5
	comp=Z,2µm,1.0s						
WRAB	**Tennant Creek**	23.80	229	*e*P	P	20 09 05.9	-0.8
	comp=Z,1µm,1.0s						
WRAB				LR	LR		
	comp=Z,23µm,22.0s						
WRAB	**Tennant Creek**	23.80	229	*ce*P	P	20 09 06.9	+0.2
WRAB				pmax	pmax		
	comp=Z,1µm,2.5s						
WB2	**Warramunga Arr**	23.81	229	*e*P	P	20 09 05.3	-1.4
WB2				*e*PcP	PcP	20 12 52.0	+2.9
WR1	**Warramunga Arr**	23.82	229	*e*P	P	20 09 06.7	-0.1
	comp=Z,1µm,1.0s						
WR1				*e*PcP	PcP	20 12 50.1	+1.1
WR1				*e*S	S	20 13 15.2	-3.4
WR1				*e*ScP	ScP	20 16 24.7	+2.1
WR1				*e*ScS	ScS	20 20 14.1	+4.4
WR1				*e*P'P'df	P'P'df	20 43 19.4	-49
WRA	**Warramunga Arr**	23.82	229	P	P	20 09 06.7	-0.2
	comp=Z,185nm,0.8s,baz=53,slow=9.8,SNR=322						
WRA				PcP	PcP	20 12 50.1	+1.0
	comp=Z,85nm,1.0s,baz=59,slow=1.9,SNR=3.8						
WRA				S	S	20 13 15.2	-3.4
	comp=Z,25nm,1.0s,baz=52,slow=13,SNR=2.5						
WRA				ScP	ScP	20 16 24.7	+2.1
	comp=Z,64nm,0.8s,baz=45,slow=2.9,SNR=12						
WRA				LR	LR	20 18 50.2	
	comp=Z,22µm,21.3s,baz=55,slow=38						
WRA				ScS	ScS	20 20 14.1	+4.4
	comp=Z,5.5nm,0.9s,baz=51,slow=4.5,SNR=5.0						
WRA				P3KP		20 43 19.4	
	comp=Z,1.7nm,0.8s,baz=306,slow=2.3,SNR=5.1						
WRA	**Warramunga Arr**	23.82	229	*i* P	P	20 09 06.6	-0.3
WRA				pmax	pmax		
	comp=Z,185nm,0.8s						
MSAI	**Masohi**	24.21	272	P	P	20 09 09.1	-1.4
AAI	**Ambon**	24.93	271	P	P	20 09 15.9	-1.1
AAI	**Ambon**	24.93	271	P	P	20 09 16.6	-0.4
AAI				pmax	pmax		
	comp=Z,675nm,0.6s						
ARMA	**Armidale**	25.67	183	P	P	20 09 25.4	+1.7
	baz=26,SNR=34						
ARMA	**Armidale**	25.67	183	*e*P	P	20 09 21.6	-2.1
	comp=Z,284nm,0.8s						
LBMI	**Labuha**	25.94	278	P	P	20 09 27.0	+0.7
NLAI	**Namlea**	26.04	272	P	P	20 09 27.6	+0.5
	comp=Z,327nm,0.7s,comp=Z,7µmcomp=Z,67µm						
FUNA	**Funafuti**	26.14	100	*e*P	P	20 09 27.5	-0.5
	comp=Z,2µm,1.8s						
FUNA				LR	LR		
	comp=Z,22µm,19.0s						
TNTI	**Ternate**	26.33	281	P	P	20 09 30.3	+0.5
TNTI	**Ternate**	26.33	281	*e*P	P	20 09 29.2	-0.6
	comp=Z,2µm,1.9s						
KNRA	**Kununurra**	26.36	244	P	P	20 09 29.6	-0.4
	baz=26,SNR=1000						
AS01	**Alice Springs**	26.47	223	*e*P	P	20 09 29.8	-1.2
AS31	**Alice Springs**	26.50	223	*e*P	P	20 09 30.9	-0.3
	comp=Z,58nm,0.7s						
ASAR	**Alice Springs**	26.50	223	P	P	20 09 30.9	-0.4
	comp=Z,17nm,0.6s,baz=56,slow=9.2,SNR=69						
ASAR				PcP	PcP	20 12 56.7	+1.6
	comp=Z,56nm,0.8s,baz=57,slow=1.7,SNR=5.1						
ASAR				S	S	20 13 55.3	-6.2
	comp=Z,12nm,0.8s,baz=41,slow=17,SNR=2.3						
ASAR				ScP	ScP	20 16 33.0	+2.8
	comp=Z,69nm,1.0s,baz=59,slow=2.9,SNR=9.0						
ASAR				LR	LR	20 19 48.5	
	comp=Z,30µm,21.8s,baz=57,slow=36						
ASAR				ScS	ScS	20 20 23.1	+2.3
	comp=Z,2.2nm,0.9s,baz=54,slow=4.7,SNR=2.8						
ASAR				P3KP		20 43 14.2	
	comp=Z,0.8nm,0.8s,baz=276,slow=0.8,SNR=2.8						
H11S3	**WAKE ISLAND Hy**	26.58	30	P	P	20 09 33.2	+1.4
	baz=219,slow=6.8,SNR=8.7						
H11S2	**WAKE ISLAND Hy**	26.59	30	P	P	20 09 33.2	+1.4
	baz=219,slow=6.8,SNR=14						
H11S1	**WAKE ISLAND Hy**	26.60	30	P	P	20 09 33.3	+1.4
	baz=219,slow=6.8,SNR=11						
WAKE	**Wake Island**	27.24	29	*e*P	P	20 09 38.1	+0.3
	comp=Z,2µm,1.9s						
WAKE				LR	LR		
	comp=Z,66µm,21.0s						
SANI	**Sanana**	27.25	275	P	P	20 09 39.3	+1.2
	comp=Z,539nm,0.8s,comp=Z,10µmcomp=Z,50µm						
LHI	**Lord Howe Isla**	27.29	169	P	P	20 09 37.3	-0.9
	baz=27,SNR=3.9						
LHI	**Lord Howe Isla**	27.29	169	*e*P	P	20 09 38.8	+0.6
	comp=Z,334nm,0.8s						
CMSA	**Cobar Meteorol**	27.65	194	P	P	20 09 41.1	-0.3
	baz=28,SNR=29						
H11N1	**WAKE ISLAND Hy**	27.72	29	P	P	20 09 41.7	-0.2
H11N3	**WAKE ISLAND Hy**	27.74	29	P	P	20 09 41.8	-0.2
	baz=244,slow=74,SNR=11						
H11N2	**WAKE ISLAND Hy**	27.74	29	P	P	20 09 41.8	-0.2
	baz=30,slow=74,SNR=8.1						
MGCD	**Mangrove Creek**	28.48	184	P	P	20 09 50.8	+2.1
	baz=28,SNR=27						
RIV	**Riverview**	29.09	183	P	P	20 09 56.1	+2.0
	baz=29,SNR=11						
RIV	**Riverview**	29.09	183	P	P	20 09 55.0	+0.9
RIV				pmax	pmax		
	comp=Z,379nm,0.9s						
SOEI	**Soe**	29.11	258	P	P	20 09 54.3	-0.4
	comp=Z,488nm,0.8s,comp=Z,6µm						
SOEI	**Soe**	29.11	258	*e*P	P	20 09 54.2	-0.4
	comp=Z,313nm,0.8s						
STKA	**Stephens Creek**	29.18	200	P	P	20 09 54.1	-0.9
	comp=Z,99nm,1.0s,baz=358,slow=8.4,SNR=37						
STKA				S	S	20 14 37.1	-6.1
	comp=Z,26nm,1.0s,baz=226,slow=18,SNR=1.4						
STKA				ScP	ScP	20 16 41.5	+3.3
	comp=Z,55nm,0.9s,baz=35,slow=2.3,SNR=6.0						
STKA				ScS	ScS	20 20 35.2	+2.8
	comp=Z,7.0nm,0.8s,baz=342,slow=20,SNR=2.8						
STKA				LR	LR	20 21 15.1	
	comp=Z,53µm,21.6s,baz=17,slow=36						
STKA				P3KP		20 43 11.0	
	comp=Z,1.2nm,0.3s,baz=167,slow=5.3,SNR=6.1						
STKA	**Stephens Creek**	29.18	200	P	P	20 09 55.3	+0.3
	baz=29,SNR=36						
STKA	**Stephens Creek**	29.18	200	*e*P	P	20 09 53.9	-1.1
	comp=Z,26nm,0.8s						
STKA				S	S	20 14 37.1	-6.1
STKA				*e*ScP	ScP	20 16 42.9	+4.7
STKA				ScS	ScS	20 20 35.2	+2.8
STKA				PKKKP		20 43 11.0	
STKA	**Stephens Creek**	29.18	200	*e*P	P	20 09 53.9	-1.1
STKA				S	S	20 14 37.1	-6.1
STKA				*e*		20 16 42.9	
STKA						20 20 35.2	
STKA				pmax	pmax		
	comp=Z,26nm,0.8s						
MATI	**Mati**	29.23	293	*e*P	P	20 09 53.6	-2.0
DDMP	**Don Marcelino,**	29.42	291	*e*P	P	20 09 55.5	-1.9
KMSI	**Cibinong**	29.62	279	P	P	20 10 00.2	+1.1
	comp=Z,2µm,0.8s,comp=Z,22µmcomp=Z,50µm						
BATI	**Baumata**	29.76	258	P	P	20 10 00.5	+0.1
	comp=Z,280nm,0.7s,baz=74,slow=2.6,SNR=21						
BATI				ScP	ScP	20 16 43.7	+3.3
	comp=Z,134nm,0.9s,baz=276,slow=5.4,SNR=6.1						
BATI				ScS	ScS	20 20 38.8	+2.9
	comp=Z,27nm,1.0s,baz=7.1,slow=16,SNR=2.9						
BATI				LR	LR	20 24 42.8	
	comp=Z,56µm,21.8s,baz=110,slow=42						
BATI	**Baumata**	29.76	258	P	P	20 10 00.0	-0.4
YNG	**Young**	29.83	188	P	P	20 10 02.1	+1.4
	baz=30,SNR=7.9						
DAV	**Davao City (W)**	29.90	293	ScS	ScS	20 20 39.0	+2.6
	comp=Z,145nm,0.5s,baz=162,slow=20,SNR=1.9						
DAV				LR	LR	20 22 14.3	
	comp=Z,14µm,18.5s,baz=112,slow=37						
DAV	**Davao City (W)**	29.90	293	⇑*i*P	P	20 10 00.9	-0.6
DAV	**Davao City (W)**	29.90	293	*e*P	P	20 10 01.1	-0.5
DAV				ScS	ScS	20 20 39.0	+2.6
GSPH	**General Santos**	30.13	290	⇓*i*P	P	20 10 03.9	+0.1
KDI	**Kendari**	30.47	270	P	P	20 10 06.4	-0.2
	comp=Z,62nm,0.9s,comp=Z,3µm						
LUWI	**Luwuk**	30.56	276	P	P	20 10 08.1	+0.6
	comp=Z,580nm,0.7s,comp=Z,9µmcomp=Z,46µm						
LUWI	**Luwuk**	30.56	276	*e*P	P	20 10 06.0	-1.5
	comp=Z,820nm,1.1s						
BUTP	**Butuan**	30.62	296	*e*P	P	20 10 07.7	-0.2
SKMP	**Bagumbayan, Su**	30.66	291	*e*P	P	20 10 07.1	-1.2
BUKP	**Musuan**	30.68	294	*e*P	P	20 10 08.9	+0.4
CNB	**Canberra Magne**	30.71	186	P	P	20 10 09.6	+1.0
	baz=31,SNR=7.0						
CAN	**Canberra**	30.76	187	*e*P	P	20 10 07.8	-1.2
	comp=Z,133nm,0.9s						
CAN	**Canberra**	30.76	187	*e*P	P	20 10 07.8	-1.2
CAN				pmax	pmax		
	comp=Z,133nm,0.9s						
MMRI	**Maumere**	30.97	261	P	P	20 10 10.4	-0.6
	comp=Z,390nm,1.1s,comp=Z,5µmcomp=Z,34µm						
MMRI	**Maumere**	30.97	261	*e*P	P	20 10 08.4	-2.6
	comp=Z,392nm,1.0s						
CGP	**Cagayan de Oro**	31.24	295	⇓*e*P	P	20 10 15.5	+2.0
WRKA	**Warakurna**	31.32	227	P	P	20 10 13.0	-1.1
	baz=31,SNR=46						
EDFI	**Ende, Flores**	31.52	261	P	P	20 10 14.0	-2.0
HTT	**Hallett**	31.56	203	P	P	20 10 15.7	-0.4
	baz=32,SNR=167						
MRSI	**Marisa**	31.61	278	P	P	20 10 15.8	-0.9
APSI	**Ampana**	31.70	276	P	P	20 10 18.0	+0.6
	comp=Z,358nm,0.9s,comp=Z,5µmcomp=Z,25µm						
MSLP	**Maasin**	31.80	298	*e*P	P	20 10 19.0	+0.7
PLP	**Palo**	32.16	299	⇓*e*P	P	20 10 22.0	+0.6
PAGZ	**Pagadian**	32.21	293	*e*P	P	20 10 21.6	-0.3
BBOO	**Buckleboo**	32.25	208	P	P	20 10 21.7	-0.4
	baz=32,SNR=13						
BBOO	**Buckleboo**	32.25	208	*e*P	P	20 10 20.5	-1.6
	comp=Z,230nm,1.0s						
LLP	**Lapu-Lapu**	32.66	297	*e*P	P	20 10 24.9	-1.0
BKSI	**Bulukumba**	32.92	267	P	P	20 10 27.4	-0.8
	comp=Z,60nm,1.3s,comp=Z,2µmcomp=Z,27µm						
WSI	**Waingapu**	32.98	259	P	P	20 10 27.6	-1.1
	comp=Z,2µm,0.6s,comp=Z,25µm						
KAPI	**Kappang**	33.30	268	PFAKE		20 10 40.0	+8.5
KAPI				LR	LR		
	comp=Z,7µm,21.0s						
CBIJ	**Chichi jima**	33.30	342	*e*P	P	20 10 29.0	-2.3
	comp=Z,849nm,0.8s						
CBIJ				PcP	PcP	20 13 12.3	-0.1
JCJ	**Chichijima**	33.30	342	P	P	20 10 29.8	-1.5
	comp=Z,432nm,0.4s,baz=148,slow=14,SNR=43						
JCJ				PcP	PcP	20 13 12.3	-0.1
	comp=Z,141nm,0.8s,baz=180,slow=9.1,SNR=3.5						
JCJ				LR	LR	20 22 29.0	
	comp=Z,23µm,21.4s,slow=33						
SPSI	**Sidrap Palu**	33.31	270	P	P	20 10 30.5	-1.1
	comp=Z,112nm,1.0s,comp=Z,2µm						
TTSI	**Tana Toraja**	33.31	272	P	P	20 10 31.6	0.0
	comp=Z,144nm,1.2s,comp=Z,4µmcomp=Z,38µm						
PCI	**Palu**	33.49	275	P	P	20 10 33.8	+0.6
	comp=Z,699nm,0.9s,comp=Z,10µmcomp=Z,49µm						
PCI	**Palu**	33.49	275	P	P	20 10 33.0	-0.2
PCI				pmax	pmax		
	comp=Z,699nm,0.9s						
TOO	**Toolangi**	33.51	191	P	P	20 10 34.0	+1.0
	baz=34,SNR=6.8						
TOO	**Toolangi**	33.51	191	P	P	20 10 33.6	+0.6
TOO				pmax	pmax		
	comp=Z,71nm,1.7s						
MPSI	**Mapaga**	33.60	278	P	P	20 10 34.3	+0.2
ARPS	**Mount Arapiles**	33.61	197	P	P	20 10 34.6	+0.7
	baz=34,SNR=37						
WBSI	**Waikabubak, Su**	33.86	260	P	P	20 10 35.4	-1.1
PVCP	**Virac**	34.03	303	*e*P	P	20 10 37.1	-0.7
RCP	**Roxas**	34.28	298	⇑*e*P	P	20 10 40.7	+0.7
KNTN	**Kanton**	35.09	88	*e*P	P	20 10 45.7	-1.3
	comp=Z,2µm,1.8s						
FORT	**Forrest**	35.13	219	P	P	20 10 46.8	-0.4
	baz=35,SNR=70						
FORT	**Forrest**	35.13	219	*e*P	P	20 10 43.8	-3.3
	comp=Z,809nm,0.9s						
OTRP	**Odiongan**	35.27	299	*e*P	P	20 10 48.6	0.0
PLAI	**Plampang**	35.38	261	P	P	20 10 48.2	-1.3
GQP	**Guinayangan**	35.63	302	⇑*e*P	P	20 11 02.9	+11
AFI	**Afiamalu**	35.75	107	P	P	20 10 52.0	-0.7
	comp=Z,15nm,0.7s,baz=221,slow=20,SNR=2.5						
AFI				S	S	20 16 24.9	-1.1
	comp=Z,8.9nm,0.6s,baz=306,slow=19,SNR=2.1						
AFI				ScP	ScP	20 17 04.3	+3.2
	comp=Z,11nm,0.4s,baz=73,slow=11,SNR=3.3						
AFI				LR	LR	20 23 19.0	
	comp=Z,26µm,21.4s,baz=280,slow=33						
AFI	**Afiamalu**	35.75	107	*e*P	P	20 10 52.9	+0.1
AFI				S	S	20 16 24.9	-1.1
AFI				*e*ScP	ScP	20 17 05.8	+4.7
AFI				*e*		20 17 06.6	
AFI	**Afiamalu**	35.75	107	*e*P	P	20 10 52.9	+0.1
AFI				S	S	20 16 24.9	-1.1

OUZ	Omahuta	35.80	151	*e*P	P	20 10 53.5	+0.7
	comp=Z,168nm,0.9s						
OUZ	Omahuta	35.80	151	P	P	20 10 54.4	+1.6
MYLDM	Lahad Datu	35.98	285	*e*P	P	20 10 55.0	+0.4
	comp=Z,2µm,1.8s						
SJMP	San Jose	36.11	298	*e*P	P	20 10 58.4	+2.7
SMKI	Samarinda	36.16	276	P	P	20 10 57.7	+1.5
	comp=Z,172nm,0.9s,comp=Z,4µmcomp=Z,24µm						
TWSI	Taliwang, Sumb	36.25	262	P	P	20 10 55.1	-1.9
MBWA	Marble Bar	36.36	240	*e*P	P	20 10 56.8	-1.1
	comp=Z,430nm,0.8s						
MBWA				LR	LR		
	comp=Z,22µm,19.0s						
MBWA	Marble Bar	36.36	240	P	P	20 10 57.5	-0.4
	SNR=35						
LQP	Lukban	36.50	301	⇑*e*P	P	20 11 01.4	+2.1
RAO	Raoul Island	36.71	135	LR	LR	20 24 17.0	
	comp=Z,10µm,21.8s,baz=317,slow=33						
RAO	Raoul Island	36.71	135	*e*P	P	20 11 00.3	-0.3
	comp=Z,472nm,1.0s						
RAO	Raoul Island	36.71	135	*e*P	P	20 11 00.4	-0.3
RAO				pmax	pmax		
	comp=Z,471nm,1.0s						
GLKZ	Green Lake	36.72	135	P	P	20 11 08.2	+7.5
BUSP	Coron	36.72	297	*e*P	P	20 11 01.0	+0.1
WCZ	Waipu Caves	36.74	151	P	P	20 11 03.8	+3.0
KBKI	Kotabaru	36.93	271	P	P	20 11 02.4	-0.4
	comp=Z,54nm,0.7s,comp=Z,532nm						
TGY	Tagaytay City	37.01	301	P	P	20 11 04.6	+1.2
	comp=Z,916nm,0.9s,baz=204,slow=2.0,SNR=14						
TGY				LR	LR	20 24 07.3	
	comp=Z,54µm,21.7s,baz=120,slow=33						
WTAZ	Waiatarua	37.65	151	P	P	20 11 13.9	+5.4
CAUP	Cauayan	37.68	305	*e*P	P	20 11 10.0	+1.0
BATP	Bataraza	37.71	291	*e*P	P	20 11 09.0	-0.3
WIAZ	Waiheke Island	37.80	151	P	P	20 11 12.0	+2.1
SRBI	Singaraja	37.86	263	P	P	20 11 08.8	-1.9
	comp=Z,110nm,0.9s,comp=Z,2µm						
DNP	Denpasar	37.90	262	P	P	20 11 09.7	-1.2
	comp=Z,586nm,1.0s,comp=Z,13µm						
IGBI	Denpasar	37.97	262	P	P	20 11 11.2	-0.4
MOO	Moorlands	38.00	187	P	P	20 11 13.2	+1.8
	baz=38,SNR=7.4						
KUZ	Kuaotunu	38.06	150	P	P	20 11 18.9	+6.9
MKAZ	Moumakai	38.07	151	P	P	20 11 14.7	+2.7
MTKI	Muara Teweh, K	38.40	274	P	P	20 11 14.4	-0.8
KKM	Kota Kinabalu	38.40	286	*e*P	P	20 11 14.0	-1.2
	comp=Z,345nm,1.0s						
KKM	Kota Kinabalu	38.40	286	P	P	20 11 18.0	+2.7
TAU	Tasmania Unive	38.45	187	*e*P	P	20 11 14.8	-0.3
	comp=Z,481nm,1.4s						
TAU				LR	LR		
	comp=Z,19µm,22.0s						
TAU	Tasmania Unive	38.45	187	*e*P	P	20 11 14.8	-0.3
TAU				pmax	pmax		
	comp=Z,481nm,1.4s						
TAU				MLR	MLR		
	comp=Z,19µm,22.0s						
APYP	Conner	38.63	306	*e*P	P	20 11 16.9	-0.1
SCZP	Santa Cruz	38.67	302	*e*P	P	20 11 13.6	-3.8
JAGI	Jajag, Banyuwa	38.93	262	P	P	20 11 19.1	-0.6
	comp=Z,311nm,0.7s,comp=Z,4µm						
JAGI	Jajag, Banyuwa	38.93	262	*e*P	P	20 11 16.1	-3.5
	comp=Z,203nm,0.7s						
ABRA	Dolores	38.95	306	*e*P	P	20 11 21.3	+1.6
HIZ	Hauiti	39.05	153	*e*P	P	20 11 20.4	+0.1
	comp=Z,341nm,0.8s						
HIZ				*e*S	S	20 17 14.9	-0.5
HIZ	Hauiti	39.05	153	P	P	20 11 23.4	+3.1
TLZ	Tolley Road	39.22	152	P	P	20 11 27.1	+5.3
OPRZ	Ohinepanea	39.33	150	P	P	20 11 26.4	+3.8
OMRZ	Omania	39.45	151	P	P	20 11 27.4	+3.8
BLJI	Banyuglugur	39.45	264	P	P	20 11 22.4	-1.6
JOW	Kunigami	39.49	324	P	P	20 11 25.6	+1.5
	comp=Z,1µm,0.7s,baz=146,slow=9.8,SNR=150						
JOW				ScP	ScP	20 17 16.2	+1.4
	comp=Z,127nm,1.0s,baz=116,slow=12,SNR=18						
JOW				LR	LR	20 27 47.6	
	comp=Z,8µm,19.2s,baz=152,slow=36						
JOW	Kunigami	39.49	324	*e*P	P	20 11 26.0	+1.9
	comp=Z,2µm,0.9s						
JOW				*e*ScP	ScP	20 17 15.9	+1.0
BBP	Basco	39.51	310	*e*P	P	20 11 21.6	-2.8
MEEK	Meekatharra	39.58	233	P	P	20 11 24.6	-0.4
	baz=40,SNR=850						
KMBL	Kambalda	39.61	224	P	P	20 11 24.6	-0.5
	baz=40,SNR=20						
GMJI	Gumukmas	39.62	263	P	P	20 11 24.9	-0.5
	comp=Z,127nm,0.9s,comp=Z,3µm						
JHJ2	Mitsune	39.63	342	*e*P	P	20 11 22.6	-2.5
	comp=Z,467nm,0.8s						
JHJ	Hachijo jima 2	39.65	342	P	P	20 11 22.9	-2.5
	comp=Z,373nm,0.8s,baz=227,slow=19,SNR=32						
JHJ				PcP	PcP	20 13 31.3	-0.1
	comp=Z,299nm,0.8s,baz=205,slow=10,SNR=5.1						
JHJ				ScP	ScP	20 17 16.2	+0.9
	comp=Z,186nm,0.7s,baz=66,slow=20,SNR=12						
JHJ				LR	LR	20 25 33.6	
	comp=Z,16µm,21.9s,baz=164,slow=33						
HAZ	Te Kaha	39.88	149	P	P	20 11 28.2	+1.1
URZ	Urewera	39.93	150	P	P	20 11 26.7	-0.9
	comp=Z,20nm,0.4s,baz=277,slow=1.1,SNR=14						
URZ				ScP	ScP	20 17 16.5	+0.2
	comp=Z,62nm,0.9s,baz=335,slow=2.8,SNR=8.2						
URZ	Urewera	39.93	150	P	P	20 11 28.4	+0.9
NGZ	Ngauruhoe	39.93	152	P	P	20 11 30.0	+2.2
FWVZ	Far West T-bar	39.97	153	P	P	20 11 30.3	+2.1
RUGZ	Raukumara Rang	39.99	149	P	P	20 11 28.9	+0.7
MXZ	Matakaoa Point	40.01	148	*e*P	P	20 11 26.7	-1.5
	comp=Z,173nm,0.9s						
WHVZ	Whangaehu Hut	40.01	153	P	P	20 11 31.6	+3.0
MTVZ	Mangateitei	40.04	153	P	P	20 11 32.3	+3.7
PKGZ	Pakihiroa	40.13	149	P	P	20 11 29.7	+0.3
RTZ	Ruatahuna	40.14	151	P	P	20 11 31.1	+1.7
MWZ	Matawai	40.19	150	P	P	20 11 30.6	+0.7
MWZ				S	S	20 17 31.4	-1.2
WMGZ	Waiomatatini S	40.26	148	P	P	20 11 31.3	+1.0
MTHZ	Maungataniwha	40.26	151	P	P	20 11 31.5	+1.1
RAGZ	Rawiri	40.26	150	P	P	20 11 32.2	+1.8
TWGZ	Tauwhareparae	40.30	149	P	P	20 11 31.3	+0.5
BKZ	Black Stump Fm	40.34	152	*e*P	P	20 11 30.9	-0.1
	comp=Z,175nm,0.7s						
BKZ	Black Stump Fm	40.34	152	P	P	20 11 32.0	+1.0
PUZ	Puketiti	40.36	149	P	P	20 11 31.6	+0.4
BHHZ	Black Hill Sta	40.39	152	P	P	20 11 32.9	+1.3
RAHZ	Arahi	40.43	151	P	P	20 11 33.3	+1.5
NMHZ	Naumai	40.43	151	P	P	20 11 33.2	+1.3
TKGZ	Te Karaka	40.44	150	P	P	20 11 32.8	+1.0
SNGZ	Shannon Statio	40.45	150	P	P	20 11 32.9	+1.0
KWHZ	Kaweka Forest	40.51	152	P	P	20 11 33.7	+1.2
WHHZ	Waihua	40.62	151	P	P	20 11 35.1	+1.7
CNGZ	Carnagh Statio	40.65	149	P	P	20 11 34.1	+0.5
ARHZ	Aropaoanui	40.66	151	P	P	20 11 34.5	+0.9
KRHZ	Kereru	40.66	152	P	P	20 11 34.4	+0.8
KNZ	Kokohu	40.80	150	P	P	20 11 35.1	+0.4
TSZ	Takapari Road	40.80	153	P	P	20 11 35.7	+0.8
THZ	Tophouse	40.94	157	*e*P	P	20 11 35.9	-0.1
	comp=Z,389nm,0.8s						
TBJI	Tambak Boyo	41.16	265	P	P	20 11 36.6	-1.5
YOJ	Yonaguni jima	41.22	316	*e*P	P	20 11 39.8	+1.4
	comp=Z,1µm,0.8s						
YOJ	Yonaguni jima	41.22	316	*e*P	P	20 11 39.8	+1.4
YOJ				pmax	pmax		
	comp=Z,1µm,0.8s						
PWJI	Pagerwojo	41.23	263	P	P	20 11 37.0	-1.7
SNZO	South Karori	41.28	155	*e*P	P	20 11 39.3	+0.6
	comp=Z,1µm,1.7s						
SNZO				LR	LR		
	comp=Z,18µm,20.0s						
FOZ	Fox Glacier	41.42	162	*e*P	P	20 11 40.9	+1.1
	comp=Z,432nm,1.3s						
BFZ	Birch Farm	41.44	153	*e*P	P	20 11 40.0	0.0
	comp=Z,867nm,1.5s						
PBKI	Pangkalan Bun	41.45	271	P	P	20 11 40.7	+0.2
SBUM	Sibu	41.52	279	*e*P	P	20 11 41.4	+0.3
	comp=Z,150nm,1.1s						
SBUM	Sibu	41.52	279	P	P	20 11 42.0	+0.9
NGJI	Ngawi	41.55	264	P	P	20 11 40.6	-0.7
	comp=Z,174nm,1.3s						
LTZ	Lake Taylor	41.59	159	*e*P	P	20 11 42.0	+0.8
	comp=Z,418nm,0.8s						
GIRL	Giralia	41.66	241	P	P	20 11 42.6	+0.6
	baz=42,SNR=82						
KHZ	Kahutara	41.74	157	*e*P	P	20 11 42.0	-0.5
	comp=Z,535nm,1.1s						
PCJI	Pacitan	41.86	263	P	P	20 11 42.7	-1.1
	comp=Z,671nm,0.7s,comp=Z,9µm						
STKI	Sintang	41.91	275	P	P	20 11 44.9	+0.6
	comp=Z,320nm,0.7s,comp=Z,8µmcomp=Z,27µm						
OXZ	Oxford	41.98	159	*e*P	P	20 11 44.5	+0.1
	comp=Z,340nm,1.1s						
RPZ	Rata Peaks	41.98	161	P	P	20 11 45.2	+0.7
	comp=Z,331nm,1.0s,baz=340,slow=3.7,SNR=38						
RPZ	Rata Peaks	41.98	161	*e*P	P	20 11 44.6	+0.1
	comp=Z,700nm,1.2s						
WOJI	Wonogiri, Jawa	42.10	263	P	P	20 11 45.1	-0.7
	comp=Z,160nm,1.1s,comp=Z,3µm						
LBZ	Lake Benmore	42.31	162	*e*P	P	20 11 47.6	+0.5
	comp=Z,361nm,1.1s						
WKZ	Wanaka	42.36	163	*e*P	P	20 11 47.8	+0.3
	comp=Z,998nm,1.7s						
DCZ	Deep Cove	42.45	165	*e*P	P	20 11 48.7	+0.6
	comp=Z,882nm,1.8s						
UGM	Wanagama	42.50	263	P	P	20 11 48.6	-0.5
	comp=Z,307nm,1.1s						
UGM	Wanagama	42.50	263	*e*P	P	20 11 48.0	-1.1
	comp=Z,515nm,1.1s						
MQZ	McQueen's Vall	42.53	159	*e*P	P	20 11 49.8	+1.0
	comp=Z,715nm,1.4s						
JOHN	Johnston Islan	42.55	59	*e*P	P	20 11 50.4	+1.0
	comp=Z,949nm,1.1s						
JOHN				LR	LR		
	comp=Z,4µm,22.0s						
SMRI	Semarang	42.56	265	P	P	20 11 48.6	-1.0
SMRI	Semarang	42.56	265	*e*P	P	20 11 48.3	-1.3
	comp=Z,241nm,0.9s						
INU	Inuyama	42.59	340	*e*P	P	20 11 48.3	-1.1
	comp=Z,270nm,1.2s						
MLZ	Mavora Lakes	42.60	164	*e*P	P	20 11 49.8	+0.3
	comp=Z,812nm,1.2s						
TATO	Taipei	42.61	315	*e*P	P	20 11 50.2	+0.4
	comp=Z,722nm,0.9s						
TATO				LR	LR		
	comp=Z,49µm,22.0s						
TATO	Taipei	42.61	315	P	P	20 11 51.6	+1.9
	SNR=15						
KLBR	Kellerberrin	42.67	227	P	P	20 11 49.3	-0.9
	baz=43,SNR=30						
MORW	Morawa	42.72	231	P	P	20 11 49.9	-0.8
	baz=43,SNR=453						
BLDU	Ballidu	42.95	229	P	P	20 11 51.7	-0.8
	baz=43,SNR=27						
PYZ	Puysegur Point	42.99	166	*e*P	P	20 11 54.1	+1.6
	comp=Z,243nm,1.0s						
ODZ	Otahua Downs	43.04	162	*e*P	P	20 11 53.1	+0.1
	comp=Z,366nm,1.4s						
WHZ	Wether Hill Ro	43.05	165	*e*P	P	20 11 53.0	-0.1
	comp=Z,164nm,0.9s						
JNU	Nakatsue	43.10	332	P	P	20 11 54.5	+0.8
	comp=Z,1µm,0.8s,baz=126,slow=4.3,SNR=476						
JNU				PcP	PcP	20 13 43.4	+0.7
	comp=Z,123nm,0.8s,baz=111,slow=6.3,SNR=3.9						
JNU				ScP	ScP	20 17 31.2	+2.2
	comp=Z,123nm,1.0s,baz=114,slow=3.7,SNR=19						
JNU				ScS	ScS	20 21 50.9	+1.9
	comp=Z,3.0nm,0.9s,baz=0.0,slow=20,SNR=2.9						
JNU				LR	LR	20 30 09.5	
	comp=Z,7µm,18.1s,baz=168,slow=36						
JNU	Nakatsue	43.10	332	*e*P	P	20 11 53.9	+0.2
	comp=Z,1µm,0.9s						
JNU				*e*PP	PP	20 13 31.4	-3.5
JNU				*e*PcP	PcP	20 13 43.6	+0.9
JNU				*e*ScP	ScP	20 17 30.9	+1.8
JNU				ScS	ScS	20 21 50.9	+1.9
KSM	Kuching	43.25	277	*e*P	P	20 11 54.7	-0.4
	comp=Z,686nm,1.4s						
KSM	Kuching	43.25	277	P	P	20 11 56.0	+0.8
MIDW	Midway	43.28	39	*e*P	P	20 11 55.5	+0.4
	comp=Z,2µm,1.9s						
MIDW				LR	LR		
	comp=Z,26µm,22.0s						
MJAR	Matsushiro Arr	43.30	342	P	P	20 11 53.7	-1.5
	comp=Z,108nm,1.0s,baz=171,slow=8.6,SNR=150						
MJAR				PcP	PcP	20 13 44.3	+1.0
	comp=Z,95nm,0.9s,baz=171,slow=3.6,SNR=9.9						
MJAR				ScP	ScP	20 17 31.9	+2.1
	comp=Z,41nm,1.1s,baz=180,slow=4.5,SNR=14						
MJAR				ScS	ScS	20 21 52.1	+2.1
	comp=Z,3.3nm,1.1s,baz=187,slow=5.2,SNR=4.0						
MJAR				LR	LR	20 30 04.6	
	comp=Z,12µm,18.1s,baz=170,slow=36						
MJAR				PKP2ab		20 45 01.2	
	comp=Z,3.6nm,1.1s,baz=311,slow=5.2,SNR=5.8						
MAJO	Matsushiro	43.30	342	*e*P	P	20 11 53.5	-1.7
	comp=Z,294nm,1.0s						
MAJO				*e*PP	PP	20 13 28.2	-8.7
MAJO				*e*PcP	PcP	20 13 44.3	+1.0
MAJO				*e*ScP	ScP	20 17 31.9	+2.1
MAJO				*e*ScS	ScS	20 21 52.1	+2.1
MAJO				*e*P'P'ab	P'P'ab	20 45 01.2	+5.6
MAJO	Matsushiro	43.30	342	*e*P	P	20 11 53.5	-1.7
MAJO				*e*		20 13 44.3	
MAJO				*e*		20 21 52.1	
MAJO				pmax	pmax		
	comp=Z,294nm,1.0s						
MAT	Matsushiro	43.30	342	P	P	20 11 53.8	-1.4
MJB9	Matsu-Tunnel	43.31	342	*e*P	P	20 11 53.5	-1.8
	comp=Z,287nm,1.0s						
MJB9				*e*PP	PP	20 13 27.6	-9.4
MJB9				*e*PcP	PcP	20 13 44.3	+1.0
NWAO	Narrogin (SRO)	43.75	226	*e*P	P	20 11 59.8	+0.9
	comp=Z,186nm,1.2s						
NWAO				LR	LR		
	comp=Z,23µm,22.0s						
NWAO	Narrogin (SRO)	43.75	226	P	P	20 12 00.9	+2.0
	SNR=9.4						
NWAO	Narrogin (SRO)	43.75	226	*e*P	P	20 11 59.8	+0.9
NWAO				pmax	pmax		
	comp=Z,186nm,1.2s						
NWAO				MLR	MLR		
	comp=Z,23µm,22.0s						
MUN	Mundaring	44.00	227	P	P	20 12 00.3	-0.7
	baz=44,SNR=75						
KPJI	Karang Pucung	44.06	264	P	P	20 12 01.8	+0.1
	comp=Z,560nm,0.6s,comp=Z,6µm						
CMJI	Cimerak	44.55	264	P	P	20 12 04.4	-1.2
	comp=Z,785nm,1.0s,comp=Z,7µm						
QZH	Quanzhou	44.66	313	⇑*i*P	P	20 12 07.8	+1.5
QZH				PP	PP	20 13 54.3	+2.7
QZH				ScP	ScP	20 17 37.5	+1.9
QZH				S	S	20 18 36.8	-1.9
QZH				pmax	pmax		
	comp=Z,650nm,1.1s						
QZH				pmax	pmax		
	comp=Z,8µm,5.7s						
QZH				LR	LR		
	comp=Z,8µm,20.8s						
QZH				LR	LR		
	comp=Z,14µm,18.5s						
QZH				LR	LR		
	comp=Z,37µm,28.4s						
JCJI	Jatiwangi	44.71	266	P	P	20 12 06.7	-0.2
	comp=Z,776nm,0.8s,comp=Z,9µm						
RKGY	Rocky Gully	44.84	224	P	P	20 12 08.2	+0.6
	baz=45,SNR=13						
LEM	Lembang	45.36	265	P	P	20 12 11.4	-0.8
	comp=Z,260nm,0.8s,baz=61,slow=5.9,SNR=40						
LEM				ScP	ScP	20 17 42.2	+3.3
	comp=Z,41nm,1.0s,baz=173,slow=8.1,SNR=4.7						
LEM				ScS	ScS	20 22 06.7	+2.4
	comp=Z,36nm,1.0s,baz=342,slow=19,SNR=3.8						
LEM				LR	LR	20 35 41.9	
	comp=Z,6µm,20.6s,baz=92,slow=42						
LEM	Lembang	45.36	265	P	P	20 12 12.0	-0.2
DBJI	Dramaga	46.22	265	P	P	20 12 18.7	-0.2
	comp=Z,159nm,1.2s,comp=Z,4µm						
SKJI	Sukabumi	46.41	265	P	P	20 12 19.4	-0.9
	comp=Z,955nm,0.8s,comp=Z,8µm						
HKC	Hong Kong Obse	46.60	307	⇑P	P	20 12 24.0	+2.3
SBJI	Serang	46.84	266	P	P	20 12 23.5	-0.2
SSE	Sheshan	46.85	321	P	P	20 12 24.5	+1.0
SSE				S	S	20 19 10.5	+0.5
SSE				sS	sS	20 19 38.0	+2.2
SSE				pmax	pmax		
	comp=Z,230nm,1.3s						
SSE				pmax	pmax		
	comp=Z,4µm,10.6s						
SSE				LR	LR		
	comp=Z,7µm,20.4s						
MCO	Taipa Grande	47.01	306	P	P	20 12 27.0	+2.2
CGJI	Cibinong	47.27	265	P	P	20 12 25.5	-1.5
	comp=Z,427nm,1.2s,comp=Z,6µm						
ERM	Erimo	47.33	350	*e*P	P	20 12 27.8	+0.8
	comp=Z,189nm,0.6s						
ERM				LR	LR		
	comp=Z,24µm,21.0s						
ERM	Erimo	47.33	350	c*e*P	P	20 12 28.0	+1.0
ERM				pmax	pmax		
	comp=Z,191nm,0.7s						
TJN	Taejon	47.42	332	c*e*P	P	20 12 28.6	+0.8
GZH	Guangzhou	47.66	307	⇑*i*P	P	20 12 32.0	+2.1
GZH				pP	pP	20 12 47.3	+2.1
GZH				sP	sP	20 12 54.3	+2.3
GZH				PcP	PcP	20 14 01.0	+2.3
GZH				PP	PP	20 14 23.0	+0.9
GZH				ScP	ScP	20 17 49.3	+1.2
GZH				PcS	PcS	20 17 56.3	+1.9
GZH				S	S	20 19 23.5	+1.8
GZH				ScS	ScS	20 22 18.8	+0.2
GZH				SS	SS	20 22 46.0	-4.8
GZH				pmax	pmax		
	comp=Z,10µm,10.1s						
GZH				LR	LR		
	comp=Z,17µm,23.3s						
GZH				LR	LR		
	comp=Z,34µm,23.1s						
BLSI	Bandar Lampung	47.74	267	P	P	20 12 30.2	-0.5
	comp=Z,88nm,1.7s,comp=Z,3µmcomp=Z,20µm						
KSRS	Korea Array	48.04	333	P	P	20 12 33.4	+0.8
	comp=Z,210nm,0.7s,baz=148,slow=8.2,SNR=558						
KSRS				PcP	PcP	20 14 00.5	+0.8
	comp=Z,51nm,0.7s,baz=159,slow=3.6,SNR=8.8						
KSRS				ScP	ScP	20 17 53.1	+3.8
	comp=Z,83nm,1.0s,baz=140,slow=5.2,SNR=33						
KSRS				S	S	20 19 26.4	-0.2
	comp=Z,0.7nm,0.8s,baz=123,slow=8.9,SNR=2.9						
KSRS				ScS	ScS	20 22 23.9	+3.4
	comp=Z,0.8nm,0.8s,baz=167,slow=5.9,SNR=2.5						
KSRS				LR	LR	20 32 40.1	
	comp=Z,9µm,18.5s,baz=175,slow=36						
KSRS				PKP2ab		20 44 40.5	
	comp=Z,1.7nm,1.0s,baz=306,slow=2.9,SNR=4.2						
KSRS				P4KPbc		20 50 14.7	
	comp=Z,1.6nm,0.7s,baz=150,slow=6.0,SNR=7.3						
KS15	Wonju Array Si	48.04	333	*e*P	P	20 12 33.0	+0.4
KS15				*e*PcP	PcP	20 14 02.5	+2.8
KS15				*e*ScP	ScP	20 17 52.9	+3.5
KSAR	Wonju Array Be	48.04	333	P	P	20 12 33.4	+0.8
KSAR				PcP	PcP	20 14 00.5	+0.8
KSAR				ScP	ScP	20 17 53.1	+3.8
KSAR				S	S	20 19 26.4	-0.3
KSAR				ScS	ScS	20 22 23.9	+3.3
KSAR				P'P'ab	P'P'ab	20 44 40.5	+4.8
KSAR				*e*		20 50 14.7	
KSAR	Wonju Array Be	48.04	333	P	P	20 12 33.4	+0.8
KSAR						20 14 00.5	
KSAR				S	S	20 19 26.4	-0.3
KSAR						20 22 23.9	
KS01	Wonju Array Si	48.07	333	*e*P	P	20 12 32.1	-0.6
KS01				*e*PcP	PcP	20 14 00.8	+0.9
KLI	Kotabumi	48.14	268	P	P	20 12 33.2	-0.5
KLI	Kotabumi	48.14	268	P	P	20 12 31.4	-2.3
PMBI	Palembang	48.31	270	P	P	20 12 34.4	-0.7
KASI	Kota Agung	48.48	267	P	P	20 12 34.8	-1.6
RAR	Rarotonga	48.50	114	P	P	20 12 36.6	+0.1
	comp=Z,29nm,0.7s,baz=216,slow=5.5,SNR=4.5						
RAR				S	S	20 19 36.2	+2.5
	comp=Z,9.1nm,0.5s,baz=106,slow=20,SNR=2.1						
RAR				LR	LR	20 30 23.0	
	comp=Z,8µm,21.9s,baz=284,slow=33						
RAR	Rarotonga	48.50	114	*e*P	P	20 12 38.0	+1.5
	comp=Z,234nm,1.4s						
RAR				S	S	20 19 36.2	+2.5
RAR	Rarotonga	48.50	114	*e*P	P	20 12 38.0	+1.5
RAR				S	S	20 19 36.2	+2.5
RAR				pmax	pmax		
	comp=Z,234nm,1.4s						
INCN	Inchon	48.66	332	*e*P	P	20 12 38.2	+0.8
	comp=Z,2µm,0.8s						
INCN				LR	LR		
	comp=Z,16µm,19.0s						
INCN	Inchon	48.66	332	P	P	20 12 38.9	+1.5
	SNR=151						
INCN	Inchon	48.66	332	*e*P	P	20 12 38.2	+0.8
INCN				pmax	pmax		
	comp=Z,2µm,0.8s						
INCN				MLR	MLR		
	comp=Z,16µm,19.0s						
DSRI	Dabo	48.70	273	P	P	20 12 37.1	-1.0
QIZ	Qiongzhong	48.71	300	P	P	20 12 39.8	+1.7
QIZ				pP	pP	20 12 54.8	+1.4
QIZ				sP	sP	20 13 01.8	+1.6
QIZ				pmax	pmax		
	comp=Z,6µm,6.3s						
QIZ				LR	LR		
	comp=Z,14µm,21.6s						
QIZ				LR	LR		
	comp=Z,29µm,21.6s						
QIZ				LR	LR		
	comp=Z,43µm,21.6s						
QIZ	Qiongzhong	48.71	300	*e*P	P	20 12 39.3	+1.2
	comp=Z,543nm,1.7s						
QIZ				LR	LR		
	comp=Z,53µm,22.0s						
MDSI	Maura Dua	48.83	268	P	P	20 12 38.0	-1.0
TPRI	Tanjung Pinang	48.91	275	P	P	20 12 39.8	+0.1
	comp=Z,188nm,1.8s,comp=Z,6µm						
YUK	Yuzh-Kuril'sk	48.91	353	c *i*P	P	20 12 39.6	+0.5
YUK				*e**PP	pP	20 12 54.3	-0.2
YUK				*e*		20 14 02.7	
YUK				*i*		20 14 33.7	
YUK				*e*S	S	20 19 36.9	-1.7
YUK				*i*		20 22 28.3	
YUK				pmax	pmax		
	comp=Z,1µm,3.4s						
YUK				pmax	pmax		
	comp=Z,441nm,1.4s						
YUK				pmax	pmax		
	comp=N,238nm,0.7s						
YUK				pmax	pmax		
	comp=E,629nm,0.9s						
LWLI	Liwa	48.93	267	P	P	20 12 39.1	-0.9
	comp=E,248nm,0.8s,comp=E,4µm						
NJ2	Nanjing	48.96	321	*e*P	P	20 12 41.5	+1.7
NJ2				PcP	PcP	20 14 05.8	+2.6
NJ2				ScP	ScP	20 17 56.0	+2.6
NJ2				S	S	20 19 38.5	-1.3
NJ2				pmax	pmax		
	comp=E,320nm,1.2s						
NJ2				pmax	pmax		
	comp=E,7µm,7.5s						
NJ2				LR	LR		
	comp=E,23µm,22.5s						
NJ2				LR	LR		
	comp=E,16µm,20.3s						
NJ2				LR	LR		
	comp=E,43µm,23.0s						
ASAJ	Asahikawa	49.47	350	P	P	20 12 44.7	+1.3
	comp=E,267nm,0.7s,baz=223,slow=12,SNR=131						
ASAJ				ScP	ScP	20 17 58.6	+3.3
	comp=E,22nm,0.8s,baz=266,slow=5.4,SNR=4.4						
ASAJ				S	S	20 19 46.4	-0.1
	comp=E,12nm,1.1s,baz=336,slow=19,SNR=1.6						
ASAJ				ScS	ScS	20 22 32.6	+2.7
	comp=E,3.0nm,0.8s,baz=90,slow=20,SNR=2.1						
ASAJ				LR	LR	20 30 49.9	
	comp=E,22µm,21.9s,baz=176,slow=33						
ASAJ	Asahikawa	49.47	350	*e*P	P	20 12 44.1	+0.7
	comp=E,393nm,0.8s						
ASAJ				*e*ScP	ScP	20 17 59.1	+3.8
ASAJ				S	S	20 19 46.4	-0.1
ASAJ				ScS	ScS	20 22 32.6	+2.7
MYKOM	Kota Tinggi	49.69	276	*e*P	P	20 12 45.3	-0.3
	comp=E,310nm,1.4s						
MYKOM	Kota Tinggi	49.69	276	P	P	20 12 48.0	+2.4
XMAS	Kiritimati	49.79	83	*e*P	P	20 12 46.5	0.0
	comp=E,767nm,1.3s						
KUR	Kuril'sk	49.89	355	c *i*P	P	20 12 47.2	+0.6
KUR				*i* *PP	pP	20 13 02.5	+0.5
KUR				*e*		20 14 39.7	
KUR				*i* S	S	20 19 53.0	+0.7
KUR				*i* SS	ScS	20 22 24.8	-7.8
KUR				pmax	pmax		
	comp=Z,560nm,1.7s						
KUR				pmax	pmax		
	comp=N,253nm,1.4s						
KUR				pmax	pmax		

	comp=E,92nm,1.3s						
KUR				pmax	pmax		
	comp=Z,6µm,5.6s						
KUR				pmax	pmax		
	comp=N,3µm,3.1s						
MCQ	**Macquarie Isla**	**49.92**	**176**	*e*P	**P**	**20 12 47.3**	**+0.7**
	comp=N,483nm,1.0s						
MCQ	**Macquarie Isla**	**49.92**	**176**	*e*P	**P**	**20 12 47.3**	**+0.7**
MCQ				pmax	pmax		
	comp=Z,483nm,1.0s						
MNAI	**Manna**	**50.05**	**268**	P	**P**	**20 12 48.2**	**-0.2**
MNAI	**Manna**	**50.05**	**268**	*e*P	**P**	**20 12 47.1**	**-1.3**
	comp=Z,961nm,1.4s						
MASI	**Maura Aman, Be**	**50.82**	**270**	P	**P**	**20 12 54.3**	**0.0**
	comp=Z,457nm,0.8s,comp=Z,5µm						
WHN	**Wuhan**	**51.01**	**316**	⇑*i*P	**P**	**20 12 56.8**	**+1.5**
WHN				sP	**sP**	**20 13 18.0**	**+0.5**
WHN				PcP	**PcP**	**20 14 14.3**	**+3.6**
WHN				ScP	**ScP**	**20 18 05.5**	**+3.3**
WHN				S	**S**	**20 20 11.0**	**+2.7**
WHN				pmax	pmax		
	comp=Z,1µm,1.3s						
WHN				pmax	pmax		
	comp=Z,12µm,4.7s						
WHN				LR	LR		
	comp=Z,15µm,13.5s						
WHN				LR	LR		
	comp=Z,17µm,18.3s						
WHN				LR	LR		
	comp=Z,65µm,24.0s						
MSHR	**Mys Shultsa**	**51.08**	**339**	*ce*P	**P**	**20 12 56.7**	**+1.1**
TEY	**Ternei**	**51.64**	**345**	⇑*e*P	**P**	**20 12 55.9**	**-3.9**
TEY				*i*		20 13 02.4	
TEY				*e*S	**S**	**20 20 09.0**	**-7.6**
TEY				pmax	pmax		
	comp=Z,250nm,0.8s						
KRJI	**Kerinci**	**51.67**	**271**	P	**P**	**20 13 00.7**	**0.0**
	comp=Z,315nm,0.9s,comp=Z,4µm						
YSS	**Yuzh-Sakhalins**	**52.20**	**351**	*e*P	**P**	**20 13 03.8**	**-0.1**
	comp=Z,224nm,0.7s						
YSS				*e*PcP	**PcP**	**20 14 18.1**	**+3.3**
YSS				LR	LR		
	comp=Z,17µm,21.0s						
YSS	**Yuzh-Sakhalins**	**52.20**	**351**	α*i*P	**P**	**20 13 04.5**	**+0.6**
YSS				*e**SP	**pP**	**20 13 17.6**	**-1.8**
YSS				*e*		20 14 18.0	
YSS				*e*S	**S**	**20 20 23.0**	**-1.3**
YSS				*e*PS	PKiKP	20 20 41.0	-14
YSS				pmax	pmax		
	comp=Z,290nm,1.6s						
YSS				pmax	pmax		
	comp=Z,6µm,9.0s						
YSS				pmax	pmax		
	comp=N,3µm,12.0s						
USA0B	**Ussuriysk Arra**	**52.23**	**341**	*e*P	**P**	**20 13 04.4**	**+0.3**
	comp=N,763nm,0.9s						
USRK	**Ussuriysk Ar.**	**52.23**	**341**	P	**P**	**20 13 05.1**	**+0.9**
	comp=N,389nm,0.8s,baz=169,slow=8.1						
USRK				ScP	**ScP**	**20 18 09.1**	**+1.9**
	baz=169,slow=3.7						
USRK				S	**S**	**20 20 23.2**	**-1.5**
	baz=64,slow=20						
USRK				ScS	**ScS**	**20 22 51.1**	**+2.3**
	baz=108,slow=3.2						
USRK				LR	LR	20 31 38.7	
	comp=N,14µm,21.5s,baz=143,slow=32						
USRK				PKP2ab		20 44 22.7	
	baz=258,slow=8.7						
BKNI	**Bangkinang**	**52.31**	**274**	P	**P**	**20 13 06.1**	**+0.8**
	comp=N,296nm,0.8s,comp=N,7µm						
BKNI	**Bangkinang**	**52.31**	**274**	*e*P	**P**	**20 13 04.0**	**-1.3**
	comp=N,221nm,0.8s						
TIA	**Tai'an**	**52.82**	**323**	P	**P**	**20 13 09.3**	**+0.6**
TIA				S	**S**	**20 20 38.0**	**+4.9**
TIA				pmax	pmax		
	comp=N,170nm,1.1s						
TIA				pmax	pmax		
	comp=N,6µm,5.6s						
TIA				LR	LR		
	comp=N,12µm,26.5s						
TIA				LR	LR		
	comp=N,10µm,25.6s						
TIA				LR	LR		
	comp=N,31µm,28.0s						
IPM	**Ipoh**	**52.87**	**279**	*e*P	**P**	**20 13 08.6**	**-0.9**
	comp=N,163nm,1.1s						
SKNT	**Sakolnakorn**	**53.13**	**295**	P	**P**	**20 13 12.0**	**+0.7**
	comp=N,117nm,1.9s,comp=N,3µm						
KEKH	**Kekaha**	**53.16**	**58**	*e*P	**P**	**20 13 12.7**	**+1.2**
	comp=N,905nm,1.1s						
KULM	**Kulim**	**53.37**	**280**	*e*P	**P**	**20 13 11.9**	**-1.3**
	comp=N,778nm,1.8s						
KULM	**Kulim**	**53.37**	**280**	P	**P**	**20 13 15.0**	**+1.8**
MDJ	**Mudanjiang**	**53.41**	**339**	P	**P**	**20 13 10.8**	**-2.1**
MDJ				PP	**PP**	**20 15 12.5**	**-1.4**
MDJ				PcS	**PcS**	**20 18 12.3**	**-6.1**
MDJ				S	**S**	**20 20 43.5**	**+2.6**
MDJ				pmax	pmax		
	comp=N,690nm,0.9s						
MDJ				pmax	pmax		
	comp=N,8µm,10.0s						
MDJ				LR	LR		
	comp=N,10µm,15.9s						
MDJ				LR	LR		
	comp=N,9µm,19.9s						
MDJ				LR	LR		
	comp=N,33µm,28.7s						
MDJ	**Mudanjiang**	**53.41**	**339**	*e*P	**P**	**20 13 13.4**	**+0.5**
	comp=N,490nm,0.9s						
MDJ				LR	LR		
	comp=Z,6µm,19.0s						
SNY	**Shenyang**	**53.54**	**333**	⇑P	**P**	**20 13 14.3**	**+0.4**
SNY				S	**S**	**20 20 50.5**	**+7.8**
SNY				pmax	pmax		
	comp=Z,190nm,1.7s						
SNY				pmax	pmax		
	comp=Z,7µm,5.5s						
SNY				LR	LR		
	comp=Z,17µm,17.6s						
SNY				LR	LR		
	comp=Z,7µm,14.7s						
SNY				LR	LR		
	comp=Z,38µm,35.8s						
SKLT	**Songkhla**	**53.74**	**282**	P	**P**	**20 13 16.3**	**+0.5**
	comp=Z,274nm,0.9s,comp=Z,6µm						
MNSI	**Mandailing Nat**	**53.81**	**274**	P	**P**	**20 13 15.6**	**-0.8**
KHON	**Khomkaen**	**53.97**	**294**	P	**P**	**20 13 18.4**	**+0.9**
	comp=Z,119nm,0.8s,comp=Z,935nm						
SRAK	**Srakaew**	**54.00**	**291**	P	**P**	**20 13 14.4**	**-3.3**
	comp=Z,422nm,0.7s,comp=Z,5µm						
SISI	**Saibi**	**54.09**	**272**	P	**P**	**20 13 17.5**	**-0.9**
NONG	**Nongkai**	**54.24**	**296**	P	**P**	**20 13 20.0**	**+0.6**
	comp=Z,6.9nm,0.8s,comp=Z,186nm						
CN2	**Changchun**	**54.32**	**336**	*e*P	**P**	**20 13 19.8**	**+0.3**
CN2				*e*pP	pP	20 13 35.8	+0.7
CN2				*e*sP	sP	20 13 42.5	+0.7
CN2				PP	**PP**	**20 15 23.0**	**+0.9**
CN2				ScP	**ScP**	**20 18 18.0**	**+1.7**
CN2				*e*S	**S**	**20 20 56.0**	**+2.9**
CN2				LR	LR		
	comp=Z,9µm,21.0s						
CN2				LR	LR		
	comp=Z,8µm,21.0s						
CN2				LR	LR		
	comp=Z,11µm,19.0s						
ENH	**Enshi**	**54.33**	**313**	*e*P	**P**	**20 13 20.5**	**+0.6**
	comp=Z,917nm,1.1s						
ENH				*e*PcP	**PcP**	**20 14 26.2**	**+2.8**
ENH				LR	LR		
	comp=Z,17µm,21.0s						
HON	**Honolulu**	**54.37**	**60**	*e*P	**P**	**20 13 20.9**	**+0.6**
	comp=Z,3µm,1.6s						
HON	**Honolulu**	**54.37**	**60**	*e*P	**P**	**20 13 20.9**	**+0.6**
HON				pmax	pmax		
	comp=Z,3µm,1.6s						
KIP	**Kipapa**	**54.39**	**60**	*e*P	**P**	**20 13 21.2**	**+0.8**
	comp=Z,1µm,1.4s						
KIP				LR	LR		
	comp=Z,23µm,21.0s						
KIP	**Kipapa**	**54.39**	**60**	*ce*P	**P**	**20 13 22.3**	**+1.8**
KIP				pmax	pmax		
	comp=Z,2µm,1.3s						
OPA	**Opana**	**54.50**	**59**	*e*P	**P**	**20 13 22.2**	**+1.0**
	comp=Z,2µm,1.2s						
OPA	**Opana**	**54.50**	**59**	P	**P**	**20 13 23.3**	**+2.1**
OPA				pmax	pmax		
	comp=Z,2µm,1.2s						
GYA	**Guiyang**	**54.60**	**307**	⇑*i*P	**P**	**20 13 23.3**	**+1.3**
GYA				pP	pP	20 13 36.0	-1.7
GYA				PP	**PP**	**20 15 28.3**	**+3.2**
GYA				ScP	**ScP**	**20 18 20.5**	**+2.3**
GYA				sS	sS	20 21 20.0	-4.1
GYA				ScS	**ScS**	**20 23 05.3**	**-1.3**
GYA				SS	**SS**	**20 24 42.8**	**+1.4**
GYA				pmax	pmax		
	comp=Z,100nm,0.9s						
GYA				pmax	pmax		
	comp=Z,6µm,10.9s						
GYA				LR	LR		
	comp=Z,15µm,23.6s						
GYA				LR	LR		
	comp=Z,24µm,21.7s						
GYA				LR	LR		
	comp=Z,35µm,20.2s						
PSI	**Prapat**	**54.70**	**277**	P	**P**	**20 13 21.8**	**-1.3**
	comp=Z,45nm,0.8s,baz=179,slow=2.1,SNR=17						
PSI				ScP	**ScP**	**20 18 20.1**	**+1.3**
	comp=Z,50nm,1.0s,baz=180,slow=3.8,SNR=8.5						
PSI				S	**S**	**20 20 52.0**	**-7.5**
	comp=Z,1.7nm,0.4s,baz=180,slow=8.5,SNR=2.3						
PSI				LR	LR	20 40 58.7	
	comp=Z,4µm,20.9s,baz=90,slow=41						
PSI	**Prapat**	**54.70**	**277**	*e*P	**P**	**20 13 21.0**	**-2.0**
	comp=Z,405nm,1.7s						
PSI				*e*ScP	**ScP**	**20 18 21.5**	**+2.6**
PSI				*e*S	**S**	**20 20 52.0**	**-7.5**
PSI	**Prapat**	**54.70**	**277**	*e*P	**P**	**20 13 21.0**	**-2.0**
PSI				*e*S	**S**	**20 20 52.0**	**-7.5**
PSI				pmax	pmax		
	comp=Z,405nm,1.7s						
NAYO	**Nakonayok**	**54.76**	**291**	P	**P**	**20 13 24.4**	**+1.2**
	comp=Z,9.3nm,0.9s						
TRTT	**Trang**	**54.77**	**283**	P	**P**	**20 13 23.6**	**+0.2**
	comp=Z,116nm,0.8s,comp=Z,2µmcomp=Z,15µm						
PATY	**Pattaya**	**54.80**	**289**	P	**P**	**20 13 24.8**	**+1.2**
	comp=Z,83nm,0.8s,comp=Z,1µm						
PBSI	**Pulau Batu**	**55.01**	**273**	P	**P**	**20 13 24.2**	**-0.9**
	comp=Z,91nm,1.2s,comp=Z,3µm						
TSI	**Tuntungan**	**55.15**	**277**	P	**P**	**20 13 26.1**	**0.0**
	comp=Z,269nm,1.3s,comp=Z,6µmcomp=Z,27µm						
SKR	**Severo-Kuril's**	**55.18**	**2**	*c i*P	**P**	**20 13 26.3**	**+0.8**
SKR				*e*		20 14 28.3	
SKR				*e*S	**S**	**20 21 03.7**	**-0.6**
SKR				*e*SSS	SSS	20 26 57.2	
SKR				pmax	pmax		
	comp=Z,6µm,7.9s						
SKR				pmax	pmax		
	comp=Z,400nm,1.1s						
SKR				pmax	pmax		
	comp=Z,5µm,15.5s						
SKR				smax	smax		
	comp=E,4µm,11.9s						
SKR				smax	smax		
	comp=N,10µm,21.6s						
SKR				smax	smax		
	comp=E,5µm,9.5s						
SKR				smax	smax		
	comp=N,9µm,15.0s						
SKR				MLR	MLR		
	comp=Z,16µm,18.0s						
KRAB	**Krabi**	**55.33**	**283**	P	P	20 13 32.7	+5.3
	comp=Z,2µm,0.8s						
KKH	**Kailua Kona**	**55.49**	**62**	*e*P	**P**	**20 13 28.8**	**+0.4**
KKH	**Kailua Kona**	**55.49**	**62**	*e*P	**P**	**20 13 28.8**	**+0.4**
KHLH	**Kahului Airpor**	**55.57**	**61**	*e*P	**P**	**20 13 30.1**	**+1.1**
	comp=Z,2µm,1.2s						
KHLU	**Kahalu‘u**	**55.58**	**63**	*e*P	**P**	**20 13 29.9**	**+0.7**
	comp=Z,2µm,1.3s						
HUH	**Hualalai**	**55.66**	**62**	*e*P	**P**	**20 13 30.5**	**+0.5**
	comp=Z,1µm,1.2s						
HLK	**Haleakala**	**55.67**	**61**	*e*P	**P**	**20 13 29.9**	**-0.2**
	comp=Z,1µm,1.2s						
KHU	**Kahuku**	**55.70**	**63**	*e*P	**P**	**20 13 31.4**	**+1.1**
	comp=Z,2µm,1.2s						
HPO	**Honuapo**	**55.71**	**63**	*e*P	**P**	**20 13 28.5**	**-1.5**
PBKT	**Sadao Pong**	**55.73**	**294**	*e*P	**P**	**20 13 31.3**	**+1.1**
PBKT	**Sadao Pong**	**55.73**	**294**	P	**P**	**20 13 31.4**	**+1.2**
	comp=Z,197nm,1.3s,comp=Z,7µm						
MHA	**Mahukona**	**55.77**	**62**	*e*P	**P**	**20 13 29.9**	**-0.5**
MHA	**Mahukona**	**55.77**	**62**	*e*P	**P**	**20 13 29.9**	**-0.5**
MWH	**Moku‘aweowe**	**55.80**	**63**	*e*P	**P**	**20 13 32.0**	**+0.7**
	comp=Z,1µm,1.4s						
MLOA	**Mauna Loa Obse**	**55.84**	**63**	*e*P	**P**	**20 13 31.9**	**+0.4**
	comp=Z,2µm,1.6s						
GSI	**Gunungsitoli**	**55.86**	**275**	P	**P**	**20 13 30.1**	**-1.1**
	comp=Z,358nm,1.0s,comp=Z,6µmcomp=Z,28µm						
GSI	**Gunungsitoli**	**55.86**	**275**	*e*P	**P**	**20 13 29.3**	**-1.9**
	comp=Z,245nm,0.8s						
SURT	**Suratani**	**55.86**	**284**	P	**P**	**20 13 32.1**	**+0.9**
	comp=Z,0.3nm,0.6s						
AIN	**Ainahou**	**55.89**	**63**	*e*P	**P**	**20 13 31.0**	**-0.5**
	comp=Z,2µm,1.3s						
HPAH	**Hawaii Prepara**	**55.90**	**62**	*e*P	**P**	**20 13 32.1**	**+0.6**
	comp=Z,883nm,1.1s						
KCSI	**Kotacane, Aceh**	**55.94**	**277**	P	**P**	**20 13 30.2**	**-1.6**
	comp=Z,201nm,0.9s,comp=Z,4µmcomp=Z,27µm						
HMH	**Humu‘ula Sheep**	**55.94**	**63**	*e*P	**P**	**20 13 32.5**	**+0.5**
	comp=Z,3µm,1.5s						
POHA	**Pohakuloa**	**55.95**	**63**	*e*P	**P**	**20 13 32.3**	**+0.2**
	comp=Z,1µm,1.1s						
POHA				LR	LR		
	comp=Z,18µm,19.0s						
BJT	**Baijiatuau**	**55.97**	**326**	*e*P	**P**	**20 13 31.4**	**-0.1**
	comp=Z,659nm,1.7s						
BJT				LR	LR		
	comp=Z,24µm,22.0s						
BJT	**Baijiatuau**	**55.97**	**326**	*e*P	**P**	**20 13 31.4**	**-0.1**
BJT				pmax	pmax		
	comp=Z,659nm,1.7s						
BJT				MLR	MLR		
	comp=Z,24µm,22.0s						
PHET	**Kaeng Krachan**	**55.97**	**289**	P	**P**	**20 13 33.4**	**+1.5**
	comp=Z,81nm,1.4s,comp=Z,932nm						
BJI	**Beijing**	**55.98**	**326**	P	**P**	**20 13 31.8**	**+0.3**
BJI				S	**S**	**20 21 13.3**	**-2.1**
BJI				pmax	pmax		
	comp=Z,48nm,1.3s						
BJI				LR	LR		
	comp=Z,3µm,23.2s						
BJI				LR	LR		
	comp=Z,7µm,21.8s						
BJI				LR	LR		
	comp=Z,7µm,26.5s						
MLH	**Mauna Loa**	**55.99**	**63**	*e*P	**P**	**20 13 32.6**	**+0.3**
	comp=Z,2µm,1.7s						
MLH	**Mauna Loa**	**55.99**	**63**	*e*P	**P**	**20 13 32.6**	**+0.3**
MLH				pmax	pmax		
	comp=Z,2µm,1.7s						
HLP	**Hilina Pali**	**55.99**	**63**	*e*P	**P**	**20 13 32.2**	**+0.1**
	comp=Z,938nm,1.2s						
TYV	**Tymovskoe**	**56.03**	**352**	*e*P	**P**	**20 13 32.7**	**+1.0**
TYV				*e*S	**S**	**20 21 16.5**	**+0.7**
TYV				pmax	pmax		
	comp=Z,6µm,8.8s						
TYV				pmax	pmax		
	comp=Z,371nm,1.7s						
TYV				smax	smax		
	comp=N,22nm,1.6s						
TYV				smax	smax		
	comp=N,3µm,8.8s						
PUH	**Pauahi**	**56.10**	**63**	*e*P	**P**	**20 13 33.0**	**0.0**
	comp=N,309nm,1.0s						
COCO	**West Island**	**56.14**	**259**	*e*P	**P**	**20 13 33.1**	**-0.1**
	comp=N,2µm,1.8s						
COCO				LR	LR		
	comp=Z,6µm,22.0s						
COCO	**West Island**	**56.14**	**259**	P	**P**	**20 13 34.0**	**+0.9**
	SNR=5.6						
COCO	**West Island**	**56.14**	**259**	*e*P	**P**	**20 13 33.1**	**-0.1**
COCO				pmax	pmax		
	comp=Z,2µm,1.8s						
COCO				MLR	MLR		
	comp=Z,6µm,22.0s						
STCH	**Steam Cracks**	**56.19**	**63**	*e*P	**P**	**20 13 33.6**	**0.0**
	comp=Z,249nm,0.8s						
NPOC	**North of Pu‘u**	**56.20**	**63**	*e*P	**P**	**20 13 33.8**	**+0.1**
	comp=Z,376nm,0.8s						
PHIT	**Phitsanulok**	**56.42**	**294**	P	**P**	**20 13 36.4**	**+1.3**
	comp=Z,278nm,0.8s,comp=Z,2µm						
TIY	**Taiyuan**	**56.64**	**322**	*e*P	**P**	**20 13 37.0**	**+0.6**
TIY				pP	**pP**	**20 13 55.0**	**+2.9**
TIY				S	**S**	**20 21 24.3**	**-0.2**
TIY				sS	**sS**	**20 21 52.0**	**+1.0**
TIY				SS	**SS**	**20 25 14.5**	**+1.4**
TIY				pmax	pmax		
	comp=Z,110nm,1.1s						
TIY				pmax	pmax		
	comp=Z,5µm,5.8s						
TIY				LR	LR		
	comp=Z,6µm,17.5s						
TIY				LR	LR		
	comp=Z,12µm,18.4s						
TIY				LR	LR		
	comp=Z,24µm,23.9s						
XAN	**Xi'an**	**56.77**	**316**	P	**P**	**20 13 38.0**	**+0.6**
XAN				PP	**PP**	**20 15 46.3**	**+2.0**
XAN				PcS	**PcS**	**20 18 36.0**	**+2.3**
XAN				S	**S**	**20 21 25.3**	**-1.0**
XAN				pmax	pmax		
	comp=Z,140nm,1.4s						
XAN				pmax	pmax		
	comp=Z,8µm,8.2s						
XAN				LR	LR		
	comp=Z,11µm,20.2s						
XAN				LR	LR		
	comp=Z,17µm,19.2s						
XAN				LR	LR		
	comp=Z,25µm,20.1s						
KLR	**Kul'dur**	**56.81**	**343**	ScP	**ScP**	**20 18 28.5**	**+1.3**
	comp=Z,3.6nm,1.1s,baz=143,slow=2.5,SNR=5.5						
KLR				S	**S**	**20 21 21.1**	**-5.1**
	comp=Z,0.2nm,0.8s,baz=166,slow=16,SNR=2.6						
KLR				ScS	**ScS**	**20 23 22.1**	**+0.8**
	comp=Z,0.3nm,0.8s,baz=229,slow=19,SNR=5.7						
KLR				LR	LR	20 36 36.4	
	comp=Z,656nm,20.8s,baz=164,slow=34						
KLR				PKPPKP		20 43 28.6	
	comp=Z,0.1nm,0.5s,baz=318,slow=12,SNR=3.5						
KLR				P4KPbc		20 50 51.6	
	comp=Z,0.1nm,0.5s,baz=135,slow=2.9,SNR=4.2						
KLR	**Kul'dur**	**56.81**	**343**	*c i*P	**P**	**20 13 37.8**	**+0.5**
SRDT	**SRDT**	**56.81**	**290**	P	**P**	**20 13 39.5**	**+1.5**
	comp=Z,624nm,1.1s,comp=Z,8µm						
LHMI	**Lhok Sumawe**	**57.00**	**279**	P	**P**	**20 13 40.3**	**+1.0**
	comp=Z,530nm,0.8s,comp=Z,11µmcomp=Z,28µm						
LHMI	**Lhok Sumawe**	**57.00**	**279**	*e*P	**P**	**20 13 38.8**	**-0.5**
	comp=Z,553nm,0.9s						
GRNR	**Gornyy**	**57.06**	**347**	⇑*i*P	**P**	**20 13 42.8**	**+3.8**
GRNR				pmax	pmax		
	comp=N,130nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,210nm,1.0s						
KMI	**Kunming**	**57.21**	**304**	P	**P**	**20 13 42.5**	**+1.6**
KMI				pP	pP	20 13 57.5	+0.9
KMI				sP	sP	20 14 03.8	+0.5
KMI				PP	**PP**	**20 15 46.0**	**-2.5**
KMI				S	**S**	**20 21 26.3**	**-6.4**
KMI				pmax	pmax		
	comp=Z,250nm,1.5s						
KMI				pmax	pmax		
	comp=Z,6µm,6.5s						
KMI				LR	LR		
	comp=Z,9µm,20.5s						
KMI				LR	LR		
	comp=Z,22µm,26.5s						
KMI				LR	LR		
	comp=Z,38µm,25.9s						
SNSI	**Sinabang, Aceh**	**57.23**	**276**	P	**P**	**20 13 40.7**	**-0.2**
	comp=Z,256nm,1.1s,comp=Z,5µm						
MLSI	**Meulaboh, Aceh**	**57.39**	**278**	P	**P**	**20 13 41.2**	**-0.9**
	comp=Z,750nm,1.0s,comp=Z,8µm						
PPT	**Papeete**	**57.42**	**108**	P	**P**	**20 13 42.9**	**+0.7**
	comp=Z,64nm,0.8s,baz=51,slow=5.6,SNR=6.4						
PPT				LR	LR	20 35 53.8	
	comp=Z,6µm,19.2s,baz=269,slow=33						
PPT2	**Papeete2**	**57.42**	**108**	*e*P	**P**	**20 13 43.4**	**+1.1**
	comp=Z,143nm,1.0s						
PPT2				*e*S	**S**	**20 21 36.2**	**+0.7**
	comp=Z,14µm,28.2s						
PPT2				*e*LQ	LQ	20 28 10.6	
	comp=Z,20µm,31.2s						
PPT2				*e*LR	LR	20 30 35.9	
	comp=Z,19µm,24.2s,baz=283						
PAE	**Paea**	**57.43**	**108**	*e*P	**P**	**20 13 42.8**	**+0.6**
	comp=Z,22nm,0.9s						
PPTF	**Pamatai, Papee**	**57.43**	**108**	*e*P	**P**	**20 13 42.6**	**+0.2**
	comp=Z,131nm,0.8s						
LAMP	**Lampang**	**57.55**	**295**	P	**P**	**20 13 44.4**	**+1.3**
	comp=Z,136nm,0.8s,comp=Z,1µm						
UMPA	**Umpang Tak**	**57.56**	**292**	P	**P**	**20 13 44.4**	**+1.1**
	comp=Z,65nm,1.2s,comp=Z,641nm						
TIAR	**Tiarei**	**57.64**	**108**	*e*P	**P**	**20 13 44.9**	**+1.1**
	comp=Z,84nm,0.9s						
PET	**Petropavlovsk**	**57.65**	**4**	*e*P	**P**	**20 13 43.6**	**+0.5**
	comp=Z,169nm,0.8s						
PET				LR	LR		
	comp=Z,17µm,22.0s						
PET	**Petropavlovsk**	**57.65**	**4**	⇑*e*P	**P**	**20 13 43.6**	**+0.5**
PET				pmax	pmax		
	comp=Z,410nm,1.7s						
PEA0B	**Petropavlovsk-**	**57.67**	**3**	*e*P	**P**	**20 13 44.1**	**+0.8**
	comp=Z,777nm,1.3s						
PETK	**Petropavlovsk-**	**57.67**	**3**	P	**P**	**20 13 44.5**	**+1.2**
	comp=Z,223nm,0.9s,baz=166,slow=6.5						
PETK				ScP	**ScP**	**20 18 32.2**	**+1.3**
	baz=156,slow=3.8						
PETK				LR	LR	20 34 35.6	
	comp=Z,19µm,21.7s,baz=199,slow=32						
PETK				PKP2bc		20 43 41.0	
	baz=86,slow=5.9						
PETK	**Petropavlovsk-**	**57.67**	**3**	*e*P	**P**	**20 13 43.0**	**-0.3**
PETK				ScP	**ScP**	**20 18 32.2**	**+1.3**
PETK				⇑*e*		20 43 41.0	
PETK	**Petropavlovsk-**	**57.67**	**3**	*e*P	**P**	**20 13 43.0**	**-0.3**
PEA1	**Petropavlovsk-**	**57.68**	**3**	*e*P	**P**	**20 13 44.5**	**+1.1**
PEA1				*e*ScP	**ScP**	**20 18 32.2**	**+1.3**
PEA1				⇑*e*		20 43 41.0	
TVO	**Taravao**	**57.75**	**108**	*e*P	**P**	**20 13 45.7**	**+1.1**
CM01	**Chiang Mai Arr**	**58.12**	**295**	*e*P	**P**	**20 13 47.5**	**+0.3**
CM31	**Chiang Mai Arr**	**58.15**	**295**	*e*P	**P**	**20 13 48.2**	**+0.9**
CM31	**Chiang Mai Arr**	**58.15**	**295**	P	**P**	**20 13 48.9**	**+1.6**
CMAR	**Chiang Mai Arr**	**58.15**	**295**	P	**P**	**20 13 48.8**	**+1.4**
	comp=Z,163nm,0.8s,baz=115,slow=5.2,SNR=477						
CMAR				S	**S**	**20 21 46.9**	**+2.1**
	comp=Z,1.7nm,0.9s,baz=153,slow=3.0,SNR=2.7						
CMAR				LR	LR	20 37 10.7	
	comp=Z,10µm,21.5s,baz=104,slow=34						
CMAR				PKPPKP	**P'P'df**	**20 43 26.6**	**-3.0**
	comp=Z,3.2nm,0.9s,baz=301,slow=4.3,SNR=5.1						
CMAR				P4KPbc		20 51 00.8	
	comp=Z,1.5nm,0.8s,baz=91,slow=2.2,SNR=6.6						
CMMT	**Chiang Mai**	**58.25**	**295**	P	**P**	**20 13 48.7**	**+0.6**
	comp=Z,230nm,1.7s,comp=Z,6µm						
CHTO	**Chiang Mai**	**58.26**	**295**	*e*P	**P**	**20 13 48.7**	**+0.6**
	comp=Z,332nm,1.4s						
CHTO				LR	LR		
	comp=Z,15µm,22.0s						
CHTO	**Chiang Mai**	**58.26**	**295**	P	**P**	**20 13 49.3**	**+1.2**
	SNR=104						
CHTO	**Chiang Mai**	**58.26**	**295**	*e*P	**P**	**20 13 48.7**	**+0.6**
CHTO				pmax	pmax		
	comp=Z,332nm,1.4s						
CHTO				MLR	MLR		
	comp=Z,15µm,22.0s						
CHTO	**Chiang Mai**	**58.26**	**295**	P	**P**	**20 13 48.8**	**+0.7**
	comp=Z,1µm,1.7s,comp=Z,29µmcomp=Z,126µm						
TBI	**Tubuai**	**58.28**	**115**	*e*S	**S**	**20 21 47.0**	**+0.6**
	comp=Z,17µm,29.2s						
TBI				*e*LQ	LQ	20 28 31.5	
	comp=Z,56µm,33.8s						
TBI				*e*LR	LR	20 30 59.2	
	comp=Z,71µm,34.2s,baz=279						
NKL	**Nikolayevsk**	**58.55**	**351**	*i* P	**P**	**20 13 50.0**	**+0.6**
NKL				*e*		20 23 36.0	
NKL				pmax	pmax		
	comp=N,2µm,10.0s						
NKL				pmax	pmax		
	comp=E,900nm,10.0s						
NKL				pmax	pmax		
	comp=Z,7µm,10.0s						
NKL				MLR	MLR		
	comp=N,7µm,16.0s						
NKL				MLR	MLR		
	comp=E,5µm,16.0s						
NKL				MLR	MLR		
	comp=Z,9µm,16.0s						
BSI	**Banda Aceh**	**58.67**	**279**	P	**P**	**20 13 51.8**	**+0.8**
PMOR	**Pomariorio Ree**	**58.82**	**105**	*e*P	**P**	**20 13 52.8**	**+0.8**
	comp=Z,641nm,1.2s						
PMOR	**Pomariorio Ree**	**58.82**	**105**	*e*T	T	21 17 21.2	

	comp=Z,11nm,0.2s						
CD2	**Chengdu**	**58.92**	**310**	⇑*i*P	**P**	**20 13 53.5**	**+0.9**
CD2				pP	pP	20 14 06.0	-2.3
CD2				sP	sP	20 14 11.3	-3.7
CD2				PP	**PP**	**20 16 04.3**	**+0.8**
CD2				S	**S**	**20 21 56.0**	**+1.4**
CD2				sS	sS	20 22 19.0	-2.2
CD2				SS	**SS**	**20 25 53.5**	**+4.3**
CD2				pmax	pmax		
	comp=Z,530nm,0.7s						
CD2				pmax	pmax		
	comp=Z,12µm,8.5s						
CD2				LR	LR		
	comp=Z,44µm,26.3s						
CD2				LR	LR		
	comp=Z,44µm,25.8s						
CD2				LR	LR		
	comp=Z,44µm,27.8s						
VAH	**Vaihoa**	**59.09**	**105**	*e*P	**P**	**20 13 54.4**	**+0.5**
	comp=Z,314nm,1.2s						
HHC	**Hu-ho-hao-te**	**59.14**	**324**	*e*P	**P**	**20 13 54.8**	**+0.8**
HHC				pP	pP	20 14 11.5	+1.7
HHC				S	**S**	**20 21 57.3**	**+0.1**
HHC				pmax	pmax		
	comp=Z,73nm,1.2s						
HHC				pmax	pmax		
	comp=Z,7µm,5.6s						
HHC				LR	LR		
	comp=Z,14µm,20.8s						
HHC				LR	LR		
	comp=Z,15µm,20.7s						
HHC				LR	LR		
	comp=Z,34µm,21.6s						
SMY	**Shemya**	**59.85**	**15**	*e*P	**P**	**20 13 59.4**	**+1.0**
SMY	**Shemya**	**59.85**	**15**	*e*P	**P**	**20 13 59.4**	**+1.0**
BTO	**Baotou**	**59.91**	**323**	*e*P	**P**	**20 13 59.5**	**+0.3**
BTO				S	**S**	**20 22 02.5**	**-4.5**
BTO				pmax	pmax		
	comp=Z,29nm,2.6s						
CMBY	**CAMPBELL BAY**	**60.25**	**281**	*e*P	**P**	**20 14 00.8**	**-1.1**
HIA	**Hailar**	**61.05**	**336**	*e*P	**P**	**20 14 07.0**	**+0.3**
	comp=Z,389nm,1.1s						
HIA				LR	LR		
	comp=Z,12µm,20.0s						
HIA	**Hailar**	**61.05**	**336**	*e*P	**P**	**20 14 07.0**	**+0.3**
HIA				pmax	pmax		
	comp=Z,389nm,1.1s						
HIA				MLR	MLR		
	comp=Z,12µm,20.0s						
LZH	**Lanzhou**	**61.38**	**316**	⇑P	**P**	**20 14 11.3**	**+1.9**
LZH				pP	pP	20 14 23.3	-2.0
LZH				sP	sP	20 14 28.5	-3.4
LZH				PP	**PP**	**20 16 29.5**	**+4.2**
LZH				ScP	**ScP**	**20 18 50.0**	**+2.0**
LZH				S	**S**	**20 22 26.3**	**+0.1**
LZH				sS	sS	20 22 50.3	-2.7
LZH				SS	**SS**	**20 26 29.8**	**+1.9**
LZH				pmax	pmax		
	comp=Z,1µm,1.2s						
LZH				pmax	pmax		
	comp=Z,16µm,9.3s						
LZH				LR	LR		
	comp=Z,19µm,17.4s						
LZH				LR	LR		
	comp=Z,31µm,17.3s						
LZH				LR	LR		
	comp=Z,49µm,19.5s						
ZEA	**Zeya**	**62.11**	**343**	*c i*P	**P**	**20 14 14.6**	**+0.8**
ZEA				*e*S	**S**	**20 22 33.0**	**-1.4**
ZEA				*e*PS	**PnS**	**20 22 52.0**	**-5.1**
ZEA				pmax	pmax		
	comp=E,130nm,1.0s						
ZEA				pmax	pmax		
	comp=N,500nm,1.2s						
ZEA				pmax	pmax		
	comp=Z,1µm,1.2s						
ZEA				pmax	pmax		
	comp=Z,5µm,12.0s						
ZEA				pmax	pmax		
	comp=N,2µm,10.0s						
ZEA				smax	smax		
	comp=E,2µm,9.0s						
PBA	**Port Blair**	**62.24**	**286**	*e*P	P	20 14 14.9	-0.4
	comp=E,375nm,1.1s						
ATKA	**Atka Island**	**63.06**	**22**	*e*P	**P**	**20 14 20.2**	**+0.1**
	comp=E,800nm,1.9s						
MA2	**Magadan**	**64.06**	**359**	S	**S**	**20 22 56.9**	**-1.6**
	comp=E,3.4nm,0.4s,baz=345,slow=20,SNR=2.9						
MA2				LR	LR	20 42 17.0	
	comp=E,11µm,19.3s,baz=178,slow=36						
MA2				PKP2bc		20 43 23.0	
	comp=E,20nm,1.1s,baz=62,slow=5.4,SNR=6.4						
MA2	**Magadan**	**64.06**	**359**	*e*P	**P**	**20 14 26.0**	**-0.5**
	comp=E,870nm,1.3s						
MA2				S	**S**	**20 22 56.9**	**-1.6**
MA2				⇑*e*		20 43 23.0	
MA2	**Magadan**	**64.06**	**359**	⇑*e*P	**P**	**20 14 27.8**	**+1.3**
MA2				pmax	pmax		
	comp=Z,724nm,1.3s						
MOKO	**MOKOCHONG**	**64.54**	**302**	*e*P	**P**	**20 14 30.7**	**+0.1**
SAIH	**SAIHA**	**64.67**	**297**	*e*P	**P**	**20 14 32.1**	**+0.7**
SAIH				IAMs_20	IAMs_20	20 39 21.0	
	comp=Z,41µm,31.5s						
KOHI	**KOHIMA**	**64.69**	**301**	*e*P	**P**	**20 14 31.5**	**-0.1**
KOHI				IAMs_20	IAMs_20	20 39 40.4	
	comp=Z,21µm,22.0s						
JORH	**JORHAT**	**64.91**	**302**	*e*P	**P**	**20 14 33.2**	**+0.4**
SILR	**SILCHAR**	**65.52**	**300**	*e*P	**P**	**20 14 38.0**	**+1.3**
CIT	**Chita**	**65.73**	**334**	*e*P	**P**	**20 14 38.8**	**+1.2**
CIT				*e*		20 14 48.5	
CIT				*e*		20 15 03.4	
CIT				pmax	pmax		
	comp=Z,706nm,1.1s						
NIKH	**Nikolski High**	**65.73**	**24**	*e*P	**P**	**20 14 37.7**	**+0.1**
	comp=Z,412nm,1.1s						
GTA	**Gaotai**	**65.80**	**317**	⇑P	**P**	**20 14 40.0**	**+1.5**
GTA				pP	pP	20 14 53.8	-0.7
GTA				sP	sP	20 14 59.0	-2.1
GTA				PcP	**PcP**	**20 15 13.5**	**+4.3**
GTA				ScP		20 19 11.3	
GTA				S	**S**	**20 23 21.0**	**+0.1**
GTA				sS	pS	20 23 43.5	+3.4
GTA				SS	**SS**	**20 27 38.0**	**+1.3**
GTA				pmax	pmax		
	comp=Z,200nm,1.3s						
GTA				pmax	pmax		
	comp=Z,8µm,6.2s						
GTA				LR	LR		
	comp=Z,7µm,22.5s						
GTA				LR	LR		
	comp=Z,11µm,22.2s						
GTA				LR	LR		
	comp=Z,19µm,21.6s						
BRDH	**Bariadhala**	**65.92**	**297**	P	**P**	**20 14 41.0**	**+1.6**
	comp=Z,248nm,0.4s,baz=68,slow=22,SNR=12						
BRDH				LR	LR	20 44 32.5	
	comp=Z,6µm,20.4s,baz=156,slow=37						
ULN	**Ulaanbaatar**	**66.07**	**328**	*e*P	**P**	**20 14 41.0**	**+1.0**
	comp=Z,361nm,1.1s						
ULN				LR	LR		
	comp=Z,17µm,22.0s						
ULN	**Ulaanbaatar**	**66.07**	**328**	P	**P**	**20 14 41.6**	**+1.5**
	SNR=179						
ULN	**Ulaanbaatar**	**66.07**	**328**	*ce*P	**P**	**20 14 41.2**	**+1.2**
ULN				pmax	pmax		
	comp=Z,573nm,1.7s						
TEZP	**TEZPUR**	**66.09**	**302**	*e*P	**P**	**20 14 41.1**	**+0.7**
BELO	**BELONIA**	**66.25**	**298**	*e*P	**P**	**20 14 43.0**	**+1.5**
TAOE	**Nuku Hiva Isla**	**66.28**	**98**	*e*P	**P**	**20 14 42.0**	**0.0**
	comp=Z,588nm,1.3s						
TAOE				*e*S	**S**	**20 23 28.1**	**+0.5**
	comp=Z,17µm,28.9s						
TAOE				*e*LQ	LQ	20 31 49.1	
	comp=Z,18µm,37.2s						
TAOE				*e*LR	LR	20 34 33.9	
	comp=Z,30µm,32.3s,baz=275						
TAOE	**Nuku Hiva Isla**	**66.28**	**98**	*e*P	**P**	**20 14 43.0**	**+1.0**
	comp=Z,342nm,1.3s						
SONA0	**Songino Array**	**66.40**	**328**	*e*P	**P**	**20 14 43.2**	**+1.1**
SONA0				*e*		20 19 10.2	
SONA0				*e*S	**S**	**20 23 28.7**	**+0.8**
SONA0				*e*SKSac	**ScS**	**20 24 33.9**	**0.0**
SONA0				⇑*e*		20 43 20.6	
SONA0				*e*		20 44 51.8	
SONA0				*e*		20 51 33.8	
SONM	**Songino Array**	**66.40**	**328**	P	**P**	**20 14 43.2**	**+1.1**
	comp=Z,71nm,0.6s,baz=136,slow=7.7,SNR=194						
SONM				ScP		20 19 10.2	
	comp=Z,44nm,1.2s,baz=156,slow=2.5,SNR=5.9						
SONM				S	**S**	**20 23 28.7**	**+0.8**
	comp=Z,1.9nm,1.2s,baz=45,slow=15,SNR=2.5						
SONM				ScS	**ScS**	**20 24 33.9**	**0.0**
	comp=Z,2.0nm,1.0s,baz=123,slow=5.3,SNR=3.1						
SONM				PKP2bc		20 43 20.6	
	comp=Z,5.1nm,1.1s,baz=311,slow=2.0,SNR=11						
SONM				LR	LR	20 44 51.8	
	comp=Z,10µm,18.2s,baz=130,slow=37						
SONM				P4KPbc		20 51 33.8	
	comp=Z,3.6nm,1.1s,baz=149,slow=4.0,SNR=12						
SONA1	**Songino Array**	**66.40**	**328**	*e*P	**P**	**20 14 41.9**	**-0.2**
SHL	**Shillong**	**66.55**	**300**	*e*P	**P**	**20 14 43.7**	**+0.1**
	comp=Z,406nm,1.0s						
SHL	**Shillong**	**66.55**	**300**	*e*P	**P**	**20 14 43.7**	**+0.1**
SHL	**Shillong**	**66.55**	**300**	*e*P	**P**	**20 14 43.7**	**+0.1**
SHL				pmax	pmax		
	comp=Z,406nm,1.0s						
GUWA	**GUWAHATI**	**66.91**	**301**	*e*P	**P**	**20 14 45.8**	**+0.2**
GUWA				IAMs_20	IAMs_20	20 53 15.2	
	comp=Z,5µm,30.7s						
UNV	**Unalaska Valle**	**67.34**	**25**	*e*P	**P**	**20 14 47.4**	**-0.4**
	comp=Z,127nm,0.9s						
SEY	**Seymchan**	**67.40**	**360**	S	**S**	**20 23 39.8**	**+0.6**
	comp=Z,1.9nm,0.9s,baz=311,slow=20,SNR=3.4						
SEY				ScS	**SKiKP**	**20 24 42.3**	**+0.7**
	comp=Z,2.6nm,1.1s,baz=209,slow=19,SNR=3.1						
SEY				PKPPKP		20 43 11.9	
	comp=Z,36nm,1.3s,baz=302,slow=3.0,SNR=8.2						
SEY				LR	LR	20 47 16.4	
	comp=Z,4µm,18.0s,baz=160,slow=39						
SEY	**Seymchan**	**67.40**	**360**	*ce*P	**P**	**20 14 48.4**	**+0.4**
AKUT	**Akutan**	**67.85**	**25**	*e*P	**P**	**20 14 50.7**	**-0.2**
	comp=Z,302nm,1.0s						
TURI	**Tura**	**67.88**	**300**	*e*P	**P**	**20 14 52.5**	**+0.7**
CASY	**Casey**	**68.26**	**197**	*e*P	**P**	**20 14 53.2**	**-0.1**
	comp=Z,68nm,0.8s						
CASY				LR	LR		
	comp=Z,3µm,22.0s						
SPIA	**Saint Paul Isl**	**68.39**	**20**	*e*P	**P**	**20 14 54.5**	**+0.2**
	comp=Z,1µm,1.5s						
LSA	**Lhasa**	**68.46**	**304**	P	**P**	**20 14 57.3**	**+1.4**
LSA				S	**S**	**20 23 52.5**	**-1.5**
LSA				pmax	pmax		
	comp=Z,83nm,1.0s						
LSA				pmax	pmax		
	comp=Z,5µm,13.9s						
LSA				LR	LR		
	comp=Z,3µm,20.1s						
LSA				LR	LR		
	comp=Z,6µm,25.1s						
LSA				LR	LR		
	comp=Z,24µm,27.6s						
LSA	**Lhasa**	**68.46**	**304**	*e*P	**P**	**20 14 57.0**	**+1.0**
	comp=Z,223nm,0.9s						
LSA				LR	LR		
	comp=Z,21µm,22.0s						
LSA	**Lhasa**	**68.46**	**304**	P	**P**	**20 14 57.5**	**+1.5**
LSA	**Lhasa**	**68.46**	**304**	*e*P	**P**	**20 14 57.0**	**+1.0**
LSA				pmax	pmax		
	comp=Z,223nm,0.9s						
LSA				MLR	MLR		
	comp=Z,21µm,22.0s						
YAK	**Yakutsk**	**68.91**	**348**	P	**P**	**20 14 57.7**	**+0.2**
	comp=Z,5.4nm,0.4s,baz=211,slow=19,SNR=4.9						
YAK				S	**S**	**20 23 54.6**	**-2.5**
	comp=Z,0.9nm,0.3s,baz=105,slow=20,SNR=2.3						
YAK				PKPPKP	**P’P’df**	**20 43 06.7**	**-1.8**
	comp=Z,0.9nm,0.3s,baz=32,slow=15,SNR=2.3						
YAK				LR	LR	20 43 48.5	
	comp=Z,5µm,21.6s,baz=88,slow=35						
YAK	**Yakutsk**	**68.91**	**348**	*e*P	**P**	**20 14 57.6**	**+0.2**
	comp=Z,905nm,1.2s						
YAK				S	**S**	**20 23 54.6**	**-2.5**
YAK				P’P’		20 43 06.7	
YAK	**Yakutsk**	**68.91**	**348**	*c i*P	**P**	**20 14 58.2**	**+0.8**
YAK				*e*		20 15 23.7	
YAK				*e*S	**S**	**20 23 56.9**	**-0.1**
YAK				*e**SS	**SKiKP**	**20 24 34.4**	**-9.4**
YAK				pmax	pmax		
	comp=Z,637nm,1.5s						
YAK				pmax	pmax		
	comp=N,225nm,1.4s						
YAK				pmax	pmax		
	comp=E,88nm,1.4s						
YAK				smax	smax		
	comp=N,3µm,6.1s						
YAK				smax	smax		
	comp=E,1µm,5.8s						
FALS	**False Pass**	**69.34**	**25**	*e*P	**P**	**20 15 00.5**	**+0.3**
	comp=E,288nm,0.9s						
ZAK	**Zakamensk**	**69.56**	**328**	*e*P	**P**	**20 15 02.8**	**+0.9**
ZAK				*e*		20 15 27.4	
ZAK				pmax	pmax		
	comp=Z,317nm,1.1s						
BOD	**Bodaibo**	**69.79**	**339**	⇓*i*P	**P**	**20 15 02.9**	**-0.1**
BOD				pmax	pmax		
	comp=Z,431nm,1.6s						
GTK	**Tadong**	**69.88**	**301**	*e*P	**P**	**20 15 05.2**	**+0.9**
TLY	**Talaya**	**70.14**	**330**	P	**P**	**20 15 06.0**	**+0.7**
	baz=183,slow=4.8						
TLY	**Talaya**	**70.14**	**330**	*e*P	**P**	**20 15 05.7**	**+0.4**
	comp=Z,248nm,1.2s						
TLY				LR	LR		
	comp=Z,10µm,22.0s						
TLY	**Talaya**	**70.14**	**330**	P	**P**	**20 15 06.5**	**+1.2**
	SNR=91						
TLY	**Talaya**	**70.14**	**330**	*c i*P	**P**	**20 15 05.9**	**+0.6**
TLY				*e*		20 17 39.4	
TLY				*e*S	**S**	**20 24 11.2**	**-0.8**
TLY				*e*		20 24 51.0	
TLY				*e*SS	**SS**	**20 28 44.5**	**+1.4**
TLY				pmax	pmax		
	comp=Z,154nm,1.1s						
IRK	**Irkutsk**	**70.16**	**330**	⇑*i*P	**P**	**20 15 06.2**	**+0.8**
IRK				*e*S	**S**	**20 24 15.4**	**+3.1**
IRK				*e*		20 24 57.9	
IRK				pmax	pmax		
	comp=Z,573nm,1.7s						
TAPN	**Taplejung**	**70.64**	**301**	*e*P	**P**	**20 15 10.2**	**+0.9**
	comp=Z,482nm,1.0s						
ODAN	**Odare**	**70.79**	**300**	*e*P	**P**	**20 15 10.9**	**+0.8**
	comp=Z,839nm,0.8s						
SDPT	**Sand Point**	**70.93**	**26**	*e*P	**P**	**20 15 09.6**	**-0.4**
	comp=Z,366nm,1.1s						
BOK	**Bokaro**	**71.32**	**297**	*e*P	**P**	**20 15 13.8**	**+0.7**
BOK				IAmb	IAmb	20 15 18.1	
	comp=Z,209nm,1.2s						
MOY	**Mondy**	**71.48**	**329**	*e*P	**P**	**20 15 14.6**	**+1.0**
MOY				pmax	pmax		
	comp=Z,786nm,2.0s						
RAMN	**Ramite**	**71.49**	**300**	*e*P	**P**	**20 15 15.6**	**+1.3**
	comp=Z,201nm,0.7s						
RKT	**Rikitea**	**71.51**	**113**	*e*P	**P**	**20 15 14.4**	**+0.2**
	comp=Z,140nm,1.1s						
RKT				*e*S	**S**	**20 24 29.0**	**0.0**
	comp=Z,5µm,31.5s						
RKT				*e*LQ	LQ	20 34 07.3	
	comp=Z,17µm,31.8s						
RKT				*e*LR	LR	20 37 04.3	
	comp=Z,65µm,28.0s						
CHLP	**Challavanipeta**	**71.83**	**291**	*e*P	**P**	**20 15 16.6**	**+0.4**
CHLP				IAmb	IAmb	20 15 20.5	
	comp=Z,2µm,1.7s						
CHLP				*e*S	**S**	**20 24 32.4**	**-0.4**
CHLP				IVMs_BB	IVMs_BB	20 41 52.9	
	comp=Z,3µm,22.3s						
JIRN	**Jiri**	**72.03**	**301**	*e*P	**P**	**20 15 18.5**	**+0.8**
	comp=Z,825nm,0.8s						
GUN	**Gumba**	**72.36**	**301**	*e*P	**P**	**20 15 20.5**	**+0.8**
CHGN	**Chignik**	**72.43**	**26**	*e*P	**P**	**20 15 18.1**	**-0.9**
	comp=Z,110nm,0.8s						
PKIN	**Phulchoki**	**72.69**	**301**	*e*P	**P**	**20 15 21.9**	**+0.4**
KKN	**Kakani**	**72.84**	**301**	*e*P	**P**	**20 15 23.0**	**+0.6**
	comp=Z,258nm,0.5s						
DMN	**Daman**	**72.94**	**301**	*e*P	**P**	**20 15 23.8**	**+0.8**
	comp=Z,1µm,1.1s						
VNDA	**Vanda**	**72.96**	**178**	P	**P**	**20 15 22.4**	**+0.5**
	comp=Z,36nm,0.7s,baz=331,slow=6.6,SNR=212						
VNDA				S	**S**	**20 24 43.0**	**-0.8**
	comp=Z,1.0nm,1.0s,baz=354,slow=19,SNR=2.2						
VNDA				LR	LR	20 42 24.5	
	comp=Z,4µm,21.6s,baz=3.5,slow=32						
VNDA				PKP2ab		20 42 57.1	
	comp=Z,1.9nm,1.0s,baz=214,slow=4.4,SNR=3.8						
VNDA	**Vanda**	**72.96**	**178**	*e*P	**P**	**20 15 21.7**	**-0.2**
VNDA				S	**S**	**20 24 43.0**	**-0.8**
VNDA				P’P’ab		20 42 57.1	
VNDA	**Vanda**	**72.96**	**178**	*e*P	**P**	**20 15 21.7**	**-0.2**
VNDA				S	**S**	**20 24 43.0**	**-0.8**
PALK	**Pallekele**	**73.28**	**279**	P	**P**	**20 15 25.5**	**+0.6**
	comp=Z,112nm,0.8s,baz=116,slow=5.1,SNR=59						
PALK				LR	LR	20 47 52.4	
	comp=Z,4µm,21.7s,baz=97,slow=36						
PALK	**Pallekele**	**73.28**	**279**	*e*P	**P**	**20 15 24.9**	**-0.1**
	comp=Z,156nm,0.8s						
PALK	**Pallekele**	**73.28**	**279**	P	**P**	**20 15 25.7**	**+0.8**
	SNR=13						
PALK	**Pallekele**	**73.28**	**279**	*i* P	**P**	**20 15 25.5**	**+0.6**
	SNR=23						
PALK	**Pallekele**	**73.28**	**279**	*i* P	**P**	**20 15 25.9**	**+0.9**
GKN	**Gorkha**	**73.44**	**301**	*e*P	**P**	**20 15 26.4**	**+0.6**
SBA	**Scott Base**	**73.50**	**177**	*e*P	**P**	**20 15 26.8**	**+1.8**
	comp=Z,292nm,1.3s						
SBA				LR	LR		
	comp=Z,8µm,22.0s						
SBA	**Scott Base**	**73.50**	**177**	*e*P	**P**	**20 15 26.8**	**+1.8**
SBA				pmax	pmax		
	comp=Z,292nm,1.3s						
SBA				MLR	MLR		
	comp=Z,8µm,22.0s						
PVM	**Polavaram**	**73.87**	**289**	*e*P	**P**	**20 15 27.7**	**-0.6**
PVM				IAmb	IAmb	20 15 33.7	
	comp=Z,328nm,0.9s						
PVM				*e*S	**S**	**20 24 55.1**	**-1.0**
PVM				IVMs_BB	IVMs_BB	20 40 51.8	
	comp=Z,3µm,29.4s						
MIR	**Mirnyy**	**74.19**	**201**	⇑*i*P	**P**	**20 15 32.0**	**+2.8**
MIR				*e*		20 18 25.0	
MIR				*e*PPP	PPP	20 20 10.0	
MIR				*e*S	**S**	**20 25 01.0**	**+3.1**
MIR				*e*PS	PnS	20 25 59.0	+20
KOLN	**Koldanda**	**74.28**	**300**	*e*P	**P**	**20 15 31.2**	**+0.4**
	comp=Z,453nm,0.8s						
DANN	**Dangsing**	**74.28**	**301**	*e*P	**P**	**20 15 31.0**	**+0.1**
	comp=Z,1µm,1.2s						
SII	**Sitkinak Islan**	**74.47**	**27**	*e*P	**P**	**20 15 30.9**	**-0.2**
	comp=Z,326nm,0.7s						
PYUN	**Piuthan**	**74.88**	**301**	*e*P	**P**	**20 15 34.4**	**+0.1**
	comp=Z,2µm,1.2s						
SKHT	**Srikalahasti**	**75.12**	**285**	*e*P	**P**	**20 15 35.0**	**-0.7**
SKHT				IAmb	IAmb	20 15 39.1	
	comp=Z,568nm,1.4s						
SKHT				*e*S	**S**	**20 25 08.9**	**-1.2**
SKHT				IVMs_BB	IVMs_BB	20 45 45.7	
	comp=Z,3µm,28.2s						
HVS	**Khovu-Aksy**	**75.14**	**326**	*d i*P	**P**	**20 15 35.7**	**+0.6**
HVS				pmax	pmax		
	comp=Z,280nm,1.0s						
ADKI	**Addanki**	**75.20**	**288**	*e*P	**P**	**20 15 35.5**	**-0.5**
ADKI				IAmb	IAmb	20 15 39.7	
	comp=Z,412nm,1.0s						
ADKI				*e*S	**S**	**20 25 06.4**	**-4.5**
ADKI				IVMs_BB	IVMs_BB	20 41 31.5	
	comp=Z,3µm,35.2s						
OHAK	**Old Harbor**	**75.25**	**27**	*e*P	**P**	**20 15 34.2**	**-1.3**
	comp=Z,109nm,0.7s						
ANM	**Nome**	**75.53**	**17**	*e*P	**P**	**20 15 38.0**	**+1.0**
	comp=Z,155nm,1.1s						
ANM	**Nome**	**75.53**	**17**	*e*P	**P**	**20 15 38.0**	**+1.0**
ANM				pmax	pmax		
	comp=Z,155nm,1.1s						
KDAK	**Kodiak Island**	**75.88**	**27**	S	**S**	**20 25 14.9**	**-2.0**
	comp=Z,4.2nm,1.1s,baz=22,slow=19,SNR=3.1						
KDAK				LR	LR	20 43 39.6	
	comp=Z,17µm,21.8s,baz=241,slow=31						
KDAK	**Kodiak Island**	**75.88**	**27**	*e*P	**P**	**20 15 39.0**	**-0.1**
KDAK				S	**S**	**20 25 14.9**	**-2.0**
KDAK	**Kodiak Island**	**75.88**	**27**	*i* P	**P**	**20 15 39.5**	**+0.4**
WMQ	**Urumqi**	**75.88**	**317**	P	**P**	**20 15 41.0**	**+1.5**
WMQ				sP	sP	20 16 04.8	+2.4
WMQ				PP	**PP**	**20 18 31.0**	**+0.5**
WMQ				S	**S**	**20 25 17.0**	**-0.7**
WMQ				ScS	**SKKSac**	**20 25 46.0**	**+0.4**
WMQ				SS	**SS**	**20 30 13.3**	**+2.1**
WMQ				pmax	pmax		
	comp=Z,2µm,1.3s						
WMQ				pmax	pmax		
	comp=Z,19µm,5.5s						
WMQ				LR	LR		
	comp=Z,19µm,26.3s						
WMQ				LR	LR		
	comp=Z,19µm,25.5s						
WMQ				LR	LR		
	comp=Z,42µm,26.3s						
SRLM	**Srisailam**	**76.26**	**288**	*e*P	**P**	**20 15 41.0**	**-1.1**
SRLM				IAmb	IAmb	20 15 45.8	
	comp=Z,543nm,0.8s						
SRLM				*e*S	**S**	**20 25 21.0**	**-1.7**
SRLM				IVMs_BB	IVMs_BB	20 41 59.9	
	comp=Z,3µm,34.7s						
RPR	**Rampur**	**76.33**	**291**	*e*P	**P**	**20 15 41.6**	**-0.8**
RPR				IAmb	IAmb	20 15 45.7	
	comp=Z,504nm,1.1s						
RPR				*e*S	**S**	**20 25 21.7**	**-1.6**
RPR				IVMs_BB	IVMs_BB	20 41 34.4	
	comp=Z,3µm,41.4s						
SVW2	**Sparrevohn**	**76.55**	**23**	*e*P	**P**	**20 15 43.2**	**+0.4**
	comp=Z,89nm,0.7s						
HYB	**Hyderabad**	**76.79**	**289**	⇑*i*P	**P**	**20 15 45.0**	**-0.1**
	comp=Z,480nm,1.0s						
HYB				*e*PcP	**PcP**	**20 15 54.0**	**-2.2**
HYB				*e*sP	**sP**	**20 16 06.0**	**-2.0**
HYB				*e*S	**S**	**20 25 29.0**	**+0.5**
HYB	**Hyderabad**	**76.79**	**289**	*e*P	**P**	**20 15 45.1**	**-0.1**
HYB				IAMs_20	IAMs_20	20 46 48.5	
	comp=Z,7µm,11.8s						
HYBB	**Hyderabad (bro**	**76.79**	**289**	*e*P	**P**	**20 15 44.3**	**-0.9**
HYBB				IAmb	IAmb	20 15 47.9	
	comp=Z,739nm,1.4s						
HYBB				*e*S	**S**	**20 25 26.1**	**-2.4**
HYBB				IVMs_BB	IVMs_BB	20 42 11.9	
	comp=Z,3µm,32.1s						
NGP	**Nagpur**	**76.96**	**293**	*e*P	**P**	**20 15 46.4**	**+0.4**
NGP				IAmb	IAmb	20 15 48.6	
	comp=Z,214nm,1.0s						
NGP				*e*x	x	20 17 42.6	
SRSP	**Sriramsagar**	**77.23**	**290**	*e*P	**P**	**20 15 46.7**	**-0.8**
SRSP				IAmb	IAmb	20 15 50.5	
	comp=Z,561nm,1.0s						
SRSP				*e*S	**S**	**20 25 31.1**	**-2.2**
SRSP				IVMs_BB	IVMs_BB	20 42 02.2	
	comp=Z,3µm,36.2s						
HOM	**Homer**	**77.32**	**25**	*e*P	**P**	**20 15 46.8**	**-0.4**
	comp=Z,564nm,0.9s						
CNPM	**China Poot**	**77.43**	**26**	*e*P	**P**	**20 15 47.5**	**-0.3**
	comp=Z,375nm,0.6s						
URV	**Uravakonda**	**77.65**	**286**	*e*P	**P**	**20 15 49.0**	**-0.9**
URV				IAmb	IAmb	20 15 53.8	
	comp=Z,352nm,0.8s						
URV				*e*S	**S**	**20 25 35.5**	**-2.4**
URV				IVMs_BB	IVMs_BB	20 46 58.2	
	comp=Z,3µm,28.1s						
BRLK	**Bradley Lake**	**77.70**	**25**	*e*P	**P**	**20 15 49.1**	**-0.2**
	comp=Z,146nm,1.0s						
TIXI	**Tiksi**	**77.80**	**352**	P	**P**	**20 15 49.5**	**-0.1**
	comp=Z,36nm,0.5s,baz=154,slow=8.4,SNR=46						
TIXI				S	**S**	**20 25 35.9**	**-1.5**
	comp=Z,4.9nm,0.8s,baz=348,slow=18,SNR=2.8						
TIXI				LR	LR	20 45 30.7	
	comp=Z,8µm,22.0s,baz=126,slow=32						
TIXI	**Tiksi**	**77.80**	**352**	*e*P	**P**	**20 15 48.8**	**-0.8**
	comp=Z,622nm,1.8s						
TIXI	**Tiksi**	**77.80**	**352**	*ce*P	**P**	**20 15 49.8**	**+0.2**
TIXI				pmax	pmax		
	comp=Z,319nm,1.7s						
SKT	**Skwentna**	**78.64**	**23**	*e*P	**P**	**20 15 52.6**	**-1.9**
	comp=Z,49nm,0.9s						
RDOG	**Red Dog Mine**	**78.75**	**15**	*e*P	**P**	**20 15 55.7**	**+0.8**
	comp=Z,440nm,1.2s						
BHPL	**Bhopal**	**78.80**	**295**	*e*P	**P**	**20 15 56.1**	**-0.1**
BHPL				IAmb	IAmb	20 15 58.6	
	comp=Z,219nm,0.9s						
RC01	**Rabbit Creek A**	**78.89**	**25**	*e*P	**P**	**20 15 55.7**	**-0.1**
	comp=Z,244nm,1.1s						
PPLA	**Purkeypile**	**78.90**	**22**	*e*P	**P**	**20 15 54.9**	**-1.1**
	comp=Z,284nm,1.5s						
ZSN	**Zaisan**	**78.99**	**320**	⇑*i*P	**P**	**20 15 58.0**	**+1.2**
	comp=Z,76nm,0.9s						

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ZSN                                 i S       S         20 25 50.4  -0.7
ZSN                                   LR      LR        20 51 28.3
      comp=Z,703nm,19.3s
CAST  Castle Rocks       79.23  22  eP        P         20 15 56.6  -1.1
      comp=Z,120nm,0.8s
PMR   Palmer             79.40  24  eP        P         20 15 57.6  -1.0
      comp=Z,159nm,1.0s
PMR                                 eS        S         20 25 50.2  -4.5
PMR   Palmer             79.40  24  eP        P         20 15 57.6  -1.0
PMR                                 eS        S         20 25 50.3  -4.5
PMR                                   pmax    pmax
      comp=Z,159nm,1.0s
MID   Middleton Isla     79.53  27  eP        P         20 16 00.5  +1.1
      comp=Z,262nm,1.3s
MID   Middleton Isla     79.53  27  eP        P         20 16 00.5  +1.1
MID                                   pmax    pmax
      comp=Z,263nm,1.3s
DDI   Dehra Dun          79.58 302  eP        P         20 16 00.8  +0.5
GHO   Glory Hole Cre     79.58  24  eP        P         20 15 59.3  -0.4
      comp=Z,158nm,0.9s
KTH   Kantishna Hill     79.74  22  eP        P         20 15 59.3  -1.3
      comp=Z,140nm,0.9s
SML   Sawmill            79.84  24  eP        P         20 16 00.8  -0.3
      comp=Z,374nm,1.0s
SML   Sawmill            79.84  24  eP        P         20 16 00.8  -0.3
SML                                   pmax    pmax
      comp=Z,374nm,1.0s
GLI   Glacier Island     79.90  25  eP        P         20 16 00.8  -0.6
      comp=Z,154nm,0.8s
TRF   Thorofare Moun     79.93  22  eP        P         20 15 60.0  -1.7
      comp=Z,97nm,0.9s
NDI   New Delhi          79.97 300  eP        P         20 16 01.0  -1.5
NDI                                 ex        S         20 25 59.0  -3.2
BPAW  Bear Paw Mtn.      80.02  22  eP        P         20 16 00.6  -1.4
      comp=Z,104nm,1.1s
FID   Port Fidalgo       80.10  26  eP        P         20 16 01.8  -0.6
      comp=Z,126nm,1.0s
H08S2 Diego Garcia H     80.17 263    P       P         20 16 05.0  +1.5
      baz=38,slow=6.1,SNR=20
H08S3 Diego Garcia H     80.18 263    P       P         20 16 04.3  +0.8
      baz=38,slow=6.1,SNR=52
H08S1 Diego Carcia H     80.19 263    P       P         20 16 04.5  +0.9
      baz=38,slow=6.1,SNR=52
DGAR  Diego Garcia       80.22 263  eP        P         20 16 04.5  +0.4
      comp=Z,827nm,1.5s
DGAR                                  LR      LR
      comp=Z,3µm,22.0s
DGAR  Diego Garcia       80.22 263  i P       P         20 16 03.7  -0.4
SCM   Sheep Creek Mo     80.27  25  eP        P         20 16 02.9  -0.5
      comp=Z,186nm,1.0s
SCM   Sheep Creek Mo     80.27  25  eP        P         20 16 02.9  -0.5
SCM                                   pmax    pmax
      comp=Z,186nm,1.0s
EYAK  Cordova Ski Ar     80.32  26  eP        P         20 16 03.6   0.0
      comp=Z,165nm,1.3s
MK01  Makanchi Array     80.44 319  eP        P         20 16 05.0  +0.4
MK31  Makanchi Array     80.46 319  eP        P         20 16 05.4  +0.7
MK32  Makanchi Array     80.46 319  eP        P         20 16 05.7  +1.0
MK32                                ePKiKP    PKiKP     20 21 33.3  +0.4
MK32                                e                   20 25 07.7
MK32                                eS        S         20 26 07.1  +0.5
MK32                                ePKKPbc   PKKPbc    20 34 47.8  -0.2
MK32                                eP'P'df   P'P'df    20 42 47.3  -2.6
MKAR  Makanchi Array     80.46 319    P       P         20 16 05.7  +1.0
      comp=Z,564nm,0.9s,baz=106,slow=5.8,SNR=1185
MKAR                                  PKiKP   PKiKP     20 21 33.3  +0.4
      comp=Z,7.5nm,0.9s,baz=86,slow=2.2,SNR=4.1
MKAR                                  SKiKP   SKiKP     20 25 07.7  +5.7
      comp=Z,7.0nm,1.1s,baz=116,slow=3.4,SNR=5.2
MKAR                                  S       S         20 26 07.1  +0.5
      comp=Z,1.8nm,0.9s,baz=79,slow=9.0,SNR=2.4
MKAR                                  PKKPbc  PKKPbc    20 34 47.8  -0.2
      comp=Z,3.3nm,0.8s,baz=277,slow=2.7,SNR=8.7
MKAR                                  PKPPKP  P'P'df    20 42 47.3  -2.6
      comp=Z,2.1nm,1.1s,baz=264,slow=1.2,SNR=5.4
MKAR                                  LR      LR        20 51 03.8
      comp=Z,10µm,21.3s,baz=105,slow=35
MKAR  Makanchi Array     80.46 319  eP        P         20 16 05.4  +0.7
      comp=Z,2µm,0.8s
MKAR                                  PKiKP   PKiKP     20 21 33.3  +0.4
MKAR                                e                   20 25 07.7
MKAR                                  S       S         20 26 07.1  +0.5
MKAR                                  PKKPbc  PKKPbc    20 34 47.8  -0.2
MKAR                                  P'P'              20 42 47.3
MKAR  Makanchi Array     80.46 319  i P       P         20 16 05.6  +0.9
MKAR                                  pmax    pmax
      comp=Z,564nm,0.9s
SMLA  Simla              80.48 302  eP        P         20 16 05.7  +0.6
SMLA                                  IAMs_20 IAMs_20   20 51 45.3
      comp=Z,15µm,26.4s
DIV   Divide             80.58  26  eP        P         20 16 04.9  -0.2
      comp=Z,186nm,1.1s
MCK   McKinley           80.59  22  eP        P         20 16 03.8  -1.2
      comp=Z,330nm,0.9s
MCK   McKinley           80.59  22  eP        P         20 16 03.8  -1.2
MCK                                   pmax    pmax
      comp=Z,330nm,0.9s
MLY   Manley             80.62  21  eP        P         20 16 05.0  -0.1
      comp=Z,118nm,0.7s
BWN   Browne             80.62  22  eP        P         20 16 04.7  -0.4
      comp=Z,512nm,1.3s
HMDM  Hanimaadhoo        80.64 278  eP        P         20 16 06.9  +0.6
      comp=Z,1µm,1.4s
MAKZ  Makanchi           80.67 319  eP        P         20 16 06.6  +0.8
      comp=Z,824nm,0.8s
MAKZ  Makanchi           80.67 319  eP        P         20 16 06.6  +0.8
MAKZ                                  pmax    pmax
      comp=Z,824nm,0.8s
KLU   Klutina            80.69  25  eP        P         20 16 05.5  -0.2
      comp=Z,219nm,1.0s
RAGM  Ragged Mountai     80.72  26  eP        P         20 16 06.3  +0.5
      comp=Z,156nm,1.1s
DHY   Denali Highway     80.86  23  eP        P         20 16 05.7  -1.0
      comp=Z,112nm,0.8s
MNCI  Minicoy            80.91 279  eP        P         20 16 08.3  +0.6
      comp=Z,3µm,1.7s
BMRM  Bremner River      81.02  26  eP        P         20 16 06.5  -0.9
      comp=Z,303nm,1.3s
ZAA0  Zalesovo Array     81.24 326  eP        P         20 16 08.1  -0.6
      comp=Z,263nm,1.0s
ZALV  Zalesovo Beam      81.24 326    P       P         20 16 08.4  -0.2
      comp=Z,173nm,0.8s,baz=111,slow=5.6,SNR=280
ZALV                                  PP      PP        20 19 11.6  -3.2
      comp=Z,10.0nm,0.8s,baz=147,slow=8.2,SNR=2.4
ZALV                                  S       S         20 26 11.3  -3.0
      comp=Z,2.5nm,0.8s,baz=132,slow=6.0,SNR=2.4
ZALV                                  PKKPbc  PKKPbc    20 34 44.8  -1.7
      comp=Z,1.2nm,0.5s,baz=297,slow=3.7,SNR=4.7
ZALV                                  PKPPKP  P'P'df    20 42 48.3  +0.4
      comp=Z,1.7nm,0.8s,baz=308,slow=4.9,SNR=5.5
ZALV                                  LR      LR        20 52 03.5
      comp=Z,7µm,21.4s,baz=126,slow=36
ZALV  Zalesovo Beam      81.24 326  eP        P         20 16 08.1  -0.5
ZALV                                  PP      PP        20 19 11.6  -3.2
ZALV                                  S       S         20 26 11.3  -3.0
ZALV                                  PKKPbc  PKKPbc    20 34 44.8  -1.7
ZALV                                  P'P'              20 42 48.3
ZALV  Zalesovo Beam      81.24 326  eP        P         20 16 08.1  -0.5
ZALV                                                    20 19 11.6
ZALV                                  S       S         20 26 11.3  -3.0
ZAA1  Zalesovo Array     81.24 326  eP        P         20 16 08.4  -0.2
ZAA1                                ePP       PP        20 19 11.6  -3.2
ZAA1                                eS        S         20 26 11.3  -3.0
ZAA1                                ePKKPbc   PKKPbc    20 34 44.8  -1.7
ZAA1                                eP'P'df   P'P'df    20 42 48.3  +0.4
WRH   Wood River Hil     81.29  22  eP        P         20 16 07.3  -1.4
      comp=Z,139nm,1.0s
POO   Poona              81.38 289  eP        P         20 16 09.3  -0.9
POO                                   IAMs_20 IAMs_20   20 49 47.3
      comp=Z,12µm,24.6s
SHLS  Shalkode           81.39 315⇑iP       P         20 16 09.6  -0.3
      comp=Z,300nm,0.8s
SHLS                                i S       S         20 26 12.7  -4.0
SHLS                                  LR      LR        20 54 02.3
      comp=Z,735nm,16.3s
PDGK  Podgornoye         81.41 315    P       P         20 16 10.5  +0.5
PDGK                                  pmax    pmax
      comp=Z,718nm,0.8s
DHRM  DHARAMSHALA        81.43 303  eP        P         20 16 10.5  +0.1
HARP  HAARP              81.44  24  eP        P         20 16 09.6   0.0
      comp=Z,178nm,1.1s
CCB   Clear Creek Bu     81.48  22  eP        P         20 16 08.0  -1.7
      comp=Z,101nm,1.0s
MDM   Murphy Dome        81.48  22  eP        P         20 16 08.3  -1.5
      comp=Z,123nm,1.2s
CRQM  Cirque             81.56  26  eP        P         20 16 10.5   0.0
      comp=Z,116nm,0.8s
CRQM                                eS        S         20 26 17.0  -0.9
PAX   Paxson             81.57  24  eP        P         20 16 09.9  -0.5
      comp=Z,88nm,1.1s
PAX   Paxson             81.57  24    P       P         20 16 09.8  -0.5
COLA  College            81.58  22  eP        P         20 16 09.1  -1.1
      comp=Z,156nm,0.8s
COLA                                  LR      LR
      comp=Z,1.0nm,20.0s
COLA  College            81.58  22  eP        P         20 16 09.1  -1.1
COLA                                  pmax    pmax
      comp=Z,156nm,0.8s
HDA   Harding Lake       81.69  22  eP        P         20 16 09.5  -1.3
      comp=Z,230nm,1.5s
UZB   Uzynbulak          81.70 315⇑iP       P         20 16 12.8  +1.2
      comp=Z,226nm,0.9s
UZB                                 i S       S         20 26 19.1  -0.9
TGL   Tana Glacier       81.70  26  eP        P         20 16 11.0  -0.1
      comp=Z,188nm,1.2s
H08N1 Diego Carcia H     81.72 264    P       P         20 16 09.6  -2.0
      baz=142,slow=2.6,SNR=33
H08N2 Diego Garcia H     81.73 264    P       P         20 16 09.7  -2.0
      baz=142,slow=2.6,SNR=33
H08N3 Diego Garcia H     81.74 264    P       P         20 16 09.8  -2.0
      baz=142,slow=2.6,SNR=29
ILAR  Eielson Array      81.89  22    P       P         20 16 10.6  -1.3
      comp=Z,53nm,0.8s,baz=243,slow=5.3,SNR=159
ILAR                                  S       S         20 26 16.3  -4.4
      comp=Z,1.5nm,1.0s,baz=246,slow=8.8,SNR=4.6
ILAR                                  PKKPbc  PKKPbc    20 34 43.1  -2.4
      comp=Z,5.7nm,0.8s,baz=5.7,slow=1.6,SNR=18
ILAR                                  PKPPKP  P'P'df    20 42 47.1  +1.0
      comp=Z,7.4nm,1.2s,baz=6.6,slow=2.1,SNR=11
ILAR                                  LR      LR        20 47 50.8
      comp=Z,8µm,21.8s,baz=235,slow=32
ILB   Eielson Array      81.89  22  eP        P         20 16 10.2  -1.7
ILB                                 ePKKPbc   PKKPbc    20 34 41.3  -4.2
ILB                                 eP'P'df   P'P'df    20 42 43.9  -2.2
IL1   Eielson Array      81.89  22  eP        P         20 16 09.9  -2.0
PRZ   Przheval'sk        81.98 314  eP        P         20 16 14.8  +1.7
      comp=Z,1µm,0.9s
COLD  Coldfoot           82.00  19  eP        P         20 16 12.3  -0.1
      comp=Z,101nm,1.0s
KPKS  Kokpek             82.02 315⇑iP       P         20 16 14.3  +1.1
      comp=Z,185nm,0.8s
KPKS                                i S       S         20 26 22.3  -0.8
KPKS                                  LR      LR        20 52 12.6
BALM  Baldy              82.03  26  eP        P         20 16 12.3  -0.6
      comp=Z,92nm,1.0s
BALM  Baldy              82.03  26  eP        P         20 16 12.3  -0.6
BALM                                  pmax    pmax
      comp=Z,92nm,1.0s
SATY  Saty               82.11 314⇑iP       P         20 16 14.9  +1.2
      comp=Z,243nm,0.8s
SATY                                eS        S         20 26 23.9  -0.4
ZHN   Zhinishke          82.12 315⇑iP       P         20 16 14.9  +1.2
      comp=Z,71nm,0.8s
ZHN                                 eS        S         20 26 23.2  -1.1
RIDG  Independ'e Rid     82.18  23  eP        P         20 16 12.7  -0.9
      comp=Z,130nm,1.0s
BOM   Bombay             82.41 290    IAmb    IAmb      20 16 05.9
      comp=Z,192nm,0.9s
BOM                                 eS        S         20 26 15.3   -12
NVS   Novosibirsk        82.41 327⇓iP       P         20 16 15.7  +0.9
NVS                                 i S       S         20 26 28.3  +1.9
NVS                                   pmax    pmax
      comp=Z,1µm,1.7s
NVS                                   pmax    pmax
      comp=N,258nm,1.5s
NVS                                   pmax    pmax
      comp=E,493nm,1.5s
NVS                                   smax    smax
      comp=N,110nm,2.2s
NVS                                   smax    smax
      comp=E,366nm,2.2s
DOT   Dot Lake           82.45  24  eP        P         20 16 14.4  -0.4
      comp=E,158nm,0.9s
TDK   Taldyqorghan       82.58 316  i P       P         20 16 17.3  +1.3
      comp=E,696nm,0.9s
TDK                                 eS        S         20 26 28.1  -0.6
TDK                                   LR      LR        20 53 50.6
      comp=E,4µm,21.0s
SCRK  Sand Creek         82.63  23  eP        P         20 16 15.2  -0.7
      comp=E,85nm,0.9s
YKU2  Yakutat            82.65  28  eP        P         20 16 14.0  -1.9
      comp=E,2µm,1.8s
SEM   Semipalatinsk      82.80 322⇑iP       P         20 16 16.9  -0.3
      comp=E,180nm,1.6s
SEM                                 i S       S         20 26 29.2  -1.9
SEM                                   LR      LR        20 53 31.7
      comp=E,1µm,18.2s
TOLK  Toolik Lake Re     82.96  18    P       P         20 16 16.8  -0.7
      baz=238
TOLK  Toolik Lake Re     82.96  18  eP        P         20 16 16.4  -1.0
      comp=E,97nm,1.0s
MDOK  Medeo              83.11 314  i P       P         20 16 20.1  +1.2
      comp=E,6µm,1.0s
MDOK                                i S       S         20 26 34.0  -0.4
MDOK                                  LR      LR        20 53 43.4
      comp=E,2µm,18.4s
KSH   Kashi              83.12 311    P       P         20 16 21.8  +2.8
KSH                                   sP      sP        20 16 39.3  -2.8
KSH                                   PP      PP        20 19 36.0  +5.1
KSH                                   SKS     S         20 26 34.0  -0.6
KSH                                   S       SKSac     20 26 36.3   0.0
KSH                                   SS      SS        20 32 05.0  +5.0
KSH                                   pmax    pmax
      comp=E,410nm,0.9s
KSH                                   pmax    pmax
      comp=E,9µm,6.9s
KSH                                   LR      LR
      comp=E,7µm,21.4s
KSH                                   LR      LR
      comp=E,6µm,17.7s
KSH                                   LR      LR
      comp=E,34µm,25.9s
AAA   Alma-Ata           83.21 314  i P       P         20 16 20.9  +1.5
      comp=E,355nm,1.1s
AAA                                 eS        S         20 26 34.9  -0.3
AAA                                   LR      LR        20 53 43.4
      comp=E,2µm,17.9s
FYU   Fort Yukon         83.35  21  eP        P         20 16 19.0  -0.4
      comp=E,194nm,1.3s
ULHL  Ulahol             83.49 313    P       P         20 16 22.6  +1.6
      SNR=68
KUU   Kurty              83.77 315⇑iP       P         20 16 23.3  +1.1
      comp=E,1µm,1.0s
KUU                                 i S       S         20 26 38.7  -2.0
KUU                                   LR      LR        20 53 49.1
      comp=E,3µm,18.8s
KURK  Kurchatov          83.88 322  eP        P         20 16 22.5   0.0
      comp=E,4µm,1.8s
KURK                                eS        S         20 26 37.0  -4.4
KURK                                eP'P'df   P'P'df    20 42 42.9  -0.5
KURK                                  LR      LR
      comp=Z,12µm,22.0s
KURK  Kurchatov          83.88 322    P       P         20 16 23.1  +0.7
      SNR=577
KURK  Kurchatov          83.88 322ceP       P         20 16 22.7  +0.2
KURK                                  pmax    pmax
      comp=Z,942nm,1.6s
KURBB Kurchatov Arra     83.91 322    P       P         20 16 23.0  +0.3
      comp=Z,273nm,0.9s,baz=108,slow=4.2,SNR=1029
KURBB                                 S       S         20 26 37.0  -4.7
      comp=Z,1.8nm,0.9s,baz=109,slow=5.0,SNR=4.1
KURBB                                 PKKPbc  PKKPbc    20 34 40.0  -0.1
      comp=Z,3.5nm,0.9s,baz=296,slow=3.1,SNR=9.0
KURBB                                 PKPPKP  P'P'df    20 42 42.9  -0.5
      comp=Z,1.3nm,1.0s,baz=269,slow=3.1,SNR=4.0
SIT   Sitka              83.96  31  eP        P         20 16 21.7  -1.0
      comp=Z,101nm,1.1s
SIT   Sitka              83.96  31  eP        P         20 16 21.7  -1.0
SIT                                   pmax    pmax
      comp=Z,101nm,1.1s
EGAK  Eagle              84.08  23  eP        P         20 16 22.9  -0.4
      comp=Z,132nm,0.9s
EGAK                                  LR      LR
      comp=Z,17µm,22.0s
TKM2  Tokmak 2           84.09 314    P       P         20 16 25.3  +1.3
      SNR=20
KZA   Kyzart             84.17 313    P       P         20 16 26.8  +2.0
      SNR=315
NIL   Nilore             84.20 304  eP        P         20 16 24.9  +0.3
      comp=Z,676nm,0.8s
NIL                                   LR      LR
      comp=Z,5µm,21.0s
NIL   Nilore             84.20 304  eP        P         20 16 24.9  +0.3
NIL                                   pmax    pmax
      comp=Z,676nm,0.8s
NIL                                   MLR     MLR
      comp=Z,5µm,21.0s
H02N1 VAN INLET T-PH     84.39  36    P       P         20 16 25.5  +0.3
DIB   Dawson Inlet,      84.42  36  eP        P         20 16 25.1   0.0
      comp=Z,113nm,1.1s
H02S1 DAWSON INLET T     84.42  36    P       P         20 16 26.0  +0.9
DAWY  Dawson             84.50  24  eP        P         20 16 25.0  -0.4
      comp=Z,215nm,1.4s
KBK   Karagaybulak       84.51 313    P       P         20 16 27.5  +1.4
      SNR=599
CRAG  Craig              84.67  33  eP        P         20 16 26.5  +0.2
      comp=Z,234nm,1.7s
BESE  Bessie Mountai     84.67  30  eP        P         20 16 26.9  +0.6
      comp=Z,434nm,1.5s
CHMS  Chumysh            84.72 314    P       P         20 16 28.2  +1.2
      SNR=1084
UCH   Uchtor             84.74 313    P       P         20 16 29.5  +1.9
      SNR=956
FRU1  Bishkek            84.77 314  eP        P         20 16 28.3  +1.0
      comp=Z,1µm,0.8s
FRU1  Bishkek            84.77 314  eP        P         20 16 28.3  +1.0
FRU1                                  pmax    pmax
      comp=Z,1µm,0.8s
FRU   Bishkek            84.78 314⇑iP       P         20 16 29.0  +1.7
FRU                                 e                   20 26 38.0
FRU                                 i S       S         20 26 48.0  -2.9
FRU                                   pmax    pmax
      comp=Z,2µm,2.1s
JIS   Juneau Island      84.81  30  eP        P         20 16 27.3  +0.3
      comp=Z,138nm,1.2s
AAK   Ala-Archa          84.83 313    P       P         20 16 29.2  +1.5
      comp=Z,817nm,0.7s,baz=106,slow=4.6,SNR=386
AAK                                   S       S         20 26 46.1  -5.6
      comp=Z,1.9nm,0.5s,baz=264,slow=19,SNR=3.6
AAK   Ala-Archa          84.83 313    P       P         20 16 29.2  +1.5
      SNR=636
AAK   Ala-Archa          84.83 313  eP        P         20 16 28.8  +1.0
      comp=Z,883nm,0.7s
AAK                                   LR      LR
      comp=Z,8µm,21.0s
AAK   Ala-Archa          84.83 313    P       P         20 16 29.2  +1.5
AAK                                   S       S         20 26 47.2  -4.6
AAK   Ala-Archa          84.83 313  i P       P         20 16 29.3  +1.6
      SNR=707
AAK   Ala-Archa          84.83 313c iP       P         20 16 29.0  +1.3
AAK                                   pmax    pmax
      comp=Z,810nm,0.9s
USP   Ospenovka          84.95 314    P       P         20 16 29.5  +1.3
      SNR=985
SFK   Sufi-Kurgan        85.08 311    P       P         20 16 30.4  +1.3
WHY   Whitehorse         85.30  28  eP        P         20 16 28.9  -0.7
      comp=Z,88nm,1.1s
QSPA  South Pole Qui     85.31 180    P       P         20 16 29.6   0.0
      comp=Z,101nm,0.7s,baz=344,slow=2.1,SNR=201
QSPA                                  S       SKSac     20 26 47.1  -2.3
      comp=Z,3.6nm,0.8s,baz=202,slow=19,SNR=8.2
QSPA                                  PKKPbc  PKKPbc    20 34 35.6  -2.3
      comp=Z,8.6nm,0.7s,baz=207,slow=1.5,SNR=19
QSPA                                  LR      LR        20 53 32.3
      comp=Z,3µm,19.9s,baz=9.0,slow=35
QSPA  South Pole Qui     85.31 180  eP        P         20 16 29.5   0.0
      comp=Z,318nm,0.8s
QSPA                                eSKSac    SKSac     20 26 47.1  -2.3
QSPA                                ePKKPbc   PKKPbc    20 34 35.6  -2.3
AML   Almayashu          85.32 313    P       P         20 16 32.2  +1.7
      SNR=1392
WRAK  Wrangell Islan     85.35  32  eP        P         20 16 29.4  -0.3
      comp=Z,148nm,1.3s
WRAK                                  LR      LR
      comp=Z,10µm,22.0s
EKS2  Erkin-Say          85.36 313    P       P         20 16 31.9  +1.6
      SNR=1175
BTLS  Baital             85.61 316⇑iP       P         20 16 32.5  +1.2
      comp=Z,802nm,1.7s
BTLS                                i S       SKSac     20 26 50.4  -1.5
MAW   Mawson             85.84 203    S       SKSac     20 26 50.2  -2.2
      comp=Z,2.2nm,0.8s,baz=280,slow=18,SNR=2.3
MAW                                   LR      LR        20 51 42.3
      comp=Z,7µm,21.1s,baz=87,slow=33
BHJ   Bhuj               85.88 294  eP        P         20 16 32.0  -1.1
MNAS  Manas              86.25 313    P       P         20 16 35.7  +0.9
MNAS                                  pmax    pmax
      comp=Z,1µm,1.1s
BBB   Bella Bella        86.76  37    S       SKSac     20 26 58.4  -0.2
      comp=Z,2.3nm,0.9s,baz=310,slow=18,SNR=2.7
BBB   Bella Bella        86.76  37  eP        P         20 16 37.9  +1.1
      comp=Z,116nm,1.3s
BBB                                   S       SKSac     20 26 58.4  -0.2
DLBC  Dease Lake         87.07  31    S       SKSac     20 27 01.5  +1.0
      comp=Z,1.7nm,0.4s,baz=59,slow=19,SNR=5.8
DLBC                                  PKKPbc  PKKPbc    20 34 34.7  +1.6
      comp=Z,4.8nm,0.9s,baz=58,slow=3.0,SNR=6.2
DLBC  Dease Lake         87.07  31  eP        P         20 16 38.5  +0.2
      comp=Z,148nm,1.2s
DLBC                                  S       SKSac     20 27 01.5  +1.0
DLBC                                ePKKPbc   PKKPbc    20 34 34.4  +1.4
DZA   Taraz              87.17 313  eP        P         20 16 40.0  +0.9
      comp=Z,159nm,0.7s
DZA                                 eS        SKSac     20 26 60.0  -1.7
BRZS  Berezniki          87.44 320⇑iP       P         20 16 39.9  -0.3
      comp=Z,157nm,0.9s
BRZS                                i S       SKSac     20 27 00.3  -2.6
BRZS                                  LR      LR        20 59 19.1
      comp=Z,1µm,16.6s
JCC   Jacoby Creek,      87.58  49  eP        P         20 16 42.7  +1.7
      comp=Z,146nm,1.5s
KBO   Bosley Butte       87.63  48  eP        P         20 16 41.2  -0.2
      comp=Z,213nm,1.6s
KEBM  Edson Butte        87.65  47  eP        P         20 16 41.2  -0.2
      comp=Z,148nm,1.5s
KMRM  Mail Ridge         87.73  50  eP        P         20 16 44.0  +2.0
      comp=Z,95nm,1.0s
KCPM  Cahto Peak         87.76  50  eP        P         20 16 42.5  +0.4
      comp=Z,64nm,1.1s
KBL   Kabul              87.78 305  eP        P         20 16 41.7  -0.7
      comp=Z,124nm,0.8s
KBL   Kabul              87.78 305  eP        P         20 16 41.7  -0.7
KBL                                   pmax    pmax
      comp=Z,124nm,0.8s
KK31  Karatay Array      87.80 313  eP        P         20 16 42.6  +0.5
KK31  Karatay Array      87.80 313  eP        P         20 16 42.6  +0.5
KKAR  Karatay Array      87.80 313  eP        P         20 16 42.4  +0.3
KKAR  Karatay Array      87.80 313  eP        P         20 16 42.4  +0.3
KHMM  Horse Mountain     87.81  49  eP        P         20 16 44.0  +1.7
      comp=Z,60nm,0.9s
IUG   Iuzhnay            88.01 312⇑iP       P         20 16 44.3  +1.0
      comp=Z,132nm,0.9s
IUG                                 i S       SKSac     20 27 05.3  -1.7
IUG                                   LR      LR        20 54 54.0
      comp=Z,1µm,18.3s
HOPS  Hopland Field      88.06  51  eP        P         20 16 42.6  -0.7
      comp=Z,83nm,1.4s
L02D  Cave Junction,     88.08  48    P       P         20 16 42.1  -1.4
      baz=262
MCCM  Marconi Confer     88.10  52  eP        P         20 16 43.0  -0.6
      comp=Z,199nm,1.6s
INK   Inuvik             88.19  21    P       P         20 16 42.9  -0.4
      comp=Z,60nm,0.9s,baz=280,slow=4.5,SNR=5.8
INK                                   S       SKSac     20 27 06.0  -0.7
      comp=Z,3.3nm,0.9s,baz=59,slow=20,SNR=17
INK                                   PKKPbc  PKKPbc    20 34 29.2  -1.2
      comp=Z,26nm,0.9s,baz=78,slow=2.9,SNR=20
INK                                   PKPPKP  P'P'df    20 42 34.6  +0.2
      comp=Z,3.1nm,0.8s,baz=71,slow=3.9,SNR=4.0
INK                                   LR      LR        20 52 30.5
      comp=Z,16µm,21.8s,baz=238,slow=33
INK   Inuvik             88.19  21  eP        P         20 16 42.9  -0.4
      comp=Z,135nm,1.1s
INK                                   S       SKSac     20 27 06.0  -0.7
INK                                 ePKKPdf   PKKPbc    20 34 28.6  -1.9
INK                                   P'P'              20 42 34.6
INK   Inuvik             88.19  21  eP        P         20 16 42.9  -0.4
INK                                   S       SKSac     20 27 06.0  -0.7
INK                                   pmax    pmax
      comp=Z,135nm,1.1s
GDXM  Geysers            88.25  51  eP        P         20 16 45.7  +1.3
      comp=Z,77nm,1.4s
BRLS  Borolday           88.28 313  eP        P         20 16 45.3  +0.9
BRLS                                eS        SKSac     20 27 06.7  -1.6
BRLS                                  LR      LR        20 57 23.0
CHM   Chimkent           88.35 312  eP        P         20 16 51.7  +7.0
      comp=Z,154nm,0.8s
CHM                                 eS        SKSac     20 27 13.3  +4.5
CHM                                   LR      LR        20 58 07.1
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      comp=Z,1µm,18.8s
TAS   Tashkent           88.45 311  P       P        20 16 46.3 +1.1
TAS                                 pmax    pmax
      comp=Z,733nm,1.0s
I03D  Drain, OR          88.48  46  P       P        20 16 44.4 -0.8
      baz=262
M02C  Callahan           88.53  48  P       P        20 16 44.8 -0.9
      baz=262,SNR=16
N02D  Trinity Center     88.59  49  P       P        20 16 45.2 -0.7
      baz=263,SNR=11
HUMO  Hull Mountain      88.62  47 eP       P        20 16 46.8 +0.8
      comp=Z,30nm,0.9s
COR   Corvallis          88.63  45 eP       P        20 16 47.0 +1.0
      comp=Z,135nm,1.4s
COR   Corvallis          88.63  45  P       P        20 16 46.9 +1.0
NLWA  Neilton Lookou     88.64  42 eP       P        20 16 46.6 +0.6
      comp=Z,58nm,1.3s
NLWA                                LR      LR
      comp=Z,11µm,22.0s
F03A  Seaside            88.64  44 eP       P        20 16 46.2 +0.2
      comp=Z,204nm,1.4s
WDC   Whiskeytown Da     88.67  49 eP       P        20 16 47.4 +1.2
      comp=Z,75nm,1.4s
YBH   Yreka Blue Hor     88.69  48  P       P        20 16 46.2 -0.2
      comp=Z,7.3nm,0.8s,baz=296,slow=1.9,SNR=15
YBH                                 PP      PP       20 20 19.8 +4.0
      comp=Z,6.6nm,1.1s,baz=246,slow=9.3,SNR=2.4
YBH                                 S       SKSac    20 27 11.3 +0.3
      comp=Z,1.4nm,1.0s,baz=228,slow=20,SNR=7.4
YBH                                 PKKP    PKKPdf   20 34 23.1 -0.2
      comp=Z,0.4nm,0.4s,baz=90,slow=1.0,SNR=2.3
YBH                                 LR      LR       20 49 02.1
      comp=Z,19µm,21.7s,baz=271,slow=30
YBH   Yreka Blue Hor     88.69  48 eP       P        20 16 46.6 +0.2
      comp=Z,26nm,0.9s
YBH                                 PP      PP       20 20 19.8 +4.0
YBH                                 S       SKSac    20 27 11.3 +0.3
YBH                                 PKKP    PKKPdf   20 34 23.1 -0.2
YBH   Yreka Blue Hor     88.69  48 eP       P        20 16 46.6 +0.2
YBH                                                  20 20 19.8
YBH                                 S       SKSac    20 27 11.3 +0.3
YBH                                 pmax    pmax
      comp=Z,26nm,0.9s
E03A  Lebam              88.72  43 eP       P        20 16 46.3  0.0
      comp=Z,97nm,0.9s
G03D  McMinnville, O     88.74  45  P       P        20 16 45.6 -0.9
      baz=262,SNR=6.1
F04D  Rainier, OR        89.04  44  P       P        20 16 47.1 -0.7
      baz=262
SAO   San Andreas Ge     89.06  53 eP       P        20 16 47.0 -1.2
      comp=Z,28nm,1.1s
SAO   San Andreas Ge     89.06  53 eP       P        20 16 47.0 -1.2
SAO                                 pmax    pmax
      comp=Z,28nm,1.1s
I04A  Tendick Farm,      89.16  46  P       P        20 16 47.5 -1.0
      baz=263,SNR=20
O03D  Paynes Creek       89.19  50  P       P        20 16 47.7 -1.1
      baz=263,SNR=16
J04D  Umpqua Nationa     89.31  47  P       P        20 16 48.3 -1.1
      baz=263
ORV   Oroville           89.34  50 eP       P        20 16 48.7 -0.7
      comp=Z,44nm,1.3s
ORV   Oroville           89.34  50 eP       P        20 16 48.7 -0.7
ORV                                 pmax    pmax
      comp=Z,44nm,1.3s
M04C  Macdoel            89.34  48  P       P        20 16 48.3 -1.2
      baz=263
BVAR  Borovoye Array     89.34 323  P       P        20 16 48.8 -0.3
      comp=Z,818nm,0.7s,baz=100,slow=6.2,SNR=2116
BVAR                                PKiKP   PKiKP    20 21 47.3 +0.3
      comp=Z,5.0nm,0.7s,baz=108,slow=2.6,SNR=5.3
BVAR                                S       SKSac    20 27 11.6 -2.6
      comp=Z,3.5nm,0.8s,baz=177,slow=2.5,SNR=7.0
BVAR                                PKKPbc  PKKPbc   20 34 27.4 +0.3
      comp=Z,1.9nm,0.8s,baz=270,slow=5.9,SNR=5.4
BVAR                                LR      LR       20 59 17.6
      comp=Z,5µm,18.6s,baz=98,slow=37
BRVK  Borovoye           89.41 323 eP       P        20 16 48.9 -0.5
      comp=Z,863nm,0.8s
BRVK                                LR      LR
      comp=Z,7µm,22.0s
BRVK  Borovoye           89.41 323  P       P        20 16 49.5 +0.1
      SNR=625
BRVK  Borovoye           89.41 323ceP       P        20 16 49.0 -0.5
BRVK                                pmax    pmax
      comp=Z,706nm,0.8s
H04A  Detroit Lake       89.44  45 eP       P        20 16 49.3 -0.5
      comp=Z,38nm,0.9s
K04D  Chiloquin, OR      89.50  47  P       P        20 16 49.3 -1.0
      baz=263
PMPB  Monarch Peak       89.52  54 eP       P        20 16 49.9 -0.5
      comp=Z,218nm,1.7s
A04D  Lummi Island       89.59  41  P       P        20 16 49.4 -0.9
      baz=262
AFDM  Forest Hills D     89.68  51 eP       P        20 16 51.1  0.0
      comp=Z,43nm,1.2s
D05A  Enumclaw           89.88  43 eP       P        20 16 51.5 -0.3
      comp=Z,95nm,1.1s
PAGB  Antelope Grade     89.92  54 eP       P        20 16 52.5 +0.2
      comp=Z,128nm,1.6s
B05A  Bryant             89.94  42  P       P        20 16 51.2 -0.8
      baz=263,SNR=8.9
LON   Longmire           89.95  43 eP       P        20 16 51.2 -0.9
      comp=Z,42nm,1.4s
LON   Longmire           89.95  43 eP       P        20 16 51.2 -0.9
LON                                 pmax    pmax
      comp=Z,42nm,1.4s
J05D  Fort Rock, OR      89.95  47  P       P        20 16 51.4 -1.0
      baz=264,SNR=42
I05D  Terrebonne, OR     90.00  46  P       P        20 16 51.8 -0.7
      baz=264
CMB   Columbia Colle     90.04  52 eP       P        20 16 52.4 -0.4
      comp=Z,36nm,1.3s
CMB   Columbia Colle     90.04  52 eP       P        20 16 52.4 -0.4
CMB                                 pmax    pmax
      comp=Z,36nm,1.3s
SMMC  Simmler            90.08  55  P       P        20 16 52.2 -0.9
      baz=264
G05D  Wamic, OR          90.11  45  P       P        20 16 52.3 -0.6
      baz=264
K05A  Summer Lake        90.14  47 eP       P        20 16 52.7 -0.6
      comp=Z,83nm,1.1s
PKM   Mcpherson Peak     90.19  55  P       P        20 16 53.0 -0.7
      baz=264
PINE  Pine Mountain      90.22  46 eP       P        20 16 53.6 -0.1
      comp=Z,66nm,0.9s
BEKR  Beckworth          90.24  50 eP       P        20 16 53.2 -0.7
      comp=Z,28nm,0.9s
SCZ2  Santa Cruz Isl     90.25  56  P       P        20 16 52.6 -1.2
      baz=265
SNCC  San Nicolas Is     90.27  57  P       P        20 16 52.7 -1.2
      baz=265
MOD   Modoc Plateau      90.49  48 eP       P        20 16 54.0 -0.9
      comp=Z,39nm,1.0s
G06A  Carlson Farm,      90.59  45 eP       P        20 16 55.6 +0.4
      comp=Z,63nm,1.4s
C06D  Leavenworth        90.70  42  P       P        20 16 55.1 -0.5
      baz=264
BLG   Laguna Peak, P     90.73  56  P       P        20 16 54.9 -1.2
      baz=265
VCNR  Virginia City      90.73  51 eP       P        20 16 56.5 +0.4
      comp=Z,36nm,1.1s
PNTR  Pine Nut           90.75  51 eP       P        20 16 55.7 -0.6
      comp=Z,66nm,1.2s
LTY   Liberty            90.78  43 eP       P        20 16 54.4 -1.6
      comp=Z,26nm,0.9s
WAKR  Walker             90.83  52 eP       P        20 16 55.4 -1.3
      comp=Z,156nm,2.0s
VES   Vestal, Richgr     90.87  54  P       P        20 16 55.5 -1.1
      baz=265,SNR=5.9
PAHR  Pah Rah Range      90.98  50 eP       P        20 16 56.5 -0.8
      comp=Z,28nm,1.0s
ARVC  Arvin              91.01  55  P       P        20 16 56.3 -1.0
      baz=265
YERR  Yerington          91.02  51 eP       P        20 16 56.9 -0.6
      comp=Z,74nm,1.5s
MDPB  Devils Postpil     91.03  53 eP       P        20 16 56.7 -1.0
      comp=Z,69nm,1.2s
OSI   Osito Audit: C     91.06  56  P       P        20 16 56.6 -1.1
      baz=265
OMMB  Old Mammoth Mi     91.09  53 eP       P        20 16 57.1 -0.9
      comp=Z,56nm,1.3s
MLAC  Mammoth, Mammo     91.22  53  P       P        20 16 57.4 -1.1
      baz=265
I07A  Izee               91.28  46 eP       P        20 16 57.7 -0.8
      comp=Z,43nm,1.1s
DECC  Green Verdugo      91.35  56  P       P        20 16 58.5 -0.4
      baz=265
ISA   Isabella, Lake     91.35  55  P       P        20 16 58.1 -0.9
      baz=265,SNR=5.3
ISA   Isabella, Lake     91.35  55 eP       P        20 16 59.1 +0.2
      comp=Z,37nm,1.2s
ISA   Isabella, Lake     91.35  55 eP       P        20 16 59.1 +0.2
ISA                                 pmax    pmax
      comp=Z,37nm,1.2s
PASC  Pasadena Art C     91.46  56 eP       P        20 16 59.0 -0.5
      comp=Z,82nm,1.0s
HAWA  Hanford            91.47  44 eP       P        20 16 58.9 -0.3
      comp=Z,55nm,1.1s
HAWA                                LR      LR
      comp=Z,24µm,21.0s
RYN   Ryan               91.55  52 eP       P        20 16 59.8 -0.2
      comp=Z,77nm,1.3s
MWC   Mount Wilson       91.57  56 eP       P        20 16 59.9 -0.3
      comp=Z,179nm,1.1s
MWC   Mount Wilson       91.57  56 eP       P        20 16 59.9 -0.3
MWC                                 pmax    pmax
      comp=Z,179nm,1.1s
TIN   Tinemaha, Big      91.66  53  P       P        20 16 59.9 -0.5
      baz=265
EDW2  Edwards Air Fo     91.68  55  P       P        20 17 00.1 -0.4
      baz=266,SNR=15
NV01  Mina Array Sit     91.71  52 eP       P        20 16 59.7 -1.1
NV01                               eP'P'df  P'P'df   20 42 25.0 -5.2
NVAR  Mina Array Bea     91.71  52  P       P        20 17 00.3 -0.4
      comp=Z,12nm,0.9s,baz=251,slow=5.9,SNR=53
NVAR                                PP      PP       20 20 48.4 +8.3
      comp=Z,7.9nm,1.0s,baz=260,slow=9.1,SNR=4.3
NVAR                                S       SKSac    20 27 30.9 +1.9
      comp=Z,0.4nm,0.7s,baz=63,slow=4.2,SNR=3.4
NVAR                                PKKPbc  PKKPbc   20 34 20.9 +0.1
      comp=Z,0.9nm,0.6s,baz=92,slow=3.3,SNR=4.0
NVAR                                PKPPKP  P'P'df   20 42 28.9 -1.3
      comp=Z,0.7nm,0.7s,baz=104,slow=5.4,SNR=4.2
NVAR                                LR      LR       20 50 48.6
      comp=Z,23µm,21.3s,baz=89,slow=31
CWC   Cottonwood Cre     91.73  54  P       P        20 17 00.3 -0.5
      baz=266
WVOR  Wild Horse Val     91.77  48 eP       P        20 17 00.4 -0.4
      comp=Z,54nm,1.0s
WVOR                                LR      LR
      comp=Z,22µm,22.0s
WVOR  Wild Horse Val     91.77  48 eP       P        20 17 00.4 -0.4
WVOR                                pmax    pmax
      comp=Z,54nm,1.0s
WVOR                                MLR     MLR
      comp=Z,22µm,22.0s
G08A  Pilot Rock         91.78  45 eP       P        20 17 00.0 -0.8
      comp=Z,107nm,1.4s
B08A  Colville Reser     91.78  42 eP       P        20 16 59.3 -1.3
      comp=Z,52nm,1.4s
E08A  Dider Farm, El     91.81  44 eP       P        20 17 00.1 -0.6
      comp=Z,118nm,1.5s
NV11  Mina Array Sit     91.82  52 eP       P        20 17 00.8 -0.4
      comp=Z,6.8nm,1.2s
BFSC  Mount Baldy Ra     91.90  56  P       P        20 17 01.3 -0.3
      baz=266,SNR=7.9
KVN   Kaiserville        91.91  51 eP       P        20 17 00.9 -0.7
      comp=Z,30nm,1.0s
KVN   Kaiserville        91.91  51 eP       P        20 17 00.9 -0.7
KVN                                 pmax    pmax
      comp=Z,30nm,1.0s
D08A  Wollman Farm,      91.95  43 eP       P        20 17 00.7 -0.7
      comp=Z,58nm,1.3s
J08A  Circle Bar Ran     91.97  47 eP       P        20 16 59.9 -1.8
      comp=Z,46nm,0.9s
LRMC  Laurel Mtn Rad     91.98  55  P       P        20 17 01.7 -0.2
      baz=266,SNR=12
MPMC  Manual Prospec     92.18  54  P       P        20 17 02.4 -0.5
      baz=266,SNR=27
MURC  Murrieta           92.24  57  P       P        20 17 02.6 -0.4
      baz=266
109C  Camp Elliot, M     92.27  57  P       P        20 17 03.0 -0.2
      baz=266
CPE   Camp Elliot        92.27  57 eP       P        20 17 01.2 -2.0
      comp=Z,81nm,1.1s
GRAC  Grapevine Rang     92.34  53  P       P        20 17 03.1 -0.4
      baz=266
C09A  Chrisman Ranch     92.44  42 eP       P        20 17 02.5 -1.1
      comp=Z,46nm,1.1s
BAR   Barrett            92.62  58 eP       P        20 17 06.1 +1.3
      comp=Z,69nm,1.2s
GSC   Goldstone, Bar     92.68  55  P       P        20 17 04.6 -0.6
      baz=266,SNR=11
GSC   Goldstone, Bar     92.68  55 eP       P        20 17 05.0 -0.1
      comp=Z,78nm,1.4s
BMN   Battle Mountai     92.69  50 eP       P        20 17 04.6 -0.5
      comp=Z,51nm,1.4s
BMN   Battle Mountai     92.69  50 eP       P        20 17 04.6 -0.5
BMN                                 pmax    pmax
      comp=Z,51nm,1.4s
FURC  Furnace Creek,     92.71  54  P       P        20 17 04.9 -0.2
      baz=266,SNR=21
FRD   Ford Ranch, An     92.73  57  P       P        20 17 05.0 -0.4
      baz=266,SNR=5.8
MONP2 Monument Peak      92.84  57  P       P        20 17 05.5 -0.6
      baz=266,SNR=13
PFO   Pinyon Flats O     92.86  57  P       P        20 17 05.5 -0.6
      baz=266,SNR=15
PFO   Pinyon Flats O     92.86  57 eP       P        20 17 06.1 +0.1
      comp=Z,46nm,1.0s
PFO                                 LR      LR
      comp=Z,14µm,21.0s
XPFO  Piæon Flat         92.86  57 eP       P        20 17 06.4 +0.3
      comp=Z,46nm,1.0s
TPFO  Pinon Flats        92.86  57  P       P        20 17 05.5 -0.6
      baz=266,SNR=16
BMO   Blue Mountains     92.91  45 eP       P        20 17 05.1 -0.9
      comp=Z,189nm,1.8s
BMO                                 LR      LR
      comp=Z,16µm,21.0s
BMO   Blue Mountains     92.91  45 eP       P        20 17 05.1 -0.9
BMO                                 pmax    pmax
      comp=Z,189nm,1.8s
BMO                                 MLR     MLR
      comp=Z,16µm,21.0s
HEC   Hector,Ludlow      93.03  55  P       P        20 17 06.2 -0.6
      baz=266,SNR=8.4
F10A  Beach Ranch, E     93.04  44 eP       P        20 17 05.5 -1.0
      comp=Z,135nm,1.5s
IKP   In-Ko-Pah, Jac     93.09  58  P       P        20 17 06.7 -0.4
      baz=266
SHOC  Shoshone, Teco     93.15  54  P       P        20 17 07.1 -0.1
      baz=267,SNR=14
TPNV  Topopah Spring     93.23  53  P       P        20 17 07.3 -0.5
      baz=267,SNR=24
TPNV  Topopah Spring     93.23  53 eP       P        20 17 07.3 -0.5
      comp=Z,251nm,1.7s
TPNV  Topopah Spring     93.23  53 eP       P        20 17 07.3 -0.5
TPNV                                pmax    pmax
      comp=Z,251nm,1.7s
BELC  Belle Mtn. Jos     93.26  56  P       P        20 17 07.7 -0.3
      baz=267,SNR=19
SWSC  Sam W. Stewart     93.37  57  P       P        20 17 08.1 -0.2
      baz=267
TUQ   Turquoise Moun     93.41  55  P       P        20 17 08.1 -0.5
      baz=267,SNR=20
GMRC  Granite Mounta     93.59  56  P       P        20 17 08.8 -0.6
      baz=267,SNR=18
BC3   Big Chuckawall     93.70  57  P       P        20 17 09.5 -0.4
      baz=267,SNR=13
MRIV  Mauritius Mete     93.71 249 eP       P        20 17 10.1  0.0
R11A  Troy Canyon, C     93.83  52  P       P        20 17 10.0 -0.5
      baz=267
R11A  Troy Canyon, C     93.83  52 eP       P        20 17 10.2 -0.3
      comp=Z,50nm,1.2s
MFID  Camas Ranch        93.89  47 eP       P        20 17 09.1 -1.5
      comp=Z,42nm,1.2s
SYO   Syowa Base         93.93 199⇑eP       P        20 17 06.3 -3.7
SYO   Syowa Base         93.93 199⇑eP       P        20 17 09.0 -1.0
SYO   Syowa Base         93.93 199⇓iP       P        20 17 11.6 +1.6
IRM   Iron Mountain      93.98  56  P       P        20 17 10.8 -0.3
      baz=267,SNR=20
SHPR  Sheep Range        94.08  54 eP       P        20 17 11.5 -0.2
      comp=Z,93nm,1.2s
GLA   Glamis             94.19  57  P       P        20 17 11.9 -0.2
      baz=267
GLA   Glamis             94.19  57 eP       P        20 17 12.2 +0.1
      comp=Z,122nm,1.2s
GLA   Glamis             94.19  57 eP       P        20 17 12.2 +0.1
GLA                                 pmax    pmax
      comp=Z,122nm,1.2s
NEE2  Needles Airpor     94.44  56  P       P        20 17 13.0 -0.2
      baz=267
Y12C  Blythe             94.47  57  P       P        20 17 13.0 -0.4
      baz=267
Y12C  Blythe             94.47  57 eP       P        20 17 13.4 +0.1
      comp=Z,156nm,1.8s
RPN   Rapa Nui           94.55 118  LR      LR       20 52 56.4
      comp=Z,6µm,20.8s,baz=268,slow=31
PDMCI Parker Dam,Lak     94.82  56  P       P        20 17 14.5 -0.3
      baz=268
HLID  Hailey             94.93  47  P       P        20 17 14.4 -1.0
      baz=268
HLID  Hailey             94.93  47 eP       P        20 17 15.1 -0.4
      comp=Z,48nm,1.4s
HLID                                LR      LR
      comp=Z,16µm,22.0s
YKW3  Yellowknife Ar     95.12  28 eP       P        20 17 14.7 -0.9
      comp=Z,66nm,1.2s
YKA   Yellowknife Ar     95.13  28  P       P        20 17 15.5 -0.1
      comp=Z,12nm,0.8s,baz=268,slow=4.5,SNR=34
YKA                                 PKiKP   PKiKP    20 21 57.2 +0.7
      comp=Z,1.4nm,0.7s,baz=290,slow=1.6,SNR=2.7
YKA                                 PKKPbc  PKKPdf   20 34 11.0 -1.2
      comp=Z,4.4nm,0.8s,baz=85,slow=3.0,SNR=7.9
YKA                                 PKPPKP  P'P'df   20 42 22.3 +0.5
      comp=Z,1.3nm,0.8s,baz=72,slow=2.3,SNR=4.3
YKA                                 LR      LR       20 55 56.6
      comp=Z,940nm,20.7s,baz=286,slow=33
PSUT  Pine Spring        95.20  52 eP       P        20 17 15.6 -1.2
      comp=Z,46nm,1.1s
SVE   Sverdlovsk         95.25 327d iP      P        20 17 15.5 -0.8
SVE                                e                 20 21 05.2
SVE                                eS       SKSac    20 27 47.3 +0.3
SVE                                 pmax    pmax
      comp=Z,426nm,1.3s
SVE                                 pmax    pmax
      comp=Z,721nm,12.3s
SVE                                 MLR     MLR
      comp=Z,9µm,19.0s
SVE                                 MLR     MLR
      comp=E,8µm,19.0s
WALA  Waterton Lakes     95.40  41 eP       P        20 17 16.4 -1.0
CCUT  Cedar City         95.56  53 eP       P        20 17 18.6 +0.1
      comp=E,52nm,1.2s
ABKAR Akbulak array      95.60 319 eP       P        20 17 16.4 -1.7
LCMT  Little Creek M     95.64  53 eP       P        20 17 18.6 -0.2
      comp=E,52nm,1.1s
214A  Organ Pipe Nat     95.85  58  P       P        20 17 18.3 -1.4
      baz=268
KNB   Kanab              95.98  53 eP       P        20 17 21.1 +0.7
      comp=E,128nm,1.3s
WSAR  Wadi Sarin         95.98 293  P       P        20 17 20.0 -0.4
      comp=E,28nm,0.8s,baz=116,slow=6.3,SNR=15
WSAR                                LR      LR       21 01 01.0
      comp=E,4µm,21.9s,baz=114,slow=36
WSAR  Wadi Sarin         95.98 293  P       P        20 17 20.4  0.0
DUG   Dugway, Tooele     96.05  50  P       P        20 17 20.0 -0.6
      baz=269
DUG   Dugway, Tooele     96.05  50 eP       P        20 17 20.0 -0.6
      comp=E,21nm,1.3s
DUG                                 LR      LR
      comp=Z,16µm,21.0s
DUG   Dugway, Tooele     96.05  50  P       P        20 17 20.1 -0.5
MCMT  McKenzie Canyo     96.08  46 eP       P        20 17 19.6 -1.1
HVU   Hansel Valley      96.10  49 eP       P        20 17 19.7 -1.1
      comp=Z,40nm,1.3s
HVU   Hansel Valley      96.10  49 eP       P        20 17 19.7 -1.1
HVU                                 pmax    pmax
      comp=Z,40nm,1.3s
DLMT  Dillon             96.26  45 eP       P        20 17 20.6 -0.9
      comp=Z,26nm,1.2s
LRM   Limekiln Ridge     96.36  45 eP       P        20 17 21.6 -0.4
PKCU  Pink Cliffs        96.39  53 eP       P        20 17 22.3 -0.1
      comp=Z,104nm,1.2s
ARU   Arti               96.40 326  P       P        20 17 20.3 -1.2
      comp=Z,185nm,0.7s,baz=105,slow=1.5,SNR=187
ARU                                 PKKPbc  PKKPbc   20 34 08.7 -0.2
      comp=Z,3.6nm,0.7s,baz=280,slow=6.0,SNR=4.4
ARU   Arti               96.40 326 eP       P        20 17 20.1 -1.5
      comp=Z,308nm,0.9s
ARU                                 PKKPbc  PKKPbc   20 34 08.7 -0.2
ARU                                 LR      LR
      comp=Z,10µm,21.0s
ARU   Arti               96.40 326c iP      P        20 17 20.3 -1.2
ARU                                 *PP     pP       20 17 39.8 +1.5
ARU                                                  20 21 13.6
ARU                                 S       SKSac    20 27 50.1 -3.0
ARU                                 SP      SP       20 30 00.0 +3.3
ARU                                 PS      PS       20 30 09.8 +5.2
ARU                                 pmax    pmax
      comp=Z,651nm,1.7s
BIDO  Bidbid             96.45 293  P       P        20 17 24.0 +1.4
      SNR=20
MTPU  Mount Pierson      96.50  52 eP       P        20 17 22.5 -0.4
      comp=Z,31nm,1.0s
MSU   Marysvale          96.51  52 eP       P        20 17 22.3 -0.5
MSU   Marysvale          96.51  52 eP       P        20 17 22.3 -0.5
NLU   North Lily Min     96.61  50 eP       P        20 17 23.3 +0.1
      comp=Z,16nm,1.0s
GEYT  Alibeck            96.82 308  P       P        20 17 22.8 -1.2
      comp=Z,21nm,0.9s,baz=94,slow=4.5,SNR=52
GEYT                                PP      PP       20 21 25.3 +5.6
      comp=Z,5.1nm,0.8s,baz=87,slow=7.4,SNR=4.1
GEYT                                LR      LR       21 02 23.5
      comp=Z,5µm,21.6s,baz=240,slow=36
GYA0B ALIBECK ARRAY      96.82 308 eP       P        20 17 23.6 -0.4
      comp=Z,122nm,1.3s
AKTO  Aktyubinsk         96.85 320  P       P        20 17 22.4 -1.3
      comp=Z,118nm,0.9s,baz=90,slow=5.9,SNR=172
AKTO                                PP      PP       20 21 23.7 +4.2
      comp=Z,16nm,0.9s,baz=88,slow=12,SNR=4.6
AKTO                                LR      LR       21 00 42.7
      comp=Z,4µm,21.4s,baz=85,slow=35
BOZ   Bozeman (W)        96.94  45  P       P        20 17 23.2 -1.3
      baz=270
BOZ   Bozeman (W)        96.94  45 eP       P        20 17 23.8 -0.7
      comp=Z,18nm,1.0s
BOZ                                 LR      LR
      comp=Z,20µm,22.0s
BOZ   Bozeman (W)        96.94  45 eP       P        20 17 23.8 -0.7
BOZ                                 pmax    pmax
      comp=Z,18nm,1.0s
BOZ                                 MLR     MLR
      comp=Z,20µm,22.0s
HWUT  Hardware Ranch     97.00  49  PFAKE            20 17 40.0 +15
HWUT                                LR      LR
      comp=Z,10µm,20.0s
QLMT  Earthquake Lak     97.09  46 eP       P        20 17 24.9 -0.3
WUAZ  Wupatki            97.12  55  P       P        20 17 23.7 -1.9
      baz=269
WUAZ  Wupatki            97.12  55 eP       Pdif     20 17 26.0 +0.3
      comp=Z,53nm,1.1s
WUAZ                                LR      LR
      comp=Z,13µm,21.0s
YHB   Horse Butte        97.26  46 eP       P        20 17 26.1  0.0
      comp=Z,14nm,0.8s
MSEY  Mahe Island        97.26 265  PFAKE            20 17 40.0 +13
MSEY                                LR      LR
      comp=Z,4µm,20.0s
TMUT  Trail Mountain     97.28  51 eP       Pdif     20 17 26.4  0.0
      comp=Z,40nm,1.2s
Q16A  Castle Valley      97.30  52 eP       P        20 17 26.3 -0.1
      comp=Z,54nm,1.4s
AHID  Auburn Hatcher     97.34  48 eP       P        20 17 25.2 -1.2
      comp=Z,12nm,0.9s
AHID                                LR      LR
      comp=Z,19µm,21.0s
FXWY  Fox Creek          97.39  47 eP       P        20 17 25.6 -1.1
      comp=Z,14nm,1.1s
TPAW  Teton Pass         97.45  47 eP       P        20 17 26.0 -1.0
      comp=Z,17nm,1.0s
YFT   Old Faithful       97.52  46 eP       P        20 17 26.6 -0.7
      comp=Z,24nm,0.9s
REDW  Red Top Meadow     97.52  47 eP       P        20 17 26.3 -0.9
      comp=Z,36nm,1.4s
TUC   Tucson             97.57  58  P       P        20 17 26.8 -0.8
      baz=269
TUC   Tucson             97.57  58  PFAKE            20 17 40.0 +12
TUC                                 LR      LR
      comp=Z,16µm,20.0s
TUC   Tucson             97.57  58  P       Pdif     20 17 28.2 +0.6
TUC                                 pmax    pmax
      comp=Z,9.0nm,1.5s
MOOW  Moose Ponds        97.59  47 eP       P        20 17 26.5 -1.1
      comp=Z,15nm,1.3s
FLWY  Flagg Ranch        97.62  46 eP       P        20 17 26.5 -1.2
      comp=Z,25nm,1.3s
P17A  Butcher Ranch,     97.64  51 eP       P        20 17 26.3 -1.5
      comp=Z,64nm,1.7s
LOHW  Long Hollow        97.70  47 eP       P        20 17 26.9 -1.2
      comp=Z,20nm,1.4s
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H17A	**Grant Village**	**97.70**	**46**	P	**P**	**20 17 27.4**	**-0.7**
	baz=271						
H17A	**Grant Village**	**97.70**	**46**	*e*P	**P**	**20 17 27.6**	**-0.5**
	comp=Z,11nm,0.8s						
SRU	**San Rafael Swe**	**97.81**	**51**	*e*P	**P**	**20 17 28.2**	**-0.4**
	comp=Z,15nm,0.9s						
SRU	**San Rafael Swe**	**97.81**	**51**	*e*P	**P**	**20 17 28.2**	**-0.4**
SRU				pmax	pmax		
	comp=Z,15nm,0.9s						
LKWY	**Lake**	**97.83**	**46**	PFAKE		20 17 40.0	+11
LKWY				LR	LR		
	comp=Z,18µm,22.0s						
LPIG	**La Paz**	**97.83**	**66**	PP	PP	20 21 33.7	+5.9
	comp=Z,22nm,0.3s,baz=14,slow=1.8,SNR=5.4						
LPIG				LR	LR	20 58 29.2	
	comp=Z,9µm,18.1s,baz=280,slow=34						
P18A	**Preston Nutter**	**98.02**	**51**	*e*P	**P**	**20 17 29.1**	**-0.6**
	comp=Z,26nm,1.0s						
MDH	**Madha**	**98.17**	**295**	P	**P**	**20 17 28.9**	**-1.4**
EGMT	**Eagleton**	**98.17**	**42**	P	**P**	**20 17 28.7**	**-1.2**
	baz=272						
EGMT	**Eagleton**	**98.17**	**42**	*e*P	**P**	**20 17 28.7**	**-1.2**
	comp=Z,59nm,1.5s						
EGMT				LR	LR		
	comp=Z,15µm,21.0s						
BANOM	**Banah**	**98.19**	**295**	P	Pdif	20 17 30.8	+0.4
	SNR=7.0						
BANOM	**Banah**	**98.19**	**295**	*i* P	Pdif	20 17 30.7	+0.3
	SNR=17						
UOSS	**Minazif**	**98.25**	**294**	*e*P	**P**	**20 17 29.0**	**-1.6**
	comp=Z,48nm,1.1s						
UOSS	**Minazif**	**98.25**	**294**	*i* P	**P**	**20 17 29.5**	**-1.2**
	SNR=6.7						
MSFE	**Esma-Masafi**	**98.30**	**295**	*i* P	**P**	**20 17 30.2**	**-0.8**
	SNR=8.4						
HATD	**Hatta, Dubai**	**98.31**	**294**	P	**P**	**20 17 30.1**	**-0.9**
	SNR=6.7						
HATD	**Hatta, Dubai**	**98.31**	**294**	*i* P	**P**	**20 17 30.0**	**-0.9**
	SNR=7.5						
SHME	**Shamm**	**98.33**	**296**	*i* P	**P**	**20 17 30.6**	**-0.5**
	SNR=25						
ASHO	**Ashiyiah**	**98.38**	**294**	P	**P**	**20 17 30.6**	**-0.6**
	SNR=5.4						
ASHO	**Ashiyiah**	**98.38**	**294**	*i* P	**P**	**20 17 30.2**	**-1.1**
	SNR=5.4						
W18A	**Petrified Fore**	**98.46**	**55**	P	**P**	**20 17 30.3**	**-1.3**
	baz=270						
W18A	**Petrified Fore**	**98.46**	**55**	*e*P	Pdif	20 17 31.8	+0.1
	comp=Z,79nm,1.3s						
BW06	**Boulder Array**	**98.48**	**48**	P	**P**	**20 17 31.1**	**-0.5**
	baz=272						
BW06	**Boulder Array**	**98.48**	**48**	*e*P	**P**	**20 17 30.2**	**-1.4**
	comp=Z,14nm,0.9s						
BW06				LR	LR		
	comp=Z,14µm,21.0s						
PD31	**Pinedale Array**	**98.48**	**48**	*e*P	**P**	**20 17 29.4**	**-2.2**
PD31				*e*PP	**PP**	**20 21 30.6**	**-1.9**
PDAR	**Pinedale Array**	**98.48**	**48**	P	**P**	**20 17 30.1**	**-1.5**
	comp=Z,3.4nm,0.8s,baz=243,slow=2.7,SNR=19						
PDAR				PP	**PP**	**20 21 32.2**	**-0.3**
	comp=Z,5.1nm,0.8s,baz=247,slow=5.8,SNR=5.4						
PDAR				PKPPKP	**P’P’df**	**20 42 15.3**	**-1.9**
	comp=Z,0.6nm,0.4s,baz=90,slow=0.9,SNR=5.5						
PDAR				LR	LR	20 56 00.6	
	comp=Z,11µm,20.7s,baz=281,slow=32						
PDAR	**Pinedale Array**	**98.48**	**48**	*e*P	**P**	**20 17 29.7**	**-1.9**
PDAR				PP	**PP**	**20 21 32.2**	**-0.3**
PDAR				P’P’		20 42 15.3	
RLMT	**Red Lodge**	**98.62**	**45**	P	**P**	**20 17 30.9**	**-1.3**
	baz=272						
RLMT	**Red Lodge**	**98.62**	**45**	*e*P	Pdif	20 17 32.7	+0.6
	comp=Z,11nm,1.0s						
RLMT				LR	LR		
	comp=Z,19µm,22.0s						
ALNE	**Al Ain**	**98.64**	**294**	*i* P	**P**	**20 17 32.0**	**-0.5**
	SNR=12						
NAZ	**Nazwa, Dubai**	**98.74**	**294**	P	**P**	**20 17 32.3**	**-0.6**
	SNR=7.3						
NAZ	**Nazwa, Dubai**	**98.74**	**294**	*i* P	**P**	**20 17 31.9**	**-0.9**
	SNR=6.5						
PV09	**Paradox Valley**	**98.90**	**52**	*e*P	**P**	**20 17 33.5**	**-0.2**
PV14	**Lion Creek, Pa**	**98.99**	**52**	*e*P	**P**	**20 17 33.5**	**-0.5**
	comp=Z,112nm,1.8s						
PV23	**Carpenter Ridg**	**99.00**	**52**	*e*P	**P**	**20 17 33.6**	**-0.4**
	comp=Z,66nm,1.3s						
PV19	**Morning Glory**	**99.02**	**52**	*e*P	**Pdif**	**20 17 33.6**	**-0.5**
	comp=Z,33nm,1.0s						
PV21	**Cone Mtn., Par**	**99.03**	**52**	*e*P	**Pdif**	**20 17 33.6**	**-0.5**
	comp=Z,60nm,1.4s						
PV20	**West Nyswonger**	**99.03**	**52**	*e*P	**Pdif**	**20 17 33.7**	**-0.5**
	comp=Z,81nm,1.6s						
ASUD	**Al Ashush, Dub**	**99.04**	**294**	P	**Pdif**	**20 17 33.8**	**-0.3**
	SNR=13						
ASUD	**Al Ashush, Dub**	**99.04**	**294**	*i* P	**Pdif**	**20 17 33.7**	**-0.5**
	SNR=25						
PV17	**East Wray Mesa**	**99.04**	**52**	*e*P	**Pdif**	**20 17 35.3**	**+1.1**
	comp=Z,91nm,1.8s						
PV16	**Nyswonger Mesa**	**99.08**	**52**	*e*P	**Pdif**	**20 17 34.2**	**-0.1**
	comp=Z,63nm,1.5s						
PV18	**Skein Mesa, Pa**	**99.08**	**52**	*e*P	**Pdif**	**20 17 34.8**	**+0.4**
	comp=Z,84nm,1.9s						
PV11	**David Mesa, Pa**	**99.11**	**52**	*e*P	**Pdif**	**20 17 34.0**	**-0.5**
	comp=Z,54nm,1.1s						
PV03	**Paradox Valley**	**99.13**	**52**	*e*P	**Pdif**	**20 17 34.8**	**+0.2**
PV13	**Radium Mtn., P**	**99.16**	**52**	*e*P	**Pdif**	**20 17 34.2**	**-0.5**
	comp=Z,44nm,1.5s						
PV12	**Saucer Basin,**	**99.17**	**52**	*e*P	**Pdif**	**20 17 33.8**	**-0.9**
	comp=Z,42nm,1.1s						
PV22	**Blue Mesa, Par**	**99.17**	**52**	*e*P	**Pdif**	**20 17 35.0**	**+0.2**
	comp=Z,18nm,0.9s						
PV02	**Paradox Valley**	**99.22**	**52**	*e*P	**Pdif**	**20 17 35.4**	**+0.4**
	comp=Z,36nm,1.4s						
AJN	**Ajban**	**99.35**	**294**	*i* P	**Pdif**	**20 17 35.2**	**-0.4**
	SNR=8.8						
MVCO	**Mesa Verde**	**99.43**	**53**	P	**Pdif**	**20 17 35.2**	**-0.8**
	baz=271						
MVCO	**Mesa Verde**	**99.43**	**53**	*e*P	**Pdif**	**20 17 36.4**	**+0.4**
	comp=Z,44nm,1.3s						
MVCO				LR	LR		
	comp=Z,11µm,22.0s						
O20A	**White River Ci**	**99.55**	**50**	P	**Pdif**	**20 17 35.7**	**-0.7**
	baz=272						
O20A	**White River Ci**	**99.55**	**50**	*e*P	**Pdif**	**20 17 37.8**	**+1.4**
	comp=Z,33nm,1.3s						
121A	**Cookes Peak, D**	**100.11**	**58**	P	**Pdif**	**20 17 37.6**	**-1.5**
	baz=271						
NVL	**N’lazarevskaya**	**100.48**	**192**	⇑*i*P	**Pdif**	**20 17 44.7**	**+5.1**
NVL				*e*		20 21 48.4	
NVL				*e*S	**SKSac**	**20 28 16.6**	**+3.4**
NVL				*e*		20 29 03.8	
NVL				*e*SP	**SP**	**20 30 37.6**	**-2.2**
NVL				*e*SS	SS	20 36 20.7	+14
NVL				pmax	pmax		
	comp=Z,10.0nm,0.8s						
NVL				MLR	MLR		
	comp=Z,13µm,19.0s						
LAO	**LASA Array**	**100.65**	**44**	P	**Pdif**	**20 17 39.9**	**-1.0**
	baz=274						
LAO	**LASA Array**	**100.65**	**44**	PFAKE		20 17 50.0	+9.1
LAO				LR	LR		
	comp=Z,14µm,20.0s						
MZR	**Muzera**	**100.71**	**292**	*i* P	**Pdif**	**20 17 41.6**	**0.0**
	SNR=6.7						
K22A	**Casper**	**100.72**	**48**	P	**Pdif**	**20 17 40.1**	**-1.4**
	baz=274						
S22A	**4UR Ranch, Cre**	**100.74**	**53**	P	**Pdif**	**20 17 40.8**	**-1.0**
	baz=272						
TASM	**ASL Pad, Albuq**	**101.15**	**55**	P	**Pdif**	**20 17 42.9**	**-0.7**
	baz=272						
ANMO	**Albuquerque**	**101.15**	**55**	P	**Pdif**	**20 17 44.3**	**+0.7**
	comp=Z,1.0nm,0.8s,baz=261,slow=8.2,SNR=2.1						
ANMO				PP	**PP**	**20 21 55.0**	**+1.9**
	comp=Z,2.9nm,0.9s,baz=259,slow=8.2,SNR=3.6						
ANMO	**Albuquerque**	**101.15**	**55**	P	**Pdif**	**20 17 42.7**	**-0.9**
	baz=272						
ANMO	**Albuquerque**	**101.15**	**55**	*e*Pdif	**Pdif**	**20 17 45.6**	**+2.0**
ANMO				*e*PP	**PP**	**20 21 48.1**	**-5.0**
ANMO				PP	**PP**	**20 21 55.0**	**+1.9**
ANMO				LR	LR		
	comp=Z,9µm,22.0s						
ANMO	**Albuquerque**	**101.15**	**55**	*e*P	**Pdif**	**20 17 45.6**	**+2.0**
ANMO						20 21 55.0	
ANMO				MLR	MLR		
	comp=Z,9µm,22.0s						
TASL	**Snake Pit, Alb**	**101.15**	**55**	P	**Pdif**	**20 17 42.8**	**-0.9**
	baz=272						
N23A	**Red Feather La**	**101.26**	**49**	P	**Pdif**	**20 17 43.2**	**-0.8**
	baz=274						
ISCO	**Idaho Springs**	**101.58**	**50**	P	**Pdif**	**20 17 44.9**	**-0.7**
	baz=274						
ISCO	**Idaho Springs**	**101.58**	**50**	PFAKE		20 18 00.0	+14
ISCO				LR	LR		
	comp=Z,15µm,22.0s						
SDCO	**Great Sand Dun**	**101.79**	**53**	P	**Pdif**	**20 17 45.7**	**-0.9**
	baz=273						
SDCO	**Great Sand Dun**	**101.79**	**53**	PFAKE		20 18 00.0	+13
SDCO				LR	LR		
	comp=Z,18µm,22.0s						
DGMT	**Dagmar**	**101.84**	**42**	P	**Pdif**	**20 17 45.7**	**-0.4**
	baz=276						
DGMT	**Dagmar**	**101.84**	**42**	PFAKE		20 18 00.0	+14
DGMT				LR	LR		
	comp=Z,11µm,22.0s						
Q24A	**Divide**	**102.00**	**51**	P	**Pdif**	**20 17 46.5**	**-0.9**
	baz=274						
MNTX	**Cornudas Mount**	**102.17**	**59**	P	**Pdif**	**20 17 47.6**	**-0.4**
	baz=272						
MNTX	**Cornudas Mount**	**102.17**	**59**	PFAKE		20 18 00.0	+12
MNTX				LR	LR		
	comp=Z,8µm,21.0s						
SNAA	**Sanae**	**102.22**	**188**	PKiKP	**PKiKP**	**20 22 08.9**	**-0.2**
SNAA	**Sanae**	**102.22**	**188**	Pdiff	**Pdif**	**20 17 46.6**	**-0.8**
SNAA	**Sanae**	**102.22**	**188**	P	**Pdif**	**20 17 46.7**	**-0.8**
	comp=Z,2.2nm,0.7s,baz=215,slow=7.5,SNR=15						
SNAA				PKiKP	**PKiKP**	**20 22 09.6**	**+0.5**
	comp=Z,4.2nm,0.7s,baz=201,slow=3.6,SNR=6.1						
SNAA				PKKPbc	**PKKPbc**	**20 33 49.4**	**-3.5**
	comp=Z,3.5nm,0.8s,baz=256,slow=4.2,SNR=7.2						
SNAA	**Sanae**	**102.22**	**188**	*e*Pdif	**Pdif**	**20 17 47.6**	**+0.2**
SNAA				*e*PKiKP	**PKiKP**	**20 22 12.5**	**+3.4**
SNAA				PKKPbc	**PKKPbc**	**20 33 49.4**	**-3.5**
SNAA	**Sanae**	**102.22**	**188**	*e*P	**Pdif**	**20 17 47.7**	**+0.2**
FFC	**Flin Flon**	**102.35**	**35**	PFAKE		20 18 00.0	+12
FFC				LR	LR		
	comp=Z,8µm,22.0s						
PRGR	**Permogore**	**102.37**	**332**	*e*P	**Pdif**	**20 17 46.8**	**-1.3**
PRGR				pmax	pmax		
	comp=Z,327nm,0.8s						
RSSD	**Black Hills**	**102.41**	**46**	P	**Pdif**	**20 17 48.5**	**-0.5**
	baz=276						
T25A	**Trinidad**	**102.70**	**53**	P	**Pdif**	**20 17 49.5**	**-0.9**
	baz=274						
SPA0	**Spitsbergen Ar**	**103.22**	**352**	*e*Pdif	**Pdif**	**20 17 51.1**	**-0.6**
SPA0	**Spitsbergen Ar**	**103.22**	**352**	*e*Pdif	**Pdif**	**20 17 51.5**	**-0.1**
SPA0				*e*PP	**PP**	**20 22 03.3**	**-3.7**
SPITS	**Spitsbergen Ar**	**103.22**	**352**	Pdiff	**Pdif**	**20 17 50.7**	**-0.9**
	comp=Z,13nm,0.7s,baz=46,slow=3.6,SNR=18						
SPITS				PKiKP	**PKiKP**	**20 22 11.8**	**+1.0**
	comp=Z,15nm,0.8s,baz=73,slow=4.8,SNR=5.8						
SPITS				PKKPbc	**PKKPbc**	**20 33 46.9**	**-3.1**
	comp=Z,1.2nm,0.3s,baz=222,slow=1.9,SNR=13						
KBS	**Kingsbay**	**103.26**	**353**	PFAKE		20 18 00.0	+8.2
KBS				LR	LR		
	comp=Z,6µm,22.0s						
KBS	**Kingsbay**	**103.26**	**353**	*e*	**Pdif**	**20 17 52.5**	**+0.7**
KBS				*e*PP	**PKiKP**	**20 22 09.9**	**-0.9**
VNA3	**Neumayer Olymp**	**103.40**	**186**	PKiKP	**PKiKP**	**20 22 12.6**	**+1.4**
VNA3	**Neumayer Olymp**	**103.40**	**186**	Pdiff	**Pdif**	**20 17 55.7**	**+3.0**
ABPO	**Ambohimpanom**	**103.47**	**249**	PFAKE		20 18 10.0	+16
ABPO				LR	LR		
	comp=Z,2µm,20.0s						
OPO	**Ambohidratompo**	**103.58**	**250**	PKiKP	**PKiKP**	**20 22 13.7**	**+0.5**
	comp=Z,6.0nm,0.7s,baz=336,slow=2.9,SNR=6.6						
OPO				PKKPbc	**PKKPbc**	**20 33 47.3**	**0.0**
	comp=Z,3.5nm,0.9s,baz=345,slow=13,SNR=3.5						
TXAR	**Lajitas Array**	**103.74**	**61**	Pdiff	**Pdif**	**20 17 55.8**	**+0.6**
	comp=Z,0.6nm,0.8s,baz=236,slow=3.2,SNR=6.9						
TXAR				PP	**PKiKP**	**20 22 14.7**	**+1.5**
	comp=Z,7.1nm,1.1s,baz=261,slow=6.0,SNR=6.9						
TXAR				PKKPbc	**PKKPbc**	**20 33 46.9**	**-0.1**
	comp=Z,2.3nm,0.7s,baz=123,slow=4.4,SNR=4.5						
TXAR				PKPPKP	**P’P’df**	**20 42 07.4**	**-0.5**
	comp=Z,0.3nm,0.8s,baz=108,slow=2.9,SNR=3.4						
VNA1	**Neumayer--Stat**	**103.82**	**186**	PKiKP	**PKiKP**	**20 22 13.3**	**+1.3**
VNA1	**Neumayer--Stat**	**103.82**	**186**	Pdiff	**Pdif**	**20 17 58.0**	**+3.6**
KSCO	**Kaye Shedlock’**	**103.95**	**51**	P	**Pdif**	**20 17 56.4**	**+0.5**
	baz=275						
HSPB	**Hornsund (broa**	**104.19**	**351**	*e*Pdif	**Pdif**	**20 17 55.7**	**-0.3**
OGNE	**Ogallala**	**104.21**	**49**	PFAKE		20 18 10.0	+13
OGNE				LR	LR		
	comp=Z,11µm,20.0s						
MAK	**Makhachkala**	**104.61**	**313**	*i* P	**Pdif**	**20 17 59.6**	**+1.1**
MAK				*e*		20 22 19.5	
MAK				*e*PPP	PPP	20 24 32.3	
MAK				*e*		20 28 32.9	
MAK				*e*		20 29 14.9	
MAK				*e*PS	**PS**	**20 31 29.2**	**-3.6**
AKT	**Akhty**	**104.63**	**312**	*e*P	**Pdif**	**20 17 58.1**	**-0.7**
AKT				*e*		20 22 18.9	
AKT				pmax	pmax		
	comp=Z,75nm,1.2s						
BJO	**Bjornoya**	**105.29**	**348**	*e*Pdif	**Pdif**	**20 17 59.7**	**-1.2**
APA	**Apatity**	**105.33**	**340**	⇓*i*P	**Pdif**	**20 17 59.7**	**-1.5**
APA				*i* PPP	PPP	20 24 45.0	
APA				*i*		20 28 37.0	
APA				*i* S	**Sdif**	**20 29 46.0**	**-5.6**
APA				*i* PS	**PS**	**20 31 27.0**	**-12**
APA				*i* PPS	PPS	20 32 43.0	
APA				pmax	pmax		
	comp=Z,55nm,0.6s						
KLMR	**Klimovskoe**	**105.43**	**332**	*e*P	**Pdif**	**20 17 58.0**	**-3.7**
KLMR				*e*PS	**PS**	**20 31 33.7**	**-6.7**
KLMR				pmax	pmax		
	comp=Z,316nm,1.4s						
KLMR	**Klimovskoe**	**105.43**	**332**	*e*Pdif	**Pdif**	**20 17 58.0**	**-3.7**
KLMR				AMP		20 18 03.4	
	comp=Z,316nm,1.4s						
KLMR				*e*PP	**PKiKP**	**20 22 17.8**	**+2.7**
KLMR				*e*PS	**PS**	**20 31 33.8**	**-6.7**
KLMR				*e*PS	**PS**	**20 31 33.8**	**-6.7**
KLMR				*e*PKKPbc	**PKKPbc**	**20 33 41.1**	**-1.8**
KLMR				*e*SS	**SS**	**20 37 05.7**	**-10**
KLMR				*e*SS	**SS**	**20 37 05.7**	**-10**
KLMR				LQ	LQ	20 54 35.4	
KLMR				LQ	LQ	20 54 35.4	
KLMR				LR	LR	21 01 33.8	
KLMR				AMP		21 10 25.1	
	comp=Z,13µm,18.1s						
PMSA	**Palmer Station**	**105.50**	**164**	PFAKE		20 22 30.0	
PMSA				LR	LR		
	comp=Z,7µm,22.0s						
GROC	**Groznyy**	**105.82**	**314**	*e*P	**Pdif**	**20 18 00.9**	**-3.0**
GROC				*e*		20 22 35.1	
GROC				*e*		20 28 37.5	
GROC				*e*		20 29 20.3	
GROC				*e*		20 29 53.8	
CBKS	**Cedar Bluff**	**106.21**	**51**	PFAKE		20 22 30.0	
CBKS				LR	LR		
	comp=Z,23µm,20.0s						
KEV	**Kevo**	**106.28**	**343**	*e*Pdif	**Pdif**	**20 18 04.2**	**-1.2**
KEV				LR	LR		
	comp=Z,11µm,22.0s						
KEV	**Kevo**	**106.28**	**343**	*e*P	**Pdif**	**20 18 04.2**	**-1.2**
KEV				MLR	MLR		
	comp=Z,11µm,22.0s						
HAMF	**Hammerfest**	**106.70**	**344**	*e*Pdif	**Pdif**	**20 18 06.6**	**-0.6**
ARA0	**ARCESS Array S**	**106.84**	**343**	*e*Pdif	**Pdif**	**20 18 07.3**	**-0.6**
ARA0				*e*PKiKP	**PKiKP**	**20 22 18.0**	**+0.5**
ARA0				*e*PKKPbc	**PKKPbc**	**20 33 35.3**	**-3.5**
ARA0				*e*PKKPdf	**PKKPdf**	**20 33 50.7**	**-0.1**
ARCES	**ARCESS Array B**	**106.84**	**343**	Pdiff	**Pdif**	**20 18 07.3**	**-0.6**
	comp=Z,25nm,0.7s,baz=53,slow=6.2,SNR=55						
ARCES				PKiKP	**PKiKP**	**20 22 18.0**	**+0.5**
	comp=Z,27nm,0.8s,baz=52,slow=1.2,SNR=18						
ARCES				PKKPbc	**PKKPbc**	**20 33 35.3**	**-3.5**
	comp=Z,3.1nm,0.7s,baz=222,slow=1.6,SNR=7.6						
ARCES				PKKP	**PKKPdf**	**20 33 50.7**	**-0.1**
	comp=Z,2.8nm,0.8s,baz=266,slow=2.4,SNR=9.1						
ULM	**Lac du Bonnet**	**106.90**	**39**	Pdiff	**Pdif**	**20 18 07.7**	**-0.8**
	comp=Z,1.7nm,0.5s,baz=288,slow=3.2,SNR=2.5						
ULM				PKiKP	**PKiKP**	**20 22 18.3**	**+0.1**
	comp=Z,3.1nm,0.5s,baz=175,slow=0.6,SNR=3.7						
VRH	**Novokhopyorsk**	**106.97**	**322**	*e*P	**Pdif**	**20 18 07.4**	**-1.4**
VRH				*e*		20 28 44.6	
VRH				*e*PS	**PS**	**20 31 53.5**	**-3.4**
VRH				*e*SS	SS	20 37 42.7	+5.2
VRH				pmax	pmax		
	comp=Z,70nm,0.8s						
VRH				MLR	MLR		
	comp=Z,17µm,26.0s						
JCT	**Junction City**	**107.02**	**60**	P	**PKiKP**	**20 22 18.6**	**-0.5**
	baz=275						
JCT	**Junction City**	**107.02**	**60**	PFAKE		20 22 30.0	
JCT				LR	LR		
	comp=Z,15µm,20.0s						
GNI	**Garni**	**107.05**	**310**	Pdiff	**Pdif**	**20 18 08.9**	**-0.8**
	comp=Z,12nm,0.9s,baz=158,slow=4.2,SNR=5.1						
GNI	**Garni**	**107.05**	**310**	PFAKE		20 22 30.0	
GNI				LR	LR		
	comp=Z,4µm,22.0s						
ZEI	**Tsey**	**107.26**	**313**	*e*P	**Pdif**	**20 18 09.6**	**-1.0**
ZEI				pmax	pmax		
	comp=Z,53nm,1.0s						
AGMN	**Agassiz Nation**	**107.35**	**41**	P	**PKiKP**	**20 22 18.8**	**-0.3**
	baz=283						
AGMN	**Agassiz Nation**	**107.35**	**41**	PFAKE		20 22 30.0	
AGMN				LR	LR		
	comp=Z,9µm,20.0s						
GOF	**Gofitskoye**	**107.45**	**316**	*e*P	**Pdif**	**20 18 10.3**	**-0.8**
GOF				pmax	pmax		
	comp=Z,80nm,1.8s						
TASB	**TASBURUN-IGDIR**	**107.46**	**310**	*e*P	PKiKP	20 22 29.2	+10
WMOK	**Wichita Mounta**	**107.46**	**55**	P	**PKiKP**	**20 22 18.4**	**-1.4**
	baz=277						
WMOK	**Wichita Mounta**	**107.46**	**55**	PFAKE		20 22 30.0	
WMOK				LR	LR		
	comp=Z,11µm,22.0s						
A33A	**Warroad**	**107.51**	**40**	P	**PKiKP**	**20 22 19.3**	**-0.1**
	baz=283						
ECSD	**EROS Data Cent**	**107.77**	**46**	P	**PKiKP**	**20 22 19.8**	**-0.3**
	baz=281						
ECSD	**EROS Data Cent**	**107.77**	**46**	PFAKE		20 22 30.0	
ECSD				LR	LR		
	comp=Z,11µm,21.0s						
DAG	**Danmarks Havn**	**107.80**	**358**	*i* P	**Pdif**	**20 18 11.2**	**-0.8**
	comp=Z,16nm,1.0s						
DAG	**Danmarks Havn**	**107.80**	**358**	*i* P	**PKiKP**	**20 22 19.4**	**+0.2**
	comp=Z,11nm,0.9s						
DAG	**Danmarks Havn**	**107.80**	**358**	*i* P	**PKKPbc**	**20 33 33.5**	**-2.4**
	comp=Z,22nm,1.2s						
DAG	**Danmarks Havn**	**107.80**	**358**	*i* P	**Pdif**	**20 18 11.2**	**-0.8**
DAG				pmax	pmax		
	comp=Z,16nm,1.0s						
KTK1	**Kautokeino**	**107.80**	**343**	*e*Pdif	**Pdif**	**20 18 11.8**	**-0.4**
KBZ	**Khabaz**	**107.81**	**314**	Pdiff	**Pdif**	**20 18 12.2**	**-0.5**
	comp=Z,8.7nm,1.0s,baz=91,slow=4.3,SNR=24						
KBZ				PKiKP	**PKiKP**	**20 22 20.1**	**0.0**
	comp=Z,9.1nm,0.8s,baz=282,slow=1.1,SNR=1.8						
KBZ				PP	**PP**	**20 22 43.2**	**+1.3**
	comp=Z,7.6nm,0.8s,baz=75,slow=9.2,SNR=3.5						
CLDR	**Caldiran**	**107.83**	**310**	*i* P	**PKiKP**	**20 22 19.1**	**-1.5**
KVAR	**Kislovodsk Arr**	**107.91**	**315**	Pdiff	**Pdif**	**20 18 12.6**	**-0.8**
	comp=Z,15nm,1.0s,baz=344,slow=1.4,SNR=10.0						
KIV	**Kislovodsk**	**107.92**	**315**	*e*Pdif	**Pdif**	**20 18 13.2**	**-0.2**
KIV				LR	LR		
	comp=Z,6µm,21.0s						
KIV	**Kislovodsk**	**107.92**	**315**	*c i*P	**Pdif**	**20 18 13.1**	**-0.2**
KIV				*i*		20 28 50.1	
KIV				*i*		20 32 07.1	
KIV				*i* SS	SS	20 37 48.8	-2.3
KIV				pmax	pmax		
	comp=Z,27nm,0.8s						
MOS	**Moscow**	**108.03**	**328**	*i* P	**Pdif**	**20 18 13.4**	**0.0**
MOS				pmax	pmax		
	comp=Z,229nm,1.0s						
RAYN	**Ar Rayn**	**108.03**	**293**	PFAKE		20 22 30.0	
RAYN				LR	LR		
	comp=Z,4µm,22.0s						
B34A	**Aery, Baudette**	**108.09**	**40**	P	**PKiKP**	**20 22 20.2**	**-0.3**
	baz=284						
LPSR	**Galich’ya Gora**	**108.27**	**324**	*e*P	**Pdif**	**20 18 13.4**	**-1.2**
LPSR				*e*		20 28 52.4	
LPSR				pmax	pmax		
	comp=Z,110nm,0.9s						
CUKT	**Cukurca**	**108.35**	**308**	*i* P	**PKiKP**	**20 22 18.6**	**-2.9**
AGRB	**Hanur-Agry**	**108.47**	**310**	*e*P	**PKiKP**	**20 22 27.3**	**+5.6**
VORD	**Divnogorie**	**108.51**	**322**	*e*P	**Pdif**	**20 18 14.6**	**-1.1**
VORD				pmax	pmax		
	comp=Z,30nm,1.0s						
VSR	**Storozhevoye**	**108.52**	**323**	*e*P	**Pdif**	**20 18 14.3**	**-1.4**
VSR				*e*		20 28 51.4	
VSR				*e*PS	**PS**	**20 32 03.0**	**-10**
VSR				*e*SS	SS	20 37 55.1	-3.4
VSR				pmax	pmax		
	comp=Z,50nm,1.0s						
KSU1	**Kansas State U**	**108.59**	**50**	P	**PKiKP**	**20 22 21.3**	**-0.4**
	baz=279						
KSU1	**Kansas State U**	**108.59**	**50**	PFAKE		20 22 30.0	
KSU1				LR	LR		
	comp=Z,14µm,20.0s						
TRO	**Tromso**	**108.60**	**345**	*e*Pdif	**Pdif**	**20 18 15.5**	**-0.2**
TRO				*e*PP	**PP**	**20 22 45.8**	**-0.9**
E35A	**Pequot Lakes**	**108.71**	**42**	P	**PKiKP**	**20 22 21.0**	**-0.7**
	baz=283						
B35A	**Bob, Littlefor**	**108.72**	**40**	P	**PKiKP**	**20 22 21.3**	**-0.4**
	baz=285						
SENK	**Senkaya-Erzuru**	**108.79**	**311**	*i* P	**PKiKP**	**20 22 23.3**	**+1.0**
OBN	**Obninsk**	**108.81**	**327**	PFAKE		20 22 30.0	
OBN				LR	LR		
	comp=Z,7µm,21.0s						
OBN	**Obninsk**	**108.81**	**327**	*c i*P	**Pdif**	**20 18 16.0**	**-0.9**
OBN				*i*		20 22 47.5	
OBN				*e*PPP	PPP	20 25 04.7	
OBN				*i*		20 28 51.7	
OBN				*i*		20 32 06.5	
OBN				pmax	pmax		
	comp=Z,157nm,1.0s						
OBN				MLR	MLR		
	comp=Z,12µm,22.0s						
D35A	**Remer**	**108.82**	**42**	P	**PKiKP**	**20 22 21.8**	**-0.1**
	baz=284						
H35A	**Sunnyside Ranc**	**108.83**	**44**	P	**PKiKP**	**20 22 22.4**	**+0.4**
	baz=282						
WHTX	**Lake Whitney,**	**108.87**	**58**	P	**PKiKP**	**20 22 20.5**	**-1.9**
	baz=276						
KVTX	**Kingsville**	**108.92**	**63**	PFAKE		20 22 30.0	
KVTX				LR	LR		
	comp=Z,13µm,20.0s						
GURO	**Guroymak-BITLI**	**109.38**	**309**	*e*P	**PKiKP**	**20 22 26.4**	**+3.0**
J36A	**Seneca 1, Swea**	**109.47**	**46**	P	**PKiKP**	**20 22 24.9**	**+1.7**
	baz=282						
E36A	**McGregor**	**109.49**	**42**	P	**PKiKP**	**20 22 22.8**	**-0.3**
	baz=284						
H36A	**Jessenland, He**	**109.49**	**44**	P	**PKiKP**	**20 22 22.8**	**-0.5**
	baz=283						
L36A	**Harm Buss Farm**	**109.49**	**47**	P	**PKiKP**	**20 22 22.9**	**-0.4**
	baz=282						
N36A	**Muff Farm, Cla**	**109.53**	**48**	P	**PKiKP**	**20 22 22.8**	**-0.6**
	baz=281						
K36A	**Gilmore City**	**109.54**	**46**	P	**PKiKP**	**20 22 23.2**	**-0.2**
	baz=282						
I36A	**Fitzsimmons Fa**	**109.55**	**45**	P	**PKiKP**	**20 22 23.3**	**0.0**
	baz=283						
CHOM	**Cayeli-Rize**	**109.87**	**312**	*i* P	**PKiKP**	**20 22 25.6**	**+1.5**
D37A	**Cotton**	**109.88**	**41**	P	**PKiKP**	**20 22 23.8**	**0.0**
	baz=285						
C37A	**Embarrass**	**109.88**	**41**	P	**PKiKP**	**20 22 28.7**	**+4.8**
	baz=286						
I37A	**Lemond, Waseca**	**109.98**	**45**	P	**PKiKP**	**20 22 24.0**	**-0.2**
	baz=283						
J37A	**Redenius Farm,**	**110.04**	**46**	P	**PKiKP**	**20 22 23.9**	**-0.4**
	baz=283						
SVAN	**Silvan-Diyarba**	**110.09**	**309**	*e*P	**PKiKP**	**20 22 27.3**	**+2.7**
K37A	**Belmond**	**110.10**	**46**	P	**PKiKP**	**20 22 23.8**	**-0.6**
	baz=283						
SOC	**Sochi**	**110.10**	**315**	*c i*P	**Pdif**	**20 18 22.1**	**-0.8**
SOC				*i*		20 28 59.4	
SOC				*i* PS	**PS**	**20 32 25.4**	**-3.3**
SOC				*e*SS	SS	20 38 18.7	-1.5
SOC				pmax	pmax		
	comp=Z,14nm,0.8s						
SOC				MLR	MLR		
	comp=Z,6µm,20.0s						
L37A	**Phoenix Point,**	**110.15**	**47**	P	**PKiKP**	**20 22 25.1**	**+0.5**
	baz=282						
H37A	**Dierke Farm, C**	**110.19**	**44**	P	**PKiKP**	**20 22 21.6**	**-3.0**
	baz=284						
EYMN	**Ely**	**110.27**	**40**	P	**PKiKP**	**20 22 24.3**	**-0.3**
	baz=286						
EYMN	**Ely**	**110.27**	**40**	PFAKE		20 22 40.0	
EYMN				LR	LR		
	comp=Z,10µm,20.0s						
BNGB	**Bingˆ¶l**	**110.34**	**310**	*e*P	**PKiKP**	**20 22 27.3**	**+2.1**
F38A	**Pierce - Schro**	**110.56**	**42**	P	**PKiKP**	**20 22 24.9**	**-0.3**
	baz=285						
SCIA	**State Center**	**110.59**	**47**	PFAKE		20 22 40.0	
SCIA				LR	LR		

	comp=Z,12µm,22.0s						
E38A	The Farm, Brul	110.60	42	P	PKiKP	20 22 25.2	-0.1
	baz=286						
M38A	Pleasantville	110.71	47	P	PKiKP	20 22 25.9	+0.3
	baz=283						
L38A	Oak Wood Farm,	110.72	47	P	PKiKP	20 22 26.2	+0.6
	baz=283						
STEI	Steigen	110.75	344	*e*Pdif	Pdif	20 18 25.0	-0.2
STEI				*e*PP	PP	20 23 02.3	+0.1
G38A	Ridgeland	110.78	43	P	PKiKP	20 22 24.5	-1.1
	baz=285						
MAZI	Mazidag	110.80	308	*e*P	PKiKP	20 22 27.0	+0.9
P38A	Dawn	110.84	49	P	PKiKP	20 22 24.8	-1.2
	baz=282						
LOF	Lofoten	111.05	345	*e*Pdif	Pdif	20 18 25.8	-0.8
FIA0	FINESS Array S	111.07	336	*e*Pdif	Pdif	20 18 25.8	-1.0
FIA0				*e*PKiKP	PKiKP	20 22 26.2	+0.5
FIA0				*e*PP	PP	20 23 03.6	-1.1
FIA0				*e*PKKPbc	PKKPbc	20 33 22.1	-3.0
FIA0	FINESS Array S	111.07	336	*e*P	Pdif	20 18 25.8	-1.0
FIA0				*i*		20 22 26.2	
FIA0				*e*		20 23 03.6	
FINES	FINESS Array B	111.07	336	Pdiff	Pdif	20 18 25.8	-1.0
	comp=Z,26nm,0.6s,baz=70,slow=4.3,SNR=112						
FINES				PKiKP	PKiKP	20 22 26.2	+0.5
	comp=Z,36nm,0.8s,baz=106,slow=2.6,SNR=15						
FINES				PP	PP	20 23 03.6	-1.1
	comp=Z,39nm,0.9s,baz=52,slow=7.6,SNR=10						
FINES				PKKPbc	PKKPbc	20 33 22.1	-3.0
	comp=Z,1.1nm,0.3s,baz=215,slow=2.3,SNR=13						
F39A	Loretta	111.21	42	P	PKiKP	20 22 26.3	-0.1
	baz=286						
G39A	Holcombe	111.21	43	P	PKiKP	20 22 26.4	-0.1
	baz=286						
NATX	Nacogdoches	111.26	58	PFAKE		20 22 40.0	
NATX				LR	LR		
	comp=Z,8µm,19.0s						
H39A	Augusta	111.29	44	P	PKiKP	20 22 25.9	-0.8
	baz=285						
X39A	Fountain Ranch	111.31	55	P	PKiKP	20 22 25.5	-1.4
	baz=279						
E39A	Mellen	111.33	42	P	PKiKP	20 22 25.6	-1.1
	baz=286						
I39A	Houston	111.34	45	P	PKiKP	20 22 25.6	-1.2
	baz=285						
J39A	Decorah	111.34	45	P	PKiKP	20 22 26.5	-0.2
	baz=284						
N39A	Derby Farms, D	111.34	48	P	PKiKP	20 22 26.4	-0.4
	baz=283						
PTK	Pertek	111.35	310	*e*P	PKiKP	20 22 30.3	+3.1
K39A	Oelwein	111.37	46	P	PKiKP	20 22 25.9	-0.9
	baz=284						
Q39A	Willow Grove F	111.38	50	P	PKiKP	20 22 26.4	-0.5
	baz=282						
S39A	Bolivar	111.38	51	P	PKiKP	20 22 26.0	-1.0
	baz=281						
ANN	Anapa	111.39	316	*i* PKIKP	PKiKP	20 22 27.7	+0.9
ANN				*e*		20 23 06.7	
ANN				*e*		20 29 04.3	
ANN				*e*PS	PS	20 32 37.9	-2.6
ANN				MLR	MLR		
	comp=N,11µm,23.0s						
ANN				MLR	MLR		
	comp=Z,11µm,23.0s						
ANN				MLR	MLR		
	comp=E,681nm,23.0s						
L39A	Vinton	111.42	46	P	PKiKP	20 22 26.6	-0.4
	baz=284						
P39B	Salisbury	111.45	49	P	PKiKP	20 22 25.8	-1.2
	baz=282						
T39A	Clever	111.46	52	P	PKiKP	20 22 26.6	-0.6
	baz=281						
R39A	Chumby, Stover	111.47	51	P	PKiKP	20 22 26.2	-0.9
	baz=282						
U39A	Green Forest	111.50	53	P	PKiKP	20 22 25.8	-1.5
	baz=280						
SVRC	Sivrice-ELAZID	111.52	309	*e*P	PKiKP	20 22 25.9	-1.6
MIAR	Mount Ida	111.74	55	P	PKiKP	20 22 26.3	-1.5
	baz=280						
MIAR	Mount Ida	111.74	55	PFAKE		20 22 40.0	
MIAR				LR	LR		
	comp=Z,11µm,22.0s						
E40A	Wakefield	111.74	42	P	PKiKP	20 22 26.9	-0.5
	baz=287						
F40A	Park Falls	111.74	42	P	PKiKP	20 22 26.3	-1.2
	baz=287						
SUMG	Summit	111.78	4	*i* P	PKKPbc	20 33 21.3	-2.2
	comp=Z,67nm,1.1s						
C40A	Isle Royale Na	111.78	40	P	PKiKP	20 22 26.4	-1.0
	baz=288						
G40A	Rib Lake	111.88	43	P	PKiKP	20 22 26.7	-1.0
	baz=286						
H40A	Chili	111.92	44	P	PKiKP	20 22 27.6	-0.2
	baz=286						
I40A	Norwalk	111.96	44	P	PKiKP	20 22 29.0	+1.1
	baz=285						
P40A	Paris	111.98	49	P	PKiKP	20 22 27.6	-0.5
	baz=283						
O40A	La Belle	111.98	49	P	PKiKP	20 22 27.6	-0.4
	baz=283						
U40A	Yellville	112.00	53	P	PKiKP	20 22 27.4	-0.9
	baz=281						
L40A	Anamosa	112.00	46	P	PKiKP	20 22 27.8	-0.3
	baz=284						
J40A	Soldiers Grove	112.01	45	P	PKiKP	20 22 27.6	-0.4
	baz=285						
N40A	Mertquake, Sal	112.02	48	P	PKiKP	20 22 26.9	-1.2
	baz=284						
Q40A	Laux Farm, Aux	112.07	50	P	PKiKP	20 22 26.8	-1.5
	baz=282						
R40A	Maddies Statio	112.07	51	P	PKiKP	20 22 26.9	-1.4
	baz=282						
URFA	Urfa	112.08	309	*e*P	PKiKP	20 22 31.7	+3.2
Z40A	Long Farm, Mag	112.09	56	P	PKiKP	20 22 27.1	-1.4
	baz=279						
T40A	Mansfield	112.11	52	P	PKiKP	20 22 27.1	-1.3
	baz=281						
V40A	Witts Springs	112.12	53	P	PKiKP	20 22 27.1	-1.5
	baz=281						
MOR8	Moi Rana	112.21	343	*e*Pdif	Pdif	20 18 30.8	-1.0
VSU	Vasula	112.32	333*c*	*i*PKIKP	PKiKP	20 22 27.7	-0.4
VSU				pmax	pmax		
	comp=Z,228nm,1.7s						
COWI	Conover	112.35	42	PFAKE		20 22 40.0	
COWI				LR	LR		
	comp=Z,13µm,22.0s						
X40A	Basin Creek Fa	112.35	55	P	PKiKP	20 22 25.7	-3.2
	baz=280						
E41A	Kenton	112.35	41	P	PKiKP	20 22 27.6	-1.0
	baz=288						
F41A	Three Lakes	112.48	42	P	PKiKP	20 22 27.9	-0.9
	baz=287						
JFWS	Jewell Farm	112.48	45	P	PKiKP	20 22 28.6	-0.4
	baz=285						
JFWS	Jewell Farm	112.48	45	PFAKE		20 22 40.0	
JFWS				LR	LR		
	comp=Z,12µm,21.0s						
L41A	Preston	112.52	46	P	PKiKP	20 22 28.5	-0.6
	baz=285						
K41A	Shullsburg	112.52	46	P	PKiKP	20 22 28.5	-0.5
	baz=285						
J41A	Loganville	112.53	45	P	PKiKP	20 22 28.3	-0.7
	baz=286						
141A	Papa Simpson,	112.61	57	P	PKiKP	20 22 30.3	+0.8
	baz=279						
Y41A	Eaglette Beard	112.64	55	P	PKiKP	20 22 30.6	+1.1
	baz=280						
V41A	Mountainview	112.66	53	P	PKiKP	20 22 28.4	-1.1
	baz=281						
M41A	Milan	112.66	47	P	PKiKP	20 22 32.0	+2.7
	baz=284						
P41A	Barry, Barry	112.69	49	P	PKiKP	20 22 28.8	-0.6
	baz=283						
241A	Mo Tay, Goldon	112.69	57	P	PKiKP	20 22 31.0	+1.4
	baz=279						
W41B	Gary Mavity, V	112.70	54	P	PKiKP	20 22 28.9	-0.7
	baz=281						
O41A	Passleys Farm,	112.72	48	P	PKiKP	20 22 29.0	-0.5
	baz=284						
JMIC	Jan Mayen	112.72	354	*e*Pdif	Pdif	20 18 35.8	+1.8
T41A	Mountain View	112.72	52	P	PKiKP	20 22 28.4	-1.2
	baz=282						
Q41A	Truxton	112.72	50	P	PKiKP	20 22 28.9	-0.6
	baz=283						
U41A	Viola	112.74	53	P	PKiKP	20 22 29.4	-0.2
	baz=282						
R41A	Rosebud	112.75	50	P	PKiKP	20 22 29.0	-0.6
	baz=283						
DARE	Darende-Malaty	112.87	310	*e*P	PKiKP	20 22 32.2	+2.2
CCM	Cathedral Cave	112.91	51	P	PKiKP	20 22 29.3	-0.6
	baz=283						
SVSK	Karacayir	112.93	311	*e*P	PKiKP	20 22 31.6	+1.8
E42A	Champion	113.05	41	P	PKiKP	20 22 31.4	+1.4
	baz=289						
G42A	Mountain	113.08	42	P	PKiKP	20 22 29.8	-0.2
	baz=288						
L42A	Oliver, Polo	113.14	46	P	PKiKP	20 22 29.6	-0.6
	baz=285						
I42A	Draeger Farm,	113.15	44	P	PKiKP	20 22 29.0	-1.1
	baz=287						
K42A	Prairie Point,	113.16	45	P	PKiKP	20 22 29.8	-0.4
	baz=286						
J42A	Columbus	113.16	45	P	PKiKP	20 22 29.8	-0.4
	baz=286						
TOKT	Tokat	113.17	312	*e*P	PKiKP	20 22 33.6	+3.2
N42A	Yates City	113.17	47	P	PKiKP	20 22 29.6	-0.7
	baz=285						
R42A	Luebbering	113.21	50	P	PKiKP	20 22 29.7	-0.7
	baz=283						
M42A	Sheffield	113.21	47	P	PKiKP	20 22 29.8	-0.6
	baz=285						
P42A	Winchester	113.25	49	P	PKiKP	20 22 29.9	-0.6
	baz=284,SNR=7.9						
Q42A	Golden Eagle	113.26	50	P	PKiKP	20 22 30.2	-0.4
	baz=284						
V42A	Cord	113.27	53	P	PKiKP	20 22 29.4	-1.2
	baz=282						
U42A	Revenden	113.28	52	P	PKiKP	20 22 30.1	-0.5
	baz=282						
Z42A	Norrel Spur, H	113.29	56	P	PKiKP	20 22 34.3	+3.6
	baz=280						
O42A	Bath	113.30	48	P	PKiKP	20 22 33.0	+2.4
	baz=284						
X42A	Stuttgart	113.32	54	P	PKiKP	20 22 30.4	-0.3
	baz=281						
Y42A	Garnett, Star	113.32	55	P	PKiKP	20 22 34.4	+3.6
	baz=280						
S42A	Caledonia	113.32	51	P	PKiKP	20 22 30.4	-0.3
	baz=283						
KVT	Kavak	113.34	313	*e*P	PKiKP	20 22 34.4	+3.7
GAZ	Gaziantep	113.39	309	*e*P	PKiKP	20 22 28.9	-2.1
KMRS	Kahramanmaras	113.56	309	*e*P	PKiKP	20 22 33.4	+2.2
G43A	Wallace	113.57	42	P	PKiKP	20 22 30.4	-0.5
	baz=288						
SIM	Simferopol’	113.61	317	P	Pdif	20 18 37.6	-0.9
SIM				*i*		20 22 32.4	
SIM				*e*		20 23 24.7	
SIM				PPP	PPP	20 25 47.0	
SIM						20 29 13.1	
SIM				SP	SP	20 32 55.3	+2.1
J43A	Natural Harves	113.64	44	P	PKiKP	20 22 30.6	-0.5
	baz=287						
MICGM	Minsk	113.66	329⇑	*e*P	Pdif	20 18 38.0	-0.5
MICGM				PM		20 18 39.0	
	comp=Z,0.1nm,1.0s						
MICGM				*e*PKP1	PKiKP	20 22 30.0	-0.8
MICGM				*e*pPKP1		20 22 56.0	
MICGM				*e*sPKP1		20 23 11.0	
MICGM				*e*PP	PP	20 23 22.0	-1.4
MICGM				*e*PPP	PPP	20 25 22.0	
MICGM				*e*PKS	PKSdf	20 26 20.0	+13
MICGM				*e*SKS	SKSac	20 29 12.0	+0.6
MICGM				*e*SKKS	SKKSac	20 30 14.0	-6.4
MICGM				*e*SP	SP	20 32 56.0	+3.0
MICGM				*e*PS	PS	20 33 02.0	+1.1
MICGM				*e*SPP	SPP	20 33 30.0	
MICGM				*e*PPS	PPS	20 34 30.0	
MICGM				*e*SS	SS	20 39 46.0	+39
MICGM				*e*SSS	SSS	20 45 26.0	
MICGM				*e*LR	LR	20 59 40.0	
MICGM				LRM	MLR	21 13 40.0	
	comp=N,2.7nm,18.0s						
MICGM				LRM	MLR	21 13 44.0	
	comp=E,5.0nm,18.0s						
MICGM				LRM	MLR	21 13 48.0	
	comp=Z,23nm,18.0s						
MNK	Minsk	113.66	329⇑	*e*P	Pdif	20 18 38.0	-0.5
MNK				*e*		20 22 30.0	
MNK				*e*		20 23 22.0	
MNK				*e*		20 29 12.0	
MNK				*e*		20 32 56.0	
MNK				*e*		20 33 02.0	
MNK				pmax	pmax		
	comp=Z,140nm,1.0s						
E43A	Lone Tree Farm	113.67	41	P	PKiKP	20 22 30.6	-0.5
	baz=289						
I43A	Langenfeld Bro	113.68	44	P	PKiKP	20 22 30.2	-1.0
	baz=287						
SNOP	Sinop	113.70	314	*e*P	PKiKP	20 22 30.8	-0.5
SARI	SarD1z-Kayseri	113.72	310	*e*P	PKiKP	20 22 34.0	+2.3
F43A	Flat Rock, Esc	113.74	42	P	PKiKP	20 22 30.3	-0.9
	baz=289						
L43A	Garden Prairie	113.75	46	P	PKiKP	20 22 33.0	+1.6
	baz=286						
H43A	Windswept, Lux	113.76	43	P	PKiKP	20 22 30.3	-1.0
	baz=288						
DIKM	Dikmen	113.77	314	*e*P	PKiKP	20 22 32.5	+1.1
N43A	Stutzman Famil	113.77	47	P	PKiKP	20 22 31.0	-0.5
	baz=285						
M43A	Waltham Townsh	113.80	47	P	PKiKP	20 22 31.0	-0.5
	baz=286						
O43A	Sugar Creek Fa	113.84	48	P	PKiKP	20 22 31.3	-0.3
	baz=285						
P43A	Skaggs, Pawnee	113.85	49	P	PKiKP	20 22 31.2	-0.5
	baz=284						
IDID	Didziasalis	113.86	330	*e*P	Pdif	20 18 38.6	-0.8
IDID				IAmb	IAmb	20 18 43.1	
	comp=Z,15nm,0.9s						
IDID	Didziasalis	113.86	330	*e*P	SKSac	20 29 13.6	+1.4
T43A	Greenville	113.87	51	P	PKiKP	20 22 30.7	-1.1
	baz=283						
R43A	Red Bud	113.87	50	P	PKiKP	20 22 30.6	-1.1
	baz=284						
Q43A	New Douglas	113.89	49	P	PKiKP	20 22 33.5	+1.8
	baz=284						
IZAR	Zarasai	113.89	330	*e*P	Pdif	20 18 37.8	-1.7
IZAR				IAmb	IAmb	20 18 43.5	
	comp=Z,14nm,0.8s						
IZAR	Zarasai	113.89	330	*e*P	SKSac	20 29 14.3	+2.0
S43A	Fulton Ridge,	113.92	51	P	PKiKP	20 22 31.1	-0.8
	baz=283						
X43A	Marvell	113.93	54	P	PKiKP	20 22 32.3	+0.3
	baz=281						
NACGM	Naroch	114.03	329	*e*P	Pdif	20 18 39.0	-1.2
NACGM				*e*P	Pdif	20 18 39.0	-1.2
NACGM				*e*PKP	PKPdf	20 22 31.0	-0.5
NACGM				*e*PP	PP	20 23 17.0	-9.1
NACGM				*e*PPP	PPP	20 25 46.0	
NACGM				*e*SKS	SKSac	20 29 14.0	+1.1
NACGM				*e*SKKS	SKKSac	20 30 18.0	-4.9
NACGM				*e*S	Sdif	20 30 48.0	-17
NACGM				*e*SS	SS	20 39 22.0	+11
NACGM				*e*SSS	SSS	20 42 48.0	
NACGM				*e*LQ	LQ	20 57 06.0	
NACGM				*e*LR	LR	21 02 54.0	
NACGM				LRM	MLR	21 10 36.0	
	comp=Z,6.7nm,22.0s						
ISAL	Salakas	114.04	330	*e*P	Pdif	20 18 39.2	-0.9
ISAL				IAmb	IAmb	20 18 41.1	
	comp=Z,11nm,1.1s						
ISAL	Salakas	114.04	330	*e*P	SKSac	20 29 16.2	+3.3
BNN	Bunyan	114.05	311	*e*P	PKPdf	20 22 31.7	-0.5
IIGN	Ignalina	114.10	330	*e*P	Pdif	20 18 39.7	-0.8
IIGN				IAmb	IAmb	20 18 43.0	
	comp=Z,8.5nm,0.9s						
IIGN	Ignalina	114.10	330	*e*P	SKSac	20 29 15.0	+1.9
NSS	Namsos	114.11	343	*e*Pdif	Pdif	20 18 41.9	+1.6
NSS				*e*PKPdf	PKiKP	20 22 31.9	+0.6
F44A	Big Bay de Noc	114.18	41	P	PKPdf	20 22 31.8	-0.2
	baz=290						
T44A	Benton	114.41	51	P	PKPdf	20 22 35.6	+2.9
	baz=283						
Q44A	Meyer Farm, Va	114.41	49	P	PKPdf	20 22 36.2	+3.5
	baz=285						
M44A	Midewin, Midew	114.47	46	P	PKPdf	20 22 36.3	+3.5
	baz=286						
O44A	Mansfield	114.50	48	P	PKPdf	20 22 32.5	-0.3
	baz=286						
X44A	Crenshaw	114.53	54	P	PKPdf	20 22 33.7	+0.6
	baz=282						
Z44A	Pea Ridge, Bel	114.54	56	P	PKPdf	20 22 33.7	+0.6
	baz=281						
244A	Avery, Jackson	114.56	57	P	PKPdf	20 22 36.2	+3.0
	baz=280						
P44A	Sand Creek, Wi	114.57	49	P	PKPdf	20 22 32.6	-0.5
	baz=285						
N44A	Piper City	114.57	47	P	PKPdf	20 22 32.7	-0.3
	baz=286						
AKASG	Malin Array Be	114.59	325	Pdiff	Pdif	20 18 41.9	-0.9
	comp=Z,23nm,0.7s,baz=50,slow=4.9,SNR=55						
AKASG				PKP	PKPdf	20 22 32.8	+0.1
	comp=Z,109nm,0.7s,baz=62,slow=2.4,SNR=64						
AKASG				PP	PP	20 23 32.2	+2.0
	comp=Z,6.7nm,0.7s,baz=48,slow=7.9,SNR=6.4						
AKASG				SKP		20 26 05.9	
	comp=Z,6.5nm,0.8s,baz=71,slow=2.0,SNR=6.9						
AKASG				PKKPbc	PKKPbc	20 33 10.8	-2.1
	comp=Z,1.2nm,0.5s,baz=262,slow=3.4,SNR=5.1						
AKBB	Malin Array Si	114.59	325	*e*Pdif	Pdif	20 18 42.3	-0.4
AKBB				*e*PKiKP	PKPdf	20 22 32.9	+0.2
AKBB				*e*SKPdf	SKiKP	20 26 05.0	+1.6
AKBB	Malin Array Si	114.59	325	*e*P	Pdif	20 18 42.3	-0.4
AKBB				*i*		20 22 32.9	
AKBB				*e*		20 26 05.0	
KIEV	Kiev	114.60	325	PFAKE		20 22 40.0	+7.3
KIEV				LR	LR		
	comp=Z,14µm,22.0s						
KIEV	Kiev	114.60	325	*i* P	PKPdf	20 22 32.6	-0.1
	SNR=44						
KIEV	Kiev	114.60	325	*i* PKIKP	PKPdf	20 22 33.2	+0.5
344A	Westbrook Farm	114.62	58	P	PKPdf	20 22 32.9	-0.5
	baz=280						
CORM	Corum	114.62	312	*e*P	PKPdf	20 22 34.0	+0.7
ASF	Jabal al Asfar	114.64	303	Pdiff	Pdif	20 18 45.0	+1.5
	comp=Z,2.0nm,0.9s,baz=334,slow=7.9,SNR=3.1						
ASF				PKP	PKiKP	20 22 33.7	+0.2
	comp=Z,14nm,0.7s,baz=36,slow=1.0,SNR=14						
ASF				PP	PP	20 23 33.5	+2.1
	comp=Z,5.5nm,0.9s,baz=88,slow=1.8,SNR=5.7						
YURE	YUREGIR	114.70	308	*e*P	PKPdf	20 22 33.6	+0.2
E45A	Wooded Hills,	114.86	41	P	PKPdf	20 22 34.5	+1.2
	baz=291						
F45A	CMU Biological	114.88	41	P	PKPdf	20 22 33.2	-0.2
	baz=290						
O45A	Potomac	115.02	48	P	PKPdf	20 22 33.5	-0.4
	baz=286						
KARA	Karaisali	115.05	309	*e*P	PKPdf	20 22 35.8	+1.8
Q45A	Warren Harvey,	115.06	49	P	PKPdf	20 22 33.4	-0.6
	baz=285						
R45A	Skylar, Fairfi	115.12	50	P	PKPdf	20 22 33.8	-0.3
	baz=285						
Y45A	Yeager Farm, C	115.15	55	P	PKPdf	20 22 33.6	-0.7
	baz=282						
W45A	Hickory Valley	115.16	53	P	PKPdf	20 22 35.2	+0.9
	baz=283						
P45A	Graceland, Par	115.21	48	P	PKPdf	20 22 34.7	+0.4
	baz=286						
CANT	Cankiri	115.25	313	*e*P	PKPdf	20 22 34.5	+0.1
SFIN	Lafayette	115.45	47	P	PKPdf	20 22 33.5	-1.2
	baz=287						
BR101	Keskin Array S	115.48	312	*e*Pdif	Pdif	20 18 46.8	-0.4
BR101				*e*PKPdf	PKPdf	20 22 35.4	+0.4
BR101				*e*PP	PP	20 23 39.6	+2.5
BR101				*e*SKPdf	SKiKP	20 26 07.8	+2.0
BR131	Keskin Array S	115.48	312	*e*PKPdf	PKPdf	20 22 34.7	-0.3
BRTR	Keskin Array B	115.48	312	Pdiff	Pdif	20 18 46.8	-0.4
	comp=Z,2.9nm,0.7s,baz=106,slow=4.1,SNR=16						
BRTR				PKP	PKPdf	20 22 35.4	+0.4
	comp=Z,20nm,0.7s,baz=130,slow=2.6,SNR=30						
BRTR				PP	PP	20 23 39.6	+2.5
	comp=Z,16nm,1.1s,baz=100,slow=6.4,SNR=4.1						
BRTR				SKP		20 26 07.8	
	comp=Z,12nm,1.1s,baz=184,slow=2.0,SNR=4.6						
KAMT	Kaman	115.52	312	*e*P	PKPdf	20 22 33.9	-1.1
MERS	Mersin	115.55	309	*e*P	PKPdf	20 22 34.9	-0.2
N46A	Monticello	115.56	47	P	PKPdf	20 22 34.6	-0.3
	baz=287						
TBLU	Trondheim	115.57	342	*e*Pdif	Pdif	20 18 45.8	-1.0
P46A	Rosedale	115.58	48	P	PKPdf	20 22 34.8	-0.2
	baz=286						
SFJD	Kangerlussuaq	115.63	10	PFAKE		20 22 50.0	+16
SFJD				LR	LR		
	comp=Z,8µm,22.0s						
U46A	Springville	115.68	52	P	PKPdf	20 22 32.9	-2.4
	baz=284						
M46A	Old House Fiel	115.69	46	P	PKPdf	20 22 34.7	-0.4
	baz=288						
MMAI	Mount Meron Ar	115.71	304	Pdiff	Pdif	20 18 48.0	-0.3
	comp=Z,2.4nm,0.8s,baz=227,slow=7.7,SNR=3.4						
MMAI				PKP	PKiKP	20 22 36.4	+0.8
	comp=Z,6.9nm,0.5s,baz=69,slow=4.6,SNR=20						
MMAI				PP	PP	20 23 40.6	+1.6
	comp=Z,6.9nm,0.9s,baz=64,slow=6.6,SNR=2.9						
MMAI				SKP		20 26 08.1	
	comp=Z,12nm,1.0s,baz=98,slow=2.5,SNR=4.7						
S46A	Don Dixon Farm	115.71	50	P	PKPdf	20 22 36.8	+1.5
	baz=285						
KMBO	Kilima Mbogo	115.72	267	PKP	PKPdf	20 22 53.1	+17
	comp=Z,5.6nm,0.9s,baz=76,slow=1.8,SNR=14						
KMBO	Kilima Mbogo	115.72	267	PFAKE		20 22 50.0	+14
KMBO				LR	LR		
	comp=Z,3µm,22.0s						
T46A	Princeton	115.74	51	P	PKPdf	20 22 34.9	-0.4
	baz=284						
GLMI	Grayling	115.77	42	PFAKE		20 22 50.0	+15
GLMI				LR	LR		
	comp=Z,13µm,22.0s						
X46A	Booneville	115.78	54	P	PKPdf	20 22 34.8	-0.7
	baz=283						
Z46A	Louisville	115.78	55	P	PKPdf	20 22 35.0	-0.5
	baz=282						
146A	Union	115.80	56	P	PKPdf	20 22 34.7	-0.9
	baz=282						
W46A	Michie	115.81	53	P	PKPdf	20 22 35.0	-0.5
	baz=283						
V46A	Holladay	115.86	52	P	PKPdf	20 22 35.4	-0.3
	baz=284						
KIZK	Mersin	115.94	308	*e*P	PKPdf	20 22 37.2	+1.4
AFSR	Af¯ar-Bala (A	115.98	312	*e*P	PKPdf	20 22 37.2	+1.3
WVT	Waverly	116.01	52	P	PKPdf	20 22 34.6	-1.3
	baz=284						
WVT	Waverly	116.01	52	*e*PKPdf	PKPdf	20 22 32.6	-3.3
ANTO	Ankara	116.06	312	⇓*i*P	PKPdf	20 22 38.8	+2.8
ANTO	Ankara	116.06	312	*e*PKPdf	PKPdf	20 22 35.0	-1.0
ANTO				LR	LR		
	comp=Z,3µm,22.0s						
ANTO	Ankara	116.06	312	P	PKPdf	20 22 37.0	+1.0
	SNR=21						
ANTO	Ankara	116.06	312	⇓PKIKP	PKPdf	20 22 38.8	+2.8
LOD	Lodumlu	116.08	312	*e*P	PKPdf	20 22 35.4	-0.6
BR231	Keskin MP Arra	116.08	312	*e*PKPdf	PKPdf	20 22 36.6	+0.5
EREN	Erenkoy	116.15	307	*e*P	PKPdf	20 22 39.1	+2.9
O47A	Sheridan	116.16	47	P	PKPdf	20 22 34.9	-1.2
	baz=287						
SORM	Soroca	116.17	322	⇓*i*P	PKPdf	20 22 37.8	+2.0
SORM	Soroca	116.17	322	⇓*i*P	SKPdf	20 26 06.8	+0.3
SORM	Soroca	116.17	322	⇑*i*P	PKKPbc	20 33 03.1	-4.2
SORM	Soroca	116.17	322	⇓PKIKP	PKPdf	20 22 37.8	+2.0
KEBE	Keben-Mersin	116.29	308	*e*P	PKPdf	20 22 35.8	-0.7
SUW	Suwalki	116.30	330	*e*PKPdf	PKPdf	20 22 36.1	+0.2
SUW				*e*PKPab	PKPdf	20 22 38.3	+2.4
SUW				*e*PP	PP	20 23 43.0	+1.0
SUW				*e*SKSac	SKSac	20 29 24.2	+2.7
SUW				*e*SP	SP	20 33 19.7	+2.7
SUW				LMZ	LR	21 04 48.5	
	comp=Z,15µm,33.5s						
SUW	Suwalki	116.30	330	*e*PKPdf	PKPdf	20 22 35.0	-0.9
SUW	Suwalki	116.30	330	*e*PKIKP	PKPdf	20 22 38.3	+2.4
SUW				*e*		20 23 43.0	
SUW				*e*		20 29 24.2	
SUW				*e*SP	SP	20 33 19.7	+2.6
P47A	Martinsville	116.31	48	P	PKPdf	20 22 35.2	-1.2
	baz=287						
L47A	Sherwood	116.33	45	P	PKPdf	20 22 35.0	-1.3
	baz=289						
V47A	Nunnelly	116.33	52	P	PKPdf	20 22 35.2	-1.3
	baz=284						
KIS	Kishinev	116.34	321	*e*PKP	PKPdf	20 22 38.0	+1.8
KIS	Kishinev	116.34	321	*i* PP	PP	20 23 43.0	+0.4
	comp=Z,2µm,8.0s						
KIS	Kishinev	116.34	321	*e*PKS	SKPdf	20 26 08.0	+1.1
KIS				*i* SKS	SKSac	20 29 24.0	+2.0
KIS				*e*SKKS	SKKSac	20 30 36.0	-2.8
KIS	Kishinev	116.34	321	*e*PS	PS	20 33 28.0	+2.3
KIS				*e*LR	LR	20 58 20.0	
	comp=Z,8µm,23.0s						
KIS	Kishinev	116.34	321	⇓*i*P	PKPdf	20 22 37.8	+1.6

KIS	Kishinev	116.34	321	ePKIKP	PKPdf	20 22 38.0	+1.8
KIS				i		20 23 43.0	
KIS				e		20 26 08.0	
KIS				i		20 29 24.0	
KIS				ePS	PS	20 33 28.0	+2.3
KIS				pmax	pmax		
	comp=Z,2µm,8.0s						
KIS				MLR	MLR		
	comp=Z,13µm,22.0s						
Q47A	Bedord North L	116.35	49	P	PKPdf	20 22 36.0	-0.5
	baz=286						
U47A	Clarksville	116.36	52	P	PKPdf	20 22 35.5	-1.1
	baz=285						
IKL	Isikli	116.36	308	eP	PKPdf	20 22 36.8	+0.2
T47A	Sharon Grove	116.36	51	P	PKPdf	20 22 35.7	-0.8
	baz=285						
T47A	Sharon Grove	116.36	51	ePKPdf	PKPdf	20 22 35.5	-1.1
X47A	Russelville	116.37	54	P	PKPdf	20 22 35.4	-1.2
	baz=283						
PAYG	Puerto Ayora	116.39	93	PFAKE		20 22 50.0	+13
PAYG				LR	LR		
	comp=Z,4µm,19.0s						
W47A	Westpoint	116.41	53	P	PKPdf	20 22 35.2	-1.5
	baz=284						
147A	Livingston	116.44	56	P	PKPdf	20 22 35.4	-1.4
	baz=282						
R47A	Wooly Knot Far	116.45	49	P	PKPdf	20 22 35.4	-1.3
	baz=286,SNR=13						
AKKU	Akkuyu-Mersin	116.49	308	eP	PKPdf	20 22 35.9	-0.9
Y47A	UCPARC, Winfie	116.52	54	P	PKPdf	20 22 35.4	-1.6
	baz=283						
WCI	Wyandotte Cave	116.65	49	P	PKPdf	20 22 35.8	-1.3
	baz=286						
WCI	Wyandotte Cave	116.65	49	ePKPdf	PKPdf	20 22 36.0	-1.1
HFS	Hagfors	116.68	339	Pdiff	Pdif	20 18 51.6	-0.2
	comp=Z,6.3nm,0.7s,baz=90,slow=3.0,SNR=22						
HFS				PKP	PKPdf	20 22 35.8	-0.7
	comp=Z,14nm,0.6s,baz=67,slow=2.6,SNR=36						
HFS				PP	PP	20 23 42.6	-1.7
	comp=Z,21nm,1.0s,baz=56,slow=11,SNR=3.7						
HFS				PKKPbc	PKKPbc	20 33 02.6	-3.3
	comp=Z,1.9nm,0.8s,baz=188,slow=9.6,SNR=4.4						
BERE	Bereket-Mersin	116.69	308	eP	PKPdf	20 22 35.8	-1.6
NC303	NORSAR Array S	116.71	340	ePdif	Pdif	20 18 53.2	+1.2
NC303				ePKPdf	PKPdf	20 22 36.4	-0.1
NC303	NORSAR Array S	116.71	340	ePKPdf	PKPdf	20 22 36.8	+0.2
EIL	Elat	116.73	301	PKP	PKPdf	20 22 44.7	+7.2
	comp=Z,23nm,0.7s,baz=337,slow=3.9,SNR=20						
M48A	Edgerton	116.83	45	P	PKPdf	20 22 36.1	-1.3
	baz=289						
TEKE	Tekeli-Mersin	116.83	308	eP	PKPdf	20 22 38.2	+0.7
DOMB	Dombas	116.85	342	ePdif	Pdif	20 18 52.1	-0.5
DOMB				ePKPdf	PKiKP	20 22 37.1	+0.3
DOMB				ePP	PP	20 23 45.3	-0.2
LADK	Ladik-KONYA	116.86	311	eP	PKPdf	20 22 38.2	+0.6
NB201	NORSAR Array S	116.87	340	ePKPdf	PKPdf	20 22 36.7	-0.2
Z48A	Northport	116.87	55	P	PKPdf	20 22 36.3	-1.3
	baz=283						
Q48A	North Vernon	116.87	48	P	PKPdf	20 22 36.4	-1.1
	baz=287,SNR=6.4						
NC204	NORSAR Array S	116.88	341	ePdif	Pdif	20 18 51.9	-0.9
NC204				ePKPdf	PKPdf	20 22 36.7	-0.2
T48A	Bowling Green	116.88	51	P	PKPdf	20 22 36.2	-1.3
	baz=286						
L48A	N Adams	116.88	45	P	PKPdf	20 22 36.1	-1.3
	baz=289						
MOL	Molde	116.90	343	ePKPdf	PKPdf	20 22 38.7	+1.9
NB2	NORSAR Subarra	116.90	340	PKPdf	PKPdf	20 22 36.1	-0.8
	comp=Z,22nm,1.2s,baz=44,slow=1.9						
NB2	NORSAR Subarra	116.90	340	PKPdf	PKPdf	20 22 36.1	-0.8
	baz=44,slow=1.9						
NOA	NORSAR Array B	116.90	340	Pdiff	Pdif	20 18 50.9	-2.0
	comp=Z,1.0nm,0.7s,baz=51,slow=4.2,SNR=27						
NOA				PKP	PKPdf	20 22 36.1	-0.8
	comp=Z,14nm,0.6s,baz=46,slow=1.9,SNR=9.6						
NOA				PP	PP	20 23 44.0	-1.9
	comp=Z,8.4nm,0.8s,baz=40,slow=6.2,SNR=5.6						
NOA				SKP		20 26 09.4	
	comp=Z,2.9nm,0.8s,baz=48,slow=1.9,SNR=3.7						
V48A	Smith Brothers	116.90	52	P	PKPdf	20 22 36.2	-1.4
	baz=285						
V48A	Smith Brothers	116.90	52	ePKPdf	PKPdf	20 22 37.2	-0.5
V48A				ePP	PP	20 23 46.0	-1.1
O48A	Farmland	116.90	47	P	PKPdf	20 22 36.3	-1.2
	baz=288						
LEOM	Leova	116.91	321	⇓iP	PKPdf	20 22 39.5	+2.2
LEOM	Leova	116.91	321	⇓PKIKP	PKPdf	20 22 39.5	+2.2
R48A	Northridge Ran	116.92	49	P	PKPdf	20 22 36.3	-1.3
	baz=287						
U48A	Cassie Pea, Po	116.92	51	P	PKPdf	20 22 36.3	-1.3
	baz=285						
P48A	Milroy	116.94	48	P	PKPdf	20 22 36.2	-1.4
	baz=287						
CSS	Mathiatis	116.95	307	P	PKPdf	20 22 38.2	+0.4
W48A	Pulaski	116.96	53	P	PKPdf	20 22 36.2	-1.5
	baz=284						
S48A	Wiedeman Farm,	116.99	50	P	PKPdf	20 22 36.3	-1.5
	baz=286,SNR=7.4						
MAMC	Mammari	116.99	307	P	PKPdf	20 22 39.1	+1.3
NC602	NORSAR Array S	117.01	340	ePKPdf	PKPdf	20 22 36.5	-0.5
KIZT	Kizilcal	117.03	312	eP	PKPdf	20 22 39.1	+1.1
X48A	Hartselle	117.04	54	P	PKPdf	20 22 36.4	-1.5
	baz=284						
X48A	Hartselle	117.04	54	ePKPdf	PKPdf	20 22 36.7	-1.3
X48A				ePP	PP	20 23 47.7	-0.3
IAS	Iasi	117.05	321	⇓iP	PKPdf	20 22 39.4	+1.9
IAS	Iasi	117.05	321	⇓PKIKP	PKPdf	20 22 39.4	+1.9
MDUB	Mudurnu	117.05	313	eP	PKPdf	20 22 35.9	-2.0
TLCR		117.05	319	⇓iP	PKPdf	20 22 40.2	+2.6
TLCR		117.05	319	⇓PKIKP	PKPdf	20 22 40.2	+2.6
NBO00	NORSAR Array S	117.05	341	ePKPdf	PKPdf	20 22 37.0	-0.2
NAO01	NORSAR Array S	117.15	340	ePdif	Pdif	20 18 54.9	+0.9
NAO01				ePKPdf	PKiKP	20 22 37.5	+0.2
NAO01				ePP	PP	20 23 42.5	-5.2
LEF	Lefka	117.27	307	eP	PKPdf	20 22 37.8	-0.5
AAM	Ann Arbor	117.30	44	PFAKE		20 22 50.0	+12
AAM				LR	LR		
	comp=Z,15µm,21.0s						
GIUM	Giurgiulesti	117.33	320	⇓iP	PKPdf	20 22 41.4	+3.3
M49A	Liberty Center	117.36	45	P	PKPdf	20 22 37.0	-1.4
	baz=290						
SZAC	Souni	117.36	307	P	PKPdf	20 22 39.9	+1.3
AKN	Aaknes	117.36	343	ePdif	Pdif	20 18 54.2	-0.6
AKN				ePKPdf	PKiKP	20 22 39.2	+1.4
LRAL	Lakeview Retre	117.41	55	P	PKPdf	20 22 37.2	-1.5
	baz=283						
LRAL	Lakeview Retre	117.41	55	ePKPdf	PKPdf	20 22 38.7	+0.1
GAZI	Gazipasa	117.43	309	eP	PKPdf	20 22 37.2	-1.5
P49A	Miami Univ. Ec	117.44	48	P	PKPdf	20 22 37.4	-1.1
	baz=288						
Q49A	Aurora	117.47	48	P	PKPdf	20 22 38.7	+0.1
	baz=288						
R49A	Shelbyville	117.48	49	P	PKPdf	20 22 37.5	-1.2
	baz=287						
ALFC	Alefka	117.49	307	P	PKPdf	20 22 39.0	+0.2
CFR	Carcaliu	117.49	319	⇓iP	Pdif	20 18 57.7	+1.9
CFR	Carcaliu	117.49	319	⇓iP	PKPdf	20 22 41.0	+2.5
CFR	Carcaliu	117.49	319	⇓iP	SKPdf	20 26 07.7	-1.4
CFR	Carcaliu	117.49	319	⇓P	Pdif	20 18 57.7	+1.9
W49A	Belvidere	117.50	53	P	PKPdf	20 22 37.5	-1.3
	baz=285						
U49A	Red Boiling Sp	117.51	51	P	PKPdf	20 22 37.6	-1.2
	baz=286						
O49A	Covington	117.52	47	P	PKPdf	20 22 37.5	-1.2
	baz=289						
249A	Camden	117.54	56	P	PKPdf	20 22 37.5	-1.5
	baz=283						
S49A	Springfield	117.54	50	P	PKPdf	20 22 37.6	-1.2
	baz=287,SNR=5.6						
T49A	Edmonton	117.54	50	P	PKPdf	20 22 37.5	-1.3
	baz=286,SNR=5.3						
T49A	Edmonton	117.54	50	ePKPdf	PKPdf	20 22 38.4	-0.5
GULT	Gulveren	117.55	314	eP	PKPdf	20 22 38.6	-0.3
EFOR	EFORIE	117.59	318	⇑iP	PKPdf	20 22 41.5	+2.8
TIRR	Tirgusor	117.59	318	⇑iP	Pdif	20 18 54.4	-1.8
TIRR	Tirgusor	117.59	318	⇑iP	PKPdf	20 22 40.8	+2.1
TIRR	Tirgusor	117.59	318	⇓iP	SKPdf	20 26 09.2	-0.1
TIRR	Tirgusor	117.59	318	ePKPdf	PKPdf	20 22 38.5	-0.1
TIRR				ePP	PP	20 23 45.5	-5.9
TIRR	Tirgusor	117.59	318	⇑PKIKP	PKPdf	20 22 40.8	+2.1
X49A	Woodville	117.60	53	P	PKPdf	20 22 37.6	-1.4
	baz=284						
349A	Repton	117.61	57	P	PKPdf	20 22 37.8	-1.3
	baz=282						
V49A	McMinnville	117.62	52	P	PKPdf	20 22 37.6	-1.4
	baz=285						
149A	Jones	117.67	56	P	PKPdf	20 22 38.4	-0.8
	baz=283						
Y49A	Blount Mountai	117.69	54	P	PKPdf	20 22 38.7	-0.6
	baz=284						
AKMC	Akamas	117.73	307	P	PKPdf	20 22 39.2	-0.1
SWET	Sewanee	117.74	53	ePKPdf	PKPdf	20 22 39.0	-0.3
SWET				ePP	PP	20 23 46.3	-6.6
Z49A	Columbiana	117.75	55	P	PKPdf	20 22 38.7	-0.7
	baz=284						
PPCY	Paphos	117.76	307	P	PKPdf	20 22 38.2	-1.1
BRAL	Brewton	117.77	57	PFAKE		20 22 50.0	+11
BRAL				LR	LR		
	comp=Z,8µm,20.0s						
TLB	Topalu	117.79	319	⇓iP	Pdif	20 18 58.6	+1.5
TLB	Topalu	117.79	319	⇑iP	PKPdf	20 22 41.9	+2.9
TLB	Topalu	117.79	319	⇓iP	SKPdf	20 26 10.3	+0.6
TLB	Topalu	117.79	319	⇓iP	PKKPbc	20 32 58.5	-3.0
TLB	Topalu	117.79	319	⇓P	Pdif	20 18 58.6	+1.5
PRAR	RASCA	117.80	322	⇓iP	PKPdf	20 22 41.9	+2.9
HARR	Harsova	117.82	319	⇑iP	Pdif	20 18 58.7	+1.5
HARR	Harsova	117.82	319	⇑iP	PKPdf	20 22 41.9	+2.8
HARR	Harsova	117.82	319	⇓iP	SKPdf	20 26 11.5	+1.7
HARR	Harsova	117.82	319	⇑P	Pdif	20 18 58.7	+1.5
OSL	Oslo	117.87	340	ePKPdf	PKPdf	20 22 40.1	+1.4
EFI	East Falkland	117.88	159	PFAKE		20 22 50.0	+11
EFI				LR	LR		
	comp=Z,6µm,19.0s						
CVDA	Cernavoda	117.89	318	⇑iP	PKPdf	20 22 42.0	+2.8
TESR	Tescani	117.90	321	⇓iP	Pdif	20 18 57.9	+0.3
TESR	Tescani	117.90	321	⇓iP	PKPdf	20 22 41.7	+2.5
LVV	L'vov	117.96	325	eP	Pdif	20 18 58.0	+0.2
LVV				e		20 23 54.0	
LVV				e		20 29 29.0	
LVV				ePS	PKKPdf	20 33 30.0	+0.5
LODK	Lodwar	117.97	271	eP	PP	20 23 49.3	-6.1
LODK				e		20 37 27.0	
	baz=90,slow=6.9						
HRT	Hereke	118.03	314	eP	PKPdf	20 22 41.0	+1.3
O50A	Cable	118.05	47	P	PKPdf	20 22 39.2	-0.5
	baz=289						
BIZ	Bicaz	118.06	322	⇑iP	Pdif	20 19 00.7	+2.4
BIZ	Bicaz	118.06	322	⇑iP	PKPdf	20 22 42.7	+3.2
BIZ	Bicaz	118.06	322	⇓iP	SKPdf	20 26 10.3	+0.1
P50A	Jamestown	118.09	47	P	PKPdf	20 22 38.6	-1.3
	baz=289						
T50A	Nancy	118.10	50	P	PKPdf	20 22 39.2	-0.7
	baz=287						
SUTC	Sutluce-Ispart	118.10	310	eP	PKPdf	20 22 40.0	-0.1
ADVT	Abdulvahap	118.11	314	eP	PKPdf	20 22 38.7	-1.1
CAVI	Cavuskoy	118.11	313	eP	PKPdf	20 22 41.0	+1.1
R50A	Paris	118.12	49	P	PKPdf	20 22 39.4	-0.5
	baz=288						
VRI	Vrincioaia	118.12	320	⇑iP	Pdif	20 18 59.6	+1.0
VRI	Vrincioaia	118.12	320	⇓iP	PKPdf	20 22 42.0	+2.3
VRI	Vrincioaia	118.12	320	⇑iP	SKPdf	20 26 12.7	+2.3
VRI	Vrincioaia	118.12	320	⇓PKIKP	PKPdf	20 22 42.0	+2.3
ICOR	Ion Corvin	118.13	318	⇓iP	PKPdf	20 22 42.8	+3.1
X50B	Fort Payne	118.15	53	P	PKPdf	20 22 39.3	-0.8
	baz=285						
GRER		118.17	320	⇑iP	PKPdf	20 22 44.2	+4.4
PLOR	Plostina	118.18	320	⇑iP	Pdif	20 18 59.5	+0.6
PLOR	Plostina	118.18	320	⇓iP	PKPdf	20 22 41.9	+2.1
PLOR	Plostina	118.18	320	⇓PKIKP	PKPdf	20 22 41.9	+2.1
N50A	Nevada	118.18	46	P	PKPdf	20 22 38.9	-1.0
	baz=290						
Q50A	Georgetown	118.20	48	P	PKPdf	20 22 39.4	-0.6
	baz=288						
Y50A	Piedmont	118.23	54	P	PKPdf	20 22 39.4	-0.9
	baz=284						
W50A	Signal Mountai	118.23	52	P	PKPdf	20 22 39.6	-0.7
	baz=285						
W50A	Signal Mountai	118.23	52	ePKPdf	PKPdf	20 22 39.3	-0.9
W50A				ePP	PP	20 23 49.9	-6.5
Z50A	Ashland	118.23	55	P	PKPdf	20 22 39.5	-0.8
	baz=284						
Z50A	Ashland	118.23	55	ePKPdf	PKPdf	20 22 39.7	-0.6
Z50A				ePP	PP	20 23 51.8	-4.6
AMRR	Amara	118.24	319	⇓iP	PKPdf	20 22 43.7	+3.8
AMRR	Amara	118.24	319	⇓PKIKP	PKPdf	20 22 43.7	+3.8
S50A	Richmond	118.24	49	P	PKPdf	20 22 39.6	-0.6
	baz=287,SNR=6.9						
250A	Grady	118.24	56	P	PKPdf	20 22 40.0	-0.3
	baz=283						
U50A	Jamestown	118.27	51	P	PKPdf	20 22 39.4	-0.8
	baz=286,SNR=14						
V50A	Pikevile	118.27	52	P	PKPdf	20 22 39.6	-0.7
	baz=286						
BUR08	Bucovina Ar. S	118.30	323	ePKPdf	PKPdf	20 22 41.0	+0.9
BURAR	Bucovina Array	118.30	323	⇓iP	Pdif	20 19 00.4	+0.9
BURAR	Bucovina Array	118.30	323	⇓iP	PKPdf	20 22 43.2	+3.1
BURAR	Bucovina Array	118.30	323	⇓iP	SKPdf	20 26 13.1	+2.3
BURAR	Bucovina Array	118.30	323	⇓iP	PKKPbc	20 33 03.3	+3.3
BURAR	Bucovina Array	118.30	323	⇓PKIKP	PKPdf	20 22 43.2	+3.1
150A	Eclectic	118.30	55	P	PKPdf	20 22 39.5	-0.9
	baz=284						
350A	Dozier	118.31	57	P	PKPdf	20 22 42.0	+1.6
	baz=283						
YLV	Yalova	118.33	314	eP	PKPdf	20 22 39.2	-1.1
PGOR	Pogoanele	118.35	319	⇓iP	PKPdf	20 22 44.0	+3.9
ISP	Isparta	118.36	311	⇓iP	PKPdf	20 22 41.0	+0.5
ISP	Isparta	118.36	311	ePKPdf	PKPdf	20 22 40.3	-0.2
ISP				ePP	PP	20 23 52.1	-5.1
ISP	Isparta	118.36	311	⇓PKIKP	PKPdf	20 22 41.0	+0.5
ISK	Istanbul-Kandi	118.38	315	eP	PKPdf	20 22 39.6	-0.7
KAVV	Kandilli-Istan	118.38	315	eP	PKPdf	20 22 41.5	+1.2
HYA	Hoyanger	118.40	343	ePKPdf	PKPdf	20 22 40.8	+1.1
KONO	Kongsberg	118.47	340	ePKPdf	PKPdf	20 22 40.4	+0.5
KONO				ePP	PP	20 23 52.9	-3.9
KONO	Kongsberg	118.47	340	i PKIKP	PKPdf	20 22 41.1	+1.2
KONO	Kongsberg	118.47	340	ePdif	Pdif	20 18 58.6	-1.2
KONO				ePKPdf	PKPdf	20 22 39.8	-0.2
KONO				ePP	PP	20 23 56.3	-0.4
ISR	Istrita	118.55	320	⇑iP	PKPdf	20 22 44.0	+3.4
ISR	Istrita	118.55	320	⇑PKIKP	PKPdf	20 22 44.0	+3.4
Q51A	Peebles	118.61	48	P	PKPdf	20 22 40.3	-0.6
	baz=289						
TVSB	Tavsanli	118.64	313	eP	PKPdf	20 22 39.6	-1.4
R51A	Hillsboro	118.67	49	P	PKPdf	20 22 39.7	-1.2
	baz=288						
BEL	Belsk	118.69	328	ePKPdf	PKPdf	20 22 42.1	+1.5
BEL				ePKPab	PKiKP	20 22 43.0	+2.4
BEL				ePP	PP	20 24 00.8	+2.2
BEL				eSKSac	SKSac	20 29 33.5	+3.1
BEL				e		20 30 55.0	
BEL				LMZ	LR	21 06 47.9	
	comp=Z,12µm,32.7s						
BEL	Belsk	118.69	328	ePKIKP	PKPdf	20 22 42.1	+1.5
CTKS	Kestanelik-??a	118.72	315	eP	PKPdf	20 22 41.5	+0.6
KORT	Korkueli	118.73	310	eP	PKPdf	20 22 40.1	-1.2
PRD	Provadia	118.75	317	i P	PKPdf	20 22 41.7	+0.8
Y51A	Rockmart	118.77	54	P	PKPdf	20 22 39.9	-1.4
	baz=285						
MLR	Muntele Rosu	118.78	320	Pdiff	Pdif	20 19 00.2	-1.5
	comp=Z,4.0nm,1.0s,baz=18,slow=1.8,SNR=4.6						
MLR				PKP	PKPdf	20 22 41.0	-0.2
	comp=Z,40nm,0.9s,baz=252,slow=7.2,SNR=32						
MLR				PP	PP	20 24 04.5	+4.8
	comp=Z,13nm,0.8s,baz=37,slow=4.8,SNR=4.1						
MLR				SKP		20 26 14.7	
	comp=Z,32nm,1.1s,baz=43,slow=4.1,SNR=5.7						
MLR				PKKPbc	PKKPbc	20 32 57.0	-1.2
	comp=Z,3.9nm,0.5s,baz=269,slow=4.3,SNR=15						
MLR				SKKPbc	SKKPbc	20 36 40.2	-1.0
	comp=Z,8.8nm,1.1s,baz=180,slow=5.7,SNR=3.7						
MLR	Muntele Rosu	118.78	320	⇓iP	SKPdf	20 26 11.7	-0.1
MLR	Muntele Rosu	118.78	320	⇑iP	PKKPbc	20 32 58.9	+0.7
CTYL	Yalikoy Yolu	118.78	315	eP	PKPdf	20 22 40.1	-1.0
CPCT	Cooper Cave	118.78	52	ePKPdf	PKPdf	20 22 40.6	-0.7
CPCT				ePP	PP	20 23 56.1	-4.0
T51A	Gray	118.80	50	P	PKPdf	20 22 39.9	-1.4
	baz=287,SNR=8.7						
KWP	Kalwaria Pacla	118.80	326	ePKPdf	PKPdf	20 22 41.6	+0.7
KWP				ePKPab	PKiKP	20 22 43.7	+2.8
KWP				ePP	PP	20 24 00.5	+0.9
KWP				eSKSac	SKSac	20 29 33.2	+2.3
KWP				LMZ	LR	21 06 41.5	
	comp=Z,28µm,33.0s						
KWP	Kalwaria Pacla	118.80	326	ePKPdf	PKPdf	20 22 41.3	+0.4
KWP	Kalwaria Pacla	118.80	326	ePKIKP	PKPdf	20 22 41.6	+0.7
V51A	Loudon	118.82	52	P	PKPdf	20 22 40.1	-1.2
	baz=286						
Z51A	Franklin	118.82	54	P	PKPdf	20 22 41.2	-0.2
	baz=284						
S51A	Beattyville	118.86	49	P	PKPdf	20 22 40.9	-0.4
	baz=288,SNR=22						
S51A	Beattyville	118.86	49	ePKPdf	PKPdf	20 22 40.8	-0.6
151A	Opelika	118.89	55	P	PKPdf	20 22 41.1	-0.5
	baz=284						
SUE	Sulen	118.91	343	ePdif	Pdif	20 19 01.3	-0.4
SUE				ePKPdf	PKiKP	20 22 41.1	+0.4
U51A	La Follette	118.92	51	P	PKPdf	20 22 40.9	-0.7
	baz=287						
SULR		118.92	319	⇓iP	SKPdf	20 26 12.6	+0.7
DOPR	Dopca	118.92	321	⇑iP	Pdif	20 19 02.8	+0.6
DOPR	Dopca	118.92	321	⇓iP	PKPdf	20 22 44.3	+3.0
DOPR	Dopca	118.92	321	⇓iP	SKPdf	20 26 14.4	+2.5
SLVT	Silivri	118.93	315	eP	PKPdf	20 22 41.9	+0.5
251A	Midway	118.93	56	P	PKPdf	20 22 41.1	-0.5
	baz=284						
351A	Pinckard	118.95	57	P	PKPdf	20 22 41.1	-0.6
	baz=283						
PLAR	PLOIESTI	118.97	320	⇑iP	PKPdf	20 22 44.6	+3.3
ARCR	ARCALIA	119.06	322	⇓iP	PKPdf	20 22 44.4	+2.9
ARCR	ARCALIA	119.06	322	⇑iP	SKPdf	20 26 12.7	+0.6
INCR	INCERC-Sediu C	119.08	319	⇓iP	PKPdf	20 22 44.7	+3.2
ELL	Elmali	119.15	310	eP	PKPdf	20 22 44.3	+2.2
KCTX	Karacabey (Bur	119.16	314	eP	PKPdf	20 22 42.4	+0.5
TZTN	Tazewell	119.23	50	P	PKPdf	20 22 41.6	-0.5
	baz=287						
S52A	Salyersville	119.24	49	P	PKPdf	20 22 41.5	-0.6
	baz=288						
ASK	Askoy	119.24	342	ePKPdf	PKPdf	20 22 42.8	+1.4
ODD1	Odda	119.25	341	ePKPdf	PKPdf	20 22 42.0	+0.6
BER	Bergen	119.28	342	ePdif	Pdif	20 19 02.9	-0.4
BER				ePKPdf	PKiKP	20 22 43.1	+1.7
SGRR	Singureni	119.29	319	⇓iP	PKPdf	20 22 44.4	+2.5
BMR	Baia Mare	119.30	323	⇓iP	PKPdf	20 22 44.6	+2.7
BMR	Baia Mare	119.30	323	⇓PKIKP	PKPdf	20 22 44.6	+2.7
TKL	Tuckaleechee C	119.31	52	PKP	PKPdf	20 22 42.3	0.0
	comp=Z,12nm,0.7s,baz=169,slow=3.8,SNR=21						
TKL				PP	PP	20 24 09.5	+5.8
	comp=Z,10nm,0.9s,baz=130,slow=9.9,SNR=4.1						
TKL				SKP		20 26 15.7	
	comp=Z,12nm,1.0s,baz=165,slow=2.8,SNR=3.9						
W52A	Murphy	119.35	52	P	PKPdf	20 22 41.8	-0.7
	baz=286						
W52A	Murphy	119.35	52	ePKPdf	PKPdf	20 22 42.1	-0.3
152A	Waverly Hall	119.36	55	P	PKPdf	20 22 41.6	-0.9
	baz=284						
152A	Waverly Hall	119.36	55	ePKPdf	PKPdf	20 22 42.4	-0.1
152A				ePP	PP	20 23 56.5	-7.6
R52A	Catlettsburg	119.36	48	P	PKPdf	20 22 41.8	-0.5
	baz=289						
SADO	Sadowa	119.38	40	ePKPdf	PKPdf	20 22 42.9	+0.7
SADO				ePP	PP	20 23 56.7	-7.1
V52A	Sevierville	119.40	51	P	PKPdf	20 22 41.3	-1.2
	baz=287,SNR=12						
V52A	Sevierville	119.40	51	ePKPdf	PKPdf	20 22 42.1	-0.4
452A	Marianna	119.40	57	P	PKPdf	20 22 42.1	-0.5
	baz=283						
U52A	Thorn Hill	119.41	51	P	PKPdf	20 22 42.1	-0.4
	baz=287						
MTUR	Matau	119.45	320	⇓iP	Pdif	20 19 14.1	+9.5
MTUR	Matau	119.45	320	⇑iP	PKPdf	20 22 43.8	+1.4
MTUR	Matau	119.45	320	⇑PKIKP	PKPdf	20 22 43.8	+1.4
Z52A	Williamson	119.47	54	P	PKPdf	20 22 42.0	-0.7
	baz=285						
352A	Blakely	119.47	56	P	PKPdf	20 22 42.1	-0.6
	baz=284						
EDC	Edincik	119.49	314	eP	PKPdf	20 22 37.3	-5.2
T52A	Hallie	119.49	50	P	PKPdf	20 22 42.0	-0.7
	baz=288						
252A	Lumpkin	119.50	56	P	PKPdf	20 22 42.0	-0.7
	baz=284						
X52A	Dahlonega	119.51	53	P	PKPdf	20 22 42.0	-0.7
	baz=286						
AKAS	Kas	119.53	309	eP	PKPdf	20 22 41.5	-1.4
KULA	Kula-Manisa	119.53	312	eP	PKPdf	20 22 45.5	+2.8
UZH	Uzhgorod	119.54	325	eP	Pdif	20 19 06.4	+1.6
UZH				e		20 22 43.0	
UZH				e		20 22 49.6	
UZH				e		20 23 00.3	
UZH				e		20 24 02.6	
UZH				i		20 33 43.0	
BSD	Bornholm Skovb	119.55	334	i P	PKPdf	20 22 42.0	-0.1
	comp=Z,64nm,0.9s						
	comp=Z,9µm,23.0s						
BSD	Bornholm Skovb	119.55	334	i PKIKP	PKPdf	20 22 42.0	-0.1
BSD				pmax	pmax		
	comp=Z,64nm,0.9s						
BSD				MLR	MLR		
	comp=Z,9µm,23.0s						
Y52A	Lilburn	119.58	54	P	PKPdf	20 22 42.5	-0.4
	baz=286						
Y52A	Lilburn	119.58	54	ePKPdf	PKPdf	20 22 42.7	-0.2
JMB	Yambol	119.59	317	i P	PKPdf	20 22 43.0	+0.4
MANT	Manisa	119.62	312	ePKPdf	PKPdf	20 22 42.6	-0.5
GKP	Gorka Klasztor	119.64	331	ePKPdf	PKPdf	20 22 42.9	+0.5
GKP				ePP	PP	20 24 02.2	-2.9
GKP				eSKSac	SKSac	20 29 36.3	+2.6
GKP				e		20 30 59.9	
GKP				eSP	SP	20 33 36.7	-10
GKP				LMZ	LR	21 13 23.4	
	comp=Z,18µm,24.1s						
GKP	Gorka Klasztor	119.64	331	ePKIKP	PKPdf	20 22 42.9	+0.5
GKP				e		20 24 02.2	
GKP				e		20 29 36.3	
GKP				MLR	MLR		
	comp=Z,18µm,24.1s						
TRPA	Tarpa	119.65	324	⇓iP	Pdif	20 19 06.3	+1.0
TRPA	Tarpa	119.65	324	⇓iP	PKPdf	20 22 44.7	+2.2
TRPA	Tarpa	119.65	324	⇓iP	SKPdf	20 26 12.6	-0.6
TRPA	Tarpa	119.65	324	ePKPdf	PKPdf	20 22 44.7	+2.2
TRPA	Tarpa	119.65	324	eSKSac	SKSac	20 29 35.3	+1.4
ARR	Arges	119.66	321	⇓iP	Pdif	20 19 06.8	+1.3
ARR	Arges	119.66	321	⇑iP	PKPdf	20 22 46.6	+3.8
ARR	Arges	119.66	321	⇓iP	SKPdf	20 26 15.6	+2.2
PLCA	Paso Flores	119.67	143	PKP	PKPdf	20 22 43.0	0.0
	comp=Z,11nm,0.6s,baz=258,slow=2.5,SNR=33						
PLCA				PKKPbc	PKKPbc	20 32 54.5	-0.3
	comp=Z,18nm,0.8s,baz=69,slow=3.0,SNR=13						
PLCA				SKKPbc	SKKPbc	20 36 38.8	+1.4
	comp=Z,6.8nm,0.9s,baz=337,slow=1.5,SNR=3.4						
PLCA	Paso Flores	119.67	143	ePKPdf	PKPdf	20 22 43.7	+0.7
PLCA				ePKKPbc	PKKPbc	20 32 54.9	+0.1
PLCA				SKKPbc	SKKPbc	20 36 38.8	+1.4
BLS5	Blasjo	119.69	341	ePdif	Pdif	20 19 04.8	-0.5
BLS5				ePKPdf	PKiKP	20 22 43.2	+0.9
CJR	Cluj-Napoca	119.69	322	⇓iP	PKPdf	20 22 45.5	+2.7
CJR	Cluj-Napoca	119.69	322	⇓iP	SKPdf	20 26 15.9	+2.5
CJR	Cluj-Napoca	119.69	322	⇓PKIKP	PKPdf	20 22 45.5	+2.7
SZH	Strazhica	119.71	318	i P	PKPdf	20 22 43.3	+0.5
EDRB	Edirne	119.72	316	eP	PKPdf	20 22 41.9	-1.0
BALB	Balikesir	119.72	313	eP	PKPdf	20 22 45.2	+2.3
HUMR	Humele	119.81	320	⇓iP	PKPdf	20 22 45.2	+2.2
HUMR	Humele	119.81	320	⇑iP	SKPdf	20 26 13.8	+0.2
FETY	Fethiye	119.81	310	eP	PKPdf	20 22 43.8	+0.5
FETY	Fethiye	119.81	310	ePKPdf	PKPdf	20 22 44.2	+0.9
FETY	Fethiye	119.81	310	P	PKPdf	20 22 44.2	+0.9
RKY	Sarkoy-Tekirda	119.85	315	eP	PKPdf	20 22 45.2	+2.0
HOMB	Homborsund	119.88	339	ePdif	Pdif	20 19 05.5	-0.5
HOMB				ePKPdf	PKiKP	20 22 43.0	+0.3
CRVS	Cervenica-Dubn	119.88	325	i P	Pdif	20 19 07.0	+0.7
CRVS				e		20 22 44.4	
CRVS	Cervenica-Dubn	119.88	325	ePDIFF	Pdif	20 19 07.0	+0.7
CRVS	Cervenica-Dubn	119.88	325	ePKP	PKPdf	20 22 44.4	+1.4
BORG	Borgarnes	119.89	357	PFAKE		20 22 50.0	+7.5
BORG				LR	LR		
	comp=Z,1µm,21.0s						
ERPA	Erie	119.90	43	P	PKPdf	20 22 42.5	-0.7
	baz=293						
ZIMR		119.92	319	⇑iP	PKPdf	20 22 45.8	+2.6
ZIMR		119.92	319	PKIKP	PKPdf	20 22 45.8	+2.6
W53A	Cullowhee	119.93	52	P	PKPdf	20 22 43.0	-0.7
	baz=287,SNR=10.0						
Y53A	Monroe	119.97	53	P	PKPdf	20 22 42.9	-0.7
	baz=286						
253A	Americus	119.99	56	P	PKPdf	20 22 43.1	-0.6
	baz=284						
BOSA	Boshof	120.00	233	PKP	PKPdf	20 22 44.5	+0.5
	comp=Z,28nm,0.7s,baz=126,slow=2.2,SNR=26						
BOSA				SKP		20 26 17.4	
	comp=Z,9.2nm,0.9s,baz=258,slow=4.4,SNR=4.8						
BOSA				PKKPbc	PKKPbc	20 32 52.6	-0.6
	comp=Z,4.1nm,0.8s,baz=9.7,slow=1.2,SNR=5.3						
BOSA	Boshof	120.00	233	ePKPdf	PKPdf	20 22 44.4	+0.4

BOSA				ePKPdf	PKPdf	20 22 44.5	+0.5
BOSA				eSKPdf	SKiKP	20 26 17.4	+2.4
BOSA				ePKKPbc	PKKPbc	20 32 52.6	-0.6
X53A	Estanollee	120.01	53	P	PKPdf	20 22 43.1	-0.6
	baz=286						
U53A	Fall Branch	120.03	50	P	PKPdf	20 22 43.1	-0.6
	baz=288,SNR=24						
V53A	Saluda	120.06	51	P	PKPdf	20 22 43.1	-0.7
	baz=287						
V53A	Saluda	120.06	51	ePKPdf	PKPdf	20 22 44.0	+0.2
DALY	Dalyan (Mu˜la	120.09	310	eP	PKPdf	20 22 46.5	+2.8
353A	Camilla	120.09	56	P	PKPdf	20 22 43.4	-0.5
	baz=284						
OJC	Ojcow	120.10	327	ePKPdf	PKPdf	20 22 43.6	+0.3
OJC				ePKPab	PKiKP	20 22 45.8	+2.3
OJC				ePP	PP	20 24 09.9	+1.5
OJC				eSKSac	SKSac	20 29 37.8	+2.3
OJC				ePS	SP	20 33 44.2	-7.3
OJC				LMZ	LR	21 10 46.7	
	comp=Z,8µm,28.5s						
OJC	Ojcow	120.10	327	ePKPdf	PKPdf	20 22 42.0	-1.3
OJC	Ojcow	120.10	327	ePKIKP	PKPdf	20 22 43.7	+0.3
TURN	Turunc	120.11	310	eP	PKPdf	20 22 45.2	+1.5
453A	Whigham	120.12	57	P	PKPdf	20 22 43.1	-0.8
	baz=284						
453A	Whigham	120.12	57	ePKPdf	PKPdf	20 22 44.4	+0.5
453A				ePP	PP	20 24 07.4	-2.1
PVL	Pavlikeni	120.13	318	i P	PKPdf	20 22 44.4	+0.8
Z53A	Monticello	120.13	54	P	PKPdf	20 22 42.6	-1.3
	baz=286						
BG3	Lake Jocassee	120.16	52	ePKPdf	PKPdf	20 22 43.5	-0.4
LOT	Lotru	120.17	321	⇑iP	PKPdf	20 22 45.8	+2.0
GOGA	Godfrey	120.18	54	P	PKPdf	20 22 42.8	-1.2
	baz=286						
GOGA	Godfrey	120.18	54	ePKPdf	PKPdf	20 22 43.0	-1.0
GOGA				LR	LR		
	comp=Z,11µm,21.0s						
DRGR		120.19	323	⇓iP	Pdif	20 19 11.9	+4.0
DRGR		120.19	323	⇑iP	PKPdf	20 22 45.7	+2.0
DRGR		120.19	323	⇑PKIKP	PKPdf	20 22 45.7	+2.0
COP	Copenhagen	120.23	335	i P	PKPdf	20 22 45.4	+2.0
	comp=Z,98nm,0.9s						
	comp=Z,10µm,26.0s						
COP	Copenhagen	120.23	335	i PKIKP	PKPdf	20 22 45.4	+2.0
COP				pmax	pmax		
	comp=Z,98nm,0.9s						
COP				MLR	MLR		
	comp=Z,10µm,26.0s						
KMY	Karmoy	120.24	342	ePKPdf	PKPdf	20 22 43.2	-0.1
NIE	Niedzica	120.26	326	ePKPdf	PKPdf	20 22 44.8	+1.1
NIE				ePKPab	PKiKP	20 22 46.9	+3.1
NIE				ePP	PP	20 24 10.6	+1.0
NIE				eSKSac	SKSac	20 29 39.2	+3.1
NIE				ePS	SP	20 33 45.7	-7.3
NIE				LMZ	LR	21 06 08.3	
	comp=Z,8µm,31.4s						
NIE	Niedzica	120.26	326	ePKIKP	PKPdf	20 22 44.8	+1.1
LPK	Lapseki	120.26	315	eP	PKPdf	20 22 42.4	-1.6
SNART	Snartemo	120.27	340	ePKPdf	PKPdf	20 22 44.3	+0.9
AYDB	Zeytinkoy-Aydi	120.30	312	eP	PKPdf	20 22 43.4	-0.9
ERIK	Erikli-Kesan	120.33	315	eP	PKPdf	20 22 44.3	+0.3
N54A	Moraine State	120.35	45	P	PKPdf	20 22 43.7	-0.4
	baz=292						
N54A	Moraine State	120.35	45	ePKPdf	PKPdf	20 22 43.9	-0.2
M54A	Oil Creek Stat	120.36	44	P	PKPdf	20 22 43.1	-1.1
	baz=293						
M54A	Oil Creek Stat	120.36	44	ePKPdf	PKPdf	20 22 44.3	+0.2
GELI	Tayfur-Gelibol	120.46	315	eP	PKPdf	20 22 44.8	+0.5
DIM	Dimitrovgrad	120.47	317	i P	PKPdf	20 22 45.2	+0.9
SCHQ	Schefferville	120.50	26	PKP	PKPdf	20 22 44.5	+0.6
	comp=Z,7.5nm,0.7s,baz=0.0,slow=4.0,SNR=3.8						
SCHQ				PKKPbc	PKKPab	20 32 51.8	+0.2
	comp=Z,6.3nm,0.7s,baz=115,slow=4.4,SNR=4.6						
SCHQ	Schefferville	120.50	26	ePKPdf	PKPdf	20 22 44.2	+0.2
SCHQ				ePKKPbc	PKKPab	20 32 51.1	-0.4
DEV	Deva	120.51	322	⇓iP	PKPdf	20 22 47.0	+2.7
DEV	Deva	120.51	322	⇓iP	SKPdf	20 26 14.4	-0.5
DEV	Deva	120.51	322	⇓PKIKP	PKPdf	20 22 47.0	+2.7
ENEZ	Enez	120.56	315	eP	PKPdf	20 22 45.2	+0.7
ALN	Alexandroupoli	120.57	315	ePKPdf	PKPdf	20 22 44.0	-0.5
ALN	Alexandroupoli	120.57	315	P	PKPdf	20 22 43.3	-1.2
PLVO	Plevna	120.58	39	ePKPdf	PKPdf	20 22 43.8	-0.6
TIGA	Tifton	120.59	56	P	PKPdf	20 22 44.2	-0.6
	baz=284						
MLSB	Milas	120.60	311	eP	PKPdf	20 22 44.3	-0.5
DKL	Dikili	120.63	313	eP	PKPpre	20 22 33.4	
CRAR	CRAIOVA	120.66	320	⇑iP	PKPdf	20 22 47.8	+3.2
CRAR	CRAIOVA	120.66	320	⇑PKIKP	PKPdf	20 22 47.8	+3.2
ARG	Arkhangelos	120.68	310	P	PKPdf	20 22 46.8	+1.9
Y54A	Tignall	120.68	53	P	PKPdf	20 22 44.3	-0.7
	baz=286,SNR=12						
254A	Abbeville	120.71	56	P	PKPdf	20 22 44.4	-0.6
	baz=285						
KDZ	Kurdzhali	120.71	316	i P	PKPdf	20 22 44.5	-0.3
HOPE	Hope Point	120.72	173	ePKPdf	PKPdf	20 22 44.8	+0.4
HOPE				LR	LR		
	comp=Z,8µm,22.0s						
Z54A	Sparta	120.73	54	P	PKPdf	20 22 44.4	-0.7
	baz=286						
454A	Quitman	120.73	57	P	PKPdf	20 22 44.0	-1.1
	baz=284						
RDO	Rodhopi	120.83	316	ePKPdf	PKPdf	20 22 44.4	-0.6
RDO	Rodhopi	120.83	316	P	PKPdf	20 22 44.4	-0.6
554A	Perry	120.84	58	P	PKPdf	20 22 44.4	-0.9
	baz=284						
LANS	Liptovska Anna	120.86	326	i P	Pdif	20 19 14.8	+4.1
LANS				e		20 22 46.3	
LANS	Liptovska Anna	120.86	326	ePDIFF	Pdif	20 19 14.8	+4.1
LANS	Liptovska Anna	120.86	326	ePKP	PKPdf	20 22 46.3	+1.4
GCAM	G?zelcaml?	120.87	312	eP	PKPdf	20 22 43.4	-1.8
SRE	Strehaia	120.89	320	⇓iP	PKPdf	20 22 48.1	+3.1
SRE	Strehaia	120.89	320	⇓iP	SKPdf	20 26 17.4	+1.7
SRE	Strehaia	120.89	320	⇓PKIKP	PKPdf	20 22 48.1	+3.1
DAT	Datca	120.93	310	eP	PKPdf	20 22 45.2	-0.3
MCWV	Mont Chateau	120.94	46	P	PKPdf	20 22 45.0	-0.4
	baz=292						
MCWV	Mont Chateau	120.94	46	ePKPdf	PKPdf	20 22 44.9	-0.4
BOZC	Bozcaada	120.97	314	eP	PKPdf	20 22 43.4	-1.9
MUD	Monsted U'grnd	120.98	338	i P	PKPdf	20 22 45.7	+0.9
	comp=Z,17µm,25.0s						
MUD	Monsted U'grnd	120.98	338	i PKIKP	PKPdf	20 22 45.7	+0.9
MUD				MLR	MLR		
	comp=Z,17µm,25.0s						
PLD	Plovdiv	121.01	317	i P	PKPdf	20 22 44.8	-0.5
BODT	Bodrum	121.03	311	eP	PKPdf	20 22 46.7	+1.1
RAC	Raciborz	121.03	328	ePKIKP	PKPdf	20 22 45.8	+0.7
RAC				e		20 24 15.3	
RAC				e		20 29 39.5	
RAC				ePS	PS	20 34 04.2	-3.5
RAC				MLR	MLR		
	comp=Z,8µm,21.7s						
MMNY	Mt. Morris Dam	121.06	42	ePKPdf	PKPdf	20 22 45.1	-0.3
PAULI	Pauline	121.09	52	ePKPdf	PKPdf	20 22 45.3	-0.4
SMTH	Samothraki Isl	121.09	315	ePKPdf	PKPdf	20 22 45.6	0.0
SMTH	Samothraki Isl	121.09	315	P	PKPdf	20 22 45.6	0.0
URLA	Izmir	121.11	312	eP	PKPdf	20 22 44.8	-0.9
LBTB	Lobatse	121.17	237	PKP	PKPdf	20 22 46.4	+0.1
	comp=Z,27nm,0.7s,baz=121,slow=3.3,SNR=21						
LBTB				SKP		20 26 20.1	
	comp=Z,20nm,1.0s,baz=126,slow=5.4,SNR=5.7						
LBTB	Lobatse	121.17	237	ePKPdf	PKPdf	20 22 44.7	-1.6
LBTB				eSKPdf	SKiKP	20 26 20.1	+2.7
RZN	Rozhen	121.17	317	i P	PKPdf	20 22 45.7	-0.2
PGB	Panagyurishte	121.19	318	i P	PKPdf	20 22 47.4	+1.6
OKC	Ostrava-Krasne	121.19	328	ePDIFF	Pdif	20 19 12.7	+0.6
OKC				ePKPdf	PKiKP	20 22 46.3	+0.7
OKC				ex	x	20 22 53.6	
OKC				ex	x	20 23 35.2	
OKC				ePP	PP	20 24 18.3	+2.4
OKC				eSP	SP	20 33 57.0	-4.2
OKC				ex	x	20 40 43.5	
OKC				AMS	AMS	21 16 00.0	
	comp=Z,8µm,21.1s						
OKC	Ostrava-Krasne	121.19	328	eP	Pdif	20 19 12.7	+0.6
OKC				e		20 22 46.3	
OKC				e		20 22 53.6	
OKC				e		20 24 18.3	
OKC				ePS	SP	20 33 57.0	-4.2
OKC				e		20 40 43.5	
OKC				MLR	MLR		
	comp=Z,8µm,21.1s						
155A	Kite	121.20	55	P	PKPdf	20 22 45.3	-0.7
	baz=286						
455A	Stateville	121.23	57	P	PKPdf	20 22 45.4	-0.7
	baz=284						
PSZ	Piszkesteto	121.28	325	⇑iP	Pdif	20 19 13.9	+1.2
PSZ	Piszkesteto	121.28	325	⇓iP	PKPdf	20 22 46.9	+1.1
PSZ	Piszkesteto	121.28	325	⇑iP	SKPdf	20 26 17.5	+1.1
PSZ	Piszkesteto	121.28	325	ePKPdf	PKPdf	20 22 46.0	+0.2
PSZ	Piszkesteto	121.28	325	⇑eSKPdf	SKiKP	20 26 19.1	+2.2
PSZ				eSKSac	SKSac	20 29 42.6	+2.8
PSZ	Piszkesteto	121.28	325	ePKPdf	PKPdf	20 22 45.4	-0.4
PSZ	Piszkesteto	121.28	325	⇓PKIKP	PKPdf	20 22 46.9	+1.1
HERR	Herculane	121.28	321	⇑iP	PKPdf	20 22 48.1	+2.3
HERR	Herculane	121.28	321	⇑iP	SKPdf	20 26 16.8	+0.4
SIGR	SIGRI	121.34	314	ePKPdf	PKPdf	20 22 45.3	-0.8
SIGR	SIGRI	121.34	314	P	PKPdf	20 22 45.3	-0.8
KMSC	Kings Mountain	121.37	51	P	PKPdf	20 22 45.5	-0.7
	baz=288,SNR=6.5						
KMSC	Kings Mountain	121.37	51	ePKPdf	PKPdf	20 22 46.5	+0.3
BLA	Blacksburg	121.39	49	P	PKPdf	20 22 45.0	-1.3
	baz=290						
BLA	Blacksburg	121.39	49	ePKPdf	PKPdf	20 22 45.9	-0.4
BLA				LR	LR		
	comp=Z,15µm,20.0s						
BZS	Buzias	121.43	322	⇓iP	PKPdf	20 22 48.3	+2.3
BZS	Buzias	121.43	322	⇑iP	SKPdf	20 26 16.0	-0.7
BZS	Buzias	121.43	322	⇑iP	PKKPbc	20 32 49.2	+1.0
BZS	Buzias	121.43	322	⇓PKIKP	PKPdf	20 22 48.3	+2.3
555A	McAlpin	121.43	57	P	PKPdf	20 22 45.8	-0.7
	baz=284						
555A	McAlpin	121.43	57	ePKPdf	PKPdf	20 22 47.1	+0.6
MORC	Moravsky Berou	121.55	328	⇑iP	Pdif	20 19 14.7	+0.9
MORC	Moravsky Berou	121.55	328	⇑iP	PKPdf	20 22 48.3	+2.1
MORC	Moravsky Berou	121.55	328	⇑iP	SKPdf	20 26 18.1	+1.2
MORC	Moravsky Berou	121.55	328	⇑PKIKP	PKPdf	20 22 48.3	+2.1
MORC	Moravsky Berou	121.55	328	ePDIFF	Pdif	20 19 14.2	+0.4
MORC	Moravsky Berou	121.55	328	ePKP	PKPdf	20 22 46.7	+0.5
MORC				ePP	PP	20 24 20.1	+1.7
MORC				eSKIKP		20 26 19.8	
MORC				eSKS	SKSdf	20 29 43.8	-10
MORC				ePS	PS	20 34 09.9	-2.6
LIA	Limnos Island	121.56	315	P	PKPdf	20 22 46.2	-0.2
VYHS	Vyhne	121.57	326	i P	Pdif	20 19 15.0	+1.1
VYHS				e		20 22 46.3	
VYHS	Vyhne	121.57	326	ePDIFF	Pdif	20 19 15.0	+1.1
VYHS	Vyhne	121.57	326	ePKP	PKPdf	20 22 46.3	0.0
KSP	Ksiaz	121.57	329	ePKPdf	PKPdf	20 22 46.8	+0.6
KSP				ePP	PP	20 24 20.3	+1.9
KSP				eSKSac	SKSac	20 29 42.9	+2.4
KSP				e		20 31 13.2	
KSP				ePS	PS	20 34 08.9	-3.6
KSP				LMZ	LR	21 14 27.7	
	comp=Z,22µm,25.8s						
KSP	Ksiaz	121.57	329	ePKIKP	PKPdf	20 22 46.8	+0.6
KSP				e		20 24 20.3	
KSP				e		20 29 42.9	
KSP				ePS	PS	20 34 08.9	-3.6
KSP				MLR	MLR		
	comp=Z,22µm,25.8s						
THAS	Thassos island	121.61	316	P	PKPdf	20 22 45.9	-0.6
TIM	Timisoara	121.61	322	⇓iP	PKPdf	20 22 48.8	+2.4
TIM	Timisoara	121.61	322	⇓PKIKP	PKPdf	20 22 48.8	+2.4
O56A	Blue Knob Stat	121.62	45	P	PKPdf	20 22 46.3	-0.4
	baz=293						
O56A	Blue Knob Stat	121.62	45	ePKPdf	PKPdf	20 22 46.5	-0.2
SUR	Sutherland	121.69	227	PKP	PKPdf	20 22 48.5	+1.2
	comp=Z,39nm,0.9s,baz=129,slow=3.3,SNR=14						
SUR	Sutherland	121.69	227	ePKPdf	PKPdf	20 22 51.4	+4.2
SUR				LR	LR		
	comp=Z,12µm,21.0s						
JSC	Jenkinsville	121.69	52	ePKPdf	PKPdf	20 22 47.7	+0.8
MDVR	Moldovita	121.77	321	⇓iP	Pdif	20 19 15.6	+0.7
MDVR	Moldovita	121.77	321	⇓iP	PKPdf	20 22 49.3	+2.5
MDVR	Moldovita	121.77	321	⇓iP	SKPdf	20 26 18.5	+1.1
MDVR	Moldovita	121.77	321	⇑iP	PKKPbc	20 32 46.7	-0.3
KRLC	Kraliky	121.78	328	ePDIFF	Pdif	20 19 16.3	+1.5
KRLC				ePKPdf	PKiKP	20 22 47.9	+1.1
KRLC	Kraliky	121.78	328	eP	Pdif	20 19 16.3	+1.5
KRLC				e		20 22 47.9	
VTS	Vitosha	121.81	318	⇓iP	Pdif	20 19 16.6	+1.3
VTS	Vitosha	121.81	318	⇓iP	PKPdf	20 22 49.8	+2.7
VTS	Vitosha	121.81	318	⇓iP	SKPdf	20 26 18.1	+0.4
VTS	Vitosha	121.81	318	ePKPdf	PKPdf	20 22 46.7	-0.4
VTS	Vitosha	121.81	318	i P	PKPdf	20 22 46.7	-0.4
VTS	Vitosha	121.81	318	P	PKPdf	20 22 46.7	-0.4
VTS	Vitosha	121.81	318	⇓PKIKP	PKPdf	20 22 49.8	+2.7
BANR	Banloc	121.84	322	⇑iP	PKPdf	20 22 49.5	+2.7
256A	Glennville	121.85	55	P	PKPdf	20 22 46.0	-1.2
	baz=286						
DPC	Dobruska-Polom	121.85	329	ePDIFF	Pdif	20 19 16.2	+1.1
DPC				ex	x	20 19 22.3	
DPC				ePKPdf	PKiKP	20 22 47.9	+1.0
DPC				epPKP	pPKPdf	20 22 58.9	-5.2
DPC				ex	x	20 23 44.5	
DPC				ePP	PP	20 24 23.5	+3.1
DPC				eSP	SP	20 34 07.0	-0.1
DPC				ex	x	20 40 58.0	
DPC				AMS	AMS	21 14 20.0	
	comp=Z,15µm,25.1s						
DPC	Dobruska-Polom	121.85	329	eP	Pdif	20 19 16.2	+1.1
DPC				e		20 22 47.9	
DPC				e		20 22 58.9	
DPC				e		20 24 23.5	
DPC				ePS	PS	20 34 07.0	-8.1
DPC				e		20 40 58.0	
DPC				MLR	MLR		
	comp=Z,15µm,25.1s						
MMB	Musomiste	121.89	317	i P	PKPdf	20 22 46.3	-0.8
NVR	Nevrokopi	121.90	317	P	PKPdf	20 22 46.2	-0.9
UPC	Upice	121.92	329	ePDIFF	Pdif	20 19 16.2	+0.8
UPC				ePKPdf	PKiKP	20 22 47.9	+0.9
UPC				ex	x	20 22 55.1	
UPC				ex	x	20 23 45.0	
UPC				ePP	PP	20 24 23.6	+2.9
UPC				eSP	SP	20 34 06.8	-0.8
UPC				AMS	AMS	21 14 30.0	
	comp=Z,23µm,25.6s						
UPC	Upice	121.92	329	eP	Pdif	20 19 16.2	+0.8
UPC				e		20 22 47.9	
UPC				e		20 22 55.1	
UPC				e		20 24 23.6	
UPC				ePS	PS	20 34 06.8	-8.8
UPC				MLR	MLR		
	comp=Z,23µm,25.6s						
556A	Lake Butler	121.93	57	P	PKPdf	20 22 46.1	-1.3
	baz=284						
SSPA	Standing Stone	121.94	44	P	PKPdf	20 22 46.8	-0.4
	baz=294						
SSPA	Standing Stone	121.94	44	ePKPdf	PKPdf	20 22 45.7	-1.5
656A	Willston	121.98	58	P	PKPdf	20 22 47.0	-0.5
	baz=284						
JAVC	Velka Javorina	122.01	327	ePDIFF	Pdif	20 19 17.6	+1.7
JAVC	Velka Javorina	122.01	327	ePKP	PKPdf	20 22 48.8	+1.7
JAVC				ePP	PP	20 24 24.0	+2.5
JAVC				eSKIKP		20 26 21.8	
JAVC				eSKS	SKSdf	20 29 45.7	-8.6
JAVC				eSKKS	SKKSac	20 31 20.0	+3.9
JAVC				ePS	PS	20 34 15.8	-0.8
BUD	Budapest	122.01	325	ePKPdf	PKPdf	20 22 47.8	+0.7
BUD	Budapest	122.01	325	⇑eSKPdf	SKiKP	20 26 21.1	+2.9
BUD				eSKSac	SKSac	20 29 44.9	+2.9
LSZ	Lusaka	122.03	249	PKP	PKPdf	20 22 48.6	+0.5
	comp=Z,26nm,0.6s,baz=123,slow=1.7,SNR=28						
LSZ				SKP		20 26 22.0	
	comp=Z,29nm,1.1s,baz=82,slow=1.6,SNR=7.3						
LSZ	Lusaka	122.03	249	ePKPpre	PKPpre	20 22 47.7	
LSZ				ePKPdf	PKPdf	20 22 48.0	-0.2
LSZ				eSKPdf	SKiKP	20 26 22.0	+2.7
LSZ				LR	LR		
	comp=Z,5µm,21.0s						
LSZ	Lusaka	122.03	249	P	PKPdf	20 22 49.4	+1.2
	SNR=12						
JTS	JuntasAbangare	122.17	81	PKP	PKPdf	20 22 48.7	+0.4
	comp=Z,10.0nm,0.6s,baz=344,slow=1.5,SNR=6.5						
JTS	JuntasAbangare	122.17	81	ePKPdf	PKPdf	20 22 48.7	+0.4
JTS				LR	LR		
	comp=Z,13µm,22.0s						
AMGA	Amorgos Island	122.17	311	P	PKPdf	20 22 48.7	+0.9
SRS	Serrai	122.18	317	ePKPdf	PKPdf	20 22 46.9	-0.8
SRS	Serrai	122.18	317	P	PKPdf	20 22 46.9	-0.8
KKB	Krupnik	122.21	318	i P	PKPdf	20 22 47.4	-0.3
OUR	Ouranopolis	122.23	316	ePKPdf	PKPdf	20 22 47.1	-0.6
OUR	Ouranopolis	122.23	316	P	PKPdf	20 22 47.1	-0.6
MBAR	Mbarara	122.25	266	ePKPdf	PKPdf	20 22 48.4	-0.3
NCAT	North Carolina	122.27	50	ePKPdf	PKPdf	20 22 48.3	+0.3
NCAT				ePP	PP	20 24 17.9	-5.9
VRAC	Vranov	122.33	328	Pdiff	Pdif	20 19 17.7	+0.4
	comp=Z,5.1nm,0.7s,baz=64,slow=6.6,SNR=11						
VRAC				PKP	PKiKP	20 22 47.8	0.0
	comp=Z,62nm,0.8s,baz=92,slow=1.7,SNR=51						
VRAC				SKP		20 26 21.4	
	comp=Z,21nm,1.2s,baz=50,slow=0.5,SNR=4.5						
VRAC	Vranov	122.33	328	⇑iP	Pdif	20 19 18.6	+1.4
VRAC	Vranov	122.33	328	⇑iP	PKPdf	20 22 50.1	+2.4
VRAC	Vranov	122.33	328	⇑iP	SKPdf	20 26 17.0	-1.3
VRAC	Vranov	122.33	328	⇓iP	PKKPbc	20 32 57.9	+13
VRAC	Vranov	122.33	328	⇑PKIKP	PKPdf	20 22 50.1	+2.4
VRAC	Vranov	122.33	328	ePDIFF	Pdif	20 19 17.9	+0.7
VRAC	Vranov	122.33	328	ePKP	PKPdf	20 22 48.0	+0.3
VRAC				ePP	PP	20 24 24.9	+1.3
VRAC				eSKIKP		20 26 21.0	
VRAC				eSKS	SKSdf	20 29 46.2	-8.5
VRAC				eSKKS	SKKSac	20 31 19.4	+1.3
VRAC				ePS	PS	20 34 16.4	-2.9
LONY	Lake Ozonia	122.34	39	P	PKPdf	20 22 47.6	-0.3
	baz=299						
LONY	Lake Ozonia	122.34	39	ePKPdf	PKPdf	20 22 48.4	+0.5
LONY				ePP	PP	20 24 15.9	-8.1
LONY				LR	LR		
	comp=Z,8µm,21.0s						
ANAF	Anafi Island	122.43	311	P	PKPdf	20 22 47.9	-0.4
757A	Oxford	122.48	59	P	PKPdf	20 22 48.1	-0.5
	baz=284						
857A	Zephyrhills	122.50	59	P	PKPdf	20 22 48.0	-0.6
	baz=284						
MODS	Modra-Piesok	122.50	327	i P	Pdif	20 19 19.9	+1.9
MODS				e		20 22 49.1	
MODS	Modra-Piesok	122.50	327	ePDIFF	Pdif	20 19 19.9	+1.9
MODS	Modra-Piesok	122.50	327	ePKP	PKPdf	20 22 49.1	+1.0
CSKK	Csˆ‡kako	122.51	325	ePKPdf	PKPdf	20 22 49.4	+1.3
CSKK	Csˆ‡kako	122.51	325	⇑eSKPdf	SKiKP	20 26 20.9	+1.6
CSKK				eSKSac	SKSac	20 29 46.3	+2.6
BINY	Binghamton	122.57	42	P	PKPdf	20 22 47.8	-0.6
	baz=297						
BINY	Binghamton	122.57	42	ePKPdf	PKPdf	20 22 48.0	-0.4
BINY				LR	LR		
	comp=Z,9µm,19.0s						
KRUC	Moravsky	122.58	328	ePDIFF	Pdif	20 19 18.1	-0.2
KRUC	Moravsky	122.58	328	ePKP	PKPdf	20 22 48.4	+0.2
KRUC				ePP	PP	20 24 26.8	+1.5
KRUC				eSKIKP		20 26 21.4	
KRUC				eSKS	SKSdf	20 29 47.2	-8.0
KRUC				eSKKS	SKKSac	20 31 21.2	+1.5
KRUC				ePS	PS	20 34 19.4	-2.1
PLG	Polygyros	122.59	316	P	PKPdf	20 22 49.2	+0.7
PAIG	Paliouri	122.61	315	ePKPdf	PKPdf	20 22 47.4	-1.1
PAIG	Paliouri	122.61	315	P	PKPdf	20 22 47.4	-1.1
PVCC	Panska Ves	122.63	330	ePDIFF	Pdif	20 19 19.4	+0.9
PVCC				ex	x	20 19 25.5	
PVCC				ePKPdf	PKiKP	20 22 49.1	+0.7
PVCC				ePP	PP	20 24 28.3	+2.8
PVCC				AMS	AMS	21 15 20.0	
	comp=Z,11µm,24.0s						
PVCC	Panska Ves	122.63	330	eP	Pdif	20 19 19.4	+0.9
PVCC				e		20 22 49.1	
PVCC				e		20 24 28.3	
PVCC				MLR	MLR		
	comp=Z,11µm,24.0s						
KNT	Kendrikon	122.64	317	P	PKPdf	20 22 46.6	-1.9
THR3	Thira Island,	122.69	311	ePKPdf	PKPdf	20 22 48.3	-0.4
THR3	Thira Island,	122.69	311	P	PKPdf	20 22 48.3	-0.4
THR6	Thira Island,	122.71	311	ePKPdf	PKPdf	20 22 48.6	-0.2
THR6	Thira Island,	122.71	311	P	PKPdf	20 22 48.6	-0.2
BRG	Berggiesshubel	122.72	331	PDIFF	Pdif	20 19 19.2	+0.3
	comp=Z,9.0nm,0.8s						
BRG	Berggiesshubel	122.72	331	ePKP	PKPdf	20 22 48.9	+0.5
	comp=Z,201nm,0.9s						
BRG				PP	PP	20 24 30.0	+3.9
BRG				i PKS	PKSdf	20 26 22.1	-2.8
	comp=Z,115nm,1.5s						
BRG				SS	SS	20 41 20.0	+16
	comp=N,10µm,25.4s						
	comp=E,4µm,23.6s						
	comp=Z,10µm,24.6s						
BRG	Berggiesshubel	122.72	331	ePKIKP	PKPdf	20 22 48.9	+0.5
BRG						20 24 30.0	
BRG				SS	SS	20 41 20.0	+16
BRG				pmax	pmax		
	comp=Z,201nm,0.9s						
BRG				MLR	MLR		
	comp=E,10µm,23.6s						
BRG				MLR	MLR		
	comp=Z,4µm,24.6s						
HORT	Hortiatis	122.74	316	P	PKPdf	20 22 48.2	-0.6
AOS	Alonnisos	122.77	314	ePKPdf	PKPdf	20 22 49.2	+0.4
AOS	Alonnisos	122.77	314	P	PKPdf	20 22 49.2	+0.4
VAY	Valandovo	122.79	317	ePKPdf	PKPdf	20 22 49.5	+0.7
VAY	Valandovo	122.79	317	P	PKPdf	20 22 49.5	+0.7
VAY	Valandovo	122.79	317	i PKP	PKPdf	20 22 49.6	+0.9
KARY	Karystos	122.81	313	P	PKPdf	20 22 48.9	0.0
THE	Thessaloniki	122.82	316	ePKPdf	PKPdf	20 22 48.4	-0.4
THE	Thessaloniki	122.82	316	P	PKPdf	20 22 48.4	-0.4
FRNY	Flat Rock	122.85	38	ePKPdf	PKPdf	20 22 48.0	-0.8
FRNY				ePP	PP	20 24 23.8	-3.5
NCB	Newcomb	122.89	39	ePKPdf	PKPdf	20 22 48.5	-0.4
CLL	Collm	122.90	331	ePdif	Pdif	20 19 19.0	-0.7
	comp=Z,35nm,1.6s						
CLL				epPdif	pPdif	20 19 32.0	-4.5
CLL				ePKPdf	PKiKP	20 22 49.0	+0.1
	comp=Z,215nm,0.9s						
CLL				esPKPdf	pPKPdf	20 23 07.0	+1.0
CLL				e		20 23 12.0	
CLL				ePP	PP	20 24 27.0	-0.3
CLL				ePKSdf	PKSdf	20 26 22.0	-3.1
	comp=Z,84nm,1.4s						
CLL				esPPP		20 27 30.0	
CLL				eSKSac	SKSac	20 29 47.0	+2.2
CLL				esSKSac	sSKSac	20 30 12.0	-2.6
CLL				esSKKSac		20 31 54.0	
CLL				ePS	PS	20 34 21.0	-3.2
CLL				ePPS	PPS	20 35 46.0	
CLL				e		20 36 54.0	
CLL				ePSPS		20 41 54.0	
CLL				esSSS		20 46 06.0	
CLL				e		20 49 42.0	
CLL				e		20 54 42.0	
CLL				LmV		21 21 00.0	
	comp=Z,12µm,20.8s						
CLL	Collm	122.90	331	ePKPdf	PKPdf	20 22 48.5	-0.2
CLL	Collm	122.90	331	eP	Pdif	20 19 19.0	-0.7
CLL				e		20 22 49.0	
CLL				e		20 23 07.0	
CLL				e		20 24 27.0	
CLL				e		20 29 47.0	
CLL				pmax	pmax		
	comp=Z,35nm,1.6s						
CLL				MLR	MLR		
	comp=Z,12µm,20.8s						
GOPC	GO Pecny, Ondr	122.90	329	ePDIFF	Pdif	20 19 21.3	+1.5
GOPC				ePKPdf	PKiKP	20 22 49.6	+0.6
GOPC				ex	x	20 22 56.4	
GOPC				ePP	PP	20 24 30.1	+2.7
GOPC				eSP	SP	20 34 15.1	-1.2
GOPC				ePKPPKP	P'P'df	20 41 34.1	+4.9
GOPC				AMS	AMS	21 15 00.0	
	comp=Z,18µm,24.5s						
GOPC	GO Pecny, Ondr	122.90	329	eP	Pdif	20 19 21.3	+1.5
GOPC				e		20 22 49.6	
GOPC				e		20 22 56.4	
GOPC				e		20 24 30.1	
GOPC				ePS	PS	20 34 15.1	-9.3
GOPC				e		20 41 34.1	
GOPC				MLR	MLR		
	comp=Z,18µm,24.5s						
NHSC	New Hope	122.91	53	PFAKE		20 23 00.0	+11
NHSC				LR	LR		
	comp=Z,11µm,22.0s						
NPS	Neapolis	122.92	309	P	PKPdf	20 22 51.0	+1.7
PAGS	Pennsylvania G	122.92	44	ePKPdf	PKPdf	20 22 48.7	-0.4
PRU	Pruhonice	122.98	329	ePDIFF	Pdif	20 19 20.8	+0.7
PRU				ePKPdf	PKiKP	20 22 49.6	+0.5
PRU				ex	x	20 22 56.5	
PRU				ex	x	20 23 55.7	
PRU				ePP	PP	20 24 30.2	+2.3
PRU				eSP	SP	20 34 13.1	-3.9
PRU				ex	x	20 41 28.0	

PRU				AMS	AMS	21 15 40.0	
	comp=Z,17μm,23.9s						
PRU	Pruhonice	122.98	329	eP	Pdif	20 19 20.8	+0.7
PRU				e		20 22 49.6	
PRU				e		20 24 30.2	
PRU				ePS	PS	20 34 13.1	-12
PRU				e		20 41 28.0	
PRU				MLR	MLR		
	comp=Z,17μm,23.9s						
PRA	Prague	122.98	330	ePKPdf	PKPdf	20 22 49.9	+1.0
PRA				ex	x	20 22 56.7	
PRA				ePP	PP	20 24 30.5	+2.6
PRA				ePS	PS	20 34 13.4	-12
PRA				ex	x	20 41 28.2	
PRA				AMS	AMS	21 15 40.0	
	comp=Z,17μm,23.8s						
PRA	Prague	122.98	330	ePKIKP	PKPdf	20 22 49.9	+1.0
PRA				e		20 22 56.7	
PRA				e		20 24 30.5	
PRA				ePS	PS	20 34 13.4	-12
PRA				e		20 41 28.2	
PRA				MLR	MLR		
	comp=Z,17μm,23.8s						
KSPA	Keystone Colle	123.00	42	ePKPdf	PKPdf	20 22 49.3	+0.1
LAST	Lasithi	123.06	309	ePKPdf	PKPdf	20 22 50.3	+0.7
LAST	Lasithi	123.06	309	P	PKPdf	20 22 50.3	+0.7
GRG	Griva	123.06	317	ePKPdf	PKPdf	20 22 48.5	-0.9
GRG	Griva	123.06	317	P	PKPdf	20 22 48.5	-0.9
SKIA	Skiathos	123.07	314	P	PKPdf	20 22 48.7	-0.7
SERI	Serifos	123.10	312	P	PKPdf	20 22 50.2	+0.6
SDMD	Soldier's Deli	123.18	45	ePKPpre	PKPpre	20 22 45.4	
DIVS	Divibare	123.18	321	eP	SKPdf	20 26 21.9	+1.7
	comp=Z,88nm,1.2s						
XOR	Xorichti	123.18	315	P	PKPdf	20 22 47.8	-1.9
NEO	Neokhori	123.19	315	P	PKPdf	20 22 49.5	-0.2
PTL	Penteli	123.22	313	ePKPdf	PKPdf	20 22 48.7	-1.1
PTL	Penteli	123.22	313	P	PKPdf	20 22 48.7	-1.1
SKO	Skopje	123.26	318	ePKPdf	PKPdf	20 22 49.5	-0.2
SKO	Skopje	123.26	318	P	PKPdf	20 22 49.5	-0.2
SKO	Skopje	123.26	318	i PKP	PKPdf	20 22 49.8	+0.1
CBN	Corbin Frederi	123.28	47	P	PKPdf	20 22 49.3	-0.5
	baz=293						
CBN	Corbin Frederi	123.28	47	PFAKE		20 23 00.0	+10
CBN				LR	LR		
	comp=Z,9μm,20.0s						
MVL	Millersville	123.28	44	ePKPpre	PKPpre	20 22 44.2	
MVL				ePKPdf	PKiKP	20 22 51.1	+1.2
N59A	State Game Lan	123.28	43	P	PKPdf	20 22 49.5	-0.3
	baz=296						
N59A	State Game Lan	123.28	43	ePKPdf	PKPdf	20 22 49.4	-0.4
SOP	Sopron	123.29	326	ePKPdf	PKPdf	20 22 49.3	-0.2
SOP	Sopron	123.29	326	⇑eSKPdf	SKiKP	20 26 22.3	+1.5
ATHU	Athens Univers	123.31	313	ePKPdf	PKPdf	20 22 49.3	-0.6
ATHU	Athens Univers	123.31	313	P	PKPdf	20 22 49.3	-0.6
MHLO	Agia Marina, M	123.34	311	P	PKPdf	20 22 50.9	+0.9
VLY	Voula,Athens	123.35	313	ePKPdf	PKPdf	20 22 49.9	-0.1
VLY	Voula,Athens	123.35	313	P	PKPdf	20 22 49.9	-0.1
ATH	Athens Observa	123.36	313	P	PKPdf	20 22 50.2	+0.2
SMIA	Simia	123.37	314	P	PKPdf	20 22 50.0	0.0
LIT	Litokhoron	123.37	316	ePKPdf	PKPdf	20 22 48.4	-1.6
LIT				ePKPdf	PKPdf	20 22 48.9	-1.1
LIT	Litokhoron	123.37	316	P	PKPdf	20 22 48.9	-1.1
BIGH	Upper Bighouse	123.42	346	eP	PKPdf	20 22 48.2	-1.2
BIGH				IAMs_20	IAMs_20	21 09 30.8	
	comp=Z,19μm,29.0s						
IDI	Anoyia	123.47	310	PKP	PKPdf	20 22 50.9	+0.5
	comp=Z,71nm,0.7s,baz=161,slow=4.3,SNR=32						
IDI				PP	PP	20 24 36.3	+4.3
	comp=Z,20nm,0.9s,baz=31,slow=3.9,SNR=3.8						
IDI				SKP		20 26 24.5	
	comp=Z,18nm,0.9s,baz=356,slow=5.5,SNR=3.6						
IDI	Anoyia	123.47	310	⇓iP	Pdif	20 19 10.9	-12
IDI	Anoyia	123.47	310	⇓iP	PKPdf	20 22 53.2	+2.8
IDI	Anoyia	123.47	310	ePKPdf	PKPdf	20 22 50.5	+0.1
IDI				PP	PP	20 24 36.3	+4.3
IDI				SKP		20 26 24.5	
ACCN	Adirondack Com	123.52	40	ePKPdf	PKPdf	20 22 51.1	+0.9
ACCN				ePP	PP	20 24 31.9	-0.1
CONA	Conrad Observa	123.53	327	ePdiff	Pdif	20 19 23.9	+1.1
	comp=Z,24nm,1.0s,SNR=19						
CONA				ePKiKP	PKiKP	20 22 50.6	+0.2
	comp=Z,120nm,0.7s,SNR=66						
LKR	Lokris	123.61	314	P	PKPdf	20 22 49.2	-1.2
SIVA	Sivas	123.62	309	P	PKPdf	20 22 52.0	+1.4
VT1	Waterbury	123.62	38	ePKPdf	PKPdf	20 22 50.1	-0.3
VT1				ePP	PP	20 24 29.5	-3.1
KRUS	Krusevo	123.66	318	i PKP	PKPdf	20 22 50.2	-0.4
PRNS	Prines Rethymn	123.74	310	P	PKPdf	20 22 53.1	+2.3
KZN	Kozani	123.78	316	P	PKPdf	20 22 50.4	-0.4
FNA	Florina	123.84	317	ePKPdf	PKPdf	20 22 49.6	-1.3
FNA	Florina	123.84	317	P	PKPdf	20 22 50.2	-0.7
TRY	Troy	123.84	40	ePKPdf	PKPdf	20 22 50.1	-0.7
IVA	Berane	123.84	320	⇑iPKP	PKPdf	20 22 51.3	+0.4
BEHE	Becsehely	123.85	325	ePKPdf	PKPdf	20 22 51.6	+0.9
BEHE	Becsehely	123.85	325	⇑eSKPdf	SKiKP	20 26 24.8	+2.8
BEHE				eSKSac	SKSdf	20 29 54.4	-3.3
ROC1	El Roble	123.86	135	ePKPdf	PKPdf	20 22 52.1	+0.7
ROCH	El Roble	123.86	135	eP	PKPdf	20 22 52.6	+1.2
NKC	Novy Kostel	123.87	331	ePDIFF	Pdif	20 19 24.8	+0.7
NKC				ePKPdf	PKiKP	20 22 51.7	+0.8
NKC				ePP	PP	20 24 32.2	-1.7
NKC				eSP	SP	20 34 23.1	-1.7
NKC				ex	x	20 41 34.7	
NKC				AMS	AMS	21 19 10.0	
	comp=Z,12μm,22.4s						
NKC	Novy Kostel	123.87	331	eP	Pdif	20 19 24.8	+0.7
NKC				e		20 22 51.7	
NKC				e		20 24 32.2	
NKC				ePS	PS	20 34 23.1	-10
NKC				e		20 41 34.7	
NKC				MLR	MLR		
	comp=Z,12μm,22.4s						
LTK	Loutraki	123.89	313	ePKPdf	PKPdf	20 22 49.2	-1.8
LTK	Loutraki	123.89	313	P	PKPdf	20 22 49.2	-1.8
DID	Didima	123.89	313	ePKPdf	PKPdf	20 22 50.8	-0.3
DID	Didima	123.89	313	P	PKPdf	20 22 50.8	-0.3
LOUT	Loutraki	123.89	313	P	PKPdf	20 22 49.1	-1.9
THL	Klokotos Trika	123.93	315	P	PKPdf	20 22 49.7	-1.3
PSUB	Penn St. - Bra	123.93	44	ePKPdf	PKPdf	20 22 50.5	-0.5
AGG	Agios Georgios	123.94	315	ePKPdf	PKPdf	20 22 49.7	-1.4
AGG				ePKPdf	PKiKP	20 22 50.0	-1.3
AGG	Agios Georgios	123.94	315	P	PKPdf	20 22 49.7	-1.4
PVY	Plav	123.94	320	⇑iPKP	PKPdf	20 22 51.1	0.0
VAM	Vamos	123.96	310	P	PKPdf	20 22 52.3	+1.1
CNNC	Cliffs of the	124.00	50	PFAKE		20 23 00.0	+8.7
CNNC				LR	LR		
	comp=Z,542nm,21.0s						
ODNJ	Ogdensburg	124.00	42	ePKPdf	PKPdf	20 22 51.6	+0.5
PEL	Peldehue	124.00	135	ePKPdf	PKPdf	20 22 51.7	+0.2
KRND	KRANIDI	124.00	313	P	PKPdf	20 22 51.6	+0.4
KHC	Kasperske Hory	124.01	329	ePDIFF	Pdif	20 19 25.3	+0.6
KHC				ex	x	20 19 29.7	
KHC				ex	x	20 20 05.4	
KHC				ePKPpre	PKPpre	20 22 47.2	
KHC				ePKPdf	PKiKP	20 22 51.9	+0.7
KHC				ex	x	20 23 55.6	
KHC				ePP	PP	20 24 34.3	-0.6
KHC				ePKKP	PKKPab	20 32 35.5	-1.1
KHC				eSP	SP	20 34 28.2	+2.1
KHC				ex	x	20 41 40.7	
KHC				AMS	AMS	21 17 10.0	
	comp=Z,11μm,23.6s						
KHC	Kasperske Hory	124.01	329	ePdif	Pdif	20 19 24.5	-0.3
KHC				ePKPdf	PKiKP	20 22 51.3	+0.1
KHC	Kasperske Hory	124.01	329	eP	Pdif	20 19 25.3	+0.6
KHC				e		20 22 51.9	
KHC				e		20 24 34.3	
KHC				ePS	PS	20 34 28.2	-6.0
KHC				e		20 41 40.7	
KHC				MLR	MLR		
	comp=Z,11μm,23.6s						
CHAN	Chania	124.03	310	P	PKPdf	20 22 53.6	+2.3
DSF	Desfina	124.05	314	ePKPdf	PKPdf	20 22 50.8	-0.6
DSF	Desfina	124.05	314	P	PKPdf	20 22 50.8	-0.6
PHP	Peshkopia	124.05	318	ePKPdf	PKPdf	20 22 50.8	-0.5
PHP	Peshkopia	124.05	318	P	PKPdf	20 22 50.8	-0.5
MCD	Coleburn Disti	124.05	345	eP	PKPdf	20 22 50.2	-0.5
OHR	Ohrid	124.08	318	i PKP	PKPdf	20 22 51.0	-0.4
KOME	Kolasin	124.10	320	⇑iPKP	PKPdf	20 22 53.6	+2.2
THAL	Thalero	124.10	314	P	PKPdf	20 22 51.6	+0.2
IMMV	Iera Moni Meta	124.10	310	P	PKPdf	20 22 53.4	+1.9
ARSA	Arzberg	124.11	326	ePdiff	Pdif	20 19 26.7	+1.5
	comp=Z,18nm,0.9s,SNR=9.1						
ARSA				ePKiKP	PKPdf	20 22 51.2	0.0
	comp=Z,58nm,0.9s,SNR=28						
GEC2	GERESS Array S	124.12	329	ePdif	Pdif	20 19 25.2	0.0
GEC2				ePKPdf	PKPdf	20 22 51.4	+0.1
GEC2				eSKPdf	SKiKP	20 26 24.6	+2.0
GEC2	GERESS Array S	124.12	329	eP	Pdif	20 19 25.3	0.0
GEC2				e		20 22 51.4	
GERES	GERESS Array B	124.12	329	Pdiff	Pdif	20 19 25.4	0.0
	comp=Z,5.3nm,0.8s,baz=48,slow=4.0,SNR=37						
GERES				PKhKP	PKPpre	20 22 38.5	
	comp=Z,0.6nm,0.7s,baz=62,slow=9.0,SNR=3.0						
GERES				PKP	PKiKP	20 22 51.6	+0.1
	comp=Z,128nm,0.7s,baz=66,slow=1.7,SNR=144						
GERES				SKPab	SKPab	20 26 00.5	
	comp=Z,20nm,1.1s,baz=60,slow=4.7,SNR=5.1						
GERES				SKP		20 26 24.6	
	comp=Z,7.9nm,0.9s,baz=48,slow=2.0,SNR=5.0						
GERES				SKKPbc	SKKPbc	20 36 24.9	+1.0
	comp=Z,1.8nm,1.0s,baz=194,slow=5.0,SNR=4.5						
GEA0	GERESS Array S	124.13	329	ePdif	Pdif	20 19 24.9	-0.4
GEA0				ePKPdf	PKiKP	20 22 51.8	+0.3
LBNH	Lisbon	124.18	38	P	PKPdf	20 22 51.1	-0.3
	baz=302						
LBNH	Lisbon	124.18	38	ePKPdf	PKPdf	20 22 51.9	+0.5
061Z	Ochoppi	124.19	62	P	PKPdf	20 22 51.1	-0.8
	baz=283						
KPRO	Kipourio	124.21	316	P	PKPdf	20 22 51.2	-0.5
MME1	Meikle Cairn	124.21	345	eP	PKPdf	20 22 50.2	-0.9
NEST	Nestorio	124.23	317	P	PKPdf	20 22 51.4	-0.3
HNH	Hanover	124.23	39	ePKPdf	PKPdf	20 22 52.0	+0.6
GVD	Gavdhos	124.24	309	ePKPdf	PKPdf	20 22 52.3	+0.5
GVD	Gavdhos	124.24	309	P	PKPdf	20 22 52.3	+0.5
PENT	Pentalofos	124.26	316	P	PKPdf	20 22 52.2	+0.4
KBN	Korca	124.31	317	ePKPdf	PKPdf	20 22 53.4	+1.6
KBN	Korca	124.31	317	P	PKPdf	20 22 53.4	+1.6
UPM	Unac-Piva	124.31	321	⇓iPKP	PKPdf	20 22 51.6	-0.3
KALE	Kalithea	124.33	314	ePKPdf	PKPdf	20 22 51.7	-0.2
KALE	Kalithea	124.33	314	P	PKPdf	20 22 51.7	-0.2
EVR	Evrytania	124.35	315	P	PKPdf	20 22 51.9	-0.1
GUR	Goura	124.37	314	ePKPdf	PKPdf	20 22 51.5	-0.6
GUR	Goura	124.37	314	P	PKPdf	20 22 51.5	-0.6
SERG	Sergoula	124.38	314	P	PKPdf	20 22 51.8	-0.2
TRIZ	Trizonia	124.39	314	P	PKPdf	20 22 51.8	-0.1
ANX	Ano Chora	124.41	314	P	PKPdf	20 22 51.5	-0.6
ALIK	Aliki, Aigiali	124.41	314	P	PKPdf	20 22 53.8	+1.8
VLI	Veliai	124.42	312	ePKPdf	PKPdf	20 22 52.4	+0.3
VLI	Veliai	124.42	312	P	PKPdf	20 22 52.4	+0.3
MOA	Molln	124.44	328	ePdiff	Pdif	20 19 28.4	+1.8
	comp=Z,7.8nm,0.8s						
MOA				PKiKP	PKPdf	20 22 51.8	0.0
	comp=Z,63nm,0.8s,SNR=50						
NKY	Niksic	124.45	320	⇓iPKP	PKPdf	20 22 51.7	-0.4
KLV	Kalavryta, Ach	124.47	314	ePKPdf	PKPdf	20 22 51.8	-0.4
KLV	Kalavryta, Ach	124.47	314	P	PKPdf	20 22 51.8	-0.4
ANKY	Antikythira Is	124.47	311	ePKPdf	PKPdf	20 22 52.8	+0.6
ANKY	Antikythira Is	124.47	311	P	PKPdf	20 22 52.8	+0.6
PDG	Podgorica	124.47	320	⇑iP	Pdif	20 19 27.7	+0.8
PDG	Podgorica	124.47	320	⇓iP	PKPdf	20 22 54.3	+2.3
PDG	Podgorica	124.47	320	P	PKPdf	20 22 51.7	-0.3
TTG	Podgorica	124.47	320	⇓iPKP	PKPdf	20 22 53.9	+1.9
TTG	Podgorica	124.47	320	ePKPdf	PKPdf	20 22 51.2	-0.8
EFP	Efpalio	124.48	314	P	PKPdf	20 22 52.9	+0.8
NKME	Niksic	124.50	320	⇑iPKP	PKPdf	20 22 51.7	-0.4
PAL	Palisades	124.50	42	P	PKPdf	20 22 51.5	-0.6
	baz=298						
KYTH	Kithira	124.51	311	ePKPdf	PKPdf	20 22 52.6	+0.3
KYTH	Kithira	124.51	311	P	PKPdf	20 22 52.6	+0.3
LAKA	Lakka	124.51	314	ePKPdf	PKPdf	20 22 52.0	-0.2
LAKA	Lakka	124.51	314	P	PKPdf	20 22 52.0	-0.2
KTHR	Kythira	124.55	311	P	PKPdf	20 22 53.7	+1.4
BLY	Banja Luka	124.56	323	⇓iP	PKPdf	20 22 54.8	+2.7
BLY	Banja Luka	124.56	323	⇓iP	SKPdf	20 26 24.3	+1.6
BLY	Banja Luka	124.56	323	ePKPdf	PKPdf	20 22 51.9	-0.1
VLX	Vlachokerasia	124.57	313	ePKPdf	PKPdf	20 22 52.8	+0.3
VLX	Vlachokerasia	124.57	313	P	PKPdf	20 22 52.8	+0.3
TRIP	Tripoli	124.59	313	P	PKPdf	20 22 53.9	+1.4
CEME	Cevo	124.63	320	⇑iPKP	PKPdf	20 22 53.3	+0.9
DRME	Dracevica, Mon	124.64	319	⇑iPKP	PKPdf	20 22 52.3	0.0
PVO	Paravola	124.68	315	P	PKPdf	20 22 54.0	+1.5
BRY	Bratogost	124.69	321	⇑iPKP	PKPdf	20 22 51.9	-0.7
PERS	Pernice	124.70	326	i PKPdf	PKPdf	20 22 52.2	-0.1
JAN	Janina	124.70	316	ePKPdf	PKPdf	20 22 53.0	+0.4
JAN	Janina	124.70	316	P	PKPdf	20 22 53.0	+0.4
ULC	Ulcinj	124.71	319	⇑iPKP	PKPdf	20 22 53.0	+0.5
SOKA	Soboth	124.72	326	ePdiff	Pdif	20 19 28.8	+0.8
	comp=Z,28nm,1.8s,SNR=18						
SOKA				ePKiKP	PKPdf	20 22 52.4	0.0
	comp=Z,153nm,1.0s,SNR=84						
DSL	Palaion Diasel	124.76	315	ePKPdf	PKPdf	20 22 52.3	-0.4
DSL	Palaion Diasel	124.76	315	P	PKPdf	20 22 52.3	-0.4
BUM	Brajici-Budva	124.77	320	⇑iPKP	PKPdf	20 22 52.9	+0.2
DRO	Drossia	124.82	314	P	PKPdf	20 22 54.2	+1.4
DYR	Agios Nikonas	124.85	312	P	PKPdf	20 22 53.3	+0.4
KPL	Plockton	124.87	346	eP	PKPdf	20 22 52.2	0.0
KPL				IAMs_20	IAMs_20	21 10 24.4	
	comp=Z,10μm,28.1s						
PDO	Prodromos	124.93	315	P	PKPdf	20 22 52.7	-0.3
HCY	Herceg Novi	124.95	320	⇑iPKP	PKPdf	20 22 52.3	-0.6
RLS	Riolos of Patr	124.95	314	P	PKPdf	20 22 53.4	+0.4
ITM	Ithomi	124.98	313	ePKPdf	PKPdf	20 22 52.6	-0.6
ITM	Ithomi	124.98	313	P	PKPdf	20 22 53.3	+0.1
AMT	Artemida-Makis	125.00	313	P	PKPdf	20 22 53.6	+0.4
OBKA	Obir	125.09	326	i Pdiff	Pdif	20 19 30.7	+1.0
	comp=Z,8.6nm,0.9s						
OBKA				ePKiKP	PKPdf	20 22 53.0	-0.1
	comp=Z,73nm,1.0s,SNR=28						
OZLJ	Ozalj	125.09	325	P	PKPdf	20 22 53.1	+0.1
PQI	Presque Isle	125.10	34	ePKPdf	PKPdf	20 22 53.4	+0.4
IGT	Igoumenitsa	125.11	316	ePKPdf	PKPdf	20 22 52.8	-0.5
IGT	Igoumenitsa	125.11	316	P	PKPdf	20 22 52.8	-0.5
SGD	Sagiada	125.14	316	P	PKPdf	20 22 53.2	-0.1
SRN	Sarande	125.18	317	ePKPdf	PKPdf	20 22 52.9	-0.5
SRN	Sarande	125.18	317	P	PKPdf	20 22 52.9	-0.5
PKME	Peaks-Kenny Pk	125.20	36	P	PKPdf	20 22 52.2	-1.1
	baz=305						
PKME	Peaks-Kenny Pk	125.20	36	ePKPdf	PKPdf	20 22 52.9	-0.3
PKME				LR	LR		
	comp=Z,14μm,21.0s						
LKD2	Lefkada island	125.22	315	P	PKPdf	20 22 53.7	+0.1
WTSB	Winterswijk	125.22	335	ePKP	PKPdf	20 22 53.4	+0.3
	comp=Z,351nm,1.4s						
WTSB				ePP	PP	20 24 43.2	+0.5
PYL	PYLOS	125.23	313	ePKPdf	PKPdf	20 22 52.6	-1.0
PYL	PYLOS	125.23	313	P	PKPdf	20 22 52.6	-1.0
STON	Ston	125.24	321	P	PKPdf	20 22 52.9	-0.5
BOJS	Bojanci	125.28	325	i PKPdf	PKPdf	20 22 54.0	+0.5
INVG	Invergeldie, C	125.28	345	eP	PKPdf	20 22 53.0	-0.1
INVG				IAMs_20	IAMs_20	21 14 17.9	
	comp=Z,11μm,26.4s						
EVGI	Lefkada island	125.29	315	P	PKPdf	20 22 54.6	+0.9
HRV	Adam Dziewonsk	125.30	40	P	PKPdf	20 22 52.4	-1.2
	baz=301						
AVIZ	Vizcacheras	125.31	137	eP	PKPdf	20 22 54.8	+0.8
AAGR	Agrelo	125.32	136	eP	PKPdf	20 22 55.0	+0.9
ESY	Stoneypath	125.33	344	eP	PKPdf	20 22 53.3	+0.1
VISS	Visnje	125.34	325	i PKPdf	PKPdf	20 22 53.9	+0.3
WVL	Waterville	125.38	37	ePKPdf	PKPdf	20 22 54.8	+1.1
ARCO	CERRO ARCO	125.39	136	eP	PKPdf	20 22 53.5	-0.8
KEK	Kerkira	125.40	317	P	PKPdf	20 22 50.3	-3.6
KBA	Koelnbreinsper	125.40	327	ePdiff	Pdif	20 19 32.1	+0.9
	comp=Z,2.4nm,0.7s						
KBA				ePKiKP	PKPdf	20 22 53.8	-0.1
	comp=Z,93nm,0.8s,SNR=34						
AUSP	Uspallata	125.42	135	eP	PKPdf	20 22 52.1	-2.4
FSK	Fiskardo	125.43	315	P	PKPdf	20 22 53.7	-0.2
EDI	Edinburgh	125.49	344	eP	PKPdf	20 22 52.3	-1.2
EDI				IAMs_20	IAMs_20	21 09 54.7	
	comp=Z,10μm,33.5s						
MYKA	Terra Mystica	125.52	327	ePdiff	Pdif	20 19 32.8	+1.2
	comp=Z,3.2nm,0.6s						
MYKA				ePKiKP	PKPdf	20 22 54.0	+0.1
	comp=Z,71nm,0.9s,SNR=25						
GO04	Tololo Observa	125.52	132	ePKPdf	PKPdf	20 22 54.2	-0.5
VLS	Valsamata	125.53	315	P	PKPdf	20 22 53.7	-0.5
UDBI	Udbina	125.53	323	P	PKPdf	20 22 54.1	+0.1
ASAL	Salagasta	125.60	136	eP	PKPdf	20 22 54.1	-0.5
BRYW	Bryant College	125.62	40	ePKPdf	PKPdf	20 22 54.7	+0.5
RTLS	Leoncito	125.72	135	eP	PKPdf	20 22 56.4	+1.2
JAVS	Javornik	125.72	326	i PKPdf	PKPdf	20 22 54.3	-0.1
EKA	Eskdalemuir Ar	126.00	344	PKhKP	PKPpre	20 22 44.2	
	comp=Z,2.1nm,0.7s,baz=90,slow=0.7,SNR=5.2						
EKA				PKP	PKPdf	20 22 54.6	+0.1
	comp=Z,11nm,0.5s,baz=18,slow=2.5,SNR=18						
EKA				SKPab	SKPab	20 26 07.5	
	comp=Z,14nm,0.8s,baz=45,slow=2.3,SNR=5.9						
EKA				SKKPbc	SKKPbc	20 36 17.6	-0.2
	comp=Z,1.8nm,0.7s,baz=193,slow=3.4,SNR=3.6						
TRI	Trieste	126.00	326	ePKPdf	PKPdf	20 22 53.9	-0.9
ESK	Eskdalemuir	126.03	344	ePKPdf	PKPdf	20 22 54.9	+0.3
ESK				LR	LR		
	comp=Z,7μm,21.0s						
ESK	Eskdalemuir	126.03	344	eP	PKPdf	20 22 54.5	0.0
ESK				IAMs_20	IAMs_20	21 10 53.6	
	comp=Z,9μm,28.6s						
NVLJ	Novalja	126.04	324	P	PKPdf	20 22 54.8	0.0
ABTA	Abfaltersbach	126.06	327	ePdiff	Pdif	20 19 33.2	-0.8
	comp=Z,8.2nm,0.9s						
ABTA				ePKiKP	PKPdf	20 22 54.6	-0.4
	comp=Z,220nm,0.9s,SNR=69						
EDMD	Edmundbyers	126.08	342	eP	PKPdf	20 22 54.5	-0.2
EDMD				IAMs_20	IAMs_20	21 12 24.7	
	comp=Z,15μm,29.0s						
WATA	Walderalm	126.18	328	ePdiff	Pdif	20 19 36.2	+1.7
	comp=Z,2.1nm,0.7s						
WATA				ePKiKP	PKiKP	20 22 55.9	+0.1
	comp=Z,128nm,0.7s,SNR=52						
LCO	Las Campanas	126.19	131	ePKPdf	PKPdf	20 22 55.8	-0.3
LCO				LR	LR		
	comp=Z,5μm,21.0s						
WTTA	Wattenberg	126.19	328	ePdiff	Pdif	20 19 35.8	+1.1
	comp=Z,5.2nm,0.9s						
WTTA				ePKiKP	PKiKP	20 22 56.2	+0.4
	comp=Z,284nm,0.9s,SNR=61						
RTCV	Cerro Valdivia	126.22	135	eP	PKPdf	20 22 55.6	-0.1
MOTA	Moosalm	126.42	329	ePdiff	Pdif	20 19 35.8	+0.1
	comp=Z,2.6nm,0.8s						
STU	Stuttgart	126.42	331	ePKPpre	PKPpre	20 22 45.7	
STU				ePKPdf	PKPdf	20 22 55.6	+0.1
TRQA	Tornquist	126.43	146	ePKPdf	PKPdf	20 22 56.2	+0.3
TRQA				ePP	PP	20 24 53.6	+2.5
TRQA				LR	LR		
	comp=Z,4μm,21.0s						
HGN	Heimansgroeve	126.48	335	ePKP	PKPdf	20 22 56.1	+0.5
	comp=Z,214nm,1.0s						
HGN				ePP	PP	20 24 51.6	+0.5
AROD	Rodeo	126.49	133	eP	PKPdf	20 22 57.8	+1.1
RETA	Reutte	126.50	329	ePKiKP	PKiKP	20 22 56.5	+0.2
	comp=Z,123nm,1.0s,SNR=36						
FASA	Fasano	126.51	319	eP	PKPdf	20 22 57.6	+1.7
CGL1	Ceglie Messapi	126.51	319	eP	PKPdf	20 22 58.2	+2.2
MEM	Membach	126.56	335	⇑PKIKP	PKPdf	20 22 56.1	+0.4
RTLL	Cerro Villicun	126.56	135	eP	PKPdf	20 22 56.1	-0.3
BEBN	Eben Emael	126.56	335	⇑PKIKP	PKPdf	20 22 56.2	+0.5
BEBN				⇑PP	PP	20 24 54.6	+2.9
KESW	Keswick, Cumbr	126.63	343	eP	PKPdf	20 22 55.5	-0.3
KESW				IAMs_20	IAMs_20	21 11 57.5	
	comp=Z,9μm,27.4s						
BAI	Bari	126.67	319	eP	PKPdf	20 22 58.3	+2.1
TAR1	Taranto	126.70	319	eP	PKPdf	20 22 56.4	+0.1
HPK	Haverah Park	126.72	342	eP	PKPdf	20 22 56.2	+0.3
HPK				IAMs_20	IAMs_20	21 13 14.0	
	comp=Z,11μm,27.2s						
MASS	Massafra	126.74	319	eP	PKPdf	20 22 56.3	-0.1
ACDV	Cuesta del Vie	126.75	133	eP	PKPdf	20 22 55.0	-2.0
AMOG	MOGNA	126.77	135	eP	PKPdf	20 22 54.9	-1.9
FETA	Feichten	126.82	329	ePdiff	Pdif	20 19 36.0	-1.5
	comp=Z,2.0nm,0.8s						
FETA				ePKiKP	PKiKP	20 22 57.6	+0.5
	comp=Z,253nm,0.9s,SNR=42						
ACAN	Cantantal	126.91	137	eP	PKPdf	20 22 57.4	+0.3
SG1	Sgolgore (BA)	126.94	319	eP	PKPdf	20 22 57.3	+0.5
WACR	West Acre	127.01	339	eP	PKPdf	20 22 56.5	0.0
WACR				IAMs_20	IAMs_20	21 12 19.6	
	comp=Z,22μm,28.6s						
CLGH	Cloghs, Cushen	127.01	345	eP	PKPdf	20 22 56.7	+0.2
CLGH				IAMs_20	IAMs_20	21 11 14.7	
	comp=Z,12μm,27.6s						
MATE	Matera	127.02	319	⇓iP	PKPdf	20 22 59.8	+2.9
DAVA	Damuels	127.09	329	ePdiff	Pdif	20 19 35.6	-3.1
	comp=Z,5.3nm,0.9s						
DAVA				ePKiKP	PKiKP	20 22 57.9	+0.3
	comp=Z,203nm,0.8s,SNR=39						
UCC	Uccle	127.11	336	⇑PKP	PKPdf	20 22 57.3	+0.6
UCC				⇓PP	PP	20 24 57.5	+2.2
UCC	Uccle	127.11	336	ePKPdf	PKPdf	20 22 57.4	+0.6
UCC				ePP	PP	20 24 53.3	-1.9
BFO	Black Forest	127.14	331	ePKPdf	PKPdf	20 22 56.7	-0.2
BFO				ePP	PP	20 24 50.4	-5.3
BFO				LR	LR		
	comp=Z,319nm,20.0s						
BFO	Black Forest	127.14	331	i PKIKP	PKPdf	20 22 57.4	+0.4
WLF	Walferdange	127.20	334	⇑PKP	PKPdf	20 22 58.5	+1.6
WLF	Walferdange	127.20	334	ePKPpre	PKPpre	20 22 49.5	
WLF				ePKPdf	PKiKP	20 22 58.1	+0.6
BCIP	Isla Barro Col	127.23	82	PFAKE		20 23 10.0	+12
BCIP				LR	LR		
	comp=Z,6μm,22.0s						
LBWR	Ladybower, Pea	127.23	341	eP	PKPdf	20 22 57.1	+0.2
LBWR				IAMs_20	IAMs_20	21 10 47.0	
	comp=Z,10μm,27.4s						
GO03	Copiap	127.27	130	ePKPdf	PKPdf	20 22 58.0	0.0
FUORN	Ofenpass-Fuorn	127.33	328	ePKPpre	PKPpre	20 22 45.5	
FUORN				ePKPdf	PKiKP	20 22 59.0	+0.8
SNF	Seneffe	127.36	335	⇑PKIKP	PKPdf	20 22 57.9	+0.6
DAVOX	Davos/Dischmat	127.42	329	Pdiff	Pdif	20 19 40.0	-0.2
	comp=Z,6.0nm,0.9s,baz=39,slow=6.2,SNR=6.9						
DAVOX				PKhKP	PKPpre	20 22 45.8	
	comp=Z,14nm,0.7s,baz=280,slow=2.7,SNR=20						
DAVOX				PKP	PKiKP	20 22 58.3	0.0
	comp=Z,180nm,0.8s,baz=70,slow=1.8,SNR=62						
DAVOX				SKPab	SKPab	20 26 12.2	
	comp=Z,34nm,1.0s,baz=48,slow=6.0,SNR=5.3						
DAVOX				SKP		20 26 31.8	
	comp=Z,12nm,0.7s,baz=66,slow=4.9,SNR=4.6						
AGUA	GUANDACOL	127.58	133	eP	PKPpre	20 22 54.3	
NNA	Nana	127.60	109	PFAKE		20 23 10.0	+11
NNA				LR	LR		
	comp=Z,2μm,22.0s						
STNC	Stoke	127.64	341	eP	PKPdf	20 22 57.5	-0.2
STNC				IAMs_20	IAMs_20	21 18 44.4	
	comp=Z,11μm,26.5s						
CWF	Charnwood Fore	127.65	341	eP	PKPdf	20 22 57.5	-0.2
CWF				IAMs_20	IAMs_20	21 13 08.8	
	comp=Z,13μm,27.3s						
TIP	Timpagrande	127.72	317	⇓iP	PKPdf	20 23 01.1	+2.7
TIP	Timpagrande	127.72	317	ePKPpre	PKPpre	20 22 45.4	
TIP				ePKPdf	PKPdf	20 22 58.1	-0.3
TIP				ePKPdf	PKiKP	20 22 58.6	-0.4
TIP	Timpagrande	127.72	317	P	PKPdf	20 22 58.1	-0.3
ECH	Echery	127.78	332	ePKPpre	PKPpre	20 22 45.9	
ECH				ePKPdf	PKPdf	20 22 58.0	-0.2
ECH				ePP	PP	20 24 53.5	-6.4
MRA	San Martin	127.82	138	eP	PKPpre	20 22 55.4	
TUE	Stuetta	127.90	329	ePKPdf	PKPdf	20 22 58.9	+0.2
CUC	Castrocucco	127.94	319	ePKPpre	PKPpre	20 22 45.3	
CUC				ePKPdf	PKPdf	20 22 58.1	-0.7
WME	Myndd Eilian	128.02	343	eP	PKPdf	20 22 58.3	-0.1
WPM1	Penmaenmawr	128.02	343	eP	PKPdf	20 22 58.0	-0.4
WPS	Cemaes, Angles	128.07	343	eP	PKPdf	20 22 58.9	+0.4
WPS				IAMs_20	IAMs_20	21 11 40.2	
	comp=Z,9μm,29.4s						
WLF1	Llynfaes	128.14	343	eP	PKPdf	20 22 58.3	-0.3
WLF1				IAMs_20	IAMs_20	21 11 57.1	
	comp=Z,17μm,27.7s						
AQU	L'Aquila	128.18	322	ePKPpre	PKPpre	20 22 45.7	
AQU				ePKPdf	PKPdf	20 22 59.2	0.0
AQU	L'Aquila	128.18	322	ePKHKP	PKPpre	20 22 45.7	
AQU				e		20 22 59.2	
VCA	Vinchina	128.19	132	eP	PKPdf	20 23 02.0	+2.2
YRC	Rhoscolyn	128.22	343	eP	PKPdf	20 23 00.0	+1.2
OTAV	Otavalo	128.26	93	PFAKE		20 23 10.0	+9.4
OTAV				LR	LR		
	comp=Z,5μm,22.0s						
OTAV	Otavalo	128.26	93	eP	PKPdf	20 23 04.3	+3.7
OTAV				eP	PKiKP	20 23 06.7	+5.4
HLM1	Long Mynd	128.35	342	eP	PKPdf	20 22 59.4	+0.2
HLM1				IAMs_20	IAMs_20	21 10 29.9	
	comp=Z,7μm,28.5s						
SSW	Stow on the Wo	128.48	340	eP	PKPdf	20 23 00.2	+0.9
MTDJ	Mount Denham	128.69	70	PFAKE		20 23 10.0	+9.2
MTDJ				LR	LR		
	comp=Z,7μm,22.0s						
DSB	Dublin	128.73	344	ePKPdf	PKPdf	20 23 00.4	+0.6
STRD	Stroud	128.75	341	eP	PKPdf	20 22 59.3	-0.6

STRD				IAMs_20	IAMs_20	21 12 01.4	
	comp=Z,15µm,29.6s						
CEL	Celeste	128.76	317	ePKPpre	PKPpre	20 22 48.7	
CEL				ePKPdf	PKiKP	20 23 00.8	-0.2
MCH1	Michaelchurch	128.83	341	eP	PKPdf	20 22 59.3	-0.7
MCH1				IAMs_20	IAMs_20	21 11 31.7	
	comp=Z,9µm,26.9s						
VLC	Villacollemand	128.85	326	ePKPpre	PKPpre	20 22 48.8	
VLC				ePKPdf	PKPdf	20 23 00.6	+0.3
VLC				ePP	PP	20 24 58.8	-8.3
SWN1	Swindon	128.85	340	eP	PKPdf	20 23 00.5	+0.5
SWN1				IAMs_20	IAMs_20	21 12 36.4	
	comp=Z,14µm,27.9s						
MONM	Monmouth	128.91	341	eP	PKPdf	20 22 59.8	-0.3
MONM				IAMs_20	IAMs_20	21 10 01.3	
	comp=Z,11µm,31.4s						
PB10	IPOC Station P	129.00	125	ePKPpre	PKPpre	20 22 49.2	
PB10				ePKPdf	PKiKP	20 23 02.0	+0.1
SENIN	Lac Senin/Sane	129.01	330	ePKPpre	PKPpre	20 22 49.5	
SENIN				ePKPdf	PKiKP	20 23 01.3	-0.2
HGH	Gray Hill	129.08	341	eP	PKPdf	20 23 00.5	0.0
TCA	Tanti	129.24	137	eP	PKPdf	20 23 02.4	+0.8
PB04	IPOC Station P	129.87	124	ePKPdf	PKPdf	20 23 03.8	+0.7
PB04	IPOC Station P	129.87	124	eP	PKPdf	20 23 04.7	+1.6
HTL	Hartland	130.17	342	eP	PKPdf	20 23 02.1	-0.4
HTL				IAMs_20	IAMs_20	21 19 04.6	
	comp=Z,6µm,24.7s						
VAE	Valguarnera	130.17	317	PKhKP	PKPpre	20 22 50.5	
	comp=Z,1.8nm,0.4s,baz=37,slow=12,SNR=2.1						
VAE				SKPbc	SKPbc	20 26 24.1	+2.8
	comp=Z,119nm,1.1s,baz=87,slow=2.6,SNR=15						
POPC	Popayan, Colom	130.22	91	eP	PKPdf	20 23 04.1	0.0
BNI	Bardonecchia	130.24	329	ePKPpre	PKPpre	20 22 50.3	
BNI				ePKPdf	PKiKP	20 23 04.1	+0.1
BNI	Bardonecchia	130.24	329	ePKHKP	PKPpre	20 22 50.3	
BNI				e		20 23 04.1	
TSUM	Tsumeb	130.28	240	PKhKP	PKPpre	20 22 51.4	
	comp=Z,1.0nm,0.4s,baz=4.2,slow=7.2,SNR=4.9						
TSUM				SKPbc	SKPbc	20 26 25.2	+2.9
	comp=Z,60nm,1.0s,baz=92,slow=4.7,SNR=16						
TSUM	Tsumeb	130.28	240	PFAKE		20 23 20.0	+16
TSUM				LR	LR		
	comp=Z,6µm,21.0s						
HORQ	Saladito	130.33	89	eP	PKPdf	20 23 04.9	+0.5
HORQ				eP	PKiKP	20 23 05.9	+0.7
HORQ				eP	PKiKP	20 23 07.3	+2.1
PB07	IPOC Station P	130.36	124⇓	eP	PKPdf	20 23 06.3	+2.3
PCON	Cinco Dias	130.48	91	eP	PKPdf	20 23 08.8	+3.8
PB02	IPOC Station P	130.53	123	eP	PKPdf	20 23 05.9	+1.6
YOTC	Yotoco, Valle	130.63	89	eP	PKPdf	20 23 08.8	+4.1
GTBY	Guantanamo Bay	130.65	68	PFAKE		20 23 20.0	+16
GTBY				LR	LR		
	comp=Z,6µm,22.0s						
DBBC	Dabeiba	130.84	85	eP	PKPdf	20 23 04.2	-0.8
PB09	IPOC Station P	130.86	124	eP	PKPdf	20 23 05.9	+0.9
PB09				eP	PKiKP	20 23 06.5	+0.6
JSA	Saint Aubin	130.93	339	eP	PKPdf	20 23 04.2	+0.1
JSA				IAMs_20	IAMs_20	21 12 57.9	
	comp=Z,18µm,31.3s						
CLTB	Caltabellotta	130.93	317	ePKPpre	PKPpre	20 22 52.3	
CLTB				ePKPdf	PKiKP	20 23 05.1	-0.4
LPA	La Plata	130.96	146	cePKIKP	PKPdf	20 23 04.0	-0.6
LPA				pPP		20 25 34.0	
LPA				PKS	PKSbc	20 26 27.0	-3.3
LPA				SDIFF		20 33 23.0	
PB01	IPOC Station P	130.99	123	ePKPpre	PKPpre	20 22 55.9	
PB01				ePKPdf	PKPdf	20 23 03.2	-2.0
PB01	IPOC Station P	130.99	123	eP	PKPdf	20 23 05.6	+0.5
CCA1	Carnmenellis	131.11	342	eP	PKPdf	20 23 04.3	-0.1
SSB	Saint Sauveur	131.14	331	ePKPpre	PKPpre	20 22 52.7	
SSB				ePKPdf	PKiKP	20 23 05.6	0.0
SSB	Saint Sauveur	131.14	331	ePKHKP	PKPpre	20 22 52.7	
SSB				e		20 23 05.6	
PB11	IPOC Station P	131.41	121	eP	PKPpre	20 23 02.0	
BETC	Betania	131.46	91	eP	PKPdf	20 23 08.9	+2.7
HELC	Santa Helena	131.51	86	eP	PKPdf	20 23 06.2	-0.5
ANIL	Santa Ana	131.59	88	eP	PKPdf	20 23 07.3	+0.6
PB16	IPOC Station P	132.13	120⇑	iP	PKPpre	20 22 59.8	
ROSC	El Rosal	132.68	88	PKhKP	PKPpre	20 22 59.0	
	comp=Z,5.1nm,0.4s,baz=210,slow=20,SNR=2.3						
ROSC				PKP	PKPdf	20 23 07.8	-1.1
	comp=Z,22nm,0.5s,baz=196,slow=21,SNR=9.9						
ROSC				SKPbc	SKPab	20 26 33.0	+0.2
	comp=Z,13nm,0.5s,baz=280,slow=5.7,SNR=3.4						
ROSC	El Rosal	132.68	88	ePKPpre	PKPpre	20 22 58.1	
ROSC				ePKPdf	PKPdf	20 23 08.2	-0.8
ROSC				eSKPbc	SKPab	20 26 34.9	+2.1
CHIC	Chingaza	133.26	88	eP	PKPpre	20 23 06.0	
CHIC				eP	PKiKP	20 23 08.7	-2.6
CHIC				eP	PKiKP	20 23 09.7	-1.6
HJA	Humahuaca	133.26	128	eP	PKPdf	20 23 07.7	-2.1
VILC	Villavicencio,	133.28	89	eP	PKPdf	20 23 17.1	+7.4
YJA	Yavi	133.71	127	eP	PKPpre	20 23 05.9	
BARC	Barichara	133.84	85	eP	PKPdf	20 23 11.3	+0.4
GRTK	Grand Turk	133.92	65	PFAKE		20 23 20.0	+9.5
GRTK				LR	LR		
	comp=Z,5µm,20.0s						
RUSC	La Rusia	133.94	86	eP	PKPdf	20 23 12.1	+0.7
TAMR	Tamra	133.95	319	eP	SKPdf	20 26 36.7	-3.7
	comp=Z,441nm,1.6s						
LPAZ	La Paz	134.16	118	PKhKP	PKPpre	20 23 01.6	
	comp=Z,5.0nm,0.7s,baz=331,slow=4.0,SNR=8.8						
LPAZ				PKP	PKPdf	20 23 09.8	-2.1
	comp=Z,6.4nm,0.5s,baz=18,slow=3.3,SNR=15						
LPAZ				SKPbc	SKPab	20 26 38.5	-1.0
	comp=Z,60nm,1.0s,baz=271,slow=3.5,SNR=12						
LPAZ	La Paz	134.16	118	ePKPpre	PKPpre	20 22 59.0	
LPAZ				ePKPdf	PKPdf	20 23 09.9	-2.0
LPAZ	La Paz	134.16	118⇑	iP	PKPdf	20 23 09.1	-2.8
LPAZ	La Paz	134.16	118	ePKHKP	PKPpre	20 22 59.0	
LPAZ				e		20 23 09.9	
PAMC	Pamplona, Colo	134.32	84	eP	PKPdf	20 23 13.1	+0.9
KEST	Kesra	134.54	318	PKhKP	PKPpre	20 22 58.4	
	comp=Z,5.0nm,0.7s,baz=179,slow=3.3,SNR=8.4						
KEST				PKP	PKPdf	20 23 09.8	-1.6
	comp=Z,41nm,0.9s,baz=92,slow=1.9,SNR=14						
KEST				SKPbc	SKPab	20 26 38.4	-1.5
	comp=Z,91nm,0.9s,baz=335,slow=2.8,SNR=19						
YOPC	Yopal, Colombi	134.59	87	eP	PKPpre	20 23 09.1	
THTN	Thala	135.08	318	ePKPpre	PKPpre	20 23 00.5	
THTN				ePKPdf	PKiKP	20 23 13.6	-0.4
BBSR	BB Station	135.14	47	PFAKE		20 23 20.0	+7.5
BBSR				LR	LR		
	comp=Z,11µm,22.0s						
TAMC	Tame, Arauca	135.23	86	eP	PKPdf	20 23 14.6	+1.4
CMAH	Djebel Manchou	135.29	320	P	PKPpre	20 23 09.1	
ABSA	Djebel Ababsia	135.46	320	P	PKPpre	20 23 09.7	
CAEH	’Ain El Ouahch	135.56	321	P	PKPdf	20 23 11.8	-1.4
CKFL	Kef-Lekhel	135.87	320	P	PKPdf	20 23 13.4	-0.6
CASM	Ain Smara	136.10	320	P	PKPdf	20 23 14.8	+0.5
CTEI	Djebel Teioual	136.28	320	P	PKPdf	20 23 15.2	+0.5
DFRA	Djebel Bou Aff	136.32	321	P	PKPdf	20 23 15.6	+0.8
SDV	Santo Domingo	136.32	82	PKP	PKPdf	20 23 15.1	-0.4
	comp=Z,69nm,0.8s,baz=332,slow=4.5,SNR=10						
SDV				SKPbc	SKPbc	20 26 44.5	+1.6
	comp=Z,45nm,0.9s,baz=255,slow=5.8,SNR=6.9						
SDV	Santo Domingo	136.32	82	ePKPpre	PKPpre	20 23 04.5	
SDV				ePKPdf	PKPdf	20 23 15.5	0.0
SDV				eSKPbc	SKPbc	20 26 45.1	+2.2
SDV				LR	LR		
	comp=Z,6µm,22.0s						
SDV	Santo Domingo	136.32	82	eP	PKPdf	20 23 17.8	+2.3
SET	Setif	136.83	321	P	PKPdf	20 23 20.0	+4.3
CKHR	Kef el Ahmar	136.88	321	P	PKPdf	20 23 18.5	+2.6
CPUP	Villa Florida	137.32	138	PKhKP	PKPpre	20 23 05.2	
	comp=Z,1.7nm,0.5s,baz=272,slow=1.4,SNR=6.0						
CPUP				PKP	PKPdf	20 23 16.9	+0.1
	comp=Z,40nm,0.9s,baz=239,slow=2.8,SNR=7.2						
CPUP				SKPbc	SKPbc	20 26 46.6	+1.3
	comp=Z,11nm,0.8s,baz=226,slow=5.7,SNR=6.2						
CPUP				PKKP	PKKPdf	20 32 52.1	+0.2
	comp=Z,3.4nm,0.7s,baz=84,slow=2.7,SNR=7.3						
CPUP	Villa Florida	137.32	138	ePKPpre	PKPpre	20 23 08.0	
CPUP				ePKPdf	PKPdf	20 23 17.1	+0.3
CPUP				eSKPbc	SKPbc	20 26 46.8	+1.5
CPUP				PKKP	PKKPdf	20 32 52.1	+0.2
CPUP	Villa Florida	137.32	138	ePKHKP	PKPpre	20 23 08.0	
CPUP				e		20 23 17.1	
EMHD	Djebel Mahouad	138.34	323	P	PKPpre	20 23 13.7	
CRPR	Cabo Rojo, PR	138.45	68	ePKPdf	PKPdf	20 23 19.7	+0.7
AOPR	Arecibo Observ	138.70	67	ePKPdf	PKPdf	20 23 18.6	-1.0
PBRG	Braganca	138.88	337	ePKPdf	PKPpre	20 23 11.5	
PBRG	Braganca	138.88	337	ePP	PP	20 26 13.2	+2.7
EBNR	Beni Rached	139.12	324	P	PKPdf	20 23 15.0	-4.9
SJG	San Juan	139.31	68	ePKPdf	PKPdf	20 23 18.2	-2.4
SJG				LR	LR		
	comp=Z,6µm,21.0s						
ECHA	Ech Chlef	139.32	324	P	PKPpre	20 23 15.2	
PGAV	Gavieira, Arco	139.32	339	ePKPdf	PKPpre	20 23 12.6	
PGAV	Gavieira, Arco	139.32	339	ePP	PP	20 26 16.0	+2.8
PGAV	Gavieira, Arco	139.32	339	eSS	SS	20 44 36.9	+10
PGAV	Gavieira, Arco	139.32	339	eLR	LR	21 11 40.8	
	comp=Z,7µm,20.0s						
ES19	SONSECA Array	139.42	332	ePKPpre	PKPpre	20 23 11.8	
ES19				ePKPdf	PKiKP	20 23 21.9	-0.8
PCAB	Cabril	139.45	338	ePKPdf	PKPpre	20 23 11.6	
PCAB	Cabril	139.45	338	ePP	PP	20 26 18.3	+4.3
ESDC	Sonseca Array	139.47	333	PKhKP	PKPpre	20 23 12.4	
	comp=Z,4.2nm,0.6s,baz=9.8,slow=3.3,SNR=30						
ESDC				PKP	PKiKP	20 23 22.1	-0.7
	comp=Z,25nm,0.7s,baz=13,slow=3.0,SNR=20						
ESDC				PP	PP	20 26 16.4	+2.1
	comp=Z,4.2nm,0.7s,baz=34,slow=6.7,SNR=8.0						
ESDC				SKPbc	SKPbc	20 26 52.4	+1.3
	comp=Z,26nm,1.0s,baz=19,slow=3.0,SNR=13						
ESDC				SKPab	SKPab	20 27 02.5	+1.2
	comp=Z,32nm,1.0s,baz=33,slow=4.1,SNR=7.0						
ESDC				SKKPbc	SKKPbc	20 35 29.2	+1.2
	comp=Z,23nm,1.1s,baz=230,slow=3.3,SNR=25						
ESLA	Sonseca Array	139.47	333	ePKPpre	PKPpre	20 23 12.6	
ESLA				ePKPdf	PKPdf	20 23 21.4	+1.0
MVO	Moncorvo	139.54	337	ePKPdf	PKPpre	20 23 12.2	
MVO	Moncorvo	139.54	337	ePP	PP	20 26 16.7	+2.1
MVO	Moncorvo	139.54	337	eSS	SS	20 45 28.2	+59
MVO	Moncorvo	139.54	337	eLR	LR	21 12 45.8	
	comp=Z,6µm,22.0s						
HUMP	Col San Antoni	139.58	67	ePKPpre	PKPpre	20 23 12.3	
HUMP				ePKPdf	PKPdf	20 23 21.9	+0.9
EANR	’Ain N’Sour	139.61	324	P	PKPpre	20 23 15.5	
POLO	Lamas de Olo	139.66	338	ePKPdf	PKPpre	20 23 13.3	
POLO	Lamas de Olo	139.66	338	ePP	PP	20 26 12.4	-2.9
POLO	Lamas de Olo	139.66	338	eSS	SS	20 45 41.6	+71
PAB	San Pablo	139.75	333	ePKPpre	PKPpre	20 23 13.1	
PAB				ePKPdf	PKPdf	20 23 20.3	-0.7
PAB				LR	LR		
	comp=Z,4µm,21.0s						
PAB	San Pablo	139.75	333	ePKHKP	PKPpre	20 23 13.1	
PAB				e		20 23 20.3	
PAB				MLR	MLR		
	comp=Z,4µm,21.0s						
ETRT	Tiaret	139.88	323	P	PKPpre	20 23 17.4	
PTO	Porto	140.16	338	ePKPdf	PKPpre	20 23 15.9	
PVIS	Viseu	140.26	337	ePKPdf	PKPpre	20 23 15.2	
PVIS	Viseu	140.26	337	ePP	PP	20 26 21.8	+2.8
MTE	Manteigas	140.40	337	ePKPdf	PKPpre	20 23 17.0	
MTE	Manteigas	140.40	337	ePP	PP	20 26 22.8	+2.9
MTE	Manteigas	140.40	337	eSS	SS	20 45 17.1	+38
MTE	Manteigas	140.40	337	eLR	LR	21 13 55.2	
	comp=Z,8µm,22.0s						
MTE	Manteigas	140.40	337	ePKPpre	PKPpre	20 23 15.1	
CDVI	St. Croix	140.68	68	ePKPpre	PKPpre	20 23 15.3	
CDVI				ePKPdf	PKPdf	20 23 23.5	+0.4
PCBR	Castelo Branco	140.85	336	ePKPdf	PKPpre	20 23 17.9	
COI	Coimbra	140.90	337	ePKPdf	PKPpre	20 23 17.8	
COI	Coimbra	140.90	337	ePP	PP	20 26 25.1	+2.3
PCAS	Casmilo, Conde	141.07	337	ePKPdf	PKPpre	20 23 16.7	
PCAS	Casmilo, Conde	141.07	337	ePP	PP	20 26 25.4	+1.5
PCAS	Casmilo, Conde	141.07	337	eSS	SS	20 45 46.4	+60
PMRV	Marv??o	141.16	336	ePKPdf	PKPdf	20 23 15.1	-8.3
PMRV	Marv??o	141.16	336	ePP	PP	20 26 24.9	+0.4
PMRV	Marv??o	141.16	336	eSS	SS	20 45 22.5	+34
PMRV	Marv??o	141.16	336	eLR	LR	21 12 42.4	
	comp=Z,6µm,22.0s						
SAML	Samuel	141.32	110	ePKPpre	PKPpre	20 23 17.0	
SAML				LR	LR		
	comp=Z,4µm,21.0s						
SAML	Samuel	141.32	110	ePKHKP	PKPpre	20 23 17.0	
SAML				MLR	MLR		
	comp=Z,4µm,21.0s						
PTOM	Tomar	141.41	337	ePKPdf	PKPpre	20 23 18.1	
PTOM	Tomar	141.41	337	ePP	PP	20 26 28.1	+2.2
PESTR	Estremoz	141.72	335	ePKPdf	PKPpre	20 23 18.9	
PESTR	Estremoz	141.72	335	ePP	PP	20 26 30.4	+2.5
PESTR	Estremoz	141.72	335	eSS	SS	20 45 32.5	+38
PESTR	Estremoz	141.72	335	ePKPpre	PKPpre	20 23 18.4	
PMTG	Montargil	141.81	336	ePKPdf	PKPpre	20 23 17.6	
PMTG	Montargil	141.81	336	ePP	PP	20 26 30.8	+2.4
PMTG	Montargil	141.81	336	eSS	SS	20 45 53.8	+58
ALMR	Almeirim	141.87	337	eP	PKPpre	20 23 20.1	
ALMR				AMS	AMS	21 29 43.8	
	comp=E,9µm,23.5s						
ALMR	Almeirim	141.87	337	ePKPdf	PKPpre	20 23 20.6	
ALMR	Almeirim	141.87	337	ePP	PP	20 26 30.9	+2.1
ALMR	Almeirim	141.87	337	ePKIKP	PKPpre	20 23 20.0	
PBAR	Barrancos	142.07	334	ePKPdf	PKPpre	20 23 19.2	
PBAR	Barrancos	142.07	334	ePP	PP	20 26 20.8	-9.2
SABA	Saba	142.12	67	eP	PKPpre	20 23 15.8	
PCRV	Puerto La Cruz	142.13	79	PKhKP	PKPpre	20 23 22.5	
	comp=E,14nm,0.7s,baz=194,slow=2.3,SNR=4.6						
PCRV				PP	PP	20 26 35.4	+2.9
	comp=E,7.0nm,0.9s,baz=245,slow=6.7,SNR=1.7						
PCRV				SKP		20 26 56.9	
	comp=E,7.9nm,0.9s,baz=259,slow=5.2,SNR=2.6						
EVO	Evora	142.18	336	ePKPdf	PKPpre	20 23 20.6	
EVO	Evora	142.18	336	ePP	PP	20 26 33.1	+2.4
PMAFR	Mafra	142.32	337	ePKPdf	PKPpre	20 23 21.6	
PMAFR	Mafra	142.32	337	ePP	PP	20 26 33.4	+1.9
PMAFR	Mafra	142.32	337	eSS	SS	20 46 18.7	+77
SEUS	St. Eustatius	142.39	67	eP	PKPpre	20 23 18.5	
PMST	Lisbon--Monsan	142.47	337	ePKPdf	PKPpre	20 23 21.3	
PMST	Lisbon--Monsan	142.47	337	ePP	PP	20 26 34.5	+2.1
LIS	Lisbon	142.48	337	eP	PKPpre	20 23 21.2	
LIS				ePP	PP	20 26 29.7	-2.7
LIS				AMS	AMS	21 29 31.4	
	comp=Z,12µm,23.4s						
LIS	Lisbon	142.48	337	ePKPdf	PKPpre	20 23 22.6	
LIS	Lisbon	142.48	337	ePP	PP	20 26 33.3	+0.9
LIS	Lisbon	142.48	337	ePKHKP	PKPpre	20 23 21.2	
LIS				e		20 26 29.6	
PBEJ	Beja	142.55	335	ePKPdf	PKPdf	20 23 23.7	-2.2
PBEJ	Beja	142.55	335	ePP	PP	20 26 36.7	+3.8
BSK	Brimstone Hill	142.56	67	eP	PKPdf	20 23 28.7	+2.2
PNCL	Nicolau / Gran	142.75	336	ePKPdf	PKPpre	20 23 22.2	
PNCL	Nicolau / Gran	142.75	336	ePP	PP	20 26 36.0	+1.9
PNCL	Nicolau / Gran	142.75	336	eSS	SS	20 45 50.1	+44
NVRH	Round Hill, Ne	142.82	68	eP	PKPdf	20 23 25.6	-1.4
NVBH	Bath Hotel, Ne	142.82	68	eP	PKPdf	20 23 25.6	-1.3
MESJ	Messejana	142.85	335	eP	PKPpre	20 23 22.1	
MESJ				AMS	AMS	21 29 45.9	
	comp=Z,7µm,19.2s						
MESJ	Messejana	142.85	335	ePKPdf	PKPpre	20 23 22.2	
MESJ	Messejana	142.85	335	ePP	PP	20 26 36.7	+2.0
MESJ	Messejana	142.85	335	ePKHKP	PKPpre	20 23 22.0	
NEV	Hard Times	142.86	68	eP	PKPdf	20 23 27.4	+0.4
PCVE	Castro Verde	142.96	335	ePKPdf	PKPdf	20 23 23.1	-3.6
PCVE	Castro Verde	142.96	335	ePP	PP	20 26 37.9	+2.5
PVAQ	Vaqueiros	143.01	334	ePKPdf	PKPab	20 23 22.7	+0.7
PVAQ	Vaqueiros	143.01	334	ePP	PP	20 26 34.2	-1.5
PVAQ	Vaqueiros	143.01	334	eSS	SS	20 46 00.9	+51
PVAQ	Vaqueiros	143.01	334	eLR	LR	21 14 14.3	
	comp=Z,5µm,22.0s						
SFS	San Fernando	143.10	332	ePKPdf	PKPbc	20 23 24.1	+0.3
SFS	San Fernando	143.10	332	ePKIKP	PKPbc	20 23 24.1	+0.3
PBDV	Barranco-do-Ve	143.24	334	ePKPdf	PKPbc	20 23 24.4	+0.1
PBDV	Barranco-do-Ve	143.24	334	ePP	PP	20 26 39.4	+2.3
PBDV	Barranco-do-Ve	143.24	334	eSS	SS	20 45 35.5	+23
PTEO	Sao Teotonio	143.31	336	ePKPdf	PKPbc	20 23 25.5	+1.1
MLYT	Lee’s Yard	143.32	68	eP	PKPab	20 23 21.8	-2.0
ANWB	Willy Bob	143.44	66	PFAKE		20 23 40.0	+12
ANWB				LR	LR		
	comp=Z,8µm,22.0s						
ANWB	Willy Bob	143.44	66	eP	PKPab	20 23 17.5	-6.7
MORF	Marmelete	143.49	335	eP	PKPab	20 23 23.0	-1.0
MORF				eSS	SS	20 45 15.5	+0.5
MORF				AMS	AMS	21 30 43.1	
	comp=Z,8µm,16.6s						
MORF	Marmelete	143.49	335	ePKPdf	PKPbc	20 23 25.0	0.0
MORF	Marmelete	143.49	335	ePP	PP	20 26 35.8	-2.8
MORF	Marmelete	143.49	335	eSS	SS	20 46 06.7	+52
MORF	Marmelete	143.49	335	ePKHKP	PKPpre	20 23 23.0	
MORF				eSS	SS	20 45 15.5	+0.4
BPA	Boggy Peak	143.54	68	eP	PKPbc	20 23 26.9	+1.2
PFVI	Vila Bisbo	143.71	335	ePKPdf	PKPbc	20 23 25.7	+0.1
PFVI	Vila Bisbo	143.71	335	ePP	PP	20 26 42.0	+2.1
PFVI	Vila Bisbo	143.71	335	ePKPdf	PKPbc	20 23 26.2	+0.6
GDHS	Morne Mazeau,	143.83	69	ePKPpre	PKPpre	20 23 20.5	
GDHS				ePKPdf	PKPdf	20 23 28.9	0.0
TAM	Tamanrasset	143.91	303	ePKPdf	PKPbc	20 23 27.1	+0.2
TAM	Tamanrasset	143.91	303	ePKIKP	PKPbc	20 23 27.1	+0.3
TBG	Guadaloupe-3	144.05	69	eP	PKPab	20 23 23.9	-2.7
MGG	Marie-Galante	144.34	69	eP	PKPab	20 23 27.4	-0.3
DLPL	La Plaine	144.54	70	eP	PKPab	20 23 25.4	-3.2
CXM	Morne La Croix	144.74	71	eP	PKPdf	20 23 30.7	+0.2
FDF	Fort de France	144.77	71	ePKPdf	PKPab	20 23 29.4	0.0
FDF	Fort de France	144.77	71	eP	PKPab	20 23 22.9	-6.5
FDF	Fort de France	144.77	71	eP	PKPdf	20 23 31.2	+0.7
FDF	Fort de France	144.77	71	ePKIKP	PKPab	20 23 29.4	0.0
GRGR	Grenville	144.79	76	PFAKE		20 23 40.0	+10
GRGR				LR	LR		
	comp=Z,6µm,21.0s						
GRGR	Grenville	144.79	76	eP	PKPab	20 23 26.4	-3.1
GRSS	Sisters	144.80	75	eP	PKPab	20 23 25.9	-3.6
SVB	Belmont	144.98	74	ePKPbc	PKPbc	20 23 28.5	-1.7
SVB	Belmont	144.98	74	eP	PKPdf	20 23 31.1	+0.3
SVV	Soufriere Volc	145.00	73	eP	PKPdf	20 23 30.9	0.0
SSV	Crater Summit	145.03	73	eP	PKPdf	20 23 31.7	+0.7
SLB	Belfond	145.07	73	eP	PKPdf	20 23 32.8	+1.8
SVCV	St. Vincent, C	145.08	74	eP	PKPdf	20 23 30.9	0.0
MDT	Midelt	145.13	326	PKPbc	PKPdf	20 23 31.2	+0.4
	comp=Z,654nm,1.1s,baz=36,slow=1.6,SNR=182						
MDT				PP	PP	20 26 51.2	+2.3
	comp=Z,13nm,0.9s,baz=49,slow=12,SNR=2.1						
MDT				SKPbc	SKiKP	20 27 08.4	+2.4
	comp=Z,78nm,1.1s,baz=359,slow=4.0,SNR=6.8						
MDT				SKKPbc	SKKPbc	20 35 06.2	+1.2
	comp=Z,5.9nm,1.0s,baz=233,slow=5.4,SNR=5.0						
H05S1	Guadeloupe/Mar	145.14	71	PKPbc	PKPbc	20 23 27.4	-3.2
H07S1	FLORES T-PHASE	145.21	6	PKPbc	PKPdf	20 23 31.5	+0.9
	SNR=62						
H07S1	FLORES T-PHASE	145.21	6	ePKP	PKPdf	20 23 31.1	+0.5
H07S1	FLORES T-PHASE	145.21	6	eLR	LR	21 12 40.8	
SPB	Sao Paulo	145.47	145	ePKPdf	PKPdf	20 23 30.5	-1.0
PGRA	Graciosa	145.77	2	ePKP	PKPab	20 23 34.0	+1.6
PGRA	Graciosa	145.77	2	eLQ	LQ	21 04 06.4	
PGRA				eLR	LR	21 12 05.5	
	comp=Z,2µm,21.3s						
TOSP	Speyside	146.00	77	eP	PKPdf	20 23 31.8	-0.8
ROSA	Rosais	146.07	2	ePKP	PKPab	20 23 34.5	+1.0
ROSA	Rosais	146.07	2	eLQ	LQ	21 04 39.2	
ROSA				eLR	LR	21 12 10.6	
	comp=Z,742nm,22.4s						
PCED	Cedros	146.14	3	ePKP	PKPab	20 23 36.2	+2.4
ADH	Angra Heroismo	146.15	1	ePKP	PKPab	20 23 35.2	+1.4
PMAN	Manadas	146.16	2	ePKP	PKPab	20 23 36.6	+2.8
HOR	Horta	146.24	3	ePKP	PKPab	20 23 35.0	+0.8
PICO	Pico	146.28	2	ePKP	PKPab	20 23 51.4	+17
PCAN	Candelaria	146.31	2	ePKP	PKPab	20 23 36.0	+1.5
PTGA	Pitinga	146.47	98	ePKPdf	PKPdf	20 23 33.2	-0.2
PTGA				LR	LR		
	comp=Z,13µm,19.0s						
BBGH	Gun Hill	146.62	73	PFAKE		20 23 50.0	+14
BBGH				LR	LR		
	comp=Z,11µm,22.0s						
BBGH	Gun Hill	146.62	73	eP	PKPdf	20 23 32.0	-1.6
BBSP	Saint Philip	146.72	73	eP	PKPab	20 23 42.0	+5.3
PSET	Sete Cidades	146.97	358	ePKP	PKPab	20 23 36.6	-0.5
PSET	Sete Cidades	146.97	358	eLQ	LQ	21 03 10.9	
PSET	Sete Cidades	146.97	358	eLR	LR	21 13 32.7	
	comp=Z,2µm,19.6s						
BART	Pico Bartolome	147.00	358	ePKP	PKPbc	20 23 36.4	+0.7
CMLA	Cha da Macela	147.02	358	ePKP	PKPab	20 23 36.9	-0.3
CMLA	Cha da Macela	147.02	358	eLQ	LQ	21 05 04.4	
CMLA				eLR	LR	21 12 23.2	
	comp=Z,2µm,20.2s						
CMLA	Cha da Macela	147.02	358	PFAKE		20 23 50.0	+13
CMLA				LR	LR		
	comp=Z,5µm,22.0s						
PDA	Ponta Delgada	147.04	358	ePKP	PKPab	20 23 38.1	+0.8
PSMN	Pico do Norte,	147.76	357	eLQ	LQ	21 02 53.3	
PSMN	Pico do Norte,	147.76	357	eLR	LR	21 13 46.4	
	comp=Z,1µm,21.3s						
PMPS	Porto Santo	150.09	342	ePKPdf	PKPdf	20 23 40.2	+1.4
PMPS	Porto Santo	150.09	342	ePP	PP	20 27 17.3	+0.1
PMOZ	Porto Moniz, M	150.56	343	ePKPdf	PKPdf	20 23 40.5	+0.8
PMOZ	Porto Moniz, M	150.56	343	ePP	PP	20 27 20.7	+0.6
PMOZ	Porto Moniz, M	150.56	343	eLR	LR	21 17 02.4	
	comp=Z,4µm,22.0s						
PMAR	Madeira	150.57	343	ePKPdf	PKPdf	20 23 41.2	+1.4
PMAR	Madeira	150.57	343	ePP	PP	20 27 20.5	+0.2
TOA0	Torodi Ar. Sit	150.61	289	ePKPdf	PKPdf	20 23 39.0	-1.1
TOA0				ePKPdf	PKPdf	20 23 39.5	-0.5
TORD	Torodi Ar. Bea	150.61	289	PKP	PKPdf	20 23 39.3	-0.7
	comp=Z,9.1nm,0.6s,baz=79,slow=1.4						
TORD				PKPbc	PKPbc	20 23 45.5	-0.1
	baz=66,slow=1.7						
TORD				PP	PP	20 27 21.3	-1.0
	baz=96,slow=10						
TOA1	Torodi Ar. Sit	150.61	289	ePKPdf	PKPdf	20 23 39.3	-0.7
TOA1				ePKPbc	PKPbc	20 23 45.5	-0.1
TOA1				ePP	PP	20 27 21.3	-1.0
FUL	Funchal	150.64	343	ePKPdf	PKPdf	20 23 42.3	+2.7
FUL	Funchal	150.64	343	ePP	PP	20 27 20.9	+0.5
SHEL	Horse Pasture	150.76	225	ePKPdf	PKPdf	20 23 42.9	+2.6
SHEL				LR	LR		
	comp=Z,2µm,20.0s						
SHEL	Horse Pasture	150.76	225	i PKIKP	PKPbc	20 23 46.5	+0.6
BDFB	Brasilia	150.91	134	PKP	PKPdf	20 23 39.2	-1.4
	comp=Z,50nm,0.9s,baz=195,slow=2.5,SNR=43						
BDFB	Brasilia	150.91	134	ePKPdf	PKPdf	20 23 42.5	+1.8
BDFB	Brasilia	150.91	134	ePKIKP	PKPdf	20 23 42.5	+1.8
KOWA	Kowa	155.50	295	PKP	PKPdf	20 23 46.1	-1.1
	comp=Z,22nm,0.7s,baz=76,slow=1.5,SNR=33						
KOWA				PKPab	PKPab	20 24 12.7	-0.3
	comp=Z,80nm,0.7s,baz=332,slow=2.5,SNR=11						
KOWA				PP	PP	20 27 49.9	+0.1
	comp=Z,39nm,1.0s,baz=67,slow=6.1,SNR=5.2						
KIC	Kosan Boka	157.95	275	ePKIKP	PKPdf	20 23 51.8	+1.4
	comp=Z,147nm,0.9s						
KIC	Kosan Boka	157.95	275	ePKIKP	PP	20 28 02.2	-1.6
	comp=Z,324nm,1.5s						
DBIC	Dimbokro	158.04	276	PKP	PKPdf	20 23 49.2	-1.2
	comp=Z,35nm,0.8s,baz=4.8,slow=0.7,SNR=20						
DBIC				PKPab	PKPab	20 24 24.6	+0.5
	comp=Z,75nm,0.8s,baz=86,slow=3.5,SNR=6.6						
DBIC				PP	PP	20 28 04.7	+0.4
	comp=Z,32nm,1.1s,baz=57,slow=5.8,SNR=6.2						
DBIC	Dimbokro	158.04	276	ePKPdf	PKPdf	20 23 50.2	-0.3
DBIC				ePKPab	PKPab	20 24 25.2	+1.1
DBIC				ePP	PP	20 28 03.5	-0.8
DBIC	Dimbokro	158.04	276	ePKIKP	PKPdf	20 23 50.2	-0.3
DBIC				e		20 24 25.2	
DBIC				e		20 28 03.5	
TIC	Toumodi	158.21	276	ePKIKP	PKPdf	20 23 52.0	+1.3
TIC	Toumodi	158.21	276	ePKIKP	PP	20 28 02.2	-3.0
LIC	Lamto	158.24	275	ePKIKP	PKPdf	20 23 52.0	+1.3
	comp=Z,214nm,0.8s						
LIC	Lamto	158.24	275	ePKIKP	PP	20 28 02.3	-3.1
	comp=Z,334nm,1.8s						
ASCN	Ascension	162.36	225	PFAKE		20 24 10.0	+15
ASCN				LR	LR		
	comp=Z,6µm,22.0s						
RCBR	Riachuelo	166.20	139	PFAKE		20 24 10.0	+11
RCBR				LR	LR		
	comp=Z,50µm,22.0s						

IDC ***28*** *20:18:44.7±1.2, 12.°77N×48.°37E, h0^{km}, mb4.1/10, mb1 4.3/11, mb1mx3.9/79, mbtmp4.1/11, ML4.4/1, Error ellipse: s-maj=32.1km s-min=24.7km az=19.0*

NEIC ***28*** *20:18:46.0±0.4, 12.°81N×48.°35E, h10^{km}, mb4.9/3, Error ellipse: s-maj=11.9km s-min=7.8km az=198.0*

ISCJB ***28*** *20:18:46.6±0.4, 12.°89N±0.°06×48.°28E±0.°04, h26^{km}, mb4.4/13, Error ellipse: s-maj=8.7km s-min=4.9km az=176.8*

CSEM ***28*** *20:18:46.1±0.3, 12.°86N×48.°26E, h10^{km}, mb5.0/4, Error ellipse: s-maj=12.2km s-min=7.4km az=6.0*

DHMR ***28*** *20:18:48.3±1.5, 13.°14N×48.°13E, h34^{km}±95^{km}, ML4.0*

ISC 28 20:18:48.6±0.7**, 12.°91N**±0.°08×**48.°29E**±0.°06**, h26**^{km}**, n42, σ1.^{s}08**/49**, mb4.3**/13**, 2C-1D, Eastern Gulf of Aden**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MUKL	Al Mukalla	1.72	25	i P	Pn	20 19 15.5	-1.4
MUKL				i S	Sn	20 19 36.8	-1.1
MUKL				AML	AML	20 19 42.6	
	comp=E,2µm,0.5s						
BDHA	Al Bayda’	2.86	292⇑	iP	Pn	20 19 31.8	-1.0

BDHA				e		20 19 31.8	
	baz=121,slow=16						
BDHA				iS	Sn	20 20 05.1	-1.4
BDHA				AML	AML	20 20 08.9	
	comp=N,1μm,0.3s						
BDHA	Al Bayda’	2.86	292	⇑iP	Pn	20 19 31.8	-1.0
BDHA				iS	Sn	20 20 05.1	-1.4
	comp=N,705nm,0.3s						
LBOS		3.11	288	⇓iP	Pn	20 19 35.4	-0.9
LBOS				iS	Sn	20 20 11.8	-1.1
DAMY	Dhamar	4.14	294	ePn	Pn	20 19 51.0	+0.5
DAMY	Dhamar	4.14	294	ePn	Pn	20 19 51.0	+0.5
ATD	Arta Tunnel	5.50	256	Pn	Pn	20 20 08.4	-0.6
	comp=N,13nm,0.3s,baz=143,slow=23,SNR=32						
ATD				Sn	Sn	20 21 11.0	-0.4
	comp=N,1.4nm,0.3s,baz=252,slow=19,SNR=2.7						
ATD	Arta Tunnel	5.50	256	ePn	Pn	20 20 07.9	-1.1
ATD				Sn	Sn	20 21 11.0	-0.4
ATD	Arta Tunnel	5.50	256	ePn	Pn	20 20 07.9	-1.1
ATD				Sn	Sn	20 21 11.0	-0.4
RAYN	Ar Rayn	10.88	346	ePn	Pn	20 21 22.4	-0.4
RAYN	Ar Rayn	10.88	346	ePn	Pn	20 21 22.4	-0.4
KURBB	Kurchatov Arra	44.95	27	P	P	20 27 04.0	+2.6
	comp=N,3.0nm,0.8s,baz=228,slow=8.5,SNR=5.1						
KURK	Kurchatov	45.06	27	eP	P	20 27 04.0	+1.7
KURK	Kurchatov	45.06	27	eP	P	20 27 04.0	+1.7
GEC2	GERESS Array S	45.82	328	eP	P	20 27 07.5	-1.0
	comp=N,26nm,1.6s						
GEC2	GERESS Array S	45.82	328	eP	P	20 27 07.5	-1.0
	comp=N,26nm,1.6s						
GERES	GERESS Array B	45.82	328	P	P	20 27 09.6	+1.1
	comp=N,1.8nm,0.9s,baz=134,slow=7.0,SNR=1.9						
CM31	Chiang Mai Arr	48.95	77	eP	P	20 27 31.9	-1.3
CMAR	Chiang Mai Arr	48.95	77	P	P	20 27 33.5	+0.2
	comp=N,2.3nm,0.7s,baz=277,slow=8.7,SNR=7.8						
CM01	Chiang Mai Arr	48.97	77	eP	P	20 27 31.6	-1.7
ZALV	Zalesovo Beam	50.04	27	P	P	20 27 41.4	+0.5
	comp=N,2.4nm,0.6s,baz=222,slow=6.7,SNR=3.0						
ZAA1	Zalesovo Array	50.05	27	eP	P	20 27 41.4	+0.5
ZAA1	Zalesovo Array	50.05	27	eP	P	20 27 41.4	+0.5
FIA0	FINESS Array S	51.07	346	eP	P	20 27 49.8	+1.3
FIA0	FINESS Array S	51.07	346	eP	P	20 27 49.8	+1.3
FINES	FINESS Array B	51.07	346	P	P	20 27 49.8	+1.3
	comp=N,3.4nm,0.7s,baz=153,slow=9.4,SNR=4.0						
ESLA	Sonseca Array	53.00	310	eP	P	20 28 04.6	+1.2
	comp=N,76nm,1.7s						
SONA0	Songino Array	59.26	42	eP	P	20 28 48.8	+0.7
SONA0	Songino Array	59.26	42	eP	P	20 28 48.8	+0.7
SONM	Songino Array	59.26	42	P	P	20 28 48.8	+0.7
	comp=N,0.9nm,0.7s,baz=240,slow=6.5,SNR=2.6						
KS15	Wonju Array Si	74.06	55	eP	P	20 30 20.8	-1.8
KSAR	Wonju Array Be	74.06	55	P	P	20 30 21.3	-1.3
KSRS	Korea Array	74.09	54	P	P	20 30 21.3	-1.5
	comp=N,0.7nm,0.8s,baz=269,slow=7.2,SNR=3.6						
MAJO	Matsushiro	82.37	54	eP	P	20 31 08.4	-0.3
MJAR	Matsushiro Arr	82.37	54	P	P	20 31 08.4	-0.3
	comp=N,0.8nm,0.7s,baz=267,slow=3.3,SNR=3.6						
WR1	Warramunga Arr	90.69	110	eP	P	20 31 49.5	-0.2
	comp=N,55nm,1.9s						
WRA	Warramunga Arr	90.69	110	P	P	20 31 49.5	-0.2
	comp=N,3.3nm,0.8s,baz=298,slow=3.6,SNR=12						
WB2	Warramunga Arr	90.70	110	eP	P	20 31 48.7	-1.1
ASAR	Alice Springs	91.16	114	P	P	20 31 52.9	+1.0
	comp=N,1.6nm,1.0s,baz=303,slow=4.0,SNR=5.7						
AS31	Alice Springs	91.16	114	eP	P	20 31 51.4	-0.5
	comp=N,1.4nm,1.1s						
AS01	Alice Springs	91.20	114	eP	P	20 31 51.9	-0.2
VGB	Gordon Butte	121.02	351	ePKPdf	PKPdf	20 37 39.2	0.0

GUC 28 20:28:52.6±0.6, 34.°62S×71.°81W, h11^{km}±2^{km}, ML3.7, 3C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GO05	HualaæØ	0.40	194	⇓iP	Pg	20 28 59.9	-0.6
GO05				iS	Sg	20 29 05.5	-0.3
NICH	Los Niches	0.61	128	⇑iP	Pg	20 29 03.8	-0.8
NICH				iS	Sg	20 29 12.4	-0.2
ANTU	Antumapu	1.44	43	eP	Pn	20 29 17.2	-1.4
ANTU				iS	Sn	20 29 35.3	-2.3
ANTU				IAML		20 29 39.5	
	comp=N,2μm,0.5s						
LMEL	Las Melosas	1.54	60	⇑iP	Pn	20 29 19.1	-1.1
LMEL				iS	Sn	20 29 38.8	-1.5
LMEL				IAML		20 29 41.7	
	comp=N,2μm,0.2s						
CLCH	Cerro Calan	1.62	41	eP	Pn	20 29 20.3	-0.9
CLCH				iS	Sn	20 29 40.5	-1.6
CLCH				IAML		20 29 45.5	
	comp=E,2μm,1.1s						
ROCH	El Roble	1.78	22	eP	Pn	20 29 21.4	-2.1
ROCH				iS	Sn	20 29 45.6	-0.6
ROCH				IAML		20 29 52.1	
	comp=E,2μm,0.7s						
FCH	Farellones	1.81	45	⇑iP	Pn	20 29 23.2	-0.8
FCH				iS	Sn	20 29 46.5	-0.7
FCH				IAML		20 29 52.5	
	comp=E,760nm,0.1s						
CCHI	Chillan	1.99	186	eP	Pn	20 29 25.6	-0.6
CCHI				iS	Sn	20 29 50.8	-0.3

DJA 28 21:03:49.4±0.3, 1°N±2°×9°9E±°, h53^{km}±8^{km}, M3.7/17, mb3.7/3, MLv3.7/17, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PBSI	Pulau Batu	0.81	202	P	Pn	21 04 05.1	+0.4
PBSI				S	Sn	21 04 17.2	+1.3
MNSI	Mandailing Nat	0.99	85	P	Pn	21 04 07.5	+0.4
MNSI				S	Sn	21 04 21.0	+0.8
GSI	Gunungsitoli	1.18	301	P	Pn	21 04 09.9	+0.3
GSI				S	Sn	21 04 25.3	+0.6
SISI	Saibi	2.07	166	P	Pn	21 04 22.0	+0.2
BKNI	Bangkinang	2.48	99	P	Pn	21 04 27.9	+0.6
TSI	Tuntungan	2.78	359	P	Pn	21 04 31.4	-0.1
TSI				S	Sn	21 05 04.9	+1.0
SNSI	Sinabang, Aceh	2.83	307	P	Pn	21 04 31.9	-0.2
KCSI	Kotacane, Aceh	2.92	344	P	Pn	21 04 32.9	-0.5
PPSI	Pulau Pagai	3.72	158	P	Pn	21 04 44.6	+0.2
PPSI				S	Sn	21 05 27.2	+0.2
KRJI	Kerinci	3.99	134	P	Pn	21 04 48.1	-0.1
MLSI	Meulaboh, Aceh	4.16	328	P	Pn	21 04 50.0	-0.4
LHMI	Lhok Sumawe	4.79	340	P	Pn	21 04 59.6	+0.6
MASI	Maura Aman, Be	5.28	136	P	Pn	21 05 05.4	-0.4

JMA 28 21:16:55.5, 37.°07N×140.°72E, h12^{km}±1^{km}, M1.6, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ONAJ	Iwakimizuishiy	0.07	63	P	Pg	21 16 58.1	0.0
ONAJ				S	Sg	21 16 59.8	-0.2
JFFD	Fukushimafurud	0.13	279	P	Pg	21 16 58.7	-0.1
JFFD				S	Sg	21 17 00.8	-0.3
JFK	Kawauchi	0.32	23	P	Pg	21 17 02.1	+0.1
JFK				S	Sg	21 17 06.7	+0.3
JHO	Hitachi	0.47	195	P	Pg	21 17 04.6	-0.2
JHO				S	Sg	21 17 10.9	-0.2
JFT	Otama	0.54	326	P	Pg	21 17 06.3	+0.2
JFT				S	Sg	21 17 13.7	+0.4
JMM	Marumori	0.80	4	P	Pg	21 17 10.6	-0.3
JMM				S	Sg	21 17 21.0	-0.4

JMA 28 21:17:25.1, 36.°77N×138.°40E, h7^{km}±1^{km}, M1.1, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MAT	Matsushiro	0.28	214	P	Pg	21 17 30.3	-0.2
MAT				S	Sg	21 17 34.1	-0.1
MAT	Matsushiro	0.28	214	P	Pg	21 17 30.3	-0.2
MAT				S	Sg	21 17 34.1	-0.1
JNG	Nsakai	0.44	214	P	Pg	21 17 33.3	-0.3
JNG				S	Sg	21 17 39.2	-0.1
JHK	Hiroka	0.69	46	P	Pg	21 17 37.8	-0.5
JHK				S	Sg	21 17 46.9	-0.4

*KRNET **28** 21:36:00.8±0.1, 42.°17N×76.°57E, h20^{km}, mb2.9*

*NNC **28** 21:36:00.2±1.2, 42.°22N×76.°66E, h3^{km}±10^{km}, mb2.8, mpv2.5, Error ellipse: s-maj=11.8km s-min=6.3km az=17.0*

*SOME **28** 21:36:01.0, 42.°18N×76.°62E, h15^{km}*

ISC 28 21:36:00.6±1.0, 42.°17N±0.°03×76.°58E±0.°02, h13^{km}±8^{km}, n57, σ1.^{s}09/101, 29C-17D, Lake Issyk-Kul region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ULHL	Ulahol	0.27	287	P	Pg	21 36 06.4	+0.1
	12nm,0.0s,SNR=294						
ULHL	Ulahol	0.27	287	⇑iP	Pg	21 36 06.2	-0.1
	baz=88						
ULHL				⇑iS	Sg	21 36 10.3	+0.1
	baz=88						
BOOM	Boomskoye usch	0.58	304	⇓iP	Pg	21 36 11.7	-0.2
	baz=5.0						
BOOM				⇓iS	Sg	21 36 19.7	+0.1
	baz=5.0						
IZV	Izvestkoviy	0.87	1	eP	Pb	21 36 17.6	-0.1
	baz=2.0						
IZV				eS	Sb	21 36 29.6	+0.3
	baz=2.0						
IZV	Izvestkoviy	0.87	1	eP	Pb	21 36 17.6	-0.1
	3.0nm,0.1s						
IZV				eS	Sb	21 36 29.6	+0.3
	18nm,0.2s						
TNSS	Tian-Shan	0.91	17	eP	Pg	21 36 17.8	-0.5
	baz=17						
TNSS				eS	Sb	21 36 30.2	-0.5
	baz=17						
TNSS	Tian-Shan	0.91	17	eP	Pg	21 36 17.8	-0.5
	5.2nm,0.1s						
TNSS				eS	Sb	21 36 30.2	-0.5
	44nm,0.2s						
MTBS	Maitube	0.97	353	eP	Pb	21 36 19.0	-0.3
	baz=54						
MTBS				eS	Sg	21 36 31.9	-0.1
	baz=54						
MTBS	Maitube	0.97	353	eP	Pb	21 36 19.0	-0.3
	2.4nm,0.1s						
MTBS				eS	Sg	21 36 31.9	-0.1
	11nm,0.4s						
KST	Kastek	0.99	333	eP	Pb	21 36 19.4	-0.3
	baz=33						
KST				eS	Sg	21 36 32.7	+0.1
	baz=33						
KST	Kastek	0.99	333	eP	Pb	21 36 19.4	-0.3
	3.2nm,0.2s						
KST				eS	Sg	21 36 32.7	+0.1
	14nm,0.2s						
KZA	Kyzart	1.00	265	⇑P	Pb	21 36 19.8	-0.2
	6.6nm,0.1s,SNR=12						
KZA	Kyzart	1.00	265	⇑iP	Pb	21 36 19.3	-0.7
	baz=65						
KZA				⇑iS	Sb	21 36 32.7	-0.5
	baz=65						
TKM2	Tokmak 2	1.05	316	⇑P	Pb	21 36 20.7	0.0
	1.2nm,0.2s						
TKM2				⇑S	Sg	21 36 35.1	+0.5
	14nm,0.4s						
TKM2	Tokmak 2	1.05	316	⇑P	Pb	21 36 20.7	0.0
	2.2nm,0.1s,SNR=22						
TKM2	Tokmak 2	1.05	316	⇓iP	Pb	21 36 20.1	-0.6
	baz=17						
TKM2				⇓iS	Sb	21 36 34.5	0.0
	baz=17						
MDOK	Medeo	1.05	19	eP	Pb	21 36 20.4	-0.4
	baz=19						
MDOK				eS	Sg	21 36 34.2	-0.5
	baz=19						
MDOK	Medeo	1.05	19	eP	Pb	21 36 20.4	-0.4
	2.1nm,0.2s						
MDOK				eS	Sg	21 36 34.2	-0.5
	16nm,0.3s						
AAA	Alma-Ata	1.07	13	eP	Pg	21 36 21.2	0.0
	baz=13						
AAA				eS	Sn	21 36 35.6	-0.5
	baz=13						
AAA	Alma-Ata	1.07	13	eP	Pg	21 36 21.2	0.0
	9.3nm,0.1s						
AAA				eS	Sn	21 36 35.6	-0.5
	37nm,0.2s						
DGS	Degeres	1.23	331	eP	Pg	21 36 24.2	-0.1
	baz=32						
DGS				eS	Sg	21 36 40.6	+0.3
	baz=32						
DGS	Degeres	1.23	331	eP	Pg	21 36 24.2	-0.1
	2.0nm,0.1s						
DGS				eS	Sg	21 36 40.5	+0.3
	15nm,0.2s						
KBK	Karagaybulak	1.31	293	P	Pb	21 36 25.5	+0.4
	2.7nm,0.1s,SNR=13						
KBK	Karagaybulak	1.31	293	⇑iP	Pn	21 36 25.1	+0.4
	baz=93						
KBK				⇑iS	Sb	21 36 42.2	+0.3
	baz=93						
PRZ	Przheval’sk	1.38	76	⇑iP	Pg	21 36 27.0	-0.2
	baz=76						
PRZ				⇑iS	Sg	21 36 45.4	+0.2
	baz=76						
UCH	Uchtor	1.54	273	⇓P	Pb	21 36 29.2	-0.1
	4.7nm,0.2s,SNR=16						
UCH	Uchtor	1.54	273	⇑iP	Pn	21 36 28.9	+0.7
	baz=73						
UCH				⇑iS	Sb	21 36 49.4	+0.6
	baz=73						
CHMS	Chumysh	1.59	302	⇑iP	Pb	21 36 29.8	0.0
	baz=2.0						
CHMS				⇑iS	Sb	21 36 50.5	+0.7
	baz=2.0						
SATY	Saty	1.61	56	⇓iP	Pb	21 36 29.9	-0.5
	15nm,0.1s						
SATY				eS	Sb	21 36 50.6	-0.1
	134nm,0.1s						
AAK	Ala-Archa	1.62	288	⇓P	Pb	21 36 30.9	+0.5
	1.4nm,0.4s						
AAK				⇓S	Sb	21 36 51.9	+1.1
	5.2nm,0.4s						
AAK	Ala-Archa	1.62	288	⇑iP	Pb	21 36 30.0	-0.4
	baz=88						
AAK				⇑iS	Sb	21 36 51.2	+0.4
	baz=88						
ZHN	Zhinishke	1.69	53	eP	Pb	21 36 31.4	-0.3
	baz=53						
ZHN				eS	Sg	21 36 53.6	-1.5
	baz=53						
ZHN	Zhinishke	1.69	53	eP	Pb	21 36 31.4	-0.3
	4.4nm,0.1s						
ZHN				eS	Sg	21 36 53.6	-1.5
	136nm,0.2s						
KUU	Kurty	1.73	354	⇑iP	Pb	21 36 32.9	+0.6
	baz=54						
KUU				⇑eS	Sg	21 36 55.5	-0.9
	baz=54						
KUU	Kurty	1.73	354	⇑iP	Pb	21 36 32.9	+0.6
	1.2nm,0.1s						
KUU				eS	Sg	21 36 55.5	-0.9
	28nm,0.5s						
KURS	Kuram	1.76	41	eP	Pb	21 36 33.0	+0.2
	baz=41						
KURS				eS	Sg	21 36 56.1	-1.2
	baz=41						
KURS	Kuram	1.76	41	eP	Pb	21 36 33.0	+0.2
	3.4nm,0.3s						
KURS				eS	Sg	21 36 56.0	-1.2
	13nm,0.6s						
USP	Ospenovka	1.89	306	⇓P	Pb	21 36 35.4	+0.4
	15nm,0.2s,SNR=8.4						
USP	Ospenovka	1.89	306	⇓iP	Pb	21 36 34.8	-0.2
	baz=6.0						
USP				⇓iS	Sb	21 36 59.4	+0.9
	baz=6.0						
KPKS	Kokpek	2.02	49	eP	Pb	21 36 37.3	+0.1
	baz=50						
KPKS				eS	Sg	21 37 03.2	-2.3
	baz=50						
KPKS	Kokpek	2.02	49	eP	Pb	21 36 37.3	+0.1
	24nm,0.2s						
KPKS				eS	Sg	21 37 03.1	-2.3
	70nm,0.2s						
UZB	Uzynbulak	2.05	61	eP	Pb	21 36 37.2	-0.5
	baz=61						
UZB				eS	Sb	21 37 03.7	+0.6
	baz=61						
UZB	Uzynbulak	2.05	61	eP	Pb	21 36 37.2	-0.5
	6.8nm,0.2s						
UZB				eS	Sb	21 37 03.8	+0.6
	26nm,0.3s						
EKS2	Erkin-Say	2.14	284	⇑P	Pb	21 36 40.7	+1.5
	3.3nm,0.3s,SNR=9.6						
EKS2	Erkin-Say	2.14	284	⇑iP	Pb	21 36 38.2	-1.0
	baz=84						
EKS2				⇑iS	Sb	21 37 05.3	-0.4
	baz=84						
AML	Almayashu	2.15	270	⇓P	Pb	21 36 40.5	+0.9
	7.7nm,0.2s,SNR=12						
AML	Almayashu	2.15	270	⇓iP	Pb	21 36 38.8	-0.8
	baz=70						
AML				⇓iS	Sb	21 37 06.1	-0.2
	baz=70						
ARXS	Arharly	2.24	24	eP	Pb	21 36 41.5	+0.6
	2.9nm,0.5s						
ARXS				eS	Sg	21 37 10.4	-2.1
	7.7nm,0.3s						
SHLS	Shalkode	2.34	64	eP	Pg	21 36 47.7	+2.1
	11nm,0.3s						
SHLS				eS	Sg	21 37 21.1	+5.2
	53nm,0.4s						
PDGK	Podgornoye	2.44	61	⇓Pg	Pb	21 36 42.3	-2.1
	3.5nm,0.6s						
PDGK				⇑Lg	Lg	21 37 15.4	
	13nm,0.5s						
PDGK	Podgornoye	2.44	61	⇑iP	Pb	21 36 42.7	-1.6
	baz=61						
PDGK				⇑iS	Sb	21 37 13.5	-0.8
	baz=61						
MRKS	Merke	2.55	284	eP	Pb	21 36 48.3	+2.0
	2.0nm,0.2s						
MRKS				eS	Sg	21 37 22.0	-0.6
	12nm,0.4s						
MNAS	Manas	3.04	277	⇑Pg	Pb	21 36 55.7	+1.0
	1.2nm,0.5s						
MNAS				⇓Lg	Lg	21 37 36.8	
	3.9nm,0.9s						
SFK	Sufi-Kurgan	3.17	228	⇓Lg	Lg	21 37 42.7	
	2.6nm,0.5s						
BTLS	Baital	3.41	328	eP	Pb	21 37 03.1	+2.2
	0.5nm,0.2s						
BTLS				eS	Sg	21 37 47.5	-2.7
	3.4nm,0.4s						
KAPS	Kapalarasan	3.71	32	eP	Pb	21 37 07.0	+1.0
	0.7nm,0.5s						
KAPS				eS	Sb	21 37 54.2	+3.4
	3.1nm,0.5s						
KK31	Karatay Array	4.58	284	Pg	Pg	21 37 26.0	-2.2
	0.4nm,0.5s,baz=95,slow=18,SNR=4.1						
KK31				⇑Lg	Lg	21 38 25.3	
	0.3nm,0.3s,baz=66,slow=41,SNR=5.1						

*ISN **28** 21:36:03.7±0.3, 35.°36N×47.°89E, h0^{km}, ML2.6*

TEH 28 21:36:10.3, 35.°83N×48.°89E, h4^{km}, ML2.6, Western Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HKZM	Kohzaman	0.45	178	ePg	Pg	21 36 18.8	-0.2
HKZM				eSg	Sg	21 36 24.2	-0.7
HKZM				e		21 36 26.2	
	comp=Z,99nm,0.0s						
IRAZ	Razeghan	0.95	116	ePg	Pg	21 36 27.7	-0.8
IRAZ				eSg	Sg	21 36 40.0	-0.8
IRAZ				e		21 36 43.3	
	comp=Z,348nm,0.1s						
HAGD	Aghdareh	1.03	168	ePg	Pg	21 36 28.9	-1.1
HAGD				e		21 36 44.1	
	comp=Z,99nm,0.0s						
IGZV	Ghazvin	1.21	62	ePg	Pg	21 36 31.9	-1.6
IGZV				e		21 36 50.7	
	comp=Z,871nm,0.1s						
IMHD	Mahdasht	1.45	95	ePn	Pn	21 36 37.2	-0.3
IMHD				e		21 37 08.8	
	comp=Z,561nm,0.0s						
HSAM	Samen	1.63	188	ePn	Pn	21 36 40.1	0.0

IDC 28 21:42:33.6±2.6, 21.°96S×177.°92W, h0^{km}, mb4.1/5, mb1 4.3/5, mb1mx3.8/49, mbtmp4.1/5, Error ellipse: s-maj=67.1km s-min=32.1km az=33.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
STKA	Stephens Creek	37.24	246	P	P	21 49 46.9	-0.2
	1.3nm,0.5s,baz=100,slow=12,SNR=4.3						
ASAR	Alice Springs	44.28	258	P	P	21 50 45.0	-0.4
	2.3nm,0.7s,baz=100,slow=7.1,SNR=18						
WRA	Warramunga Arr	44.49	263	P	P	21 50 47.2	+0.1
	3.1nm,0.5s,baz=91,slow=8.3,SNR=24						
VNDA	Vanda	56.47	185	P	P	21 52 16.9	+0.1
	0.7nm,0.8s,baz=22,slow=5.4,SNR=6.1						
QSPA	South Pole Qui	68.11	180	P	P	21 53 34.7	-0.5
	2.0nm,0.8s,baz=46,slow=3.2,SNR=6.2						
HFS	Hagfors	140.99	351	PKP	PKPdf	22 02 04.1	-1.2
	1.2nm,0.3s,baz=52,slow=3.2,SNR=22						
AKASG	Malin Array Be	144.32	330	PKP	PKPdf	22 02 12.6	+1.1
	0.6nm,0.5s,baz=41,slow=3.8,SNR=3.2						

CASC 28 21:45:22.2±1.3, 12.°52N×88.°20W, h43^{km}±73^{km}, ML4.1, mb4.1(NEIC), Off coast of central America

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LCND	La Caˆ–ada	0.84	21	eP	Pn	21 45 37.8	+0.2
LCND				eS	Sn	21 45 49.2	+0.4
LCND				IAML		21 45 52.1	
	comp=Z,13μm,0.3s						
LCY	Lacayo	0.90	354	eP	Pn	21 45 38.9	+0.4
VSM	San Miguel	0.90	355	eP	Pn	21 45 39.3	+0.6
PACA	Pacayal	0.95	353	eP	Pn	21 45 39.7	+0.5
PACA				eS	Sn	21 45 52.4	+0.7
TECA	Tecapa	1.01	343	eP	Pn	21 45 40.4	+0.2
CRIN	San Cristobal	1.13	81	eP	Pn	21 45 42.4	+0.7
CRIN				eS	Sn	21 45 57.8	+1.6
SNVI	San Vicente	1.25	330	eP	Pn	21 45 43.9	+0.5
SNVI				eS	Sn	21 45 59.7	+0.5
TELN	Telica	1.34	86	eP	Pn	21 45 44.7	+0.2
LFRS	El Faro	1.38	322	eP	Pn	21 45 45.4	+0.2
CNGN	Cerro Negro	1.46	91	eP	Pn	21 45 46.1	-0.1
CNGN				eS	Sn	21 46 05.0	+0.7
LFU	La Fuente	1.51	324	eP	Pn	21 45 47.6	+0.7
SNET	Serv Nac Est T	1.53	319	eP	Pn	21 45 47.3	+0.1
SNET				eS	Sn	21 46 06.3	+0.3
SNET				IAML		21 46 09.8	
	comp=Z,3μm,0.2s						
OPAM	San Salvador	1.54	321	eS	Sn	21 46 06.1	0.0
UEES	San Salvador	1.57	320	eP	Pn	21 45 47.7	0.0
UEES				eS	Sn	21 46 07.4	+0.5
UEES				IAML		21 46 14.6	
	comp=Z,2μm,0.3s						
BOQS	Boqueron	1.60	319	eP	Pn	21 45 48.9	+0.6
BOQS				eS	Sn	21 46 09.1	+1.2
COPN	Copaltepe	1.60	102	eP	Pn	21 45 48.1	0.0
COPN				eS	Sn	21 46 07.1	-0.5
COPN				IAML		21 46 09.9	
	comp=Z,2μm,0.5s						
MOMN	Momotombo	1.62	94	eP	Pn	21 45 48.4	0.0
CEDA	San Andres	1.73	318	eP	Pn	21 45 50.4	+0.5
CEDA				eS	Sn	21 46 10.8	+0.1
CEDA				IAML		21 46 20.8	
	comp=Z,2μm,0.5s						
XAVN	Gruta Xavier	1.87	101	eP	Pn	21 45 51.9	+0.2
ESTN	Estel	1.87	72	eP	Pn	21 45 52.0	+0.1
SBLS	San Blas	1.91	313	eP	Pn	21 45 53.0	+0.5
MGAN	Managua	1.94	101	eP	Pn	21 45 52.8	+0.1
MGAN				eS	Sn	21 46 15.6	-0.4
MTO3	Montecristo	2.18	329	eP	Pn	21 45 56.6	+0.4
RCON	San Juan de Ri	2.21	64	eP	Pn	21 45 57.0	+0.5
MATN	Matagalpa	2.25	79	eP	Pn	21 45 57.0	-0.1

*ISCJB **28** 21:58:55.0±0.4, 8.°98S±0.°07×158.°70E±0.°04, h10^{km}, mb4.2/19, MS4.2/1, Error ellipse: s-maj=10.6km s-min=5.2km az=21.1*

*IDC **28** 21:58:55.0±0.5, 8.°96S×158.°73E, h0^{km}, mb4.3/16, mb1 4.4/17, mb1mx4.2/47, mbtmp4.2/17, ML3.1/1, MS4.1/3, Ms1 4.2/3, ms1mx3.6/41, Error ellipse: s-maj=16.2km s-min=14.5km az=61.0*

*NEIC **28** 21:58:57.0±2.0, 9.°02S×158.°77E, h13^{km}±13^{km}, mb4.7/4, Error ellipse: s-maj=12.9km s-min=9.3km az=119.0*

ISC 28 21:58:56.6±0.5, 9.°00S±0.°09×158.°74E±0.°06, h10^{km}, n32, σ0.^{s}63/34, mb4.4/19, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	1.26	110	Pn	Pg	21 59 21.0	+0.1
	838nm,0.3s,baz=238,slow=3.2,SNR=206						
HNR				Sn	Sn	21 59 37.3	0.0
	1μm,0.3s,baz=35,slow=6.0,SNR=24						
HNR	Honiara	1.26	110	*i* P	Pn	21 59 20.0	-0.3
HNR				*i* S	Sb	21 59 26.0	-11
HNR	Honiara	1.26	110	*e*Pg	Pg	21 59 20.7	-0.1
HNR				Pn	Pg	21 59 21.0	+0.1
HNR				Sn	Sn	21 59 37.3	0.0
HNR				*e*Sg	Sg	21 59 37.8	+0.5
PMG	Port Moresby	11.44	267	LR	LR	22 05 53.9	
	comp=Z,1μm,18.6s,baz=60,slow=37						
DZM	Mont Dzumac	14.96	151	Pn	Pn	22 02 27.4	-0.9
	0.1nm,0.3s,baz=120,slow=20,SNR=2.2						
DZM				LR	LR	22 07 31.0	
	comp=Z,637nm,20.3s,baz=136,slow=34						
CTAO	Charters Tower	16.35	226	*e*Pn	Pn	22 02 46.3	-0.1
	15nm,0.9s						
WRA	Warramunga Arr	25.98	243	P	P	22 04 29.7	0.0
	7.3nm,0.7s,baz=69,slow=9.3,SNR=36						
STKA	Stephens Creek	27.78	213	P	P	22 04 46.5	+0.7
	3.6nm,0.5s,baz=41,slow=14,SNR=10						
ASAR	Alice Springs	27.87	235	P	P	22 04 46.1	-0.7
	1.0nm,0.7s,baz=63,slow=9.7,SNR=16						
ASAR				PcP	PcP	22 08 02.5	-0.3
	0.4nm,0.6s,baz=69,slow=3.1,SNR=3.0						
KSRS	Korea Array	54.48	330	P	P	22 08 24.1	-0.4
	1.4nm,0.9s,baz=159,slow=8.0,SNR=5.7						
KSAR	Wonju Array Be	54.49	330	P	P	22 08 24.1	-0.5
SKNT	Sakolnakorn	59.98	295	P	P	22 09 13.6	+10
	4.8nm,0.7s						
PETK	Petropavlovsk-	61.87	359	P	P	22 09 15.9	0.0
	4.9nm,1.0s,baz=194,slow=6.5						
CMAR	Chiang Mai Arr	64.99	295	P	P	22 09 37.9	+0.6
	1.2nm,0.7s,baz=129,slow=5.9,SNR=6.3						
CMAR				LR	LR	22 38 24.6	
	comp=Z,132nm,18.1s,baz=306,slow=36						
VNDA	Vanda	68.52	179	P	P	22 09 59.5	+0.7
	2.1nm,0.8s,baz=329,slow=6.7,SNR=17						
ULN	Ulaanbaatar	72.69	326	*e*P	P	22 10 25.9	+1.0
	6.7nm,1.0s						
SONM	Songino Array	73.04	326	P	P	22 10 27.5	+0.6
	4.2nm,0.8s,baz=133,slow=5.8,SNR=21						
QSPA	South Pole Qui	80.99	180	P	P	22 11 11.7	+0.2
	7.7nm,1.1s,baz=318,slow=3.7,SNR=8.7						
QSPA	South Pole Qui	80.99	180	*e*P	P	22 11 11.6	+0.2
	10nm,1.0s						
ILAR	Eielson Array	83.90	21	P	P	22 11 25.9	-0.4
	1.6nm,0.8s,baz=264,slow=4.2,SNR=13						
MAW	Mawson	83.98	203	P	P	22 11 27.0	+0.2
	2.4nm,0.8s,baz=63,slow=6.8,SNR=4.1						
EGAK	Eagle	85.95	22	*e*P	P	22 11 37.2	+0.5
	3.9nm,0.8s						
MKAR	Makanchi Array	87.36	318	P	P	22 11 43.7	-0.4
	1.3nm,0.6s,baz=97,slow=6.3,SNR=13						
ZALV	Zalesovo Beam	87.92	325	P	P	22 11 45.3	-1.2
	0.8nm,0.5s,baz=100,slow=4.8,SNR=3.4						
NVAR	Mina Array Bea	90.06	51	P	P	22 11 58.4	+1.1
	0.7nm,0.8s,baz=251,slow=4.5,SNR=5.3						
KURK	Kurchatov	90.70	321	P	P	22 11 58.4	-1.2
KURBB	Kurchatov Arra	90.73	321	P	P	22 11 58.4	-1.4
	0.3nm,0.2s,baz=95,slow=3.0,SNR=3.7						
PDAR	Pinedale Array	97.28	48	P	P	22 12 29.6	-0.7
	0.1nm,0.3s,baz=339,slow=2.3,SNR=3.2						
GERES	GERESS Array B	130.65	330	PKP	PKPdf	22 18 08.0	-0.2
	0.4nm,0.8s,baz=113,slow=3.0,SNR=4.3						
BDFB	Brasilia	143.92	133	PKhKP	PKPpre	22 18 30.6	
	3.9nm,0.9s,baz=172,slow=1.8,SNR=7.1						
ESDC	Sonseca Array	145.77	336	PKPbc	PKPab	22 18 37.3	+0.5
	0.6nm,0.9s,baz=26,slow=3.3,SNR=4.1						
MDT	Midelt	151.74	329	PKPbc	PKPbc	22 18 52.1	-0.2
	1.9nm,0.9s,baz=20,slow=5.2,SNR=4.8						

ISCJB ***28*** *22:10:10.9±0.6, 17°.06N±0°.07×94°.13W±0°.05, h164^{km}±5^{km}, mb3.6/3, Error ellipse: s-maj=13.0km s-min=6.1km az=26.2*
IDC ***28*** *22:10:11.0±1.3, 17°.11N×93°.89W, h149^{km}±16^{km}, mb3.4/3, mb1 3.6/5, mb1mx3.1/50, mbtmp3.8/5, Error ellipse: s-maj=57.0km s-min=17.7km az=47.0*
MEX ***28*** *22:10:14.3±0.5, 17°.15N×94°.08W, h153^{km}±5^{km}, MD4.2*
ISC 28 22:10:11.9±0.7**, 17°.10N**±0°.08×**94°.14W**±0°.05**, h160**^{km}±7^{km}**, n14, σ1^{s}.69**/22**, mb3.5**/3**, Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMIG	Matias Romero	0.72	270	P	Pn	22 10 36.1	+0.5
	328nm,0.3s,baz=109,slow=3.9,SNR=4904						
CMIG				S	Sn	22 10 54.0	+0.3
	583nm,0.3s,baz=344,slow=22,SNR=127						
TUIG	Tuzandepetl	0.97	344	*e*P	Pn	22 10 37.8	+0.3
TUIG				*i* S	Sn	22 10 55.7	-1.4
TGIG		1.02	108	*i* P	Pn	22 10 38.2	+0.3
TGIG				*e*S	Sn	22 10 56.1	-1.8
PCIG		1.64	147	*e*P	Pn	22 10 44.5	+0.7
PCIG				*i* S	Sn	22 11 08.2	0.0
CCIG	Comitan	2.08	113	*i* P	Pn	22 10 49.1	+0.3
CCIG				*i* S	Sn	22 11 16.2	-1.0
TPIG	Tehuac#an	3.34	294	*e*P	Pn	22 11 05.3	+1.1
TPIG				*e*S	Sn	22 11 44.6	-0.2
PNIG	Pinotepa	3.89	260	*e*P	Pn	22 11 10.2	-0.9
PNIG				*i* S	Sn	22 11 56.2	-0.9
JTS	JuntasAbangare	11.20	126	P	Pn	22 12 45.2	-2.4
	0.7nm,0.3s,baz=352,slow=14,SNR=2.7						
JTS				S	Sn	22 14 56.8	+5.1
	0.2nm,0.3s,baz=30,slow=20,SNR=2.0						
TXAR	Lajitas Array	14.99	326	P	P	22 13 37.8	+0.3
	0.1nm,0.3s,baz=150,slow=12,SNR=8.2						
NVAR	Mina Array Bea	29.98	320	P	P	22 16 08.1	+2.4
	1.5nm,0.7s,baz=130,slow=8.4,SNR=11						
SIV	San Ignacio	46.30	133	P	P	22 18 20.6	-1.3
	1.0nm,0.8s,baz=320,slow=5.6,SNR=5.5						
YKA	Yellowknife Ar	47.56	347	P	P	22 18 30.1	-0.9
	0.7nm,0.6s,baz=155,slow=7.0,SNR=4.6						
WRA	Warramunga Arr	134.07	259	PKP	PKPdf	22 29 11.1	0.0
	0.6nm,0.8s,baz=98,slow=1.3,SNR=4.5						
ASAR	Alice Springs	134.66	253	PKP	PKPdf	22 29 11.7	-0.5
	0.3nm,0.7s,baz=131,slow=2.6,SNR=3.0						

ISCJB ***28*** *22:45:14.9±0.4, 24°.44N±0°.02×122°.31E±0°.02, h62^{km}±5^{km}, Error ellipse: s-maj=4.1km s-min=2.6km az=168.1*
JMA ***28*** *22:45:15.1±0.1, 24°.69N×122°.38E, h69^{km}±1^{km}, M2.2*
TAP ***28*** *22:45:15.3, 24°.44N×122°.25E, h67^{km}, ML3.3, B*
ISC 28 22:45:15.0±1.3**, 24°.44N**±0°.03×**122°.31E**±0°.02**, h65**^{km}±8^{km}**, n54, σ0^{s}.91**/103**, 2C, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EOS1	EOS1	0.20	304	*e*P	Pn	22 45 25.8	+0.8
	baz=314						
EOS1				*e*S	Sn	22 45 33.8	+1.6
	baz=314						
TWC	Suao	0.45	292	⇑P	Pn	22 45 27.0	+0.1
	baz=295						
TWC				*e*S	Sn	22 45 35.2	-0.4
	baz=295						
NANB	Nanao	0.51	269	*e*P	Pn	22 45 27.6	+0.1
	baz=268						
NANB				*e*S	Sn	22 45 37.0	+0.4
	baz=268						
EGS		0.53	320	*e*P	Pn	22 45 27.8	+0.1
	baz=325						
JYNG	Yonagunijimaku	0.58	89	P	Pn	22 45 28.5	+0.3
JYNG				S	Sn	22 45 38.2	+0.3
YOJ	Yonaguni jima	0.64	88	*e*P	Pn	22 45 29.2	+0.2
	baz=88						
YOJ				*e*S	Sn	22 45 38.5	-0.6
	baz=88						
YOJ	Yonaguni jima	0.64	88	P	Pn	22 45 29.1	+0.2
YOJ				S	Sn	22 45 39.3	+0.2
TWE	Neicheng	0.65	296	P	Pn	22 45 29.3	+0.4
	baz=300						
TWE				*e*S	Sn	22 45 39.0	-0.2
	baz=300						
TIPB	Shuangxi	0.69	321	*e*P	Pn	22 45 29.4	-0.1
	baz=328						
TIPB				*e*S	Sn	22 45 39.4	-0.7
	baz=328						
NACB	Ninganchiao	0.70	248	*e*P	Pn	22 45 29.2	-0.4
	baz=240						
NACB				*e*S	Sn	22 45 39.0	-1.4
	baz=240						
ENTT	Nioudou	0.70	287	P	Pn	22 45 30.3	+0.6
	baz=281						
ENTT				*e*S	Sn	22 45 40.6	+0.2
	baz=281						
TWD	Chiawan	0.74	241	⇑P	Pn	22 45 29.8	-0.2
	baz=233						
TWD				*e*S	Sn	22 45 40.9	-0.3
	baz=233						
HWA	Hwalien	0.79	234	*e*P	Pn	22 45 30.9	+0.2
	baz=224						
HWA				*e*S	Sn	22 45 42.1	0.0
	baz=224						
NWF	Wu-fen Shan	0.79	323	*e*P	Pn	22 45 30.5	-0.2
	baz=325						
ENLB	Shoufeng	0.84	231	*e*P	Pn	22 45 30.9	-0.3
	baz=223						
ENLB				*e*S	Sn	22 45 42.7	-0.4
	baz=223						
NNSB	Datong	0.84	269	*e*P	Pn	22 45 31.4	0.0
	baz=262						
NNSB				*e*S	Sn	22 45 42.7	-0.8
	baz=262						
NNS	Nan Shan	0.85	270	*e*P	Pn	22 45 31.8	+0.2
	baz=263						
NNS				*e*S	Sn	22 45 43.8	+0.1
	baz=263						
YHNB	Yeheng	0.88	285	*e*P	Pn	22 45 32.3	+0.5
	baz=278						
YHNB				*e*S	Sn	22 45 42.6	-1.7
	baz=278						
NSK	Sanguang	0.90	285	P	Pn	22 45 32.4	+0.4
	baz=278						
NSK				*e*S	Sn	22 45 44.8	+0.2
	baz=278						
YM10	YM10	0.98	317	*e*P	Pn	22 45 33.0	-0.2
	baz=318						
YM10				*e*S	Sn	22 45 44.8	-1.8
	baz=318						
YM11	YM11	0.98	317	*e*P	Pn	22 45 33.4	+0.3
	baz=319						
YM11				*e*S	Sn	22 45 46.1	-0.5
	baz=319						
YM05	YM05	0.99	317	*e*P	Pn	22 45 32.5	-0.7
	baz=319						
YM05				*e*S	Sn	22 45 45.0	-1.7
	baz=319						
WHF	Hehuan Shan	0.99	253	P	Pn	22 45 33.7	+0.1
	baz=252						
WHF				*e*S	Sn	22 45 47.0	-0.3
	baz=252						
YM04	YM04	1.00	316	*e*P	Pn	22 45 33.1	-0.2
	baz=317						
YM04				*e*S	Sn	22 45 45.0	-1.9
	baz=317						
ESL	Shilin	1.01	232	P	Pn	22 45 33.0	-0.5
	baz=240						
ESL				*e*S	Sn	22 45 46.4	-0.7
	baz=240						
TWS1	Kuangyinshan	1.04	309	P	Pn	22 45 34.0	+0.1
	baz=319						
TWS1				*e*S	Sn	22 45 46.8	-1.1
	baz=319						
TWT	Tachien	1.05	260	*e*P	Pn	22 45 35.0	+0.9
	baz=256						
TWT				*e*S	Sn	22 45 48.7	+0.5
	baz=256						
TDCB	Techi	1.06	260	*e*P	Pn	22 45 34.9	+0.7
	baz=257						
TDCB				*e*S	Sn	22 45 48.0	-0.6
	baz=257						
CHGB	Renai	1.10	250	*e*P	Pn	22 45 35.2	+0.4
	baz=242						
CHGB				*e*S	Sn	22 45 48.6	-0.9
	baz=242						
EGFH	Guangfu	1.11	227	*e*P	Pn	22 45 34.6	-0.1
	baz=218						
EGFH				*e*S	Sn	22 45 48.2	-1.2
	baz=218						
NCU	National Centr	1.15	298	*e*P	Pn	22 45 35.8	+0.6
	baz=298						
NCU				*e*S	Sn	22 45 50.1	-0.1
	baz=298						
LIOB	Emei	1.19	280	*e*P	Pn	22 45 36.5	+0.7
	baz=280						
LIOB				*e*S	Sn	22 45 51.4	+0.1
	baz=280						
NSTT	Nanjuang	1.21	279	P	Pn	22 45 36.5	+0.6
	baz=279						
NSTT				*e*S	Sn	22 45 50.9	-0.6
	baz=279						
EHY	Hungye	1.29	224	P	Pn	22 45 36.4	-0.8
	baz=222						
EHY				*e*S	Sn	22 45 51.7	-1.9
	baz=222						
IRIF	Iriomote-Funau	1.30	94	P	Pn	22 45 37.0	-0.2
IRIF				S	Sn	22 45 53.5	-0.3
YULB	Yu-li	1.39	222	*e*P	Pn	22 45 37.7	-0.8
	baz=220						
YULB				*e*S	Sn	22 45 53.0	-3.1
	baz=220						
SSLB	Suanglung	1.40	243	*e*P	Pn	22 45 38.8	+0.3
	baz=235						
SMLT	Sun Moon Lake	1.40	247	*e*P	Pn	22 45 40.0	+1.4
	baz=240						
SMLT				*e*S	Sn	22 45 56.7	+0.4
	baz=240						
HATJ	Hateruma jima	1.42	105	P	Pn	22 45 39.7	+1.0
TYC	Yuchr	1.43	248	*e*P	Pn	22 45 39.8	+1.0
	baz=241						
FULB	Fuli	1.54	217	*e*P	Pn	22 45 40.0	-0.5
	baz=207						
FULB				*e*S	Sn	22 45 59.0	-0.6
	baz=207						
YUS	Yu-Shan	1.56	233	*e*P	Pn	22 45 41.4	+0.3
	baz=225						
YUS				*e*S	Sn	22 45 59.0	-1.7
	baz=225						
JKRS	Kuro-shima	1.56	97	P	Pn	22 45 41.2	+0.5
JKRS				S	Sn	22 46 00.9	+0.8
WJS	Zhushan	1.57	247	*e*P	Pn	22 45 42.6	+1.8
	baz=238						
WJS				*e*S	Sn	22 46 02.2	+2.0
	baz=238						
CHKT	Chengkung	1.59	213	*e*P	Pn	22 45 40.0	-1.0
	baz=202						
CHKT				*e*S	Sn	22 45 57.9	-2.7
	baz=202						
ALS	Alishan	1.66	236	*e*P	Pn	22 45 43.4	+1.1
	baz=228						
ALS				*e*S	Sn	22 46 02.9	+0.2
	baz=228						
JIJ	Ishigaki jima	1.68	92	P	Pn	22 45 42.0	-0.2
JIJ				*e*S	Sn	22 46 02.5	-0.2
CHN5	Tsauling	1.71	241	*e*P	Pn	22 45 43.8	+1.1
	baz=232						
CHN5				*e*S	Sn	22 46 04.2	+0.5
	baz=232						
JISG	Ishigakijimahi	1.83	85	P	Pn	22 45 44.1	-0.2
JISG				*e*S	Sn	22 46 05.9	-0.6
STYT	Tauyuan	1.91	228	*e*P	Pn	22 45 46.4	+1.0
	baz=221						
STYT				*e*S	Sn	22 46 08.1	-0.3
	baz=221						
WTP	Ta-pu	1.95	233	*e*P	Pn	22 45 47.5	+1.5
	baz=232						
WTP				*e*S	Sn	22 46 10.6	+1.0
	baz=232						
TWK	Hsinying	2.03	235	*e*P	Pn	22 45 48.5	+1.4
	baz=234						
TWK				*e*S	Sn	22 46 12.5	+1.0
	baz=234						
CHN1	Nanshi	2.05	233	*e*P	Pn	22 45 48.5	+1.2
	baz=232						
CHN1				*e*S	Sn	22 46 13.0	+1.0
	baz=232						
JTJ	Tarama	2.19	84	P	Pn	22 45 49.4	+0.3
JTJ				*e*S	Sn	22 46 14.9	-0.3

IDC ***28*** *22:51:11.5±4.0, 36°.21N×70°.68E, h168^{km}±35^{km}, mb3.4/13, mb1 3.5/18, mb1mx3.2/68, mbtmp4.0/18, Error ellipse: s-maj=26.2km s-min=15.3km az=21.0*
SOME ***28*** *22:51:12.0, 37°.23N×70°.50E, h0^{km}*
BJI ***28*** *22:51:13.7, 36°.45N×70°.69E, h196^{km}, mb4.4/7, mB4.7/4*
ISCJB ***28*** *22:51:14.0±0.3, 36°.51N±0°.02×70°.71E±0°.05, h188^{km}, mb4.0/18, Error ellipse: s-maj=5.4km s-min=3.4km az=179.7*
NEIC ***28*** *22:51:15.5±0.4, 36°.53N×70°.66E, h189^{km}±5^{km}, mb4.2/5, Error ellipse: s-maj=7.1km s-min=5.8km az=116.0*
NNC ***28*** *22:51:19.3±1.3, 36°.85N×70°.70E, h200^{km}±10^{km}, mb3.4, mpv4.5, Error ellipse: s-maj=11.6km s-min=9.3km az=41.0*
ISC 28 22:51:14.5±0.5**, 36°.45N**±0°.05×**70°.77E**±0°.06**, h188**^{km}**, n81, σ1^{s}.76**/95**, mb3.8**/18**, 7C-7D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KBL	Kabul	2.37	217	*e*Pn	Pn	22 51 57.6	+1.1
KBL				*e*Sn	Sn	22 52 28.9	-0.2
CHCP	Chirah Chowk	3.46	143	P	Pn	22 52 11.7	+2.5
NIL	Nilore	3.46	143	*e*Pn	Pn	22 52 12.0	+2.8
THW	Thamme Wali	3.73	167	P	Pn	22 52 14.3	+1.6
SFK	Sufi-Kurgan	4.16	30	⇑P	Pn	22 52 19.3	+1.3
	62nm,0.4s						
SFK				⇑S	Sn	22 53 07.5	-0.5
	118nm,0.5s						
KSH	Kashi	5.13	52	P	Pn	22 52 27.3	-3.1
KSH				S	Sn	22 53 19.3	-11
KSH				smax	smax		
	comp=N,290nm,0.6s						
KSH				smax	smax		
	comp=E,290nm,0.5s						
IUG	Iuzhnay	5.72	354	*e*P	Pn	22 52 38.5	+0.6
	173nm,0.4s						
IUG				*e*S	Sn	22 53 39.8	-4.0
	135nm,0.5s						
CHM	Chimkent	5.93	352	*e*P	Pn	22 52 47.7	+7.0
	130nm,0.2s						
CHM				*e*S	Sn	22 53 53.5	+4.8
	233nm,0.6s						
AML	Almayashu	6.11	21	P	Pn	22 52 43.6	+0.3
	SNR=92						
MNAS	Manas	6.18	12	⇓P	Pn	22 52 44.4	+0.4
	18nm,0.5s						
MNAS				⇑S	Sn	22 53 51.7	-2.9
	90nm,0.8s						
DHRM	DHARAMSHALA	6.20	131	*e*P	Pn	22 52 45.6	+1.1
DHRM				*e*S	Sn	22 53 53.9	-1.6
DHRM				IAML		22 53 57.2	
	comp=N,528nm,0.8s						
DHRM				IAML		22 53 59.6	
	comp=E,217nm,0.1s						
DZA	Taraz	6.45	4	*e*P	Pn	22 52 48.3	+0.9
	comp=E,206nm,0.2s						
DZA				*e*S	Sn	22 53 57.6	-3.3
	comp=E,141nm,0.8s						
UCH	Uchtor	6.46	26	P	Pn	22 52 48.5	+0.5
	SNR=44						
KZA	Kyzart	6.61	30	P	Pn	22 52 50.0	+0.1
	SNR=7.1						
BRLS	Borolday	6.61	354	*e*P	Pn	22 52 46.4	-3.1
BRLS				*e*S	Sn	22 53 52.5	-12
EKS2	Erkin-Say	6.62	20	P	Pn	22 52 49.9	+0.1
	SNR=22						
KK31	Karatay Array	6.65	358	P	Pn	22 52 50.0	0.0
	comp=E,17nm,0.5s,baz=185,slow=12,SNR=350						
KK31				⇓S	Sn	22 54 01.2	-4.4
	comp=E,24nm,0.7s,baz=188,slow=22,SNR=8.8						
KK31	Karatay Array	6.65	358	*e*Pn	Pn	22 52 49.9	-0.1
KKAR	Karatay Array	6.65	358	*e*Pn	Pn	22 52 49.9	-0.1
AAK	Ala-Archa	6.82	24	P	Pn	22 52 53.0	+0.6
	comp=E,6.3nm,0.3s,baz=193,slow=7.2,SNR=42						
AAK				S	Sn	22 54 08.0	-1.8
	comp=E,3.4nm,0.3s,baz=332,slow=22,SNR=22						
AAK	Ala-Archa	6.82	24	⇓P	Pn	22 52 52.8	+0.4
	comp=E,19nm,0.6s						
AAK				⇓S	Sn	22 54 08.1	-1.6
	comp=E,52nm,0.7s						
AAK	Ala-Archa	6.82	24	P	Pn	22 52 53.1	+0.8
	SNR=21						
AAK	Ala-Archa	6.82	24	*e*Pn	Pn	22 52 53.1	+0.8
AAK				*e*Sn	Sn	22 54 09.0	-0.7
KBK	Karagaybulak	6.99	26	P	Pn	22 52 55.6	+1.0
	SNR=22						
ULHL	Ulahol	7.17	35	P	Pn	22 52 58.2	+1.1
	SNR=6.0						
CHMS	Chumysh	7.22	24	P	Pn	22 52 58.1	+0.5
	SNR=15						
USP	Ospenovka	7.39	22	P	Pn	22 52 59.8	+0.1
	SNR=6.5						
TKM2	Tokmak 2	7.46	28	⇑P	Pn	22 53 01.2	+0.4
	comp=E,34nm,0.5s						
TKM2				⇓S	Sn	22 54 22.1	-2.9
	comp=E,20nm,0.9s						
TKM2	Tokmak 2	7.46	28	P	Pn	22 53 01.4	+0.6
	SNR=63						
SMLA	Simla	7.52	133	*e*P	Pn	22 53 01.9	+0.5
SMLA				*e*S	Sn	22 54 23.5	-2.7
SMLA				IAML		22 54 26.1	
	comp=N,139nm,0.7s						
KST	Kastek	7.70	30	*e*P	Pn	22 53 04.6	+0.7
	comp=N,38nm,0.8s						
KST				*e*S	Sn	22 54 27.5	-3.3
	comp=N,21nm,1.3s						
DDI	Dehra Dun	8.63	133	*e*P	Pn	22 53 18.0	+1.9
DDI				*e*S	Sn	22 54 48.8	-4.0
DDI				IAML		22 54 55.0	
	comp=E,112nm,0.1s						
DDI				IAML		22 54 55.1	
	comp=N,70nm,0.4s						
KHET	Khetri	9.38	152	*e*P	Pn	22 53 25.4	-0.5
KHET				*e*S	Sn	22 55 02.0	-8.6
JOSI	Joshimath	9.40	126	*e*P	Pn	22 53 32.0	+5.6
JOSI				*e*x	x	22 54 49.4	
JOSI				IAML		22 57 30.0	
	comp=E,53nm,0.4s						
JOSI				IAML		22 57 30.9	
	comp=N,63nm,0.8s						
MAKZ	Makanchi	13.30	35	*e*Pn	Pn	22 54 16.8	+0.7
MK01	Makanchi Array	13.43	36	*e*Pn	Pn	22 54 18.2	+0.6
MK31	Makanchi Array	13.44	36	⇓P	Pn	22 54 18.7	+0.9
	comp=N,5.0nm,0.7s,baz=221,slow=14,SNR=24						
MK31	Makanchi Array	13.44	36	*e*Pn	Pn	22 54 18.6	+0.7
MKAR	Makanchi Array	13.44	36	P	Pn	22 54 18.1	+0.2
	comp=N,0.3nm,0.3s,baz=210,slow=12,SNR=26						
MKAR	Makanchi Array	13.44	36	*e*Pn	Pn	22 54 18.6	+0.7
BHPL	Bhopal	14.37	155	*e*P	P	22 54 33.6	+2.3
BHPL				*e*x	Sn	22 57 02.4	-7.6
WMQ	Urumqi	14.88	55	P	P	22 54 37.5	+0.7
WMQ				pmax	pmax		
	comp=N,19nm,0.6s						
WMQ				pmax	pmax		
	comp=N,250nm,4.5s						
AB31	Akbulak array	15.04	332	P	Pn	22 54 36.5	-1.1
	comp=N,1.8nm,0.5s,baz=146,slow=12,SNR=34						
AB31				⇑S	Sn	22 57 22.1	-3.3
	comp=N,1.0nm,0.6s,baz=160,slow=21,SNR=3.7						
ABKAR	Akbulak array	15.04	332	*e*Pn	Pn	22 54 36.6	-1.0
KURBB	Kurchatov Arra	15.23	19	P	Pn	22 54 39.5	-0.4
	comp=N,0.2nm,0.3s,baz=209,slow=10.0,SNR=8.2						
KURBB	Kurchatov Arra	15.23	19	⇑P	Pn	22 54 39.4	-0.4
	comp=N,2.2nm,0.4s						
KURK	Kurchatov	15.34	19	*e*Pn	P	22 54 41.9	+0.2
	comp=N,2.2nm,0.6s						
BVA0	Borovoye Array	16.57	359	P	Pn	22 54 56.4	+0.3
	comp=N,2.3nm,0.6s,baz=152,slow=9.6,SNR=17						
BVAR	Borovoye Array	16.57	359	P	Pn	22 54 56.2	+0.1
	comp=N,1.2nm,0.3s,baz=160,slow=9.7,SNR=20						
BRVK	Borovoye	16.61	359	*e*P	Pn	22 54 56.7	+0.2
	comp=N,4.7nm,0.6s						
AKTO	Aktyubinsk	16.73	331	P	Pn	22 54 58.0	0.0
	comp=N,0.8nm,0.3s,baz=139,slow=10,SNR=16						
AKTO	Aktyubinsk	16.73	331	⇑P	Pn	22 54 57.5	-0.5
	comp=N,6.9nm,0.6s						
GTK	Tadong	17.65	116	*e*x	P	22 55 15.7	+8.1
ZAA0	Zalesovo Array	20.04	25	⇓P	P	22 55 33.1	+0.2
	comp=N,9.5nm,0.7s						
ZAA0	Zalesovo Array	20.04	25	*e*P	P	22 55 33.4	+0.5
	comp=N,9.0nm,0.7s						
ZALV	Zalesovo Beam	20.04	25	P	P	22 55 33.3	+0.4
	comp=N,6.5nm,0.3s,baz=224,slow=11,SNR=36						
ZALV	Zalesovo Beam	20.04	25	*e*P	P	22 55 33.1	+0.2
ARU	Arti	21.62	341	P	P	22 55 50.3	+0.8
	comp=N,1.5nm,0.5s,baz=148,slow=6.3,SNR=5.9						
ARU	Arti	21.62	341	*e*P	P	22 55 49.7	+0.1
	comp=N,2.9nm,0.8s						
KIV	Kislovodsk	22.65	298	*e*P	P	22 55 58.6	-1.1
	comp=N,3.6nm,0.7s						
SONM	Songino Array	28.52	55	P	P	22 56 54.0	+1.6
	comp=N,0.8nm,0.8s,baz=251,slow=9.0,SNR=4.4						
SONA1	Songino Array	28.52	55	*e*P	P	22 56 53.5	+1.0
HHC	Hu-ho-hao-te	31.95	69	*e*P	P	22 57 23.5	+0.7
HHC				pmax	pmax		

	comp=N,10.0nm,1.1s						
HHC				pmax	pmax		
	comp=N,230nm,8.6s						
GYA	Guiyang	32.04	98	*e*P	P	22 57 26.0	+2.3
GYA				pmax	pmax		
	comp=N,10.0nm,0.8s						
BUR04	Bucovina Ar. S	35.16	303	*e*P	P	22 57 50.3	0.0
FINES	FINESS Array B	37.42	326	P	P	22 58 09.1	0.0
	comp=N,1.3nm,0.6s,baz=112,slow=10.0,SNR=8.0						
ARCES	ARCESS Array B	41.12	338	P	P	22 58 40.4	+0.8
	comp=N,2.1nm,1.0s,baz=111,slow=5.1,SNR=5.0						
HFS	Hagfors	42.99	322	P	P	22 58 55.2	+0.4
	comp=N,1.6nm,0.6s,baz=98,slow=8.9,SNR=5.0						
NB2	NORSAR Subarra	44.31	323	P	P	22 59 04.6	-0.8
	comp=Z,2.0nm,1.0s,baz=94,slow=8.6						
NOA	NORSAR Array B	44.31	323	P	P	22 59 05.0	-0.4
	comp=Z,0.9nm,0.7s,baz=95,slow=7.8,SNR=6.8						
JHJ2	Mitsune	55.70	72	*e*P	P	23 00 32.3	+0.9
	comp=Z,107nm,1.2s						
SCO	Scoresbysund	57.02	336	*e*P	P	23 00 41.1	+1.0
	comp=Z,458nm,1.4s						
ESDC	Sonseca Array	57.31	298	P	P	23 00 42.8	0.0
	comp=Z,0.2nm,0.5s,baz=72,slow=8.6,SNR=3.0						
TORD	Torodi Ar. Bea	65.53	269	P	P	23 01 36.3	-1.8
	comp=Z,0.9nm,0.5s,baz=50,slow=5.2						
INK	Inuvik	73.98	9	P	P	23 02 29.3	+0.5
	comp=Z,1.1nm,0.6s,baz=340,slow=3.5,SNR=8.2						
BPAW	Bear Paw Mtn.	74.50	18	*e*P	P	23 02 32.8	+0.8
	comp=Z,13nm,1.7s						
IL1	Eielson Array	74.88	16	*e*P	P	23 02 34.1	0.0
IL1				*e*S	S	23 11 56.5	+1.3
YKA	Yellowknife Ar	81.30	3	P	P	23 03 09.9	+0.5
	comp=Z,0.6nm,0.5s,baz=352,slow=5.4,SNR=4.4						
WRA	Warramunga Arr	82.12	122	P	P	23 03 13.5	-0.9
	comp=Z,1.1nm,0.9s,baz=323,slow=5.3,SNR=3.8						
ASAR	Alice Springs	84.38	125	P	P	23 03 24.4	-1.4
	comp=Z,0.5nm,0.7s,baz=311,slow=5.6,SNR=6.6						
LCCM	Lewis and Clar	98.05	2	*e*P	Pdif	23 04 30.8	+1.2

ISCJB ***28*** *22:55:36.2±0.5, 24.°94N±0.°03×122.°28E±0.°02, h2^{km}±5^{km},*
Error ellipse: s-maj=4.7km s-min=3.2km az=16.4
JMA ***28*** *22:55:36.7±0.3, 24.°50N×122.°11E, h9^{km}, M2.2*
TAP ***28*** *22:55:37.3, 24.°93N×122.°25E, h4^{km}±1^{km}, ML2.6, C*
ISC 28 22:55:35.9±1.0, **24.°96N**±0.°03×**122.°29E**±0.°02, **h12**^{km}±10^{km},
n32, σ**0^{s}.35**/50, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TWB1	Santiao Chiao	0.28	281	P	Pg	22 55 41.7	0.0
	baz=288						
TWB1				*e*S	Sg	22 55 45.4	-0.1
	baz=288						
TIPB	Shuangxi	0.42	272	P	Pb	22 55 44.7	-0.6
	baz=276						
TIPB				*e*S	Sg	22 55 50.0	+0.1
	baz=276						
EOS1	EOS1	0.43	200	*e*P	Pb	22 55 45.8	+0.4
	baz=196						
EOS1				*e*S	Sb	22 55 52.0	+0.2
	baz=196						
WFSB	Wu-fen Shan	0.47	284	*e*P	Pb	22 55 45.8	-0.4
	baz=288						
WFSB				*e*S	Sg	22 55 52.0	+0.5
	baz=288						
TWC	Suao	0.53	229	P	Pg	22 55 46.4	+0.1
	baz=228						
TWC				S	Sg	22 55 53.1	-0.2
	baz=228						
TWE	Neicheng	0.61	248	P	Pb	22 55 48.2	-0.3
	baz=247						
TWE				*e*S	Sg	22 55 55.9	0.0
	baz=247						
TWA	Mucha	0.64	272	*e*P	Pb	22 55 49.5	+0.5
	baz=274						
TWA				*e*S	Sb	22 55 57.7	-0.2
	baz=274						
YM11	YM11	0.68	288	*e*P	Pb	22 55 50.3	+0.6
	baz=291						
YM05	YM05	0.69	288	*e*P	Pb	22 55 49.8	0.0
	baz=290						
YM10	YM10	0.69	287	*e*P	Pb	22 55 49.7	-0.2
	baz=289						
PCYT	Pengchaiyu	0.70	344	*e*P	Pb	22 55 49.8	-0.2
	baz=347						
TWY	Chenhua	0.70	297	*e*P	Pg	22 55 49.5	0.0
	baz=300						
TWY				*e*S	Sb	22 56 00.6	+0.9
	baz=300						
NANB	Nanao	0.72	223	*e*P	Pg	22 55 49.9	+0.1
	baz=222						
NANB				*e*S	Sb	22 55 59.8	-0.4
	baz=222						
ENA	Nanau	0.72	223	*e*P	Pb	22 55 50.2	-0.2
	baz=222						
ENA				*e*S	Sb	22 56 00.3	0.0
	baz=222						
ENTT	Nioudou	0.73	244	P	Pb	22 55 50.5	0.0
	baz=244						
ENTT				*e*S	Sb	22 55 59.9	-0.5
	baz=244						
JYNG	Yonagunijimaku	0.78	130	P	Pb	22 55 51.5	+0.1
JYNG				*e*S	Sb	22 56 02.0	0.0
TWS1	Kuangyinshan	0.80	281	*e*P	Pn	22 55 52.8	-0.2
	baz=282						
TWS1				*e*S	Sb	22 56 02.8	+0.2
	baz=282						
YOJ	Yonaguni jima	0.82	127	*e*P	Pg	22 55 51.1	-0.8
	baz=123						
YOJ	Yonaguni jima	0.82	127	P	Pb	22 55 52.5	+0.4
YOJ				*e*S	Sg	22 56 02.7	+0.1
YHNB	Yeheng	0.88	251	*e*P	Pg	22 55 52.8	-0.1
	baz=252						
YHNB				*e*S	Sb	22 56 05.1	+0.3
	baz=252						
NSK	Sanguang	0.89	252	P	Pb	22 55 53.6	+0.3
	baz=252						
NSK				*e*S	Sb	22 56 04.9	-0.2
	baz=252						
NNSB	Datong	0.98	238	P	Pb	22 55 55.1	+0.2
	baz=237						
NNSB				*e*S	Sb	22 56 07.8	+0.1
	baz=237						
NACB	Ninganchiao	1.00	219	*e*P	Pg	22 55 55.0	-0.3
	baz=218						
NACB				*e*S	Sg	22 56 08.0	-0.3
	baz=218						
TWD	Chiawan	1.08	216	*e*P	Pb	22 55 56.7	+0.2
	baz=214						
LIOB	Emei	1.20	255	*e*P	Pb	22 55 58.4	-0.1
	baz=255						
WHF	Hehuan Shan	1.23	229	*e*P	Pg	22 56 00.2	+0.5
	baz=228						
TDCB	Techi	1.24	236	*e*P	Pg	22 55 59.6	-0.3
	baz=235						
IRIF	Iriomote-Funau	1.45	115	P	Pg	22 56 03.7	-0.1
SMLT	Sun Moon Lake	1.66	230	*e*P	Pg	22 56 07.8	+0.1
	baz=229						
SSLB	Suanglung	1.68	227	*e*P	Pb	22 56 07.4	+0.5
	baz=226						
JKRS	Kuro-shima	1.72	114	P	Pb	22 56 07.8	+0.3
JIJ	Ishigaki jima	1.79	109	P	Pb	22 56 09.3	+0.7

IDC 28 23:01:01.5±7.0, **18.°14S**×**178.°50W**, **h583**^{km}±79^{km},
mb3.3/4, **mb1 3.6**/4, **mb1mx2.9**/44, **mbtmp4.3**/4, **Error ellipse: s-maj=95.1km s-min=35.3km az=157.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	38.44	241	P	P	23 07 35.2	+0.7
	3.3nm,0.4s,baz=77,slow=11,SNR=4.3						
WRA	Warramunga Arr	44.50	260	P	P	23 08 21.6	-0.9
	1.1nm,0.3s,baz=100,slow=7.8,SNR=25						
WRA				PcP	PcP	23 09 52.5	-0.5
	1.1nm,1.0s,baz=137,slow=4.9,SNR=2.9						
ASAR	Alice Springs	44.64	254	P	P	23 08 23.6	+0.1
	13nm,0.6s,baz=88,slow=8.4,SNR=223						
ASAR				PcP	PcP	23 09 53.4	0.0
	0.3nm,0.4s,baz=101,slow=3.5,SNR=4.3						
TXAR	Lajitas Array	86.19	58	P	P	23 12 42.2	-0.1
	0.2nm,0.7s,baz=243,slow=6.0,SNR=3.3						
GERES	GERESS Array B	147.81	345	PKPbc	PKPbc	23 19 41.1	-0.5
	0.2nm,0.4s,baz=128,slow=3.0,SNR=2.9						

DDA ***28*** *23:29:43.0, 34.°75N×34.°35E, h9^{km}, Ml4.5*
BJI ***28*** *23:29:44.3, 34.°60N×33.°83E, h39^{km}, mb4.7/13, mB5.0/5, Ms4.5/2, Ms7 4.3/2*
ISCJB ***28*** *23:29:48.5±0.1, 34.°87N±0.°01×34.°30E±0.°01, h49^{km}±2^{km}, mb4.3/78, MS3.6/7, Error ellipse: s-maj=2.2km s-min=1.6km az=143.4*
ISK ***28*** *23:29:48.3, 34.°92N×34.°37E, h28^{km}, ML4.5/25*
MOS ***28*** *23:29:49.3±1.2, 34.°89N×34.°28E, h54^{km}, mb4.3/33, Error ellipse: s-maj=5.9km s-min=3.4km az=115.1*
CSEM ***28*** *23:29:49.9±0.1, 34.°88N×34.°33E, h47^{km}±1^{km}, mb4.3/52, Error ellipse: s-maj=2.3km s-min=2.0km az=38.0*
IDC ***28*** *23:29:49.6±1.4, 34.°96N×34.°28E, h41^{km}±14^{km}, mb3.9/28, mb1 4.1/35, mb1mx4.0/65, mbtmp4.2/35, ML3.9/4, MS3.3/7, Ms1 3.3/7, ms1mx3.0/62, Error ellipse: s-maj=10.1km s-min=9.0km az=60.0*
NEIC ***28*** *23:29:49.9±0.5, 34.°82N×34.°27E, h47^{km}±4^{km}, mb4.5/36, MD4.4(GRAL), ML4.5(ISK), ML4.5(NIC), Error ellipse: s-maj=5.9km s-min=4.5km az=178.0*
NEIC Felt [III] at Paralimni. Also felt at Ayia Napa, Larnaca, Paphos, Paramali and Trikomo. Felt at Baabda, Lebanon.
NIC ***28*** *23:29:49.0±0.4, 34.°90N×34.°43E, h44^{km}, ML4.5 Felt I=III MM at Paralimni.*
NIC Felt III MM at Paralimni.
HLW ***28*** *23:29:49.4, 34.°95N×34.°19E, h21^{km}±15^{km}, Ml4.7*
GRAL ***28*** *23:29:50.6±1.5, 34.°81N×34.°33E, h35^{km}±35^{km}, MD4.5*
GII ***28*** *23:29:52.1±0.2, 34.°82N×34.°33E, h32^{km}, mb4.3/5, MD4.2/5*
ISC 28 23:29:49.0±0.5, **34.°86N**±0.°02×**34.°32E**±0.°02, **h36**^{km}±1^{km},
n766, σ**1^{s}.65**/827, **mb4.3**/82, **MS3.3**/7, **13C-11D, Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PHNC	Paralimni	0.28	300	P	Pn	23 29 58.2	+1.1
PHNC	Paralimni	0.28	300	P	Pn	23 29 58.2	+1.1
	baz=107						
PHNC	Paralimni	0.28	300	P	Pn	23 29 58.2	+1.1
AKIN	Ak˜–nc˜–lar- K	0.72	282	PG	Pn	23 30 03.4	+0.8
AKIN	Ak˜–nc˜–lar- K	0.72	282	*e*Pg	Pn	23 30 03.4	+0.8
CSS	Mathiatis	0.82	277	P	Pn	23 30 04.9	+0.9
CSS	Mathiatis	0.82	277	P	Pn	23 30 04.9	+0.9
	baz=93						
CSS	Mathiatis	0.82	277	P	Pn	23 30 04.9	+0.9
MAMC	Mammari	0.96	289	P	Pn	23 30 07.0	+1.1
MAMC	Mammari	0.96	289	P	Pn	23 30 07.0	+1.1
	baz=104						
MAMC	Mammari	0.96	289	P	Pn	23 30 07.0	+1.1
SZAC	Souni	1.19	265	P	Pn	23 30 11.0	+1.9
SZAC				S	Sn	23 30 26.8	+2.8
SZAC	Souni	1.19	265	P	Pn	23 30 11.0	+1.9
	baz=82						
SZAC				S	Sn	23 30 26.8	+2.8
SZAC	Souni	1.19	265	P	Pn	23 30 11.0	+1.9
SZAC				S	Sn	23 30 26.8	+2.8
AKDN	Akdeniz- K˜–br	1.19	292	PN	Pn	23 30 10.1	+1.0
AKDN				SN	Sn	23 30 25.0	+1.0
AKDN	Akdeniz- K˜–br	1.19	292	*e*Pn	Pn	23 30 10.1	+1.0
AKDN				*e*Sn	Sn	23 30 25.0	+1.0
LEF	Lefka	1.20	283	PN	Pn	23 30 10.7	+1.5
LEF				SN	Sn	23 30 27.3	+3.0
LEF	Lefka	1.20	283	*e*Pn	Pn	23 30 10.7	+1.5
LEF				S	Sn	23 30 27.2	+3.0
BEYL	Beirut	1.39	135	*e*P	Pn	23 30 11.8	+0.1
BEYL	Beirut	1.39	135	*e*P	Pn	23 30 11.8	+0.1
AKK2	Akkuyu-Mersin	1.42	334	PN	Pn	23 30 12.0	-0.2
AKK2	Akkuyu-Mersin	1.42	334	*e*Pn	Pn	23 30 12.0	-0.2
AKK1	Akkuyu-Mersin	1.43	334	PN	Pn	23 30 12.1	-0.2
AKK1	Akkuyu-Mersin	1.43	334	*e*Pn	Pn	23 30 12.1	-0.2
AKKU	Akkuyu-Mersin	1.44	334	PN	Pn	23 30 12.6	+0.2
AKKU	Akkuyu-Mersin	1.44	334	*e*Pn	Pn	23 30 12.6	+0.2
ALFC	Alefka	1.45	282	P	Pn	23 30 13.5	+0.9
	baz=99						
ALFC				S	Sn	23 30 31.5	+1.2
ALFC	Alefka	1.45	282	P	Pn	23 30 13.5	+0.9
ALFC				S	Sn	23 30 31.5	+1.2
BHL	Bhannes	1.46	131	*e*P	Pn	23 30 12.7	-0.1
BHL				*e*S	Sn	23 30 28.1	-2.7
BHL	Bhannes	1.46	131	*e*P	Pn	23 30 12.8	-0.1
BHL				*e*S	Sn	23 30 29.2	-1.5
BHL	Bhannes	1.46	131	*e*P	Pn	23 30 12.7	-0.1
BHL				*e*S	Sn	23 30 28.1	-2.7
BHL	Bhannes	1.46	131	*e*P	Pn	23 30 12.7	-0.1
BHL				*e*S	Sn	23 30 28.1	-2.7
GULN	MERSIN_Gulnar	1.46	334	*i* P	Pn	23 30 12.8	0.0
GULN				*i* S	Sn	23 30 30.4	-0.3
GULN	MERSIN_Gulnar	1.46	334	P	Pn	23 30 12.8	0.0
GULN				S	Sn	23 30 30.4	-0.3
HWQ	Hawqa	1.46	113	*e*P	Pn	23 30 13.8	+0.9
HWQ	Hawqa	1.46	113	*e*P	Pn	23 30 13.8	+0.9
IKL	Isikli	1.47	339	PN	Pn	23 30 13.1	+0.3
IKL				SN	Sn	23 30 30.5	-0.3
IKL	Isikli	1.47	339	*e*Pn	Pn	23 30 13.1	+0.3
IKL				*e*Sn	Sn	23 30 30.5	-0.3
TEPE	Tepekoy-Mersin	1.49	336	PN	Pn	23 30 13.3	+0.1
TEPE	Tepekoy-Mersin	1.49	336	*e*Pn	Pn	23 30 13.3	+0.1
OREN	Orenkoy-Mersin	1.52	332	PN	Pn	23 30 13.8	+0.3
OREN	Orenkoy-Mersin	1.52	332	*e*Pn	Pn	23 30 13.8	+0.3
DQRL	Deir Qamar	1.55	138	*e*P	Pn	23 30 13.9	-0.2
DQRL	Deir Qamar	1.55	138	*e*P	Pn	23 30 13.9	-0.2
TEKE	Tekeli-Mersin	1.61	323	PN	Pn	23 30 14.9	0.0
TEKE				SN	Sn	23 30 35.0	+0.6
TEKE	Tekeli-Mersin	1.61	323	*e*Pn	Pn	23 30 14.9	0.0
TEKE				*e*Sn	Sn	23 30 35.0	+0.6
KIZK	Mersin	1.62	355	PN	Pn	23 30 15.4	+0.5
KIZK	Mersin	1.62	355	*i* P	Pn	23 30 15.5	+0.5
KIZK				*i* S	Sn	23 30 34.9	+0.4
KIZK	Mersin	1.62	355	P	Pn	23 30 15.5	+0.5
KIZK				S	Sn	23 30 34.9	+0.4
PPCY	Paphos	1.63	271	P	Pn	23 30 16.8	+1.8
	baz=88						
PPCY	Paphos	1.63	271	P	Pn	23 30 16.8	+1.8
AKMC	Akamas	1.65	276	P	Pn	23 30 17.3	+2.0
	baz=93						
AKMC	Akamas	1.65	276	P	Pn	23 30 17.3	+2.0
KEBE	Keben-Mersin	1.66	343	PN	Pn	23 30 16.3	+0.8
KEBE	Keben-Mersin	1.66	343	*e*Pn	Pn	23 30 16.3	+0.8
BOZY	Bozyazi-Mersin	1.66	319	PN	Pn	23 30 15.9	+0.5
BOZY	Bozyazi-Mersin	1.66	319	*e*Pn	Pn	23 30 15.9	+0.5
BERE	Bereket-Mersin	1.73	329	PN	Pn	23 30 17.1	+0.5
BERE	Bereket-Mersin	1.73	329	*e*Pn	Pn	23 30 17.1	+0.5
QRWL	Qaraoun	1.73	139	*e*P	Pn	23 30 16.9	+0.4
QRWL	Qaraoun	1.73	139	*e*P	Pn	23 30 17.0	+0.4
FKH	Fakeheh	1.83	109	*e*P	Pn	23 30 19.0	+1.1
FKH	Fakeheh	1.83	109	*e*P	Pn	23 30 19.0	+1.1
RCY	Rachaya	1.85	137	*e*P	Pn	23 30 19.2	+0.9
RCY	Rachaya	1.85	137	*e*P	Pn	23 30 19.2	+0.9
YAYL	Yayladag	1.87	51	PN	Pn	23 30 17.9	-0.6
YAYL	Yayladag	1.87	51	*i* P	Pn	23 30 18.8	+0.3
YAYL				*i* S	Sn	23 30 39.2	-1.6
YAYL	Yayladag	1.87	51	*e*Pn	Pn	23 30 17.9	-0.6
YAYL	Yayladag	1.87	51	P	Pn	23 30 18.8	+0.3
YAYL				S	Sn	23 30 39.2	-1.6
KRTS	Karatas	1.91	26	PN	Pn	23 30 19.6	+0.7
KRTS	Karatas	1.91	26	*e*Pn	Pn	23 30 19.6	+0.7
HNTI	Hanita	1.91	158	Pn	Pn	23 30 19.6	+0.6
HNTI				Sn	Sn	23 30 41.7	-0.1
SHBL	Chebaa	1.92	142	*e*P	Pn	23 30 20.1	+0.9
SHBL	Chebaa	1.92	142	*e*P	Pn	23 30 20.1	+0.9
NATI	Neve Ativ	1.98	143	Pn	Pn	23 30 21.1	+1.2
NATI				Sn	Sn	23 30 43.7	+0.2
KSDI	Kefar Szold	2.00	146	P	Pn	23 30 21.2	+1.0
	baz=329						
KSDI				S	Sn	23 30 44.0	0.0
KSDI	Kefar Szold	2.00	146	Pn	Pn	23 30 21.4	+1.2
KSDI				Sn	Sn	23 30 44.6	+0.6
KSDI	Kefar Szold	2.00	146	P	Pn	23 30 21.2	+1.0
KSDI				S	Sn	23 30 44.0	0.0
MERS	Mersin	2.01	5	PN	Pn	23 30 20.9	+0.6
MERS	Mersin	2.01	5	*e*Pn	Pn	23 30 20.9	+0.6
MMA0B	Mount Meron ar	2.05	154	Pn	Pn	23 30 21.8	+0.8
MMA0B				Sn	Sn	23 30 44.9	-0.4
MMAI	Mount Meron Ar	2.05	154	P	Pn	23 30 21.9	+0.9
	501nm,0.3s,baz=337,slow=14,SNR=6858						
MMAI				S	Sn	23 30 44.6	-0.7
	2µm,0.3s,baz=328,slow=21,SNR=44						
ERMK	Ermenek	2.11	328	*i* P	Pn	23 30 23.4	+1.5
ERMK				*i* S	Sn	23 30 52.6	+5.6
ERMK	Ermenek	2.11	328	P	Pn	23 30 23.4	+1.5
GAZI	Gazipasa	2.13	310	PN	Pn	23 30 22.5	+0.5
GAZI	Gazipasa	2.13	310	*i* P	Pn	23 30 22.6	+0.6
GAZI				*i* S	Sn	23 30 47.1	-0.2
GAZI	Gazipasa	2.13	310	P	Pn	23 30 22.6	+0.5
GAZI				S	Sn	23 30 47.1	-0.2
TAHT	Tahtakopru-Hat	2.14	45	PN	Pn	23 30 22.6	+0.5
TAHT	Tahtakopru-Hat	2.14	45	*e*Pn	Pn	23 30 22.6	+0.5
YURE	YUREGIR	2.23	28	PN	Pn	23 30 24.1	+0.8
YURE	YUREGIR	2.23	28	*i* P	Pn	23 30 24.2	+0.8
YURE				*i* S	Sn	23 30 49.1	-0.5
YURE	YUREGIR	2.23	28	*e*Pn	Pn	23 30 24.1	+0.8
YURE				S	Sn	23 30 49.1	-0.5
BLGI	Bet Lehem HaGe	2.25	161	Pn	Pn	23 30 24.8	+1.2
BLGI				Sn	Sn	23 30 50.4	+0.4
KSHT	Keshet	2.25	146	Pn	Pn	23 30 25.7	+2.0
OFRI	‘Ofer	2.31	166	Pn	Pn	23 30 25.3	+0.9
GULE	Gulek	2.44	9	*i* P	Pn	23 30 26.9	+0.5
GULE	Gulek	2.44	9	P	Pn	23 30 27.0	+0.5
KARA	Karaisali	2.46	14	PN	Pn	23 30 27.0	+0.4
KARA	Karaisali	2.46	14	*e*Pn	Pn	23 30 27.0	+0.4
MMLI	Mount Malkishu	2.59	159	PN	Pn	23 30 30.6	+2.3
MMLI	Mount Malkishu	2.59	159	Pn	Pn	23 30 29.8	+1.5
MMLI				Sn	Sn	23 30 59.3	+0.8
MMLI	Mount Malkishu	2.59	159	Pn	Pn	23 30 29.8	+1.5
MMLI				Sn	Sn	23 30 59.3	+0.8
SLTI	Sal’it	2.69	167	Pn	Pn	23 30 30.4	+0.8
HMDT	Nahal Hemdat	2.79	159	Pn	Pn	23 30 32.8	+1.7
HMDT				Sn	Sn	23 31 05.3	+1.8
HMDT	Nahal Hemdat	2.79	159	Pn	Pn	23 30 32.8	+1.7
HMDT				Sn	Sn	23 31 05.3	+1.8
KUZU	Kuzuini	2.94	49	*i* P	Pn	23 30 33.2	+0.1
KUZU				*i* S	Sn	23 31 07.1	-0.1
KUZU	Kuzuini	2.94	49	P	Pn	23 30 33.2	+0.1
KUZU				S	Sn	23 31 07.1	-0.1
KEPZ	Antalya-Kepez	3.00	313	*i* P	Pn	23 30 35.8	+1.8
KEPZ				*i* S	Sn	23 31 11.6	+2.9
KEPZ	Antalya-Kepez	3.00	313	P	Pn	23 30 35.8	+1.8
KEPZ				S	Sn	23 31 11.6	+2.9
ANDN	Andirin	3.17	31	*i* P	Pn	23 30 36.8	+0.5
ANDN				*i* S	Sn	23 31 11.6	-1.3
ANDN	Andirin	3.17	31	P	Pn	23 30 36.8	+0.5
ANDN				S	Sn	23 31 11.6	-1.3
GAZ	Gaziantep	3.28	45	PN	Pn	23 30 38.0	+0.1
GAZ	Gaziantep	3.28	45	*e*Pn	Pn	23 30 38.0	+0.1
KMER	Konya-Meram	3.30	332	*i* P	Pn	23 30 39.0	+0.8
KMER	Konya-Meram	3.30	332	P	Pn	23 30 39.0	+0.8
YAHY	KAYSERI_Yahyal	3.33	14	*i* P	Pn	23 30 40.3	+1.7
YAHY	KAYSERI_Yahyal	3.33	14	P	Pn	23 30 40.3	+1.7
AMAZ	Amatzia	3.36	171	Pn	Pn	23 30 40.8	+1.9
AMAZ	Amatzia	3.36	171	Pn	Pn	23 30 40.8	+1.9
KMRS	Kahramanmaras	3.36	38	PN	Pn	23 30 39.3	+0.4
KMRS	Kahramanmaras	3.36	38	*e*Pn	Pn	23 30 39.3	+0.4
DSI	Dead Sea	3.40	165	Pn	Pn	23 30 41.4	+1.9
SAIM	ADANA	3.41	24	*i* P	Pn	23 30 40.6	+1.0
SAIM	ADANA	3.41	24	P	Pn	23 30 40.7	+1.0
ASF	Jabal al Asfar	3.44	141	P	Pn	23 30 42.5	+2.4
	33nm,0.3s,baz=290,slow=5.8,SNR=178						
ASF				S	Sn	23 31 23.1	+3.5
	87nm,0.3s,baz=149,slow=22,SNR=19						
KONT	Konya--Tatoy	3.46	333	PN	Pn	23 30 41.4	+1.1
KONT	Konya--Tatoy	3.46	333	*i* P	Pn	23 30 42.0	+1.8
KONT	Konya--Tatoy	3.46	333	*e*Pn	Pn	23 30 41.4	+1.1
YTIR	Yattir	3.56	169	Pn	Pn	23 30 43.9	+2.2
YTIR	Yattir	3.56	169	Pn	Pn	23 30 43.9	+2.2
MZDA	Masada	3.65	166	Pn	Pn	23 30 45.1	+2.3
MZDA	Masada	3.65	166	Pn	Pn	23 30 45.1	+2.3
LADK	Ladik-KONYA	3.68	335	PN	Pn	23 30 44.7	+1.3
LADK	Ladik-KONYA	3.68	335	*e*Pn	Pn	23 30 44.7	+1.3
SUTC	Sutluce-Ispart	3.75	315	PN	Pn	23 30 45.6	+1.3
SUTC	Sutluce-Ispart	3.75	315	*e*Pn	Pn	23 30 45.6	+1.3
KORT	Korkueli	3.87	305	PN	Pn	23 30 47.7	+1.8
KORT	Korkueli	3.87	305	*i* P	Pn	23 30 46.9	+0.9
KORT	Korkueli	3.87	305	P	Pn	23 30 46.9	+0.9
KORT	Korkueli	3.87	305	*e*Pn	Pn	23 30 47.7	+1.8
DOGA	KONYA_Doganhis	3.88	327	*i* P	Pn	23 30 47.8	+1.6
DOGA	KONYA_Doganhis	3.88	327	P	Pn	23 30 47.8	+1.6
SARI	SarD1z-Kayseri	3.92	25	PN	Pn	23 30 48.2	+1.5
RSH		3.93	188	P	Pn	23 30 47.1	+0.4
	baz=186						
RSH		3.93	188	P	Pn	23 30 47.1	+0.4
KZIT	Kziot	3.95	179	PN	Pn	23 30 48.6	+1.6
KZIT	Kziot	3.95	179	P	Pn	23 30 48.6	+1.6
	baz=0.0						
KZIT	Kziot	3.95	179	Pn	Pn	23 30 48.6	+1.6
KZIT	Kziot	3.95	179	P	Pn	23 30 48.6	+1.6
AVNS	Nevsehir-Avano	3.96	6	*i* P	Pn	23 30 49.3	+2.1
AVNS	Nevsehir-Avano	3.96	6	P	Pn	23 30 49.3	+2.1
SURC	SANLIURFA_SURC	4.02	59	*i* P	Pn	23 30 48.0	0.0
SURC	SANLIURFA_SURC	4.02	59	P	Pn	23 30 48.0	0.0
ELL	Elmali	4.05	299	PN	Pn	23 30 50.4	+1.9
ELL	Elmali	4.05	299	P	Pn	23 30 51.2	+2.7
ELL	Elmali	4.05	299	*e*Pn	Pn	23 30 50.4	+1.9
ELL	Elmali	4.05	299	P	Pn	23 30 51.2	+2.7
KDHN	Kadinhani	4.06	335	*i* P	Pn	23 30 49.8	+1.2
KDHN	Kadinhani	4.06	335	P	Pn	23 30 49.8	+1.2
KSL	Kastellorizon	4.07	290	P	Pn	23 30 49.1	+0.4
KSL	Kastellorizon	4.07	290	P	Pn	23 30 49.1	+0.4
AKAS	Kas	4.08	291	PN	Pn	23 30 50.5	+1.5
AKAS	Kas	4.08	291	*i* P	Pn	23 30 50.4	+1.5
AKAS	Kas	4.08	291	P	Pn	23 30 50.4	+1.5
ELBS	KAHRAMANMARAS	4.13	32	*i* P	Pn	23 30 50.9	+1.3
ELBS	KAHRAMANMARAS	4.13	32	P	Pn	23 30 50.9	+1.3
ATAB	Bozova	4.13	50	*i* P	Pn	23 30 49.7	+0.2
ATAB	Bozova	4.13	50	P	Pn	23 30 49.7	+0.2
BNN	Bunyan	4.16	17	PN	Pn	23 30 51.4	+1.4
BNN	Bunyan	4.16	17	*e*Pn	Pn	23 30 51.4	+1.4
ISP	Isparta	4.26	315	PN	Pn	23 30 53.4	+2.1
ISP	Isparta	4.26	315	*e*Pn	Pn	23 30 53.6	+2.4
ISP	Isparta	4.26	315	P	Pn	23 30 53.0	+1.7
ISP	Isparta	4.26	315	Pn	Pn	23 30 53.4	+2.1
ISP	Isparta	4.26	315	*e*P	Pn	23 30 53.7	+2.4
ISP	Isparta	4.26	315	Pn	Pn	23 30 53.4	+2.1
ISP	Isparta	4.26	315	*e*P	Pn	23 30 53.7	+2.4
RMNI	Mount Ramon	4.27	175	Pn	Pn	23 30 53.7	+2.2
RMNI	Mount Ramon	4.27	175	Pn	Pn	23 30 53.7	+2.2
ZFRI	Zfri	4.36	170	Pn	Pn	23 30 54.2	+1.6
ZFRI	Zfri	4.36	170	Pn	Pn	23 30 54.2	+1.6
SANL	SANLIURFA_Merk	4.43	57	*i* P	Pn	23 30 54.7	+1.1
SANL	SANLIURFA_Merk	4.43	57	P	Pn	23 30 54.7	+1.1
BRDR	BURDUR-Merkez	4.45	311	*i* P	Pn	23 30 55.9	+1.9
BRDR	BURDUR-Merkez	4.45	311	P	Pn	23 30 55.9	+1.9
URFA	Urfa	4.46	53	PN	Pn	23 30 54.3	+0.3
URFA	Urfa	4.46	53	*e*Pn	Pn	23 30 54.3	+0.3
KIZT	Kizilcal	4.46	335	PN	Pn	23 30 54.8	+0.7
KIZT	Kizilcal	4.46	335	*e*Pn	Pn	23 30 54.8	+0.7
AKCD	Akcadag	4.49	39	*i* P	Pn	23 30 55.4	+0.9
AKCD	Akcadag	4.49	39	P	Pn	23 30 55.3	+0.9
DARE	Darende-Malaty	4.49	34	PN	Pn	23 30 55.6	+1.1
DARE	Darende-Malaty	4.49	34	*e*Pn	Pn	23 30 55.6	+1.1
CUGUR	Gurin_S˜VAS	4.52	31	*i* P	Pn	23 30 56.5	+1.6
CUGUR	Gurin_S˜VAS	4.52	31	P	Pn	23 30 56.5	+1.6
GOLH	Golhisar	4.53	303	*i* P	Pn	23 30 58.0	+3.0
GOLH	Golhisar	4.53	303	P	Pn	23 30 58.0	+3.0
PRNI	Paran	4.54	173	Pn	Pn	23 30 56.2	+1.1
PRNI	Paran	4.54	173	Pn	Pn	23 30 56.2	+1.1
FETY	Fethiye	4.61	294	PN	Pn	23 30 58.0	+1.9
FETY	Fethiye	4.61	294	P	Pn	23 30 56.9	+0.8
FETY	Fethiye	4.61	294	P	Pn	23 30 56.9	+0.8
FETY	Fethiye	4.61	294	P	Pn	23 30 56.9	+0.8
FETY	Fethiye	4.61	294	*e*Pn	Pn	23 30 58.0	+1.9
AFSR	Af¯ar-Bala (A	4.68	348	PN	Pn	23 30 59.0	+1.9
AFSR	Af¯ar-Bala (A	4.68	348	*e*Pn	Pn	23 30 59.0	+1.9
BOLV	Bolvadin	4.70	326	*i* P	Pn	23 31 01.1	+3.6
BOLV	Bolvadin	4.70	326	P	Pn	23 31 01.1	+3.6
CDAG	Cicekdag	4.75	0	*i* P	Pn	23 30 59.3	+1.2
CDAG	Cicekdag	4.75	0	P	Pn	23 30 59.3	+1.2
BBAL	Bala	4.77	349	*i* P	Pn	23 31 01.1	+2.8
BBAL	Bala	4.77	349	P	Pn	23 31 01.1	+2.8
KZIL	AFYON_Kizioren	4.77	316	*i* P	Pn	23 31 00.3	+1.9
KZIL	AFYON_Kizioren	4.77	316	P	Pn	23 31 00.3	+1.9
CUSAR	Sarkisla-SIVAS	4.80	18	*i* P	Pn	23 31 00.7	+1.9
CUSAR	Sarkisla-SIVAS	4.80	18	P	Pn	23 31 00.7	+1.9
CUALT	Altinyayla-SIV	4.81	23	*i* P	Pn	23 31 01.1	+2.1
CUALT	Altinyayla-SIV	4.81	23	P	Pn	23 31 01.1	+2.1
YOZ	Yozgat	4.83	9	PN	Pn	23 31 00.5	+1.2
YOZ	Yozgat	4.83	9	*e*Pn	Pn	23 31 00.5	+1.2
HRFI	Mount Harif	4.85	173	Pn	Pn	23 31 01.0	+1.6
HRFI	Mount Harif	4.85	173	Pn	Pn	23 31 01.0	+1.6
BRTR	Keskin Array B	4.88	354	P	Pn	23 31 01.1	+1.1
	1.8nm,0.3s,baz=180,slow=14,SNR=69						

BRTR				LR	LR	23 33 28.1	
	comp=Z,173nm,20.2s,baz=144,slow=46						
BRTR	**Keskin Array B**	**4.88**	**354**	*i* P	**Pn**	**23 31 01.7**	**+1.8**
BRTR				pmax	pmax		
	comp=Z,9.0nm,0.5s						
BR131	**Keskin Array S**	**4.88**	**354**	*e*Pn	**Pn**	**23 31 01.9**	**+1.9**
BR131	**Keskin Array S**	**4.88**	**354**	*e*Pn	**Pn**	**23 31 01.9**	**+1.9**
DALY	**Dalyan (Mu˜la**	**5.00**	**295**	PN	**Pn**	**23 31 03.1**	**+1.7**
DALY	**Dalyan (Mu˜la**	**5.00**	**295**	*i* P	**Pn**	**23 31 02.3**	**+0.9**
DALY	**Dalyan (Mu˜la**	**5.00**	**295**	P	**Pn**	**23 31 02.3**	**+0.9**
DALY	**Dalyan (Mu˜la**	**5.00**	**295**	*e*Pn	**Pn**	**23 31 03.1**	**+1.7**
TURN	**Turunc**	**5.06**	**295**	*i* P	**Pn**	**23 31 06.2**	**+4.0**
TURN	**Turunc**	**5.06**	**295**	P	**Pn**	**23 31 06.2**	**+4.0**
MBRI	**Mt Berech**	**5.08**	**174**	Pn	**Pn**	**23 31 04.2**	**+1.6**
MBRI	**Mt Berech**	**5.08**	**174**	Pn	**Pn**	**23 31 04.2**	**+1.6**
TAVA	**DENIZLI_Tavas**	**5.09**	**302**	*i* P	**Pn**	**23 31 04.3**	**+1.6**
TAVA	**DENIZLI_Tavas**	**5.09**	**302**	P	**Pn**	**23 31 04.3**	**+1.6**
BR231	**Keskin MP Arra**	**5.12**	**347**	*e*Pn	**Pn**	**23 31 05.6**	**+2.4**
BR231	**Keskin MP Arra**	**5.12**	**347**	*e*Pn	**Pn**	**23 31 05.6**	**+2.4**
ANTO	**Ankara**	**5.14**	**347**	⇓*i*P	Pn	23 31 15.0	+12
ANTO	**Ankara**	**5.14**	**347**	*e*Pn	**Pn**	**23 31 06.0**	**+2.5**
ANTO	**Ankara**	**5.14**	**347**	P	**Pn**	**23 31 05.3**	**+1.9**
ANTO	**Ankara**	**5.14**	**347**	P	**Pn**	**23 31 05.3**	**+1.9**
ANTO	**Ankara**	**5.14**	**347**	*e*Pn	**Pn**	**23 31 06.0**	**+2.5**
EIL	**Elat**	**5.21**	**174**	P	Pn	23 31 11.5	+7.2
	comp=Z,9.7nm,0.3s,baz=4.8,slow=4.2,SNR=62						
EIL				S	**Sn**	**23 32 09.7**	**+6.6**
	comp=Z,31nm,0.3s,baz=129,slow=13,SNR=7.7						
EIL				LR	LR	23 33 43.9	
	comp=Z,231nm,19.3s,baz=22,slow=44						
EIL	**Elat**	**5.21**	**174**	Pn	**Pn**	**23 31 05.7**	**+1.4**
EIL	**Elat**	**5.21**	**174**	Pn	**Pn**	**23 31 05.7**	**+1.4**
ELZG	**Elazig**	**5.21**	**45**	*i* P	**Pn**	**23 31 05.2**	**+0.7**
ELZG	**Elazig**	**5.21**	**45**	P	**Pn**	**23 31 05.2**	**+0.7**
KHAL	**Karahalli**	**5.23**	**313**	*i* P	**Pn**	**23 31 05.3**	**+0.6**
KHAL	**Karahalli**	**5.23**	**313**	P	**Pn**	**23 31 05.3**	**+0.6**
ARG	**Arkhangelos**	**5.23**	**287**	P	**Pn**	**23 31 05.0**	**+0.4**
ARG	**Arkhangelos**	**5.23**	**287**	P	**Pn**	**23 31 05.0**	**+0.4**
ARG	**Arkhangelos**	**5.23**	**287**	P	**Pn**	**23 31 05.0**	**+0.4**
ARG	**Arkhangelos**	**5.23**	**287**	P	**Pn**	**23 31 05.0**	**+0.4**
HHAG	**Hagoal**	**5.25**	**202**	P	**Pn**	**23 31 05.4**	**+0.5**
	baz=201						
HHAG				AMP		23 32 00.0	
	baz=201						
HHAG				S	**Sn**	**23 32 00.2**	**-3.9**
	baz=201						
HHAG	**Hagoal**	**5.25**	**202**	P	**Pn**	**23 31 05.4**	**+0.5**
SVRC	**Sivrice-ELAZID**	**5.33**	**47**	PN	**Pn**	**23 31 06.6**	**+0.6**
SVRC	**Sivrice-ELAZID**	**5.33**	**47**	*e*Pn	**Pn**	**23 31 06.6**	**+0.6**
KOT	**Kottamia**	**5.36**	**204**	P	**Pn**	**23 31 07.0**	**+0.6**
	baz=203						
KOT				S	**Sn**	**23 32 03.5**	**-3.3**
	baz=203						
KOT	**Kottamia**	**5.36**	**204**	P	**Pn**	**23 31 07.0**	**+0.6**
YER	**Yerkesik**	**5.39**	**297**	PN	**Pn**	**23 31 08.8**	**+1.9**
YER	**Yerkesik**	**5.39**	**297**	P	**Pn**	**23 31 08.3**	**+1.4**
YER	**Yerkesik**	**5.39**	**297**	P	**Pn**	**23 31 08.3**	**+1.4**
YER	**Yerkesik**	**5.39**	**297**	P	**Pn**	**23 31 08.3**	**+1.4**
YER	**Yerkesik**	**5.39**	**297**	P	**Pn**	**23 31 08.3**	**+1.4**
YER	**Yerkesik**	**5.39**	**297**	*e*Pn	**Pn**	**23 31 08.8**	**+1.9**
ESKT	**Eskisehir**	**5.41**	**330**	*i* P	**Pn**	**23 31 08.3**	**+1.1**
SEYT	**Eskypehyr**	**5.41**	**330**	P	**Pn**	**23 31 08.3**	**+1.2**
KEMA	**Kemaliye**	**5.52**	**36**	*i* P	**Pn**	**23 31 09.5**	**+0.9**
KEMA	**Kemaliye**	**5.52**	**36**	P	**Pn**	**23 31 09.5**	**+0.9**
HQLS		**5.58**	**173**	P	**Pn**	**23 31 10.9**	**+1.4**
DIYA	**Diyarbakir**	**5.58**	**55**	*i* P	**Pn**	**23 31 10.3**	**+0.8**
DIYA	**Diyarbakir**	**5.58**	**55**	P	**Pn**	**23 31 10.3**	**+0.8**
ZNM	**Zenema**	**5.61**	**193**	P	**Pn**	**23 31 11.5**	**+1.7**
	baz=192						
ZNM	**Zenema**	**5.61**	**193**	P	**Pn**	**23 31 11.5**	**+1.7**
DYBB	**Diyarbakir**	**5.61**	**55**	PN	**Pn**	**23 31 11.6**	**+1.7**
SQR	**Saqqara**	**5.63**	**209**	P	**Pn**	**23 31 10.8**	**+0.7**
	baz=208						
SQR	**Saqqara**	**5.63**	**209**	P	**Pn**	**23 31 10.8**	**+0.7**
DIY	**Diyarbakir**	**5.64**	**56**	*e*Pn	**Pn**	**23 31 11.6**	**+1.3**
HBST	**Basata**	**5.64**	**176**	P	**Pn**	**23 31 11.6**	**+1.3**
	baz=175						
HBST				S	**Sn**	**23 32 12.2**	**-1.6**
	baz=175						
HBST	**Basata**	**5.64**	**176**	P	**Pn**	**23 31 11.6**	**+1.3**
PTK	**Pertek**	**5.71**	**44**	PN	**Pn**	**23 31 12.5**	**+1.1**
PTK	**Pertek**	**5.71**	**44**	*e*Pn	**Pn**	**23 31 12.5**	**+1.1**
GDZ	**Gediz**	**5.73**	**319**	*i* P	**Pn**	**23 31 12.5**	**+1.0**
GDZ	**Gediz**	**5.73**	**319**	P	**Pn**	**23 31 12.5**	**+1.0**
MARD	**Mardin**	**5.77**	**63**	*i* P	**Pn**	**23 31 13.3**	**+1.1**
CTAK	**Corum_Osmancik**	**5.79**	**4**	*i* P	**Pn**	**23 31 14.3**	**+1.9**
CTAK	**Corum_Osmancik**	**5.79**	**4**	P	**Pn**	**23 31 14.3**	**+1.9**
DAT	**Datca**	**5.79**	**291**	*i* P	**Pn**	**23 31 13.2**	**+0.8**
DAT	**Datca**	**5.79**	**291**	P	**Pn**	**23 31 13.2**	**+0.8**
HAQS	**Haql**	**5.82**	**175**	P	**Pn**	**23 31 14.0**	**+1.3**
HAQS				S	**Sn**	**23 32 18.8**	**+0.6**
NUB		**5.83**	**177**	P	**Pn**	**23 31 14.8**	**+2.0**
	baz=176						
NUB		**5.83**	**177**	P	**Pn**	**23 31 14.8**	**+2.0**
KULA	**Kula-Manisa**	**5.83**	**310**	PN	**Pn**	**23 31 13.7**	**+0.8**
KULA	**Kula-Manisa**	**5.83**	**310**	*e*Pn	**Pn**	**23 31 13.7**	**+0.8**
HMYD	**Mayadein**	**5.87**	**211**	P	**Pn**	**23 31 14.3**	**+0.9**
	baz=211						
HMYD	**Mayadein**	**5.87**	**211**	P	**Pn**	**23 31 14.3**	**+0.9**
BORA	**Eskisehir**	**5.88**	**330**	PN	**Pn**	**23 31 15.3**	**+1.7**
BORA	**Eskisehir**	**5.88**	**330**	*i* P	**Pn**	**23 31 14.8**	**+1.2**
BORA	**Eskisehir**	**5.88**	**330**	P	**Pn**	**23 31 14.8**	**+1.2**
BORA	**Eskisehir**	**5.88**	**330**	*e*Pn	**Pn**	**23 31 15.3**	**+1.7**
MANT	**Manisa**	**5.88**	**310**	*i* P	**Pn**	**23 31 14.7**	**+1.0**
MANT	**Manisa**	**5.88**	**310**	*e*Pn	**Pn**	**23 31 15.5**	**+1.8**
MANT	**Manisa**	**5.88**	**310**	P	**Pn**	**23 31 14.7**	**+1.0**
MANT	**Manisa**	**5.88**	**310**	*e*Pn	**Pn**	**23 31 15.5**	**+1.8**
KARP	**Karpathos**	**5.90**	**279**	P	**Pn**	**23 31 13.7**	**-0.2**
KARP	**Karpathos**	**5.90**	**279**	P	**Pn**	**23 31 13.7**	**-0.2**
KARP	**Karpathos**	**5.90**	**279**	P	**Pn**	**23 31 13.7**	**-0.2**
AYDN	**Tasoluk**	**5.91**	**300**	*i* P	**Pn**	**23 31 14.7**	**+0.8**
AYDN	**Tasoluk**	**5.91**	**300**	P	**Pn**	**23 31 14.7**	**+0.8**
BODT	**Bodrum**	**6.09**	**293**	P	**Pn**	**23 31 17.1**	**+0.6**
BODT	**Bodrum**	**6.09**	**293**	P	**Pn**	**23 31 17.1**	**+0.6**
BODT	**Bodrum**	**6.09**	**293**	P	**Pn**	**23 31 17.1**	**+0.6**
DEMI	**Demirci**	**6.13**	**315**	*i* P	**Pn**	**23 31 17.7**	**+0.7**
DEMI	**Demirci**	**6.13**	**315**	P	**Pn**	**23 31 17.7**	**+0.7**
SUSE	**Susehri**	**6.16**	**29**	*i* P	**Pn**	**23 31 20.0**	**+2.5**
SUSE	**Susehri**	**6.16**	**29**	P	**Pn**	**23 31 20.0**	**+2.5**
JLOS		**6.19**	**170**	P	**Pn**	**23 31 19.6**	**+1.7**
JLOS				S	**Sn**	**23 32 28.8**	**+1.2**
ILGA	**Ilgaz**	**6.20**	**356**	*e*Pn	**Pn**	**23 31 20.9**	**+2.8**
ILGA	**Ilgaz**	**6.20**	**356**	*e*Pn	**Pn**	**23 31 20.9**	**+2.8**
BCAM	**Yenicaga**	**6.20**	**344**	*i* P	**Pn**	**23 31 19.9**	**+1.8**
BCAM	**Yenicaga**	**6.20**	**344**	P	**Pn**	**23 31 19.9**	**+1.8**
HKAT	**Jabal Katrina**	**6.33**	**183**	P	**Pn**	**23 31 20.3**	**+0.4**
	baz=182						
HKAT				AMP		23 32 00.0	
	baz=182						
HKAT	**Jabal Katrina**	**6.33**	**183**	P	**Pn**	**23 31 20.3**	**+0.4**
BDAS	**Al Bad'**	**6.45**	**174**	P	**Pn**	**23 31 22.4**	**+1.0**
NBNS	**Bani Suef**	**6.74**	**203**	P	**Pn**	**23 31 25.7**	**+0.4**
	baz=203						
NBNS				S	**Sn**	**23 32 37.1**	**-3.7**
	baz=203						
NBNS	**Bani Suef**	**6.74**	**203**	P	**Pn**	**23 31 25.7**	**+0.4**
AMGA	**Amorgos Island**	**7.12**	**288**	P	**Pn**	**23 31 30.3**	**-0.3**
ANAF	**Anafi Island**	**7.12**	**285**	P	**Pn**	**23 31 29.9**	**-0.7**
NPS	**Neapolis**	**7.15**	**276**	P	**Pn**	**23 31 31.1**	**+0.1**
NPS	**Neapolis**	**7.15**	**276**	P	**Pn**	**23 31 31.1**	**+0.1**
NPS	**Neapolis**	**7.15**	**276**	P	**Pn**	**23 31 31.1**	**+0.1**
NPS	**Neapolis**	**7.15**	**276**	P	**Pn**	**23 31 31.1**	**+0.1**
LAST	**Lasithi**	**7.26**	**275**	P	**Pn**	**23 31 32.3**	**-0.3**
LAST	**Lasithi**	**7.26**	**275**	P	**Pn**	**23 31 32.3**	**-0.3**
LAST	**Lasithi**	**7.26**	**275**	P	**Pn**	**23 31 32.3**	**-0.3**
SANT	**Santorini**	**7.37**	**284**	*e*Pn	**Pn**	**23 31 36.2**	**+2.2**
SANT				*e*Sn	**Sn**	**23 32 50.9**	**-5.6**
SANT	**Santorini**	**7.37**	**284**	*e*Pn	**Pn**	**23 31 36.2**	**+2.2**
SANT				*e*Sn	**Sn**	**23 32 50.9**	**-5.6**
THR2	**Thira island,**	**7.41**	**285**	P	**Pn**	**23 31 33.9**	**-0.6**
THR2	**Thira island,**	**7.41**	**285**	P	**Pn**	**23 31 33.9**	**-0.6**
THR2	**Thira island,**	**7.41**	**285**	P	**Pn**	**23 31 33.9**	**-0.6**
THR6	**Thira Island,**	**7.42**	**284**	P	**Pn**	**23 31 34.0**	**-0.7**
THR6	**Thira Island,**	**7.42**	**284**	P	**Pn**	**23 31 34.0**	**-0.7**
THR6	**Thira Island,**	**7.42**	**284**	P	**Pn**	**23 31 34.0**	**-0.7**
STAX	**Taxiarchis Har**	**7.42**	**284**	P	**Pn**	**23 31 34.3**	**-0.4**
SAP1	**Santorini-Akro**	**7.42**	**284**	P	**Pn**	**23 31 34.1**	**-0.6**
THR3	**Thira Island,**	**7.43**	**285**	P	**Pn**	**23 31 34.1**	**-0.6**
THR3	**Thira Island,**	**7.43**	**285**	P	**Pn**	**23 31 34.1**	**-0.6**
THR3	**Thira Island,**	**7.43**	**285**	P	**Pn**	**23 31 34.1**	**-0.6**
CMBO	**Columbo, Santo**	**7.43**	**285**	P	**Pn**	**23 31 34.1**	**-0.7**
APE	**Apeiranthos**	**7.46**	**290**	P	**Pn**	**23 31 35.3**	**0.0**
APE	**Apeiranthos**	**7.46**	**290**	P	**Pn**	**23 31 35.3**	**0.0**
CHOS	**Chios island**	**7.52**	**300**	P	**Pn**	**23 31 36.8**	**+0.7**
CHOS	**Chios island**	**7.52**	**300**	P	**Pn**	**23 31 36.8**	**+0.7**
CHOS	**Chios island**	**7.52**	**300**	P	**Pn**	**23 31 36.8**	**+0.7**
IDI	**Anoyia**	**7.75**	**276**	P	**Pn**	**23 31 38.6**	**-0.6**
	comp=Z,36nm,0.3s,baz=106,slow=10,SNR=180						
IDI				S	**Sn**	**23 33 02.0**	**-3.7**
	comp=Z,48nm,0.3s,baz=256,slow=16,SNR=14						
IDI	**Anoyia**	**7.75**	**276**	*e*Pn	**Pn**	**23 31 39.4**	**+0.2**
IDI				S	**Sn**	**23 33 02.0**	**-3.7**
IDI	**Anoyia**	**7.75**	**276**	*e*Pn	**Pn**	**23 31 39.4**	**+0.2**
IDI				S	**Sn**	**23 33 02.0**	**-3.7**
SIVA	**Sivas**	**7.81**	**274**	P	**Pn**	**23 31 39.7**	**-0.4**
SIVA	**Sivas**	**7.81**	**274**	P	**Pn**	**23 31 39.7**	**-0.4**
SIVA	**Sivas**	**7.81**	**274**	P	**Pn**	**23 31 39.7**	**-0.4**
VAM	**Vamos**	**8.31**	**277**	P	**Pn**	**23 31 46.0**	**-0.9**
VAM	**Vamos**	**8.31**	**277**	P	**Pn**	**23 31 46.0**	**-0.9**
VAM	**Vamos**	**8.31**	**277**	P	**Pn**	**23 31 46.0**	**-0.9**
VAM	**Vamos**	**8.31**	**277**	P	**Pn**	**23 31 46.0**	**-0.9**
SLUM	**Salum**	**8.34**	**249**	P	**Pn**	**23 31 47.1**	**-0.2**
	baz=248						
SLUM	**Salum**	**8.34**	**249**	P	**Pn**	**23 31 47.1**	**-0.2**
CHAN	**Chania**	**8.44**	**277**	P	**Pn**	**23 31 49.0**	**+0.3**
IMMV	**Iera Moni Meta**	**8.49**	**277**	P	**Pn**	**23 31 48.3**	**-1.0**
ALN	**Alexandroupoli**	**8.89**	**315**	*e*Pn	**Pn**	**23 31 56.0**	**+1.3**
ALN	**Alexandroupoli**	**8.89**	**315**	*e*P	**Pn**	**23 31 56.1**	**+1.3**
ALN	**Alexandroupoli**	**8.89**	**315**	*e*Pn	**Pn**	**23 31 56.0**	**+1.3**
ANKY	**Antikythira Is**	**9.06**	**279**	P	**Pn**	**23 31 55.1**	**-2.0**
ANKY	**Antikythira Is**	**9.06**	**279**	P	**Pn**	**23 31 55.1**	**-2.0**
ANKY	**Antikythira Is**	**9.06**	**279**	P	**Pn**	**23 31 55.1**	**-2.0**
KTHR	**Kythira**	**9.33**	**282**	P	**Pn**	**23 31 59.3**	**-1.5**
DID	**Didima**	**9.34**	**290**	P	**Pn**	**23 32 00.9**	**-0.1**
DID	**Didima**	**9.34**	**290**	P	**Pn**	**23 32 00.9**	**-0.1**
DID	**Didima**	**9.34**	**290**	P	**Pn**	**23 32 00.9**	**-0.1**
VLI	**Veliai**	**9.43**	**285**	P	**Pn**	**23 32 00.7**	**-1.6**
VLI	**Veliai**	**9.43**	**285**	P	**Pn**	**23 32 00.7**	**-1.6**
VLI	**Veliai**	**9.43**	**285**	P	**Pn**	**23 32 00.7**	**-1.6**
SOC	**Sochi**	**9.66**	**24**	*e*P	**Pn**	**23 32 04.8**	**-0.5**
SOC				*e*		23 33 52.5	
SOC				MLR	MLR		
	comp=Z,61nm,12.0s						
SOC	**Sochi**	**9.66**	**24**	*e*P	**Pn**	**23 32 04.8**	**-0.5**
SOC				*e*S	**Sn**	**23 33 52.5**	**+0.1**
	comp=Z,61nm,12.0s						
GNI	**Garni**	**9.81**	**54**	P	**Pn**	**23 32 09.6**	**+2.1**
	comp=Z,0.3nm,0.3s,baz=209,slow=19,SNR=2.5						
GNI	**Garni**	**9.81**	**54**	*e*Pn	**Pn**	**23 32 06.2**	**-1.4**
GNI	**Garni**	**9.81**	**54**	*e*Pn	**Pn**	**23 32 06.2**	**-1.4**
DYR	**Agios Nikonas**	**9.92**	**284**	P	**Pn**	**23 32 08.8**	**-0.2**
VLX	**Vlachokerasia**	**9.98**	**288**	P	**Pn**	**23 32 08.7**	**-1.2**
VLX	**Vlachokerasia**	**9.98**	**288**	P	**Pn**	**23 32 08.7**	**-1.2**
VLX	**Vlachokerasia**	**9.98**	**288**	P	**Pn**	**23 32 08.7**	**-1.2**
DSF	**Desfina**	**10.12**	**294**	P	**Pn**	**23 32 12.3**	**+0.6**
DSF	**Desfina**	**10.12**	**294**	P	**Pn**	**23 32 12.3**	**+0.6**
DSF	**Desfina**	**10.12**	**294**	P	**Pn**	**23 32 12.3**	**+0.6**
GUR	**Goura**	**10.13**	**291**	P	**Pn**	**23 32 12.5**	**+0.6**
GUR	**Goura**	**10.13**	**291**	P	**Pn**	**23 32 12.5**	**+0.6**
GUR	**Goura**	**10.13**	**291**	P	**Pn**	**23 32 12.5**	**+0.6**
ITM	**Ithomi**	**10.30**	**287**	*e*Pn	**Pn**	**23 32 14.4**	**+0.2**
ITM	**Ithomi**	**10.30**	**287**	P	**Pn**	**23 32 14.1**	**-0.1**
ITM	**Ithomi**	**10.30**	**287**	*e*Pn	**Pn**	**23 32 14.4**	**+0.2**
KLV	**Kalavryta, Ach**	**10.30**	**291**	P	**Pn**	**23 32 14.7**	**+0.4**
KLV	**Kalavryta, Ach**	**10.30**	**291**	P	**Pn**	**23 32 14.7**	**+0.4**
KLV	**Kalavryta, Ach**	**10.30**	**291**	P	**Pn**	**23 32 14.7**	**+0.4**
PYL	**PYLOS**	**10.41**	**285**	P	**Pn**	**23 32 13.0**	**-2.6**
PYL	**PYLOS**	**10.41**	**285**	P	**Pn**	**23 32 13.0**	**-2.6**
PYL	**PYLOS**	**10.41**	**285**	P	**Pn**	**23 32 13.0**	**-2.6**
TRIZ	**Trizonia**	**10.45**	**293**	P	**Pn**	**23 32 17.8**	**+1.7**
AGG	**Agios Georgios**	**10.46**	**297**	*e*Pn	**Pn**	**23 32 18.6**	**+2.3**
AGG	**Agios Georgios**	**10.46**	**297**	*e*P	**Pn**	**23 32 18.6**	**+2.3**
AGG	**Agios Georgios**	**10.46**	**297**	*e*P	**Pn**	**23 32 18.6**	**+2.3**
SERG	**Sergoula**	**10.47**	**293**	P	**Pn**	**23 32 17.8**	**+1.3**
AMT	**Artemida-Makis**	**10.54**	**288**	P	**Pn**	**23 32 17.6**	**+0.2**
EFP	**Efpalio**	**10.59**	**293**	P	**Pn**	**23 32 20.1**	**+2.0**
TIRR	**Tirgusor**	**10.61**	**336**	⇓*i*P	**Pn**	**23 32 17.2**	**-1.0**
TIRR	**Tirgusor**	**10.61**	**336**	*e*Pn	**Pn**	**23 32 19.8**	**+1.6**
TIRR	**Tirgusor**	**10.61**	**336**	*e*P	**Pn**	**23 32 19.8**	**+1.6**
TIRR	**Tirgusor**	**10.61**	**336**	*e*P	**Pn**	**23 32 19.8**	**+1.6**
NEY	**Neytrino**	**10.61**	**35**	*i* P	**Pn**	**23 32 19.1**	**+0.6**
NEY	**Neytrino**	**10.61**	**35**	*i* P	**Pn**	**23 32 19.1**	**+0.6**
DRO	**Drossia**	**10.62**	**291**	P	**Pn**	**23 32 19.4**	**+0.9**
ANX	**Ano Chora**	**10.62**	**294**	P	**Pn**	**23 32 20.3**	**+1.6**
LIT	**Litokhoron**	**10.75**	**303**	*e*Pn	**Pn**	**23 32 22.1**	**+1.8**
LIT	**Litokhoron**	**10.75**	**303**	*e*P	**Pn**	**23 32 22.1**	**+1.8**
LIT	**Litokhoron**	**10.75**	**303**	*e*P	**Pn**	**23 32 22.1**	**+1.8**
EVR	**Evrytania**	**10.81**	**296**	P	**Pn**	**23 32 23.5**	**+2.4**
EVR	**Evrytania**	**10.81**	**296**	P	**Pn**	**23 32 23.5**	**+2.4**
EVR	**Evrytania**	**10.81**	**296**	P	**Pn**	**23 32 23.5**	**+2.4**
RLS	**Riolos of Patr**	**10.83**	**291**	P	**Pn**	**23 32 23.1**	**+1.7**
RLS	**Riolos of Patr**	**10.83**	**291**	P	**Pn**	**23 32 23.1**	**+1.7**
RLS	**Riolos of Patr**	**10.83**	**291**	P	**Pn**	**23 32 23.1**	**+1.7**
TLB	**Topalu**	**10.84**	**335**	⇑*i*P	**Pn**	**23 32 21.2**	**-0.3**
TLB	**Topalu**	**10.84**	**335**	⇑P	**Pn**	**23 32 21.2**	**-0.3**
TLB	**Topalu**	**10.84**	**335**	P	**Pn**	**23 32 21.2**	**-0.3**
ZEI	**Tsey**	**10.88**	**40**	*e*P	**Pn**	**23 32 26.8**	**+4.6**
KBZ	**Khabaz**	**11.06**	**34**	P	**Pn**	**23 32 28.3**	**+3.8**
	comp=Z,0.0nm,0.3s,baz=242,slow=4.1,SNR=4.1						
KIV	**Kislovodsk**	**11.14**	**33**	*e*Pn	**Pn**	**23 32 27.2**	**+1.5**
KIV	**Kislovodsk**	**11.14**	**33**	P	**Pn**	**23 32 29.4**	**+3.7**
KIV	**Kislovodsk**	**11.14**	**33***c*	*i*P	**Pn**	**23 32 29.5**	**+3.8**
KIV				pmax	pmax		
	comp=Z,14nm,1.2s						
KIV				MLR	MLR		
	comp=Z,99nm,22.0s						
KIV	**Kislovodsk**	**11.14**	**33**	*e*Pn	**Pn**	**23 32 27.2**	**+1.5**
PDO	**Prodromos**	**11.18**	**293**	P	**Pn**	**23 32 27.6**	**+1.4**
GRG	**Griva**	**11.21**	**306**	P	Pn	23 32 31.4	+4.9
NCK	**Nalchik**	**11.22**	**37**	*i* P	**Pn**	**23 32 27.9**	**+1.2**
NCK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
NCK	**Nalchik**	**11.22**	**37**	*i* P	**Pn**	**23 32 27.9**	**+1.2**
	comp=Z,6.0nm,1.0s						
DSL	**Palaion Diasel**	**11.40**	**296**	P	**Pn**	**23 32 31.8**	**+2.6**
DSL	**Palaion Diasel**	**11.40**	**296**	P	**Pn**	**23 32 31.8**	**+2.6**
DSL	**Palaion Diasel**	**11.40**	**296**	P	**Pn**	**23 32 31.8**	**+2.6**
VLS	**Valsamata**	**11.53**	**291**	P	**Pn**	**23 32 29.3**	**-1.7**
VLS	**Valsamata**	**11.53**	**291**	P	**Pn**	**23 32 29.3**	**-1.7**
VLS	**Valsamata**	**11.53**	**291**	P	**Pn**	**23 32 29.3**	**-1.7**
VLS	**Valsamata**	**11.53**	**291**	P	**Pn**	**23 32 29.3**	**-1.7**
VTS	**Vitosha**	**11.61**	**315**	*e*Pn	**Pn**	**23 32 34.4**	**+2.3**
VTS	**Vitosha**	**11.61**	**315**	*e*P	**Pn**	**23 32 34.4**	**+2.3**
VTS	**Vitosha**	**11.61**	**315**	*e*P	**Pn**	**23 32 34.4**	**+2.3**
FNA	**Florina**	**11.82**	**304**	*e*Pn	**Pn**	**23 32 36.5**	**+1.6**
FNA	**Florina**	**11.82**	**304**	*e*P	**Pn**	**23 32 36.5**	**+1.6**
FNA	**Florina**	**11.82**	**304**	*e*P	**Pn**	**23 32 36.5**	**+1.6**
IGT	**Igoumenitsa**	**12.09**	**297**	P	**Pn**	**23 32 39.5**	**+0.9**
IGT	**Igoumenitsa**	**12.09**	**297**	P	**Pn**	**23 32 39.5**	**+0.9**
IGT	**Igoumenitsa**	**12.09**	**297**	P	**Pn**	**23 32 39.5**	**+0.9**
IGT	**Igoumenitsa**	**12.09**	**297**	P	**Pn**	**23 32 39.5**	**+0.9**
GROC	**Groznyy**	**12.19**	**44**	*e*P	**Pn**	**23 32 36.9**	**-3.1**
GROC				*e*S	**Sn**	**23 34 54.5**	**0.0**
GROC				pmax	pmax		
	comp=Z,3.0nm,0.4s						
MLR	**Muntele Rosu**	**12.39**	**331**	⇓*i*P	**P**	**23 32 52.6**	**-1.7**
MLR	**Muntele Rosu**	**12.39**	**331**	*e*Pn	**Pn**	**23 32 44.7**	**+1.9**
MLR	**Muntele Rosu**	**12.39**	**331**	⇓P	**P**	**23 32 52.6**	**-1.7**
MLR	**Muntele Rosu**	**12.39**	**331**	*e*Pn	**Pn**	**23 32 44.7**	**+1.9**
VOIR		**12.71**	**329**	⇓*i*P	**Pn**	**23 32 51.6**	**+4.5**
VOIR		**12.71**	**329**	⇓P	**Pn**	**23 32 51.6**	**+4.5**
ARR	**Arges**	**12.84**	**328**	⇓*i*P	**P**	**23 32 58.5**	**-0.7**
DOPR	**Dopca**	**13.00**	**331**	⇓*i*P	**P**	**23 33 00.8**	**-0.2**
MAK	**Makhachkala**	**13.05**	**48**	*e*P	Pn	23 32 46.6	-5.1
MAK				*e*S	**Sn**	**23 35 11.0**	**-4.6**
MAK				pmax	pmax		
	comp=Z,85nm,1.1s						
MAK				MLR	MLR		
	comp=Z,228nm,17.0s						
HERR	**Herculane**	**13.54**	**321**	⇑*i*P	**P**	**23 33 06.4**	**-0.5**
MDVR	**Moldovita**	**13.84**	**319**	⇑*i*P	**P**	**23 33 09.9**	**-0.4**
TTG	**Podgorica**	**13.98**	**307**	*e*Pn	**Pn**	**23 33 07.3**	**+2.9**
TTG	**Podgorica**	**13.98**	**307**	*e*P	**Pn**	**23 33 07.3**	**+2.9**
TTG	**Podgorica**	**13.98**	**307**	*e*Pn	**Pn**	**23 33 07.3**	**+2.9**
CJR	**Cluj-Napoca**	**14.34**	**329**	⇑*i*P	**P**	**23 33 17.8**	**+1.9**
CJR	**Cluj-Napoca**	**14.34**	**329**	⇑P	**P**	**23 33 17.8**	**+1.9**
CJR	**Cluj-Napoca**	**14.34**	**329**	P	**P**	**23 33 17.8**	**+1.9**
DIVS	**Divibare**	**14.39**	**314**	*e*Pn	**Pn**	**23 33 12.4**	**+2.4**
DIVS	**Divibare**	**14.39**	**314**	*e*Pn	**Pn**	**23 33 12.4**	**+2.4**
BURAR	**Bucovina Array**	**14.45**	**335**	⇑*i*P	**P**	**23 33 18.0**	**+0.9**
BURAR	**Bucovina Array**	**14.45**	**335**	⇑P	**P**	**23 33 18.0**	**+0.9**
BUR04	**Bucovina Ar. S**	**14.45**	**335**	*e*Pn	**P**	**23 33 14.8**	**-2.4**
BUR04	**Bucovina Ar. S**	**14.45**	**335**	*e*Pn	**P**	**23 33 14.8**	**-2.4**
BZS	**Buzias**	**14.45**	**322**	⇑*i*P	**P**	**23 33 19.0**	**+1.9**
BZS	**Buzias**	**14.45**	**322**	⇑P	**P**	**23 33 19.0**	**+1.9**
BZS	**Buzias**	**14.45**	**322**	P	**P**	**23 33 19.0**	**+1.9**
BUR08	**Bucovina Ar. S**	**14.48**	**335**	*e*Pn	**P**	**23 33 15.1**	**-2.4**
BUR08	**Bucovina Ar. S**	**14.48**	**335**	*e*Pn	**P**	**23 33 15.1**	**-2.4**
BRY	**Bratogost**	**14.66**	**308**	P	**P**	**23 33 20.0**	**+0.4**
BRY	**Bratogost**	**14.66**	**308**	P	**P**	**23 33 20.0**	**+0.4**
TIP	**Timpagrande**	**14.68**	**292**	*e*Pn	**Pn**	**23 33 10.4**	**-3.5**
TIP				*e*Sn	Sn	23 35 45.5	-10
TIP	**Timpagrande**	**14.68**	**292**	*e*Pn	**Pn**	**23 33 10.4**	**-3.5**
TIP				*e*Sn	Sn	23 35 45.5	-10
RAYN	**Ar Rayn**	**14.92**	**136**	P	**Pn**	**23 33 19.6**	**+2.3**
STON	**Ston**	**15.20**	**307**	P	**Pn**	**23 33 23.1**	**+2.3**
CUC	**Castrocucco**	**15.56**	**295**	*e*Pn	**Pn**	**23 33 23.3**	**-2.3**
	comp=Z,27nm,0.8s						
CUC				*e*Sn	**Sn**	**23 36 12.2**	**-4.6**
CUC	**Castrocucco**	**15.56**	**295**	*e*Pn	**Pn**	**23 33 23.3**	**-2.3**
	comp=Z,27nm,0.8s						
CUC				*e*Sn	**Sn**	**23 36 12.2**	**-4.6**
TRPA	**Tarpa**	**15.90**	**330**	⇓*i*P	**P**	**23 33 38.2**	**+5.1**
AK11	**Malin Array Si**	**16.25**	**348**	*e*Pn	**Pn**	**23 33 35.3**	**+1.1**
AK11	**Malin Array Si**	**16.25**	**348**	*e*Pn	**Pn**	**23 33 35.3**	**+1.1**
KIEV	**Kiev**	**16.25**	**348**	*e*Pn	**P**	**23 33 36.2**	**-0.8**
	comp=Z,17nm,0.7s						
KIEV	**Kiev**	**16.25**	**348**	*i* P	**P**	**23 33 37.2**	**+0.2**
	SNR=9.2						
KIEV	**Kiev**	**16.25**	**348**	*i* P	**P**	**23 33 35.8**	**-1.2**
KIEV	**Kiev**	**16.25**	**348**	*e*Pn	**P**	**23 33 36.2**	**-0.8**
	comp=Z,17nm,0.7s						
KIEV	**Kiev**	**16.25**	**348**	P	**P**	**23 33 37.2**	**+0.2**
	SNR=9.2						
AKASG	**Malin Array Be**	**16.26**	**348**	P	**Pn**	**23 33 32.4**	**-2.0**
	comp=Z,4.6nm,0.3s,baz=167,slow=11,SNR=14						
AKASG	**Malin Array Be**	**16.26**	**348**	*i* P	**P**	**23 33 36.2**	**-0.8**
AKASG				pmax	pmax		
	comp=Z,12nm,0.5s						
AKASG	**Malin Array Be**	**16.26**	**348**	*i* P	**P**	**23 33 36.2**	**-0.8**
	comp=Z,12nm,0.5s						
AKBB	**Malin Array Si**	**16.26**	**348**	*e*Pn	**P**	**23 33 36.3**	**-0.7**
	comp=Z,18nm,0.7s						
AKBB	**Malin Array Si**	**16.26**	**348**	*e*P	**P**	**23 33 36.3**	**-0.7**
AKBB				pmax	pmax		
	comp=Z,18nm,0.7s						
AKBB	**Malin Array Si**	**16.26**	**348**	*e*P	**P**	**23 33 36.3**	**-0.7**
	comp=Z,18nm,0.7s						
VAE	**Valguarnera**	**16.29**	**285**	P	**Pn**	**23 33 34.0**	**-0.9**
	comp=Z,1.2nm,0.3s,baz=67,slow=4.1,SNR=4.4						
VAE				S	**Sn**	**23 36 24.2**	**-10**
	comp=Z,3.3nm,0.3s,baz=284,slow=6.6,SNR=9.0						
UZH	**Uzhgorod**	**16.39**	**331**	*e*P	**P**	**23 33 38.4**	**-0.2**
UZH	**Uzhgorod**	**16.39**	**331**	*e*P	**P**	**23 33 38.4**	**-0.2**
BLY	**Banja Luka**	**16.43**	**312**	*e*Pn	**Pn**	**23 33 37.7**	**+1.1**
	comp=Z,9.9nm,0.9s						
BLY	**Banja Luka**	**16.43**	**312**	*e*Pn	**Pn**	**23 33 37.7**	**+1.1**
	comp=Z,9.9nm,0.9s						
VORD	**Divnogorie**	**16.49**	**11**	*e*P	**Pn**	**23 33 37.8**	**+0.5**
VORD				pmax	pmax		
	comp=Z,9.0nm,0.5s						
VSR	**Storozhevoye**	**16.72**	**11**	*e*P	**P**	**23 33 41.5**	**-0.6**
VSR				pmax	pmax		
	comp=Z,10.0nm,1.4s						
VSR	**Storozhevoye**	**16.72**	**11**	*e*P	**P**	**23 33 41.5**	**-0.6**
	comp=Z,10.0nm,1.4s						
PSZ	**Piszkesteto**	**16.91**	**325**	*e*Pn	**Pn**	**23 33 41.8**	**-0.9**
	comp=Z,4.9nm,0.7s						
PSZ	**Piszkesteto**	**16.91**	**325**	*e*P	**Pn**	**23 33 41.8**	**-0.9**
PSZ				pmax	pmax		
	comp=Z,5.0nm,0.7s						
PSZ	**Piszkesteto**	**16.91**	**325**	*e*P	**Pn**	**23 33 41.8**	**-0.9**
	comp=Z,5.0nm,0.7s						
CRVS	**Cervenica-Dubn**	**16.95**	**330**	*e*P	**P**	**23 33 46.7**	**+1.9**
CRVS	**Cervenica-Dubn**	**16.95**	**330**	*e*P	**P**	**23 33 46.7**	**+1.9**
CRVS	**Cervenica-Dubn**	**16.95**	**330**	*e*P	**P**	**23 33 46.7**	**+1.9**
KWP	**Kalwaria Pacla**	**17.05**	**333**	*e*Pn	**Pn**	**23 33 44.7**	**+0.4**
	comp=Z,128nm,1.0s						
KWP	**Kalwaria Pacla**	**17.05**	**333**	*e*P	**Pn**	**23 33 44.7**	**+0.4**
KWP				pmax	pmax		
	comp=Z,128nm,1.0s						
KWP	**Kalwaria Pacla**	**17.05**	**333**	*e*P	**Pn**	**23 33 44.7**	**+0.4**
	comp=Z,128nm,1.0s						
VRH	**Novokhopyorsk**	**17.19**	**16**	*e*P	**Pn**	**23 33 45.8**	**-0.2**
VRH				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VRH	**Novokhopyorsk**	**17.19**	**16**	*e*P	**Pn**	**23 33 45.8**	**-0.2**
	comp=Z,10.0nm,0.6s						
LPSR	**Galich'ya Gora**	**18.03**	**9**	*e*P	**Pn**	**23 33 55.6**	**-0.9**
LPSR				pmax	pmax		
	comp=Z,10.0nm,1.1s						
SOP	**Sopron**	**18.45**	**319**	P	**Pn**	**23 34 03.8**	**+2.2**
SOP				pmax	pmax		
	comp=Z,6.0nm,1.3s						
JAVC	**Velka Javorina**	**18.63**	**324**	*e*PN	**Pn**	**23 34 04.9**	**+1.0**
SOKA	**Soboth**	**18.73**	**315**	*e*Pn	**Pn**	**23 34 06.4**	**+1.4**
	comp=Z,2.3nm,0.7s						
SOKA	**Soboth**	**18.73**	**315**	Pn	**Pn**	**23 34 06.4**	**+1.4**
	comp=Z,2.3nm,0.7s						
ARSA	**Arzberg**	**18.76**	**317**	*e*P	**P**	**23 34 04.8**	**+0.1**
	comp=Z,4.9nm,1.1s						
ARSA	**Arzberg**	**18.76**	**317**	P	**P**	**23 34 04.8**	**+0.1**
	comp=Z,4.9nm,1.1s						
OBKA	**Obir**	**18.92**	**314**	*e*Pn	**Pn**	**23 34 07.3**	**-0.1**
	comp=Z,10nm,1.5s						
OBKA	**Obir**	**18.92**	**314**	Pn	**Pn**	**23 34 07.3**	**-0.1**
	comp=Z,10nm,1.5s						
CONA	**Conrad Observa**	**18.97**	**319**	*e*Pn	**P**	**23 34 07.5**	**+0.4**
	comp=Z,1.2nm,0.8s						
CONA				*i* Pn	**P**	**23 34 07.5**	**+0.4**
MORC	**Moravsky Berou**	**19.32**	**326**	⇓*i*P	Pn	23 34 23.0	+11
MORC	**Moravsky Berou**	**19.32**	**326**	*e*P	**Pn**	**23 34 11.9**	**-0.2**
	comp=Z,6.1nm,1.3s						
MORC	**Moravsky Berou**	**19.32**	**326**	*e*P	**Pn**	**23 34 12.0**	**-0.2**
MORC				pmax	pmax		
	comp=Z,6.0nm,1.3s						
MORC	**Moravsky Berou**	**19.32**	**326**	*e*P	**Pn**	**23 34 11.9**	**-0.2**
	comp=Z,6.1nm,1.3s						
GEYT	**Alibeck**	**19.39**	**74**	P	**P**	**23 34 12.2**	**+0.5**
	comp=Z,0.6nm,0.3s,baz=270,slow=10,SNR=45						
GYA0B	**ALIBECK ARRAY**	**19.39**	**74**	*e*P	**Pn**	**23 34 14.1**	**+1.1**
	comp=Z,44nm,0.9s						
GYA0B	**ALIBECK ARRAY**	**19.39**	**74**	*e*P	**Pn**	**23 34 14.1**	**+1.1**
	comp=Z,44nm,0.9s						
KRUC	**Moravsky**	**19.40**	**322**	*e*PN	**Pn**	**23 34 12.7**	**-0.3**
VRAC	**Vranov**	**19.46**	**323**	LR	LR	23 42 44.6	
	comp=Z,73nm,20.0s,baz=28,slow=40						
MYKA	**Terra Mystica**	**19.52**	**313**	*e*Pn	**P**	**23 34 13.9**	**+0.8**
	comp=Z,17nm,0.7s						
MYKA	**Terra Mystica**	**19.52**	**313**	Pn	**P**	**23 34 13.9**	**+0.8**
	comp=Z,17nm,0.7s						
MOA	**Molln**	**19.80**	**317**	*e*P	**P**	**23 34 16.5**	**+0.4**
	comp=Z,4.7nm,0.8s						
MOA	**Molln**	**19.80**	**317**	P	**P**	**23 34 16.5**	**+0.4**
	comp=Z,4.7nm,0.8s						
KBA	**Koelnbreinsper**	**19.92**	**314**	*e*P	**P**	**23 34 16.9**	**-0.8**
	comp=Z,3.5nm,0.5s						
KBA	**Koelnbreinsper**	**19.92**	**314**	P	**Pn**	**23 34 19.1**	**-0.4**
KBA				pmax	pmax		
	comp=Z,13nm,1.2s						
KBA	**Koelnbreinsper**	**19.92**	**314**	P	**Pn**	**23 34 19.1**	**-0.4**
	comp=Z,13nm,1.2s						
ABTA	**Abfaltersbach**	**20.26**	**312**	*e*P	**P**	**23 34 21.4**	**+0.2**
	comp=Z,6.1nm,0.8s						
ABTA	**Abfaltersbach**	**20.26**	**312**	P	**P**	**23 34 21.4**	**+0.2**
	comp=Z,6.1nm,0.8s						
DPC	**Dobruska-Polom**	**20.29**	**325**	*e*P	**P**	**23 34 22.6**	**+1.2**
DPC				*e*x	x	23 34 28.9	
DPC	**Dobruska-Polom**	**20.29**	**325**	*e*P	**P**	**23 34 22.6**	**+1.2**
OBN	**Obninsk**	**20.31**	**4**	*e*P	Pn	23 34 23.8	+0.1
	comp=Z,17nm,0.6s						
OBN	**Obninsk**	**20.31**	**4**	⇑*e*P	**P**	**23 34 22.3**	**+0.8**
OBN				*e*		23 34 45.6	
OBN				pmax	pmax		
	comp=Z,12nm,0.8s						
OBN				MLR	MLR		
	comp=Z,68nm,20.0s						
OBN	**Obninsk**	**20.31**	**4**	*e*P	**P**	**23 34 22.3**	**+0.8**
	comp=Z,12nm,0.8s						
KEST	**Kesra**	**20.39**	**280**	P	**P**	**23 34 22.1**	**-0.6**
	comp=Z,8.9nm,0.9s,baz=344,slow=3.1,SNR=10.0						
KEST				S	**S**	**23 38 00.6**	**-8.7**
	comp=Z,1.3nm,0.8s,baz=90,slow=20,SNR=3.8						
KEST	**Kesra**	**20.39**	**280**	*e*P	**P**	**23 34 24.0**	**+1.3**
	comp=Z,8.1nm,0.7s						
KEST				S	**S**	**23 38 00.6**	**-8.7**
KEST	**Kesra**	**20.39**	**280**	*e*P	**P**	**23 34 24.0**	**+1.3**
	comp=Z,8.1nm,0.7s						

KEST				S	S	23 38 00.6	-8.7
TAMR	Tamra	20.51	283	eP	Pn	23 34 25.8	-0.5
	comp=Z,34nm,1.5s						
TAMR	Tamra	20.51	283	eP	Pn	23 34 25.8	-0.5
	comp=Z,34nm,1.5s						
UPC	Upice	20.54	325	eP	P	23 34 24.9	+0.8
UPC	Upice	20.54	325	eP	P	23 34 24.9	+0.8
UPC	Upice	20.54	325	eP	P	23 34 24.9	+0.8
GEA0	GERESS Array S	20.67	319	eP	P	23 34 24.9	-0.7
GEC2	GERESS Array S	20.67	319	eP	P	23 34 25.4	-0.3
	comp=Z,6.0nm,0.7s						
GEC2	GERESS Array S	20.67	319	eP	P	23 34 25.4	-0.3
GEC2				pmax	pmax		
	comp=Z,6.0nm,0.7s						
GEC2	GERESS Array S	20.67	319	eP	P	23 34 25.4	-0.3
	comp=Z,6.0nm,0.7s						
GERES	GERESS Array B	20.67	319	P	P	23 34 25.2	-0.5
	comp=Z,5.6nm,0.6s,baz=122,slow=8.9,SNR=29						
GERES				PcP	PcP	23 38 34.0	-0.6
	comp=Z,0.4nm,0.5s,baz=157,slow=2.8,SNR=4.3						
GERES	GERESS Array B	20.67	319	P	P	23 34 25.2	-0.5
GERES						23 38 34.0	
GERES				pmax	pmax		
	comp=Z,5.0nm,0.5s						
GERES	GERESS Array B	20.67	319	P	P	23 34 25.2	-0.5
	comp=Z,5.0nm,0.5s						
SHME	Shamm	20.73	109	P	P	23 34 26.7	+0.3
GOPC	GO Pecny, Ondr	20.75	322	eP	Pn	23 34 28.2	-0.7
GOPC	GO Pecny, Ondr	20.75	322	eP	Pn	23 34 28.2	-0.7
ASUD	Al Ashush, Dub	20.86	114	iP	Pn	23 34 29.3	-1.1
	SNR=8.6						
ASUD	Al Ashush, Dub	20.86	114	P	P	23 34 29.3	+1.5
	SNR=8.6						
KHC	Kasperske Hory	20.90	319	eP	P	23 34 27.8	-0.3
KHC				ex	x	23 34 32.1	
KHC				ex	x	23 34 37.6	
KHC	Kasperske Hory	20.90	319	eP	P	23 34 27.2	-0.9
	comp=Z,3.3nm,0.7s						
KHC	Kasperske Hory	20.90	319	eP	P	23 34 27.8	-0.3
KHC	Kasperske Hory	20.90	319	eP	P	23 34 27.8	-0.3
BANOM	Banah	20.91	109	iP	P	23 34 29.0	+0.6
	SNR=6.5						
BANOM	Banah	20.91	109	P	P	23 34 29.0	+0.6
	SNR=6.5						
NAZ	Nazwa, Dubai	20.91	112	iP	P	23 34 29.7	+1.4
	SNR=22						
NAZ	Nazwa, Dubai	20.91	112	P	P	23 34 29.7	+1.4
	SNR=22						
PRU	Pruhonice	20.92	322	eP	Pn	23 34 29.7	-1.2
PRU				ex	x	23 34 39.5	
PRU	Pruhonice	20.92	322	eP	Pn	23 34 29.7	-1.2
THTN	Thala	20.94	279	eP	Pn	23 34 30.6	-0.8
	comp=Z,11nm,1.0s						
THTN	Thala	20.94	279	eP	Pn	23 34 30.6	-0.8
	comp=Z,11nm,1.0s						
MOS	Moscow	21.00	5	eP	Pn	23 34 31.8	+0.1
MOS				e		23 35 01.3	
PRA	Prague	21.02	322	eP	P	23 34 31.0	+1.7
PRA				ex	x	23 34 38.8	
PRA	Prague	21.02	322	eP	P	23 34 31.0	+1.7
PRA	Prague	21.02	322	eP	P	23 34 31.0	+1.7
WTTA	Wattenberg	21.03	313	ePn	P	23 34 30.7	+1.1
	comp=Z,13nm,1.2s						
WTTA	Wattenberg	21.03	313	Pn	P	23 34 30.7	+1.1
	comp=Z,13nm,1.2s						
MSFE	Esma-Masafi	21.09	111	iP	P	23 34 31.2	+0.8
	SNR=6.5						
WATA	Walderalm	21.10	313	eP	P	23 34 30.6	+0.2
	comp=Z,3.9nm,0.8s						
WATA	Walderalm	21.10	313	P	P	23 34 30.6	+0.2
	comp=Z,3.9nm,0.8s						
IDID	Didziasalis	21.11	348	eP	P	23 34 29.8	-0.5
IDID				IAmb	IAmb	23 34 31.7	
	comp=Z,16nm,0.9s						
MDH	Madha	21.23	111	iP	P	23 34 32.7	+0.9
	SNR=7.0						
MDH	Madha	21.23	111	P	P	23 34 32.7	+0.9
	SNR=7.0						
IIGN	Ignalina	21.24	347	eP	P	23 34 31.2	-0.4
IIGN				IAmb	IAmb	23 34 32.3	
	comp=Z,15nm,0.7s						
IIGN	Ignalina	21.24	347	eP	P	23 34 31.2	-0.4
PVCC	Panska Ves	21.25	323	eP	P	23 34 33.7	+2.0
PVCC				ex	x	23 34 41.7	
PVCC	Panska Ves	21.25	323	eP	P	23 34 33.7	+2.0
WET	Wettzell	21.29	319	P	P	23 34 33.0	+0.8
WET				pmax	pmax		
	comp=Z,13nm,1.0s						
UOSS	Minazif	21.35	112	eP	P	23 34 33.9	+0.9
	comp=Z,13nm,0.6s						
UOSS	Minazif	21.35	112	P	P	23 34 33.7	+0.7
UOSS	Minazif	21.35	112	eP	P	23 34 33.9	+0.9
	comp=Z,13nm,0.6s						
HATD	Hatta, Dubai	21.36	112	iP	P	23 34 33.8	+0.6
	SNR=13						
HATD	Hatta, Dubai	21.36	112	P	P	23 34 33.8	+0.6
	SNR=13						
ASHO	Ashiyiah	21.38	112	iP	P	23 34 34.2	+0.8
	SNR=30						
ASHO	Ashiyiah	21.38	112	P	P	23 34 34.2	+0.8
	SNR=30						
MOTA	Moosalm	21.39	313	eP	P	23 34 32.4	-1.0
	comp=Z,3.5nm,0.7s,SNR=5.2						
MOTA	Moosalm	21.39	313	P	P	23 34 32.4	-1.0
	comp=Z,3.5nm,0.7s,SNR=5.2						
ISAL	Salakas	21.47	347	eP	P	23 34 33.3	-0.7
ISAL				IAmb	IAmb	23 34 34.4	
	comp=Z,12nm,0.5s						
ISAL	Salakas	21.47	347	eP	P	23 34 33.3	-0.7
FETA	Feichten	21.47	312	eP	P	23 34 34.4	0.0
	comp=Z,11nm,1.0s						
FETA	Feichten	21.47	312	P	P	23 34 34.4	0.0
	comp=Z,11nm,1.0s						
ALNE	Al Ain	21.50	114	P	P	23 34 35.5	+0.9
FUORN	Ofenpass-Fuorn	21.59	310	eP	P	23 34 38.5	+2.8
	comp=Z,18nm,1.1s						
FUORN	Ofenpass-Fuorn	21.59	310	eP	P	23 34 38.5	+2.8
	comp=Z,18nm,1.1s						
IZAR	Zarasai	21.62	348	eP	P	23 34 35.1	-0.4
IZAR				IAmb	IAmb	23 34 36.0	
	comp=Z,12nm,0.7s						
RETA	Reutte	21.66	313	eP	P	23 34 35.1	-1.2
	comp=Z,5.7nm,0.7s						
RETA	Reutte	21.66	313	P	P	23 34 35.1	-1.2
	comp=Z,5.7nm,0.7s						
BRG	Berggiesshubel	21.77	324	eP	P	23 34 37.6	+0.2
	comp=Z,3.4nm,0.8s						
BRG				e		23 34 47.6	
	comp=Z,5.7nm,1.0s						
BRG	Berggiesshubel	21.77	324	eP	P	23 34 37.6	+0.2
BRG				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BRG	Berggiesshubel	21.77	324	eP	P	23 34 37.6	+0.2
	comp=Z,10.0nm,0.8s						
DAVOX	Davos/Dischmat	21.90	310	P	P	23 34 38.4	-0.5
	comp=Z,2.2nm,0.5s,baz=152,slow=14,SNR=6.5						
DAVOX				LR	LR	23 44 06.0	
	comp=Z,107nm,20.8s,baz=104,slow=39						
DAVOX	Davos/Dischmat	21.90	310	P	P	23 34 38.4	-0.5
DAVOX				pmax	pmax		
	comp=Z,5.0nm,0.9s						
DAVOX				MLR	MLR		
	comp=Z,107nm,20.8s						
DAVA	Damuels	22.11	312	eP	P	23 34 39.6	-1.6
	comp=Z,4.4nm,0.5s						
DAVA	Damuels	22.11	312	P	P	23 34 39.6	-1.6
	comp=Z,4.4nm,0.5s						
TUE	Stuetta	22.11	309	eP	P	23 34 44.2	+2.9
	comp=Z,23nm,1.7s						
TUE	Stuetta	22.11	309	eP	P	23 34 44.2	+2.9
	comp=Z,23nm,1.7s						
CLL	Collm	22.51	323	eP	P	23 34 45.0	-0.2
	comp=Z,5.0nm,1.1s						
CLL				epP	pP	23 34 55.0	+0.2
CLL				i		23 35 06.4	
CLL	Collm	22.51	323	eP	P	23 34 46.0	+0.8
	comp=Z,9.9nm,1.2s						
CLL	Collm	22.51	323	eP	P	23 34 46.0	+0.8
CLL				pmax	pmax		
	comp=Z,10.0nm,1.2s						
MOX	Moxa	22.81	321	P	P	23 34 50.8	+2.3
MOX				pmax	pmax		
	comp=Z,6.0nm,0.9s						
MOX	Moxa	22.81	321	P	P	23 34 50.8	+2.3
	comp=Z,6.0nm,0.9s						
AKTK	Aktyubinsk	23.22	41	P	P	23 34 52.2	-0.4
	comp=Z,2.0nm,0.8s						
AKTO	Aktyubinsk	23.22	41	P	P	23 34 52.2	-0.4
	comp=Z,2.2nm,0.8s,baz=254,slow=9.3,SNR=7.2						
SENIN	Lac Senin/Sane	23.39	308	eP	P	23 34 54.0	-0.6
	comp=Z,12nm,0.8s						
SENIN	Lac Senin/Sane	23.39	308	eP	P	23 34 54.0	-0.6
	comp=Z,12nm,0.8s						
BNI	Bardonecchia	23.40	304	eP	P	23 34 55.0	+0.4
	comp=Z,4.7nm,0.8s						
BNI	Bardonecchia	23.40	304	P	P	23 34 55.0	+0.4
BNI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BNI	Bardonecchia	23.40	304	eP	P	23 34 55.0	+0.4
	comp=Z,4.7nm,0.8s						
LPG	La Plagne	23.48	305	eP	P	23 34 55.6	0.0
LPG				pmax	pmax		
	comp=Z,6.0nm,0.8s						
LPG	La Plagne	23.48	305	eP	P	23 34 55.6	0.0
	comp=Z,6.0nm,0.8s						
LPL	La Plagne	23.50	305	eP	P	23 34 55.5	-0.2
LPL				pmax	pmax		
	comp=Z,3.0nm,0.5s						
LPL	La Plagne	23.50	305	eP	P	23 34 55.5	-0.2
	comp=Z,3.0nm,0.5s						
BFO	Black Forest	23.50	313	eP	P	23 34 54.5	-0.9
	comp=Z,19nm,1.1s						
BFO	Black Forest	23.50	313	eP	P	23 34 54.5	-0.9
BFO				pmax	pmax		
	comp=Z,19nm,1.1s						
BFO	Black Forest	23.50	313	eP	P	23 34 54.5	-0.9
	comp=Z,19nm,1.1s						
ABKAR	Akbulak array	23.70	45	eP	P	23 34 56.9	-0.3
ABKAR	Akbulak array	23.70	45	eP	P	23 34 56.9	-0.3
ORIF	Oris-en-Rattie	23.91	303	eP	P	23 34 59.7	+0.3
ORIF				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ORIF	Oris-en-Rattie	23.91	303	eP	P	23 34 59.7	+0.3
	comp=Z,4.0nm,0.9s						
VSU	Vasula	24.14	350	iP	P	23 35 00.5	-0.7
VSU				pmax	pmax		
	comp=Z,35nm,1.1s						
ECH	Echery	24.17	312	eP	P	23 35 01.0	-0.7
	comp=Z,20nm,1.6s						
ECH	Echery	24.17	312	eP	P	23 35 01.0	-0.7
ECH				pmax	pmax		
	comp=Z,20nm,1.6s						
CDF	Champ du Feu	24.18	312	eP	P	23 34 59.8	-2.0
CDF				pmax	pmax		
	comp=Z,3.0nm,0.7s						
CDF	Champ du Feu	24.18	312	eP	P	23 34 59.8	-2.0
	comp=Z,3.0nm,0.7s						
HINF	Hinteralfeld	24.20	311	eP	P	23 35 01.1	-0.9
HINF				pmax	pmax		
	comp=Z,2.0nm,0.5s						
HINF	Hinteralfeld	24.20	311	eP	P	23 35 01.1	-0.9
	comp=Z,2.0nm,0.5s						
HAU	Haudompre	24.59	311	eP	P	23 35 04.7	-0.8
HAU				pmax	pmax		
	comp=Z,3.0nm,0.8s						
VIVF	Saint-Julien-l	24.73	303	eP	P	23 35 06.0	-0.8
VIVF				pmax	pmax		
	comp=Z,27nm,2.0s						
VIVF	Saint-Julien-l	24.73	303	eP	P	23 35 06.0	-0.8
	comp=Z,27nm,2.0s						
MEM	Membach	25.86	316	⇑AP	pP	23 35 29.0	+1.7
AVF	Avril sur Loir	26.12	307	eP	P	23 35 22.8	+3.5
AVF				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KLMR	Klimovskoe	26.22	6	eP	P	23 35 18.4	-1.7
KLMR				pmax	pmax		
	comp=Z,36nm,0.8s						
KLMR	Klimovskoe	26.22	6	eP	P	23 35 18.4	-1.7
KLMR				AMP		23 35 19.6	
	comp=Z,36nm,0.8s						
CAF	Calviac	26.56	302	eP	P	23 35 26.1	+2.7
CAF				pmax	pmax		
	comp=Z,22nm,1.7s						
BAIF	Baives	26.68	314	eP	P	23 35 26.1	+1.8
BAIF				pmax	pmax		
	comp=Z,17nm,1.6s						
FIA1	FINESS Array S	27.12	351	eP	P	23 35 27.2	-0.9
FINES	FINESS Array B	27.12	351	P	P	23 35 26.6	-1.5
	comp=Z,4.1nm,0.5s,baz=155,slow=10,SNR=53						
FINES				PcP	PcP	23 38 47.1	-1.0
	comp=Z,1.4nm,0.7s,baz=132,slow=2.1,SNR=4.1						
FINES	FINESS Array B	27.12	351	iP	P	23 35 27.2	-0.9
FINES				pmax	pmax		
	comp=Z,4.0nm,0.5s						
ARU	Arti	27.16	30	P	P	23 35 27.6	-1.0
	comp=Z,1.7nm,0.5s,baz=221,slow=11,SNR=6.6						
ARU	Arti	27.16	30	eP	P	23 35 28.2	-0.5
ARU	Arti	27.16	30d	iP	P	23 35 27.2	-1.4
ARU				S	S	23 40 07.2	+2.6
ARU				SS	SnSn	23 41 14.6	+1.0
ARU				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PRGR	Permogore	27.74	12	eP	P	23 35 31.7	-2.0
PRGR				pmax	pmax		
	comp=Z,4.0nm,0.6s						
HFS	Hagfors	28.62	338	P	P	23 35 40.8	-0.8
	comp=Z,4.4nm,0.6s,baz=143,slow=11,SNR=29						
KK31	Karatay Array	29.13	63	eP	P	23 35 47.1	+0.7
KK31	Karatay Array	29.13	63	eP	P	23 35 47.1	+0.7
KK31	Karatay Array	29.13	63	eP	P	23 35 47.1	+0.7
KKAR	Karatay Array	29.13	63	eP	P	23 35 47.1	+0.7
KKAR	Karatay Array	29.13	63	eP	P	23 35 47.1	+0.7
KKAR	Karatay Array	29.13	63	eP	P	23 35 47.1	+0.7
NC405	NORSAR Array S	30.00	338	eP	P	23 35 53.9	+0.1
NAO01	NORSAR Array S	30.05	337	eP	P	23 35 53.4	-0.8
NB201	NORSAR Array S	30.08	338	eP	P	23 35 55.0	+0.4
NB2	NORSAR Subarra	30.09	338	P	P	23 35 53.2	-1.5
	comp=Z,2.9nm,0.9s,baz=141,slow=9.3						
NOA	NORSAR Array B	30.09	338	P	P	23 35 53.5	-1.2
	comp=Z,1.0nm,0.7s,baz=141,slow=9.3,SNR=5.4						
NOA				LR	LR	23 49 56.2	
	comp=Z,58nm,21.0s,baz=40,slow=40						
NBO00	NORSAR Array S	30.23	337	eP	P	23 35 56.6	+0.8
NC204	NORSAR Array S	30.42	338	eP	P	23 35 56.7	-0.9
ES19	SONSECA Array	30.63	290	eP	P	23 35 59.4	-0.3
ES19	SONSECA Array	30.63	290	eP	P	23 35 59.4	-0.3
ESDC	Sonseca Array	30.68	290	P	P	23 35 59.7	-0.5
	comp=Z,0.4nm,0.4s,baz=81,slow=8.9,SNR=9.0						
ESDC				PcP	PcP	23 38 57.4	-0.1
	comp=Z,0.7nm,0.7s,baz=70,slow=3.0,SNR=5.9						
BRVK	Borovoye	31.19	43	iP	P	23 36 00.7	-3.7
BRVK				pmax	pmax		
	comp=Z,2.0nm,1.2s						
BVAR	Borovoye Array	31.24	43	P	P	23 36 05.6	+0.8
	comp=Z,0.2nm,0.4s,baz=264,slow=2.9,SNR=3.3						
BVAR				LR	LR	23 51 39.9	
	comp=Z,75nm,21.7s,baz=126,slow=42						
MDT	Midelt	32.27	278	P	P	23 36 15.5	+1.2
	comp=Z,1.2nm,0.8s,baz=66,slow=9.2,SNR=3.1						
EKA	Eskdalemuir Ar	32.88	320	P	P	23 36 19.2	0.0
	comp=Z,1.9nm,0.6s,baz=116,slow=9.6,SNR=8.5						
KSH	Kashi	33.29	69	P	P	23 36 21.8	-1.3
KSH				ePP	PnPn	23 37 32.5	-1.6
ARCES	ARCESS Array B	35.07	355	P	P	23 36 37.2	-0.8
	comp=Z,6.6nm,0.6s,baz=171,slow=9.1,SNR=38						
ARCES	ARCESS Array B	35.07	355	eP	P	23 36 37.6	-0.5
ARCES	ARCESS Array B	35.07	355	eP	P	23 36 37.6	-0.5
KURBB	Kurchatov Arra	35.50	50	P	P	23 36 42.3	+0.3
	comp=Z,0.7nm,0.5s,baz=263,slow=8.6,SNR=4.3						
KURK	Kurchatov	35.57	50	eP	P	23 36 43.7	+1.1
KURK	Kurchatov	35.57	50	eP	P	23 36 43.7	+1.1
TOA0	Torodi Ar. Sit	36.56	242	eP	P	23 36 51.4	0.0
TORD	Torodi Ar. Bea	36.56	242	P	P	23 36 50.4	-1.0
	comp=Z,2.1nm,0.9s,baz=64,slow=6.7						
TORD				PcP	PcP	23 39 14.4	0.0
	baz=91,slow=1.3						
MKAR	Makanchi Array	37.65	57	P	P	23 36 58.8	-1.6
	comp=Z,0.8nm,0.7s,baz=254,slow=8.8,SNR=7.0						
MK01	Makanchi Array	37.66	57	eP	P	23 37 01.1	+0.6
ZALV	Zalesovo Beam	39.81	45	P	P	23 37 18.5	+0.2
	comp=Z,0.4nm,0.3s,baz=255,slow=11,SNR=2.9						
KOWA	Kowa	39.98	249	P	P	23 37 20.6	+0.4
	comp=Z,6.5nm,0.6s,baz=59,slow=9.8,SNR=24						
WMQ	Urumqi	41.60	61	P	P	23 37 35.3	+1.9
DANN	Dangsing	42.26	85	eP	P	23 37 40.6	+1.4
	comp=Z,26nm,0.5s						
GKN	Gorkha	43.11	85	eP	P	23 37 46.9	+1.0
	comp=Z,36nm,0.6s						
DMN	Daman	43.64	85	eP	P	23 37 51.4	+1.1
	comp=Z,20nm,0.6s						
KKN	Kakani	43.71	85	eP	P	23 37 51.8	+0.9
	comp=Z,35nm,0.6s						
PKIN	Phulchoki	43.89	85	eP	P	23 37 53.1	+0.7
	comp=Z,11nm,0.5s						
SPA0	Spitsbergen Ar	44.10	355	eP	P	23 37 53.0	-0.1
SPITS	Spitsbergen Ar	44.10	355	P	P	23 37 52.6	-0.5
	comp=Z,3.8nm,0.5s,baz=134,slow=4.2,SNR=21						
JIRN	Jiri	44.51	84	eP	P	23 37 58.5	+1.1
	comp=Z,58nm,0.6s						
DBIC	Dimbokro	45.67	241	P	P	23 38 06.3	0.0
	comp=Z,5.5nm,0.6s,baz=22,slow=7.7,SNR=12						
KIC	Kosan Boka	45.80	241	eP	P	23 38 07.3	0.0
	comp=Z,26nm,0.9s						
ODAN	Odare	45.80	85	eP	P	23 38 07.3	-0.3
TIC	Toumodi	45.80	241	eP	P	23 38 07.1	-0.3
LIC	Lamto	46.10	241	eP	P	23 38 09.3	-0.4
	comp=Z,58nm,1.3s						
SONM	Songino Array	53.77	53	P	P	23 39 09.1	+1.3
	comp=Z,0.3nm,0.4s,baz=260,slow=6.9,SNR=2.8						
LZH	Lanzhou	55.48	67	eP	P	23 39 22.8	+2.4
LZH				pP	pP	23 39 34.0	+2.7
LZH				sP	sP	23 39 38.3	+2.8
LZH				ePP	PP	23 41 28.0	+3.7
LZH				pmax	pmax		
	comp=Z,19nm,1.3s						
LZH				pmax	pmax		
	comp=Z,65nm,7.8s						
LZH				LR	LR		
	comp=Z,170nm,15.0s						
LZH				LR	LR		
	comp=Z,180nm,15.2s						
LZH				LR	LR		
	comp=Z,280nm,18.7s						
BOD	Bodaibo	55.98	39	eP	P	23 39 21.0	-2.4
BOD				pmax	pmax		
	comp=Z,4.0nm,1.4s						
TSUM	Tsumeb	56.07	199	P	P	23 39 25.6	+1.0
	comp=Z,1.3nm,0.6s,baz=336,slow=11,SNR=5.3						
CMAR	Chiang Mai Arr	59.09	88	P	P	23 39 45.3	-0.6
	comp=Z,0.5nm,0.3s,baz=290,slow=8.3,SNR=4.1						
HHC	Hu-ho-hao-te	59.43	59	eP	P	23 39 48.5	+0.4
HHC				pP	pP	23 39 56.0	-3.1
HHC				S	S	23 47 50.5	-4.3
HHC				sS	sS	23 48 13.0	+0.1
HHC				SS	SS	23 51 52.8	+3.1
HHC				pmax	pmax		
	comp=Z,11nm,1.0s						
HHC				pmax	pmax		
	comp=Z,99nm,5.5s						
HHC				LR	LR		
	comp=Z,110nm,14.1s						
HHC				LR	LR		
	comp=Z,89nm,14.3s						
HHC				LR	LR		
	comp=Z,140nm,15.7s						
GYA	Guiyang	61.59	76	eP	P	23 40 03.8	+0.8
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
BOSA	Boshof	63.72	189	P	P	23 40 18.4	+1.5
	comp=Z,3.6nm,0.7s,baz=6.2,slow=4.7,SNR=6.7						
CN2	Changchun	67.62	52	eP	P	23 40 43.5	+1.6
CN2				pmax	pmax		
	comp=Z,10.0nm,0.4s						
NJ2	Nanjing	68.46	65	eP	P	23 40 47.0	-0.4
NJ2				pmax	pmax		
	comp=Z,11nm,0.6s						
KSRS	Korea Array	72.33	56	LR	LR	00 17 21.2	
	comp=Z,50nm,18.0s,baz=190,slow=39						
YKA	Yellowknife Ar	79.81	346	P	P	23 41 52.6	-0.4
	comp=Z,2.2nm,0.8s,baz=30,slow=5.2,SNR=9.1						
MDM	Murphy Dome	80.48	1	eP	P	23 41 57.0	+0.3
	comp=Z,4.3nm,1.0s						
ILAR	Eielson Array	80.69	1	P	P	23 41 57.7	-0.1
	comp=Z,0.6nm,0.5s,baz=321,slow=4.0,SNR=6.3						
MMNY	Mt. Morris Dam	81.05	316	eP	P	23 42 00.6	+0.4
	comp=Z,12nm,0.8s						
DAWY	Dawson	81.28	357	eP	P	23 41 58.0	-3.0
	comp=Z,2.2nm,0.8s						
SCRK	Sand Creek	81.48	359	eP	P	23 42 02.9	+0.7
	comp=Z,4.1nm,0.9s						
SSPA	Standing Stone	82.38	315	eP	P	23 42 07.7	+0.5
	comp=Z,12nm,1.1s						
FFC	Flin Flon	83.19	336	eP	P	23 42 11.2	+0.1
	comp=Z,16nm,1.6s						
FFC	Flin Flon	83.19	336	eP	P	23 42 11.2	+0.1
FFC				pmax	pmax		
	comp=Z,16nm,1.6s						
ULM	Lac du Bonnet	84.52	330	P	P	23 42 17.1	-0.9
	comp=Z,5.8nm,0.6s,baz=70,slow=5.7,SNR=9.4						
ULM	Lac du Bonnet	84.52	330	eP	P	23 42 17.2	-0.8
	comp=Z,8.0nm,0.8s						
ULM	Lac du Bonnet	84.52	330	eP	P	23 42 17.2	-0.8
ULM				pmax	pmax		
	comp=Z,8.0nm,0.8s						
COWI	Conover	84.65	324	eP	P	23 42 18.3	-0.5
	comp=Z,7.2nm,0.9s						
S51A	Beattyville	87.68	315	eP	P	23 42 33.4	-0.5
	comp=Z,5.5nm,0.8s						
TKL	Tuckaleechee C	89.15	314	P	P	23 42 41.0	+0.2
	comp=Z,3.0nm,0.8s,baz=63,slow=9.0,SNR=5.1						
TKL	Tuckaleechee C	89.15	314	P	P	23 42 41.0	+0.2
TKL				pmax	pmax		
	comp=Z,3.0nm,0.8s						
LAO	LASA Array	91.39	334	eP	P	23 42 52.1	+1.0
	comp=Z,8.2nm,1.0s						
T42A	Van Buren	92.30	319	eP	P	23 42 55.2	-0.3
	comp=Z,3.4nm,0.8s						
MIAR	Mount Ida	95.49	319	eP	P	23 43 10.2	+0.1
	comp=Z,4.4nm,0.8s						
MIAR	Mount Ida	95.49	319	P	P	23 43 10.2	+0.1
MIAR				pmax	pmax		
	comp=Z,4.0nm,0.8s						
HLID	Hailey	96.90	338	eP	P	23 43 20.7	+4.1
	comp=Z,5.3nm,1.8s						

ISCJB ***28*** *23:55:06.4±1.3, 36.°28N±0.°10×70.°67E±0.°10, h100km, mb3.5/4, Error ellipse: s-maj=15.6km s-min=8.5km az=148.0*

SOME ***28*** *23:55:06.3, 37.°27N×70.°20E, h0km*

IDC ***28*** *23:55:09.8±6.0, 36.°37N×70.°76E, h115km±58km, mb3.3/5, mb1 3.2/10, mb1mx3.0/68, mbtmp3.6/10, Error ellipse: s-maj=54.0km s-min=40.5km az=124.0*

ISC 28 23:55:09.4±1.7**, 36.°4N**±0.°1×**70.°6E**±0.°1**, h100**km**, n13, σ1.s96**/16**, mb3.7**/4**, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IUG	Iuzhnay	5.74	356	eP	Pn	23 56 34.9	+2.8
	9.7nm,0.2s						
IUG				eS	Sn	23 57 39.6	+2.9
	34nm,0.4s						
BRLS	Borolday	6.63	355	eP	Pn	23 56 42.5	-1.7
BRLS				eS	Sn	23 57 53.5	-4.7
AAK	Ala-Archa	6.91	25	P	Pn	23 56 48.9	+0.9
	2.5nm,0.3s,baz=177,slow=5.0,SNR=9.7						
AAK				S	Sn	23 58 05.4	+0.3
	1.1nm,0.3s,baz=101,slow=18,SNR=10.0						
GEYT	Alibeck	10.07	282	S	Sn	23 59 23.0	+1.0
	0.3nm,0.3s,baz=108,slow=2.3,SNR=4.5						
MKAR	Makanchi Array	13.55	36	P	Pn	23 58 17.6	+0.2
	0.0nm,0.3s,baz=209,slow=11,SNR=3.2						
KURBB	Kurchatov Arra	15.31	19	P	Pn	23 58 38.1	-1.6
	0.0nm,0.3s,baz=207,slow=10.0,SNR=4.7						
BVAR	Borovoye Array	16.61	360	P	Pn	23 58 56.6	+0.7
	0.1nm,0.3s,baz=161,slow=8.9,SNR=2.5						
AKTO	Aktyubinsk	16.69	331	P	Pn	23 58 57.2	+0.3
	0.1nm,0.3s,baz=150,slow=14,SNR=2.7						
ZALV	Zalesovo Beam	20.13	25	P	P	23 59 34.3	-0.9
	1.5nm,0.4s,baz=212,slow=10,SNR=7.2						
FINES	FINESS Array B	37.37	326	P	P	00 02 13.0	+1.1
	0.9nm,0.8s,baz=107,slow=9.3,SNR=2.8						
HFS	Hagfors	42.93	322	P	P	00 02 57.2	-0.7
	1.4nm,0.8s,baz=106,slow=11,SNR=5.0						
NOA	NORSAR Array B	44.25	323	P	P	00 03 07.6	-0.9
	0.7nm,0.7s,baz=100,slow=7.2,SNR=3.2						
TORD	Torodi Ar. Bea	65.39	268	P	P	00 05 41.0	-0.5
	0.3nm,0.7s,baz=38,slow=6.5						

IDC 28 23:58:58.0±6.0**, 7.°02S**×**130.°60E, h99**km±57km**, mb3.4**/3**, mb1 3.8**/6**, mb1mx3.4**/48**, mbtmp4.0**/6**, Error ellipse: s-maj=67.2km s-min=30.1km az=57.0, Tanimbar Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	Baumata	7.56	245	P	Pn	00 00 46.6	+1.0

	5.8nm,0.3s,baz=104,slow=4.2,SNR=4.2						
BATI				S	Sn	00 02 06.5	-3.3
	10nm,0.3s,baz=65,slow=19,SNR=4.7						
WRA	**Warramunga Arr**	**13.35**	**165**	P	Pn	00 02 01.8	-1.9
	0.8nm,0.3s,baz=343,slow=13,SNR=14						
WRA				S	Sn	00 04 22.0	-8.7
	1.5nm,0.3s,baz=332,slow=25,SNR=10.0						
ASAR	**Alice Springs**	**16.86**	**170**	P	P	00 02 48.6	+0.1
	0.7nm,0.3s,baz=360,slow=11,SNR=36						
ASAR				S	Sn	00 05 43.1	-12
	0.4nm,0.3s,baz=350,slow=25,SNR=7.1						
SONM	**Songino Array**	**58.65**	**341**	P	P	00 08 44.8	-0.3
	0.5nm,0.5s,baz=162,slow=7.7,SNR=2.8						
MKAR	**Makanchi Array**	**68.57**	**327**	P	P	00 09 50.0	-0.2
	0.7nm,0.5s,baz=116,slow=8.1,SNR=19						
KURBB	**Kurchatov Arra**	**72.84**	**328**	P	P	00 10 16.0	0.0
	0.2nm,0.4s,baz=122,slow=5.3,SNR=3.5						
TORD	**Torodi Ar. Bea**	**129.40**	**281**	PKP	PKPdf	00 17 56.5	+0.3
	0.4nm,0.7s,baz=85,slow=1.6						

NNC 29 00:00:45.7±2.8, 37°.07N×70°.78E, h0^{km}, mb3.6, mpv3.1, 5C-3D, Error ellipse: s-maj=27.1km s-min=17.1km az=151.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**3.63**	**35**	⇑Pn	Pn	00 01 43.2	-0.2
	0.6nm,0.2s						
SFK				⇑Sn	Sn	00 02 28.5	+1.5
	1.9nm,0.2s						
MNAS	**Manas**	**5.57**	**13**	⇑Pn	Pn	00 02 09.7	-0.3
	0.8nm,0.4s						
MNAS				⇑Sn	Sn	00 03 15.2	+0.5
	2.2nm,0.6s						
KK31	**Karatay Array**	**6.03**	**358**	⇑Pn	Pn	00 02 17.4	+1.3
	2.3nm,0.4s,baz=182,slow=14,SNR=26						
KK31				⇓Sn	Sn	00 03 28.4	+2.6
	1.6nm,0.5s,baz=188,slow=26,SNR=4.8						
AB31	**Akbulak array**	**14.50**	**331**	⇓P	Pn	00 04 10.1	-2.0
	0.2nm,0.2s,baz=231,slow=8.0,SNR=16						
AKTO	**Aktyubinsk**	**16.20**	**330**	⇓P	Pn	00 04 35.4	+0.8
	1.8nm,0.9s						

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*ISCJB **29** 00:12:26.5±0.5, 49°.87N±0°.03×18°.47E±0°.03, h0^{km}, Error ellipse: s-maj=5.1km s-min=2.5km az=14.0*
*CSEM **29** 00:12:27.7±0.3, 49°.84N×18°.51E, h1^{km}, ML2.7/11, Error ellipse: s-maj=7.1km s-min=3.5km az=17.0*
*IPEC **29** 00:12:28.1±0.2, 49°.83N×18°.58E, h0^{km}, ML1.7/3, Error ellipse: s-maj=1.8km s-min=1.1km az=163.0*
ISC 29 00:12:26.9±0.8, **49°.85N**±0°.04×**18°.54E**±0°.02, **h0**^{km}, **n38**, σ**0^{s}75**/67, **Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.25**	**267**	*e*PG	**Pb**	**00 12 34.0**	**-0.4**
OKC				*e*SG	**Sb**	**00 12 37.8**	**-1.6**
	comp=Z,40nm,0.4s						
OKC	**Ostrava-Krasne**	**0.25**	**267**	Pg	**Pb**	**00 12 34.0**	**-0.4**
OKC				Sg	**Sb**	**00 12 37.8**	**-1.6**
	40nm,0.4s						
MORC	**Moravsky Berou**	**0.65**	**264**	*e*Pg	**Pb**	**00 12 41.1**	**-0.1**
MORC				*e*Sg	**Sg**	**00 12 49.1**	**+1.3**
	16nm,0.2s						
MORC	**Moravsky Berou**	**0.65**	**264**	*e*PG	**Pb**	**00 12 41.1**	**-0.1**
MORC				*e*SG	**Sg**	**00 12 49.2**	**+1.4**
MORC	**Moravsky Berou**	**0.65**	**264**	*e*Pg	**Pb**	**00 12 41.1**	**-0.1**
	baz=85						
MORC				*e*Sg	**Sg**	**00 12 49.1**	**+1.3**
	16nm,0.2s,baz=85						
OJC	**Ojcow**	**0.89**	**65**	*e*Pg	**Pb**	**00 12 45.0**	**-0.3**
OJC				*e*Sg	**Sb**	**00 12 57.4**	**-0.4**
LANS	**Liptovska Anna**	**0.93**	**139**	*e*PG	**Pb**	**00 12 45.5**	**-0.4**
LANS				*e*SG	**Sb**	**00 12 58.7**	**-0.1**
JAVC	**Velka Javorina**	**1.14**	**210**	*e*Pg	**Pn**	**00 12 50.1**	**-0.1**
JAVC	**Velka Javorina**	**1.14**	**210**	*e*PG	**Pn**	**00 12 50.2**	**0.0**
JAVC	**Velka Javorina**	**1.14**	**210**	*e*Pg	**Pn**	**00 12 50.1**	**-0.1**
	baz=31						
KRLC	**Kraliky**	**1.16**	**282**	*e*PG	**Pb**	**00 12 50.0**	**+0.2**
KRLC				*e*SG	**Sb**	**00 13 05.9**	**+0.5**
	comp=Z,5.1nm,0.2s						
KRLC	**Kraliky**	**1.16**	**282**	Pg	**Pb**	**00 12 50.0**	**+0.2**
KRLC				Sg	**Sb**	**00 13 05.9**	**+0.5**
	5.1nm,0.2s						
NIE	**Niedzica**	**1.22**	**110**	*e*Pg	**Pn**	**00 12 51.2**	**-0.2**
NIE				*e*Sg	**Sn**	**00 13 09.3**	**+0.7**
NIE	**Niedzica**	**1.22**	**110**	*e*Pg	**Pn**	**00 12 51.2**	**-0.2**
NIE				*e*Sg	**Sn**	**00 13 09.3**	**+0.7**
VYHS	**Vyhne**	**1.37**	**172**	*e*PN	**Pn**	**00 12 53.3**	**0.0**
VYHS				*e*SN	**Sb**	**00 13 11.8**	**+0.3**
VYHS				*e*LG	Lg	00 13 15.6	
VYHS	**Vyhne**	**1.37**	**172**	*e*Pn	**Pn**	**00 12 53.3**	**0.0**
VYHS				*e*Sn	**Sb**	**00 13 11.9**	**+0.4**
VRAC	**Vranov**	**1.38**	**248**	*e*Pg	**Pb**	**00 12 54.0**	**+0.5**
VRAC				*e*Sg	**Sb**	**00 13 11.6**	**-0.1**
	7.2nm,0.3s						
VRAC	**Vranov**	**1.38**	**248**	*e*PG	**Pb**	**00 12 54.1**	**+0.5**
VRAC				*e*SG	**Sb**	**00 13 11.7**	**0.0**
VRAC	**Vranov**	**1.38**	**248**	*e*Pg	**Pb**	**00 12 54.0**	**+0.5**
	baz=67						
VRAC				*e*Sg	**Sb**	**00 13 11.6**	**-0.1**
	7.2nm,0.3s,baz=67						
DPC	**Dobruska-Polom**	**1.51**	**290**	*e*PG	**Pg**	**00 12 56.5**	**+0.6**
DPC				*e*SG	**Sn**	**00 13 16.7**	**+0.9**
	comp=Z,7.1nm,0.3s						
DPC	**Dobruska-Polom**	**1.51**	**290**	Pg	**Pg**	**00 12 56.5**	**+0.6**
DPC				Sg	**Sn**	**00 13 16.7**	**+0.9**
	7.1nm,0.3s						
KRUC	**Moravsky**	**1.61**	**241**	*e*Pg	**Pb**	**00 12 57.5**	**+0.1**
KRUC				*e*Sg	**Sg**	**00 13 18.9**	**+0.4**
	8.7nm,0.2s						
KRUC	**Moravsky**	**1.61**	**241**	*e*PG	**Pb**	**00 12 57.6**	**+0.1**
KRUC				*e*SG	**Sg**	**00 13 18.9**	**+0.4**
KRUC	**Moravsky**	**1.61**	**241**	*e*Pg	**Pb**	**00 12 57.5**	**+0.1**
	baz=61						
KRUC				*e*Sg	**Sg**	**00 13 18.9**	**+0.4**
	8.7nm,0.2s,baz=61						
UPC	**Upice**	**1.75**	**293**	*e*PG	**Pg**	**00 13 00.2**	**-0.3**
UPC				*e*SG	**Sg**	**00 13 24.1**	**+0.9**
	comp=Z,4.1nm,0.4s						
UPC	**Upice**	**1.75**	**293**	Pg	**Pg**	**00 13 00.2**	**-0.3**
UPC				Sg	**Sg**	**00 13 24.1**	**+0.9**
	4.1nm,0.4s						
GOPC	**GO Pecny, Ondr**	**2.43**	**273**	*e*PG	**Pg**	**00 13 13.2**	**-0.2**
GOPC				*e*SG	**Sg**	**00 13 43.9**	**-1.0**
	comp=Z,3.2nm,0.3s						
GOPC	**GO Pecny, Ondr**	**2.43**	**273**	Pg	**Pg**	**00 13 13.2**	**-0.2**
GOPC				Sg	**Sg**	**00 13 43.9**	**-1.0**
	3.2nm,0.3s						
PRU	**Pruhonice**	**2.59**	**275**	*e*PG	**Pg**	**00 13 16.4**	**-0.1**
PRU				*e*SG	**Sg**	**00 13 48.6**	**-1.4**
	comp=Z,3.1nm,0.4s						
PRU	**Pruhonice**	**2.59**	**275**	Pg	**Pg**	**00 13 16.4**	**-0.1**
PRU				Sg	**Sg**	**00 13 48.6**	**-1.4**
	3.1nm,0.4s						
PVCC	**Panska Ves**	**2.64**	**286**	*e*SG	**Sg**	**00 13 52.6**	**+0.9**
	comp=Z,5.7nm,0.2s						
PVCC	**Panska Ves**	**2.64**	**286**	Sg	**Sg**	**00 13 52.6**	**+0.9**
	5.7nm,0.2s						
BRG	**Berggiesshubel**	**3.12**	**291**	SG	**Sg**	**00 14 06.7**	**-0.3**
	1.6nm,0.3s						
KHC	**Kasperske Hory**	**3.31**	**259**	*e*PG	**Pg**	**00 13 29.7**	**-0.7**
KHC				*e*SG	**Sg**	**00 14 11.5**	**-1.8**
	comp=Z,2.5nm,0.3s						
KHC	**Kasperske Hory**	**3.31**	**259**	Pg	**Pg**	**00 13 29.7**	**-0.7**
KHC				Sg	**Sg**	**00 14 11.5**	**-1.8**
	2.5nm,0.3s						
CLL	**Collm**	**3.82**	**295**	*e*Sg	**Sg**	**00 14 28.0**	**-1.5**
NKC	**Novy Kostel**	**3.94**	**278**	*e*SG	**Sg**	**00 14 33.5**	**-0.1**
	comp=Z,2.3nm,0.5s						
NKC	**Novy Kostel**	**3.94**	**278**	Sg	**Sg**	**00 14 33.5**	**-0.1**
	2.3nm,0.5s						

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*DDA **29** 00:39:17.8, 41°.38N×43°.68E, h7^{km}, Ml2.6*
*TIF **29** 00:39:17.8, 41°.42N×43°.68E, h13^{km}*
*ISCJB **29** 00:39:18.5±0.6, 41°.38N±0°.03×43°.67E±0°.03, h9^{km}±4^{km}, Error ellipse: s-maj=5.8km s-min=3.6km az=159.8*
*CSEM **29** 00:39:18.0±0.1, 41°.39N×43°.68E, h5^{km}, ML1.8, Error ellipse: s-maj=2.4km s-min=1.6km az=157.0*
ISC 29 00:39:18.1±0.9, **41°.40N**±0°.03×**43°.68E**±0°.02, **h11**^{km}±6^{km}, **n22**, σ**0^{s}45**/44, **Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKH	**Akhalkalaki**	**0.14**	**275**	P	**Pg**	**00 39 21.5**	**-0.1**
AKH				S	**Sg**	**00 39 23.8**	**-0.3**
AKH	**Akhalkalaki**	**0.14**	**275**	P	**Pg**	**00 39 21.5**	**-0.1**
AKH				S	**Sg**	**00 39 23.8**	**-0.3**
BGD	**Bogdanovka**	**0.15**	**204**	P	**Pg**	**00 39 21.8**	**+0.1**
BGD				S	**Sg**	**00 39 24.3**	**+0.1**
BGD	**Bogdanovka**	**0.15**	**204**	P	**Pg**	**00 39 21.8**	**+0.1**
BGD				S	**Sg**	**00 39 24.3**	**+0.1**
EAK	**Akyaka**	**0.71**	**184**	*i* P	**Pg**	**00 39 31.2**	**-0.8**
EAK				*i* S	**Sg**	**00 39 41.4**	**+0.1**
EAK	**Akyaka**	**0.71**	**184**	P	**Pg**	**00 39 31.2**	**-0.8**
EAK				S	**Sg**	**00 39 41.4**	**+0.1**
EPOS	**Posof**	**0.72**	**279**	*i* P	**Pg**	**00 39 31.9**	**-0.2**
EPOS				*i* S	**Sg**	**00 39 41.6**	**+0.1**
EPOS	**Posof**	**0.72**	**279**	P	**Pg**	**00 39 31.9**	**-0.2**
EPOS				S	**Sg**	**00 39 41.7**	**+0.1**
TBLG	**Delisi**	**0.86**	**67**	P	**Pg**	**00 39 34.5**	**-0.3**
TBLG				S	**Sb**	**00 39 46.5**	**-0.3**
TBLG	**Delisi**	**0.86**	**67**	P	**Pg**	**00 39 34.5**	**-0.3**
TBLG				S	**Sb**	**00 39 46.4**	**-0.3**
DUS	**Dusheti**	**1.03**	**48**	P	**Pb**	**00 39 38.1**	**0.0**
DUS				S	**Sn**	**00 39 53.1**	**0.0**
DUS	**Dusheti**	**1.03**	**48**	P	**Pb**	**00 39 38.1**	**0.0**
DUS				S	**Sn**	**00 39 53.1**	**0.0**
ONI	**Oni**	**1.20**	**352**	P	**Pg**	**00 39 40.6**	**-0.6**
ONI				S	**Sb**	**00 39 57.2**	**+0.6**
DGRG	**David-gareji**	**1.28**	**87**	P	**Pg**	**00 39 42.3**	**-0.4**
DGRG				S	**Sn**	**00 40 01.0**	**+1.9**
DGRG	**David-gareji**	**1.28**	**87**	P	**Pg**	**00 39 42.3**	**-0.4**
DGRG				S	**Sb**	**00 39 58.7**	**+0.1**
ARTV	**Artvin**	**1.33**	**261**	*i* P	**Pb**	**00 39 43.3**	**0.0**
ARTV				*i* S	**Sb**	**00 40 00.0**	**-0.5**
ARTV	**Artvin**	**1.33**	**261**	P	**Pb**	**00 39 43.3**	**0.0**
ARTV				S	**Sb**	**00 40 00.0**	**-0.5**
DAGI	**Agillar**	**1.37**	**257**	*i* P	**Pb**	**00 39 43.8**	**+0.1**
DAGI				*i* S	**Sg**	**00 40 01.8**	**-0.3**
DDEM	**Demirkent**	**1.54**	**251**	*i* P	**Pb**	**00 39 46.5**	**-0.2**
DDEM				*i* S	**Sb**	**00 40 06.5**	**+0.3**
DDEM	**Demirkent**	**1.54**	**251**	P	**Pb**	**00 39 46.5**	**-0.2**
DDEM				S	**Sb**	**00 40 06.5**	**+0.3**
DBAD	**Bademkaya**	**1.54**	**256**	*i* P	**Pb**	**00 39 46.5**	**-0.3**
DBAD				*i* S	**Sb**	**00 40 06.8**	**+0.5**
DBAD	**Bademkaya**	**1.54**	**256**	P	**Pb**	**00 39 46.5**	**-0.3**
DBAD				S	**Sb**	**00 40 06.8**	**+0.5**

JMA 29 00:48:18.2±0.1, **38°.34N**×**142°.15E**, **h37**^{km}±1^{km}, **M3.5**, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIO	**Ouri**	**0.64**	**281**	P	Pn	00 48 30.9	0.0
JIO				S	Sn	00 48 39.3	-0.4
OFUJ	**Ofunato**	**0.83**	**333**	P	Pn	00 48 33.6	+0.3
OFUJ				S	Sn	00 48 44.3	-0.1
JMK	**Ichinoseki**	**0.95**	**310**	P	Pn	00 48 35.5	+0.5
JMK				*e*S	Sn	00 48 47.1	-0.2
JOU	**Okura**	**1.17**	**272**	P	Pn	00 48 39.0	+1.0
JOU				*e*S	Sn	00 48 53.7	+1.0
JMM	**Marumori**	**1.17**	**247**	P	Pn	00 48 37.8	-0.2
JMM				S	Sn	00 48 51.8	-0.9
JOM	**Ohasama**	**1.31**	**330**	P	Pn	00 48 41.0	+1.0
JOM				*e*S	Sn	00 48 57.7	+1.4
JFK	**Kawauchi**	**1.40**	**226**	P	Pn	00 48 40.6	-0.6
JFK				S	Sn	00 48 56.8	-1.7
JYK	**Kaneyama**	**1.52**	**293**	P	Pn	00 48 43.8	+1.0
JYS	**Shirataka**	**1.65**	**267**	P	Pn	00 48 45.7	+1.2
JFT	**Otama**	**1.65**	**241**	P	Pn	00 48 45.6	+1.0
JFT				S	Sn	00 49 05.1	+0.5

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*NIED **29** 00:59:00, 41°.60N×141°.90E, h47^{km}, Mw3.8 Best double couple: M$_0$5.02000×10^{14} NP1:φ$_s$190.00000°, δ25.00000°, λ79.00000°. NP2:φ$_s$23.00000°, δ66.00000°, λ95.00000°.*
*ISCJB **29** 00:59:31.1±0.4, 41°.56N±0°.03×141°.90E±0°.05, h74^{km}±3^{km}, mb3.8/16, Error ellipse: s-maj=6.6km s-min=4.2km az=33.8*
*JMA **29** 00:59:31.8±0.1, 41°.58N×141°.91E, h67^{km}±2^{km}, M3.7 Broadband fault plane solution: P waves. NP1: φ$_s$32.00000°, δ75.00000°, λ94.00000°. NP2:φ$_s$198.00000°, δ15.00000°, λ77.00000°. Principal axes: T Plg60.0000°, Azm307.0000°; N Plg3.0000°, Azm211.0000°; P Plg30.0000°, Azm119.0000°;*
JMA Felt I J1.
*IDC **29** 00:59:33.4±1.9, 41°.64N×141°.86E, h77^{km}±15^{km}, mb3.6/16, mb1 3.7/19, mb1mx3.5/72, mbtmp3.9/19, MS3.1/3, Ms1 3.1/3, ms1mx2.5/65 Error ellipse: s-maj=20.1km s-min=13.5km az=114.0*
ISC 29 00:59:32.0±0.8, **41°.56N**±0°.04×**141°.91E**±0°.04, **h67**^{km}±7^{km}, **n45**, σ**0^{s}86**/50, **mb4.0**/16, **3C-8D**, **Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAHD	**Aomorihigashid**	**0.53**	**236**	P	**Pn**	**00 59 45.1**	**+0.3**
JAHD				*e*S	**Sn**	**00 59 54.7**	**+0.6**
JOT	**Ohata**	**0.68**	**255**	⇓P	**Pn**	**00 59 46.3**	**-0.1**
JOT				*e*S	**Sn**	**00 59 56.8**	**-0.2**
JARK	**Aomorirokkasho**	**0.69**	**217**	P	**Pn**	**00 59 46.4**	**-0.2**
JARK				*e*S	**Sn**	**00 59 56.9**	**-0.4**
JKB	**Kayabe**	**0.73**	**297**	⇓P	**Pn**	**00 59 46.5**	**-0.6**
JKB				*e*S	**Sn**	**00 59 57.8**	**-0.4**
JNBK	**Urakawa-nobuka**	**0.95**	**41**	⇑P	**Pn**	**00 59 48.9**	**-0.8**
JTM	**Tenmabayashi**	**1.00**	**220**	⇓P	**Pn**	**00 59 50.7**	**+0.3**
JTM				*e*S	**Sn**	**01 00 04.1**	**+0.1**
JEM	**Erimo**	**1.03**	**64**	⇑P	**Pn**	**00 59 50.4**	**-0.4**
JEM				*e*S	**Sn**	**01 00 04.0**	**-0.7**
JNB	**Noboribetsu**	**1.12**	**325**	⇓P	**Pn**	**00 59 51.1**	**-0.7**
JNB				*e*S	**Sn**	**01 00 05.6**	**-1.0**
JSR	**Shiriuchi**	**1.12**	**269**	P	**Pn**	**00 59 52.1**	**+0.2**
JSR				*e*S	**Sn**	**01 00 06.9**	**+0.2**
JANG	**Nango**	**1.23**	**194**	⇑P	**Pn**	**00 59 53.1**	**-0.2**
JANG				*e*S	**Sn**	**01 00 08.3**	**-0.8**
JBT2	**Biratori 2**	**1.26**	**15**	⇓P	**Pn**	**00 59 53.8**	**+0.1**
JBT2				*e*S	**Sn**	**01 00 10.8**	**+0.9**
JYM2	**Yakumo 2**	**1.28**	**296**	⇓P	**Pn**	**00 59 54.3**	**+0.4**
JEW	**Eniwo**	**1.32**	**345**	⇓P	**Pn**	**00 59 54.5**	**0.0**
JEW				*e*S	**Sn**	**01 00 11.2**	**-0.2**
JCH	**Churui**	**1.51**	**45**	P	**Pn**	**00 59 57.3**	**+0.4**
JCH				*e*S	**Sn**	**01 00 16.2**	**+0.5**
JOSM	**Okushiri--Mats**	**1.90**	**287**	⇓P	**Pn**	**01 00 01.8**	**-0.3**
ASAJ	**Asahikawa**	**2.60**	**11**	P	**Pn**	**01 00 12.7**	**+1.0**
	5.4nm,0.3s,baz=228,slow=12,SNR=33						
ASAJ				S	**Sn**	**01 00 43.0**	**+0.8**
	6.7nm,0.3s,baz=165,slow=33,SNR=4.1						
ASAJ				LR	LR	01 01 19.8	
	comp=Z,35nm,19.8s,baz=212,slow=42						
MJAR	**Matsushiro Arr**	**5.78**	**211**	P	**Pn**	**01 00 57.8**	**+2.6**
	0.6nm,0.3s,baz=22,slow=16,SNR=7.4						
USRK	**Ussuriysk Ar.**	**7.75**	**293**	P	**Pn**	**01 01 23.1**	**+1.0**
	baz=100,slow=16						
KLR	**Kul'dur**	**10.47**	**320**	P	**Pn**	**01 02 02.3**	**+3.1**
	0.0nm,0.3s,baz=132,slow=16,SNR=4.7						
KSRS	**Korea Array**	**11.56**	**254**	P	Pn	01 02 19.5	+5.4
	0.3nm,0.3s,baz=66,slow=14,SNR=7.0						
SEY	**Seymchan**	**22.29**	**13**	P	**P**	**01 04 21.7**	**-1.7**
	0.7nm,0.4s,baz=130,slow=7.9,SNR=3.9						
SONM	**Songino Array**	**25.85**	**296**	P	**P**	**01 04 58.4**	**+1.2**
	0.6nm,0.5s,baz=107,slow=7.7,SNR=4.5						
H11N2	**WAKE ISLAND Hy**	**30.39**	**128**	T	T	01 38 07.5	
	baz=322,slow=76,SNR=57						
H11N1	**WAKE ISLAND Hy**	**30.40**	**128**	T	T	01 38 07.7	
	baz=322,slow=76,SNR=53						
H11N3	**WAKE ISLAND Hy**	**30.41**	**128**	T	T	01 38 08.3	
	baz=322,slow=76,SNR=32						
H11S1	**WAKE ISLAND Hy**	**31.23**	**130**	T	T	01 39 12.7	
	baz=323,slow=76,SNR=65						
H11S3	**WAKE ISLAND Hy**	**31.24**	**130**	T	T	01 39 11.4	
	baz=323,slow=76,SNR=47						
H11S2	**WAKE ISLAND Hy**	**31.25**	**130**	T	T	01 39 15.0	
	baz=323,slow=76,SNR=53						
ZALV	**Zalesovo Beam**	**39.28**	**308**	P	**P**	**01 06 53.6**	**-0.3**
	1.3nm,0.3s,baz=104,slow=9.4,SNR=2.6						
KURBB	**Kurchatov Arra**	**43.64**	**304**	P	**P**	**01 07 29.4**	**-0.3**
	2.4nm,0.4s,baz=78,slow=8.9,SNR=5.2						
KURBB				PcP	**PcP**	**01 09 15.3**	**-0.5**
	0.2nm,0.3s,baz=90,slow=3.2,SNR=3.8						
ILAR	**Eielson Array**	**45.51**	**35**	P	**P**	**01 07 45.0**	**+0.6**
	1.0nm,0.7s,baz=276,slow=7.0,SNR=9.2						
BVAR	**Borovoye Array**	**47.90**	**309**	P	**P**	**01 08 03.1**	**-0.1**
	1.0nm,0.5s,baz=82,slow=10,SNR=8.0						
AKTO	**Aktyubinsk**	**56.00**	**310**	P	**P**	**01 09 03.0**	**-0.4**
	0.9nm,0.6s,baz=73,slow=11,SNR=3.0						
ARCES	**ARCESS Array B**	**59.91**	**339**	P	**P**	**01 09 30.2**	**-0.3**
	2.7nm,0.9s,baz=67,slow=6.9,SNR=4.4						
WRA	**Warramunga Arr**	**61.59**	**188**	P	**P**	**01 09 42.3**	**-0.1**
	1.0nm,1.0s,baz=16,slow=6.9,SNR=2.4						
GEYT	**Alibeck**	**62.05**	**297**	P	**P**	**01 09 43.8**	**-1.7**
	0.8nm,0.5s,baz=29,slow=3.3,SNR=5.6						
FINES	**FINESS Array B**	**65.01**	**332**	P	**P**	**01 10 04.3**	**-0.2**
	1.9nm,0.6s,baz=42,slow=6.2,SNR=16						
KVAR	**Kislovodsk Arr**	**68.26**	**310**	LR	LR	01 43 30.6	
	comp=Z,26nm,19.0s,slow=39						
HFS	**Hagfors**	**70.13**	**335**	P	**P**	**01 10 37.1**	**+0.2**
	0.8nm,0.4s,baz=36,slow=5.9,SNR=12						
NOA	**NORSAR Array B**	**70.17**	**337**	P	**P**	**01 10 36.7**	**-0.5**
	0.3nm,0.4s,baz=50,slow=5.6,SNR=3.3						
AKASG	**Malin Array Be**	**70.97**	**322**	P	**P**	**01 10 41.6**	**-0.5**
	0.7nm,0.4s,baz=46,slow=5.6,SNR=4.2						
PDAR	**Pinedale Array**	**74.24**	**47**	P	**P**	**01 11 02.6**	**+0.6**
	0.2nm,0.6s,baz=321,slow=2.1,SNR=3.6						
MLR	**Muntele Rosu**	**76.19**	**319**	LR	LR	01 46 25.6	
	comp=Z,44nm,18.6s,baz=221,slow=37						
GERES	**GERESS Array B**	**79.07**	**328**	P	**P**	**01 11 29.4**	**+0.4**
	0.2nm,0.4s,baz=30,slow=8.0,SNR=3.4						
SNAA	**Sanae**	**145.17**	**199**	PKPbc	**PKPdf**	**01 19 00.9**	**+0.2**
	0.4nm,0.6s,baz=200,slow=5.0,SNR=7.1						

DJA 29 01:12:20.7±0.4, **4°S**±4°×**12°8E**±°, **h11**^{km}±2^{km}, **M4.2**/11, **mb5.5**/1, **MLv3.6**/11, **Seram**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AAI	**Ambon**	**0.02**	**346**	Pg	Pg	01 12 22.6	-0.1
AAI				Sg	Sg	01 12 24.5	+0.4
MSAI	**Masohi**	**0.81**	**64**	P	Pb	01 12 36.7	-0.1
NLAI	**Namlea**	**1.19**	**293**	P	Pn	01 12 43.2	-0.1
NLAI				S	Sg	01 12 59.3	+0.1
BNDI	**Bandanaira**	**1.88**	**115**	P	Pn	01 12 52.6	-0.2
BNDI				S	Sb	01 13 17.8	-0.9
SANI	**Sanana**	**2.76**	**307**	P	Pn	01 13 05.3	+0.4
SANI				S	Sn	01 13 38.7	+0.5
LBMI	**Labuha**	**3.13**	**347**	P	Pn	01 13 09.3	-0.7
FAKI	**Fak Fak**	**4.12**	**79**	P	Pn	01 13 23.4	-0.2
SWI	**Sorong**	**4.17**	**47**	P	Pn	01 13 24.0	-0.2
TNTI	**Ternate**	**4.53**	**349**	P	Pn	01 13 29.4	+0.1
SAUI	**Saumlaki**	**5.25**	**144**	P	Pn	01 13 39.0	-0.1

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*IDC **29** 01:29:59.4±0.7, 2°.71N×128°.86E, h0^{km}, mb4.0/16, mb1 4.1/16, mb1mx3.9/54, mbtmp4.0/16, MS3.4/6, Ms1 3.4/6, ms1mx3.0/58, Error ellipse: s-maj=31.6km s-min=13.6km az=76.0*
*NEIC **29** 01:30:04.4±0.4, 2°.72N×128°.88E, h35^{km}, mb4.3/6, Error ellipse: s-maj=17.3km s-min=7.7km az=76.0*
*DJA **29** 01:30:05.9±0.4, 2°N±3°×12°8E±°, h133^{km}±4^{km}, M4.7/13, mb5.0/6, mB5.9/4, MLv4.2/13, Mw(mB)5.5/4*
ISC 29 01:30:07.2±0.7, **1°.70N**±0°.07×**127°.85E**±0°.08, **h100**^{km}, **n47**, σ**2^{s}65**/25, **mb4.1**/22, **Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**1.04**	**208**	P	**Pn**	**01 30 28.8**	**+0.7**
TNTI				S	**Sn**	**01 30 46.6**	**+2.8**
LBMI	**Labuha**	**2.35**	**189**	P	**Pn**	**01 30 43.3**	**-1.0**
LBMI				S	**Sn**	**01 31 11.9**	**-0.9**
KMSI	**Cibinong**	**4.03**	**254**	P	**Pn**	**01 31 04.0**	**-2.8**
SANI	**Sanana**	**4.16**	**207**	P	**Pn**	**01 31 06.6**	**-2.0**
SWI	**Sorong**	**4.25**	**127**	P	**Pn**	**01 31 09.6**	**-0.2**
NLAI	**Namlea**	**4.96**	**189**	P	**Pn**	**01 31 17.4**	**-2.0**
MSAI	**Masohi**	**5.12**	**168**	P	**Pn**	**01 31 20.7**	**-1.0**
AAI	**Ambon**	**5.36**	**176**	P	**Pn**	**01 31 24.0**	**-0.9**
	725nm,0.6s,67µm5.4nm						
LUWI	**Luwuk**	**5.76**	**242**	P	**Pn**	**01 31 28.1**	**-2.2**
BATI	**Baumata**	**12.54**	**199**	LR	LR	01 38 33.7	
	comp=Z,210nm,20.6s,baz=127,slow=37						
GUMO	**Guam**	**20.57**	**54**	LR	LR	01 40 18.3	
	comp=Z,139nm,21.4s,baz=246,slow=32						
WRAB	**Tennant Creek**	**22.42**	**164**	*e*P	P	01 35 07.9	+10
	5.4nm,0.6s						
WRA	**Warramunga Arr**	**22.43**	**164**	P	P	01 35 07.3	+9.4
	1.5nm,0.3s,baz=347,slow=10,SNR=14						
GZH	**Guangzhou**	**25.50**	**328**	*e*P	**P**	**01 35 31.3**	**+4.9**
GZH				S	S	01 39 59.5	+13
GZH				LR	LR		
	comp=N,190nm,8.8s						
GZH				LR	LR		
	comp=E,170nm,8.6s						
ASAR	**Alice Springs**	**25.89**	**167**	P	P	01 35 40.5	+10
	comp=E,3.1nm,0.9s,baz=355,slow=6.3,SNR=19						
JNU	**Nakatsue**	**31.39**	**5**	LR	LR	01 48 29.5	
	comp=E,57nm,20.2s,baz=133,slow=37						
CMAR	**Chiang Mai Arr**	**32.88**	**302**	P	P	01 36 38.4	+6.4
	comp=E,1.0nm,0.3s,baz=123,slow=8.8,SNR=7.3						
CHTO	**Chiang Mai**	**33.04**	**303**	*e*P	P	01 36 39.5	+6.1
	comp=E,4.1nm,0.8s						
HNR	**Honiara**	**33.83**	**110**	LR	LR	01 49 39.4	
	comp=E,68nm,20.6s,baz=351,slow=36						
KSAR	**Wonju Array Be**	**35.57**	**0**	P	P	01 36 48.5	-6.4
KSRS	**Korea Array**	**35.58**	**0**	P	P	01 36 48.5	-6.5
	comp=E,1.5nm,0.9s,baz=183,slow=12,SNR=6.3						
STKA	**Stephens Creek**	**35.85**	**160**	P	P	01 37 06.4	+9.0
	comp=E,2.0nm,0.5s,baz=323,slow=9.5,SNR=5.0						
MJAR	**Matsushiro Arr**	**35.97**	**14**	P	P	01 36 50.2	-8.2
	comp=E,1.9nm,0.8s,baz=194,slow=10,SNR=9.1						
MAJO	**Matsushiro**	**35.97**	**14**	*e*P	P	01 36 50.2	-8.2
	comp=E,4.4nm,0.8s						
H11S3	**WAKE ISLAND Hy**	**41.57**	**64**	T	T	02 20 32.6	
	baz=252,slow=75,SNR=9.9						
H11S2	**WAKE ISLAND Hy**	**41.58**	**64**	T	T	02 20 35.4	
	baz=252,slow=75,SNR=5.5						
H11S1	**WAKE ISLAND Hy**	**41.58**	**64**	T	T	02 20 33.2	
	baz=252,slow=75,SNR=4.2						
H11N1	**WAKE ISLAND Hy**	**42.16**	**62**	T	T	02 21 15.2	
	baz=250,slow=75,SNR=4.7						
H11N2	**WAKE ISLAND Hy**	**42.17**	**62**	T	T	02 21 14.3	
	baz=250,slow=75,SNR=4.1						
H11N3	**WAKE ISLAND Hy**	**42.17**	**62**	T	T	02 21 14.6	
	baz=250,slow=75,SNR=5.0						
USRK	**Ussuriysk Ar.**	**42.48**	**4**	P	**P**	**01 37 48.1**	**-4.3**
	comp=E,3.1nm,0.8s,baz=164,slow=7.2						
USRK				LR	LR	01 56 58.8	
	comp=E,31nm,18.1s,baz=206,slow=39						
ULN	**Ulaanbaatar**	**49.39**	**342**	*e*P	**P**	**01 38 45.7**	**-1.1**
	comp=E,5.2nm,1.0s						
ULN				*e*pP	pP	01 38 54.7	-16
SONM	**Songino Array**	**49.57**	**341**	P	**P**	**01 38 49.4**	**+1.2**
	comp=E,0.4nm,0.3s,baz=170,slow=8.8,SNR=3.0						
HYB	**Hyderabad**	**50.87**	**291**	*i* P	P	01 39 07.0	+8.6
PETK	**Petropavlovsk-**	**56.89**	**21**	P	**P**	**01 39 37.6**	**-4.0**
	comp=E,3.2nm,0.8s,baz=186,slow=8.5						
MKAR	**Makanchi Array**	**59.85**	**325**	P	**P**	**01 40 04.8**	**+2.5**
	comp=E,1.2nm,0.7s,baz=111,slow=8.0,SNR=13						
YAK	**Yakutsk**	**60.20**	**1**	LR	LR	02 04 39.9	
	comp=E,32nm,21.1s,baz=266,slow=35						
ZALV	**Zalesovo Beam**	**62.90**	**333**	P	**P**	**01 40 26.2**	**+3.6**
	comp=E,0.4nm,0.4s,baz=114,slow=6.8,SNR=2.2						
KURBB	**Kurchatov Arra**	**64.04**	**328**	P	**P**	**01 40 32.4**	**+2.1**
	comp=E,1.9nm,0.8s,baz=124,slow=5.9,SNR=14						
KURK	**Kurchatov**	**64.05**	**328**	*e*P	**P**	**01 40 31.8**	**+1.5**
BVAR	**Borovoye Array**	**69.62**	**327**	P	**P**	**01 41 08.4**	**+2.7**
	comp=E,0.9nm,0.4s,baz=133,slow=6.1,SNR=8.2						
BRVK	**Borovoye**	**69.69**	**327**	*e*P	**P**	**01 41 08.2**	**+2.1**
AKTO	**Aktyubinsk**	**75.94**	**322**	P	**P**	**01 41 46.2**	**+3.1**
	comp=E,1.0nm,0.7s,baz=97,slow=8.4,SNR=3.6						
ARU	**Arti**	**77.24**	**328**	*e*P	**P**	**01 41 53.5**	**+3.2**
	comp=E,2.6nm,0.9s						
VNDA	**Vanda**	**81.28**	**173**	P	P	01 42 21.4	+10
	comp=E,0.5nm,0.8s,baz=315,slow=9.5,SNR=2.9						
RAYN	**Ar Rayn**	**82.31**	**293**	*e*P	P	01 42 25.5	+7.1
	comp=E,1.7nm,0.6s						
ILAR	**Eielson Array**	**86.45**	**25**	P	**P**	**01 42 36.9**	**-1.5**
	comp=E,0.2nm,0.6s,baz=243,slow=6.0,SNR=3.0						

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*TIF **29** 01:35:32.0, 41°.43N×43°.70E, h10^{km}±1^{km}*
*ISCJB **29** 01:35:32.6±0.5, 41°.39N±0°.03×43°.67E±0°.03, h7^{km}±4^{km}, Error ellipse: s-maj=5.6km s-min=3.5km az=162.6*
*CSEM **29** 01:35:32.3±0.1, 41°.40N×43°.67E, h5^{km}, ML1.6, Error ellipse: s-maj=3.2km s-min=2.0km az=155.0*
*DDA **29** 01:35:34.0, 41°.34N×43°.52E, h7^{km}, Ml2.5*
ISC 29 01:35:32.5±0.9, **41°.40N**±0°.03×**43°.67E**±0°.02, **h10**^{km}±6^{km},

n26,σ0^{s}46/50,Turkey-Georgia-Armenia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKH	Akhalkalaki	0.13	273	P	Pg	01 35 35.6	-0.1
AKH				S	Sg	01 35 37.9	0.0
AKH	Akhalkalaki	0.13	273	P	Pg	01 35 35.6	-0.1
AKH				S	Sg	01 35 37.9	0.0
BGD	Bogdanovka	0.15	200	P	Pg	01 35 35.9	-0.1
BGD				S	Sg	01 35 38.4	+0.1
BGD	Bogdanovka	0.15	200	P	Pg	01 35 35.9	-0.1
BGD				S	Sg	01 35 38.4	+0.1
EPOS	Posof	0.71	278	iP	Pg	01 35 46.1	-0.2
EPOS				iS	Sg	01 35 56.1	+0.5
EPOS	Posof	0.71	278	P	Pg	01 35 46.1	-0.2
EPOS				S	Sg	01 35 56.1	+0.5
EAK	Akyaka	0.72	184	iP	Pg	01 35 45.4	-1.0
EAK				iS	Sg	01 35 56.1	+0.4
EAK	Akyaka	0.72	184	P	Pg	01 35 45.4	-1.0
EAK				S	Sg	01 35 56.2	+0.4
TBLG	Delisi	0.87	67	P	Pg	01 35 48.8	-0.5
TBLG				S	Sg	01 36 00.6	0.0
TBLG	Delisi	0.87	67	P	Pg	01 35 48.8	-0.5
TBLG				S	Sg	01 36 00.6	0.0
DUS	Dusheti	1.04	48	P	Pg	01 35 52.1	-0.3
DUS				S	Sb	01 36 06.8	+0.5
DUS	Dusheti	1.04	48	P	Pg	01 35 52.2	-0.3
DUS				S	Sb	01 36 06.8	+0.5
ONI	Oni	1.20	352	P	Pg	01 35 54.8	-0.7
ONI				S	Sn	01 36 12.1	+0.2
GUDG	Gudauri	1.22	29	P	Pg	01 35 55.4	-0.7
GUDG	Gudauri	1.22	29	P	Pg	01 35 55.3	-0.7
DGRG	David-gareji	1.28	87	P	Pn	01 35 56.4	-0.2
DGRG				S	Sn	01 36 15.2	+1.3
DGRG	David-gareji	1.28	87	P	Pn	01 35 56.4	-0.2
DGRG				S	Sn	01 36 15.2	+1.3
ARTV	Artvin	1.33	261	iP	Pn	01 35 57.5	+0.1
ARTV				iS	Sb	01 36 14.9	+0.1
ARTV	Artvin	1.33	261	P	Pn	01 35 57.5	+0.1
ARTV				S	Sb	01 36 14.9	+0.1
DAGI	Agillar	1.36	257	iP	Pb	01 35 58.1	-0.1
DAGI				iS	Sn	01 36 16.3	+0.4
DBOC	Borcka	1.51	268	iP	Pb	01 36 00.3	-0.3
DBOC				iS	Sn	01 36 19.6	+0.2
DBOC	Borcka	1.51	268	P	Pb	01 36 00.3	-0.3
DBOC				S	Sn	01 36 19.6	+0.2
DDEM	Demirkent	1.53	251	iP	Pb	01 36 01.2	+0.1
DDEM				iS	Sn	01 36 20.2	+0.1
DDEM	Demirkent	1.53	251	P	Pb	01 36 01.2	+0.1
DDEM				S	Sn	01 36 20.2	+0.1
DBAD	Bademkaya	1.54	256	iP	Pb	01 36 00.8	-0.4
DBAD				iS	Sn	01 36 20.3	+0.1
DBAD	Bademkaya	1.54	256	P	Pb	01 36 00.8	-0.4
DBAD				S	Sn	01 36 20.3	+0.1

NNC 29 01:58:51.3±3.6,36°.81N×69°.43E,h0^{km},mb4.1,mpv3.9, 4C-3D,Error ellipse: s-maj=31.4km s-min=23.9km az=168.0,Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	4.53	44	⇑Pn	Pn	02 00 01.1	-0.2
	7.0nm,0.3s						
SFK				⇑Sn	Sn	02 00 56.0	+1.2
	4.4nm,0.3s						
MNAS	Manas	6.15	22	⇑Pn	Pn	02 00 23.5	0.0
	4.5nm,0.6s						
MNAS				⇓Sn	Sn	02 01 36.5	+1.8
	2.6nm,0.4s						
KK31	Karatay Array	6.34	7	Pn	Pn	02 00 27.0	+0.9
	6.1nm,0.5s,baz=195,slow=14,SNR=104						
KK31				⇓Sn	Sn	02 01 40.1	+0.8
	1.2nm,0.3s,baz=190,slow=22						
AAK	Ala-Archa	7.01	32	Pn	Pn	02 00 34.7	-0.7
	5.6nm,0.7s						
TKM2	Tokmak 2	7.73	36	⇓Pn	Pn	02 00 43.7	-1.6
	7.2nm,1.0s						
AB31	Akbulak array	14.23	334	P	Pn	02 02 14.1	+0.1
	0.2nm,0.3s,baz=154,slow=13,SNR=11						
AKTO	Aktyubinsk	15.90	333	⇑P	P	02 02 40.7	+0.5
	3.3nm,0.9s						

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*NIED **29** 01:59:00,38°.20N×141°.60E,h35^{km},Mw3.7 Best double couple: $M_0$4.29000×10^{14} NP1:ϕ_s180.00000°,δ53.00000°, λ144.00000°. NP2:ϕ_s293.00000°,δ62.00000°,λ43.00000°.*

JMA 29 01:59:50.5,38°.18N×141°.61E,h61^{km}±1^{km},M3.7,Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIO	Ouri	0.34	323	P	Pn	02 00 01.2	+0.2
JIO				S	Sn	02 00 08.6	-0.1
JMM	Marumori	0.72	244	P	Pn	02 00 04.8	-0.2
JMM				S	Sn	02 00 15.4	-0.2
JOU	Okura	0.77	284	P	Pn	02 00 05.8	+0.2
JOU				S	Sn	02 00 17.0	+0.2
JMK	Ichinoseki	0.83	338	P	Pn	02 00 06.7	+0.3
JMK				S	Sn	02 00 18.3	+0.2
JFK	Kawauchi	1.00	216	P	Pn	02 00 08.6	0.0
JFK				S	Sn	02 00 22.1	+0.1
JFT	Otama	1.21	237	P	Pn	02 00 11.7	+0.4
JFT				S	Sn	02 00 27.4	+0.6
JYS	Shirataka	1.22	272	P	Pn	02 00 11.9	+0.5
JYS				S	Sn	02 00 28.0	+0.9
JYK	Kaneyama	1.23	307	P	Pn	02 00 11.8	+0.2
JYK				S	Sn	02 00 28.1	+0.8
JOM	Ohasama	1.31	349	P	Pn	02 00 13.1	+0.4
JOM				S	Sn	02 00 30.0	+0.6
JRG	Rokugo	1.43	328	P	Pn	02 00 15.1	+0.8
JRG				S	Sn	02 00 33.5	+1.3
JYA	Atsumi	1.55	286	P	Pn	02 00 16.2	+0.4
JYA				S	Sn	02 00 36.0	+1.1
JFY	Yanaizu	1.69	243	P	Pn	02 00 18.6	+0.7
MAT	Matsushiro	3.17	240	P	Pn	02 00 39.9	+2.0
MAT				S	Sn	02 01 20.6	+6.1

IDC 29 02:03:08.4±2.1,2°.79N×128°.87E,h0^{km},mb3.4/4, mb1 3.6/4,mb1mx3.2/57,mbtmp3.4/4,MS4.0/1,Ms1 4.0/1, ms1mx2.6/38,Error ellipse: s-maj=167.8km s-min=21.3km az=69.0,Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.22	167	P	P	02 08 17.4	+0.1
	0.5nm,0.4s,baz=346,slow=9.9,SNR=6.5						
ASAR	Alice Springs	26.75	170	P	P	02 08 48.4	-1.7
	0.3nm,0.5s,baz=353,slow=8.2,SNR=5.0						
MKAR	Makanchi Array	59.55	325	P	P	02 13 12.7	-1.1
	0.3nm,0.6s,baz=122,slow=7.7,SNR=2.0						
RPZ	Rata Peaks	59.78	146	LR	LR	02 38 48.4	
	comp=Z,130nm,21.4s,baz=195,slow=36						
KURBB	Kurchatov Arra	63.68	327	P	P	02 13 43.5	+1.9
	0.3nm,0.5s,baz=127,slow=6.1,SNR=2.6						

IDC 29 02:08:35.0±1.2,1°.78N×89°.63E,h0^{km},mb3.8/7,mb1 4.0/7, mb1mx3.6/67,mbtmp3.8/7,Error ellipse: s-maj=52.6km s-min=21.3km az=44.0,North Indian Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	45.29	353	P	P	02 16 54.3	-0.3
	0.3nm,0.6s,baz=188,slow=9.7,SNR=2.3						
SONM	Songino Array	48.12	15	P	P	02 17 17.1	+0.2
	1.0nm,0.5s,baz=197,slow=9.7,SNR=7.1						
WRA	Warramunga Arr	48.87	119	P	P	02 17 22.7	-0.2
	0.7nm,0.6s,baz=295,slow=8.7,SNR=6.0						
ASAR	Alice Springs	49.92	123	P	P	02 17 31.1	+0.2
	0.8nm,0.7s,baz=298,slow=7.7,SNR=8.3						
BRTR	Keskin Array B	63.20	314	P	P	02 19 05.0	-0.4
	0.5nm,0.6s,baz=126,slow=6.8,SNR=4.5						
MLR	Muntele Rosu	70.51	318	P	P	02 19 52.4	+0.5
	2.0nm,0.6s,baz=180,slow=10,SNR=6.9						
GERES	GERESS Array B	79.41	319	P	P	02 20 43.5	+0.2
	0.6nm,0.6s,baz=103,slow=6.0,SNR=5.5						
TXAR	Lajitas Array	146.55	21	PKPbc	PKPdf	02 28 17.4	-0.5
	0.3nm,0.7s,baz=250,slow=2.5,SNR=6.6						

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*BJI **29** 02:21:09.6,22°.96N×94°.24E,h60^{km},mb5.7/73,mB5.7/57, ML5.6/4,Ms5.4/86,Ms7 5.2/75*

*ISCJB **29** 02:21:10.0±0.2,22°.91N±0°.01×94°.23E±0°.01,h67^{km}±2^{km}, mb5.6/386,Error ellipse: s-maj=2.6km s-min=1.8km az=39.2*

*MOS **29** 02:21:11.4±1.0,22°.91N×94°.36E,h83^{km},mb5.8/117, MS5.0/33,Error ellipse: s-maj=6.0km s-min=3.2km az=123.9*

*NEIC **29** 02:21:12.6±0.4,22°.94N×94°.30E,h75^{km}±3^{km},mb5.8/186, MW5.7,Error ellipse: s-maj=3.1km s-min=2.1km az=215.0, Moment Tensor Solution. s28 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.66; $M_{\theta\theta}$-2.16; $M_{\phi\phi}$2.82; $M_{r\theta}$-2.22; $M_{\theta\phi}$3.71; $M_{\phi r}$-0.33; Best double couple: $M_0$5.00000×10^{17} NP1: ϕ_s71.00000°,δ83.00000°,λ-27.00000°. NP2:ϕ_s165.00000°, δ63.00000°,λ-173.00000°. Principal axes: T 5.1300, Plg14.0000°, Azm121.0000°; N -0.1900, Plg62.0000°, Azm238.0000°; P -4.9400, Plg24.0000°, Azm25.0000°;*

NEIC Felt [III] at Mandalay. Also felt at Falam, Pakokku and Shwebo. Felt [III] at Manipur, India. Also felt at Guwahati, Kolkata and Shillong. Felt at Chittagong and Dhaka, Bangladesh.

*GCMT **29** 02:21:12.6±0.1,22°.83N×94°.32E,h72^{km},MW5.8/136, Moment Tensor Solution. s122,c214; s136,c353; Duration: 1^{s}8 Moment tensor: Scale 10^{17}Nm; M_{rr}-0.38±.05; $M_{\theta\theta}$-0.97±.05; $M_{\phi\phi}$1.35±.05; $M_{r\theta}$-2.33±.04; $M_{\theta\phi}$4.79±.05; $M_{\phi r}$0.08±.04; Best double couple: $M_0$5.46200×10^{17} NP1:ϕ_s82.00000°,δ85.00000°, λ-25.00000°. NP2:ϕ_s174.00000°,δ65.00000°, λ-175.00000°. Principal axes: T 5.4640, Plg14.0000°, Azm131.0000°; N -0.0010, Plg64.0000°, Azm252.0000°; P -5.4590, Plg21.0000°, Azm35.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

*IDC **29** 02:21:13.9±0.7,22°.95N×94°.42E,h85^{km}±4^{km},mb5.2/67, mb1 5.2/68,mb1mx5.2/75,mbtmp5.5/68,MS4.7/60, Ms1 4.7/60,ms1mx4.7/67 Error ellipse: s-maj=7.9km s-min=5.4km az=45.0*

ISC 29 02:21:12.9±0.3,22°.93N±0°.02×94°.28E±0°.02,h81^{km}±1^{km}, h81^{km}:pP-P,n1831,σ1^{s}53/2143,mb5.7/404,42C-166D, Myanmar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SILR	SILCHAR	2.29	324	eP	Pn	02 21 48.5	-0.2
SILR				eS	Sn	02 22 13.8	-2.3
BRDH	Bariadhala	2.44	265	P	Pn	02 21 50.1	-0.7
	3μm,0.3s,baz=256,slow=15,SNR=214						
BRDH				S	Sn	02 22 15.3	-4.6
	2μm,0.3s,baz=110,slow=14,SNR=8.7						
BELO	BELONIA	2.63	278	eP	Pn	02 21 52.3	-0.9
BELO				ex	x	02 22 21.7	
KOHI	KOHIMA	2.79	357	eP	Pn	02 21 56.9	+1.3
KOHI				eS	Sn	02 22 26.9	-1.4
KOHI				IAML		02 22 38.8	
	comp=N,59μm,0.7s						
KOHI				IAML		02 22 42.3	
	comp=E,48μm,0.3s						
AGT	Agartala	2.94	289	eP	Pn	02 21 56.0	-1.5
AGT				eS	Sn	02 22 26.4	-5.4
MOKO	MOKOCHONG	3.39	4	eP	Pn	02 22 04.5	+0.8
SHL	Shillong	3.42	321	ePn	Pn	02 22 01.9	-2.3
SHL				eSn	Sn	02 22 37.9	-5.8
SHL	Shillong	3.42	321	eP	Pn	02 22 02.0	-2.1
SHL				⇑iPN		02 22 05.5	
SHL				eSN	Sn	02 22 39.0	-4.7
SHL	Shillong	3.42	321	eP	Pn	02 22 01.9	-2.3
SHL				e		02 22 37.9	
JORH	JORHAT	3.80	360	eP	Pn	02 22 10.3	+1.1
JORH				eS	Sn	02 22 53.0	+0.3
JORH				IAML		02 23 13.7	
	comp=N,95μm,0.9s						
JORH				IAML		02 23 14.4	
	comp=E,40μm,0.3s						
TEZP	TEZPUR	3.91	340	eP	Pn	02 22 08.9	-1.7
TEZP				eS	Sn	02 22 50.5	-5.0
GUWA	GUWAHATI	4.02	325	eP	Pn	02 22 09.4	-2.7
GUWA				eS	Sn	02 22 52.5	-5.5
ITAN	ITANAGAR	4.23	353	eP	Pn	02 22 15.0	0.0
ITAN				eS	Sn	02 22 57.4	-5.8
ITAN				IAML		02 23 08.8	
	comp=E,20μm,0.2s						
ITAN				IAML		02 23 09.8	
	comp=N,16μm,0.7s						
TURI	Tura	4.45	307	eP	Pn	02 22 15.4	-2.6
TURI				eS	Sn	02 23 02.5	-6.1
TURI				eS	Sn	02 23 02.5	-6.1
TURI				IAML		02 23 08.8	
	comp=E,29μm,0.3s						
TURI				IAML		02 23 09.4	
	comp=N,36μm,0.3s						
CHTO	Chiang Mai	5.98	132	ePn	Pn	02 22 39.1	+0.2
CHTO				eSn	Sn	02 23 44.8	-1.3
CHTO	Chiang Mai	5.98	132	P	Pn	02 22 39.1	+0.2
	SNR=872						
CHTO	Chiang Mai	5.98	132	eP	Pn	02 22 39.1	+0.2
CHTO				e		02 23 44.8	
CHTO	Chiang Mai	5.98	132	P	Pn	02 22 38.6	-0.4
	comp=N,13μm,0.7s,comp=N,137μmcomp=N,124μm comp=N,97nm						
CMMT	Chiang Mai	5.98	132	P	Pn	02 22 38.6	-0.4
	comp=N,3μm,0.7s,comp=N,31μmcomp=N,65μmcomp=N,22nm						
CM31	Chiang Mai Arr	6.23	135	ePn	Pn	02 22 42.9	+0.5
CM31	Chiang Mai Arr	6.23	135	P	Pn	02 22 42.9	+0.5
CMAR	Chiang Mai Arr	6.23	135	P	Pn	02 22 42.3	-0.1
	comp=N,162nm,0.3s,baz=314,slow=12,SNR=624						
CMAR				ScP	ScP	02 33 00.6	+0.8
	comp=N,1.8nm,0.3s,baz=281,slow=1.7,SNR=26						
CM01	Chiang Mai Arr	6.27	135	ePn	Pn	02 22 42.2	-0.7
LAMP	Lampang	6.66	130	P	Pn	02 22 48.2	0.0
	comp=N,806nm,1.0s,comp=N,8μmcomp=N,9.3nm						
GTK	Tadong	6.75	312	eP	Pn	02 22 47.3	-2.3
GTK				eS	Sn	02 23 56.7	-8.4
LSA	Lhasa	7.31	338	P	Pn	02 22 58.0	+0.6
LSA				S	Sn	02 24 15.8	-3.2
LSA				smax	smax		
	comp=N,2μm,0.7s						
LSA				smax	smax		
	comp=N,3μm,0.7s						
LSA	Lhasa	7.31	338	ePn	Pn	02 22 57.5	+0.1
LSA				eSn	Sn	02 24 15.1	-4.0
LSA				eScP	ScP	02 33 02.2	+1.1
LSA	Lhasa	7.31	338	P	Pn	02 22 58.8	+1.4
LSA	Lhasa	7.31	338	eP	Pn	02 22 57.5	+0.1
LSA				e		02 24 15.1	
ODAN	Odare	7.38	303	ePn	Pn	02 22 56.1	-2.1
ODAN				eSn	Sn	02 24 14.1	-6.4
	comp=N,12μm,0.4s						
TAPN	Taplejung	7.40	308	ePn	Pn	02 22 56.3	-2.3
TAPN				eSn	Sn	02 24 15.8	-5.4
	comp=N,9μm,0.5s						
UTTA	Uttaradit	7.83	130	P	Pn	02 23 04.1	0.0
	comp=N,272nm,0.7s,comp=N,4μmcomp=N,2.2nm						
UMPA	Umpang Tak	7.96	146	P	Pn	02 23 09.0	+3.0
	comp=N,448nm,0.6s,comp=N,3.6nm						
RAMN	Ramite	8.04	301	ePn	Pn	02 23 04.9	-2.3
RAMN				eSn	Sn	02 24 28.7	-7.9
KMI	Kunming	8.04	73	P	Pn	02 23 13.5	+6.3
KMI				sP		02 23 33.0	
KMI				S	Sn	02 24 47.5	+11
KMI				pmax	pmax		
	comp=Z,2μm,1.1s						
KMI				pmax	pmax		
	comp=Z,9μm,3.4s						
KMI				LR	LR		
	comp=N,30μm,6.9s						
KMI				LR	LR		
	comp=E,19μm,6.4s						
KMI				LR	LR		
	comp=Z,22μm,11.8s						
PHIT	Phitsanulok	8.11	134	P	Pn	02 23 08.4	+0.3
	comp=Z,4μm,1.0s,comp=Z,31μmcomp=Z,13nm						
JIRN	Jiri	8.70	304	ePn	Pn	02 23 13.9	-2.5
GUN	Gumba	9.07	305	ePn	Pn	02 23 18.7	-2.7
GUN				eSn	Sn	02 24 53.7	-8.3
	comp=Z,15μm,0.9s						
PKIN	Phulchoki	9.28	302	ePn	Pn	02 23 21.8	-2.3
KKN	Kakani	9.47	303	ePn	Pn	02 23 23.6	-3.1
DMN	Daman	9.52	301	ePn	Pn	02 23 24.3	-3.1
DMN				eSn	Sn	02 25 02.8	-10
NONG	Nongkai	9.61	119	P	Pn	02 23 30.0	+1.5
	comp=Z,17nm,1.1s,comp=Z,365nm						
SRDT	SRDT	9.69	151	P	Pn	02 23 30.0	+0.5
	comp=Z,583nm,2.0s,comp=Z,12μm						
GKN	Gorkha	10.07	302	ePn	Pn	02 23 31.6	-3.3
GKN				eSn	Sn	02 25 16.4	-10
	comp=Z,7μm,0.7s						
KHON	Khomkaen	10.38	128	P	Pn	02 23 40.7	+1.7
	comp=Z,485nm,1.0s,comp=Z,4μm						
CHLP	Challavanipeta	10.53	247	eP	Pn	02 23 35.9	-5.1
CHLP				IAmb	IAmb	02 23 42.0	
	comp=Z,117nm,0.7s						
KOLN	Koldanda	10.79	299	ePn	Pn	02 23 40.6	-4.2
KOLN				eSn	Sn	02 25 32.3	-12
	comp=Z,7μm,0.8s						
SKNT	Sakolnakorn	10.88	121	P	Pn	02 23 46.5	+0.8
	comp=Z,809nm,1.2s,comp=Z,12μm						
DANN	Dangsing	10.92	302	ePn	Pn	02 23 42.1	-4.4
PHET	Kaeng Krachan	11.19	152	P	Pn	02 23 51.1	+1.1
	comp=Z,120nm,0.8s,comp=Z,1μm						
PBA	Port Blair	11.30	188	ePn	Pn	02 23 49.6	-2.0
PYUN	Piuthan	11.42	299	ePn	Pn	02 23 48.7	-4.6
PYUN				eSn	Sn	02 25 47.9	-11
	comp=Z,2μm,0.7s						
VIS	Vishakhapatnam	11.50	245	iP	Pn	02 23 50.3	-3.9
VIS				ix	x	02 25 45.7	
VIS				ex	x	02 25 48.6	
	comp=N,2μm,0.8s						
VIS				ex	x	02 25 48.7	
	comp=E,1μm,0.5s						
SRAK	Srakaew	11.52	139	P	Pn	02 24 02.0	+7.5
CD2	Chengdu	11.60	45	P	Pn	02 23 55.5	-0.1
CD2				S	Sn	02 26 03.8	+0.5
CD2				pmax	pmax		
	comp=E,670nm,0.6s						
CD2				pmax	pmax		
	comp=E,6μm,6.6s						
CD2				LR	LR		
	comp=E,15μm,7.6s						
CD2				LR	LR		
	comp=E,15μm,8.1s						
CD2				LR	LR		
	comp=E,10μm,8.3s						
PATY	Pattaya	11.76	147	P	Pn	02 24 00.3	+2.6
	comp=E,157nm,1.2s,comp=E,5μm						
GYA	Guiyang	11.80	70	⇓iP	Pn	02 23 59.5	+1.2
GYA				pP		02 24 08.0	
GYA				sP		02 24 19.3	
GYA				S	Sn	02 26 10.5	+2.3
GYA				sS		02 26 23.0	
GYA				SS		02 26 24.8	
GYA				pmax	pmax		
	comp=E,90nm,1.0s						
GYA				pmax	pmax		
	comp=E,2μm,7.8s						
GYA				LR	LR		
	comp=E,25μm,12.4s						
GYA				LR	LR		
	comp=E,13μm,13.1s						
GYA				LR	LR		
	comp=E,17μm,12.1s						
PVM	Polavaram	13.16	247	eP	Pn	02 24 11.9	-4.7
PVM				IAmb	IAmb	02 24 18.4	
	comp=Z,138nm,0.8s						
NGP	Nagpur	14.23	266	eP	Pn	02 24 27.0	-3.7
NGP				ex	x	02 26 50.3	
SURT	Suratani	14.55	162	P	Pn	02 24 35.6	+0.8
	comp=Z,0.3nm,0.9s,comp=Z,9.5nm						
RPR	Rampur	14.57	257	eP	Pn	02 24 30.8	-4.3
RPR				IAmb	IAmb	02 24 32.0	
	comp=Z,97nm,1.0s						
QIZ	Qiongzhong	15.04	102	ePn	P	02 24 43.0	-1.6
	comp=Z,1μm,1.8s						
QIZ				eSn	Sn	02 27 24.2	-2.8
QIZ				eScP	ScP	02 33 11.3	0.0
JOSI	Joshimath	15.18	303	eP	Pn	02 24 39.9	-3.1
JOSI				ex	x	02 27 13.9	
JOSI				IAML		02 27 24.8	
	comp=N,132μm,1.4s						
JOSI				IAML		02 27 29.4	
	comp=E,2μm,0.5s						
KRAB	Krabi	15.37	161	P	P	02 24 49.0	+0.8
	comp=E,2μm,0.6s,comp=E,31μm						
SRSP	Sriramsagar	15.41	258	eP	Pn	02 24 40.7	-5.1
SRSP				IAmb	IAmb	02 24 43.3	
	comp=Z,202nm,1.0s						
ENH	Enshi	15.44	58	ePn	Pn	02 24 45.0	-1.2
	comp=Z,892nm,0.8s						
ENH				eScP	ScP	02 33 11.4	-0.5
LZH	Lanzhou	15.52	30	⇓P	Pn	02 24 45.5	-1.8
LZH				pP	P	02 24 57.5	+7.5
LZH				PP	pP	02 25 00.0	-5.8
LZH				sP	sP	02 25 08.3	-7.8
LZH				S	Sn	02 27 35.3	-3.3
LZH				sS	S	02 27 53.0	+3.7
LZH				SS		02 27 57.3	
LZH				pmax	pmax		
	comp=Z,1μm,1.0s						
LZH				pmax	pmax		
	comp=Z,4μm,4.3s						
LZH				LR	LR		
	comp=Z,14μm,10.8s						
LZH				LR	LR		
	comp=Z,17μm,10.8s						
LZH				LR	LR		
	comp=Z,16μm,13.6s						
HYB	Hyderabad	15.74	252	iP	Pn	02 24 45.5	-4.6
	comp=Z,300nm,1.0s						
HYB				eS	Sn	02 27 35.0	-9.0
HYBB	Hyderabad (bro	15.74	252	eP	Pn	02 24 47.7	-2.4
HYBB				IAmb	IAmb	02 25 02.9	
	comp=Z,322nm,1.2s						
TRTT	Trang	15.88	160	P	Pn	02 24 51.1	-0.7
	comp=Z,290nm,1.3s,comp=Z,3μm						
SRLM	Srisailam	16.01	248	eP	Pn	02 24 48.8	-4.6
SRLM				IAmb	IAmb	02 25 01.4	
	comp=Z,205nm,0.8s						
NDI	New Delhi	16.39	294	eP	Pn	02 24 58.0	-0.1
NDI				ex	x	02 27 43.0	
SKHT	Srikalahasti	16.56	239	eP	Pn	02 24 56.1	-4.2
SKHT				IAmb	IAmb	02 25 03.7	
	comp=Z,639nm,1.4s						
SKLT	Songkhla	16.81	158	P	Pn	02 25 02.3	-1.1
	comp=Z,456nm,1.2s,comp=Z,6μm						
XAN	Xi'an	16.96	46	P	Pn	02 25 03.0	-2.1
XAN				PP	pP	02 25 18.8	-2.9
XAN				S	S	02 28 16.5	-2.0
XAN				SS	Sn	02 28 33.8	+21
XAN				pmax	pmax		
	comp=Z,61nm,0.8s						
XAN				pmax	pmax		
	comp=Z,4μm,8.9s						
XAN				LR	LR		
	comp=Z,4μm,4.7s						
XAN				LR	LR		
	comp=Z,5μm,5.8s						
XAN				LR	LR		
	comp=Z,7μm,11.5s						
GTA	Gaotai	17.09	15	⇓P	Pn	02 25 04.8	-2.0
GTA				pP	pP	02 25 16.3	-7.0
GTA				sP	sP	02 25 22.5	-11
GTA				S	Sn	02 28 14.0	-2.5
GTA				sS	S	02 28 31.0	+10
GTA				ScP	ScP	02 33 15.8	+0.7
GTA				ScS	ScS	02 36 54.3	-0.6
GTA				pmax	pmax		
	comp=Z,3μm,6.2s						
GTA				LR	LR		
	comp=Z,2μm,9.7s						
GTA				LR	LR		
	comp=Z,6μm,9.2s						
GTA				LR	LR		
	comp=Z,4μm,8.4s						
BSI	Banda Aceh	17.36	177	P	Pn	02 25 09.0	-1.1
KHET	Khetri	17.44	291	eP	Pn	02 25 07.1	-4.0
KHET				ex	x	02 28 04.7	
GZH	Guangzhou	17.55	86	iP	Pn	02 25 16.8	+4.4
GZH				S	S	02 28 29.0	-1.0
GZH				LR	LR		
	comp=Z,8μm,5.3s						
GZH				LR	LR		
	comp=Z,6μm,5.8s						
LHMI	Lhok Sumawe	17.78	171	P	Pn	02 25 15.6	+0.4
	comp=Z,1μm,1.4s,comp=Z,18μm						
LHMI	Lhok Sumawe	17.78	171	eP	Pn	02 25 15.2	0.0
	comp=Z,3μm,1.5s						
MCO	Taipa Grande	17.83	89	P	Pn	02 25 18.0	+2.2

URV	**Uravakonda**	**17.94**	**247**	*e*P	**P**	**02 25 14.4**	**-2.3**
URV				IAmb	IAmb	02 25 18.6	
	comp=Z,138nm,0.9s						
HKC	**Hong Kong Obse**	**18.38**	**88**	⇓P	**Pn**	**02 25 24.0**	**+1.6**
KULM	**Kulim**	**18.58**	**160**	*e*P	**P**	**02 25 22.6**	**-1.2**
	comp=Z,795nm,1.5s						
MLSI	**Meulaboh, Aceh**	**18.66**	**173**	P	**P**	**02 25 23.8**	**-0.8**
	comp=Z,2µm,0.8s,comp=Z,20µm						
WHN	**Wuhan**	**19.45**	**63**	⇓*i*P	**P**	**02 25 34.0**	**+0.9**
WHN				pP	**pP**	**02 25 47.5**	**-1.7**
WHN				S	**S**	**02 29 03.3**	**-5.4**
WHN				ScP	**ScP**	**02 33 19.8**	**-0.3**
WHN				pmax	pmax		
	comp=Z,5µm,4.0s						
WHN				LR	LR		
	comp=Z,21µm,9.9s						
WHN				LR	LR		
	comp=Z,12µm,9.3s						
WHN				LR	LR		
	comp=Z,9µm,8.4s						
IPM	**Ipoh**	**19.46**	**159**	*e*P	**P**	**02 25 32.5**	**-0.9**
	comp=Z,2µm,1.6s						
KCSI	**Kotacane, Aceh**	**19.58**	**170**	P	**P**	**02 25 33.9**	**-0.8**
	comp=Z,911nm,0.8s,comp=Z,14µm						
TPTI		**19.75**	**171**	P	**P**	**02 25 34.0**	**-2.5**
	comp=Z,1µm,0.6s,comp=Z,12µm						
TSI	**Tuntungan**	**19.75**	**167**	P	**Pn**	**02 25 37.6**	**-1.1**
	comp=Z,4µm,1.3s,comp=Z,53µm						
PALK	**Pallekele**	**20.32**	**222**	P	**P**	**02 25 43.6**	**+0.9**
	comp=Z,98nm,0.8s,baz=116,slow=2.1,SNR=22						
PALK				S	S	02 29 14.0	-12
	comp=Z,68nm,0.7s,baz=296,slow=18,SNR=12						
PALK				ScP	**ScP**	**02 33 22.1**	**-0.3**
	comp=Z,27nm,0.8s,baz=296,slow=1.6,SNR=4.5						
PALK				LR	LR	02 35 08.0	
	comp=Z,4µm,18.3s,baz=130,slow=41						
PALK	**Pallekele**	**20.32**	**222**	*e*P	**P**	**02 25 43.2**	**+0.5**
	comp=Z,631nm,1.5s						
PALK				*e*S	S	02 29 14.3	-12
PALK				*e*ScP	**ScP**	**02 33 23.2**	**+0.7**
PALK	**Pallekele**	**20.32**	**222**	P	Pn	02 25 44.3	-1.1
	SNR=12						
PALK	**Pallekele**	**20.32**	**222**	*i* P	**P**	**02 25 43.8**	**+1.2**
	SNR=24						
PALK	**Pallekele**	**20.32**	**222**	*i* P	**P**	**02 25 43.9**	**+1.2**
BOM	**Bombay**	**20.45**	**263**	*e*P	P	02 25 33.0	-11
BOM				*e*S	S	02 29 15.1	-13
SNSI	**Sinabang, Aceh**	**20.49**	**174**	P	**P**	**02 25 42.2**	**-2.3**
	comp=Z,4µm,0.7s,comp=Z,37µm						
PSI	**Prapat**	**20.51**	**167**	P	**P**	**02 25 45.3**	**+0.5**
	comp=Z,291nm,0.7s,baz=360,slow=9.0,SNR=96						
PSI				ScP	**ScP**	**02 33 23.4**	**+0.4**
	comp=Z,56nm,0.6s,baz=359,slow=2.3,SNR=25						
PSI	**Prapat**	**20.51**	**167**	*e*P	**P**	**02 25 45.2**	**+0.4**
	comp=Z,528nm,0.9s						
PSI				ScP	**ScP**	**02 33 23.4**	**+0.4**
PSI	**Prapat**	**20.51**	**167**	*e*P	**P**	**02 25 45.2**	**+0.4**
PSI				pmax	pmax		
	comp=Z,528nm,0.9s						
SARP	**Sargodha**	**21.14**	**300**	P	**P**	**02 25 49.9**	**-1.4**
CHCP	**Chirah Chowk**	**21.33**	**305**	P	**P**	**02 25 53.5**	**+0.1**
NIL	**Nilore**	**21.34**	**305**	*e*P	**P**	**02 25 53.4**	**-0.1**
NIL				*e*S	**S**	**02 29 41.0**	**-5.0**
NIL	**Nilore**	**21.34**	**305**	*e*P	**P**	**02 25 53.4**	**-0.1**
NIL				*e*S	**S**	**02 29 41.1**	**-5.0**
WMQ	**Urumqi**	**21.54**	**347**	P	**P**	**02 25 56.8**	**+1.3**
WMQ				pP	pP	02 26 07.0	-5.0
WMQ				PP	**sP**	**02 26 22.8**	**+0.6**
WMQ				S	**S**	**02 29 46.0**	**-3.8**
WMQ				PcP	**PcP**	**02 29 59.3**	**+4.3**
WMQ				SS	**SnSn**	**02 30 23.5**	**+3.4**
WMQ				pmax	pmax		
	comp=Z,1µm,1.3s						
WMQ				pmax	pmax		
	comp=Z,2µm,3.7s						
WMQ				LR	LR		
	comp=Z,8µm,33.7s						
WMQ				LR	LR		
	comp=Z,7µm,25.9s						
WMQ				LR	LR		
	comp=Z,11µm,28.5s						
GSI	**Gunungsitoli**	**21.73**	**171**	P	**P**	**02 25 55.8**	**-1.9**
	comp=Z,950nm,1.2s,comp=Z,11µm						
GSI	**Gunungsitoli**	**21.73**	**171**	*e*P	**P**	**02 25 56.1**	**-1.7**
	comp=Z,569nm,0.6s						
TRD	**Trivandrum**	**21.95**	**232**	⇑*e*x	P	02 26 09.2	+9.1
BTO	**Baotou**	**22.07**	**33**	*e*P	**P**	**02 25 59.8**	**-1.5**
THW	**Thamme Wali**	**22.18**	**301**	P	**P**	**02 26 01.5**	**-1.0**
THW				S	**S**	**02 30 04.0**	**+2.2**
QZH	**Quanzhou**	**22.31**	**80**	⇓*i*P	**P**	**02 26 04.5**	**+0.6**
QZH				S	**S**	**02 30 06.0**	**+1.9**
QZH				pmax	pmax		
	comp=Z,66nm,0.9s						
QZH				pmax	pmax		
	comp=Z,890nm,3.8s						
QZH				LR	LR		
	comp=Z,19µm,9.2s						
QZH				LR	LR		
	comp=Z,8µm,7.6s						
MNSI	**Mandailing Nat**	**22.59**	**166**	P	**P**	**02 26 04.8**	**-2.2**
	comp=Z,460nm,1.3s,comp=Z,8µm						
KSH	**Kashi**	**22.70**	**321**	P	**P**	**02 26 08.0**	**-0.1**
KSH				sP	sP	02 26 33.0	-1.7
KSH				PP	**PnPn**	**02 26 39.0**	**+3.2**
KSH				S	**S**	**02 30 05.5**	**-5.0**
KSH				SS	**SnSn**	**02 30 52.8**	**+4.3**
KSH				PcS	**PcS**	**02 33 37.8**	**+1.2**
KSH				pmax	pmax		
	comp=Z,4µm,1.7s						
KSH				pmax	pmax		
	comp=Z,6µm,6.7s						
KSH				LR	LR		
	comp=Z,4µm,14.2s						
KSH				LR	LR		
	comp=Z,2µm,11.6s						
MYKOM	**Kota Tinggi**	**22.97**	**155**	*e*P	**P**	**02 26 10.8**	**0.0**
	comp=Z,2µm,2.0s						
HHC	**Hu-ho-hao-te**	**23.05**	**35**	*e*P	**P**	**02 26 10.5**	**-1.0**
HHC				pP	pP	02 26 22.8	-5.5
HHC				sP	sP	02 26 34.0	-4.4
HHC				PP	**PnPn**	**02 26 45.3**	**+4.8**
HHC				S	**S**	**02 30 18.5**	**+2.4**
HHC				sS	Sn	02 30 33.5	-5.7
HHC				SS	**SnSn**	**02 31 00.0**	**+3.0**
HHC				pmax	pmax		
	comp=Z,130nm,1.4s						
HHC				pmax	pmax		
	comp=Z,1µm,5.2s						
HHC				LR	LR		
	comp=Z,4µm,10.5s						
HHC				LR	LR		
	comp=Z,4µm,10.3s						
HHC				LR	LR		
	comp=Z,5µm,11.7s						
PBSI	**Pulau Batu**	**23.17**	**170**	P	**P**	**02 26 12.2**	**-0.6**
	comp=Z,971nm,1.4s,comp=Z,12µm						
BKNI	**Bangkinang**	**23.41**	**163**	P	**P**	**02 26 13.3**	**-1.7**
BKNI	**Bangkinang**	**23.41**	**163**	*e*P	**P**	**02 26 13.3**	**-1.7**
	comp=Z,1µm,1.3s						
PRZ	**Przheval'sk**	**23.57**	**330**	*e*P	**P**	**02 26 16.8**	**+0.4**
	comp=Z,552nm,0.6s						
PRZ	**Przheval'sk**	**23.57**	**330**	*e*P	**P**	**02 26 16.8**	**+0.4**
PRZ				pmax	pmax		
	comp=Z,552nm,0.6s						
NJ2	**Nanjing**	**23.58**	**62**	*e*P	**P**	**02 26 16.0**	**-0.4**
NJ2				pP	**pP**	**02 26 31.5**	**-2.5**
NJ2				sP	**sP**	**02 26 40.5**	**-3.4**
NJ2				S	**S**	**02 30 25.3**	**+0.8**
NJ2				pmax	pmax		
	comp=Z,160nm,1.5s						
NJ2				pmax	pmax		
	comp=Z,1µm,4.9s						
NJ2				LR	LR		
	comp=Z,12µm,13.6s						
NJ2				LR	LR		
	comp=Z,5µm,13.6s						
NJ2				LR	LR		
	comp=Z,4µm,13.3s						
SHLS	**Shalkode**	**23.62**	**332**	⇓*i*P	**P**	**02 26 17.1**	**+0.3**
	comp=Z,452nm,1.4s						
SHLS				*i* S	**S**	**02 30 25.9**	**+0.6**
PDGK	**Podgornoye**	**23.75**	**332**	P	**P**	**02 26 19.7**	**+1.7**
PDGK				pmax	pmax		
	comp=Z,759nm,1.3s						
TIA	**Tai'an**	**23.80**	**51**	P	**P**	**02 26 18.0**	**-0.4**
TIA				S	**S**	**02 30 28.5**	**+0.3**
TIA				pmax	pmax		
	comp=Z,280nm,1.3s						
TIA				pmax	pmax		
	comp=Z,2µm,6.7s						
TIA				LR	LR		
	comp=Z,3µm,15.1s						
TIA				LR	LR		
	comp=Z,5µm,15.9s						
TIA				LR	LR		
	comp=Z,7µm,17.1s						
UZB	**Uzynbulak**	**23.81**	**332**	⇓*i*P	**P**	**02 26 20.6**	**+2.1**
	comp=Z,360nm,1.7s						
UZB				*i* S	**S**	**02 30 32.2**	**+3.9**
UZB				LR	LR	02 36 57.4	
	comp=Z,1µm,13.3s						
SATY	**Saty**	**24.01**	**330**	⇓*i*P	**P**	**02 26 23.0**	**+2.6**
	comp=Z,1µm,1.7s						
SATY				*i* S	**S**	**02 30 35.9**	**+4.2**
SATY				LR	LR	02 37 53.7	
	comp=Z,557nm,9.3s						
ZHN	**Zhinishke**	**24.09**	**331**	⇓*i*P	**P**	**02 26 23.2**	**+2.3**
	comp=Z,222nm,1.0s						
ZHN				*i* S	**S**	**02 30 36.8**	**+4.0**
KPKS	**Kokpek**	**24.21**	**331**	⇓*i*P	**P**	**02 26 24.1**	**+2.1**
	comp=Z,224nm,0.7s						
KPKS				*i* S	**S**	**02 30 38.4**	**+3.6**
ULHL	**Ulahol**	**24.45**	**326**	P	**P**	**02 26 27.0**	**+2.7**
	SNR=27						
SFK	**Sufi-Kurgan**	**24.48**	**319**	P	**P**	**02 26 26.4**	**+1.7**
SFK				pmax	pmax		
	comp=Z,538nm,1.4s						
SISI	**Saibi**	**24.56**	**168**	P	**P**	**02 26 26.0**	**+0.7**
	comp=Z,894nm,1.4s,comp=Z,14µm						
MDOK	**Medeo**	**24.73**	**329**	*i* P	**P**	**02 26 29.4**	**+2.6**
	comp=Z,5µm,1.2s						
MDOK				*i* S	**S**	**02 30 47.2**	**+4.1**
MDOK				LR	LR	02 38 03.7	
	comp=Z,2µm,11.0s						
AAA	**Alma-Ata**	**24.82**	**329**	⇓*i*P	**P**	**02 26 30.6**	**+3.0**
	comp=Z,1µm,1.5s						
AAA				*e*S	**S**	**02 30 48.1**	**+3.6**
AAA				LR	LR	02 38 06.0	
	comp=Z,1µm,11.5s						
AAA	**Alma-Ata**	**24.82**	**329**	*i* P	**P**	**02 26 30.4**	**+2.8**
AAA				*i* S	**S**	**02 30 47.3**	**+2.8**
AAA				pmax	pmax		
	comp=Z,1µm,1.8s						
AAA				smax	smax		
	comp=N,9µm,10.0s						
AAA				MLR	MLR		
	comp=Z,2µm,13.0s						
KZA	**Kyzart**	**24.84**	**325**	P	**P**	**02 26 30.6**	**+2.4**
	SNR=34						
KBL	**Kabul**	**24.90**	**303**	*e*P	**P**	**02 26 29.9**	**+1.3**
	comp=Z,1µm,1.6s						
KBL	**Kabul**	**24.90**	**303**	*e*P	**P**	**02 26 29.9**	**+1.3**
KBL				pmax	pmax		
	comp=Z,1µm,1.6s						
TATO	**Taipei**	**24.94**	**80**	*e*P	**P**	**02 26 29.2**	**+0.5**
	comp=Z,180nm,1.1s						
MNCI	**Minicoy**	**25.04**	**238**	*e*P	**P**	**02 26 29.5**	**-0.2**
	comp=Z,439nm,1.1s						
BJT	**Baijiatuau**	**25.17**	**42**	*e*P	**P**	**02 26 31.3**	**+0.6**
	comp=Z,212nm,0.8s						
BJT				*e*ScP	**ScP**	**02 33 34.7**	**+0.1**
BJT	**Baijiatuau**	**25.17**	**42**	*e*P	**P**	**02 26 31.3**	**+0.6**
BJT				pmax	pmax		
	comp=Z,212nm,0.8s						
BJI	**Beijing**	**25.19**	**42**	⇓*i*P	**P**	**02 26 31.3**	**+0.5**
BJI				pP	**pP**	**02 26 46.0**	**-3.4**
BJI				S	**S**	**02 30 51.5**	**+1.3**
BJI				pmax	pmax		
	comp=Z,350nm,1.1s						
BJI				pmax	pmax		
	comp=Z,2µm,4.7s						
BJI				LR	LR		
	comp=Z,3µm,9.8s						
BJI				LR	LR		
	comp=Z,5µm,21.9s						
BJI				LR	LR		
	comp=Z,2µm,35.0s						
TKM2	**Tokmak 2**	**25.26**	**327**	P	**P**	**02 26 34.0**	**+2.3**
	SNR=170						
TKM2	**Tokmak 2**	**25.26**	**327**	P	**P**	**02 26 33.9**	**+2.1**
TKM2				pmax	pmax		
	comp=Z,288nm,0.9s						
SSE	**Sheshan**	**25.27**	**65**	P	**P**	**02 26 31.5**	**-0.2**
SSE				S	**S**	**02 30 51.5**	**-0.2**
SSE				pmax	pmax		
	comp=Z,35nm,0.9s						
SSE				pmax	pmax		
	comp=Z,270nm,3.7s						
SSE				LR	LR		
	comp=Z,5µm,8.2s						
SSE				LR	LR		
	comp=Z,2µm,8.9s						
UCH	**Uchtor**	**25.34**	**324**	P	**P**	**02 26 35.1**	**+2.3**
	SNR=134						
KBK	**Karagaybulak**	**25.41**	**325**	P	**P**	**02 26 35.9**	**+2.8**
	SNR=83						
ZSN	**Zaisan**	**25.61**	**345**	*i* P	**P**	**02 26 36.9**	**+2.3**
	comp=Z,110nm,1.5s						
ZSN				*i* S	**S**	**02 31 00.8**	**+4.0**
KUU	**Kurty**	**25.61**	**329**	⇓*i*P	**P**	**02 26 36.3**	**+1.6**
	comp=Z,361nm,1.5s						
KUU				*i* S	**S**	**02 31 00.1**	**+3.2**
KUU				LR	LR	02 38 41.0	
	comp=Z,1µm,10.3s						
AAK	**Ala-Archa**	**25.64**	**325**	P	**P**	**02 26 37.4**	**+2.3**
	comp=Z,172nm,0.9s,baz=129,slow=6.3,SNR=100						
AAK				ScP	**ScP**	**02 33 37.5**	**+1.4**
	comp=Z,7.6nm,0.5s,baz=170,slow=4.6,SNR=4.2						
AAK				LR	LR	02 38 47.7	
	comp=Z,2µm,19.4s,baz=112,slow=41						
AAK	**Ala-Archa**	**25.64**	**325**	P	**P**	**02 26 37.9**	**+2.7**
	SNR=93						
AAK	**Ala-Archa**	**25.64**	**325**	*e*P	**P**	**02 26 37.7**	**+2.7**
	comp=Z,292nm,1.0s						
AAK				*e*ScP	**ScP**	**02 33 37.0**	**+0.8**
AAK	**Ala-Archa**	**25.64**	**325**	P	**P**	**02 26 37.8**	**+2.7**
	SNR=97						
AAK	**Ala-Archa**	**25.64**	**325**	*i* P	**P**	**02 26 37.7**	**+2.7**
	SNR=102						
AAK	**Ala-Archa**	**25.64**	**325**	P	**P**	**02 26 37.6**	**+2.5**
AAK				pmax	pmax		
	comp=Z,243nm,1.2s						
MK01	**Makanchi Array**	**25.68**	**341**	*e*P	**P**	**02 26 35.8**	**+0.5**
MK31	**Makanchi Array**	**25.70**	**341**	*e*P	**P**	**02 26 37.3**	**+1.8**
MK31	**Makanchi Array**	**25.70**	**341**	*i* P	**P**	**02 26 37.1**	**+1.6**
MK31				pmax	pmax		
	comp=Z,164nm,0.5s						
MKAR	**Makanchi Array**	**25.70**	**341**	P	**P**	**02 26 37.2**	**+1.8**
	comp=Z,288nm,0.7s,baz=150,slow=9.5,SNR=1629						
MKAR				ScP	**ScP**	**02 33 35.6**	**-0.5**
	comp=Z,12nm,0.8s,baz=126,slow=3.2,SNR=6.7						
MKAR				LR	LR	02 38 54.6	
	comp=Z,3µm,21.7s,baz=146,slow=41						
MKAR				P3KPbc		02 59 28.9	
	comp=Z,0.7nm,0.8s,baz=340,slow=4.0,SNR=4.5						
MKAR	**Makanchi Array**	**25.70**	**341**	*e*P	**P**	**02 26 37.3**	**+1.8**
	comp=Z,2µm,0.6s						
MKAR				ScP	**ScP**	**02 33 35.6**	**-0.5**
MKAR				*e*		02 59 28.9	
FRU	**Bishkek**	**25.71**	**325**	⇓*e*P	**P**	**02 26 38.0**	**+2.4**
FRU				*i*		02 26 57.0	
FRU				*e*		02 31 00.0	
FRU				pmax	pmax		
	comp=Z,430nm,2.0s						
AML	**Almayashu**	**25.73**	**323**	P	**P**	**02 26 38.7**	**+2.5**
	SNR=17						
CHMS	**Chumysh**	**25.75**	**326**	P	**P**	**02 26 37.9**	**+1.9**
	SNR=38						
MAKZ	**Makanchi**	**25.81**	**340**	*e*P	**P**	**02 26 38.0**	**+1.5**
	comp=Z,345nm,1.0s						
MAKZ	**Makanchi**	**25.81**	**340**	*e*P	**P**	**02 26 38.0**	**+1.5**
MAKZ				pmax	pmax		
	comp=Z,345nm,1.0s						
KRJI	**Kerinci**	**25.83**	**163**	P	**P**	**02 26 37.0**	**0.0**
	comp=Z,466nm,0.8s,comp=Z,7µm						
EKS2	**Erkin-Say**	**26.04**	**324**	P	**P**	**02 26 41.4**	**+2.6**
	SNR=66						
USP	**Ospenovka**	**26.07**	**326**	P	**P**	**02 26 41.0**	**+2.0**
	SNR=66						
PPSI	**Pulau Pagai**	**26.14**	**167**	P	**P**	**02 26 40.9**	**+1.3**
	comp=Z,2µm,1.5s,comp=Z,29µm						
YOJ	**Yonaguni jima**	**26.34**	**81**	*e*P	**P**	**02 26 41.1**	**-0.3**
	comp=Z,132nm,1.0s						
YOJ	**Yonaguni jima**	**26.34**	**81**	*e*P	**P**	**02 26 41.1**	**-0.3**
YOJ				pmax	pmax		
	comp=Z,133nm,1.0s						
KSM	**Kuching**	**26.40**	**142**	*e*P	**P**	**02 26 42.4**	**+0.3**
	comp=Z,266nm,1.0s						
MNAS	**Manas**	**26.63**	**322**	P	**P**	**02 26 46.3**	**+2.3**
MNAS				pmax	pmax		
	comp=Z,273nm,1.1s						
SONM	**Songino Array**	**26.68**	**18**	P	**P**	**02 26 44.3**	**-0.1**
	comp=Z,38nm,0.6s,baz=200,slow=8.6,SNR=81						
SONM				ScP	**ScP**	**02 33 38.9**	**-0.1**
	comp=Z,58nm,0.9s,baz=206,slow=3.6,SNR=25						
SONM				LR	LR	02 39 43.8	
	comp=Z,3µm,20.2s,baz=176,slow=42						
SONA1	**Songino Array**	**26.69**	**18**	*e*P	**P**	**02 26 44.1**	**-0.5**
TGY	**Tagaytay City**	**26.72**	**105**	P	**P**	**02 26 45.2**	**+0.2**
	comp=Z,127nm,0.4s,baz=166,slow=8.4,SNR=2.5						
SBUM	**Sibu**	**26.78**	**137**	*e*P	**P**	**02 26 46.5**	**+1.0**
	comp=Z,136nm,1.3s						
ULN	**Ulaanbaatar**	**26.90**	**19**	*e*P	**P**	**02 26 45.9**	**-0.5**
	comp=Z,174nm,1.0s						
ULN				*e*ScP	**ScP**	**02 33 39.5**	**-0.3**
ULN	**Ulaanbaatar**	**26.90**	**19**	P	**P**	**02 26 46.6**	**+0.1**
	SNR=67						
ULN	**Ulaanbaatar**	**26.90**	**19**	*d* *i*P	**P**	**02 26 46.4**	**0.0**
ULN				pmax	pmax		
	comp=Z,158nm,2.5s						
KKM	**Kota Kinabalu**	**27.00**	**125**	*e*P	**P**	**02 26 49.3**	**+1.7**
	comp=Z,281nm,1.1s						
MASI	**Maura Aman, Be**	**27.05**	**162**	P	**P**	**02 26 47.9**	**0.0**
	comp=Z,282nm,1.4s,comp=Z,6µm						
BTLS	**Baital**	**27.57**	**328**	⇓*i*P	**P**	**02 26 53.7**	**+1.5**
	comp=Z,98nm,1.6s						
BTLS				*i* sP	**sP**	**02 27 21.8**	**+1.3**
BTLS				*i* S	**S**	**02 31 31.1**	**+3.4**
BTLS				LR	LR	02 38 17.8	
	comp=Z,552nm,13.5s						
IUG	**Iuzhnay**	**27.86**	**319**	⇓*e*P	**P**	**02 26 57.1**	**+2.1**
	comp=Z,125nm,1.6s						
IUG				*i* sP	**sP**	**02 27 25.4**	**+2.1**
IUG				*e*S	**S**	**02 31 36.6**	**+4.0**
IUG				LR	LR	02 39 10.5	
	comp=Z,393nm,11.5s						
KK31	**Karatay Array**	**28.15**	**321**	*e*P	**P**	**02 26 58.9**	**+1.4**
KK31	**Karatay Array**	**28.15**	**321**	*e*P	**P**	**02 26 58.4**	**+0.9**
KK31				pmax	pmax		
	comp=Z,61nm,1.2s						
KKAR	**Karatay Array**	**28.15**	**321**	*e*P	**P**	**02 26 58.9**	**+1.4**
KKAR	**Karatay Array**	**28.15**	**321**	*e*P	**P**	**02 26 58.9**	**+1.4**
HVS	**Khovu-Aksy**	**28.16**	**359**	*c* *i*P	**P**	**02 26 59.0**	**+1.4**
HVS				pmax	pmax		
	comp=Z,481nm,0.9s						
DL2	**Dalian**	**28.21**	**49**	P	**P**	**02 26 58.3**	**+0.2**
DL2				sP	**sP**	**02 27 24.5**	**-1.8**
DL2				S	**S**	**02 31 38.0**	**0.0**
DL2				ScP	**ScP**	**02 33 42.8**	**-0.9**
DL2				ScS	**ScS**	**02 37 33.5**	**-3.0**
DL2				pmax	pmax		
	comp=Z,91nm,0.7s						
DL2				pmax	pmax		
	comp=Z,500nm,11.4s						
DL2				LR	LR		
	comp=Z,3µm,13.6s						
DL2				LR	LR		
	comp=Z,2µm,15.6s						
DL2				LR	LR		
	comp=Z,5µm,16.6s						
STKI	**Sintang**	**28.22**	**141**	P	**P**	**02 26 59.6**	**+1.3**
	comp=Z,187nm,1.2s,comp=Z,14µm						
ZAK	**Zakamensk**	**28.30**	**12**	*e*P	**P**	**02 26 59.9**	**+1.1**
ZAK				pmax	pmax		
	comp=Z,189nm,1.2s						
MDSI	**Maura Dua**	**28.91**	**159**	P	**P**	**02 27 02.3**	**-2.1**
	comp=Z,146nm,1.1s,comp=Z,2µm						
MOY	**Mondy**	**29.16**	**9**	*e*P	**P**	**02 27 08.4**	**+2.0**
MOY				pmax	pmax		
	comp=Z,362nm,1.8s						
MYLDM	**Lahad Datu**	**29.29**	**123**	*e*P	**P**	**02 27 10.0**	**+2.1**
	comp=Z,456nm,1.5s						
LWLI	**Liwa**	**29.37**	**160**	P	**P**	**02 27 06.4**	**-2.3**
	comp=Z,179nm,0.6s						
KLI	**Kotabumi**	**29.49**	**158**	P	P	02 27 19.9	+10
SEM	**Semipalatinsk**	**29.54**	**342**	⇓*i*P	**P**	**02 27 10.9**	**+0.9**
	comp=Z,174nm,1.6s						
TLY	**Talaya**	**29.61**	**12**	*e*P	**P**	**02 27 12.5**	**+2.2**
	comp=Z,252nm,1.3s						
TLY				*e*ScP	**ScP**	**02 33 48.3**	**+0.4**
TLY	**Talaya**	**29.61**	**12**	P	**P**	**02 27 12.5**	**+2.2**
	SNR=44						
TLY	**Talaya**	**29.61**	**12**	*d* *i*P	**P**	**02 27 12.3**	**+2.0**
TLY				*e*S	**S**	**02 32 03.2**	**+3.6**
TLY				*e*SSS	SSS	02 33 39.6	
TLY				pmax	pmax		
	comp=Z,207nm,1.2s						
TLY				MLR	MLR		
	comp=Z,3µm,20.0s						
KASI	**Kota Agung**	**29.99**	**159**	P	**P**	**02 27 11.4**	**-2.6**
	comp=Z,134nm,0.5s						
KURBB	**Kurchatov Arra**	**30.25**	**340**	P	**P**	**02 27 17.4**	**+1.4**
	comp=Z,60nm,0.6s,baz=150,slow=8.7,SNR=397						
KURBB				S	**S**	**02 32 09.5**	**-0.3**
	comp=Z,37nm,1.3s,baz=155,slow=16,SNR=4.9						
KURBB				ScP	**ScP**	**02 33 50.2**	**+0.3**
	comp=Z,19nm,0.7s,baz=148,slow=2.8,SNR=16						
IRK	**Irkutsk**	**30.26**	**12**	*e*P	**P**	**02 27 17.9**	**+1.8**
IRK				pmax	pmax		
	comp=Z,669nm,1.8s						
KURK	**Kurchatov**	**30.31**	**340**	*e*P	**P**	**02 27 17.9**	**+1.4**
KURK				S	**S**	**02 32 09.5**	**-1.1**
KURK				*e*ScP	**ScP**	**02 33 50.5**	**+0.4**
KURK	**Kurchatov**	**30.31**	**340**	P	**P**	**02 27 17.9**	**+1.4**
	SNR=85						
KURK	**Kurchatov**	**30.31**	**340**	*d* *i*P	**P**	**02 27 17.6**	**+1.1**
KURK				pmax	pmax		
	comp=Z,307nm,1.7s						
PBKI	**Pangkalan Bun**	**30.61**	**144**	P	**P**	**02 27 20.8**	**+1.3**
SNY	**Shenyang**	**30.88**	**45**	⇓P	**P**	**02 27 21.0**	**-0.6**
SNY				sP	**pP**	**02 27 39.5**	**-1.0**
SNY				PP	**PnPn**	**02 28 22.3**	**-3.0**
SNY				S	**S**	**02 32 18.8**	**-0.9**
SNY				sS	**sS**	**02 32 50.5**	**-1.7**
SNY				pmax	pmax		
	comp=Z,96nm,1.0s						
SNY				pmax	pmax		
	comp=Z,380nm,5.9s						
SNY				LR	LR		
	comp=Z,3µm,14.3s						
SNY				LR	LR		
	comp=Z,2µm,15.9s						
SNY				LR	LR		
	comp=Z,2µm,14.9s						
JOW	**Kunigami**	**31.03**	**76**	P	**P**	**02 27 23.2**	**0.0**
	comp=Z,101nm,0.5s,baz=264,slow=6.7,SNR=30						
JOW				ScP	**ScP**	**02 33 52.9**	**-0.2**
	comp=Z,86nm,1.0s,baz=257,slow=1.5,SNR=7.1						
JOW				LR	LR	02 41 16.1	
	comp=Z,2µm,21.4s,baz=252,slow=39						
JOW	**Kunigami**	**31.03**	**76**	*e*P	**P**	**02 27 23.5**	**+0.4**
	comp=Z,114nm,0.5s						
JOW				ScP	**ScP**	**02 33 52.9**	**-0.2**
MTKI	**Muara Teweh, K**	**31.08**	**137**	P	**P**	**02 27 24.9**	**+1.2**
	comp=Z,57nm,0.7s						
SBJI	**Serang**	**31.11**	**157**	P	**P**	**02 27 24.7**	**+0.8**
INCN	**Inchon**	**31.32**	**55**	*e*P	**P**	**02 27 24.5**	**-1.1**
	comp=Z,60nm,0.6s						
INCN				*e*ScP	**ScP**	**02 33 52.8**	**-1.1**
INCN	**Inchon**	**31.32**	**55**	*e*P	**P**	**02 27 24.5**	**-1.1**
INCN				pmax	pmax		
	comp=Z,60nm,0.6s						
TJN	**Taejon**	**31.56**	**57**	*d* *i*P	**P**	**02 27 26.1**	**-1.6**
DBJI	**Dramaga**	**31.74**	**156**	P	**P**	**02 27 27.8**	**-1.6**
	comp=Z,278nm,1.1s,comp=Z,8µm						
ZAA0	**Zalesovo Array**	**31.79**	**349**	*e*P	**P**	**02 27 30.9**	**+1.4**
	comp=Z,644nm,1.4s						
ZALV	**Zalesovo Beam**	**31.79**	**349**	P	**P**	**02 27 30.9**	**+1.4**
	comp=Z,76nm,0.5s,baz=163,slow=7.7,SNR=330						
ZALV				S	**S**	**02 32 34.0**	**+0.3**
	comp=Z,24nm,0.9s,baz=165,slow=12,SNR=4.0						
ZALV				ScP	**ScP**	**02 33 53.7**	**-1.3**
	comp=Z,12nm,0.5s,baz=169,slow=3.1,SNR=9.9						
ZALV				ScS	**ScS**	**02 37 48.4**	**-4.7**
	comp=Z,5.5nm,0.8s,baz=155,slow=8.4,SNR=4.7						
ZALV				P3KPbc		02 59 00.8	
	comp=Z,1.1nm,0.4s,baz=352,slow=6.4,SNR=4.2						
ZALV	**Zalesovo Beam**	**31.79**	**349**	*e*P	**P**	**02 27 29.8**	**+0.3**

ZALV				S	S	02 32 34.0	+0.3
ZALV				ScP	ScP	02 33 53.7	-1.3
ZALV				e		02 59 00.8	
ZALV	Zalesovo Beam	31.79	349	eP	P	02 27 29.8	+0.3
ZALV				S	S	02 32 34.0	+0.3
BRZS	Berezniki	31.88	333	⇓iP	P	02 27 32.2	+1.8
	comp=Z,264nm,1.5s						
BRZS				i S	S	02 32 38.7	+3.5
BRZS				LR	LR	02 42 10.8	
	comp=Z,462nm,9.8s						
SKJI	Sukabumi	32.08	157	P	P	02 27 29.6	-2.8
	comp=Z,669nm,0.5s,comp=Z,6µm						
KS15	Wonju Array Si	32.26	56	eP	P	02 27 32.4	-1.4
KS15				eS	S	02 32 42.5	+1.1
KSAR	Wonju Array Be	32.26	56	P	P	02 27 32.4	-1.4
KSAR				PP	PnPn	02 28 42.4	-0.6
KSAR				S	S	02 32 38.5	-2.8
KSAR				ScP	ScP	02 33 56.0	-1.0
KSAR	Wonju Array Be	32.26	56	P	P	02 27 32.4	-1.4
KSAR						02 28 42.4	
KSAR				S	S	02 32 38.6	-2.8
KS01	Wonju Array Si	32.28	56	eP	P	02 27 32.2	-1.8
KSRS	Korea Array	32.29	56	P	P	02 27 32.4	-1.7
	comp=Z,8.7nm,0.6s,baz=255,slow=8.4,SNR=38						
KSRS				PP	PnPn	02 28 42.4	-1.0
	comp=Z,29nm,1.1s,baz=251,slow=7.8,SNR=4.4						
KSRS				S	S	02 32 38.5	-3.3
	comp=Z,17nm,1.2s,baz=249,slow=13,SNR=4.7						
KSRS				ScP	ScP	02 33 56.0	-1.1
	comp=Z,40nm,1.1s,baz=255,slow=3.9,SNR=19						
KSRS				LR	LR	02 40 33.8	
	comp=Z,1µm,18.2s,baz=257,slow=36						
LEM	Lembang	32.32	155	P	P	02 27 34.4	-0.3
	comp=Z,52nm,0.7s,baz=330,slow=20,SNR=7.6						
LEM				LR	LR	02 41 47.5	
	comp=Z,2µm,19.9s,baz=316,slow=38						
CIT	Chita	32.62	22	eP	P	02 27 36.6	-0.2
CIT				e		02 28 00.3	
CIT				e		02 28 10.6	
WSAR	Wadi Sarin	32.75	278	P	P	02 27 40.6	+2.3
	comp=Z,8.9nm,0.8s,baz=129,slow=14,SNR=2.1						
WSAR				ScP	ScP	02 33 59.5	+0.6
	comp=Z,59nm,1.0s,baz=93,slow=4.9,SNR=11						
WSAR				LR	LR	02 41 45.3	
	comp=Z,1µm,19.0s,baz=112,slow=38						
WSAR	Wadi Sarin	32.75	278	P	ScP	02 34 00.2	+1.3
	SNR=12						
NVS	Novosibirsk	32.93	348	⇑iP	P	02 27 40.8	+1.4
NVS				e*PP	sP	02 28 05.4	-2.4
NVS				eS	S	02 32 51.2	-0.1
NVS				pmax	pmax		
	comp=N,180nm,0.6s						
NVS				pmax	pmax		
	comp=E,98nm,0.6s						
NVS				pmax	pmax		
	comp=Z,191nm,0.6s						
NVS				smax	smax		
	comp=N,178nm,1.4s						
NVS				smax	smax		
	comp=E,417nm,1.4s						
CN2	Changchun	33.04	43	⇓P	P	02 27 39.5	-1.0
CN2				eS	S	02 32 47.8	-5.5
CN2				pmax	pmax		
	comp=E,50nm,1.2s						
CN2				pmax	pmax		
	comp=E,500nm,5.0s						
CN2				LR	LR		
	comp=E,2µm,17.0s						
CN2				LR	LR		
	comp=E,2µm,17.0s						
CN2				LR	LR		
	comp=E,2µm,16.0s						
HIA	Hailar	33.08	31	eP	P	02 27 41.5	+0.6
	comp=E,367nm,1.9s						
HIA				eScP	ScP	02 33 59.7	0.0
HIA	Hailar	33.08	31	eP	P	02 27 41.5	+0.6
HIA				pmax	pmax		
	comp=Z,367nm,1.9s						
BIDO	Bidbid	33.17	278	P	P	02 27 48.7	+6.7
	SNR=7.7						
KPJI	Karang Pucung	33.32	153	P	P	02 27 43.8	+0.6
	comp=Z,652nm,1.1s,comp=Z,7µm						
MPSI	Mapaga	33.53	128	P	P	02 27 46.1	+0.9
KBKI	Kotabaru	33.70	138	P	P	02 27 48.2	+1.6
	comp=Z,128nm,1.2s						
JNU	Nakatsue	33.72	64	P	P	02 27 46.3	-0.3
	comp=Z,46nm,0.8s,baz=272,slow=3.5,SNR=50						
JNU				ScP	ScP	02 34 01.1	-1.2
	comp=Z,76nm,1.2s,baz=22,slow=0.9,SNR=13						
JNU				LR	LR	02 43 36.0	
	comp=Z,3µm,18.3s,baz=268,slow=40						
JNU	Nakatsue	33.72	64	eP	P	02 27 46.5	-0.2
	comp=Z,93nm,1.0s						
JNU				ScP	ScP	02 34 01.1	-1.2
SMRI	Semarang	33.73	150	P	P	02 27 48.9	+2.1
SMRI	Semarang	33.73	150	eP	P	02 27 48.6	+1.8
	comp=Z,409nm,1.1s						
DAV	Davao City (W)	33.98	113	LR	LR	02 42 59.8	
	comp=Z,2µm,19.7s,baz=300,slow=39						
TBJI	Tambak Boyo	34.20	148	P	P	02 27 52.0	+1.2
GEYT	Alibeck	34.34	304	P	P	02 27 53.1	+1.1
	comp=Z,25nm,1.1s,baz=98,slow=11,SNR=26						
GEYT				ScP	ScP	02 34 05.3	+1.0
	comp=Z,12nm,0.9s,baz=151,slow=3.4,SNR=6.6						
GEYT				LR	LR	02 45 44.4	
	comp=Z,2µm,18.1s,baz=30,slow=43						
GYA0B	ALIBECK ARRAY	34.34	304	eP	P	02 27 53.1	+1.1
	comp=Z,120nm,1.0s						
PCI	Palu	34.36	130	P	P	02 27 53.7	+1.4
NGJI	Ngawi	34.48	149	P	P	02 27 55.1	+1.8
UGM	Wanagama	34.53	151	P	P	02 27 55.1	+1.3
UGM	Wanagama	34.53	151	eP	P	02 27 54.0	+0.3
	comp=Z,627nm,1.5s						
BANOM	Banah	34.63	283	P	P	02 27 56.4	+1.8
SHME	Shamm	34.77	283	P	P	02 27 58.1	+2.3
UOSS	Minazif	34.78	281	eP	P	02 27 55.7	-0.3
	comp=Z,49nm,1.1s						
HATD	Hatta, Dubai	34.86	281	P	P	02 27 58.7	+2.1
ASHO	Ashiyiah	34.94	281	P	P	02 27 58.4	+1.0
ASHO	Ashiyiah	34.94	281	P	P	02 27 59.7	+2.4
MRSI	Marisa	34.94	126	P	P	02 27 58.6	+1.3
COCO	West Island	34.99	176	eP	P	02 27 57.8	+0.2
	comp=Z,884nm,1.8s						
COCO	West Island	34.99	176	eP	P	02 27 57.8	+0.2
COCO				pmax	pmax		
	comp=Z,884nm,1.8s						
BVA0	Borovoye Array	35.13	335	P	P	02 27 59.4	+0.9
BVA0				pmax	pmax		
	comp=Z,104nm,1.5s						
BVAR	Borovoye Array	35.13	335	P	P	02 27 59.5	+1.0
	comp=Z,25nm,0.5s,baz=147,slow=11,SNR=129						
BVAR				ScP	ScP	02 34 07.9	+1.2
	comp=Z,12nm,0.8s,baz=158,slow=5.8,SNR=6.3						
BVAR				LR	LR	02 44 44.7	
	comp=Z,3µm,21.9s,baz=136,slow=40						
BVAR				P3KPbc		02 58 48.5	
	comp=Z,1.8nm,0.5s,baz=274,slow=1.5,SNR=16						
BRVK	Borovoye	35.20	335	eP	P	02 28 00.3	+1.2
	comp=Z,84nm,0.9s						
BRVK				eScP	ScP	02 34 07.2	+0.2
BRVK	Borovoye	35.20	335	P	P	02 28 00.3	+1.2
	SNR=55						
BRVK	Borovoye	35.20	335	d iP	P	02 28 00.1	+1.0
BRVK				pmax	pmax		
	comp=Z,143nm,1.7s						
PWJI	Pagerwojo	35.22	149	P	P	02 28 00.0	+0.4
	comp=Z,112nm,1.1s						
APSI	Ampana	35.66	128	P	P	02 28 04.4	+0.9
BLJI	Banyuglugur	35.87	146	P	P	02 28 06.3	+1.1
TTSI	Tana Toraja	35.88	133	P	P	02 28 07.1	+1.7
MDJ	Mudanjiang	36.06	45	P	P	02 28 03.0	-3.6
MDJ				sP	pP	02 28 27.3	+1.6
MDJ				S	S	02 33 35.5	-4.4
MDJ				ScP	ScP	02 34 06.8	-3.5
MDJ				SS	SnSn	02 36 07.8	-4.8
MDJ				pmax	pmax		
	comp=Z,61nm,1.1s						
MDJ				pmax	pmax		
	comp=Z,360nm,6.4s						
MDJ				LR	LR		
	comp=Z,2µm,17.5s						
MDJ				LR	LR		
	comp=Z,2µm,13.5s						
MDJ				LR	LR		
	comp=Z,3µm,13.8s						
MDJ	Mudanjiang	36.06	45	eP	P	02 28 06.1	-0.5
	comp=Z,115nm,1.4s						
MDJ				eScP	ScP	02 34 09.3	-1.0
GMJI	Gumukmas	36.24	147	P	P	02 28 10.0	+1.6
MSHR	Mys Shultsa	36.31	48	ceP	P	02 28 08.4	-0.4
KMSI	Cibinong	36.43	123	P	P	02 28 11.7	+1.7
SPSI	Sidrap Palu	36.52	134	P	P	02 28 12.2	+1.4
LUWI	Luwuk	36.57	127	P	P	02 28 12.1	+0.9
LUWI	Luwuk	36.57	127	eP	P	02 28 12.6	+1.3
	comp=Z,1µm,1.3s						
JAGI	Jajag, Banyuwa	36.77	146	P	P	02 28 12.6	-0.3
JAGI	Jajag, Banyuwa	36.77	146	eP	P	02 28 12.7	-0.3
	comp=Z,323nm,1.2s						
H08N2	Diego Garcia H	36.93	221	P	P	02 28 12.9	-1.0
	baz=29,slow=4.9,SNR=16						
H08N1	Diego Carcia H	36.93	221	P	P	02 28 12.9	-1.0
	baz=29,slow=4.9,SNR=9.5						
H08N3	Diego Garcia H	36.95	221	P	P	02 28 12.5	-1.6
	baz=29,slow=4.9,SNR=11						
DGAR	Diego Garcia	36.95	218	i P	P	02 28 15.6	+1.2
SRBI	Singaraja	37.01	144	P	P	02 28 16.2	+1.3
USRK	Ussuriysk Ar.	37.47	46	P	P	02 28 18.0	-0.5
	comp=Z,48nm,0.7s,baz=253,slow=8.4						
USRK				ScP	ScP	02 34 13.9	-1.7
	baz=253,slow=3.6						
USRK				LR	LR	02 46 32.4	
	comp=Z,1µm,19.4s,baz=238,slow=41						
IGBI	Denpasar	37.59	145	P	P	02 28 19.0	-0.8
BOD	Bodaibo	37.66	17	eP	P	02 28 20.7	+0.7
BOD				e		02 30 36.5	
BOD				eS	ScS	02 38 22.5	-2.0
BOD				pmax	pmax		
	comp=Z,264nm,1.4s						
ABKAR	Akbulak array	37.68	323	eP	P	02 28 21.9	+1.6
BKSI	Bulukumba	37.77	135	P	P	02 28 21.6	+0.2
KDI	Kendari	38.47	130	P	P	02 28 27.9	+0.6
TWSI	Taliwang, Sumb	38.47	142	P	P	02 28 27.3	0.0
TNTI	Ternate	38.96	120	P	P	02 28 31.3	-0.1
TNTI	Ternate	38.96	120	eP	P	02 28 31.4	-0.1
	comp=Z,148nm,1.1s						
TNTI				eS	S	02 34 19.6	-4.9
INU	Inuyama	39.05	62	eP	P	02 28 31.8	-0.1
	comp=Z,134nm,0.7s						
INU				eS	S	02 34 20.8	-4.5
PLAI	Plampang	39.05	141	P	P	02 28 30.8	-1.4
AKTO	Aktyubinsk	39.36	323	P	P	02 28 35.6	+1.2
	comp=Z,41nm,0.4s,baz=121,slow=11						
AKTO				ScP	ScP	02 34 22.1	-0.7
	comp=Z,28nm,1.0s,baz=120,slow=6.2,SNR=8.6						
AKTO				LR	LR	02 48 00.9	
	comp=Z,2µm,19.5s,baz=131,slow=41						
KLR	Kul’dur	39.45	39	ScP	ScP	02 34 21.8	-1.3
	comp=Z,1.5nm,0.6s,baz=227,slow=4.6,SNR=13						
KLR	Kul’dur	39.45	39	d iP	P	02 28 34.7	-0.4
ZEA	Zeya	39.55	31	eP	P	02 28 34.0	-1.9
ZEA				e		02 30 12.0	
ZEA				ePPP	PPP	02 30 43.0	
ZEA				eS	S	02 34 30.0	-2.4
ZEA				pmax	pmax		
	comp=N,300nm,6.0s						
ZEA				pmax	pmax		
	comp=E,200nm,6.0s						
ZEA				pmax	pmax		
	comp=Z,600nm,6.0s						
ZEA				pmax	pmax		
	comp=Z,57nm,1.2s						
ZEA				pmax	pmax		
	comp=N,500nm,12.0s						
ZEA				pmax	pmax		
	comp=Z,1µm,12.0s						
ZEA				smax	smax		
	comp=E,500nm,8.0s						
ZEA				MLR	MLR		
	comp=N,2µm,16.0s						
ZEA				MLR	MLR		
	comp=Z,2µm,16.0s						
ZEA				MLR	MLR		
	comp=E,1µm,12.0s						
SANI	Sanana	39.64	125	P	P	02 28 36.3	-0.8
LBMI	Labuha	39.92	121	P	P	02 28 39.7	+0.3
MJB9	Matsu-Tunnel	40.15	60	eP	P	02 28 40.6	-0.5
	comp=E,148nm,0.8s						
MAJO	Matsushiro	40.15	60	eP	P	02 28 40.6	-0.5
	comp=E,145nm,0.8s						
MAJO				eScP	ScP	02 34 25.0	-1.1
MAJO	Matsushiro	40.15	60	d iP	P	02 28 40.0	-1.1
MAJO				pmax	pmax		
	comp=Z,131nm,0.9s						
MAT	Matsushiro	40.15	60	P	P	02 28 40.5	-0.6
MAT				S	S	02 34 40.6	-1.3
MJAR	Matsushiro Arr	40.15	60	P	P	02 28 40.8	-0.3
	comp=Z,71nm,0.8s,baz=270,slow=9.5,SNR=253						
MJAR				ScP	ScP	02 34 25.1	-1.0
	comp=Z,37nm,1.1s,baz=258,slow=5.0,SNR=19						
WBSI	Waikabubak, Su	40.65	140	P	P	02 28 43.3	-2.1
TEY	Ternei	40.85	47	⇓eP	P	02 28 44.8	-1.9
TEY				pmax	pmax		
	comp=Z,80nm,0.9s						
JHJ	Hachijo jima 2	41.16	65	LR	LR	02 48 23.1	
	comp=Z,1µm,19.1s,baz=293,slow=40						
JHJ2	Mitsune	41.19	65	eP	P	02 28 49.0	-0.7
	comp=Z,165nm,1.1s						
WSI	Waingapu	41.21	139	P	P	02 28 58.5	+8.5
NLAI	Namlea	41.25	125	P	P	02 28 51.9	+1.5
EDFI	Ende, Flores	41.37	136	P	P	02 28 49.5	-1.9
MMRI	Maumere	41.63	136	P	P	02 28 53.2	-0.2
MMRI	Maumere	41.63	136	eP	P	02 28 52.8	-0.7
	comp=Z,175nm,1.1s						
SVE	Sverdlovsk	41.80	333	c iP	P	02 28 56.1	+1.8
SVE				eS	S	02 35 06.1	+0.4
SVE				e		02 38 15.0	
SVE				pmax	pmax		
	comp=Z,426nm,1.3s						
SVE				MLR	MLR		
	comp=Z,3µm,20.0s						
AAI	Ambon	42.37	124	P	P	02 29 00.7	+1.2
ARU	Arti	42.45	331	P	P	02 29 00.5	+1.0
	comp=Z,49nm,0.4s,baz=110,slow=7.6,SNR=100						
ARU	Arti	42.45	331	eP	P	02 29 00.4	+0.8
	comp=Z,225nm,1.3s						
ARU	Arti	42.45	331	d iP	P	02 29 00.6	+1.0
ARU				*PP	pP	02 29 18.3	-0.8
ARU						02 30 40.1	
ARU						02 30 54.0	
ARU				PPP	PPP	02 31 14.8	
ARU				eS	S	02 35 16.4	+1.1
ARU				*SS	sS	02 35 53.4	+4.7
ARU						02 38 51.3	
ARU				pmax	pmax		
	comp=Z,287nm,1.7s						
ARU				MLR	MLR		
	comp=Z,2µm,20.0s						
MSAI	Masohi	42.72	123	P	P	02 29 03.8	+1.5
GRNR	Gornyy	42.84	39	⇓iP	P	02 29 05.9	+3.0
GRNR				pmax	pmax		
	comp=E,200nm,1.0s						
GRNR				pmax	pmax		
	comp=Z,42nm,1.0s						
AKT	Akhty	42.95	307	eP	P	02 29 05.5	+1.5
AKT				e		02 30 46.3	
AKT				e		02 30 56.4	
AKT				eS	S	02 35 25.1	+1.8
AKT				pmax	pmax		
	comp=Z,96nm,0.8s						
SWI	Sorong	43.06	118	P	P	02 29 06.5	+1.4
MAK	Makhachkala	43.40	309	eP	P	02 29 06.0	-1.5
MAK				e*PP	pP	02 29 26.7	-0.4
MAK				e*SP	sP	02 29 36.3	-0.1
MAK				e		02 30 53.0	
MAK				eSS	SS	02 38 55.3	+9.0
MAK				pmax	pmax		
	comp=Z,136nm,1.7s						
MAK				MLR	MLR		
	comp=Z,1µm,17.0s						
BATI	Baumata	43.73	136	P	P	02 29 09.1	-1.4
	comp=Z,168nm,0.6s,baz=279,slow=2.2,SNR=17						
BATI				ScP	ScP	02 34 38.6	-2.1
	comp=Z,32nm,0.5s,baz=37,slow=5.1,SNR=4.6						
BATI				LR	LR	02 51 22.0	
	comp=Z,1µm,18.1s,baz=309,slow=41						
BATI	Baumata	43.73	136	P	P	02 29 09.6	-0.9
	comp=Z,86nm,0.5s,comp=Z,1µm						
SOEI	Soe	43.79	135	P	P	02 29 10.0	-1.0
SOEI	Soe	43.79	135	eP	P	02 29 09.8	-1.3
	comp=Z,618nm,1.0s						
SOEI				eS	S	02 35 38.5	+2.4
RAYN	Ar Rayn	44.65	281	eP	P	02 29 18.2	+0.3
	comp=Z,75nm,0.8s						
RAYN				eScP	ScP	02 34 44.9	+0.4
RAYN	Ar Rayn	44.65	281	eP	P	02 29 18.2	+0.3
RAYN				pmax	pmax		
	comp=Z,75nm,0.8s						
GROC	Groznyy	44.68	309	eP	P	02 29 19.4	+1.7
GROC				e*PP	pP	02 29 38.8	+1.4
GROC				e*SP	sP	02 29 48.5	+1.8
GROC				e		02 31 05.8	
GROC				eS	S	02 35 51.4	+3.2
GROC				e*SS	sS	02 36 26.1	+4.2
GROC				e		02 39 07.0	
GROC				pmax	pmax		
	comp=Z,169nm,1.4s						
ASAJ	Asahikawa	44.74	50	P	P	02 29 17.8	-0.4
	comp=Z,60nm,0.8s,baz=257,slow=7.1,SNR=26						
ASAJ				ScP	ScP	02 34 43.5	-0.9
	comp=Z,12nm,0.7s,baz=276,slow=8.8,SNR=4.4						
ASAJ				LR	LR	02 49 24.2	
	comp=Z,515nm,19.1s,baz=248,slow=38						
ASAJ	Asahikawa	44.74	50	eP	P	02 29 17.3	-1.0
	comp=Z,99nm,1.0s						
ASAJ				ScP	ScP	02 34 43.5	-0.9
ERM	Erimo	44.76	53	eP	P	02 29 18.2	-0.1
	comp=Z,85nm,0.9s						
ERM	Erimo	44.76	53	ceP	P	02 29 17.9	-0.4
ERM				pmax	pmax		
	comp=Z,115nm,1.7s						
GNI	Garni	44.98	304	P	P	02 29 20.8	+0.4
	comp=Z,10nm,0.8s,baz=342,slow=3.2,SNR=3.8						
GNI				LR	LR	02 54 38.1	
	comp=Z,465nm,18.4s,baz=91,slow=44						
GNI	Garni	44.98	304	eP	P	02 29 20.8	+0.4
	comp=Z,65nm,0.8s						
GNI	Garni	44.98	304	P	P	02 29 24.3	+3.9
	SNR=10						
GNI	Garni	44.98	304	i P	P	02 29 21.9	+1.5
	SNR=8.7						
GNI	Garni	44.98	304	i P	P	02 29 21.0	+0.6
GNI				pmax	pmax		
	comp=Z,193nm,1.5s						
FAKI	Fak Fak	45.07	120	P	P	02 29 21.5	+0.3
FAKI	Fak Fak	45.07	120	eP	P	02 29 21.4	+0.3
	comp=Z,890nm,1.6s						
TBLG	Delisi	45.20	307	eP	P	02 29 25.2	+3.2
	comp=Z,53nm,0.9s						
TBLG	Delisi	45.20	307	P	P	02 29 25.1	+3.2
TBLG				pmax	pmax		
	comp=Z,53nm,0.9s						
YSS	Yuzh-Sakhalins	45.51	46	eP	P	02 29 23.7	-0.6
	comp=Z,182nm,1.2s						
YSS				eScP	ScP	02 34 46.7	-0.7
YSS	Yuzh-Sakhalins	45.51	46	κeP	P	02 29 23.6	-0.6
YSS				e		02 31 10.0	
YSS				eS	S	02 35 57.2	-2.8
YSS				pmax	pmax		
	comp=E,30nm,0.7s						
YSS				pmax	pmax		
	comp=Z,100nm,0.7s						
YSS				pmax	pmax		
	comp=Z,400nm,3.6s						
YSS				MLR	MLR		
	comp=E,1µm,16.0s						
YSS				MLR	MLR		
	comp=Z,2µm,16.0s						
RKPI	Ransiki, Papua	45.82	117	P	P	02 29 27.8	+0.7
	comp=Z,196nm,0.7s,comp=Z,3µm						
YAK	Yakutsk	45.90	22	P	P	02 29 26.6	-0.5
	comp=Z,4.8nm,0.4s,baz=142,slow=19,SNR=8.8						
YAK				LR	LR	02 51 33.0	
	comp=Z,1µm,21.1s,baz=274,slow=40						
YAK	Yakutsk	45.90	22	eP	P	02 29 26.7	-0.5
	comp=Z,158nm,0.8s						
YAK	Yakutsk	45.90	22	eP	P	02 29 26.5	-0.5
YAK				e*PP	pP	02 29 47.7	+0.8
YAK				e		02 31 02.9	
YAK				e		02 31 17.6	
YAK				eS	S	02 36 04.1	-1.2
YAK				e		02 39 08.4	
YAK				eSSS	SSS	02 40 24.4	
YAK				pmax	pmax		
	comp=Z,66nm,0.9s						
YAK				pmax	pmax		
	comp=N,14nm,1.1s						
YAK				pmax	pmax		
	comp=E,19nm,1.4s						
YAK				smax	smax		
	comp=E,424nm,2.5s						
YAK				smax	smax		
	comp=N,315nm,2.3s						
ZEI	Tsey	45.98	308	eP	P	02 29 27.9	-0.4
ZEI				eS	S	02 36 10.8	+3.4
ZEI				pmax	pmax		
	comp=Z,139nm,0.9s						
AKH	Akhalkalaki	46.08	306	eP	P	02 29 32.1	+3.0
	comp=Z,138nm,0.9s						
AKH	Akhalkalaki	46.08	306	eP	P	02 29 32.1	+3.0
AKH				pmax	pmax		
	comp=Z,138nm,0.9s						
NKL	Nikolayevsk	46.20	37	i P	P	02 29 29.0	-0.6
NKL				e		02 31 23.0	
NKL				eS	S	02 36 10.0	+0.2
NKL				pmax	pmax		
	comp=N,40nm,1.0s						
NKL				pmax	pmax		
	comp=E,34nm,1.0s						
NKL				pmax	pmax		
	comp=Z,170nm,1.0s						
NKL				pmax	pmax		
	comp=E,400nm,8.0s						
NKL				pmax	pmax		
	comp=Z,800nm,8.0s						
NKL				smax	smax		
	comp=N,500nm,13.0s						
NKL				smax	smax		
	comp=E,1µm,13.0s						
NKL				MLR	MLR		
	comp=N,1µm,14.0s						
NKL				MLR	MLR		
	comp=E,2µm,14.0s						
NKL				MLR	MLR		
	comp=Z,2µm,11.0s						
NCK	Nalchik	46.31	309	i P	P	02 29 31.9	+1.2
NCK				pmax	pmax		
	comp=Z,36nm,1.0s						
KBZ	Khabaz	46.85	309	P	P	02 29 36.0	+1.2
	comp=Z,15nm,1.0s,baz=120,slow=7.7,SNR=22						
KBZ				LR	LR	02 52 49.7	
	comp=Z,2µm,21.7s,baz=92,slow=40						
NEY	Neytrino	46.90	308	i P	P	02 29 37.5	+2.0
GOF	Gofitskoye	46.97	311	⇓iP	P	02 29 37.1	+1.3
GOF				eS	S	02 36 24.1	+3.0
GOF				pmax	pmax		
	comp=Z,130nm,1.1s						
GOF				smax	smax		
	comp=N,290nm,1.6s						
KIV	Kislovodsk	47.03	309	eP	P	02 29 37.3	+0.9
	comp=N,151nm,0.9s						
KIV	Kislovodsk	47.03	309	P	P	02 29 38.3	+1.9
	SNR=39						
KIV	Kislovodsk	47.03	309	i P	P	02 29 38.1	+1.7
	SNR=29						
KIV	Kislovodsk	47.03	309	d iP	P	02 29 37.9	+1.5
KIV				i		02 30 09.8	
KIV				e		02 31 09.0	
KIV				e		02 31 30.2	
KIV				ePPP	PPP	02 32 13.7	
KIV				i S	S	02 36 23.3	+1.1
KIV				eSSS	SSS	02 40 57.7	
KIV				pmax	pmax		
	comp=Z,128nm,1.0s						
KIV				MLR	MLR		
	comp=Z,2µm,19.0s						
YUK	Yuzh-Kuril’sk	47.04	51	eP	P	02 29 30.3	-6.0
YUK				i		02 31 23.3	
YUK				ePPP	PPP	02 32 14.3	
YUK				eS	S	02 36 14.6	-7.5
YUK				eSS	SS	02 39 46.3	-3.5
YUK				pmax	pmax		
	comp=N,203nm,1.0s						
YUK				pmax	pmax		
	comp=E,295nm,1.0s						
YUK				pmax	pmax		
	comp=Z,521nm,1.0s						

YUK				MLR	MLR		
	comp=N,979nm,19.0s						
YUK				MLR	MLR		
	comp=Z,866nm,18.0s						
YUK				MLR	MLR		
	comp=E,238nm,11.0s						
BAKI	**Biak**	47.25	115	P	P	02 29 39.0	+0.7
SHO	**Shikotan**	47.71	51	eP	P	02 29 40.3	-1.2
SHO				pmax	pmax		
	comp=E,15nm,0.5s						
SHO				pmax	pmax		
	comp=Z,34nm,0.5s						
SHO				pmax	pmax		
	comp=N,9.0nm,0.9s						
SRPI	**Serui, Papua**	47.73	115	P	P	02 29 43.3	+1.3
	comp=N,272nm,0.6s						
DAMY	**Dhamar**	47.78	269	eP	P	02 29 45.0	+2.2
	comp=N,139nm,1.3s						
KUR	**Kuril'sk**	48.64	49	d iP	P	02 29 48.2	-0.4
KUR				i		02 31 43.8	
KUR				i PPP	PPP	02 32 33.0	
KUR				i S	S	02 36 44.8	+0.1
KUR				pmax	pmax		
	comp=N,115nm,1.2s						
KUR				pmax	pmax		
	comp=Z,341nm,1.2s						
KUR				pmax	pmax		
	comp=Z,661nm,6.3s						
KUR				MLR	MLR		
	comp=Z,516nm,12.0s						
KUR				MLR	MLR		
	comp=E,274nm,14.0s						
KUR				MLR	MLR		
	comp=N,297nm,10.0s						
GUMO	**Guam**	48.73	92	P	P	02 29 50.5	+0.7
	comp=N,13nm,0.3s,baz=204,slow=20,SNR=3.9						
SOC	**Sochi**	49.12	308	eP	P	02 29 53.5	+1.2
SOC				e		02 31 52.7	
SOC				eS	S	02 36 51.5	+0.1
SOC				eS	S	02 36 54.0	+2.6
SOC				pmax	pmax		
	comp=Z,81nm,0.9s						
VRH	**Novokhopyorsk**	49.18	319	eP	P	02 29 53.0	+0.4
VRH				eS	S	02 36 48.7	-3.3
VRH				pmax	pmax		
	comp=Z,270nm,1.3s						
VRH				smax	smax		
	comp=N,2µm,2.5s						
VRH				MLR	MLR		
	comp=Z,2µm,21.0s						
ATD	**Arta Tunnel**	50.19	266	P	P	02 30 03.8	+2.8
	comp=Z,38nm,1.0s,baz=117,slow=2.3,SNR=3.6						
ATD				LR	LR	02 49 53.8	
	comp=Z,411nm,20.9s,baz=68,slow=34						
ATD	**Arta Tunnel**	50.19	266	eP	P	02 30 03.2	+2.2
	comp=Z,67nm,1.1s						
MBWA	**Marble Bar**	50.36	149	eP	P	02 30 02.3	+0.4
MBWA				eScP	ScP	02 35 07.0	-1.2
MBWA	**Marble Bar**	50.36	149	P	P	02 30 02.4	+0.5
	SNR=14						
VORD	**Divnogorie**	50.61	318	eP	P	02 30 03.6	+0.1
VORD				eS	S	02 37 10.7	-1.3
VORD				pmax	pmax		
	comp=Z,140nm,1.2s						
VORD				smax	smax		
	comp=N,590nm,1.2s						
MTN	**Manton Dam**	50.66	131	eP	P	02 30 03.5	-0.8
	comp=N,174nm,1.8s						
VSR	**Storozhevoye**	50.74	318	eP	P	02 30 04.7	+0.2
VSR				eS	S	02 37 09.9	-3.9
VSR				pmax	pmax		
	comp=Z,130nm,1.1s						
VSR				smax	smax		
	comp=N,720nm,1.5s						
VSR				MLR	MLR		
	comp=Z,3µm,22.0s						
VORR	**Voronezh**	50.82	319	eP	P	02 30 06.0	+0.9
VORR				eS	S	02 37 15.0	+0.2
VORR				pmax	pmax		
	comp=Z,500nm,1.4s						
PRGR	**Permogore**	50.86	332	⇓iP	P	02 30 05.9	+0.7
PRGR				eS	S	02 37 15.9	+0.7
PRGR				pmax	pmax		
	comp=Z,161nm,0.6s						
ANN	**Anapa**	50.88	310	eP	P	02 30 05.4	-0.2
ANN				e		02 32 01.3	
ANN				ePPP	PPP	02 33 03.2	
ANN				i S	S	02 37 17.2	+1.3
ANN				eSS	SS	02 40 53.8	+2.5
ANN				pmax	pmax		
	comp=Z,45nm,1.1s						
ANN				MLR	MLR		
	comp=N,1µm,17.0s						
ANN				MLR	MLR		
	comp=Z,2µm,17.0s						
ANN				MLR	MLR		
	comp=E,231nm,17.0s						
ASF	**Jabal al Asfar**	51.19	294	P	P	02 30 10.6	+2.3
	comp=E,12nm,0.7s,baz=52,slow=4.0,SNR=18						
ASF				LR	LR	02 57 03.5	
	comp=E,570nm,18.5s,baz=36,slow=42						
LPSR	**Galich'ya Gora**	51.20	320	eP	P	02 30 08.3	+0.4
LPSR				eS	S	02 37 19.1	-0.9
LPSR				pmax	pmax		
	comp=Z,210nm,0.6s						
LPSR				smax	smax		
	comp=N,670nm,1.5s						
GENI	**Genyem**	51.42	113	P	P	02 30 11.3	+1.2
	comp=N,763nm,1.2s,comp=N,7µm						
JAY	**Jayapura**	51.83	113	P	P	02 30 14.5	+1.3
	comp=N,709nm,0.8s						
HWQ	**Hawqa**	51.83	296	eP	P	02 30 17.2	+4.1
SHBL	**Chebaa**	52.07	295	eP	P	02 30 18.9	+4.0
BHL	**Bhannes**	52.10	296	eP	P	02 30 17.0	+2.0
MMAI	**Mount Meron Ar**	52.38	295	P	P	02 30 19.0	+1.9
	comp=N,4.6nm,0.5s,baz=108,slow=9.4,SNR=14						
MMAI				ScP	ScP	02 35 18.2	+1.1
	comp=N,22nm,1.2s,baz=90,slow=1.4,SNR=7.4						
MMAI				LR	LR	02 57 00.4	
	comp=N,898nm,18.0s,baz=65,slow=41						
TIXI	**Tiksi**	52.57	13	eP	P	02 30 17.0	-0.8
TIXI	**Tiksi**	52.57	13	d iP	P	02 30 17.5	-0.3
TIXI				pmax	pmax		
	comp=Z,401nm,1.4s						
MOS	**Moscow**	52.70	324	eP	P	02 30 19.3	+0.4
MOS				e		02 30 37.3	
MOS				e		02 31 34.1	
MOS				e		02 32 17.6	
MOS				eS	S	02 37 39.2	-1.3
MOS				eSS	SS	02 41 15.0	-4.6
MOS				pmax	pmax		
	comp=Z,600nm,1.5s						
MOS				pmax	pmax		
	comp=Z,311nm,1.4s						
MOS				smax	smax		
	comp=N,1µm,3.7s						
MOS				smax	smax		
	comp=E,800nm,2.3s						
MOS				MLR	MLR		
	comp=Z,900nm,17.0s						
OBN	**Obninsk**	53.13	323	P	P	02 30 22.2	+0.1
	comp=Z,182nm,0.4s,baz=85,slow=6.4,SNR=65						
OBN	**Obninsk**	53.13	323	eP	P	02 30 21.8	-0.3
OBN	**Obninsk**	53.13	323	d iP	P	02 30 22.3	+0.1
OBN				e		02 31 30.5	
OBN				e		02 32 24.4	
OBN				ePPP	PPP	02 33 30.7	
OBN				i S	S	02 37 43.6	-2.8
OBN				eSS	SS	02 41 22.3	-4.2
OBN				eSSS	SSS	02 43 16.8	
OBN				pmax	pmax		
	comp=Z,203nm,1.3s						
OBN				MLR	MLR		
	comp=Z,1µm,23.0s						
SIM	**Simferopol'**	53.24	310	d eP	P	02 30 22.7	-0.5
SIM				i S	S	02 37 48.0	-0.3
SIM				pmax	pmax		
	comp=Z,300nm,10.6s						
KLMR	**Klimovskoe**	53.26	330	eP	P	02 30 22.0	-1.0
KLMR				eS	S	02 37 45.3	-2.7
KLMR				pmax	pmax		
	comp=Z,267nm,1.4s						
KLMR	**Klimovskoe**	53.26	330	eP	P	02 30 22.1	-1.0
KLMR				AMP		02 30 24.5	
	comp=Z,267nm,1.4s						
KLMR				eS	S	02 37 45.3	-2.7
KLMR				eS	S	02 37 45.3	-2.7
KLMR				LQ	LQ	02 45 41.5	
KLMR				LQ	LQ	02 45 41.5	
KLMR				LR	LR	02 53 37.6	
ILGA	**Ilgaz**	53.41	305	eP	P	02 30 26.4	+1.7
	comp=Z,225nm,1.1s						
BR131	**Keskin Array S**	53.48	303	eP	P	02 30 26.1	+0.9
BR131	**Keskin Array S**	53.48	303	P	P	02 30 26.0	+0.9
BRTR	**Keskin Array B**	53.48	303	P	P	02 30 25.9	+0.7
	comp=Z,5.0nm,0.5s,baz=104,slow=6.1,SNR=104						
BRTR				LR	LR	02 56 24.3	
	comp=Z,434nm,19.3s,baz=98,slow=39						
MA2	**Magadan**	53.67	32	P	P	02 30 25.5	-0.5
	comp=Z,46nm,0.8s,baz=265,slow=7.4,SNR=40						
MA2				ScP	ScP	02 35 20.4	-1.7
	comp=Z,30nm,0.9s,baz=248,slow=3.5,SNR=6.8						
MA2	**Magadan**	53.67	32	eP	P	02 30 25.0	-1.1
	comp=Z,65nm,0.9s						
MA2				eScP	ScP	02 35 20.9	-1.2
MA2	**Magadan**	53.67	32	eP	P	02 30 25.0	-1.1
MA2				pmax	pmax		
	comp=Z,65nm,0.9s						
CSS	**Mathiatis**	53.94	297	P	P	02 30 29.3	+0.8
MAMC	**Mammari**	54.01	298	P	P	02 30 30.8	+1.8
ANTO	**Ankara**	54.12	303	eP	P	02 30 30.3	+0.5
	comp=Z,86nm,0.9s						
ANTO	**Ankara**	54.12	303	P	P	02 30 31.1	+1.3
	SNR=12						
ANTO	**Ankara**	54.12	303	eP	P	02 30 30.3	+0.5
ANTO				pmax	pmax		
	comp=Z,86nm,0.9s						
SZAC	**Souni**	54.32	297	P	P	02 30 32.8	+1.5
ALFC	**Alefka**	54.52	298	P	P	02 30 31.8	-0.9
AKMC	**Akamas**	54.75	298	P	P	02 30 35.2	+0.8
PPCY	**Paphos**	54.75	297	P	P	02 30 30.9	-3.4
SKR	**Severo-Kuril's**	54.85	43	eP	P	02 30 26.3	-8.5
SKR				e		02 32 36.0	
SKR				eS	S	02 37 58.8	-11
SKR				e		02 40 11.9	
SKR				pmax	pmax		
	comp=Z,200nm,16.5s						
SKR				MLR	MLR		
	comp=Z,1µm,18.0s						
SEY	**Seymchan**	55.44	28	P	P	02 30 38.3	-0.5
	comp=Z,12nm,0.5s,baz=247,slow=6.2,SNR=51						
SEY				ScP	ScP	02 35 29.0	-0.8
	comp=Z,7.7nm,0.7s,baz=242,slow=8.4,SNR=4.6						
SEY				LR	LR	02 57 22.1	
	comp=Z,2µm,19.2s,baz=176,slow=39						
SEY	**Seymchan**	55.44	28	c eP	P	02 30 38.0	-0.8
ISP	**Isparta**	55.99	301	⇑iP	P	02 30 44.8	+1.5
ISP	**Isparta**	55.99	301	eP	P	02 30 43.9	+0.5
	comp=Z,77nm,1.1s						
ISP	**Isparta**	55.99	301	P	P	02 30 43.6	+0.3
ISP	**Isparta**	55.99	301	i P	P	02 30 43.6	+0.3
ISP				pmax	pmax		
	comp=Z,35nm,0.9s						
PETK	**Petropavlovsk-**	56.10	41	P	P	02 30 43.0	-0.8
	comp=Z,38nm,0.9s,baz=225,slow=3.1						
PETK				LR	LR	02 58 22.5	
	comp=Z,964nm,18.8s,baz=250,slow=40						
PETK	**Petropavlovsk-**	56.10	41	eP	P	02 30 42.7	-1.0
PETK	**Petropavlovsk-**	56.10	41	eP	P	02 30 42.7	-1.0
PET	**Petropavlovsk**	56.66	41	eP	P	02 30 46.5	-1.2
PET	**Petropavlovsk**	56.66	41	b eP	P	02 30 47.1	-0.6
PET				e*SP	sP	02 31 19.5	+2.3
PET				eS	S	02 38 29.7	-4.1
PET				pmax	pmax		
	comp=Z,81nm,1.1s						
PET				pmax	pmax		
	comp=Z,400nm,9.7s						
PET				MLR	MLR		
	comp=Z,1µm,18.0s						
KSL	**Kastellorizon**	56.88	299	P	P	02 30 49.5	0.0
KSL	**Kastellorizon**	56.88	299	P	P	02 30 49.5	0.0
AKASG	**Malin Array Be**	56.89	317	P	P	02 30 49.4	0.0
	comp=Z,48nm,0.5s,baz=82,slow=6.4,SNR=194						
AKASG				S	S	02 38 34.0	-2.9
	comp=Z,17nm,1.1s,baz=89,slow=11,SNR=7.6						
AKASG				LR	LR	02 58 42.1	
	comp=Z,1µm,20.2s,baz=85,slow=40						
AKBB	**Malin Array Si**	56.89	317	eP	P	02 30 49.3	-0.1
	comp=Z,115nm,0.8s						
AKBB				eS	S	02 38 35.8	-1.1
AKBB	**Malin Array Si**	56.89	317	eP	P	02 30 49.3	-0.1
AKBB				eS	S	02 38 35.8	-1.1
AKBB				pmax	pmax		
	comp=Z,115nm,0.8s						
KIEV	**Kiev**	56.90	316	eP	P	02 30 49.3	-0.2
	comp=Z,105nm,0.8s						
KIEV	**Kiev**	56.90	316	i P	P	02 30 49.4	0.0
	SNR=87						
KIEV	**Kiev**	56.90	316	d iP	P	02 30 49.2	-0.2
KIEV				pmax	pmax		
	comp=Z,91nm,1.0s						
AK11	**Malin Array Si**	56.93	316	eP	P	02 30 49.4	-0.2
TLCR		57.00	310	⇑iP	P	02 30 50.9	+0.7
TLCR		57.00	310	P	P	02 30 56.1	+5.9
KIS	**Kishinev**	57.01	312	⇓iP	P	02 30 50.0	-0.3
	comp=Z,400nm,1.5s						
KIS				epP	pP	02 31 14.0	+3.3
KIS	**Kishinev**	57.01	312	ePP	PP	02 33 18.0	+20
KIS				i S	S	02 38 37.0	-1.6
	comp=Z,1µm,4.0s						
KIS	**Kishinev**	57.01	312	ePS	pS	02 39 02.0	+0.7
KIS				esS	sS	02 39 26.0	+13
KIS				LRM	MLR	02 59 28.0	
	comp=Z,1µm,16.0s						
KIS	**Kishinev**	57.01	312	⇓iP	P	02 30 50.0	-0.3
KIS				e*PP	pP	02 31 14.0	+3.3
KIS				i S	S	02 38 37.0	-1.6
KIS				i PS	pS	02 39 02.0	+0.7
KIS				pmax	pmax		
	comp=Z,400nm,1.5s						
KIS				pmax	pmax		
	comp=Z,500nm,2.0s						
KIS				smax	smax		
	comp=N,1µm,4.0s						
KIS				MLR	MLR		
	comp=Z,1µm,16.0s						
FETY	**Fethiye**	57.23	300	P	P	02 30 51.5	-0.6
FETY	**Fethiye**	57.23	300	P	P	02 30 51.5	-0.6
TIRR	**Tirgusor**	57.30	309	⇑iP	P	02 30 53.1	+0.8
TIRR	**Tirgusor**	57.30	309	eP	P	02 30 53.2	+0.8
	comp=Z,83nm,1.2s						
TIRR	**Tirgusor**	57.30	309	eP	P	02 30 53.2	+0.9
TIRR				pmax	pmax		
	comp=Z,83nm,1.2s						
SORM	**Soroca**	57.35	313	⇓iP	P	02 30 52.8	+0.2
SORM	**Soroca**	57.35	313	P	P	02 30 53.0	+0.4
LEOM	**Leova**	57.40	311	⇓iP	P	02 30 54.0	+1.0
LEOM	**Leova**	57.40	311	P	P	02 30 54.5	+1.5
CFR	**Carcaliu**	57.48	310	⇑iP	P	02 30 54.6	+1.0
CFR	**Carcaliu**	57.48	310	P	P	02 30 53.9	+0.3
TLB	**Topalu**	57.56	309	⇑iP	P	02 30 55.5	+1.3
HARR	**Harsova**	57.64	309	⇑iP	P	02 30 55.8	+1.1
HARR	**Harsova**	57.64	309	P	P	02 30 58.5	+3.8
ICOR	**Ion Corvin**	57.74	309	⇑iP	P	02 30 57.0	+1.5
YER	**Yerkesik**	57.82	300	P	P	02 30 56.8	+0.6
YER	**Yerkesik**	57.82	300	P	P	02 30 56.8	+0.6
YER	**Yerkesik**	57.82	300	P	P	02 30 56.8	+0.6
WRA	**Warramunga Arr**	57.83	134	P	P	02 30 56.7	+0.4
	comp=Z,105nm,0.5s,baz=323,slow=7.6,SNR=624						
WRA				ScP	ScP	02 35 38.5	-2.4
	comp=Z,9.9nm,0.6s,baz=329,slow=4.4,SNR=7.6						
WRA				S	S	02 38 47.6	-2.3
	comp=Z,4.8nm,1.0s,baz=327,slow=18,SNR=12						
WRA				ScS	ScS	02 40 34.7	-3.9
	comp=Z,6.5nm,1.2s,baz=303,slow=8.2,SNR=4.8						
WRA				PKP2bc		03 00 44.8	
	comp=Z,2.5nm,1.2s,baz=94,slow=1.2,SNR=4.7						
WRA				LR	LR	03 01 57.4	
	comp=Z,326nm,18.0s,baz=320,slow=42						
WRA				P4KPbc		03 08 06.3	
	comp=Z,0.5nm,0.6s,baz=325,slow=4.4,SNR=6.1						
WRAB	**Tennant Creek**	57.83	134	eP	P	02 30 56.9	+0.5
WRAB	**Tennant Creek**	57.83	134	c eP	P	02 30 56.8	+0.5
WRAB				pmax	pmax		
	comp=Z,330nm,1.3s						
WB2	**Warramunga Arr**	57.83	134	eP	P	02 30 56.2	-0.2
WB2				eS	S	02 38 49.5	-0.5
IAS	**Iasi**	57.87	312	⇑iP	P	02 30 57.0	+0.7
MICGM	**Minsk**	58.00	321	⇑iP	P	02 30 58.0	+0.9
MICGM				PM		02 31 00.0	
	comp=Z,0.4nm,1.5s						
MICGM				epP	pP	02 31 18.0	+0.4
MICGM				esP	PcP	02 31 40.0	-8.3
MICGM				ePP	PP	02 33 32.0	+26
MICGM				ePPP	PPP	02 34 32.0	
MICGM				eS	S	02 38 50.0	-1.2
MICGM				esS	sS	02 39 44.0	+18
MICGM				eScS	ScS	02 40 00.0	-39
MICGM				eSS	SKiKP	02 42 00.0	+22
MICGM				eSSS	SSS	02 45 00.0	
MICGM				eLR	LR	02 54 20.0	
MICGM				LRM	MLR	03 01 10.0	
	comp=Z,2.7nm,18.0s						
MNK	**Minsk**	58.00	321	⇑iP	P	02 30 58.0	+0.9
MNK				e		02 34 32.0	
MNK				eS	S	02 38 50.0	-1.2
MNK				pmax	pmax		
	comp=Z,410nm,1.5s						
ARG	**Arkhangelos**	58.04	299	P	P	02 30 57.5	-0.2
ARG	**Arkhangelos**	58.04	299	P	P	02 30 57.5	-0.2
ARG	**Arkhangelos**	58.04	299	P	P	02 30 57.5	-0.2
PRD	**Provadia**	58.07	308	i P	P	02 30 58.1	+0.4
VRI	**Vrincioaia**	58.46	311	⇑iP	P	02 31 02.6	+2.1
VRI	**Vrincioaia**	58.46	311	P	P	02 31 01.9	+1.4
TESR	**Tescani**	58.50	311	⇑iP	P	02 31 01.6	+0.8
PLOR	**Plostina**	58.52	311	⇑iP	P	02 31 03.1	+2.2
PLOR	**Plostina**	58.52	311	P	P	02 31 02.5	+1.6
BODT	**Bodrum**	58.60	300	P	P	02 31 02.5	+0.9
BODT	**Bodrum**	58.60	300	P	P	02 31 02.5	+0.9
ISR	**Istrita**	58.61	310	⇑iP	P	02 31 04.2	+2.6
ISR	**Istrita**	58.61	310	P	P	02 31 03.8	+2.2
HORU	**Horodok**	58.65	315	P	P	02 31 01.9	+0.2
NACGM	**Naroch**	58.67	321	e	P	02 31 02.0	+0.3
NACGM				eLQ	LQ	02 50 14.0	
NACGM				eLR	LR	02 56 12.0	
JMB	**Yambol**	58.70	307	i P	P	02 31 03.0	+0.8
IDID	**Didziasalis**	58.72	322	eP	P	02 31 03.1	+1.0
IDID				IAmb	IAmb	02 31 04.0	
	comp=Z,74nm,1.3s						
PRAR	**RASCA**	58.78	312	⇑iP	P	02 31 03.4	+0.7
SULR		58.83	309	⇓iP	P	02 31 05.2	+2.2
BIZ	**Bicaz**	58.87	312	⇓iP	P	02 31 04.4	+1.1
SMG	**Samos**	58.91	301	P	P	02 31 04.9	+1.2
SMG	**Samos**	58.91	301	P	P	02 31 04.9	+1.2
MLR	**Muntele Rosu**	59.02	310	P	P	02 31 06.2	+1.6
	comp=Z,200nm,1.1s,baz=34,slow=4.7						
MLR				S	S	02 39 06.2	+1.1
	comp=Z,7.8nm,1.2s,baz=307,slow=20,SNR=8.9						
MLR				PKP2ab		03 00 59.4	
	comp=Z,7.0nm,0.9s,baz=201,slow=5.6,SNR=13						
MLR				LR	LR	03 01 23.7	
	comp=Z,1µm,20.4s,baz=74,slow=41						
MLR	**Muntele Rosu**	59.02	310	⇓iP	P	02 31 06.5	+2.0
IIGN	**Ignalina**	59.02	322	eP	P	02 31 05.3	+1.1
IIGN				IAmb	IAmb	02 31 06.1	
	comp=Z,61nm,0.6s						
VSU	**Vasula**	59.03	325	c eP	P	02 31 04.5	+0.4
VSU				pmax	pmax		
	comp=Z,534nm,1.6s						
IZAR	**Zarasai**	59.04	322	eP	P	02 31 05.3	+1.0
IZAR				IAmb	IAmb	02 31 06.0	
	comp=Z,39nm,0.6s						
ISAL	**Salakas**	59.09	322	eP	P	02 31 05.8	+1.1
ISAL				IAmb	IAmb	02 31 06.6	
	comp=Z,82nm,1.3s						
SZH	**Strazhica**	59.13	308	i P	P	02 31 05.3	+0.1
ALN	**Alexandroupoli**	59.22	305	eP	P	02 31 06.7	+0.9
	comp=Z,76nm,1.2s						
ALN	**Alexandroupoli**	59.22	305	P	P	02 31 06.5	+0.7
ALN	**Alexandroupoli**	59.22	305	eP	P	02 31 06.7	+0.9
ALN				pmax	pmax		
	comp=Z,76nm,1.2s						
DOPR	**Dopca**	59.39	311	⇑iP	P	02 31 08.4	+1.4
BURAR	**Bucovina Array**	59.46	313	⇓iP	P	02 31 08.8	+1.3
BURAR	**Bucovina Array**	59.46	313	P	P	02 31 09.2	+1.7
BUR04	**Bucovina Ar. S**	59.46	313	eP	P	02 31 07.5	0.0
BUR08	**Bucovina Ar. S**	59.47	313	eP	P	02 31 08.0	+0.4
DIM	**Dimitrovgrad**	59.51	306	i P	P	02 31 08.7	+0.9
SIGR	**SIGRI**	59.52	303	P	P	02 31 08.3	+0.4
SIGR	**SIGRI**	59.52	303	P	P	02 31 08.3	+0.4
RDO	**Rodhopi**	59.58	305	P	P	02 31 08.7	+0.4
RDO	**Rodhopi**	59.58	305	P	P	02 31 08.7	+0.4
KDZ	**Kurdzhali**	59.63	306	i P	P	02 31 09.6	+1.0
SMTH	**Samothraki Isl**	59.65	305	P	P	02 31 09.1	+0.3
SMTH	**Samothraki Isl**	59.65	305	P	P	02 31 09.1	+0.3
MTUR	**Matau**	59.65	310	⇓iP	P	02 31 10.5	+1.7
MTUR	**Matau**	59.65	310	P	P	02 31 21.9	+13
VOIR		59.65	310	⇓iP	P	02 31 09.6	+0.8
VOIR		59.65	310	P	P	02 31 09.1	+0.3
NWAO	**Narrogin (SRO)**	59.71	158	P	P	02 31 09.3	+0.2
	comp=Z,150nm,0.5s,baz=213,slow=7.8,SNR=199						
NWAO				LR	LR	02 58 15.4	
	comp=Z,743nm,21.2s,baz=208,slow=37						
NWAO	**Narrogin (SRO)**	59.71	158	eP	P	02 31 09.1	0.0
NWAO	**Narrogin (SRO)**	59.71	158	P	P	02 31 09.1	0.0
	SNR=11						
NWAO	**Narrogin (SRO)**	59.71	158	eP	P	02 31 09.1	0.0
FIA1	**FINESS Array S**	59.72	329	eP	P	02 31 09.4	+0.5
FINES	**FINESS Array B**	59.72	329	P	P	02 31 09.4	+0.5
	comp=Z,45nm,0.6s,baz=106,slow=6.2,SNR=455						
FINES				LR	LR	02 59 26.3	
	comp=Z,1µm,19.2s,baz=106,slow=38						
FINES				PKP2ab		03 00 57.1	
	comp=Z,2.4nm,1.0s,baz=195,slow=5.9,SNR=3.9						
FINES	**FINESS Array B**	59.72	329	i P	P	02 31 09.3	+0.4
FINES				pmax	pmax		
	comp=Z,45nm,0.6s						
ZKR	**Zakros**	59.72	298	P	P	02 31 09.7	+0.3
ZKR	**Zakros**	59.72	298	P	P	02 31 09.7	+0.3
GOLR		59.74	310	⇑iP	P	02 31 10.1	+0.7
HUMR	**Humele**	59.75	309	⇓iP	P	02 31 11.7	+2.3
ARR	**Arges**	59.95	310	⇓iP	P	02 31 11.9	+1.1
LIA	**Limnos Island**	59.97	304	P	P	02 31 11.5	+0.6
LIA	**Limnos Island**	59.97	304	P	P	02 31 11.5	+0.6
ARCR	**ARCALIA**	60.06	312	⇓iP	P	02 31 13.6	+2.1
PLD	**Plovdiv**	60.12	306	i P	P	02 31 12.4	+0.4
LODK	**Lodwar**	60.12	260	i P	P	02 31 13.7	+1.2
LODK				e		02 31 19.9	
	baz=64,slow=8.6						
RZN	**Rozhen**	60.15	306	i P	P	02 31 12.6	+0.2
THR2	**Thira island,**	60.17	300	P	P	02 31 12.5	+0.1
THR2	**Thira island,**	60.17	300	P	P	02 31 12.5	+0.1
THT2	**Imerovigli**	60.18	300	P	P	02 31 16.2	+3.7
LVV	**L'vov**	60.20	315	eP	P	02 31 12.9	+0.5
THR3	**Thira Island,**	60.20	300	P	P	02 31 12.9	+0.3
THR3	**Thira Island,**	60.20	300	P	P	02 31 12.9	+0.3
THR6	**Thira Island,**	60.21	300	P	P	02 31 13.0	+0.3
THR6	**Thira Island,**	60.21	300	P	P	02 31 13.0	+0.3
SAP1	**Santorini-Akro**	60.22	300	P	P	02 31 12.6	-0.1
AS31	**Alice Springs**	60.23	138	eP	P	02 31 13.7	+0.7
	comp=Z,61nm,0.6s						
ASAR	**Alice Springs**	60.23	138	P	P	02 31 13.7	+0.7
	comp=Z,132nm,0.5s,baz=319,slow=6.7,SNR=1124						
ASAR				ScP	ScP	02 35 49.4	-2.2
	comp=Z,3.9nm,0.5s,baz=318,slow=4.3,SNR=5.1						
ASAR				S	S	02 39 21.0	+0.1
	comp=Z,8.4nm,1.1s,baz=312,slow=12,SNR=13						
ASAR				ScS	SKKSac	02 40 51.9	-4.4
	comp=Z,5.7nm,0.9s,baz=321,slow=7.5,SNR=7.2						
ASAR				PKPPKP	P'P'df	03 00 35.8	+1.2
	comp=Z,2.3nm,1.0s,baz=156,slow=2.5,SNR=6.7						
ASAR				LR	LR	03 01 05.1	
	comp=Z,401nm,19.1s,baz=314,slow=40						
THAS	**Thassos island**	60.25	305	P	P	02 31 12.9	+0.1
AS01	**Alice Springs**	60.26	138	eP	P	02 31 12.5	-0.6
COEN	**Coen**	60.29	123	eP	P	02 31 14.0	+0.5
	comp=Z,53nm,1.0s						
LAST	**Lasithi**	60.31	298	P	P	02 31 14.2	+0.7
LAST	**Lasithi**	60.31	298	P	P	02 31 14.2	+0.7
KMBO	**Kilima Mbogo**	60.39	255	P	P	02 31 33.1	+19
	comp=Z,3.3nm,0.6s,baz=53,slow=11,SNR=13						
PGB	**Panagyurishte**	60.48	307	i P	P	02 31 15.1	+0.6
LOT	**Lotru**	60.55	310	⇓iP	P	02 31 15.9	+0.9
CJR	**Cluj-Napoca**	60.60	312	⇑iP	P	02 31 17.2	+2.0
BMR	**Baia Mare**	60.62	313	⇓iP	P	02 31 17.0	+1.7
SUW	**Suwalki**	60.73	320	i P	P	02 31 15.9	0.0
SUW				i S	S	02 39 25.0	-1.4
SUW				LMZ	LR	02 57 13.2	
	comp=Z,2µm,30.4s						
SUW	**Suwalki**	60.73	320	⇓iP	P	02 31 15.9	0.0
SUW				i S	S	02 39 25.0	-1.4
IDI	**Anoyia**	60.77	299	P	P	02 31 17.0	+0.3

	comp=Z,22nm,0.6s,baz=15,slow=7.3,SNR=35						
IDI				LR	LR	03 04 57.3	
	comp=Z,186nm,20.9s,baz=88,slow=43						
IDI	Anoyia	60.77	299	eP	P	02 31 16.9	+0.3
	comp=Z,109nm,1.0s						
NVR	Nevrokopi	60.82	306	P	P	02 31 17.2	+0.4
NVR	Nevrokopi	60.82	306	P	P	02 31 17.2	+0.4
OUR	Ouranopolis	60.84	304	P	P	02 31 17.4	+0.6
OUR	Ouranopolis	60.84	304	P	P	02 31 17.4	+0.6
OUR	Ouranopolis	60.84	304	P	P	02 31 17.4	+0.6
KEV	Kevo	60.85	338	eP	P	02 31 15.8	-0.6
KEV	Kevo	60.85	338	eP	P	02 31 15.8	-0.6
SIVA	Sivas	60.88	298	P	P	02 31 18.0	+0.7
SIVA	Sivas	60.88	298	P	P	02 31 18.0	+0.7
MMB	Musomiste	60.90	306	i P	P	02 31 16.8	-0.5
PMG	Port Moresby	60.92	116	P	P	02 31 18.7	+1.0
	comp=Z,83nm,0.8s,baz=348,slow=8.5,SNR=16						
PMG				ScP	ScP	02 35 53.8	-1.0
	comp=Z,60nm,1.1s,baz=18,slow=3.2,SNR=5.1						
PMG				LR	LR	03 00 35.9	
	comp=Z,172nm,20.8s,baz=286,slow=39						
PMG	Port Moresby	60.92	116	eP	P	02 31 19.0	+1.2
	comp=Z,137nm,0.9s						
PMG				eScP	ScP	02 35 53.1	-1.7
SRS	Serrai	61.05	305	P	P	02 31 18.4	+0.1
SRS	Serrai	61.05	305	P	P	02 31 18.4	+0.1
SRS	Serrai	61.05	305	P	P	02 31 18.4	+0.1
AOS	Alonnisos	61.05	303	P	P	02 31 18.4	+0.1
AOS	Alonnisos	61.05	303	P	P	02 31 18.4	+0.1
KWP	Kalwaria Pacla	61.07	315	i P	P	02 31 19.2	+0.9
KWP				i S	S	02 39 30.7	-0.3
KWP				LMZ	LR	02 59 30.0	
	comp=Z,2µm,27.7s						
KWP	Kalwaria Pacla	61.07	315	⇓iP	P	02 31 19.2	+0.9
KWP				i S	S	02 39 30.7	-0.3
PAIG	Paliouri	61.11	304	P	P	02 31 19.2	+0.5
PAIG	Paliouri	61.11	304	P	P	02 31 19.2	+0.5
PAIG	Paliouri	61.11	304	P	P	02 31 19.2	+0.5
DEV	Deva	61.13	311	⇓iP	P	02 31 20.7	+1.9
VTS	Vitosha	61.18	307	⇓iP	P	02 31 20.7	+1.3
VTS	Vitosha	61.18	307	eP	P	02 31 20.0	+0.7
	comp=Z,43nm,0.8s						
VTS	Vitosha	61.18	307	i P	P	02 31 19.8	+0.4
VTS	Vitosha	61.18	307	P	P	02 31 20.1	+0.7
VTS	Vitosha	61.18	307	P	P	02 31 22.3	+2.9
PTL	Penteli	61.20	302	P	P	02 31 19.2	-0.2
PTL	Penteli	61.20	302	P	P	02 31 19.2	-0.2
PLG	Polygyros	61.24	305	P	P	02 31 20.1	+0.4
PLG	Polygyros	61.24	305	P	P	02 31 20.1	+0.4
TRPA	Tarpa	61.24	313	⇓iP	P	02 31 20.5	+1.0
TRPA	Tarpa	61.24	313	⇓eP	P	02 31 20.5	+1.0
SOH	Sokhos	61.26	305	P	P	02 31 19.7	-0.1
SOH	Sokhos	61.26	305	P	P	02 31 19.7	-0.1
SOH	Sokhos	61.26	305	P	P	02 31 19.7	-0.1
ATHU	Athens Univers	61.27	302	P	P	02 31 19.4	-0.5
ATHU	Athens Univers	61.27	302	P	P	02 31 19.4	-0.5
VLY	Voula,Athens	61.28	302	P	P	02 31 19.0	-1.0
VLY	Voula,Athens	61.28	302	P	P	02 31 19.0	-1.0
VAM	Vamos	61.31	299	P	P	02 31 21.1	+0.9
VAM	Vamos	61.31	299	P	P	02 31 21.1	+0.9
VAM	Vamos	61.31	299	P	P	02 31 21.1	+0.9
ARCES	ARCESS Array B	61.31	338	P	P	02 31 20.7	+1.0
	comp=Z,41nm,0.5s,baz=96,slow=6.9,SNR=250						
ARCES	ARCESS Array B	61.31	338	eP	P	02 31 19.8	+0.1
ARCES	ARCESS Array B	61.31	338	eP	P	02 31 19.8	+0.1
SKIA	Skiathos	61.37	303	P	P	02 31 21.1	+0.6
UZH	Uzhgorod	61.38	314	eP	P	02 31 19.8	-0.6
UZH				e		02 31 41.0	
UZH				e		02 31 48.8	
UZH				e		02 35 06.0	
UZH				eS	S	02 39 31.0	-3.9
UZH				e		02 40 00.0	
UZH				e		02 46 20.0	
UZH				MLR	MLR		
	comp=N,200nm,16.0s						
UZH				MLR	MLR		
	comp=Z,100nm,16.0s						
HORT	Hortiatis	61.47	305	P	P	02 31 20.5	-0.8
HORT	Hortiatis	61.47	305	P	P	02 31 20.5	-0.8
IMMV	Iera Moni Meta	61.48	299	P	P	02 31 21.9	+0.6
GVD	Gavdhos	61.49	298	P	P	02 31 21.7	+0.3
GVD	Gavdhos	61.49	298	P	P	02 31 21.7	+0.3
NEO	Neokhori	61.54	303	P	P	02 31 21.7	0.0
NEO	Neokhori	61.54	303	P	P	02 31 21.7	0.0
HERR	Herculane	61.55	310	⇑iP	P	02 31 23.3	+1.7
XOR	Xorichti	61.55	303	P	P	02 31 21.3	-0.5
XOR	Xorichti	61.55	303	P	P	02 31 21.3	-0.5
KNT	Kendrikon	61.56	306	P	P	02 31 21.9	+0.1
KNT	Kendrikon	61.56	306	P	P	02 31 21.9	+0.1
KNT	Kendrikon	61.56	306	P	P	02 31 21.9	+0.1
THE	Thessaloniki	61.57	305	P	P	02 31 21.9	+0.1
THE	Thessaloniki	61.57	305	P	P	02 31 21.9	+0.1
THE	Thessaloniki	61.57	305	P	P	02 31 21.9	+0.1
SMIA	Simia	61.60	303	P	P	02 31 21.9	-0.2
DID	Didima	61.77	301	P	P	02 31 21.4	-1.9
DID	Didima	61.77	301	P	P	02 31 21.4	-1.9
OPO	Ambohidratompo	61.78	232	P	P	02 31 24.3	+0.7
	comp=Z,6.9nm,0.5s,baz=41,slow=10.0,SNR=18						
OPO				LR	LR	02 56 35.4	
	comp=Z,1µm,19.0s,baz=23,slow=34						
VAY	Valandovo	61.79	306	P	P	02 31 23.1	-0.2
VAY	Valandovo	61.79	306	P	P	02 31 23.1	-0.2
VAY	Valandovo	61.79	306	i P	P	02 31 23.4	+0.1
VAY	Valandovo	61.79	306	P	P	02 31 23.1	-0.2
LKR	Lokris	61.80	303	P	P	02 31 22.3	-1.1
LKR	Lokris	61.80	303	P	P	02 31 22.3	-1.1
KRND	KRANIDI	61.85	301	P	P	02 31 22.9	-0.9
LOUT	Loutraki	61.91	302	P	P	02 31 22.6	-1.6
LTK	Loutraki	61.91	302	P	P	02 31 22.5	-1.7
LTK	Loutraki	61.91	302	P	P	02 31 22.5	-1.7
CRVS	Cervenica-Dubn	61.92	314	eP	P	02 31 25.7	+1.7
CRVS				pmax	pmax		
	comp=Z,96nm,1.3s						
CRVS	Cervenica-Dubn	61.92	314	eP	P	02 31 25.7	+1.7
PROD	Prodromos	61.93	302	P	P	02 31 23.0	-1.3
GRG	Griva	61.96	305	P	P	02 31 24.1	-0.4
GRG	Griva	61.96	305	P	P	02 31 24.1	-0.4
GRG	Griva	61.96	305	P	P	02 31 24.1	-0.4
ANKY	Antikythira Is	61.97	300	P	P	02 31 25.3	+0.7
ANKY	Antikythira Is	61.97	300	P	P	02 31 25.3	+0.7
LIT	Litokhoron	62.00	304	eP	P	02 31 24.2	-0.6
	comp=Z,88nm,0.9s						
LIT	Litokhoron	62.00	304	P	P	02 31 24.3	-0.5
LIT	Litokhoron	62.00	304	eP	P	02 31 24.2	-0.6
LIT				pmax	pmax		
	comp=Z,88nm,0.9s						
KTK1	Kautokeino	62.02	337	⇓iP	P	02 31 25.2	+0.9
ABPO	Ambohimpanom	62.04	232	eP	P	02 31 26.2	+0.8
	comp=Z,182nm,1.6s						
BZS	Buzias	62.05	311	⇓iP	P	02 31 26.0	+1.0
MDVR	Moldovita	62.05	310	⇓iP	P	02 31 26.6	+1.5
VLI	Veliai	62.12	301	P	P	02 31 24.7	-0.9
VLI	Veliai	62.12	301	P	P	02 31 24.7	-0.9
HAMF	Hammerfest	62.14	339	⇓iP	P	02 31 26.4	+1.3
KTHR	Kythira	62.14	300	P	P	02 31 24.9	-0.9
BEL	Belsk	62.20	318	i P	P	02 31 26.6	+0.7
BEL				i S	S	02 39 45.3	+0.1
BEL				LMZ	LR	02 57 01.9	
	comp=Z,2µm,32.3s						
BEL	Belsk	62.20	318	⇓iP	P	02 31 26.6	+0.7
BEL				i S	S	02 39 45.3	+0.1
AGG	Agios Georgios	62.26	303	P	P	02 31 25.6	-1.0
AGG	Agios Georgios	62.26	303	P	P	02 31 25.6	-1.0
AGG	Agios Georgios	62.26	303	P	P	02 31 25.6	-1.0
BANR	Banloc	62.41	310	⇓iP	P	02 31 29.2	+1.9
GUR	Goura	62.41	302	P	P	02 31 26.1	-1.5
GUR	Goura	62.41	302	P	P	02 31 26.1	-1.5
THL	Klokotos Trika	62.43	304	P	P	02 31 25.9	-1.7
VLX	Vlachokerasia	62.46	301	P	P	02 31 26.9	-1.1
VLX	Vlachokerasia	62.46	301	P	P	02 31 26.9	-1.1
KLNR	Kaliningrad	62.47	321	d iP	P	02 31 27.5	0.0
KLNR				pmax	pmax		
	comp=Z,122nm,0.8s						
TRAZ	Trapeza	62.48	302	P	P	02 31 25.3	-2.7
KZN	Kozani	62.52	305	P	P	02 31 27.9	-0.4
KZN	Kozani	62.52	305	P	P	02 31 27.9	-0.4
KZN	Kozani	62.52	305	P	P	02 31 27.9	-0.4
TRIP	Tripoli	62.53	302	P	P	02 31 27.7	-0.7
KLV	Kalavryta, Ach	62.54	302	P	P	02 31 27.0	-1.5
KLV	Kalavryta, Ach	62.54	302	P	P	02 31 27.0	-1.5
SKO	Skopje	62.55	307	P	P	02 31 28.3	-0.1
SKO	Skopje	62.55	307	P	P	02 31 28.3	-0.1
SKO	Skopje	62.55	307	i P	P	02 31 28.4	0.0
SKO	Skopje	62.55	307	P	P	02 31 28.3	-0.1
TRIZ	Trizonia	62.55	302	P	P	02 31 27.0	-1.4
SERG	Sergoula	62.56	303	P	P	02 31 27.0	-1.6
KECS	Kecovo	62.59	314	eP	P	02 31 29.9	+1.4
KECS	Kecovo	62.59	314	eP	P	02 31 29.9	+1.4
DYR	Agios Nikonas	62.59	301	P	P	02 31 28.4	-0.4
ANX	Ano Chora	62.64	303	P	P	02 31 28.0	-1.2
NIE	Niedzica	62.65	315	i P	P	02 31 30.3	+1.4
NIE				ePP	PcS	02 35 49.0	-21
NIE				i S	S	02 39 51.3	+0.3
NIE				LMZ	LR	03 01 01.0	
	comp=Z,1µm,26.4s						
NIE	Niedzica	62.65	315	⇓iP	P	02 31 30.3	+1.4
NIE				i S	S	02 39 51.3	+0.3
NIE				MLR	MLR		
	comp=Z,1µm,26.4s						
LAKA	Lakka	62.65	302	P	P	02 31 28.1	-1.0
LAKA	Lakka	62.65	302	P	P	02 31 28.1	-1.0
EFP	Efpalio	62.68	303	P	P	02 31 29.0	-0.3
EVR	Evrytania	62.68	303	P	P	02 31 28.6	-0.8
EVR	Evrytania	62.68	303	P	P	02 31 28.6	-0.8
FNA	Florina	62.75	305	eP	P	02 31 29.3	-0.5
	comp=Z,84nm,0.9s						
FNA				eS	S	02 39 53.2	+0.7
FNA	Florina	62.75	305	P	P	02 31 29.1	-0.7
FNA	Florina	62.75	305	eP	P	02 31 29.3	-0.5
FNA				eS	S	02 39 53.3	+0.7
FNA				pmax	pmax		
	comp=Z,84nm,0.9s						
KRUS	Krusevo	62.77	306	i P	P	02 31 29.2	-0.7
ITM	Ithomi	62.85	301	eP	P	02 31 29.9	-0.6
	comp=Z,105nm,1.0s						
ITM	Ithomi	62.85	301	P	P	02 31 29.8	-0.7
KPRO	Kipourio	62.87	304	P	P	02 31 29.4	-1.3
DRO	Drossia	62.90	302	P	P	02 31 30.2	-0.6
OJC	Ojcow	62.91	316	i P	P	02 31 31.1	+0.5
OJC				ePP	PcS	02 35 49.7	-22
OJC				i S	S	02 39 52.3	-2.0
OJC				LMZ	LR	02 57 56.9	
	comp=Z,2µm,30.7s						
OJC	Ojcow	62.91	316	eP	P	02 31 31.1	+0.5
	comp=Z,55nm,0.9s						
OJC	Ojcow	62.91	316	⇓iP	P	02 31 31.1	+0.5
OJC				i S	S	02 39 52.3	-2.0
PVO	Paravola	62.94	303	P	P	02 31 30.7	-0.3
AMT	Artemida-Makis	62.97	302	P	P	02 31 30.4	-0.9
PSZ	Piszkesteto	63.03	313	⇓iP	P	02 31 32.5	+0.9
PSZ	Piszkesteto	63.03	313	⇓eP	P	02 31 32.7	+1.1
PSZ	Piszkesteto	63.03	313	eP	P	02 31 32.1	+0.6
	comp=Z,86nm,1.3s						
PSZ	Piszkesteto	63.03	313	P	P	02 31 33.6	+2.0
PYL	PYLOS	63.04	301	P	P	02 31 30.4	-1.3
PYL	PYLOS	63.04	301	P	P	02 31 30.4	-1.3
NEST	Nestorio	63.05	305	P	P	02 31 31.3	-0.5
RLS	Riolos of Patr	63.07	302	P	P	02 31 31.5	-0.4
RLS	Riolos of Patr	63.07	302	P	P	02 31 31.5	-0.4
OHR	Ohrid	63.14	306	i P	P	02 31 31.4	-1.0
OHR	Ohrid	63.14	306	P	P	02 31 34.1	+1.7
LANS	Liptovska Anna	63.21	315	eP	P	02 31 34.1	+1.4
LANS	Liptovska Anna	63.21	315	eP	P	02 31 34.1	+1.4
PDO	Prodromos	63.21	303	P	P	02 31 32.3	-0.5
KBN	Korca	63.22	305	P	P	02 31 32.0	-0.9
KBN	Korca	63.22	305	P	P	02 31 32.0	-0.9
KBN	Korca	63.22	305	P	P	02 31 32.0	-0.9
JAN	Janina	63.31	304	P	P	02 31 33.2	-0.3
JAN	Janina	63.31	304	P	P	02 31 33.2	-0.3
VTN	Vitineika	63.31	302	P	P	02 31 33.8	+0.3
PHP	Peshkopia	63.33	306	P	P	02 31 32.2	-1.4
PHP	Peshkopia	63.33	306	P	P	02 31 32.2	-1.4
PHP	Peshkopia	63.33	306	P	P	02 31 32.2	-1.4
DIVS	Divibare	63.35	309	eP	P	02 31 34.2	+0.4
	comp=Z,84nm,1.2s						
IVA	Berane	63.58	308	⇓iP	P	02 31 35.3	0.0
KFL	Anninata	63.59	302	P	P	02 31 34.4	-1.0
TRO	Tromso	63.61	338	⇓iP	P	02 31 35.5	+0.7
BUD	Budapest	63.66	313	⇓eP	P	02 31 36.4	+0.8
BUD	Budapest	63.66	313	P	P	02 31 36.4	+0.8
VYHS	Vyhne	63.68	314	eP	P	02 31 36.4	+0.6
VYHS				pmax	pmax		
	comp=Z,21nm,1.1s						
VYHS	Vyhne	63.68	314	eP	P	02 31 36.4	+0.6
FSK	Fiskardo	63.71	303	P	P	02 31 34.5	-1.6
IGT	Igoumenitsa	63.72	304	P	P	02 31 34.8	-1.4
IGT	Igoumenitsa	63.72	304	P	P	02 31 34.8	-1.4
IGT	Igoumenitsa	63.72	304	P	P	02 31 34.8	-1.4
VLS	Valsamata	63.74	302	P	P	02 31 35.2	-1.1
VLS	Valsamata	63.74	302	P	P	02 31 35.2	-1.1
VLS	Valsamata	63.74	302	P	P	02 31 35.2	-1.1
SGD	Sagiada	63.78	304	P	P	02 31 34.7	-1.9
KOME	Kolasin	63.85	308	⇓iP	P	02 31 36.9	-0.2
PLE	Pljevlja	63.88	308	⇑iP	P	02 31 36.7	-0.6
SRN	Sarande	63.92	304	P	P	02 31 35.6	-1.9
SRN	Sarande	63.92	304	P	P	02 31 35.6	-1.9
OKC	Ostrava-Krasne	64.01	316	⇓eP	P	02 31 38.9	+1.0
OKC				ex	x	02 31 42.5	
OKC				epP	pP	02 31 59.5	+0.8
OKC				ex	x	02 35 54.9	
OKC				eS	S	02 40 08.3	+0.5
OKC				AMS	AMS	03 01 40.0	
	comp=Z,1µm,24.2s						
OKC	Ostrava-Krasne	64.01	316	eP	P	02 31 38.9	+1.0
OKC				e		02 31 59.5	
OKC				eS	S	02 40 08.3	+0.5
OKC				MLR	MLR		
	comp=Z,1µm,24.2s						
MORH	Mˆ‡rˆ¡gy, Hung	64.05	312	⇓eP	P	02 31 39.0	+0.8
KEK	Kerkira	64.10	304	P	P	02 31 36.7	-2.0
KEK	Kerkira	64.10	304	P	P	02 31 36.7	-2.0
PDG	Podgorica	64.10	307	⇓iP	P	02 31 39.0	+0.4
PDG	Podgorica	64.10	307	P	P	02 31 38.3	-0.2
TTG	Podgorica	64.10	307	⇓iP	P	02 31 38.5	-0.1
TTG	Podgorica	64.10	307	eP	P	02 31 38.4	-0.2
	comp=Z,61nm,0.9s						
TTG				eS	S	02 40 08.4	-0.8
TTG	Podgorica	64.10	307	eP	P	02 31 38.4	-0.2
TTG				eS	S	02 40 08.4	-0.8
TTG				pmax	pmax		
	comp=Z,61nm,0.9s						
CSKK	Csˆ‡kako	64.18	313	⇓eP	P	02 31 39.5	+0.4
DRME	Dracevica, Mon	64.19	307	⇓iP	P	02 31 39.1	-0.1
NKY	Niksic	64.24	308	⇑iP	P	02 31 39.4	-0.3
UPM	Unac-Piva	64.25	308	⇑iP	P	02 31 39.7	-0.1
NKME	Niksic	64.28	308	⇑iP	P	02 31 39.6	-0.2
GKP	Gorka Klasztor	64.29	319	i P	P	02 31 40.0	+0.4
GKP				eS	S	02 40 10.6	-0.5
GKP				LMZ	LR	02 59 41.4	
	comp=Z,2µm,32.4s						
GKP	Gorka Klasztor	64.29	319	⇓iP	P	02 31 40.0	+0.4
GKP				eS	S	02 40 10.6	-0.5
CEME	Cevo	64.33	308	⇓iP	P	02 31 39.9	-0.3
BUM	Brajici-Budva	64.39	307	⇓iP	P	02 31 40.5	-0.1
MORC	Moravsky Berou	64.40	316	⇓iP	P	02 31 41.9	+1.4
MORC	Moravsky Berou	64.40	316	eP	P	02 31 41.4	+0.8
	comp=Z,154nm,1.5s						
MORC	Moravsky Berou	64.40	316	P	P	02 31 42.2	+1.7
MORC	Moravsky Berou	64.40	316	⇓iP	P	02 31 41.3	+0.8
MORC				eS	S	02 40 12.3	-0.5
JAVC	Velka Javorina	64.41	315	⇓iP	P	02 31 42.1	+1.5
BRY	Bratogost	64.56	308	⇑iP	P	02 31 41.4	-0.4
SMOL	Smolenice	64.61	314	eP	P	02 31 42.7	+0.9
SMOL	Smolenice	64.61	314	eP	P	02 31 42.7	+0.9
MODS	Modra-Piesok	64.73	314	eP	P	02 31 43.5	+0.9
MODS				pmax	pmax		
	comp=Z,66nm,1.2s						
MODS	Modra-Piesok	64.73	314	eP	P	02 31 43.5	+0.9
STEI	Steigen	64.86	336	⇓iP	P	02 31 43.3	+0.3
KRLC	Kraliky	64.86	316	⇓eP	P	02 31 44.6	+1.1
KRLC				ex	x	02 31 53.7	
KRLC	Kraliky	64.86	316	eP	P	02 31 44.6	+1.1
VRAC	Vranov	65.07	315	⇑iP	P	02 31 46.5	+1.7
VRAC	Vranov	65.07	315	P	P	02 31 48.0	+3.2
VRAC	Vranov	65.07	315	⇓iP	P	02 31 45.9	+1.1
VRAC				eS	S	02 40 21.3	+0.4
KSP	Ksiaz	65.09	317	i P	P	02 31 45.9	+1.0
KSP				eS	S	02 40 19.9	-1.2
KSP				LMZ	LR	02 59 21.7	
	comp=Z,2µm,29.5s						
KSP	Ksiaz	65.09	317	⇓iP	P	02 31 45.9	+1.0
KSP				eS	S	02 40 19.9	-1.2
DPC	Dobruska-Polom	65.12	316	eP	P	02 31 46.6	+1.4
DPC				ex	x	02 31 50.2	
DPC				ex	x	02 34 20.8	
DPC				eS	S	02 40 21.9	+0.2
DPC				AMS	AMS	03 03 10.0	
	comp=Z,1µm,16.0s						
DPC	Dobruska-Polom	65.12	316	eP	P	02 31 46.6	+1.4
DPC				eS	S	02 40 21.9	+0.2
DPC				MLR	MLR		
	comp=Z,1µm,16.0s						
MOR8	Moi Rana	65.17	334	⇓iP	P	02 31 45.0	-0.1
STON	Ston	65.17	308	P	P	02 31 44.9	-0.6
KRUC	Moravsky	65.23	315	⇓iP	P	02 31 46.6	+0.8
KRUC				eS	S	02 40 20.7	-2.1
SPA0	Spitsbergen Ar	65.24	347	eP	P	02 31 46.5	+1.0
SPA0	Spitsbergen Ar	65.24	347	⇓iP	P	02 31 46.4	+1.0
SPITS	Spitsbergen Ar	65.24	347	P	P	02 31 46.4	+1.0
	comp=Z,14nm,0.4s,baz=60,slow=9.2,SNR=54						
SPITS				LR	LR	03 03 55.0	
	comp=Z,694nm,18.4s,baz=60,slow=39						
BLY	Banja Luka	65.26	310	⇑iP	P	02 31 47.4	+1.3
BLY	Banja Luka	65.26	310	eP	P	02 31 46.0	-0.1
	comp=Z,89nm,1.0s						
SOP	Sopron	65.29	313	⇓eP	P	02 31 47.3	+1.1
SOP	Sopron	65.29	313	P	P	02 31 46.7	+0.5
HSPB	Hornsund (broa	65.29	346	eP	P	02 31 46.9	+1.2
HSPB				eS	S	02 40 24.3	+1.6
HSPB	Hornsund (broa	65.29	346	⇓iP	P	02 31 46.9	+1.2
BEHE	Becsehely	65.30	312	⇓eP	P	02 31 47.4	+1.0
UPC	Upice	65.30	317	⇓eP	P	02 31 47.5	+1.2
UPC				eS	S	02 40 23.2	-0.6
UPC				AMS	AMS	03 03 10.0	
	comp=Z,2µm,16.9s						
UPC	Upice	65.30	317	⇓eP	P	02 31 47.5	+1.2
UPC				eS	S	02 40 23.2	-0.6
UPC				MLR	MLR		
	comp=Z,2µm,16.9s						
BSD	Bornholm Skovb	65.49	322	⇓iP	P	02 31 47.0	-0.4
	comp=Z,34nm,0.7s						
BSD	Bornholm Skovb	65.49	322	⇓iP	P	02 31 47.0	-0.4
BSD				pmax	pmax		
	comp=Z,34nm,0.7s						
LOF	Lofoten	65.50	336	eP	P	02 31 47.4	+0.2
KOGS	Kog	65.67	312	i P	P	02 31 49.3	+0.6
KOGS				e		02 34 39.6	
KOGS				i S	S	02 40 27.7	-0.6
KONS	Konsvik	65.69	334	eP	P	02 31 48.6	+0.2
CONA	Conrad Observa	65.72	314	eP	P	02 31 49.7	+0.6
	comp=Z,99nm,1.3s,SNR=72						
HFS	Hagfors	65.74	327	P	P	02 31 49.4	+0.4
	comp=Z,82nm,0.5s,baz=104,slow=6.1,SNR=766						
HFS				S	S	02 40 27.3	-1.4
	comp=Z,5.4nm,0.9s,baz=129,slow=15,SNR=3.6						
HFS				LR	LR	03 05 23.2	
	comp=Z,593nm,18.8s,baz=88,slow=40						
FASA	Fasano	65.76	306	eP	P	02 31 49.1	-0.3
TAR1	Taranto	65.87	306	eP	P	02 31 49.8	-0.3
MASS	Massafra	65.95	306	eP	P	02 31 50.1	-0.6
MBAR	Mbarara	66.00	258	eP	P	02 31 52.6	+1.1
	comp=Z,53nm,1.0s						
ARSA	Arzberg	66.05	313	i P	P	02 31 51.6	+0.4
	comp=Z,26nm,0.7s,SNR=22						
BAI	Bari	66.07	306	eP	P	02 31 51.3	0.0
GOPC	GO Pecny, Ondr	66.16	316	eP	P	02 31 53.0	+1.2
GOPC				ex	x	02 32 01.3	
GOPC				ex	x	02 34 32.1	
GOPC				ex	x	02 35 50.8	
GOPC				eS	S	02 40 35.3	+1.1
GOPC				AMS	AMS	03 03 50.0	
	comp=Z,2µm,16.0s						
GOPC	GO Pecny, Ondr	66.16	316	eP	P	02 31 53.0	+1.2
GOPC				e		02 35 50.8	
GOPC				eS	S	02 40 35.3	+1.1
GOPC				MLR	MLR		
	comp=Z,2µm,16.0s						
KBS	Kingsbay	66.18	348	eP	P	02 31 51.3	-0.2
	comp=Z,190nm,1.7s						
KBS	Kingsbay	66.18	348	eP	P	02 31 51.3	-0.2
KBS				pmax	pmax		
	comp=Z,190nm,1.7s						
KBS	Kingsbay	66.18	348	⇓iP	P	02 31 52.0	+0.6
PVCC	Panska Ves	66.22	317	⇓eP	P	02 31 53.5	+1.4
PVCC				epP	pP	02 32 13.0	-0.1
PVCC				ex	x	02 34 32.6	
PVCC				AMS	AMS	03 03 50.0	
	comp=Z,2µm,16.4s						
PVCC	Panska Ves	66.22	317	eP	P	02 31 53.5	+1.4
PVCC				e		02 32 13.0	
PVCC				MLR	MLR		
	comp=Z,2µm,16.4s						
NSS	Namsos	66.26	332	eP	P	02 31 52.6	+0.4
SG1	Sgolgore (BA)	66.26	306	eP	P	02 31 52.4	-0.3
MATE	Matera	66.28	306	⇓iP	P	02 31 52.0	-0.7
UDBI	Udbina	66.30	310	P	P	02 31 52.5	-0.4
PRU	Pruhonice	66.31	316	⇓eP	P	02 31 53.9	+1.2
PRU				epP	pP	02 32 09.8	-3.9
PRU				ex	x	02 34 33.0	
PRU				ex	x	02 35 56.8	
PRU				eS	S	02 40 37.1	+1.2
PRU				AMS	AMS	03 03 50.0	
	comp=Z,2µm,16.4s						
PRU	Pruhonice	66.31	316	⇓eP	P	02 31 53.9	+1.2
PRU				e		02 35 56.8	
PRU				eS	S	02 40 37.1	+1.2
PRU				MLR	MLR		
	comp=Z,2µm,16.4s						
CTAO	Charters Tower	66.33	126	eP	P	02 31 54.2	+0.9
CTAO	Charters Tower	66.33	126	eP	P	02 31 54.2	+0.9
OZLJ	Ozalj	66.33	311	P	P	02 31 53.6	+0.6
PRA	Prague	66.36	316	⇓eP	P	02 31 54.5	+1.4
PRA				AMS	AMS	03 03 50.0	
	comp=Z,2µm,16.0s						
PRA	Prague	66.36	316	eP	P	02 31 54.5	+1.4
PRA				MLR	MLR		
	comp=Z,2µm,16.0s						
PERS	Pernice	66.41	312	i P	P	02 31 54.1	+0.6
PERS				eS	S	02 40 35.8	-1.7
SOKA	Soboth	66.46	312	i P	P	02 31 54.4	+0.5
	comp=Z,25nm,0.6s,SNR=32						
RGN	Rugen	66.47	321	eP	P	02 31 54.9	+1.2
	comp=Z,83nm,1.0s						
BOJS	Bojanci	66.50	311	i P	P	02 31 54.7	+0.7
BOJS				i S	S	02 40 37.1	-1.3
TIP	Timpagrande	66.51	304	⇓iP	P	02 31 54.9	+0.6
TIP	Timpagrande	66.51	304	eP	P	02 31 54.5	+0.2
	comp=Z,80nm,1.2s						
TIP	Timpagrande	66.51	304	P	P	02 31 53.9	-0.5
BRG	Berggiesshubel	66.56	317	⇓iP	P	02 31 55.3	+0.9
	comp=Z,67nm,0.6s						
BRG				i pP	pP	02 32 16.6	+1.3
	comp=Z,55nm,0.9s						
BRG				i		02 32 25.8	
	comp=Z,87nm,1.2s						
BRG				S	S	02 40 39.0	0.0
BRG				ePKPPKP	P’P’df	03 00 26.1	-1.4
	comp=Z,10.0nm,1.8s						
	comp=N,806nm,27.3s						
	comp=E,1µm,17.8s						
	comp=Z,2µm,18.2s						
BRG	Berggiesshubel	66.56	317	⇓iP	P	02 31 55.3	+0.9
BRG				i *PP	pP	02 32 16.6	+1.3
BRG				i		02 32 25.8	
BRG				S	S	02 40 39.0	0.0
BRG				MLR	MLR		
	comp=N,1µm,27.0s						
BRG				MLR	MLR		
	comp=E,806nm,17.8s						
BRG				MLR	MLR		
	comp=Z,1µm,18.2s						
NC405	NORSAR Array S	66.64	328	eP	P	02 31 55.0	+0.4
NC602	NORSAR Array S	66.76	328	eP	P	02 31 55.4	0.0
NC602	NORSAR Array S	66.76	328	eP	P	02 31 56.3	+0.9
NC303	NORSAR Array S	66.79	329	eP	P	02 31 55.2	-0.4
MOA	Molln	66.80	314	i P	P	02 31 56.2	+0.3
	comp=Z,61nm,0.6s,SNR=75						
OBKA	Obir	66.82	312	eP	P	02 31 56.7	+0.5
	comp=Z,37nm,0.9s,SNR=18						
COP	Copenhagen	66.84	322	⇓iP	P	02 31 56.9	+0.9
COP	Copenhagen	66.84	322	⇓iP	P	02 31 56.9	+0.9
NB201	NORSAR Array S	66.85	328	eP	P	02 31 56.1	+0.1
NB2	NORSAR Subarra	66.89	328	P	P	02 31 56.1	-0.2
	comp=Z,42nm,0.6s,baz=84,slow=6.5						
NB2	NORSAR Subarra	66.89	328	P	P	02 31 56.1	-0.2
	baz=84,slow=6.5						

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NOA   NORSAR Array B  66.89 328    P         P         02 31 56.2 -0.1
      comp=Z,29nm,0.6s,baz=85,slow=6.4,SNR=236
NOA                                LR        LR        03 03 45.7
      comp=Z,2µm,18.1s,baz=90,slow=38
LJU   Ljubljana       66.91 312  i P         P         02 31 57.6 +0.9
LJU                              e                     02 34 48.6
LJU                              i S         S         02 40 41.8 -1.6
NVLJ  Novalja         66.92 310    P         P         02 31 55.9 -0.8
GEC2  GERESS Array S  67.01 315  eP          P         02 31 58.2 +0.8
      comp=Z,72nm,0.6s
GERES GERESS Array B  67.01 315    P         P         02 31 58.2 +0.8
      comp=Z,47nm,0.5s,baz=74,slow=6.4,SNR=696
GERES                              PKP2bc              03 00 23.1
      comp=Z,0.1nm,0.3s,baz=251,slow=4.1,SNR=4.4
GERES                              LR        LR        03 05 53.3
      comp=Z,592nm,18.5s,baz=78,slow=40
GEA0  GERESS Array S  67.02 315  eP          P         02 31 57.0 -0.4
KHC   Kasperske Hory  67.05 315⇓eP           P         02 31 58.5 +0.9
KHC                              ex          x         02 34 39.1
KHC                              ex          x         02 36 07.8
KHC                              eS          S         02 40 46.3 +1.2
KHC                                AMS       AMS       03 03 20.0
      comp=Z,2µm,27.8s
KHC   Kasperske Hory  67.05 315  eP          P         02 31 58.3 +0.7
      comp=Z,38nm,1.5s
KHC   Kasperske Hory  67.05 315⇓eP           P         02 31 58.5 +0.9
KHC                              e                     02 36 07.8
KHC                              eS          S         02 40 46.3 +1.2
NAO01 NORSAR Array S  67.07 328  eP          P         02 31 57.5 +0.1
CUC   Castrocucco     67.07 305  eP          P         02 31 57.4 -0.5
      comp=Z,31nm,0.8s
NC204 NORSAR Array S  67.08 329  eP          P         02 31 57.8 +0.2
CLL   Collm           67.09 318⇓iP           P         02 31 58.0 +0.3
      comp=Z,84nm,1.4s
CLL                              epP         pP        02 32 17.0 -1.6
CLL                              esP         sP        02 32 27.0 -0.6
CLL                              epPP                  02 34 48.0
CLL                              esPPP                 02 36 26.0
CLL                              i S         S         02 40 44.6 -0.7
CLL                              eSP         SPn       02 41 01.0 -4.4
CLL                              ePS         PnS       02 41 22.0 +3.8
CLL                              e                     02 44 36.0
CLL                              eSS         SS        02 45 12.0 +6.8
CLL                              e(sSS)                02 46 00.0
CLL                              eSSS        SSS       02 48 22.0
CLL                              ePKPPKPdfP'P'df       03 00 25.0 -1.7
      comp=Z,15nm,1.7s
CLL                                LmV                 03 05 00.0
      comp=Z,2µm,20.8s
CLL   Collm           67.09 318  eP          P         02 31 58.1 +0.5
      comp=Z,45nm,0.9s
CLL   Collm           67.09 318⇓iP           P         02 31 58.0 +0.3
CLL                              e*PP        pP        02 32 17.0 -1.6
CLL                              i S         S         02 40 44.6 -0.7
CLL                                pmax      pmax
      comp=Z,84nm,1.4s
NBO00 NORSAR Array S  67.10 328  eP          P         02 31 57.6  0.0
TBLU  Trondheim       67.11 331⇓iP           P         02 31 57.7 +0.1
OSL   Oslo            67.25 327  eP          P         02 31 59.1 +0.6
CEL   Celeste         67.36 303  eP          P         02 32 00.8 +1.1
      comp=Z,148nm,1.1s
MYKA  Terra Mystica   67.42 313  i P         P         02 31 60.0  0.0
      comp=Z,10nm,0.5s,SNR=9.8
CADS  Cadrg           67.42 312  i P         P         02 32 00.0 +0.1
TRI   Trieste         67.49 312  eP          P         02 32 00.6 +0.3
      comp=Z,322nm,1.5s
TRI   Trieste         67.49 312  eP          P         02 32 00.6 +0.3
TRI                                pmax      pmax
      comp=Z,322nm,1.5s
KBA   Koelnbreinsper  67.54 313  i P         P         02 32 00.8  0.0
      comp=Z,32nm,0.5s,SNR=18
NKC   Novy Kostel     67.60 317⇓eP           P         02 32 02.0 +1.0
NKC                              ex          x         02 32 07.1
NKC                              ex          x         02 34 47.2
NKC                              ex          x         02 36 13.9
NKC                              eS          S         02 40 53.2 +1.6
NKC                                AMS       AMS       03 04 30.0
      comp=Z,2µm,17.5s
NKC   Novy Kostel     67.60 317  eP          P         02 32 02.0 +1.0
NKC                              e                     02 36 13.9
NKC                              eS          S         02 40 53.2 +1.6
NKC                                MLR       MLR
      comp=Z,2µm,17.5s
DOMB  Dombas          67.80 330  eP          P         02 32 02.4 +0.4
KONO  Kongsberg       67.85 327  eP          P         02 32 02.7 +0.4
      comp=Z,51nm,1.0s
KONO  Kongsberg       67.85 327ceP           P         02 32 02.2 -0.1
KONO                               pmax      pmax
      comp=Z,78nm,1.3s
KONO  Kongsberg       67.85 327⇓iP           P         02 32 02.5 +0.2
MOX   Moxa            68.06 317    P         P         02 32 04.6 +0.8
ABTA  Abfaltersbach   68.16 313  i P         P         02 32 03.9 -0.8
      comp=Z,31nm,0.9s,SNR=25
BBOO  Buckleboo       68.28 143  eP          P         02 32 05.7 +0.4
      comp=Z,158nm,0.8s
AQU   L'Aquila        68.39 308  eP          P         02 32 06.5 +0.4
      comp=Z,155nm,1.0s
AQU   L'Aquila        68.39 308  eP          P         02 32 06.5 +0.4
AQU                                pmax      pmax
      comp=Z,155nm,1.0s
MOL   Molde           68.43 330  eP          P         02 32 06.9 +1.0
GRF   Grafenberg Arr  68.47 316    P         P         02 32 07.8 +1.3
GRFO  Grafenberg      68.47 316  eP          P         02 32 07.7 +1.3
      comp=Z,292nm,1.7s
GRFO  Grafenberg      68.47 316  eP          P         02 32 07.7 +1.3
GRFO                               pmax      pmax
      comp=Z,292nm,1.7s
MUD   Monsted U'grnd  68.54 324⇓iP           P         02 32 07.7 +1.0
      comp=Z,57nm,0.6s
MUD   Monsted U'grnd  68.54 324⇓iP           P         02 32 07.7 +1.0
MUD                                pmax      pmax
      comp=Z,57nm,0.6s
HOMB  Homborsund      68.61 326  eP          P         02 32 07.5 +0.4
WTTA  Wattenberg      68.65 314  i P         P         02 32 07.6 -0.3
      comp=Z,30nm,0.5s,SNR=22
VAE   Valguarnera     68.67 303    P         P         02 32 10.3 +2.4
      comp=Z,5.8nm,0.6s,baz=8.1,slow=7.1,SNR=6.0
VAE                                LR        LR        03 09 50.7
      comp=Z,193nm,18.1s,baz=72,slow=42
WATA  Walderalm       68.68 314  i P         P         02 32 07.5 -0.4
      comp=Z,22nm,0.6s,SNR=30
FUR   Furstenfeldbru  68.72 315    P         P         02 32 08.7 +0.7
AKN   Aaknes          68.74 330  eP          P         02 32 09.8 +1.9
WDD   Wied Dalam      68.96 301  eP          P         02 32 10.0 +0.3
      comp=Z,78nm,1.0s
MOTA  Moosalm         68.99 314  i P         P         02 32 09.4 -0.5
      comp=Z,35nm,0.7s,SNR=80
RETA  Reutte          69.19 314  i P         P         02 32 11.1  0.0
      comp=Z,34nm,0.4s,SNR=53
SNART Snartemo        69.27 326  eP          P         02 32 12.0 +0.8
HYA   Hoyanger        69.29 329  eP          P         02 32 12.2 +1.0
ODD1  Odda            69.29 327  eP          P         02 32 11.7 +0.4
FETA  Feichten        69.31 313  i P         P         02 32 11.7 -0.2
      comp=Z,30nm,0.6s,SNR=37
BLS5  Blasjo          69.46 327  eP          P         02 32 13.4 +1.0
CLTB  Caltabellotta   69.57 303  eP          P         02 32 13.2 -0.3
      comp=Z,31nm,0.8s
FUORN Ofenpass-Fuorn  69.70 313  eP          P         02 32 14.5 +0.1
      comp=Z,35nm,0.6s
FUORN                            eS          S         02 41 22.3 +5.2
DAVA  Damuels         69.82 314  i P         P         02 32 15.1 +0.1
      comp=Z,78nm,1.0s,SNR=46
BER   Bergen          69.84 328  eP          P         02 32 15.2 +0.6
BER                                IAMs_20   IAMs_20   03 04 33.1
      comp=Z,2µm,18.5s
ASK   Askoy           69.89 328  eP          P         02 32 15.2 +0.3
DAVOX Davos/Dischmat  69.93 313    P         P         02 32 15.8 +0.1
      comp=Z,47nm,0.5s,baz=91,slow=8.0,SNR=182
DAVOX                              S         S         02 41 16.1 -3.5
      comp=Z,1.0nm,0.7s,baz=343,slow=19,SNR=5.7
DAVOX                              LR        LR        03 06 47.9
      comp=Z,637nm,20.1s,baz=68,slow=39
STU   Stuttgart       69.96 315  eP          P         02 32 15.9 +0.4
      comp=Z,230nm,1.4s
STU   Stuttgart       69.96 315  eP          P         02 32 16.0 +0.4
STU                                pmax      pmax
      comp=Z,230nm,1.4s
SUE   Sulen           69.99 329  eP          P         02 32 15.7 +0.2
KMY   Karmoy          70.11 327  eP          P         02 32 16.4 +0.1
VLC   Villacollemand  70.15 310  eP          P         02 32 17.4 +0.4
      comp=Z,138nm,1.3s
TUE   Stuetta         70.35 313  eP          P         02 32 17.6 -0.8
      comp=Z,62nm,1.0s
BFO   Black Forest    70.61 315  eP          P         02 32 19.8 +0.1
      comp=Z,85nm,1.5s
BFO   Black Forest    70.61 315  i P         P         02 32 19.8 +0.1
SLE   Schleitheim     70.63 315    P         P         02 32 20.1 +0.3
WTSB  Winterswijk     70.77 319  eP          P         02 32 21.3 +0.8
      comp=Z,77nm,0.6s
LANF  Langenberg      70.81 316    P         P         02 32 21.8 +1.0
STKA  Stephens Creek  70.84 139    P         P         02 32 21.6 +0.5
      comp=Z,108nm,1.1s,baz=319,slow=6.4,SNR=58
STKA                               S         S         02 41 29.4 -0.6
      comp=Z,12nm,1.1s,baz=155,slow=19,SNR=8.7
STKA                               LR        LR        03 06 52.2
      comp=Z,695nm,20.6s,baz=302,slow=39
STKA  Stephens Creek  70.84 139  eP          P         02 32 21.7 +0.5
      comp=Z,79nm,1.5s
STKA                             eS          S         02 41 31.9 +1.9
STKA  Stephens Creek  70.84 139  eP          P         02 32 21.7 +0.5
STKA                             eS          S         02 41 31.9 +1.9
STKA                               pmax      pmax
      comp=Z,79nm,1.5s
CDF   Champ du Feu    71.28 315  eP          P         02 32 22.8 -1.0
CDF                                pmax      pmax
      comp=Z,38nm,0.6s
ECH   Echery          71.40 315  eP          P         02 32 23.9 -0.5
      comp=Z,27nm,0.9s
ECH   Echery          71.40 315  eP          P         02 32 23.9 -0.5
ECH                                pmax      pmax
      comp=Z,27nm,0.9s
PGF   Pioggiola       71.52 309  eP          P         02 32 24.6 -0.7
PGF                                pmax      pmax
      comp=Z,59nm,0.7s
MEM   Membach         71.56 318  ⇓P          P         02 32 26.0 +0.7
      comp=Z,40nm,1.6s
MEM   Membach         71.56 318    P         P         02 32 26.2 +0.9
HGN   Heimansgroeve   71.57 318  eP          P         02 32 25.9 +0.6
      comp=Z,139nm,1.9s
HGN                              eS          S         02 41 39.6 +1.6
HINF  Hinteralfeld    71.70 315  eP          P         02 32 25.0 -1.2
HINF                               pmax      pmax
      comp=Z,95nm,1.5s
WLF   Walferdange     71.70 317  ⇑P          P         02 32 27.4 +1.3
      comp=Z,137nm,1.4s
WLF   Walferdange     71.70 317  eP          P         02 32 26.4 +0.3
      comp=Z,236nm,1.2s
WLF   Walferdange     71.70 317  eP          P         02 32 26.4 +0.3
WLF                                pmax      pmax
      comp=Z,236nm,1.2s
BEBN  Eben Emael      71.72 318  ⇑P          P         02 32 22.9 -3.3
SENIN Lac Senin/Sane  71.76 313  eP          P         02 32 27.3 +0.4
      comp=Z,67nm,0.9s
SENIN                            eS          S         02 41 44.5 +3.6
HNR   Honiara         71.84 109    LR        LR        03 03 36.0
      comp=Z,260nm,21.3s,baz=298,slow=35
HAU   Haudompre       71.98 315  eP          P         02 32 27.0 -0.9
BCLA  Clavier         72.05 318  ⇓P          P         02 32 28.8 +0.6
      comp=Z,38nm,1.8s
SBF   Sospel          72.29 311  eP          P         02 32 29.0 -0.9
SBF                                pmax      pmax
      comp=Z,57nm,0.8s
LPG   La Plagne       72.34 312  eP          P         02 32 30.0 -0.5
LPG                                pmax      pmax
      comp=Z,63nm,0.7s
LPL   La Plagne       72.35 313  eP          P         02 32 29.9 -0.5
LPL                                pmax      pmax
      comp=Z,81nm,0.5s
GIVF  Givet           72.42 318  eP          P         02 32 29.9 -0.6
GIVF                               pmax      pmax
      comp=Z,67nm,1.2s
CABF  La Chapelle     72.50 314  eP          P         02 32 31.3 +0.2
CABF                               pmax      pmax
      comp=Z,28nm,0.6s
BNI   Bardonecchia    72.51 312  eP          P         02 32 31.5 +0.2
      comp=Z,103nm,1.3s
BNI                              eS          S         02 41 50.7 +1.3
BNI   Bardonecchia    72.51 312  eP          P         02 32 31.5 +0.2
BNI                              eS          S         02 41 50.7 +1.3
BNI                                pmax      pmax
      comp=Z,103nm,1.3s
UCC   Uccle           72.53 318  ⇓P          P         02 32 29.5 -1.6
UCC   Uccle           72.53 318  eP          P         02 32 31.8 +0.7
      comp=Z,22nm,0.7s
UCC   Uccle           72.53 318  eP          P         02 32 31.8 +0.7
UCC                                pmax      pmax
      comp=Z,22nm,0.7s
SNF   Seneffe         72.65 318  ⇓P          P         02 32 32.3 +0.5
      comp=Z,61nm,1.6s
BAIF  Baives          72.82 318  eP          P         02 32 32.3 -0.5
BAIF                               pmax      pmax
      comp=Z,91nm,1.3s
TAMR  Tamra           72.87 303  eP          P         02 32 34.6 +1.2
      comp=Z,80nm,1.1s
DAG   Danmarks Havn   72.89 347⇓iP           P         02 32 32.9 +0.1
      comp=Z,200nm,1.3s
DAG   Danmarks Havn   72.89 347⇓iP           P         02 32 32.9 +0.1
DAG                                pmax      pmax
      comp=Z,200nm,1.3s
FRF   La Foret Royal  72.92 311  eP          P         02 32 32.7 -0.9
FRF                                pmax      pmax
      comp=Z,123nm,1.2s
EIDS  Eidsvold        73.05 128  eP          P         02 32 35.6 +1.1
      comp=Z,129nm,1.3s
KEST  Kesra           73.06 302    P         P         02 32 35.5 +0.9
      comp=Z,106nm,1.2s,baz=45,slow=0.9,SNR=47
KEST                               LR        LR        03 08 40.3
      comp=Z,222nm,21.1s,baz=26,slow=39
KEST  Kesra           73.06 302  eP          P         02 32 35.5 +0.9
      comp=Z,185nm,1.4s
RDOG  Red Dog Mine    73.62  22  eP          P         02 32 37.2  0.0
      comp=Z,325nm,1.7s
THTN  Thala           73.62 302  eP          P         02 32 39.3 +1.3
      comp=Z,141nm,1.6s
SSB   Saint Sauveur   73.90 313  eP          P         02 32 38.9 -0.5
      comp=Z,44nm,0.6s
SSB   Saint Sauveur   73.90 313  eP          P         02 32 38.9 -0.5
SSB                                pmax      pmax
      comp=Z,44nm,0.6s
VIVF  Saint-Julien-l  73.93 312  eP          P         02 32 38.7 -0.8
VIVF                               pmax      pmax
      comp=Z,46nm,1.0s
SMF   Signal de Mont  73.98 314  eP          P         02 32 38.8 -1.0
SMF                                pmax      pmax
      comp=Z,59nm,0.6s
SSF   Saint Saulge    74.09 315  eP          P         02 32 39.5 -0.8
SSF                                pmax      pmax
      comp=Z,176nm,1.2s
AVF   Avril sur Loir  74.27 314  eP          P         02 32 40.4 -1.0
AVF                                pmax      pmax
      comp=Z,38nm,0.6s
CMAH  Djebel Manchou  74.29 303    P         P         02 32 42.7 +0.9
DRUM  Mains of Drumt  74.67 326⇓eP           P         02 32 44.1 +0.6
DRUM                               IAmb      IAmb      02 32 44.6
      comp=Z,111nm,1.4s
MLA1  Latheron        74.68 327⇓eP           P         02 32 44.2 +0.7
CAEH  'Ain El Ouahch  74.69 304    P         P         02 32 44.3 +0.3
MCD   Coleburn Disti  74.86 326⇓eP           P         02 32 45.5 +1.0
BIGH  Upper Bighouse  74.89 327⇓eP           P         02 32 45.5 +0.8
BIGH                               IAmb      IAmb      02 32 47.0
      comp=Z,93nm,0.9s
BIGH                               IAMs_20   IAMs_20   03 08 10.1
      comp=Z,3µm,14.8s
CKFL  Kef-Lekhel      74.90 303    P         P         02 32 46.1 +0.7
LSZ   Lusaka          74.98 246  eP          P         02 32 47.0 +0.9
      comp=Z,72nm,0.9s
LSZ   Lusaka          74.98 246    P         P         02 32 47.0 +0.9
      SNR=13
LSZ   Lusaka          74.98 246  eP          P         02 32 47.0 +0.9
LSZ                                pmax      pmax
      comp=Z,73nm,0.9s
EDMD  Edmundbyers     75.05 323⇓eP           P         02 32 46.3 +0.6
EDMD                               IAMs_20   IAMs_20   03 08 46.6
      comp=Z,2µm,21.4s
ESY   Stoneypath      75.06 325⇓eP           P         02 32 46.2 +0.4
CASM  Ain Smara       75.12 303    P         P         02 32 47.1 +0.5
HPK   Haverah Park    75.14 323  eP          P         02 32 46.6 +0.4
HPK                                IAmb      IAmb      02 32 48.3
      comp=Z,169nm,1.5s
HPK                                IAMs_20   IAMs_20   03 08 53.8
      comp=Z,2µm,17.0s
CTEI  Djebel Teioual  75.24 303    P         P         02 32 48.1 +0.7
CWF   Charnwood Fore  75.35 321⇓eP           P         02 32 47.7 +0.2
CWF                                IAMs_20   IAMs_20   03 11 15.7
      comp=Z,1µm,16.9s
EDI   Edinburgh       75.36 325⇓eP           P         02 32 47.5  0.0
EDI                                IAMs_20   IAMs_20   03 05 41.0
      comp=Z,1µm,27.1s
LBWR  Ladybower, Pea  75.38 322⇓eP           P         02 32 48.1 +0.5
LBWR                               IAmb      IAmb      02 32 48.7
      comp=Z,47nm,1.0s
LBWR                               IAMs_20   IAMs_20   03 10 47.6
      comp=Z,1µm,17.4s
DFRA  Djebel Bou Aff  75.50 304    P         P         02 32 50.2 +1.3
EKA   Eskdalemuir Ar  75.54 324    P         P         02 32 49.3 +0.7
      comp=Z,17nm,0.6s,baz=75,slow=6.4,SNR=105
EKA                                LR        LR        03 09 03.9
      comp=Z,1µm,21.6s,baz=95,slow=38
ESK   Eskdalemuir     75.57 324  eP          P         02 32 49.4 +0.7
      comp=Z,259nm,1.8s
ESK   Eskdalemuir     75.57 324⇓eP           P         02 32 49.3 +0.6
ESK                                IAmb      IAmb      02 32 51.1
      comp=Z,36nm,0.8s
ESK                                IAMs_20   IAMs_20   03 08 45.3
      comp=Z,2µm,20.6s
ESK   Eskdalemuir     75.57 324  eP          P         02 32 49.4 +0.7
ESK                                pmax      pmax
      comp=Z,259nm,1.8s
INVG  Invergeldie, C  75.65 325  eP          P         02 32 49.5 +0.4
INVG                               IAmb      IAmb      02 32 52.9
      comp=Z,77nm,1.5s
BHH   Howats Hill     75.65 324⇓eP           P         02 32 49.9 +0.8
CAF   Calviac         75.68 313  eP          P         02 32 49.3 -0.3
CAF                                pmax      pmax
      comp=Z,128nm,1.3s
KESW  Keswick, Cumbr  75.76 323  eP          P         02 32 50.6 +0.8
KESW                               IAmb      IAmb      02 32 52.3
      comp=Z,35nm,0.8s
KESW                               IAMs_20   IAMs_20   03 09 08.0
      comp=Z,2µm,18.6s
EAB   Aberfoyle       75.88 325⇓eP           P         02 32 51.2 +0.7
SSW   Stow on the Wo  75.91 321⇓eP           P         02 32 51.3 +0.6
RJF   Les Rejaudoux   75.93 313  eP          P         02 32 50.9 -0.1
RJF                                pmax      pmax
      comp=Z,254nm,1.4s
SET   Setif           75.97 304    P         P         02 32 53.0 +1.5
SWN1  Swindon         76.03 320⇓eP           P         02 32 52.0 +0.6
SWN1                               IAMs_20   IAMs_20   03 12 15.9
      comp=Z,1µm,16.6s
PGBU  Gleniffferbraes 76.09 325⇓eP           P         02 32 52.4 +0.7
PGBU                               IAmb      IAmb      02 32 54.3
      comp=Z,48nm,0.7s
FLN   La Foliniere    76.13 317  eP          P         02 32 51.8 -0.2
FLN                                pmax      pmax
      comp=Z,182nm,1.7s
KPL   Plockton        76.16 327  eP          P         02 32 52.6 +0.7
KPL                                IAmb      IAmb      02 32 53.9
      comp=Z,66nm,1.4s
KPL                                IAMs_20   IAMs_20   03 09 33.4
      comp=Z,2µm,14.1s
STRD  Stroud          76.16 321⇓eP           P         02 32 52.4 +0.3
STRD                               IAMs_20   IAMs_20   03 08 13.1
      comp=Z,2µm,28.6s
HLM1  Long Mynd       76.33 321⇓eP           P         02 32 53.8 +0.7
HLM1                               IAmb      IAmb      02 32 55.2
      comp=Z,48nm,1.0s
HLM1                               IAMs_20   IAMs_20   03 11 35.2
      comp=Z,1µm,21.2s
BATH  Bath            76.37 320  eP          P         02 32 53.8 +0.5
BATH                               IAMs_20   IAMs_20   03 12 27.1
      comp=Z,1µm,15.5s
FOEL  Foel Wylfa      76.38 322  eP          P         02 32 54.1 +0.7
FOEL                               IAmb      IAmb      02 32 56.2
      comp=Z,107nm,1.3s
FOEL                               IAMs_20   IAMs_20   03 11 29.1
      comp=Z,944nm,14.8s
OLDB  Oldbury-Upon-S  76.42 320  eP          P         02 32 53.9 +0.3
OLDB                               IAMs_20   IAMs_20   03 11 33.2
      comp=Z,2µm,20.2s
ARMA  Armidale        76.44 132  eP          P         02 32 56.1 +2.0
      comp=Z,110nm,1.3s
GRR   Gorron          76.48 317  eP          P         02 32 53.2 -0.8
GRR                                pmax      pmax
      comp=Z,28nm,0.7s
MONM  Monmouth        76.51 321⇓eP           P         02 32 54.5 +0.4
MONM                               IAmb      IAmb      02 32 56.9
      comp=Z,79nm,1.3s
MONM                               IAMs_20   IAMs_20   03 12 09.7
      comp=Z,2µm,23.9s
LFF   La Frestale     76.57 313  eP          P         02 32 54.4 -0.2
MCH1  Michaelchurch   76.57 321⇓eP           P         02 32 54.7 +0.3
MCH1                               IAmb      IAmb      02 32 59.7
      comp=Z,27nm,0.6s
MCH1                               IAMs_20   IAMs_20   03 12 11.7
      comp=Z,2µm,21.8s
HGH   Gray Hill       76.58 321⇓eP           P         02 32 54.7 +0.2
WPM1  Penmaenmawr     76.66 322⇓eP           P         02 32 55.8 +0.8
LLW   Llanuwychllyn   76.66 322  eP          P         02 32 55.1 +0.1
WIM   Isle of Man     76.77 323⇓eP           P         02 32 56.7 +1.1
WME   Myndd Eilian    76.83 323⇓eP           P         02 32 56.7 +0.8
WLF1  Llynfaes        76.92 322⇓eP           P         02 32 57.3 +0.9
WLF1                               IAmb      IAmb      02 32 58.2
      comp=Z,711nm,1.9s
JQE   Queens East     76.95 318⇓eP           P         02 32 56.9 +0.3
JRS   Jersey          76.98 318⇓eP           P         02 32 57.1 +0.3
JSA   Saint Aubin     77.03 318⇓eP           P         02 32 57.1  0.0
JSA                                IAmb      IAmb      02 32 57.9
      comp=Z,47nm,0.6s
JSA                                IAMs_20   IAMs_20   03 05 19.9
      comp=Z,1µm,21.4s
YRC   Rhoscolyn       77.03 322⇓eP           P         02 32 58.0 +1.0
GMM   Mts of Mourne   77.44 324⇓eP           P         02 33 00.1 +0.9
CAN   Canberra        77.73 137  eP          P         02 33 02.1 +0.9
      comp=Z,383nm,1.7s
CAN   Canberra        77.73 137  eP          P         02 33 02.1 +0.9
CAN                                pmax      pmax
      comp=Z,383nm,1.7s
TOLK  Toolik Lake Re  77.79  20    P         P         02 33 00.7 -0.3
      baz=302
TOLK  Toolik Lake Re  77.79  20  eP          P         02 33 02.8 +1.7
      comp=Z,350nm,1.2s
EMHD  Djebel Mahouad  77.85 304    P         P         02 33 03.8 +1.7
ROSF  Rostrenen       78.02 317  eP          P         02 33 02.1 -0.5
QUIF  Quistinic       78.10 317  eP          P         02 33 02.1 -0.9
QUIF                               pmax      pmax
      comp=Z,77nm,1.4s
COLD  Coldfoot        78.34  21  eP          P         02 33 04.9 +0.8
      comp=Z,196nm,1.5s
MLY   Manley          79.31  23  eP          P         02 33 09.5  0.0
      comp=Z,150nm,0.9s
SVW2  Sparrevohn      79.38  28  eP          P         02 33 10.6 +0.7
      comp=Z,190nm,1.5s
SUMG  Summit          79.58 347⇓iP           P         02 33 11.9 +0.7
SUMG  Summit          79.58 347⇓iP           P         02 33 11.9 +0.7
CAST  Castle Rocks    79.65  25  eP          P         02 33 12.0 +0.7
      comp=Z,110nm,0.8s
SDPT  Sand Point      79.66  34  eP          P         02 33 09.7 -1.8
      comp=Z,84nm,0.6s
BORG  Borgarnes       79.69 337    P         P         02 33 13.5 +2.1
      comp=Z,32nm,0.9s,baz=100,slow=4.7,SNR=7.5
BORG                               LR        LR        03 10 34.0
      comp=Z,568nm,18.6s,baz=62,slow=37
BORG  Borgarnes       79.69 337  eP          P         02 33 11.6 +0.2
      comp=Z,130nm,1.5s
BORG  Borgarnes       79.69 337  eP          P         02 33 11.6 +0.2
BORG                               pmax      pmax
      comp=Z,130nm,1.5s
BPAW  Bear Paw Mtn.   79.72  24  eP          P         02 33 12.0 +0.4
      comp=Z,81nm,0.9s
PPLA  Purkeypile      79.88  25  eP          P         02 33 13.2 +0.5
      comp=Z,490nm,1.6s
PPLA                             eS          S         02 43 12.1 +2.5
TULEG Thule           80.22 356  eP          P         02 33 14.7 +0.6
      comp=Z,190nm,0.7s
MDM   Murphy Dome     80.25  23  eP          P         02 33 15.0 +0.4
      comp=Z,294nm,0.8s
MDM                              eS          S         02 43 17.1 +4.0
CHGN  Chignik         80.29  33  eP          P         02 33 13.4 -1.4
      comp=Z,61nm,0.6s
TRF   Thorofare Moun  80.32  24  eP          P         02 33 16.4 +1.3
      comp=Z,69nm,1.3s
TAM   Tamanrasset     80.35 291  eP          P         02 33 17.4 +1.4
      comp=Z,51nm,1.2s
COLA  College         80.43  23  eP          P         02 33 15.7 +0.3
      comp=Z,327nm,1.5s
COLA  College         80.43  23  eP          P         02 33 15.7 +0.3
COLA                               pmax      pmax
      comp=Z,327nm,1.5s
WRH   Wood River Hil  80.57  23  eP          P         02 33 15.7 -0.5
      comp=Z,116nm,1.5s
CCB   Clear Creek Bu  80.58  23  eP          P         02 33 15.7 -0.5
      comp=Z,29nm,0.7s
SKT   Skwentna        80.62  26  eP          P         02 33 16.2 -0.3
      comp=Z,271nm,1.4s
MCK   McKinley        80.68  24  eP          P         02 33 17.2 +0.3
      comp=Z,180nm,1.2s
VAL   Valentia        80.73 323⇓iP           P         02 33 25.4 +8.1
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VAL				*i* S	S	02 43 23.7	+5.3
IL1	Eielson Array	80.83	22	*e*P	P	02 33 15.9	-1.7
ILAR	Eielson Array	80.83	22	P	P	02 33 16.9	-0.6
	comp=Z,34nm,0.6s,baz=293,slow=4.6,SNR=310						
ILAR				PP	PP	02 36 23.1	+0.9
	comp=Z,6.9nm,0.7s,baz=304,slow=7.4,SNR=5.8						
ILAR				S	S	02 43 17.9	-1.1
	comp=Z,0.4nm,0.8s,baz=129,slow=2.4,SNR=3.4						
ILAR				PKKPbc	PKKPbc	02 51 55.5	-1.5
	comp=Z,0.4nm,0.4s,baz=144,slow=1.3,SNR=6.6						
ILAR				PKPPKP	P'P'df	02 59 45.4	-16
	comp=Z,0.6nm,1.1s,baz=174,slow=1.6,SNR=3.5						
ILAR				LR	LR	03 14 18.9	
	comp=Z,703nm,19.6s,baz=320,slow=39						
ILB	Eielson Array	80.83	22	*e*P	P	02 33 16.8	-0.8
KULLO	Kullorsuaq	81.00	353	⇓*i*P	P	02 33 19.1	+0.8
	comp=Z,226nm,0.8s						
KULLO	Kullorsuaq	81.00	353	⇓*i*P	P	02 33 19.1	+0.8
KULLO				pmax	pmax		
	comp=Z,230nm,0.8s						
SUA	Susitna One	81.21	26	*e*P	P	02 33 20.0	+0.2
	comp=Z,82nm,1.0s						
DHY	Denali Highway	81.63	24	*e*P	P	02 33 21.7	-0.4
	comp=Z,146nm,1.6s						
DHY				*e*S	S	02 43 33.0	+5.2
ES19	SONSECA Array	81.65	309	*e*P	P	02 33 23.2	+0.7
TAU	Tasmania Unive	81.69	144	*e*P	P	02 33 23.1	+0.8
	comp=Z,84nm,0.8s						
TAU	Tasmania Unive	81.69	144	P	P	02 33 23.8	+1.5
TAU				pmax	pmax		
	comp=Z,84nm,0.9s						
ESDC	Sonseca Array	81.70	309	P	P	02 33 23.4	+0.6
	comp=Z,10nm,0.8s,baz=60,slow=4.9,SNR=73						
ESDC				PKKPbc	PKKPbc	02 51 54.7	+0.4
	comp=Z,0.3nm,0.5s,baz=270,slow=2.5,SNR=4.9						
ESDC				LR	LR	03 15 48.7	
	comp=Z,279nm,20.0s,baz=0.0,slow=40						
ESLA	Sonseca Array	81.70	309	*e*P	P	02 33 23.4	+0.6
	comp=Z,81nm,1.4s						
GHO	Glory Hole Cre	81.77	25	*e*P	P	02 33 23.4	+0.6
	comp=Z,145nm,1.3s						
GHO				*e*S	S	02 43 33.2	+4.1
PMR	Palmer	81.79	26	*e*P	P	02 33 22.4	-0.3
	comp=Z,333nm,1.7s						
PMR				*e*S	S	02 43 33.0	+4.0
PMR	Palmer	81.79	26	*e*P	P	02 33 22.4	-0.3
PMR				*e*S	S	02 43 33.0	+4.0
PMR				pmax	pmax		
	comp=Z,333nm,1.7s						
RC01	Rabbit Creek A	81.82	26	*e*P	P	02 33 23.1	+0.1
	comp=Z,251nm,1.5s						
LBTB	Lobatse	81.88	239	*e*P	P	02 33 25.0	+1.1
	comp=Z,80nm,0.9s						
PAB	San Pablo	82.03	309	*e*P	P	02 33 24.8	+0.3
	comp=Z,76nm,1.4s						
PAB	San Pablo	82.03	309	*e*P	P	02 33 24.8	+0.3
PAB				pmax	pmax		
	comp=Z,76nm,1.4s						
BRLK	Bradley Lake	82.06	28	*e*P	P	02 33 23.6	-0.6
	comp=Z,99nm,0.6s						
RIDG	Independ'e Rid	82.16	23	*e*P	P	02 33 24.6	-0.1
	comp=Z,183nm,1.1s						
RIDG				*e*S	S	02 43 35.6	+2.6
SII	Sitkinak Islan	82.23	31	*e*P	P	02 33 25.4	+0.2
	comp=Z,452nm,2.0s						
OHAK	Old Harbor	82.32	30	*e*P	P	02 33 24.3	-1.2
	comp=Z,69nm,0.9s						
KDAK	Kodiak Island	82.36	30	P	P	02 33 25.5	-0.3
	comp=Z,35nm,0.6s,baz=282,slow=2.7,SNR=33						
KDAK	Kodiak Island	82.36	30	*e*P	P	02 33 25.4	-0.3
	comp=Z,290nm,1.8s						
KDAK	Kodiak Island	82.36	30	*i* P	P	02 33 25.2	-0.5
PAX	Paxson	82.39	23	*e*P	P	02 33 27.1	+1.1
	comp=Z,163nm,1.5s						
PAX	Paxson	82.39	23	P	P	02 33 27.1	+1.1
PAX				pmax	pmax		
	comp=Z,160nm,1.5s						
RES	Resolute Bay	82.44	2	*e*P	P	02 33 26.9	+1.0
	comp=Z,348nm,1.1s						
RES	Resolute Bay	82.44	2	*e*P	P	02 33 26.9	+1.0
RES				pmax	pmax		
	comp=Z,348nm,1.1s						
DOT	Dot Lake	82.49	23	*e*P	P	02 33 27.8	+1.4
	comp=Z,446nm,1.8s						
INK	Inuvik	82.57	16	P	P	02 33 27.2	+0.5
	comp=Z,231nm,0.7s,baz=316,slow=5.3,SNR=24						
INK				LR	LR	03 15 57.8	
	comp=Z,401nm,21.6s,baz=306,slow=40						
INK	Inuvik	82.57	16	*e*P	P	02 33 27.3	+0.7
	comp=Z,617nm,1.3s						
INK	Inuvik	82.57	16	*e*P	P	02 33 27.3	+0.7
INK				pmax	pmax		
	comp=Z,617nm,1.3s						
EGAK	Eagle	82.77	21	*e*P	P	02 33 28.1	+0.3
	comp=Z,233nm,1.3s						
PBRG	Braganca	82.79	312	*e*P	P	02 33 29.0	+0.6
	comp=Z,66nm,1.6s						
HARP	HAARP	82.85	24	*e*P	P	02 33 29.5	+1.2
	comp=Z,188nm,1.0s						
GLI	Glacier Island	83.01	26	*e*P	P	02 33 29.2	+0.1
	comp=Z,38nm,0.7s						
GLI				*e*S	S	02 43 46.2	+4.7
KLU	Klutina	83.11	25	*e*P	P	02 33 30.4	+0.7
	comp=Z,229nm,1.2s						
KLU				*e*S	S	02 43 49.0	+6.2
MVO	Moncorvo	83.25	312	*e*P	P	02 33 31.6	+0.8
	comp=Z,97nm,1.3s						
MVO	Moncorvo	83.25	312	*e*S	S	02 43 46.5	+1.5
MVO	Moncorvo	83.25	312	*e*LR	LR	03 05 40.9	
	comp=Z,360nm,22.0s						
DZM	Mont Dzumac	83.27	117	*e*P	P	02 33 29.9	-1.3
	comp=Z,130nm,1.5s						
DZM	Mont Dzumac	83.27	117	*e*S	S	02 43 45.0	-0.6
	comp=Z,379nm,23.8s						
DZM	Mont Dzumac	83.27	117	*e*LR	LR	02 59 43.4	
	comp=Z,848nm,27.9s						
DZM	Mont Dzumac	83.27	117	P	P	02 33 31.1	-0.1
	comp=Z,4.7nm,0.8s,baz=89,slow=14,SNR=3.2						
DZM				LR	LR	03 14 12.2	
	comp=Z,113nm,19.4s,baz=237,slow=38						
DZM	Mont Dzumac	83.27	117	*e*P	P	02 33 33.8	+2.6
	comp=Z,68nm,1.3s						
FID	Port Fidalgo	83.33	26	*e*P	P	02 33 31.3	+0.6
	comp=Z,160nm,1.1s						
DIV	Divide	83.38	25	*e*P	P	02 33 31.8	+0.7
	comp=Z,377nm,1.7s						
POLO	Lamas de Olo	83.69	312	*e*P	P	02 33 33.7	+0.6
	comp=Z,37nm,1.3s						
POLO	Lamas de Olo	83.69	312	*e*S	S	02 43 49.8	+0.4
PCAB	Cabril	83.71	313	*e*P	P	02 33 33.9	+0.8
	comp=Z,100nm,1.6s						
EYAK	Cordova Ski Ar	83.74	26	*e*P	P	02 33 33.7	+0.9
	comp=Z,155nm,1.2s						
PGAV	Gavieira, Arco	83.76	313	*e*P	P	02 33 34.4	+0.9
	comp=Z,64nm,1.3s						
PGAV	Gavieira, Arco	83.76	313	*e*LR	LR	03 06 48.3	
	comp=Z,382nm,22.0s						
DAWY	Dawson	83.82	21	*e*P	P	02 33 33.7	+0.5
	comp=Z,228nm,1.5s						
DAWY				*e*S	S	02 43 55.5	+5.7
MTE	Manteigas	83.93	311	*e*P	P	02 33 35.3	+1.0
	comp=Z,132nm,1.4s						
MTE	Manteigas	83.93	311	*e*S	S	02 43 53.6	+1.8
MTE	Manteigas	83.93	311	*e*LR	LR	03 06 00.0	
	comp=Z,277nm,22.0s						
MTE	Manteigas	83.93	311	*e*P	P	02 33 35.9	+1.6
	comp=Z,124nm,1.4s						
BOSA	Boshof	83.94	236	P	P	02 33 35.2	+0.7
	comp=Z,20nm,0.6s,baz=52,slow=2.8,SNR=90						
BOSA				LR	LR	03 09 10.5	
	comp=Z,478nm,20.5s,baz=50,slow=34						
BOSA	Boshof	83.94	236	*e*P	P	02 33 35.4	+0.9
	comp=Z,67nm,0.8s						
BOSA	Boshof	83.94	236	*e*P	P	02 33 35.4	+0.9
BOSA				pmax	pmax		
	comp=Z,67nm,0.8s						
PVIS	Viseu	84.03	312	*e*P	P	02 33 35.9	+1.1
	comp=Z,100nm,1.5s						
PCBR	Castelo Branco	84.11	311	*e*P	P	02 33 36.1	+0.9
	comp=Z,97nm,1.3s						
PMRV	Marv??o	84.23	310	*e*P	P	02 33 36.5	+0.7
	comp=Z,70nm,1.4s						
PMRV	Marv??o	84.23	310	*e*S	S	02 43 51.8	-2.9
PMRV	Marv??o	84.23	310	*e*LR	LR	03 06 20.9	
	comp=Z,384nm,20.0s						
RAGM	Ragged Mountai	84.26	25	*e*P	P	02 33 37.0	+1.5
	comp=Z,368nm,1.4s						
ANGG	Ammassalik, Gr	84.45	342	*e*P	P	02 33 35.4	-0.9
	comp=Z,43nm,0.7s						
PBAR	Barrancos	84.50	309	*e*P	P	02 33 38.1	+0.9
	comp=Z,263nm,1.3s						
PESTR	Estremoz	84.60	310	*e*P	P	02 33 38.2	+0.5
	comp=Z,53nm,1.4s						
PESTR	Estremoz	84.60	310	*e*S	S	02 43 56.6	-1.9
PESTR	Estremoz	84.60	310	*e*P	P	02 33 38.1	+0.4
	comp=Z,33nm,1.5s						
COI	Coimbra	84.61	311	*e*P	P	02 33 38.4	+0.7
	comp=Z,107nm,1.6s						
PCAS	Casmilo, Conde	84.73	311	*e*S	S	02 44 03.9	+4.2
ILULI	Ilulissat	84.78	348	*e*P	P	02 33 38.1	+0.1
	comp=Z,294nm,1.7s						
ILULI	Ilulissat	84.78	348	⇓*i*P	P	02 33 38.2	+0.3
	comp=Z,48nm,0.7s						
ILULI	Ilulissat	84.78	348	⇓*i*P	P	02 33 38.2	+0.3
ILULI				pmax	pmax		
	comp=Z,48nm,0.7s						
PTOM	Tomar	84.86	311	*e*P	P	02 33 39.7	+0.8
	comp=Z,147nm,1.6s						
MDT	Midelt	84.90	303	P	P	02 33 40.2	+0.8
	comp=Z,7.8nm,0.7s,baz=89,slow=7.7,SNR=22						
MDT				LR	LR	03 19 29.0	
	comp=Z,221nm,18.4s,baz=83,slow=41						
PMTG	Montargil	84.97	310	*e*P	P	02 33 40.1	+0.6
	comp=Z,67nm,1.3s						
PMTG	Montargil	84.97	310	*e*S	S	02 43 57.5	-4.5
EVO	Evora	85.05	310	*e*P	P	02 33 40.9	+1.0
	comp=Z,92nm,1.3s						
PBEJ	Beja	85.16	309	*e*P	P	02 33 42.5	+2.0
	comp=Z,107nm,1.3s						
ALMR	Almeirim	85.18	310	*e*P	P	02 33 41.3	+0.7
ALMR				AMb	AMB	02 33 43.5	
	comp=Z,112nm,1.6s						
ALMR	Almeirim	85.18	310	*e*P	P	02 33 41.3	+0.7
	comp=Z,109nm,1.5s						
ALMR	Almeirim	85.18	310	*e*P	P	02 33 41.2	+0.7
PVAQ	Vaqueiros	85.31	309	*e*P	P	02 33 42.3	+1.0
	comp=Z,158nm,1.3s						
PVAQ	Vaqueiros	85.31	309	*e*S	S	02 44 00.7	-4.8
PVAQ	Vaqueiros	85.31	309	*e*LR	LR	03 04 12.1	
	comp=Z,267nm,18.0s						
PCVE	Castro Verde	85.45	309	*e*P	P	02 33 42.9	+1.0
	comp=Z,53nm,1.4s						
PCVE	Castro Verde	85.45	309	*e*S	S	02 44 05.6	-1.2
MESJ	Messejana	85.49	309	*e*P	P	02 33 43.1	+0.9
MESJ				AMb	AMB	02 33 45.5	
	comp=Z,106nm,1.4s						
MESJ	Messejana	85.49	309	*e*P	P	02 33 43.3	+1.2
	comp=Z,110nm,1.3s						
MESJ	Messejana	85.49	309	*e*P	P	02 33 43.0	+0.9
PBDV	Barranco-do-Ve	85.54	309	*e*P	P	02 33 43.6	+1.2
	comp=Z,174nm,1.4s						
PBDV	Barranco-do-Ve	85.54	309	*e*S	S	02 44 07.7	-0.1
PNCL	Nicolau / Gran	85.59	310	*e*P	P	02 33 43.8	+1.2
	comp=Z,111nm,1.3s						
PNCL	Nicolau / Gran	85.59	310	*e*S	S	02 44 16.6	+8.4
PMAFR	Mafra	85.76	311	*e*P	P	02 33 44.4	+1.0
	comp=Z,138nm,1.4s						
PMAFR	Mafra	85.76	311	*e*S	S	02 44 13.5	+3.7
TSUM	Tsumeb	85.76	247	P	P	02 33 44.6	+0.7
	comp=Z,5.6nm,0.7s,baz=54,slow=8.9,SNR=6.8						
TSUM				LR	LR	03 11 38.2	
	comp=Z,452nm,21.2s,baz=56,slow=35						
TSUM	Tsumeb	85.76	247	*e*P	P	02 33 44.8	+1.0
	comp=Z,44nm,1.4s						
PTEO	Sao Teotonio	85.98	309	*e*P	P	02 33 45.3	+0.8
	comp=Z,133nm,1.4s						
MORF	Marmelete	86.03	309	*e*P	P	02 33 45.6	+0.7
MORF				AMb	AMB	02 33 47.5	
	comp=Z,96nm,1.6s						
MORF	Marmelete	86.03	309	*e*P	P	02 33 45.8	+0.9
	comp=Z,116nm,1.4s						
MORF	Marmelete	86.03	309	*e*S	S	02 44 13.7	+1.1
MORF	Marmelete	86.03	309	*e*P	P	02 33 45.6	+0.7
PFVI	Vila Bisbo	86.23	309	*e*P	P	02 33 46.4	+0.6
	comp=Z,132nm,1.4s						
PFVI	Vila Bisbo	86.23	309	*e*S	S	02 44 18.4	+3.9
PFVI	Vila Bisbo	86.23	309	*e*P	P	02 33 47.5	+1.7
	comp=Z,67nm,0.8s						
SFJD	Kangerlussuaq	86.58	347	P	P	02 33 47.0	+0.2
	comp=Z,45nm,0.5s,baz=48,slow=6.3,SNR=16						
SFJD				LR	LR	03 17 59.4	
	comp=Z,625nm,21.2s,baz=30,slow=39						
SFJD	Kangerlussuaq	86.58	347	*e*P	P	02 33 47.1	+0.2
	comp=Z,217nm,1.4s						
SFJD	Kangerlussuaq	86.58	347	*i* P	P	02 33 47.1	+0.2
TOA0	Torodi Ar. Sit	87.30	283	*e*P	P	02 33 50.7	-0.7
TORD	Torodi Ar. Bea	87.30	283	P	P	02 33 50.9	-0.5
	comp=Z,18nm,1.0s,baz=66,slow=4.2						
TORD				PP	PP	02 37 16.8	+0.3
	baz=52,slow=6.8						
TORD				PKKPbc	PKKPbc	02 51 42.1	+1.4
	baz=310,slow=2.5						
TORD				LR	LR	03 19 39.4	
	comp=Z,415nm,18.6s,baz=320,slow=40						
WHY	Whitehorse	87.70	22	*e*P	P	02 33 53.2	+0.6
	comp=Z,284nm,1.6s						
SUR	Sutherland	89.11	234	LR	LR	03 11 56.3	
	comp=Z,650nm,20.8s,baz=60,slow=34						
SUR	Sutherland	89.11	234	*e*P	P	02 34 00.1	+0.4
	comp=Z,22nm,0.9s						
BESE	Bessie Mountai	89.20	23	*e*P	P	02 34 01.1	+1.4
	comp=Z,144nm,1.3s						
MIR	Mirnyy	89.20	181	*e*P	P	02 34 00.0	+0.9
MIR				*i*		02 34 31.0	
MIR				pmax	pmax		
	comp=Z,108nm,1.5s						
JIS	Juneau Island	89.59	23	*e*P	P	02 34 03.0	+1.7
	comp=Z,88nm,1.0s						
CASY	Casey	89.78	173	*e*P	P	02 34 01.8	+0.1
	comp=Z,74nm,1.4s						
SIT	Sitka	90.12	25	*e*P	P	02 34 05.4	+1.6
	comp=Z,96nm,1.1s						
SIT	Sitka	90.12	25	*e*P	P	02 34 05.4	+1.6
SIT				pmax	pmax		
	comp=Z,96nm,1.1s						
DLBC	Dease Lake	91.01	22	P	P	02 34 09.3	+1.2
	comp=Z,64nm,1.1s,baz=349,slow=5.5,SNR=25						
DLBC				PP	PP	02 37 46.7	+2.1
	comp=Z,15nm,1.1s,baz=65,slow=5.2,SNR=3.9						
DLBC	Dease Lake	91.01	22	*e*P	P	02 34 09.7	+1.6
DLBC				*e*PP	PP	02 37 42.5	-2.1
WRAK	Wrangell Islan	91.71	24	*e*P	P	02 34 11.9	+0.7
	comp=Z,54nm,1.0s						
YKW3	Yellowknife Ar	91.76	13	*e*P	P	02 34 11.3	0.0
	comp=Z,119nm,1.1s						
YKA	Yellowknife Ar	91.82	13	P	P	02 34 11.7	+0.1
	comp=Z,54nm,0.8s,baz=329,slow=4.3,SNR=204						
YKA				PP	PP	02 37 47.8	-2.9
	comp=Z,5.5nm,0.7s,baz=335,slow=7.7,SNR=6.3						
YKA				PKKP	PKKPbc	02 51 28.8	-2.1
	comp=Z,0.5nm,0.4s,baz=158,slow=2.3,SNR=8.6						
YKA				SKKPbc	SKKPbc	02 55 00.4	+0.7
	comp=Z,0.4nm,0.5s,baz=156,slow=2.1,SNR=4.2						
YKA				LR	LR	03 19 15.9	
	comp=Z,26nm,20.7s,baz=352,slow=38						
KOWA	Kowa	91.86	286	P	P	02 34 14.1	+1.4
	comp=Z,10nm,0.7s,baz=89,slow=3.7,SNR=17						
KOWA				LR	LR	03 22 09.3	
	comp=Z,547nm,18.0s,baz=68,slow=40						
KOWA	Kowa	91.86	286	*e*P	P	02 34 13.9	+1.2
	comp=Z,77nm,1.5s						
CRAG	Craig	92.12	25	*e*P	P	02 34 14.4	+1.3
	comp=Z,42nm,1.0s						
MAW	Mawson	93.22	192	P	P	02 34 18.4	+0.7
	comp=Z,16nm,0.9s,baz=5.7,slow=6.8,SNR=12						
MAW				LR	LR	03 10 29.6	
	comp=Z,168nm,19.5s,baz=37,slow=32						
H02N1	VAN INLET T-PH	93.98	26	P	P	02 34 22.5	+0.6
DIB	Dawson Inlet,	94.05	26	*e*P	P	02 34 22.8	+0.8
	comp=Z,24nm,0.9s						
H02S1	DAWSON INLET T	94.05	26	P	P	02 34 22.8	+0.8
PMAR	Madeira	94.16	308	*e*P	P	02 34 25.3	+2.0
	comp=Z,62nm,1.4s						
PMOZ	Porto Moniz, M	94.31	308	*e*LR	LR	03 10 33.9	
	comp=Z,267nm,20.0s						
DBIC	Dimbokro	95.78	280	P	P	02 34 31.8	+1.1
	comp=Z,3.1nm,0.4s,baz=51,slow=6.1,SNR=12						
DBIC				LR	LR	03 22 06.3	
	comp=Z,267nm,19.6s,baz=46,slow=38						
DBIC	Dimbokro	95.78	280	*e*P	P	02 34 31.7	+0.9
	comp=Z,37nm,1.4s						
DBIC	Dimbokro	95.78	280	*e*P	P	02 34 31.7	+0.9
DBIC				pmax	pmax		
	comp=Z,37nm,1.4s						
KIC	Kosan Boka	95.80	279	*e*PKP1	P	02 34 36.0	+5.1
	comp=Z,80nm,1.4s						
TIC	Toumodi	95.94	280	*e*PKP1	P	02 34 34.5	+3.0
LIC	Lamto	96.11	279	*e*PKP1	P	02 34 34.1	+1.8
	comp=Z,46nm,1.2s						
AFI	Afiamalu	98.86	101	LR	LR	03 17 23.1	
	comp=Z,90nm,19.8s,baz=289,slow=34						
SYO	Syowa Base	99.75	197	⇑*e*Pdiff	Pdif	02 34 49.0	+1.8
SYO	Syowa Base	99.75	197	⇑*e*PKKPbc	PKKPbc	02 51 07.0	-3.6
LLLB	Lillooet	100.12	22	*e*Pdif	Pdif	02 34 51.5	+1.8
FFC	Flin Flon	101.42	10	*e*Pdif	Pdif	02 34 55.3	0.0
FFC	Flin Flon	101.42	10	*e*P	Pdif	02 34 55.3	0.0
B08A	Colville Reser	102.91	22	*e*Pdif	Pdif	02 35 03.5	+1.4
J04D	Umpqua Nationa	106.14	27	P	PKiKP	02 39 28.2	0.0
	baz=325						
EGMT	Eagleton	106.15	17	P	PKiKP	02 39 27.9	-0.1
	baz=337						
EGMT	Eagleton	106.15	17	*e*Pdif	Pdif	02 35 17.9	+1.3
EGMT				*e*PKP	PKiKP	02 39 28.4	+0.4
HUMO	Hull Mountain	106.30	28	*e*PKP	PKiKP	02 39 29.0	+0.7
J05D	Fort Rock, OR	106.46	26	P	PKiKP	02 39 28.7	-0.1
	baz=326						
ULM	Lac du Bonnet	106.60	7	Pdiff	Pdif	02 35 20.0	+1.6
	comp=Z,2.8nm,0.6s,baz=337,slow=4.1,SNR=4.6						
ULM				PKiKP	PKiKP	02 39 29.1	+0.5
	comp=Z,4.1nm,0.7s,baz=28,slow=4.3,SNR=3.9						
ULM				PKKPbc	PKKPbc	02 50 44.8	-4.5
	comp=Z,2.9nm,0.7s,baz=255,slow=3.5,SNR=3.9						
ULM	Lac du Bonnet	106.60	7	P	Pdif	02 35 20.0	+1.6
BMO	Blue Mountains	106.64	23	*e*PKP	PKiKP	02 39 29.9	+0.9
YBH	Yreka Blue Hor	107.12	28	PKKPbc	PKKPbc	02 50 46.3	-1.2
	comp=Z,0.4nm,0.4s,baz=135,slow=8.6,SNR=3.7						
M02C	Callahan	107.33	28	P	PKiKP	02 39 30.5	+0.2
	baz=324						
J08A	Circle Bar Ran	107.49	24	*e*Pdif	Pdif	02 35 25.1	+2.5
VNDA	Vanda	107.55	168	Pdiff	Pdif	02 35 24.4	+2.5
	comp=Z,0.7nm,0.6s,baz=344,slow=4.7,SNR=9.0						
VNDA				PP	PP	02 39 47.8	-3.0
	comp=Z,2.1nm,1.0s,baz=296,slow=7.4,SNR=7.8						
VNDA				PKKPbc	PKKPbc	02 50 45.4	-1.8
	comp=Z,1.1nm,0.8s,baz=318,slow=3.2,SNR=4.4						
N02D	Trinity Center	107.74	29	P	PKiKP	02 39 31.5	+0.4
	baz=324						
BOZ	Bozeman (W)	107.84	19	P	PKiKP	02 39 31.3	0.0
	baz=335						
BOZ	Bozeman (W)	107.84	19	*e*PKP	PKiKP	02 39 31.4	+0.1
A33A	Warroad	107.94	7	P	PKiKP	02 39 31.2	0.0
	baz=351						
WVOR	Wild Horse Val	108.21	25	*e*PKP	PKiKP	02 39 32.2	+0.2
LAO	LASA Array	108.27	15	*e*PKP	PKiKP	02 39 33.0	+1.0
MFID	Camas Ranch	108.42	23	*e*PKP	PKiKP	02 39 32.9	+0.5
B34A	Aery, Baudette	108.47	6	P	PKiKP	02 39 31.9	-0.3
	baz=351						
B35A	Bob, Littlefor	108.68	6	P	PKiKP	02 39 32.2	-0.4
	baz=352						
B35A	Bob, Littlefor	108.68	6	*e*Pdif	Pdif	02 35 28.1	+0.3
O03D	Paynes Creek	108.69	28	P	PKiKP	02 39 32.9	-0.1
	baz=325						
HLID	Hailey	108.78	22	P	PKiKP	02 39 34.2	+1.0
	baz=332						
HLID	Hailey	108.78	22	*e*Pdif	Pdif	02 35 30.9	+2.3
RLMT	Red Lodge	108.95	17	P	PKiKP	02 39 33.2	-0.3
	baz=337						
RLMT	Red Lodge	108.95	17	*e*PKP	PKiKP	02 39 33.1	-0.4
EYMN	Ely	109.27	4	P	PKiKP	02 39 33.8	+0.1
	baz=354						
EYMN	Ely	109.27	4	*e*PKP	PKiKP	02 39 33.8	+0.1
C35A	Jirik Farms, M	109.31	6	P	PKiKP	02 39 33.8	0.0
	baz=352						
C36A	Pine Crest Far	109.35	5	P	PKiKP	02 39 33.9	0.0
	baz=353						
D41A	Chassel	110.30	2	P	PKiKP	02 39 34.9	-0.7
	baz=357						
PKME	Peaks-Kenny Pk	110.50	348	P	PKiKP	02 39 36.2	+0.2
	baz=16						
E36A	McGregor	110.55	6	P	PKiKP	02 39 36.3	+0.1
	baz=353						
E40A	Wakefield	110.86	3	P	PKiKP	02 39 36.9	+0.1
	baz=356						
E41A	Kenton	110.88	2	P	PKiKP	02 39 36.5	-0.2
	baz=357						
E39A	Mellen	110.89	4	P	PKiKP	02 39 36.4	-0.4
	baz=355						
E42A	Champion	110.94	2	P	PKiKP	02 39 36.7	-0.3
	baz=358						
E43A	Lone Tree Farm	111.02	1	P	PKiKP	02 39 36.5	-0.5
	baz=359						
BW06	Boulder Array	111.04	19	P	PKiKP	02 39 37.0	-0.5
	baz=336						
BW06	Boulder Array	111.04	19	*e*PKP	PKiKP	02 39 36.8	-0.7
BW06				*e*SKPdf	SKiKP	02 43 04.6	-1.2
PDAR	Pinedale Array	111.04	19	Pdiff	Pdif	02 35 41.4	+2.7
	comp=Z,0.4nm,0.7s,baz=320,slow=3.9,SNR=4.8						
PDAR				PKiKP	PKiKP	02 39 37.5	+0.1
	comp=Z,4.2nm,0.8s,baz=49,slow=1.3,SNR=19						
PDAR				SKP		02 43 04.7	
	comp=Z,1.6nm,0.5s,baz=137,slow=1.7,SNR=11						
PDAR				PKKPbc	PKKPbc	02 50 33.4	-2.0
	comp=Z,0.4nm,0.4s,baz=155,slow=5.0,SNR=4.7						
E45A	Wooded Hills,	111.05	360	P	PKiKP	02 39 37.4	+0.4
	baz=0.5						
CMB	Columbia Colle	111.17	29	*e*PKP	PKiKP	02 39 36.8	-0.8
RSSD	Black Hills	111.20	14	P	PKiKP	02 39 37.4	-0.4
	baz=342						
RSSD	Black Hills	111.20	14	*e*Pdif	Pdif	02 35 40.3	+1.0
RSSD				*e*PKP	PKiKP	02 39 37.6	-0.2
RSSD	Black Hills	111.20	14	*e*P	Pdif	02 35 40.3	+1.0
RSSD				*e*		02 39 37.6	
F38A	Pierce - Schro	111.22	5	P	PKiKP	02 39 37.7	+0.2
	baz=354						
F39A	Loretta	111.33	4	P	PKiKP	02 39 37.1	-0.6
	baz=355						
F40A	Park Falls	111.37	3	P	PKiKP	02 39 37.6	-0.2
	baz=356						
F37A	Hinrichs Farm,	111.39	5	P	PKiKP	02 39 37.4	-0.3
	baz=353						
F44A	Big Bay de Noc	111.43	1	P	PKiKP	02 39 37.9	+0.1
	baz=359						
HWUT	Hardware Ranch	111.47	21	*e*PKP	PKiKP	02 39 38.2	-0.1
HWUT				*e*SKPdf	SKPdf	02 43 05.5	-1.1
F43A	Flat Rock, Esc	111.56	1	P	PKiKP	02 39 37.0	-1.0
	baz=359						
F41A	Three Lakes	111.60	3	P	PKiKP	02 39 37.2	-1.0
	baz=357						
F45A	CMU Biological	111.72	360	P	PKiKP	02 39 38.5	+0.2
	baz=0.2						
NVAR	Mina Array Bea	111.74	27	Pdiff	Pdif	02 35 46.2	+4.3
	comp=Z,0.3nm,0.5s,baz=310,slow=4.5,SNR=3.0						
NVAR				PKiKP	PKiKP	02 39 40.2	+1.3
	comp=Z,4.4nm,0.8s,baz=290,slow=1.8,SNR=20						
NVAR				SKP		02 43 07.0	
	comp=Z,4.7nm,0.8s,baz=272,slow=2.5,SNR=12						
NVAR				PKKPbc	PKKPbc	02 50 32.1	-0.8
	comp=Z,0.4nm,0.6s,baz=133,slow=4.0,SNR=4.1						
SPMN	Marine on St.	111.87	5	P	PKiKP	02 39 38.5	-0.2
	baz=353						
SUSD	Miller	111.87	10	P	PKiKP	02 39 38.9	+0.2
	baz=347						
G39A	Holcombe	111.94	4	P	PKiKP	02 39 39.0	+0.2
	baz=355						
K22A	Casper	111.98	16	P	PKiKP	02 39 39.0	-0.2
	baz=339						
G38A	Ridgeland	112.00	5	P	PKiKP	02 39 38.5	-0.5
	baz=354						
G40A	Rib Lake	112.01	3	P	PKiKP	02 39 38.9	-0.1
	baz=356						
G42A	Mountain	112.12	2	P	PKiKP	02 39 39.3	+0.1
	baz=357						
G43A	Wallace	112.12	1	P	PKiKP	02 39 39.3	+0.1
	baz=358						
H35A	Sunnyside Ranc	112.19	7	P	PKiKP	02 39 39.3	0.0
	baz=351						
DUG	Dugway, Tooele	112.32	22	P	PKiKP	02 39 40.7	+0.8
	baz=333						
H36A	Jessenland, He	112.41	6	P	PKiKP	02 39 40.2	+0.5
	baz=352						
H39A	Augusta	112.53	4	P	PKiKP	02 39 39.9	-0.1
	baz=354						
GLMI	Grayling	112.57	359	P	PKiKP	02 39 40.4	+0.4
	baz=1.1						
H40A	Chili	112.65	4	P	PKiKP	02 39 39.6	-0.6
	baz=355						
H41A	Junction City	112.69	3	P	PKiKP	02 39 39.9	-0.4
	baz=356						
QSPA	South Pole Qui	112.74	180	PKiKP	PKiKP	02 39 40.5	+0.9
	comp=Z,12nm,1.2s,baz=230,slow=2.3,SNR=5.2						
QSPA				SKP		02 43 07.6	

	comp=Z,16nm,1.1s,baz=288,slow=4.0,SNR=5.6						
QSPA				PKKPbc	PKKPbc	02 50 29.1	-1.7
	comp=Z,3.3nm,0.7s,baz=158,slow=1.6,SNR=7.5						
QSPA	South Pole Qui	112.74	180	*e*PKP		02 39 39.9	
QSPA				*e*SKPdf	SKPdf	02 43 07.5	-0.3
QSPA				PKKPbc	PKKPbc	02 50 29.1	-1.7
H42A	Shiocton	112.84	2	P	PKiKP	02 39 40.3	-0.3
	baz=357						
R11A	Troy Canyon, C	112.91	25	P	PKiKP	02 39 42.0	+0.9
	baz=330						
ECSD	EROS Data Cent	112.92	9	P	PKiKP	02 39 40.8	0.0
	baz=349						
ECSD	EROS Data Cent	112.92	9	*e*PKP	PKiKP	02 39 40.8	0.0
ECSD				*e*SKPdf	SKPdf	02 43 08.4	-0.7
I41A	Arkdale	113.24	3	P	PKiKP	02 39 40.5	-0.8
	baz=356						
I39A	Houston	113.34	5	P	PKiKP	02 39 40.9	-0.6
	baz=354						
I40A	Norwalk	113.36	4	P	PKiKP	02 39 40.9	-0.7
	baz=355						
I42A	Draeger Farm,	113.45	3	P	PKiKP	02 39 40.9	-0.8
	baz=357						
CWC	Cottonwood Cre	113.51	28	P	PKiKP	02 39 42.2	-0.1
	baz=328						
J36A	Seneca 1, Swea	113.60	7	P	PKiKP	02 39 41.7	-0.3
	baz=351						
J37A	Redenius Farm,	113.70	6	P	PKiKP	02 39 42.1	-0.2
	baz=352						
N23A	Red Feather La	113.78	17	P	PKiKP	02 39 42.8	-0.1
	baz=340						
J38A	Wedel Dairy, R	113.79	5	P	PKiKP	02 39 41.6	-0.8
	baz=353						
SNAA	Sanae	113.80	200	P	PKiKP	02 39 41.7	+0.1
SNAA	Sanae	113.80	200	P	PKKPbc	02 50 24.7	-2.0
SNAA	Sanae	113.80	200	PKiKP	PKiKP	02 39 41.8	+0.3
	comp=Z,0.8nm,0.3s,baz=97,slow=8.8,SNR=25						
SNAA				SKP		02 43 10.1	
	comp=Z,4.5nm,1.0s,baz=350,slow=3.5,SNR=4.4						
SNAA				PKKPab	PKKPbc	02 50 22.4	-4.3
	comp=Z,1.7nm,0.5s,baz=273,slow=5.4,SNR=16						
J39A	Decorah	113.84	5	P	PKiKP	02 39 41.6	-0.9
	baz=354						
O20A	White River Ci	113.84	19	P	PKiKP	02 39 43.1	+0.2
	baz=337						
J40A	Soldiers Grove	113.84	4	P	PKiKP	02 39 41.6	-0.9
	baz=355						
TPNV	Topopah Spring	113.85	26	P	PKiKP	02 39 43.8	+0.9
	baz=329						
DAC	Darwin (Calif)	113.86	28	*e*PKP	PKiKP	02 39 42.5	-0.5
DAC				*e*SKPdf	SKPdf	02 43 11.4	0.0
DAC	Darwin (Calif)	113.86	28	*e*PKIKP	PKiKP	02 39 42.5	-0.5
DAC				*e*		02 43 11.4	
J41A	Loganville	113.92	3	P	PKiKP	02 39 41.6	-1.0
	baz=356						
J43A	Natural Harves	113.98	2	P	PKiKP	02 39 42.2	-0.5
	baz=357						
J42A	Columbus	114.01	3	P	PKiKP	02 39 42.3	-0.5
	baz=357						
MPMC	Manual Prospec	114.09	28	P	PKPdf	02 39 44.5	+1.0
	baz=328						
K37A	Belmond	114.23	6	P	PKPdf	02 39 42.6	-0.7
	baz=352						
K36A	Gilmore City	114.27	7	P	PKPdf	02 39 43.0	-0.4
	baz=351						
JFWS	Jewell Farm	114.36	4	P	PKPdf	02 39 42.9	-0.6
	baz=355						
K38A	Parkersburg	114.43	6	P	PKPdf	02 39 42.9	-0.7
	baz=353						
K39A	Oelwein	114.45	5	P	PKPdf	02 39 42.4	-1.3
	baz=354						
K40A	Colesburg	114.51	4	P	PKPdf	02 39 43.3	-0.5
	baz=354						
K42A	Prairie Point,	114.54	3	P	PKPdf	02 39 43.3	-0.6
	baz=356						
BINY	Binghamton	114.58	352	P	PKPdf	02 39 44.1	+0.1
	baz=9.8						
BINY	Binghamton	114.58	352	*e*PKP	PKPdf	02 39 44.1	+0.1
BINY				*e*SKPdf	SKPdf	02 43 12.0	-0.4
L36A	Harm Buss Farm	114.77	7	P	PKPdf	02 39 44.1	-0.3
	baz=351						
EDW2	Edwards Air Fo	114.86	29	P	PKPdf	02 39 45.4	+0.6
	baz=327						
ISCO	Idaho Springs	114.89	17	P	PKPdf	02 39 44.6	-0.5
	baz=340						
ISCO	Idaho Springs	114.89	17	*e*PKP	PKPdf	02 39 44.2	-0.8
ISCO	Idaho Springs	114.89	17	*e*PKIKP	PKPdf	02 39 44.2	-0.9
L38A	Oak Wood Farm,	114.92	6	P	PKPdf	02 39 44.5	-0.1
	baz=353						
BGNE	Belgrade	114.96	10	P	PKPdf	02 39 44.2	-0.5
	baz=347						
L39A	Vinton	115.02	5	P	PKPdf	02 39 44.3	-0.5
	baz=354						
GSC	Goldstone, Bar	115.02	28	P	PKPdf	02 39 46.4	+1.2
	baz=328						
ERPA	Erie	115.07	355	P	PKPdf	02 39 44.5	-0.4
	baz=5.8						
L40A	Anamosa	115.14	5	P	PKPdf	02 39 44.5	-0.6
	baz=354						
L43A	Garden Prairie	115.16	2	P	PKPdf	02 39 44.6	-0.5
	baz=357						
L41A	Preston	115.18	4	P	PKPdf	02 39 44.2	-0.9
	baz=355						
L49A	Milan	115.27	358	P	PKPdf	02 39 45.2	-0.1
	baz=2.0						
TUQ	Turquoise Moun	115.28	27	P	PKPdf	02 39 46.9	+1.2
	baz=329						
PV19	Morning Glory	115.29	20	*e*PKPdf	PKPdf	02 39 47.3	+1.5
L42A	Oliver, Polo	115.30	3	P	PKPdf	02 39 44.9	-0.5
	baz=356						
PV11	David Mesa, Pa	115.33	20	*e*PKPdf	PKPdf	02 39 48.6	+2.8
PV12	Saucer Basin,	115.34	20	*e*PKPdf	PKPdf	02 39 46.6	+0.8
PV12				*e*PP	PP	02 40 39.3	-7.2
PV18	Skein Mesa, Pa	115.37	20	*e*PKPdf	PKPdf	02 39 47.9	+2.0
PV18				*e*PP	PP	02 40 38.4	-8.3
L47A	Sherwood	115.42	360	P	PKPdf	02 39 44.9	-0.7
	baz=0.5						
L48A	N Adams	115.45	359	P	PKPdf	02 39 45.0	-0.7
	baz=1.3						
PAL	Palisades	115.45	350	P	PKPdf	02 39 45.6	-0.1
	baz=12						
PV02	Paradox Valley	115.46	20	*e*PKPdf	PKPdf	02 39 47.2	+1.1
PV13	Radium Mtn., P	115.48	20	*e*PKPdf	PKPdf	02 39 47.2	+1.1
ODNJ	Ogdensburg	115.49	351	*e*PKPdf	PKPdf	02 39 46.2	+0.5
M37A	Trindle Farm,	115.53	7	P	PKPdf	02 39 45.7	-0.1
	baz=352						
VNA1	Neumayer--Stat	115.59	201	P	PKPdf	02 39 45.6	+0.8
VNA1	Neumayer--Stat	115.59	201	P	PKKPbc	02 50 18.2	-2.2
M38A	Pleasantville	115.61	6	P	PKPdf	02 39 45.1	-0.9
	baz=352						
M39A	Webster	115.64	5	P	PKPdf	02 39 45.5	-0.5
	baz=353						
M54A	Oil Creek Stat	115.65	355	P	PKPdf	02 39 45.7	-0.3
	baz=6.2						
M40A	Post Highland	115.77	5	P	PKPdf	02 39 45.6	-0.7
	baz=354						
Q24A	Divide	115.80	17	P	PKPdf	02 39 46.0	-0.9
	baz=340						
N59A	State Game Lan	115.81	352	P	PKPdf	02 39 46.1	-0.3
	baz=10						
M41A	Milan	115.87	4	P	PKPdf	02 39 45.6	-0.9
	baz=355						
M43A	Waltham Townsh	115.89	3	P	PKPdf	02 39 45.8	-0.7
	baz=357						
M49A	Liberty Center	115.91	359	P	PKPdf	02 39 45.8	-0.7
	baz=1.8						
M48A	Edgerton	115.91	359	P	PKPdf	02 39 46.0	-0.5
	baz=1.0						
GMRC	Granite Mounta	115.95	27	P	PKPdf	02 39 47.8	+0.9
	baz=329						
M45A	Boilermakers S	116.00	1	P	PKPdf	02 39 46.9	+0.2
	baz=358						
VNA3	Neumayer Olymp	116.00	200	P	PKPdf	02 39 45.6	-0.1
VNA3	Neumayer Olymp	116.00	200	P	PKKPbc	02 50 16.9	-2.1
N36A	Muff Farm, Cla	116.01	8	P	PKPdf	02 39 46.8	+0.1
	baz=350						
N37A	Lee Faris, Mou	116.15	7	P	PKPdf	02 39 46.9	-0.1
	baz=351						
N39A	Derby Farms, D	116.21	6	P	PKPdf	02 39 46.7	-0.4
	baz=353						
N39A	Derby Farms, D	116.21	6	*e*PKPdf	PKPdf	02 39 46.7	-0.4
N54A	Moraine State	116.22	355	P	PKPdf	02 39 46.8	-0.3
	baz=5.8						
N38A	Joes South For	116.22	6	P	PKPdf	02 39 46.4	-0.7
	baz=352						
N40A	Mertquake, Sal	116.28	5	P	PKPdf	02 39 46.5	-0.8
	baz=354						
MURC	Murrieta	116.29	29	P	PKPdf	02 39 47.7	+0.2
	baz=328						
SSPA	Standing Stone	116.35	353	P	PKPdf	02 39 47.6	+0.2
	baz=8.0						
SSPA	Standing Stone	116.35	353	*e*PKPdf	PKPdf	02 39 47.4	0.0
SSPA				*e*SKPdf	SKPdf	02 43 15.3	-0.4
N43A	Stutzman Famil	116.38	3	P	PKPdf	02 39 47.2	-0.2
	baz=356						
KSCO	Kaye Shedlock’	116.39	15	P	PKPdf	02 39 47.5	-0.2
	baz=343						
KSCO	Kaye Shedlock’	116.39	15	*e*PKPdf	PKPdf	02 39 48.1	+0.4
MVCO	Mesa Verde	116.45	20	P	PKPdf	02 39 48.3	+0.3
	baz=337						
MVCO	Mesa Verde	116.45	20	*e*PKPdf	PKPdf	02 39 48.5	+0.4
MVCO				*e*SKPdf	SKPdf	02 43 16.4	0.0
S22A	4UR Ranch, Cre	116.47	19	P	PKPdf	02 39 48.5	+0.4
	baz=338						
S22A	4UR Ranch, Cre	116.47	19	*e*PKPdf	PKPdf	02 39 48.7	+0.6
BELC	Belle Mtn. Jos	116.48	28	P	PKPdf	02 39 49.1	+1.0
	baz=329						
N46A	Monticello	116.50	1	P	PKPdf	02 39 47.1	-0.6
	baz=359						
N41A	Harden Midland	116.51	4	P	PKPdf	02 39 46.9	-0.8
	baz=355						
N41A	Harden Midland	116.51	4	*e*PKPdf	PKPdf	02 39 47.2	-0.5
N44A	Piper City	116.57	2	P	PKPdf	02 39 48.0	+0.2
	baz=358						
N50A	Nevada	116.58	358	P	PKPdf	02 39 47.8	0.0
	baz=2.6						
FRD	Ford Ranch, An	116.64	29	P	PKPdf	02 39 49.2	+0.9
	baz=328						
IRM	Iron Mountain	116.71	27	P	PKPdf	02 39 49.4	+1.1
	baz=330						
O56A	Blue Knob Stat	116.78	354	P	PKPdf	02 39 48.7	+0.4
	baz=7.3						
O56A	Blue Knob Stat	116.78	354	*e*PKPdf	PKPdf	02 39 48.5	+0.2
SDCO	Great Sand Dun	116.85	17	P	PKPdf	02 39 48.9	+0.1
	baz=340						
SDCO	Great Sand Dun	116.85	17	*e*PKPdf	PKPdf	02 39 48.4	-0.5
SDCO				*e*SKPdf	SKPdf	02 43 16.9	-0.3
O38A	Galt	116.86	7	P	PKPdf	02 39 47.8	-0.6
	baz=352						
PDMCI	Parker Dam,Lak	117.00	26	P	PKPdf	02 39 50.0	+1.2
	baz=331						
WUAZ	Wupatki	117.00	23	P	PKPdf	02 39 50.2	+1.2
	baz=334						
WUAZ	Wupatki	117.00	23	*e*PKPdf	PKPdf	02 39 50.4	+1.4
WUAZ				*e*SKPdf	SKiKP	02 43 18.0	+0.4
BC3	Big Chuckawall	117.01	28	P	PKPdf	02 39 50.4	+1.3
	baz=329						
SFIN	Lafayette	117.01	1	P	PKPdf	02 39 48.4	-0.2
	baz=359						
O40A	La Belle	117.02	5	P	PKPdf	02 39 48.3	-0.4
	baz=354						
O43A	Sugar Creek Fa	117.03	3	P	PKPdf	02 39 48.9	+0.1
	baz=356						
O42A	Bath	117.07	4	P	PKPdf	02 39 48.2	-0.6
	baz=356						
O41A	Passleys Farm,	117.10	4	P	PKPdf	02 39 48.0	-0.8
	baz=355						
O45A	Potomac	117.12	2	P	PKPdf	02 39 48.8	-0.1
	baz=358						
O48A	Farmland	117.14	360	P	PKPdf	02 39 48.4	-0.6
	baz=0.6						
O47A	Sheridan	117.16	0	P	PKPdf	02 39 48.6	-0.4
	baz=360						
O44A	Mansfield	117.20	2	P	PKPdf	02 39 48.8	-0.2
	baz=357						
O49A	Covington	117.20	359	P	PKPdf	02 39 48.6	-0.5
	baz=1.4						
O50A	Cable	117.22	358	P	PKPdf	02 39 48.7	-0.5
	baz=2.1						
MONP2	Monument Peak	117.23	29	P	PKPdf	02 39 50.7	+1.1
	baz=328						
P37A	Lathrop	117.29	7	P	PKPdf	02 39 49.0	-0.3
	baz=351						
Y12C	Blythe	117.32	27	P	PKPdf	02 39 50.5	+1.0
	baz=330						
Y12C	Blythe	117.32	27	*e*PKPdf	PKPdf	02 39 51.1	+1.7
P38A	Dawn	117.35	7	P	PKPdf	02 39 49.0	-0.4
	baz=352						
P38A	Dawn	117.35	7	*e*PKPdf	PKPdf	02 39 49.0	-0.4
KSU1	Kansas State U	117.46	10	P	PKPdf	02 39 49.7	+0.1
	baz=349						
KSU1	Kansas State U	117.46	10	*e*PKPdf	PKPdf	02 39 49.7	+0.1
KSU1				*e*SKPdf	SKPdf	02 43 17.8	-0.2
SWSC	Sam W. Stewart	117.46	28	P	PKPdf	02 39 51.0	+1.3
	baz=329						
MCWV	Mont Chateau	117.50	355	P	PKPdf	02 39 50.1	+0.4
	baz=6.1						
P41A	Barry, Barry	117.53	5	P	PKPdf	02 39 49.4	-0.3
	baz=354						
P39B	Salisbury	117.56	6	P	PKPdf	02 39 49.5	-0.3
	baz=353						
IKP	In-Ko-Pah, Jac	117.58	29	P	PKPdf	02 39 51.0	+0.9
	baz=328						
P40A	Paris	117.59	6	P	PKPdf	02 39 49.1	-0.8
	baz=353						
P40A	Paris	117.59	6	*e*PKPdf	PKPdf	02 39 49.4	-0.4
P43A	Skaggs, Pawnee	117.66	3	P	PKPdf	02 39 50.2	+0.2
	baz=356						
P42A	Winchester	117.67	4	P	PKPdf	02 39 49.8	-0.2
	baz=355						
P42A	Winchester	117.67	4	*e*PKPdf	PKPdf	02 39 49.8	-0.2
P42A				*e*PP	PP	02 40 58.0	-4.2
T25A	Trinidad	117.71	17	P	PKPdf	02 39 50.7	+0.2
	baz=341						
T25A	Trinidad	117.71	17	*e*PKPdf	PKPdf	02 39 51.0	+0.5
P50A	Jamestown	117.77	358	P	PKPdf	02 39 49.8	-0.4
	baz=2.0						
P46A	Rosedale	117.77	1	P	PKPdf	02 39 49.9	-0.3
	baz=358						
GLA	Glamis	117.79	28	P	PKPdf	02 39 51.8	+1.3
	baz=330						
GLA	Glamis	117.79	28	*e*PKPdf	PKPdf	02 39 52.2	+1.8
GLA	Glamis	117.79	28	*e*PKIKP	PKPdf	02 39 52.2	+1.8
P45A	Graceland, Par	117.84	2	P	PKPdf	02 39 49.7	-0.6
	baz=358						
P45A	Graceland, Par	117.84	2	*e*PKPdf	PKPdf	02 39 50.1	-0.2
P49A	Miami Univ. Ec	117.86	359	P	PKPdf	02 39 49.7	-0.7
	baz=1.0						
P44A	Sand Creek, Wi	117.87	3	P	PKPdf	02 39 50.2	-0.2
	baz=357						
P47A	Martinsville	117.91	0	P	PKPdf	02 39 49.9	-0.6
	baz=359						
P48A	Milroy	117.94	360	P	PKPdf	02 39 49.8	-0.7
	baz=0.3						
W18A	Petrified Fore	117.94	22	P	PKPdf	02 39 51.9	+1.0
	baz=335						
W18A	Petrified Fore	117.94	22	*e*PKPdf	PKPdf	02 39 52.4	+1.5
Q39A	Willow Grove F	117.98	6	P	PKPdf	02 39 50.2	-0.4
	baz=352						
Q38A	Cooks Store, C	118.00	7	P	PKPdf	02 39 50.2	-0.4
	baz=352						
Q40A	Laux Farm, Aux	118.12	6	P	PKPdf	02 39 50.3	-0.6
	baz=353						
Q41A	Truxton	118.23	5	P	PKPdf	02 39 50.7	-0.4
	baz=354						
Q42A	Golden Eagle	118.32	4	P	PKPdf	02 39 51.0	-0.2
	baz=355						
Q51A	Peebles	118.33	358	P	PKPdf	02 39 51.2	-0.1
	baz=2.5						
Q43A	New Douglas	118.35	4	P	PKPdf	02 39 51.2	-0.1
	baz=356						
Q49A	Aurora	118.39	359	P	PKPdf	02 39 50.5	-0.9
	baz=0.8						
Q44A	Meyer Farm, Va	118.42	3	P	PKPdf	02 39 51.3	-0.1
	baz=356						
Q47A	Bedord North L	118.46	1	P	PKPdf	02 39 51.5	0.0
	baz=359						
Q45A	Warren Harvey,	118.46	2	P	PKPdf	02 39 51.4	-0.1
	baz=357						
Q48A	North Vernon	118.47	0	P	PKPdf	02 39 51.3	-0.2
	baz=360						
CBN	Corbin Frederi	118.69	353	P	PKPdf	02 39 52.2	+0.3
	baz=8.7						
CBN	Corbin Frederi	118.69	353	*e*PKPdf	PKPdf	02 39 52.2	+0.3
R39A	Chumby, Stover	118.70	7	P	PKPdf	02 39 51.5	-0.5
	baz=352						
R38A	Fenwick Farm,	118.73	7	P	PKPdf	02 39 51.1	-1.0
	baz=351						
R40A	Maddies Statio	118.80	6	P	PKPdf	02 39 51.9	-0.3
	baz=353						
R40A	Maddies Statio	118.80	6	*e*PKPdf	PKPdf	02 39 52.0	-0.3
R41A	Rosebud	118.87	5	P	PKPdf	02 39 52.0	-0.3
	baz=354						
CVRD	Centerville Ro	118.88	353	*e*PKPdf	PKPdf	02 39 53.0	+0.6
R42A	Luebbering	118.93	5	P	PKPdf	02 39 51.9	-0.5
	baz=355						
R52A	Catlettsburg	118.99	357	P	PKPdf	02 39 52.3	-0.2
	baz=3.2						
R43A	Red Bud	118.99	4	P	PKPdf	02 39 52.0	-0.5
	baz=356						
R48A	Northridge Ran	119.00	0	P	PKPdf	02 39 52.5	0.0
	baz=360						
R45A	Skylar, Fairfi	119.06	2	P	PKPdf	02 39 52.8	+0.2
	baz=357						
R51A	Hillsboro	119.06	358	P	PKPdf	02 39 52.2	-0.5
	baz=2.2						
R44A	Waltonville	119.07	3	P	PKPdf	02 39 52.6	-0.1
	baz=356						
R47A	Wooly Knot Far	119.10	1	P	PKPdf	02 39 52.5	-0.2
	baz=359						
R50A	Paris	119.10	359	P	PKPdf	02 39 51.9	-0.9
	baz=1.4						
R49A	Shelbyville	119.11	360	P	PKPdf	02 39 52.4	-0.4
	baz=0.6						
CCM	Cathedral Cave	119.12	5	P	PKPdf	02 39 53.1	+0.3
	baz=354						
CCM	Cathedral Cave	119.12	5	*e*PKPdf	PKPdf	02 39 53.4	+0.6
CCM				*e*SKPdf	SKiKP	02 43 21.5	+0.1
R46A	Gibon Southern	119.16	2	P	PKPdf	02 39 53.0	+0.2
	baz=358						
WCI	Wyandotte Cave	119.17	1	P	PKPdf	02 39 52.7	-0.2
	baz=359						
WCI	Wyandotte Cave	119.17	1	*e*PKPdf	PKPdf	02 39 52.7	-0.2
WCI				*e*PP	PP	02 41 09.4	-3.1
WCI				*e*SKPdf	SKPdf	02 43 20.9	-0.4
WCI	Wyandotte Cave	119.17	1	*e*PKIKP	PKPdf	02 39 52.7	-0.2
ANMO	Albuquerque	119.17	19	PKP	PKPdf	02 39 54.1	+0.8
	comp=Z,18nm,0.9s,baz=276,slow=0.5,SNR=56						
ANMO				SKP		02 43 22.1	
	comp=Z,8.6nm,0.9s,baz=204,slow=1.8,SNR=9.4						
ANMO				PKKPbc	PKKPbc	02 50 06.5	-0.7
	comp=Z,1.0nm,0.5s,baz=171,slow=2.8,SNR=5.2						
FVM	French Village	119.25	4	*e*PKPdf	PKPdf	02 39 53.6	+0.5
FVM				*e*PP	PP	02 41 10.2	-2.9
FVM	French Village	119.25	4	*e*PKIKP	PKPdf	02 39 53.6	+0.5
FVM				*e*		02 41 10.3	
S38A	Stockton	119.28	7	P	PKPdf	02 39 52.6	-0.5
	baz=351						
S39A	Bolivar	119.28	7	P	PKPdf	02 39 52.6	-0.6
	baz=352						
S39A	Bolivar	119.28	7	*e*PKPdf	PKPdf	02 39 52.7	-0.4
S42A	Caledonia	119.44	5	P	PKPdf	02 39 52.8	-0.6
	baz=355						
LAZ	Ladron	119.46	20	*e*PKPdf	PKPdf	02 39 54.8	+1.0
S40A	Lebanon	119.46	6	P	PKPdf	02 39 53.2	-0.3
	baz=353						
S41A	Jillco Farms,	119.54	5	P	PKPdf	02 39 53.3	-0.4
	baz=354						
214A	Organ Pipe Nat	119.58	26	P	PKPdf	02 39 54.5	+0.6
	baz=331						
SIUC	Southern Illin	119.59	3	*e*PKPdf	PKPdf	02 39 54.1	+0.4
SIUC				*e*PP	PP	02 41 10.8	-4.7
S49A	Springfield	119.61	360	P	PKPdf	02 39 52.6	-1.1
	baz=0.4						
S44A	Carbondale	119.61	3	P	PKPdf	02 39 53.6	-0.1
	baz=356						
S52A	Salyersville	119.67	358	P	PKPdf	02 39 53.7	-0.2
	baz=2.8						
S43A	Fulton Ridge,	119.69	4	P	PKPdf	02 39 53.4	-0.5
	baz=355						
S50A	Richmond	119.71	359	P	PKPdf	02 39 53.1	-0.8
	baz=1.4						
S51A	Beattyville	119.72	358	P	PKPdf	02 39 53.5	-0.5
	baz=2.2						
S51A	Beattyville	119.72	358	*e*PKPdf	PKPdf	02 39 53.7	-0.3
S48A	Wiedeman Farm,	119.74	0	P	PKPdf	02 39 53.8	-0.3
	baz=360						
S47A	Hartford	119.79	1	P	PKPdf	02 39 53.7	-0.4
	baz=359						
T38A	Diamond	119.81	8	P	PKPdf	02 39 53.9	-0.3
	baz=351						
BNM	Barren Site	119.86	20	*e*PKPdf	PKPdf	02 39 55.4	+0.8
T40A	Mansfield	119.90	6	P	PKPdf	02 39 53.9	-0.5
	baz=353						
T39A	Clever	119.94	7	P	PKPdf	02 39 53.8	-0.7
	baz=352						
BLA	Blacksburg	119.98	355	P	PKPdf	02 39 54.5	0.0
	baz=5.6						
TUC	Tucson	120.08	24	P	PKPdf	02 39 56.1	+1.2
	baz=333						
TUC	Tucson	120.08	24	*e*PKPdf	PKPdf	02 39 56.3	+1.4
TUC				*e*SKPdf	SKPdf	02 43 23.3	0.0
T41A	Mountain View	120.08	6	P	PKPdf	02 39 54.5	-0.2
	baz=354						
T42A	Van Buren	120.15	5	P	PKPdf	02 39 54.6	-0.2
	baz=354						
T43A	Greenville	120.16	4	P	PKPdf	02 39 54.2	-0.6
	baz=355						
T44A	Benton	120.20	4	P	PKPdf	02 39 54.6	-0.3
	baz=356						
T52A	Hallie	120.23	357	P	PKPdf	02 39 54.9	-0.1
	baz=2.9						
PPT2	Papeete2	120.25	98	*e*SS	SS	02 57 42.4	-2.3
	comp=Z,678nm,26.8s						
PPT2	Papeete2	120.25	98	*e*LR	LR	03 16 43.7	
	comp=Z,550nm,28.8s						
T48A	Bowling Green	120.28	1	P	PKPdf	02 39 55.0	-0.1
	baz=359						
T49A	Edmonton	120.29	360	P	PKPdf	02 39 54.6	-0.4
	baz=0.2						
T49A	Edmonton	120.29	360	*e*PKPdf	PKPdf	02 39 54.7	-0.4
T46A	Princeton	120.32	2	P	PKPdf	02 39 54.9	-0.3
	baz=358						
T50A	Nancy	120.37	359	P	PKPdf	02 39 54.3	-1.0
	baz=0.9						
T47A	Sharon Grove	120.39	1	P	PKPdf	02 39 54.5	-0.8
	baz=358						
T47A	Sharon Grove	120.39	1	*e*PKPdf	PKPdf	02 39 55.1	-0.1
T47A				*e*PP	PP	02 41 16.8	-4.2
T51A	Gray	120.41	358	P	PKPdf	02 39 54.7	-0.7
	baz=1.9						
PBMO	Poplar Bluff	120.45	4	*e*PKPdf	PKPdf	02 39 55.3	-0.1
AMTX	Amarillo	120.54	15	*e*PKPdf	PKPdf	02 39 55.7	-0.1
U39A	Green Forest	120.56	7	P	PKPdf	02 39 55.2	-0.4
	baz=352						
HHAR	Hobbs	120.60	8	*e*PKPdf	PKPdf	02 39 55.2	-0.5
HHAR				*e*PP	PP	02 41 16.6	-5.9
PARMO	Parma	120.61	4	*e*PKPdf	PKPdf	02 39 56.7	+1.0
U40A	Yellville	120.65	7	P	PKPdf	02 39 55.3	-0.5
	baz=352						
TUL1	Leonard	120.71	10	P	PKPdf	02 39 56.0	+0.1
	baz=349						
TUL1	Leonard	120.71	10	*e*PKPdf	PKPdf	02 39 56.3	+0.4
U41A	Viola	120.76	6	P	PKPdf	02 39 55.9	-0.1
	baz=353						
U44A	Portageville	120.77	4	P	PKPdf	02 39 56.5	+0.5
	baz=356						
U42A	Revenden	120.81	5	P	PKPdf	02 39 56.2	+0.1
	baz=354						
TZTN	Tazewell	120.82	358	P	PKPdf	02 39 55.9	-0.2
	baz=2.3						
TZTN	Tazewell	120.82	358	*e*PKPdf	PKPdf	02 39 56.1	0.0
TZTN				*e*PP	PP	02 41 17.8	-6.1
TZTN				*e*SKPdf	SKPdf	02 43 24.7	+0.2
U43A	Rector	120.86	4	P	PKPdf	02 39 55.8	-0.4
	baz=355						
U48A	Cassie Pea, Po	120.88	1	P	PKPdf	02 39 56.1	-0.1
	baz=359						
U49A	Red Boiling Sp	120.88	0	P	PKPdf	02 39 56.0	-0.3
	baz=360						
U47A	Clarksville	120.94	1	P	PKPdf	02 39 56.1	-0.2
	baz=358						
U44B	Burton Farm, H	120.96	3	P	PKPdf	02 39 56.2	-0.2
	baz=356						
U53A	Fall Branch	120.96	357	P	PKPdf	02 39 56.1	-0.4
	baz=3.3						
121A	Cookes Peak, D	120.96	22	P	PKPdf	02 39 57.9	+1.1
	baz=336						
U52A	Thorn Hill	120.96	358	P	PKPdf	02 39 56.2	-0.2
	baz=2.5						
U50A	Jamestown	120.97	359	P	PKPdf	02 39 56.6	+0.1
	baz=0.9						
U45A	Rockin P Farm,	120.98	3	P	PKPdf	02 39 56.8	+0.4
	baz=357						
U46A	Springville	120.99	2	P	PKPdf	02 39 56.6	+0.2
	baz=357						
U51A	La Follette	120.99	358	P	PKPdf	02 39 56.5	0.0
	baz=1.8						
NCAT	North Carolina	121.05	354	*e*PKPdf	PKPdf	02 39 56.8	+0.2
V39A	Pettigrew	121.08	8	P	PKPdf	02 39 56.1	-0.6
	baz=352						
MSTX	Muleshoe	121.14	17	P	PKPdf	02 39 57.1	+0.2

	baz=342						
MSTX	**Muleshoe**	**121.14**	**17**	*e*PKPdf	**PKPdf**	**02 39 57.0**	**+0.1**
MSTX				*e*PP	**PP**	**02 41 27.1**	**+0.7**
V40A	**Witts Springs**	**121.20**	**7**	P	**PKPdf**	**02 39 56.8**	**-0.2**
	baz=352						
V40A	**Witts Springs**	**121.20**	**7**	*e*PKPdf	**PKPdf**	**02 39 56.6**	**-0.3**
V40A				*e*PP	**PP**	**02 41 20.1**	**-6.5**
WVT	**Waverly**	**121.23**	**2**	P	**PKPdf**	**02 39 56.9**	**0.0**
	baz=358						
WVT	**Waverly**	**121.23**	**2**	*e*PKPdf	**PKPdf**	**02 39 56.6**	**-0.3**
WVT				*e*PP	**PP**	**02 41 21.2**	**-5.5**
V41A	**Mountainview**	**121.29**	**6**	P	**PKPdf**	**02 39 56.6**	**-0.4**
	baz=353						
WMOK	**Wichita Mounta**	**121.33**	**13**	P	**PKPdf**	**02 39 57.1**	**-0.1**
	baz=346						
WMOK	**Wichita Mounta**	**121.33**	**13**	*e*PKPdf	**PKPdf**	**02 39 56.2**	**-1.0**
WMOK				*e*SKPdf	**SKPdf**	**02 43 25.0**	**-0.5**
WMOK	**Wichita Mounta**	**121.33**	**13**	*e*PKIKP	**PKPdf**	**02 39 56.2**	**-1.0**
V42A	**Cord**	**121.34**	**5**	P	**PKPdf**	**02 39 57.0**	**-0.1**
	baz=354						
V52A	**Sevierville**	**121.52**	**358**	P	**PKPdf**	**02 39 57.4**	**-0.1**
	baz=2.3						
V52A	**Sevierville**	**121.52**	**358**	*e*PKPdf	**PKPdf**	**02 39 57.6**	**+0.1**
V52A				*e*PP	**PP**	**02 41 26.4**	**-2.3**
V47A	**Nunnelly**	**121.54**	**2**	P	**PKPdf**	**02 39 56.8**	**-0.7**
	baz=358						
V46A	**Holladay**	**121.55**	**2**	P	**PKPdf**	**02 39 57.0**	**-0.5**
	baz=357						
V45A	**Humboldt**	**121.57**	**3**	P	**PKPdf**	**02 39 57.0**	**-0.6**
	baz=356						
V51A	**Loudon**	**121.58**	**359**	P	**PKPdf**	**02 39 57.6**	**0.0**
	baz=1.4						
V51A	**Loudon**	**121.58**	**359**	*e*PKPdf	**PKPdf**	**02 39 57.7**	**+0.1**
V49A	**McMinnville**	**121.63**	**0**	P	**PKPdf**	**02 39 57.0**	**-0.7**
	baz=360						
V48A	**Smith Brothers**	**121.64**	**1**	P	**PKPdf**	**02 39 56.5**	**-1.2**
	baz=359						
V48A	**Smith Brothers**	**121.64**	**1**	*e*PKPdf	**PKPdf**	**02 39 57.5**	**-0.3**
V48A				*e*PP	**PP**	**02 41 23.4**	**-6.1**
V53A	**Saluda**	**121.66**	**357**	P	**PKPdf**	**02 39 57.5**	**-0.3**
	baz=3.1						
V53A	**Saluda**	**121.66**	**357**	*e*PKPdf	**PKPdf**	**02 39 57.9**	**0.0**
W39A	**Magazine**	**121.69**	**8**	P	**PKPdf**	**02 39 57.5**	**-0.3**
	baz=351						
W39A	**Magazine**	**121.69**	**8**	*e*PKPdf	**PKPdf**	**02 39 57.9**	**+0.1**
TKL	**Tuckaleechee C**	**121.71**	**358**	PKP	**PKPdf**	**02 39 57.7**	**-0.2**
	comp=Z,11nm,0.5s,baz=133,slow=6.1,SNR=38						
TKL				SKP		02 43 25.8	
	comp=Z,7.0nm,0.7s,baz=110,slow=4.6,SNR=6.4						
TKL	**Tuckaleechee C**	**121.71**	**358**	*e*PKIKP	**PKPdf**	**02 39 57.9**	**0.0**
V50A	**Pikevile**	**121.72**	**359**	P	**PKPdf**	**02 39 57.2**	**-0.7**
	baz=0.7						
WHAR	**Wooly Hollow**	**121.77**	**6**	*e*PKPdf	**PKPdf**	**02 39 57.9**	**-0.1**
W40A	**Ferguson Farm,**	**121.78**	**7**	P	**PKPdf**	**02 39 57.4**	**-0.6**
	baz=352						
W40A	**Ferguson Farm,**	**121.78**	**7**	*e*PKPdf	**PKPdf**	**02 39 57.9**	**-0.1**
TBI	**Tubuai**	**121.84**	**104**	*e*LR	LR	03 17 48.9	
	comp=Z,418nm,27.0s						
W41B	**Gary Mavity, V**	**121.89**	**6**	P	**PKPdf**	**02 39 57.8**	**-0.4**
	baz=353						
W41B	**Gary Mavity, V**	**121.89**	**6**	*e*PKPdf	**PKPdf**	**02 39 57.9**	**-0.3**
CPCT	**Cooper Cave**	**121.93**	**359**	*e*PKPdf	**PKPdf**	**02 39 58.6**	**+0.3**
KMSC	**Kings Mountain**	**122.10**	**356**	P	**PKPdf**	**02 39 58.3**	**-0.3**
	baz=4.7						
KMSC	**Kings Mountain**	**122.10**	**356**	*e*PKPdf	**PKPdf**	**02 39 58.6**	**0.0**
W47A	**Westpoint**	**122.11**	**2**	P	**PKPdf**	**02 39 58.1**	**-0.5**
	baz=358						
W45A	**Hickory Valley**	**122.14**	**3**	P	**PKPdf**	**02 39 58.6**	**-0.1**
	baz=356						
W53A	**Cullowhee**	**122.17**	**358**	P	**PKPdf**	**02 39 59.2**	**+0.3**
	baz=2.8						
SWET	**Sewanee**	**122.18**	**0**	*e*PKPdf	**PKPdf**	**02 39 58.8**	**0.0**
W50A	**Signal Mountai**	**122.19**	**360**	P	**PKPdf**	**02 39 58.5**	**-0.4**
	baz=0.4						
W50A	**Signal Mountai**	**122.19**	**360**	*e*PKPdf	**PKPdf**	**02 39 58.6**	**-0.2**
W46A	**Michie**	**122.20**	**3**	P	**PKPdf**	**02 39 58.0**	**-0.8**
	baz=357						
W51A	**Cleveland**	**122.22**	**359**	P	**PKPdf**	**02 39 59.1**	**+0.2**
	baz=1.0						
W48A	**Pulaski**	**122.24**	**1**	P	**PKPdf**	**02 39 58.6**	**-0.3**
	baz=359						
W49A	**Belvidere**	**122.27**	**1**	P	**PKPdf**	**02 39 58.0**	**-0.9**
	baz=359						
UALR	**University of**	**122.27**	**6**	*e*PKPdf	**PKPdf**	**02 39 59.1**	**+0.1**
W52A	**Murphy**	**122.27**	**358**	P	**PKPdf**	**02 39 58.8**	**-0.2**
	baz=1.9						
W52A	**Murphy**	**122.27**	**358**	*e*PKPdf	**PKPdf**	**02 39 59.0**	**0.0**
X39A	**Fountain Ranch**	**122.33**	**8**	P	**PKPdf**	**02 39 59.6**	**+0.5**
	baz=351						
BG3	**Lake Jocassee**	**122.34**	**357**	*e*PKPdf	**PKPdf**	**02 39 59.6**	**+0.5**
GDL2	**Guadalupe Moun**	**122.36**	**19**	*e*PKPdf	**PKPdf**	**02 39 59.8**	**+0.5**
MIAR	**Mount Ida**	**122.36**	**8**	P	**PKPdf**	**02 39 59.1**	**-0.1**
	baz=351						
MIAR	**Mount Ida**	**122.36**	**8**	*e*PKPdf	**PKPdf**	**02 39 59.6**	**+0.4**
MIAR				*e*SKPdf	**SKiKP**	**02 43 27.9**	**-0.1**
MIAR	**Mount Ida**	**122.36**	**8**	*e*PKIKP	**PKPdf**	**02 39 59.6**	**+0.4**
PLAL	**Pickwick Lake**	**122.37**	**2**	*e*PKPdf	**PKPdf**	**02 39 58.4**	**-0.7**
X40A	**Basin Creek Fa**	**122.50**	**7**	*e*PKPdf	**PKPdf**	**02 39 59.4**	**0.0**
MNTX	**Cornudas Mount**	**122.51**	**20**	*e*PKPdf	**PKPdf**	**02 40 00.3**	**+0.8**
MNTX				*e*SKPdf	**SKPdf**	**02 43 27.9**	**+0.1**
X43A	**Marvell**	**122.66**	**5**	*e*PKPdf	**PKPdf**	**02 40 00.3**	**+0.7**
OXF	**Oxford**	**122.77**	**4**	*e*PKPdf	**PKPdf**	**02 39 59.8**	**-0.1**
OXF	**Oxford**	**122.77**	**4**	*e*PKIKP	**PKPdf**	**02 39 59.8**	**-0.1**
X51A	**Calhoun**	**122.82**	**359**	*e*PKPdf	**PKPdf**	**02 40 00.3**	**+0.3**
X45A	**UM Field Stati**	**122.86**	**4**	P	**PKPdf**	**02 39 59.6**	**-0.5**
	baz=356						
X49A	**Woodville**	**122.88**	**1**	P	**PKPdf**	**02 39 59.4**	**-0.7**
	baz=359						
Y40A	**Okolona**	**122.92**	**7**	P	**PKPdf**	**02 40 00.5**	**+0.3**
	baz=352						
HSIG		**122.92**	**26**	*e*PKPdf	**PKPdf**	**02 40 01.5**	**+1.1**
X48A	**Hartselle**	**122.92**	**1**	P	**PKPdf**	**02 39 59.6**	**-0.7**
	baz=358						
X48A	**Hartselle**	**122.92**	**1**	*e*PKPdf	**PKPdf**	**02 39 59.8**	**-0.5**
X50B	**Fort Payne**	**122.93**	**360**	P	**PKPdf**	**02 39 59.7**	**-0.6**
	baz=0.1						
Y41A	**Eaglette Beard**	**123.13**	**7**	P	**PKPdf**	**02 40 00.4**	**-0.2**
	baz=352						
ABTX	**Abilene, Hawle**	**123.18**	**14**	P	**PKPdf**	**02 40 01.0**	**+0.1**
	baz=345						
ABTX	**Abilene, Hawle**	**123.18**	**14**	*e*PKPdf	**PKPdf**	**02 40 01.2**	**+0.4**
Y42A	**Garnett, Star**	**123.26**	**6**	P	**PKPdf**	**02 40 01.1**	**+0.2**
	baz=353						
Y43A	**Makayla and Ka**	**123.26**	**5**	P	**PKPdf**	**02 40 01.3**	**+0.4**
	baz=354						
Y44A	**Strider, Charl**	**123.27**	**4**	P	**PKPdf**	**02 40 00.8**	**-0.1**
	baz=355						
Y45A	**Yeager Farm, C**	**123.41**	**4**	P	**PKPdf**	**02 40 01.2**	**0.0**
	baz=356						
Y46A	**Houston**	**123.43**	**3**	P	**PKPdf**	**02 40 00.5**	**-0.7**
	baz=356						
Y47A	**UCPARC, Winfie**	**123.45**	**2**	P	**PKPdf**	**02 40 00.8**	**-0.5**
	baz=358						
Y54A	**Tignall**	**123.45**	**357**	P	**PKPdf**	**02 40 01.3**	**0.0**
	baz=3.3						
Y48A	**Jasper**	**123.46**	**1**	P	**PKPdf**	**02 40 01.0**	**-0.3**
	baz=358						
Y51A	**Rockmart**	**123.49**	**359**	P	**PKPdf**	**02 40 01.3**	**0.0**
	baz=0.7						
Y53A	**Monroe**	**123.50**	**358**	P	**PKPdf**	**02 40 01.4**	**+0.1**
	baz=2.3						
Y50A	**Piedmont**	**123.50**	**0**	P	**PKPdf**	**02 40 01.2**	**-0.1**
	baz=360						
Y52A	**Lilburn**	**123.50**	**358**	P	**PKPdf**	**02 40 02.0**	**+0.6**
	baz=1.8						
Y52A	**Lilburn**	**123.50**	**358**	*e*PKPdf	**PKPdf**	**02 40 01.9**	**+0.6**
Y49A	**Blount Mountai**	**123.53**	**1**	P	**PKPdf**	**02 40 01.6**	**+0.1**
	baz=359						
Y49A	**Blount Mountai**	**123.53**	**1**	*e*PKPdf	**PKPdf**	**02 40 01.5**	**+0.1**
Z40A	**Long Farm, Mag**	**123.65**	**8**	P	**PKPdf**	**02 40 02.0**	**+0.4**
	baz=352						
Z41A	**Richland Creek**	**123.72**	**7**	P	**PKPdf**	**02 40 02.5**	**+0.7**
	baz=352						
Z42A	**Norrel Spur, H**	**123.80**	**6**	P	**PKPdf**	**02 40 02.8**	**+0.9**
	baz=353						
Z45A	**Winona**	**123.89**	**4**	P	**PKPdf**	**02 40 02.9**	**+0.8**
	baz=356						
Z44A	**Pea Ridge, Bel**	**123.93**	**5**	P	**PKPdf**	**02 40 03.0**	**+0.9**
	baz=355						
GOGA	**Godfrey**	**123.94**	**358**	P	**PKPdf**	**02 40 02.6**	**+0.4**
	baz=2.5						
GOGA	**Godfrey**	**123.94**	**358**	*e*PKPdf	**PKPdf**	**02 40 02.6**	**+0.4**
GOGA				*e*SKPdf	**SKiKP**	**02 43 31.1**	**-0.2**
GOGA	**Godfrey**	**123.94**	**358**	*e*PKIKP	**PKPdf**	**02 40 02.7**	**+0.5**
Z48A	**Northport**	**123.98**	**2**	P	**PKPdf**	**02 40 01.9**	**-0.4**
	baz=358						
Z55A	**Blythe**	**124.06**	**356**	P	**PKPdf**	**02 40 03.2**	**+0.8**
	baz=4.0						
Z51A	**Franklin**	**124.07**	**359**	P	**PKPdf**	**02 40 02.9**	**+0.5**
	baz=0.6						
Z53A	**Monticello**	**124.07**	**358**	P	**PKPdf**	**02 40 02.7**	**+0.3**
	baz=2.4						
Z54A	**Sparta**	**124.08**	**357**	P	**PKPdf**	**02 40 02.9**	**+0.5**
	baz=3.2						
Z46A	**Louisville**	**124.11**	**3**	P	**PKPdf**	**02 40 02.9**	**+0.4**
	baz=356						
Z50A	**Ashland**	**124.13**	**0**	P	**PKPdf**	**02 40 02.4**	**-0.2**
	baz=360						
Z50A	**Ashland**	**124.13**	**0**	*e*PKPdf	**PKPdf**	**02 40 02.6**	**0.0**
Z47A	**Carrollton**	**124.14**	**2**	P	**PKPdf**	**02 40 02.4**	**-0.2**
	baz=357						
Z52A	**Williamson**	**124.18**	**359**	P	**PKPdf**	**02 40 03.0**	**+0.4**
	baz=1.4						
Z49A	**Columbiana**	**124.19**	**1**	P	**PKPdf**	**02 40 02.7**	**0.0**
	baz=359						
140A	**Cam and Jess,**	**124.24**	**8**	P	**PKPdf**	**02 40 03.4**	**+0.7**
	baz=351						
140A	**Cam and Jess,**	**124.24**	**8**	*e*PKPdf	**PKPdf**	**02 40 03.7**	**+0.9**
WHTX	**Lake Whitney,**	**124.25**	**12**	P	**PKPdf**	**02 40 03.0**	**+0.2**
	baz=347						
WHTX	**Lake Whitney,**	**124.25**	**12**	*e*PKPdf	**PKPdf**	**02 40 03.4**	**+0.6**
LRAL	**Lakeview Retre**	**124.34**	**1**	*e*PKPdf	**PKPdf**	**02 40 02.9**	**-0.1**
LRAL				*e*SKPdf	**SKPdf**	**02 43 30.5**	**-0.7**
141A	**Papa Simpson,**	**124.36**	**7**	P	**PKPdf**	**02 40 03.9**	**+0.9**
	baz=352						
143A	**Socs Landing,**	**124.42**	**6**	P	**PKPdf**	**02 40 03.7**	**+0.6**
	baz=354						
143A	**Socs Landing,**	**124.42**	**6**	*e*PKPdf	**PKPdf**	**02 40 03.8**	**+0.7**
144A	**Alexander Plac**	**124.57**	**5**	P	**PKPdf**	**02 40 04.3**	**+0.9**
	baz=355						
145A	**Houston Renfro**	**124.64**	**4**	P	**PKPdf**	**02 40 03.8**	**+0.3**
	baz=355						
146A	**Union**	**124.66**	**3**	P	**PKPdf**	**02 40 04.1**	**+0.5**
	baz=356						
146A	**Union**	**124.66**	**3**	*e*PKPdf	**PKPdf**	**02 40 04.4**	**+0.8**
147A	**Livingston**	**124.66**	**3**	P	**PKPdf**	**02 40 03.6**	**0.0**
	baz=357						
147A	**Livingston**	**124.66**	**3**	*e*PKPdf	**PKPdf**	**02 40 04.2**	**+0.6**
153A	**Fort Valley**	**124.71**	**358**	P	**PKPdf**	**02 40 03.6**	**-0.1**
	baz=2.1						
152A	**Waverly Hall**	**124.71**	**359**	P	**PKPdf**	**02 40 03.6**	**-0.1**
	baz=1.1						
152A	**Waverly Hall**	**124.71**	**359**	*e*PKPdf	**PKPdf**	**02 40 04.2**	**+0.5**
148A	**Greensboro**	**124.71**	**2**	P	**PKPdf**	**02 40 03.7**	**0.0**
	baz=358						
154A	**Montrose**	**124.72**	**357**	P	**PKPdf**	**02 40 04.3**	**+0.7**
	baz=2.9						
154A	**Montrose**	**124.72**	**357**	*e*PKPdf	**PKPdf**	**02 40 04.6**	**+0.9**
149A	**Jones**	**124.78**	**1**	P	**PKPdf**	**02 40 03.2**	**-0.6**
	baz=359						
150A	**Eclectic**	**124.78**	**0**	P	**PKPdf**	**02 40 03.5**	**-0.3**
	baz=360						
151A	**Opelika**	**124.86**	**360**	P	**PKPdf**	**02 40 04.0**	**0.0**
	baz=0.4						
241A	**Mo Tay, Goldon**	**124.93**	**7**	P	**PKPdf**	**02 40 05.0**	**+0.9**
	baz=352						
NATX	**Nacogdoches**	**124.95**	**9**	P	**PKPdf**	**02 40 05.0**	**+0.8**
	baz=350						
NATX	**Nacogdoches**	**124.95**	**9**	*e*PKPdf	**PKPdf**	**02 40 05.1**	**+0.9**
244A	**Avery, Jackson**	**125.14**	**5**	P	**PKPdf**	**02 40 04.9**	**+0.3**
	baz=354						
JCT	**Junction City**	**125.20**	**15**	P	**PKPdf**	**02 40 05.2**	**+0.5**
	baz=344						
JCT	**Junction City**	**125.20**	**15**	*e*PKPdf	**PKPdf**	**02 40 05.3**	**+0.5**
JCT				*e*SKPdf	**SKPdf**	**02 43 33.1**	**0.0**
JCT	**Junction City**	**125.20**	**15**	*e*PKIKP	**PKPdf**	**02 40 05.3**	**+0.5**
245A	**Little AP, Sta**	**125.21**	**4**	P	**PKPdf**	**02 40 05.1**	**+0.4**
	baz=355						
TX31	**Lajitas Ar. Si**	**125.24**	**19**	*e*PKPdf	**PKPdf**	**02 40 05.4**	**+0.4**
TXAR	**Lajitas Array**	**125.25**	**19**	PKP	**PKPdf**	**02 40 05.4**	**+0.5**
	comp=Z,14nm,0.6s,baz=48,slow=0.2,SNR=136						
TXAR				SKP		02 43 33.6	
	comp=Z,5.6nm,0.6s,baz=56,slow=0.7,SNR=12						
247A	**Quitman**	**125.26**	**3**	P	**PKPdf**	**02 40 05.2**	**+0.4**
	baz=357						
251A	**Midway**	**125.29**	**360**	P	**PKPdf**	**02 40 05.5**	**+0.7**
	baz=0.3						
253A	**Americus**	**125.30**	**358**	P	**PKPdf**	**02 40 05.4**	**+0.5**
	baz=1.8						
253A	**Americus**	**125.30**	**358**	*e*PKPdf	**PKPdf**	**02 40 05.7**	**+0.9**
255A	**Hazlehurst**	**125.37**	**357**	P	**PKPdf**	**02 40 05.2**	**+0.3**
	baz=3.6						
252A	**Lumpkin**	**125.38**	**359**	P	**PKPdf**	**02 40 05.7**	**+0.7**
	baz=1.1						
254A	**Abbeville**	**125.39**	**357**	P	**PKPdf**	**02 40 05.5**	**+0.5**
	baz=2.7						
249A	**Camden**	**125.39**	**1**	P	**PKPdf**	**02 40 05.6**	**+0.6**
	baz=358						
435B	**Jarrell**	**125.40**	**13**	P	**PKPdf**	**02 40 05.3**	**+0.2**
	baz=347						
435B	**Jarrell**	**125.40**	**13**	*e*PKPdf	**PKPdf**	**02 40 05.5**	**+0.5**
250A	**Grady**	**125.40**	**1**	P	**PKPdf**	**02 40 04.6**	**-0.4**
	baz=359						
250A	**Grady**	**125.40**	**1**	*e*PKPdf	**PKPdf**	**02 40 05.7**	**+0.7**
341A	**Kurthwood**	**125.58**	**8**	P	**PKPdf**	**02 40 05.6**	**+0.2**
	baz=352						
342A	**Flagon Creek P**	**125.64**	**7**	P	**PKPdf**	**02 40 06.9**	**+1.4**
	baz=352						
342A	**Flagon Creek P**	**125.64**	**7**	*e*PKPdf	**PKPdf**	**02 40 07.1**	**+1.6**
344A	**Westbrook Farm**	**125.72**	**5**	P	**PKPdf**	**02 40 06.7**	**+1.1**
	baz=354						
344A	**Westbrook Farm**	**125.72**	**5**	*e*PKPdf	**PKPdf**	**02 40 06.8**	**+1.2**
346A	**Big Creek Wild**	**125.88**	**4**	P	**PKPdf**	**02 40 06.7**	**+0.7**
	baz=356						
352A	**Blakely**	**125.90**	**359**	P	**PKPdf**	**02 40 06.6**	**+0.6**
	baz=0.9						
352A	**Blakely**	**125.90**	**359**	*e*PKPdf	**PKPdf**	**02 40 07.0**	**+1.0**
TIGA	**Tifton**	**125.91**	**358**	P	**PKPdf**	**02 40 07.0**	**+1.0**
	baz=2.4						
TIGA	**Tifton**	**125.91**	**358**	*e*PKPdf	**PKPdf**	**02 40 07.0**	**+1.0**
347A	**Saraland**	**125.91**	**3**	P	**PKPdf**	**02 40 06.9**	**+0.9**
	baz=357						
345A	**Thompson Farm,**	**125.92**	**5**	P	**PKPdf**	**02 40 07.1**	**+1.1**
	baz=355						
348A	**Jackson**	**125.93**	**2**	P	**PKPdf**	**02 40 07.2**	**+1.2**
	baz=358						
356A	**Blackshear**	**125.95**	**356**	P	**PKPdf**	**02 40 07.0**	**+0.9**
	baz=4.0						
350A	**Dozier**	**125.96**	**1**	P	**PKPdf**	**02 40 06.9**	**+0.8**
	baz=359						
355A	**Pearson**	**125.97**	**357**	P	**PKPdf**	**02 40 06.7**	**+0.6**
	baz=3.2						
349A	**Repton**	**126.01**	**2**	P	**PKPdf**	**02 40 07.7**	**+1.5**
	baz=358						
353A	**Camilla**	**126.02**	**358**	P	**PKPdf**	**02 40 06.7**	**+0.5**
	baz=1.7						
TAOE	**Nuku Hiva Isla**	**126.10**	**84**	*e*LR	LR	03 19 45.7	
	comp=Z,379nm,26.9s						
351A	**Pinckard**	**126.11**	**360**	P	**PKPdf**	**02 40 06.6**	**+0.2**
	baz=0.1						
444A	**Pine Grove**	**126.45**	**5**	P	**PKPdf**	**02 40 08.2**	**+1.2**
	baz=354						
453A	**Whigham**	**126.51**	**358**	P	**PKPdf**	**02 40 08.1**	**+0.9**
	baz=1.6						
453A	**Whigham**	**126.51**	**358**	*e*PKPdf	**PKPdf**	**02 40 08.6**	**+1.4**
452A	**Marianna**	**126.53**	**359**	P	**PKPdf**	**02 40 07.8**	**+0.6**
	baz=0.6						
HKT	**Hockley**	**126.54**	**11**	*e*PKPdf	**PKPdf**	**02 40 07.9**	**+0.8**
HKT	**Hockley**	**126.54**	**11**	*e*PKIKP	**PKPdf**	**02 40 07.9**	**+0.8**
456A	**Hilliard**	**126.54**	**356**	P	**PKPdf**	**02 40 08.5**	**+1.3**
	baz=4.2						
450A	**Crestview**	**126.57**	**1**	P	**PKPdf**	**02 40 08.5**	**+1.2**
	baz=359						
455A	**Stateville**	**126.58**	**357**	P	**PKPdf**	**02 40 08.2**	**+0.9**
	baz=3.1						
454A	**Quitman**	**126.63**	**358**	P	**PKPdf**	**02 40 08.0**	**+0.6**
	baz=2.4						
HPIG		**126.81**	**22**	*e*PKPdf	**PKPdf**	**02 40 08.2**	**+0.1**
553A	**Crawfordville**	**127.17**	**359**	P	**PKPdf**	**02 40 07.9**	**-0.6**
	baz=1.5						
555A	**McAlpin**	**127.19**	**357**	P	**PKPdf**	**02 40 09.3**	**+0.8**
	baz=3.1						
555A	**McAlpin**	**127.19**	**357**	*e*PKPdf	**PKPdf**	**02 40 09.7**	**+1.2**
557A	**Orange Park**	**127.22**	**356**	P	**PKPdf**	**02 40 09.2**	**+0.7**
	baz=4.6						
556A	**Lake Butler**	**127.28**	**356**	P	**PKPdf**	**02 40 09.1**	**+0.5**
	baz=3.8						
833A	**Chaparral WMA,**	**127.37**	**15**	P	**PKPdf**	**02 40 09.4**	**+0.5**
	baz=344						
833A	**Chaparral WMA,**	**127.37**	**15**	*e*PKPdf	**PKPdf**	**02 40 10.1**	**+1.2**
LPIG	**La Paz**	**127.50**	**29**	SKP		02 43 36.9	
	comp=Z,27nm,0.3s,baz=22,slow=5.4,SNR=2.9						
657A	**Interlachen**	**127.66**	**356**	P	**PKPdf**	**02 40 09.9**	**+0.5**
	baz=4.4						
656A	**Willston**	**127.92**	**356**	P	**PKPdf**	**02 40 11.1**	**+1.2**
	baz=3.7						
656A	**Willston**	**127.92**	**356**	*e*PKPdf	**PKPdf**	**02 40 11.3**	**+1.4**
757A	**Oxford**	**128.31**	**356**	P	**PKPdf**	**02 40 11.1**	**+0.5**
	baz=4.2						
857A	**Zephyrhills**	**128.99**	**356**	P	**PKPdf**	**02 40 12.5**	**+0.5**
	baz=4.1						
DWPF	**Disney Wildern**	**129.09**	**355**	P	**PKPdf**	**02 40 12.9**	**+0.7**
	baz=5.0						
859A	**Kempfer Cattle**	**129.10**	**355**	P	**PKPdf**	**02 40 12.7**	**+0.5**
	baz=5.7						
957A	**Wimauma**	**129.59**	**356**	P	**PKPdf**	**02 40 13.9**	**+0.8**
	baz=4.1						
959A	**Okeechobee**	**129.63**	**354**	P	**PKPdf**	**02 40 13.9**	**+0.7**
	baz=5.7						
060A	**Indiantown**	**130.06**	**354**	P	**PKPdf**	**02 40 15.4**	**+1.4**
	baz=6.4						
058A	**Arcadia**	**130.17**	**355**	P	**PKPdf**	**02 40 15.1**	**+0.9**
	baz=4.7						
LNIG	**Linares**	**130.62**	**17**	*e*PKPdf	**PKPdf**	**02 40 15.1**	**-0.1**
ZAIG	**Zacatecas**	**131.71**	**21**	*e*PKPdf	**PKPdf**	**02 40 19.0**	**+1.3**
RKT	**Rikitea**	**134.85**	**100**	*e*SS	SS	03 00 43.7	-2.1
	comp=Z,371nm,26.2s						
RKT	**Rikitea**	**134.85**	**100**	*e*LR	LR	03 23 49.8	
	comp=Z,683nm,41.0s						
TLIG	**Tlapa**	**137.84**	**18**	*e*PKPdf	**PKPdf**	**02 40 30.8**	**+1.8**
CMIG	**Matias Romero**	**139.23**	**13**	SKPbc	**SKPbc**	**02 43 58.3**	**-1.3**
	comp=Z,28nm,0.9s,baz=11,slow=4.1,SNR=13						
PCRV	**Puerto La Cruz**	**141.16**	**326**	SKP	**SKPbc**	**02 44 02.9**	**-1.9**
	comp=Z,6.7nm,0.5s,baz=358,slow=5.1,SNR=5.2						
BDFB	**Brasilia**	**143.75**	**275**	PKP	**PKPdf**	**02 40 38.6**	**-1.0**
	comp=Z,11nm,0.8s,baz=98,slow=2.8,SNR=14						
BDFB				SKPbc	**SKiKP**	**02 44 12.5**	**+0.4**
	comp=Z,37nm,1.2s,baz=24,slow=4.9,SNR=4.7						
BDFB	**Brasilia**	**143.75**	**275**	*e*PKIKP	PKPbc	02 40 38.5	+1.1
SPB	**Sao Paulo**	**144.88**	**261**	*e*PKPbc	**PKPdf**	**02 40 42.0**	**+0.8**
SDV	**Santo Domingo**	**145.10**	**333**	PKPbc	**PKPbc**	**02 40 41.6**	**-0.1**
	comp=Z,230nm,1.0s,baz=338,slow=1.6,SNR=99						
SDV				SKPbc	**SKiKP**	**02 44 15.9**	**+0.7**
	comp=Z,33nm,0.8s,baz=336,slow=4.0,SNR=5.7						
SDV	**Santo Domingo**	**145.10**	**333**	*e*PKPbc	**PKPab**	**02 40 41.8**	**0.0**
SDV				*e*SKPdf	**SKPdf**	**02 44 10.0**	**+0.6**
SDV				*e*SKPbc	**SKiKP**	**02 44 15.6**	**+0.5**
SDV	**Santo Domingo**	**145.10**	**333**	*e*P	**PKPab**	**02 40 41.9**	**+0.1**
SJCC	**San Jacinto, C**	**145.78**	**341**	*e*P	**PKPab**	**02 40 44.3**	**+0.2**
PTGA	**Pitinga**	**146.64**	**308**	*e*PKPdf	**PKPbc**	**02 40 45.6**	**-0.6**
OCAC	**Ocana**	**146.73**	**337**	*e*P	**PKPdf**	**02 40 45.7**	**+0.8**
JTS	**JuntasAbangare**	**146.98**	**359**	PKPbc	**PKPdf**	**02 40 45.2**	**0.0**
	comp=Z,13nm,0.4s,baz=188,slow=1.7,SNR=22						
JTS	**JuntasAbangare**	**146.98**	**359**	*e*PKPbc	**PKPdf**	**02 40 45.5**	**+0.4**
JTS	**JuntasAbangare**	**146.98**	**359**	*e*PKP2	**PKPdf**	**02 40 45.6**	**+0.4**
MOTC	**Monteria, Cord**	**146.99**	**342**	*e*P	**PKPbc**	**02 40 46.5**	**-0.6**
PAMC	**Pamplona, Colo**	**147.33**	**336**	*e*P	**PKPbc**	**02 40 47.9**	**-0.9**
CAPC	**Capurgana**	**147.58**	**344**	*e*P	**PKPdf**	**02 40 45.8**	**-0.3**
BCIP	**Isla Barro Col**	**147.59**	**349**	*e*PKPdf	**PKPdf**	**02 40 46.3**	**+0.2**
BCIP				*e*PKPbc	**PKPbc**	**02 40 49.1**	**+0.3**
BCIP				*e*PKPab	**PKPab**	**02 40 51.5**	**+0.5**
UPA	**Univ. de Panam**	**147.72**	**348**	*e*P	**PKPdf**	**02 40 45.9**	**-0.4**
TAMC	**Tame, Arauca**	**147.79**	**333**	*e*P	**PKPbc**	**02 40 49.9**	**+0.4**
UPD2	**Meteti**	**147.82**	**346**	*e*P	**PKPbc**	**02 40 48.7**	**-0.8**
BRRC	**Barranca, Sant**	**147.92**	**337**	*e*P	**PKPdf**	**02 40 46.4**	**-0.3**
UREC	**San Jos˘' de U**	**147.92**	**341**	*e*P	**PKPbc**	**02 40 48.5**	**-1.2**
ZARC	**Zaragoza, Cauc**	**147.95**	**339**	*e*P	**PKPbc**	**02 40 48.5**	**-1.3**
BARC	**Barichara**	**148.20**	**336**	*e*P	**PKPdf**	**02 40 47.9**	**+0.4**
PTBC	**PUERTO BERRIO,**	**148.71**	**338**	*e*P	**PKPdf**	**02 40 48.1**	**+0.1**
RUSC	**La Rusia**	**148.81**	**335**	*e*PKPdf	**PKPdf**	**02 40 49.1**	**+0.3**
RUSC	**La Rusia**	**148.81**	**335**	*e*P	**PKPdf**	**02 40 49.2**	**+0.5**
DBBC	**Dabeiba**	**148.82**	**342**	*e*P	**PKPbc**	**02 40 53.4**	**+1.3**
AZU	**Azuero**	**149.01**	**349**	*e*P	**PKPbc**	**02 40 51.7**	**-0.8**
YOPC	**Yopal, Colombi**	**149.03**	**334**	*e*P	**PKPbc**	**02 40 52.2**	**-0.5**
HELC	**Santa Helena**	**149.39**	**340**	*e*P	**PKPbc**	**02 40 54.4**	**+0.4**
NORC	**Norcasia**	**149.76**	**338**	*e*P	**PKPdf**	**02 40 51.8**	**+2.1**
SOLC	**Bahia Solano**	**149.91**	**343**	*e*P	**PKPdf**	**02 40 47.5**	**-2.3**
CHIC	**Chingaza**	**150.21**	**335**	*e*P	**PKPdf**	**02 40 49.3**	**-1.6**
ROSC	**El Rosal**	**150.24**	**337**	PKP	**PKPdf**	**02 40 53.1**	**+2.2**
	comp=Z,176nm,1.0s,baz=10,slow=1.2,SNR=14						
ROSC				PKPbc	**PKiKP**	**02 40 58.1**	**+1.3**
	comp=Z,125nm,0.8s,baz=146,slow=3.6,SNR=52						
ROSC	**El Rosal**	**150.24**	**337**	*e*PKPdf	**PKPdf**	**02 40 53.0**	**+2.0**
ROSC				*e*PKPbc	**PKiKP**	**02 40 57.2**	**+0.3**
ROSC	**El Rosal**	**150.24**	**337**	*e*P	**PKPdf**	**02 40 52.7**	**+1.7**
VILC	**Villavicencio,**	**150.67**	**335**	*e*P	**PKPbc**	**02 40 56.5**	**-0.3**
TOLC	**Tolima**	**150.83**	**338**	*e*P	**PKPbc**	**02 40 57.0**	**-0.5**
PLMC	**San Jos˘' del**	**150.84**	**340**	*e*P	**PKPbc**	**02 40 57.1**	**0.0**
ANIL	**Santa Ana**	**150.94**	**338**	*e*P	**PKPbc**	**02 40 57.1**	**-0.5**
PRAC	**Prado**	**151.49**	**337**	*e*PKPdf	**PKPdf**	**02 40 52.9**	**+0.5**
PRAC				*e*PKPbc	**PKiKP**	**02 40 59.0**	**0.0**
PRAC				*e*PKPab	**PKPab**	**02 41 07.9**	**+0.9**
PRAC	**Prado**	**151.49**	**337**	*e*P	**PKPdf**	**02 40 52.5**	**+0.1**
SJAC	**San Juan de Ar**	**151.54**	**335**	*e*P	**PKPdf**	**02 40 50.6**	**-2.0**
YOTC	**Yotoco, Valle**	**151.73**	**340**	*e*P	**PKPdf**	**02 40 53.1**	**+0.2**
MALC	**Bahia Malaga**	**152.00**	**342**	*e*P	**PKPbc**	**02 40 59.8**	**+0.1**
HORQ	**Saladito**	**152.29**	**340**	*e*P	**PKPdf**	**02 40 54.6**	**+0.7**
BETC	**Betania**	**152.64**	**337**	*e*P	**PKPdf**	**02 40 51.7**	**-2.5**
MARP	**Paez Belalcaza**	**152.67**	**338**	*e*P	**PKPdf**	**02 40 54.6**	**+0.1**
POPC	**Popayan, Colom**	**153.19**	**340**	*e*P	**PKPdf**	**02 40 55.5**	**+0.3**
SOTA	**Rioblanco**	**153.55**	**339**	*e*P	**PKPdf**	**02 40 55.8**	**-0.3**
CPUP	**Villa Florida**	**153.99**	**257**	PKP	**PKPdf**	**02 40 56.5**	**+0.8**
	comp=Z,9.5nm,1.0s,baz=60,slow=2.3,SNR=11						
CPUP				PKPbc	**PKPbc**	**02 41 03.6**	**-0.1**
	comp=Z,10.0nm,0.6s,baz=82,slow=5.3,SNR=34						
CPUP	**Villa Florida**	**153.99**	**257**	*e*PKPdf	**PKPdf**	**02 40 57.0**	**+1.4**
CPUP				*e*PKPbc	**PKPbc**	**02 41 03.4**	**-0.3**
CRUC	**La Cruz**	**154.20**	**340**	*e*P	**PKPdf**	**02 40 57.5**	**+0.8**
SAML	**Samuel**	**154.31**	**299**	*e*PKPdf	**PKPdf**	**02 40 57.0**	**+0.6**
SAML				*e*PKPbc	**PKiKP**	**02 41 05.9**	**+1.1**
TRQA	**Tornquist**	**154.68**	**228**	*e*PKPdf	**PKPdf**	**02 40 56.4**	**+0.1**
TRQA				*e*PKPbc	**PKiKP**	**02 41 05.5**	**+0.6**
TRQA	**Tornquist**	**154.68**	**228**	*e*PKIKP	**PKPdf**	**02 40 56.4**	**+0.1**
SIV	**San Ignacio**	**155.78**	**282**	PKP	**PKPdf**	**02 40 59.0**	**+0.6**
	comp=Z,4.0nm,0.9s,baz=78,slow=1.9,SNR=14						
SIV				PKPbc	PKPbc	02 41 06.5	
	comp=Z,6.2nm,0.9s,baz=62,slow=4.3,SNR=9.6						
SIV				PKPab	**PKPab**	**02 41 26.2**	**+0.9**
	comp=Z,7.3nm,0.6s,baz=98,slow=7.4,SNR=8.8						
OTAV	**Otavalo**	**155.91**	**342**	*e*PKPdf	**PKPdf**	**02 41 00.1**	**+0.9**
OTAV				*e*PKPab	**PKPab**	**02 41 26.3**	**0.0**
OTAV	**Otavalo**	**155.91**	**342**	*e*P	**PKPdf**	**02 41 00.5**	**+1.2**
OTAV	**Otavalo**	**155.91**	**342**	*e*PKIKP	**PKPdf**	**02 41 00.1**	**+0.9**
OTAV				*e*		02 41 26.3	
PAYG	**Puerto Ayora**	**157.44**	**12**	*e*PKPdf	**PKPdf**	**02 41 00.3**	**-0.4**
PAYG				*e*PKPab	**PKPab**	**02 41 33.9**	**+1.7**
PLCA	**Paso Flores**	**158.12**	**212**	PKP	**PKPdf**	**02 41 02.9**	**+2.1**
	comp=Z,4.0nm,1.1s,baz=104,slow=8.3,SNR=4.7						
PLCA				PKPab	**PKPab**	**02 41 34.5**	**-0.2**
	comp=Z,3.4nm,0.6s,baz=124,slow=6.0,SNR=4.6						
LPAZ	**La Paz**	**162.17**	**289**	PKP	**PKPdf**	**02 41 07.6**	**+1.0**
	comp=Z,9.1nm,1.0s,baz=47,slow=4.0,SNR=21						
LPAZ	**La Paz**	**162.17**	**289**	*e*PKPdf	**PKPdf**	**02 41 07.0**	**+0.5**
LPAZ	**La Paz**	**162.17**	**289**	*e*PKIKP	**PKPdf**	**02 41 07.1**	**+0.5**
ATAH	**Atahualpa**	**162.79**	**335**	PKP	**PKPdf**	**02 41 09.4**	**+2.4**
	comp=Z,55nm,1.2s,baz=43,slow=0.7,SNR=12						
ATAH				PKPab	**PKPab**	**02 41 58.0**	**+2.0**
	comp=Z,48nm,0.8s,baz=358,slow=3.2,SNR=12						
MNMC	**Minye Minye**	**164.48**	**281**	*e*PKPdf	**PKPdf**	**02 41 08.7**	**+0.4**
PB11	**IPOC Station P**	**164.70**	**279**	*e*PKPdf	**PKPdf**	**02 41 09.4**	**+1.1**
LCO	**Las Campanas**	**165.20**	**243**	*e*PKPdf	**PKPdf**	**02 41 09.1**	**+0.4**
NNA	**Nana**	**166.22**	**321**	PKPab	**PKPab**	**02 42 12.1**	**+1.4**
	comp=Z,10nm,0.7s,baz=327,slow=4.6,SNR=2.6						
NNA	**Nana**	**166.22**	**321**	*e*PKPdf	**PKPdf**	**02 41 08.9**	**-0.7**
NNA				*e*PKPab	**PKPab**	**02 42 10.1**	**-0.6**
NNA	**Nana**	**166.22**	**321**	*e*PKIKP	**PKPdf**	**02 41 08.9**	**-0.7**
NNA				*e*		02 42 10.1	

ISCJB ***29*** *02:21:52.3±0.9, 14°.6S±0°.1×172°.2E±0°.1, h600km, mb3.7/6,*
Error ellipse: s-maj=18.2km s-min=15.4km az=165.3
IDC ***29*** *02:21:55.2±3.6, 14°.40S×172°.03E, h623km±44km, mb3.1/6,*
mb1 3.4/7, mb1mx3.1/52, mbtmp4.1/7, Error ellipse:
s-maj=32.9km s-min=25.8km az=170.0
ISC 29 02:21:53.3±1.0**, 14°.5S**±0°.2×**172°.2E**±0°.2**, h600**km**, n21,**
σ**1s23**/21**, mb3.9**/6**, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
DZM	**Mont Dzumac**	**9.35**	**215**	P	**P**	**02 24 07.2**	**+1.5**
	0.7nm,0.3s,baz=56,slow=8.6,SNR=7.3						
BHHZ	**Black Hill Sta**	**25.16**	**173**	P	**P**	**02 26 32.3**	**-0.6**
MRZ	**Mangatainoka R**	**26.27**	**174**	P	**P**	**02 26 41.0**	**-1.5**
QRZ	**Quartz Range**	**26.27**	**179**	P	**P**	**02 26 44.4**	**+1.9**
DUWZ	**D'Urville Isla**	**26.29**	**177**	P	**P**	**02 26 42.6**	**-0.1**
BFZ	**Birch Farm**	**26.36**	**173**	P	**P**	**02 26 41.5**	**-1.8**

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OGWZ  Otaki Gorge        26.39 175    P       P        02 26 42.0  -1.5
CAW   Cannon Point       26.66 175    P       P        02 26 44.6  -1.3
NNZ   Nelson             26.68 178    P       P        02 26 46.0   0.0
TCW   Tory Channel       26.71 177    P       P        02 26 45.4  -1.0
TUWZ  Tuamarina          26.91 177    P       P        02 26 47.3  -0.8
BHW   Baring Head        26.95 176    P       P        02 26 46.7  -1.8
THZ   Tophouse           27.21 179    P       P        02 26 50.7  -0.1
KHZ   Kahutara           27.88 178    P       P        02 26 54.7  -1.8
STKA  Stephens Creek     32.90 233    P       P        02 27 40.1  +0.5
      2.9nm,0.4s,baz=62,slow=8.4,SNR=14
WRA   Warramunga Arr     36.54 256    P       P        02 28 08.8  -1.3
      5.1nm,0.7s,baz=86,slow=9.0,SNR=26
ASAR  Alice Springs      37.25 250    P       P        02 28 15.2  -0.7
      7.4nm,0.5s,baz=77,slow=9.2,SNR=157
VNDA  Vanda              63.29 183    P       P        02 31 24.2  +0.2
      0.3nm,0.7s,baz=345,slow=5.6,SNR=4.2
NVAR  Mina Array Bea     83.50  48    P       P        02 33 19.7  +0.1
      0.7nm,0.8s,baz=228,slow=9.3,SNR=5.0
TXAR  Lajitas Array      91.96  60    P       P        02 34 00.4  +1.0
      0.5nm,0.8s,baz=202,slow=6.5,SNR=6.8
ARCES ARCESS Array B    121.14 347    PKP     PKPdf    02 39 37.5  -0.8
      3.4nm,1.0s,baz=46,slow=2.6,SNR=3.4
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*KRSC **29** 02:31:45.5±1.5, 52.°84N×160.°24E, h50^{km}±14^{km}, ML4.9*
*MOS **29** 02:31:47.7±0.9, 52.°91N×160.°05E, h53^{km}, mb4.8/24, Error ellipse: s-maj=8.0km s-min=3.9km az=87.3*
*ISCJB **29** 02:31:48.4±0.4, 52.°94N±0.°03×160.°00E±0.°06, h60^{km}±2^{km}, mb4.5/65, Error ellipse: s-maj=7.9km s-min=3.2km az=40.8*
*NEIC **29** 02:31:50.8±0.8, 53.°15N×159.°75E, h65^{km}±7^{km}, mb4.6/7, Error ellipse: s-maj=9.6km s-min=6.5km az=147.0*
*IDC **29** 02:31:51.8±1.4, 53.°14N×159.°74E, h74^{km}±10^{km}, mb4.2/36, mb1 4.3/37, mb1mx4.1/82, mbtmp4.5/37, MS3.7/2, Ms1 3.7/2, ms1mx3.0/74, Error ellipse: s-maj=15.0km s-min=10.8km az=135.0*
ISC 29 02:31:48.1±0.7, **52.°94N**±0.°04×**160.°05E**±0.°04, **h49**^{km}±6^{km}, **n233**, σ**1^{s}44**/252, **mb4.6**/65, **10C-11D, Off east coast of Kamchatka Peninsula**

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Code  Station Name        Δ°   AZ°     Phase ID             Time      Res
                                      Op      ISC         h  m  s    ISC
SPN   Mys Shipunski       0.16 355  i P       Pn       02 31 55.8  -0.3
SPN                                 i S       Sn       02 32 01.1  -0.6
SPN   Mys Shipunski       0.16 355    PN      Pn       02 31 55.8  -0.3
SPN                                   S       Sn       02 32 01.1  -0.6
NLC   Nalytchevo          0.48 299  i P       Pn       02 31 59.1  +0.1
NLC                                 eS        Sn       02 32 07.2  +0.3
NLC   Nalytchevo          0.48 299    PN      Pn       02 31 59.1  +0.1
NLC                                   S       Sn       02 32 07.2  +0.3
SDLR  Sedlovina           0.78 296  i P       Pn       02 32 03.5  +0.6
SDLR  Sedlovina           0.78 296    PN      Pn       02 32 03.5  +0.6
UGLR  Uglovaya            0.79 291  i P       Pn       02 32 03.6  +0.6
UGLR  Uglovaya            0.79 291    PN      Pn       02 32 03.6  +0.6
DALK  Dalny               0.79 277  eP        Pn       02 32 03.2  +0.3
DALK                                eS        Sn       02 32 14.4  +0.7
DALK  Dalny               0.79 277    PN      Pn       02 32 03.2  +0.3
DALK                                  S       Sn       02 32 14.4  +0.7
SMAR  Somma               0.82 294  i P       Pn       02 32 03.9  +0.3
SMAR  Somma               0.82 294    PN      Pn       02 32 03.9  +0.3
PET   Petropavlovsk       0.85 276  ePn       Pn       02 32 04.0  +0.3
PET                                 eSn       Sn       02 32 15.0  -0.1
PET   Petropavlovsk       0.85 276  ePN       Pn       02 32 03.4  -0.3
PET                                 eS        Sn       02 32 15.7  +0.6
PET                                   pmax    pmax
      comp=Z,6μm,0.4s
PET                                   pmax    pmax
      comp=Z,6μm,0.6s
PET                                   smax    smax
      comp=N,12μm,1.5s
PET                                   smax    smax
      comp=E,7μm,0.6s
PET                                   smax    smax
      comp=E,2μm,2.6s
PET                                   smax    smax
      comp=N,9μm,0.8s
PET                                   smax    smax
      comp=E,8μm,0.7s
AVH   Avacha              0.85 293  eP        Pn       02 32 04.8  +0.9
AVH   Avacha              0.85 293    PN      Pn       02 32 04.8  +0.9
KOK   Koryaka             0.92 293  eP        Pn       02 32 05.6  +0.8
KOK   Koryaka             0.92 293    PN      Pn       02 32 05.6  +0.8
KRX   Arik                0.94 297  eP        Pn       02 32 05.8  +0.7
KRX   Arik                0.94 297    PN      Pn       02 32 05.8  +0.7
RUS   Russkaya            1.06 242  i P       Pn       02 32 06.6   0.0
RUS                                 eP                 02 32 06.7
RUS                                 eS        Sn       02 32 20.6  +0.3
RUS   Russkaya            1.06 242    PN      Pn       02 32 06.6   0.0
RUS                                   S       Sn       02 32 20.6  +0.3
KII   Karymskiy           1.15 342  eP        Pn       02 32 08.8  +0.8
KII   Karymskiy           1.15 342    PN      Pn       02 32 08.8  +0.8
MTVR  Mutnovka            1.22 249  eP        Pn       02 32 09.5  +0.6
MTVR  Mutnovka            1.22 249    PN      Pn       02 32 09.5  +0.6
GRL   Gorelyy             1.26 253  eP        Pn       02 32 10.4  +1.0
GRL                                 eS        Sn       02 32 26.7  +1.4
GRL   Gorelyy             1.26 253    PN      Pn       02 32 10.4  +1.0
GRL                                   S       Sn       02 32 26.7  +1.4
ASAK  Asacha              1.42 248  i P       Pn       02 32 12.7  +1.1
ASAK                                eS        Sn       02 32 31.0  +1.8
ASAK  Asacha              1.42 248    PN      Pn       02 32 12.7  +1.1
ASAK                                  S       Sn       02 32 31.0  +1.8
PETK  Petropavlovsk-      1.43 278    P       Pn       02 32 13.0  +1.4
      baz=91,slow=20
PETK                                  S       Sn       02 32 29.6  +0.4
      baz=44,slow=16
PETK                                  LR      LR       02 33 00.2
      comp=E,1μm,18.8s,baz=157,slow=56
GNL   Ganaly              1.47 302  eP        Pn       02 32 14.0  +1.7
GNL   Ganaly              1.47 302    PN      Pn       02 32 14.0  +1.7
KDTR  Khodutka, Kamc      1.66 228  eP        Pn       02 32 15.0  +0.3
KDTR                                eS        Sn       02 32 36.4  +1.7
APC   Apacha              1.75 271  eP        Pn       02 32 18.1  +2.2
APC                                 eS        Sn       02 32 41.1  +4.1
APC   Apacha              1.75 271    PN      Pn       02 32 18.1  +2.2
APC                                   S       Sn       02 32 41.1  +4.1
MKZ   Mys Kozlova         1.90  31  eP        Pn       02 32 18.9  +0.9
MKZ   Mys Kozlova         1.90  31    PN      Pn       02 32 18.9  +0.9
MIPR  Malaya Ipel'ka      2.11 253  eP        Pn       02 32 22.9  +1.9
MIPR  Malaya Ipel'ka      2.11 253    PN      Pn       02 32 22.9  +1.9
KZV   Kizimen             2.18   4  eP        Pn       02 32 23.5  +1.5
KZV   Kizimen             2.18   4    PN      Pn       02 32 23.5  +1.5
TUMD  Tumrok D            2.28   5  eP        Pn       02 32 24.3  +1.1
TUMD                                eS        Sn       02 32 51.1  +1.1
TUMR  Tumrok              2.35   1  i P       Pn       02 32 26.4  +2.1
TUMR                                i S       Sn       02 32 54.2  +2.3
TUMR  Tumrok              2.35   1    PN      Pn       02 32 24.3   0.0
TUMR                                  S       Sn       02 32 51.1  -0.8
KMNR  Kamenistaya         2.82   2  eP        Pn       02 32 33.1  +2.3
KMNR  Kamenistaya         2.82   2    PN      Pn       02 32 33.1  +2.3
BZMR  Bezymyannaya        3.01   5  eP        Pn       02 32 36.0  +2.6
BZMR  Bezymyannaya        3.01   5    PN      Pn       02 32 36.0  +2.6
KIRR  Kirishev            3.02   3  eP        Pn       02 32 35.7  +2.1
KIRR  Kirishev            3.02   3    PN      Pn       02 32 35.7  +2.1
KPT   Kopyto              3.03   2  eP        Pn       02 32 35.6  +2.0
KPT   Kopyto              3.03   2    PN      Pn       02 32 35.6  +2.0
BZWR  Bezymyannyi-We      3.04   5  eP        Pn       02 32 36.0  +2.2
BZWR  Bezymyannyi-We      3.04   5    PN      Pn       02 32 36.0  +2.2
ZLN   Zelenaya            3.12   8  eP        Pn       02 32 36.6  +1.8
ZLN   Zelenaya            3.12   8    PN      Pn       02 32 36.6  +1.8
KOZ   Kozyrevsk           3.13 358  eP        Pn       02 32 36.4  +1.6
KOZ   Kozyrevsk           3.13 358    PN      Pn       02 32 36.4  +1.6
LGNR  Loginova            3.17   7  eP        Pn       02 32 38.8  +3.1
LGNR  Loginova            3.17   7    PN      Pn       02 32 38.8  +3.1
CIRR  Tsirk               3.21   7  eP        Pn       02 32 38.5  +2.4
CIRR  Tsirk               3.21   7    PN      Pn       02 32 38.5  +2.4
KRSR  Krestovskiy         3.30   5  eP        Pn       02 32 39.2  +1.9
KRSR  Krestovskiy         3.30   5    PN      Pn       02 32 39.2  +1.9
SKR   Severo-Kuril's      3.33 229  eP        Pn       02 32 38.5  +1.0
SKR                                 eS        Sn       02 33 16.8  +1.0
SKR   Severo-Kuril's      3.33 229  ePN       Pn       02 32 39.4  +1.9
SKR                                 eS        Sn       02 33 15.1  -0.7
SKR                                   smax    smax
      comp=N,815nm,0.6s
SKR                                   smax    smax
      comp=E,834nm,0.5s
KLY   Klyuchi             3.40   6  eP        Pn       02 32 41.1  +2.6
KLY   Klyuchi             3.40   6    PN      Pn       02 32 41.1  +2.6
KBTR  Krutoberegovo       3.65  25  eP        Pn       02 32 43.4  +1.4
KBTR  Krutoberegovo       3.65  25    PN      Pn       02 32 43.4  +1.4
BDR   Baidarnaya          3.70  10  eP        Pn       02 32 46.8  +4.1
BDR   Baidarnaya          3.70  10    PN      Pn       02 32 46.8  +4.1
SMKR  Semkarok            3.74  12  eP        Pn       02 32 45.5  +2.2
SMKR  Semkarok            3.74  12    PN      Pn       02 32 45.5  +2.2
SRKR  Sorokina            3.78   9  eP        Pn       02 32 47.0  +3.2
SRKR  Sorokina            3.78   9    PN      Pn       02 32 47.0  +3.2
BKI   Bering              4.16  55  eP        Pn       02 32 49.0   0.0
BKI                                 eS        Sn       02 33 32.0  -4.3
BKI   Bering              4.16  55    PN      Pn       02 32 49.0   0.0
MA2   Magadan             8.41 326    LR      LR       02 37 34.2
      comp=E,198nm,19.4s,baz=190,slow=42
NKL   Nikolayevsk        11.66 279  ePN       Pn       02 34 44.5  +13
NKL                                   pmax    pmax
      comp=Z,1μm,5.0s
NKL                                   pmax    pmax
      comp=Z,130nm,1.0s
SHO   Shikotan           12.61 229  ePN       Pn       02 34 41.9  -2.7
SHO                                   pmax    pmax
      comp=Z,18nm,0.4s
SHO                                   pmax    pmax
      comp=N,4.0nm,0.2s
SHO                                   pmax    pmax
      comp=E,6.0nm,0.2s
YSS   Yuzh-Sakhalins     12.63 249κePN        Pn       02 34 45.8  +0.9
YSS                                   pmax    pmax
      comp=Z,150nm,1.1s
YSS                                   pmax    pmax
      comp=Z,300nm,2.7s
YSS                                   MLR     MLR
      comp=Z,500nm,15.0s
ASAJ  Asahikawa          14.52 240    P       Pn       02 35 12.0  +1.6
      comp=Z,1.9nm,0.3s,baz=78,slow=12,SNR=7.8
ERM   Erimo              15.76 233  i P       Pn       02 35 22.6  -4.0
KLR   Kul'dur            18.11 270    P       Pn       02 35 56.7  +0.9
      comp=Z,0.1nm,0.3s,baz=78,slow=9.0,SNR=5.0
KLR   Kul'dur            18.11 270  i P       Pn       02 35 57.6  +1.8
USRK  Ussuriysk Ar.      20.41 256    P       P        02 36 21.6  +0.8
      comp=Z,4.9nm,0.5s,baz=49,slow=12
MJA0  Matsu Arr-Jizo     22.41 232  eP        P        02 36 43.5  +1.1
MJA0                                  pmax    pmax
      comp=Z,20nm,0.9s
MAJO  Matsushiro         22.43 232  eP        P        02 36 42.8  +0.1
      comp=Z,18nm,0.6s
MAJO  Matsushiro         22.43 232d iP        P        02 36 43.4  +0.8
MAJO                                  pmax    pmax
      comp=Z,33nm,1.0s
MAT   Matsushiro         22.43 232    P       P        02 36 43.3  +0.7
MJAR  Matsushiro Arr     22.43 232    P       P        02 36 43.6  +0.9
      comp=Z,20nm,0.9s,baz=15,slow=10,SNR=20
KSRS  Korea Array        27.13 248    P       P        02 37 28.5  +2.1
      comp=Z,4.4nm,0.9s,baz=39,slow=10,SNR=9.9
KSAR  Wonju Array Be     27.16 248    P       P        02 37 28.5  +1.8
KSAR  Wonju Array Be     27.16 248    P       P        02 37 28.5  +1.8
JNU   Nakatsue           28.79 238    P       P        02 37 42.6  +1.4
      comp=Z,4.7nm,0.6s,baz=6.2,slow=6.3,SNR=5.3
ILAR  Eielson Array      28.94  45    P       P        02 37 43.9  +1.6
      comp=Z,3.1nm,0.9s,baz=295,slow=6.7,SNR=2.3
H11N2 WAKE ISLAND Hy     33.57 168    T       T        03 14 04.3
      baz=352,slow=76,SNR=1618
H11N3 WAKE ISLAND Hy     33.59 168    T       T        03 14 18.2
      baz=352,slow=76,SNR=935
H11N1 WAKE ISLAND Hy     33.59 168    T       T        03 14 11.9
      baz=352,slow=76,SNR=1501
SONM  Songino Array      33.91 283    P       P        02 38 24.6  -1.6
      comp=Z,1.1nm,0.5s,baz=72,slow=8.1,SNR=4.3
SONM                                  PcP     PcP      02 41 04.3  +0.6
      comp=Z,2.4nm,0.6s,baz=69,slow=1.1,SNR=7.9
INK   Inuvik             34.01  38    P       P        02 38 26.2  -0.5
      comp=Z,5.6nm,0.8s,baz=290,slow=5.3,SNR=3.9
INK   Inuvik             34.01  38  eP        P        02 38 26.9  +0.2
      comp=Z,5.8nm,0.8s
INK   Inuvik             34.01  38  eP        P        02 38 26.9  +0.2
INK                                   pmax    pmax
      comp=Z,6.0nm,0.8s
H11S1 WAKE ISLAND Hy     34.75 169    T       T        03 15 40.4
      baz=352,slow=76,SNR=256
H11S3 WAKE ISLAND Hy     34.77 169    T       T        03 15 41.3
      baz=352,slow=76,SNR=406
H11S2 WAKE ISLAND Hy     34.77 169    T       T        03 15 44.3
      baz=352,slow=76,SNR=122
JOW   Kunigami           35.20 235    P       P        02 38 40.0  +2.5
      comp=Z,26nm,0.4s,baz=47,slow=7.1,SNR=14
ZALV  Zalesovo Beam      42.84 303    P       P        02 39 38.1  -2.8
      comp=Z,1.0nm,0.4s,baz=58,slow=5.8,SNR=3.3
YKA   Yellowknife Ar     43.29  42    P       P        02 39 44.8  +0.3
      comp=Z,1.9nm,0.8s,baz=294,slow=7.7,SNR=3.1
SPITS Spitsbergen Ar     47.28 350    P       P        02 40 15.5  -0.4
      comp=Z,4.1nm,0.3s,baz=30,slow=12,SNR=34
KURK  Kurchatov          47.79 302    P       P        02 40 19.2  -1.0
KURK                                  PcP     PcP      02 41 48.2  -0.1
KURK  Kurchatov          47.79 302  i P       P        02 40 18.4  -1.8
KURK                                  pmax    pmax
      comp=Z,12nm,0.9s
KURBB Kurchatov Arra     47.89 302    P       P        02 40 19.2  -1.7
      comp=Z,1.8nm,0.3s,baz=55,slow=8.3,SNR=12
KURBB                                 PcP     PcP      02 41 48.2  -0.5
      comp=Z,1.5nm,0.6s,baz=49,slow=3.0,SNR=5.7
MKAR  Makanchi Array     48.20 296    P       P        02 40 21.4  -2.0
      comp=Z,2.9nm,0.5s,baz=58,slow=6.6,SNR=26
BVAR  Borovoye Array     50.46 308    P       P        02 40 38.1  -2.4
      comp=Z,2.3nm,0.4s,baz=59,slow=7.8,SNR=14
BVAR                                  PcP     PcP      02 41 57.5  -0.6
      comp=Z,1.2nm,0.6s,baz=60,slow=3.5,SNR=3.6
BRVK  Borovoye           50.49 309  eP        P        02 40 39.1  -1.7
BRVK  Borovoye           50.49 309⇑eP        P        02 40 39.8  -1.0
BRVK                                  pmax    pmax
      comp=Z,4.0nm,1.2s
ARCES ARCESS Array B     53.42 342    P       P        02 41 00.7  -1.7
      comp=Z,2.2nm,0.8s,baz=30,slow=9.3,SNR=8.4
ARCES                                 PcP     PcP      02 42 08.0  -0.9
      comp=Z,1.2nm,0.5s,baz=39,slow=3.5,SNR=5.3
ARCES ARCESS Array B     53.42 342  eP        P        02 41 03.6  +1.2
ARCES                                 pmax    pmax
      comp=Z,2.0nm,0.9s
ARU   Arti               53.49 317    P       P        02 41 01.0  -2.0
      comp=Z,3.9nm,0.4s,baz=65,slow=8.7,SNR=8.7
ARU   Arti               53.49 317d iP        P        02 41 01.9  -1.1
ARU                                                    02 43 03.3
ARU                                   S       S        02 48 31.6  -0.2
ARU                                   SS      SS       02 52 05.8  -5.9
ARU                                   pmax    pmax
      comp=Z,39nm,2.5s
AAK   Ala-Archa          55.12 296    P       P        02 41 13.2  -2.0
      comp=Z,2.8nm,0.4s,baz=74,slow=6.5,SNR=4.5
AAK                                   LR      LR       03 04 22.6
      comp=Z,186nm,18.3s,baz=299,slow=36
AAK   Ala-Archa          55.12 296  eP        P        02 41 13.5  -1.8
      comp=Z,3.6nm,0.6s
AAK   Ala-Archa          55.12 296  i P       P        02 41 13.7  -1.6
AAK                                   pmax    pmax
      comp=Z,8.0nm,1.2s
HWUT  Hardware Ranch     57.36  63  eP        P        02 41 33.1  +1.8
      comp=Z,5.2nm,0.9s
PDAR  Pinedale Array     57.62  61    P       P        02 41 35.0  +1.8
      comp=Z,2.5nm,0.8s,baz=342,slow=2.3,SNR=3.4
AKTO  Aktyubinsk         57.91 312    P       P        02 41 32.7  -2.0
      comp=Z,1.4nm,0.4s,baz=77,slow=8.0,SNR=4.4
RSSD  Black Hills        59.51  56  eP        P        02 41 47.1  +0.8
RSSD  Black Hills        59.51  56  eP        P        02 41 47.1  +0.8
FINES FINESS Array B     60.25 337    P       P        02 41 50.0  -0.7
      comp=Z,3.4nm,0.5s,baz=28,slow=6.6,SNR=35
NB2   NORSAR Subarra     63.68 344    P       P        02 42 13.0  -0.9
      comp=Z,2.3nm,0.4s,baz=20,slow=6.9
NOA   NORSAR Array B     63.68 344    P       P        02 42 13.6  -0.3
      comp=Z,2.1nm,0.4s,baz=28,slow=6.0,SNR=19
HFS   Hagfors            64.09 342    P       P        02 42 15.9  -0.6
      comp=Z,5.5nm,0.5s,baz=41,slow=4.6,SNR=50
GEYT  Alibeck            67.15 303    P       P        02 42 35.1  -1.5
      comp=Z,0.8nm,0.5s,baz=46,slow=6.4,SNR=3.6
AKASG Malin Array Be     68.73 329    P       P        02 42 45.0  -1.3
      comp=Z,1.3nm,0.3s,baz=30,slow=6.4,SNR=9.4
AKASG Malin Array Be     68.73 329  eP        P        02 42 45.4  -0.9
AKASG                                 pmax    pmax
      comp=Z,1.0nm,0.3s
KIEV  Kiev               68.74 329  eP        P        02 42 45.0  -1.3
      comp=Z,2.9nm,0.5s
KIEV  Kiev               68.74 329  eP        P        02 42 45.1  -1.3
KIEV                                  pmax    pmax
      comp=Z,3.0nm,0.5s
KBZ   Khabaz             69.63 317    P       P        02 42 51.6  -0.3
      comp=Z,1.6nm,0.6s,baz=210,slow=12,SNR=4.1
TXAR  Lajitas Array      70.72  67    P       P        02 43 00.2  +1.2
      comp=Z,2.2nm,0.7s,baz=294,slow=3.9,SNR=6.1
TXAR  Lajitas Array      70.72  67  eP        P        02 43 00.6  +1.6
TXAR                                  pmax    pmax
      comp=Z,2.0nm,0.7s
EKA   Eskdalemuir Ar     71.20 350    P       P        02 43 01.4   0.0
      comp=Z,7.4nm,0.5s,baz=17,slow=5.2,SNR=86
ESK   Eskdalemuir        71.22 350  eP        P        02 43 00.9  -0.6
ESK   Eskdalemuir        71.22 350  eP        P        02 43 00.9  -0.6
JCT   Junction City      71.96  63  eP        P        02 43 08.0  +1.6
JCT   Junction City      71.96  63  eP        P        02 43 08.0  +1.6
CLL   Collm              72.49 339  i P       P        02 43 09.0  -0.1
      comp=Z,11nm,0.9s
CLL   Collm              72.49 339  i P       P        02 43 09.0  -0.1
CLL                                   pmax    pmax
      comp=Z,11nm,0.9s
UPC   Upice              72.55 337  eP        P        02 43 10.1  +0.5
UPC   Upice              72.55 337  eP        P        02 43 10.1  +0.5
WCI   Wyandotte Cave     72.58  49  eP        P        02 43 10.1  +0.1
WCI   Wyandotte Cave     72.58  49  eP        P        02 43 10.1  +0.1
DPC   Dobruska-Polom     72.62 337  eP        P        02 43 10.7  +0.7
DPC   Dobruska-Polom     72.62 337  eP        P        02 43 10.7  +0.7
CRVS  Cervenica-Dubn     72.62 333  eP        P        02 43 10.3  +0.3
CRVS                                  pmax    pmax
      comp=Z,21nm,1.9s
CRVS  Cervenica-Dubn     72.62 333  eP        P        02 43 10.3  +0.3
BRG   Berggiesshubel     72.69 338  eP        P        02 43 10.5  +0.2
      comp=Z,6.9nm,1.2s
BRG   Berggiesshubel     72.69 338  eP        P        02 43 10.5  +0.2
BRG                                   pmax    pmax
      comp=Z,7.0nm,1.2s
BURAR Bucovina Array     72.69 330⇓iP        P        02 43 10.5  -0.1
KRLC  Kraliky            72.77 336  eP        P        02 43 11.3  +0.4
KRLC  Kraliky            72.77 336  eP        P        02 43 11.3  +0.4
MORC  Moravsky Berou     72.85 336⇑iP        P        02 43 12.0  +0.6
MORC  Moravsky Berou     72.85 336    P       P        02 43 13.9  +2.5
MORC                                  pmax    pmax
      comp=Z,9.0nm,0.8s
MORC  Moravsky Berou     72.85 336  eP        P        02 43 11.8  +0.4
LANS  Liptovska Anna     72.94 334  eP        P        02 43 13.3  +1.4
LANS  Liptovska Anna     72.94 334  eP        P        02 43 13.3  +1.4
TRPA  Tarpa              73.02 332⇓iP        P        02 43 12.8  +0.5
PRU   Pruhonice          73.38 338  eP        P        02 43 15.1  +0.7
PRU                                 ex        x        02 43 18.4
PRU   Pruhonice          73.38 338  eP        P        02 43 15.1  +0.7
GOPC  GO Pecny, Ondr     73.39 337  eP        P        02 43 14.7  +0.1
GOPC  GO Pecny, Ondr     73.39 337  eP        P        02 43 14.7  +0.1
VRAC  Vranov             73.52 336⇑iP        P        02 43 15.6  +0.3
VRAC  Vranov             73.52 336    P       P        02 43 17.0  +1.7
NKC   Novy Kostel        73.62 339  eP        P        02 43 16.1  +0.2
NKC   Novy Kostel        73.62 339  eP        P        02 43 16.1  +0.2
JAVC  Velka Javorina     73.67 335  eP        P        02 43 17.8  +1.5
VYHS  Vyhne              73.70 334  eP        P        02 43 16.7  +0.3
VYHS                                  pmax    pmax
      comp=Z,4.0nm,0.5s
VYHS  Vyhne              73.70 334  eP        P        02 43 16.7  +0.3
KRUC  Moravsky           73.80 336  eP        P        02 43 17.4  +0.5
CFR   Carcaliu           73.93 327⇑iP        P        02 43 17.5  -0.2
CJR   Cluj-Napoca        73.99 330⇑iP        P        02 43 19.1  +0.9
DOPR  Dopca              74.11 329⇑iP        P        02 43 19.7  +0.8
MLR   Muntele Rosu       74.36 328    P       P        02 43 21.2  +0.7
      comp=Z,6.9nm,0.6s,baz=353,slow=8.1,SNR=36
MLR   Muntele Rosu       74.36 328⇓iP        P        02 43 20.8  +0.3
GRFO  Grafenberg         74.39 340  eP        P        02 43 19.2  -1.2
      comp=Z,5.5nm,0.5s
KHC   Kasperske Hory     74.40 338  eP        P        02 43 21.2  +0.7
KHC                                 ex        x        02 43 24.4
KHC                                 ex        x        02 43 27.8
MEM   Membach            74.52 343    P       P        02 43 21.8  +0.7
MEM                                   pmax    pmax
      comp=Z,28nm,0.9s
WET   Wettzell           74.55 338    P       P        02 43 22.7  +1.4
WET                                   pmax    pmax
      comp=Z,8.0nm,1.2s
GERES GERESS Array B     74.64 338    P       P        02 43 22.1  +0.1
      comp=Z,2.4nm,0.4s,baz=32,slow=6.0,SNR=42
GERES GERESS Array B     74.64 338  eP        P        02 43 22.1  +0.1
GERES                                 pmax    pmax
      comp=Z,3.0nm,0.4s
VOIR                     74.69 329⇓iP        P        02 43 23.2  +0.9
VOIR                     74.69 329    P       P        02 43 23.3  +0.9
VOIR                                  pmax    pmax
      comp=Z,11nm,1.3s
ARR   Arges              74.89 329⇓iP        P        02 43 24.7  +1.3
CONA  Conrad Observa     74.99 336  i P       P        02 43 24.9  +0.9
      comp=Z,5.2nm,0.5s
SOP   Sopron             75.04 335    P       P        02 43 26.2  +2.1
SOP                                   pmax    pmax
      comp=Z,11nm,0.8s
MOA   Molln              75.44 337  i P       P        02 43 27.0  +0.5
      comp=Z,2.1nm,0.6s
BZS   Buzias             75.57 331⇑iP        P        02 43 27.7  +0.5
BZS   Buzias             75.57 331    P       P        02 43 27.5  +0.3
BZS                                   pmax    pmax
      comp=Z,10.0nm,1.3s
ARSA  Arzberg            75.70 336  eP        P        02 43 28.9  +0.9
      comp=Z,4.3nm,0.5s,SNR=5.8
WRA   Warramunga Arr     75.93 205    P       P        02 43 29.3  -0.2
      comp=Z,1.0nm,0.7s,baz=20,slow=6.3,SNR=4.9
WRA   Warramunga Arr     75.93 205  eP        P        02 43 30.4  +0.9
WRA                                   pmax    pmax
      comp=Z,1.0nm,0.7s
BFO   Black Forest       76.28 341  i P       P        02 43 32.3  +1.0
MDVR  Moldovita          76.30 331⇑iP        P        02 43 31.2  -0.3
SOKA  Soboth             76.36 336  eP        P        02 43 32.5  +0.7
      comp=Z,6.7nm,0.5s,SNR=15
KBA   Koelnbreinsper     76.39 337  i P       P        02 43 33.7  +1.6
      comp=Z,25nm,0.8s,SNR=4.6
KBA   Koelnbreinsper     76.39 337    P       P        02 43 33.5  +1.4
KBA                                   pmax    pmax
      comp=Z,36nm,0.9s
WATA  Walderalm          76.55 339  eP        P        02 43 33.6  +0.7
      comp=Z,1.9nm,0.4s
RETA  Reutte             76.58 339  i P       P        02 43 33.9  +0.8
      comp=Z,2.2nm,0.6s
WTTA  Wattenberg         76.60 338  i P       P        02 43 34.6  +1.3
      comp=Z,3.0nm,0.6s
OBKA  Obir               76.63 336  i P       P        02 43 34.3  +0.9
      comp=Z,4.6nm,0.6s
MOTA  Moosalm            76.64 339  i P       P        02 43 34.4  +0.9
      comp=Z,4.1nm,0.8s
BRTR  Keskin Array B     76.72 320    P       P        02 43 33.8  -0.3
      comp=Z,2.6nm,0.9s,baz=49,slow=3.1,SNR=9.5
MYKA  Terra Mystica      76.74 337  eP        P        02 43 34.9  +1.0
      comp=Z,9.2nm,1.5s
ABTA  Abfaltersbach      76.89 338  i P       P        02 43 34.7  -0.1
      comp=Z,9.7nm,0.9s,SNR=7.8
FETA  Feichten           77.03 339  eP        P        02 43 36.5  +0.8
      comp=Z,5.9nm,0.9s,SNR=7.1
DAVOX Davos/Dischmat     77.44 339    P       P        02 43 38.9  +0.9
      comp=Z,6.6nm,0.9s,baz=51,slow=6.5,SNR=9.1
VTS   Vitosha            77.83 329⇑iP        P        02 43 40.0  -0.2
VTS   Vitosha            77.83 329    P       P        02 43 40.5  +0.2
PDG   Podgorica          79.17 332⇓iP        P        02 43 47.2  -0.2
ASAR  Alice Springs      79.61 204    P       P        02 43 50.8  +0.9
      comp=Z,1.7nm,0.7s,baz=15,slow=5.6,SNR=15
ASAR  Alice Springs      79.61 204  eP        P        02 43 50.9  +1.0
ASAR                                  pmax    pmax
      comp=Z,2.0nm,0.7s
SSB   Saint Sauveur      79.93 343    P       P        02 43 52.6  +1.0
SSB                                   pmax    pmax
      comp=Z,17nm,0.8s
MATE  Matera             81.54 333⇓iP        P        02 43 59.8  -0.3
MMAI  Mount Meron Ar     81.80 316    P       P        02 44 02.0  +0.2
      comp=Z,9.1nm,0.5s,baz=37,slow=4.1,SNR=29
TIP   Timpagrande        82.89 332⇑iP        P        02 44 07.7  +0.3
RAYN  Ar Rayn            85.11 303  eP        P        02 44 17.8  -1.1
RAYN  Ar Rayn            85.11 303  eP        P        02 44 17.8  -1.1
ESDC  Sonseca Array      86.72 348    P       P        02 44 26.8  +0.2
      comp=Z,1.9nm,0.5s,baz=0.8,slow=4.9,SNR=24
KEST  Kesra              88.09 337    P       P        02 44 33.2   0.0
      comp=Z,2.3nm,0.5s,baz=301,slow=4.2,SNR=7.9
SIV   San Ignacio       131.03  57    PKP     PKPdf    02 50 53.3  -1.1
      comp=Z,1.4nm,0.7s,baz=297,slow=2.3,SNR=3.6
PLCA  Paso Flores       144.04  91    PKP     PKPdf    02 51 18.9  +1.4
      comp=Z,2.0nm,0.7s,baz=290,slow=3.0,SNR=4.2
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*AZER **29** 02:36:35.2±1.0, 38.°19N×43.°52E, h2^{km}, ml3.6/7, Error ellipse: s-maj=10.2km s-min=8.8km az=102.0*
*ISK **29** 02:36:37.2, 38.°74N×43.°57E, h5^{km}, ML3.3/20*
*DDA **29** 02:36:37.1, 38.°71N×43.°68E, h5^{km}, Ml3.6*
*CSEM **29** 02:36:38.0±0.2, 38.°73N×43.°57E, h5^{km}, ML3.3, Error ellipse: s-maj=4.5km s-min=3.5km az=114.0*
ISC 29 02:36:38.7±1.1, **38.°74N**±0.°02×**43.°60E**±0.°02, **h4**^{km}±10^{km}, **n106**, σ**1^{s}24**/137, **10C-12D, Turkey**

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Code  Station Name        Δ°   AZ°     Phase ID             Time      Res
                                      Op      ISC         h  m  s    ISC
VANB  Van                 0.22 230    PG      Pg       02 36 43.0  +0.1
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VANB	Van	0.22	230	*e*Pg	Pg	02 36 43.0	+0.1
VMUR	Van-Muradiye	0.25	355	*i* P	Pg	02 36 43.3	-0.3
VMUR				*i* S	Sb	02 36 48.9	-1.9
VMUR	Van-Muradiye	0.25	355	P	Pg	02 36 43.3	-0.3
VMUR				S	Sb	02 36 48.8	-1.9
ERCV	ERCIS-VAN	0.35	324	PG	Pg	02 36 44.4	-1.1
ERCV	ERCIS-VAN	0.35	324	*e*Pg	Pg	02 36 44.4	-1.1
CLDR	Caldiran	0.47	31	PG	Pg	02 36 47.2	-0.6
CLDR				SG	Sg	02 36 54.4	+0.4
CLDR	Caldiran	0.47	31	*i* P	Pg	02 36 47.1	-0.7
CLDR	Caldiran	0.47	31	*e*Pg	Pg	02 36 47.2	-0.6
CLDR				*e*Sg	Sg	02 36 54.4	+0.4
GEVA	Gevas	0.60	225	*i* P	Pg	02 36 49.0	-1.2
GEVA				*i* S	Sb	02 36 59.9	-0.8
GEVA	Gevas	0.60	225	P	Pg	02 36 49.0	-1.2
GEVA				S	Sb	02 36 59.9	-0.8
ADCV	BITLIS_Adilcev	0.69	276	*i* P	Pg	02 36 51.5	-0.4
ADCV				*i* S	Sb	02 37 03.2	-0.1
ADCV	BITLIS_Adilcev	0.69	276	P	Pg	02 36 51.5	-0.4
ADCV				S	Sb	02 37 03.2	-0.1
DYDN	Diyadin	0.81	5	*i* P	Pg	02 36 52.1	-2.1
DYDN				*i* S	Sb	02 37 06.8	0.0
DYDN	Diyadin	0.81	5	P	Pg	02 36 52.1	-2.1
DYDN				S	Sb	02 37 06.8	0.0
TUTA	Tutak	0.90	317	*i* P	Pg	02 36 54.4	-1.6
TUTA				*i* S	Sb	02 37 08.9	-0.6
TUTA	Tutak	0.90	317	P	Pg	02 36 54.4	-1.6
TUTA				S	Sb	02 37 08.9	-0.6
AGRB	Hanur-Agry	0.96	331	PG	Pg	02 36 55.7	-1.4
AGRB	Hanur-Agry	0.96	331	*e*Pg	Pg	02 36 55.7	-1.4
HAKT	HAKKARI	1.18	176	*i* P	Pg	02 36 59.5	-1.8
HAKT	HAKKARI	1.18	176	P	Pg	02 36 59.5	-1.8
IGDI	IGDIR	1.19	18	*i* P	Pg	02 37 00.1	-1.4
IGDI				*i* S	Sn	02 37 20.7	+1.9
GURO	Guroymak-BITLI	1.24	262	PN	Pg	02 37 00.5	-2.0
GURO	Guroymak-BITLI	1.24	262	*e*Pn	Pg	02 37 00.5	-2.0
YOVA	Hakkari_Yˆ…kse	1.27	155	*i* P	Pg	02 37 00.3	-2.7
YOVA				*i* S	Sn	02 37 22.0	+1.0
YOVA	Hakkari_Yˆ…kse	1.27	155	P	Pg	02 37 00.3	-2.7
YOVA				S	Sn	02 37 22.0	+1.0
EKAR	Karacoban	1.30	294	*i* P	Pg	02 37 02.9	-0.8
EKAR	Karacoban	1.30	294	P	Pg	02 37 02.9	-0.8
TASB	TASBURUN-IGDIR	1.34	21	PN	Pn	02 37 03.3	-0.9
TASB	TASBURUN-IGDIR	1.34	21	*e*Pn	Pn	02 37 03.3	-0.9
HYR	Heyderabad	1.38	44	⇓P	Pb	02 37 06.0	+0.9
HYR	Heyderabad	1.38	44	⇓P	Pb	02 37 06.0	+0.9
HYR				⇓S	Sn	02 37 32.9	+9.4
EATA	Eleskirt	1.42	323	*i* P	Pn	02 37 04.1	-1.4
EATA				*i* S	Sn	02 37 26.3	+1.6
EATA	Eleskirt	1.42	323	P	Pn	02 37 04.1	-1.4
EATA				S	Sn	02 37 26.3	+1.6
CUKT	Cukurca	1.49	180	PN	Pn	02 37 05.1	-1.2
CUKT	Cukurca	1.49	180	*i* P	Pn	02 37 04.8	-1.5
CUKT	Cukurca	1.49	180	P	Pn	02 37 04.8	-1.5
CUKT	Cukurca	1.49	180	*e*Pn	Pn	02 37 05.1	-1.2
SRTM	Siirt_Merkez	1.52	241	*i* P	Pn	02 37 06.6	0.0
SRTM				*i* S	Sg	02 37 28.5	+1.1
SRTM	Siirt_Merkez	1.52	241	P	Pn	02 37 06.6	0.0
SRTM				S	Sg	02 37 28.5	+1.1
SIRT	Sirnak	1.54	217	PN	Pn	02 37 05.9	-1.0
SIRT	Sirnak	1.54	217	*e*Pn	Pn	02 37 05.9	-1.0
NAX	Nakhchivan	1.54	73	⇓P	Pb	02 37 07.5	-0.3
	SNR=14						
NAX	Nakhchivan	1.54	73	⇓P	Pb	02 37 07.5	-0.3
	SNR=14						
NAX				⇓S	Sg	02 37 32.7	+4.5
SIRN	S˜–rnak	1.55	217	*i* P	Pn	02 37 07.0	-0.1
SIRN				*i* S	Sg	02 37 30.9	+2.3
SIRN				*i* S	Sb	02 37 31.3	+3.2
SIRN	S˜–rnak	1.55	217	P	Pn	02 37 07.0	-0.1
SIRN				S	Sg	02 37 30.9	+2.3
SBZ	Shahbuz	1.66	66	⇑P	Pn	02 37 09.3	+0.7
SBZ	Shahbuz	1.66	66	⇑P	Pn	02 37 09.3	+0.7
SBZ				⇓S	Sg	02 37 36.6	+4.8
GNI	Garni	1.66	32	PN	Pn	02 37 07.9	-0.9
GNI	Garni	1.66	32	P	Pn	02 37 09.0	+0.2
	SNR=36						
GNI	Garni	1.66	32	*e*Pn	Pn	02 37 07.9	-0.9
GNI	Garni	1.66	32	P	Pn	02 37 09.0	+0.2
	SNR=36						
DIGO	Kars	1.69	354	*i* P	Pn	02 37 09.3	+0.2
DIGO	Kars	1.69	354	P	Pn	02 37 09.3	+0.2
ORD	Ordubad	1.88	83	⇑P	Pn	02 37 11.4	-0.2
ORD				⇑S	Sg	02 37 39.3	+0.3
ORD	Ordubad	1.88	83	⇑P	Pn	02 37 11.4	-0.2
ORD				⇑S	Sg	02 37 39.3	+0.3
BNGL	BINGOL	1.93	277	*i* P	Pn	02 37 12.3	-0.1
KARS	Kars	1.93	348	PN	Pn	02 37 11.3	-1.1
KARS	Kars	1.93	348	*e*Pn	Pn	02 37 11.3	-1.1
EAK	Akyaka	1.95	0	*i* P	Pg	02 37 16.3	+0.3
EAK	Akyaka	1.95	0	P	Pg	02 37 16.3	+0.3
SVAN	Silvan-Diyarba	1.98	254	PN	Pn	02 37 12.1	-0.8
SVAN	Silvan-Diyarba	1.98	254	*i* P	Pn	02 37 13.2	+0.3
SVAN				*i* S	Sb	02 37 40.8	+0.6
SVAN	Silvan-Diyarba	1.98	254	*e*Pn	Pn	02 37 12.1	-0.8
SVAN	Silvan-Diyarba	1.98	254	P	Pn	02 37 13.2	+0.3
SVAN				S	Sb	02 37 40.8	+0.6
SENK	Senkaya-Erzuru	2.06	332	PN	Pn	02 37 13.4	-0.9
SENK	Senkaya-Erzuru	2.06	332	*e*Pn	Pn	02 37 13.4	-0.9
ERZM	Erzurum	2.09	305	*i* P	Pb	02 37 17.4	+0.1
ERZM	Erzurum	2.09	305	P	Pb	02 37 17.4	+0.1
ECAT	Cat-ERZURUM	2.22	294	*i* P	Pb	02 37 18.8	-0.7
ECAT	Cat-ERZURUM	2.22	294	P	Pb	02 37 18.8	-0.7
BNGB	Bingˆ¶l	2.30	277	PN	Pn	02 37 16.4	-1.0
BINT	Bingol	2.44	274	*e*Pn	Pn	02 37 16.4	-2.9
YEDI	Yedisu-Bingol	2.48	287	PN	Pn	02 37 19.2	-0.8
YEDI	Yedisu-Bingol	2.48	287	*e*Pn	Pn	02 37 19.2	-0.8
DDEM	Demirkent	2.58	327	*i* P	Pb	02 37 25.8	+0.2
GDB	GEDABAY	2.58	39	⇓P	Pb	02 37 25.2	-0.5
	SNR=5.6						
GDB	GEDABAY	2.58	39	⇓P	Pb	02 37 25.2	-0.5
	SNR=5.6						
GDB				⇑S	Sg	02 38 02.4	+0.7
MARD	Mardin	2.64	238	*i* P	Pn	02 37 21.1	-1.1
AKH	Akhalkalaki	2.67	358	PN	Pn	02 37 22.1	-0.5
AKH	Akhalkalaki	2.67	358	*e*Pn	Pn	02 37 22.1	-0.5
DAGI	Agillar	2.67	331	*i* P	Pb	02 37 26.6	-0.6
QZX	Qazax, Azerbai	2.69	30	⇑P	Pb	02 37 26.7	-0.7
	SNR=6.3						
QZX	Qazax, Azerbai	2.69	30	⇑P	Pb	02 37 26.7	-0.7
	SNR=6.3						
QZX				⇑S	Sg	02 38 06.7	+1.6
KOPT	Kop Dagi	2.73	299	*i* P	Pb	02 37 27.6	-0.6
ARTV	Artvin	2.76	333	*i* P	Pb	02 37 27.3	-1.4
ARTV	Artvin	2.76	333	P	Pb	02 37 27.3	-1.4
DIY	Diyarbakir	2.79	253	*e*Pn	Pn	02 37 24.1	0.0
MAZI	Mazidag	2.80	244	PN	Pn	02 37 23.1	-1.2
MAZI	Mazidag	2.80	244	*e*Pn	Pn	02 37 23.1	-1.2
DYBB	Diyarbakir	2.83	255	PN	Pn	02 37 24.1	-0.6
GANJ	Ganja	2.83	47	⇓P	Pb	02 37 28.4	-1.5
	SNR=4.7						
GANJ	Ganja	2.83	47	⇓P	Pb	02 37 28.4	-1.5
	SNR=4.7						
GANJ				⇓S	Sg	02 38 09.2	-0.5
BCA	Borcka	3.10	331	PN	Pn	02 37 28.2	-0.2
BCA	Borcka	3.10	331	*e*Pn	Pn	02 37 28.2	-0.2
TBLG	Delisi	3.11	16	PN	Pn	02 37 28.5	-0.1
TBLG	Delisi	3.11	16	*e*Pn	Pn	02 37 28.5	-0.1
BAYT	Ayd˜–ntepe-Bay	3.15	303	PN	Pn	02 37 28.6	-0.5
BAYT	Ayd˜–ntepe-Bay	3.15	303	*e*Pn	Pn	02 37 28.6	-0.5
TNCL	Tunceli-Merkez	3.19	278	*i* P	Pb	02 37 36.1	+0.2
CHOM	Cayeli-Rize	3.21	318	PN	Pn	02 37 29.6	-0.3
CHOM	Cayeli-Rize	3.21	318	*e*Pn	Pn	02 37 29.6	-0.3
PTK	Pertek	3.29	274	PN	Pn	02 37 30.7	-0.5
PTK	Pertek	3.29	274	*e*Pn	Pn	02 37 30.7	-0.5
SVRC	Sivrice-ELAZID	3.39	265	PN	Pn	02 37 32.0	-0.4
SVRC	Sivrice-ELAZID	3.39	265	*e*Pn	Pn	02 37 32.0	-0.4

BJI ***29*** *03:04:34.0, 7°.32N×127°.04E, h83^{km}, mb4.9/47, mB5.0/29, Ms4.3/22, Ms7 4.2/22*

MAN ***29*** *03:04:38.7, 7°.86N×126°.47E, h8^{km}, mb5.6, ML4.6, MS5.0*

DJA ***29*** *03:04:39.9±1.6, 8°N±4°×12°7E±°, h30^{km}±13^{km}, M5.0/35, mB5.4/19, mb5.0/35, MLv5.5/4, Mw(mB)4.8/19*

ISCJB ***29*** *03:04:40.1±0.4, 7°.95N±0°.02×126°.67E±0°.03, h82^{km}±3^{km}, mb4.8/167, Error ellipse: s-maj=4.7km s-min=2.8km az=166.0*

IDC ***29*** *03:04:40.9±0.9, 7°.94N×126°.47E, h73^{km}±7^{km}, mb4.6/51, mb1 4.7/53, mb1mx4.7/63, mbtmp5.0/53, MS3.8/26, Ms1 3.8/26, ms1mx3.6/56, Error ellipse: s-maj=10.8km s-min=7.0km az=96.0*

NEIC ***29*** *03:04:42.9±0.7, 7°.94N×126°.57E, h91^{km}±6^{km}, mb4.8/67, Error ellipse: s-maj=5.3km s-min=3.7km az=84.0*

NEIC Felt [IV PIVS] at Hinatuan and [III PIVS] at Bislig. Also felt at Manat.

MOS ***29*** *03:04:43.3±1.0, 8°.28N×126°.34E, h93^{km}, mb5.0/50, Error ellipse: s-maj=9.1km s-min=5.1km az=111.1*

KLM ***29*** *03:04:45.0, 7°.97N×126°.69E, h94^{km}, mb4.9*

ISC 29 03:04:40.1±0.6, **7°.93N**±0°.03×**126°.71E**±0°.04, **h67**^{km}±4^{km}, **n513,** σ**1§66**/560, **mb4.9**/166, **32C-17D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
BIPH	Bislig	0.43	306	⇓*e*P	Pn	03 04 48.1	-4.0
BIPH				*e*S	Sn	03 04 54.4	-6.4
MATI	Mati	1.07	205	*e*P	Pn	03 04 56.0	-3.5
MATI				*e*S	Sn	03 05 08.7	-5.2
DAV	Davao City (W)	1.41	233	P	Pn	03 05 02.9	-0.9
	799nm,0.3s,baz=280,slow=4.6,SNR=36						
DAV				S	Sn	03 05 19.0	-2.6
	1µm,0.3s,baz=107,slow=19,SNR=12						
DAV	Davao City (W)	1.41	233	*e*Pn	Pn	03 05 03.6	-0.2
DAV				*e*Sn	Sn	03 05 20.7	-1.0
DMPH	Davao City--Mi	1.46	235	⇓*e*P	Pn	03 05 07.3	+2.8
DMPH				*i* S	Sn	03 05 26.0	+3.2
BUTP	Butuan	1.49	314	*e*P	Pn	03 05 04.5	-0.5
BUTP				*e*S	Sn	03 05 27.4	+3.8
BUKP	Musuan	1.63	268	*e*P	Pn	03 05 06.1	-0.8
BUKP				*e*S	Sn	03 05 29.3	+2.2
CGP	Cagayan de Oro	2.06	285	⇑*e*P	Pn	03 05 11.9	-0.7
CGP				*i* S	Sn	03 05 39.2	+1.8
DDMP	Don Marcelino,	2.06	209	*e*P	Pn	03 05 11.1	-1.6
DDMP				*e*S	Sn	03 05 37.2	-0.2
SCPH	Surigao	2.20	327	⇑*i*P	Pn	03 05 14.9	+0.4
SCPH				*i* S	Sn	03 05 42.4	+1.7
GSPH	General Santos	2.53	224	⇑*i*P	Pn	03 05 17.5	-1.5
CTBH	Cotabato--PC H	2.54	254	⇑*i*P	Pn	03 05 12.7	-6.4
CTBH				*e*S	Sn	03 05 35.3	-14
SKMP	Bagumbayan, Su	2.57	237	*e*P	Pn	03 05 17.3	-2.2
SKMP				*e*S	Sn	03 06 03.6	+14
MSLP	Maasin	2.85	320	*e*P	Pn	03 05 23.2	-0.1
MSLP				*e*S	Sn	03 06 08.3	+12
PAGZ	Pagadian	3.30	269	*e*P	Pn	03 05 28.5	-0.9
TBP	Tagbilaran	3.32	302	*e*P	Pn	03 05 29.1	-0.6
TBP				*i* S	Sn	03 06 08.2	+0.2
DCPH	Dipolog City	3.39	281	⇓*e*P	Pn	03 05 32.3	+1.7
LLP	Lapu-Lapu	3.60	311	⇑*e*P	Pn	03 05 34.2	+0.6
LLP				*e*S	Sn	03 06 16.3	+1.4
SNPH	Sibulan	3.71	293	⇓*i*P	Pn	03 05 34.6	-0.5
SNPH				*i* S	Sn	03 06 17.0	-0.7
OCLP	Ormoc	3.73	326	*e*P	Pn	03 05 35.8	+0.4
OCLP				*e*S	Sn	03 06 25.2	+7.1
BESP	Borongan	3.86	341	*e*P	Pn	03 05 41.2	+4.2
GUIM	Jordan	4.87	304	*e*P	Pn	03 05 51.3	+0.3
RCP	Roxas	5.32	313	⇑*e*P	Pn	03 05 57.8	+0.7
PVCP	Virac	6.17	336	*e*P	Pn	03 06 10.9	+2.2
CUYO	Cuyo Island	6.32	298	*e*P	Pn	03 06 10.4	-0.4
OTRP	Odiongan	6.38	314	*e*P	Pn	03 06 13.8	+2.2
SJMP	San Jose	7.11	310	*e*P	Pn	03 06 24.5	+2.9
TNTI	Ternate	7.14	175	P	Pn	03 06 23.4	+1.4
	103nm,1.1s,0.8nm						
PALU	Palau	7.72	94	P	Pn	03 06 26.4	-3.5
	baz=7.7,SNR=3.5						
KMSI	Cibinong	7.79	201	P	Pn	03 06 32.9	+2.0
	389nm,0.6s,1.9nm						
TGY	Tagaytay City	8.35	318	P	Pn	03 06 41.7	+3.1
	16nm,0.3s,baz=102,slow=20,SNR=1.8						
MYLDM	Lahad Datu	8.60	252	*e*Pn	Pn	03 06 45.8	+3.8
MRSI	Marisa	8.80	213	P	Pn	03 06 44.0	-0.7
	144nm,0.6s,2µm						
LUWI	Luwuk	9.74	204	P	Pn	03 07 00.0	+2.5
	176nm,0.6s,3µm						
LUWI	Luwuk	9.74	204	*e*Pn	Pn	03 07 01.0	+3.5
SANI	Sanana	9.94	184	P	Pn	03 06 58.1	-2.1
	104nm,0.7s,2µm						
APSI	Ampana	10.13	210	P	Pn	03 07 05.4	+2.6
	101nm,1.1s,1µm						
MPSI	Mapaga	10.15	222	P	Pn	03 07 05.1	+2.0
	10.0nm,0.8s,566nm						
CAUP	Cauayan	10.15	332	*e*P	Pn	03 07 00.1	-3.0
KKM	Kota Kinabalu	10.59	260	P	Pn	03 07 13.0	+3.8
PCI	Palu	11.13	218	P	Pn	03 07 18.9	+2.3
	63nm,1.2s						
PCI	Palu	11.13	218	P	Pn	03 07 20.8	+4.2
PCI				pmax	pmax		
	comp=Z,63nm,1.2s						
RKPI	Ransiki, Papua	11.97	141	P	Pn	03 07 29.9	+1.8
	comp=Z,66nm,1.3s,comp=Z,1µm						
KDI	Kendari	12.49	199	P	Pn	03 07 37.5	+2.4
	comp=Z,31nm,0.8s						
TTSI	Tana Toraja	12.89	212	P	Pn	03 07 41.5	+1.0
	comp=Z,61nm,0.8s,comp=Z,820nm						
SPSI	Sidrap Palu	13.69	211	P	Pn	03 07 53.0	+1.7
	comp=Z,20nm,1.1s,comp=Z,427nm						
MTKI	Muara Teweh, K	14.71	234	P	Pn	03 08 06.5	+1.8
KBKI	Kotabaru	15.33	224	P	P	03 08 15.0	-1.0
	comp=Z,24nm,0.7s						
SBUM	Sibu	15.42	250	*e*Pn	Pn	03 08 14.0	+0.2
	comp=Z,64nm,0.9s						
GENI	Genyem	17.01	127	P	P	03 08 38.4	+3.7
	comp=Z,48nm,1.0s						
STKI	Sintang	17.07	243	P	P	03 08 36.4	+1.0
EDFI	Ende, Flores	17.31	197	P	P	03 08 40.9	+2.9
	comp=Z,31nm,1.2s						
JAY	Jayapura	17.39	126	P	P	03 08 42.8	+3.9
KSM	Kuching	17.55	249	*e*Pn	P	03 08 41.9	+1.2
	comp=Z,36nm,0.7s						
KSM	Kuching	17.55	249	P	P	03 08 43.0	+2.3
SOEI	Soe	17.73	188	P	Pn	03 08 47.2	+4.4
SOEI	Soe	17.73	188	*e*P	Pn	03 08 44.8	+2.0
	comp=Z,134nm,1.0s						
SOEI				*e*Sn	S	03 12 16.7	+14
BATI	Baumata	18.27	190	P	Pn	03 08 49.4	+0.2
	comp=Z,13nm,0.3s,baz=18,slow=1.8,SNR=7.9						
BATI	Baumata	18.27	190	P	Pn	03 08 55.6	+6.4
	comp=Z,63nm,1.0s						
GUMO	Guam	18.70	71	LR	LR	03 14 43.9	
	comp=Z,185nm,20.5s,baz=262,slow=32						
JOW	Kunigami	18.86	4	P	Pn	03 08 56.4	+0.2
	comp=Z,16nm,0.3s,baz=192,slow=8.2,SNR=28						
JOW				LR	LR	03 17 45.3	
	comp=Z,155nm,18.7s,baz=168,slow=42						
JOW	Kunigami	18.86	4	*e*P	Pn	03 08 57.7	+1.5
	comp=Z,138nm,0.7s						
PLAI	Plampang	18.88	208	P	Pn	03 09 00.2	+3.8
	comp=Z,68nm,1.1s						
TWSI	Taliwang, Sumb	19.24	211	P	Pn	03 09 00.9	+0.2
	comp=Z,44nm,0.7s,comp=Z,2µm						
QIZ	Qiongzhong	19.75	306	*e*P	P	03 09 04.2	-0.5
	comp=Z,33nm,0.8s						
GZH	Guangzhou	19.80	321	P	Pn	03 09 07.0	-0.3
GZH				S	S	03 12 42.3	-2.5
GZH				LR	LR		
	comp=Z,350nm,15.9s						
GZH				LR	LR		
	comp=Z,410nm,16.0s						
MTN	Manton Dam	21.10	168	P	P	03 09 19.6	+0.3
	baz=21,SNR=7.6						
MTN	Manton Dam	21.10	168	*e*P	P	03 09 19.6	+0.3
	comp=Z,58nm,1.1s						
KDU	Kakadu	21.27	164	P	P	03 09 21.0	0.0
	baz=21,SNR=12						
NGJI	Ngawi	21.50	225	P	P	03 09 27.2	+3.7
KPJI	Karang Pucung	23.32	230	P	P	03 09 45.3	+2.6
KNRA	Kununurra	23.54	175	P	P	03 09 44.5	-0.1
	baz=24,SNR=24						
MYKOM	Kota Tinggi	23.57	256	P	P	03 09 46.0	+1.0
SKNT	Sakolnakorn	23.92	294	P	P	03 09 47.7	-0.4
	comp=Z,62nm,0.9s						
LEM	Lembang	24.03	233	P	P	03 09 51.1	+1.9
	comp=Z,24nm,0.6s,baz=334,slow=15,SNR=4.4						
LEM				LR	LR	03 19 29.7	
	comp=Z,246nm,22.0s,baz=57,slow=37						
CBIJ	Chichi jima	24.06	36	P	P	03 09 50.4	+1.2
JCJ	Chichijima	24.06	36	P	P	03 09 50.4	+1.2
	comp=Z,86nm,0.4s,baz=216,slow=19,SNR=11						
KHON	Khomkaen	24.78	292	P	P	03 09 56.1	+0.2
	comp=Z,94nm,0.8s,comp=Z,772nm						
NONG	Nongkai	25.04	296	P	P	03 09 57.9	-0.4
	comp=Z,1.0nm,0.9s,comp=Z,148nm						
NJ2	Nanjing	25.09	344	*e*P	P	03 10 01.0	+2.4
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
WHN	Wuhan	25.30	334	P	P	03 10 02.0	+1.5
JNU	Nakatsue	25.37	8	P	P	03 10 00.9	-0.2
	comp=Z,72nm,0.9s,baz=181,slow=4.0,SNR=43						
JNU				LR	LR	03 19 25.8	
	comp=Z,129nm,21.4s,baz=125,slow=35						
JNU	Nakatsue	25.37	8	*e*P	P	03 10 00.5	-0.6
	comp=Z,86nm,1.0s						
MDSI	Maura Dua	25.64	242	P	P	03 10 05.7	+2.0
	comp=Z,22nm,1.0s						
NAYO	Nakonayok	25.69	287	P	P	03 10 06.2	+2.0
	comp=Z,0.6nm,1.2s,comp=Z,24nm						
IPM	Ipoh	25.76	264	*e*P	P	03 10 05.7	+0.8
	comp=Z,49nm,1.1s						
SKLT	Songkhla	25.87	270	P	P	03 10 08.2	+2.3
	comp=Z,27nm,0.7s						
LWLI	Liwa	26.00	241	P	P	03 10 10.3	+3.2
	comp=Z,70nm,0.8s,comp=Z,14µm						
KULM	Kulim	26.02	266	*e*P	P	03 10 08.7	+1.5
	comp=Z,45nm,1.1s						
KULM	Kulim	26.02	266	P	P	03 10 09.0	+1.8
GYA	Guiyang	26.50	316	*e*P	P	03 10 13.8	+2.2
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PMG	Port Moresby	26.67	130	*e*P	P	03 10 14.5	+1.4
	comp=Z,32nm,0.9s						
PMG	Port Moresby	26.67	130	*e*P	P	03 10 14.5	+1.4
PMG				pmax	pmax		
	comp=Z,32nm,0.9s						
PHET	Kaeng Krachan	27.08	283	P	P	03 10 20.1	+3.4
	comp=Z,33nm,1.0s,comp=Z,246nm						
COEN	Coen	27.20	143	P	P	03 10 18.5	+0.7
	baz=27,SNR=5.7						
PHIT	Phitsanulok	27.23	292	P	P	03 10 18.6	+0.5
	comp=Z,79nm,1.1s,comp=Z,722nm						
UTTA	Uttaradit	27.27	294	P	P	03 10 18.7	+0.3
	comp=Z,7.7nm,0.9s						
SRDT	SRDT	27.79	286	P	P	03 10 28.5	+5.4
	comp=Z,24nm,1.1s,comp=Z,4µm						
JHJ	Hachijo jima 2	27.84	24	LR	LR	03 22 00.2	
	comp=Z,109nm,19.7s,baz=262,slow=37						
PSI	Prapat	28.12	261	P	P	03 10 24.2	-2.0
	comp=Z,2.9nm,0.3s,baz=182,slow=2.2,SNR=3.0						
PSI				PcP	PcP	03 13 39.2	0.0
	comp=Z,6.1nm,0.9s,baz=24,slow=0.2,SNR=4.2						
TJN	Taejon	28.32	1	*i* P	P	03 10 28.8	+1.2
LAMP	Lampang	28.34	295	P	P	03 10 28.7	+0.7
	comp=Z,16nm,0.9s,comp=Z,127nm						
UMPA	Umpang Tak	28.42	289	P	P	03 10 35.1	+6.4
KMI	Kunming	28.56	310	P	P	03 10 30.3	+0.2
KMI				pP	sP	03 10 52.0	-2.2
KMI				sP	pP	03 11 00.5	+14
KMI				pmax	pmax		
	comp=Z,12nm,0.8s						
KMI				LR	LR		
	comp=Z,100nm,13.1s						
KMI				LR	LR		
	comp=Z,210nm,16.6s						
KMI				LR	LR		
	comp=Z,150nm,20.8s						
WRAB	Tennant Creek	28.69	165	*e*P	P	03 10 31.1	+0.1
	comp=Z,9.1nm,0.8s						
WRAB	Tennant Creek	28.69	165	*i* P	P	03 10 34.0	+3.0
WRAB				pmax	pmax		
	comp=Z,8.0nm,0.9s						
WRA	Warramunga Arr	28.70	165	P	P	03 10 30.1	-1.0
	comp=Z,3.5nm,0.7s,baz=331,slow=9.9,SNR=31						
WRA				PcP	PcP	03 13 40.6	+0.3
	comp=Z,4.4nm,0.6s,baz=338,slow=2.7,SNR=9.2						
WRA				ScP	ScP	03 17 14.8	-1.2
	comp=Z,2.8nm,0.8s,baz=340,slow=3.3,SNR=6.1						
WRA				LR	LR	03 23 57.4	
	comp=Z,91nm,19.1s,baz=250,slow=40						
WB2	Warramunga Arr	28.70	165	*e*P	P	03 10 30.8	-0.3
WB2				*e*PcP	PcP	03 13 40.8	+0.5
INU	Inuyama	28.88	18	*e*P	P	03 10 32.9	+0.3
	comp=Z,48nm,0.8s						
CM01	Chiang Mai Arr	28.92	294	*e*P	P	03 10 33.2	+0.1
CM01				*e*PcP	PcP	03 13 41.5	+0.6
CMAR	Chiang Mai Arr	28.95	294	P	P	03 10 33.1	-0.3
	comp=Z,7.4nm,0.8s,baz=121,slow=7.1,SNR=27						
CMAR				PcP	PcP	03 13 41.6	+0.6
	comp=Z,5.5nm,0.6s,baz=77,slow=1.2,SNR=10						
CMAR				LR	LR	03 22 55.3	
	comp=Z,202nm,18.1s,baz=102,slow=38						
CMMT	Chiang Mai	29.05	295	P	P	03 10 34.5	+0.2
	comp=Z,12nm,1.0s,comp=Z,505nm						
CHTO	Chiang Mai	29.05	295	*e*P	P	03 10 33.2	-1.1
	comp=Z,21nm,1.3s						
CHTO	Chiang Mai	29.05	295	*e*P	P	03 10 33.2	-1.1
CHTO				pmax	pmax		
	comp=Z,21nm,1.3s						
CHTO	Chiang Mai	29.05	295	P	P	03 10 34.5	+0.2
	comp=Z,55nm,1.0s						
KCSI	Kotacane, Aceh	29.12	263	P	P	03 10 36.3	+1.4
	comp=Z,17nm,1.0s						
KS15	Wonju Array Si	29.40	2	*e*P	P	03 10 37.4	+0.3
KSAR	Wonju Array Be	29.40	2	P	P	03 10 36.8	-0.3
KSAR				PcP	PcP	03 13 41.9	+0.1
KSAR	Wonju Array Be	29.40	2	P	P	03 10 36.8	-0.3
KSAR						03 13 41.9	
KSRS	Korea Array	29.41	2	P	P	03 10 36.8	-0.5
	comp=Z,5.8nm,0.8s,baz=180,slow=11,SNR=20						
KSRS				PcP	PcP	03 13 41.9	0.0
	comp=Z,1.2nm,0.8s,baz=194,slow=3.5,SNR=4.8						
KSRS				LR	LR	03 25 21.6	
	comp=Z,104nm,18.1s,baz=198,slow=42						
KS01	Wonju Array Si	29.43	2	*e*P	P	03 10 36.6	-0.8
KS01				*e*PcP	PcP	03 13 41.9	0.0
MBWA	Marble Bar	29.71	193	*e*P	P	03 10 39.5	-0.5
GSI	Gunungsitoli	29.76	259	P	P	03 10 41.2	+0.6
GSI	Gunungsitoli	29.76	259	*e*P	P	03 10 40.3	-0.4
	comp=Z,24nm,0.9s						
GSI				*e*PcP	PcP	03 13 44.3	+1.1
MAJO	Matsushiro	30.35	19	*e*P	P	03 10 45.1	-0.5
	comp=Z,14nm,0.8s						
MAJO				*e*PcP	PcP	03 13 45.0	+0.7
MAJO	Matsushiro	30.35	19	*c i*P	P	03 10 44.2	-1.4
MAJO				pmax	pmax		
	comp=Z,14nm,1.0s						
MAT	Matsushiro	30.35	19	P	P	03 10 44.6	-1.0
MAT				*e*S	S	03 15 31.6	-10
MJAR	Matsushiro Arr	30.35	19	P	P	03 10 44.7	-0.9
	comp=Z,12nm,0.7s,baz=198,slow=9.9,SNR=62						
MJAR				PcP	PcP	03 13 44.7	+0.4
	comp=Z,3.7nm,0.9s,baz=189,slow=3.2,SNR=8.4						
MJAR				LR	LR	03 25 22.6	
	comp=Z,75nm,18.0s,baz=170,slow=41						
MJB9	Matsu-Tunnel	30.35	19	*e*P	P	03 10 45.2	-0.5
	comp=Z,14nm,0.7s						
MJB9				*e*PcP	PcP	03 13 45.5	+1.1
QIS	Mount Isa	31.02	156	P	P	03 10 51.7	+0.1
	baz=31,SNR=29						
MTSU	Mount Surprise	31.19	146	P	P	03 10 52.8	-0.3
	baz=31,SNR=5.0						
CD2	Chengdu	31.35	320	*e*P	P	03 10 55.0	+0.5
CD2				pP	pP	03 11 14.3	+3.5
CD2				sP	sP	03 11 24.0	+5.3
CD2				S	S	03 15 56.5	-0.6
CD2				sS	sS	03 16 30.5	+5.6
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.4s						
CD2				LR	LR		
	comp=Z,430nm,15.4s						
CD2				LR	LR		
	comp=Z,490nm,16.4s						
CD2				LR	LR		
	comp=Z,480nm,14.4s						
AS31	Alice Springs	32.18	168	*e*P	P	03 11 01.2	-0.6
	comp=Z,3.3nm,0.4s						
ASAR	Alice Springs	32.18	168	P	P	03 11 01.2	-0.6
	comp=Z,3.2nm,0.3s,baz=343,slow=7.3,SNR=90						
ASAR				PcP	PcP	03 13 49.6	+0.2
	comp=Z,6.9nm,0.5s,baz=350,slow=2.5,SNR=19						
ASAR				ScP	ScP	03 17 26.5	-0.9
	comp=Z,4.3nm,1.0s,baz=356,slow=3.7,SNR=9.8						
AS01	Alice Springs	32.19	167	*e*P	P	03 11 00.9	-1.0
AS01				*e*PcP	PcP	03 13 48.8	-0.6
WRKA	Warakurna	32.80	177	P	P	03 11 07.0	-0.2
	baz=33,SNR=38						
BJI	Beijing	33.34	345	⇑*e*P	P	03 11 09.5	-2.2
BJI				pmax	pmax		
	comp=Z,17nm,0.8s						
CTAO	Charters Tower	33.84	146	*e*P	P	03 11 17.8	+1.5
CTAO	Charters Tower	33.84	146	*e*P	P	03 11 17.8	+1.5

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MSHR  Mys Shultsa        34.73   6ceP    P      03 11 23.4 -0.4
LZH   Lanzhou            34.95 327 eP    P      03 11 27.5 +1.5
LZH                                pP    sP     03 11 49.5 -0.8
LZH                               ePP    PP     03 12 51.5 +5.1
LZH                                eS    S      03 16 52.8 -0.2
LZH                                sS    sS     03 17 27.3 +6.2
LZH                                pmax  pmax
      comp=Z,29nm,1.1s
LZH                                pmax  pmax
      comp=Z,290nm,6.5s
LZH                                LR    LR
      comp=Z,350nm,15.4s
LZH                                LR    LR
      comp=Z,440nm,15.4s
LZH                                LR    LR
      comp=Z,740nm,17.9s
MEEK  Meekatharra        35.25 193 P     P      03 11 27.9 -0.5
      baz=35,SNR=14
HHC   Hu-ho-hao-te       35.45 340 eP    P      03 11 32.0 +1.9
HHC                                pP    sP     03 11 51.0 -3.5
HHC                                S     S      03 16 58.3 -2.2
HHC                                pmax  pmax
      comp=Z,30nm,1.1s
HHC                                pmax  pmax
      comp=Z,77nm,4.5s
HHC                                LR    LR
      comp=Z,180nm,14.2s
HHC                                LR    LR
      comp=Z,180nm,13.2s
HHC                                LR    LR
      comp=Z,150nm,16.4s
CN2   Changchun          35.75 358 eP    P      03 11 31.5 -1.0
CN2                               epP    sP     03 11 53.8 -3.0
CN2                                pmax  pmax
      comp=Z,10.0nm,0.8s
USRK  Ussuriysk Ar.      36.42   6 P     P      03 11 39.1 +0.9
      comp=Z,48nm,0.8s,baz=182,slow=7.8
USRK                               LR    LR     03 25 26.9
      comp=Z,98nm,21.8s,baz=210,slow=34
MDJ   Mudanjiang         36.63   3 P     P      03 11 38.3 -1.7
MDJ                                pmax  pmax
      comp=Z,56nm,1.0s
MDJ                                pmax  pmax
      comp=Z,280nm,10.8s
MDJ   Mudanjiang         36.63   3 eP    P      03 11 40.4 +0.4
BRDH  Bariadhala         36.74 297 LR    LR     03 28 07.1
      comp=Z,252nm,19.2s,baz=80,slow=38
ERM   Erimo              36.93  21 eP    P      03 11 43.3 +0.7
ERM   Erimo              36.93  21ceP    P      03 11 44.1 +1.5
ERM                                pmax  pmax
      comp=Z,39nm,1.3s
HNR   Honiara            37.33 117 LR    LR     03 25 53.7
      comp=Z,82nm,19.9s,baz=310,slow=34
SHL   Shillong           37.51 302 eP    P      03 11 47.0 -1.0
MORW  Morawa             38.19 195 P     P      03 11 53.6 +0.3
      baz=38,SNR=6.3
QLP   Quilpie            38.29 154 P     P      03 11 54.0 -0.2
      baz=38,SNR=3.9
FORT  Forrest            38.51 178 P     P      03 11 56.0 +0.1
      baz=39,SNR=33
ASAJ  Asahikawa          38.62  18 P     P      03 11 58.8 +1.9
      comp=Z,60nm,0.5s,baz=229,slow=7.4,SNR=156
ASAJ                               PcP   PcP    03 14 08.6 +0.6
      comp=Z,3.9nm,0.6s,baz=213,slow=10,SNR=3.7
ASAJ                               LR    LR     03 26 38.6
      comp=Z,83nm,20.8s,baz=188,slow=34
KMBL  Kambalda           39.34 187 P     P      03 12 03.3 +0.3
      baz=40,SNR=22
BLDU  Ballidu            39.51 194 P     P      03 12 03.9 -0.4
      baz=40,SNR=18
GTA   Gaotai             39.55 327 eP    P      03 12 07.5 +2.6
GTA                                pP    sP     03 12 27.5 -1.9
GTA                                sP    pP     03 12 35.0  +13
GTA                                S     S      03 18 06.5 +3.7
GTA                                pmax  pmax
      comp=Z,6.0nm,1.0s
GTA                                pmax  pmax
      comp=Z,97nm,5.4s
GTA                                LR    LR
      comp=Z,310nm,19.0s
GTA                                LR    LR
      comp=Z,290nm,20.3s
GTA                                LR    LR
      comp=Z,320nm,19.4s
LSA   Lhasa              39.77 308 eP    P      03 12 07.0 -0.2
LSA   Lhasa              39.77 308 eP    P      03 12 07.0 -0.2
KLBR  Kellerberrin       40.22 192 P     P      03 12 10.3 +0.1
      baz=40,SNR=18
H11S3 WAKE ISLAND Hy     40.22  71 T     T      03 55 37.4
      baz=247,slow=73,SNR=195
H11S1 WAKE ISLAND Hy     40.24  71 T     T      03 55 35.1
      baz=247,slow=73,SNR=142
H11S2 WAKE ISLAND Hy     40.24  71 T     T      03 55 36.8
      baz=247,slow=73,SNR=124
H11N1 WAKE ISLAND Hy     40.63  69 T     T      03 56 15.8
      baz=265,slow=75,SNR=255
H11N2 WAKE ISLAND Hy     40.64  69 T     T      03 55 52.5
      baz=265,slow=75,SNR=99
H11N3 WAKE ISLAND Hy     40.65  69 T     T      03 56 12.7
      baz=265,slow=75,SNR=146
EIDS  Eidsvold           40.72 145 eP    P      03 12 14.8 +0.3
      comp=Z,12nm,1.1s
MUN   Mundaring          40.93 194 P     P      03 12 16.4 +0.3
      baz=41,SNR=6.1
YSS   Yuzh-Sakhalins     41.24  17 eP    P      03 12 18.8 +0.4
YSS   Yuzh-Sakhalins     41.24  17⇑eP    P      03 12 19.5 +1.0
YSS                                pmax  pmax
      comp=Z,30nm,1.1s
YSS                                MLR   MLR
      comp=Z,300nm,16.0s
KLR   Kul'dur            41.38   5 P     P      03 12 19.9 +0.2
      comp=Z,1.3nm,0.5s,baz=198,slow=5.7,SNR=67
KLR                                PcP   PcP    03 14 16.7  0.0
      comp=Z,0.7nm,0.8s,baz=306,slow=3.8,SNR=5.6
BBOO  Buckleboo          41.48 168 P     P      03 12 20.7 +0.1
      baz=42,SNR=35
BBOO  Buckleboo          41.48 168 eP    P      03 12 20.8 +0.1
      comp=Z,31nm,1.1s
NWAO  Narrogin (SRO)     41.62 192 P     P      03 12 22.1 +0.4
      comp=Z,33nm,0.8s,baz=257,slow=7.3,SNR=9.8
NWAO                               LR    LR     03 31 53.6
      comp=Z,120nm,18.0s,baz=146,slow=39
NWAO  Narrogin (SRO)     41.62 192 eP    P      03 12 21.4 -0.3
      comp=Z,43nm,1.0s
NWAO  Narrogin (SRO)     41.62 192 eP    P      03 12 21.4 -0.3
NWAO                               pmax  pmax
      comp=Z,43nm,1.0s
ODAN  Odare              41.74 302 eP    P      03 12 22.7 -0.5
      comp=Z,79nm,0.6s
STKA  Stephens Creek     42.06 161 P     P      03 12 25.4  0.0
      comp=Z,19nm,0.8s,baz=336,slow=8.2,SNR=27
STKA                               PcP   PcP    03 14 19.1 -0.2
      comp=Z,3.5nm,0.8s,baz=6.8,slow=4.3,SNR=3.7
STKA                               LR    LR     03 32 17.4
      comp=Z,108nm,21.0s,baz=339,slow=39
STKA  Stephens Creek     42.06 161 P     P      03 12 25.3  0.0
      baz=42,SNR=14
RAMN  Ramite             42.44 302 eP    P      03 12 28.4 -0.5
      comp=Z,33nm,0.5s
HTT   Hallett            42.74 165 P     P      03 12 31.4 +0.5
      baz=43,SNR=10
JIRN  Jiri               43.02 302 eP    P      03 12 33.2 -0.5
      comp=Z,68nm,0.3s
ULN   Ulaanbaatar        43.16 341 eP    P      03 12 33.2 -1.1
      comp=Z,6.8nm,0.5s
ULN                                ePcP  PcP    03 14 22.6 -0.3
ULN   Ulaanbaatar        43.16 341ceP    P      03 12 32.7 -1.6
ULN                                pmax  pmax
      comp=Z,5.0nm,0.6s
CMSA  Cobar Meteorol     43.24 156 P     P      03 12 35.3 +0.4
      baz=43,SNR=6.9
RKGY  Rocky Gully        43.30 192 P     P      03 12 36.7 +1.4
      baz=44,SNR=7.3
SONM  Songino Array      43.35 340 P     P      03 12 34.4 -1.5
      comp=Z,1.8nm,0.4s,baz=152,slow=9.8,SNR=9.5
SONM                               PcP   PcP    03 14 22.9 -0.6
      comp=Z,3.0nm,0.6s,baz=151,slow=3.3,SNR=7.8
SONM                               ScP   ScP    03 18 09.2  0.0
      comp=Z,0.3nm,0.4s,baz=151,slow=3.4,SNR=3.8
SONM                               LR    LR     03 32 33.2
      comp=Z,146nm,19.2s,baz=164,slow=39
GUN   Gumba              43.36 303 eP    P      03 12 35.9 -0.6
      comp=Z,35nm,0.4s
SONA1 Songino Array      43.36 340 eP    P      03 12 34.2 -1.7
SONA1                              ePP   PcP    03 14 24.0 +0.5
GRNR  Gornyy             43.46   9 eP    P      03 12 41.1 +4.6
GRNR                               pmax  pmax
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```
      comp=Z,150nm,1.0s
PKIN  Phulchoki          43.65 302 eP    P      03 12 37.9 -0.9
      comp=Z,24nm,0.4s
KKN   Kakani             43.82 302 eP    P      03 12 39.7 -0.3
      comp=Z,21nm,0.6s
DMN   Daman              43.91 302 eP    P      03 12 39.9 -0.9
      comp=Z,15nm,0.5s
GKN   Gorkha             44.43 302 eP    P      03 12 43.7 -1.1
      comp=Z,17nm,0.3s
KOLN  Koldanda           45.23 301 eP    P      03 12 50.4 -0.8
      comp=Z,39nm,0.5s
DANN  Dangsing           45.27 302 eP    P      03 12 50.7 -1.0
      comp=Z,61nm,0.6s
PALK  Pallekele          45.59 272 PcP   PcP    03 14 31.1 -0.6
      comp=Z,16nm,1.1s,baz=113,slow=2.9,SNR=2.8
PALK                               LR    LR     03 34 38.5
      comp=Z,110nm,18.2s,baz=94,slow=40
ZEA   Zeya               45.68   0 eP    P      03 12 53.0 -1.1
ZEA                                pmax  pmax
      comp=Z,27nm,0.9s
PYUN  Piuthan            45.84 302 eP    P      03 12 55.3 -0.8
      comp=Z,50nm,0.8s
NKL   Nikolayevsk        46.50  12 i P   P      03 13 02.0 +1.5
NKL                                pmax  pmax
      comp=N,43nm,1.0s
NKL                                pmax  pmax
      comp=Z,150nm,1.0s
ARPS  Mount Arapiles     46.67 163 P     P      03 13 03.0 +0.9
      baz=47,SNR=9.8
TLY   Talaya             47.57 341 eP    P      03 13 08.5 -0.5
      comp=Z,9.4nm,0.6s
TLY   Talaya             47.57 341 eP    P      03 13 08.5 -0.5
TLY                                pmax  pmax
      comp=Z,10.0nm,0.9s
HYB   Hyderabad          47.81 286 i P   P      03 13 11.0 -0.4
MOY   Mondy              48.47 339 eP    P      03 13 15.6 -0.4
TOO   Toolangi           48.55 160 P     P      03 13 18.5 +1.8
      baz=49,SNR=3.5
DZM   Mont Dzumac        49.05 128 P     P      03 13 21.6 +0.7
      comp=Z,2.8nm,0.4s,baz=240,slow=15,SNR=10
DZM                                LR    LR     03 32 35.6
      comp=Z,109nm,21.8s,baz=56,slow=34
WMQ   Urumqi             49.34 323 P     P      03 13 25.0 +2.2
WMQ                                pP    sP     03 13 46.3 -1.3
WMQ                                sP    pP     03 13 56.5  +17
WMQ                                LR    LR
      comp=Z,320nm,26.9s
WMQ                                LR    LR
      comp=Z,310nm,22.7s
WMQ                                LR    LR
      comp=Z,420nm,29.1s
BOD   Bodaibo            50.74 351 eP    P      03 13 32.6 -0.4
BOD                                pmax  pmax
      comp=Z,16nm,1.0s
HVS   Khovu-Aksy         50.97 334 i P   P      03 13 35.1 +0.1
PETK  Petropavlovsk-     51.59  23 P     P      03 13 40.6 +1.1
      comp=Z,13nm,0.7s,baz=204,slow=3.2
PETK                               PcP   PcP    03 14 52.6 +0.1
      baz=205,slow=3.0
PETK  Petropavlovsk-     51.59  23 eP    P      03 13 41.7 +2.2
PETK                               PcP   PcP    03 14 52.6 +0.1
PETK  Petropavlovsk-     51.59  23 eP    P      03 13 41.7 +2.2
PETK                                            03 14 52.6
PET   Petropavlovsk      51.91  24⇑eP    P      03 13 43.5 +1.7
PET                                pmax  pmax
      comp=Z,34nm,1.0s
DGZ   Jazzator, Alta     52.98 329 i P   P      03 13 49.5 -0.6
DGZ                                pmax  pmax
      comp=Z,5.0nm,0.8s
YAK   Yakutsk            54.04   2 P     P      03 13 57.6 +0.3
      comp=Z,7.0nm,0.2s,baz=343,slow=19,SNR=13
YAK   Yakutsk            54.04   2 eP    P      03 13 57.3 -0.1
YAK   Yakutsk            54.04   2 eP    P      03 13 56.1 -1.3
YAK                                pmax  pmax
      comp=Z,62nm,0.9s
YAK                                pmax  pmax
      comp=E,7.0nm,1.0s
YAK                                pmax  pmax
      comp=N,25nm,1.1s
MK01  Makanchi Array     54.13 324 eP    P      03 13 57.4 -1.0
MK31  Makanchi Array     54.15 324 eP    P      03 13 57.7 -0.8
MK31  Makanchi Array     54.15 324 eP    P      03 13 57.7 -0.8
MKAR  Makanchi Array     54.15 324 P     P      03 13 57.8 -0.8
      comp=N,41nm,0.5s,baz=122,slow=8.4,SNR=233
MKAR                               PcP   PcP    03 15 01.4 -1.1
      comp=N,4.9nm,0.5s,baz=89,slow=13,SNR=6.7
MKAR                               ScP   ScP    03 18 54.4 -0.5
      comp=N,1.2nm,0.9s,baz=122,slow=5.2,SNR=4.4
MKAR                               LR    LR     03 38 39.5
      comp=N,115nm,18.6s,baz=88,slow=38
PDGK  Podgornoye         54.22 319 P     P      03 13 57.7 -1.6
PDGK                               pmax  pmax
      comp=Z,16nm,0.7s
MA2   Magadan            54.67  15 P     P      03 14 03.2 +1.2
      comp=Z,29nm,0.6s,baz=198,slow=6.9,SNR=28
MA2                                PcP   PcP    03 15 03.7 -0.3
      comp=Z,10nm,0.8s,baz=141,slow=6.5,SNR=4.1
MA2   Magadan            54.67  15 eP    P      03 14 02.1 +0.1
MA2                                PcP   PcP    03 15 03.7 -0.3
MA2   Magadan            54.67  15⇑eP    P      03 14 02.8 +0.8
MA2                                pmax  pmax
      comp=Z,20nm,0.6s
KSH   Kashi              55.13 313 P     P      03 14 06.8 +0.9
KSH                                sP    sP     03 14 42.0  +11
KSH                                PP    PP     03 16 14.0 +4.2
KSH                                pmax  pmax
      comp=Z,10.0nm,0.6s
NIL   Nilore             55.42 306 eP    P      03 14 07.0 -1.0
NIL   Nilore             55.42 306 eP    P      03 14 07.0 -1.0
KZA   Kyzart             56.57 316 P     P      03 14 17.3 +0.8
      SNR=6.5
TKM2  Tokmak 2           56.65 317 P     P      03 14 16.1 -0.6
      SNR=6.0
TKM2  Tokmak 2           56.65 317 P     P      03 14 15.4 -1.4
TKM2                               pmax  pmax
      comp=Z,5.0nm,0.6s
ZAA0  Zalesovo Array     56.88 332 eP    P      03 14 16.3 -1.6
      comp=Z,16nm,1.0s
ZALV  Zalesovo Beam      56.88 332 P     P      03 14 16.1 -1.8
      comp=Z,13nm,0.4s,baz=122,slow=7.4,SNR=37
ZALV                               PcP   PcP    03 15 12.7 -0.1
      comp=Z,3.5nm,0.4s,baz=123,slow=6.8,SNR=4.7
SFK   Sufi-Kurgan        57.09 313 P     P      03 14 18.9 -1.1
SFK                                pmax  pmax
      comp=Z,7.0nm,0.5s
UCH   Uchtor             57.13 316 P     P      03 14 20.4 -0.2
      SNR=15
AAK   Ala-Archa          57.30 316 P     P      03 14 20.7 -0.6
      comp=Z,2.5nm,0.3s,baz=148,slow=10.0,SNR=4.2
AAK   Ala-Archa          57.30 316 eP    P      03 14 20.3 -1.0
AAK   Ala-Archa          57.30 316 eP    P      03 14 21.0 -0.3
AAK                                pmax  pmax
      comp=Z,4.0nm,0.9s
USP   Ospenovka          57.52 317 P     P      03 14 21.9 -0.8
      SNR=10
AML   Almayashu          57.67 315 P     P      03 14 24.1 -0.1
      SNR=6.2
EKS2  Erkin-Say          57.80 316 P     P      03 14 25.8 +1.0
      SNR=10
SEY   Seymchan           57.98  14 P     P      03 14 27.6 +2.1
      comp=Z,18nm,0.7s,baz=218,slow=5.5,SNR=70
SEY   Seymchan           57.98  14ceP    P      03 14 27.4 +1.9
NVS   Novosibirsk        58.16 332 eP    P      03 14 25.1 -1.8
NVS                                e            03 15 17.7
NVS                                pmax  pmax
      comp=N,10.0nm,0.9s
NVS                                pmax  pmax
      comp=E,13nm,0.9s
NVS                                pmax  pmax
      comp=Z,16nm,0.9s
KURK  Kurchatov          58.24 326 eP    P      03 14 26.2 -1.3
KURK  Kurchatov          58.24 326ceP    P      03 14 26.6 -0.9
KURK                               pmax  pmax
      comp=Z,54nm,1.0s
KURBB Kurchatov Arra     58.24 326 P     P      03 14 26.1 -1.4
      comp=Z,16nm,0.6s,baz=124,slow=6.3,SNR=116
MNAS  Manas              58.62 315 P     P      03 14 29.7 -0.9
MNAS                               pmax  pmax
      comp=Z,10.0nm,0.6s
KK31  Karatay Array      60.20 315 eP    P      03 14 40.4 -1.0
KK31  Karatay Array      60.20 315 i P   P      03 14 40.2 -1.1
KK31                               pmax  pmax
      comp=Z,9.0nm,0.5s
KKAR  Karatay Array      60.20 315 eP    P      03 14 40.4 -0.9
KKAR  Karatay Array      60.20 315 eP    P      03 14 40.4 -0.9
TIXI  Tiksi              63.67   1 P     P      03 15 03.7 -0.3
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      comp=Z,10nm,0.3s,baz=168,slow=1.0,SNR=13
TIXI                               LR    LR     03 44 54.2
      comp=Z,38nm,18.8s,baz=270,slow=38
TIXI  Tiksi              63.67   1 eP    P      03 15 03.4 -0.5
TIXI  Tiksi              63.67   1ceP    P      03 15 03.9 -0.1
TIXI                               pmax  pmax
      comp=Z,22nm,0.8s
BVA0  Borovoye Array     63.83 326 i P   P      03 15 03.7 -1.7
BVA0                               pmax  pmax
      comp=Z,12nm,0.6s
BVAR  Borovoye Array     63.83 326 P     P      03 15 04.0 -1.4
      comp=Z,11nm,0.4s,baz=118,slow=6.5,SNR=45
BVAR                               LR    LR     03 44 20.8
      comp=Z,108nm,21.8s,baz=142,slow=37
BRVK  Borovoye           63.91 326 eP    P      03 15 04.2 -1.7
      comp=Z,17nm,0.8s
BRVK  Borovoye           63.91 326ceP    P      03 15 04.0 -1.9
BRVK                               pmax  pmax
      comp=Z,23nm,1.0s
WSAR  Wadi Sarin         66.80 292 P     P      03 15 23.3 -1.9
      comp=Z,7.6nm,0.7s,baz=160,slow=5.0,SNR=7.5
GEYT  Alibeck            68.30 308 P     P      03 15 32.7 -1.7
      comp=Z,3.2nm,0.7s,baz=236,slow=12,SNR=13
GEYT                               LR    LR     03 50 04.3
      comp=Z,69nm,18.1s,baz=45,slow=40
GYA0B ALIBECK ARRAY      68.30 308 eP    P      03 15 34.2 -0.2
      comp=Z,8.8nm,0.7s
AB31  Akbulak array      68.93 320 i P   P      03 15 36.4 -1.6
AB31                               pmax  pmax
      comp=Z,17nm,0.7s
ABKAR Akbulak array      68.93 320 eP    P      03 15 36.6 -1.5
AKTO  Aktyubinsk         70.40 321 P     P      03 15 45.5 -1.6
      comp=Z,15nm,0.6s,baz=98,slow=9.2,SNR=38
AKTO                               LR    LR     03 50 02.0
      comp=Z,106nm,19.0s,baz=89,slow=39
SVE   Sverdlovsk         70.41 328⇓eP    P      03 15 45.8 -1.2
SVE                                pmax  pmax
      comp=Z,23nm,0.8s
ARU   Arti               71.41 327 P     P      03 15 51.2 -1.9
      comp=Z,15nm,0.4s,baz=103,slow=3.8,SNR=27
ARU   Arti               71.41 327 eP    P      03 15 50.4 -2.6
ARU   Arti               71.41 327c iP   P      03 15 51.0 -2.1
ARU                                             03 16 10.4
ARU                                             03 18 26.4
ARU                                S     S      03 25 00.9 -5.2
ARU                                SS    SS     03 29 31.0  -11
ARU                                pmax  pmax
      comp=Z,11nm,0.5s
CASY  Casey              74.95 187 eP    P      03 16 13.9 +0.2
      comp=Z,17nm,0.7s
CHGN  Chignik            75.06  34 eP    P      03 16 14.0 -0.5
      comp=Z,57nm,1.4s
RDOG  Red Dog Mine       75.41  21 eP    P      03 16 17.1 +0.7
      comp=Z,24nm,1.2s
AKT   Akhty              76.55 311 eP    P      03 16 22.0 -1.5
AKT                                e            03 16 30.6
AKT                                pmax  pmax
      comp=Z,10.0nm,0.6s
DDFL  Dedoflistskaro     77.76 311 P     P      03 16 34.8 +4.5
OHAK  Old Harbor         77.97  33 eP    P      03 16 31.3 +0.4
      comp=Z,14nm,1.0s
KDAK  Kodiak Island      78.38  33ceP    P      03 16 34.3 +1.1
TBLG  Delisi             78.79 311 eP    P      03 16 35.8 -0.1
      comp=Z,21nm,0.8s
TBLG  Delisi             78.79 311 eP    P      03 16 35.8 -0.1
TBLG                               pmax  pmax
      comp=Z,21nm,0.8s
GNI   Garni              78.81 309ceP    P      03 16 31.7 -4.5
GNI                                pmax  pmax
      comp=Z,37nm,1.3s
PRGR  Permogore          78.83 331 eP    P      03 16 33.4 -2.2
PRGR                               pmax  pmax
      comp=Z,17nm,0.6s
CAST  Castle Rocks       79.02  27 eP    P      03 16 37.8 +1.1
      comp=Z,11nm,1.0s
SKT   Skwentna           79.17  28 eP    P      03 16 38.3 +0.7
      comp=Z,12nm,1.1s
ZEI   Tsey               79.40 312 eP    P      03 16 37.2 -2.2
ZEI                                pmax  pmax
      comp=Z,11nm,0.6s
SUA   Susitna One        79.52  29 eP    P      03 16 40.6 +1.0
      comp=Z,17nm,0.7s
BPAW  Bear Paw Mtn.      79.55  26 eP    P      03 16 40.6 +1.0
      comp=Z,19nm,1.0s
NCK   Nalchik            79.61 313 i P   P      03 16 38.6 -1.7
NCK                                pmax  pmax
      comp=Z,6.0nm,0.8s
AKH   Akhalkalaki        79.73 311 eP    P      03 16 41.6 +0.3
      comp=Z,7.8nm,0.8s
AKH   Akhalkalaki        79.73 311 eP    P      03 16 41.6 +0.3
AKH                                pmax  pmax
      comp=Z,8.0nm,0.8s
TRF   Thorofare Moun     79.83  27 eP    P      03 16 42.2 +1.0
      comp=Z,18nm,1.1s
COLD  Coldfoot           80.06  23 eP    P      03 16 43.8 +1.5
      comp=Z,12nm,0.9s
KBZ   Khabaz             80.11 313 P     P      03 16 41.6 -1.4
      comp=Z,3.2nm,0.8s,baz=171,slow=5.0,SNR=8.8
KVAR  Kislovodsk Arr     80.25 313 P     P      03 16 43.6 -0.3
      comp=Z,17nm,1.1s,baz=246,slow=3.1,SNR=7.0
NEY   Neytrino           80.25 312 i P   P      03 16 42.7 -1.3
KIV   Kislovodsk         80.26 313 eP    P      03 16 45.0 +1.1
      comp=Z,11nm,0.9s
KIV   Kislovodsk         80.26 313 eP    P      03 16 44.6 +0.7
KIV                                pmax  pmax
      comp=Z,12nm,0.9s
PMR   Palmer             80.30  29 eP    P      03 16 44.0 +0.4
      comp=Z,15nm,1.0s
PMR   Palmer             80.30  29 eP    P      03 16 44.0 +0.4
PMR                                pmax  pmax
      comp=Z,15nm,1.0s
MCK   McKinley           80.44  27 eP    P      03 16 44.9 +0.5
      comp=Z,24nm,0.8s
MCK   McKinley           80.44  27 eP    P      03 16 44.9 +0.5
MCK                                pmax  pmax
      comp=Z,24nm,0.8s
VRH   Novokhopyorsk      80.74 321 eP    P      03 16 44.2 -2.0
VRH                                pmax  pmax
      comp=Z,30nm,0.9s
MDM   Murphy Dome        80.78  25 eP    P      03 16 46.9 +0.7
      comp=Z,13nm,0.9s
WRH   Wood River Hil     80.83  26 eP    P      03 16 47.0 +0.6
      comp=Z,17nm,1.2s
CCB   Clear Creek Bu     80.95  26 eP    P      03 16 47.4 +0.3
      comp=Z,9.9nm,0.8s
DHY   Denali Highway     81.14  27 eP    P      03 16 48.8 +0.5
      comp=Z,8.3nm,0.9s
GLI   Glacier Island     81.28  30 eP    P      03 16 50.4 +1.5
      comp=Z,9.9nm,0.7s
ILAR  Eielson Array      81.35  26 P     P      03 16 48.6 -0.5
      comp=Z,4.9nm,0.7s,baz=243,slow=5.0,SNR=57
ILAR                               PP    PP     03 19 57.3 +1.8
      comp=Z,0.5nm,0.9s,baz=269,slow=6.9,SNR=3.2
ILB   Eielson Array      81.35  26 eP    P      03 16 48.7 -0.5
IL1   Eielson Array      81.35  26 eP    P      03 16 48.0 -1.2
KLMR  Klimovskoe         81.77 330 eP    P      03 16 48.8 -2.6
KLMR                               pmax  pmax
      comp=Z,14nm,0.6s
KLMR  Klimovskoe         81.77 330 eP    P      03 16 48.8 -2.6
KLMR                               AMP          03 16 52.1
      comp=Z,14nm,0.6s
KLU   Klutina            81.83  29 eP    P      03 16 53.4 +1.5
      comp=Z,9.6nm,1.2s
DIV   Divide             81.92  29 eP    P      03 16 54.0 +1.6
      comp=Z,14nm,1.0s
FYU   Fort Yukon         82.01  24 eP    P      03 16 55.1 +2.5
      comp=Z,11nm,1.1s
VSR   Storozhevoye       82.34 321 eP    P      03 16 53.0 -1.7
VSR                                pmax  pmax
      comp=Z,10.0nm,0.6s
LPSR  Galich'ya Gora     82.42 322 eP    P      03 16 53.3 -1.7
LPSR                               pmax  pmax
      comp=Z,20nm,0.6s
BMRM  Bremner River      82.49  29 eP    P      03 16 57.4 +2.0
      comp=Z,10nm,0.9s
SCRK  Sand Creek         82.63  26 eP    P      03 16 57.2 +1.1
      comp=Z,4.1nm,0.8s
OPO   Ambohidratompo     82.67 250 P     P      03 16 55.5 -1.7
      comp=Z,2.1nm,0.5s,baz=43,slow=4.9,SNR=6.3
OBN   Obninsk            83.64 325 eP    P      03 16 58.6 -2.7
OBN                                pmax  pmax
      comp=Z,7.0nm,0.9s
EGAK  Eagle              83.80  26 eP    P      03 17 03.0 +1.1
      comp=Z,18nm,1.0s
ANN   Anapa              83.97 314 eP    P      03 16 59.5 -3.7
ANN                               e*PP   sP     03 17 26.0 -3.1
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ANN                               eS       S        03 27 11.8  -10
ANN                                pmax    pmax
      comp=Z,47nm,1.0s
DAWY  Dawson            84.64  26 eP       P        03 17 07.1 +0.8
      comp=Z,14nm,0.9s
ASF   Jabal al Asfar    85.68 302  P       P        03 17 12.4 +0.2
      comp=Z,2.6nm,0.6s,baz=52,slow=5.6,SNR=8.0
INK   Inuvik            86.29  22  P       P        03 17 14.2  0.0
      comp=Z,5.0nm,0.9s,baz=268,slow=2.8,SNR=8.2
INK   Inuvik            86.29  22 eP       P        03 17 13.9 -0.4
      comp=Z,6.3nm,0.9s
SIM   Simferopol'       86.29 315 eP       P        03 17 12.6 -2.2
SIM                                pmax    pmax
      comp=Z,18nm,0.9s
SPITS Spitsbergen Ar    86.38 349  P       P        03 17 13.4 -1.3
      comp=Z,2.3nm,0.5s,baz=36,slow=11,SNR=16
ARCES ARCESS Array B    86.53 340  P       P        03 17 14.0 -1.5
      comp=Z,10nm,0.7s,baz=76,slow=5.0,SNR=54
ARCES                              PKKP    PKKPbc   03 35 10.4 -3.8
      comp=Z,1.1nm,0.8s,baz=289,slow=3.7,SNR=4.2
ARCES ARCESS Array B    86.53 340 eP       P        03 17 14.4 -1.0
ARCES                              PKKP    PKKPbc   03 35 10.4 -3.8
ARCES ARCESS Array B    86.53 340 eP       P        03 17 14.5 -1.0
MMAI  Mount Meron Ar    86.83 303  P       P        03 17 17.9 +0.1
      comp=Z,4.2nm,0.5s,baz=85,slow=5.1,SNR=9.0
HAMF  Hammerfest        86.86 341 eP       P        03 17 17.9 +0.8
KBS   Kingsbay          86.89 350 eP       P        03 17 15.4 -1.6
WHY   Whitehorse        87.25  29 eP       P        03 17 20.9 +1.6
      comp=Z,7.4nm,0.8s
BR131 Keskin Array S    87.35 310 eP       P        03 17 18.4 -1.8
BRTR  Keskin Array B    87.35 310  P       P        03 17 18.4 -1.9
      comp=Z,1.9nm,0.5s,baz=140,slow=4.0,SNR=21
KTK1  Kautokeino        87.44 339 eP       P        03 17 20.7 +0.8
VNDA  Vanda             87.57 173  P       P        03 17 20.5 +0.3
      comp=Z,4.2nm,0.6s,baz=317,slow=6.7,SNR=38
VNDA  Vanda             87.57 173 eP       P        03 17 20.5 +0.3
      comp=Z,6.9nm,1.0s
VNDA  Vanda             87.57 173 eP       P        03 17 20.5 +0.3
VNDA                               pmax    pmax
      comp=Z,7.0nm,1.0s
EIL   Elat              87.65 299  P       P        03 17 22.0 +0.2
      comp=Z,2.4nm,0.6s,baz=18,slow=14,SNR=2.9
MAW   Mawson            87.66 200  P       P        03 17 20.9 +0.1
      comp=Z,1.8nm,0.7s,baz=69,slow=8.6,SNR=1.9
FIA1  FINESS Array S    88.15 332 eP       P        03 17 21.6 -1.8
FINES FINESS Array B    88.15 332  P       P        03 17 21.9 -1.5
      comp=Z,27nm,0.4s,baz=80,slow=4.1,SNR=228
SBA   Scott Base        88.47 172 eP       P        03 17 26.1 +1.6
      comp=Z,13nm,1.4s
VSU   Vasula            88.49 329ceP       P        03 17 23.2 -1.8
VSU                                pmax    pmax
      comp=Z,64nm,0.7s
AKASG Malin Array Be    88.64 321  P       P        03 17 24.0 -2.0
      comp=Z,6.3nm,0.6s,baz=69,slow=4.8,SNR=28
AKASG Malin Array Be    88.64 321  P       P        03 17 24.0 -2.0
AKBB  Malin Array Si    88.64 321 eP       P        03 17 24.3 -1.7
      comp=Z,9.5nm,0.8s
KIEV  Kiev              88.66 321 eP       P        03 17 24.2 -1.8
      comp=Z,9.3nm,0.8s
KIEV  Kiev              88.66 321 i P      P        03 17 23.5 -2.5
KIEV                               pmax    pmax
      comp=Z,8.0nm,0.9s
AK11  Malin Array Si    88.68 321 eP       P        03 17 24.5 -1.7
TRO   Tromso            88.72 341 eP       P        03 17 26.1 +0.2
KMBO  Kilima Mbogo      89.62 269  P       P        03 17 46.4  +15
      comp=Z,2.4nm,0.8s,baz=137,slow=17,SNR=7.5
SORM  Soroca            89.70 318⇑iP       P        03 17 30.2 -0.8
SORM  Soroca            89.70 318 ⇑P       P        03 17 30.2 -0.8
TLCR                    89.96 316⇓iP       P        03 17 30.7 -1.6
TLCR                    89.96 316 ⇓P       P        03 17 30.7 -1.6
CFR   Carcaliu          90.44 316⇑iP       P        03 17 34.4 -0.1
CFR   Carcaliu          90.44 316 ⇑P       P        03 17 34.4 -0.1
LOF   Lofoten           91.09 340 eP       P        03 17 37.3 +0.3
TESR  Tescani           91.17 317⇑iP       P        03 17 36.6 -1.3
VRI   Vrincioaia        91.26 317⇑iP       P        03 17 38.1 -0.2
VRI   Vrincioaia        91.26 317 ⇑P       P        03 17 38.1 -0.2
SUW   Suwalki           91.50 325 eP       P        03 17 37.3 -1.9
SUW   Suwalki           91.50 325 eP       P        03 17 37.3 -1.9
MOR8  Moi Rana          91.56 338 eP       P        03 17 38.4 -0.9
BURAR Bucovina Array    91.87 318⇓iP       P        03 17 40.7 -0.6
BURAR Bucovina Array    91.87 318 ⇓P       P        03 17 40.7 -0.6
BUR04 Bucovina Ar. S    91.87 318 eP       P        03 17 39.9 -1.4
BUR08 Bucovina Ar. S    91.88 318 eP       P        03 17 40.6 -0.6
MLR   Muntele Rosu      91.88 316  P       P        03 17 41.0 -0.3
      comp=Z,2.8nm,0.7s,baz=335,slow=4.6,SNR=8.7
MLR                                LR      LR       04 03 11.8
      comp=Z,113nm,20.9s,baz=63,slow=38
MLR   Muntele Rosu      91.88 316⇓iP       P        03 17 41.5 +0.1
KONS  Konsvik           91.92 338 eP       P        03 17 41.7 +0.8
KWP   Kalwaria Pacla    92.97 321 eP       P        03 17 45.5 -0.6
KWP   Kalwaria Pacla    92.97 321 eP       P        03 17 45.5 -0.6
RES   Resolute Bay      93.71  10 eP       P        03 17 48.8 -0.2
RES   Resolute Bay      93.71  10 eP       P        03 17 48.8 -0.2
CRVS  Cervenica-Dubn    93.95 320 eP       P        03 17 51.1 +0.4
CRVS                               pmax    pmax
      comp=Z,5.0nm,0.8s
CRVS  Cervenica-Dubn    93.95 320 eP       P        03 17 51.1 +0.4
HFS   Hagfors           94.31 332  P       P        03 17 50.4 -1.7
      comp=Z,5.2nm,0.5s,baz=94,slow=4.8,SNR=43
HFS                                LR      LR       04 04 01.5
      comp=Z,97nm,20.2s,baz=46,slow=38
VTS   Vitosha           94.50 314⇑iP       P        03 17 50.1 -3.4
VTS   Vitosha           94.50 314 eP       P        03 17 52.1 -1.4
      comp=Z,3.4nm,1.2s
VTS   Vitosha           94.50 314 eP       P        03 17 52.1 -1.4
VTS                                pmax    pmax
      comp=Z,3.0nm,1.2s
NIE   Niedzica          94.53 321 eP       P        03 17 53.5 +0.1
NIE   Niedzica          94.53 321 eP       P        03 17 53.5 +0.1
OJC   Ojcow             94.59 322 eP       P        03 17 53.2 -0.3
OJC   Ojcow             94.59 322 eP       P        03 17 54.8 +1.2
      comp=Z,6.6nm,0.9s
OJC   Ojcow             94.59 322 eP       P        03 17 53.3 -0.3
BZS   Buzias            94.79 317⇑iP       P        03 17 53.9 -0.7
BZS   Buzias            94.79 317 ⇑P       P        03 17 53.9 -0.7
NC405 NORSAR Array S    94.79 334 eP       P        03 17 54.2 -0.1
MDVR  Moldovita         94.95 316⇓iP       P        03 17 54.3 -1.1
IDI   Anoyia            95.00 307  P       P        03 17 53.8 -2.0
      comp=Z,9.8nm,1.1s,baz=58,slow=13,SNR=3.7
NB2   NORSAR Subarra    95.04 334  P       P        03 17 52.6 -2.8
      comp=Z,3.1nm,0.6s,baz=65,slow=4.6
NB2   NORSAR Subarra    95.04 334  P       P        03 17 53.2 -2.2
NB2   NORSAR Subarra    95.04 334  P       P        03 17 52.6 -2.8
      baz=65,slow=4.6
NOA   NORSAR Array B    95.04 334  P       P        03 17 52.6 -2.8
      comp=Z,3.4nm,0.7s,baz=64,slow=4.7,SNR=16
NOA                                LR      LR       04 05 22.6
      comp=Z,47nm,19.2s,baz=75,slow=38
YKW3  Yellowknife Ar    95.67  24 eP       P        03 17 57.9 -0.3
      comp=Z,7.1nm,0.8s
YKA   Yellowknife Ar    95.70  24  P       P        03 17 58.3  0.0
      comp=Z,6.3nm,0.8s,baz=302,slow=4.8,SNR=29
YKA                                PKKP    PKKPdf   03 34 46.8 -3.5
      comp=Z,0.4nm,0.5s,baz=118,slow=2.9,SNR=4.9
VYHS  Vyhne             95.74 320 eP       P        03 17 57.4 -1.5
VYHS  Vyhne             95.74 320 eP       P        03 17 57.4 -1.5
MORC  Moravsky Berou    96.11 322⇓iP       P        03 17 57.2 -3.4
MORC  Moravsky Berou    96.11 322 ⇓P       P        03 17 57.2 -3.4
MORC  Moravsky Berou    96.11 322 eP       P        03 18 00.9 +0.3
SYO   Syowa Base        96.31 201⇓eP       P        03 18 00.9  0.0
DIVS  Divibare          96.33 316 eP       P        03 18 01.7  0.0
      comp=Z,2.0nm,0.8s
JAVC  Velka Javorina    96.35 321 eP       P        03 18 02.5 +0.8
DPC   Dobruska-Polom    96.65 323 eP       P        03 18 02.8 -0.2
DPC   Dobruska-Polom    96.65 323 eP       P        03 18 02.8 -0.2
VRAC  Vranov            96.86 322  P       P        03 18 03.3 -0.6
      comp=Z,4.7nm,0.8s,baz=45,slow=5.7,SNR=9.6
VRAC  Vranov            96.86 322⇓iP       P        03 18 04.0 +0.1
VRAC  Vranov            96.86 322 ⇓P       P        03 18 04.0 +0.1
VRAC  Vranov            96.86 322 eP       P        03 18 03.4 -0.5
KRUC  Moravsky          97.07 322 eP       P        03 18 03.7 -1.2
PDG   Podgorica         97.35 315⇓iP       P        03 18 04.3 -2.0
QSPA  South Pole Qui    97.81 180  P       P        03 18 06.4 -1.5
      comp=Z,3.2nm,0.8s,baz=328,slow=2.1,SNR=9.9
QSPA  South Pole Qui    97.81 180 eP       P        03 18 07.6 -0.2
      comp=Z,10.0nm,1.4s
BRG   Berggiesshubel    97.87 324 eP       Pdif     03 18 09.0 +0.5
      comp=Z,4.1nm,1.2s
BRG                               e                 03 18 30.6
      comp=Z,4.1nm,1.4s
BRG   Berggiesshubel    97.87 324 eP       Pdif     03 18 09.0 +0.5
BRG                               e                 03 18 30.6
BRG                                pmax    pmax
      comp=Z,2.0nm,1.2s
KHC   Kasperske Hory    98.76 322 eP       P        03 18 12.0 -0.5
KHC                               ex       x        03 18 25.0
KHC   Kasperske Hory    98.76 322 eP       Pdif     03 18 13.4 +0.9
      comp=Z,2.9nm,1.6s
KHC   Kasperske Hory    98.76 322 eP       P        03 18 12.0 -0.5
SOKA  Soboth            98.78 320 ePdiff   P        03 18 12.4 -0.3
      comp=Z,1.0nm,0.7s
GEC2  GERESS Array S    98.80 322 eP       P        03 18 12.0 -0.8
      comp=Z,2.8nm,0.8s
GEC2  GERESS Array S    98.80 322 eP       P        03 18 12.0 -0.8
GEC2                               pmax    pmax
      comp=Z,3.0nm,0.8s
GERES GERESS Array B    98.80 322  P       P        03 18 11.7 -1.1
      comp=Z,1.8nm,0.6s,baz=64,slow=5.2,SNR=19
GEA0  GERESS Array S    98.80 322 eP       P        03 18 11.6 -1.2
MOA   Molln             98.83 321 ePdiff   P        03 18 12.0 -0.9
      comp=Z,4.9nm,0.7s
LSZ   Lusaka           100.23 256  P       Pdif     03 18 16.9 -3.0
      comp=Z,1.3nm,0.6s,baz=115,slow=3.9,SNR=4.5
WATA  Walderalm        100.70 321 ePdiff   Pdif     03 18 21.3 -0.1
      comp=Z,1.3nm,0.6s
MOTA  Moosalm          100.99 321 ePdiff   Pdif     03 18 21.5 -1.1
      comp=Z,2.0nm,0.7s
RETA  Reutte           101.14 322 ePdiff   Pdif     03 18 22.4 -0.9
      comp=Z,3.3nm,1.6s
FETA  Feichten         101.36 321 ePdiff   Pdif     03 18 24.7 +0.3
      comp=Z,2.0nm,0.7s
DAVA  Damuels          101.77 322 ePdiff   Pdif     03 18 27.3 +1.1
      comp=Z,3.9nm,1.0s
NVAR  Mina Array Bea   104.11  47  Pdiff   Pdif     03 18 38.4 +1.6
      comp=Z,0.2nm,0.6s,baz=253,slow=7.9,SNR=5.2
NVAR                               PKKPbc  PKKPbc   03 34 25.5 -0.8
      comp=Z,0.6nm,0.8s,baz=149,slow=3.1,SNR=4.1
PDAR  Pinedale Array   108.20  40  PKiKP   PKiKP    03 23 02.5 +1.3
      comp=Z,0.3nm,0.5s,baz=101,slow=0.8,SNR=3.9
PDAR                               PKKP    PKKPdf   03 34 24.4 -3.1
      comp=Z,0.3nm,0.5s,baz=104,slow=6.3,SNR=4.1
SNAA  Sanae            109.24 195  PKiKP   PKiKP    03 23 01.2 -0.8
      comp=Z,0.4nm,0.5s,baz=188,slow=7.1,SNR=4.3
SNAA                               PKKPbc  PKKPbc   03 34 08.4 -3.0
      comp=Z,2.6nm,0.8s,baz=326,slow=6.1,SNR=15
ANMO  Albuquerque      114.19  46  PKP     PKPdf    03 23 12.9 +0.2
      comp=Z,1.9nm,0.7s,baz=194,slow=4.3,SNR=7.8
MNTX  Cornudas Mount   116.56  49 ePKPdf   PKPdf    03 23 18.2 +1.1
G42A  Mountain         118.38  28 ePKPdf   PKPdf    03 23 20.2  0.0
MDT   Midelt           118.48 314  PKP     PKPdf    03 23 21.1 +0.1
      comp=Z,0.9nm,0.5s,baz=303,slow=3.3,SNR=6.0
TX31  Lajitas Ar. Si   119.00  50 ePKPdf   PKPdf    03 23 22.8 +0.8
TXAR  Lajitas Array    119.00  50  PKP     PKPdf    03 23 22.9 +0.8
      comp=Z,1.5nm,0.6s,baz=318,slow=1.0,SNR=25
JFWS  Jewell Farm      119.25  30 ePKPdf   PKPdf    03 23 21.5 -0.5
JFWS  Jewell Farm      119.25  30 ePKIKP   PKPdf    03 23 21.5 -0.5
L40A  Anamosa          119.36  32 ePKPdf   PKPdf    03 23 21.7 -0.5
WMOK  Wichita Mounta   119.61  42 ePKPdf   PKPdf    03 23 23.0  0.0
WMOK  Wichita Mounta   119.61  42 ePKIKP   PKPdf    03 23 23.0  0.0
P40A  Paris            120.70  34 ePKPdf   PKPdf    03 23 24.9  0.0
S39A  Bolivar          121.22  37 ePKPdf   PKPdf    03 23 25.4 -0.6
JCT   Junction City    121.29  47 ePKPdf   PKPdf    03 23 26.5 +0.2
JCT   Junction City    121.29  47 ePKIKP   PKPdf    03 23 26.5 +0.2
R40A  Maddies Statio   121.43  35 ePKPdf   PKPdf    03 23 25.9 -0.4
TOA0  Torodi Ar. Sit   121.52 291 ePKPdf   PKPdf    03 23 26.2 -0.8
TORD  Torodi Ar. Bea   121.52 291  PKP     PKPdf    03 23 25.5 -1.5
      comp=Z,2.8nm,0.3s,baz=21,slow=4.0
CCM   Cathedral Cave   122.17  35 ePKPdf   PKPdf    03 23 28.6 +0.9
CCM   Cathedral Cave   122.17  35 ePKIKP   PKPdf    03 23 28.6 +0.9
W39A  Magazine         122.57  39 ePKPdf   PKPdf    03 23 28.9 +0.3
435B  Jarrell          122.71  46 ePKPdf   PKPdf    03 23 30.1 +1.1
833A  Chaparral WMA,   122.74  49 ePKPdf   PKPdf    03 23 30.6 +1.5
V40A  Witts Springs    122.77  38 ePKPdf   PKPdf    03 23 29.0  0.0
MIAR  Mount Ida        123.12  40 ePKPdf   PKPdf    03 23 30.4 +0.7
MIAR  Mount Ida        123.12  40 ePKIKP   PKPdf    03 23 30.4 +0.7
HKT   Hockley          124.43  45 ePKPdf   PKPdf    03 23 32.6 +0.4
LNIG  Linares          124.44  53 ePKPdf   PKPdf    03 23 32.8 +0.3
WCI   Wyandotte Cave   124.74  31 ePKPdf   PKPdf    03 23 32.5 -0.1
WCI   Wyandotte Cave   124.74  31 ePKIKP   PKPdf    03 23 32.6 -0.1
M54A  Oil Creek Stat   125.17  24 ePKPdf   PKPdf    03 23 33.5 +0.1
341A  Kurthwood        125.42  42 ePKPdf   PKPdf    03 23 34.9 +0.8
WVT   Waverly          125.46  34 ePKPdf   PKPdf    03 23 34.3 +0.2
WVT   Waverly          125.46  34 ePKIKP   PKPdf    03 23 34.3 +0.2
OXF   Oxford           125.70  37 ePKPdf   PKPdf    03 23 35.1 +0.5
OXF   Oxford           125.70  37 ePKIKP   PKPdf    03 23 35.1 +0.5
T49A  Edmonton         125.98  32 ePKPdf   PKPdf    03 23 35.6 +0.5
PLAL  Pickwick Lake    126.14  35 ePKPdf   PKPdf    03 23 35.3 -0.2
KOWA  Kowa             126.29 294  PKP     PKPdf    03 23 36.2  0.0
      comp=Z,3.1nm,0.4s,baz=90,slow=4.9,SNR=19
S51A  Beattyville      126.56  30 ePKPdf   PKPdf    03 23 36.4 +0.2
V52A  Sevierville      127.95  31 ePKPdf   PKPdf    03 23 39.6 +0.7
TKL   Tuckaleechee C   128.00  32  PKP     PKPdf    03 23 39.5 +0.5
      comp=Z,5.2nm,0.8s,baz=170,slow=2.3,SNR=10
LRAL  Lakeview Retre   128.16  36 ePKPdf   PKPdf    03 23 39.2 -0.1
DBIC  Dimbokro         129.57 285  PKP     PKPdf    03 23 42.9 +0.4
      comp=Z,6.7nm,0.9s,baz=79,slow=3.0,SNR=7.4
ASCN  Ascension        141.45 267 ePKPdf   PKPdf    03 24 04.1 -0.5
JTS   JuntasAbangare   143.65  61  PKP     PKPdf    03 24 08.0 -0.6
      comp=Z,5.1nm,0.4s,baz=353,slow=7.5,SNR=7.1
JTS   JuntasAbangare   143.65  61 ePKPdf   PKPdf    03 24 07.5 -1.0
JTS   JuntasAbangare   143.65  61 ePKIKP   PKPdf    03 24 07.5 -1.0
PLCA  Paso Flores      143.89 158  PKP     PKPdf    03 24 09.2 +0.9
      comp=Z,4.9nm,0.8s,baz=283,slow=4.2,SNR=11
GRTK  Grand Turk       145.90  31 ePKPbc   PKPab    03 24 13.2 -0.1
BCIP  Isla Barro Col   148.57  58 ePKPbc   PKPbc    03 24 20.4 -0.2
TRQA  Tornquist        148.99 167 ePKPbc   PKPbc    03 24 21.1 +0.1
TRQA  Tornquist        148.99 167 ePKHKP   PKPbc    03 24 21.1 +0.1
ROC1  El Roble         150.15 149 ePKPbc   PKPbc    03 24 25.1 +0.8
PEL   Peldehue         150.18 150 ePKPbc   PKPbc    03 24 24.6 +0.5
PEL   Peldehue         150.18 150 ePKIKP   PKPbc    03 24 24.6 +0.5
CRPR  Cabo Rojo, PR    150.84  28 ePKPbc   PKPbc    03 24 25.9  0.0
OBIP  Obispado Ponce   151.04  27 ePKPbc   PKPbc    03 24 26.7 +0.2
SJG   San Juan         151.18  26 ePKPbc   PKPbc    03 24 26.7 -0.1
SJG                               ePKPab   PKPab    03 24 33.4 -1.1
SJG   San Juan         151.18  26 ePKIKP   PKPbc    03 24 26.7 -0.1
SJG                               e                 03 24 33.4
HUMP  Col San Antoni   151.28  25 ePKPbc   PKPbc    03 24 25.9 -1.1
MTP   Monte Pirata     151.45  25 ePKPbc   PKPbc    03 24 27.4  0.0
STVI  Saint Thomas     151.46  24 ePKPbc   PKPbc    03 24 27.4  0.0
LCO   Las Campanas     153.38 144 ePKPbc   PKPbc    03 24 32.6 +0.8
LCO   Las Campanas     153.38 144 ePKIKP   PKPbc    03 24 32.6 +0.8
CPUP  Villa Florida    161.30 169  PKP     PKPdf    03 24 34.0 +0.2
      comp=Z,1.6nm,0.8s,baz=139,slow=1.8,SNR=3.0
LPAZ  La Paz           163.29 121  PKP     PKPdf    03 24 37.7 +0.9
      comp=Z,3.5nm,0.8s,baz=234,slow=1.2,SNR=13
LPAZ                               PKPab   PKPab    03 25 30.4 +2.8
      comp=Z,2.3nm,0.8s,baz=191,slow=5.6,SNR=4.4
LPAZ  La Paz           163.29 121 ePKPdf   PKPdf    03 24 38.2 +1.3
LPAZ                               PKPab   PKPab    03 25 30.4 +2.8
LPAZ  La Paz           163.29 121 ePKIKP   PKPdf    03 24 38.2 +1.3
LPAZ                                                03 25 30.5
SAML  Samuel           170.16  97 ePKPdf   PKPdf    03 24 41.1 -0.2
SAML  Samuel           170.16  97 ePKIKP   PKPdf    03 24 41.1 -0.2
BDFB  Brasilia         170.76 213  PKPab   PKPab    03 25 59.8  0.0
      comp=Z,0.9nm,0.4s,baz=125,slow=8.9,SNR=2.6
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*IDC **29** 03:27:48.2±0.7, 6.°07N×125.°48E, h112^{km}±5^{km}, mb4.1/29, mb1 4.1/29, mb1mx4.0/59, mbtmp4.4/29, MS2.8/1, Ms1 2.8/1, ms1mx2.4/56, Error ellipse: s-maj=17.2km s-min=8.3km az=76.0*

*ISCJB **29** 03:27:48.2±0.3, 6.°15N±0.°02×125.°82E±0.°04, h119^{km}±2^{km}, mb4.4/59, Error ellipse: s-maj=6.2km s-min=3.4km az=1.4*

*DJA **29** 03:27:49.0±0.5, 6.°N±5.°×12.°6E±.°, h105^{km}±4^{km}, M5.2/7, mB5.3/2, mb5.0/7, MLv5.2/4, Mw(mB)4.7/2*

*NEIC **29** 03:27:50.0±0.7, 6.°18N×125.°70E, h123^{km}±7^{km}, mb4.6/25, Error ellipse: s-maj=7.9km s-min=4.6km az=79.0*

NEIC Felt [I PIVS] at General Santos.

*KLM **29** 03:27:50.0, 6.°32N×126.°01E, h107^{km}, mb4.6*

*MAN **29** 03:27:55.3, 6.°55N×125.°71E, h27^{km}, mb5.2, ML4.2, MS4.3*

ISC 29 03:27:49.8±0.6**, 6.°17N**±0.°04×**125.°77E**±0.°05**, h121**^{km}±5^{km}**, n157, σ1.^{s}85**/169**, mb4.4**/59**, 7C-4D, Mindanao**

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Code  Station Name        Δ°   AZ°    Phase ID              Time     Res
                                   Op       ISC         h  m  s    ISC
DDMP  Don Marcelino,     0.09 223 eP       Pn       03 28 04.0 -2.3
DDMP                              eS       Sn       03 28 15.2 -3.6
GSPH  General Santos     0.82 264⇓iP       Pn       03 28 09.0 -1.4
GSPH                              i S      Sn       03 28 22.5 -3.4
MATI  Mati               0.91  32 eP       Pn       03 28 08.8 -2.3
MATI                              eS       Sn       03 28 23.2 -4.0
DAV   Davao City (W)     0.92 348  P       Pn       03 28 10.0 -1.2
      196nm,0.3s,baz=249,slow=5.3,SNR=19
DAV                                S       Sn       03 28 25.8 -1.4
      2µm,0.3s,baz=24,slow=20,SNR=43
DAV                                LR      LR       03 28 37.8
      comp=Z,258nm,18.8s,baz=130,slow=49
DMPH  Davao City--Mi     0.95 344⇑eP       Pn       03 28 13.7 +2.3
DMPH                              i S      Sn       03 28 29.2 +1.4
SKMP  Bagumbayan, Su     1.27 286 eP       Pn       03 28 12.9 -1.8
SKMP                              eS       Sn       03 28 32.4 -1.2
BUKP  Musuan             1.84 338 eP       Pn       03 28 20.6 -0.8
BUKP                              eS       Sn       03 28 45.4 -0.2
CTBH  Cotabato--PC H     1.84 305⇓eP       Pn       03 28 14.2 -7.2
CTBH                              i S      Sn       03 28 37.3 -8.1
BIPH  Bislig             2.09  16⇑eP       Pn       03 28 24.4  0.0
BIPH                              eS       Sn       03 28 50.0 -0.9
CGP   Cagayan de Oro     2.51 335⇓eP       Pn       03 28 29.8  0.0
CGP                               eS       Sn       03 29 00.4 -0.1
BUTP  Butuan             2.79 357 eP       Pn       03 28 33.8 +0.4
BUTP                              eS       Sn       03 29 08.5 +1.6
SCPH  Surigao            3.60 356 eP       Pn       03 28 44.6 +0.5
SCPH                              eS       Sn       03 29 23.5 -2.6
MSLP  Maasin             4.04 347 eP       Pn       03 28 50.8 +0.8
MSLP                              eS       Sn       03 29 39.8 +3.1
LLP   Lapu-Lapu          4.49 337 eP       Pn       03 28 56.2 +0.2
LLP                               eS       Sn       03 29 45.9 -1.6
TNTI  Ternate            5.59 163  P       Pn       03 29 10.1 -0.7
KMSI  Cibinong           5.84 198  P       Pn       03 29 14.3 +0.2
      398nm,0.9s,2.1nm
RCP   Roxas              6.13 331⇓eP       Pn       03 29 20.3 +2.2
MRSI  Marisa             6.82 214  P       Pn       03 29 28.1 +0.7
      206nm,1.0s,2µm1.2nm
MYLDM Lahad Datu         7.30 263 ePn      Pn       03 29 36.2 +2.3
LUWI  Luwuk              7.76 203  P       Pn       03 29 40.8 +0.7
LUWI  Luwuk              7.76 203 ePn      Pn       03 29 42.2 +2.1
LUWI                              eSn      Sn       03 31 10.1 +3.6
APSI  Ampana             8.15 210  P       Pn       03 29 44.5 -0.8
SANI  Sanana             8.17 178  P       Pn       03 29 43.0 -2.6
MPSI  Mapaga             8.24 226  P       Pn       03 29 45.4 -1.2
NLAI  Namlea             9.44 172  P       Pn       03 30 00.5 -2.3
TTSI  Tana Toraja       10.91 213  P       Pn       03 30 22.4 -0.2
SBUM  Sibu              14.01 255  P       P        03 31 11.0 +3.8
EDFI  Ende, Flores      15.37 195  P       Pn       03 31 21.1 +0.7
KSM   Kuching           16.11 254  P       P        03 31 34.0 +3.4
BATI  Baumata           16.40 187  P       P        03 31 34.1 +0.4
      12nm,0.3s,baz=327,slow=2.7,SNR=12
BATI  Baumata           16.40 187  P       Pn       03 31 32.1 -1.0
PLAI  Plampang          16.89 208  P       P        03 31 40.7 +1.5
TWSI  Taliwang, Sumb    17.26 211  P       Pn       03 31 44.7 +1.2
MTN   Manton Dam        19.62 164 eP       P        03 32 09.3 +0.3
      27nm,1.0s
QIZ   Qiongzhong        20.10 311 eP       P        03 32 14.6 +0.4
      34nm,0.8s
GUMO  Guam              20.20  67  LR      LR       03 39 26.9
      comp=Z,28nm,19.6s,baz=256,slow=34
GZH   Guangzhou         20.65 326 eP       Pn       03 32 25.3 +1.8
JOW   Kunigami          20.69   6  P       Pn       03 32 22.4 -1.5
      28nm,0.7s,baz=212,slow=9.3,SNR=6.6
JOW   Kunigami          20.69   6 eP       P        03 32 21.3 +0.9
      26nm,0.7s
LEM   Lembang           22.24 235  P       P        03 32 32.5 -4.6
      21nm,0.3s,baz=162,slow=20,SNR=4.5
MYKOM Kota Tinggi       22.29 260  P       P        03 32 41.0 +3.5
SKNT  Sakolnakorn       23.86 299  P       P        03 32 53.6 +1.3
      14nm,1.1s
MDSI  Maura Dua         24.02 244  P       P        03 32 55.5 +1.8
KHON  Khomkaen          24.64 296  P       P        03 33 01.1 +1.7
      19nm,1.0s,508nm
IPM   Ipoh              24.69 267 eP       P        03 33 01.2 +1.3
      18nm,0.8s
NONG  Nongkai           25.04 300  P       P        03 33 05.2 +2.2
      0.3nm,0.9s,49nm
PMG   Port Moresby      26.34 126  P       P        03 33 14.3 -0.4
      36nm,0.9s,baz=269,slow=24,SNR=4.9
PMG   Port Moresby      26.34 126 eP       P        03 33 14.0 -0.7
      26nm,0.8s
NJ2   Nanjing           26.55 347 eP       P        03 33 18.3 +1.9
NJ2                                pmax    pmax
      comp=Z,9.0nm,0.5s
PHET  Kaeng Krachan     26.62 287  P       P        03 33 21.6 +4.3
      7.4nm,1.2s
GYA   Guiyang           27.19 320 eP       P        03 33 24.0 +1.6
GYA                                pmax    pmax
      comp=Z,10.0nm,0.7s
JNU   Nakatsue          27.24   9  P       P        03 33 21.7 -1.0
      9.1nm,0.8s,baz=256,slow=1.3,SNR=6.8
JNU   Nakatsue          27.24   9 eP       P        03 33 22.4 -0.2
      12nm,0.9s
WRAB  Tennant Creek     27.28 162 eP       P        03 33 22.1 -1.0
      6.2nm,0.6s
WRA   Warramunga Arr    27.28 162  P       P        03 33 22.6 -0.5
      2.7nm,0.8s,baz=345,slow=9.9,SNR=19
WB2   Warramunga Arr    27.29 162 eP       P        03 33 23.1 -0.1
      8.6nm,0.7s
MBWA  Marble Bar        27.80 192 eP       P        03 33 29.8 +2.1
KCSI  Kotacane, Aceh    28.02 266  P       P        03 33 30.1 +0.3
KCSI  Kotacane, Aceh    28.02 266  P       P        03 33 29.8  0.0
GSI   Gunungsitoli      28.54 261  P       P        03 33 34.7 +0.3
      46nm,0.6s
GSI   Gunungsitoli      28.54 261 eP       P        03 33 33.9 -0.5
      37nm,0.7s
TPTI                    28.64 266  P       P        03 33 25.9 -9.4
CMAR  Chiang Mai Arr    28.86 297  P       P        03 33 38.0 +0.7
      2.5nm,0.6s,baz=111,slow=6.6,SNR=11
CHTO  Chiang Mai        28.99 298 eP       P        03 33 38.9 +0.4
      4.0nm,0.6s
KMI   Kunming           29.01 313  P       P        03 33 41.0 +2.3
KMI                                sP      sP       03 34 18.5 -0.5
KMI                                S       S        03 38 14.5 -6.9
KMI                                pmax    pmax
      comp=Z,10.0nm,0.7s
KMI                                pmax    pmax
      comp=Z,71nm,6.1s
MLSI  Meulaboh, Aceh    29.30 268  P       P        03 33 33.3 -7.9
ASAR  Alice Springs     30.70 165  P       P        03 33 53.2 -0.2
      3.0nm,0.5s,baz=347,slow=7.4,SNR=59
ASAR                               PcP     PcP      03 36 48.2 -0.4
      1.1nm,0.6s,baz=350,slow=2.0,SNR=4.4
ASAR                               S       S        03 38 45.3 -2.1
      0.8nm,0.9s,baz=347,slow=15,SNR=2.8
ASAR                               ScP     ScP      03 40 19.2 -1.1
      0.4nm,0.5s,baz=350,slow=3.8,SNR=3.8
AS01  Alice Springs     30.71 165 eP       P        03 33 53.1 -0.4
KSAR  Wonju Array Be    31.19   3  P       P        03 33 58.0 +0.5
KSRS  Korea Array       31.20   3  P       P        03 33 58.0 +0.4
      2.9nm,0.6s,baz=192,slow=11,SNR=15
CD2   Chengdu           32.13 323 eP       P        03 34 06.0  0.0
CD2                                pmax    pmax
      comp=Z,10.0nm,0.5s
MAJO  Matsushiro        32.31  19 eP       P        03 34 06.9 -0.4
      3.1nm,0.6s
MAT   Matsushiro        32.31  19  P       P        03 34 07.5 +0.1
MJAR  Matsushiro Arr    32.31  19  P       P        03 34 06.7 -0.7
      2.8nm,0.8s,baz=199,slow=9.8,SNR=14
CTAO  Charters Tower    32.97 143 eP       P        03 34 14.2 +0.9
LZH   Lanzhou           35.93 329 eP       P        03 34 42.3 +3.4
LZH                                pP      pP       03 35 04.3 -1.4
LZH                                sP      sP       03 35 16.5 -3.0
LZH                               ePP      PnPn     03 36 08.0 +4.4
LZH                                pmax    pmax
      comp=Z,24nm,1.0s
LZH                                pmax    pmax
      comp=Z,230nm,4.8s
LZH                                LR      LR
      comp=N,280nm,12.0s
LZH                                LR      LR
      comp=E,280nm,12.2s
LZH                                LR      LR
      comp=Z,380nm,15.7s
HHC   Hu-ho-hao-te      36.80 342 eP       P        03 34 48.3 +2.2
HHC                                pP      pP       03 35 11.8 -1.2
HHC                                S       S        03 40 21.8 +0.4
HHC                                SS      SnSn     03 42 58.8 -7.7
HHC                                pmax    pmax
      comp=Z,11nm,0.9s
HHC                                pmax    pmax
      comp=Z,160nm,7.3s
CN2   Changchun         37.48 360 eP       P        03 34 54.8 +3.1
USRK  Ussuriysk Ar.     38.27   7  P       P        03 34 59.5 +1.2
      4.8nm,0.6s,baz=188,slow=8.7
MDJ   Mudanjiang        38.44   4  P       P        03 35 00.0 +0.2
MDJ                                pmax    pmax
      comp=Z,15nm,0.8s
MDJ                                pmax    pmax
      comp=Z,150nm,6.3s
MDJ   Mudanjiang        38.44   4 eP       P        03 35 00.6 +0.8
      10nm,0.9s
BBOO  Buckleboo         39.98 166 eP       P        03 35 13.2 +0.6
      139nm,2.0s
GTA   Gaotai            40.53 329 eP       P        03 35 17.8 +0.5
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GTA				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ASAJ	Asahikawa	40.58	19	P	P	03 35 19.4	+1.9
	4.8nm,0.4s,baz=199,slow=4.4,SNR=6.0						
STKA	Stephens Creek	40.73	159	P	P	03 35 19.6	+0.7
	5.5nm,0.4s,baz=330,slow=8.6,SNR=31						
STKA	Stephens Creek	40.73	159	eP	P	03 35 19.5	+0.7
	1.9nm,0.8s						
H11S3	WAKE ISLAND Hy	41.70	69	T	T	04 19 49.6	
	baz=270,slow=71,SNR=8.3						
H11S1	WAKE ISLAND Hy	41.71	69	T	T	04 19 47.1	
	baz=270,slow=71,SNR=6.3						
H11S2	WAKE ISLAND Hy	41.71	69	T	T	04 19 54.9	
	baz=270,slow=71,SNR=6.9						
H11N1	WAKE ISLAND Hy	42.15	67	T	T	04 20 28.0	
	baz=265,slow=75,SNR=3.9						
H11N2	WAKE ISLAND Hy	42.15	67	T	T	04 20 45.0	
	baz=265,slow=75,SNR=3.6						
H11N3	WAKE ISLAND Hy	42.16	67	T	T	04 20 15.2	
	baz=265,slow=75,SNR=4.4						
KLR	Kul'dur	43.21	6	P	P	03 35 38.8	0.0
	0.3nm,0.5s,baz=196,slow=4.9,SNR=17						
ULN	Ulaanbaatar	44.52	342	eP	P	03 35 49.4	-0.1
	1.2nm,0.4s						
SONM	Songino Array	44.70	341	P	P	03 35 50.5	-0.4
	0.6nm,0.4s,baz=157,slow=9.6,SNR=6.0						
SONM				PcP	PcP	03 37 29.8	-1.5
	1.0nm,0.6s,baz=165,slow=3.0,SNR=4.3						
SONA1	Songino Array	44.71	341	eP	P	03 35 50.2	-0.7
DZM	Mont Dzumac	48.73	126	P	P	03 36 23.7	+1.1
	12nm,0.6s,baz=274,slow=13,SNR=8.3						
WMQ	Urumqi	50.20	324	P	P	03 36 34.8	+1.4
WMQ				LR	LR		
	comp=N,43nm,27.5s						
WMQ				LR	LR		
	comp=E,170nm,25.3s						
WMQ				LR	LR		
	comp=Z,72nm,29.5s						
PETK	Petropavlovsk-	53.56	23	P	P	03 36 59.6	+1.5
	3.8nm,0.6s,baz=184,slow=4.2						
MK01	Makanchi Array	55.00	325	eP	P	03 37 08.2	-0.6
MK31	Makanchi Array	55.02	325	eP	P	03 37 08.3	-0.6
MKAR	Makanchi Array	55.02	325	P	P	03 37 07.8	-1.1
	1.9nm,0.5s,baz=118,slow=7.3,SNR=28						
MKAR	Makanchi Array	55.02	325	eP	P	03 37 08.3	-0.6
	13nm,0.8s						
KSH	Kashi	55.66	314	eP	P	03 37 16.5	+2.8
KSH				ePcP	PcP	03 38 13.0	+1.2
NIL	Nilore	55.70	307	eP	P	03 37 14.1	+0.1
YAK	Yakutsk	55.82	2	P	P	03 37 14.6	+0.4
	1.9nm,0.4s,baz=324,slow=19,SNR=2.4						
YAK	Yakutsk	55.82	2	eP	P	03 37 14.1	-0.1
MA2	Magadan	56.60	15	P	P	03 37 20.9	+1.1
	3.8nm,0.5s,baz=183,slow=5.3,SNR=4.0						
MA2	Magadan	56.60	15	eP	P	03 37 19.5	-0.3
ZALV	Zalesovo Beam	58.00	333	P	P	03 37 29.0	-0.8
	1.2nm,0.7s,baz=110,slow=8.1,SNR=3.4						
KURBB	Kurchatov Arra	59.19	327	P	P	03 37 36.8	-1.3
	2.3nm,0.6s,baz=127,slow=7.1,SNR=26						
KURK	Kurchatov	59.19	327	eP	P	03 37 37.1	-0.9
SEY	Seymchan	59.90	14	P	P	03 37 43.4	+0.7
	0.9nm,0.3s,baz=296,slow=11,SNR=4.7						
BVAR	Borovoye Array	64.77	327	P	P	03 38 14.5	-0.9
	1.0nm,0.6s,baz=140,slow=9.2,SNR=7.3						
BRVK	Borovoye	64.84	327	eP	P	03 38 14.8	-1.1
TIXI	Tiksi	65.44	1	eP	P	03 38 18.7	-0.6
	4.7nm,0.4s						
AKTO	Aktyubinsk	71.17	321	P	P	03 38 54.9	-0.6
	1.6nm,0.6s,baz=109,slow=10,SNR=8.0						
ARU	Arti	72.38	327	eP	P	03 39 00.8	-1.8
	2.0nm,0.6s						
CASY	Casey	73.11	186	eP	P	03 39 06.4	-0.2
	3.1nm,0.7s						
SII	Sitkinak Islan	79.40	34	eP	P	03 39 40.9	-1.6
	29nm,0.9s						
OHAK	Old Harbor	79.94	33	eP	P	03 39 44.3	-1.0
	53nm,1.7s						
KDAK	Kodiak Island	80.36	33	eP	P	03 39 48.4	+0.9
	14nm,0.5s						
CAST	Castle Rocks	81.00	27	eP	P	03 39 52.1	+1.2
	6.2nm,0.7s						
BPAW	Bear Paw Mtn.	81.53	26	eP	P	03 39 54.8	+1.1
	17nm,1.3s						
COLD	Coldfoot	82.03	23	eP	P	03 39 57.1	+0.8
MCK	McKinley	82.42	27	eP	P	03 39 58.8	+0.4
MDM	Murphy Dome	82.75	25	eP	P	03 40 00.8	+0.7
WRH	Wood River Hil	82.81	26	eP	P	03 40 01.2	+0.8
CCB	Clear Creek Bu	82.93	26	eP	P	03 40 01.0	0.0
IL1	Eielson Array	83.33	26	eP	P	03 40 01.9	-1.1
ILAR	Eielson Array	83.33	26	P	P	03 40 02.5	-0.5
	1.5nm,0.6s,baz=242,slow=4.9,SNR=22						
ILB	Eielson Array	83.33	26	eP	P	03 40 03.2	+0.2
DIV	Divide	83.90	29	eP	P	03 40 06.0	-0.1
RIDG	Independ'e Rid	84.24	27	eP	P	03 40 08.5	+0.7
SCRK	Sand Creek	84.61	26	eP	P	03 40 11.7	+1.9
EGAK	Eagle	85.78	25	eP	P	03 40 16.0	+0.7
DAWY	Dawson	86.62	26	eP	P	03 40 20.2	+0.7
BRTR	Keskin Array B	87.74	310	P	P	03 40 23.1	-2.5
	0.7nm,0.7s,baz=91,slow=6.7,SNR=4.7						
ARCES	ARCESS Array B	87.84	340	P	P	03 40 24.0	-1.3
	1.3nm,0.6s,baz=73,slow=5.7,SNR=8.2						
SPITS	Spitsbergen Ar	87.92	349	P	P	03 40 25.4	-0.1
	1.1nm,0.4s,baz=23,slow=11,SNR=9.1						
INK	Inuvik	88.26	21	eP	P	03 40 26.7	-0.5
	1.2nm,0.6s						
FINES	FINESS Array B	89.25	332	P	P	03 40 30.0	-2.0
	2.7nm,0.6s,baz=69,slow=4.4,SNR=15						
TESR	Tescani	91.81	317	⇑iP	P	03 40 42.6	-1.7
VRI	Vrincioaia	91.88	316	⇑iP	P	03 40 44.6	-0.1
MLR	Muntele Rosu	92.49	316	P	P	03 40 46.4	-1.2
	1.4nm,0.6s,baz=45,slow=4.3						
MLR	Muntele Rosu	92.49	316	⇑iP	P	03 40 46.6	-1.0
BURAR	Bucovina Array	92.56	318	⇑iP	P	03 40 47.4	-0.4
SYO	Syowa Base	94.34	201	⇑eP	P	03 40 54.9	-0.4
NOA	NORSAR Array B	96.19	334	P	P	03 41 02.4	-1.8
	0.8nm,0.8s,baz=65,slow=4.6,SNR=3.5						
TORD	Torodi Ar. Bea	121.23	289	PKP	PKPdf	03 46 27.2	-2.4
	0.3nm,0.4s,baz=44,slow=2.1						
JCT	Junction City	123.16	47	ePKPdf	PKPdf	03 46 33.3	+0.2
KOWA	Kowa	126.14	293	PKP	PKPdf	03 46 38.9	-0.1
	0.8nm,0.3s,baz=55,slow=5.0,SNR=6.5						
WCI	Wyandotte Cave	126.72	31	ePKPdf	PKPdf	03 46 39.8	+0.2
TKL	Tuckaleechee C	129.98	32	PKP	PKPdf	03 46 46.9	+1.0
	2.6nm,0.8s,baz=301,slow=5.9,SNR=4.8						
ASCN	Ascension	140.40	265	ePKPdf	PKPdf	03 47 05.9	0.0
TRQA	Tornquist	147.48	169	ePKPbc	PKPbc	03 47 20.0	-0.2
LCO	Las Campanas	152.46	148	ePKPbc	PKPbc	03 47 33.3	+0.4

DJA 29 03:32:57.3±1.3, 2°N±8°×9°6E±°, h48^{km}±8^{km}, M3.6/4, MLv3.6/4, Northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNSI	Sinabang, Aceh	0.45	32	P	Pn	03 33 10.0	+2.2
SNSI				S	Sn	03 33 17.8	+2.5
TPTI		1.64	42	P	Pn	03 33 24.5	+0.8
TPTI				S	Sn	03 33 44.8	+1.2
MLSI	Meulaboh, Aceh	2.24	8	P	Pn	03 33 32.4	+0.4
MLSI				S	Sn	03 33 58.6	+0.1

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*IDC **29** 03:35:41.2±2.8, 34°.52N×141°.18E, h0^{km}, mb3.4/3, mb1 3.5/4, mb1mx3.3/69, mbtmp3.3/4, ML3.4/1, MS2.3/1, Ms1 2.3/1, ms1mx2.0/35, Error ellipse: s-maj=66.2km s-min=24.9km az=77.0*

*ISCJB **29** 03:35:48.0±0.7, 34°.44N±0°.04×140°.62E±0°.07, h51^{km}±7^{km}, mb3.4/3, Error ellipse: s-maj=9.7km s-min=6.1km az=170.9*

*JMA **29** 03:35:47.4±0.2, 34°.44N×140°.64E, h58^{km}±3^{km}, M2.7*

ISC 29 03:35:49.0±1.2, 34°.44N±0°.04×140°.59E±0°.07, h42^{km}±13^{km}, n18, σ0^{s}.60/24, mb3.5/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO3	Boso 3	0.37	349	P	Pn	03 35 58.0	+0.1
BSO1	Boso 1	0.38	56	P	Pn	03 35 57.6	-0.2
BSO4	Boso 4	0.59	339	P	Pn	03 36 00.9	0.0
KTR	Katsuura	0.74	342	eS	Sn	03 36 12.8	-0.4
JMKN	Mikurajimanish	0.99	237	P	Pn	03 36 06.4	-0.1
JMKN				S	Sn	03 36 19.4	+0.1
JIM2	Oshima 3	1.00	287	P	Pn	03 36 05.9	-0.7
JIZS	Izushimoda	1.44	282	P	Pn	03 36 12.2	-0.4
JHJ2	Mitsune	1.47	206	P	Pn	03 36 13.1	+0.1
JHJ	Hachijo jima 2	1.48	207	Pn	Pn	03 36 13.5	+0.3
	22nm,0.3s,baz=337,slow=18,SNR=22						
JHJ				Sn	Sn	03 36 31.3	+0.1
	86nm,0.3s,baz=99,slow=23,SNR=17						
JOD2	Odawara 2	1.49	304	P	Pn	03 36 12.5	-0.8
JOD2				S	Sn	03 36 31.6	+0.1
JYN	Shimob	1.99	303	P	Pn	03 36 20.0	-0.2
JYN				eS	Sn	03 36 44.1	+0.2
SHZ3	Shizuoka 3	2.06	288	eS	Sn	03 36 46.1	+0.4
JRY	Ryogami san	2.10	319	P	Pn	03 36 21.2	-0.5
MJAR	Matsushiro Arr	2.86	318	Pn	Pn	03 36 32.6	+0.5
	4.2nm,0.3s,baz=152,slow=13,SNR=40						
MJAR				Sn	Sn	03 37 04.9	-0.5
	1.4nm,0.3s,baz=299,slow=28,SNR=5.4						
MJAR				LR	LR	03 37 42.3	
	comp=Z,42nm,19.2s,baz=75,slow=39						
MAT	Matsushiro	2.86	318	P	Pn	03 36 33.1	+0.9
MAT				S	Sn	03 37 06.9	+1.4
MKAR	Makanchi Array	44.98	304	P	P	03 44 01.1	+1.0
	0.3nm,0.5s,baz=81,slow=9.3,SNR=2.9						
KURBB	Kurchatov Arra	47.11	310	P	P	03 44 16.5	-0.2
	0.4nm,0.7s,baz=83,slow=6.8,SNR=5.9						
WRA	Warramunga Arr	54.40	187	P	P	03 45 11.2	-0.7
	0.2nm,0.5s,baz=4.6,slow=7.4,SNR=4.6						

IDC 29 03:46:01.6±3.9, 15°.73S×173°.75W, h0^{km}, mb3.6/3, mb1 3.9/4, mb1mx3.6/46, mbtmp3.7/4, ML3.6/1, Error ellipse: s-maj=269.7km s-min=23.6km az=149.0, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	2.63	47	Pn	Pn	03 46 43.7	-1.7
	11nm,0.3s,baz=45,slow=1.9,SNR=10						
AFI				Sn	Sn	03 47 12.7	-5.4
	30nm,0.3s,baz=44,slow=23,SNR=10.0						
WRA	Warramunga Arr	49.44	257	P	P	03 54 53.7	-0.2
	0.2nm,0.3s,baz=94,slow=6.2,SNR=6.9						
ASAR	Alice Springs	49.69	252	P	P	03 54 55.3	-0.5
	2.3nm,0.6s,baz=88,slow=8.0,SNR=27						
PDAR	Pinedale Array	82.73	42	P	P	03 58 28.8	+1.0
	0.1nm,0.5s,baz=226,slow=7.4,SNR=2.4						

IDC 29 03:47:40.7±2.1, 1°.44S×127°.93E, h0^{km}, mb3.1/2, mb1 3.3/3, mb1mx3.2/53, mbtmp3.1/3, ML3.4/1, MS3.2/1, Ms1 3.2/1, ms1mx2.6/21, Error ellipse: s-maj=157.9km s-min=25.9km az=67.0, Halmahera

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGY	Tagaytay City	16.92	336	LR	LR	03 58 44.3	
	comp=Z,88nm,21.0s,baz=31,slow=39						
WRA	Warramunga Arr	19.43	162	P	P	03 52 08.8	-0.1
	0.1nm,0.3s,baz=340,slow=11,SNR=5.6						
ASAR	Alice Springs	22.84	166	P	P	03 52 45.8	+0.1
	0.2nm,0.3s,baz=345,slow=11,SNR=6.0						
MKAR	Makanchi Array	62.47	326	P	P	03 58 06.0	0.0
	0.1nm,0.4s,baz=115,slow=6.5,SNR=2.6						

MEX 29 03:52:19.4±0.8, 15°.16N×93°.05W, h80^{km}±11^{km}, MD4.0, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.57	343	eP	Pn	03 52 32.3	-1.4
PCIG				i S	Sn	03 52 42.5	-1.8
THIG		0.80	108	eP	Pn	03 52 34.5	-1.6
THIG				eS	Sn	03 52 47.4	-1.1
CCIG	Comitan	1.42	38	eP	Pn	03 52 42.6	-1.2
CCIG				eS	Sn	03 53 00.0	-2.2
TGIG		1.61	357	eP	Pn	03 52 45.8	-0.5
TGIG				eS	Sn	03 53 05.5	-1.1

IDC 29 04:10:22.4±1.2, 1°.64N×124°.56E, h0^{km}, mb3.8/7, mb1 3.9/7, mb1mx3.6/59, mbtmp3.8/7, Error ellipse: s-maj=180.0km s-min=16.4km az=63.0, Minahassa Peninsula, Sulawesi

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	23.50	156	P	P	04 15 34.1	0.0
	0.9nm,0.4s,baz=335,slow=11,SNR=13						
ASAR	Alice Springs	26.75	161	P	P	04 16 04.9	+0.9
	0.2nm,0.3s,baz=340,slow=7.5,SNR=3.4						
STKA	Stephens Creek	37.05	156	P	P	04 17 33.6	-0.7
	0.6nm,0.3s,baz=332,slow=12,SNR=2.9						
MKAR	Makanchi Array	58.07	327	P	P	04 20 18.2	+0.8
	0.5nm,0.4s,baz=116,slow=7.8,SNR=11						
KURBB	Kurchatov Arra	62.35	329	P	P	04 20 47.3	+0.5
	0.8nm,0.7s,baz=121,slow=6.7,SNR=6.6						
BVAR	Borovoye Array	67.90	328	P	P	04 21 23.1	+0.3
	0.7nm,0.5s,baz=123,slow=5.5,SNR=5.4						
AKTO	Aktyubinsk	73.96	322	P	P	04 21 58.0	-1.6
	1.4nm,0.8s,baz=121,slow=5.2,SNR=3.2						

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*IDC **29** 04:19:58.5±3.4, 36°.36N×71°.43E, h149^{km}±28^{km}, mb3.3/9, mb1 3.4/16, mb1mx3.2/71, mbtmp3.8/16, Error ellipse: s-maj=26.7km s-min=19.3km az=175.0*

*ISCJB **29** 04:19:59.9±0.9, 36°.70N±0°.08×71°.24E±0°.08, h150^{km}, mb3.5/9, Error ellipse: s-maj=12.8km s-min=6.2km az=141.1*

*NNC **29** 04:20:07.3±4.2, 37°.29N×71°.13E, h0^{km}, mb4.2, mpv3.8, Error ellipse: s-maj=36.0km s-min=29.9km az=133.0*

ISC 29 04:19:59.9±1.0, 36°.60N±0°.10×71°.28E±0°.08, h150^{km}, n22, σ1^{s}.78/29, mb3.7/9, 3C-6D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.83	27	⇓Pn	Pn	04 21 00.9	+2.8
	31nm,0.4s						
SFK				⇓Sn	Sn	04 21 43.6	+0.3
	85nm,0.3s						
MNAS	Manas	5.96	9	⇓Pn	Pn	04 21 28.3	+2.3
	5.9nm,0.5s						
MNAS				⇑Sn	Sn	04 22 30.5	-3.0
	24nm,0.5s						
AAK	Ala-Archa	6.52	21	P	Pn	04 21 35.5	+1.9
	3.8nm,0.3s,baz=180,slow=5.5,SNR=15						
AAK				S	Sn	04 22 44.3	-2.7
	1.5nm,0.3s,baz=337,slow=22,SNR=14						
AAK	Ala-Archa	6.52	21	⇑Pn	Pn	04 21 36.1	+2.5
	5.8nm,0.4s						
AAK				⇓Sn	Sn	04 22 45.1	-1.9
	21nm,0.7s						
KK31	Karatay Array	6.52	355	Pn	Pn	04 21 35.5	+2.0
	1.7nm,0.3s,baz=170,slow=11,SNR=57						
KK31				⇑Sn	Sn	04 22 44.5	-2.4
	9.4nm,0.6s,baz=181,slow=25,SNR=14						
TKM2	Tokmak 2	7.13	26	⇓Pn	Pn	04 21 43.6	+1.7
	3.3nm,0.5s						
TKM2				⇓Sn	Sn	04 22 59.3	-2.5
	4.4nm,0.6s						
GEYT	Alibeck	10.57	281	P	Pn	04 22 28.0	+0.6
	0.2nm,0.3s,baz=104,slow=12,SNR=4.3						
GEYT				S	Sn	04 24 22.4	-2.0
	baz=91,slow=29,SNR=2.4						
MKAR	Makanchi Array	13.08	35	P	Pn	04 23 00.3	+0.3
	0.1nm,0.3s,baz=221,slow=14,SNR=8.8						
KURBB	Kurchatov Arra	14.96	18	P	Pn	04 23 22.6	-0.9
	0.1nm,0.3s,baz=208,slow=11,SNR=4.3						
BVAR	Borovoye Array	16.44	358	P	P	04 23 42.0	+0.2
	0.2nm,0.3s,baz=165,slow=12,SNR=3.0						
AKTO	Aktyubinsk	16.81	330	P	Pn	04 23 47.9	+1.7
	0.5nm,0.3s,baz=152,slow=9.2,SNR=8.4						
ZALV	Zalesovo Beam	19.73	24	P	P	04 24 17.4	-0.2
	0.7nm,0.3s,baz=213,slow=10,SNR=2.8						
FINES	FINESS Array B	37.53	326	P	P	04 27 00.1	+1.2
	0.7nm,0.4s,baz=119,slow=10,SNR=12						
ARCES	ARCESS Array B	41.14	337	P	P	04 27 30.0	+1.2
	1.3nm,0.6s,baz=107,slow=8.2,SNR=7.2						
GERES	GERESS Array B	43.05	305	P	P	04 27 45.6	+0.9
	0.1nm,0.4s,baz=30,slow=10,SNR=2.7						
HFS	Hagfors	43.13	322	P	P	04 27 45.9	+0.9
	3.0nm,0.5s,baz=98,slow=10,SNR=24						
NB2	NORSAR Subarra	44.44	323	P	P	04 27 55.9	+0.4
	comp=Z,0.8nm,0.4s,baz=98,slow=7.9						
NOA	NORSAR Array B	44.44	323	P	P	04 27 55.9	+0.4
	comp=Z,0.8nm,0.5s,baz=96,slow=7.6,SNR=6.9						
ESDC	Sonseca Array	57.61	298	P	P	04 29 35.1	+1.0
	comp=Z,0.5nm,0.7s,baz=55,slow=7.1,SNR=4.1						
TORD	Torodi Ar. Bea	65.94	269	P	P	04 30 28.3	-1.8
	comp=Z,0.5nm,0.4s,baz=52,slow=5.7						
YKA	Yellowknife Ar	81.14	3	P	P	04 31 57.1	-1.0
	comp=Z,0.3nm,0.5s,baz=348,slow=4.7,SNR=3.6						
WRA	Warramunga Arr	81.85	122	P	P	04 32 00.8	-1.7
	comp=Z,0.3nm,0.8s,baz=329,slow=4.9,SNR=4.6						

MAN 29 04:21:11.5, 12°.36N×123°.69E, h9^{km}, mb4.2, ML3.0, MS2.7, 1C-1D, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMPH	Masbate	0.06	270	⇓iP	Pg	04 21 13.8	+0.4
MMPH				i S	Sg	04 21 15.5	+0.6
RCP	Roxas	1.22	229	⇑eP	Pg	04 21 35.2	+0.4
RCP				eS	Sn	04 21 51.4	+0.1
LQP	Lukban	2.72	310	eP	Pb	04 22 01.8	+1.3

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*NIED **29** 05:25:00, 35°.70N×140°.60E, h53^{km}, Mw4.1 Best double couple: $M_0$1.38000×10^{15} NP1:ϕ_s182.00000°, δ16.00000°, λ89.00000°. NP2:ϕ_s3.00000°, δ74.00000°, λ90.00000°.*

*ISCJB **29** 05:25:52.3±0.5, 35°.71N±0°.04×140°.74E±0°.08, h45^{km}, mb3.8/14, MS3.1/5, Error ellipse: s-maj=9.8km s-min=5.7km az=163.1*

*JMA **29** 05:25:53.8±0.1, 35°.73N×140°.60E, h47^{km}±1^{km}, M3.4 Broadband fault plane solution: P waves. NP1: ϕ_s23.00000°, δ83.00000°, λ93.00000°. NP2:ϕ_s180.00000°, δ8.00000°, λ67.00000°. Principal axes: T Plg52.0000°, Azm296.0000°; N Plg3.0000°, Azm202.0000°; P Plg38.0000°, Azm110.0000°;*

JMA Felt II J1.

*IDC **29** 05:25:55.7±2.2, 35°.51N×140°.52E, h72^{km}±19^{km}, mb3.5/14, mb1 3.6/16, mb1mx3.5/69, mbtmp3.8/16, MS3.1/8, Ms1 3.1/8, ms1mx2.8/55 Error ellipse: s-maj=26.4km s-min=12.2km az=75.0*

ISC 29 05:25:53.2±0.7, 35°.68N±0°.05×140°.68E±0°.07, h45^{km}, n38, σ1^{s}.28/29, mb3.9/14, MS3.4/5, 1C-2D, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	0.15	81	⇑P	Pn	05 26 01.7	+1.1
JIHU	Itakohorinouch	0.31	337	P	Pn	05 26 02.7	+0.7
JCN	Nagara	0.47	236	⇓P	Pn	05 26 05.0	+1.3
JYT	Yasato	0.68	324	⇓P	Pn	05 26 06.0	-0.4
JYT				S	Sn	05 26 15.0	-0.9
BSO4	Boso 4	0.74	202	P	Pn	05 26 08.3	+1.1
BSO3	Boso 3	0.89	189	P	Pn	05 26 10.0	+1.0
BSO1	Boso 1	1.05	166	P	Pn	05 26 12.0	+1.0
JAG	Ashikaga	1.24	307	P	Pn	05 26 13.6	-0.5
MJAR	Matsushiro Arr	2.18	294	P	Pn	05 26 27.5	+0.6
	27nm,0.3s,baz=297,slow=25,SNR=71						
MJAR				LR	LR	05 27 27.3	
	comp=Z,281nm,19.6s,baz=105,slow=44						
MAT	Matsushiro	2.18	294	P	Pn	05 26 28.3	+1.3
MAT				eS	Sn	05 26 55.9	+3.1
JHJ	Hachijo jima 2	2.66	196	P	Pn	05 26 33.6	+0.1
	45nm,0.3s,baz=326,slow=20,SNR=17						
JHJ				S	Sn	05 27 03.8	-0.7
	69nm,0.3s,baz=264,slow=22,SNR=9.3						
JNU	Nakatsue	8.49	255	LR	LR	05 31 32.9	
	comp=Z,181nm,18.7s,baz=125,slow=40						
KSRS	Korea Array	10.41	284	LR	LR	05 32 24.8	
	comp=Z,69nm,19.5s,baz=110,slow=38						
PETK	Petropavlovsk-	21.16	29	LR	LR	05 39 44.1	
	comp=Z,15nm,19.7s,baz=232,slow=39						
H11N2	WAKE ISLAND Hy	28.01	118	T	T	06 00 53.9	
	baz=310,slow=75,SNR=31						
H11N1	WAKE ISLAND Hy	28.01	118	T	T	06 00 55.9	
	baz=310,slow=75,SNR=30						
H11N3	WAKE ISLAND Hy	28.02	118	T	T	06 00 53.4	
	baz=310,slow=75,SNR=23						
SONM	Songino Array	28.08	306	P	P	05 31 39.7	-0.8
	0.9nm,0.7s,baz=107,slow=10,SNR=4.5						
H11S3	WAKE ISLAND Hy	28.66	120	T	T	06 01 41.4	
	baz=312,slow=75,SNR=51						
H11S1	WAKE ISLAND Hy	28.66	120	T	T	06 01 42.6	
	baz=312,slow=75,SNR=46						
H11S2	WAKE ISLAND Hy	28.68	120	T	T	06 01 42.6	
	baz=312,slow=75,SNR=37						
CMAR	Chiang Mai Arr	40.59	256	LR	LR	05 51 19.1	
	comp=Z,17nm,19.7s,baz=335,slow=38						
ZALV	Zalesovo Beam	42.40	313	P	P	05 33 42.9	-0.2
	0.9nm,0.5s,baz=79,slow=7.9,SNR=5.0						
MKAR	Makanchi Array	44.35	303	P	P	05 33 58.9	0.0
	1.5nm,0.6s,baz=87,slow=9.7,SNR=11						
KURBB	Kurchatov Arra	46.38	309	P	P	05 34 14.6	-0.2
	2.4nm,0.6s,baz=84,slow=8.3,SNR=22						
ILAR	Eielson Array	50.95	32	P	P	05 34 50.8	+1.0
	0.3nm,0.6s,baz=272,slow=6.2,SNR=4.1						
BVAR	Borovoye Array	51.05	313	P	P	05 34 50.9	+0.2
	0.7nm,0.5s,baz=71,slow=4.9,SNR=6.4						
WRA	Warramunga Arr	55.64	187	P	P	05 35 22.1	-2.6
	0.8nm,0.4s,baz=1.0,slow=7.5,SNR=7.2						
INK	Inuvik	55.86	27	LR	LR	06 00 48.8	
	comp=Z,30nm,18.7s,baz=172,slow=37						
ASAR	Alice Springs	59.37	187	P	P	05 35 48.0	-2.8
	0.2nm,0.5s,baz=20,slow=11,SNR=7.1						
FINES	FINESS Array B	69.73	332	P	P	05 36 58.1	+0.1
	1.2nm,0.7s,baz=66,slow=6.5,SNR=7.0						
GNI	Garni	72.04	307	LR	LR	06 11 18.6	
	comp=Z,25nm,19.2s,baz=348,slow=38						
AKASG	Malin Array Be	75.00	322	P	P	05 37 28.7	-0.9
	0.9nm,0.5s,baz=48,slow=5.8,SNR=6.0						
AKASG				LR	LR	06 13 15.3	
	comp=Z,21nm,18.6s,baz=265,slow=38						
HFS	Hagfors	75.08	336	P	P	05 37 29.8	-0.1
	1.1nm,0.7s,baz=69,slow=4.8,SNR=4.9						
NB2	NORSAR Subarra	75.20	337	P	P	05 37 30.7	0.0
	comp=Z,0.4nm,0.5s,baz=41,slow=5.9						
NOA	NORSAR Array B	75.20	337	P	P	05 37 30.3	-0.4
	comp=Z,0.6nm,0.5s,baz=42,slow=5.7,SNR=4.4						
PDAR	Pinedale Array	79.04	45	P	P	05 37 54.5	+1.6
	comp=Z,0.1nm,0.3s,baz=194,slow=0.7,SNR=3.6						
BRTR	Keskin Array B	79.30	311	P	P	05 37 55.7	+1.5
	comp=Z,0.6nm,0.8s,baz=89,slow=4.6,SNR=3.4						

IDC 29 05:29:26.6±2.5, 17°.45S×177°.82W, h0^{km}, mb4.0/4, mb1 4.4/4, mb1mx3.8/45, mbtmp4.0/4, Error ellipse: s-maj=237.0km s-min=25.6km az=156.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	45.27	259	P	P	05 37 45.9	-0.4
	1.0nm,0.5s,baz=96,slow=6.8,SNR=13						
ASAR	Alice Springs	45.46	254	P	P	05 37 47.9	+0.1
	7.4nm,0.5s,baz=88,slow=8.4,SNR=137						
TXAR	Lajitas Array	85.28	57	P	P	05 42 06.4	+0.6
	0.5nm,0.8s,baz=227,slow=4.7,SNR=6.9						
PDAR	Pinedale Array	86.64	43	P	P	05 42 11.8	-0.6
	0.3nm,0.6s,baz=173,slow=0.7,SNR=3.5						

WEL 29 05:35:52.1, 38°S±7°×18°0W±°, h33^{km}, ML3.8/12, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.47	268	P	Pn	05 36 16.7	+0.5
WMGZ				S	Sn	05 36 34.6	+0.4
MXZ	Matakaoa Point	1.57	278	P	Pn	05 36 17.9	+0.3
MXZ				S	Sn	05 36 36.8	-0.1
PUZ	Puketiti	1.61	259	P	Pn	05 36 19.3	+1.0
PUZ				S	Sn	05 36 38.7	+0.7
PKGZ	Pakihiroa	1.73	266	P	Pn	05 36 20.3	+0.3
TWGZ	Tauwhareparae	1.85	257	P	Pn	05 36 22.7	+1.2
TWGZ				S	Sn	05 36 45.0	+1.2
HAZ	Te Kaha	1.97	270	P	Pn	05 36 23.9	+0.8
TKGZ	Te Karaka	2.01	250	P	Pn	05 36 25.0	+1.3
TKGZ				S	Sn	05 36 49.5	+1.7
RUGZ	Raukumara Rang	2.06	264	P	Pn	05 36 24.9	+0.5
RIGZ	Rimuhau	2.17	244	P	Pn	05 36 27.0	+1.0
RIGZ				S	Sn	05 36 52.8	+1.0
PRGZ	Paritu Road	2.19	238	P	Pn	05 36 28.4	+2.2
PRGZ				S	Sn	05 36 54.9	+2.8
MWZ	Matawai	2.23	255	P	Pn	05 36 27.4	+0.6
MWZ				S	Sn	05 36 53.4	+0.3
MHGZ	Mahia Peninsul	2.30	233	P	Pn	05 36 29.6	+1.9
MHGZ				S	Sb	05 36 58.0	-2.9

RAGZ	**Rawiri**	**2.35**	**252**	P	Pn	05 36 30.1	+1.5
RAGZ				S	Sn	05 36 56.9	+0.5
KNZ	**Kokohu**	**2.38**	**238**	P	Pn	05 36 30.3	+1.6
KNZ				S	Sn	05 36 58.2	+1.4
WHHZ	**Waihua**	**2.71**	**241**	P	Pn	05 36 33.2	0.0
RTZ	**Ruatahuna**	**2.72**	**251**	P	Pn	05 36 35.5	+2.0
RTZ				S	Sn	05 37 06.9	+1.7
MTHZ	**Maungataniwha**	**2.90**	**247**	P	Pn	05 36 37.3	+1.4

ISCJB ***29*** *05:45:13.7±0.8, 38°.73N±0°.03×43°.65E±0°.06, h15^{km}±4^{km}, Error ellipse: s-maj=8.4km s-min=4.9km az=21.1*

CSEM ***29*** *05:45:13.3±0.3, 38°.73N×43°.59E, h10^{km}, ML2.1, Error ellipse: s-maj=8.0km s-min=4.8km az=114.0*

DDA ***29*** *05:45:13.0, 38°.71N×43°.59E, h7^{km}, Ml2.7*

ISK ***29*** *05:45:13.4, 38°.75N×43°.53E, h17^{km}, ML2.1/4*

ISC 29 05:45:14.3±0.9**, 38°.74N**±0°.03×**43°.59E**±0°.03**, h17**^{km}±6^{km}**, n24,** σ1^{s}**22**/43**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VANB	**Van**	**0.21**	**226**	PG	**Pg**	**05 45 19.3**	**-0.1**
VANB				SG	**Sg**	**05 45 24.0**	**+1.1**
VANB	**Van**	**0.21**	**226**	*e*Pg	**Pg**	**05 45 19.3**	**-0.1**
VANB				*e*Sg	**Sg**	**05 45 24.0**	**+1.1**
VMUR	**Van-Muradiye**	**0.25**	**358**	*i* P	**Pg**	**05 45 18.9**	**-1.1**
VMUR				*i* S	**Sb**	**05 45 24.1**	**-0.5**
VMUR	**Van-Muradiye**	**0.25**	**358**	P	**Pg**	**05 45 18.9**	**-1.1**
VMUR				S	**Sb**	**05 45 24.1**	**-0.5**
CLDR	**Caldiran**	**0.48**	**33**	PG	**Pb**	**05 45 23.8**	**-0.6**
CLDR				SG	**Sb**	**05 45 31.4**	**+0.2**
CLDR	**Caldiran**	**0.48**	**33**	*i* P	**Pg**	**05 45 23.0**	**-1.0**
CLDR				*i* S	**Sb**	**05 45 32.8**	**+1.6**
CLDR	**Caldiran**	**0.48**	**33**	P	**Pg**	**05 45 23.0**	**-1.0**
CLDR	**Caldiran**	**0.48**	**33**	*e*Pg	**Pb**	**05 45 23.8**	**-0.6**
CLDR				*e*Sg	**Sb**	**05 45 31.4**	**+0.2**
CLDR				S	**Sb**	**05 45 32.8**	**+1.6**
GEVA	**Gevas**	**0.59**	**224**	*i* P	**Pg**	**05 45 24.2**	**-1.9**
GEVA				*i* S	**Sb**	**05 45 34.8**	**+0.3**
GEVA	**Gevas**	**0.59**	**224**	P	**Pg**	**05 45 24.2**	**-1.9**
GEVA				S	**Sb**	**05 45 34.8**	**+0.3**
ADCV	**BITLIS_Adilcev**	**0.68**	**276**	*i* P	**Pg**	**05 45 26.5**	**-1.1**
ADCV				*i* S	**Sn**	**05 45 40.5**	**+1.0**
ADCV	**BITLIS_Adilcev**	**0.68**	**276**	P	**Pg**	**05 45 26.5**	**-1.1**
ADCV				S	**Sn**	**05 45 40.5**	**+1.0**
TUTA	**Tutak**	**0.89**	**318**	*i* P	**Pg**	**05 45 30.7**	**-1.0**
TUTA				*i* S	**Sb**	**05 45 43.9**	**+0.8**
TUTA	**Tutak**	**0.89**	**318**	P	**Pg**	**05 45 30.7**	**-1.0**
TUTA				S	**Sb**	**05 45 43.9**	**+0.8**
AGRB	**Hanur-Agry**	**0.95**	**331**	PG	**Pg**	**05 45 31.7**	**-1.1**
AGRB				SG	**Sb**	**05 45 45.1**	**+0.3**
AGRB	**Hanur-Agry**	**0.95**	**331**	*e*Pg	**Pg**	**05 45 31.7**	**-1.1**
AGRB				*e*Sg	**Sb**	**05 45 45.1**	**+0.3**
HAKT	**HAKKARI**	**1.19**	**175**	*i* P	**Pb**	**05 45 34.9**	**-1.5**
HAKT				*i* S	**Sn**	**05 45 55.8**	**+3.7**
HAKT	**HAKKARI**	**1.19**	**175**	P	**Pb**	**05 45 34.9**	**-1.5**
GURO	**Guroymak-BITLI**	**1.23**	**262**	PN	**Pn**	**05 45 35.7**	**-1.1**
GURO	**Guroymak-BITLI**	**1.23**	**262**	*e*Pn	**Pn**	**05 45 35.7**	**-1.1**
EATA	**Eleskirt**	**1.40**	**323**	*i* P	**Pn**	**05 45 39.0**	**-0.3**
EATA				*i* S	**Sg**	**05 46 01.3**	**+1.6**
EATA	**Eleskirt**	**1.40**	**323**	P	**Pn**	**05 45 39.0**	**-0.3**
SRTM	**Siirt_Merkez**	**1.51**	**241**	*i* P	**Pb**	**05 45 41.5**	**-0.3**
SRTM				*i* S	**Sg**	**05 46 04.6**	**+1.6**
SRTM	**Siirt_Merkez**	**1.51**	**241**	P	**Pb**	**05 45 41.5**	**-0.3**

IDC 29 05:50:54.9±6.8**, 15°.67S**×**174°.16E, h0**^{km}**, mb3.6**/3**, mb1 4.0**/3**, mb1mx3.5**/43**, mbtmp3.6**/3**, MS3.3**/10**, Ms1 3.3**/10**, ms1mx3.0**/47**, Error ellipse: s-maj=313.9km s-min=33.5km az=143.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**9.69**	**228**	LR	LR	05 56 18.9	
	comp=Z,248nm,19.8s,baz=32,slow=34						
AFI	**Afiamalu**	**13.71**	**84**	LR	LR	05 57 59.5	
	comp=Z,44nm,19.7s,baz=262,slow=31						
HNR	**Honiara**	**15.19**	**292**	LR	LR	05 58 57.6	
	comp=Z,54nm,21.0s,baz=151,slow=32						
RPZ	**Rata Peaks**	**28.07**	**185**	LR	LR	06 06 35.3	
	comp=Z,144nm,19.8s,baz=292,slow=34						
STKA	**Stephens Creek**	**33.72**	**236**	LR	LR	06 09 59.8	
	comp=Z,82nm,18.1s,baz=194,slow=34						
WRA	**Warramunga Arr**	**38.09**	**258**	P	P	05 58 17.1	+1.3
	0.5nm,0.7s,baz=89,slow=9.2,SNR=3.5						
ASAR	**Alice Springs**	**38.63**	**252**	P	P	05 58 19.1	-1.3
	1.4nm,0.7s,baz=82,slow=8.6,SNR=15						
CMAR	**Chiang Mai Arr**	**81.44**	**292**	LR	LR	06 37 25.7	
	comp=Z,7.9nm,21.3s,baz=210,slow=34						
YBH	**Yreka Blue Hor**	**81.50**	**42**	LR	LR	06 31 32.6	
	comp=Z,22nm,21.4s,baz=204,slow=30						
ILAR	**Eielson Array**	**85.50**	**16**	P	P	06 03 34.3	0.0
	0.2nm,0.6s,baz=226,slow=6.1,SNR=3.0						
ILAR				LR	LR	06 34 37.4	
	comp=Z,23nm,21.7s,baz=292,slow=31						
ANMO	**Albuquerque**	**90.42**	**54**	LR	LR	06 38 33.8	
	comp=Z,17nm,18.8s,baz=258,slow=32						
TXAR	**Lajitas Array**	**90.93**	**60**	LR	LR	06 37 50.9	
	comp=Z,22nm,19.6s,baz=0.0,slow=31						

IDC 29 05:59:22.8±2.1**, 2°.06N**×**127°.62E, h0**^{km}**, mb3.4**/3**, mb1 3.6**/3**, mb1mx3.2**/57**, mbtmp3.4**/3**, Error ellipse: s-maj=149.6km s-min=25.1km az=67.0, Northern Molucca Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WRA	**Warramunga Arr**	**22.84**	**164**	P	P	06 04 28.1	+0.3
	1.4nm,0.6s,baz=344,slow=11,SNR=9.2						
ASAR	**Alice Springs**	**26.30**	**167**	P	P	06 04 59.8	-0.6
	0.3nm,0.5s,baz=344,slow=7.7,SNR=5.6						
MKAR	**Makanchi Array**	**59.42**	**325**	P	P	06 09 27.5	+0.1
	0.2nm,0.5s,baz=108,slow=9.5,SNR=2.4						

NIED ***29*** *06:09:00, 37°.50N×144°.20E, h5^{km}, Mw4.3 Best double couple: M$_0$3.03000×10^{15} NP1:ϕ_s53.00000°, δ16.00000°, λ-99.00000°. NP2:ϕ_s242.00000°, δ74.00000°, λ-87.00000°.*

IDC ***29*** *06:09:48.7±0.5, 37°.21N×144°.51E, h0^{km}, mb4.1/24, mb1 4.3/30, mb1mx4.1/71, mbtmp4.1/30, ML3.3/5, MS3.3/29, Ms1 3.3/29, ms1mx3.1/74, Error ellipse: s-maj=14.9km s-min=12.8km az=138.0*

BJI ***29*** *06:09:49.1, 37°.35N×144°.49E, h13^{km}, mb4.5/22, mB4.8/15, Ms4.0/9, Ms7 3.8/9*

NEIC ***29*** *06:09:50.9±2.1, 37°.26N×144°.41E, h11^{km}±13^{km}, mb4.6/62, Error ellipse: s-maj=5.5km s-min=4.1km az=143.0*

ISCJB ***29*** *06:09:53.0±0.2, 37°.37N±0°.03×144°.23E±0°.02, h33^{km}, mb4.4/102, MS3.5/25, Error ellipse: s-maj=4.7km s-min=2.5km az=171.7*

JMA ***29*** *06:09:53.0±0.3, 37°.45N×144°.21E, h54^{km}, M4.5*

MOS ***29*** *06:09:57.6±1.5, 37°.65N×144°.26E, h62^{km}, mb4.7/24, Error ellipse: s-maj=10.1km s-min=6.5km az=114.0*

ISC 29 06:09:54.6±0.5**, 37°.34N**±0°.05×**144°.39E**±0°.05**, h35**^{km}**, n238,** σ1^{s}**88**/244**, mb4.5**/102**, MS3.6**/25**, 16C-15D, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIO	**Ouri**	**2.65**	**296**	P	**Pn**	**06 10 32.2**	**-2.6**
JIO				S	**Sn**	**06 11 01.3**	**-4.4**
OFUJ	**Ofunato**	**2.76**	**310**	P	**Pn**	**06 10 33.3**	**-3.0**
OFUJ				*e*S	**Sn**	**06 11 03.5**	**-4.9**
JFK	**Kawauchi**	**2.80**	**272**	P	**Pn**	**06 10 34.8**	**-2.2**
JFK				S	**Sn**	**06 11 05.3**	**-4.2**
JMK	**Ichinoseki**	**2.97**	**304**	P	**Pn**	**06 10 36.7**	**-2.6**
JMK				*e*S	**Sn**	**06 11 09.1**	**-4.6**
JFT	**Otama**	**3.23**	**274**	P	**Pn**	**06 10 41.6**	**-1.3**
JFT				S	**Sn**	**06 11 16.8**	**-3.3**
JOM	**Ohasama**	**3.23**	**312**	P	**Pn**	**06 10 40.3**	**-2.6**
JOM				S	**Sn**	**06 11 15.9**	**-4.2**
JYK	**Kaneyama**	**3.55**	**298**	P	**Pn**	**06 10 45.3**	**-1.9**
JANG	**Nango**	**3.77**	**324**	P	**Pn**	**06 10 46.9**	**-3.3**
BSO1	**Boso 1**	**3.85**	**227**	P	**Pn**	**06 10 48.1**	**-2.8**
JRY	**Ryogami san**	**4.60**	**255**	P	**Pn**	**06 10 59.5**	**-2.3**
JRY				S	**Sn**	**06 11 49.3**	**-4.7**
JOD2	**Odawara 2**	**4.76**	**246**	P	**Pn**	**06 11 02.7**	**-1.2**
JOD2				S	**Sn**	**06 11 53.3**	**-4.5**
ERM	**Erimo**	**4.76**	**349**	*e*Pn	**Pn**	**06 11 00.1**	**-3.8**
ERM				*e*Sn	**Sn**	**06 11 54.7**	**-3.1**
ERM	**Erimo**	**4.76**	**349**	*ce*P	**Pn**	**06 11 00.3**	**-3.6**
ERM				pmax	pmax		
	comp=Z,73nm,0.5s						
JOT	**Ohata**	**4.79**	**328**	P	**Pn**	**06 11 02.0**	**-2.3**
JOT				S	**Sn**	**06 11 51.4**	**-7.2**
MJAR	**Matsushiro Arr**	**5.01**	**263**	Pn	**Pn**	**06 11 06.0**	**-1.3**
	comp=Z,4.2nm,0.3s,baz=16,slow=5.1,SNR=72						
MJAR				Sn	**Sn**	**06 12 02.5**	**-1.6**
	comp=Z,2.8nm,0.3s,baz=94,slow=27,SNR=7.1						
MJAR				LR	LR	06 13 07.5	
	comp=Z,85nm,20.6s,baz=80,slow=39						
MAJO	**Matsushiro**	**5.01**	**263**	*e*Pn	**Pn**	**06 11 07.0**	**-0.5**
MAJO				*e*Sn	**Sn**	**06 12 03.7**	**-0.4**
MAJO	**Matsushiro**	**5.01**	**263**	*d i*P	**Pn**	**06 11 06.7**	**-0.7**
MAT	**Matsushiro**	**5.01**	**263**	P	**Pn**	**06 11 07.0**	**-0.4**
MAT				S	**Sn**	**06 12 02.6**	**-1.5**
MJB9	**Matsu-Tunnel**	**5.02**	**263**	*e*Pn	**Pn**	**06 11 07.0**	**-0.5**
MJB9				*e*Sn	**Sn**	**06 12 03.6**	**-0.6**
JKB	**Kayabe**	**5.23**	**331**	P	**Pn**	**06 11 07.9**	**-2.3**
JCH	**Churui**	**5.33**	**352**	P	**Pn**	**06 11 07.7**	**-3.9**
JCH				*e*S	**Sn**	**06 12 04.5**	**-7.2**
JHJ2	**Mitsune**	**5.64**	**223**	*e*Pn	**Pn**	**06 11 13.6**	**-2.4**
JHJ2				*e*Sn	**Sn**	**06 12 13.9**	**-5.6**
JHJ2	**Mitsune**	**5.64**	**223**	P	**Pn**	**06 11 12.5**	**-3.5**
JHJ	**Hachijo jima 2**	**5.65**	**223**	Pn	**Pn**	**06 11 12.6**	**-3.5**
	comp=Z,23nm,0.3s,baz=341,slow=20,SNR=53						
JHJ				Sn	**Sn**	**06 12 11.8**	**-8.0**
	comp=Z,63nm,0.3s,baz=66,slow=21,SNR=8.6						
JHJ				LR	LR	06 14 06.4	
	comp=Z,45nm,19.8s,baz=169,slow=46						
JOSM	**Okushiri--Mats**	**6.06**	**323**	P	**Pn**	**06 11 19.6**	**-2.1**
INU	**Inuyama**	**6.27**	**254**	*e*Pn	**Pn**	**06 11 24.6**	**0.0**
YUK	**Yuzh-Kuril'sk**	**6.78**	**9**	*d i*P	Pn	06 11 25.6	-6.0
YUK				*e*S	Sn	06 12 37.6	-10
YUK				pmax	pmax		
	comp=N,95nm,0.4s						
YUK				pmax	pmax		
	comp=Z,248nm,0.6s						
YUK				pmax	pmax		
	comp=E,79nm,0.4s						
SHO	**Shikotan**	**6.78**	**15**	*d i*P	Pn	06 11 26.7	-4.9
SHO				*e*S	Sn	06 12 37.2	-10
SHO				pmax	pmax		
	comp=E,34nm,0.6s						
SHO				pmax	pmax		
	comp=Z,84nm,0.6s						
SHO				pmax	pmax		
	comp=N,22nm,0.5s						
SHO				smax	smax		
	comp=N,31nm,9.0s						
SHO				smax	smax		
	comp=Z,109nm,9.0s						
ASAJ	**Asahikawa**	**6.90**	**349**	Pn	**Pn**	**06 11 30.2**	**-3.1**
	comp=Z,12nm,0.3s,baz=195,slow=10.0,SNR=59						
ASAJ				Sn	**Sn**	**06 12 45.4**	**-5.1**
	comp=Z,1.8nm,0.3s,baz=150,slow=30,SNR=1.3						
ASAJ				LR	LR	06 14 34.6	
	comp=Z,97nm,20.8s,baz=170,slow=40						
KUR	**Kuril'sk**	**8.31**	**17**	*e*P	Pn	06 11 47.5	-5.0
KUR				pmax	pmax		
	comp=N,40nm,0.5s						
KUR				pmax	pmax		
	comp=E,26nm,0.5s						
KUR				pmax	pmax		
	comp=Z,66nm,0.5s						
TEY	**Ternei**	**9.67**	**325**	*e*P	**Pn**	**06 12 09.8**	**-1.3**
YSS	**Yuzh-Sakhalins**	**9.68**	**353**	*e*P	**Pn**	**06 12 11.5**	**+0.2**
YSS				pmax	pmax		
	comp=Z,20nm,0.6s						
YSS				MLR	MLR		
	comp=Z,200nm,15.0s						
CBIJ	**Chichi jima**	**10.38**	**191**	Pn	Pn	06 12 14.0	-7.1
CBIJ				Sn	Sn	06 14 01.4	-15
JCJ	**Chichijima**	**10.38**	**191**	Pn	Pn	06 12 14.0	-7.1
	baz=0.0,slow=20						
JCJ				Sn	Sn	06 14 01.4	-15
	comp=Z,2.7nm,0.3s,baz=228,slow=21,SNR=2.2						
USRK	**Ussuriysk Ar.**	**11.62**	**310**	Pn	**Pn**	**06 12 37.3**	**-0.7**
	baz=106,slow=15						
USRK				LR	LR	06 17 13.2	
	comp=Z,87nm,20.3s,baz=147,slow=38						
JNU	**Nakatsue**	**11.82**	**253**	Pn	**Pn**	**06 12 39.6**	**-1.1**
	comp=Z,0.1nm,0.3s,baz=48,slow=11,SNR=5.6						
JNU				LR	LR	06 17 55.7	
	comp=Z,40nm,18.4s,baz=121,slow=41						
JNU	**Nakatsue**	**11.82**	**253**	*e*Pn	**Pn**	**06 12 39.8**	**-1.0**
KSRS	**Korea Array**	**13.10**	**275**	Pn	**Pn**	**06 12 58.1**	**0.0**
	comp=Z,0.2nm,0.3s,baz=91,slow=12,SNR=5.9						
KSRS				LR	LR	06 17 37.8	
	comp=Z,68nm,18.5s,baz=70,slow=35						
KSAR	**Wonju Array Be**	**13.13**	**275**	Pn	**Pn**	**06 12 58.1**	**-0.5**
KSAR	**Wonju Array Be**	**13.13**	**275**	P	**Pn**	**06 12 58.1**	**-0.5**
INCN	**Inchon**	**14.12**	**276**	*e*Pn	**Pn**	**06 13 11.2**	**-0.9**
INCN	**Inchon**	**14.12**	**276**	*e*P	**Pn**	**06 13 11.2**	**-0.9**
KLR	**Kul'dur**	**15.00**	**326**	Pn	**Pn**	**06 13 24.8**	**+0.8**
	comp=Z,0.0nm,0.3s,baz=149,slow=10,SNR=7.0						
KLR				LR	LR	06 19 40.3	
	comp=Z,11nm,20.1s,baz=142,slow=39						
KLR	**Kul'dur**	**15.00**	**326**	⇓*e*P	**Pn**	**06 13 20.4**	**-3.5**
CN2	**Changchun**	**15.76**	**300**	*e*P	**Pn**	**06 13 34.5**	**+0.7**
PETK	**Petropavlovsk-**	**18.29**	**26**	P	**P**	**06 14 03.3**	**-2.0**
	baz=192,slow=13						
PETK				LR	LR	06 23 40.7	
	comp=Z,41nm,18.0s,baz=216,slow=45						
PET	**Petropavlovsk**	**18.57**	**28**	*e*P	**P**	**06 14 08.1**	**-0.3**
	comp=Z,133nm,2.0s						
PET	**Petropavlovsk**	**18.57**	**28**	*e*P	**P**	**06 14 08.1**	**-0.3**
PET				pmax	pmax		
	comp=Z,133nm,2.0s						
ZEA	**Zeya**	**20.23**	**330**	*e*P	**P**	**06 14 25.1**	**-1.4**
ZEA				pmax	pmax		
	comp=Z,20nm,0.8s						
NJ2	**Nanjing**	**21.62**	**263**	*e*P	**P**	**06 14 40.8**	**-0.8**
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
MA2	**Magadan**	**22.63**	**8**	LR	LR	06 24 59.2	
	comp=Z,34nm,19.2s,baz=191,slow=40						
GUMO	**Guam**	**23.66**	**179**	LR	LR	06 23 10.3	
	comp=Z,26nm,20.2s,baz=358,slow=34						
HHC	**Hu-ho-hao-te**	**25.63**	**288**	*e*P	**P**	**06 15 21.3**	**+0.4**
HHC				pP	pP	06 15 26.3	-4.6
HHC				S	**S**	**06 19 49.5**	**+2.6**
HHC				sS	sS	06 19 59.5	-3.9
HHC				SS	**SnSn**	**06 20 45.8**	**+3.4**
HHC				pmax	pmax		
	comp=Z,18nm,1.0s						
HHC				pmax	pmax		
	comp=Z,140nm,5.3s						
HHC				LR	LR		
	comp=Z,140nm,11.0s						
HHC				LR	LR		
	comp=Z,150nm,11.2s						
HHC				LR	LR		
	comp=Z,160nm,11.2s						
SEY	**Seymchan**	**26.09**	**8**	P	**P**	**06 15 24.6**	**0.0**
	comp=Z,1.4nm,0.3s,baz=187,slow=9.3,SNR=11						
SEY	**Seymchan**	**26.09**	**8**	⇓*e*P	**P**	**06 15 25.1**	**+0.4**
H11N2	**WAKE ISLAND Hy**	**26.33**	**126**	T	T	06 42 38.7	
	baz=317,slow=74,SNR=124						
H11N1	**WAKE ISLAND Hy**	**26.34**	**126**	T	T	06 42 41.8	
	baz=317,slow=74,SNR=64						
H11N3	**WAKE ISLAND Hy**	**26.34**	**126**	T	T	06 42 40.1	
	baz=317,slow=74,SNR=98						
YAK	**Yakutsk**	**26.35**	**344**	*e*P	**P**	**06 15 26.2**	**-0.8**
	comp=Z,28nm,0.6s						
YAK	**Yakutsk**	**26.35**	**344**	*e*P	**P**	**06 15 26.2**	**-0.8**
YAK				pmax	pmax		
	comp=Z,28nm,0.6s						
H11S1	**WAKE ISLAND Hy**	**27.10**	**128**	T	T	06 43 36.3	
	baz=319,slow=76,SNR=33						
H11S3	**WAKE ISLAND Hy**	**27.10**	**128**	T	T	06 43 38.5	
	baz=319,slow=76,SNR=24						
H11S2	**WAKE ISLAND Hy**	**27.11**	**128**	T	T	06 43 47.7	
	baz=319,slow=76,SNR=25						
BOD	**Bodaibo**	**28.58**	**326**	*e*P	**P**	**06 15 46.4**	**-0.7**
BOD				pmax	pmax		
	comp=Z,8.0nm,1.4s						
ULN	**Ulaanbaatar**	**29.16**	**303**	*e*P	**P**	**06 15 56.8**	**+4.2**
	comp=Z,9.9nm,1.5s						
ULN	**Ulaanbaatar**	**29.16**	**303**	⇓*e*P	**P**	**06 15 53.0**	**+0.4**
ULN				pmax	pmax		
	comp=Z,4.0nm,1.2s						
SONA1	**Songino Array**	**29.59**	**303**	*e*P	**P**	**06 15 55.6**	**-0.8**
SONM	**Songino Array**	**29.60**	**303**	P	**P**	**06 15 57.9**	**+1.5**
	comp=Z,0.8nm,0.7s,baz=104,slow=9.2,SNR=4.6						
SONM				LR	LR	06 27 51.1	
	comp=Z,41nm,18.8s,baz=29,slow=36						
TLY	**Talaya**	**31.94**	**310**	*e*P	P	06 16 22.6	+5.7
TLY				pmax	pmax		
	comp=Z,3.0nm,1.4s						
TLY				MLR	MLR		
	comp=Z,143nm,18.0s						
ZAK	**Zakamensk**	**31.96**	**307**	*e*P	**P**	**06 16 18.3**	**+1.1**
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
LZH	**Lanzhou**	**32.35**	**280**	*e*P	**P**	**06 16 19.3**	**-1.6**
LZH				pP	pP	06 16 25.5	-5.5
LZH				sP	sP	06 16 29.0	-6.2
LZH				*e*PP	**PnPn**	**06 17 29.3**	**+1.3**
LZH				pmax	pmax		
	comp=Z,25nm,1.1s						
LZH				pmax	pmax		
	comp=Z,160nm,4.9s						
LZH				LR	LR		
	comp=Z,250nm,12.9s						
LZH				LR	LR		
	comp=Z,360nm,12.2s						
LZH				LR	LR		
	comp=Z,380nm,14.6s						
GYA	**Guiyang**	**33.62**	**262**	*e*P	**P**	**06 16 32.0**	**+0.1**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
CD2	**Chengdu**	**34.05**	**271**	*e*P	**P**	**06 16 34.8**	**-0.7**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.2s						
GTA	**Gaotai**	**34.74**	**287**	*e*P	**P**	**06 16 45.3**	**+3.7**
GTA				pP	pP	06 16 50.0	-1.7
GTA				sP	sP	06 16 52.5	-3.4
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
TIXI	**Tiksi**	**35.30**	**352**	⇑*e*P	**P**	**06 16 47.8**	**+2.0**
TIXI				pmax	pmax		
	comp=Z,6.0nm,0.8s						
KMI	**Kunming**	**37.36**	**263**	P	**P**	**06 17 03.8**	**-0.4**
KMI				pmax	pmax		
	comp=Z,15nm,0.5s						
WMQ	**Urumqi**	**42.82**	**297**	P	**P**	**06 17 51.3**	**+2.2**
WMQ				LR	LR		
	comp=Z,350nm,25.9s						
WMQ				LR	LR		
	comp=Z,280nm,38.7s						
WMQ				LR	LR		
	comp=Z,71nm,22.1s						
ZALV	**Zalesovo Beam**	**43.47**	**312**	P	**P**	**06 17 55.4**	**+1.3**
	comp=Z,0.9nm,0.3s,baz=90,slow=7.1,SNR=1.7						
ZALV				LR	LR	06 38 12.5	
	comp=Z,32nm,18.1s,baz=81,slow=39						
CMAR	**Chiang Mai Arr**	**43.88**	**257**	P	**P**	**06 17 57.7**	**-0.1**
	comp=Z,0.9nm,0.3s,baz=56,slow=6.7,SNR=5.4						
MK01	**Makanchi Array**	**45.96**	**302**	*e*P	**P**	**06 18 14.5**	**+0.4**
MK31	**Makanchi Array**	**45.96**	**302**	*e*P	**P**	**06 18 14.7**	**+0.5**
MK31				*e*pwP	**pP**	**06 18 23.6**	**-1.0**
MK31	**Makanchi Array**	**45.96**	**302**	*e*P	**P**	**06 18 14.7**	**+0.5**
MKAR	**Makanchi Array**	**45.96**	**302**	P	**P**	**06 18 14.8**	**+0.6**
	comp=Z,1.1nm,0.8s,baz=85,slow=8.2,SNR=9.6						
MKAR				PcP	**PcP**	**06 19 50.2**	**-0.4**
	comp=Z,0.6nm,0.9s,baz=94,slow=4.3,SNR=1.7						
MKAR	**Makanchi Array**	**45.96**	**302**	*e*P	**P**	**06 18 14.7**	**+0.6**
MKAR				*e*pwP	**pP**	**06 18 23.9**	**-0.7**
MKAR				PcP	**PcP**	**06 19 50.1**	**-0.4**
MAKZ	**Makanchi**	**46.17**	**302**	*e*P	**P**	**06 18 16.8**	**+1.0**
MAKZ				*e*pwP	**pP**	**06 18 25.4**	**-0.7**
MAKZ	**Makanchi**	**46.17**	**302**	*e*P	**P**	**06 18 16.8**	**+1.0**
MDM	**Murphy Dome**	**47.39**	**32**	*e*P	**P**	**06 18 25.8**	**+0.8**
	comp=Z,9.3nm,1.0s						
MDM				*e*pwP	**pP**	**06 18 35.7**	**+0.2**
KURK	**Kurchatov**	**47.61**	**308**	*e*P	**P**	**06 18 26.9**	**-0.1**
KURK				*e*pwP	**pP**	**06 18 36.4**	**-0.9**
KURK	**Kurchatov**	**47.61**	**308**	⇑*e*P	**P**	**06 18 26.8**	**-0.1**
KURK				pmax	pmax		
	comp=Z,3.0nm,0.6s						
KURBB	**Kurchatov Arra**	**47.68**	**308**	P	**P**	**06 18 27.5**	**0.0**
	comp=Z,2.7nm,0.5s,baz=81,slow=7.8,SNR=22						
IL1	**Eielson Array**	**47.96**	**33**	*e*P	**P**	**06 18 29.0**	**-0.4**
ILAR	**Eielson Array**	**47.96**	**33**	P	**P**	**06 18 28.9**	**-0.5**
	comp=Z,3.1nm,0.9s,baz=263,slow=5.9,SNR=27						
ILAR	**Eielson Array**	**47.96**	**33**	P	**P**	**06 18 29.0**	**-0.5**
ILB	**Eielson Array**	**47.96**	**33**	*e*P	**P**	**06 18 29.3**	**-0.1**
KLU	**Klutina**	**48.50**	**37**	*e*P	**P**	**06 18 34.2**	**+0.5**
	comp=Z,8.2nm,1.2s						
SCRK	**Sand Creek**	**49.24**	**34**	*e*P	**P**	**06 18 40.5**	**+1.0**
	comp=Z,3.9nm,1.0s						
BVAR	**Borovoye Array**	**52.12**	**313**	P	**P**	**06 19 02.1**	**+0.9**
	comp=Z,1.2nm,0.8s,baz=73,slow=9.8,SNR=5.5						
BVAR				PcP	**PcP**	**06 20 13.3**	**+0.6**
	comp=Z,0.6nm,0.5s,baz=90,slow=2.9,SNR=1.9						
BVAR				LR	LR	06 41 22.1	
	comp=Z,43nm,21.8s,baz=48,slow=36						
BRVK	**Borovoye**	**52.17**	**313**	*e*P	**P**	**06 19 01.6**	**+0.1**
	comp=Z,2.9nm,0.8s						
BRVK	**Borovoye**	**52.17**	**313**	⇓*e*P	**P**	**06 19 02.2**	**+0.7**
BRVK				pmax	pmax		
	comp=Z,3.0nm,1.3s						
AAK	**Ala-Archa**	**52.42**	**299**	LR	LR	06 42 23.4	
	comp=Z,27nm,20.9s,baz=91,slow=37						
AAK	**Ala-Archa**	**52.42**	**299**	⇑*e*P	**P**	**06 19 04.1**	**+0.3**
AAK				pmax	pmax		
	comp=Z,3.0nm,1.1s						
PSI	**Prapat**	**54.01**	**242**	P	**P**	**06 19 15.9**	**+0.2**
	comp=Z,3.5nm,0.7s,baz=180,slow=3.6,SNR=3.5						
KK31	**Karatay Array**	**55.02**	**301**	*e*P	**P**	**06 19 23.1**	**+0.5**
KK31	**Karatay Array**	**55.02**	**301**	*e*P	**P**	**06 19 23.1**	**+0.5**
KKAR	**Karatay Array**	**55.02**	**301**	*e*P	**P**	**06 19 23.1**	**+0.5**
KKAR	**Karatay Array**	**55.02**	**301**	*e*P	**P**	**06 19 23.1**	**+0.5**
ARU	**Arti**	**57.70**	**319**	LR	LR	06 46 45.1	
	comp=Z,65nm,19.4s,baz=28,slow=38						
ARU	**Arti**	**57.70**	**319**	*e*P	**P**	**06 19 42.6**	**+1.2**
	comp=Z,6.5nm,1.0s						
ARU	**Arti**	**57.70**	**319**	*c i*P	**P**	**06 19 42.6**	**+1.2**
ARU						06 20 34.6	
ARU						06 21 46.1	
ARU				S	**S**	**06 27 42.1**	**+4.7**
ARU				SS	**SS**	**06 31 31.4**	**+4.0**
ARU				pmax	pmax		
	comp=Z,9.0nm,1.2s						
WRAB	**Tennant Creek**	**57.75**	**191**	*e*P	**P**	**06 19 40.3**	**-1.9**
	comp=Z,11nm,0.9s						
WRAB	**Tennant Creek**	**57.75**	**191**	⇓*i*P	**P**	**06 19 40.2**	**-1.9**
WRAB				pmax	pmax		
	comp=Z,12nm,0.9s						
WB2	**Warramunga Arr**	**57.76**	**191**	*e*P	**P**	**06 19 41.0**	**-1.2**
	comp=Z,16nm,0.9s						
WRA	**Warramunga Arr**	**57.76**	**191**	P	**P**	**06 19 40.5**	**-1.7**
	comp=Z,8.9nm,0.8s,baz=12,slow=7.4,SNR=41						
WRA				PcP	**PcP**	**06 20 33.9**	**-0.8**
	comp=Z,0.5nm,0.6s,baz=2.5,slow=4.2,SNR=2.8						
ABKAR	**Akbulak array**	**59.55**	**311**	*e*P	**P**	**06 19 54.4**	**0.0**
AKTO	**Aktyubinsk**	**60.23**	**313**	P	**P**	**06 20 00.2**	**+1.2**
	comp=Z,1.0nm,0.5s,baz=79,slow=5.2,SNR=5.0						
AKTO				LR	LR	06 47 39.2	
	comp=Z,35nm,18.1s,baz=60,slow=38						
SPITS	**Spitsbergen Ar**	**60.67**	**349**	LR	LR	06 47 54.0	
	comp=Z,12nm,20.3s,baz=225,slow=38						
AS01	**Alice Springs**	**61.47**	**191**	*e*P	**P**	**06 20 06.4**	**-1.4**
AS31	**Alice Springs**	**61.48**	**191**	*e*P	**P**	**06 20 06.3**	**-1.4**
	comp=Z,1.4nm,0.7s						
ASAR	**Alice Springs**	**61.48**	**191**	P	**P**	**06 20 06.5**	**-1.3**
	comp=Z,4.0nm,0.8s,baz=16,slow=9.0,SNR=31						
YKA	**Yellowknife Ar**	**62.34**	**31**	P	**P**	**06 20 12.7**	**-0.4**
	comp=Z,0.6nm,0.7s,baz=293,slow=6.5,SNR=5.0						
DZM	**Mont Dzumac**	**62.64**	**157**	LR	LR	06 43 23.3	
	comp=Z,34nm,21.8s,baz=208,slow=32						
NLWA	**Neilton Lookou**	**64.74**	**49**	*e*P	**P**	**06 20 29.8**	**+0.5**
	comp=Z,8.3nm,1.0s						
GEYT	**Alibeck**	**65.75**	**300**	LR	LR	06 52 03.9	
	comp=Z,38nm,18.1s,baz=245,slow=38						
B08A	**Colville Reser**	**66.93**	**46**	*e*P	**P**	**06 20 43.8**	**+0.4**
	comp=Z,7.7nm,1.3s						
H04A	**Detroit Lake**	**67.09**	**51**	*e*P	**P**	**06 20 44.9**	**+0.4**
	comp=Z,6.6nm,1.0s						
PINE	**Pine Mountain**	**68.31**	**51**	*e*P	**P**	**06 20 52.7**	**+0.3**
	comp=Z,8.4nm,0.8s						
K05A	**Summer Lake**	**68.90**	**52**	*e*P	**P**	**06 20 56.9**	**+0.8**
	comp=Z,16nm,1.0s						
OBN	**Obninsk**	**69.25**	**324**	⇑*e*P	**P**	**06 21 00.0**	**+2.3**
OBN				*e*		06 21 22.8	
OBN				pmax	pmax		
	comp=Z,10.0nm,0.8s						
WALA	**Waterton Lakes**	**69.60**	**43**	*e*P	**P**	**06 21 00.3**	**+0.1**

	comp=Z,10nm,1.4s						
FINES	FINESS Array B	69.63	333	P	P	06 21 00.8	+0.8
	comp=Z,2.7nm,1.1s,baz=46,slow=6.0,SNR=3.6						
FINES				LR	LR	06 54 44.3	
	comp=Z,59nm,19.6s,baz=60,slow=39						
MOD	Modoc Plateau	69.71	52	eP	P	06 21 01.6	+0.6
	comp=Z,4.1nm,0.9s						
J08A	Circle Bar Ran	70.06	50	eP	P	06 21 03.9	+0.7
	comp=Z,9.1nm,1.2s						
ORV	Oroville	70.19	55	eP	P	06 21 03.8	-0.1
	comp=Z,8.7nm,1.5s						
ORV	Oroville	70.19	55	eP	P	06 21 03.8	-0.1
ORV				pmax	pmax		
	comp=Z,9.0nm,1.5s						
WVOR	Wild Horse Val	70.46	51	eP	P	06 21 06.0	+0.4
	comp=Z,4.2nm,1.1s						
WVOR	Wild Horse Val	70.46	51	eP	P	06 21 06.0	+0.4
WVOR				pmax	pmax		
	comp=Z,4.0nm,1.1s						
BEKR	Beckworth	70.76	54	eP	P	06 21 07.8	+0.3
	comp=Z,4.1nm,0.9s						
PAHR	Pah Rah Range	71.48	54	eP	P	06 21 11.9	0.0
	comp=Z,5.5nm,1.2s						
CMB	Columbia Colle	71.74	56	eP	P	06 21 12.8	-0.6
	comp=Z,8.7nm,1.5s						
CMB	Columbia Colle	71.74	56	eP	P	06 21 12.8	-0.6
CMB				pmax	pmax		
	comp=Z,9.0nm,1.5s						
YERR	Yerington	71.97	55	eP	P	06 21 15.7	+0.8
	comp=Z,6.4nm,1.1s						
LRM	Limekiln Ridge	72.25	46	eP	P	06 21 16.7	+0.1
HLID	Hailey	72.41	48	eP	P	06 21 17.3	-0.1
	comp=Z,5.0nm,1.6s						
DLMT	Dillon	72.43	46	eP	P	06 21 18.0	+0.5
	comp=Z,6.5nm,1.1s						
BMN	Battle Mountai	72.46	52	eP	P	06 21 18.8	+1.0
	comp=Z,3.0nm,0.8s						
KIV	Kislovodsk	72.48	312	⇑eP	P	06 21 18.4	+0.7
KIV				e		06 21 35.8	
KIV				e		06 23 59.1	
KIV				pmax	pmax		
	comp=Z,11nm,1.0s						
KBZ	Khabaz	72.49	312	P	P	06 21 16.8	-0.8
	comp=Z,0.8nm,0.6s,baz=212,slow=6.2,SNR=3.6						
KBZ				LR	LR	06 55 10.8	
	comp=Z,23nm,19.3s,baz=48,slow=38						
KVN	Kaiserville	72.67	54	eP	P	06 21 19.9	+0.8
	comp=Z,6.0nm,1.1s						
KVN	Kaiserville	72.67	54	eP	P	06 21 19.9	+0.8
KVN				pmax	pmax		
	comp=Z,6.0nm,1.1s						
BOZ	Bozeman (W)	72.85	45	eP	P	06 21 20.0	+0.1
	comp=Z,5.2nm,1.2s						
BOZ	Bozeman (W)	72.85	45	eP	P	06 21 20.0	+0.1
BOZ				pmax	pmax		
	comp=Z,5.0nm,1.2s						
NEY	Neytrino	72.87	312	⇓eP	P	06 21 20.8	+0.7
NEY				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NV01	Mina Array Sit	72.89	55	eP	P	06 21 20.8	+0.4
NVAR	Mina Array Bea	72.89	55	P	P	06 21 21.1	+0.6
	comp=Z,3.1nm,0.7s,baz=288,slow=5.8,SNR=31						
GNI	Garni	73.41	308	LR	LR	06 56 40.9	
	comp=Z,25nm,18.2s,baz=178,slow=38						
GNI	Garni	73.41	308	⇑eP	P	06 21 25.5	+2.1
GNI				pmax	pmax		
	comp=Z,13nm,0.6s						
H17A	Grant Village	74.16	46	eP	P	06 21 29.3	+1.4
	comp=Z,6.9nm,1.0s						
IMW	Indian Meadow	74.25	47	eP	P	06 21 29.5	+1.1
	comp=Z,3.0nm,0.8s						
FXWY	Fox Creek	74.36	47	eP	P	06 21 30.1	+1.1
	comp=Z,12nm,1.8s						
MOOW	Moose Ponds	74.45	47	eP	P	06 21 29.9	+0.3
MOOW				ePcP	pP	06 21 40.9	+0.5
TPAW	Teton Pass	74.49	47	eP	P	06 21 29.9	+0.1
	comp=Z,7.7nm,1.4s						
R11A	Troy Canyon, C	74.69	53	eP	P	06 21 30.7	-0.2
	comp=Z,3.2nm,1.0s						
HFS	Hagfors	74.76	337	P	P	06 21 30.3	-0.4
	comp=Z,4.0nm,1.1s,baz=47,slow=6.3,SNR=3.3						
HFS				LR	LR	07 00 03.8	
	comp=Z,32nm,18.1s,baz=360,slow=40						
NB2	NORSAR Subarra	74.80	338	P	P	06 21 30.8	-0.1
	comp=Z,2.2nm,0.7s,baz=38,slow=6.2						
NOA	NORSAR Array B	74.80	338	P	P	06 21 31.0	0.0
	comp=Z,2.7nm,1.0s,baz=38,slow=5.7,SNR=3.8						
NOA				LR	LR	06 57 56.6	
	comp=Z,37nm,21.9s,baz=35,slow=38						
NOA	NORSAR Array B	74.80	338	P	P	06 21 31.0	0.0
TPNV	Topopah Spring	75.07	55	eP	P	06 21 33.4	+0.3
	comp=Z,5.8nm,1.0s						
TPNV	Topopah Spring	75.07	55	eP	P	06 21 33.4	+0.3
TPNV				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HWUT	Hardware Ranch	75.26	49	eP	P	06 21 34.9	+0.7
	comp=Z,5.2nm,1.3s						
DUG	Dugway, Tooele	75.34	51	eP	P	06 21 35.4	+0.7
	comp=Z,2.8nm,0.8s						
DUG	Dugway, Tooele	75.34	51	P	P	06 21 35.3	+0.7
DUG				pmax	pmax		
	comp=Z,3.0nm,0.9s						
AKASG	Malin Array Be	75.48	324	P	P	06 21 34.4	-0.6
	comp=Z,0.9nm,0.5s,baz=43,slow=5.5,SNR=5.1						
KIEV	Kiev	75.50	324	eP	P	06 21 35.7	+0.6
KIEV				pmax	pmax		
	comp=Z,7.0nm,1.4s						
PSUT	Pine Spring	75.68	52	eP	P	06 21 37.3	+0.6
	comp=Z,3.4nm,1.0s						
PDAR	Pinedale Array	75.74	47	P	P	06 21 36.6	-0.3
	comp=Z,0.7nm,0.8s,baz=236,slow=1.6,SNR=7.6						
PDAR	Pinedale Array	75.74	47	eP	P	06 21 36.3	-0.7
SHPR	Sheep Range	76.04	55	eP	P	06 21 39.3	+0.6
	comp=Z,2.6nm,1.0s						
CCUT	Cedar City	76.58	53	eP	P	06 21 42.5	+0.7
	comp=Z,3.3nm,0.9s						
MSU	Marysvale	76.75	52	eP	P	06 21 43.7	+1.0
MSU	Marysvale	76.75	52	eP	P	06 21 43.7	+1.0
LCMT	Little Creek M	76.97	53	eP	P	06 21 44.7	+0.8
	comp=Z,3.9nm,1.0s						
P17A	Butcher Ranch,	77.05	50	eP	P	06 21 44.6	+0.3
	comp=Z,8.2nm,1.2s						
Q16A	Castle Valley	77.12	51	eP	P	06 21 45.5	+0.6
	comp=Z,5.2nm,1.1s						
KNB	Kanab	77.24	53	eP	P	06 21 46.2	+0.7
	comp=Z,10nm,1.4s						
KNB	Kanab	77.24	53	eP	P	06 21 46.2	+0.7
KNB				pmax	pmax		
	comp=Z,11nm,1.4s						
SRU	San Rafael Swe	77.40	50	eP	P	06 21 46.6	+0.2
	comp=Z,4.3nm,0.8s						
SRU	San Rafael Swe	77.40	50	eP	P	06 21 46.6	+0.2
SRU				pmax	pmax		
	comp=Z,4.0nm,0.8s						
SORM	Soroca	77.64	322	⇑iP	P	06 21 47.0	-0.2
SORM	Soroca	77.64	322	⇑P	P	06 21 47.0	-0.2
PV22	Blue Mesa, Par	78.82	50	eP	P	06 21 54.5	+0.2
	comp=Z,12nm,1.6s						
PV20	West Nyswonger	78.84	50	eP	P	06 21 55.1	+0.7
	comp=Z,27nm,1.6s						
PV19	Morning Glory	78.85	50	eP	P	06 21 54.9	+0.4
	comp=Z,5.5nm,0.7s						
PV17	East Wray Mesa	78.88	50	eP	P	06 21 54.6	0.0
	comp=Z,7.5nm,0.8s						
PV16	Nyswonger Mesa	78.89	50	eP	P	06 21 55.5	+0.9
	comp=Z,14nm,1.6s						
PV11	David Mesa, Pa	78.92	50	eP	P	06 21 55.4	+0.6
	comp=Z,25nm,1.6s						
PV18	Skein Mesa, Pa	78.93	50	eP	P	06 21 55.3	+0.4
	comp=Z,7.4nm,1.1s						
PV03	Paradox Valley	78.96	50	eP	P	06 21 55.4	+0.3
PV13	Radium Mtn., P	79.04	50	eP	P	06 21 55.9	+0.4
	comp=Z,7.6nm,1.0s						
PV02	Paradox Valley	79.06	50	eP	P	06 21 56.3	+0.7
	comp=Z,6.8nm,1.2s						
WUAZ	Wupatki	79.08	54	eP	P	06 21 56.4	+0.7
	comp=Z,3.6nm,0.8s						
BUR08	Bucovina Ar. S	79.50	323	eP	P	06 21 58.1	+0.4
BUR04	Bucovina Ar. S	79.52	323	eP	P	06 21 58.3	+0.5
BURAR	Bucovina Array	79.52	323	⇑iP	P	06 21 59.4	+1.6
BURAR	Bucovina Array	79.52	323	⇑P	P	06 21 59.4	+1.6
BIZ	Bicaz	79.56	322	⇑iP	P	06 22 00.9	+3.0
TESR	Tescani	79.59	322	⇑iP	P	06 21 58.2	+0.1
MVCO	Mesa Verde	79.84	51	eP	P	06 22 00.2	+0.4
	comp=Z,4.4nm,1.1s						
VRI	Vrincioaia	80.01	321	⇓iP	P	06 22 05.6	+5.3
VRI	Vrincioaia	80.01	321	⇓P	P	06 22 05.6	+5.3
TLB	Topalu	80.22	319	⇓iP	P	06 22 04.1	+2.6
TLB	Topalu	80.22	319	⇓P	P	06 22 04.1	+2.6
DOPR	Dopca	80.60	322	⇑iP	P	06 22 05.7	+2.2
MLR	Muntele Rosu	80.66	321	LR	LR	07 00 42.8	
	comp=Z,58nm,19.4s,baz=9.5,slow=38						
MLR	Muntele Rosu	80.66	321	⇓iP	P	06 22 06.6	+2.6
MLR	Muntele Rosu	80.66	321	⇓P	P	06 22 06.6	+2.6
BR231	Keskin MP Arra	80.83	314	eP	P	06 22 08.5	+3.5
VYHS	Vyhne	81.79	327	eP	P	06 22 12.5	+2.7
VYHS	Vyhne	81.79	327	eP	P	06 22 12.5	+2.7
CLL	Collm	81.98	332	eP	P	06 22 11.0	+0.3
	comp=Z,5.0nm,1.2s						
CLL				i		06 22 20.3	
	comp=Z,6.0nm,1.0s						
CLL	Collm	81.98	332	eP	P	06 22 11.0	+0.3
CLL				pmax	pmax		
	comp=Z,5.0nm,1.2s						
ECSD	EROS Data Cent	82.18	40	eP	P	06 22 10.7	-1.2
	comp=Z,2.9nm,1.0s						
ANMO	Albuquerque	82.56	52	P	P	06 22 14.5	+0.2
	comp=Z,0.5nm,0.4s,baz=327,slow=9.4,SNR=2.8						
ANMO	Albuquerque	82.56	52	eP	P	06 22 14.7	+0.4
	comp=Z,1.9nm,1.1s						
ANMO	Albuquerque	82.56	52	⇑eP	P	06 22 14.8	+0.5
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.2s						
PPT	Papeete	82.67	118	LR	LR	06 58 23.1	
	comp=Z,41nm,18.2s,baz=145,slow=35						
KHC	Kasperske Hory	83.50	330	eP	P	06 22 29.0	+10
KHC				ex	x	06 22 58.2	
KHC	Kasperske Hory	83.50	330	eP	P	06 22 18.6	-0.1
	comp=Z,1.0nm,0.9s						
KHC	Kasperske Hory	83.50	330	eP	P	06 22 18.6	-0.1
KHC				pmax	pmax		
	comp=Z,1.0nm,0.9s						
GERES	GERESS Array B	83.67	330	P	P	06 22 19.1	-0.6
	comp=Z,0.3nm,0.6s,baz=33,slow=10,SNR=4.3						
GERES				LR	LR	07 01 58.5	
	comp=Z,34nm,21.5s,baz=60,slow=37						
MMAI	Mount Meron Ar	83.70	307	P	P	06 22 20.6	+0.5
	comp=Z,0.5nm,0.3s,baz=58,slow=9.0,SNR=2.8						
MMAI				LR	LR	07 01 52.3	
	comp=Z,21nm,20.4s,baz=145,slow=37						
BFO	Black Forest	86.17	332	i P	P	06 22 33.7	+1.6
FUORN	Ofenpass-Fuorn	86.84	330	eP	P	06 22 36.8	+1.0
	comp=Z,6.3nm,1.1s						
TXAR	Lajitas Array	88.03	54	P	P	06 22 41.3	-0.4
	comp=Z,0.5nm,0.7s,baz=304,slow=3.3,SNR=10						
HHAR	Hobbs	88.98	43	eP	P	06 22 43.9	-2.0
	comp=Z,10nm,1.2s						
KEST	Kesra	96.18	325	LR	LR	07 09 58.1	
	comp=Z,99nm,18.3s,baz=254,slow=38						
QSPA	South Pole Qui	127.08	180	PKP	PKPdf	06 28 52.3	-1.8
	comp=Z,0.7nm,0.6s,baz=308,slow=3.0,SNR=3.2						
SNAA	Sanae	141.72	196	PKhKP	PKPpre	06 29 14.0	
	comp=Z,1.1nm,0.8s,baz=170,slow=4.0,SNR=7.0						
LPAZ	La Paz	144.46	63	PKP	PKPab	06 29 27.3	+0.6
	comp=Z,0.4nm,0.4s,baz=270,slow=3.0,SNR=4.0						

NDI ***29*** *06:29:19.6±3.5, 22°.99N×93°.76E, h14^{km}±37^{km}, ML3.4*
IDC ***29*** *06:29:19.9±2.0, 22°.70N×94°.01E, h98^{km}±21^{km}, mb3.6/12, mb1 3.7/14, mb1mx3.3/71, mbtmp3.9/14, Error ellipse: s-maj=28.8km s-min=13.3km az=38.0*
ISC 29 06:29:20.3±0.7, **22°.88N**±0°.07×**93°.84E**±0°.06, **h100^{km}, n36, σ2^{s}52**/58, **mb3.8**/12, **Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IMP	Imphal	1.95	3	eP	Pn	06 29 52.2	-0.1
IMP				eS	Sn	06 30 16.9	+0.2
IMP				IAML		06 30 18.6	
	comp=E,158nm,0.5s						
IMP				IAML		06 30 19.1	
	comp=N,482nm,0.3s						
BRDH	Bariadhala	2.04	265	P	Pn	06 29 54.9	+1.6
	comp=N,31nm,0.3s,baz=90,slow=20,SNR=4.8						
BRDH				S	Sn	06 30 22.2	+3.6
	comp=N,78nm,0.3s,baz=68,slow=22,SNR=12						
BELO	BELONIA	2.24	280	eS	Sn	06 30 20.9	-2.3
KOHI	KOHIMA	2.84	5	eP	Pn	06 30 03.8	-0.2
KOHI				eS	Sn	06 30 36.0	-1.7
KOHI				IAML		06 30 44.5	
	comp=N,159nm,0.3s						
KOHI				IAML		06 30 44.5	
	comp=E,202nm,0.4s						
SHL	Shillong	3.22	327	eP	Pn	06 30 08.9	-0.2
SHL				eS	Sn	06 30 43.6	-3.2
SHL				IAML		06 30 45.0	
	comp=E,213nm,0.1s						
SHL				IAML		06 30 46.6	
	comp=N,167nm,0.2s						
MOKO	MOKOCHONG	3.48	10	eP	Pn	06 30 16.0	+3.4
MOKO				eS	Sn	06 30 54.1	+1.0
MOKO				IAML		06 31 01.9	
	comp=E,141nm,0.3s						
GUWA	GUWAHATI	3.84	330	eP	Pn	06 30 15.8	-1.5
GUWA				eS	Sn	06 30 56.5	-4.9
GUWA				IAML		06 31 00.2	
	comp=N,80nm,0.1s						
GUWA				IAML		06 31 02.2	
	comp=E,63nm,0.1s						
TEZP	TEZPUR	3.84	346	eP	Pn	06 30 15.5	-1.8
TEZP				eS	Sn	06 30 57.4	-4.1
TEZP				IAML		06 31 00.4	
	comp=N,284nm,0.1s						
TEZP				IAML		06 31 01.4	
	comp=E,233nm,0.1s						
TURI	Tura	4.16	310	eP	Pn	06 30 22.2	+0.5
TURI				eS	Sn	06 31 07.5	-1.8
TURI				IAML		06 31 09.2	
	comp=N,402nm,0.2s						
TURI				IAML		06 31 09.4	
	comp=E,522nm,0.1s						
GTK	Tadong	6.49	314	eS	Sn	06 32 02.4	-3.6
GTK				IAML		06 32 06.9	
	comp=N,38nm,0.2s						
GTK				IAML		06 32 10.7	
	comp=E,50nm,0.1s						
CMAR	Chiang Mai Arr	6.49	132	P	Pn	06 30 48.5	-4.8
	comp=E,1.3nm,0.3s,baz=312,slow=13,SNR=6.7						
ODAN	Odare	7.07	305	ePn	Pn	06 31 01.0	-0.4
ODAN				eSn	Sn	06 32 18.4	-2.0
	comp=E,102nm,0.3s						
TAPN	Taplejung	7.12	310	ePn	Pn	06 31 02.7	+0.6
TAPN				eSn	Sn	06 32 20.7	-0.9
	comp=E,54nm,0.3s						
RAMN	Ramite	7.72	303	ePn	Pn	06 31 10.6	+0.4
RAMN				eSn	Sn	06 32 33.5	-2.7
	comp=E,34nm,0.3s						
JIRN	Jiri	8.40	306	ePn	Pn	06 31 19.9	+0.3
JIRN				eSn	Sn	06 32 50.8	-2.2
GUN	Gumba	8.77	306	ePn	Pn	06 31 25.1	+0.5
GUN				eSn	Sn	06 32 59.5	-2.4
PKIN	Phulchoki	8.96	303	ePn	Pn	06 31 27.4	+0.3
PKIN				eSn	Sn	06 33 02.7	-3.7
	comp=E,63nm,0.4s						
KKN	Kakani	9.16	304	ePn	Pn	06 31 30.3	+0.6
KKN				eSn	Sn	06 33 07.8	-3.3
DMN	Daman	9.20	303	ePn	Pn	06 31 29.9	-0.5
DMN				eSn	Sn	06 33 07.6	-4.7
GKN	Gorkha	9.76	303	ePn	Pn	06 31 37.7	-0.1
GKN				eSn	Sn	06 33 21.7	-3.9
KOLN	Koldanda	10.46	300	ePn	Pn	06 31 46.2	-1.3
KOLN				eSn	Sn	06 33 36.9	-6.0
	comp=E,31nm,0.3s						
DANN	Dangsing	10.60	303	ePn	Pn	06 31 48.8	-0.6
DANN				eSn	Sn	06 33 41.7	-4.7
PYUN	Piuthan	11.09	300	ePn	Pn	06 31 54.8	-1.2
PYUN				eSn	Sn	06 33 52.3	-5.9
	comp=E,18nm,0.4s						
MKAR	Makanchi Array	25.62	341	P	P	06 34 42.6	+2.3
	comp=E,1.7nm,0.6s,baz=148,slow=11,SNR=20						
MKAR				pP	pP	06 35 05.0	+2.5
	comp=E,0.5nm,0.5s,baz=157,slow=8.9,SNR=2.5						
KURBB	Kurchatov Arra	30.16	340	P	P	06 35 22.2	+1.5
	comp=E,0.4nm,0.5s,baz=154,slow=8.3,SNR=4.3						
YAK	Yakutsk	46.10	23	P	P	06 37 35.4	+1.4
	comp=E,6.9nm,0.5s,baz=229,slow=23,SNR=4.3						
AKASG	Malin Array Be	56.65	317	P	P	06 38 53.7	+0.7
	comp=E,0.9nm,0.5s,baz=85,slow=6.2,SNR=4.6						
WRA	Warramunga Arr	58.08	134	P	P	06 39 01.4	-2.0
	comp=E,0.7nm,0.9s,baz=321,slow=7.5,SNR=5.0						
FINES	FINESS Array B	59.56	329	P	P	06 39 14.6	+1.5
	comp=E,1.1nm,0.6s,baz=104,slow=6.5,SNR=6.3						
ASAR	Alice Springs	60.47	137	P	P	06 39 18.9	-1.0
	comp=E,0.4nm,0.7s,baz=323,slow=6.8,SNR=4.6						
ARCES	ARCESS Array B	61.21	338	P	P	06 39 25.8	+1.6
	comp=E,1.7nm,0.8s,baz=96,slow=7.5,SNR=2.9						
HFS	Hagfors	65.57	327	P	P	06 39 54.2	+1.2
	comp=E,0.9nm,0.4s,baz=97,slow=6.0,SNR=13						
HFS				pP	pP	06 40 18.5	+0.4
	comp=E,0.7nm,0.6s,baz=91,slow=6.2,SNR=1.3						
NOA	NORSAR Array B	66.72	328	P	P	06 40 01.0	+0.6
	comp=E,0.2nm,0.4s,baz=92,slow=5.5,SNR=2.3						
GERES	GERESS Array B	66.76	315	P	P	06 40 03.4	+2.3
	comp=E,0.7nm,0.5s,baz=73,slow=6.1,SNR=7.7						
EKA	Eskdalemuir Ar	75.34	324	P	P	06 40 53.3	+0.7
	comp=E,1.3nm,1.0s,baz=63,slow=4.9,SNR=3.7						
TXAR	Lajitas Array	125.42	19	PKP	PKPdf	06 48 10.6	+0.3
	comp=E,0.1nm,0.5s,baz=2.8,slow=3.7,SNR=2.8						

IDC 29 06:34:34.3±2.4, **54°.21N**×**85°.93E, h0^{km}, mb1 2.8**/2, **mb1mx2.7**/73, **mbtmp2.8**/2, **ML2.7**/2, **Error ellipse: s-maj=18.3km s-min=11.4km az=51.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	0.70	249	i		06 39 07.7	
	baz=69,slow=327,SNR=2.6						
ZALV	Zalesovo Beam	0.70	249	Pg	Pg	06 34 46.6	-1.1
	0.6nm,0.3s,baz=62,slow=17,SNR=9.6						
ZALV				Lg	Lg	06 34 58.0	
	2.7nm,0.3s,baz=66,slow=31,SNR=9.0						
KURBB	Kurchatov Arra	5.78	235	Pn	Pn	06 36 02.4	+1.2
	0.1nm,0.3s,baz=50,slow=13,SNR=7.5						
MKAR	Makanchi Array	7.78	199	Pn	Pn	06 36 29.4	+0.8
	0.3nm,0.3s,baz=20,slow=12,SNR=12						

IDC ***29*** *06:46:25.8±3.1, 23°.22N×109°.98W, h0^{km}, mb3.4/1, mb1 3.6/3, mb1mx3.3/48, mbtmp3.1/3, ML3.8/2, MS2.6/1, Ms1 2.6/1, ms1mx2.3/25, Error ellipse: s-maj=51.6km s-min=19.5km az=60.0*
MEX ***29*** *06:46:30.1±0.6, 23°.38N×110°.08W, h8^{km}±6^{km}, MD3.5*
ISC 29 06:46:28.9±2.3, **23°.4N**±0°.1×**110°.02W**±0°.10, **h10^{km}, n7, σ2^{s}53**/9, **Baja California**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLBS	Sierra La Lagu	0.29	14	eP	Pg	06 46 36.0	+1.2
SLBS				eS	Sg	06 46 41.3	+2.6
LPIG	La Paz	0.74	339	Pg	Pg	06 46 43.5	+0.3
	124nm,0.3s,baz=154,slow=4.8,SNR=128						
LPIG				Lg	Lg	06 46 56.6	
	398nm,0.3s,baz=144,slow=23,SNR=14						
LPIG				LR	LR	06 47 04.6	
	comp=Z,145nm,20.0s,baz=168,slow=42						
LPIG	La Paz	0.74	339	eP	Pg	06 46 43.3	+0.1
LPIG				eS	Sg	06 46 52.4	-0.6
TXAR	Lajitas Array	8.21	43	Pn	Pn	06 48 29.3	+1.1
	0.2nm,0.3s,baz=213,slow=13,SNR=23						
TXAR				Sn	Sn	06 49 55.7	-5.3
	baz=227,slow=20,SNR=0.9						
PFO	Pinyon Flats O	11.63	332	LR	LR	06 52 52.4	
	comp=Z,30nm,20.9s,baz=207,slow=33						
PDAR	Pinedale Array	19.32	1	P	P	06 50 54.9	+0.5
	0.0nm,0.3s,baz=175,slow=14,SNR=1.9						
ILAR	Eielson Array	47.79	340	P	P	06 55 05.8	-0.3
	0.4nm,0.8s,baz=148,slow=5.3,SNR=4.4						

SOME ***29*** *07:16:23.6, 41°.82N×79°.22E, h10^{km}*
KRNET ***29*** *07:16:24.5±0.1, 41°.94N×79°.30E, mb3.4*
NNC ***29*** *07:16:25.6±2.4, 41°.98N×79°.49E, h0^{km}, mb3.5, mpv3.2, Error ellipse: s-maj=19.1km s-min=8.4km az=141.0*
ISC 29 07:16:25.3±1.4, **41°.93N**±0°.06×**79°.25E**±0°.04, **h10^{km}, n36, σ1^{s}87**/69, **24C-18D, Kyrgyzstan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PRZ	Przheval'sk	0.84	311	⇑iP	Pg	07 16 40.7	-0.8
	baz=10.0						
PRZ				⇑iS	Sg	07 16 52.7	+0.2
	baz=10.0						
UZB	Uzynbulak	1.22	352	eP	Pn	07 16 47.8	-0.9
	11nm,0.2s						
UZB				eS	Sn	07 17 04.9	-0.5
	19nm,0.3s						
SHLS	Shalkode	1.23	7	eP	Pg	07 16 49.6	+0.6
	65nm,0.1s						
SHLS				eS	Sn	07 17 07.8	+2.2
	117nm,0.2s						
SATY	Saty	1.29	331	eP	Pn	07 16 49.0	-0.6
	30nm,0.1s						
SATY				eS	Sn	07 17 06.2	-0.7
	180nm,0.1s						
PDGK	Podgornoye	1.41	7	⇑P	Pn	07 16 50.5	-0.7
	7.5nm,0.2s						
PDGK				⇓S	Sn	07 17 09.2	-0.6
	36nm,0.6s						
PDGK	Podgornoye	1.41	7	⇓iP	Pb	07 16 50.8	-0.9
	baz=6.0						
PDGK				⇓iS	Sg	07 17 09.8	-0.8
	baz=6.0						
KPKS	Kokpek	1.59	345	eP	Pb	07 16 54.4	-0.4
	74nm,0.2s						
KPKS				eS	Sg	07 17 15.8	-0.6
	101nm,0.2s						
KTMS	Ketmen	1.71	28	eP	Pb	07 16 56.2	-0.8
	29nm,0.2s						
KTMS				eS	Sg	07 17 18.9	-1.6
	49nm,0.1s						
KURS	Kuram	1.75	333	⇓iP	Pg	07 16 57.5	-1.3
	12nm,0.4s						
KURS				⇓iS	Sg	07 17 21.4	0.0
	42nm,0.4s						
TNSS	Tian-Shan	2.03	304	⇓iP	Pb	07 17 02.0	-0.5
	64nm,0.4s						
TNSS				eS	Sg	07 17 29.4	-1.3
	61nm,0.4s						
MDOK	Medeo	2.04	308	eP	Pb	07 17 02.0	-0.6
	67nm,0.4s						
MDOK				eS	Sb	07 17 29.2	+1.1
	111nm,0.4s						
KOTS	Kotyrbulak	2.05	310	eP	Pb	07 17 02.2	-0.4
	53nm,0.2s						
KOTS				eS	Sg	07 17 29.6	-1.5
	103nm,0.5s						
KNDC	Almaty	2.12	308	⇓P	Pb	07 17 03.4	-0.5
	32nm,0.5s						
KNDC				⇑S	Sg	07 17 32.7	-0.8
	153nm,0.8s						
AAA	Alma-Ata	2.15	307	eP	Pb	07 17 04.2	-0.1
	80nm,0.2s						
AAA				eS	Sg	07 17 33.5	-0.8
	110nm,0.3s						
IZV	Izvestkoviy	2.24	300	eP	Pb	07 17 05.2	-0.8
	114nm,0.3s						
IZV				eS	Sb	07 17 34.6	+0.7
	156nm,0.4s						
ULHL	Ulahol	2.26	279	⇑iP	Pb	07 17 05.5	-0.9
	baz=79						
ULHL				⇑iS	Sb	07 17 35.3	+0.8
	baz=79						
MTBS	Maitube	2.41	301	⇓iP	Pb	07 17 07.9	-0.9
	23nm,0.2s						
MTBS				⇓iS	Sb	07 17 39.9	+1.3
	49nm,0.3s						
DJR	Jarkent	2.43	9	eP	Pb	07 17 08.5	-0.7
	5.6nm,0.2s						
DJR				eS	Sg	07 17 41.1	-2.3
	50nm,0.5s						
BOOM	Boomskoye usch	2.52	284	⇑iP	Pb	07 17 08.7	-2.1
	baz=84						
BOOM				⇑iS	Sb	07 17 41.3	-0.7
	baz=84						
CHKK	Chushkaly	2.54	320	eP	Pb	07 17 11.3	+0.3
	26nm,0.3s						
CHKK				eS	Sg	07 17 45.2	-1.7
	251nm,0.3s						
KTBS	Karatobe	2.59	314	eP	Pb	07 17 11.4	-0.6
	15nm,0.3s						
KTBS				eS	Sb	07 17 45.0	+1.0
	84nm,0.6s						
KST	Kastek	2.67	296	eP	Pb	07 17 12.4	-1.0
	39nm,0.5s						
KST				⇓iS	Sb	07 17 47.0	+0.7
	45nm,0.7s						
TKM2	Tokmak 2	2.88	291	⇓P	Pb	07 17 14.1	-2.8

Code	Station Name	Δ°	AZ°	Op	ISC	Time h m s	Res ISC
	3.1nm,0.3s						
TKM2				⇑S	Sb	07 17 53.8	+1.5
	20nm,0.3s						
TKM2	**Tokmak 2**	2.88	291	⇑*i*P	Pb	07 17 13.8	-3.1
	baz=91						
TKM2				⇑*i*S	Sb	07 17 50.0	-2.3
	baz=91						
DGS	**Degeres**	2.88	298	*e*P	Pb	07 17 16.0	-1.0
	16nm,0.3s						
DGS				*e*S	Sb	07 17 52.7	+0.4
	31nm,0.9s						
KUU	**Kurty**	2.90	313	*e*P	Pb	07 17 16.6	-0.6
	4.6nm,0.4s						
KUU				⇓*i*S	Sb	07 17 55.1	+2.4
	52nm,0.4s						
KZA	**Kyzart**	2.99	274	⇑*e*P	Pb	07 17 15.7	-3.2
	baz=74						
KZA				⇑*i*S	Sb	07 17 53.0	-2.6
	baz=74						
UCH	**Uchtor**	3.54	276	⇑*e*P	Pn	07 17 23.3	+2.5
	baz=76						
UCH				⇑*i*S	Sn	07 18 06.5	+3.6
	baz=76						
AAK	**Ala-Archa**	3.60	283	⇓P	Pn	07 17 24.1	+2.8
	3.4nm,0.3s						
AAK				⇑S	Sb	07 18 14.6	+1.7
	8.4nm,0.6s						
AAK	**Ala-Archa**	3.60	283	⇓*i*P	Pn	07 17 23.9	+2.6
	baz=83						
AAK				⇓*i*S	Sn	07 18 07.2	+3.2
	baz=83						
EKS2	**Erkin-Say**	4.13	282	⇑*e*P	Pn	07 17 31.1	+2.6
	baz=82						
EKS2				⇑*e*S	Sn	07 18 20.0	+3.1
	baz=82						
AML	**Almayashu**	4.14	275	⇑*e*P	Pn	07 17 31.8	+2.8
	baz=75						
AML				⇑*i*S	Sn	07 18 20.9	+3.1
	baz=75						
MRKS	**Merke**	4.54	282	*e*P	Pb	07 17 47.9	+2.7
	3.3nm,0.6s						
MRKS				*e*S	Sg	07 18 46.2	-4.9
	7.9nm,0.3s						
MNAS	**Manas**	5.04	279	⇑Pg	Pg	07 17 58.1	-3.8
	1.5nm,0.5s						
MNAS				⇓Lg	Lg	07 19 06.6	
	2.0nm,0.5s						
MK31	**Makanchi Array**	5.32	23	⇑Pn	Pn	07 17 46.7	+1.8
	0.1nm,0.1s,baz=208,slow=12,SNR=22						
MK31				⇑Sn	Sn	07 18 48.9	+2.7
	1.1nm,0.5s,baz=207,slow=26,SNR=5.2						
MK31				⇓Lg	Lg	07 19 11.7	
	0.6nm,0.4s,baz=205,slow=26,SNR=4.0						
KK31	**Karatay Array**	6.56	283	⇓Pg	Pg	07 18 25.3	-5.7
	0.3nm,0.4s,baz=98,slow=16,SNR=4.4						
KK31				⇑Lg	Lg	07 19 56.5	
	0.6nm,0.5s,baz=90,slow=26,SNR=3.7						

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*IDC **29** 07:28:02.8±0.9, 24°.26N×94°.57E, h0^{km}, mb3.8/14, mb1 3.9/15, mb1mx3.6/72, mbtmp3.8/15, ML3.8/1, MS3.4/3, Ms1 3.4/3, ms1mx2.6/65, Error ellipse: s-maj=43.7km s-min=15.0km az=57.0*

*NDI **29** 07:28:06.4±2.4, 24°.12N×94°.33E, h10^{km}, ML3.5*

ISC 29 07:28:05.8±1.2**, 24°.18N**±0°.05×**94°.43E**±0°.06**, h19**^{km}±4^{km}**, n28,** σ1^{s}.**40**/33**, mb3.7**/14**, MS3.2**/3**, Myanmar-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IMP	**Imphal**	0.79	326	*e*P	Pg	07 28 21.4	+0.1
IMP				*e*S	Sg	07 28 31.6	-0.2
IMP				IAML		07 28 33.7	
	comp=E,3μm,0.3s						
IMP				IAML		07 28 33.8	
	comp=N,2μm,0.3s						
KOHI	**KOHIMA**	1.56	349	*e*P	Pb	07 28 34.5	+0.3
KOHI				*e*S	Sg	07 28 56.5	0.0
KOHI				IAML		07 28 59.1	
	comp=E,697nm,0.6s						
KOHI				IAML		07 28 59.1	
	comp=N,815nm,0.6s						
SILR	**SILCHAR**	1.60	292	*e*P	Pb	07 28 35.3	+0.6
MOKO	**MOKOCHONG**	2.14	2	*e*P	Pb	07 28 42.5	-1.4
MOKO				*e*S	Sb	07 29 10.2	0.0
MOKO				IAML		07 29 15.4	
	comp=E,477nm,0.3s						
MOKO				IAML		07 29 15.6	
	comp=N,460nm,0.7s						
JORH	**JORHAT**	2.56	356	*e*P	Pn	07 28 47.9	+1.7
JORH				*e*S	Sb	07 29 22.5	+0.3
SHL	**Shillong**	2.70	301	*e*P	Pn	07 28 49.9	+1.6
SHL				*e*PN	Pb	07 28 50.0	-3.5
SHL				*e*SN	Sn	07 29 23.0	+2.5
TEZP	**TEZPUR**	2.84	329	*e*P	Pb	07 28 53.3	-2.6
ITAN	**ITANAGAR**	3.02	348	*e*P	Pb	07 28 56.9	-2.1
ITAN				*e*S	Sn	07 29 30.9	+2.6
ITAN				IAML		07 29 42.7	
	comp=E,218nm,0.4s						
ITAN				IAML		07 29 43.9	
	comp=N,349nm,0.6s						
GUWA	**GUWAHATI**	3.19	310	*e*P	Pn	07 28 55.5	+0.6
GUWA				*e*S	Sn	07 29 32.7	+0.2
GUWA				IAML		07 29 34.2	
	comp=N,69nm,0.3s						
GUWA				IAML		07 29 36.0	
	comp=E,54nm,0.1s						
CMAR	**Chiang Mai Arr**	7.08	143	Pn	Pn	07 29 49.6	+1.3
	comp=E,0.4nm,0.3s,baz=323,slow=16,SNR=4.2						
CMAR				Lg	Lg	07 31 48.1	
	comp=E,0.1nm,0.3s,baz=324,slow=32,SNR=2.6						
MKAR	**Makanchi Array**	24.58	340	P	P	07 33 24.9	+0.4
	comp=E,1.5nm,0.6s,baz=143,slow=11,SNR=12						
AAK	**Ala-Archa**	24.71	323	P	P	07 33 27.4	+1.5
	comp=E,2.2nm,0.5s,baz=271,slow=8.5,SNR=3.7						
SONM	**Songino Array**	25.45	19	P	P	07 33 31.8	-0.8
	comp=E,0.7nm,0.7s,baz=209,slow=9.2,SNR=3.5						
KURBB	**Kurchatov Arra**	29.14	339	P	P	07 34 04.4	-1.0
	comp=E,0.3nm,0.6s,baz=154,slow=8.1,SNR=3.3						
ZALV	**Zalesovo Beam**	30.60	349	P	P	07 34 18.9	+0.6
	comp=E,1.1nm,0.4s,baz=157,slow=7.8,SNR=3.4						
GEYT	**Alibeck**	33.77	303	LR	LR	07 50 46.6	
	comp=E,23nm,19.4s,baz=270,slow=40						
BVAR	**Borovoye Array**	34.07	334	P	P	07 34 49.1	+0.4
	comp=E,0.5nm,0.5s,baz=133,slow=12,SNR=5.2						
DAV	**Davao City (W)**	34.35	115	LR	LR	07 47 59.5	
	comp=E,42nm,20.0s,baz=132,slow=35						
TIXI	**Tiksi**	51.33	13	P	P	07 37 07.3	-1.1
	comp=E,2.1nm,0.3s,baz=195,slow=4.3,SNR=4.2						
WRA	**Warramunga Arr**	58.60	135	P	P	07 38 01.2	-0.5
	comp=E,0.4nm,0.6s,baz=323,slow=7.4,SNR=3.1						
FINES	**FINESS Array B**	58.73	328	P	P	07 38 02.2	+0.1
	comp=E,1.4nm,0.6s,baz=102,slow=6.2,SNR=5.2						
ASAR	**Alice Springs**	61.06	138	P	P	07 38 18.9	+0.3
	comp=E,0.4nm,0.6s,baz=326,slow=7.0,SNR=3.6						
HFS	**Hagfors**	64.78	327	P	P	07 38 42.7	-0.1
	comp=E,3.2nm,0.8s,baz=100,slow=6.0,SNR=8.9						
NOA	**NORSAR Array B**	65.90	328	P	P	07 38 49.9	-0.2
	comp=E,0.3nm,0.6s,baz=95,slow=5.4,SNR=3.3						
GERES	**GERESS Array B**	66.24	315	P	P	07 38 52.7	+0.1
	comp=E,0.3nm,0.6s,baz=88,slow=5.0,SNR=3.1						
KEST	**Kesra**	72.52	302	LR	LR	08 15 38.8	
	comp=E,110nm,18.4s,baz=236,slow=39						
INK	**Inuvik**	81.34	16	P	P	07 40 19.8	-0.8
	comp=E,1.3nm,0.8s,baz=304,slow=2.6,SNR=3.4						
TXAR	**Lajitas Array**	124.02	19	PKP	PKPdf	07 47 01.6	-1.9
	comp=E,0.1nm,0.6s,baz=327,slow=1.5,SNR=2.7						

JMA 29 07:42:03.9, 32°.90N×132°.12E, h40^{km}±1^{km}**, M0.5, Shikoku**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JSKE	**Saikikamae**	0.21	241	P	Pn	07 42 11.1	-0.2
JSKE				S	Sn	07 42 16.3	-0.1
JUS	**Usuki**	0.35	298	P	Pn	07 42 12.5	-0.3
JUS				S	Sn	07 42 19.0	0.0
UWA2	**Uwa jima 2**	0.53	53	P	Pn	07 42 14.8	-0.3
UWA2				S	Sn	07 42 23.3	+0.4
JTO	**Tosashimizu**	0.57	94	P	Pn	07 42 15.4	-0.3
JNA	**Nagahama**	0.72	25	S	Sn	07 42 28.2	+0.7

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*NIED **29** 07:43:00, 46°.50N×153°.80E, h14^{km}, Mw4.1 Best double couple: M$_0$1.53000×10^{15} NP1:φ$_s$243.00000°, δ15.00000°, λ83.00000°. NP2:φ$_s$71.00000°, δ75.00000°, λ92.00000°.*

*IDC **29** 07:43:54.9±0.6, 45°.99N×154°.15E, h0^{km}, mb3.9/21, mb1 4.1/26, mb1mx3.9/73, mbtmp3.9/26, ML3.5/3, MS3.2/9, Ms1 3.2/9, ms1mx2.7/67, Error ellipse: s-maj=18.2km s-min=13.4km az=158.0*

*NEIC **29** 07:43:56.5±2.7, 45°.99N×154°.14E, h10^{km}±16^{km}, mb4.4/2, Error ellipse: s-maj=8.9km s-min=5.3km az=132.0*

*ISCJB **29** 07:43:56.5±0.5, 45°.85N±0°.06×153°.94E±0°.06, h20^{km}, mb4.0/34, MS3.4/7, Error ellipse: s-maj=9.9km s-min=3.7km az=148.1*

*SKHL **29** 07:43:58.4±0.7, 45°.78N×154°.11E, h39^{km}±2^{km}, mb4.4/3*

*MOS **29** 07:43:59.0±1.1, 45°.91N×154°.01E, h39^{km}, mb4.4/15, Error ellipse: s-maj=9.0km s-min=8.0km az=70.5*

ISC 29 07:43:57.9±0.6**, 45°.81N**±0°.07×**154°.14E**±0°.06**, h20**^{km}**, n115,** σ**2**^{s}.**07**/124**, mb4.1**/34**, MS3.4**/7**, 6C-7D, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	4.45	265	*i* P	Pn	07 45 05.0	+0.9
KUR				AMB	AMB	07 45 15.7	
	33nm,0.4s						
KUR				AMB	AMB	07 45 15.7	
	21nm,0.4s						
KUR				AMB	AMB	07 45 15.7	
	12nm,0.4s						
KUR				*i* S	Sn	07 45 53.9	-1.3
KUR				A	A	07 46 00.9	
	75nm,0.4s						
KUR				A	A	07 46 00.9	
	180nm,0.4s						
KUR	**Kuril'sk**	4.45	265	*d i*P	Pn	07 45 05.0	+0.9
KUR				*i* S	Sn	07 45 53.9	-1.3
KUR				pmax	pmax		
	comp=Z,121nm,0.3s						
KUR				pmax	pmax		
	comp=E,21nm,0.4s						
KUR				pmax	pmax		
	comp=N,33nm,0.2s						
KUR				smax	smax		
	comp=E,178nm,0.6s						
KUR				smax	smax		
	comp=N,75nm,0.2s						
SKR	**Severo-Kuril's**	5.06	14	*e*P	Pn	07 45 12.1	-0.4
SKR	**Severo-Kuril's**	5.06	14	⇑*e*P	Pn	07 45 12.2	-0.3
SHO	**Shikotan**	5.54	252	*i* P	Pn	07 45 18.9	-0.3
SHO				AMB	AMB	07 45 31.8	
	comp=N,20nm,0.4s						
SHO				AMB	AMB	07 45 31.8	
	comp=N,30nm,0.4s						
SHO				AMB	AMB	07 45 31.8	
	comp=N,45nm,0.4s						
SHO				*e*S	Sn	07 46 18.8	-3.5
SHO				A	A	07 46 27.0	
	comp=N,100nm,0.4s						
SHO				A	A	07 46 27.0	
	comp=N,59nm,0.4s						
SHO	**Shikotan**	5.54	252	*d i*P	Pn	07 45 18.9	-0.3
SHO				*e*S	Sn	07 46 18.8	-3.5
SHO				pmax	pmax		
	comp=N,20nm,0.4s						
SHO				pmax	pmax		
	comp=E,30nm,0.4s						
SHO				pmax	pmax		
	comp=Z,45nm,0.4s						
SHO				smax	smax		
	comp=E,59nm,0.3s						
SHO				smax	smax		
	comp=N,102nm,0.5s						
YUK	**Yuzh-Kuril'sk**	6.14	256	*e*P	Pn	07 45 27.0	-0.3
YUK				*e*S	Sn	07 46 34.0	-2.9
YUK				A	A	07 46 42.4	
	comp=N,30nm,0.4s						
YUK				A	A	07 46 42.4	
	comp=N,22nm,0.4s						
YUK	**Yuzh-Kuril'sk**	6.14	256	P	Pn	07 45 27.0	-0.3
YUK				*e*S	Sn	07 46 34.0	-2.9
YUK				smax	smax		
	comp=N,30nm,0.1s						
YUK				smax	smax		
	comp=E,217nm,0.5s						
LAGR	**Lagunnoye**	6.18	257	*e*P	Pn	07 45 28.4	+0.5
LAGR				*e*S	Sn	07 46 34.9	-3.1
LAGR	**Lagunnoye**	6.18	257	*e*P	Pn	07 45 28.4	+0.5
LAGR				S	Sn	07 46 34.9	-3.1
GRPR	**Tuman**	6.21	256	*e*P	Pn	07 45 29.2	+0.9
GRPR				*e*S	Sn	07 46 36.1	-2.6
GRPR	**Tuman**	6.21	256	P	Pn	07 45 29.2	+0.9
GRPR				*e*S	Sn	07 46 36.1	-2.6
NEM2	**Nemuro 2**	6.47	251	P	Pn	07 45 30.9	-1.0
NEM2				*e*S	Sn	07 46 40.1	-5.0
GLVR	**Golovnino**	6.47	254	*e*P	Pn	07 45 33.2	+1.3
GLVR				*e*S	Sn	07 46 42.1	-3.0
GLVR	**Golovnino**	6.47	254	*e*P	Pn	07 45 33.2	+1.3
GLVR				S	Sn	07 46 42.1	-3.0
JRA	**Rausu**	6.67	257	P	Pn	07 45 35.3	+0.6
JNK	**Nakash**	7.07	255	P	Pn	07 45 40.2	+0.1
JNK				*e*S	Sn	07 46 57.5	-2.4
JAK	**Akkeshi**	7.32	251	P	Pn	07 45 42.4	-1.2
JAK				*e*S	Sn	07 47 00.7	-5.3
JTKR	**Abashiri--Toko**	7.49	259	P	Pn	07 45 46.6	+0.7
PETK	**Petropavlovsk-**	7.67	16	Pn	Pn	07 45 45.2	-3.1
	baz=188,slow=13						
PETK				Sn	Sn	07 47 09.1	-5.4
	baz=194,slow=18						
PETK				LR	LR	07 48 53.4	
	comp=E,64nm,19.1s,baz=183,slow=40						
JAR	**Ashorobuto**	7.82	255	P	Pn	07 45 50.7	+0.3
JAR				*e*S	Sn	07 47 15.4	-2.9
JMP	**Maruseppu**	7.86	261	P	Pn	07 45 52.3	+1.3
JOB	**Onbets**	7.93	252	*e*S	Sn	07 47 16.3	-4.8
YSS	**Yuzh-Sakhalins**	7.96	282	*e*P	Pn	07 45 54.7	+2.4
YSS				AMB	AMB	07 45 55.6	
	comp=E,20nm,0.9s						
YSS	**Yuzh-Sakhalins**	7.96	282	*e*P	Pn	07 45 54.7	+2.4
YSS				pmax	pmax		
	comp=Z,20nm,0.9s						
YSS				MLR	MLR		
	comp=Z,200nm,15.0s						
ASAJ	**Asahikawa**	8.36	262	Pn	Pn	07 45 59.0	+1.2
	comp=Z,1.4nm,0.3s,baz=67,slow=22,SNR=7.0						
ASAJ				Sn	Sn	07 47 36.0	+4.5
	comp=Z,1.1nm,0.3s,baz=347,slow=24,SNR=1.6						
JCH	**Churui**	8.37	251	P	Pn	07 45 57.5	-0.5
JCH				*e*S	Sn	07 47 27.5	-4.3
MYR	**Moyori**	8.57	250	*e*P	Pn	07 45 59.9	-0.8
JFR	**Furan**	8.67	256	P	Pn	07 46 03.6	+1.6
JEM	**Erimo**	8.78	248	P	Pn	07 46 04.7	+1.1
JNBK	**Urakawa-nobuka**	8.92	251	P	Pn	07 46 05.1	-0.5
JNBK				*e*S	Sn	07 47 37.5	-7.9
JBT2	**Biratori 2**	8.97	254	P	Pn	07 46 06.0	-0.2
JNB	**Noboribetsu**	9.99	255	*e*S	Sn	07 48 06.5	-5.1
JKB	**Kayabe**	10.24	252	*e*S	Sn	07 48 09.0	-8.8
JANG	**Nango**	10.71	244	P	Pn	07 46 27.5	-2.5
JANG				*e*S	Sn	07 48 19.2	-10
JTM	**Tenmabayashi**	10.76	247	*e*S	Sn	07 48 21.4	-9.1
JOSM	**Okushiri--Mats**	11.21	256	P	Pn	07 46 35.9	-0.9
OFUJ	**Ofunato**	11.39	238	*e*S	Sn	07 48 36.5	-10
JIO	**Ouri**	11.99	237	*e*S	Sn	07 48 50.4	-10
MA2	**Magadan**	13.94	353	LR	LR	07 52 08.9	
	comp=Z,36nm,18.2s,baz=206,slow=36						
MA2	**Magadan**	13.94	353	⇑*e*P	Pn	07 47 13.0	-1.1
MA2				pmax	pmax		
	comp=Z,5.0nm,0.7s						
MJAR	**Matsushiro Arr**	15.13	238	Pn	Pn	07 47 31.1	+0.8
	comp=Z,0.1nm,0.3s,baz=143,slow=19,SNR=4.9						
MAJO	**Matsushiro**	15.13	238	*e*Pn	Pn	07 47 31.5	+1.2
	comp=Z,12nm,1.0s						
MAJO	**Matsushiro**	15.13	238	⇓*e*P	Pn	07 47 31.5	+1.2
MAJO				pmax	pmax		
	comp=Z,4.0nm,0.7s						
MAT	**Matsushiro**	15.13	238	P	P	07 47 37.4	+2.0
KLR	**Kul'dur**	15.50	291	Pn	Pn	07 47 34.1	-1.0
	comp=Z,0.0nm,0.3s,baz=107,slow=12,SNR=3.9						
KLR				LR	LR	07 53 22.7	
	comp=Z,4.2nm,18.9s,baz=112,slow=37						
KLR	**Kul'dur**	15.50	291	⇑*e*P	Pn	07 47 35.6	+0.5
USRK	**Ussuriysk Ar.**	15.74	272	Pn	Pn	07 47 38.0	-0.3
	baz=83,slow=15						
SEY	**Seymchan**	17.19	357	P	Pn	07 47 54.1	-2.5
	comp=Z,0.0nm,0.3s,baz=18,slow=23,SNR=1.6						
KSRS	**Korea Array**	21.23	256	P	P	07 48 42.7	+0.4
	comp=Z,1.1nm,0.7s,baz=54,slow=10.0,SNR=2.7						
KSAR	**Wonju Array Be**	21.26	256	P	P	07 48 42.7	0.0
KSAR	**Wonju Array Be**	21.26	256	P	P	07 48 42.7	0.0
YAK	**Yakutsk**	21.50	328	⇓*e*P	P	07 48 46.2	+1.2
YAK				pmax	pmax		
	comp=Z,3.0nm,0.3s						
H11N2	**WAKE ISLAND Hy**	28.05	154	T	T	08 19 10.5	
	baz=342,slow=74						
H11N1	**WAKE ISLAND Hy**	28.07	154	T	T	08 19 13.6	
	baz=342						
H11N3	**WAKE ISLAND Hy**	28.07	154	T	T	08 19 13.7	
	baz=342,slow=74						
H11S1	**WAKE ISLAND Hy**	29.15	155	T	T	08 20 36.1	
	baz=342						
H11S3	**WAKE ISLAND Hy**	29.16	155	T	T	08 20 37.2	
	baz=342						
H11S2	**WAKE ISLAND Hy**	29.17	155	T	T	08 20 37.8	
	baz=342						
ULN	**Ulaanbaatar**	31.89	291	⇑*e*P	P	07 50 25.2	+3.4
ULN				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SONM	**Songino Array**	32.33	291	P	P	07 50 26.0	+0.4
	comp=Z,0.3nm,0.4s,baz=80,slow=9.2,SNR=2.2						
ILAR	**Eielson Array**	36.85	38	P	P	07 51 03.5	-0.9
	comp=Z,0.5nm,1.1s,baz=269,slow=9.0,SNR=4.0						
GTA	**Gaotai**	39.83	281	⇑P	P	07 51 31.8	+1.9
GTA				pP	sP	07 51 39.3	+0.8
GTA				sP	pP	07 51 43.0	+6.9
GTA				PcP	PP	07 52 58.5	-2.8
GTA				pmax	pmax		
	comp=Z,5.0nm,1.1s						
DGZ	**Jazzator, Alta**	43.69	300	⇓*e*P	P	07 52 04.6	+3.3
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ZALV	**Zalesovo Beam**	43.74	307	P	P	07 51 59.5	-2.0
	comp=Z,1.0nm,0.3s,baz=78,slow=7.5,SNR=2.6						
ZALV				LR	LR	08 10 42.3	
	comp=Z,27nm,18.3s,baz=66,slow=37						
MKAR	**Makanchi Array**	48.01	299	P	P	07 52 34.9	-0.4
	comp=Z,1.2nm,0.6s,baz=68,slow=7.3,SNR=15						
MKAR	**Makanchi Array**	48.01	299	*e*P	P	07 52 35.3	0.0
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
KURK	**Kurchatov**	48.48	305	*e*P	P	07 52 38.2	-0.6
KURK	**Kurchatov**	48.48	305	*e*P	P	07 52 38.1	-0.6
	comp=Z,20nm,0.8s						
KURK	**Kurchatov**	48.48	305	⇓*e*P	P	07 52 38.2	-0.6
KURK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KURBB	**Kurchatov Arra**	48.57	305	P	P	07 52 38.6	-0.9
	comp=Z,2.1nm,0.7s,baz=70,slow=8.6,SNR=9.5						
YKA	**Yellowknife Ar**	51.26	37	P	P	07 52 59.3	-0.4
	comp=Z,0.6nm,0.7s,baz=299,slow=7.9,SNR=3.8						
BVAR	**Borovoye Array**	52.01	310	P	P	07 53 03.7	-1.9
	comp=Z,0.9nm,0.5s,baz=64,slow=9.8,SNR=2.6						
CMAR	**Chiang Mai Arr**	52.85	258	P	P	07 53 13.3	+1.1
	comp=Z,0.8nm,0.3s,baz=41,slow=6.0,SNR=3.2						
AAK	**Ala-Archa**	54.89	297	*e*P	P	07 53 28.5	+1.5
AAK	**Ala-Archa**	54.89	297	⇑*e*P	P	07 53 28.5	+1.5
AAK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
ARU	**Arti**	56.19	318	*e*P	P	07 53 35.6	-0.3
ARU	**Arti**	56.19	318	*d i*P	P	07 53 35.4	-0.5
ARU						07 55 38.0	
ARU				S	S	08 01 23.8	-0.2
ARU				SS	SS	08 05 09.2	-0.6
ARU				pmax	pmax		
	comp=Z,12nm,2.5s						
PRGR	**Permogore**	58.55	328	*e*P	P	07 53 52.6	+0.2
PRGR				pmax	pmax		
	comp=Z,6.0nm,0.5s						
AKTO	**Aktyubinsk**	59.89	313	LR	LR	08 21 00.1	
	comp=Z,32nm,18.6s,baz=55,slow=37						
NVAR	**Mina Array Bea**	62.24	62	P	P	07 54 18.5	+0.1
	comp=Z,0.5nm,0.9s,baz=279,slow=6.3,SNR=3.8						
PDAR	**Pinedale Array**	64.73	54	P	P	07 54 34.5	-0.2
	comp=Z,0.8nm,0.9s,baz=297,slow=4.0,SNR=5.9						
FINES	**FINESS Array B**	65.20	335	P	P	07 54 36.8	-0.3
	comp=Z,4.5nm,1.0s,baz=38,slow=7.0,SNR=7.7						
FINES				LR	LR	08 25 43.1	
	comp=Z,24nm,18.2s,baz=238,slow=39						
FINES	**FINESS Array B**	65.20	335	*e*P	P	07 54 38.2	+1.0
FINES	**FINESS Array B**	65.20	335	*e*P	P	07 54 38.2	+1.0
FINES				pmax	pmax		
	comp=Z,5.0nm,1.0s						
OBN	**Obninsk**	66.49	326	*e*P	P	07 54 46.5	+0.9
OBN				*e*		07 57 15.4	
OBN				pmax	pmax		
	comp=Z,5.0nm,0.9s						
WRAB	**Tennant Creek**	67.85	200	*e*P	P	07 54 55.4	+0.8
	comp=Z,4.7nm,1.0s						
WRAB	**Tennant Creek**	67.85	200	*e*P	P	07 54 55.4	+0.8
WRAB				pmax	pmax		
	comp=Z,5.0nm,1.0s						
WRA	**Warramunga Arr**	67.86	200	P	P	07 54 55.5	+0.9
	comp=Z,2.3nm,0.9s,baz=18,slow=6.9,SNR=6.5						
WRA	**Warramunga Arr**	67.86	200	*e*P	P	07 54 56.3	+1.7
WRA	**Warramunga Arr**	67.86	200	*e*P	P	07 54 56.3	+1.7
WRA				pmax	pmax		
	comp=Z,2.0nm,0.9s						
NOA	**NORSAR Array B**	69.35	342	P	P	07 55 02.4	-1.2
	comp=Z,0.5nm,0.7s,baz=27,slow=6.4,SNR=3.3						
NOA				LR	LR	08 27 56.7	
	comp=Z,5.8nm,18.8s,baz=25,slow=38						
NOA	**NORSAR Array B**	69.35	342	*e*P	P	07 55 04.9	+1.3
NOA	**NORSAR Array B**	69.35	342	*e*P	P	07 55 04.9	+1.3
NOA				pmax	pmax		
	comp=Z,1.0nm,0.7s						
HFS	**Hagfors**	69.59	340	P	P	07 55 03.9	-1.1
	comp=Z,2.2nm,0.9s,baz=45,slow=4.3,SNR=4.1						
HFS				LR	LR	08 30 22.5	
	comp=Z,23nm,18.3s,baz=340,slow=40						
ASAR	**Alice Springs**	71.55	200	P	P	07 55 18.6	+1.3
	comp=Z,1.4nm,0.8s,baz=14,slow=6.0,SNR=8.4						
ASAR	**Alice Springs**	71.55	200	*e*P	P	07 55 17.9	+0.6
ASAR	**Alice Springs**	71.55	200	*e*P	P	07 55 17.9	+0.6
ASAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
KIV	**Kislovodsk**	71.97	315	*e*P	P	07 55 20.8	+0.9
KIV				*e*		07 55 37.2	
KIV				*e*		07 58 02.5	
KIV				pmax	pmax		
	comp=Z,5.0nm,1.0s						
KBZ	**Khabaz**	72.03	315	P	P	07 55 21.1	+1.0
	comp=Z,4.4nm,0.8s,baz=51,slow=1.5,SNR=13						
AKASG	**Malin Array Be**	72.73	327	P	P	07 55 23.1	-1.1
	comp=Z,1.3nm,0.6s,baz=30,slow=6.4,SNR=5.3						
AKASG	**Malin Array Be**	72.73	327	*e*P	P	07 55 27.5	+3.4
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.6s						
GNI	**Garni**	73.69	311	LR	LR	08 30 45.6	
	comp=Z,19nm,18.8s,baz=166,slow=38						
TXAR	**Lajitas Array**	77.33	61	P	P	07 55 50.8	-0.5
	comp=Z,1.2nm,0.6s,baz=304,slow=4.2,SNR=24						
EKA	**Eskdalemuir Ar**	77.42	347	P	P	07 55 55.5	+4.4
	comp=Z,1.2nm,0.8s,baz=30,slow=5.8,SNR=3.3						
CLL	**Collm**	77.62	336	*e*P	P	07 55 51.0	-1.3
	comp=Z,3.0nm,0.9s						
CLL	**Collm**	77.62	336	*e*P	P	07 55 51.0	-1.3
CLL				pmax	pmax		
	comp=Z,3.0nm,0.9s						
BRTR	**Keskin Array B**	79.57	317	P	P	07 56 03.2	-0.2
	comp=Z,1.2nm,0.6s,baz=37,slow=3.6,SNR=5.9						
BRTR	**Keskin Array B**	79.57	317	*e*P	P	07 56 04.6	+1.1
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
GERES	**GERESS Array B**	79.61	335	P	P	07 56 02.4	-1.1
	comp=Z,0.4nm,0.5s,baz=343,slow=4.2,SNR=4.3						
GERES	**GERESS Array B**	79.61	335	*e*P	P	07 56 03.4	-0.1
GERES	**GERESS Array B**	79.61	335	*e*P	P	07 56 03.4	-0.1
DAVOX	**Davos/Dischmat**	82.59	336	LR	LR	08 36 25.1	
	comp=Z,29nm,18.1s,baz=263,slow=38						
LPAZ	**La Paz**	134.13	64	PKP	PKPdf	08 03 15.3	+0.4
	comp=Z,0.6nm,0.9s,baz=270,slow=3.0,SNR=2.0						
PLCA	**Paso Flores**	147.40	97	PKPbc	PKPbc	08 03 40.1	+0.3
	comp=Z,4.3nm,0.9s,baz=250,slow=5.8,SNR=5.1						

IDC 29 07:47:14.0±3.0**, 4°.77S×152°.02E, h0**^{km}**, mb3.7**/2**, mb1 3.9**/3**, mb1mx3.4**/48**, mbtmp3.8**/3**, ML1.6**/1**, MS3.1**/1**, Ms1 3.1**/1**, ms1mx2.4**/40**, Error ellipse: s-maj=130.2km s-min=39.6km az=123.0, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	**Port Moresby**	6.67	226	Pn	Pn	07 48 53.9	+0.5
	0.7nm,0.3s,baz=27,slow=16,SNR=1.7						
PMG				Sn	Sn	07 50 05.2	-5.0

	3.8nm,0.3s,baz=157,slow=19,SNR=6.7						
WRA	**Warramunga Arr**	**22.89**	**227**	P	P	07 52 18.6	-0.9
	1.6nm,0.5s,baz=53,slow=10.0,SNR=18						
ASAR	**Alice Springs**	**25.66**	**221**	P	P	07 52 46.1	+0.3
	0.6nm,0.4s,baz=59,slow=8.8,SNR=15						
ASAR				LR	LR	08 03 17.8	
	comp=Z,44nm,18.9s,baz=132,slow=38						
TORD	**Torodi Ar. Bea**	**149.56**	**288**	PKPbc	PKPbc	08 07 06.3	-0.3
	baz=103,slow=3.1						

IDC 29 07:50:07.5±1.6, 1°.19N×125°.44E, h0^{km}, mb3.6/4, mb1 3.7/4, mb1mx3.4/55, mbtmp3.6/4, Error ellipse: s-maj=197.5km s-min=20.9km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**22.74**	**158**	P	P	07 55 11.4	-0.1
	0.9nm,0.5s,baz=336,slow=10,SNR=7.0						
ASAR	**Alice Springs**	**26.04**	**162**	P	P	07 55 42.8	+0.1
	0.3nm,0.4s,baz=346,slow=11,SNR=9.6						
MKAR	**Makanchi Array**	**58.93**	**327**	P	P	08 00 09.4	+0.8
	0.3nm,0.4s,baz=124,slow=8.4,SNR=6.0						
MKAR				PcP	PcP	08 00 55.9	-2.0
	0.2nm,0.4s,baz=90,slow=2.2,SNR=4.2						
KURBB	**Kurchatov Arra**	**63.20**	**329**	P	P	08 00 37.7	+0.2
	0.5nm,0.5s,baz=125,slow=6.2,SNR=6.6						

IDC 29 07:53:20.7±8.3, 6°.89S×129°.82E, h101^{km}±78^{km}, mb3.5/2, mb1 3.6/5, mb1mx3.2/51, mbtmp3.8/5, ML3.8/3, Error ellipse: s-maj=89.7km s-min=24.0km az=51.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	**6.92**	**241**	P	Pn	07 55 00.3	+0.7
	4.1nm,0.3s,baz=59,slow=5.9,SNR=1.9						
BATI				S	Sn	07 56 12.0	-4.9
	5.3nm,0.3s,baz=274,slow=19,SNR=1.6						
WRA	**Warramunga Arr**	**13.70**	**162**	P	Pn	07 56 29.6	-1.1
	0.4nm,0.3s,baz=338,slow=14,SNR=13						
WRA				S	Sn	07 58 52.3	-9.3
	1.2nm,0.3s,baz=340,slow=20,SNR=12						
ASAR	**Alice Springs**	**17.14**	**167**	P	P	07 57 15.2	+1.1
	0.2nm,0.3s,baz=353,slow=10,SNR=11						
ASAR				S	Sn	08 00 12.5	-12
	0.1nm,0.3s,baz=347,slow=28,SNR=2.1						
STKA	**Stephens Creek**	**27.18**	**158**	P	P	07 58 54.7	-0.2
	0.5nm,0.3s,baz=330,slow=17,SNR=1.3						
MKAR	**Makanchi Array**	**68.04**	**327**	P	P	08 04 09.2	-0.1
	0.3nm,0.4s,baz=117,slow=7.9,SNR=6.9						

MEX 29 07:55:29.4±0.4, 16°.13N×98°.47W, h16^{km}±8^{km}, MD3.6, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	**Pinotepa**	**0.42**	**52**	*e*P	Pg	07 55 36.4	-1.6
PNIG				*e*S	Sg	07 55 42.2	-1.6
TLIG	**Tlapa**	**1.42**	**356**	*e*P	Pn	07 55 51.0	-3.7
TLIG				*e*S	Sn	07 56 07.6	-5.6
VHO	**Vista Hermosa**	**1.91**	**61**	*e*P	Pn	07 55 58.5	-3.1
VHO				*e*S	Sn	07 56 20.5	-4.9
CAIG	**El Cayaco**	**1.94**	**298**	*i* P	Pn	07 55 58.3	-3.5
CAIG				*e*S	Sn	07 56 21.1	-4.8
HUIG	**Huatulco**	**2.31**	**99**	*e*P	Pn	07 56 03.4	-3.3
HUIG				*e*S	Sn	07 56 29.9	-4.9

*ISCJB **29** 08:01:12.6±1.1, 2°.89N±0°.06×78°.00W±0°.08, h62^{km}±13^{km}, Error ellipse: s-maj=15.4km s-min=6.9km az=30.8*
*RSNC **29** 08:01:13.6±0.9, 2°.85N×77°.74W, h0^{km}±7^{km}, ML3.3*
*IGQ **29** 08:01:16.3±1.5, 3°N±11°×7°8W±4°6, h20^{km}, MLv4.0/6*
ISC 29 08:01:13.1±1.8, 2°.89N±0°.06×77°.99W±0°.09, h59^{km}±17^{km}, n13, σ1^s.23/18, Near west coast of Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRGC	**Isla de Gorgon**	**0.21**	**303**	*i* P	**Pn**	**08 01 22.3**	**-0.1**
GRGC				*e*S	**Sn**	**08 01 29.3**	**+0.1**
GRGC				*i*		08 01 30.1	
	comp=Z,1μm,0.1s						
MALC	**Bahia Malaga**	**1.29**	**30**	*e*P	**Pn**	**08 01 35.4**	**+0.4**
MALC				*e*S	**Sn**	**08 01 53.4**	**+2.0**
HORQ	**Saladito**	**1.48**	**66**	*e*P	**Pn**	**08 01 36.5**	**-1.3**
HORQ				*e*S	**Sn**	**08 01 54.4**	**-1.9**
CRUC	**La Cruz**	**1.67**	**142**	*e*P	**Pn**	**08 01 41.0**	**+0.7**
CRUC				*e*S	**Sn**	**08 02 01.9**	**+1.0**
CRUC				*i*		08 02 04.7	
	comp=Z,394nm,0.4s						
GCUF	**Volcan Galeras**	**1.77**	**159**	*e*P	**Pn**	**08 01 42.6**	**+0.8**
GCUF				*i*		08 02 08.0	
	comp=Z,369nm,0.4s						
LITE1	**Lita**	**2.11**	**190**	P	**Pn**	**08 01 44.6**	**-1.6**
URCU	**Urcuqui**	**2.44**	**186**	P	**Pn**	**08 01 51.1**	**+0.1**
YAHU	**Yahuarcocha**	**2.50**	**182**	P	**Pn**	**08 01 53.0**	**+1.3**
COTA	**Cotacachi**	**2.56**	**188**	P	**Pn**	**08 01 52.9**	**+0.2**
CUIC	**Cuicocha-Domo**	**2.59**	**188**	P	**Pn**	**08 01 53.1**	**+0.1**
CUIC				S	**Sn**	**08 02 21.7**	**-1.9**
IMBA	**Imbabura, San**	**2.60**	**185**	P	**Pn**	**08 01 54.1**	**+1.0**
OTAV	**Otavalo**	**2.67**	**190**	P	**Pn**	**08 01 53.8**	**-0.3**
YANA	**Yana**	**3.04**	**191**	P	**Pn**	**08 02 00.0**	**+0.8**

*IDC **29** 08:27:11.3±0.9, 20°.07N×145°.79E, h0^{km}, mb3.9/13, mb1 4.0/14, mb1mx3.8/63, mbtmp3.9/14, ML3.7/1, MS2.9/2, Ms1 2.9/2, ms1mx2.3/57, Error ellipse: s-maj=33.3km s-min=18.8km az=86.0*
*ISCJB **29** 08:27:14.9±0.8, 20°.0N±0°.1×145°.8E±0°.2, h35^{km}, mb3.8/13, MS2.8/2, Error ellipse: s-maj=28.8km s-min=14.5km az=173.6*
ISC 29 08:27:16.8±1.0, 20°.0N±0°.1×145°.7E±0°.2, h35^{km}, n22, σ0^s.79/14, mb3.9/13, Mariana Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MJAR	**Matsushiro Arr**	**17.71**	**340**	P	**Pn**	**08 31 20.8**	**+0.2**
	0.3nm,0.3s,baz=160,slow=9.0,SNR=3.5						
H11S3	**WAKE ISLAND Hy**	**19.85**	**91**	T	T	08 52 55.2	
	baz=276,slow=75,SNR=15						
H11S1	**WAKE ISLAND Hy**	**19.86**	**91**	T	T	08 52 58.2	
	baz=276,slow=75,SNR=15						
H11S2	**WAKE ISLAND Hy**	**19.87**	**91**	T	T	08 52 56.7	
	baz=276,slow=75,SNR=14						
H11N1	**WAKE ISLAND Hy**	**19.91**	**87**	T	T	08 53 07.4	
	baz=274,slow=75,SNR=6.3						
H11N2	**WAKE ISLAND Hy**	**19.91**	**87**	T	T	08 52 44.7	
	baz=274,slow=75,SNR=4.3						
H11N3	**WAKE ISLAND Hy**	**19.93**	**87**	T	T	08 53 08.7	
	baz=274,slow=75,SNR=4.2						
KSRS	**Korea Array**	**23.27**	**322**	P	**P**	**08 32 21.8**	**+0.6**
	1.6nm,0.7s,baz=149,slow=8.6,SNR=5.4						
ASAJ	**Asahikawa**	**24.15**	**354**	LR	LR	08 44 43.9	
	comp=Z,4.5nm,18.2s,baz=40,slow=44						
WRA	**Warramunga Arr**	**41.27**	**196**	P	**P**	**08 34 59.2**	**+0.3**
	0.8nm,0.6s,baz=23,slow=8.8,SNR=12						
SONM	**Songino Array**	**42.12**	**320**	P	**P**	**08 35 05.8**	**0.0**
	0.4nm,0.4s,baz=135,slow=4.3,SNR=2.9						
ASAR	**Alice Springs**	**44.95**	**195**	P	**P**	**08 35 28.6**	**0.0**
	0.3nm,0.4s,baz=14,slow=6.8,SNR=5.6						
BRDH	**Bariadhala**	**50.21**	**283**	LR	LR	08 58 24.1	
	comp=Z,60nm,19.2s,baz=141,slow=37						
ZALV	**Zalesovo Beam**	**56.98**	**322**	P	**P**	**08 36 58.1**	**-0.5**
	0.9nm,0.5s,baz=130,slow=8.5,SNR=3.8						
MKAR	**Makanchi Array**	**57.56**	**313**	P	**P**	**08 37 03.8**	**+0.8**
	0.8nm,0.6s,baz=92,slow=9.4,SNR=8.5						
KURBB	**Kurchatov Arra**	**60.35**	**317**	P	**P**	**08 37 22.1**	**0.0**
	0.6nm,0.3s,baz=95,slow=7.4,SNR=2.7						
ILAR	**Eielson Array**	**62.44**	**27**	P	**P**	**08 37 35.9**	**-0.2**
	0.3nm,0.7s,baz=251,slow=4.7,SNR=3.7						
BVAR	**Borovoye Array**	**65.47**	**320**	P	**P**	**08 37 55.8**	**-0.4**
	0.5nm,0.3s,baz=94,slow=7.9,SNR=6.3						
YKA	**Yellowknife Ar**	**76.80**	**28**	P	**P**	**08 39 05.3**	**+0.8**
	0.3nm,0.6s,baz=283,slow=5.6,SNR=4.1						
ARCES	**ARCESS Array B**	**81.23**	**342**	P	**P**	**08 39 29.2**	**+0.5**
	3.9nm,1.1s,baz=26,slow=8.6,SNR=5.4						
FINES	**FINESS Array B**	**85.68**	**335**	P	**P**	**08 39 50.5**	**-1.2**
	1.2nm,0.5s,baz=67,slow=4.5,SNR=17						
HFS	**Hagfors**	**91.15**	**338**	P	**P**	**08 40 16.1**	**-1.7**
	1.4nm,0.8s,baz=48,slow=2.1,SNR=5.1						

*IDC **29** 08:32:10.6±2.3, 37°.69S×179°.99E, h0^{km}, mb4.2/2, mb1 4.3/4, mb1mx3.8/41, mbtmp4.1/4, ML3.5/2, Error ellipse: s-maj=55.7km s-min=27.4km az=144.0*
*NEIC **29** 08:32:11.8±0.0, 37°.64S×179°.70W, h50^{km}, ML4.2(WEL), After WEL.*
*WEL **29** 08:32:11.6, 38°S±9°×18°0W±°, h33^{km}, ML4.3/32*
ISC 29 08:32:10.6±3.6, 37°.78S±0°.07×179°.88W±0°.08, h7^{km}±22^{km}, n91, σ1^s.02/105, mb4.1/3, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**1.35**	**268**	Pn	**Pn**	**08 32 35.9**	**+0.1**
WMGZ				Sn	**Sb**	**08 32 53.6**	**0.0**
WMGZ	**Waiomatatini S**	**1.35**	**268**	P	**Pn**	**08 32 36.0**	**+0.1**
WMGZ				S	**Sb**	**08 32 53.9**	**+0.2**
MXZ	**Matakaoa Point**	**1.46**	**278**	Pn	**Pn**	**08 32 37.2**	**-0.1**
MXZ				Sn	**Sn**	**08 32 55.5**	**-1.0**
MXZ	**Matakaoa Point**	**1.46**	**278**	P	**Pn**	**08 32 37.3**	**+0.1**
MXZ				S	**Sn**	**08 32 55.8**	**-0.8**
PUZ	**Puketiti**	**1.50**	**258**	Pn	**Pn**	**08 32 38.1**	**+0.1**
PUZ	**Puketiti**	**1.50**	**258**	P	**Pn**	**08 32 38.4**	**+0.5**
PUZ				S	**Sn**	**08 32 57.5**	**-0.2**
PKGZ	**Pakihiroa**	**1.62**	**266**	P	**Pn**	**08 32 39.6**	**0.0**
CNGZ	**Carnagh Statio**	**1.66**	**244**	Pn	**Pb**	**08 32 41.5**	**-0.1**
CNGZ	**Carnagh Statio**	**1.66**	**244**	P	**Pb**	**08 32 41.7**	**+0.2**
TWGZ	**Tauwhareparae**	**1.74**	**256**	Pn	**Pn**	**08 32 41.7**	**+0.5**
TWGZ	**Tauwhareparae**	**1.74**	**256**	P	**Pn**	**08 32 41.8**	**+0.6**
TWGZ				S	**Sn**	**08 33 04.0**	**+0.4**
HAZ	**Te Kaha**	**1.85**	**270**	P	**Pn**	**08 32 43.0**	**+0.3**
TKGZ	**Te Karaka**	**1.91**	**249**	Pn	**Pn**	**08 32 44.2**	**+0.8**
TKGZ	**Te Karaka**	**1.91**	**249**	P	**Pn**	**08 32 44.3**	**+0.8**
TKGZ				S	**Sn**	**08 33 08.6**	**+0.9**
RUGZ	**Raukumara Rang**	**1.94**	**264**	P	**Pn**	**08 32 44.1**	**0.0**
RUGZ				S	**Sn**	**08 33 07.4**	**-1.4**
RIGZ	**Rimuhau**	**2.07**	**243**	P	**Pn**	**08 32 45.7**	**-0.1**
RIGZ				S	**Sn**	**08 33 12.2**	**+0.2**
PRGZ	**Paritu Road**	**2.10**	**236**	P	**Pn**	**08 32 47.4**	**+1.3**
MWZ	**Matawai**	**2.12**	**254**	Pn	**Pn**	**08 32 46.6**	**+0.1**
MWZ	**Matawai**	**2.12**	**254**	P	**Pn**	**08 32 46.6**	**+0.1**
MWZ				S	**Sn**	**08 33 12.1**	**-1.0**
MHGZ	**Mahia Peninsul**	**2.21**	**231**	Pn	**Pn**	**08 32 48.9**	**+1.2**
MHGZ	**Mahia Peninsul**	**2.21**	**231**	P	**Pn**	**08 32 48.9**	**+1.2**
RAGZ	**Rawiri**	**2.25**	**251**	Pn	**Pn**	**08 32 48.8**	**+0.5**
RAGZ	**Rawiri**	**2.25**	**251**	P	**Pn**	**08 32 48.7**	**+0.5**
KNZ	**Kokohu**	**2.29**	**236**	Pn	**Pn**	**08 32 49.3**	**+0.6**
KNZ	**Kokohu**	**2.29**	**236**	P	**Pn**	**08 32 49.2**	**+0.6**
KNZ				S	**Sn**	**08 33 17.4**	**+0.3**
SNGZ	**Shannon Statio**	**2.41**	**245**	Pn	**Pn**	**08 32 51.0**	**+0.7**
SNGZ	**Shannon Statio**	**2.41**	**245**	P	**Pn**	**08 32 51.6**	**+1.2**
SNGZ				S	**Sn**	**08 33 20.1**	**0.0**
URZ	**Urewera**	**2.42**	**258**	Pn	**Pn**	**08 32 51.6**	**+1.0**
	11nm,0.3s,baz=270,slow=2.9,SNR=64						
URZ				Sn	**Sn**	**08 33 20.6**	**+0.1**
	53nm,0.3s,baz=224,slow=19,SNR=39						
URZ	**Urewera**	**2.42**	**258**	P	**Pn**	**08 32 51.6**	**+1.0**
RTZ	**Ruatahuna**	**2.61**	**250**	P	**Pn**	**08 32 54.3**	**+1.1**
WHHZ	**Waihua**	**2.61**	**239**	P	**Pn**	**08 32 54.3**	**+1.2**
WHHZ				S	**Sn**	**08 33 25.9**	**+0.8**
RAHZ	**Arahi**	**2.64**	**244**	P	**Pn**	**08 32 54.9**	**+1.3**
MTHZ	**Maungataniwha**	**2.79**	**246**	P	**Pn**	**08 32 56.6**	**+0.9**
OPRZ	**Ohinepanea**	**2.82**	**268**	P	**Pn**	**08 32 56.1**	**0.0**
ARHZ	**Aropaoanui**	**2.86**	**238**	Pn	**Pn**	**08 32 57.9**	**+1.3**
ARHZ	**Aropaoanui**	**2.86**	**238**	P	**Pn**	**08 32 58.0**	**+1.4**
RRRZ	**Republican Roa**	**2.90**	**258**	P	**Pn**	**08 32 57.7**	**+0.6**
NMHZ	**Naumai**	**2.92**	**242**	Pn	**Pn**	**08 32 58.2**	**+0.9**
NMHZ	**Naumai**	**2.92**	**242**	P	**Pn**	**08 32 58.3**	**+0.9**
KARZ	**Kaharoa**	**3.08**	**264**	P	**Pn**	**08 32 59.9**	**+0.3**
MRHZ	**Matea Rd**	**3.10**	**249**	P	**Pn**	**08 33 00.8**	**+0.9**
MCHZ	**McNeill Hill**	**3.15**	**237**	Pn	**Pn**	**08 33 01.4**	**+0.8**
MCHZ	**McNeill Hill**	**3.15**	**237**	P	**Pn**	**08 33 01.5**	**+0.8**
BKZ	**Black Stump Fm**	**3.17**	**243**	Pn	**Pn**	**08 33 01.7**	**+0.8**
BKZ	**Black Stump Fm**	**3.17**	**243**	P	**Pn**	**08 33 01.5**	**+0.6**
KAHZ	**Kahuranaki**	**3.24**	**231**	P	**Pn**	**08 33 02.6**	**+0.8**
KWHZ	**Kaweka Forest**	**3.33**	**239**	P	**Pn**	**08 33 03.7**	**+0.6**
PXZ	**Pawanui**	**3.39**	**227**	P	**Pn**	**08 33 03.6**	**-0.3**
KRHZ	**Kereru**	**3.47**	**236**	P	**Pn**	**08 33 05.3**	**+0.2**
BHHZ	**Black Hill Sta**	**3.61**	**240**	Pn	**Pn**	**08 33 07.5**	**+0.6**
BHHZ	**Black Hill Sta**	**3.61**	**240**	P	**Pn**	**08 33 07.5**	**+0.6**
WPHZ	**Waipukurau**	**3.67**	**230**	P	**Pn**	**08 33 07.3**	**-0.4**
PNHZ	**Pukenui**	**3.73**	**234**	Pn	**Pn**	**08 33 08.8**	**+0.2**
PNHZ	**Pukenui**	**3.73**	**234**	P	**Pn**	**08 33 08.8**	**+0.2**
MOVZ	**Moawhango**	**3.79**	**243**	P	**Pn**	**08 33 11.1**	**+1.7**
WHVZ	**Whangaehu Hut**	**3.86**	**246**	P	**Pn**	**08 33 12.3**	**+1.8**
DVHZ	**Dannevirke**	**3.98**	**230**	Pn	**Pn**	**08 33 11.3**	**-0.7**
DVHZ	**Dannevirke**	**3.98**	**230**	P	**Pn**	**08 33 11.5**	**-0.4**
MKAZ	**Moumakai**	**4.00**	**278**	P	**Pn**	**08 33 12.5**	**+0.2**
BFZ	**Birch Farm**	**4.18**	**225**	Pn	**Pn**	**08 33 12.8**	**-1.9**
BFZ	**Birch Farm**	**4.18**	**225**	P	**Pn**	**08 33 13.0**	**-1.7**
ETAZ	**East Tamaki Re**	**4.22**	**280**	P	**Pn**	**08 33 15.8**	**+0.6**
PRWZ	**Pori Road**	**4.25**	**228**	Pn	**Pn**	**08 33 15.4**	**-0.2**
PRWZ	**Pori Road**	**4.25**	**228**	P	**Pn**	**08 33 15.5**	**-0.2**
POWZ	**Post Office Ro**	**4.28**	**231**	Pn	**Pn**	**08 33 16.2**	**+0.1**
POWZ	**Post Office Ro**	**4.28**	**231**	P	**Pn**	**08 33 16.2**	**+0.1**
TIWZ	**Tintock**	**4.44**	**226**	Pn	**Pn**	**08 33 17.4**	**-1.0**
TIWZ	**Tintock**	**4.44**	**226**	P	**Pn**	**08 33 17.4**	**-1.0**
WAZ	**Wanganui**	**4.47**	**242**	Pn	**Pn**	**08 33 20.2**	**+1.4**
WAZ	**Wanganui**	**4.47**	**242**	P	**Pn**	**08 33 20.8**	**+2.1**
RVAZ	**Riverhead Bore**	**4.53**	**281**	P	**Pn**	**08 33 20.7**	**+1.1**
MRZ	**Mangatainoka R**	**4.55**	**229**	Pn	**Pn**	**08 33 18.8**	**-1.1**
MRZ	**Mangatainoka R**	**4.55**	**229**	P	**Pn**	**08 33 18.8**	**-1.1**
HOWZ	**Holdsworth Sta**	**4.74**	**227**	Pn	**Pn**	**08 33 20.7**	**-1.7**
OGWZ	**Otaki Gorge**	**4.89**	**230**	P	**Pn**	**08 33 23.7**	**-0.8**
WCZ	**Waipu Caves**	**4.98**	**290**	P	**Pn**	**08 33 26.2**	**+0.5**
KIW	**Kapiti Island**	**5.08**	**231**	P	**Pn**	**08 33 26.2**	**-0.9**
CAW	**Cannon Point**	**5.13**	**228**	Pn	**Pn**	**08 33 26.4**	**-1.4**
TCW	**Tory Channel**	**5.67**	**231**	Pn	**Pn**	**08 33 33.7**	**-1.5**
TCW	**Tory Channel**	**5.67**	**231**	P	**Pn**	**08 33 33.9**	**-1.3**
CTZ	**Chatham Island**	**6.45**	**158**	Pn	**Pn**	**08 33 48.7**	**+2.9**
CTZ	**Chatham Island**	**6.45**	**158**	P	**Pn**	**08 33 48.9**	**+3.0**
QRZ	**Quartz Range**	**6.63**	**240**	Pn	**Pn**	**08 33 46.3**	**-2.1**
THZ	**Tophouse**	**6.83**	**232**	Pn	**Pn**	**08 33 49.1**	**-2.1**
LTZ	**Lake Taylor**	**7.81**	**228**	Pn	**Pn**	**08 34 01.8**	**-2.7**
RPZ	**Rata Peaks**	**9.08**	**226**	Pn	**Pn**	**08 34 21.6**	**-0.4**
	0.5nm,0.3s,baz=271,slow=4.3,SNR=2.8						
RPZ				Sn	Sn	08 35 54.0	-10
	3.0nm,0.3s,baz=309,slow=18,SNR=12						
HNR	**Honiara**	**33.58**	**322**	P	**P**	**08 38 51.7**	**+0.4**
	45nm,0.3s,baz=340,slow=23,SNR=6.5						
ASAR	**Alice Springs**	**41.74**	**276**	P	**P**	**08 40 00.2**	**-0.2**
	2.5nm,0.6s,baz=121,slow=8.2,SNR=23						
WRA	**Warramunga Arr**	**43.39**	**281**	P	**P**	**08 40 13.6**	**-0.3**
	1.4nm,0.4s,baz=121,slow=7.8,SNR=11						
ARCES	**ARCESS Array B**	**145.37**	**345**	PKPbc	**PKPab**	**08 51 49.1**	**+1.0**
	2.1nm,0.7s,baz=8.5,slow=2.5,SNR=5.9						
FINES	**FINESS Array B**	**151.32**	**334**	PKPbc	**PKPbc**	**08 52 03.6**	**-0.4**
	2.0nm,1.1s,baz=42,slow=2.3,SNR=4.2						

WEL 29 08:37:33.6, 38°S±16°×18°0W±1°1, h33^{km}, ML3.6/18, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	**Waiomatatini S**	**1.46**	**271**	P	Pn	08 37 58.2	+0.5
PUZ	**Puketiti**	**1.60**	**262**	P	Pn	08 38 00.2	+0.6
PKGZ	**Pakihiroa**	**1.73**	**269**	P	Pn	08 38 01.5	+0.1
TWGZ	**Tauwhareparae**	**1.83**	**259**	P	Pn	08 38 03.9	+1.1
HAZ	**Te Kaha**	**1.96**	**272**	P	Pn	08 38 05.2	+0.6
TKGZ	**Te Karaka**	**1.98**	**252**	P	Pn	08 38 06.2	+1.4
TKGZ				S	Sn	08 38 30.5	+1.9
RUGZ	**Raukumara Rang**	**2.04**	**266**	P	Pn	08 38 06.3	+0.5
RIGZ	**Rimuhau**	**2.14**	**246**	P	Pn	08 38 08.3	+1.3
RIGZ				S	Sn	08 38 33.7	+1.2
MWZ	**Matawai**	**2.21**	**257**	P	Pn	08 38 08.6	+0.7
MWZ				S	Sn	08 38 34.5	+0.4
RAGZ	**Rawiri**	**2.33**	**253**	P	Pn	08 38 11.7	+2.0
KNZ	**Kokohu**	**2.34**	**240**	P	Pn	08 38 11.4	+1.7
SNGZ	**Shannon Statio**	**2.47**	**247**	P	Pn	08 38 13.3	+1.7
URZ	**Urewera**	**2.52**	**260**	P	Pn	08 38 13.7	+1.5
URZ				S	Sn	08 38 41.8	+0.1
WHHZ	**Waihua**	**2.67**	**242**	P	Pn	08 38 16.0	+1.7
RTZ	**Ruatahuna**	**2.69**	**253**	P	Pn	08 38 16.2	+1.6
MTHZ	**Maungataniwha**	**2.86**	**249**	P	Pn	08 38 18.7	+1.7
MTHZ				S	Sn	08 38 51.4	+1.1
ARHZ	**Aropaoanui**	**2.91**	**240**	P	Pn	08 38 20.2	+2.5
NMHZ	**Naumai**	**2.98**	**245**	P	Pn	08 38 20.3	+1.7
MCHZ	**McNeill Hill**	**3.20**	**239**	P	Pn	08 38 23.6	+1.9
BKZ	**Black Stump Fm**	**3.23**	**245**	P	Pn	08 38 23.5	+1.5
KWHZ	**Kaweka Forest**	**3.38**	**241**	P	Pn	08 38 25.9	+1.7
BHHZ	**Black Hill Sta**	**3.66**	**242**	P	Pn	08 38 29.5	+1.5

IDC 29 08:41:15.8±4.4, 7°.00S×131°.96E, h0^{km}, mb3.6/1, mb1 3.4/3, mb1mx3.2/44, mbtmp3.3/3, ML2.9/2, Error ellipse: s-maj=306.9km s-min=32.8km az=74.0, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	**13.08**	**170**	Pn	Pn	08 44 23.4	+0.3
	0.1nm,0.3s,baz=350,slow=13,SNR=3.8						
WRA				Sn	Sn	08 46 38.5	-11
	0.1nm,0.3s,baz=352,slow=24,SNR=4.0						
ASAR	**Alice Springs**	**16.68**	**174**	Pn	Pn	08 45 10.9	-0.3
	0.0nm,0.3s,baz=351,slow=11,SNR=3.0						
MKAR	**Makanchi Array**	**69.30**	**326**	P	P	08 52 25.1	0.0
	0.3nm,0.5s,baz=132,slow=6.9,SNR=5.5						

*IDC **29** 08:41:22.9±3.5, 27°.95S×66°.83W, h140^{km}±31^{km}, mb3.4/2, mb1 3.3/5, mb1mx3.0/40, mbtmp3.7/5, Error ellipse: s-maj=39.5km s-min=23.4km az=100.0*
*ISCJB **29** 08:41:24.8±0.5, 27°.92S±0°.04×66°.70W±0°.05, h164^{km}, mb3.9/3, Error ellipse: s-maj=7.4km s-min=5.0km az=44.9*
*SJA **29** 08:41:24.3±0.9, 27°.94S×66°.72W, h184^{km}±5^{km}, ML3.4, MW3.3*
ISC 29 08:41:24.9±0.7, 27°.88S±0°.05×66°.73W±0°.06, h164^{km}, n25, σ1^s.42/34, mb3.9/3, 9D, Catamarca Province

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CYA	**Choya**	**0.99**	**125**	*e*P	**Pn**	**08 41 53.0**	**+2.0**
CYA				IAML		08 41 53.2	
	comp=Z,163nm,0.5s						
CYA				*e*S	**Sn**	**08 42 12.7**	**+1.7**
VCA	**Vinchina**	**1.56**	**236**	*e*P	**Pn**	**08 41 58.0**	**+1.7**
VCA				*e*S	**Sn**	**08 42 22.0**	**+1.5**
VCA				IAML		08 42 23.9	
	comp=Z,676nm,0.3s						
AHML	**Horco Molle**	**1.65**	**49**	⇓*e*P	**Pn**	**08 41 59.2**	**+2.0**
AHML				IAML		08 42 24.4	
	comp=Z,74nm,0.5s						
AGUA	**GUANDACOL**	**2.23**	**224**	⇓*e*P	**Pn**	**08 42 04.6**	**+1.1**
AGUA				*e*S	**Sn**	**08 42 34.7**	**+1.1**
AROD	**Rodeo**	**3.31**	**226**	⇓*e*P	**Pn**	**08 42 18.1**	**+1.1**
AROD				*e*S	**Sn**	**08 42 58.4**	**+0.8**
AMOG	**MOGNA**	**3.42**	**206**	*e*P	**Pn**	**08 42 18.1**	**+0.1**
AMOG				⇓*e*S	**Sn**	**08 42 58.9**	**-0.6**
LCO	**Las Campanas**	**3.67**	**251**	⇓*e*P	**Pn**	**08 42 21.8**	**+0.2**
LCO				*e*S	**Sn**	**08 43 04.7**	**-0.9**
RTLL	**Cerro Villicun**	**3.76**	**203**	*e*P	**Pn**	**08 42 22.5**	**+0.1**
RTLL				IAML		08 42 23.1	
	comp=Z,70nm,0.2s						
RTLL				*e*S	**Sn**	**08 43 05.4**	**-1.9**
TCA	**Tanti**	**3.91**	**152**	*e*P	**Pn**	**08 42 24.8**	**+0.4**
TCA				⇓*e*S	**Sn**	**08 43 08.9**	**-2.0**
TCA				IAML		08 43 09.8	
	comp=Z,35nm,0.5s						
RTCV	**Cerro Valdivia**	**4.27**	**201**	*e*P	**Pn**	**08 42 29.2**	**+0.2**
RTLS	**Leoncito**	**4.50**	**209**	*e*P	**Pn**	**08 42 32.6**	**+0.4**
RTLS				IAML		08 42 34.2	
	comp=Z,33nm,0.3s						
MRA	**San Martin**	**4.61**	**169**	*e*P	**Pn**	**08 42 33.7**	**+0.2**
MRA				IAML		08 43 40.7	
	comp=Z,29nm,0.4s						
AUSP	**Uspallata**	**4.90**	**207**	⇓*e*P	**Pn**	**08 42 37.9**	**+0.4**
ASAL	**Salagasta**	**5.04**	**201**	*e*P	**Pn**	**08 42 39.2**	**+0.1**
ARCO	**CERRO ARCO**	**5.30**	**201**	⇓*e*P	**Pn**	**08 42 42.8**	**+0.2**
ARCO				IAML		08 43 45.1	
	comp=Z,33nm,0.3s						
AAGR	**Agrelo**	**5.50**	**199**	⇓*e*P	**Pn**	**08 42 45.0**	**-0.1**
CPUP	**Villa Florida**	**8.52**	**82**	P	**Pn**	**08 43 24.6**	**-0.5**
	comp=Z,0.1nm,0.3s,baz=258,slow=14,SNR=3.0						
LPAZ	**La Paz**	**11.61**	**353**	P	**Pn**	**08 44 06.3**	**0.0**
	comp=Z,0.5nm,0.3s,baz=156,slow=5.9,SNR=13						
LPAZ				S	**Sn**	**08 46 10.2**	**-5.2**
	comp=Z,0.0nm,0.3s,baz=229,slow=20,SNR=1.9						
SIV	**San Ignacio**	**12.94**	**25**	P	**Pn**	**08 44 22.6**	**-0.3**
	comp=Z,0.1nm,0.3s,baz=194,slow=12,SNR=8.0						
PMSA	**Palmer Station**	**36.94**	**178**	P	**P**	**08 48 16.6**	**-1.1**
	comp=Z,24nm,0.9s,baz=40,slow=7.9,SNR=2.4						
QSPA	**South Pole Qui**	**62.34**	**180**	P	**P**	**08 51 30.5**	**+0.8**
	comp=Z,1.2nm,0.7s,baz=279,slow=2.9,SNR=5.4						
TORD	**Torodi Ar. Bea**	**77.76**	**68**	P	**P**	**08 53 05.9**	**+1.7**
	comp=Z,0.4nm,0.9s,baz=243,slow=6.3						
ASAR	**Alice Springs**	**125.02**	**203**	PKP	**PKPdf**	**09 00 06.5**	**+0.3**
	comp=Z,0.2nm,0.4s,baz=136,slow=1.8,SNR=4.8						
WRA	**Warramunga Arr**	**128.27**	**206**	PKP	**PKPdf**	**09 00 13.2**	**+0.7**
	comp=Z,0.3nm,0.3s,baz=154,slow=2.0,SNR=14						
MKAR	**Makanchi Array**	**149.25**	**44**	PKPbc	**PKPbc**	**09 00 54.0**	**+0.1**
	comp=Z,0.2nm,0.5s,baz=297,slow=2.7,SNR=3.5						

*IDC **29** 09:00:42.8±1.0, 52°.64S×18°.70E, h0^{km}, mb3.9/5, mb1 4.0/5, mb1mx3.7/48, mbtmp3.9/5, MS3.9/4, Ms1 3.8/4, ms1mx3.3/43, Error ellipse: s-maj=52.5km s-min=26.3km az=62.0*
*ISCJB **29** 09:00:44.3±1.8, 52°.8S±0°.2×19°.0E±0°.3, h10^{km}, mb3.9/6, MS3.9/4, Error ellipse: s-maj=39.0km s-min=19.9km az=142.1*
*NEIC **29** 09:00:44.4±0.7, 52°.69S×18°.73E, h10^{km}, mb4.0/2, Error ellipse: s-maj=24.2km s-min=17.6km az=78.0*
ISC 29 09:00:44.2±1.1, 52°.6S±0°.2×18°.8E±0°.2, h10^{km}, n26, σ1^s.08/19, mb4.0/6, MS3.9/4, 2C, Southwest of Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SYO	**Syowa Base**	**19.13**	**157**	⇑*e*P	**P**	**09 05 05.2**	**-1.8**
SYO	**Syowa Base**	**19.13**	**157**	⇑*e*P	**Pn**	**09 05 09.0**	**+1.2**
SNAA	**Sanae**	**21.36**	**199**	P	**P**	**09 05 31.8**	**+0.5**
SNAA	**Sanae**	**21.36**	**199**	*e*P	**P**	**09 05 31.3**	**0.0**
	5.7nm,0.9s						
VNA1	**Neumayer--Stat**	**21.82**	**204**	P	**P**	**09 05 38.0**	**+1.9**
VNA3	**Neumayer Olymp**	**22.56**	**204**	P	**P**	**09 05 44.0**	**-0.1**
BOSA	**Boshof**	**24.47**	**14**	LR	LR	09 14 10.8	
	comp=Z,88nm,18.9s,baz=202,slow=33						
MAW	**Mawson**	**25.84**	**142**	P	**P**	**09 06 15.5**	**+0.2**
	2.8nm,0.9s,baz=289,slow=9.5,SNR=5.2						
TSUM	**Tsumeb**	**33.37**	**358**	LR	LR	09 19 12.4	
	comp=Z,66nm,18.9s,baz=314,slow=33						
QSPA	**South Pole Qui**	**37.60**	**180**	P	**P**	**09 07 58.1**	**-0.6**
	3.0nm,0.7s,baz=227,slow=2.6,SNR=11						
QSPA	**South Pole Qui**	**37.60**	**180**	*e*P	**P**	**09 07 58.3**	**-0.4**
	3.0nm,0.8s						
VNDA	**Vanda**	**48.11**	**170**	P	**P**	**09 09 24.5**	**+1.1**
	0.6nm,0.7s,baz=242,slow=13,SNR=3.6						
VNDA	**Vanda**	**48.11**	**170**	*e*P	**P**	**09 09 22.6**	**-0.8**
H10S2	**ASCENSION HYDR**	**51.30**	**316**	T	T	10 05 17.7	
	baz=162						
H10S3	**ASCENSION HYDR**	**51.31**	**316**	T	T	10 05 10.9	
	baz=162						
H10S1	**ASCENSION HYDR**	**51.32**	**316**	T	T	10 05 17.4	
	baz=162						
ASAR	**Alice Springs**	**85.46**	**124**	P	**P**	**09 13 21.7**	**-0.5**
	0.9nm,0.9s,baz=203,slow=4.8,SNR=6.0						
AS01	**Alice Springs**	**85.49**	**124**	*e*P	**P**	**09 13 21.4**	**-0.9**
PSI	**Prapat**	**86.23**	**80**	LR	LR	09 44 41.9	
	comp=Z,147nm,20.7s,baz=97,slow=31						
WRA	**Warramunga Arr**	**88.78**	**122**	P	**P**	**09 13 39.3**	**+1.0**
	0.4nm,0.8s,baz=213,slow=4.4,SNR=3.0						
WR1	**Warramunga Arr**	**88.78**	**122**	*e*P	**P**	**09 13 39.3**	**+1.0**
BATI	**Baumata**	**90.83**	**108**	LR	LR	09 51 16.7	
	comp=Z,133nm,19.3s,baz=113,slow=33						
PDAR	**Pinedale Array**	**144.56**	**275**	PKP	**PKPab**	**09 20 17.9**	**-1.1**
	0.7nm,0.7s,baz=125,slow=4.5,SNR=8.8						
NVAR	**Mina Array Bea**	**147.28**	**262**	PKPbc	**PKPbc**	**09 20 27.4**	**-0.1**
	0.9nm,0.7s,baz=126,slow=4.6,SNR=10						
YKA	**Yellowknife Ar**	**153.70**	**310**	PKPbc	**PKPbc**	**09 20 40.7**	**-1.2**
	0.3nm,0.9s,baz=93,slow=3.1,SNR=3.5						
ILAR	**Eielson Array**	**165.78**	**334**	PKPab	**PKPab**	**09 21 48.8**	**+1.5**
	0.5nm,0.8s,baz=33,slow=2.5,SNR=6.6						

*NIED **29** 09:20:00, 47°.20N×139°.50E, h620^{km}, Mw5.7 Best double couple: $M_0$4.55000×10^{17} NP1:ϕ_s334.00000°, δ32.00000°, λ36.00000°. NP2:ϕ_s212.00000°, δ72.00000°, λ117.00000°.*
*JMA **29** 09:20:52.8±0.2, 47°.19N×139°.46E, h528^{km}, M5.7*
JMA Felt I J1.
*SKHL **29** 09:20:53.0±0.9, 47°.26N×139°.30E, h504^{km}±8^{km}, mb6.6/8, msh6.5/12*
*MOS **29** 09:20:53.3±0.8, 47°.34N×139°.17E, h498^{km}, mb5.6/146, Error ellipse: s-maj=5.8km s-min=3.5km az=111.4*

ISCJB ***29*** *09:20:53.1±0.1, 47°.37N±0°.01×139°.09E±0°.01, h492^{km}±1^{km}, mb5.5/811, Error ellipse: s-maj=1.8km s-min=1.4km az=157.9*

BJI ***29*** *09:20:53.4, 47°.35N×139°.09E, h498^{km}, mb6.0/75, mB5.6/42*

NEIC ***29*** *09:20:54.0±0.0, 47°.26N×139°.16E, h510^{km}, Moment Tensor Solution. s28 Moment tensor: Scale 10^{17}Nm; M_{rr}2.87; $M_{\theta\theta}$-0.46; $M_{\phi\phi}$-2.41; $M_{r\theta}$-0.91; $M_{\theta\phi}$-0.87; $M_{\phi r}$-0.25; Best double couple: $M_0$3.00000×10^{17} NP1: ϕ_s214.00000°, δ52.00000°, λ106.00000°. NP2: ϕ_s8.00000°, δ41.00000°, λ70.00000°. Principal axes: T 3.1000, Plg75.0000°, Azm178.0000°; N -0.3000, Plg12.0000°, Azm23.0000°; P -2.7900, Plg5.0000°, Azm292.0000°;*

NEIC ***29*** *09:20:55.0±0.1, 47°.38N×139°.07E, mb5.6/294, MW5.7, MW5.6 Error ellipse: s-maj=2.2km s-min=1.6km az=146.0, Moment Tensor Solution. s53 Moment tensor: Scale 10^{17}Nm; M_{rr}3.76; $M_{\theta\theta}$0.58; $M_{\phi\phi}$-4.34; $M_{r\theta}$-2.33; $M_{\theta\phi}$-1.29; $M_{\phi r}$-0.99; Best double couple: $M_0$5.00000×10^{17} NP1: ϕ_s218.00000°, δ60.00000°, λ119.00000°. NP2: ϕ_s350.00000°, δ41.00000°, λ50.00000°. Principal axes: T 5.0000, Plg63.0000°, Azm176.0000°; N -0.0500, Plg25.0000°, Azm23.0000°; P -4.9500, Plg11.0000°, Azm288.0000°;*

NEIC Felt at Vostochnoye. Recorded [1 JMA] in south-central and northern Hokkaido, Japan. Also recorded [1 JMA] in Aomori, Iwate and Miyagi, Honshu.

IDC ***29*** *09:20:55.1±0.3, 47°.36N×139°.10E, h505^{km}±2^{km}, mb5.0/65, mb1 5.0/76, mb1mx5.0/79, mbtmp5.8/76 Error ellipse: s-maj=4.8km s-min=4.3km az=69.0*

GCMT ***29*** *09:20:55.0±0.1, 47°.29N×138°.90E, h507^{km}±1^{km}, MW5.7/123, Moment Tensor Solution. s123, c234; s61, c64; Duration: 1s.8 Moment tensor: Scale 10^{17}Nm; M_{rr}3.46±.05; $M_{\theta\theta}$0.83±.08; $M_{\phi\phi}$-4.29±.08; $M_{r\theta}$-2.05±.08; $M_{\theta\phi}$-0.88±.07; $M_{\phi r}$-1.23±.08; Best double couple: $M_0$4.69200×10^{17} NP1: ϕ_s214.00000°, δ61.00000°, λ119.00000°. NP2: ϕ_s345.00000°, δ40.00000°, λ49.00000°. Principal axes: T 4.6310, Plg62.0000°, Azm171.0000°; N 0.1230, Plg25.0000°, Azm19.0000°; P -4.7520, Plg11.0000°, Azm283.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to mantle waves, cutoff=125s.*

ISC 29 09:20:55.0±0.2**, 47°.39N**±0°.02×**139°.13E**±0°.02**, h506**^{km}±1^{km}**, h505**^{km}**:pP-P, n2580,** σ1s.**44**/3259**, mb5.5**/876**, 101C-167D, Primorye**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YSS	**Yuzh-Sakhalins**	**2.51**	**99**	⇓*i*P	**P**	**09 22 02.6**	**-0.8**
YSS				AMB	AMB	09 22 03.8	
	40μm,0.5s						
YSS				AMB	AMB	09 22 04.0	
	37μm,0.5s						
YSS				*e*S	**S**	**09 22 56.6**	**-2.5**
YSS				A	A	09 22 58.3	
	76μm,3.0s						
YSS				A	A	09 22 58.5	
	48μm,1.1s						
YSS				A	A	09 22 58.5	
	19μm,1.1s						
YSS	**Yuzh-Sakhalins**	**2.51**	**99**	κ *i*PN	**P**	**09 22 02.6**	**-0.8**
YSS				*e*S	**S**	**09 22 57.5**	**-1.6**
YSS				pmax	pmax		
	comp=Z,41μm,0.6s						
YSS				pmax	pmax		
	comp=E,16μm,0.8s						
YSS				pmax	pmax		
	comp=Z,43μm,0.7s						
YSS				pmax	pmax		
	comp=E,19μm,0.8s						
YSS				smax	smax		
	comp=E,76μm,2.8s						
YSS				smax	smax		
	comp=N,51μm,1.0s						
YSS				smax	smax		
	comp=E,22μm,0.9s						
YSS				MLR	MLR		
	comp=Z,6μm,5.0s						
UGL	**Uglegorsk**	**2.59**	**48**	⇑*i*P	**P**	**09 22 03.6**	**-0.1**
UGL				AMB	AMB	09 22 05.0	
	comp=Z,24μm,0.9s						
UGL				AMB	AMB	09 22 05.0	
	comp=Z,40μm,1.0s						
UGL				*e*S	**S**	**09 22 58.5**	**-1.4**
UGL				A	A	09 23 01.0	
	comp=Z,84μm,2.4s						
UGL				A	A	09 23 01.0	
	comp=Z,142μm,2.4s						
UGL				A	A	09 23 01.0	
	comp=Z,24μm,2.4s						
UGL				A	A	09 23 01.5	
	comp=Z,10μm,1.0s						
UGL				A	A	09 23 01.5	
	comp=Z,20μm,1.0s						
JRR	**Rishiri**	**2.71**	**145**	P	**P**	**09 22 03.4**	**-1.3**
JRR				*e*S	**S**	**09 23 00.3**	**-1.0**
JWK2	**Keihoku**	**2.82**	**136**	⇓P	**P**	**09 22 03.8**	**-1.6**
JWK2				*e*S	**S**	**09 23 00.3**	**-2.3**
TEY	**Ternei**	**2.93**	**218**	⇑*i*P	**P**	**09 22 05.1**	**-1.0**
TEY				AMB	AMB	09 22 06.2	
	comp=Z,3μm,1.2s						
TEY				*i* S	**S**	**09 23 02.4**	**-1.5**
TEY				A	A	09 23 03.7	
	comp=Z,34μm,6.0s						
TEY				A	A	09 23 03.7	
	comp=Z,15μm,6.0s						
TEY	**Ternei**	**2.93**	**218**	⇑*e*PN	**P**	**09 22 05.1**	**-1.0**
TEY				*e*S	**S**	**09 22 59.4**	**-4.5**
TEY				pmax	pmax		
	comp=Z,3μm,1.2s						
TEY				smax	smax		
	comp=E,1μm,1.4s						
TEY				smax	smax		
	comp=N,2μm,1.7s						
TEY				smax	smax		
	comp=N,34μm,5.0s						
TEY				MLR	MLR		
	comp=N,7μm,16.0s						
KHBR	**Khabarovsk**	**2.95**	**293**	⇑*i*P	**P**	**09 22 06.5**	**+0.5**
KHBR				*e*rx	rx	09 22 59.3	
KHBR				*e*S	**S**	**09 23 03.9**	**-0.1**
JYG	**Yagishiri**	**3.37**	**151**	⇓P	**P**	**09 22 07.1**	**-2.0**
JYG				*e*S	**S**	**09 23 06.2**	**-3.1**
JSE	**Soyaes**	**3.42**	**134**	P	**P**	**09 22 07.1**	**-2.3**
JSE				*e*S	**S**	**09 23 05.9**	**-4.0**
JSS	**Shosan**	**3.54**	**147**	⇓P	**P**	**09 22 08.8**	**-1.6**
GRNR	**Gornyy**	**3.82**	**333**	⇑*i*P	**P**	**09 22 12.4**	**+0.1**
GRNR				AMB	AMB	09 22 12.8	
	comp=N,1μm,0.5s						
GRNR				A	A	09 23 15.3	
	comp=N,1μm,0.5s						
GRNR				*e*S	**S**	**09 23 15.4**	**-0.1**
GRNR	**Gornyy**	**3.82**	**333**	⇑*i*PN	**P**	**09 22 15.5**	**+3.2**
GRNR				*e*S	**S**	**09 23 18.2**	**+2.7**
GRNR				pmax	pmax		
	comp=E,480nm,0.5s						
GRNR				pmax	pmax		
	comp=Z,1μm,0.5s						
GRNR				smax	smax		
	comp=E,1μm,0.5s						
GRNR				smax	smax		
	comp=Z,810nm,0.5s						
ASAJ	**Asahikawa**	**4.07**	**142**	P	**P**	**09 22 12.4**	**-2.1**
	comp=Z,860nm,0.3s,baz=308,slow=7.6,SNR=2014						
ASAJ				S	**S**	**09 23 16.0**	**-3.3**
	comp=Z,28nm,0.3s,baz=113,slow=28,SNR=7.1						
ASAJ	**Asahikawa**	**4.07**	**142**	⇓P	**P**	**09 22 12.1**	**-2.4**
JHR	**Hokuryu**	**4.08**	**152**	⇓P	**P**	**09 22 12.9**	**-1.6**
JSK	**Shakotan**	**4.15**	**166**	⇓P	**P**	**09 22 12.8**	**-2.3**
JSK				*e*S	**S**	**09 23 16.0**	**-4.3**
JKK2	**Kamakawa 2**	**4.34**	**143**	⇓P	**P**	**09 22 14.4**	**-2.3**
JAB	**Ashibetsu**	**4.45**	**150**	⇓P	**P**	**09 22 15.5**	**-2.1**
JMP	**Maruseppu**	**4.50**	**137**	⇓P	**P**	**09 22 15.4**	**-2.6**
JTKR	**Abashiri--Toko**	**4.79**	**134**	⇓P	**P**	**09 22 18.0**	**-2.4**
JSH	**Shimam**	**4.79**	**172**	⇓P	**P**	**09 22 17.9**	**-2.6**
JEW	**Eniwo**	**4.83**	**159**	⇓P	**P**	**09 22 18.8**	**-2.1**
JEW				*e*S	**S**	**09 23 27.0**	**-4.0**
JFR	**Furan**	**4.88**	**149**	⇓P	**P**	**09 22 18.3**	**-3.1**
JNB	**Noboribetsu**	**5.10**	**164**	⇓P	**P**	**09 22 20.5**	**-2.8**
JNB				S	**S**	**09 23 30.4**	**-4.9**
JBT2	**Biratori 2**	**5.15**	**152**	⇓P	**P**	**09 22 20.5**	**-3.2**
JAR	**Ashorobuto**	**5.24**	**140**	⇓P	**P**	**09 22 22.0**	**-2.5**
JAR				*e*S	**S**	**09 23 32.1**	**-5.5**
KLR	**Kul'dur**	**5.26**	**293**	P	**P**	**09 22 24.9**	**+0.4**
	comp=Z,25nm,0.3s,baz=102,slow=6.3,SNR=4743						
KLR				S	**S**	**09 23 38.4**	**+0.6**
	comp=Z,2.8nm,0.3s,baz=194,slow=23,SNR=15						
KLR				ScP	**ScP**	**09 31 11.6**	**+1.4**
	comp=Z,0.1nm,0.3s,baz=50,slow=0.8,SNR=7.8						
JOSM	**Okushiri--Mats**	**5.31**	**177**	P	**P**	**09 22 22.7**	**-2.5**
JOSM				*e*S	**S**	**09 23 34.0**	**-4.8**
JYM2	**Yakumo 2**	**5.34**	**170**	⇓P	**P**	**09 22 22.6**	**-2.9**
JRA	**Rausu**	**5.44**	**127**	⇓P	**P**	**09 22 23.9**	**-2.4**
JOB	**Onbets**	**5.58**	**142**	⇓P	**P**	**09 22 24.2**	**-3.5**
JCH	**Churui**	**5.64**	**146**	P	**P**	**09 22 23.7**	**-4.5**
JCH				*e*S	**S**	**09 23 35.7**	**-8.6**
JKB	**Kayabe**	**5.67**	**165**	⇓P	**P**	**09 22 25.4**	**-3.1**
JKB				*e*S	**S**	**09 23 38.9**	**-5.9**
JNBK	**Urakawa-nobuka**	**5.72**	**152**	*e*S	**S**	**09 23 38.2**	**-7.5**
LAGR	**Lagunnoye**	**5.73**	**123**	*e*P	**P**	**09 22 27.2**	**-1.8**
LAGR				AMB	AMB	09 22 41.0	
	comp=Z,5μm,0.6s						
LAGR				AMB	AMB	09 22 41.0	
	comp=Z,8μm,0.6s						
LAGR				AMB	AMB	09 22 41.0	
	comp=Z,7μm,0.6s						
LAGR				*e*S	**S**	**09 23 42.3**	**-3.5**
LAGR	**Lagunnoye**	**5.73**	**123**	*e*PN	**P**	**09 22 27.2**	**-1.8**
LAGR				*e*S	**S**	**09 23 42.3**	**-3.5**
LAGR				pmax	pmax		
	comp=E,8μm,0.6s						
LAGR				pmax	pmax		
	comp=N,5μm,0.8s						
GRPR	**Tuman**	**5.76**	**124**	*e*P	**P**	**09 22 27.5**	**-1.8**
GRPR				AMB	AMB	09 22 30.0	
	comp=N,1μm,0.5s						
GRPR				AMB	AMB	09 22 30.0	
	comp=N,3μm,0.5s						
GRPR				AMB	AMB	09 22 30.0	
	comp=N,3μm,0.5s						
GRPR				*e*S	**S**	**09 23 43.2**	**-3.2**
GRPR	**Tuman**	**5.76**	**124**	*c* *i*PN	**P**	**09 22 27.5**	**-1.8**
GRPR				*e*S	**S**	**09 23 43.2**	**-3.2**
GRPR				pmax	pmax		
	comp=Z,3μm,0.4s						
GRPR				pmax	pmax		
	comp=E,3μm,0.8s						
GRPR				pmax	pmax		
	comp=N,1μm,0.5s						
GLVR	**Golovnino**	**5.78**	**127**	*e*P	**P**	**09 22 27.3**	**-2.2**
GLVR				AMB	AMB	09 22 32.4	
	comp=N,1μm,0.3s						
GLVR				AMB	AMB	09 22 32.4	
	comp=N,1μm,0.3s						
GLVR				AMB	AMB	09 22 32.4	
	comp=N,5μm,0.3s						
GLVR				*e*S	**S**	**09 23 42.0**	**-4.8**
GLVR	**Golovnino**	**5.78**	**127**	*e*PN	**P**	**09 22 27.3**	**-2.2**
GLVR				*e*S	**S**	**09 23 42.0**	**-4.8**
GLVR				pmax	pmax		
	comp=Z,5μm,0.4s						
GLVR				pmax	pmax		
	comp=N,1μm,0.2s						
GLVR				pmax	pmax		
	comp=E,1μm,0.2s						
YUK	**Yuzh-Kuril'sk**	**5.79**	**123**	⇓*i*P	**P**	**09 22 26.8**	**-2.7**
YUK				AMB	AMB	09 22 32.6	
	comp=E,2μm,0.7s						
YUK				AMB	AMB	09 22 32.6	
	comp=E,2μm,0.7s						
YUK				AMB	AMB	09 22 32.6	
	comp=E,4μm,0.7s						
YUK				*i* S	**S**	**09 23 41.8**	**-5.0**
YUK	**Yuzh-Kuril'sk**	**5.79**	**123**	*d* *i*PN	**P**	**09 22 26.8**	**-2.7**
YUK				*i* S	**S**	**09 23 41.8**	**-5.0**
YUK				pmax	pmax		
	comp=Z,4μm,0.7s						
YUK				pmax	pmax		
	comp=N,2μm,0.4s						
YUK				pmax	pmax		
	comp=E,2μm,0.4s						
YUK				MLR	MLR		
	comp=E,841nm,12.0s						
YUK				MLR	MLR		
	comp=Z,1μm,12.0s						
YUK				MLR	MLR		
	comp=N,675nm,9.0s						
NKL	**Nikolayevsk**	**5.85**	**9**	⇑*i*P	**P**	**09 22 30.0**	**+0.1**
NKL				AMB	AMB	09 22 33.5	
	comp=N,24μm,6.0s						
NKL				*i* S	**S**	**09 23 48.0**	**+0.2**
NKL				A	A	09 23 52.0	
	comp=N,34μm,6.0s						
NKL	**Nikolayevsk**	**5.85**	**9**	*i* PN	**P**	**09 22 30.0**	**+0.1**
NKL				*i* S	**S**	**09 23 48.0**	**+0.2**
NKL				pmax	pmax		
	comp=E,420nm,0.8s						
NKL				pmax	pmax		
	comp=Z,470nm,0.8s						
NKL				pmax	pmax		
	comp=N,9μm,4.0s						
NKL				pmax	pmax		
	comp=E,4μm,4.0s						
NKL				pmax	pmax		
	comp=Z,240nm,6.0s						
NKL				smax	smax		
	comp=N,34μm,4.0s						
NKL				smax	smax		
	comp=E,34μm,4.0s						
NKL				MLR	MLR		
	comp=N,3μm,7.0s						
NKL				MLR	MLR		
	comp=E,2μm,7.0s						
NKL				MLR	MLR		
	comp=Z,4μm,7.0s						
JAK	**Akkeshi**	**5.90**	**136**	⇓P	**P**	**09 22 26.1**	**-4.5**
JAK				*e*S	**S**	**09 23 39.8**	**-8.9**
USRK	**Ussuriysk Ar.**	**5.92**	**240**	P	**P**	**09 22 30.4**	**-0.4**
	baz=57,slow=10						
USRK				S	**S**	**09 23 46.3**	**-2.9**
	baz=38,slow=15						
USRK				ScP	**ScP**	**09 31 11.5**	**+0.7**
	baz=118,slow=3.8						
JSR	**Shiriuchi**	**5.93**	**171**	P	**P**	**09 22 28.0**	**-3.0**
JEM	**Erimo**	**6.09**	**150**	⇓P	**P**	**09 22 29.1**	**-3.4**
ERM	**Erimo**	**6.09**	**150**	*e*P	**P**	**09 22 29.3**	**-3.2**
ERM	**Erimo**	**6.09**	**150**	*e*P	**P**	**09 22 29.9**	**-2.6**
ERM				*e*S	**S**	**09 23 45.9**	**-6.2**
ERM	**Erimo**	**6.09**	**150**	*c* *i*PN	**P**	**09 22 29.3**	**-3.2**
ERM				pmax	pmax		
	comp=Z,5μm,0.8s						
GRTR	**Gornotajezhnoj**	**6.12**	**236**	⇓*i*P	**P**	**09 22 31.9**	**-0.9**
GRTR				*e*rx	rx	09 23 10.3	
GRTR				sP		09 23 45.0	
GRTR				*e*S	**S**	**09 23 49.7**	**-3.1**
NEM2	**Nemuro 2**	**6.15**	**128**	P	P	09 22 28.0	-5.1
JOT	**Ohata**	**6.16**	**166**	⇓P	**P**	**09 22 29.7**	**-3.5**
JSI2	**Shiura 2**	**6.40**	**171**	⇓P	**P**	**09 22 32.4**	**-3.1**
KUR	**Kuril'sk**	**6.42**	**106**	*e*P	**P**	**09 22 33.5**	**-2.1**
KUR				AMB	AMB	09 22 37.0	
	comp=Z,697nm,0.4s						
KUR				AMB	AMB	09 22 37.0	
	comp=Z,819nm,0.4s						
KUR				AMB	AMB	09 22 37.0	
	comp=Z,3μm,0.4s						
KUR				*e*S	**S**	**09 23 52.8**	**-5.2**
KUR	**Kuril'sk**	**6.42**	**106**	*d* *i*PN	**P**	**09 22 33.5**	**-2.1**
KUR				*e*S	**S**	**09 23 52.8**	**-5.2**
KUR				pmax	pmax		
	comp=N,697nm,0.3s						
KUR				pmax	pmax		
	comp=E,819nm,0.5s						
KUR				MLR	MLR		
	comp=Z,1μm,12.0s						
KUR				MLR	MLR		
	comp=N,743nm,16.0s						
KUR				MLR	MLR		
	comp=E,457nm,9.0s						
SHO	**Shikotan**	**6.44**	**120**	*i* P	**P**	**09 22 32.1**	**-3.8**
SHO				AMB	AMB	09 22 35.2	
	comp=E,1μm,0.2s						
SHO				AMB	AMB	09 22 35.2	
	comp=E,593nm,0.2s						
SHO				AMB	AMB	09 22 35.2	
	comp=E,2μm,0.2s						
SHO				*i* S	**S**	**09 23 49.9**	**-8.5**
SHO	**Shikotan**	**6.44**	**120**	*d* *i*PN	**P**	**09 22 32.1**	**-3.8**
SHO				*i* S	**S**	**09 23 49.9**	**-8.5**
SHO				pmax	pmax		
	comp=N,1μm,0.2s						
SHO				pmax	pmax		
	comp=E,593nm,0.2s						
SHO				pmax	pmax		
	comp=Z,3μm,0.2s						
SHO				MLR	MLR		
	comp=Z,1μm,11.0s						
SHO				MLR	MLR		
	comp=N,836nm,12.0s						
SHO				MLR	MLR		
	comp=E,1μm,10.0s						
OKH	**Okha**	**6.63**	**20**	*i* P	**P**	**09 22 39.0**	**+1.6**
OKH				AMB	AMB	09 22 39.9	
	comp=E,18μm,3.0s						
OKH				*i* S	**S**	**09 24 03.0**	**+1.5**
OKH				A	A	09 24 06.4	
	comp=E,37μm,5.0s						
OKH				A	A	09 24 06.4	
	comp=E,28μm,5.0s						
OKH	**Okha**	**6.63**	**20**	⇑*i*PN	**P**	**09 22 39.0**	**+1.6**
OKH				*i* S	**S**	**09 24 03.0**	**+1.5**
OKH				pmax	pmax		
	comp=Z,18μm,2.5s						
OKH				smax	smax		
	comp=N,37μm,5.1s						
OKH				smax	smax		
	comp=E,28μm,4.7s						
JTM	**Tenmabayashi**	**6.75**	**167**	⇓P	**P**	**09 22 35.5**	**-3.4**
JIW	**Iwasaki**	**6.82**	**174**	⇓P	**P**	**09 22 37.3**	**-2.4**
EKMR	**Ekimchan**	**6.93**	**327**	⇓*i*P	**P**	**09 22 40.8**	**+0.3**
EKMR				AMB	AMB	09 22 45.4	
	comp=E,2μm,2.3s						
EKMR				AMB	AMB	09 22 45.5	
	comp=E,800nm,0.6s						
EKMR				AMB	AMB	09 22 46.2	
	comp=E,360nm,0.6s						
EKMR				*e*S	**S**	**09 24 07.8**	**+0.7**
EKMR				*e*S	S	09 24 12.7	+5.6
EKMR				A	A	09 24 13.9	
	comp=E,1μm,1.0s						
EKMR				A	A	09 24 13.9	
	comp=E,990nm,1.0s						
EKMR				A	A	09 24 15.8	
	comp=E,5μm,3.0s						
EKMR				A	A	09 24 17.7	
	comp=E,370nm,1.0s						
MDJ	**Mudanjiang**	**7.20**	**251**	P	**P**	**09 22 40.0**	**-3.3**
MDJ				S	**S**	**09 24 06.3**	**-5.8**
MDJ	**Mudanjiang**	**7.20**	**251**	*e*P	**P**	**09 22 42.8**	**-0.6**
JANG	**Nango**	**7.22**	**165**	P	**P**	**09 22 39.9**	**-3.8**
JANG				*e*S	**S**	**09 24 04.4**	**-8.3**
JAH	**Hinai**	**7.28**	**171**	P	**P**	**09 22 41.8**	**-2.5**
MSHR	**Mys Shultsa**	**7.42**	**233**	*d* *i*PN	**P**	**09 22 44.5**	**-1.1**
JYW	**Yuwa**	**7.88**	**174**	⇓P	**P**	**09 22 48.9**	**-1.5**
JOM	**Ohasama**	**8.07**	**168**	⇓P	**P**	**09 22 49.9**	**-2.4**
JOM				*e*S	**S**	**09 24 21.7**	**-6.8**
JTB	**Tobi-shima**	**8.20**	**178**	⇑P	**P**	**09 22 52.0**	**-1.6**
JYK	**Kaneyama**	**8.51**	**174**	⇑P	**P**	**09 22 54.9**	**-2.0**
JMK	**Ichinoseki**	**8.57**	**169**	⇑P	**P**	**09 22 55.2**	**-2.3**
JMK				*e*S	**S**	**09 24 31.6**	**-6.4**
JYA	**Atsumi**	**8.80**	**177**	⇑P	**P**	**09 22 58.1**	**-1.8**
JAW	**Awa shima**	**8.93**	**179**	⇑P	**P**	**09 22 59.4**	**-1.8**
JAW				S	**S**	**09 24 41.6**	**-3.2**
JIO	**Ouri**	**9.08**	**169**	⇑P	**P**	**09 23 00.2**	**-2.6**
JSD	**Sado**	**9.37**	**184**	⇑P	**P**	**09 23 04.3**	**-1.5**
JSD				S	**S**	**09 24 49.8**	**-3.5**
JNS	**Sasagawa**	**9.56**	**179**	⇑P	**P**	**09 23 06.8**	**-1.1**
JNS				S	**S**	**09 24 54.2**	**-2.9**
JMM	**Marumori**	**9.60**	**172**	⇑P	**P**	**09 23 05.9**	**-2.3**
JHG	**Hegura jima**	**9.67**	**190**	⇑P	**P**	**09 23 08.3**	**-0.7**
JHG				S	**S**	**09 24 58.0**	**-1.1**
BMKR	**Bomnak**	**9.77**	**322**	⇓*i*P	**P**	**09 23 10.0**	**+0.2**
BMKR				AMB	AMB	09 23 12.8	
	comp=E,1μm,0.5s						
BMKR				*e*S	**S**	**09 25 00.5**	**-0.2**
JIZZ	**Izumozaki**	**9.86**	**182**	⇑P	**P**	**09 23 09.9**	**-1.0**
JIZZ				S	**S**	**09 25 00.2**	**-2.5**
ZEA	**Zeya**	**9.87**	**314**	⇓*i*P	**P**	**09 23 11.1**	**+0.3**
ZEA				AMB	AMB	09 23 13.5	
	comp=E,2μm,0.8s						
ZEA				AMB	AMB	09 23 14.0	
	comp=E,5μm,5.0s						
ZEA				sP		09 24 47.0	
ZEA				*e*S	**S**	**09 25 02.0**	**-0.5**
ZEA				A	A	09 25 09.0	
	comp=E,12μm,6.5s						
ZEA				A	A	09 25 09.0	
	comp=E,25μm,6.5s						
ZEA	**Zeya**	**9.87**	**314**	*d* *i*PN	**P**	**09 23 11.1**	**+0.3**
ZEA				*e*S	**S**	**09 24 58.0**	**-4.5**
ZEA				pmax	pmax		
	comp=N,2μm,1.0s						
ZEA				pmax	pmax		
	comp=E,1μm,1.0s						
ZEA				pmax	pmax		
	comp=Z,2μm,0.8s						
ZEA				pmax	pmax		
	comp=E,4μm,5.0s						
ZEA				pmax	pmax		
	comp=Z,5μm,5.0s						
ZEA				pmax	pmax		
	comp=N,5μm,6.0s						
ZEA				smax	smax		
	comp=E,25μm,7.0s						
ZEA				smax	smax		
	comp=N,12μm,6.0s						
JFT	**Otama**	**9.90**	**174**	⇑P	**P**	**09 23 09.5**	**-2.0**
JSZ	**Suzu**	**10.02**	**188**	⇑P	**P**	**09 23 11.9**	**-0.8**
JSZ				S	**S**	**09 25 04.4**	**-1.4**
JHK	**Hiroka**	**10.13**	**181**	⇑P	**P**	**09 23 12.0**	**-1.9**
JHK				S	**S**	**09 25 03.6**	**-4.5**
CN2	**Changchun**	**10.24**	**254**	⇓*i*P	**P**	**09 23 13.8**	**-1.0**
CN2				*e*sP		09 24 53.0	
CN2				*e*S	**S**	**09 25 06.8**	**-3.1**
CN2				pmax	pmax		
	comp=N,9μm,3.0s						
JJN	**Nakama**	**10.30**	**184**	P	**P**	**09 23 14.5**	**-1.2**
ONAJ	**Iwakimizuishiy**	**10.35**	**173**	P	**P**	**09 23 13.7**	**-2.6**
KROS	**Kirovskiy**	**10.41**	**317**	⇓*i*P	**P**	**09 23 16.1**	**-0.4**
KROS				AMB	AMB	09 23 22.6	
	comp=N,270nm,0.4s						
JSB	**Shiboa**	**10.43**	**176**	P	**P**	**09 23 15.4**	**-1.6**
JJH	**Hakui**	**10.60**	**190**	P	**P**	**09 23 18.2**	**-0.6**
JJH				S	**S**	**09 25 16.8**	**-0.3**
JKT	**Katashina**	**10.61**	**179**	P	**P**	**09 23 17.2**	**-1.9**
JHO	**Hitachi**	**10.82**	**174**	P	**P**	**09 23 18.2**	**-3.0**
JHO				S	**S**	**09 25 15.3**	**-6.1**
JGK	**Kuni**	**10.82**	**182**	P	**P**	**09 23 20.0**	**-1.2**
MJB9	**Matsu-Tunnel**	**10.86**	**184**	*e*P	**P**	**09 23 19.6**	**-1.9**
MJB9				*e*S	**S**	**09 25 20.0**	**-2.2**
JTT	**Ttatey**	**10.86**	**188**	P	**P**	**09 23 20.3**	**-1.2**
MAJO	**Matsushiro**	**10.86**	**184**	*e*P	**P**	**09 23 19.7**	**-1.9**
MAJO	**Matsushiro**	**10.86**	**184**	*e*P	**P**	**09 23 19.7**	**-1.9**
MAJO				*e*S	**S**	**09 25 19.9**	**-2.2**
MAJO	**Matsushiro**	**10.86**	**184**	*c* *i*PN	**P**	**09 23 19.7**	**-1.9**
MAT	**Matsushiro**	**10.86**	**184**	P	**P**	**09 23 19.8**	**-1.8**
MAT				S	**S**	**09 25 20.2**	**-2.0**
MAT	**Matsushiro**	**10.86**	**184**	P	**P**	**09 23 19.7**	**-1.8**
MAT				S	**S**	**09 25 19.3**	**-2.9**
MJAR	**Matsushiro Arr**	**10.86**	**184**	P	**P**	**09 23 20.0**	**-1.6**
	comp=N,51nm,0.3s,baz=351,slow=11,SNR=947						
MJAR				S	**S**	**09 25 20.6**	**-1.7**
	comp=N,1.6nm,0.3s,baz=353,slow=19,SNR=6.5						
MJAR				PcP	**PcP**	**09 28 32.4**	**+0.5**
	comp=N,1.8nm,0.3s,baz=235,slow=0.3,SNR=4.1						
MJAR				ScP	**ScP**	**09 31 17.4**	**+1.2**
	comp=N,0.4nm,0.3s,baz=291,slow=1.0,SNR=21						
MJAR				P3KPbc		09 59 19.9	
	comp=N,0.1nm,0.3s,baz=197,slow=3.8,SNR=2.5						
JAG	**Ashikaga**	**10.96**	**179**	P	**P**	**09 23 20.4**	**-2.2**
JAG				S	**S**	**09 25 20.7**	**-3.4**
JNG	**Nsakai**	**11.00**	**184**	P	**P**	**09 23 21.3**	**-1.8**
JNG				S	**S**	**09 25 23.3**	**-1.7**
JGN	**Niukaw**	**11.24**	**188**	P	**P**	**09 23 24.4**	**-1.2**
JKG	**Kaga**	**11.30**	**192**	P	**P**	**09 23 24.9**	**-1.2**
JKG				S	**S**	**09 25 31.1**	**+0.5**
JRY	**Ryogami san**	**11.36**	**181**	P	**P**	**09 23 24.5**	**-2.4**
JNT	**Takato**	**11.53**	**184**	P	**P**	**09 23 27.0**	**-1.8**
SKR	**Severo-Kuril's**	**11.63**	**67**	*e*P	**P**	**09 23 26.9**	**-2.5**
SKR				AMB	AMB	09 23 28.8	
	comp=N,6μm,2.0s						

SKR				AMB	AMB	09 23 29.8	
	comp=N,3µm,0.7s						
SKR				*e*S	**S**	**09 25 31.7**	**-4.9**
SKR	**Severo-Kuril's**	**11.63**	**67**	*e*PN	**P**	**09 23 26.9**	**-2.5**
SKR				*e*S	**S**	**09 25 31.7**	**-4.9**
SKR				pmax	pmax		
	comp=Z,6µm,1.6s						
SKR				pmax	pmax		
	comp=Z,1µm,5.6s						
SKR				pmax	pmax		
	comp=Z,3µm,0.7s						
SKR				MLR	MLR		
	comp=Z,900nm,18.0s						
JOI	**OKI**	**11.92**	**204**	P	**P**	**09 23 31.7**	**-1.0**
JFM	**Mihama**	**12.08**	**192**	P	**P**	**09 23 32.9**	**-1.6**
JFM				S	**S**	**09 25 44.8**	**-1.0**
JOD2	**Odawara 2**	**12.11**	**180**	P	**P**	**09 23 31.8**	**-3.0**
INU	**Inuyama**	**12.13**	**188**	*e*P	**P**	**09 23 33.3**	**-1.7**
JKSM	**Kasumi**	**12.25**	**197**	P	**P**	**09 23 34.7**	**-1.6**
SNY	**Shenyang**	**12.39**	**249**	⇓P	**P**	**09 23 37.0**	**-0.6**
SNY				sP		09 25 20.5	
SNY				S	**S**	**09 25 50.8**	**-0.8**
SNY				ScS	**ScS**	**09 34 52.8**	**-1.7**
KS01	**Wonju Array Si**	**12.91**	**224**	*e*P	**P**	**09 23 42.2**	**-0.9**
KSRS	**Korea Array**	**12.91**	**224**	P	**P**	**09 23 43.7**	**+0.5**
	comp=Z,33nm,0.3s,baz=36,slow=10,SNR=862						
KSRS				S	**S**	**09 26 04.5**	**+2.7**
	baz=41,slow=22,SNR=14						
KSRS				PcP	**PcP**	**09 28 35.0**	**+0.9**
	comp=Z,1.2nm,0.3s,baz=67,slow=2.1,SNR=5.4						
KSRS				ScP	**ScP**	**09 31 20.4**	**+1.3**
	comp=Z,0.9nm,0.3s,baz=359,slow=1.2,SNR=14						
KSRS				PKiKP	**PKiKP**	**09 36 29.4**	**-1.4**
	comp=Z,0.2nm,0.3s,baz=322,slow=1.5,SNR=5.1						
KS15	**Wonju Array Si**	**12.94**	**224**	*e*P	**P**	**09 23 42.9**	**-0.6**
KSAR	**Wonju Array Be**	**12.94**	**224**	P	**P**	**09 23 43.7**	**+0.2**
KSAR				S	**S**	**09 26 04.5**	**+2.2**
KSAR				PcP	**PcP**	**09 28 35.0**	**+0.8**
KSAR				ScP	**ScP**	**09 31 20.4**	**+1.2**
KSAR				PKiKP	**PKiKP**	**09 36 29.4**	**-1.4**
JAD	**Aida**	**12.98**	**198**	P	**P**	**09 23 42.7**	**-1.3**
HIA	**Hailar**	**13.04**	**285**	*e*P	**P**	**09 23 43.3**	**-1.0**
HIA	**Hailar**	**13.04**	**285**	*e*PN	**P**	**09 23 43.3**	**-1.0**
PEA0B	**Petropavlovsk-**	**13.18**	**57**	*e*P	**P**	**09 23 44.6**	**-1.1**
PETK	**Petropavlovsk-**	**13.18**	**57**	P	**P**	**09 23 44.7**	**-1.0**
	baz=238,slow=6.9						
PETK				S	**S**	**09 26 05.2**	**-1.3**
	baz=123,slow=5.3						
PETK				ScP	**ScP**	**09 31 20.1**	**+0.8**
	baz=237,slow=2.6						
PETK	**Petropavlovsk-**	**13.18**	**57**	*e*P	**P**	**09 23 44.1**	**-1.6**
PETK				S	**S**	**09 26 05.2**	**-1.3**
PETK				ScP	**ScP**	**09 31 20.1**	**+0.8**
PETK	**Petropavlovsk-**	**13.18**	**57**	*e*PN	**P**	**09 23 44.1**	**-1.6**
PETK				S	**S**	**09 26 05.2**	**-1.3**
JGT2	**ShimaneMisato**	**13.28**	**204**	P	**P**	**09 23 46.1**	**-0.9**
INCN	**Inchon**	**13.52**	**227**	*e*P	**P**	**09 23 49.2**	**-0.4**
INCN	**Inchon**	**13.52**	**227**	P	**P**	**09 23 49.2**	**-0.4**
	SNR=23						
INCN	**Inchon**	**13.52**	**227**	*e*P	**P**	**09 23 49.2**	**-0.4**
JJS	**Sakaide**	**13.58**	**199**	P	**P**	**09 23 48.6**	**-1.6**
PET	**Petropavlovsk**	**13.70**	**58**	*e*P	**P**	**09 23 48.8**	**-2.4**
PET	**Petropavlovsk**	**13.70**	**58**	*e*P	**P**	**09 23 49.2**	**-2.0**
PET				*e*PcP	**PcP**	**09 28 36.1**	**+1.2**
PET	**Petropavlovsk**	**13.70**	**58**	κ *i*P	**P**	**09 23 48.9**	**-2.3**
PET				pmax	pmax		
	comp=Z,900nm,12.2s						
PET				pmax	pmax		
	comp=Z,499nm,1.3s						
PET				pmax	pmax		
	comp=Z,1µm,12.2s						
PET				MLR	MLR		
	comp=Z,1µm,16.0s						
PET				MLR	MLR		
	comp=Z,1µm,15.0s						
MA2	**Magadan**	**14.01**	**25**	P	**P**	**09 23 53.7**	**-0.6**
	comp=Z,9.8nm,0.3s,baz=214,slow=9.0,SNR=54						
MA2				S	**S**	**09 26 21.2**	**-1.0**
	baz=63,slow=21,SNR=6.2						
MA2				ScP	**ScP**	**09 31 21.2**	**+0.7**
	comp=Z,0.8nm,0.3s,baz=126,slow=3.4,SNR=14						
MA2	**Magadan**	**14.01**	**25**	*e*P	**P**	**09 23 53.5**	**-0.8**
MA2	**Magadan**	**14.01**	**25**	*i* P	**P**	**09 23 53.5**	**-0.8**
MA2				pmax	pmax		
	comp=Z,70nm,0.7s						
TJN	**Taejon**	**14.05**	**223**	*d i*P	**P**	**09 23 55.1**	**0.0**
JHM	**Kurahashi**	**14.14**	**203**	P	**P**	**09 23 54.8**	**-1.3**
JHJ	**Hachijo jima 2**	**14.26**	**178**	P	**P**	**09 23 56.5**	**-1.0**
	comp=Z,390nm,0.3s,baz=234,slow=1.9,SNR=135						
JHJ				S	**S**	**09 26 26.3**	**-1.6**
	comp=Z,28nm,0.3s,baz=73,slow=23,SNR=11						
JHJ				ScP	**ScP**	**09 31 20.9**	**-0.6**
	comp=Z,2.1nm,0.3s,baz=174,slow=4.3,SNR=4.1						
JHJ2	**Mitsune**	**14.27**	**178**	*e*P	**P**	**09 23 56.0**	**-1.5**
JKD	**Kudamatsu**	**14.40**	**205**	P	**P**	**09 23 57.4**	**-1.5**
JNA	**Nagahama**	**14.70**	**202**	P	**P**	**09 24 01.1**	**-1.0**
JKU	**Kubokawa**	**14.80**	**200**	P	**P**	**09 24 01.8**	**-1.2**
JFA	**Akaike**	**15.04**	**208**	P	**P**	**09 24 04.1**	**-1.5**
DL2	**Dalian**	**15.30**	**243**	⇓*i*P	**P**	**09 24 06.8**	**-1.4**
DL2				sP	sP	09 26 01.3	-12
DL2				S	**S**	**09 26 46.3**	**-1.3**
DL2				ScS	**ScS**	**09 35 00.5**	**-1.3**
DL2				pmax	pmax		
	comp=Z,2µm,0.9s						
DL2				pmax	pmax		
	comp=Z,1µm,4.4s						
JNU	**Nakatsue**	**15.56**	**207**	P	**P**	**09 24 09.6**	**-1.5**
	comp=Z,25nm,0.3s,baz=1.0,slow=2.9,SNR=199						
JNU				S	**S**	**09 26 51.7**	**-1.1**
	baz=72,slow=15,SNR=3.9						
JNU				ScP	**ScP**	**09 31 24.0**	**+0.1**
	comp=Z,0.7nm,0.3s,baz=30,slow=4.0,SNR=6.6						
JNU	**Nakatsue**	**15.56**	**207**	*e*P	**P**	**09 24 09.4**	**-1.7**
	comp=Z,523nm,0.8s						
JNU				S	**S**	**09 26 51.7**	**-1.1**
JNU				*e*PcP	**PcP**	**09 28 38.4**	**+0.4**
JNU				ScP	**ScP**	**09 31 24.0**	**+0.1**
YAK	**Yakutsk**	**15.63**	**343**	P	**P**	**09 24 10.3**	**-0.9**
	comp=Z,0.2nm,0.3s,baz=204,slow=19,SNR=294						
YAK				S	**S**	**09 26 51.2**	**-1.8**
	comp=Z,0.0nm,0.3s,baz=344,slow=24,SNR=21						
YAK	**Yakutsk**	**15.63**	**343**	*e*P	**P**	**09 24 09.6**	**-1.6**
	comp=Z,2µm,0.7s						
YAK				S	**S**	**09 26 51.2**	**-1.8**
YAK				*e*PcP	**PcP**	**09 28 37.7**	**+0.2**
YAK	**Yakutsk**	**15.63**	**343**	*d i*P	**P**	**09 24 09.9**	**-1.3**
YAK				*e*S	**S**	**09 26 49.3**	**-3.7**
YAK				pmax	pmax		
	comp=Z,1µm,0.9s						
YAK				pmax	pmax		
	comp=E,121nm,1.0s						
YAK				pmax	pmax		
	comp=N,391nm,1.0s						
YAK				smax	smax		
	comp=N,6µm,1.8s						
YAK				smax	smax		
	comp=E,1µm,0.9s						
JTSN	**Tsuno**	**16.20**	**204**	P	**P**	**09 24 16.5**	**-1.2**
JTZ	**Takazaki**	**16.64**	**205**	P	**P**	**09 24 20.5**	**-1.7**
JFU	**Fukue jima 2**	**16.70**	**212**	P	**P**	**09 24 21.2**	**-1.6**
JNAR	**Kushima--Naru**	**16.95**	**204**	P	**P**	**09 24 24.0**	**-1.2**
CIT	**Chita**	**17.14**	**295**	*e*P	**P**	**09 24 24.3**	**-2.6**
CIT				*e*		09 27 19.4	
CIT				pmax	pmax		
	comp=Z,2µm,1.1s						
SEY	**Seymchan**	**17.26**	**21**	P	**P**	**09 24 27.2**	**-0.5**
	comp=Z,9.4nm,0.3s,baz=197,slow=7.4,SNR=104						
SEY				PcP	**PcP**	**09 28 40.1**	**0.0**
	comp=Z,1.6nm,0.3s,baz=221,slow=9.3,SNR=3.2						
SEY				ScP	**ScP**	**09 31 27.5**	**+0.8**
	comp=Z,0.5nm,0.3s,baz=103,slow=3.4,SNR=6.7						
SEY				PKiKP	**PKiKP**	**09 36 30.6**	**-1.0**
	comp=Z,0.3nm,0.3s,baz=231,slow=4.7,SNR=3.5						
SEY	**Seymchan**	**17.26**	**21**	⇑*e*P	**P**	**09 24 27.4**	**-0.4**
BJI	**Beijing**	**18.11**	**254**	⇓*e*P	**P**	**09 24 34.5**	**-1.4**
BJI				sP	**sP**	**09 26 38.0**	**-6.2**
BJI				S	**S**	**09 27 35.5**	**-0.5**
BJI				pmax	pmax		
	comp=Z,2µm,0.8s						
BJI				pmax	pmax		
	comp=Z,5µm,3.6s						
BJT	**Baijiatuau**	**18.12**	**254**	*e*P	**P**	**09 24 34.6**	**-1.5**
	comp=Z,1µm,0.9s						
BJT	**Baijiatuau**	**18.12**	**254**	*e*P	**P**	**09 24 34.6**	**-1.5**
BJT				pmax	pmax		
	comp=Z,1µm,0.9s						
BOD	**Bodaibo**	**18.38**	**314**	*e*P	**P**	**09 24 36.6**	**-1.5**
BOD				pmax	pmax		
	comp=Z,1µm,1.5s						
JNN	**Nakanoshima**	**18.93**	**206**	P	**P**	**09 24 42.8**	**-0.8**
TIA	**Tai'an**	**19.77**	**244**	P	**P**	**09 24 51.3**	**+0.1**
TIA				sP	**sP**	**09 27 02.0**	**-0.8**
TIA				S	**S**	**09 28 03.5**	**+0.3**
TIA				pmax	pmax		
	comp=Z,260nm,0.8s						
CBIJ	**Chichi jima**	**20.40**	**172**	*e*P	**P**	**09 24 55.3**	**-1.6**
	comp=Z,1µm,0.5s						
JCJ	**Chichijima**	**20.40**	**172**	P	**P**	**09 24 55.4**	**-1.6**
	comp=Z,1µm,0.4s,baz=312,slow=7.2,SNR=77						
JAMN	**Amaminishikomi**	**20.63**	**206**	P	**P**	**09 24 57.0**	**-2.1**
HHC	**Hu-ho-hao-te**	**20.77**	**262**	*i* P	**P**	**09 25 01.0**	**+0.7**
HHC				sP	sP	09 27 14.5	+0.5
HHC				S	**S**	**09 28 18.3**	**-1.0**
HHC				ScS	**ScS**	**09 35 20.0**	**+0.6**
HHC				pmax	pmax		
	comp=Z,2µm,0.9s						
HHC				pmax	pmax		
	comp=Z,6µm,5.1s						
JTK	**Tokunoshima**	**21.13**	**206**	P	**P**	**09 25 01.8**	**-1.8**
SSE	**Sheshan**	**21.31**	**227**	P	**P**	**09 25 05.3**	**+0.1**
SSE				sP	**sP**	**09 27 19.8**	**+0.1**
SSE				S	**S**	**09 28 28.8**	**+1.0**
SSE				pmax	pmax		
	comp=Z,260nm,3.5s						
ULN	**Ulaanbaatar**	**21.55**	**283**	*e*P	**P**	**09 25 07.6**	**+0.3**
ULN	**Ulaanbaatar**	**21.55**	**283**	*e*P	**P**	**09 25 07.4**	**+0.1**
	comp=Z,2µm,0.9s						
ULN				*e*PcP	**PcP**	**09 28 49.8**	**+1.3**
ULN	**Ulaanbaatar**	**21.55**	**283**	P	**P**	**09 25 07.7**	**+0.3**
	SNR=772						
ULN	**Ulaanbaatar**	**21.55**	**283**	*d i*P	**P**	**09 25 07.6**	**+0.3**
ULN				pmax	pmax		
	comp=Z,2µm,0.9s						
NJ2	**Nanjing**	**21.76**	**233**	*e*P	**P**	**09 25 09.3**	**+0.1**
NJ2				sP	**sP**	**09 27 26.8**	**+2.1**
NJ2				S	**S**	**09 28 37.0**	**+2.1**
NJ2				PcP	**PcP**	**09 28 48.0**	**-0.9**
NJ2				ScP	**ScP**	**09 31 39.0**	**+1.2**
NJ2				ScS	**ScS**	**09 35 22.5**	**-0.5**
NJ2				pmax	pmax		
	comp=Z,39nm,0.7s						
NJ2				pmax	pmax		
	comp=Z,320nm,10.3s						
TIY	**Taiyuan**	**21.82**	**253**	*e*P	**P**	**09 25 10.5**	**+0.7**
TIY				sP	**sP**	**09 27 26.3**	**+0.9**
TIY				S	**S**	**09 28 38.8**	**+3.0**
TIY				ScS	**ScS**	**09 35 22.3**	**-1.0**
TIY				pmax	pmax		
	comp=Z,380nm,0.8s						
BTO	**Baotou**	**21.93**	**263**	*e*P	**P**	**09 25 10.5**	**-0.2**
SONA1	**Songino Array**	**21.98**	**283**	*e*P	**P**	**09 25 11.1**	**0.0**
SONA1				*e*PcP	**PcP**	**09 28 50.8**	**+1.5**
SONM	**Songino Array**	**21.99**	**283**	P	**P**	**09 25 11.8**	**+0.5**
	comp=Z,962nm,0.7s,baz=79,slow=8.0,SNR=1691						
SONM				PcP	**PcP**	**09 28 49.5**	**+0.2**
	comp=Z,28nm,0.6s,baz=19,slow=2.4,SNR=5.5						
SONM				ScP	**ScP**	**09 31 39.2**	**+0.9**
	comp=Z,82nm,1.0s,baz=113,slow=1.8,SNR=16						
SONM				PKiKP	**PKiKP**	**09 36 32.8**	**-1.5**
	comp=Z,2.0nm,0.6s,baz=210,slow=0.8,SNR=5.7						
SONM				P3KPbc		09 58 42.3	
	comp=Z,0.9nm,0.5s,baz=252,slow=4.9,SNR=5.2						
SONM				P3KP		09 59 18.0	
	comp=Z,1.9nm,0.9s,baz=218,slow=1.3,SNR=4.0						
SONM				P4KP		10 07 41.5	
	comp=Z,3.0nm,0.6s,baz=91,slow=4.6,SNR=17						
JOW	**Kunigami**	**22.23**	**206**	P	**P**	**09 25 12.2**	**-1.2**
	comp=Z,256nm,0.5s,baz=21,slow=7.4,SNR=78						
JOW				PcP	**PcP**	**09 28 49.5**	**-0.5**
	comp=Z,65nm,0.5s,baz=198,slow=6.5,SNR=7.7						
JOW				ScP	**ScP**	**09 31 40.5**	**+1.3**
	comp=Z,74nm,0.9s,baz=284,slow=1.9,SNR=8.3						
JOW	**Kunigami**	**22.23**	**206**	*e*P	**P**	**09 25 12.1**	**-1.4**
	comp=Z,248nm,0.5s						
JOW				*e*S	**S**	**09 28 51.3**	**+9.0**
JOW				ScP	**ScP**	**09 31 40.5**	**+1.3**
IRK	**Irkutsk**	**22.86**	**295**	⇓*i*P	**P**	**09 25 18.4**	**-0.5**
IRK				pmax	pmax		
	comp=Z,1µm,1.2s						
SMY	**Shemya**	**22.92**	**64**	*e*P	**P**	**09 25 18.8**	**-0.5**
	comp=Z,780nm,1.5s						
SMY				*e*PcP	**PcP**	**09 28 51.3**	**+0.4**
SMY	**Shemya**	**22.92**	**64**	*e*P	**P**	**09 25 18.8**	**-0.5**
SMY				*e*		09 28 51.3	
SMY				pmax	pmax		
	comp=Z,780nm,1.5s						
TLY	**Talaya**	**23.27**	**294**	*e*P	**P**	**09 25 22.6**	**0.0**
TLY	**Talaya**	**23.27**	**294**	*e*P	**P**	**09 25 22.9**	**+0.3**
	comp=Z,334nm,0.8s						
TLY				*e*PcP	**PcP**	**09 28 53.2**	**+1.4**
TLY	**Talaya**	**23.27**	**294**	P	**P**	**09 25 22.8**	**+0.3**
	SNR=228						
TLY	**Talaya**	**23.27**	**294**	*d i*P	**P**	**09 25 22.6**	**0.0**
TLY				*e*		09 27 41.8	
TLY				pmax	pmax		
	comp=Z,361nm,0.9s						
TLY				MLR	MLR		
	comp=Z,459nm,13.0s						
ZAK	**Zakamensk**	**23.62**	**291**	*e*P	**P**	**09 25 26.1**	**+0.4**
ZAK				pmax	pmax		
	comp=Z,692nm,1.1s						
TIXI	**Tiksi**	**24.81**	**352**	P	**P**	**09 25 34.9**	**-0.9**
	comp=Z,31nm,0.5s,baz=141,slow=6.4,SNR=35						
TIXI				PcP	**PcP**	**09 28 54.4**	**-0.3**
	comp=Z,30nm,0.4s,baz=111,slow=0.8,SNR=6.0						
TIXI				ScP	**ScP**	**09 31 45.8**	**+0.4**
	comp=Z,62nm,1.1s,baz=150,slow=3.9,SNR=8.7						
TIXI	**Tiksi**	**24.81**	**352**	*e*P	**P**	**09 25 35.0**	**-0.9**
	comp=Z,64nm,1.0s						
TIXI				*e*PcP	**PcP**	**09 28 54.5**	**-0.3**
TIXI				ScP	**ScP**	**09 31 45.8**	**+0.4**
TIXI	**Tiksi**	**24.81**	**352**	*d i*P	**P**	**09 25 34.9**	**-0.9**
TIXI				pmax	pmax		
	comp=Z,73nm,1.1s						
MOY	**Mondy**	**24.92**	**294**	*e*P	**P**	**09 25 37.6**	**+0.3**
MOY				pmax	pmax		
	comp=Z,654nm,2.0s						
WHN	**Wuhan**	**25.41**	**237**	⇓P	**P**	**09 25 41.5**	**-0.2**
WHN				sP	**sP**	**09 28 00.5**	**-3.6**
WHN				S	**S**	**09 29 30.0**	**-2.3**
WHN				pmax	pmax		
	comp=Z,110nm,0.9s						
YOJ	**Yonaguni jima**	**26.23**	**215**	*e*P	**P**	**09 25 46.1**	**-3.0**
	comp=Z,195nm,1.4s						
YOJ				*e*PcP	**PcP**	**09 28 58.9**	**0.0**
YOJ	**Yonaguni jima**	**26.23**	**215**	*e*P	**P**	**09 25 46.1**	**-3.0**
YOJ				*e*		09 28 58.9	
YOJ				pmax	pmax		
	comp=Z,195nm,1.4s						
XAN	**Xi'an**	**26.31**	**251**	P	**P**	**09 25 49.3**	**-0.4**
XAN				pmax	pmax		
	comp=Z,120nm,1.2s						
TATO	**Taipei**	**26.39**	**218**	*e*P	**P**	**09 25 50.8**	**+0.4**
	comp=Z,179nm,0.9s						
TATO	**Taipei**	**26.39**	**218**	P	**P**	**09 25 50.6**	**+0.1**
QZH	**Quanzhou**	**27.71**	**223**	⇑*i*P	**P**	**09 26 02.0**	**0.0**
QZH				sP	**sP**	**09 28 22.8**	**-2.8**
QZH				S	**S**	**09 30 09.8**	**+1.5**
QZH				ScS	**ScS**	**09 35 49.0**	**+0.9**
QZH				pmax	pmax		
	comp=Z,49nm,0.5s						
QZH				pmax	pmax		
	comp=Z,310nm,5.1s						
KIWB	**Kanaga Island**	**28.35**	**65**	*e*P	**P**	**09 26 06.4**	**-0.9**
KIWB				*e*PcP	**PcP**	**09 29 03.9**	**+0.3**
LZH	**Lanzhou**	**28.41**	**260**	⇓P	**P**	**09 26 08.8**	**+0.5**
LZH				sP	sP	09 28 32.8	+0.5
LZH				S	**S**	**09 30 20.0**	**+0.5**
LZH				pmax	pmax		
	comp=Z,1µm,1.1s						
LZH				pmax	pmax		
	comp=Z,770nm,6.0s						
ENH	**Enshi**	**28.49**	**244**	*e*P	**P**	**09 26 08.5**	**-0.3**
	comp=Z,119nm,0.8s						
ENH				*e*PcP	**PcP**	**09 29 05.2**	**+0.7**
GTA	**Gaotai**	**29.40**	**269**	⇓P	**P**	**09 26 17.5**	**+0.7**
GTA				sP	sP	09 28 42.0	+0.9
GTA				PcP	**PcP**	**09 29 08.3**	**+1.5**
GTA				S	**S**	**09 30 35.8**	**+1.1**
GTA				ScP	**ScP**	**09 32 01.0**	**+0.8**
GTA				PcS	**PcS**	**09 32 51.0**	**+0.4**
GTA				ScS	**ScS**	**09 35 56.0**	**-0.1**
GTA				pmax	pmax		
	comp=Z,310nm,1.2s						
GTA				pmax	pmax		
	comp=Z,1µm,4.8s						
HVS	**Khovu-Aksy**	**29.52**	**294**	*e*P	**P**	**09 26 17.8**	**+0.2**
HVS	**Khovu-Aksy**	**29.52**	**294**	*d i*P	**P**	**09 26 17.8**	**+0.2**
HVS				pmax	pmax		
	comp=Z,392nm,0.7s						
ATKA	**Atka Island**	**30.09**	**63**	*e*P	**P**	**09 26 20.5**	**-1.9**
	comp=Z,97nm,0.7s						
ATKA				*e*PcP	**PcP**	**09 29 08.4**	**+0.3**
CD2	**Chengdu**	**31.65**	**251**	⇓*i*P	**P**	**09 26 36.3**	**+0.1**
CD2				pP	pP	09 28 02.8	+0.1
CD2				sP	sP	09 29 00.8	-0.3
CD2				S	**S**	**09 31 08.0**	**-1.3**
CD2				PcS	**PcS**	**09 32 58.8**	**+0.5**
CD2				pmax	pmax		
	comp=Z,470nm,0.5s						
CD2				pmax	pmax		
	comp=Z,540nm,3.2s						
SPIA	**Saint Paul Isl**	**31.78**	**53**	*e*P	**P**	**09 26 36.4**	**-0.4**
	comp=Z,1µm,1.7s						
GZH	**Guangzhou**	**31.84**	**229**	*i* P	P	09 26 32.5	-5.3
GZH				pP	pP	09 27 59.8	-4.7
GZH				PP	PP	09 28 02.3	-16
GZH				S	S	09 31 02.8	-9.5
GZH				sS	sS	09 33 41.3	-12
GZH				SS	SS	09 33 45.8	-36
GZH				ScS	**ScS**	**09 36 05.0**	**-3.3**
GZH				pmax	pmax		
	comp=Z,200nm,2.6s						
GYA	**Guiyang**	**32.96**	**242**	⇑*i*P	**P**	**09 26 47.0**	**-0.5**
GYA				pP	pP	09 28 18.0	+3.4
GYA				PP	**PP**	**09 28 21.8**	**-7.0**
GYA				sP	sP	09 29 13.0	+0.3
GYA				PcP	**PcP**	**09 29 17.3**	**+0.6**
GYA				S	**S**	**09 31 26.8**	**-2.7**
GYA				ScP	**ScP**	**09 32 14.5**	**+2.1**
GYA				SS	SS	09 34 18.0	-23
GYA				ScS	**ScS**	**09 36 12.8**	**-1.6**
GYA				pmax	pmax		
	comp=Z,190nm,0.6s						
GYA				pmax	pmax		
	comp=Z,290nm,5.9s						
NIKH	**Nikolski High**	**33.16**	**61**	*e*P	**P**	**09 26 46.2**	**-2.4**
	comp=Z,66nm,0.5s						
NIKH				*e*PcP	**PcP**	**09 29 16.8**	**+0.1**
GUMO	**Guam**	**34.04**	**170**	P	**P**	**09 26 54.3**	**-2.1**
	comp=Z,159nm,0.4s,baz=129,slow=8.1,SNR=27						
GUMO	**Guam**	**34.04**	**170**	*e*P	**P**	**09 26 54.0**	**-2.5**
	comp=Z,243nm,1.0s						
GUMO	**Guam**	**34.04**	**170**	*e*P	**P**	**09 26 54.0**	**-2.5**
GUMO				pmax	pmax		
	comp=Z,243nm,1.0s						
ANM	**Nome**	**34.11**	**39**	*e*P	**P**	**09 26 55.0**	**-1.5**
	comp=Z,164nm,1.2s						
ANM				*e*PcP	**sP**	**09 29 21.2**	**-1.4**
ANM	**Nome**	**34.11**	**39**	*e*P	**P**	**09 26 55.0**	**-1.5**
ANM				*e*		09 29 21.2	
ANM				pmax	pmax		
	comp=Z,164nm,1.2s						
ZAA0	**Zalesovo Array**	**34.30**	**302**	*e*P	**P**	**09 26 58.0**	**-0.3**
	comp=Z,324nm,1.1s						
ZAA0				*e*PcP	**PcP**	**09 29 21.0**	**+1.0**
ZALV	**Zalesovo Beam**	**34.30**	**302**	P	**P**	**09 26 58.1**	**-0.2**
	comp=Z,105nm,0.4s,baz=85,slow=9.0,SNR=330						
ZALV				PcP	**PcP**	**09 29 20.3**	**+0.4**
	comp=Z,115nm,0.7s,baz=85,slow=2.5,SNR=13						
ZALV				S	**S**	**09 31 49.4**	**+0.6**
	comp=Z,13nm,0.9s,baz=81,slow=9.3,SNR=2.8						
ZALV				ScP	**ScP**	**09 32 16.9**	**+0.3**
	comp=Z,98nm,0.8s,baz=87,slow=3.0,SNR=16						
ZALV				ScS	**ScS**	**09 36 19.5**	**-0.9**
	comp=Z,15nm,0.9s,baz=132,slow=10.0,SNR=8.8						
ZALV				PKiKP	**PKiKP**	**09 36 39.4**	**-2.2**
	comp=Z,4.2nm,0.6s,baz=179,slow=2.6,SNR=4.6						
ZALV				P3KPbc		09 57 44.8	
	comp=Z,4.6nm,0.6s,baz=255,slow=4.5,SNR=14						
ZALV				P4KP		10 08 34.7	
	comp=Z,0.6nm,0.3s,baz=72,slow=4.8,SNR=6.4						
ZALV	**Zalesovo Beam**	**34.30**	**302**	*e*P	**P**	**09 26 56.9**	**-1.4**
ZALV				*e*PcP	**PcP**	**09 29 20.1**	**+0.1**
ZALV				S	**S**	**09 31 49.4**	**+0.6**
ZALV				ScP	**ScP**	**09 32 16.9**	**+0.3**
ZALV				ScS	**ScS**	**09 36 19.5**	**-0.9**
ZALV				PKiKP	**PKiKP**	**09 36 39.4**	**-2.2**
ZALV				P4KP		10 08 34.7	
ZALV	**Zalesovo Beam**	**34.30**	**302**	*e*P	**P**	**09 26 56.9**	**-1.4**
ZALV				*e*		09 29 20.1	
ZALV				S	**S**	**09 31 49.4**	**+0.6**
ZALV						09 36 19.5	
UNV	**Unalaska Valle**	**34.35**	**59**	*e*P	**P**	**09 26 56.7**	**-2.0**
	comp=Z,223nm,1.5s						
UNV				*e*PcP	**PcP**	**09 29 19.9**	**-0.2**
AKUT	**Akutan**	**34.72**	**58**	*e*P	**P**	**09 26 59.8**	**-1.9**
	comp=Z,65nm,0.6s						
AKUT				*e*PcP	**PcP**	**09 29 21.0**	**-0.2**
NVS	**Novosibirsk**	**35.03**	**303**	⇑*i*P	**P**	**09 27 04.6**	**+0.3**
NVS				*e**PP	**pP**	**09 28 32.3**	**-0.1**
NVS				*e*S	**S**	**09 31 58.8**	**-1.0**
NVS				*e**SS	**ScS**	**09 36 21.3**	**-3.0**
NVS				pmax	pmax		
	comp=N,69nm,1.0s						
NVS				pmax	pmax		
	comp=E,316nm,1.0s						
NVS				pmax	pmax		
	comp=Z,337nm,1.0s						
NVS				smax	smax		
	comp=N,158nm,1.8s						
NVS				smax	smax		
	comp=E,299nm,1.8s						
RDOG	**Red Dog Mine**	**35.38**	**33**	*e*P	**P**	**09 27 06.9**	**-0.2**
	comp=E,58nm,0.5s						
WMQ	**Urumqi**	**35.62**	**284**	P	**P**	**09 27 10.3**	**+0.7**
WMQ				PP	**PP**	**09 28 46.8**	**+0.7**
WMQ				PcP	**PcP**	**09 29 25.0**	**+0.8**
WMQ				sP	sP	09 29 37.0	+1.0
WMQ				S	**S**	**09 32 09.5**	**+0.2**
WMQ				sS	sS	09 34 53.8	+1.7
WMQ				ScS	**ScS**	**09 36 28.5**	**+0.2**
WMQ				pmax	pmax		
	comp=E,1µm,0.9s						
WMQ				pmax	pmax		
	comp=E,3µm,3.6s						
WAKE	**Wake Island**	**35.90**	**132**	*e*P	**P**	**09 27 11.8**	**-0.3**
	comp=E,103nm,0.7s						
FALS	**False Pass**	**35.91**	**56**	*e*P	**P**	**09 27 10.2**	**-1.4**
	comp=E,70nm,0.5s						
FALS				*e*PcP	**PcP**	**09 29 24.9**	**+0.2**
ZSN	**Zaisan**	**36.08**	**291**	*i* P	**P**	**09 27 13.7**	**+0.5**
	comp=E,32nm,0.7s						
ZSN				*i* PP	**PP**	**09 28 53.6**	**+2.2**
ZSN				*i* S	**S**	**09 32 16.5**	**+0.6**
KMI	**Kunming**	**36.33**	**245**	P	**P**	**09 27 16.0**	**+0.2**
KMI				pP	pP	09 28 43.0	-1.6
KMI				PP	**PP**	**09 28 53.8**	**-0.8**
KMI				PcP	**PcP**	**09 29 27.8**	**+1.0**
KMI				sP	sP	09 29 42.0	-0.4
KMI				S	**S**	**09 32 19.3**	**-1.2**
KMI				sS	sS	09 35 01.8	-2.1
KMI				ScS	**ScS**	**09 36 32.5**	**-0.6**
KMI				pmax	pmax		
	comp=E,260nm,0.8s						
KMI				pmax	pmax		
	comp=E,530nm,3.1s						
TGY	**Tagaytay City**	**36.49**	**211**	P	**P**	**09 27 17.9**	**+0.9**
	comp=E,524nm,0.5s,baz=305,slow=12,SNR=8.7						
QIZ	**Qiongzhong**	**37.02**	**230**	P	**P**	**09 27 22.0**	**+0.8**
QIZ				S	**S**	**09 32 33.0**	**+2.6**
QIZ				pmax	pmax		
	comp=E,290nm,2.1s						
QIZ	**Qiongzhong**	**37.02**	**230**	*e*P	**P**	**09 27 22.1**	**+0.8**
	comp=E,49nm,1.0s						
QIZ				*e*PcP	**PcP**	**09 29 29.9**	**+1.1**
QIZ				*e*S	**S**	**09 32 29.6**	**-0.8**
SDPT	**Sand Point**	**37.44**	**55**	*e*P	**P**	**09 27 22.2**	**-2.1**
	comp=E,58nm,0.6s						
SDPT				*e*PcP	**PcP**	**09 29 29.8**	**+0.4**
BESP	**Borongan**	**37.49**	**202**	*e*P	**P**	**09 27 25.7**	**+0.5**
SEM	**Semipalatinsk**	**37.95**	**297**	⇓*i*P	**P**	**09 27 28.2**	**-0.6**
	comp=E,449nm,0.7s						

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SEM                                 i S       S        09 32 43.5  -0.5
MK31  Makanchi Array     37.96 291  eP        P        09 27 29.0  +0.3
MK31                                ePcP      PcP      09 29 31.5  +0.2
MK31  Makanchi Array     37.96 291  i P       P        09 27 28.6  -0.1
MK31                                 pmax     pmax
      comp=Z,587nm,0.6s
MKAR  Makanchi Array     37.96 291   P        P        09 27 28.8  +0.1
      comp=Z,631nm,0.7s,baz=78,slow=8.6,SNR=3394
MKAR                                 PcP      PcP      09 29 31.5  +0.2
      comp=Z,24nm,0.5s,baz=67,slow=1.9,SNR=11
MKAR                                 ScP      ScP      09 32 30.7  +0.3
      comp=Z,84nm,0.8s,baz=57,slow=4.5,SNR=20
MKAR                                 S        S        09 32 44.2  +0.4
      comp=Z,58nm,1.2s,baz=79,slow=15,SNR=6.8
MKAR                                 ScS      ScS      09 36 34.2  -7.3
      comp=Z,3.3nm,0.8s,baz=53,slow=4.9,SNR=3.0
MKAR                                 PKiKP    PKiKP    09 36 43.0  -1.8
      comp=Z,5.4nm,0.8s,baz=74,slow=0.5,SNR=5.4
MKAR                                 P3KPbc            09 57 30.8
      comp=Z,5.7nm,0.7s,baz=248,slow=4.9,SNR=42
MKAR                                 P3KP              09 59 10.8
      comp=Z,2.2nm,1.2s,baz=169,slow=3.8,SNR=3.0
MKAR                                 P4KP              10 08 52.4
      comp=Z,0.5nm,0.8s,baz=61,slow=7.6,SNR=4.6
MKAR  Makanchi Array     37.96 291  eP        P        09 27 29.1  +0.4
      comp=Z,5µm,0.8s
MKAR                                ePcP      PcP      09 29 31.6  +0.3
MKAR                                 ScP      ScP      09 32 30.7  +0.3
MKAR                                 S        S        09 32 44.2  +0.4
MKAR                                 ScS      ScS      09 36 34.2  -7.3
MKAR                                 PKiKP    PKiKP    09 36 43.0  -1.8
MKAR                                 PKKKP             09 59 10.8
MKAR                                 P4KP              10 08 52.4
MK01  Makanchi Array     37.96 291  eP        P        09 27 29.1  +0.4
MK01                                ePcP      PcP      09 29 31.5  +0.2
PLP   Palo               38.03 203⇑ iP        P        09 27 29.0  -0.6
MAKZ  Makanchi           38.15 291  eP        P        09 27 30.7  +0.4
      comp=Z,800nm,0.9s
MAKZ  Makanchi           38.15 291  eP        P        09 27 30.7  +0.4
MAKZ                                 pmax     pmax
      comp=Z,801nm,0.9s
OCLP  Ormoc              38.23 203  eP        P        09 27 32.1  +0.8
RCP   Roxas              38.29 206⇑ eP        P        09 27 31.5  -0.2
CHGN  Chignik            38.35  53  eP        P        09 27 29.2  -2.4
      comp=Z,24nm,0.6s
CHGN                                ePcP      PcP      09 29 32.3  +0.1
SVW2  Sparrevohn         38.81  45  eP        P        09 27 35.0  -0.4
      comp=Z,52nm,1.2s
SVW2                                ePcP      PcP      09 29 35.3  +1.6
KURK  Kurchatov          38.83 298  eP        P        09 27 35.3  -0.4
KURK  Kurchatov          38.83 298  eP        P        09 27 35.7  +0.1
      comp=Z,727nm,0.6s
KURK                                 pP       pP       09 29 07.5  +1.7
KURK                                 PcP      PcP      09 29 34.5  +0.6
KURK                                 ScP      ScP      09 32 34.1  +0.5
KURK                                 S        S        09 32 56.6  +0.1
KURK                                 PKiKP    PKiKP    09 36 43.5  -1.8
KURK                                e                  09 57 25.9
KURK                                 P4KP              10 08 55.2
KURK  Kurchatov          38.83 298   P        P        09 27 35.8  +0.1
      SNR=237
KURK  Kurchatov          38.83 298c iP        P        09 27 35.3  -0.4
KURK                                 pmax     pmax
      comp=Z,585nm,0.6s
KURBB Kurchatov Arra     38.91 298   P        P        09 27 36.4  +0.1
      comp=Z,599nm,0.5s,baz=69,slow=8.6,SNR=1959
KURBB                                pP       pP       09 29 07.5  +1.0
      comp=Z,41nm,0.9s,baz=68,slow=11,SNR=2.8
KURBB                                PcP      PcP      09 29 34.5  +0.3
      comp=Z,54nm,0.6s,baz=81,slow=3.2,SNR=7.6
KURBB                                ScP      ScP      09 32 34.1  +0.2
      comp=Z,48nm,0.9s,baz=68,slow=3.0,SNR=21
KURBB                                S        S        09 32 56.6  -1.1
      comp=Z,38nm,1.2s,baz=73,slow=16,SNR=8.1
KURBB                                PKiKP    PKiKP    09 36 43.5  -1.9
      comp=Z,2.3nm,0.7s,baz=60,slow=0.9,SNR=4.2
KURBB                                P3KPbc            09 57 25.9
      comp=Z,1.3nm,0.5s,baz=252,slow=5.4,SNR=16
KURBB                                P4KP              10 08 55.2
      comp=Z,1.3nm,1.1s,baz=75,slow=3.2,SNR=5.4
IM3   Indian Mountai     38.96  37  eP        P        09 27 36.1  -0.5
IM3                                 ePcP      PcP      09 29 35.5  +1.4
MSLP  Maasin             39.05 203  eP        P        09 27 37.1  -0.8
LKP   Lekhapani          39.18 255  eP        P        09 27 39.1  +0.3
LKP                                  IAmb     IAmb     09 27 41.0
      comp=Z,651nm,1.1s
GUIM  Jordan             39.22 206  eP        P        09 27 38.9  -0.3
DIBR  DIBRUGARH          39.71 256  eP        P        09 27 44.0  +1.0
BUTP  Butuan             39.97 201  eP        P        09 27 45.2  -0.1
CAST  Castle Rocks       40.02  41  eP        P        09 27 44.8  -0.3
      comp=Z,58nm,0.8s
PPLA  Purkeypile         40.06  42  eP        P        09 27 46.3  +0.6
      comp=Z,463nm,1.8s
COLD  Coldfoot           40.24  35  eP        P        09 27 46.6  -0.2
      comp=Z,92nm,1.1s
TOLK  Toolik Lake Re     40.32  32   P        P        09 27 47.3  -0.2
      baz=276
TOLK  Toolik Lake Re     40.32  32  eP        P        09 27 47.2  -0.2
      comp=Z,106nm,1.4s
MLY   Manley             40.33  38  eP        P        09 27 47.5  -0.1
      comp=Z,292nm,1.8s
BPAW  Bear Paw Mtn.      40.38  40  eP        P        09 27 47.6  -0.4
      comp=Z,51nm,0.9s
KTH   Kantishna Hill     40.51  40  eP        P        09 27 49.0   0.0
      comp=Z,176nm,1.3s
SKT   Skwentna           40.54  43  eP        P        09 27 48.5  -0.9
      comp=Z,13nm,0.6s
SII   Sitkinak Islan     40.55  51  eP        P        09 27 48.2  -1.3
      comp=Z,94nm,1.1s
JORH  JORHAT             40.63 256  eP        P        09 27 49.0  -1.5
ITAN  ITANAGAR           40.71 257  eP        P        09 27 51.2  +0.1
MOKO  MOKOCHONG          40.74 255  eP        P        09 27 52.9  +1.4
MOKO                                 IAmb     IAmb     09 27 54.0
      comp=Z,427nm,0.4s
LSA   Lhasa              40.76 262   P        P        09 27 53.0  +0.9
LSA                                  pmax     pmax
      comp=Z,210nm,0.9s
LSA   Lhasa              40.76 262  eP        P        09 27 53.2  +1.1
      comp=Z,153nm,0.8s
LSA   Lhasa              40.76 262   P        P        09 27 53.2  +1.1
LSA   Lhasa              40.76 262   P        P        09 27 53.2  +1.1
LSA                                  pmax     pmax
      comp=Z,150nm,0.8s
TRF   Thorofare Moun     40.80  40  eP        P        09 27 51.5  -0.1
      comp=Z,108nm,0.9s
OHAK  Old Harbor         40.84  50  eP        P        09 27 49.6  -2.0
      comp=Z,84nm,0.6s
SUA   Susitna One        41.02  43  eP        P        09 27 52.0  -1.2
      comp=Z,52nm,1.2s
SUA                                 ePcP      PcP      09 29 41.4  +0.3
BWN   Browne             41.02  39  eP        P        09 27 54.1  +1.0
      comp=Z,273nm,1.0s
HOM   Homer              41.02  46  eP        P        09 27 52.9  -0.3
      comp=Z,191nm,0.9s
HOM                                 ePcP      PP       09 29 41.4  -0.4
KDAK  Kodiak Island      41.05  49   P        P        09 27 52.3  -1.0
      comp=Z,33nm,0.5s,baz=110,slow=3.0,SNR=209
KDAK                                 PcP      PP       09 29 41.9  -0.1
      comp=Z,118nm,0.7s,baz=249,slow=3.5,SNR=14
KDAK                                 ScP      ScP      09 32 43.4  +1.2
      comp=Z,34nm,0.8s,baz=251,slow=3.0,SNR=5.2
KDAK  Kodiak Island      41.05  49  eP        P        09 27 50.0  -3.3
KDAK  Kodiak Island      41.05  49  eP        P        09 27 52.3  -1.0
      comp=Z,45nm,0.6s
KDAK                                ePcP      PP       09 29 42.0  +0.1
KDAK                                 ScP      ScP      09 32 43.4  +1.2
KDAK  Kodiak Island      41.05  49  i P       P        09 27 52.0  -1.3
BUKP  Musuan             41.16 201  eP        P        09 27 54.7  -0.2
PDGK  Podgornoye         41.21 287   P        P        09 27 54.6  -0.5
PDGK                                 pmax     pmax
      comp=Z,239nm,1.0s
CNPM  China Poot         41.26  46  eP        P        09 27 53.7  -1.4
CNPM                                ePcP      PcP      09 29 42.3  +0.6
SHLS  Shalkode           41.31 287  eP        P        09 27 54.1  -1.7
      comp=Z,98nm,0.8s
SHLS                                i S       S        09 33 29.4  -3.7
MCK   McKinley           41.34  40  eP        P        09 27 55.3  -0.3
      comp=Z,134nm,1.0s
MCK                                 ePcP      PP       09 29 43.5  -1.2
MCK   McKinley           41.34  40  eP        P        09 27 55.3  -0.3
MCK                                 e                  09 29 43.5
MCK                                  pmax     pmax
      comp=Z,134nm,1.0s
BRLK  Bradley Lake       41.37  46  eP        P        09 27 55.0  -0.9
BRLK                                ePcP      PcP      09 29 42.7  +0.6
MDM   Murphy Dome        41.39  38  eP        P        09 27 55.8  -0.2
      comp=Z,110nm,1.2s
KOHI  KOHIMA             41.42 255  eP        P        09 27 55.5  -1.4
NONG  Nongkai            41.48 238   P        P        09 27 57.6  +0.3
      comp=Z,2.5nm,1.0s,comp=Z,98nm
WRH   Wood River Hil     41.55  39  eP        P        09 27 57.2  -0.1
      comp=Z,189nm,0.9s
COLA  College            41.57  38  eP        P        09 27 57.4   0.0
      comp=Z,138nm,0.9s
COLA  College            41.57  38  eP        P        09 27 57.4   0.0
COLA                                 pmax     pmax
      comp=Z,138nm,0.9s
RC01  Rabbit Creek A     41.58  44  eP        P        09 27 56.8  -0.8
RC01                                ePcP      PcP      09 29 43.5  +0.7
UZB   Uzynbulak          41.60 287⇓ iP        P        09 27 58.3  +0.1
      comp=Z,120nm,1.1s
UZB                                 i PP      PP       09 29 48.3  +0.8
UZB                                 i sP      sP       09 30 33.2  +6.1
UZB                                 i S       S        09 33 37.2  -0.1
PAGZ  Pagadian           41.63 204  eP        P        09 27 57.2  -1.3
CCB   Clear Creek Bu     41.63  38  eP        P        09 27 57.3  -0.6
      comp=Z,139nm,1.0s
TEZP  TEZPUR             41.67 257  eP        P        09 27 58.6  -0.1
TEZP                                 IAmb     IAmb     09 27 59.7
      comp=Z,311nm,1.3s
KPKS  Kokpek             41.67 288⇓ iP        P        09 27 59.3  +0.6
      comp=Z,296nm,1.0s
KPKS                                i PP      PP       09 29 49.7  +1.5
KPKS                                i S       S        09 33 38.8  +0.5
PMR   Palmer             41.74  43  eP        P        09 27 57.8  -1.0
PMR                                 ePcP      PcP      09 29 44.0  +0.8
PMR   Palmer             41.74  43  eP        P        09 27 57.8  -1.0
PMR                                 e                  09 29 44.0
GHO   Glory Hole Cre     41.79  43  eP        P        09 27 59.1  -0.2
      comp=Z,148nm,0.7s
GHO                                 eS        S        09 33 37.4  -2.0
SKNT  Sakolnakorn        41.88 236   P        P        09 28 00.5   0.0
      comp=Z,37nm,0.9s
ZHN   Zhinishke          41.97 287⇓ iP        P        09 28 01.6  +0.5
      comp=Z,125nm,0.8s
ZHN                                 i S       S        09 33 42.9  +0.2
IL1   Eielson Array      41.99  38  eP        P        09 28 00.2  -0.5
IL1                                 ePcP      PcP      09 29 43.3  -0.8
ILAR  Eielson Array      41.99  38   P        P        09 28 00.3  -0.5
      comp=Z,34nm,0.7s,baz=282,slow=6.6,SNR=412
ILAR                                 pP       pP       09 29 33.4  +0.7
      comp=Z,71nm,0.9s,baz=293,slow=9.7,SNR=8.0
ILAR                                 PcP      PcP      09 29 42.9  -1.2
      comp=Z,27nm,0.7s,baz=271,slow=3.4,SNR=6.7
ILAR                                 S        S        09 33 39.8  -2.4
      comp=Z,2.0nm,0.8s,baz=260,slow=9.7,SNR=3.9
ILAR                                 PKiKP    PKiKP    09 36 45.6  -2.1
      comp=Z,1.3nm,0.6s,baz=301,slow=3.5,SNR=4.9
ILAR                                 P3KPbc            09 57 13.2
      comp=Z,0.5nm,0.9s,baz=76,slow=3.7,SNR=4.7
ILAR                                 P3KP              09 58 40.7
      comp=Z,0.7nm,0.7s,baz=235,slow=2.9,SNR=5.5
ILAR                                 PKPPKP   P'P'df   09 59 18.1   -38
      comp=Z,1.5nm,0.9s,baz=198,slow=1.6,SNR=6.4
ILB   Eielson Array      41.99  38  eP        P        09 28 00.0  -0.7
SATY  Saty               42.04 287⇓ iP        P        09 28 02.1  +0.5
      comp=Z,253nm,1.1s
SATY                                i PP      PP       09 29 53.0  +1.5
SATY                                i S       S        09 33 44.3  +0.6
SML   Sawmill            42.05  43  eP        P        09 28 01.1  -0.3
      comp=Z,168nm,1.0s
SML   Sawmill            42.05  43  eP        P        09 28 01.1  -0.3
SML                                  pmax     pmax
      comp=Z,168nm,1.0s
IMP   Imphal             42.13 254  eP        P        09 28 02.1  -0.4
DHY   Denali Highway     42.17  41  eP        P        09 28 01.7  -0.7
DHY                                 ePcP      PcP      09 29 46.4  +1.4
FYU   Fort Yukon         42.28  35  eP        P        09 28 03.5  +0.5
      comp=Z,441nm,1.2s
PRZ   Przheval'sk        42.31 287  eP        P        09 28 05.1  +1.2
      comp=Z,818nm,1.4s
PRZ   Przheval'sk        42.31 287   P        P        09 28 05.0  +1.2
PRZ                                  pmax     pmax
      comp=Z,820nm,1.4s
PAYA  Payao              42.40 242   P        P        09 28 05.2  +0.6
      comp=Z,20nm,1.0s,comp=Z,254nm
SCM   Sheep Creek Mo     42.51  42  eP        P        09 28 04.8  -0.2
      comp=Z,60nm,0.8s
SCM                                 ePcP      PcP      09 29 47.2  +1.2
SCM   Sheep Creek Mo     42.51  42  eP        P        09 28 04.8  -0.2
SCM                                 e                  09 29 47.2
SCM                                  pmax     pmax
      comp=Z,60nm,0.8s
BRZS  Berezniki          42.64 299⇓ iP        P        09 28 06.3  +0.2
      comp=Z,580nm,0.8s
BRZS                                i PP      PP       09 29 57.8  +1.1
BRZS                                i S       S        09 33 52.0  +0.1
GUWA  GUWAHATI           42.69 257  eP        P        09 28 06.7  -0.1
GUWA                                 IAmb     IAmb     09 28 07.6
      comp=Z,102nm,0.7s
BVAR  Borovoye Array     42.82 304   P        P        09 28 07.9  +0.5
      comp=Z,251nm,0.6s,baz=72,slow=9.4,SNR=1294
BVAR                                 PcP      PcP      09 29 47.6  +0.4
      comp=Z,44nm,0.5s,baz=70,slow=4.7,SNR=7.9
BVAR                                 ScP      ScP      09 32 49.6  +0.1
      comp=Z,55nm,0.8s,baz=68,slow=2.9,SNR=12
BVAR                                 S        S        09 33 54.2   0.0
      comp=Z,49nm,1.0s,baz=82,slow=16,SNR=10.0
BVAR                                 P3KP              09 59 05.3
      comp=Z,2.9nm,0.9s,baz=216,slow=4.8,SNR=8.0
BRVK  Borovoye           42.86 304  eP        P        09 28 07.8  +0.1
BRVK  Borovoye           42.86 304  eP        P        09 28 08.4  +0.6
      comp=Z,375nm,0.8s
BRVK  Borovoye           42.86 304   P        P        09 28 07.9  +0.1
      SNR=203
BRVK  Borovoye           42.86 304d iP        P        09 28 07.8  +0.1
BRVK                                 pmax     pmax
      comp=Z,367nm,0.7s
MDOK  Medeo              42.87 288  i P       P        09 28 08.8  +0.6
      comp=Z,3µm,1.1s
MDOK                                i PP      PP       09 30 00.5  +1.4
MDOK                                i S       S        09 33 56.1  +0.5
GLI   Glacier Island     42.88  44  eP        P        09 28 07.4  -0.4
GLI                                 ePcP      PcP      09 29 49.0  +1.8
SILR  SILCHAR            42.92 255  eP        P        09 28 09.5  +1.0
AAA   Alma-Ata           42.93 288  eP        P        09 28 09.4  +0.8
      comp=Z,191nm,0.8s
AAA   Alma-Ata           42.93 288  i P       P        09 28 09.4  +0.8
AAA                                 i S       S        09 33 57.4  +1.0
AAA                                  pmax     pmax
      comp=Z,700nm,2.6s
AAA                                  smax     smax
      comp=E,1µm,5.9s
AAA                                  MLR      MLR
      comp=Z,200nm,7.0s
SHL   Shillong           42.98 257  eP        P        09 28 09.2  -0.1
      comp=Z,329nm,0.9s
SHL                                 ePcP      PcP      09 29 48.2  -0.1
SHL   Shillong           42.98 257  eP        P        09 28 09.3  -0.1
SHL   Shillong           42.98 257   P        P        09 28 09.2  -0.1
SHL                                  pmax     pmax
      comp=Z,330nm,0.9s
KUU   Kurty              42.99 289⇓ iP        P        09 28 08.6  -0.3
      comp=Z,317nm,1.1s
KUU                                 eS        S        09 33 56.5  -0.5
PAX   Paxson             43.04  40  eP        P        09 28 08.7  -0.4
PAX                                 ePcP      PcP      09 29 49.2  +1.4
PAX   Paxson             43.04  40  eP        P        09 28 08.7  -0.4
PAX                                 e                  09 29 49.2
KHON  Khomkaen           43.04 236   P        P        09 28 09.6   0.0
      comp=Z,94nm,0.9s,comp=Z,1µm
RIDG  Independ'e Rid     43.11  39  eP        P        09 28 08.5  -1.1
      comp=Z,240nm,1.1s
LAMP  Lampang            43.18 242   P        P        09 28 11.5  +0.8
      comp=Z,28nm,0.9s,comp=Z,218nm
FID   Port Fidalgo       43.21  44  eP        P        09 28 09.8  -0.6
      comp=Z,142nm,0.8s
KLU   Klutina            43.25  43  eP        P        09 28 10.8   0.0
      comp=Z,97nm,0.6s
HARP  HAARP              43.34  41  eP        P        09 28 12.0  +0.7
      comp=Z,222nm,0.7s
HARP                                epP       PcP      09 29 50.7  +1.9
CMMT  Chiang Mai         43.37 243   P        P        09 28 12.2   0.0
      comp=Z,77nm,1.1s,comp=Z,733nm
CHTO  Chiang Mai         43.37 243  eP        P        09 28 12.5  +0.3
      comp=Z,64nm,0.9s
CHTO  Chiang Mai         43.37 243   P        P        09 28 12.3  +0.1
      SNR=16
CHTO  Chiang Mai         43.37 243  eP        P        09 28 12.5  +0.3
CHTO                                 pmax     pmax
      comp=Z,64nm,0.9s
CHTO  Chiang Mai         43.37 243   P        P        09 28 12.3  +0.1
      comp=Z,349nm,1.1s,comp=Z,3µm
SCRK  Sand Creek         43.41  39  eP        P        09 28 11.4  -0.7
      comp=Z,122nm,1.0s
DIV   Divide             43.42  43  eP        P        09 28 11.6  -0.5
      comp=Z,60nm,0.8s
DOT   Dot Lake           43.47  39  eP        P        09 28 12.0  -0.4
      comp=Z,80nm,0.8s
EYAK  Cordova Ski Ar     43.61  44  eP        P        09 28 13.6  +0.1
      comp=Z,88nm,0.8s
CMAR  Chiang Mai Arr     43.65 243   P        P        09 28 15.2  +0.8
      comp=Z,13nm,0.4s,baz=30,slow=7.2,SNR=62
CMAR                                 PcP      PcP      09 29 51.5  +1.0
      comp=Z,22nm,0.8s,baz=16,slow=3.0,SNR=14
CMAR                                 ScP      ScP      09 32 55.0  +1.6
      comp=Z,23nm,0.9s,baz=22,slow=3.7,SNR=16
CMAR                                 PKiKP    PKiKP    09 36 48.8  -1.7
      comp=Z,1.4nm,0.7s,baz=239,slow=0.1,SNR=4.2
MID   Middleton Isla     43.68  46  eP        P        09 28 14.5  +0.5
      comp=Z,130nm,1.0s
MID   Middleton Isla     43.68  46  eP        P        09 28 14.5  +0.5
MID                                  pmax     pmax
      comp=Z,130nm,1.0s
PHIT  Phitsanulok        43.75 240   P        P        09 28 16.1  +0.9
      comp=Z,57nm,1.0s,comp=Z,601nm
ULHL  Ulahol             43.83 287   P        P        09 28 16.7  +0.9
      SNR=19
BTLS  Baital             43.91 292⇓ iP        P        09 28 16.0  -0.1
      comp=Z,107nm,1.3s
BTLS                                i PP      PP       09 30 09.2  +0.8
BTLS                                i S       S        09 34 09.8  -0.3
PBKT  Sadao Pong         43.92 239  eP        P        09 28 16.6  +0.1
PBKT  Sadao Pong         43.92 239   P        P        09 28 16.5  +0.1
      comp=Z,49nm,1.2s,comp=Z,1µm
TKM2  Tokmak 2           43.92 289   P        P        09 28 17.1  +0.7
      SNR=375
TKM2  Tokmak 2           43.92 289   P        P        09 28 17.2  +0.7
TKM2                                 pmax     pmax
      comp=Z,550nm,1.2s
SUKH  Sukhothai          43.99 241   P        P        09 28 19.1  +2.1
      comp=Z,12nm,1.1s
GTK   Tadong             44.01 261  eP        P        09 28 17.6  +0.4
GTK                                  IAmb     IAmb     09 28 18.9
      comp=Z,191nm,0.9s
BMRM  Bremner River      44.02  43  eP        P        09 28 17.1  +0.3
      comp=Z,251nm,0.8s
TURI  Tura               44.02 258  eP        P        09 28 17.5  +0.3
RAGM  Ragged Mountai     44.17  44  eP        P        09 28 18.6  +0.7
      comp=Z,114nm,1.1s
EGAK  Eagle              44.36  37  eP        P        09 28 19.1  -0.2
      comp=Z,193nm,0.8s
CHMS  Chumysh            44.43 289   P        P        09 28 20.2   0.0
      SNR=34
USP   Ospenovka          44.46 290   P        P        09 28 21.1  +0.7
      SNR=185
KBK   Karagaybulak       44.47 289   P        P        09 28 21.4  +0.8
      SNR=130
KZA   Kyzart             44.56 288   P        P        09 28 23.0  +1.3
      SNR=58
AGT   Agartala           44.56 255  ex        PcP      09 29 53.6   0.0
TAPN  Taplejung          44.59 262  eP        P        09 28 22.5  +0.6
      comp=Z,79nm,0.4s
FRU   Bishkek            44.59 289⇓ eP        P        09 28 23.0  +1.6
FRU                                 e                  09 30 00.0
FRU                                 eS        S        09 34 22.0  +2.1
FRU                                 eSS       ScS      09 37 20.0  -2.5
FRU                                  pmax     pmax
      comp=Z,610nm,1.9s
KDM   Kudat              44.61 212   P        P        09 28 24.0  +2.2
AAK   Ala-Archa          44.77 289   P        P        09 28 23.4  +0.4
      SNR=100
AAK   Ala-Archa          44.77 289  eP        P        09 28 23.3  +0.4
AAK   Ala-Archa          44.77 289  eP        P        09 28 23.6  +0.6
      comp=Z,440nm,1.4s
AAK   Ala-Archa          44.77 289   P        P        09 28 23.3  +0.4
      SNR=103
AAK   Ala-Archa          44.77 289  i P       P        09 28 23.6  +0.6
      SNR=103
AAK   Ala-Archa          44.77 289d iP        P        09 28 23.3  +0.4
AAK                                  pmax     pmax
      comp=Z,285nm,1.2s
TGL   Tana Glacier       44.91  43  eP        P        09 28 24.2  +0.5
TGL                                 ePcP      PcP      09 29 55.2  +0.9
UCH   Uchtor             44.96 288   P        P        09 28 25.4  +0.6
      SNR=62
ODAN  Odare              45.12 262  eP        P        09 28 26.4  +0.4
      comp=Z,262nm,0.8s
BRDH  Bariadhala         45.14 254   P        P        09 28 27.4  +1.6
      comp=Z,173nm,0.4s,baz=86,slow=16,SNR=9.4
EKS2  Erkin-Say          45.22 289   P        P        09 28 26.6  +0.3
      SNR=251
DAWY  Dawson             45.31  38  eP        P        09 28 26.5  -0.2
      comp=Z,50nm,1.1s
SRAK  Srakaew            45.36 235   P        P        09 28 25.5  -2.1
      comp=Z,435nm,0.7s,comp=Z,3µm
KSH   Kashi              45.39 284   P        P        09 28 32.3  +4.6
KSH                                  PP       PP       09 30 28.5  +6.5
KSH                                  sP       sP       09 31 03.3  +5.2
KSH                                  PcS      PcS      09 33 55.0  +3.5
KSH                                  S        S        09 34 38.0  +6.7
KSH                                  ScS      ScS      09 37 31.0  +3.0
KSH                                  pmax     pmax
      comp=Z,180nm,0.9s
JIRN  Jiri               45.41 264  eP        P        09 28 28.7  +0.4
      comp=Z,913nm,0.7s
UMPA  Umpang Tak         45.44 241   P        P        09 28 30.8  +2.5
      comp=Z,32nm,1.0s,comp=Z,449nm
GUN   Gumba              45.46 264  eP        P        09 28 28.7   0.0
      comp=Z,286nm,0.6s
NAYO  Nakonayok          45.52 236   P        P        09 28 29.8  +1.0
      comp=Z,1.4nm,1.4s,comp=Z,18nm
AML   Almayashu          45.53 289   P        P        09 28 29.9  +0.8
      SNR=131
RAMN  Ramite             45.59 263  eP        P        09 28 29.9  +0.3
      comp=Z,532nm,0.5s
KKM   Kota Kinabalu      45.64 213  eP        P        09 28 30.4  +0.6
      comp=Z,215nm,0.7s
KKM   Kota Kinabalu      45.64 213   P        P        09 28 30.0  +0.2
MYLDM Lahad Datu         45.64 209  eP        P        09 28 31.1  +1.4
      comp=Z,140nm,0.9s
KKN   Kakani             45.94 265  eP        P        09 28 32.4  +0.2
      comp=Z,349nm,0.6s
PKIN  Phulchoki          46.00 264  eP        P        09 28 33.3  +0.6
      comp=Z,220nm,0.7s
MNAS  Manas              46.12 290   P        P        09 28 33.7  +0.4
MNAS                                 pmax     pmax
      comp=Z,382nm,0.9s
INK   Inuvik             46.15  31   P        P        09 28 33.2  +0.3
      comp=Z,71nm,0.4s,baz=291,slow=7.0,SNR=713
INK                                  PcP      PcP      09 29 58.8  +0.4
      comp=Z,50nm,0.9s,baz=296,slow=3.0,SNR=7.1
INK                                  S        S        09 34 42.3  +1.5
      comp=Z,6.4nm,0.9s,baz=89,slow=29,SNR=8.0
INK                                  PKiKP    PKiKP    09 36 50.3  -1.2
      comp=Z,4.3nm,0.8s,baz=329,slow=6.3,SNR=3.8
INK                                  ScS      ScS      09 37 28.7  -3.0
      comp=Z,7.4nm,1.0s,baz=28,slow=32,SNR=15
INK   Inuvik             46.15  31  eP        P        09 28 33.1  +0.3
      comp=Z,92nm,0.5s
INK                                 ePcP      PcP      09 29 59.3  +0.9
INK                                  S        S        09 34 42.3  +1.5
INK                                  PKiKP    PKiKP    09 36 50.3  -1.2
INK                                  ScS      ScS      09 37 28.7  -3.0
INK   Inuvik             46.15  31  eP        P        09 28 33.1  +0.3
INK                                 e                  09 29 59.3
INK                                                    09 37 28.7
INK                                  pmax     pmax
      comp=Z,92nm,0.5s
DMN   Daman              46.17 264  eP        P        09 28 34.5  +0.5
      comp=Z,355nm,0.8s
GKN   Gorkha             46.24 265  eP        P        09 28 34.6  +0.2
      comp=Z,403nm,0.5s
SVE   Sverdlovsk         46.58 312c iP        P        09 28 36.7  +0.4
SVE                                 e                  09 37 38.6
SVE                                  pmax     pmax
      comp=Z,829nm,0.7s
DANN  Dangsing           46.61 266  eP        P        09 28 38.1  +0.7
      comp=Z,1µm,0.7s
DZA   Taraz              46.66 291  eP        P        09 28 37.9  +0.6
      comp=Z,152nm,0.9s
SFK   Sufi-Kurgan        46.74 286   P        P        09 28 38.2   0.0
SFK                                  pmax     pmax
      comp=Z,337nm,1.1s
SRDT  SRDT               46.76 239   P        P        09 28 39.2  +1.0
      comp=Z,111nm,0.7s
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PATY	Pattaya	46.90	236	P	P	09 28 40.9	+1.6
	comp=Z,44nm,1.1s						
KK31	Karatay Array	47.08	291	eP	P	09 28 40.5	+0.1
KK31	Karatay Array	47.08	291	P	P	09 28 40.5	+0.1
KK31				pmax	pmax		
	comp=Z,259nm,0.7s						
KKAR	Karatay Array	47.08	291	eP	P	09 28 40.8	+0.4
KKAR	Karatay Array	47.08	291	eP	P	09 28 40.8	+0.4
KOLN	Koldanda	47.09	266	eP	P	09 28 41.7	+0.8
	comp=Z,377nm,0.9s						
PYUN	Piuthan	47.29	267	eP	P	09 28 42.8	+0.4
	comp=Z,1µm,0.9s						
BRLS	Borolday	47.54	292	i S	S	09 35 05.2	+4.1
TNTI	Ternate	47.55	196	P	P	09 28 43.1	-1.1
TNTI	Ternate	47.55	196	eP	P	09 28 43.3	-0.9
	comp=Z,353nm,1.2s						
PHET	Kaeng Krachan	47.61	237	P	P	09 28 46.2	+1.5
	comp=Z,78nm,0.9s,comp=Z,618nm						
ARU	Arti	47.78	312	ScP	ScP	09 33 09.5	-0.6
	comp=Z,33nm,0.9s,baz=38,slow=2.5,SNR=3.8						
ARU				S	S	09 35 04.1	+0.2
	comp=Z,37nm,0.9s,baz=278,slow=20,SNR=26						
ARU	Arti	47.78	312	eP	P	09 28 45.2	-0.2
ARU	Arti	47.78	312	eP	P	09 28 45.5	0.0
	comp=Z,1µm,1.4s						
ARU				ScP	ScP	09 33 09.5	-0.6
ARU				S	S	09 35 04.1	+0.2
ARU	Arti	47.78	312	d iP	P	09 28 45.2	-0.2
ARU						09 30 03.9	
ARU				*PP	pP	09 30 21.5	+0.9
ARU						09 30 41.3	
ARU				eS	S	09 35 04.2	+0.2
ARU						09 37 39.8	
ARU				*SS	sS	09 37 57.1	+1.1
ARU				SS	SS	09 38 37.4	-2.6
ARU				pmax	pmax		
	comp=Z,1µm,1.7s						
IUG	Iuzhnay	47.87	290	⇓iP	P	09 28 47.1	+0.7
	comp=Z,190nm,1.2s						
CHM	Chimkent	48.05	291	eP	P	09 28 49.0	+1.3
	comp=Z,209nm,0.8s						
BOK	Bokaro	48.18	260	eP	P	09 28 49.1	+0.3
BOK				IAmb	IAmb	09 28 50.2	
	comp=Z,139nm,1.1s						
BAKI	Biak	48.45	184	P	P	09 28 51.0	+0.1
KMSI	Cibinong	48.46	200	P	P	09 28 50.2	-0.8
SWI	Sorong	48.54	191	P	P	09 28 51.3	-0.3
WHY	Whitehorse	48.55	41	eP	P	09 28 52.2	+1.0
	comp=Z,83nm,1.2s						
WHY				ePcP	PcP	09 30 08.5	+1.1
RKPI	Ransiki, Papua	48.89	187	P	P	09 28 54.1	-0.1
	comp=Z,568nm,0.8s,comp=Z,6µm						
LBMI	Labuha	48.90	196	P	P	09 28 53.6	-0.7
MRSI	Marisa	49.07	203	P	P	09 28 54.6	-0.9
SRPI	Serui, Papua	49.12	184	P	P	09 28 56.2	+0.3
	comp=Z,735nm,0.7s,comp=Z,8µm						
DDI	Dehra Dun	49.25	273	eP	P	09 28 57.4	+0.6
DDI				IAmb	IAmb	09 28 58.4	
DHRM	DHARAMSHALA	49.27	276	eP	P	09 28 56.9	-0.3
DHRM				IAmb	IAmb	09 28 57.8	
	comp=Z,618nm,0.6s						
SMLA	Simla	49.36	274	eP	P	09 28 57.4	-0.1
BESE	Bessie Mountai	49.48	43	eP	P	09 28 59.2	+1.1
	comp=Z,77nm,0.8s						
JAY	Jayapura	49.71	178	P	P	09 29 00.6	+0.3
	comp=Z,2µm,1.2s,comp=Z,22µm						
MANU	Manus Island	49.75	169	eP	P	09 29 00.8	+0.2
	comp=Z,364nm,0.9s						
MPSI	Mapaga	49.77	206	P	P	09 29 00.2	-0.5
GENI	Genyem	49.78	179	P	P	09 29 01.3	+0.5
	comp=Z,664nm,0.9s,comp=Z,7µm						
JIS	Juneau Island	49.84	44	eP	P	09 29 01.9	+1.3
	comp=Z,61nm,0.8s						
SIT	Sitka	49.96	45	eP	P	09 29 03.1	+1.5
	comp=Z,123nm,1.1s						
SIT	Sitka	49.96	45	P	P	09 29 03.0	+1.5
SIT				pmax	pmax		
	comp=Z,120nm,1.1s						
SPA0	Spitsbergen Ar	50.05	347	eP	P	09 29 02.5	+0.6
SPA0	Spitsbergen Ar	50.05	347	eP	P	09 29 02.4	+0.4
SPA0				IAmb	IAmb	09 29 03.0	
	comp=Z,34nm,1.0s						
SPITS	Spitsbergen Ar	50.05	347	P	P	09 29 02.5	+0.6
	comp=Z,11nm,0.4s,baz=56,slow=11,SNR=77						
SPITS				PcP	PcP	09 30 12.5	-0.1
	comp=Z,16nm,0.5s,baz=30,slow=10.0,SNR=4.8						
SPITS				ScP	ScP	09 33 19.9	+0.5
	comp=Z,32nm,0.9s,baz=40,slow=20,SNR=5.3						
KBS	Kingsbay	50.17	348	eP	P	09 29 03.5	+0.7
KBS	Kingsbay	50.17	348	eP	P	09 29 03.7	+0.9
	comp=Z,45nm,0.9s						
KBS	Kingsbay	50.17	348	eP	P	09 29 03.7	+0.9
KBS				pmax	pmax		
	comp=Z,45nm,0.9s						
KBS	Kingsbay	50.17	348	eP	P	09 29 03.7	+0.9
KBS				IAmb	IAmb	09 29 04.4	
	comp=Z,48nm,0.9s						
LUWI	Luwuk	50.31	201	P	P	09 29 02.4	-2.3
LUWI	Luwuk	50.31	201	eP	P	09 29 02.4	-2.3
	comp=Z,2µm,1.5s						
AB31	Akbulak array	50.37	303	P	P	09 29 05.0	+0.3
AB31				pmax	pmax		
	comp=Z,483nm,0.8s						
ABKAR	Akbulak array	50.37	303	eP	P	09 29 05.3	+0.6
FAKI	Fak Fak	50.46	189	P	P	09 29 05.4	-0.4
	comp=Z,2µm,0.8s,comp=Z,13µm						
FAKI	Fak Fak	50.46	189	eP	P	09 29 05.4	-0.4
	comp=Z,1µm,0.7s						
FAKI				ePcP	PcP	09 30 15.3	+0.3
SBUM	Sibu	50.47	216	eP	P	09 29 06.7	+0.9
	comp=Z,419nm,0.7s						
SBUM				ePcP	PcP	09 30 16.6	+1.5
SBUM	Sibu	50.47	216	P	P	09 29 07.0	+1.2
APSI	Ampana	50.47	203	P	P	09 29 04.6	-1.2
NIL	Nilore	50.48	279	eP	P	09 29 06.8	+1.0
	comp=Z,467nm,0.8s						
NIL				ePcP	PcP	09 30 15.5	+0.6
NIL	Nilore	50.48	279	eP	P	09 29 06.8	+1.0
NIL				e		09 30 15.5	
NIL				pmax	pmax		
	comp=Z,467nm,0.8s						
SANI	Sanana	50.56	197	P	P	09 29 05.1	-1.4
AKTO	Aktyubinsk	50.86	305	P	P	09 29 08.6	+0.4
	comp=Z,202nm,0.7s,baz=62,slow=10,SNR=455						
AKTO				ScP	ScP	09 33 22.9	-0.5
	comp=Z,39nm,0.9s,baz=48,slow=5.4,SNR=6.3						
AKTO				S	S	09 35 46.7	+0.6
	comp=Z,22nm,1.1s,baz=307,slow=21,SNR=13						
PCI	Palu	50.97	205	P	P	09 29 08.3	-1.2
HSPB	Hornsund (broa	50.98	346	eP	P	09 29 10.1	+1.3
HSPB				IAmb	IAmb	09 29 10.9	
	comp=Z,126nm,1.2s						
SURT	Suratani	51.30	235	P	P	09 29 13.5	+1.6
	comp=Z,0.1nm,0.9s						
MSAI	Masohi	51.31	193	P	P	09 29 12.9	+0.9
PRGR	Permogore	51.33	322	⇓iP	P	09 29 11.7	+0.2
PRGR				e		09 30 17.1	
PRGR				e*PP	pP	09 30 49.7	+1.1
PRGR				e		09 31 13.6	
PRGR				i S	S	09 35 52.1	+0.1
PRGR				e		09 38 03.9	
PRGR				pmax	pmax		
	comp=Z,245nm,0.8s						
NLAI	Namlea	51.51	195	P	P	09 29 13.5	+0.1
WRAK	Wrangell Islan	51.71	45	eP	P	09 29 15.6	+1.4
	comp=Z,62nm,1.0s						
TRTT	Trang	51.73	233	P	P	09 29 15.8	+0.7
	comp=Z,67nm,0.9s,comp=Z,801nm						
AAI	Ambon	51.76	194	P	P	09 29 15.3	+0.1
DLBC	Dease Lake	51.78	42	PKPPKP		09 59 11.3	
	comp=Z,2.1nm,1.1s,baz=140,slow=4.8,SNR=3.8						
DLBC	Dease Lake	51.78	42	eP	P	09 29 16.6	+1.7
	comp=Z,61nm,0.8s						
DLBC				P'P'		09 59 11.3	
SKLT	Songkhla	51.79	232	P	P	09 29 16.4	+1.0
	comp=Z,166nm,1.1s,comp=Z,2µm						
CRAG	Craig	51.81	46	eP	P	09 29 16.5	+1.5
	comp=Z,64nm,0.7s						
CRAG				ePcP	PcP	09 30 21.3	+1.9
JOHN	Johnston Islan	51.93	108	eP	P	09 29 17.2	+0.7
	comp=Z,317nm,0.8s						
KSM	Kuching	52.13	218	eP	P	09 29 18.4	+0.5
	comp=Z,349nm,1.1s						
KSM				ePcP	PcP	09 30 21.8	+0.5
KSM	Kuching	52.13	218	P	P	09 29 18.0	+0.1
BKB	Balikpapan	52.21	209	P	P	09 29 18.4	0.0
BNDI	Bandanaira	52.33	192	P	P	09 29 18.6	-0.7
MTKI	Muara Teweh, K	52.59	211	P	P	09 29 21.6	+0.4
RABL	Rabaul	52.63	164	eP	P	09 29 22.5	+1.0
	comp=Z,970nm,0.8s						
APA	Apatity	52.64	332	⇑iP	P	09 29 18.7	-2.1
APA				i		09 30 22.0	
APA				i *PP	pP	09 30 59.8	+1.2
APA				i		09 31 23.7	
APA				i S	S	09 36 07.0	-2.3
APA				i		09 38 14.0	
APA				pmax	pmax		
	comp=Z,35nm,0.7s						
APA				MLR	MLR		
	comp=Z,400nm,12.0s						
PBA	Port Blair	52.67	243	eP	P	09 29 22.3	+0.6
	comp=Z,251nm,1.1s						
KBL	Kabul	52.76	283	eP	P	09 29 21.8	-0.7
	comp=Z,251nm,0.6s						
KBL	Kabul	52.76	283	eP	P	09 29 21.8	-0.7
KBL				pmax	pmax		
	comp=Z,251nm,0.6s						
TTSI	Tana Toraja	53.01	204	P	P	09 29 22.8	-1.4
RES	Resolute Bay	53.04	16	eP	P	09 29 23.4	-0.2
	comp=Z,114nm,1.0s						
RES				ePcP	PcP	09 30 24.7	+0.9
RES	Resolute Bay	53.04	16	eP	P	09 29 23.4	-0.2
RES				e		09 30 24.7	
RES				pmax	pmax		
	comp=Z,114nm,1.0s						
CHLP	Challavanipeta	53.08	257	eP	P	09 29 24.5	-0.2
CHLP				IAmb	IAmb	09 29 25.6	
	comp=Z,62nm,1.0s						
KDI	Kendari	53.16	201	P	P	09 29 25.1	-0.1
KEV	Kevo	53.22	336	eP	P	09 29 24.9	+0.1
	comp=Z,54nm,0.9s						
KEV	Kevo	53.22	336	eP	P	09 29 25.0	+0.1
KEV				pmax	pmax		
	comp=Z,54nm,0.9s						
DIB	Dawson Inlet,	53.31	49	eP	P	09 29 26.5	+0.8
	comp=Z,123nm,1.1s						
DIB				ePcP	PcP	09 30 26.2	+1.0
KULM	Kulim	53.35	231	eP	P	09 29 26.8	+0.2
	comp=Z,213nm,1.3s						
KULM				ePcP	PcP	09 30 26.8	+0.8
KULM	Kulim	53.35	231	P	P	09 29 27.0	+0.3
HAMF	Hammerfest	53.53	338	eP	P	09 29 26.9	-0.3
HAMF				IAmb	IAmb	09 29 27.7	
	comp=Z,57nm,1.0s						
ARCES	ARCESS Array B	53.77	336	P	P	09 29 28.9	+0.1
	comp=Z,10.0nm,0.4s,baz=54,slow=8.2,SNR=112						
ARCES				PcP	PcP	09 30 27.0	+0.2
	comp=Z,30nm,0.9s,baz=35,slow=4.4,SNR=8.8						
ARCES				ScP	ScP	09 33 34.9	-0.8
	comp=Z,28nm,0.9s,baz=37,slow=4.7,SNR=9.5						
ARCES				PKiKP	PKiKP	09 36 58.9	-0.8
	comp=Z,2.1nm,0.6s,baz=90,slow=1.3,SNR=4.1						
ARCES				PKPPKP	P'P'df	09 59 22.5	-18
	comp=Z,2.4nm,0.8s,baz=199,slow=1.9,SNR=3.9						
ARCES	ARCESS Array B	53.77	336	eP	P	09 29 28.9	0.0
ARCES				ePcP	PcP	09 30 27.4	+0.6
ARCES				ScP	ScP	09 33 34.9	-0.8
ARCES				PKiKP	PKiKP	09 36 58.9	-0.8
ARCES				P'P'		09 59 22.5	
ARCES	ARCESS Array B	53.77	336	eP	P	09 29 28.9	0.0
ARCES				e		09 30 27.4	
IPM	Ipoh	53.84	230	eP	P	09 29 29.6	-0.6
	comp=Z,130nm,1.0s						
SPSI	Sidrap Palu	53.90	204	P	P	09 29 28.8	-1.7
KLMR	Klimovskoe	54.25	324	eP	P	09 29 30.3	-2.0
KLMR				e*PP	pP	09 31 09.7	-1.2
KLMR				e		09 31 38.0	
KLMR				pmax	pmax		
	comp=Z,165nm,1.1s						
KLMR	Klimovskoe	54.25	324	eP	P	09 29 30.3	-2.0
KLMR				AMP		09 29 32.8	
	comp=Z,165nm,1.1s						
KLMR				epP	pP	09 31 09.8	-1.2
KLMR				ePP	PP	09 31 38.0	-2.8
BHPL	Bhopal	54.26	266	eP	P	09 29 32.7	-0.4
BHPL				IAmb	IAmb	09 29 33.3	
	comp=Z,215nm,0.7s						
KBKI	Kotabaru	54.36	209	P	P	09 29 33.3	-0.4
TARA	Tarawa	54.43	137	eP	P	09 29 34.8	+0.5
	comp=Z,938nm,1.6s						
KTK1	Kautokeino	54.72	337	eP	P	09 29 34.9	-0.7
KEKH	Kekaha	54.74	95	eP	P	09 29 37.2	+0.8
	comp=Z,157nm,1.0s						
MYKOM	Kota Tinggi	54.75	225	eP	P	09 29 37.2	+0.8
	comp=Z,132nm,0.8s						
MYKOM				ePcP	PcP	09 30 31.6	+0.2
MYKOM	Kota Tinggi	54.75	225	P	P	09 29 37.0	+0.5
TULEG	Thule	55.07	8	eP	P	09 29 37.5	-0.4
	comp=Z,203nm,1.1s						
BKSI	Bulukumba	55.10	203	P	P	09 29 37.8	-1.1
DAG	Danmarks Havn	55.31	354	⇑iP	P	09 29 39.4	-0.2
	comp=Z,52nm,0.9s						
DAG				i		09 31 16.7	
DAG	Danmarks Havn	55.31	354	⇑iP	P	09 29 39.4	-0.2
DAG				i		09 31 16.7	
DAG				pmax	pmax		
	comp=Z,52nm,0.9s						
TRO	Tromso	55.42	338	eP	P	09 29 40.7	+0.3
TRO				IAmb	IAmb	09 29 44.4	
	comp=Z,51nm,0.8s						
SAUI	Saumlaki	55.56	189	P	P	09 29 43.0	+0.9
SAUI	Saumlaki	55.56	189	eP	P	09 29 43.1	+0.9
	comp=Z,2µm,0.9s						
PVM	Polavaram	55.59	258	eP	P	09 29 42.0	-0.4
PVM				IAmb	IAmb	09 29 43.6	
	comp=Z,44nm,0.8s						
YKW3	Yellowknife Ar	55.80	33	eP	P	09 29 42.7	-0.4
	comp=Z,42nm,0.7s						
YKW3				ePcP	PcP	09 30 35.8	+1.0
YKA	Yellowknife Ar	55.84	33	P	P	09 29 43.4	-0.1
	comp=Z,30nm,0.6s,baz=309,slow=6.6,SNR=363						
YKA				PcP	PcP	09 30 35.5	+0.6
	comp=Z,26nm,0.7s,baz=314,slow=3.4,SNR=18						
YKA				pP	pP	09 31 23.8	+0.9
	comp=Z,26nm,1.0s,baz=307,slow=7.0,SNR=3.8						
YKA				ScP	ScP	09 33 44.9	-0.1
	comp=Z,4.1nm,0.7s,baz=311,slow=4.3,SNR=4.0						
YKA				S	S	09 36 46.6	-5.0
	comp=Z,1.9nm,1.1s,baz=302,slow=12,SNR=2.7						
YKA				PKPPKP	P'P'df	09 59 15.9	-21
	comp=Z,1.2nm,0.9s,baz=138,slow=2.0,SNR=5.0						
YKA				P4KPbc		10 06 53.1	
	comp=Z,0.9nm,0.7s,baz=310,slow=4.3,SNR=11						
YKA	Yellowknife Ar	55.84	33	eP	P	09 29 42.9	-0.6
YKA	Yellowknife Ar	55.84	33	i P	P	09 29 42.9	-0.6
YKA				pmax	pmax		
	comp=Z,31nm,0.6s						
RPR	Rampur	56.01	261	eP	P	09 29 45.0	-0.3
RPR				IAmb	IAmb	09 29 46.2	
	comp=Z,88nm,0.9s						
BBB	Bella Bella	56.08	48	eP	P	09 29 46.1	+0.8
	comp=Z,129nm,0.8s						
BBB				ePcP	PcP	09 30 37.5	+1.4
OPA	Opana	56.09	94	eP	P	09 29 47.1	+1.3
	comp=Z,248nm,0.8s						
OPA				ePcP	PcP	09 30 37.9	+1.3
KIP	Kipapa	56.27	94	eP	P	09 29 48.0	+0.9
	comp=Z,131nm,0.7s						
KIP				ePcP	PcP	09 30 38.0	+0.7
KIP	Kipapa	56.27	94	c iP	P	09 29 48.1	+1.0
KIP				pmax	pmax		
	comp=Z,756nm,0.7s						
PSI	Prapat	56.36	231	P	P	09 29 47.1	-0.8
	comp=Z,49nm,0.8s,baz=0.2,slow=7.4,SNR=23						
PSI				PcP	PcP	09 30 37.8	-0.1
	comp=Z,25nm,0.5s,baz=0.1,slow=5.0,SNR=8.5						
PSI	Prapat	56.36	231	eP	P	09 29 46.8	-1.1
	comp=Z,60nm,0.9s						
PSI				ePcP	PcP	09 30 37.8	-0.1
PSI	Prapat	56.36	231	eP	P	09 29 46.8	-1.1
PSI				e		09 30 37.8	
PSI				pmax	pmax		
	comp=Z,60nm,0.9s						
SRSP	Sriramsagar	56.60	262	eP	P	09 29 48.7	-0.7
SRSP				IAmb	IAmb	09 29 49.8	
	comp=Z,148nm,1.0s						
TPTI		56.91	233	P	P	09 29 50.8	-0.7
PMG	Port Moresby	56.99	171	P	P	09 29 52.2	+0.2
	comp=Z,164nm,0.8s,baz=18,slow=11,SNR=26						
PMG	Port Moresby	56.99	171	eP	P	09 29 52.2	+0.2
	comp=Z,184nm,0.9s						
PMG	Port Moresby	56.99	171	eP	P	09 29 52.2	+0.2
PMG				pmax	pmax		
	comp=Z,184nm,0.9s						
PHC	Port Hardy	57.29	49	eP	P	09 29 53.9	+0.3
BKNI	Bangkinang	57.39	227	P	P	09 29 55.2	+0.4
BKNI	Bangkinang	57.39	227	eP	P	09 29 55.5	+0.7
	comp=Z,467nm,1.0s						
HYBB	Hyderabad (bro	57.52	260	eP	P	09 29 55.4	-0.3
HYBB				IAmb	IAmb	09 29 55.9	
	comp=Z,44nm,0.9s						
HYB	Hyderabad	57.52	260	i P	P	09 29 55.0	-0.8
HYB				ePcP	PcP	09 30 42.0	-0.4
HYB				epP	pP	09 31 37.0	+1.0
HYB				eS	S	09 37 14.0	-0.5
HYB	Hyderabad	57.52	260	eP	P	09 29 55.8	0.0
HYB				IAmb	IAmb	09 29 56.3	
	comp=Z,40nm,0.8s						
ADKI	Addanki	57.70	258	eP	P	09 29 56.8	-0.1
ADKI				IAmb	IAmb	09 29 57.8	
	comp=Z,48nm,0.9s						
KHLH	Kahului Airpor	57.71	94	eP	P	09 29 57.6	+0.7
	comp=Z,358nm,0.8s						
MMRI	Maumere	57.76	200	P	P	09 29 56.2	-1.1
MMRI	Maumere	57.76	200	eP	P	09 29 56.2	-1.1
	comp=Z,2µm,1.4s						
GEYT	Alibeck	57.79	293	P	P	09 29 57.0	-0.3
	comp=Z,60nm,0.4s,baz=58,slow=5.6,SNR=123						
GEYT				S	S	09 37 17.5	+0.1
	comp=Z,2.9nm,0.8s,baz=232,slow=47,SNR=11						
GYA0B	ALIBECK ARRAY	57.79	293	eP	P	09 29 57.8	+0.5
	comp=Z,193nm,0.9s						
LOF	Lofoten	57.85	339	eP	P	09 29 57.0	-0.2
LOF				IAmb	IAmb	09 29 59.4	
	comp=Z,96nm,1.5s						
HLK	Haleakala	57.92	94	eP	P	09 30 00.0	+1.3
	comp=Z,521nm,1.3s						
HLK				ePcP	PcP	09 30 45.0	+0.8
EDFI	Ende, Flores	58.00	200	P	P	09 29 57.0	-2.0
MOS	Moscow	58.10	319	eP	P	09 29 59.0	0.0
MOS				e		09 30 44.2	
MOS				e*PP	pP	09 31 39.5	0.0
MOS				e		09 32 13.8	
MOS				e		09 33 54.7	
MOS				eS	S	09 37 19.7	-1.0
MOS				e		09 38 53.3	
MOS				pmax	pmax		
	comp=Z,300nm,1.4s						
MOS				pmax	pmax		
	comp=Z,237nm,1.5s						
MOS				pmax	pmax		
	comp=N,129nm,1.4s						
MOS				smax	smax		
	comp=E,2µm,2.3s						
MOS				smax	smax		
	comp=N,800nm,1.7s						
SRLM	Srisailam	58.23	259	eP	P	09 29 59.7	-0.9
SRLM				IAmb	IAmb	09 30 01.1	
	comp=Z,88nm,1.1s						
GSI	Gunungsitoli	58.34	231	P	P	09 30 01.1	-0.1
GSI	Gunungsitoli	58.34	231	eP	P	09 30 01.2	0.0
GSI				ePcP	PcP	09 30 46.0	+0.4
SOEI	Soe	58.41	197	P	P	09 30 00.3	-1.5
SOEI	Soe	58.41	197	eP	P	09 30 00.6	-1.2
	comp=Z,503nm,0.5s						
PMBI	Palembang	58.47	221	P	P	09 30 03.4	+1.3
PUL	Pulkovo	58.54	326	eP	P	09 30 02.1	+0.2
PUL	Pulkovo	58.54	326	c eP	P	09 30 02.1	+0.2
PUL				pmax	pmax		
	comp=Z,130nm,0.7s						
MHA	Mahukona	58.55	94	eP	P	09 30 04.1	+1.5
MHA				ePcP	PcP	09 30 47.7	+1.3
MHA	Mahukona	58.55	94	eP	P	09 30 04.1	+1.5
MHA				e		09 30 47.7	
HPAH	Hawaii Prepara	58.80	94	eP	P	09 30 05.1	+0.7
	comp=Z,354nm,1.0s						
KKH	Kailua Kona	58.84	94	eP	P	09 30 05.7	+1.1
HUH	Hualalai	58.94	94	eP	P	09 30 06.1	+0.5
	comp=Z,132nm,0.7s						
FIA1	FINESS Array S	58.96	329	eP	P	09 30 04.3	-0.4
	comp=Z,186nm,0.6s						
FIA1				ePcP	PcP	09 30 47.1	-0.3
FIA1				eS	S	09 37 30.1	-1.3
OBN	Obninsk	58.96	319	eP	P	09 30 04.2	-0.6
OBN	Obninsk	58.96	319	eP	P	09 30 04.5	-0.4
	comp=Z,175nm,0.8s						
OBN	Obninsk	58.96	319	d iP	P	09 30 04.2	-0.6
OBN				e		09 30 47.0	
OBN				e*PP	pP	09 31 44.2	-1.5
OBN				e		09 32 19.1	
OBN				i S	S	09 37 29.8	-1.8
OBN				eSS	SS	09 41 35.5	+0.2
OBN				pmax	pmax		
	comp=Z,184nm,0.8s						
OBN				MLR	MLR		
	comp=Z,186nm,14.0s						
FINES	FINESS Array B	58.96	329	P	P	09 30 04.2	-0.6
	comp=Z,177nm,0.5s,baz=50,slow=7.6,SNR=1403						
FINES				pP	pP	09 31 46.1	+0.4
	comp=Z,81nm,0.9s,baz=46,slow=9.0,SNR=7.6						
FINES				ScP	ScP	09 33 58.4	-0.4
	comp=Z,32nm,0.8s,baz=72,slow=6.2,SNR=5.5						
FINES				S	S	09 37 29.8	-1.7
	comp=Z,25nm,0.8s,baz=34,slow=18,SNR=11						
FINES				PKPPKP	P'P'df	09 59 01.6	-31
	comp=Z,1.8nm,0.8s,baz=180,slow=0.8,SNR=3.4						
KHLU	Kahalu'u	58.97	94	eP	P	09 30 06.4	+0.8
	comp=Z,272nm,0.9s						
BATI	Baumata	58.97	198	P	P	09 30 04.8	-0.7
	comp=Z,481nm,0.6s,baz=23,slow=4.0,SNR=46						
BATI	Baumata	58.97	198	P	P	09 30 04.2	-1.3
VRH	Novokhopyorsk	58.99	313	eP	P	09 30 04.7	-0.4
VRH				e*PP	pP	09 31 44.6	-1.4
VRH				e		09 32 21.7	
VRH				eS	S	09 37 30.2	-1.9
VRH				pmax	pmax		
	comp=Z,440nm,0.7s						
VRH				smax	smax		
	comp=N,3µm,1.8s						
PLAI	Plampang	59.10	205	P	P	09 30 04.3	-2.0
POHA	Pohakuloa	59.10	94	eP	P	09 30 07.6	+1.0
	comp=N,537nm,0.8s						
MOR8	Moi Rana	59.12	337	eP	P	09 30 03.7	-2.1
MOR8				IAmb	IAmb	09 30 04.7	
	comp=Z,85nm,0.5s						
SRBI	Singaraja	59.17	208	P	P	09 30 06.6	-0.2
KONS	Konsvik	59.21	338	eP	P	09 30 06.1	-0.2
KONS				IAmb	IAmb	09 30 11.7	
	comp=Z,24nm,0.5s						
MLOA	Mauna Loa Obse	59.22	94	eP	P	09 30 08.8	+1.1
	comp=Z,279nm,0.9s						
HMH	Humu'ula Sheep	59.24	94	eP	P	09 30 08.6	+1.0
	comp=Z,286nm,0.9s						
MWH	Moku'aweowe	59.24	94	eP	P	09 30 08.7	+0.8
	comp=Z,180nm,0.9s						
TWSI	Taliwang, Sumb	59.27	206	P	P	09 30 05.9	-1.6
KRJI	Kerinci	59.27	225	P	P	09 30 07.9	+0.2
MLH	Mauna Loa	59.38	94	eP	P	09 30 09.5	+1.0
	comp=Z,404nm,0.8s						
MLH				ePcP	PcP	09 30 51.1	+1.1
MLH	Mauna Loa	59.38	94	eP	P	09 30 09.5	+1.0
MLH				e		09 30 51.1	
MLH				pmax	pmax		
	comp=Z,404nm,0.8s						
KHU	Kahuku	59.40	94	eP	P	09 30 09.6	+1.0
	comp=Z,344nm,0.8s						
KHU	Kahuku	59.40	94	eP	P	09 30 09.6	+1.0
KHU				pmax	pmax		
	comp=Z,344nm,0.8s						
SKHT	Srikalahasti	59.40	256	eP	P	09 30 08.4	+0.1
SKHT				IAmb	IAmb	09 30 09.9	
	comp=Z,45nm,1.0s						
AIN	Ainahou	59.41	94	eP	P	09 30 09.7	+1.0
	comp=Z,411nm,0.9s						
WBSI	Waikabubak, Su	59.43	203	P	P	09 30 05.4	-3.2
LPSR	Galich'ya Gora	59.47	316	eP	P	09 30 08.1	-0.2
LPSR				e*PP	pP	09 31 48.1	-1.3
LPSR				e		09 32 26.0	
LPSR				e*SP	sP	09 32 42.2	-1.7
LPSR				eS	S	09 37 36.1	-2.0
LPSR				pmax	pmax		
	comp=Z,350nm,0.8s						
LPSR				smax	smax		
	comp=N,450nm,1.8s						
UWE	Uwekahuna	59.49	94	eP	P	09 30 10.2	+1.0

	comp=N,150nm,0.9s						
WRMHI	West Rim	59.50	94	*e*P	P	09 30 09.7	+0.5
	comp=N,228nm,1.0s						
UWB	Uwekahuna B	59.50	94	*e*P	P	09 30 10.1	+0.9
	comp=N,188nm,1.0s						
OBL	Observatory Le	59.50	94	*e*P	P	09 30 10.2	+1.0
	comp=N,182nm,0.9s						
SBLHI	Steaming Bluff	59.51	94	*e*P	P	09 30 09.9	+0.7
	comp=N,179nm,1.0s						
NPH	North Pit	59.51	94	*e*P	P	09 30 10.0	+0.8
	comp=N,124nm,1.0s						
NPH	North Pit	59.51	94	*e*P	P	09 30 10.0	+0.8
NPH				pmax	pmax		
	comp=Z,124nm,1.0s						
HATHI	Halema‘uma‘u T	59.51	94	*e*P	P	09 30 09.8	+0.5
	comp=Z,218nm,1.1s						
SDHHI	Sand Hill	59.51	94	*e*P	P	09 30 10.1	+0.8
	comp=Z,227nm,1.0s						
BYL	Byron’s Ledge	59.52	94	*e*P	P	09 30 09.7	+0.4
	comp=Z,195nm,0.9s						
HNR	Honiara	59.52	156	P	P	09 30 09.5	+0.4
	comp=Z,107nm,0.4s,baz=210,slow=15,SNR=9.4						
HNR	Honiara	59.52	156	*e*P	P	09 30 09.8	+0.7
	comp=Z,776nm,1.3s						
HNR	Honiara	59.52	156	*e*P	P	09 30 09.8	+0.7
HNR				pmax	pmax		
	comp=Z,776nm,1.3s						
RIM	Rim	59.52	94	*e*P	P	09 30 10.2	+0.8
	comp=Z,236nm,0.9s						
BHJ	Bhuj	59.53	272	*e*P	P	09 30 09.4	+0.3
BHJ				IAmb	IAmb	09 30 10.8	
	comp=Z,325nm,0.3s						
KKO	Keanakako‘i	59.53	94	*e*P	P	09 30 10.4	+1.0
	comp=Z,248nm,0.9s						
HLP	Hilina Pali	59.57	94	*e*P	P	09 30 10.8	+1.1
	comp=Z,201nm,0.9s						
PUH	Pauahi	59.58	94	*e*P	P	09 30 10.8	+1.1
	comp=Z,350nm,1.0s						
PUH				*e*PcP	PcP	09 30 51.4	+0.7
STCH	Steam Cracks	59.63	94	*e*P	P	09 30 11.1	+1.1
	comp=Z,217nm,0.9s						
NGJI	Ngawi	59.77	212	P	P	09 30 11.5	+0.7
MASI	Maura Aman, Be	59.82	224	P	P	09 30 11.0	-0.2
LHSI	Lahat	59.83	222	P	P	09 30 11.4	+0.2
SMRI	Semarang	59.85	213	P	P	09 30 11.5	+0.1
SMRI	Semarang	59.85	213	*e*P	P	09 30 11.5	+0.1
	comp=Z,560nm,0.9s						
JAGI	Jajag, Banyuwa	59.87	209	*e*P	P	09 30 09.8	-1.7
	comp=Z,146nm,0.6s						
IGBI	Denpasar	59.88	208	P	P	09 30 09.1	-2.4
POO	Poona	59.91	265	*e*P	P	09 30 10.7	-1.2
POO				IAmb	IAmb	09 30 12.4	
	comp=Z,78nm,0.7s						
GMJI	Gumukmas	59.92	210	P	P	09 30 10.3	-1.5
VORR	Voronezh	59.92	315	*e*P	P	09 30 10.0	-1.4
VORR				*e*S	S	09 37 42.0	-1.8
VORR				pmax	pmax		
	comp=Z,500nm,1.2s						
MDSI	Maura Dua	60.12	221	P	P	09 30 12.0	-1.1
LLLB	Lillooet	60.14	47	*e*P	P	09 30 13.4	+0.5
	comp=Z,100nm,0.9s						
KLI	Kotabumi	60.15	220	P	P	09 30 12.9	-0.5
URV	Uravakonda	60.15	259	*e*P	P	09 30 12.8	-0.7
URV				IAmb	IAmb	09 30 13.6	
	comp=Z,44nm,0.6s						
VSR	Storozhevoye	60.23	314	*e*P	P	09 30 13.1	-0.3
VSR				*e**PP	pP	09 31 54.3	-0.6
VSR				*e**SP	sP	09 32 47.7	-1.6
VSR				*e*S	S	09 37 45.8	-1.9
VSR				pmax	pmax		
	comp=Z,320nm,0.6s						
VSR				smax	smax		
	comp=N,690nm,1.3s						
SUMG	Summit	60.33	359	*e*P	P	09 30 14.8	+0.6
	comp=N,672nm,1.1s						
SUMG	Summit	60.33	359	⇑*i*P	P	09 30 15.1	+0.9
	comp=N,132nm,0.9s						
SUMG				*i*		09 31 55.0	
SUMG	Summit	60.33	359	⇑*i*P	P	09 30 15.1	+0.9
SUMG				*i*		09 31 55.0	
SUMG				pmax	pmax		
	comp=Z,130nm,0.9s						
VORD	Divnogorie	60.33	314	*e*P	P	09 30 13.9	-0.2
VORD				*e*S	S	09 37 47.2	-1.7
VORD				pmax	pmax		
	comp=Z,180nm,0.6s						
VORD				smax	smax		
	comp=N,450nm,1.2s						
MTN	Manton Dam	60.38	189	*e*P	P	09 30 14.6	-0.3
	comp=N,1μm,0.8s						
WOJI	Wonogiri, Jawa	60.40	213	P	P	09 30 14.8	-0.2
MNAI	Manna	60.56	223	*e*P	P	09 30 15.1	-1.0
	comp=N,463nm,1.2s						
PPSI	Pulau Pagai	60.56	226	P	P	09 30 16.2	+0.1
UGM	Wanagama	60.62	213	P	P	09 30 15.3	-1.2
UGM	Wanagama	60.62	213	*e*P	P	09 30 16.0	-0.5
	comp=N,834nm,1.2s						
LWLI	Liwa	60.64	221	P	P	09 30 15.4	-1.4
PCJI	Pacitan	60.64	212	P	P	09 30 15.9	-0.7
KPJI	Karang Pucung	60.69	215	P	P	09 30 16.0	-0.9
LEM	Lembang	60.75	217	P	P	09 30 16.9	-0.6
	comp=N,228nm,0.8s,baz=35,slow=6.5,SNR=31						
VSU	Vasula	60.78	326	*d* *i*P	P	09 30 16.4	-0.5
VSU				pmax	pmax		
	comp=Z,434nm,0.6s						
KASI	Kota Agung	60.90	220	P	P	09 30 15.8	-2.5
A04D	Lummi Island	60.93	49	P	P	09 30 18.9	+0.8
	baz=310,SNR=14						
MAK	Makhachkala	61.05	303	*e*P	P	09 30 18.7	-0.2
MAK				*e**PP	pP	09 31 58.8	-2.0
MAK				*e*		09 32 40.0	
MAK				*e**SP	sP	09 32 54.5	-0.5
MAK				*e*S	S	09 37 58.8	+0.7
MAK				pmax	pmax		
	comp=Z,194nm,0.9s						
NSS	Namsos	61.05	337	*e*P	P	09 30 18.2	-0.4
NSS				IAmb	IAmb	09 30 32.5	
	comp=Z,280nm,2.3s						
COEN	Coen	61.17	176	*e*P	P	09 30 20.1	+0.1
	comp=Z,470nm,0.8s						
NLWA	Neilton Lookou	61.18	50	*e*P	P	09 30 21.4	+1.6
	comp=Z,236nm,0.7s						
SKJI	Sukabumi	61.35	218	P	P	09 30 18.3	-3.0
B05A	Bryant	61.54	49	P	P	09 30 22.8	+0.7
	baz=310,SNR=56						
SCO	Scoresbysund	61.64	353	*e*P	P	09 30 24.2	+1.8
	comp=Z,538nm,0.7s						
SCO	Scoresbysund	61.64	353	*e*P	P	09 30 24.2	+1.8
SCO				pmax	pmax		
	comp=Z,538nm,0.7s						
B06A	Marblemount	61.68	48	*e*P	P	09 30 23.8	+0.8
	comp=Z,232nm,0.9s						
AKT	Akhty	61.86	302	⇓*i*P	P	09 30 25.1	+0.6
AKT				*e*		09 30 57.3	
AKT				*e**PP	pP	09 32 08.0	+1.3
AKT				*e*		09 32 46.5	
AKT				*e**SP	sP	09 32 58.7	-2.1
AKT				*e*S	S	09 38 09.1	+0.7
AKT				pmax	pmax		
	comp=Z,414nm,1.2s						
GROC	Groznyy	61.86	304	*e*P	P	09 30 24.1	-0.2
GROC				*e**PP	pP	09 32 05.1	-1.4
GROC				*e*		09 32 48.3	
GROC				*e*S	S	09 38 09.0	+0.8
GROC				*e*		09 39 22.3	
GROC				pmax	pmax		
	comp=Z,136nm,1.0s						
E03A	Lebam	61.88	51	*e*P	P	09 30 25.7	+1.3
	comp=Z,277nm,0.8s						
PNT	Penticton	62.10	47	*e*P	P	09 30 25.9	+0.2
PNT	Penticton	62.10	47	*e*P	P	09 30 26.0	+0.2
GOF	Gofitskoye	62.19	307	⇓*i*P	P	09 30 27.3	+0.9
GOF				pmax	pmax		
	comp=Z,520nm,0.7s						
D05A	Enumclaw	62.29	50	*e*P	P	09 30 28.5	+1.5
	comp=Z,193nm,0.8s						
B941	Kapowsin	62.30	50	*e*P	P	09 30 28.1	+1.1
SEKA	Sheki	62.34	302	P	P	09 30 27.8	+0.3
C06D	Leavenworth	62.37	48	P	P	09 30 28.0	+0.4
	baz=311,SNR=7.8						
ZKTA	Zakatala	62.40	302	P	P	09 30 28.2	+0.4
F04D	Rainier, OR	62.48	51	P	P	09 30 29.2	+0.9
	baz=311,SNR=8.8						
LON	Longmire	62.67	50	*e*P	P	09 30 30.2	+0.6
	comp=Z,52nm,0.8s						
LON	Longmire	62.67	50	*e*P	P	09 30 30.2	+0.6
LON				pmax	pmax		
	comp=Z,53nm,0.8s						
MNGR	Mingechevir, A	62.68	301	P	P	09 30 30.1	+0.4
FL2	Flat Top 2	62.75	51	*e*P	P	09 30 31.4	+1.1
LVP	Lakeview Peak	62.80	51	*e*P	P	09 30 31.5	+1.0
B202	Windy Ridge, M	62.83	50	*e*P	P	09 30 31.7	+1.1
WPW	White Pass	62.84	50	*e*P	P	09 30 31.8	+1.0
B08A	Colville Reser	62.87	47	*e*P	P	09 30 31.1	+0.2
	comp=Z,166nm,1.3s						
IZAR	Zarasai	62.88	324	*e*P	P	09 30 30.7	0.0
IZAR				IAmb	IAmb	09 30 31.5	
	comp=Z,67nm,0.6s						
NCK	Nalchik	62.90	306	⇓*e*P	P	09 30 31.8	+0.7
NCK				pmax	pmax		
	comp=Z,264nm,1.1s						
G03D	McMinnville, O	62.91	52	P	P	09 30 32.2	+1.1
	baz=311,SNR=22						
LTY	Liberty	62.92	49	*e*P	P	09 30 31.5	+0.2
	comp=Z,80nm,0.8s						
WTV	Waterville	63.00	48	*e*P	P	09 30 32.0	+0.3
IDID	Didziasalis	63.00	324	*e*P	P	09 30 31.6	+0.2
IDID				IAmb	IAmb	09 30 32.4	
	comp=Z,58nm,0.7s						
TBM	Table Mountain	63.02	49	*e*P	P	09 30 32.6	+0.8
ISAL	Salakas	63.06	324	*e*P	P	09 30 32.0	+0.1
ISAL				IAmb	IAmb	09 30 32.8	
	comp=Z,80nm,0.6s						
KIV	Kislovodsk	63.10	306	*e*P	P	09 30 33.3	+0.8
KIV	Kislovodsk	63.10	306	*e*P	P	09 30 33.5	+1.1
	comp=Z,383nm,0.8s						
KIV	Kislovodsk	63.10	306	P	P	09 30 33.4	+1.0
	SNR=101						
KIV	Kislovodsk	63.10	306	*i* P	P	09 30 33.5	+1.0
	SNR=90						
KIV	Kislovodsk	63.10	306	*d* *i*P	P	09 30 33.3	+0.8
KIV				*e*		09 31 05.3	
KIV				*e**PP	pP	09 32 15.9	+0.7
KIV				*e*		09 33 01.6	
KIV				*e**SP	sP	09 33 08.4	-0.8
KIV				*i* S	S	09 38 25.8	+2.2
KIV				*e*SS	SS	09 42 41.5	+1.1
KIV				pmax	pmax		
	comp=Z,456nm,0.8s						
KIV				MLR	MLR		
	comp=Z,250nm,21.0s						
MICGM	Minsk	63.10	322	⇓*i*P	P	09 30 32.0	-0.1
MICGM				PM		09 30 33.0	
	comp=Z,0.7nm,0.8s						
MICGM				*e*PcP	PcP	09 31 21.0	+17
MICGM				*e*pP	pP	09 32 15.0	+0.1
MICGM				*e*PP	PP	09 32 53.0	-5.6
MICGM				*e*PPP	PPP	09 34 37.0	
MICGM				*e*S	S	09 38 22.0	-1.0
MICGM				SM		09 38 23.0	
	comp=E,1.8nm,1.0s						
MICGM				SM		09 38 23.0	
	comp=N,1.2nm,1.0s						
MICGM				*e*SP	SPn	09 38 45.0	+3.8
MICGM				*e*ScS	SKSac	09 39 33.0	-1.2
MICGM				*e*sS	sS	09 41 00.0	-27
MNK	Minsk	63.10	322	⇓*i*P	P	09 30 32.0	-0.1
MNK				*e*		09 32 15.0	
MNK				*e*		09 34 37.0	
MNK				*e*S	S	09 38 22.0	-1.0
MNK				*e*		09 38 45.0	
MNK				*e*		09 39 33.0	
MNK				pmax	pmax		
	comp=Z,670nm,0.8s						
MNK				smax	smax		
	comp=N,1μm,1.0s						
MNK				smax	smax		
	comp=E,2μm,1.0s						
IIGN	Ignalina	63.18	324	*e*P	P	09 30 32.7	+0.1
IIGN				IAmb	IAmb	09 30 33.6	
	comp=Z,132nm,0.6s						
NAC	Naches	63.19	49	*e*P	P	09 30 33.7	+0.8
ZEI	Tsey	63.19	305	*e*P	P	09 30 28.9	-4.3
ZEI				*e*S	S	09 38 24.7	-0.2
ZEI				pmax	pmax		
	comp=Z,187nm,1.1s						
EBG	Ellensburg	63.21	49	*e*P	P	09 30 34.1	+1.1
GANJ	Ganja	63.21	302	P	P	09 30 33.4	+0.3
MNGI	Mangalore	63.23	260	*e*x	x	09 31 29.5	
NACGM	Naroch	63.27	323	*e*P	P	09 30 32.0	-1.2
NACGM				*e*S	S	09 38 23.0	-2.0
COR	Corvallis	63.30	52	*e*P	P	09 30 35.4	+1.8
	comp=Z,226nm,0.8s						
COR	Corvallis	63.30	52	P	P	09 30 35.2	+1.6
COR				pmax	pmax		
	comp=Z,230nm,0.8s						
TBLG	Delisi	63.41	303	*e*P	P	09 30 35.7	+1.3
	comp=Z,404nm,1.0s						
ILULI	Ilulissat	63.47	4	*e*P	P	09 30 34.3	+0.1
	comp=Z,246nm,1.6s						
ILULI				*e*pP	pP	09 32 17.4	+0.2
ILULI	Ilulissat	63.47	4	*e*P	P	09 30 34.3	+0.1
ILULI				*e**PP	pP	09 32 17.4	+0.2
ILULI				pmax	pmax		
	comp=Z,246nm,1.6s						
NEY	Neytrino	63.54	306	⇓*e*P	P	09 30 36.4	+1.0
NEY				pmax	pmax		
	comp=Z,32nm,0.9s						
PALK	Pallekele	63.56	251	P	P	09 30 35.3	-0.4
	comp=Z,66nm,0.9s,baz=300,slow=0.3,SNR=19						
PALK	Pallekele	63.56	251	*e*P	P	09 30 35.5	-0.2
	comp=Z,75nm,0.9s						
PALK	Pallekele	63.56	251	*i* P	P	09 30 35.5	-0.2
	SNR=8.2						
PALK	Pallekele	63.56	251	*i* P	P	09 30 36.3	+0.5
TRW	Toppenish Ridg	63.63	50	*e*P	P	09 30 36.9	+1.1
TDH	Tom, Dick, Har	63.64	51	*e*P	P	09 30 36.8	+0.8
C09A	Chrisman Ranch	63.77	47	*e*P	P	09 30 37.3	+0.7
	comp=Z,181nm,0.8s						
MOL	Molde	63.80	337	*e*P	P	09 30 36.8	+0.3
MOL				IAmb	IAmb	09 30 38.5	
	comp=Z,15nm,0.6s						
E07A	Sunnyside	63.81	49	*e*P	P	09 30 37.9	+1.1
	comp=Z,132nm,0.8s						
DOMB	Dombas	63.83	336	*e*P	P	09 30 36.2	-0.6
DOMB				IAmb	IAmb	09 30 36.9	
	comp=Z,43nm,0.5s						
H04A	Detroit Lake	63.83	52	*e*P	P	09 30 37.9	+0.8
	comp=Z,160nm,0.8s						
NC405	NORSAR Array S	63.84	335	*e*P	P	09 30 36.5	-0.3
NC303	NORSAR Array S	63.85	335	*e*P	P	09 30 36.6	-0.2
I03D	Drain, OR	63.86	53	P	P	09 30 38.4	+1.2
	baz=312,SNR=143						
KEBM	Edson Butte	63.86	54	*e*P	P	09 30 39.0	+1.7
	comp=Z,239nm,1.1s						
G05D	Wamic, OR	63.92	51	P	P	09 30 38.5	+0.8
	baz=312,SNR=51						
D08A	Wollman Farm,	63.95	48	*e*P	P	09 30 38.2	+0.5
	comp=Z,94nm,0.9s						
NC204	NORSAR Array S	63.98	335	*e*P	P	09 30 37.3	-0.4
NB201	NORSAR Array S	64.01	335	*e*P	P	09 30 37.7	-0.2
HFS	Hagfors	64.02	333	P	P	09 30 37.8	-0.2
	comp=Z,121nm,0.5s,baz=64,slow=6.6,SNR=942						
HFS				pP	pP	09 32 20.9	-0.2
	comp=Z,47nm,0.7s,baz=55,slow=7.6,SNR=8.7						
HFS				S	S	09 38 32.3	-1.7
	comp=Z,42nm,0.9s,baz=54,slow=18,SNR=21						
HFS				PKPPKP	P’P’df	09 58 60.0	-25
	comp=Z,2.8nm,0.9s,baz=235,slow=5.1,SNR=3.5						
NB2	NORSAR Subarra	64.04	335	P	P	09 30 37.7	-0.4
	comp=Z,39nm,0.6s,baz=34,slow=6.5						
NB2	NORSAR Subarra	64.04	335	P	pP	09 32 20.9	-0.4
	comp=Z,86nm,0.9s,baz=35,slow=6.5						
NB2	NORSAR Subarra	64.04	335	P	P	09 30 37.7	-0.4
	baz=34,slow=6.5						
NB2	NORSAR Subarra	64.04	335	P	pP	09 32 20.9	-0.4
	comp=Z,86nm,0.9s,baz=35,slow=6.5						
NOA	NORSAR Array B	64.04	335	P	P	09 30 37.6	-0.5
	comp=Z,32nm,0.6s,baz=37,slow=6.6,SNR=185						
NOA				pP	pP	09 32 21.2	-0.1
	comp=Z,56nm,0.9s,baz=36,slow=6.6,SNR=13						
NOA				S	S	09 38 33.9	-0.4
	comp=Z,3.8nm,0.9s,baz=44,slow=11,SNR=4.6						
NOA				PKPPKP	P’P’df	09 59 11.2	-13
	comp=Z,0.5nm,0.9s,baz=172,slow=2.6,SNR=3.5						
HAWA	Hanford	64.08	49	*e*P	P	09 30 39.5	+0.9
	comp=Z,176nm,0.8s						
NBO00	NORSAR Array S	64.17	335	*e*P	P	09 30 38.6	-0.3
NC602	NORSAR Array S	64.19	334	*e*P	P	09 30 38.4	-0.6
F07A	Phinny Hill Vi	64.21	50	*e*P	P	09 30 40.8	+1.4
	comp=Z,176nm,0.8s						
IRO	Indian Ridge	64.25	52	*e*P	P	09 30 41.0	+1.1
E08A	Dider Farm, El	64.26	49	*e*P	P	09 30 40.6	+0.9
	comp=Z,148nm,0.8s						
PRLK	Prince Lake	64.27	52	*e*P	P	09 30 41.0	+1.0
AKN	Aaknes	64.27	337	*e*P	P	09 30 40.6	+1.1
AKN				IAmb	IAmb	09 30 52.4	
	comp=Z,251nm,2.1s						
G06A	Carlson Farm,	64.29	51	*e*P	P	09 30 41.0	+1.0
	comp=Z,306nm,1.7s						
NAO01	NORSAR Array S	64.29	335	*e*P	P	09 30 39.3	-0.3
NAO01	NORSAR Array S	64.29	335	*e*P	P	09 30 38.9	-0.8
NAO01				IAmb	IAmb	09 30 40.1	
	comp=Z,38nm,0.8s						
DBO	Dodson Butte	64.30	54	*e*P	P	09 30 41.5	+1.4
I04A	Tendick Farm,	64.31	53	P	P	09 30 40.7	+0.6
	baz=312,SNR=110						
AKH	Akhalkalaki	64.33	304	⇑*i*P	P	09 30 41.9	+1.5
AKH	Akhalkalaki	64.33	304	*e*P	P	09 30 42.1	+1.7
	comp=Z,190nm,1.4s						
AKH	Akhalkalaki	64.33	304	*e*P	P	09 30 42.1	+1.7
AKH				pmax	pmax		
	comp=Z,190nm,1.4s						
KBO	Bosley Butte	64.36	55	*e*P	P	09 30 42.3	+1.8
	comp=Z,252nm,0.8s						
GNI	Garni	64.44	302	P	P	09 30 41.7	+0.5
	comp=Z,30nm,0.4s,baz=151,slow=4.5,SNR=62						
GNI	Garni	64.44	302	*e*P	P	09 30 43.0	+1.8
	comp=Z,146nm,1.0s						
GNI	Garni	64.44	302	P	P	09 30 42.5	+1.3
	SNR=44						
GNI	Garni	64.44	302	*d* *i*P	P	09 30 42.4	+1.2
GNI				pmax	pmax		
	comp=Z,585nm,1.4s						
I05D	Terrebonne, OR	64.52	52	P	P	09 30 42.1	+0.7
	baz=312,SNR=86						
NAX	Nakhchivan	64.65	301	P	P	09 30 43.0	+0.6
E09A	Wood Farm, Sta	64.71	48	*e*P	P	09 30 43.4	+0.9
	comp=Z,248nm,0.8s						
L02D	Cave Junction,	64.74	55	P	P	09 30 44.2	+1.3
	baz=312,SNR=26						
HUMO	Hull Mountain	64.80	54	*e*P	P	09 30 44.6	+1.4
	comp=Z,44nm,0.6s						
J04D	Umpqua Nationa	64.84	53	P	P	09 30 44.6	+0.9
	baz=312,SNR=104						
SOC	Sochi	64.96	308	*e*P	P	09 30 44.3	+0.1
SOC				*e**PP	pP	09 32 28.1	+0.4
SOC				*e*		09 33 10.8	
SOC				*e*PPP	PPP	09 34 53.9	
SOC				*e*S	S	09 38 46.7	+1.0
SOC				*e*SS	SS	09 43 12.2	+3.3
SOC				pmax	pmax		
	comp=Z,113nm,0.6s						
WALA	Waterton Lakes	65.03	44	*e*P	P	09 30 45.2	+0.6
	comp=Z,182nm,0.8s						
OSL	Oslo	65.08	334	*e*P	P	09 30 44.0	-0.6
OSL				IAmb	IAmb	09 30 44.8	
	comp=Z,31nm,0.6s						
PINE	Pine Mountain	65.10	52	*e*P	P	09 30 46.9	+1.6
	comp=Z,323nm,0.7s						
G08A	Pilot Rock	65.12	50	*e*P	P	09 30 46.1	+0.8
	comp=Z,51nm,0.9s						
AKASG	Malin Array Be	65.22	319	P	P	09 30 45.0	-0.7
	comp=Z,40nm,0.4s,baz=40,slow=6.6,SNR=440						
AKASG				pP	pP	09 32 29.1	-0.3
	comp=Z,21nm,0.6s,baz=38,slow=8.2,SNR=5.2						
AKASG				S	S	09 38 47.2	-1.4
	comp=Z,19nm,1.0s,baz=44,slow=12,SNR=20						
AKASG				PKPPKP	P’P’df	09 59 11.4	-11
	comp=Z,2.3nm,0.9s,baz=214,slow=3.7,SNR=6.6						
AKASG	Malin Array Be	65.22	319	*i* P	P	09 30 45.0	-0.7
AKASG				pmax	pmax		
	comp=Z,112nm,0.6s						
AKBB	Malin Array Si	65.22	319	*e*P	P	09 30 45.2	-0.4
	comp=Z,153nm,0.7s						
AKBB				*e*S	S	09 38 47.1	-1.5
KIEV	Kiev	65.23	319	*e*P	P	09 30 44.8	-0.9
KIEV	Kiev	65.23	319	*e*P	P	09 30 45.1	-0.6
	comp=Z,149nm,0.7s						
KIEV				*e*S	S	09 38 47.3	-1.5
KIEV	Kiev	65.23	319	*d* *i*P	P	09 30 44.8	-0.9
KIEV				pmax	pmax		
	comp=Z,166nm,0.8s						
AK11	Malin Array Si	65.26	319	*e*P	P	09 30 45.4	-0.5
J05D	Fort Rock, OR	65.28	52	P	P	09 30 47.5	+1.1
	baz=313,SNR=261						
HYA	Hoyanger	65.33	337	*e*P	P	09 30 45.7	-0.5
HYA				IAmb	IAmb	09 30 46.6	
	comp=Z,35nm,0.5s						
ANN	Anapa	65.34	310	*e*P	P	09 30 46.4	-0.1
ANN	Anapa	65.34	310	*d* *i*P	P	09 30 46.1	-0.4
ANN				*i* *PP	pP	09 32 29.8	-0.5
ANN				*e*		09 33 18.1	
ANN				*e*PPP	PPP	09 35 00.4	
ANN				*i* S	S	09 38 51.0	+0.7
ANN				pmax	pmax		
	comp=Z,257nm,1.1s						
SUW	Suwalki	65.37	324	*e*P	P	09 30 45.5	-1.0
SUW				*e*pP	pP	09 32 29.2	-1.0
SUW				*i* S	S	09 38 48.4	-1.9
SUW	Suwalki	65.37	324	*e*P	P	09 30 45.6	-1.0
	comp=Z,180nm,1.3s						
SUW	Suwalki	65.37	324	⇓*e*P	P	09 30 45.5	-1.0
SUW				*e**PP	pP	09 32 29.2	-1.0
SUW				*i* S	S	09 38 48.3	-1.9
JCC	Jacoby Creek,	65.40	56	*e*P	P	09 30 48.6	+1.7
	comp=Z,206nm,1.0s						
K04D	Chiloquin, OR	65.44	53	P	P	09 30 48.3	+0.9
	baz=313						
YBH	Yreka Blue Hor	65.52	54	P	P	09 30 48.6	+0.7
	comp=Z,79nm,0.8s,baz=326,slow=2.8,SNR=193						
YBH				S	S	09 38 56.7	+4.0
	comp=Z,1.8nm,1.0s,baz=230,slow=20,SNR=8.1						
YBH				PKPPKP	P’P’df	09 59 18.8	-3.5
	comp=Z,5.9nm,1.1s,baz=130,slow=3.0,SNR=6.5						
YBH	Yreka Blue Hor	65.52	54	*e*P	P	09 30 49.2	+1.3
	comp=Z,108nm,0.9s						
YBH				S	S	09 38 56.8	+4.0
YBH				P’P’		09 59 18.8	
KHMM	Horse Mountain	65.53	56	*e*P	P	09 30 49.6	+1.6
	comp=Z,163nm,0.9s						
F10A	Beach Ranch, E	65.54	48	*e*P	P	09 30 48.6	+0.7
	comp=Z,106nm,0.9s						
KONO	Kongsberg	65.64	335	*e*P	P	09 30 48.1	0.0
	comp=Z,150nm,1.8s						
KONO				*e*pP	pP	09 32 32.7	+0.7
KONO	Kongsberg	65.64	335	*d* *i*P	P	09 30 48.0	-0.2
KONO				pmax	pmax		
	comp=Z,17nm,0.7s						
KONO	Kongsberg	65.64	335	*e*P	P	09 30 47.9	-0.2
KONO				IAmb	IAmb	09 30 48.8	
	comp=Z,19nm,0.8s						
I07A	Izee	65.66	51	*e*P	P	09 30 49.8	+1.1
	comp=Z,97nm,1.1s						
M02C	Callahan	65.67	55	P	P	09 30 50.0	+1.2
	baz=312,SNR=112						
SFJD	Kangerlussuaq	65.70	4	P	P	09 30 48.3	-0.1
	comp=Z,23nm,0.6s,baz=346,slow=8.2,SNR=8.8						
SFJD				pP	pP	09 32 32.2	0.0
	comp=Z,43nm,0.7s,baz=349,slow=9.1,SNR=4.9						
SFJD				PKPPKP	P’P’df	09 59 19.5	-2.0
	comp=Z,9.7nm,0.5s,baz=152,slow=6.1,SNR=4.2						
SFJD	Kangerlussuaq	65.70	4	*e*P	P	09 30 48.6	+0.2
	comp=Z,95nm,1.0s						
SFJD				pP	pP	09 32 32.2	0.0
SFJD				P’P’		09 59 19.6	
SFJD	Kangerlussuaq	65.70	4	*e*P	P	09 30 48.6	+0.2
SFJD				*PP	pP	09 32 32.2	0.0
SFJD				pmax	pmax		
	comp=Z,95nm,1.0s						
JTMT	Jette	65.77	45	*e*P	P	09 30 50.5	+1.2
	comp=Z,552nm,1.5s						
SUE	Sulen	65.80	338	*e*P	P	09 30 49.3	+0.2
SUE				IAmb	IAmb	09 30 49.7	
	comp=Z,35nm,0.6s						
K05A	Summer Lake	65.84	53	*e*P	P	09 30 51.5	+1.5
	comp=Z,252nm,0.8s						
KNTN	Kanton	65.88	124	*e*P	P	09 30 51.4	+1.0
	comp=Z,532nm,0.8s						
M04C	Macdoel	65.97	54	P	P	09 30 51.5	+0.8
	baz=313,SNR=273						
FFC	Flin Flon	65.97	34	*e*P	P	09 30 50.1	-0.2
FFC	Flin Flon	65.97	34	*e*P	P	09 30 50.2	-0.1
	comp=Z,221nm,0.9s						
FFC	Flin Flon	65.97	34	*e*P	P	09 30 50.2	-0.1
FFC				pmax	pmax		

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            comp=Z,221nm,0.9s
KMRM  Mail Ridge          65.98  56 eP       P       09 30 52.4 +1.7
            comp=Z,195nm,0.8s
LMPM  Military Pass       65.99  54 eP       P       09 30 52.5 +1.5
N02D  Trinity Center      66.04  55  P       P       09 30 52.4 +1.3
            baz=313,SNR=150
CHOM  Cayeli-Rize         66.06 305 eP       P       09 30 52.1 +0.9
KLNR  Kaliningrad         66.07 326d iP      P       09 30 50.2 -0.7
KLNR                                 pmax    pmax
            comp=Z,180nm,0.7s
LGMM  Garner Mountai      66.09  54 eP       P       09 30 52.7 +1.2
ASK   Askoy               66.17 337 eP       P       09 30 51.8 +0.4
ASK                                  IAmb    IAmb    09 30 52.2
            comp=Z,32nm,0.6s
BER   Bergen              66.22 337 eP       P       09 30 52.1 +0.3
BER                                  IAmb    IAmb    09 30 52.4
            comp=Z,33nm,0.6s
ODD1  Odda                66.27 336 eP       P       09 30 52.4 +0.3
ODD1                                 IAmb    IAmb    09 30 52.8
            comp=Z,33nm,0.5s
BMO   Blue Mountains      66.28  49 eP       P       09 30 53.4 +0.9
            comp=Z,143nm,0.9s
BMO   Blue Mountains      66.28  49 eP       P       09 30 53.4 +0.9
BMO                                  pmax    pmax
            comp=Z,143nm,0.9s
WDC   Whiskeytown Da      66.39  55 eP       P       09 30 54.4 +1.2
            comp=Z,86nm,0.8s
WDC   Whiskeytown Da      66.39  55 eP       P       09 30 54.4 +1.2
WDC                                  pmax    pmax
            comp=Z,86nm,0.8s
KCPM  Cahto Peak          66.41  57 eP       P       09 30 54.8 +1.3
            comp=Z,129nm,0.7s
J08A  Circle Bar Ran      66.70  51 eP       P       09 30 56.4 +1.2
            comp=Z,235nm,1.2s
BANOM Banah               66.71 283  P       P       09 30 55.6 +0.2
            SNR=6.3
BANOM Banah               66.71 283 i P      P       09 30 55.6 +0.2
            SNR=26
MOD   Modoc Plateau       66.72  53 eP       P       09 30 56.2 +0.7
            comp=Z,104nm,0.9s
BLS5  Blasjo              66.73 336 eP       P       09 30 55.5 +0.5
BLS5                                 IAmb    IAmb    09 30 56.1
            comp=Z,17nm,1.0s
SHME  Shamm               66.73 284 i P      P       09 30 55.4 -0.2
            SNR=23
LBCM  Butte Creek Ri      66.88  54 eP       P       09 30 57.2 +0.8
BAYT  Ayd˜–ntepe-Bay      66.89 305 eP       P       09 30 56.8 +0.3
SIM   Simferopol'         66.95 312c iP      P       09 30 56.1 -0.4
SIM                                 e*PP     pP      09 32 41.3 +0.4
SIM                                 eS       S       09 39 07.0 -2.3
SIM                                  pmax    pmax
            comp=Z,130nm,0.9s
WSAR  Wadi Sarin          66.98 280  P       P       09 30 58.0 +0.8
            comp=Z,32nm,0.9s,baz=38,slow=3.2,SNR=14
WSAR  Wadi Sarin          66.98 280  P       P       09 30 56.7 -0.4
O03D  Paynes Creek        67.00  55  P       P       09 30 57.2 +0.1
            baz=313,SNR=121
O03D  Paynes Creek        67.00  55 eP       P       09 30 57.2 +0.1
HOMB  Homborsund          67.10 334 eP       P       09 30 57.5 +0.3
HOMB                                 IAmb    IAmb    09 30 58.5
            comp=Z,31nm,0.4s
BIDO  Bidbid              67.13 280  P       P       09 30 58.9 +0.9
            SNR=9.0
MDH   Madha               67.13 283 i P      P       09 30 57.5 -0.5
            SNR=8.4
WRAB  Tennant Creek       67.14 185 eP       P       09 30 57.6 -0.3
            comp=Z,328nm,0.8s
WRAB  Tennant Creek       67.14 185 i P      P       09 30 57.0 -1.0
WRAB                                 pmax    pmax
            comp=Z,242nm,0.6s
WB2   Warramunga Arr      67.15 185 eP       P       09 30 57.7 -0.4
            comp=Z,356nm,0.6s
WB2                                 ePcP     PcP     09 31 22.3 +0.8
WRA   Warramunga Arr      67.16 185  P       P       09 30 57.4 -0.6
            comp=Z,315nm,0.5s,baz=0.9,slow=6.7,SNR=1098
WRA                                  PKiKP   PKiKP   09 37 16.6 -1.1
            comp=Z,0.9nm,0.6s,baz=64,slow=1.8,SNR=3.8
WRA                                  PKPPKP  P'P'df  09 59 06.9 -8.5
            comp=Z,2.1nm,1.0s,baz=172,slow=2.0,SNR=6.0
WRA                                  P4KPbc          10 07 42.4
            comp=Z,0.5nm,0.7s,baz=0.7,slow=4.8,SNR=5.3
WRA   Warramunga Arr      67.16 185 i P      P       09 30 55.5 -2.5
WRA                                  pmax    pmax
            comp=Z,315nm,0.5s
BORG  Borgarnes           67.17 351  P       P       09 30 59.6 +2.1
            comp=Z,16nm,0.7s,baz=9.5,slow=5.5,SNR=10.0
BORG  Borgarnes           67.17 351 eP       P       09 30 59.1 +1.6
            comp=Z,57nm,1.0s
BORG                                epP      pP      09 32 44.6 +2.7
BORG  Borgarnes           67.17 351 eP       P       09 30 59.1 +1.6
BORG                                e*PP     pP      09 32 44.6 +2.7
BORG                                 pmax    pmax
            comp=Z,57nm,1.0s
WC3   Warramunga Arr      67.17 185 eP       P       09 30 57.8 -0.3
            comp=Z,691nm,1.2s
WC3                                 ePcP     PcP     09 31 21.9 +0.3
HOPS  Hopland Field       67.17  57 eP       P       09 30 59.0 +1.0
            comp=Z,130nm,1.0s
WBK   Wadi Bani Khal      67.18 279  P       P       09 30 59.5 +1.1
            SNR=6.4
MSFE  Esma-Masafi         67.18 283 i P      P       09 30 58.3  0.0
            SNR=12
WVOR  Wild Horse Val      67.25  52 eP       P       09 30 59.6 +1.0
            comp=Z,154nm,1.0s
WVOR  Wild Horse Val      67.25  52 eP       P       09 30 59.7 +1.0
WVOR                                 pmax    pmax
            comp=Z,154nm,1.0s
ANGG  Ammassalik, Gr      67.31 359 eP       P       09 30 58.2 -0.1
            comp=Z,52nm,0.9s
ESPY  Espiye-Giresun      67.31 306 eP       P       09 30 57.1 -1.8
YEDI  Yedisu-Bingol       67.31 304 eP       P       09 31 00.5 +1.4
UMQ   Umm Al-Quwin        67.40 284 i P      P       09 31 00.2 +0.5
            SNR=5.7
SKG   Skaggs Springs      67.41  57 eP       P       09 31 00.4 +0.9
SNART Snartemo            67.42 335 eP       P       09 30 59.4 +0.2
SNART                                IAmb    IAmb    09 30 59.8
            comp=Z,26nm,0.8s
UOSS  Minazif             67.44 283 eP       P       09 30 59.8 -0.1
            comp=Z,103nm,0.8s
UOSS  Minazif             67.44 283  P       P       09 30 59.8 -0.1
UOSS  Minazif             67.44 283 i P      P       09 30 59.6 -0.3
            SNR=25
GDXM  Geysers             67.46  57 eP       P       09 31 01.7 +1.7
            comp=Z,199nm,1.0s
SORM  Soroca              67.46 317⇑iP       P       09 30 59.2 -0.4
SORM  Soroca              67.46 317⇓iP       S       09 39 13.6 -1.6
SORM  Soroca              67.46 317  P       P       09 30 59.2 -0.4
CTAO  Charters Tower      67.47 173 eP       P       09 30 59.8 -0.1
            comp=Z,245nm,1.3s
CTAO  Charters Tower      67.47 173 eP       P       09 30 59.8 -0.1
CTAO                                 pmax    pmax
            comp=Z,245nm,1.3s
MGL   Magalia             67.47  55 eP       P       09 31 00.2 +0.2
BNGB  Bingˆ¶l             67.55 303 eP       P       09 31 00.9 +0.4
HATD  Hatta, Dubai        67.56 283  P       P       09 31 01.0 +0.3
            SNR=15
HATD  Hatta, Dubai        67.56 283 i P      P       09 31 01.0 +0.3
            SNR=49
BSD   Bornholm Skovb      67.60 329 i P      P       09 31 00.1 -0.3
BSD                                 i                09 32 43.4
BSD                                  pmax    pmax
            comp=Z,78nm,0.7s
NMTM  Middletown          67.66  57 eP       P       09 31 02.0 +1.0
GARM  Arbuckle            67.67  56 eP       P       09 31 02.8 +1.7
ERZN  Erzincan            67.67 304 eP       P       09 31 00.8 -0.5
HRY   Holter Researc      67.68  45 eP       P       09 31 01.9 +0.7
ORV   Oroville            67.68  56 eP       P       09 31 01.1 -0.1
            comp=Z,102nm,0.8s
ORV   Oroville            67.68  56 eP       P       09 31 01.1 -0.1
ORV                                  pmax    pmax
            comp=Z,102nm,0.8s
EGMT  Eagleton            67.70  43  P       P       09 31 01.5 +0.2
            baz=317,SNR=308
EGMT  Eagleton            67.70  43 eP       P       09 31 01.7 +0.5
            comp=Z,400nm,0.8s
ASHO  Ashiyiah            67.71 283  P       P       09 31 01.6 -0.1
            SNR=14
ASHO  Ashiyiah            67.71 283 i P      P       09 31 01.5 -0.1
            SNR=24
NAZ   Nazwa, Dubai        67.77 283  P       P       09 31 01.9  0.0
            SNR=11
NAZ   Nazwa, Dubai        67.77 283 i P      P       09 31 02.0 +0.1
            SNR=23
MNCI  Minicoy             67.80 258 eP       P       09 31 02.0 -0.2
            comp=Z,238nm,1.3s
MCCM  Marconi Confer      67.86  57 eP       P       09 31 02.8 +0.5
            comp=Z,128nm,0.8s
BEL   Belsk               67.96 324 i P      P       09 31 03.4 +0.7
BEL                                 epP      pP      09 32 47.9 +0.5
BEL                                 i S      S       09 39 21.7 +0.8
BEL   Belsk               67.96 324⇓iP       P       09 31 03.3 +0.7
BEL                                 e*PP     pP      09 32 47.9 +0.5
BEL                                 i S      S       09 39 21.7 +0.8
COP   Copenhagen          67.99 331 i P      P       09 31 02.6 -0.1
COP                                 i                09 32 45.5
LRM   Limekiln Ridge      68.02  46 eP       P       09 31 04.3 +0.9
MFID  Camas Ranch         68.04  49 eP       P       09 31 04.6 +1.1
            comp=Z,187nm,0.8s
KIS   Kishinev            68.07 316⇓iP       P       09 31 03.5 +0.1
            comp=Z,500nm,1.0s
KIS                                 i pP     pP      09 32 47.0 -1.2
KIS                                 i S      S       09 39 22.0 -0.3
            comp=Z,2µm,2.0s
KIS                                 i ScS    SKSac   09 40 12.0 -0.1
KIS                                 i sS     sS      09 42 32.0 +2.6
KIS                                  LRM     MLR     10 03 08.0
            comp=Z,300nm,15.0s
KIS   Kishinev            68.07 316⇓iP       P       09 31 03.4 +0.1
KIS   Kishinev            68.07 316⇓iP       P       09 31 03.5 +0.1
KIS                                 i *PP    pP      09 32 47.0 -1.2
KIS                                 e                09 33 40.0
KIS                                 e                09 35 26.0
KIS                                 i S      S       09 39 22.0 -0.3
KIS                                 i                09 40 12.0
KIS                                  pmax    pmax
            comp=Z,460nm,1.0s
KIS                                  smax    smax
            comp=N,2µm,2.0s
KIS                                  smax    smax
            comp=E,1µm,4.0s
KIS                                  MLR     MLR
            comp=Z,600nm,16.0s
BEKR  Beckworth           68.10  55 eP       P       09 31 04.3 +0.4
            comp=Z,183nm,0.9s
MILM  Milestii Mici       68.13 316⇓iP       S       09 39 21.8 -1.2
LVV   L'vov               68.14 321 i P      P       09 31 04.0 +0.2
LVV                                 e*PP     pP      09 32 51.1 +2.5
LVV                                 e                09 33 46.3
LVV                                 ePPP     PPP     09 35 32.9
LVV                                 eS       S       09 39 22.5 -0.6
LVV                                  pmax    pmax
            comp=Z,200nm,1.1s
LVV                                  MLR     MLR
            comp=N,1µm,15.0s
LVV                                  MLR     MLR
            comp=E,900nm,15.0s
LVV                                  MLR     MLR
            comp=Z,1µm,15.0s
GKP   Gorka Klasztor      68.22 327 i P      P       09 31 04.4 +0.2
GKP                                 epP      pP      09 32 49.0 -0.1
GKP                                 i S      S       09 39 23.7 -0.2
GKP   Gorka Klasztor      68.22 327⇓iP       P       09 31 04.4 +0.2
GKP                                 e*PP     pP      09 32 49.0 -0.1
GKP                                 i S      S       09 39 23.7 -0.2
ASUD  Al Ashush, Dub      68.23 283  P       P       09 31 04.9 +0.2
            SNR=17
ASUD  Al Ashush, Dub      68.23 283 i P      P       09 31 04.9 +0.2
            SNR=60
BSY   Bisya               68.28 280  P       P       09 31 05.8 +0.7
            SNR=8.7
DLMT  Dillon              68.28  46 eP       P       09 31 06.0 +1.1
            comp=Z,389nm,0.8s
LCCM  Lewis and Clar      68.28  45 eP       P       09 31 05.8 +0.9
PTK   Pertek              68.34 304 eP       P       09 31 05.7 +0.3
ALNE  Al Ain              68.34 282 i P      P       09 31 05.5  0.0
            SNR=20
AFDM  Forest Hills D      68.39  56 eP       P       09 31 06.3 +0.8
            comp=Z,114nm,1.0s
MUD   Monsted U'grnd      68.41 333 i P      P       09 31 05.6 +0.4
MUD                                 i                09 32 48.7
ILIC  ilic-Erzincan       68.41 305 eP       P       09 31 06.4 +0.6
PEAR  Peavine Mounta      68.50  55 eP       P       09 31 07.1 +0.7
IAS   Iasi                68.52 317⇓iP       P       09 31 06.1  0.0
IAS   Iasi                68.52 317  P       P       09 31 06.1  0.0
MCMT  McKenzie Canyo      68.54  47 eP       P       09 31 07.5 +0.8
DYBB  Diyarbakir          68.57 303 eP       P       09 31 07.8 +1.1
BOZ   Bozeman (W)         68.58  45  P       P       09 31 07.3 +0.5
            baz=316,SNR=415
BOZ   Bozeman (W)         68.58  45 eP       P       09 31 07.7 +1.0
            comp=Z,200nm,0.9s
BOZ   Bozeman (W)         68.58  45 eP       P       09 31 07.7 +1.0
BOZ                                  pmax    pmax
            comp=Z,200nm,0.9s
RGN   Rugen               68.61 330 eP       P       09 31 07.5 +1.0
            comp=Z,80nm,0.7s
KVT   Kavak               68.65 308 eP       P       09 31 07.9 +0.8
HLID  Hailey              68.66  48  P       P       09 31 07.7 +0.4
            baz=316,SNR=131
HLID  Hailey              68.66  48 eP       P       09 31 08.4 +1.1
            comp=Z,301nm,1.8s
DIKM  Dikmen              68.67 309 eP       P       09 31 07.7 +0.5
LEOM  Leova               68.72 316⇑iP       P       09 31 07.6 +0.3
MAZI  Mazidag             68.73 302 eP       P       09 31 08.3 +0.6
SVRC  Sivrice-ELAZID      68.74 304 eP       P       09 31 08.8 +0.9
PAHR  Pah Rah Range       68.75  54 eP       P       09 31 08.5 +0.6
            comp=Z,216nm,0.8s
RUBR  Rubicon Trail       68.78  55 eP       P       09 31 09.3 +1.1
            comp=Z,177nm,0.9s
HMDM  Hanimaadhoo         68.84 257 eP       P       09 31 09.0 +0.5
            comp=Z,140nm,0.9s
KWP   Kalwaria Pacla      68.85 321 i P      P       09 31 08.9 +0.8
KWP                                 eS       S       09 39 31.8 +0.4
KWP   Kalwaria Pacla      68.85 321 eP       P       09 31 08.5 +0.4
            comp=Z,1µm,0.6s
KWP   Kalwaria Pacla      68.85 321⇓iP       P       09 31 08.9 +0.8
KWP                                 eS       S       09 39 31.8 +0.4
VCNR  Virginia City       68.89  55 eP       P       09 31 09.7 +0.9
            comp=Z,152nm,0.7s
TOKT  Tokat               68.92 307 eP       P       09 31 09.1 +0.4
SVSK  Karacayir           68.95 306 eP       P       09 31 09.8 +1.0
PRAR  RASCA               69.00 318⇓iP       P       09 31 09.1  0.0
PNTR  Pine Nut            69.06  55 eP       P       09 31 10.9 +1.1
            comp=Z,240nm,0.9s
QLMT  Earthquake Lak      69.23  46 eP       P       09 31 11.9 +1.1
BUR08 Bucovina Ar. S      69.26 319 eP       P       09 31 11.0 +0.3
BUR04 Bucovina Ar. S      69.27 319 eP       P       09 31 11.0 +0.2
BURAR Bucovina Array      69.27 319⇓iP       P       09 31 10.6 -0.2
BURAR Bucovina Array      69.27 319⇑iP       S       09 39 37.7 +1.2
BURAR Bucovina Array      69.27 319  P       P       09 31 11.8 +1.0
YERR  Yerington           69.33  55 eP       P       09 31 12.4 +1.0
            comp=Z,342nm,0.7s
CMB   Columbia Colle      69.36  56 eP       P       09 31 12.2 +0.8
            comp=Z,217nm,1.0s
CMB   Columbia Colle      69.36  56 eP       P       09 31 12.2 +0.8
CMB                                  pmax    pmax
            comp=Z,217nm,1.0s
BIZ   Bicaz               69.37 318⇓iP       P       09 31 11.8 +0.5
BIZ   Bicaz               69.37 318⇑iP       S       09 39 38.2 +0.7
GCMT  Greycliff           69.38  44 eP       P       09 31 12.6 +1.1
TLCR                      69.39 315⇓iP       P       09 31 11.7 +0.3
TLCR                      69.39 315  P       P       09 31 12.2 +0.8
YHB   Horse Butte         69.41  46 eP       P       09 31 12.9 +1.1
            comp=Z,312nm,0.8s
BMN   Battle Mountai      69.42  52 eP       P       09 31 13.2 +1.3
            comp=Z,156nm,0.8s
TESR  Tescani             69.44 317⇑iP       P       09 31 12.0 +0.3
TESR  Tescani             69.44 317⇓iP       S       09 39 39.2 +1.0
GIUM  Giurgiulesti        69.47 315⇑iP       P       09 31 12.6 +0.8
WAKR  Walker              69.56  55 eP       P       09 31 14.0 +1.2
            comp=Z,179nm,0.7s
YMR   Madison River       69.58  46 eP       P       09 31 14.2 +1.4
            comp=Z,160nm,0.7s
OJC   Ojcow               69.61 323 i P      P       09 31 13.2 +0.6
OJC                                 epP      pP      09 32 58.1  0.0
OJC                                 eS       S       09 39 38.4 -1.6
OJC   Ojcow               69.61 323 eP       P       09 31 13.2 +0.6
            comp=Z,123nm,0.7s
OJC   Ojcow               69.61 323⇓iP       P       09 31 13.2 +0.6
OJC                                 e*PP     pP      09 32 58.1  0.0
OJC                                 eS       S       09 39 38.4 -1.6
DARE  Darende-Malaty      69.63 305 eP       P       09 31 13.8 +0.7
SAO   San Andreas Ge      69.64  58 eP       P       09 31 13.6 +0.5
            comp=Z,92nm,1.0s
SAO   San Andreas Ge      69.64  58 eP       P       09 31 13.6 +0.5
SAO                                  pmax    pmax
            comp=Z,92nm,1.0s
BPCNC Pine Canyon         69.67  58 eP       P       09 31 14.1 +0.9
URFA  Urfa                69.67 303 eP       P       09 31 14.3 +0.9
CFR   Carcaliu            69.73 315⇓iP       P       09 31 13.6 +0.2
CFR   Carcaliu            69.73 315⇑iP       S       09 39 41.8 +0.3
UZH   Uzhgorod            69.79 321 eP       P       09 31 13.6 -0.1
UZH                                 e                09 31 39.4
UZH                                 e                09 33 02.0
UZH                                 e                09 33 59.6
UZH                                 e                09 35 41.0
UZH                                 eS       S       09 39 40.6 -1.5
UZH                                 e                09 40 29.0
YFT   Old Faithful        69.80  46 eP       P       09 31 16.5 +2.3
            comp=Z,194nm,0.8s
DGMT  Dagmar              69.84  39  P       P       09 31 14.1  0.0
            baz=320,SNR=130
DGMT  Dagmar              69.84  39 eP       P       09 31 14.4 +0.3
            comp=Z,300nm,0.7s
VRI   Vrincioaia          69.88 317⇑iP       P       09 31 15.0 +0.6
VRI   Vrincioaia          69.88 317⇑iP       S       09 39 43.6 +0.3
VRI   Vrincioaia          69.88 317  P       P       09 31 14.9 +0.6
ILGA  Ilgaz               69.91 309 eP       P       09 31 16.6 +1.6
            comp=Z,229nm,1.2s
ILGA                                epP      pP      09 33 03.0 +2.5
KVN   Kaiserville         69.92  54 eP       P       09 31 16.1 +1.2
            comp=Z,235nm,0.7s
KVN   Kaiserville         69.92  54 eP       P       09 31 16.1 +1.2
KVN                                  pmax    pmax
            comp=Z,235nm,0.7s
BVL   Bear Valley         69.92  58 eP       P       09 31 15.9 +1.1
LKWY  Lake                69.93  45 eP       P       09 31 17.4 +2.4
            comp=Z,142nm,0.8s
PLOR  Plostina            69.93 317⇑iP       P       09 31 15.2 +0.5
PLOR  Plostina            69.93 317⇑iP       S       09 39 44.4 +0.5
PLOR  Plostina            69.93 317  P       P       09 31 15.2 +0.5
CRVS  Cervenica-Dubn      69.93 322 eP       P       09 31 15.0 +0.4
CRVS                                 pmax    pmax
            comp=Z,28nm,0.8s
CRVS  Cervenica-Dubn      69.93 322 eP       P       09 31 15.0 +0.4
CRVS                                epP      pP      09 33 00.9 +0.7
YPP   Pitchstone Pla      69.95  46 eP       P       09 31 17.4 +2.2
            comp=Z,238nm,1.5s
H17A  Grant Village       69.97  46  P       P       09 31 16.3 +1.1
            baz=317,SNR=267
H17A  Grant Village       69.97  46 eP       P       09 31 18.0 +2.8
            comp=Z,292nm,0.8s
RYN   Ryan                69.98  55 eP       P       09 31 16.4 +1.1
            comp=Z,138nm,0.8s
BMR   Baia Mare           69.99 320⇑iP       P       09 31 15.8 +0.8
NIE   Niedzica            70.02 323 i P      P       09 31 16.2 +1.0
NIE                                 epP      pP      09 33 01.0 +0.3
NIE                                 i S      S       09 39 46.2 +1.4
NIE   Niedzica            70.02 323⇓iP       P       09 31 16.2 +1.0
NIE                                 e*PP     pP      09 33 01.0 +0.3
NIE                                 i S      S       09 39 46.2 +1.4
CORM  Corum               70.05 308 eP       P       09 31 16.6 +1.0
ARCR  ARCALIA             70.06 319⇑iP       P       09 31 16.6 +1.2
RLMT  Red Lodge           70.06  44  P       P       09 31 16.2 +0.5
            baz=318,SNR=250
RLMT  Red Lodge           70.06  44 eP       P       09 31 16.8 +1.1
            comp=Z,191nm,0.6s
TRPA  Tarpa               70.06 320⇓iP       P       09 31 16.0 +0.7
TRPA  Tarpa               70.06 320⇓ex       P       09 31 16.5 +1.1
TRPA                                ex       pP      09 33 01.9 +0.9
TIRR  Tirgusor            70.12 315⇓iP       P       09 31 16.1 +0.3
TIRR  Tirgusor            70.12 315⇓iP       S       09 39 47.4 +1.4
TIRR  Tirgusor            70.12 315 eP       P       09 31 16.1 +0.3
            comp=Z,49nm,0.8s
TIRR  Tirgusor            70.12 315 eP       P       09 31 16.1 +0.3
TIRR                                 pmax    pmax
            comp=Z,49nm,0.8s
GRER                      70.13 316⇓iP       P       09 31 18.1 +2.3
FLWY  Flagg Ranch         70.14  46 eP       P       09 31 18.0 +1.8
            comp=Z,170nm,0.9s
IMW   Indian Meadow       70.16  46 eP       P       09 31 18.0 +1.6
            comp=Z,114nm,0.8s
BIGH  Upper Bighouse      70.17 340⇓eP       P       09 31 16.0 +0.3
BIGH                                 IAmb    IAmb    09 31 16.5
            comp=Z,60nm,0.6s
HARR  Harsova             70.19 315⇑iP       P       09 31 16.6 +0.5
HARR  Harsova             70.19 315  P       P       09 31 17.1 +1.0
TLB   Topalu              70.21 315⇑iP       P       09 31 16.6 +0.3
NV01  Mina Array Sit      70.24  55 eP       P       09 31 18.0 +1.1
NVAR  Mina Array Bea      70.24  55  P       P       09 31 18.1 +1.1
            comp=Z,170nm,0.7s,baz=300,slow=5.7,SNR=1545
NVAR                                 PKPPKP  P'P'df  09 58 48.7  -26
            comp=Z,0.2nm,0.6s,baz=197,slow=1.5,SNR=3.5
NVAR                                 P4KPbc          10 07 59.8
            comp=Z,0.6nm,0.8s,baz=275,slow=4.3,SNR=5.2
LHV   Little Huntoon      70.26  55 eP       P       09 31 18.1 +1.4
COCO  West Island         70.28 224 eP       P       09 31 17.4 +0.4
            comp=Z,266nm,0.9s
COCO  West Island         70.28 224 i P      P       09 31 18.7 +1.7
EFOR  EFORIE              70.30 314⇑iP       P       09 31 17.8 +1.0
LAO   LASA Array          70.30  42  P       P       09 31 17.2 +0.3
            baz=319,SNR=87
LAO   LASA Array          70.30  42 eP       P       09 31 17.8 +0.9
            comp=Z,122nm,0.9s
FXWY  Fox Creek           70.30  46 eP       P       09 31 18.6 +1.4
            comp=Z,103nm,0.9s
NV11  Mina Array Sit      70.32  54 eP       P       09 31 18.3 +1.0
            comp=Z,9.2nm,0.8s
SARI  SarD1z-Kayseri      70.34 306 eP       P       09 31 17.9 +0.5
MOOW  Moose Ponds         70.36  46 eP       P       09 31 18.9 +1.4
            comp=Z,218nm,1.0s
MINS  Minaret Summit      70.37  56 eP       P       09 31 18.6 +0.7
MDPB  Devils Postpil      70.38  56 eP       P       09 31 18.9 +1.1
            comp=Z,95nm,0.7s
MDYM  Dry Creek           70.39  56 eP       P       09 31 19.1 +1.1
CVDA  Cernavoda           70.40 315⇑iP       P       09 31 17.9 +0.5
PMPB  Monarch Peak        70.40  58 eP       P       09 31 17.9 +0.2
            comp=Z,102nm,0.8s
MLKM  Mammoth Lakes       70.41  56 eP       P       09 31 19.6 +1.5
DOPR  Dopca               70.43 317⇑iP       P       09 31 18.9 +1.3
DOPR  Dopca               70.43 317⇓iP       S       09 39 51.2 +1.6
MBWA  Marble Bar          70.43 199 eP       P       09 31 17.5 -0.3
            comp=Z,447nm,1.1s
MBWA  Marble Bar          70.43 199  P       P       09 31 17.3 -0.5
            SNR=20
OMMB  Old Mammoth Mi      70.43  56 eP       P       09 31 19.3 +1.1
            comp=Z,139nm,1.6s
TPAW  Teton Pass          70.45  47 eP       P       09 31 18.9 +0.8
            comp=Z,525nm,1.6s
PGOR  Pogoanele           70.47 316⇓iP       P       09 31 19.2 +1.3
KSP   Ksiaz               70.50 326 i P      P       09 31 18.5 +0.6
KSP                                 epP      pP      09 33 04.1 +0.4
KSP                                 i S      S       09 39 50.9 +0.7
KSP   Ksiaz               70.50 326⇓iP       P       09 31 18.5 +0.6
KSP                                 e*PP     pP      09 33 04.1 +0.4
KSP                                 i S      S       09 39 50.9 +0.7
MLAC  Mammoth, Mammo70.51  55  P       P       09 31 19.6 +1.0
            baz=315,SNR=34
ISR   Istrita             70.53 316⇑iP       P       09 31 19.4 +1.1
ISR   Istrita             70.53 316⇓iP       S       09 39 51.9 +1.1
LOHW  Long Hollow         70.53  46 eP       P       09 31 19.9 +1.4
            comp=Z,192nm,1.3s
MLR   Muntele Rosu        70.53 317  P       P       09 31 19.0 +0.6
            comp=Z,23nm,0.3s,baz=246,slow=12,SNR=68
MLR   Muntele Rosu        70.53 317⇓iP       S       09 39 52.7 +1.8
MLR   Muntele Rosu        70.53 317 eP       P       09 31 18.9 +0.6
            comp=Z,59nm,0.8s
MLR   Muntele Rosu        70.53 317 eP       P       09 31 18.9 +0.6
MLR                                  pmax    pmax
            comp=Z,59nm,0.8s
AMRR  Amara               70.53 315⇓iP       P       09 31 19.2 +1.0
SNOW  Snow King Moun      70.56  46 eP       P       09 31 20.6 +1.8
            comp=Z,364nm,1.5s
OKC   Ostrava-Krasne      70.57 324 eP       P       09 31 18.6 +0.3
OKC                                 ex       x       09 31 29.7
OKC                                 epP      pP      09 33 04.9 +0.7
OKC                                 eS       S       09 39 47.6 -3.4
OKC   Ostrava-Krasne      70.57 324 eP       P       09 31 18.6 +0.3
OKC                                 e                09 31 29.7
OKC                                 e*PP     pP      09 33 04.9 +0.7
OKC                                 eS       S       09 39 47.6 -3.4
OKC                                  smax    smax
            comp=N,4.0nm,0.5s
LANS  Liptovska Anna      70.57 323 eP       P       09 31 19.9 +1.5
LANS                                e                09 33 06.8
LANS                                e                09 34 03.4
LANS  Liptovska Anna      70.57 323 eP       P       09 31 19.9 +1.5
LANS                                epP      pP      09 33 06.8 +2.5
LANS                                ePP      PP      09 34 03.4 +0.6
MZR   Muzera              70.58 283 i P      P       09 31 18.7 -0.2
            SNR=51
REDW  Red Top Meadow      70.59  47 eP       P       09 31 20.3 +1.4
            comp=N,121nm,0.9s
ICOR  Ion Corvin          70.67 315⇑iP       P       09 31 20.2 +1.2
CJR   Cluj-Napoca         70.68 319⇑iP       P       09 31 20.2 +1.1
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Sta	Name	Dist	Az	Phase	ISC phase	Time	Res
KMRS	Kahramanmaras	70.71	305	eP	P	09 31 19.8	+0.3
XMAS	Kiritimati	70.75	109	eP	P	09 31 20.7	+0.8
	comp=N,278nm,0.8s						
GAZ	Gaziantep	70.77	304	eP	P	09 31 20.3	+0.4
HVU	Hansel Valley	70.78	49	eP	P	09 31 21.1	+1.1
	comp=N,74nm,0.9s						
MORC	Moravsky Berou	70.86	324	⇑iP	P	09 31 20.6	+0.5
MORC	Moravsky Berou	70.86	324	eP	P	09 31 21.0	+0.8
	comp=N,88nm,0.7s						
MORC	Moravsky Berou	70.86	324	P	P	09 31 21.5	+1.4
MORC	Moravsky Berou	70.86	324	i P	P	09 31 20.6	+0.5
MORC				e		09 33 07.5	
MORC				eS	S	09 39 53.4	-1.0
MORC				e		09 59 05.5	
AS01	Alice Springs	70.87	185	eP	P	09 31 20.9	+0.5
UPC	Upice	70.88	326	eP	P	09 31 20.9	+0.7
UPC				ePCP	PcP	09 31 38.5	+1.4
UPC				epP	pP	09 33 07.1	+1.0
UPC				eS	S	09 39 51.1	-3.3
UPC	Upice	70.88	326	eP	P	09 31 20.9	+0.7
UPC				e		09 31 35.6	
UPC				e*PP	pP	09 33 07.1	+1.0
UPC				eS	S	09 39 51.1	-3.3
AS31	Alice Springs	70.88	185	eP	P	09 31 20.8	+0.4
	comp=N,108nm,0.6s						
ASAR	Alice Springs	70.88	185	P	P	09 31 20.8	+0.4
	comp=N,364nm,0.6s,baz=0.6,slow=5.4,SNR=4446						
ASAR				PKiKP	PKiKP	09 37 21.8	-1.0
	comp=N,1.3nm,0.6s,baz=16,slow=1.3,SNR=3.8						
ASAR				S	S	09 39 58.3	+3.2
	comp=N,1.6nm,0.8s,baz=16,slow=21,SNR=4.7						
ASAR				PKPPKP	P'P'df	09 59 01.0	-8.0
	comp=N,1.0nm,0.8s,baz=153,slow=3.2,SNR=5.5						
DPC	Dobruska-Polom	70.88	325	eP	P	09 31 21.3	+1.0
DPC				ePCP	PcP	09 31 37.2	0.0
DPC				epP	pP	09 33 07.4	+1.2
DPC				esP	sP	09 33 55.4	-3.9
DPC				eS	S	09 39 52.0	-2.6
DPC				eXS	sS	09 43 00.2	-3.3
DPC	Dobruska-Polom	70.88	325	eP	P	09 31 21.3	+1.0
DPC				e		09 31 37.2	
DPC				e*PP	pP	09 33 07.4	+1.2
DPC				e*SP	sP	09 33 55.4	-3.9
DPC				eS	S	09 39 52.0	-2.6
AHID	Auburn Hatcher	70.91	47	eP	P	09 31 21.5	+0.7
	comp=N,76nm,0.8s						
BR131	Keskin Array S	70.91	308	eP	P	09 31 21.4	+0.7
BR131	Keskin Array S	70.91	308	P	P	09 31 21.3	+0.5
BRTR	Keskin Array B	70.91	308	P	P	09 31 21.2	+0.5
	comp=N,40nm,0.7s,baz=74,slow=3.9,SNR=201						
BRTR				pP	pP	09 33 08.1	+1.4
	comp=N,8.2nm,0.8s,baz=46,slow=5.3,SNR=4.6						
BRTR				PKPPKP	P'P'df	09 59 04.5	-8.8
	comp=N,5.4nm,1.0s,baz=183,slow=5.3,SNR=14						
BRTR	Keskin Array B	70.91	308	i P	P	09 31 21.2	+0.5
BRTR				pmax	pmax		
	comp=Z,42nm,0.8s						
KRLC	Kraliky	70.92	325	eP	P	09 31 21.1	+0.6
KRLC				ePCP	PcP	09 31 37.0	-0.3
KRLC				epP	pP	09 33 08.4	+2.0
KRLC	Kraliky	70.92	325	eP	P	09 31 21.1	+0.6
KRLC				e		09 31 37.0	
KRLC				e*PP	pP	09 33 08.4	+2.0
VOIR		70.98	317	⇑iP	P	09 31 21.9	+0.9
VOIR		70.98	317	⇑iP	S	09 39 57.0	+1.0
SULR		70.99	316	⇓iP	P	09 31 21.7	+0.8
DRGR		71.01	319	⇓iP	P	09 31 21.7	+0.6
DRGR		71.01	319	⇑iP	S	09 39 57.7	+1.4
DRGR		71.01	319	P	P	09 31 21.6	+0.5
PAGB	Antelope Grade	71.06	58	eP	P	09 31 22.6	+1.0
	comp=Z,291nm,0.7s						
KAMT	Kaman	71.12	308	eP	P	09 31 21.7	-0.3
MTUR	Matau	71.14	317	⇑iP	P	09 31 22.6	+0.7
MTUR	Matau	71.14	317	⇓iP	S	09 39 58.6	+0.9
MTUR	Matau	71.14	317	P	P	09 31 31.9	+10
ARR	Arges	71.23	317	⇓iP	P	09 31 23.6	+1.2
ARR	Arges	71.23	317	⇓iP	S	09 40 00.6	+1.9
ANTO	Ankara	71.25	309	eP	P	09 31 24.0	+1.3
ANTO	Ankara	71.25	309	⇑iP	P	09 31 23.5	+0.9
ANTO	Ankara	71.25	309	eP	P	09 31 23.6	+0.9
	comp=Z,96nm,0.8s						
ANTO				epP	pP	09 33 10.6	+1.9
ANTO	Ankara	71.25	309	P	P	09 31 23.5	+0.9
	SNR=20						
ANTO	Ankara	71.25	309	P	P	09 31 24.7	+2.0
LOD	Lodumlu	71.25	309	eP	P	09 31 22.4	-0.3
DRUM	Mains of Drumt	71.26	339	⇓eP	P	09 31 22.2	-0.1
DRUM				IAmb	IAmb	09 31 22.8	
	comp=Z,32nm,0.6s						
TIN	Tinemaha, Big	71.26	56	P	P	09 31 23.9	+1.1
	baz=316,SNR=29						
BGU	Big Grassy Mou	71.28	50	eP	P	09 31 24.1	+1.2
	comp=Z,52nm,0.7s						
BR231	Keskin MP Arra	71.28	309	eP	P	09 31 23.9	+1.0
SPUT	South Promonto	71.29	49	eP	P	09 31 24.0	+1.0
	comp=Z,113nm,0.9s						
VYHS	Vyhne	71.35	323	eP	P	09 31 23.9	+0.9
VYHS				pmax	pmax		
	comp=Z,26nm,0.8s						
VYHS	Vyhne	71.35	323	eP	P	09 31 23.9	+0.9
VYHS				epP	pP	09 33 11.0	+1.9
VYHS				ePP	PP	09 34 08.5	-0.8
CLL	Collm	71.36	328	eP	P	09 31 22.8	-0.2
	comp=Z,90nm,0.9s						
CLL	Collm	71.36	328	i P	P	09 31 22.7	-0.2
CLL				e		09 31 38.0	
CLL				i *PP	pP	09 33 09.2	+0.2
CLL				eS	S	09 39 55.0	-4.8
CLL				pmax	pmax		
	comp=Z,88nm,0.6s						
PSZ	Piszkesteto	71.36	322	eP	P	09 31 24.0	+0.9
	comp=Z,58nm,0.8s						
PSZ				epP	pP	09 33 11.5	+2.3
PSZ	Piszkesteto	71.36	322	eP	P	09 31 24.0	+0.9
PSZ				e*PP	pP	09 33 11.5	+2.3
PSZ				pmax	pmax		
	comp=Z,58nm,0.8s						
BRG	Berggiesshubel	71.36	327	i P	P	09 31 23.0	0.0
BRG				i		09 31 39.5	
BRG				i *SP	sP	09 33 59.3	-2.9
BRG				S	S	09 39 57.0	-2.9
BRG				SS	SS	09 44 45.0	-1.2
BRG				MLR	MLR		
	comp=N,1µm,24.4s						
BRG				MLR	MLR		
	comp=E,341nm,13.4s						
BRG				MLR	MLR		
	comp=Z,84nm,19.8s						
PVCC	Panska Ves	71.41	326	eP	P	09 31 23.9	+0.6
PVCC				epP	pP	09 33 10.2	+0.8
PVCC	Panska Ves	71.41	326	eP	P	09 31 23.9	+0.6
PVCC				e*PP	pP	09 33 10.2	+0.8
AFSR	Af¯ar-Bala (A	71.41	308	eP	P	09 31 23.7	+0.1
SGRR	Singureni	71.47	316	⇑iP	P	09 31 23.6	-0.1
GOLR		71.48	317	⇓iP	P	09 31 24.1	+0.3
SMMC	Simmler	71.50	58	P	P	09 31 24.8	+0.6
	baz=315,SNR=31						
HWUT	Hardware Ranch	71.53	48	eP	P	09 31 25.5	+1.1
	comp=Z,260nm,0.9s						
JAVC	Velka Javorina	71.53	324	i P	P	09 31 25.6	+1.5
JAVC				e		09 33 12.2	
JAVC				eS	S	09 40 04.1	+2.1
PRD	Provadia	71.55	314	i P	P	09 31 24.8	+0.6
LOT	Lotru	71.56	318	⇑iP	P	09 31 25.1	+0.7
IVI	Ivigtut	71.60	4	eP	P	09 31 24.3	+0.2
	comp=Z,94nm,0.7s						
IVI				epP	pP	09 33 10.6	+0.3
VRAC	Vranov	71.61	324	P	P	09 31 27.3	+2.8
DEV	Deva	71.62	319	⇑iP	P	09 31 25.6	+1.0
DEV	Deva	71.62	319	P	P	09 31 25.6	+1.0
VES	Vestal, Richgr	71.64	57	P	P	09 31 24.8	-0.1
	baz=316,SNR=115						
MDUB	Mudurnu	71.65	310	eP	P	09 31 25.4	+0.4
BW06	Boulder Array	71.67	46	P	P	09 31 25.3	0.0
	baz=318,SNR=511						
BW06	Boulder Array	71.67	46	eP	P	09 31 25.9	+0.7
	comp=Z,282nm,0.8s						
PD31	Pinedale Array	71.67	46	eP	P	09 31 25.8	+0.5
PDAR	Pinedale Array	71.67	46	P	P	09 31 25.8	+0.5
	comp=Z,218nm,0.6s,baz=335,slow=1.8,SNR=2161						
PDAR				S	S	09 40 05.8	+1.7
	comp=Z,3.2nm,1.1s,baz=73,slow=5.1,SNR=7.3						
PDAR				PKPPKP	P'P'df	09 58 46.2	-26
	comp=Z,0.3nm,0.6s,baz=159,slow=3.8,SNR=2.7						
HUMR	Humele	71.70	317	⇓iP	P	09 31 24.9	-0.2
NRS	Narsarsuaq	71.74	2	eP	P	09 31 24.8	-0.2
	comp=Z,70nm,1.2s						
NRS	Narsarsuaq	71.74	2	eP	P	09 31 24.8	-0.2
NRS				pmax	pmax		
	comp=Z,70nm,1.2s						
CWC	Cottonwood Cre	71.78	56	P	P	09 31 26.6	+0.6
	baz=316						
GRAC	Grapevine Rang	71.79	55	P	P	09 31 26.6	+0.8
	baz=316,SNR=94						
R11A	Troy Canyon, C	71.79	53	P	P	09 31 26.2	+0.2
	baz=316,SNR=131						
R11A	Troy Canyon, C	71.79	53	eP	P	09 31 26.7	+0.7
	comp=Z,43nm,0.6s						
ULM	Lac du Bonnet	71.80	34	P	P	09 31 25.1	-0.5
	comp=Z,97nm,0.4s,baz=330,slow=6.5,SNR=190						
ULM				pP	pP	09 33 13.8	+2.0
	comp=Z,26nm,0.7s,baz=309,slow=8.9,SNR=5.2						
ULM				PKPPKP	P'P'df	09 59 00.2	-11
	comp=Z,12nm,1.0s,baz=133,slow=4.8,SNR=7.3						
ULM	Lac du Bonnet	71.80	34	eP	P	09 31 25.0	-0.5
	comp=Z,185nm,0.9s						
ULM				pP	pP	09 33 13.8	+2.0
ULM				P'P'		09 59 00.2	
ULM	Lac du Bonnet	71.80	34	eP	P	09 31 25.0	-0.5
ULM				*PP	pP	09 33 13.8	+2.0
ULM				pmax	pmax		
	comp=Z,185nm,0.9s						
GOPC	GO Pecny, Ondr	71.82	326	eP	P	09 31 26.4	+0.7
GOPC				ePCP	PcP	09 31 39.6	-1.6
GOPC				epP	pP	09 33 13.1	+1.1
GOPC				esP	sP	09 34 04.7	-0.4
GOPC				eS	S	09 40 01.7	-3.4
GOPC				eXS	sS	09 43 14.5	-0.2
GOPC	GO Pecny, Ondr	71.82	326	eP	P	09 31 26.4	+0.7
GOPC				e		09 31 39.6	
GOPC				e*PP	pP	09 33 13.1	+1.1
GOPC				e*SP	sP	09 34 04.7	-0.4
GOPC				eS	S	09 40 01.7	-3.4
PRA	Prague	71.83	326	eP	P	09 31 26.7	+1.0
PRA	Prague	71.83	326	eP	P	09 31 26.7	+1.0
PRU	Pruhonice	71.86	326	eP	P	09 31 26.4	+0.5
PRU				ePCP	PcP	09 31 42.3	+1.0
PRU				epP	pP	09 33 13.1	+0.9
PRU				esP	sP	09 34 02.3	-2.9
PRU				eS	S	09 40 01.6	-3.8
PRU				ex	x	09 40 30.2	
PRU				eXS	sS	09 43 11.8	-3.2
PRU	Pruhonice	71.86	326	eP	P	09 31 26.4	+0.5
PRU				e		09 31 42.3	
PRU				e*PP	pP	09 33 13.1	+0.9
PRU				e*SP	sP	09 34 02.3	-2.9
PRU				eS	S	09 40 01.6	-3.8
KRUC	Moravsky	71.88	324	i P	P	09 31 26.6	+0.5
KRUC				e		09 33 13.9	
KRUC				eS	S	09 40 06.0	+0.2
PKM	Mcpherson Peak	71.90	58	P	P	09 31 27.5	+0.8
	baz=316,SNR=39						
YURE	YUREGIR	71.90	305	eP	P	09 31 27.6	+1.1
SMOL	Smolenice	71.91	323	eP	P	09 31 27.6	+1.4
SMOL	Smolenice	71.91	323	eP	P	09 31 27.6	+1.4
KARA	Karaisali	71.91	305	eP	P	09 31 26.9	+0.4
DUG	Dugway, Tooele	71.92	50	P	P	09 31 27.6	+0.9
	baz=317,SNR=208						
DUG	Dugway, Tooele	71.92	50	eP	P	09 31 27.8	+1.2
	comp=Z,205nm,1.0s						
AUMIH	MIHALICIK	71.94	310	eP	P	09 31 26.9	+0.1
TCUT	Toone Canyon	71.97	49	eP	P	09 31 28.4	+1.3
	comp=Z,364nm,0.8s						
GULT	Gulveren	72.03	310	eP	P	09 31 27.2	0.0
BUD	Budapest	72.06	322	⇓ex	P	09 31 28.4	+1.3
BUD				ex	pP	09 33 14.8	+1.3
BUD	Budapest	72.06	322	P	P	09 31 28.1	+1.0
INVG	Invergeldie, C	72.07	340	⇓eP	P	09 31 26.7	-0.3
SULT	Sultanhani-AKS	72.08	307	eP	P	09 31 27.6	+0.1
MODS	Modra-Piesok	72.08	323	eP	P	09 31 28.5	+1.2
MODS				pmax	pmax		
	comp=Z,59nm,1.0s						
MODS	Modra-Piesok	72.08	323	eP	P	09 31 28.5	+1.2
MODS				epP	pP	09 33 16.0	+2.4
CTU	Camp Tracy	72.11	49	eP	P	09 31 28.5	+0.8
	comp=Z,117nm,1.0s						
ISA	Isabella, Lake	72.12	57	P	P	09 31 27.2	-0.6
	baz=316,SNR=63						
ISA	Isabella, Lake	72.12	57	eP	P	09 31 27.7	-0.1
	comp=Z,76nm,0.9s						
ISA	Isabella, Lake	72.12	57	eP	P	09 31 27.7	-0.1
ISA				pmax	pmax		
	comp=Z,76nm,0.9s						
DAC	Darwin (Calif)	72.17	56	eP	P	09 31 29.0	+0.8
	comp=Z,94nm,0.9s						
DAC	Darwin (Calif)	72.17	56	eP	P	09 31 29.0	+0.8
DAC				pmax	pmax		
	comp=Z,94nm,0.9s						
YAYL	Yayladag	72.20	304	eP	P	09 31 28.8	+0.5
SZH	Strazhica	72.21	315	i P	P	09 31 28.5	+0.4
KRTS	Karatas	72.23	305	eP	P	09 31 29.4	+1.1
AUSIV	SIVRIHISAR	72.23	309	eP	P	09 31 28.2	-0.2
MDND	Maddock	72.26	37	P	P	09 31 28.3	0.0
	baz=322,SNR=43						
MDND	Maddock	72.26	37	eP	P	09 31 28.9	+0.6
	comp=Z,564nm,1.2s						
SBC	Santa Barbara	72.28	58	P	P	09 31 29.1	+0.5
	baz=316,SNR=9.0						
ARVC	Arvin	72.30	57	P	P	09 31 28.7	0.0
	baz=316,SNR=28						
JLU	Jordanelle	72.33	49	eP	P	09 31 30.1	+0.9
	comp=Z,104nm,0.9s						
EAB	Aberfoyle	72.36	340	eP	P	09 31 28.8	+0.1
MPMC	Manual Prospec	72.39	56	P	P	09 31 29.9	+0.4
	baz=316,SNR=140						
BZS	Buzias	72.40	319	⇑iP	P	09 31 29.3	+0.2
BZS	Buzias	72.40	319	⇓iP	S	09 40 12.4	+0.7
MOX	Moxa	72.40	328	P	P	09 31 29.3	+0.2
SRE	Strehaia	72.42	318	⇓iP	P	09 31 30.3	+1.0
SRE	Strehaia	72.42	318	P	P	09 31 30.2	+1.0
NKC	Novy Kostel	72.44	327	eP	P	09 31 29.4	+0.1
NKC				ePCP	PcP	09 31 42.3	-1.5
NKC				epP	pP	09 33 16.7	+0.9
NKC				esP	sP	09 34 05.2	-3.6
NKC	Novy Kostel	72.44	327	eP	P	09 31 29.4	+0.1
NKC				e		09 31 42.3	
NKC				e*PP	pP	09 33 16.7	+0.9
NKC				e*SP	sP	09 34 05.2	-3.6
TPNV	Topopah Spring	72.44	54	P	P	09 31 30.2	+0.5
	baz=316,SNR=318						
TPNV	Topopah Spring	72.44	54	eP	P	09 31 30.7	+0.9
	comp=Z,172nm,0.8s						
TPNV	Topopah Spring	72.44	54	eP	P	09 31 30.7	+0.9
TPNV				pmax	pmax		
	comp=Z,173nm,0.8s						
FURC	Furnace Creek,	72.45	55	P	P	09 31 30.5	+1.0
	baz=316,SNR=225						
KIZT	Kizilcal	72.46	309	eP	P	09 31 29.1	-0.7
CSKK	Csˆ‡kako	72.48	322	⇓ex	P	09 31 30.8	+1.2
CSKK				ex	pP	09 33 17.5	+1.4
NLU	North Lily Min	72.48	50	eP	P	09 31 31.0	+1.0
	comp=Z,117nm,0.9s						
MERS	Mersin	72.49	306	eP	P	09 31 29.7	-0.2
JMB	Yambol	72.50	314	i P	P	09 31 30.2	+0.5
PSUT	Pine Spring	72.59	52	eP	P	09 31 31.6	+1.0
	comp=Z,127nm,0.8s						
HERR	Herculane	72.61	318	⇓iP	P	09 31 30.4	0.0
SCZ2	Santa Cruz Isl	72.64	59	P	P	09 31 30.6	-0.1
	baz=316,SNR=5.1						
MPU	Maple Canyon	72.67	49	eP	P	09 31 32.0	+0.9
	comp=Z,133nm,0.8s						
LADK	Ladik-KONYA	72.70	308	eP	P	09 31 30.7	-0.4
LRMC	Laurel Mtn Rad	72.70	56	P	P	09 31 31.6	+0.4
	baz=316,SNR=85						
OSI	Osito Audit: C	72.73	58	P	P	09 31 31.6	+0.3
	baz=316,SNR=42						
OSI	Osito Audit: C	72.73	58	eP	P	09 31 32.5	+1.2
	comp=Z,180nm,0.8s						
PGBU	Glenifferbraes	72.73	339	⇓eP	P	09 31 31.2	+0.4
PGBU				IAmb	IAmb	09 31 34.0	
	comp=Z,72nm,1.2s						
BANR	Banloc	72.80	319	⇓iP	P	09 31 32.4	+1.0
EKA	Eskdalemuir Ar	72.84	339	P	P	09 31 31.8	+0.3
	comp=Z,18nm,0.5s,baz=26,slow=5.3,SNR=118						
ESK	Eskdalemuir	72.87	339	eP	P	09 31 31.9	+0.3
	comp=Z,47nm,0.9s						
ESK				epP	pP	09 33 19.2	+0.9
ESK	Eskdalemuir	72.87	339	⇓eP	P	09 31 31.6	-0.1
ESK				IAmb	IAmb	09 31 32.2	
	comp=Z,25nm,0.6s						
ESK	Eskdalemuir	72.87	339	eP	P	09 31 31.9	+0.3
ESK				e*PP	pP	09 33 19.2	+0.9
ESK				pmax	pmax		
	comp=Z,47nm,0.9s						
KONT	Konya--Tatoy	72.89	308	eP	P	09 31 31.8	-0.3
BLG	Laguna Peak, P	72.89	58	P	P	09 31 31.9	-0.3
	baz=316,SNR=24						
KHC	Kasperske Hory	72.92	326	eP	P	09 31 32.8	+0.7
KHC				ePCP	PcP	09 31 47.5	+1.6
KHC				epP	pP	09 33 20.1	+1.3
KHC				eS	SKiKP	09 40 13.7	+3.3
KHC				ex	x	09 40 43.7	
KHC				eXS	sS	09 43 25.1	-2.6
KHC	Kasperske Hory	72.92	326	eP	P	09 31 32.8	+0.7
	comp=Z,37nm,0.6s						
KHC	Kasperske Hory	72.92	326	eP	P	09 31 32.8	+0.7
KHC				e		09 31 47.5	
KHC				e*PP	pP	09 33 20.1	+1.3
KHC				eS	SKiKP	09 40 13.7	+3.3
KHC				e		09 40 43.7	
SOP	Sopron	72.92	323	⇓ex	P	09 31 33.8	+1.7
SOP	Sopron	72.92	323	P	P	09 31 33.2	+1.1
WTSB	Winterswijk	72.94	331	eP	P	09 31 31.9	-0.2
	comp=Z,66nm,0.8s						
WTSB				epP	pP	09 33 19.7	+0.9
EDW2	Edwards Air Fo	72.95	57	P	P	09 31 32.8	+0.2
	baz=316,SNR=119						
ECK	Cauldkaine Hil	72.97	338	eP	P	09 31 32.5	+0.2
KIZK	Mersin	72.98	305	eP	P	09 31 32.3	-0.3
EDMD	Edmundbyers	72.99	338	⇓eP	P	09 31 32.2	-0.2
CONA	Conrad Observa	73.00	324	i P	P	09 31 33.7	+1.0
	comp=Z,77nm,0.7s,SNR=91						
CONA				epP	pP	09 33 20.1	+0.6
	comp=Z,72nm,1.3s,SNR=12						
CONA				eS	S	09 40 20.2	+1.7
	comp=Z,15nm,1.4s						
MDVR	Moldovita	73.01	319	⇓iP	P	09 31 32.8	+0.1
A33A	Warroad	73.05	34	P	P	09 31 32.4	-0.5
	baz=325,SNR=23						
BHH	Howats Hill	73.08	338	eP	P	09 31 32.6	-0.2
GEC2	GERESS Array S	73.11	326	eP	P	09 31 33.8	+0.5
	comp=Z,30nm,0.7s						
GEC2	GERESS Array S	73.11	326	eP	P	09 31 33.8	+0.5
GEC2				pmax	pmax		
	comp=Z,30nm,0.7s						
GERES	GERESS Array B	73.11	326	P	P	09 31 33.4	+0.1
	comp=Z,24nm,0.6s,baz=36,slow=5.6,SNR=235						
GERES				pP	pP	09 33 21.1	+1.1
	comp=Z,9.6nm,0.8s,baz=28,slow=6.0,SNR=8.2						
GERES				sP	sP	09 34 12.3	-0.6
	comp=Z,7.0nm,0.8s,baz=38,slow=6.8,SNR=4.6						
GERES				S	S	09 40 21.4	+1.8
	comp=Z,2.3nm,1.0s,baz=37,slow=8.6,SNR=4.9						
GERES				PKKPbc	PKKPbc	09 51 04.6	+0.1
	comp=Z,0.2nm,0.5s,baz=197,slow=3.1,SNR=3.7						
GERES				PKPPKP	P'P'df	09 58 39.1	-30
	comp=Z,0.9nm,0.9s,baz=153,slow=1.1,SNR=3.7						
GEA0	GERESS Array S	73.11	326	eP	P	09 31 33.5	+0.2
WET	Wettzell	73.17	326	P	P	09 31 34.0	+0.4
SHOC	Shoshone, Teco	73.19	55	P	P	09 31 34.5	+0.6
	baz=317,SNR=62						
DECC	Green Verdugo	73.21	58	P	P	09 31 34.3	+0.3
	baz=316,SNR=41						
EIDS	Eidsvold	73.22	169	eP	P	09 31 34.7	+0.8
	comp=Z,220nm,0.8s						
K22A	Casper	73.22	45	P	P	09 31 34.0	-0.1
	baz=320,SNR=117						
K22A	Casper	73.22	45	eP	P	09 31 34.4	+0.2
	comp=Z,94nm,0.8s						
MORH	Mˆ‡rˆ¡gy, Hung	73.22	321	⇓ex	P	09 31 34.2	+0.4
MORH				ex	pP	09 33 21.1	+0.4
KEBE	Keben-Mersin	73.24	306	eP	P	09 31 34.7	+0.5
SNCC	San Nicolas Is	73.24	59	P	P	09 31 34.9	+0.7
	baz=316,SNR=6.4						
SNCC	San Nicolas Is	73.24	59	eP	P	09 31 35.4	+1.2
	comp=Z,214nm,0.8s						
RSSD	Black Hills	73.26	42	P	P	09 31 34.2	-0.2
	baz=321						
RSSD	Black Hills	73.26	42	eP	P	09 31 34.7	+0.3
	comp=Z,238nm,0.8s						
RSSD	Black Hills	73.26	42	eP	P	09 31 34.7	+0.3
RSSD				pmax	pmax		
	comp=Z,238nm,0.8s						
TCRU	Three Creeks R	73.28	51	eP	P	09 31 36.1	+1.4
	comp=Z,136nm,0.8s						
DIM	Dimitrovgrad	73.32	315	i P	P	09 31 35.4	+0.9
GSC	Goldstone, Bar	73.32	56	P	P	09 31 35.0	+0.2
	baz=317,SNR=120						
GSC	Goldstone, Bar	73.32	56	eP	P	09 31 35.6	+0.8
	comp=Z,153nm,1.0s						
GSC	Goldstone, Bar	73.32	56	eP	P	09 31 35.6	+0.8
GSC				pmax	pmax		
	comp=Z,153nm,1.0s						
GRF	Grafenberg Arr	73.33	328	P	P	09 31 34.9	+0.4
GRFO	Grafenberg	73.33	328	eP	P	09 31 35.2	+0.8
	comp=Z,74nm,0.8s						
GRFO				epP	pP	09 33 22.4	+1.1
GRFO	Grafenberg	73.33	328	eP	P	09 31 35.2	+0.8
GRFO				e*PP	pP	09 33 22.4	+1.1
GRFO				pmax	pmax		
	comp=Z,74nm,0.8s						
PASC	Pasadena Art C	73.35	58	eP	P	09 31 35.5	+0.6
	comp=Z,141nm,0.8s						
PASC				epP	pP	09 33 24.8	+3.0
SHPR	Sheep Range	73.36	54	eP	P	09 31 36.4	+1.3
	comp=Z,126nm,0.9s						
DZM	Mont Dzumac	73.39	154	eP	P	09 31 36.7	+1.6
	comp=Z,612nm,1.4s						
DZM	Mont Dzumac	73.39	154	P	P	09 31 36.9	+1.8
	comp=Z,88nm,0.6s,baz=345,slow=3.5,SNR=70						
DZM	Mont Dzumac	73.39	154	eP	P	09 31 37.1	+2.0
	comp=Z,745nm,1.7s						
MWC	Mount Wilson	73.39	57	eP	P	09 31 35.8	+0.5
	comp=Z,178nm,0.8s						
MWC				epP	pP	09 33 25.3	+3.1
MWC	Mount Wilson	73.39	57	eP	P	09 31 35.8	+0.5
MWC				e*PP	pP	09 33 25.3	+3.1
MWC				pmax	pmax		
	comp=Z,178nm,0.8s						
AGMN	Agassiz Nation	73.39	35	P	P	09 31 33.7	-1.1
	baz=325,SNR=165						
AGMN	Agassiz Nation	73.39	35	eP	P	09 31 34.2	-0.6
	comp=Z,181nm,0.8s						
BBO1	Bothel	73.40	338	⇓eP	P	09 31 35.3	+0.6
IKL	Isikli	73.41	306	eP	P	09 31 34.5	-0.6
TMUT	Trail Mountain	73.42	50	eP	P	09 31 36.7	+1.2
	comp=Z,176nm,0.7s						
MSU	Marysvale	73.49	51	eP	P	09 31 37.7	+1.8
MSU	Marysvale	73.49	51	eP	P	09 31 37.7	+1.8
KESW	Keswick, Cumbr	73.50	338	⇓eP	P	09 31 35.6	+0.3
KESW				IAmb	IAmb	09 31 36.2	
	comp=Z,54nm,0.8s						
RRX	Edison Barstow	73.52	56	P	P	09 31 36.3	+0.5
	baz=317,SNR=10						
P17A	Butcher Ranch,	73.53	49	eP	P	09 31 37.0	+1.0
	comp=Z,236nm,1.1s						
AKKU	Akkuyu-Mersin	73.54	306	eP	P	09 31 35.5	-0.4
CCUT	Cedar City	73.57	52	eP	P	09 31 37.4	+1.1
	comp=Z,72nm,0.8s						
BERE	Bereket-Mersin	73.58	306	eP	P	09 31 35.7	-0.6
PGB	Panagyurishte	73.59	316	i P	P	09 31 36.8	+0.7
BFSC	Mount Baldy Ra	73.61	57	P	P	09 31 36.6	+0.2
	baz=317,SNR=100						
FMP	Fort Macarthur	73.62	58	P	P	09 31 36.5	+0.1
	baz=316,SNR=9.0						
RWWY	Rawlins	73.63	46	eP	P	09 31 36.3	-0.3
	comp=Z,192nm,1.0s						
GAL1	Galloway	73.65	339	⇓eP	P	09 31 36.0	-0.1
GAL1				IAmb	IAmb	09 31 36.9	
	comp=Z,21nm,0.6s						
P18A	Preston Nutter	73.67	49	eP	P	09 31 38.3	+1.4
	comp=Z,310nm,0.8s						
PLD	Plovdiv	73.68	315	i P	P	09 31 37.0	+0.5
PLD	Plovdiv	73.68	315	P	P	09 31 37.1	+0.5
KDZ	Kurdzhali	73.68	314	i P	P	09 31 37.4	+0.8
ARSA	Arzberg	73.69	324	i P	P	09 31 37.1	+0.6
	comp=Z,28nm,0.8s,SNR=14						
ARSA				epP	pP	09 33 24.1	+0.5
	comp=Z,44nm,1.2s,SNR=7.1						
ARSA				eS	S	09 40 27.3	+1.4
	comp=Z,16nm,1.4s						
HPK	Haverah Park	73.69	337	⇓eP	P	09 31 36.2	-0.1

HPK				IAmb	IAmb	09 31 37.2	
	comp=Z,69nm,0.6s						
SZCU	Shurtz Canyon	73.69	52	eP	P	09 31 37.9	+0.9
	comp=Z,77nm,0.8s						
MOA	Molln	73.70	325	eP	P	09 31 37.1	+0.5
	comp=Z,40nm,0.7s,SNR=41						
MOA				epP	pP	09 33 24.1	+0.5
	comp=Z,25nm,1.0s						
MOA				eS	SKiKP	09 40 17.1	+5.4
	comp=Z,20nm,1.4s						
B34A	Aery, Baudette	73.70	34	P	P	09 31 35.7	-0.8
	baz=325,SNR=327						
TUQ	Turquoise Moun	73.72	55	P	P	09 31 37.7	+0.7
	baz=317,SNR=49						
CIS	Catalina Islan	73.78	58	P	P	09 31 37.9	+0.6
	baz=316,SNR=17						
CLGH	Cloghs, Cushen	73.78	340⇓	eP	P	09 31 37.1	+0.2
CLGH				IAmb	IAmb	09 31 37.7	
	comp=Z,58nm,0.6s						
TEKE	Tekeli-Mersin	73.79	306	eP	P	09 31 36.8	-0.5
BEHE	Becsehely	73.80	323⇓	ex	P	09 31 38.1	+0.9
BEHE				ex	pP	09 33 24.7	+0.5
C33A	Trail	73.87	35	P	P	09 31 36.7	-0.8
	baz=325,SNR=88						
SRU	San Rafael Swe	73.91	49	eP	P	09 31 38.6	+0.4
	comp=Z,140nm,0.6s						
SRU	San Rafael Swe	73.91	49	eP	P	09 31 38.6	+0.4
SRU				pmax	pmax		
	comp=Z,140nm,0.6s						
HEC	Hector,Ludlow	73.93	56	P	P	09 31 39.3	+1.1
	baz=317,SNR=90						
ALN	Alexandroupoli	73.94	313	eP	P	09 31 38.9	+0.9
	comp=Z,64nm,1.1s						
ALN	Alexandroupoli	73.94	313	P	P	09 31 38.6	+0.5
ALN	Alexandroupoli	73.94	313	P	P	09 31 38.9	+0.9
ALN				pmax	pmax		
	comp=Z,64nm,1.1s						
ISP	Isparta	73.96	309	eP	P	09 31 38.1	-0.3
ISP	Isparta	73.96	309⇑	iP	P	09 31 38.2	-0.1
ISP	Isparta	73.96	309	eP	P	09 31 38.4	+0.1
	comp=Z,44nm,0.7s						
ISP				epP	pP	09 33 26.5	+1.1
ISP	Isparta	73.96	309	P	P	09 31 38.2	-0.1
ISP	Isparta	73.96	309d	iP	P	09 31 38.3	-0.1
ISP				pmax	pmax		
	comp=Z,40nm,0.7s						
SUTC	Sutluce-Ispart	73.96	308	eP	P	09 31 38.4	0.0
RZN	Rozhen	73.99	315	i P	P	09 31 39.4	+0.8
SCI2	San Clemente I	74.00	59	P	P	09 31 38.7	+0.2
	baz=316,SNR=8.1						
RDO	Rodhopi	74.00	314	P	P	09 31 39.4	+1.0
RDO	Rodhopi	74.00	314	P	P	09 31 39.4	+1.0
RDO	Rodhopi	74.00	314	P	S	09 41 00.6	+31
BBRC	Big Bear Solar	74.01	57	P	P	09 31 39.7	+0.8
	baz=317,SNR=219						
VTS	Vitosha	74.01	316⇑	iP	P	09 31 39.3	+0.7
VTS	Vitosha	74.01	316⇑	iP	S	09 40 29.5	-0.4
VTS	Vitosha	74.01	316	eP	P	09 31 39.6	+1.0
	comp=Z,73nm,0.6s						
VTS	Vitosha	74.01	316	i P	P	09 31 39.4	+0.8
VTS	Vitosha	74.01	316	P	P	09 31 39.4	+0.8
VTS	Vitosha	74.01	316	P	SKSac	09 40 58.3	+1.0
VTS	Vitosha	74.01	316	eP	P	09 31 39.6	+1.0
VTS				pmax	pmax		
	comp=Z,73nm,0.6s						
LCMT	Little Creek M	74.03	53	eP	P	09 31 39.9	+1.1
	comp=Z,65nm,0.8s						
B35A	Bob, Littlefor	74.16	34	P	P	09 31 38.8	-0.3
	baz=326,SNR=245						
B35A	Bob, Littlefor	74.16	34	eP	P	09 31 38.9	-0.3
	comp=Z,284nm,0.5s						
GAZI	Gazipasa	74.16	306	eP	P	09 31 37.9	-1.5
WACR	West Acre	74.17	335	eP	P	09 31 39.0	0.0
WACR				IAmb	IAmb	09 31 39.7	
	comp=Z,74nm,0.7s						
LBWR	Ladybower, Pea	74.21	337⇓	eP	P	09 31 39.8	+0.5
LBWR				IAmb	IAmb	09 31 40.3	
	comp=Z,86nm,0.7s						
HGN	Heimansgroeve	74.25	331	eP	P	09 31 39.5	-0.1
	comp=Z,33nm,0.6s						
HGN				epP	pP	09 33 26.7	-0.2
KNB	Kanab	74.26	52	eP	P	09 31 41.4	+1.2
	comp=Z,124nm,0.9s						
KNB	Kanab	74.26	52	eP	P	09 31 41.4	+1.2
KNB				pmax	pmax		
	comp=Z,125nm,0.9s						
C34A	RKJ Ranch, Bem	74.29	35	P	P	09 31 39.3	-0.6
	baz=325,SNR=143						
WIM	Isle of Man	74.29	339⇓	eP	P	09 31 40.0	+0.2
O20A	White River Ci	74.30	47	P	P	09 31 40.6	+0.3
	baz=320,SNR=238						
O20A	White River Ci	74.30	47	eP	P	09 31 41.0	+0.7
	comp=Z,246nm,0.8s						
BEBN	Eben Emael	74.31	331	⇑P	P	09 31 39.9	0.0
	comp=Z,9.0nm,0.7s						
BEBN				⇓AP	pP	09 33 27.5	+0.3
DIVS	Divibare	74.31	319	eP	P	09 31 40.3	+0.1
	comp=Z,74nm,0.8s						
MURC	Murrieta	74.33	57	P	P	09 31 40.6	+0.1
	baz=317,SNR=62						
GMRC	Granite Mounta	74.34	56	P	P	09 31 41.2	+0.6
	baz=317,SNR=159						
PERS	Pernice	74.35	324	i P	P	09 31 40.7	+0.3
PERS				epP	pP	09 33 27.6	0.0
SOKA	Soboth	74.35	324	eP	P	09 31 40.7	+0.3
	comp=Z,26nm,0.6s,SNR=24						
SOKA				epP	pP	09 33 28.0	+0.4
	comp=Z,45nm,1.2s,SNR=6.7						
SOKA				eS	S	09 40 33.2	-0.1
	comp=Z,30nm,1.2s						
MEM	Membach	74.36	331	⇑P	P	09 31 39.9	-0.4
	comp=Z,38nm,0.8s						
MEM				⇑AP	pP	09 33 28.4	+0.9
MEM	Membach	74.36	331	P	P	09 31 40.4	+0.2
LDFC	Landfair	74.43	55	eP	P	09 31 42.0	+0.8
	comp=Z,235nm,0.9s						
MANT	Manisa	74.49	310	eP	P	09 31 42.2	+0.7
	comp=Z,135nm,0.6s						
GMM	Mts of Mourne	74.52	340⇓	eP	P	09 31 41.1	+0.1
SMTH	Samothraki Isl	74.52	313	P	P	09 31 41.4	0.0
SMTH	Samothraki Isl	74.52	313	P	P	09 31 41.4	0.0
ASF	Jabal al Asfar	74.53	301	P	P	09 31 42.8	+1.2
	comp=Z,35nm,0.7s,baz=351,slow=12,SNR=58						
ASF				pP	pP	09 33 29.9	+0.9
	comp=Z,20nm,0.8s,baz=344,slow=3.4,SNR=8.8						
MMB	Musomiste	74.54	315	i P	P	09 31 42.2	+0.7
FUR	Furstenfeldbru	74.58	327	P	P	09 31 42.5	+0.9
C35A	Jirik Farms, M	74.61	34	P	P	09 31 41.3	-0.4
	baz=326,SNR=213						
KKB	Krupnik	74.63	316	i P	P	09 31 42.6	+0.6
NVR	Nevrokopi	74.66	315	P	P	09 31 43.0	+0.8
NVR	Nevrokopi	74.66	315	P	P	09 31 43.0	+0.8
OBKA	Obir	74.68	324	i P	P	09 31 42.4	+0.2
	comp=Z,55nm,0.7s,SNR=28						
OBKA				epP	pP	09 33 29.9	+0.3
	comp=Z,40nm,1.0s,SNR=5.8						
OBKA				S	S	09 40 34.1	-2.8
	comp=Z,10nm,1.3s						
KBA	Koelnbreinsper	74.69	325	i P	P	09 31 43.3	+0.9
	comp=Z,61nm,0.5s,SNR=11						
KBA				epP	pP	09 33 29.9	+0.1
	comp=Z,75nm,1.4s,SNR=5.8						
KBA				eS	S	09 40 36.0	-1.2
	comp=Z,52nm,1.5s						
KBA	Koelnbreinsper	74.69	325	P	P	09 31 43.5	+1.1
CWF	Charnwood Fore	74.69	336⇓	eP	P	09 31 42.1	0.0
CWF				IAmb	IAmb	09 31 42.6	
	comp=Z,27nm,0.7s						
BELC	Belle Mtn. Jos	74.72	56	P	P	09 31 43.0	+0.2
	baz=317,SNR=120						
UCC	Uccle	74.73	332	⇓AP	pP	09 33 29.4	-0.2
PFO	Pinyon Flats O	74.75	57	P	P	09 31 43.1	+0.2
	baz=317,SNR=114						
PFO	Pinyon Flats O	74.75	57	eP	P	09 31 43.5	+0.6
	comp=Z,222nm,1.1s						
PFO	Pinyon Flats O	74.75	57	eP	P	09 31 43.5	+0.6
PFO				pmax	pmax		
	comp=Z,222nm,1.1s						
XPFO	Piæon Flat	74.75	57	eP	P	09 31 43.5	+0.6
	comp=Z,221nm,1.1s						
FRD	Ford Ranch, An	74.75	57	P	P	09 31 43.2	+0.3
	baz=317,SNR=106						
BCLA	Clavier	74.76	331	⇓P	P	09 31 42.6	+0.1
	comp=Z,36nm,0.7s						
BCLA				⇑AP	pP	09 33 30.7	+0.8
PHWY	Pilot Hill	74.77	45	eP	P	09 31 43.5	+0.4
	comp=Z,128nm,1.3s						
MMAI	Mount Meron Ar	74.79	302	P	P	09 31 44.3	+1.2
	comp=Z,49nm,0.5s,baz=50,slow=7.7,SNR=66						
STU	Stuttgart	74.83	328	eP	P	09 31 43.8	+0.8
	comp=Z,65nm,0.8s						
STU				epP	pP	09 33 32.0	+1.7
STU	Stuttgart	74.83	328	eP	P	09 31 43.8	+0.8
STU				e*PP	pP	09 33 32.0	+1.7
STU				pmax	pmax		
	comp=Z,65nm,0.8s						
N23A	Red Feather La	74.85	45	P	P	09 31 43.9	+0.3
	baz=320,SNR=111						
N23A	Red Feather La	74.85	45	eP	P	09 31 44.3	+0.8
	comp=Z,149nm,1.0s						
WME	Myndd Eilian	74.88	338⇓	eP	P	09 31 43.2	+0.1
109C	Camp Elliot, M	74.90	58	P	P	09 31 43.9	+0.2
	baz=317,SNR=47						
CPE	Camp Elliot	74.90	58	eP	P	09 31 44.0	+0.4
	comp=Z,133nm,0.8s						
CPE				epP	pP	09 33 32.7	+1.6
WPM1	Penmaenmawr	74.91	338	eP	P	09 31 43.4	+0.1
NEE2	Needles Airpor	74.93	55	P	P	09 31 44.0	+0.2
	baz=318,SNR=10						
MYKA	Terra Mystica	74.94	324	i P	P	09 31 43.5	-0.2
	comp=Z,55nm,0.6s,SNR=31						
MYKA				epP	pP	09 33 31.2	+0.1
	comp=Z,29nm,0.8s						
MYKA				eS	S	09 40 35.6	-4.2
	comp=Z,19nm,1.4s						
SRS	Serrai	74.97	315	P	P	09 31 44.3	+0.4
SRS	Serrai	74.97	315	P	P	09 31 44.3	+0.4
SRS	Serrai	74.97	315	P	S	09 40 40.0	-0.1
SRS	Serrai	74.97	315	P	P	09 31 44.3	+0.4
C36A	Pine Crest Far	74.99	33	P	P	09 31 43.2	-0.6
	baz=326,SNR=143						
WLF1	Llynfaes	75.00	338⇓	eP	P	09 31 43.8	+0.1
WLF1				IAmb	IAmb	09 31 46.3	
	comp=Z,51nm,0.8s						
SNF	Seneffe	75.01	332	⇑P	P	09 31 43.5	-0.3
	comp=Z,46nm,0.8s						
SNF				⇑AP	pP	09 33 32.2	+0.9
BLY	Banja Luka	75.01	321⇓	iP	P	09 31 44.2	+0.2
BLY	Banja Luka	75.01	321	eP	P	09 31 44.5	+0.5
	comp=Z,21nm,1.0s						
OZLJ	Ozalj	75.03	323	P	P	09 31 44.3	+0.2
FOEL	Foel Wylfa	75.06	337⇓	eP	P	09 31 44.5	+0.3
FOEL				IAmb	IAmb	09 31 45.2	
	comp=Z,74nm,0.7s						
LJU	Ljubljana	75.07	324	i P	P	09 31 44.5	+0.2
LJU				i pP	pP	09 33 31.8	0.0
LJU				esP	sP	09 34 21.5	-3.0
LJU				i S	S	09 40 38.8	-2.2
PV09	Paradox Valley	75.09	49	eP	P	09 31 46.1	+1.2
D35A	Remer	75.09	34	P	P	09 31 43.8	-0.6
	baz=326,SNR=68						
IRM	Iron Mountain	75.09	56	P	P	09 31 45.4	+0.7
	baz=318,SNR=185						
AFI	Afiamalu	75.12	131	P	P	09 31 45.3	+0.3
	comp=Z,172nm,0.7s,baz=224,slow=5.3,SNR=50						
AFI	Afiamalu	75.12	131	eP	P	09 31 45.5	+0.5
	comp=Z,211nm,0.8s						
AFI	Afiamalu	75.12	131	eP	P	09 31 45.5	+0.5
AFI				pmax	pmax		
	comp=Z,211nm,0.8s						
PV21	Cone Mtn., Par	75.12	49	eP	P	09 31 46.1	+1.0
	comp=Z,321nm,0.7s						
E34A	Wadena	75.12	35	P	P	09 31 44.2	-0.4
	baz=325,SNR=14						
WLF	Walferdange	75.12	331	eP	P	09 31 45.4	+0.8
	comp=Z,64nm,1.3s						
WLF				epP	pP	09 33 33.4	+1.3
WLF	Walferdange	75.12	331	eP	P	09 31 45.4	+0.8
WLF				e*PP	pP	09 33 33.4	+1.3
WLF				pmax	pmax		
	comp=Z,64nm,1.3s						
LIA	Limnos Island	75.13	313	P	P	09 31 44.8	0.0
LIA	Limnos Island	75.13	313	P	P	09 31 44.8	0.0
LANF	Langenberg	75.15	329	eP	P	09 31 45.3	+0.6
WATA	Walderalm	75.16	326	i P	P	09 31 45.5	+0.5
	comp=Z,58nm,0.5s,SNR=24						
WATA				epP	pP	09 33 33.5	+1.0
	comp=Z,24nm,0.8s						
PV23	Carpenter Ridg	75.18	49	eP	P	09 31 46.6	+1.1
	comp=Z,419nm,0.7s						
GIVF	Givet	75.19	332	eP	P	09 31 44.1	-0.8
GIVF				pmax	pmax		
	comp=Z,23nm,0.8s						
PLE	Pljevlja	75.19	319⇑	iP	P	09 31 45.9	+0.7
WTTA	Wattenberg	75.19	326	i P	P	09 31 45.8	+0.6
	comp=Z,53nm,0.5s,SNR=29						
WTTA				epP	pP	09 33 33.1	+0.3
	comp=Z,33nm,1.1s,SNR=6.1						
WTTA				S	S	09 40 39.3	-3.4
	comp=Z,25nm,1.0s						
BOJS	Bojanci	75.21	323	i P	P	09 31 45.0	-0.1
BOJS				i pP	pP	09 33 32.4	-0.3
BOJS				i S	S	09 40 40.6	-2.0
LLW	Llanuwychllyn	75.22	338	eP	P	09 31 45.0	-0.1
PV10	Paradox Valley	75.23	49	eP	P	09 31 47.0	+1.3
CADS	Cadrg	75.23	324	i P	P	09 31 44.6	-0.7
PV22	Blue Mesa, Par	75.23	49	eP	P	09 31 46.9	+1.2
	comp=Z,372nm,0.7s						
PV14	Lion Creek, Pa	75.24	49	eP	P	09 31 46.7	+0.9
	comp=Z,398nm,0.9s						
SUSD	Miller	75.25	39	P	P	09 31 45.2	-0.1
	baz=324,SNR=175						
C37A	Embarrass	75.25	33	P	P	09 31 44.5	-0.8
	baz=327,SNR=107						
KNT	Kendrikon	75.27	316	P	P	09 31 46.1	+0.6
KNT	Kendrikon	75.27	316	P	P	09 31 46.1	+0.6
KNT	Kendrikon	75.27	316	P	P	09 31 46.1	+0.6
BC3	Big Chuckawall	75.28	56	P	P	09 31 46.3	+0.4
	baz=318,SNR=80						
ABTA	Abfaltersbach	75.29	325	eP	P	09 31 45.4	-0.2
	comp=Z,21nm,1.1s,SNR=14						
ABTA				epP	pP	09 33 33.0	-0.3
	comp=Z,18nm,1.1s						
ABTA				S	S	09 40 39.8	-3.7
	comp=Z,12nm,1.3s						
PV20	West Nyswonger	75.29	49	eP	P	09 31 47.2	+1.2
	comp=Z,328nm,0.8s						
MONP2	Monument Peak	75.29	57	P	P	09 31 46.2	+0.1
	baz=317,SNR=77						
VAY	Valandovo	75.30	316	P	P	09 31 46.5	+0.8
VAY	Valandovo	75.30	316	i P	P	09 31 46.4	+0.8
BAR	Barrett	75.30	58	eP	P	09 31 46.4	+0.5
	comp=Z,179nm,0.8s						
HLM1	Long Mynd	75.31	337	eP	P	09 31 45.7	+0.1
HLM1				IAmb	IAmb	09 31 50.1	
	comp=Z,20nm,1.0s						
IVA	Berane	75.32	318⇑	iP	P	09 31 46.2	+0.3
SKO	Skopje	75.32	317	P	P	09 31 46.8	+1.0
SKO	Skopje	75.32	317	i P	P	09 31 46.8	+1.0
SIGR	SIGRI	75.32	312	P	P	09 31 46.3	+0.5
EYMN	Ely	75.33	32	P	P	09 31 44.9	-0.9
	baz=327,SNR=221						
EYMN	Ely	75.33	32	eP	P	09 31 45.3	-0.5
	comp=Z,230nm,0.9s						
MOTA	Moosalm	75.33	326	i P	P	09 31 46.3	+0.3
	comp=Z,101nm,0.7s,SNR=135						
MOTA				epP	pP	09 33 33.9	+0.3
	comp=Z,36nm,0.7s,SNR=8.1						
MOTA				eS	S	09 40 38.6	-5.5
	comp=Z,12nm,1.0s						
RETA	Reutte	75.34	327	eP	P	09 31 46.3	+0.4
	comp=Z,27nm,0.6s,SNR=16						
RETA				epP	pP	09 33 34.1	+0.6
	comp=Z,30nm,1.0s						
RETA				S	S	09 40 45.3	+1.3
	comp=Z,20nm,1.6s						
PV16	Nyswonger Mesa	75.34	49	eP	P	09 31 47.1	+0.8
	comp=Z,535nm,1.4s						
PV17	East Wray Mesa	75.34	49	eP	P	09 31 47.3	+1.0
	comp=Z,398nm,0.9s						
D36A	Goodland	75.35	34	P	P	09 31 44.9	-0.9
	baz=326,SNR=118						
D36A	Goodland	75.35	34	eP	P	09 31 45.4	-0.5
	comp=Z,225nm,0.9s						
PV11	David Mesa, Pa	75.37	49	eP	P	09 31 47.5	+1.1
	comp=Z,263nm,0.7s						
E35A	Pequot Lakes	75.39	35	P	P	09 31 45.3	-0.8
	baz=326,SNR=88						
OUR	Ouranopolis	75.39	314	P	P	09 31 46.6	+0.4
PV18	Skein Mesa, Pa	75.39	49	eP	P	09 31 47.3	+0.8
	comp=Z,204nm,0.9s						
PV12	Saucer Basin,	75.39	49	eP	P	09 31 47.7	+1.1
	comp=Z,154nm,0.9s						
PV03	Paradox Valley	75.42	49	eP	P	09 31 47.5	+0.8
RAYN	Ar Rayn	75.42	289	eP	P	09 31 46.6	-0.1
	comp=Z,42nm,0.7s						
RAYN	Ar Rayn	75.42	289	i P	P	09 31 46.7	-0.1
	SNR=42						
RAYN	Ar Rayn	75.42	289	eP	P	09 31 46.6	-0.1
RAYN				pmax	pmax		
	comp=Z,42nm,0.7s						
BAIF	Baives	75.42	332	eP	P	09 31 45.4	-0.8
BAIF				pmax	pmax		
	comp=Z,15nm,0.6s						
PV05	Paradox Valley	75.42	49	eP	P	09 31 48.1	+1.4
UPM	Unac-Piva	75.50	319⇑	iP	P	09 31 46.7	-0.3
PV13	Radium Mtn., P	75.50	49	eP	P	09 31 48.1	+0.9
	comp=Z,573nm,1.5s						
KOME	Kolasin	75.51	319⇑	iP	P	09 31 46.6	-0.4
PV02	Paradox Valley	75.51	49	eP	P	09 31 48.0	+0.8
	comp=Z,126nm,0.8s						
PVY	Plav	75.51	318⇑	iP	P	09 31 47.0	0.0
BFO	Black Forest	75.51	329	eP	P	09 31 47.2	+0.4
	comp=Z,56nm,1.0s						
BFO	Black Forest	75.51	329	i P	P	09 31 45.6	-1.2
DSB	Dublin	75.53	339	eP	P	09 31 47.1	+0.4
	comp=Z,58nm,1.1s						
PDMCI	Parker Dam,Lak	75.54	55	P	P	09 31 47.8	+0.7
	baz=318,SNR=96						
C38A	Sawbill Land.	75.60	32	P	P	09 31 46.8	-0.5
	baz=327,SNR=192						
SWSC	Sam W. Stewart	75.61	57	P	P	09 31 47.7	+0.1
	baz=318,SNR=26						
PLG	Polygyros	75.61	315	P	P	09 31 47.8	+0.3
PLG	Polygyros	75.61	315	P	P	09 31 47.8	+0.3
D37A	Cotton	75.64	33	P	P	09 31 46.8	-0.7
	baz=327,SNR=125						
TRI	Trieste	75.65	324	eP	P	09 31 46.9	-0.6
	comp=Z,69nm,0.7s						
TRI	Trieste	75.65	324	eP	P	09 31 46.9	-0.6
TRI				pmax	pmax		
	comp=Z,69nm,0.7s						
IKP	In-Ko-Pah, Jac	75.65	57	P	P	09 31 48.4	+0.5
	baz=317,SNR=133						
PV01	Paradox Valley	75.65	49	eP	P	09 31 49.0	+1.0
YER	Yerkesik	75.65	310	P	P	09 31 48.8	+1.0
SMCO	Snowmass	75.66	47	eP	P	09 31 49.2	+0.9
	comp=Z,223nm,0.8s						
KSL	Kastellorizon	75.70	308	P	P	09 31 46.8	-1.2
Y12C	Blythe	75.74	56	P	P	09 31 48.9	+0.7
	baz=318,SNR=97						
Y12C	Blythe	75.74	56	eP	P	09 31 49.6	+1.3
	comp=Z,219nm,0.8s						
FETA	Feichten	75.74	326	i P	P	09 31 48.6	+0.3
	comp=Z,38nm,0.7s,SNR=40						
FETA				epP	pP	09 33 36.4	+0.4
	comp=Z,48nm,1.1s,SNR=7.2						
FETA				S	S	09 40 47.7	-0.8
	comp=Z,4.3nm,0.8s						
NKY	Niksic	75.77	319⇑	iP	P	09 31 48.1	-0.3
STRD	Stroud	75.79	336	eP	P	09 31 48.6	+0.4
STRD				IAmb	IAmb	09 31 50.3	
	comp=Z,54nm,0.8s						
CDF	Champ du Feu	75.81	329	eP	P	09 31 48.0	-0.5
CDF				pmax	pmax		
	comp=Z,35nm,0.6s						
MCH1	Michaelchurch	75.82	337⇓	eP	P	09 31 48.6	+0.2
MCH1				IAmb	IAmb	09 31 52.7	
	comp=Z,25nm,0.9s						
SCHQ	Schefferville	75.82	15	P	P	09 31 48.5	+0.2
	comp=Z,53nm,0.6s,baz=355,slow=6.0,SNR=36						
SCHQ				pP	pP	09 33 36.2	+0.1
	comp=Z,23nm,0.8s,baz=345,slow=5.1,SNR=3.7						
SCHQ	Schefferville	75.82	15	eP	P	09 31 48.5	+0.2
	comp=Z,186nm,1.3s						
SCHQ				pP	pP	09 33 36.2	+0.1
NKME	Niksic	75.83	319⇑	iP	P	09 31 48.3	-0.4
DAVA	Damuels	75.83	327	i P	P	09 31 49.0	+0.2
	comp=Z,102nm,0.7s,SNR=56						
DAVA				epP	pP	09 33 36.9	+0.4
	comp=Z,61nm,0.9s,SNR=8.5						
DAVA				S	S	09 40 46.6	-2.9
	comp=Z,19nm,1.5s						
CHOS	Chios island	75.85	312	P	P	09 31 49.2	+0.3
ISCO	Idaho Springs	75.85	46	P	P	09 31 49.4	+0.2
	baz=321,SNR=98						
ISCO	Idaho Springs	75.85	46	eP	P	09 31 50.1	+0.9
	comp=Z,89nm,1.0s						
E36A	McGregor	75.86	34	P	P	09 31 48.6	-0.1
	baz=326,SNR=218						
KRUS	Krusevo	75.88	317	i P	P	09 31 49.7	+0.6
HMNX	Herstmonceux	75.90	335	eP	P	09 31 49.5	+0.7
HMNX				IAmb	IAmb	09 31 50.1	
	comp=Z,221nm,0.6s						
BRY	Bratogost	75.90	319⇑	iP	P	09 31 48.7	-0.5
MONM	Monmouth	75.91	337⇓	eP	P	09 31 49.1	+0.2
MONM				IAmb	IAmb	09 31 49.5	
	comp=Z,50nm,1.2s						
SWN1	Swindon	75.93	336	eP	P	09 31 49.4	+0.4
SWN1				IAmb	IAmb	09 31 50.0	
	comp=Z,134nm,0.7s						
SLE	Schleitheim	75.94	328	P	P	09 31 49.4	+0.2
PDG	Podgorica	75.96	319⇓	iP	P	09 31 49.4	+0.1
PDG	Podgorica	75.96	319⇑	iP	S	09 40 50.2	-0.4
PDG	Podgorica	75.96	319	P	P	09 31 49.6	+0.3
TTG	Podgorica	75.96	319⇑	iP	P	09 31 49.1	-0.2
TTG	Podgorica	75.96	319	eP	P	09 31 49.6	+0.3
	comp=Z,142nm,0.9s						
TTG				epP	pP	09 33 37.4	+0.3
TTG	Podgorica	75.96	319	eP	P	09 31 49.6	+0.3
TTG				e*PP	pP	09 33 37.4	+0.3
TTG				pmax	pmax		
	comp=Z,142nm,0.9s						
PUK	Puka	75.98	318	i Pg	S	09 40 54.2	+3.1
PUK	Puka	75.98	318	i PG	S	09 40 54.2	+3.1
PHP	Peshkopia	76.01	317	P	P	09 31 49.9	+0.2
PHP	Peshkopia	76.01	317	i Pg	S	09 40 50.0	-1.4
PHP				i Sg	SKSac	09 41 02.5	-9.3
PHP	Peshkopia	76.01	317	i PG	S	09 40 50.0	-1.4
PHP				i SG	SKSac	09 41 02.5	-9.3
CEME	Cevo	76.02	319⇑	iP	P	09 31 49.2	-0.5
ECH	Echery	76.02	329	eP	P	09 31 49.9	+0.3
	comp=Z,48nm,0.7s						
ECH	Echery	76.02	329	eP	P	09 31 49.9	+0.3
ECH				pmax	pmax		
	comp=Z,48nm,0.7s						
GLA	Glamis	76.08	56	P	P	09 31 50.9	+0.6
	baz=318,SNR=32						
GLA	Glamis	76.08	56	eP	P	09 31 51.6	+1.3
	comp=Z,212nm,0.9s						
GLA	Glamis	76.08	56	P	P	09 31 51.5	+1.3
GLA				pmax	pmax		
	comp=Z,210nm,0.9s						
HGH	Gray Hill	76.09	337	eP	P	09 31 49.9	0.0
NVLJ	Novalja	76.13	323	P	P	09 31 49.2	-1.0
E37A	Wrenshall	76.15	34	P	P	09 31 49.8	-0.5
	baz=327,SNR=14						
WUAZ	Wupatki	76.15	52	P	P	09 31 51.0	+0.2
	baz=319,SNR=146						
WUAZ	Wupatki	76.15	52	eP	P	09 31 52.2	+1.4
	comp=Z,131nm,0.9s						
DRME	Dracevica, Mon	76.18	318⇑	iP	P	09 31 50.5	-0.1
C40A	Isle Royale Na	76.19	31	P	P	09 31 49.6	-0.9
	baz=329,SNR=23						
C40A	Isle Royale Na	76.19	31	eP	P	09 31 49.6	-0.9
	comp=Z,141nm,1.1s						
BODT	Bodrum	76.22	310	P	P	09 31 51.0	+0.1
BODT	Bodrum	76.22	310	P	S	09 40 52.0	-1.6
BUM	Brajici-Budva	76.22	319⇑	iP	P	09 31 50.3	-0.6
FUORN	Ofenpass-Fuorn	76.25	326	eP	P	09 31 52.3	+1.1
	comp=Z,134nm,0.7s						
DAVOX	Davos/Dischmat	76.26	327	P	P	09 31 51.8	+0.6
	comp=Z,33nm,0.5s,baz=37,slow=5.1,SNR=82						
DAVOX				pP	pP	09 33 40.9	+1.8
	comp=Z,27nm,0.8s,baz=18,slow=12,SNR=7.9						
DAVOX				PKKPbc	PKKPbc	09 50 58.2	+0.2
	comp=Z,1.6nm,0.5s,baz=254,slow=9.8,SNR=6.0						
FNA	Florina	76.28	316	eP	P	09 31 51.3	+0.1
	comp=Z,35nm,0.9s						
FNA	Florina	76.28	316	P	P	09 31 51.8	+0.6
FNA	Florina	76.28	316	P	S	09 40 51.8	-2.5
FNA	Florina	76.28	316	P	P	09 31 51.3	+0.1
FNA				pmax	pmax		
	comp=Z,35nm,0.9s						
HCY	Herceg Novi	76.28	319⇑	iP	P	09 31 50.3	-0.8
LIT	Litokhoron	76.29	315	eP	P	09 31 51.1	-0.1
	comp=Z,58nm,1.3s						

LIT	Litokhoron	76.29	315	P	P	09 31 50.8	-0.4
LIT	Litokhoron	76.29	315	*e*P	P	09 31 51.1	-0.1
LIT				pmax	pmax		
	comp=Z,58nm,1.3s						
OHR	Ohrid	76.29	317	*i* P	P	09 31 51.4	+0.1
OHR	Ohrid	76.29	317	P	P	09 31 51.2	-0.1
STON	Ston	76.30	320	P	P	09 31 50.1	-1.0
ULC	Ulcinj	76.33	318	⇓*i*P	P	09 31 50.7	-0.8
AOS	Alonnisos	76.33	314	P	P	09 31 51.7	+0.2
AOS	Alonnisos	76.33	314	P	P	09 31 51.7	+0.2
AOS	Alonnisos	76.33	314	P	S	09 40 54.1	-0.7
MOF	Molkenrain	76.34	329	P	P	09 31 51.4	-0.1
MVCO	Mesa Verde	76.39	49	P	P	09 31 52.6	+0.4
	baz=320,SNR=357						
MVCO	Mesa Verde	76.39	49	*e*P	P	09 31 53.2	+1.1
	comp=Z,242nm,0.7s						
IWEX	Carrickbyrne,	76.43	339	*e*P	P	09 31 51.9	+0.1
IWEX				IAmb	IAmb	09 31 52.6	
	comp=Z,60nm,0.8s						
ARG	Arkhangelos	76.43	309	P	P	09 31 52.6	+0.6
ARG	Arkhangelos	76.43	309	P	S	09 40 55.9	0.0
E38A	The Farm, Brul	76.43	33	P	P	09 31 51.5	-0.4
	baz=327,SNR=254						
E38A	The Farm, Brul	76.43	33	*e*P	P	09 31 51.6	-0.4
	comp=Z,628nm,1.3s						
HINF	Hinteralfeld	76.47	329	*e*P	P	09 31 51.1	-1.0
HINF				pmax	pmax		
	comp=Z,23nm,0.7s						
HAU	Haudompre	76.48	330	*e*P	P	09 31 51.4	-0.8
HAU				pmax	pmax		
	comp=Z,23nm,0.7s						
XOR	Xorichti	76.52	314	P	P	09 31 52.3	-0.2
XOR	Xorichti	76.52	314	P	P	09 31 52.3	-0.2
XOR	Xorichti	76.52	314	P	S	09 40 55.4	-1.4
FYTO	Fytoko, Volos	76.61	314	P	P	09 31 53.0	0.0
FYTO	Fytoko, Volos	76.61	314	P	P	09 31 53.0	0.0
FYTO	Fytoko, Volos	76.61	314	P	S	09 40 56.8	-0.9
OGNE	Ogallala	76.66	43	P	P	09 31 53.3	-0.1
	baz=322,SNR=30						
OGNE	Ogallala	76.66	43	*e*P	P	09 31 54.0	+0.6
	comp=Z,375nm,0.9s						
KBN	Korca	76.68	316	P	P	09 31 53.8	+0.3
KBN	Korca	76.68	316	P	P	09 31 53.8	+0.3
KBN	Korca	76.68	316	*i* Pg	S	09 40 54.1	-4.5
KBN				*i* Sg	SKSac	09 41 09.9	-6.9
KBN	Korca	76.68	316	*i* PG	S	09 40 54.1	-4.5
KBN				*i* SG	SKSac	09 41 09.9	-6.9
TUE	Stuetta	76.72	327	*e*P	P	09 31 54.3	+0.6
	comp=Z,57nm,0.8s						
NEST	Nestorio	76.73	316	P	P	09 31 54.0	+0.3
NEST	Nestorio	76.73	316	P	S	09 40 58.7	-0.5
Q24A	Divide	76.73	46	P	P	09 31 54.2	+0.1
	baz=321,SNR=50						
Q24A	Divide	76.73	46	*e*P	P	09 31 54.6	+0.5
	comp=Z,90nm,0.8s						
H35A	Sunnyside Ranc	76.75	36	P	P	09 31 53.3	-0.3
	baz=326,SNR=205						
F37A	Hinrichs Farm,	76.77	34	P	P	09 31 53.1	-0.6
	baz=327,SNR=53						
ECSD	EROS Data Cent	76.81	38	P	P	09 31 53.4	-0.6
	baz=325,SNR=419						
ECSD	EROS Data Cent	76.81	38	*e*P	P	09 31 54.0	-0.1
	comp=Z,239nm,0.6s						
S22A	4UR Ranch, Cre	76.83	48	P	P	09 31 54.9	+0.2
	baz=321,SNR=326						
S22A	4UR Ranch, Cre	76.83	48	*e*P	P	09 31 56.0	+1.3
	comp=Z,142nm,0.8s						
F38A	Pierce - Schro	76.85	34	P	P	09 31 54.2	0.0
	baz=327,SNR=464						
LOMF	Lomont	76.88	329	*e*P	P	09 31 54.9	+0.5
SMIA	Simia	76.89	314	P	P	09 31 54.6	0.0
SMIA	Simia	76.89	314	P	S	09 41 00.6	-0.2
THL	Klokotos Trika	76.93	315	P	P	09 31 53.5	-1.2
THL	Klokotos Trika	76.93	315	P	S	09 40 58.5	-2.6
KARY	Karystos	76.94	313	P	P	09 31 54.7	-0.1
KPRO	Kipourio	76.94	316	P	P	09 31 54.3	-0.6
KPRO	Kipourio	76.94	316	P	S	09 40 58.8	-2.6
E39A	Mellen	76.99	33	P	P	09 31 54.2	-0.7
	baz=328,SNR=425						
SPMN	Marine on St.	77.11	35	P	P	09 31 55.0	-0.7
	baz=327,SNR=84						
SPMN	Marine on St.	77.11	35	*e*P	P	09 31 55.3	-0.4
	comp=Z,205nm,1.1s						
AMGA	Amorgos Island	77.12	311	P	P	09 31 55.1	-0.8
D41A	Chassel	77.13	31	P	P	09 31 54.9	-0.8
	baz=329,SNR=66						
D41A	Chassel	77.13	31	*e*P	P	09 31 55.3	-0.4
	comp=Z,133nm,0.6s						
LKR	Lokris	77.17	314	P	P	09 31 55.3	-0.8
LKR	Lokris	77.17	314	P	S	09 41 02.0	-1.7
E40A	Wakefield	77.18	32	P	P	09 31 55.9	-0.1
	baz=328,SNR=551						
AGG	Agios Georgios	77.21	315	*e*P	P	09 31 55.8	-0.5
	comp=Z,86nm,0.9s						
AGG	Agios Georgios	77.21	315	*e*P	P	09 31 55.8	-0.5
AGG				pmax	pmax		
	comp=Z,86nm,0.9s						
PTL	Penteli	77.21	313	P	P	09 31 55.7	-0.6
PTL	Penteli	77.21	313	P	P	09 31 55.7	-0.6
H36A	Jessenland, He	77.21	36	P	P	09 31 56.1	-0.1
	baz=326,SNR=114						
F39A	Loretta	77.25	33	P	P	09 31 56.0	-0.4
	baz=328,SNR=232						
W18A	Petrified Fore	77.33	52	P	P	09 31 57.7	+0.5
	baz=320,SNR=24						
W18A	Petrified Fore	77.33	52	*e*P	P	09 31 58.5	+1.3
	comp=Z,120nm,0.8s						
KARP	Karpathos	77.44	309	P	P	09 31 57.2	-0.5
E41A	Kenton	77.50	32	P	P	09 31 56.9	-0.8
	baz=329,SNR=248						
SDCO	Great Sand Dun	77.50	47	P	P	09 31 57.9	-0.4
	baz=321,SNR=418						
SDCO	Great Sand Dun	77.50	47	*e*P	P	09 31 59.1	+0.8
	comp=Z,128nm,0.8s						
G38A	Ridgeland	77.53	34	P	P	09 31 56.9	-1.0
	baz=327,SNR=99						
EVR	Evrytania	77.54	315	P	S	09 41 04.6	-3.2
F40A	Park Falls	77.54	33	P	P	09 31 57.4	-0.6
	baz=328,SNR=233						
ANAF	Anafi Island	77.55	311	P	S	09 40 52.6	-15
SENIN	Lac Senin/Sane	77.56	328	*e*P	P	09 31 58.7	+0.4
	comp=Z,40nm,0.8s						
DSF	Desfina	77.59	314	P	P	09 31 57.2	-1.2
DSF	Desfina	77.59	314	P	P	09 31 57.2	-1.2
DSF	Desfina	77.59	314	P	S	09 40 58.4	-10
H37A	Dierke Farm, C	77.61	35	P	P	09 31 58.1	-0.2
	baz=327,SNR=47						
VAL	Valentia	77.63	341	*e*P	pP	09 33 50.7	+4.0
VAL				*i* S	S	09 41 07.8	-0.2
SRN	Sarande	77.64	317	P	P	09 31 58.7	+0.1
SRN	Sarande	77.64	317	P	S	09 41 02.7	-5.9
SRN	Sarande	77.64	317	*i* Pn	S	09 41 09.4	+0.8
SRN	Sarande	77.64	317	*i* PN	S	09 41 09.4	+0.8
I36A	Fitzsimmons Fa	77.64	36	P	P	09 31 58.0	-0.5
	baz=326,SNR=56						
LTK	Loutraki	77.67	313	P	P	09 31 57.4	-1.4
LTK	Loutraki	77.67	313	P	P	09 31 57.4	-1.4
G39A	Holcombe	77.69	34	P	P	09 31 57.9	-0.9
	baz=328,SNR=65						
LOUT	Loutraki	77.70	313	P	P	09 31 57.5	-1.5
DSL	Palaion Diasel	77.71	315	P	P	09 31 59.1	+0.1
ANX	Ano Chora	77.74	315	P	P	09 31 58.9	-0.4
ANX	Ano Chora	77.74	315	P	S	09 41 02.0	-7.9
SGD	Sagiada	77.74	316	P	P	09 31 59.3	+0.2
SGD	Sagiada	77.74	316	P	S	09 41 08.9	-0.8
COWI	Conover	77.75	32	*e*P	P	09 31 58.4	-0.7
	comp=Z,106nm,1.1s						
IGT	Igoumenitsa	77.76	316	P	P	09 31 59.3	0.0
IGT	Igoumenitsa	77.76	316	P	S	09 41 03.7	-6.2
CABF	La Chapelle	77.77	329	*e*P	P	09 31 58.7	-0.6
CABF				pmax	pmax		
	comp=Z,15nm,0.8s						
H38A	Maiden Rock	77.78	35	P	P	09 31 58.3	-0.9
	baz=327,SNR=54						
KALE	Kalithea	77.79	314	P	S	09 41 02.2	-8.2
THAL	Thalero	77.81	314	P	P	09 31 58.6	-1.0
SERG	Sergoula	77.82	314	P	P	09 31 58.8	-0.8
SERG	Sergoula	77.82	314	P	S	09 41 07.0	-3.6
TRIZ	Trizonia	77.85	314	P	P	09 31 58.8	-0.9
TRIZ	Trizonia	77.85	314	P	S	09 41 04.1	-6.7
KEK	Kerkira	77.87	317	P	P	09 31 59.8	0.0
KEK	Kerkira	77.87	317	P	S	09 41 04.6	-6.4
EFP	Efpalio	77.88	314	P	P	09 31 59.6	-0.3
EFP	Efpalio	77.88	314	P	S	09 41 08.4	-2.8
I37A	Lemond, Waseca	77.89	36	P	P	09 31 59.5	-0.4
	baz=327,SNR=136						
I37A	Lemond, Waseca	77.89	36	*e*P	P	09 31 59.9	+0.1
	comp=Z,487nm,0.8s						
E42A	Champion	77.90	31	P	P	09 31 59.0	-0.9
	baz=330,SNR=58						
KSCO	Kaye Shedlock’	77.91	45	P	P	09 31 60.0	-0.3
	baz=322,SNR=38						
KSCO	Kaye Shedlock’	77.91	45	*e*P	P	09 32 00.6	+0.3
	comp=Z,483nm,1.6s						
PVO	Paravola	77.91	315	P	S	09 41 09.3	-2.2
TRAZ	Trapeza	77.93	314	P	P	09 31 58.2	-2.1
TRAZ	Trapeza	77.93	314	P	S	09 41 04.1	-7.8
DID	Didima	77.94	313	P	P	09 31 58.0	-2.3
DID	Didima	77.94	313	P	P	09 31 58.0	-2.3
LAKA	Lakka	77.99	314	P	P	09 32 00.1	-0.5
LAKA	Lakka	77.99	314	P	S	09 41 09.1	-3.3
FLN	La Foliniere	78.02	334	*e*P	P	09 31 59.6	-0.8
FLN				pmax	pmax		
	comp=Z,40nm,0.5s						
214A	Organ Pipe Nat	78.03	56	P	P	09 32 00.4	-0.5
	baz=319,SNR=122						
BGNE	Belgrade	78.05	40	P	P	09 32 00.5	-0.3
	baz=324,SNR=76						
BGNE	Belgrade	78.05	40	*e*P	P	09 32 01.2	+0.4
	comp=Z,497nm,0.8s						
UPR	University Cam	78.05	314	P	P	09 32 01.8	+1.0
UPR	University Cam	78.05	314	P	S	09 41 11.8	-1.2
GUR	Goura	78.05	314	P	P	09 31 59.6	-1.4
GUR	Goura	78.05	314	P	S	09 41 09.4	-3.8
LDF	La Druitiere	78.06	334	*e*P	P	09 32 00.4	-0.3
LDF				pmax	pmax		
	comp=Z,27nm,0.6s						
KLV	Kalavryta, Ach	78.06	314	P	P	09 31 59.8	-1.2
KLV	Kalavryta, Ach	78.06	314	P	S	09 41 06.9	-6.3
G40A	Rib Lake	78.07	33	P	P	09 32 00.3	-0.5
	baz=328,SNR=253						
G40A	Rib Lake	78.07	33	*e*P	P	09 32 00.7	-0.2
	comp=Z,324nm,0.8s						
F41A	Three Lakes	78.07	32	P	P	09 32 00.3	-0.5
	baz=329,SNR=151						
F41A	Three Lakes	78.07	32	*e*P	P	09 32 00.6	-0.3
	comp=Z,172nm,0.7s						
J36A	Seneca 1, Swea	78.08	37	P	P	09 32 00.1	-0.9
	baz=326,SNR=22						
J36A	Seneca 1, Swea	78.08	37	*e*P	P	09 32 00.7	-0.2
	comp=Z,121nm,0.7s						
PDO	Prodromos	78.09	315	P	P	09 32 00.6	-0.5
PDO	Prodromos	78.09	315	P	S	09 41 04.2	-9.2
JRS	Jersey	78.10	335	⇓*e*P	P	09 32 01.1	+0.3
JSA	Saint Aubin	78.12	335	⇓*e*P	P	09 32 01.1	+0.1
JSA				IAmb	IAmb	09 32 01.7	
	comp=Z,115nm,0.6s						
H39A	Augusta	78.16	34	P	P	09 32 00.5	-0.8
	baz=328,SNR=58						
LKD2	Lefkada island	78.19	315	P	P	09 32 01.4	-0.2
LKD2	Lefkada island	78.19	315	P	S	09 41 11.2	-3.3
ARMA	Armidale	78.26	169	*e*P	P	09 32 02.9	+0.9
	comp=Z,221nm,0.9s						
SSF	Saint Saulge	78.26	331	*e*P	P	09 32 01.1	-0.7
SSF				pmax	pmax		
	comp=Z,40nm,0.7s						
E43A	Lone Tree Farm	78.27	31	P	P	09 32 00.9	-0.9
	baz=330,SNR=42						
E43A	Lone Tree Farm	78.27	31	*e*P	P	09 32 01.3	-0.6
	comp=Z,149nm,0.9s						
VLC	Villacollemand	78.27	325	*e*P	P	09 32 02.7	+0.8
	comp=Z,90nm,0.9s						
VLC				*e*pP	pP	09 33 52.5	+1.9
I38A	Scanlan Farm,	78.29	35	P	P	09 32 00.9	-1.1
	baz=327,SNR=22						
DRO	Drossia	78.35	314	P	P	09 32 02.4	-0.1
DRO	Drossia	78.35	314	P	S	09 41 07.3	-8.9
RLS	Riolos of Patr	78.38	314	P	P	09 32 02.5	-0.1
RLS	Riolos of Patr	78.38	314	P	S	09 41 07.1	-9.3
F42A	Maple Grove Fa	78.40	32	P	P	09 32 01.5	-1.1
	baz=330,SNR=12						
TRIP	Tripoli	78.41	314	P	P	09 32 02.5	-0.4
TRIP	Tripoli	78.41	314	P	S	09 41 09.8	-7.1
J37A	Redenius Farm,	78.42	36	P	P	09 32 01.7	-1.0
	baz=327,SNR=118						
E44A	Grand Marais A	78.42	30	P	P	09 32 01.6	-1.1
	baz=331,SNR=28						
E44A	Grand Marais A	78.42	30	*e*P	P	09 32 02.3	-0.3
	comp=Z,226nm,0.8s						
FORT	Forrest	78.44	190	*e*P	P	09 32 03.0	+0.2
	comp=Z,883nm,0.6s						
GRR	Gorron	78.46	334	*e*P	P	09 32 02.2	-0.6
GRR				pmax	pmax		
	comp=Z,76nm,0.7s						
VLX	Vlachokerasia	78.48	313	P	P	09 32 02.2	-1.1
VLX	Vlachokerasia	78.48	313	P	S	09 41 13.1	-4.6
LPL	La Plagne	78.49	328	*e*P	P	09 32 03.1	-0.2
LPL				pmax	pmax		
	comp=Z,58nm,0.7s						
G41A	Antigo	78.49	33	P	P	09 32 02.1	-1.0
	baz=329,SNR=78						
LPG	La Plagne	78.50	328	*e*P	P	09 32 03.3	-0.2
LPG				pmax	pmax		
	comp=Z,57nm,0.6s						
FSK	Fiskardo	78.50	315	P	P	09 32 02.5	-0.7
FSK	Fiskardo	78.50	315	P	S	09 41 09.3	-8.4
SMF	Signal de Mont	78.52	330	*e*P	P	09 32 02.6	-0.6
SMF				pmax	pmax		
	comp=Z,80nm,0.7s						
T25A	Trinidad	78.52	47	P	P	09 32 03.0	-0.6
	baz=322,SNR=274						
T25A	Trinidad	78.52	47	*e*P	P	09 32 04.2	+0.5
	comp=Z,206nm,0.8s						
MATE	Matera	78.53	319	⇓*i*P	P	09 32 02.9	-0.4
H40A	Chili	78.55	34	P	P	09 32 02.8	-0.6
	baz=328,SNR=92						
AVF	Avril sur Loir	78.55	331	*e*P	P	09 32 02.8	-0.6
AVF				pmax	pmax		
	comp=Z,85nm,0.8s						
AQU	L’Aquila	78.56	322	*e*P	P	09 32 04.8	+1.2
	comp=Z,106nm,0.8s						
AQU				*e*pP	pP	09 33 53.4	+1.1
AQU	L’Aquila	78.56	322	*e*P	P	09 32 04.8	+1.2
AQU				*e**PP	pP	09 33 53.4	+1.1
AQU				pmax	pmax		
	comp=Z,106nm,0.8s						
K36A	Gilmore City	78.61	37	P	P	09 32 02.6	-1.1
	baz=326,SNR=25						
LAST	Lasithi	78.62	310	P	P	09 32 03.7	-0.4
LAST	Lasithi	78.62	310	P	S	09 41 17.3	-1.9
KFL	Anninata	78.67	315	P	P	09 32 04.1	-0.1
KFL	Anninata	78.67	315	P	S	09 41 12.2	-7.3
AMT	Artemida-Makis	78.68	314	P	P	09 32 03.8	-0.5
AMT	Artemida-Makis	78.68	314	P	S	09 41 16.3	-3.3
F43A	Flat Rock, Esc	78.68	31	P	P	09 32 02.7	-1.3
	baz=330,SNR=47						
VLI	Veliai	78.71	313	P	S	09 41 13.8	-6.1
VLS	Valsamata	78.71	315	P	S	09 41 11.6	-8.3
G42A	Mountain	78.74	32	P	P	09 32 03.5	-0.9
	baz=329,SNR=73						
G42A	Mountain	78.74	32	*e*P	P	09 32 04.0	-0.4
	comp=Z,156nm,1.0s						
I39A	Houston	78.76	35	P	P	09 32 03.4	-1.2
	baz=328,SNR=37						
I39A	Houston	78.76	35	*e*P	P	09 32 04.0	-0.5
	comp=Z,297nm,0.6s						
F44A	Big Bay de Noc	78.81	30	P	P	09 32 04.0	-0.8
	baz=330,SNR=106						
H41A	Junction City	78.83	33	P	P	09 32 03.9	-1.0
	baz=329,SNR=54						
H41A	Junction City	78.83	33	*e*P	P	09 32 04.5	-0.4
	comp=Z,140nm,0.8s						
IDI	Anoyia	78.83	311	P	P	09 32 04.1	-1.0
	comp=Z,26nm,0.4s,baz=72,slow=6.4,SNR=45						
IDI	Anoyia	78.83	311	*e*P	P	09 32 04.3	-0.9
	comp=Z,244nm,1.8s						
K37A	Belmond	78.83	37	P	P	09 32 03.8	-1.1
	baz=327,SNR=99						
J38A	Wedel Dairy, R	78.84	36	P	P	09 32 03.7	-1.3
	baz=327,SNR=43						
ITM	Ithomi	78.85	314	*e*P	P	09 32 04.8	-0.4
	comp=Z,162nm,0.8s						
ITM				*e*S	S	09 41 20.4	-1.0
ITM	Ithomi	78.85	314	P	P	09 32 04.4	-0.8
ITM	Ithomi	78.85	314	P	S	09 41 10.1	-11
TUC	Tucson	78.89	54	P	P	09 32 05.6	0.0
	baz=320						
TUC	Tucson	78.89	54	*e*P	P	09 32 06.9	+1.3
	comp=Z,108nm,1.1s						
TUC	Tucson	78.89	54	*e*P	P	09 32 06.9	+1.3
TUC				pmax	pmax		
	comp=Z,108nm,1.1s						
E45A	Wooded Hills,	78.90	30	P	P	09 32 04.0	-1.3
	baz=331,SNR=36						
BNI	Bardonecchia	78.91	328	*e*P	P	09 32 06.1	+0.6
	comp=Z,38nm,0.8s						
BGF	Bois d’Agland	78.92	331	*e*P	P	09 32 05.4	0.0
BGF				pmax	pmax		
	comp=Z,26nm,0.6s						
STKA	Stephens Creek	78.93	178	P	P	09 32 05.6	+0.2
	comp=Z,110nm,0.6s,baz=338,slow=6.8,SNR=220						
STKA	Stephens Creek	78.93	178	*e*P	P	09 32 05.8	+0.4
	comp=Z,26nm,0.7s						
STKA	Stephens Creek	78.93	178	*e*P	P	09 32 05.8	+0.4
STKA				pmax	pmax		
	comp=Z,26nm,0.7s						
L36A	Harm Buss Farm	78.97	38	P	P	09 32 04.9	-0.8
	baz=326,SNR=31						
DYR	Agios Nikonas	78.97	313	P	S	09 41 14.7	-8.0
G43A	Wallace	78.99	32	P	P	09 32 04.9	-0.8
	baz=330,SNR=77						
G43A	Wallace	78.99	32	*e*P	P	09 32 05.4	-0.3
	comp=Z,153nm,0.8s						
I40A	Norwalk	79.08	34	P	P	09 32 05.6	-0.6
	baz=328,SNR=58						
SIVA	Sivas	79.08	310	P	P	09 32 06.7	+0.3
VAM	Vamos	79.09	311	P	P	09 32 06.5	0.0
VAM	Vamos	79.09	311	P	P	09 32 06.5	0.0
J39A	Decorah	79.13	35	P	P	09 32 05.1	-1.4
	baz=328,SNR=81						
IMMV	Iera Moni Meta	79.16	311	P	P	09 32 06.9	+0.1
IMMV	Iera Moni Meta	79.16	311	P	S	09 41 22.3	-2.4
PYL	PYLOS	79.16	314	P	P	09 32 05.6	-1.2
PYL	PYLOS	79.16	314	P	S	09 41 16.7	-7.9
TASM	ASL Pad, Albuq	79.18	50	P	P	09 32 07.9	+0.7
	baz=321,SNR=181						
ANMO	Albuquerque	79.19	50	P	P	09 32 08.4	+1.2
	comp=Z,71nm,0.9s,baz=320,slow=6.6,SNR=274						
ANMO				PKKPbc	PKKPbc	09 50 52.4	+0.9
	comp=Z,2.3nm,0.8s,baz=156,slow=9.9,SNR=10						
ANMO	Albuquerque	79.19	50	P	P	09 32 07.2	-0.1
	baz=321						
ANMO	Albuquerque	79.19	50	*e*P	P	09 32 08.7	+1.5
	comp=Z,142nm,1.1s						
ANMO				PKKPbc	PKKPbc	09 50 52.4	+0.9
ANMO	Albuquerque	79.19	50	*c* *i*P	P	09 32 08.2	+1.0
ANMO				pmax	pmax		
	comp=Z,142nm,1.2s						
TASL	Snake Pit, Alb	79.19	50	P	P	09 32 07.8	+0.6
	baz=321,SNR=171						
ANKY	Antikythira Is	79.19	312	P	P	09 32 06.1	-0.9
ROSF	Rostrenen	79.21	336	*e*P	P	09 32 06.6	-0.2
ROSF				pmax	pmax		
	comp=Z,91nm,0.8s						
I41A	Arkdale	79.22	34	P	P	09 32 06.5	-0.5
	baz=329,SNR=50						
I41A	Arkdale	79.22	34	*e*P	P	09 32 06.8	-0.2
	comp=Z,220nm,1.1s						
LAZ	Ladron	79.25	50	*e*P	P	09 32 09.4	+1.9
K38A	Parkersburg	79.29	36	P	P	09 32 06.3	-1.0
	baz=327,SNR=44						
K38A	Parkersburg	79.29	36	*e*P	P	09 32 07.0	-0.4
	comp=Z,144nm,1.0s						
ORIF	Oris-en-Rattie	79.31	328	*e*P	P	09 32 07.2	-0.4
ORIF				pmax	pmax		
	comp=Z,46nm,0.7s						
L37A	Phoenix Point,	79.32	37	P	P	09 32 06.3	-1.2
	baz=327,SNR=20						
H42A	Shiocton	79.33	33	P	P	09 32 06.9	-0.7
	baz=329,SNR=78						
H42A	Shiocton	79.33	33	*e*P	P	09 32 07.6	0.0
	comp=Z,183nm,0.9s						
TCF	Toulx Ste Croi	79.37	331	*e*P	P	09 32 07.3	-0.5
TCF				pmax	pmax		
	comp=Z,33nm,0.8s						
F45A	CMU Biological	79.38	30	P	P	09 32 06.6	-1.2
	baz=331,SNR=48						
CBKS	Cedar Bluff	79.42	43	P	P	09 32 07.4	-0.8
	baz=324,SNR=34						
CBKS	Cedar Bluff	79.42	43	*e*P	P	09 32 08.1	-0.2
	comp=Z,224nm,0.7s						
CBKS	Cedar Bluff	79.42	43	*e*P	P	09 32 08.1	-0.2
CBKS				pmax	pmax		
	comp=Z,224nm,0.7s						
M36A	Felix, Anita	79.45	38	P	P	09 32 07.4	-0.9
	baz=326,SNR=14						
J40A	Soldiers Grove	79.45	35	P	P	09 32 07.0	-1.3
	baz=328,SNR=38						
CUC	Castrocucco	79.46	319	*e*P	P	09 32 07.9	-0.5
	comp=Z,36nm,1.0s						
CUC				*e*pP	pP	09 33 57.3	-0.1
SSB	Saint Sauveur	79.47	329	*e*P	P	09 32 08.9	+0.6
	comp=Z,27nm,0.7s						
SSB				*e*pP	pP	09 33 58.0	+0.7
SSB	Saint Sauveur	79.47	329	P	P	09 32 08.3	0.0
SSB				pmax	pmax		
	comp=Z,27nm,0.7s						
LENM	Lemitar	79.52	50	*e*P	P	09 32 10.4	+1.4
F46A	Macinaw City C	79.56	30	P	P	09 32 07.9	-0.8
	baz=332,SNR=129						
QUIF	Quistinic	79.56	335	*e*P	P	09 32 08.1	-0.6
QUIF				pmax	pmax		
	comp=Z,25nm,0.5s						
LPM	Los Pinos Moun	79.59	50	*e*P	P	09 32 10.8	+1.5
K39A	Oelwein	79.59	36	P	P	09 32 07.6	-1.4
	baz=328,SNR=124						
Y22E	IRIS PASSCAL I	79.62	50	P	P	09 32 10.4	+0.9
	baz=321						
Y22D	IRIS PASSCAL I	79.62	50	P	P	09 32 09.6	+0.1
	baz=321						
L38A	Oak Wood Farm,	79.63	37	P	P	09 32 08.6	-0.6
	baz=327,SNR=36						
H43A	Windswept, Lux	79.64	32	P	P	09 32 08.1	-1.1
	baz=330,SNR=50						
H43A	Windswept, Lux	79.64	32	*e*P	P	09 32 09.4	+0.2
	comp=Z,192nm,0.7s						
SBF	Sospel	79.65	327	*e*P	P	09 32 08.4	-0.9
SBF				pmax	pmax		
	comp=Z,60nm,0.8s						
TIP	Timpagrande	79.70	318	⇑*i*P	P	09 32 09.8	+0.1
TIP	Timpagrande	79.70	318	⇓*i*P	S	09 41 25.0	-5.2
TIP	Timpagrande	79.70	318	*e*P	P	09 32 10.2	+0.5
	comp=Z,54nm,1.0s						
TIP	Timpagrande	79.70	318	P	P	09 32 09.7	+0.1
BNM	Barren Site	79.71	50	*e*P	P	09 32 11.8	+1.7
I42A	Draeger Farm,	79.72	33	P	P	09 32 09.3	-0.4
	baz=329,SNR=128						
I42A	Draeger Farm,	79.72	33	*e*P	P	09 32 09.6	0.0
	comp=Z,247nm,0.9s						
SCIA	State Center	79.73	37	P	P	09 32 09.4	-0.3
	baz=327,SNR=21						
SCIA	State Center	79.73	37	*e*P	P	09 32 10.2	+0.5
	comp=Z,270nm,1.0s						
J41A	Loganville	79.76	34	P	P	09 32 08.9	-0.9
	baz=329,SNR=61						
VIVF	Saint-Julien-l	79.79	329	*e*P	P	09 32 09.7	-0.3
VIVF				pmax	pmax		
	comp=Z,22nm,0.7s						
M37A	Trindle Farm,	79.80	38	P	P	09 32 09.4	-0.7
	baz=327,SNR=77						
BBOO	Buckleboo	79.88	183	*e*P	P	09 32 10.6	+0.2
	comp=Z,170nm,0.8s						
K40A	Colesburg	79.89	35	P	P	09 32 09.4	-1.1
	baz=328,SNR=28						
N36A	Muff Farm, Cla	79.91	39	P	P	09 32 10.4	-0.3
	baz=326,SNR=45						
I43A	Langenfeld Bro	80.01	33	P	P	09 32 10.4	-0.8
	baz=330,SNR=50						
L39A	Vinton	80.03	36	P	P	09 32 10.3	-1.0
	baz=328,SNR=76						
DGAR	Diego Garcia	80.05	248	*e*P	P	09 32 11.6	-0.1
	comp=Z,368nm,1.3s						
DGAR	Diego Garcia	80.05	248	*d* *i*P	P	09 32 11.6	-0.1
JFWS	Jewell Farm	80.05	34	P	P	09 32 10.2	-1.1
	baz=328,SNR=43						
JFWS	Jewell Farm	80.05	34	*e*P	P	09 32 10.9	-0.5
	comp=Z,78nm,0.6s						
JFWS	Jewell Farm	80.05	34	*e*P	P	09 32 10.9	-0.5
JFWS				pmax	pmax		
	comp=Z,78nm,0.6s						
J42A	Columbus	80.14	34	P	P	09 32 11.1	-0.7
	baz=329,SNR=88						
M38A	Pleasantville	80.14	37	P	P	09 32 11.4	-0.5
	baz=327,SNR=24						
PGF	Pioggiola	80.17	325	*e*P	P	09 32 11.2	-1.0

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PGF                                     pmax     pmax
      comp=Z,16nm,0.7s
N37A  Lee Faris, Mou     80.27  38   P      P         09 32 12.1 -0.5
      baz=327,SNR=109
N37A  Lee Faris, Mou     80.27  38  eP      P         09 32 12.8 +0.2
      comp=Z,452nm,0.6s
K41A  Shullsburg         80.29  35   P      P         09 32 11.8 -0.9
      baz=328,SNR=36
J43A  Natural Harves     80.34  33   P      P         09 32 12.3 -0.6
      baz=330,SNR=68
121A  Cookes Peak, D     80.35  52   P      P         09 32 13.1 -0.3
      baz=321,SNR=188
L40A  Anamosa            80.40  36   P      P         09 32 11.9 -1.3
      baz=328,SNR=100
L40A  Anamosa            80.40  36  eP      P         09 32 12.4 -0.8
      comp=Z,183nm,0.8s
GLMI  Grayling           80.44  30   P      P         09 32 12.8 -0.6
      baz=332,SNR=42
GLMI  Grayling           80.44  30  eP      P         09 32 13.2 -0.2
      comp=Z,279nm,0.8s
RJF   Les Rejaudoux      80.47 331  eP      P         09 32 13.2 -0.3
RJF                                  pmax   pmax
      comp=Z,28nm,0.8s
M39A  Webster            80.51  36   P      P         09 32 13.1 -0.7
      baz=328,SNR=98
K42A  Prairie Point,     80.51  34   P      P         09 32 12.6 -1.1
      baz=329,SNR=83
LHI   Lord Howe Isla     80.57 163  eP      P         09 32 15.3 +1.4
      comp=Z,198nm,0.9s
KSU1  Kansas State U     80.61  41   P      P         09 32 13.5 -0.9
      baz=325,SNR=77
KSU1  Kansas State U     80.61  41  eP      P         09 32 14.1 -0.3
      comp=Z,140nm,0.8s
CAF   Calviac            80.62 331  eP      P         09 32 14.6 +0.2
CAF                                  pmax   pmax
      comp=Z,42nm,0.8s
N38A  Joes South For     80.65  38   P      P         09 32 14.0 -0.6
      baz=327,SNR=82
L41A  Preston            80.67  35   P      P         09 32 13.6 -1.0
      baz=328,SNR=88
O37A  Wolven Farm, M     80.79  38   P      P         09 32 14.7 -0.6
      baz=327,SNR=61
CEL   Celeste            80.84 318  eP      P         09 32 16.1 +0.4
      comp=Z,120nm,1.0s
CEL                                 epP     pP        09 34 05.5 +0.3
M40A  Post Highland      80.84  36   P      P         09 32 14.5 -1.0
      baz=328,SNR=99
N39A  Derby Farms, D     80.88  37   P      P         09 32 15.2 -0.5
      baz=328,SNR=198
N39A  Derby Farms, D     80.88  37  eP      P         09 32 15.6 -0.1
      comp=Z,410nm,0.8s
K43A  Burlington         80.96  33   P      P         09 32 15.1 -1.0
      baz=330,SNR=32
K43A  Burlington         80.96  33  eP      P         09 32 15.7 -0.4
      comp=Z,172nm,0.8s
L42A  Oliver, Polo       81.05  35   P      P         09 32 15.4 -1.2
      baz=329,SNR=60
L42A  Oliver, Polo       81.05  35  eP      P         09 32 15.7 -0.9
      comp=Z,153nm,0.8s
O38A  Galt               81.11  38   P      P         09 32 16.7 -0.2
      baz=327,SNR=43
P37A  Lathrop            81.19  39   P      P         09 32 16.8 -0.5
      baz=327,SNR=78
M41A  Milan              81.25  35   P      P         09 32 16.6 -1.0
      baz=328,SNR=115
N40A  Mertquake, Sal     81.25  36   P      P         09 32 17.0 -0.6
      baz=328,SNR=83
L43A  Garden Prairie     81.25  34   P      P         09 32 16.5 -1.1
      baz=330,SNR=24
HSIG                     81.30  56  eP      P         09 32 18.8 +0.6
      comp=Z,118nm,1.1s
O39A  Kirksville         81.39  37   P      P         09 32 18.0 -0.4
      baz=328,SNR=21
M42A  Sheffield          81.49  35   P      P         09 32 17.8 -1.1
      baz=329,SNR=52
P38A  Dawn               81.50  38   P      P         09 32 18.5 -0.5
      baz=327,SNR=89
P38A  Dawn               81.50  38  eP      P         09 32 19.5 +0.5
      comp=Z,275nm,0.8s
L44A  Lake County Fo     81.57  33   P      P         09 32 18.7 -0.6
      baz=330,SNR=30
AMTX  Amarillo           81.65  47   P      P         09 32 20.0 +0.1
      baz=323
AMTX  Amarillo           81.65  47  eP      P         09 32 20.7 +0.8
      comp=Z,274nm,1.0s
N41A  Harden Midland     81.69  36   P      P         09 32 19.2 -0.8
      baz=328,SNR=78
N41A  Harden Midland     81.69  36  eP      P         09 32 19.6 -0.3
      comp=Z,546nm,1.3s
Q37A  Longview Farm,     81.74  39   P      P         09 32 19.6 -0.6
      baz=327,SNR=45
O40A  La Belle           81.78  37   P      P         09 32 19.9 -0.4
      baz=328,SNR=247
M43A  Waltham Townsh     81.81  34   P      P         09 32 19.8 -0.7
      baz=329,SNR=104
MSTX  Muleshoe           81.83  48   P      P         09 32 20.4 -0.6
      baz=323
SRIG  Santa Rosalia      81.85  58  eP      P         09 32 20.7 -0.3
      comp=Z,79nm,1.0s
N42A  Yates City         81.91  35   P      P         09 32 20.3 -0.8
      baz=329,SNR=71
P39B  Salisbury          81.95  38   P      P         09 32 20.7 -0.5
      baz=327,SNR=73
Q38A  Cooks Store, C     82.02  39   P      P         09 32 21.0 -0.6
      baz=327,SNR=116
VAE   Valguarnera        82.14 319   P      P         09 32 21.8 -0.6
      comp=Z,4.9nm,0.4s,baz=110,slow=9.5,SNR=3.8
N43A  Stutzman Famil     82.16  35   P      P         09 32 21.8 -0.5
      baz=329,SNR=223
O41A  Passleys Farm,     82.18  36   P      P         09 32 21.7 -0.7
      baz=328,SNR=133
M44A  Midewin, Midew     82.20  34   P      P         09 32 22.0 -0.5
      baz=330,SNR=87
M44A  Midewin, Midew     82.20  34  eP      P         09 32 22.2 -0.3
      comp=Z,368nm,1.0s
M44A                                epP     pP        09 34 14.0 +1.5
P40A  Paris              82.20  37   P      P         09 32 22.1 -0.4
      baz=328,SNR=212
P40A  Paris              82.20  37  eP      P         09 32 22.8 +0.2
      comp=Z,309nm,0.8s
TRQ   Mont Tremblant     82.21  23  eP      P         09 32 22.5 -0.1
Q39A  Willow Grove F     82.22  38   P      P         09 32 22.2 -0.4
      baz=327,SNR=59
SADO  Sadowa             82.24  26  eP      P         09 32 21.9 -0.8
      comp=Z,63nm,1.0s
MNTX  Cornudas Mount     82.28  51   P      P         09 32 23.2 +0.1
      baz=322,SNR=232
MNTX  Cornudas Mount     82.28  51  eP      P         09 32 24.3 +1.2
      comp=Z,301nm,1.5s
NWAO  Narrogin (SRO)     82.34 198   P      P         09 32 23.1 +0.1
      comp=Z,338nm,0.7s,baz=243,slow=5.9,SNR=212
NWAO  Narrogin (SRO)     82.34 198  eP      P         09 32 23.1 +0.1
      comp=Z,461nm,0.8s
NWAO  Narrogin (SRO)     82.34 198   P      P         09 32 22.9 -0.1
      SNR=16
NWAO  Narrogin (SRO)     82.34 198  eP      P         09 32 23.1 +0.1
NWAO                                 pmax   pmax
      comp=Z,461nm,0.8s
GDL2  Guadalupe Moun     82.42  50  eP      P         09 32 25.3 +1.3
O42A  Bath               82.44  36   P      P         09 32 23.1 -0.6
      baz=329,SNR=35
P41A  Barry, Barry       82.48  37   P      P         09 32 23.5 -0.5
      baz=328,SNR=134
M45A  Boilermakers S     82.50  33   P      P         09 32 23.5 -0.5
      baz=330,SNR=14
R38A  Fenwick Farm,      82.55  39   P      P         09 32 23.3 -1.0
      baz=327,SNR=164
DAMY  Dhamar             82.58 283  epP     pP        09 34 17.1 +1.7
      comp=Z,52nm,1.0s
PLVO  Plevna             82.61  25  eP      P         09 32 23.9 -0.6
      comp=Z,173nm,0.7s
CLNB  Carlsbad           82.62  50  eP      P         09 32 26.0 +1.1
Q40A  Laux Farm, Aux     82.64  38   P      P         09 32 24.4 -0.4
      baz=328,SNR=143
O43A  Sugar Creek Fa     82.66  35   P      P         09 32 24.0 -0.8
      baz=329,SNR=45
N44A  Piper City         82.68  34   P      P         09 32 24.4 -0.6
      baz=330,SNR=88
L47A  Sherwood           82.74  32   P      P         09 32 24.9 -0.3
      baz=332
CAN   Canberra           82.81 172  eP      P         09 32 26.4 +1.0
      comp=Z,273nm,1.0s
CAN   Canberra           82.81 172  eP      P         09 32 26.4 +1.0
CAN                                  pmax   pmax
      comp=Z,273nm,1.0s
R39A  Chumby, Stover     82.81  39   P      P         09 32 24.9 -0.7
      baz=327,SNR=272
M46A  Old House Fiel     82.82  33   P      P         09 32 25.3 -0.3
      baz=331,SNR=32
M46A  Old House Fiel     82.82  33  eP      P         09 32 25.8 +0.2
      comp=Z,351nm,1.1s
P42A  Winchester         82.85  36   P      P         09 32 25.2 -0.6
      baz=329,SNR=101
P42A  Winchester         82.85  36  eP      P         09 32 25.6 -0.3
      comp=Z,224nm,0.8s
N45A  Kentland           82.87  34   P      P         09 32 25.3 -0.6
      baz=330,SNR=63
EPF   Esparros           82.88 331  eP      P         09 32 25.5 -0.5
EPF                                  pmax   pmax
      comp=Z,25nm,0.6s
AAM   Ann Arbor          82.99  31   P      P         09 32 26.3 -0.2
      baz=332,SNR=25
AAM   Ann Arbor          82.99  31  eP      P         09 32 26.7 +0.2
      comp=Z,144nm,0.8s
AAM   Ann Arbor          82.99  31  eP      P         09 32 26.7 +0.2
AAM                                  pmax   pmax
      comp=Z,144nm,0.8s
S38A  Stockton           83.01  40   P      P         09 32 25.7 -1.0
      baz=327,SNR=88
Q41A  Truxton            83.03  37   P      P         09 32 26.5 -0.2
      baz=328,SNR=282
L48A  N Adams            83.04  31   P      P         09 32 26.4 -0.4
      baz=332,SNR=96
O44A  Mansfield          83.11  35   P      P         09 32 26.7 -0.3
      baz=330,SNR=63
N46A  Monticello         83.12  33   P      P         09 32 26.5 -0.6
      baz=331,SNR=35
L49A  Milan              83.12  31   P      P         09 32 27.0 -0.1
      baz=332,SNR=40
P43A  Skaggs, Pawnee     83.13  36   P      P         09 32 26.7 -0.5
      baz=329,SNR=58
R40A  Maddies Statio     83.16  38   P      P         09 32 27.0 -0.4
      baz=328,SNR=205
R40A  Maddies Statio     83.16  38  eP      P         09 32 27.3 -0.1
      comp=Z,170nm,0.6s
WMOK  Wichita Mounta     83.17  45   P      P         09 32 27.3 -0.2
      baz=325,SNR=228
WMOK  Wichita Mounta     83.17  45  eP      P         09 32 28.1 +0.5
      comp=Z,181nm,1.0s
WMOK  Wichita Mounta     83.17  45  eP      P         09 32 28.1 +0.5
WMOK                                 pmax   pmax
      comp=Z,181nm,1.0s
S39A  Bolivar            83.21  39   P      P         09 32 26.8 -0.8
      baz=327,SNR=195
S39A  Bolivar            83.21  39  eP      P         09 32 27.2 -0.5
      comp=Z,194nm,0.8s
O45A  Potomac            83.31  34   P      P         09 32 27.8 -0.3
      baz=330,SNR=269
T38A  Diamond            83.34  40   P      P         09 32 27.7 -0.7
      baz=327,SNR=134
M48A  Edgerton           83.34  32   P      P         09 32 27.9 -0.4
      baz=332,SNR=31
Q42A  Golden Eagle       83.35  37   P      P         09 32 28.1 -0.2
      baz=329,SNR=100
PQI   Presque Isle       83.36  18  eP      P         09 32 28.0 -0.2
      comp=Z,113nm,1.0s
SFIN  Lafayette          83.43  34   P      P         09 32 28.3 -0.5
      baz=330,SNR=55
SFIN  Lafayette          83.43  34  eP      P         09 32 28.7  0.0
      comp=Z,199nm,0.6s
WDD   Wied Dalam         83.45 318  eP      P         09 32 29.6 +0.8
      comp=Z,100nm,0.8s
WDD                                 epP     pP        09 34 20.2 +0.9
R41A  Rosebud            83.52  38   P      P         09 32 28.7 -0.5
      baz=328,SNR=152
TUL1  Leonard            83.60  42   P      P         09 32 29.7  0.0
      baz=326,SNR=156
TUL1  Leonard            83.60  42  eP      P         09 32 30.4 +0.8
      comp=Z,259nm,0.8s
M49A  Liberty Center     83.61  31   P      P         09 32 29.1 -0.4
      baz=332,SNR=38
P44A  Sand Creek, Wi     83.64  35   P      P         09 32 29.2 -0.5
      baz=330,SNR=91
S40A  Lebanon            83.64  39   P      P         09 32 29.4 -0.4
      baz=328,SNR=222
Q43A  New Douglas        83.66  36   P      P         09 32 29.3 -0.6
      baz=329,SNR=36
LONY  Lake Ozonia        83.69  24   P      P         09 32 29.0 -0.9
      baz=338,SNR=25
LONY  Lake Ozonia        83.69  24  eP      P         09 32 29.6 -0.4
      comp=Z,63nm,1.1s
SLM   Saint Louis        83.70  37  eP      P         09 32 30.0 -0.1
      comp=Z,232nm,0.9s
SLM   Saint Louis        83.70  37  eP      P         09 32 30.0 -0.1
SLM                                  pmax   pmax
      comp=Z,232nm,0.9s
T39A  Clever             83.75  40   P      P         09 32 29.6 -0.7
      baz=327,SNR=75
FRNY  Flat Rock          83.75  23  eP      P         09 32 29.6 -0.6
      comp=Z,33nm,0.8s
R42A  Luebbering         83.78  37   P      P         09 32 29.8 -0.6
      baz=329,SNR=110
CCM   Cathedral Cave     83.78  38   P      P         09 32 30.5  0.0
      baz=328
CCM   Cathedral Cave     83.78  38  eP      P         09 32 31.3 +0.8
      comp=Z,184nm,0.9s
CCM   Cathedral Cave     83.78  38  eP      P         09 32 31.3 +0.8
CCM                                  pmax   pmax
      comp=Z,184nm,0.9s
O47A  Sheridan           83.90  33   P      P         09 32 30.1 -1.0
      baz=331,SNR=60
P45A  Graceland, Par     83.92  35   P      P         09 32 30.5 -0.7
      baz=330,SNR=98
P45A  Graceland, Par     83.92  35  eP      P         09 32 31.3 +0.1
      comp=Z,211nm,0.8s
Q44A  Meyer Farm, Va     83.97  36   P      P         09 32 30.6 -0.8
      baz=330,SNR=42
S41A  Jillco Farms,      83.97  38   P      P         09 32 31.0 -0.4
      baz=328,SNR=182
M50A  Fremont            84.00  31   P      P         09 32 31.1 -0.4
      baz=333,SNR=19
T40A  Mansfield          84.01  39   P      P         09 32 31.1 -0.6
      baz=328
P46A  Rosedale           84.05  34   P      P         09 32 31.3 -0.5
      baz=330,SNR=34
HHAR  Hobbs              84.12  40  eP      P         09 32 32.6 +0.4
      comp=Z,166nm,0.6s
R43A  Red Bud            84.14  37   P      P         09 32 31.4 -0.8
      baz=329,SNR=60
FVM   French Village     84.18  37  eP      P         09 32 33.6 +1.1
      comp=Z,74nm,0.6s
FVM   French Village     84.18  37  eP      P         09 32 33.6 +1.1
FVM                                  pmax   pmax
      comp=Z,74nm,0.6s
S42A  Caledonia          84.21  38   P      P         09 32 32.1 -0.5
      baz=329,SNR=99
U39A  Green Forest       84.24  40   P      P         09 32 32.5 -0.4
      baz=327,SNR=503
O48A  Farmland           84.26  32   P      P         09 32 32.0 -0.9
      baz=332,SNR=58
Q45A  Warren Harvey,     84.31  35   P      P         09 32 32.7 -0.4
      baz=330,SNR=69
ERPA  Erie               84.38  28   P      P         09 32 32.8 -0.6
      baz=335,SNR=25
ERPA  Erie               84.38  28  eP      P         09 32 33.4  0.0
      comp=Z,250nm,0.6s
ERPA                                epP     pP        09 34 24.1 +0.1
NCB   Newcomb            84.39  24  eP      P         09 32 33.2 -0.3
      comp=Z,185nm,1.6s
PKME  Peaks-Kenny Pk     84.41  20   P      P         09 32 33.0 -0.4
      baz=341,SNR=36
PKME  Peaks-Kenny Pk     84.41  20  eP      P         09 32 33.8 +0.3
      comp=Z,82nm,0.7s
PKME                                epP     pP        09 34 24.9 +0.8
T41A  Mountain View      84.42  39   P      P         09 32 33.1 -0.6
      baz=328,SNR=290
VT1   Waterbury          84.44  22  eP      P         09 32 34.0 +0.3
      comp=Z,132nm,0.8s
MMNY  Mt. Morris Dam     84.47  26  eP      P         09 32 33.4 -0.4
      comp=Z,172nm,0.5s
ABTX  Abilene, Hawle     84.47  46   P      P         09 32 33.7 -0.3
      baz=324,SNR=42
ABTX  Abilene, Hawle     84.47  46  eP      P         09 32 34.7 +0.7
      comp=Z,140nm,0.8s
OLIL  Olney              84.47  35  eP      P         09 32 34.1 +0.2
      comp=Z,153nm,1.1s
R44A  Waltonville        84.50  36   P      P         09 32 33.7 -0.4
      baz=330,SNR=24
Q46A  CEJHS Indians,     84.51  35   P      P         09 32 33.7 -0.3
      baz=330,SNR=13
P47A  Martinsville       84.52  34   P      P         09 32 33.6 -0.5
      baz=331,SNR=84
N50A  Nevada             84.52  31   P      P         09 32 33.8 -0.3
      baz=333,SNR=29
U40A  Yellville          84.54  40   P      P         09 32 34.0 -0.3
      baz=328,SNR=617
O49A  Covington          84.62  32   P      P         09 32 33.9 -0.7
      baz=332,SNR=42
V39A  Pettigrew          84.62  41   P      P         09 32 34.0 -0.7
      baz=327,SNR=294
S43A  Fulton Ridge,      84.68  37   P      P         09 32 34.3 -0.6
      baz=329,SNR=97
BLO   Bloomington        84.70  34  eP      P         09 32 35.1 +0.1
      comp=Z,72nm,0.7s
BLO   Bloomington        84.70  34  eP      P         09 32 35.1 +0.1
BLO                                  pmax   pmax
      comp=Z,72nm,0.7s
T42A  Van Buren          84.72  38   P      P         09 32 34.9 -0.3
      baz=328,SNR=277
T42A  Van Buren          84.72  38  eP      P         09 32 35.4 +0.2
      comp=Z,238nm,0.7s
LBNH  Lisbon             84.74  22   P      P         09 32 34.4 -0.7
      baz=340,SNR=16
LBNH  Lisbon             84.74  22  eP      P         09 32 35.8 +0.7
      comp=Z,286nm,1.8s
LBNH  Lisbon             84.74  22  eP      P         09 32 35.8 +0.7
LBNH                                 pmax   pmax
      comp=Z,286nm,1.8s
ALLY  Alegheny Colle     84.75  28  eP      P         09 32 35.3 +0.1
      comp=Z,243nm,0.8s
ALLY                                epP     pP        09 34 27.2 +1.2
R45A  Skylar, Fairfi     84.78  36   P      P         09 32 34.9 -0.5
      baz=330,SNR=58
TAMR  Tamra              84.81 322  eP      P         09 32 35.1 -0.4
      comp=Z,36nm,0.9s
P48A  Milroy             84.86  33   P      P         09 32 35.2 -0.6
      baz=332,SNR=59
SIUC  Southern Illin     84.91  37  eP      P         09 32 36.3 +0.3
      comp=Z,264nm,0.7s
S44A  Carbondale         84.91  37   P      P         09 32 35.6 -0.4
      baz=330,SNR=110
O50A  Cable              84.91  31   P      P         09 32 35.3 -0.7
      baz=332,SNR=71
Q47A  Bedord North L     84.94  34   P      P         09 32 36.0 -0.1
      baz=331,SNR=257
U41A  Viola              84.95  39   P      P         09 32 35.7 -0.6
      baz=328,SNR=127
WVL   Waterville         84.99  20  eP      P         09 32 36.5 +0.3
      comp=Z,78nm,0.9s
WVL                                 epP     pP        09 34 27.8 +0.6
T43A  Greenville         85.01  38   P      P         09 32 36.1 -0.4
      baz=329,SNR=148
V40A  Witts Springs      85.02  40   P      P         09 32 36.1 -0.6
      baz=328,SNR=129
V40A  Witts Springs      85.02  40  eP      P         09 32 36.5 -0.1
      comp=Z,106nm,0.6s
M54A  Oil Creek Stat     85.03  28   P      P         09 32 36.1 -0.6
      baz=335,SNR=42
M54A  Oil Creek Stat     85.03  28  eP      P         09 32 36.6 -0.1
      comp=Z,109nm,0.6s
TX31  Lajitas Ar. Si     85.05  51  eP      P         09 32 37.9 +0.9
TXAR  Lajitas Array      85.05  51   P      P         09 32 38.0 +0.9
      comp=Z,41nm,0.7s,baz=287,slow=2.9,SNR=367
TXAR                                 pP     pP        09 34 29.7 +1.8
      comp=Z,19nm,0.9s,baz=284,slow=3.9,SNR=7.3
TXAR                                 PKiKP  PKiKP     09 37 43.8 -0.7
      comp=Z,0.8nm,0.6s,baz=318,slow=1.2,SNR=4.6
TXAR                                 PKKPbc PKKPbc    09 50 36.9 -1.3
      comp=Z,2.9nm,0.8s,baz=147,slow=6.4,SNR=17
TXAR                                 PKPPKP P'P'df    09 58 24.8  -23
      comp=Z,1.4nm,1.1s,baz=168,slow=4.6,SNR=5.5
P49A  Miami Univ. Ec     85.06  33   P      P         09 32 36.0 -0.7
      baz=332,SNR=49
ACCN  Adirondack Com     85.08  23  eP      P         09 32 36.8  0.0
      comp=Z,176nm,1.4s
W39A  Magazine           85.10  41   P      P         09 32 36.7 -0.3
      baz=327,SNR=84
W39A  Magazine           85.10  41  eP      P         09 32 37.3 +0.3
      comp=Z,217nm,1.3s
HNH   Hanover            85.15  22  eP      P         09 32 37.5 +0.4
      comp=Z,138nm,1.4s
HNH                                 epP     pP        09 34 29.2 +1.2
R46A  Gibon Southern     85.16  35   P      P         09 32 36.8 -0.4
      baz=330,SNR=58
S45A  Carrier Mills      85.19  36   P      P         09 32 37.3 -0.2
      baz=330,SNR=40
PBMO  Poplar Bluff       85.21  38  eP      P         09 32 37.7 +0.2
      comp=Z,189nm,0.7s
Q48A  North Vernon       85.21  34   P      P         09 32 37.1 -0.4
      baz=331,SNR=93
U42A  Revenden           85.23  39   P      P         09 32 37.4 -0.3
      baz=328,SNR=86
T44A  Benton             85.30  37   P      P         09 32 37.8 -0.2
      baz=329,SNR=42
USIN  University of      85.31  35  eP      P         09 32 38.3 +0.4
      comp=Z,238nm,1.3s
V41A  Mountainview       85.32  40   P      P         09 32 37.8 -0.3
      baz=328,SNR=218
P50A  Jamestown          85.32  32   P      P         09 32 37.7 -0.4
      baz=332,SNR=79
EMMW  East Machias       85.35  19  eP      P         09 32 38.1 +0.2
      comp=Z,93nm,0.9s
EMMW                                epP     pP        09 34 29.3 +0.3
N54A  Moraine State      85.42  29   P      P         09 32 38.2 -0.3
      baz=335,SNR=66
N54A  Moraine State      85.42  29  eP      P         09 32 38.8 +0.3
      comp=Z,360nm,1.4s
LPIG  La Paz             85.42  59   P      P         09 32 39.5 +0.8
      comp=Z,68nm,0.9s,baz=285,slow=1.4,SNR=12
W40A  Ferguson Farm,     85.42  40   P      P         09 32 38.5 -0.1
      baz=328,SNR=108
W40A  Ferguson Farm,     85.42  40  eP      P         09 32 39.3 +0.7
      comp=Z,283nm,0.8s
Q49A  Aurora             85.46  33   P      P         09 32 38.4 -0.3
      baz=332,SNR=46
R47A  Wooly Knot Far     85.46  34   P      P         09 32 38.4 -0.3
      baz=331,SNR=108
BINY  Binghamton         85.53  25   P      P         09 32 38.0 -1.0
      baz=337,SNR=25
BINY  Binghamton         85.53  25  eP      P         09 32 39.0  0.0
      comp=Z,87nm,0.9s
BINY                                epP     pP        09 34 29.9 -0.2
X39A  Fountain Ranch     85.53  42   P      P         09 32 38.9 -0.2
      baz=327,SNR=128
FFD   Franklin Falls     85.53  22  eP      P         09 32 39.6 +0.6
      comp=Z,98nm,0.8s
FFD                                 epP     pP        09 34 31.4 +1.4
S46A  Don Dixon Farm     85.53  35   P      P         09 32 38.3 -0.7
      baz=330,SNR=33
GLKZ  Green Lake         85.54 143   P      P         09 32 44.9 +5.9
U43A  Rector             85.57  38   P      P         09 32 39.1 -0.1
      baz=329,SNR=43
PARMO Parma              85.59  37  eP      P         09 32 39.9 +0.5
      comp=Z,378nm,1.0s
WCI   Wyandotte Cave     85.61  34   P      P         09 32 39.3 -0.2
      baz=331
WCI   Wyandotte Cave     85.61  34  eP      P         09 32 39.9 +0.4
      comp=Z,166nm,0.8s
WCI   Wyandotte Cave     85.61  34  eP      P         09 32 39.9 +0.4
WCI                                  pmax   pmax
      comp=Z,165nm,0.8s
R48A  Northridge Ran     85.62  34   P      P         09 32 39.6 +0.1
      baz=331,SNR=66
V42A  Cord               85.63  39   P      P         09 32 39.2 -0.3
      baz=328,SNR=105
WHAR  Wooly Hollow       85.68  40  eP      P         09 32 40.4 +0.5
      comp=Z,468nm,0.9s
TRY   Troy               85.69  24  eP      P         09 32 40.0 +0.3
      comp=Z,92nm,1.2s
T45A  Paducah            85.74  36   P      P         09 32 40.0 -0.1
      baz=330,SNR=32
T45A  Paducah            85.74  36  eP      P         09 32 40.8 +0.8
      comp=Z,395nm,0.6s
MIAR  Mount Ida          85.74  41   P      P         09 32 40.2 +0.1
      baz=327,SNR=182
MIAR  Mount Ida          85.74  41  eP      P         09 32 40.9 +0.8
      comp=Z,181nm,0.9s
MIAR  Mount Ida          85.74  41  eP      P         09 32 40.9 +0.8
MIAR                                 pmax   pmax
      comp=Z,181nm,0.9s
U44A  Portageville       85.75  37   P      P         09 32 40.4 +0.3
      baz=329,SNR=9.7
W41B  Gary Mavity, V     85.80  40   P      P         09 32 40.5 +0.1
      baz=328,SNR=183
W41B  Gary Mavity, V     85.80  40  eP      P         09 32 40.7 +0.3
      comp=Z,238nm,1.0s
ATD   Arta Tunnel        85.82 282   P      P         09 32 41.9 +1.0
      comp=Z,51nm,1.1s,baz=344,slow=5.3,SNR=9.1
ATD                                  pP     pP        09 34 33.6 +1.5
      comp=Z,36nm,1.0s,baz=29,slow=10,SNR=6.7
KEST  Kesra              85.82 321   P      P         09 32 40.7 +0.1
      comp=Z,22nm,0.9s,baz=327,slow=1.2,SNR=29
KEST                                 pP     pP        09 34 32.6 +0.8
      comp=Z,41nm,0.9s,baz=310,slow=5.7,SNR=14
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KEST				PKKPbc	PKKPbc	09 50 38.5	+2.0
	comp=Z,2.7nm,0.5s,baz=289,slow=3.9,SNR=4.2						
KEST	Kesra	85.82	321	eP	P	09 32 40.9	+0.3
	comp=Z,49nm,1.0s						
KEST				pP	pP	09 34 32.6	+0.8
KEST				PKKPbc	PKKPbc	09 50 38.5	+2.0
PVMO	Portageville	85.83	38	eP	P	09 32 40.8	+0.3
	comp=Z,169nm,1.1s						
HPIG		85.86	54	eP	P	09 32 42.2	+1.1
	comp=Z,100nm,1.2s						
HPIG				epP	pP	09 34 34.6	+2.3
CMAH	Djebel Manchou	85.86	323	P	P	09 32 39.8	-1.0
Q50A	Georgetown	85.94	32	P	P	09 32 40.8	-0.2
	baz=332,SNR=45						
S47A	Hartford	85.94	35	P	P	09 32 40.3	-0.8
	baz=331,SNR=19						
SLBS	Sierra La Lagu	85.95	59	eP	P	09 32 42.6	+1.1
	comp=Z,222nm,1.8s						
CAEH	’Ain El Ouahch	85.96	323	P	P	09 32 40.4	-0.8
R49A	Shelbyville	85.98	33	P	P	09 32 41.1	-0.1
	baz=332,SNR=27						
Q51A	Peebles	86.00	32	P	P	09 32 41.1	-0.2
	baz=333,SNR=122						
V43A	Jonesboro	86.01	38	P	P	09 32 41.7	+0.3
	baz=329,SNR=8.0						
T46A	Princeton	86.02	36	P	P	09 32 41.4	0.0
	baz=330,SNR=60						
W42A	Bald Knob	86.03	39	P	P	09 32 41.7	+0.2
	baz=328,SNR=51						
U44B	Burton Farm, H	86.03	37	P	P	09 32 41.6	+0.1
	baz=330,SNR=21						
WHTX	Lake Whitney,	86.05	45	P	P	09 32 41.7	0.0
	baz=326,SNR=53						
WHTX	Lake Whitney,	86.05	45	eP	P	09 32 42.5	+0.8
	comp=Z,120nm,0.8s						
GNAR	Gosnell	86.08	38	eP	P	09 32 42.2	+0.6
	comp=Z,461nm,1.3s						
UALR	University of	86.09	40	eP	P	09 32 42.2	+0.4
	comp=Z,48nm,0.7s						
GLAT	Glass	86.12	37	eP	P	09 32 42.5	+0.6
	comp=Z,707nm,1.3s						
X40A	Basin Creek Fa	86.12	41	P	P	09 32 41.9	0.0
	baz=328,SNR=146						
X40A	Basin Creek Fa	86.12	41	eP	P	09 32 43.0	+1.0
	comp=Z,191nm,0.8s						
JCT	Junction City	86.13	48	P	P	09 32 41.9	-0.2
	baz=324,SNR=121						
JCT	Junction City	86.13	48	eP	P	09 32 42.6	+0.5
	comp=Z,112nm,0.8s						
JCT	Junction City	86.13	48	eP	P	09 32 42.6	+0.5
JCT				pmax	pmax		
	comp=Z,112nm,0.8s						
ABSA	Djebel Ababsia	86.14	323	P	P	09 32 41.4	-0.8
HBAR	Harrisburg	86.16	39	eP	P	09 32 43.2	+1.2
	comp=Z,1µm,1.3s						
PBRG	Braganca	86.17	335	eP	P	09 32 41.9	-0.2
	comp=Z,38nm,2.4s						
PBRG				epP	pP	09 34 33.4	0.0
KSPA	Keystone Colle	86.18	25	eP	P	09 32 41.9	-0.2
	comp=Z,91nm,1.0s						
KSPA				epP	pP	09 34 33.5	+0.1
S48A	Wiedeman Farm,	86.20	34	P	P	09 32 42.1	-0.2
	baz=331,SNR=112						
UTMT	University of	86.23	37	eP	P	09 32 42.9	+0.5
	comp=Z,300nm,1.1s						
V44A	Blytheville	86.25	38	P	P	09 32 42.4	-0.1
	baz=329						
THTN	Thala	86.25	322	eP	P	09 32 43.2	+0.5
	comp=Z,54nm,1.0s						
THTN				epP	pP	09 34 35.5	+1.5
X41A	Kaden, Bauxite	86.25	40	P	P	09 32 42.4	-0.2
	baz=328,SNR=18						
U45A	Rockin P Farm,	86.27	37	P	P	09 32 42.5	-0.1
	baz=330,SNR=32						
R50A	Paris	86.30	33	P	P	09 32 42.6	-0.2
	baz=332,SNR=79						
Y40A	Okolona	86.32	41	P	P	09 32 42.9	+0.1
	baz=328,SNR=28						
CKFL	Kef-Lekhel	86.34	323	P	P	09 32 42.4	-0.7
T47A	Sharon Grove	86.38	35	P	P	09 32 42.9	-0.2
	baz=331,SNR=64						
T47A	Sharon Grove	86.38	35	eP	P	09 32 43.6	+0.5
	comp=Z,182nm,0.7s						
S49A	Springfield	86.38	34	P	P	09 32 42.9	-0.3
	baz=332,SNR=115						
SSPA	Standing Stone	86.38	27	P	P	09 32 42.6	-0.5
	baz=336						
SSPA	Standing Stone	86.38	27	eP	P	09 32 43.3	+0.2
	comp=Z,104nm,0.9s						
HALT	Halls	86.41	38	eP	P	09 32 44.0	+0.7
	comp=Z,388nm,1.3s						
PGAV	Gavieira, Arco	86.45	336	eP	P	09 32 43.4	-0.1
	comp=Z,68nm,0.9s						
PGAV				epP	pP	09 34 35.1	+0.2
HRV	Adam Dziewonsk	86.45	22	P	P	09 32 42.8	-0.6
	baz=340						
HRV	Adam Dziewonsk	86.45	22	eP	P	09 32 43.9	+0.5
	comp=Z,114nm,0.9s						
HRV				epP	pP	09 34 35.6	+0.8
HRV	Adam Dziewonsk	86.45	22	eP	P	09 32 43.9	+0.5
HRV				e*PP	pP	09 34 35.6	+0.8
HRV				pmax	pmax		
	comp=Z,115nm,0.9s						
QUA2	Belchertown	86.46	23	eP	P	09 32 43.7	+0.3
	comp=Z,29nm,0.8s						
U46A	Springville	86.50	36	P	P	09 32 43.7	0.0
	baz=330,SNR=45						
O56A	Blue Knob Stat	86.50	28	P	P	09 32 43.4	-0.3
	baz=336,SNR=68						
O56A	Blue Knob Stat	86.50	28	eP	P	09 32 44.0	+0.2
	comp=Z,196nm,1.0s						
W43A	Forest City	86.53	39	P	P	09 32 44.2	+0.4
	baz=329,SNR=7.5						
T48A	Bowling Green	86.55	35	P	P	09 32 43.7	-0.2
	baz=331,SNR=71						
DFRA	Djebel Bou Aff	86.56	324	P	P	09 32 44.0	-0.1
R51A	Hillsboro	86.56	32	P	P	09 32 43.9	-0.1
	baz=333,SNR=54						
X42A	Stuttgart	86.59	40	P	P	09 32 44.5	+0.4
	baz=328,SNR=5.3						
PCAB	Cabril	86.62	336	eP	P	09 32 44.1	-0.1
	comp=Z,39nm,1.1s						
PCAB				epP	pP	09 34 36.1	+0.4
WES	Weston	86.63	22	eP	P	09 32 45.0	+0.8
	comp=Z,153nm,0.9s						
WES				epP	pP	09 34 36.3	+0.7
WES	Weston	86.63	22	eP	P	09 32 45.0	+0.8
WES				e*PP	pP	09 34 36.3	+0.7
WES				pmax	pmax		
	comp=Z,153nm,0.9s						
MCWV	Mont Chateau	86.64	29	P	P	09 32 44.4	+0.1
	baz=335,SNR=54						
MCWV	Mont Chateau	86.64	29	eP	P	09 32 45.1	+0.7
	comp=Z,180nm,0.9s						
V45A	Humboldt	86.71	37	P	P	09 32 44.5	-0.1
	baz=330,SNR=8.4						
BCX	Boston College	86.72	22	eP	P	09 32 44.8	+0.2
	comp=Z,170nm,1.4s						
BCX				epP	pP	09 34 36.8	+0.7
Y41A	Eaglette Beard	86.73	41	P	P	09 32 45.1	+0.3
	baz=328,SNR=27						
CTEI	Djebel Teioual	86.76	323	P	P	09 32 43.0	-2.1
N59A	State Game Lan	86.77	26	P	P	09 32 44.5	-0.4
	baz=337,SNR=37						
N59A	State Game Lan	86.77	26	eP	P	09 32 45.0	0.0
	comp=Z,127nm,0.8s						
N59A				epP	pP	09 34 36.5	0.0
U47A	Clarksville	86.78	36	P	P	09 32 45.0	-0.1
	baz=331,SNR=64						
S50A	Richmond	86.81	33	P	P	09 32 45.0	-0.1
	baz=332,SNR=165						
WVT	Waverly	86.83	36	P	P	09 32 45.3	0.0
	baz=330						
WVT	Waverly	86.83	36	eP	P	09 32 45.6	+0.4
	comp=Z,148nm,0.9s						
WVT	Waverly	86.83	36	eP	P	09 32 45.7	+0.4
WVT				pmax	pmax		
	comp=Z,148nm,0.9s						
MET	Memphis--Engin	86.83	38	eP	P	09 32 45.9	+0.6
	comp=Z,1µm,1.6s						
MVO	Moncorvo	86.85	335	eP	P	09 32 45.5	+0.1
	comp=Z,47nm,0.9s						
MVO				epP	pP	09 34 36.9	0.0
R52A	Catlettsburg	86.86	32	P	P	09 32 45.1	-0.3
	baz=333,SNR=20						
W44A	Shelby Farms P	86.87	38	P	P	09 32 45.7	+0.3
	baz=329,SNR=13						
POLO	Lamas de Olo	86.87	336	eP	P	09 32 45.4	-0.1
	comp=Z,38nm,0.7s						
POLO				epP	pP	09 34 37.2	+0.2
T49A	Edmonton	86.89	34	P	P	09 32 45.3	-0.2
	baz=332,SNR=122						
T49A	Edmonton	86.89	34	eP	P	09 32 46.0	+0.4
	comp=Z,141nm,0.7s						
Z40A	Long Farm, Mag	86.90	42	P	P	09 32 46.4	+0.8
	baz=328,SNR=95						
X43A	Marvell	86.95	39	P	P	09 32 46.2	+0.4
	baz=329,SNR=42						
X43A	Marvell	86.95	39	eP	P	09 32 46.7	+0.9
	comp=Z,314nm,1.1s						
ODNJ	Ogdensburg	86.95	25	eP	P	09 32 45.5	-0.2
	comp=Z,68nm,0.7s						
ODNJ				epP	pP	09 34 38.1	+0.8
435B	Jarrell	86.98	46	P	P	09 32 45.9	-0.2
	baz=326,SNR=16						
435B	Jarrell	86.98	46	eP	P	09 32 47.2	+1.1
	comp=Z,60nm,0.9s						
V46A	Holladay	87.00	37	P	P	09 32 45.8	-0.3
	baz=330,SNR=106						
BRYW	Bryant College	87.01	22	eP	P	09 32 46.5	+0.5
	comp=Z,60nm,0.8s						
BRYW				epP	pP	09 34 38.4	+0.8
U48A	Cassie Pea, Po	87.02	35	P	P	09 32 46.0	-0.1
	baz=331,SNR=54						
CCAR	Cane Creek	87.07	40	eP	P	09 32 47.8	+1.4
	comp=Z,353nm,0.8s						
PAGS	Pennsylvania G	87.12	27	eP	P	09 32 46.3	-0.2
	comp=Z,79nm,0.8s						
PAGS				epP	pP	09 34 39.0	+0.8
W45A	Hickory Valley	87.12	38	P	P	09 32 46.8	+0.2
	baz=330,SNR=28						
Y42A	Garnett, Star	87.13	40	P	P	09 32 47.5	+0.8
	baz=328,SNR=133						
S51A	Beattyville	87.14	33	P	P	09 32 46.4	-0.3
	baz=333,SNR=73						
S51A	Beattyville	87.14	33	eP	P	09 32 47.0	+0.2
	comp=Z,142nm,0.8s						
CKHR	Kef el Ahmar	87.16	324	P	P	09 32 47.3	+0.3
Z41A	Richland Creek	87.17	41	P	P	09 32 47.2	+0.3
	baz=328,SNR=11						
Z41A	Richland Creek	87.17	41	eP	P	09 32 47.9	+1.0
	comp=Z,84nm,0.8s						
LUPA	Lehigh Univers	87.18	26	eP	P	09 32 46.8	-0.1
YLE	Yale	87.20	24	eP	P	09 32 46.8	0.0
	comp=Z,45nm,0.9s						
V47A	Nunnelly	87.22	36	P	P	09 32 47.0	-0.1
	baz=330,SNR=125						
PAL	Palisades	87.22	24	P	P	09 32 46.7	-0.3
	baz=338,SNR=22						
PAL	Palisades	87.22	24	eP	P	09 32 47.2	+0.2
	comp=Z,99nm,0.7s						
PAL				epP	pP	09 34 39.3	+0.7
PAL	Palisades	87.22	24	eP	P	09 32 47.2	+0.2
PAL				e*PP	pP	09 34 39.3	+0.7
PAL				pmax	pmax		
	comp=Z,99nm,0.7s						
T50A	Nancy	87.22	34	P	P	09 32 47.0	-0.2
	baz=332,SNR=239						
ES19	SONSECA Array	87.25	332	eP	P	09 32 47.6	+0.3
X44A	Crenshaw	87.28	39	P	P	09 32 47.7	+0.3
	baz=329,SNR=12						
S52A	Salyersville	87.29	32	P	P	09 32 47.3	-0.1
	baz=333,SNR=72						
ESDC	Sonseca Array	87.29	332	P	P	09 32 47.4	-0.1
	comp=Z,12nm,0.6s,baz=17,slow=4.2,SNR=101						
ESDC				pP	pP	09 34 40.1	+1.0
	comp=Z,72nm,1.0s,baz=19,slow=4.2,SNR=28						
ESDC				PP	PP	09 36 21.4	+1.6
	comp=Z,3.9nm,0.7s,baz=24,slow=7.9,SNR=4.2						
ESDC				PKKPbc	PKKPbc	09 50 30.9	-2.3
	comp=Z,1.1nm,0.5s,baz=236,slow=1.8,SNR=4.4						
ESDC				PKPPKP	P’P’df	09 58 42.6	-1.0
	comp=Z,1.0nm,0.8s,baz=210,slow=2.9,SNR=5.8						
ESLA	Sonseca Array	87.29	332	eP	P	09 32 47.8	+0.4
	comp=Z,144nm,1.1s						
ESLA				epP	pP	09 34 40.1	+1.0
U49A	Red Boiling Sp	87.31	35	P	P	09 32 47.5	0.0
	baz=331,SNR=128						
PTO	Porto	87.31	336	eP	P	09 32 47.5	+0.1
	comp=Z,70nm,1.1s						
PTO				epP	pP	09 34 39.6	+0.5
BRNJ	Basking Ridge	87.34	25	eP	P	09 32 47.7	+0.2
	comp=Z,107nm,0.8s						
140A	Cam and Jess,	87.34	42	P	P	09 32 48.5	+0.8
	baz=327,SNR=51						
140A	Cam and Jess,	87.34	42	eP	P	09 32 49.3	+1.6
	comp=Z,302nm,0.8s						
CPNY	Central Park	87.41	25	eP	P	09 32 48.3	+0.4
	comp=Z,61nm,0.7s						
MVL	Millersville	87.44	27	eP	P	09 32 48.0	0.0
	comp=Z,57nm,0.7s						
Y43A	Makayla and Ka	87.44	40	P	P	09 32 48.9	+0.7
	baz=329,SNR=70						
W46A	Michie	87.47	37	P	P	09 32 48.1	-0.2
	baz=330,SNR=80						
PVIS	Viseu	87.51	336	eP	P	09 32 48.5	+0.1
	comp=Z,46nm,1.1s						
PVIS				epP	pP	09 34 40.2	0.0
PAB	San Pablo	87.53	333	eP	P	09 32 48.9	+0.3
	comp=Z,109nm,1.0s						
PAB				epP	pP	09 34 41.2	+0.8
PAB	San Pablo	87.53	333	eP	P	09 32 48.9	+0.3
PAB				e*PP	pP	09 34 41.2	+0.8
PAB				pmax	pmax		
	comp=Z,109nm,1.0s						
Z42A	Norrel Spur, H	87.54	41	P	P	09 32 49.4	+0.7
	baz=328,SNR=56						
RAR	Rarotonga	87.56	125	P	P	09 32 49.7	+0.9
	comp=Z,33nm,0.8s,baz=255,slow=6.6,SNR=9.4						
RAR	Rarotonga	87.56	125	eP	P	09 32 49.8	+1.1
	comp=Z,93nm,1.0s						
NATX	Nacogdoches	87.57	43	P	P	09 32 49.7	+0.9
	baz=327,SNR=36						
NATX	Nacogdoches	87.57	43	eP	P	09 32 50.6	+1.8
	comp=Z,283nm,0.8s						
NATX				epP	pP	09 34 43.0	+2.3
V48A	Smith Brothers	87.58	36	P	P	09 32 48.6	-0.2
	baz=331,SNR=137						
V48A	Smith Brothers	87.58	36	eP	P	09 32 49.2	+0.5
	comp=Z,194nm,0.8s						
OXF	Oxford	87.58	38	P	P	09 32 48.8	0.0
	baz=330,SNR=70						
OXF	Oxford	87.58	38	eP	P	09 32 49.2	+0.5
	comp=Z,410nm,1.1s						
OXF	Oxford	87.58	38	eP	P	09 32 49.3	+0.5
OXF				pmax	pmax		
	comp=Z,410nm,1.1s						
T51A	Gray	87.61	33	P	P	09 32 48.7	-0.2
	baz=332,SNR=65						
X45A	UM Field Stati	87.66	38	P	P	09 32 49.2	0.0
	baz=330,SNR=38						
141A	Papa Simpson,	87.67	42	P	P	09 32 50.1	+0.9
	baz=328,SNR=31						
W47A	Westpoint	87.69	37	P	P	09 32 49.5	+0.1
	baz=330,SNR=103						
MTE	Manteigas	87.70	335	eP	P	09 32 49.5	+0.1
	comp=Z,80nm,0.9s						
MTE				epP	pP	09 34 41.2	0.0
MTE	Manteigas	87.70	335	eP	P	09 32 49.5	+0.1
	comp=Z,144nm,1.0s						
MTE				epP	pP	09 34 41.9	+0.7
Y44A	Strider, Charl	87.71	39	P	P	09 32 50.1	+0.7
	baz=329,SNR=46						
PLAL	Pickwick Lake	87.73	37	eP	P	09 32 49.5	+0.1
	comp=Z,182nm,0.8s						
U50A	Jamestown	87.75	34	P	P	09 32 49.7	+0.1
	baz=332,SNR=113						
240A	Hunter Patters	87.75	43	P	P	09 32 50.6	+0.9
	baz=327,SNR=16						
240A	Hunter Patters	87.75	43	eP	P	09 32 50.9	+1.2
	comp=Z,376nm,1.1s						
PSUB	Penn St. - Bra	87.78	26	eP	P	09 32 49.3	-0.3
	comp=Z,75nm,0.7s						
SDMD	Soldier’s Deli	87.83	27	eP	P	09 32 49.8	0.0
	comp=Z,43nm,0.8s						
T52A	Hallie	87.83	32	P	P	09 32 50.3	+0.3
	baz=333,SNR=78						
OUZ	Omahuta	87.85	152	eP	P	09 32 53.1	+3.3
	comp=Z,236nm,0.9s						
OUZ	Omahuta	87.85	152	P	P	09 32 53.0	+3.3
X46A	Booneville	87.88	38	P	P	09 32 50.2	0.0
	baz=330						
Z43A	Armstrong Fami	87.90	40	P	P	09 32 50.9	+0.6
	baz=329,SNR=28						
V49A	McMinnville	87.91	35	P	P	09 32 50.2	-0.2
	baz=331,SNR=80						
W48A	Pulaski	88.05	36	P	P	09 32 51.1	+0.1
	baz=331,SNR=193						
Y45A	Yeager Farm, C	88.08	39	P	P	09 32 51.6	+0.5
	baz=329,SNR=193						
833A	Chaparral WMA,	88.08	49	P	P	09 32 52.0	+0.7
	baz=325,SNR=23						
833A	Chaparral WMA,	88.08	49	eP	P	09 32 53.0	+1.8
	comp=Z,132nm,1.0s						
833A				epP	pP	09 34 45.2	+2.0
U51A	La Follette	88.10	34	P	P	09 32 50.9	-0.4
	baz=332,SNR=59						
COI	Coimbra	88.13	336	eP	P	09 32 51.4	+0.2
	comp=Z,100nm,1.0s						
COI				epP	pP	09 34 43.4	+0.2
TZTN	Tazewell	88.13	33	P	P	09 32 51.5	+0.1
	baz=333,SNR=73						
TZTN	Tazewell	88.13	33	eP	P	09 32 51.8	+0.4
	comp=Z,145nm,0.8s						
142A	Monroe	88.15	41	P	P	09 32 52.6	+1.1
	baz=328,SNR=44						
241A	Mo Tay, Goldon	88.16	42	P	P	09 32 52.5	+1.0
	baz=328,SNR=28						
241A	Mo Tay, Goldon	88.16	42	eP	P	09 32 53.3	+1.8
	comp=Z,175nm,0.9s						
Z44A	Pea Ridge, Bel	88.20	40	P	P	09 32 52.4	+0.7
	baz=329,SNR=103						
PCBR	Castelo Branco	88.20	335	eP	P	09 32 51.5	-0.1
	comp=Z,32nm,1.1s						
PCBR				epP	pP	09 34 43.4	-0.2
X47A	Russelville	88.22	37	P	P	09 32 51.5	-0.3
	baz=330,SNR=139						
143A	Socs Landing,	88.26	41	P	P	09 32 52.7	+0.7
	baz=328,SNR=36						
143A	Socs Landing,	88.26	41	eP	P	09 32 53.5	+1.5
	comp=Z,213nm,1.0s						
PCAS	Casmilo, Conde	88.29	336	eP	P	09 32 51.9	-0.2
	comp=Z,48nm,1.2s						
PCAS				epP	pP	09 34 44.1	+0.1
V50A	Pikevile	88.31	35	P	P	09 32 51.9	-0.3
	baz=332,SNR=64						
U52A	Thorn Hill	88.33	33	P	P	09 32 52.3	0.0
	baz=333,SNR=87						
W49A	Belvidere	88.34	36	P	P	09 32 52.0	-0.4
	baz=331,SNR=136						
Y46A	Houston	88.35	38	P	P	09 32 52.4	-0.1
	baz=330,SNR=189						
SWET	Sewanee	88.38	35	eP	P	09 32 52.5	-0.1
	comp=Z,174nm,0.7s						
Z45A	Winona	88.44	39	P	P	09 32 53.5	+0.7
	baz=329,SNR=71						
Z45A	Winona	88.44	39	eP	P	09 32 54.1	+1.3
	comp=Z,371nm,0.7s						
242A	Grayson	88.47	42	P	P	09 32 53.6	+0.6
	baz=328,SNR=6.3						
V51A	Loudon	88.48	34	P	P	09 32 53.1	0.0
	baz=332,SNR=65						
V51A	Loudon	88.48	34	eP	P	09 32 53.3	+0.3
	comp=Z,138nm,0.8s						
HKT	Hockley	88.52	45	i P	P	09 32 53.7	+0.5
HKT				pmax	pmax		
	comp=Z,166nm,1.6s						
PMRV	Marv??o	88.56	335	eP	P	09 32 53.3	0.0
	comp=Z,36nm,1.3s						
PMRV				epP	pP	09 34 45.4	0.0
X48A	Hartselle	88.61	37	P	P	09 32 53.4	-0.2
	baz=331,SNR=101						
X48A	Hartselle	88.61	37	eP	P	09 32 53.6	0.0
	comp=Z,124nm,0.8s						
341A	Kurthwood	88.62	43	P	P	09 32 54.4	+0.6
	baz=328,SNR=34						
341A	Kurthwood	88.62	43	eP	P	09 32 55.1	+1.4
	comp=Z,305nm,1.6s						
W50A	Signal Mountai	88.64	35	P	P	09 32 53.7	-0.2
	baz=332,SNR=89						
W50A	Signal Mountai	88.64	35	eP	P	09 32 54.0	+0.2
	comp=Z,135nm,0.8s						
U53A	Fall Branch	88.64	32	P	P	09 32 53.8	0.0
	baz=333,SNR=92						
BLA	Blacksburg	88.65	31	P	P	09 32 53.5	-0.3
	baz=334,SNR=30						
BLA	Blacksburg	88.65	31	eP	P	09 32 54.3	+0.5
	comp=Z,106nm,0.8s						
BLA	Blacksburg	88.65	31	eP	P	09 32 54.3	+0.5
BLA				pmax	pmax		
	comp=Z,105nm,0.8s						
PTOM	Tomar	88.67	336	eP	P	09 32 53.9	+0.1
	comp=Z,35nm,1.1s						
PTOM				epP	pP	09 34 46.3	+0.4
CPCT	Cooper Cave	88.73	34	eP	P	09 32 54.7	+0.5
	comp=Z,241nm,0.7s						
V52A	Sevierville	88.73	33	P	P	09 32 54.2	0.0
	baz=333,SNR=73						
V52A	Sevierville	88.73	33	eP	P	09 32 54.6	+0.4
	comp=Z,125nm,0.8s						
CVRD	Centerville Ro	88.75	28	eP	P	09 32 54.8	+0.6
	comp=Z,158nm,0.8s						
144A	Alexander Plac	88.75	40	P	P	09 32 54.8	+0.5
	baz=329,SNR=17						
WCZ	Waipu Caves	88.75	152	P	P	09 32 56.5	+2.6
Y47A	UCPARC, Winfie	88.75	37	P	P	09 32 54.3	0.0
	baz=330,SNR=91						
PTRD	Partlow Road	88.76	28	eP	P	09 32 54.8	+0.6
	comp=Z,91nm,0.9s						
CBN	Corbin Frederi	88.76	28	P	P	09 32 54.4	+0.1
	baz=336,SNR=11						
CBN	Corbin Frederi	88.76	28	eP	P	09 32 55.1	+0.8
	comp=Z,179nm,0.6s						
TKL	Tuckaleechee C	88.83	34	P	P	09 32 55.1	+0.5
	comp=Z,113nm,0.7s,baz=110,slow=0.3,SNR=221						
TKL	Tuckaleechee C	88.83	34	eP	P	09 32 55.1	+0.5
	comp=Z,126nm,0.8s						
TKL	Tuckaleechee C	88.83	34	eP	P	09 32 55.1	+0.5
TKL				pmax	pmax		
	comp=Z,126nm,0.8s						
X49A	Woodville	88.84	36	P	P	09 32 54.4	-0.4
	baz=331,SNR=72						
W51A	Cleveland	88.89	35	P	P	09 32 54.8	-0.2
	baz=332,SNR=74						
Z46A	Louisville	88.91	39	P	P	09 32 55.9	+0.8
	baz=330,SNR=55						
243A	Waterproof	88.92	41	P	P	09 32 55.6	+0.5
	baz=328,SNR=9.5						
342A	Flagon Creek P	88.97	42	P	P	09 32 56.2	+0.9
	baz=328,SNR=11						
342A	Flagon Creek P	88.97	42	eP	P	09 32 57.6	+2.2
	comp=Z,145nm,1.2s						
145A	Houston Renfro	88.99	40	P	P	09 32 56.4	+0.9
	baz=329,SNR=35						
Y48A	Jasper	89.02	37	P	P	09 32 55.3	-0.2
	baz=331,SNR=57						
VBMS	Vicksburg	89.06	40	P	P	09 32 56.4	+0.7
	baz=329,SNR=27						
VBMS	Vicksburg	89.06	40	eP	P	09 32 57.6	+1.8
	comp=Z,346nm,1.0s						
441A	DeRidder	89.10	43	P	P	09 32 56.5	+0.6
	baz=328,SNR=12						
MSEY	Mahe Island	89.11	262	epP	pP	09 34 50.0	+1.5
MSEY	Mahe Island	89.11	262	i P	P	09 32 57.2	+0.9
PMTG	Montargil	89.13	335	eP	P	09 32 55.4	-0.6
	comp=Z,38nm,1.0s						
PMTG				epP	pP	09 34 47.7	-0.4
PESTR	Estremoz	89.14	335	eP	P	09 32 55.9	-0.1
	comp=Z,43nm,1.2s						
PESTR				epP	pP	09 34 48.0	-0.2
PESTR	Estremoz	89.14	335	eP	P	09 32 56.1	+0.1
	comp=Z,28nm,1.0s						
PESTR				epP	pP	09 34 48.6	+0.4
244A	Avery, Jackson	89.14	40	P	P	09 32 56.7	+0.6
	baz=329,SNR=90						
ALMR	Almeirim	89.15	335	eP	P	09 32 55.4	-0.6
ALMR				AMb	AMB	09 32 56.8	
	comp=Z,83nm,0.9s						
ALMR	Almeirim	89.15	335	eP	P	09 32 55.6	-0.4
	comp=Z,93nm,1.0s						
ALMR				epP	pP	09 34 47.8	-0.4
ALMR	Almeirim	89.15	335	eP	P	09 32 55.4	-0.6
X50B	Fort Payne	89.16	36	P	P	09 32 55.9	-0.4
	baz=332,SNR=36						
V53A	Saluda	89.18	33	P	P	09 32 56.1	-0.3
	baz=333,SNR=42						
V53A	Saluda	89.18	33	eP	P	09 32 56.8	+0.5
	comp=Z,94nm,1.0s						
W52A	Murphy	89.27	34	P	P	09 32 56.7	0.0
	baz=332,SNR=32						
W52A	Murphy	89.27	34	eP	P	09 32 57.1	+0.4

	comp=Z,71nm,0.9s						
Z47A	Carrollton	89.27	38	P	P	09 32 56.7	0.0
	baz=330,SNR=55						
Z48A	Northport	89.33	38	P	P	09 32 56.5	-0.5
	baz=330,SNR=54						
146A	Union	89.34	39	P	P	09 32 57.7	+0.7
	baz=330,SNR=86						
146A	Union	89.34	39	*e*P	P	09 32 58.7	+1.6
	comp=Z,584nm,0.9s						
343A	Vidalia	89.37	42	P	P	09 32 58.0	+0.8
	baz=328,SNR=6.5						
X51A	Calhoun	89.38	35	P	P	09 32 57.1	-0.1
	baz=332,SNR=37						
X51A	Calhoun	89.38	35	*e*P	P	09 32 57.5	+0.4
	comp=Z,103nm,0.8s						
Y49A	Blount Mountai	89.38	36	P	P	09 32 56.9	-0.3
	baz=331,SNR=47						
Y49A	Blount Mountai	89.38	36	*e*P	P	09 32 57.4	+0.1
	comp=Z,110nm,1.1s						
442A	Mamou	89.48	42	P	P	09 32 59.4	+1.6
	baz=328						
W53A	Cullowhee	89.49	33	P	P	09 32 57.8	0.0
	baz=333,SNR=43						
245A	Little AP, Sta	89.49	40	P	P	09 32 58.5	+0.8
	baz=329,SNR=92						
PMAFR	Mafra	89.53	336	*e*P	P	09 32 57.9	0.0
	comp=Z,110nm,1.3s						
PMAFR				*e*pP	pP	09 34 49.6	-0.5
EVO	Evora	89.57	335	*e*P	P	09 32 58.1	+0.1
	comp=Z,30nm,1.3s						
EVO				*e*pP	pP	09 34 50.2	-0.1
PBAR	Barrancos	89.61	334	*e*P	P	09 32 58.3	+0.1
	comp=Z,100nm,1.3s						
PBAR				*e*pP	pP	09 34 50.3	-0.2
344A	Westbrook Farm	89.62	41	P	P	09 32 59.3	+0.9
	baz=329,SNR=27						
344A	Westbrook Farm	89.62	41	*e*P	P	09 33 00.1	+1.8
	comp=Z,119nm,0.8s						
344A				*e*pP	pP	09 34 53.9	+3.2
Y50A	Piedmont	89.62	36	P	P	09 32 58.3	0.0
	baz=332,SNR=60						
147A	Livingston	89.64	38	P	P	09 32 58.7	+0.2
	baz=330,SNR=59						
147A	Livingston	89.64	38	*e*P	P	09 32 59.5	+1.0
	comp=Z,309nm,0.8s						
147A				*e*pP	pP	09 34 52.1	+1.4
X52A	Dahlonega	89.72	34	P	P	09 32 59.4	+0.6
	baz=332,SNR=58						
LIS	Lisbon	89.72	336	*e*P	P	09 32 58.3	-0.4
LIS				AMb	AMB	09 32 59.6	
	comp=Z,85nm,1.1s						
LIS	Lisbon	89.72	336	*e*P	P	09 32 58.2	-0.4
BG3	Lake Jocassee	89.73	33	*e*P	P	09 32 59.5	+0.7
	comp=Z,146nm,0.8s						
WTAZ	Waiatarua	89.74	152	P	P	09 33 01.7	+3.2
WIAZ	Waiheke Island	89.79	152	P	P	09 33 01.3	+2.5
PMOR	Pomariorio Ree	89.80	112	*e*P	P	09 33 00.6	+1.3
	comp=Z,291nm,1.4s						
246A	Jackson Lee, B	89.84	39	P	P	09 33 00.0	+0.6
	baz=330,SNR=9.4						
LRAL	Lakeview Retre	89.86	37	P	P	09 32 59.3	-0.1
	baz=331,SNR=48						
LRAL	Lakeview Retre	89.86	37	*e*P	P	09 32 59.7	+0.3
	comp=Z,60nm,0.9s						
Y51A	Rockmart	89.88	35	P	P	09 32 59.6	0.0
	baz=332,SNR=84						
NCAT	North Carolina	89.90	31	*e*P	P	09 32 60.0	+0.4
	comp=Z,86nm,0.9s						
NCAT				*e*pP	pP	09 34 53.5	+1.7
Z49A	Columbiana	89.91	37	P	P	09 32 60.0	+0.3
	baz=331,SNR=75						
KUZ	Kuaotunu	89.93	151	P	P	09 33 01.8	+2.5
148A	Greensboro	89.96	38	P	P	09 33 00.3	+0.4
	baz=330,SNR=25						
PBEJ	Beja	90.00	335	*e*P	P	09 33 00.9	+0.9
	comp=Z,37nm,1.1s						
PBEJ				*e*pP	pP	09 34 53.0	+0.7
X53A	Estanollee	90.03	34	P	P	09 33 00.8	+0.6
	baz=333,SNR=75						
247A	Quitman	90.03	39	P	P	09 33 01.2	+1.0
	baz=330,SNR=19						
345A	Thompson Farm,	90.06	40	P	P	09 33 01.1	+0.7
	baz=329,SNR=20						
MKAZ	Moumakai	90.08	152	P	P	09 33 02.5	+2.5
Z50A	Ashland	90.10	36	P	P	09 33 01.0	+0.4
	baz=331,SNR=163						
Z50A	Ashland	90.10	36	*e*P	P	09 33 01.1	+0.4
	comp=Z,262nm,0.8s						
PNCL	Nicolau / Gran	90.11	335	*e*P	P	09 33 00.3	-0.2
	comp=Z,41nm,1.3s						
PNCL				*e*pP	pP	09 34 52.7	-0.1
KMSC	Kings Mountain	90.19	32	P	P	09 33 01.1	+0.2
	baz=334,SNR=44						
KMSC	Kings Mountain	90.19	32	*e*P	P	09 33 01.4	+0.5
	comp=Z,127nm,0.9s						
TAU	Tasmania Unive	90.21	174	*e*P	P	09 33 01.7	+1.2
	comp=Z,135nm,0.7s						
TAU	Tasmania Unive	90.21	174	*e*P	P	09 33 01.7	+1.2
TAU				pmax	pmax		
	comp=Z,135nm,0.7s						
TAOE	Nuku Hiva Isla	90.23	103	*e*P	P	09 33 03.3	+1.8
346A	Big Creek Wild	90.23	40	P	P	09 33 01.9	+0.7
	baz=330,SNR=14						
346A	Big Creek Wild	90.23	40	*e*P	P	09 33 02.7	+1.5
	comp=Z,89nm,1.0s						
444A	Pine Grove	90.24	41	P	P	09 33 02.5	+1.3
	baz=329,SNR=7.0						
MESJ	Messejana	90.27	335	*e*P	P	09 33 01.1	-0.2
MESJ				AMb	AMB	09 33 02.3	
	comp=Z,56nm,1.2s						
MESJ				*e*SKS	SKSac	09 42 43.1	-0.6
MESJ	Messejana	90.27	335	*e*P	P	09 33 01.4	+0.1
	comp=Z,56nm,1.1s						
MESJ				*e*pP	pP	09 34 53.7	+0.1
MESJ	Messejana	90.27	335	*e*P	P	09 33 01.0	-0.2
MESJ				*e*		09 42 43.1	
PAULI	Pauline	90.30	33	*e*P	P	09 33 01.9	+0.5
	comp=Z,73nm,1.0s						
Y52A	Lilburn	90.30	35	P	P	09 33 02.3	+0.8
	baz=332,SNR=40						
Y52A	Lilburn	90.30	35	*e*P	P	09 33 02.3	+0.8
	comp=Z,117nm,1.0s						
149A	Jones	90.32	37	P	P	09 33 02.3	+0.7
	baz=331,SNR=93						
Z51A	Franklin	90.35	36	P	P	09 33 01.9	+0.2
	baz=332,SNR=24						
248A	Dixon Mills	90.36	38	P	P	09 33 02.5	+0.7
	baz=330,SNR=54						
445A	Amite	90.41	41	P	P	09 33 02.7	+0.7
	baz=329,SNR=5.3						
PCVE	Castro Verde	90.41	335	*e*P	P	09 33 02.0	+0.1
	comp=Z,63nm,1.0s						
PCVE				*e*pP	pP	09 34 54.3	0.0
Y53A	Monroe	90.50	34	P	P	09 33 02.9	+0.5
	baz=333,SNR=70						
PVAQ	Vaqueiros	90.53	334	*e*P	P	09 33 02.6	+0.1
	comp=Z,48nm,1.2s						
PVAQ				*e*pP	pP	09 34 54.7	-0.2
347A	Saraland	90.62	39	P	P	09 33 04.2	+1.2
	baz=330,SNR=92						
150A	Eclectic	90.63	37	P	P	09 33 03.2	+0.2
	baz=331,SNR=76						
HODGE	Hodges	90.66	33	*e*P	P	09 33 03.2	0.0
	comp=Z,84nm,1.2s						
PTEO	Sao Teotonio	90.69	335	*e*P	P	09 33 03.3	+0.1
	comp=Z,68nm,2.2s						
PTEO				*e*pP	pP	09 34 56.2	+0.6
PPT	Papeete	90.70	115	P	P	09 33 04.2	+0.8
	comp=Z,66nm,0.8s,baz=89,slow=21,SNR=5.8						
PPT2	Papeete2	90.72	115	*e*P	P	09 33 04.9	+1.3
	comp=Z,92nm,1.2s						
PPTF	Pamatai, Papee	90.72	115	*e*P	P	09 33 04.7	+1.1
	comp=Z,83nm,0.9s						
249A	Camden	90.73	38	P	P	09 33 04.1	+0.6
	baz=331,SNR=130						
PBDV	Barranco-do-Ve	90.74	334	*e*P	P	09 33 04.0	+0.5
	comp=Z,73nm,1.3s						
PBDV				*e*pP	pP	09 34 56.2	+0.3
Z52A	Williamson	90.76	35	P	P	09 33 04.3	+0.7
	baz=332,SNR=45						
446A	Poplarville	90.79	40	P	P	09 33 03.8	+0.1
	baz=330,SNR=6.8						
LNIG	Linares	90.82	51	*e*P	P	09 33 03.9	-0.2
	comp=Z,68nm,1.3s						
Y54A	Tignall	90.83	34	P	P	09 33 04.4	+0.5
	baz=333,SNR=70						
TIAR	Tiarei	90.83	115	*e*P	P	09 33 05.0	+0.9
	comp=Z,13nm,0.7s						
ZAIG	Zacatecas	90.86	54	*e*P	P	09 33 05.8	+1.2
	comp=Z,78nm,1.0s						
348A	Jackson	90.89	39	P	P	09 33 05.1	+0.9
	baz=330,SNR=11						
348A	Jackson	90.89	39	*e*P	P	09 33 05.7	+1.5
	comp=Z,208nm,1.3s						
348A				*e*pP	pP	09 34 59.1	+2.5
MORF	Marmelete	90.89	335	*e*P	P	09 33 03.7	-0.5
MORF				AMb	AMB	09 33 04.7	
	comp=Z,58nm,1.4s						
MORF				*e*SKS	SKSac	09 42 47.0	-0.4
MORF	Marmelete	90.89	335	*e*P	P	09 33 04.6	+0.4
	comp=Z,59nm,1.3s						
MORF				*e*pP	pP	09 34 56.8	+0.2
MORF	Marmelete	90.89	335	*e*P	P	09 33 03.7	-0.5
MORF				*e*		09 42 46.9	
GOGA	Godfrey	90.93	34	P	P	09 33 04.9	+0.5
	baz=333,SNR=41						
GOGA	Godfrey	90.93	34	*e*P	P	09 33 05.0	+0.6
	comp=Z,119nm,1.1s						
GOGA	Godfrey	90.93	34	P	P	09 33 04.6	+0.2
GOGA				pmax	pmax		
	comp=Z,120nm,1.1s						
151A	Opelika	90.98	36	P	P	09 33 04.8	+0.2
	baz=332,SNR=34						
JSC	Jenkinsville	90.98	32	*e*P	P	09 33 05.0	+0.4
	comp=Z,101nm,1.2s						
JSC	Jenkinsville	90.98	32	*e*P	P	09 33 05.0	+0.4
JSC				pmax	pmax		
	comp=Z,101nm,1.2s						
Z53A	Monticello	91.01	35	P	P	09 33 05.3	+0.5
	baz=333,SNR=39						
250A	Grady	91.08	37	P	P	09 33 05.2	+0.1
	baz=331,SNR=55						
250A	Grady	91.08	37	*e*P	P	09 33 05.8	+0.7
	comp=Z,169nm,0.9s						
447A	Lucedale	91.10	40	P	P	09 33 06.0	+0.9
	baz=330,SNR=12						
447A	Lucedale	91.10	40	*e*P	P	09 33 06.6	+1.4
	comp=Z,116nm,0.9s						
152A	Waverly Hall	91.10	36	P	P	09 33 05.3	+0.1
	baz=332,SNR=17						
152A	Waverly Hall	91.10	36	*e*P	P	09 33 05.7	+0.5
	comp=Z,37nm,0.9s						
PFVI	Vila Bisbo	91.11	335	*e*pP	pP	09 34 57.5	-0.1
349A	Repton	91.24	38	P	P	09 33 06.8	+1.0
	baz=331,SNR=20						
HIZ	Hauiti	91.28	153	P	P	09 33 09.0	+3.4
448A	Bay Minette	91.32	39	P	P	09 33 07.4	+1.2
	baz=330,SNR=8.1						
TLZ	Tolley Road	91.32	152	P	P	09 33 08.7	+2.9
Z54A	Sparta	91.33	34	P	P	09 33 06.5	+0.2
	baz=333,SNR=25						
251A	Midway	91.33	37	P	P	09 33 06.6	+0.4
	baz=332,SNR=50						
153A	Fort Valley	91.47	35	P	P	09 33 07.2	+0.4
	baz=332,SNR=21						
HAZ	Te Kaha	91.53	150	P	P	09 33 06.9	+0.2
350A	Dozier	91.54	38	P	P	09 33 07.7	+0.5
	baz=331,SNR=25						
Z55A	Blythe	91.61	34	P	P	09 33 07.9	+0.4
	baz=334,SNR=12						
252A	Lumpkin	91.68	36	P	P	09 33 08.1	+0.2
	baz=332,SNR=10						
RUGZ	Raukumara Rang	91.69	150	P	P	09 33 07.5	-0.2
DREZ	Durham Road	91.69	153	P	P	09 33 10.2	+2.7
449A	Pace	91.74	39	P	P	09 33 08.9	+0.8
	baz=331,SNR=23						
URZ	Urewera	91.77	151	P	P	09 33 07.5	-0.2
	comp=Z,18nm,0.7s,baz=273,slow=4.7,SNR=13						
URZ	Urewera	91.77	151	*e*P	P	09 33 07.7	-0.1
	comp=Z,321nm,1.9s						
URZ	Urewera	91.77	151	P	P	09 33 07.6	-0.2
154A	Montrose	91.78	35	P	P	09 33 08.8	+0.5
	baz=333,SNR=9.4						
154A	Montrose	91.78	35	*e*P	P	09 33 09.1	+0.8
	comp=Z,249nm,1.4s						
VRZ	Vera Road	91.81	153	P	P	09 33 09.5	+1.5
253A	Americus	91.87	36	P	P	09 33 09.3	+0.6
	baz=332,SNR=35						
253A	Americus	91.87	36	*e*P	P	09 33 09.8	+1.1
	comp=Z,266nm,1.0s						
253A				*e*pP	pP	09 35 02.6	+1.4
351A	Pinckard	91.97	37	P	P	09 33 09.9	+0.7
	baz=332,SNR=59						
450A	Crestview	91.97	38	P	P	09 33 09.9	+0.7
	baz=331,SNR=16						
MWZ	Matawai	91.97	151	P	P	09 33 08.9	+0.1
TWGZ	Tauwhareparae	91.98	150	P	P	09 33 10.8	+1.9
155A	Kite	92.02	34	P	P	09 33 09.9	+0.6
	baz=333,SNR=25						
352A	Blakely	92.06	36	P	P	09 33 10.4	+0.8
	baz=332,SNR=44						
352A	Blakely	92.06	36	*e*P	P	09 33 10.8	+1.1
	comp=Z,177nm,0.8s						
352A				*e*pP	pP	09 35 03.8	+1.6
MTHZ	Maungataniwha	92.22	151	P	P	09 33 09.8	-0.1
254A	Abbeville	92.30	35	P	P	09 33 11.3	+0.6
	baz=333,SNR=22						
156A	Sylvania	92.35	33	P	P	09 33 11.7	+0.8
	baz=334,SNR=9.1						
MOVZ	Moawhango	92.37	152	P	P	09 33 11.9	+1.2
RIGZ	Rimuhau	92.39	151	P	P	09 33 10.8	0.0
BKZ	Black Stump Fm	92.39	152	*e*P	P	09 33 11.2	+0.5
	comp=Z,86nm,1.5s						
BKZ	Black Stump Fm	92.39	152	P	P	09 33 11.0	+0.3
NHSC	New Hope	92.43	32	P	P	09 33 10.9	-0.4
	baz=335						
353A	Camilla	92.46	36	P	P	09 33 12.1	+0.6
	baz=332,SNR=42						
451A	Vernon	92.48	38	P	P	09 33 12.5	+0.9
	baz=332,SNR=10.0						
451A	Vernon	92.48	38	*e*P	P	09 33 12.6	+0.9
	comp=Z,229nm,1.1s						
451A				*e*pP	pP	09 35 06.3	+2.2
452A	Marianna	92.51	37	P	P	09 33 12.3	+0.6
	baz=332,SNR=7.4						
BHHZ	Black Hill Sta	92.55	152	P	P	09 33 12.2	+0.7
RGRS	Roger Stewart	92.61	32	*e*P	P	09 33 12.6	+0.5
	comp=Z,321nm,0.6s						
TIGA	Tifton	92.63	35	P	P	09 33 13.1	+0.8
	baz=333,SNR=24						
TIGA	Tifton	92.63	35	*e*P	P	09 33 13.2	+1.0
	comp=Z,118nm,1.0s						
255A	Hazlehurst	92.63	34	P	P	09 33 12.6	+0.4
	baz=333,SNR=17						
255A	Hazlehurst	92.63	34	*e*P	P	09 33 13.0	+0.7
	comp=Z,133nm,0.8s						
KNZ	Kokohu	92.64	151	P	P	09 33 12.9	+1.1
QRZ	Quartz Range	92.71	155	P	P	09 33 14.0	+1.8
KRHZ	Kereru	92.78	152	P	P	09 33 13.6	+1.0
256A	Glennville	92.81	34	P	P	09 33 13.5	+0.5
	baz=334						
453A	Whigham	92.86	36	P	P	09 33 14.1	+0.8
	baz=332,SNR=12						
453A	Whigham	92.86	36	*e*P	P	09 33 14.5	+1.3
	comp=Z,59nm,1.0s						
355A	Pearson	93.00	35	P	P	09 33 14.5	+0.6
	baz=333,SNR=10						
552A	Lynn Haven	93.09	37	P	P	09 33 15.2	+0.8
	baz=332						
454A	Quitman	93.25	36	P	P	09 33 15.7	+0.6
	baz=333,SNR=5.7						
356A	Blackshear	93.30	34	P	P	09 33 15.5	+0.2
	baz=334						
NNZ	Nelson	93.32	155	P	P	09 33 15.5	+0.7
DSZ	Denniston Nort	93.36	156	P	P	09 33 17.3	+2.2
553A	Crawfordville	93.40	37	P	P	09 33 16.1	+0.3
	baz=332,SNR=8.0						
MRZ	Mangatainoka R	93.46	153	P	P	09 33 15.3	-0.3
455A	Stateville	93.47	35	P	P	09 33 16.7	+0.6
	baz=333						
JRQG	Juriquilla Cam	93.69	54	*e*P	P	09 33 18.1	+0.6
	comp=Z,152nm,1.1s						
THZ	Tophouse	93.69	155	*e*P	P	09 33 18.6	+2.0
	comp=Z,43nm,0.9s						
THZ	Tophouse	93.69	155	P	P	09 33 18.3	+1.7
MDT	Midelt	93.76	330	P	P	09 33 17.4	-0.2
	comp=Z,7.0nm,0.8s,baz=50,slow=6.9,SNR=16						
MDT				pP	pP	09 35 09.6	-0.6
	comp=Z,6.4nm,0.8s,baz=46,slow=4.8,SNR=8.5						
MDT				PKKPbc	PKKPbc	09 50 18.8	+1.5
	comp=Z,2.5nm,0.6s,baz=269,slow=1.4,SNR=8.8						
554A	Perry	93.79	36	P	P	09 33 18.2	+0.6
	baz=333,SNR=5.5						
SNZO	South Karori	93.79	154	*e*P	P	09 33 18.1	+1.1
	comp=Z,290nm,2.0s						
456A	Hilliard	93.88	35	P	P	09 33 18.6	+0.6
	baz=334						
456A	Hilliard	93.88	35	*e*P	P	09 33 18.7	+0.8
	comp=Z,74nm,0.8s						
555A	McAlpin	94.04	36	P	P	09 33 19.3	+0.6
	baz=333,SNR=8.6						
555A	McAlpin	94.04	36	*e*P	P	09 33 20.0	+1.3
	comp=Z,72nm,0.8s						
MOIG	Morelia	94.10	55	*e*P	P	09 33 19.9	+0.5
	comp=Z,53nm,0.7s						
556A	Lake Butler	94.37	35	P	P	09 33 20.9	+0.7
	baz=333,SNR=13						
655A	Horseshoe Beac	94.47	36	P	P	09 33 20.0	-0.7
	baz=333						
KHZ	Kahutara	94.47	155	*e*P	P	09 33 21.1	+1.0
	comp=Z,72nm,1.3s						
FOZ	Fox Glacier	94.51	158	*e*P	P	09 33 21.2	+1.0
	comp=Z,139nm,1.3s						
557A	Orange Park	94.62	35	P	P	09 33 21.6	+0.3
	baz=334,SNR=6.6						
656A	Willston	94.88	36	P	P	09 33 23.2	+0.7
	baz=333,SNR=16						
656A	Willston	94.88	36	*e*P	P	09 33 23.9	+1.4
	comp=Z,121nm,0.9s						
656A				*e*pP	pP	09 35 17.4	+2.2
OXZ	Oxford	94.89	157	*e*P	P	09 33 22.5	+0.4
	comp=Z,77nm,1.0s						
657A	Interlachen	94.95	35	P	P	09 33 23.5	+0.6
	baz=334						
RPZ	Rata Peaks	95.00	157	P	P	09 33 23.1	+0.6
	comp=Z,18nm,0.5s,baz=2.9,slow=7.2,SNR=12						
RPZ	Rata Peaks	95.00	157	*e*P	P	09 33 23.6	+1.1
	comp=Z,98nm,1.5s						
658A	Bunnell	95.33	35	*e*P	P	09 33 24.3	-0.3
	comp=Z,63nm,0.9s						
LBZ	Lake Benmore	95.40	158	*e*P	P	09 33 25.5	+1.2
	comp=Z,51nm,0.8s						
757A	Oxford	95.45	35	P	P	09 33 25.9	+0.8
	baz=333,SNR=8.3						
MLZ	Mavora Lakes	95.82	160	*e*P	P	09 33 26.6	+0.4
	comp=Z,306nm,1.9s						
857A	Zephyrhills	95.98	36	P	P	09 33 28.0	+0.5
	baz=333						
ODZ	Otahua Downs	96.13	158	*e*P	P	09 33 28.6	+1.0
	comp=Z,50nm,1.2s						
DWPF	Disney Wildern	96.44	35	P	P	09 33 28.3	-1.2
	baz=334						
859A	Kempfer Cattle	96.69	35	P	P	09 33 31.3	+0.6
	baz=334,SNR=5.9						
958A	Wauchula	96.78	36	P	P	09 33 31.5	+0.4
	baz=334						
959A	Okeechobee	97.18	35	P	Pdif	09 33 33.2	+0.3
	baz=334						
058A	Arcadia	97.23	36	P	Pdif	09 33 33.1	0.0
	baz=334						
OPO	Ambohidratompo	104.72	259	PKKPbc	PKKPbc	09 49 44.9	-1.7
	comp=Z,1.1nm,0.3s,baz=72,slow=17,SNR=4.6						
TORD	Torodi Ar. Bea	108.76	316	Pdiff	Pdif	09 34 24.9	+0.3
	baz=21,slow=3.5						
TORD				PKiKP	PKiKP	09 38 24.6	-1.9
	baz=64,slow=1.9						
TORD				PKKPbc	PKKPbc	09 49 35.9	+1.5
	baz=190,slow=2.6						
KOWA	Kowa	110.13	322	PKKPbc	PKKPbc	09 49 31.9	+1.7
	comp=Z,7.8nm,0.5s,baz=206,slow=2.5,SNR=14						
SJG	San Juan	110.96	26	PKKPbc	PKKPbc	09 49 25.0	-2.7
	comp=Z,6.9nm,0.3s,baz=329,slow=20,SNR=8.3						
LSZ	Lusaka	115.24	275	*e*PKPdf	PKPdf	09 38 39.4	+0.5
LSZ	Lusaka	115.24	275	*e*PKIKP	PKPdf	09 38 39.4	+0.5
DBIC	Dimbokro	117.47	319	PKP	PKPdf	09 38 42.7	-0.5
	comp=Z,18nm,0.5s,baz=15,slow=2.0,SNR=45						
DBIC				SKP		09 41 30.1	
	comp=Z,5.7nm,0.7s,baz=11,slow=6.2,SNR=3.8						
DBIC				PKKPbc	PKKPbc	09 49 06.4	+0.7
	comp=Z,11nm,0.5s,baz=177,slow=3.7,SNR=23						
DBIC	Dimbokro	117.47	319	PKIKP	PKPdf	09 38 42.6	-0.6
OCAC	Ocana	117.59	37	*e*P	PKPdf	09 38 43.1	-0.5
ZARC	Zaragoza, Cauc	117.62	39	*e*P	PKPdf	09 38 42.1	-1.4
SDV	Santo Domingo	118.05	34	PKP	PKPdf	09 38 44.2	-0.4
	comp=Z,88nm,0.6s,baz=342,slow=3.2,SNR=17						
BRRC	Barranca, Sant	118.45	38	*e*P	PKPdf	09 38 45.1	0.0
HELC	Santa Helena	118.50	40	*e*PKPdf	PKPdf	09 38 44.2	-1.5
HELC	Santa Helena	118.50	40	*e*P	PKPdf	09 38 44.6	-1.1
PTBC	PUERTO BERRIO,	118.65	39	*e*P	PKPdf	09 38 44.1	-1.4
PCRV	Puerto La Cruz	118.91	27	PKP	PKPdf	09 38 43.5	-2.5
	comp=Z,12nm,0.6s,baz=297,slow=1.2,SNR=12						
PCRV				PKKPbc	PKKPbc	09 49 01.2	+0.3
	comp=Z,4.1nm,0.5s,baz=190,slow=2.9,SNR=6.3						
MIR	Mirnyy	118.94	199	⇓*i*PKIKP	PKPdf	09 38 47.0	+2.7
MIR				pmax	pmax		
	comp=Z,108nm,1.0s						
BARC	Barichara	119.13	37	*e*P	PKPdf	09 38 46.1	-0.6
PLMC	San Jos˜' del	119.31	41	*e*P	PKPdf	09 38 46.1	-0.8
RUSC	La Rusia	119.81	38	*e*PKPdf	PKPdf	09 38 48.2	-0.1
RUSC	La Rusia	119.81	38	*e*P	PKPdf	09 38 46.1	-2.2
YOTC	Yotoco, Valle	120.09	42	*e*P	PKPdf	09 38 48.1	-0.3
ROSC	El Rosal	120.23	39	PKP	PKPdf	09 38 49.2	+0.2
	comp=Z,13nm,0.6s,baz=180,slow=4.1,SNR=13						
ROSC				PKKPbc	PKKPbc	09 48 58.3	+1.8
	comp=Z,5.2nm,0.5s,baz=177,slow=20,SNR=5.3						
ROSC	El Rosal	120.23	39	*e*PKPdf	PKPdf	09 38 48.9	-0.1
ROSC				PKKPbc	PKKPbc	09 48 58.3	+1.8
HORQ	Saladito	120.41	43	*e*P	PKPdf	09 38 49.1	-0.2
CHIC	Chingaza	120.67	39	*e*P	PKPdf	09 38 50.1	+0.2
PRAC	Prado	120.99	41	*e*PKPdf	PKPdf	09 38 49.3	-0.7
PRAC	Prado	120.99	41	*e*P	PKPdf	09 38 49.1	-1.0
VILC	Villavicencio,	121.15	39	*e*P	PKPdf	09 38 49.1	-1.4
MARP	Paez Belalcaza	121.28	42	*e*P	PKPdf	09 38 51.6	+0.7
SOTA	Rioblanco	121.60	43	*e*P	PKPdf	09 38 50.6	-1.2
BETC	Betania	121.66	42	*e*P	PKPdf	09 38 51.1	-0.3
OTAV	Otavalo	122.38	46	*e*PKPdf	PKPdf	09 38 53.3	+0.1
OTAV	Otavalo	122.38	46	*e*P	PKPdf	09 38 53.1	-0.2
OTAV	Otavalo	122.38	46	PKIKP	PKPdf	09 38 53.3	+0.1
LBTB	Lobatse	123.69	269	PKKPbc	PKKPbc	09 48 45.0	+2.1
	comp=Z,12nm,0.6s,baz=241,slow=4.1,SNR=27						
LBTB	Lobatse	123.69	269	*e*PKPdf	PKPdf	09 38 55.3	+0.4
LBTB				PKKPbc	PKKPab	09 48 45.0	+0.8
RPN	Rapa Nui	123.72	95	PKP	PKPdf	09 38 55.2	+0.5
	comp=Z,59nm,0.5s,baz=250,slow=0.7,SNR=4.4						
TSUM	Tsumeb	125.16	280	PKP	PKPdf	09 38 58.1	+0.3
	comp=Z,20nm,0.9s,baz=5.2,slow=4.7,SNR=28						
TSUM				PKKPbc	PKKPbc	09 48 33.8	-3.4
	comp=Z,1.2nm,0.5s,baz=83,slow=2.1,SNR=5.1						
TSUM	Tsumeb	125.16	280	*e*PKPdf	PKPdf	09 38 58.8	+0.9
TSUM				PKKPbc	PKKPbc	09 48 33.8	-3.4
VNDA	Vanda	125.44	174	PKP	PKPdf	09 38 56.5	0.0
	comp=Z,43nm,0.7s,baz=315,slow=4.3,SNR=175						
VNDA				PKKPbc	PKKPbc	09 48 36.9	+0.4
	comp=Z,1.5nm,0.8s,baz=267,slow=3.7,SNR=5.1						
VNDA	Vanda	125.44	174	*e*PKPdf	PKPdf	09 38 56.9	+0.4
VNDA				PKKPbc	PKKPbc	09 48 36.9	+0.4
SBA	Scott Base	126.12	173	*e*PKPdf	PKPdf	09 38 58.6	+0.8
SBA	Scott Base	126.12	173	PKIKP	PKPdf	09 38 58.6	+0.8
BOSA	Boshof	126.25	266	PKP	PKPdf	09 38 60.0	+0.2
	comp=Z,16nm,1.0s,baz=166,slow=2.9,SNR=13						
BOSA				PKKPbc	PKKPab	09 48 34.8	+1.7
	comp=Z,5.1nm,0.9s,baz=230,slow=3.8,SNR=7.3						
MAW	Mawson	128.01	208	PKhKP	PKPpre	09 38 40.6	
	comp=Z,1.4nm,0.5s,baz=151,slow=3.8,SNR=5.2						
MAW				PKP	PKiKP	09 39 02.3	0.0
	comp=Z,40nm,0.8s,baz=33,slow=2.6,SNR=31						
PTGA	Pitinga	130.64	26	*e*PKPdf	PKPdf	09 39 08.4	0.0
NNA	Nana	133.59	53	PKP	PKPdf	09 39 14.2	+0.3
	comp=Z,50nm,0.6s,baz=304,slow=5.7,SNR=26						
NNA				SKPbc	SKPbc	09 41 53.3	-1.6
	comp=Z,22nm,0.8s,baz=304,slow=6.7,SNR=3.9						
NNA	Nana	133.59	53	*i* PKIKP	PKPdf	09 39 14.6	+0.7
SYO	Syowa Base	136.47	211	⇓*e*PKPdf	PKPdf	09 39 19.4	+1.9
SYO	Syowa Base	136.47	211	⇑*e*pPKiKP	pPKiKP	09 41 18.7	-0.1
QSPA	South Pole Qui	137.12	180	PKhKP	PKPpre	09 39 06.3	
	comp=Z,20nm,0.5s,baz=139,slow=0.6,SNR=79						
QSPA				SKPbc	SKPbc	09 42 04.3	+0.3
	comp=Z,89nm,1.0s,baz=347,slow=1.4,SNR=15						
QSPA	South Pole Qui	137.12	180	PKPpre	PKPpre	09 39 06.3	
QSPA				*e*PKPdf	PKiKP	09 39 20.5	-0.4
QSPA				SKPbc	SKPbc	09 42 04.3	+0.3
SAML	Samuel	137.26	34	*e*PKPpre	PKPpre	09 39 09.6	
SAML				*e*PKPdf	PKPdf	09 39 21.2	+0.5
SAML	Samuel	137.26	34	*e*PKHKP	PKPpre	09 39 09.6	
SAML				*e*		09 39 21.2	
RCBR	Riachuelo	138.37	353	*e*PKPdf	PKPdf	09 39 20.9	-1.9
RCBR	Riachuelo	138.37	353	*e*PKIKP	PKPdf	09 39 20.9	-1.9
LPAZ	La Paz	141.68	45	PKhKP	PKPpre	09 39 24.1	
	comp=Z,28nm,0.7s,baz=347,slow=3.8,SNR=34						
LPAZ	La Paz	141.68	45	*e*PKPpre	PKPpre	09 39 23.5	

LPAZ				ePKPdf	PKPdf	09 39 27.3	-2.1
LPAZ	La Paz	141.68	45	ePKHKP	PKPpre	09 39 23.5	
LPAZ				e		09 39 27.3	
MNMC	Minye Minye	143.36	50	ePKPdf	PKPbc	09 39 30.8	+0.6
PB11	IPOC Station P	143.85	50	ePKPbc	PKPdf	09 39 32.4	-0.2
PB01	IPOC Station P	145.00	51	ePKPdf	PKPab	09 39 35.8	0.0
PB04	IPOC Station P	145.69	53	ePKPdf	PKPbc	09 39 36.5	-0.6
NVL	N'lazarevskaya	145.96	208	⇑iPKP2	PKPbc	09 39 35.7	-0.5
NVL				e		09 54 57.9	
NVL				eSSS	SSS	10 07 04.1	
NVL				pmax	pmax		
	comp=Z,428nm,0.7s						
PB10	IPOC Station P	146.40	55	ePKPdf	PKPbc	09 39 38.0	-0.9
PB10	IPOC Station P	146.40	55	iP	PKPdf	09 39 37.6	+1.0
PB14	IPOC Station P	147.36	56	iP	PKPdf	09 39 39.1	+0.5
BDFB	Brasilia	147.79	13	PKP	PKPdf	09 39 39.7	+0.4
	comp=Z,72nm,0.5s,baz=318,slow=1.3,SNR=80						
BDFB				PKPbc	PKPbc	09 39 43.2	+0.3
	comp=Z,72nm,0.5s,baz=207,slow=0.9,SNR=80						
BDFB				pPKPbc	pPKPdf	09 41 40.0	+0.8
	comp=Z,53nm,0.9s,baz=276,slow=1.4,SNR=5.9						
YJA	Yavi	147.97	47	eP	PKPdf	09 39 41.1	+1.3
HJA	Humahuaca	148.89	48	eP	PKPdf	09 39 42.3	+1.1
GO03	Copiap	149.73	60	ePKPdf	PKPdf	09 39 43.6	+1.6
GO03				ePKPbc	PKiKP	09 39 47.8	-0.3
SNAA	Sanae	149.92	203	ePKPdf	PKPdf	09 39 41.0	+0.1
SNAA				ePKPbc	PKPbc	09 39 46.2	-0.2
SNAA				ePKPab	PKPab	09 39 55.0	+0.6
SNAA	Sanae	149.92	203	c iPKIKP	PKPdf	09 39 39.7	-1.2
SLA	San Lorenzo	150.09	49	eP	PKPdf	09 39 43.2	+0.4
LCO	Las Campanas	150.50	62	ePKPdf	PKPdf	09 39 44.8	+1.4
LCO				ePKPbc	PKiKP	09 39 50.1	+0.2
LCO	Las Campanas	150.50	62	eP	PKPdf	09 39 45.0	+1.5
LCO	Las Campanas	150.50	62	ePKIKP	PKPdf	09 39 44.8	+1.4
GO04	Tololo Observa	151.27	64	ePKPdf	PKPdf	09 39 45.3	+0.8
GO04				ePKPbc	PKiKP	09 39 51.2	-0.1
VCA	Vinchina	151.77	58	eP	PKPdf	09 39 46.0	+0.8
AHML	Horco Molle	151.85	52	eP	PKPdf	09 39 45.8	+0.5
AGUA	GUANDACOL	152.16	60	eP	PKPdf	09 39 46.9	+1.2
CYA	Choya	152.90	55	eP	PKPdf	09 39 47.3	+0.6
ROC1	El Roble	153.04	69	ePKPdf	PKPdf	09 39 46.6	-0.4
ROC1	El Roble	153.04	69	eP	PKPdf	09 39 46.6	-0.4
AMOG	MOGNA	153.21	62	eP	PKPdf	09 39 47.5	+0.4
RTLS	Leoncito	153.32	65	eP	PKPdf	09 39 47.7	+0.1
PEL	Peldehue	153.36	68	ePKPbc	PKPbc	09 39 55.4	0.0
RTLL	Cerro Villicun	153.50	63	eP	PKPdf	09 39 48.5	+1.0
ZON	Zonda	153.52	63	eP	PKPdf	09 39 48.5	+0.9
AUSP	Uspallata	153.56	65	eP	PKPdf	09 39 48.1	+0.3
GO05	HualaæØ	153.75	73	ePKPbc	PKPbc	09 39 55.5	-0.6
GO05				ePKPab	PKPab	09 40 11.7	+0.1
RTCV	Cerro Valdivia	153.83	64	eP	PKPdf	09 39 47.7	-0.3
ASAL	Salagasta	154.15	65	eP	PKPdf	09 39 48.4	0.0
ARCO	CERRO ARCO	154.26	66	eP	PKPdf	09 39 49.4	+0.7
AAGR	Agrelo	154.49	66	eP	PKPdf	09 39 48.1	-0.8
AVIZ	Vizcacheras	154.94	66	eP	PKPdf	09 39 50.0	+0.6
CPUP	Villa Florida	155.30	37	PKP	PKPdf	09 39 49.3	-0.7
	comp=Z,23nm,1.0s,baz=26,slow=2.9,SNR=24						
CPUP				PKPab	PKPab	09 40 18.9	+0.6
	comp=Z,78nm,0.6s,baz=337,slow=3.7,SNR=57						
CPUP				PP	PP	09 43 54.7	-2.0
	comp=Z,7.6nm,0.8s,baz=24,slow=4.5,SNR=3.3						
CPUP	Villa Florida	155.30	37	ePKPdf	PKPdf	09 39 50.6	+0.6
CPUP				ePKPab	PKPab	09 40 19.1	+0.7
CPUP				PP	PP	09 43 54.7	-2.0
CPUP	Villa Florida	155.30	37	ePKIKP	PKPdf	09 39 50.6	+0.6
CPUP				e		09 40 19.1	
CPUP						09 43 54.7	
SPB	Sao Paulo	155.68	15	ePKPdf	PKPdf	09 39 51.5	+0.9
TCA	Tanti	155.78	57	iP	PKPdf	09 39 49.8	-0.8
MRA	San Martin	155.92	61	eP	PKPdf	09 39 50.0	-0.8
CANA	Caviahue	155.98	78	eP	PKPdf	09 39 50.3	-0.5
GO06	Curarrehue	156.58	82	ePKPdf	PKPdf	09 39 51.2	-0.2
GO06				ePKPab	PKPab	09 40 24.7	+0.9
PLCA	Paso Flores	157.75	84	PKP	PKPdf	09 39 51.3	-1.5
	comp=Z,8.6nm,0.8s,baz=332,slow=2.9,SNR=10						
PLCA				PKPab	PKPab	09 40 29.5	+0.7
	comp=Z,53nm,0.9s,baz=312,slow=4.7,SNR=15						
PLCA	Paso Flores	157.75	84	ePKPdf	PKPdf	09 39 51.6	-1.2
PLCA				ePKPab	PKPab	09 40 29.9	+1.1
PLCA	Paso Flores	157.75	84	ePKIKP	PKPdf	09 39 51.6	-1.2
PMSA	Palmer Station	158.53	153	PKPab	PKPab	09 40 32.0	+0.7
	comp=Z,70nm,0.8s,baz=201,slow=2.6,SNR=12						
PMSA	Palmer Station	158.53	153	ePKPab	PKPab	09 40 32.4	+1.1
TRQA	Tornquist	161.95	67	ePKPdf	PKPdf	09 39 57.2	-0.3
TRQA	Tornquist	161.95	67	ePKIKP	PKPdf	09 39 57.2	-0.3
EFI	East Falkland	168.04	117	ePKPab	PKPab	09 41 14.1	+0.4
EFI	East Falkland	168.04	117	ePKP2	PKPab	09 41 14.1	+0.4
HOPE	Hope Point	172.56	200	ePKPab	PKPab	09 41 33.7	+0.2

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*ISCJB **29** 09:30:21.1±0.6, 29°.90N±0°.08×138°.6E±0°.1, h421^{km}, mb3.3/7, Error ellipse: s-maj=16.8km s-min=9.5km az=156.9*

*IDC **29** 09:30:22.4±0.8, 29°.98N×138°.80E, h419^{km}±11^{km}, mb3.1/7, mb1 3.2/10, mb1mx2.9/74, mbtmp3.9/10, Error ellipse: s-maj=28.5km s-min=10.1km az=73.0*

ISC 29 09:30:22.5±0.8**, 30°.0N**±0°.1×**138°.8E**±0°.2**, h421**^{km}**, n10,** σ**0^s.97**/12**, mb3.2**/7**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHJ	Hachijo jima 2	3.25	14	P	P	09 31 30.4	+1.2
	14nm,0.3s,baz=116,slow=21,SNR=7.0						
JHJ				S	S	09 32 23.9	+0.5
	16nm,0.3s,baz=52,slow=23,SNR=12						
JCJ	Chichijima	4.11	133	P	P	09 31 36.7	-0.2
	9.1nm,0.3s,baz=9.0,slow=18,SNR=8.5						
JCJ				S	S	09 32 36.0	-1.4
	83nm,0.3s,baz=281,slow=22,SNR=18						
MJAR	Matsushiro Arr	6.58	356	P	P	09 32 01.4	-0.8
	0.8nm,0.3s,baz=174,slow=11,SNR=6.1						
MKAR	Makanchi Array	46.38	308	P	P	09 38 08.6	-0.5
	0.5nm,0.6s,baz=85,slow=10,SNR=3.3						
KURBB	Kurchatov Arra	48.93	313	P	P	09 38 26.6	-1.6
	1.2nm,0.6s,baz=92,slow=7.6,SNR=6.1						
WRA	Warramunga Arr	49.81	186	P	P	09 38 35.9	+0.8
	0.9nm,0.7s,baz=12,slow=7.3,SNR=5.0						
ASAR	Alice Springs	53.53	186	P	P	09 39 02.9	+0.7
	0.5nm,0.5s,baz=358,slow=4.8,SNR=4.1						
BVAR	Borovoye Array	53.94	316	P	P	09 39 04.6	-0.1
	1.8nm,0.5s,baz=93,slow=6.2,SNR=7.7						
YKA	Yellowknife Ar	71.02	28	P	P	09 40 56.2	+0.2
	0.1nm,0.3s,baz=301,slow=6.0,SNR=3.3						
FINES	FINESS Array B	74.06	333	P	P	09 41 13.2	-0.5
	2.6nm,0.9s,baz=52,slow=7.2,SNR=3.3						

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*NIED **29** 09:32:00, 38°.90N×142°.60E, h56^{km}, Mw3.9 Best double couple: M$_0$7.05000×10^{14} NP1:φ$_s$52.00000°, δ30.00000°, λ93.00000°. NP2:φ$_s$229.00000°, δ60.00000°, λ88.00000°.*

*ISCJB **29** 09:32:27.4±0.9, 38°.92N±0°.04×142°.70E±0°.08, h44^{km}±9^{km}, mb3.9/10, Error ellipse: s-maj=11.0km s-min=6.3km az=12.2*

*JMA **29** 09:32:28.3±0.1, 38°.94N×142°.62E, h40^{km}±1^{km}, M3.8*

JMA Felt I J1.

*IDC **29** 09:32:29.8±0.8, 38°.86N×142°.69E, h51^{km}±7^{km}, mb3.6/10, mb1 3.8/15, mb1mx3.5/74, mbtmp3.9/15, Error ellipse: s-maj=18.7km s-min=13.7km az=84.0*

ISC 29 09:32:28.9±0.9**, 38°.89N**±0°.05×**142°.68E**±0°.08**, h45**^{km}±8^{km}**, n38,** σ**1^s.55**/41**, mb3.9**/12**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.81	284	P	Pn	09 32 42.7	-1.3
OFUJ				S	Sn	09 32 52.7	-2.3
MIYJ	Miyakonagasawa	0.96	316	P	Pn	09 32 44.6	-1.4
MIYJ				S	Sn	09 32 56.3	-2.3
JIO	Ouri	1.13	248	P	Pn	09 32 47.5	-0.8
JIO				S	Sn	09 33 01.1	-1.6
JMK	Ichinoseki	1.14	274	P	Pn	09 32 47.7	-0.8
JMK				S	Sn	09 33 01.6	-1.4
JTH	Tanohata	1.23	329	P	Pn	09 32 48.3	-1.4
JOM	Ohasama	1.23	299	P	Pn	09 32 48.7	-1.0
JOM				S	Sn	09 33 03.8	-1.3
JKZ	Kuzumaki	1.52	317	P	Pn	09 32 53.0	-0.7
JKZ				eS	Sn	09 33 11.3	-0.9
JOU	Okura	1.67	252	P	Pn	09 32 55.4	-0.3
JRG	Rokugo	1.67	288	P	Pn	09 32 55.2	-0.5
JANG	Nango	1.74	329	P	Pn	09 32 55.2	-1.4
JANG				eS	Sn	09 33 15.8	-1.8
JMM	Marumori	1.80	236	P	Pn	09 32 57.3	-0.2
JYK	Kaneyama	1.81	272	P	Pn	09 32 57.5	-0.2
MJAR	Matsushiro Arr	4.25	238	P	Pn	09 33 32.4	+1.2
	3.8nm,0.3s,baz=36,slow=13,SNR=25						
MAT	Matsushiro	4.25	238	P	Pn	09 33 33.3	+2.1
ASAJ	Asahikawa	5.22	359	P	Pn	09 33 44.4	-0.1
	2.5nm,0.3s,baz=208,slow=14,SNR=27						
ASAJ				S	Sn	09 34 41.3	-2.2
	0.8nm,0.3s,baz=170,slow=32,SNR=6.5						
JHJ	Hachijo jima 2	6.22	203	P	Pn	09 33 57.2	-1.0
	2.1nm,0.3s,baz=37,slow=20,SNR=4.8						
JHJ				S	Sn	09 35 03.0	-4.9
	13nm,0.3s,baz=232,slow=24,SNR=6.1						
USRK	Ussuriysk Ar.	9.61	307	P	Pn	09 34 47.7	+3.1
	baz=132,slow=33						
KSRS	Korea Array	11.71	268	P	Pn	09 35 21.4	+8.2
	0.2nm,0.3s,baz=77,slow=13,SNR=3.3						
PETK	Petropavlovsk-	17.58	31	P	Pn	09 36 29.5	-1.0
	baz=99,slow=4.0						
SONM	Songino Array	27.64	301	P	P	09 38 12.2	-0.1
	1.5nm,0.8s,baz=87,slow=7.5,SNR=3.0						
H11N2	WAKE ISLAND Hy	28.32	125	T	T	10 08 50.1	
	baz=318,slow=75,SNR=60						
H11N1	WAKE ISLAND Hy	28.33	126	T	T	10 08 52.2	
	baz=318,slow=75,SNR=46						
H11N3	WAKE ISLAND Hy	28.34	125	T	T	10 08 56.2	
	baz=318,slow=75,SNR=40						
H11S1	WAKE ISLAND Hy	29.10	127	T	T	10 09 48.3	
	baz=319,slow=76,SNR=6.4						
H11S3	WAKE ISLAND Hy	29.11	127	T	T	10 09 49.1	
	baz=319,slow=76,SNR=6.0						
H11S2	WAKE ISLAND Hy	29.12	127	T	T	10 09 53.2	
	baz=319,slow=76,SNR=7.1						
ZALV	Zalesovo Beam	41.44	311	P	P	09 40 10.9	0.0
	1.1nm,0.5s,baz=98,slow=9.3,SNR=2.2						
MKAR	Makanchi Array	44.01	301	P	P	09 40 32.2	+0.3
	0.7nm,0.5s,baz=84,slow=11,SNR=8.0						
KURBB	Kurchatov Arra	45.68	307	P	P	09 40 44.9	-0.2
	1.4nm,0.5s,baz=81,slow=8.2,SNR=7.6						
KURBB				pP	pP	09 40 59.0	+1.6
	2.6nm,0.5s,baz=80,slow=8.2,SNR=7.0						
ILAR	Eielson Array	47.40	33	P	P	09 40 58.6	+0.3
	0.7nm,0.7s,baz=255,slow=5.6,SNR=4.4						
BVAR	Borovoye Array	50.09	311	P	P	09 41 20.3	+1.2
	0.6nm,0.5s,baz=78,slow=7.3,SNR=3.1						
INK	Inuvik	52.28	28	P	P	09 41 36.6	+1.3
	1.8nm,1.0s,baz=104,slow=5.3,SNR=3.3						
WRA	Warramunga Arr	59.04	189	P	P	09 42 24.0	-0.3
	1.8nm,0.5s,baz=6.6,slow=7.0,SNR=23						
WRA				pP	pP	09 42 38.1	+1.0
	1.7nm,0.8s,baz=7.9,slow=7.0,SNR=5.6						
ASAR	Alice Springs	62.77	189	P	P	09 42 49.8	+0.2
	0.6nm,0.7s,baz=14,slow=7.7,SNR=6.3						
ASAR				pP	pP	09 43 04.4	+1.9
	0.7nm,0.8s,baz=12,slow=6.7,SNR=3.8						
FINES	FINESS Array B	67.64	332	pP	pP	09 43 36.3	+2.5
	1.8nm,0.9s,baz=46,slow=11,SNR=3.6						
AKASG	Malin Array Be	73.44	323	pP	pP	09 44 10.3	+0.9
	0.8nm,0.5s,baz=44,slow=7.4,SNR=3.2						
TXAR	Lajitas Array	88.20	53	P	P	09 45 15.9	+0.4
	0.1nm,0.5s,baz=298,slow=1.9,SNR=3.4						
QSPA	South Pole Qui	128.63	180	PKP	PKPdf	09 51 30.2	+0.1
	5.6nm,1.0s,baz=218,slow=3.1,SNR=4.1						

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*NEIC **29** 09:52:53.8±3.0, 31°.42S×179°.36W, h159^{km}±25^{km}, mb4.3/6, Error ellipse: s-maj=26.5km s-min=13.7km az=210.0*

*ISCJB **29** 09:52:59.3±0.6, 31°.77S±0°.04×179°.8W±0°.1, h200^{km}, mb4.0/8, Error ellipse: s-maj=12.8km s-min=4.9km az=10.9*

*IDC **29** 09:53:00.4±8.0, 31°.98S×179°.41W, h222^{km}±75^{km}, mb3.9/2, mb1 4.0/3, mb1mx3.3/42, mbtmp4.3/3, Error ellipse: s-maj=75.7km s-min=29.3km az=12.0*

*WEL **29** 09:53:02.8±0.7, 32°S±9°×18°0W±1°9, h33^{km}, ML5.1/9*

ISC 29 09:52:59.7±0.7**, 31°.74S**±0°.07×**179°.8W**±0°.1**, h200**^{km}**, n50,** σ**1^s.50**/59**, mb4.2**/8**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
GLKZ	Green Lake	2.94	33	S	Sn	09 54 26.2	-0.7
WMGZ	Waiomatatini S	6.24	193	P	Pn	09 54 31.1	+1.1
HAZ	Te Kaha	6.33	198	P	Pn	09 54 32.3	+1.2
HAZ				S	Sn	09 55 44.3	+0.7
PKGZ	Pakihiroa	6.38	196	P	Pn	09 54 32.0	+0.2
PKGZ				S	Sn	09 55 42.1	-2.9
WCZ	Waipu Caves	6.44	228	P	Pn	09 54 34.2	+1.6
PUZ	Puketiti	6.52	194	P	Pn	09 54 35.1	+1.5
RUGZ	Raukumara Rang	6.55	198	P	Pn	09 54 35.3	+1.2
RUGZ				S	Sn	09 55 47.1	-1.9
TWGZ	Tauwhareparae	6.68	195	P	Pn	09 54 38.5	+2.8
TWGZ				S	Sn	09 55 51.9	0.0
MWZ	Matawai	6.94	198	P	Pn	09 54 38.5	-0.6
MWZ				S	Sn	09 55 56.0	-2.0
TKGZ	Te Karaka	6.96	196	P	Pn	09 54 38.3	-1.0
TKGZ				S	Sn	09 55 56.7	-1.7
URZ	Urewera	6.99	201	P	Pn	09 54 39.7	+0.1
	0.5nm,0.3s,baz=272,slow=4.3,SNR=8.2						
URZ				S	Sn	09 55 58.0	-1.1
	3.1nm,0.3s,baz=204,slow=22,SNR=8.6						
URZ	Urewera	6.99	201	P	Pn	09 54 39.8	+0.2
URZ				S	Sn	09 55 57.2	-1.9
RAGZ	Rawiri	7.12	198	P	Pn	09 54 42.1	+0.6
RAGZ				S	Sn	09 56 00.5	-1.8
RIGZ	Rimuhau	7.23	196	P	Pn	09 54 43.6	+0.6
BKZ	Black Stump Fm	8.01	201	ePn	Pn	09 54 54.4	+1.4
BFZ	Birch Farm	9.48	199	ePn	Pn	09 55 14.8	+2.7
THZ	Tophouse	11.59	208	ePn	Pn	09 55 39.5	+0.2
KHZ	Kahutara	11.91	205	ePn	Pn	09 55 42.1	-1.2
MQZ	McQueen's Vall	13.35	204	ePn	Pn	09 56 02.2	+0.8
AS01	Alice Springs	41.51	269	eP	P	10 00 28.2	+0.7
AS31	Alice Springs	41.55	269	eP	P	10 00 28.8	+0.9
	1.0nm,0.7s						
ASAR	Alice Springs	41.55	269	P	P	10 00 29.0	+1.1
	2.1nm,0.3s,baz=107,slow=7.5,SNR=62						
WB2	Warramunga Arr	42.65	275	eP	P	10 00 37.8	+1.0
	15nm,1.3s						
WRAB	Tennant Creek	42.66	275	eP	P	10 00 37.7	+0.9
	8.5nm,1.1s						
WRAB				epP	pP	10 01 19.0	-0.6
WR1	Warramunga Arr	42.66	275	eP	P	10 00 37.8	+0.9
	6.6nm,0.6s						
WRA	Warramunga Arr	42.66	275	P	P	10 00 37.8	+0.9
	6.9nm,0.7s,baz=111,slow=8.0,SNR=61						
QSPA	South Pole Qui	58.37	180	eP	P	10 02 35.9	+2.0
	5.3nm,0.7s						
SNAA	Sanae	76.85	179	P	P	10 04 29.7	+0.5
SNAA	Sanae	76.85	179	eP	P	10 04 29.6	+0.5
	2.2nm,0.9s						
VNA3	Neumayer Olymp	77.06	177	P	P	10 04 30.3	0.0
VNA1	Neumayer--Stat	77.72	177	P	P	10 04 34.6	+0.8
MTUM	Tungsten Hills	89.39	44	eP	P	10 05 27.2	-6.5
MK01	Makanchi Array	117.46	310	ePKPdf	PKPdf	10 11 20.1	-1.1
MK32	Makanchi Array	117.47	310	ePKPdf	PKPdf	10 11 19.4	-1.8
MKAR	Makanchi Array	117.47	310	PKP	PKPdf	10 11 19.4	-1.8
	0.3nm,0.6s,baz=81,slow=1.6,SNR=4.1						
KURK	Kurchatov	120.88	313	ePKPdf	PKPdf	10 11 26.3	-1.3
KURBB	Kurchatov Arra	120.91	313	PKP	PKPdf	10 11 26.3	-1.4
	0.6nm,0.4s,baz=116,slow=2.2,SNR=9.1						
BVAR	Borovoye Array	126.30	315	PKP	PKPdf	10 11 37.4	-0.6
	0.9nm,0.4s,baz=125,slow=2.0,SNR=6.0						
KBZ	Khabaz	144.57	302	PKP	PKPbc	10 12 11.2	-0.1
	1.2nm,0.6s,baz=168,slow=4.6,SNR=3.8						
FIA1	FINESS Array S	145.85	338	ePKPdf	PKPdf	10 12 13.6	-0.1
FIA1				ePKPdf	PKPbc	10 12 13.7	-1.0
FIA0	FINESS Array S	145.85	338	ePKPdf	PKPdf	10 12 13.3	-0.4
FINES	FINESS Array B	145.85	338	PKPbc	PKPdf	10 12 13.3	-0.4
	1.4nm,0.4s,baz=43,slow=4.2,SNR=33						
NC303	NORSAR Array S	149.62	349	ePKPbc	PKPbc	10 12 23.8	-0.9
NB2	NORSAR Subarra	149.82	349	PKP	PKPdf	10 12 23.9	+3.6
	comp=Z,0.3nm,0.4s,baz=17,slow=2.6						
NB200	NORSAR Array S	149.82	349	ePKPbc	PKPdf	10 12 22.8	+2.4
NOA	NORSAR Array B	149.82	349	PKPbc	PKPdf	10 12 22.8	+2.4
	comp=Z,0.5nm,0.5s,baz=16,slow=4.1,SNR=4.2						
HFS	Hagfors	150.22	346	PKPbc	PKPdf	10 12 24.3	+3.4
	comp=Z,1.3nm,0.5s,baz=110,slow=2.1,SNR=11						
AKASG	Malin Array Be	151.40	320	PKPbc	PKPbc	10 12 28.0	-1.2
	comp=Z,0.8nm,0.5s,baz=54,slow=2.8,SNR=3.7						
BR101	Keskin Array S	151.86	296	ePKPbc	PKPbc	10 12 29.4	-1.5
BRTR	Keskin Array B	151.86	296	PKPbc	PKPbc	10 12 29.4	-1.5
	comp=Z,0.7nm,0.6s,baz=126,slow=6.3,SNR=5.1						

IDC 29 09:59:19.3±1.7**, 4°.65S**×**144°.29E, h0**^{km}**, mb3.5**/2**, mb1 3.8**/4**, mb1mx3.5**/44**, mbtmp3.6**/4**, ML3.5**/1**, MS3.6**/2**, Ms1 3.6**/2**, ms1mx2.8**/38**, Error ellipse: s-maj=46.2km s-min=27.5km az=99.0, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PMG	Port Moresby	5.52	149	Pn	Pn	10 00 42.1	-0.7
	1.4nm,0.3s,baz=232,slow=17,SNR=4.3						
PMG				Sn	Sn	10 01 50.0	+3.0
	1.7nm,0.3s,baz=116,slow=12,SNR=2.8						
WRA	Warramunga Arr	18.03	212	P	Pn	10 03 31.4	-0.1
	0.2nm,0.3s,baz=36,slow=13,SNR=6.0						
ASAR	Alice Springs	21.39	207	P	P	10 04 08.9	+0.1
	1.8nm,0.8s,baz=40,slow=7.5,SNR=6.5						
JNU	Nakatsue	39.66	342	LR	LR	10 20 38.2	
	comp=Z,119nm,20.0s,baz=125,slow=32						
KSRS	Korea Array	44.58	341	LR	LR	10 23 49.4	
	comp=Z,45nm,21.2s,baz=175,slow=33						
ILAR	Eielson Array	85.32	24	P	P	10 11 58.0	0.0
	0.3nm,0.6s,baz=268,slow=3.8,SNR=3.4						

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*IDC **29** 10:09:16.9±1.9, 18°.84S×177°.79W, h564^{km}±19^{km}, mb2.7/6, mb1 3.1/7, mb1mx2.8/45, mbtmp3.7/7, Error ellipse: s-maj=77.9km s-min=13.3km az=149.0*

ISC 29 10:09:14.9±1.4**, 18°.9S**±0°.6×**177°.9W**±0°.4**, h532**^{km}**, n9,** σ**1^s.87**/12**, mb3.2**/6**, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
AFI	Afiamalu	7.71	51	P	P	10 11 11.7	+2.3
	3.4nm,0.3s,baz=263,slow=8.1,SNR=7.7						
AFI				S	S	10 12 43.6	+0.5
	0.9nm,0.3s,baz=49,slow=19,SNR=2.5						
STKA	Stephens Creek	38.57	242	P	P	10 15 53.2	+1.0
	1.3nm,0.8s,baz=90,slow=12,SNR=3.3						
WRA	Warramunga Arr	44.90	260	P	P	10 16 43.2	+0.8
	0.6nm,0.4s,baz=98,slow=7.2,SNR=41						
WRA				PcP	PcP	10 18 11.2	-1.5
	0.2nm,0.3s,baz=92,slow=3.5,SNR=4.9						
ASAR	Alice Springs	44.97	255	P	P	10 16 43.9	+0.9
	0.9nm,0.4s,baz=86,slow=8.3,SNR=27						
ASAR				PcP	PcP	10 18 11.3	-1.6
	0.3nm,0.5s,baz=99,slow=3.6,SNR=5.5						
TXAR	Lajitas Array	86.14	57	P	P	10 20 57.6	-2.5
	0.1nm,0.6s,baz=224,slow=7.5,SNR=3.1						
ILAR	Eielson Array	86.73	13	P	P	10 21 00.1	-1.8
	0.3nm,0.8s,baz=224,slow=5.0,SNR=3.3						
PDAR	Pinedale Array	87.75	43	P	P	10 21 07.8	+0.3
	0.2nm,0.8s,baz=238,slow=5.2,SNR=2.2						
GERES	GERESS Array B	148.66	345	PKPbc	PKPdf	10 28 00.5	+2.7
	0.5nm,0.7s,baz=52,slow=6.4,SNR=3.0						
DAVOX	Davos/Dischmat	151.44	349	PKPbc	PKPbc	10 28 07.6	-1.4
	1.3nm,0.6s,baz=214,slow=3.6,SNR=2.8						

MEX 29 10:18:45.5±1.0**, 16°.97N**×**95°.10W, h126**^{km}±17^{km}**, MD3.9, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
HUIG	Huatulco	1.54	219	eP	Pn	10 19 12.4	-1.3
HUIG				eS	Sn	10 19 33.4	-1.9
HUIG				iS		10 19 34.4	
VHO	Vista Hermosa	1.57	274	eP	Pn	10 19 13.7	-0.6
VHO				eS	Sn	10 19 33.9	-2.3
TGIG		1.90	95	eP	Pn	10 19 16.9	-1.2
TGIG				iS	Sn	10 19 40.9	-2.1
PNIG	Pinotepa	2.96	259	eP	Pn	10 19 29.4	-2.1
PNIG				eS	Sn	10 20 05.2	-1.8
TLIG	Tlapa	3.37	281	eP	Pn	10 19 36.0	-0.9
TLIG				iS	Sn	10 20 15.2	-1.4

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*IDC **29** 10:20:28.6±3.8, 35°.89N×69°.88E, h79^{km}±34^{km}, mb3.3/6, mb1 3.5/10, mb1mx3.2/63, mbtmp3.7/10, MS3.7/1, Ms1 3.7/1, ms1mx2.5/50, Error ellipse: s-maj=25.9km s-min=19.5km az=173.0*

*ISCJB **29** 10:20:33.8±0.5, 36°.27N±0°.03×69°.76E±0°.06, h150^{km}, mb3.3/6, Error ellipse: s-maj=6.6km s-min=4.8km az=178.4*

*NNC **29** 10:20:37.5±2.5, 36°.53N×69°.61E, h133^{km}±41^{km}, mb3.7, mpv4.4, Error ellipse: s-maj=22.6km s-min=20.4km az=149.0*

ISC 29 10:20:34.5±0.7**, 36°.26N**±0°.05×**69°.74E**±0°.07**, h150**^{km}**, n34,** σ**1^s.26**/36**, mb3.3**/6**, 8C-4D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
CEP	Cherat	3.02	143	P	Pn	10 21 22.3	0.0
CEP				S	Sn	10 21 58.0	-1.2
CEP	Cherat	3.02	143	P	Sn	10 21 57.7	-1.5
THW	Thamme Wali	3.84	154	P	Pn	10 21 32.1	-0.6
CHCP	Chirah Chowk	3.89	131	P	Pn	10 21 33.5	+0.1
SFK	Sufi-Kurgan	4.78	37	⇓P	Pn	10 21 45.6	+0.4
	18nm,0.3s						
SFK				⇓S	Sn	10 22 39.9	-0.3
	90nm,0.3s						
SARP	Sargodha	4.97	150	P	Pn	10 21 46.4	-1.2
MNAS	Manas	6.57	18	⇑P	Pn	10 22 08.9	0.0
	11nm,0.3s						
MNAS				⇑S	Sn	10 23 20.7	-2.2
	60nm,0.7s						
AML	Almayashu	6.62	26	P	Pn	10 22 09.6	-0.2
	SNR=60						
KK31	Karatay Array	6.86	5	⇓P	Pn	10 22 13.0	+0.5
	18nm,0.4s,baz=187,slow=14,SNR=182						
KK31				⇑S	Sn	10 23 26.9	-2.6
	7.6nm,0.3s,baz=189,slow=23,SNR=5.5						
UCH	Uchtor	7.01	30	P	Pn	10 22 14.8	-0.3
	SNR=111						
EKS2	Erkin-Say	7.11	25	P	Pn	10 22 16.3	+0.2
	SNR=24						
KZA	Kyzart	7.21	35	P	Pn	10 22 17.2	-0.5
	SNR=19						
AAK	Ala-Archa	7.35	29	⇑P	Pn	10 22 19.3	0.0
	5.3nm,0.3s						
AAK				⇑S	Sn	10 23 39.9	-1.6
	46nm,0.7s						
AAK	Ala-Archa	7.35	29	P	Pn	10 22 19.6	+0.3
	SNR=13						
KBK	Karagaybulak	7.55	31	P	Pn	10 22 22.7	+0.7
	SNR=5.6						
CHMS	Chumysh	7.76	28	P	Pn	10 22 24.8	+0.2
	SNR=13						
USP	Ospenovka	7.90	26	P	Pn	10 22 26.1	-0.4
	SNR=17						
TKM2	Tokmak 2	8.04	32	P	Pn	10 22 28.4	-0.2
	SNR=19						
GEYT	Alibeck	9.43	284	P	Pn	10 22 44.9	-2.1
	0.4nm,0.3s,baz=118,slow=12,SNR=4.1						
GEYT				S	Sn	10 24 30.6	-0.9
	0.6nm,0.3s,baz=261,slow=24,SNR=4.0						
MK31	Makanchi Array	14.09	38	⇓P	Pn	10 23 47.4	-0.1
	2.5nm,0.5s,baz=212,slow=11,SNR=7.0						
MKAR	Makanchi Array	14.09	38	P	Pn	10 23 47.6	+0.1
	0.6nm,0.3s,baz=220,slow=13,SNR=11						
AB31	Akbulak array	14.82	334	⇑P	P	10 23 57.6	-1.0
	1.4nm,0.3s,baz=148,slow=13,SNR=86						
KURBB	Kurchatov Arra	15.69	21	P	P	10 24 07.1	-1.1
	0.1nm,0.3s,baz=208,slow=11,SNR=7.6						
KURBB	Kurchatov Arra	15.69	21	⇑P	P	10 24 07.0	-1.1
	9.1nm,0.5s						
AKTO	Aktyubinsk	16.50	333	⇑P	Pn	10 24 19.3	+2.1
	6.9nm,0.9s						
BVAR	Borovoye Array	16.77	1	P	Pn	10 24 22.3	+2.0
	1.1nm,0.3s,baz=165,slow=12,SNR=18						
ZALV	Zalesovo Beam	20.56	26	P	Pn	10 25 03.8	-1.4
	22nm,0.5s,baz=219,slow=11,SNR=43						
ARCES	ARCESS Array B	40.98	338	P	P	10 28 07.1	+4.9
	1.8nm,0.8s,baz=113,slow=8.9,SNR=2.7						
HFS	Hagfors	42.62	322	P	P	10 28 20.4	+4.8
	1.4nm,0.7s,baz=104,slow=11,SNR=4.0						
JOW	Kunigami	50.11	83	LR	LR	10 52 56.6	
	comp=Z,80nm,18.6s,baz=101,slow=39						
TORD	Torodi Ar. Bea	64.69	268	P	P	10 30 58.7	+2.0
	0.5nm,0.8s,baz=34,slow=5.6						
YKA	Yellowknife Ar	81.52	2	P	P	10 32 37.8	+3.1
	0.2nm,0.6s,baz=350,slow=5.3,SNR=3.6						
WRA	Warramunga Arr	82.74	121	P	P	10 32 42.4	+0.6
	0.3nm,0.9s,baz=329,slow=4.7,SNR=3.5						
ASAR	Alice Springs	84.96	124	P	P	10 32 54.1	+1.1
	0.2nm,0.8s,baz=303,slow=4.1,SNR=3.3						

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*IDC **29** 10:27:29.6±1.6, 17°.41S×178°.97W, h505^{km}±21^{km}, mb3.7/5, mb1 3.9/6, mb1mx3.2/45, mbtmp4.6/6, Error ellipse:*

s-maj=27.3km s-min=18.4km az=156.0

*ISCJB **29** 10:27:30.2±0.8, 17°.3S±0°.2×178°.9W±0°.1, h539^{km}, mb4.2/5, Error ellipse: s-maj=33.2km s-min=10.9km az=156.3*

ISC 29 10:27:31.5±0.8, 17°.3S±0°.2×178°.8W±0°.1, h539^{km}, n7, σ1^{s}.69/10, mb4.0/5, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**7.56**	**64**	P	**P**	**10 29 24.7**	**+0.1**
	8.4nm,0.3s,baz=65,slow=2.2,SNR=16						
AFI				S	**S**	**10 30 56.1**	**-1.3**
	1.1nm,0.3s,baz=37,slow=20,SNR=2.4						
STKA	**Stephens Creek**	**38.59**	**240**	P	**P**	**10 34 07.9**	**-0.6**
	12nm,0.6s,baz=94,slow=8.3,SNR=49						
WRA	**Warramunga Arr**	**44.39**	**259**	P	**P**	**10 34 52.6**	**-1.9**
	3.8nm,0.8s,baz=95,slow=7.9,SNR=46						
ASAR	**Alice Springs**	**44.60**	**254**	P	**P**	**10 34 55.0**	**-1.2**
	34nm,0.6s,baz=89,slow=7.9,SNR=681						
ASAR				PcP	**PcP**	**10 36 28.0**	**+0.5**
	0.9nm,0.5s,baz=102,slow=3.9,SNR=4.1						
ASAR				ScP	**ScP**	**10 39 31.8**	**+3.3**
	0.4nm,0.6s,baz=108,slow=3.5,SNR=5.3						
MJAR	**Matsushiro Arr**	**67.24**	**323**	P	**P**	**10 37 33.0**	**+0.6**
	1.0nm,0.7s,baz=156,slow=6.8,SNR=5.1						
QSPA	**South Pole Qui**	**72.71**	**180**	P	**P**	**10 38 05.1**	**+0.4**
	1.6nm,0.7s,baz=109,slow=4.6,SNR=6.3						
BRTR	**Keskin Array B**	**144.13**	**315**	PKP	**PKPdf**	**10 46 07.4**	**+1.0**
	0.5nm,0.6s,baz=111,slow=4.4,SNR=3.2						

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*IDC **29** 10:34:17.3±1.8, 52°.53S×19°.30E, h0^{km}, mb3.6/2, mb1 3.7/2, mb1mx3.4/47, mbtmp3.6/2, Error ellipse: s-maj=69.1km s-min=51.2km az=66.0*

ISC 29 10:34:18.4±1.7, 52°.4S±0°.3×19°.3E±0°.3, h10^{km}, n7, σ1^{s}.90/7, Southwest of Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SNAA	**Sanae**	**21.67**	**199**	P	**P**	**10 39 09.8**	**+1.0**
VNA1	**Neumayer--Stat**	**22.14**	**204**	P	**P**	**10 39 16.2**	**+2.4**
VNA3	**Neumayer Olymp**	**22.88**	**204**	P	**P**	**10 39 19.5**	**-2.1**
QSPA	**South Pole Qui**	**37.83**	**180**	P	**P**	**10 41 33.9**	**-0.8**
	1.3nm,0.6s,baz=257,slow=6.0,SNR=5.9						
ASAR	**Alice Springs**	**85.35**	**123**	P	**P**	**10 46 56.1**	**+0.3**
	0.1nm,0.5s,baz=205,slow=4.1,SNR=3.6						
PDAR	**Pinedale Array**	**144.83**	**275**	PKP	**PKPab**	**10 53 53.0**	**-1.1**
	0.3nm,0.6s,baz=125,slow=5.6,SNR=5.2						
NVAR	**Mina Array Bea**	**147.59**	**262**	PKPbc	**PKPbc**	**10 54 03.6**	**+1.1**
	0.4nm,0.7s,baz=138,slow=4.7,SNR=6.0						

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*SJA **29** 10:49:17.6±0.3, 33°.55S×72°.14W, h10^{km}, ML3.5, MW3.3*

*GUC **29** 10:49:21.0±0.6, 33°.51S×71°.89W, h33^{km}±209^{km}, ML3.2*

ISC 29 10:49:18.2±2.1, 33°.54S±0°.05×72°.01W±0°.08, h6^{km}±13^{km}, n18, σ1^{s}.19/29, 1D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROC1	**El Roble**	**1.00**	**56**	*e*P	**Pn**	**10 49 38.8**	**-0.2**
ROCH	**El Roble**	**1.01**	**56**	⇓*e*P	**Pb**	**10 49 38.0**	**-0.2**
ROCH				*i* S	**Sg**	**10 49 49.7**	**-0.9**
ROCH				IAML		10 50 02.1	
	comp=N,796nm,0.5s						
PEL	**Peldehue**	**1.18**	**71**	*e*P	**Pn**	**10 49 41.1**	**-0.1**
PEL				*i* S	**Sb**	**10 49 56.6**	**+0.2**
PEL				IAML		10 50 02.1	
	comp=N,1μm,0.6s						
CLCH	**Cerro Calan**	**1.24**	**84**	*e*P	**Pg**	**10 49 42.4**	**+0.5**
CLCH				*i* S	**Sg**	**10 49 57.9**	**-0.2**
FCH	**Farellones**	**1.45**	**82**	*e*P	**Pg**	**10 49 46.0**	**0.0**
FCH				*i* S	**Sg**	**10 50 05.1**	**+0.2**
FCH				IAML		10 50 10.2	
	comp=E,1μm,0.3s						
GO05	**HualaæØ**	**1.47**	**177**	*e*P	**Pn**	**10 49 45.4**	**+0.2**
GO05				*e*S	**Sg**	**10 50 05.6**	**+0.1**
LMEL	**Las Melosas**	**1.54**	**102**	*e*P	**Pb**	**10 49 46.8**	**-0.3**
LMEL				*i* S	**Sb**	**10 50 06.9**	**0.0**
LMEL				IAML		10 50 09.5	
	comp=N,1μm,0.2s						
AUSP	**Uspallata**	**2.57**	**60**	*e*P	**Pb**	**10 50 04.9**	**+0.1**
AUSP				*e*S	**Sg**	**10 50 39.4**	**-1.2**
ARCO	**CERRO ARCO**	**2.67**	**76**	*e*P	**Pb**	**10 50 08.0**	**+1.5**
ARCO				IAML		10 50 11.7	
	comp=Z,208nm,0.5s						
ARCO				*e*S	**Sg**	**10 50 45.9**	**+1.9**
AAGR	**Agrelo**	**2.70**	**81**	*e*P	**Pb**	**10 50 07.8**	**+0.8**
ASAL	**Salagasta**	**2.83**	**71**	*e*P	**Pb**	**10 50 09.6**	**+0.5**
ASAL				*e*S	**Sg**	**10 50 47.5**	**-1.5**
AVIZ	**Vizcacheras**	**2.92**	**90**	*e*P	**Pb**	**10 50 10.1**	**-0.5**
RTCV	**Cerro Valdivia**	**3.37**	**61**	*e*P	**Pb**	**10 50 16.8**	**-1.5**
RTLL	**Cerro Villicun**	**3.71**	**55**	*e*P	**Pb**	**10 50 22.6**	**-1.6**
RTLL				*e*S	**Sg**	**10 51 15.8**	**-1.6**
RTLL				IAML		10 51 16.1	
	comp=Z,49nm,0.5s						
AMOG	**MOGNA**	**3.95**	**50**	*e*P	**Pn**	**10 50 21.8**	**+2.5**
AROD	**Rodeo**	**3.99**	**33**	*e*P	**Pn**	**10 50 22.5**	**+2.3**
AROD				*e*S	**Sb**	**10 51 16.9**	**-0.9**
CANA	**Caviahue**	**4.41**	**170**	*e*S	**Sn**	**10 51 16.1**	**-1.3**
VCA	**Vinchina**	**5.79**	**35**	*e*P	**Pn**	**10 50 46.2**	**+1.4**
VCA				IAML		10 52 14.5	
	comp=Z,26nm,0.5s						

IDC 29 11:03:59.9±2.7, 6°.20S×148°.42E, h97^{km}±23^{km}, mb3.5/2, mb1 3.8/4, mb1mx3.3/47, mbtmp3.9/4, Error ellipse: s-maj=73.4km s-min=13.9km az=124.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**3.42**	**201**	P	Pn	11 04 50.5	-0.7
	19nm,0.3s,baz=35,slow=7.6,SNR=39						
PMG				S	Sn	11 05 31.5	+0.5
	16nm,0.3s,baz=359,slow=21,SNR=10						
WRA	**Warramunga Arr**	**19.34**	**224**	P	Pn	11 08 18.7	-1.0
	0.5nm,0.3s,baz=51,slow=10,SNR=34						
WRA				S	S	11 11 50.1	-1.4
	0.0nm,0.3s,baz=51,slow=17,SNR=3.1						
ASAR	**Alice Springs**	**22.29**	**217**	P	P	11 08 50.5	+1.2
	2.4nm,0.6s,baz=52,slow=9.1,SNR=57						
ASAR				PcP	PcP	11 12 43.1	+1.2
	0.6nm,0.8s,baz=45,slow=4.2,SNR=5.1						
ASAR				S	S	11 12 50.1	+1.9
	1.6nm,1.1s,baz=35,slow=22,SNR=5.2						
ILAR	**Eielson Array**	**85.11**	**23**	P	P	11 16 23.2	-1.5
	0.4nm,0.6s,baz=249,slow=4.7,SNR=7.7						

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*IDC **29** 11:09:52.7±1.1, 17°.63S×173°.16W, h0^{km}, mb3.9/6, mb1 4.1/7, mb1mx3.7/54, mbtmp3.9/7, ML3.6/1, MS3.5/3, Ms1 3.5/3, ms1mx2.8/43, Error ellipse: s-maj=50.8km s-min=20.2km az=134.0*

*ISCJB **29** 11:09:55.5±0.6, 17°.47S±0°.10×173°.3W±0°.1, h28^{km}, mb4.4/15, MS3.9/2, Error ellipse: s-maj=21.6km s-min=7.7km az=34.5*

*NEIC **29** 11:09:55.2±0.5, 17°.59S×173°.28W, h10^{km}, mb4.6/9, Error ellipse: s-maj=20.0km s-min=8.9km az=127.0*

ISC 29 11:09:57.0±0.9, 17°.5S±0°.1×173°.3W±0°.2, h28^{km}, n27, σ1^{s}.21/26, mb4.5/15, 1D, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AFI	**Afiamalu**	**3.83**	**23**	Pn	**Pn**	**11 10 52.6**	**-1.7**
	3.9nm,0.3s,baz=222,slow=13,SNR=9.5						
AFI				Sn	**Sn**	**11 11 36.3**	**-2.2**
	11nm,0.3s,baz=329,slow=22,SNR=5.8						
AFI	**Afiamalu**	**3.83**	**23**	*e*Pn	**Pn**	**11 10 55.2**	**+0.9**
AFI				*e*Sn	**Sn**	**11 11 38.7**	**+0.2**
RAR	**Rarotonga**	**13.30**	**108**	LR	LR	11 17 17.0	
	comp=Z,46nm,20.0s,baz=276,slow=34						
URZ	**Urewera**	**22.35**	**200**	P	**P**	**11 14 50.9**	**-1.8**
	16nm,0.7s,baz=54,slow=11,SNR=5.7						
URZ	**Urewera**	**22.35**	**200**	*e*P	**P**	**11 14 51.7**	**-1.0**
	36nm,1.2s						
BKZ	**Black Stump Fm**	**23.37**	**200**	*e*P	**P**	**11 15 01.3**	**-2.1**
	17nm,1.1s						
HIZ	**Hauiti**	**23.38**	**204**	*e*P	**P**	**11 15 04.0**	**+0.5**
	98nm,1.0s						
WC3	**Warramunga Arr**	**49.46**	**258**	*e*P	**P**	**11 18 45.9**	**+0.7**
	4.9nm,1.0s						
WB2	**Warramunga Arr**	**49.48**	**258**	*e*P	**P**	**11 18 46.0**	**+0.7**
	6.7nm,1.1s						
WRAB	**Tennant Creek**	**49.48**	**258**	*e*P	**P**	**11 18 45.8**	**+0.5**
	6.0nm,1.1s						
WR1	**Warramunga Arr**	**49.49**	**258**	*e*P	**P**	**11 18 45.6**	**+0.2**
	7.0nm,1.1s						
WRA	**Warramunga Arr**	**49.49**	**258**	P	**P**	**11 18 45.6**	**+0.2**
	1.6nm,0.9s,baz=98,slow=6.7,SNR=25						
AS01	**Alice Springs**	**49.54**	**254**	*e*P	**P**	**11 18 46.5**	**+0.7**
AS31	**Alice Springs**	**49.59**	**254**	*e*P	**P**	**11 18 46.5**	**+0.4**
	1.2nm,1.0s						
ASAR	**Alice Springs**	**49.59**	**254**	P	**P**	**11 18 46.1**	**0.0**
	2.9nm,0.8s,baz=91,slow=8.4,SNR=30						
SOEI	**Soe**	**60.94**	**268**	*e*P	**P**	**11 20 07.8**	**-0.4**
	19nm,0.9s						
CTM	**Castle Mountai**	**73.01**	**43**	*e*P	**P**	**11 21 27.3**	**+2.8**
NVAR	**Mina Array Bea**	**75.80**	**42**	P	**P**	**11 21 40.6**	**-0.2**
	0.6nm,0.9s,baz=220,slow=6.7,SNR=3.9						
BWN	**Browne**	**83.44**	**10**	*e*P	**P**	**11 22 21.5**	**0.0**
	69nm,1.2s						
PDAR	**Pinedale Array**	**83.74**	**42**	P	**P**	**11 22 23.6**	**-0.2**
	0.2nm,0.6s,baz=240,slow=7.1,SNR=3.3						
ILAR	**Eielson Array**	**84.45**	**11**	P	**P**	**11 22 27.9**	**+1.3**
	0.3nm,0.6s,baz=223,slow=5.6,SNR=4.6						
MAW	**Mawson**	**85.87**	**199**	LR	LR	11 56 42.0	
	comp=Z,51nm,21.2s,baz=236,slow=33						
PSI	**Prapat**	**88.70**	**273**	LR	LR	12 02 13.6	
	comp=Z,55nm,19.3s,baz=266,slow=35						
CLL	**Collm**	**145.87**	**353**	⇓*i*PKPbc	**PKPab**	**11 29 35.6**	**+1.6**
	comp=Z,8.0nm,1.1s						
CLL				*e*		11 29 47.0	
	comp=Z,8.0nm,1.2s						
BR101	**Keskin Array S**	**147.79**	**319**	*e*PKPbc	**PKPab**	**11 29 41.9**	**-0.2**
BRTR	**Keskin Array B**	**147.79**	**319**	PKPbc	**PKPab**	**11 29 41.9**	**-0.3**
	comp=Z,1.0nm,1.0s,baz=132,slow=2.1,SNR=3.8						
GERES	**GERESS Array B**	**148.19**	**351**	PKPbc	**PKPab**	**11 29 42.1**	**-1.3**
	comp=Z,0.5nm,0.8s,baz=95,slow=1.6,SNR=3.8						

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*NIED **29** 11:21:00, 38°.00N×144°.10E, h5^{km}, Mw4.2 Best double couple: M$_0$2.44000×10^{15} NP1:ϕ$_s$176.00000°, δ36.00000°, λ-104.00000°. NP2:ϕ$_s$13.00000°, δ55.00000°, λ-80.00000°.*

*IDC **29** 11:21:41.1±0.6, 37°.90N×144°.27E, h0^{km}, mb4.4/30, mb1 4.5/36, mb1mx4.4/71, mbtmp4.4/36, ML4.1/5, MS3.4/17, Ms1 3.4/17, ms1mx3.1/63, Error ellipse: s-maj=14.8km s-min=11.8km az=150.0*

*ISCJB **29** 11:21:42.4±0.9, 38°.01N±0°.03×144°.16E±0°.02, h11^{km}±5^{km}, mb4.6/195, MS3.8/20, Error ellipse: s-maj=5.0km s-min=2.7km az=176.3*

*JMA **29** 11:21:44.9±0.2, 38°.02N×144°.15E, h46^{km}, M4.5*

*NEIC **29** 11:21:45.4±1.1, 37°.92N×144°.20E, h23^{km}±7^{km}, mb4.7/130, Error ellipse: s-maj=4.1km s-min=2.8km az=156.0*

*MOS **29** 11:21:45.1±0.8, 38°.10N×144°.16E, h27^{km}, mb4.9/66, Error ellipse: s-maj=7.6km s-min=4.9km az=115.3*

*BJI **29** 11:21:46.5, 38°.25N×144°.16E, h40^{km}, mb4.7/43, mB4.8/22, Ms4.1/27, Ms7 4.0/26*

ISC 29 11:21:44.2±0.8, 38°.00N±0°.04×144°.31E±0°.04, h17^{km}±4^{km}, n409, σ1^{s}.74/443, mb4.7/200, MS3.8/20, 31C-24D, Off east coast of Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**2.33**	**298**	P	**Pn**	**11 22 20.4**	**-1.4**
OFUJ				S	**Sn**	**11 22 46.9**	**-3.3**
JIO	**Ouri**	**2.38**	**282**	P	**Pn**	**11 22 20.8**	**-1.6**
JIO				S	**Sn**	**11 22 46.8**	**-4.4**
MIYJ	**Miyakonagasawa**	**2.50**	**310**	P	**Pn**	**11 22 22.6**	**-1.5**
MIYJ				*e*S	**Sn**	**11 22 50.8**	**-3.5**
JMK	**Ichinoseki**	**2.60**	**292**	P	**Pn**	**11 22 24.3**	**-1.2**
JMK				*e*S	**Sn**	**11 22 53.7**	**-3.1**
JOM	**Ohasama**	**2.78**	**303**	P	**Pn**	**11 22 27.0**	**-1.0**
JOM				*e*S	**Sn**	**11 22 58.2**	**-2.9**
JFT	**Otama**	**3.19**	**262**	P	**Pn**	**11 22 32.6**	**-1.0**
JFT				S	**Sn**	**11 23 07.5**	**-3.7**
JANG	**Nango**	**3.21**	**318**	P	**Pn**	**11 22 32.5**	**-1.4**
JANG				*e*S	**Sn**	**11 23 08.2**	**-3.6**
JYK	**Kaneyama**	**3.23**	**288**	P	**Pn**	**11 22 33.5**	**-0.7**
JYK				S	**Sn**	**11 23 09.5**	**-2.9**
ERM	**Erimo**	**4.10**	**348**	*e*Pn	**Pn**	**11 22 45.4**	**-0.8**
ERM				*e*Sn	**Sn**	**11 23 28.6**	**-5.1**
ERM	**Erimo**	**4.10**	**348**	*d i*P	**Pn**	**11 22 45.6**	**-0.5**
JOT	**Ohata**	**4.21**	**324**	P	**Pn**	**11 22 46.3**	**-1.3**
JOT				*e*S	**Sn**	**11 23 32.5**	**-3.9**
BSO1	**Boso 1**	**4.29**	**220**	P	**Pn**	**11 22 45.4**	**-2.9**
BSO1				*e*S	**Sn**	**11 23 33.5**	**-4.2**
JKB	**Kayabe**	**4.63**	**328**	P	**Pn**	**11 22 53.0**	**-0.3**
JKB				S	**Sn**	**11 23 42.1**	**-4.5**
JCH	**Churui**	**4.66**	**351**	P	**Pn**	**11 22 52.4**	**-1.4**
JCH				S	**Sn**	**11 23 42.3**	**-5.2**
JRY	**Ryogami san**	**4.76**	**247**	P	**Pn**	**11 22 53.2**	**-2.1**
JRY				S	**Sn**	**11 23 43.0**	**-7.1**
JOD2	**Odawara 2**	**5.01**	**239**	P	**Pn**	**11 22 56.0**	**-2.7**
JOD2				S	**Sn**	**11 23 48.8**	**-7.5**
MJAR	**Matsushiro Arr**	**5.08**	**255**	Pn	**Pn**	**11 22 59.3**	**-0.3**
	11nm,0.3s,baz=76,slow=14,SNR=160						
MJAR				Sn	**Sn**	**11 23 56.0**	**-1.9**
	4.3nm,0.3s,baz=88,slow=26,SNR=6.2						
MAJO	**Matsushiro**	**5.08**	**255**	*e*Pn	**Pn**	**11 22 59.3**	**-0.3**
MAJO	**Matsushiro**	**5.08**	**255**	*c i*P	**Pn**	**11 22 59.6**	**-0.1**
MAT	**Matsushiro**	**5.08**	**255**	P	**Pn**	**11 22 59.7**	**0.0**
MAT				S	**Sn**	**11 23 55.1**	**-2.9**
MJB9	**Matsu-Tunnel**	**5.08**	**255**	*e*Pn	**Pn**	**11 22 59.7**	**0.0**
NEM2	**Nemuro 2**	**5.46**	**11**	P	**Pn**	**11 23 02.1**	**-2.7**
NEM2				*e*S	**Sn**	**11 24 00.8**	**-6.5**
JOSM	**Okushiri--Mats**	**5.51**	**319**	P	**Pn**	**11 23 04.4**	**-1.1**
JTKR	**Abashiri--Toko**	**5.97**	**357**	P	**Pn**	**11 23 10.4**	**-1.4**
JTKR				S	**Sn**	**11 24 14.1**	**-5.6**
JHJ2	**Mitsune**	**6.10**	**218**	*e*Pn	**Pn**	**11 23 09.6**	**-4.1**
JHJ2				*e*Sn	**Sn**	**11 24 17.3**	**-5.7**
JHJ2	**Mitsune**	**6.10**	**218**	P	**Pn**	**11 23 09.3**	**-4.3**
JHJ	**Hachijo jima 2**	**6.11**	**218**	Pn	**Pn**	**11 23 09.7**	**-4.1**
	69nm,0.3s,baz=98,slow=2.1,SNR=52						
JHJ				Sn	Sn	11 24 14.0	-9.4
	59nm,0.3s,baz=106,slow=23,SNR=6.5						
JHJ				LR	LR	11 26 30.9	
	comp=Z,68nm,18.1s,baz=96,slow=48						
YUK	**Yuzh-Kuril'sk**	**6.14**	**11**	*c i*P	**Pn**	**11 23 11.6**	**-2.5**
YUK				*i* S	**Sn**	**11 24 16.7**	**-7.2**
YUK				pmax	pmax		
	comp=Z,213nm,0.2s						
YUK				pmax	pmax		
	comp=N,39nm,0.1s						
YUK				pmax	pmax		
	comp=E,68nm,0.1s						
YUK				smax	smax		
	comp=N,814nm,0.3s						
YUK				smax	smax		
	comp=E,2μm,0.5s						
SHO	**Shikotan**	**6.16**	**17**	*d i*P	**Pn**	**11 23 12.5**	**-1.9**
SHO				*i* S	**Sn**	**11 24 18.3**	**-6.2**
SHO				pmax	pmax		
	comp=Z,89nm,0.6s						
SHO				pmax	pmax		
	comp=N,32nm,0.5s						
SHO				pmax	pmax		
	comp=E,52nm,0.7s						
SHO				smax	smax		
	comp=E,558nm,0.2s						
SHO				smax	smax		
	comp=N,98nm,0.3s						
SHO				MLR	MLR		
	comp=Z,121nm,10.0s						
SHO				MLR	MLR		
	comp=E,209nm,10.0s						
ASAJ	**Asahikawa**	**6.24**	**349**	Pn	**Pn**	**11 23 15.3**	**-0.2**
	comp=E,18nm,0.3s,baz=162,slow=9.6,SNR=214						
ASAJ				Sn	**Sn**	**11 24 23.1**	**-3.4**
	comp=E,6.5nm,0.3s,baz=72,slow=22,SNR=9.7						
ASAJ				LR	LR	11 25 53.8	
	comp=E,175nm,19.7s,baz=142,slow=40						
ASAJ	**Asahikawa**	**6.24**	**349**	*e*Pn	**Pn**	**11 23 15.2**	**-0.2**
ASAJ				*e*Sn	**Sn**	**11 24 25.1**	**-1.3**
INU	**Inuyama**	**6.43**	**248**	*e*Pn	**Pn**	**11 23 18.3**	**+0.1**
KUR	**Kuril'sk**	**7.70**	**19**	*e*P	**Pn**	**11 23 33.7**	**-1.8**
KUR				*e*S	**Sn**	**11 24 54.5**	**-7.7**
KUR				pmax	pmax		
	comp=Z,69nm,0.4s						
KUR				pmax	pmax		
	comp=N,18nm,0.3s						
KUR				pmax	pmax		
	comp=E,21nm,0.3s						
YSS	**Yuzh-Sakhalins**	**9.02**	**353**	*e*P	**Pn**	**11 23 52.7**	**-0.9**
YSS				*e*S	**Sn**	**11 25 31.3**	**-3.4**
YSS				pmax	pmax		
	comp=Z,10.0nm,0.7s						
YSS				smax	smax		
	comp=E,40nm,1.1s						
YSS				MLR	MLR		
	comp=Z,200nm,13.0s						
YSS				MLR	MLR		
	comp=N,300nm,12.0s						
CBIJ	**Chichi jima**	**11.02**	**190**	*e*Pn	Pn	11 24 15.1	-6.1
CBIJ				Sn	Sn	11 26 11.7	-12
JCJ	**Chichijima**	**11.02**	**190**	Pn	Pn	11 24 15.1	-6.0
	comp=N,15nm,0.3s,baz=281,slow=23,SNR=6.3						
JCJ				Sn	Sn	11 26 11.7	-12
	comp=N,12nm,0.3s,baz=236,slow=17,SNR=3.5						
USRK	**Ussuriysk Ar.**	**11.16**	**308**	Pn	**Pn**	**11 24 21.8**	**-1.2**
	baz=119,slow=14						
USRK				LR	LR	11 28 31.6	
	comp=N,257nm,18.9s,baz=125,slow=37						
JNU	**Nakatsue**	**11.97**	**250**	Pn	**Pn**	**11 24 32.2**	**-1.9**
	comp=N,0.2nm,0.3s,baz=50,slow=14,SNR=5.4						
JNU				LR	LR	11 29 35.4	
	comp=N,86nm,19.6s,baz=122,slow=40						
JNU	**Nakatsue**	**11.97**	**250**	*e*Pn	**Pn**	**11 24 33.5**	**-0.7**
MDJ	**Mudanjiang**	**12.88**	**305**	P	**Pn**	**11 24 44.0**	**-2.4**
MDJ				sP	P	11 24 59.5	+2.3
MDJ				S	**Sn**	**11 27 10.5**	**+1.2**
MDJ				pmax	pmax		
	comp=N,55nm,1.0s						
MDJ				pmax	pmax		
	comp=N,140nm,4.1s						
MDJ				LR	LR		
	comp=N,340nm,14.1s						
MDJ				LR	LR		
	comp=N,410nm,14.0s						
MDJ				LR	LR		
	comp=N,520nm,18.3s						
KSRS	**Korea Array**	**12.99**	**273**	Pn	**Pn**	**11 24 49.0**	**+1.0**
	comp=N,0.2nm,0.3s,baz=84,slow=13,SNR=12						
KSRS				LR	LR	11 29 17.6	
	comp=N,141nm,18.7s,baz=81,slow=35						
KS15	**Wonju Array Si**	**13.02**	**273**	*e*Pn	**Pn**	**11 24 50.0**	**+1.5**
KSAR	**Wonju Array Be**	**13.02**	**273**	Pn	**Pn**	**11 24 49.0**	**+0.6**
KSAR	**Wonju Array Be**	**13.02**	**273**	P	**Pn**	**11 24 49.0**	**+0.6**
TJN	**Taejon**	**13.61**	**268**	⇓*e*P	**Pn**	**11 24 55.9**	**-0.6**
GRNR	**Gornyy**	**13.94**	**339**	*e*P	**Pn**	**11 25 02.4**	**+1.5**
GRNR				pmax	pmax		
	comp=Z,26nm,1.1s						
KLR	**Kul'dur**	**14.42**	**325**	Pn	**Pn**	**11 25 07.2**	**-0.3**
	comp=Z,0.0nm,0.3s,baz=126,slow=14,SNR=8.1						
KLR	**Kul'dur**	**14.42**	**325**	*ce*P	**Pn**	**11 25 07.1**	**-0.4**
CN2	**Changchun**	**15.38**	**298**	*e*P	**P**	**11 25 23.8**	**-1.2**
JOW	**Kunigami**	**17.51**	**235**	LR	LR	11 33 07.5	
	comp=Z,122nm,19.1s,baz=124,slow=39						
PETK	**Petropavlovsk-**	**17.73**	**27**	LR	LR	11 34 24.6	
	comp=Z,47nm,18.8s,baz=208,slow=43						
ZEA	**Zeya**	**19.63**	**329**	*e*P	**P**	**11 26 11.8**	**0.0**
ZEA				pmax	pmax		
	comp=N,35nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,41nm,1.0s						
NJ2	**Nanjing**	**21.64**	**262**	*e*P	**P**	**11 26 33.0**	**-0.7**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
BJI	**Beijing**	**21.92**	**284**	⇑*e*P	**P**	**11 26 38.8**	**+2.2**
BJI				pP	**sP**	**11 26 45.3**	**+1.7**
BJI				pmax	pmax		
	comp=Z,25nm,0.9s						
BJI				LR	LR		
	comp=Z,270nm,21.7s						
BJI				LR	LR		
	comp=Z,390nm,13.1s						
BJI				LR	LR		
	comp=Z,160nm,18.0s						
MA2	**Magadan**	**21.98**	**9**	P	**P**	**11 26 36.4**	**-0.7**
	comp=Z,11nm,0.9s,baz=181,slow=12,SNR=6.6						
MA2	**Magadan**	**21.98**	**9**	*e*P	**P**	**11 26 37.9**	**+0.7**
	comp=Z,29nm,1.2s						
MA2	**Magadan**	**21.98**	**9**	⇑*e*P	**P**	**11 26 38.3**	**+1.2**
MA2				pmax	pmax		
	comp=Z,28nm,1.3s						
HHC	**Hu-ho-hao-te**	**25.38**	**287**	*e*P	**P**	**11 27 12.0**	**+1.4**
HHC				PP	**PnPn**	**11 27 51.8**	**+6.2**
HHC				S	**S**	**11 31 33.0**	**-3.5**
HHC				SS	**SnSn**	**11 32 35.8**	**+7.4**
HHC				pmax	pmax		
	comp=Z,28nm,1.1s						
HHC				pmax	pmax		
	comp=Z,110nm,5.1s						
HHC				LR	LR		
	comp=Z,120nm,12.0s						
HHC				LR	LR		
	comp=Z,260nm,13.7s						
HHC				LR	LR		
	comp=Z,190nm,13.2s						
SEY	**Seymchan**	**25.44**	**9**	P	**P**	**11 27 11.7**	**+0.9**
	comp=Z,11nm,0.7s,baz=190,slow=6.2,SNR=43						
SEY	**Seymchan**	**25.44**	**9**	*de*P	**P**	**11 27 12.4**	**+1.6**
YAK	**Yakutsk**	**25.70**	**344**	*e*P	**P**	**11 27 13.1**	**-0.1**
YAK				pmax	pmax		
	comp=Z,22nm,0.8s						
YAK				pmax	pmax		
	comp=N,14nm,1.1s						
YAK				pmax	pmax		
	comp=E,9.0nm,1.2s						
WHN	**Wuhan**	**25.78**	**262**	*e*P	**P**	**11 27 15.8**	**+1.6**
WHN				S	**S**	**11 31 47.3**	**+4.6**
WHN				LR	LR		
	comp=E,820nm,14.7s						
WHN				LR	LR		
	comp=E,1μm,21.2s						
WHN				LR	LR		
	comp=E,550nm,17.8s						
BTO	**Baotou**	**26.57**	**286**	*e*P	**P**	**11 27 22.3**	**+0.9**
H11N2	**WAKE ISLAND Hy**	**26.77**	**127**	T	T	11 55 31.4	
	baz=318,slow=75,SNR=50						
H11N1	**WAKE ISLAND Hy**	**26.77**	**127**	T	T	11 55 28.7	
	baz=318,slow=75,SNR=20						
H11N3	**WAKE ISLAND Hy**	**26.78**	**127**	T	T	11 55 32.3	
	baz=318,slow=75,SNR=31						
H11S1	**WAKE ISLAND Hy**	**27.55**	**129**	T	T	11 56 45.3	
	baz=319						
H11S3	**WAKE ISLAND Hy**	**27.55**	**129**	T	T	11 56 41.4	
	baz=319						
H11S2	**WAKE ISLAND Hy**	**27.57**	**129**	T	T	11 56 34.3	
	baz=319						
BOD	**Bodaibo**	**28.00**	**325**	*e*P	**P**	**11 27 33.9**	**-0.1**
BOD				pmax	pmax		
	comp=Z,21nm,1.3s						
ULN	**Ulaanbaatar**	**28.76**	**302**	*e*P	**P**	**11 27 41.5**	**+0.5**
	comp=Z,5.5nm,0.9s						
ULN	**Ulaanbaatar**	**28.76**	**302**	⇓*e*P	**P**	**11 27 41.5**	**+0.5**
ULN				pmax	pmax		
	comp=Z,12nm,1.7s						
SONA1	**Songino Array**	**29.19**	**302**	*e*P	**P**	**11 27 45.4**	**+0.6**
SONM	**Songino Array**	**29.19**	**302**	P	**P**	**11 27 45.0**	**+0.1**
	comp=Z,3.2nm,0.7s,baz=93,slow=8.7,SNR=12						
SONM				PcP	**PcP**	**11 30 51.8**	**-0.1**
	comp=Z,0.3nm,0.4s,baz=8.5,slow=2.9,SNR=2.5						
SONM				LR	LR	11 39 53.3	
	comp=Z,91nm,18.2s,baz=115,slow=37						
TLY	**Talaya**	**31.48**	**309**	*e*P	**P**	**11 28 06.8**	**+2.0**
TLY				pmax	pmax		
	comp=Z,6.0nm,1.1s						
TLY				MLR	MLR		
	comp=Z,164nm,15.0s						
LZH	**Lanzhou**	**32.18**	**279**	*e*P	**P**	**11 28 12.0**	**+0.6**
LZH				pP	sP	11 28 22.0	+3.4
LZH				*e*PP	**PP**	**11 29 22.5**	**-1.6**
LZH				pmax	pmax		
	comp=Z,44nm,1.1s						
LZH				pmax	pmax		
	comp=Z,190nm,4.3s						
LZH				LR	LR		
	comp=Z,250nm,12.9s						
LZH				LR	LR		
	comp=Z,360nm,12.2s						
LZH				LR	LR		
	comp=Z,380nm,14.6s						
GYA	**Guiyang**	**33.65**	**261**	*e*P	**P**	**11 28 24.8**	**+0.5**
GYA				pmax	pmax		
	comp=Z,10.0nm,0.7s						
CD2	**Chengdu**	**33.98**	**270**	*e*P	**P**	**11 28 25.8**	**-1.2**
CD2				S	**S**	**11 33 49.5**	**-1.9**
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.2s						
CD2				LR	LR		

	comp=Z,310nm,12.3s						
CD2				LR	LR		
	comp=Z,220nm,10.9s						
GTA	Gaotai	34.49	286	P	P	11 28 32.3	+0.8
GTA				pP	sP	11 28 44.5	+5.8
GTA				PcP	PcP	11 31 07.3	+0.9
GTA				S	S	11 33 56.8	-2.6
GTA				pmax	pmax		
	comp=Z,6.0nm,1.6s						
GTA				pmax	pmax		
	comp=Z,85nm,5.4s						
GTA				LR	LR		
	comp=Z,110nm,16.2s						
GTA				LR	LR		
	comp=Z,230nm,16.8s						
GTA				LR	LR		
	comp=Z,220nm,17.8s						
TIXI	Tiksi	34.64	351⇑	eP	P	11 28 31.9	-0.2
TIXI				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KMI	Kunming	37.38	262	P	P	11 28 56.3	-0.2
KMI				pP	sP	11 29 07.5	+3.8
KMI				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KMI				LR	LR		
	comp=Z,85nm,9.8s						
KMI				LR	LR		
	comp=Z,110nm,14.3s						
KMI				LR	LR		
	comp=Z,120nm,15.6s						
HVS	Khovu-Aksy	37.63	307⇑	eP	P	11 28 59.0	+0.9
HVS				pmax	pmax		
	comp=Z,4.0nm,0.7s						
WMQ	Urumqi	42.47	296	P	P	11 29 39.8	+1.5
ZAA0	Zalesovo Array	42.98	312	eP	P	11 29 42.4	+0.2
	comp=Z,6.8nm,0.9s						
ZALV	Zalesovo Beam	42.98	312	P	P	11 29 42.6	+0.3
	comp=Z,5.5nm,0.9s,baz=90,slow=7.4,SNR=15						
ZALV				PcP	PcP	11 31 32.1	-0.3
	comp=Z,3.1nm,0.5s,baz=73,slow=2.6,SNR=6.8						
ZALV				LR	LR	11 49 04.6	
	comp=Z,78nm,18.1s,baz=68,slow=38						
ZALV	Zalesovo Beam	42.98	312	eP	P	11 29 42.1	-0.2
ZALV				ePcP	PcP	11 31 32.1	-0.3
ZALV	Zalesovo Beam	42.98	312	eP	P	11 29 42.1	-0.2
ZALV				e		11 31 32.1	
PBKT	Sadao Pong	43.55	253	eP	P	11 29 47.6	+0.3
	comp=Z,6.6nm,0.9s						
PBKT	Sadao Pong	43.55	253	P	P	11 29 49.2	+1.9
	comp=Z,7.2nm,1.0s						
NVS	Novosibirsk	43.85	313	eP	P	11 29 38.6	-11
CMAR	Chiang Mai Arr	43.97	257	P	P	11 29 50.5	-0.1
	comp=Z,0.6nm,0.3s,baz=49,slow=7.5,SNR=4.1						
CMAR				LR	LR	11 50 18.4	
	comp=Z,52nm,18.1s,baz=356,slow=39						
IM3	Indian Mountai	44.64	31	eP	P	11 29 56.3	+0.9
KDAK	Kodiak Island	44.83	43	P	P	11 29 57.0	0.0
	comp=Z,14nm,0.7s,baz=272,slow=6.4,SNR=12						
KDAK	Kodiak Island	44.83	43	eP	P	11 29 57.8	+0.8
	comp=Z,19nm,0.8s						
KDAK	Kodiak Island	44.83	43	i P	P	11 29 57.5	+0.5
MK01	Makanchi Array	45.56	302	eP	P	11 30 03.5	+0.4
MK31	Makanchi Array	45.56	302	eP	P	11 30 03.2	+0.1
MK31	Makanchi Array	45.56	302	i P	P	11 30 03.1	0.0
MK31				pmax	pmax		
	comp=Z,11nm,0.7s						
MKAR	Makanchi Array	45.56	302	P	P	11 30 03.3	+0.2
	comp=Z,8.9nm,0.7s,baz=85,slow=9.7,SNR=56						
MKAR				PcP	PcP	11 31 41.1	-0.4
	comp=Z,1.1nm,0.7s,baz=82,slow=3.1,SNR=2.5						
MKAR				LR	LR	11 49 42.2	
	comp=Z,56nm,18.0s,baz=54,slow=37						
MKAR	Makanchi Array	45.56	302	eP	P	11 30 03.2	+0.2
	comp=Z,66nm,0.7s						
MKAR				PcP	PcP	11 31 41.1	-0.4
MKAR	Makanchi Array	45.56	302c	eP	P	11 30 03.2	+0.1
MKAR				pmax	pmax		
	comp=Z,9.0nm,0.7s						
MAKZ	Makanchi	45.77	302	eP	P	11 30 05.0	+0.3
	comp=Z,8.8nm,0.8s						
MAKZ	Makanchi	45.77	302	eP	P	11 30 05.0	+0.3
MAKZ				pmax	pmax		
	comp=Z,9.0nm,0.8s						
MLY	Manley	45.80	32	eP	P	11 30 07.0	+2.2
	comp=Z,5.5nm,1.0s						
BWN	Browne	46.31	34	eP	P	11 30 10.5	+1.8
	comp=Z,42nm,1.1s						
PMR	Palmer	46.47	37	eP	P	11 30 10.7	+0.8
	comp=Z,13nm,1.2s						
PMR	Palmer	46.47	37	eP	P	11 30 10.7	+0.8
PMR				pmax	pmax		
	comp=Z,13nm,1.2s						
SML	Sawmill	46.84	37	eP	P	11 30 13.9	+1.0
	comp=Z,12nm,0.9s						
SML	Sawmill	46.84	37	eP	P	11 30 14.0	+1.0
SML				pmax	pmax		
	comp=Z,12nm,0.9s						
MDM	Murphy Dome	46.86	33	eP	P	11 30 14.8	+1.7
	comp=Z,12nm,1.0s						
MDM				ePcP	PcP	11 31 43.3	-2.4
WRH	Wood River Hil	46.92	33	eP	P	11 30 15.0	+1.5
	comp=Z,3.3nm,0.9s						
KURK	Kurchatov	47.16	308	eP	P	11 30 15.4	-0.1
	comp=Z,17nm,0.8s						
KURK	Kurchatov	47.16	308d	iP	P	11 30 15.2	-0.3
KURK				pmax	pmax		
	comp=Z,16nm,0.7s						
KURBB	Kurchatov Arra	47.23	308	P	P	11 30 15.8	-0.3
	comp=Z,14nm,0.6s,baz=81,slow=7.9,SNR=103						
SCM	Sheep Creek Mo	47.32	37	eP	P	11 30 18.2	+1.5
	comp=Z,12nm,1.0s						
ILAR	Eielson Array	47.44	33	P	P	11 30 18.1	+0.6
	comp=Z,5.5nm,0.8s,baz=265,slow=6.5,SNR=72						
ILB	Eielson Array	47.44	33	eP	P	11 30 18.4	+0.8
IL1	Eielson Array	47.44	33	eP	P	11 30 18.7	+1.2
KLU	Klutina	48.01	37	eP	P	11 30 22.9	+0.9
	comp=Z,10nm,1.0s						
DIV	Divide	48.11	38	eP	P	11 30 23.9	+1.1
	comp=Z,16nm,1.0s						
FYU	Fort Yukon	48.11	30	eP	P	11 30 25.2	+2.6
	comp=Z,11nm,1.0s						
EYAK	Cordova Ski Ar	48.17	39	eP	P	11 30 25.1	+1.9
	comp=Z,16nm,1.3s						
HARP	HAARP	48.30	36	eP	P	11 30 27.1	+2.9
	comp=Z,7.1nm,0.7s						
PDGK	Podgornoye	48.36	298	P	P	11 30 24.5	-0.6
PDGK				pmax	pmax		
	comp=Z,22nm,1.5s						
RIDG	Independ'e Rid	48.36	34	eP	P	11 30 25.7	+1.0
	comp=Z,5.8nm,1.1s						
BMRM	Bremner River	48.69	38	eP	P	11 30 29.2	+1.9
	comp=Z,12nm,1.0s						
SCRK	Sand Creek	48.73	34	eP	P	11 30 28.7	+1.1
	comp=Z,10nm,1.0s						
PRZ	Przheval'sk	49.38	297	eP	P	11 30 33.7	+0.7
	comp=Z,14nm,0.7s						
PRZ	Przheval'sk	49.38	297	eP	P	11 30 33.7	+0.7
PRZ				pmax	pmax		
	comp=Z,14nm,0.7s						
HNR	Honiara	49.40	160	LR	LR	11 53 09.8	
	comp=Z,32nm,18.2s,baz=286,slow=38						
TGL	Tana Glacier	49.57	38	eP	P	11 30 35.6	+1.5
	comp=Z,13nm,1.1s						
BALM	Baldy	49.77	38	eP	P	11 30 37.0	+1.3
	comp=Z,9.9nm,0.8s						
BALM	Baldy	49.77	38	eP	P	11 30 37.0	+1.3
BALM				pmax	pmax		
	comp=Z,10.0nm,0.8s						
EGAK	Eagle	49.89	33	eP	P	11 30 37.2	+0.9
	comp=Z,4.4nm,1.0s						
DAWY	Dawson	50.73	33	eP	P	11 30 44.2	+1.4
	comp=Z,2.6nm,1.0s						
TKM2	Tokmak 2	51.20	299	P	P	11 30 47.4	+0.6
TKM2				pmax	pmax		
	comp=Z,26nm,0.9s						
IPM	Ipoh	51.62	241	eP	P	11 30 49.8	-0.2
	comp=Z,22nm,1.5s						
BVAR	Borovoye Array	51.63	312	P	P	11 30 50.0	+0.3
	comp=Z,5.3nm,0.8s,baz=72,slow=8.7,SNR=18						
BVAR				PcP	PcP	11 32 03.2	0.0
	comp=Z,1.8nm,0.7s,baz=63,slow=3.9,SNR=2.8						
BRVK	Borovoye	51.68	312	eP	P	11 30 50.2	+0.3
	comp=Z,11nm,1.0s						
BRVK	Borovoye	51.68	312d	iP	P	11 30 50.3	+0.3
BRVK				pmax	pmax		
	comp=Z,16nm,2.5s						
FRU	Bishkek	51.90	299	eP	P	11 30 52.0	+0.1
KIP	Kipapa	51.96	91⇓	eP	P	11 30 51.7	-0.8
AAK	Ala-Archa	52.05	299	eP	P	11 30 53.5	+0.3
	comp=Z,8.7nm,1.2s						
AAK	Ala-Archa	52.05	299d	eP	P	11 30 53.5	+0.3
AAK				pmax	pmax		
	comp=Z,11nm,1.5s						
MTN	Manton Dam	52.07	196	eP	P	11 30 52.2	-1.0
	comp=Z,25nm,1.2s						
KSH	Kashi	52.11	294	eP	P	11 30 58.0	+4.4
KSH				ePcP	PcP	11 32 08.8	+3.4
KSH				pmax	pmax		
	comp=Z,11nm,1.1s						
INK	Inuvik	52.47	28	eP	P	11 30 56.9	+1.3
	comp=Z,21nm,1.5s						
INK	Inuvik	52.47	28	eP	P	11 30 56.9	+1.3
INK				pmax	pmax		
	comp=Z,21nm,1.5s						
WHY	Whitehorse	53.43	37	eP	P	11 31 04.5	+1.4
	comp=Z,4.9nm,0.8s						
MNAS	Manas	53.48	299	P	P	11 31 04.3	+0.6
MNAS				pmax	pmax		
	comp=Z,13nm,0.9s						
SFK	Sufi-Kurgan	53.69	296	P	P	11 31 05.5	+0.1
SFK				pmax	pmax		
	comp=Z,25nm,1.4s						
SIT	Sitka	54.14	42	eP	P	11 31 10.8	+2.7
	comp=Z,4.9nm,0.9s						
SIT	Sitka	54.14	42	eP	P	11 31 10.8	+2.7
SIT				pmax	pmax		
	comp=Z,5.0nm,0.9s						
JIS	Juneau Island	54.29	40	eP	P	11 31 11.5	+2.3
	comp=Z,8.8nm,1.2s						
KK31	Karatay Array	54.63	300	eP	P	11 31 11.6	-0.3
KK31	Karatay Array	54.63	300	eP	P	11 31 11.6	-0.3
KKAR	Karatay Array	54.63	300	eP	P	11 31 11.6	-0.3
KKAR	Karatay Array	54.63	300	eP	P	11 31 11.6	-0.3
MLOA	Mauna Loa Obse	54.89	92	eP	P	11 31 14.3	-0.3
	comp=Z,229nm,1.5s						
SVE	Sverdlovsk	55.94	319⇑	eP	P	11 31 21.9	+0.8
SVE				pmax	pmax		
	comp=Z,30nm,1.1s						
DLBC	Dease Lake	56.43	39	eP	P	11 31 26.9	+2.2
	comp=Z,9.1nm,1.3s						
NIL	Nilore	56.49	289	eP	P	11 31 26.1	+0.6
	comp=Z,37nm,1.4s						
NIL	Nilore	56.49	289	eP	P	11 31 26.1	+0.6
NIL				pmax	pmax		
	comp=Z,37nm,1.4s						
ARU	Arti	57.16	319	eP	P	11 31 30.1	+0.3
	comp=Z,25nm,1.1s						
ARU	Arti	57.16	319d	iP	P	11 31 29.8	0.0
ARU						11 33 34.9	
ARU				S	S	11 39 25.0	+0.8
ARU				SS	SS	11 43 15.0	+2.5
ARU				pmax	pmax		
	comp=Z,38nm,1.7s						
ARU				MLR	MLR		
	comp=Z,135nm,17.0s						
WRAB	Tennant Creek	58.38	191	eP	P	11 31 37.4	-1.4
	comp=Z,9.0nm,0.8s						
WRAB	Tennant Creek	58.38	191c	iP	P	11 31 37.2	-1.5
WRAB				pmax	pmax		
	comp=Z,12nm,1.0s						
WB2	Warramunga Arr	58.39	191	eP	P	11 31 37.4	-1.4
	comp=Z,12nm,0.9s						
WRA	Warramunga Arr	58.40	191	P	P	11 31 37.0	-1.8
	comp=Z,9.0nm,0.9s,baz=11,slow=7.2,SNR=33						
WRA	Warramunga Arr	58.40	191	P	P	11 31 37.0	-1.8
AB31	Akbulak array	59.07	311	P	P	11 31 43.1	-0.2
AB31				pmax	pmax		
	comp=Z,2.0nm,0.7s						
ABKAR	Akbulak array	59.07	311	eP	P	11 31 43.2	-0.1
KBL	Kabul	59.21	292	eP	P	11 31 44.0	-0.8
	comp=Z,9.3nm,0.8s						
KBL	Kabul	59.21	292	eP	P	11 31 44.0	-0.8
KBL				pmax	pmax		
	comp=Z,9.0nm,0.8s						
AKTO	Aktyubinsk	59.73	312	P	P	11 31 47.4	-0.5
	comp=Z,10nm,0.8s,baz=63,slow=11,SNR=21						
AKTO				LR	LR	11 57 28.7	
	comp=Z,32nm,21.0s,baz=89,slow=36						
AKTO	Aktyubinsk	59.73	312	P	P	11 31 47.9	0.0
AKTO				pmax	pmax		
	comp=Z,12nm,0.8s						
SPITS	Spitsbergen Ar	60.01	349	LR	LR	11 59 15.0	
	comp=Z,26nm,20.2s,baz=175,slow=38						
PRGR	Permogore	61.20	327	eP	P	11 31 57.2	-0.5
PRGR				pmax	pmax		
	comp=Z,20nm,1.1s						
YKW3	Yellowknife Ar	61.76	31	eP	P	11 32 02.5	+1.0
	comp=Z,2.2nm,0.8s						
YKA	Yellowknife Ar	61.80	31	P	P	11 32 01.9	+0.3
	comp=Z,2.0nm,0.7s,baz=301,slow=6.6,SNR=20						
YKA	Yellowknife Ar	61.80	31	P	P	11 32 02.0	+0.3
AS01	Alice Springs	62.11	191	eP	P	11 32 03.0	-1.2
ASAR	Alice Springs	62.12	191	P	P	11 32 03.0	-1.3
	comp=Z,2.1nm,0.9s,baz=7.4,slow=6.9,SNR=11						
MBWA	Marble Bar	63.22	206	eP	P	11 32 10.9	-0.7
	comp=Z,6.2nm,0.8s						
KEV	Kevo	63.34	340	eP	P	11 32 12.6	+0.7
	comp=Z,32nm,1.5s						
KEV	Kevo	63.34	340	eP	P	11 32 12.6	+0.7
KEV				pmax	pmax		
	comp=Z,32nm,1.5s						
ARCES	ARCESS Array B	63.89	340	P	P	11 32 14.6	-1.0
	comp=Z,2.6nm,0.7s,baz=38,slow=8.0,SNR=5.6						
ARCES	ARCESS Array B	63.89	340	eP	P	11 32 16.1	+0.6
ARCES	ARCESS Array B	63.89	340	eP	P	11 32 16.1	+0.6
KLMR	Klimovskoe	64.16	328	eP	P	11 32 15.5	-1.9
KLMR				pmax	pmax		
	comp=Z,13nm,1.5s						
KLMR	Klimovskoe	64.16	328	eP	P	11 32 15.5	-1.9
KLMR				AMP		11 32 18.1	
	comp=Z,13nm,1.5s						
NLWA	Neilton Lookou	64.35	49	eP	P	11 32 20.9	+2.0
	comp=Z,13nm,0.9s						
E03A	Lebam	64.95	50	eP	P	11 32 23.9	+1.2
	comp=Z,10.0nm,1.0s						
GEYT	Alibeck	65.37	300	P	P	11 32 24.6	-1.2
	comp=Z,3.7nm,0.9s,baz=57,slow=5.5,SNR=8.9						
GYA0B	ALIBECK ARRAY	65.37	300	eP	P	11 32 26.2	+0.5
	comp=Z,8.0nm,0.9s						
D05A	Enumclaw	65.57	48	eP	P	11 32 28.6	+1.8
	comp=Z,7.1nm,0.8s						
LON	Longmire	65.89	49	eP	P	11 32 30.5	+1.5
	comp=Z,3.2nm,1.1s						
LON	Longmire	65.89	49	eP	P	11 32 30.5	+1.5
LON				pmax	pmax		
	comp=Z,3.0nm,1.1s						
B08A	Colville Reser	66.51	46	eP	P	11 32 34.3	+1.3
	comp=Z,8.1nm,1.4s						
H04A	Detroit Lake	66.72	51	eP	P	11 32 35.8	+1.5
	comp=Z,11nm,0.9s						
C09A	Chrisman Ranch	67.41	46	eP	P	11 32 39.6	+0.9
	comp=Z,5.5nm,0.8s						
D08A	Wollman Farm,	67.43	47	eP	P	11 32 40.0	+1.2
	comp=Z,4.8nm,0.9s						
PINE	Pine Mountain	67.94	51	eP	P	11 32 44.0	+1.7
	comp=Z,13nm,0.9s						
LGPM	Granite Peak	68.28	55	eP	P	11 32 43.6	-0.8
K05A	Summer Lake	68.54	52	eP	P	11 32 48.1	+2.1
	comp=Z,15nm,1.0s						
OBN	Obninsk	68.68	324	eP	P	11 32 47.3	+0.9
	comp=Z,14nm,1.0s						
OBN	Obninsk	68.68	324c	iP	P	11 32 46.7	+0.3
OBN				e		11 33 12.9	
OBN				e		11 35 21.5	
OBN				pmax	pmax		
	comp=Z,21nm,1.2s						
OBN				MLR	MLR		
	comp=Z,87nm,16.0s						
FIA1	FINESS Array S	69.01	333	eP	P	11 32 48.2	-0.2
	comp=Z,7.8nm,0.8s						
FINES	FINESS Array B	69.01	333	P	P	11 32 47.8	-0.6
	comp=Z,5.6nm,0.7s,baz=55,slow=7.2,SNR=17						
FINES				LR	LR	12 06 02.7	
	comp=Z,53nm,18.3s,baz=60,slow=38						
FINES	FINESS Array B	69.01	333	i P	P	11 32 48.5	+0.1
FINES				pmax	pmax		
	comp=Z,6.0nm,0.7s						
WALA	Waterton Lakes	69.16	44	eP	P	11 32 51.0	+1.2
	comp=Z,5.3nm,1.0s						
MOD	Modoc Plateau	69.35	53	eP	P	11 32 52.2	+1.1
	comp=Z,2.6nm,0.8s						
BMO	Blue Mountains	69.57	49	eP	P	11 32 52.9	+0.6
	comp=Z,4.1nm,1.1s						
BMO	Blue Mountains	69.57	49	eP	P	11 32 52.9	+0.6
BMO				pmax	pmax		
	comp=Z,4.0nm,1.1s						
J08A	Circle Bar Ran	69.69	50	eP	P	11 32 54.7	+1.6
	comp=Z,7.4nm,1.0s						
SUMG	Summit	69.70	1	eP	P	11 32 53.8	+0.8
	comp=Z,68nm,1.5s						
SUMG	Summit	69.70	1	i P	P	11 32 53.9	+0.9
	comp=Z,22nm,0.9s						
SUMG	Summit	69.70	1	i P	P	11 32 53.9	+0.9
SUMG				pmax	pmax		
	comp=Z,22nm,0.9s						
ORV	Oroville	69.86	55	eP	P	11 32 54.9	+0.8
	comp=Z,5.5nm,1.2s						
ORV	Oroville	69.86	55	eP	P	11 32 54.9	+0.8
ORV				pmax	pmax		
	comp=Z,6.0nm,1.2s						
WVOR	Wild Horse Val	70.10	51	eP	P	11 32 56.6	+1.0
	comp=Z,5.1nm,1.3s						
WVOR	Wild Horse Val	70.10	51	eP	P	11 32 56.6	+1.0
WVOR				pmax	pmax		
	comp=Z,5.0nm,1.3s						
BEKR	Beckworth	70.43	54	eP	P	11 32 58.8	+1.0
	comp=Z,5.3nm,1.0s						
PAHR	Pah Rah Range	71.14	54	eP	P	11 33 03.4	+1.3
	comp=Z,3.8nm,1.0s						
MFID	Camas Ranch	71.26	49	eP	P	11 33 04.2	+1.5
	comp=Z,4.8nm,1.0s						
CMB	Columbia Colle	71.42	56	eP	P	11 33 04.8	+1.1
	comp=Z,15nm,1.5s						
CMB	Columbia Colle	71.42	56	eP	P	11 33 04.8	+1.1
CMB				pmax	pmax		
	comp=Z,15nm,1.5s						
FFC	Flin Flon	71.63	34	eP	P	11 33 05.0	+0.5
	comp=Z,8.7nm,1.0s						
FFC	Flin Flon	71.63	34	eP	P	11 33 05.0	+0.5
FFC				pmax	pmax		
	comp=Z,9.0nm,1.0s						
YERR	Yerington	71.64	55	eP	P	11 33 06.3	+1.1
	comp=Z,7.1nm,1.1s						
NCK	Nalchik	71.72	311⇓	eP	P	11 33 06.8	+1.5
NCK				pmax	pmax		
	comp=Z,8.0nm,0.4s						
LRM	Limekiln Ridge	71.83	46	eP	P	11 33 07.3	+1.0
KIV	Kislovodsk	71.99	312	eP	P	11 33 08.0	+0.9
	comp=Z,16nm,0.9s						
KIV	Kislovodsk	71.99	312c	iP	P	11 33 08.4	+1.3
KIV				e		11 33 26.7	
KIV				e		11 35 55.5	
KIV				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KBZ	Khabaz	72.00	312	P	P	11 33 07.8	+0.9
	comp=Z,6.6nm,0.9s,baz=82,slow=3.3,SNR=16						
HLID	Hailey	72.01	49	eP	P	11 33 08.2	+0.8
	comp=Z,3.2nm,1.0s						
DLMT	Dillon	72.02	46	eP	P	11 33 08.7	+1.4
	comp=Z,6.1nm,1.3s						
KVN	Kaiserville	72.33	54	eP	P	11 33 10.1	+0.8
	comp=Z,6.0nm,1.1s						
NEY	Neytrino	72.38	311⇓	eP	P	11 33 10.8	+1.3
NEY				pmax	pmax		
	comp=Z,1.0nm,0.8s						
BOZ	Bozeman (W)	72.43	46	eP	P	11 33 10.1	+0.4
	comp=Z,1.9nm,0.8s						
BOZ	Bozeman (W)	72.43	46	eP	P	11 33 10.1	+0.4
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.8s						
NV01	Mina Array Sit	72.56	55	eP	P	11 33 11.8	+1.1
NVAR	Mina Array Bea	72.56	55	P	P	11 33 12.2	+1.5
	comp=Z,3.0nm,0.8s,baz=284,slow=6.3,SNR=25						
NV11	Mina Array Sit	72.65	55	eP	P	11 33 12.8	+1.6
	comp=Z,0.6nm,1.4s						
GNI	Garni	72.96	308⇓	eP	P	11 33 14.0	+1.0
GNI				pmax	pmax		
	comp=Z,44nm,1.6s						
UOSS	Minazif	73.69	289	eP	P	11 33 16.8	-0.5
	comp=Z,21nm,1.3s						
IMW	Indian Meadow	73.84	47	eP	P	11 33 20.0	+1.7
	comp=Z,2.8nm,0.8s						
FLWY	Flagg Ranch	73.87	46	eP	P	11 33 20.6	+2.3
	comp=Z,7.7nm,1.2s						
FXWY	Fox Creek	73.95	47	eP	P	11 33 19.9	+1.0
	comp=Z,4.1nm,1.1s						
MOOW	Moose Ponds	74.05	47	eP	P	11 33 21.3	+1.9
	comp=Z,3.2nm,1.0s						
TPAW	Teton Pass	74.08	47	eP	P	11 33 20.7	+1.0
	comp=Z,11nm,1.4s						
NC204	NORSAR Array S	74.10	339	eP	P	11 33 19.3	+0.1
NB201	NORSAR Array S	74.13	338	eP	P	11 33 19.5	+0.2
HFS	Hagfors	74.13	337	P	P	11 33 18.9	-0.4
	comp=Z,4.0nm,0.7s,baz=33,slow=5.5,SNR=9.0						
HFS				LR	LR	12 09 30.8	
	comp=Z,35nm,18.6s,baz=2.5,slow=39						
NB2	NORSAR Subarra	74.16	338	P	P	11 33 19.1	-0.4
	comp=Z,2.3nm,0.7s,baz=38,slow=5.9						
NOA	NORSAR Array B	74.16	338	P	P	11 33 19.4	-0.1
	comp=Z,3.6nm,0.7s,baz=38,slow=5.8,SNR=14						
NOA				LR	LR	12 09 37.1	
	comp=Z,36nm,21.6s,baz=40,slow=39						
REDW	Red Top Meadow	74.22	47	eP	P	11 33 21.0	+0.6
	comp=Z,6.5nm,1.4s						
R11A	Troy Canyon, C	74.34	54	eP	P	11 33 22.5	+1.3
	comp=Z,4.3nm,1.1s						
ANN	Anapa	74.50	315	eP	P	11 33 18.0	-3.7
ANN				e*PP	sP	11 33 28.0	-1.2
ANN				eS	SKiKP	11 42 50.1	+3.0
ANN				pmax	pmax		
	comp=Z,23nm,1.2s						
TPNV	Topopah Spring	74.74	55	eP	P	11 33 24.2	+0.8
	comp=Z,5.8nm,1.1s						
HWUT	Hardware Ranch	74.87	49	eP	P	11 33 24.9	+0.8
	comp=Z,9.7nm,1.4s						
AKASG	Malin Array Be	74.92	323	P	P	11 33 23.9	-0.1
	comp=Z,3.0nm,0.6s,baz=43,slow=6.0,SNR=10						
AKASG	Malin Array Be	74.92	323	i P	P	11 33 23.8	-0.2
AKASG				pmax	pmax		
	comp=Z,3.0nm,0.6s						
AKBB	Malin Array Si	74.92	323	eP	P	11 33 23.8	-0.2
	comp=Z,12nm,1.2s						
AKBB	Malin Array Si	74.92	323	eP	P	11 33 23.8	-0.2
AKBB				pmax	pmax		
	comp=Z,12nm,1.2s						
KIEV	Kiev	74.93	323	eP	P	11 33 24.0	-0.1
	comp=Z,14nm,1.3s						
KIEV	Kiev	74.93	323d	iP	P	11 33 23.8	-0.3
KIEV				pmax	pmax		
	comp=Z,13nm,1.4s						
AK11	Malin Array Si	74.96	323	eP	P	11 33 23.4	-0.8
DUG	Dugway, Tooele	74.97	51	eP	P	11 33 24.7	0.0
	comp=Z,5.8nm,1.3s						
DUG	Dugway, Tooele	74.97	51	eP	P	11 33 24.7	0.0
DUG				pmax	pmax		
	comp=Z,6.0nm,1.3s						
PSUT	Pine Spring	75.32	53	eP	P	11 33 27.6	+0.8
	comp=Z,7.7nm,1.3s						
PD31	Pinedale Array	75.33	47	eP	P	11 33 27.5	+0.6
PDAR	Pinedale Array	75.33	47	P	P	11 33 27.6	+0.8
	comp=Z,0.9nm,0.7s,baz=276,slow=2.3,SNR=13						
PDAR	Pinedale Array	75.33	47	eP	P	11 33 27.3	+0.5
JLU	Jordanelle	75.55	50	eP	P	11 33 28.3	+0.1
	comp=Z,4.6nm,1.3s						
SHPR	Sheep Range	75.71	55	eP	P	11 33 29.6	+0.6
	comp=Z,4.1nm,1.1s						
MPU	Maple Canyon	75.80	50	eP	P	11 33 30.7	+1.1
	comp=Z,8.1nm,1.4s						
CCUT	Cedar City	76.23	53	eP	P	11 33 33.5	+1.4
	comp=Z,4.6nm,1.2s						
MSU	Marysvale	76.38	52	eP	P	11 33 34.6	+1.7
MSU	Marysvale	76.38	52	eP	P	11 33 34.6	+1.7
LCMT	Little Creek M	76.63	53	eP	P	11 33 35.0	+0.8
	comp=Z,6.0nm,1.3s						
P17A	Butcher Ranch,	76.67	50	eP	P	11 33 35.7	+1.2
	comp=Z,2.5nm,0.7s						
KNB	Kanab	76.89	53	eP	P	11 33 36.9	+1.1
	comp=Z,9.0nm,1.4s						
KNB	Kanab	76.89	53	eP	P	11 33 36.9	+1.1
KNB				pmax	pmax		
	comp=Z,9.0nm,1.4s						
SRU	San Rafael Swe	77.03	50	eP	P	11 33 37.4	+0.9
	comp=Z,3.3nm,0.8s						
SRU	San Rafael Swe	77.03	50	eP	P	11 33 37.4	+0.9
SRU				pmax	pmax		
	comp=Z,3.0nm,0.8s						
ULM	Lac du Bonnet	77.41	35	eP	P	11 33 38.4	+0.2
	comp=Z,3.5nm,0.9s						
ULM	Lac du Bonnet	77.41	35	eP	P	11 33 38.4	+0.2
ULM				pmax	pmax		

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      comp=Z,4.0nm,0.9s
LVV   L'vov             77.93 325  eP      P       11 33 41.8 +0.7
PV21  Cone Mtn., Par    78.31  50  eP      P       11 33 45.0 +1.2
      comp=Z,3.0nm,0.8s
PV23  Carpenter Ridg    78.36  50  eP      P       11 33 45.4 +1.3
      comp=Z,13nm,1.4s
PV10  Paradox Valley    78.39  50  eP      P       11 33 45.2 +0.9
PV14  Lion Creek, Pa    78.41  50  eP      P       11 33 44.8 +0.5
      comp=Z,8.9nm,1.3s
PV22  Blue Mesa, Par    78.44  50  eP      P       11 33 45.4 +0.9
      comp=Z,3.3nm,1.0s
PV20  West Nyswonger    78.46  50  eP      P       11 33 45.8 +1.2
      comp=Z,6.6nm,0.9s
PV17  East Wray Mesa    78.50  50  eP      P       11 33 45.9 +1.1
      comp=Z,18nm,1.4s
PV16  Nyswonger Mesa    78.51  50  eP      P       11 33 46.4 +1.5
      comp=Z,5.5nm,1.1s
PV11  David Mesa, Pa    78.54  50  eP      P       11 33 46.3 +1.3
      comp=Z,8.7nm,1.2s
PV05  Paradox Valley    78.55  51  eP      P       11 33 46.4 +1.4
PV18  Skein Mesa, Pa    78.56  50  eP      P       11 33 46.0 +0.9
      comp=Z,8.6nm,1.3s
PV12  Saucer Basin,     78.57  50  eP      P       11 33 45.7 +0.5
      comp=Z,6.6nm,1.1s
PV03  Paradox Valley    78.59  50  eP      P       11 33 46.2 +1.0
N23A  Red Feather La    78.61  47  eP      P       11 33 46.5 +1.1
      comp=Z,4.3nm,1.0s
KWP   Kalwaria Pacla    78.66 326  eP      P       11 33 46.0 +0.8
      comp=Z,105nm,1.0s
KWP   Kalwaria Pacla    78.66 326  eP      P       11 33 46.0 +0.8
PV13  Radium Mtn., P    78.66  50  eP      P       11 33 46.3 +0.6
      comp=Z,16nm,1.4s
AGMN  Agassiz Nation    78.81  36  eP      P       11 33 45.4 -0.6
      comp=Z,5.6nm,1.2s
PV01  Paradox Valley    78.83  50  eP      P       11 33 47.4 +0.7
BUR08 Bucovina Ar. S    78.94 323  eP      P       11 33 47.3 +0.4
BUR04 Bucovina Ar. S    78.95 323  eP      P       11 33 47.4 +0.4
BURAR Bucovina Array    78.95 323⇑ iP      P       11 33 47.7 +0.7
BURAR Bucovina Array    78.95 323 ⇑P       P       11 33 47.7 +0.7
BIZ   Bicaz             79.01 322⇓ iP      P       11 33 47.2 +0.1
TESR  Tescani           79.04 321⇓ iP      P       11 33 48.0 +0.7
VRI   Vrincioaia        79.45 321⇑ iP      P       11 33 50.5 +0.9
VRI   Vrincioaia        79.45 321 ⇑P       P       11 33 50.5 +0.9
OJC   Ojcow             79.49 327  eP      P       11 33 50.7 +1.0
OJC   Ojcow             79.49 327  eP      P       11 33 50.2 +0.5
      comp=Z,9.3nm,1.0s
OJC   Ojcow             79.49 327  eP      P       11 33 50.2 +0.5
OJC                                 pmax   pmax
      comp=Z,9.0nm,1.0s
TIRR  Tirgusor          79.58 319⇑ iP      P       11 33 47.5 -2.8
TIRR  Tirgusor          79.58 319 ⇑P       P       11 33 47.5 -2.8
TLB   Topalu            79.68 319⇓ iP      P       11 33 51.4 +0.6
TLB   Topalu            79.68 319 ⇓P       P       11 33 51.4 +0.6
TRPA  Tarpa             79.83 325⇑ iP      P       11 33 52.8 +1.2
NIE   Niedzica          79.88 327  eP      P       11 33 53.2 +1.3
NIE   Niedzica          79.88 327  eP      P       11 33 53.2 +1.3
BRTR  Keskin Array B    79.91 313   P      P       11 33 52.8 +0.4
      comp=Z,1.0nm,0.7s,baz=147,slow=2.5,SNR=6.6
BRTR  Keskin Array B    79.91 313  i P     P       11 33 51.5 -0.9
BRTR                                pmax   pmax
      comp=Z,1.0nm,0.7s
DOPR  Dopca             80.04 322⇓ iP      P       11 33 54.9 +2.1
MLR   Muntele Rosu      80.11 321⇑ iP      P       11 33 55.0 +1.7
MLR   Muntele Rosu      80.11 321 ⇑P       P       11 33 55.1 +1.7
KSP   Ksiaz             80.46 330  eP      P       11 33 55.6 +0.7
KSP   Ksiaz             80.46 330  eP      P       11 33 55.7 +0.7
VOIR                    80.59 321⇑ iP      P       11 33 56.5 +0.7
VOIR                    80.59 321 ⇑P       P       11 33 56.5 +0.7
MTUR  Matau             80.73 321⇓ iP      P       11 33 58.7 +2.1
MTUR  Matau             80.73 321 ⇓P       P       11 33 58.7 +2.1
MORC  Moravsky Berou    80.78 328⇓ iP      P       11 33 57.6 +0.8
MORC  Moravsky Berou    80.78 328  eP      P       11 33 57.2 +0.5
      comp=Z,8.3nm,1.1s
MORC  Moravsky Berou    80.78 328  eP      P       11 33 57.2 +0.5
MORC                                pmax   pmax
      comp=Z,8.0nm,1.1s
MORC  Moravsky Berou    80.78 328  eP      P       11 33 57.5 +0.8
PSZ   Piszkesteto       81.18 326  eP      P       11 34 00.1 +1.2
      comp=Z,6.8nm,0.9s
VYHS  Vyhne             81.21 327  eP      P       11 33 59.9 +0.9
VYHS                                pmax   pmax
      comp=Z,4.0nm,1.2s
VYHS  Vyhne             81.21 327  eP      P       11 33 59.9 +0.9
BRG   Berggiesshubel    81.36 331  eP      P       11 34 00.1 +0.4
      comp=Z,3.8nm,1.0s
BRG   Berggiesshubel    81.36 331  eP      P       11 34 00.1 +0.4
BRG                                 pmax   pmax
      comp=Z,3.0nm,1.0s
CLL   Collm             81.38 332⇑ iP      P       11 34 00.0 +0.3
      comp=Z,9.0nm,0.9s
CLL   Collm             81.38 332  eP      P       11 34 00.1 +0.3
      comp=Z,9.3nm,1.0s
CLL   Collm             81.38 332  eP      P       11 34 00.1 +0.3
CLL                                 pmax   pmax
      comp=Z,9.0nm,1.0s
JAVC  Velka Javorina    81.43 328  eP      P       11 34 02.0 +1.8
VRAC  Vranov            81.53 328⇑ iP      P       11 34 01.8 +1.1
VRAC  Vranov            81.53 328 ⇑P       P       11 34 01.8 +1.1
VRAC  Vranov            81.53 328  eP      P       11 34 01.6 +0.9
ECSD  EROS Data Cent    81.71  40  eP      P       11 34 02.0 +0.2
      comp=Z,3.3nm,0.9s
KRUC  Moravsky          81.81 328  eP      P       11 34 02.6 +0.5
BZS   Buzias            82.11 323⇑ iP      P       11 34 01.9 -1.9
BZS   Buzias            82.11 323 ⇑P       P       11 34 01.9 -1.9
ANMO  Albuquerque       82.19  52   P      P       11 34 04.5 -0.2
      comp=Z,1.9nm,1.0s,baz=302,slow=6.5,SNR=8.2
ANMO  Albuquerque       82.19  52  eP      P       11 34 06.0 +1.4
      comp=Z,5.3nm,1.3s
ANMO  Albuquerque       82.19  52⇑ eP      P       11 34 06.2 +1.5
ANMO                                pmax   pmax
      comp=Z,6.0nm,1.7s
RAYN  Ar Rayn           82.40 294  eP      P       11 34 05.3 -0.4
      comp=Z,5.4nm,1.1s
RAYN  Ar Rayn           82.40 294  eP      P       11 34 05.3 -0.4
RAYN                                pmax   pmax
      comp=Z,5.0nm,1.1s
MOX   Moxa              82.43 332   P      P       11 34 08.5 +3.1
MOX                                 pmax   pmax
      comp=Z,4.0nm,1.4s
MDVR  Moldovita         82.68 323⇓ iP      P       11 34 07.1 +0.2
SOP   Sopron            82.81 327   P      P       11 34 10.1 +2.7
SOP                                 pmax   pmax
      comp=Z,10.0nm,1.1s
KHC   Kasperske Hory    82.89 330  eP      P       11 34 08.5 +0.6
KHC                                ePCP    PcP     11 34 11.7 -0.9
KHC   Kasperske Hory    82.89 330  eP      P       11 34 08.3 +0.4
      comp=Z,1.4nm,0.8s
KHC   Kasperske Hory    82.89 330  eP      P       11 34 08.5 +0.6
CONA  Conrad Observa    82.91 328  i P     P       11 34 09.0 +1.0
      comp=Z,5.5nm,1.0s
EKA   Eskdalemuir Ar    82.96 342   P      P       11 34 07.9 -0.1
      comp=Z,2.3nm,0.7s,baz=33,slow=5.4,SNR=7.5
ISP   Isparta           82.99 313⇓ eP      P       11 34 09.4 +0.7
ISP                                 pmax   pmax
      comp=Z,3.0nm,1.0s
GERES GERESS Array B    83.07 330   P      P       11 34 08.2 -0.6
      comp=Z,0.9nm,0.7s,baz=45,slow=4.0,SNR=8.4
GEA0  GERESS Array S    83.08 330  eP      P       11 34 09.0 +0.1
MMAI  Mount Meron Ar    83.26 307   P      P       11 34 10.0 -0.1
      comp=Z,11nm,0.9s,baz=32,slow=5.8,SNR=7.1
VTS   Vitosha           83.56 320⇑ iP      P       11 34 12.6 +1.0
VTS   Vitosha           83.56 320  eP      P       11 34 12.1 +0.5
      comp=Z,9.4nm,1.1s
VTS   Vitosha           83.56 320  eP      P       11 34 12.1 +0.5
VTS                                 pmax   pmax
      comp=Z,9.0nm,1.1s
ARSA  Arzberg           83.59 328  eP      P       11 34 11.9 +0.5
      comp=Z,2.6nm,0.7s
G40A  Rib Lake          83.67  35  eP      P       11 34 12.1 +0.2
      comp=Z,6.1nm,1.1s
SCHQ  Schefferville     83.75  18  eP      P       11 34 12.6 +0.5
      comp=Z,6.9nm,0.6s
SOKA  Soboth            84.24 328  eP      P       11 34 15.0 +0.1
      comp=Z,6.6nm,0.8s
SRS   Serrai            84.45 319   P      P       11 34 18.4 +2.4
MYKA  Terra Mystica     84.86 328  i P     P       11 34 17.8 -0.2
      comp=Z,2.3nm,0.6s
WATA  Walderalm         85.13 330  i PcP   P       11 34 19.9 +0.4
      comp=Z,1.6nm,0.7s
WTTA  Wattenberg        85.17 330  ePcP    P       11 34 20.1 +0.4
      comp=Z,2.4nm,0.5s
MOTA  Moosalm           85.31 330  i P     P       11 34 20.2 -0.1
      comp=Z,3.1nm,0.8s
RETA  Reutte            85.33 330  i PcP   P       11 34 20.6 +0.3
      comp=Z,8.7nm,0.8s
BFO   Black Forest      85.55 332  eP      P       11 34 21.2 -0.2
      comp=Z,7.7nm,1.0s
BFO   Black Forest      85.55 332  i P     P       11 34 22.2 +0.8
PDG   Podgorica         85.63 323⇑ iP      P       11 34 22.0 +0.1
TTG   Podgorica         85.63 323  eP      P       11 34 21.9 +0.1
      comp=Z,11nm,1.2s
TTG   Podgorica         85.63 323  eP      P       11 34 21.9 +0.1
TTG                                 pmax   pmax
      comp=Z,11nm,1.2s
FETA  Feichten          85.72 330  ePcP    P       11 34 22.8 +0.4
      comp=Z,6.3nm,1.1s
DAVA  Damuels           85.84 331  ePcP    P       11 34 23.4 +0.4
      comp=Z,9.6nm,0.9s
ECH   Echery            86.08 333  eP      P       11 34 23.7 -0.3
      comp=Z,5.2nm,0.9s
ECH   Echery            86.08 333  eP      P       11 34 23.7 -0.3
ECH                                 pmax   pmax
      comp=Z,5.0nm,0.9s
FUORN Ofenpass-Fuorn    86.24 330  eP      P       11 34 25.4 +0.3
      comp=Z,11nm,0.9s
DAVOX Davos/Dischmat    86.25 331   P      P       11 34 24.8 -0.3
      comp=Z,4.1nm,0.9s,baz=352,slow=9.7,SNR=5.4
WMOK  Wichita Mounta    86.94  47  eP      P       11 34 28.8 +0.3
      comp=Z,3.1nm,1.1s
WMOK  Wichita Mounta    86.94  47  eP      P       11 34 28.8 +0.3
WMOK                                pmax   pmax
      comp=Z,3.0nm,1.1s
TXAR  Lajitas Array     87.69  54   P      P       11 34 32.1 -0.2
      comp=Z,0.5nm,0.8s,baz=304,slow=3.7,SNR=6.6
P42A  Winchester        87.94  39  eP      P       11 34 33.1  0.0
      comp=Z,9.8nm,1.1s
MIAR  Mount Ida         90.03  44  eP      P       11 34 43.6 +0.5
      comp=Z,6.7nm,1.1s
MIAR  Mount Ida         90.03  44  eP      P       11 34 43.6 +0.5
MIAR                                pmax   pmax
      comp=Z,7.0nm,1.1s
LPAZ  La Paz           144.21  62   PKP    PKPab   11 41 18.4 +0.2
      comp=Z,1.2nm,0.7s,baz=347,slow=6.8,SNR=6.9
LPAZ  La Paz           144.21  62  ePKPdf  PKPbc   11 41 19.0 +0.4
LPAZ  La Paz           144.21  62  ePKIKP  PKPbc   11 41 19.0 +0.5
MNMC  Minye Minye      145.04  67  ePKPbc  PKPdf   11 41 21.9 +0.5
PB11  IPOC Station P   145.40  68  ePKPdf  PKPab   11 41 22.3 +0.4
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*ROM **29** 11:23:29.7±0.2, 44.°817N±0.°006×11.°470E±0.°008, h8^{km}, ML2.5/14*
*VIE **29** 11:23:33.1±0.8, 44.°84N×11.°64E, h7^{km}±4^{km}, mb2.1/7, ml2.3/12, Error ellipse: s-maj=9.1km s-min=4.9km az=112.0 45 km NNE of Bologna*
*CSEM **29** 11:23:34.1±1.0, 44.°94N×11.°60E, h2^{km}, ML2.3, Error ellipse: s-maj=16.9km s-min=9.6km az=17.0*
*PRU **29** 11:23:38.0, 45.°01N×11.°53E, h13^{km}*
ISC 29 11:23:31.5±0.9, **44.°78N**±0.°03×**11.°44E**±0.°03, **h14**^{km}±4^{km}, **n53**, σ**1.ˢ11**/67, **1C-4D, Northern Italy**

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Code  Station Name       Δ°   AZ°    Phase ID          Time     Res
                                    Op      ISC        h  m  s   ISC
T0822 Casumaru (Bond     0.09 308   P       Pb      11 23 34.3 -0.2
T0822                               S       Sb      11 23 37.2 +0.7
T0822                               AML     AML
      comp=E,13630µm,0.2s
T0822                               AML     AML
      comp=N,14650µm,0.1s
T0822                               AML     AML
      comp=E,13645µm,0.2s
T0822                               AML     AML
      comp=N,14700µm,0.1s
T0822                               AML     AML
      comp=N,14700µm,0.1s
T0822                               AML     AML
      comp=E,13645µm,0.2s
T0822                               END
T0822                               END
T0821 Loc. Casaglia      0.14  30   P       Pg      11 23 34.5 -0.7
T0821                               S       Sg      11 23 37.5 -0.2
T0821                               AML     AML
      comp=E,3680µm,0.1s
T0821                               AML     AML
      comp=N,4170µm,0.1s
T0821                               AML     AML
      comp=E,3685µm,0.1s
T0821                               AML     AML
      comp=N,4170µm,0.1s
T0821                               AML     AML
      comp=E,3685µm,0.1s
T0821                               AML     AML
      comp=N,4170µm,0.1s
T0821                               END
T0821                               END
FIU   Minerbio Fiu       0.14 166   P       Pb      11 23 35.6 -0.4
FIU                                 S       Sb      11 23 39.6 +0.7
FIU                                 AML     AML
      comp=E,2760µm,0.4s
FIU                                 AML     AML
      comp=N,4965µm,0.7s
FIU                                 AML     AML
      comp=E,2760µm,0.4s
FIU                                 AML     AML
      comp=N,4965µm,0.7s
FIU                                 AML     AML
      comp=N,4965µm,0.7s
FIU                                 AML     AML
      comp=E,2760µm,0.4s
FIU                                 END
FIU                                 END
T0800 Massa Finalese     0.15 296   P       Pb      11 23 35.3 -0.8
T0800                               S       Sb      11 23 39.8 +0.6
T0800                               AML     AML
      comp=E,2025µm,0.2s
T0800                               AML     AML
      comp=N,2475µm,0.2s
T0800                               AML     AML
      comp=E,1815µm,0.2s
T0800                               AML     AML
      comp=N,2765µm,0.3s
T0800                               AML     AML
      comp=E,2025µm,0.2s
T0800                               AML     AML
      comp=N,2480µm,0.2s
T0800                               AML     AML
      comp=E,1820µm,0.2s
T0800                               AML     AML
      comp=N,2765µm,0.3s
T0800                               AML     AML
      comp=N,2480µm,0.2s
T0800                               AML     AML
      comp=N,2765µm,0.3s
T0800                               AML     AML
      comp=E,2025µm,0.2s
T0800                               AML     AML
      comp=E,1820µm,0.2s
T0800                               END
T0800                               END
T0805 Bondeno (FE)       0.16 329   P       Pb      11 23 35.2 -1.1
T0802 SanFelice sul      0.21 297   P       Pb      11 23 36.2 -0.9
RAVA  Ravarino           0.23 264   P       Pb      11 23 37.4  0.0
RAVA                                S       Sb      11 23 43.1 +1.7
RAVA                                AML     AML
      comp=E,1300µm,0.9s
RAVA                                AML     AML
      comp=N,1460µm,0.3s
RAVA                                AML     AML
      comp=E,1300µm,0.9s
RAVA                                AML     AML
      comp=N,1465µm,0.3s
RAVA                                AML     AML
      comp=E,1300µm,0.9s
RAVA                                AML     AML
      comp=N,1465µm,0.3s
SERM  Sermide            0.25 336   P       Pb      11 23 37.9  0.0
TEOL  Teolo              0.60  16⇓ ePg      Pb      11 23 43.4 -0.4
TEOL  Teolo              0.60  16  ePg      Pb      11 23 43.4 -0.4
TEOL  Teolo              0.60  16   P       Pb      11 23 43.4 -0.4
TEOL                                AML     AML
      comp=E,730µm,0.3s
TEOL                                AML     AML
      comp=N,583µm,0.8s
TEOL                                AML     AML
      comp=E,730µm,0.3s
TEOL                                AML     AML
      comp=N,583µm,0.8s
TEOL                                AML     AML
      comp=N,583µm,0.8s
TEOL                                AML     AML
      comp=E,730µm,0.3s
ROVR  Roverˆ¤ Verone     0.91 343   P       Pn      11 23 48.9 -1.0
ROVR                                AML     AML
      comp=E,306µm,1.3s
ROVR                                AML     AML
      comp=N,547µm,0.2s
ROVR                                AML     AML
      comp=E,306µm,1.3s
ROVR                                AML     AML
      comp=N,548µm,0.2s
ROVR                                AML     AML
      comp=E,306µm,1.3s
ROVR                                AML     AML
      comp=N,548µm,0.2s
SALO  Salr               1.06 323   P       Pg      11 23 53.0 +1.0
SALO                                AML     AML
      comp=E,240µm,0.8s
SALO                                AML     AML
      comp=N,242µm,1.0s
SALO                                AML     AML
      comp=E,240µm,0.8s
SALO                                AML     AML
      comp=N,242µm,1.0s
DOSS  Dosso del Somm     1.11 351⇑ ePg      Pg      11 23 52.6 -0.4
DOSS                               eSg      Sg      11 24 09.0 +1.4
DOSS  Dosso del Somm     1.11 351  ePg      Pg      11 23 52.6 -0.4
DOSS                               eSg      Sg      11 24 09.0 +1.4
CGRP  Cima Grappa        1.13  13⇓ ePg      Pb      11 23 52.8 -0.1
CGRP                               eSg      Sb      11 24 08.9 +1.4
CGRP  Cima Grappa        1.13  13  ePg      Pb      11 23 52.8 -0.1
CGRP                               eSg      Sb      11 24 08.9 +1.4
CGRP  Cima Grappa        1.13  13   P       Pb      11 23 52.8 -0.1
CGRP                                AML     AML
      comp=E,94µm,0.5s
CGRP                                AML     AML
      comp=N,78µm,0.7s
CGRP                                AML     AML
      comp=E,94µm,0.5s
CGRP                                AML     AML
      comp=N,78µm,0.7s
MAGA  Magasa             1.15 330   P       Pg      11 23 53.4 -0.2
MAGA                                AML     AML
      comp=E,532µm,0.3s
MAGA                                AML     AML
      comp=N,414µm,1.1s
MAGA                                AML     AML
      comp=E,532µm,0.3s
MAGA                                AML     AML
      comp=N,414µm,1.1s
PANI  Panarotta          1.27 357  ePg      Pg      11 23 55.5 -0.5
PANI  Panarotta          1.27 357  ePg      Pg      11 23 55.5 -0.5
CTI   Castel Tesino      1.28   7   P       Pb      11 23 54.9 -0.4
CTI                                 AML     AML
      comp=E,196µm,0.9s
CTI                                 AML     AML
      comp=N,288µm,0.2s
CTI                                 AML     AML
      comp=N,288µm,0.2s
CTI                                 AML     AML
      comp=E,196µm,0.9s
VARN  Col Varnada, M     1.30  21⇓ ePg      Pb      11 23 55.6 -0.1
VARN                               eSg      Sn      11 24 13.4 +0.9
VARN  Col Varnada, M     1.30  21  ePg      Pb      11 23 55.6 -0.1
VARN                               eSg      Sn      11 24 13.4 +0.9
RNI   Roncone            1.33 335  ePg      Pg      11 23 56.6 -0.5
RNI   Roncone            1.33 335  ePg      Pg      11 23 56.7 -0.5
AGOR  Agordo             1.56  16   P       Pb      11 24 00.5 +0.3
AGOR                                AML     AML
      comp=E,34µm,0.4s
AGOR                                AML     AML
      comp=N,27µm,0.3s
AGOR                                AML     AML
      comp=N,27µm,0.3s
AGOR                                AML     AML
      comp=E,34µm,0.4s
OZOL  Ozolo              1.65 351⇓ ePg      Pg      11 24 01.6 -1.5
OZOL                               eSg      Sb      11 24 23.7 +1.4
OZOL  Ozolo              1.65 351  ePg      Pg      11 24 01.6 -1.5
OZOL                               eSg      Sb      11 24 23.7 +1.4
KOSI  Kohlern            1.68 359   P       Pb      11 24 01.7 -0.7
KOSI                                AML     AML
      comp=E,48µm,0.3s
KOSI                                AML     AML
      comp=N,60µm,0.4s
KOSI                                AML     AML
      comp=E,48µm,0.3s
KOSI                                AML     AML
      comp=N,60µm,0.4s
MOSI  Grossmontoni       1.94 342   P       Pg      11 24 07.6 -1.1
ABSI  Aberstueckl        1.95 358   P       Pb      11 24 05.2 -1.7
ABSI                                AML     AML
      comp=E,58µm,0.5s
ABSI                                AML     AML
      comp=N,51µm,0.5s
ABSI                                AML     AML
      comp=E,58µm,0.5s
ABSI                                AML     AML
      comp=N,51µm,0.5s
ABTA  Abfaltersbach      2.10  20  ePg      Pg      11 24 11.2 -0.7
      comp=N,0.1nm,0.1s
ABTA  Abfaltersbach      2.10  20   Pg      Pg      11 24 11.2 -0.7
      comp=N,0.1nm,0.1s
FETA  Feichten           2.30 348  ePn      Pb      11 24 12.2 -0.6
      comp=N,2.4nm,0.3s
FETA  Feichten           2.30 348   Pn      Pb      11 24 12.2 -0.6
      comp=N,2.4nm,0.3s
MYKA  Terra Mystica      2.41  39  ePg      Pg      11 24 17.4 -0.2
      comp=N,1.4nm,0.2s
MYKA  Terra Mystica      2.41  39   Pg      Pg      11 24 17.4 -0.2
      comp=N,1.4nm,0.2s
NVLJ  Novalja            2.46  94   Sn      Sn      11 24 40.6 -0.2
WTTA  Wattenberg         2.49   3  ePg      Pg      11 24 18.6 -0.6
      comp=N,0.3nm,0.1s
WTTA  Wattenberg         2.49   3   Pg      Pg      11 24 18.6 -0.6
      comp=N,0.3nm,0.1s
WTTA                                Sg      Sb      11 24 49.6 +3.0
WATA  Walderalm          2.56   2  ePn      Pb      11 24 15.6 -1.6
      comp=N,2.4nm,0.3s
WATA  Walderalm          2.56   2   Pn      Pb      11 24 15.6 -1.6
      comp=N,2.4nm,0.3s
MOTA  Moosalm            2.58 355  ePn      Pb      11 24 16.0 -1.6
      comp=N,0.3nm,0.1s
MOTA  Moosalm            2.58 355   Pn      Pb      11 24 16.0 -1.6
      comp=N,0.3nm,0.1s
DAVA  Damuels            2.73 337   Pn      Pb      11 24 19.0 -1.2
      comp=N,0.8nm,0.3s
DAVA  Damuels            2.73 337   Pn      Pb      11 24 19.0 -1.2
      comp=N,0.8nm,0.3s
OBKA  Obir               2.78  50  ePn      Pn      11 24 16.9 +1.2
      comp=N,0.3nm,0.1s
OBKA  Obir               2.78  50   Pn      Pn      11 24 16.9 +1.2
      comp=N,0.3nm,0.1s
SOKA  Soboth             3.15  52   Pg      Pg      11 24 30.2 -1.7
      comp=N,0.6nm,0.3s
SOKA  Soboth             3.15  52   Pg      Pg      11 24 30.2 -1.7
      comp=N,0.6nm,0.3s
KHC   Kasperske Hory     4.59  18  eSN      Sn      11 25 31.3 -2.3
KHC   Kasperske Hory     4.59  18   Sn      Sn      11 25 31.3 -2.3
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*IDC **29** 11:52:35.2±1.6, 3.°18N×97.°05E, h0^{km}, mb3.4/5, mb1 3.6/5, mb1mx3.3/65, mbtmp3.4/5, Error ellipse: s-maj=58.5km s-min=18.5km az=46.0*
*DJA **29** 11:52:39.7±0.2, 3°N±2°×9°7E±°, h10^{km}, M3.6/11, MLv3.6/11*
ISC 29 11:52:38.2±0.9, **3.°22N**±0.°04×**97.°19E**±0.°04, **h9**^{km}±5^{km}, **n15**, σ**1.ˢ47**/21, **mb3.3**/5, **Northern Sumatera**

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Code  Station Name       Δ°   AZ°    Phase ID          Time     Res
                                    Op      ISC        h  m  s   ISC
TPTI                     0.04 343   P       Pg      11 52 39.8 -0.2
TPTI                                S       Sg      11 52 41.5 +0.2
KCSI  Kotacane, Aceh     0.65  63   P       Pg      11 52 50.6 -0.2
KCSI                                S       Sg      11 52 58.8 -0.6
SNSI  Sinabang, Aceh     1.18 227   P       Pn      11 53 02.2 +1.2
SNSI                                S       Sn      11 53 19.9 +2.7
MLSI  Meulaboh, Aceh     1.30 323   P       Pb      11 53 03.3 +0.4
MLSI                                S       Sn      11 53 23.0 +2.8
TSI   Tuntungan          1.40  78   P       Pb      11 53 05.1 +0.6
TSI                                 S       Sg      11 53 24.4 +1.2
PSI   Prapat             1.78 104   Pn      Pn      11 53 10.6 +1.3
      8.9nm,0.3s,baz=360,slow=13,SNR=20
PSI                                 Sn      Sb      11 53 34.5 +0.9
      15nm,0.3s,baz=180,slow=16,SNR=12
GSI   Gunungsitoli       1.94 169   P       Pb      11 53 12.8 -1.0
LHMI  Lhok Sumawe        2.01 353   P       Pn      11 53 12.8 +0.5
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BSI	Banda Aceh	2.95	320	P	Pb	11 53 30.7	-0.3
MNSI	Mandailing Nat	3.39	135	P	Pn	11 53 33.0	+1.6
WRA	Warramunga Arr	43.13	124	P	P	12 00 37.5	-1.9
	0.4nm,0.7s,baz=304,slow=9.0,SNR=11						
ASAR	Alice Springs	44.63	129	P	P	12 00 50.2	-1.3
	0.3nm,0.7s,baz=302,slow=8.2,SNR=7.5						
MKAR	Makanchi Array	45.29	346	P	P	12 00 54.7	-1.7
	0.1nm,0.4s,baz=165,slow=8.7,SNR=2.8						
KURBB	Kurchatov Arra	49.79	345	P	P	12 01 29.6	-1.7
	0.1nm,0.3s,baz=166,slow=7.5,SNR=3.1						
STKA	Stephens Creek	54.72	133	P	P	12 02 08.1	-0.1
	0.9nm,0.7s,baz=314,slow=12,SNR=2.9						

IDC ***29*** *12:03:43.6±2.6, 36°.33N×71°.29E, h213^{km}±22^{km}, mb3.4/14, mb1 3.4/20, mb1mx3.2/67, mbtmp3.9/20, MS2.7/1, Ms1 2.7/1, ms1mx2.1/47, Error ellipse: s-maj=19.5km s-min=13.5km az=172.0*

ISCJB ***29*** *12:03:47.2±0.3, 36°.65N±0°.03×71°.30E±0°.05, h250^{km}, mb3.5/14, Error ellipse: s-maj=5.9km s-min=3.1km az=152.0*

NNC ***29*** *12:03:48.1±5.7, 37°.08N×70°.47E, h0^{km}, mb4.3, mpv4.0, Error ellipse: s-maj=49.1km s-min=36.7km az=154.0*

ISC 29 12:03:46.9±0.5, 36°.64N±0°.05×71°.30E±0°.06, h250^{km}, n55, σ2^{s}.24/59, mb3.5/14, 5C-2D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	2.86	170	P	Pn	12 04 39.3	+1.3
CEP				S	S	12 05 18.0	-0.5
CEP	Cherat	2.86	170	P	S	12 05 17.7	-0.8
CHCP	Chirah Chowk	3.39	151	P	Pn	12 04 45.6	+1.9
SFK	Sufi-Kurgan	3.79	27	⇑Pn	Pn	12 04 49.0	+0.7
	15nm,0.3s						
SFK				⇑Sn	S	12 05 34.3	-2.8
	42nm,0.3s						
AML	Almayashu	5.79	18	P	Pn	12 05 13.2	+0.6
	SNR=38						
MNAS	Manas	5.91	9	⇓Pn	Pn	12 05 14.2	+0.3
	5.2nm,0.3s						
MNAS				⇑Sn	S	12 06 18.5	-5.0
	36nm,0.6s						
DHRM	DHARAMSHALA	6.02	135	*e*P	Pn	12 05 16.4	+0.8
DHRM				*e*S	S	12 06 25.0	-1.5
DHRM				IAML		12 06 27.6	
	comp=E,348nm,0.2s						
UCH	Uchtor	6.11	23	P	Pn	12 05 17.5	+0.8
	SNR=59						
KZA	Kyzart	6.23	28	P	Pn	12 05 18.7	+0.5
	SNR=10						
EKS2	Erkin-Say	6.31	17	P	Pn	12 05 19.9	+1.1
	SNR=8.5						
AAK	Ala-Archa	6.47	21	P	Pn	12 05 21.9	+0.9
	comp=E,3.3nm,0.3s,baz=208,slow=12,SNR=16						
AAK				S	S	12 06 35.5	-0.9
	comp=E,3.7nm,0.3s,baz=310,slow=23,SNR=8.3						
AAK	Ala-Archa	6.47	21	⇑Pn	Pn	12 05 22.5	+1.5
	comp=E,9.2nm,0.6s						
AAK				⇓Sn	S	12 06 34.5	-1.9
	comp=E,40nm,0.9s						
AAK	Ala-Archa	6.47	21	P	Pn	12 05 22.1	+1.2
	SNR=8.3						
KK31	Karatay Array	6.48	355	Pn	Pn	12 05 20.7	-0.2
	comp=E,4.2nm,0.4s,baz=177,slow=12,SNR=52						
KK31				Sn	S	12 06 32.1	-4.2
	comp=E,16nm,0.5s,baz=184,slow=23,SNR=18						
TKM2	Tokmak 2	7.09	27	P	Pn	12 05 29.9	+1.2
	SNR=5.8						
SMLA	Simla	7.35	137	*e*P	Pn	12 05 33.3	+1.3
SMLA				*e*S	S	12 06 53.4	-3.1
SMLA				IAML		12 06 58.1	
	comp=E,91nm,0.4s						
SMLA				IAML		12 06 59.7	
	comp=N,102nm,0.5s						
KKR	Kurukshetra	8.11	144	*e*x	S	12 07 06.4	-7.6
JOSI	Joshimath	9.18	129	*e*P	Pn	12 05 57.4	+2.0
JOSI				*e*S	S	12 07 37.3	-2.0
JOSI				IAML		12 08 07.9	
	comp=E,94nm,0.8s						
BHGR	Bahadurgarh	9.25	147	*e*S	S	12 07 36.7	-3.7
KHET	Khetri	9.36	155	*e*P	Pn	12 05 57.5	+0.1
KHET				*e*S	S	12 07 39.6	-3.4
KHET				IAML		12 07 41.1	
	comp=N,14nm,0.5s						
KHET				IAML		12 07 41.4	
	comp=E,12nm,0.3s						
GEYT	Alibeck	10.58	281	P	Pn	12 06 10.4	-2.3
	comp=E,0.5nm,0.3s,baz=102,slow=14,SNR=5.1						
GEYT				S	S	12 08 10.6	-0.8
	comp=E,0.3nm,0.3s,baz=266,slow=39,SNR=3.2						
MKAR	Makanchi Array	13.04	36	P	P	12 06 44.8	0.0
	comp=E,0.2nm,0.3s,baz=208,slow=11,SNR=7.8						
PYUN	Piuthan	13.04	127	*e*P	P	12 06 45.6	+0.4
	comp=E,32nm,0.4s						
PYUN				*e*S	S	12 09 03.2	-5.3
DANN	Dangsing	13.37	125	*e*P	P	12 06 49.4	+0.4
	comp=E,25nm,0.4s						
KOLN	Koldanda	13.66	127	*e*P	P	12 06 53.9	+1.8
	comp=E,16nm,0.3s						
GKN	Gorkha	14.18	124	*e*P	P	12 06 59.3	+1.5
	comp=E,38nm,0.4s						
BHPL	Bhopal	14.37	157	*e*P	P	12 07 04.0	+4.2
BHPL				*e*x	x	12 09 26.4	
KKN	Kakani	14.75	123	*e*P	Pn	12 07 06.2	+1.9
	comp=E,42nm,0.6s						
DMN	Daman	14.75	124	*e*P	Pn	12 07 06.5	+2.1
	comp=E,26nm,0.5s						
KURBB	Kurchatov Arra	14.91	18	P	Pn	12 07 06.6	+0.9
	comp=E,0.1nm,0.3s,baz=207,slow=12,SNR=2.7						
PKIN	Phulchoki	14.97	123	*e*P	Pn	12 07 10.0	+3.0
	comp=E,32nm,0.4s						
AB31	Akbulak array	15.08	330	P	Pn	12 07 09.3	+1.5
	comp=E,1.9nm,0.6s,baz=155,slow=7.9,SNR=24						
GUN	Gumba	15.09	121	*e*P	Pn	12 07 10.5	+2.0
	comp=E,34nm,0.4s						
JIRN	Jiri	15.46	121	*e*P	Pn	12 07 15.5	+2.6
	comp=E,66nm,0.4s						
RAMN	Ramite	16.19	122	*e*P	Pn	12 07 23.7	+2.2
	comp=E,22nm,0.4s						
BVAR	Borovoye Array	16.39	358	P	Pn	12 07 23.7	+0.3
	comp=E,0.2nm,0.3s,baz=168,slow=9.7,SNR=4.1						
AKTO	Aktyubinsk	16.78	329	P	Pn	12 07 28.2	+0.4
	comp=E,0.6nm,0.3s,baz=142,slow=12,SNR=11						
AKTO	Aktyubinsk	16.78	329	⇑P	Pn	12 07 28.4	+0.5
	comp=E,3.6nm,0.6s						
ODAN	Odare	16.79	121	*e*P	Pn	12 07 31.5	+3.0
	comp=E,13nm,0.5s						
ZALV	Zalesovo Beam	19.69	24	P	Pn	12 07 59.1	-2.8
	comp=E,0.5nm,0.3s,baz=220,slow=10,SNR=4.4						
ZALV				LR	LR	12 16 33.5	
	comp=E,23nm,19.9s,baz=248,slow=38						
ARU	Arti	21.57	341	P	P	12 08 19.2	+2.6
	comp=E,0.8nm,0.3s,baz=68,slow=19,SNR=3.8						
BRTR	Keskin Array B	29.62	288	P	P	12 09 30.6	+1.5
	comp=E,0.7nm,0.6s,baz=95,slow=10.0,SNR=5.0						
AKASG	Malin Array Be	33.04	309	P	P	12 09 58.8	+0.1
	comp=E,0.3nm,0.4s,baz=81,slow=7.5,SNR=3.7						
FINES	FINESS Array B	37.50	326	P	P	12 10 39.2	+2.8
	comp=E,1.3nm,0.4s,baz=119,slow=9.6,SNR=20						
ARCES	ARCESS Array B	41.10	337	P	P	12 11 09.1	+3.0
	comp=E,1.6nm,0.4s,baz=115,slow=8.1,SNR=25						
HFS	Hagfors	43.10	322	P	P	12 11 23.9	+1.6
	comp=E,3.2nm,0.5s,baz=98,slow=10,SNR=22						
NB2	NORSAR Subarra	44.41	323	P	P	12 11 34.6	+1.9
	comp=Z,0.9nm,0.5s,baz=97,slow=7.9						
NOA	NORSAR Array B	44.41	323	P	P	12 11 34.5	+1.8
	comp=Z,1.6nm,0.6s,baz=96,slow=7.7,SNR=7.7						
ESDC	Sonseca Array	57.60	298	P	P	12 13 13.3	+2.4
	comp=Z,0.1nm,0.3s,baz=54,slow=7.8,SNR=7.2						
TORD	Torodi Ar. Bea	65.96	269	P	P	12 14 06.6	-0.1
	comp=Z,1.4nm,0.6s,baz=50,slow=5.6						
KOWA	Kowa	69.80	273	P	P	12 14 31.5	+0.9
	comp=Z,2.7nm,0.7s,baz=43,slow=5.9,SNR=4.7						
ILAR	Eielson Array	74.58	16	P	P	12 14 59.4	+1.4
	comp=Z,0.2nm,0.7s,baz=303,slow=5.3,SNR=4.2						
YKA	Yellowknife Ar	81.09	3	P	P	12 15 36.7	+3.0
	comp=Z,0.6nm,0.4s,baz=350,slow=5.4,SNR=17						
WRA	Warramunga Arr	81.86	122	P	P	12 15 38.7	+0.2
	comp=Z,0.3nm,0.7s,baz=324,slow=5.0,SNR=5.4						
ASAR	Alice Springs	84.14	125	P	P	12 15 49.9	-0.2
	comp=Z,0.3nm,0.7s,baz=315,slow=4.4,SNR=5.4						

MAN 29 12:09:35.9, 11°.33N×125°.69E, h0^{km}, mb4.3, ML3.2, MS2.9, 1C, Samar

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BESP	Borongan	0.36	318	*e*P	Pg	12 09 43.7	+0.9
BESP				*e*S	Sb	12 09 55.1	+3.8
PLP	Palo	0.71	256	⇑*e*P	Pg	12 09 49.6	+0.1
PLP				*i* S	Sn	12 10 04.6	-0.3
OCLP	Ormoc	1.09	255	*e*P	Pb	12 09 57.7	0.0
OCLP				*e*S	Sn	12 10 19.1	+4.8
MSLP	Maasin	1.44	214	*e*P	Pn	12 10 02.2	-1.1
MSLP				*e*S	Sn	12 10 25.3	+2.4

TEH 29 12:10:38.2, 33°.38N×50°.97E, h5^{km}, ML2.7, Northern and central Iran

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IKLH	Kolahrood	0.51	97	*e*Pg	Pb	12 10 49.0	-0.9
IKLH				*e*		12 11 00.7	
	comp=Z,13μm,0.0s						
ROKH	ROKH	1.03	177	*e*Pg	Pb	12 10 58.9	+0.2
ROKH				*e*		12 11 14.9	
	comp=Z,99nm,0.2s						
IZEF	Zefreh	1.24	113	*e*Pn	Pb	12 11 02.2	0.0
IZEF				*e*		12 11 21.0	
	comp=Z,1μm,0.1s						
IGAR	Gharneh	1.33	137	*e*		12 11 24.3	
	comp=Z,3μm,0.1s						
IGAR				*e*Pn	Pb	12 11 03.9	+0.2
ISFB	Sefidab	1.43	47	*e*		12 11 25.8	
	comp=Z,797nm,0.1s						
ISFB				*e*Pn	Pn	12 11 04.8	-0.2
IRAM	Ramesheh	1.97	142	*e*Pn	Pg	12 11 15.4	-0.5
IRAM				*e*		12 11 46.4	
	comp=Z,394nm,0.1s						
HSAM	Samen	2.14	293	*e*Pn	Pb	12 11 17.3	-0.3
HSAM				*e*		12 11 48.2	
	comp=Z,99nm,0.1s						
IRAZ	Razeghan	2.19	337	*e*Pn	Pb	12 11 18.2	-0.3
ANAR	Anarak	2.32	94	*e*	Pg	12 11 23.7	+1.0
	comp=Z,99nm,0.0s						

NEIC ***29*** *12:22:11.8±0.1, 14°.19N×92°.29W, h18^{km}, mb5.6/299, ME5.3, MS5.5/299, MW5.8, MW5.8, MW5.9, Error ellipse: s-maj=3.2km s-min=2.5km az=46.0, Moment Tensor Solution. s44 Moment tensor: Scale 10^{17}Nm; M$_{rr}$4.50; M$_{\theta\theta}$-2.84; M$_{\phi\phi}$-1.66; M$_{r\theta}$2.16; M$_{\theta\phi}$3.12; M$_{\phi r}$-0.81; Best double couple: M$_0$5.50000×10^{17} NP1:φ$_s$120.00000°, δ58.00000°, λ79.00000°. NP2:φ$_s$321.00000°, δ34.00000°, λ107.00000°. Principal axes: T 5.0900, Plg75.0000°, Azm358.0000°; N 0.8000, Plg10.0000°, Azm126.0000°; P -5.8900, Plg12.0000°, Azm218.0000°; Broadband fault plane solution: P waves. NP1:φ$_s$300.00000°, δ25.00000°, λ90.00000°. NP2:φ$_s$120.00000°, δ65.00000°, λ90.00000°. Principal axes: T Plg70.0000°, Azm30.0000°; N Plg0.0000°, Azm0.0000°; P Plg20.0000°, Azm210.0000°; Depth from synthetics of broadband displacement seismograms. Energy computed from BB mechanism.*

NEIC Felt at Antigua Guatemala. Also felt at Tapachula and Tuxtla Gutierrez, Mexico.

GCMT ***29*** *12:22:11.8±0.1, 14°.20N×92°.88W, h20^{km}, MW5.8/133, Moment Tensor Solution. s133,c290; s129,c413; Duration: 2^{s}.0 Moment tensor: Scale 10^{17}Nm; M$_{rr}$5.66±.06; M$_{\theta\theta}$-4.53±.04; M$_{\phi\phi}$-1.14±.05; M$_{r\theta}$3.00±.09; M$_{\theta\phi}$2.30±.03; M$_{\phi r}$-2.96±.10; Best double couple: M$_0$7.06800×10^{17} NP1:φ$_s$127.00000°, δ63.00000°, λ99.00000°. NP2:φ$_s$287.00000°, δ28.00000°, λ72.00000°. Principal axes: T 7.1470, Plg70.0000°, Azm57.0000°; N -0.1680, Plg8.0000°, Azm303.0000°; P -6.9890, Plg18.0000°, Azm210.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface/mantle waves, cutoff=50s.*

ISCJB ***29*** *12:22:12.7±0.1, 14°.29N±0°.01×92°.34W±0°.01, h33^{km}, mb5.4/477, MS5.5/431 Error ellipse: s-maj=2.3km s-min=1.6km az=138.0*

CASC ***29*** *12:22:12.5±1.3, 15°.48N×92°.28W, h36^{km}±999^{km}, ML4.8, mb5.6(NEIC)*

MEX ***29*** *12:22:13.7±0.9, 14°.07N×92°.75W, h16^{km}±53^{km}, MD5.7*

MOS ***29*** *12:22:14.7±0.9, 14°.43N×92°.23W, h45^{km}, mb5.6/100, MS5.5/65, Error ellipse: s-maj=6.1km s-min=3.7km az=95.9*

NEIC ***29*** *12:22:15.0±0.0, 14°.23N×92°.46W, h19^{km}, Moment Tensor Solution. s35 Moment tensor: Scale 10^{17}Nm; M$_{rr}$5.49; M$_{\theta\theta}$-4.17; M$_{\phi\phi}$-1.32; M$_{r\theta}$4.61; M$_{\theta\phi}$2.55; M$_{\phi r}$-2.20; Best double couple: M$_0$7.60000×10^{17} NP1:φ$_s$117.00000°, δ66.00000°, λ87.00000°. NP2:φ$_s$304.00000°, δ24.00000°, λ96.00000°. Principal axes: T 7.4900, Plg68.0000°, Azm21.0000°; N 0.1500, Plg2.0000°, Azm118.0000°; P -7.6400, Plg21.0000°, Azm209.0000°;*

IDC ***29*** *12:22:17.3±1.8, 14°.39N×92°.24W, h61^{km}±15^{km}, mb4.6/36, mb1 4.8/39, mb1mx4.7/48, mbtmp4.9/39, MS5.4/43, Ms1 5.4/43, ms1mx5.3/47 Error ellipse: s-maj=14.5km s-min=7.5km az=53.0*

NEIC ***29*** *12:22:29.0±0.0, 14°.61N×92°.59W, h30^{km}, Moment Tensor Solution. s22 Moment tensor: Scale 10^{17}Nm; M$_{rr}$6.36; M$_{\theta\theta}$-5.23; M$_{\phi\phi}$-1.13; M$_{r\theta}$1.27; M$_{\theta\phi}$1.54; M$_{\phi r}$-1.02; Best double couple: M$_0$6.30000×10^{17} NP1:φ$_s$284.00000°, δ38.00000°, λ83.00000°. NP2:φ$_s$113.00000°, δ52.00000°, λ95.00000°. Principal axes: T 6.5900, Plg82.0000°, Azm51.0000°; N -0.6600, Plg4.0000°, Azm290.0000°; P -5.9400, Plg7.0000°, Azm199.0000°;*

ISC 29 12:22:14.6±0.5, 14°.24N±0°.03×92°.56W±0°.03, h41^{km}±4^{km}, n1705, σ1^{s}.71/1672, mb5.4/492, MS5.5/449, 16C-7D, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
THIG		0.72	23	*e*P	Pn	12 22 28.6	+0.2
THIG				*i* S	Sn	12 22 40.5	+2.3
PCIG		1.59	336	*e*P	Pn	12 22 38.8	-1.5
PCIG				*e*S	Sn	12 22 58.3	-1.2
IXG	Ixpaco	2.04	92	*e*P	Pn	12 22 46.5	-0.1
CCIG	Comitan	2.07	11	*e*Pn	Pn	12 22 49.7	+2.7
TGIG		2.58	348	*e*P	Pn	12 22 54.9	+1.0
TGIG				*i* S	Sn	12 23 26.2	+2.1
RTR	El Retiro	2.85	97	*e*P	Pn	12 22 58.4	+0.6
SBLS	San Blas	2.88	98	*e*P	Pn	12 22 58.8	+0.6
SNJE	San Jose	2.89	97	*e*P	Pn	12 22 58.8	+0.4
MRL	Marmol	2.89	73	*e*P	Pn	12 22 51.3	-7.1
CEDA	San Andres	3.10	98	*e*P	Pn	12 23 01.6	+0.5
CEDA				*e*S	Sn	12 23 40.2	+3.2
MTO3	Montecristo	3.10	87	IAML		12 24 00.9	
	comp=Z,1μm,0.6s						
COLS	Colinas	3.22	100	*e*P	Pn	12 23 03.3	+0.6
BOQS	Boqueron	3.22	99	*e*P	Pn	12 23 03.8	+0.9
UEES	San Salvador	3.26	99	*e*S	Sn	12 23 44.4	+3.4
SNET	Serv Nac Est T	3.28	99	*e*Pn	Pn	12 22 57.8	-5.8
SNET	Serv Nac Est T	3.28	99	*e*P	Pn	12 23 04.2	+0.7
SNET				IAML		12 24 08.3	
	comp=Z,13μm,0.8s						
OPAM	San Salvador	3.30	99	*e*P	Pn	12 23 05.2	+1.3
OPAM				*e*S	Sn	12 23 44.8	+2.8
OPAM				IAML		12 24 05.1	
	comp=Z,5μm,0.5s						
LFU	La Fuente	3.38	98	*e*P	Pn	12 23 05.6	+0.7
LFRS	El Faro	3.45	100	*e*P	Pn	12 23 06.5	+0.5
CMIG	Matias Romero	3.61	322	P	Pn	12 23 08.3	+0.3
	comp=Z,85nm,0.3s,baz=139,slow=13,SNR=414						
CMIG				S	Sn	12 23 54.6	+5.2
	comp=Z,491nm,0.3s,baz=97,slow=16,SNR=7.2						
CMIG				LR	LR	12 24 44.1	
	comp=Z,53μm,18.8s,baz=130,slow=40						
SNVI	San Vicente	3.67	99	*e*P	Pn	12 23 10.1	+1.1
HUIG	Huatulco	3.75	294	*e*P	Pn	12 23 07.5	-2.5
HUIG				*e*S	Sn	12 23 48.5	-4.4
LCND	La Caˆ–ada	4.63	101	*e*P	Pn	12 23 22.5	+0.4
LCND				*e*S	Sn	12 24 16.7	+2.0
VHO	Vista Hermosa	4.91	306	*e*P	Pn	12 23 24.9	-1.2
VHO				*e*S	Sn	12 24 18.6	-3.1
CSGN	Cosiguina Volc	5.02	104	*e*P	Pn	12 23 29.1	+1.5
CRIN	San Cristobal	5.57	105	*e*P	Pn	12 23 36.6	+1.5
CRIN				IAML		12 25 02.0	
	comp=Z,2μm,0.6s						
PNIG	Pinotepa	5.78	292	*e*P	Pn	12 23 36.5	-1.4
PNIG				*e*S	Sn	12 24 38.4	-4.6
CNGN	Cerro Negro	5.96	106	*e*P	Pn	12 23 41.7	+1.3
CNGN				*e*S	Sn	12 24 52.3	+4.8
CNGN				AMP		12 25 02.8	
ESTN	Estel	6.12	100	*e*Pn	Pn	12 23 43.1	+0.4
ESTN	Estel	6.12	100	*e*P	Pn	12 23 43.3	+0.6
MOMN	Momotombo	6.14	107	*e*P	Pn	12 23 43.9	+1.1
COPN	Copaltepe	6.16	109	*e*P	Pn	12 23 44.2	+1.0
MGAN	Managua	6.49	108	*e*P	Pn	12 23 49.1	+1.4
MATN	Matagalpa	6.58	101	*e*P	Pn	12 23 49.2	+0.2
LVIG	Laguna Verde	6.58	326	*e*Pn	Pn	12 23 46.3	-2.5
MASN	Masaya	6.63	109	*e*P	Pn	12 23 54.1	+4.5
TLIG	Tlapa	6.66	301	*e*Pn	Pn	12 23 51.4	+1.3
BOAB	BOACO BROADBAN	6.94	104	*e*P	Pn	12 23 52.8	-1.1
MYIG	MØrida	7.20	22	*e*Pn	Pn	12 23 58.2	+0.8
UNM	Universidad Na	8.11	309	*e*Pn	Pn	12 24 14.3	+4.2
UNM	Universidad Na	8.11	309	*e*P	Pn	12 24 14.3	+4.2
ESPN	Las Esperanzas	8.30	103	*e*Pn	Pn	12 24 13.4	+1.0
ESPN	Las Esperanzas	8.30	103	*e*P	Pn	12 24 12.9	+0.5
JTS	JuntasAbangare	8.41	117	P	Pn	12 24 14.8	+0.9
	comp=Z,4.3nm,0.3s,baz=16,slow=7.1,SNR=38						
JTS				S	Sn	12 25 46.2	-1.5
	baz=310,slow=17,SNR=1.2						
JTS				LR	LR	12 27 21.8	
	comp=Z,18μm,19.9s,baz=5.0,slow=37						
JTS	JuntasAbangare	8.41	117	*e*Pn	Pn	12 24 16.0	+2.0
	comp=Z,601nm,0.9s						
JTS				S	Sn	12 25 46.2	-1.5
JTS	JuntasAbangare	8.41	117	P	Pn	12 24 14.9	+0.9
JTS				pmax	pmax		
	comp=Z,662nm,0.9s						
JTS	JuntasAbangare	8.41	117	*e*Sn	Sn	12 26 25.3	+38
HDC	Heredia	9.27	116	*e*Pn	Pn	12 24 28.0	+2.0
MOIG	Morelia	9.87	304	*e*Pn	Pn	12 24 35.8	+1.6
JRQG	Juriquilla Cam	9.89	312	*e*Pn	Pn	12 24 37.4	+2.9
PRVC	Isla de Provid	10.91	93	*e*P	Pn	12 24 45.1	-3.2
FSCY	Frank Sound, G	12.00	64	*e*Pn	Pn	12 25 06.2	+3.0
LNIG	Linares	12.43	330	*e*Pn	Pn	12 25 11.6	+2.6
ZAIG	Zacatecas	12.72	313	*e*Pn	Pn	12 25 16.3	+3.0
CBCY	The Bluff, Cay	13.40	64	*e*Pn	Pn	12 25 25.9	+3.6
BCIP	Isla Barro Col	13.44	111	*e*Pn	Pn	12 25 24.2	+1.3
BCIP	Isla Barro Col	13.44	111	*e*P	Pn	12 25 22.3	-0.5
MTDJ	Mount Denham	14.96	73	*e*P	P	12 25 49.1	+0.7
PAYG	Puerto Ayora	14.99	171	*e*Pn	Pn	12 25 46.0	+2.1
	comp=Z,421nm,1.3s						
645A	Chauvin	15.25	7	P	Pn	12 25 46.9	-0.1
	baz=186						
833A	Chaparral WMA,	15.38	337	P	Pn	12 25 49.9	+1.1
	baz=154,SNR=62						
833A	Chaparral WMA,	15.38	337	*e*Pn	Pn	12 25 48.7	-0.1
	comp=Z,289nm,0.9s						
541A	Lake Charles	15.75	358	P	Pn	12 25 54.3	+0.7
	baz=177						
542A	Morse	15.81	0	P	Pn	12 25 55.3	+1.0
	baz=179						
544A	White Castle	15.84	4	P	Pn	12 25 55.0	+0.3
	baz=184						
059Z	Ave Maria	15.91	39	P	Pn	12 25 53.5	-2.1
	baz=222,SNR=11						
061Z	Ochoppi	15.91	42	P	Pn	12 25 53.0	-2.6
	baz=225,SNR=12						
061Z	Ochoppi	15.91	42	*e*Pn	Pn	12 25 55.1	-0.5
	comp=Z,591nm,1.0s						
CAPC	Capurgana	15.91	109	*e*P	Pn	12 25 53.6	-2.1
HKT	Hockley	15.92	350	*e*Pn	Pn	12 25 56.4	+0.7
	comp=Z,666nm,1.9s						
HKT	Hockley	15.92	350	*e*P	Pn	12 25 56.4	+0.7
HKT				pmax	pmax		
	comp=Z,666nm,1.9s						
546A	Slidell	16.13	9	P	Pn	12 25 58.5	+0.1
	baz=189						
058A	Arcadia	16.23	37	P	Pn	12 25 58.3	-1.4
	baz=219,SNR=49						
442A	Mamou	16.39	0	P	Pn	12 26 02.4	+0.6
	baz=180						
441A	DeRidder	16.44	358	P	Pn	12 26 02.8	+0.5
	baz=177,SNR=6.8						
443A	Delano Plantat	16.46	2	P	Pn	12 26 03.1	+0.6
	baz=182						
957A	Wimauma	16.46	34	P	Pn	12 26 01.8	-0.9
	baz=217						
957A	Wimauma	16.46	34	*e*Pn	P	12 26 04.4	-0.5
	comp=Z,800nm,1.1s						
444A	Pine Grove	16.48	6	P	Pn	12 26 03.0	+0.1
	baz=185						
060Z	West Palm Beac	16.51	41	P	Pn	12 26 02.1	-1.2
	baz=224						
445A	Amite	16.54	7	P	Pn	12 26 03.9	+0.4
	baz=187						
059A	Moore Haven	16.55	38	P	Pn	12 26 03.0	-0.7
	baz=221,SNR=14						
059A	Moore Haven	16.55	38	*e*Pn	Pn	12 26 04.1	+0.3
	comp=Z,319nm,0.9s						
958A	Wauchula	16.66	35	P	Pn	12 26 03.4	-1.8
	baz=218						
446A	Poplarville	16.73	10	P	Pn	12 26 06.1	+0.1
	baz=190,SNR=16						
447A	Lucedale	16.86	12	P	Pn	12 26 07.9	+0.3
	baz=192,SNR=10						
447A	Lucedale	16.86	12	*e*Pn	Pn	12 26 08.5	+0.8
	comp=Z,606nm,1.3s						
857A	Zephyrhills	16.94	33	P	Pn	12 26 08.2	-0.4
	baz=216,SNR=56						
343A	Vidalia	16.98	3	P	Pn	12 26 10.0	+0.9
	baz=182,SNR=8.7						
341A	Kurthwood	17.02	358	P	Pn	12 26 10.2	+0.6
	baz=177,SNR=8.4						
341A	Kurthwood	17.02	358	*e*Pn	Pn	12 26 10.4	+0.8
	comp=Z,573nm,1.7s						
342A	Flagon Creek P	17.05	1	P	Pn	12 26 10.7	+0.7
	baz=180,SNR=9.3						
342A	Flagon Creek P	17.05	1	*e*Pn	P	12 26 11.4	0.0
	comp=Z,1μm,1.9s						
060A	Indiantown	17.08	40	P	Pn	12 26 09.5	-0.9
	baz=223,SNR=14						
060A	Indiantown	17.08	40	*e*Pn	Pn	12 26 11.1	+0.7
	comp=Z,514nm,0.9s						
435B	Jarrell	17.10	345	P	Pn	12 26 11.5	+0.9
	baz=162,SNR=17						
435B	Jarrell	17.10	345	*e*Pn	Pn	12 26 11.2	+0.6
	comp=Z,176nm,0.9s						
959A	Okeechobee	17.12	38	P	Pn	12 26 10.0	-0.9
	baz=221,SNR=7.2						
345A	Thompson Farm,	17.14	7	P	P	12 26 12.4	-0.1
	baz=187,SNR=14						
449A	Pace	17.16	16	P	Pn	12 26 11.6	+0.3
	baz=197,SNR=5.1						
448A	Bay Minette	17.16	14	P	Pn	12 26 11.2	-0.2
	baz=195,SNR=7.4						
552A	Lynn Haven	17.18	22	P	Pn	12 26 11.3	-0.2
	baz=204						
344A	Westbrook Farm	17.21	5	P	P	12 26 13.2	0.0
	baz=185,SNR=26						
344A	Westbrook Farm	17.21	5	*e*P	P	12 26 14.0	+0.8
	comp=Z,2μm,2.0s						
DWPF	Disney Wildern	17.25	35	P	Pn	12 26 11.7	-0.7
	baz=218						
DWPF	Disney Wildern	17.25	35	*e*P	P	12 26 14.4	+0.9
	comp=Z,824nm,1.4s						
346A	Big Creek Wild	17.30	9	P	P	12 26 14.0	-0.2
	baz=189,SNR=15						
346A	Big Creek Wild	17.30	9	*e*P	P	12 26 15.0	+0.9
	comp=Z,344nm,1.1s						
858A	St. Cloud	17.36	35	P	Pn	12 26 13.4	-0.5
	baz=218,SNR=13						
450A	Crestview	17.37	17	P	Pn	12 26 14.6	+0.6
	baz=199,SNR=12						
MOTC	Monteria, Cord	17.42	106	*e*P	Pn	12 26 10.8	-3.9
451A	Vernon	17.46	20	P	Pn	12 26 15.3	+0.2
	baz=202						
451A	Vernon	17.46	20	*e*Pn	P	12 26 16.9	+1.0
	comp=Z,687nm,1.4s						
655A	Horseshoe Beac	17.46	28	P	Pn	12 26 14.6	-0.5
	baz=210,SNR=41						
347A	Saraland	17.47	12	P	Pn	12 26 15.6	+0.4
	baz=192,SNR=21						
JCT	Junction City	17.48	339	P	P	12 26 17.0	+0.7
	baz=155,SNR=15						
JCT	Junction City	17.48	339	*e*P	P	12 26 17.1	+0.9
	comp=Z,227nm,1.0s						
JCT	Junction City	17.48	339	*e*P	P	12 26 17.1	+0.9
JCT				pmax	pmax		
	comp=Z,227nm,1.0s						
859A	Kempfer Cattle	17.51	36	P	Pn	12 26 14.9	-0.8
	baz=220,SNR=28						

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SJCC  San Jacinto, C    17.53 102 eP    Pn     12 26 11.5 -4.7
NATX  Nacogdoches       17.54 354  P    P      12 26 17.0 +0.2
      baz=172,SNR=14
NATX  Nacogdoches       17.54 354 eP    P      12 26 17.3 +0.4
      comp=Z,563nm,1.5s
553A  Crawfordville     17.55  24  P    Pn     12 26 16.0 -0.2
      baz=206,SNR=32
757A  Oxford            17.56  32  P    Pn     12 26 15.8 -0.6
      baz=215,SNR=21
243A  Waterproof        17.58   3  P    P      12 26 17.4 +0.1
      baz=183,SNR=6.0
HPIG                    17.59 318 ePn   P      12 26 18.8 +1.2
      comp=Z,658nm,2.0s
BRAL  Brewton           17.59  16  P    Pn     12 26 16.8 +0.1
      baz=197,SNR=14
BRAL  Brewton           17.59  16 ePn   P      12 26 18.8 +1.5
      comp=Z,1µm,1.5s
GTBY  Guantanamo Bay    17.61  69 eP    Pn     12 26 17.5 +0.5
      comp=Z,1µm,1.8s
348A  Jackson           17.62  13  P    Pn     12 26 17.1 +0.1
      baz=194,SNR=18
348A  Jackson           17.62  13 ePn   P      12 26 19.1 +1.5
      comp=Z,465nm,1.1s
656A  Willston          17.68  30  P    Pn     12 26 17.3 -0.5
      baz=213,SNR=33
656A  Willston          17.68  30 ePn   P      12 26 18.9 +0.6
      comp=Z,2µm,1.4s
241A  Mo Tay, Goldon    17.70 359  P    Pn     12 26 18.5 +0.4
      baz=178,SNR=17
241A  Mo Tay, Goldon    17.70 359 ePn   P      12 26 19.4 +0.9
      comp=Z,1µm,1.8s
349A  Repton            17.73  15  P    Pn     12 26 18.7 +0.3
      baz=196,SNR=89
242A  Grayson           17.74   1  P    P      12 26 19.4 +0.4
      baz=180
240A  Hunter Patters    17.75 357  P    P      12 26 19.5 +0.5
      baz=175
240A  Hunter Patters    17.75 357 ePn   P      12 26 20.5 +1.4
      comp=Z,953nm,1.8s
554A  Perry             17.77  26  P    Pn     12 26 18.6 -0.2
      baz=208,SNR=13
244A  Avery, Jackson    17.80   5  P    Pn     12 26 19.5 +0.3
      baz=185,SNR=24
452A  Marianna          17.87  21  P    Pn     12 26 19.9 -0.2
      baz=203,SNR=20
245A  Little AP, Sta    17.87   7  P    Pn     12 26 20.3 +0.1
      baz=188,SNR=10
UREC  San Jos˜' de U    17.91 109 eP    Pn     12 26 20.8  0.0
246A  Jackson Lee, B    17.97   9  P    Pn     12 26 21.3  0.0
      baz=190
VBMS  Vicksburg         17.99   6  P    Pn     12 26 21.9 +0.3
      baz=186,SNR=13
VBMS  Vicksburg         17.99   6 ePn   P      12 26 23.2 +1.5
      comp=Z,320nm,1.0s
350A  Dozier            18.03  17  P    Pn     12 26 21.8 -0.2
      baz=199,SNR=16
758A  Lake Helen        18.04  34  P    Pn     12 26 20.7 -1.5
      baz=217
247A  Quitman           18.09  11  P    P      12 26 22.7 -0.2
      baz=192,SNR=9.7
555A  McAlpin           18.11  28  P    P      12 26 21.9 -1.2
      baz=210,SNR=26
555A  McAlpin           18.11  28 ePn   Pn     12 26 24.1 +1.0
      comp=Z,512nm,1.0s
351A  Pinckard          18.11  19  P    P      12 26 22.6 -0.5
      baz=201,SNR=17
453A  Whigham           18.19  23  P    P      12 26 23.4 -0.5
      baz=206,SNR=16
453A  Whigham           18.19  23 ePn   Pn     12 26 25.9 +1.9
      comp=Z,805nm,1.3s
657A  Interlachen       18.19  31  P    P      12 26 22.8 -1.2
      baz=214,SNR=7.5
TXAR  Lajitas Array     18.20 327  P    Pn     12 26 26.9 +2.6
      comp=Z,1.0nm,0.3s,baz=150,slow=11,SNR=202
TXAR                               S    S      12 29 49.5 -1.0
      comp=Z,0.1nm,0.3s,baz=155,slow=26,SNR=2.1
TXAR                               LR   LR     12 34 40.1
      comp=Z,7µm,19.0s,baz=0.0,slow=41
TX31  Lajitas Ar. Si    18.20 327 eP    Pn     12 26 26.6 +2.3
WHTX  Lake Whitney,     18.23 347  P    Pn     12 26 25.1 +0.6
      baz=164,SNR=44
WHTX  Lake Whitney,     18.23 347 ePn   Pn     12 26 25.6 +1.1
      comp=Z,329nm,1.4s
142A  Monroe            18.23   2  P    Pn     12 26 25.0 +0.4
      baz=181,SNR=7.0
556A  Lake Butler       18.27  29  P    P      12 26 24.0 -0.9
      baz=212,SNR=31
141A  Papa Simpson,     18.28 359  P    Pn     12 26 25.3 +0.2
      baz=178,SNR=12
248A  Dixon Mills       18.31  13  P    P      12 26 24.8 -0.4
      baz=194,SNR=21
454A  Quitman           18.34  25  P    P      12 26 24.7 -0.9
      baz=208,SNR=20
140A  Cam and Jess,     18.34 357  P    Pn     12 26 26.1 +0.2
      baz=176,SNR=9.7
140A  Cam and Jess,     18.34 357 eP    Pn     12 26 28.4 +2.6
      comp=Z,1µm,1.5s
249A  Camden            18.34  15  P    P      12 26 25.1 -0.5
      baz=196,SNR=28
658A  Bunnell           18.37  33  P    P      12 26 25.1 -0.8
      baz=216,SNR=5.3
658A  Bunnell           18.37  33 ePn   Pn     12 26 26.6 +0.3
      comp=Z,295nm,1.0s
143A  Socs Landing,     18.41   3  P    P      12 26 26.6 +0.3
      baz=183,SNR=9.6
143A  Socs Landing,     18.41   3 eP    Pn     12 26 28.1 +1.5
      comp=Z,600nm,1.1s
144A  Alexander Plac    18.41   6  P    P      12 26 26.8 +0.4
      baz=186
145A  Houston Renfro    18.43   7  P    P      12 26 26.7  0.0
      baz=187,SNR=12
PLMC  San Jos˜' del     18.52 118 eP    P      12 26 28.1 +0.2
352A  Blakely           18.53  21  P    P      12 26 27.5 -0.2
      baz=203,SNR=15
352A  Blakely           18.53  21 eP    Pn     12 26 28.9 +0.8
      comp=Z,2µm,1.9s
HELC  Santa Helena      18.56 114 eP    Pn     12 26 29.8 +0.7
      comp=Z,349nm,1.0s
HELC  Santa Helena      18.56 114 eP    P      12 26 27.6 -1.0
250A  Grady             18.57  17  P    P      12 26 28.0 -0.1
      baz=199,SNR=28
250A  Grady             18.57  17 eP    Pn     12 26 29.3 +0.6
      comp=Z,2µm,1.9s
146A  Union             18.59   9  P    Pn     12 26 29.1 +0.2
      baz=190,SNR=20
146A  Union             18.59   9 eP    Pn     12 26 29.7 +0.8
      comp=Z,356nm,1.1s
557A  Orange Park       18.61  31  P    P      12 26 27.4 -1.2
      baz=214,SNR=14
455A  Stateville        18.62  27  P    P      12 26 28.8 +0.1
      baz=209,SNR=9.5
ZARC  Zaragoza, Cauc    18.62 109 eP    Pn     12 26 29.4 -0.1
353A  Camilla           18.67  23  P    P      12 26 29.5 +0.3
      baz=205,SNR=27
147A  Livingston        18.76  11  P    Pn     12 26 31.0  0.0
      baz=192,SNR=53
147A  Livingston        18.76  11 eP    Pn     12 26 32.0 +1.1
      comp=Z,2µm,1.6s
148A  Greensboro        18.88  13  P    Pn     12 26 32.3  0.0
      baz=194,SNR=23
SLBS  Sierra La Lagu    18.92 302 eP    Pn     12 26 35.0 +1.9
      comp=Z,247nm,1.4s
Z43A  Armstrong Fami    18.92   3  P    Pn     12 26 33.0 +0.1
      baz=183
Z41A  Richland Creek    18.93 359  P    Pn     12 26 32.9 -0.1
      baz=178,SNR=26
Z41A  Richland Creek    18.93 359 eP    Pn     12 26 34.4 +1.4
      comp=Z,2µm,1.8s
251A  Midway            18.93  19  P    P      12 26 32.7 +0.6
      baz=201,SNR=46
Z40A  Long Farm, Mag    18.95 358  P    Pn     12 26 33.0 -0.2
      baz=177,SNR=12
Z42A  Norrel Spur, H    18.95   2  P    P      12 26 32.8 +0.4
      baz=181
YOTC  Yotoco, Valle     18.96 121 eP    Pn     12 26 34.7 +1.1
TIGA  Tifton            18.99  24  P    P      12 26 33.1 +0.3
      baz=207,SNR=16
TIGA  Tifton            18.99  24 eP    P      12 26 33.4 +0.6
      comp=Z,2µm,1.8s
HORQ  Saladito          19.01 123 eP    P      12 26 33.4 -0.1
149A  Jones             19.02  15  P    P      12 26 32.8 -0.2
      baz=196,SNR=37
Z44A  Pea Ridge, Bel    19.05   5  P    P      12 26 33.9 +0.5
      baz=186
456A  Hilliard          19.05  29  P    P      12 26 33.3 -0.2
      baz=212
456A  Hilliard          19.05  29 eP    Pn     12 26 34.5  0.0
      comp=Z,297nm,0.9s
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252A  Lumpkin           19.07  21  P    P      12 26 33.2 -0.4
      baz=203,SNR=21
GUYC  Guyana, Colomb    19.13 116 eP    P      12 26 34.7 -0.2
Z46A  Louisville        19.15   9  P    Pn     12 26 35.5 -0.1
      baz=190,SNR=15
457A  Yulee             19.19  30  P    P      12 26 34.0 -0.9
      baz=213
355A  Pearson           19.21  26  P    P      12 26 34.1 -1.1
      baz=209
Z45A  Winona            19.22   7  P    Pn     12 26 36.2 -0.3
      baz=188,SNR=18
Z45A  Winona            19.22   7 eP    Pn     12 26 36.6 +0.1
      comp=Z,2µm,1.5s
150A  Eclectic          19.23  17  P    P      12 26 36.1 +0.7
      baz=199,SNR=30
Z47A  Carrollton        19.31  11  P    P      12 26 36.4 +0.2
      baz=192,SNR=26
253A  Americus          19.34  22  P    P      12 26 36.9 +0.3
      baz=204,SNR=11
253A  Americus          19.34  22 eP    Pn     12 26 37.6 -0.3
      comp=Z,1µm,1.6s
151A  Opelika           19.36  19  P    P      12 26 36.9 +0.1
      baz=201,SNR=80
PTBC  PUERTO BERRIO,    19.37 111 eP    P      12 26 35.4 -1.7
LRAL  Lakeview Retre    19.38  14  P    P      12 26 37.8 +0.8
      baz=196,SNR=67
LRAL  Lakeview Retre    19.38  14 eP    P      12 26 37.9 +0.9
      comp=Z,723nm,1.8s
LPIG  La Paz            19.40 303  P    Pn     12 26 40.5 +1.8
      comp=Z,13nm,0.3s,baz=130,slow=14,SNR=5.7
LPIG                               LR   LR     12 34 18.2
      comp=Z,10µm,18.1s,baz=121,slow=37
ABTX  Abilene, Hawle    19.41 342  P    P      12 26 38.2 +0.8
      baz=158,SNR=27
ABTX  Abilene, Hawle    19.41 342 eP    Pn     12 26 39.2 +0.5
      comp=Z,222nm,1.0s
NORC  Norcasia          19.43 115 eP    Pn     12 26 38.7 -0.5
ANIL  Santa Ana         19.49 118 eP    Pn     12 26 39.8 -0.3
TOLC  Tolima            19.51 118 eP    P      12 26 38.7 -0.2
356A  Blackshear        19.51  28  P    P      12 26 37.9 -0.5
      baz=211,SNR=12
Y42A  Garnett, Star     19.52   2  P    P      12 26 38.7 +0.2
      baz=182
Y41A  Eaglette Beard    19.55 360  P    P      12 26 39.2 +0.4
      baz=179,SNR=24
254A  Abbeville         19.56  24  P    P      12 26 38.7 -0.2
      baz=207,SNR=8.8
Z48A  Northport         19.58  13  P    P      12 26 38.9 -0.3
      baz=194,SNR=27
CCAR  Cane Creek        19.60   2 eP    Pn     12 26 40.6 -0.4
      comp=Z,715nm,1.4s
Y43A  Makayla and Ka    19.64   4  P    P      12 26 40.0 +0.2
      baz=184
Z49A  Columbiana        19.65  15  P    P      12 26 40.2 +0.2
      baz=197,SNR=106
CMBC  Cumbal            19.67 131 eP    Pn     12 26 45.6 +3.1
152A  Waverly Hall      19.69  20  P    P      12 26 40.4  0.0
      baz=202,SNR=17
152A  Waverly Hall      19.69  20 eP    P      12 26 41.1 +0.8
      comp=Z,170nm,1.1s
Y40A  Okolona           19.69 358  P    P      12 26 40.7 +0.3
      baz=177,SNR=18
OTAV  Otavalo           19.71 134 eP    Pn     12 26 42.7 -0.2
      comp=Z,137nm,1.3s
OTAV  Otavalo           19.71 134 eP    P      12 26 39.4 -1.9
OTAV  Otavalo           19.71 134 eP    Pn     12 26 42.7 -0.2
OTAV                               pmax pmax
      comp=Z,137nm,1.3s
Y45A  Yeager Farm, C    19.73   7  P    P      12 26 41.0 +0.2
      baz=188,SNR=27
Y44A  Strider, Charl    19.75   6  P    P      12 26 41.0  0.0
      baz=186,SNR=8.1
OCAC  Ocana             19.78 105 eP    P      12 26 38.7 -3.0
BRRC  Barranca, Sant    19.82 109 eP    P      12 26 40.2 -1.8
SOTA  Rioblanco         19.83 126 eP    Pn     12 26 45.4 +1.0
GCUF  Volcan Galeras    19.84 129 eP    P      12 26 43.2 +0.5
Y46A  Houston           19.84   9  P    P      12 26 42.1 +0.1
      baz=190,SNR=46
Z50A  Ashland           19.86  17  P    P      12 26 43.0 +0.6
      baz=198,SNR=53
Z50A  Ashland           19.86  17 eP    P      12 26 43.2 +0.9
      comp=Z,273nm,1.1s
255A  Hazlehurst        19.87  26  P    P      12 26 41.8 -0.6
      baz=209,SNR=6.6
255A  Hazlehurst        19.87  26 eP    P      12 26 42.9 +0.5
      comp=Z,423nm,1.3s
PCON  Cinco Dias        19.88 125 eP    P      12 26 44.0 +0.9
357A  Townsend          19.89  29  P    P      12 26 41.5 -1.1
      baz=212
CRUC  La Cruz           19.92 128 eP    Pn     12 26 45.3  0.0
MARP  Paez Belalcaza    19.93 123 eP    Pn     12 26 45.3 -0.1
153A  Fort Valley       19.98  22  P    P      12 26 43.1 -0.5
      baz=205,SNR=6.0
Y47A  UCPARC, Winfie    20.03  11  P    P      12 26 44.1  0.0
      baz=193,SNR=32
Z51A  Franklin          20.14  18  P    P      12 26 45.0 -0.3
      baz=200,SNR=9.0
X40A  Basin Creek Fa    20.16 359  P    P      12 26 45.6 +0.1
      baz=178,SNR=21
X40A  Basin Creek Fa    20.16 359 eP    P      12 26 46.3 +0.8
      comp=Z,728nm,1.7s
X41A  Kaden, Bauxite    20.16   0  P    P      12 26 45.5  0.0
      baz=179,SNR=24
256A  Glennville        20.18  27  P    P      12 26 44.5 -1.2
      baz=210,SNR=5.9
Y48A  Jasper            20.18  13  P    P      12 26 45.4 -0.4
      baz=194,SNR=19
154A  Montrose          20.22  24  P    P      12 26 45.1 -1.0
      baz=207,SNR=16
154A  Montrose          20.22  24 eP    P      12 26 46.3 +0.1
      comp=Z,606nm,1.3s
154A                               LR   LR
      comp=Z,17µm,18.0s
X39A  Fountain Ranch    20.23 356  P    P      12 26 47.0 +0.8
      baz=175,SNR=40
MIAR  Mount Ida         20.23 358  P    P      12 26 46.4  0.0
      baz=176,SNR=45
MIAR  Mount Ida         20.23 358 eP    P      12 26 46.2  0.0
      comp=Z,615nm,1.4s
MIAR  Mount Ida         20.23 358 eP    P      12 26 46.3  0.0
MIAR                               pmax pmax
      comp=Z,615nm,1.4s
X42A  Stuttgart         20.24   2  P    P      12 26 46.7 +0.4
      baz=182
X43A  Marvell           20.24   4  P    P      12 26 47.2 +0.8
      baz=184,SNR=32
X43A  Marvell           20.24   4 eP    P      12 26 47.2 +0.8
      comp=Z,4µm,1.9s
ROSC  El Rosal          20.25 116  P    P      12 26 47.8 +0.7
      comp=Z,206nm,1.0s,baz=34,slow=2.2,SNR=188
ROSC  El Rosal          20.25 116 eP    Pn     12 26 49.7 +0.4
      comp=Z,1µm,1.5s
ROSC  El Rosal          20.25 116 eP    P      12 26 48.0 +0.9
Z52A  Williamson        20.26  20  P    P      12 26 45.7 -0.9
      baz=202,SNR=46
X44A  Crenshaw          20.29   6  P    P      12 26 46.5 -0.3
      baz=186,SNR=10
X45A  UM Field Stati    20.30   8  P    P      12 26 46.5 -0.4
      baz=188,SNR=26
Y49A  Blount Mountai    20.31  15  P    P      12 26 46.9 -0.3
      baz=197,SNR=29
Y49A  Blount Mountai    20.31  15 eP    P      12 26 47.6 +0.5
      comp=Z,643nm,1.5s
PRAC  Prado             20.33 119 eP    Pn     12 26 49.0 -0.9
      comp=Z,645nm,1.3s
PRAC  Prado             20.33 119 eP    P      12 26 48.0 +0.4
OXF   Oxford            20.38   7  P    P      12 26 47.7 -0.2
      baz=188,SNR=25
OXF   Oxford            20.38   7 eP    P      12 26 48.7 +0.8
      comp=Z,796nm,1.2s
OXF   Oxford            20.38   7 eP    P      12 26 48.7 +0.8
OXF                                pmax pmax
      comp=Z,796nm,1.2s
BETC  Betania           20.44 123 eP    Pn     12 26 51.0  0.0
UALR  University of     20.44   1 eP    P      12 26 48.5 -0.1
      comp=Z,1µm,1.5s
155A  Kite              20.48  25  P    P      12 26 47.7 -1.3
      baz=208,SNR=27
BARC  Barichara         20.50 110 eP    P      12 26 50.7 +1.0
Y50A  Piedmont          20.52  16  P    P      12 26 49.1 -0.3
      baz=198,SNR=40
X46A  Booneville        20.54   9  P    P      12 26 49.4 -0.3
      baz=190
257A  Skidaway Islan    20.56  29  P    P      12 26 49.0 -0.9
      baz=213
257A  Skidaway Islan    20.56  29 eP    P      12 26 49.3 -0.5
      comp=Z,3µm,1.8s
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X47A  Russelville       20.63  11  P    P      12 26 50.2 -0.4
      baz=192,SNR=34
Z53A  Monticello        20.64  22  P    P      12 26 50.9 +0.2
      baz=205,SNR=45
PAMC  Pamplona, Colo    20.67 107 eP    P      12 26 51.4 -0.4
CLNB  Carlsbad          20.71 332 eP    Pn     12 26 54.0 -0.2
Y51A  Rockmart          20.72  18  P    P      12 26 51.6  0.0
      baz=200,SNR=59
X48A  Hartselle         20.73  13  P    P      12 26 51.5 -0.2
      baz=194,SNR=37
X48A  Hartselle         20.73  13 eP    P      12 26 51.6  0.0
      comp=Z,500nm,1.4s
GOGA  Godfrey           20.80  22  P    P      12 26 52.6 +0.2
      baz=205,SNR=37
GOGA  Godfrey           20.80  22 eP    P      12 26 52.5 +0.1
      comp=Z,261nm,1.1s
GOGA                               LR   LR
      comp=Z,13µm,18.0s
GOGA  Godfrey           20.80  22 eP    P      12 26 52.5 +0.1
GOGA                               pmax pmax
      comp=Z,261nm,1.1s
GOGA                               MLR  MLR
      comp=Z,13µm,18.0s
W43A  Forest City       20.82   4  P    P      12 26 53.5 +0.9
      baz=184
W41B  Gary Mavity, V    20.84   1  P    P      12 26 52.9  0.0
      baz=180,SNR=27
W41B  Gary Mavity, V    20.84   1 eP    P      12 26 52.7 -0.2
      comp=Z,702nm,1.7s
W40A  Ferguson Farm,    20.86 359  P    P      12 26 53.3 +0.2
      baz=178,SNR=17
W40A  Ferguson Farm,    20.86 359 eP    P      12 26 53.9 +0.8
      comp=Z,641nm,1.4s
CHIC  Chingaza          20.87 115 eP    Pn     12 26 55.5 -1.0
Z54A  Sparta            20.87  23  P    P      12 26 52.6 -0.6
      baz=206,SNR=14
GDL2  Guadalupe Moun    20.88 331 eP    Pn     12 26 55.5 -0.6
RUSC  La Rusia          20.88 111 eP    P      12 26 53.5 -0.5
      comp=Z,212nm,1.2s
RUSC  La Rusia          20.88 111 eP    P      12 26 52.7 -1.3
W39A  Magazine          20.89 357  P    P      12 26 54.6 +1.2
      baz=176,SNR=36
W39A  Magazine          20.89 357 eP    P      12 26 54.5 +1.2
      comp=Z,675nm,1.7s
156A  Sylvania          20.92  27  P    P      12 26 52.3 -1.4
      baz=211
X49A  Woodville         20.95  15  P    P      12 26 53.8 -0.3
      baz=196,SNR=27
WHAR  Wooly Hollow      20.96   1 eP    P      12 26 54.8 +0.6
      comp=Z,998nm,1.8s
W42A  Bald Knob         20.96   2  P    P      12 26 54.9 +0.8
      baz=182
MNTX  Cornudas Mount    20.97 328  P    P      12 26 55.8 +1.4
      baz=143,SNR=273
MNTX  Cornudas Mount    20.97 328 eP    P      12 26 55.8 +1.4
      comp=Z,495nm,1.8s
Y52A  Lilburn           21.00  20  P    P      12 26 54.8 +0.1
      baz=203,SNR=33
Y52A  Lilburn           21.00  20 eP    P      12 26 54.9 +0.3
      comp=Z,917nm,1.5s
PLAL  Pickwick Lake     21.04  10 eP    P      12 26 54.8 -0.3
      comp=Z,208nm,1.3s
W45A  Hickory Valley    21.05   8  P    P      12 26 55.4 +0.3
      baz=188
X50B  Fort Payne        21.08  16  P    P      12 26 55.2 -0.3
      baz=198,SNR=43
Z55A  Blythe            21.14  25  P    P      12 26 56.2 +0.1
      baz=208,SNR=11
W46A  Michie            21.14  10  P    P      12 26 56.0 -0.1
      baz=190,SNR=6.2
VILC  Villavicencio,    21.15 117 eP    P      12 26 58.0 +1.5
Y53A  Monroe            21.16  21  P    P      12 26 56.5 +0.2
      baz=204,SNR=27
WMOK  Wichita Mounta    21.17 346  P    P      12 26 57.1 +0.7
      baz=162,SNR=46
WMOK  Wichita Mounta    21.17 346 eP    P      12 26 56.8 +0.4
      comp=Z,432nm,1.9s
WMOK  Wichita Mounta    21.17 346 eP    P      12 26 56.8 +0.4
WMOK                               pmax pmax
      comp=Z,432nm,1.9s
HBAR  Harrisburg        21.29   4 eP    P      12 26 57.9 +0.2
      comp=Z,1µm,1.2s
SJAC  San Juan de Ar    21.35 119 eP    P      12 27 01.3 +2.6
W47A  Westpoint         21.39  11  P    P      12 26 58.7 -0.1
      baz=192,SNR=22
X51A  Calhoun           21.40  18  P    P      12 26 58.4 -0.4
      baz=200,SNR=34
X51A  Calhoun           21.40  18 eP    P      12 26 58.3 -0.5
      comp=Z,433nm,1.3s
W48A  Pulaski           21.41  13  P    P      12 26 59.2 +0.2
      baz=194,SNR=19
V41A  Mountainview      21.45   1  P    P      12 26 59.6 +0.1
      baz=180,SNR=26
V40A  Witts Springs     21.47 359  P    P      12 27 00.5 +0.8
      baz=179,SNR=35
V40A  Witts Springs     21.47 359 eP    P      12 26 59.7  0.0
      comp=Z,357nm,1.5s
Y54A  Tignall           21.49  23  P    P      12 26 58.7 -1.1
      baz=206,SNR=48
V42A  Cord              21.50   3  P    P      12 26 59.9  0.0
      baz=182,SNR=18
V39A  Pettigrew         21.53 358  P    P      12 27 00.3  0.0
      baz=176,SNR=29
V43A  Jonesboro         21.53   4  P    P      12 27 00.8 +0.6
      baz=185,SNR=8.9
W49A  Belvidere         21.55  14  P    P      12 26 59.9 -0.6
      baz=196,SNR=26
GRTK  Grand Turk        21.62  67 eP    P      12 27 00.9 -0.5
      comp=Z,968nm,1.4s
GRTK                               LR   LR
      comp=Z,5µm,19.0s
V44A  Blytheville       21.63   6  P    P      12 27 01.5 +0.2
      baz=186
V45A  Humboldt          21.65   8  P    P      12 27 01.8 +0.2
      baz=189
BANI  BANI              21.70  76 eP    P      12 27 02.8 +0.4
YOPC  Yopal, Colombi    21.70 112 eP    P      12 27 05.3 +2.9
MSTX  Muleshoe          21.71 337  P    P      12 27 03.4 +1.0
      baz=152,SNR=70
MSTX  Muleshoe          21.71 337 eP    P      12 27 02.8 +0.4
      comp=Z,163nm,1.0s
SWET  Sewanee           21.72  15 eP    P      12 27 01.7 -0.7
      comp=Z,1µm,1.8s
RGRS  Roger Stewart     21.73  29 eP    P      12 27 02.5 +0.1
      comp=Z,3µm,1.5s
X52A  Dahlonega         21.73  20  P    P      12 27 01.8 -0.7
      baz=202,SNR=28
GNAR  Gosnell           21.75   6 eP    P      12 27 03.5 +0.9
      comp=Z,1µm,1.4s
HALT  Halls             21.77   7 eP    P      12 27 02.7 -0.1
      comp=Z,2µm,1.9s
TUL1  Leonard           21.77 353  P    P      12 27 03.1 +0.2
      baz=171,SNR=22
TUL1  Leonard           21.77 353 eP    P      12 27 02.4 -0.4
      comp=Z,237nm,1.0s
V46A  Holladay          21.83  10  P    P      12 27 02.9 -0.6
      baz=191,SNR=34
TAMC  Tame, Arauca      21.84 109 eP    P      12 27 03.3 -0.5
X53A  Estanollee        21.84  21  P    P      12 27 03.0 -0.6
      baz=204,SNR=13
CSU   Charleston Sou    21.85  29 eP    P      12 27 03.8 +0.1
W50A  Signal Mountai    21.86  16  P    P      12 27 03.3 -0.7
      baz=198,SNR=36
W50A  Signal Mountai    21.86  16 eP    P      12 27 03.4 -0.5
      comp=Z,183nm,1.0s
NHSC  New Hope          21.90  29  P    P      12 27 03.1 -1.1
      baz=213,SNR=14
NHSC  New Hope          21.90  29 eP    P      12 27 04.3  0.0
      comp=Z,1µm,1.3s
NHSC                               LR   LR
      comp=Z,10µm,20.0s
V47A  Nunnelly          21.96  11  P    P      12 27 04.5 -0.4
      baz=192,SNR=17
HODGE Hodges            21.98  23 eP    P      12 27 07.3 +2.2
      comp=Z,95nm,1.1s
HHAR  Hobbs             21.98 357 eP    P      12 27 05.1  0.0
      comp=Z,390nm,1.6s
W51A  Cleveland         21.98  17  P    P      12 27 04.6 -0.6
      baz=200,SNR=16
U41A  Viola             22.02   1  P    P      12 27 06.7 +1.2
      baz=181,SNR=16
V48A  Smith Brothers    22.02  13  P    P      12 27 05.3 -0.2
      baz=194,SNR=18
V48A  Smith Brothers    22.02  13 eP    P      12 27 04.6 -0.9
      comp=Z,462nm,1.5s
U40A  Yellville         22.02 359  P    P      12 27 06.2 +0.6
      baz=179,SNR=31
U42A  Revenden          22.05   3  P    P      12 27 06.4 +0.6
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	baz=183,SNR=25						
U39A	Green Forest	22.06	358	P	P	12 27 06.7	+0.7
	baz=177,SNR=24						
U43A	Rector	22.12	5	P	P	12 27 06.9	+0.3
	baz=185						
SDV	Santo Domingo	22.12	102	P	P	12 27 06.8	-0.3
	comp=Z,90nm,0.9s,baz=293,slow=10,SNR=26						
SDV				PcP	PcP	12 31 04.3	+0.7
	comp=Z,15nm,0.8s,baz=45,slow=1.4,SNR=3.1						
SDV				LR	LR	12 36 31.9	
	comp=Z,10µm,21.0s,baz=286,slow=39						
SDV	Santo Domingo	22.12	102	*e*P	P	12 27 04.8	-2.3
	comp=Z,161nm,1.0s						
SDV				PcP	PcP	12 31 04.3	+0.7
SDV	Santo Domingo	22.12	102	*e*P	P	12 27 02.6	-4.4
SDD	Santo Domingo	22.12	76	*e*P	P	12 27 05.7	-1.2
	comp=Z,941nm,1.4s						
SDD				LR	LR		
	comp=Z,20µm,20.0s						
GLAT	Glass	22.13	7	*e*P	P	12 27 06.9	+0.3
	comp=Z,792nm,1.2s						
AMTX	Amarillo	22.14	340	P	P	12 27 08.0	+1.0
	baz=155						
AMTX	Amarillo	22.14	340	*e*P	P	12 27 07.3	+0.4
	comp=Z,240nm,1.0s						
W52A	Murphy	22.17	19	P	P	12 27 06.5	-0.7
	baz=202,SNR=15						
W52A	Murphy	22.17	19	*e*P	P	12 27 06.9	-0.3
	comp=Z,150nm,1.0s						
U44B	Burton Farm, H	22.19	7	P	P	12 27 06.5	-0.9
	baz=188,SNR=7.4						
WVT	Waverly	22.20	10	P	P	12 27 06.9	-0.6
	baz=192						
WVT	Waverly	22.20	10	*e*P	P	12 27 05.9	-1.6
	comp=Z,112nm,0.9s						
WVT	Waverly	22.20	10	*e*P	P	12 27 05.9	-1.6
WVT				pmax	pmax		
	comp=Z,112nm,0.9s						
V49A	McMinnville	22.25	14	P	P	12 27 07.6	-0.4
	baz=196,SNR=33						
UTMT	University of	22.25	8	*e*P	P	12 27 07.7	-0.3
	comp=Z,1µm,1.7s						
U45A	Rockin P Farm,	22.27	8	P	P	12 27 08.5	+0.2
	baz=189,SNR=12						
CPCT	Cooper Cave	22.32	17	*e*P	P	12 27 08.2	-0.6
	comp=Z,469nm,1.6s						
V50A	Pikevile	22.37	16	P	P	12 27 08.6	-0.7
	baz=199,SNR=22						
U46A	Springville	22.37	9	P	P	12 27 09.2	-0.1
	baz=190,SNR=15						
BG3	Lake Jocassee	22.41	21	*e*P	P	12 27 09.1	-0.7
	comp=Z,264nm,1.3s						
JSC	Jenkinsville	22.42	25	*e*P	P	12 27 09.2	-0.6
	comp=Z,826nm,2.0s						
JSC				LR	LR		
	comp=Z,16µm,18.0s						
JSC	Jenkinsville	22.42	25	*e*P	P	12 27 09.2	-0.6
JSC				pmax	pmax		
	comp=Z,826nm,2.0s						
JSC				MLR	MLR		
	comp=Z,16µm,18.0s						
PARMO	Parma	22.47	6	*e*P	P	12 27 11.0	+0.6
	comp=Z,306nm,1.0s						
W53A	Cullowhee	22.49	20	P	P	12 27 10.2	-0.5
	baz=204,SNR=31						
SRIG	Santa Rosalia	22.49	308	*e*P	P	12 27 12.2	+1.5
	comp=Z,401nm,1.7s						
HSIG		22.50	314	*e*P	P	12 27 12.3	+1.5
	comp=Z,174nm,1.4s						
HSIG				LR	LR		
	comp=Z,12µm,18.0s						
PBMO	Poplar Bluff	22.52	4	*e*P	P	12 27 09.9	-1.0
	comp=Z,130nm,1.0s						
U47A	Clarksville	22.60	11	P	P	12 27 10.5	-1.3
	baz=193,SNR=18						
PAULI	Pauline	22.67	23	*e*P	P	12 27 12.0	-0.4
	comp=Z,126nm,1.2s						
T39A	Clever	22.70	358	P	P	12 27 12.1	-0.8
	baz=177,SNR=42						
V51A	Loudon	22.70	18	P	P	12 27 11.8	-1.0
	baz=200,SNR=22						
V51A	Loudon	22.70	18	*e*P	P	12 27 12.0	-0.8
	comp=Z,723nm,1.6s						
T41A	Mountain View	22.72	2	P	P	12 27 12.3	-0.7
	baz=181,SNR=25						
T42A	Van Buren	22.73	3	P	P	12 27 12.5	-0.7
	baz=183,SNR=24						
T42A	Van Buren	22.73	3	*e*P	P	12 27 12.1	-1.0
	comp=Z,168nm,1.4s						
TKL	Tuckaleechee C	22.74	19	P	P	12 27 12.6	-0.6
	comp=Z,39nm,0.8s,baz=209,slow=11,SNR=59						
TKL	Tuckaleechee C	22.74	19	*e*P	P	12 27 11.9	-1.3
	comp=Z,747nm,1.5s						
TKL	Tuckaleechee C	22.74	19	*e*P	P	12 27 11.9	-1.3
TKL				pmax	pmax		
	comp=Z,747nm,1.5s						
T38A	Diamond	22.75	356	P	P	12 27 13.1	-0.3
	baz=175,SNR=33						
T40A	Mansfield	22.81	0	P	P	12 27 13.4	-0.6
	baz=179,SNR=20						
U48A	Cassie Pea, Po	22.82	13	P	P	12 27 13.4	-0.7
	baz=194,SNR=23						
T43A	Greenville	22.84	5	P	P	12 27 14.0	-0.2
	baz=185,SNR=19						
121A	Cookes Peak, D	22.90	325	P	P	12 27 16.6	+1.4
	baz=139,SNR=109						
T44A	Benton	22.90	6	P	P	12 27 14.9	0.0
	baz=187,SNR=9.6						
T45A	Paducah	22.95	8	P	P	12 27 15.3	-0.1
	baz=189						
T45A	Paducah	22.95	8	*e*P	P	12 27 14.8	-0.5
	comp=Z,174nm,0.7s						
V52A	Sevierville	22.96	19	P	P	12 27 15.1	-0.5
	baz=202,SNR=43						
V52A	Sevierville	22.96	19	*e*P	P	12 27 14.9	-0.7
	comp=Z,700nm,1.7s						
U49A	Red Boiling Sp	22.99	14	P	P	12 27 14.6	-1.3
	baz=196,SNR=38						
V53A	Saluda	23.06	21	P	P	12 27 16.3	-0.3
	baz=204,SNR=34						
V53A	Saluda	23.06	21	*e*P	P	12 27 16.4	-0.3
	comp=Z,252nm,1.1s						
T46A	Princeton	23.08	10	P	P	12 27 15.8	-0.9
	baz=191,SNR=12						
U50A	Jamestown	23.14	16	P	P	12 27 16.0	-1.3
	baz=199,SNR=46						
KMSC	Kings Mountain	23.14	24	P	P	12 27 17.0	-0.3
	baz=208,SNR=22						
KMSC	Kings Mountain	23.14	24	*e*P	P	12 27 17.0	-0.3
	comp=Z,109nm,0.9s						
T47A	Sharon Grove	23.17	11	P	P	12 27 16.6	-1.0
	baz=193,SNR=57						
T47A	Sharon Grove	23.17	11	*e*P	P	12 27 16.4	-1.2
	comp=Z,168nm,0.9s						
S40A	Lebanon	23.26	0	P	P	12 27 17.9	-0.6
	baz=180,SNR=35						
S41A	Jillco Farms,	23.26	2	P	P	12 27 17.9	-0.6
	baz=181,SNR=20						
S38A	Stockton	23.32	357	P	P	12 27 18.2	-0.9
	baz=176,SNR=81						
U51A	La Follette	23.33	18	P	P	12 27 18.7	-0.6
	baz=201,SNR=64						
S43A	Fulton Ridge,	23.34	5	P	P	12 27 18.5	-0.8
	baz=185,SNR=6.6						
S39A	Bolivar	23.36	358	P	P	12 27 18.6	-0.9
	baz=178,SNR=66						
S39A	Bolivar	23.36	358	*e*P	P	12 27 18.0	-1.5
	comp=Z,150nm,1.3s						
T48A	Bowling Green	23.43	12	P	P	12 27 19.0	-1.1
	baz=194,SNR=20						
S42A	Caledonia	23.48	4	P	P	12 27 19.0	-1.7
	baz=184,SNR=9.1						
S44A	Carbondale	23.54	7	P	P	12 27 20.5	-0.7
	baz=187,SNR=14						
U52A	Thorn Hill	23.54	19	P	P	12 27 19.9	-1.4
	baz=202,SNR=22						
BNM	Barren Site	23.56	330	*e*P	P	12 27 23.6	+1.9
SIUC	Southern Illin	23.57	7	*e*P	P	12 27 20.5	-1.0
	comp=Z,555nm,1.3s						
S45A	Carrier Mills	23.61	8	P	P	12 27 21.3	-0.5
	baz=189						
T49A	Edmonton	23.61	14	P	P	12 27 20.9	-1.1
	baz=196,SNR=35						
T49A	Edmonton	23.61	14	*e*P	P	12 27 20.5	-1.4
	comp=Z,285nm,1.4s						
TZTN	Tazewell	23.63	18	P	P	12 27 21.0	-1.1
	baz=202,SNR=27						
TZTN	Tazewell	23.63	18	*e*P	P	12 27 21.1	-0.9
	comp=Z,494nm,1.5s						
Y22D	IRIS PASSCAL I	23.64	329	P	P	12 27 24.1	+1.7
	baz=143						
Y22E	IRIS PASSCAL I	23.64	329	P	P	12 27 23.9	+1.5
	baz=143						
T50A	Nancy	23.71	16	P	P	12 27 21.3	-1.5
	baz=198,SNR=55						
FVM	French Village	23.72	4	*e*P	P	12 27 20.9	-2.0
	comp=Z,384nm,1.8s						
FVM	French Village	23.72	4	*e*P	P	12 27 20.9	-2.0
FVM				pmax	pmax		
	comp=Z,384nm,1.8s						
S46A	Don Dixon Farm	23.74	10	P	P	12 27 22.5	-0.6
	baz=191,SNR=22						
LENM	Lemitar	23.74	329	*e*P	P	12 27 25.3	+1.9
CCM	Cathedral Cave	23.75	3	P	P	12 27 22.7	-0.4
	baz=182						
CCM	Cathedral Cave	23.75	3	*e*P	P	12 27 21.7	-1.4
	comp=Z,110nm,1.0s						
CCM	Cathedral Cave	23.75	3	*e*P	P	12 27 21.7	-1.4
CCM				pmax	pmax		
	comp=Z,110nm,1.0s						
U53A	Fall Branch	23.77	20	P	P	12 27 22.7	-0.8
	baz=204,SNR=36						
S47A	Hartford	23.80	11	P	P	12 27 22.6	-1.0
	baz=193,SNR=20						
R38A	Fenwick Farm,	23.88	357	P	P	12 27 23.5	-0.8
	baz=176,SNR=47						
T51A	Gray	23.90	17	P	P	12 27 23.3	-1.3
	baz=200,SNR=29						
R40A	Maddies Statio	23.95	1	P	P	12 27 24.0	-1.0
	baz=180,SNR=17						
R40A	Maddies Statio	23.95	1	*e*P	P	12 27 23.1	-1.9
	comp=Z,152nm,1.2s						
R39A	Chumby, Stover	23.98	359	P	P	12 27 24.2	-1.2
	baz=178,SNR=30						
R41A	Rosebud	23.98	2	P	P	12 27 24.5	-0.8
	baz=182,SNR=50						
R42A	Luebbering	23.99	3	P	P	12 27 24.9	-0.5
	baz=184						
LAZ	Ladron	24.01	329	*e*P	P	12 27 28.2	+2.3
USIN	University of	24.02	10	*e*P	P	12 27 25.0	-0.7
	comp=Z,934nm,1.7s						
S48A	Wiedeman Farm,	24.03	13	P	P	12 27 23.9	-1.9
	baz=195,SNR=22						
R43A	Red Bud	24.05	5	P	P	12 27 25.4	-0.6
	baz=186,SNR=24						
R44A	Waltonville	24.11	7	P	P	12 27 26.0	-0.5
	baz=188,SNR=8.4						
TASL	Snake Pit, Alb	24.12	331	P	P	12 27 27.8	+0.9
	baz=145,SNR=88						
ANMO	Albuquerque	24.12	331	P	P	12 27 28.7	+1.8
	comp=Z,39nm,0.7s,baz=147,slow=11,SNR=110						
ANMO				LR	LR	12 37 50.5	
	comp=Z,4µm,18.2s,baz=139,slow=39						
ANMO	Albuquerque	24.12	331	P	P	12 27 28.0	+1.0
	baz=145						
ANMO	Albuquerque	24.12	331	*e*P	P	12 27 28.6	+1.8
	comp=Z,71nm,1.0s						
ANMO	Albuquerque	24.12	331	*c i*P	P	12 27 28.9	+2.0
ANMO				pmax	pmax		
	comp=Z,209nm,2.5s						
TASM	ASL Pad, Albuq	24.13	331	P	P	12 27 28.2	+1.2
	baz=145,SNR=89						
R45A	Skylar, Fairfi	24.25	8	P	P	12 27 27.9	+0.1
	baz=190,SNR=33						
R46A	Gibon Southern	24.29	10	P	P	12 27 27.6	-0.6
	baz=191,SNR=9.3						
T52A	Hallie	24.32	19	P	P	12 27 27.6	-0.9
	baz=202,SNR=18						
S49A	Springfield	24.32	14	P	P	12 27 27.8	-0.7
	baz=197,SNR=25						
SLM	Saint Louis	24.38	4	*e*P	P	12 27 28.3	-0.7
	comp=Z,247nm,0.8s						
SLM	Saint Louis	24.38	4	*e*P	P	12 27 28.3	-0.7
SLM				pmax	pmax		
	comp=Z,247nm,0.8s						
S50A	Richmond	24.44	16	P	P	12 27 28.7	-0.9
	baz=199,SNR=22						
TUC	Tucson	24.50	320	P	P	12 27 30.9	+0.6
	baz=133						
TUC	Tucson	24.50	320	*e*P	P	12 27 32.0	+1.7
	comp=Z,133nm,1.1s						
TUC				LR	LR		
	comp=Z,26µm,19.0s						
TUC	Tucson	24.50	320	*e*P	P	12 27 32.0	+1.7
TUC				pmax	pmax		
	comp=Z,133nm,1.1s						
TUC				MLR	MLR		
	comp=Z,26µm,19.0s						
WCI	Wyandotte Cave	24.53	12	P	P	12 27 29.5	-0.8
	baz=194						
WCI	Wyandotte Cave	24.53	12	*e*P	P	12 27 29.3	-1.0
	comp=Z,230nm,1.0s						
WCI	Wyandotte Cave	24.53	12	*e*P	P	12 27 29.3	-1.0
WCI				pmax	pmax		
	comp=Z,230nm,1.0s						
R47A	Wooly Knot Far	24.55	11	P	P	12 27 30.1	-0.4
	baz=194,SNR=33						
NCAT	North Carolina	24.58	26	*e*P	P	12 27 29.9	-1.0
	comp=Z,471nm,1.9s						
Q37A	Longview Farm,	24.59	356	P	P	12 27 30.5	-0.4
	baz=175,SNR=5.8						
S51A	Beattyville	24.63	17	P	P	12 27 30.4	-0.9
	baz=201,SNR=26						
S51A	Beattyville	24.63	17	*e*P	P	12 27 30.1	-1.2
	comp=Z,171nm,1.1s						
Q42A	Golden Eagle	24.64	4	P	P	12 27 31.1	-0.2
	baz=184,SNR=7.7						
Q38A	Cooks Store, C	24.64	358	P	P	12 27 31.5	+0.2
	baz=177,SNR=34						
Q41A	Truxton	24.64	2	P	P	12 27 30.1	-1.3
	baz=182,SNR=11						
Q40A	Laux Farm, Aux	24.66	1	P	P	12 27 31.6	+0.1
	baz=180,SNR=12						
Q39A	Willow Grove F	24.71	359	P	P	12 27 31.5	-0.4
	baz=178,SNR=17						
OLIL	Olney	24.71	8	*e*P	P	12 27 31.8	-0.2
	comp=Z,316nm,1.1s						
MPR	Mayaguez	24.71	77	PFAKE		12 27 40.0	+7.8
MPR				LR	LR		
	comp=Z,14µm,21.0s						
CRPR	Cabo Rojo, PR	24.73	78	PFAKE		12 27 40.0	+7.7
CRPR				LR	LR		
	comp=Z,30µm,19.0s						
Q43A	New Douglas	24.73	5	P	P	12 27 32.1	-0.1
	baz=186,SNR=6.3						
AGP	Aguadilla	24.73	77	PFAKE		12 27 40.0	+7.6
AGP				LR	LR		
	comp=Z,18µm,20.0s						
Q44A	Meyer Farm, Va	24.76	7	P	P	12 27 32.5	+0.1
	baz=188,SNR=17						
R48A	Northridge Ran	24.78	13	P	P	12 27 32.0	-0.6
	baz=195,SNR=20						
S52A	Salyersville	24.82	18	P	P	12 27 31.4	-1.6
	baz=202,SNR=18						
R49A	Shelbyville	24.83	14	P	P	12 27 31.5	-1.6
	baz=197,SNR=27						
Q45A	Warren Harvey,	24.86	8	P	P	12 27 32.1	-1.2
	baz=190,SNR=24						
KSU1	Kansas State U	25.02	353	P	P	12 27 34.1	-0.7
	baz=170,SNR=23						
KSU1	Kansas State U	25.02	353	*e*P	P	12 27 34.2	-0.5
	comp=Z,118nm,0.7s						
R50A	Paris	25.03	15	P	P	12 27 33.5	-1.4
	baz=198,SNR=32						
AOPR	Arecibo Observ	25.09	77	PFAKE		12 27 40.0	+4.3
AOPR				LR	LR		
	comp=Z,14µm,19.0s						
T25A	Trinidad	25.13	337	P	P	12 27 37.3	+1.2
	baz=152,SNR=143						
T25A	Trinidad	25.13	337	*e*P	P	12 27 37.9	+1.8
	comp=Z,148nm,0.9s						
P39B	Salisbury	25.15	360	P	P	12 27 35.6	-0.3
	baz=179,SNR=11						
Q47A	Bedord North L	25.19	11	P	P	12 27 35.9	-0.4
	baz=193,SNR=18						
P40A	Paris	25.19	1	P	P	12 27 35.9	-0.5
	baz=181,SNR=18						
P40A	Paris	25.19	1	*e*P	P	12 27 35.8	-0.5
	comp=Z,159nm,1.4s						
OBIP	Obispado Ponce	25.20	78	PFAKE		12 27 50.0	+13
OBIP				LR	LR		
	comp=Z,11µm,21.0s						
R51A	Hillsboro	25.25	17	P	P	12 27 35.9	-0.9
	baz=200,SNR=25						
ICMP	Isla Caja de M	25.27	78	PFAKE		12 27 50.0	+13
ICMP				LR	LR		
	comp=Z,12µm,19.0s						
CBKS	Cedar Bluff	25.28	347	P	P	12 27 38.0	+0.7
	baz=163,SNR=18						
CBKS	Cedar Bluff	25.28	347	*e*P	P	12 27 36.9	-0.3
	comp=Z,117nm,0.9s						
P37A	Lathrop	25.30	357	P	P	12 27 37.0	-0.3
	baz=175,SNR=19						
P38A	Dawn	25.30	358	P	P	12 27 36.4	-0.9
	baz=177,SNR=13						
P38A	Dawn	25.30	358	*e*P	P	12 27 36.3	-1.0
	comp=Z,60nm,0.8s						
BLA	Blacksburg	25.30	23	P	P	12 27 36.1	-1.3
	baz=208,SNR=12						
BLA	Blacksburg	25.30	23	*e*P	P	12 27 36.5	-1.0
	comp=Z,737nm,1.9s						
BLA	Blacksburg	25.30	23	*e*P	P	12 27 36.5	-1.0
BLA				pmax	pmax		
	comp=Z,737nm,1.9s						
Q48A	North Vernon	25.32	13	P	P	12 27 35.9	-1.6
	baz=195,SNR=33						
P42A	Winchester	25.32	4	P	P	12 27 36.2	-1.3
	baz=184,SNR=8.1						
P42A	Winchester	25.32	4	*e*P	P	12 27 36.7	-0.8
	comp=Z,280nm,1.5s						
P44A	Sand Creek, Wi	25.36	7	P	P	12 27 37.2	-0.7
	baz=188,SNR=14						
P41A	Barry, Barry	25.37	3	P	P	12 27 36.4	-1.5
	baz=183,SNR=10						
BLO	Bloomington	25.40	11	*e*P	P	12 27 36.6	-1.6
	comp=Z,83nm,0.9s						
BLO	Bloomington	25.40	11	*e*P	P	12 27 36.6	-1.6
BLO				pmax	pmax		
	comp=Z,83nm,0.9s						
P43A	Skaggs, Pawnee	25.44	5	P	P	12 27 38.8	+0.2
	baz=186						
ATAH	Atahualpa	25.47	146	P	P	12 27 40.5	+1.0
	comp=Z,37nm,0.9s,baz=326,slow=8.3,SNR=16						
ATAH				PcP	PcP	12 31 10.2	-0.7
	comp=Z,9.1nm,0.8s,baz=315,slow=5.7,SNR=2.8						
ATAH				LR	LR	12 36 12.6	
	comp=Z,13µm,18.1s,baz=303,slow=33						
P45A	Graceland, Par	25.54	9	P	P	12 27 39.0	-0.5
	baz=190,SNR=11						
P45A	Graceland, Par	25.54	9	*e*P	P	12 27 39.3	-0.2
	comp=Z,180nm,1.0s						
R52A	Catlettsburg	25.55	18	P	P	12 27 39.0	-0.6
	baz=202						
214A	Organ Pipe Nat	25.57	317	P	P	12 27 40.7	+0.8
	baz=129,SNR=16						
Q49A	Aurora	25.58	14	P	P	12 27 39.1	-0.7
	baz=197						
SJG	San Juan	25.64	78	P	P	12 27 38.5	-2.1
	comp=Z,12nm,0.8s,baz=346,slow=1.7,SNR=4.9						
SJG				PcP	PcP	12 31 09.7	-1.1
	comp=Z,12nm,0.7s,baz=347,slow=1.9,SNR=3.2						
SJG				LR	LR	12 37 40.3	
	comp=Z,13µm,21.9s,baz=248,slow=36						
SJG	San Juan	25.64	78	*e*P	P	12 27 39.5	-1.2
	comp=Z,114nm,1.5s						
SJG				PcP	PcP	12 31 09.7	-1.1
SJG	San Juan	25.64	78	*e*P	P	12 27 39.5	-1.2
SJG						12 31 09.7	
SJG				pmax	pmax		
	comp=Z,114nm,1.5s						
Q50A	Georgetown	25.65	16	P	P	12 27 39.5	-1.0
	baz=199,SNR=17						
P46A	Rosedale	25.71	10	P	P	12 27 40.6	-0.4
	baz=191,SNR=24						
P47A	Martinsville	25.75	11	P	P	12 27 41.0	-0.4
	baz=194,SNR=13						
O40A	La Belle	25.79	1	P	P	12 27 41.6	-0.2
	baz=181,SNR=9.9						
O38A	Galt	25.79	358	P	P	12 27 41.2	-0.6
	baz=177						
O41A	Passleys Farm,	25.82	3	P	P	12 27 42.0	0.0
	baz=183						
O37A	Wolven Farm, M	25.86	357	P	P	12 27 42.4	-0.1
	baz=176						
P48A	Milroy	25.89	13	P	P	12 27 41.6	-1.1
	baz=195,SNR=17						
O39A	Kirksville	25.91	0	P	P	12 27 42.5	-0.3
	baz=179						
W18A	Petrified Fore	25.91	326	P	P	12 27 44.5	+1.3
	baz=139						
W18A	Petrified Fore	25.91	326	*e*P	P	12 27 45.5	+2.3
	comp=Z,322nm,1.9s						
HUMP	Col San Antoni	25.93	78	PFAKE		12 27 50.0	+6.7
HUMP				LR	LR		
	comp=Z,14µm,21.0s						
CBYP	Canovanas	25.93	78	PFAKE		12 27 50.0	+6.6
CBYP				LR	LR		
	comp=Z,18µm,20.0s						
O42A	Bath	25.95	4	P	P	12 27 43.0	-0.2
	baz=185						
Q51A	Peebles	25.99	17	P	P	12 27 43.1	-0.6
	baz=200,SNR=38						
O44A	Mansfield	26.06	7	P	P	12 27 43.8	-0.4
	baz=188						
SDCO	Great Sand Dun	26.08	336	P	P	12 27 46.8	+2.0
	baz=150,SNR=109						
SDCO	Great Sand Dun	26.08	336	*e*P	P	12 27 46.8	+2.0
	comp=Z,180nm,1.3s						
O43A	Sugar Creek Fa	26.10	6	P	P	12 27 44.5	0.0
	baz=187						
P49A	Miami Univ. Ec	26.12	14	P	P	12 27 43.6	-1.1
	baz=197,SNR=13						
MTP	Monte Pirata	26.21	78	PFAKE		12 28 00.0	+14
MTP				LR	LR		
	comp=Z,16µm,20.0s						
KSCO	Kaye Shedlock’	26.22	342	P	P	12 27 46.5	+0.6
	baz=157,SNR=9.5						
KSCO	Kaye Shedlock’	26.22	342	*e*P	P	12 27 46.4	+0.5
	comp=Z,204nm,1.3s						
O45A	Potomac	26.25	8	P	P	12 27 45.3	-0.6
	baz=190,SNR=11						
N41A	Harden Midland	26.41	3	P	P	12 27 46.7	-0.6
	baz=183						
N41A	Harden Midland	26.41	3	*e*P	P	12 27 46.8	-0.6
	comp=Z,81nm,1.1s						
P50A	Jamestown	26.42	15	P	P	12 27 46.7	-0.8
	baz=199,SNR=24						
N37A	Lee Faris, Mou	26.46	357	P	P	12 27 47.4	-0.4
	baz=176						
N37A	Lee Faris, Mou	26.46	357	*e*P	P	12 27 47.6	-0.2
	comp=Z,128nm,1.0s						
N38A	Joes South For	26.46	359	P	P	12 27 47.6	-0.2
	baz=178,SNR=10.0						
SFIN	Lafayette	26.47	9	P	P	12 27 47.1	-0.8
	baz=191,SNR=17						
SFIN	Lafayette	26.47	9	*e*P	P	12 27 47.1	-0.8
	comp=Z,78nm,0.8s						
O47A	Sheridan	26.49	11	P	P	12 27 47.1	-1.0
	baz=193,SNR=19						
N39A	Derby Farms, D	26.54	0	P	P	12 27 47.9	-0.6
	baz=180						
N39A	Derby Farms, D	26.54	0	*e*P	P	12 27 47.6	-0.8
	comp=Z,108nm,1.2s						
N36A	Muff Farm, Cla	26.56	356	P	P	12 27 48.4	-0.3
	baz=174						
N40A	Mertquake, Sal	26.56	2	P	P	12 27 48.2	-0.4
	baz=182,SNR=6.2						
N42A	Yates City	26.58	4	P	P	12 27 48.0	-0.9
	baz=185						
S22A	4UR Ranch, Cre	26.62	334	P	P	12 27 50.8	+1.1
	baz=147,SNR=165						
S22A	4UR Ranch, Cre	26.62	334	*e*P	P	12 27 52.0	+2.4
	comp=Z,291nm,1.5s						
S22A				LR	LR		
	comp=Z,7µm,19.0s						
O48A	Farmland	26.71	13	P	P	12 27 49.4	-0.7
	baz=196,SNR=14						
N44A	Piper City	26.73	7	P	P	12 27 51.1	+0.8
	baz=189						
N43A	Stutzman Famil	26.76	6	P	P	12 27 50.5	0.0
	baz=187						
STVI	Saint Thomas	26.80	77	PFAKE		12 28 00.0	+8.9
STVI				LR	LR		
	comp=Z,13µm,20.0s						
O49A	Covington	26.83	14	P	P	12 27 50.6	-0.6
	baz=197,SNR=16						
N45A	Kentland	26.87	8	P	P	12 27 50.8	-0.7
	baz=190,SNR=7.1						
MVCO	Mesa Verde	26.93	331	P	P	12 27 53.3	+1.0
	baz=144,SNR=182						
MVCO	Mesa Verde	26.93	331	*e*P	P	12 27 54.8	+2.4
	comp=Z,234nm,0.9s						
O50A	Cable	26.97	15	P	P	12 27 51.5	-0.9
	baz=199						

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Q24A  Divide            27.02 338  P      P      12 27 53.7 +0.5
      baz=152,SNR=5.5
Q24A  Divide            27.02 338 eP      P      12 27 54.6 +1.4
      comp=Z,45nm,1.2s
N46A  Monticello        27.04  10  P      P      12 27 52.5 -0.5
      baz=192
M40A  Post Highland     27.08   2  P      P      12 27 53.0 -0.4
      baz=182,SNR=13
M38A  Pleasantville     27.08 359  P      P      12 27 53.0 -0.4
      baz=178,SNR=14
M41A  Milan             27.09   3  P      P      12 27 53.2 -0.3
      baz=184
M37A  Trindle Farm,     27.09 358  P      P      12 27 54.0 +0.5
      baz=176,SNR=10
CVRD  Centerville Ro    27.10  26 eP      P      12 27 53.4 -0.2
      comp=Z,50nm,1.0s
WUAZ  Wupatki           27.11 325  P      P      12 27 54.6 +0.6
      baz=136,SNR=24
WUAZ  Wupatki           27.11 325 eP      P      12 27 56.3 +2.4
      comp=Z,110nm,1.4s
WUAZ                               LR     LR
      comp=Z,16µm,19.0s
M39A  Webster           27.14   1  P      P      12 27 53.5 -0.4
      baz=180
M36A  Felix, Anita      27.18 356  P      P      12 27 54.2 -0.2
      baz=175
PTRD  Partlow Road      27.22  26 eP      P      12 27 53.8 -0.9
      comp=Z,120nm,1.3s
M43A  Waltham Townsh    27.27   6  P      P      12 27 54.6 -0.6
      baz=187,SNR=5.5
M44A  Midewin, Midew    27.33   7  P      P      12 27 55.2 -0.4
      baz=189
M44A  Midewin, Midew    27.33   7 eP      P      12 27 56.5 +0.8
      comp=Z,141nm,1.4s
CBN   Corbin Frederi    27.40  27  P      P      12 27 54.7 -1.6
      baz=213
CBN   Corbin Frederi    27.40  27 eP      P      12 27 55.4 -0.9
      comp=Z,109nm,1.0s
ABVI  Anegada Island    27.41  77  PFAKE         12 28 10.0 +13
ABVI                               LR     LR
      comp=Z,12µm,20.0s
M45A  Boilermakers S    27.44   9  P      P      12 27 56.2 -0.4
      baz=191
BGNE  Belgrade          27.50 351  P      P      12 27 57.2  0.0
      baz=168
BGNE  Belgrade          27.50 351 eP      P      12 27 57.1  0.0
      comp=Z,114nm,1.1s
SCIA  State Center      27.57 359  P      P      12 27 58.6 +0.8
      baz=178
SCIA  State Center      27.57 359 eP      P      12 27 57.6 -0.2
      comp=Z,125nm,1.1s
PCRV  Puerto La Cruz    27.58  95  P      P      12 27 57.8 -0.5
      comp=Z,3.6nm,0.5s,baz=46,slow=5.8,SNR=8.1
PCRV                               LR     LR     12 39 54.4
      comp=Z,5µm,21.5s,baz=298,slow=39
GLA   Glamis            27.58 317  P      P      12 27 59.8 +1.8
      baz=127,SNR=10
GLA   Glamis            27.58 317 eP      P      12 27 59.9 +1.8
      comp=Z,326nm,1.8s
GLA                                LR     LR
      comp=Z,9µm,19.0s
GLA   Glamis            27.58 317 eP      P      12 27 59.9 +1.8
GLA                                pmax   pmax
      comp=Z,326nm,1.8s
GLA                                MLR    MLR
      comp=Z,9µm,19.0s
M46A  Old House Fiel    27.60  10  P      P      12 27 58.2 +0.1
      baz=192
MCWV  Mont Chateau      27.67  21  P      P      12 27 58.0 -0.7
      baz=207
MCWV  Mont Chateau      27.67  21 eP      P      12 27 57.6 -1.2
      comp=Z,71nm,1.4s
N50A  Nevada            27.68  16  P      P      12 27 58.4 -0.4
      baz=199
PV01  Paradox Valley    27.71 332 eP      P      12 28 02.0 +2.6
L40A  Anamosa           27.74   2  P      P      12 27 57.9 -1.4
      baz=182,SNR=17
L40A  Anamosa           27.74   2 eP      P      12 27 58.2 -1.1
      comp=Z,86nm,1.0s
L42A  Oliver, Polo      27.77   5  P      P      12 27 59.3 -0.4
      baz=185
L42A  Oliver, Polo      27.77   5 eP      P      12 27 58.7 -0.9
      comp=Z,102nm,1.0s
L39A  Vinton            27.78   1  P      P      12 27 59.3 -0.4
      baz=181,SNR=6.2
L41A  Preston           27.79   3  P      P      12 28 00.0 +0.3
      baz=184,SNR=8.3
L38A  Oak Wood Farm,    27.80 359  P      P      12 27 59.5 -0.4
      baz=179,SNR=6.6
L37A  Phoenix Point,    27.80 358  P      P      12 27 59.9 +0.1
      baz=177
Y12C  Blythe            27.82 318  P      P      12 28 01.4 +1.3
      baz=129,SNR=6.5
Y12C  Blythe            27.82 318 eP      P      12 28 02.2 +2.1
      comp=Z,62nm,1.3s
Y12C                               LR     LR
      comp=Z,20µm,19.0s
L36A  Harm Buss Farm    27.82 357  P      P      12 28 00.5 +0.5
      baz=175
PV15  Paradox Valley    27.84 332 eP      P      12 28 02.6 +2.1
PV13  Radium Mtn., P    27.84 332 eP      P      12 28 03.1 +2.5
      comp=Z,470nm,1.5s
PV13                               LR     LR
      comp=Z,6µm,19.0s
PV02  Paradox Valley    27.84 332 eP      P      12 28 03.2 +2.6
      comp=Z,274nm,1.3s
OGNE  Ogallala          27.86 345  P      P      12 28 01.6 +1.1
      baz=160,SNR=12
OGNE  Ogallala          27.86 345 eP      P      12 28 01.4 +0.9
      comp=Z,86nm,1.0s
SMCO  Snowmass          27.90 336 eP      P      12 28 03.1 +1.9
      comp=Z,82nm,1.3s
SMCO                               LR     LR
      comp=Z,5µm,19.0s
PV05  Paradox Valley    27.91 331 eP      P      12 28 03.4 +2.2
ISCO  Idaho Springs     27.92 338  P      P      12 28 02.1 +0.7
      baz=152,SNR=27
ISCO  Idaho Springs     27.92 338 eP      P      12 28 02.8 +1.4
      comp=Z,142nm,1.8s
ISCO  Idaho Springs     27.92 338 eP      P      12 28 02.8 +1.4
ISCO                               pmax   pmax
      comp=Z,143nm,1.8s
PDMCI Parker Dam,Lak    27.92 319  P      P      12 28 02.5 +1.5
      baz=130,SNR=20
PV03  Paradox Valley    27.93 332 eP      P      12 28 03.8 +2.5
PV18  Skein Mesa, Pa    27.95 332 eP      P      12 28 03.8 +2.3
      comp=Z,263nm,1.2s
PV12  Saucer Basin,     27.96 332 eP      P      12 28 04.2 +2.6
      comp=Z,261nm,1.0s
PV12                               LR     LR
      comp=Z,8µm,19.0s
PV11  David Mesa, Pa    27.98 332 eP      P      12 28 04.2 +2.4
      comp=Z,389nm,1.2s
M48A  Edgerton          27.99  13  P      P      12 28 00.6 -0.9
      baz=196
PV17  East Wray Mesa    28.00 332 eP      P      12 28 04.3 +2.3
      comp=Z,288nm,1.1s
PV16  Nyswonger Mesa    28.01 332 eP      P      12 28 04.3 +2.3
      comp=Z,271nm,1.3s
L43A  Garden Prairie    28.04   6  P      P      12 28 01.9 -0.1
      baz=187
PV19  Morning Glory     28.04 332 eP      P      12 28 04.8 +2.5
      comp=Z,202nm,1.2s
PV14  Lion Creek, Pa    28.11 332 eP      P      12 28 05.2 +2.3
      comp=Z,197nm,1.1s
PV10  Paradox Valley    28.12 332 eP      P      12 28 04.9 +1.9
L44A  Lake County Fo    28.12   7  P      P      12 28 03.3 +0.6
      baz=189
PV22  Blue Mesa, Par    28.13 332 eP      P      12 28 05.7 +2.5
      comp=Z,160nm,1.1s
M49A  Liberty Center    28.14  14  P      P      12 28 02.0 -0.9
      baz=197
PV23  Carpenter Ridg    28.17 332 eP      P      12 28 06.0 +2.5
      comp=Z,280nm,1.2s
SWSC  Sam W. Stewart    28.18 315  P      P      12 28 04.7 +1.4
      baz=126,SNR=13
IKP   In-Ko-Pah, Jac    28.22 315  P      P      12 28 05.4 +1.6
      baz=125,SNR=14
PV21  Cone Mtn., Par    28.24 332 eP      P      12 28 06.5 +2.4
      comp=Z,170nm,1.3s
PV09  Paradox Valley    28.26 332 eP      P      12 28 06.7 +2.3
M50A  Fremont           28.30  15  P      P      12 28 03.9 -0.4
      baz=199
K38A  Parkersburg       28.30 360  P      P      12 28 05.0 +0.7
      baz=179
K38A  Parkersburg       28.30 360 eP      P      12 28 03.1 -1.2
      comp=Z,53nm,0.9s
K41A  Shullsburg        28.33   4  P      P      12 28 05.1 +0.5
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      baz=184
K36A  Gilmore City      28.34 357  P      P      12 28 05.1 +0.4
      baz=176
L47A  Sherwood          28.36  12  P      P      12 28 04.4 -0.4
      baz=195
BC3   Big Chuckawall    28.36 317  P      P      12 28 06.8 +1.6
      baz=127,SNR=47
K39A  Oelwein           28.37   1  P      P      12 28 04.8 -0.1
      baz=181,SNR=9.5
SABA  Saba              28.38  79  PFAKE         12 28 20.0 +15
SABA                               LR     LR
      comp=Z,21µm,18.0s
K40A  Colesburg         28.38   2  P      P      12 28 05.5 +0.5
      baz=182
K37A  Belmond           28.44 358  P      P      12 28 04.9 -0.6
      baz=177,SNR=6.9
IRM   Iron Mountain     28.47 318  P      P      12 28 07.5 +1.5
      baz=128,SNR=27
L48A  N Adams           28.49  13  P      P      12 28 04.8 -1.2
      baz=196,SNR=18
K42A  Prairie Point,    28.57   5  P      P      12 28 06.1 -0.6
      baz=186
MONP2 Monument Peak     28.57 315  P      P      12 28 08.7 +1.6
      baz=125,SNR=12
SEUS  St. Eustatius     28.62  80  PFAKE         12 28 20.0 +13
SEUS                               LR     LR
      comp=Z,18µm,20.0s
BAR   Barrett           28.62 314 eP      P      12 28 09.3 +2.0
      comp=Z,151nm,1.9s
BAR                                LR     LR
      comp=Z,7µm,21.0s
SDMD  Soldier's Deli    28.63  26 eP      P      12 28 06.2 -1.1
      comp=Z,20nm,1.0s
JFWS  Jewell Farm       28.64   4  P      P      12 28 07.6 +0.3
      baz=184
JFWS  Jewell Farm       28.64   4 eP      P      12 28 07.0 -0.3
      comp=Z,50nm,0.8s
JFWS  Jewell Farm       28.64   4 eP      P      12 28 07.0 -0.3
JFWS                               pmax   pmax
      comp=Z,50nm,0.8s
O56A  Blue Knob Stat    28.68  23  P      P      12 28 07.0 -0.8
      baz=209,SNR=9.0
O56A  Blue Knob Stat    28.68  23 eP      P      12 28 06.8 -0.9
      comp=Z,204nm,1.8s
N54A  Moraine State     28.79  20  P      P      12 28 07.7 -0.9
      baz=205,SNR=10
N54A  Moraine State     28.79  20 eP      P      12 28 07.3 -1.3
      comp=Z,71nm,1.0s
L49A  Milan             28.79  14  P      P      12 28 08.8 +0.1
      baz=197
BELC  Belle Mtn. Jos    28.93 317  P      P      12 28 11.6 +1.3
      baz=127,SNR=14
J38A  Wedel Dairy, R    28.98   0  P      P      12 28 10.4 +0.1
      baz=180
J37A  Redenius Farm,    28.98 359  P      P      12 28 10.0 -0.3
      baz=178
AAM   Ann Arbor         29.00  14  P      P      12 28 09.7 -0.8
      baz=197
AAM   Ann Arbor         29.00  14 eP      P      12 28 09.2 -1.3
      comp=Z,127nm,1.4s
AAM   Ann Arbor         29.00  14 eP      P      12 28 09.2 -1.3
AAM                                pmax   pmax
      comp=Z,127nm,1.4s
J39A  Decorah           29.00   1  P      P      12 28 10.6 +0.1
      baz=181,SNR=5.4
N23A  Red Feather La    29.01 339  P      P      12 28 11.7 +0.8
      baz=152,SNR=10.0
N23A  Red Feather La    29.01 339 eP      P      12 28 12.3 +1.4
      comp=Z,32nm,1.1s
N23A                               LR     LR
      comp=Z,4µm,22.0s
XPFO  Piæon Flat        29.01 316 eP      P      12 28 13.3 +2.4
      comp=Z,104nm,1.5s
XPFO                               LR     LR
      comp=Z,6µm,19.0s
PFO   Pinyon Flats O    29.01 316  P      P      12 28 12.4 +1.5
      baz=126,SNR=9.6
PFO   Pinyon Flats O    29.01 316 eP      P      12 28 13.1 +2.2
      comp=Z,95nm,1.5s
PFO                                LR     LR
      comp=Z,6µm,18.0s
PFO   Pinyon Flats O    29.01 316 eP      P      12 28 13.1 +2.2
PFO                                pmax   pmax
      comp=Z,95nm,1.5s
PFO                                MLR    MLR
      comp=Z,6µm,18.0s
J36A  Seneca 1, Swea    29.03 357  P      P      12 28 10.4 -0.3
      baz=176
J36A  Seneca 1, Swea    29.03 357 eP      P      12 28 10.0 -0.7
      comp=Z,50nm,0.9s
LDFC  Landfair          29.03 320 eP      P      12 28 14.3 +3.3
      comp=Z,428nm,1.8s
LDFC                               LR     LR
      comp=Z,24µm,18.0s
FRD   Ford Ranch, An    29.04 315  P      P      12 28 12.5 +1.4
      baz=125,SNR=13
109C  Camp Elliot, M    29.04 314  P      P      12 28 12.6 +1.5
      baz=124
CPE   Camp Elliot       29.04 314 eP      P      12 28 12.4 +1.4
      comp=Z,95nm,1.4s
CPE                                LR     LR
      comp=Z,5µm,20.0s
J40A  Soldiers Grove    29.09   3  P      P      12 28 11.3  0.0
      baz=183
J41A  Loganville        29.10   4  P      P      12 28 11.3 -0.2
      baz=184
J42A  Columbus          29.12   5  P      P      12 28 11.8 +0.2
      baz=186
GMRC  Granite Mounta    29.20 319  P      P      12 28 13.9 +1.4
      baz=129,SNR=26
PHWY  Pilot Hill        29.20 340 eP      P      12 28 13.8 +1.1
      comp=Z,36nm,1.3s
O20A  White River Ci    29.23 335  P      P      12 28 13.8 +1.0
      baz=147,SNR=31
O20A  White River Ci    29.23 335 eP      P      12 28 15.0 +2.2
      comp=Z,404nm,1.8s
O20A                               LR     LR
      comp=Z,6µm,19.0s
LCMT  Little Creek M    29.23 325 eP      P      12 28 15.2 +2.4
      comp=Z,179nm,2.0s
LCMT                               LR     LR
      comp=Z,9µm,19.0s
SSPA  Standing Stone    29.25  23  P      P      12 28 11.5 -1.3
      baz=210
SSPA  Standing Stone    29.25  23 eP      P      12 28 11.9 -0.9
      comp=Z,85nm,1.2s
SSPA                               LR     LR
      comp=Z,10µm,18.0s
J43A  Natural Harves    29.25   6  P      P      12 28 12.7  0.0
      baz=188
MVL   Millersville      29.33  26 eP      P      12 28 12.1 -1.4
      comp=Z,136nm,1.8s
ALLY  Alegheny Colle    29.36  19 eP      P      12 28 12.8 -1.0
      comp=Z,91nm,1.1s
PAGS  Pennsylvania G    29.37  25 eP      P      12 28 12.7 -1.1
      comp=Z,67nm,1.4s
M54A  Oil Creek Stat    29.39  20  P      P      12 28 13.1 -0.9
      baz=206
M54A  Oil Creek Stat    29.39  20 eP      P      12 28 12.7 -1.3
      comp=Z,75nm,1.1s
SRU   San Rafael Swe    29.40 331 eP      P      12 28 16.4 +2.0
      comp=Z,373nm,1.9s
SRU   San Rafael Swe    29.40 331 eP      P      12 28 16.4 +2.0
SRU                                pmax   pmax
      comp=Z,373nm,1.9s
MURC  Murrieta          29.51 315  P      P      12 28 16.6 +1.5
      baz=125,SNR=7.3
I39A  Houston           29.52   2  P      P      12 28 15.7 +0.6
      baz=182
I39A  Houston           29.52   2 eP      P      12 28 14.0 -1.1
      comp=Z,114nm,1.4s
SZCU  Shurtz Canyon     29.56 326 eP      P      12 28 18.4 +2.6
      comp=Z,301nm,1.8s
SZCU                               LR     LR
      comp=Z,13µm,18.0s
ECSD  EROS Data Cent    29.59 354  P      P      12 28 15.8  0.0
      baz=172,SNR=38
ECSD  EROS Data Cent    29.59 354 eP      P      12 28 14.5 -1.3
      comp=Z,39nm,1.1s
ECSD                               LR     LR
      comp=Z,5µm,22.0s
I40A  Norwalk           29.59   3  P      P      12 28 16.4 +0.6
      baz=183
HEC   Hector,Ludlow     29.66 318  P      P      12 28 18.0 +1.5
      baz=128,SNR=8.0
PSUB  Penn St. - Bra    29.66  27  PFAKE         12 28 30.0 +14
PSUB                               LR     LR
      comp=Z,9µm,21.0s
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I37A  Lemond, Waseca    29.68 359  P      P      12 28 16.5  0.0
      baz=178
I37A  Lemond, Waseca    29.68 359 eP      P      12 28 17.3 +0.8
      comp=Z,91nm,1.3s
CCUT  Cedar City        29.68 325 eP      P      12 28 19.9 +3.0
      comp=Z,66nm,1.3s
CCUT                               LR     LR
      comp=Z,10µm,18.0s
P18A  Preston Nutter    29.68 332 eP      P      12 28 19.1 +2.1
      comp=Z,150nm,1.6s
P18A                               LR     LR
      comp=Z,5µm,20.0s
I38A  Scanlan Farm,     29.70   0  P      P      12 28 16.8 +0.1
      baz=180
BBRC  Big Bear Solar    29.70 316  P      P      12 28 18.7 +1.5
      baz=126,SNR=7.0
I42A  Draeger Farm,     29.71   5  P      P      12 28 16.8  0.0
      baz=187
I42A  Draeger Farm,     29.71   5 eP      P      12 28 16.3 -0.5
      comp=Z,40nm,1.0s
MSU   Marysvale         29.75 328 eP      P      12 28 20.3 +2.7
MSU   Marysvale         29.75 328 eP      P      12 28 20.3 +2.7
GDHS  Morne Mazeau,     29.76  82  PFAKE         12 28 30.0 +12
GDHS                               LR     LR
      comp=Z,18µm,20.0s
ANWB  Willy Bob         29.77  79  PFAKE         12 28 30.0 +12
ANWB                               LR     LR
      comp=Z,12µm,21.0s
TUQ   Turquoise Moun    29.77 319  P      P      12 28 19.2 +1.5
      baz=129,SNR=13
P17A  Butcher Ranch,    29.79 331 eP      P      12 28 19.9 +2.2
      comp=Z,90nm,1.1s
I41A  Arkdale           29.80   4  P      P      12 28 17.9 +0.3
      baz=185
I41A  Arkdale           29.80   4 eP      P      12 28 17.0 -0.6
      comp=Z,76nm,1.4s
ERPA  Erie              29.83  19  PFAKE         12 28 30.0 +12
ERPA                               LR     LR
      comp=Z,12µm,18.0s
TMUT  Trail Mountain    29.87 330 eP      P      12 28 20.9 +2.2
      comp=Z,54nm,1.0s
TMUT                               LR     LR
      comp=Z,4µm,19.0s
TCRU  Three Creeks R    29.97 328  PFAKE         12 28 30.0 +11
TCRU                               LR     LR
      comp=Z,22µm,18.0s
SHPR  Sheep Range       30.00 322 eP      P      12 28 22.0 +2.3
      comp=Z,107nm,1.6s
SHPR                               LR     LR
      comp=Z,16µm,18.0s
RWWY  Rawlins           30.16 338 eP      P      12 28 22.0 +0.9
      comp=Z,106nm,1.1s
RWWY                               LR     LR
      comp=Z,3µm,21.0s
BFSC  Mount Baldy Ra    30.19 316  P      P      12 28 22.5 +1.1
      baz=125,SNR=7.1
H37A  Dierke Farm, C    30.24 359  P      P      12 28 22.4 +0.9
      baz=179
CIS   Catalina Islan    30.24 314  P      P      12 28 23.3 +1.6
      baz=123,SNR=6.0
LUPA  Lehigh Univers    30.25  27 eP      P      12 28 21.0 -0.6
      comp=Z,3.8nm,1.0s
GSC   Goldstone, Bar    30.25 318  P      P      12 28 23.6 +1.7
      baz=128,SNR=10
GSC   Goldstone, Bar    30.25 318 eP      P      12 28 24.1 +2.3
      comp=Z,121nm,1.8s
GSC                               ePcP    PcP    12 31 23.8 +1.9
GSC                                LR     LR
      comp=Z,11µm,20.0s
GSC   Goldstone, Bar    30.25 318 eP      P      12 28 24.1 +2.3
GSC                               e              12 31 23.8
GSC                                pmax   pmax
      comp=Z,121nm,1.8s
GSC                                MLR    MLR
      comp=Z,11µm,20.0s
H36A  Jessenland, He    30.26 358  P      P      12 28 22.2 +0.6
      baz=177,SNR=9.3
DLPL  La Plaine         30.28  84 eP      P      12 28 21.4 -0.8
SHOC  Shoshone, Teco    30.29 320  P      P      12 28 23.5 +1.5
      baz=129
H38A  Maiden Rock       30.33   0  P      P      12 28 23.1 +0.8
      baz=180
H40A  Chili             30.33   3  P      P      12 28 23.1 +0.8
      baz=184
N59A  State Game Lan    30.34  26  P      P      12 28 21.8 -0.7
      baz=213,SNR=8.0
N59A  State Game Lan    30.34  26 eP      P      12 28 21.7 -0.7
      comp=Z,98nm,1.6s
H39A  Augusta           30.36   2  P      P      12 28 23.4 +0.9
      baz=182,SNR=9.4
NNA   Nana              30.36 148  P      P      12 28 23.5 +0.6
      comp=Z,16nm,1.0s,baz=333,slow=11,SNR=2.8
NNA                                LR     LR     12 38 16.1
      comp=Z,8µm,21.7s,baz=320,slow=32
NNA   Nana              30.36 148 ePn     P      12 28 22.9  0.0
      comp=Z,108nm,1.0s
NNA   Nana              30.36 148 eP      P      12 28 22.9  0.0
NNA                                pmax   pmax
      comp=Z,109nm,1.0s
H41A  Junction City     30.37   4  P      P      12 28 22.9 +0.3
      baz=185
H41A  Junction City     30.37   4 eP      P      12 28 22.0 -0.7
      comp=Z,33nm,1.1s
H43A  Windswept, Lux    30.40   7  P      P      12 28 23.9 +1.0
      baz=189
FDF   Fort de France    30.40  85  PFAKE         12 28 30.0 +6.7
FDF                                LR     LR
      comp=Z,16µm,21.0s
SVB   Belmont           30.41  88  PFAKE         12 28 30.0 +6.6
SVB                                LR     LR
      comp=Z,5µm,19.0s
H35A  Sunnyside Ranc    30.42 357  P      P      12 28 23.0  0.0
      baz=175,SNR=6.3
MWC   Mount Wilson      30.45 315 eP      P      12 28 25.9 +2.2
      comp=Z,108nm,1.5s
MWC                                LR     LR
      comp=Z,6µm,18.0s
MWC   Mount Wilson      30.45 315 eP      P      12 28 25.9 +2.2
MWC                                pmax   pmax
      comp=Z,108nm,1.5s
MWC                                MLR    MLR
      comp=Z,6µm,18.0s
PASC  Pasadena Art C    30.51 315 eP      P      12 28 26.5 +2.5
      comp=Z,96nm,1.5s
PASC                               LR     LR
      comp=Z,8µm,18.0s
SUSD  Miller            30.59 351  P      P      12 28 24.8 +0.2
      baz=167
MPU   Maple Canyon      30.64 330 eP      P      12 28 27.7 +2.3
      comp=Z,76nm,1.1s
MPU                                LR     LR
      comp=Z,7µm,19.0s
DECC  Green Verdugo     30.66 315  P      P      12 28 26.7 +1.4
      baz=124,SNR=5.9
PSUT  Pine Spring       30.66 326 eP      P      12 28 28.2 +2.7
      comp=Z,54nm,1.2s
PSUT                               LR     LR
      comp=Z,11µm,20.0s
BRNJ  Basking Ridge     30.67  27 eP      P      12 28 24.4 -0.9
      comp=Z,103nm,1.3s
BRNJ                               LR     LR
      comp=Z,8µm,20.0s
K22A  Casper            30.77 340  P      P      12 28 27.4 +1.0
      baz=152,SNR=20
K22A  Casper            30.77 340 eP      P      12 28 27.9 +1.5
      comp=Z,68nm,1.3s
K22A                               LR     LR
      comp=Z,3µm,20.0s
EDW2  Edwards Air Fo    30.78 316  P      P      12 28 27.9 +1.4
      baz=125,SNR=6.9
NLU   North Lily Min    30.81 330 eP      P      12 28 29.3 +2.5
      comp=Z,134nm,1.5s
G38A  Ridgeland         30.83   1  P      P      12 28 27.2 +0.5
      baz=181,SNR=5.7
KSPA  Keystone Colle    30.88  25 eP      P      12 28 25.4 -1.8
      comp=Z,78nm,1.3s
KSPA                              ePcP    PcP    12 31 25.3 +2.1
SPMN  Marine on St.     30.88 360  P      P      12 28 27.9 +0.7
      baz=179,SNR=13
SPMN  Marine on St.     30.88 360 eP      P      12 28 26.0 -1.1
      comp=Z,39nm,0.9s
LRMC  Laurel Mtn Rad    30.93 318  P      P      12 28 29.8 +2.0
      baz=127,SNR=10
TPNV  Topopah Spring    30.94 321  P      P      12 28 29.3 +1.3
      baz=130,SNR=25
TPNV  Topopah Spring    30.94 321 eP      P      12 28 30.8 +2.8
      comp=Z,331nm,1.9s
TPNV                               LR     LR
```

	comp=Z,19μm,18.0s						
TPNV	**Topopah Spring**	30.94	321	*e*P	P	12 28 30.8	+2.8
TPNV				pmax	pmax		
	comp=Z,331nm,1.9s						
TPNV				MLR	MLR		
	comp=Z,19μm,18.0s						
SNCC	**San Nicolas Is**	30.95	312	PFAKE		12 28 40.0	+12
SNCC				LR	LR		
	comp=Z,6μm,21.0s						
G39A	**Holcombe**	30.96	2	P	P	12 28 28.4	+0.5
	baz=182,SNR=8.4						
ODNJ	**Ogdensburg**	30.98	27	*e*P	P	12 28 27.4	-0.6
	comp=Z,67nm,1.2s						
G40A	**Rib Lake**	30.99	3	P	P	12 28 28.4	+0.3
	baz=184						
G40A	**Rib Lake**	30.99	3	*e*P	P	12 28 28.3	+0.2
	comp=Z,19nm,1.0s						
FURC	**Furnace Creek,**	31.01	320	P	P	12 28 30.1	+1.7
	baz=129,SNR=16						
JLU	**Jordanelle**	31.02	331	*e*P	P	12 28 31.0	+2.3
	comp=Z,104nm,1.5s						
JLU				LR	LR		
	comp=Z,4μm,18.0s						
CPNY	**Central Park**	31.03	28	PFAKE		12 28 40.0	+12
CPNY				LR	LR		
	comp=Z,10μm,20.0s						
MMNY	**Mt. Morris Dam**	31.07	21	*e*P	P	12 28 27.3	-1.5
	comp=Z,76nm,1.2s						
MMNY				LR	LR		
	comp=Z,11μm,18.0s						
BLG	**Laguna Peak, P**	31.08	314	P	P	12 28 30.3	+1.2
	baz=123						
G42A	**Mountain**	31.10	6	P	P	12 28 29.5	+0.5
	baz=187						
G42A	**Mountain**	31.10	6	*e*P	P	12 28 27.3	-1.8
	comp=Z,57nm,1.4s						
OSI	**Osito Audit: C**	31.12	315	P	P	12 28 31.5	+2.0
	baz=124						
OSI	**Osito Audit: C**	31.12	315	*e*P	P	12 28 31.6	+2.0
	comp=Z,76nm,1.4s						
OSI				LR	LR		
	comp=Z,6μm,20.0s						
MPMC	**Manual Prospec**	31.16	319	P	P	12 28 31.4	+1.4
	baz=128,SNR=25						
BBSR	**BB Station**	31.16	50	PFAKE		12 28 40.0	+10
BBSR				LR	LR		
	comp=Z,7μm,20.0s						
G43A	**Wallace**	31.19	7	P	P	12 28 30.4	+0.5
	baz=189						
GLMI	**Grayling**	31.22	11	*e*P	P	12 28 29.2	-0.9
	comp=Z,73nm,0.9s						
CTU	**Camp Tracy**	31.23	331	*e*P	P	12 28 32.8	+2.4
	comp=Z,59nm,1.0s						
CTU				LR	LR		
	comp=Z,4μm,20.0s						
PAL	**Palisades**	31.23	28	P	P	12 28 29.3	-0.9
	baz=216						
PAL	**Palisades**	31.23	28	*e*P	P	12 28 28.6	-1.6
	comp=Z,67nm,1.4s						
PAL				LR	LR		
	comp=Z,10μm,20.0s						
PAL	**Palisades**	31.23	28	*e*P	P	12 28 28.6	-1.6
PAL				pmax	pmax		
	comp=Z,67nm,1.4s						
PAL				MLR	MLR		
	comp=Z,10μm,20.0s						
BINY	**Binghamton**	31.33	24	P	P	12 28 30.2	-0.9
	baz=212,SNR=19						
BINY	**Binghamton**	31.33	24	*e*P	P	12 28 30.3	-0.9
	comp=Z,83nm,1.0s						
RSSD	**Black Hills**	31.35	344	P	P	12 28 32.3	+0.8
	baz=158						
RSSD	**Black Hills**	31.35	344	*e*P	P	12 28 32.2	+0.6
	comp=Z,13nm,0.8s						
RSSD				LR	LR		
	comp=Z,900nm,21.0s						
DUG	**Dugway, Tooele**	31.35	329	P	P	12 28 33.8	+2.3
	baz=140,SNR=24						
DUG	**Dugway, Tooele**	31.35	329	*e*P	P	12 28 33.8	+2.3
	comp=Z,224nm,1.9s						
DUG				LR	LR		
	comp=Z,13μm,19.0s						
DUG	**Dugway, Tooele**	31.35	329	P	P	12 28 33.8	+2.3
DUG				pmax	pmax		
	comp=Z,220nm,1.9s						
DAC	**Darwin (Calif)**	31.36	319	*e*P	P	12 28 32.1	+0.4
	comp=Z,43nm,1.2s						
DAC				LR	LR		
	comp=Z,13μm,20.0s						
DAC	**Darwin (Calif)**	31.36	319	*e*P	P	12 28 32.1	+0.4
DAC				pmax	pmax		
	comp=Z,43nm,1.2s						
DAC				MLR	MLR		
	comp=Z,13μm,20.0s						
F37A	**Hinrichs Farm,**	31.38	360	P	P	12 28 32.4	+0.9
	baz=179						
TCUT	**Toone Canyon**	31.41	332	*e*P	P	12 28 34.8	+2.6
	comp=Z,210nm,1.0s						
ARVC	**Arvin**	31.49	316	P	P	12 28 35.2	+2.6
	baz=125,SNR=6.8						
R11A	**Troy Canyon, C**	31.49	324	P	P	12 28 34.6	+1.8
	baz=133,SNR=32						
R11A	**Troy Canyon, C**	31.49	324	*e*P	P	12 28 35.1	+2.3
	comp=Z,96nm,1.5s						
R11A				LR	LR		
	comp=Z,18μm,18.0s						
F41A	**Three Lakes**	31.53	5	P	P	12 28 34.2	+1.4
	baz=186						
ISA	**Isabella, Lake**	31.56	317	P	P	12 28 35.0	+1.6
	baz=126,SNR=11						
ISA	**Isabella, Lake**	31.56	317	*e*P	P	12 28 35.7	+2.4
	comp=Z,115nm,1.8s						
ISA				*e*PcP	PcP	12 31 27.5	+2.2
ISA				LR	LR		
	comp=Z,8μm,19.0s						
ISA	**Isabella, Lake**	31.56	317	*e*P	P	12 28 35.7	+2.4
ISA				*e*		12 31 27.5	
ISA				pmax	pmax		
	comp=Z,115nm,1.8s						
ISA				MLR	MLR		
	comp=Z,8μm,19.0s						
F39A	**Loretta**	31.60	2	P	P	12 28 33.9	+0.4
	baz=182						
F38A	**Pierce - Schro**	31.62	1	P	P	12 28 34.3	+0.7
	baz=181,SNR=9.4						
F40A	**Park Falls**	31.64	3	P	P	12 28 34.6	+0.7
	baz=184,SNR=6.1						
GRAC	**Grapevine Rang**	31.66	320	P	P	12 28 36.5	+2.4
	baz=129,SNR=15						
CWC	**Cottonwood Cre**	31.77	319	P	P	12 28 36.9	+1.6
	baz=127						
F43A	**Flat Rock, Esc**	31.81	7	P	P	12 28 36.0	+0.7
	baz=189						
HWUT	**Hardware Ranch**	31.87	332	*e*P	P	12 28 37.9	+1.8
	comp=Z,163nm,1.5s						
HWUT				LR	LR		
	comp=Z,5μm,18.0s						
COWI	**Conover**	31.89	5	*e*P	P	12 28 36.5	+0.5
	comp=Z,33nm,1.1s						
BW06	**Boulder Array**	31.98	336	P	P	12 28 38.2	+1.1
	baz=147,SNR=41						
BW06	**Boulder Array**	31.98	336	*e*P	P	12 28 37.9	+0.8
	comp=Z,57nm,1.3s						
BW06				LR	LR		
	comp=Z,6μm,19.0s						
PD31	**Pinedale Array**	31.98	336	*e*P	P	12 28 38.1	+1.0
PDAR	**Pinedale Array**	31.98	336	P	P	12 28 38.1	+1.0
	comp=Z,11nm,0.7s,baz=127,slow=9.4,SNR=56						
PDAR				PcP	PcP	12 31 26.8	+0.2
	comp=Z,5.8nm,0.9s,baz=160,slow=4.4,SNR=4.7						
PDAR				LR	LR	12 43 27.4	
	comp=Z,5μm,18.0s,baz=154,slow=40						
BGU	**Big Grassy Mou**	32.02	330	*e*P	P	12 28 39.7	+2.3
	comp=Z,58nm,1.1s						
BGU				LR	LR		
	comp=Z,11μm,20.0s						
PKM	**Mcpherson Peak**	32.02	315	P	P	12 28 38.6	+1.1
	baz=123						
SPUT	**South Promonto**	32.04	331	*e*P	P	12 28 39.2	+1.6
	comp=Z,312nm,1.8s						
F44A	**Big Bay de Noc**	32.05	8	P	P	12 28 38.1	+0.7
	baz=191						
VES	**Vestal, Richgr**	32.06	317	P	P	12 28 40.0	+2.3
	baz=125,SNR=24						
BBGH	**Gun Hill**	32.07	88	PFAKE		12 28 50.0	+12
BBGH				LR	LR		
	comp=Z,10μm,19.0s						
E39A	**Mellen**	32.08	3	P	P	12 28 38.2	+0.5
	baz=183						
F46A	**Macinaw City C**	32.11	10	P	P	12 28 38.0	+0.1
	baz=194						
E40A	**Wakefield**	32.18	3	P	P	12 28 38.8	+0.3
	baz=184,SNR=8.8						
E36A	**McGregor**	32.18	359	P	P	12 28 39.0	+0.5
	baz=178,SNR=7.8						
TIN	**Tinemaha, Big**	32.24	319	P	P	12 28 40.9	+1.6
	baz=128,SNR=5.9						
E34A	**Wadena**	32.24	357	P	P	12 28 39.1	0.0
	baz=175,SNR=12						
E35A	**Pequot Lakes**	32.25	358	P	P	12 28 39.6	+0.5
	baz=176,SNR=8.5						
E41A	**Kenton**	32.26	5	P	P	12 28 39.4	+0.1
	baz=186						
E38A	**The Farm, Brul**	32.27	1	P	P	12 28 39.8	+0.4
	baz=181						
E38A	**The Farm, Brul**	32.27	1	*e*P	P	12 28 38.5	-0.9
	comp=Z,38nm,1.0s						
E38A				LR	LR		
	comp=Z,6μm,22.0s						
E42A	**Champion**	32.32	6	P	P	12 28 39.9	+0.1
	baz=188						
E43A	**Lone Tree Farm**	32.37	7	P	P	12 28 40.7	+0.5
	baz=190						
E43A	**Lone Tree Farm**	32.37	7	PFAKE		12 28 50.0	+10
E43A				LR	LR		
	comp=Z,7μm,19.0s						
SMMC	**Simmler**	32.38	315	P	P	12 28 42.2	+1.6
	baz=123						
SADO	**Sadowa**	32.49	18	*e*P	P	12 28 39.5	-1.9
	comp=Z,60nm,1.3s						
SADO				LR	LR		
	comp=Z,11μm,19.0s						
HVU	**Hansel Valley**	32.56	331	*e*P	P	12 28 44.4	+2.2
	comp=Z,276nm,1.5s						
HVU				LR	LR		
	comp=Z,8μm,19.0s						
HVU	**Hansel Valley**	32.56	331	*e*P	P	12 28 44.4	+2.2
HVU				pmax	pmax		
	comp=Z,276nm,1.5s						
HVU				MLR	MLR		
	comp=Z,8μm,19.0s						
AHID	**Auburn Hatcher**	32.60	334	*e*P	P	12 28 44.2	+1.6
	comp=Z,122nm,1.1s						
AHID				LR	LR		
	comp=Z,5μm,22.0s						
E45A	**Wooded Hills,**	32.61	10	P	P	12 28 42.4	+0.1
	baz=193						
TRY	**Troy**	32.73	26	*e*P	P	12 28 42.6	-0.7
	comp=Z,78nm,1.3s						
E44A	**Grand Marais A**	32.75	8	PFAKE		12 29 00.0	+16
E44A				LR	LR		
	comp=Z,5μm,21.0s						
D35A	**Remer**	32.76	358	P	P	12 28 43.6	0.0
	baz=177,SNR=6.1						
PAGB	**Antelope Grade**	32.78	316	*e*P	P	12 28 45.4	+1.4
	comp=Z,196nm,1.7s						
PAGB				LR	LR		
	comp=Z,4μm,18.0s						
D37A	**Cotton**	32.81	0	P	P	12 28 44.4	+0.3
	baz=180,SNR=12						
D36A	**Goodland**	32.84	359	P	P	12 28 44.3	0.0
	baz=178						
D36A	**Goodland**	32.84	359	*e*P	P	12 28 43.4	-0.9
	comp=Z,40nm,1.4s						
D36A				LR	LR		
	comp=Z,3μm,22.0s						
D41A	**Chassel**	32.89	5	P	P	12 28 45.0	+0.3
	baz=187						
D41A	**Chassel**	32.89	5	*e*P	P	12 28 44.7	0.0
	comp=Z,87nm,1.6s						
MLAC	**Mammoth, Mammo**	32.97	320	P	P	12 28 47.4	+1.5
	baz=128						
REDW	**Red Top Meadow**	32.99	335	*e*P	P	12 28 48.0	+2.0
	comp=Z,440nm,1.4s						
REDW				LR	LR		
	comp=Z,4μm,20.0s						
SNOW	**Snow King Moun**	33.04	335	*e*P	P	12 28 48.4	+2.0
	comp=Z,201nm,0.8s						
SNOW				LR	LR		
	comp=Z,4μm,20.0s						
NV11	**Mina Array Sit**	33.05	322	*e*P	P	12 28 49.6	+3.0
	comp=Z,31nm,1.9s						
NV11				LR	LR		
	comp=Z,1μm,18.0s						
OMMB	**Old Mammoth Mi**	33.06	320	*e*P	P	12 28 49.4	+2.6
	comp=Z,134nm,1.6s						
OMMB				LR	LR		
	comp=Z,9μm,22.0s						
LOHW	**Long Hollow**	33.10	336	*e*P	P	12 28 48.9	+1.9
	comp=Z,369nm,1.8s						
LOHW				LR	LR		
	comp=Z,5μm,20.0s						
MDPB	**Devils Postpil**	33.12	320	*e*P	P	12 28 49.8	+2.6
	comp=Z,162nm,1.8s						
MDPB				LR	LR		
	comp=Z,8μm,19.0s						
TPAW	**Teton Pass**	33.14	335	*e*P	P	12 28 48.2	+0.9
	comp=Z,210nm,1.3s						
TPAW				LR	LR		
	comp=Z,3μm,20.0s						
NV01	**Mina Array Sit**	33.14	321	*e*P	P	12 28 50.0	+2.6
NVAR	**Mina Array Bea**	33.14	321	P	P	12 28 49.8	+2.4
	comp=Z,34nm,0.8s,baz=135,slow=8.6,SNR=270						
NVAR				PcP	PcP	12 31 31.4	+1.6
	comp=Z,10.0nm,0.8s,baz=139,slow=3.7,SNR=5.7						
NVAR				LR	LR	12 44 05.6	
	comp=Z,14μm,18.5s,baz=228,slow=40						
LHV	**Little Huntoon**	33.15	321	*e*P	P	12 28 50.6	+3.5
ACCN	**Adirondack Com**	33.26	25	*e*P	P	12 28 46.4	-1.6
	comp=Z,48nm,1.3s						
ACCN				LR	LR		
	comp=Z,4μm,20.0s						
MOOW	**Moose Ponds**	33.27	336	*e*P	P	12 28 50.1	+1.7
	comp=Z,129nm,1.4s						
MOOW				LR	LR		
	comp=Z,5μm,19.0s						
FXWY	**Fox Creek**	33.29	335	*e*P	P	12 28 50.4	+1.8
	comp=Z,253nm,1.9s						
C35A	**Jirik Farms, M**	33.38	358	P	P	12 28 49.1	+0.1
	baz=177,SNR=34						
C37A	**Embarrass**	33.39	0	P	P	12 28 49.9	+0.8
	baz=180						
PLVO	**Plevna**	33.39	20	*e*P	P	12 28 47.8	-1.4
	comp=Z,29nm,1.0s						
PLVO				LR	LR		
	comp=Z,13μm,18.0s						
C38A	**Sawbill Land.**	33.39	2	P	P	12 28 48.9	-0.2
	baz=182						
RYN	**Ryan**	33.40	321	*e*P	P	12 28 52.2	+2.7
	comp=Z,68nm,1.3s						
RYN				LR	LR		
	comp=Z,12μm,19.0s						
C36A	**Pine Crest Far**	33.41	360	P	P	12 28 49.6	+0.2
	baz=179						
KVN	**Kaiserville**	33.42	322	*e*P	P	12 28 52.3	+2.5
	comp=Z,117nm,1.4s						
KVN				LR	LR		
	comp=Z,12μm,19.0s						
KVN	**Kaiserville**	33.42	322	*e*P	P	12 28 52.3	+2.5
KVN				pmax	pmax		
	comp=Z,117nm,1.4s						
KVN				MLR	MLR		
	comp=Z,12μm,19.0s						
PMPB	**Monarch Peak**	33.42	316	*e*P	P	12 28 52.1	+2.4
	comp=Z,397nm,1.8s						
PMPB				LR	LR		
	comp=Z,7μm,18.0s						
IMW	**Indian Meadow**	33.47	336	*e*P	P	12 28 52.0	+1.7
	comp=Z,244nm,1.9s						
IMW				LR	LR		
	comp=Z,4μm,20.0s						
HRV	**Adam Dziewonsk**	33.49	29	PFAKE		12 29 00.0	+10
HRV				LR	LR		
	comp=Z,9μm,18.0s						
NCB	**Newcomb**	33.52	24	*e*P	P	12 28 48.9	-1.5
	comp=Z,33nm,1.0s						
NCB				LR	LR		
	comp=Z,4μm,19.0s						
FLWY	**Flagg Ranch**	33.53	336	*e*P	P	12 28 52.6	+1.9
	comp=Z,85nm,1.0s						
FLWY				LR	LR		
	comp=Z,5μm,19.0s						
EYMN	**Ely**	33.62	1	P	P	12 28 51.1	+0.1
	baz=181						
EYMN	**Ely**	33.62	1	*e*P	P	12 28 49.6	-1.5
	comp=Z,31nm,1.4s						
YPP	**Pitchstone Pla**	33.73	336	*e*P	P	12 28 54.3	+1.8
	comp=Z,109nm,1.5s						
YPP				LR	LR		
	comp=Z,6μm,19.0s						
H17A	**Grant Village**	33.75	336	P	P	12 28 53.8	+1.2
	baz=147,SNR=27						
H17A	**Grant Village**	33.75	336	*e*P	P	12 28 54.7	+2.1
	comp=Z,193nm,1.6s						
H17A				LR	LR		
	comp=Z,10μm,20.0s						
LKWY	**Lake**	33.82	337	*e*P	P	12 28 56.0	+2.8
	comp=Z,181nm,1.5s						
LKWY				LR	LR		
	comp=Z,7μm,22.0s						
BMN	**Battle Mountai**	33.84	325	*e*P	P	12 28 55.6	+2.3
	comp=Z,92nm,1.3s						
BMN				LR	LR		
	comp=Z,12μm,18.0s						
BMN	**Battle Mountai**	33.84	325	*e*P	P	12 28 55.6	+2.3
BMN				pmax	pmax		
	comp=Z,92nm,1.3s						
BMN				MLR	MLR		
	comp=Z,12μm,18.0s						
RLMT	**Red Lodge**	33.88	339	P	P	12 28 54.7	+0.9
	baz=150,SNR=24						
RLMT	**Red Lodge**	33.88	339	*e*P	P	12 28 54.6	+0.9
	comp=Z,183nm,1.6s						
RLMT				LR	LR		
	comp=Z,2μm,18.0s						
WAKR	**Walker**	33.88	320	*e*P	P	12 28 56.6	+2.9
	comp=Z,169nm,1.8s						
WAKR				LR	LR		
	comp=Z,15μm,19.0s						
YFT	**Old Faithful**	33.90	336	*e*P	P	12 28 56.8	+2.9
	comp=Z,158nm,1.4s						
YFT				LR	LR		
	comp=Z,5μm,20.0s						
LONY	**Lake Ozonia**	33.92	23	P	P	12 28 52.2	-1.6
	baz=212,SNR=17						
LONY	**Lake Ozonia**	33.92	23	*e*P	P	12 28 51.9	-1.9
	comp=Z,58nm,1.1s						
LONY				LR	LR		
	comp=Z,8μm,19.0s						
MDND	**Maddock**	34.01	352	P	P	12 28 54.3	-0.2
	baz=167,SNR=17						
MDND	**Maddock**	34.01	352	*e*P	P	12 28 54.3	-0.2
	comp=Z,215nm,0.8s						
B35A	**Bob, Littlefor**	34.03	359	P	P	12 28 54.3	-0.4
	baz=178,SNR=8.8						
B35A	**Bob, Littlefor**	34.03	359	*e*P	P	12 28 54.0	-0.7
	comp=Z,44nm,1.3s						
B35A				LR	LR		
	comp=Z,3μm,22.0s						
YERR	**Yerington**	34.06	321	*e*P	P	12 28 58.2	+2.9
	comp=Z,165nm,1.5s						
YERR				LR	LR		
	comp=Z,12μm,18.0s						
AGMN	**Agassiz Nation**	34.06	356	P	P	12 28 54.7	-0.2
	baz=174,SNR=11						
AGMN	**Agassiz Nation**	34.06	356	*e*P	P	12 28 53.9	-1.1
	comp=Z,21nm,0.8s						
AGMN				LR	LR		
	comp=Z,4μm,22.0s						
YMR	**Madison River**	34.13	336	*e*P	P	12 28 58.0	+2.2
	comp=Z,380nm,1.6s						
YMR				LR	LR		
	comp=Z,4μm,21.0s						
SAO	**San Andreas Ge**	34.16	316	PFAKE		12 29 10.0	+14
SAO				LR	LR		
	comp=Z,6μm,19.0s						
B34A	**Aery, Baudette**	34.19	358	P	P	12 28 55.8	-0.3
	baz=176,SNR=11						
CMB	**Columbia Colle**	34.19	319	*e*P	P	12 28 57.9	+1.6
	comp=Z,23nm,1.0s						
CMB				LR	LR		
	comp=Z,8μm,19.0s						
CMB	**Columbia Colle**	34.19	319	*e*P	P	12 28 57.9	+1.6
CMB				pmax	pmax		
	comp=Z,23nm,1.0s						
CMB				MLR	MLR		
	comp=Z,8μm,19.0s						
YHB	**Horse Butte**	34.29	336	*e*P	P	12 28 59.2	+2.0
	comp=Z,83nm,1.3s						
YHB				LR	LR		
	comp=Z,4μm,21.0s						
LAO	**LASA Array**	34.31	343	P	P	12 28 57.8	+0.5
	baz=156,SNR=12						
LAO	**LASA Array**	34.31	343	*e*P	P	12 28 57.4	+0.1
	comp=Z,195nm,2.0s						
LAO				LR	LR		
	comp=Z,3μm,20.0s						
PNTR	**Pine Nut**	34.34	321	*e*P	P	12 29 00.7	+2.9
	comp=Z,230nm,1.5s						
PNTR				LR	LR		
	comp=Z,13μm,18.0s						
VT1	**Waterbury**	34.41	25	*e*P	P	12 28 57.5	-0.5
	comp=Z,13nm,0.9s						
QLMT	**Earthquake Lak**	34.45	336	*e*P	P	12 29 01.2	+2.6
FRNY	**Flat Rock**	34.49	24	*e*P	P	12 28 57.1	-1.6
	comp=Z,82nm,1.6s						
FRNY				LR	LR		
	comp=Z,5μm,19.0s						
VCNR	**Virginia City**	34.50	321	*e*P	P	12 29 01.9	+2.8
	comp=Z,85nm,1.5s						
VCNR				LR	LR		
	comp=Z,9μm,19.0s						
GCMT	**Greycliff**	34.60	339	*e*P	P	12 29 00.8	+1.0
PAHR	**Pah Rah Range**	34.60	322	*e*P	P	12 29 02.5	+2.5
	comp=Z,143nm,1.6s						
PAHR				LR	LR		
	comp=Z,10μm,18.0s						
RUBR	**Rubicon Trail**	34.66	321	*e*P	P	12 29 03.8	+3.3
	comp=Z,133nm,1.2s						
RUBR				LR	LR		
	comp=Z,17μm,18.0s						
A33A	**Warroad**	34.67	357	P	P	12 29 00.1	-0.1
	baz=175,SNR=5.4						
LBNH	**Lisbon**	34.69	26	P	P	12 28 59.2	-1.3
	baz=216						
LBNH	**Lisbon**	34.69	26	*e*P	P	12 28 58.9	-1.6
	comp=Z,103nm,1.9s						
LBNH				LR	LR		
	comp=Z,9μm,20.0s						
LBNH	**Lisbon**	34.69	26	*e*P	P	12 28 58.9	-1.6
LBNH				pmax	pmax		
	comp=Z,103nm,1.9s						
LBNH				MLR	MLR		
	comp=Z,9μm,20.0s						
HLID	**Hailey**	34.70	332	P	P	12 29 01.8	+1.0
	baz=140,SNR=144						
HLID	**Hailey**	34.70	332	*e*P	P	12 29 02.9	+2.1
	comp=Z,89nm,1.1s						
HLID				LR	LR		
	comp=Z,9μm,18.0s						
MCMT	**McKenzie Canyo**	35.02	335	*e*P	P	12 29 06.5	+3.0
AFDM	**Forest Hills D**	35.10	320	*e*P	P	12 29 06.2	+2.1
	comp=Z,76nm,1.8s						
AFDM				LR	LR		
	comp=Z,6μm,19.0s						
BOZ	**Bozeman (W)**	35.16	337	P	P	12 29 06.5	+1.8
	baz=146,SNR=60						
BOZ	**Bozeman (W)**	35.16	337	*e*P	P	12 29 06.2	+1.5
	comp=Z,256nm,1.8s						
BOZ				LR	LR		
	comp=Z,5μm,18.0s						
BOZ	**Bozeman (W)**	35.16	337	*e*P	P	12 29 06.2	+1.5
BOZ				pmax	pmax		
	comp=Z,256nm,1.8s						
BOZ				MLR	MLR		
	comp=Z,5μm,18.0s						
MFID	**Camas Ranch**	35.26	330	*e*P	P	12 29 07.2	+1.7
	comp=Z,315nm,1.9s						
MFID				LR	LR		
	comp=Z,12μm,18.0s						
BEKR	**Beckworth**	35.29	322	*e*P	P	12 29 08.5	+2.6
	comp=Z,186nm,1.8s						
BEKR				LR	LR		
	comp=Z,10μm,19.0s						
TRQ	**Mont Tremblant**	35.29	22	*e*P	P	12 29 04.0	-1.7
DLMT	**Dillon**	35.35	335	*e*P	P	12 29 08.7	+2.4
	comp=Z,274nm,1.5s						
DLMT				LR	LR		
	comp=Z,4μm,20.0s						
CSPM	**San Pablo Ridg**	35.39	317	*e*P	P	12 29 13.4	+6.8
DGMT	**Dagmar**	35.46	347	P	P	12 29 07.7	+0.7
	baz=160,SNR=17						
DGMT	**Dagmar**	35.46	347	*e*P	P	12 29 07.8	+0.7
	comp=Z,50nm,0.8s						

DGMT				LR	LR		
	comp=Z,3µm,21.0s						
LCCM	**Lewis and Clar**	**35.46**	**337**	*e*P	**P**	**12 29 09.4**	**+2.1**
PTGA	**Pitinga**	**35.53**	**112**	*e*P	**P**	**12 29 07.5**	**-0.6**
	comp=Z,208nm,1.0s						
PTGA				LR	LR		
	comp=Z,5µm,21.0s						
LRM	**Limekiln Ridge**	**35.67**	**336**	*e*P	**P**	**12 29 10.8**	**+1.6**
ORV	**Oroville**	**35.80**	**320**	*e*P	**P**	**12 29 12.6**	**+2.5**
	comp=Z,108nm,1.5s						
ORV				LR	LR		
	comp=Z,7µm,20.0s						
ORV	**Oroville**	**35.80**	**320**	P	**P**	**12 29 12.5**	**+2.5**
ORV				pmax	pmax		
	comp=Z,110nm,1.5s						
MCCM	**Marconi Confer**	**35.87**	**317**	PFAKE		12 29 20.0	+9.3
MCCM				LR	LR		
	comp=Z,7µm,18.0s						
WVOR	**Wild Horse Val**	**35.99**	**326**	*e*P	**P**	**12 29 13.6**	**+1.8**
	comp=Z,134nm,1.3s						
WVOR				LR	LR		
	comp=Z,10µm,18.0s						
WVOR	**Wild Horse Val**	**35.99**	**326**	*e*P	**P**	**12 29 13.6**	**+1.8**
WVOR				pmax	pmax		
	comp=Z,134nm,1.3s						
WVOR				MLR	MLR		
	comp=Z,10µm,18.0s						
ULM	**Lac du Bonnet**	**36.01**	**356**	P	**P**	**12 29 10.4**	**-1.3**
	comp=Z,14nm,0.7s,baz=176,slow=8.8,SNR=24						
ULM				PcP	**PcP**	**12 31 37.1**	**-0.4**
	comp=Z,11nm,0.7s,baz=162,slow=3.9,SNR=3.9						
ULM				LR	LR	12 45 47.2	
	comp=Z,3µm,21.2s,baz=173,slow=39						
ULM	**Lac du Bonnet**	**36.01**	**356**	*e*P	**P**	**12 29 10.7**	**-1.0**
	comp=Z,29nm,0.9s						
ULM				PcP	**PcP**	**12 31 37.1**	**-0.4**
ULM	**Lac du Bonnet**	**36.01**	**356**	*e*P	**P**	**12 29 10.7**	**-1.0**
ULM						12 31 37.2	
ULM				pmax	pmax		
	comp=Z,29nm,0.9s						
HRY	**Holter Researc**	**36.17**	**337**	*e*P	**P**	**12 29 15.0**	**+1.7**
GDXM	**Geysers**	**36.18**	**318**	PFAKE		12 29 30.0	+17
GDXM				LR	LR		
	comp=Z,12µm,21.0s						
O03D	**Paynes Creek**	**36.42**	**321**	P	**P**	**12 29 16.3**	**+0.7**
	baz=127,SNR=19						
HOPS	**Hopland Field**	**36.47**	**318**	PFAKE		12 29 30.0	+14
HOPS				LR	LR		
	comp=Z,9µm,18.0s						
J08A	**Circle Bar Ran**	**36.55**	**328**	*e*P	**P**	**12 29 18.7**	**+2.2**
	comp=Z,153nm,1.1s						
J08A				LR	LR		
	comp=Z,7µm,18.0s						
MOD	**Modoc Plateau**	**36.55**	**324**	*e*P	**P**	**12 29 18.2**	**+1.6**
	comp=Z,76nm,1.4s						
MOD				LR	LR		
	comp=Z,14µm,19.0s						
EGMT	**Eagleton**	**36.58**	**341**	P	**P**	**12 29 17.0**	**+0.3**
	baz=151,SNR=23						
EGMT	**Eagleton**	**36.58**	**341**	*e*P	**P**	**12 29 17.1**	**+0.4**
	comp=Z,242nm,1.8s						
EGMT				LR	LR		
	comp=Z,2µm,20.0s						
PKME	**Peaks-Kenny Pk**	**36.66**	**28**	P	**P**	**12 29 15.8**	**-1.5**
	baz=219						
PKME	**Peaks-Kenny Pk**	**36.66**	**28**	*e*P	**P**	**12 29 15.9**	**-1.5**
	comp=Z,36nm,1.2s						
PKME				LR	LR		
	comp=Z,10µm,20.0s						
BMO	**Blue Mountains**	**37.04**	**330**	*e*P	**P**	**12 29 21.3**	**+0.6**
	comp=Z,110nm,1.4s						
BMO				LR	LR		
	comp=Z,12µm,19.0s						
WDC	**Whiskeytown Da**	**37.05**	**321**	*e*P	**P**	**12 29 20.4**	**-0.3**
	comp=Z,34nm,1.4s						
WDC				LR	LR		
	comp=Z,6µm,19.0s						
WDC	**Whiskeytown Da**	**37.05**	**321**	*e*P	**P**	**12 29 20.4**	**-0.3**
WDC				pmax	pmax		
	comp=Z,34nm,1.4s						
WDC				MLR	MLR		
	comp=Z,6µm,19.0s						
SAML	**Samuel**	**37.15**	**127**	*e*P	**P**	**12 29 20.6**	**-1.3**
	comp=Z,81nm,1.1s						
SAML				LR	LR		
	comp=Z,6µm,19.0s						
KCPM	**Cahto Peak**	**37.18**	**319**	*e*P	**P**	**12 29 24.0**	**+1.9**
	comp=Z,205nm,1.6s						
KCPM				LR	LR		
	comp=Z,8µm,21.0s						
M04C	**Macdoel**	**37.36**	**323**	P	**P**	**12 29 24.5**	**+1.0**
	baz=128,SNR=16						
N02D	**Trinity Center**	**37.38**	**321**	P	**P**	**12 29 24.1**	**+0.5**
	baz=126						
K05A	**Summer Lake**	**37.42**	**325**	*e*P	**P**	**12 29 25.7**	**+1.6**
	comp=Z,98nm,1.4s						
K05A				LR	LR		
	comp=Z,14µm,18.0s						
KMRM	**Mail Ridge**	**37.56**	**319**	*e*P	**P**	**12 29 27.5**	**+2.3**
	comp=Z,158nm,1.3s						
KMRM				LR	LR		
	comp=Z,10µm,20.0s						
I07A	**Izee**	**37.59**	**328**	*e*P	**P**	**12 29 26.5**	**+1.2**
	comp=Z,27nm,0.9s						
I07A				LR	LR		
	comp=Z,5µm,19.0s						
M02C	**Callahan**	**37.72**	**322**	P	**P**	**12 29 27.1**	**+0.6**
	baz=127						
F10A	**Beach Ranch, E**	**37.84**	**332**	*e*P	**P**	**12 29 28.7**	**+1.3**
	comp=Z,201nm,0.8s						
F10A				LR	LR		
	comp=Z,8µm,19.0s						
K04D	**Chiloquin, OR**	**37.84**	**324**	P	**P**	**12 29 28.4**	**+0.9**
	baz=129,SNR=5.6						
YBH	**Yreka Blue Hor**	**37.84**	**322**	LR	LR	12 47 13.5	
	comp=Z,9µm,19.1s,baz=149,slow=40						
YBH	**Yreka Blue Hor**	**37.84**	**322**	*e*P	**P**	**12 29 27.3**	**-0.2**
	comp=Z,37nm,1.8s						
YBH	**Yreka Blue Hor**	**37.84**	**322**	*e*P	**P**	**12 29 27.3**	**-0.2**
YBH				pmax	pmax		
	comp=Z,37nm,1.8s						
KHMM	**Horse Mountain**	**37.95**	**320**	*e*P	**P**	**12 29 30.6**	**+2.0**
	comp=Z,53nm,1.0s						
KHMM				LR	LR		
	comp=Z,6µm,22.0s						
JTMT	**Jette**	**37.97**	**336**	*e*P	**P**	**12 29 29.7**	**+1.2**
	comp=Z,118nm,1.4s						
JTMT				LR	LR		
	comp=Z,6µm,20.0s						
J05D	**Fort Rock, OR**	**37.98**	**325**	P	**P**	**12 29 29.7**	**+1.0**
	baz=131,SNR=16						
JCC	**Jacoby Creek,**	**38.10**	**320**	*e*P	**P**	**12 29 31.9**	**+2.3**
	comp=Z,448nm,1.7s						
JCC				LR	LR		
	comp=Z,7µm,22.0s						
PINE	**Pine Mountain**	**38.15**	**326**	*e*P	**P**	**12 29 31.2**	**+1.0**
	comp=Z,85nm,1.3s						
PINE				LR	LR		
	comp=Z,14µm,18.0s						
G08A	**Pilot Rock**	**38.16**	**329**	*e*P	**P**	**12 29 31.1**	**+0.9**
	comp=Z,122nm,1.9s						
G08A				LR	LR		
	comp=Z,7µm,18.0s						
J04D	**Umpqua Nationa**	**38.43**	**325**	P	**P**	**12 29 33.9**	**+1.3**
	baz=130,SNR=24						
HUMO	**Hull Mountain**	**38.52**	**323**	*e*P	**P**	**12 29 33.5**	**+0.3**
	comp=Z,75nm,1.9s						
HUMO				LR	LR		
	comp=Z,7µm,18.0s						
L02D	**Cave Junction,**	**38.63**	**322**	P	**P**	**12 29 35.0**	**+1.0**
	baz=127						
E09A	**Wood Farm, Sta**	**38.67**	**331**	*e*P	**P**	**12 29 35.1**	**+0.8**
	comp=Z,50nm,0.9s						
E09A				LR	LR		
	comp=Z,13µm,19.0s						
I05D	**Terrebonne, OR**	**38.73**	**326**	P	**P**	**12 29 36.0**	**+1.1**
	baz=132,SNR=9.8						
LPAZ	**La Paz**	**38.77**	**141**	P	**P**	**12 29 35.6**	**-0.5**
	comp=Z,10nm,0.9s,baz=332,slow=8.4,SNR=35						
LPAZ				LR	LR	12 45 08.4	
	comp=Z,5µm,20.6s,baz=326,slow=35						
LPAZ	**La Paz**	**38.77**	**141**	*e*P	**P**	**12 29 36.1**	**+0.1**
	comp=Z,46nm,1.1s						
LPAZ	**La Paz**	**38.77**	**141**	*e*P	**P**	**12 29 36.2**	**+0.1**
LPAZ				pmax	pmax		
	comp=Z,46nm,1.1s						
WALA	**Waterton Lakes**	**38.90**	**338**	*e*P	**P**	**12 29 37.9**	**+1.5**
	comp=Z,109nm,1.4s						
WALA				LR	LR		
	comp=Z,5µm,21.0s						
I04A	**Tendick Farm,**	**38.96**	**325**	P	**P**	**12 29 37.9**	**+1.1**
	baz=130,SNR=25						
G06A	**Carlson Farm,**	**38.97**	**328**	*e*P	**P**	**12 29 38.5**	**+1.6**
	comp=Z,75nm,1.5s						
G06A				LR	LR		
	comp=Z,9µm,18.0s						
PRLK	**Prince Lake**	**38.98**	**326**	*e*P	**P**	**12 29 38.9**	**+1.8**
IRO	**Indian Ridge**	**39.01**	**325**	*e*P	**P**	**12 29 38.8**	**+1.4**
KBO	**Bosley Butte**	**39.03**	**322**	*e*P	**P**	**12 29 39.9**	**+2.4**
	comp=Z,502nm,1.7s						
KBO				LR	LR		
	comp=Z,8µm,18.0s						
F07A	**Phinny Hill Vi**	**39.07**	**329**	*e*P	**P**	**12 29 38.6**	**+1.0**
	comp=Z,34nm,1.0s						
F07A				LR	LR		
	comp=Z,4µm,20.0s						
E08A	**Dider Farm, El**	**39.08**	**331**	*e*P	**P**	**12 29 37.7**	**0.0**
	comp=Z,41nm,1.2s						
E08A				LR	LR		
	comp=Z,9µm,19.0s						
HAWA	**Hanford**	**39.23**	**330**	*e*P	**P**	**12 29 39.8**	**+0.7**
	comp=Z,23nm,0.9s						
HAWA				LR	LR		
	comp=Z,8µm,19.0s						
G05D	**Wamic, OR**	**39.32**	**328**	P	**P**	**12 29 41.0**	**+1.2**
	baz=132,SNR=10						
H04A	**Detroit Lake**	**39.41**	**326**	*e*P	**P**	**12 29 42.0**	**+1.4**
	comp=Z,184nm,1.3s						
H04A				LR	LR		
	comp=Z,17µm,18.0s						
I03D	**Drain, OR**	**39.42**	**324**	P	**P**	**12 29 41.7**	**+1.1**
	baz=128,SNR=24						
D08A	**Wollman Farm,**	**39.43**	**331**	*e*P	**P**	**12 29 41.4**	**+0.8**
	comp=Z,103nm,1.3s						
D08A				LR	LR		
	comp=Z,10µm,19.0s						
KEBM	**Edson Butte**	**39.49**	**323**	*e*P	**P**	**12 29 42.8**	**+1.5**
	comp=Z,954nm,1.9s						
KEBM				LR	LR		
	comp=Z,12µm,18.0s						
E07A	**Sunnyside**	**39.51**	**330**	*e*P	**P**	**12 29 42.6**	**+1.2**
	comp=Z,44nm,1.0s						
E07A				LR	LR		
	comp=Z,8µm,21.0s						
HOOD	**Mount Hood Mea**	**39.55**	**327**	*e*P	**P**	**12 29 44.3**	**+2.4**
C09A	**Chrisman Ranch**	**39.69**	**333**	*e*P	**P**	**12 29 44.4**	**+1.6**
	comp=Z,310nm,1.9s						
C09A				LR	LR		
	comp=Z,9µm,18.0s						
COR	**Corvallis**	**39.96**	**325**	*e*P	**P**	**12 29 46.9**	**+1.9**
	comp=Z,285nm,1.5s						
COR				LR	LR		
	comp=Z,6µm,20.0s						
COR	**Corvallis**	**39.96**	**325**	*e*P	**P**	**12 29 46.9**	**+1.9**
COR				pmax	pmax		
	comp=Z,285nm,1.5s						
COR				MLR	MLR		
	comp=Z,6µm,20.0s						
MNMC	**Minye Minye**	**40.14**	**145**	*e*P	**P**	**12 29 48.1**	**+1.0**
	comp=Z,317nm,1.2s						
MNMC				LR	LR		
	comp=Z,8µm,21.0s						
G03D	**McMinnville, O**	**40.34**	**326**	P	**P**	**12 29 50.0**	**+1.8**
	baz=130,SNR=11						
LTY	**Liberty**	**40.40**	**330**	*e*P	**P**	**12 29 50.4**	**+1.6**
	comp=Z,255nm,1.7s						
LTY				LR	LR		
	comp=Z,7µm,18.0s						
B08A	**Colville Reser**	**40.58**	**332**	*e*P	**P**	**12 29 51.4**	**+1.2**
	comp=Z,138nm,1.8s						
B08A				LR	LR		
	comp=Z,9µm,19.0s						
LON	**Longmire**	**40.60**	**329**	*e*P	**P**	**12 29 51.8**	**+1.3**
	comp=Z,265nm,1.9s						
LON				LR	LR		
	comp=Z,7µm,19.0s						
LON	**Longmire**	**40.60**	**329**	*e*P	**P**	**12 29 51.8**	**+1.3**
LON				pmax	pmax		
	comp=Z,265nm,1.9s						
LON				MLR	MLR		
	comp=Z,7µm,19.0s						
PB11	**IPOC Station P**	**40.62**	**146**	*e*P	**P**	**12 29 51.2**	**+0.2**
	comp=Z,159nm,1.2s						
PB11				LR	LR		
	comp=Z,6µm,22.0s						
F04D	**Rainier, OR**	**40.77**	**327**	P	**P**	**12 29 53.4**	**+1.6**
	baz=131						
C06D	**Leavenworth**	**40.98**	**331**	P	**P**	**12 29 55.3**	**+1.8**
	baz=135						
D05A	**Enumclaw**	**40.99**	**329**	*e*P	**P**	**12 29 55.1**	**+1.5**
	comp=Z,98nm,1.2s						
D05A				LR	LR		
	comp=Z,6µm,19.0s						
FFC	**Flin Flon**	**41.06**	**352**	*e*P	**P**	**12 29 54.1**	**+0.1**
	comp=Z,14nm,0.6s						
FFC				LR	LR		
	comp=Z,3µm,22.0s						
FFC	**Flin Flon**	**41.06**	**352**	*e*P	**P**	**12 29 54.1**	**+0.1**
FFC				pmax	pmax		
	comp=Z,14nm,0.6s						
FFC				MLR	MLR		
	comp=Z,3µm,22.0s						
E03A	**Lebam**	**41.36**	**327**	*e*P	**P**	**12 29 58.1**	**+1.5**
	comp=Z,353nm,1.9s						
E03A				LR	LR		
	comp=Z,16µm,18.0s						
PNT	**Penticton**	**41.41**	**333**	*e*P	**P**	**12 29 59.0**	**+2.0**
PNT	**Penticton**	**41.41**	**333**	*e*P	**P**	**12 29 59.0**	**+2.0**
B06A	**Marblemount**	**41.68**	**331**	*e*P	**P**	**12 30 00.2**	**+1.1**
	comp=Z,59nm,0.8s						
B06A				LR	LR		
	comp=Z,8µm,18.0s						
PB01	**IPOC Station P**	**41.75**	**147**	*e*P	**P**	**12 30 00.6**	**+0.4**
	comp=Z,40nm,1.2s						
PB01				LR	LR		
	comp=Z,6µm,22.0s						
B05A	**Bryant**	**41.79**	**330**	P	**P**	**12 30 00.8**	**+0.7**
	baz=134						
NLWA	**Neilton Lookou**	**42.08**	**328**	*e*P	**P**	**12 30 04.2**	**+1.7**
	comp=Z,326nm,1.5s						
NLWA				LR	LR		
	comp=Z,9µm,18.0s						
A04D	**Lummi Island**	**42.40**	**330**	P	**P**	**12 30 06.4**	**+1.4**
	baz=134,SNR=15						
PB04	**IPOC Station P**	**42.47**	**148**	*e*P	**P**	**12 30 06.2**	**+0.1**
	comp=Z,94nm,1.3s						
PB04				LR	LR		
	comp=Z,5µm,21.0s						
PB10	**IPOC Station P**	**43.26**	**150**	*e*P	**P**	**12 30 12.8**	**+0.5**
	comp=Z,76nm,1.2s						
PB10				LR	LR		
	comp=Z,4µm,20.0s						
LLLB	**Lillooet**	**43.36**	**333**	*e*P	**P**	**12 30 14.3**	**+1.5**
	comp=Z,98nm,1.1s						
LLLB				LR	LR		
	comp=Z,6µm,18.0s						
RPN	**Rapa Nui**	**44.23**	**202**	P	**P**	**12 30 22.4**	**+2.3**
	comp=Z,96nm,1.0s,baz=18,slow=6.4,SNR=2.1						
RPN				LR	LR	12 43 57.5	
	comp=Z,6µm,21.3s,baz=46,slow=29						
YJA	**Yavi**	**44.87**	**143**	*e*P	**P**	**12 30 26.2**	**+0.4**
SCHQ	**Schefferville**	**45.19**	**21**	P	**P**	**12 30 25.2**	**-2.1**
	comp=Z,24nm,0.8s,baz=215,slow=8.1,SNR=11						
SCHQ				PcP	**PcP**	**12 32 07.2**	**0.0**
	comp=Z,20nm,0.8s,baz=204,slow=1.4,SNR=3.8						
SCHQ				LR	LR	12 49 56.6	
	comp=Z,6µm,21.5s,baz=212,slow=37						
SCHQ	**Schefferville**	**45.19**	**21**	*e*P	**P**	**12 30 25.4**	**-2.1**
	comp=Z,57nm,1.1s						
SCHQ				PcP	**PcP**	**12 32 07.2**	**0.0**
HJA	**Humahuaca**	**45.73**	**144**	*e*P	**P**	**12 30 32.6**	**+0.1**
GO03	**Copiap**	**46.89**	**152**	*e*P	**P**	**12 30 42.8**	**+1.6**
	comp=Z,97nm,1.4s						
GO03				LR	LR		
	comp=Z,5µm,21.0s						
BBB	**Bella Bella**	**47.28**	**331**	*e*P	**P**	**12 30 46.1**	**+2.3**
	comp=Z,122nm,1.5s						
BBB				LR	LR		
	comp=Z,5µm,18.0s						
LCO	**Las Campanas**	**47.91**	**154**	*e*P	**P**	**12 30 49.1**	**-0.2**
	comp=Z,124nm,1.3s						
LCO				LR	LR		
	comp=Z,5µm,21.0s						
LCO	**Las Campanas**	**47.91**	**154**	*e*P	**P**	**12 30 49.1**	**-0.2**
LCO				pmax	pmax		
	comp=Z,123nm,1.3s						
LCO				MLR	MLR		
	comp=Z,5µm,21.0s						
AHML	**Horco Molle**	**48.61**	**147**	*e*P	**P**	**12 30 54.3**	**-0.3**
VCA	**Vinchina**	**48.79**	**151**	*e*P	**P**	**12 30 57.4**	**+1.4**
GO04	**Tololo Observa**	**48.88**	**155**	*e*P	**P**	**12 30 57.1**	**+0.3**
	comp=Z,122nm,1.3s						
GO04				LR	LR		
	comp=Z,4µm,21.0s						
AGUA	**GUANDACOL**	**49.29**	**152**	*e*P	**P**	**12 30 59.7**	**-0.1**
AROD	**Rodeo**	**49.44**	**153**	*e*P	**P**	**12 31 02.4**	**+1.3**
CYA	**Choya**	**49.71**	**149**	*e*P	**P**	**12 31 02.3**	**-0.6**
DIB	**Dawson Inlet,**	**50.01**	**330**	*e*P	**P**	**12 31 06.7**	**+1.9**
	comp=Z,84nm,1.2s						
DIB				LR	LR		
	comp=Z,3µm,20.0s						
AMOG	**MOGNA**	**50.53**	**153**	*e*P	**P**	**12 31 09.4**	**+0.3**
YKA	**Yellowknife Ar**	**50.67**	**347**	P	**P**	**12 31 09.5**	**-0.1**
	comp=Z,64nm,0.7s,baz=150,slow=7.5,SNR=490						
YKA				LR	LR	12 56 39.7	
	comp=Z,247nm,19.4s,baz=166,slow=41						
YKW3	**Yellowknife Ar**	**50.73**	**347**	*e*P	**P**	**12 31 10.3**	**+0.2**
	comp=Z,88nm,0.9s						
RTLL	**Cerro Villicun**	**50.87**	**153**	*e*P	**P**	**12 31 11.5**	**-0.2**
RTLS	**Leoncito**	**50.93**	**154**	*e*P	**P**	**12 31 13.0**	**+0.6**
AUSP	**Uspallata**	**51.26**	**155**	*e*P	**P**	**12 31 15.7**	**+0.9**
RTCV	**Cerro Valdivia**	**51.30**	**154**	*e*P	**P**	**12 31 15.7**	**+0.8**
PEL	**Peldehue**	**51.55**	**156**	*e*P	**P**	**12 31 17.8**	**+1.1**
	comp=Z,84nm,1.2s						
PEL				LR	LR		
	comp=Z,6µm,22.0s						
PEL	**Peldehue**	**51.55**	**156**	*e*P	**P**	**12 31 17.8**	**+1.1**
PEL				pmax	pmax		
	comp=Z,84nm,1.2s						
PEL				MLR	MLR		
	comp=Z,6µm,22.0s						
CRAG	**Craig**	**51.65**	**332**	*e*P	**P**	**12 31 19.6**	**+2.5**
	comp=Z,120nm,1.3s						
CRAG				LR	LR		
	comp=Z,6µm,18.0s						
ASAL	**Salagasta**	**51.81**	**154**	*e*P	**P**	**12 31 19.4**	**+0.8**
WRAK	**Wrangell Islan**	**51.88**	**333**	*e*P	**P**	**12 31 19.2**	**+0.4**
	comp=Z,43nm,1.3s						
WRAK				LR	LR		
	comp=Z,5µm,19.0s						
ARCO	**CERRO ARCO**	**51.98**	**155**	*e*P	**P**	**12 31 21.4**	**+1.3**
DLBC	**Dease Lake**	**52.21**	**336**	*e*P	**P**	**12 31 23.9**	**+2.5**
	comp=Z,212nm,1.1s						
DLBC				LR	LR		
	comp=Z,7µm,18.0s						
AAGR	**Agrelo**	**52.24**	**155**	*e*P	**P**	**12 31 22.5**	**+0.6**
ACAN	**Cantantal**	**52.25**	**153**	*e*P	**P**	**12 31 22.4**	**+0.5**
TAOE	**Nuku Hiva Isla**	**52.49**	**247**	*e*S	**S**	**12 38 50.0**	**+1.8**
	comp=Z,5µm,26.1s						
TAOE				*e*SS	**SS**	**12 42 32.4**	**+5.5**
	comp=Z,1µm,24.7s						
TAOE				*e*LR	LR	12 46 27.0	
	comp=Z,5µm,25.6s,baz=61						
TAOE	**Nuku Hiva Isla**	**52.49**	**247**	*e*T	T	13 27 20.0	
	comp=Z,47nm,0.2s						
TCA	**Tanti**	**52.68**	**150**	*e*P	**P**	**12 31 24.8**	**-0.4**
AVIZ	**Vizcacheras**	**52.70**	**155**	*e*	**P**	**12 31 26.0**	**+0.7**
AVIZ				*e*P	**P**	**12 31 26.0**	**+0.7**
GO05	**HualaæØ**	**52.75**	**159**	*e*P	**P**	**12 31 27.1**	**+1.5**
	comp=Z,101nm,1.1s						
GO05				LR	LR		
	comp=Z,7µm,18.0s						
CPUP	**Villa Florida**	**52.92**	**140**	P	**P**	**12 31 25.6**	**-1.4**
	comp=Z,21nm,1.0s,baz=332,slow=7.5,SNR=21						
CPUP				LR	LR	12 55 31.6	
	comp=Z,5µm,18.0s,baz=330,slow=38						
CPUP	**Villa Florida**	**52.92**	**140**	*e*P	**P**	**12 31 25.2**	**-1.7**
	comp=Z,103nm,1.3s						
CPUP	**Villa Florida**	**52.92**	**140**	*e*P	**P**	**12 31 25.2**	**-1.7**
CPUP				pmax	pmax		
	comp=Z,103nm,1.3s						
MRA	**San Martin**	**53.04**	**151**	*e*P	**P**	**12 31 27.1**	**-0.8**
BDFB	**Brasilia**	**53.11**	**122**	P	**P**	**12 31 27.6**	**-1.1**
	comp=Z,24nm,0.9s,baz=298,slow=9.4,SNR=29						
BDFB				LR	LR	12 54 50.5	
	comp=Z,4µm,19.3s,baz=299,slow=37						
BDFB	**Brasilia**	**53.11**	**122**	*e*P	**P**	**12 31 28.1**	**-0.5**
	comp=Z,188nm,1.1s						
BDFB	**Brasilia**	**53.11**	**122**	*e*P	**P**	**12 31 28.2**	**-0.5**
BDFB				pmax	pmax		
	comp=Z,188nm,1.1s						
SIT	**Sitka**	**53.58**	**333**	*e*P	**P**	**12 31 33.4**	**+2.0**
	comp=Z,108nm,1.7s						
SIT				LR	LR		
	comp=Z,4µm,19.0s						
SIT	**Sitka**	**53.58**	**333**	*e*P	**P**	**12 31 33.4**	**+2.0**
SIT				pmax	pmax		
	comp=Z,108nm,1.7s						
SIT				MLR	MLR		
	comp=Z,4µm,19.0s						
JIS	**Juneau Island**	**53.89**	**334**	*e*P	**P**	**12 31 35.2**	**+1.7**
	comp=Z,118nm,1.6s						
JIS				LR	LR		
	comp=Z,4µm,19.0s						
BESE	**Bessie Mountai**	**54.27**	**334**	*e*P	**P**	**12 31 38.6**	**+2.2**
	comp=Z,82nm,1.3s						
BESE				LR	LR		
	comp=Z,4µm,20.0s						
WHY	**Whitehorse**	**55.54**	**336**	*e*P	**P**	**12 31 47.2**	**+1.5**
	comp=Z,56nm,1.1s						
WHY				LR	LR		
	comp=Z,5µm,18.0s						
CANA	**Caviahue**	**55.65**	**159**	*e*P	**P**	**12 31 46.6**	**-0.1**
RKT	**Rikitea**	**55.69**	**229**	*e*S	**S**	**12 39 32.4**	**+1.4**
	comp=Z,5µm,27.2s						
RKT				*e*LR	LR	12 47 54.3	
	comp=Z,5µm,25.8s,baz=46						
RKT	**Rikitea**	**55.69**	**229**	*e*T	T	13 31 15.4	
	comp=Z,11nm,0.3s						
YKU2	**Yakutat**	**56.85**	**334**	PFAKE		12 32 10.0	+15
YKU2				LR	LR		
	comp=Z,5µm,18.0s						
NRS	**Narsarsuaq**	**57.75**	**25**	*i* P	**P**	**12 31 59.6**	**-1.6**
	comp=Z,10µm,19.0s						
NRS	**Narsarsuaq**	**57.75**	**25**	*i* P	**P**	**12 31 59.6**	**-1.6**
NRS				MLR	MLR		
	comp=Z,10µm,19.0s						
SPB	**Sao Paulo**	**57.97**	**130**	*e*P	**P**	**12 32 01.7**	**-1.7**
	comp=Z,100nm,1.4s						
SPB				LR	LR		
	comp=Z,4µm,19.0s						
PLCA	**Paso Flores**	**58.38**	**160**	P	**P**	**12 32 05.8**	**-0.2**
	comp=Z,12nm,1.1s,baz=23,slow=7.4,SNR=9.9						
PLCA				LR	LR	12 52 30.2	
	comp=Z,7µm,18.1s,baz=24,slow=31						
PLCA	**Paso Flores**	**58.38**	**160**	*e*P	**P**	**12 32 04.1**	**-1.9**
	comp=Z,101nm,1.4s						
PLCA	**Paso Flores**	**58.38**	**160**	*e*P	**P**	**12 32 04.1**	**-1.9**
PLCA				pmax	pmax		
	comp=Z,101nm,1.4s						
BALM	**Baldy**	**58.78**	**334**	*e*P	**P**	**12 32 10.5**	**+1.9**
	comp=Z,102nm,1.1s						
BALM				LR	LR		
	comp=Z,4µm,19.0s						
BALM	**Baldy**	**58.78**	**334**	*e*P	**P**	**12 32 10.5**	**+1.9**
BALM				pmax	pmax		
	comp=Z,102nm,1.1s						
BALM				MLR	MLR		
	comp=Z,4µm,19.0s						
TGL	**Tana Glacier**	**58.85**	**334**	*e*P	**P**	**12 32 11.1**	**+2.0**
	comp=Z,141nm,1.2s						
TGL				LR	LR		
	comp=Z,4µm,20.0s						
H07S1	**FLORES T-PHASE**	**59.02**	**53**	*e*P	**P**	**12 32 10.5**	**0.0**
DAWY	**Dawson**	**59.25**	**338**	*e*P	**P**	**12 32 12.2**	**+0.5**
	comp=Z,74nm,1.5s						
DAWY				LR	LR		
	comp=Z,7µm,18.0s						
TRQA	**Tornquist**	**59.41**	**152**	*e*P	**P**	**12 32 11.3**	**-1.8**
	comp=Z,51nm,1.2s						
TRQA				LR	LR		
	comp=Z,6µm,20.0s						
TRQA	**Tornquist**	**59.41**	**152**	*e*P	**P**	**12 32 11.3**	**-1.8**
TRQA				pmax	pmax		
	comp=Z,51nm,1.2s						
TRQA				MLR	MLR		
	comp=Z,6µm,20.0s						
SFJD	**Kangerlussuaq**	**59.45**	**18**	LR	LR	13 00 04.5	
	comp=Z,5µm,18.2s,baz=224,slow=38						
SFJD	**Kangerlussuaq**	**59.45**	**18**	*i* P	**P**	**12 32 12.9**	**0.0**
	comp=Z,5µm,14.0s						
SFJD	**Kangerlussuaq**	**59.45**	**18**	*i* P	**P**	**12 32 12.9**	**0.0**
SFJD				MLR	MLR		

	comp=Z,5µm,14.0s						
RAGM	**Ragged Mountai**	**59.47**	**333**	*e*P	**P**	**12 32 15.8**	**+2.5**
	comp=Z,156nm,1.2s						
RAGM				LR	LR		
	comp=Z,3µm,22.0s						
RCBR	**Riachuelo**	**59.63**	**106**	*e*P	**P**	**12 32 15.7**	**+0.6**
	comp=Z,150nm,0.9s						
RCBR				LR	LR		
	comp=Z,4µm,22.0s						
RCBR	**Riachuelo**	**59.63**	**106**	*e*P	**P**	**12 32 15.7**	**+0.6**
RCBR				pmax	pmax		
	comp=Z,149nm,0.9s						
RCBR				MLR	MLR		
	comp=Z,4µm,22.0s						
BMRM	**Bremner River**	**59.71**	**334**	*e*P	**P**	**12 32 15.9**	**+0.9**
	comp=Z,91nm,1.1s						
BMRM				LR	LR		
	comp=Z,4µm,18.0s						
MID	**Middleton Isla**	**59.80**	**332**	PFAKE		12 32 30.0	+15
MID				LR	LR		
	comp=Z,2µm,20.0s						
JCUZ	**Jacuzzi**	**59.82**	**284**	PFAKE		12 32 30.0	+14
JCUZ				LR	LR		
	comp=Z,2µm,20.0s						
STCH	**Steam Cracks**	**59.84**	**284**	PFAKE		12 32 30.0	+13
STCH				LR	LR		
	comp=Z,3µm,20.0s						
PUH	**Pauahi**	**59.93**	**284**	PFAKE		12 32 30.0	+13
PUH				LR	LR		
	comp=Z,3µm,18.0s						
BYL	**Byron's Ledge**	**59.97**	**284**	PFAKE		12 32 30.0	+13
BYL				LR	LR		
	comp=Z,3µm,19.0s						
HATHI	**Halema'uma'u T**	**59.97**	**284**	PFAKE		12 32 30.0	+13
HATHI				LR	LR		
	comp=Z,3µm,22.0s						
KKO	**Keanakako'i**	**59.97**	**284**	PFAKE		12 32 30.0	+12
KKO				LR	LR		
	comp=Z,3µm,20.0s						
RIM	**Rim**	**59.98**	**284**	PFAKE		12 32 30.0	+12
RIM				LR	LR		
	comp=Z,3µm,18.0s						
UWB	**Uwekahuna B**	**59.98**	**284**	PFAKE		12 32 30.0	+12
UWB				LR	LR		
	comp=Z,2µm,20.0s						
NPH	**North Pit**	**59.98**	**284**	PFAKE		12 32 30.0	+12
NPH				LR	LR		
	comp=Z,3µm,20.0s						
OBL	**Observatory Le**	**59.99**	**284**	PFAKE		12 32 30.0	+12
OBL				LR	LR		
	comp=Z,3µm,21.0s						
UWE	**Uwekahuna**	**60.00**	**284**	PFAKE		12 32 30.0	+12
UWE				LR	LR		
	comp=Z,3µm,19.0s						
SDHHI	**Sand Hill**	**60.00**	**284**	PFAKE		12 32 30.0	+12
SDHHI				LR	LR		
	comp=Z,3µm,19.0s						
WRMHI	**West Rim**	**60.00**	**284**	PFAKE		12 32 30.0	+12
WRMHI				LR	LR		
	comp=Z,2µm,19.0s						
EYAK	**Cordova Ski Ar**	**60.02**	**333**	*e*P	**P**	**12 32 19.4**	**+2.4**
	comp=Z,141nm,1.2s						
EYAK				LR	LR		
	comp=Z,4µm,19.0s						
HLP	**Hilina Pali**	**60.02**	**284**	PFAKE		12 32 30.0	+12
HLP				LR	LR		
	comp=Z,3µm,20.0s						
INK	**Inuvik**	**60.05**	**344**	*e*P	**P**	**12 32 17.4**	**+0.3**
	comp=Z,278nm,1.4s						
INK				LR	LR		
	comp=Z,6µm,18.0s						
INK	**Inuvik**	**60.05**	**344**	*e*P	**P**	**12 32 17.4**	**+0.3**
INK				pmax	pmax		
	comp=Z,278nm,1.4s						
INK				MLR	MLR		
	comp=Z,6µm,18.0s						
MLH	**Mauna Loa**	**60.08**	**284**	PFAKE		12 32 30.0	+12
MLH				LR	LR		
	comp=Z,3µm,20.0s						
AIN	**Ainahou**	**60.16**	**284**	PFAKE		12 32 30.0	+11
AIN				LR	LR		
	comp=Z,3µm,18.0s						
HMH	**Humu'ula Sheep**	**60.16**	**285**	PFAKE		12 32 30.0	+11
HMH				LR	LR		
	comp=Z,3µm,19.0s						
POHA	**Pohakuloa**	**60.19**	**285**	PFAKE		12 32 30.0	+11
POHA				LR	LR		
	comp=Z,3µm,19.0s						
MLOA	**Mauna Loa Obse**	**60.25**	**285**	PFAKE		12 32 30.0	+10
MLOA				LR	LR		
	comp=Z,3µm,19.0s						
MWH	**Moku'aweowe**	**60.27**	**284**	PFAKE		12 32 30.0	+10
MWH				LR	LR		
	comp=Z,3µm,20.0s						
EGAK	**Eagle**	**60.29**	**338**	*e*P	**P**	**12 32 18.8**	**+0.1**
	comp=Z,101nm,1.3s						
EGAK				LR	LR		
	comp=Z,4µm,18.0s						
DIV	**Divide**	**60.29**	**333**	*e*P	**P**	**12 32 20.7**	**+1.8**
	comp=Z,109nm,1.2s						
DIV				LR	LR		
	comp=Z,4µm,22.0s						
KHU	**Kahuku**	**60.32**	**284**	PFAKE		12 32 30.0	+10
KHU				LR	LR		
	comp=Z,3µm,19.0s						
HPAH	**Hawaii Prepara**	**60.32**	**285**	PFAKE		12 32 30.0	+10
HPAH				LR	LR		
	comp=Z,3µm,20.0s						
FID	**Port Fidalgo**	**60.43**	**333**	*e*P	**P**	**12 32 21.9**	**+2.1**
	comp=Z,249nm,1.4s						
FID				LR	LR		
	comp=Z,3µm,18.0s						
RES	**Resolute Bay**	**60.45**	**359**	*e*P	**P**	**12 32 19.5**	**-0.2**
	comp=Z,56nm,1.6s						
RES	**Resolute Bay**	**60.45**	**359**	*e*P	**P**	**12 32 19.5**	**-0.2**
RES				pmax	pmax		
	comp=Z,56nm,1.6s						
HUH	**Hualalai**	**60.48**	**285**	PFAKE		12 32 40.0	+19
HUH				LR	LR		
	comp=Z,3µm,19.0s						
KLU	**Klutina**	**60.52**	**334**	*e*P	**P**	**12 32 21.9**	**+1.4**
	comp=Z,106nm,1.0s						
KLU				LR	LR		
	comp=Z,4µm,18.0s						
KHLU	**Kahalu'u**	**60.54**	**285**	PFAKE		12 32 40.0	+19
KHLU				LR	LR		
	comp=Z,3µm,19.0s						
HARP	**HAARP**	**60.62**	**335**	*e*P	**P**	**12 32 22.8**	**+1.7**
	comp=Z,257nm,1.2s						
HARP				LR	LR		
	comp=Z,2µm,18.0s						
GLI	**Glacier Island**	**60.76**	**333**	*e*P	**P**	**12 32 23.1**	**+1.0**
	comp=Z,47nm,1.1s						
GLI				LR	LR		
	comp=Z,3µm,21.0s						
DOT	**Dot Lake**	**60.78**	**336**	*e*P	**P**	**12 32 24.0**	**+1.8**
	comp=Z,135nm,1.0s						
DOT				LR	LR		
	comp=Z,6µm,19.0s						
ILULI	**Ilulissat**	**60.80**	**16**	PFAKE		12 32 30.0	+7.8
ILULI				LR	LR		
	comp=Z,9µm,19.0s						
ILULI	**Ilulissat**	**60.80**	**16**	*i* P	**P**	**12 32 21.4**	**-0.8**
	comp=Z,9µm,19.0s						
ILULI	**Ilulissat**	**60.80**	**16**	*i* P	**P**	**12 32 21.4**	**-0.8**
ILULI				MLR	MLR		
	comp=Z,9µm,19.0s						
SCRK	**Sand Creek**	**60.91**	**337**	*e*P	**P**	**12 32 24.6**	**+1.3**
	comp=Z,157nm,1.4s						
SCRK				LR	LR		
	comp=Z,6µm,19.0s						
KHLH	**Kahului Airpor**	**60.92**	**286**	PFAKE		12 32 40.0	+16
KHLH				LR	LR		
	comp=Z,2µm,21.0s						
PAX	**Paxson**	**61.01**	**335**	*e*P	**P**	**12 32 25.1**	**+1.2**
	comp=Z,112nm,1.1s						
PAX				LR	LR		
	comp=Z,4µm,19.0s						
PAX	**Paxson**	**61.01**	**335**	*e*P	**P**	**12 32 25.1**	**+1.2**
PAX				pmax	pmax		
	comp=Z,112nm,1.1s						
PAX				MLR	MLR		
	comp=Z,4µm,19.0s						
RIDG	**Independ'e Rid**	**61.13**	**336**	*e*P	**P**	**12 32 25.6**	**+1.0**
	comp=Z,210nm,1.3s						
RIDG				LR	LR		
	comp=Z,6µm,19.0s						
ROSA	**Rosais**	**61.25**	**54**	*e*P	**P**	**12 32 22.8**	**-3.0**
	comp=Z,49nm,1.1s						
SCM	**Sheep Creek Mo**	**61.27**	**334**	*e*P	**P**	**12 32 26.9**	**+1.3**
	comp=Z,121nm,1.1s						
SCM				LR	LR		
	comp=Z,3µm,22.0s						
SCM	**Sheep Creek Mo**	**61.27**	**334**	*e*P	**P**	**12 32 26.9**	**+1.3**
SCM				pmax	pmax		
	comp=Z,121nm,1.1s						
SCM				MLR	MLR		
	comp=Z,3µm,22.0s						
PGRA	**Graciosa**	**61.47**	**53**	*e*P	**P**	**12 32 26.4**	**-0.9**
	comp=Z,23nm,0.4s						
SML	**Sawmill**	**61.70**	**334**	*e*P	**P**	**12 32 29.6**	**+1.1**
	comp=Z,225nm,1.3s						
SML				LR	LR		
	comp=Z,2µm,20.0s						
SML	**Sawmill**	**61.70**	**334**	*e*P	**P**	**12 32 29.6**	**+1.1**
SML				pmax	pmax		
	comp=Z,225nm,1.3s						
SML				MLR	MLR		
	comp=Z,2µm,20.0s						
VAH	**Vaihoa**	**61.83**	**244**	*e*P	P	12 32 38.1	+8.1
	comp=Z,104nm,1.2s						
DHY	**Denali Highway**	**61.83**	**335**	*e*P	**P**	**12 32 29.7**	**+0.2**
	comp=Z,36nm,1.1s						
DHY				LR	LR		
	comp=Z,2µm,21.0s						
GHO	**Glory Hole Cre**	**61.94**	**333**	*e*P	**P**	**12 32 31.0**	**+0.9**
	comp=Z,171nm,1.0s						
GHO				LR	LR		
	comp=Z,4µm,22.0s						
PMR	**Palmer**	**61.95**	**333**	*e*P	**P**	**12 32 31.2**	**+1.1**
	comp=Z,138nm,1.3s						
PMR				LR	LR		
	comp=Z,3µm,21.0s						
PMR	**Palmer**	**61.95**	**333**	*e*P	**P**	**12 32 31.2**	**+1.1**
PMR				pmax	pmax		
	comp=Z,138nm,1.3s						
PMR				MLR	MLR		
	comp=Z,3µm,21.0s						
PMOR	**Pomariorio Ree**	**61.96**	**244**	*e*P	P	12 32 38.6	+7.7
	comp=Z,143nm,1.5s						
PMOR	**Pomariorio Ree**	**61.96**	**244**	*e*T	T	13 39 08.1	
	comp=Z,3.3nm,0.3s						
RC01	**Rabbit Creek A**	**62.02**	**332**	*e*P	**P**	**12 32 31.7**	**+1.1**
	comp=Z,108nm,1.0s						
RC01				LR	LR		
	comp=Z,3µm,19.0s						
BRLK	**Bradley Lake**	**62.06**	**331**	*e*P	**P**	**12 32 32.2**	**+1.3**
	comp=Z,115nm,1.1s						
BRLK				LR	LR		
	comp=Z,3µm,20.0s						
CNPM	**China Poot**	**62.14**	**330**	*e*P	**P**	**12 32 32.5**	**+1.0**
	comp=Z,98nm,1.2s						
CNPM				LR	LR		
	comp=Z,3µm,20.0s						
KDAK	**Kodiak Island**	**62.23**	**328**	*e*P	**P**	**12 32 33.2**	**+1.3**
	comp=Z,306nm,1.9s						
KDAK				LR	LR		
	comp=Z,2µm,19.0s						
KDAK	**Kodiak Island**	**62.23**	**328**	*i* P	**P**	**12 32 33.6**	**+1.6**
HOM	**Homer**	**62.38**	**331**	PFAKE		12 32 50.0	+17
HOM				LR	LR		
	comp=Z,2µm,20.0s						
IL1	**Eielson Array**	**62.40**	**337**	*e*P	**P**	**12 32 34.0**	**+0.9**
ILAR	**Eielson Array**	**62.40**	**337**	P	**P**	**12 32 33.9**	**+0.8**
	comp=Z,27nm,0.9s,baz=130,slow=4.9,SNR=203						
ILAR				LR	LR	13 01 54.5	
	comp=Z,4µm,19.0s,baz=128,slow=38						
ILB	**Eielson Array**	**62.40**	**337**	*e*P	**P**	**12 32 33.5**	**+0.4**
OHAK	**Old Harbor**	**62.42**	**328**	*e*P	**P**	**12 32 33.9**	**+0.6**
	comp=Z,111nm,1.3s						
OHAK				LR	LR		
	comp=Z,2µm,20.0s						
SUA	**Susitna One**	**62.62**	**333**	*e*P	**P**	**12 32 34.4**	**-0.3**
	comp=Z,428nm,1.8s						
SUA				LR	LR		
	comp=Z,3µm,20.0s						
FYU	**Fort Yukon**	**62.66**	**339**	*e*P	**P**	**12 32 35.5**	**+0.8**
	comp=Z,215nm,1.6s						
FYU				LR	LR		
	comp=Z,2µm,21.0s						
SII	**Sitkinak Islan**	**62.69**	**327**	*e*P	**P**	**12 32 36.4**	**+1.2**
	comp=Z,333nm,1.8s						
SII				LR	LR		
	comp=Z,2µm,19.0s						
CCB	**Clear Creek Bu**	**62.70**	**337**	*e*P	**P**	**12 32 35.2**	**+0.2**
	comp=Z,82nm,1.4s						
CCB				LR	LR		
	comp=Z,5µm,18.0s						
WRH	**Wood River Hil**	**62.73**	**336**	*e*P	**P**	**12 32 34.8**	**-0.4**
	comp=Z,28nm,1.0s						
WRH				LR	LR		
	comp=Z,5µm,18.0s						
MCK	**McKinley**	**62.75**	**335**	*e*P	**P**	**12 32 36.2**	**+0.8**
	comp=Z,110nm,1.0s						
MCK				LR	LR		
	comp=Z,3µm,20.0s						
MCK	**McKinley**	**62.75**	**335**	*e*P	**P**	**12 32 36.2**	**+0.8**
MCK				pmax	pmax		
	comp=Z,110nm,1.0s						
MCK				MLR	MLR		
	comp=Z,3µm,20.0s						
COLA	**College**	**62.82**	**337**	*e*P	**P**	**12 32 36.5**	**+0.7**
	comp=Z,87nm,1.0s						
COLA				LR	LR		
	comp=Z,4µm,19.0s						
COLA	**College**	**62.82**	**337**	*e*P	**P**	**12 32 36.5**	**+0.7**
COLA				pmax	pmax		
	comp=Z,87nm,1.0s						
COLA				MLR	MLR		
	comp=Z,4µm,19.0s						
MDM	**Murphy Dome**	**63.00**	**337**	*e*P	**P**	**12 32 37.5**	**+0.4**
	comp=Z,230nm,1.9s						
MDM				LR	LR		
	comp=Z,4µm,18.0s						
ANGG	**Ammassalik, Gr**	**63.01**	**22**	PFAKE		12 32 50.0	+13
ANGG				LR	LR		
	comp=Z,8µm,19.0s						
BWN	**Browne**	**63.15**	**336**	*e*P	**P**	**12 32 38.6**	**+0.5**
	comp=Z,759nm,1.3s						
BWN				LR	LR		
	comp=Z,4µm,19.0s						
SKT	**Skwentna**	**63.16**	**333**	*e*P	**P**	**12 32 39.2**	**+1.0**
	comp=Z,155nm,1.2s						
SKT				LR	LR		
	comp=Z,3µm,20.0s						
PSET	**Sete Cidades**	**63.17**	**55**	*e*P	**P**	**12 32 37.0**	**-1.7**
	comp=Z,107nm,1.1s						
TRF	**Thorofare Moun**	**63.19**	**335**	*e*P	**P**	**12 32 39.5**	**+1.0**
	comp=Z,792nm,2.0s						
TRF				LR	LR		
	comp=Z,3µm,20.0s						
CMLA	**Cha da Macela**	**63.32**	**55**	*e*P	**P**	**12 32 40.1**	**+0.4**
	comp=Z,48nm,0.7s						
KULLO	**Kullorsuaq**	**63.44**	**10**	*i* P	**P**	**12 32 40.0**	**+0.2**
	comp=Z,4µm,21.0s						
KULLO	**Kullorsuaq**	**63.44**	**10**	*i* P	**P**	**12 32 40.0**	**+0.2**
KULLO				MLR	MLR		
	comp=Z,4µm,21.0s						
KTH	**Kantishna Hill**	**63.49**	**335**	*e*P	**P**	**12 32 41.2**	**+0.8**
	comp=Z,75nm,1.0s						
KTH				LR	LR		
	comp=Z,3µm,20.0s						
TULEG	**Thule**	**63.53**	**6**	PFAKE		12 32 50.0	+10
TULEG				LR	LR		
	comp=Z,4µm,19.0s						
PSMN	**Pico do Norte,**	**63.66**	**56**	*e*P	**P**	**12 32 41.5**	**-0.5**
	comp=Z,55nm,0.8s						
BPAW	**Bear Paw Mtn.**	**63.73**	**335**	*e*P	**P**	**12 32 42.4**	**+0.4**
	comp=Z,112nm,1.2s						
BPAW				LR	LR		
	comp=Z,4µm,19.0s						
PPLA	**Purkeypile**	**63.77**	**334**	*e*P	**P**	**12 32 43.2**	**+0.8**
	comp=Z,152nm,1.2s						
PPLA				LR	LR		
	comp=Z,2µm,19.0s						
CAST	**Castle Rocks**	**63.92**	**334**	*e*P	**P**	**12 32 43.7**	**+0.5**
	comp=Z,123nm,1.1s						
CAST				LR	LR		
	comp=Z,3µm,20.0s						
MLY	**Manley**	**64.00**	**336**	*e*P	**P**	**12 32 44.8**	**+1.1**
	comp=Z,97nm,1.0s						
MLY				LR	LR		
	comp=Z,4µm,18.0s						
TIAR	**Tiarei**	**64.32**	**242**	*e*P	P	12 32 54.4	+7.9
	comp=Z,14nm,0.9s						
PPT	**Papeete**	**64.52**	**242**	LR	LR	12 53 45.8	
	comp=Z,2µm,18.5s,baz=70,slow=29						
PPT2	**Papeete2**	**64.53**	**242**	*e*S	**S**	**12 41 27.6**	**+2.8**
	comp=Z,5µm,32.8s						
PPT2				*e*LQ	LQ	12 49 18.6	
	comp=Z,3µm,29.0s						
PPT2				*e*LR	LR	12 52 03.7	
	comp=Z,5µm,24.8s,baz=57						
PAE	**Paea**	**64.56**	**242**	*e*P	P	12 32 56.2	+8.1
	comp=Z,12nm,1.0s						
SVW2	**Sparrevohn**	**64.70**	**331**	PFAKE		12 33 00.0	+12
SVW2				LR	LR		
	comp=Z,2µm,20.0s						
COLD	**Coldfoot**	**64.71**	**339**	*e*P	**P**	**12 32 50.3**	**+2.1**
	comp=Z,147nm,1.3s						
COLD				LR	LR		
	comp=Z,5µm,19.0s						
CHGN	**Chignik**	**64.91**	**326**	*e*P	**P**	**12 32 50.3**	**+0.6**
	comp=Z,103nm,1.1s						
CHGN				LR	LR		
	comp=Z,1µm,19.0s						
TOLK	**Toolik Lake Re**	**65.11**	**340**	P	**P**	**12 32 51.8**	**+0.9**
	baz=116,SNR=21						
TOLK	**Toolik Lake Re**	**65.11**	**340**	*e*P	**P**	**12 32 52.4**	**+1.5**
	comp=Z,85nm,1.0s						
TOLK				LR	LR		
	comp=Z,3µm,22.0s						
XMAS	**Kiritimati**	**65.17**	**266**	PFAKE		12 33 10.0	+18
XMAS				LR	LR		
	comp=Z,4µm,20.0s						
IM3	**Indian Mountai**	**65.52**	**337**	*e*P	**P**	**12 32 53.7**	**+0.1**
SDPT	**Sand Point**	**65.86**	**325**	*e*P	**P**	**12 32 56.2**	**+0.3**
	comp=Z,75nm,1.0s						
SDPT				LR	LR		
	comp=Z,2µm,19.0s						
SUMG	**Summit**	**66.15**	**15**	*e*P	**P**	**12 32 56.7**	**-1.2**
	comp=Z,314nm,2.0s						
SUMG				LR	LR		
	comp=Z,11µm,19.0s						
SUMG	**Summit**	**66.15**	**15**	*i* P	**P**	**12 32 57.5**	**-0.5**
	comp=Z,11µm,17.0s						
SUMG	**Summit**	**66.15**	**15**	*i* P	**P**	**12 32 57.5**	**-0.5**
SUMG				MLR	MLR		
	comp=Z,11µm,17.0s						
TBI	**Tubuai**	**67.03**	**237**	*e*S	**S**	**12 41 58.3**	**+3.4**
	comp=Z,2µm,31.5s						
TBI	**Tubuai**	**67.03**	**237**	*e*LR	LR	12 53 08.7	
	comp=Z,5µm,26.0s,baz=61						
UNV	**Unalaska Valle**	**69.15**	**322**	*e*P	**P**	**12 33 16.9**	**+0.2**
	comp=Z,166nm,1.4s						
UNV				LR	LR		
	comp=Z,1µm,19.0s						
BORG	**Borgarnes**	**69.23**	**26**	LR	LR	13 04 16.9	
	comp=Z,1µm,19.4s,baz=268,slow=36						
RDOG	**Red Dog Mine**	**69.56**	**338**	*e*P	**P**	**12 33 19.8**	**+0.7**
	comp=Z,88nm,1.3s						
RDOG				LR	LR		
	comp=Z,3µm,21.0s						
ANM	**Nome**	**69.86**	**334**	PFAKE		12 33 30.0	+9.1
ANM				LR	LR		
	comp=Z,3µm,22.0s						
PMOZ	**Porto Moniz, M**	**70.23**	**60**	*e*P	**P**	**12 33 22.0**	**-1.9**
PMOZ				*e*S	**S**	**12 42 39.9**	**+6.8**
PMOZ	**Porto Moniz, M**	**70.23**	**60**	*e*LR	LR	12 55 03.6	
	comp=Z,1µm,22.0s						
NIKH	**Nikolski High**	**70.51**	**321**	PFAKE		12 33 40.0	+15
NIKH				LR	LR		
	comp=Z,1µm,18.0s						
DAG	**Danmarks Havn**	**72.55**	**13**	*i* P	**P**	**12 33 37.4**	**+0.4**
	comp=Z,4µm,20.0s						
DAG	**Danmarks Havn**	**72.55**	**13**	*i* P	**P**	**12 33 37.4**	**+0.4**
DAG				MLR	MLR		
	comp=Z,4µm,20.0s						
JOHN	**Johnston Islan**	**73.77**	**284**	PFAKE		12 34 00.0	+15
JOHN				LR	LR		
	comp=Z,2µm,20.0s						
RAR	**Rarotonga**	**74.78**	**243**	LR	LR	12 59 30.6	
	comp=Z,2µm,18.6s,baz=54,slow=30						
PMAFR	**Mafra**	**76.02**	**53**	*e*S	**S**	**12 43 38.9**	**+0.5**
LIS	**Lisbon**	**76.15**	**53**	*e*P	**P**	**12 33 56.7**	**-2.0**
LIS				AMS	AMS	13 04 14.3	
	comp=Z,3µm,18.6s						
LIS	**Lisbon**	**76.15**	**53**	*e*P	**P**	**12 33 56.6**	**-2.0**
PGAV	**Gavieira, Arco**	**76.42**	**50**	*e*P	**P**	**12 33 58.6**	**-1.6**
	comp=Z,40nm,1.6s						
PGAV	**Gavieira, Arco**	**76.42**	**50**	*e*LR	LR	12 57 35.5	
	comp=Z,2µm,20.0s						
DSB	**Dublin**	**76.45**	**38**	PFAKE		12 34 10.0	+10
DSB				LR	LR		
	comp=Z,3µm,18.0s						
KPL	**Plockton**	**76.48**	**34**	*e*P	**P**	**12 33 58.4**	**-1.7**
KPL				IAmb	IAmb	12 33 60.0	
	comp=Z,38nm,1.0s						
KPL				IAMs_20	IAMs_20	13 09 11.2	
	comp=Z,3µm,16.0s						
PCAS	**Casmilo, Conde**	**76.48**	**52**	*e*P	**P**	**12 33 58.9**	**-1.6**
	comp=Z,70nm,1.4s						
PCAS				*e*S	**S**	**12 43 45.4**	**+1.9**
PCAS				*e*SS	**SS**	**12 48 43.6**	**+5.0**
COI	**Coimbra**	**76.53**	**52**	*e*P	**P**	**12 33 58.9**	**-1.9**
	comp=Z,56nm,1.4s						
ALMR	**Almeirim**	**76.54**	**53**	*e*P	**P**	**12 33 58.9**	**-1.9**
ALMR				*e*S	**S**	**12 43 39.1**	**-5.0**
ALMR				AMS	AMS	13 03 20.3	
	comp=Z,2µm,24.7s						
ALMR	**Almeirim**	**76.54**	**53**	*e*P	**P**	**12 33 58.9**	**-1.9**
	comp=Z,111nm,1.4s						
ALMR	**Almeirim**	**76.54**	**53**	*e*P	**P**	**12 33 58.9**	**-1.9**
ALMR				*e*S	**S**	**12 43 39.1**	**-5.0**
PTOM	**Tomar**	**76.61**	**52**	*e*P	**P**	**12 33 59.8**	**-1.4**
	comp=Z,48nm,1.5s						
PFVI	**Vila Bisbo**	**76.61**	**55**	*e*P	**P**	**12 34 00.4**	**-0.9**
	comp=Z,71nm,1.2s						
PFVI				*e*S	**S**	**12 43 47.8**	**+2.8**
PFVI	**Vila Bisbo**	**76.61**	**55**	PFAKE		12 34 10.0	+8.7
PFVI				LR	LR		
	comp=Z,3µm,20.0s						
PNCL	**Nicolau / Gran**	**76.71**	**54**	*e*P	**P**	**12 33 59.5**	**-2.3**
	comp=Z,33nm,1.6s						
PNCL				*e*S	**S**	**12 43 51.0**	**+5.0**
PNCL				*e*SS	**SS**	**12 48 51.5**	**+9.4**
MORF	**Marmelete**	**76.73**	**55**	*e*P	**P**	**12 34 00.1**	**-2.0**
MORF				AMS	AMS	13 04 56.0	
	comp=Z,3µm,20.5s						
MORF	**Marmelete**	**76.73**	**55**	*e*P	**P**	**12 34 00.8**	**-1.2**
	comp=Z,39nm,1.6s						
MORF				*e*S	**S**	**12 43 50.1**	**+3.8**
MORF	**Marmelete**	**76.73**	**55**	*e*P	**P**	**12 34 00.0**	**-2.0**
PMTG	**Montargil**	**76.82**	**53**	*e*P	**P**	**12 34 00.4**	**-2.0**
	comp=Z,41nm,1.3s						
PMTG				*e*S	**S**	**12 43 50.5**	**+3.3**
PMTG				*e*SS	**SS**	**12 48 50.4**	**+6.7**
POLO	**Lamas de Olo**	**76.85**	**50**	*e*P	**P**	**12 34 00.4**	**-2.3**
	comp=Z,11nm,1.4s						
POLO	**Lamas de Olo**	**76.85**	**50**	*e*S	S	12 44 08.2	+21
POLO				*e*SS	**SS**	**12 48 50.0**	**+5.8**
PVIS	**Viseu**	**76.86**	**51**	*e*P	**P**	**12 34 00.8**	**-1.9**
	comp=Z,27nm,1.1s						
MESJ	**Messejana**	**76.99**	**54**	*e*P	**P**	**12 34 01.5**	**-2.0**
MESJ				*e*S	**S**	**12 43 44.3**	**-4.8**
MESJ				AMS	AMS	13 04 56.8	
	comp=Z,3µm,18.4s						
MESJ	**Messejana**	**76.99**	**54**	*e*P	**P**	**12 34 01.5**	**-2.0**
	comp=Z,31nm,1.6s						
MESJ	**Messejana**	**76.99**	**54**	*e*P	**P**	**12 34 01.4**	**-2.0**
MESJ				*e*S	**S**	**12 43 44.3**	**-4.8**
EVO	**Evora**	**77.06**	**53**	*e*P	**P**	**12 34 02.0**	**-1.8**
	comp=Z,28nm,1.4s						
MTE	**Manteigas**	**77.16**	**51**	*e*P	**P**	**12 34 02.1**	**-2.3**
	comp=Z,30nm,1.4s						
MTE				*e*S	**S**	**12 43 51.5**	**+0.5**
MTE				*e*SS	**SS**	**12 48 51.1**	**+2.2**
MTE	**Manteigas**	**77.16**	**51**	*e*LR	LR	12 59 44.5	
	comp=Z,2µm,20.0s						
MTE	**Manteigas**	**77.16**	**51**	*e*P	**P**	**12 34 01.7**	**-2.7**
	comp=Z,37nm,1.4s						
MTE				LR	LR		
	comp=Z,2µm,20.0s						
MDO	**Dochfour**	**77.16**	**34**	*e*P	**P**	**12 34 02.0**	**-2.0**
PCVE	**Castro Verde**	**77.16**	**54**	*e*P	**P**	**12 34 02.6**	**-1.8**
	comp=Z,39nm,1.8s						
PCVE				*e*S	**S**	**12 43 44.3**	**-6.7**
PCVE				*e*SS	**SS**	**12 48 53.8**	**+4.8**
PBEJ	**Beja**	**77.24**	**54**	*e*P	**P**	**12 34 03.1**	**-1.7**
	comp=Z,22nm,1.9s						
GAL1	**Galloway**	**77.26**	**36**	IAMs_20	IAMs_20	13 11 35.2	

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             comp=Z,956nm,16.2s
BIGH   Upper Bighouse    77.29  33  IAMs_20  IAMs_20  13 06 30.1
             comp=Z,7µm,19.2s
PCBR   Castelo Branco    77.29  52  eP       P        12 34 03.5  -1.5
             comp=Z,29nm,1.3s
PBDV   Barranco-do-Ve    77.30  55  eP       P        12 34 04.5  -0.7
             comp=Z,37nm,1.7s
PBDV                                eS       S        12 43 58.0  +5.4
PBDV                                eSS      SS       12 48 59.9  +8.8
EAB    Aberfoyle         77.32  35  eP       P        12 34 02.5  -2.3
PESTR  Estremoz          77.34  53  eP       P        12 34 03.2  -2.2
             comp=Z,24nm,1.6s
PESTR                               eS       S        12 43 53.3  +0.4
PESTR                               eSS      SS       12 48 58.0  +6.4
PESTR  Estremoz          77.34  53  eP       P        12 34 02.3  -3.1
             comp=Z,12nm,1.2s
PESTR                                LR      LR
             comp=Z,1µm,20.0s
PMRV   Marv??o           77.41  52  eP       P        12 34 03.7  -2.1
             comp=Z,25nm,1.7s
PMRV                                eS       S        12 43 43.4   -10
PMRV                                eSS      SS       12 48 59.4  +6.7
PMRV                                eLR      LR       12 58 36.0
             comp=Z,3µm,20.0s
MVO    Moncorvo          77.44  50  eP       P        12 34 04.0  -2.0
             comp=Z,34nm,1.2s
MVO                                 eS       S        12 43 57.2  +3.1
MVO                                 eSS      SS       12 49 09.2   +16
MVO    Moncorvo          77.44  50  eLR      LR       12 59 51.2
             comp=Z,2µm,20.0s
PVAQ   Vaqueiros         77.45  54  eP       P        12 34 05.3  -0.7
             comp=Z,26nm,1.4s
PVAQ                                eS       S        12 43 56.0  +1.9
PVAQ                                eSS      SS       12 49 00.0  +6.7
PVAQ   Vaqueiros         77.45  54  eLR      LR       13 01 43.1
             comp=Z,3µm,22.0s
INVG   Invergeldie, C    77.45  35  eP       P        12 34 03.6  -2.0
INVG                                 IAmb    IAmb     12 34 05.5
             comp=Z,26nm,0.9s
INVG                                 IAMs_20 IAMs_20  13 10 47.5
             comp=Z,3µm,17.1s
PBRG   Braganca          77.57  50  eP       P        12 34 04.8  -1.9
             comp=Z,26nm,1.3s
MCD    Coleburn Disti    77.74  33  eP       P        12 34 05.6  -1.6
PBAR   Barrancos         77.87  53  eP       P        12 34 06.3  -2.0
             comp=Z,46nm,1.2s
EDI    Edinburgh         77.99  35   IAMs_20 IAMs_20  13 10 33.7
             comp=Z,2µm,17.8s
EDU    Dundee            78.00  34  eP       P        12 34 07.0  -1.7
ESK    Eskdalemuir       78.06  36  eP       P        12 34 07.2  -1.9
             comp=Z,34nm,0.9s
ESK                                  LR      LR
             comp=Z,3µm,18.0s
ESK    Eskdalemuir       78.06  36  eP       P        12 34 06.7  -2.3
ESK                                  IAmb    IAmb     12 34 07.7
             comp=Z,31nm,0.8s
ESK                                  IAMs_20 IAMs_20  13 11 16.2
             comp=Z,3µm,17.8s
BHH    Howats Hill       78.08  36  eP       P        12 34 08.0  -1.2
EKA    Eskdalemuir Ar    78.08  36   P       P        12 34 07.0  -2.2
             comp=Z,20nm,0.7s,baz=280,slow=5.5,SNR=49
EKA                                  LR      LR       13 06 49.5
             comp=Z,1µm,21.5s,baz=265,slow=34
ECK    Cauldkaine Hil    78.12  36  eP       P        12 34 07.6  -1.8
KESW   Keswick, Cumbr    78.22  36   IAMs_20 IAMs_20  13 10 02.7
             comp=Z,2µm,18.1s
DRUM   Mains of Drumt    78.24  34  eP       P        12 34 08.3  -1.7
DRUM                                 IAmb    IAmb     12 34 11.2
             comp=Z,38nm,0.9s
ESY    Stoneypath        78.31  35  eP       P        12 34 08.8  -1.6
FOEL   Foel Wylfa        78.40  38   IAMs_20 IAMs_20  13 10 40.1
             comp=Z,3µm,19.1s
HLM1   Long Mynd         78.65  39  eP       P        12 34 10.0  -2.4
HLM1                                 IAMs_20 IAMs_20  13 10 49.6
             comp=Z,2µm,16.9s
MCH1   Michaelchurch     78.65  39   IAMs_20 IAMs_20  13 11 10.1
             comp=Z,2µm,15.6s
SFS    San Fernando      78.79  55   PFAKE            12 34 20.0  +6.6
SFS                                  LR      LR
             comp=Z,1µm,22.0s
MONM   Monmouth          78.79  39   IAMs_20 IAMs_20  13 10 50.6
             comp=Z,2µm,15.6s
EDMD   Edmundbyers       78.84  36  eP       P        12 34 11.6  -1.7
EDMD                                 IAmb    IAmb     12 34 13.5
             comp=Z,33nm,1.0s
EDMD                                 IAMs_20 IAMs_20  13 11 41.7
             comp=Z,2µm,15.4s
KBS    Kingsbay          78.88  11   PFAKE            12 34 30.0   +17
KBS                                  LR      LR
             comp=Z,4µm,18.0s
MIDW   Midway            78.91 296   PFAKE            12 34 30.0   +16
MIDW                                 LR      LR
             comp=Z,1µm,20.0s
BATH   Bath              79.15  40   IAMs_20 IAMs_20  13 06 51.0
             comp=Z,3µm,22.3s
QUIF   Quistinic         79.17  43  eP       P        12 34 14.5  -0.8
QUIF                                 pmax    pmax
             comp=Z,18nm,0.9s
STRD   Stroud            79.20  39   IAMs_20 IAMs_20  13 11 10.3
             comp=Z,3µm,18.2s
SWN1   Swindon           79.46  39   IAMs_20 IAMs_20  13 07 12.0
             comp=Z,3µm,22.3s
CWF    Charnwood Fore    79.56  38  eP       P        12 34 15.5  -1.8
CWF                                  IAMs_20 IAMs_20  13 12 53.0
             comp=Z,2µm,17.3s
JSA    Saint Aubin       79.62  42   IAMs_20 IAMs_20  13 08 44.3
             comp=Z,3µm,19.6s
PAB    San Pablo         79.72  52  eP       P        12 34 16.7  -1.9
             comp=Z,15nm,1.0s
PAB                                  LR      LR
             comp=Z,3µm,21.0s
PAB    San Pablo         79.72  52  eP       P        12 34 16.7  -1.9
PAB                                  pmax    pmax
             comp=Z,15nm,1.0s
PAB                                  MLR     MLR
             comp=Z,3µm,21.0s
SPITS  Spitsbergen Ar    79.96  11   P       P        12 34 18.2  -0.8
             comp=Z,2.7nm,0.6s,baz=316,slow=8.1,SNR=2.4
SPITS                                LR      LR       13 13 23.3
             comp=Z,6µm,18.6s,baz=300,slow=38
ESDC   Sonseca Array     79.99  52   P       P        12 34 18.1  -2.0
             comp=Z,7.9nm,0.8s,baz=289,slow=5.8,SNR=50
ESDC                                 LR      LR       13 04 39.0
             comp=Z,2µm,21.7s,baz=280,slow=32
ESLA   Sonseca Array     79.99  52  eP       P        12 34 18.0  -2.0
             comp=Z,21nm,1.1s
ESLA                                 LR      LR
             comp=Z,3µm,21.0s
ES19   SONSECA Array     80.03  52  eP       P        12 34 17.5  -2.8
KNTN   Kanton            80.19 265   PFAKE            12 34 30.0  +8.6
KNTN                                 LR      LR
             comp=Z,2µm,19.0s
HSPB   Hornsund (broa    80.21  13  eP       P        12 34 21.9  +1.5
HSPB                                 MLR     MLR
             comp=Z,5µm,22.2s
GRR    Gorron            80.61  42  eP       P        12 34 20.7  -2.4
GRR                                  pmax    pmax
             comp=Z,72nm,1.4s
MDT    Midelt            80.73  59   P       P        12 34 22.1  -2.0
             comp=Z,5.7nm,0.8s,baz=274,slow=7.2,SNR=15
MDT                                  LR      LR       13 06 16.4
             comp=Z,2µm,20.2s,baz=306,slow=33
FLN    La Foliniere      80.79  42  eP       P        12 34 22.6  -1.4
FLN                                  pmax    pmax
             comp=Z,32nm,1.2s
HMNX   Herstmonceux      80.90  40   IAMs_20 IAMs_20  13 07 46.2
             comp=Z,3µm,18.8s
LDF    La Druitiere      81.06  42  eP       P        12 34 24.0  -1.5
LDF                                  pmax    pmax
             comp=Z,22nm,1.1s
ELSH   Elham, Standar    81.34  39   IAMs_20 IAMs_20  13 08 20.2
             comp=Z,3µm,20.4s
MFF    Saint Martin d    81.44  44  eP       P        12 34 25.8  -1.7
MFF                                  pmax    pmax
             comp=Z,42nm,1.6s
PMSA   Palmer Station    81.71 168   LR      LR       13 02 56.4
             comp=Z,2µm,19.6s,baz=330,slow=30
ETSF   Etsaut            81.90  48  eP       P        12 34 28.8  -1.3
ETSF                                 pmax    pmax
             comp=Z,10.0nm,0.9s
LFF    La Frestale       82.39  46  eP       P        12 34 31.0  -1.5
LFF                                  pmax    pmax
             comp=Z,16nm,0.9s
EPF    Esparros          82.51  48  eP       P        12 34 31.8  -1.5
EPF                                  pmax    pmax
             comp=Z,6.0nm,0.7s
CART   Cartagena         82.67  53   PFAKE            12 34 40.0  +5.8
CART                                 LR      LR
             comp=Z,2µm,20.0s
RJF    Les Rejaudoux     82.84  45  eP       P        12 34 32.4  -2.5
RJF                                  pmax    pmax
             comp=Z,32nm,1.4s
TCF    Toulx Ste Croi    83.09  44  eP       P        12 34 34.4  -1.8
TCF                                  pmax    pmax
             comp=Z,8.0nm,0.8s
HOPE   Hope Point        83.15 151   PFAKE            12 34 50.0   +14
HOPE                                 LR      LR
             comp=Z,4µm,21.0s
AFI    Afiamalu          83.24 254   LR      LR       13 03 26.6
             comp=Z,1µm,19.1s,baz=68,slow=30
CAF    Calviac           83.31  45  eP       P        12 34 34.7  -2.7
CAF                                  pmax    pmax
             comp=Z,10.0nm,1.0s
UCC    Uccle             83.41  39   PFAKE            12 34 50.0   +12
UCC                                  LR      LR
             comp=Z,2µm,19.0s
BGF    Bois d'Agland     83.46  44  eP       P        12 34 36.4  -1.7
BGF                                  pmax    pmax
             comp=Z,23nm,0.8s
AVF    Avril sur Loir    83.74  43  eP       P        12 34 37.4  -2.1
AVF                                  pmax    pmax
             comp=Z,15nm,0.9s
MTLF   Montolieu         83.78  47  eP       P        12 34 38.3  -1.5
MTLF                                 pmax    pmax
             comp=Z,34nm,1.5s
KONO   Kongsberg         83.86  30   PFAKE            12 34 50.0   +10
KONO                                 LR      LR
             comp=Z,2µm,20.0s
KONO   Kongsberg         83.86  30⇓eP       P        12 34 40.6  +0.8
KONO                                 pmax    pmax
             comp=Z,39nm,1.5s
NBO00  NORSAR Array S    83.99  28  eP       P        12 34 39.8  -0.8
BCLA   Clavier           84.08  40  ⇑P       P        12 34 39.9  -1.3
SMF    Signal de Mont    84.10  43  eP       P        12 34 39.4  -2.0
SMF                                  pmax    pmax
             comp=Z,7.0nm,0.8s
NB2    NORSAR Subarra    84.19  28   P       P        12 34 40.8  -0.8
             comp=Z,131nm,2.5s,baz=289,slow=5.3
NB2    NORSAR Subarra    84.19  28   P       P        12 34 40.8  -0.8
             baz=289,slow=5.3
NOA    NORSAR Array B    84.19  28   P       P        12 34 39.9  -1.7
             comp=Z,3.4nm,0.8s,baz=290,slow=5.2,SNR=12
NOA                                  LR      LR       13 12 48.2
             comp=Z,1µm,19.7s,baz=285,slow=36
BEBN   Eben Emael        84.22  39  ⇑P       P        12 34 40.5  -1.3
NC405  NORSAR Array S    84.40  28  eP       P        12 34 41.2  -1.4
MEM    Membach           84.47  39  ⇑P       P        12 34 41.9  -1.3
MEM    Membach           84.47  39   P       P        12 34 41.8  -1.3
MEM                                  pmax    pmax
             comp=Z,27nm,1.5s
MUD    Monsted U'grnd    84.61  33  i P      P        12 34 43.3  -0.4
             comp=Z,2µm,18.0s
MUD    Monsted U'grnd    84.61  33  i P      P        12 34 43.3  -0.4
MUD                                  MLR     MLR
             comp=Z,2µm,18.0s
WLF    Walferdange       84.81  40  ⇑P       P        12 34 44.1  -0.8
WLF    Walferdange       84.81  40  eP       P        12 34 43.8  -1.1
             comp=Z,18nm,1.0s
WLF                                  LR      LR
             comp=Z,3µm,20.0s
WLF    Walferdange       84.81  40  eP       P        12 34 43.8  -1.1
WLF                                  pmax    pmax
             comp=Z,18nm,1.0s
WLF                                  MLR     MLR
             comp=Z,3µm,20.0s
SSB    Saint Sauveur     84.92  45  eP       P        12 34 44.7  -0.9
             comp=Z,25nm,1.5s
SSB                                  LR      LR
             comp=Z,2µm,20.0s
SSB    Saint Sauveur     84.92  45  eP       P        12 34 44.7  -0.9
SSB                                  pmax    pmax
             comp=Z,25nm,1.5s
SSB                                  MLR     MLR
             comp=Z,2µm,20.0s
VIVF   Saint-Julien-l    85.12  45  eP       P        12 34 46.0  -0.6
VIVF                                 pmax    pmax
             comp=Z,58nm,1.8s
KOWA   Kowa              85.14  76   P       P        12 34 45.7  -1.5
             comp=Z,14nm,0.8s,baz=294,slow=3.3,SNR=11
KOWA                                 LR      LR       13 10 05.9
             comp=Z,2µm,20.5s,baz=285,slow=34
KOWA   Kowa              85.14  76  eP       P        12 34 45.9  -1.3
             comp=Z,35nm,1.1s
HAU    Haudompre         85.39  42  eP       P        12 34 45.7  -2.2
HAU                                  pmax    pmax
             comp=Z,16nm,0.9s
CABF   La Chapelle       85.61  43  eP       P        12 34 49.8  +0.7
CABF                                 pmax    pmax
             comp=Z,143nm,2.2s
HFS    Hagfors           85.65  29   P       P        12 34 47.9  -1.0
             comp=Z,5.7nm,0.8s,baz=242,slow=3.1,SNR=11
HFS                                  LR      LR       13 10 42.1
             comp=Z,2µm,21.7s,baz=282,slow=34
HINF   Hinteralfeld      85.77  42  eP       P        12 34 48.3  -1.5
HINF                                 pmax    pmax
             comp=Z,62nm,1.7s
ECH    Echery            85.85  41  eP       P        12 34 48.4  -1.8
             comp=Z,18nm,1.0s
ECH                                  LR      LR
             comp=Z,3µm,18.0s
ECH    Echery            85.85  41  eP       P        12 34 48.4  -1.8
ECH                                  pmax    pmax
             comp=Z,18nm,1.0s
ECH                                  MLR     MLR
             comp=Z,3µm,18.0s
ORIF   Oris-en-Rattie    85.93  45  eP       P        12 34 50.7   0.0
ORIF                                 pmax    pmax
             comp=Z,21nm,0.9s
MOF    Molkenrain        85.94  42  eP       P        12 34 49.4  -1.3
TIC    Toumodi           86.02  84  eP       P        12 34 51.5  -0.1
LANF   Langenberg        86.04  41   P       P        12 34 50.8  -0.3
ARCES  ARCESS Array B    86.08  18   P       P        12 34 50.2  -0.6
             comp=Z,2.2nm,0.6s,baz=279,slow=3.8,SNR=14
LIC    Lamto             86.11  85  eP       P        12 34 52.1  +0.1
             comp=Z,283nm,1.6s
DBIC   Dimbokro          86.17  84   P       P        12 34 51.4  -1.0
             comp=Z,18nm,0.8s,baz=244,slow=4.6,SNR=20
DBIC                                 LR      LR       13 11 08.7
             comp=Z,2µm,20.3s,baz=266,slow=34
DBIC   Dimbokro          86.17  84  eP       P        12 34 51.7  -0.6
             comp=Z,35nm,0.9s
LPL    La Plagne         86.34  44  eP       P        12 34 52.4  -0.5
LPL                                  pmax    pmax
             comp=Z,144nm,2.3s
KIC    Kosan Boka        86.35  84  eP       P        12 34 53.3   0.0
             comp=Z,53nm,0.8s
LPG    La Plagne         86.36  44  eP       P        12 34 52.7  -0.4
LPG                                  pmax    pmax
             comp=Z,35nm,1.3s
KEV    Kevo              86.41  18   PFAKE            12 35 00.0  +7.6
KEV                                  LR      LR
             comp=Z,2µm,20.0s
BNI    Bardonecchia      86.44  45  eP       P        12 34 52.1  -1.2
             comp=Z,38nm,1.4s
BNI                                  LR      LR
             comp=Z,2µm,20.0s
SENIN  Lac Senin/Sane    86.48  43  eP       P        12 34 52.6  -1.0
             comp=Z,25nm,1.0s
SENIN                                LR      LR
             comp=Z,2µm,21.0s
BFO    Black Forest      86.57  41  eP       P        12 34 52.0  -1.7
             comp=Z,11nm,0.9s
BFO    Black Forest      86.57  41  i P      P        12 34 52.5  -1.2
COP    Copenhagen        86.59  33  i P      P        12 34 53.9  +0.4
             comp=Z,1µm,22.0s
COP    Copenhagen        86.59  33  i P      P        12 34 53.9  +0.4
COP                                  MLR     MLR
             comp=Z,1µm,22.0s
SLE    Schleitheim       86.84  42   P       P        12 34 54.0  -1.1
SLE                                  pmax    pmax
             comp=Z,28nm,1.0s
STU    Stuttgart         86.98  40  eP       P        12 34 54.3  -1.4
             comp=Z,26nm,1.0s
STU                                  LR      LR
             comp=Z,2µm,20.0s
STU    Stuttgart         86.98  40  eP       P        12 34 54.3  -1.4
STU                                  pmax    pmax
             comp=Z,26nm,1.0s
STU                                  MLR     MLR
             comp=Z,2µm,20.0s
TUE    Stuetta           87.80  43  eP       P        12 34 59.2  -0.7
             comp=Z,22nm,1.0s
TUE                                  LR      LR
             comp=Z,2µm,19.0s
MOX    Moxa              87.86  38   P       P        12 35 00.1  +0.2
MOX                                  pmax    pmax
             comp=Z,9.0nm,1.7s
DAVA   Damuels           87.89  42  ePcP     P        12 34 59.4  -0.9
             comp=Z,7.1nm,0.7s,SNR=7.4
GRFO   Grafenberg        87.94  39  eP       P        12 34 60.0  -0.3
             comp=Z,27nm,1.2s
GRFO                                 LR      LR
             comp=Z,2µm,20.0s
GRFO   Grafenberg        87.94  39  eP       P        12 35 00.0  -0.3
GRFO                                 pmax    pmax
             comp=Z,27nm,1.2s
GRFO                                 MLR     MLR
             comp=Z,2µm,20.0s
GRF    Grafenberg Arr    87.94  39   P       P        12 35 00.0  -0.3
DAVOX  Davos/Dischmat    88.05  42   P       P        12 35 00.3  -0.7
             comp=Z,9.6nm,0.8s,baz=328,slow=5.0,SNR=16
DAVOX                                LR      LR       13 10 56.3
             comp=Z,2µm,20.0s,baz=264,slow=33
BSD    Bornholm Skovb    88.12  33  i P      P        12 34 59.3  -1.6
             comp=Z,2µm,18.0s
BSD    Bornholm Skovb    88.12  33  i P      P        12 34 59.3  -1.6
BSD                                  MLR     MLR
             comp=Z,2µm,18.0s
DFRA   Djebel Bou Aff    88.26  53   P       P        12 35 00.1  -2.1
SEY    Seymchan          88.31 336⇑eP       P        12 35 03.0  +1.3
FUORN  Ofenpass-Fuorn    88.35  42  eP       P        12 35 02.3  -0.3
             comp=Z,34nm,1.3s
FUORN                                LR      LR
             comp=Z,2µm,21.0s
RETA   Reutte            88.39  41  eP       P        12 35 00.6  -1.9
             comp=Z,9.1nm,1.0s,SNR=8.6
CLL    Collm             88.45  37⇑iP       P        12 35 01.6  -1.0
             comp=Z,27nm,1.9s
CLL                                 e                 12 35 14.0
CLL                                 e                 12 35 42.0
CLL                                 ePP      PP       12 38 29.0  -1.5
CLL                                 eSKSac   SKSac    12 45 29.0  +0.5
CLL                                 esS      pS       12 46 04.0  +2.8
CLL                                 ePPS     PPS      12 47 12.0
CLL                                 eSS      SS       12 51 30.0  -5.4
CLL                                 eSSS     SSS      12 54 54.0
CLL                                 e                 12 55 42.0
CLL                                 eSSSS             12 58 42.0
CLL                                  LmH              13 12 00.0
             comp=N,1µm,21.8s
CLL                                  LmH              13 12 00.0
             comp=E,2µm,20.5s
CLL                                  LmV              13 12 00.0
             comp=Z,2µm,20.3s
CLL    Collm             88.45  37  eP       P        12 35 01.8  -0.8
             comp=Z,9.2nm,1.1s
CLL                                  LR      LR
             comp=Z,2µm,21.0s
CLL    Collm             88.45  37⇑iP       P        12 35 01.6  -1.0
CLL                                 e                 12 35 14.0
CLL                                 e                 12 45 29.0
CLL                                  pmax    pmax
             comp=Z,27nm,1.9s
CLL                                  MLR     MLR
             comp=Z,2µm,20.3s
NKC    Novy Kostel       88.50  38  eP       P        12 35 03.0  +0.1
NKC                                 ePP      PP       12 38 30.6  -0.4
NKC                                  AMS     AMS      13 15 20.0
             comp=Z,2µm,19.5s
NKC    Novy Kostel       88.50  38  eP       P        12 35 03.0  +0.1
NKC                                 e                 12 38 30.6
NKC                                  MLR     MLR
             comp=Z,2µm,19.5s
FETA   Feichten          88.52  42  ePcP     P        12 35 02.5  -0.7
             comp=Z,7.5nm,0.9s,SNR=7.0
OUL    Oulu              88.52  22   P       P        12 35 03.0  +0.4
OUL                                  pmax    pmax
             comp=Z,17nm,2.5s
MOTA   Moosalm           88.65  41  ePcP     P        12 35 03.3  -0.6
             comp=Z,7.5nm,0.9s,SNR=5.9
PGF    Pioggiola         88.79  46  eP       P        12 35 03.9  -0.7
PGF                                  pmax    pmax
             comp=Z,28nm,1.1s
CTEI   Djebel Teioual    88.81  53   P       P        12 35 03.7  -1.1
CKFL   Kef-Lekhel        88.95  53   P       P        12 35 04.6  -0.9
WATA   Walderalm         88.96  41  ePcP     P        12 35 03.9  -1.4
             comp=Z,4.2nm,0.9s
WTTA   Wattenberg        89.02  41  eP       P        12 35 03.6  -2.0
             comp=Z,2.3nm,0.5s
WET    Wettzell          89.15  39   P       P        12 35 06.4  +0.4
WET                                  pmax    pmax
             comp=Z,7.0nm,1.1s
BRG    Berggiesshubel    89.16  37  eP       P        12 35 05.2  -0.8
             comp=Z,11nm,1.2s
BRG                                  PS      PnS      12 46 53.0  -7.7
BRG                                  SS      SS       12 51 34.0   -12
             comp=N,827nm,18.5s
             comp=E,1µm,21.7s
             comp=Z,2µm,22.3s
BRG    Berggiesshubel    89.16  37  eP       P        12 35 05.2  -0.8
BRG                                  PS      PnS      12 46 53.0  -7.7
BRG                                  pmax    pmax
             comp=Z,4.0nm,1.2s
BRG                                  MLR     MLR
             comp=N,1µm,18.5s
BRG                                  MLR     MLR
             comp=E,827nm,21.7s
BRG                                  MLR     MLR
             comp=Z,1µm,22.3s
MSF    Maaselka          89.17  20  eP       P        12 35 02.7  -3.0
VLC    Villacollemand    89.23  45   PFAKE            12 35 20.0   +13
VLC                                  LR      LR
             comp=Z,1µm,21.0s
CMAH   Djebel Manchou    89.42  52   P       P        12 35 07.6   0.0
ABSA   Djebel Ababsia    89.57  53   P       P        12 35 07.0  -1.4
KHC    Kasperske Hory    89.58  39  eP       P        12 35 08.0   0.0
KHC                                 epP      PcP      12 35 12.6  +3.2
KHC                                 ePP      PP       12 38 39.0  -0.6
KHC                                 eSKS     SKSac    12 45 25.5   -10
KHC                                  AMS     AMS      13 13 30.0
             comp=Z,3µm,18.5s
KHC    Kasperske Hory    89.58  39  eP       P        12 35 07.0  -1.0
             comp=Z,6.3nm,1.5s
KHC                                  LR      LR
             comp=Z,1µm,19.0s
KHC    Kasperske Hory    89.58  39  eP       P        12 35 07.0  -1.0
KHC                                  pmax    pmax
             comp=Z,6.0nm,1.5s
KHC                                  MLR     MLR
             comp=Z,1µm,19.0s
APA    Apatity           89.59  18⇑iP       P        12 35 07.2  -0.4
APA                                 i                 12 38 35.0
APA                                 i                 12 45 35.0
APA                                 i S      S        12 45 55.0  -0.4
APA                                 i PS     PnS      12 46 55.0   -10
APA                                  pmax    pmax
             comp=Z,4.0nm,1.0s
PET    Petropavlovsk     89.64 325   PFAKE            12 35 20.0   +12
PET                                  LR      LR
             comp=Z,700nm,20.0s
PET    Petropavlovsk     89.64 325c iP       P        12 35 09.1  +1.0
PET                                 e                 12 38 41.4
PET                                 eS       S        12 45 56.9  +0.5
PET                                 ePS      PS       12 47 07.0  +0.4
PET                                 ePPS     PPS      12 47 29.9
PET                                 eSS      SS       12 51 51.8  -0.7
PET                                  pmax    pmax
             comp=Z,700nm,8.3s
PET                                  pmax    pmax
             comp=Z,700nm,15.2s
PRA    Prague            89.75  38   AMS     AMS      13 22 10.0
             comp=Z,2µm,19.1s
GEC2   GERESS Array S    89.76  39  eP       P        12 35 08.0  -1.0
             comp=Z,8.8nm,1.2s
GEC2                                 LR      LR
             comp=Z,3µm,20.0s
GEC2   GERESS Array S    89.76  39  eP       P        12 35 08.0  -1.0
GEC2                                 pmax    pmax
             comp=Z,9.0nm,1.2s
GEC2                                 MLR     MLR
             comp=Z,3µm,20.0s
GERES  GERESS Array B    89.76  39   P       P        12 35 07.7  -1.2
             comp=Z,2.4nm,0.8s,baz=320,slow=3.5,SNR=16
GERES                                LR      LR       13 14 06.9
             comp=Z,2µm,19.9s,baz=292,slow=35
ABTA   Abfaltersbach     89.76  42  eP       P        12 35 05.6  -3.4
             comp=Z,6.0nm,1.1s,SNR=5.7
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GEA0	GERESS Array S	89.76	39	eP	P	12 35 07.9	-1.1
PRU	Pruhonice	89.85	38	eP	P	12 35 08.8	-0.4
PRU				epP	pP	12 35 16.7	-5.0
PRU				ePP	PP	12 38 40.8	-0.8
PRU				eSKS	SKSac	12 45 27.5	-9.3
PRU				AMS	AMS	13 16 20.0	
	comp=Z,2µm,19.6s						
PRU	Pruhonice	89.85	38	eP	P	12 35 08.8	-0.4
PRU				e		12 38 40.8	
PRU				e		12 45 27.5	
PRU				MLR	MLR		
	comp=Z,2µm,19.6s						
SUF	Sumiainen	89.86	24	eP	P	12 35 07.7	-1.3
SUF				pmax	pmax		
	comp=Z,13nm,1.4s						
TIXI	Tiksi	89.91	348	eP	P	12 35 09.0	0.0
	comp=Z,116nm,1.4s						
TIXI				LR	LR		
	comp=Z,3µm,22.0s						
TIXI	Tiksi	89.91	348	c iP	P	12 35 08.6	-0.4
TIXI				pmax	pmax		
	comp=Z,167nm,2.5s						
GOPC	GO Pecny, Ondr	90.02	38	eP	P	12 35 10.0	-0.1
GOPC				ePP	PP	12 38 42.2	-0.9
GOPC				eSKS	SKSac	12 45 31.6	-6.3
GOPC				AMS	AMS	13 16 20.0	
	comp=Z,2µm,18.9s						
GOPC	GO Pecny, Ondr	90.02	38	eP	P	12 35 10.0	-0.1
GOPC				e		12 38 42.2	
GOPC				e		12 45 31.6	
GOPC				MLR	MLR		
	comp=Z,2µm,18.9s						
PEA0B	Petropavlovsk-	90.14	325	PFAKE		12 35 20.0	+9.5
PEA0B				LR	LR		
	comp=Z,700nm,20.0s						
PETK	Petropavlovsk-	90.14	325	P	P	12 35 11.1	+0.6
	comp=Z,4.2nm,0.8s,baz=78,slow=7.5						
PETK	Petropavlovsk-	90.14	325	eP	P	12 35 10.6	+0.1
PETK	Petropavlovsk-	90.14	325	eP	P	12 35 10.6	+0.1
KBA	Koelnbreinsper	90.18	41	ePcP	P	12 35 11.4	+0.4
	comp=Z,3.0nm,0.5s						
MOA	Molln	90.48	40	ePcP	P	12 35 11.3	-1.0
	comp=Z,3.0nm,0.7s						
FINES	FINESS Array B	90.51	25	P	P	12 35 11.1	-0.9
	comp=Z,5.6nm,1.0s,baz=290,slow=4.0,SNR=8.1						
FINES				LR	LR	13 15 05.0	
	comp=Z,2µm,20.3s,baz=292,slow=35						
FIA1	FINESS Array S	90.51	25	eP	P	12 35 10.8	-1.2
UPC	Upice	90.52	37	eP	P	12 35 12.2	-0.1
UPC				ePP	PP	12 38 45.8	-1.2
UPC				eSKS	SKSac	12 45 37.5	-3.2
UPC				AMS	AMS	13 16 00.0	
	comp=Z,2µm,21.7s						
UPC	Upice	90.52	37	eP	P	12 35 12.2	-0.1
UPC				e		12 38 45.8	
UPC				e		12 45 37.5	
UPC				MLR	MLR		
	comp=Z,2µm,21.7s						
MYKA	Terra Mystica	90.53	41	ePcP	P	12 35 11.2	-1.4
	comp=Z,6.1nm,1.0s						
MA2	Magadan	90.63	333	eP	P	12 35 13.2	+0.6
	comp=Z,53nm,1.1s						
MA2				LR	LR		
	comp=Z,1µm,21.0s						
MA2	Magadan	90.63	333	i P	P	12 35 13.7	+1.0
MA2				pmax	pmax		
	comp=Z,51nm,1.7s						
THTN	Thala	90.72	53	eP	P	12 35 12.3	-1.4
	comp=Z,25nm,1.1s						
THTN				LR	LR		
	comp=Z,2µm,22.0s						
CADS	Cadrg	90.74	42	i P	P	12 35 12.3	-1.2
DPC	Dobruska-Polom	90.76	37	eP	P	12 35 13.4	-0.1
DPC				epP	PcP	12 35 19.9	+5.3
DPC				ePP	PP	12 38 48.2	-0.8
DPC				AMS	AMS	13 13 10.0	
	comp=Z,2µm,19.8s						
DPC	Dobruska-Polom	90.76	37	eP	P	12 35 13.4	-0.1
DPC				e		12 38 48.2	
DPC				MLR	MLR		
	comp=Z,2µm,19.8s						
TOC7	Torodi Ar. Sit	90.83	76	PFAKE		12 35 20.0	+5.5
TOC7				LR	LR		
	comp=Z,2µm,21.0s						
TOB5	Torodi Ar. Sit	90.83	76	PFAKE		12 35 20.0	+5.5
TOB5				LR	LR		
	comp=Z,3µm,21.0s						
TOC5	Torodi Ar. Sit	90.83	76	PFAKE		12 35 20.0	+5.5
TOC5				LR	LR		
	comp=Z,3µm,21.0s						
TOB4	Torodi Ar. Sit	90.84	76	PFAKE		12 35 20.0	+5.5
TOB4				LR	LR		
	comp=Z,2µm,21.0s						
TOA1	Torodi Ar. Sit	90.84	76	PFAKE		12 35 30.0	+15
TOA1				LR	LR		
	comp=Z,2µm,21.0s						
TOA0	Torodi Ar. Sit	90.85	76	eP	P	12 35 13.5	-1.0
	comp=Z,6.0nm,0.9s						
TOA0				LR	LR		
	comp=Z,2µm,21.0s						
TOA3	Torodi Ar. Sit	90.85	76	PFAKE		12 35 30.0	+15
TOA3				LR	LR		
	comp=Z,2µm,21.0s						
TORD	Torodi Ar. Bea	90.85	76	P	P	12 35 12.8	-1.8
	comp=Z,1.6nm,0.7s,baz=249,slow=4.0						
TORD				LR	LR	13 13 17.5	
	comp=Z,2µm,20.6s,baz=305,slow=34						
TOC1	Torodi Ar. Sit	90.85	76	PFAKE		12 35 30.0	+15
TOC1				LR	LR		
	comp=Z,3µm,21.0s						
TRI	Trieste	90.95	42	PFAKE		12 35 30.0	+16
TRI				LR	LR		
	comp=Z,2µm,20.0s						
CRNS	Crni Vrh	91.13	42	eP	P	12 35 13.9	-1.5
OBKA	Obir	91.16	41	ePcP	P	12 35 16.0	+0.5
	comp=Z,4.4nm,0.9s						
KEST	Kesra	91.18	53	P	P	12 35 14.9	-1.0
	comp=Z,9.1nm,0.9s,baz=262,slow=4.0,SNR=11						
KEST				LR	LR	13 11 22.4	
	comp=Z,1µm,21.6s,baz=243,slow=32						
KEST	Kesra	91.18	53	eP	P	12 35 13.9	-1.9
	comp=Z,26nm,1.0s						
KRUC	Moravsky	91.32	38	eP	P	12 35 14.7	-1.4
LJU	Ljubljana	91.32	42	eP	P	12 35 14.7	-1.4
LJU				eS	SKSac	12 45 43.9	-1.6
VRAC	Vranov	91.34	38	P	P	12 35 15.2	-1.0
VRAC				pmax	pmax		
	comp=Z,8.0nm,0.9s						
VRAC	Vranov	91.34	38	eP	P	12 35 15.2	-1.0
SOKA	Soboth	91.40	41	ePcP	P	12 35 16.3	-0.4
	comp=Z,2.2nm,0.9s						
CONA	Conrad Observa	91.44	40	ePcP	P	12 35 16.0	-0.8
	comp=Z,3.7nm,1.0s						
PERS	Pernice	91.47	41	i P	P	12 35 15.2	-1.7
PERS				e		12 38 51.5	
PERS				eS	SKSac	12 45 47.0	+0.6
ARSA	Arzberg	91.49	40	ePcP	P	12 35 17.2	+0.2
	comp=Z,2.0nm,0.7s						
MORC	Moravsky Berou	91.71	38	eP	P	12 35 17.2	-0.7
	comp=Z,5.2nm,1.0s						
MORC				LR	LR		
	comp=Z,2µm,18.0s						
MORC	Moravsky Berou	91.71	38	eP	P	12 35 17.3	-0.7
MORC				pmax	pmax		
	comp=Z,5.0nm,1.0s						
MORC				MLR	MLR		
	comp=Z,2µm,18.0s						
MORC	Moravsky Berou	91.71	38	eP	P	12 35 16.9	-1.1
TAM	Tamanrasset	91.81	66	eP	P	12 35 18.2	-0.9
	comp=Z,16nm,1.5s						
TAM				LR	LR		
	comp=Z,3µm,21.0s						
TAM	Tamanrasset	91.81	66	eP	P	12 35 18.2	-0.9
TAM				pmax	pmax		
	comp=Z,16nm,1.5s						
TAM				MLR	MLR		
	comp=Z,3µm,21.0s						
AQU	L'Aquila	91.92	45	eP	P	12 35 19.2	+0.1
	comp=Z,20nm,1.0s						
AQU				LR	LR		
	comp=Z,3µm,20.0s						
AQU	L'Aquila	91.92	45	eP	P	12 35 19.2	+0.1
AQU				pmax	pmax		
	comp=Z,20nm,1.0s						
AQU				MLR	MLR		
	comp=Z,3µm,20.0s						
OKC	Ostrava-Krasne	92.04	37	eP	P	12 35 19.4	0.0
OKC				eSKS	SKSac	12 45 53.1	+3.7
OKC				AMS	AMS	13 21 40.0	
	comp=Z,1µm,16.6s						
OKC	Ostrava-Krasne	92.04	37	eP	P	12 35 19.4	0.0
OKC				e		12 45 53.1	
OKC				MLR	MLR		
	comp=Z,1µm,16.6s						
SKR	Severo-Kuril's	92.04	324	eP	P	12 35 19.6	+0.3
SKR				eS	S	12 46 18.5	+0.1
SKR				ePS	PnS	12 47 40.1	+5.8
SKR				eSS	SS	12 52 24.8	-2.4
SKR				pmax	pmax		
	comp=Z,600nm,18.0s						
SKR				MLR	MLR		
	comp=Z,400nm,17.0s						
MODS	Modra-Piesok	92.13	39	eP	P	12 35 19.7	-0.2
MODS	Modra-Piesok	92.13	39	eP	P	12 35 19.7	-0.2
VSU	Vasula	92.37	27	⇓eP	P	12 35 19.6	-1.1
VSU				pmax	pmax		
	comp=Z,89nm,1.9s						
BEL	Belsk	92.68	35	eP	P	12 35 23.2	+0.9
BEL	Belsk	92.68	35	eP	P	12 35 23.2	+0.9
OJC	Ojcow	92.84	36	eP	P	12 35 23.8	+0.6
OJC	Ojcow	92.84	36	eP	P	12 35 22.8	-0.3
	comp=Z,30nm,1.8s						
OJC	Ojcow	92.84	36	eP	P	12 35 22.8	-0.3
OJC				pmax	pmax		
	comp=Z,30nm,1.8s						
SUW	Suwalki	92.93	32	PFAKE		12 35 30.0	+6.6
SUW				LR	LR		
	comp=Z,2µm,22.0s						
VYHS	Vyhne	93.02	38	eP	P	12 35 23.5	-0.5
VYHS	Vyhne	93.02	38	eP	P	12 35 23.5	-0.5
CLTB	Caltabellotta	93.50	50	PFAKE		12 35 40.0	+13
CLTB				LR	LR		
	comp=Z,3µm,21.0s						
BLY	Banja Luka	93.55	42	eP	P	12 35 26.6	+0.2
BLY				LR	LR		
	comp=Z,2µm,21.0s						
PSZ	Piszkesteto	93.91	39	eP	P	12 35 28.0	-0.2
	comp=Z,23nm,1.3s						
PSZ				LR	LR		
	comp=Z,2µm,21.0s						
PSZ	Piszkesteto	93.91	39	eP	P	12 35 28.0	-0.2
PSZ				pmax	pmax		
	comp=Z,23nm,1.3s						
PSZ				MLR	MLR		
	comp=Z,2µm,21.0s						
TARA	Tarawa	94.05	272	PFAKE		12 35 40.0	+11
TARA				LR	LR		
	comp=Z,2µm,20.0s						
VAE	Valguarnera	94.42	50	LR	LR	13 13 13.3	
	comp=Z,4µm,21.4s,baz=344,slow=32						
CUC	Castrocucco	94.49	47	eP	P	12 35 30.4	-0.6
	comp=Z,9.3nm,0.9s						
CUC				LR	LR		
	comp=Z,1µm,20.0s						
KWP	Kalwaria Pacla	94.78	36	PFAKE		12 35 40.0	+8.0
KWP				LR	LR		
	comp=Z,11µm,21.0s						
UZH	Uzhgorod	95.01	37	eP	P	12 35 32.2	-0.9
UZH				e		12 35 42.0	
UZH				eS	S	12 46 39.4	-5.3
WDD	Wied Dalam	95.10	51	PFAKE		12 35 40.0	+6.2
WDD				LR	LR		
	comp=Z,1µm,20.0s						
CEL	Celeste	95.21	49	PFAKE		12 35 50.0	+16
CEL				LR	LR		
	comp=Z,2µm,20.0s						
WAKE	Wake Island	95.23	291	PFAKE		12 35 50.0	+15
WAKE				LR	LR		
	comp=Z,1µm,20.0s						
TIP	Timpagrande	95.48	47	PFAKE		12 35 50.0	+14
TIP				LR	LR		
	comp=Z,2µm,21.0s						
DIVS	Divibare	95.64	42	eP	P	12 35 34.9	-1.3
	comp=Z,6.3nm,1.1s						
DIVS				LR	LR		
	comp=Z,2µm,20.0s						
TTG	Podgorica	95.88	44	PFAKE		12 35 50.0	+13
TTG				LR	LR		
	comp=Z,2µm,20.0s						
KLMR	Klimovskoe	96.02	21	eP	P	12 35 33.8	-3.6
KLMR				pmax	pmax		
	comp=Z,9.0nm,1.2s						
KLMR	Klimovskoe	96.02	21	eP	P	12 35 33.9	-3.5
KLMR				AMP		12 35 37.8	
	comp=Z,9.0nm,1.2s						
KLMR				LQ	LQ	13 11 00.1	
KLMR				LQ	LQ	13 11 00.1	
KLMR				LR	LR	13 12 55.6	
YAK	Yakutsk	97.06	341	PFAKE		12 35 50.0	+7.9
YAK				LR	LR		
	comp=Z,2µm,21.0s						
YAK	Yakutsk	97.06	341	⇓eP	Pdif	12 35 42.9	+0.8
YAK				pmax	pmax		
	comp=Z,16nm,1.2s						
BUR04	Bucovina Ar. S	97.22	37	eP	P	12 35 42.2	-1.0
PRGR	Permogore	97.49	19	eP	P	12 35 42.5	-1.5
KIEV	Kiev	97.82	33	⇓eP	P	12 35 44.2	-1.5
KIEV				pmax	pmax		
	comp=Z,5.0nm,1.1s						
AKASG	Malin Array Be	97.82	33	P	P	12 35 45.5	-0.3
	comp=Z,0.2nm,0.3s,baz=282,slow=4.7,SNR=5.6						
AKASG				LR	LR	13 21 07.6	
	comp=Z,1µm,19.6s,baz=325,slow=36						
AKASG	Malin Array Be	97.82	33	i P	P	12 35 45.5	-0.3
AKASG				pmax	pmax		
	comp=Z,1.0nm,0.4s						
AKBB	Malin Array Si	97.82	33	PFAKE		12 36 00.0	+14
AKBB				LR	LR		
	comp=Z,2µm,19.0s						
VTS	Vitosha	98.42	42	PFAKE		12 36 00.0	+11
VTS				LR	LR		
	comp=Z,2µm,20.0s						
OBN	Obninsk	98.71	27	PFAKE		12 36 00.0	+10
OBN				LR	LR		
	comp=Z,2µm,18.0s						
OBN	Obninsk	98.71	27	eP	P	12 35 49.5	-0.1
OBN				e		12 39 50.2	
OBN				ePPP	PPP	12 41 55.8	
OBN				pmax	pmax		
	comp=Z,22nm,1.3s						
MLR	Muntele Rosu	98.73	39	P	P	12 35 48.8	-1.3
	comp=Z,1.8nm,0.7s,baz=271,slow=2.7,SNR=5.8						
MLR				LR	LR	13 20 27.7	
	comp=Z,1µm,20.5s,baz=296,slow=36						
NKL	Nikolayevsk	98.88	331	eP	P	12 35 49.0	-1.4
NKL				pmax	pmax		
	comp=Z,500nm,9.0s						
URZ	Urewera	98.93	233	PFAKE		12 36 00.0	+9.1
URZ				LR	LR		
	comp=Z,3µm,18.0s						
LIT	Litokhoron	99.09	45	PFAKE		12 36 00.0	+8.2
LIT				LR	LR		
	comp=Z,1µm,19.0s						
AGG	Agios Georgios	99.47	46	PFAKE		12 36 00.0	+6.5
AGG				LR	LR		
	comp=Z,2µm,20.0s						
BKZ	Black Stump Fm	99.57	232	PFAKE		12 36 10.0	+16
BKZ				LR	LR		
	comp=Z,3µm,18.0s						
KIS	Kishinev	99.63	36	eP	Pdif	12 35 52.0	-2.0
KIS				eS	SKSac	12 46 35.0	+5.5
KIS				LRM	MLR	13 18 58.0	
	comp=Z,1µm,20.0s						
KIS	Kishinev	99.63	36	eP	Pdif	12 35 52.0	-2.0
KIS				MLR	MLR		
	comp=Z,2µm,20.0s						
ITM	Ithomi	100.01	48	PFAKE		12 36 10.0	+14
ITM				LR	LR		
	comp=Z,800nm,22.0s						
TIRR	Tirgusor	100.76	39	PFAKE		12 36 10.0	+11
TIRR				LR	LR		
	comp=Z,2µm,22.0s						
ALN	Alexandroupoli	101.10	43	PFAKE		12 36 10.0	+9.4
ALN				LR	LR		
	comp=Z,800nm,22.0s						
VNA3	Neumayer Olymp	101.10	161	P	Pdif	12 35 59.9	0.0
YUK	Yuzh-Kuril'sk	101.36	321	c iP	Pdif	12 35 50.8	-11
YUK				i S	SKSac	12 46 35.9	-2.1
YUK				i SS	SS	12 54 41.2	+2.3
VNA1	Neumayer--Stat	101.44	160	P	Pdif	12 36 01.8	+0.5
YSS	Yuzh-Sakhalins	101.53	325	⇑eP	Pdif	12 36 03.0	+0.6
YSS				e		12 40 12.0	
YSS				eS	Sdif	12 47 35.0	-5.1
YSS				ePS	PS	12 49 16.0	-0.6
YSS				eSS	SS	12 54 53.0	+12
YSS				pmax	pmax		
	comp=Z,300nm,4.5s						
IDI	Anoyia	103.01	48	P	Pdif	12 36 07.2	-2.1
	comp=Z,12nm,1.0s,baz=268,slow=4.7,SNR=2.4						
SNAA	Sanae	103.32	161	P	Pdif	12 36 09.8	-0.1
SIM	Simferopol'	103.83	36	eP	Pdif	12 36 11.5	-1.2
SIM				e		12 46 49.0	
DZM	Mont Dzumac	105.24	251	eSP	SP	12 49 52.3	+0.2
	comp=Z,678nm,26.5s						
DZM				eSS	SKKPbc	12 55 38.6	-0.9
	comp=Z,511nm,24.8s						
DZM	Mont Dzumac	105.24	251	eLQ	LQ	13 06 31.0	
	comp=Z,2µm,36.4s						
DZM				eLR	LR	13 10 57.4	
	comp=Z,2µm,21.8s						
BRVK	Borovoye	111.36	11	⇑iPKIKP	PKiKP	12 40 45.4	+1.2
BVAR	Borovoye Array	111.42	11	PKiKP	PKiKP	12 40 44.7	+0.4
	comp=Z,0.9nm,0.6s,baz=318,slow=2.0,SNR=6.1						
ZALV	Zalesovo Beam	112.05	2	PKiKP	PKiKP	12 40 44.9	-0.5
	comp=Z,0.8nm,0.4s,baz=225,slow=3.4,SNR=3.9						
ZALV	Zalesovo Beam	112.05	2	PKIKP	PKiKP	12 40 45.0	-0.5
MAK	Makhachkala	112.32	31	i P	Pdif	12 36 52.1	+1.6
MAK				ePPP	PPP	12 43 54.3	
MAK				e		12 47 27.6	
CN2	Changchun	112.62	331	Pdif	Pdif	12 36 54.5	+2.7
CN2				ePP	PP	12 41 41.5	+8.3
CN2				AMB	AMB		
	comp=Z,260nm,16.0s						
CN2				LR	LR		
	comp=N,700nm,20.0s						
CN2				LR	LR		
	comp=E,680nm,20.0s						
CN2				LR	LR		
	comp=Z,1µm,22.0s						
TLY	Talaya	112.86	349	i PKIKP	PKiKP	12 41 02.9	+16
TLY				e		12 41 35.0	
TLY				eSS	SS	12 57 12.2	-1.4
TLY				pmax	pmax		
	comp=Z,7.0nm,1.9s						
KURK	Kurchatov	114.86	6	ePKPdf	PKPdf	12 40 53.6	+2.7
KURK				PKKPbc	PKKPbc	12 51 26.7	-2.8
KURK	Kurchatov	114.86	6	⇓iPKIKP	PKPdf	12 40 51.5	+0.5
KURBB	Kurchatov Arra	114.94	6	PKP	PKPdf	12 40 51.0	-0.1
	comp=Z,2.2nm,0.7s,baz=347,slow=2.1,SNR=27						
KURBB				PKKPbc	PKKPbc	12 51 26.7	-2.5
	comp=Z,0.6nm,0.7s,baz=186,slow=3.1,SNR=5.8						
ULN	Ulaanbaatar	115.74	345	d iPKIKP	PKPdf	12 40 54.5	+1.5
SONA1	Songino Array	115.91	346	ePKPdf	PKPdf	12 40 55.5	+2.2
SONM	Songino Array	115.93	346	PKP	PKPdf	12 40 53.6	+0.3
	comp=Z,2.0nm,0.7s,baz=329,slow=1.2,SNR=7.7						
SONM				PKKPbc	PKKPbc	12 51 23.3	-2.7
	comp=Z,1.1nm,0.9s,baz=177,slow=5.5,SNR=3.8						
KS01	Wonju Array Si	116.03	325	ePKPdf	PKPdf	12 40 53.5	-0.1
KSRS	Korea Array	116.03	325	PKP	PKPdf	12 40 54.1	+0.5
	comp=Z,2.8nm,0.7s,baz=6.9,slow=1.8,SNR=6.6						
KSAR	Wonju Array Be	116.06	325	PKP	PKPdf	12 40 54.1	+0.4
KSAR	Wonju Array Be	116.06	325	PKIKP	PKPdf	12 40 54.1	+0.4
DL2	Dalian	118.22	330	PKP	PKPdf	12 40 52.5	-5.3
DL2				eSS	SS	12 58 29.5	+4.8
DL2				AMB	AMB		
	comp=Z,240nm,10.0s						
DL2				LR	LR		
	comp=Z,580nm,18.8s						
DL2				LR	LR		
	comp=Z,1µm,18.6s						
DL2				LR	LR		
	comp=Z,990nm,18.6s						
MAKZ	Makanchi	119.03	4	ePKPdf	PKPdf	12 40 58.0	-1.2
MAKZ	Makanchi	119.03	4	ePKIKP	PKPdf	12 40 58.0	-1.2
MK31	Makanchi Array	119.07	4	ePKPdf	PKPdf	12 40 59.0	-0.3
MK31	Makanchi Array	119.07	4	ePKIKP	PKPdf	12 40 59.0	-0.3
MKAR	Makanchi Array	119.07	4	PKP	PKPdf	12 40 59.1	-0.1
	comp=Z,2.1nm,0.8s,baz=353,slow=0.7,SNR=16						
MKAR				PKKPbc	PKKPbc	12 51 13.6	-1.1
	comp=Z,0.4nm,0.7s,baz=157,slow=4.1,SNR=3.5						
MK01	Makanchi Array	119.09	4	ePKPdf	PKPdf	12 40 58.8	-0.5
BJI	Beijing	119.74	335	Pdif	Pdif	12 37 39.8	+16
BJI				PKP	PKPdf	12 40 59.8	-0.9
BJI				PP	PP	12 42 23.8	+0.9
BJI	Beijing	119.74	335	PKP	PKPdf	12 40 59.8	-0.9
BJI				SS	SS	12 58 52.5	+8.5
BJI				LR	LR		
	comp=Z,2µm,20.8s						
BJI				LR	LR		
	comp=Z,1µm,18.2s						
BJI				LR	LR		
	comp=Z,2µm,22.7s						
HHC	Hu-ho-hao-te	120.80	339	ePKP	PKPdf	12 41 03.5	+0.6
HHC				PP	PP	12 42 32.0	+1.7
HHC				SKS	SKSdf	12 48 13.5	+1.5
HHC				SKKS	SKKSac	12 49 21.5	-6.6
HHC				AMB	AMB		
	comp=Z,240nm,5.5s						
HHC				LR	LR		
	comp=Z,950nm,20.2s						
HHC				LR	LR		
	comp=Z,880nm,21.2s						
HHC				LR	LR		
	comp=Z,2µm,22.4s						
BOSA	Boshof	120.95	115	PKP	PKPdf	12 41 03.2	-0.2
	comp=Z,14nm,0.8s,baz=304,slow=2.9,SNR=14						
LBTB	Lobatse	121.19	111	ePKPdf	PKPdf	12 41 04.0	0.0
LBTB	Lobatse	121.19	111	ePKIKP	PKPdf	12 41 04.0	0.0
GEYT	Alibeck	121.26	27	PKP	PKPdf	12 41 03.5	-0.2
	comp=Z,2.1nm,0.7s,baz=67,slow=3.7,SNR=5.3						
GYA0B	ALIBECK ARRAY	121.26	27	ePKPdf	PKPdf	12 41 03.9	+0.2
FRU	Bishkek	122.00	11	ePKIKP	PKPdf	12 41 06.0	+1.0
FRU				e		12 41 18.0	
AAK	Ala-Archa	122.16	11	PKP	PKPdf	12 41 05.4	-0.1
	comp=Z,2.6nm,0.3s,baz=94,slow=0.8,SNR=3.5						
AAK	Ala-Archa	122.16	11	ePKPdf	PKPdf	12 41 06.2	+0.7
AAK	Ala-Archa	122.16	11	c iPKIKP	PKPdf	12 41 06.5	+1.0
WMQ	Urumqi	122.22	360	PKP	PKPdf	12 41 06.0	+0.5
WMQ				SKS	SKSdf	12 48 12.8	-1.7
WMQ				SS	SS	12 59 18.8	+3.6
WMQ				AMB	AMB		
	comp=Z,1µm,4.7s						
WMQ				LR	LR		
	comp=Z,3µm,19.7s						
WMQ				LR	LR		
	comp=Z,2µm,21.7s						
WMQ				LR	LR		
	comp=Z,3µm,23.7s						
TIA	Tai'an	122.51	332	PKP	PKPdf	12 41 05.3	-0.9
TIA				AMB	AMB		
	comp=Z,330nm,11.6s						
TIA				LR	LR		
	comp=Z,660nm,14.7s						
TIA				LR	LR		
	comp=Z,440nm,16.7s						
TIA				LR	LR		
	comp=Z,980nm,19.1s						
LSZ	Lusaka	122.85	99	ePKPdf	PKPdf	12 41 07.6	+0.2
LSZ	Lusaka	122.85	99	ePKIKP	PKPdf	12 41 07.6	+0.2
PRZ	Przheval'sk	122.95	8	ePKPdf	PKPdf	12 41 08.4	+1.4
PRZ	Przheval'sk	122.95	8	ePKIKP	PKPdf	12 41 08.5	+1.4
MAW	Mawson	124.32	169	PKP	PKPdf	12 41 08.5	-0.1
	comp=Z,3.4nm,0.8s,baz=246,slow=6.0,SNR=5.0						
RAYN	Ar Rayn	124.41	48	ePKPdf	PKPdf	12 41 10.1	-0.1
RAYN	Ar Rayn	124.41	48	ePKIKP	PKPdf	12 41 10.1	-0.1
SSE	Sheshan	124.47	325	PKP	PKPdf	12 41 10.3	+0.3
SSE				AMB	AMB		
	comp=Z,130nm,4.8s						
SSE				LR	LR		
	comp=Z,200nm,21.6s						
SSE				LR	LR		
	comp=Z,200nm,24.5s						
NJ2	Nanjing	125.00	327	ePKP	PKPdf	12 41 13.0	+2.0
GTA	Gaotai	125.39	348	⇑PKP	PKPdf	12 41 12.0	+0.2
GTA				sPKP		12 41 26.8	
GTA				PP	PP	12 43 10.5	+9.4
GTA				SS	SS	13 00 06.0	+10
GTA				AMB	AMB		
	comp=Z,300nm,13.3s						
GTA				LR	LR		
	comp=Z,1µm,22.5s						
GTA				LR	LR		
	comp=Z,760nm,20.6s						
GTA				LR	LR		
	comp=Z,2µm,22.2s						

KSH	**Kashi**	**125.46**	**11**	*e*PKP	**PKPdf**	**12 41 14.0**	**+2.1**
KSH				sPKP		12 41 28.5	
KSH				PP	**PP**	**12 43 08.0**	**+6.5**
KSH				PKS	**PKSdf**	**12 44 49.0**	**+0.4**
KSH				SKS	**SKSdf**	**12 48 20.8**	**-0.1**
KSH				SKKS	**SKKSac**	**12 49 55.8**	**-2.3**
KSH				LR	LR		
	comp=Z,600nm,14.3s						
KSH				LR	LR		
	comp=Z,1µm,19.4s						
KSH				LR	LR		
	comp=Z,1µm,19.3s						
CASY	**Casey**	**125.76**	**191**	*e*PKPdf	**PKPdf**	**12 41 11.7**	**+0.4**
LZH	**Lanzhou**	**127.59**	**343**	*e*PKP	**PKPdf**	**12 41 17.8**	**+1.7**
LZH				LR	LR		
	comp=Z,4µm,19.5s						
LZH				LR	LR		
	comp=Z,2µm,18.4s						
LZH				LR	LR		
	comp=Z,4µm,21.7s						
STKA	**Stephens Creek**	**127.70**	**241**	PKP	**PKPdf**	**12 41 16.4**	**+0.3**
	comp=Z,7.5nm,0.7s,baz=56,slow=2.3,SNR=15						
XAN	**Xi'an**	**127.81**	**337**	PKP	**PKPdf**	**12 41 16.8**	**+0.4**
XAN				LR	LR		
	comp=Z,1µm,19.2s						
XAN				LR	LR		
	comp=Z,990nm,17.3s						
XAN				LR	LR		
	comp=Z,1µm,19.7s						
WHN	**Wuhan**	**128.49**	**330**	PKP	**PKPdf**	**12 41 17.8**	**+0.1**
WHN				LR	LR		
	comp=Z,1µm,11.7s						
WHN				LR	LR		
	comp=Z,2µm,16.6s						
WHN				LR	LR		
	comp=Z,2µm,21.6s						
QZH	**Quanzhou**	**130.60**	**322**	*e*PKP	**PKPdf**	**12 41 23.0**	**+1.1**
QZH				PP	**PP**	**12 43 42.8**	**+6.8**
QZH				SS	SS	13 01 10.0	+8.6
QZH				LR	LR		
	comp=Z,490nm,17.0s						
QZH				LR	LR		
	comp=Z,620nm,22.3s						
QZH				LR	LR		
	comp=Z,790nm,17.8s						
CD2	**Chengdu**	**132.44**	**341**	PKP	**PKPdf**	**12 41 25.3**	**0.0**
CD2				sPKP		12 41 40.8	
CD2				PP	**PP**	**12 43 50.3**	**+3.0**
CD2				SKS	**SKSdf**	**12 48 33.8**	**-0.1**
CD2				SKKS	**SKKSac**	**12 50 40.3**	**-1.5**
CD2				SS	**SS**	**13 01 25.5**	**+2.6**
CD2				AMB	AMB		
	comp=Z,580nm,5.2s						
CD2				LR	LR		
	comp=Z,2µm,20.4s						
CD2				LR	LR		
	comp=Z,1µm,23.3s						
CD2				LR	LR		
	comp=Z,2µm,17.9s						
WSAR	**Wadi Sarin**	**133.28**	**38**	PKP	**PKPdf**	**12 41 26.7**	**-0.3**
	comp=Z,4.7nm,0.9s,baz=43,slow=1.0,SNR=3.6						
WC3	**Warramunga Arr**	**134.90**	**256**	*e*PKPdf	**PKPdf**	**12 41 29.9**	**-0.2**
WB2	**Warramunga Arr**	**134.92**	**256**	*e*PKPdf	**PKPdf**	**12 41 31.2**	**+1.1**
WRAB	**Tennant Creek**	**134.92**	**256**	*e*PKPdf	**PKPdf**	**12 41 30.9**	**+0.8**
WRAB	**Tennant Creek**	**134.92**	**256**	⇓*i*PKIKP	**PKPdf**	**12 41 31.2**	**+1.1**
WRA	**Warramunga Arr**	**134.93**	**256**	PKP	**PKPdf**	**12 41 30.3**	**+0.2**
	comp=Z,4.7nm,0.7s,baz=85,slow=2.1,SNR=25						
WRA				SKPbc	**SKPbc**	**12 44 56.9**	**-0.6**
	comp=Z,1.1nm,1.1s,baz=94,slow=2.4,SNR=4.9						
GZH	**Guangzhou**	**135.06**	**325**	PKP	**PKPdf**	**12 41 28.0**	**-2.3**
GZH				PKS	**PKSdf**	**12 45 03.0**	**-3.8**
GZH				LR	LR		
	comp=Z,410nm,20.0s						
GZH				LR	LR		
	comp=Z,890nm,20.0s						
AS01	**Alice Springs**	**135.19**	**251**	*e*PKPdf	**PKPdf**	**12 41 28.1**	**-2.5**
AS31	**Alice Springs**	**135.23**	**251**	*e*PKPdf	**PKPdf**	**12 41 30.0**	**-0.7**
ASAR	**Alice Springs**	**135.23**	**251**	PKhKP	PKPpre	12 41 19.1	
	comp=Z,0.8nm,0.8s,baz=106,slow=3.5,SNR=6.6						
ASAR				PKP	**PKPdf**	**12 41 30.6**	**-0.1**
	comp=Z,3.3nm,0.8s,baz=103,slow=1.7,SNR=18						
GYA	**Guiyang**	**135.43**	**335**	Pdif	**Pdif**	**12 38 33.0**	**-0.8**
GYA				PKP	**PKPdf**	**12 41 31.3**	**+0.2**
GYA				PP	**PP**	**12 44 10.5**	**+3.9**
GYA				PKS	**PKSdf**	**12 45 05.3**	**-2.4**
GYA	**Guiyang**	**135.43**	**335**	PKP	**PKPdf**	**12 41 31.3**	**+0.2**
GYA				PP	**PP**	**12 44 10.5**	**+3.9**
GYA				PKS	**PKSdf**	**12 45 05.3**	**-2.4**
GYA				SKKS		12 50 57.0	
GYA				SS	**SS**	**13 02 00.8**	**+1.3**
GYA				AMB	AMB		
	comp=Z,190nm,8.2s						
GYA				LR	LR		
	comp=Z,300nm,21.8s						
GYA				LR	LR		
	comp=Z,250nm,22.4s						
GYA				LR	LR		
	comp=Z,220nm,22.0s						
LSA	**Lhasa**	**136.17**	**355**	*e*PKPdf	**PKPdf**	**12 41 36.1**	**+3.2**
LSA	**Lhasa**	**136.17**	**355**	*e*PKIKP	**PKPdf**	**12 41 36.1**	**+3.2**
MTN	**Manton Dam**	**137.54**	**266**	*e*PKPdf	**PKPdf**	**12 41 37.3**	**+2.2**
KMI	**Kunming**	**138.12**	**339**	PKP	**PKPdf**	**12 41 36.8**	**+0.5**
KMI				sPKP		12 41 52.0	
KMI				PP	**PP**	**12 44 25.0**	**+1.6**
KMI				PKS	**PKSdf**	**12 45 12.3**	**-0.5**
KMI				SKKS		12 51 17.5	
KMI				SS	**SS**	**13 02 34.0**	**+2.5**
KMI				AMB	AMB		
	comp=Z,500nm,9.8s						
KMI				LR	LR		
	comp=Z,1µm,21.6s						
KMI				LR	LR		
	comp=Z,750nm,19.2s						
KMI				LR	LR		
	comp=Z,2µm,24.1s						
SHL	**Shillong**	**140.19**	**354**	*e*PKPdf	PKPpre	12 41 41.1	
SHL	**Shillong**	**140.19**	**354**	*e*P	**PKPdf**	**12 41 33.0**	**-7.0**
SHL				*e*S	**SKiKP**	**12 45 18.0**	**+2.4**
SHL	**Shillong**	**140.19**	**354**	*e*PKIKP	**PKPdf**	**12 41 41.1**	**+1.1**
OPO	**Ambohidratompo**	**141.20**	**102**	PKP	**PKPdf**	**12 41 40.1**	**-1.8**
	comp=Z,7.0nm,1.0s,baz=236,slow=3.6,SNR=3.9						
APSI	**Ampana**	**143.68**	**288**	PKP	PKPab	12 41 42.9	0.0
APSI				PKP	**PKPdf**	**12 41 46.3**	**+0.1**
KDI	**Kendari**	**143.85**	**283**	PKP	PKPbc	12 41 44.0	-0.3
BATI	**Baumata**	**144.40**	**272**	PKP	**PKPdf**	**12 41 47.1**	**-0.4**
	comp=Z,43nm,1.0s,baz=166,slow=1.7,SNR=3.7						
MPSI	**Mapaga**	**144.76**	**292**	PKP	**PKPab**	**12 41 45.3**	**-1.7**
POO	**Poona**	**144.79**	**23**	*e*P	**PKPab**	**12 41 43.0**	**-4.0**
CHTO	**Chiang Mai**	**145.25**	**341**	*e*PKPbc	**PKPbc**	**12 41 47.5**	**-1.0**
CHTO	**Chiang Mai**	**145.25**	**341**	*e*PKP2	**PKPbc**	**12 41 47.5**	**-1.0**
CHTO	**Chiang Mai**	**145.25**	**341**	P	**PKPbc**	**12 41 48.5**	**0.0**
	comp=Z,224nm,1.2s,comp=Z,8µm						
PCI	**Palu**	**145.33**	**290**	PKP	**PKPbc**	**12 41 47.8**	**-1.2**
MMRI	**Maumere**	**145.47**	**275**	PKP	**PKPdf**	**12 41 47.9**	**-1.4**
MMRI	**Maumere**	**145.47**	**275**	*e*PKPdf	**PKPdf**	**12 41 48.6**	**-0.7**
CM31	**Chiang Mai Arr**	**145.59**	**340**	*e*PKPdf	**PKPab**	**12 41 50.3**	**+0.4**
CMAR	**Chiang Mai Arr**	**145.59**	**340**	PKPbc	**PKPab**	**12 41 50.1**	**+0.3**
	comp=Z,36nm,0.8s,baz=339,slow=3.6,SNR=174						
CM01	**Chiang Mai Arr**	**145.61**	**340**	*e*PKPdf	**PKPab**	**12 41 50.2**	**+0.2**
SRSP	**Sriramsagar**	**145.84**	**15**	*e*PKPab	**PKPdf**	**12 41 49.4**	**-0.5**
EDFI	**Ende, Flores**	**146.02**	**275**	PKP	**PKPdf**	**12 41 48.5**	**-1.9**
RPR	**Rampur**	**146.14**	**14**	*e*PKPab	**PKPdf**	**12 41 50.6**	**+0.2**
TTSI	**Tana Toraja**	**146.17**	**286**	PKP	**PKPdf**	**12 41 49.1**	**-1.4**
SPSI	**Sidrap Palu**	**146.53**	**285**	PKP	**PKPbc**	**12 41 52.1**	**-0.5**
PBKT	**Sadao Pong**	**146.59**	**336**	*e*PKPdf	**PKPbc**	**12 41 52.8**	**+0.1**
MSEY	**Mahe Island**	**147.11**	**76**	*e*PKPdf	**PKPbc**	**12 41 53.4**	**-1.0**
MSEY	**Mahe Island**	**147.11**	**76**	*e*PKP2	**PKPbc**	**12 41 53.4**	**-1.0**
NWAO	**Narrogin (SRO)**	**147.14**	**230**	PKPbc	**PKPbc**	**12 41 53.3**	**-0.6**
	comp=Z,16nm,0.9s,baz=334,slow=6.0,SNR=5.6						
NWAO	**Narrogin (SRO)**	**147.14**	**230**	*e*PKPdf	**PKPbc**	**12 41 53.7**	**-0.1**
NWAO	**Narrogin (SRO)**	**147.14**	**230**	*e*PKIKP	**PKPbc**	**12 41 53.7**	**-0.1**
CHLP	**Challavanipeta**	**147.29**	**6**	*e*PKPbc	**PKPbc**	**12 41 55.2**	**+0.7**
HYBB	**Hyderabad (bro**	**147.34**	**16**	*e*PKPbc	**PKPbc**	**12 41 53.7**	**-1.1**
HYB	**Hyderabad**	**147.34**	**16**	*i* PKP	**PKPbc**	**12 41 54.5**	**-0.3**
BKB	**Balikpapan**	**148.15**	**291**	PKP	**PKPbc**	**12 41 58.4**	**+1.3**
PVM	**Polavaram**	**148.19**	**11**	*e*PKPbc	**PKPbc**	**12 41 56.2**	**-0.8**
MBWA	**Marble Bar**	**148.52**	**253**	*e*PKPdf	**PKPdf**	**12 41 54.1**	**-0.2**
SRLM	**Srisailam**	**148.69**	**16**	*e*PKPdf	**PKPdf**	**12 41 54.9**	**+0.1**
ADKI	**Addanki**	**149.21**	**14**	*e*PKPbc	**PKPbc**	**12 41 59.8**	**+0.1**
URV	**Uravakonda**	**149.30**	**20**	*e*PKPbc	**PKPbc**	**12 41 59.2**	**-0.9**
PLAI	**Plampang**	**149.81**	**277**	PKP	**PKPdf**	**12 41 54.9**	**-1.6**
SBUM	**Sibu**	**150.37**	**302**	*e*PKPdf	**PKPdf**	**12 41 57.8**	**+0.4**
SBUM				*e*PKPbc	**PKiKP**	**12 42 03.3**	**-0.1**
SKHT	**Srikalahasti**	**151.16**	**16**	*e*PKPdf	**PKPdf**	**12 41 59.2**	**+0.6**
KSM	**Kuching**	**152.49**	**303**	*e*PKPdf	**PKPdf**	**12 42 01.6**	**+1.0**
KSM				*e*PKPbc	**PKiKP**	**12 42 08.6**	**+0.8**
IPM	**Ipoh**	**157.03**	**323**	*e*PKPdf	**PKPdf**	**12 42 07.2**	**+0.3**
KCSI	**Kotacane, Aceh**	**159.59**	**329**	PKP	**PKPdf**	**12 42 08.2**	**-1.8**
KCSI				PKP	**PKPdf**	**12 42 10.7**	**+0.7**
PSI	**Prapat**	**159.59**	**325**	PKP	**PKPdf**	**12 42 09.8**	**-0.3**
	comp=Z,7.5nm,0.9s,baz=179,slow=0.9,SNR=9.1						
PSI				PKPab	**PKPab**	**12 42 48.6**	**+0.3**
	comp=Z,20nm,1.0s,baz=0.3,slow=3.1,SNR=5.4						
MNSI	**Mandailing Nat**	**160.82**	**320**	PKP	**PKPdf**	**12 42 09.2**	**-2.2**
MNSI				PKP	**PKPdf**	**12 42 12.2**	**+0.8**
MDSI	**Maura Dua**	**160.87**	**299**	PKP	**PKPdf**	**12 42 09.8**	**-1.6**
MDSI				PKP	**PKPdf**	**12 42 12.4**	**+1.0**
GSI	**Gunungsitoli**	**161.58**	**326**	PKP	**PKPdf**	**12 42 10.5**	**-1.7**
GSI				PKP	**PKPdf**	**12 42 13.1**	**+0.9**
GSI	**Gunungsitoli**	**161.58**	**326**	*e*PKPdf	**PKPdf**	**12 42 13.5**	**+1.3**
MASI	**Maura Aman, Be**	**161.70**	**306**	PKP	**PKPdf**	**12 42 10.6**	**-1.8**
MASI				PKP	**PKPdf**	**12 42 13.3**	**+0.9**

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*ISCJB **29** 12:35:07.7±0.6, 8°.32S±0°.08×119°.61E±0°.05, h200^{km}, mb3.2/1, Error ellipse: s-maj=11.7km s-min=6.6km az=4.9*

*DJA **29** 12:35:10.3±0.8, 8°S±6°×12°0E±°, h163^{km}±11^{km}, M3.5/8, MLv3.5/8*

*IDC **29** 12:35:13.2±2.2, 7°.76S×120°.25E, h215^{km}±17^{km}, mb2.9/2, mb1 3.2/4, mb1mx2.9/56, mbtmp3.7/4, MS3.7/1, Ms1 3.7/1, ms1mx3.1/11, Error ellipse: s-maj=80.0km s-min=11.8km az=50.0*

ISC 29 12:35:08.6±1.0, **8°.30S**±0°.08×**119°.60E**±0°.05, **h200**^{km}, **n12**, σ**1^{s}.86**/17, **Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WBSI	**Waikabubak, Su**	**1.35**	**189**	P	**Pn**	**12 35 40.5**	**-0.7**
WBSI				S	**Sn**	**12 36 04.4**	**-2.2**
WSI	**Waingapu**	**1.53**	**153**	P	**Pn**	**12 35 42.3**	**-0.3**
PLAI	**Plampang**	**1.88**	**254**	P	**Pn**	**12 35 44.3**	**-1.7**
PLAI				S	**Sn**	**12 36 13.2**	**-1.7**
EDFI	**Ende, Flores**	**2.11**	**102**	P	**Pn**	**12 35 47.2**	**-1.3**
EDFI				S	**Sn**	**12 36 15.6**	**-3.8**
MMRI	**Maumere**	**2.63**	**98**	P	**Pn**	**12 35 53.3**	**-0.7**
MMRI				S	**Sn**	**12 36 27.2**	**-2.2**
TWSI	**Taliwang, Sumb**	**2.73**	**261**	P	**Pn**	**12 35 55.8**	**+0.7**
BKSI	**Bulukumba**	**3.00**	**10**	P	**Pn**	**12 35 58.1**	**-0.2**
BATI	**Baumata**	**4.44**	**116**	P	**Pn**	**12 36 17.8**	**+1.8**
	7.2nm,0.3s,baz=285,slow=12,SNR=9.0						
BATI				S	**Sn**	**12 37 07.8**	**-1.1**
	17nm,0.3s,baz=188,slow=19,SNR=8.4						
WRA	**Warramunga Arr**	**18.37**	**131**	P	**Pn**	**12 39 11.8**	**+0.6**
	0.4nm,0.3s,baz=307,slow=11,SNR=55						
WRA				S	**S**	**12 42 28.9**	**+0.8**
	0.1nm,0.3s,baz=308,slow=24,SNR=2.4						
ASAR	**Alice Springs**	**20.53**	**140**	P	Pn	12 39 36.0	-1.2
	0.5nm,0.3s,baz=316,slow=9.1,SNR=28						
ASAR				S	**S**	**12 43 13.1**	**+2.7**
	1.2nm,0.8s,baz=314,slow=20,SNR=6.5						
GUMO	**Guam**	**33.20**	**49**	LR	LR	12 53 19.5	
	comp=Z,122nm,20.5s,baz=194,slow=34						
MKAR	**Makanchi Array**	**64.11**	**332**	P	**P**	**12 45 23.0**	**+1.5**
	0.3nm,0.5s,baz=129,slow=8.3,SNR=4.2						

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*ISCJB **29** 12:40:14.4±0.2, 42°.48N±0°.02×19°.21E±0°.02, h23^{km}±2^{km}, Error ellipse: s-maj=2.8km s-min=2.3km az=28.8*

*CSEM **29** 12:40:14.3±0.1, 42°.49N×19°.26E, h12^{km}, ML2.9/8, Error ellipse: s-maj=2.3km s-min=2.1km az=14.0*

*PDG **29** 12:40:14.3±0.1, 42°.49N×19°.21E, h15^{km}, MD2.7/6, ML2.6/12, Error ellipse: s-maj=0.1km s-min=0.2km az=0.0*

*BEO **29** 12:40:14.7±0.3, 42°.49N×19°.24E, h14^{km}±2^{km}, ML2.5/14*

*TIR **29** 12:40:24.1, 42°.49N×19°.26E, h7^{km}, Md3.2/5*

ISC 29 12:40:14.7±0.8, **42°.49N**±0°.01×**19°.24E**±0°.01, **h18**^{km}±3^{km}, **n137**, σ**1^{s}.14**/240, **39C-15D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDG	**Podgorica**	**0.06**	**166**	*e*Pg	**Pg**	**12 40 17.7**	**-0.3**
PDG				*e*Sg	**Sg**	**12 40 20.6**	**+0.3**
PDG	**Podgorica**	**0.06**	**166**	⇓*i*P	**Pg**	**12 40 17.5**	**-0.5**
PDG				S	**Sg**	**12 40 20.5**	**+0.3**
PDG	**Podgorica**	**0.06**	**166**	⇓*i*P	**Pg**	**12 40 17.5**	**-0.5**
PDG	**Podgorica**	**0.06**	**166**	*e*Pg	**Pg**	**12 40 17.7**	**-0.3**
PDG				*i* Sg	**Sg**	**12 40 18.8**	**-1.4**
PDG				S	**Sg**	**12 40 20.5**	**+0.3**
PDG	**Podgorica**	**0.06**	**166**	⇑*i*Pg	**Pg**	**12 40 17.7**	**-0.3**
PDG				*e*Sg	**Sg**	**12 40 20.7**	**+0.5**
TTG	**Podgorica**	**0.06**	**166**	⇑*i*Pg	**Pg**	**12 40 17.7**	**-0.3**
TTG				*i* Sg	**Sg**	**12 40 18.8**	**-1.4**
CEME	**Cevo**	**0.24**	**284**	⇑*i*Pg	**Pg**	**12 40 19.5**	**-0.8**
CEME				*i* Sg	**Sg**	**12 40 23.2**	**-1.0**
CEME	**Cevo**	**0.24**	**284**	⇑*i*Pg	**Pg**	**12 40 19.5**	**-0.8**
CEME				*i* Sg	**Sg**	**12 40 23.2**	**-1.0**
DRME	**Dracevica, Mon**	**0.30**	**187**	⇓*i*Pg	**Pg**	**12 40 20.5**	**-0.9**
DRME				*i* Sg	**Sg**	**12 40 25.9**	**+0.1**
DRME	**Dracevica, Mon**	**0.30**	**187**	⇓*i*Pg	**Pg**	**12 40 20.5**	**-0.9**
DRME				*i* Sg	**Sg**	**12 40 25.9**	**+0.1**
DRME	**Dracevica, Mon**	**0.30**	**187**	⇑*i*Pg	**Pg**	**12 40 20.4**	**-0.9**
DRME				*e*Sg	**Sb**	**12 40 26.3**	**0.0**
BUM	**Brajici-Budva**	**0.32**	**234**	⇓*i*Pg	**Pg**	**12 40 20.5**	**-1.0**
BUM				*i* Sg	**Sg**	**12 40 25.5**	**-0.7**
BUM	**Brajici-Budva**	**0.32**	**234**	⇓*i*Pg	**Pg**	**12 40 20.5**	**-1.0**
BUM				*i* Sg	**Sg**	**12 40 25.5**	**-0.7**
NKME	**Niksic**	**0.35**	**323**	⇑*i*Pg	**Pg**	**12 40 21.1**	**-1.0**
NKME				*i* Sg	**Sg**	**12 40 26.7**	**-0.4**
NKME	**Niksic**	**0.35**	**323**	⇑*i*Pg	**Pg**	**12 40 21.1**	**-1.0**
NKME				*i* Sg	**Sg**	**12 40 26.7**	**-0.4**
NKY	**Niksic**	**0.37**	**331**	⇑*i*Pg	**Pg**	**12 40 21.6**	**-0.9**
NKY				*i* Sg	**Sg**	**12 40 27.6**	**-0.2**
NKY	**Niksic**	**0.37**	**331**	⇑*i*Pg	**Pg**	**12 40 21.6**	**-0.9**
NKY				*i* Sg	**Sg**	**12 40 27.6**	**-0.2**
KOME	**Kolasin**	**0.42**	**30**	⇑*i*Pg	**Pg**	**12 40 23.0**	**-0.3**
KOME				*i* Sg	**Sb**	**12 40 29.5**	**-0.2**
KOME	**Kolasin**	**0.42**	**30**	⇑*i*Pg	**Pg**	**12 40 23.0**	**-0.3**
KOME				*i* Sg	**Sb**	**12 40 29.5**	**-0.2**
ULC	**Ulcinj**	**0.53**	**179**	⇑*i*Pg	**Pg**	**12 40 24.2**	**-1.0**
ULC				*i* Sg	**Sb**	**12 40 32.8**	**+0.2**
ULC	**Ulcinj**	**0.53**	**179**	⇑*i*Pg	**Pg**	**12 40 24.2**	**-1.0**
ULC				*i* Sg	**Sb**	**12 40 32.8**	**+0.2**
PVY	**Plav**	**0.55**	**79**	⇑*i*Pg	**Pg**	**12 40 25.1**	**-0.6**
PVY				*i* Sg	**Sb**	**12 40 34.1**	**+0.8**
HCY	**Herceg Novi**	**0.55**	**266**	⇑*i*Pg	**Pg**	**12 40 24.5**	**-1.2**
HCY				*i* Sg	**Sg**	**12 40 33.3**	**+0.2**
HCY	**Herceg Novi**	**0.55**	**266**	⇑*i*Pg	**Pg**	**12 40 24.5**	**-1.2**
HCY				*e*Sg	**Sg**	**12 40 33.0**	**-0.1**
HCY	**Herceg Novi**	**0.55**	**266**	⇓*i*Pg	**Pg**	**12 40 24.1**	**-1.6**
HCY				*e*Sg	**Sg**	**12 40 33.0**	**-0.1**
BEY	**Berane**	**0.62**	**51**	⇓*i*Pg	**Pg**	**12 40 26.3**	**-0.7**
BEY				*i* Sg	**Sb**	**12 40 36.3**	**+0.9**
IVA	**Berane**	**0.62**	**51**	⇓*i*Pg	**Pg**	**12 40 26.3**	**-0.7**
IVA				*i* Sg	**Sb**	**12 40 36.3**	**+0.9**
BCI	**Bajram Curri**	**0.63**	**101**	*i* Pn	**Pg**	**12 40 25.9**	**-1.3**
BCI				*i* Sn	**Sb**	**12 40 36.1**	**+0.5**
BCI	**Bajram Curri**	**0.63**	**101**	*i* PN	**Pg**	**12 40 25.9**	**-1.3**
BCI				*i* SN	**Sb**	**12 40 36.1**	**+0.5**
BRY	**Bratogost**	**0.66**	**309**	⇑*i*Pg	**Pg**	**12 40 26.6**	**-1.2**
BRY				*i* Sg	**Sg**	**12 40 36.7**	**+0.1**
BRY	**Bratogost**	**0.66**	**309**	⇑*i*Pg	**Pg**	**12 40 26.6**	**-1.2**
BRY				*e*Sg	**Sg**	**12 40 36.1**	**-0.5**
BRY	**Bratogost**	**0.66**	**309**	⇑*i*Pg	**Pg**	**12 40 26.2**	**-1.6**
BRY				*e*Sg	**Sg**	**12 40 36.1**	**-0.5**
PUK	**Puka**	**0.66**	**132**	*i* Pn	**Pg**	**12 40 26.5**	**-1.3**
PUK				*i* Sn	**Sb**	**12 40 37.5**	**+0.9**
PUK	**Puka**	**0.66**	**132**	*i* PN	**Pg**	**12 40 26.5**	**-1.3**
PUK				*i* SN	**Sb**	**12 40 37.5**	**+0.9**
TREB	**Trebinje**	**0.69**	**290**	*e*Pg	**Pb**	**12 40 27.0**	**-1.2**
TREB				*e*Sg	**Sb**	**12 40 37.6**	**+0.1**
TREB	**Trebinje**	**0.69**	**290**	*e*Pg	**Pb**	**12 40 27.0**	**-1.2**
TREB				*e*Sg	**Sb**	**12 40 37.6**	**+0.1**
TREB	**Trebinje**	**0.69**	**290**	⇑*i*Pg	**Pb**	**12 40 26.8**	**-1.4**
TREB				*e*Sg	**Sb**	**12 40 37.7**	**+0.2**
UPM	**Unac-Piva**	**0.75**	**341**	⇑*i*Pg	**Pb**	**12 40 28.2**	**-1.2**
UPM				*i* Sg	**Sg**	**12 40 40.3**	**+0.7**
UPM	**Unac-Piva**	**0.75**	**341**	⇑*i*Pg	**Pb**	**12 40 28.2**	**-1.2**
UPM				*e*Sg	**Sb**	**12 40 38.7**	**-0.8**
UPM	**Unac-Piva**	**0.75**	**341**	⇑*i*Pg	**Pb**	**12 40 28.2**	**-1.2**
UPM				*e*Sg	**Sb**	**12 40 38.7**	**-0.8**
PLE	**Pljevlja**	**0.85**	**8**	⇓*i*Pg	**Pb**	**12 40 30.4**	**-0.6**
PLE				*i* Sg	**Sn**	**12 40 43.8**	**-0.2**
PLE	**Pljevlja**	**0.85**	**8**	⇓*i*Pg	**Pb**	**12 40 30.4**	**-0.6**
PLE				*i* Sg	**Sn**	**12 40 43.8**	**-0.2**
SJES	**Sjenica**	**0.94**	**35**	*e*Pg	**Pb**	**12 40 31.9**	**-0.7**
SJES				*e*Sg	**Sg**	**12 40 45.4**	**-0.1**
SJES	**Sjenica**	**0.94**	**35**	*e*Pg	**Pb**	**12 40 31.9**	**-0.7**
SJES				*e*Sg	**Sg**	**12 40 45.4**	**-0.1**
STON	**Ston**	**1.20**	**289**	*e*Pg	**Pn**	**12 40 36.3**	**-0.2**
STON				*e*Sg	**Sg**	**12 40 53.2**	**-0.3**
STON	**Ston**	**1.20**	**289**	*i* Pg	**Pn**	**12 40 35.8**	**-0.7**
STON				Sg	**Sg**	**12 40 53.8**	**+0.3**
STON	**Ston**	**1.20**	**289**	*e*Pg	**Pn**	**12 40 36.3**	**-0.2**
STON				*e*Sg	**Sn**	**12 40 52.5**	**+0.2**
STON	**Ston**	**1.20**	**289**	⇑*i*Pg	**Pn**	**12 40 35.2**	**-1.3**
STON				*e*Sg	**Sn**	**12 40 52.5**	**+0.2**
PHP	**Peshkopia**	**1.20**	**131**	*i* Pn	**Pg**	**12 40 37.5**	**-0.5**
PHP	**Peshkopia**	**1.20**	**131**	*i* PN	**Pg**	**12 40 37.5**	**-0.5**
PHP				*i* SN	Sb	12 40 35.9	-16
IVAS	**Ivanjica**	**1.28**	**31**	*e*Pg	**Pb**	**12 40 38.1**	**-0.2**
IVAS				*e*Sg	**Sn**	**12 40 55.2**	**+0.7**
IVAS	**Ivanjica**	**1.28**	**31**	*e*Pg	**Pb**	**12 40 38.1**	**-0.2**
IVAS				*e*Sg	**Sn**	**12 40 55.2**	**+0.7**
BBLS	**Lazići**	**1.38**	**5**	*e*Pg	**Pb**	**12 40 40.1**	**0.0**
BBLS				*e*Sg	**Sg**	**12 40 58.6**	**-0.8**
BBLS	**Lazići**	**1.38**	**5**	*e*Pg	**Pb**	**12 40 40.1**	**0.0**
BBLS				*e*Sg	**Sg**	**12 40 58.6**	**-0.8**
BBLS	**Lazići**	**1.38**	**5**	⇑*i*Pg	**Pb**	**12 40 39.7**	**-0.4**
BBLS				*e*Sg	**Sg**	**12 40 58.7**	**-0.7**
SELS	**Selova**	**1.57**	**62**	*e*Pn	**Pn**	**12 40 41.7**	**0.0**
SELS				*e*Sg	**Sg**	**12 41 04.3**	**-1.0**
HAPS	**Han Pijesak,Bl**	**1.61**	**353**	⇑*i*Pn	**Pn**	**12 40 42.6**	**+0.2**
HAPS				*e*Sn	**Sb**	**12 41 03.6**	**-0.4**
HAPS	**Han Pijesak,Bl**	**1.61**	**353**	⇑*i*Pn	**Pn**	**12 40 42.6**	**+0.2**
HAPS				*e*Sn	**Sb**	**12 41 03.6**	**-0.4**
DIVS	**Divibare**	**1.70**	**19**	*e*Pg	**Pn**	**12 40 44.4**	**+0.8**
DIVS				*e*Sg	**Sg**	**12 41 08.9**	**-0.7**
DIVS	**Divibare**	**1.70**	**19**	*e*Pn	**Pn**	**12 40 44.1**	**+0.5**
DIVS	**Divibare**	**1.70**	**19**	*e*Pg	**Pn**	**12 40 44.4**	**+0.8**
DIVS				*e*Sn	**Sb**	**12 41 06.0**	**-0.6**
DIVS				*e*Sg	**Sg**	**12 41 08.9**	**-0.7**
DIVS	**Divibare**	**1.70**	**19**	*e*Pn	**Pn**	**12 40 44.1**	**+0.5**
DIVS				*e*Sn	**Sb**	**12 41 06.0**	**-0.6**
SKO	**Skopje**	**1.72**	**107**	*e*Pg	**Pb**	**12 40 45.6**	**-0.1**
SKO				*e*Sg	**Sg**	**12 41 08.9**	**-1.1**
SKO	**Skopje**	**1.72**	**107**	*i* Pn	**Pb**	**12 40 45.4**	**-0.3**
SKO				*i* Sn	**Sg**	**12 41 08.7**	**-1.4**
SKO	**Skopje**	**1.72**	**107**	*e*Pg	**Pb**	**12 40 45.6**	**-0.1**
SKO				*e*Sg	**Sg**	**12 41 08.9**	**-1.1**
GRUS	**Gruza**	**1.77**	**37**	*e*Pn	**Pn**	**12 40 44.4**	**0.0**
GRUS				*e*Sg	**Sg**	**12 41 11.1**	**-0.6**
GRUS	**Gruza**	**1.77**	**37**	*e*Pn	**Pn**	**12 40 44.4**	**0.0**
GRUS				*e*Sg	**Sg**	**12 41 11.1**	**-0.6**
OHR	**Ohrid**	**1.81**	**139**	*i* Pn	**Pb**	**12 40 48.1**	**+0.8**
OHR				*i* Sn	**Sg**	**12 41 12.7**	**-0.2**
KRUS	**Krusevo**	**1.87**	**126**	*i* Pn	**Pb**	**12 40 47.9**	**-0.5**
KRUS				*i* Sn	**Sb**	**12 41 12.9**	**+1.4**
BARS	**Barje**	**1.93**	**79**	*e*Pn	**Pn**	**12 40 47.3**	**+0.6**
BARS				*e*Sg	**Sg**	**12 41 15.7**	**-1.2**
BARS	**Barje**	**1.93**	**79**	*e*Pn	**Pn**	**12 40 47.3**	**+0.6**
BARS				*e*Sg	**Sg**	**12 41 15.7**	**-1.2**
TRUS	**Trudelj**	**1.93**	**26**	*e*Pn	**Pn**	**12 40 47.4**	**+0.7**
TRUS				*e*Sn	**Sn**	**12 41 11.3**	**+0.8**
TRUS	**Trudelj**	**1.93**	**26**	*e*Pn	**Pn**	**12 40 47.4**	**+0.7**
TRUS				*e*Sn	**Sn**	**12 41 11.3**	**+0.8**
TEKS	**Tekeris**	**2.07**	**6**	*e*Sg	**Sg**	**12 41 20.4**	**-1.0**
TEKS	**Tekeris**	**2.07**	**6**	*e*Sg	**Sg**	**12 41 20.4**	**-1.0**
BOVS	**Bovan**	**2.14**	**57**	*e*Pn	**Pn**	**12 40 49.6**	**0.0**
BOVS	**Bovan**	**2.14**	**57**	*e*Pn	**Pn**	**12 40 49.6**	**0.0**
KBN	**Korca**	**2.20**	**147**	*i* Pn	**Pn**	**12 40 51.4**	**+1.0**
KBN	**Korca**	**2.20**	**147**	*i* PN	**Pn**	**12 40 51.4**	**+1.0**
SG1	**Sgolgore (BA)**	**2.53**	**230**	*e*Pn	**Pn**	**12 40 55.4**	**+0.5**
SG1	**Sgolgore (BA)**	**2.53**	**230**	*e*Pn	**Pn**	**12 40 55.4**	**+0.5**
KUBS	**Kucevo**	**2.62**	**42**	*e*Pg	**Pb**	**12 41 01.5**	**+0.4**
KUBS				*e*Sg	**Sg**	**12 41 37.6**	**-1.2**
ZAPS	**Zavoj**	**2.62**	**71**	*e*Pn	**Pn**	**12 40 57.2**	**+1.1**
ZAPS				*e*Sn	**Sn**	**12 41 28.0**	**+0.5**
ZAPS	**Zavoj**	**2.62**	**71**	*e*Pn	**Pn**	**12 40 57.2**	**+1.1**
ZAPS				*e*Sn	**Sn**	**12 41 28.0**	**+0.5**
MATE	**Matera**	**2.64**	**227**	⇓*i*P	**Pn**	**12 40 56.5**	**+0.1**
MATE	**Matera**	**2.64**	**227**	⇓*i*P	**Pn**	**12 40 56.5**	**+0.1**
FRGS	**Fruska Gora**	**2.70**	**9**	*e*Sg	**Pn**	**12 40 58.5**	**+1.2**
FRGS	**Fruska Gora**	**2.70**	**9**	*e*Pn	**Sb**	**12 41 40.7**	**+5.4**
FRGS	**Fruska Gora**	**2.70**	**9**	*e*Pn	**Pn**	**12 40 57.9**	**+0.6**
FRGS				*e*Sn	**Sn**	**12 41 30.0**	**+0.5**
BLY	**Banja Luka**	**2.71**	**327**	⇑*i*P	**Pn**	**12 40 57.3**	**0.0**
BLY	**Banja Luka**	**2.71**	**327**	⇑*i*P	**Pn**	**12 40 57.3**	**0.0**
BLY	**Banja Luka**	**2.71**	**327**	⇑*i*Pn	**Pn**	**12 40 58.4**	**+1.1**
BLY				S	**Sn**	**12 41 29.6**	**0.0**
BLY				*e*Sn	**Sn**	**12 41 30.0**	**+0.4**
BLY	**Banja Luka**	**2.71**	**327**	⇑*i*Pn	**Pn**	**12 40 58.4**	**+1.1**
BLY				*e*Sn	**Sn**	**12 41 30.0**	**+0.4**
MDVR	**Moldovita**	**2.91**	**37**	⇑*i*P	**Pn**	**12 41 00.2**	**0.0**
MDVR	**Moldovita**	**2.91**	**37**	⇑*i*P	**Pn**	**12 41 00.2**	**0.0**
MDVR				S	**Sn**	**12 41 33.7**	**-1.1**
VTS	**Vitosha**	**2.94**	**87**	⇑*i*P	**Pn**	**12 41 00.5**	**-0.1**
VTS	**Vitosha**	**2.94**	**87**	⇑*i*P	**Pn**	**12 41 00.5**	**-0.1**
VTS				S	**Sn**	**12 41 35.2**	**-0.3**
HERR	**Herculane**	**3.32**	**43**	⇓*i*P	**Pn**	**12 41 05.3**	**-0.5**
HERR	**Herculane**	**3.32**	**43**	⇓*i*P	**Pn**	**12 41 05.3**	**-0.5**
HERR				S	**Sn**	**12 41 43.6**	**-1.2**
BZS	**Buzias**	**3.57**	**28**	⇑*i*P	**Pn**	**12 41 09.0**	**-0.1**
BZS	**Buzias**	**3.57**	**28**	⇑*i*P	**Pn**	**12 41 09.0**	**-0.1**
BZS				S	**Sn**	**12 41 49.6**	**-1.2**
MORH	**Mˆ‡rˆ¡gy, Hung**	**3.75**	**354**	*e*Pn	**Pn**	**12 41 11.7**	**+0.1**
MORH				*e*Sn	**Sn**	**12 41 55.3**	**0.0**
MORH	**Mˆ‡rˆ¡gy, Hung**	**3.75**	**354**	*e*Pn	**Pn**	**12 41 11.7**	**+0.1**
MORH				*e*Sn	**Sn**	**12 41 55.3**	**0.0**
NVLJ	**Novalja**	**3.79**	**305**	*e*Pn	**Pn**	**12 41 13.1**	**+0.9**
NVLJ				Sn	**Sn**	**12 41 57.5**	**+1.2**
TIP	**Timpagrande**	**3.80**	**210**	⇑*i*P	**Pn**	**12 41 11.7**	**-0.8**
TIP	**Timpagrande**	**3.80**	**210**	⇑*i*P	**Pn**	**12 41 11.7**	**-0.8**
TIP				S	**Sn**	**12 41 55.7**	**-1.1**
OZLJ	**Ozalj**	**4.14**	**320**	*e*Pn	**Pn**	**12 41 19.3**	**+2.3**
BOJS	**Bojanci**	**4.16**	**318**	*i* Pn	**Pn**	**12 41 19.3**	**+1.9**
BOJS				*i* Sn	**Sn**	**12 42 08.3**	**+2.7**
BOJS	**Bojanci**	**4.16**	**318**	*i* Pn	**Pn**	**12 41 19.3**	**+1.9**
BOJS				*i* Sn	**Sn**	**12 42 08.3**	**+2.7**
CRES	**Cresnjev**	**4.30**	**322**	*i* Pn	**Pn**	**12 41 21.2**	**+1.9**
CRES				*i* Sn	**Sn**	**12 42 12.5**	**+3.5**
CRES	**Cresnjev**	**4.30**	**322**	*e*Pn	**Pn**	**12 41 20.0**	**+0.7**
CRES				*e*Sn	**Sn**	**12 42 08.1**	**-0.9**
CRES	**Cresnjev**	**4.30**	**322**	*e*Pn	**Pn**	**12 41 20.0**	**+0.7**
CRES				*e*Sn	**Sn**	**12 42 08.1**	**-0.9**
BEHE	**Becsehely**	**4.35**	**337**	*e*Pn	**Pn**	**12 41 20.6**	**+0.7**
BEHE				*e*Sn	**Sn**	**12 42 09.6**	**-0.6**
BEHE	**Becsehely**	**4.35**	**337**	*e*Pn	**Pn**	**12 41 20.6**	**+0.7**
BEHE				*e*Sn	**Sn**	**12 42 09.6**	**-0.6**
GBRS	**Gornja Briga**	**4.41**	**315**	*i* Pn	**Pn**	**12 41 23.0**	**+2.2**
GBRS	**Gornja Briga**	**4.41**	**315**	*i* Pn	**Pn**	**12 41 23.0**	**+2.2**
DRGR		**4.96**	**29**	S	**Sn**	**12 42 23.3**	**-2.1**
DRGR		**4.96**	**29**	S	**Sn**	**12 42 23.3**	**-2.1**
SOKA	**Soboth**	**5.15**	**326**	*e*Pn	**Pn**	**12 41 32.2**	**+1.2**
	3.0nm,0.4s,SNR=8.8						
SOKA				*i* Sn	**Sn**	**12 42 29.7**	**-0.3**
	0.7nm,0.5s						
SOKA	**Soboth**	**5.15**	**326**	Pn	**Pn**	**12 41 32.2**	**+1.2**
	3.0nm,0.4s,SNR=8.8						
SOKA				Sn	**Sn**	**12 42 29.7**	**-0.3**
	0.7nm,0.5s						
OBKA	**Obir**	**5.23**	**322**	*e*Pn	**Pn**	**12 41 35.0**	**+2.9**
	0.7nm,0.2s						
OBKA				*e*Sn	**Sn**	**12 42 34.8**	**+2.8**
	0.8nm,0.3s						
OBKA	**Obir**	**5.23**	**322**	Pn	**Pn**	**12 41 35.0**	**+2.9**
	0.7nm,0.2s						
OBKA				Sn	**Sn**	**12 42 34.8**	**+2.8**
	0.8nm,0.3s						
ARSA	**Arzberg**	**5.44**	**332**	*e*Pn	**Pn**	**12 41 36.5**	**+1.6**
	4.8nm,0.3s,SNR=9.7						
ARSA	**Arzberg**	**5.44**	**332**	Pn	**Pn**	**12 41 36.5**	**+1.6**
	4.8nm,0.3s,SNR=9.7						
CONA	**Conrad Observa**	**5.94**	**338**	*e*Pn	**Pn**	**12 41 43.9**	**+2.1**
	1.2nm,0.4s						
CONA				*e*Sn	**Sn**	**12 42 51.5**	**+2.1**
	0.6nm,0.3s						
CONA	**Conrad Observa**	**5.94**	**338**	Pn	**Pn**	**12 41 43.9**	**+2.1**
	1.2nm,0.4s						
CONA				Sn	**Sn**	**12 42 51.5**	**+2.1**
	0.6nm,0.3s						
MOA	**Molln**	**6.41**	**328**	*i* Pn	**Pn**	**12 41 50.8**	**+2.6**
	1.1nm,0.3s						
MOA				*e*Sn	**Sn**	**12 43 02.2**	**+1.4**
	1.1nm,0.3s						

MOA	**Molln**	**6.41**	**328**	Pn	**Pn**	**12 41 50.8**	**+2.6**
	1.1nm,0.3s						
MOA				Sn	**Sn**	**12 43 02.2**	**+1.4**
	1.1nm,0.3s						
ABTA	**Abfaltersbach**	**6.41**	**314**	*e*Pn	**Pn**	**12 41 49.6**	**+1.3**
	0.2nm,0.2s						
ABTA				*e*Sn	**Sn**	**12 43 01.5**	**+0.4**
	0.8nm,0.2s						
ABTA	**Abfaltersbach**	**6.41**	**314**	Pn	**Pn**	**12 41 49.6**	**+1.3**
	0.2nm,0.2s						
ABTA				Sn	**Sn**	**12 43 01.5**	**+0.4**
	0.8nm,0.2s						
WTTA	**Wattenberg**	**7.20**	**314**	*e*Sn	**Sn**	**12 43 22.1**	**+1.4**
	1.9nm,0.3s						
WTTA	**Wattenberg**	**7.20**	**314**	Sn	**Sn**	**12 43 22.1**	**+1.4**
	1.9nm,0.3s						
FETA	**Feichten**	**7.56**	**310**	*e*Sn	**Sn**	**12 43 30.5**	**+1.1**
	0.7nm,0.4s						
FETA	**Feichten**	**7.56**	**310**	Sn	**Sn**	**12 43 30.5**	**+1.1**
	0.7nm,0.4s						
KHC	**Kasperske Hory**	**7.73**	**331**	*e*P	**Pn**	**12 42 10.1**	**+3.8**
RETA	**Reutte**	**7.81**	**313**	*e*Sn	**Sn**	**12 43 36.8**	**+1.4**
	1.2nm,0.3s						
RETA	**Reutte**	**7.81**	**313**	Sn	**Sn**	**12 43 36.8**	**+1.4**
	1.2nm,0.3s						

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*ISCJB **29** 13:22:47.4±0.5, 39°.03N±0°.05×15°.5E±0°.1, h251^{km}±5^{km}, mb3.6/3, Error ellipse: s-maj=14.1km s-min=5.4km az=26.7*

*ROM **29** 13:22:47.8±0.3, 38°.97N±0°.02×15°.51E±0°.04, h244^{km}±2^{km}, ML3.1/42*

*IDC **29** 13:22:48.9±1.6, 39°.45N×15°.38E, h215^{km}±58^{km}, mb3.0/4, mb1 2.9/7, mb1mx2.7/67, mbtmp3.4/7, Error ellipse: s-maj=62.6km s-min=27.3km az=7.0*

ISC 29 13:22:47.9±0.9**, 39°.02N**±0°.06×**15°.52E**±0°.08**, h245**^{km}±7^{km}**, n63, σ0^{s}.93**/68**, mb3.6**/3**, 2D, Southern Italy**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JOPP	**Joppolo**	**0.50**	**145**	P	**Pn**	**13 23 20.2**	**-0.1**
JOPP				AML	AML		
	comp=E,189µm,0.1s						
JOPP				AML	AML		
	comp=N,304µm,0.3s						
JOPP				AML	AML		
	comp=E,189µm,0.1s						
JOPP				AML	AML		
	comp=N,304µm,0.3s						
JOPP				AML	AML		
	comp=N,304µm,0.3s						
JOPP				AML	AML		
	comp=E,189µm,0.1s						
LLI	**Lipari**	**0.73**	**218**	P	**Pn**	**13 23 22.2**	**+1.1**
GRI	**Girifalco**	**0.73**	**105**	P	**Pn**	**13 23 21.8**	**+0.7**
GRI				AML	AML		
	comp=E,310µm,0.2s						
GRI				AML	AML		
	comp=N,254µm,1.1s						
MSRU	**Castanea**	**0.76**	**180**	P	**Pn**	**13 23 21.0**	**-0.3**
MSRU				AML	AML		
	comp=E,592µm,1.2s						
MSRU				AML	AML		
	comp=N,572µm,0.3s						
MSRU				AML	AML		
	comp=E,592µm,1.2s						
MSRU				AML	AML		
	comp=N,572µm,0.3s						
MSRU				AML	AML		
	comp=N,572µm,0.3s						
MSRU				AML	AML		
	comp=E,592µm,1.2s						
VPL	**Vulcano Piano**	**0.76**	**213**	*i* P	**Pn**	**13 23 21.8**	**+0.6**
VPL				AML	AML		
	comp=E,732µm,0.3s						
VPL				AML	AML		
	comp=N,1078µm,0.5s						
VPL				AML	AML		
	comp=E,805µm,1.4s						
VPL				AML	AML		
	comp=N,1078µm,0.5s						
VPL				AML	AML		
	comp=E,804µm,1.4s						
VPL				AML	AML		
	comp=N,1078µm,0.5s						
VPL				AML	AML		
	comp=N,1078µm,0.5s						
VPL				AML	AML		
	comp=E,804µm,1.4s						
MILZ	**Milazzo**	**0.78**	**197**	*i* P	**Pn**	**13 23 21.2**	**0.0**
MILZ				AML	AML		
	comp=E,596µm,0.7s						
MILZ				AML	AML		
	comp=N,772µm,1.2s						
MILZ				AML	AML		
	comp=E,596µm,0.7s						
MILZ				AML	AML		
	comp=N,772µm,1.2s						
MILZ				AML	AML		
	comp=E,596µm,0.7s						
MILZ				AML	AML		
	comp=N,772µm,1.2s						
MILZ				AML	AML		
	comp=E,596µm,0.7s						
MILZ				AML	AML		
	comp=N,772µm,1.2s						
CEL	**Celeste**	**0.81**	**159**	P	**Pn**	**13 23 21.2**	**-0.3**
CEL				AML	AML		
	comp=E,313µm,0.5s						
CEL				AML	AML		
	comp=N,268µm,0.9s						
CEL				AML	AML		
	comp=E,313µm,0.5s						
CEL				AML	AML		
	comp=N,268µm,0.9s						
CEL				AML	AML		
	comp=E,313µm,0.5s						
CEL				AML	AML		
	comp=N,268µm,0.9s						
CEL				AML	AML		
	comp=E,313µm,0.5s						
CEL				AML	AML		
	comp=N,268µm,0.9s						
MSCL	**Scilla**	**0.82**	**165**	P	**Pn**	**13 23 21.3**	**-0.3**
MSCL				AML	AML		
	comp=E,871µm,0.2s						
MSCL				AML	AML		
	comp=N,584µm,0.5s						
MSCL				AML	AML		
	comp=E,870µm,0.2s						
MSCL				AML	AML		
	comp=N,584µm,0.5s						
MSCL				AML	AML		
	comp=E,870µm,0.2s						
MSCL				AML	AML		
	comp=N,584µm,0.5s						
ATN	**Antennamare**	**0.86**	**183**	P	**Pn**	**13 23 21.3**	**-0.6**
ATN				AML	AML		
	comp=E,548µm,1.2s						
ATN				AML	AML		
	comp=N,476µm,0.3s						
ATN				AML	AML		
	comp=E,548µm,1.2s						
ATN				AML	AML		
	comp=N,476µm,0.3s						
ATN				AML	AML		
	comp=E,548µm,1.2s						
ATN				AML	AML		
	comp=N,476µm,0.3s						
ATN				AML	AML		
	comp=E,548µm,1.2s						
ATN				AML	AML		
	comp=N,476µm,0.3s						
CELI	**Celico**	**0.86**	**63**	*i* P	**Pn**	**13 23 23.1**	**+1.4**
CELI				S	**S**	**13 23 48.5**	**+0.1**
CELI				AML	AML		
	comp=E,385µm,1.5s						
CELI				AML	AML		
	comp=N,484µm,0.6s						
CELI				AML	AML		
	comp=N,484µm,0.6s						
CELI				AML	AML		
	comp=E,385µm,1.5s						
IFIL	**Filicudi I Eol**	**0.87**	**239**	P	**Pn**	**13 23 21.8**	**+0.1**
MPNC	**Port Mandanici**	**0.88**	**188**	*e*P	**Pn**	**13 23 21.4**	**-0.5**
MPNC				S	**S**	**13 23 46.1**	**-2.4**
MPNC				AML	AML		
	comp=E,430µm,1.5s						
MPNC				AML	AML		
	comp=N,443µm,0.4s						
MPNC				AML	AML		
	comp=N,443µm,0.4s						
MPNC				AML	AML		
	comp=E,430µm,1.5s						
GMB	**Gambarie**	**0.89**	**164**	P	**Pn**	**13 23 21.9**	**-0.1**
SERS	**Sersale**	**0.91**	**89**	*i* P	**Pn**	**13 23 22.7**	**+0.6**
SERS				AML	AML		
	comp=E,123µm,0.4s						
SERS				AML	AML		
	comp=N,158µm,0.3s						
SERS				AML	AML		
	comp=E,123µm,0.4s						
SERS				AML	AML		
	comp=N,158µm,0.3s						
SERS				AML	AML		
	comp=N,158µm,0.3s						
SERS				AML	AML		
	comp=E,123µm,0.4s						
PLAC	**Placanica**	**0.92**	**128**	P	**Pn**	**13 23 22.4**	**+0.4**
PLAC				AML	AML		
	comp=E,228µm,1.4s						
PLAC				AML	AML		
	comp=N,166µm,1.2s						
PLAC				AML	AML		
	comp=E,228µm,1.4s						
PLAC				AML	AML		
	comp=N,166µm,1.2s						
PLAC				AML	AML		
	comp=E,228µm,1.4s						
PLAC				AML	AML		
	comp=N,166µm,1.2s						
PLAC				AML	AML		
	comp=E,228µm,1.4s						
PLAC				AML	AML		
	comp=N,166µm,1.2s						
MMN	**Mormanno**	**0.94**	**23**	*i* P	**Pn**	**13 23 22.5**	**+0.5**
MMN				AML	AML		
	comp=E,31µm,0.5s						
MMN				AML	AML		
	comp=N,46µm,0.9s						
MMN				AML	AML		
	comp=E,31µm,0.5s						
MMN				AML	AML		
	comp=N,46µm,0.9s						
MMN				AML	AML		
	comp=N,46µm,0.9s						
MMN				AML	AML		
	comp=E,31µm,0.5s						
MCSR	**Castroreale**	**0.98**	**192**	P	**Pn**	**13 23 22.6**	**+0.1**
MCSR				AML	AML		
	comp=E,606µm,0.8s						
MCSR				AML	AML		
	comp=N,650µm,0.3s						
MCSR				AML	AML		
	comp=E,606µm,0.8s						
MCSR				AML	AML		
	comp=N,651µm,0.3s						
MCSR				AML	AML		
	comp=N,651µm,0.3s						
MCSR				AML	AML		
	comp=E,606µm,0.8s						
TIP	**Timpagrande**	**0.98**	**80**	P	**Pn**	**13 23 23.1**	**+0.8**
TIP				AML	AML		
	comp=E,116µm,0.5s						
TIP				AML	AML		
	comp=N,111µm,0.8s						
TIP				AML	AML		
	comp=E,116µm,0.5s						
TIP				AML	AML		
	comp=N,111µm,0.8s						
TIP				AML	AML		
	comp=E,116µm,0.5s						
TIP				AML	AML		
	comp=N,111µm,0.8s						
CUC	**Castrocucco**	**1.00**	**13**	*i* P	**Pn**	**13 23 22.8**	**+0.5**
CUC				AML	AML		
	comp=E,67µm,1.3s						
CUC				AML	AML		
	comp=N,57µm,0.3s						
CUC				AML	AML		
	comp=E,67µm,1.3s						
CUC				AML	AML		
	comp=N,57µm,0.3s						
CUC				AML	AML		
	comp=N,57µm,0.3s						
CUC				AML	AML		
	comp=E,67µm,1.3s						
MTTG	**Motta San Giov**	**1.03**	**172**	P	**Pn**	**13 23 22.9**	**+0.3**
MTTG				AML	AML		
	comp=E,202µm,0.5s						
MTTG				AML	AML		
	comp=N,316µm,0.6s						
MTTG				AML	AML		
	comp=E,202µm,0.5s						
MTTG				AML	AML		
	comp=N,316µm,0.6s						
MTTG				AML	AML		
	comp=E,202µm,0.5s						
MTTG				AML	AML		
	comp=N,316µm,0.6s						
NOV	**Novara**	**1.03**	**197**	*e*P	**Pn**	**13 23 23.0**	**+0.2**
NOV				S	**S**	**13 23 50.0**	**0.0**
NOV				AML	AML		
	comp=E,379µm,0.5s						
NOV				AML	AML		
	comp=N,450µm,0.3s						
NOV				AML	AML		
	comp=E,379µm,0.5s						
NOV				AML	AML		
	comp=N,450µm,0.3s						
NOV				AML	AML		
	comp=E,379µm,0.5s						
NOV				AML	AML		
	comp=N,450µm,0.3s						
BULG	**Bulgheria - Ca**	**1.06**	**354**	P	**Pn**	**13 23 23.8**	**+1.1**
BULG				AML	AML		
	comp=E,63µm,0.4s						
BULG				AML	AML		
	comp=N,111µm,0.4s						
BULG				AML	AML		
	comp=E,63µm,0.4s						
BULG				AML	AML		
	comp=N,111µm,0.4s						
BULG				AML	AML		
	comp=N,111µm,0.4s						
BULG				AML	AML		
	comp=E,63µm,0.4s						
SALB	**San Lorenzo Be**	**1.07**	**37**	P	**Pn**	**13 23 23.9**	**+1.1**
SALB				S	**S**	**13 23 50.1**	**-0.3**
SALB				AML	AML		
	comp=E,287µm,0.3s						
SALB				AML	AML		
	comp=N,152µm,0.3s						
SALB				AML	AML		
	comp=E,287µm,0.3s						
SALB				AML	AML		
	comp=N,151µm,0.3s						
SALB				AML	AML		
	comp=N,151µm,0.3s						
SALB				AML	AML		
	comp=E,287µm,0.3s						
PIPA	**Pietrapaola**	**1.11**	**65**	*e*P	**Pn**	**13 23 23.9**	**+0.9**
PIPA				AML	AML		
	comp=E,234µm,0.2s						
PIPA				AML	AML		
	comp=N,212µm,0.4s						
PIPA				AML	AML		
	comp=E,234µm,0.2s						
PIPA				AML	AML		
	comp=N,212µm,0.4s						
PIPA				AML	AML		
	comp=N,212µm,0.4s						
PIPA				AML	AML		
	comp=E,234µm,0.2s						
MGR	**Morigerati**	**1.12**	**2**	P	**Pn**	**13 23 23.9**	**+0.9**
MGR				AML	AML		
	comp=E,45µm,0.4s						
MGR				AML	AML		
	comp=N,50µm,0.7s						
MGR				AML	AML		
	comp=E,45µm,0.4s						
MGR				AML	AML		
	comp=N,50µm,0.7s						
MGR				AML	AML		
	comp=E,45µm,0.4s						
MGR				AML	AML		
	comp=N,50µm,0.7s						
MPAZ	**Palizzi**	**1.13**	**160**	P	**Pn**	**13 23 23.4**	**+0.2**
MPAZ				AML	AML		
	comp=E,346µm,1.5s						
MPAZ				AML	AML		
	comp=N,278µm,0.6s						
MPAZ				AML	AML		
	comp=E,346µm,1.5s						
MPAZ				AML	AML		
	comp=N,278µm,0.6s						
MPAZ				AML	AML		
	comp=E,346µm,1.5s						
MPAZ				AML	AML		
	comp=N,278µm,0.6s						
LADO	**San Nicola del**	**1.17**	**77**	P	**Pn**	**13 23 23.9**	**+0.6**
LADO				S	**S**	**13 23 50.9**	**-0.4**
LADO				AML	AML		
	comp=E,40µm,0.2s						
LADO				AML	AML		
	comp=N,39µm,0.2s						
LADO				AML	AML		
	comp=E,40µm,0.2s						
LADO				AML	AML		
	comp=N,39µm,0.2s						
LADO				AML	AML		
	comp=E,40µm,0.2s						
LADO				AML	AML		
	comp=N,39µm,0.2s						
SIRI	**Monte Sirino -**	**1.19**	**13**	P	**Pn**	**13 23 24.3**	**+0.7**
SIRI				AML	AML		
	comp=E,125µm,1.1s						
SIRI				AML	AML		
	comp=N,109µm,0.2s						
SIRI				AML	AML		
	comp=N,109µm,0.2s						
SIRI				AML	AML		
	comp=E,125µm,1.1s						
MSFR	**San Fratello**	**1.22**	**217**	*i* P	**Pn**	**13 23 24.4**	**+0.5**
MSFR				AML	AML		
	comp=E,24µm,1.3s						
MSFR				AML	AML		
	comp=N,36µm,1.3s						
MSFR				AML	AML		
	comp=E,24µm,1.3s						
MSFR				AML	AML		
	comp=N,36µm,1.3s						
SCHR	**S. Chirico Rap**	**1.25**	**20**	*e*P	**Pn**	**13 23 25.3**	**+1.3**
SCHR				AML	AML		
	comp=E,82µm,0.8s						
SCHR				AML	AML		
	comp=N,51µm,0.3s						
SCHR				AML	AML		
	comp=E,83µm,0.8s						
SCHR				AML	AML		
	comp=N,51µm,0.3s						
SCHR				AML	AML		
	comp=N,51µm,0.3s						
SCHR				AML	AML		
	comp=E,83µm,0.8s						
MTSN	**Montesano sull**	**1.26**	**8**	P	**Pn**	**13 23 25.0**	**+0.9**
MTSN				AML	AML		
	comp=E,64µm,0.5s						
MTSN				AML	AML		
	comp=N,85µm,0.5s						
MTSN				AML	AML		
	comp=E,64µm,0.5s						
MTSN				AML	AML		
	comp=N,85µm,0.5s						
MTSN				AML	AML		
	comp=N,85µm,0.5s						
MTSN				AML	AML		
	comp=E,64µm,0.5s						
MNO	**Monte Soro**	**1.26**	**211**	P	**Pn**	**13 23 25.5**	**+1.2**
ORI	**Oriolo Calabro**	**1.27**	**34**	*i* P	**Pn**	**13 23 25.1**	**+1.1**
ORI				AML	AML		
	comp=E,303µm,1.3s						
ORI				AML	AML		
	comp=N,351µm,1.2s						
ORI				AML	AML		
	comp=E,303µm,1.3s						
ORI				AML	AML		
	comp=N,351µm,1.2s						
MCEL	**Monticello**	**1.32**	**10**	P	**Pn**	**13 23 25.8**	**+1.4**
MCEL				AML	AML		
	comp=E,111µm,0.9s						
MCEL				AML	AML		
	comp=N,87µm,0.9s						
MCEL				AML	AML		
	comp=E,110µm,0.9s						
MCEL				AML	AML		
	comp=N,87µm,0.9s						
MCEL				AML	AML		
	comp=N,87µm,0.9s						
MCEL				AML	AML		
	comp=E,110µm,0.9s						
GALF	**Gagliano Caste**	**1.50**	**210**	P	**Pn**	**13 23 27.7**	**+1.8**
GALF				AML	AML		
	comp=E,80µm,0.6s						
GALF				AML	AML		
	comp=N,93µm,0.6s						
GALF				AML	AML		
	comp=N,93µm,0.6s						
GALF				AML	AML		
	comp=E,80µm,0.6s						
CAGR	**Agira**	**1.61**	**210**	P	**Pn**	**13 23 28.5**	**+1.8**
CAGR				AML	AML		
	comp=E,162µm,0.9s						
CAGR				AML	AML		
	comp=N,186µm,0.7s						
CAGR				AML	AML		
	comp=E,162µm,0.9s						
CAGR				AML	AML		
	comp=N,186µm,0.7s						
MIGL	**Miglionico**	**1.74**	**24**	P	**Pn**	**13 23 27.7**	**+0.2**
MIGL				AML	AML		
	comp=E,314µm,0.9s						
MIGL				AML	AML		
	comp=N,490µm,0.7s						
MIGL				AML	AML		
	comp=E,314µm,0.9s						
MIGL				AML	AML		
	comp=N,490µm,0.7s						
HLNI	**Lentini**	**1.75**	**197**	P	**Pn**	**13 23 27.8**	**0.0**
HLNI				AML	AML		
	comp=E,60µm,0.6s						
HLNI				AML	AML		
	comp=N,58µm,1.5s						
HLNI				AML	AML		
	comp=E,60µm,0.6s						
HLNI				AML	AML		
	comp=N,58µm,1.5s						
HLNI				AML	AML		
	comp=N,58µm,1.5s						
HLNI				AML	AML		
	comp=E,60µm,0.6s						
VAE	**Valguarnera**	**1.77**	**210**	P	**Pn**	**13 23 30.0**	**+2.0**
	comp=E,1.7nm,0.3s,baz=35,slow=12,SNR=4.8						
AGST	**Augusta-Monte**	**1.77**	**187**	P	**Pn**	**13 23 27.7**	**-0.3**
HCRL	**Carlentini**	**1.78**	**193**	P	**Pn**	**13 23 28.0**	**0.0**
HCRL				AML	AML		
	comp=E,252µm,0.6s						
HCRL				AML	AML		
	comp=N,194µm,1.4s						
HCRL				AML	AML		
	comp=N,194µm,1.4s						
HCRL				AML	AML		
	comp=E,252µm,0.6s						
MATE	**Matera**	**1.87**	**29**	P	**Pn**	**13 23 28.5**	**-0.1**
MATE				AML	AML		
	comp=E,191µm,1.1s						
MATE				AML	AML		
	comp=N,371µm,0.3s						
MATE				AML	AML		
	comp=E,191µm,1.1s						
MATE				AML	AML		
	comp=N,371µm,0.3s						
LTRZ	**Laterza**	**1.87**	**32**	P	**Pn**	**13 23 28.5**	**-0.3**
LTRZ				AML	AML		
	comp=E,166µm,0.9s						
LTRZ				AML	AML		
	comp=N,286µm,0.5s						
LTRZ				AML	AML		
	comp=N,286µm,0.5s						
LTRZ				AML	AML		
	comp=E,166µm,0.9s						

SSY	Sortino	1.90	191	P	Pn	13 23 28.8	-0.3
SSY				AML	AML		
	comp=E,81µm,0.8s						
SSY				AML	AML		
	comp=N,144µm,0.2s						
SSY				AML	AML		
	comp=N,144µm,0.2s						
SSY				AML	AML		
	comp=E,81µm,0.8s						
HVZN	Vizzini	1.94	199	P	Pn	13 23 29.9	+0.4
HVZN				AML	AML		
	comp=E,209µm,0.6s						
HVZN				AML	AML		
	comp=N,136µm,0.5s						
HVZN				AML	AML		
	comp=N,136µm,0.5s						
HVZN				AML	AML		
	comp=E,209µm,0.6s						
MEU	Monte Lauro	1.97	194	P	Pn	13 23 30.2	+0.4
SG1	Sgolgore (BA)	2.03	26	⇓iPn	Pn	13 23 32.2	+2.1
SG1				Sn	S	13 24 02.1	-1.4
TAR1	Taranto	2.03	42	ePn	Pn	13 23 29.9	-0.2
MASS	Massafra	2.04	37	ePn	Pn	13 23 29.8	-0.4
AMUR	Altamura	2.06	24	eP	Pn	13 23 30.6	+0.2
HAVL	Avola	2.08	189	P	Pn	13 23 30.7	0.0
HAVL				AML	AML		
	comp=E,93µm,0.9s						
HAVL				AML	AML		
	comp=N,134µm,0.6s						
HAVL				AML	AML		
	comp=N,134µm,0.6s						
HAVL				AML	AML		
	comp=E,93µm,0.9s						
MRVN	Minervino Murg	2.10	14	P	Pn	13 23 31.7	+0.8
MRVN				AML	AML		
	comp=E,59µm,0.8s						
MRVN				AML	AML		
	comp=N,26µm,1.0s						
MRVN				AML	AML		
	comp=N,26µm,1.0s						
MRVN				AML	AML		
	comp=E,59µm,0.8s						
NOCI	Noci	2.13	34	P	Pn	13 23 30.7	-0.4
NOCI				AML	AML		
	comp=E,86µm,1.6s						
NOCI				AML	AML		
	comp=N,74µm,0.9s						
NOCI				AML	AML		
	comp=N,74µm,0.9s						
NOCI				AML	AML		
	comp=E,86µm,1.6s						
FASA	Fasano	2.28	38	ePn	Pn	13 23 32.2	-0.3
BAI	Bari	2.33	26	⇓iPn	Pn	13 23 33.1	+0.1
MMGO	Monte Magaggia	2.41	237	P	Pn	13 23 34.4	+0.4
SCTE	Santa Cesarea	2.51	64	AML	AML		
	comp=E,56µm,0.2s						
SCTE				AML	AML		
	comp=N,52µm,0.4s						
SCTE				AML	AML		
	comp=N,52µm,0.4s						
SCTE				AML	AML		
	comp=E,56µm,0.2s						
BRTR	Keskin Array B	14.04	81	P	P	13 25 59.8	+2.3
	comp=E,0.1nm,0.3s,baz=266,slow=13,SNR=3.0						
ESDC	Sonseca Array	15.09	279	P	Pn	13 26 09.7	+0.4
	comp=E,0.1nm,0.3s,baz=82,slow=12,SNR=2.1						
EKA	Eskdalemuir Ar	20.57	329	P	P	13 27 06.5	-1.5
	comp=E,0.3nm,0.2s,baz=141,slow=11,SNR=6.7						
HFS	Hagfors	21.17	357	P	P	13 27 12.4	-1.7
	comp=E,0.7nm,0.5s,baz=174,slow=12,SNR=7.6						
FINES	FINESS Array B	23.38	13	P	P	13 27 34.9	+0.4
	comp=E,1.2nm,0.4s,baz=182,slow=9.0,SNR=13						
ARCES	ARCESS Array B	31.04	7	P	P	13 28 42.0	-0.5
	comp=E,1.4nm,0.8s,baz=191,slow=9.0,SNR=6.5						

KRSC 29 13:28:15.2±1.2**, 49°.21N**×**157°.16E, h44**^{km}±24^{km}**, ML3.7, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	1.63	336	eP	Pn	13 28 42.2	+0.8
SKR				eS	Sn	13 29 02.0	+0.9
PAU	Pauzhetka	2.27	354	eP	Pn	13 28 53.5	+3.2
PAU				eS	Sn	13 29 20.9	+3.8
KDTR	Khodutka, Kamc	2.67	12	eP	Pn	13 28 58.5	+2.8
KDTR				eS	Sn	13 29 30.4	+3.6
ASAK	Asacha	3.22	8	eP	Pn	13 29 07.3	+4.0
RUS	Russkaya	3.34	14	eP	Pn	13 29 08.5	+3.6
RUS				eS	Sn	13 29 48.4	+5.1
MTVR	Mutnovka	3.34	11	eP	Pn	13 29 09.0	+3.9
MTVR				eS	Sn	13 29 48.1	+4.5
PET	Petropavlovsk	3.94	13	eP	Pn	13 29 17.5	+4.4
PET				eS	Sn	13 30 03.3	+5.3
DALK	Dalny	3.96	14	eP	Pn	13 29 16.8	+3.4
DALK				eS	Sn	13 30 03.0	+4.5
UGLR	Uglovaya	4.14	14	eP	Pn	13 29 21.1	+5.1
AVH	Avacha	4.18	13	P	Pn	13 29 20.2	+3.6
NLC	Nalytchevo	4.20	18	eS	Sn	13 30 08.0	+3.6
SDLR	Sedlovina	4.22	14	eP	Pn	13 29 21.3	+4.2
KRX	Arik	4.26	12	P	Pn	13 29 21.6	+3.9
SPN	Mys Shipunski	4.29	24	eP	Pn	13 29 22.3	+4.3
SPN				eS	Sn	13 30 12.2	+5.5
GNL	Ganaly	4.52	6	eP	Pn	13 29 25.6	+4.4
KBTR	Krutoberegovo	7.81	24	eP	Pn	13 30 10.4	+4.3

*DDA **29** 13:46:49.6, 37°.04N×28°.53E, h7^{km}, Ml2.6, Suspected Mining explosion.*
*ISK **29** 13:46:49.4, 37°.07N×28°.55E, h12^{km}, ML2.0/8*
*ISCJB **29** 13:46:50.1±0.5, 37°.09N±0°.03×28°.57E±0°.03, h0^{km}, Error ellipse: s-maj=4.6km s-min=3.4km az=39.0*
*CSEM **29** 13:46:50.2±0.3, 37°.07N×28°.52E, h1^{km}, ML2.6, Error ellipse: s-maj=8.0km s-min=5.5km az=41.0, Suspected Mining explosion.*
ISC 29 13:46:49.6±0.9**, 37°.13N**±0°.03×**28°.58E**±0°.03**, h0**^{km}**, n30, σ0^{s}.85**/44**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YER	Yerkesik	0.23	270	PG	Pg	13 46 54.5	+0.4
YER				SG	Sg	13 46 58.9	+1.7
YER	Yerkesik	0.23	270	ePg	Pg	13 46 54.5	+0.4
YER				eSg	Sg	13 46 58.9	+1.7
TURN	Turunc	0.26	175	PG	Pb	13 46 57.4	+0.2
TURN				SG	Sb	13 47 03.5	+1.2
TURN	Turunc	0.26	175	iP	Pb	13 46 57.0	-0.2
TURN				iS	Sb	13 47 03.4	+1.2
TURN	Turunc	0.26	175	P	Pb	13 46 57.0	-0.2
TURN	Turunc	0.26	175	ePg	Pb	13 46 57.4	+0.2
DALY	Dalyan (Mu˜la	0.32	169	PG	Pg	13 46 55.2	-0.5
DALY	Dalyan (Mu˜la	0.32	169	iP	Pg	13 46 55.3	-0.5
DALY				iS	Sg	13 47 00.7	+0.8
DALY	Dalyan (Mu˜la	0.32	169	P	Pg	13 46 55.3	-0.5
DALY				S	Sg	13 47 00.7	+0.8
TAVA	DENIZLI_Tavas	0.43	39	iP	Pb	13 46 59.8	-0.3
TAVA				iS	Sb	13 47 07.5	+0.3
TAVA	DENIZLI_Tavas	0.43	39	P	Pb	13 46 59.8	-0.3
TAVA				S	Sb	13 47 07.5	+0.3
FETY	Fethiye	0.64	141	PG	Pg	13 47 01.6	-0.3
FETY				SG	Sg	13 47 10.9	+0.7
FETY	Fethiye	0.64	141	ePg	Pg	13 47 01.6	-0.3
FETY				eSg	Sg	13 47 10.9	+0.7
MLSB	Milas	0.66	284	PG	Pg	13 47 02.6	+0.3
MLSB	Milas	0.66	284	ePg	Pg	13 47 02.6	+0.3
AYDN	Tasoluk	0.77	314	iP	Pb	13 47 05.5	-0.4
AYDN				iS	Sb	13 47 16.7	-0.2
AYDN	Tasoluk	0.77	314	P	Pb	13 47 05.5	-0.4
AYDN				S	Sb	13 47 16.7	-0.2
DAT	Datca	0.90	244	PG	Pg	13 47 06.2	-0.6
DAT	Datca	0.90	244	iP	Pg	13 47 06.1	-0.6
DAT				iS	Sb	13 47 19.9	-0.8
DAT	Datca	0.90	244	ePg	Pg	13 47 06.2	-0.6
BDRM	Kayabasi	0.91	266	iP	Pg	13 47 04.8	-2.2
BDRM				iS	Sn	13 47 22.4	-1.1
BDRM	Kayabasi	0.91	266	P	Pg	13 47 04.8	-2.2
AYDB	Zeytinkoy-Aydi	0.98	326	PG	Pb	13 47 09.5	0.0
AYDB	Zeytinkoy-Aydi	0.98	326	ePg	Pb	13 47 09.5	0.0
ARG	Arkhangelos	0.98	202	PG	Pg	13 47 07.4	-1.1
ARG	Arkhangelos	0.98	202	ePg	Pg	13 47 07.4	-1.1
BODT	Bodrum	1.01	266	PG	Pg	13 47 08.9	-0.2
BODT	Bodrum	1.01	266	ePg	Pg	13 47 08.9	-0.2
AKAS	Kas	1.22	137	PN	Pg	13 47 12.6	-0.4
AKAS	Kas	1.22	137	ePn	Pg	13 47 12.6	-0.4

*ISCJB **29** 14:05:59.3±0.4, 18°.57S±0°.04×69°.35W±0°.05, h119^{km}±3^{km}, mb4.0/8, Error ellipse: s-maj=8.5km s-min=6.5km az=15.0*
*BJI **29** 14:06:00.6, 18°.60S×69°.30W, h106^{km}, mB4.9/1*
*NEIC **29** 14:06:01.0±0.0, 18°.62S×69°.49W, h111^{km}, mb4.7/5, ML4.2(GUC), After GUC.*
NEIC Felt [II] at Arica.
*GUC **29** 14:06:01.0±0.6, 18°.62S×69°.50W, h111^{km}±3^{km}, ML4.2*
*IDC **29** 14:06:03.6±2.1, 18°.51S×69°.14W, h134^{km}±18^{km}, mb3.6/7, mb1 3.8/11, mb1mx3.5/45, mbtmp4.1/11, Error ellipse: s-maj=20.4km s-min=17.1km az=94.0*
ISC 29 14:06:00.3±0.6**, 18°.61S**±0°.05×**69°.35W**±0°.07**, h110**^{km}±6^{km}**, n51, σ1^{s}.51**/55**, mb4.1**/7**, 1C-4D, Northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB16	IPOC Station P	0.31	330	⇓iP	Pn	14 06 17.8	+0.9
PB16				eS	Sn	14 06 30.1	+0.9
PB16				IAML		14 06 30.9	
	comp=E,6µm,0.5s						
MNMC	Minye Minye	0.57	204	ePn	Pn	14 06 19.0	+1.0
MNMC				eSn	Sn	14 06 32.1	+0.8
MNMC	Minye Minye	0.57	204	eP	Pn	14 06 18.9	+0.8
MNMC				eS	Sn	14 06 32.5	+1.2
MNMC				IAML		14 06 33.0	
	comp=N,10µm,0.2s						
PB12	IPOC Station P	0.93	269	⇑iP	Pn	14 06 20.7	-0.2
PB12				eS	Sn	14 06 35.5	-0.9
PB12				IAML		14 06 36.7	
	comp=N,9µm,0.4s						
PB11	IPOC Station P	1.18	194	ePn	Pn	14 06 24.5	+0.8
PB11				eSn	Sn	14 06 41.4	+0.1
PB11	IPOC Station P	1.18	194	⇓iP	Pn	14 06 24.6	+0.9
PB11				eS	Sn	14 06 42.3	+1.0
PB11				IAML		14 06 43.3	
	comp=N,14µm,0.6s						
PSGC	Pisagua	1.23	217	⇓iP	Pn	14 06 24.1	0.0
PSGC				eS	Sn	14 06 42.1	0.0
PSGC				IAML		14 06 43.5	
	comp=N,3µm,0.4s						
PB08	IPOC Station P	1.54	173	⇓iP	Pn	14 06 29.7	+1.8
PB08				eS	Sn	14 06 51.5	+2.6
PB08				IAML		14 06 52.8	
	comp=E,4µm,0.2s						
PB01	IPOC Station P	2.43	183	ePn	Pn	14 06 39.5	+0.6
PB01				eSn	Sn	14 07 05.6	-2.9
LPAZ	La Paz	2.58	27	P	Pn	14 06 44.2	+2.8
	comp=E,25nm,0.3s,baz=294,slow=3.6,SNR=1421						
PB04	IPOC Station P	3.78	191	ePn	Pn	14 06 56.0	-0.9
PB10	IPOC Station P	5.01	193	ePn	Pn	14 07 11.6	-1.6
SIV	San Ignacio	8.32	73	P	Pn	14 07 57.8	-0.5
	comp=E,1.7nm,0.3s,baz=277,slow=9.2,SNR=34						
SIV				S	Sn	14 09 29.6	-1.0
	comp=E,0.3nm,0.3s,baz=337,slow=17,SNR=8.0						
GO03	Copiap	8.98	185	ePn	Pn	14 08 03.7	-3.5
NNA	Nana	9.78	311	P	Pn	14 08 16.2	-1.8
	comp=E,4.8nm,0.3s,baz=144,slow=9.7,SNR=12						
NNA				S	Sn	14 09 58.0	-8.0
	comp=E,1.3nm,0.3s,baz=248,slow=19,SNR=2.1						
NNA	Nana	9.78	311	ePn	Pn	14 08 15.8	-2.2
LCO	Las Campanas	10.43	187	ePn	Pn	14 08 23.3	-3.6
SAML	Samuel	11.31	33	ePn	Pn	14 08 36.7	-2.0
GO04	Tololo Observa	11.59	186	ePn	Pn	14 08 40.8	-1.7
CPUP	Villa Florida	13.50	127	P	Pn	14 09 06.9	-0.5
	comp=E,0.2nm,0.3s,baz=313,slow=13,SNR=7.0						
CPUP	Villa Florida	13.50	127	ePn	Pn	14 09 07.1	-0.3
ROC1	El Roble	14.39	186	ePn	Pn	14 09 19.1	+0.1
PEL	Peldehue	14.53	184	ePn	Pn	14 09 20.6	0.0
PTGA	Pitinga	20.01	28	P	P	14 10 23.0	-1.5
	comp=E,2.6nm,0.3s,baz=282,slow=23,SNR=16						
PTGA	Pitinga	20.01	28	eP	P	14 10 22.7	-1.8
	comp=E,16nm,0.2s						
TRQA	Tornquist	20.42	163	eP	P	14 10 29.6	+0.9
	comp=E,74nm,1.8s						
BDFB	Brasilia	20.60	85	P	P	14 10 31.3	+0.4
	comp=E,4.8nm,0.6s,baz=256,slow=9.5,SNR=8.2						
GO06	Curarrehue	20.98	185	eP	P	14 10 36.1	+1.3
	comp=E,17nm,1.1s						
PLCA	Paso Flores	22.07	182	P	P	14 10 48.9	+2.5
	comp=E,6.4nm,0.9s,baz=24,slow=9.5,SNR=8.8						
PLCA	Paso Flores	22.07	182	eP	P	14 10 45.1	-1.3
	comp=E,17nm,1.1s						
TXAR	Lajitas Array	58.04	325	P	P	14 15 42.8	+0.7
	comp=E,0.2nm,0.8s,baz=140,slow=5.7,SNR=2.5						
DBIC	Dimbokro	68.34	75	P	P	14 16 49.9	-0.4
	comp=E,2.9nm,0.8s,baz=233,slow=5.1,SNR=3.2						
QSPA	South Pole Qui	71.57	180	P	P	14 17 10.9	+1.5
	comp=E,1.8nm,0.6s,baz=109,slow=4.0,SNR=8.6						
RCCR	Rock Creek Can	72.61	321	eP	P	14 17 16.1	-0.1
TORD	Torodi Ar. Bea	76.79	71	P	P	14 17 39.7	-0.7
	comp=E,0.4nm,0.4s,baz=240,slow=5.8						
YKA	Yellowknife Ar	88.34	341	P	P	14 18 39.6	+0.5
	comp=E,0.5nm,0.4s,baz=132,slow=4.8,SNR=14						
BESE	Bessie Mountai	93.68	331	eP	P	14 19 04.6	+0.4
	comp=E,6.6nm,0.7s						
H11S2	WAKE ISLAND Hy	127.06	279	T	T	16 44 15.3	
	baz=100,slow=74,SNR=12						
H11N3	WAKE ISLAND Hy	127.06	281	T	T	16 44 22.1	
	baz=100,slow=74,SNR=7.0						
H11S1	WAKE ISLAND Hy	127.06	279	T	T	16 44 16.3	
	baz=100,slow=74,SNR=11						
H11S3	WAKE ISLAND Hy	127.07	279	T	T	16 44 21.9	
	baz=100,slow=74,SNR=11						
H11N2	WAKE ISLAND Hy	127.08	281	T	T	16 44 25.2	
	baz=100,slow=74,SNR=9.6						
H11N1	WAKE ISLAND Hy	127.08	281	T	T	16 44 30.0	
	baz=100,slow=74,SNR=5.0						
ASAR	Alice Springs	132.25	209	PKP	PKPdf	14 25 01.6	-0.7
	comp=E,0.2nm,0.5s,baz=159,slow=1.0,SNR=5.3						
WRA	Warramunga Arr	135.19	212	PKP	PKPdf	14 25 07.9	+0.1
	comp=E,0.4nm,0.6s,baz=150,slow=1.8,SNR=5.8						
KSH	Kashi	143.54	48	ePKP	PKPdf	14 25 23.5	+1.0
WMQ	Urumqi	148.31	33	PKPbc	PKPdf	14 25 29.8	-0.6
MJAR	Matsushiro Arr	149.90	312	PKPbc	PKPbc	14 25 38.5	+0.5
	comp=E,0.5nm,0.5s,baz=56,slow=0.8,SNR=4.0						
HHC	Hu-ho-hao-te	157.82	358	ePKP	PKPdf	14 25 45.8	+1.5
LZH	Lanzhou	161.58	18	ePKP	PKPdf	14 25 51.8	+3.0
LZH				pPKP	pPKPdf	14 26 16.5	-2.4
LZH				sPKP		14 26 29.0	
LZH				LR	LR		
	comp=E,130nm,18.1s						
LZH				LR	LR		
	comp=E,130nm,18.0s						
LZH				LR	LR		
	comp=E,170nm,20.1s						
NJ2	Nanjing	164.71	333	ePKP	PKPdf	14 25 50.5	-1.1

*ISCJB **29** 14:11:05.0±0.5, 4°.07S±0°.05×101°.24E±0°.04, h34^{km}, mb4.3/13, Error ellipse: s-maj=8.3km s-min=4.2km az=42.0*
*NEIC **29** 14:11:08.9±0.6, 3°.97S×101°.41E, h55^{km}±5^{km}, mb4.6/7, Error ellipse: s-maj=8.2km s-min=4.4km az=53.0*
NEIC Felt [III] at Kapahiang.
*DJA **29** 14:11:09.1±1.1, 4°S±3°×10°1E±°, h30^{km}±11^{km}, M4.8/13, mb5.0/5, mB5.3/3, MLv4.6/13, Mw(mB)4.8/3*
*IDC **29** 14:11:10.5±5.4, 3°.84S×101°.59E, h58^{km}±43^{km}, mb3.9/10, mb1 4.1/11, mb1mx3.6/63, mbtmp4.3/11, ML4.7/1, Error ellipse: s-maj=69.7km s-min=14.5km az=57.0*
ISC 29 14:11:07.4±0.6**, 3°.95S**±0°.07×**101°.38E**±0°.06**, h34**^{km}**, n60, σ1^{s}.52**/58**, mb4.4**/13**, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MASI	Maura Aman, Be	1.17	47	P	Pn	14 11 28.7	+1.2
MNAI	Manna	1.62	105	P	Pn	14 11 34.9	+1.2
MNAI				S	Sn	14 11 55.5	+2.1
MNAI	Manna	1.62	105	ePn	Pn	14 11 35.2	+1.5
MNAI				eSn	Sn	14 11 54.1	+0.7
PPSI	Pulau Pagai	1.81	311	P	Pb	14 11 39.3	-0.6
PPSI				S	Sb	14 12 01.2	-1.0
KRJI	Kerinci	1.84	2	P	Pn	14 11 39.2	+2.4
LHSI	Lahat	2.14	87	P	Pn	14 11 43.2	+2.4
LHSI				S	Sn	14 12 08.3	+2.1
MDSI	Maura Dua	2.84	101	P	Pn	14 11 52.1	+1.7
LWLI	Liwa	2.87	112	P	Pn	14 11 52.6	+1.6
SISI	Saibi	3.47	319	P	Pn	14 12 02.0	+3.0
KASI	Kota Agung	3.48	117	P	Pn	14 12 00.7	+1.5
BKNI	Bangkinang	4.26	355	ePn	Pn	14 12 11.8	+1.9
DSRI	Dabo	4.70	43	P	Pn	14 12 18.2	+2.2
MNSI	Mandailing Nat	5.04	339	P	Pn	14 12 23.1	+2.4
CGJI	Cibinong	5.04	122	P	Pn	14 12 21.6	+0.9
	232nm,0.7s,6µm1.2nm						
MYKOM	Kota Tinggi	6.21	23	ePn	Pn	14 12 39.5	+2.7
GSI	Gunungsitoli	6.46	324	P	Pn	14 12 41.9	+1.7
	26nm,0.5s,0.3nm						
GSI	Gunungsitoli	6.46	324	ePn	Pn	14 12 41.6	+1.5
LEM	Lembang	6.83	115	P	Pn	14 12 47.4	+1.9
	14nm,0.3s,baz=156,slow=18,SNR=10						
LEM	Lembang	6.83	115	P	Pn	14 12 48.7	+3.2
	477nm,0.7s,2.7nm						
PSI	Prapat	7.14	340	ePn	Pn	14 12 49.5	-0.1
CMJI	Cimerak	8.00	119	P	Pn	14 13 01.3	0.0
	100nm,0.6s,3µm						
TPTI		8.30	330	P	Pn	14 13 07.9	+2.4
IPM	Ipoh	8.38	358	ePn	Pn	14 13 08.7	+2.1
KULM	Kulim	9.20	355	ePn	Pn	14 13 19.8	+1.9
COCO	West Island	9.35	209	ePn	Pn	14 13 20.3	+0.5
UGM	Wanagama	9.91	114	ePn	Pn	14 13 28.1	+0.5
KSM	Kuching	10.42	59	ePn	Pn	14 13 35.8	+1.2
JAGI	Jajag, Banyuwa	13.46	110	ePn	Pn	14 14 15.9	-0.3
KKM	Kota Kinabalu	17.83	56	ePn	Pn	14 15 10.8	-2.3
	55nm,1.2s						
MYLDM	Lahad Datu	19.35	62	eP	P	14 15 29.7	-0.6
	56nm,1.4s						
CM01	Chiang Mai Arr	22.35	354	eP	P	14 16 02.7	0.0
CMAR	Chiang Mai Arr	22.39	354	P	P	14 16 03.3	+0.2
	2.1nm,0.7s,baz=182,slow=7.1,SNR=11						
BATI	Baumata	22.96	107	P	P	14 16 07.9	-1.3
	8.3nm,0.4s,baz=337,slow=17,SNR=5.3						
H08S2	Diego Garcia H	28.97	261	T	T	14 47 03.4	
	baz=84,slow=75,SNR=36						
H08S3	Diego Garcia H	28.98	261	T	T	14 46 55.1	
	baz=84,slow=75,SNR=48						
H08S1	Diego Carcia H	28.99	261	T	T	14 47 02.3	
	baz=84,slow=75,SNR=22						
H01W3	Cape Leeuwin H	32.98	161	T	T	14 52 07.0	
	baz=337,slow=76,SNR=9.1						
H01W2	Cape Leeuwin H	32.99	161	T	T	14 52 10.1	
	baz=337,slow=76,SNR=7.5						
H01W1	Cape Leeuwin H	32.99	161	T	T	14 52 01.2	
	baz=337,slow=76,SNR=6.4						
WR1	Warramunga Arr	35.84	119	eP	P	14 18 02.9	-1.3
	32nm,1.9s						
WRA	Warramunga Arr	35.84	119	P	P	14 18 02.9	-1.3
	2.2nm,0.4s,baz=302,slow=9.0,SNR=64						
WB2	Warramunga Arr	35.84	119	eP	P	14 18 03.2	-1.0
	9.3nm,1.2s						
ASAR	Alice Springs	37.01	125	P	P	14 18 13.9	-0.3
	2.3nm,0.5s,baz=302,slow=7.8,SNR=50						
AS31	Alice Springs	37.01	125	eP	P	14 18 13.7	-0.5
	1.2nm,0.4s						
STKA	Stephens Creek	46.84	131	P	P	14 19 34.5	+0.1
	2.1nm,0.6s,baz=299,slow=10.0,SNR=6.1						
STKA	Stephens Creek	46.84	131	eP	P	14 19 34.4	+0.1
	6.1nm,1.9s						
SONA0	Songino Array	51.75	4	eP	P	14 20 11.9	+0.2
SONM	Songino Array	51.75	4	P	P	14 20 11.9	+0.2
	1.9nm,0.4s,baz=179,slow=11,SNR=14						
MK01	Makanchi Array	53.24	344	eP	P	14 20 21.9	-0.8
MK31	Makanchi Array	53.27	344	eP	P	14 20 21.7	-1.1
MK32	Makanchi Array	53.27	344	eP	P	14 20 22.2	-0.7
MKAR	Makanchi Array	53.27	344	P	P	14 20 22.2	-0.7
	1.5nm,0.6s,baz=152,slow=7.1,SNR=17						
MKAR	Makanchi Array	53.27	344	eP	P	14 20 21.8	-1.1
	12nm,0.6s						
USRK	Ussuriysk Ar.	55.24	26	P	P	14 20 36.2	-1.0
	1.9nm,0.5s,baz=200,slow=6.1						
KURBB	Kurchatov Arra	57.80	343	P	P	14 20 56.5	+1.2
	0.4nm,0.3s,baz=160,slow=7.0,SNR=3.0						
KURK	Kurchatov	57.85	343	eP	P	14 20 56.5	+0.8
ZALV	Zalesovo Beam	59.33	349	P	P	14 21 05.0	-0.9
	1.5nm,0.3s,baz=131,slow=4.1,SNR=5.2						
ZALV	Zalesovo Beam	59.33	349	eP	P	14 21 04.4	-1.5
ZAA1	Zalesovo Array	59.33	349	eP	P	14 21 05.0	-1.0
TXAR	Lajitas Array	145.34	41	PKPbc	PKPdf	14 30 42.0	-0.6
	0.3nm,0.5s,baz=280,slow=1.0,SNR=8.2						

MAN 29 14:12:24.9, 13°.66N×120°.38E, h33^{km}**, mb3.7, ML2.4, MS1.9, 1C, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	Lubang	0.15	299	eP	Pb	14 12 32.1	+1.1
LUBP				eS	Sb	14 12 37.1	+1.9
PGP	Puerto Galera	0.58	106	⇑eP	Pn	14 12 37.6	+0.8
PGP				iS	Sn	14 12 46.6	+1.4
SJMP	San Jose	1.39	149	eP	Pb	14 12 49.5	-0.9
SJMP				eS	Sn	14 13 05.1	-0.1

*BJI **29** 14:21:16.1, 6°.10S×104°.30E, h60^{km}, mb5.1/59, mB5.1/34, Ms4.7/36, Ms7 4.5/36*
*DJA **29** 14:21:16.8±0.2, 6°S±2°×10°4E±°, h48^{km}±2^{km}, M5.1/58, mB5.5/36, mb5.2/58, MLv5.4/19, Mw(mB)5.0/36*
*IDC **29** 14:21:17.5±1.6, 5°.90S×104°.57E, h52^{km}±13^{km}, mb4.7/44, mb1 4.7/45, mb1mx4.5/67, mbtmp4.9/45, ML4.2/1, MS4.1/36, Ms1 4.1/36, ms1mx4.0/58, Error ellipse: s-maj=13.0km s-min=7.1km az=37.0*
*GCMT **29** 14:21:18.4±0.3, 6°.46S×104°.45E, h53^{km}±1^{km}, MW5.1/74, Moment Tensor Solution. s67,c100; s74,c109; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}4.12±.19; $M_{\theta\theta}$-4.06±.13; $M_{\phi\phi}$-0.06±.17; $M_{r\theta}$1.59±.12; $M_{\theta\phi}$1.63±.10; $M_{\phi r}$-1.37±.12; Best double couple: $M_0$4.86600×10^{16} NP1:ϕ_s119.00000°, δ58.00000°, λ101.00000°. NP2: ϕ_s279.00000°, δ34.00000°, λ73.00000°. Principal axes: T 4.6700, Plg74.0000°, Azm61.0000°; N 0.3890, Plg10.0000°, Azm293.0000°; P -5.0630, Plg12.0000°, Azm201.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*
*ISCJB **29** 14:21:18.2±0.4, 5°.99S±0°.03×104°.48E±0°.03, h73^{km}±3^{km}, mb5.0/177 Error ellipse: s-maj=5.9km s-min=2.8km az=39.1*
*NEIC **29** 14:21:18.4±0.6, 6°.00S×104°.42E, h66^{km}±4^{km}, mb5.2/65, Error ellipse: s-maj=6.9km s-min=3.3km az=219.0*
*MOS **29** 14:21:20.0±1.1, 5°.69S×104°.68E, h81^{km}, mb5.3/77, Error ellipse: s-maj=9.1km s-min=4.4km az=119.5*
ISC 29 14:21:17.6±0.6**, 6°.09S**±0°.04×**104°.35E**±0°.04**, h58**^{km}±4^{km}**, n1077, σ1^{s}.18**/1068**, mb5.2**/180**, MS4.2**/47**, 51C-21D, Sunda Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KASI	Kota Agung	0.58	14	P	Pn	14 21 30.8	+0.5
KASI				S	Sn	14 21 40.5	+0.9
LWLI	Liwa	1.10	345	P	Pn	14 21 38.6	+1.5
BLSI	Bandar Lampung	1.14	51	P	Pn	14 21 38.2	+0.7
KLI	Kotabumi	1.32	22	P	Pn	14 21 41.5	+1.7
KLI	Kotabumi	1.32	22	P	Pn	14 21 41.5	+1.7
CGJI	Cibinong	1.43	111	P	Pn	14 21 40.0	-1.3
CGJI				S	Sn	14 21 58.4	-0.7
MDSI	Maura Dua	1.60	354	P	Pn	14 21 45.8	+2.2
SBJI	Serang	1.77	91	P	Pn	14 21 45.8	-0.1
MNAI	Manna	2.21	321	P	Pn	14 21 53.4	+1.5
MNAI	Manna	2.21	321	ePn	Pn	14 21 53.5	+1.5
TNG	Tangerang	2.28	92	P	Pn	14 21 55.0	+2.1
SKJI	Sukabumi	2.37	113	P	Pn	14 21 54.6	+0.5
LHSI	Lahat	2.40	340	P	Pn	14 21 57.5	+3.1
PMBI	Palembang	3.17	8	P	Pn	14 22 08.0	+3.0
LEM	Lembang	3.33	103	P	Pn	14 22 09.1	+1.7
	75nm,0.3s,baz=198,slow=20,SNR=43						
LEM				S	Sn	14 22 46.3	+0.6
	104nm,0.3s,baz=200,slow=21,SNR=6.1						
LEM				LR	LR	14 23 48.3	
	comp=Z,5µm,18.6s,baz=305,slow=48						
LEM	Lembang	3.33	103	P	Pn	14 22 09.4	+2.1
MASI	Maura Aman, Be	3.61	324	P	Pn	14 22 14.2	+3.1
CMJI	Cimerak	4.40	113	P	Pn	14 22 22.0	+0.1
KRJI	Kerinci	4.91	324	P	Pn	14 22 30.7	+1.8
PPSI	Pulau Pagai	5.45	307	P	Pn	14 22 37.1	+0.9
	1µm,1.2s,12µm15nm						
DSRI	Dabo	5.58	2	P	Pn	14 22 41.3	+3.3
	810nm,1.5s,8µm3.4nm						
SMRI	Semarang	6.12	99	P	Pn	14 22 53.3	+7.8
SMRI	Semarang	6.12	99	ePn	Pn	14 22 49.0	+3.5
UGM	Wanagama	6.39	107	P	Pn	14 22 51.4	+2.2
	241nm,0.7s,1.3nm						
UGM	Wanagama	6.39	107	ePn	Pn	14 22 50.8	+1.6
TPRI	Tanjung Pinang	6.96	1	P	Pn	14 23 00.1	+3.1
	192nm,1.1s,4µm0.9nm						

SISI	Saibi	7.07	312	P	Pn	14 22 58.8	+0.3
	124nm,0.7s,2µm1.2nm						
PCJI	Pacitan	7.09	108	P	Pn	14 23 00.6	+1.9
	178nm,1.0s,3µm1.1nm						
NGJI	Ngawi	7.17	101	P	Pn	14 23 02.2	+2.3
	135nm,1.1s,0.9nm						
BKNI	Bangkinang	7.18	332	P	Pn	14 23 01.7	+1.7
	237nm,0.9s,3µm1.9nm						
BKNI	Bangkinang	7.18	332	*e*Pn	Pn	14 22 59.6	-0.4
MYKOM	Kota Tinggi	7.84	356	*e*Pn	Pn	14 23 10.4	+1.3
PBKI	Pangkalan Bun	8.03	66	P	Pn	14 23 13.8	+2.1
	173nm,0.9s						
MNSI	Mandailing Nat	8.34	325	P	Pn	14 23 15.2	-0.6
	51nm,0.6s,1µm0.4nm						
PBSI	Pulau Batu	8.53	314	P	Pn	14 23 16.6	-1.8
	91nm,0.6s						
GMJI	Gumukmas	9.28	104	P	Pn	14 23 29.8	+1.1
	136nm,0.7s,2µm						
BLJI	Banyuglugur	9.32	101	P	Pn	14 23 31.5	+2.2
	277nm,0.5s,6µm						
STKI	Sintang	9.38	50	P	Pn	14 23 32.9	+2.8
	132nm,0.9s,11µm						
COCO	West Island	9.58	230	*e*Pn	Pn	14 23 30.3	-2.6
COCO	West Island	9.58	230	*i* P	Pn	14 23 31.5	-1.3
KSM	Kuching	9.58	39	*e*Pn	Pn	14 23 34.4	+1.5
GSI	Gunungsitoli	9.99	317	P	Pn	14 23 36.7	-1.7
	67nm,1.0s						
GSI	Gunungsitoli	9.99	317	*e*Pn	Pn	14 23 36.5	-1.9
JAGI	Jajag, Banyuwa	10.00	104	P	Pn	14 23 38.5	-0.2
	612nm,0.8s,6µm						
JAGI	Jajag, Banyuwa	10.00	104	*e*Pn	Pn	14 23 38.5	-0.2
PSI	Prapat	10.36	328	P	Pn	14 23 42.4	-1.3
	1.9nm,0.3s,baz=180,slow=14,SNR=4.0						
PSI				LR	LR	14 28 21.2	
	comp=Z,1µm,20.5s,baz=91,slow=41						
PSI	Prapat	10.36	328	*e*Pn	Pn	14 23 41.1	-2.6
PSI	Prapat	10.36	328	*e*P	Pn	14 23 41.1	-2.6
SRBI	Singaraja	10.96	101	P	Pn	14 23 53.8	+2.1
	152nm,0.9s,2µm						
IPM	Ipoh	11.01	342	*e*Pn	Pn	14 23 52.1	-0.4
IGBI	Denpasar	11.04	105	P	Pn	14 23 51.5	-1.3
	209nm,0.6s,5µm						
DNP	Denpasar	11.07	104	P	Pn	14 23 51.4	-1.8
	574nm,0.5s						
DNP	Denpasar	11.07	104	P	Pn	14 23 52.9	-0.3
DNP				pmax	pmax		
	comp=Z,551nm,0.6s						
SBUM	Sibu	11.56	43	*e*Pn	Pn	14 24 03.8	+3.9
KCSI	Kotacane, Aceh	11.59	325	P	Pn	14 23 55.9	-4.5
	comp=Z,22nm,0.7s						
SNSI	Sinabang, Aceh	11.64	316	P	Pn	14 24 00.3	-0.7
	comp=Z,102nm,0.8s						
MTKI	Muara Teweh, K	11.70	64	P	Pn	14 24 05.2	+3.4
	comp=Z,64nm,1.6s,comp=Z,4µm						
TPTI		11.73	322	P	Pn	14 23 59.4	-2.8
	comp=Z,35nm,0.6s						
KULM	Kulim	11.89	342	*e*Pn	Pn	14 24 04.8	+0.3
TWSI	Taliwang, Sumb	12.70	103	P	Pn	14 24 13.0	-2.5
	comp=Z,48nm,0.5s,comp=Z,1µm						
MLSI	Meulaboh, Aceh	12.99	322	P	Pn	14 24 15.5	-4.0
	comp=Z,102nm,0.7s						
PLAI	Plampang	13.59	102	P	Pn	14 24 24.6	-3.0
	comp=Z,182nm,0.9s,comp=Z,2µm						
SKLT	Songkhla	13.69	344	P	P	14 24 34.9	-0.9
SMKI	Samarinda	14.00	67	P	P	14 24 45.0	+5.7
WBSI	Waikabubak, Su	15.31	104	P	P	14 24 56.2	+2.3
SPSI	Sidrap Palu	15.50	83	P	Pn	14 24 53.7	+1.0
	comp=Z,26nm,0.9s,comp=Z,500nm						
TTSI	Tana Toraja	15.71	80	P	Pn	14 24 55.7	+0.4
	comp=Z,55nm,1.2s,comp=Z,969nm						
BKSI	Bulukumba	15.71	88	P	P	14 24 57.6	-0.7
	comp=Z,155nm,1.1s,comp=Z,1µm						
PCI	Palu	16.29	72	P	P	14 25 05.8	+1.1
	comp=Z,227nm,1.3s,comp=Z,4µm						
PCI	Palu	16.29	72	P	P	14 25 08.1	+3.4
PCI				pmax	pmax		
	comp=Z,227nm,1.3s						
MPSI	Mapaga	16.78	68	P	P	14 25 12.1	+1.9
	comp=Z,51nm,0.9s,comp=Z,963nm						
KKM	Kota Kinabalu	16.90	45	*e*Pn	P	14 25 13.5	+1.9
	comp=Z,214nm,1.7s						
EDFI	Ende, Flores	17.39	100	P	Pn	14 25 15.4	-1.1
	comp=Z,71nm,1.2s,comp=Z,1µm						
MMRI	Maumere	17.92	99	P	P	14 25 20.5	-2.3
	comp=Z,240nm,1.0s,comp=Z,3µm						
MMRI	Maumere	17.92	99	*e*P	P	14 25 20.6	-2.2
	comp=Z,171nm,0.7s						
APSI	Ampana	18.01	74	P	Pn	14 25 25.8	+1.8
	comp=Z,182nm,0.9s,comp=Z,2µm						
MYLDM	Lahad Datu	18.02	52	*e*P	Pn	14 25 25.8	+1.7
	comp=Z,121nm,1.1s						
KDI	Kendari	18.32	84	P	Pn	14 25 30.5	+2.8
	comp=Z,66nm,0.9s						
MRSI	Marisa	18.73	70	P	Pn	14 25 33.3	+0.6
	comp=Z,122nm,0.6s,comp=Z,1µm						
GIRL	Giralia	19.02	151	P	P	14 25 35.2	+0.4
	baz=19,SNR=23						
LUWI	Luwuk	19.05	75	*e*P	P	14 25 35.6	+0.4
	comp=Z,162nm,0.9s						
PHET	Kaeng Krachan	19.45	346	P	Pn	14 25 42.1	+0.9
	comp=Z,8.5nm,0.8s,comp=Z,136nm						
BATI	Baumata	19.55	103	P	P	14 25 40.6	-0.1
	comp=Z,114nm,0.3s,baz=350,slow=1.8,SNR=89						
BATI				S	S	14 29 16.0	-2.5
	comp=Z,7.2nm,0.3s,baz=49,slow=20,SNR=6.4						
BATI	Baumata	19.55	103	P	Pn	14 25 41.7	-0.7
	comp=Z,296nm,0.9s,comp=Z,4µm						
SOEI	Soe	20.05	102	P	P	14 25 46.5	+0.2
	comp=Z,493nm,0.8s,comp=Z,5µm						
SOEI	Soe	20.05	102	*e*P	P	14 25 45.2	-1.1
	comp=Z,457nm,0.9s						
SRAK	Srakaew	20.10	353	P	P	14 25 45.7	-0.9
NAYO	Nakonayok	20.50	352	P	P	14 25 50.1	-0.8
MBWA	Marble Bar	21.13	137	*e*P	P	14 25 55.7	-2.0
	comp=Z,24nm,0.8s						
UTHA	Uthaitani	22.05	347	P	P	14 26 08.3	+0.7
	comp=Z,6.9nm,0.8s						
PBKT	Sadao Pong	22.76	352	*e*P	P	14 26 13.3	-1.9
	comp=Z,19nm,1.0s						
NLAI	Namlea	22.85	84	P	P	14 26 18.4	+2.2
LBMI	Labuha	23.73	78	P	P	14 26 26.1	+1.5
	comp=Z,226nm,1.0s,comp=Z,2µm						
SUKH	Sukhothai	23.88	349	P	P	14 26 26.8	+0.9
	comp=Z,8.4nm,0.8s						
TNTI	Ternate	23.97	74	P	P	14 26 28.2	+1.4
	comp=Z,85nm,0.8s,comp=Z,1µm						
TNTI	Ternate	23.97	74	*e*P	P	14 26 25.7	-1.0
	comp=Z,89nm,0.9s						
UTTA	Uttaradit	23.98	351	P	P	14 26 27.9	+1.1
MEEK	Meekatharra	24.54	148	P	P	14 26 32.3	+0.3
	baz=25,SNR=7.2						
DAV	Davao City (W)	24.89	59	LR	LR	14 36 54.3	
	comp=Z,502nm,21.2s,baz=198,slow=38						
LAMP	Lampang	24.90	349	P	P	14 26 35.5	+0.3
	comp=Z,7.1nm,0.8s						
CM01	Chiang Mai Arr	24.93	348	*e*P	P	14 26 32.9	-2.5
CM31	Chiang Mai Arr	24.97	348	*e*P	P	14 26 34.3	-1.6
CMAR	Chiang Mai Arr	24.97	348	P	P	14 26 34.0	-1.8
	comp=Z,11nm,0.8s,baz=181,slow=8.7,SNR=39						
CMAR				PcP	PcP	14 30 11.5	+1.4
	comp=Z,2.0nm,0.6s,baz=208,slow=3.8,SNR=5.9						
CMAR				ScP	ScP	14 33 44.5	+0.2
	comp=Z,1.0nm,0.7s,baz=190,slow=3.2,SNR=4.4						
CMAR				LR	LR	14 37 05.0	
	comp=Z,703nm,20.5s,baz=166,slow=38						
CMMT	Chiang Mai	25.31	348	P	P	14 26 37.7	-1.3
CHTO	Chiang Mai	25.31	348	*e*P	P	14 26 36.5	-2.5
	comp=Z,21nm,1.0s						
CHTO	Chiang Mai	25.31	348	*e*P	P	14 26 36.5	-2.5
CHTO				pmax	pmax		
	comp=Z,21nm,1.0s						
CHTO	Chiang Mai	25.31	348	P	P	14 26 37.8	-1.2
QIZ	Qiongzhong	25.54	12	P	P	14 26 41.5	+0.5
QIZ				pP	pP	14 26 57.0	+1.6
QIZ				S	S	14 31 08.8	+4.1
QIZ				LR	LR		
	comp=Z,1µm,19.1s						
QIZ				LR	LR		
	comp=Z,310nm,14.7s						
QIZ				LR	LR		
	comp=Z,1µm,17.6s						
KNRA	Kununurra	25.77	114	P	P	14 26 42.0	-1.1
	baz=26,SNR=17						
PALK	Pallekele	27.07	299	LR	LR	14 36 33.7	
	comp=Z,424nm,18.8s,baz=115,slow=34						
MTN	Manton Dam	27.24	106	P	P	14 26 55.7	-0.7
	baz=27,SNR=38						
MTN	Manton Dam	27.24	106	*e*P	P	14 26 54.1	-2.3
	comp=Z,41nm,0.6s						
KDU	Kakadu	28.49	105	P	P	14 27 06.1	-1.5
	baz=29,SNR=13						
NWAO	Narrogin (SRO)	29.27	157	LR	LR	14 37 24.7	
	comp=Z,819nm,21.9s,baz=192,slow=33						
WRKA	Warakurna	29.68	132	P	P	14 27 18.7	+0.6
	baz=30,SNR=4.8						
KMBL	Kambalda	30.04	149	P	P	14 27 21.4	+0.3
	baz=30,SNR=4.9						
H01W3	Cape Leeuwin H	30.04	164	T	T	14 58 50.5	
	baz=342,slow=76,SNR=142						
H01W1	Cape Leeuwin H	30.06	164	T	T	14 58 56.4	
	baz=342,slow=76,SNR=174						
H01W2	Cape Leeuwin H	30.06	164	T	T	14 58 58.3	
	baz=342,slow=76,SNR=225						
GZH	Guangzhou	30.30	17	*e*P	P	14 27 32.5	+9.0
KMI	Kunming	31.07	357	P	P	14 27 33.3	+2.8
KMI				S	S	14 32 31.5	-0.4
KMI				pmax	pmax		
	comp=Z,14nm,0.9s						
KMI				LR	LR		
	comp=Z,1µm,17.9s						
KMI				LR	LR		
	comp=Z,610nm,15.6s						
KMI				LR	LR		
	comp=Z,1µm,15.6s						
BRDH	Bariadhala	31.18	337	LR	LR	14 43 21.5	
	comp=Z,586nm,19.0s,baz=130,slow=43						
H08S2	Diego Garcia H	31.66	265	T	T	15 01 13.9	
	baz=89,slow=75,SNR=70						
H08S3	Diego Garcia H	31.67	265	T	T	15 01 08.8	
	baz=89,slow=75,SNR=102						
H08S1	Diego Carcia H	31.68	265	T	T	15 01 15.3	
	baz=89,slow=75,SNR=66						
WRA	Warramunga Arr	32.22	118	P	P	14 27 39.9	-0.6
	comp=Z,12nm,0.5s,baz=292,slow=10.0,SNR=123						
WRA				PcP	PcP	14 30 28.8	+0.7
	comp=Z,3.1nm,0.5s,baz=300,slow=2.1,SNR=6.6						
WRA				S	S	14 32 49.1	-0.7
	comp=Z,1.8nm,1.0s,baz=293,slow=20,SNR=3.1						
WRA				ScP	ScP	14 34 08.3	+1.3
	comp=Z,2.6nm,1.1s,baz=282,slow=4.0,SNR=4.3						
WRAB	Tennant Creek	32.22	118	*e*P	P	14 27 39.5	-1.1
	comp=Z,18nm,0.6s						
WRAB	Tennant Creek	32.22	118	*c* *i*P	P	14 27 39.9	-0.7
WRAB				pmax	pmax		
	comp=Z,18nm,0.7s						
WB2	Warramunga Arr	32.23	118	*e*P	P	14 27 39.9	-0.7
	comp=Z,16nm,0.6s						
GYA	Guiyang	32.43	4	⇑*i*P	P	14 27 44.3	+1.9
GYA				pP	sP	14 28 01.5	-2.4
GYA				PP	PP	14 28 55.0	-1.7
GYA				S	S	14 32 54.5	+1.4
GYA				sS	sS	14 33 21.0	+3.1
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
GYA				pmax	pmax		
	comp=Z,100nm,5.0s						
GYA				LR	LR		
	comp=Z,600nm,17.0s						
GYA				LR	LR		
	comp=Z,550nm,17.4s						
GYA				LR	LR		
	comp=Z,520nm,17.2s						
AS31	Alice Springs	33.36	125	*e*P	P	14 27 49.4	-1.1
	comp=Z,5.5nm,0.9s						
ASAR	Alice Springs	33.36	125	P	P	14 27 50.5	0.0
	comp=Z,13nm,0.8s,baz=302,slow=8.0,SNR=79						
ASAR				PcP	PcP	14 30 32.2	+0.9
	comp=Z,6.6nm,0.9s,baz=304,slow=2.4,SNR=10						
ASAR				S	S	14 33 06.0	-1.5
	comp=Z,4.0nm,0.9s,baz=293,slow=16,SNR=9.3						
ASAR				ScP	ScP	14 34 12.3	+1.3
	comp=Z,1.7nm,1.1s,baz=296,slow=3.0,SNR=3.5						
ASAR				LR	LR	14 43 19.9	
	comp=Z,483nm,18.9s,baz=296,slow=40						
AS01	Alice Springs	33.40	125	*e*P	P	14 27 49.6	-1.3
AS01				*e*PcP	PcP	14 30 31.9	+0.5
SHL	Shillong	33.72	339	*e*P	P	14 27 52.0	-1.7
	comp=Z,159nm,2.0s						
SHL	Shillong	33.72	339	*e*P	P	14 27 53.0	-0.7
SHL	Shillong	33.72	339	*e*P	P	14 27 52.0	-1.7
SHL				pmax	pmax		
	comp=Z,159nm,2.0s						
ENH	Enshi	36.49	7	*e*P	P	14 28 17.1	-0.2
	comp=Z,31nm,0.8s						
ODAN	Odare	36.65	334	*e*P	P	14 28 18.1	-0.8
	comp=Z,67nm,0.8s						
CD2	Chengdu	36.80	359	*e*P	P	14 28 21.0	+1.1
CD2				pP	pP	14 28 35.8	+1.1
CD2				sP	sP	14 28 43.0	+1.5
CD2				PP	PnPn	14 29 46.3	+1.0
CD2				S	S	14 34 03.0	+3.0
CD2				pmax	pmax		
	comp=Z,20nm,0.5s						
CD2				pmax	pmax		
	comp=Z,180nm,4.8s						
CD2				LR	LR		
	comp=Z,900nm,18.4s						
CD2				LR	LR		
	comp=Z,620nm,16.4s						
CD2				LR	LR		
	comp=Z,790nm,18.4s						
RAMN	Ramite	37.07	333	*e*P	P	14 28 22.3	-0.3
QIS	Mount Isa	37.08	116	P	P	14 28 22.2	-0.3
	baz=37,SNR=12						
LSA	Lhasa	37.78	341	P	P	14 28 28.5	-0.3
LSA				pmax	pmax		
	comp=Z,22nm,1.1s						
LSA	Lhasa	37.78	341	*e*P	P	14 28 28.1	-0.7
	comp=Z,26nm,1.0s						
LSA	Lhasa	37.78	341	P	P	14 28 29.0	+0.3
LSA	Lhasa	37.78	341	*e*P	P	14 28 28.1	-0.7
LSA				pmax	pmax		
	comp=Z,26nm,1.0s						
JIRN	Jiri	37.87	333	*e*P	P	14 28 29.1	-0.3
	comp=Z,160nm,0.9s						
PKIN	Phulchoki	38.16	332	*e*P	P	14 28 32.0	+0.2
	comp=Z,33nm,0.7s						
GUN	Gumba	38.22	333	*e*P	P	14 28 32.1	-0.3
	comp=Z,128nm,0.8s						
DMN	Daman	38.32	332	*e*P	P	14 28 32.3	-0.8
	comp=Z,62nm,0.9s						
KKN	Kakani	38.39	332	*e*P	P	14 28 32.8	-0.9
	comp=Z,66nm,0.8s						
POO	Poona	38.77	310	*e*x	P	14 28 34.0	-2.8
GKN	Gorkha	38.87	332	*e*P	P	14 28 37.0	-0.6
COEN	Coen	38.97	105	P	P	14 28 37.6	-1.0
	baz=39,SNR=25						
COEN	Coen	38.97	105	*e*P	P	14 28 37.2	-1.3
	comp=Z,28nm,0.8s						
KOLN	Koldanda	39.18	330	*e*P	P	14 28 40.6	+0.3
	comp=Z,77nm,0.7s						
DANN	Dangsing	39.58	331	*e*P	P	14 28 43.0	-0.7
BBOO	Buckleboo	39.71	136	P	P	14 28 44.6	+0.1
	baz=40,SNR=5.4						
PYUN	Piuthan	39.76	330	*e*P	P	14 28 44.7	-0.4
	comp=Z,78nm,0.8s						
JOW	Kunigami	40.10	34	LR	LR	14 44 43.0	
	comp=Z,293nm,20.4s,baz=184,slow=35						
XAN	Xi’an	40.15	6	P	P	14 28 47.5	-0.5
XAN				pmax	pmax		
	comp=Z,48nm,0.8s						
XAN				LR	LR		
	comp=Z,270nm,19.2s						
XAN				LR	LR		
	comp=Z,380nm,20.1s						
XAN				LR	LR		
	comp=Z,530nm,17.3s						
NJ2	Nanjing	40.37	19	*e*P	P	14 28 52.3	+2.5
NJ2				pmax	pmax		
	comp=Z,13nm,0.5s						
MTSU	Mount Surprise	40.77	111	P	P	14 28 53.3	-0.1
	baz=41,SNR=34						
LZH	Lanzhou	41.96	359	*e*P	P	14 29 05.0	+2.0
LZH				pP	pP	14 29 20.0	+2.0
LZH				sP	sP	14 29 27.8	+3.0
LZH				*e*PP	PnPn	14 30 46.0	-0.6
LZH				pmax	pmax		
	comp=Z,28nm,1.0s						
LZH				pmax	pmax		
	comp=Z,470nm,6.5s						
LZH				LR	LR		
	comp=Z,560nm,14.6s						
LZH				LR	LR		
	comp=Z,580nm,17.9s						
LZH				LR	LR		
	comp=Z,760nm,17.3s						
HTT	Hallett	42.05	135	P	P	14 29 03.7	-0.1
	baz=42,SNR=7.8						
PMG	Port Moresby	42.52	97	P	P	14 29 06.9	-0.9
	comp=Z,53nm,0.8s,baz=292,slow=3.2,SNR=10						
PMG				LR	LR	14 49 07.9	
	comp=Z,132nm,19.0s,baz=254,slow=40						
PMG	Port Moresby	42.52	97	*e*P	P	14 29 06.5	-1.3
	comp=Z,67nm,0.8s						
PMG	Port Moresby	42.52	97	*e*P	P	14 29 06.5	-1.3
PMG				pmax	pmax		
	comp=Z,67nm,0.8s						
CTAO	Charters Tower	42.98	113	*e*P	P	14 29 10.8	-0.5
	comp=Z,42nm,1.3s						
CTAO	Charters Tower	42.98	113	*e*P	P	14 29 10.9	-0.5
CTAO				pmax	pmax		
	comp=Z,42nm,1.3s						
QLP	Quilpie	43.09	123	P	P	14 29 12.0	-0.2
	baz=43,SNR=11						
STKA	Stephens Creek	43.21	131	P	P	14 29 13.8	+0.7
	comp=Z,51nm,0.7s,baz=308,slow=7.7,SNR=133						
STKA				LR	LR	14 49 36.4	
	comp=Z,417nm,18.8s,baz=295,slow=39						
STKA	Stephens Creek	43.21	131	P	P	14 29 13.9	+0.7
	baz=43,SNR=99						
STKA	Stephens Creek	43.21	131	*e*P	P	14 29 13.5	+0.4
	comp=Z,10nm,0.6s						
STKA	Stephens Creek	43.21	131	*e*P	P	14 29 13.5	+0.4
STKA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
NDI	New Delhi	43.34	324	*e*P	P	14 29 08.5	-5.7
GUMO	Guam	44.73	64	P	P	14 29 23.1	-2.4
	comp=Z,28nm,0.5s,baz=181,slow=16,SNR=5.0						
GUMO	Guam	44.73	64	*e*P	P	14 29 23.0	-2.5
GTA	Gaotai	45.47	355	⇑P	P	14 29 30.5	-0.6
GTA				S	S	14 36 08.8	+0.1
GTA				pmax	pmax		
	comp=Z,3.0nm,1.2s						
GTA				pmax	pmax		
	comp=Z,98nm,4.9s						
GTA				LR	LR		
	comp=Z,490nm,16.8s						
GTA				LR	LR		
	comp=Z,380nm,18.7s						
GTA				LR	LR		
	comp=Z,540nm,16.8s						
CMSA	Cobar Meteorol	46.18	129	P	P	14 29 37.1	+0.3
	baz=46,SNR=20						
JNU	Nakatsue	46.42	31	P	P	14 29 38.0	-0.6
	comp=Z,22nm,1.0s,baz=209,slow=4.9,SNR=11						
JNU				LR	LR	14 49 11.0	
	comp=Z,203nm,21.2s,baz=134,slow=36						
JNU	Nakatsue	46.42	31	*e*P	P	14 29 38.1	-0.5
HHC	Hu-ho-hao-te	47.18	7	*e*P	P	14 29 45.8	+1.3
HHC				pP	sP	14 30 03.8	-2.6
HHC				S	S	14 36 37.5	+4.4
HHC				sS	sS	14 37 03.0	+4.2
HHC				pmax	pmax		
	comp=Z,25nm,1.1s						
HHC				pmax	pmax		
	comp=Z,90nm,5.4s						
HHC				LR	LR		
	comp=Z,580nm,18.0s						
HHC				LR	LR		
	comp=Z,320nm,14.3s						
HHC				LR	LR		
	comp=Z,370nm,17.3s						
BJI	Beijing	47.18	12	⇑*e*P	P	14 29 43.8	-0.5
BJI				pmax	pmax		
	comp=Z,20nm,1.0s						
KS15	Wonju Array Si	48.56	25	*e*P	P	14 29 56.1	+1.0
KSAR	Wonju Array Be	48.56	25	P	P	14 29 55.1	0.0
KSAR				PcP	PcP	14 31 20.9	+0.7
KSAR	Wonju Array Be	48.56	25	P	P	14 29 55.1	0.0
KSAR						14 31 20.9	
EIDS	Eidsvold	48.58	119	P	P	14 29 55.3	-0.2
	baz=49,SNR=4.2						
EIDS	Eidsvold	48.58	119	*e*P	P	14 29 53.7	-1.8
	comp=Z,17nm,1.1s						
KSRS	Korea Array	48.58	25	P	P	14 29 55.1	-0.1
	comp=Z,7.9nm,0.7s,baz=221,slow=7.3,SNR=42						
KSRS				PcP	PcP	14 31 20.9	+0.6
	comp=Z,2.1nm,1.1s,baz=233,slow=2.0,SNR=4.3						
KS01	Wonju Array Si	48.59	25	*e*P	P	14 29 54.7	-0.6
NIL	Nilore	49.30	325	*e*P	P	14 29 59.5	-1.4
	comp=Z,99nm,0.9s						
NIL	Nilore	49.30	325	*e*P	P	14 29 59.5	-1.4
NIL				pmax	pmax		
	comp=Z,99nm,0.9s						
INU	Inuyama	51.42	34	*e*P	P	14 30 14.5	-2.3
	comp=Z,16nm,1.1s						
JHJ	Hachijo jima 2	51.49	38	LR	LR	14 54 39.0	
	comp=Z,102nm,19.0s,baz=274,slow=39						
WMQ	Urumqi	51.91	345	P	P	14 30 20.8	+0.4
WMQ				pP	pP	14 30 34.3	-1.6
WMQ				sP	sP	14 30 40.8	-1.7
WMQ				pmax	pmax		
	comp=Z,62nm,1.1s						
WMQ				pmax	pmax		
	comp=Z,150nm,3.7s						
WMQ				LR	LR		
	comp=Z,490nm,29.5s						
WMQ				LR	LR		
	comp=Z,310nm,25.7s						
WMQ				LR	LR		
	comp=Z,420nm,28.3s						
KBL	Kabul	52.38	323	*e*P	P	14 30 22.1	-2.1
	comp=Z,37nm,1.1s						
KBL	Kabul	52.38	323	*e*P	P	14 30 22.2	-2.1
KBL				pmax	pmax		
	comp=Z,37nm,1.1s						
KSH	Kashi	52.41	332	P	P	14 30 22.8	-1.5
KSH				sP	sP	14 30 46.5	+0.1
KSH				*e*PcP	PcP	14 31 32.5	-2.0
KSH				PP	PP	14 32 24.0	+0.3
KSH				S	S	14 37 39.5	-6.7
KSH				pmax	pmax		
	comp=Z,47nm,0.9s						
KSH				pmax	pmax		
	comp=Z,180nm,5.7s						
MAJO	Matsushiro	52.95	34	*e*P	P	14 30 24.6	-3.5
	comp=Z,14nm,0.9s						
MAJO	Matsushiro	52.95	34	*c* *i*P	P	14 30 25.9	-2.3
MAJO				pmax	pmax		
	comp=Z,23nm,1.3s						
MAT	Matsushiro	52.95	34	P	P	14 30 26.0	-2.2
MJAR	Matsushiro Arr	52.95	34	P	P	14 30 26.0	-2.2
	comp=Z,12nm,0.8s,baz=216,slow=8.2,SNR=57						
MJAR				PcP	PcP	14 31 36.9	+0.5
	comp=Z,3.7nm,0.9s,baz=210,slow=5.7,SNR=4.9						
MJAR				ScP	ScP	14 35 30.6	+1.4
	comp=Z,0.3nm,0.5s,baz=225,slow=6.0,SNR=2.7						
MJAR				LR	LR	14 54 57.7	
	comp=Z,59nm,19.3s,baz=210,slow=38						
MJB9	Matsu-Tunnel	52.95	34	*e*P	P	14 30 24.6	-3.6
	comp=Z,14nm,0.9s						
CN2	Changchun	53.20	19	*e*P	P	14 30 29.0	-0.8
CN2				*e*sP	sP	14 30 50.8	-1.2
CN2				*e*S	S	14 37 54.3	-2.2
CN2				pmax	pmax		
	comp=Z,40nm,1.2s						
CN2				LR	LR		
	comp=Z,320nm,18.0s						
CN2				LR	LR		
	comp=Z,270nm,18.0s						
CN2				LR	LR		
	comp=Z,410nm,20.0s						
WSAR	Wadi Sarin	53.33	305	P	P	14 30 33.4	+2.2
	comp=Z,13nm,0.9s,baz=166,slow=4.0,SNR=9.3						
WSAR				LR	LR	14 51 38.7	
	comp=Z,278nm,19.6s,baz=133,slow=34						
SONM	Songino Array	53.72	2	P	P	14 30 33.8	0.0
	comp=Z,17nm,0.7s,baz=179,slow=6.3,SNR=88						
SONM				PcP	PcP	14 31 39.2	-0.1
	comp=Z,5.0nm,0.8s,baz=182,slow=3.7,SNR=4.0						
SONM				ScP	ScP	14 35 33.1	+0.8
	comp=Z,0.7nm,0.7s,baz=188,slow=5.8,SNR=3.3						
SONM				LR	LR	14 55 18.8	
	comp=Z,291nm,20.7s,baz=181,slow=38						
SONA1	Songino Array	53.74	2	*e*P	P	14 30 32.8	-1.1
ULN	Ulaanbaatar	53.78	2	*e*P	P	14 30 33.5	-0.7
	comp=Z,19nm,1.1s						
ULN	Ulaanbaatar	53.78	2	⇑*i*P	P	14 30 33.9	-0.3
ULN				pmax	pmax		
	comp=Z,30nm,1.7s						

PRZ	**Przheval'sk**	**53.81**	**336**	*e*P	**P**	**14 30 34.6**	**0.0**
	comp=Z,45nm,1.1s						
PRZ	**Przheval'sk**	**53.81**	**336**	*e*P	**P**	**14 30 34.6**	**0.0**
PRZ				pmax	pmax		
	comp=Z,45nm,1.1s						
BIDO	**Bidbid**	**53.87**	**305**	P	**P**	**14 30 37.4**	**+2.3**
	SNR=7.0						
SHLS	**Shalkode**	**53.97**	**338**	*e*P	**P**	**14 30 34.7**	**-0.9**
	comp=Z,27nm,1.0s						
SHLS				*e*S	**S**	**14 38 05.5**	**-1.8**
SFK	**Sufi-Kurgan**	**53.97**	**331**	P	**P**	**14 30 36.2**	**+0.3**
SFK				pmax	pmax		
	comp=Z,113nm,1.1s						
PDGK	**Podgornoye**	**54.10**	**338**	P	**P**	**14 30 36.5**	**-0.2**
PDGK				pmax	pmax		
	comp=Z,53nm,1.0s						
UZB	**Uzynbulak**	**54.12**	**337**	*e*P	**P**	**14 30 36.9**	**+0.1**
	comp=Z,16nm,1.0s						
SATY	**Saty**	**54.29**	**337**	*e*P	**P**	**14 30 38.0**	**0.0**
	comp=Z,25nm,1.0s						
SATY				*e*S	**S**	**14 38 11.8**	**+0.2**
KPKS	**Kokpek**	**54.53**	**337**⇑	*i*P	**P**	**14 30 39.1**	**-0.6**
	comp=Z,20nm,1.0s						
KPKS				*e*S	**S**	**14 38 14.2**	**-0.5**
KZA	**Kyzart**	**54.80**	**334**	P	**P**	**14 30 42.5**	**+0.5**
	SNR=21						
MDOK	**Medeo**	**54.92**	**336**	*i* P	**P**	**14 30 42.5**	**-0.2**
	comp=Z,233nm,1.3s						
UCH	**Uchtor**	**55.24**	**333**	P	**P**	**14 30 45.0**	**-0.3**
	SNR=17						
TKM2	**Tokmak 2**	**55.33**	**335**	P	**P**	**14 30 45.4**	**-0.3**
	SNR=31						
TKM2	**Tokmak 2**	**55.33**	**335**	P	**P**	**14 30 45.1**	**-0.5**
TKM2				pmax	pmax		
	comp=Z,51nm,1.0s						
KBK	**Karagaybulak**	**55.39**	**334**	P	**P**	**14 30 46.9**	**+0.8**
	SNR=7.3						
AML	**Almayashu**	**55.54**	**333**	P	**P**	**14 30 47.2**	**-0.2**
	SNR=26						
AAK	**Ala-Archa**	**55.58**	**334**	P	**P**	**14 30 47.5**	**+0.1**
	comp=Z,12nm,1.0s,baz=141,slow=4.4,SNR=22						
AAK	**Ala-Archa**	**55.58**	**334**	P	**P**	**14 30 47.9**	**+0.5**
	SNR=6.7						
AAK	**Ala-Archa**	**55.58**	**334**	*e*P	**P**	**14 30 46.6**	**-0.8**
	comp=Z,25nm,1.2s						
AAK	**Ala-Archa**	**55.58**	**334**	P	**P**	**14 30 47.2**	**-0.2**
	SNR=9.2						
AAK	**Ala-Archa**	**55.58**	**334**	*i* P	**P**	**14 30 47.5**	**+0.1**
	SNR=7.8						
AAK	**Ala-Archa**	**55.58**	**334***c*	*i*P	**P**	**14 30 47.4**	**0.0**
AAK				pmax	pmax		
	comp=Z,26nm,1.3s						
FRU	**Bishkek**	**55.68**	**334**	*e*P	**P**	**14 30 48.0**	**0.0**
FRU				*i*		14 31 14.0	
FRU				pmax	pmax		
	comp=Z,70nm,1.8s						
CHMS	**Chumysh**	**55.76**	**334**	P	**P**	**14 30 48.3**	**-0.2**
	SNR=7.0						
KUU	**Kurty**	**55.81**	**336**	*e*P	**P**	**14 30 48.1**	**-0.8**
	comp=Z,46nm,1.0s						
USRK	**Ussuriysk Ar.**	**55.91**	**24**	P	**P**	**14 30 49.1**	**-0.4**
	comp=Z,38nm,0.8s,baz=211,slow=6.6						
EKS2	**Erkin-Say**	**55.92**	**333**	P	**P**	**14 30 49.9**	**+0.1**
	SNR=40						
ZSN	**Zaisan**	**56.02**	**344**⇑	*e*P	**P**	**14 30 49.9**	**-0.4**
	comp=Z,5.2nm,1.1s						
ALNE	**Al Ain**	**56.05**	**304**	*i* P	**P**	**14 30 52.9**	**+1.9**
	SNR=14						
UOSS	**Minazif**	**56.08**	**305**	*e*P	**P**	**14 30 48.7**	**-2.4**
	comp=Z,28nm,1.1s						
UOSS	**Minazif**	**56.08**	**305**	P	**P**	**14 30 52.5**	**+1.4**
ASHO	**Ashiyiah**	**56.08**	**305**	P	**P**	**14 30 52.9**	**+1.8**
ASHO	**Ashiyiah**	**56.08**	**305**	*i* P	**P**	**14 30 53.1**	**+2.0**
	SNR=7.4						
HATD	**Hatta, Dubai**	**56.08**	**305**	P	**P**	**14 30 53.0**	**+1.9**
HATD	**Hatta, Dubai**	**56.08**	**305**	*i* P	**P**	**14 30 53.0**	**+1.9**
	SNR=8.2						
USP	**Ospenovka**	**56.08**	**334**	P	**P**	**14 30 50.5**	**-0.4**
	SNR=12						
MK01	**Makanchi Array**	**56.15**	**342**	*e*P	**P**	**14 30 49.6**	**-1.6**
MDH	**Madha**	**56.16**	**306**	P	**P**	**14 30 52.6**	**+1.0**
MK31	**Makanchi Array**	**56.18**	**342**	*e*P	**P**	**14 30 50.0**	**-1.5**
MK31	**Makanchi Array**	**56.18**	**342**	P	**P**	**14 30 50.2**	**-1.2**
MK31				pmax	pmax		
	comp=Z,29nm,1.1s						
MKAR	**Makanchi Array**	**56.18**	**342**	P	**P**	**14 30 50.5**	**-0.9**
	comp=Z,13nm,0.7s,baz=148,slow=7.4,SNR=106						
MKAR				LR	LR	14 57 05.3	
	comp=Z,163nm,21.9s,baz=194,slow=38						
MKAR	**Makanchi Array**	**56.18**	**342**	*e*P	**P**	**14 30 50.0**	**-1.5**
	comp=Z,120nm,1.1s						
ZAK	**Zakamensk**	**56.25**	**359**	*e*P	**P**	**14 30 51.4**	**-0.6**
ZAK				pmax	pmax		
	comp=Z,8.0nm,1.4s						
MAKZ	**Makanchi**	**56.29**	**342**	*e*P	**P**	**14 30 51.0**	**-1.2**
	comp=Z,13nm,1.0s						
MAKZ	**Makanchi**	**56.29**	**342**	*e*P	**P**	**14 30 51.0**	**-1.2**
MAKZ				pmax	pmax		
	comp=Z,13nm,1.0s						
MSFE	**Esma-Masafi**	**56.30**	**306**	*i* P	**P**	**14 30 55.0**	**+2.2**
	SNR=6.7						
MNAS	**Manas**	**56.37**	**332**	P	**P**	**14 30 52.9**	**-0.1**
MNAS				pmax	pmax		
	comp=Z,88nm,1.0s						
NAZ	**Nazwa, Dubai**	**56.53**	**305**	P	**P**	**14 30 56.1**	**+1.7**
	SNR=5.5						
NAZ	**Nazwa, Dubai**	**56.53**	**305**	*i* P	**P**	**14 30 56.0**	**+1.7**
	SNR=9.5						
SHME	**Shamm**	**56.63**	**307**	P	**P**	**14 30 56.9**	**+1.8**
ASUD	**Al Ashush, Dub**	**56.65**	**305**	*i* P	**P**	**14 30 57.3**	**+2.2**
	SNR=6.8						
OPO	**Ambohidratompo**	**56.99**	**252**	LR	LR	14 50 08.1	
	comp=Z,205nm,21.8s,baz=72,slow=30						
TAS	**Tashkent**	**57.07**	**329**	P	**P**	**14 30 58.9**	**+1.1**
TAS				pmax	pmax		
	comp=Z,104nm,0.9s						
IUG	**Iuzhnay**	**57.30**	**330**⇑	*i*P	**P**	**14 30 59.4**	**-0.2**
	comp=Z,27nm,1.1s						
DGZ	**Jazzator, Alta**	**57.48**	**347**	*i* P	**P**	**14 31 00.6**	**-0.2**
DGZ				pmax	pmax		
	comp=Z,17nm,0.7s						
MZR	**Muzera**	**57.50**	**302**	*i* P	**P**	**14 31 03.5**	**+2.2**
	SNR=8.2						
TLY	**Talaya**	**57.55**	**359**	*e*P	**P**	**14 31 02.3**	**+1.3**
TLY				pmax	pmax		
	comp=Z,27nm,1.5s						
MOY	**Mondy**	**57.60**	**358**	*e*P	**P**	**14 31 01.9**	**+0.4**
MOY				pmax	pmax		
	comp=Z,35nm,2.2s						
BTLS	**Baital**	**57.70**	**335**⇑	*i*P	**P**	**14 31 01.2**	**-1.0**
	comp=Z,5.1nm,0.9s						
HVS	**Khovu-Aksy**	**57.73**	**352**⇑	*i*P	**P**	**14 31 01.6**	**-0.8**
HVS				pmax	pmax		
	comp=Z,19nm,1.3s						
KK31	**Karatay Array**	**57.78**	**331**	*e*P	**P**	**14 31 01.1**	**-1.7**
KK31	**Karatay Array**	**57.78**	**331**	*i* P	**P**	**14 31 01.5**	**-1.3**
KK31				pmax	pmax		
	comp=Z,17nm,1.2s						
KKAR	**Karatay Array**	**57.78**	**331**	*e*P	**P**	**14 31 01.1**	**-1.7**
KKAR	**Karatay Array**	**57.78**	**331**	*e*P	**P**	**14 31 01.1**	**-1.7**
ERM	**Erimo**	**59.52**	**33***c*	*e*P	**P**	**14 31 13.6**	**-1.3**
ERM				pmax	pmax		
	comp=Z,21nm,1.2s						
SEM	**Semipalatinsk**	**60.01**	**342**	*e*P	**P**	**14 31 17.3**	**-1.1**
	comp=Z,15nm,1.2s						
KLR	**Kul'dur**	**60.05**	**20**	P	**P**	**14 31 17.6**	**-0.9**
	comp=Z,2.2nm,0.8s,baz=239,slow=4.8,SNR=66						
ASAJ	**Asahikawa**	**60.70**	**31**	P	**P**	**14 31 22.1**	**-0.8**
	comp=Z,19nm,0.8s,baz=238,slow=7.5,SNR=23						
ASAJ				LR	LR	14 58 40.9	
	comp=Z,83nm,20.9s,baz=250,slow=37						
ASAJ	**Asahikawa**	**60.70**	**31**	*e*P	**P**	**14 31 22.1**	**-0.8**
	comp=Z,26nm,0.9s						
KURBB	**Kurchatov Arra**	**60.73**	**341**	P	**P**	**14 31 22.4**	**-0.6**
	comp=Z,18nm,0.9s,baz=160,slow=6.1,SNR=100						
KURK	**Kurchatov**	**60.78**	**342**	*e*P	**P**	**14 31 22.3**	**-1.0**
	comp=Z,42nm,1.0s						
KURK	**Kurchatov**	**60.78**	**342**	P	**P**	**14 31 22.9**	**-0.5**
	SNR=16						
KURK	**Kurchatov**	**60.78**	**342***c*	*i*P	**P**	**14 31 22.5**	**-0.8**
KURK				pmax	pmax		
	comp=Z,52nm,1.1s						
GEYT	**Alibeck**	**61.35**	**319**	P	**P**	**14 31 27.1**	**-0.4**
	comp=Z,11nm,0.8s,baz=190,slow=7.5,SNR=39						
GEYT				LR	LR	15 00 27.2	
	comp=Z,90nm,19.3s,baz=180,slow=38						
GYA0B	**ALIBECK ARRAY**	**61.35**	**319**	*e*P	**P**	**14 31 27.8**	**+0.2**
	comp=Z,29nm,0.8s						
DZM	**Mont Dzumac**	**61.89**	**112**	P	**P**	**14 31 32.4**	**+0.8**
	comp=Z,4.9nm,0.7s,baz=288,slow=20,SNR=3.3						
ZAA0	**Zalesovo Array**	**62.03**	**347**	*e*P	**P**	**14 31 30.3**	**-1.5**
	comp=Z,79nm,1.4s						
ZALV	**Zalesovo Beam**	**62.03**	**347**	P	**P**	**14 31 30.8**	**-0.9**
	comp=Z,14nm,0.3s,baz=157,slow=6.3,SNR=61						
ZALV				LR	LR	15 01 07.7	
	comp=Z,230nm,19.7s,baz=74,slow=39						
ZALV	**Zalesovo Beam**	**62.03**	**347**	*e*P	**P**	**14 31 30.3**	**-1.4**
ZALV	**Zalesovo Beam**	**62.03**	**347**	*e*P	**P**	**14 31 30.3**	**-1.4**
BRZS	**Berezniki**	**62.23**	**337**⇑	*i*P	**P**	**14 31 32.6**	**-0.6**
	comp=Z,19nm,1.2s						
YUK	**Yuzh-Kuril'sk**	**62.35**	**33**	*e*P	**P**	**14 31 34.2**	**+0.2**
ZEA	**Zeya**	**62.65**	**15**	*e*P	**P**	**14 31 36.1**	**+0.2**
ZEA				pmax	pmax		
	comp=N,53nm,1.0s						
ZEA				pmax	pmax		
	comp=E,35nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,58nm,1.0s						
ZEA				pmax	pmax		
	comp=Z,200nm,2.0s						
YSS	**Yuzh-Sakhalins**	**62.80**	**29***j*	*i*P	**P**	**14 31 36.7**	**-0.3**
YSS				*e*		14 31 55.5	
YSS				*e*		14 32 04.3	
YSS				pmax	pmax		
	comp=Z,50nm,0.8s						
GRNR	**Gornyy**	**63.02**	**22**	*e*P	**P**	**14 31 41.1**	**+2.7**
GRNR				pmax	pmax		
	comp=Z,78nm,1.0s						
NVS	**Novosibirsk**	**63.22**	**346**	*e*P	**P**	**14 31 37.0**	**-2.6**
NVS				*e*		14 32 15.6	
NVS				*e*S	**S**	**14 40 02.6**	**-4.1**
NVS				pmax	pmax		
	comp=N,22nm,1.6s						
NVS				pmax	pmax		
	comp=E,16nm,1.6s						
NVS				pmax	pmax		
	comp=Z,26nm,1.6s						
NVS				smax	smax		
	comp=N,5.0nm,1.3s						
NVS				smax	smax		
	comp=E,7.0nm,1.3s						
BOD	**Bodaibo**	**64.18**	**6**	*e*P	**P**	**14 31 45.3**	**-0.6**
BOD				pmax	pmax		
	comp=Z,32nm,1.0s						
KUR	**Kuril'sk**	**64.22**	**33**	*i* P	**P**	**14 31 45.6**	**-0.8**
RAYN	**Ar Rayn**	**64.51**	**300**	*e*P	**P**	**14 31 46.3**	**-2.5**
	comp=Z,26nm,1.3s						
RAYN	**Ar Rayn**	**64.51**	**300**	*i* P	**P**	**14 31 50.1**	**+1.3**
	SNR=12						
RAYN	**Ar Rayn**	**64.51**	**300**	*e*P	**P**	**14 31 46.3**	**-2.5**
RAYN				pmax	pmax		
	comp=Z,26nm,1.3s						
BVAR	**Borovoye Array**	**65.53**	**338**	P	**P**	**14 31 54.2**	**-0.6**
	comp=Z,13nm,0.6s,baz=141,slow=7.6,SNR=88						
BVAR				LR	LR	15 03 01.8	
	comp=Z,135nm,21.1s,baz=142,slow=38						
BRVK	**Borovoye**	**65.60**	**338**	*e*P	**P**	**14 31 54.2**	**-1.0**
	comp=Z,25nm,1.0s						
BRVK	**Borovoye**	**65.60**	**338**	P	**P**	**14 31 54.6**	**-0.6**
	SNR=12						
BRVK	**Borovoye**	**65.60**	**338***c*	*i*P	**P**	**14 31 54.4**	**-0.8**
BRVK				pmax	pmax		
	comp=Z,33nm,1.3s						
NKL	**Nikolayevsk**	**66.52**	**23**	*e*P	**P**	**14 32 00.5**	**-0.6**
NKL				pmax	pmax		
	comp=Z,52nm,1.0s						
AB31	**Akbulak array**	**67.31**	**330**	*i* P	**P**	**14 32 05.9**	**-0.3**
AB31				pmax	pmax		
	comp=Z,87nm,1.0s						
ABKAR	**Akbulak array**	**67.31**	**330**	*e*P	**P**	**14 32 05.6**	**-0.6**
MAW	**Mawson**	**67.49**	**196**	LR	LR	14 55 29.8	
	comp=Z,318nm,21.5s,baz=58,slow=30						
AKTO	**Aktyubinsk**	**69.02**	**330**	P	**P**	**14 32 16.7**	**-0.2**
	comp=Z,15nm,0.9s,baz=125,slow=6.9,SNR=39						
AKTO				LR	LR	15 07 32.8	
	comp=Z,114nm,19.5s,baz=132,slow=40						
AKT	**Akhty**	**70.03**	**318**	*e*P	**P**	**14 32 24.3**	**+0.8**
AKT				*e*		14 32 44.5	
AKT				pmax	pmax		
	comp=Z,59nm,1.2s						
YAK	**Yakutsk**	**70.68**	**12**	P	**P**	**14 32 25.5**	**-1.3**
	comp=Z,2.3nm,0.3s,baz=146,slow=23,SNR=9.6						
YAK	**Yakutsk**	**70.68**	**12**	*e*P	**P**	**14 32 25.2**	**-1.7**
	comp=Z,95nm,1.0s						
YAK	**Yakutsk**	**70.68**	**12**	*e*P	**P**	**14 32 23.9**	**-3.0**
YAK				pmax	pmax		
	comp=Z,69nm,1.0s						
YAK				pmax	pmax		
	comp=E,13nm,1.2s						
YAK				pmax	pmax		
	comp=N,20nm,1.3s						
GNI	**Garni**	**71.46**	**316**	P	**P**	**14 32 31.8**	**-0.6**
	comp=N,4.4nm,0.5s,baz=168,slow=16,SNR=4.6						
GNI				LR	LR	15 05 36.3	
	comp=N,46nm,21.2s,baz=112,slow=37						
GNI	**Garni**	**71.46**	**316**⇑	*e*P	**P**	**14 32 32.6**	**+0.3**
GNI				pmax	pmax		
	comp=Z,87nm,1.5s						
GROC	**Groznyy**	**72.09**	**319**	*e*P	**P**	**14 32 36.1**	**+0.3**
GROC				*e*		14 32 53.8	
GROC				*e*		14 35 17.6	
GROC				*e*		14 42 34.8	
GROC				pmax	pmax		
	comp=Z,54nm,0.9s						
SVE	**Sverdlovsk**	**72.12**	**336***d*	*e*P	**P**	**14 32 36.2**	**+0.6**
SVE				pmax	pmax		
	comp=Z,101nm,1.1s						
TBLG	**Delisi**	**72.14**	**317**	*e*P	**P**	**14 32 36.8**	**+0.6**
	comp=Z,38nm,0.9s						
TBLG	**Delisi**	**72.14**	**317**	*e*P	**P**	**14 32 36.8**	**+0.6**
TBLG				pmax	pmax		
	comp=Z,38nm,0.9s						
ARU	**Arti**	**72.69**	**335**	P	**P**	**14 32 38.8**	**-0.3**
	comp=Z,42nm,1.0s,baz=114,slow=3.8,SNR=57						
ARU	**Arti**	**72.69**	**335**	*e*P	**P**	**14 32 38.6**	**-0.4**
	comp=Z,63nm,1.0s						
ARU	**Arti**	**72.69**	**335***c*	*i*P	**P**	**14 32 38.6**	**-0.4**
ARU						14 32 57.9	
ARU				S	**S**	**14 42 00.4**	**+0.6**
ARU				pmax	pmax		
	comp=Z,116nm,1.7s						
AKH	**Akhalkalaki**	**72.86**	**317**	*e*P	**P**	**14 32 39.8**	**-0.8**
	comp=Z,8.9nm,0.9s						
AKH	**Akhalkalaki**	**72.86**	**317**	*e*P	**P**	**14 32 39.8**	**-0.8**
AKH				pmax	pmax		
	comp=Z,9.0nm,0.9s						
ZEI	**Tsey**	**73.16**	**318**	*e*P	**P**	**14 32 42.8**	**+0.4**
ZEI				pmax	pmax		
	comp=Z,16nm,0.6s						
NCK	**Nalchik**	**73.67**	**319**⇓	*e*P	**P**	**14 32 45.8**	**+0.6**
NCK				pmax	pmax		
	comp=Z,32nm,1.0s						
PETK	**Petropavlovsk-**	**74.11**	**30**	P	**P**	**14 32 46.5**	**-1.1**
	comp=Z,8.3nm,0.8s,baz=193,slow=5.8						
PETK				LR	LR	15 07 38.5	
	comp=Z,83nm,18.1s,baz=249,slow=38						
NEY	**Neytrino**	**74.14**	**318***c*	*e*P	**P**	**14 32 49.7**	**+1.6**
NEY				pmax	pmax		
	comp=Z,4.0nm,1.1s						
KBZ	**Khabaz**	**74.22**	**319**	P	**P**	**14 32 49.0**	**+0.7**
	comp=Z,16nm,0.9s,baz=105,slow=3.5,SNR=24						
KVAR	**Kislovodsk Arr**	**74.45**	**319**	P	**P**	**14 32 50.6**	**+0.7**
	comp=Z,18nm,0.9s,baz=288,slow=3.4,SNR=12						
KIV	**Kislovodsk**	**74.46**	**319**	*e*P	**P**	**14 32 49.5**	**-0.4**
	comp=Z,26nm,1.1s						
KIV	**Kislovodsk**	**74.46**	**319**	P	**P**	**14 32 50.6**	**+0.7**
	SNR=6.1						
KIV	**Kislovodsk**	**74.46**	**319**	P	**P**	**14 32 50.3**	**+0.5**
KIV	**Kislovodsk**	**74.46**	**319***c*	*i*P	**P**	**14 32 50.4**	**+0.5**
KIV				*e*		14 35 36.3	
KIV				pmax	pmax		
	comp=Z,25nm,1.3s						
KIV				MLR	MLR		
	comp=Z,47nm,18.0s						
ASF	**Jabal al Asfar**	**74.48**	**306**	P	**P**	**14 32 52.1**	**+1.8**
	comp=Z,13nm,0.8s,baz=68,slow=2.8,SNR=19						
PET	**Petropavlovsk**	**74.54**	**31**	*e*P	**P**	**14 32 48.8**	**-1.2**
	comp=Z,12nm,0.6s						
PET	**Petropavlovsk**	**74.54**	**31**	*e*P	**P**	**14 32 49.0**	**-1.0**
PET				*e*S	**S**	**14 42 21.1**	**+0.3**
PET				pmax	pmax		
	comp=Z,57nm,0.8s						
PET				pmax	pmax		
	comp=Z,100nm,13.4s						
PET				MLR	MLR		
	comp=Z,200nm,16.0s						
PET				MLR	MLR		
	comp=Z,100nm,19.0s						
GOF	**Gofitskoye**	**74.69**	**320**	*e*P	**P**	**14 32 51.5**	**+0.4**
MA2	**Magadan**	**75.04**	**22**	P	**P**	**14 32 52.3**	**-0.5**
	comp=Z,15nm,0.8s,baz=190,slow=3.6,SNR=7.5						
MA2	**Magadan**	**75.04**	**22**	*e*P	**P**	**14 32 52.1**	**-0.6**
	comp=Z,27nm,1.1s						
MA2	**Magadan**	**75.04**	**22**	*i* P	**P**	**14 32 52.2**	**-0.5**
MA2				pmax	pmax		
	comp=Z,12nm,0.8s						
EIL	**Elat**	**75.37**	**303**	P	P	14 33 06.0	+11
	comp=Z,17nm,0.9s,baz=92,slow=1.2,SNR=14						
SYO	**Syowa Base**	**75.46**	**200**⇑	*e*P	**P**	**14 32 57.1**	**+2.1**
MMAI	**Mount Meron Ar**	**75.94**	**306**	P	**P**	**14 33 00.7**	**+2.1**
	comp=Z,9.0nm,0.8s,baz=96,slow=8.5,SNR=11						
MMAI				LR	LR	15 06 38.7	
	comp=Z,121nm,20.9s,baz=140,slow=36						
VNDA	**Vanda**	**77.34**	**169**	P	**P**	**14 33 07.5**	**+1.9**
	comp=Z,2.7nm,0.9s,baz=292,slow=5.6,SNR=13						
VNDA				LR	LR	15 05 02.6	
	comp=Z,149nm,18.7s,baz=301,slow=34						
VNDA	**Vanda**	**77.34**	**169**	*e*P	**P**	**14 33 03.8**	**-1.8**
	comp=Z,6.6nm,1.0s						
VNDA	**Vanda**	**77.34**	**169**	*e*P	**P**	**14 33 03.8**	**-1.8**
VNDA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
BOSA	**Boshof**	**77.55**	**242**	P	**P**	**14 33 10.4**	**+2.5**
	comp=Z,2.1nm,0.9s,baz=100,slow=6.1,SNR=3.3						
BOSA				LR	LR	15 02 58.4	
	comp=Z,193nm,19.1s,baz=88,slow=32						
SEY	**Seymchan**	**77.85**	**20**	P	**P**	**14 33 08.2**	**-0.3**
	comp=Z,7.4nm,0.8s,baz=232,slow=8.2,SNR=22						
VRH	**Novokhopyorsk**	**78.13**	**325**	*e*P	**P**	**14 33 10.1**	**-0.3**
VRH				pmax	pmax		
	comp=Z,50nm,1.1s						
ANN	**Anapa**	**78.26**	**318**	*e*P	**P**	**14 33 09.2**	**-2.0**
ANN				*e**PP	**PcP**	**14 33 22.1**	**+1.7**
ANN				*e*		14 36 06.5	
ANN				*e*S	**S**	**14 43 01.3**	**-0.5**
ANN				*e*SS	**SS**	**14 48 03.9**	**-1.5**
ANN				pmax	pmax		
	comp=Z,26nm,1.0s						
SBA	**Scott Base**	**78.43**	**169**	*e*P	**P**	**14 33 13.2**	**+1.6**
	comp=Z,12nm,1.4s						
SBA	**Scott Base**	**78.43**	**169**	*e*P	**P**	**14 33 13.2**	**+1.6**
SBA				pmax	pmax		
	comp=Z,12nm,1.4s						
TIXI	**Tiksi**	**79.24**	**8**	P	**P**	**14 33 14.3**	**-1.8**
	comp=Z,13nm,1.0s,baz=157,slow=3.5,SNR=10						
TIXI	**Tiksi**	**79.24**	**8**	*e*P	**P**	**14 33 14.0**	**-2.1**
	comp=Z,20nm,1.1s						
TIXI	**Tiksi**	**79.24**	**8***c*	*i*P	**P**	**14 33 14.4**	**-1.7**
TIXI				pmax	pmax		
	comp=Z,33nm,1.7s						
BRTR	**Keskin Array B**	**79.27**	**312**	P	**P**	**14 33 17.4**	**+0.3**
	comp=Z,14nm,0.8s,baz=129,slow=7.0,SNR=82						
BRTR				LR	LR	15 10 03.5	
	comp=Z,77nm,19.8s,baz=100,slow=37						
BR131	**Keskin Array S**	**79.27**	**312**	*e*P	**P**	**14 33 16.4**	**-0.7**
BR131	**Keskin Array S**	**79.27**	**312**	P	**P**	**14 33 17.4**	**+0.3**
VORD	**Divnogorie**	**79.43**	**324**	*e*P	**P**	**14 33 16.0**	**-1.5**
VORD				pmax	pmax		
	comp=Z,10.0nm,1.0s						
VSR	**Storozhevoye**	**79.60**	**325**	*e*P	**P**	**14 33 18.2**	**-0.2**
VSR				*e*S	**S**	**14 43 16.1**	**+0.2**
VSR				pmax	pmax		
	comp=Z,40nm,1.0s						
VSR				smax	smax		
	comp=N,20nm,0.8s						
ANTO	**Ankara**	**79.93**	**312**⇓	*i*P	**P**	**14 33 21.8**	**+1.2**
ANTO	**Ankara**	**79.93**	**312**	*e*P	**P**	**14 33 19.9**	**-0.7**
	comp=N,38nm,1.2s						
ANTO	**Ankara**	**79.93**	**312**	P	**P**	**14 33 21.6**	**+1.0**
	SNR=7.9						
ANTO	**Ankara**	**79.93**	**312**	P	**P**	**14 33 23.5**	**+2.9**
LPSR	**Galich'ya Gora**	**80.29**	**326**	*e*P	**P**	**14 33 21.8**	**-0.3**
LPSR				pmax	pmax		
	comp=Z,40nm,1.1s						
SIM	**Simferopol'**	**80.53**	**317**	*i* P	**P**	**14 33 23.8**	**+0.2**
SIM				pmax	pmax		
	comp=Z,40nm,0.9s						
ISP	**Isparta**	**81.09**	**310**	*e*P	**P**	**14 33 27.3**	**+0.4**
	comp=Z,35nm,1.5s						
ISP	**Isparta**	**81.09**	**310***d*	*i*P	**P**	**14 33 27.8**	**+0.9**
ISP				pmax	pmax		
	comp=Z,25nm,1.4s						
PRGR	**Permogore**	**81.14**	**336**	*e*P	**P**	**14 33 26.2**	**-0.3**
PRGR				*e*S	**S**	**14 43 31.2**	**-0.4**
PRGR				pmax	pmax		
	comp=Z,24nm,0.4s						
MOS	**Moscow**	**82.22**	**328**	*e*P	**P**	**14 33 32.9**	**+0.6**
MOS				*e*		14 33 53.5	
MOS				pmax	pmax		
	comp=Z,40nm,0.9s						
OBN	**Obninsk**	**82.54**	**328***c*	*e*P	**P**	**14 33 34.3**	**+0.3**
OBN				*e*		14 36 40.0	
OBN				pmax	pmax		
	comp=Z,66nm,1.2s						
OBN				MLR	MLR		
	comp=Z,107nm,19.0s						
KLMR	**Klimovskoe**	**83.39**	**334**	*e*P	**P**	**14 33 36.8**	**-1.4**
KLMR				pmax	pmax		
	comp=Z,39nm,1.1s						
KLMR	**Klimovskoe**	**83.39**	**334**	*e*P	**P**	**14 33 36.8**	**-1.4**
KLMR				AMP		14 33 39.4	
	comp=Z,39nm,1.1s						
QSPA	**South Pole Qui**	**83.89**	**180**	P	**P**	**14 33 42.0**	**+1.0**
	comp=Z,4.8nm,0.9s,baz=347,slow=0.5,SNR=13						
QSPA				LR	LR	15 06 29.1	
	comp=Z,297nm,19.5s,baz=252,slow=32						
TLCR		**84.20**	**317**⇑	*i*P	**P**	**14 33 44.2**	**+1.5**
TLCR		**84.20**	**317**	P	**P**	**14 33 38.3**	**-4.4**
TIRR	**Tirgusor**	**84.29**	**316**⇑	*i*P	**P**	**14 33 44.6**	**+1.4**
TIRR	**Tirgusor**	**84.29**	**316**	*e*P	**P**	**14 33 42.9**	**-0.3**
	comp=Z,31nm,1.1s						
TIRR	**Tirgusor**	**84.29**	**316**	*e*P	**P**	**14 33 42.9**	**-0.3**
TIRR				pmax	pmax		
	comp=Z,31nm,1.1s						
TLB	**Topalu**	**84.58**	**316**⇑	*i*P	**P**	**14 33 46.2**	**+1.5**
MILM	**Milestii Mici**	**84.64**	**318**⇑	*i*P	**P**	**14 33 46.4**	**+1.5**
KIS	**Kishinev**	**84.65**	**318**	*e*P	**P**	**14 33 45.0**	**0.0**
KIS	**Kishinev**	**84.65**	**318**	*e*P	**P**	**14 33 45.0**	**0.0**
CFR	**Carcaliu**	**84.66**	**316**⇑	*i*P	**P**	**14 33 46.4**	**+1.4**
CFR	**Carcaliu**	**84.66**	**316**	P	**P**	**14 33 46.5**	**+1.4**
CFR				pmax	pmax		
	comp=Z,15nm,1.7s						
HARR	**Harsova**	**84.68**	**316**⇑	*i*P	**P**	**14 33 47.0**	**+1.8**
HARR	**Harsova**	**84.68**	**316**	P	**P**	**14 33 48.0**	**+2.8**
PRD	**Provadia**	**84.70**	**314**	*e*P	**P**	**14 33 46.7**	**+1.4**
LEOM	**Leova**	**84.90**	**318**⇓	*i*P	**P**	**14 33 48.0**	**+1.8**
LEOM	**Leova**	**84.90**	**318**	P	**P**	**14 33 48.0**	**+1.8**
IDI	**Anoyia**	**84.94**	**306**⇓	*i*P	**P**	**14 33 48.3**	**+1.5**
TSUM	**Tsumeb**	**84.98**	**251**	LR	LR	15 06 54.3	
	comp=Z,267nm,20.9s,baz=126,slow=32						
SORM	**Soroca**	**85.25**	**319**⇑	*i*P	**P**	**14 33 49.5**	**+1.5**
SORM	**Soroca**	**85.25**	**319**	P	**P**	**14 33 49.4**	**+1.5**
AKASG	**Malin Array Be**	**85.36**	**322**	P	**P**	**14 33 48.5**	**+0.1**
	comp=Z,9.4nm,0.8s,baz=82,slow=5.4,SNR=10						
AKBB	**Malin Array Si**	**85.36**	**322**	*e*P	**P**	**14 33 48.3**	**-0.1**
	comp=Z,17nm,0.9s						
AKBB	**Malin Array Si**	**85.36**	**322**	*e*P	**P**	**14 33 48.3**	**-0.1**
AKBB				pmax	pmax		
	comp=Z,17nm,0.9s						
KIEV	**Kiev**	**85.36**	**322**	*e*P	**P**	**14 33 48.3**	**-0.2**
	comp=Z,15nm,0.9s						
KIEV	**Kiev**	**85.36**	**322**	*i* P	**P**	**14 33 48.6**	**+0.1**
	SNR=14						
KIEV	**Kiev**	**85.36**	**322***c*	*i*P	**P**	**14 33 48.5**	**+0.1**
KIEV				pmax	pmax		
	comp=Z,17nm,0.9s						
RDO	**Rodhopi**	**85.61**	**312**	P	**P**	**14 33 51.0**	**+1.1**
ISR	**Istrita**	**85.74**	**316**⇑	*i*P	**P**	**14 33 52.1**	**+1.5**
ISR	**Istrita**	**85.74**	**316**	P	**P**	**14 33 53.7**	**+3.1**
ISR				pmax	pmax		
	comp=Z,20nm,1.1s						
SZH	**Strazhica**	**85.77**	**314**	*e*P	**P**	**14 33 51.5**	**+0.8**
VRI	**Vrincioaia**	**85.78**	**317**⇑	*i*P	**P**	**14 33 52.6**	**+1.8**
VRI	**Vrincioaia**	**85.78**	**317**	P	**P**	**14 33 52.5**	**+1.8**
PLOR	**Plostina**	**85.83**	**317**⇑	*i*P	**P**	**14 33 52.7**	**+1.7**
PLOR	**Plostina**	**85.83**	**317**	P	**P**	**14 33 52.6**	**+1.6**
TESR	**Tescani**	**85.98**	**317**⇓	*i*P	**P**	**14 33 53.2**	**+1.5**
MLR	**Muntele Rosu**	**86.24**	**316**	P	**P**	**14 33 54.3**	**+1.2**

	comp=Z,56nm,1.1s,baz=65,slow=2.0,SNR=51						
MLR				PP	PP	14 37 16.1	+1.5
	comp=Z,5.1nm,0.9s,baz=85,slow=7.6,SNR=4.2						
MLR	Muntele Rosu	86.24	316⇑	iP	P	14 33 54.6	+1.5
MLR	Muntele Rosu	86.24	316	eP	P	14 33 54.1	+1.0
	comp=Z,86nm,1.1s						
MLR				PP	PP	14 37 16.1	+1.5
MLR	Muntele Rosu	86.24	316	eP	P	14 33 54.1	+1.0
MLR						14 37 16.1	
MLR				pmax	pmax		
	comp=Z,87nm,1.1s						
RZN	Rozhen	86.32	312	eP	P	14 33 54.7	+1.0
PLD	Plovdiv	86.41	313	P	P	14 33 55.2	+1.3
BIZ	Bicaz	86.44	318⇓	iP	P	14 33 55.6	+1.7
PRAR	RASCA	86.45	318⇓	iP	P	14 33 55.7	+1.7
HUMR	Humele	86.70	315⇑	iP	P	14 33 56.8	+1.6
DOPR	Dopca	86.72	317⇓	iP	P	14 33 56.9	+1.6
VOIR		86.84	316⇓	iP	P	14 33 57.4	+1.4
VOIR		86.84	316	P	P	14 33 57.7	+1.7
VOIR				pmax	pmax		
	comp=Z,6.0nm,1.2s						
NVR	Nevrokopi	86.89	312	P	P	14 33 57.1	+0.8
PGB	Panagyurishte	86.89	313	eP	P	14 33 56.8	+0.5
MMB	Musomiste	87.03	312	eP	P	14 33 57.0	0.0
SRS	Serrai	87.04	312	P	P	14 33 57.2	+0.2
SRS	Serrai	87.04	312	P	P	14 33 57.9	+0.9
SRS				pmax	pmax		
	comp=Z,17nm,1.5s						
ARR	Arges	87.11	316⇓	iP	P	14 33 58.8	+1.5
SOH	Sokhos	87.17	311	P	P	14 33 58.7	+1.0
BURAR	Bucovina Array	87.18	318⇑	iP	P	14 33 59.6	+2.0
BURAR	Bucovina Array	87.18	318	P	P	14 34 01.1	+3.5
BUR04	Bucovina Ar. S	87.18	318	eP	P	14 33 59.1	+1.5
BUR08	Bucovina Ar. S	87.20	318	eP	P	14 33 59.3	+1.6
PUL	Pulkovo	87.28	331⇓	eP	P	14 33 59.1	+1.5
PUL				pmax	pmax		
	comp=Z,50nm,0.8s						
GUR	Goura	87.43	308	P	P	14 34 00.4	+1.3
KKB	Krupnik	87.55	312	eP	P	14 33 59.3	-0.2
VTS	Vitosha	87.59	313⇓	iP	P	14 34 01.2	+1.4
VTS	Vitosha	87.59	313	eP	P	14 34 00.4	+0.6
	comp=Z,29nm,1.0s						
VTS	Vitosha	87.59	313	eP	P	14 34 00.0	+0.2
VTS	Vitosha	87.59	313	P	P	14 34 00.7	+0.9
VTS	Vitosha	87.59	313	P	P	14 34 02.2	+2.4
KLV	Kalavryta, Ach	87.60	308	P	P	14 34 00.5	+0.7
AGG	Agios Georgios	87.63	309	eP	P	14 33 59.9	0.0
	comp=Z,98nm,1.5s						
AGG	Agios Georgios	87.63	309	P	P	14 34 00.2	+0.3
AGG	Agios Georgios	87.63	309	eP	P	14 33 59.9	0.0
AGG				pmax	pmax		
	comp=Z,98nm,1.5s						
ITM	Ithomi	87.64	308	eP	P	14 33 59.5	-0.4
	comp=Z,46nm,1.2s						
ARCR	ARCALIA	87.65	318⇓	iP	P	14 34 01.6	+1.8
LIT	Litokhoron	87.69	311	eP	P	14 34 00.3	+0.1
	comp=Z,47nm,1.0s						
LIT	Litokhoron	87.69	311	P	P	14 34 00.7	+0.5
LIT	Litokhoron	87.69	311	eP	P	14 34 00.3	+0.1
LIT				pmax	pmax		
	comp=Z,47nm,1.0s						
LOT	Lotru	87.73	316⇑	iP	P	14 34 01.7	+1.4
VAY	Valandovo	87.84	312	i P	P	14 34 01.3	+0.5
ANX	Ano Chora	87.87	309	P	P	14 34 02.9	+1.8
GRG	Griva	87.90	311	P	P	14 34 01.7	+0.5
GRG				pmax	pmax		
	comp=Z,29nm,1.2s						
IDID	Didziasalis	87.97	326	eP	P	14 34 02.3	+1.3
IDID				IAmb	IAmb	14 34 03.5	
	comp=Z,28nm,0.5s						
CJR	Cluj-Napoca	88.08	317⇑	iP	P	14 34 03.6	+1.7
CJR	Cluj-Napoca	88.08	317	P	P	14 34 03.6	+1.7
RLS	Riolos of Patr	88.14	308	P	P	14 34 04.2	+1.9
PVO	Paravola	88.18	309	P	P	14 34 04.5	+2.0
IIGN	Ignalina	88.26	326	eP	P	14 34 03.6	+1.2
IIGN				IAmb	IAmb	14 34 05.0	
	comp=Z,28nm,1.0s						
BMR	Baia Mare	88.33	318⇑	iP	P	14 34 05.1	+2.1
ISAL	Salakas	88.37	326	eP	P	14 34 04.3	+1.3
ISAL				IAmb	IAmb	14 34 05.4	
	comp=Z,15nm,0.9s						
LVV	L'vov	88.40	320	eP	P	14 34 04.1	+0.9
DEV	Deva	88.40	316⇑	iP	P	14 34 05.2	+1.8
DEV	Deva	88.40	316	P	P	14 34 05.5	+2.1
DEV				pmax	pmax		
	comp=Z,96nm,1.1s						
PDO	Prodromos	88.44	309	P	P	14 34 05.2	+1.5
HERR	Herculane	88.56	315⇑	iP	P	14 34 05.9	+1.7
FNA	Florina	88.64	311	eP	P	14 34 04.5	-0.2
	comp=Z,15nm,1.2s						
FNA	Florina	88.64	311	P	P	14 34 03.6	-1.1
FNA	Florina	88.64	311	eP	P	14 34 04.5	-0.2
FNA				pmax	pmax		
	comp=Z,15nm,1.2s						
KFL	Anninata	88.67	308	P	P	14 34 06.0	+1.2
DRGR		88.70	317⇓	iP	P	14 34 06.6	+1.8
DRGR		88.70	317	P	P	14 34 06.8	+2.0
VSU	Vasula	88.72	329c	iP	P	14 34 05.0	+0.5
VSU				pmax	pmax		
	comp=Z,77nm,1.0s						
SKO	Skopje	88.78	312	i P	P	14 34 05.5	+0.2
KRUS	Krusevo	88.83	312	i P	P	14 34 05.8	+0.2
MDVR	Moldovita	89.04	315⇓	iP	P	14 34 08.4	+1.9
TRPA	Tarpa	89.05	318⇑	iP	P	14 34 08.2	+1.9
OHR	Ohrid	89.12	311	i P	P	14 34 07.2	+0.2
OHR	Ohrid	89.12	311	P	P	14 34 08.0	+1.1
OHR				pmax	pmax		
	comp=Z,50nm,1.0s						
KWP	Kalwaria Pacla	89.20	320	eP	P	14 34 08.5	+1.4
KWP	Kalwaria Pacla	89.20	320	eP	P	14 34 07.6	+0.5
	comp=Z,393nm,0.6s						
KWP	Kalwaria Pacla	89.20	320	eP	P	14 34 08.5	+1.4
IGT	Igoumenitsa	89.24	310	P	P	14 34 08.5	+1.0
IGT	Igoumenitsa	89.24	310	P	P	14 34 08.8	+1.3
BZS	Buzias	89.25	316⇑	iP	P	14 34 08.9	+1.6
UZH	Uzhgorod	89.30	319	eP	P	14 34 09.4	+1.9
UZH				e		14 34 32.4	
UZH				eS	S	14 44 54.4	+1.8
SGD	Sagiada	89.32	310	P	P	14 34 09.2	+1.4
PHP	Peshkopia	89.47	312	P	P	14 34 09.0	+0.4
MSF	Maaselka	89.58	337	P	P	14 34 09.2	+0.8
MSF				pmax	pmax		
	comp=Z,23nm,0.9s						
SNAA	Sanae	89.60	198	P	P	14 34 10.5	+1.9
SNAA	Sanae	89.60	198	eP	P	14 34 10.2	+1.6
	comp=Z,18nm,1.2s						
SNAA	Sanae	89.60	198⇑	eP	P	14 34 12.0	+3.4
KEK	Kerkira	89.67	310	P	P	14 34 10.9	+1.4
FIA1	FINESS Array S	89.73	332	eP	P	14 34 09.0	-0.2
	comp=Z,13nm,0.8s						
FINES	FINESS Array B	89.73	332	P	P	14 34 09.6	+0.4
	comp=Z,8.7nm,0.8s,baz=94,slow=5.9,SNR=22						
FINES				LR	LR	15 19 59.9	
	comp=Z,72nm,19.7s,baz=74,slow=39						
FINES	FINESS Array B	89.73	332	i P	P	14 34 10.1	+0.9
FINES				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CRVS	Cervenica-Dubn	89.89	319	eP	P	14 34 15.1	+4.8
CRVS	Cervenica-Dubn	89.89	319	ePCP	PcP	14 34 15.1	+3.6
SUF	Sumiainen	89.99	333	P	P	14 34 11.7	+1.3
SUF				pmax	pmax		
	comp=Z,16nm,0.8s						
DIVS	Divibare	90.15	314	eP	P	14 34 12.1	+0.4
	comp=Z,45nm,1.3s						
PDG	Podgorica	90.45	312⇓	iP	P	14 34 14.7	+1.7
TTG	Podgorica	90.45	312	eP	P	14 34 13.3	+0.2
	comp=Z,33nm,1.0s						
TTG	Podgorica	90.45	312	eP	P	14 34 13.3	+0.2
TTG				pmax	pmax		
	comp=Z,33nm,1.0s						
KECS	Kecovo	90.46	319	eP	P	14 34 14.4	+1.5
KECS				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KECS	Kecovo	90.46	319	eP	P	14 34 14.4	+1.5
OUL	Oulu	90.64	335	P	P	14 34 14.4	+1.0
OUL				pmax	pmax		
	comp=Z,35nm,1.4s						
NIE	Niedzica	90.72	319	eP	P	14 34 14.8	+0.6
NIE	Niedzica	90.72	319	eP	P	14 34 14.8	+0.6
BEL	Belsk	90.77	322	eP	P	14 34 15.5	+1.2
BEL	Belsk	90.77	322	eP	P	14 34 15.5	+1.2
OJC	Ojcow	91.15	320	eP	P	14 34 17.1	+1.0
OJC	Ojcow	91.15	320	eP	P	14 34 17.1	+1.0
VYHS	Vyhne	91.55	318	eP	P	14 34 19.1	+1.1
VYHS				pmax	pmax		
	comp=Z,5.0nm,1.4s						
VYHS	Vyhne	91.55	318	eP	P	14 34 19.1	+1.1
VNA1	Neumayer--Stat	91.61	198	P	P	14 34 20.6	+2.7
ARCES	ARCESS Array B	91.78	340	P	P	14 34 18.5	-0.1
	comp=Z,6.2nm,0.8s,baz=93,slow=4.7,SNR=10						
TIP	Timpagrande	91.94	309⇑	iP	P	14 34 22.0	+1.9
MATE	Matera	92.14	310⇓	iP	P	14 34 22.9	+2.0
BLY	Banja Luka	92.23	315⇓	iP	P	14 34 22.9	+1.6
BLY	Banja Luka	92.23	315	eP	P	14 34 21.8	+0.6
	comp=Z,10.0nm,1.0s						
JAVC	Velka Javorina	92.36	319	eP	P	14 34 24.4	+2.6
JAVC				ePP	PP	14 38 05.5	+2.3
MORC	Moravsky Berou	92.54	320⇑	iP	P	14 34 24.2	+1.6
MORC	Moravsky Berou	92.54	320	eP	P	14 34 23.0	+0.4
	comp=Z,6.6nm,1.0s						
MORC	Moravsky Berou	92.54	320	P	P	14 34 25.1	+2.5
MORC	Moravsky Berou	92.54	320	eP	P	14 34 23.6	+1.0
MORC				ePP	PP	14 38 04.7	0.0
VRAC	Vranov	93.11	319	ePP	PP	14 38 10.1	+1.0
KRUC	Moravsky	93.21	319	ePP	PP	14 38 09.8	-0.1
GCIS	Gornji Cirnik	93.44	316	eP	P	14 34 28.0	+1.2
KSP	Ksiaz	93.45	321	eP	P	14 34 27.8	+1.1
KSP	Ksiaz	93.45	321	eP	P	14 34 27.8	+1.1
DOBS	Dobrina	93.57	316	eP	P	14 34 28.6	+1.2
BRG	Berggiesshubel	94.94	321	eP	P	14 34 34.9	+1.3
	comp=Z,2.5nm,0.8s						
BRG	Berggiesshubel	94.94	321	eP	P	14 34 34.9	+1.3
BRG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
GEA0	GERESS Array S	94.97	318	eP	P	14 34 33.9	+0.1
GERES	GERESS Array B	94.97	318	P	P	14 34 34.4	+0.5
	comp=Z,1.2nm,0.7s,baz=102,slow=3.1,SNR=12						
GERES				PP	PP	14 38 23.6	-0.1
	comp=Z,0.6nm,0.7s,baz=101,slow=9.3,SNR=6.2						
GERES				LR	LR	15 24 03.5	
	comp=Z,44nm,19.4s,baz=92,slow=40						
SPITS	Spitsbergen Ar	95.50	348	P	P	14 34 35.1	-0.5
	comp=Z,8.8nm,0.8s,baz=56,slow=13,SNR=6.4						
SPITS				LR	LR	15 24 24.4	
	comp=Z,177nm,20.0s,baz=125,slow=40						
WET	Wettzell	95.53	319	P	P	14 34 38.2	+1.9
WET				pmax	pmax		
	comp=Z,4.0nm,1.3s						
CLL	Collm	95.55	321⇑	iP	P	14 34 36.7	+0.4
	comp=Z,5.0nm,1.1s						
CLL	Collm	95.55	321⇑	iP	P	14 34 36.7	+0.4
CLL				pmax	pmax		
	comp=Z,5.0nm,1.1s						
HFS	Hagfors	95.56	330	P	P	14 34 35.9	-0.3
	comp=Z,4.2nm,0.8s,baz=76,slow=6.1,SNR=7.1						
NOA	NORSAR Array B	96.81	331	P	P	14 34 40.7	-1.2
	comp=Z,1.6nm,0.9s,baz=85,slow=6.7,SNR=3.5						
NOA				LR	LR	15 23 50.0	
	comp=Z,78nm,20.3s,baz=70,slow=39						
CAST	Castle Rocks	101.48	27	ePdif	Pdif	14 35 03.1	+0.4
ILAR	Eielson Array	103.43	25	PKiKP	PKiKP	14 39 29.7	-0.2
	comp=Z,0.3nm,0.7s,baz=266,slow=2.7,SNR=5.2						
ESDC	Sonseca Array	107.95	310	PP	PP	14 40 02.2	+0.5
	comp=Z,0.1nm,0.3s,baz=80,slow=7.2,SNR=4.4						
YKA	Yellowknife Ar	116.90	19	PKP	PKPdf	14 39 54.8	-0.5
	comp=Z,1.3nm,0.8s,baz=318,slow=2.0,SNR=11						
YKA				PP	PP	14 41 00.8	-3.5
	comp=Z,0.4nm,0.8s,baz=312,slow=7.0,SNR=3.2						
B05A	Bryant	122.43	35	P	PKPdf	14 40 06.5	+0.1
	baz=301						
E03A	Lebam	122.43	37	ePKPdf	PKPdf	14 40 06.7	+0.2
LTY	Liberty	123.78	35	ePKPdf	PKPdf	14 40 08.2	-1.0
I03D	Drain, OR	123.92	40	P	PKPdf	14 40 10.8	+1.4
	baz=298						
B08A	Colville Reser	123.93	34	ePKPdf	PKPdf	14 40 10.0	+0.6
I04A	Tendick Farm,	124.47	40	P	PKPdf	14 40 11.3	+0.8
	baz=299						
HUMO	Hull Mountain	124.67	41	ePKPdf	PKPdf	14 40 10.8	-0.2
I05D	Terrebonne, OR	124.88	39	P	PKPdf	14 40 12.1	+0.8
	baz=300						
D08A	Wollman Farm,	124.89	35	ePKPdf	PKPdf	14 40 11.7	+0.5
J04D	Umpqua Nationa	124.93	40	P	PKPdf	14 40 12.3	+0.7
	baz=299						
E08A	Dider Farm, El	125.12	35	ePKPdf	PKPdf	14 40 12.7	+1.1
M02C	Callahan	125.29	43	P	PKPdf	14 40 13.7	+1.5
	baz=297						
PINE	Pine Mountain	125.40	39	ePKPdf	PKPdf	14 40 13.9	+1.3
J05D	Fort Rock, OR	125.47	40	P	PKPdf	14 40 13.0	+0.3
	baz=299						
M04C	Macdoel	125.79	42	P	PKPdf	14 40 14.0	+0.7
	baz=298						
K05A	Summer Lake	125.96	40	ePKPdf	PKPdf	14 40 14.3	+0.7
WALA	Waterton Lakes	126.37	30	ePKPdf	PKPdf	14 40 14.7	+0.6
F10A	Beach Ranch, E	126.46	35	ePKPdf	PKPdf	14 40 14.8	+0.5
O03D	Paynes Creek	126.50	43	P	PKPdf	14 40 15.3	+0.8
	baz=297						
MOD	Modoc Plateau	126.74	41	ePKPdf	PKPdf	14 40 15.8	+0.7
BMO	Blue Mountains	127.05	36	ePKPdf	PKPdf	14 40 15.8	+0.3
BMO	Blue Mountains	127.05	36	ePKIKP	PKPdf	14 40 15.8	+0.3
J08A	Circle Bar Ran	127.16	38	ePKPdf	PKPdf	14 40 16.6	+0.8
WVOR	Wild Horse Val	127.54	40	ePKPdf	PKPdf	14 40 17.0	+0.4
WVOR	Wild Horse Val	127.54	40	ePKIKP	PKPdf	14 40 17.0	+0.4
AFDM	Forest Hills D	127.67	44	ePKPdf	PKPdf	14 40 17.5	+0.7
BEKR	Beckworth	127.68	43	ePKPdf	PKPdf	14 40 17.2	+0.2
PAHR	Pah Rah Range	128.41	43	ePKPdf	PKPdf	14 40 19.1	+0.7
MFID	Camas Ranch	128.74	37	ePKPdf	PKPdf	14 40 20.0	+1.2
EGMT	Eagleton	129.11	29	P	PKPdf	14 40 20.6	+1.3
	baz=314						
EGMT	Eagleton	129.11	29	ePKPdf	PKPdf	14 40 20.4	+1.1
DLMT	Dillon	129.42	33	ePKPdf	PKPdf	14 40 20.8	+0.7
HLID	Hailey	129.50	36	P	PKPdf	14 40 20.8	+0.5
	baz=306						
HLID	Hailey	129.50	36	ePKPdf	PKPdf	14 40 21.1	+0.8
KVN	Kaiserville	129.60	43	ePKPdf	PKPdf	14 40 21.2	+0.5
MCMT	McKenzie Canyo	129.62	34	ePKPdf	PKPdf	14 40 20.9	+0.3
NVAR	Mina Array Bea	129.76	44	PKP	PKPdf	14 40 21.3	+0.2
	comp=Z,1.4nm,0.9s,baz=270,slow=1.8,SNR=9.9						
NV01	Mina Array Sit	129.76	44	ePKPdf	PKPdf	14 40 21.1	+0.1
BOZ	Bozeman (W)	129.79	32	P	PKPdf	14 40 21.0	+0.3
	baz=311						
BOZ	Bozeman (W)	129.79	32	ePKPdf	PKPdf	14 40 21.1	+0.3
BOZ	Bozeman (W)	129.79	32	ePKIKP	PKPdf	14 40 21.1	+0.3
YHB	Horse Butte	130.58	33	ePKPdf	PKPdf	14 40 24.0	+1.5
FXWY	Fox Creek	131.39	34	ePKPdf	PKPdf	14 40 25.2	+1.2
MPMC	Manual Prospec	131.46	46	P	PKPdf	14 40 24.3	0.0
	baz=298						
MOOW	Moose Ponds	131.47	34	ePKPdf	PKPdf	14 40 25.2	+1.1
TPAW	Teton Pass	131.52	34	ePKPdf	PKPdf	14 40 25.1	+0.7
HVU	Hansel Valley	131.53	37	ePKPdf	PKPdf	14 40 24.8	+0.6
HVU	Hansel Valley	131.53	37	ePKIKP	PKPdf	14 40 24.8	+0.6
LOHW	Long Hollow	131.64	34	ePKPdf	PKPdf	14 40 25.4	+0.9
R11A	Troy Canyon, C	131.65	42	P	PKPdf	14 40 25.7	+1.1
	baz=301						
R11A	Troy Canyon, C	131.65	42	ePKPdf	PKPdf	14 40 24.6	0.0
REDW	Red Top Meadow	131.66	34	ePKPdf	PKPdf	14 40 24.1	-0.4
LAO	LASA Array	131.75	28	ePKPdf	PKPdf	14 40 23.9	-0.5
HWUT	Hardware Ranch	132.35	37	ePKPdf	PKPdf	14 40 26.0	+0.2
DUG	Dugway, Tooele	132.44	39	P	PKPdf	14 40 27.0	+1.1
	baz=306						
DUG	Dugway, Tooele	132.44	39	ePKPdf	PKPdf	14 40 25.9	-0.1
DUG	Dugway, Tooele	132.44	39	PKIKP	PKPdf	14 40 25.9	-0.1
BW06	Boulder Array	132.77	34	P	PKPdf	14 40 28.1	+1.4
	baz=311						
BW06	Boulder Array	132.77	34	ePKPdf	PKPdf	14 40 25.9	-0.8
PDAR	Pinedale Array	132.77	34	PKP	PKPdf	14 40 27.4	+0.7
	comp=Z,0.8nm,0.6s,baz=48,slow=2.2,SNR=10						
PDAR	Pinedale Array	132.77	34	ePKPdf	PKPdf	14 40 25.8	-0.8
ULM	Lac du Bonnet	132.83	18	PKP	PKPdf	14 40 26.4	+0.2
	comp=Z,8.1nm,0.9s,baz=281,slow=2.2,SNR=9.4						
ULM				SKPbc	SKPab	14 43 49.6	-0.7
	comp=Z,9.4nm,1.1s,baz=16,slow=5.2,SNR=3.6						
ULM	Lac du Bonnet	132.83	18	ePKPdf	PKPdf	14 40 25.7	-0.5
ULM				SKPbc	SKPab	14 43 49.6	-0.7
ULM	Lac du Bonnet	132.83	18	ePKIKP	PKPdf	14 40 25.7	-0.5
GMRC	Granite Mounta	133.37	47	P	PKPdf	14 40 29.8	+1.9
	baz=299						
MSU	Marysvale	133.81	40	ePKPdf	PKPdf	14 40 28.8	+0.1
MSU	Marysvale	133.81	40	ePKIKP	PKPdf	14 40 28.8	+0.1
LCMT	Little Creek M	133.94	43	ePKPdf	PKPdf	14 40 28.8	0.0
TMUT	Trail Mountain	133.96	39	ePKPdf	PKPdf	14 40 29.5	+0.4
P18A	Preston Nutter	134.36	38	ePKPdf	PKPdf	14 40 28.6	-1.3
RSSD	Black Hills	134.68	29	P	PKPdf	14 40 30.4	+0.2
	baz=318						
RSSD	Black Hills	134.68	29	ePKPdf	PKPdf	14 40 29.4	-0.7
RSSD	Black Hills	134.68	29	ePKIKP	PKPdf	14 40 29.5	-0.7
B34A	Aery, Baudette	134.77	18	P	PKPdf	14 40 29.7	-0.2
	baz=333						
O20A	White River Ci	135.23	36	P	PKPdf	14 40 32.2	+0.9
	baz=311						
O20A	White River Ci	135.23	36	ePKPdf	PKPdf	14 40 30.9	-0.4
PV09	Paradox Valley	135.74	38	ePKPdf	PKPdf	14 40 31.1	-1.3
PV14	Lion Creek, Pa	135.88	38	ePKPdf	PKPdf	14 40 32.4	-0.3
C36A	Pine Crest Far	135.96	17	P	PKPdf	14 40 32.4	+0.3
	baz=335						
PV16	Nyswonger Mesa	135.99	38	ePKPdf	PKPdf	14 40 32.8	0.0
WUAZ	Wupatki	136.02	43	P	PKPdf	14 40 34.5	+1.7
	baz=303						
PV11	David Mesa, Pa	136.02	38	ePKPdf	PKPdf	14 40 31.4	-1.4
N23A	Red Feather La	136.03	33	P	PKPdf	14 40 33.1	+0.3
	baz=314						
PV03	Paradox Valley	136.06	38	ePKPdf	PKPdf	14 40 31.2	-1.7
EYMN	Ely	136.15	15	P	PKPdf	14 40 32.9	+0.4
	baz=337						
EYMN	Ely	136.15	15	ePKPdf	PKPdf	14 40 31.3	-1.2
C37A	Embarrass	136.16	16	P	PKPdf	14 40 32.8	+0.2
	baz=336						
D36A	Goodland	136.39	17	P	PKPdf	14 40 34.0	+1.0
	baz=334						
D37A	Cotton	136.62	17	P	PKPdf	14 40 33.3	-0.1
	baz=335						
C40A	Isle Royale Na	136.76	13	P	PKPdf	14 40 33.5	-0.1
	baz=340						
MVCO	Mesa Verde	136.92	39	P	PKPdf	14 40 35.9	+1.3
	baz=308						
E36A	McGregor	136.95	18	P	PKPdf	14 40 34.1	+0.1
	baz=334						
S22A	4UR Ranch, Cre	137.62	38	P	PKPdf	14 40 36.2	+0.3
	baz=310						
S22A	4UR Ranch, Cre	137.62	38	ePKPdf	PKPdf	14 40 36.2	+0.3
D41A	Chassel	137.69	13	P	PKPdf	14 40 35.6	+0.2
	baz=341						
E39A	Mellen	137.85	15	P	PKPdf	14 40 35.4	-0.2
	baz=338						
F38A	Pierce - Schro	137.87	17	P	PKPdf	14 40 35.9	+0.2
	baz=336						
E40A	Wakefield	137.95	15	P	PKPdf	14 40 35.9	0.0
	baz=339						
H35A	Sunnyside Ranc	138.05	21	P	PKPdf	14 40 37.2	+1.1
	baz=331						
E41A	Kenton	138.16	14	P	PKPdf	14 40 36.6	+0.3
	baz=340						
F39A	Loretta	138.18	16	P	PKPdf	14 40 38.5	+2.2
	baz=337						
ECSD	EROS Data Cent	138.22	23	P	PKPdf	14 40 36.8	+0.4
	baz=328						
ECSD	EROS Data Cent	138.22	23	ePKPdf	PKPdf	14 40 33.1	-3.3
F40A	Park Falls	138.38	15	P	PKPdf	14 40 37.5	+0.8
	baz=338						
SDCO	Great Sand Dun	138.41	36	P	PKPdf	14 40 38.7	+1.4
	baz=312						
SDCO	Great Sand Dun	138.41	36	ePKPdf	PKPdf	14 40 36.6	-0.8
E42A	Champion	138.44	13	P	PKPdf	14 40 39.0	+2.2
	baz=341						
H36A	Jessenland, He	138.46	20	P	PKPdf	14 40 36.9	0.0
	baz=332						
COWI	Conover	138.47	14	ePKPdf	PKPdf	14 40 36.4	-0.5
G38A	Ridgeland	138.59	17	P	PKPdf	14 40 36.9	-0.1
	baz=335						
E44A	Grand Marais A	138.66	11	P	PKPdf	14 40 39.0	+1.8
	baz=344						
G39A	Holcombe	138.68	17	P	PKPdf	14 40 37.7	+0.4
	baz=336						
E43A	Lone Tree Farm	138.68	12	P	PKPdf	14 40 37.5	+0.3
	baz=343						
F41A	Three Lakes	138.81	14	P	PKPdf	14 40 37.9	+0.4
	baz=339						
F41A	Three Lakes	138.81	14	ePKPdf	PKPdf	14 40 37.5	0.0
H38A	Maiden Rock	138.91	18	P	PKPdf	14 40 38.3	+0.7
	baz=334						
G40A	Rib Lake	138.97	16	P	PKPdf	14 40 38.0	+0.2
	baz=338						
G40A	Rib Lake	138.97	16	ePKPdf	PKPdf	14 40 37.5	-0.3
I37A	Lemond, Waseca	139.14	20	P	PKPdf	14 40 38.8	+0.6
	baz=332						
I37A	Lemond, Waseca	139.14	20	ePKPdf	PKPdf	14 40 37.5	-0.7
F43A	Flat Rock, Esc	139.17	12	P	PKPdf	14 40 38.8	+0.7
	baz=342						
F44A	Big Bay de Noc	139.19	12	P	PKPdf	14 40 39.0	+0.8
	baz=344						
H39A	Augusta	139.20	17	P	PKPdf	14 40 38.6	+0.4
	baz=336						
J36A	Seneca 1, Swea	139.41	21	P	PKPdf	14 40 39.1	+0.5
	baz=331						
J36A	Seneca 1, Swea	139.41	21	ePKPdf	PKPdf	14 40 38.0	-0.7
G42A	Mountain	139.44	14	P	PKPdf	14 40 39.2	+0.5
	baz=340						
I38A	Scanlan Farm,	139.46	19	P	PKPdf	14 40 39.1	+0.3
	baz=334						
T25A	Trinidad	139.46	36	P	PKPdf	14 40 40.0	+0.7
	baz=313						
H40A	Chili	139.51	16	P	PKPdf	14 40 39.2	+0.4
	baz=337						
G43A	Wallace	139.60	13	P	PKPdf	14 40 39.7	+0.8
	baz=341						
ANMO	Albuquerque	139.62	40	ePKPdf	PKPdf	14 40 38.5	-1.1
ANMO	Albuquerque	139.62	40	ePKIKP	PKPdf	14 40 38.5	-1.1
TASL	Snake Pit, Alb	139.62	40	P	PKPdf	14 40 40.5	+1.0
	baz=308						
H41A	Junction City	139.72	16	P	PKPdf	14 40 39.8	+0.6
	baz=338						
H41A	Junction City	139.72	16	ePKPdf	PKPdf	14 40 37.2	-1.9
K36A	Gilmore City	139.97	22	P	PKPdf	14 40 40.1	+0.4
	baz=330						
J38A	Wedel Dairy, R	140.06	19	P	PKPdf	14 40 40.0	+0.2
	baz=333						
K37A	Belmond	140.16	21	P	PKPdf	14 40 41.1	+1.1
	baz=331						
J39A	Decorah	140.29	18	P	PKPdf	14 40 41.3	+1.0
	baz=334						
I42A	Draeger Farm,	140.59	15	P	PKPdf	14 40 42.9	+2.1
	baz=339						
K39A	Oelwein	140.80	19	P	PKPdf	14 40 40.4	-0.8
	baz=334						
J42A	Columbus	141.06	16	P	PKPdf	14 40 42.8	+1.1
	baz=338						
JFWS	Jewell Farm	141.12	17	P	PKPdf	14 40 41.9	+0.1
	baz=336						
L39A	Vinton	141.29	20	P	PKPdf	14 40 42.8	+0.7
	baz=333						
M38A	Pleasantville	141.50	21	P	PKPpre	14 40 36.3	
	baz=331						
L40A	Anamosa	141.60	19	P	PKPpre	14 40 36.2	
	baz=335						
L40A	Anamosa	141.60	19	ePKPpre	PKPpre	14 40 34.7	
L41A	Preston	141.81	18	P	PKPpre	14 40 37.0	
	baz=336						
KSU1	Kansas State U	142.07	27	P	PKPpre	14 40 38.7	
	baz=325						
KSU1	Kansas State U	142.07	27	ePKPpre	PKPpre	14 40 34.0	
M40A	Post Highland	142.09	20	P	PKPpre	14 40 38.3	
	baz=334						
L42A	Oliver, Polo	142.13	17	P	PKPpre	14 40 37.7	
	baz=337						
L42A	Oliver, Polo	142.13	17	ePKPpre	PKPpre	14 40 36.7	
N39A	Derby Farms, D	142.22	21	P	PKPpre	14 40 38.4	
	baz=332						
N39A	Derby Farms, D	142.22	21	ePKPpre	PKPpre	14 40 36.9	
L43A	Garden Prairie	142.22	16	P	PKPpre	14 40 38.7	
	baz=338						
MNTX	Cornudas Mount	142.29	44	P	PKPpre	14 40 40.9	
	baz=306						
MNTX	Cornudas Mount	142.29	44	ePKPpre	PKPpre	14 40 39.1	
MSTX	Muleshoe	142.58	39	P	PKPpre	14 40 41.4	
	baz=312						
MSTX	Muleshoe	142.58	39	ePKPpre	PKPpre	14 40 38.3	
P37A	Lathrop	142.63	24	P	PKPpre	14 40 41.6	
	baz=328						
M43A	Waltham Townsh	142.85	17	P	PKPpre	14 40 41.3	
	baz=338						
P38A	Dawn	142.93	23	P	PKPpre	14 40 42.0	
	baz=330						
P38A	Dawn	142.93	23	ePKPpre	PKPpre	14 40 41.4	
N41A	Harden Midland	142.94	19	P	PKPpre	14 40 40.9	
	baz=334						
O40A	La Belle	143.11	21	P	PKPpre	14 40 41.6	
	baz=332						
AAM	Ann Arbor	143.25	10	ePKPpre	PKPbc	14 40 42.4	-0.2
AAM	Ann Arbor	143.25	10	ePKIKP	PKPbc	14 40 42.4	-0.2
L47A	Sherwood	143.27	12	P	PKPbc	14 40 42.5	-0.2
	baz=344						
P39B	Salisbury	143.35	22	P	PKPbc	14 40 42.6	-0.4
	baz=331						
L48A	N Adams	143.45	11	P	PKPbc	14 40 43.3	0.0
	baz=345						

O41A	Passleys Farm,	143.46	20	P	PKPab	14 40 42.7	+0.5
	baz=334						
Q38A	Cooks Store, C	143.46	24	P	PKPab	14 40 42.6	+0.3
	baz=329						
P40A	Paris	143.57	22	P	PKPbc	14 40 43.4	-0.3
	baz=332						
Q39A	Willow Grove F	143.64	23	P	PKPbc	14 40 43.5	-0.4
	baz=330						
N44A	Piper City	143.68	16	P	PKPbc	14 40 44.2	+0.3
	baz=339						
P41A	Barry, Barry	143.79	20	P	PKPbc	14 40 44.4	+0.2
	baz=334						
N45A	Kentland	143.80	15	P	PKPbc	14 40 44.6	+0.3
	baz=340						
O43A	Sugar Creek Fa	143.81	18	P	PKPbc	14 40 44.2	-0.1
	baz=337						
ERPA	Erie	143.92	5	P	PKPbc	14 40 44.4	-0.2
	baz=353						
N46A	Monticello	143.95	14	P	PKPbc	14 40 44.7	0.0
	baz=341						
R38A	Fenwick Farm,	144.00	25	P	PKPab	14 40 43.8	-0.6
	baz=328						
Q40A	Laux Farm, Aux	144.03	22	P	PKPbc	14 40 44.8	-0.2
	baz=331						
BINY	Binghamton	144.04	0	P	PKPab	14 40 44.7	+0.3
	baz=359						
BINY	Binghamton	144.04	0	*e*PKPdf	PKPab	14 40 44.1	-0.4
P42A	Winchester	144.12	20	P	PKPbc	14 40 45.1	-0.1
	baz=334						
P42A	Winchester	144.12	20	*e*PKPdf	PKPab	14 40 44.7	-0.1
R39A	Chumby, Stover	144.25	24	P	PKPab	14 40 45.1	-0.3
	baz=330						
O45A	Potomac	144.30	16	P	PKPab	14 40 45.6	+0.1
	baz=339						
P43A	Skaggs, Pawnee	144.33	19	P	PKPab	14 40 45.5	-0.1
	baz=336						
SFIN	Lafayette	144.35	15	P	PKPab	14 40 45.4	-0.2
	baz=340						
SFIN	Lafayette	144.35	15	*e*PKPdf	PKPab	14 40 45.4	-0.2
ALLY	Alegheny Colle	144.37	6	*e*PKPdf	PKPab	14 40 45.4	-0.3
Q41A	Truxton	144.38	21	P	PKPab	14 40 45.6	-0.2
	baz=333						
WMOK	Wichita Mounta	144.38	34	P	PKPab	14 40 45.6	-0.3
	baz=318						
WMOK	Wichita Mounta	144.38	34	*e*PKPdf	PKPab	14 40 45.7	-0.3
WMOK	Wichita Mounta	144.38	34	*e*PKIKP	PKPab	14 40 45.7	-0.3
S38A	Stockton	144.47	25	P	PKPab	14 40 45.5	-0.7
	baz=328						
M54A	Oil Creek Stat	144.55	5	P	PKPab	14 40 45.9	-0.5
	baz=353						
M54A	Oil Creek Stat	144.55	5	*e*PKPdf	PKPab	14 40 45.8	-0.5
R40A	Maddies Statio	144.57	23	P	PKPab	14 40 45.6	-0.9
	baz=331						
R40A	Maddies Statio	144.57	23	*e*PKPdf	PKPab	14 40 45.8	-0.7
Q42A	Golden Eagle	144.66	20	P	PKPab	14 40 46.1	-0.8
	baz=334						
S39A	Bolivar	144.67	25	P	PKPab	14 40 46.2	-0.7
	baz=329						
S39A	Bolivar	144.67	25	*e*PKPdf	PKPab	14 40 45.8	-1.1
KSPA	Keystone Colle	144.68	0	*e*PKPdf	PKPab	14 40 46.3	-0.5
O47A	Sheridan	144.71	14	P	PKPab	14 40 46.2	-0.7
	baz=342						
P44A	Sand Creek, Wi	144.77	18	P	PKPab	14 40 46.2	-1.0
	baz=337						
T38A	Diamond	144.81	26	P	PKPab	14 40 46.8	-0.7
	baz=327						
N50A	Nevada	144.82	10	P	PKPab	14 40 47.2	-0.2
	baz=347						
TX31	Lajitas Ar. Si	144.88	45	*e*PKPbc	PKPbc	14 40 48.4	+0.3
TXAR	Lajitas Array	144.88	45	PKP	PKPdf	14 40 48.9	0.0
	comp=Z,31nm,0.8s,baz=284,slow=1.6,SNR=293						
R41A	Rosebud	144.90	22	P	PKPab	14 40 46.8	-1.0
	baz=332						
Q43A	New Douglas	144.91	19	P	PKPab	14 40 47.4	-0.4
	baz=335						
O48A	Farmland	144.93	13	P	PKPab	14 40 47.1	-0.7
	baz=343						
P45A	Graceland, Par	144.97	16	P	PKPab	14 40 47.5	-0.4
	baz=339						
P45A	Graceland, Par	144.97	16	*e*PKPbc	PKPab	14 40 46.8	-1.2
SLM	Saint Louis	145.01	20	*e*PKPbc	PKPbc	14 40 47.1	-1.0
SLM	Saint Louis	145.01	20	*e*PKIKP	PKPbc	14 40 47.1	-1.0
TUL1	Leonard	145.03	29	P	PKPbc	14 40 48.2	-0.1
	baz=323						
TUL1	Leonard	145.03	29	*e*PKPbc	PKPbc	14 40 47.5	-0.7
P46A	Rosedale	145.03	16	P	PKPbc	14 40 48.1	0.0
	baz=340						
N54A	Moraine State	145.06	6	P	PKPbc	14 40 47.1	-1.1
	baz=352						
N54A	Moraine State	145.06	6	*e*PKPbc	PKPbc	14 40 47.0	-1.2
S40A	Lebanon	145.08	24	P	PKPbc	14 40 47.8	-0.6
	baz=330						
R42A	Luebbering	145.13	21	P	PKPbc	14 40 47.5	-1.0
	baz=333						
BDFB	Brasilia	145.14	231	PKPbc	PKPdf	14 40 50.7	+1.0
	comp=Z,6.9nm,0.8s,baz=178,slow=3.9,SNR=8.9						
ODNJ	Ogdensburg	145.15	359	*e*PKPbc	PKPbc	14 40 47.7	-0.7
O49A	Covington	145.16	12	P	PKPbc	14 40 47.9	-0.7
	baz=345						
CCM	Cathedral Cave	145.17	22	P	PKPbc	14 40 48.3	-0.3
	baz=332						
CCM	Cathedral Cave	145.17	22	*e*PKPbc	PKPbc	14 40 48.5	-0.1
Q44A	Meyer Farm, Va	145.17	18	P	PKPbc	14 40 47.9	-0.7
	baz=336						
PAL	Palisades	145.20	358	P	PKPbc	14 40 47.8	-0.9
	baz=2.9						
PAL	Palisades	145.20	358	*e*PKPbc	PKPbc	14 40 48.1	-0.5
PAL	Palisades	145.20	358	*e*PKIKP	PKPbc	14 40 48.1	-0.5
T39A	Clever	145.21	25	P	PKPbc	14 40 48.2	-0.6
	baz=328						
N59A	State Game Lan	145.32	0	P	PKPbc	14 40 48.8	-0.2
	baz=360						
N59A	State Game Lan	145.32	0	*e*PKPbc	PKPbc	14 40 48.6	-0.5
O50A	Cable	145.34	11	P	PKPbc	14 40 48.5	-0.7
	baz=346						
S41A	Jillco Farms,	145.39	23	P	PKPbc	14 40 48.5	-0.9
	baz=331						
P47A	Martinsville	145.40	15	P	PKPbc	14 40 48.4	-0.9
	baz=341						
ABTX	Abilene, Hawle	145.41	37	P	PKPab	14 40 49.8	-0.1
	baz=315						
ABTX	Abilene, Hawle	145.41	37	*e*PKPdf	PKPbc	14 40 49.6	0.0
CPNY	Central Park	145.42	358	*e*PKPdf	PKPbc	14 40 48.6	-0.7
Q45A	Warren Harvey,	145.44	17	P	PKPbc	14 40 48.9	-0.5
	baz=338						
R43A	Red Bud	145.44	20	P	PKPdf	14 40 48.5	-1.0
	baz=334						
T40A	Mansfield	145.46	24	P	PKPdf	14 40 49.0	-0.6
	baz=330						
FVM	French Village	145.53	21	*e*PKPdf	PKPdf	14 40 48.5	-1.2
FVM	French Village	145.53	21	*e*PKIKP	PKPdf	14 40 48.5	-1.2
BRNJ	Basking Ridge	145.54	359	*e*PKPdf	PKPdf	14 40 49.1	-0.5
SSPA	Standing Stone	145.55	3	P	PKPdf	14 40 49.5	-0.1
	baz=356						
SSPA	Standing Stone	145.55	3	*e*PKPdf	PKPdf	14 40 49.2	-0.4
Q46A	CEJHS Indians,	145.55	16	P	PKPdf	14 40 49.3	-0.4
	baz=339						
S42A	Caledonia	145.58	21	P	PKPdf	14 40 49.3	-0.5
	baz=333						
HHAR	Hobbs	145.59	27	*e*PKPdf	PKPdf	14 40 48.9	-1.0
OLIL	Olney	145.60	17	*e*PKPdf	PKPdf	14 40 49.5	-0.3
P48A	Milroy	145.63	13	P	PKPdf	14 40 49.4	-0.4
	baz=343						
BLO	Bloomington	145.63	15	*e*PKPdf	PKPdf	14 40 49.7	-0.1
BLO	Bloomington	145.63	15	*e*PKIKP	PKPdf	14 40 49.7	-0.1
LUPA	Lehigh Univers	145.64	360	*e*PKPdf	PKPdf	14 40 48.6	-1.1
U39A	Green Forest	145.71	26	P	PKPdf	14 40 49.7	-0.4
	baz=327						
P49A	Miami Univ. Ec	145.71	12	P	PKPdf	14 40 50.1	+0.1
	baz=344						
R44A	Waltonville	145.74	19	P	PKPdf	14 40 50.0	0.0
	baz=336						
P50A	Jamestown	145.83	11	P	PKPdf	14 40 49.5	-0.6
	baz=345						
T41A	Mountain View	145.85	23	P	PKPdf	14 40 50.3	0.0
	baz=331						
O56A	Blue Knob Stat	145.87	4	P	PKPbc	14 40 50.6	-0.3
	baz=355						
O56A	Blue Knob Stat	145.87	4	*e*PKPdf	PKPdf	14 40 50.3	+0.1
Q47A	Bedord North L	145.88	15	P	PKPdf	14 40 50.3	+0.1
	baz=341						
R45A	Skylar, Fairfi	145.95	18	P	PKPdf	14 40 50.4	+0.1
	baz=337						
PAGS	Pennsylvania G	146.00	1	*e*PKPdf	PKPdf	14 40 50.3	0.0
U40A	Yellville	146.00	25	P	PKPdf	14 40 50.5	0.0
	baz=328						
S43A	Fulton Ridge,	146.02	21	P	PKPdf	14 40 50.3	-0.2
	baz=334						
Q48A	North Vernon	146.06	14	P	PKPdf	14 40 50.6	+0.1
	baz=342						
V39A	Pettigrew	146.09	27	P	PKPdf	14 40 50.8	+0.1
	baz=327						
T42A	Van Buren	146.13	22	P	PKPdf	14 40 50.9	+0.2
	baz=332						
T42A	Van Buren	146.13	22	*e*PKPdf	PKPdf	14 40 51.0	+0.2
Q49A	Aurora	146.18	13	P	PKPdf	14 40 51.1	+0.4
	baz=343						
SIUC	Southern Illin	146.18	20	*e*PKPdf	PKPdf	14 40 51.2	+0.4
S44A	Carbondale	146.19	20	P	PKPbc	14 40 51.7	-0.2
	baz=335						
MVL	Millersville	146.23	1	*e*PKPdf	PKPbc	14 40 51.7	-0.2
R46A	Gibon Southern	146.26	17	P	PKPbc	14 40 51.8	-0.2
	baz=338						
PSUB	Penn St. - Bra	146.31	360	*e*PKPdf	PKPdf	14 40 51.5	+0.6
MCWV	Mont Chateau	146.37	6	P	PKPbc	14 40 52.2	-0.1
	baz=352						
MCWV	Mont Chateau	146.37	6	*e*PKPdf	PKPdf	14 40 51.6	+0.5
T43A	Greenville	146.38	21	P	PKPbc	14 40 51.8	-0.6
	baz=333						
U41A	Viola	146.40	24	P	PKPbc	14 40 52.0	-0.5
	baz=330						
S45A	Carrier Mills	146.43	19	P	PKPbc	14 40 52.1	-0.5
	baz=336						
USIN	University of	146.44	17	*e*PKPdf	PKPdf	14 40 51.7	+0.5
R47A	Wooly Knot Far	146.45	16	P	PKPdf	14 40 51.7	+0.5
	baz=340						
V40A	Witts Springs	146.48	26	P	PKPdf	14 40 51.6	+0.2
	baz=328						
V40A	Witts Springs	146.48	26	*e*PKPdf	PKPdf	14 40 51.4	0.0
Q51A	Peebles	146.48	11	P	PKPbc	14 40 52.1	-0.5
	baz=346						
R48A	Northridge Ran	146.53	15	P	PKPbc	14 40 52.1	-0.7
	baz=341						
Q50A	Georgetown	146.53	12	P	PKPdf	14 40 52.0	+0.6
	baz=345						
W39A	Magazine	146.56	28	P	PKPbc	14 40 52.4	-0.6
	baz=326						
W39A	Magazine	146.56	28	*e*PKPdf	PKPdf	14 40 51.8	+0.3
WCI	Wyandotte Cave	146.58	15	P	PKPdf	14 40 51.9	+0.5
	baz=340						
WCI	Wyandotte Cave	146.58	15	*e*PKPdf	PKPdf	14 40 52.2	+0.8
WCI	Wyandotte Cave	146.58	15	*e*PKP2	PKPdf	14 40 52.2	+0.8
PBMO	Poplar Bluff	146.60	22	*e*PKPdf	PKPdf	14 40 52.1	+0.6
T44A	Benton	146.62	21	P	PKPbc	14 40 52.5	-0.6
	baz=334						
U42A	Revenden	146.66	23	P	PKPdf	14 40 52.3	+0.7
	baz=331						
S46A	Don Dixon Farm	146.69	18	P	PKPbc	14 40 52.9	-0.4
	baz=338						
JCT	Junction City	146.77	40	P	PKPbc	14 40 53.1	-0.7
	baz=312						
JCT	Junction City	146.77	40	*e*PKPdf	PKPdf	14 40 52.8	+0.8
JCT	Junction City	146.77	40	*e*PKP2	PKPdf	14 40 52.8	+0.8
V41A	Mountainview	146.78	25	P	PKPdf	14 40 52.5	+0.7
	baz=329						
R49A	Shelbyville	146.80	14	P	PKPbc	14 40 53.0	-0.6
	baz=342						
SDMD	Soldier's Deli	146.81	2	*e*PKPdf	PKPdf	14 40 51.2	-0.5
W40A	Ferguson Farm,	146.89	27	P	PKPbc	14 40 53.3	-0.7
	baz=327						
W40A	Ferguson Farm,	146.89	27	*e*PKPdf	PKPdf	14 40 52.7	+0.7
X39A	Fountain Ranch	146.97	29	P	PKPbc	14 40 53.4	-0.8
	baz=325						
U43A	Rector	146.97	22	P	PKPbc	14 40 53.5	-0.6
	baz=332						
R50A	Paris	147.00	13	P	PKPdf	14 40 53.1	+1.0
	baz=344						
T45A	Paducah	147.00	19	P	PKPbc	14 40 54.5	+0.3
	baz=336						
S47A	Hartford	147.01	17	P	PKPbc	14 40 54.1	-0.1
	baz=339						
V42A	Cord	147.08	24	P	PKPbc	14 40 53.4	-1.0
	baz=330						
U44A	Portageville	147.11	21	P	PKPbc	14 40 53.9	-0.6
	baz=334						
R51A	Hillsboro	147.14	12	P	PKPbc	14 40 53.8	-0.8
	baz=345						
WHAR	Wooly Hollow	147.15	26	*e*PKPbc	PKPbc	14 40 53.9	-0.8
WHTX	Lake Whitney,	147.15	36	P	PKPbc	14 40 54.4	-0.4
	baz=317						
WHTX	Lake Whitney,	147.15	36	*e*PKPbc	PKPbc	14 40 54.0	-0.8
S48A	Wiedeman Farm,	147.18	15	P	PKPbc	14 40 53.7	-1.0
	baz=341						
MIAR	Mount Ida	147.19	28	P	PKPbc	14 40 54.2	-0.6
	baz=326						
MIAR	Mount Ida	147.19	28	*e*PKPbc	PKPbc	14 40 54.8	-0.1
MIAR	Mount Ida	147.19	28	PKP2	PKPbc	14 40 54.7	-0.1
T46A	Princeton	147.22	18	P	PKPbc	14 40 54.8	-0.1
	baz=337						
S49A	Springfield	147.25	14	P	PKPbc	14 40 54.0	-0.9
	baz=342						
W41B	Gary Mavity, V	147.26	26	P	PKPdf	14 40 53.3	+0.7
	baz=328						
W41B	Gary Mavity, V	147.26	26	*e*PKPdf	PKPdf	14 40 53.3	+0.7
R52A	Catlettsburg	147.28	10	P	PKPbc	14 40 54.4	-0.5
	baz=347						
U44B	Burton Farm, H	147.38	21	P	PKPbc	14 40 54.5	-0.8
	baz=334						
V43A	Jonesboro	147.43	23	P	PKPbc	14 40 54.7	-0.7
	baz=332						
GLAT	Glass	147.46	21	*e*PKPbc	PKPbc	14 40 55.1	-0.4
GNAR	Gosnell	147.47	22	*e*PKPbc	PKPbc	14 40 55.2	-0.4
W42A	Bald Knob	147.48	25	P	PKPbc	14 40 55.6	0.0
	baz=330						
T47A	Sharon Grove	147.51	17	P	PKPbc	14 40 55.0	-0.7
	baz=338						
T47A	Sharon Grove	147.51	17	*e*PKPdf	PKPdf	14 40 52.4	-0.7
UTMT	University of	147.54	20	*e*PKPbc	PKPbc	14 40 55.1	-0.6
UALR	University of	147.56	26	*e*PKPbc	PKPbc	14 40 55.3	-0.6
S50A	Richmond	147.56	13	P	PKPbc	14 40 54.8	-1.0
	baz=344						
U45A	Rockin P Farm,	147.57	20	P	PKPbc	14 40 55.6	-0.2
	baz=335						
X40A	Basin Creek Fa	147.58	27	P	PKPbc	14 40 55.9	0.0
	baz=327						
X40A	Basin Creek Fa	147.58	27	*e*PKPbc	PKPbc	14 40 55.8	-0.1
HBAR	Harrisburg	147.59	23	*e*PKPbc	PKPbc	14 40 55.5	-0.4
T48A	Bowling Green	147.60	16	P	PKPbc	14 40 55.4	-0.5
	baz=340						
X41A	Kaden, Bauxite	147.72	27	P	PKPbc	14 40 56.4	+0.2
	baz=327						
U46A	Springville	147.76	19	P	PKPbc	14 40 56.2	-0.1
	baz=336						
HALT	Halls	147.77	21	*e*PKPbc	PKPbc	14 40 55.5	-0.8
Y40A	Okolona	147.77	28	P	PKPbc	14 40 56.1	-0.3
	baz=326						
S51A	Beattyville	147.77	12	P	PKPbc	14 40 56.2	-0.1
	baz=345						
S51A	Beattyville	147.77	12	*e*PKPbc	PKPbc	14 40 55.5	-0.8
S52A	Salyersville	147.84	11	P	PKPbc	14 40 56.3	-0.2
	baz=346						
T49A	Edmonton	147.84	15	P	PKPbc	14 40 55.2	-1.3
	baz=341						
T49A	Edmonton	147.84	15	*e*PKPbc	PKPbc	14 40 55.6	-0.9
435B	Jarrell	147.94	37	P	PKPbc	14 40 57.8	+0.8
	baz=316						
435B	Jarrell	147.94	37	*e*PKPbc	PKPdf	14 40 55.4	+1.5
U47A	Clarksville	147.96	18	P	PKPbc	14 40 56.8	-0.1
	baz=338						
V45A	Humboldt	148.05	21	P	PKPbc	14 40 57.2	+0.1
	baz=334						
WVT	Waverly	148.08	19	P	PKPbc	14 40 57.3	+0.1
	baz=337						
WVT	Waverly	148.08	19	*e*PKPdf	PKPdf	14 40 54.1	+0.1
WVT				*e*PKPbc	PKPbc	14 40 57.1	-0.1
WVT	Waverly	148.08	19	*e*PKIKP	PKPdf	14 40 54.1	+0.1
WVT				*e*		14 40 57.1	
T50A	Nancy	148.09	14	P	PKPbc	14 40 56.7	-0.5
	baz=342						
CVRD	Centerville Ro	148.11	3	*e*PKPbc	PKPbc	14 40 56.5	-0.7
U48A	Cassie Pea, Po	148.12	17	P	PKPbc	14 40 56.9	-0.4
	baz=339						
Y41A	Eaglette Beard	148.19	27	P	PKPbc	14 40 57.3	-0.2
	baz=327						
V46A	Holladay	148.29	20	P	PKPbc	14 40 57.6	-0.1
	baz=336						
Z40A	Long Farm, Mag	148.33	29	P	PKPbc	14 40 58.7	+0.7
	baz=325						
U49A	Red Boiling Sp	148.33	16	P	PKPbc	14 40 57.5	-0.3
	baz=340						
T51A	Gray	148.35	13	P	PKPbc	14 40 57.4	-0.5
	baz=344						
X43A	Marvell	148.40	24	P	PKPbc	14 40 58.2	+0.2
	baz=330						
X43A	Marvell	148.40	24	*e*PKPbc	PKPdf	14 40 56.0	+1.5
T52A	Hallie	148.41	11	P	PKPbc	14 40 57.9	-0.1
	baz=346						
833A	Chaparral WMA,	148.45	43	P	PKPbc	14 40 59.3	+0.9
	baz=310						
V47A	Nunnelly	148.46	19	P	PKPbc	14 40 58.1	0.0
	baz=337						
W45A	Hickory Valley	148.50	22	P	PKPbc	14 40 58.1	-0.2
	baz=334						
CCAR	Cane Creek	148.53	26	*e*PKPbc	PKPbc	14 40 58.0	-0.4
Y42A	Garnett, Star	148.60	26	P	PKPbc	14 40 59.2	+0.6
	baz=328						
Z41A	Richland Creek	148.62	28	P	PKPbc	14 40 59.4	+0.7
	baz=326						
Z41A	Richland Creek	148.62	28	*e*PKPbc	PKPbc	14 40 58.8	+0.1
U50A	Jamestown	148.66	14	P	PKPbc	14 40 58.9	+0.1
	baz=342						
X44A	Crenshaw	148.71	23	P	PKPbc	14 40 58.7	-0.2
	baz=331						
BLA	Blacksburg	148.72	7	P	PKPbc	14 40 58.8	0.0
	baz=351						
BLA	Blacksburg	148.72	7	*e*PKPbc	PKPbc	14 40 57.9	-1.0
BLA	Blacksburg	148.72	7	*e*PKP2	PKPbc	14 40 57.9	-1.0
140A	Cam and Jess,	148.74	30	P	PKPbc	14 40 59.3	+0.3
	baz=324						
140A	Cam and Jess,	148.74	30	*e*PKPbc	PKPbc	14 40 59.0	0.0
V48A	Smith Brothers	148.75	18	P	PKPbc	14 40 58.6	-0.3
	baz=338						
V48A	Smith Brothers	148.75	18	*e*PKPbc	PKPbc	14 40 58.2	-0.8
W46A	Michie	148.81	20	P	PKPbc	14 40 58.8	-0.2
	baz=335						
TZTN	Tazewell	148.84	12	P	PKPbc	14 40 58.9	-0.3
	baz=345						
TZTN	Tazewell	148.84	12	*e*PKPbc	PKPbc	14 40 58.5	-0.7
NATX	Nacogdoches	148.88	32	P	PKPbc	14 41 00.4	+1.0
	baz=321						
NATX	Nacogdoches	148.88	32	*e*PKPbc	PKPbc	14 40 59.7	+0.3
U51A	La Follette	148.89	13	P	PKPbc	14 40 59.1	-0.2
	baz=344						
Y43A	Makayla and Ka	148.90	25	P	PKPbc	14 40 59.8	+0.5
	baz=330						
W47A	Westpoint	148.96	19	P	PKPbc	14 40 59.0	-0.5
	baz=336						
OXF	Oxford	148.99	22	P	PKPbc	14 40 59.0	-0.6
	baz=333						
OXF	Oxford	148.99	22	*e*PKPbc	PKPbc	14 40 58.7	-0.9
OXF	Oxford	148.99	22	*e*PKP2	PKPbc	14 40 58.7	-0.9
V49A	McMinnville	149.00	16	P	PKPbc	14 40 58.9	-0.7
	baz=340						
Z42A	Norrel Spur, H	149.00	27	P	PKPbc	14 40 59.9	+0.2
	baz=327						
U52A	Thorn Hill	149.02	12	P	PKPbc	14 40 59.3	-0.3
	baz=345						
PLAL	Pickwick Lake	149.05	20	*e*PKPbc	PKPbc	14 40 58.9	-0.8
X45A	UM Field Stati	149.07	22	P	PKPbc	14 40 59.1	-0.6
	baz=333						
141A	Papa Simpson,	149.10	29	P	PKPbc	14 40 59.9	0.0
	baz=325						
Y44A	Strider, Charl	149.16	24	P	PKPbc	14 40 60.0	0.0
	baz=331						
ZAIG	Zacatecas	149.20	55	*e*PKPbc	PKPbc	14 41 00.9	0.0
U53A	Fall Branch	149.21	11	P	PKPbc	14 40 59.8	-0.4
	baz=346						
X46A	Booneville	149.25	21	P	PKPbc	14 40 59.7	-0.5
	baz=334						
W48A	Pulaski	149.28	18	P	PKPbc	14 40 59.3	-1.0
	baz=338						
V50A	Pikevile	149.30	15	P	PKPbc	14 41 00.3	0.0
	baz=341						
V51A	Loudon	149.37	14	P	PKPbc	14 41 00.3	-0.2
	baz=343						
V51A	Loudon	149.37	14	*e*PKPbc	PKPbc	14 41 00.4	-0.1
W49A	Belvidere	149.50	17	P	PKPbc	14 41 00.2	-0.6
	baz=339						
V52A	Sevierville	149.50	13	P	PKPbc	14 41 00.9	+0.1
	baz=344						
V52A	Sevierville	149.50	13	*e*PKPbc	PKPbc	14 41 00.5	-0.4
SWET	Sewanee	149.50	17	*e*PKPbc	PKPbc	14 41 00.2	-0.7
Y45A	Yeager Farm, C	149.51	23	P	PKPbc	14 41 00.9	+0.1
	baz=332						
X47A	Russelville	149.54	20	P	PKPbc	14 41 00.6	-0.4
	baz=336						
241A	Mo Tay, Goldon	149.57	30	P	PKPbc	14 41 01.6	+0.5
	baz=324						
HKT	Hockley	149.59	36	*e*PKPbc	PKPbc	14 41 01.7	+0.5
TKL	Tuckaleechee C	149.64	13	PKPbc	PKPbc	14 41 01.1	-0.1
	comp=Z,52nm,0.7s,baz=327,slow=0.9,SNR=69						
Z44A	Pea Ridge, Bel	149.66	25	P	PKPbc	14 41 01.9	+0.6
	baz=330						
CPCT	Cooper Cave	149.66	14	*e*PKPbc	PKPbc	14 41 01.1	-0.1
W50A	Signal Mountai	149.69	16	P	PKPbc	14 41 01.2	-0.2
	baz=341						
W50A	Signal Mountai	149.69	16	*e*PKPbc	PKPbc	14 41 00.9	-0.5
143A	Socs Landing,	149.72	27	P	PKPbc	14 41 01.3	-0.1
	baz=328						
Y46A	Houston	149.75	22	P	PKPbc	14 41 01.6	+0.1
	baz=333						
V53A	Saluda	149.83	12	P	PKPbc	14 41 01.7	0.0
	baz=346						
V53A	Saluda	149.83	12	*e*PKPdf	PKPdf	14 40 57.1	+0.2
V53A				*e*PKPbc	PKPbc	14 41 01.5	-0.2
X48A	Hartselle	149.87	19	P	PKPbc	14 41 01.0	-0.8
	baz=337						
X48A	Hartselle	149.87	19	*e*PKPbc	PKPbc	14 41 00.9	-0.8
W51A	Cleveland	149.88	15	P	PKPbc	14 41 01.6	-0.1
	baz=342						
Z45A	Winona	149.88	24	P	PKPbc	14 41 01.9	+0.1
	baz=331						
Z45A	Winona	149.88	24	*e*PKPbc	PKPbc	14 41 01.8	0.0
NCAT	North Carolina	149.91	7	*e*PKPbc	PKPbc	14 41 01.2	-0.6
341A	Kurthwood	150.00	31	P	PKPbc	14 41 02.6	+0.4
	baz=323						
341A	Kurthwood	150.00	31	*e*PKPbc	PKPbc	14 41 02.3	+0.1
X49A	Woodville	150.04	18	P	PKPbc	14 41 02.0	-0.1
	baz=338						
Y47A	UCPARC, Winfie	150.10	21	P	PKPbc	14 41 02.1	-0.2
	baz=335						
W52A	Murphy	150.14	14	P	PKPbc	14 41 02.7	+0.3
	baz=343						
W52A	Murphy	150.14	14	*e*PKPbc	PKPbc	14 41 02.1	-0.4
W53A	Cullowhee	150.24	12	P	PKPbc	14 41 02.9	+0.1
	baz=345						
X50B	Fort Payne	150.29	17	P	PKPbc	14 41 01.8	-1.1
	baz=340						
Y48A	Jasper	150.32	20	P	PKPbc	14 41 01.9	-0.9
	baz=336						
Z46A	Louisville	150.33	23	P	PKPbc	14 41 03.1	+0.1
	baz=333						
X51A	Calhoun	150.41	16	P	PKPbc	14 41 02.9	-0.2
	baz=341						
X51A	Calhoun	150.41	16	*e*PKPbc	PKPbc	14 41 02.5	-0.6
145A	Houston Renfro	150.45	25	P	PKPbc	14 41 03.1	-0.1
	baz=330						
BG3	Lake Jocassee	150.46	12	*e*PKPbc	PKPbc	14 41 03.1	-0.1
LNIG	Linares	150.49	48	*e*PKPbc	PKPbc	14 41 03.1	-0.5
244A	Avery, Jackson	150.60	27	P	PKPbc	14 41 03.8	+0.2
	baz=328						
KMSC	Kings Mountain	150.62	10	P	PKPbc	14 41 03.5	-0.1
	baz=348						
KMSC	Kings Mountain	150.62	10	*e*PKPbc	PKPbc	14 41 03.0	-0.6
X52A	Dahlonega	150.62	14	P	PKPbc	14 41 02.9	-0.7
	baz=343						
Y49A	Blount Mountai	150.62	18	P	PKPbc	14 41 02.7	-0.9
	baz=338						
Y49A	Blount Mountai	150.62	18	*e*PKPbc	PKPbc	14 41 03.2	-0.4
Z47A	Carrollton	150.66	22	P	PKPbc	14 41 03.4	-0.3
	baz=334						
Z48A	Northport	150.68	21	P	PKPbc	14 41 03.2	-0.5
	baz=335						
146A	Union	150.78	24	P	PKPbc	14 41 04.3	+0.3
	baz=332						
146A	Union	150.78	24	*e*PKPbc	PKPbc	14 41 03.9	-0.1
Y50A	Piedmont	150.80	17	P	PKPbc	14 41 03.9	-0.1
	baz=339						
PAULI	Pauline	150.85	10	*e*PKPbc	PKPbc	14 41 03.4	-0.7
X53A	Estanollee	150.85	13	P	PKPbc	14 41 04.3	+0.1
	baz=344						
Y51A	Rockmart	150.98	16	P	PKPbc	14 41 03.8	-0.7
	baz=340						
147A	Livingston	151.05	22	P	PKPbc	14 41 05.3	+0.6
	baz=333						
147A	Livingston	151.05	22	*e*PKPbc	PKPbc	14 41 03.7	-0.9
344A	Westbrook Farm	151.08	27	P	PKPbc	14 41 05.2	+0.5
	baz=328						

344A	Westbrook Farm	151.08	27	*e*PKPbc	PKPbc	14 41 04.6	-0.1
LRAL	Lakeview Retre	151.19	20	*e*PKPbc	PKPbc	14 41 04.4	-0.5
Z49A	Columbiana	151.19	19	P	PKPbc	14 41 04.9	0.0
	baz=337						
Y52A	Lilburn	151.28	15	P	PKPbc	14 41 05.3	+0.2
	baz=342						
Y52A	Lilburn	151.28	15	*e*PKPbc	PKPbc	14 41 05.2	0.0
Z50A	Ashland	151.33	18	P	PKPbc	14 41 05.0	-0.3
	baz=338						
Z50A	Ashland	151.33	18	*e*PKPbc	PKPbc	14 41 04.8	-0.5
148A	Greensboro	151.34	21	P	PKPbc	14 41 05.6	+0.3
	baz=335						
HODGE	Hodges	151.34	11	*e*PKPbc	PKPbc	14 41 05.0	-0.2
Y53A	Monroe	151.41	14	P	PKPbc	14 41 05.8	+0.4
	baz=343						
247A	Quitman	151.47	24	P	PKPbc	14 41 06.3	+0.7
	baz=332						
JSC	Jenkinsville	151.47	10	*e*PKPbc	PKPbc	14 41 05.3	-0.2
JSC	Jenkinsville	151.47	10	*e*PKIKP	PKPbc	14 41 05.3	-0.2
Z51A	Franklin	151.50	17	P	PKPbc	14 41 05.7	0.0
	baz=340						
345A	Thompson Farm,	151.52	26	P	PKPbc	14 41 06.3	+0.5
	baz=329						
Y54A	Tignall	151.60	12	P	PKPbc	14 41 05.6	-0.3
	baz=345						
149A	Jones	151.65	20	P	PKPbc	14 41 05.5	-0.5
	baz=336						
346A	Big Creek Wild	151.70	26	P	PKPbc	14 41 06.4	+0.2
	baz=330						
346A	Big Creek Wild	151.70	26	*e*PKPbc	PKPbc	14 41 05.9	-0.2
248A	Dixon Mills	151.77	22	P	PKPbc	14 41 06.1	-0.2
	baz=334						
Z52A	Williamson	151.83	16	P	PKPbc	14 41 06.6	+0.2
	baz=341						
GOGA	Godfrey	151.86	14	P	PKPbc	14 41 06.4	-0.1
	baz=343						
GOGA	Godfrey	151.86	14	*e*PKPbc	PKPbc	14 41 06.2	-0.2
GOGA	Godfrey	151.86	14	*e*PKIKP	PKPbc	14 41 06.3	-0.2
150A	Eclectic	151.90	19	P	PKPbc	14 41 07.0	+0.4
	baz=338						
Z53A	Monticello	151.96	14	P	PKPbc	14 41 07.0	+0.3
	baz=343						
347A	Saraland	152.07	24	P	PKPbc	14 41 07.8	+0.8
	baz=332						
249A	Camden	152.10	21	P	PKPbc	14 41 07.4	+0.4
	baz=335						
Z54A	Sparta	152.17	13	P	PKPbc	14 41 07.2	0.0
	baz=344						
151A	Opelika	152.19	18	P	PKPbc	14 41 07.4	+0.1
	baz=339						
152A	Waverly Hall	152.24	17	P	PKPbc	14 41 07.6	+0.2
	baz=340						
152A	Waverly Hall	152.24	17	*e*PKPbc	PKPbc	14 41 07.3	0.0
348A	Jackson	152.31	23	P	PKPbc	14 41 08.6	+1.0
	baz=333						
348A	Jackson	152.31	23	*e*PKPbc	PKPbc	14 41 08.3	+0.7
Z55A	Blythe	152.34	12	P	PKPbc	14 41 08.4	+0.9
	baz=346						
250A	Grady	152.40	20	P	PKPbc	14 41 08.7	+0.9
	baz=337						
250A	Grady	152.40	20	*e*PKPbc	PKPbc	14 41 07.5	-0.2
153A	Fort Valley	152.50	15	P	PKPbc	14 41 08.7	+0.7
	baz=342						
251A	Midway	152.57	18	P	PKPbc	14 41 08.8	+0.7
	baz=339						
349A	Repton	152.64	22	P	PKPbc	14 41 09.3	+1.0
	baz=334						
154A	Montrose	152.71	14	P	PKPbc	14 41 09.0	+0.6
	baz=344						
154A	Montrose	152.71	14	*e*PKPbc	PKPbc	14 41 08.4	0.0
NHSC	New Hope	152.79	8	P	PKPbc	14 41 08.4	-0.1
	baz=350						
155A	Kite	152.85	13	P	PKPbc	14 41 09.2	+0.5
	baz=345						
BRAL	Brewton	152.86	22	P	PKPbc	14 41 09.5	+0.7
	baz=334						
BRAL	Brewton	152.86	22	*e*PKPbc	PKPbc	14 41 08.9	+0.1
252A	Lumpkin	152.86	17	P	PKPbc	14 41 09.4	+0.6
	baz=340						
350A	Dozier	152.88	20	P	PKPbc	14 41 10.1	+1.3
	baz=336						
253A	Americus	152.97	16	P	PKPbc	14 41 09.8	+0.8
	baz=341						
253A	Americus	152.97	16	*e*PKPbc	PKPbc	14 41 08.7	-0.3
351A	Pinckard	153.26	19	P	PKPbc	14 41 09.5	-0.1
	baz=338						
352A	Blakely	153.29	18	P	PKPbc	14 41 09.8	+0.1
	baz=339						
352A	Blakely	153.29	18	*e*PKPbc	PKPbc	14 41 09.7	+0.1
254A	Abbeville	153.30	15	P	PKPbc	14 41 10.0	+0.3
	baz=343						
255A	Hazlehurst	153.51	13	P	PKPbc	14 41 10.6	+0.4
	baz=345						
255A	Hazlehurst	153.51	13	*e*PKPbc	PKPbc	14 41 09.8	-0.4
353A	Camilla	153.62	17	P	PKPbc	14 41 11.6	+1.1
	baz=340						
TIGA	Tifton	153.71	15	P	PKPbc	14 41 11.3	+0.6
	baz=342						
TIGA	Tifton	153.71	15	*e*PKPbc	PKPbc	14 41 10.4	-0.2
452A	Marianna	153.79	19	P	PKPbc	14 41 12.2	+1.4
	baz=338						
453A	Whigham	154.05	17	P	PKPbc	14 41 12.3	+0.9
	baz=340						
453A	Whigham	154.05	17	*e*PKPbc	PKPbc	14 41 11.4	0.0

MEX 29 14:49:07.7±0.3**, 24°.88N×99°.71W, h20^{km}, MD3.5, Central Mexico**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LNIG	Linares	0.23	85	*e*P	Pb	14 49 12.3	-1.0
	baz=265,slow=11						
LNIG				*e*S	Sb	14 49 15.9	-1.2

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*NIED **29** 14:56:00, 28°.30N×128°.80E, h77^{km}, Mw4.1 Best double couple: M$_0$1.61000×10^{15} NP1:φ$_s$347.00000°, δ51.00000°, λ-25.00000°. NP2:φ$_s$94.00000°, δ71.00000°, λ-138.00000°.*

*BJI **29** 14:56:16.8, 28°.08N×128°.89E, h96^{km}, mb4.3/23, mB4.5/15*

*ISCJB **29** 14:56:17.5±0.2, 28°.22N±0°.03×128°.86E±0°.04, h90^{km}±2^{km}, mb4.1/27, Error ellipse: s-maj=6.7km s-min=2.9km az=35.1*

*JMA **29** 14:56:18.6±0.1, 28°.32N×128°.77E, h68^{km}±2^{km}, M3.8*

JMA Felt I J1.

*IDC **29** 14:56:19.1±0.7, 28°.25N×128°.71E, h93^{km}±8^{km}, mb3.7/18, mb1 3.9/23, mb1mx3.6/72, mbtmp4.1/23, MS3.3/1, Ms1 3.3/1, ms1mx2.3/63, Error ellipse: s-maj=16.0km s-min=8.2km az=108.0*

*NEIC **29** 14:56:19.4±0.5, 28°.18N×128°.79E, h96^{km}±5^{km}, mb4.5/9, Error ellipse: s-maj=10.0km s-min=5.8km az=143.0*

NEIC Recorded [1 JMA] in Kagoshima.

ISC 29 14:56:18.2±0.6**, 28°.24N**±0°.04×**128°.84E**±0°.04**, h83**^{km}±5^{km}**, n90, σ1^{s}45**/111**, mb4.2**/27**, 1C-1D, Ryukyu Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAMN	Amaminishikomi	0.29	90	P	Pn	14 56 30.1	-0.7
JAMN				S	Sn	14 56 38.6	-1.5
JTK	Tokunoshima	0.47	168	P	Pn	14 56 31.9	-0.1
JTK				S	Sn	14 56 41.8	-0.4
JAM	Amami Oshima	0.69	76	P	Pn	14 56 33.5	-0.5
JAM				*e*S	Sn	14 56 44.8	-1.0
JOKE	Okinoerabujima	0.91	195	P	Pn	14 56 36.9	+0.4
JOKE				*e*S	Sn	14 56 50.2	+0.1
JTAJ	Takarajima	0.96	19	P	Pn	14 56 36.1	-0.9
JTAJ				*e*S	Sn	14 56 50.0	-1.0
JZK	Kikaishima	1.00	86	P	Pn	14 56 39.0	+1.6
JZK				S	Sn	14 56 55.9	+4.1
JYRO	Yoronjima	1.26	196	P	Pn	14 56 41.3	+0.6
JYRO				*e*S	Sn	14 56 58.2	+0.7
JIH	Iheya	1.43	213	P	Pn	14 56 43.5	+0.7
JIH				*e*S	Sn	14 57 01.6	+0.3
JOW	Kunigami	1.50	200	P	Pn	14 56 44.3	+0.6
	155nm,0.3s,baz=101,slow=23,SNR=98						
JOW				S	Sn	14 57 03.5	+0.7
	334nm,0.3s,baz=37,slow=20,SNR=25						
JOW	Kunigami	1.50	200	P	Pn	14 56 44.2	+0.6
JOW				*e*S	Sn	14 57 04.1	+1.3
JNN	Nakanoshima	1.83	29	P	Pn	14 56 47.7	-0.3
JNTH	Nagotoyohara	1.87	203	P	Pn	14 56 49.3	+0.8
JNTH				*e*S	Sn	14 57 13.7	+2.3
JAGN	Aguni-jima	2.18	221	P	Pn	14 56 53.4	+0.8
JAGN				*e*S	Sn	14 57 20.7	+1.9
JYAK	Yakushimahirau	2.46	36	P	Pn	14 56 56.4	0.0
JYAK				*e*S	Sn	14 57 27.1	+1.5
JKC	Kuchinoerabu	2.51	28	P	Pn	14 56 57.3	+0.4
JKC				*e*S	Sn	14 57 27.5	+0.9
JKE	Kume jima 2	2.65	224	P	Pn	14 56 59.5	+0.7
JKE				*e*S	Sn	14 57 30.9	+0.9
JMTN	Minamitane	2.80	39	P	Pn	14 57 01.3	+0.4
JMTN				*e*S	Sn	14 57 35.5	+1.8
JTN	Tanegashima 3	3.04	37	P	Pn	14 57 04.6	+0.4
JTN				*e*S	Sn	14 57 40.7	+1.1
JMZ	Minamidaito 2	3.21	138	P	Pn	14 57 06.3	-0.2
JMZ				*e*S	Sn	14 57 41.0	-2.8
JIKM	Ikemajima	4.62	225	P	Pn	14 57 25.2	-0.4
JIRB	Irabujima	4.73	225	P	Pn	14 57 26.7	-0.4
JNU	Nakatsue	5.17	19	P	Pn	14 57 35.5	+2.4
	14nm,0.3s,baz=230,slow=5.2,SNR=110						
JNU				S	Sn	14 58 33.1	+1.7
	2.8nm,0.3s,baz=233,slow=20,SNR=2.2						
JNU	Nakatsue	5.17	19	*e*Pn	Pn	14 57 35.4	+2.2
JISG	Ishigakijimahi	5.46	229	P	Pn	14 57 35.5	-1.5
JIJ	Ishigaki jima	5.72	229	P	Pn	14 57 39.0	-1.6
JKRS	Kuro-shima	5.89	228	P	Pn	14 57 41.7	-1.3
IRIF	Iriomote-Funau	6.02	231	P	Pn	14 57 42.6	-2.1
YOJ	Yonaguni jima	6.45	236	*e*Pn	Pn	14 57 50.2	-0.3
KS15	Wonju Array Si	9.21	355	*e*Pn	Pn	14 58 29.2	+1.0
KSRS	Korea Array	9.22	355	P	Pn	14 58 30.4	+2.2
	0.2nm,0.3s,baz=180,slow=14,SNR=14						
NJ2	Nanjing	9.44	296	*e*P	Pn	14 58 31.3	-0.1
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
INU	Inuyama	9.92	42	*e*Pn	Pn	14 58 40.8	+2.9
JHJ	Hachijo jima 2	10.60	60	P	Pn	14 58 50.8	+3.6
	11nm,0.3s,baz=66,slow=20,SNR=5.6						
JHJ2	Mitsune	10.62	60	*e*Pn	Pn	14 58 50.8	+3.4
MAJO	Matsushiro	11.44	41	*e*Pn	Pn	14 59 00.4	+1.8
MJAR	Matsushiro Arr	11.44	41	P	Pn	14 59 01.0	+2.4
	0.4nm,0.3s,baz=234,slow=16,SNR=8.3						
MJB9	Matsu-Tunnel	11.44	41	*e*Pn	Pn	14 59 00.2	+1.5
BJT	Baijiatuau	15.73	322	*e*P	P	14 59 57.5	+0.3
	19nm,1.0s						
BJI	Beijing	15.74	322⇓	*e*P	P	14 59 57.5	+0.2
BJI				pmax	pmax		
	comp=Z,24nm,1.1s						
CN2	Changchun	15.76	351	*e*P	P	14 59 57.0	-0.5
ERM	Erimo	18.02	37	*e*P	Pn	15 00 23.4	+0.4
	45nm,1.4s						
HHC	Hu-ho-hao-te	18.95	316	*e*P	Pn	15 00 35.5	+1.2
HHC				S	Sn	15 04 05.5	-0.8
HHC				sS	sS	15 04 26.0	-4.4
HHC				pmax	pmax		
	comp=Z,20nm,0.9s						
HHC				pmax	pmax		
	comp=Z,110nm,7.4s						
ASAJ	Asahikawa	19.30	31	P	Pn	15 00 38.0	-0.3
	0.2nm,0.3s,baz=218,slow=7.8,SNR=3.6						
ASAJ	Asahikawa	19.30	31	*e*P	P	15 00 36.2	-0.3
	29nm,1.3s						
GYA	Guiyang	19.78	270	*e*P	Pn	15 00 42.8	-1.4
GYA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
CD2	Chengdu	21.97	283	*e*P	P	15 01 04.5	-0.9
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,140nm,4.8s						
LZH	Lanzhou	22.52	297	*e*P	P	15 01 11.0	-0.4
LZH				pP	pP	15 01 29.0	+0.9
LZH				sP	sP	15 01 43.0	+4.5
LZH				pmax	pmax		
	comp=Z,44nm,1.0s						
LZH				pmax	pmax		
	comp=Z,140nm,5.4s						
LZH				LR	LR		
	comp=N,300nm,12.6s						
LZH				LR	LR		
	comp=E,300nm,12.5s						
LZH				LR	LR		
	comp=Z,440nm,14.9s						
KMI	Kunming	23.52	268	P	P	15 01 24.0	+2.8
KMI				pmax	pmax		
	comp=Z,8.0nm,0.5s						
ULN	Ulaanbaatar	25.89	325	*e*P	P	15 01 42.4	0.0
	6.6nm,0.8s						
SONM	Songino Array	26.20	324	P	P	15 01 45.8	+0.6
	5.8nm,0.7s,baz=134,slow=10,SNR=31						
SONA1	Songino Array	26.20	324	*e*P	P	15 01 45.2	-0.1
GTA	Gaotai	26.45	302	⇑P	P	15 01 50.0	+2.4
GTA				pmax	pmax		
	comp=Z,8.0nm,1.0s						
H11N2	WAKE ISLAND Hy	35.67	95	T	T	15 40 51.8	
	baz=290,slow=75						
H11N1	WAKE ISLAND Hy	35.67	95	T	T	15 40 59.9	
	baz=290,slow=75						
H11N3	WAKE ISLAND Hy	35.68	95	T	T	15 40 59.0	
	baz=290,slow=75						
H11S3	WAKE ISLAND Hy	35.94	97	T	T	15 41 10.2	
	baz=291						
H11S1	WAKE ISLAND Hy	35.95	97	T	T	15 41 20.2	
	baz=291						
H11S2	WAKE ISLAND Hy	35.96	97	T	T	15 41 20.7	
	baz=291						
WMQ	Urumqi	36.32	306	P	P	15 03 15.0	+1.0
WMQ				LR	LR		
	comp=N,61nm,26.1s						
WMQ				LR	LR		
	comp=E,57nm,17.5s						
WMQ				LR	LR		
	comp=Z,49nm,18.9s						
SEY	Seymchan	37.94	17	P	P	15 03 26.5	-0.8
	2.1nm,0.7s,baz=215,slow=7.3,SNR=10						
MK01	Makanchi Array	40.62	310	*e*P	P	15 03 49.1	-0.8
MK31	Makanchi Array	40.63	310	*e*P	P	15 03 50.4	+0.4
MKAR	Makanchi Array	40.63	310	P	P	15 03 48.2	-1.9
	0.8nm,0.6s,baz=97,slow=8.6,SNR=12						
MKAR				PcP	PcP	15 05 49.7	-0.7
	0.6nm,0.7s,baz=111,slow=3.2,SNR=5.4						
MKAR	Makanchi Array	40.63	310	*e*P	P	15 03 50.4	+0.4
	7.9nm,0.8s						
ZALV	Zalesovo Beam	41.00	321	P	P	15 03 52.2	-0.7
	1.2nm,0.4s,baz=114,slow=8.7,SNR=6.4						
KURBB	Kurchatov Arra	43.80	315	P	P	15 04 13.5	-2.2
	1.3nm,0.4s,baz=100,slow=8.9,SNR=8.2						
KSH	Kashi	44.74	299	*e*P	P	15 04 25.8	+2.3
KSH				*e*PcP	PP	15 06 07.3	-2.0
KSH				PcS	PcS	15 09 59.0	+0.8
KSH				S	S	15 10 57.0	+2.6
KSH				sS	sS	15 11 37.0	+8.3
KSH				ScS	ScS	15 14 11.0	-2.1
KSH				SS	SS	15 14 12.0	-5.3
WRA	Warramunga Arr	48.20	173	P	P	15 04 50.6	+0.1
	0.8nm,0.4s,baz=353,slow=8.3,SNR=7.3						
BVAR	Borovoye Array	49.16	317	P	P	15 04 57.1	-0.4
	0.8nm,0.4s,baz=90,slow=9.7,SNR=11						
BVAR				PcP	PcP	15 06 19.6	-0.1
	1.5nm,0.6s,baz=96,slow=4.5,SNR=9.6						
BVAR				LR	LR	15 27 23.9	
	comp=Z,30nm,20.5s,baz=94,slow=38						
ASAR	Alice Springs	51.84	174	P	P	15 05 18.6	+0.5
	0.5nm,0.7s,baz=359,slow=9.3,SNR=13						
ABKAR	Akbulak array	55.69	312	*e*P	P	15 05 45.6	-0.2
PPLA	Purkeypile	60.28	31	*e*P	P	15 06 18.7	+0.8
	11nm,0.6s						
MDM	Murphy Dome	61.82	29	*e*P	P	15 06 28.8	+0.7
	10nm,0.7s						
WRH	Wood River Hil	61.94	29	*e*P	P	15 06 29.5	+0.6
	18nm,2.0s						
ILAR	Eielson Array	62.41	29	P	P	15 06 31.4	-0.7
	0.7nm,0.6s,baz=279,slow=8.6,SNR=27						
SCRK	Sand Creek	63.79	29	*e*P	P	15 06 41.1	-0.3
	3.7nm,0.9s						
EGAK	Eagle	64.83	28	*e*P	P	15 06 48.0	0.0
INK	Inuvik	66.83	24	P	P	15 07 00.6	-0.2
	1.5nm,0.5s,baz=285,slow=8.1,SNR=12						
KBZ	Khabaz	68.32	309	P	P	15 07 11.1	+0.5
	2.1nm,0.7s,baz=78,slow=4.2,SNR=4.8						
FINES	FINESS Array B	71.39	330	P	P	15 07 27.7	-1.4
	0.6nm,0.4s,baz=70,slow=4.6,SNR=7.6						
YKA	Yellowknife Ar	76.48	25	P	P	15 07 58.8	+0.1
	0.9nm,0.5s,baz=334,slow=4.3,SNR=13						
HFS	Hagfors	77.30	332	P	P	15 08 03.6	+0.3
	0.5nm,0.4s,baz=19,slow=4.9,SNR=5.5						
VYHS	Vyhne	81.33	321	*e*P	P	15 08 26.8	+1.2
DBO	Dodson Butte	83.00	45	*e*P	P	15 08 34.4	-0.1
GERES	GERESS Array B	83.93	323	P	P	15 08 37.6	-1.5
	0.9nm,0.7s,baz=56,slow=5.0,SNR=8.8						
GEA0	GERESS Array S	83.93	323	*e*P	P	15 08 38.8	-0.3
EKA	Eskdalemuir Ar	87.19	335	P	P	15 08 53.1	-1.9
	0.8nm,0.5s,baz=47,slow=4.3,SNR=4.1						
PDAR	Pinedale Array	91.26	39	P	P	15 09 14.5	-0.3
	0.1nm,0.4s,baz=301,slow=2.6,SNR=3.7						
ULM	Lac du Bonnet	92.38	27	P	P	15 09 19.0	-0.5
	1.8nm,0.6s,baz=309,slow=10.0,SNR=3.3						
PTGA	Pitinga	151.37	19	*e*PKPbc	PKPbc	15 16 03.3	+0.1

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*IDC **29** 15:07:29.5±1.7, 44°.15N×128°.96W, h0^{km}, mb3.7/7, mb1 3.9/11, mb1mx3.6/70, mbtmp3.7/11, ML3.3/4, MS3.4/8, Ms1 3.4/8, ms1mx2.9/68, Error ellipse: s-maj=40.6km s-min=15.3km az=47.0*

*ISCJB **29** 15:07:31.2±0.3, 44°.14N±0°.03×128°.84W±0°.04, h15^{km}, mb4.1/18, MS3.5/6, Error ellipse: s-maj=4.8km s-min=2.8km az=136.0*

*NEIC **29** 15:07:31.6±0.3, 44°.10N×128°.94W, h10^{km}, mb4.0/44, Error ellipse: s-maj=4.4km s-min=2.3km az=49.0*

ISC 29 15:07:32.0±0.8**, 44°.03N**±0°.07×**128°.93W**±0°.07**, h15**^{km}**, n176, σ1^{s}24**/173**, mb4.1**/18**, MS3.5**/6**, Off coast of Oregon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KEBM	Edson Butte	3.54	107	*e*Pn	Pn	15 08 22.9	-3.6
KBO	Bosley Butte	3.89	116	*e*Pn	Pn	15 08 28.3	-3.0
I03D	Drain, OR	4.05	93	P	Pn	15 08 32.5	-0.9
	baz=278,SNR=531						
I03D				S	Sn	15 09 20.6	+0.1
	baz=278						
COR	Corvallis	4.08	80	*e*Pn	Pn	15 08 32.9	-0.9
G03D	McMinnville, O	4.22	72	P	Pn	15 08 34.8	-0.9
	baz=257,SNR=37						
L02D	Cave Junction,	4.33	114	P	Pn	15 08 37.4	+0.2
	baz=298,SNR=9.0						
L02D				S	Sn	15 09 26.3	-1.1
	baz=298						
E03A	Lebam	4.55	54	*e*Pn	Pn	15 08 38.9	-1.4
B019	Raymond	4.56	53	*e*Pn	Pn	15 08 39.6	-0.7
HUMO	Hull Mountain	4.58	106	*e*Pn	Pn	15 08 38.6	-2.1
B023	Clatskanie	4.64	61	*e*Pn	Pn	15 08 40.8	-0.7
BMW	Boistfort Moun	4.71	57	*e*Pn	Pn	15 08 42.0	-0.6
I04A	Tendick Farm,	4.72	91	P	Pn	15 08 42.7	0.0
	baz=276,SNR=33						
I04A				S	Sn	15 09 38.9	+1.8
	baz=276						
IRO	Indian Ridge	4.82	88	*e*Pn	Pn	15 08 44.6	+0.5
H04A	Detroit Lake	4.88	80	*e*Pn	Pn	15 08 44.6	-0.3
NLWA	Neilton Lookou	4.89	45	*e*Pn	Pn	15 08 43.6	-1.3
C03A	Quillayute Air	4.96	36	*e*Pn	Pn	15 08 44.9	-1.1
J04D	Umpqua Nationa	5.01	97	P	Pn	15 08 47.2	+0.4
	baz=282,SNR=18						
J04D				S	Sn	15 09 48.7	+4.1
	baz=282						
PRLK	Prince Lake	5.02	85	*e*Pn	Pn	15 08 47.5	+0.6
LVP	Lakeview Peak	5.05	64	*e*Pn	Pn	15 08 47.8	+0.5
YBH	Yreka Blue Hor	5.11	114	Pn	Pn	15 08 48.9	+0.8
	0.6nm,0.3s,baz=314,slow=12,SNR=8.7						
YBH				Sn	Sn	15 09 43.7	-3.2
	0.2nm,0.3s,baz=180,slow=17,SNR=2.5						
FL2	Flat Top 2	5.14	63	*e*Pn	Pn	15 08 48.7	+0.2
MTMW	Mount Mitchell	5.17	65	*e*Pn	Pn	15 08 48.6	-0.3
M02C	Callahan	5.19	118	P	Pn	15 08 49.8	+0.6
	baz=303						
B201	Coldwater, Mou	5.24	62	*e*Pn	Pn	15 08 49.4	-0.4
TDH	Tom, Dick, Har	5.25	74	*e*Pn	Pn	15 08 50.2	+0.2
TDL	Tradedollar La	5.29	62	*e*Pn	Pn	15 08 50.5	0.0
SOSW	Source of Smit	5.29	63	*e*Pn	Pn	15 08 51.4	+0.8
HOOD	Mount Hood Mea	5.35	73	*e*Pn	Pn	15 08 51.9	+0.5
I05D	Terrebonne, OR	5.47	84	P	Pn	15 08 53.1	+0.1
	baz=270						
OZB	Mount Ozzard	5.48	24	*e*Pn	Pn	15 08 52.5	-0.6
GNW	Green Mountain	5.54	48	*e*Pn	Pn	15 08 53.1	-0.8
G05D	Wamic, OR	5.57	75	P	Pn	15 08 55.0	+0.7
	baz=261,SNR=8.6						
J05D	Fort Rock, OR	5.63	95	P	Pn	15 08 55.1	-0.2
	baz=281,SNR=12						
J05D				S	Sn	15 10 00.3	+0.4
	baz=281						
LON	Longmire	5.71	59	*e*Pn	Pn	15 08 55.6	-0.6
OBSR	Observation Ro	5.77	58	*e*Pn	Pn	15 08 57.3	-0.1
PINE	Pine Mountain	5.78	90	*e*Pn	Pn	15 08 56.7	-0.6
D05A	Enumclaw	5.81	55	*e*Pn	Pn	15 08 57.1	-0.4
WPW	White Pass	5.85	60	*e*Pn	Pn	15 08 58.4	+0.2
EDB	Eliza Dome	5.98	11	*e*Pn	Pn	15 08 59.6	-0.3
K05A	Summer Lake	6.00	100	*e*Pn	Pn	15 08 59.5	-1.0
G06A	Carlson Farm,	6.04	76	*e*Pn	Pn	15 09 00.8	-0.1
MCW	Mount Constitu	6.28	40	*e*Pn	Pn	15 09 03.5	-0.6
B05A	Bryant	6.37	46	P	Pn	15 09 05.0	-0.2
	baz=231,SNR=21						
B05A				S	Sn	15 10 17.6	0.0
	baz=231						
JCW	Jim Creek	6.41	47	*e*Pn	Pn	15 09 06.1	+0.3
LTY	Liberty	6.63	58	*e*Pn	Pn	15 09 08.8	-0.2
TBM	Table Mountain	6.64	59	*e*Pn	Pn	15 09 09.7	+0.7
F07A	Phinny Hill Vi	6.66	71	*e*Pn	Pn	15 09 09.2	+0.1
RPW	Rockport	6.78	47	*e*Pn	Pn	15 09 11.4	+0.4
WRW	Wenatchee Ridg	6.79	53	*e*Pn	Pn	15 09 11.5	+0.3
MBW	Mount Baker	6.80	43	*e*Pn	Pn	15 09 11.4	0.0
B06A	Marblemount	6.84	46	*e*Pn	Pn	15 09 11.2	-0.5
HAWA	Hanford	7.05	67	*e*Pn	Pn	15 09 14.8	+0.2
ORV	Oroville	7.12	126	*e*Pn	Pn	15 09 17.6	+1.9
G08A	Pilot Rock	7.22	76	*e*Pn	Pn	15 09 17.0	-0.1
E08A	Dider Farm, El	7.39	67	*e*Pn	Pn	15 09 19.6	+0.4
J08A	Circle Bar Ran	7.61	91	*e*Pn	Pn	15 09 23.0	+0.6
BEKR	Beckworth	7.62	120	*e*Pn	Pn	15 09 25.5	+2.9
D08A	Wollman Farm,	7.65	63	*e*Pn	Pn	15 09 22.7	-0.2
B08A	Colville Reser	7.94	54	*e*Pn	Pn	15 09 25.7	-1.2
LLLB	Lillooet	8.14	34	*e*Pn	Pn	15 09 28.8	-0.8
BBB	Bella Bella	8.18	4	Pn	Pn	15 09 30.4	+0.3
	0.3nm,0.3s,baz=197,slow=5.8,SNR=5.6						
RUBR	Rubicon Trail	8.24	124	*e*Pn	Pn	15 09 34.3	+3.1
C09A	Chrisman Ranch	8.33	59	*e*Pn	Pn	15 09 31.6	-0.6
BMO	Blue Mountains	8.36	80	*e*Pn	Pn	15 09 32.8	+0.1
VCNR	Virginia City	8.40	121	*e*Pn	Pn	15 09 36.5	+3.1
F10A	Beach Ranch, E	8.52	73	*e*Pn	Pn	15 09 35.8	+0.9
PNTR	Pine Nut	8.56	122	*e*Pn	Pn	15 09 36.3	+0.8
CMB	Columbia Colle	8.80	130	*e*Pn	Pn	15 09 40.6	+1.9
YERR	Yerington	8.84	121	*e*Pn	Pn	15 09 40.7	+1.3
WAKR	Walker	9.03	124	*e*Pn	Pn	15 09 44.5	+2.5
NV01	Mina Array Sit	9.76	121	*e*Pn	Pn	15 09 53.8	+1.8
NVAR	Mina Array Bea	9.76	121	Pn	Pn	15 09 53.8	+1.8
	0.1nm,0.3s,baz=281,slow=13,SNR=14						
NVAR				LR	LR	15 13 34.3	
	comp=Z,240nm,18.2s,baz=52,slow=37						
HLID	Hailey	10.51	87	*e*Pn	Pn	15 10 04.3	+2.1
JTMT	Jette	10.87	65	*e*Pn	Pn	15 10 07.4	+0.3
WALA	Waterton Lakes	11.50	59	*e*Pn	Pn	15 10 15.4	-0.3
MCMT	McKenzie Canyo	11.53	80	*e*Pn	Pn	15 10 17.4	+1.1
TPNV	Topopah Spring	11.96	122	*e*Pn	Pn	15 10 25.3	+3.2
BOZ	Bozeman (W)	12.39	77	Pn	Pn	15 10 28.5	+0.6
	94nm,1.2s						
DUG	Dugway, Tooele	12.56	102	*e*Pn	Pn	15 10 31.6	+1.3
FXWY	Fox Creek	12.94	85	*e*Pn	Pn	15 10 35.2	-0.3
IMW	Indian Meadow	12.97	84	*e*Pn	Pn	15 10 35.5	-0.4
HWUT	Hardware Ranch	12.98	95	*e*Pn	Pn	15 10 38.4	+2.4
	13nm,1.6s						
TPAW	Teton Pass	13.01	86	*e*Pn	Pn	15 10 33.6	-2.9
SNOW	Snow King Moun	13.16	86	*e*Pn	Pn	15 10 38.3	-0.2
H17A	Grant Village	13.18	82	*e*Pn	Pn	15 10 36.4	-2.4
LOHW	Long Hollow	13.25	85	*e*Pn	Pn	15 10 40.7	+1.0
SZCU	Shurtz Canyon	13.60	113	*e*Pn	Pn	15 10 45.9	+1.4
MSU	Marysvale	13.75	108	*e*Pn	Pn	15 10 47.1	+0.6
LCMT	Little Creek M	13.83	115	*e*Pn	Pn	15 10 49.5	+2.0
LDFC	Landfair	13.90	125	*e*Pn	Pn	15 10 47.9	-0.6
TMUT	Trail Mountain	14.06	104	*e*Pn	Pn	15 10 52.2	+1.3
RLMT	Red Lodge	14.06	79	*e*Pn	Pn	15 10 49.8	-1.0
PD31	Pinedale Array	14.14	88	*e*Pn	Pn	15 10 53.5	+1.6
PDAR	Pinedale Array	14.14	88	Pn	Pn	15 10 54.2	+2.2
	0.0nm,0.3s,baz=274,slow=12,SNR=6.7						
PDAR				LR	LR	15 16 28.4	
	comp=Z,128nm,20.9s,baz=304,slow=38						
PDAR	Pinedale Array	14.14	88	*e*Pn	Pn	15 10 52.7	+0.8
PDAR				*e*P	P	15 10 59.7	+0.2
P18A	Preston Nutter	14.60	101	*e*Pn	Pn	15 10 59.0	+0.7
SRU	San Rafael Swe	14.62	103	*e*Pn	Pn	15 11 00.1	+1.7
JIS	Juneau Island	14.67	349	*e*Pn	Pn	15 10 59.9	+1.2
BESE	Bessie Mountai	15.03	348	*e*Pn	Pn	15 11 04.4	+0.7
Y12C	Blythe	15.18	128	*e*Pn	Pn	15 11 06.6	+0.8
	7.7nm,1.1s						

GLA	Glamis	15.53	130	*e*Pn	Pn	15 11 11.6	+1.2
	22nm,1.8s						
PV09	Paradox Valley	15.87	104	*e*Pn	Pn	15 11 17.2	+2.2
WUAZ	Wupatki	15.93	116	*e*Pn	Pn	15 11 16.5	+0.8
	14nm,1.3s						
PV23	Carpenter Ridg	15.97	104	*e*Pn	Pn	15 11 16.8	+0.4
	20nm,1.2s						
PV10	Paradox Valley	15.99	104	*e*Pn	Pn	15 11 15.7	-0.9
PV14	Lion Creek, Pa	16.00	104	*e*Pn	Pn	15 11 18.6	+1.9
	16nm,1.6s						
PV20	West Nyswonger	16.05	104	*e*Pn	Pn	15 11 16.4	-0.9
	17nm,1.3s						
PV19	Morning Glory	16.06	104	*e*Pn	Pn	15 11 16.8	-0.6
	17nm,1.4s						
PV05	Paradox Valley	16.08	105	*e*Pn	Pn	15 11 20.3	+2.6
PV17	East Wray Mesa	16.09	104	*e*Pn	Pn	15 11 19.3	+1.5
	15nm,1.1s						
PV22	Blue Mesa, Par	16.09	103	*e*Pn	Pn	15 11 19.5	+1.6
	17nm,1.2s						
PV16	Nyswonger Mesa	16.10	104	*e*Pn	Pn	15 11 19.7	+1.7
	6.3nm,1.0s						
PV18	Skein Mesa, Pa	16.14	104	*e*Pn	Pn	15 11 18.4	0.0
	7.4nm,1.0s						
PV11	David Mesa, Pa	16.14	104	*e*Pn	P	15 11 21.1	-0.5
	8.4nm,1.2s						
PV03	Paradox Valley	16.18	104	*e*Pn	Pn	15 11 18.9	0.0
PV12	Saucer Basin,	16.18	104	*e*Pn	Pn	15 11 19.5	+0.5
	24nm,1.6s						
PV13	Radium Mtn., P	16.24	104	*e*Pn	Pn	15 11 20.3	+0.5
	15nm,1.4s						
PV02	Paradox Valley	16.28	104	*e*Pn	Pn	15 11 20.5	+0.3
	8.0nm,1.1s						
K22A	Casper	16.36	87	*e*Pn	Pn	15 11 21.3	+0.2
	9.9nm,1.4s						
PV01	Paradox Valley	16.43	104	*e*Pn	Pn	15 11 22.8	+0.6
MVCO	Mesa Verde	16.92	107	*e*Pn	Pn	15 11 29.9	+1.5
	13nm,1.2s						
WHY	Whitehorse	17.04	350	*e*Pn	P	15 11 31.4	0.0
	3.2nm,0.8s						
SMCO	Snowmass	17.11	99	*e*Pn	Pn	15 11 30.5	-0.4
	9.4nm,1.5s						
W18A	Petrified Fore	17.24	115	*e*Pn	Pn	15 11 32.6	+0.3
	56nm,1.8s						
N23A	Red Feather La	17.24	92	*e*Pn	Pn	15 11 31.7	-0.7
	8.3nm,1.1s						
PHWY	Pilot Hill	17.47	91	*e*Pn	Pn	15 11 33.5	-1.7
	3.4nm,0.9s						
DGMT	Dagmar	17.65	67	*e*Pn	Pn	15 11 36.0	-1.2
	42nm,1.5s						
S22A	4UR Ranch, Cre	17.83	103	*e*Pn	Pn	15 11 40.5	+0.7
	23nm,2.0s						
RSSD	Black Hills	17.88	81	*e*Pn	Pn	15 11 39.1	-1.1
	4.7nm,1.0s						
SDCO	Great Sand Dun	18.76	101	*e*P	P	15 11 51.1	+0.4
	3.5nm,0.9s						
EYAK	Cordova Ski Ar	19.38	334	*e*P	Pn	15 11 58.4	+0.2
	9.8nm,1.2s						
ANMO	Albuquerque	19.52	110	P	P	15 12 00.3	+1.3
	0.1nm,0.3s,baz=297,slow=13,SNR=6.4						
ANMO	Albuquerque	19.52	110	*e*P	P	15 11 58.5	-0.5
	3.4nm,1.1s						
T25A	Trinidad	19.81	102	*e*P	P	15 12 01.4	-0.7
	12nm,1.1s						
DIV	Divide	19.85	336	*e*P	Pn	15 12 04.2	+0.4
	7.6nm,0.9s						
BNM	Barren Site	19.87	112	*e*P	P	15 12 03.1	+0.3
YKA	Yellowknife Ar	20.30	19	P	P	15 12 05.8	-1.1
	2.7nm,0.9s,baz=209,slow=11,SNR=13						
FFC	Flin Flon	20.43	49	*e*P	P	15 12 08.1	-0.4
	38nm,1.6s						
SCM	Sheep Creek Mo	20.86	335	*e*P	P	15 12 12.8	-0.4
	12nm,1.1s						
DAWY	Dawson	20.94	347	*e*P	P	15 12 13.9	-0.1
	6.1nm,1.2s						
PMR	Palmer	21.25	333	*e*P	P	15 12 17.3	0.0
	7.1nm,1.0s						
RIDG	Independ'e Rid	21.74	341	*e*P	P	15 12 22.7	+0.1
	11nm,1.0s						
SCRK	Sand Creek	21.75	342	*e*P	P	15 12 22.8	0.0
	6.5nm,1.2s						
EGAK	Eagle	21.90	346	*e*P	P	15 12 23.6	-0.6
	6.1nm,1.2s						
IL1	Eielson Array	23.10	340	*e*P	P	15 12 35.8	-1.1
ILAR	Eielson Array	23.10	340	P	P	15 12 35.9	-1.1
	2.2nm,1.0s,baz=157,slow=8.2,SNR=16						
ILB	Eielson Array	23.10	340	*e*P	P	15 12 36.7	-0.2
WRH	Wood River Hil	23.16	339	*e*P	P	15 12 36.8	-0.7
	9.1nm,1.2s						
PPLA	Purkeypile	23.19	333	*e*P	P	15 12 37.5	-0.6
	30nm,1.4s						
ULM	Lac du Bonnet	23.20	63	P	P	15 12 38.4	+0.3
	6.2nm,0.9s,baz=288,slow=10,SNR=7.2						
ULM	Lac du Bonnet	23.20	63	*e*P	P	15 12 38.0	0.0
	8.1nm,1.0s						
ECSD	EROS Data Cent	23.22	79	*e*P	P	15 12 37.6	-0.8
	33nm,1.8s						
CCB	Clear Creek Bu	23.23	339	*e*P	P	15 12 37.3	-0.9
	6.9nm,1.3s						
MDM	Murphy Dome	23.59	339	*e*P	P	15 12 41.3	-0.6
	6.6nm,0.7s						
INK	Inuvik	24.46	356	P	P	15 12 49.4	-0.5
	2.3nm,1.0s,baz=151,slow=7.9,SNR=3.7						
TXAR	Lajitas Array	24.88	118	P	P	15 12 55.7	+1.5
	0.6nm,0.8s,baz=301,slow=8.3,SNR=7.0						
WMOK	Wichita Mounta	24.97	101	*e*P	P	15 12 55.2	+0.3
	8.9nm,1.1s						
LPIG	La Paz	25.05	136	LR	LR	15 21 30.1	
	comp=Z,90nm,20.1s,baz=342,slow=33						
IM3	Indian Mountai	25.86	337	*e*P	P	15 13 01.7	-0.9
PETK	Petropavlovsk-	47.39	308	LR	LR	15 33 45.5	
	comp=Z,30nm,18.7s,baz=91,slow=33						
H11N3	WAKE ISLAND Hy	58.10	267	T	T	16 20 13.5	
	baz=49,slow=75,SNR=1518						
H11N2	WAKE ISLAND Hy	58.10	267	T	T	16 20 00.7	
	baz=49,slow=75,SNR=1104						
H11N1	WAKE ISLAND Hy	58.11	267	T	T	16 20 06.6	
	baz=49,slow=75,SNR=919						
H11S1	WAKE ISLAND Hy	59.03	266	T	T	16 21 07.6	
	baz=50,slow=75,SNR=148						
H11S2	WAKE ISLAND Hy	59.03	266	T	T	16 21 24.1	
	baz=50,slow=75,SNR=114						
H11S3	WAKE ISLAND Hy	59.05	266	T	T	16 21 09.1	
	baz=50,slow=75,SNR=109						
GUMO	Guam	77.98	277	LR	LR	15 45 51.6	
	comp=Z,24nm,20.4s,baz=61,slow=30						
ZALV	Zalesovo Beam	78.22	340	LR	LR	15 56 51.7	
	comp=Z,23nm,18.2s,baz=66,slow=38						
HHC	Hu-ho-hao-te	79.53	318	*e*P	P	15 19 38.0	-0.2
HHC				pmax	pmax		
	comp=Z,15nm,1.2s						
HHC				pmax	pmax		
	comp=Z,73nm,4.6s						
LPAZ	La Paz	81.67	122	P	P	15 19 51.6	+1.1
	comp=Z,0.8nm,0.8s,baz=276,slow=2.3,SNR=3.8						
KURK	Kurchatov	82.64	343	P	P	15 19 52.5	-2.0
KURBB	Kurchatov Arra	82.75	343	P	P	15 19 52.5	-2.5
	comp=Z,0.8nm,0.8s,baz=18,slow=5.4,SNR=5.5						
HNR	Honiara	83.25	250	LR	LR	15 48 53.7	
	comp=Z,31nm,20.9s,baz=62,slow=30						
WMQ	Urumqi	86.63	334	*e*P	P	15 20 16.8	+2.0
LZH	Lanzhou	86.98	320	*e*P	P	15 20 17.0	+0.2
LZH				pP	pP	15 20 21.5	-0.3
LZH				sP	sP	15 20 23.5	-0.1
LZH				*e*PP	PP	15 23 41.0	+1.8
LZH				pmax	pmax		
	comp=Z,30nm,1.0s						
LZH				pmax	pmax		
	comp=Z,100nm,4.8s						
PMG	Port Moresby	92.12	259	LR	LR	15 57 49.7	
	comp=Z,23nm,18.4s,baz=83,slow=33						

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*ISCJB **29** 15:12:53.3±0.5, 49°.86N±0°.03×18°.48E±0°.03, h0^{km}, Error ellipse: s-maj=4.7km s-min=2.6km az=10.7*

*IPEC **29** 15:12:54.4±0.2, 49°.85N×18°.56E, h0^{km}±3^{km}, ML1.4/4, Error ellipse: s-maj=1.4km s-min=1.1km az=155.0*

*CSEM **29** 15:12:54.1±0.2, 49°.86N×18°.50E, h1^{km}, ML2.5/10, Error ellipse: s-maj=5.2km s-min=2.8km az=9.0*

ISC 29 15:12:54.2±0.8, **49°.84N**±0°.03×**18°.54E**±0°.02, **h0**^{km}, **n34**, σ**0**^{s}.**74**/64, **Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.25	270	*e*PG	Pg	15 13 00.2	+1.1
OKC				*e*SG	Sg	15 13 04.2	+1.9
	comp=Z,24nm,0.4s						
OKC	Ostrava-Krasne	0.25	270	Pg	Pg	15 13 00.2	+1.1
OKC				Sg	Sg	15 13 04.2	+1.9
	24nm,0.4s						
MORC	Moravsky Berou	0.65	265	*e*Pg	Pg	15 13 07.1	+0.5
MORC				*e*Sg	Sg	15 13 15.3	+0.3
	6.4nm,0.1s						
MORC	Moravsky Berou	0.65	265	*e*PG	Pg	15 13 07.2	+0.6
MORC				*e*SG	Sg	15 13 15.4	+0.4
MORC	Moravsky Berou	0.65	265	*e*Pg	Pg	15 13 07.1	+0.5
	baz=84						
MORC				*e*Sg	Sg	15 13 15.3	+0.3
	6.4nm,0.1s,baz=84						
OJC	Ojcow	0.90	64	*e*Pg	Pg	15 13 11.4	-0.1
OJC				*e*Sg	Sg	15 13 23.2	+0.1
OJC	Ojcow	0.90	64	*e*Pg	Pg	15 13 11.4	-0.1
OJC				*e*Sg	Sg	15 13 23.2	+0.1
LANS	Liptovska Anna	0.92	138	*e*PG	Pb	15 13 12.7	-0.3
LANS				*e*SG	Sb	15 13 25.5	-0.3
LANS	Liptovska Anna	0.92	138	*e*Pg	Pg	15 13 12.6	+0.8
LANS				*e*Sg	Sb	15 13 25.5	-0.3
JAVC	Velka Javorina	1.13	210	*e*Pg	Pb	15 13 16.6	-0.1
JAVC				*e*Sg	Sg	15 13 30.5	0.0
	4.7nm,0.3s						
JAVC	Velka Javorina	1.13	210	*e*PG	Pb	15 13 16.7	0.0
JAVC				*e*SG	Sg	15 13 30.5	0.0
JAVC	Velka Javorina	1.13	210	*e*Pg	Pb	15 13 16.6	-0.1
	baz=30						
JAVC				*e*Sg	Sg	15 13 30.5	0.0
	4.7nm,0.3s,baz=30						
KRLC	Kraliky	1.16	283	*e*PG	Pg	15 13 15.8	-0.6
KRLC				*e*SG	Sg	15 13 31.6	+0.2
	comp=Z,3.0nm,0.2s						
KRLC	Kraliky	1.16	283	Pg	Pg	15 13 15.8	-0.6
KRLC				Sg	Sg	15 13 31.6	+0.2
	3.0nm,0.2s						
NIE	Niedzica	1.22	109	*e*Pg	Pb	15 13 18.5	+0.3
NIE				*e*Sg	Sn	15 13 35.8	0.0
NIE	Niedzica	1.22	109	*e*Pg	Pb	15 13 18.5	+0.3
NIE				*e*Sg	Sn	15 13 35.8	0.0
VYHS	Vyhne	1.36	172	*e*PN	Pg	15 13 20.3	0.0
VYHS				*e*SN	Sg	15 13 38.5	+0.7
VYHS				*e*LG	Lg	15 13 40.5	
VYHS	Vyhne	1.36	172	*e*Pn	Pg	15 13 20.3	0.0
VYHS				*e*Sn	Sb	15 13 38.8	+0.3
VRAC	Vranov	1.37	248	*e*Pg	Pg	15 13 20.3	-0.2
VRAC				*e*Sg	Sg	15 13 38.1	-0.2
	4.0nm,0.2s						
VRAC	Vranov	1.37	248	*e*PG	Pg	15 13 20.4	-0.1
VRAC				*e*SG	Sg	15 13 38.1	-0.2
VRAC	Vranov	1.37	248	*e*Pg	Pg	15 13 20.3	-0.2
	baz=66						
VRAC				*e*Sg	Sg	15 13 38.1	-0.2
	4.0nm,0.2s,baz=66						
DPC	Dobruska-Polom	1.52	291	*e*PG	Pn	15 13 22.3	-0.4
DPC				*e*SG	Sg	15 13 42.4	-0.5
	comp=Z,5.2nm,0.3s						
DPC	Dobruska-Polom	1.52	291	Pg	Pn	15 13 22.3	-0.4
DPC				Sg	Sg	15 13 42.4	-0.5
	5.2nm,0.3s						
KRUC	Moravsky	1.60	242	*e*Pg	Pn	15 13 23.6	-0.1
KRUC				*e*Sg	Sn	15 13 45.1	0.0
	4.6nm,0.2s						
KRUC	Moravsky	1.60	242	*e*PG	Pn	15 13 23.7	-0.1
KRUC				*e*SG	Sn	15 13 45.2	+0.1
KRUC	Moravsky	1.60	242	*e*Pg	Pn	15 13 23.6	-0.1
	baz=60						
KRUC				*e*Sg	Sn	15 13 45.1	0.0
	4.6nm,0.2s,baz=60						
UPC	Upice	1.76	293	*e*PG	Pb	15 13 26.9	-0.4
UPC				*e*SG	Sg	15 13 51.0	+0.4
	comp=Z,2.7nm,0.2s						
UPC	Upice	1.76	293	Pg	Pb	15 13 26.9	-0.4
UPC				Sg	Sg	15 13 51.0	+0.4
	2.7nm,0.2s						
GOPC	GO Pecny, Ondr	2.43	273	*e*SG	Sb	15 14 09.9	+0.7
	comp=Z,2.3nm,0.2s						
GOPC	GO Pecny, Ondr	2.43	273	Sg	Sb	15 14 09.9	+0.7
	2.3nm,0.2s						
PRU	Pruhonice	2.59	275	*e*SG	Sb	15 14 15.4	+1.6
	comp=Z,1.7nm,0.2s						
PRU	Pruhonice	2.59	275	Sg	Sb	15 14 15.4	+1.6
	1.7nm,0.2s						
KHC	Kasperske Hory	3.31	260	*e*PG	Pg	15 13 56.0	-1.6
KHC				*e*SG	Sg	15 14 38.7	-1.8
	comp=Z,1.4nm,0.3s						
KHC	Kasperske Hory	3.31	260	Pg	Pg	15 13 56.0	-1.6
KHC				Sg	Sg	15 14 38.7	-1.8
	1.4nm,0.3s						

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*ISCJB **29** 15:17:25.9±0.6, 32°.27N±0°.03×115°.29W±0°.05, h21^{km}±7^{km}, Error ellipse: s-maj=6.5km s-min=5.3km az=10.1*

*ECX **29** 15:17:26.8±0.4, 32°.25N×115°.31W, h6^{km}, MD2.4, ML2.6*

*MEX **29** 15:17:27.7±0.4, 32°.31N×115°.23W, h12^{km}±71^{km}, MD3.7*

ISC 29 15:17:25.2±1.1, **32°.29N**±0°.04×**115°.27W**±0°.04, **h25**^{km}±9^{km}, **n21**, σ**0**^{s}.**28**/28, **2C**, **California-Baja California border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MBIG	Mexicali	0.13	28	*e*P	Pb	15 17 30.1	0.0
MBIG	Mexicali	0.13	28	*e*P	Pb	15 17 29.7	-0.3
DREC	Desert Rsrch C	0.53	344	*e*P	Pn	15 17 37.3	+0.1
ERPC	Ernies Place	0.56	324	*e*P	Pn	15 17 37.5	-0.1
COA	Coachella	0.58	12	*e*P	Pn	15 17 38.0	+0.1
WESC	Westside Schoo	0.61	320	*e*P	Pn	15 17 37.9	-0.3
YUH	Yuha Desert	0.66	303	*e*P	Pb	15 17 38.0	0.0
YMD	Yuma Desert	0.67	67	*e*P	Pn	15 17 39.3	+0.3
COK	Cook Ranch	0.68	325	*e*P	Pn	15 17 39.1	-0.1
IKP	In-Ko-Pah, Jac	0.79	297	⇑*i*P	Pb	15 17 40.5	+0.1
ZAX	El Zacaton	1.15	228	*e*P	Pn	15 17 46.2	+0.4
CBX	Cerro Bola	1.18	271	*e*P	Pb	15 17 47.0	+0.1
CBX				*e*S	Sb	15 18 02.4	+0.5
CBX	Cerro Bola	1.18	271	*e*P	Pb	15 17 47.0	+0.1
CBX				*e*S	Sn	15 18 01.2	-0.4
TJIG	Tijuana	1.20	277	*e*P	Pb	15 17 47.1	-0.1
TJIG				*i* S	Sn	15 18 02.2	+0.3
BAR	Barrett	1.25	289	*e*P	Pb	15 17 47.9	-0.1
SPIG	San Pedro Mart	1.25	188	*e*P	Pn	15 17 47.7	+0.3
SPIG	San Pedro Mart	1.25	188	*e*P	Pb	15 17 48.0	-0.3
SPIG				*e*S	Sn	15 18 03.3	-0.3
SPX	San Pedro Mart	1.25	188	*e*P	Pb	15 17 48.1	-0.2
SPX				*e*S	Sb	15 18 04.3	+0.2
SPX				⇑*e*		15 18 08.8	
SPX				IAML		15 18 08.8	
	comp=N,59nm,0.1s						
ECNX	Esteban Cantu	1.29	241	*e*P	Pb	15 17 48.5	-0.3
ECNX				*e*S	Sb	15 18 05.0	-0.1
PBX	Punta Banda	1.35	246	*e*P	Pb	15 17 49.3	-0.5
PBX				*e*S	Sb	15 18 06.9	+0.2
SDRC	San Diego Road	1.48	288	*e*P	Pb	15 17 51.6	-0.4

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*IDC **29** 15:21:23.0±1.6, 33°.07N×141°.23E, h0^{km}, mb3.3/3, mb1 3.5/5, mb1mx3.2/61, mbtmp3.3/5, ML3.3/2, MS2.3/1, Ms1 2.3/1, ms1mx1.9/28, Error ellipse: s-maj=38.6km s-min=21.4km az=67.0*

*JMA **29** 15:21:28.3±0.1, 33°.30N×141°.00E, h52^{km}, M3.3*

ISC 29 15:21:25.9±1.9, **33°.19N**±0°.07×**141°.05E**±0°.08, **h17**^{km}±11^{km}, **n19**, σ**1**^{s}.**25**/26, **mb3.2**/3, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHJ2	Mitsune	1.04	266	P	Pg	15 21 46.5	+0.6
JHJ2				S	Sn	15 22 00.0	+0.3
JHCJ	Hachijojimakas	1.06	264	P	Pg	15 21 46.6	+0.3
JHJ	Hachijo jima 2	1.06	267	Pn	Pg	15 21 46.3	-0.2
	202nm,0.3s,baz=90,slow=20,SNR=304						
JHJ				Sn	Sb	15 21 59.6	+0.2
	274nm,0.3s,baz=75,slow=20,SNR=33						
JAOM	Aogashimamukai	1.30	237	P	Pg	15 21 50.9	-0.1
JAOM				S	Sg	15 22 06.8	-1.2
JMKN	Mikurajimanish	1.40	300	P	Pn	15 21 50.9	+0.2
JMKN				S	Sn	15 22 07.0	-1.8
BSO1	Boso 1	1.46	358	P	Pn	15 21 51.5	+0.5
BSO3	Boso 3	1.67	345	P	Pn	15 21 54.1	0.0
JKO	Kozu shima	1.88	302	P	Pn	15 21 57.7	+0.5
JKO				S	Sn	15 22 19.5	-1.0
JIM2	Oshima 3	2.03	319	P	Pn	15 21 59.2	-0.1
JIM2				S	Sn	15 22 21.5	-2.8
JIZS	Izushimoda	2.36	311	P	Pn	15 22 04.6	+0.8
JOD2	Odawara 2	2.63	322	P	Pn	15 22 07.6	+0.1
SHZ3	Shizuoka 3	3.01	309	P	Pn	15 22 14.6	+1.8
MJAR	Matsushiro Arr	4.08	326	Pn	Pn	15 22 28.8	+1.3
	2.3nm,0.3s,baz=153,slow=11,SNR=38						
MJAR				Sn	Sn	15 23 13.4	-1.4
	1.1nm,0.3s,baz=288,slow=31,SNR=7.2						
MAT	Matsushiro	4.08	326	P	Pn	15 22 29.4	+1.9
MAT				*e*S	Sn	15 23 14.9	+0.1
ASAJ	Asahikawa	10.98	6	Pn	Pn	15 24 01.0	-1.1
	0.2nm,0.3s,baz=217,slow=20,SNR=5.6						
KSRS	Korea Array	11.53	295	LR	LR	15 29 22.6	
	comp=Z,14nm,18.7s,baz=280,slow=41						
MKAR	Makanchi Array	46.00	305	P	P	15 29 50.4	+2.2
	0.1nm,0.5s,baz=93,slow=5.8,SNR=2.9						
WRA	Warramunga Arr	53.22	188	P	P	15 30 42.7	-0.7
	0.2nm,0.3s,baz=4.7,slow=7.5,SNR=10						
ASAR	Alice Springs	56.95	188	P	P	15 31 08.9	-1.4
	0.2nm,0.8s,baz=5.0,slow=5.9,SNR=7.2						

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*ISCJB **29** 15:53:58.5±4.0, 31°.0S±0°.2×176°.6W±0°.6, h33^{km}, mb3.7/3, Error ellipse: s-maj=77.1km s-min=15.8km az=12.1*

*IDC **29** 15:53:59.0±3.0, 30°.75S×177°.19W, h0^{km}, mb3.7/3, mb1 4.0/5, mb1mx3.7/43, mbtmp4.0/5, ML3.4/2, MS3.0/1, Ms1 3.0/1, ms1mx2.4/42, Error ellipse: s-maj=67.6km s-min=33.3km az=111.0*

ISC 29 15:54:01.6±3.1, **30°.9S**±0°.2×**176°.8W**±0°.5, **h35**^{km}, **n7**, σ**1**^{s}.**12**/7, **mb3.9**/3, **Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	8.93	213	Pn	Pn	15 56 06.9	-1.1
	0.2nm,0.3s,baz=12,slow=17,SNR=3.7						
URZ				Sn	Sn	15 57 48.6	+1.3
	0.7nm,0.3s,baz=27,slow=4.5,SNR=6.5						
RPZ	Rata Peaks	16.05	214	Pn	Pn	15 57 44.0	-0.5
	0.3nm,0.3s,baz=11,slow=10,SNR=2.2						
DZM	Mont Dzumac	17.39	296	LR	LR	16 03 30.6	
	comp=Z,53nm,18.7s,baz=33,slow=34						
STKA	Stephens Creek	35.41	257	P	P	16 00 54.7	+0.5
	2.1nm,0.9s,baz=90,slow=9.1,SNR=2.8						
ASAR	Alice Springs	44.15	267	P	P	16 02 06.6	-0.4
	0.3nm,0.6s,baz=104,slow=7.2,SNR=6.9						
WRA	Warramunga Arr	45.18	272	P	P	16 02 14.6	-0.6
	0.5nm,0.3s,baz=111,slow=7.9,SNR=19						
FINES	FINESS Array B	145.95	341	PKPbc	PKPab	16 13 38.3	+1.0
	1.1nm,0.7s,baz=43,slow=3.6,SNR=5.9						

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*ISCJB **29** 16:05:31.6±0.3, 23°.05N±0°.02×101°.41E±0°.03, h10^{km}, mb4.1/18, MS3.4/18, Error ellipse: s-maj=4.1km s-min=2.9km az=143.5*

*BJI **29** 16:05:32.5, 23°.08N×101°.22E, h10^{km}, mb4.4/17, mB4.5/11, ML4.2/10, Ms4.2/21, Ms7 3.9/16*

*NEIC **29** 16:05:33.1±0.4, 23°.04N×101°.29E, h10^{km}, mb4.3/6, Error ellipse: s-maj=11.0km s-min=6.0km az=81.0*

*PLV **29** 16:05:34.1±1.5, 23°.17N×101°.45E, h7^{km}±7^{km}, ML4.1*

*IDC **29** 16:05:36.8±5.3, 22°.95N×101°.17E, h35^{km}±45^{km}, mb3.6/13, mb1 3.7/14, mb1mx3.4/68, mbtmp3.8/14, ML4.0/1, MS3.3/17, Ms1 3.4/17, ms1mx3.1/64, Error ellipse: s-maj=38.1km s-min=14.7km az=66.0*

ISC 29 16:05:34.4±0.4, **23°.10N**±0°.03×**101°.39E**±0°.04, **h10**^{km}, **n85**, σ**2**^{s}.**32**/94, **mb4.1**/18, **MS3.3**/18, **1D**, **Yunnan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LCVN	Lai Chau	1.94	122	*e*Pn	Pn	16 06 05.8	-1.8
LCVN				*e*Pg	Pb	16 06 09.7	-0.3
LCVN				IAML		16 06 43.4	
	comp=N,2µm,0.4s						
LCVN				IAML		16 06 44.9	
	comp=Z,2µm,0.5s						
KMI	Kunming	2.37	31	Pn	Pb	16 06 13.8	-3.5
KMI				Pg	Pg	16 06 19.5	-0.3
KMI				Sn	Sg	16 06 47.0	-3.5
KMI				Sg	Sb	16 06 52.0	+5.3
KMI				smax	smax		
	comp=Z,1µm,0.8s						
KMI				smax	smax		
	comp=Z,1µm,0.9s						
SPV	Sa-pa	2.38	108	*i* Pn	Pn	16 06 13.1	-0.5
SPV				IAML		16 06 58.4	
	comp=E,3µm,0.3s						
SPV				IAML		16 06 58.7	
	comp=N,2µm,0.4s						
CKVB	Chieng Khoang	2.62	125	*e*Pg	Pg	16 06 23.6	-1.1
CKVB				IAML		16 07 04.6	
	comp=N,613nm,0.5s						
CKVB				IAML		16 07 09.8	
	comp=E,618nm,0.5s						
CLVV	Chieng Lao	2.78	122	*e*Pn	Pn	16 06 18.8	-0.3
CLVV				*e*Pg	Pg	16 06 26.4	-1.4
CLVV				IAML		16 07 11.8	
	comp=N,534nm,0.3s						
CLVV				IAML		16 07 11.9	
	comp=E,623nm,0.5s						
BMV	Son La	2.81	125	*e*Pn	Pn	16 06 19.4	0.0
BMV				*e*Pg	Pg	16 06 27.9	-0.4
BMV				IAML		16 07 14.2	
	comp=E,681nm,0.6s						
BMV				IAML		16 07 16.1	
	comp=N,555nm,0.5s						
MLVB	It Ong	2.92	122	*e*Pg	Pg	16 06 29.5	-0.8
MLVB				IAML		16 07 13.8	
	comp=N,217nm,0.5s						
MLVB				IAML		16 07 19.5	
	comp=E,313nm,0.6s						
NCV	Pung Luong	3.01	118	*e*Pn	Pn	16 06 21.9	-0.3
NCV				IAML		16 07 15.3	
	comp=N,650nm,0.4s						
NCV				IAML		16 07 16.1	
	comp=E,601nm,0.6s						
MUVB	Co Noi	3.06	124	*e*Pn	Pn	16 06 22.5	-0.5
MUVB				IAML		16 07 20.7	
	comp=N,484nm,0.4s						
MUVB				IAML		16 07 26.2	
	comp=E,424nm,0.5s						
TTVN	Tram Tau	3.19	120	*e*Pn	Pn	16 06 24.8	+0.2
TTVN				*e*Pg	Pg	16 06 34.4	-1.1
TTVN				IAML		16 07 27.1	
	comp=E,373nm,0.5s						
TTVN				IAML		16 07 28.3	
	comp=N,438nm,0.6s						
VTVB	Vinh Tuy	3.35	104	*e*Pn	Pn	16 06 26.8	0.0
VTVB				*e*Pg	Pg	16 06 37.5	-1.2
MCVV	Moc Chau	3.79	126	*e*Pn	Pn	16 06 31.9	-1.2
MCVV				IAML		16 07 48.6	
	comp=N,164nm,0.7s						
MCVV				IAML		16 07 56.4	
	comp=E,116nm,0.5s						
DHV	Doan Hung	3.81	112	*e*Pg	Pg	16 06 44.7	-2.7
DHV				IAML		16 07 42.1	
	comp=N,448nm,0.5s						
DHV				IAML		16 07 43.2	
	comp=E,374nm,0.6s						
BCVB	Bac Can	4.23	106	*e*Pn	Pn	16 06 37.4	-1.5
BCVB				*e*Pg	Pg	16 06 53.2	-2.2
BCVB				*e*Sg	Sg	16 07 49.2	-1.1
BCVB				IAML		16 07 58.0	
	comp=N,386nm,0.6s						
BCVB				IAML		16 07 59.2	
	comp=E,292nm,0.6s						
HBVN	Hoa-Binh	4.32	121	*e*Pn	Pn	16 06 39.1	-1.0
HBVN				IAML		16 08 02.1	
	comp=N,494nm,0.4s						
HBVN				IAML		16 08 09.2	
	comp=E,255nm,0.4s						
CBVB	Cao Bang	4.45	95	*e*Pn	Pn	16 06 41.2	-0.9
CBVB				*e*Pg	Pg	16 06 58.1	-1.7
CBVB				*e*Sg	Sg	16 07 55.2	-2.3
CBVB				IAML		16 08 01.8	
	comp=N,400nm,0.6s						
CBVB				IAML		16 08 09.4	
	comp=E,220nm,0.6s						
BGV	Bac-Giang	4.83	111	*e*Pg	Pg	16 07 04.4	-2.6
BGV				*e*Sg	Sg	16 08 08.8	-0.9
BGV				IAML		16 08 14.8	
	comp=N,55nm,0.5s						
BGV				IAML		16 08 16.5	
	comp=E,46nm,0.4s						
CMMT	Chiang Mai	4.83	209	P	Pn	16 06 51.9	+4.6
	comp=E,72nm,0.8s,comp=E,1µmcomp=E,2.3nm						
CHTO	Chiang Mai	4.83	209	*e*Pn	Pn	16 06 44.2	-3.1
CHTO	Chiang Mai	4.83	209	P	Pn	16 06 52.9	+5.6
	comp=E,320nm,0.8s,comp=E,4µmcomp=E,10nm						
LAMP	Lampang	4.84	200	P	Pb	16 06 59.2	-0.1

	comp=E,39nm,0.7s,comp=E,416nmcomp=E,0.4nm						
MTZV	**Met**	**4.84**	**108**	*e*Pn	**Pn**	**16 06 46.2**	**-1.1**
MTZV				IAML		16 08 14.1	
	comp=N,160nm,0.5s						
MTZV				IAML		16 08 14.7	
	comp=E,97nm,0.6s						
LSVB	**Lang Son stati**	**5.11**	**103**	*e*Pn	**Pn**	**16 06 50.5**	**-0.6**
CM31	**Chiang Mai Arr**	**5.15**	**207**	*e*Pn	Pn	16 06 44.8	-6.9
CMAR	**Chiang Mai Arr**	**5.15**	**207**	Pn	**Pn**	**16 06 49.2**	**-2.5**
	comp=E,1.5nm,0.3s,baz=15,slow=13,SNR=7.7						
CMAR				Pg	**Pb**	**16 07 08.4**	**+3.7**
	comp=E,5.8nm,0.3s,baz=17,slow=15,SNR=41						
CMAR				Lg	Lg	16 08 12.3	
	comp=E,10.0nm,0.3s,baz=24,slow=28,SNR=11						
CMAR				LR	LR	16 09 07.7	
	comp=E,148nm,18.7s,baz=30,slow=43						
CM01	**Chiang Mai Arr**	**5.18**	**206**	*e*Pn	**Pn**	**16 06 50.0**	**-2.1**
NONG	**Nongkai**	**5.27**	**161**	P	**Pn**	**16 06 52.3**	**-1.0**
	comp=E,5.0nm,0.8s,comp=E,378nmcomp=E,0.0nm						
UTTA	**Uttaradit**	**5.38**	**189**	P	**Pb**	**16 07 06.3**	**-2.3**
	comp=E,40nm,0.6s,comp=E,488nmcomp=E,0.3nm						
SUKH	**Sukhothai**	**5.82**	**197**	P	**Pg**	**16 07 26.7**	**+0.7**
GYA	**Guiyang**	**5.85**	**54**	Pn	**Pn**	**16 07 03.3**	**+2.0**
GYA				Sn	**Sn**	**16 08 14.5**	**+6.0**
GYA				Sg	**Sg**	**16 08 44.8**	**+2.6**
GYA				smax	smax		
	comp=E,90nm,0.9s						
GYA				smax	smax		
	comp=E,80nm,0.8s						
PHIT	**Phitsanulok**	**5.95**	**189**	P	Pb	16 07 23.2	+5.0
VIVB	**Vinh**	**5.98**	**137**	*e*Pg	**Pg**	**16 07 28.1**	**-0.9**
VIVB				IAML		16 08 53.5	
	comp=N,75nm,0.6s						
VIVB				IAML		16 08 55.8	
	comp=E,82nm,0.6s						
PBKT	**Sadao Pong**	**6.50**	**184**	*e*Pn	**Pn**	**16 07 07.8**	**-2.4**
PBKT	**Sadao Pong**	**6.50**	**184**	P	**Pb**	**16 07 30.7**	**+3.0**
SKNT	**Sakolnakorn**	**6.56**	**158**	P	**Pn**	**16 07 14.3**	**+3.3**
	comp=E,22nm,1.0s,comp=E,0.3nm						
KHON	**Khomkaen**	**6.86**	**168**	P	**Pn**	**16 07 18.2**	**+3.1**
	comp=E,49nm,0.7s,comp=E,533nmcomp=E,0.2nm						
CD2	**Chengdu**	**8.06**	**15**	*e*P	**Pn**	**16 07 30.0**	**-1.7**
CD2				S	**Sn**	**16 09 02.8**	**-0.2**
CD2				pmax	pmax		
	comp=E,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=E,120nm,5.8s						
CD2				LR	LR		
	comp=E,2μm,10.1s						
CD2				LR	LR		
	comp=E,4μm,9.3s						
CD2				LR	LR		
	comp=E,550nm,5.8s						
QIZ	**Qiongzhong**	**8.87**	**116**	P	**Pn**	**16 07 41.5**	**-1.3**
QIZ				S	**Sn**	**16 09 22.5**	**-0.3**
QIZ				LR	LR		
	comp=E,800nm,11.8s						
QIZ				LR	LR		
	comp=E,470nm,10.8s						
QIZ				LR	LR		
	comp=E,300nm,9.8s						
QIZ	**Qiongzhong**	**8.87**	**116**	*e*Pn	**Pn**	**16 07 40.8**	**-2.0**
SHL	**Shillong**	**9.01**	**288**	*e*Pn	**Pn**	**16 07 40.4**	**-4.4**
LZH	**Lanzhou**	**13.12**	**9**	*e*P	**Pn**	**16 08 44.3**	**+3.3**
LZH				pP	P	16 08 47.5	-3.8
LZH				sP		16 08 50.0	
LZH				*e*PP	**PnPn**	**16 08 55.3**	**+6.2**
LZH				*e*S	**Sn**	**16 11 12.8**	**+5.7**
LZH				sS	S	16 11 17.0	-15
LZH				SS	**SnSn**	**16 11 26.3**	**+6.5**
LZH				pmax	pmax		
	comp=E,23nm,1.0s						
LZH				pmax	pmax		
	comp=E,150nm,4.5s						
LZH				LR	LR		
	comp=E,400nm,10.3s						
LZH				LR	LR		
	comp=E,1μm,14.6s						
LZH				LR	LR		
	comp=E,1μm,10.8s						
GTA	**Gaotai**	**16.32**	**356**	*e*P	**Pn**	**16 09 23.8**	**0.0**
GTA				pP	pP	16 09 27.8	-1.8
GTA				sP	sP	16 09 30.5	-0.4
GTA				S	**Sn**	**16 12 24.5**	**-0.5**
GTA				pmax	pmax		
	comp=E,47nm,4.5s						
GTA				LR	LR		
	comp=E,150nm,12.2s						
GTA				LR	LR		
	comp=E,270nm,11.1s						
IPM	**Ipoh**	**18.51**	**181**	*e*P	**P**	**16 09 50.5**	**-0.6**
	comp=E,17nm,1.4s						
HHC	**Hu-ho-hao-te**	**19.67**	**23**	*e*P	**Pn**	**16 10 05.8**	**+0.7**
HHC				PP	**PnPn**	**16 10 25.0**	**+6.3**
HHC				S	**Sn**	**16 13 44.8**	**-1.2**
HHC				sS	pS	16 13 55.0	-3.0
HHC				pmax	pmax		
	comp=E,19nm,0.9s						
HHC				pmax	pmax		
	comp=E,79nm,4.7s						
HHC				LR	LR		
	comp=E,340nm,12.2s						
HHC				LR	LR		
	comp=E,580nm,12.0s						
HHC				LR	LR		
	comp=E,260nm,11.3s						
PSI	**Prapat**	**20.32**	**187**	P	**P**	**16 10 10.6**	**-0.3**
	comp=E,2.5nm,0.5s,baz=0.1,slow=15,SNR=3.5						
PSI				LR	LR	16 19 10.9	
	comp=E,124nm,19.3s,baz=268,slow=40						
BJI	**Beijing**	**21.02**	**33**⇓	*e*P	**P**	**16 10 17.5**	**-0.7**
BJI				S	Sn	16 14 15.3	-3.1
BJI				pmax	pmax		
	comp=E,9.0nm,0.7s						
BJI				LR	LR		
	comp=E,500nm,16.3s						
BJI				LR	LR		
	comp=E,690nm,19.2s						
WMQ	**Urumqi**	**23.55**	**335**	P	**P**	**16 10 44.8**	**-0.3**
WMQ				sP	sP	16 10 52.3	+3.0
WMQ				LR	LR		
	comp=E,110nm,22.1s						
WMQ				LR	LR		
	comp=E,170nm,25.1s						
SONM	**Songino Array**	**25.01**	**8**	P	**P**	**16 10 59.9**	**+1.4**
	comp=E,1.3nm,0.7s,baz=188,slow=11,SNR=7.5						
SONA1	**Songino Array**	**25.02**	**8**	*e*P	**P**	**16 10 56.2**	**-2.5**
PALK	**Pallekele**	**25.36**	**235**	LR	LR	16 21 35.5	
	comp=E,63nm,18.3s,baz=115,slow=38						
KSRS	**Korea Array**	**26.90**	**52**	LR	LR	16 22 33.7	
	comp=E,67nm,18.6s,baz=244,slow=38						
KSH	**Kashi**	**27.06**	**313**	*e*P	**P**	**16 11 18.0**	**+0.7**
JNU	**Nakatsue**	**27.78**	**62**	LR	LR	16 23 21.6	
	comp=E,46nm,20.0s,baz=304,slow=38						
MK01	**Makanchi Array**	**28.18**	**332**	*e*P	**P**	**16 11 25.3**	**-1.8**
MK31	**Makanchi Array**	**28.21**	**332**	*e*P	**P**	**16 11 26.1**	**-1.3**
MKAR	**Makanchi Array**	**28.21**	**332**	P	**P**	**16 11 26.4**	**-1.0**
	comp=E,4.0nm,0.7s,baz=139,slow=9.5,SNR=22						
MKAR	**Makanchi Array**	**28.21**	**332**	*e*P	**P**	**16 11 26.1**	**-1.3**
	comp=E,24nm,0.8s						
CN2	**Changchun**	**28.62**	**38**	*e*P	**P**	**16 11 31.8**	**+0.8**
LEM	**Lembang**	**30.36**	**168**	LR	LR	16 26 24.1	
	comp=E,118nm,18.2s,baz=284,slow=41						
KURBB	**Kurchatov Arra**	**32.74**	**333**	P	**P**	**16 12 06.6**	**-0.6**
	comp=E,1.9nm,1.0s,baz=138,slow=9.4,SNR=15						
USRK	**Ussuriysk Ar.**	**32.75**	**43**	LR	LR	16 26 40.4	
	comp=E,104nm,18.9s,baz=233,slow=38						
KURK	**Kurchatov**	**32.77**	**333**	*e*P	**P**	**16 12 06.1**	**-1.4**
	comp=E,3.8nm,0.8s						
ZAA0	**Zalesovo Array**	**33.25**	**342**	*e*P	**P**	**16 12 11.3**	**-0.3**
	comp=E,4.2nm,1.1s						
ZALV	**Zalesovo Beam**	**33.25**	**342**	P	**P**	**16 12 11.3**	**-0.3**
	comp=E,1.7nm,0.7s,baz=142,slow=7.5,SNR=5.6						
ZALV	**Zalesovo Beam**	**33.25**	**342**	*e*P	**P**	**16 12 10.6**	**-1.1**
MJAR	**Matsushiro Arr**	**34.43**	**59**	LR	LR	16 28 19.7	
	comp=E,45nm,19.0s,baz=205,slow=39						
JHJ	**Hachijo jima 2**	**35.14**	**65**	LR	LR	16 26 51.8	
	comp=E,49nm,18.8s,baz=298,slow=36						
BVAR	**Borovoye Array**	**38.04**	**330**	P	**P**	**16 12 51.1**	**-1.7**
	comp=E,1.4nm,0.8s,baz=126,slow=7.3,SNR=7.4						
BVAR				LR	LR	16 31 36.5	
	comp=E,17nm,21.6s,baz=83,slow=41						
BRVK	**Borovoye**	**38.11**	**330**	*e*P	**P**	**16 12 53.1**	**-0.3**
	comp=E,3.5nm,0.8s						
GEYT	**Alibeck**	**39.74**	**302**	LR	LR	16 32 53.4	
	comp=E,57nm,20.6s,baz=240,slow=41						
ABKAR	**Akbulak array**	**41.68**	**319**	*e*P	**P**	**16 13 23.1**	**0.0**
AKTO	**Aktyubinsk**	**43.29**	**320**	LR	LR	16 32 07.2	
	comp=E,26nm,21.3s,baz=111,slow=37						
MBWA	**Marble Bar**	**47.48**	**157**	*e*P	**P**	**16 14 07.8**	**-1.9**
	comp=E,22nm,0.6s						
TIXI	**Tiksi**	**51.04**	**11**	*e*P	**P**	**16 14 36.1**	**-0.3**
	comp=E,4.3nm,0.6s						
PETK	**Petropavlovsk-**	**51.75**	**40**	LR	LR	16 39 02.7	
	comp=E,59nm,18.0s,baz=249,slow=39						
WRA	**Warramunga Arr**	**53.51**	**140**	P	**P**	**16 14 53.5**	**-1.9**
	comp=E,1.4nm,0.7s,baz=332,slow=8.0,SNR=6.7						
ASAR	**Alice Springs**	**56.20**	**144**	P	**P**	**16 15 13.2**	**-1.7**
	comp=E,0.6nm,0.8s,baz=326,slow=6.9,SNR=6.3						
MMAI	**Mount Meron Ar**	**58.24**	**295**	LR	LR	16 42 57.5	
	comp=E,17nm,18.7s,baz=115,slow=39						
AKASG	**Malin Array Be**	**61.29**	**316**	P	**P**	**16 15 48.8**	**-1.2**
	comp=E,0.6nm,0.4s,baz=77,slow=6.2,SNR=2.8						
FINES	**FINESS Array B**	**62.98**	**329**	P	**P**	**16 16 00.2**	**-0.9**
	comp=E,1.3nm,0.8s,baz=242,slow=36,SNR=2.9						
FINES				LR	LR	16 43 52.2	
	comp=E,33nm,19.8s,baz=240,slow=36						
SPITS	**Spitsbergen Ar**	**66.54**	**347**	LR	LR	16 49 15.0	
	comp=E,35nm,20.6s,baz=55,slow=39						
VYHS	**Vyhne**	**68.25**	**315**	*e*P	**P**	**16 16 35.1**	**-0.3**
HFS	**Hagfors**	**69.13**	**328**	P	**P**	**16 16 38.6**	**-2.0**
	comp=E,1.2nm,0.7s,baz=76,slow=6.1,SNR=4.3						
NOA	**NORSAR Array B**	**70.16**	**329**	P	**P**	**16 16 44.0**	**-3.1**
	comp=E,0.6nm,0.7s,baz=79,slow=6.3,SNR=3.0						
NOA				LR	LR	16 49 37.2	
	comp=E,26nm,19.7s,baz=75,slow=38						
YKA	**Yellowknife Ar**	**90.03**	**16**	P	**P**	**16 18 34.8**	**+0.7**
	comp=E,0.2nm,0.7s,baz=329,slow=4.0,SNR=2.9						

GUC 29 16:10:53.5±0.5**, 23°.74S×67°.44W, h255^{km}**±12^{km}**, ML4.1, 4C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB15	**IPOC Station P**	**1.94**	**285**⇑	*i*P	Pn	16 11 37.7	+1.5
PB15				*e*S	S	16 12 11.6	+1.9
PB15				IAML		16 12 17.7	
	comp=E,1μm,0.3s						
PB06	**IPOC Station P**	**2.21**	**297**	*e*P	Pn	16 11 40.5	+1.9
PB06				*e*S	S	16 12 16.0	+1.8
PB06				IAML		16 12 17.1	
	comp=N,422nm,0.4s						
PB09	**IPOC Station P**	**2.55**	**319**⇑	*i*P	Pn	16 11 43.8	+2.0
PB09				*e*S	S	16 12 22.5	+2.4
PB09				IAML		16 12 23.3	
	comp=E,104nm,0.6s						
PB05	**IPOC Station P**	**2.69**	**289**	*e*P	Pn	16 11 45.6	+2.4
PB05				*e*S	S	16 12 24.8	+2.3
PB05				IAML		16 12 26.7	
	comp=N,155nm,0.4s						
PB03	**IPOC Station P**	**2.72**	**308**⇑	*i*P	Pn	16 11 45.6	+2.1
PB03				*e*S	S	16 12 24.9	+1.8
PB03				IAML		16 12 27.7	
	comp=N,318nm,0.4s						
PB07	**IPOC Station P**	**3.02**	**311**⇑	*i*P	Pn	16 11 49.0	+2.2
PB07				*e*S	S	16 12 30.9	+2.0
PB07				IAML		16 12 35.2	
	comp=E,265nm,0.5s						
PB01	**IPOC Station P**	**3.28**	**324**	*e*P	Pn	16 11 50.9	+1.4

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*ISCJB **29** 16:18:45.9±0.8, 44°.48N±0°.10×147°.02E±0°.09, h148^{km}, mb2.9/3, Error ellipse: s-maj=15.1km s-min=6.9km az=152.2*

*IDC **29** 16:18:46.5±7.7, 44°.77N×147°.04E, h126^{km}±86^{km}, mb3.0/3, mb1 3.3/4, mb1mx2.9/66, mbtmp3.3/4, ML3.0/1, Error ellipse: s-maj=118.1km s-min=62.8km az=140.0*

*JMA **29** 16:18:47.3±0.4, 44°.54N×147°.05E, h124^{km}, M2.9*

ISC 29 16:18:46.9±1.0**, 44°.5N**±0°.1×**147°.02E**±0°.09**, h148^{km}, n21, σ0ˢ.71**/22**, mb3.0**/3**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NEM2	**Nemuro 2**	**1.44**	**220**	P	**Pn**	**16 19 15.2**	**-0.4**
NEM2				*e*S	**Sn**	**16 19 36.0**	**-1.5**
JRA	**Rausu**	**1.46**	**249**	P	**Pn**	**16 19 15.3**	**-0.5**
JRA				*e*S	**Sn**	**16 19 37.4**	**-0.6**
JNK	**Nakash**	**1.88**	**243**	P	**Pn**	**16 19 20.5**	**+0.1**
JAK	**Akkeshi**	**2.23**	**230**	P	**Pn**	**16 19 24.9**	**+0.3**
JTKR	**Abashiri--Toko**	**2.29**	**259**	P	**Pn**	**16 19 24.9**	**-0.4**
JTKR				*e*S	**Sn**	**16 19 54.2**	**-0.6**
JAR	**Ashorobuto**	**2.62**	**245**	P	**Pn**	**16 19 30.6**	**+1.2**
JMP	**Maruseppu**	**2.67**	**261**	P	**Pn**	**16 19 29.7**	**-0.3**
JOB	**Onbets**	**2.79**	**237**	P	**Pn**	**16 19 32.6**	**+1.2**
JKK2	**Kamakawa 2**	**3.13**	**261**	P	**Pn**	**16 19 36.1**	**+0.3**
JKK2				*e*S	**Sn**	**16 20 14.1**	**+0.5**
ASAJ	**Asahikawa**	**3.19**	**265**	P	**Pn**	**16 19 36.2**	**-0.3**
	1.1nm,0.3s,baz=89,slow=14,SNR=20						
ASAJ				S	**Sn**	**16 20 15.1**	**+0.1**
	0.3nm,0.3s,baz=339,slow=17,SNR=3.5						
JCH	**Churui**	**3.24**	**236**	P	**Pn**	**16 19 37.9**	**+0.7**
JCH				*e*S	**Sn**	**16 20 15.8**	**-0.3**
JNBK	**Urakawa-nobuka**	**3.80**	**236**	P	**Pn**	**16 19 44.2**	**-0.2**
JNBK				*e*S	**Sn**	**16 20 28.7**	**-0.4**
H11N2	**WAKE ISLAND Hy**	**29.71**	**140**	T	T	16 55 45.0	
	baz=332,slow=76,SNR=8.4						
H11N1	**WAKE ISLAND Hy**	**29.72**	**140**	T	T	16 55 49.7	
	baz=332,slow=76,SNR=7.0						
H11N3	**WAKE ISLAND Hy**	**29.73**	**140**	T	T	16 55 46.3	
	baz=332,slow=76,SNR=6.4						
H11S1	**WAKE ISLAND Hy**	**30.68**	**141**	T	T	16 57 05.3	
	baz=333,slow=76,SNR=15						
H11S3	**WAKE ISLAND Hy**	**30.69**	**141**	T	T	16 57 05.3	
	baz=333,slow=76,SNR=8.2						
H11S2	**WAKE ISLAND Hy**	**30.70**	**141**	T	T	16 57 06.6	
	baz=333,slow=76,SNR=6.9						
ILAR	**Eielson Array**	**40.97**	**37**	P	**P**	**16 26 14.3**	**-0.3**
	0.2nm,0.4s,baz=272,slow=8.8,SNR=4.6						
YKA	**Yellowknife Ar**	**55.26**	**34**	P	**P**	**16 28 03.7**	**-0.5**
	0.1nm,0.5s,baz=299,slow=7.6,SNR=3.9						
TXAR	**Lajitas Array**	**82.33**	**56**	P	**P**	**16 30 53.4**	**+1.2**
	0.1nm,0.6s,baz=303,slow=5.3,SNR=3.1						

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*ISCJB **29** 16:23:56.1±1.0, 15°.5S±0°.3×175°.1W±0°.1, h262^{km}, mb3.6/6, Error ellipse: s-maj=41.8km s-min=10.4km az=156.0*

*IDC **29** 16:23:56.8±1.4, 15°.58S×175°.06W, h256^{km}±23^{km}, mb3.5/6, mb1 3.6/7, mb1mx3.2/51, mbtmp4.1/7, Error ellipse: s-maj=62.6km s-min=15.8km az=137.0*

ISC 29 16:23:57.0±1.0**, 15°.6S**±0°.3×**175°.0W**±0°.2**, h262^{km}, n11, σ0ˢ.50**/14**, mb3.6**/6**, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	**3.55**	**62**	P	**Pn**	**16 24 56.3**	**0.0**
	8.9nm,0.3s,baz=192,slow=5.0,SNR=14						
AFI				S	**S**	**16 25 43.7**	**+0.2**
	15nm,0.3s,baz=227,slow=12,SNR=7.3						
STKA	**Stephens Creek**	**42.60**	**240**	P	**P**	**16 31 28.7**	**+0.8**
	0.9nm,0.8s,baz=70,slow=12,SNR=3.8						
WRA	**Warramunga Arr**	**48.29**	**257**	P	**P**	**16 32 11.9**	**-0.6**
	0.9nm,0.4s,baz=98,slow=5.9,SNR=60						
WRA				PcP	**PcP**	**16 33 34.6**	**-0.5**
	0.5nm,0.9s,baz=94,slow=3.8,SNR=3.2						
ASAR	**Alice Springs**	**48.58**	**252**	P	**P**	**16 32 14.4**	**-0.3**
	8.7nm,0.6s,baz=88,slow=7.5,SNR=269						
ASAR				PcP	**PcP**	**16 33 35.8**	**-0.4**
	0.3nm,0.5s,baz=92,slow=5.1,SNR=3.5						
PETK	**Petropavlovsk-**	**72.36**	**343**	P	**P**	**16 34 54.8**	**+0.5**
	4.3nm,1.0s,baz=140,slow=7.9						
SEY	**Seymchan**	**82.32**	**346**	P	**P**	**16 35 49.4**	**+0.3**
	2.0nm,0.9s,baz=152,slow=15,SNR=3.8						
ILAR	**Eielson Array**	**82.95**	**12**	P	**P**	**16 35 51.6**	**-0.7**
	0.2nm,0.6s,baz=208,slow=5.9,SNR=5.0						
FINES	**FINESS Array B**	**131.79**	**347**	PKP	**PKPdf**	**16 42 38.3**	**-0.3**
	1.1nm,0.8s,baz=14,slow=7.9,SNR=2.4						
BRTR	**Keskin Array B**	**145.32**	**319**	PKPbc	**PKPdf**	**16 43 04.1**	**0.0**
	0.9nm,0.7s,baz=93,slow=3.8,SNR=5.8						
GERES	**GERESS Array B**	**146.09**	**350**	PKPbc	**PKPbc**	**16 43 06.3**	**-0.1**
	0.4nm,0.7s,baz=35,slow=4.9,SNR=4.7						
MMAI	**Mount Meron Ar**	**147.48**	**308**	PKPbc	**PKPbc**	**16 43 11.3**	**+0.5**
	0.3nm,0.3s,baz=257,slow=19,SNR=1.8						

GUC 29 16:39:26.1±0.5**, 20°.79S×70°.57W, h41^{km}**±1^{km}**, ML4.1, 2C-4D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB02	**IPOC Station P**	**0.82**	**130**⇓	*i*P	Pn	16 39 41.6	+0.3
PB02				*e*S	Sn	16 39 53.2	+0.9
PB02				IAML		16 39 55.5	
	comp=E,31μm,0.5s						
PB01	**IPOC Station P**	**1.04**	**104**⇓	*i*P	Pn	16 39 45.3	+1.0
PB01				*e*S	Sn	16 39 59.1	+1.3
PB01				IAML		16 40 00.2	
	comp=N,9μm,0.5s						
PB07	**IPOC Station P**	**1.13**	**146**⇓	*i*P	Pn	16 39 46.5	+0.9
PB07				*e*S	Sn	16 40 01.8	+1.8
PB07				IAML		16 40 04.0	
	comp=E,3μm,0.5s						
PSGC	**Pisagua**	**1.26**	**19**	*e*P	Pn	16 39 48.5	+1.2
PSGC				*e*S	Sn	16 40 05.0	+1.9
PSGC				IAML		16 40 08.1	
	comp=N,7μm,0.1s						
PB11	**IPOC Station P**	**1.33**	**40**	*e*P	Pn	16 39 49.8	+1.4
PB11				*e*S	Sn	16 40 07.7	+2.6
PB11				IAML		16 40 10.7	
	comp=E,6μm,0.5s						
PB03	**IPOC Station P**	**1.46**	**149**⇑	*i*P	Pn	16 39 51.4	+1.2
PB03				*e*S	Sn	16 40 11.1	+2.8
PB08	**IPOC Station P**	**1.48**	**64**⇓	*i*P	Pn	16 39 52.4	+1.8
PB08				*e*S	Sn	16 40 12.2	+3.4
PB08				IAML		16 40 15.1	
	comp=N,5μm,0.3s						
PB04	**IPOC Station P**	**1.58**	**166**	*e*P	Pn	16 39 52.3	+0.4
PB09	**IPOC Station P**	**1.59**	**129**⇑	*i*P	Pn	16 39 54.7	+2.7

MEX 29 16:41:06.1±4.0**, 24°.82N×99°.73W, h20^{km}, MD3.5, Central Mexico**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LNIG	**Linares**	**0.25**	**71**	*e*P	Pb	16 41 11.3	-0.7
	baz=276,slow=16						
LNIG				*e*S	Sb	16 41 14.4	-1.6

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*NEIC **29** 16:43:37.6±0.0, 36°.75S×176°.86E, h183^{km}, ML4.1(WEL), After WEL.*

WEL 29 16:43:36.6, 37°S±6°×**17°7E**±°**, h218^{km}**±8^{km}**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HAZ	**Te Kaha**	**1.00**	**147**	P	Pn	16 44 07.6	-0.6
HAZ				S	S	16 44 33.4	+0.5
KUZ	**Kuaotunu**	**1.11**	**279**	P	Pn	16 44 08.7	-0.3
RUGZ	**Raukumara Rang**	**1.14**	**156**	P	Pn	16 44 08.4	-0.9
RUGZ				S	S	16 44 32.5	-2.4
PKGZ	**Pakihiroa**	**1.25**	**141**	P	Pn	16 44 10.1	+0.2
URZ	**Urewera**	**1.34**	**179**	Pn	Pn	16 44 10.2	-0.3
URZ	**Urewera**	**1.34**	**179**	P	Pn	16 44 10.3	-0.3
URZ				S	S	16 44 35.6	-1.5
WMGZ	**Waiomatatini S**	**1.39**	**131**	Pn	Pn	16 44 10.9	0.0
WMGZ	**Waiomatatini S**	**1.39**	**131**	P	Pn	16 44 10.9	0.0
WMGZ				S	S	16 44 37.1	-0.5
TWGZ	**Tauwhareparae**	**1.44**	**151**	Pn	Pn	16 44 11.9	+0.5
TWGZ	**Tauwhareparae**	**1.44**	**151**	P	Pn	16 44 11.9	+0.5
TWGZ				S	S	16 44 38.6	0.0
MWZ	**Matawai**	**1.46**	**166**	Pn	Pn	16 44 11.3	-0.3
MWZ	**Matawai**	**1.46**	**166**	P	Pn	16 44 11.3	-0.2
MWZ				S	S	16 44 37.3	-1.5
PUZ	**Puketiti**	**1.48**	**141**	Pn	Pn	16 44 11.7	0.0
PUZ	**Puketiti**	**1.48**	**141**	P	Pn	16 44 11.7	0.0
PUZ				S	S	16 44 37.2	-1.9
RRRZ	**Republican Roa**	**1.49**	**198**	P	Pn	16 44 12.7	+0.9
MKAZ	**Moumakai**	**1.56**	**263**	P	Pn	16 44 13.0	+0.7
MUGZ	**Murupara**	**1.58**	**189**	P	Pn	16 44 12.5	0.0
MUGZ				S	S	16 44 38.8	-1.8
RAGZ	**Rawiri**	**1.59**	**171**	Pn	Pn	16 44 13.2	+0.4
RAGZ	**Rawiri**	**1.59**	**171**	P	Pn	16 44 12.8	+0.1
TKGZ	**Te Karaka**	**1.63**	**159**	Pn	Pn	16 44 13.1	+0.1
TKGZ	**Te Karaka**	**1.63**	**159**	P	Pn	16 44 13.1	+0.2
TKGZ				S	S	16 44 40.2	-1.2
PRRZ	**Plateau Road**	**1.67**	**199**	P	Pn	16 44 14.2	+0.8
RTZ	**Ruatahuna**	**1.70**	**183**	P	Pn	16 44 13.7	0.0
ETAZ	**East Tamaki Re**	**1.73**	**268**	P	Pn	16 44 14.8	+0.9
CNGZ	**Carnagh Statio**	**1.80**	**151**	Pn	Pn	16 44 15.1	+0.7
CNGZ	**Carnagh Statio**	**1.80**	**151**	P	Pn	16 44 15.2	+0.8
RIGZ	**Rimuhau**	**1.86**	**164**	P	Pn	16 44 15.0	-0.2
KUTZ	**Kaahu Road**	**1.86**	**212**	P	Pn	16 44 16.9	+1.8
KUTZ				P	Pn	16 44 17.0	+1.8
SNGZ	**Shannon Statio**	**1.87**	**174**	Pn	Pn	16 44 15.4	+0.2
SNGZ	**Shannon Statio**	**1.87**	**174**	P	Pn	16 44 15.4	+0.2
SNGZ				S	S	16 44 43.5	-1.9
TLZ	**Tolley Road**	**1.87**	**221**	P	Pn	16 44 16.6	+1.4
MTHZ	**Maungataniwha**	**1.94**	**186**	P	Pn	16 44 16.0	+0.1
MTHZ				S	S	16 44 45.9	-0.7
AWAZ	**Awhitu Peninsu**	**1.96**	**265**	P	Pn	16 44 16.9	+0.8
MRHZ	**Matea Rd**	**1.98**	**195**	P	Pn	16 44 16.5	+0.1
RAHZ	**Arahi**	**1.99**	**180**	P	Pn	16 44 16.7	+0.3
RAHZ				S	S	16 44 46.9	-0.6
RVAZ	**Riverhead Bore**	**2.02**	**273**	P	Pn	16 44 16.9	+0.3
PRGZ	**Paritu Road**	**2.10**	**163**	P	Pn	16 44 17.8	+0.4
KNZ	**Kokohu**	**2.15**	**168**	Pn	Pn	16 44 17.8	-0.1
KNZ	**Kokohu**	**2.15**	**168**	P	Pn	16 44 17.9	0.0
WHHZ	**Waihua**	**2.16**	**177**	P	Pn	16 44 18.3	+0.3
WHHZ				S	S	16 44 49.0	-1.3
NMHZ	**Naumai**	**2.19**	**186**	Pn	Pn	16 44 19.0	+0.6
NMHZ	**Naumai**	**2.19**	**186**	P	Pn	16 44 19.1	+0.7
BKZ	**Black Stump Fm**	**2.29**	**192**	Pn	Pn	16 44 18.9	-0.5
BKZ	**Black Stump Fm**	**2.29**	**192**	P	Pn	16 44 18.9	-0.5
BKZ				S	S	16 44 51.4	-1.5
MHGZ	**Mahia Peninsul**	**2.32**	**164**	Pn	Pn	16 44 20.2	+0.6
MHGZ	**Mahia Peninsul**	**2.32**	**164**	P	Pn	16 44 20.3	+0.6
ARHZ	**Aropaoanui**	**2.34**	**182**	Pn	Pn	16 44 20.2	+0.3
ARHZ	**Aropaoanui**	**2.34**	**182**	P	Pn	16 44 20.2	+0.4
HIZ	**Hauiti**	**2.38**	**227**	P	Pn	16 44 21.8	+1.5
MCHZ	**McNeill Hill**	**2.54**	**187**	Pn	Pn	16 44 22.3	+0.3
MCHZ	**McNeill Hill**	**2.54**	**187**	P	Pn	16 44 22.3	+0.3
MCHZ				S	S	16 44 57.8	+0.3
KWHZ	**Kaweka Forest**	**2.56**	**192**	P	Pn	16 44 22.3	+0.1
FWVZ	**Far West T-bar**	**2.63**	**207**	Pn	Pn	16 44 23.5	+0.3
FWVZ	**Far West T-bar**	**2.63**	**207**	P	Pn	16 44 23.7	+0.5
WHVZ	**Whangaehu Hut**	**2.64**	**206**	Pn	Pn	16 44 23.7	+0.3
WHVZ	**Whangaehu Hut**	**2.64**	**206**	P	Pn	16 44 23.9	+0.6
WNVZ	**Wahianoa**	**2.68**	**206**	Pn	Pn	16 44 24.0	+0.3
BHHZ	**Black Hill Sta**	**2.69**	**197**	Pn	Pn	16 44 23.2	-0.5
BHHZ	**Black Hill Sta**	**2.69**	**197**	P	Pn	16 44 23.2	-0.5
MOVZ	**Moawhango**	**2.70**	**203**	Pn	Pn	16 44 23.5	-0.3
MOVZ	**Moawhango**	**2.70**	**203**	P	Pn	16 44 23.4	-0.4
CKHZ	**Cape Kidnapper**	**2.73**	**180**	Pn	Pn	16 44 24.6	+0.5
CKHZ	**Cape Kidnapper**	**2.73**	**180**	P	Pn	16 44 24.7	+0.5
KRHZ	**Kereru**	**2.78**	**192**	P	Pn	16 44 24.3	-0.4
VRZ	**Vera Road**	**2.87**	**219**	P	Pn	16 44 27.3	+1.7
KAHZ	**Kahuranaki**	**2.88**	**183**	Pn	Pn	16 44 25.7	-0.1
KAHZ	**Kahuranaki**	**2.88**	**183**	P	Pn	16 44 25.8	0.0
PNHZ	**Pukenui**	**3.07**	**193**	Pn	Pn	16 44 27.2	-0.7
PNHZ	**Pukenui**	**3.07**	**193**	P	Pn	16 44 27.3	-0.7
PXZ	**Pawanui**	**3.11**	**183**	Pn	Pn	16 44 28.0	-0.4
PXZ	**Pawanui**	**3.11**	**183**	P	Pn	16 44 28.0	-0.3
WPHZ	**Waipukurau**	**3.18**	**189**	Pn	Pn	16 44 28.5	-0.7
WPHZ	**Waipukurau**	**3.18**	**189**	P	Pn	16 44 28.6	-0.6
TSZ	**Takapari Road**	**3.26**	**195**	Pn	Pn	16 44 29.2	-0.9
TSZ	**Takapari Road**	**3.26**	**195**	P	Pn	16 44 29.3	-0.8
WAZ	**Wanganui**	**3.28**	**210**	Pn	Pn	16 44 30.6	+0.2
WAZ	**Wanganui**	**3.28**	**210**	P	Pn	16 44 30.5	+0.2
NEZ	**North Egmont**	**3.33**	**224**	Pn	Pn	16 44 33.2	+2.1
PRHZ	**Porangahau**	**3.36**	**186**	Pn	Pn	16 44 30.8	-0.5
PRHZ	**Porangahau**	**3.36**	**186**	P	Pn	16 44 30.9	-0.4
DVHZ	**Dannevirke**	**3.45**	**192**	Pn	Pn	16 44 31.2	-1.2
POWZ	**Post Office Ro**	**3.62**	**196**	Pn	Pn	16 44 33.7	-0.7
POWZ	**Post Office Ro**	**3.62**	**196**	P	Pn	16 44 33.7	-0.7
PRWZ	**Pori Road**	**3.73**	**193**	Pn	Pn	16 44 35.1	-0.6
BFZ	**Birch Farm**	**3.81**	**190**	Pn	Pn	16 44 35.8	-0.9
MRZ	**Mangatainoka R**	**3.92**	**197**	Pn	Pn	16 44 36.2	-1.7
TIWZ	**Tintock**	**3.96**	**193**	Pn	Pn	16 44 37.3	-1.3
HOWZ	**Holdsworth Sta**	**4.16**	**197**	Pn	Pn	16 44 39.1	-1.8
OGWZ	**Otaki Gorge**	**4.17**	**200**	Pn	Pn	16 44 39.4	-1.6
KIW	**Kapiti Island**	**4.29**	**203**	Pn	Pn	16 44 40.6	-1.9
MTW	**Mount Morrison**	**4.41**	**196**	Pn	Pn	16 44 42.1	-1.8
CAW	**Cannon Point**	**4.47**	**200**	Pn	Pn	16 44 42.7	-2.0
DUWZ	**D'Urville Isla**	**4.60**	**212**	Pn	Pn	16 44 44.6	-1.8
TRWZ	**Traveller**	**4.60**	**193**	Pn	Pn	16 44 44.4	-2.0
PAWZ	**Paruwai Farm**	**4.64**	**196**	Pn	Pn	16 44 44.8	-2.1
MSWZ	**Moikau Station**	**4.71**	**197**	Pn	Pn	16 44 45.5	-2.3
WEL	**Wellington**	**4.72**	**202**	Pn	Pn	16 44 46.0	-1.8
BHW	**Baring Head**	**4.80**	**200**	Pn	Pn	16 44 46.5	-2.3
TCW	**Tory Channel**	**4.81**	**206**	Pn	Pn	16 44 46.9	-2.1

TUWZ	Tuamarina	5.13	208	Pn	Pn	16 44 50.7	-2.2
QRZ	Quartz Range	5.28	221	Pn	Pn	16 44 53.2	-1.7
BSWZ	Blackbirch Sta	5.40	207	Pn	Pn	16 44 54.2	-2.2
THZ	Tophouse	5.82	213	Pn	Pn	16 44 59.5	-2.3
KHZ	Kahutara	6.14	205	Pn	Pn	16 45 03.5	-2.2
DSZ	Denniston Nort	6.33	219	Pn	Pn	16 45 06.7	-1.5
LTZ	Lake Taylor	6.93	211	Pn	Pn	16 45 10.9	-5.1
OXZ	Oxford	7.48	210	Pn	Pn	16 45 19.5	-3.5
MQZ	McQueen’s Vall	7.58	205	Pn	Pn	16 45 20.3	-3.9
RPZ	Rata Peaks	8.20	212	Pn	Pn	16 45 29.4	-2.9
CTZ	Chatham Island	8.33	147	Pn	Pn	16 45 42.7	+8.7
LBZ	Lake Benmore	9.12	213	Pn	Pn	16 45 40.7	-3.4
ODZ	Otahua Downs	9.46	209	Pn	Pn	16 45 46.1	-2.5
JCZ	Jackson Bay	9.54	219	Pn	Pn	16 45 46.6	-3.1

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*DDA **29** 16:43:44.0, 41°.41N×43°.77E, h7^{km}, Ml2.7*
*TIF **29** 16:43:44.0, 41°.37N×43°.77E, h14^{km}±2^{km}*
*CSEM **29** 16:43:44.7±0.2, 41°.39N×43°.75E, h5^{km}, ML1.6, Error ellipse: s-maj=5.7km s-min=3.3km az=156.0*
*ISCJB **29** 16:43:45.1±0.7, 41°.39N±0°.04×43°.75E±0°.04, h10^{km}±4^{km}, Error ellipse: s-maj=7.6km s-min=4.4km az=161.2*
ISC 29 16:43:44.8±0.9**, 41°.39N**±0°.04×**43°.75E**±0°.03**, h13**^{km}±6^{km}**, n19,** σ**0^{s}.60**/36**, Turkey-Georgia-Armenia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BGD	Bogdanovka	0.17	221	P	Pg	16 43 49.3	+0.4
BGD				S	Sg	16 43 52.1	+0.3
BGD	Bogdanovka	0.17	221	P	Pg	16 43 49.3	+0.4
BGD				S	Sg	16 43 52.1	+0.3
AKH	Akhalkalaki	0.19	275	P	Pg	16 43 49.1	-0.1
AKH				S	Sg	16 43 52.0	-0.3
AKH	Akhalkalaki	0.19	275	P	Pg	16 43 49.1	-0.1
AKH				S	Sg	16 43 52.0	-0.3
EAK	Akyaka	0.71	189	*i* P	Pb	16 43 58.3	-0.9
EAK				*i* S	Sb	16 44 08.1	-0.9
EAK	Akyaka	0.71	189	P	Pb	16 43 58.3	-0.9
EAK				S	Sb	16 44 08.1	-0.9
TBLG	Delisi	0.81	65	P	Pb	16 44 00.3	-0.5
TBLG				S	Sb	16 44 11.6	-0.1
TBLG	Delisi	0.81	65	P	Pb	16 44 00.3	-0.5
TBLG				S	Sb	16 44 11.6	-0.1
DIGO	Kars	1.02	196	*i* P	Pb	16 44 04.0	-0.3
DIGO				*i* S	Sb	16 44 18.4	+0.6
DIGO	Kars	1.02	196	P	Pb	16 44 04.1	-0.3
DIGO				S	Sb	16 44 18.4	+0.6
DGRG	David-gareji	1.22	87	P	Pn	16 44 08.0	+0.4
DGRG				S	Sn	16 44 25.6	+1.5
DGRG	David-gareji	1.22	87	P	Pn	16 44 08.0	+0.4
DGRG				S	Sn	16 44 23.6	-0.4
ARTV	Artvin	1.39	262	*i* P	Pn	16 44 09.6	-0.5
ARTV	Artvin	1.39	262	P	Pn	16 44 09.6	-0.5
DAGI	Agillar	1.42	258	*i* P	Pb	16 44 11.3	+0.1
DAGI				*i* S	Sn	16 44 29.8	+0.8
DDEM	Demirkent	1.59	252	*i* P	Pg	16 44 14.9	-0.4
DDEM				*i* S	Sn	16 44 34.1	+0.9
DDEM	Demirkent	1.59	252	P	Pg	16 44 14.9	-0.4
DDEM				S	Sn	16 44 34.1	+0.9
DBAD	Bademkaya	1.59	257	*i* P	Pb	16 44 14.2	0.0
DBAD				*i* S	Sb	16 44 34.3	+0.1
DBAD	Bademkaya	1.59	257	P	Pb	16 44 14.1	0.0
DBAD				S	Sb	16 44 34.3	+0.1

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*ISCJB **29** 16:53:52.6±0.4, 44°.26N±0°.02×17°.95E±0°.02, h1^{km}±2^{km}, Error ellipse: s-maj=3.2km s-min=1.7km az=44.6*
*PDG **29** 16:53:52.7±0.5, 44°.21N×17°.92E, h12^{km}±1^{km}, ML3.1/14, Error ellipse: s-maj=0.8km s-min=1.3km az=0.0*
*BEO **29** 16:53:53.8±0.3, 44°.18N×17°.89E, h2^{km}±2^{km}, ML3.0/12*
*CSEM **29** 16:53:53.4±0.1, 44°.21N×17°.94E, h2^{km}, ML3.1, Error ellipse: s-maj=3.7km s-min=2.0km az=46.0*
*PRU **29** 16:53:58.5, 44°.39N×17°.77E, h3^{km}*
ISC 29 16:53:53.3±1.0**, 44°.22N**±0°.02×**17°.94E**±0°.02**, h7**^{km}±9^{km}**, n170,** σ**1^{s}.48**/284**, 43C-20D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DOB	Doboj	0.52	13	⇑*i*Pg	Pg	16 54 03.9	+0.5
DOB				*e*Sg	Sg	16 54 11.6	+1.4
DOB	Doboj	0.52	13	⇑*i*Pg	Pg	16 54 03.9	+0.5
DOB				*e*Sg	Sg	16 54 11.6	+1.4
HAPS	Han Pijesak,Bl	0.74	100	*e*Pg	Pg	16 54 07.1	-0.4
HAPS				*e*Sg	Sg	16 54 17.4	+0.3
HAPS	Han Pijesak,Bl	0.74	100	*e*Pg	Pg	16 54 07.1	-0.4
HAPS				*e*Sg	Sg	16 54 18.2	+1.1
HAPS	Han Pijesak,Bl	0.74	100	⇑*i*Pg	Pg	16 54 06.9	-0.6
HAPS				*e*Sg	Sg	16 54 18.2	+1.1
BLY	Banja Luka	0.76	315	*e*Pg	Pg	16 54 08.1	+0.3
BLY				*e*Sg	Sb	16 54 19.1	-0.2
BLY	Banja Luka	0.76	315	⇑*i*P	Pg	16 54 08.0	+0.3
BLY				S	Sg	16 54 18.4	+0.8
BLY	Banja Luka	0.76	315	*e*Pg	Pg	16 54 08.1	+0.3
BLY				S	Sg	16 54 18.4	+0.8
BLY	Banja Luka	0.76	315	⇑*i*Pg	Pg	16 54 07.8	0.0
BLY				*e*Sg	Sb	16 54 18.8	-0.5
MRAK	Mrakovica	1.08	317	*e*Pg	Pg	16 54 13.4	-0.7
MRAK				*e*Sg	Sg	16 54 28.7	+0.5
MRAK	Mrakovica	1.08	317	*e*Pg	Pg	16 54 13.4	-0.7
MRAK				*e*Sg	Sg	16 54 28.7	+0.5
BLJ	Bijeljina	1.10	59	*e*Pg	Pg	16 54 13.5	-0.9
BLJ	Bijeljina	1.10	59	*e*Pg	Pg	16 54 13.5	-0.9
BBLS	Lazići	1.11	108	*e*Pg	Pg	16 54 14.5	-0.1
BBLS				*e*Sg	Sb	16 54 30.5	+0.8
BBLS	Lazići	1.11	108	⇑*i*Pg	Pg	16 54 14.5	-0.1
BBLS				*e*Sg	Sg	16 54 29.8	+0.7
BBLS	Lazići	1.11	108	⇑*i*Pg	Pg	16 54 14.5	-0.1
BBLS				*e*Sg	Sg	16 54 29.8	+0.7
TEKS	Tekeris	1.19	73	*e*Pg	Pn	16 54 16.9	+0.6
TEKS				*e*Sg	Sn	16 54 33.8	+1.1
TEKS	Tekeris	1.19	73	*e*Pg	Pn	16 54 16.9	+0.6
TEKS				*e*Sg	Sg	16 54 31.8	+0.4
TEKS	Tekeris	1.19	73	*e*Pg	Pg	16 54 15.3	-0.7
TEKS				*e*Sg	Sg	16 54 31.8	+0.4
UPM	Unac-Piva	1.23	145	⇑*i*Pg	Pg	16 54 15.8	-1.2
UPM				*i* Sg	Sg	16 54 31.0	-2.0
UPM	Unac-Piva	1.23	145	⇑*i*Pg	Pg	16 54 15.8	-1.2
UPM				*e*Sg	Sg	16 54 32.2	-0.8
UPM	Unac-Piva	1.23	145	⇑*i*Pg	Pg	16 54 15.7	-1.2
UPM				*e*Sg	Sg	16 54 32.2	-0.8
STON	Ston	1.36	187	*e*Pg	Pn	16 54 17.6	-1.0
STON				*e*Sg	Sb	16 54 35.3	-1.3
STON	Ston	1.36	187	*e*Pg	Pn	16 54 17.7	-1.0
STON				Sg	Sb	16 54 36.3	-0.4
STON	Ston	1.36	187	⇑*i*Pg	Pn	16 54 17.6	-1.0
STON				*e*Sg	Sb	16 54 35.6	-1.0
STON	Ston	1.36	187	⇑*i*Pg	Pn	16 54 17.6	-1.0
STON				*e*Sg	Sb	16 54 35.6	-1.0
PLE	Pljevlja	1.38	130	⇑*i*Pg	Pn	16 54 18.3	-0.7
PLE				*i* Sg	Sn	16 54 40.0	+2.4
PLE	Pljevlja	1.38	130	⇑*i*Pg	Pn	16 54 18.3	-0.7
PLE				*i* Sg	Sn	16 54 40.0	+2.4
BRY	Bratogost	1.39	162	⇑*i*Pg	Pn	16 54 17.9	-1.3
BRY				*i* Sg	Sb	16 54 36.2	-1.4
BRY	Bratogost	1.39	162	⇑*i*Pg	Pn	16 54 17.9	-1.3
BRY				*e*Sg	Sb	16 54 36.6	-1.0
BRY	Bratogost	1.39	162	⇑*i*Pg	Pn	16 54 17.9	-1.3
BRY				*e*Sg	Sb	16 54 36.6	-1.0
DIVS	Divibare	1.48	94	*e*Pg	Pn	16 54 20.6	+0.1
DIVS				*e*Sg	Sg	16 54 41.8	+0.9
DIVS	Divibare	1.48	94	*e*Pg	Pn	16 54 20.6	+0.1
DIVS				*e*Sg	Sg	16 54 41.8	+0.9
DIVS	Divibare	1.48	94	*e*Pg	Pn	16 54 20.4	-0.1
DIVS				*e*Sg	Sg	16 54 41.8	+0.9
TREB	Trebinje	1.53	169	*e*Pg	Pn	16 54 20.8	-0.3
TREB				*e*Sg	Sb	16 54 41.8	+0.2
TREB	Trebinje	1.53	169	*e*Pn	Pn	16 54 20.7	-0.3
TREB				*e*Sg	Sb	16 54 42.0	+0.4
TREB	Trebinje	1.53	169	*e*Pn	Pn	16 54 20.7	-0.3
TREB				*e*Sg	Sb	16 54 42.0	+0.4
UDBI	Udbina	1.59	282	*e*Pn	Pn	16 54 20.7	-1.2
UDBI				Sn	Sg	16 54 44.1	-0.3
NKY	Niksic	1.60	151	⇑*i*Pn	Pn	16 54 22.1	0.0
NKY				*i* Sn	Sg	16 54 44.9	+0.1
NKY	Niksic	1.60	151	⇑*i*Pn	Pn	16 54 22.1	0.0
NKY				*i* Sn	Sg	16 54 44.9	+0.1
NKME	Niksic	1.63	153	⇑*i*Pn	Pn	16 54 21.8	-0.7
NKME				*i* Sn	Sg	16 54 45.9	+0.3
NKME	Niksic	1.63	153	⇑*i*Pn	Pn	16 54 21.8	-0.7
NKME				*i* Sn	Sg	16 54 45.9	+0.3
IVAS	Ivanjica	1.72	111	*e*Pn	Pn	16 54 24.1	+0.3
IVAS				*e*Sn	Sb	16 54 48.0	+0.8
IVAS	Ivanjica	1.72	111	*e*Pn	Pn	16 54 24.1	+0.3
IVAS				*e*Sn	Sb	16 54 48.0	+0.8
SJES	Sjenica	1.76	122	*e*Pn	Pn	16 54 24.9	+0.6
SJES				*e*Sn	Sn	16 54 48.1	+1.1
TRUS	Trudelj	1.77	89	*e*Pn	Pb	16 54 25.9	-0.2
TRUS				*e*Sn	Sg	16 54 50.2	0.0
TRUS	Trudelj	1.77	89	*e*Pn	Pb	16 54 25.9	-0.2
TRUS				*e*Sn	Sg	16 54 50.2	0.0
KOME	Kolasin	1.79	140	⇓*i*Pn	Pn	16 54 25.3	+0.7
KOME				*i* Sn	Sg	16 54 50.7	+0.1
KOME	Kolasin	1.79	140	⇓*i*Pn	Pn	16 54 25.3	+0.7
KOME				*i* Sn	Sg	16 54 50.7	+0.1
CEME	Cevo	1.82	157	⇓*i*Pn	Pn	16 54 25.6	+0.5
CEME				*i* Sn	Sg	16 54 51.8	+0.1
CEME	Cevo	1.82	157	⇓*i*Pn	Pn	16 54 25.6	+0.5
CEME				*i* Sn	Sg	16 54 51.8	+0.1
HCY	Herceg Novi	1.82	167	⇑*i*Pn	Pb	16 54 26.3	-0.6
HCY				*i* Sn	Sg	16 54 51.3	-0.4
HCY	Herceg Novi	1.82	167	*e*Pn	Pn	16 54 25.5	+0.5
HCY				*e*Sn	Sn	16 54 48.8	+0.5
HCY	Herceg Novi	1.82	167	*e*Pn	Pn	16 54 25.5	+0.5
HCY				*e*Sn	Sn	16 54 48.8	+0.5
BEY	Berane	1.96	133	⇑*i*Pn	Pn	16 54 27.6	+0.6
BEY				*i* Sn	Sb	16 54 55.1	+1.1
IVA	Berane	1.96	133	⇑*i*Pn	Pn	16 54 27.6	+0.6
IVA				*i* Sn	Sb	16 54 55.1	+1.1
GRUS	Gruza	2.03	98	*e*Pn	Pn	16 54 29.0	+1.1
GRUS				*e*Sn	Sn	16 54 55.2	+1.7
GRUS	Gruza	2.03	98	*e*Pn	Pn	16 54 29.0	+1.1
GRUS				*e*Sn	Sn	16 54 55.2	+1.7
PDG	Podgorica	2.03	151	*e*Pn	Pn	16 54 29.4	+1.5
PDG				*e*Sn	Sn	16 54 55.0	+1.5
PDG	Podgorica	2.03	151	⇓*i*P	Pn	16 54 29.0	+1.1
PDG	Podgorica	2.03	151	⇑*i*Pn	Pn	16 54 28.6	+0.7
PDG	Podgorica	2.03	151	⇓*i*P	Pn	16 54 29.0	+1.1
PDG				*e*Sn	Sn	16 54 54.6	+1.1
PDG				S	Sb	16 54 55.2	-0.8
PDG	Podgorica	2.03	151	⇑*i*Pn	Pn	16 54 29.0	+1.1
PDG				*e*Sn	Sn	16 54 54.6	+1.1
TTG	Podgorica	2.03	151	⇑*i*Pn	Pn	16 54 28.6	+0.7
TTG				*i* Sn	Sb	16 54 56.5	+0.5
BUM	Brajici-Budva	2.04	160	⇓*i*Pn	Pb	16 54 29.9	-0.8
BUM				*i* Sn	Sb	16 54 57.3	+0.9
BUM	Brajici-Budva	2.04	160	⇓*i*Pn	Pb	16 54 29.9	-0.8
BUM				*i* Sn	Sb	16 54 57.3	+0.9
MORH	Mˆ‡rˆ¡gy, Hung	2.05	14	⇓*e*Pn	Pn	16 54 28.5	+0.3
MORH				*e*Sn	Sg	16 54 59.9	+0.6
MORH	Mˆ‡rˆ¡gy, Hung	2.05	14	*e*Pn	Pn	16 54 28.5	+0.3
MORH				*e*Sn	Sn	16 54 55.2	+1.1
MORH	Mˆ‡rˆ¡gy, Hung	2.05	14	*e*Pn	Pn	16 54 28.5	+0.3
MORH				*e*Sn	Sn	16 54 55.2	+1.1
PVY	Plav	2.19	137	⇑*i*Pn	Pn	16 54 30.9	+0.6
PVY				*i* Sn	Sb	16 55 00.3	-0.5
PVY	Plav	2.19	137	⇑*i*Pn	Pn	16 54 30.9	+0.6
PVY				*i* Sn	Sb	16 55 00.3	-0.5
NVLJ	Novalja	2.23	280	*i* Pn	Pn	16 54 29.7	-0.9
NVLJ				Sn	Sb	16 55 01.5	-0.1
DRME	Dracevica, Mon	2.23	155	⇓*i*Pn	Pn	16 54 31.1	+0.5
DRME				*i* Sn	Sb	16 55 01.3	-0.3
DRME	Dracevica, Mon	2.23	155	⇓*i*Pn	Pn	16 54 31.1	+0.5
DRME				*e*Sn	Sn	16 54 58.6	+0.2
DRME	Dracevica, Mon	2.23	155	*e*Pn	Pn	16 54 31.6	+1.0
DRME				*e*Sn	Sn	16 54 58.6	+0.2
OZLJ	Ozalj	2.24	309	*e*Pn	Pn	16 54 32.8	+1.9
OZLJ				Sn	Sn	16 54 59.0	+0.3
BOJS	Bojanci	2.30	305	*i* Pn	Pn	16 54 33.2	+1.6
BOJS				*i* Sn	Sg	16 55 11.8	+4.6
BOJS	Bojanci	2.30	305	*i* Pn	Pn	16 54 33.2	+1.6
SVIS	Svilajnac	2.35	88	*e*Pn	Pn	16 54 34.2	+1.9
SVIS	Svilajnac	2.35	88	*e*Pn	Pn	16 54 34.2	+1.9
CRES	Cresnjev	2.38	313	*i* Pn	Pn	16 54 33.5	+0.8
CRES				*i* Sn	Sg	16 55 12.8	+3.0
CRES	Cresnjev	2.38	313	⇑*i*Pn	Pn	16 54 33.6	+0.8
CRES				*e*Sn	Sn	16 55 03.4	+1.1
CRES	Cresnjev	2.38	313	⇑*i*Pn	Pn	16 54 33.6	+0.8
CRES				*e*Sn	Sn	16 55 03.4	+1.1
ULC	Ulcinj	2.45	157	⇑*i*Pn	Pn	16 54 35.5	+1.8
ULC				*i* Sn	Sb	16 55 06.8	-1.3
ULC	Ulcinj	2.45	157	⇑*i*Pn	Pn	16 54 35.5	+1.8
ULC				*i* Sn	Sb	16 55 06.8	-1.3
SELS	Selova	2.51	112	*e*Pn	Pn	16 54 36.8	+2.2
SELS	Selova	2.51	112	*e*Pn	Pn	16 54 36.8	+2.2
GBRS	Gornja Briga	2.58	302	*i* Pn	Pn	16 54 37.2	+1.7
GBRS	Gornja Briga	2.58	302	*i* Pn	Pn	16 54 37.2	+1.7
KUBS	Kucevo	2.69	85	*e*Pn	Pn	16 54 38.2	+1.2
KUBS	Kucevo	2.69	85	*e*Pn	Pn	16 54 38.2	+1.2
RIY	Rijeka	2.70	295	*e*Pn	Pn	16 54 38.5	+1.4
RIY				*e*Sn	Sn	16 55 11.0	+1.0
VISS	Visnje	2.71	307	*i* Pn	Pn	16 54 38.5	+1.2
VISS	Visnje	2.71	307	*i* Pn	Pn	16 54 38.5	+1.2
MDVR	Moldovita	2.76	77	⇑*i*P	Pn	16 54 38.1	+0.1
MDVR	Moldovita	2.76	77	⇑*i*P	Pn	16 54 38.1	+0.1
BOVS	Bovan	2.78	101	*e*Pn	Pn	16 54 39.4	+1.1
BOVS	Bovan	2.78	101	*e*Pn	Pn	16 54 39.4	+1.1
CEY	Cerknica	2.92	303	⇑*i*Pn	Pn	16 54 41.0	+0.8
CEY				*e*Sn	Sn	16 55 15.9	+0.4
CEY	Cerknica	2.92	303	⇑*i*Pn	Pn	16 54 41.0	+0.8
CEY				*e*Sn	Sn	16 55 15.9	+0.4
BZS	Buzias	2.96	61	⇓*i*P	Pn	16 54 40.3	-0.4
BZS	Buzias	2.96	61	⇓*i*P	Pn	16 54 40.3	-0.4
BZS				S	Sn	16 55 16.0	-0.5
LJU	Ljubljana	3.03	308	*e*Pn	Pn	16 54 42.5	+0.9
LJU	Ljubljana	3.03	308	*e*Pn	Pn	16 54 42.5	+0.9
ZAGS	Zajecar	3.12	96	*e*Pn	Pn	16 54 44.6	+1.7
ZAGS	Zajecar	3.12	96	*e*Pn	Pn	16 54 44.6	+1.7
BARS	Barje	3.15	115	*e*Pn	Pn	16 54 43.7	+0.4
BARS	Barje	3.15	115	*e*Pn	Pn	16 54 43.7	+0.4
CSKK	Csˆ‡kako	3.15	4	*e*Pn	Pn	16 54 45.0	+1.7
CSKK				*e*Sn	Sg	16 55 36.2	+1.8
SOKA	Soboth	3.20	321	*e*Pn	Pn	16 54 44.4	+0.3
	1.7nm,0.2s						
SOKA				*e*Pg	Pg	16 54 54.8	+0.3
	1.7nm,0.2s						
SOKA				*e*Sn	Sn	16 55 20.1	-2.3
	6.6nm,0.3s						
SOKA	Soboth	3.20	321	Pn	Pn	16 54 44.4	+0.3
	1.7nm,0.2s						
HERR	Herculane	3.27	77	⇓*i*P	Pn	16 54 45.5	+0.6
HERR	Herculane	3.27	77	⇓*i*P	Pn	16 54 45.5	+0.6
HERR				S	Sn	16 55 22.4	-1.6
OBKA	Obir	3.31	315	*e*Pn	Pn	16 54 47.6	+2.1
	1.7nm,0.2s						
OBKA				Pg	Pg	16 54 56.4	-0.2
	21nm,0.5s						
OBKA				Sg	Sg	16 55 43.7	+4.2
	37nm,0.7s						
OBKA	Obir	3.31	315	Pn	Pn	16 54 47.7	+2.1
	1.7nm,0.2s						
ARSA	Arzberg	3.47	332	*i* Pn	Pn	16 54 48.6	+0.9
	8.1nm,0.3s						
ARSA				*e*Sn	Sn	16 55 26.8	-2.3
	6.1nm,0.5s						
ARSA	Arzberg	3.47	332	Pn	Pn	16 54 48.6	+0.9
	8.1nm,0.3s						
ARSA				Sn	Sn	16 55 26.8	-2.3
	6.1nm,0.5s						
ZAPS	Zavoj	3.53	104	*e*Pn	Pn	16 54 49.5	+0.9
SOP	Sopron	3.59	345	⇑*e*Pn	Pn	16 54 51.0	+1.6
SOP				*e*Sn	Sn	16 55 32.7	+0.6
MATE	Matera	3.69	195	⇑*i*P	Pn	16 54 51.0	+0.4
MATE	Matera	3.69	195	⇑*i*P	Pn	16 54 51.0	+0.4
SRE	Strehaia	3.80	82	⇓*i*P	Pn	16 54 52.4	+0.2
SRE	Strehaia	3.80	82	⇓*i*P	Pn	16 54 52.4	+0.2
MYKA	Terra Mystica	3.87	310	*e*Pn	Pn	16 54 55.2	+2.0
	1.5nm,0.3s						
MYKA				Pg	Pg	16 55 06.0	-1.3
	4.4nm,0.3s						
MYKA	Terra Mystica	3.87	310	Pn	Pn	16 54 55.2	+2.0
	1.5nm,0.3s						
PSZ	Piszkesteto	3.94	20	⇓*i*P	Pn	16 54 54.2	0.0
PSZ	Piszkesteto	3.94	20	⇑*e*Pn	Pn	16 54 54.3	0.0
PSZ				*e*Sn	Sn	16 55 40.6	-0.1
PSZ	Piszkesteto	3.94	20	⇓*i*P	Pn	16 54 54.2	0.0
CONA	Conrad Observa	3.98	339	*e*Pn	Pn	16 54 55.8	+1.0
	2.7nm,0.3s						
CONA				*e*Sn	Sn	16 55 40.2	-1.5
	10.0nm,0.6s						
CONA	Conrad Observa	3.98	339	Pn	Pn	16 54 55.8	+1.0
	2.7nm,0.3s						
CONA				Sn	Sn	16 55 40.2	-1.5
	10.0nm,0.6s						
MODS	Modra-Piesok	4.18	354	*e*PN	Pn	16 54 59.0	+1.5
MODS				*e*SN	Sn	16 55 43.9	-2.6
MODS				*e*LG	Lg	16 55 48.9	
MODS	Modra-Piesok	4.18	354	*e*Pn	Pn	16 54 59.0	+1.5
MODS				*e*Sn	Sn	16 55 43.9	-2.6
KBA	Koelnbreinsper	4.31	313	*e*Pn	Pn	16 55 00.3	+0.9
	1.2nm,0.2s						
KBA				*e*Sn	Sn	16 55 49.2	-0.7
	3.1nm,0.3s						
KBA	Koelnbreinsper	4.31	313	Pn	Pn	16 55 00.3	+0.9
	1.2nm,0.2s						
KBA				Sn	Sn	16 55 49.2	-0.7
	3.1nm,0.3s						
SMOL	Smolenice	4.31	355	*e*PN	Pn	16 54 58.9	-0.3
SMOL				*e*SN	Sn	16 55 48.5	-1.2
SMOL	Smolenice	4.31	355	*e*Pn	Pn	16 54 58.9	-0.3
SMOL				*e*Sn	Sn	16 55 48.5	-1.2
VYHS	Vyhne	4.32	8	*e*PN	Pn	16 55 00.4	+1.0
VYHS				*e*SN	Sn	16 55 47.9	-2.1
VYHS				*e*LG	Lg	16 55 51.9	
VYHS	Vyhne	4.32	8	*e*Pn	Pn	16 55 00.4	+1.0
VYHS				*e*Sn	Sn	16 55 47.9	-2.1
MOA	Molln	4.44	326	*e*Pn	Pn	16 55 02.3	+1.3
	2.5nm,0.2s						
MOA				*e*Sn	Sn	16 55 52.1	-0.9
	3.4nm,0.2s						
MOA	Molln	4.44	326	Pn	Pn	16 55 02.3	+1.3
	2.5nm,0.2s						
MOA				Sn	Sn	16 55 52.1	-0.9
	3.4nm,0.2s						
ABTA	Abfaltersbach	4.58	305	*e*Pn	Pn	16 55 04.3	+1.3
ABTA				Pg	Pg	16 55 18.6	-2.3
	1.4nm,0.3s						
ABTA	Abfaltersbach	4.58	305	Pn	Pn	16 55 04.3	+1.3
JAVC	Velka Javorina	4.64	358	*e*PN	Pn	16 55 06.1	+2.2
JAVC				*e*SN	Sn	16 55 57.5	-0.5
KRUC	Moravsky	4.96	348	*e*PN	Pn	16 55 09.4	+1.3
CRVS	Cervenica-Dubn	5.27	26	*e*PN	Pn	16 55 14.0	+1.5
CRVS	Cervenica-Dubn	5.27	26	*e*Pn	Pn	16 55 14.0	+1.5
WTTA	Wattenberg	5.36	307	*e*Pn	Pn	16 55 17.1	+3.3
	1.5nm,0.2s						
WTTA				Sg	Sg	16 56 53.2	+7.9
	3.6nm,0.5s						
WTTA	Wattenberg	5.36	307	Pn	Pn	16 55 17.1	+3.3
	1.5nm,0.2s						
WATA	Walderalm	5.43	307	*e*Pn	Pn	16 55 17.9	+3.1
	1.3nm,0.2s						
WATA	Walderalm	5.43	307	Pn	Pn	16 55 17.9	+3.1
	1.3nm,0.2s						
MORC	Moravsky Berou	5.56	357	⇑*i*P	Pn	16 55 15.7	-0.8
MORC	Moravsky Berou	5.56	357	⇑*i*P	Pn	16 55 15.7	-0.8
MORC	Moravsky Berou	5.56	357	*e*PN	Pn	16 55 18.3	+1.8
OKC	Ostrava-Krasne	5.62	1	*e*SN	Sn	16 56 20.7	-1.3
MOTA	Moosalm	5.71	306	*e*Pn	Pn	16 55 20.9	+2.3
	4.5nm,0.4s						
MOTA	Moosalm	5.71	306	Pn	Pn	16 55 20.9	+2.3
	4.5nm,0.4s						
KHC	Kasperske Hory	5.75	330	*e*PN	Pn	16 55 20.4	+1.3
KHC				*e*x	x	16 55 28.0	
KHC				*e*SN	Sn	16 56 24.1	-1.3
KHC	Kasperske Hory	5.75	330	Pn	Pn	16 55 20.4	+1.3
FETA	Feichten	5.78	301	*e*Pn	Pn	16 55 22.7	+3.1
	0.7nm,0.3s						
FETA				Pg	Pg	16 55 40.4	-3.6
	6.4nm,0.6s						
FETA	Feichten	5.78	301	Pn	Pn	16 55 22.7	+3.1
	0.7nm,0.3s						
MLR	Muntele Rosu	5.83	75	⇓*i*P	Pn	16 55 20.5	+0.2
GOPC	GO Pecny, Ondr	6.09	340	*e*SN	Sn	16 56 31.0	-2.6
GOPC				*e*x	x	16 56 42.4	
PRU	Pruhonice	6.22	339	*e*SN	Sn	16 56 36.1	-0.6
PRU				*e*x	x	16 56 49.2	
PRU	Pruhonice	6.22	339	Sn	Sn	16 56 36.1	-0.6
DPC	Dobruska-Polom	6.23	350	*e*PN	Pn	16 55 28.2	+2.6
DPC				*e*SN	Sn	16 56 38.1	+1.0
DPC	Dobruska-Polom	6.23	350	Pn	Pn	16 55 28.2	+2.6
DPC				Sn	Sn	16 56 38.1	+1.0
DAVA	Damuels	6.42	301	*e*Pn	Pn	16 55 31.1	+2.7
	0.8nm,0.5s						
DAVA	Damuels	6.42	301	Pn	Pn	16 55 31.1	+2.7
	0.8nm,0.5s						
BRG	Berggiesshubel	7.18	339	SG	Sb	16 57 23.0	-1.1
	2.6nm,0.6s						
CLL	Collm	7.83	337	*e*Sb	Sb	16 57 39.0	-3.7
CLL				*e*Sg	Sg	16 57 56.0	-8.4

IDC 29 16:58:58.6±2.6**, 43°.06N**×**105°.27W, h0**^{km}**, mb2.6**/1**, mb1 3.4**/3**, mb1mx3.2**/60**, mbtmp3.1**/3**, ML3.2**/2**, Error ellipse: s-maj=47.7km s-min=9.3km az=157.0, Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PDAR	Pinedale Array	3.16	266	Pn	Pb	16 59 52.9	-3.0
	2.4nm,0.3s,baz=85,slow=13,SNR=59						
PDAR				Lg	Lg	17 00 37.6	
	13nm,0.3s,baz=88,slow=33,SNR=15						
ULM	Lac du Bonnet	9.66	39	Pn	Pn	17 01 16.7	-2.1
	0.4nm,0.3s,baz=225,slow=14,SNR=3.3						
ULM				Pg		17 01 54.1	
	0.8nm,0.3s,baz=228,slow=14,SNR=5.0						
ULM				Lg	Lg	17 03 54.8	
	0.4nm,0.3s,baz=146,slow=20,SNR=4.0						
I56US	NEWPORT INFRAS	9.79	306	*i*		17 54 50.0	
	baz=118,slow=314,SNR=1.3						
YKA	Yellowknife Ar	20.23	347	P	P	17 03 34.2	-0.7
	0.3nm,0.5s,baz=158,slow=13,SNR=4.0						

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*IDC **29** 17:17:38.7±0.8, 52°.78S×18°.41E, h0^{km}, mb3.9/6, mb1 4.0/6, mb1mx3.8/48, mbtmp3.9/6, MS3.6/5, Ms1 3.5/5, ms1mx3.1/49, Error ellipse: s-maj=52.8km s-min=20.5km az=70.0*
*ISCJB **29** 17:17:40.2±0.7, 52°.82S±0°.09×18°.7E±0°.3, h13^{km}, mb3.9/6, MS3.5/5, Error ellipse: s-maj=28.5km s-min=12.5km az=6.1*
ISC 29 17:17:40.7±0.8**, 52°.7S**±0°.1×**18°.6E**±0°.2**, h13**^{km}**, n22,** σ**1^{s}.11**/13**, mb3.9**/6**, MS3.4**/5**, Southwest of Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUR	Sutherland	20.38	5	P	Pn	17 22 21.6	+2.3
	3.7nm,0.9s,baz=187,slow=12,SNR=6.1						
SNAA	Sanae	21.24	199	P	P	17 22 27.5	+1.3
VNA1	Neumayer--Stat	21.69	204	P	P	17 22 31.4	+0.6
VNA3	Neumayer Olymp	22.43	204	P	P	17 22 39.9	+1.1
BOSA	Boshof	24.58	14	LR	LR	17 30 34.8	
	comp=Z,70nm,21.1s,baz=203,slow=32						
MAW	Mawson	25.86	142	P	P	17 23 12.0	+0.4
	2.3nm,0.8s,baz=288,slow=14,SNR=3.6						
LBTB	Lobatse	28.16	14	LR	LR	17 33 13.6	
	comp=Z,99nm,20.0s,baz=196,slow=33						
TSUM	Tsumeb	33.45	358	LR	LR	17 36 06.2	
	comp=Z,59nm,18.5s,baz=165,slow=33						
QSPA	South Pole Qui	37.52	180	P	P	17 24 53.8	-0.3
	4.1nm,0.8s,baz=203,slow=3.9,SNR=13						
VNDA	Vanda	48.05	170	P	P	17 26 18.9	-0.2
	1.2nm,1.0s,baz=210,slow=8.1,SNR=4.8						
H08S1	Diego Carcia H	62.61	64	T	T	18 35 21.3	
	baz=210,slow=76,SNR=40						
H08S2	Diego Garcia H	62.62	64	T	T	18 35 21.3	
	baz=210,slow=76,SNR=19						
H08S3	Diego Garcia H	62.63	64	T	T	18 35 13.2	
	baz=210,slow=76,SNR=38						
TORD	Torodi Ar. Bea	67.18	342	P	P	17 28 35.6	+1.4
	1.1nm,1.1s,baz=164,slow=7.5						
ASAR	Alice Springs	85.53	124	P	P	17 30 17.9	-0.7
	0.5nm,0.7s,baz=211,slow=4.5,SNR=8.1						
IDI	Anoyia	87.80	5	LR	LR	18 11 57.5	
	comp=Z,22nm,19.8s,baz=308,slow=37						
BATI	Baumata	90.94	108	LR	LR	18 08 54.4	
	comp=Z,115nm,19.0s,baz=262,slow=34						
BRTR	Keskin Array B	92.98	12	P	P	17 30 54.2	+0.9
	0.4nm,0.7s,baz=181,slow=8.5,SNR=2.9						
PDAR	Pinedale Array	144.43	275	PKP	PKPab	17 37 13.2	-1.3
	0.3nm,0.3s,baz=132,slow=2.2,SNR=5.5						
NVAR	Mina Array Bea	147.13	262	PKPbc	PKPbc	17 37 22.4	-0.8
	0.9nm,0.8s,baz=134,slow=5.3,SNR=7.1						
YKA	Yellowknife Ar	153.65	310	PKPab	PKPab	17 37 48.8	-1.8
	0.3nm,0.6s,baz=94,slow=4.4,SNR=4.4						
ILAR	Eielson Array	165.79	334	PKPab	PKPab	17 38 43.2	-0.1

0.4nm,0.9s,baz=5.9,slow=3.9,SNR=4.5

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*NNC **29** 17:26:31.5±3.1, 36°.74N×71°.33E, h166km±49km, mb2.8, mpv3.6, Error ellipse: s-maj=37.7km s-min=28.7km az=92.0*

ISC 29 17:26:23.2±1.4, **36°.22N**±0°.09×**71°.3E**±0°.1, **h114km, n16, σ2s.15**/21, **5C-5D, Afghanistan-Tajikistan border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	**4.16**	**24**	⇓P	**Pn**	**17 27 27.8**	**+2.9**
	2.3nm,0.2s						
SFK				⇑S	**Sn**	**17 28 14.5**	**+1.8**
	9.6nm,0.2s						
MNAS	**Manas**	**6.33**	**8**	⇓P	**Pn**	**17 27 55.3**	**+1.3**
	2.7nm,0.5s						
MNAS				⇑S	**Sn**	**17 29 02.7**	**-2.2**
	5.7nm,0.4s						
AAK	**Ala-Archa**	**6.86**	**20**	⇑P	**Pn**	**17 28 04.5**	**+3.2**
	5.4nm,0.6s						
AAK				S	**Sn**	**17 29 15.2**	**-2.8**
	3.8nm,0.6s						
KK31	**Karatay Array**	**6.90**	**355**	P	**Pn**	**17 28 02.7**	**+1.0**
	2.2nm,0.3s,baz=179,slow=12,SNR=52						
KK31				⇓S	**Sn**	**17 29 14.7**	**-4.0**
	2.0nm,0.3s,baz=175,slow=22,SNR=5.3						
TKM2	**Tokmak 2**	**7.46**	**25**	⇑P	**Pn**	**17 28 10.2**	**+0.7**
	3.5nm,0.6s						
TKM2				⇑S	**Sn**	**17 29 29.8**	**-2.7**
	2.9nm,0.8s						
PYUN	**Piuthan**	**12.77**	**126**	*e*P	**Pn**	**17 29 19.3**	**-1.5**
	45nm,0.4s						
DANN	**Dangsing**	**13.12**	**123**	*e*P	**Pn**	**17 29 24.3**	**-1.1**
KOLN	**Koldanda**	**13.39**	**126**	*e*P	**Pn**	**17 29 28.1**	**-0.8**
GKN	**Gorkha**	**13.93**	**122**	*e*P	**Pn**	**17 29 34.7**	**-1.1**
	15nm,0.3s						
DMN	**Daman**	**14.50**	**122**	*e*P	**Pn**	**17 29 41.8**	**-1.4**
	15nm,0.4s						
KKN	**Kakani**	**14.51**	**121**	*e*P	**Pn**	**17 29 41.9**	**-1.4**
	14nm,0.4s						
PKIN	**Phulchoki**	**14.72**	**122**	*e*P	**Pn**	**17 29 45.8**	**-0.2**
	23nm,0.4s						
GUN	**Gumba**	**14.85**	**120**	*e*P	**Pn**	**17 29 47.6**	**-0.1**
	17nm,0.3s						
JIRN	**Jiri**	**15.22**	**120**	*e*P	**Pn**	**17 29 51.5**	**-0.9**
	36nm,0.3s						
AB31	**Akbulak array**	**15.46**	**331**	⇓P	**P**	**17 29 55.2**	**-1.5**
	1.0nm,0.4s,baz=140,slow=14,SNR=32						
AKTO	**Aktyubinsk**	**17.15**	**330**	⇓P	**Pn**	**17 30 18.9**	**+3.2**
	1.5nm,0.6s						

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*CSEM **29** 17:32:28.8±0.1, 44°.19N×17°.94E, h2km, ML2.6, Error ellipse: s-maj=3.7km s-min=2.3km az=51.0*

*BEO **29** 17:32:29.2±0.3, 44°.20N×17°.89E, h0km, ML2.4/10*

*PRU **29** 17:32:30.6, 44°.28N×18°.25E, h0km*

ISC 29 17:32:28.5±1.0, **44°.20N**±0°.02×**17°.91E**±0°.02, **h7km**±9km, **n88, σ0s.96**/153, **24C-6D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
DOB	**Doboj**	**0.55**	**15**	⇑*i*Pg	**Pg**	**17 32 39.0**	**-0.1**
DOB				*e*Sg	**Sb**	**17 32 47.5**	**-1.1**
DOB	**Doboj**	**0.55**	**15**	⇑*i*Pg	**Pg**	**17 32 39.0**	**-0.1**
DOB				*e*Sg	**Sb**	**17 32 47.5**	**-1.1**
BLY	**Banja Luka**	**0.75**	**317**	*e*Pg	**Pg**	**17 32 43.5**	**+0.5**
BLY				*e*Sg	**Sg**	**17 32 53.3**	**+0.5**
BLY	**Banja Luka**	**0.75**	**317**	⇓*i*P	**Pg**	**17 32 43.5**	**+0.5**
BLY				S	**Sg**	**17 32 53.2**	**+0.5**
BLY	**Banja Luka**	**0.75**	**317**	⇑*i*Pg	**Pg**	**17 32 43.2**	**+0.2**
BLY	**Banja Luka**	**0.75**	**317**	⇓*i*P	**Pg**	**17 32 43.5**	**+0.5**
BLY				*e*Sg	**Sg**	**17 32 53.3**	**+0.5**
BLY	**Banja Luka**	**0.75**	**317**	⇑*i*Pg	**Pg**	**17 32 43.2**	**+0.2**
BLY				*e*Sg	**Sg**	**17 32 53.5**	**+0.7**
HAPS	**Han Pijesak,BI**	**0.76**	**98**	*e*Pg	**Pg**	**17 32 42.6**	**-0.5**
HAPS				*e*Sg	**Sg**	**17 32 53.6**	**+0.6**
HAPS	**Han Pijesak,BI**	**0.76**	**98**	⇑*i*Pg	**Pg**	**17 32 42.6**	**-0.5**
HAPS				*e*Sg	**Sg**	**17 32 53.6**	**+0.6**
HAPS	**Han Pijesak,BI**	**0.76**	**98**	⇑*i*Pg	**Pg**	**17 32 42.6**	**-0.5**
HAPS				*e*Sg	**Sb**	**17 32 54.0**	**-0.7**
MRAK	**Mrakovica**	**1.08**	**319**	*e*Sg	**Sb**	**17 33 04.4**	**+0.4**
MRAK	**Mrakovica**	**1.08**	**319**	*e*Sg	**Sb**	**17 33 04.4**	**+0.4**
BBLS	**Lazići**	**1.13**	**107**	*e*Pg	**Pg**	**17 32 49.8**	**-0.4**
BBLS				*e*Sg	**Sn**	**17 33 06.3**	**-0.4**
BBLS	**Lazići**	**1.13**	**107**	*e*Pg	**Pg**	**17 32 49.8**	**-0.4**
BBLS				*e*Sg	**Sb**	**17 33 06.0**	**+0.6**
BBLS	**Lazići**	**1.13**	**107**	⇑*i*Pg	**Pg**	**17 32 50.2**	**0.0**
BBLS				*e*Sg	**Sb**	**17 33 06.0**	**+0.6**
TEKS	**Tekeris**	**1.22**	**73**	*e*Sg	**Pg**	**17 32 50.5**	**-1.3**
TEKS	**Tekeris**	**1.22**	**73**	*e*Pg	**Sn**	**17 33 08.7**	**0.0**
TEKS	**Tekeris**	**1.22**	**73**	*e*Pg	**Pg**	**17 32 51.7**	**-0.1**
TEKS				*e*Sg	**Sn**	**17 33 08.3**	**-0.4**
TEKS	**Tekeris**	**1.22**	**73**	*e*Pg	**Pg**	**17 32 51.7**	**-0.1**
TEKS				*e*Sg	**Sn**	**17 33 08.3**	**-0.4**
UPM	**Unac-Piva**	**1.23**	**144**	⇑*i*Pg	**Pg**	**17 32 51.5**	**-0.6**
UPM				*e*Sg	**Sn**	**17 33 08.9**	**-0.4**
UPM	**Unac-Piva**	**1.23**	**144**	⇑*i*Pg	**Pg**	**17 32 51.5**	**-0.6**
UPM				*e*Sg	**Sn**	**17 33 08.9**	**-0.4**
STON	**Ston**	**1.34**	**186**	*e*Pg	**Pn**	**17 32 52.8**	**-0.7**
STON				*e*Sg	**Sn**	**17 33 12.1**	**+0.5**
STON	**Ston**	**1.34**	**186**	*i* Pg	**Pn**	**17 32 53.3**	**-0.3**
STON				Sg	**Sg**	**17 33 11.4**	**0.0**
STON	**Ston**	**1.34**	**186**	⇑*i*Pg	**Pn**	**17 32 53.2**	**-0.3**
STON				*e*Sg	**Sn**	**17 33 12.0**	**+0.5**
STON	**Ston**	**1.34**	**186**	⇑*i*Pg	**Pn**	**17 32 53.2**	**-0.3**
STON				*e*Sg	**Sn**	**17 33 12.0**	**+0.5**
BRY	**Bratogost**	**1.38**	**160**	*e*Pg	**Pn**	**17 32 54.1**	**-0.2**
BRY				*e*Sg	**Sg**	**17 33 12.8**	**+0.1**
BRY	**Bratogost**	**1.38**	**160**	*e*Pg	**Pn**	**17 32 54.1**	**-0.2**
BRY				*e*Sg	**Sg**	**17 33 12.8**	**+0.1**
DIVS	**Divibare**	**1.50**	**93**	*e*Pg	**Pb**	**17 32 56.7**	**-0.1**
DIVS				*e*Sg	**Sg**	**17 33 17.1**	**+0.2**
DIVS	**Divibare**	**1.50**	**93**	⇑*i*Pg	**Pb**	**17 32 56.7**	**-0.1**
DIVS				*e*Sg	**Sg**	**17 33 17.4**	**+0.5**
DIVS	**Divibare**	**1.50**	**93**	⇑*i*Pg	**Pb**	**17 32 56.7**	**-0.1**
DIVS				*e*Sg	**Sg**	**17 33 17.4**	**+0.5**
TREB	**Trebinje**	**1.52**	**168**	*e*Pg	**Pb**	**17 32 56.9**	**0.0**
TREB				*e*Sg	**Sg**	**17 33 17.7**	**+0.5**
TREB	**Trebinje**	**1.52**	**168**	⇑*i*Pg	**Pb**	**17 32 56.9**	**0.0**
TREB				*e*Sg	**Sg**	**17 33 17.9**	**+0.7**
TREB	**Trebinje**	**1.52**	**168**	⇑*i*Pg	**Pb**	**17 32 56.9**	**0.0**
TREB				*e*Sg	**Sg**	**17 33 17.9**	**+0.7**
UDBI	**Udbina**	**1.57**	**283**	*i* Pn	**Pn**	**17 32 57.1**	**+0.3**
UDBI				Sn	**Sg**	**17 33 19.6**	**+0.6**
IVAS	**Ivanjica**	**1.74**	**110**	*e*Pn	**Pb**	**17 33 01.2**	**+0.4**
IVAS				*e*Sn	**Sg**	**17 33 24.2**	**-0.2**
IVAS	**Ivanjica**	**1.74**	**110**	*e*Pn	**Pb**	**17 33 01.2**	**+0.4**
IVAS				*e*Sn	**Sg**	**17 33 24.2**	**-0.2**
SJES	**Sjenica**	**1.77**	**121**	*e*Pn	**Pb**	**17 33 01.6**	**+0.3**
SJES				*e*Sn	**Sb**	**17 33 24.4**	**+0.7**
TRUS	**Trudelj**	**1.80**	**88**	*e*Pg	**Pb**	**17 33 01.7**	**0.0**
TRUS				*e*Sg	**Sg**	**17 33 26.9**	**+0.6**
TRUS	**Trudelj**	**1.80**	**88**	*e*Pg	**Pb**	**17 33 01.7**	**0.0**
TRUS				*e*Sg	**Sg**	**17 33 26.9**	**+0.6**
HCY	**Herceg Novi**	**1.80**	**166**	*e*Pn	**Pb**	**17 33 01.8**	**0.0**
HCY				*e*Sn	**Sb**	**17 33 24.8**	**+0.2**
HCY	**Herceg Novi**	**1.80**	**166**	*e*Pn	**Pb**	**17 33 01.8**	**0.0**
HCY				*e*Sn	**Sb**	**17 33 24.8**	**+0.2**
PDG	**Podgorica**	**2.02**	**150**	*e*Pg	**Pb**	**17 33 05.1**	**-0.5**
PDG				*e*Sg	**Sg**	**17 33 32.9**	**-0.6**
PDG	**Podgorica**	**2.02**	**150**	⇑*i*P	**Pb**	**17 33 04.7**	**-0.9**
PDG	**Podgorica**	**2.02**	**150**	⇑*i*P	**Pb**	**17 33 04.7**	**-0.9**
PDG	**Podgorica**	**2.02**	**150**	*e*Pg	**Pb**	**17 33 05.1**	**-0.5**
PDG				*e*Sn	**Sn**	**17 33 29.7**	**+1.2**
PDG				S	**Sb**	**17 33 31.2**	**+0.2**
PDG				*e*Sg	**Sg**	**17 33 32.9**	**-0.6**
PDG	**Podgorica**	**2.02**	**150**	⇑*i*Pn	**Pb**	**17 33 04.8**	**-0.9**
PDG				*e*Sn	**Sn**	**17 33 29.7**	**+1.2**
GRUS	**Gruza**	**2.05**	**98**	*e*Pn	**Pn**	**17 33 04.3**	**+0.9**
GRUS	**Gruza**	**2.05**	**98**	*e*Pn	**Pn**	**17 33 04.3**	**+0.9**
MORH	**Mˆ‡rˆ¡gy, Hung**	**2.08**	**14**	*e*Pn	**Pn**	**17 33 05.0**	**+1.2**
MORH				*e*Sn	**Sn**	**17 33 31.1**	**+1.1**
MORH	**Mˆ‡rˆ¡gy, Hung**	**2.08**	**14**	*e*Pn	**Pn**	**17 33 05.0**	**+1.2**
MORH				*e*Sn	**Sn**	**17 33 31.1**	**+1.1**
NVLJ	**Novalja**	**2.21**	**281**	*e*Pn	**Pb**	**17 33 07.7**	**-0.9**
NVLJ				Sn	**Sb**	**17 33 35.3**	**-0.9**
DRME	**Dracevica, Mon**	**2.22**	**155**	*e*Sn	**Sn**	**17 33 34.2**	**+0.8**
DRME	**Dracevica, Mon**	**2.22**	**155**	*e*Pn	**Pn**	**17 33 07.3**	**+1.6**
DRME				*e*Sn	**Sn**	**17 33 34.2**	**+0.8**
BOJS	**Bojanci**	**2.29**	**306**	*i* Pn	**Pb**	**17 33 09.1**	**-1.1**
BOJS				*i* Sn	**Sn**	**17 33 37.1**	**+1.9**
BOJS	**Bojanci**	**2.29**	**306**	Pn	**Pb**	**17 33 09.1**	**-1.1**
BOJS				*i* Sn	**Sn**	**17 33 37.1**	**+1.9**
CRES	**Cresnjev**	**2.38**	**314**	*i* Pn	**Pb**	**17 33 10.1**	**-1.6**
CRES	**Cresnjev**	**2.38**	**314**	*e*Pn	**Pn**	**17 33 08.9**	**+1.0**
CRES				*e*Sn	**Sn**	**17 33 38.5**	**+1.2**
CRES	**Cresnjev**	**2.38**	**314**	*e*Pn	**Pn**	**17 33 08.9**	**+1.0**
CRES				*e*Sn	**Sn**	**17 33 38.5**	**+1.2**
GBRS	**Gornja Briga**	**2.57**	**302**	*i* Pn	**Pb**	**17 33 14.2**	**-0.8**
GBRS	**Gornja Briga**	**2.57**	**302**	*i* Pn	**Pb**	**17 33 14.2**	**-0.8**
VISS	**Visnje**	**2.70**	**307**	*i* Pn	**Pn**	**17 33 14.6**	**+2.2**
VISS	**Visnje**	**2.70**	**307**	*i* Pn	**Pn**	**17 33 14.6**	**+2.2**
MDVR	**Moldovita**	**2.79**	**77**	⇑*i*P	**Pn**	**17 33 13.9**	**+0.3**
MDVR	**Moldovita**	**2.79**	**77**	⇑*i*P	**Pn**	**17 33 13.9**	**+0.3**
BZS	**Buzias**	**2.99**	**60**	⇑*i*P	**Pn**	**17 33 17.2**	**+0.9**
BZS	**Buzias**	**2.99**	**60**	⇑*i*P	**Pn**	**17 33 17.2**	**+0.9**
BZS				S	**Sn**	**17 33 51.8**	**-0.7**
SOKA	**Soboth**	**3.20**	**322**	*e*Pn	**Pn**	**17 33 20.4**	**+1.2**
	0.3nm,0.2s						
SOKA				*e*Sn	**Sn**	**17 33 56.0**	**-1.6**
	3.3nm,0.4s						
SOKA	**Soboth**	**3.20**	**322**	Pn	**Pn**	**17 33 20.4**	**+1.2**
	0.3nm,0.2s						
SOKA				Sn	**Sn**	**17 33 56.0**	**-1.6**
	3.3nm,0.4s						
HERR	**Herculane**	**3.30**	**77**	⇑*i*P	**Pn**	**17 33 21.9**	**+1.4**
HERR	**Herculane**	**3.30**	**77**	⇑*i*P	**Pn**	**17 33 21.9**	**+1.4**
HERR				S	**Sn**	**17 33 59.2**	**-0.7**
OBKA	**Obir**	**3.31**	**315**	*e*Pn	**Pn**	**17 33 23.0**	**+2.3**
OBKA				*e*Sn	**Sn**	**17 34 01.4**	**+1.1**
	1.9nm,0.3s						
OBKA	**Obir**	**3.31**	**315**	Pn	**Pn**	**17 33 23.0**	**+2.3**
OBKA				Sn	**Sn**	**17 34 01.4**	**+1.1**
	1.9nm,0.3s						
ARSA	**Arzberg**	**3.48**	**332**	*e*Pn	**Pn**	**17 33 24.1**	**+1.1**
	1.2nm,0.4s						
ARSA				*e*Sn	**Sn**	**17 34 02.9**	**-1.6**
	1.9nm,0.4s						
ARSA	**Arzberg**	**3.48**	**332**	Pn	**Pn**	**17 33 24.1**	**+1.1**
	1.2nm,0.4s						
ARSA				Sn	**Sn**	**17 34 02.9**	**-1.6**
	1.9nm,0.4s						
MATE	**Matera**	**3.66**	**194**	⇓*i*P	**Pn**	**17 33 25.7**	**+0.2**
MATE	**Matera**	**3.66**	**194**	⇓*i*P	**Pn**	**17 33 25.7**	**+0.2**
PSZ	**Piszkesteto**	**3.97**	**20**	⇓*i*P	**Pn**	**17 33 29.8**	**0.0**
PSZ	**Piszkesteto**	**3.97**	**20**	⇓*i*P	**Pn**	**17 33 29.8**	**0.0**
CONA	**Conrad Observa**	**3.99**	**340**	*e*Pn	**Pn**	**17 33 30.9**	**+0.8**
	0.8nm,0.3s						
CONA				*e*Sn	**Sn**	**17 34 16.8**	**-0.4**
	2.9nm,0.5s						
CONA	**Conrad Observa**	**3.99**	**340**	Pn	**Pn**	**17 33 30.9**	**+0.8**
	0.8nm,0.3s						
CONA				Sn	**Sn**	**17 34 16.8**	**-0.4**
	2.9nm,0.5s						
MODS	**Modra-Piesok**	**4.20**	**354**	*e*PN	**Pn**	**17 33 34.5**	**+1.6**
MODS				*e*SN	**Sn**	**17 34 20.9**	**-1.3**
MODS				*e*LG	Lg	17 34 24.3	
MODS	**Modra-Piesok**	**4.20**	**354**	*e*Pn	**Pn**	**17 33 34.5**	**+1.6**
MODS				*e*Sn	**Sn**	**17 34 20.9**	**-1.3**
VYHS	**Vyhne**	**4.34**	**8**	*e*PN	**Pn**	**17 33 35.8**	**+0.9**
VYHS				*e*SN	**Sn**	**17 34 23.9**	**-1.9**
VYHS				*e*LG	Lg	17 34 27.2	
VYHS	**Vyhne**	**4.34**	**8**	*e*Pn	**Pn**	**17 33 35.8**	**+0.9**
VYHS				*e*Sn	**Sn**	**17 34 23.9**	**-1.9**
MOA	**Molln**	**4.44**	**327**	*e*Pn	**Pn**	**17 33 38.4**	**+2.1**
	0.7nm,0.3s						
MOA				*i* Sn	**Sn**	**17 34 29.1**	**+0.9**
	1.7nm,0.4s						
MOA	**Molln**	**4.44**	**327**	Pn	**Pn**	**17 33 38.4**	**+2.1**
	0.7nm,0.3s						
MOA				Sn	**Sn**	**17 34 29.1**	**+0.9**
	1.7nm,0.4s						
KHC	**Kasperske Hory**	**5.76**	**330**	*e*SN	**Sn**	**17 34 59.0**	**-1.7**
FETA	**Feichten**	**5.77**	**302**	Pg	**Pg**	**17 34 16.1**	**-2.8**
	1.9nm,0.7s						

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*NIED **29** 17:33:00, 32°.60N×131°.90E, h47km, Mw4.0 Best double couple: $M_0$1.07000×10¹⁵ NP1:ϕ_s23.00000°, δ23.00000°, λ-52.00000°. NP2:ϕ_s163.00000°, δ72.00000°, λ-105.00000°.*

*ISCJB **29** 17:33:11.5±0.4, 32°.62N±0°.04×131°.81E±0°.04, h59km±3km, mb3.7/10, MS3.1/2, Error ellipse: s-maj=7.5km s-min=5.3km az=154.6*

*JMA **29** 17:33:12.7, 32°.62N×131°.83E, h47km±1km, M3.8 Broadband fault plane solution: P waves. NP1: ϕ_s167.00000°, δ70.00000°, λ-121.00000°. NP2: ϕ_s48.00000°, δ37.00000°, λ-35.00000°. Principal axes: T Plg19.0000°, Azm280.0000°; N Plg29.0000°, Azm179.0000°; P Plg54.0000°, Azm38.0000°;*

JMA Felt II J1.

*IDC **29** 17:33:14.0±1.2, 32°.61N×131°.64E, h65km±9km, mb3.4/10, mb1 3.6/14, mb1mx3.4/68, mbtmp3.7/14, MS3.0/5, Ms1 3.0/5, ms1mx2.6/42 Error ellipse: s-maj=18.7km s-min=15.3km az=57.0*

ISC 29 17:33:12.4±0.7, **32°.62N**±0°.05×**131°.82E**±0°.04, **h49km**±6km, **n35, σ0s.93**/38, **mb3.7**/10, **2C-6D, Kyushu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JSKE	**Saikikamae**	**0.19**	**21**	P	**Pn**	**17 33 20.7**	**+0.2**
JSKE				S	**Sn**	**17 33 26.7**	**+0.4**
JHHC	**Hyugahichiya**	**0.23**	**222**	P	**Pn**	**17 33 20.9**	**+0.1**
JHHC				S	**Sn**	**17 33 27.2**	**+0.4**
JKIT	**Kitakata**	**0.31**	**271**	⇓P	**Pn**	**17 33 21.6**	**+0.1**
JKIT				S	**Sn**	**17 33 28.3**	**+0.3**
JUS	**Usuki**	**0.45**	**352**	⇓P	**Pn**	**17 33 23.1**	**+0.1**
JUS				S	**Sn**	**17 33 31.2**	**+0.7**
JTSN	**Tsuno**	**0.46**	**216**	⇓P	**Pn**	**17 33 23.3**	**+0.2**
JTSN				S	**Sn**	**17 33 31.4**	**+0.7**
JTO	**Tosashimizu**	**0.86**	**74**	⇑P	**Pn**	**17 33 28.3**	**+0.1**
JTO				S	**Sn**	**17 33 40.0**	**+0.2**
UWA2	**Uwa jima 2**	**0.90**	**49**	⇓P	**Pn**	**17 33 29.0**	**+0.3**
UWA2				S	**Sn**	**17 33 41.6**	**+0.9**
JNU	**Nakatsue**	**0.94**	**302**	P	**Pn**	**17 33 30.0**	**+0.7**
	609nm,0.3s,baz=76,slow=2.0,SNR=5155						
JNU				S	**Sn**	**17 33 42.9**	**+1.2**
	878nm,0.3s,baz=18,slow=23,SNR=40						
JNU				LR	LR	17 34 01.0	
	comp=Z,253nm,21.4s,baz=123,slow=58						
JTZ	**Takazaki**	**0.95**	**221**	⇑P	**Pn**	**17 33 30.5**	**+1.1**
JNA	**Nagahama**	**1.09**	**30**	⇓P	**Pn**	**17 33 31.9**	**+0.7**
JKU	**Kubokawa**	**1.25**	**56**	⇓P	**Pn**	**17 33 33.7**	**+0.2**
KSRS	**Korea Array**	**5.79**	**328**	P	**Pn**	**17 34 36.8**	**+1.2**
	1.3nm,0.3s,baz=146,slow=14,SNR=33						
KSRS				S	**Sn**	**17 35 40.1**	**-0.5**
	1.7nm,0.3s,baz=146,slow=25,SNR=10						
KSRS				LR	LR	17 36 11.1	
	comp=Z,7.5nm,20.2s,baz=140,slow=31						
MAT	**Matsushiro**	**6.56**	**52**	P	**Pn**	**17 34 48.0**	**+1.7**
MAT				S	**Sn**	**17 35 59.1**	**-0.7**
MJAR	**Matsushiro Arr**	**6.56**	**52**	P	**Pn**	**17 34 48.0**	**+1.7**
	3.8nm,0.3s,baz=242,slow=14,SNR=112						
MJAR				S	**Sn**	**17 35 58.0**	**-1.8**
	baz=77,slow=25,SNR=2.3						
MJAR				LR	LR	17 37 39.6	
	comp=Z,100nm,18.8s,baz=220,slow=40						
JHJ	**Hachijo jima 2**	**6.72**	**84**	P	**Pn**	**17 34 48.9**	**+0.5**
	9.9nm,0.3s,baz=85,slow=23,SNR=7.2						
JHJ				LR	LR	17 37 24.9	
	comp=Z,67nm,20.5s,baz=296,slow=36						
ASAJ	**Asahikawa**	**14.24**	**33**	P	**Pn**	**17 36 31.9**	**+0.8**
	0.2nm,0.3s,baz=148,slow=12,SNR=4.8						
ASAJ				LR	LR	17 41 37.5	
	comp=Z,43nm,20.0s,baz=318,slow=35						
KLR	**Kul'dur**	**16.59**	**360**	P	**P**	**17 37 03.4**	**+0.1**
	0.0nm,0.3s,baz=165,slow=9.0,SNR=13						
SONM	**Songino Array**	**24.50**	**316**	P	**P**	**17 38 26.4**	**-0.7**
	2.8nm,0.9s,baz=120,slow=9.3,SNR=13						
CMAR	**Chiang Mai Arr**	**32.70**	**253**	LR	LR	17 53 27.0	
	comp=Z,19nm,20.3s,baz=170,slow=37						
H11N2	**WAKE ISLAND Hy**	**33.84**	**104**	T	T	18 15 49.5	
	baz=300,slow=75,SNR=10						
H11N1	**WAKE ISLAND Hy**	**33.84**	**104**	T	T	18 15 49.8	
	baz=300,slow=75,SNR=5.8						
H11N3	**WAKE ISLAND Hy**	**33.85**	**104**	T	T	18 15 50.8	
	baz=300,slow=75,SNR=6.9						
H11S3	**WAKE ISLAND Hy**	**34.28**	**106**	T	T	18 16 21.4	
	baz=301,slow=75,SNR=7.5						
H11S1	**WAKE ISLAND Hy**	**34.29**	**106**	T	T	18 16 20.8	
	baz=301,slow=75,SNR=7.5						
H11S2	**WAKE ISLAND Hy**	**34.30**	**106**	T	T	18 16 26.4	
	baz=301,slow=75,SNR=5.0						
MKAR	**Makanchi Array**	**39.99**	**306**	P	**P**	**17 40 40.1**	**-2.2**
	0.3nm,0.6s,baz=91,slow=10,SNR=3.6						
KURBB	**Kurchatov Arra**	**42.70**	**311**	P	**P**	**17 41 03.2**	**-1.1**
	1.3nm,0.2s,baz=102,slow=9.7,SNR=3.0						
BVAR	**Borovoye Array**	**47.83**	**314**	P	**P**	**17 41 44.1**	**-0.8**
	1.2nm,0.6s,baz=94,slow=9.4,SNR=6.6						
WRA	**Warramunga Arr**	**52.32**	**177**	P	**P**	**17 42 18.7**	**-0.6**
	0.4nm,0.8s,baz=8.0,slow=8.3,SNR=3.2						
ASAR	**Alice Springs**	**56.01**	**178**	P	**P**	**17 42 46.1**	**0.0**
	0.2nm,0.6s,baz=8.6,slow=12,SNR=4.8						
ILAR	**Eielson Array**	**57.35**	**30**	P	**P**	**17 42 55.9**	**+0.7**
	0.6nm,0.6s,baz=268,slow=6.0,SNR=10						
GEYT	**Alibeck**	**58.96**	**298**	LR	LR	18 10 15.7	
	comp=Z,35nm,18.1s,baz=180,slow=38						
YKA	**Yellowknife Ar**	**71.43**	**27**	P	**P**	**17 44 27.5**	**+0.3**
	0.5nm,0.8s,baz=304,slow=5.7,SNR=5.2						
BRTR	**Keskin Array B**	**75.59**	**308**	P	**P**	**17 44 51.5**	**-0.8**
	0.7nm,0.8s,baz=91,slow=6.2,SNR=5.0						
NVAR	**Mina Array Bea**	**83.87**	**48**	P	**P**	**17 45 38.8**	**+1.6**
	0.4nm,0.5s,baz=296,slow=5.2,SNR=5.8						

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*NEIC **29** 17:35:49.0±0.0, 12°.02S×77°.20W, h58km, mb4.5/11, ML4.5(ARE), After ARE.*

NEIC Felt [III] at Callao, Lima and Ricardo Palma and [II] at Huacho, Huaral and San Luis. Also felt at Mala and Santa Eulalia.

*IDC **29** 17:35:50.9±1.3, 11°.94S×77°.16W, h49km±11km, mb3.8/9, mb1 4.0/10, mb1mx3.7/41, mbtmp4.1/10, ML2.8/1, MS3.5/6, Ms1 3.5/6, ms1mx3.0/42, Error ellipse: s-maj=30.0km s-min=18.3km az=61.0*

ISC 29 17:35:49.0±0.6, **12°.14S**±0°.07×**77°.24W**±0°.07, **h35km, n69, σ2s.51**/60, **mb4.4**/16, **MS3.7**/6, **1C, Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
NNA	**Nana**	**0.42**	**69**	P	**Pn**	**17 36 01.6**	**+3.0**
	2µm,0.3s,baz=300,slow=5.9,SNR=1089						
NNA				S	**Sn**	**17 36 09.2**	**+4.0**
	10µm,0.3s,baz=191,slow=18,SNR=264						
NNA	**Nana**	**0.42**	**69**	*e*Pn	**Pn**	**17 36 01.9**	**+3.4**
NNA				*e*Sn	**Sn**	**17 36 09.3**	**+4.1**
ATAH	**Atahualpa**	**5.10**	**347**	P	**Pn**	**17 37 07.0**	**+3.7**
	34nm,0.3s,baz=143,slow=3.6,SNR=138						
ATAH				S	**Sn**	**17 38 06.0**	**+4.8**
	19nm,0.3s,baz=105,slow=20,SNR=8.0						
LPAZ	**La Paz**	**9.75**	**116**	P	Pn	17 38 13.3	+6.0
	0.7nm,0.3s,baz=261,slow=5.8,SNR=13						
LPAZ				LR	LR	17 42 33.0	
	comp=Z,119nm,21.8s,baz=258,slow=41						
LPAZ	**La Paz**	**9.75**	**116**	*e*Pn	**Pn**	**17 38 06.5**	**-0.9**
MNMC	**Minye Minye**	**10.12**	**134**	*e*Pn	**Pn**	**17 38 13.9**	**+1.7**
PB11	**IPOC Station P**	**10.52**	**137**	*e*Pn	**Pn**	**17 38 18.2**	**+0.7**
PB01	**IPOC Station P**	**11.56**	**141**	*e*Pn	**Pn**	**17 38 30.7**	**-0.9**
OTAV	**Otavalo**	**12.35**	**354**	*e*Pn	**Pn**	**17 38 46.9**	**+3.9**
OTAV	**Otavalo**	**12.35**	**354**	*e*P	**Pn**	**17 38 45.8**	**+2.9**
GCUF	**Volcan Galeras**	**13.28**	**360**	*e*P	**Pn**	**17 38 57.8**	**+2.2**
SAML	**Samuel**	**14.18**	**78**	*e*Pn	**Pn**	**17 39 05.3**	**-2.2**
SOTA	**Rioblanco**	**14.20**	**3**	*e*P	**Pn**	**17 39 08.8**	**+0.7**
PCON	**Cinco Dias**	**14.40**	**3**	*e*P	**Pn**	**17 39 13.2**	**+2.3**
HORQ	**Saladito**	**15.53**	**2**	*e*P	**P**	**17 39 29.2**	**-0.6**
SJAC	**San Juan de Ar**	**15.66**	**12**	*e*P	**Pn**	**17 39 29.2**	**+2.0**
PRAC	**Prado**	**15.92**	**9**	*e*Pn	**Pn**	**17 39 30.1**	**-0.5**
	21nm,0.8s						
PRAC	**Prado**	**15.92**	**9**	*e*P	**P**	**17 39 34.5**	**+0.6**
YOTC	**Yotoco, Valle**	**16.04**	**3**	*e*P	**P**	**17 39 36.3**	**+1.0**
SIV	**San Ignacio**	**16.14**	**106**	P	**P**	**17 39 37.7**	**+1.3**
	0.2nm,0.3s,baz=284,slow=12,SNR=12						
VILC	**Villavicencio,**	**16.52**	**13**	*e*P	**Pn**	**17 39 39.4**	**+1.0**
CHIC	**Chingaza**	**17.02**	**12**	*e*P	**Pn**	**17 39 45.1**	**+0.3**
ROSC	**El Rosal**	**17.12**	**10**	P	**Pn**	**17 39 46.1**	**+0.1**
	0.7nm,0.3s,baz=153,slow=18,SNR=3.3						
ROSC	**El Rosal**	**17.12**	**10**	*e*P	P	17 39 59.3	+12
RUSC	**La Rusia**	**18.38**	**13**	*e*P	**Pn**	**17 40 04.0**	**+2.3**
	8.2nm,0.6s						
RUSC	**La Rusia**	**18.38**	**13**	*e*P	**Pn**	**17 40 03.3**	**+1.6**
PTBC	**PUERTO BERRIO,**	**18.76**	**9**	*e*P	**P**	**17 40 05.1**	**-0.1**
BARC	**Barichara**	**19.04**	**12**	*e*P	**Pn**	**17 40 09.9**	**+0.5**
DBBC	**Dabeiba**	**19.06**	**3**	*e*P	**Pn**	**17 40 14.8**	**+5.3**
ZARC	**Zaragoza, Cauc**	**19.65**	**7**	*e*P	**P**	**17 40 12.6**	**-2.3**
PTGA	**Pitinga**	**20.55**	**58**	P	**P**	**17 40 24.4**	**-0.3**
	5.2nm,0.5s,baz=228,slow=11,SNR=15						
PTGA				S	**S**	**17 44 04.8**	**-8.0**
	1.9nm,0.3s,baz=171,slow=19,SNR=4.0						
PTGA	**Pitinga**	**20.55**	**58**	*e*P	**P**	**17 40 24.9**	**+0.2**
	12nm,0.8s						
PTGA				S	**S**	**17 44 04.8**	**-8.0**
MOTC	**Monteria, Cord**	**20.84**	**4**	*e*P	**P**	**17 40 29.0**	**+1.2**
SJCC	**San Jacinto, C**	**21.99**	**5**	*e*P	**P**	**17 40 40.1**	**-0.2**
CPUP	**Villa Florida**	**23.46**	**130**	P	**P**	**17 40 57.4**	**+1.9**
	4.0nm,1.0s,baz=329,slow=9.1,SNR=4.1						
BDFB	**Brasilia**	**28.57**	**100**	LR	LR	17 54 07.3	
	comp=Z,121nm,21.1s,baz=181,slow=38						
PLCA	**Paso Flores**	**29.09**	**170**	P	**P**	**17 41 48.9**	**+2.6**
	4.8nm,1.0s,baz=15,slow=9.0,SNR=6.1						
TXAR	**Lajitas Array**	**48.48**	**329**	P	**P**	**17 44 28.5**	**-0.1**
	0.4nm,0.6s,baz=154,slow=9.2,SNR=5.6						
MIAR	**Mount Ida**	**48.95**	**342**	*e*P	**P**	**17 44 30.7**	**-1.2**
	4.1nm,0.6s						
WHAR	**Wooly Hollow**	**49.28**	**344**	*e*P	**P**	**17 44 33.0**	**-1.4**
	10nm,1.1s						
W39A	**Magazine**	**49.62**	**342**	*e*P	**P**	**17 44 36.0**	**-1.0**
	6.1nm,1.0s						
V40A	**Witts Springs**	**49.91**	**343**	*e*P	**P**	**17 44 36.0**	**-3.3**
	7.7nm,1.0s						
MNTX	**Cornudas Mount**	**51.26**	**329**	*e*P	**P**	**17 44 47.9**	**-1.6**
	6.9nm,1.6s						
S39A	**Bolivar**	**51.81**	**344**	*e*P	**P**	**17 44 52.4**	**-1.2**
	5.9nm,0.9s						
ANMO	**Albuquerque**	**54.41**	**330**	*e*P	**P**	**17 45 11.3**	**-1.6**
	5.5nm,1.4s						
PDAR	**Pinedale Array**	**62.14**	**334**	P	**P**	**17 46 05.5**	**-1.4**
	0.2nm,0.3s,baz=137,slow=8.6,SNR=4.0						
OMMB	**Old Mammoth Mi**	**63.11**	**324**	*e*P	**P**	**17 46 12.4**	**-1.1**
	6.3nm,1.1s						
NV01	**Mina Array Sit**	**63.27**	**325**	*e*P	**P**	**17 46 13.5**	**-1.0**
NVAR	**Mina Array Bea**	**63.27**	**325**	P	**P**	**17 46 15.2**	**+0.7**
	1.1nm,0.7s,baz=137,slow=7.2,SNR=12						
ULM	**Lac du Bonnet**	**64.23**	**347**	P	**P**	**17 46 18.4**	**-1.9**
	2.0nm,0.5s,baz=101,slow=7.5,SNR=3.0						
DBIC	**Dimbokro**	**74.34**	**79**	LR	LR	18 17 45.0	
	comp=Z,32nm,18.5s,baz=189,slow=34						
KOWA	**Kowa**	**77.21**	**72**	LR	LR	18 18 53.6	
	comp=Z,47nm,18.3s,baz=152,slow=34						
YKA	**Yellowknife Ar**	**79.87**	**343**	P	**P**	**17 47 52.7**	**-1.0**
	1.1nm,0.6s,baz=137,slow=5.2,SNR=12						
TORD	**Torodi Ar. Bea**	**82.21**	**75**	P	**P**	**17 48 07.0**	**-0.2**
	1.9nm,1.0s,baz=270,slow=5.8						
DLBC	**Dease Lake**	**82.33**	**335**	LR	LR	18 27 07.5	
	comp=Z,25nm,18.3s,baz=322,slow=37						
SYO	**Syowa Base**	**87.95**	**161**	⇑*e*PcP	**P**	**17 48 33.5**	**-1.4**
MAW	**Mawson**	**95.43**	**166**	LR	LR	18 30 27.8	
	comp=Z,25nm,19.7s,baz=244,slow=34						
H11N3	**WAKE ISLAND Hy**	**118.15**	**286**	T	T	20 03 06.6	
	baz=91,slow=74,SNR=11						
H11N2	**WAKE ISLAND Hy**	**118.16**	**286**	T	T	20 03 17.7	
	baz=91,slow=74,SNR=11						
H11N1	**WAKE ISLAND Hy**	**118.17**	**286**	T	T	20 03 19.3	
	baz=91,slow=74,SNR=11						
H11S2	**WAKE ISLAND Hy**	**118.26**	**285**	T	T	20 03 26.1	
	baz=95,slow=75,SNR=93						
H11S1	**WAKE ISLAND Hy**	**118.27**	**285**	T	T	20 03 26.8	
	baz=95,slow=75,SNR=114						
H11S3	**WAKE ISLAND Hy**	**118.28**	**285**	T	T	20 03 27.7	
	baz=95,slow=75,SNR=119						
ASAR	**Alice Springs**	**133.16**	**221**	PKP	**PKPdf**	**17 55 01.1**	**-0.9**
	0.2nm,0.4s,baz=127,slow=1.7,SNR=12						
WRA	**Warramunga Arr**	**135.47**	**225**	PKP	**PKPdf**	**17 55 06.2**	**-0.1**
	0.8nm,0.5s,baz=123,slow=2.0,SNR=8.3						
ZALV	**Zalesovo Beam**	**135.93**	**15**	PKP	**PKPdf**	**17 55 05.7**	**-0.4**
	1.0nm,0.5s,baz=297,slow=6.5,SNR=5.0						
KSH	**Kashi**	**143.87**	**36**	*e*PKP	**PKPdf**	**17 55 21.5**	**+0.3**
SONM	**Songino Array**	**144.29**	**356**	PKP	**PKPab**	**17 55 19.6**	**+0.1**
	0.5nm,0.4s,baz=306,slow=0.8,SNR=5.1						
LZH	**Lanzhou**	**156.14**	**358**	*e*PKP	PKPdf	17 55 32.8	-7.7
LZH				pPKP	sPKPdf	17 55 59.3	+3.4
LZH				sPKP		17 56 07.0	
LZH				LR	LR		
	comp=N,130nm,18.1s						
LZH				LR	LR		
	comp=E,130nm,18.0s						
LZH				LR	LR		
	comp=Z,170nm,20.1s						

IDC 29 17:41:31.5±2.4**,5°.20S×130°.53E,h0^{km},mb3.3**/1**, mb1 3.3**/3**,mb1mx3.1**/52**,mbtmp3.1**/3**,ML3.0**/2**,Error ellipse: s-maj=152.2km s-min=30.1km az=71.0,Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	**Warramunga Arr**	15.12	166	Pn	Pn	17 45 05.5	-1.1
	0.1nm,0.3s,baz=349,slow=14,SNR=3.4						
WRA				Sn	Sn	17 47 44.0	-11
	0.1nm,0.3s,baz=358,slow=22,SNR=3.1						
ASAR	**Alice Springs**	18.65	170	P	Pn	17 45 51.5	+0.2
	0.1nm,0.3s,baz=348,slow=9.3,SNR=14						
MKAR	**Makanchi Array**	67.03	326	P	P	17 52 26.5	0.0
	0.2nm,0.5s,baz=116,slow=6.6,SNR=4.0						

IDC 29 18:18:41.5±3.4**,19°.36S×177°.13W,h412^{km}**±57^{km}**, mb3.6**/4**,mb1 3.7**/6**,mb1mx3.1**/52**,mbtmp4.5**/6**,Error ellipse: s-maj=96.4km s-min=37.0km az=146.0,Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	**Afiamalu**	7.46	44	P	P	18 20 31.4	+0.3
	3.4nm,0.3s,baz=190,slow=2.9,SNR=6.3						
AFI				S	S	18 21 59.6	-0.5
	1.9nm,0.3s,baz=209,slow=21,SNR=2.1						
DZM	**Mont Dzumac**	15.61	257	P	P	18 22 00.0	-0.3
	1.8nm,0.3s,baz=91,slow=13,SNR=20						
CTA	**Charters Tower**	34.44	263	P	P	18 24 53.3	+0.5
	5.8nm,0.4s,baz=82,slow=12,SNR=4.3						
STKA	**Stephens Creek**	39.03	243	P	P	18 25 30.4	-0.4
	1.1nm,0.4s,baz=90,slow=12,SNR=14						
WRA	**Warramunga Arr**	45.58	261	P	P	18 26 22.9	-0.2
	0.9nm,0.4s,baz=95,slow=7.7,SNR=38						
ASAR	**Alice Springs**	45.59	256	P	P	18 26 23.0	-0.2
	5.9nm,0.8s,baz=91,slow=8.3,SNR=95						

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*ISCJB **29** 18:19:37.4±0.3, 43°.94N±0°.03×105°.33W±0°.04, h0^{km}, mb3.9/3, Error ellipse: s-maj=4.7km s-min=3.7km az=136.4*

*IDC **29** 18:19:39.0±0.9, 43°.87N×105°.50W, h0^{km}, mb3.9/3, mb1 3.7/9, mb1mx3.4/72, mbtmp3.5/9, ML2.9/4, Error ellipse: s-maj=22.5km s-min=8.3km az=147.0*

*NEIC **29** 18:19:38.9±0.4, 43°.88N×105°.28W, h0^{km}, ML3.5, Error ellipse: s-maj=7.3km s-min=6.5km az=165.0, Suspected Mining explosion.*

NEIC 48 km [30 miles] SSE of Gillette.

ISC 29 18:19:39.0±0.7**,43°.90N**±0°.04×**105°.33W**±0°.04**,h0^{km},n31, σ1^{s}79**/40**,mb3.9**/3**,Wyoming**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	**Black Hills**	0.96	76	P	Pg	18 19 57.4	0.0
	baz=256						
RSSD	**Black Hills**	0.96	76	*e*Pg	Pg	18 19 57.2	-0.1
RSSD				*e*Sg	Sb	18 20 11.0	-0.9
K22A	**Casper**	1.52	215	P	Pn	18 20 06.1	-1.5
	baz=36						
K22A				S	Sg	18 20 28.0	+0.1
	baz=36						
LAO	**LASA Array**	2.86	348	*e*Pn	Pn	18 20 25.5	-0.5
LAO				*e*Sn	Sn	18 20 58.2	-2.9
N23A	**Red Feather La**	3.04	189	P	Pn	18 20 28.4	-0.1
	baz=9.0						
N23A				S	Sn	18 21 06.2	+0.5
	baz=9.0						
RLMT	**Red Lodge**	3.07	295	P	Pn	18 20 31.0	+2.0
	baz=112						
PDAR	**Pinedale Array**	3.29	251	Pn	Pn	18 20 33.5	+1.6
	5.5nm,0.3s,baz=72,slow=14,SNR=45						
PDAR				Lg	Lg	18 21 17.7	
	15nm,0.3s,baz=70,slow=32,SNR=13						
BW06	**Boulder Array**	3.29	251	P	Pn	18 20 32.9	+0.9
	baz=69						
BW06				Sb	Sb	18 21 21.1	+2.1
	baz=69						
BW06	**Boulder Array**	3.29	251	*e*Pn	Pn	18 20 32.6	+0.7
BW06				*e*Sn	Sn	18 21 11.0	-0.8
OGNE	**Ogallala**	3.83	139	P	Pn	18 20 38.5	-0.7
	baz=322						
OGNE	**Ogallala**	3.83	139	*e*Pn	Pn	18 20 37.7	-1.5
ISCO	**Idaho Springs**	4.10	183	P	Pn	18 20 42.9	-0.3
	baz=3.3						
ISCO	**Idaho Springs**	4.10	183	*e*Pn	Pn	18 20 41.0	-2.2
ISCO				*e*Sn	Sn	18 21 27.4	-4.7
O20A	**White River Ci**	4.34	211	P	Pn	18 20 46.7	+0.3
	baz=29						
AHID	**Auburn Hatcher**	4.36	257	Pn	Pn	18 20 44.2	-2.5
AHID				*e*Sn	Sn	18 21 33.0	-5.3
DGMT	**Dagmar**	4.64	9	*e*Pn	Pn	18 20 54.0	+3.7
DGMT				*e*Sn	Sn	18 21 43.5	-1.4
BOZ	**Bozeman (W)**	4.80	293	*e*Pn	Pn	18 20 54.6	+1.9
HWUT	**Hardware Ranch**	5.13	246	*e*Pn	Pn	18 20 57.4	+0.1
	21nm,0.8s						
EGMT	**Eagleton**	5.15	325	Pn	Pn	18 20 57.4	0.0
	36nm,0.8s						
SDCO	**Great Sand Dun**	6.15	181	*e*Pn	Pn	18 21 11.1	-0.2
	2.7nm,0.6s						
ECSD	**EROS Data Cent**	6.31	88	*e*Pn	Pn	18 21 13.2	0.0
	6.9nm,0.5s						
ECSD				*e*Sn	Sn	18 22 27.3	+1.4
WALA	**Waterton Lakes**	7.86	314	*e*Pn	Pn	18 21 32.8	-1.7
	5.1nm,0.8s						
ULM	**Lac du Bonnet**	9.05	42	Pn	Pn	18 21 49.6	-1.2
	0.9nm,0.3s,baz=233,slow=13,SNR=6.0						
ULM				Pg	Pg	18 22 17.4	
	0.3nm,0.3s,baz=223,slow=18,SNR=3.0						
ULM				Lg	Lg	18 24 21.4	
	0.6nm,0.3s,baz=138,slow=19,SNR=2.7						
I56US	**NEWPORT INFRAS**	9.29	302	*i*		19 09 10.0	
	baz=116,slow=313,SNR=2.8						
NVAR	**Mina Array Bea**	11.20	245	Pn	Pn	18 22 21.7	+1.2
	0.1nm,0.3s,baz=57,slow=12,SNR=6.3						
YBH	**Yreka Blue Hor**	12.95	266	Pn	Pn	18 22 44.8	+0.5
	0.1nm,0.3s,baz=69,slow=5.0,SNR=4.9						
TXAR	**Lajitas Array**	14.60	174	Pn	Pn	18 23 07.4	+0.6
	baz=353,slow=13,SNR=2.6						
TXAR				Pg	Pg	18 24 05.4	
	0.1nm,0.3s,baz=8.4,slow=13,SNR=6.1						
TXAR				Lg	Lg	18 27 23.1	
	0.1nm,0.3s,baz=12,slow=30,SNR=4.6						
YKA	**Yellowknife Ar**	19.40	347	P	Pn	18 24 07.1	-0.3
	0.1nm,0.3s,baz=155,slow=13,SNR=3.4						
ZALV	**Zalesovo Beam**	82.14	354	P	P	18 32 00.9	-0.3
	0.6nm,0.4s,baz=40,slow=2.5,SNR=4.2						
BVAR	**Borovoye Array**	83.38	3	P	P	18 32 08.5	+0.8
	0.3nm,0.6s,baz=340,slow=6.3,SNR=3.6						
MKAR	**Makanchi Array**	89.44	355	P	P	18 32 38.1	+0.5
	0.6nm,0.7s,baz=20,slow=3.9,SNR=7.5						

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*SOME **29** 18:57:46.5, 43°.52N×81°.22E, h15^{km}*

*NNC **29** 18:57:50.2±6.5, 43°.47N×80°.99E, h0^{km}, mb2.8, mpv2.7, Error ellipse: s-maj=82.0km s-min=27.2km az=153.0*

ISC 29 18:57:42.3±2.6**,43°.44N**±0°.08×**81°.50E**±0°.09**,h15^{km}**±15^{km}**, n17,σ1^{s}60**/31**,2C-3D,Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	**Ketmen**	0.84	271	*e*P	Pb	18 57 59.1	+0.5
	31nm,0.1s						
KTMS				*e*S	Sg	18 58 08.0	-1.6
	193nm,0.1s						
PDGK	**Podgornoye**	1.47	267	⇓P	Pb	18 58 09.9	+0.6
	3.9nm,0.4s						
PDGK				⇓S	Sb	18 58 27.0	-0.9
	26nm,0.3s						
SHLS	**Shalkode**	1.51	260	*e*P	Pn	18 58 05.7	-3.2
	14nm,0.1s						
SHLS				*e*S	Sn	18 58 19.7	-8.6
	145nm,0.2s						
DJR	**Jarkent**	1.53	307	*e*P	Pg	18 58 12.5	+0.8
	4.4nm,0.2s						
DJR				*e*S	Sg	18 58 31.4	-0.1
	37nm,0.3s						
UZB	**Uzynbulak**	1.83	262	*e*P	Pb	18 58 16.2	+0.7
	5.3nm,0.2s						
UZB				*e*S	Sb	18 58 38.0	-0.3
	44nm,0.2s						
KPKS	**Kokpek**	2.05	272	*e*P	Pb	18 58 20.3	+1.1
	11nm,0.1s						
KPKS				*e*S	Sb	18 58 45.1	+0.6
	80nm,0.2s						
ZHN	**Zhinishke**	2.25	264	*e*P	Pb	18 58 23.6	+0.9
	5.3nm,0.1s						
ZHN				*e*S	Sb	18 58 50.4	0.0
	74nm,0.3s						
MNBS	**Baschi**	2.34	287	*e*P	Pb	18 58 25.1	+1.0
	0.2nm,0.1s						
MNBS				*e*S	Sb	18 58 53.0	+0.2
	28nm,0.4s						
KAPS	**Kapalarasan**	2.40	321	*e*P	Pg	18 58 28.2	-0.1
	2.6nm,0.2s						
KAPS				*e*S	Sg	18 58 56.9	-2.6
	23nm,0.3s						
KURS	**Kuram**	2.42	272	*e*P	Pb	18 58 26.9	+1.3
	2.6nm,0.6s						
KURS				*e*S	Sb	18 58 56.1	+0.9
	7.8nm,0.4s						
KOTS	**Kotyrbulak**	3.21	268	*e*P	Pb	18 58 40.8	+1.8
	2.6nm,0.3s						
KOTS				*e*S	Sb	18 59 19.4	+1.5
	18nm,0.4s						
MDOK	**Medeo**	3.26	267	*e*P	Pb	18 58 42.3	+2.4
	2.0nm,0.2s						
MDOK				*e*S	Sb	18 59 22.0	+2.5
	4.8nm,0.3s						
CHKK	**Chushkaly**	3.30	279	*e*P	Pb	18 58 42.3	+1.8
	0.9nm,0.3s						
CHKK				*e*S	Sb	18 59 22.3	+1.8
	7.2nm,0.2s						
MK31	**Makanchi Array**	3.40	9	Pn	Pb	18 58 44.0	+1.8
	baz=226,slow=14,SNR=4.2						
MK31				⇑Pg	Pg	18 58 58.1	+11
	0.9nm,0.5s,baz=188,slow=15,SNR=7.1						
MK31				Lg	Lg	18 59 35.1	
	1.2nm,0.3s,baz=200,slow=26,SNR=4.9						
KTBS	**Karatobe**	3.51	276	*e*P	Pb	18 58 45.4	+1.3
	0.8nm,0.3s						
KTBS				*e*S	Sb	18 59 27.8	+1.2
	7.0nm,0.5s						
DGS	**Degeres**	4.18	269	*e*P	Pb	18 58 56.6	+1.0
	1.0nm,0.4s						
DGS				*e*S	Sb	18 59 48.5	+2.6
	5.5nm,0.7s						
TKM2	**Tokmak 2**	4.35	265	⇑Pg	Pg	18 59 06.8	+1.3
	1.1nm,0.6s						
TKM2				⇓Lg	Lg	18 59 55.1	
	3.5nm,0.6s						

IDC 29 19:08:57.1±45.0**,15°.06S×170°.39W,h0^{km},mb4.0**/3**, mb1 4.2**/3**,mb1mx3.6**/49**,mbtmp4.0**/3**,Error ellipse: s-maj=885.4km s-min=189.1km az=79.0,Samoa Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	46.72	240	P	P	19 17 28.6	+0.4
	0.7nm,0.4s,baz=78,slow=10,SNR=5.1						
WRA	**Warramunga Arr**	52.74	256	P	P	19 18 13.7	-0.7
	0.5nm,0.5s,baz=95,slow=6.8,SNR=11						
ASAR	**Alice Springs**	52.97	252	P	P	19 18 16.1	+0.1
	3.8nm,0.6s,baz=89,slow=8.1,SNR=78						

IDC 29 19:18:06.3±1.3**,52°.65S×19°.01E,h0^{km},mb3.9**/3**, mb1 3.9**/3**,mb1mx3.5**/48**,mbtmp3.9**/3**,MS3.2**/3**,Ms1 3.2**/3**, ms1mx2.8**/43**,Error ellipse: s-maj=64.4km s-min=32.6km az=62.0,Southwest of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUR	**Sutherland**	20.30	4	P	Pn	19 22 49.2	+3.4
	9.3nm,1.1s,baz=205,slow=14,SNR=2.7						
BOSA	**Boshof**	24.46	13	LR	LR	19 31 03.6	
	comp=Z,61nm,20.2s,baz=185,slow=32						
MAW	**Mawson**	25.74	142	P	P	19 23 37.5	-0.5
	1.6nm,0.8s,baz=290,slow=12,SNR=2.9						
LBTB	**Lobatse**	28.05	13	LR	LR	19 33 50.2	
	comp=Z,47nm,20.0s,baz=194,slow=34						
TSUM	**Tsumeb**	33.40	358	LR	LR	19 35 40.9	
	comp=Z,45nm,20.2s,baz=158,slow=32						
QSPA	**South Pole Qui**	37.58	180	P	P	19 25 22.2	0.0
	1.8nm,0.7s,baz=244,slow=1.9,SNR=8.5						
ASAR	**Alice Springs**	85.33	123	P	P	19 30 45.9	+0.6
	0.4nm,0.7s,baz=208,slow=4.9,SNR=5.5						
PDAR	**Pinedale Array**	144.71	275	PKP	PKPab	19 37 42.0	-1.4
	0.5nm,0.6s,baz=121,slow=4.2,SNR=6.0						
NVAR	**Mina Array Bea**	147.41	261	PKPbc	PKPbc	19 37 51.7	-0.1
	0.6nm,0.7s,baz=136,slow=4.3,SNR=4.6						
ILAR	**Eielson Array**	165.86	335	PKPab	PKPab	19 39 11.1	-0.3
	0.4nm,0.8s,baz=26,slow=2.3,SNR=5.0						

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*ISCJB **29** 19:33:26.6±0.3, 19°.37N±0°.03×146°.36E±0°.05, h33^{km}, mb4.6/89, MS3.6/35, Error ellipse: s-maj=6.9km s-min=4.7km az=176.8*

*BJI **29** 19:33:27.1, 19°.06N×146°.52E, h65^{km}, mb4.7/47, mB4.9/27, Ms4.3/11, Ms7 4.1/12*

*IDC **29** 19:33:32.0±1.6, 19°.30N×146°.33E, h67^{km}±13^{km}, mb4.2/28, mb1 4.3/31, mb1mx4.2/64, mbtmp4.5/31, MS3.5/32, Ms1 3.5/32, ms1mx3.4/51, Error ellipse: s-maj=15.8km s-min=11.2km az=95.0*

*MOS **29** 19:33:32.4±1.2, 19°.34N×146°.25E, h84^{km}, mb4.8/32, Error ellipse: s-maj=12.1km s-min=5.6km az=105.3*

*NEIC **29** 19:33:32.0±1.2, 19°.42N×146°.21E, h66^{km}±11^{km}, mb4.8/29, Error ellipse: s-maj=9.5km s-min=6.6km az=92.0*

ISC 29 19:33:29.2±0.4**,19°.45N**±0°.05×**146°.29E**±0°.09**,h35^{km},n167, σ2^{s}05**/162**,mb4.7**/89**,MS3.6**/35**,5C-16D,Mariana Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	**Guam**	5.99	193	P	Pn	19 34 58.0	+2.6
	14nm,0.3s,baz=141,slow=1.4,SNR=17						
GUMO				S	Sn	19 36 08.0	+5.3
	29nm,0.3s,baz=90,slow=20,SNR=4.3						
GUMO	**Guam**	5.99	193	*e*Pn	Pn	19 34 58.6	+3.2
GUMO				*e*Sn	Sn	19 36 03.1	+0.3
GUMO	**Guam**	5.99	193	*e*P	Pn	19 34 58.6	+3.2
GUMO				*e*		19 36 03.1	
CBIJ	**Chichi jima**	8.49	334	*e*Pn	Pn	19 35 31.6	+1.9
JHJ2	**Mitsune**	14.78	338	*e*Pn	Pn	19 36 57.3	+1.6
JHJ	**Hachijo jima 2**	14.80	338	P	P	19 37 03.2	+1.7
	13nm,0.3s,baz=164,slow=8.9,SNR=7.3						
INU	**Inuyama**	17.83	335	*e*P	P	19 37 35.2	+0.2
	50nm,0.9s						
MJAR	**Matsushiro Arr**	18.44	339	P	Pn	19 37 43.0	+0.8
	1.4nm,0.3s,baz=168,slow=11,SNR=89						
MJAR				S	Sn	19 41 07.1	-0.1
	0.2nm,0.3s,baz=95,slow=28,SNR=4.5						
MJAR				ScP	ScP	19 45 39.5	-4.9
	0.1nm,0.3s,baz=190,slow=2.9,SNR=5.2						
MAJO	**Matsushiro**	18.45	339	*e*P	P	19 37 41.1	-0.7
	26nm,0.8s						
MAJO				*e*Sn	Sn	19 41 05.2	-2.0
MAJO	**Matsushiro**	18.45	339	*de*P	Pn	19 37 43.2	+1.1
MAJO				pmax	pmax		
	comp=Z,19nm,0.7s						
MAT	**Matsushiro**	18.45	339	P	Pn	19 37 43.1	+1.0
MAT				S	S	19 41 19.6	+9.0
MJB9	**Matsu-Tunnel**	18.45	339	*e*P	P	19 37 41.1	-0.8
	comp=Z,26nm,0.8s						
H11S3	**WAKE ISLAND Hy**	19.32	89	T	T	19 58 58.1	
	baz=275,slow=74,SNR=9.9						
H11S1	**WAKE ISLAND Hy**	19.33	89	T	T	19 58 59.4	
	baz=275,slow=74,SNR=9.5						
H11S2	**WAKE ISLAND Hy**	19.34	89	T	T	19 58 59.4	
	baz=275,slow=74,SNR=10						
JNU	**Nakatsue**	19.36	318	P	Pn	19 37 53.0	-0.3
	comp=Z,0.7nm,0.3s,baz=123,slow=8.1,SNR=10						
JNU	**Nakatsue**	19.36	318	*e*P	P	19 37 51.0	-1.0
	comp=Z,48nm,1.5s						
H11N1	**WAKE ISLAND Hy**	19.42	86	T	T	19 56 27.2	
	baz=276,slow=75,SNR=2.8						
H11N2	**WAKE ISLAND Hy**	19.42	86	T	T	19 56 28.2	
	baz=276,slow=75,SNR=6.7						
H11N3	**WAKE ISLAND Hy**	19.44	86	T	T	19 56 27.1	
	baz=276,slow=75,SNR=7.9						
JAY	**Jayapura**	22.51	195	P	P	19 38 26.8	+0.8
JAY				pmax	pmax		
	comp=Z,9.0nm,1.0s						
ERM	**Erimo**	22.65	354	⇑*e*P	P	19 38 30.2	+2.9
ERM				pmax	pmax		
	comp=Z,13nm,1.0s						
DAV	**Davao City (W)**	23.58	241	LR	LR	19 46 03.6	
	comp=Z,60nm,20.9s,baz=168,slow=32						
TJN	**Taejon**	23.67	319	⇓*i*P	P	19 38 36.5	-1.1
KSRS	**Korea Array**	24.05	322	P	P	19 38 41.4	+0.2
	comp=Z,7.9nm,0.8s,baz=146,slow=8.8,SNR=26						
KSRS				ScP	ScP	19 45 54.1	-4.0
	comp=Z,1.6nm,1.0s,baz=128,slow=2.0,SNR=5.5						
KSAR	**Wonju Array Be**	24.07	322	P	P	19 38 41.4	+0.1
KSAR	**Wonju Array Be**	24.07	322	P	P	19 38 41.4	+0.1
KS01	**Wonju Array Si**	24.09	322	*e*P	P	19 38 38.5	-3.0
SHO	**Shikotan**	24.35	1	*e*P	P	19 38 45.5	+1.7
SHO				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ASAJ	**Asahikawa**	24.79	354	P	P	19 38 50.0	+2.2
	comp=Z,12nm,0.7s,baz=187,slow=9.0,SNR=15						
ASAJ				LR	LR	19 50 08.8	
	comp=Z,73nm,19.2s,baz=181,slow=40						
KUR	**Kuril'sk**	25.74	3	⇓*e*P	P	19 38 58.9	+2.5
USRK	**Ussuriysk Ar.**	27.42	337	P	P	19 39 13.2	+1.6
	comp=Z,6.5nm,0.7s,baz=130,slow=9.0						
NJ2	**Nanjing**	27.62	302	*e*P	P	19 39 13.0	-0.5
NJ2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
PMG	**Port Moresby**	28.69	178	LR	LR	19 51 25.4	
	comp=Z,51nm,19.4s,baz=5.5,slow=38						
CN2	**Changchun**	29.90	329	*e*P	P	19 39 36.3	+2.6
HNR	**Honiara**	31.70	154	LR	LR	19 51 23.5	
	comp=Z,157nm,21.7s,baz=342,slow=34						
KLR	**Kul'dur**	31.92	342	*d i*P	P	19 39 52.4	+1.0
GRNR	**Gornyy**	32.21	348	*e*P	P	19 39 58.1	+4.1
GRNR				pmax	pmax		
	comp=Z,44nm,1.0s						
BJI	**Beijing**	32.99	315	⇓*e*P	P	19 40 02.0	+1.1
BJI				pmax	pmax		
	comp=Z,10.0nm,0.7s						
PETK	**Petropavlovsk-**	34.74	12	P	P	19 40 17.7	+1.7
	comp=Z,7.2nm,0.6s,baz=182,slow=6.5						
PETK				LR	LR	19 52 32.0	
	comp=Z,78nm,21.8s,baz=197,slow=33						
HHC	**Hu-ho-hao-te**	36.48	313	*e*P	P	19 40 32.5	+1.3
HHC				pP	sP	19 40 51.3	+5.7
HHC				S	S	19 46 07.5	-3.5
HHC				sS	ScP	19 46 35.0	-3.7
HHC				pmax	pmax		
	comp=Z,14nm,1.0s						
HHC				pmax	pmax		
	comp=Z,97nm,6.1s						
HHC				LR	LR		
	comp=Z,91nm,12.6s						
HHC				LR	LR		
	comp=Z,110nm,12.6s						
HHC				LR	LR		
	comp=Z,74nm,13.7s						
BATI	**Baumata**	36.95	219	LR	LR	19 56 26.7	
	comp=Z,140nm,18.1s,baz=240,slow=37						
GYA	**Guiyang**	37.03	288	*e*P	P	19 40 35.8	-0.3
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ZEA	**Zeya**	37.23	341	*e*P	P	19 40 38.2	+1.0
ZEA				pmax	pmax		
	comp=Z,17nm,1.0s						
CD2	**Chengdu**	39.92	295	*e*P	P	19 40 58.8	-1.5
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,120nm,5.0s						
MA2	**Magadan**	40.21	4	P	P	19 41 03.1	+1.1
	comp=Z,16nm,0.8s,baz=134,slow=4.9,SNR=6.9						
MA2	**Magadan**	40.21	4	*e*P	P	19 41 03.2	+1.1
MA2				pmax	pmax		
	comp=Z,18nm,1.7s						
KMI	**Kunming**	40.55	286	P	P	19 41 04.8	-1.0
KMI				pmax	pmax		
	comp=Z,5.0nm,0.7s						
LZH	**Lanzhou**	40.70	303	*e*P	P	19 41 07.5	+0.8
LZH				pP	sP	19 41 21.5	+0.3
LZH				sP	pP	19 41 29.5	+13
LZH				*e*PP	PnPn	19 42 47.0	+2.0
LZH				pmax	pmax		
	comp=Z,26nm,1.2s						
LZH				pmax	pmax		
	comp=Z,97nm,4.9s						
LZH				LR	LR		
	comp=Z,170nm,15.0s						
LZH				LR	LR		
	comp=Z,180nm,15.2s						
LZH				LR	LR		
	comp=Z,280nm,18.7s						
WRAB	**Tennant Creek**	40.85	197	*de*P	P	19 41 06.9	-1.0
WRAB				pmax	pmax		
	comp=Z,15nm,1.0s						
WB2	**Warramunga Arr**	40.86	197	*e*P	P	19 41 06.9	-1.0
	comp=Z,17nm,0.9s						
WRA	**Warramunga Arr**	40.87	197	P	P	19 41 05.9	-2.1
	comp=Z,14nm,1.0s,baz=18,slow=8.8,SNR=52						
ULN	**Ulaanbaatar**	42.53	321	*e*P	P	19 41 20.3	-1.2
	comp=Z,6.6nm,0.7s						
ULN	**Ulaanbaatar**	42.53	321	*d i*P	P	19 41 22.2	+0.6
ULN				pmax	pmax		
	comp=Z,7.0nm,0.7s						
SONA1	**Songino Array**	42.91	321	*e*P	P	19 41 23.6	-1.1
SONM	**Songino Array**	42.91	321	P	P	19 41 25.1	+0.5
	comp=Z,6.5nm,0.6s,baz=132,slow=8.5,SNR=52						
SONM				PcP	PcP	19 43 14.8	-0.1
	comp=Z,0.7nm,0.6s,baz=136,slow=2.7,SNR=3.4						
SONM				ScP	ScP	19 46 60.0	-3.5
	comp=Z,0.4nm,0.7s,baz=116,slow=3.4,SNR=4.3						
SEY	**Seymchan**	43.65	4	⇓*e*P	P	19 41 31.6	+1.5
YAK	**Yakutsk**	44.09	349	*e*P	P	19 41 33.3	-0.4
YAK				pmax	pmax		
	comp=Z,21nm,0.9s						
YAK				pmax	pmax		
	comp=N,5.0nm,1.0s						
AS01	**Alice Springs**	44.51	196	*e*P	P	19 41 37.0	-0.6
AS31	**Alice Springs**	44.52	196	*e*P	P	19 41 38.1	+0.4
	comp=N,1.5nm,0.6s						
ASAR	**Alice Springs**	44.53	196	P	P	19 41 36.1	-1.6
	comp=N,2.5nm,0.7s,baz=3.6,slow=6.7,SNR=23						
ASAR				ScP	ScP	19 47 05.3	-4.9
	comp=N,0.6nm,0.8s,baz=16,slow=4.8,SNR=4.4						
GTA	**Gaotai**	44.54	307	⇑P	P	19 41 38.5	+0.7
GTA				pP	sP	19 41 53.0	+0.6
GTA				sP	pP	19 41 59.5	+11
GTA				pmax	pmax		
	comp=N,6.0nm,1.6s						
CMAR	**Chiang Mai Arr**	44.67	277	P	P	19 41 40.4	+1.3
	comp=N,1.5nm,1.0s,baz=64,slow=8.2,SNR=4.6						
BOD	**Bodaibo**	45.04	336	*e*P	P	19 41 35.2	-6.2
BOD				pmax	pmax		
	comp=Z,5.0nm,1.2s						
DZM	**Mont Dzumac**	45.73	153	LR	LR	19 58 13.6	
	comp=Z,93nm,21.1s,baz=338,slow=32						
ZAK	**Zakamensk**	45.89	323	*e*P	P	19 41 48.1	-0.2
ZAK				pmax	pmax		
	comp=Z,6.0nm,1.0s						
TLY	**Talaya**	46.27	324	*e*P	P	19 41 52.0	+0.7
TLY				*e*S	S	19 48 37.0	+1.3
TLY				pmax	pmax		
	comp=Z,10.0nm,1.1s						
TLY				MLR	MLR		
	comp=Z,64nm,19.0s						
MOY	**Mondy**	47.74	323	*e*P	P	19 42 04.4	+1.5
MOY				pmax	pmax		
	comp=Z,11nm,1.4s						
LSA	**Lhasa**	50.77	293	P	P	19 42 30.2	+3.5
LSA				pmax	pmax		
	comp=Z,7.0nm,1.0s						
STKA	**Stephens Creek**	51.23	185	P	P	19 42 26.9	-2.6
	comp=Z,1.4nm,0.5s,baz=354,slow=11,SNR=7.4						
STKA				LR	LR	20 04 17.2	
	comp=Z,86nm,20.1s,baz=22,slow=36						
HVS	**Khovu-Aksy**	51.81	320	⇓*e*P	P	19 42 35.3	+1.6
HVS				pmax	pmax		
	comp=Z,11nm,0.8s						
AFI	**Afiamalu**	52.95	126	LR	LR	19 59 41.1	
	comp=Z,33nm,21.5s,baz=338,slow=30						
TIXI	**Tiksi**	53.19	353	⇓*e*P	P	19 42 43.3	-0.2
TIXI				pmax	pmax		
	comp=Z,5.0nm,0.8s						
DGZ	**Jazzator, Alta**	55.34	318	*i* P	P	19 43 00.8	+1.0
DGZ				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ZAA0	**Zalesovo Array**	57.76	322	*e*P	P	19 43 15.2	-1.4
	comp=Z,17nm,1.0s						
ZALV	**Zalesovo Beam**	57.76	322	P	P	19 43 16.6	-0.1
	comp=Z,8.7nm,0.5s,baz=97,slow=6.5,SNR=46						
ZALV				LR	LR	20 08 53.3	
	comp=Z,42nm,20.3s,baz=68,slow=37						

ZALV	**Zalesovo Beam**	**57.76**	**322**	eP	**P**	**19 43 15.7**	**-1.0**
ZALV	**Zalesovo Beam**	**57.76**	**322**	eP	**P**	**19 43 15.7**	**-1.0**
MK01	**Makanchi Array**	**58.34**	**313**	eP	**P**	**19 43 21.3**	**+0.4**
MK31	**Makanchi Array**	**58.35**	**313**	eP	**P**	**19 43 21.3**	**+0.3**
MK31	**Makanchi Array**	**58.35**	**313**	eP	**P**	**19 43 21.3**	**+0.3**
MKAR	**Makanchi Array**	**58.35**	**313**	P	**P**	**19 43 21.6**	**+0.6**
	comp=Z,10nm,0.7s,baz=92,slow=9.1,SNR=100						
MKAR				ScP	**ScP**	**19 48 06.1**	**-3.4**
	comp=Z,0.8nm,0.8s,baz=84,slow=5.2,SNR=3.4						
MKAR				LR	LR	20 10 49.0	
	comp=Z,31nm,18.3s,baz=54,slow=38						
KDAK	**Kodiak Island**	**58.43**	**33**	P	**P**	**19 43 21.6**	**+0.3**
	comp=Z,6.4nm,0.7s,baz=208,slow=9.1,SNR=7.2						
KDAK	**Kodiak Island**	**58.43**	**33**	i P	**P**	**19 43 23.3**	**+2.1**
MAKZ	**Makanchi**	**58.56**	**313**	eP	**P**	**19 43 22.3**	**-0.1**
	comp=Z,17nm,0.8s						
MAKZ	**Makanchi**	**58.56**	**313**	eP	**P**	**19 43 22.3**	**-0.1**
MAKZ				pmax	pmax		
	comp=Z,17nm,0.8s						
NVS	**Novosibirsk**	**58.84**	**323**	eP	**P**	**19 43 24.3**	**+0.1**
NVS				pmax	pmax		
	comp=N,5.0nm,1.1s						
NVS				pmax	pmax		
	comp=E,7.0nm,1.1s						
NVS				pmax	pmax		
	comp=Z,12nm,1.1s						
NWAO	**Narrogin (SRO)**	**59.02**	**208**	LR	LR	20 08 14.4	
	comp=Z,29nm,21.6s,baz=192,slow=35						
PDGK	**Podgornoye**	**60.16**	**309**	P	**P**	**19 43 34.3**	**+0.6**
PDGK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
CAST	**Castle Rocks**	**60.18**	**27**	eP	**P**	**19 43 33.6**	**+0.2**
	comp=Z,9.4nm,0.8s						
IM3	**Indian Mountai**	**60.31**	**24**	eP	**P**	**19 43 34.4**	**+0.3**
BPAW	**Bear Paw Mtn.**	**60.84**	**27**	eP	**P**	**19 43 37.5**	**-0.3**
	comp=Z,17nm,1.0s						
TRF	**Thorofare Moun**	**60.96**	**27**	eP	**P**	**19 43 38.1**	**-0.8**
	comp=Z,13nm,0.9s						
PMR	**Palmer**	**61.03**	**30**	eP	**P**	**19 43 38.3**	**-0.8**
	comp=Z,4.3nm,0.7s						
PMR	**Palmer**	**61.03**	**30**	eP	**P**	**19 43 38.3**	**-0.8**
PMR				pmax	pmax		
	comp=Z,4.0nm,0.7s						
KURK	**Kurchatov**	**61.09**	**318**	eP	**P**	**19 43 38.0**	**-1.6**
	comp=Z,20nm,0.9s						
KURK	**Kurchatov**	**61.09**	**318**	d iP	**P**	**19 43 39.7**	**0.0**
KURK				pmax	pmax		
	comp=Z,19nm,0.8s						
KURBB	**Kurchatov Arra**	**61.14**	**318**	P	**P**	**19 43 40.4**	**+0.4**
	comp=Z,19nm,0.8s,baz=90,slow=7.6,SNR=134						
MLY	**Manley**	**61.20**	**26**	eP	**P**	**19 43 39.5**	**-0.8**
	comp=Z,9.1nm,1.0s						
DHY	**Denali Highway**	**62.15**	**28**	eP	**P**	**19 43 47.0**	**+0.1**
	comp=Z,3.0nm,0.7s						
WRH	**Wood River Hil**	**62.15**	**27**	eP	**P**	**19 43 46.6**	**-0.1**
	comp=Z,6.1nm,1.0s						
KLU	**Klutina**	**62.51**	**30**	eP	**P**	**19 43 49.3**	**+0.1**
	comp=Z,7.4nm,1.0s						
TOLK	**Toolik Lake Re**	**62.69**	**22**	eP	**P**	**19 43 51.0**	**+0.7**
	comp=Z,9.8nm,0.6s						
ILAR	**Eielson Array**	**62.73**	**26**	P	**P**	**19 43 49.5**	**-1.0**
	comp=Z,3.8nm,0.8s,baz=258,slow=5.4,SNR=43						
ILAR				LR	LR	20 09 28.2	
	comp=Z,27nm,19.8s,baz=279,slow=34						
ILB	**Eielson Array**	**62.73**	**26**	eP	**P**	**19 43 48.4**	**-2.1**
IL1	**Eielson Array**	**62.73**	**26**	eP	**P**	**19 43 49.3**	**-1.2**
KSH	**Kashi**	**62.89**	**305**	eP	**P**	**19 43 56.0**	**+3.8**
KSH				ePcP	**PcP**	**19 44 32.5**	**+2.3**
PAX	**Paxson**	**62.98**	**28**	eP	**P**	**19 43 51.2**	**-1.1**
	comp=Z,5.6nm,0.7s						
PAX	**Paxson**	**62.98**	**28**	eP	**P**	**19 43 51.2**	**-1.1**
PAX				pmax	pmax		
	comp=Z,6.0nm,0.7s						
HARP	**HAARP**	**63.03**	**29**	eP	**P**	**19 43 51.6**	**-1.0**
	comp=Z,18nm,0.7s						
BMRM	**Bremner River**	**63.06**	**31**	eP	**P**	**19 43 51.7**	**-1.1**
	comp=Z,12nm,1.1s						
RIDG	**Independ'e Rid**	**63.40**	**28**	eP	**P**	**19 43 53.5**	**-1.6**
	comp=Z,11nm,0.9s						
AAK	**Ala-Archa**	**63.83**	**309**	LR	LR	20 14 32.8	
	comp=Z,32nm,18.4s,baz=92,slow=38						
AAK	**Ala-Archa**	**63.83**	**309**	⇑eP	**P**	**19 43 59.5**	**+1.1**
AAK				pmax	pmax		
	comp=Z,6.0nm,1.2s						
SFK	**Sufi-Kurgan**	**64.75**	**306**	P	**P**	**19 44 05.8**	**+1.2**
SFK				pmax	pmax		
	comp=Z,6.0nm,1.7s						
DAWY	**Dawson**	**65.83**	**28**	eP	**P**	**19 44 10.8**	**-0.1**
	comp=Z,4.7nm,0.8s						
BVAR	**Borovoye Array**	**66.25**	**320**	P	**P**	**19 44 14.0**	**+0.3**
	comp=Z,9.2nm,0.5s,baz=92,slow=7.4,SNR=79						
BVAR				LR	LR	20 14 42.3	
	comp=Z,33nm,20.4s,baz=95,slow=37						
BRVK	**Borovoye**	**66.32**	**320**	d iP	**P**	**19 44 14.2**	**+0.1**
BRVK				pmax	pmax		
	comp=Z,21nm,1.3s						
INK	**Inuvik**	**68.47**	**23**	P	**P**	**19 44 27.4**	**-0.1**
	comp=Z,8.3nm,0.7s,baz=288,slow=6.5,SNR=25						
INK	**Inuvik**	**68.47**	**23**	eP	**P**	**19 44 26.6**	**-0.9**
	comp=Z,9.3nm,0.8s						
INK	**Inuvik**	**68.47**	**23**	eP	**P**	**19 44 26.6**	**-0.9**
INK				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KBL	**Kabul**	**68.97**	**300**	eP	**P**	**19 44 30.2**	**-1.3**
	comp=Z,14nm,1.1s						
KBL	**Kabul**	**68.97**	**300**	eP	**P**	**19 44 30.2**	**-1.3**
KBL				pmax	pmax		
	comp=Z,14nm,1.1s						
DLBC	**Dease Lake**	**70.36**	**34**	eP	**P**	**19 44 39.3**	**-0.1**
	comp=Z,7.8nm,1.0s						
SVE	**Sverdlovsk**	**71.59**	**325**	eP	**P**	**19 44 47.3**	**+0.5**
ARU	**Arti**	**72.78**	**324**	eP	**P**	**19 44 51.5**	**-2.4**
	comp=Z,6.6nm,0.6s						
ARU	**Arti**	**72.78**	**324**	d iP	**P**	**19 44 53.7**	**-0.2**
ARU						19 47 35.3	
ARU				S	**S**	**19 54 16.0**	**-1.2**
ARU				SS	**SS**	**19 58 48.5**	**-8.4**
ARU				pmax	pmax		
	comp=Z,6.0nm,0.7s						
PPT	**Papeete**	**72.94**	**116**	LR	LR	20 08 44.2	
	comp=Z,89nm,21.7s,baz=346,slow=29						
ABKAR	**Akbulak array**	**73.17**	**317**	eP	**P**	**19 44 55.6**	**-0.8**
AKTO	**Aktyubinsk**	**74.17**	**318**	P	**P**	**19 45 01.7**	**-0.6**
	comp=Z,3.1nm,0.7s,baz=87,slow=8.3,SNR=13						
AKTO				LR	LR	20 18 34.3	
	comp=Z,36nm,21.5s,baz=69,slow=36						
MCW	**Mount Constitu**	**76.22**	**43**	eP	**P**	**19 45 16.6**	**+2.5**
MCW	**Mount Constitu**	**76.22**	**43**	eP	**P**	**19 45 16.6**	**+2.5**
GEYT	**Alibeck**	**76.91**	**306**	P	**P**	**19 45 19.2**	**+0.9**
	comp=Z,1.0nm,0.8s,baz=105,slow=1.7,SNR=5.9						
YKW3	**Yellowknife Ar**	**77.04**	**28**	eP	**P**	**19 45 17.4**	**-1.0**
	comp=Z,6.8nm,0.9s						
YKA	**Yellowknife Ar**	**77.07**	**28**	P	**P**	**19 45 18.5**	**0.0**
	comp=Z,3.5nm,0.6s,baz=288,slow=5.3,SNR=18						
YKA				LR	LR	20 17 17.4	
	comp=Z,6.2nm,21.5s,baz=288,slow=34						
PRGR	**Permogore**	**78.02**	**331**	eP	**P**	**19 45 23.2**	**-0.7**
PRGR				pmax	pmax		
	comp=Z,10.0nm,0.7s						
YBH	**Yreka Blue Hor**	**78.05**	**50**	LR	LR	20 13 51.1	
	comp=Z,22nm,20.0s,baz=317,slow=31						
SPITS	**Spitsbergen Ar**	**78.52**	**351**	LR	LR	20 21 23.1	
	comp=Z,18nm,21.4s,baz=105,slow=36						
RES	**Resolute Bay**	**78.56**	**14**	P	**P**	**19 45 26.7**	**0.0**
	comp=Z,4.2nm,0.8s,baz=320,slow=5.4,SNR=6.2						
PAT2	**Paterson 2**	**78.97**	**45**	eP	**P**	**19 45 31.6**	**+2.1**
KLMR	**Klimovskoe**	**81.06**	**332**	eP	**P**	**19 45 38.5**	**-1.9**
KLMR				pmax	pmax		
	comp=Z,9.0nm,1.0s						
KLMR	**Klimovskoe**	**81.06**	**332**	eP	**P**	**19 45 38.6**	**-1.9**
KLMR				AMP		19 45 39.8	
	comp=Z,9.0nm,1.0s						
ARCES	**ARCESS Array B**	**81.95**	**342**	P	**P**	**19 45 45.2**	**+0.2**
	comp=Z,3.2nm,0.6s,baz=50,slow=6.5,SNR=12						
NV01	**Mina Array Sit**	**82.24**	**52**	eP	**P**	**19 45 46.8**	**-0.7**
NVAR	**Mina Array Bea**	**82.24**	**52**	P	**P**	**19 45 47.5**	**0.0**
	comp=Z,1.7nm,0.7s,baz=264,slow=6.0,SNR=14						
NVAR				LR	LR	20 16 06.2	
	comp=Z,30nm,19.4s,baz=102,slow=31						
AKT	**Akhty**	**83.51**	**312**	eP	**P**	**19 45 53.8**	**-0.1**
AKT				pmax	pmax		
	comp=Z,9.0nm,0.8s						
GROC	**Groznyy**	**84.25**	**314**	eP	**P**	**19 45 52.7**	**-4.7**
GROC				e*PP	**sP**	**19 46 11.7**	**-0.8**
GROC				e*SP	pP	19 46 19.7	+11
GROC				eS	S	19 56 07.9	-13
GROC				pmax	pmax		
	comp=Z,5.0nm,0.4s						
OBN	**Obninsk**	**84.95**	**327**	eP	**P**	**19 45 59.1**	**-1.6**
OBN				e		19 49 13.1	
OBN				ePPP	PPP	19 51 09.0	
OBN				pmax	pmax		
	comp=Z,9.0nm,0.7s						
NCK	**Nalchik**	**85.63**	**315**	⇑eP	**P**	**19 46 04.1**	**-0.3**
NCK				pmax	pmax		
	comp=Z,5.0nm,0.4s						
KBZ	**Khabaz**	**86.01**	**315**	LR	LR	20 27 51.3	
	comp=Z,53nm,21.9s,baz=58,slow=38						
GNI	**Garni**	**86.11**	**311**	⇓eP	**P**	**19 46 05.3**	**-1.7**
GNI				pmax	pmax		
	comp=Z,35nm,1.2s						
NEY	**Neytrino**	**86.31**	**315**	⇑eP	**P**	**19 46 08.9**	**+0.9**
NEY				pmax	pmax		
	comp=Z,1.0nm,0.9s						
FINES	**FINESS Array B**	**86.44**	**335**	P	**P**	**19 46 06.5**	**-1.5**
	comp=Z,2.1nm,0.6s,baz=74,slow=4.8,SNR=16						
FINES				LR	LR	20 27 36.1	
	comp=Z,32nm,20.6s,baz=53,slow=38						
PDAR	**Pinedale Array**	**86.90**	**46**	P	**P**	**19 46 10.5**	**-0.5**
	comp=Z,0.4nm,0.4s,baz=192,slow=4.2,SNR=4.3						
PDAR				LR	LR	20 18 23.2	
	comp=Z,31nm,21.2s,baz=269,slow=31						
ANN	**Anapa**	**89.12**	**318**	eP	**P**	**19 46 17.7**	**-3.4**
ANN				e*PP	**sP**	**19 46 37.3**	**+1.0**
ANN				e		19 49 50.8	
ANN				eS	**SKSac**	**19 56 40.0**	**-8.5**
ANN				pmax	pmax		
	comp=Z,31nm,1.4s						
AKASG	**Malin Array Be**	**91.00**	**326**	LR	LR	20 30 43.3	
	comp=Z,37nm,20.1s,baz=45,slow=38						
KIEV	**Kiev**	**91.02**	**326**	⇓iP	**P**	**19 46 28.8**	**-1.1**
KIEV				pmax	pmax		
	comp=Z,18nm,2.8s						
ULM	**Lac du Bonnet**	**91.67**	**35**	LR	LR	20 25 35.6	
	comp=Z,17nm,19.4s,baz=334,slow=34						
HFS	**Hagfors**	**91.89**	**338**	P	**P**	**19 46 31.7**	**-2.1**
	comp=Z,3.0nm,0.9s,baz=100,slow=5.0,SNR=5.5						
HFS				LR	LR	20 30 11.7	
	comp=Z,28nm,21.2s,baz=28,slow=37						
NOA	**NORSAR Array B**	**92.06**	**340**	P	**P**	**19 46 32.5**	**-2.1**
	comp=Z,0.6nm,0.8s,baz=45,slow=4.4,SNR=3.3						
NOA				LR	LR	20 31 59.7	
	comp=Z,29nm,20.6s,baz=40,slow=38						
ANMO	**Albuquerque**	**92.36**	**52**	LR	LR	20 20 06.2	
	comp=Z,26nm,20.5s,baz=254,slow=30						
ANMO	**Albuquerque**	**92.36**	**52**	⇓eP	**P**	**19 46 37.0**	**+0.3**
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.7s						
LPIG	**La Paz**	**93.76**	**63**	LR	LR	20 20 10.3	
	comp=Z,36nm,20.6s,baz=36,slow=30						
BRTR	**Keskin Array B**	**93.98**	**314**	P	**P**	**19 46 43.0**	**-1.1**
	comp=Z,1.3nm,0.9s,baz=121,slow=2.2,SNR=7.6						
BORG	**Borgarnes**	**95.53**	**355**	LR	LR	20 26 10.6	
	comp=Z,8.7nm,19.6s,baz=341,slow=33						
MLR	**Muntele Rosu**	**95.74**	**322**	LR	LR	20 32 05.4	
	comp=Z,37nm,21.7s,baz=44,slow=37						
LPAZ	**La Paz**	**147.13**	**90**	PKPbc	**PKPdf**	**19 53 08.1**	**+0.1**
	comp=Z,1.4nm,0.5s,baz=310,slow=2.1,SNR=4.5						

IDC ***29*** *19:52:38.9±1.6, 13°.92N×121°.98E, h0^{km}, mb3.4/3, mb1 3.6/3, mb1mx3.1/62, mbtmp3.4/3, Error ellipse: s-maj=38.9km s-min=18.0km az=36.0*

MAN ***29*** *19:52:39.0, 13°.55N×120°.19E, h64^{km}, mb4.4, ML3.2, MS3.0*

ISCJB ***29*** *19:52:40.7±1.1, 13°.39N±0°.04×120°.27E±0°.06, h5^{km}±8^{km}, mb3.5/3, Error ellipse: s-maj=9.6km s-min=6.3km az=178.7*

ISC 29 19:52:40.1±1.7**, 13°.33N**±0°.06×**120°.23E**±0°.07**, h5**^{km}±12^{km}**, n9, σ1**^{s}**.24**/15**, mb3.4**/3**, 1C-1D, Mindoro**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
LUBP	**Lubang**	**0.40**	**3**	eP	**Pg**	**19 52 47.9**	**-0.1**
LUBP				eS	**Sg**	**19 52 52.7**	**-0.5**
PGP	**Puerto Galera**	**0.73**	**76**	⇓eP	**Pg**	**19 52 53.4**	**-0.7**
PGP				i S	**Sg**	**19 53 02.4**	**-1.2**
TGY	**Tagaytay City**	**1.03**	**42**	Pn	**Pb**	**19 53 01.5**	**+0.9**
	208nm,0.3s,baz=355,slow=2.0,SNR=17						
TGY				Sn	**Sg**	**19 53 14.8**	**+1.4**
	91nm,0.3s,baz=83,slow=22,SNR=5.9						
TGY	**Tagaytay City**	**1.03**	**42**	⇑eP	**Pg**	**19 53 00.0**	**0.0**
TGY				i S	**Sn**	**19 53 17.3**	**+1.0**
SJMP	**San Jose**	**1.23**	**135**	eP	**Pn**	**19 53 05.3**	**+1.3**
SJMP				eS	**Sn**	**19 53 21.0**	**0.0**
BUSP	**Coron**	**1.32**	**181**	eP	**Pn**	**19 53 06.1**	**+0.8**
BUSP				eS	**Sn**	**19 53 25.3**	**+2.0**
WRA	**Warramunga Arr**	**35.86**	**157**	P	**P**	**19 59 39.8**	**-1.4**
	0.5nm,0.6s,baz=338,slow=9.5,SNR=4.8						
SONM	**Songino Array**	**36.28**	**344**	P	**P**	**19 59 43.2**	**-1.5**
	0.5nm,0.7s,baz=142,slow=7.3,SNR=3.6						
ASAR	**Alice Springs**	**39.13**	**160**	P	**P**	**20 00 08.3**	**-0.6**
	0.3nm,0.5s,baz=338,slow=6.9,SNR=7.3						

IDC ***29*** *20:02:56.2±1.0, 27°.81N×91°.93E, h0^{km}, mb3.6/9, mb1 3.8/9, mb1mx3.5/67, mbtmp3.6/9, Error ellipse: s-maj=43.0km s-min=17.4km az=60.0*

NDI ***29*** *20:03:00.5±2.1, 27°.89N×92°.07E, h12^{km}, ML3.4*

ISCJB ***29*** *20:03:01.6±0.9, 27°.98N±0°.06×92°.07E±0°.04, h49^{km}±12^{km}, mb3.6/8, Error ellipse: s-maj=9.6km s-min=6.6km az=6.8*

ISC 29 20:03:03.5±1.4**, 27°.91N**±0°.08×**92°.05E**±0°.04**, h52**^{km}±17^{km}**, n18, σ1**^{s}**.51**/26**, mb3.7**/8**, Eastern Xizang-India border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TEZP	**TEZPUR**	**1.45**	**152**	eP	**Pn**	**20 03 25.9**	**-1.6**
TEZP				eS	**Sn**	**20 03 46.0**	**+0.7**
TEZP				IAML		20 03 49.0	
	comp=E,618nm,0.1s						
TEZP				IAML		20 03 50.1	
	comp=N,766nm,0.3s						
GUWA	**GUWAHATI**	**1.74**	**191**	eP	**Pn**	**20 03 29.6**	**-1.7**
GUWA				eS	**Sn**	**20 03 52.7**	**+0.3**
GUWA				IAML		20 03 55.9	
	comp=E,413nm,0.4s						
GUWA				IAML		20 03 56.4	
	comp=N,295nm,0.1s						
JORH	**JORHAT**	**2.28**	**120**	eP	**Pn**	**20 03 38.5**	**-0.2**
JORH				ex	**Sn**	**20 04 10.2**	**+4.5**
SHL	**Shillong**	**2.34**	**184**	eP	**Pn**	**20 03 38.5**	**-1.2**
SHL				eS	**Sn**	**20 04 07.5**	**+0.1**
SHL				IAML		20 04 11.5	
	comp=N,196nm,0.1s						
SHL				IAML		20 04 12.1	
	comp=E,291nm,0.4s						
MOKO	**MOKOCHONG**	**2.71**	**125**	eP	**Pn**	**20 03 43.6**	**-1.1**
MOKO				eS	**Sn**	**20 04 17.9**	**+1.4**
MOKO				IAML		20 04 26.6	
	comp=N,469nm,0.4s						
MOKO				IAML		20 04 29.1	
	comp=E,511nm,0.3s						
TURI	**Tura**	**2.81**	**213**	eP	**Pn**	**20 03 46.4**	**+0.4**
TURI				eS	**Sn**	**20 04 20.2**	**+1.6**
TURI				IAML		20 04 27.0	
	comp=E,408nm,0.3s						
TURI				IAML		20 04 28.9	
	comp=N,196nm,0.2s						
KOHI	**KOHIMA**	**2.86**	**139**	eP	**Pn**	**20 03 45.7**	**-1.0**
KOHI				eS	**Sn**	**20 04 21.4**	**+1.4**
KOHI				IAML		20 04 37.6	
	comp=E,146nm,0.3s						
KOHI				IAML		20 04 39.3	
	comp=N,180nm,0.6s						
GTK	**Tadong**	**3.11**	**260**	eP	**Pn**	**20 03 49.9**	**-0.3**
GTK				eS	**Sn**	**20 04 27.8**	**+1.5**
GTK				IAML		20 04 34.9	
	comp=E,180nm,0.6s						
GTK				IAML		20 04 36.4	
	comp=N,111nm,0.4s						
LKP	**Lekhapani**	**3.42**	**99**	eP	**Pn**	**20 03 52.4**	**-2.0**
LKP				IAML		20 04 58.9	
	comp=E,349nm,0.6s						
LKP				IAML		20 05 00.1	
	comp=N,254nm,0.4s						
MKAR	**Makanchi Array**	**20.35**	**340**	P	**P**	**20 07 33.9**	**-1.6**
	comp=N,0.7nm,0.8s,baz=151,slow=13,SNR=6.5						
SONM	**Songino Array**	**22.82**	**26**	P	**P**	**20 08 01.7**	**-0.4**
	comp=N,0.6nm,0.7s,baz=216,slow=8.8,SNR=4.6						
KURBB	**Kurchatov Arra**	**24.90**	**339**	P	**P**	**20 08 21.3**	**-0.1**
	comp=N,0.5nm,0.6s,baz=154,slow=8.9,SNR=4.9						
ZALV	**Zalesovo Beam**	**26.55**	**350**	P	**P**	**20 08 38.1**	**+1.8**
	comp=N,0.6nm,0.5s,baz=157,slow=7.7,SNR=3.3						
HFS	**Hagfors**	**60.49**	**326**	P	**P**	**20 13 07.8**	**-0.1**
	comp=N,2.5nm,0.9s,baz=74,slow=12,SNR=2.9						
GERES	**GERESS Array B**	**62.12**	**313**	P	**P**	**20 13 18.5**	**-0.6**
	comp=N,0.4nm,0.5s,baz=76,slow=5.6,SNR=6.7						
WRA	**Warramunga Arr**	**62.74**	**135**	P	**P**	**20 13 23.4**	**-0.1**
	comp=N,1.2nm,0.6s,baz=324,slow=7.2,SNR=12						
ASAR	**Alice Springs**	**65.26**	**138**	P	**P**	**20 13 40.2**	**+0.2**
	comp=N,0.7nm,0.6s,baz=320,slow=6.5,SNR=12						
ILAR	**Eielson Array**	**77.00**	**22**	P	**P**	**20 14 50.7**	**+0.3**
	comp=N,0.2nm,0.6s,baz=331,slow=4.6,SNR=3.4						

NEIC ***29*** *20:06:47.5±0.0, 38°.49S×175°.81E, h172^{km}, ML4.2(WEL), After WEL.*

WEL 29 20:06:48.0, 38°S±2°×**17°6E**±°**, h166**^{km}±3^{km}**, North Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUTZ	**Kaahu Road**	**0.01**	**105**	P	Pn	20 07 10.3	+0.3
WATZ	**Wairara**	**0.23**	**196**	Pn	Pn	20 07 10.5	+0.2
WATZ	**Wairara**	**0.23**	**196**	P	Pn	20 07 10.6	+0.3
TLZ	**Tolley Road**	**0.27**	**306**	Pn	Pn	20 07 10.6	+0.1
TLZ				Sn	Sn	20 07 28.0	+0.5
TLZ	**Tolley Road**	**0.27**	**306**	P	Pn	20 07 10.6	+0.2
TLZ				S	Sn	20 07 28.2	+0.6
GRRZ	**Galatos Road**	**0.27**	**60**	P	Pn	20 07 10.7	+0.2
WPRZ	**Whakapapatarin**	**0.28**	**97**	P	Pn	20 07 10.5	+0.1
RATZ	**Rangitukua**	**0.38**	**185**	P	Pn	20 07 10.8	0.0
HRRZ	**Handcock Road**	**0.38**	**76**	P	Pn	20 07 10.9	+0.2
ALRZ	**Allen Road**	**0.42**	**100**	P	Pn	20 07 11.0	+0.2
HATZ	**Hinemaiaia**	**0.46**	**152**	P	Pn	20 07 11.0	0.0
HATZ				S	Sn	20 07 27.4	-1.4
RITZ	**Rihia Road**	**0.49**	**176**	P	Pn	20 07 11.6	+0.5
KATZ	**Kakaramea**	**0.50**	**191**	P	Pn	20 07 11.2	-0.1
MRHZ	**Matea Rd**	**0.59**	**126**	P	Pn	20 07 11.2	-0.4
MRHZ				S	Sn	20 07 28.2	-1.6
KRVZ	**Karewarewa**	**0.62**	**192**	P	Pn	20 07 12.2	+0.2
WTVZ	**West Tongariro**	**0.65**	**195**	P	Pn	20 07 12.3	+0.2
TWVZ	**Taurewa**	**0.65**	**207**	Pn	Pn	20 07 12.0	0.0
TWVZ				Sn	Sn	20 07 30.5	-0.2
TWVZ	**Taurewa**	**0.65**	**207**	P	Pn	20 07 12.1	0.0
TWVZ				S	Sn	20 07 30.5	-0.2
NGZ	**Ngauruhoe**	**0.71**	**193**	P	Pn	20 07 12.7	+0.2
COVZ	**Chateau Observ**	**0.74**	**196**	P	Pn	20 07 12.7	+0.1
HIZ	**Hauiti**	**0.75**	**268**	Pn	Pn	20 07 12.5	0.0
HIZ	**Hauiti**	**0.75**	**268**	P	Pn	20 07 12.6	0.0
TUVZ	**Tukino**	**0.79**	**189**	Pn	Pn	20 07 13.2	+0.2
TUVZ	**Tukino**	**0.79**	**189**	P	Pn	20 07 13.2	+0.2
FWVZ	**Far West T-bar**	**0.79**	**195**	Pn	Pn	20 07 12.9	-0.2
FWVZ	**Far West T-bar**	**0.79**	**195**	P	Pn	20 07 12.9	-0.1
DRZ	**Dome Shelter**	**0.81**	**194**	Pn	Pn	20 07 13.4	+0.1
DRZ	**Dome Shelter**	**0.81**	**194**	P	Pn	20 07 13.4	+0.1
WHVZ	**Whangaehu Hut**	**0.81**	**192**	Pn	Pn	20 07 13.1	-0.1
WHVZ	**Whangaehu Hut**	**0.81**	**192**	P	Pn	20 07 13.2	-0.1
TRVZ	**Turoa**	**0.84**	**194**	Pn	Pn	20 07 13.5	+0.1
TRVZ	**Turoa**	**0.84**	**194**	P	Pn	20 07 13.5	+0.1
WNVZ	**Wahianoa**	**0.86**	**191**	Pn	Pn	20 07 13.5	+0.1
BKZ	**Black Stump Fm**	**0.86**	**142**	Pn	Pn	20 07 12.9	-0.4
BKZ	**Black Stump Fm**	**0.86**	**142**	P	Pn	20 07 13.4	+0.1
BKZ				S	Sn	20 07 31.4	-1.5
PKVZ	**Pokaka**	**0.88**	**204**	Pn	Pn	20 07 13.5	0.0
PKVZ	**Pokaka**	**0.88**	**204**	P	Pn	20 07 13.6	+0.1
MTHZ	**Maungataniwha**	**0.88**	**115**	P	Pn	20 07 13.6	+0.1
MTHZ				S	Sn	20 07 32.2	-0.9
MOVZ	**Moawhango**	**0.92**	**183**	Pn	Pn	20 07 13.6	-0.2
MOVZ	**Moawhango**	**0.92**	**183**	P	Pn	20 07 13.6	-0.2
MOVZ				S	Sn	20 07 31.7	-2.0
RTZ	**Ruatahuna**	**0.93**	**98**	P	Pn	20 07 13.8	0.0
MTVZ	**Mangateitei**	**0.94**	**196**	Pn	Pn	20 07 13.9	0.0
MTVZ	**Mangateitei**	**0.94**	**196**	P	Pn	20 07 14.0	+0.1
NMHZ	**Naumai**	**0.99**	**128**	Pn	Pn	20 07 15.1	+0.8
NMHZ	**Naumai**	**0.99**	**128**	P	Pn	20 07 15.1	+0.9
BHHZ	**Black Hill Sta**	**1.02**	**169**	Pn	Pn	20 07 14.4	-0.2
BHHZ	**Black Hill Sta**	**1.02**	**169**	P	Pn	20 07 14.4	-0.1
VRZ	**Vera Road**	**1.04**	**232**	Pn	Pn	20 07 14.4	-0.2
VRZ	**Vera Road**	**1.04**	**232**	P	Pn	20 07 14.7	+0.1
URZ	**Urewera**	**1.05**	**78**	Pn	Pn	20 07 14.1	-0.5
URZ	**Urewera**	**1.05**	**78**	P	Pn	20 07 14.1	-0.5
KWHZ	**Kaweka Forest**	**1.05**	**153**	P	Pn	20 07 15.0	+0.3
RAHZ	**Arahi**	**1.08**	**114**	P	Pn	20 07 15.5	+0.5
MCHZ	**McNeill Hill**	**1.18**	**144**	Pn	Pn	20 07 16.6	+0.9
MCHZ	**McNeill Hill**	**1.18**	**144**	P	Pn	20 07 16.7	+0.9
ARHZ	**Aropaoanui**	**1.21**	**130**	Pn	Pn	20 07 16.6	+0.6
ARHZ	**Aropaoanui**	**1.21**	**130**	P	Pn	20 07 16.6	+0.6
SNGZ	**Shannon Statio**	**1.23**	**104**	Pn	Pn	20 07 16.7	+0.4
SNGZ	**Shannon Statio**	**1.23**	**104**	P	Pn	20 07 16.7	+0.4
KRHZ	**Kereru**	**1.23**	**160**	P	Pn	20 07 16.5	+0.2
RAGZ	**Rawiri**	**1.26**	**91**	Pn	Pn	20 07 16.5	-0.1
RAGZ	**Rawiri**	**1.26**	**91**	P	Pn	20 07 16.6	0.0
WHHZ	**Waihua**	**1.26**	**118**	P	Pn	20 07 17.0	+0.5
MHEZ	**Mangahewa**	**1.30**	**243**	P	Pn	20 07 17.5	+0.6
MWZ	**Matawai**	**1.36**	**84**	Pn	Pn	20 07 17.1	-0.3
MWZ	**Matawai**	**1.36**	**84**	P	Pn	20 07 17.2	-0.3
WAZ	**Wanganui**	**1.42**	**207**	Pn	Pn	20 07 17.9	-0.2
WAZ	**Wanganui**	**1.42**	**207**	P	Pn	20 07 17.9	-0.1
DREZ	**Durham Road**	**1.44**	**240**	Pn	Pn	20 07 17.8	-0.4
DREZ	**Durham Road**	**1.44**	**240**	P	Pn	20 07 18.6	+0.4
PNHZ	**Pukenui**	**1.46**	**168**	Pn	Pn	20 07 18.2	-0.2
PNHZ	**Pukenui**	**1.46**	**168**	P	Pn	20 07 18.2	-0.2
LREZ	**Lake Rotokare**	**1.47**	**228**	P	Pn	20 07 19.0	+0.6
MKAZ	**Moumakai**	**1.47**	**339**	P	Pn	20 07 18.6	+0.1
CKHZ	**Cape Kidnapper**	**1.53**	**140**	Pn	Pn	20 07 19.6	+0.5
CKHZ	**Cape Kidnapper**	**1.53**	**140**	P	Pn	20 07 19.6	+0.6
RIGZ	**Rimuhau**	**1.54**	**99**	P	Pn	20 07 18.9	-0.4
KAHZ	**Kahuranaki**	**1.55**	**148**	Pn	Pn	20 07 19.7	+0.4
KAHZ	**Kahuranaki**	**1.55**	**148**	P	Pn	20 07 19.7	+0.5
PREZ	**Palmer Road**	**1.55**	**236**	P	Pn	20 07 19.7	+0.4
KNZ	**Kokohu**	**1.55**	**111**	Pn	Pn	20 07 19.4	+0.2
KNZ	**Kokohu**	**1.55**	**111**	P	Pn	20 07 19.4	+0.2
NEZ	**North Egmont**	**1.55**	**239**	Pn	Pn	20 07 19.6	+0.3
RUGZ	**Raukumara Rang**	**1.56**	**71**	P	Pn	20 07 18.4	-1.1
KBAZ	**Karaka Road Bo**	**1.57**	**332**	P	Pn	20 07 19.8	+0.3
TSZ	**Takapari Road**	**1.57**	**176**	Pn	Pn	20 07 19.3	-0.2
TSZ	**Takapari Road**	**1.57**	**176**	P	Pn	20 07 19.4	-0.2
PKE	**Pukeiti**	**1.59**	**243**	P	Pn	20 07 20.0	+0.2
TKGZ	**Te Karaka**	**1.60**	**89**	Pn	Pn	20 07 20.0	+0.3
TKGZ	**Te Karaka**	**1.60**	**89**	P	Pn	20 07 20.1	+0.3
KHEZ	**Kahui Hut**	**1.62**	**240**	P	Pn	20 07 20.3	+0.2
WPHZ	**Waipukurau**	**1.65**	**163**	Pn	Pn	20 07 20.2	-0.1
WPHZ	**Waipukurau**	**1.65**	**163**	P	Pn	20 07 20.2	-0.1
PRGZ	**Paritu Road**	**1.68**	**106**	P	Pn	20 07 20.8	+0.2
ETAZ	**East Tamaki Re**	**1.68**	**335**	P	Pn	20 07 20.6	-0.1
AWAZ	**Awhitu Peninsu**	**1.70**	**327**	P	Pn	20 07 20.9	+0.1
HAZ	**Te Kaha**	**1.72**	**65**	P	Pn	20 07 20.1	-0.9
TWGZ	**Tauwhareparae**	**1.73**	**80**	Pn	Pn	20 07 21.4	+0.1
TWGZ	**Tauwhareparae**	**1.73**	**80**	P	Pn	20 07 21.4	+0.1
PXZ	**Pawanui**	**1.74**	**152**	Pn	Pn	20 07 21.1	-0.1
PXZ	**Pawanui**	**1.74**	**152**	P	Pn	20 07 21.3	0.0
OHWZ	**Ohakea**	**1.76**	**192**	P	Pn	20 07 21.5	+0.1
MHGZ	**Mahia Peninsul**	**1.77**	**113**	Pn	Pn	20 07 21.9	+0.4
MHGZ	**Mahia Peninsul**	**1.77**	**113**	P	Pn	20 07 22.0	+0.4
NMEZ	**Namu Road**	**1.77**	**238**	P	Pn	20 07 21.7	+0.1
WIAZ	**Waiheke Island**	**1.77**	**342**	P	Pn	20 07 21.7	0.0
DVHZ	**Dannevirke**	**1.83**	**171**	Pn	Pn	20 07 21.6	-0.6
DVHZ	**Dannevirke**	**1.83**	**171**	P	Pn	20 07 21.6	-0.6
WTAZ	**Waiatarua**	**1.84**	**327**	P	Pn	20 07 22.7	+0.3
CNGZ	**Carnagh Statio**	**1.88**	**91**	Pn	Pn	20 07 23.2	+0.4
CNGZ	**Carnagh Statio**	**1.88**	**91**	P	Pn	20 07 23.3	+0.5
PKGZ	**Pakihiroa**	**1.88**	**72**	P	Pn	20 07 22.6	-0.3
PRHZ	**Porangahau**	**1.89**	**161**	Pn	Pn	20 07 22.6	-0.2
PRHZ	**Porangahau**	**1.89**	**161**	P	Pn	20 07 22.7	-0.2
POWZ	**Post Office Ro**	**1.90**	**181**	Pn	Pn	20 07 22.3	-0.7
POWZ	**Post Office Ro**	**1.90**	**181**	P	Pn	20 07 22.3	-0.7
PUZ	**Puketiti**	**1.97**	**79**	Pn	Pn	20 07 23.5	-0.3
PUZ	**Puketiti**	**1.97**	**79**	P	Pn	20 07 23.6	-0.2
ANWZ	**Angora Road**	**2.04**	**166**	P	Pn	20 07 24.2	-0.3
PRWZ	**Pori Road**	**2.07**	**177**	Pn	Pn	20 07 24.2	-0.6
PRWZ	**Pori Road**	**2.07**	**177**	P	Pn	20 07 24.2	-0.6
WMGZ	**Waiomatatini S**	**2.16**	**73**	Pn	Pn	20 07 25.4	-0.4
WMGZ	**Waiomatatini S**	**2.16**	**73**	P	Pn	20 07 25.5	-0.4
MRZ	**Mangatainoka R**	**2.18**	**185**	Pn	Pn	20 07 24.6	-1.5
MRZ	**Mangatainoka R**	**2.18**	**185**	P	Pn	20 07 25.0	-1.1
BFZ	**Birch Farm**	**2.22**	**171**	Pn	Pn	20 07 25.6	-0.9
BFZ	**Birch Farm**	**2.22**	**171**	P	Pn	20 07 25.7	-0.9
TIWZ	**Tintock**	**2.29**	**179**	Pn	Pn	20 07 26.2	-1.1
TIWZ	**Tintock**	**2.29**	**179**	P	Pn	20 07 26.4	-1.0

OGWZ	Otaki Gorge	2.38	192	Pn	Pn	20 07 27.2	-1.2
OGWZ	Otaki Gorge	2.38	192	P	Pn	20 07 27.2	-1.2
HOWZ	Holdsworth Sta	2.42	185	Pn	Pn	20 07 27.4	-1.6
HOWZ	Holdsworth Sta	2.42	185	P	Pn	20 07 27.4	-1.5
CPWZ	Castlepoint	2.44	173	Pn	Pn	20 07 28.4	-0.7
CPWZ	Castlepoint	2.44	173	P	Pn	20 07 28.6	-0.6
KIW	Kapiti Island	2.47	196	Pn	Pn	20 07 27.9	-1.7
KIW	Kapiti Island	2.47	196	P	Pn	20 07 27.9	-1.6
TMWZ	Te Maipa	2.62	179	Pn	Pn	20 07 29.8	-1.5
TMWZ	Te Maipa	2.62	179	P	Pn	20 07 29.9	-1.4
MTW	Mount Morrison	2.68	185	Pn	Pn	20 07 30.1	-1.9
MTW	Mount Morrison	2.68	185	P	Pn	20 07 30.1	-1.9
CAW	Cannon Point	2.68	192	Pn	Pn	20 07 30.2	-1.8
CAW	Cannon Point	2.68	192	P	Pn	20 07 30.3	-1.8
DUWZ	D'Urville Isla	2.73	212	Pn	Pn	20 07 30.8	-1.9
DUWZ	D'Urville Isla	2.73	212	P	Pn	20 07 30.8	-1.9
PAWZ	Paruwai Farm	2.91	186	Pn	Pn	20 07 32.7	-2.2
PAWZ	Paruwai Farm	2.91	186	P	Pn	20 07 32.7	-2.1
WEL	Wellington	2.91	196	Pn	Pn	20 07 32.8	-2.0
TRWZ	Traveller	2.91	182	Pn	Pn	20 07 32.9	-1.9
TRWZ	Traveller	2.91	182	P	Pn	20 07 32.9	-2.0
SNZO	South Karori	2.95	196	ePn	Pn	20 07 32.9	-2.3
MSWZ	Moikau Station	2.96	188	Pn	Pn	20 07 33.2	-2.2
MSWZ	Moikau Station	2.96	188	P	Pn	20 07 33.3	-2.2
TCW	Tory Channel	2.97	203	Pn	Pn	20 07 33.4	-2.1
TCW	Tory Channel	2.97	203	P	Pn	20 07 33.4	-2.1
BHW	Baring Head	3.01	194	Pn	Pn	20 07 33.7	-2.3
BHW	Baring Head	3.01	194	P	Pn	20 07 33.7	-2.3
PLWZ	Palliser	3.11	188	Pn	Pn	20 07 34.9	-2.5
PLWZ	Palliser	3.11	188	P	Pn	20 07 34.9	-2.4
TUWZ	Tuamarina	3.27	205	Pn	Pn	20 07 36.7	-2.6
TUWZ	Tuamarina	3.27	205	P	Pn	20 07 36.8	-2.5
NNZ	Nelson	3.31	214	Pn	Pn	20 07 37.2	-2.6
NNZ	Nelson	3.31	214	P	Pn	20 07 37.2	-2.6
QRZ	Quartz Range	3.45	226	Pn	Pn	20 07 38.6	-3.0
QRZ	Quartz Range	3.45	226	P	Pn	20 07 38.5	-3.0
CMWZ	Cape Campbell	3.48	200	Pn	Pn	20 07 40.2	-1.8
CMWZ	Cape Campbell	3.48	200	P	Pn	20 07 40.3	-1.7
BSWZ	Blackbirch Sta	3.55	204	Pn	Pn	20 07 40.4	-2.5
BSWZ	Blackbirch Sta	3.55	204	P	Pn	20 07 40.4	-2.4
BSWZ				S	Sn	20 08 21.2	-4.5
THZ	Tophouse	3.96	213	Pn	Pn	20 07 45.0	-3.2
KHZ	Kahutara	4.29	203	Pn	Pn	20 07 49.6	-2.7
LTZ	Lake Taylor	5.07	211	Pn	Pn	20 07 58.9	-3.6
OXZ	Oxford	5.62	209	Pn	Pn	20 08 05.3	-4.4
MQZ	McQueen's Vall	5.73	204	Pn	Pn	20 08 06.5	-4.7
WVZ	Waitaha Valley	5.99	218	Pn	Pn	20 08 10.6	-4.0
RPZ	Rata Peaks	6.34	213	Pn	Pn	20 08 15.3	-3.9
FOZ	Fox Glacier	6.78	220	Pn	Pn	20 08 20.9	-4.1
LBZ	Lake Benmore	7.25	214	Pn	Pn	20 08 27.0	-4.3
JCZ	Jackson Bay	7.69	221	Pn	Pn	20 08 32.6	-4.6
TUZ	Tuapeka	8.76	210	Pn	Pn	20 08 47.8	-3.4

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*ISCJB **29** 20:21:23.3±0.5, 11°.96N±0°.07×141°.01E±0°.07, h34^{km}, mb4.0/20, MS3.3/16, Error ellipse: s-maj=9.8km s-min=9.3km az=14.6*

*IDC **29** 20:21:27.0±3.0, 12°.04N×141°.30E, h51^{km}±28^{km}, mb3.8/19, mb1 4.0/20, mb1mx3.8/53, mbtmp4.1/20, ML4.3/1, MS3.3/17, Ms1 3.4/17, ms1mx3.1/52, Error ellipse: s-maj=21.2km s-min=10.9km az=76.0*

ISC 29 20:21:25.2±0.5**, 11°.96N**±0°.09×**141°.07E**±0°.09**, h34**^{km}**, n37,** σ**1^{s}.44**/26**, mb4.0**/20**, MS3.3**/16**, Western Caroline Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	4.04	66	P	Pn	20 22 24.7	+0.1
	25nm,0.3s,baz=255,slow=2.7,SNR=11						
GUMO				S	Sn	20 23 14.6	+3.8
	24nm,0.3s,baz=178,slow=23,SNR=3.0						
JOW	Kunigami	19.07	323	LR	LR	20 32 08.9	
	comp=Z,87nm,18.8s,baz=68,slow=34						
JHJ	Hachijo jima 2	21.09	357	LR	LR	20 32 52.5	
	comp=Z,110nm,18.3s,baz=185,slow=33						
PMG	Port Moresby	22.07	164	P	P	20 26 16.7	-0.7
	11nm,0.8s,baz=342,slow=17,SNR=3.2						
JNU	Nakatsue	23.04	338	P	P	20 26 27.5	-0.1
	6.3nm,0.8s,baz=97,slow=4.1,SNR=6.0						
JNU				LR	LR	20 33 27.5	
	comp=Z,69nm,21.9s,baz=122,slow=31						
MJAR	Matsushiro Arr	24.61	354	P	P	20 26 40.8	-1.6
	3.4nm,1.0s,baz=181,slow=9.2,SNR=9.3						
MJAR				LR	LR	20 35 05.3	
	comp=Z,33nm,18.6s,baz=215,slow=33						
H11S3	WAKE ISLAND Hy	25.53	72	T	T	20 53 11.4	
	baz=266,slow=78,SNR=5.6						
H11S1	WAKE ISLAND Hy	25.55	72	T	T	20 53 11.4	
	baz=266,slow=78,SNR=3.8						
H11S2	WAKE ISLAND Hy	25.55	72	T	T	20 53 11.4	
	baz=266,slow=78,SNR=6.9						
H11N1	WAKE ISLAND Hy	25.98	69	T	T	20 53 45.9	
	baz=255,slow=75,SNR=5.7						
H11N2	WAKE ISLAND Hy	25.99	69	T	T	20 53 42.9	
	baz=255,slow=75,SNR=4.5						
H11N3	WAKE ISLAND Hy	26.00	69	T	T	20 53 47.2	
	baz=255,slow=75,SNR=4.4						
KSRS	Korea Array	27.99	337	P	P	20 27 13.0	+0.1
	0.6nm,0.5s,baz=164,slow=9.5,SNR=3.6						
KSRS				LR	LR	20 36 41.4	
	comp=Z,54nm,20.2s,baz=152,slow=33						
HNR	Honiara	28.35	138	LR	LR	20 38 18.8	
	comp=Z,55nm,18.1s,baz=329,slow=36						
ASAJ	Asahikawa	32.07	2	LR	LR	20 42 31.8	
	comp=Z,23nm,19.6s,baz=174,slow=40						
WRA	Warramunga Arr	32.39	192	P	P	20 27 52.3	+0.3
	1.7nm,0.7s,baz=12,slow=9.7,SNR=11						
WRA				PcP	PcP	20 30 39.2	+0.1
	0.3nm,0.8s,baz=359,slow=2.6,SNR=3.9						
USRK	Ussuriysk Ar.	33.06	348	P	P	20 27 58.4	+0.8
	3.4nm,0.8s,baz=177,slow=9.5						
USRK				LR	LR	20 39 50.0	
	comp=Z,90nm,21.7s,baz=95,slow=33						
ASAR	Alice Springs	36.10	191	P	P	20 28 25.6	+1.6
	1.2nm,0.6s,baz=20,slow=12,SNR=29						
ASAR				PcP	PcP	20 30 50.0	+0.2
	0.2nm,0.5s,baz=15,slow=4.0,SNR=2.6						
ASAR				LR	LR	20 42 56.0	
	comp=Z,96nm,21.3s,baz=9.5,slow=36						
CMAR	Chiang Mai Arr	41.09	284	P	P	20 29 09.0	+2.8
	1.1nm,0.5s,baz=88,slow=5.6,SNR=5.3						
CMAR				LR	LR	20 43 44.6	
	comp=Z,20nm,21.9s,baz=185,slow=32						
DZM	Mont Dzumac	41.99	144	P	P	20 29 12.8	-0.7
	11nm,1.1s,baz=342,slow=12,SNR=3.7						
DZM				LR	LR	20 43 47.2	
	comp=Z,102nm,21.6s,baz=322,slow=32						
PETK	Petropavlovsk-	43.15	15	LR	LR	20 45 00.5	
	comp=Z,39nm,21.9s,baz=197,slow=33						
STKA	Stephens Creek	43.59	179	P	P	20 29 26.5	+0.3
	2.9nm,0.6s,baz=9.2,slow=7.2,SNR=15						
SONM	Songino Array	46.02	328	P	P	20 29 47.2	+1.6
	0.5nm,0.5s,baz=141,slow=7.3,SNR=5.5						
SONM				LR	LR	20 49 39.2	
	comp=Z,31nm,19.0s,baz=138,slow=37						
MKAR	Makanchi Array	60.13	317	P	P	20 31 29.7	+0.3
	1.0nm,0.8s,baz=105,slow=8.3,SNR=8.5						
ZALV	Zalesovo Beam	60.83	326	P	P	20 31 34.3	+0.3
	0.8nm,0.6s,baz=62,slow=6.9,SNR=3.6						
ZALV				LR	LR	20 59 02.4	
	comp=Z,30nm,18.9s,baz=68,slow=37						
KURBB	Kurchatov Arra	63.50	321	P	P	20 31 51.9	0.0
	3.0nm,0.7s,baz=106,slow=6.8,SNR=24						
BVAR	Borovoye Array	68.92	322	P	P	20 32 26.8	+0.1
	1.9nm,0.4s,baz=111,slow=7.0,SNR=15						
ILAR	Eielson Array	71.61	25	P	P	20 32 40.9	-2.1
	0.3nm,0.6s,baz=241,slow=6.4,SNR=5.4						
AKTO	Aktyubinsk	76.47	319	P	P	20 33 11.2	-0.4
	0.9nm,0.5s,baz=112,slow=7.4,SNR=4.2						
YKA	Yellowknife Ar	85.98	27	P	P	20 33 59.9	-1.9
	0.7nm,0.7s,baz=40,slow=1.7,SNR=3.6						
YBH	Yreka Blue Hor	86.72	48	LR	LR	21 03 53.9	
	comp=Z,19nm,20.4s,baz=223,slow=29						
NVAR	Mina Array Bea	90.81	51	P	P	20 34 24.8	-0.9
	0.5nm,0.6s,baz=260,slow=4.5,SNR=3.0						
FINES	FINESS Array B	91.04	334	P	P	20 34 23.3	-2.6
	1.3nm,0.4s,baz=66,slow=5.0,SNR=22						
HFS	Hagfors	96.84	336	LR	LR	21 20 18.6	
	comp=Z,46nm,21.3s,baz=180,slow=36						
NOA	NORSAR Array B	97.20	338	LR	LR	21 23 22.9	
	comp=Z,15nm,18.1s,baz=155,slow=38						
TORD	Torodi Ar. Bea	132.61	300	PKP	PKPdf	20 40 37.8	+0.4
	0.6nm,1.1s,baz=40,slow=1.5						
LPAZ	La Paz	151.37	102	PKPbc	PKPbc	20 41 17.2	+0.1
	5.9nm,0.6s,baz=313,slow=2.0,SNR=22						

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*ISCJB **29** 20:33:16.8±0.9, 28°.70S±0°.03×69°.21W±0°.04, h127^{km}±10^{km}, Error ellipse: s-maj=6.5km s-min=5.3km az=157.9*

*GUC **29** 20:33:17.6±0.8, 28°.75S×69°.33W, h125^{km}±14^{km}, ML3.5*

*SJA **29** 20:33:17.1±0.6, 28°.76S×69°.17W, h128^{km}±4^{km}, ML4.0, MW4.0*

ISC 29 20:33:17.1±1.7**, 28°.71S**±0°.04×**69°.22W**±0°.04**, h129**^{km}±14^{km}**, n15,** σ**0^{s}.78**/26**, 1C-2D, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VCA	Vinchina	0.89	92	iP	Pn	20 33 39.7	+0.5
VCA				IAML		20 33 40.1	
	comp=Z,4µm,0.2s						
VCA				iS	Sn	20 33 55.6	-0.2
AGUA	GUANDACOL	1.00	141	iP	Pn	20 33 39.9	-0.2
LCO	Las Campanas	1.34	257	iP	Pn	20 33 44.4	+0.7
LCO	Las Campanas	1.34	257	eP	Pn	20 33 43.8	+0.2
LCO				eS	Sn	20 34 03.2	-0.5
LCO				IAML		20 34 04.3	
	comp=E,2µm,0.3s						
GO03	Copiap	1.43	321	⇓eP	Pn	20 33 45.2	+0.7
GO03				eS	Sn	20 34 05.4	+0.2
GO03				IAML		20 34 07.7	
	comp=E,514nm,0.2s						
ACDV	Cuesta del Vie	1.46	177	iP	Pn	20 33 45.4	+0.5
ACDV				iS	Sn	20 34 06.1	0.0
AROD	Rodeo	1.47	189	iP	Pn	20 33 46.0	+0.8
AROD				iS	Sn	20 34 07.4	+0.8
CPCH	Copiapo	1.68	323	⇓eP	Pn	20 33 46.2	-1.0
CPCH				eS	Sn	20 34 08.3	-1.9
GO04	Tololo Observa	2.01	223	⇑iP	Pn	20 33 51.5	+0.1
GO04				eS	Sn	20 34 17.1	-0.5
TLL	Tololo Astrono	2.01	223	eP	Pn	20 33 51.9	+0.4
TLL				eS	Sn	20 34 17.4	-0.2
TLL				IAML		20 34 20.7	
	comp=N,418nm,0.7s						
CDCH	Caldera	2.17	319	eS	Sn	20 34 20.8	+0.2
RTLL	Cerro Villicun	2.69	166	iP	Pn	20 34 00.1	+0.3
RTLL				iS	Sn	20 34 31.7	-0.9
CYA	Choya	3.01	86	iP	Pn	20 34 04.6	+0.6
CYA				IAML		20 34 04.8	
	comp=Z,228nm,0.2s						
CYA				iS	Sn	20 34 39.2	-0.8
RTCV	Cerro Valdivia	3.20	170	iP	Pn	20 34 06.7	+0.3
RTCV				iS	Sn	20 34 42.9	-1.4
PB14	IPOC Station P	4.20	345	eP	Pn	20 34 20.9	+1.0

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*ISCJB **29** 20:55:47.5±0.3, 37°.22N±0°.02×72°.03E±0°.06, h142^{km}, mb3.4/10, Error ellipse: s-maj=6.9km s-min=3.1km az=171.1*

*IDC **29** 20:55:50.1±4.3, 37°.40N×71°.88E, h137^{km}±33^{km}, mb3.3/10, mb1 3.5/15, mb1mx3.3/64, mbtmp3.9/15, MS2.6/1, Ms1 2.6/1, ms1mx2.2/43, Error ellipse: s-maj=34.6km s-min=16.3km az=179.0*

*NNC **29** 20:55:52.8±2.7, 37°.67N×71°.73E, h170^{km}±25^{km}, mb3.6, mpv4.5, Error ellipse: s-maj=25.4km s-min=15.4km az=18.0*

ISC 29 20:55:48.3±0.6**, 37°.26N**±0°.05×**72°.06E**±0°.07**, h142**^{km}**, n64,** σ**2^{s}.45**/75**, mb3.5**/10**, 11C-6D, Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	2.97	22	⇑P	Pn	20 56 37.6	+2.5
	155nm,0.3s						
SFK				⇑S	Sn	20 57 12.8	+1.4
	144nm,0.3s						
CEP	Cherat	3.43	182	P	Pn	20 56 41.8	+0.7
CEP				S	Sn	20 57 22.0	+0.1
CEP	Cherat	3.43	182	P	Sn	20 57 22.4	+0.5
CHCP	Chirah Chowk	3.72	164	P	Pn	20 56 46.8	+2.0
THW	Thamme Wali	4.46	183	P	Pn	20 56 54.6	+0.1
TAS	Tashkent	4.60	333	⇓S	Sn	20 57 44.7	-4.4
	277nm,0.3s						
AML	Almayashu	5.03	14	P	Pn	20 57 03.3	+1.1
	SNR=646						
MNAS	Manas	5.23	4	⇑P	Pn	20 57 05.3	+0.5
	55nm,0.4s						
MNAS				⇑S	Sn	20 58 01.6	-2.8
	146nm,0.4s						
UCH	Uchtor	5.31	20	P	Pn	20 57 07.5	+1.5
	SNR=172						
KZA	Kyzart	5.40	26	P	Pn	20 57 08.5	+1.2
	SNR=38						
EKS2	Erkin-Say	5.55	13	P	Pn	20 57 10.2	+1.2
	SNR=73						
AAK	Ala-Archa	5.69	18	P	Pn	20 57 12.5	+1.8
	26nm,0.3s,baz=186,slow=6.9,SNR=113						
AAK				S	Sn	20 58 14.8	-0.4
	5.7nm,0.3s,baz=28,slow=20,SNR=14						
AAK	Ala-Archa	5.69	18	⇑P	Pn	20 57 12.4	+1.6
	51nm,0.4s						
AAK				⇓S	Sn	20 58 14.4	-0.8
	40nm,0.6s						
AAK	Ala-Archa	5.69	18	P	Pn	20 57 12.6	+1.8
	SNR=63						
KBK	Karagaybulak	5.83	21	P	Pn	20 57 14.6	+1.9
	SNR=32						
ULHL	Ulahol	5.93	32	P	Pn	20 57 15.5	+1.4
	SNR=35						
KK31	Karatay Array	5.96	349	⇑P	Pn	20 57 14.1	-0.2
	8.2nm,0.3s,baz=176,slow=13						
KK31				⇓S	Sn	20 58 16.2	-5.3
	62nm,0.3s,baz=172,slow=21,SNR=34						
CHMS	Chumysh	6.09	19	P	Pn	20 57 17.5	+1.4
	SNR=41						
DHRM	DHARAMSHALA	6.09	144	eP	Pn	20 57 17.1	+0.7
DHRM				eS	Sn	20 58 22.6	-2.5
DHRM				IAML		20 58 27.0	
	comp=N,606nm,0.6s						
DHRM				IAML		20 58 28.4	
	comp=E,856nm,0.6s						
TKM2	Tokmak 2	6.27	24	⇑P	Pn	20 57 19.7	+1.1
	comp=E,43nm,0.5s						
TKM2				⇓S	Sn	20 58 29.8	+0.6
	comp=E,14nm,0.6s						
TKM2	Tokmak 2	6.27	24	P	Pn	20 57 20.2	+1.6
	SNR=91						
USP	Ospenovka	6.28	16	P	Pn	20 57 19.5	+0.8
	SNR=25						
SMLA	Simla	7.43	144	eP	Pn	20 57 34.4	+0.3
SMLA				eS	Sn	20 58 52.0	-5.1
SMLA				IAML		20 58 57.7	
	comp=N,175nm,0.7s						
SMLA				IAML		20 58 57.9	
	comp=E,220nm,0.3s						
PDGK	Podgornoye	8.30	41	⇓P	Pn	20 57 46.6	+0.8
	comp=E,3.4nm,0.5s						
DDI	Dehra Dun	8.53	142	eP	Pn	20 57 48.4	-0.4
DDI				eS	Sn	20 59 17.4	-6.2
DDI				IAML		20 59 22.6	
	comp=N,188nm,0.4s						
DDI				IAML		20 59 26.1	
	comp=E,212nm,0.5s						
JOSI	Joshimath	9.13	135	eP	Pn	20 57 55.9	-1.2
JOSI				eS	Sn	20 59 32.2	-6.2
JOSI				IAML		20 59 39.5	
	comp=N,167nm,0.7s						
JOSI				IAML		20 59 39.6	
	comp=E,122nm,0.7s						
KHET	Khetri	9.69	160	eP	Pn	20 58 02.5	-1.8
KHET				eS	Sn	20 59 40.4	-11
GEYT	Alibeck	11.09	278	P	Pn	20 58 16.3	-6.5
	comp=E,2.2nm,0.3s,baz=80,slow=10.0,SNR=27						
GEYT				S	Sn	21 00 12.4	-13
	comp=E,2.8nm,0.3s,baz=294,slow=22,SNR=9.1						
GEYT				LR	LR	21 03 50.8	
	comp=E,32nm,18.6s,baz=225,slow=44						
MK31	Makanchi Array	12.18	35	⇑P	Pn	20 58 37.2	+0.2
	comp=E,2.3nm,0.6s						
MKAR	Makanchi Array	12.18	35	P	Pn	20 58 37.7	+0.7
	comp=E,0.2nm,0.3s,baz=220,slow=13,SNR=21						
PYUN	Piuthan	12.96	132	eP	Pn	20 58 45.9	-1.5
	comp=E,58nm,0.4s						
PYUN				eS	Sn	21 01 03.5	-7.2
DANN	Dangsing	13.24	129	eP	Pn	20 58 50.6	-0.6
	comp=E,61nm,0.5s						
KOLN	Koldanda	13.56	131	eP	Pn	20 58 53.7	-1.5
	comp=E,34nm,0.4s						
GKN	Gorkha	14.04	127	eP	Pn	20 59 00.6	-0.6
	comp=E,48nm,0.4s						
KURBB	Kurchatov Arra	14.14	17	P	Pn	20 59 00.2	-1.9
	comp=E,0.1nm,0.3s,baz=203,slow=10,SNR=9.0						
KURBB	Kurchatov Arra	14.14	17	⇑P	Pn	20 58 59.9	-2.2
	comp=E,9.8nm,0.6s						
KURK	Kurchatov	14.25	17	⇑P	P	20 59 04.9	-1.5
	comp=E,9.7nm,0.9s						
KKN	Kakani	14.60	127	eP	Pn	20 59 07.1	-1.1
	comp=E,44nm,0.4s						
DMN	Daman	14.61	127	eP	Pn	20 59 08.5	0.0
	comp=E,32nm,0.4s						
BHPL	Bhopal	14.71	160	eP	Pn	20 59 08.7	-0.9
BHPL				ex	x	21 01 40.5	
PKIN	Phulchoki	14.82	127	eP	Pn	20 59 10.8	-0.3
	comp=E,46nm,0.7s						
AB31	Akbulak array	14.87	328	P	Pn	20 59 09.8	-1.4
	comp=E,3.7nm,0.5s,baz=134,slow=14,SNR=88						
AB31				⇓S	Sn	21 01 39.4	-17
	comp=E,9.2nm,0.6s,baz=146,slow=22,SNR=17						
GUN	Gumba	14.90	125	eP	Pn	20 59 11.5	-0.7
	comp=E,34nm,0.4s						
JIRN	Jiri	15.27	125	eP	Pn	20 59 16.2	-0.7
	comp=E,140nm,0.5s						
BVAR	Borovoye Array	15.81	356	P	Pn	20 59 21.8	-1.0
	comp=E,1.2nm,0.3s,baz=164,slow=10.0,SNR=15						
BVAR				S	Sn	21 02 09.9	-8.6
	comp=E,0.5nm,0.3s,baz=165,slow=23,SNR=9.3						
RAMN	Ramite	16.02	126	eP	P	20 59 25.6	-1.0
	comp=E,27nm,0.4s						
AKTO	Aktyubinsk	16.58	327	P	Pn	20 59 32.0	-0.2
	comp=E,1.1nm,0.3s,baz=134,slow=12,SNR=17						
AKTO				S	S	21 02 22.9	-14
	comp=E,0.6nm,0.3s,baz=350,slow=23,SNR=5.0						
AKTO	Aktyubinsk	16.58	327	⇑P	Pn	20 59 32.7	+0.5
	comp=E,4.5nm,0.6s						
ODAN	Odare	16.60	124	eP	P	20 59 33.4	+0.4
	comp=E,30nm,0.6s						
ZALV	Zalesovo Beam	18.87	24	P	Pn	20 59 59.0	-0.6
	comp=E,1.7nm,0.3s,baz=221,slow=11,SNR=29						
SHL	Shillong	20.50	119	eP	Pn	21 00 18.6	-0.5
MOKO	MOKOCHONG	21.93	113	eP	P	21 00 35.3	+4.8
KOHI	KOHIMA	21.98	115	ex	P	21 00 34.2	+3.0
LKP	Lekhapani	22.36	109	eP	P	21 00 37.3	+2.6
SONM	Songino Array	27.20	56	P	P	21 01 21.8	+3.1
	comp=E,1.2nm,0.8s,baz=255,slow=9.1,SNR=7.4						
FINES	FINESS Array B	37.34	325	P	P	21 02 47.1	+0.5
	comp=E,0.6nm,0.5s,baz=109,slow=10,SNR=4.1						
ARCES	ARCESS Array B	40.77	337	P	P	21 03 15.6	+0.5
	comp=E,0.8nm,0.4s,baz=112,slow=8.2,SNR=13						
HFS	Hagfors	43.00	321	P	P	21 03 33.6	+0.4
	comp=E,1.0nm,0.5s,baz=96,slow=14,SNR=9.3						
NOA	NORSAR Array B	44.29	323	P	P	21 03 43.9	+0.3
	comp=E,0.6nm,0.7s,baz=116,slow=5.7,SNR=2.7						
MJAR	Matsushiro Arr	51.88	69	P	P	21 04 45.2	+3.0
	comp=E,0.7nm,0.9s,baz=284,slow=11,SNR=3.0						
ESDC	Sonseca Array	57.86	298	P	P	21 05 27.3	+2.2
	comp=E,0.2nm,0.6s,baz=55,slow=5.7,SNR=3.1						
TORD	Torodi Ar. Bea	66.59	269	P	P	21 06 24.0	+0.5
	comp=E,0.4nm,0.8s,baz=47,slow=5.0						
ILAR	Eielson Array	73.81	16	P	P	21 07 08.4	+1.7
	comp=E,0.5nm,0.9s,baz=320,slow=4.0,SNR=3.7						
YKA	Yellowknife Ar	80.44	3	P	P	21 07 45.2	+1.4
	comp=E,0.5nm,0.4s,baz=352,slow=5.3,SNR=3.8						

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*ISCJB **29** 21:04:31.0±0.7, 2°.57N±0°.09×89°.62E±0°.06, h10^{km}, mb3.9/9, MS3.1/1, Error ellipse: s-maj=13.2km s-min=7.1km az=23.8*

*IDC **29** 21:04:32.1±1.7, 2°.65N×89°.59E, h0^{km}, mb3.6/7, mb1 3.9/10, mb1mx3.6/69, mbtmp3.7/10, ML4.0/3, MS3.1/1, Ms1 3.1/1, ms1mx2.4/55, Error ellipse: s-maj=43.3km s-min=22.3km az=39.0*

*NEIC **29** 21:04:33.1±0.5, 2°.57N×89°.62E, h10^{km}, mb4.7/4, Error ellipse: s-maj=10.4km s-min=6.8km az=200.0*

ISC 29 21:04:33.3±0.9**, 2°.6N**±0°.1×**89°.70E**±0°.08**, h10**^{km}**, n40,** σ**0^{s}.99**/34**, mb3.9**/9**, North Indian Ocean**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GSI	Gunungsitoli	7.98	99	ePn	Pn	21 06 29.2	-0.3
GSI				eSn	Sn	21 07 50.3	-9.5
PSI	Prapat	9.22	89	Pn	Pn	21 06 47.1	+0.6
	1.6nm,0.3s,baz=186,slow=0.7,SNR=6.6						
PSI				Sn	Sn	21 08 27.6	-2.8
	1.0nm,0.3s,baz=0.4,slow=23,SNR=3.7						
PALK	Pallekele	10.09	298	Pn	Pn	21 06 57.2	-1.2
	0.4nm,0.3s,baz=116,slow=12,SNR=4.4						
PALK				Sn	Sn	21 08 40.5	-11
	5.1nm,0.3s,baz=298,slow=0.8,SNR=18						
KULM	Kulim	11.24	76	ePn	Pn	21 07 13.6	-0.6
SKHT	Srikalahasti	14.82	319	eP	Pn	21 08 03.3	+0.2
SKHT				e		21 10 31.0	
ADKI	Addanki	16.27	325	eP	Pn	21 08 20.5	-1.6
ADKI				e		21 11 00.7	
PVM	Polavaram	16.57	332	eP	Pn	21 08 25.2	-0.7
PVM				e		21 11 09.1	
CHLP	Challavanipeta	16.73	341	eP	Pn	21 08 26.5	-1.5
CHLP				e		21 11 14.4	
SRLM	Srisailam	17.11	322	eP	Pn	21 08 32.6	-0.3
SRLM				e		21 11 24.1	
URV	Uravakonda	17.34	316	eP	Pn	21 08 34.5	-1.2
PBKT	Sadao Pong	17.76	38	ePn	P	21 08 43.4	+1.8
	7.6nm,0.8s						
CM31	Chiang Mai Arr	18.17	29	ePn	P	21 08 47.1	+1.0
CMAR	Chiang Mai Arr	18.17	29	P	P	21 08 47.1	+1.0
	0.4nm,0.3s,baz=224,slow=13,SNR=7.0						
H08S3	Diego Garcia H	19.96	239	T	T	21 29 36.8	
	baz=59,slow=75,SNR=48						
H08S2	Diego Garcia H	19.96	239	T	T	21 29 39.7	
	baz=59,slow=75,SNR=36						
H08S1	Diego Carcia H	19.98	239	T	T	21 29 39.7	
	baz=59,slow=75,SNR=15						
H01W3	Cape Leeuwin H	43.79	151	T	T	21 59 31.9	
	baz=324,slow=76,SNR=15						
H01W2	Cape Leeuwin H	43.80	151	T	T	21 59 32.6	
	baz=324,slow=76,SNR=17						
H01W1	Cape Leeuwin H	43.80	151	T	T	21 59 20.0	
	baz=324,slow=76,SNR=20						
MK01	Makanchi Array	44.45	353	eP	P	21 12 44.1	-0.5
MK32	Makanchi Array	44.48	353	eP	P	21 12 44.0	-0.8
MKAR	Makanchi Array	44.48	353	P	P	21 12 44.0	-0.8
	0.5nm,0.7s,baz=156,slow=9.2,SNR=5.6						
MKAR	Makanchi Array	44.48	353	eP	P	21 12 45.3	+0.5
	10.0nm,0.9s						
ABPO	Ambohimpanom	46.96	241	eP	P	21 13 04.2	-0.8
	12nm,1.4s						
SONA0	Songino Array	47.30	15	eP	P	21 13 07.4	+0.2
SONM	Songino Array	47.30	15	P	P	21 13 07.4	+0.2
	1.9nm,0.7s,baz=195,slow=9.4,SNR=15						
SONA1	Songino Array	47.32	15	eP	P	21 13 07.4	+0.1
KURBB	Kurchatov Arra	48.76	351	P	P	21 13 18.3	0.0
	0.3nm,0.6s,baz=174,slow=9.3,SNR=4.5						
KURK	Kurchatov	48.84	351	eP	P	21 13 18.3	-0.5
WR1	Warramunga Arr	49.21	119	eP	P	21 13 23.3	+1.0
	10nm,1.2s						
WRA	Warramunga Arr	49.21	119	P	P	21 13 23.3	+1.0
	0.5nm,0.8s,baz=297,slow=8.6,SNR=3.5						
KSRS	Korea Array	49.31	40	LR	LR	21 36 39.3	
	comp=Z,18nm,18.5s,baz=215,slow=39						
ZALV	Zalesovo Beam	51.33	356	P	P	21 13 37.1	-0.5
	0.4nm,0.3s,baz=162,slow=5.5,SNR=3.2						
ZAA1	Zalesovo Array	51.33	356	eP	P	21 13 37.1	-0.6
BVAR	Borovoye Array	52.73	345	P	P	21 13 48.0	-0.2
	0.1nm,0.4s,baz=316,slow=6.0,SNR=2.2						
ABKAR	Akbulak array	52.96	336	eP	P	21 13 50.3	+0.4
MAJO	Matsushiro	55.96	47	eP	P	21 14 13.2	+1.1
MJAR	Matsushiro Arr	55.96	47	P	P	21 14 13.1	+1.1
	0.4nm,0.4s,baz=242,slow=5.2,SNR=3.1						
CLL	Collm	79.66	322	eP	P	21 16 41.0	-0.1
TXAR	Lajitas Array	145.75	21	PKPbc	PKPab	21 24 13.7	-0.1
	0.7nm,0.6s,baz=318,slow=1.1,SNR=12						

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*SJA **29** 21:39:00.6±1.1, 33°.50S×70°.15W, h125^{km}±8^{km}, ML2.5, MW2.9*

*ISCJB **29** 21:39:01.4±0.8, 33°.51S±0°.05×70°.10W±0°.06, h123^{km}±6^{km}, Error ellipse: s-maj=10.7km s-min=5.4km az=139.9*

*GUC **29** 21:39:01.9±0.7, 33°.47S×70°.14W, h126^{km}±4^{km}, ML3.1*

ISC 29 21:39:01.6±1.7**, 33°.52S**±0°.06×**70°.11W**±0°.06**, h122**^{km}±10^{km}**, n17,** σ**0^{s}.65**/32**, 3C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FCH	Farellones	0.25	322	⇑eP	Pn	21 39 19.0	0.0

FCH				eS	Sn	21 39 31.8	-0.4
FCH				IAML		21 39 32.9	
	comp=E,387nm,0.1s						
LMEL	**Las Melosas**	0.33	194	⇑iP	Pn	21 39 19.5	+0.3
LMEL				eS	Sn	21 39 32.9	+0.4
LMEL				IAML		21 39 37.5	
	comp=E,231nm,0.2s						
CLCH	**Cerro Calan**	0.38	289	eP	Pn	21 39 19.4	+0.2
CLCH				eS	Sn	21 39 32.1	-0.4
CLCH				IAML		21 39 34.5	
	comp=N,537nm,0.2s						
ANTU	**Antumapu**	0.44	264	eP	Pn	21 39 19.6	+0.1
ANTU				eS	Sn	21 39 33.1	0.0
ANTU				IAML		21 39 33.5	
	comp=N,551nm,0.2s						
PEL	**Peldehue**	0.61	308	eP	Pn	21 39 20.2	-0.4
PEL				eS	Sn	21 39 34.4	-0.6
PEL				IAML		21 39 35.1	
	comp=N,2µm,0.4s						
ROCH	**El Roble**	0.94	306	⇑eP	Pn	21 39 23.7	+0.2
ROCH				eS	Sn	21 39 39.5	-0.5
ROCH				IAML		21 39 40.9	
	comp=N,1µm,0.3s						
ROC1	**El Roble**	0.94	305	eP	Pn	21 39 23.7	+0.2
ROC1				eS	Sn	21 39 39.3	-0.7
AAGR	**Agrelo**	1.16	68	eP	Pn	21 39 25.7	+0.2
ARCO	**CERRO ARCO**	1.20	56	eP	Pn	21 39 26.1	+0.1
ARCO				IAML		21 39 27.5	
	comp=Z,55nm,0.2s						
ARCO				eS	Sn	21 39 45.1	+0.7
ASAL	**Salagasta**	1.42	49	eP	Pn	21 39 28.8	+0.5
ASAL				eS	Sn	21 39 49.2	+0.6
AUSP	**Uspallata**	1.43	25	eP	Pn	21 39 29.0	+0.3
RTLS	**Leoncito**	1.85	22	eP	Pn	21 39 34.8	+1.2
RTLS				eS	Sn	21 39 59.1	+1.1
RTLS				IAML		21 40 01.6	
	comp=Z,36nm,0.2s						
GO05	**HualaæØ**	2.12	225	eP	Pn	21 39 36.9	+0.3
GO05				eS	Sn	21 40 03.5	+0.1
RTCV	**Cerro Valdivia**	2.12	39	eP	Pn	21 39 36.7	0.0
RTCV				eS	Sn	21 40 02.7	-0.9
RTLL	**Cerro Villicun**	2.59	33	eP	Pn	21 39 42.5	-0.1
RTLL				eS	Sn	21 40 14.2	0.0
ACAN	**Cantantal**	2.75	64	eP	Pn	21 39 44.8	0.0
ACAN				eS	Sn	21 40 16.0	-2.0
AMOG	**MOGNA**	2.92	28	eP	Pn	21 39 47.5	+0.6
AMOG				eS	Sn	21 40 21.0	-0.9

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*ISN **29** 21:56:02.8±0.6, 32°.79N×48°.03E, h2^{km}±7^{km}, ML3.1*
*CSEM **29** 21:56:07.0±0.2, 32°.74N×47°.82E, h2^{km}, ML2.8, Error ellipse: s-maj=7.0km s-min=4.6km az=6.0*

TEH 29 21:56:07.4, 32°.78N×47°.94E, h13^{km}, ML3.1, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
IKFM	**Kafar-mosalman**	0.75	354	ePg	Pg	21 56 20.8	-1.2
IKFM				e		21 56 24.4	
	comp=Z,99nm,0.1s						
IKFM				e		21 56 43.1	
	comp=N,99nm,0.5s						
IKFM				e		22 00 39.1	
	comp=E,99nm,6.6s						
SHGR	**Shooshtar-Gavs**	0.99	132	ePg	Pn	21 56 27.5	+0.6
SHGR	**Shooshtar-Gavs**	0.99	132	ePg	Pn	21 56 27.5	+0.6
SHGR				eSg	Sn	21 56 41.2	+0.5
HSAM	**Samen**	1.53	21	ePn	Pb	21 56 35.8	0.0
HSAM				e		21 56 38.2	
	comp=N,99nm,0.1s						
AHWZ	**Ahwaz**	1.56	157	ePn	Pn	21 56 34.8	0.0
AHWZ				e		21 56 59.5	
	comp=N,99nm,0.1s						
AHWZ				e		21 57 01.5	
	comp=E,99nm,0.2s						
KCHF	**Cheshme Sefid,**	1.67	333	ePn	Pb	21 56 37.9	-0.2
KCHF				e		21 57 05.9	
	comp=Z,99nm,0.3s						
KHMZ	**Khomeyn**	1.94	60	ePn	Pb	21 56 42.8	0.0
KHMZ	**Khomeyn**	1.94	60	ePn	Pb	21 56 42.8	0.0
IVIS	**Veis**	1.97	333	ePn	Pb	21 56 42.3	-0.8
IVIS				e		21 57 14.6	
	comp=Z,395nm,0.2s						
IVIS				e		21 57 16.4	
	comp=E,399nm,0.2s						
IVIS				e		21 57 21.1	
	comp=N,764nm,0.3s						
HAGD	**Aghdareh**	2.27	26	ePn	Pb	21 56 46.7	-1.7
HAGD				e		21 56 48.6	
	comp=Z,99nm,0.1s						
HAGD				e		21 56 57.0	
	comp=E,99nm,0.1s						
HAGD				e		21 56 58.5	
	comp=N,99nm,0.1s						
ILIN	**Lien**	2.29	339	ePn	Pb	21 56 48.6	0.0
ILIN				e		21 57 24.7	
	comp=Z,648nm,0.2s						
ILIN				e		21 57 30.6	
	comp=E,779nm,0.2s						
IDHR	**Dehrash**	2.31	326	ePn	Pb	21 56 47.4	-1.7
IDHR				e		21 57 25.7	
	comp=E,1µm,0.4s						
IDHR				e		21 57 25.8	
	comp=Z,862nm,0.3s						
IDHR				e		21 57 26.9	
	comp=N,1µm,0.2s						
NSR	**Nassriya**	2.34	221	ePn	Pn	21 56 44.0	-1.4
	SNR=4.0						
NSR				eSn	Sn	21 57 14.0	0.0
	SNR=4.0						
ASAO	**Ashtian**	2.48	44	ePn	Pb	21 56 50.2	-1.7
ASAO	**Ashtian**	2.48	44	ePn	Pb	21 56 50.2	-1.7
ZNGN	**Zangian**	2.55	104	ePn	Pn	21 56 49.3	+0.6
ZNGN				e		21 57 27.3	
	comp=Z,99nm,0.2s						
ZNGN				e		21 57 27.3	
	comp=N,99nm,0.2s						
ZNGN				e		21 57 33.1	
	comp=E,99nm,0.3s						
ROKH	**ROKH**	2.65	99	ePn	Pn	21 56 50.8	+0.8
ROKH				e		21 57 32.4	
	comp=Z,99nm,0.3s						
ROKH				e		21 57 33.0	
	comp=N,99nm,0.2s						
ROKH				e		21 57 33.6	
	comp=E,99nm,0.2s						
HKZM	**Kohzaman**	2.71	17	ePn	Pn	21 56 53.2	+2.3
HKZM				e		21 56 54.5	
	comp=N,99nm,0.1s						
HKZM				e		21 57 30.2	
	comp=E,99nm,0.2s						
HKZM				e		21 57 30.5	
	comp=Z,99nm,0.4s						
BHD	**Baghdad**	3.03	280	ePn	Pn	21 56 54.6	-0.4
	SNR=4.0						
BHD				eSn	Sn	21 57 32.5	+1.3
	SNR=4.0						
IRAZ	**Razeghan**	3.10	32	ePn	Pb	21 56 59.3	-3.1
IRAZ				e		21 57 02.4	
	comp=Z,509nm,0.2s						
IKLH	**Kolahrood**	3.10	79	ePn	Pn	21 56 58.9	+2.7
IKLH				e		21 57 46.4	
	comp=E,537nm,0.2s						
IKLH				e		21 57 51.4	
	comp=Z,558nm,0.2s						
IKLH				e		21 58 02.5	
	comp=N,537nm,0.2s						
GHVR	**GHOM**	3.27	58	ePn	Pn	21 57 00.7	+2.3
GHVR	**GHOM**	3.27	58	ePn	Pn	21 57 00.7	+2.3
IGAR	**Gharneh**	3.48	95	e		21 57 07.9	
	comp=Z,419nm,0.1s						
IGAR				ePn	Pn	21 57 02.2	+0.8
IGAR				e		21 57 50.6	
	comp=N,610nm,0.2s						
IZEF	**Zefreh**	3.69	87	e		21 57 10.1	
	comp=Z,172nm,0.1s						
IZEF				ePn	Pn	21 57 05.6	+1.2
IZEF				e		21 58 05.8	
	comp=N,239nm,0.3s						
IZEF				e		21 58 08.6	
	comp=E,233nm,0.3s						
IRAM	**Ramesheh**	3.88	103	e		21 57 52.1	
	comp=E,381nm,0.2s						
IRAM				ePn	Pn	21 57 07.2	+0.3
IRAM				e		21 57 52.1	
	comp=N,437nm,0.2s						
IRAM				e		21 57 54.0	
	comp=Z,339nm,0.3s						
IDMV	**Damavand**	4.39	49	ePn	Pn	21 57 15.5	+1.5
IDMV				e		21 57 16.3	
	comp=Z,221nm,0.2s						
IDMV				e		21 57 16.6	
	comp=E,350nm,0.1s						
IDMV				e		21 57 16.9	
	comp=N,268nm,0.2s						
IFIR	**Firoozkooh**	4.90	53	ePn	Pn	21 57 22.5	+1.5
IFIR				e		21 57 23.7	
	comp=N,197nm,0.1s						
IFIR				e		21 57 25.5	
	comp=Z,204nm,0.2s						
IFIR				e		21 57 29.2	
	comp=E,144nm,0.1s						
IPAR	**Pars**	5.26	122	e		21 58 33.4	
	comp=Z,109nm,0.5s						
IPAR				e		21 58 37.7	
	comp=E,131nm,0.3s						
IPAR				e		21 58 41.3	
	comp=N,131nm,0.3s						
RTB	**Rutbah**	6.43	274	ePn	Pn	21 57 42.0	+0.3
	SNR=4.0						
RTB				eSn	Sn	21 58 54.0	-1.0
	SNR=4.0						

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*NEIC **29** 21:58:23.8±0.6, 40°.72N×112°.54W, h0^{km}, ML2.6, Error ellipse: s-maj=10.6km s-min=5.6km az=83.0, Suspected Mining explosion.*
NEIC 29 km [18 miles] NW of Tooele.
*ISCJB **29** 21:58:24.0±0.4, 40°.72N±0°.02×112°.37W±0°.04, h0^{km}, Error ellipse: s-maj=4.4km s-min=3.0km az=175.6*
*IDC **29** 21:58:34.1±1.2, 41°.46N×112°.15W, h0^{km}, mb1 3.1/3, mb1mx3.0/66, mbtmp2.6/3, ML3.0/3, Error ellipse: s-maj=27.2km s-min=8.7km az=145.0*

ISC 29 21:58:23.4±0.8, **40°.71N**±0°.02×**112°.44W**±0°.03, **h0^{km}, n36,** σ**1^{s}75**/50, **Utah**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BGU	**Big Grassy Mou**	0.50	296	ePg	Pn	21 58 37.1	-0.8
BGU				eSg	Sb	21 58 47.1	+4.1
DUG	**Dugway, Tooele**	0.59	209	ePg	Pg	21 58 32.7	-1.9
DUG				eSg	Sg	21 58 43.1	+0.9
SPUT	**South Promonto**	0.60	359	ePg	Pb	21 58 36.6	-0.3
SPUT				eSg	Sb	21 58 46.5	+0.6
TCUT	**Toone Canyon**	0.88	62	ePg	Pg	21 58 37.8	-2.5
HVU	**Hansel Valley**	1.10	347	ePg	Pb	21 58 45.8	+0.4
HVU				eSg	Sn	21 59 02.0	-0.2
HWUT	**Hardware Ranch**	1.11	36	ePg	Pg	21 58 42.5	-2.2
HWUT				eSg	Sg	21 58 59.4	+0.2
MSU	**Marysvale**	2.20	175	ePn	Pn	21 58 58.8	-2.7
PSUT	**Pine Spring**	2.43	207	ePn	Pn	21 59 06.3	+1.8
PSUT				eSn	Sb	21 59 38.9	+0.2
REDW	**Red Top Meadow**	2.90	24	ePn	Pn	21 59 10.1	-1.0
REDW				eSn	Sn	21 59 49.5	+2.6
PD31	**Pinedale Array**	2.98	45	ePn	Pb	21 59 17.1	-0.5
PDAR	**Pinedale Array**	2.98	45	Pn	Pn	21 59 13.8	+1.7
	0.5nm,0.3s,baz=230,slow=18,SNR=12						
PDAR				Lg	Lg	21 59 49.8	
	0.6nm,0.3s,baz=233,slow=33,SNR=4.9						
PDAR	**Pinedale Array**	2.98	45	ePn	Pn	21 59 14.1	+1.9
PDAR				eSn	Sn	21 59 48.9	+0.2
TPAW	**Teton Pass**	2.99	21	ePn	Pn	21 59 11.9	-0.4
FXWY	**Fox Creek**	3.11	19	ePn	Pn	21 59 14.1	+0.1
HLID	**Hailey**	3.21	333	ePn	Pn	21 59 15.1	-0.1
LOHW	**Long Hollow**	3.21	25	ePn	Pn	21 59 15.5	+0.3
CCUT	**Cedar City**	3.23	193	ePn	Pb	21 59 21.0	-0.8
O20A	**White River Ci**	3.26	99	ePn	Pn	21 59 17.9	+2.0
MOOW	**Moose Ponds**	3.29	22	ePn	Pn	21 59 15.2	-1.2
PV09	**Paradox Valley**	3.38	130	ePn	Pn	21 59 19.0	+1.4
R11A	**Troy Canyon, C**	3.38	227	ePn	Pb	21 59 24.2	-0.1
R11A				eSn	Sn	21 59 59.4	+0.8
PV21	**Cone Mtn., Par**	3.43	128	ePn	Pn	21 59 19.6	+1.2
PV21				eSn	Sn	22 00 01.7	+1.9
PV23	**Carpenter Ridg**	3.48	129	ePn	Pn	21 59 17.8	-1.2
PV23				eSn	Sn	22 00 02.2	+1.1
PV14	**Lion Creek, Pa**	3.52	130	ePn	Pn	21 59 19.7	+0.1
PV22	**Blue Mesa, Par**	3.56	126	ePn	Pn	21 59 21.7	+1.6
PV22				eSn	Sn	22 00 03.3	+0.3
PV19	**Morning Glory**	3.59	131	ePn	Pn	21 59 18.2	-2.3
PV17	**East Wray Mesa**	3.62	131	ePn	Pn	21 59 22.0	+1.0
PV17				eSn	Sn	22 00 05.9	+1.3
PV11	**David Mesa, Pa**	3.66	130	ePn	Pn	21 59 25.6	+4.1
PV18	**Skein Mesa, Pa**	3.68	131	ePn	Pn	21 59 25.4	+3.7
PV03	**Paradox Valley**	3.71	130	ePn	Pn	21 59 24.6	+2.4
LCMT	**Little Creek M**	3.74	190	ePn	Pb	21 59 29.0	-1.4
PV13	**Radium Mtn., P**	3.79	131	ePn	Pn	21 59 26.6	+3.4
SMCO	**Snowmass**	4.47	108	ePg	Pb	21 59 41.3	-1.7
NV01	**Mina Array Sit**	5.07	245	ePg	Pg	22 00 00.2	-0.4
NV01				eSg	Sg	22 01 04.7	-1.5
NVAR	**Mina Array Bea**	5.07	245	Pn	Pg	22 00 00.2	-0.4
	0.1nm,0.3s,baz=68,slow=17,SNR=3.3						
NVAR				Sn	Sg	22 01 04.7	-1.5
	0.1nm,0.3s,baz=43,slow=33,SNR=2.3						
TXAR	**Lajitas Array**	13.42	145	Pn	P	22 01 55.3	+10
	0.0nm,0.3s,baz=336,slow=7.9,SNR=2.9						

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*NIED **29** 22:05:00, 39°.10N×142°.50E, h32^{km}, Mw5.4 Best double couple: M$_0$1.20000×10^{17} NP1:φ$_s$292.00000°, δ21.00000°, λ-149.00000°. NP2:φ$_s$173.00000°, δ79.00000°, λ-72.00000°.*
*ISCJB **29** 22:05:05.9±0.4, 39°.08N±0°.02×142°.40E±0°.01, h33^{km}±2^{km}, mb5.3/575, MS5.1/124, Error ellipse: s-maj=2.6km s-min=1.7km az=160.5*
*JMA **29** 22:05:05.2±0.1, 39°.10N×142°.47E, h34^{km}±1^{km}, M5.5*
JMA Felt IV J1.
*BJI **29** 22:05:06.0, 39°.05N×142°.31E, h43^{km}, mb5.2/83, mB5.1/62, Ms5.3/93, Ms7 5.3/87*
*MOS **29** 22:05:06.9±0.9, 39°.20N×142°.35E, h39^{km}, mb5.5/135, MS5.4/34, Error ellipse: s-maj=5.4km s-min=3.6km az=104.3*
*IDC **29** 22:05:08.5±1.0, 39°.08N×142°.37E, h44^{km}±9^{km}, mb4.9/56, mb1 4.9/63, mb1mx4.9/73, mbtmp5.1/63, ML4.7/6, MS4.9/62, Ms1 4.9/62, ms1mx4.9/67, Error ellipse: s-maj=7.9km s-min=6.6km az=93.0*
*NEIC **29** 22:05:09.2±0.4, 39°.08N×142°.32E, h49^{km}±3^{km}, mb5.4/297, MS4.9/29, MW5.3, Error ellipse: s-maj=2.8km s-min=2.0km az=145.0, Moment Tensor Solution. s74 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-0.86; M$_{\theta\theta}$0.17; M$_{\phi\phi}$0.69; M$_{r\theta}$0.13; M$_{\theta\phi}$0.03; M$_{\phi r}$1.00; Best double couple: M$_0$1.30000×10^{17} NP1:φ$_s$2.00000°, δ19.00000°, λ-94.00000°. NP2: φ$_s$186.00000°, δ71.00000°, λ-89.00000°. Principal axes: T 1.1800, Plg26.0000°, Azm275.0000°; N 0.1700, Plg1.0000°, Azm6.0000°; P -1.3600, Plg64.0000°, Azm99.0000°;*
NEIC Felt [II] at Sendai. Also felt at Akita, Aomori, Fukushima, Hachinohe, Ishinomaki, Kesennuma, Kitakami, Misawa, Miyako, Morioka, Shiwa, Wakuya and Yokote. Recorded [4 JMA] in Iwate and Miyagi.
*GCMT **29** 22:05:09.2±0.1, 39°.17N×142°.31E, h34^{km}, MW5.4/128, Moment Tensor Solution. s116,c217; s128,c251; Duration: 1^{s}3 Moment tensor: Scale 10^{17}Nm; M$_{rr}$-1.36±.02; M$_{\theta\theta}$0.44±.01; M$_{\phi\phi}$0.91±.01; M$_{r\theta}$0.42±.02; M$_{\theta\phi}$-0.41±.01; M$_{\phi r}$1.27±.02; Best double couple: M$_0$1.78600×10^{17} NP1:φ$_s$181.00000°, δ69.00000°, λ-73.00000°. NP2:φ$_s$320.00000°, δ27.00000°, λ-127.00000°. Principal axes: T 1.5230, Plg22.0000°, Azm258.0000°; N 0.5250, Plg16.0000°, Azm354.0000°; P -2.0490, Plg62.0000°, Azm118.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 29 22:05:06.6±0.3, **39°.14N**±0°.02×**142°.46E**±0°.03, **h31**^{km}±1^{km}, **h31^{km}:pP-P, n1635,** σ**1^{s}37**/1797, **mb5.4**/583, **MS5.2**/126, **86C-48D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	**Ofunato**	0.61	265	⇑P	Pn	22 05 17.6	-1.6
OFUJ				S	Sn	22 05 25.9	-2.1
MIYJ	**Miyakonagasawa**	0.66	312	⇓P	Pn	22 05 18.4	-1.4
MIYJ				S	Sn	22 05 27.8	-1.3
JTH	**Tanohata**	0.92	330	⇓P	Pn	22 05 22.6	-0.8
JOM	**Ohasama**	0.96	291	⇑P	Pn	22 05 23.1	-0.9
JOM				S	Sb	22 05 36.6	-0.5
JMK	**Ichinoseki**	0.98	259	⇑P	Pn	22 05 23.0	-1.2
JMK				S	Sn	22 05 35.8	-1.2
JIO	**Ouri**	1.10	232	⇑P	Pn	22 05 23.9	-2.0
JIO				S	Sn	22 05 37.3	-2.8
JKZ	**Kuzumaki**	1.21	314	⇓P	Pn	22 05 27.2	-0.3
JKZ				S	Sb	22 05 43.4	-0.9
JANG	**Nango**	1.43	330	⇓P	Pn	22 05 30.1	-0.3
JRG	**Rokugo**	1.44	281	⇑P	Pn	22 05 30.1	-0.4
JOU	**Okura**	1.60	242	⇑P	Pn	22 05 31.7	-1.1
JYK	**Kaneyama**	1.65	263	⇑P	Pn	22 05 32.9	-0.5
JMM	**Marumori**	1.82	226	⇑P	Pn	22 05 34.1	-1.7
JYS	**Shirataka**	2.08	245	P	Pn	22 05 38.8	-0.6
ONAJ	**Iwakimizuishiy**	2.42	213	P	Pn	22 05 42.1	-2.0
JAW	**Awa shima**	2.60	256	⇑P	Pn	22 05 46.4	-0.1
JAW				S	Sb	22 06 30.2	+6.3
JNS	**Sasagawa**	2.79	243	⇑P	Pn	22 05 48.9	-0.3
ERM	**Erimo**	2.92	10	ePn	Pn	22 05 51.6	+0.7
ERM				eSn	Sn	22 06 23.0	-1.9
ERM	**Erimo**	2.92	10	d iP	Pn	22 05 51.9	+1.0
JHO	**Hitachi**	2.93	211	⇑P	Pn	22 05 48.8	-2.3
JSB	**Shiboa**	2.95	223	P	Pn	22 05 51.1	-0.3
JHK	**Hiroka**	3.30	236	⇑P	Pn	22 05 55.9	-0.3
JSD	**Sado**	3.47	253	⇑P	Pn	22 05 57.8	-0.6
JKT	**Katashina**	3.47	228	P	Pn	22 05 58.9	+0.3
JAG	**Ashikaga**	3.61	222	⇑P	Pn	22 05 59.8	-0.6
JJN	**Nakama**	3.95	240	⇑P	Pn	22 06 05.8	+0.8
JGK	**Kuni**	3.97	231	P	Pn	22 06 06.2	+0.8
MJAR	**Matsushiro Arr**	4.25	234	P	Pn	22 06 09.8	+0.6
	74nm,0.3s,baz=39,slow=11,SNR=338						
MJAR				S	Sn	22 06 56.0	-1.7
	21nm,0.3s,baz=39,slow=22,SNR=4.3						
MJAR				LR	LR	22 08 01.4	
	comp=Z,41µm,18.2s,baz=50,slow=42						
MAJO	**Matsushiro**	4.25	234	ePn	Pn	22 06 09.5	+0.3
MAJO				eSn	Sn	22 06 55.1	-2.6
MAJO	**Matsushiro**	4.25	234	ceP	Pn	22 06 09.9	+0.7
MAT	**Matsushiro**	4.25	234	P	Pn	22 06 11.9	+2.7
MAT	**Matsushiro**	4.25	234	P	Pn	22 06 09.9	+0.7
MAT				eS	Sn	22 07 02.1	+4.4
MJB9	**Matsu-Tunnel**	4.25	234	ePn	Pn	22 06 10.0	+0.8
MJB9				eSn	Sn	22 06 59.8	+2.1
JSZ	**Suzu**	4.35	249	⇑P	Pn	22 06 10.7	+0.2
JNG	**Nsakai**	4.40	233	P	Pn	22 06 12.2	+0.9
JHG	**Hegura jima**	4.53	255	P	Pn	22 06 13.2	+0.2
JNT	**Takato**	4.73	228	P	Pn	22 06 16.9	+0.9
JNK	**Nakash**	4.76	20	⇑P	Pn	22 06 14.7	-1.4
NEM2	**Nemuro 2**	4.89	29	⇑P	Pn	22 06 16.3	-1.7
ASAJ	**Asahikawa**	4.97	1	P	Pn	22 06 20.7	+1.5
	22nm,0.3s,baz=217,slow=12,SNR=78						
ASAJ				S	Sn	22 07 18.9	+3.3
	24nm,0.3s,baz=77,slow=30,SNR=2.9						
ASAJ	**Asahikawa**	4.97	1	ePn	Pn	22 06 19.9	+0.8
ASAJ				eSn	Sn	22 07 19.3	+3.7
JJH	**Hakui**	5.00	245	P	Pn	22 06 21.0	+1.6
JGN	**Niukaw**	5.01	236	P	Pn	22 06 22.3	+2.6
GLVR	**Golovnino**	5.14	26	i P	Pn	22 06 20.9	-0.5
GLVR				i S	Sn	22 07 17.4	-2.2
GLVR				pmax	pmax		
	comp=Z,2µm,0.7s						
GLVR				pmax	pmax		
	comp=E,805nm,0.3s						
GLVR				pmax	pmax		
	comp=N,1µm,0.2s						
GLVR				smax	smax		
	comp=N,8µm,0.5s						
GLVR				smax	smax		
	comp=E,8µm,0.6s						
GRPR	**Tuman**	5.45	26	c iP	Pn	22 06 25.9	+0.3
GRPR				i S	Sn	22 07 24.1	-3.1
GRPR				pmax	pmax		
	comp=Z,2µm,0.3s						
GRPR				pmax	pmax		
	comp=N,1µm,0.5s						
GRPR				pmax	pmax		
	comp=E,2µm,0.4s						
GRPR				smax	smax		
	comp=N,238nm,0.4s						
GRPR				smax	smax		
	comp=E,6µm,0.4s						
LAGR	**Lagunnoye**	5.51	26	d iP	Pn	22 06 26.8	+0.3
LAGR				i S	Sn	22 07 26.8	-1.9
LAGR				pmax	pmax		
	comp=N,1µm,0.4s						
LAGR				pmax	pmax		
	comp=E,2µm,0.4s						
LAGR				pmax	pmax		
	comp=Z,2µm,0.4s						
LAGR				smax	smax		
	comp=E,6µm,0.4s						
LAGR				smax	smax		
	comp=N,11µm,0.8s						
YUK	**Yuzh-Kuril'sk**	5.52	26	c iP	Pn	22 06 25.0	-1.6
YUK				i S	Sn	22 07 26.2	-2.7
YUK				pmax	pmax		
	comp=Z,2µm,0.7s						
YUK				pmax	pmax		
	comp=N,986nm,0.4s						
YUK				pmax	pmax		
	comp=E,474nm,0.2s						
YUK				smax	smax		
	comp=E,809nm,0.3s						
YUK				smax	smax		
	comp=N,6.0nm,0.4s						
SHO	**Shikotan**	5.75	33	d iP	Pn	22 06 28.7	-1.1
SHO				i S	Sn	22 07 30.2	-4.5
SHO				pmax	pmax		
	comp=Z,369nm,0.3s						
SHO				pmax	pmax		
	comp=N,137nm,0.2s						
SHO				pmax	pmax		
	comp=E,132nm,0.4s						
SHO				smax	smax		
	comp=E,1µm,0.3s						
SHO				smax	smax		
	comp=N,2µm,0.5s						
INU	**Inuyama**	5.76	231	ePn	Pn	22 06 31.1	+1.2
INU				eSn	Sn	22 07 33.4	-1.4
JFM	**Mihama**	6.29	237	P	Pn	22 06 39.8	+2.6
JHJ2	**Mitsune**	6.38	200	ePn	Pn	22 06 37.6	-0.9
JHJ2				eSn	Sn	22 07 47.7	-2.6
JHJ	**Hachijo jima 2**	6.38	201	P	Pn	22 06 37.8	-0.7
	comp=N,100nm,0.3s,baz=322,slow=20,SNR=54						
JHJ				S	Sn	22 07 46.7	-3.7
	comp=N,148nm,0.3s,baz=270,slow=21,SNR=4.1						
JHJ				LR	LR	22 09 17.8	
	comp=N,10µm,21.6s,baz=59,slow=40						
KUR	**Kuril'sk**	7.29	32	d iP	Pn	22 06 50.2	-0.7
KUR				i S	Sn	22 08 09.2	-3.4
KUR				pmax	pmax		
	comp=N,254nm,0.5s						
KUR				pmax	pmax		
	comp=Z,594nm,0.5s						
KUR				pmax	pmax		
	comp=E,126nm,0.3s						
KUR				smax	smax		
	comp=E,359nm,0.3s						
KUR				smax	smax		
	comp=N,673nm,0.6s						
TEY	**Ternei**	7.32	325	⇑eP	Pn	22 06 56.5	+5.2
TEY				eS	Sn	22 08 17.3	+4.0
TEY				pmax	pmax		
	comp=E,400nm,1.4s						
TEY				pmax	pmax		
	comp=N,500nm,1.5s						
TEY				pmax	pmax		
	comp=Z,600nm,1.5s						
TEY				smax	smax		
	comp=E,100nm,1.0s						
TEY				MLR	MLR		
	comp=Z,9µm,11.0s						
YSS	**Yuzh-Sakhalins**	7.81	2	αeP	Pn	22 06 57.6	-0.5
YSS				eS	Sn	22 08 27.6	+2.2
YSS				pmax	pmax		
	comp=E,150nm,0.9s						
YSS				pmax	pmax		
	comp=Z,250nm,0.9s						
YSS				pmax	pmax		
	comp=Z,1µm,3.2s						
YSS				smax	smax		
	comp=N,340nm,1.0s						
YSS				MLR	MLR		

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             comp=Z,10µm,15.0s
YSS                                    MLR     MLR
             comp=N,8µm,16.0s
MSHR   Mys Shultsa         9.22 295⇓eP      Pn      22 07 19.7 +2.3
USRK   Ussuriysk Ar.       9.32 306  P      Pn      22 07 20.8 +2.1
USRK                                 LR     LR      22 10 50.2
             comp=N,21µm,18.3s,baz=112,slow=37
USA0B  Ussuriysk Arra      9.32 306 ePn     Pn      22 07 22.3 +3.6
USA0B                               eSn     Sn      22 09 03.6 +1.2
MDJ    Mudanjiang         11.04 304  P      Pn      22 07 43.0 +0.7
MDJ                                  S      Sn      22 09 47.0 +2.4
MDJ                                  pmax   pmax
             comp=N,110nm,1.0s
MDJ                                  pmax   pmax
             comp=N,2µm,5.4s
MDJ                                  LR     LR
             comp=N,7µm,16.7s
MDJ                                  LR     LR
             comp=N,16µm,16.3s
MDJ                                  LR     LR
             comp=N,24µm,17.4s
MDJ    Mudanjiang         11.04 304 ePn     Pn      22 07 45.7 +3.4
JNU    Nakatsue           11.12 241  P      Pn      22 07 44.3 +0.8
             comp=N,4.0nm,0.3s,baz=134,slow=0.4,SNR=44
JNU                                  LR     LR      22 12 20.3
             comp=N,15µm,19.8s,baz=46,slow=39
JNU    Nakatsue           11.12 241 ePn     Pn      22 07 45.0 +1.6
KSRS   Korea Array        11.54 266  P      Pn      22 07 51.5 +2.2
             comp=N,1.5nm,0.3s,baz=79,slow=14,SNR=27
KSRS                                 S      Sn      22 10 04.1 +7.1
             comp=N,0.5nm,0.3s,baz=74,slow=23,SNR=2.9
KSRS                                 LR     LR      22 11 55.9
             comp=N,11µm,19.4s,baz=80,slow=35
KS01   Wonju Array Si     11.56 266 ePn     Pn      22 07 53.4 +4.0
KS15   Wonju Array Si     11.58 266 ePn     Pn      22 07 53.3 +3.6
KS15                                eSn     Sn      22 10 01.5 +3.7
KSAR   Wonju Array Be     11.58 266  P      Pn      22 07 51.5 +1.8
KSAR   Wonju Array Be     11.58 266  P      Pn      22 07 51.5 +1.8
TYV    Tymovskoe          11.72   1 eP      Pn      22 07 52.6 +1.0
TYV                                 eS      Sn      22 09 58.3 -3.0
TYV                                  pmax   pmax
             comp=Z,500nm,3.7s
TYV                                  pmax   pmax
             comp=Z,69nm,0.9s
TYV                                  smax   smax
             comp=E,37nm,0.8s
TYV                                  smax   smax
             comp=N,500nm,3.5s
CBIJ   Chichi jima        12.01 181 ePn     Pn      22 07 52.7 -3.0
CBIJ                                eSn     Sn      22 09 56.8  -12
JCJ    Chichijima         12.01 181  P      Pn      22 07 52.7 -3.0
JCJ                                  S      Sn      22 09 56.8  -12
             comp=N,25nm,0.3s,baz=30,slow=21,SNR=3.9
TJN    Taejon             12.26 262⇓eP      Pn      22 08 02.4 +3.4
GRNR   Gornyy             12.38 342 eP      Pn      22 08 05.1 +4.5
GRNR                                 pmax   pmax
             comp=Z,55nm,1.0s
INCN   Inchon             12.54 267 ePn     P       22 08 07.4 -6.7
KLR    Kul'dur            12.66 326  P      Pn      22 08 06.0 +1.6
             comp=Z,0.2nm,0.3s,baz=133,slow=12,SNR=84
KLR                                  LR     LR      22 12 50.7
             comp=Z,1µm,21.6s,baz=138,slow=36
KLR    Kul'dur            12.66 326c iP     Pn      22 08 05.2 +0.7
CN2    Changchun          13.57 296 eP      Pn      22 08 17.3 +0.4
CN2                                 esP     P       22 08 32.8 +7.3
CN2                                 eS      Sn      22 10 47.8 +1.3
CN2                                  pmax   pmax
             comp=Z,40nm,1.2s
CN2                                  pmax   pmax
             comp=Z,820nm,5.0s
CN2                                  LR     LR
             comp=Z,5µm,15.0s
CN2                                  LR     LR
             comp=Z,7µm,15.0s
CN2                                  LR     LR
             comp=Z,7µm,20.0s
NKL    Nikolayevsk        14.07 356 eP      Pn      22 08 19.0 -4.6
NKL                                 eS      Sn      22 11 04.0 +5.6
NKL                                  pmax   pmax
             comp=N,500nm,4.0s
NKL                                  pmax   pmax
             comp=Z,500nm,4.0s
NKL                                  pmax   pmax
             comp=N,86nm,1.0s
NKL                                  pmax   pmax
             comp=Z,110nm,1.0s
NKL                                  smax   smax
             comp=E,1µm,16.0s
NKL                                  MLR    MLR
             comp=N,4µm,15.0s
NKL                                  MLR    MLR
             comp=E,5µm,15.0s
NKL                                  MLR    MLR
             comp=Z,6µm,15.0s
OKH    Okha               14.42   1⇑iP      Pn      22 08 20.8 -7.5
OKH                                  pmax   pmax
             comp=Z,100nm,7.4s
SNY    Shenyang           14.62 287 ⇓P      Pn      22 08 32.0 +0.9
SNY                                  S      Sn      22 11 17.0 +5.0
SNY                                  pmax   pmax
             comp=Z,21nm,1.7s
SNY                                  pmax   pmax
             comp=Z,1µm,11.2s
SNY                                  LR     LR
             comp=Z,2µm,14.5s
SNY                                  LR     LR
             comp=Z,9µm,17.5s
SNY                                  LR     LR
             comp=Z,14µm,20.0s
SKR    Severo-Kuril's     15.03  35 eP      Pn      22 08 34.1 -2.5
SKR                                  pmax   pmax
             comp=Z,106nm,0.8s
SKR                                  MLR    MLR
             comp=Z,4µm,15.0s
DL2    Dalian             16.19 276⇑iP      Pn      22 08 51.0 -0.7
DL2                                  S      Sn      22 11 48.0 -2.3
DL2                                  pmax   pmax
             comp=Z,110nm,0.8s
DL2                                  pmax   pmax
             comp=Z,1µm,7.3s
DL2                                  LR     LR
             comp=Z,3µm,16.0s
DL2                                  LR     LR
             comp=Z,5µm,17.9s
DL2                                  LR     LR
             comp=Z,9µm,20.2s
JOW    Kunigami           17.07 228  P      P       22 09 02.2 -2.2
             comp=Z,3.9nm,0.3s,baz=144,slow=6.9,SNR=5.4
JOW    Kunigami           17.07 228 ePn     P       22 09 02.2 -2.2
             comp=Z,40nm,0.8s
PEA0B  Petropavlovsk-     17.46  32 ePn     Pn      22 09 05.1 -2.5
             comp=Z,50nm,0.9s
PETK   Petropavlovsk-     17.46  32  P      Pn      22 09 05.1 -2.6
             baz=195,slow=10
PETK                                 PcP    PcP     22 13 48.5 +1.3
             baz=209,slow=3.6
PETK                                 LR     LR      22 16 47.4
             comp=Z,5µm,18.1s,baz=205,slow=40
PETK   Petropavlovsk-     17.46  32 ePn     Pn      22 09 03.9 -3.8
PETK                                ePcP    PcP     22 13 48.1 +0.9
PETK   Petropavlovsk-     17.46  32 eP      Pn      22 09 03.9 -3.8
PEA1   Petropavlovsk-     17.46  32 ePn     Pn      22 09 05.1 -2.6
PEA1                                ePcP    PcP     22 13 48.5 +1.3
PET    Petropavlovsk      17.80  33 ePn     Pn      22 09 05.9 -5.9
             comp=Z,84nm,1.5s
PET    Petropavlovsk      17.80  33 eP      P       22 09 13.2 +0.9
PET                                 eS      S       22 12 35.7 +0.4
PET                                  pmax   pmax
             comp=Z,700nm,11.8s
PET                                  pmax   pmax
             comp=Z,81nm,1.0s
PET                                  pmax   pmax
             comp=Z,800nm,11.1s
PET                                  MLR    MLR
             comp=Z,4µm,17.0s
ZEA    Zeya               17.91 330 eP      Pn      22 09 11.1 -2.1
ZEA                                 eS      Sn      22 12 25.0 -6.8
ZEA                                  pmax   pmax
             comp=N,200nm,2.0s
ZEA                                  pmax   pmax
             comp=Z,300nm,2.0s
ZEA                                  pmax   pmax
             comp=E,71nm,0.9s
ZEA                                  pmax   pmax
             comp=N,110nm,1.0s
ZEA                                  pmax   pmax
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             comp=Z,180nm,0.8s
ZEA                                  smax   smax
             comp=N,500nm,4.0s
ZEA                                  MLR    MLR
             comp=N,6µm,15.0s
ZEA                                  MLR    MLR
             comp=Z,9µm,15.0s
ZEA                                  MLR    MLR
             comp=E,4µm,16.0s
HIA    Hailar             19.10 309 eP      P       22 09 24.5 -2.3
             comp=E,43nm,0.7s
HIA    Hailar             19.10 309 eP      P       22 09 24.5 -2.3
HIA                                  pmax   pmax
             comp=Z,43nm,0.7s
SSE    Sheshan            19.13 252  P      Pn      22 09 28.8 +0.7
SSE                                  S      S       22 13 01.5 -0.7
SSE                                  sS     sS      22 13 13.5 -2.0
SSE                                  pmax   pmax
             comp=Z,110nm,1.0s
SSE                                  pmax   pmax
             comp=Z,210nm,3.8s
SSE                                  LR     LR
             comp=Z,3µm,15.6s
TIA    Tai'an             20.24 270  P      P       22 09 37.8 -1.5
TIA                                  S      S       22 13 16.0 -8.7
TIA                                  pmax   pmax
             comp=Z,65nm,0.7s
TIA                                  LR     LR
             comp=Z,2µm,12.0s
TIA                                  LR     LR
             comp=Z,6µm,12.4s
TIA                                  LR     LR
             comp=Z,8µm,12.9s
BJI    Beijing            20.25 281⇑eP      P       22 09 36.5 -2.8
BJI                                  pP     pP      22 09 45.0 -2.6
BJI                                  S      S       22 13 17.5 -7.3
BJI                                  pmax   pmax
             comp=Z,37nm,0.8s
BJI                                  LR     LR
             comp=Z,6µm,31.3s
BJT    Baijiatuau         20.26 281 eP      P       22 09 36.8 -2.6
             comp=Z,56nm,0.9s
BJT                                 eS      S       22 13 17.8 -7.2
BJT                                  LR     LR
             comp=Z,5µm,19.0s
BJT    Baijiatuau         20.26 281 eP      P       22 09 36.8 -2.6
BJT                                 eS      S       22 13 17.8 -7.2
BJT                                  pmax   pmax
             comp=Z,56nm,0.9s
BJT                                  MLR    MLR
             comp=Z,5µm,19.0s
NJ2    Nanjing            20.42 257 eP      Pn      22 09 41.8 -1.6
NJ2                                  pP     sP      22 09 53.0 -0.4
NJ2                                  sP     pP      22 09 59.0  +10
NJ2                                  S      S       22 13 22.0 -6.2
NJ2                                  sS     sS      22 13 36.0 -5.4
NJ2                                  pmax   pmax
             comp=Z,31nm,0.8s
NJ2                                  pmax   pmax
             comp=Z,350nm,3.6s
NJ2                                  LR     LR
             comp=Z,4µm,19.5s
NJ2                                  LR     LR
             comp=Z,6µm,16.3s
NJ2                                  LR     LR
             comp=Z,7µm,14.1s
MA2    Magadan            21.13  12  P      P       22 09 49.1 +0.5
             comp=Z,173nm,0.8s,baz=199,slow=9.3,SNR=56
MA2    Magadan            21.13  12 eP      P       22 09 47.0 -1.6
             comp=Z,156nm,0.8s
MA2                                  LR     LR
             comp=Z,3µm,20.0s
MA2    Magadan            21.13  12 eP      P       22 09 47.0 -1.6
MA2                                  pmax   pmax
             comp=Z,156nm,0.8s
MA2                                  MLR    MLR
             comp=Z,3µm,20.0s
TATO   Taipei             22.62 238  PFAKE          22 10 20.0  +15
TATO                                 LR     LR
             comp=Z,6µm,20.0s
TIY    Taiyuan            23.52 276 eP      P       22 10 13.5 -0.5
TIY                                  S      S       22 14 17.8 -8.0
TIY                                  LR     LR
             comp=Z,1µm,11.2s
TIY                                  LR     LR
             comp=Z,4µm,11.1s
TIY                                  LR     LR
             comp=Z,4µm,12.4s
HHC    Hu-ho-hao-te       23.67 284 eP      P       22 10 13.5 -2.0
HHC                                  pP     sP      22 10 26.5 -1.6
HHC                                  sP     pP      22 10 35.0  +11
HHC                                  PP     PnPn    22 10 50.0 +6.8
HHC                                  S      S       22 14 24.0 -4.3
HHC                                  sS     pS      22 14 37.3 -0.3
HHC                                  SS     SnSn    22 15 10.0 +3.1
HHC                                  pmax   pmax
             comp=Z,37nm,1.2s
HHC                                  pmax   pmax
             comp=Z,210nm,6.3s
HHC                                  LR     LR
             comp=Z,3µm,14.9s
HHC                                  LR     LR
             comp=Z,8µm,16.7s
HHC                                  LR     LR
             comp=Z,10µm,16.9s
CIT    Chita              23.80 312 eP      P       22 10 17.5 +1.0
CIT                                 e               22 10 24.6
CIT                                 e               22 10 32.3
CIT                                 e               22 10 52.2
CIT                                 e               22 11 02.2
CIT                                 e               22 14 28.6
CIT                                  pmax   pmax
             comp=Z,382nm,1.0s
YAK    Yakutsk            24.22 345  P      P       22 10 19.9 -0.4
             comp=Z,10.0nm,0.4s,baz=196,slow=22,SNR=32
YAK                                  S      S       22 14 34.0 -2.4
             comp=Z,2.7nm,0.4s,baz=243,slow=24,SNR=4.3
YAK    Yakutsk            24.22 345 eP      P       22 10 19.5 -0.7
             comp=Z,239nm,0.7s
YAK                                 eS      S       22 14 34.0 -2.4
YAK                                  LR     LR
             comp=Z,2µm,20.0s
YAK    Yakutsk            24.22 345 eP      P       22 10 19.7 -0.5
YAK                                 e*PP    pP      22 10 28.9 -0.3
YAK                                 e               22 10 49.2
YAK                                 ePPP    PPP     22 11 10.3
YAK                                 eS      S       22 14 34.2 -2.2
YAK                                 e*SS    sS      22 14 49.1 -2.0
YAK                                  pmax   pmax
             comp=Z,269nm,0.9s
YAK                                  pmax   pmax
             comp=N,115nm,1.0s
YAK                                  pmax   pmax
             comp=E,38nm,1.1s
YAK                                  smax   smax
             comp=E,465nm,2.0s
YAK                                  smax   smax
             comp=N,373nm,2.1s
YAK                                  MLR    MLR
             comp=Z,5µm,17.0s
YAK                                  MLR    MLR
             comp=N,8µm,19.0s
YAK                                  MLR    MLR
             comp=E,1µm,17.0s
WHN    Wuhan              24.54 258 ⇓P      P       22 10 22.5 -0.9
WHN                                  sP     sP      22 10 42.0 +5.9
WHN                                  S      S       22 14 38.3 -3.8
WHN                                  LR     LR
             comp=E,8µm,14.5s
WHN                                  LR     LR
             comp=E,17µm,15.5s
WHN                                  LR     LR
             comp=E,18µm,15.0s
SEY    Seymchan           24.57  11  P      P       22 10 25.3 +1.9
             comp=E,84nm,0.6s,baz=197,slow=6.9,SNR=167
SEY                                  S      S       22 14 48.8 +6.8
             comp=E,2.4nm,0.2s,baz=178,slow=22,SNR=5.6
SEY    Seymchan           24.57  11deP      P       22 10 25.2 +1.8
QZH    Quanzhou           24.59 242⇑iP      P       22 10 21.8 -2.2
QZH                                  sP     sP      22 10 40.5 +3.8
QZH                                  S      S       22 14 40.8 -2.3
QZH                                  pmax   pmax
             comp=E,310nm,5.4s
QZH                                  LR     LR
             comp=E,5µm,14.7s
QZH                                  LR     LR
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             comp=E,3µm,14.7s
QZH                                  LR     LR
             comp=E,6µm,14.7s
BTO    Baotou             24.86 284 eP      P       22 10 24.0 -2.5
BTO                                  S      S       22 14 44.3 -3.2
GUMO   Guam               25.54 175  P      P       22 10 32.5 -0.1
             comp=E,31nm,0.5s,baz=198,slow=8.4,SNR=3.6
GUMO                                 LR     LR      22 19 18.3
             comp=E,1µm,20.9s,baz=21,slow=33
GUMO   Guam               25.54 175 eP      P       22 10 32.5 -0.1
GUMO                                 LR     LR
             comp=Z,3µm,19.0s
SMY    Shemya             25.62  48 eP      P       22 10 30.5 -2.5
             comp=Z,180nm,1.0s
SMY    Shemya             25.62  48 eP      P       22 10 30.5 -2.5
SMY                                  pmax   pmax
             comp=Z,181nm,1.0s
BOD    Bodaibo            26.24 325 eP      P       22 10 38.1 -0.5
BOD                                  pmax   pmax
             comp=Z,92nm,1.2s
ULN    Ulaanbaatar        26.92 301 eP      P       22 10 44.9 -0.2
             comp=Z,16nm,0.7s
ULN                                  LR     LR
             comp=Z,6µm,19.0s
ULN    Ulaanbaatar        26.92 301  P      P       22 10 44.4 -0.7
             SNR=15
ULN    Ulaanbaatar        26.92 301c iP     P       22 10 44.2 -0.9
ULN                                  pmax   pmax
             comp=Z,63nm,2.5s
XAN    Xi'an              27.30 270  P      P       22 10 47.3 -1.2
XAN                                  PP     PnPn    22 11 36.0 +3.1
XAN                                  S      S       22 15 22.0 -4.1
XAN                                  PcS    PcS     22 17 51.3 +2.1
XAN                                  pmax   pmax
             comp=Z,12nm,0.8s
XAN                                  pmax   pmax
             comp=Z,320nm,5.8s
XAN                                  LR     LR
             comp=Z,4µm,17.7s
XAN                                  LR     LR
             comp=Z,3µm,18.7s
XAN                                  LR     LR
             comp=Z,4µm,12.5s
SONA1  Songino Array      27.36 300 eP      P       22 10 48.5 -0.4
SONA0  Songino Array      27.36 300 eP      P       22 10 49.3 +0.3
SONA0                               ePcP    PcP     22 14 08.4 +0.9
SONA0                               eS      S       22 15 29.1 +2.1
SONM   Songino Array      27.36 300  P      P       22 10 49.3 +0.3
             comp=Z,15nm,0.6s,baz=99,slow=8.6,SNR=87
SONM                                 PcP    PcP     22 14 08.4 +0.9
             comp=Z,1.9nm,0.6s,baz=108,slow=4.6,SNR=2.7
SONM                                 S      S       22 15 29.1 +2.1
             comp=Z,1.1nm,0.9s,baz=298,slow=32,SNR=1.9
SONM                                 LR     LR      22 22 11.9
             comp=Z,6µm,18.6s,baz=98,slow=37
ENH    Enshi              28.39 262 eP      P       22 10 57.2 -1.0
             comp=Z,67nm,0.6s
ENH                                  LR     LR
             comp=Z,2µm,20.0s
H11N2  WAKE ISLAND Hy     28.61 126  T      T       22 41 25.5
             baz=318,slow=75
H11N1  WAKE ISLAND Hy     28.62 126  T      T       22 41 24.9
             baz=318,slow=75,SNR=4676
H11N3  WAKE ISLAND Hy     28.63 126  T      T       22 41 29.1
             baz=318,slow=75
IRK    Irkutsk            29.35 309 eP      P       22 11 05.8 -0.7
IRK                                  pmax   pmax
             comp=Z,72nm,2.4s
H11S1  WAKE ISLAND Hy     29.40 127  T      T       22 42 25.0
             baz=319,slow=76,SNR=1924
H11S3  WAKE ISLAND Hy     29.40 127  T      T       22 42 29.0
             baz=319,slow=76,SNR=2361
H11S2  WAKE ISLAND Hy     29.42 127  T      T       22 42 25.0
             baz=319,slow=76,SNR=1985
GZH    Guangzhou          29.45 246  P      P       22 11 04.0 -3.6
GZH                                  S      S       22 15 50.3  -10
GZH                                  LR     LR
             comp=Z,4µm,15.3s
GZH                                  LR     LR
             comp=Z,4µm,15.3s
TLY    Talaya             29.63 308 eP      P       22 11 07.8 -1.2
             comp=Z,51nm,1.0s
TLY                                  LR     LR
             comp=Z,7µm,19.0s
TLY    Talaya             29.63 308  P      P       22 11 09.7 +0.7
             SNR=12
TLY    Talaya             29.63 308c iP     P       22 11 08.8 -0.2
TLY                                 e               22 12 20.4
TLY                                 eS      S       22 16 02.8 +0.5
TLY                                  pmax   pmax
             comp=Z,53nm,0.9s
TLY                                  MLR    MLR
             comp=Z,7µm,15.0s
ZAK    Zakamensk          29.67 305 eP      P       22 11 09.6 +0.1
ZAK                                  pmax   pmax
             comp=Z,36nm,1.1s
LZH    Lanzhou            30.58 277 ⇑P      P       22 11 18.0 +0.2
LZH                                  pP     sP      22 11 32.0 +1.5
LZH                                  sP     pP      22 11 38.3  +12
LZH                                  S      S       22 16 15.0 -2.9
LZH                                  sS     sS      22 16 36.5 +3.8
LZH                                  SS     SnSn    22 17 59.5 +3.6
LZH                                  pmax   pmax
             comp=Z,48nm,0.9s
LZH                                  pmax   pmax
             comp=Z,220nm,7.1s
LZH                                  LR     LR
             comp=Z,6µm,17.9s
LZH                                  LR     LR
             comp=Z,11µm,15.7s
LZH                                  LR     LR
             comp=Z,10µm,19.0s
MOY    Mondy              31.26 307 eP      P       22 11 23.7 +0.2
MOY                                  pmax   pmax
             comp=Z,55nm,1.9s
GYA    Guiyang            32.43 258⇑iP      P       22 11 32.5 -1.5
GYA                                  pP     sP      22 11 48.0 +1.2
GYA                                  PP     PP      22 12 43.5 -4.0
GYA                                  PcP    PcP     22 14 23.8 +2.9
GYA                                  S      S       22 16 41.5 -5.2
GYA                                  sS     sS      22 17 07.0 +5.4
GYA                                  ScP    ScP     22 18 02.5 +0.2
GYA                                  pmax   pmax
             comp=Z,90nm,0.8s
GYA                                  pmax   pmax
             comp=Z,160nm,6.5s
GYA                                  LR     LR
             comp=Z,2µm,17.7s
GYA                                  LR     LR
             comp=Z,3µm,17.9s
GYA                                  LR     LR
             comp=Z,5µm,19.2s
CD2    Chengdu            32.54 267  P      P       22 11 34.8 -0.1
CD2                                  pP     sP      22 11 46.3 -1.4
CD2                                  sP     pP      22 11 51.5 +7.6
CD2                                  S      S       22 16 42.0 -6.3
CD2                                  sS     sS      22 17 07.5 +4.3
CD2                                  pmax   pmax
             comp=Z,90nm,0.5s
CD2                                  pmax   pmax
             comp=Z,280nm,7.0s
CD2                                  LR     LR
             comp=Z,5µm,12.9s
CD2                                  LR     LR
             comp=Z,5µm,17.9s
CD2                                  LR     LR
             comp=Z,8µm,13.5s
GTA    Gaotai             32.78 284 ⇑P      P       22 11 36.5 -0.6
GTA                                  pP     sP      22 11 48.5 -1.4
GTA                                  sP     pP      22 11 53.8 +7.7
GTA                                  PP     PP      22 12 48.0 -3.3
GTA                                  PcP    PcP     22 14 22.3 +0.6
GTA                                  S      S       22 16 48.0 -4.1
GTA                                  ScP    ScP     22 18 04.3 +0.9
GTA                                  PcS    PcS     22 18 07.5 +0.4
GTA                                  SS     SnSn    22 18 48.8 -0.4
GTA                                  ScS    ScS     22 22 02.5 -0.9
GTA                                  pmax   pmax
             comp=Z,27nm,1.4s
GTA                                  pmax   pmax
             comp=Z,230nm,6.5s
GTA                                  LR     LR
             comp=Z,3µm,18.4s
GTA                                  LR     LR
             comp=Z,8µm,18.4s
GTA                                  LR     LR
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	comp=Z,11µm,18.1s						
QIZ	**Qiongzhong**	**34.57**	**244**	P	**P**	**22 11 54.5**	**+1.9**
QIZ				S	**S**	**22 17 22.3**	**+2.6**
QIZ				sS	**sS**	**22 17 41.0**	**+6.3**
QIZ				LR	LR		
	comp=Z,3µm,15.7s						
QIZ				LR	LR		
	comp=Z,3µm,14.7s						
QIZ				LR	LR		
	comp=Z,5µm,15.7s						
QIZ	**Qiongzhong**	**34.57**	**244**	PFAKE		22 12 00.0	+7.4
QIZ				LR	LR		
	comp=Z,3µm,19.0s						
DAV	**Davao City (W)**	**35.37**	**210**	LR	LR	22 28 02.4	
	comp=Z,1µm,18.1s,baz=48,slow=39						
DAV	**Davao City (W)**	**35.37**	**210**	PFAKE		22 12 10.0	+11
DAV				LR	LR		
	comp=Z,955nm,21.0s						
HVS	**Khovu-Aksy**	**35.78**	**306***c*	*i*P	**P**	**22 12 04.2**	**+1.4**
HVS				pmax	pmax		
	comp=Z,30nm,0.9s						
KMI	**Kunming**	**36.13**	**259**	P	**P**	**22 12 05.8**	**-0.4**
KMI				pP	sP	22 12 21.0	+2.0
KMI				sP	pP	22 12 25.5	+10
KMI				PP	**PP**	**22 13 30.0**	**+1.4**
KMI				S	**S**	**22 17 36.8**	**-7.3**
KMI				SS	**SnSn**	**22 20 05.3**	**-5.4**
KMI				pmax	pmax		
	comp=Z,100nm,0.9s						
KMI				pmax	pmax		
	comp=Z,240nm,7.2s						
KMI				LR	LR		
	comp=Z,3µm,15.8s						
KMI				LR	LR		
	comp=Z,4µm,17.4s						
KMI				LR	LR		
	comp=Z,4µm,19.3s						
DGZ	**Jazzator, Alta**	**39.86**	**304**⇑	*i*P	**P**	**22 12 38.5**	**+1.1**
NONG	**Nongkai**	**39.99**	**250**	P	**P**	**22 12 39.5**	**+1.0**
	comp=Z,0.7nm,1.0s						
SKNT	**Sakolnakorn**	**40.09**	**248**	P	**P**	**22 12 40.4**	**+1.0**
	comp=Z,14nm,0.9s						
WMQ	**Urumqi**	**40.66**	**295**	P	**P**	**22 12 45.3**	**+1.3**
WMQ				pP	sP	22 12 59.8	+2.9
WMQ				PcP	**PcP**	**22 14 44.5**	**-0.8**
WMQ				S	**S**	**22 18 50.0**	**-1.9**
WMQ				ScS	**ScS**	**22 22 46.5**	**-0.5**
WMQ				pmax	pmax		
	comp=Z,460nm,3.7s						
WMQ				LR	LR		
	comp=Z,4µm,16.3s						
WMQ				LR	LR		
	comp=Z,5µm,16.3s						
WMQ				LR	LR		
	comp=Z,4µm,26.7s						
ZAA0	**Zalesovo Array**	**41.14**	**311**	*e*P	**P**	**22 12 47.6**	**0.0**
	comp=Z,38nm,0.8s						
ZAA1	**Zalesovo Array**	**41.14**	**311**	*e*P	**P**	**22 12 47.7**	**+0.1**
ZAA1				*e*PcP	**PcP**	**22 14 46.9**	**+0.4**
ZALV	**Zalesovo Beam**	**41.14**	**311**	P	**P**	**22 12 47.7**	**+0.1**
	comp=Z,32nm,0.5s,baz=92,slow=8.1,SNR=153						
ZALV				PcP	**PcP**	**22 14 46.9**	**+0.4**
	comp=Z,10nm,0.7s,baz=99,slow=3.2,SNR=3.9						
ZALV				LR	LR	22 30 31.1	
	comp=Z,5µm,19.1s,baz=83,slow=37						
ZALV	**Zalesovo Beam**	**41.14**	**311**	*e*P	**P**	**22 12 47.0**	**-0.6**
ZALV	**Zalesovo Beam**	**41.14**	**311**	*e*P	**P**	**22 12 47.0**	**-0.6**
RKPI	**Ransiki, Papua**	**41.16**	**193**	P	**P**	**22 12 48.5**	**+0.3**
	comp=Z,55nm,1.1s,comp=Z,3µm						
MANU	**Manus Island**	**41.23**	**173**	*e*P	**P**	**22 12 48.0**	**-0.7**
	comp=Z,52nm,0.8s						
KHON	**Khomkaen**	**41.34**	**248**	P	**P**	**22 12 50.6**	**+0.9**
	comp=Z,32nm,0.7s						
JORH	**JORHAT**	**41.85**	**268**	*e*P	**P**	**22 12 54.9**	**+1.1**
JORH				IAmb	IAmb	22 12 56.5	
	comp=Z,186nm,0.9s						
MOKO	**MOKOCHONG**	**41.86**	**267**	*e*P	**P**	**22 12 54.3**	**+0.2**
ZSN	**Zaisan**	**41.88**	**301**⇑	*i*P	**P**	**22 12 55.0**	**+1.2**
	comp=Z,6.0nm,0.8s						
ZSN				*i* S	**S**	**22 19 11.7**	**+1.9**
ZSN				*i* LR	LR	22 30 31.5	
	comp=Z,378nm,16.3s						
KMSI	**Cibinong**	**41.94**	**208**	P	P	22 13 04.3	+10
NVS	**Novosibirsk**	**42.01**	**312**⇑	*i*P	**P**	**22 12 55.2**	**+0.4**
NVS				*e*		22 14 54.7	
NVS				*e*S	**S**	**22 19 09.2**	**-2.3**
NVS				pmax	pmax		
	comp=N,3.0nm,0.6s						
NVS				pmax	pmax		
	comp=E,24nm,0.6s						
NVS				pmax	pmax		
	comp=Z,25nm,0.6s						
NVS				smax	smax		
	comp=N,11nm,1.4s						
NVS				smax	smax		
	comp=E,21nm,1.4s						
UTTA	**Uttaradit**	**42.09**	**252**	P	**P**	**22 12 56.8**	**+0.9**
	comp=E,6.3nm,0.7s,comp=E,56nm						
LAMP	**Lampang**	**42.29**	**253**	P	**P**	**22 12 58.3**	**+0.8**
	comp=E,15nm,0.7s,comp=E,127nm						
KOHI	**KOHIMA**	**42.47**	**266**	*e*P	**P**	**22 12 56.6**	**-2.6**
KOHI				IAmb	IAmb	22 13 00.8	
	comp=Z,328nm,1.3s						
PBKT	**Sadao Pong**	**42.53**	**250**	*e*P	**P**	**22 12 59.4**	**0.0**
	comp=Z,27nm,1.1s						
PBKT	**Sadao Pong**	**42.53**	**250**	P	**P**	**22 13 00.7**	**+1.3**
	comp=Z,20nm,0.9s						
PHIT	**Phitsanulok**	**42.54**	**251**	P	P	22 13 11.6	+12
CMMT	**Chiang Mai**	**42.63**	**254**	P	**P**	**22 13 00.2**	**0.0**
	comp=Z,45nm,0.7s,comp=Z,684nm						
CHTO	**Chiang Mai**	**42.63**	**254**	*e*P	**P**	**22 13 00.3**	**+0.1**
	comp=Z,31nm,0.8s						
CHTO				LR	LR		
	comp=Z,1µm,19.0s						
CHTO	**Chiang Mai**	**42.63**	**254**	*e*P	**P**	**22 13 00.3**	**+0.1**
CHTO				pmax	pmax		
	comp=Z,31nm,0.8s						
CHTO				MLR	MLR		
	comp=Z,1µm,19.0s						
CHTO	**Chiang Mai**	**42.63**	**254**	P	**P**	**22 13 00.4**	**+0.1**
	comp=Z,201nm,0.7s,comp=Z,3µm						
MRSI	**Marisa**	**42.82**	**211**	P	**P**	**22 13 03.0**	**+1.3**
	comp=Z,50nm,0.9s,comp=Z,752nm						
CM31	**Chiang Mai Arr**	**42.85**	**254**	*e*P	**P**	**22 13 02.4**	**+0.4**
CM31				*e*PcP	**PcP**	**22 14 53.1**	**+0.4**
CMAR	**Chiang Mai Arr**	**42.85**	**254**	P	**P**	**22 13 02.2**	**+0.2**
	comp=Z,12nm,0.8s,baz=46,slow=6.6,SNR=36						
CMAR				PcP	**PcP**	**22 14 53.1**	**+0.4**
	comp=Z,4.8nm,0.7s,baz=9.3,slow=1.4,SNR=6.5						
CMAR				ScP	**ScP**	**22 18 40.9**	**-0.5**
	comp=Z,0.8nm,0.3s,baz=46,slow=2.6,SNR=4.7						
CMAR				LR	LR	22 31 13.2	
	comp=Z,668nm,21.0s,baz=65,slow=37						
CM01	**Chiang Mai Arr**	**42.86**	**254**	*e*P	**P**	**22 13 01.1**	**-1.0**
CM01				*e*PcP	**PcP**	**22 14 53.4**	**+0.6**
CM01				*e*ScP	**ScP**	**22 18 41.8**	**+0.3**
LSA	**Lhasa**	**42.87**	**273**	P	**P**	**22 13 03.5**	**+0.9**
LSA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
LSA	**Lhasa**	**42.87**	**273**	*e*P	**P**	**22 13 03.8**	**+1.1**
	comp=Z,29nm,0.6s						
LSA				LR	LR		
	comp=Z,4µm,20.0s						
LSA	**Lhasa**	**42.87**	**273**	*i* P	**P**	**22 13 03.6**	**+0.9**
	SNR=21						
LSA	**Lhasa**	**42.87**	**273**	*e*P	**P**	**22 13 03.8**	**+1.1**
LSA				pmax	pmax		
	comp=Z,29nm,0.6s						
LSA				MLR	MLR		
	comp=Z,4µm,20.0s						
FAKI	**Fak Fak**	**42.90**	**195**	*e*P	**P**	**22 13 02.6**	**+0.3**
	comp=Z,57nm,0.8s						
TEZP	**TEZPUR**	**43.04**	**269**	*e*P	**P**	**22 13 03.2**	**-0.3**
SVW2	**Sparrevohn**	**43.36**	**39**	*e*P	**P**	**22 13 03.4**	**-2.3**
	comp=Z,71nm,1.0s						
SANI	**Sanana**	**43.70**	**204**	P	**P**	**22 13 09.2**	**+0.4**
	comp=Z,118nm,1.1s,comp=Z,1µm						
MK01	**Makanchi Array**	**43.73**	**300**	*e*P	**P**	**22 13 08.4**	**-0.5**
MK31	**Makanchi Array**	**43.73**	**300**	*e*P	**P**	**22 13 08.9**	**+0.1**
MK31	**Makanchi Array**	**43.73**	**300**	*e*P	**P**	**22 13 09.0**	**+0.1**
MK32	**Makanchi Array**	**43.73**	**300**	*e*P	**P**	**22 13 09.2**	**+0.3**
MKAR	**Makanchi Array**	**43.73**	**300**	P	**P**	**22 13 09.2**	**+0.3**
	comp=Z,52nm,0.8s,baz=84,slow=8.9,SNR=247						
MKAR				S	**S**	**22 19 36.0**	**-1.0**
	comp=Z,2.3nm,1.1s,baz=74,slow=17,SNR=5.4						
MKAR				LR	LR	22 32 00.5	
	comp=Z,4µm,21.1s,baz=68,slow=37						
MKAR	**Makanchi Array**	**43.73**	**300**	*e*P	**P**	**22 13 08.9**	**+0.1**
	comp=Z,346nm,0.6s						
MKAR	**Makanchi Array**	**43.73**	**300**	*e*P	**P**	**22 13 09.0**	**+0.1**
MKAR				pmax	pmax		
	comp=Z,347nm,0.6s						
NAYO	**Nakonayok**	**43.76**	**247**	P	**P**	**22 13 11.4**	**+2.0**
	comp=Z,0.6nm,0.9s						
MPSI	**Mapaga**	**43.79**	**214**	P	**P**	**22 13 09.7**	**+0.1**
	comp=Z,29nm,0.7s						
LUWI	**Luwuk**	**43.88**	**209**	P	**P**	**22 13 09.7**	**-0.6**
	comp=Z,110nm,1.0s,comp=Z,2µm						
MAKZ	**Makanchi**	**43.94**	**301**	*e*P	**P**	**22 13 10.7**	**+0.1**
	comp=Z,53nm,0.8s						
MAKZ	**Makanchi**	**43.94**	**301**	*e*P	**P**	**22 13 10.7**	**+0.1**
MAKZ				pmax	pmax		
	comp=Z,53nm,0.8s						
GUWA	**GUWAHATI**	**44.11**	**269**	*e*P	**P**	**22 13 12.9**	**+0.7**
GUWA				IAmb	IAmb	22 13 13.8	
	comp=Z,169nm,1.3s						
APSI	**Ampana**	**44.20**	**211**	P	**P**	**22 13 13.2**	**+0.4**
SHL	**Shillong**	**44.28**	**268**	*e*P	**P**	**22 13 13.3**	**-0.4**
	comp=Z,41nm,0.6s						
SHL	**Shillong**	**44.28**	**268**	*e*P	**P**	**22 13 12.7**	**-1.0**
SHL				IAmb	IAmb	22 13 16.8	
	comp=Z,37nm,1.0s						
SHL	**Shillong**	**44.28**	**268**	*e*P	**P**	**22 13 13.3**	**-0.4**
SHL				pmax	pmax		
	comp=Z,41nm,0.6s						
UTHA	**Uthaitani**	**44.30**	**250**	P	**P**	**22 13 15.7**	**+2.0**
	comp=Z,8.0nm,0.8s,comp=Z,81nm						
UMPA	**Umpang Tak**	**44.32**	**251**	P	**P**	**22 13 16.7**	**+2.8**
	comp=Z,19nm,0.8s,comp=Z,146nm						
SEM	**Semipalatinsk**	**44.34**	**306**	*i* P	**P**	**22 13 13.8**	**-0.2**
	comp=Z,14nm,0.8s						
SEM				*i* S	**S**	**22 19 45.8**	**-0.5**
SEM				*i* LR	LR	22 31 51.5	
	comp=Z,2µm,15.7s						
IM3	**Indian Mountai**	**44.43**	**32**	*e*P	**P**	**22 13 14.5**	**+0.4**
OHAK	**Old Harbor**	**44.66**	**44**	*e*P	**P**	**22 13 15.6**	**-0.5**
	comp=Z,36nm,0.9s						
PCI	**Palu**	**44.94**	**213**	P	**P**	**22 13 19.0**	**+0.2**
	comp=Z,77nm,0.9s,comp=Z,794nm						
PPLA	**Purkeypile**	**44.98**	**36**	*e*P	**P**	**22 13 21.4**	**+2.6**
	comp=Z,119nm,1.3s						
KDAK	**Kodiak Island**	**44.99**	**43**	*e*P	**P**	**22 13 19.8**	**+1.1**
	comp=Z,72nm,0.8s						
KDAK	**Kodiak Island**	**44.99**	**43***c*	*e*P	**P**	**22 13 19.3**	**+0.6**
PATY	**Pattaya**	**45.02**	**246**	P	P	22 13 23.0	+3.5
	comp=Z,13nm,0.8s						
CAST	**Castle Rocks**	**45.03**	**35**	*e*P	**P**	**22 13 21.0**	**+2.0**
	comp=Z,64nm,1.0s						
SKT	**Skwentna**	**45.30**	**37**	*e*P	**P**	**22 13 23.3**	**+2.2**
	comp=Z,27nm,1.0s						
KURK	**Kurchatov**	**45.31**	**307**	*e*P	**P**	**22 13 21.0**	**-0.4**
	comp=Z,91nm,0.8s						
KURK				*e*S	**S**	**22 19 58.6**	**-1.1**
KURK				LR	LR		
	comp=Z,5µm,19.0s						
KURK	**Kurchatov**	**45.31**	**307**	P	**P**	**22 13 21.2**	**-0.1**
	SNR=35						
KURK	**Kurchatov**	**45.31**	**307***d*	*i*P	**P**	**22 13 20.8**	**-0.6**
KURK				pmax	pmax		
	comp=Z,106nm,0.9s						
SRDT	**SRDT**	**45.33**	**249**	P	P	22 13 31.8	+10
KURBB	**Kurchatov Arra**	**45.38**	**307**	P	**P**	**22 13 22.3**	**+0.3**
	comp=Z,57nm,0.4s,baz=80,slow=8.3,SNR=476						
KURBB				S	**S**	**22 19 58.6**	**-2.2**
	comp=Z,2.3nm,1.1s,baz=76,slow=13,SNR=5.7						
TURI	**Tura**	**45.49**	**269**	*e*P	**P**	**22 13 24.5**	**+1.3**
BPAW	**Bear Paw Mtn.**	**45.52**	**34**	*e*P	**P**	**22 13 24.9**	**+2.0**
	comp=Z,39nm,1.0s						
MLY	**Manley**	**45.63**	**33**	*e*P	**P**	**22 13 25.7**	**+1.9**
	comp=Z,62nm,1.0s						
SUA	**Susitna One**	**45.69**	**38**	*e*P	**P**	**22 13 26.0**	**+1.6**
	comp=Z,73nm,0.9s						
BRLK	**Bradley Lake**	**45.72**	**40**	*e*P	**P**	**22 13 25.6**	**+1.1**
	comp=Z,33nm,0.8s						
SBUM	**Sibu**	**45.73**	**225**	*e*P	**P**	**22 13 25.6**	**+0.5**
	comp=Z,5.4nm,0.7s						
BELO	**BELONIA**	**45.83**	**265**	*e*P	**P**	**22 13 25.7**	**-0.1**
TRF	**Thorofare Moun**	**45.84**	**35**	*e*P	**P**	**22 13 28.2**	**+2.6**
	comp=Z,38nm,0.8s						
PHET	**Kaeng Krachan**	**45.92**	**247**	P	**P**	**22 13 28.3**	**+1.7**
	comp=Z,32nm,0.8s,comp=Z,288nm						
COLD	**Coldfoot**	**45.92**	**30**	*e*P	**P**	**22 13 27.9**	**+1.9**
	comp=Z,18nm,0.9s						
GTK	**Tadong**	**45.96**	**272**	*e*P	**P**	**22 13 28.1**	**+1.0**
GTK				IAmb	IAmb	22 13 31.1	
	comp=Z,63nm,1.9s						
BRDH	**Bariadhala**	**45.99**	**265**	P	**P**	**22 13 26.7**	**-0.3**
	comp=Z,84nm,0.3s,baz=336,slow=6.7,SNR=3.0						
BRDH				LR	LR	22 33 42.2	
	comp=Z,2µm,21.9s,baz=98,slow=37						
BWN	**Browne**	**46.19**	**34**	*e*P	**P**	**22 13 30.9**	**+2.8**
	comp=Z,298nm,1.0s						
RC01	**Rabbit Creek A**	**46.20**	**39**	*e*P	**P**	**22 13 29.6**	**+1.4**
	comp=Z,103nm,1.0s						
TOLK	**Toolik Lake Re**	**46.23**	**28**	P	**P**	**22 13 29.8**	**+1.3**
	baz=267						
TOLK	**Toolik Lake Re**	**46.23**	**28**	*e*P	**P**	**22 13 30.5**	**+2.0**
	comp=Z,47nm,0.8s						
MCK	**McKinley**	**46.43**	**35**	*e*P	**P**	**22 13 31.5**	**+1.4**
	comp=Z,66nm,0.9s						
PMR	**Palmer**	**46.45**	**38**	*e*P	**P**	**22 13 30.8**	**+0.6**
	comp=Z,64nm,0.9s						
PMR	**Palmer**	**46.45**	**38**	*e*P	**P**	**22 13 30.8**	**+0.6**
PMR				pmax	pmax		
	comp=Z,64nm,0.9s						
GHO	**Glory Hole Cre**	**46.54**	**38**	*e*P	**P**	**22 13 32.4**	**+1.3**
	comp=Z,118nm,1.0s						
PDGK	**Podgornoye**	**46.54**	**296**	P	**P**	**22 13 31.6**	**+0.2**
PDGK				pmax	pmax		
	comp=Z,37nm,0.8s						
SHLS	**Shalkode**	**46.62**	**296**⇑	*i*P	**P**	**22 13 30.0**	**-1.9**
	comp=Z,15nm,0.9s						
SHLS				*i* S	**S**	**22 20 15.1**	**-3.9**
SHLS				*i* LR	LR	22 33 37.6	
	comp=Z,930nm,17.8s						
TAPN	**Taplejung**	**46.64**	**273**	*e*P	**P**	**22 13 34.7**	**+2.1**
	comp=Z,25nm,0.4s						
MDM	**Murphy Dome**	**46.70**	**33**	*e*P	**P**	**22 13 33.9**	**+1.7**
	comp=Z,94nm,1.0s						
WRH	**Wood River Hil**	**46.78**	**34**	*e*P	**P**	**22 13 34.2**	**+1.4**
	comp=Z,33nm,0.9s						
WRH				*e*PcP	**PcP**	**22 15 04.5**	**-1.1**
SML	**Sawmill**	**46.82**	**38**	*e*P	**P**	**22 13 34.6**	**+1.4**
	comp=Z,100nm,1.0s						
SML	**Sawmill**	**46.82**	**38**	*e*P	**P**	**22 13 34.6**	**+1.4**
SML				pmax	pmax		
	comp=Z,100nm,1.0s						
COLA	**College**	**46.87**	**33**	*e*P	**P**	**22 13 35.4**	**+2.0**
	comp=Z,69nm,1.1s						
COLA				LR	LR		
	comp=Z,1.0nm,21.0s						
COLA	**College**	**46.87**	**33**	*e*P	**P**	**22 13 35.4**	**+2.0**
COLA				pmax	pmax		
	comp=Z,69nm,1.1s						
CCB	**Clear Creek Bu**	**46.89**	**34**	*e*P	**P**	**22 13 34.9**	**+1.2**
	comp=Z,36nm,1.1s						
UZB	**Uzynbulak**	**46.92**	**296**⇑	*i*P	**P**	**22 13 34.7**	**+0.3**
	comp=Z,6.5nm,0.8s						
UZB				*i* S	**S**	**22 20 24.1**	**+0.5**
UZB				*i* LR	LR	22 34 43.5	
	comp=Z,261nm,13.4s						
KPKS	**Kokpek**	**47.06**	**297**⇑	*i*P	**P**	**22 13 35.9**	**+0.5**
	comp=Z,12nm,0.8s						
KPKS				*i* S	**S**	**22 20 24.9**	**-0.4**
KPKS				*i* LR	LR	22 34 08.5	
	comp=Z,901nm,15.3s						
ODAN	**Odare**	**47.13**	**272**	*e*P	**P**	**22 13 36.9**	**+0.6**
	comp=Z,82nm,0.7s						
DHY	**Denali Highway**	**47.17**	**36**	*e*P	**P**	**22 13 36.8**	**+0.7**
	comp=Z,57nm,1.1s						
MTKI	**Muara Teweh, K**	**47.23**	**219**	P	**P**	**22 13 36.7**	**-0.1**
	comp=Z,102nm,0.8s						
MTKI				pP	**pP**	**22 13 46.9**	**+0.8**
	comp=Z,102nm,0.8s						
HDA	**Harding Lake**	**47.27**	**34**	*e*P	**P**	**22 13 37.5**	**+0.8**
	comp=Z,86nm,1.0s						
IL1	**Eielson Array**	**47.28**	**33**	*e*P	**P**	**22 13 35.8**	**-0.9**
ILAR	**Eielson Array**	**47.28**	**33**	P	**P**	**22 13 37.3**	**+0.6**
	comp=Z,55nm,0.8s,baz=268,slow=6.0,SNR=361						
ILAR				PcP	**PcP**	**22 15 07.6**	**+0.3**
	comp=Z,7.4nm,0.8s,baz=284,slow=3.9,SNR=3.0						
ILAR				S	**S**	**22 20 26.3**	**-1.4**
	comp=Z,0.4nm,0.6s,baz=183,slow=13,SNR=5.0						
ILAR				LR	LR	22 34 24.0	
	comp=Z,922nm,21.6s,baz=274,slow=37						
ILB	**Eielson Array**	**47.28**	**33**	*e*P	**P**	**22 13 37.7**	**+1.0**
ILB				*e*PcP	**PcP**	**22 15 07.6**	**+0.3**
ILB				*e*S	**S**	**22 20 26.3**	**-1.4**
SCM	**Sheep Creek Mo**	**47.29**	**37**	*e*P	**P**	**22 13 38.4**	**+1.5**
	comp=Z,95nm,0.9s						
SCM	**Sheep Creek Mo**	**47.29**	**37**	*e*P	**P**	**22 13 38.4**	**+1.5**
SCM				pmax	pmax		
	comp=Z,95nm,0.9s						
ZHN	**Zhinishke**	**47.33**	**297**⇑	*i*P	**P**	**22 13 38.0**	**+0.5**
	comp=Z,5.1nm,0.7s						
ZHN				*e*S	**S**	**22 20 28.5**	**-0.7**
ZHN				*i* LR	LR	22 34 23.4	
	comp=Z,330nm,15.0s						
GLI	**Glacier Island**	**47.50**	**39**	*e*P	**P**	**22 13 39.5**	**+1.1**
	comp=Z,49nm,0.8s						
PRZ	**Przheval'sk**	**47.57**	**296**	*e*P	**P**	**22 13 41.1**	**+1.6**
	comp=Z,43nm,0.8s						
PRZ	**Przheval'sk**	**47.57**	**296**	*e*P	**P**	**22 13 41.1**	**+1.6**
PRZ				pmax	pmax		
	comp=Z,43nm,0.8s						
KSM	**Kuching**	**47.60**	**226**	*e*P	**P**	**22 13 39.6**	**-0.1**
	comp=Z,31nm,0.8s						
JIRN	**Jiri**	**47.67**	**274**	*e*P	**P**	**22 13 42.3**	**+1.6**
RAMN	**Ramite**	**47.70**	**273**	*e*P	**P**	**22 13 41.2**	**+0.5**
	comp=Z,100nm,0.6s						
SPSI	**Sidrap Palu**	**47.73**	**211**	P	**P**	**22 13 39.0**	**-1.7**
	comp=Z,25nm,1.2s						
GUN	**Gumba**	**47.79**	**274**	*e*P	**P**	**22 13 42.8**	**+1.2**
	comp=Z,170nm,0.6s						
FID	**Port Fidalgo**	**47.81**	**39**	*e*P	**P**	**22 13 42.0**	**+1.1**
	comp=Z,96nm,1.3s						
FYU	**Fort Yukon**	**47.88**	**31**	*e*P	**P**	**22 13 43.7**	**+2.4**
	comp=Z,108nm,1.1s						
KLU	**Klutina**	**47.99**	**38**	*e*P	**P**	**22 13 43.7**	**+1.3**
	comp=Z,98nm,1.1s						
PAX	**Paxson**	**48.04**	**36**	*e*P	**P**	**22 13 44.4**	**+1.6**
	comp=Z,21nm,1.0s						
PAX	**Paxson**	**48.04**	**36**	*e*P	**P**	**22 13 44.4**	**+1.6**
PAX				pmax	pmax		
	comp=Z,21nm,1.0s						
DIV	**Divide**	**48.11**	**38**	*e*P	**P**	**22 13 45.0**	**+1.8**
	comp=Z,122nm,1.0s						
STKI	**Sintang**	**48.13**	**224**	P	**P**	**22 13 44.0**	**+0.2**
	comp=Z,39nm,0.8s						
EYAK	**Cordova Ski Ar**	**48.20**	**39**	*e*P	**P**	**22 13 45.7**	**+1.9**
	comp=Z,69nm,1.0s						
HARP	**HAARP**	**48.25**	**37**	*e*P	**P**	**22 13 46.5**	**+2.2**
	comp=Z,103nm,1.0s						
RIDG	**Independ'e Rid**	**48.25**	**35**	*e*P	**P**	**22 13 45.1**	**+0.8**
	comp=Z,46nm,0.9s						
MDOK	**Medeo**	**48.29**	**297**	*i* P	**P**	**22 13 45.6**	**+0.6**
	comp=Z,329nm,0.8s						
MDOK				*i* S	**S**	**22 20 42.3**	**-0.6**
MDOK				*i* LR	LR	22 34 26.2	
	comp=Z,1µm,18.4s						
KKN	**Kakani**	**48.31**	**275**	*e*P	**P**	**22 13 46.0**	**+0.5**
	comp=Z,178nm,0.6s						
PKIN	**Phulchoki**	**48.33**	**274**	*e*P	**P**	**22 13 46.1**	**+0.5**
	comp=Z,60nm,0.6s						
AAA	**Alma-Ata**	**48.37**	**297**	*i* P	**P**	**22 13 45.7**	**+0.2**
AAA				*i* S	**S**	**22 20 36.7**	**-7.1**
AAA				pmax	pmax		
	comp=Z,300nm,4.3s						
AAA				smax	smax		
	comp=E,700nm,8.5s						
PMG	**Port Moresby**	**48.49**	**174**	P	**P**	**22 13 46.4**	**-0.2**
	comp=E,17nm,0.8s,baz=349,slow=16,SNR=2.7						
PMG				LR	LR	22 30 55.3	
	comp=E,345nm,21.9s,baz=333,slow=32						
PMG	**Port Moresby**	**48.49**	**174**	*e*P	**P**	**22 13 46.4**	**-0.2**
PMG				LR	LR		
	comp=Z,749nm,21.0s						
PMG	**Port Moresby**	**48.49**	**174**	*e*P	**P**	**22 13 46.4**	**-0.2**
PMG				MLR	MLR		
	comp=Z,749nm,21.0s						
DMN	**Daman**	**48.54**	**274**	*e*P	**P**	**22 13 47.9**	**+0.7**
	comp=Z,38nm,0.6s						
KUU	**Kurty**	**48.55**	**298**	*i* P	**P**	**22 13 46.9**	**+0.1**
	comp=Z,31nm,0.8s						
KUU				*i* S	**S**	**22 20 45.9**	**-0.4**
KUU				*i* LR	LR	22 34 41.9	
	comp=Z,1µm,13.9s						
SCRK	**Sand Creek**	**48.60**	**34**	*e*P	**P**	**22 13 47.8**	**+0.8**
	comp=Z,88nm,0.9s						
DOT	**Dot Lake**	**48.60**	**35**	*e*P	**P**	**22 13 48.7**	**+1.7**
	comp=Z,41nm,0.9s						
BMRM	**Bremner River**	**48.69**	**38**	*e*P	**P**	**22 13 49.1**	**+1.4**
	comp=Z,76nm,0.9s						
GKN	**Gorkha**	**48.71**	**275**	*e*P	**P**	**22 13 48.7**	**+0.3**
	comp=Z,112nm,0.6s						
RAGM	**Ragged Mountai**	**48.74**	**39**	*e*P	**P**	**22 13 50.2**	**+2.1**
	comp=Z,60nm,1.0s						
BKSI	**Bulukumba**	**48.83**	**210**	P	**P**	**22 13 48.8**	**-0.3**
	comp=Z,23nm,1.1s,comp=Z,327nm						
BRZS	**Berezniki**	**49.18**	**307**⇑	*i*P	**P**	**22 13 51.5**	**-0.1**
	comp=Z,18nm,0.5s						
BRZS				*i* S	**S**	**22 20 54.1**	**-0.9**
BRZS				*i* LR	LR	22 34 55.0	
	comp=Z,389nm,14.8s						
DANN	**Dangsing**	**49.22**	**276**	*e*P	**P**	**22 13 53.3**	**+0.8**
	comp=Z,854nm,0.6s						
TKM2	**Tokmak 2**	**49.38**	**297**	P	**P**	**22 13 54.1**	**+0.7**
	SNR=141						
TRTT	**Trang**	**49.40**	**242**	P	P	22 14 04.1	+11
TGL	**Tana Glacier**	**49.59**	**38**	*e*P	**P**	**22 13 57.2**	**+2.6**
	comp=Z,69nm,1.0s						
KOLN	**Koldanda**	**49.62**	**275**	*e*P	**P**	**22 13 54.7**	**-0.8**
	comp=Z,75nm,0.6s						
EGAK	**Eagle**	**49.73**	**33**	*e*P	**P**	**22 13 55.8**	**+0.4**
	comp=Z,22nm,0.6s						
BTLS	**Baital**	**49.74**	**300**⇑	*i*P	**P**	**22 13 56.0**	**+0.1**
	comp=Z,7.9nm,1.1s						
BTLS				*e*S	**S**	**22 21 01.9**	**-1.0**
BTLS				*i* LR	LR	22 36 07.1	
	comp=Z,363nm,12.7s						
BVAR	**Borovoye Array**	**49.78**	**311**	P	**P**	**22 13 56.5**	**+0.4**
	comp=Z,21nm,0.5s,baz=76,slow=7.9,SNR=95						
BVAR				PcP	**PcP**	**22 15 16.9**	**+0.3**
	comp=Z,12nm,0.7s,baz=87,slow=3.6,SNR=4.1						
BVAR				S	**S**	**22 21 02.1**	**-1.2**
	comp=Z,1.9nm,0.9s,baz=69,slow=13,SNR=5.0						
BVAR				LR	LR	22 35 58.6	
	comp=Z,4µm,18.5s,baz=74,slow=37						
BRVK	**Borovoye**	**49.84**	**311**	*e*P	**P**	**22 13 56.7**	**+0.2**
	comp=Z,29nm,0.9s						
BRVK				*e*S	**S**	**22 21 03.1**	**-0.9**
BRVK				LR	LR		
	comp=Z,2µm,20.0s						
BRVK	**Borovoye**	**49.84**	**311**	P	**P**	**22 13 56.9**	**+0.3**
	SNR=19						
BRVK	**Borovoye**	**49.84**	**311**	*e*P	**P**	**22 13 56.7**	**+0.2**
BRVK				*e*S	**S**	**22 21 03.1**	**-0.9**
BRVK				pmax	pmax		
	comp=Z,29nm,0.9s						
BRVK				MLR	MLR		
	comp=Z,2µm,20.0s						
BOK	**Bokaro**	**49.86**	**270**	*e*P	**P**	**22 13 56.9**	**-0.2**
KZA	**Kyzart**	**49.91**	**296**	P	**P**	**22 13 59.5**	**+1.8**
	SNR=9.0						
KBK	**Karagaybulak**	**49.92**	**297**	P	**P**	**22 13 58.1**	**+0.6**
	SNR=84						
CHMS	**Chumysh**	**49.94**	**298**	P	**P**	**22 13 58.1**	**+0.7**
	SNR=16						
PYUN	**Piuthan**	**49.94**	**276**	*e*P	**P**	**22 13 58.0**	**+0.1**
	comp=Z,547nm,0.9s						
USP	**Ospenovka**	**50.02**	**298**	P	**P**	**22 13 58.9**	**+0.8**
	SNR=17						
FRU1	**Bishkek**	**50.08**	**297**	*e*P	**P**	**22 13 59.8**	**+1.2**
	comp=Z,29nm,0.6s						
FRU1	**Bishkek**	**50.08**	**297**	*e*P	**P**	**22 13 59.8**	**+1.2**
FRU1				pmax	pmax		
	comp=Z,29nm,0.6s						
FRU	**Bishkek**	**50.08**	**297**	*e*P	**P**	**22 14 01.0**	**+2.4**
FRU				*i*		22 14 10.0	
FRU				*i*		22 14 19.0	
FRU				*e*S	**S**	**22 21 08.0**	**+0.2**
AAK	**Ala-Archa**	**50.24**	**297**	LR	LR	22 36 22.7	
	comp=Z,2µm,18.6s,baz=60,slow=37						
AAK	**Ala-Archa**	**50.24**	**297**	P	**P**	**22 14 00.7**	**+0.8**
	SNR=10						
AAK	**Ala-Archa**	**50.24**	**297**	*e*P	**P**	**22 14 00.4**	**+0.5**
	comp=Z,22nm,1.0s						
AAK				LR	LR		
	comp=Z,2µm,19.0s						
AAK	**Ala-Archa**	**50.24**	**297**	P	**P**	**22 14 00.4**	**+0.5**

	SNR=11						
AAK	**Ala-Archa**	**50.24**	**297**	*i* P	**P**	**22 14 00.3**	**+0.4**
	SNR=11						
AAK	**Ala-Archa**	**50.24**	**297**	*c* *i*P	**P**	**22 14 00.3**	**+0.4**
AAK				pmax	pmax		
	comp=Z,19nm,1.1s						
KSH	**Kashi**	**50.32**	**293**	P	P	22 14 05.3	+4.7
KSH				pP	sP	22 14 18.8	+5.2
KSH				*e*PcP	**PcP**	**22 15 23.5**	**+4.5**
KSH				PP	PP	22 16 03.0	+7.0
KSH				PcS	**PcS**	**22 19 19.5**	**+3.3**
KSH				S	**S**	**22 21 15.0**	**+3.6**
KSH				ScS	**ScS**	**22 23 49.5**	**+0.1**
KSH				pmax	pmax		
	comp=Z,19nm,1.2s						
KSH				pmax	pmax		
	comp=Z,420nm,5.9s						
KSH				LR	LR		
	comp=Z,2µm,13.4s						
KSH				LR	LR		
	comp=Z,1µm,14.4s						
KSH				LR	LR		
	comp=Z,2µm,13.6s						
UCH	**Uchtor**	**50.37**	**297**	P	**P**	**22 14 01.9**	**+0.7**
	SNR=16						
KULM	**Kulim**	**50.59**	**239**	*e*P	**P**	**22 14 03.1**	**+0.5**
	comp=Z,25nm,0.8s						
DAWY	**Dawson**	**50.59**	**34**	*e*P	**P**	**22 14 03.6**	**+1.5**
	comp=Z,9.3nm,0.8s						
EKS2	**Erkin-Say**	**50.72**	**297**	P	**P**	**22 14 04.3**	**+0.8**
	SNR=26						
IPM	**Ipoh**	**50.94**	**238**	*e*P	**P**	**22 14 05.1**	**-0.3**
	comp=Z,38nm,0.8s						
AML	**Almayashu**	**50.97**	**297**	P	**P**	**22 14 02.0**	**-3.7**
	SNR=29						
HNR	**Honiara**	**50.99**	**158**	LR	LR	22 33 42.2	
	comp=Z,2µm,21.8s,baz=328,slow=34						
MMRI	**Maumere**	**51.11**	**206**	*e*P	**P**	**22 14 06.2**	**-0.3**
	comp=Z,81nm,0.8s						
MYKOM	**Kota Tinggi**	**51.17**	**233**	*e*P	**P**	**22 14 07.9**	**+0.9**
	comp=Z,21nm,0.9s						
EDFI	**Ende, Flores**	**51.41**	**207**	P	**P**	**22 14 07.7**	**-1.1**
	comp=Z,60nm,0.7s						
TPRI	**Tanjung Pinang**	**51.44**	**232**	P	**P**	**22 14 09.2**	**+0.2**
SOEI	**Soe**	**51.51**	**203**	P	**P**	**22 14 08.1**	**-1.5**
	comp=Z,143nm,1.3s,comp=Z,2µm						
SOEI	**Soe**	**51.51**	**203**	*e*P	**P**	**22 14 09.1**	**-0.4**
	comp=Z,62nm,0.8s						
MNAS	**Manas**	**51.66**	**298**	P	**P**	**22 14 11.4**	**+0.8**
MNAS				pmax	pmax		
	comp=Z,65nm,0.8s						
SFK	**Sufi-Kurgan**	**51.89**	**294**	P	**P**	**22 14 13.0**	**+0.5**
SFK				pmax	pmax		
	comp=Z,42nm,1.0s						
BATI	**Baumata**	**52.12**	**204**	P	**P**	**22 14 13.5**	**-0.5**
	comp=Z,38nm,0.7s,baz=339,slow=1.4,SNR=5.9						
BATI				LR	LR	22 35 40.8	
	comp=Z,316nm,21.9s,baz=58,slow=35						
BATI	**Baumata**	**52.12**	**204**	P	**P**	**22 14 13.5**	**-0.5**
	comp=Z,52nm,1.0s						
INK	**Inuvik**	**52.14**	**28**	*e*P	**P**	**22 14 14.9**	**+1.3**
	comp=Z,64nm,0.9s						
INK	**Inuvik**	**52.14**	**28**	*e*P	**P**	**22 14 14.9**	**+1.3**
INK				pmax	pmax		
	comp=Z,64nm,0.9s						
DDI	**Dehra Dun**	**52.67**	**281**	*e*P	**P**	**22 14 17.6**	**-0.6**
MTN	**Manton Dam**	**52.78**	**194**	*e*P	**P**	**22 14 18.4**	**-0.5**
	comp=Z,105nm,1.1s						
KK31	**Karatay Array**	**52.80**	**299**	*e*P	**P**	**22 14 18.8**	**-0.1**
KK31	**Karatay Array**	**52.80**	**299**	*e*P	**P**	**22 14 18.8**	**-0.1**
KKAR	**Karatay Array**	**52.80**	**299**	*e*P	**P**	**22 14 18.8**	**-0.1**
KKAR	**Karatay Array**	**52.80**	**299**	*e*P	**P**	**22 14 18.8**	**-0.1**
COEN	**Coen**	**52.82**	**179**	*e*P	**P**	**22 14 19.3**	**+0.1**
	comp=Z,55nm,0.8s						
SMLA	**Simla**	**52.97**	**283**	*e*P	**P**	**22 14 19.9**	**-0.3**
DHRM	**DHARAMSHALA**	**53.11**	**284**	*e*P	**P**	**22 14 20.9**	**-0.7**
TWSI	**Taliwang, Sumb**	**53.23**	**212**	P	**P**	**22 14 21.9**	**-0.3**
	comp=Z,35nm,1.1s						
WHY	**Whitehorse**	**53.41**	**37**	*e*P	**P**	**22 14 25.3**	**+2.0**
	comp=Z,53nm,1.0s						
KIP	**Kipapa**	**53.44**	**91**	⇓ *e*P	**P**	**22 14 25.3**	**+1.5**
IUG	**Iuzhnay**	**53.49**	**298**	⇑ *i*P	**P**	**22 14 24.9**	**+0.8**
	comp=Z,16nm,1.1s						
IUG				*i* S	**S**	**22 21 56.2**	**+1.4**
IUG				*i* LR	LR	22 38 13.9	
	comp=Z,363nm,13.9s						
PSI	**Prapat**	**53.58**	**239**	P	**P**	**22 14 25.2**	**+0.2**
	comp=Z,23nm,0.7s,baz=0.2,slow=5.5,SNR=22						
PSI				LR	LR	22 38 41.3	
	comp=Z,830nm,18.9s,baz=89,slow=38						
PSI	**Prapat**	**53.58**	**239**	*e*P	**P**	**22 14 24.9**	**-0.1**
	comp=Z,23nm,0.7s						
PSI	**Prapat**	**53.58**	**239**	*e*P	**P**	**22 14 24.9**	**-0.1**
PSI				pmax	pmax		
	comp=Z,23nm,0.7s						
CMBY	**CAMPBELL BAY**	**54.02**	**247**	*e*P	**P**	**22 14 26.1**	**-2.1**
BESE	**Bessie Mountai**	**54.03**	**40**	*e*P	**P**	**22 14 29.9**	**+2.1**
	comp=Z,42nm,1.1s						
BKNI	**Bangkinang**	**54.07**	**235**	P	**P**	**22 14 28.3**	**-0.2**
BKNI	**Bangkinang**	**54.07**	**235**	*e*P	**P**	**22 14 29.7**	**+1.2**
	comp=Z,126nm,0.8s						
SVE	**Sverdlovsk**	**54.13**	**318**	*d* *i*P	**P**	**22 14 29.2**	**+0.8**
SVE				*e*		22 16 34.3	
SVE				*e*S	**S**	**22 22 04.4**	**+1.6**
SVE				*e*		22 25 49.0	
SVE				pmax	pmax		
	comp=Z,71nm,0.7s						
SVE				MLR	MLR		
	comp=Z,6µm,16.0s						
SVE				MLR	MLR		
	comp=E,4µm,16.0s						
MLSI	**Meulaboh, Aceh**	**54.22**	**242**	P	**P**	**22 14 28.7**	**-0.9**
	comp=E,58nm,0.7s						
SIT	**Sitka**	**54.26**	**42**	*e*P	P	22 14 32.9	+3.6
	comp=E,40nm,1.2s						
SIT	**Sitka**	**54.26**	**42**	*e*P	P	22 14 32.9	+3.6
SIT				pmax	pmax		
	comp=Z,40nm,1.2s						
JIS	**Juneau Island**	**54.36**	**40**	*e*P	**P**	**22 14 32.4**	**+2.4**
	comp=Z,41nm,0.9s						
MNSI	**Mandailing Nat**	**54.65**	**237**	P	**P**	**22 14 32.7**	**0.0**
	comp=Z,26nm,0.6s						
SMRI	**Semarang**	**54.70**	**220**	P	**P**	**22 14 33.6**	**+0.6**
	comp=Z,120nm,1.1s						
SMRI	**Semarang**	**54.70**	**220**	*e*P	**P**	**22 14 33.8**	**+0.7**
	comp=Z,120nm,1.0s						
NIL	**Nilore**	**54.76**	**287**	*e*P	**P**	**22 14 34.5**	**+1.2**
	comp=Z,65nm,0.8s						
NIL	**Nilore**	**54.76**	**287**	*e*P	**P**	**22 14 34.5**	**+1.2**
NIL				pmax	pmax		
	comp=Z,65nm,0.8s						
ARU	**Arti**	**55.34**	**318**	*e*P	**P**	**22 14 36.8**	**-0.4**
	comp=Z,49nm,0.7s						
ARU				*e*S	**S**	**22 22 18.4**	**-0.7**
ARU				LR	LR		
	comp=Z,6µm,20.0s						
ARU	**Arti**	**55.34**	**318**	*c* *i*P	**P**	**22 14 37.4**	**+0.2**
ARU						22 15 37.5	
ARU						22 16 40.9	
ARU				PPP	PPP	22 17 53.5	
ARU				*e*S	**S**	**22 22 20.1**	**+1.0**
ARU						22 24 19.6	
ARU				SS	**SS**	**22 26 06.6**	**+3.5**
ARU				pmax	pmax		
	comp=Z,64nm,1.0s						
ARU				MLR	MLR		
	comp=Z,6µm,16.0s						
GSI	**Gunungsitoli**	**55.59**	**239**	P	**P**	**22 14 39.4**	**-0.1**
	comp=Z,76nm,1.5s						
GSI	**Gunungsitoli**	**55.59**	**239**	*e*P	**P**	**22 14 39.1**	**-0.4**
	comp=Z,198nm,1.5s						
KRJI	**Kerinci**	**55.68**	**233**	P	**P**	**22 14 40.1**	**-0.1**
LHSI	**Lahat**	**55.81**	**229**	P	**P**	**22 14 41.3**	**+0.3**
	comp=Z,110nm,0.9s						
CRAG	**Craig**	**55.96**	**43**	*e*P	**P**	**22 14 44.5**	**+3.0**
	comp=Z,36nm,1.1s						
MDSI	**Maura Dua**	**55.96**	**228**	P	**P**	**22 14 42.0**	**-0.1**
	comp=Z,43nm,0.9s						
LEM	**Lembang**	**55.97**	**223**	P	**P**	**22 14 42.4**	**0.0**
	comp=Z,58nm,0.8s,baz=42,slow=6.4,SNR=12						
LEM				LR	LR	22 38 33.9	
	comp=Z,421nm,21.5s,baz=29,slow=36						
WRAK	**Wrangell Islan**	**56.02**	**42**	*e*P	**P**	**22 14 44.4**	**+2.3**
	comp=Z,30nm,1.1s						
MASI	**Maura Aman, Be**	**56.03**	**231**	P	**P**	**22 14 43.8**	**+1.1**
POHA	**Pohakuloa**	**56.29**	**91**	PFAKE		22 15 00.0	+15
POHA				LR	LR		
	comp=Z,1µm,22.0s						
DLBC	**Dease Lake**	**56.47**	**39**	P	**P**	**22 14 45.4**	**+0.1**
	comp=Z,43nm,1.0s						
BHPL	**Bhopal**	**56.73**	**274**	*e*P	**P**	**22 14 47.1**	**-0.6**
BHPL				IAmb	IAmb	22 14 51.2	
	comp=Z,48nm,1.9s						
DIB	**Dawson Inlet,**	**57.15**	**46**	*e*P	**P**	**22 14 52.0**	**+1.9**
	comp=Z,43nm,1.4s						
ABKAR	**Akbulak array**	**57.23**	**309**	*e*P	**P**	**22 14 50.5**	**-0.3**
KBL	**Kabul**	**57.45**	**290**	*e*P	**P**	**22 14 52.8**	**0.0**
	comp=Z,30nm,0.8s						
KBL	**Kabul**	**57.45**	**290**	*e*P	**P**	**22 14 52.8**	**0.0**
KBL				pmax	pmax		
	comp=Z,30nm,0.8s						
AKTO	**Aktyubinsk**	**57.89**	**311**	P	**P**	**22 14 56.3**	**+0.9**
	comp=Z,17nm,0.8s,baz=94,slow=8.5,SNR=30						
AKTO				LR	LR	22 41 05.6	
	comp=Z,3µm,18.4s,baz=62,slow=37						
SPA0	**Spitsbergen Ar**	**58.62**	**349**	*e*P	**P**	**22 15 01.2**	**+1.1**
SPITS	**Spitsbergen Ar**	**58.62**	**349**	P	**P**	**22 15 01.2**	**+1.1**
	comp=Z,26nm,1.0s,baz=80,slow=6.9,SNR=6.1						
SPITS				LR	LR	22 44 01.4	
	comp=Z,681nm,18.2s,baz=10.0,slow=40						
CTA	**Charters Tower**	**59.02**	**176**	P	**P**	**22 15 02.0**	**-1.5**
	comp=Z,7.3nm,0.6s,baz=353,slow=6.0,SNR=11						
CTAO	**Charters Tower**	**59.02**	**176**	*e*P	**P**	**22 15 02.6**	**-0.9**
	comp=Z,11nm,0.8s						
CTAO				LR	LR		
	comp=Z,913nm,21.0s						
CTAO	**Charters Tower**	**59.02**	**176**	*e*P	**P**	**22 15 02.6**	**-0.9**
CTAO				pmax	pmax		
	comp=Z,11nm,0.8s						
CTAO				MLR	MLR		
	comp=Z,913nm,21.0s						
HYB	**Hyderabad**	**59.09**	**268**	*i* P	**P**	**22 15 05.0**	**+0.7**
HYB	**Hyderabad**	**59.09**	**268**	*e*P	**P**	**22 15 04.0**	**-0.3**
HYB				IAmb	IAmb	22 15 05.4	
	comp=Z,40nm,0.2s						
WRAB	**Tennant Creek**	**59.25**	**189**	PFAKE		22 15 20.0	+15
WRAB				LR	LR		
	comp=Z,486nm,22.0s						
WB2	**Warramunga Arr**	**59.26**	**189**	*e*P	**P**	**22 15 04.1**	**-1.1**
	comp=Z,81nm,0.7s						
WR1	**Warramunga Arr**	**59.26**	**189**	*e*P	**P**	**22 15 04.0**	**-1.1**
	comp=Z,81nm,0.6s						
WR1				*e*PcP	**PcP**	**22 15 54.0**	**+0.8**
WRA	**Warramunga Arr**	**59.26**	**189**	P	**P**	**22 15 04.0**	**-1.2**
	comp=Z,81nm,0.6s,baz=6.9,slow=7.0,SNR=38						
WRA				PcP	**PcP**	**22 15 54.0**	**+0.8**
	comp=Z,20nm,0.8s,baz=359,slow=3.9,SNR=6.8						
WRA				LR	LR	22 40 02.1	
	comp=Z,514nm,21.7s,baz=0.0,slow=35						
WRA				PKP2bc		22 44 48.1	
	comp=Z,2.2nm,0.9s,baz=203,slow=2.3,SNR=6.9						
PRGR	**Permogore**	**59.46**	**327**	*e*P	**P**	**22 15 05.5**	**-0.6**
PRGR				*e*		22 17 16.9	
PRGR				*e*S	**S**	**22 23 14.8**	**+1.9**
PRGR				pmax	pmax		
	comp=Z,51nm,1.2s						
RES	**Resolute Bay**	**60.36**	**15**	*e*P	**P**	**22 15 12.7**	**+0.6**
	comp=Z,47nm,0.8s						
RES	**Resolute Bay**	**60.36**	**15**	*e*P	**P**	**22 15 12.7**	**+0.6**
RES				pmax	pmax		
	comp=Z,47nm,0.8s						
APA	**Apatity**	**61.11**	**336**	⇓ *i*P	**P**	**22 15 16.0**	**-1.3**
APA				pmax	pmax		
	comp=Z,14nm,0.6s						
YKA	**Yellowknife Ar**	**61.58**	**31**	P	**P**	**22 15 21.4**	**+0.9**
	comp=Z,17nm,0.9s,baz=298,slow=6.7,SNR=15						
YKA				LR	LR	22 42 46.0	
	comp=Z,59nm,22.0s,baz=300,slow=37						
YKB5	**Yellowknife Ar**	**61.58**	**31**	*e*P	**P**	**22 15 21.4**	**+0.9**
KEV	**Kevo**	**61.77**	**339**	*e*P	**P**	**22 15 22.4**	**+0.7**
	comp=Z,14nm,0.8s						
KEV	**Kevo**	**61.77**	**339**	*e*P	**P**	**22 15 22.4**	**+0.7**
KEV				pmax	pmax		
	comp=Z,14nm,0.8s						
POO	**Poona**	**62.11**	**272**	*e*P	**P**	**22 15 25.5**	**+0.6**
ARA0	**ARCESS Array S**	**62.32**	**339**	*e*P	**P**	**22 15 25.8**	**+0.4**
ARCES	**ARCESS Array B**	**62.32**	**339**	P	**P**	**22 15 25.8**	**+0.4**
	comp=Z,5.6nm,0.5s,baz=53,slow=7.7,SNR=18						
ARCES	**ARCESS Array B**	**62.32**	**339**	*e*P	**P**	**22 15 25.7**	**+0.3**
KLMR	**Klimovskoe**	**62.42**	**327**	*e*P	**P**	**22 15 25.4**	**-0.8**
KLMR				*e*		22 17 42.5	
KLMR				pmax	pmax		
	comp=Z,54nm,1.2s						
KLMR				MLR	MLR		
	comp=Z,2µm,17.0s						
KLMR	**Klimovskoe**	**62.42**	**327**	*e*P	**P**	**22 15 25.4**	**-0.8**
KLMR				AMP		22 15 40.2	
	comp=Z,54nm,1.2s						
KLMR				*e*PP	**PP**	**22 17 42.5**	**-0.7**
KLMR				LQ	LQ	22 38 57.5	
KLMR				LQ	LQ	22 38 57.5	
KLMR				LR	LR	22 42 30.3	
KLMR				AMP		22 44 42.2	
	comp=Z,2µm,16.8s						
AS01	**Alice Springs**	**62.98**	**189**	*e*P	**P**	**22 15 29.0**	**-1.4**
AS31	**Alice Springs**	**62.99**	**189**	*e*P	**P**	**22 15 29.7**	**-0.7**
	comp=Z,12nm,0.7s						
ASAR	**Alice Springs**	**62.99**	**189**	P	**P**	**22 15 29.5**	**-0.9**
	comp=Z,40nm,0.7s,baz=9.2,slow=5.3,SNR=99						
ASAR				LR	LR	22 43 33.4	
	comp=Z,413nm,20.4s,baz=16,slow=37						
ASAR				PKP2bc		22 44 37.8	
	comp=Z,1.5nm,0.7s,baz=171,slow=2.6,SNR=9.1						
GEYT	**Alibeck**	**63.55**	**298**	P	**P**	**22 15 34.4**	**+0.3**
	comp=Z,7.6nm,0.9s,baz=284,slow=6.0,SNR=22						
GEYT				LR	LR	22 44 59.3	
	comp=Z,1µm,18.5s,baz=240,slow=38						
GYA0B	**ALIBECK ARRAY**	**63.55**	**298**	*e*P	**P**	**22 15 35.5**	**+1.4**
	comp=Z,26nm,0.8s						
PALK	**Pallekele**	**63.63**	**257**	P	**P**	**22 15 35.5**	**+0.5**
	comp=Z,13nm,0.6s,baz=121,slow=1.4,SNR=8.8						
PALK				LR	LR	22 45 38.9	
	comp=Z,591nm,20.2s,baz=101,slow=38						
PALK	**Pallekele**	**63.63**	**257**	*e*P	**P**	**22 15 35.5**	**+0.5**
	comp=Z,16nm,0.8s						
PALK	**Pallekele**	**63.63**	**257**	*e*P	**P**	**22 15 35.5**	**+0.5**
PALK				pmax	pmax		
	comp=Z,16nm,0.8s						
MBWA	**Marble Bar**	**63.65**	**204**	PFAKE		22 15 50.0	+15
MBWA				LR	LR		
	comp=Z,417nm,20.0s						
DAG	**Danmarks Havn**	**63.75**	**355**	*i* P	**P**	**22 15 34.7**	**-0.1**
	comp=Z,21nm,0.8s						
DAG	**Danmarks Havn**	**63.75**	**355**	*i* P	**P**	**22 15 34.7**	**-0.1**
DAG				pmax	pmax		
	comp=Z,21nm,0.8s						
LLLB	**Lillooet**	**64.17**	**45**	*e*P	**P**	**22 15 39.3**	**+1.2**
	comp=Z,39nm,1.2s						
EIDS	**Eidsvold**	**64.68**	**171**	*e*P	**P**	**22 15 41.3**	**-0.1**
	comp=Z,24nm,0.6s						
A04D	**Lummi Island**	**64.68**	**47**	P	**P**	**22 15 42.0**	**+0.7**
	baz=301						
NLWA	**Neilton Lookou**	**64.70**	**49**	*e*P	**P**	**22 15 43.3**	**+1.8**
	comp=Z,79nm,1.1s						
DZM	**Mont Dzumac**	**64.90**	**155**	*e*P	**P**	**22 15 43.9**	**+0.8**
	comp=Z,48nm,1.1s						
DZM	**Mont Dzumac**	**64.90**	**155**	*e*LR	LR	22 35 12.0	
	comp=Z,3µm,22.9s						
DZM	**Mont Dzumac**	**64.90**	**155**	P	**P**	**22 15 43.7**	**+0.6**
	comp=Z,14nm,0.8s,baz=284,slow=19,SNR=9.7						
DZM				LR	LR	22 40 55.1	
	comp=Z,1µm,22.0s,baz=38,slow=33						
DZM	**Mont Dzumac**	**64.90**	**155**	*e*P	**P**	**22 15 44.2**	**+1.1**
	comp=Z,44nm,1.4s						
B05A	**Bryant**	**65.27**	**47**	P	**P**	**22 15 46.0**	**+0.9**
	baz=302,SNR=17						
E03A	**Lebam**	**65.31**	**49**	*e*P	**P**	**22 15 47.6**	**+2.1**
	comp=Z,80nm,1.0s						
B06A	**Marblemount**	**65.48**	**47**	*e*P	**P**	**22 15 47.9**	**+1.4**
	comp=Z,61nm,1.1s						
F03A	**Seaside**	**65.64**	**50**	*e*P	P	22 15 50.8	+3.2
	comp=Z,79nm,1.3s						
F04D	**Rainier, OR**	**65.88**	**49**	P	**P**	**22 15 49.6**	**+0.4**
	baz=302						
D05A	**Enumclaw**	**65.90**	**48**	*e*P	**P**	**22 15 51.6**	**+2.3**
	comp=Z,71nm,1.0s						
MOS	**Moscow**	**66.05**	**323**	*e*P	**P**	**22 15 52.3**	**+2.2**
MOS				*e*		22 16 21.8	
MOS				*e*		22 18 16.3	
MOS				*e*S	**S**	**22 24 36.1**	**+0.3**
MOS				pmax	pmax		
	comp=Z,200nm,1.5s						
MOS				pmax	pmax		
	comp=Z,66nm,0.9s						
MOS				smax	smax		
	comp=E,800nm,3.5s						
MOS				smax	smax		
	comp=N,400nm,2.6s						
MOS				MLR	MLR		
	comp=Z,4µm,15.0s						
MOS				MLR	MLR		
	comp=N,2µm,16.0s						
MOS				MLR	MLR		
	comp=E,3µm,16.0s						
C06D	**Leavenworth**	**66.13**	**47**	P	**P**	**22 15 51.7**	**+0.9**
	baz=302						
G03D	**McMinnville, O**	**66.19**	**50**	P	**P**	**22 15 52.1**	**+0.9**
	baz=302,SNR=8.1						
LON	**Longmire**	**66.23**	**48**	*e*P	**P**	**22 15 52.4**	**+0.9**
	comp=E,17nm,0.9s						
LON	**Longmire**	**66.23**	**48**	*e*P	**P**	**22 15 52.4**	**+0.9**
LON				pmax	pmax		
	comp=Z,17nm,0.9s						
COR	**Corvallis**	**66.50**	**51**	*e*P	**P**	**22 15 55.6**	**+2.4**
	comp=Z,78nm,0.9s						
COR	**Corvallis**	**66.50**	**51**	*e*P	**P**	**22 15 55.6**	**+2.4**
COR				pmax	pmax		
	comp=Z,78nm,0.9s						
VRH	**Novokhopyorsk**	**66.58**	**318**	*e*P	**P**	**22 15 54.6**	**+1.1**
VRH				*e*S	**S**	**22 24 40.9**	**-1.4**
VRH				pmax	pmax		
	comp=Z,30nm,0.7s						
VRH				smax	smax		
	comp=N,220nm,2.8s						
VRH				MLR	MLR		
	comp=Z,7µm,24.0s						
B08A	**Colville Reser**	**66.78**	**46**	*e*P	**P**	**22 15 55.7**	**+0.8**
	comp=Z,48nm,1.1s						
KEBM	**Edson Butte**	**66.79**	**53**	*e*P	**P**	**22 15 57.6**	**+2.5**
	comp=Z,100nm,1.0s						
OBN	**Obninsk**	**66.91**	**323**	*e*P	**P**	**22 15 55.5**	**-0.1**
	comp=Z,40nm,1.0s						
OBN				LR	LR		
	comp=Z,912nm,20.0s						
OBN	**Obninsk**	**66.91**	**323**	*c* *i*P	**P**	**22 15 55.4**	**-0.1**
OBN				*e*		22 16 15.0	
OBN				*e*		22 18 22.6	
OBN				*e*PPP	PPP	22 19 58.8	
OBN				*i* S	**S**	**22 24 46.2**	**+0.1**
OBN				*e*SS	**SS**	**22 29 06.1**	**+2.2**
OBN				pmax	pmax		
	comp=Z,21nm,0.6s						
OBN				MLR	MLR		
	comp=Z,4µm,16.0s						
I03D	**Drain, OR**	**66.95**	**52**	P	**P**	**22 15 56.7**	**+0.7**
	baz=303,SNR=23						
H04A	**Detroit Lake**	**67.12**	**50**	*e*P	**P**	**22 15 58.8**	**+1.5**
	comp=Z,72nm,1.0s						
KBO	**Bosley Butte**	**67.21**	**54**	*e*P	P	22 16 01.0	+3.1
	comp=Z,104nm,1.2s						
LPSR	**Galich'ya Gora**	**67.22**	**320**	*e*P	**P**	**22 15 57.1**	**-0.5**
LPSR				*e*S	**S**	**22 24 48.4**	**-1.6**
LPSR				pmax	pmax		
	comp=Z,20nm,1.0s						
LPSR				smax	smax		
	comp=E,120nm,2.6s						
LPSR				MLR	MLR		
	comp=Z,8µm,22.0s						
FIA1	**FINESS Array S**	**67.33**	**332**	*e*P	**P**	**22 15 58.2**	**+0.1**
FIA0	**FINESS Array S**	**67.34**	**332**	*e*P	**P**	**22 15 58.2**	**0.0**
FIA0	**FINESS Array S**	**67.34**	**332**	*e*P	**P**	**22 15 58.2**	**0.0**
FINES	**FINESS Array B**	**67.34**	**332**	P	**P**	**22 15 58.2**	**0.0**
	comp=Z,19nm,0.6s,baz=44,slow=8.0,SNR=96						
FINES				LR	LR	22 47 20.6	
	comp=Z,3µm,21.5s,baz=38,slow=38						
G05D	**Wamic, OR**	**67.34**	**50**	P	**P**	**22 15 59.1**	**+0.6**
	baz=303,SNR=13						
E07A	**Sunnyside**	**67.47**	**48**	*e*P	**P**	**22 16 01.7**	**+2.4**
	comp=Z,54nm,1.0s						
I04A	**Tendick Farm,**	**67.47**	**51**	P	**P**	**22 15 59.8**	**+0.4**
	baz=303,SNR=29						
L02D	**Cave Junction,**	**67.63**	**53**	P	**P**	**22 16 01.0**	**+0.6**
	baz=303,SNR=6.4						
C09A	**Chrisman Ranch**	**67.68**	**46**	*e*P	**P**	**22 16 01.7**	**+1.0**
	comp=Z,88nm,1.1s						
C09A				*e*pP	**sP**	**22 16 12.8**	**-1.1**
D08A	**Wollman Farm,**	**67.73**	**47**	*e*P	**P**	**22 16 01.1**	**+0.1**
	comp=Z,50nm,0.9s						
G06A	**Carlson Farm,**	**67.74**	**49**	*e*P	**P**	**22 16 02.6**	**+1.5**
	comp=Z,37nm,1.0s						
HAWA	**Hanford**	**67.75**	**48**	*e*P	**P**	**22 16 02.5**	**+1.4**
	comp=Z,32nm,1.0s						
HAWA				*e*pP	**sP**	**22 16 13.9**	**-0.4**
HUMO	**Hull Mountain**	**67.78**	**53**	*e*P	**P**	**22 16 03.2**	**+1.8**
	comp=Z,27nm,1.5s						
F07A	**Phinny Hill Vi**	**67.79**	**48**	*e*P	**P**	**22 16 03.3**	**+1.9**
	comp=Z,48nm,0.8s						
MAK	**Makhachkala**	**67.81**	**308**	*e*P	**P**	**22 15 59.3**	**-2.2**
MAK				*e*		22 18 34.8	
MAK				*e*S	**S**	**22 24 51.6**	**-5.8**
MAK				pmax	pmax		
	comp=Z,256nm,1.8s						
I05D	**Terrebonne, OR**	**67.82**	**50**	P	**P**	**22 16 02.2**	**+0.6**
	baz=304,SNR=11						
AFI	**Afiamalu**	**67.88**	**131**	LR	LR	22 41 21.2	
	comp=Z,1µm,20.5s,baz=326,slow=32						
VSR	**Storozhevoye**	**67.89**	**319**	*e*P	**P**	**22 16 01.7**	**-0.2**
VSR				*e*S	**S**	**22 24 55.8**	**-2.4**
VSR				pmax	pmax		
	comp=Z,9.0nm,0.4s						
VSR				smax	smax		
	comp=N,50nm,1.4s						
VSR				MLR	MLR		
	comp=Z,8µm,25.0s						
J04D	**Umpqua Nationa**	**67.96**	**52**	P	**P**	**22 16 03.1**	**+0.4**
	baz=304,SNR=7.4						
E08A	**Dider Farm, El**	**67.96**	**47**	*e*P	**P**	**22 16 03.0**	**+0.6**
	comp=Z,38nm,0.9s						
VORD	**Divnogorie**	**67.97**	**318**	*e*P	**P**	**22 16 02.0**	**-0.4**
VORD				pmax	pmax		
	comp=Z,20nm,1.7s						
JCC	**Jacoby Creek,**	**68.09**	**55**	*e*P	**P**	**22 16 05.7**	**+2.5**
	comp=Z,45nm,1.0s						
KHMM	**Horse Mountain**	**68.25**	**55**	*e*P	**P**	**22 16 06.7**	**+2.2**
	comp=Z,73nm,1.3s						
PINE	**Pine Mountain**	**68.36**	**51**	*e*P	**P**	**22 16 06.8**	**+1.6**
	comp=Z,99nm,1.0s						
YBH	**Yreka Blue Hor**	**68.42**	**53**	P	**P**	**22 16 07.4**	**+1.9**
	comp=Z,22nm,0.9s,baz=358,slow=4.8,SNR=46						
YBH				LR	LR	22 41 54.0	
	comp=Z,433nm,21.5s,baz=302,slow=32						
YBH	**Yreka Blue Hor**	**68.42**	**53**	*e*P	**P**	**22 16 07.1**	**+1.6**
	comp=Z,34nm,1.0s						
YBH	**Yreka Blue Hor**	**68.42**	**53**	*e*P	**P**	**22 16 07.1**	**+1.6**
YBH				pmax	pmax		
	comp=Z,34nm,1.0s						
J05D	**Fort Rock, OR**	**68.47**	**51**	P	**P**	**22 16 06.3**	**+0.4**
	baz=304,SNR=37						
E09A	**Wood Farm, Sta**	**68.47**	**47**	*e*P	**P**	**22 16 06.8**	**+1.2**
	comp=Z,56nm,1.0s						
AKT	**Akhty**	**68.49**	**306**	*e*P	**P**	**22 16 05.8**	**-0.2**
AKT				*e*		22 16 29.8	
AKT				*e*		22 18 37.1	
AKT				pmax	pmax		
	comp=Z,26nm,0.7s						
K04D	**Chiloquin, OR**	**68.52**	**52**	P	**P**	**22 16 06.8**	**+0.7**
	baz=304						
M02C	**Callahan**	**68.52**	**54**	P	**P**	**22 16 06.5**	**+0.4**
	baz=304,SNR=18						
SUMG	**Summit**	**68.58**	**0**	*e*P	**P**	**22 16 07.1**	**+0.8**
	comp=Z,99nm,0.8s						
SUMG	**Summit**	**68.58**	**0**	*i* P	**P**	**22 16 07.7**	**+1.4**
	comp=Z,51nm,0.8s						
	comp=Z,2µm,22.0s						
SUMG	**Summit**	**68.58**	**0**	*i* P	**P**	**22 16 07.7**	**+1.4**
SUMG				pmax	pmax		
	comp=Z,51nm,0.8s						
SUMG				MLR	MLR		
	comp=Z,2µm,22.0s						
G08A	**Pilot Rock**	**68.69**	**49**	*e*P	**P**	**22 16 08.5**	**+1.3**
	comp=Z,16nm,1.0s						
GROC	**Groznyy**	**68.72**	**309**	*e*P	**P**	**22 16 09.2**	**+2.0**
GROC				*e*		22 16 34.2	
GROC				*e*S	**S**	**22 25 13.3**	**+5.0**
GROC				pmax	pmax		
	comp=Z,10.0nm,0.6s						
N02D	**Trinity Center**	**68.84**	**54**	P	**P**	**22 16 08.7**	**+0.5**
	baz=304,SNR=14						
M04C	**Macdoel**	**68.93**	**53**	P	**P**	**22 16 09.0**	**+0.2**

	baz=304,SNR=34						
K05A	Summer Lake	68.98	52	eP	P	22 16 10.7	+1.5
	comp=Z,102nm,1.1s						
I07A	Izee	69.06	50	eP	P	22 16 11.7	+2.2
	comp=Z,11nm,0.9s						
VSU	Vasula	69.06	330	ceP	P	22 16 09.1	+0.1
VSU				pmax	pmax		
	comp=Z,68nm,0.6s						
WDC	Whiskeytown Da	69.16	54	eP	P	22 16 11.5	+1.5
	comp=Z,30nm,0.9s						
WDC	Whiskeytown Da	69.16	54	eP	P	22 16 11.5	+1.5
WDC				pmax	pmax		
	comp=Z,30nm,0.9s						
F10A	Beach Ranch, E	69.30	47	eP	P	22 16 12.6	+1.6
	comp=Z,17nm,1.0s						
GOF	Gofitskoye	69.31	312	eP	P	22 16 11.6	+0.8
WALA	Waterton Lakes	69.33	43	eP	P	22 16 11.9	+0.8
	comp=Z,45nm,0.9s						
O03D	Paynes Creek	69.79	54	P	P	22 16 14.3	+0.3
	baz=305,SNR=26						
MOD	Modoc Plateau	69.81	52	eP	P	22 16 15.7	+1.5
	comp=Z,29nm,1.0s						
MOD				epP	sP	22 16 26.6	-0.9
NCK	Nalchik	69.88	310	⇑eP	P	22 16 15.7	+1.3
NCK				pmax	pmax		
	comp=Z,18nm,1.0s						
BMO	Blue Mountains	69.91	48	eP	P	22 16 15.6	+0.9
	comp=Z,27nm,1.0s						
BMO	Blue Mountains	69.91	48	eP	P	22 16 15.6	+0.9
BMO				pmax	pmax		
	comp=Z,27nm,1.0s						
JTMT	Jette	69.91	44	eP	P	22 16 15.0	+0.3
	comp=Z,61nm,1.0s						
J08A	Circle Bar Ran	70.08	50	eP	P	22 16 17.2	+1.5
	comp=Z,48nm,1.1s						
ZEI	Tsey	70.10	309	eP	P	22 16 15.3	-0.7
ZEI				pmax	pmax		
	comp=Z,33nm,1.1s						
KIV	Kislovodsk	70.15	311	eP	P	22 16 17.6	+1.5
	comp=Z,126nm,1.1s						
KIV				LR	LR		
	comp=Z,1µm,19.0s						
KIV	Kislovodsk	70.15	311	P	P	22 16 17.7	+1.6
	SNR=15						
KIV	Kislovodsk	70.15	311	i P	P	22 16 16.9	+0.8
	SNR=16						
KIV	Kislovodsk	70.15	311	c iP	P	22 16 16.8	+0.6
KIV				i		22 16 25.9	
KIV				e		22 16 34.4	
KIV				i S	S	22 25 25.5	+0.2
KIV				eSS	SS	22 29 56.4	+1.7
KIV				pmax	pmax		
	comp=Z,64nm,1.0s						
KIV				MLR	MLR		
	comp=Z,2µm,17.0s						
KBZ	Khabaz	70.16	311	P	P	22 16 17.1	+1.1
	comp=Z,15nm,1.0s,baz=38,slow=2.7,SNR=11						
KBZ				LR	LR	22 52 16.3	
	comp=Z,1µm,18.2s,baz=46,slow=40						
TBLG	Delisi	70.20	308	eP	P	22 16 19.3	+2.8
	comp=Z,33nm,1.0s						
ORV	Oroville	70.40	55	eP	P	22 16 18.3	+0.7
	comp=Z,29nm,1.0s						
ORV	Oroville	70.40	55	eP	P	22 16 18.3	+0.7
ORV				pmax	pmax		
	comp=Z,29nm,1.0s						
WVOR	Wild Horse Val	70.52	51	eP	P	22 16 20.0	+1.5
	comp=Z,37nm,1.1s						
WVOR	Wild Horse Val	70.52	51	eP	P	22 16 20.0	+1.5
WVOR				pmax	pmax		
	comp=Z,37nm,1.1s						
NEY	Neytrino	70.54	310	⇓eP	P	22 16 20.1	+1.4
NEY				pmax	pmax		
	comp=Z,2.0nm,0.8s						
STKA	Stephens Creek	70.66	181	P	P	22 16 18.8	-0.3
	comp=Z,13nm,0.7s,baz=333,slow=7.6,SNR=17						
STKA	Stephens Creek	70.66	181	eP	P	22 16 18.7	-0.3
	comp=Z,2.9nm,0.8s						
STKA	Stephens Creek	70.66	181	eP	P	22 16 18.7	-0.3
STKA				pmax	pmax		
	comp=Z,3.0nm,0.8s						
FORT	Forrest	70.84	193	eP	P	22 16 19.8	-0.4
	comp=Z,48nm,0.7s						
BEKR	Beckworth	70.94	54	eP	P	22 16 20.6	-0.5
	comp=Z,51nm,0.9s						
AFDM	Forest Hills D	71.08	55	eP	P	22 16 22.9	+1.0
	comp=Z,21nm,1.1s						
GNI	Garni	71.11	307	P	P	22 16 23.4	+1.2
	comp=Z,5.6nm,1.0s,baz=61,slow=20,SNR=2.4						
GNI				LR	LR	22 50 42.4	
	comp=Z,2µm,18.6s,baz=61,slow=38						
GNI	Garni	71.11	307	eP	P	22 16 22.2	0.0
	comp=Z,236nm,1.3s						
GNI	Garni	71.11	307	P	P	22 16 23.4	+1.2
GNI	Garni	71.11	307	⇓eP	P	22 16 25.6	+3.4
GNI				pmax	pmax		
	comp=Z,58nm,1.3s						
WSAR	Wadi Sarin	71.12	285	P	P	22 16 22.8	+0.5
	comp=Z,3.6nm,0.7s,baz=85,slow=18,SNR=4.1						
WSAR				LR	LR	22 50 24.3	
	comp=Z,568nm,20.4s,baz=110,slow=38						
AKH	Akhalkalaki	71.15	308	⇓iP	P	22 16 23.9	+1.5
AKH	Akhalkalaki	71.15	308	eP	P	22 16 26.4	+4.0
	comp=Z,12nm,0.8s						
IDID	Didziasalis	71.16	327	eP	P	22 16 22.6	+0.7
IDID				IAmb	IAmb	22 16 23.7	
	comp=Z,11nm,0.7s						
MICGM	Minsk	71.21	326	e	P	22 16 23.0	+0.7
MNK	Minsk	71.21	326	eP	P	22 16 23.0	+0.7
IND	Independence	71.23	54	eP	P	22 16 24.2	+1.2
ISAL	Salakas	71.25	327	eP	P	22 16 23.2	+0.7
ISAL				IAmb	IAmb	22 16 38.5	
	comp=Z,21nm,1.0s						
BANOM	Banah	71.32	288	P	P	22 16 25.9	+2.5
BANOM	Banah	71.32	288	P	P	22 16 23.9	+0.4
IIGN	Ignalina	71.35	327	eP	P	22 16 23.8	+0.7
IIGN				IAmb	IAmb	22 16 28.5	
	comp=Z,19nm,0.6s						
SHME	Shamm	71.36	289	P	P	22 16 23.8	0.0
NACGM	Naroch	71.42	327	e	P	22 16 24.0	+0.5
NACGM				eLR	LR	22 47 55.0	
FFC	Flin Flon	71.49	33	eP	P	22 16 24.4	+0.4
	comp=Z,76nm,0.9s						
FFC				LR	LR		
	comp=Z,579nm,20.0s						
FFC	Flin Flon	71.49	33	eP	P	22 16 24.4	+0.4
FFC				pmax	pmax		
	comp=Z,76nm,0.9s						
FFC				MLR	MLR		
	comp=Z,579nm,20.0s						
ILULI	Ilulissat	71.50	5	eP	P	22 16 24.4	+0.6
	comp=Z,41nm,0.9s						
ILULI	Ilulissat	71.50	5	i P	P	22 16 24.5	+0.8
	comp=Z,29nm,0.9s						
ILULI	Ilulissat	71.50	5	i P	P	22 16 24.5	+0.8
ILULI				pmax	pmax		
	comp=Z,29nm,0.9s						
MFID	Camas Ranch	71.61	49	eP	P	22 16 26.4	+1.3
	comp=Z,28nm,1.0s						
PAHR	Pah Rah Range	71.65	54	eP	P	22 16 26.3	+0.9
	comp=Z,44nm,0.9s						
MDH	Madha	71.68	288	P	P	22 16 27.1	+1.5
VCNR	Virginia City	71.72	54	eP	P	22 16 27.9	+2.0
	comp=Z,34nm,0.9s						
HRY	Holter Researc	71.87	44	eP	P	22 16 27.9	+1.3
PNTR	Pine Nut	71.87	54	eP	P	22 16 28.5	+1.6
	comp=Z,36nm,0.9s						
UOSS	Minazif	71.95	288	eP	P	22 16 26.9	-0.3
	comp=Z,22nm,0.8s						
UOSS	Minazif	71.95	288	P	P	22 16 26.6	-0.6
CMB	Columbia Colle	71.99	55	eP	P	22 16 28.5	+1.1
	comp=Z,33nm,1.0s						
CMB	Columbia Colle	71.99	55	eP	P	22 16 28.5	+1.1
CMB				pmax	pmax		
	comp=Z,33nm,1.0s						
HATD	Hatta, Dubai	72.07	288	P	P	22 16 28.5	+0.5
LRM	Limekiln Ridge	72.07	45	eP	P	22 16 28.9	+0.9
EGMT	Eagleton	72.15	42	P	P	22 16 28.5	+0.3
	baz=309,SNR=37						
EGMT	Eagleton	72.15	42	eP	P	22 16 28.9	+0.7
	comp=Z,66nm,1.0s						
YERR	Yerington	72.16	54	eP	P	22 16 30.0	+1.4
	comp=Z,56nm,0.9s						
ASHO	Ashiyiah	72.21	288	P	P	22 16 29.2	+0.3
DLMT	Dillon	72.28	46	eP	P	22 16 29.6	+0.5
	comp=Z,51nm,1.0s						
WAKR	Walker	72.32	55	eP	P	22 16 31.1	+1.6
	comp=Z,24nm,0.9s						
HLID	Hailey	72.34	48	P	P	22 16 29.9	+0.3
	baz=308,SNR=32						
HLID	Hailey	72.34	48	eP	P	22 16 31.0	+1.4
	comp=Z,20nm,1.0s						
NC405	NORSAR Array S	72.35	337	eP	P	22 16 29.4	+0.3
NC303	NORSAR Array S	72.37	338	eP	P	22 16 29.8	+0.6
MCMT	McKenzie Canyo	72.46	46	eP	P	22 16 31.0	+0.7
HFS	Hagfors	72.51	336	P	P	22 16 29.6	-0.3
	comp=Z,12nm,0.6s,baz=52,slow=5.8,SNR=47						
HFS				LR	LR	22 52 12.7	
	comp=Z,2µm,20.9s,baz=36,slow=39						
NC204	NORSAR Array S	72.51	338	eP	P	22 16 30.3	+0.3
NB201	NORSAR Array S	72.53	337	eP	P	22 16 30.7	+0.5
BMN	Battle Mountai	72.56	52	eP	P	22 16 32.1	+1.2
	comp=Z,43nm,1.1s						
BMN	Battle Mountai	72.56	52	eP	P	22 16 32.1	+1.2
BMN				pmax	pmax		
	comp=Z,43nm,1.1s						
NB2	NORSAR Subarra	72.56	337	P	P	22 16 30.1	-0.3
	comp=Z,34nm,1.2s,baz=39,slow=6.2						
NB2	NORSAR Subarra	72.56	337	P	P	22 16 30.1	-0.3
	baz=39,slow=6.2						
NOA	NORSAR Array B	72.56	337	P	P	22 16 30.1	-0.3
	comp=Z,9.3nm,0.6s,baz=38,slow=6.0,SNR=71						
NOA				LR	LR	22 53 32.7	
	comp=Z,2µm,19.2s,baz=35,slow=40						
ANN	Anapa	72.66	314	eP	P	22 16 28.3	-2.9
ANN				e*PP	pP	22 16 39.3	-1.6
ANN				e		22 16 44.0	
ANN				eS	S	22 25 51.2	-2.9
ANN				pmax	pmax		
	comp=Z,52nm,1.5s						
ANN				MLR	MLR		
	comp=N,3µm,20.0s						
ANN				MLR	MLR		
	comp=E,373nm,20.0s						
ANN				MLR	MLR		
	comp=Z,2µm,20.0s						
BOZ	Bozeman (W)	72.67	45	P	P	22 16 31.4	0.0
	baz=308,SNR=75						
BOZ	Bozeman (W)	72.67	45	eP	P	22 16 32.2	+0.8
	comp=Z,45nm,1.0s						
BOZ	Bozeman (W)	72.67	45	eP	P	22 16 32.2	+0.8
BOZ				pmax	pmax		
	comp=Z,45nm,1.0s						
NBO00	NORSAR Array S	72.70	338	eP	P	22 16 31.6	+0.5
ASUD	Al Ashush, Dub	72.78	288	P	P	22 16 32.7	+0.5
NAO01	NORSAR Array S	72.81	337	eP	P	22 16 31.6	-0.2
RYN	Ryan	72.82	54	eP	P	22 16 33.8	+1.4
	comp=Z,32nm,1.0s						
KVN	Kaiserville	72.84	54	eP	P	22 16 33.7	+1.1
	comp=Z,58nm,1.0s						
MDPB	Devils Postpil	73.06	55	eP	P	22 16 35.9	+1.8
	comp=Z,21nm,1.0s						
NV01	Mina Array Sit	73.08	54	eP	P	22 16 34.4	+0.3
NVAR	Mina Array Bea	73.08	54	P	P	22 16 35.1	+1.0
	comp=Z,30nm,0.9s,baz=285,slow=5.9,SNR=118						
NVAR				LR	LR	22 44 01.6	
	comp=Z,482nm,20.8s,baz=73,slow=32						
OMMB	Old Mammoth Mi	73.12	55	eP	P	22 16 36.5	+2.0
	comp=Z,24nm,1.3s						
AKASG	Malin Array Be	73.14	322	P	P	22 16 34.0	+0.2
	comp=Z,18nm,0.4s,baz=45,slow=6.2,SNR=50						
AKASG				LR	LR	22 52 07.6	
	comp=Z,1µm,18.2s,baz=50,slow=38						
AKBB	Malin Array Si	73.14	322	eP	P	22 16 33.7	-0.1
	comp=Z,27nm,0.6s						
KIEV	Kiev	73.15	322	eP	P	22 16 33.3	-0.6
	comp=Z,26nm,0.6s						
KIEV	Kiev	73.15	322	i P	P	22 16 33.7	-0.2
	SNR=23						
KIEV	Kiev	73.15	322	d iP	P	22 16 33.4	-0.5
KIEV				pmax	pmax		
	comp=Z,20nm,0.6s						
NV11	Mina Array Sit	73.17	54	eP	P	22 16 35.4	+0.8
	comp=Z,2.2nm,1.1s						
AK11	Malin Array Si	73.18	322	eP	P	22 16 34.6	+0.5
MLAC	Mammoth, Mammo	73.22	55	P	P	22 16 35.0	+0.1
	baz=307,SNR=5.6						
QLMT	Earthquake Lak	73.25	46	eP	P	22 16 37.0	+2.0
PAGB	Antelope Grade	73.43	57	eP	P	22 16 37.9	+1.9
	comp=Z,46nm,1.0s						
YHB	Horse Butte	73.43	46	eP	P	22 16 37.9	+1.9
	comp=Z,36nm,0.9s						
SUW	Suwalki	73.56	328	eP	P	22 16 38.5	+2.2
SUW				LMZ	LR	22 50 57.9	
	comp=Z,2µm,19.2s						
SUW	Suwalki	73.56	328	eP	P	22 16 38.7	+2.4
	comp=Z,48nm,1.0s						
SUW	Suwalki	73.56	328	eP	P	22 16 38.5	+2.2
SUW				MLR	MLR		
	comp=Z,2µm,19.2s						
GCMT	Greycliff	73.61	44	eP	P	22 16 38.5	+1.5
YMR	Madison River	73.61	45	eP	P	22 16 39.2	+2.1
	comp=Z,28nm,0.9s						
SFJD	Kangerlussuaq	73.72	5	P	P	22 16 36.5	-0.5
	comp=Z,24nm,0.8s,baz=1.1,slow=8.2,SNR=3.0						
SFJD				LR	LR	22 49 57.8	
	comp=Z,818nm,21.8s,baz=346,slow=36						
SFJD	Kangerlussuaq	73.72	5	eP	P	22 16 36.5	-0.5
SFJD				epP	sP	22 16 48.5	-1.8
SFJD	Kangerlussuaq	73.72	5	eP	P	22 16 36.5	-0.5
SFJD				e*PP	sP	22 16 48.5	-1.8
YFT	Old Faithful	73.82	46	eP	P	22 16 41.7	+3.3
	comp=Z,25nm,0.8s						
SMMC	Simmler	73.85	58	P	P	22 16 38.8	+0.4
	baz=307						
TIN	Tinemaha, Big	73.95	55	P	P	22 16 39.3	+0.3
	baz=307						
YPP	Pitchstone Pla	73.95	46	eP	P	22 16 41.7	+2.5
	comp=Z,14nm,0.9s						
H17A	Grant Village	74.00	46	P	P	22 16 39.6	+0.1
	baz=309						
H17A	Grant Village	74.00	46	eP	P	22 16 42.7	+3.2
	comp=Z,54nm,0.9s						
IMW	Indian Meadow	74.11	46	eP	P	22 16 42.2	+2.0
	comp=Z,34nm,0.9s						
VES	Vestal, Richgr	74.13	57	P	P	22 16 40.4	+0.4
	baz=307,SNR=14						
FLWY	Flagg Ranch	74.13	46	eP	P	22 16 42.4	+2.3
	comp=Z,48nm,1.4s						
KONO	Kongsberg	74.16	337	eP	P	22 16 40.2	+0.5
	comp=Z,9.2nm,0.7s						
KONO	Kongsberg	74.16	337	eP	P	22 16 40.2	+0.5
KONO				pmax	pmax		
	comp=Z,9.0nm,0.7s						
PKM	Mcpherson Peak	74.22	58	P	P	22 16 40.5	-0.2
	baz=307,SNR=5.3						
FXWY	Fox Creek	74.23	46	eP	P	22 16 42.6	+1.9
	comp=Z,30nm,1.0s						
RLMT	Red Lodge	74.26	44	P	P	22 16 40.6	-0.3
	baz=310,SNR=11						
RLMT	Red Lodge	74.26	44	eP	P	22 16 42.4	+1.5
	comp=Z,44nm,1.4s						
MOOW	Moose Ponds	74.32	46	eP	P	22 16 43.1	+1.9
	comp=Z,33nm,1.1s						
TPAW	Teton Pass	74.37	46	eP	P	22 16 42.2	+0.6
	comp=Z,69nm,1.4s						
HVU	Hansel Valley	74.39	49	eP	P	22 16 43.2	+1.6
	comp=Z,30nm,0.9s						
HVU	Hansel Valley	74.39	49	eP	P	22 16 43.3	+1.6
HVU				pmax	pmax		
	comp=Z,30nm,0.9s						
SIM	Simferopol’	74.40	316	i P	P	22 16 41.0	-0.4
SIM				eS	S	22 26 12.0	-1.8
SIM				pmax	pmax		
	comp=Z,21nm,0.9s						
CWC	Cottonwood Cre	74.42	56	P	P	22 16 41.5	-0.3
	baz=307						
LOHW	Long Hollow	74.48	46	eP	P	22 16 43.9	+1.7
	comp=Z,23nm,1.2s						
SNOW	Snow King Moun	74.49	46	eP	P	22 16 44.3	+2.0
	comp=Z,22nm,1.0s						
REDW	Red Top Meadow	74.50	46	eP	P	22 16 43.9	+1.6
	comp=Z,32nm,1.1s						
SBC	Santa Barbara	74.55	58	P	P	22 16 42.3	-0.2
	baz=307						
ISA	Isabella, Lake	74.63	57	P	P	22 16 43.4	+0.4
	baz=307,SNR=6.0						
ISA	Isabella, Lake	74.63	57	eP	P	22 16 43.9	+0.9
	comp=Z,18nm,1.1s						
ISA	Isabella, Lake	74.63	57	eP	P	22 16 43.9	+0.9
ISA				pmax	pmax		
	comp=Z,18nm,1.1s						
DGMT	Dagmar	74.69	39	P	P	22 16 43.4	+0.4
	baz=312,SNR=6.9						
DGMT	Dagmar	74.69	39	eP	P	22 16 44.0	+0.9
	comp=Z,74nm,1.2s						
DGMT				epP	PcP	22 16 54.1	-3.1
ARVC	Arvin	74.72	57	P	P	22 16 44.0	+0.6
	baz=307,SNR=7.0						
AHID	Auburn Hatcher	74.74	47	eP	P	22 16 44.9	+1.2
	comp=Z,54nm,1.5s						
BGU	Big Grassy Mou	74.78	49	eP	P	22 16 45.4	+1.5
	comp=Z,18nm,1.0s						
DAC	Darwin (Calif)	74.83	56	eP	P	22 16 44.8	+0.5
	comp=Z,18nm,1.0s						
DAC	Darwin (Calif)	74.83	56	eP	P	22 16 44.8	+0.5
DAC				pmax	pmax		
	comp=Z,18nm,1.0s						
R11A	Troy Canyon, C	74.83	53	P	P	22 16 45.0	+0.8
	baz=308,SNR=78						
R11A	Troy Canyon, C	74.83	53	eP	P	22 16 45.2	+1.0
	comp=Z,36nm,1.0s						
LAO	LASA Array	74.85	42	P	P	22 16 44.8	+0.7
	baz=312,SNR=15						
LAO	LASA Array	74.85	42	eP	P	22 16 45.5	+1.4
	comp=Z,68nm,0.9s						
SCZ2	Santa Cruz Isl	74.87	58	P	P	22 16 45.3	+0.9
	baz=307						
SPUT	South Promonto	74.88	49	eP	P	22 16 46.0	+1.5
	comp=Z,23nm,1.1s						
MPMC	Manual Prospec	75.03	56	P	P	22 16 46.2	+0.8
	baz=308,SNR=26						
FURC	Furnace Creek,	75.18	55	P	P	22 16 46.9	+0.9
	baz=308,SNR=16						
BLG	Laguna Peak, P	75.18	58	P	P	22 16 47.1	+0.9
	baz=307						
HWUT	Hardware Ranch	75.21	48	eP	P	22 16 47.4	+1.0
	comp=Z,47nm,1.1s						
HWUT				LR	LR		
	comp=Z,367nm,20.0s						
LRMC	Laurel Mtn Rad	75.25	56	P	P	22 16 47.3	+0.6
	baz=308,SNR=6.0						
TPNV	Topopah Spring	75.27	54	P	P	22 16 47.5	+0.7
	baz=308,SNR=45						
TPNV	Topopah Spring	75.27	54	eP	P	22 16 47.5	+0.7
	comp=Z,48nm,0.9s						
TPNV	Topopah Spring	75.27	54	eP	P	22 16 47.5	+0.7
TPNV				pmax	pmax		
	comp=Z,48nm,0.9s						
SORM	Soroca	75.28	321	⇑iP	P	22 16 46.5	+0.1
DUG	Dugway, Tooele	75.36	50	P	P	22 16 48.0	+0.7
	baz=309,SNR=54						
DUG	Dugway, Tooele	75.36	50	eP	P	22 16 48.4	+1.1
	comp=Z,44nm,0.9s						
DUG	Dugway, Tooele	75.36	50	eP	P	22 16 48.4	+1.1
DUG				pmax	pmax		
	comp=Z,44nm,0.9s						
SNCC	San Nicolas Is	75.40	59	P	P	22 16 48.2	+0.8
	baz=307						
EDW2	Edwards Air Fo	75.42	57	P	P	22 16 48.1	+0.6
	baz=308,SNR=19						
NWAO	Narrogin (SRO)	75.43	202	P	P	22 16 47.1	-0.1
	comp=Z,36nm,1.0s,baz=252,slow=7.2,SNR=8.2						
NWAO	Narrogin (SRO)	75.43	202	eP	P	22 16 47.1	-0.1
NWAO				LR	LR		
	comp=Z,397nm,19.0s						
NWAO	Narrogin (SRO)	75.43	202	eP	P	22 16 47.1	-0.1
NWAO				MLR	MLR		
	comp=Z,397nm,19.0s						
HORU	Horodok	75.47	323	P	P	22 16 47.0	-0.5
DECC	Green Verdugo	75.58	58	P	P	22 16 48.9	+0.5
	baz=308						
TCUT	Toone Canyon	75.61	49	eP	P	22 16 50.4	+1.6
	comp=Z,59nm,0.8s						
BW06	Boulder Array	75.61	46	P	P	22 16 49.0	+0.3
	baz=310,SNR=11						
BW06	Boulder Array	75.61	46	eP	P	22 16 49.5	+0.8
	comp=Z,22nm,0.9s						
PD31	Pinedale Array	75.61	46	eP	P	22 16 49.5	+0.7
PDAR	Pinedale Array	75.61	46	P	P	22 16 49.4	+0.7
	comp=Z,16nm,0.7s,baz=265,slow=2.9,SNR=69						
PDAR				LR	LR	22 46 01.9	
	comp=Z,274nm,21.6s,baz=337,slow=32						
PDAR	Pinedale Array	75.61	46	eP	P	22 16 48.3	-0.4
BORG	Borgarnes	75.67	353	P	P	22 16 49.4	+1.1
	comp=Z,20nm,0.7s,baz=28,slow=3.2,SNR=20						
BORG				LR	LR	22 48 43.9	
	comp=Z,234nm,21.7s,baz=9.6,slow=34						
BORG	Borgarnes	75.67	353	eP	P	22 16 50.8	+2.5
	comp=Z,37nm,0.9s						
BORG				LR	LR		
	comp=Z,224nm,21.0s						
BORG	Borgarnes	75.67	353	eP	P	22 16 50.8	+2.5
BORG				pmax	pmax		
	comp=Z,37nm,0.9s						
BORG				MLR	MLR		
	comp=Z,224nm,21.0s						
CTU	Camp Tracy	75.68	49	eP	P	22 16 50.4	+1.3
	comp=Z,24nm,1.0s						
MWC	Mount Wilson	75.77	57	eP	P	22 16 50.9	+1.1
	comp=Z,21nm,1.0s						
MWC	Mount Wilson	75.77	57	eP	P	22 16 50.9	+1.1
MWC				pmax	pmax		
	comp=Z,21nm,1.0s						
PSUT	Pine Spring	75.78	52	eP	P	22 16 50.8	+1.1
	comp=Z,31nm,0.9s						
KIS	Kishinev	75.82	320	eP	P	22 16 52.0	+2.5
KIS				eS	S	22 26 28.0	-1.5
KIS				eLR	LR	22 43 08.0	
	comp=Z,4µm,18.0s						
KIS	Kishinev	75.82	320	eP	P	22 16 52.0	+2.5
KIS				e		22 17 04.0	
KIS				eS	S	22 26 28.0	-1.5
KIS				e		22 31 30.0	
KIS				MLR	MLR		
	comp=Z,4µm,18.0s						
KIS				MLR	MLR		
	comp=E,2µm,16.0s						
SHOC	Shoshone, Teco	75.90	55	P	P	22 16 50.7	+0.5
	baz=308,SNR=7.0						
JLU	Jordanelle	75.91	49	eP	P	22 16 52.0	+1.5
	comp=E,37nm,1.2s						
GSC	Goldstone, Bar	75.93	56	P	P	22 16 51.2	+0.7
	baz=308,SNR=12						
GSC	Goldstone, Bar	75.93	56	eP	P	22 16 51.4	+0.9
	comp=E,25nm,1.1s						
GSC	Goldstone, Bar	75.93	56	eP	P	22 16 51.4	+0.9
GSC				pmax	pmax		
	comp=Z,25nm,1.1s						
FMP	Fort Macarthur	75.93	58	P	P	22 16 51.1	+0.7
	baz=308						
NLU	North Lily Min	75.95	50	eP	P	22 16 52.2	+1.4
	comp=Z,35nm,1.0s						
BSD	Bornholm Skovb	75.98	332	i P	P	22 16 50.3	+0.1
	comp=Z,21nm,0.8s						
	comp=Z,2µm,18.0s						
BSD	Bornholm Skovb	75.98	332	eP	P	22 16 50.3	+0.1
BSD				pmax	pmax		
	comp=Z,21nm,0.8s						
BSD				MLR	MLR		
	comp=Z,2µm,18.0s						
BFSC	Mount Baldy Ra	76.03	57	P	P	22 16 51.7	+0.5
	baz=308,SNR=8.7						
CIS	Catalina Islan	76.04	58	P	P	22 16 51.5	+0.4
	baz=308						
BEL	Belsk	76.13	327	eP	P	22 16 52.5	+1.3
BEL				eS	S	22 26 35.1	+2.4
BEL				LMZ	LR	22 51 57.5	
	comp=Z,2µm,23.3s						
BEL	Belsk	76.13	327	eP	P	22 16 52.5	+1.3
BEL				eS	S	22 26 35.1	+2.4
BEL				MLR	MLR		
	comp=Z,2µm,23.3s						
LVV	L’vov	76.16	324	eP	P	22 16 53.9	+2.5
LVV				eS	S	22 26 31.8	-1.3
LVV				eSS	SS	22 31 24.9	-0.9
LVV				eSSS	SSS	22 34 42.6	
LVV				MLR	MLR		
	comp=N,1µm,14.0s						
LVV				MLR	MLR		
	comp=E,2µm,14.0s						
LVV				MLR	MLR		
	comp=Z,2µm,14.0s						
MPU	Maple Canyon	76.18	50	eP	P	22 16 53.5	+1.5
	comp=Z,50nm,1.0s						
SHPR	Sheep Range	76.23	54	eP	P	22 16 53.8	+1.5
	comp=Z,31nm,1.0s						
IAS	Iasi	76.32	320	⇓iP	P	22 16 53.0	+0.7
TUQ	Turquoise Moun	76.41	55	P	P	22 16 53.9	+0.6
	baz=308,SNR=19						

COP	Copenhagen	76.41	334	*i* P	P	22 16 53.1	+0.4
	comp=Z,24nm,0.7s						
	comp=Z,2µm,19.0s						
COP	Copenhagen	76.41	334	*e*P	P	22 16 53.1	+0.4
COP				pmax	pmax		
	comp=Z,24nm,0.7s						
COP				MLR	MLR		
	comp=Z,2µm,19.0s						
LEOM	Leova	76.47	320	⇑*i*P	P	22 16 53.8	+0.6
GKP	Gorka Klasztor	76.51	330	*e*P	P	22 16 53.3	0.0
GKP				LMZ	LR	22 53 14.9	
	comp=Z,3µm,18.5s						
GKP	Gorka Klasztor	76.51	330	*e*P	P	22 16 53.3	0.0
GKP				MLR	MLR		
	comp=Z,3µm,18.5s						
HEC	Hector,Ludlow	76.52	56	P	P	22 16 54.7	+0.9
	baz=308,SNR=22						
CCUT	Cedar City	76.70	52	*e*P	P	22 16 56.4	+1.4
	comp=Z,37nm,1.0s						
MURC	Murrieta	76.72	58	P	P	22 16 56.0	+1.0
	baz=308						
MSU	Marysvale	76.81	51	*e*P	P	22 16 57.1	+1.5
MSU	Marysvale	76.81	51	*e*P	P	22 16 57.1	+1.5
SZCU	Shurtz Canyon	76.84	52	*e*P	P	22 16 57.5	+1.7
	comp=Z,26nm,1.0s						
MUD	Monsted U'grnd	76.89	335	*i* P	P	22 16 55.8	+0.4
	comp=Z,13nm,0.8s						
	comp=Z,2µm,18.0s						
MUD	Monsted U'grnd	76.89	335	*i* P	P	22 16 55.8	+0.4
MUD				pmax	pmax		
	comp=Z,13nm,0.8s						
MUD				MLR	MLR		
	comp=Z,2µm,18.0s						
TMUT	Trail Mountain	76.89	50	*e*P	P	22 16 57.5	+1.3
	comp=Z,41nm,1.3s						
KWP	Kalwaria Pacla	76.90	325	*e*P	P	22 16 56.3	+0.7
KWP				*e*S	S	22 26 42.4	+1.2
KWP				LMZ	LR	22 53 47.9	
	comp=Z,5µm,16.3s						
KWP	Kalwaria Pacla	76.90	325	*e*P	P	22 16 56.6	+1.0
	comp=Z,1µm,1.5s						
KWP	Kalwaria Pacla	76.90	325	*e*P	P	22 16 56.6	+1.0
GMRC	Granite Mounta	76.99	56	P	P	22 16 57.5	+0.9
	baz=309,SNR=15						
P17A	Butcher Ranch,	77.05	49	*e*P	P	22 16 58.1	+1.2
	comp=Z,72nm,0.9s						
TLCR		77.06	318	⇑*i*P	P	22 16 57.3	+0.7
TLCR		77.06	318	P	P	22 16 59.2	+2.6
MTPU	Mount Pierson	77.11	51	*e*P	P	22 16 59.0	+1.5
	comp=Z,44nm,1.0s						
LCMT	Little Creek M	77.11	53	*e*P	P	22 16 58.7	+1.4
	comp=Z,44nm,0.9s						
ILGA	Ilgaz	77.15	313	*e*P	P	22 16 59.4	+1.9
	comp=Z,41nm,1.0s						
BUR08	Bucovina Ar. S	77.15	322	*e*P	P	22 16 57.5	+0.2
LDFC	Landfair	77.16	55	*e*P	P	22 16 58.6	+1.1
	comp=Z,50nm,1.1s						
BUR04	Bucovina Ar. S	77.17	322	*e*P	P	22 16 57.4	+0.1
BURAR	Bucovina Array	77.17	322	⇑*i*P	P	22 16 57.7	+0.4
BURAR	Bucovina Array	77.17	322	P	P	22 16 57.7	+0.4
FRD	Ford Ranch, An	77.18	57	P	P	22 16 58.0	+0.4
	baz=309,SNR=6.5						
PFO	Pinyon Flats O	77.20	57	P	P	22 16 57.9	+0.2
	baz=309,SNR=6.5						
PFO	Pinyon Flats O	77.20	57	*e*P	P	22 16 58.1	+0.3
	comp=Z,19nm,1.0s						
XPFO	Piæon Flat	77.20	57	*e*P	P	22 16 58.1	+0.3
	comp=Z,17nm,1.0s						
BIZ	Bicaz	77.21	321	⇓*i*P	P	22 16 58.5	+1.1
109C	Camp Elliot, M	77.22	58	P	P	22 16 58.8	+1.1
	baz=308						
CPE	Camp Elliot	77.22	58	*e*P	P	22 16 59.3	+1.6
	comp=Z,23nm,1.0s						
TESR	Tescani	77.24	320	⇑*i*P	P	22 16 58.1	+0.5
P18A	Preston Nutter	77.25	49	*e*P	P	22 16 59.5	+1.3
	comp=Z,33nm,0.9s						
BELC	Belle Mtn. Jos	77.25	57	P	P	22 16 58.2	+0.1
	baz=309,SNR=10						
ULM	Lac du Bonnet	77.30	34	P	P	22 16 57.4	-0.4
	comp=Z,30nm,1.0s,baz=311,slow=6.4,SNR=28						
ULM				LR	LR	22 50 42.1	
	comp=Z,278nm,21.3s,baz=323,slow=35						
ULM	Lac du Bonnet	77.30	34	*e*P	P	22 16 57.7	-0.1
	comp=Z,45nm,1.0s						
ULM	Lac du Bonnet	77.30	34	*e*P	P	22 16 57.7	-0.1
ULM				pmax	pmax		
	comp=Z,45nm,1.0s						
MDND	Maddock	77.34	38	P	P	22 16 58.7	+0.6
	baz=315						
KNB	Kanab	77.37	52	*e*P	P	22 17 00.6	+1.8
	comp=Z,51nm,1.0s						
KNB	Kanab	77.37	52	P	P	22 17 00.5	+1.8
KNB				pmax	pmax		
	comp=Z,51nm,1.0s						
K22A	Casper	77.37	45	P	P	22 16 59.0	+0.4
	baz=312,SNR=7.6						
K22A	Casper	77.37	45	*e*P	P	22 17 00.2	+1.6
	comp=Z,52nm,1.1s						
PKCU	Pink Cliffs	77.41	52	*e*P	P	22 17 01.5	+2.4
	comp=Z,44nm,1.1s						
CFR	Carcaliu	77.41	319	⇑*i*P	P	22 16 58.9	+0.4
CFR	Carcaliu	77.41	319	P	P	22 16 58.8	+0.3
SRU	San Rafael Swe	77.42	50	*e*P	P	22 16 59.9	+0.9
	comp=Z,71nm,0.9s						
SRU	San Rafael Swe	77.42	50	*e*P	P	22 16 59.9	+0.9
SRU				pmax	pmax		
	comp=Z,71nm,0.9s						
RWWY	Rawlins	77.64	46	*e*P	P	22 17 00.1	-0.2
	comp=Z,47nm,0.9s						
BAR	Barrett	77.64	58	*e*P	P	22 17 01.5	+1.4
	comp=Z,16nm,0.9s						
VRI	Vrincioaia	77.65	320	⇓*i*P	P	22 17 01.5	+1.6
VRI	Vrincioaia	77.65	320	P	P	22 17 01.5	+1.6
JOSR	Joseni	77.66	321	⇓*i*P	P	22 17 01.7	+1.7
NEE2	Needles Airpor	77.66	55	P	P	22 17 00.7	+0.5
	baz=309						
MONP2	Monument Peak	77.67	58	P	P	22 17 00.3	-0.2
	baz=309,SNR=6.3						
PLOR	Plostina	77.70	320	⇑*i*P	P	22 17 01.1	+0.9
IRM	Iron Mountain	77.71	56	P	P	22 17 00.8	+0.3
	baz=309,SNR=20						
RSSD	Black Hills	77.72	43	P	P	22 17 00.9	+0.2
	baz=313						
RSSD	Black Hills	77.72	43	*e*P	P	22 17 01.2	+0.6
	comp=Z,43nm,0.8s						
RSSD	Black Hills	77.72	43	*e*P	P	22 17 01.2	+0.6
RSSD				pmax	pmax		
	comp=Z,43nm,0.8s						
OJC	Ojcow	77.75	326	*e*P	P	22 17 00.6	+0.3
OJC				*e*S	S	22 26 50.1	-0.3
OJC				LMZ	LR	22 54 14.6	
	comp=Z,3µm,17.0s						
OJC	Ojcow	77.75	326	*e*P	P	22 17 00.9	+0.6
	comp=Z,38nm,1.0s						
OJC	Ojcow	77.75	326	*e*P	P	22 17 00.9	+0.6
OJC				pmax	pmax		
	comp=Z,38nm,1.0s						
TIRR	Tirgusor	77.77	318	⇓*i*P	P	22 17 01.2	+0.7
UZH	Uzhgorod	77.81	324	*e*P	P	22 17 02.8	+2.1
UZH				*e*		22 17 05.0	
BC3	Big Chuckawall	77.83	57	P	P	22 17 01.8	+0.5
	baz=309,SNR=17						
HARR	Harsova	77.86	318	⇑*i*P	P	22 17 02.1	+1.1
HARR	Harsova	77.86	318	P	P	22 17 14.5	+13
GRER		77.87	319	⇑*i*P	P	22 17 02.1	+1.0
TLB	Topalu	77.87	318	⇓*i*P	P	22 17 01.8	+0.7
ARCR	ARCALIA	77.96	322	⇓*i*P	P	22 17 03.2	+1.6
IKP	In-Ko-Pah, Jac	78.03	58	P	P	22 17 02.2	-0.1
	baz=309,SNR=13						
SWSC	Sam W. Stewart	78.04	57	P	P	22 17 02.5	+0.2
	baz=309,SNR=5.5						
BR101	Keskin Array S	78.07	312	*e*P	P	22 17 02.8	+0.3
BR101				*e*PP	PP	22 20 01.8	+3.3
BR131	Keskin Array S	78.07	312	*e*P	P	22 17 02.8	+0.3
BRTR	Keskin Array B	78.07	312	P	P	22 17 02.8	+0.3
	comp=Z,3.4nm,0.7s,baz=70,slow=4.2,SNR=13						
BRTR				PP	PP	22 20 01.8	+3.3
	comp=Z,1.8nm,0.9s,baz=58,slow=7.7,SNR=3.7						
BRTR				LR	LR	22 56 00.4	
	comp=Z,710nm,18.6s,baz=50,slow=39						
O20A	White River Ci	78.08	48	P	P	22 17 02.7	0.0
	baz=312,SNR=18						
O20A	White River Ci	78.08	48	*e*P	P	22 17 03.5	+0.8
	comp=Z,34nm,0.9s						
NIE	Niedzica	78.12	326	*e*P	P	22 17 03.1	+0.6
NIE				*e*S	S	22 26 56.9	+2.3
NIE				LMZ	LR	22 54 35.1	
	comp=Z,2µm,17.2s						
NIE	Niedzica	78.12	326	*e*P	P	22 17 03.1	+0.6
NIE				*e*S	S	22 26 56.9	+2.3
NIE				MLR	MLR		
	comp=Z,2µm,17.2s						
PGOR	Pogoanele	78.19	319	⇓*i*P	P	22 17 04.4	+1.5
DOPR	Dopca	78.25	321	⇓*i*P	P	22 17 04.9	+1.7
PDMCI	Parker Dam,Lak	78.26	55	P	P	22 17 03.6	+0.1
	baz=310,SNR=11						
ISR	Istrita	78.27	319	⇓*i*P	P	22 17 04.8	+1.4
ISR	Istrita	78.27	319	P	P	22 17 04.8	+1.4
MLR	Muntele Rosu	78.31	320	P	P	22 17 04.2	+0.5
	comp=Z,5.1nm,0.5s						
MLR				LR	LR	22 54 52.9	
	comp=Z,3µm,19.0s,baz=46,slow=38						
MLR	Muntele Rosu	78.31	320	⇑*i*P	P	22 17 04.3	+0.6
MLR	Muntele Rosu	78.31	320	*e*P	P	22 17 04.2	+0.5
	comp=Z,30nm,1.5s						
MLR	Muntele Rosu	78.31	320	*e*P	P	22 17 04.2	+0.5
MLR				pmax	pmax		
	comp=Z,30nm,1.5s						
Y12C	Blythe	78.37	56	P	P	22 17 04.5	+0.4
	baz=310,SNR=17						
Y12C	Blythe	78.37	56	*e*P	P	22 17 05.3	+1.2
	comp=Z,34nm,0.9s						
ANTO	Ankara	78.46	312	⇑*i*P	P	22 17 05.5	+0.9
ANTO	Ankara	78.46	312	*e*P	P	22 17 05.7	+1.1
	comp=Z,30nm,1.0s						
ANTO	Ankara	78.46	312	*e*P	P	22 17 05.7	+1.1
ANTO				pmax	pmax		
	comp=Z,30nm,1.0s						
A33A	Warroad	78.48	35	P	P	22 17 04.5	0.0
	baz=318,SNR=11						
BR231	Keskin MP Arra	78.49	312	*e*P	P	22 17 05.8	+1.0
CJR	Cluj-Napoca	78.58	322	⇓*i*P	P	22 17 06.3	+1.1
CJR	Cluj-Napoca	78.58	322	P	P	22 17 06.2	+1.1
GLA	Glamis	78.61	57	P	P	22 17 06.0	+0.5
	baz=309,SNR=12						
GLA	Glamis	78.61	57	*e*P	P	22 17 06.7	+1.2
	comp=Z,31nm,0.8s						
GLA	Glamis	78.61	57	*e*P	P	22 17 06.7	+1.2
GLA				pmax	pmax		
	comp=Z,31nm,0.8s						
PV09	Paradox Valley	78.64	49	*e*P	P	22 17 07.2	+1.3
LANS	Liptovska Anna	78.69	326	*e*P	P	22 17 07.0	+1.4
LANS	Liptovska Anna	78.69	326	*e*P	P	22 17 07.0	+1.4
PV21	Cone Mtn., Par	78.69	49	*e*P	P	22 17 07.4	+1.3
	comp=Z,66nm,0.8s						
SULR		78.72	319	⇑*i*P	P	22 17 06.8	+1.0
OKC	Ostrava-Krasne	78.74	327	*e*P	P	22 17 06.6	+0.8
OKC				*e*S	S	22 27 00.4	-0.6
OKC				AMS	AMS	22 54 50.0	
	comp=Z,2µm,16.9s						
OKC	Ostrava-Krasne	78.74	327	*e*P	P	22 17 06.6	+0.8
OKC				*e*S	S	22 27 00.4	-0.6
OKC				MLR	MLR		
	comp=Z,2µm,16.9s						
KSP	Ksiaz	78.74	329	*e*P	P	22 17 06.1	+0.2
KSP				*e*S	S	22 27 00.5	-0.6
KSP				LMZ	LR	22 54 25.8	
	comp=Z,2µm,20.4s						
KSP	Ksiaz	78.74	329	*e*P	P	22 17 06.1	+0.2
KSP				*e*S	S	22 27 00.5	-0.6
KSP				MLR	MLR		
	comp=Z,2µm,20.4s						
PV23	Carpenter Ridg	78.74	49	*e*P	P	22 17 07.4	+1.0
	comp=Z,111nm,1.2s						
AGMN	Agassiz Nation	78.74	35	P	P	22 17 05.6	-0.3
	baz=318,SNR=9.7						
AGMN	Agassiz Nation	78.74	35	*e*P	P	22 17 05.8	-0.1
	comp=Z,46nm,1.3s						
PV14	Lion Creek, Pa	78.79	49	*e*P	P	22 17 06.4	-0.2
	comp=Z,98nm,1.0s						
VOIR		78.79	320	⇑*i*P	P	22 17 07.8	+1.5
VOIR		78.79	320	P	P	22 17 07.8	+1.5
PV22	Blue Mesa, Par	78.82	49	*e*P	P	22 17 08.1	+1.3
	comp=Z,54nm,1.0s						
PV20	West Nyswonger	78.84	49	*e*P	P	22 17 08.4	+1.5
	comp=Z,93nm,0.8s						
PV19	Morning Glory	78.85	49	*e*P	P	22 17 08.2	+1.2
	comp=Z,74nm,0.9s						
PHWY	Pilot Hill	78.87	45	*e*P	P	22 17 08.0	+0.9
	comp=Z,19nm,1.1s						
N23A	Red Feather La	78.88	46	P	P	22 17 07.2	+0.1
	baz=313,SNR=11						
N23A	Red Feather La	78.88	46	*e*P	P	22 17 08.6	+1.5
	comp=Z,54nm,1.1s						
PV17	East Wray Mesa	78.89	49	*e*P	P	22 17 08.3	+1.1
	comp=Z,111nm,0.9s						
PV16	Nyswonger Mesa	78.89	49	*e*P	P	22 17 08.5	+1.3
	comp=Z,62nm,0.9s						
PV11	David Mesa, Pa	78.92	49	*e*P	P	22 17 08.7	+1.3
	comp=Z,169nm,1.5s						
PV18	Skein Mesa, Pa	78.94	49	*e*P	P	22 17 08.4	+0.9
	comp=Z,66nm,1.0s						
DRGR		78.95	323	⇓*i*P	P	22 17 08.1	+0.9
DRGR		78.95	323	P	P	22 17 08.1	+0.9
PV12	Saucer Basin,	78.95	49	*e*P	P	22 17 09.4	+1.9
	comp=Z,33nm,0.9s						
PV03	Paradox Valley	78.97	49	*e*P	P	22 17 08.4	+0.8
MORC	Moravsky Berou	79.04	327	⇓*i*P	P	22 17 08.3	+0.7
MORC	Moravsky Berou	79.04	327	*e*P	P	22 17 08.0	+0.4
	comp=Z,13nm,0.7s						
MORC	Moravsky Berou	79.04	327	*e*P	P	22 17 08.0	+0.4
MORC				pmax	pmax		
	comp=Z,13nm,0.7s						
MORC	Moravsky Berou	79.04	327	*e*P	P	22 17 08.2	+0.7
ARR	Arges	79.05	321	⇑*i*P	P	22 17 10.2	+2.5
PV13	Radium Mtn., P	79.05	50	*e*P	P	22 17 09.4	+1.3
	comp=Z,70nm,0.9s						
PV02	Paradox Valley	79.06	49	*e*P	P	22 17 09.4	+1.2
	comp=Z,33nm,0.9s						
DPC	Dobruska-Polom	79.11	328	*e*P	P	22 17 09.2	+1.3
DPC				*e*PP	PP	22 20 03.7	-3.0
DPC				*e*S	S	22 27 05.5	+0.4
DPC				AMS	AMS	22 54 30.0	
	comp=Z,2µm,19.1s						
DPC	Dobruska-Polom	79.11	328	*e*P	P	22 17 09.2	+1.3
DPC				*e*		22 20 03.7	
DPC				*e*S	S	22 27 05.5	+0.4
DPC				MLR	MLR		
	comp=Z,2µm,19.1s						
UPC	Upice	79.11	328	*e*P	P	22 17 08.9	+1.0
UPC				*e*S	S	22 27 05.8	+0.7
UPC				AMS	AMS	22 54 40.0	
	comp=Z,2µm,19.3s						
UPC	Upice	79.11	328	*e*P	P	22 17 08.9	+1.0
UPC				*e*S	S	22 27 05.8	+0.7
UPC				MLR	MLR		
	comp=Z,2µm,19.3s						
KRLC	Kraliky	79.13	328	*e*P	P	22 17 08.8	+0.7
KRLC	Kraliky	79.13	328	*e*P	P	22 17 08.8	+0.7
B34A	Aery, Baudette	79.14	35	P	P	22 17 07.7	-0.4
	baz=318						
PRD	Provadia	79.17	318	P	P	22 17 08.1	-0.2
C33A	Trail	79.18	36	P	P	22 17 08.5	+0.2
	baz=318,SNR=6.1						
WUAZ	Wupatki	79.23	53	P	P	22 17 09.1	+0.1
	baz=311,SNR=21						
WUAZ	Wupatki	79.23	53	*e*P	P	22 17 10.1	+1.1
	comp=Z,36nm,0.9s						
LOT	Lotru	79.41	321	⇓*i*P	P	22 17 10.7	+0.9
PSZ	Piszkesteto	79.42	325	⇑*i*P	P	22 17 10.9	+1.2
PSZ	Piszkesteto	79.42	325	*e*P	P	22 17 10.6	+0.9
	comp=Z,25nm,1.1s						
PSZ	Piszkesteto	79.42	325	P	P	22 17 21.9	+12
SMCO	Snowmass	79.45	48	*e*P	P	22 17 11.5	+1.1
	comp=Z,31nm,1.1s						
VYHS	Vyhne	79.46	326	*e*P	P	22 17 10.6	+0.8
VYHS				pmax	pmax		
	comp=Z,20nm,1.7s						
VYHS	Vyhne	79.46	326	*e*P	P	22 17 10.6	+0.8
VYHS				*e*pP	sP	22 17 21.5	-1.7
HUMR	Humele	79.47	320	⇑*i*P	P	22 17 10.1	+0.1
IVI	Ivigtut	79.63	5	*e*P	P	22 17 10.7	+0.3
IVI				*e*pP	sP	22 17 21.8	-2.1
B35A	Bob, Littlefor	79.64	34	P	P	22 17 10.6	-0.2
	baz=319,SNR=14						
B35A	Bob, Littlefor	79.64	34	*e*P	P	22 17 11.0	+0.1
	comp=Z,60nm,1.3s						
BRG	Berggiesshubel	79.66	330	*e*P	P	22 17 11.3	+0.5
	comp=Z,10nm,0.8s						
BRG				*e*PP	PP	22 20 09.0	-2.1
BRG				S	S	22 27 10.0	-0.7
BRG				SS	SS	22 32 18.0	-0.2
	comp=N,2µm,16.7s						
	comp=E,1µm,17.2s						
	comp=Z,2µm,17.1s						
BRG	Berggiesshubel	79.66	330	*e*P	P	22 17 11.3	+0.5
BRG				*e*		22 20 09.0	
BRG				S	S	22 27 10.0	-0.7
BRG				SS	SS	22 32 18.0	-0.2
BRG				pmax	pmax		
	comp=Z,3.0nm,0.8s						
BRG				MLR	MLR		
	comp=N,1µm,16.7s						
BRG				MLR	MLR		
	comp=E,2µm,17.2s						
BRG				MLR	MLR		
	comp=Z,1µm,17.1s						
CLL	Collm	79.68	330	*i* P	P	22 17 10.9	0.0
	comp=Z,21nm,0.7s						
CLL				*i*		22 17 16.7	
CLL				*e*PcP	pP	22 17 19.0	-1.7
CLL				*i*		22 17 21.0	
CLL				*e*PP	PP	22 20 12.0	+0.7
CLL				*e*sPP		22 20 32.0	
CLL				*e*S	S	22 27 12.0	+1.1
CLL				*e*(sS)		22 27 41.0	
CLL				*e*		22 32 00.0	
CLL				*e*SS	SS	22 32 36.0	+18
CLL				*e*		22 33 12.0	
CLL				*e*SSS	SSS	22 35 42.0	
CLL				Lm	MLR	22 55 00.0	
	comp=Z,2µm,18.0s						
CLL	Collm	79.68	330	*e*P	P	22 17 10.6	-0.4
	comp=Z,21nm,0.7s						
CLL	Collm	79.68	330	*i* P	P	22 17 10.9	0.0
CLL				*e*		22 17 19.0	
CLL				*e*S	S	22 27 12.0	+1.1
CLL				pmax	pmax		
	comp=Z,21nm,0.7s						
CLL				MLR	MLR		
	comp=Z,2µm,18.0s						
JAVC	Velka Javorina	79.68	327	*e*P	P	22 17 12.8	+1.7
VRAC	Vranov	79.80	327	⇓*i*P	P	22 17 12.9	+1.2
VRAC	Vranov	79.80	327	P	P	22 17 12.9	+1.2
VRAC	Vranov	79.80	327	*e*P	P	22 17 12.5	+0.8
ISCO	Idaho Springs	79.80	47	P	P	22 17 12.6	+0.3
	baz=313,SNR=19						
ISCO	Idaho Springs	79.80	47	*e*P	P	22 17 13.6	+1.3
	comp=Z,19nm,0.9s						
ISCO	Idaho Springs	79.80	47	*e*P	P	22 17 13.6	+1.3
ISCO				pmax	pmax		
	comp=Z,19nm,0.9s						
MVCO	Mesa Verde	79.87	50	P	P	22 17 12.6	+0.1
	baz=312,SNR=20						
MVCO	Mesa Verde	79.87	50	*e*P	P	22 17 13.5	+0.9
	comp=Z,38nm,0.9s						
SZH	Strazhica	79.88	318	P	P	22 17 12.8	+0.6
C35A	Jirik Farms, M	80.03	35	P	P	22 17 12.6	-0.3
	baz=319,SNR=12						
KRUC	Moravsky	80.07	327	*e*P	P	22 17 13.8	+0.7
GOPC	GO Pecny, Ondr	80.07	329	*e*P	P	22 17 14.3	+1.2
GOPC				*e*pP	sP	22 17 25.6	-0.9
GOPC				*e*S	S	22 27 16.0	+0.8
GOPC				AMS	AMS	22 55 00.0	
	comp=Z,2µm,21.2s						
GOPC	GO Pecny, Ondr	80.07	329	*e*P	P	22 17 14.3	+1.2
GOPC				*e*		22 17 25.6	
GOPC				*e*S	S	22 27 16.0	+0.8
GOPC				MLR	MLR		
	comp=Z,2µm,21.2s						
SUSD	Miller	80.09	40	P	P	22 17 13.4	0.0
	baz=316,SNR=21						
PRA	Prague	80.09	329	*e*P	P	22 17 14.5	+1.3
PRA				*e*S	S	22 27 16.4	+1.0
PRA				AMS	AMS	22 55 20.0	
	comp=Z,3µm,18.9s						
PRA	Prague	80.09	329	*e*P	P	22 17 14.5	+1.3
PRA				*e*S	S	22 27 16.4	+1.0
PRA				MLR	MLR		
	comp=Z,3µm,18.9s						
JMB	Yambol	80.11	317	P	P	22 17 13.9	+0.5
PRU	Pruhonice	80.11	329	*e*P	P	22 17 14.5	+1.2
PRU				*e*PCP	pP	22 17 21.8	-1.3
PRU				*e*pP	sP	22 17 28.7	+2.0
PRU				*e*S	S	22 27 15.7	+0.1
PRU				AMS	AMS	22 55 00.0	
	comp=Z,3µm,20.2s						
PRU	Pruhonice	80.11	329	*e*P	P	22 17 14.5	+1.2
PRU				*e*		22 17 21.8	
PRU				*e*		22 17 28.7	
PRU				*e*S	S	22 27 15.7	+0.1
PRU				MLR	MLR		
	comp=Z,3µm,20.2s						
BUD	Budapest	80.13	325	P	P	22 17 16.2	+2.7
MODS	Modra-Piesok	80.22	326	*e*P	P	22 17 15.6	+1.6
MODS				pmax	pmax		
	comp=Z,28nm,1.5s						
MODS	Modra-Piesok	80.22	326	*e*P	P	22 17 15.6	+1.6
MODS				*e*pP	sP	22 17 26.0	-1.4
BZS	Buzias	80.33	322	⇓*i*P	P	22 17 14.4	-0.2
E34A	Wadena	80.38	36	P	P	22 17 14.9	0.0
	baz=318						
D35A	Remer	80.46	35	P	P	22 17 15.0	-0.3
	baz=319,SNR=5.5						
HERR	Herculane	80.48	321	⇑*i*P	P	22 17 15.8	+0.4
C36A	Pine Crest Far	80.49	34	P	P	22 17 15.6	+0.2
	baz=320,SNR=7.7						
S22A	4UR Ranch, Cre	80.49	49	P	P	22 17 16.7	+0.7
	baz=313,SNR=34						
S22A	4UR Ranch, Cre	80.49	49	*e*P	P	22 17 17.2	+1.2
	comp=Z,31nm,1.0s						
W18A	Petrified Fore	80.50	52	P	P	22 17 16.8	+0.8
	baz=312						
RAYN	Ar Rayn	80.61	293	*e*P	P	22 17 16.6	+0.1
	comp=Z,15nm,0.9s						
RAYN	Ar Rayn	80.61	293	P	P	22 17 16.3	-0.2
RAYN	Ar Rayn	80.61	293	P	P	22 17 16.6	+0.1
214A	Organ Pipe Nat	80.62	56	P	P	22 17 16.4	0.0
	baz=310,SNR=14						
Q24A	Divide	80.64	47	P	P	22 17 17.3	+0.5
	baz=313,SNR=6.9						
NKC	Novy Kostel	80.75	330	*e*P	P	22 17 17.3	+0.5
NKC				*e*S	S	22 27 21.9	-0.4
NKC				AMS	AMS	22 56 10.0	
	comp=Z,2µm,17.8s						
NKC	Novy Kostel	80.75	330	*e*P	P	22 17 17.3	+0.5
NKC				*e*S	S	22 27 21.9	-0.4
NKC				MLR	MLR		
	comp=Z,2µm,17.8s						
RAR	Rarotonga	80.75	127	P	P	22 17 16.3	-0.7
	comp=Z,11nm,0.8s,baz=110,slow=16,SNR=2.4						
RAR				LR	LR	22 47 23.4	
	comp=Z,834nm,19.9s,baz=316,slow=31						
RAR	Rarotonga	80.75	127	*e*P	P	22 17 16.3	-0.7
	comp=Z,47nm,1.4s						
RAR	Rarotonga	80.75	127	*e*P	P	22 17 16.3	-0.7
RAR				pmax	pmax		
	comp=Z,47nm,1.4s						
D36A	Goodland	80.79	35	P	P	22 17 16.6	-0.4
	baz=320						
D36A	Goodland	80.79	35	*e*P	P	22 17 17.2	+0.1
	comp=Z,15nm,0.8s						
C37A	Embarrass	80.80	34	P	P	22 17 16.9	-0.1
	baz=320,SNR=5.3						
MDVR	Moldovita	80.90	322	⇑*i*P	P	22 17 17.8	+0.1
EYMN	Ely	80.93	33	P	P	22 17 17.9	+0.2
	baz=321,SNR=7.9						
EYMN	Ely	80.93	33	*e*P	P	22 17 17.9	+0.2
	comp=Z,41nm,1.2s						
OGNE	Ogallala	80.99	44	P	P	22 17 18.6	+0.3
	baz=315,SNR=9.0						
OGNE	Ogallala	80.99	44	*e*P	P	22 17 19.0	+0.7
	comp=Z,72nm,1.0s						
OGNE				*e*pP	sP	22 17 31.1	-0.6
ASF	Jabal al Asfar	81.01	304	P	P	22 17 18.1	-0.5
	comp=Z,3.8nm,0.8s,baz=338,slow=4.6,SNR=7.3						
ASF				LR	LR	22 56 51.0	
	comp=Z,674nm,19.8s,baz=350,slow=38						
SOP	Sopron	81.06	326	P	P	22 17 19.8	+1.3
D37A	Cotton	81.13	34	P	P	22 17 18.7	-0.1
	baz=320						
ISP	Isparta	81.15	312	⇓*i*P	P	22 17 23.5	+4.2
ISP	Isparta	81.15	312	⇓*e*P	P	22 17 21.4	+2.1
CONA	Conrad Observa	81.17	327	*e*P	P	22 17 19.7	+0.5
	comp=Z,6.6nm,0.7s,SNR=8.5						
KHC	Kasperske Hory	81.17	329	*e*P	P	22 17 19.6	+0.5

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KHC                            epP   sP      22 17 32.4 -0.1
KHC                            eS    S       22 27 26.7 -0.2
KHC                             AMS  AMS     22 56 00.0
      comp=Z,3µm,18.5s
KHC   Kasperske Hory 81.17 329 eP    P       22 17 19.4 +0.3
      comp=Z,19nm,1.5s
KHC   Kasperske Hory 81.17 329 eP    P       22 17 19.6 +0.5
KHC                            e             22 17 32.4
KHC                            eS    S       22 27 26.7 -0.2
KHC                             MLR  MLR
      comp=Z,3µm,18.5s
C38A  Sawbill Land.  81.20  33  P    P       22 17 19.2  0.0
      baz=321,SNR=9.6
SDCO  Great Sand Dun 81.27  48  P    P       22 17 20.1  0.0
      baz=313,SNR=28
SDCO  Great Sand Dun 81.27  48 eP    P       22 17 21.4 +1.2
      comp=Z,17nm,1.0s
KDZ   Kurdzhali      81.30 318  P    P       22 17 21.1 +1.2
GEC2  GERESS Array S 81.35 329 eP    P       22 17 20.4 +0.3
      comp=Z,6.9nm,0.9s
GEC2                           ePP   PP      22 20 29.0 +3.7
GEC2  GERESS Array S 81.35 329 eP    P       22 17 20.4 +0.3
GEC2                           e             22 20 29.0
GEC2                            pmax pmax
      comp=Z,7.0nm,0.9s
GERES GERESS Array B 81.35 329  P    P       22 17 20.2 +0.1
      comp=Z,5.2nm,0.6s,baz=35,slow=5.6,SNR=77
GERES                           PP   PP      22 20 29.0 +3.7
      comp=Z,0.7nm,0.7s,baz=48,slow=9.9,SNR=4.1
GERES                           LR   LR      22 56 32.4
      comp=Z,3µm,20.1s,baz=28,slow=38
GEA0  GERESS Array S 81.36 329 eP    P       22 17 19.8 -0.3
GEA0                           ePP   PP      22 20 25.6 +0.2
MMAI  Mount Meron Ar 81.41 306  P    P       22 17 21.1 +0.4
      comp=Z,4.4nm,0.6s,baz=55,slow=7.2,SNR=11
MMAI                            LR   LR      22 57 40.2
      comp=Z,948nm,18.3s,baz=50,slow=39
EKA   Eskdalemuir Ar 81.42 341  P    P       22 17 20.6 +0.4
      comp=Z,4.8nm,0.6s,baz=26,slow=5.6,SNR=23
EKA                             LR   LR      22 57 58.0
      comp=Z,571nm,18.1s,baz=70,slow=39
RZN   Rozhen         81.64 318  P    P       22 17 22.6 +0.7
GRFO  Grafenberg     81.65 330 eP    P       22 17 22.1 +0.6
      comp=Z,36nm,1.1s
GRFO  Grafenberg     81.65 330 eP    P       22 17 22.2 +0.6
GRFO                            pmax pmax
      comp=Z,36nm,1.1s
TUC   Tucson         81.69  55  P    P       22 17 22.8 +0.6
      baz=311
TUC   Tucson         81.69  55 eP    P       22 17 23.3 +1.1
      comp=Z,20nm,1.2s
TUC   Tucson         81.69  55 eP    P       22 17 23.3 +1.1
TUC                             pmax pmax
      comp=Z,20nm,1.2s
VTS   Vitosha        81.76 319 eP    P       22 17 22.7 +0.2
      comp=Z,24nm,0.6s
VTS   Vitosha        81.76 319  P    P       22 17 20.0 -2.5
VTS   Vitosha        81.76 319 eP    P       22 17 22.7 +0.2
VTS                             pmax pmax
      comp=Z,24nm,0.6s
ECSD  EROS Data Cent 81.76  39  P    P       22 17 22.2 -0.1
      baz=318,SNR=50
ECSD  EROS Data Cent 81.76  39 eP    P       22 17 22.1 -0.1
      comp=Z,49nm,1.0s
TAU   Tasmania Unive 81.79 176  PFAKE        22 17 30.0 +8.0
TAU                             LR   LR
      comp=Z,830nm,20.0s
ARSA  Arzberg        81.84 327 eP    P       22 17 23.5 +0.8
      comp=Z,2.3nm,0.5s,SNR=7.8
H35A  Sunnyside Ranc 81.90  37  P    P       22 17 23.3 +0.4
      baz=319,SNR=49
MOA   Molln          81.90 328 eP    P       22 17 23.2 +0.3
      comp=Z,6.4nm,0.7s
E38A  The Farm, Brul 81.94  34  P    P       22 17 23.1 -0.1
      baz=321,SNR=18
E38A  The Farm, Brul 81.94  34 eP    P       22 17 23.0 -0.1
      comp=Z,40nm,0.9s
C40A  Isle Royale Na 81.94  32  P    P       22 17 22.8 -0.3
      baz=322
KSCO  Kaye Shedlock’ 82.02  46  P    P       22 17 23.8  0.0
      baz=315,SNR=6.6
KSCO  Kaye Shedlock’ 82.02  46 eP    P       22 17 24.9 +1.1
      comp=Z,44nm,1.2s
KSCO                           epP   sP      22 17 36.7 -0.6
F37A  Hinrichs Farm, 82.14  35  P    P       22 17 24.1 -0.1
      baz=320
MMB   Musomiste      82.22 318  P    P       22 17 25.2 +0.4
DIVS  Divibare       82.23 322 eP    P       22 17 24.9 +0.1
      comp=Z,11nm,0.8s
F38A  Pierce - Schro 82.29  35  P    P       22 17 24.9 -0.1
      baz=320,SNR=34
T25A  Trinidad       82.31  48  P    P       22 17 25.5 -0.1
      baz=314,SNR=26
T25A  Trinidad       82.31  48 eP    P       22 17 26.7 +1.1
      comp=Z,44nm,0.8s
KKB   Krupnik        82.35 319  P    P       22 17 26.0 +0.6
H36A  Jessenland, He 82.41  37  P    P       22 17 26.0 +0.3
      baz=319,SNR=18
SPMN  Marine on St.  82.44  36  P    P       22 17 25.9 +0.1
      baz=320,SNR=6.3
SPMN  Marine on St.  82.44  36 eP    P       22 17 25.9 +0.1
      comp=Z,16nm,0.8s
GROS  Grobnik        82.47 326 i P   P       22 17 25.7 -0.3
GROS                           eS    S       22 27 38.7 -1.7
PERS  Pernice        82.50 326 i P   P       22 17 26.0 -0.1
PERS                           eS    S       22 27 41.1 +0.5
PERS                           e             22 28 26.3
SOKA  Soboth         82.50 327 eP    P       22 17 26.4 +0.2
      comp=Z,16nm,0.7s,SNR=16
E39A  Mellen         82.55  34  P    P       22 17 26.3 -0.1
      baz=321,SNR=18
LAZ   Ladron         82.57  51 eP    P       22 17 29.1 +2.2
TASM  ASL Pad, Albuq 82.61  51  P    P       22 17 27.5 +0.4
      baz=313,SNR=38
ANMO  Albuquerque    82.61  51  P    P       22 17 27.8 +0.7
      comp=Z,19nm,1.0s,baz=308,slow=6.3,SNR=48
ANMO                            LR   LR      22 48 54.7
      comp=Z,497nm,21.9s,baz=332,slow=32
ANMO  Albuquerque    82.61  51  P    P       22 17 27.6 +0.4
      baz=313
ANMO  Albuquerque    82.61  51 eP    P       22 17 27.8 +0.7
      comp=Z,29nm,1.0s
ANMO                            LR   LR
      comp=Z,482nm,21.0s
ANMO  Albuquerque    82.61  51 d iP  P       22 17 28.1 +1.0
ANMO                            pmax pmax
      comp=Z,36nm,1.3s
TASL  Snake Pit, Alb 82.61  51  P    P       22 17 27.4 +0.3
      baz=313,SNR=40
SRS   Serrai         82.63 318  P    P       22 17 27.4 +0.5
BGNE  Belgrade       82.70  41  P    P       22 17 27.4 +0.1
      baz=317,SNR=8.5
BGNE  Belgrade       82.70  41 eP    P       22 17 27.5 +0.3
      comp=Z,124nm,0.9s
F39A  Loretta        82.75  34  P    P       22 17 27.6 +0.2
      baz=321,SNR=15
E40A  Wakefield      82.78  33  P    P       22 17 27.9 +0.4
      baz=322,SNR=30
I36A  Fitzsimmons Fa 82.79  37  P    P       22 17 28.1 +0.5
      baz=319,SNR=5.9
MEM   Membach        82.80 334 ⇑P    P       22 17 28.0 +0.5
      comp=Z,9.1nm,0.9s
LENM  Lemitar        82.83  51 eP    P       22 17 30.3 +2.0
OBKA  Obir           82.84 327 eP    P       22 17 28.2 +0.3
      comp=Z,13nm,0.7s,SNR=9.3
D41A  Chassel        82.86  32  P    P       22 17 28.4 +0.5
      baz=323,SNR=5.1
D41A  Chassel        82.86  32 eP    P       22 17 28.7 +0.8
      comp=Z,41nm,1.1s
H37A  Dierke Farm, C 82.88  36  P    P       22 17 28.1  0.0
      baz=320
KBA   Koelnbreinsper 82.90 328 eP    P       22 17 29.2 +0.8
      comp=Z,15nm,0.8s
G38A  Ridgeland      82.91  35  P    P       22 17 27.7 -0.5
      baz=321,SNR=12
LPM   Los Pinos Moun 82.94  51 eP    P       22 17 27.2 -1.6
VAY   Valandovo      83.01 319 i P   P       22 17 29.4 +0.6
BLY   Banja Luka     83.05 324 ⇑iP   P       22 17 30.0 +1.1
BNM   Barren Site    83.05  51 eP    P       22 17 30.9 +1.5
I37A  Lemond, Waseca 83.09  37  P    P       22 17 29.6 +0.4
      baz=320,SNR=17
I37A  Lemond, Waseca 83.09  37 eP    P       22 17 30.0 +0.9
      comp=Z,132nm,1.0s
SCHQ  Schefferville  83.09  17  P    P       22 17 29.7 +0.7
      comp=Z,25nm,0.8s,baz=350,slow=5.2,SNR=19
SCHQ                            LR   LR      22 55 29.3
      comp=Z,574nm,21.8s,baz=336,slow=36
SCHQ  Schefferville  83.09  17 eP    P       22 17 29.4 +0.4
      comp=Z,31nm,0.9s
PLE   Pljevlja       83.09 322 ⇓iP   P       22 17 29.6 +0.2
F40A  Park Falls     83.09  34  P    P       22 17 29.2  0.0
      baz=322,SNR=13
H38A  Maiden Rock    83.10  36  P    P       22 17 29.2  0.0
      baz=320
SKO   Skopje         83.10 320 i P   P       22 17 30.3 +1.0
G39A  Holcombe       83.13  35  P    P       22 17 29.4 +0.1
      baz=321,SNR=5.8
MYKA  Terra Mystica  83.13 327 eP    P       22 17 29.0 -0.4
      comp=Z,9.7nm,0.5s,SNR=14
E41A  Kenton         83.16  33  P    P       22 17 29.6 +0.1
      baz=322,SNR=13
J36A  Seneca 1, Swea 83.16  38  P    P       22 17 29.7 +0.1
      baz=319,SNR=24
J36A  Seneca 1, Swea 83.16  38 eP    P       22 17 29.7 +0.1
      comp=Z,52nm,0.8s
STU   Stuttgart      83.17 331 eP    P       22 17 30.3 +0.8
      comp=Z,23nm,0.8s
STU   Stuttgart      83.17 331 eP    P       22 17 30.3 +0.8
STU                             pmax pmax
      comp=Z,23nm,0.8s
BCLA  Clavier        83.20 334 ⇑P    P       22 17 29.4 -0.1
      comp=Z,8.7nm,1.3s
IVA   Berane         83.20 321 ⇑iP   P       22 17 30.5 +0.6
PLG   Polygyros      83.25 318  P    P       22 17 28.9 -1.2
URZ   Urewera        83.34 153  P    P       22 17 29.5 -0.7
      comp=Z,25nm,0.8s,baz=258,slow=5.7,SNR=3.6
PVY   Plav           83.37 321 ⇑iP   P       22 17 31.4 +0.6
COWI  Conover        83.38  33 eP    P       22 17 30.7  0.0
      comp=Z,11nm,0.7s
KOME  Kolasin        83.39 322 ⇑iP   P       22 17 29.6 -1.3
WATA  Walderalm      83.42 329 eP    P       22 17 31.2 +0.2
      comp=Z,5.1nm,0.7s,SNR=7.1
UPM   Unac-Piva      83.42 322 ⇓iP   P       22 17 31.2 +0.1
121A  Cookes Peak, D 83.43  53  P    P       22 17 31.5 +0.1
      baz=313,SNR=17
PAIG  Paliouri       83.45 317  P    P       22 17 30.1 -1.0
ABTA  Abfaltersbach  83.51 328 eP    P       22 17 30.8 -0.6
      comp=Z,8.5nm,1.0s,SNR=6.2
JAVS  Javornik       83.53 327 i P   P       22 17 30.3 -1.3
WLF   Walferdange    83.54 333 ⇓P    P       22 17 32.4 +1.0
H39A  Augusta        83.55  35  P    P       22 17 31.7 +0.1
      baz=321,SNR=14
J37A  Redenius Farm, 83.55  38  P    P       22 17 31.9 +0.3
      baz=320,SNR=26
I38A  Scanlan Farm,  83.56  36  P    P       22 17 31.6  0.0
      baz=320,SNR=15
G40A  Rib Lake       83.57  34  P    P       22 17 31.9 +0.2
      baz=322,SNR=20
G40A  Rib Lake       83.57  34 eP    P       22 17 31.8 +0.2
      comp=Z,27nm,0.8s
MOTA  Moosalm        83.60 329 eP    P       22 17 32.3 +0.4
      comp=Z,12nm,0.9s,SNR=16
RETA  Reutte         83.62 329 eP    P       22 17 32.3 +0.4
      comp=Z,14nm,0.9s,SNR=9.6
GIVF  Givet          83.63 334 eP    P       22 17 34.4 +2.6
GIVF                            pmax pmax
      comp=Z,4.0nm,0.6s
E42A  Champion       83.63  32  P    P       22 17 32.2 +0.3
      baz=323,SNR=6.8
K36A  Gilmore City   83.63  38  P    P       22 17 32.3 +0.3
      baz=319,SNR=18
KRUS  Krusevo        83.65 320 i P   P       22 17 32.4 +0.2
NKY   Niksic         83.67 322 ⇓iP   P       22 17 31.7 -0.6
F41A  Three Lakes    83.68  33  P    P       22 17 32.5 +0.4
      baz=322,SNR=15
F41A  Three Lakes    83.68  33 eP    P       22 17 32.6 +0.4
      comp=Z,60nm,1.4s
CBKS  Cedar Bluff    83.74  44  P    P       22 17 32.5 -0.1
      baz=316
CBKS  Cedar Bluff    83.74  44 eP    P       22 17 32.7  0.0
      comp=Z,35nm,0.9s
CBKS  Cedar Bluff    83.74  44 eP    P       22 17 32.7  0.0
CBKS                            pmax pmax
      comp=Z,35nm,0.9s
HSIG                 83.75  58 eP    P       22 17 33.1 +0.3
      comp=Z,31nm,1.2s
TRI   Trieste        83.81 327 eP    P       22 17 32.3 -0.5
      comp=Z,21nm,1.0s
TRI   Trieste        83.81 327 eP    P       22 17 32.3 -0.5
TRI                             pmax pmax
      comp=Z,21nm,1.0s
BRY   Bratogost      83.83 322 ⇓iP   P       22 17 32.3 -0.9
PDG   Podgorica      83.84 321 ⇓iP   P       22 17 33.4 +0.4
TTG   Podgorica      83.84 321 ⇓iP   P       22 17 32.7 -0.3
TTG   Podgorica      83.84 321 eP    P       22 17 33.0  0.0
      comp=Z,40nm,0.7s
UDBI  Udbina         83.86 325  P    P       22 17 33.0 -0.2
BFO   Black Forest   83.86 331 eP    P       22 17 32.9 -0.3
      comp=Z,20nm,1.0s
BFO   Black Forest   83.86 331 ceP   P       22 17 34.9 +1.8
BAIF  Baives         83.87 334 eP    P       22 17 32.5 -0.6
BAIF                            pmax pmax
      comp=Z,4.0nm,0.8s
AOS   Alonnisos      83.90 317  P    P       22 17 32.7 -0.7
CEME  Cevo           83.91 322 ⇑iP   P       22 17 33.0 -0.5
K37A  Belmond        83.92  38  P    P       22 17 33.8 +0.4
      baz=320,SNR=39
L36A  Harm Buss Farm 83.93  39  P    P       22 17 33.8 +0.3
      baz=319,SNR=12
LIT   Litokhoron     83.95 318 eP    P       22 17 33.5 -0.2
      comp=Z,26nm,0.8s
LIT   Litokhoron     83.95 318  P    P       22 17 32.0 -1.7
LIT   Litokhoron     83.95 318 eP    P       22 17 33.5 -0.2
LIT                             pmax pmax
      comp=Z,26nm,0.8s
H40A  Chili          83.99  35  P    P       22 17 34.1 +0.3
      baz=322,SNR=16
FETA  Feichten       84.01 329 i P   P       22 17 34.3 +0.3
      comp=Z,7.0nm,0.7s,SNR=7.9
FNA   Florina        84.02 319 eP    P       22 17 34.2 +0.1
      comp=Z,14nm,1.0s
FNA   Florina        84.02 319 eP    P       22 17 34.2 +0.1
FNA                             pmax pmax
      comp=Z,14nm,1.0s
J38A  Wedel Dairy, R 84.05  37  P    P       22 17 34.6 +0.5
      baz=320,SNR=9.9
E43A  Lone Tree Farm 84.05  32  P    P       22 17 34.1 +0.1
      baz=324,SNR=11
E43A  Lone Tree Farm 84.05  32 eP    P       22 17 34.1 +0.1
      comp=Z,20nm,0.6s
DRME  Dracevica, Mon 84.06 321 ⇑iP   P       22 17 34.1 -0.1
G41A  Antigo         84.06  34  P    P       22 17 34.6 +0.4
      baz=322
OHR   Ohrid          84.06 320 i P   P       22 17 34.2 -0.1
OHR   Ohrid          84.06 320  P    P       22 17 35.0 +0.7
F42A  Maple Grove Fa 84.07  33  P    P       22 17 34.7 +0.6
      baz=323
I39A  Houston        84.08  36  P    P       22 17 34.0 -0.3
      baz=321,SNR=20
I39A  Houston        84.08  36 eP    P       22 17 33.8 -0.5
      comp=Z,60nm,0.8s
BUM   Brajici-Budva  84.11 322 ⇑iP   P       22 17 34.3 -0.2
XOR   Xorichti       84.12 317  P    P       22 17 33.4 -1.2
DAVA  Damuels        84.13 330 i P   P       22 17 34.9 +0.3
      comp=Z,21nm,0.8s,SNR=11
CDF   Champ du Feu   84.19 332 eP    P       22 17 34.9 +0.1
CDF                             pmax pmax
      comp=Z,10.0nm,0.8s
HCY   Herceg Novi    84.19 322 ⇑iP   P       22 17 35.0 +0.1
ULC   Ulcinj         84.20 321 ⇑iP   P       22 17 34.6 -0.3
NVLJ  Novalja        84.23 325  P    P       22 17 33.1 -1.8
STON  Ston           84.25 323  P    P       22 17 32.8 -2.3
PMOR  Pomariorio Ree 84.28 114 eT    T       23 50 07.7
      comp=Z,72nm,0.2s
E44A  Grand Marais A 84.29  31  P    P       22 17 35.5 +0.2
      baz=324
H41A  Junction City  84.32  34  P    P       22 17 35.5 +0.1
      baz=322,SNR=6.3
H41A  Junction City  84.32  34 eP    P       22 17 35.7 +0.2
      comp=Z,31nm,0.8s
M36A  Felix, Anita   84.35  39  P    P       22 17 36.0 +0.3
      baz=319,SNR=16
L37A  Phoenix Point, 84.36  38  P    P       22 17 35.7  0.0
      baz=320,SNR=16
G42A  Mountain       84.36  33  P    P       22 17 35.8 +0.2
      baz=323,SNR=11
G42A  Mountain       84.36  33 eP    P       22 17 36.0 +0.4
      comp=Z,28nm,0.9s
ECH   Echery         84.39 332 eP    P       22 17 35.1 -0.7
      comp=Z,22nm,1.3s
ECH   Echery         84.39 332 eP    P       22 17 35.1 -0.7
ECH                             pmax pmax
      comp=Z,22nm,1.3s
J39A  Decorah        84.39  36  P    P       22 17 35.4 -0.4
      baz=321,SNR=28
F43A  Flat Rock, Esc 84.42  32  P    P       22 17 36.0  0.0
      baz=324,SNR=6.0
K38A  Parkersburg    84.43  38  P    P       22 17 36.3 +0.2
      baz=320
K38A  Parkersburg    84.43  38 eP    P       22 17 36.0  0.0
      comp=Z,18nm,0.6s
I40A  Norwalk        84.46  35  P    P       22 17 36.2  0.0
      baz=322
SMIA  Simia          84.47 317  P    P       22 17 35.3 -1.0
FUORN Ofenpass-Fuorn 84.52 329 eP    P       22 17 37.3 +0.5
      comp=Z,52nm,1.0s
DAVOX Davos/Dischmat 84.54 329  P    P       22 17 37.0 +0.2
      comp=Z,10nm,0.8s,baz=32,slow=6.0,SNR=19
DAVOX                           LR   LR      22 58 40.9
      comp=Z,1µm,19.5s,baz=28,slow=38
F44A  Big Bay de Noc 84.61  32  P    P       22 17 37.1 +0.2
      baz=324,SNR=8.3
G43A  Wallace        84.66  33  P    P       22 17 37.0 -0.1
      baz=323,SNR=7.3
G43A  Wallace        84.66  33 eP    P       22 17 37.7 +0.5
      comp=Z,33nm,0.8s
I41A  Arkdale        84.67  35  P    P       22 17 37.3 +0.1
      baz=322
I41A  Arkdale        84.67  35 eP    P       22 17 37.6 +0.4
      comp=Z,42nm,0.9s
L38A  Oak Wood Farm, 84.72  38  P    P       22 17 37.7 +0.1
      baz=320,SNR=8.9
N36A  Muff Farm, Cla 84.75  40  P    P       22 17 38.0 +0.2
      baz=319
M37A  Trindle Farm,  84.76  39  P    P       22 17 38.0 +0.3
      baz=320,SNR=8.9
SCIA  State Center   84.78  38  P    P       22 17 38.1 +0.3
      baz=320,SNR=8.8
SCIA  State Center   84.78  38 eP    P       22 17 38.8 +0.9
      comp=Z,74nm,0.8s
J40A  Soldiers Grove 84.79  36  P    P       22 17 37.7 -0.2
      baz=321,SNR=12
K39A  Oelwein        84.80  37  P    P       22 17 37.7 -0.2
      baz=321,SNR=24
E45A  Wooded Hills,  84.81  31  P    P       22 17 38.2 +0.3
      baz=325
AGG   Agios Georgios 84.83 317 eP    P       22 17 37.2 -0.9
      comp=Z,22nm,0.7s
AGG   Agios Georgios 84.83 317 eP    P       22 17 37.3 -0.9
AGG                             pmax pmax
      comp=Z,22nm,0.7s
HINF  Hinteralfeld   84.84 332 eP    P       22 17 38.5 +0.4
HINF                            pmax pmax
      comp=Z,21nm,1.5s
PPT   Papeete        84.86 117  LR   LR      22 48 12.2
      comp=Z,1µm,21.6s,baz=316,slow=30
HAU   Haudompre      84.87 332 eP    P       22 17 36.9 -1.3
HAU                             pmax pmax
      comp=Z,6.0nm,0.9s
PPT2  Papeete2       84.87 117 eS    S       22 28 04.7 -0.4
      comp=Z,944nm,31.5s
PPT2  Papeete2       84.87 117 eLR   LR      22 44 17.4
      comp=Z,2µm,22.0s,baz=315
PPT2  Papeete2       84.87 117 eT    T       23 50 51.4
      comp=Z,36nm,0.3s
H42A  Shiocton       84.90  34  P    P       22 17 38.5 +0.1
      baz=323,SNR=7.4
H42A  Shiocton       84.90  34 eP    P       22 17 38.7 +0.3
      comp=Z,37nm,0.9s
PAE   Paea           84.92 117 eT    T       23 50 54.4
      comp=Z,4.7nm,0.3s
TUE   Stuetta        85.01 330 eP    P       22 17 39.3 +0.2
      comp=Z,28nm,1.2s
TIAR  Tiarei         85.01 117 eT    T       23 51 01.3
      comp=Z,9.0nm,0.2s
J41A  Loganville     85.14  35  P    P       22 17 39.7  0.0
      baz=322,SNR=18
K40A  Colesburg      85.15  37  P    P       22 17 39.6 -0.1
      baz=321,SNR=16
M38A  Pleasantville  85.16  39  P    P       22 17 40.1 +0.4
      baz=320,SNR=25
N37A  Lee Faris, Mou 85.17  40  P    P       22 17 40.2 +0.3
      baz=319,SNR=12
N37A  Lee Faris, Mou 85.17  40 eP    P       22 17 40.6 +0.7
      comp=Z,89nm,0.9s
KSU1  Kansas State U 85.19  42  P    P       22 17 39.7 -0.3
      baz=318,SNR=8.4
KSU1  Kansas State U 85.19  42 eP    P       22 17 39.4 -0.5
      comp=Z,34nm,0.9s
L39A  Vinton         85.19  37  P    P       22 17 40.1 +0.2
      baz=321,SNR=34
F45A  CMU Biological 85.22  32  P    P       22 17 40.2 +0.3
      baz=325,SNR=5.4
I42A  Draeger Farm,  85.22  35  P    P       22 17 39.9 -0.1
      baz=323,SNR=16
I42A  Draeger Farm,  85.22  35 eP    P       22 17 40.4 +0.4
      comp=Z,50nm,0.8s
TVO   Taravao        85.23 117 eT    T       23 51 17.8
      comp=Z,1.8nm,0.3s
H43A  Windswept, Lux 85.26  34  P    P       22 17 40.3 +0.1
      baz=323,SNR=9.5
H43A  Windswept, Lux 85.26  34 eP    P       22 17 40.8 +0.6
      comp=Z,64nm,0.8s
ANX   Ano Chora      85.36 317  P    P       22 17 39.9 -1.0
JFWS  Jewell Farm    85.39  36  P    P       22 17 40.4 -0.5
      baz=322,SNR=13
JFWS  Jewell Farm    85.39  36 eP    P       22 17 40.8 -0.1
      comp=Z,44nm,1.0s
JFWS  Jewell Farm    85.39  36 eP    P       22 17 40.8 -0.1
JFWS                            pmax pmax
      comp=Z,44nm,1.0s
F46A  Macinaw City C 85.45  31  P    P       22 17 41.3 +0.1
      baz=325,SNR=5.8
AMTX  Amarillo       85.47  48  P    P       22 17 41.2 -0.3
      baz=316
AMTX  Amarillo       85.47  48 eP    P       22 17 42.6 +1.1
      comp=Z,44nm,0.8s
AMTX                           epP   pP      22 17 52.4 +0.9
MSTX  Muleshoe       85.48  49  P    P       22 17 41.8 +0.2
      baz=315,SNR=14
MSTX  Muleshoe       85.48  49 eP    P       22 17 42.1 +0.4
      comp=Z,29nm,1.0s
IGT   Igoumenitsa    85.48 319  P    P       22 17 41.4  0.0
MNTX  Cornudas Mount 85.49  52  P    P       22 17 41.9 +0.3
      baz=314,SNR=20
MNTX  Cornudas Mount 85.49  52 eP    P       22 17 42.0 +0.4
      comp=Z,15nm,1.0s
I43A  Langenfeld Bro 85.56  34  P    P       22 17 41.6 -0.1
      baz=323,SNR=5.1
J42A  Columbus       85.58  35  P    P       22 17 41.7 -0.1
      baz=322,SNR=13
K41A  Shullsburg     85.61  36  P    P       22 17 41.8 -0.1
      baz=322,SNR=17
L40A  Anamosa        85.61  37  P    P       22 17 41.8 -0.2
      baz=321,SNR=24
L40A  Anamosa        85.61  37 eP    P       22 17 42.0  0.0
      comp=Z,56nm,0.9s
M39A  Webster        85.61  38  P    P       22 17 42.2 +0.2
      baz=321,SNR=26
GUR   Goura          85.62 317  P    P       22 17 41.8 -0.4
N38A  Joes South For 85.62  39  P    P       22 17 42.3 +0.2
      baz=320,SNR=18
O37A  Wolven Farm, M 85.65  40  P    P       22 17 42.4 +0.1
      baz=320,SNR=12
GDL2  Guadalupe Moun 85.76  51 eP    P       22 17 44.2 +1.1
J43A  Natural Harves 85.84  35  P    P       22 17 43.1  0.0
      baz=323,SNR=15
SENIN Lac Senin/Sane 85.89 331 eP    P       22 17 44.0 +0.4
      comp=Z,16nm,0.9s
TAOE  Nuku Hiva Isla 85.90 105 eLR   LR      22 44 44.6
      comp=Z,2µm,22.2s
TAOE  Nuku Hiva Isla 85.90 105 eT    T       23 52 10.4
      comp=Z,34nm,0.2s
K42A  Prairie Point, 85.91  35  P    P       22 17 43.3 -0.2
      baz=322,SNR=18
N39A  Derby Farms, D 85.91  38  P    P       22 17 43.4 -0.1
      baz=320,SNR=18
N39A  Derby Farms, D 85.91  38 eP    P       22 17 44.0 +0.5
      comp=Z,56nm,0.8s
L41A  Preston        85.94  37  P    P       22 17 43.4 -0.2
      baz=322,SNR=13
M40A  Post Highland  85.98  38  P    P       22 17 43.8  0.0
      baz=321,SNR=22
P37A  Lathrop        85.98  40  P    P       22 17 44.1 +0.2
      baz=319,SNR=14
O38A  Galt           86.02  40  P    P       22 17 44.2 +0.2
      baz=320,SNR=10
CABF  La Chapelle    86.14 332 eP    P       22 17 44.2 -0.4
CABF                            pmax pmax
      comp=Z,4.0nm,0.7s
IDI   Anoyia         86.15 313  P    P       22 17 44.3 -0.6
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	comp=Z,16nm,0.6s,baz=34,slow=9.2,SNR=21						
IDI				LR	LR	23 01 04.5	
	comp=Z,446nm,18.6s,baz=51,slow=39						
IDI	**Anoyia**	86.15	313	⇑*i*P	**P**	22 17 45.5	+0.6
IDI	**Anoyia**	86.15	313	*e*P	**P**	22 17 44.8	-0.1
	comp=Z,35nm,1.0s						
GLMI	**Grayling**	86.29	31	P	**P**	22 17 45.2	-0.1
	baz=325,SNR=5.1						
GLMI	**Grayling**	86.29	31	*e*P	**P**	22 17 46.5	+1.2
	comp=Z,95nm,0.8s						
OXZ	**Oxford**	86.35	159	*e*P	**P**	22 17 46.9	+1.6
	comp=Z,45nm,1.2s						
N40A	**Mertquake, Sal**	86.35	38	P	**P**	22 17 46.0	+0.4
	baz=321,SNR=11						
P38A	**Dawn**	86.37	40	P	**P**	22 17 45.8	0.0
	baz=320,SNR=20						
P38A	**Dawn**	86.37	40	*e*P	**P**	22 17 46.1	+0.3
	comp=Z,47nm,0.8s						
L42A	**Oliver, Polo**	86.37	36	P	**P**	22 17 45.2	-0.6
	baz=322,SNR=7.9						
L42A	**Oliver, Polo**	86.37	36	*e*P	**P**	22 17 46.0	+0.2
	comp=Z,35nm,0.8s						
O39A	**Kirksville**	86.37	39	P	**P**	22 17 46.1	+0.3
	baz=320,SNR=5.9						
ITM	**Ithomi**	86.40	316	*e*P	**P**	22 17 45.9	-0.1
	comp=Z,22nm,0.7s						
K43A	**Burlington**	86.42	35	P	**P**	22 17 45.7	-0.3
	baz=323						
M41A	**Milan**	86.46	37	P	**P**	22 17 46.2	0.0
	baz=322,SNR=12						
Q37A	**Longview Farm,**	86.47	41	P	**P**	22 17 46.2	-0.2
	baz=319,SNR=5.2						
FLN	**La Foliniere**	86.52	336	*e*P	**P**	22 17 45.9	-0.4
FLN				pmax	pmax		
	comp=Z,14nm,0.8s						
L43A	**Garden Prairie**	86.65	35	P	**P**	22 17 47.3	+0.1
	baz=323						
M42A	**Sheffield**	86.76	37	P	**P**	22 17 47.7	+0.1
	baz=322,SNR=6.5						
O40A	**La Belle**	86.80	39	P	**P**	22 17 48.0	+0.1
	baz=321,SNR=25						
LPL	**La Plagne**	86.81	331	*e*P	**P**	22 17 47.9	-0.3
LPL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
LPG	**La Plagne**	86.82	331	*e*P	**P**	22 17 48.0	-0.3
LPG				pmax	pmax		
	comp=Z,11nm,0.8s						
Q38A	**Cooks Store, C**	86.83	40	P	**P**	22 17 47.9	-0.1
	baz=320,SNR=23						
N41A	**Harden Midland**	86.83	38	P	**P**	22 17 48.1	+0.1
	baz=322,SNR=7.7						
N41A	**Harden Midland**	86.83	38	*e*P	**P**	22 17 48.5	+0.4
	comp=Z,50nm,1.0s						
P39B	**Salisbury**	86.86	40	P	**P**	22 17 48.3	+0.1
	baz=320,SNR=16						
SMF	**Signal de Mont**	86.92	333	*e*P	**P**	22 17 48.3	-0.1
SMF				pmax	pmax		
	comp=Z,14nm,1.0s						
GRR	**Gorron**	86.97	336	*e*P	**P**	22 17 48.4	-0.1
GRR				pmax	pmax		
	comp=Z,19nm,0.8s						
AVF	**Avril sur Loir**	86.97	333	*e*P	**P**	22 17 48.4	-0.2
AVF				pmax	pmax		
	comp=Z,26nm,0.8s						
L44A	**Lake County Fo**	87.03	35	P	**P**	22 17 49.0	+0.1
	baz=323						
Q39A	**Willow Grove F**	87.09	40	P	**P**	22 17 49.2	-0.1
	baz=320,SNR=47						
N42A	**Yates City**	87.13	37	P	**P**	22 17 49.6	+0.1
	baz=322,SNR=9.3						
M43A	**Waltham Townsh**	87.15	36	P	**P**	22 17 49.5	0.0
	baz=323,SNR=11						
P40A	**Paris**	87.17	39	P	**P**	22 17 49.6	-0.1
	baz=321,SNR=27						
P40A	**Paris**	87.17	39	*e*P	**P**	22 17 50.0	+0.3
	comp=Z,64nm,0.9s						
WMOK	**Wichita Mounta**	87.22	46	P	**P**	22 17 50.1	0.0
	baz=317,SNR=19						
WMOK	**Wichita Mounta**	87.22	46	*e*P	**P**	22 17 50.6	+0.5
	comp=Z,19nm,1.0s						
WMOK	**Wichita Mounta**	87.22	46	*e*P	**P**	22 17 50.6	+0.5
WMOK				pmax	pmax		
	comp=Z,19nm,1.0s						
R38A	**Fenwick Farm,**	87.27	41	P	**P**	22 17 49.4	-0.9
	baz=320,SNR=13						
O41A	**Passleys Farm,**	87.28	38	P	**P**	22 17 50.2	0.0
	baz=322,SNR=14						
BGF	**Bois d'Agland**	87.35	333	*e*P	**P**	22 17 51.6	+1.2
BGF				pmax	pmax		
	comp=Z,8.0nm,0.8s						
LPIG	**La Paz**	87.44	61	LR	LR	22 50 29.2	
	comp=Z,432nm,20.7s,baz=272,slow=31						
N43A	**Stutzman Famil**	87.44	36	P	**P**	22 17 50.9	-0.1
	baz=322,SNR=15						
P41A	**Barry, Barry**	87.54	38	P	**P**	22 17 51.5	0.0
	baz=321,SNR=27						
TIP	**Timpagrande**	87.54	321	⇑*i*P	**P**	22 17 53.1	+1.5
Q40A	**Laux Farm, Aux**	87.57	39	P	**P**	22 17 51.8	+0.1
	baz=321,SNR=20						
M44A	**Midewin, Midew**	87.60	36	P	**P**	22 17 51.7	-0.1
	baz=323,SNR=5.7						
M44A	**Midewin, Midew**	87.60	36	*e*P	**P**	22 17 52.1	+0.3
	comp=Z,56nm,0.9s						
R39A	**Chumby, Stover**	87.62	40	P	**P**	22 17 51.6	-0.3
	baz=320,SNR=27						
ORIF	**Oris-en-Rattie**	87.64	331	*e*P	**P**	22 17 52.8	+0.8
ORIF				pmax	pmax		
	comp=Z,9.0nm,1.0s						
HDIL	**Hopedale**	87.69	37	*e*P	**P**	22 17 52.0	-0.1
	comp=Z,78nm,0.9s						
ROSF	**Rostrenen**	87.74	338	*e*P	**P**	22 17 53.1	+0.8
ROSF				pmax	pmax		
	comp=Z,85nm,1.8s						
TCF	**Toulx Ste Croi**	87.80	334	*e*P	**P**	22 17 52.6	-0.1
TCF				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SSB	**Saint Sauveur**	87.84	332	*e*P	**P**	22 17 53.6	+0.8
	comp=Z,14nm,1.4s						
SSB	**Saint Sauveur**	87.84	332	*e*P	**P**	22 17 53.6	+0.8
SSB				pmax	pmax		
	comp=Z,14nm,1.4s						
O43A	**Sugar Creek Fa**	87.89	37	P	**P**	22 17 53.1	-0.1
	baz=322						
T38A	**Diamond**	87.95	42	P	**P**	22 17 53.3	-0.2
	baz=320,SNR=22						
S39A	**Bolivar**	87.95	41	P	**P**	22 17 53.2	-0.3
	baz=320,SNR=29						
S39A	**Bolivar**	87.95	41	*e*P	**P**	22 17 52.9	-0.6
	comp=Z,31nm,0.8s						
M45A	**Boilermakers S**	87.96	35	P	**P**	22 17 53.5	0.0
	baz=324						
P42A	**Winchester**	87.96	38	P	**P**	22 17 53.5	0.0
	baz=322,SNR=19						
P42A	**Winchester**	87.96	38	*e*P	**P**	22 17 53.9	+0.4
	comp=Z,67nm,1.0s						
TUL1	**Leonard**	88.00	44	P	**P**	22 17 53.6	-0.1
	baz=319						
TUL1	**Leonard**	88.00	44	*e*P	**P**	22 17 54.4	+0.6
	comp=Z,25nm,1.0s						
Q41A	**Truxton**	88.02	39	P	**P**	22 17 53.8	0.0
	baz=321,SNR=34						
R40A	**Maddies Statio**	88.02	40	P	**P**	22 17 53.6	-0.2
	baz=321,SNR=32						
R40A	**Maddies Statio**	88.02	40	*e*P	**P**	22 17 53.7	-0.2
	comp=Z,55nm,1.0s						
N44A	**Piper City**	88.03	36	P	**P**	22 17 53.9	0.0
	baz=323,SNR=8.7						
VIVF	**Saint-Julien-l**	88.15	331	*e*P	**P**	22 17 54.2	-0.1
VIVF				pmax	pmax		
	comp=Z,9.0nm,1.4s						
TX31	**Lajitas Ar. Si**	88.19	53	*e*P	**P**	22 17 55.4	+0.5
LTX	**Lajitas**	88.19	53	*e*P	**P**	22 17 55.4	+0.5
LTX	**Lajitas**	88.19	53	*e*P	**P**	22 17 55.4	+0.5
TXAR	**Lajitas Array**	88.19	53	P	**P**	22 17 55.4	+0.5
	comp=Z,4.7nm,0.6s,baz=296,slow=3.2,SNR=85						
TXAR				PKKPbc	**PKKPbc**	22 35 37.6	+0.3
	comp=Z,0.3nm,0.6s,baz=146,slow=5.7,SNR=4.9						
TXAR				LR	LR	22 52 54.7	
	comp=Z,576nm,20.6s,baz=0.0,slow=32						
ABTX	**Abilene, Hawle**	88.27	48	P	**P**	22 17 55.3	+0.1
	baz=317,SNR=5.6						
ABTX	**Abilene, Hawle**	88.27	48	*e*P	**P**	22 17 56.6	+1.4
	comp=Z,31nm,1.1s						
N45A	**Kentland**	88.27	36	P	**P**	22 17 55.2	+0.3
	baz=324,SNR=9.1						
P43A	**Skaggs, Pawnee**	88.31	37	P	**P**	22 17 55.3	+0.2
	baz=322,SNR=9.4						
M46A	**Old House Fiel**	88.34	34	P	**P**	22 17 55.7	+0.5
	baz=324						
M46A	**Old House Fiel**	88.34	34	*e*P	**P**	22 17 56.6	+1.4
	comp=Z,36nm,1.0s						
L47A	**Sherwood**	88.38	33	P	**P**	22 17 55.4	0.0
	baz=325						
PGF	**Pioggiola**	88.38	328	*e*P	**P**	22 17 55.7	+0.1
PGF				pmax	pmax		
	comp=Z,57nm,1.5s						
O44A	**Mansfield**	88.39	37	P	**P**	22 17 55.7	+0.2
	baz=323,SNR=7.3						
Q42A	**Golden Eagle**	88.39	39	P	**P**	22 17 55.6	+0.1
	baz=322,SNR=9.8						
T39A	**Clever**	88.43	41	P	**P**	22 17 55.8	0.0
	baz=320,SNR=10.0						
S40A	**Lebanon**	88.44	41	P	**P**	22 17 55.8	0.0
	baz=321,SNR=21						
SADO	**Sadowa**	88.45	28	*e*P	**P**	22 17 56.4	+0.6
	comp=Z,16nm,1.0s						
R41A	**Rosebud**	88.46	39	P	**P**	22 17 55.9	0.0
	baz=321,SNR=29						
N46A	**Monticello**	88.58	35	P	**P**	22 17 56.4	0.0
	baz=324,SNR=6.4						
HPIG		88.59	56	*e*P	**P**	22 17 58.1	+1.1
	comp=Z,14nm,1.1s						
O45A	**Potomac**	88.66	36	P	**P**	22 17 57.1	+0.3
	baz=324,SNR=18						
HHAR	**Hobbs**	88.70	42	*e*P	**P**	22 17 57.5	+0.4
	comp=Z,25nm,1.0s						
CCM	**Cathedral Cave**	88.71	40	P	**P**	22 17 57.6	+0.5
	baz=321						
CCM	**Cathedral Cave**	88.71	40	*e*P	**P**	22 17 58.3	+1.2
	comp=Z,62nm,0.9s						
L48A	**N Adams**	88.73	33	P	**P**	22 17 57.7	+0.5
	baz=326,SNR=23						
SLM	**Saint Louis**	88.75	39	*e*P	**P**	22 17 58.0	+0.8
SLM				*e*pP	**sP**	22 18 09.3	-1.4
SLM	**Saint Louis**	88.75	39	*e*P	**P**	22 17 58.0	+0.8
SLM				*e**PP	**sP**	22 18 09.3	-1.4
R42A	**Luebbering**	88.76	39	P	**P**	22 17 57.7	+0.4
	baz=322,SNR=12						
AAM	**Ann Arbor**	88.76	32	P	**P**	22 17 57.7	+0.5
	baz=326						
AAM	**Ann Arbor**	88.76	32	*e*P	**P**	22 17 58.1	+0.9
	comp=Z,45nm,0.9s						
AAM				*e*pP	**sP**	22 18 09.6	-1.1
AAM	**Ann Arbor**	88.76	32	*e*P	**P**	22 17 58.1	+0.9
AAM				*e**PP	**sP**	22 18 09.6	-1.1
AAM				pmax	pmax		
	comp=Z,45nm,0.9s						
Q43A	**New Douglas**	88.77	38	P	**P**	22 17 57.9	+0.5
	baz=322						
T40A	**Mansfield**	88.77	41	P	**P**	22 17 57.4	0.0
	baz=321,SNR=13						
TRQ	**Mont Tremblant**	88.78	25	*e*P	**P**	22 17 57.4	+0.1
S41A	**Jillco Farms,**	88.83	40	P	**P**	22 17 58.1	+0.4
	baz=321,SNR=18						
SFIN	**Lafayette**	88.84	36	P	**P**	22 17 57.7	+0.1
	baz=324,SNR=16						
SFIN	**Lafayette**	88.84	36	*e*P	**P**	22 17 58.1	+0.5
	comp=Z,48nm,0.8s						
P44A	**Sand Creek, Wi**	88.87	37	P	**P**	22 17 58.1	+0.3
	baz=323,SNR=23						
U39A	**Green Forest**	88.87	42	P	**P**	22 17 57.8	-0.1
	baz=320,SNR=36						
L49A	**Milan**	88.88	33	P	**P**	22 17 58.5	+0.7
	baz=326,SNR=15						
TBI	**Tubuai**	88.91	121	*e*LR	LR	22 46 01.6	
	comp=Z,2µm,22.2s,baz=312						
TBI	**Tubuai**	88.91	121	*e*T	T	23 55 53.3	
	comp=Z,131nm,0.3s						
PLVO	**Plevna**	88.96	27	*e*P	**P**	22 17 58.3	+0.2
	comp=Z,40nm,0.8s						
M48A	**Edgerton**	88.99	33	P	**P**	22 17 58.7	+0.4
	baz=325,SNR=8.8						
Q44A	**Meyer Farm, Va**	89.13	38	P	**P**	22 17 59.2	+0.2
	baz=323,SNR=12						
S42A	**Caledonia**	89.16	39	P	**P**	22 17 59.5	+0.3
	baz=322,SNR=36						
FVM	**French Village**	89.17	39	*e*P	**P**	22 18 01.1	+1.8
	comp=Z,30nm,0.9s						
FVM				*e*pP	**sP**	22 18 12.2	-0.5
FVM	**French Village**	89.17	39	*e*P	**P**	22 18 01.1	+1.8
FVM				*e**PP	**sP**	22 18 12.2	-0.5
FVM				pmax	pmax		
	comp=Z,30nm,0.9s						
R43A	**Red Bud**	89.18	39	P	**P**	22 17 59.2	0.0
	baz=322,SNR=12						
V39A	**Pettigrew**	89.20	42	P	**P**	22 17 59.6	+0.1
	baz=320,SNR=23						
U40A	**Yellville**	89.21	42	P	**P**	22 17 59.3	-0.1
	baz=320,SNR=52						
P45A	**Graceland, Par**	89.23	36	P	**P**	22 17 59.7	+0.2
	baz=324,SNR=11						
P45A	**Graceland, Par**	89.23	36	*e*P	**P**	22 17 59.8	+0.3
	comp=Z,36nm,0.8s						
T41A	**Mountain View**	89.24	40	P	**P**	22 18 00.0	+0.4
	baz=321,SNR=23						
M49A	**Liberty Center**	89.31	33	P	**P**	22 18 00.1	+0.3
	baz=326,SNR=10						
O47A	**Sheridan**	89.37	35	P	**P**	22 18 00.1	-0.1
	baz=324,SNR=8.7						
P46A	**Rosedale**	89.40	36	P	**P**	22 18 00.6	+0.3
	baz=324,SNR=27						
Q45A	**Warren Harvey,**	89.54	37	P	**P**	22 18 01.5	+0.5
	baz=323,SNR=16						
T42A	**Van Buren**	89.59	40	P	**P**	22 18 01.4	+0.2
	baz=321,SNR=24						
T42A	**Van Buren**	89.59	40	*e*P	**P**	22 18 01.4	+0.2
	comp=Z,31nm,1.0s						
W39A	**Magazine**	89.61	43	P	**P**	22 18 01.6	+0.2
	baz=320,SNR=9.1						
W39A	**Magazine**	89.61	43	*e*P	**P**	22 18 01.5	+0.2
	comp=Z,24nm,1.3s						
R44A	**Waltonville**	89.62	38	P	**P**	22 18 01.7	+0.4
	baz=323,SNR=12						
V40A	**Witts Springs**	89.65	42	P	**P**	22 18 01.5	-0.1
	baz=320,SNR=7.3						
V40A	**Witts Springs**	89.65	42	*e*P	**P**	22 18 01.9	+0.3
	comp=Z,38nm,1.5s						
S43A	**Fulton Ridge,**	89.67	39	P	**P**	22 18 01.6	+0.1
	baz=322,SNR=13						
OLIL	**Olney**	89.69	37	*e*P	**P**	22 18 02.5	+0.8
	comp=Z,61nm,0.9s						
U41A	**Viola**	89.70	41	P	**P**	22 18 01.5	-0.2
	baz=321,SNR=17						
JCT	**Junction City**	89.73	50	P	**P**	22 18 02.2	+0.1
	baz=317,SNR=5.3						
JCT	**Junction City**	89.73	50	*e*P	**P**	22 18 02.4	+0.3
	comp=Z,14nm,0.8s						
JCT	**Junction City**	89.73	50	*e*P	**P**	22 18 02.4	+0.3
JCT				pmax	pmax		
	comp=Z,14nm,0.8s						
M50A	**Fremont**	89.76	32	P	**P**	22 18 02.5	+0.6
	baz=326						
O48A	**Farmland**	89.80	34	P	**P**	22 18 02.1	0.0
	baz=325,SNR=22						
Q46A	**CEJHS Indians,**	89.81	37	P	**P**	22 18 02.3	+0.1
	baz=324						
P47A	**Martinsville**	89.93	36	P	**P**	22 18 03.0	+0.2
	baz=324,SNR=12						
T43A	**Greenville**	89.95	40	P	**P**	22 18 03.0	+0.2
	baz=322						
X39A	**Fountain Ranch**	89.96	44	P	**P**	22 18 03.1	+0.1
	baz=320,SNR=16						
R45A	**Skylar, Fairfi**	89.96	38	P	**P**	22 18 03.4	+0.5
	baz=323,SNR=9.2						
S44A	**Carbondale**	89.97	39	P	**P**	22 18 03.4	+0.5
	baz=322,SNR=10.0						
SIUC	**Southern Illin**	89.97	38	*e*P	**P**	22 18 03.7	+0.7
	comp=Z,69nm,1.0s						
WHTX	**Lake Whitney,**	89.99	47	P	**P**	22 18 03.8	+0.6
	baz=318,SNR=6.8						
WHTX	**Lake Whitney,**	89.99	47	*e*P	**P**	22 18 04.3	+1.2
	comp=Z,36nm,0.9s						
W40A	**Ferguson Farm,**	89.99	42	P	**P**	22 18 03.3	+0.1
	baz=320,SNR=13						
W40A	**Ferguson Farm,**	89.99	42	*e*P	**P**	22 18 03.1	0.0
	comp=Z,43nm,1.0s						
V41A	**Mountainview**	90.01	42	P	**P**	22 18 03.4	+0.1
	baz=321,SNR=24						
VAE	**Valguarnera**	90.02	321	LR	LR	23 03 35.5	
	comp=Z,1µm,18.1s,baz=72,slow=39						
U42A	**Revenden**	90.04	41	P	**P**	22 18 03.4	0.0
	baz=321,SNR=9.2						
BLO	**Bloomington**	90.07	36	*e*P	**P**	22 18 04.0	+0.6
	comp=Z,33nm,1.1s						
BLO	**Bloomington**	90.07	36	*e*P	**P**	22 18 04.0	+0.6
BLO				pmax	pmax		
	comp=Z,33nm,1.1s						
PBMO	**Poplar Bluff**	90.11	40	*e*P	**P**	22 18 04.2	+0.5
	comp=Z,57nm,1.0s						
ATD	**Arta Tunnel**	90.14	285	LR	LR	23 02 21.5	
	comp=Z,352nm,21.0s,baz=56,slow=38						
LONY	**Lake Ozonia**	90.19	25	P	**P**	22 18 04.2	+0.4
	baz=332,SNR=10						
LONY	**Lake Ozonia**	90.19	25	*e*P	**P**	22 18 04.3	+0.4
	comp=Z,21nm,0.9s						
MIAR	**Mount Ida**	90.22	43	P	**P**	22 18 04.5	+0.3
	baz=320,SNR=21						
MIAR	**Mount Ida**	90.22	43	*e*P	**P**	22 18 05.0	+0.8
	comp=Z,35nm,1.0s						
MIAR	**Mount Ida**	90.22	43	*e*P	**P**	22 18 05.0	+0.8
MIAR				pmax	pmax		
	comp=Z,35nm,1.0s						
O49A	**Covington**	90.22	34	P	**P**	22 18 04.3	+0.2
	baz=326,SNR=14						
N50A	**Nevada**	90.24	33	P	**P**	22 18 04.6	+0.4
	baz=326,SNR=7.8						
Q47A	**Bedord North L**	90.31	36	P	**P**	22 18 04.7	+0.2
	baz=324,SNR=36						
S45A	**Carrier Mills**	90.31	38	P	**P**	22 18 04.8	+0.2
	baz=323,SNR=7.6						
FRNY	**Flat Rock**	90.32	25	*e*P	**P**	22 18 04.7	+0.2
	comp=Z,15nm,0.9s						
WHAR	**Wooly Hollow**	90.32	42	*e*P	**P**	22 18 04.9	+0.2
	comp=Z,43nm,0.9s						
PQI	**Presque Isle**	90.33	20	*e*P	**P**	22 18 04.7	+0.3
	comp=Z,28nm,0.9s						
P48A	**Milroy**	90.33	35	P	**P**	22 18 05.1	+0.4
	baz=325,SNR=7.5						
V42A	**Cord**	90.39	41	P	**P**	22 18 05.2	+0.3
	baz=321,SNR=10						
R46A	**Gibon Southern**	90.39	37	P	**P**	22 18 05.2	+0.3
	baz=324,SNR=6.2						
ERPA	**Erie**	90.40	30	P	**P**	22 18 05.4	+0.5
	baz=328,SNR=8.1						
ERPA	**Erie**	90.40	30	*e*P	**P**	22 18 05.9	+1.0
	comp=Z,73nm,0.8s						
W41B	**Gary Mavity, V**	90.44	42	P	**P**	22 18 05.4	+0.2
	baz=321,SNR=13						
W41B	**Gary Mavity, V**	90.44	42	*e*P	**P**	22 18 05.4	+0.2
	comp=Z,43nm,1.4s						
U43A	**Rector**	90.45	40	P	**P**	22 18 05.8	+0.5
	baz=322,SNR=6.0						
USIN	**University of**	90.51	37	*e*P	**P**	22 18 07.3	+1.8
	comp=Z,16nm,0.8s						
PARMO	**Parma**	90.54	39	*e*P	**P**	22 18 07.1	+1.5
	comp=Z,114nm,0.8s						
O50A	**Cable**	90.56	34	P	**P**	22 18 06.1	+0.4
	baz=326,SNR=21						
P49A	**Miami Univ. Ec**	90.59	35	P	**P**	22 18 05.9	+0.1
	baz=325,SNR=17						
Q48A	**North Vernon**	90.63	36	P	**P**	22 18 06.3	+0.3
	baz=325,SNR=9.6						
X40A	**Basin Creek Fa**	90.66	43	P	**P**	22 18 06.5	+0.3
	baz=320,SNR=13						
X40A	**Basin Creek Fa**	90.66	43	*e*P	**P**	22 18 06.9	+0.7
	comp=Z,21nm,1.1s						
MMNY	**Mt. Morris Dam**	90.66	29	*e*P	**P**	22 18 06.0	-0.1
	comp=Z,77nm,0.8s						
S46A	**Don Dixon Farm**	90.72	38	P	**P**	22 18 06.8	+0.4
	baz=324						
ALLY	**Alegheny Colle**	90.73	30	*e*P	**P**	22 18 07.8	+1.3
	comp=Z,56nm,0.9s						
R47A	**Wooly Knot Far**	90.78	36	P	**P**	22 18 07.0	+0.3
	baz=324,SNR=19						
Y40A	**Okolona**	90.78	43	P	**P**	22 18 07.0	+0.2
	baz=320						
435B	**Jarrell**	90.81	48	P	**P**	22 18 07.7	+0.7
	baz=318						
435B	**Jarrell**	90.81	48	*e*P	**P**	22 18 08.0	+0.9
	comp=Z,21nm,1.0s						
X41A	**Kaden, Bauxite**	90.82	43	P	**P**	22 18 07.1	+0.2
	baz=321						
V43A	**Jonesboro**	90.83	40	P	**P**	22 18 07.7	+0.7
	baz=322						
NCB	**Newcomb**	90.88	26	*e*P	**P**	22 18 07.2	+0.1
	comp=Z,25nm,0.8s						
P50A	**Jamestown**	90.93	34	P	**P**	22 18 07.6	+0.2
	baz=326,SNR=14						
WCI	**Wyandotte Cave**	90.94	36	P	**P**	22 18 07.7	+0.2
	baz=324						
WCI	**Wyandotte Cave**	90.94	36	*e*P	**P**	22 18 08.0	+0.5
	comp=Z,33nm,0.9s						
WCI	**Wyandotte Cave**	90.94	36	*e*P	**P**	22 18 08.0	+0.5
WCI				pmax	pmax		
	comp=Z,33nm,0.9s						
Q49A	**Aurora**	90.94	35	P	**P**	22 18 07.8	+0.3
	baz=325,SNR=9.6						
HBAR	**Harrisburg**	90.96	41	*e*P	**P**	22 18 09.4	+1.8
	comp=Z,63nm,0.8s						
U44B	**Burton Farm, H**	90.99	39	P	**P**	22 18 08.1	+0.3
	baz=322						
R48A	**Northridge Ran**	91.00	36	P	**P**	22 18 08.2	+0.5
	baz=325,SNR=5.5						
M54A	**Oil Creek Stat**	91.04	30	P	**P**	22 18 08.0	0.0
	baz=329,SNR=10						
M54A	**Oil Creek Stat**	91.04	30	*e*P	**P**	22 18 09.0	+1.1
	comp=Z,43nm,1.1s						
VT1	**Waterbury**	91.04	24	*e*P	**P**	22 18 09.1	+1.2
	comp=Z,31nm,0.8s						
T46A	**Princeton**	91.14	38	P	**P**	22 18 09.1	+0.6
	baz=323,SNR=20						
S47A	**Hartford**	91.18	37	P	**P**	22 18 08.9	+0.3
	baz=324						
Y41A	**Eaglette Beard**	91.24	43	P	**P**	22 18 09.4	+0.5
	baz=320						
PKME	**Peaks-Kenny Pk**	91.26	22	P	**P**	22 18 09.1	+0.3
	baz=336						
PKME	**Peaks-Kenny Pk**	91.26	22	*e*P	**P**	22 18 09.7	+0.9
	comp=Z,23nm,1.0s						
U45A	**Rockin P Farm,**	91.28	39	P	**P**	22 18 09.5	+0.4
	baz=323						
Z40A	**Long Farm, Mag**	91.30	44	P	**P**	22 18 09.8	+0.6
	baz=320,SNR=7.8						
N54A	**Moraine State**	91.38	31	P	**P**	22 18 09.7	+0.2
	baz=328,SNR=8.4						
N54A	**Moraine State**	91.38	31	*e*P	**P**	22 18 10.1	+0.6
	comp=Z,51nm,1.4s						
LBNH	**Lisbon**	91.39	24	P	**P**	22 18 09.6	+0.1
	baz=334						
LBNH	**Lisbon**	91.39	24	*e*P	**P**	22 18 11.2	+1.8
	comp=Z,14nm,0.8s						
LBNH	**Lisbon**	91.39	24	*e*P	**P**	22 18 11.3	+1.8
LBNH				pmax	pmax		
	comp=Z,14nm,0.8s						
R49A	**Shelbyville**	91.40	36	P	**P**	22 18 10.0	+0.4
	baz=325						
Q50A	**Georgetown**	91.48	34	P	**P**	22 18 10.4	+0.4
	baz=326,SNR=7.9						
S48A	**Wiedeman Farm,**	91.51	36	P	**P**	22 18 10.4	+0.2
	baz=324,SNR=12						
833A	**Chaparral WMA,**	91.53	51	P	**P**	22 18 10.6	+0.2
	baz=317						
T47A	**Sharon Grove**	91.56	38	P	**P**	22 18 10.5	+0.1
	baz=324,SNR=14						
T47A	**Sharon Grove**	91.56	38	*e*P	**P**	22 18 11.2	+0.8
	comp=Z,33nm,1.0s						
ACCN	**Adirondack Com**	91.59	25	*e*P	**P**	22 18 11.0	+0.6
	comp=Z,32nm,1.0s						
Q51A	**Peebles**	91.61	34	P	**P**	22 18 10.8	+0.2
	baz=326,SNR=20						
Z41A	**Richland Creek**	91.62	44	P	**P**	22 18 10.5	-0.2
	baz=320						
X43A	**Marvell**	91.65	42	P	**P**	22 18 10.8	-0.1
	baz=322						
X43A	**Marvell**	91.65	42	*e*P	**P**	22 18 12.7	+1.8
	comp=Z,53nm,1.0s						
140A	**Cam and Jess,**	91.67	44	P	**P**	22 18 11.4	+0.5
	baz=320						
Y42A	**Garnett, Star**	91.71	43	P	**P**	22 18 11.5	+0.4
	baz=321						
HNH	**Hanover**	91.75	24	*e*P	**P**	22 18 12.2	+1.1
	comp=Z,25nm,0.9s						
S49A	**Springfield**	91.76	36	P	**P**	22 18 11.7	+0.4
	baz=325,SNR=13						
WVL	**Waterville**	91.79	22	*e*P	**P**	22 18 12.8	+1.5
	comp=Z,23nm,0.9s						
R50A	**Paris**	91.79	35	P	**P**	22 18 11.4	0.0
	baz=326,SNR=9.5						
T48A	**Bowling Green**	91.80	37	P	**P**	22 18 11.6	+0.1
	baz=324,SNR=6.0						
BINY	**Binghamton**	91.83	28	P	**P**	22 18 11.4	-0.1
	baz=331,SNR=8.1						
BINY	**Binghamton**	91.83	28	*e*P	**P**	22 18 12.2	+0.6

	comp=Z,32nm,0.9s						
WVT	Waverly	91.90	39	P	P	22 18 12.3	+0.3
	baz=323						
WVT	Waverly	91.90	39	eP	P	22 18 12.1	+0.1
	comp=Z,18nm,0.9s						
WVT	Waverly	91.90	39	eP	P	22 18 12.1	+0.1
WVT				pmax	pmax		
	comp=Z,18nm,0.9s						
U47A	Clarksville	91.92	38	P	P	22 18 12.2	+0.2
	baz=324,SNR=6.8						
W45A	Hickory Valley	92.01	40	P	P	22 18 12.8	+0.3
	baz=323						
240A	Hunter Patters	92.03	45	P	P	22 18 12.7	+0.1
	baz=320						
V46A	Holladay	92.03	39	P	P	22 18 12.6	0.0
	baz=323,SNR=11						
Z42A	Norrel Spur, H	92.06	43	P	P	22 18 13.1	+0.3
	baz=321						
R51A	Hillsboro	92.11	35	P	P	22 18 13.0	+0.1
	baz=326						
FFD	Franklin Falls	92.17	24	eP	P	22 18 14.8	+1.7
	comp=Z,33nm,0.9s						
TRY	Troy	92.17	26	eP	P	22 18 14.2	+1.1
	comp=Z,20nm,0.9s						
T49A	Edmonton	92.20	36	P	P	22 18 13.3	0.0
	baz=325,SNR=12						
T49A	Edmonton	92.20	36	eP	P	22 18 13.9	+0.6
	comp=Z,19nm,1.0s						
U48A	Cassie Pea, Po	92.22	37	P	P	22 18 13.3	-0.1
	baz=324,SNR=6.6						
S50A	Richmond	92.25	35	P	P	22 18 13.5	0.0
	baz=326,SNR=11						
V47A	Nunnelly	92.30	39	P	P	22 18 13.9	+0.1
	baz=324,SNR=18						
OXF	Oxford	92.41	41	P	P	22 18 14.3	0.0
	baz=322,SNR=6.6						
OXF	Oxford	92.41	41	eP	P	22 18 15.4	+1.1
	comp=Z,58nm,1.0s						
OXF	Oxford	92.41	41	eP	P	22 18 15.4	+1.1
OXF				pmax	pmax		
	comp=Z,58nm,1.0s						
Y44A	Strider, Charl	92.43	41	P	P	22 18 14.2	-0.3
	baz=322						
HKT	Hockley	92.44	48	eP	P	22 18 15.9	+1.4
	comp=Z,12nm,1.4s						
HKT	Hockley	92.44	48	eP	P	22 18 15.9	+1.4
HKT				pmax	pmax		
	comp=Z,12nm,1.4s						
KSPA	Keystone Colle	92.47	28	eP	P	22 18 15.4	+0.9
	comp=Z,14nm,0.7s						
SSPA	Standing Stone	92.48	30	P	P	22 18 14.6	0.0
	baz=330						
SSPA	Standing Stone	92.48	30	eP	P	22 18 15.8	+1.2
	comp=Z,9.5nm,0.8s						
R52A	Catlettsburg	92.48	34	P	P	22 18 14.5	-0.1
	baz=327						
X45A	UM Field Stati	92.48	41	P	P	22 18 14.6	-0.1
	baz=322						
O56A	Blue Knob Stat	92.53	30	P	P	22 18 15.1	+0.2
	baz=329,SNR=12						
O56A	Blue Knob Stat	92.53	30	eP	P	22 18 15.4	+0.5
	comp=Z,21nm,0.8s						
MCWV	Mont Chateau	92.55	31	P	P	22 18 14.9	0.0
	baz=329						
U49A	Red Boiling Sp	92.57	37	P	P	22 18 15.3	+0.3
	baz=325,SNR=12						
T50A	Nancy	92.59	36	P	P	22 18 15.3	+0.1
	baz=325,SNR=15						
S51A	Beattyville	92.65	35	P	P	22 18 15.6	+0.2
	baz=326,SNR=8.6						
S51A	Beattyville	92.65	35	eP	P	22 18 15.9	+0.5
	comp=Z,17nm,1.0s						
PLAL	Pickwick Lake	92.70	39	eP	P	22 18 16.3	+0.6
	comp=Z,10nm,0.9s						
V48A	Smith Brothers	92.70	38	P	P	22 18 15.7	0.0
	baz=324,SNR=9.7						
V48A	Smith Brothers	92.70	38	eP	P	22 18 16.0	+0.3
	comp=Z,21nm,1.0s						
W47A	Westpoint	92.72	39	P	P	22 18 15.8	0.0
	baz=324,SNR=9.1						
X46A	Booneville	92.79	40	P	P	22 18 16.5	+0.4
	baz=323						
S52A	Salyersville	92.84	35	P	P	22 18 16.5	+0.1
	baz=326,SNR=7.6						
Y45A	Yeager Farm, C	92.85	41	P	P	22 18 16.2	-0.2
	baz=322,SNR=5.8						
Z44A	Pea Ridge, Bel	92.85	42	P	P	22 18 16.8	+0.4
	baz=322						
242A	Grayson	92.89	44	P	P	22 18 16.5	-0.1
	baz=321						
341A	Kurthwood	92.89	45	P	P	22 18 16.4	-0.2
	baz=320						
341A	Kurthwood	92.89	45	eP	P	22 18 18.8	+2.2
	comp=Z,15nm,0.9s						
N59A	State Game Lan	93.03	28	P	P	22 18 17.4	+0.3
	baz=331						
N59A	State Game Lan	93.03	28	eP	P	22 18 18.5	+1.4
	comp=Z,16nm,0.8s						
T51A	Gray	93.05	36	P	P	22 18 17.2	0.0
	baz=326						
U50A	Jamestown	93.09	36	P	P	22 18 17.6	+0.1
	baz=325,SNR=7.2						
V49A	McMinnville	93.12	37	P	P	22 18 17.6	0.0
	baz=325,SNR=8.6						
W48A	Pulaski	93.13	39	P	P	22 18 17.6	-0.1
	baz=324,SNR=13						
X47A	Russelville	93.18	40	P	P	22 18 18.0	+0.1
	baz=323,SNR=5.8						
Y46A	Houston	93.18	41	P	P	22 18 18.2	+0.2
	baz=323,SNR=9.9						
WES	Weston	93.25	24	eP	P	22 18 19.6	+1.6
	comp=Z,23nm,0.8s						
WES	Weston	93.25	24	eP	P	22 18 19.6	+1.6
WES				pmax	pmax		
	comp=Z,23nm,0.8s						
ODNJ	Ogdensburg	93.30	27	eP	P	22 18 19.1	+0.8
	comp=Z,11nm,0.9s						
342A	Flagon Creek P	93.32	44	P	P	22 18 18.9	+0.3
	baz=321						
T52A	Hallie	93.36	35	P	P	22 18 18.4	-0.3
	baz=326						
W49A	Belvidere	93.47	38	P	P	22 18 19.3	0.0
	baz=324,SNR=20						
U51A	La Follette	93.50	36	P	P	22 18 19.5	+0.2
	baz=326						
ZAIG	Zacatecas	93.51	57	eP	P	22 18 21.4	+1.4
	comp=Z,17nm,1.2s						
SWET	Sewanee	93.55	38	eP	P	22 18 19.5	-0.2
	comp=Z,26nm,0.9s						
TZTN	Tazewell	93.57	35	P	P	22 18 19.9	+0.2
	baz=326,SNR=5.3						
TZTN	Tazewell	93.57	35	eP	P	22 18 20.1	+0.4
	comp=Z,10.0nm,0.8s						
V50A	Pikevile	93.58	37	P	P	22 18 19.8	+0.1
	baz=325						
PAL	Palisades	93.61	27	P	P	22 18 19.2	-0.5
	baz=333						
X48A	Hartselle	93.63	39	P	P	22 18 19.7	-0.3
	baz=324,SNR=5.8						
X48A	Hartselle	93.63	39	eP	P	22 18 20.1	+0.1
	comp=Z,11nm,0.9s						
Y47A	UCPARC, Winfie	93.67	40	P	P	22 18 20.0	-0.2
	baz=323						
244A	Avery, Jackson	93.68	43	P	P	22 18 20.4	+0.1
	baz=322						
U52A	Thorn Hill	93.78	35	P	P	22 18 20.5	-0.2
	baz=326,SNR=8.5						
V51A	Loudon	93.82	36	P	P	22 18 20.9	+0.1
	baz=326,SNR=9.0						
V51A	Loudon	93.82	36	eP	P	22 18 21.4	+0.6
	comp=Z,18nm,0.9s						
KEST	Kesra	93.83	323	P	P	22 18 21.2	+0.1
	comp=Z,2.2nm,0.7s,baz=280,slow=7.1,SNR=3.6						
KEST				LR	LR	23 05 20.6	
	comp=Z,1μm,18.3s,baz=347,slow=38						
KEST	Kesra	93.83	323	eP	P	22 18 21.2	+0.1
	comp=Z,5.5nm,1.0s						
W50A	Signal Mountai	93.86	37	P	P	22 18 20.9	-0.2
	baz=325,SNR=9.7						
W50A	Signal Mountai	93.86	37	eP	P	22 18 21.5	+0.4
	comp=Z,16nm,0.9s						
X49A	Woodville	93.93	39	P	P	22 18 21.2	-0.1
	baz=324,SNR=13						
LNIG	Linares	93.97	53	eP	P	22 18 21.5	-0.2
	comp=Z,8.2nm,1.2s						
Y48A	Jasper	94.00	39	P	P	22 18 21.6	-0.1
	baz=324,SNR=6.7						
CPCT	Cooper Cave	94.03	37	eP	P	22 18 22.0	+0.2
	comp=Z,16nm,0.9s						
146A	Union	94.07	41	P	P	22 18 21.9	-0.2
	baz=323						
146A	Union	94.07	41	eP	P	22 18 23.8	+1.8
	comp=Z,26nm,1.0s						
Z47A	Carrollton	94.12	40	P	P	22 18 22.0	-0.3
	baz=323						
V52A	Sevierville	94.13	36	P	P	22 18 22.1	-0.1
	baz=326,SNR=8.0						
V52A	Sevierville	94.13	36	eP	P	22 18 22.7	+0.4
	comp=Z,19nm,1.1s						
W51A	Cleveland	94.15	37	P	P	22 18 21.9	-0.4
	baz=325,SNR=7.9						
U53A	Fall Branch	94.16	35	P	P	22 18 22.4	0.0
	baz=327,SNR=6.3						
TKL	Tuckaleechee C	94.20	36	P	P	22 18 22.9	+0.3
	comp=Z,16nm,0.8s,baz=288,slow=3.4,SNR=19						
TKL				LR	LR	23 02 17.2	
	comp=Z,668nm,21.8s,baz=342,slow=36						
TKL	Tuckaleechee C	94.20	36	eP	P	22 18 22.9	+0.3
	comp=Z,19nm,0.9s						
TKL	Tuckaleechee C	94.20	36	eP	P	22 18 22.9	+0.3
TKL				pmax	pmax		
	comp=Z,19nm,0.9s						
Z48A	Northport	94.24	40	P	P	22 18 22.3	-0.5
	baz=324						
X50B	Fort Payne	94.30	38	P	P	22 18 22.6	-0.5
	baz=325,SNR=7.0						
BLA	Blacksburg	94.38	33	P	P	22 18 23.3	-0.2
	baz=328,SNR=6.1						
BLA	Blacksburg	94.38	33	eP	P	22 18 24.5	+1.0
	comp=Z,21nm,0.9s						
BLA	Blacksburg	94.38	33	eP	P	22 18 24.5	+1.0
BLA				pmax	pmax		
	comp=Z,21nm,0.9s						
Y49A	Blount Mountai	94.42	39	P	P	22 18 23.3	-0.4
	baz=324,SNR=7.0						
Y49A	Blount Mountai	94.42	39	eP	P	22 18 24.2	+0.5
	comp=Z,13nm,1.0s						
147A	Livingston	94.44	41	P	P	22 18 23.2	-0.5
	baz=323						
X51A	Calhoun	94.59	37	P	P	22 18 24.4	0.0
	baz=325						
X51A	Calhoun	94.59	37	eP	P	22 18 25.3	+0.9
	comp=Z,20nm,1.4s						
W52A	Murphy	94.59	37	P	P	22 18 24.3	-0.2
	baz=326						
W52A	Murphy	94.59	37	eP	P	22 18 25.4	+0.9
	comp=Z,8.8nm,1.0s						
V53A	Saluda	94.63	35	P	P	22 18 24.2	-0.5
	baz=326,SNR=5.1						
V53A	Saluda	94.63	35	eP	P	22 18 25.5	+0.9
	comp=Z,9.9nm,1.0s						
Y50A	Piedmont	94.72	38	P	P	22 18 24.9	-0.1
	baz=325,SNR=6.2						
CVRD	Centerville Ro	94.72	31	eP	P	22 18 26.1	+1.1
	comp=Z,11nm,0.8s						
247A	Quitman	94.76	42	P	P	22 18 25.2	0.0
	baz=323						
LRAL	Lakeview Retre	94.79	40	P	P	22 18 25.1	-0.2
	baz=324						
LRAL	Lakeview Retre	94.79	40	eP	P	22 18 25.8	+0.5
	comp=Z,7.3nm,1.2s						
W53A	Cullowhee	94.88	36	P	P	22 18 25.9	0.0
	baz=326,SNR=7.3						
Z49A	Columbiana	94.90	39	P	P	22 18 25.8	-0.1
	baz=324						
X52A	Dahlonega	95.02	37	P	P	22 18 25.9	-0.4
	baz=326						
Y51A	Rockmart	95.04	38	P	P	22 18 26.0	-0.5
	baz=325,SNR=11						
BG3	Lake Jocassee	95.14	36	eP	P	22 18 27.8	+0.9
	comp=Z,22nm,1.0s						
BG3				epP	sP	22 18 39.1	-1.3
Z50A	Ashland	95.15	39	P	P	22 18 26.5	-0.5
	baz=324,SNR=20						
Z50A	Ashland	95.15	39	eP	P	22 18 27.4	+0.4
	comp=Z,36nm,1.0s						
149A	Jones	95.25	40	P	P	22 18 27.2	-0.3
	baz=324						
347A	Saraland	95.31	42	P	P	22 18 26.7	-1.0
	baz=323						
X53A	Estanollee	95.37	36	P	P	22 18 27.6	-0.4
	baz=326,SNR=11						
Z51A	Franklin	95.46	38	P	P	22 18 27.8	-0.6
	baz=325						
Y52A	Lilburn	95.54	37	P	P	22 18 27.7	-1.0
	baz=326,SNR=5.5						
Y52A	Lilburn	95.54	37	eP	P	22 18 29.5	+0.7
	comp=Z,12nm,0.8s						
150A	Eclectic	95.62	39	P	P	22 18 28.1	-1.1
	baz=324,SNR=6.1						
ES19	SONSECA Array	95.71	335	eP	P	22 18 29.6	+0.1
KMSC	Kings Mountain	95.73	35	P	P	22 18 28.5	-1.1
	baz=327						
KMSC	Kings Mountain	95.73	35	eP	P	22 18 30.2	+0.6
	comp=Z,11nm,0.9s						
ESDC	Sonseca Array	95.75	335	P	P	22 18 29.8	+0.1
	comp=Z,1.9nm,0.7s,baz=14,slow=4.5,SNR=20						
ESDC				PP	PP	22 22 30.1	+10
	comp=Z,1.5nm,0.9s,baz=30,slow=7.3,SNR=5.0						
ESDC				LR	LR	23 07 17.8	
	comp=Z,895nm,18.1s,baz=40,slow=39						
ESLA	Sonseca Array	95.75	335	eP	P	22 18 30.2	+0.5
	comp=Z,3.7nm,0.8s						
Y53A	Monroe	95.78	37	P	P	22 18 29.3	-0.5
	baz=326						
Z52A	Williamson	95.93	38	P	P	22 18 30.2	-0.3
	baz=325						
250A	Grady	96.01	40	P	P	22 18 30.5	-0.4
	baz=324						
250A	Grady	96.01	40	eP	P	22 18 32.6	+1.7
	comp=Z,30nm,1.1s						
151A	Opelika	96.03	39	P	P	22 18 30.7	-0.3
	baz=325						
Y54A	Tignall	96.19	36	P	P	22 18 31.3	-0.4
	baz=326,SNR=17						
GOGA	Godfrey	96.20	37	P	P	22 18 31.4	-0.3
	baz=326						
GOGA	Godfrey	96.20	37	eP	P	22 18 32.8	+1.0
	comp=Z,7.2nm,0.9s						
GOGA	Godfrey	96.20	37	eP	P	22 18 32.8	+1.0
GOGA				pmax	pmax		
	comp=Z,7.0nm,0.9s						
152A	Waverly Hall	96.21	38	P	P	22 18 31.4	-0.4
	baz=325						
152A	Waverly Hall	96.21	38	eP	P	22 18 32.5	+0.7
	comp=Z,8.6nm,1.1s						
Z53A	Monticello	96.26	37	P	P	22 18 31.6	-0.4
	baz=326						
251A	Midway	96.34	39	P	P	22 18 32.1	-0.3
	baz=325						
154A	Montrose	97.03	37	P	Pdif	22 18 35.0	-0.6
	baz=326						
154A	Montrose	97.03	37	eP	Pdif	22 18 37.2	+1.6
	comp=Z,45nm,1.2s						
155A	Kite	97.32	37	P	Pdif	22 18 36.5	-0.4
	baz=327						
254A	Abbeville	97.49	38	P	Pdif	22 18 37.0	-0.6
	baz=326						
MESJ	Messejana	98.79	337	eP	Pdif	22 18 44.1	+0.7
MESJ				AMS	AMS	23 08 18.2	
	comp=Z,965nm,17.0s						
RKT	Rikitea	98.79	113	eSKSac	SKSac	22 29 18.9	-0.4
	comp=Z,188nm,27.8s						
RKT	Rikitea	98.79	113	ePS	PS	22 31 41.2	+0.5
	comp=Z,439nm,29.0s						
RKT	Rikitea	98.79	113	eLR	LR	22 50 36.5	
	comp=Z,1μm,24.5s,baz=309						
KIBA	Kibaya	105.64	276	i P	Pdif	22 19 07.6	-6.8
TOA1	Torodi Ar. Sit	116.40	317	ePKPdf	PKPdf	22 23 45.5	-2.2
TOA1				ePKKPbc	PKKPbc	22 34 16.0	+1.2
TOA0	Torodi Ar. Sit	116.40	317	ePKPdf	PKPdf	22 23 46.0	-1.7
TOA0				ePKPdf	PKiKP	22 23 47.0	-0.7
TORD	Torodi Ar. Bea	116.40	317	PKP	PKPdf	22 23 45.5	-2.2
	comp=Z,1.8nm,0.6s,baz=19,slow=1.6						
TORD				PKKPbc	PKKPbc	22 34 16.0	+1.2
	baz=309,slow=4.6						
VNDA	Vanda	117.00	175	PKP	PKPdf	22 23 46.1	-0.8
	comp=Z,0.9nm,0.6s,baz=325,slow=3.7,SNR=8.8						
KOWA	Kowa	118.13	323	PKP	PKPdf	22 23 50.5	-0.5
	comp=Z,4.3nm,0.6s,baz=69,slow=3.5,SNR=12						
KOWA	Kowa	118.13	323	ePKPdf	PKPdf	22 23 50.5	-0.5
KOWA				ePKPdf	PKiKP	22 23 50.6	-0.4
LSZ	Lusaka	118.23	273	ePKPdf	PKPdf	22 23 51.6	+0.4
LSZ	Lusaka	118.23	273	ePKIKP	PKPdf	22 23 51.6	+0.4
MAW	Mawson	121.79	206	PKP	PKPdf	22 23 56.3	0.0
	comp=Z,6.8nm,0.8s,baz=332,slow=2.2,SNR=16						
MAW				PKKPbc	PKKPbc	22 33 56.4	+0.4
	comp=Z,2.5nm,0.8s,baz=248,slow=5.4,SNR=4.6						
SDV	Santo Domingo	123.19	40	PKP	PKPdf	22 24 01.3	+0.3
	comp=Z,28nm,0.7s,baz=14,slow=1.3,SNR=14						
ROSC	El Rosal	124.61	46	PKP	PKPdf	22 24 04.4	+0.4
	comp=Z,5.3nm,0.7s,baz=146,slow=6.0,SNR=5.2						
ROSC	El Rosal	124.61	46	ePKPdf	PKPdf	22 24 05.4	+1.4
PCRV	Puerto La Cruz	124.84	33	PKP	PKPdf	22 24 02.4	-1.6
	comp=Z,14nm,0.7s,baz=255,slow=3.7,SNR=4.3						
DBIC	Dimbokro	125.28	319	PKP	PKPdf	22 24 04.4	-0.4
	comp=Z,7.3nm,0.6s,baz=8.7,slow=3.3,SNR=15						
TIC	Toumodi	125.39	319	ePKIKP	PKPdf	22 24 04.4	-0.6
KIC	Kosan Boka	125.49	319	ePKIKP	PKPdf	22 24 04.6	-0.6
	comp=Z,13nm,0.7s						
LBTB	Lobatse	125.67	265	ePKPdf	PKPdf	22 24 05.5	+0.3
LBTB	Lobatse	125.67	265	ePKIKP	PKPdf	22 24 05.5	+0.3
LIC	Lamto	125.75	319	ePKIKP	PKPdf	22 24 04.9	-0.8
	comp=Z,69nm,1.5s						
BOSA	Boshof	127.74	261	PKP	PKPdf	22 24 09.5	+0.4
	comp=Z,4.8nm,0.7s,baz=63,slow=2.5,SNR=10						
TSUM	Tsumeb	128.74	276	PKP	PKPdf	22 24 12.6	+1.3
	comp=Z,3.0nm,0.8s,baz=357,slow=7.5,SNR=13						
QSPA	South Pole Qui	128.88	180	PKP	PKPdf	22 24 09.5	-0.5
	comp=Z,4.0nm,0.6s,baz=251,slow=1.3,SNR=16						
QSPA	South Pole Qui	128.88	180	ePKPdf	PKPdf	22 24 09.2	-0.8
QSPA				ePKPdf	PKPdf	22 24 09.5	-0.5
SYO	Syowa Base	130.45	207	⇑ePdiff	Pdif	22 21 07.0	+3.9
SYO	Syowa Base	130.45	207	⇓ePKPdf	PKPdf	22 24 12.4	-0.4
SYO	Syowa Base	130.45	207	⇑eX	PKiKP	22 24 23.0	+9.3
NNA	Nana	135.94	63	PKP	PKPdf	22 24 25.8	+0.9
	comp=Z,11nm,0.7s,baz=287,slow=4.8,SNR=5.7						
PTGA	Pitinga	136.62	34	PKP	PKPdf	22 24 26.6	+0.3
	comp=Z,12nm,0.8s,baz=357,slow=1.1,SNR=9.3						
PTGA				PP	PP	22 27 07.8	+0.6
	comp=Z,2.0nm,0.4s,baz=5.0,slow=5.6,SNR=6.3						
PTGA	Pitinga	136.62	34	ePKPdf	PKPdf	22 24 26.9	+0.7
PTGA				ePP	PP	22 27 04.8	-2.4
SAML	Samuel	142.17	44	ePKPpre	PKPpre	22 24 31.7	
SNAA	Sanae	143.00	197	P	PKPpre	22 24 31.7	
SNAA	Sanae	143.00	197	ePKPpre	PKPpre	22 24 31.6	
SNAA	Sanae	143.00	197	ePKHKP	PKPpre	22 24 31.6	
VNA3	Neumayer Olymp	144.81	195	P	PKPdf	22 24 37.7	-1.5
LPAZ	La Paz	144.90	58	PKP	PKPdf	22 24 40.8	-0.9
	comp=Z,8.8nm,0.7s,baz=354,slow=4.4,SNR=38						
LPAZ	La Paz	144.90	58	ePKPbc	PKPdf	22 24 40.6	-1.1
LPAZ	La Paz	144.90	58	ePKIKP	PKPdf	22 24 40.6	-1.1
VNA1	Neumayer--Stat	144.97	196	P	PKPdf	22 24 38.3	-1.1
MNMC	Minye Minye	145.89	63	ePKPdf	PKPab	22 24 44.0	0.0
PB11	IPOC Station P	146.27	64	ePKPdf	PKPab	22 24 44.1	-1.2
RCBR	Riachuelo	146.80	357	PKPbc	PKPab	22 24 46.9	-0.4
	comp=Z,51nm,0.5s,baz=12,slow=2.2,SNR=3.4						
RCBR	Riachuelo	146.80	357	ePKPdf	PKPab	22 24 46.8	-0.6
RCBR				ePKPdf	PKPab	22 24 46.9	-0.4
RCBR	Riachuelo	146.80	357	ePKP2	PKPab	22 24 46.8	-0.6
PB01	IPOC Station P	147.23	66	ePKPdf	PKPbc	22 24 45.7	-1.5
PB04	IPOC Station P	147.57	68	ePKPdf	PKPab	22 24 47.7	-2.8
PB10	IPOC Station P	148.00	71	ePKPbc	PKPab	22 24 49.3	-2.6
SIV	San Ignacio	149.08	48	PKPbc	PKPbc	22 24 52.2	0.0
PMSA	Palmer Station	150.03	157	PKPbc	PKPbc	22 24 53.3	+0.4
	comp=Z,18nm,0.8s,baz=284,slow=9.8,SNR=2.7						
GO03	Copiap	150.52	77	ePKPbc	PKPbc	22 24 55.8	+0.3
LCO	Las Campanas	150.88	80	ePKPbc	PKPbc	22 24 56.9	+0.4
LCO	Las Campanas	150.88	80	ePKIKP	PKPbc	22 24 56.9	+0.4
GO04	Tololo Observa	151.35	82	ePKPbc	PKPbc	22 24 57.6	+0.1
ROC1	El Roble	152.35	88	ePKPbc	PKPbc	22 24 58.9	-0.9
GO05	HualaæØ	152.36	92	ePKPbc	PKPbc	22 24 59.6	+0.2
PEL	Peldehue	152.68	88	ePKPbc	PKPbc	22 25 00.2	0.0
PEL	Peldehue	152.68	88	ePKIKP	PKPbc	22 25 00.2	0.0
GO09	Cerro Castillo	152.91	128	ePKPbc	PKPbc	22 25 01.5	+1.5
PLCA	Paso Flores	154.72	104	PKPbc	PKPbc	22 25 05.2	+0.8
	comp=Z,6.9nm,0.8s,baz=246,slow=2.3,SNR=11						
PLCA				PKPab	PKPab	22 25 19.9	+0.4
	comp=Z,4.4nm,0.7s,baz=278,slow=4.6,SNR=7.4						
BDFB	Brasilia	154.85	24	PKPbc	PKPbc	22 25 05.8	+0.3
	comp=Z,9.4nm,0.7s,baz=190,slow=3.0,SNR=15						
BDFB				PP	PP	22 28 55.0	-0.3
	comp=Z,7.4nm,0.9s,baz=356,slow=6.1,SNR=5.0						
BDFB	Brasilia	154.85	24	ePKPbc	PKPbc	22 25 06.2	+0.8
BDFB				ePP	PP	22 28 55.0	-0.3
BDFB	Brasilia	154.85	24	ePKIKP	PKPbc	22 25 06.2	+0.8
BDFB				e		22 28 55.0	
CPUP	Villa Florida	159.08	58	PKPab	PKPab	22 25 38.5	0.0
	comp=Z,6.2nm,0.9s,baz=330,slow=3.6,SNR=6.3						

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*ISCJB **29** 22:09:07.6±0.4, 24°.70N±0°.02×122°.37E±0°.02, h4^{km}±3^{km},*
Error ellipse: s-maj=3.6km s-min=2.1km az=18.6
*TAP **29** 22:09:07.7, 24°.71N×122°.33E, h11^{km}, ML3.7, C*
*JMA **29** 22:09:08.0±0.2, 24°.94N×122°.42E, h18^{km}±4^{km}, M3.4*
ISC 29 22:09:07.9±1.0, **24°.76N**±0°.03×**122°.34E**±0°.02, **h13**^{km}±8^{km},
n89, σ**0ˢ92**/128, **4C-20D, Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1	0.28	223	⇑P	Pg	22 09 13.6	-0.2
	baz=222						
EOS1				S	Sg	22 09 17.7	+0.1
	baz=222						
EGS		0.38	283	⇓iP	Pb	22 09 15.8	-0.6
	baz=290						
EGS				S	Sb	22 09 21.9	-0.3
	baz=290						
TWB1	Santiao Chiao	0.40	308	⇓iP	Pb	22 09 17.0	+0.1
	baz=314						
TWB1				eS	Sb	22 09 21.9	-1.0
	baz=314						
TWC	Suao	0.47	252	⇓iP	Pg	22 09 16.1	-1.1
	baz=265						
TWC				S	Sg	22 09 23.9	+0.5
	baz=265						
NTC	Toucheng	0.47	282	⇓eP	Pb	22 09 17.6	-0.4
	baz=287						
NTC				eS	Sb	22 09 24.7	-0.2
	baz=287						
TIPB	Shuangxi	0.51	295	⇓iP	Pb	22 09 18.8	+0.1
	baz=299						
TIPB				S	Sb	22 09 25.3	-0.8
	baz=299						
ILA	Ilan	0.54	271	eP	Pg	22 09 18.3	-0.1
	baz=274						
NWF	Wu-fen Shan	0.59	302	P	Pn	22 09 20.7	-1.4
	baz=306						
NWF				S	Sn	22 09 30.7	-0.9
	baz=306						
WFSB	Wu-fen Shan	0.59	302	⇓P	Pn	22 09 20.7	-1.3
	baz=305						
WFSB				S	Sn	22 09 30.5	-1.1
	baz=305						
TWE	Neicheng	0.61	267	⇓iP	Pg	22 09 19.2	-0.6
	baz=262						
TWE				S	Sg	22 09 28.7	+0.7
	baz=262						
NANB	Nanao	0.63	239	eP	Pg	22 09 19.1	-1.0
	baz=252						
NANB				eS	Sg	22 09 28.2	-0.2
	baz=252						
JYNG	Yonagunijimaku	0.63	119	P	Pb	22 09 20.8	0.0
JYNG				eS	Sb	22 09 30.3	+0.8
ENA	Nanau	0.64	239	eP	Pg	22 09 19.2	-1.1
	baz=241						
YOJ	Yonaguni jima	0.68	116	⇓eP	Pb	22 09 21.7	+0.1
	baz=103						
YOJ	Yonaguni jima	0.68	116	P	Pb	22 09 21.7	+0.1
YOJ				eS	Sb	22 09 31.5	+0.6
ENTT	Nioudou	0.71	261	⇓P	Pg	22 09 20.9	-0.9
	baz=263						
NWLT	Wulai	0.76	272	eP	Pg	22 09 22.1	-0.5
	baz=268						
TAP1	Taipei	0.79	291	eP	Pn	22 09 24.5	-0.2
	baz=310						
TAP1				eS	Sn	22 09 35.9	-0.5
	baz=310						
TATO	Taipei	0.80	286	⇓P	Pb	22 09 23.8	+0.2
	baz=281						
TATO				eS	Sn	22 09 35.5	-1.2
	baz=281						
YM08	YM08	0.80	302	⇓P	Pn	22 09 24.6	-0.3
	baz=305						
YM08				S	Sn	22 09 35.5	-1.2
	baz=305						
YM11	YM11	0.80	301	⇓eP	Pn	22 09 25.7	+0.7
	baz=303						
YM11				eS	Sn	22 09 37.5	+0.7
	baz=303						
YM05	YM05	0.81	300	⇓P	Pn	22 09 24.9	-0.1

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
	baz=303						
YM05	baz=303			*e*S	Sn	22 09 36.1	-0.8
YM10	YM10 baz=302	0.81	299	⇓P	Pn	22 09 24.9	-0.1
YM10	baz=302			S	Sn	22 09 36.0	-0.9
YM04	YM04 baz=301	0.83	299	⇓P	Pn	22 09 25.2	0.0
YM04	baz=301			*e*S	Sn	22 09 36.1	-1.2
YM03	YM03 baz=302	0.84	300	⇓P	Pn	22 09 24.8	-0.7
TWY	Chenhua baz=310	0.84	308	⇓*e*P	Pn	22 09 25.7	+0.2
TWY	baz=310			S	Sn	22 09 38.4	+0.6
YHNB	Yeheng baz=266	0.88	264	⇓P	Pb	22 09 24.0	-1.0
YHNB	baz=266			*e*S	Sg	22 09 36.7	+0.2
NACB	Ninganchiao baz=230	0.89	229	⇑P	Pb	22 09 23.5	-1.7
NSK	Sanguang baz=266	0.90	265	P	Pb	22 09 24.3	-1.0
NSK	baz=266			*e*S	Sb	22 09 35.9	-1.3
PCYT	Pengchaiyu baz=346	0.90	345	*e*P	Pn	22 09 26.3	+0.1
NTST	Danshui baz=298	0.90	297	*e*P	Pn	22 09 26.3	+0.1
TWS1	Kuangyinshan baz=295	0.90	292	*e*P	Pn	22 09 26.8	+0.5
TWS1	baz=295			*e*S	Sn	22 09 39.4	+0.2
NNSB	Datong baz=251	0.93	250	⇓P	Pb	22 09 24.5	-1.4
NNSB	baz=251			*e*S	Sb	22 09 36.8	-1.4
NNSH	Datong baz=257	0.93	250	*e*P	Pb	22 09 24.5	-1.5
NNS	Nan Shan baz=259	0.93	250	*e*P	Pb	22 09 24.6	-1.4
TWD	Chiawan baz=232	0.96	225	*e*P	Pb	22 09 26.1	-0.2
WLTB	Daxi baz=277	0.99	276	*e*P	Pn	22 09 28.3	+0.8
WLTB	baz=277			*e*S	Sn	22 09 42.4	+1.1
NCU	National Centr baz=283	1.07	282	*e*P	Pg	22 09 29.6	+1.1
NCU	baz=283			*e*S	Sn	22 09 44.5	+1.3
NCUH	Zhongli baz=282	1.07	282	*e*P	Pg	22 09 30.0	+1.5
ENLB	Shoufeng baz=217	1.08	218	*e*P	Pb	22 09 28.5	0.0
WHF	Hehuan Shan baz=238	1.15	238	*e*P	Pn	22 09 28.5	-1.6
TWT	Tachien baz=237	1.17	245	*e*P	Pb	22 09 30.4	+0.3
TDCB	Techi baz=237	1.19	245	*e*P	Pn	22 09 30.4	+0.1
LIOB	Emei baz=266	1.21	265	⇑P	Pg	22 09 31.3	+0.2
LIOB	baz=266			*e*S	Sg	22 09 47.5	+0.6
NSTT	Nanjuang baz=265	1.22	264	P	Pg	22 09 31.3	-0.1
NSTT	baz=265			S	Sn	22 09 47.1	+0.1
SBCB	Hsinchu baz=273	1.23	272	*e*P	Pg	22 09 32.6	+1.0
SBCB	baz=273			S	Sg	22 09 49.0	+1.4
HSN	Hsinchu baz=275	1.24	272	*e*P	Pg	22 09 32.0	+0.2
HSN	baz=275			*e*S	Sg	22 09 48.7	+0.6
ESL	Shilin baz=220	1.25	221	*e*P	Pn	22 09 30.5	-0.6
CHGB	Renai baz=237	1.27	237	*e*P	Pn	22 09 31.1	-0.4
CHGB	baz=237			*e*S	Sg	22 09 49.9	+1.0
IRIF	Iriomote-Funau	1.34	108	P	Pn	22 09 31.6	-0.6
IRIF				*e*S	Sb	22 09 49.9	+0.1
EGFH	Guangfu baz=200	1.37	218	*e*P	Pn	22 09 32.6	0.0
NMLH	Miaoli baz=261	1.43	261	*e*P	Pg	22 09 35.8	+0.5
NMLH	baz=261			*e*S	Sg	22 09 55.0	+1.2
DPDB	Guoxing baz=239	1.48	241	*e*P	Pb	22 09 35.3	+0.1
NSY	Sanyi baz=256	1.48	257	*e*P	Pb	22 09 35.7	+0.5
NSY	baz=256			*e*S	Sg	22 09 56.2	+0.8
HATJ	Hateruma jima	1.51	117	*e*S	Sb	22 09 54.9	+0.1
PTSB	Yuanli baz=256	1.52	259	*e*P	Pg	22 09 37.6	+0.5
SMLT	Sun Moon Lake baz=221	1.57	237	⇑P	Pb	22 09 37.0	+0.1
SSLB	Suanglung baz=239	1.59	233	P	Pn	22 09 36.6	+0.8
SSLB	baz=239			*e*S	Sb	22 09 57.6	+0.5
TYC	Yuchr baz=224	1.60	238	*e*P	Pb	22 09 37.6	+0.4
JKRS	Kuro-shima	1.61	108	P	Pn	22 09 35.9	0.0
JKRS				*e*S	Sn	22 09 56.5	-0.1
TCU	Taichung baz=233	1.63	248	*e*P	Pg	22 09 40.1	+0.8
YULB	Yu-li baz=213	1.66	215	*e*P	Pn	22 09 35.7	-1.0
JIJ	Ishigaki jima	1.69	103	P	Pn	22 09 36.6	-0.5
JIJ				*e*S	Sn	22 09 57.7	-0.9
WJS	Zhushan baz=236	1.74	238	*e*P	Pb	22 09 40.4	+0.7
WNT	Mingjian baz=238	1.75	240	*e*P	Pg	22 09 41.1	-0.3
YUS	Yu-Shan baz=223	1.79	225	⇓P	Pn	22 09 39.7	+0.8
JISG	Ishigakijimahi	1.80	95	P	Pn	22 09 38.3	-0.3
JISG				*e*S	Sb	22 10 02.0	-1.2
FULB	Fuli baz=197	1.82	212	*e*P	Pn	22 09 38.2	-0.7
CHN5	Tsauling baz=213	1.91	233	*e*P	Pb	22 09 42.3	-0.3
WDLH	Douliu baz=254	1.96	237	*e*P	Pb	22 09 43.8	+0.4
ELDTW	Lidau baz=202	1.98	218	*e*P	Pn	22 09 40.9	-0.2
TPUB	Ta-pu baz=211	2.13	227	*e*P	Pn	22 09 45.2	+2.0
STYT	Tauyuan baz=204	2.15	223	*e*P	Pn	22 09 44.4	+1.0
STYT	baz=204			*e*S	Sn	22 10 11.7	+1.7
TWH	Lutao baz=199	2.19	201	*e*P	Pn	22 09 42.8	-1.1
TWGBT	Beinan baz=209	2.25	211	*e*P	Pn	22 09 43.1	-1.7
TWG	Pinlang baz=209	2.25	211	*e*P	Pn	22 09 42.9	-1.9
TWK	Hsinying baz=211	2.25	229	*e*P	Pn	22 09 46.8	+2.0
CHN1	Nanshi baz=225	2.28	227	*e*P	Pb	22 09 47.6	-1.3
SGST	Jiashian baz=206	2.32	224	*e*P	Pn	22 09 47.8	+2.1
ECL	Taimali baz=209	2.50	211	*e*P	Pn	22 09 46.9	-1.3
SSD	Sandimen baz=205	2.54	218	*e*P	Pn	22 09 50.7	+1.9
MATB	Ma-tsu baz=300	2.57	303	*e*P	Pn	22 09 48.6	-0.5
VWUC	VWUC baz=272	2.63	276	*e*P	Pn	22 09 50.0	-0.1
MASBT	Mashibuluo baz=203	2.65	217	*e*P	Pn	22 09 50.5	+0.3
PNG	Penghu baz=242	2.81	246	*e*P	Pn	22 09 54.0	+1.5
PHUB	P’eng-hu baz=241	2.81	244	*e*P	Pn	22 09 53.1	+0.5
SCZT	Fangliau baz=199	2.85	214	*e*P	Pn	22 09 54.3	+1.2
WDGT	Dungji baz=236	2.87	239	*e*P	Pn	22 09 55.3	+2.1
VCHM	Qimei baz=237	3.08	240	*e*P	Pn	22 09 57.1	+1.0

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*ISCJB **29** 22:09:13.4±0.5, 6°.39S±0°.06×147°.97E±0°.07, h51^{km}, mb4.2/13, Error ellipse: s-maj=10.3km s-min=7.8km az=9.3*

*NEIC **29** 22:09:14.7±1.3, 6°.38S×147°.96E, h44^{km}±13^{km}, mb4.4/12, Error ellipse: s-maj=9.9km s-min=9.3km az=148.0*

*IDC **29** 22:09:15.4±2.5, 6°.42S×147°.95E, h50^{km}±23^{km}, mb3.7/7, mb1 4.0/10, mb1mx3.7/49, mbtmp4.1/10, ML3.9/1, MS3.5/1, Ms1 3.5/1, ms1mx3.0/40, Error ellipse: s-maj=29.4km s-min=17.5km az=104.0*

ISC 29 22:09:15.3±0.6, **6°.41S**±0°.07×**147°.95E**±0°.09, **h51**^{km}, **n30**, σ**1ˢ03**/32, **mb4.1**/13, **Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	Port Moresby 23nm,0.3s,baz=9.4,slow=6.7,SNR=26	3.08	195	P	Pn	22 10 02.1	+0.5
PMG	18nm,0.3s,baz=47,slow=23,SNR=5.9			S	Sn	22 10 37.5	+0.3
PMG	Port Moresby	3.08	195	*e*Pn	Pn	22 10 02.0	+0.5
PMG				*e*Sn	Sn	22 10 36.0	-1.1
HNR	Honiara 7.0nm,0.3s,baz=347,slow=2.9,SNR=3.1	12.26	105	P	Pn	22 12 07.5	+0.2
HNR	comp=Z,211nm,19.7s,baz=284,slow=35			LR	LR	22 16 20.8	
FAKI	Fak Fak 57nm,0.8s	16.02	282	*e*Pn	Pn	22 12 54.9	-2.6
MTN	Manton Dam 36nm,1.4s	17.76	248	*e*Pn	P	22 13 20.1	+0.7
WB2	Warramunga Arr 12nm,1.1s	18.85	223	*e*P	P	22 13 31.4	0.0
WR1	Warramunga Arr 5.5nm,0.8s	18.86	223	*e*P	P	22 13 32.1	+0.7
WRA	Warramunga Arr 0.4nm,0.3s,baz=47,slow=12,SNR=13	18.86	223	P	P	22 13 32.1	+0.7
EIDS	Eidsvold 9.1nm,1.1s	19.09	171	*e*P	P	22 13 33.9	-0.1
AS01	Alice Springs	21.81	217	*e*P	P	22 14 03.5	+0.1
AS31	Alice Springs 3.5nm,0.4s	21.84	217	*e*P	P	22 14 04.4	+0.7
ASAR	Alice Springs 5.8nm,0.8s,baz=53,slow=9.6,SNR=50	21.84	217	P	P	22 14 04.3	+0.7
DZM	Mont Dzumac 24nm,1.3s	23.70	133	*e*P	P	22 14 21.4	-1.5
ARMA	Armidale 25nm,1.3s	24.14	172	*e*P	P	22 14 25.0	-1.7
STKA	Stephens Creek 5.7nm,0.8s,baz=334,slow=8.7,SNR=7.5	26.03	192	P	P	22 14 43.3	-0.5
STKA	Stephens Creek 3.3nm,1.3s	26.03	192	*e*P	P	22 14 43.5	-0.3
FORT	Forrest 19nm,0.9s	30.60	215	*e*P	P	22 15 24.6	+0.1
MBWA	Marble Bar 22nm,1.0s	31.00	239	*e*P	P	22 15 28.7	+0.5
MJAR	Matsushiro Arr 0.5nm,0.4s,baz=165,slow=9.5,SNR=3.3	43.69	349	P	P	22 17 13.8	-1.6
MAJO	Matsushiro	43.69	349	*e*P	P	22 17 13.8	-1.6
GSI	Gunungsitoli 7.0nm,0.8s	50.86	277	*e*P	P	22 18 12.8	+1.2
VNDA	Vanda 0.7nm,0.8s,baz=58,slow=7.7,SNR=5.9	71.46	177	P	P	22 20 29.0	-1.0
MK32	Makanchi Array	78.41	320	*e*P	P	22 21 11.2	+0.5
MKAR	Makanchi Array 0.2nm,0.4s,baz=113,slow=6.5,SNR=3.2	78.41	320	P	P	22 21 11.1	+0.5
QSPA	South Pole Qui 2.4nm,0.9s,baz=188,slow=1.2,SNR=7.1	83.56	180	P	P	22 21 38.1	+0.1
ILAR	Eielson Array 0.4nm,0.6s,baz=255,slow=6.2,SNR=2.4	85.48	23	P	P	22 21 49.1	+1.7
ILB	Eielson Array	85.48	23	*e*P	P	22 21 49.1	+1.7
TORD	Torodi Ar. Bea baz=68,slow=3.5	146.10	284	PKPbc	PKPbc	22 28 51.1	+0.2
TOA1	Torodi Ar. Sit	146.10	284	*e*PKPdf	PKPbc	22 28 51.1	+0.2
PTGA	Pitinga 1.5nm,0.3s,baz=320,slow=0.9,SNR=4.1	151.25	103	PKPbc	PKPbc	22 29 04.9	+0.5

JMA 29 22:10:09.9±0.1, **39°.15N**×**142°.41E**, **h33**^{km}±1^{km}, **M3.6**, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	0.58	263	P	Pb	22 10 21.5	-0.3
OFUJ				S	Sb	22 10 29.6	-0.3
MIYJ	Miyakonagasawa	0.62	313	P	Pn	22 10 22.0	-0.4
MIYJ				S	Sb	22 10 30.2	-0.9
JTH	Tanohata	0.89	332	P	Pn	22 10 26.3	+0.1
JOM	Ohasama	0.93	291	P	Pn	22 10 26.8	+0.2
JOM				*e*S	Sn	22 10 39.0	+0.3
JMK	Ichinoseki	0.95	258	P	Pn	22 10 27.0	+0.1
JMK				*e*S	Sn	22 10 39.4	+0.2
JIO	Ouri	1.08	230	P	Pn	22 10 28.4	-0.3
JIO				*e*S	Sn	22 10 41.3	-1.2
JKZ	Kuzumaki	1.18	315	P	Pb	22 10 31.0	-0.8
JKZ				S	Sn	22 10 45.9	+0.8

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*ISK **29** 22:16:34.9, 38°.69N×43°.16E, h9^{km}, ML2.6/5*

*DDA **29** 22:16:35.8, 38°.67N×43°.23E, h7^{km}, Ml2.8*

*CSEM **29** 22:16:35.8±0.2, 38°.70N×43°.20E, h10^{km}, ML2.6, Error ellipse: s-maj=4.4km s-min=3.3km az=133.0*

ISC 29 22:16:35.8±0.9, **38°.72N**±0°.02×**43°.16E**±0°.02, **h10**^{km}±8^{km}, **n32**, σ**1ˢ39**/60, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
VANB	Van	0.22	125	PG	Pg	22 16 40.6	+0.2
VANB				SG	Sg	22 16 44.9	+1.5
VANB	Van	0.22	125	*e*Pg	Pg	22 16 40.6	+0.2
VANB				*e*Sg	Sg	22 16 44.9	+1.5
ERCV	ERCIS-VAN	0.33	25	PG	Pg	22 16 42.4	-0.1
ERCV				SG	Sg	22 16 47.8	+0.9
ERCV	ERCIS-VAN	0.33	25	*e*Pg	Pg	22 16 42.4	-0.1
ERCV				*e*Sg	Sg	22 16 47.8	+0.9
ADCV	BITLIS_Adilcev	0.35	285	*i* P	Pg	22 16 43.7	+0.8
ADCV				*i* S	Sb	22 16 50.6	+0.5
ADCV	BITLIS_Adilcev	0.35	285	P	Pg	22 16 43.7	+0.8
ADCV				S	Sb	22 16 50.6	+0.5
GEVA	Gevas	0.41	191	*i* P	Pg	22 16 43.2	-0.8
GEVA				*i* S	Sg	22 16 49.9	+0.4
GEVA	Gevas	0.41	191	P	Pg	22 16 43.2	-0.8
GEVA				S	Sg	22 16 49.9	+0.4
VMUR	Van-Muradiye	0.42	50	*i* P	Pg	22 16 44.4	+0.3
VMUR				*i* S	Sb	22 16 51.4	-0.6
VMUR	Van-Muradiye	0.42	50	P	Pg	22 16 44.4	+0.3
VMUR				S	Sb	22 16 51.4	-0.6
CLDR	Caldiran	0.73	54	PG	Pg	22 16 49.6	-0.3
CLDR				SG	Sb	22 17 00.3	-0.6
CLDR	Caldiran	0.73	54	*i* P	Pg	22 16 49.3	-0.6
CLDR				*i* S	Sg	22 16 59.6	+0.3
CLDR	Caldiran	0.73	54	P	Pg	22 16 49.3	-0.6
CLDR	Caldiran	0.73	54	*e*Pg	Pg	22 16 49.6	-0.3
CLDR				S	Sg	22 16 59.7	+0.3
CLDR				*e*Sg	Sb	22 17 00.3	-0.6
AGRB	Hanur-Agry	0.86	351	PG	Pg	22 16 52.5	0.0
AGRB				SG	Sg	22 17 05.3	+1.4
AGRB	Hanur-Agry	0.86	351	*e*Pg	Pg	22 16 52.5	0.0
AGRB				*e*Sg	Sg	22 17 05.3	+1.4
GURO	Guroymak-BITLI	0.90	260	PG	Pg	22 16 52.8	-0.4
GURO				SG	Sg	22 17 05.3	+0.4
GURO	Guroymak-BITLI	0.90	260	*e*Pg	Pg	22 16 52.8	-0.4
GURO				*e*Sg	Sg	22 17 05.3	+0.4
EKAR	Karacoban	1.01	302	*i* P	Pn	22 16 57.2	+0.9
EKAR				*i* S	Sn	22 17 15.3	+4.5
EKAR	Karacoban	1.01	302	P	Pn	22 16 57.2	+0.9
SRTM	Siirt_Merkez	1.22	234	*i* P	Pb	22 16 54.8	-4.2
SRTM				*i* S	Sn	22 17 17.2	+1.6
SRTM	Siirt_Merkez	1.22	234	P	Pb	22 16 54.8	-4.2
SRTM				S	Sn	22 17 17.2	+1.6
HAKT	HAKKARI	1.24	159	*i* P	Pb	22 16 58.1	-1.4
HAKT				*i* S	Sn	22 17 19.2	+2.9
HAKT	HAKKARI	1.24	159	P	Pb	22 16 58.1	-1.4
EATA	Eleskirt	1.25	336	*i* P	Pn	22 16 59.2	-0.6
EATA				*i* S	Sn	22 17 17.8	+0.9
EATA	Eleskirt	1.25	336	P	Pn	22 16 59.2	-0.6
EATA				S	Sn	22 17 17.8	+0.9
SIRN	S˜–rnak	1.36	206	*i* P	Pg	22 17 01.4	-0.4
SIRN				*i* S	Sg	22 17 22.0	+2.6
SIRN	S˜–rnak	1.36	206	P	Pg	22 17 01.5	-0.4
SIRN				S	Sg	22 17 22.0	+2.6
SVAN	Silvan-Diyarba	1.64	250	PN	Pn	22 17 04.6	-0.2
SVAN	Silvan-Diyarba	1.64	250	*e*Pn	Pn	22 17 04.6	-0.2
BTMN	Batman	1.70	242	*i* P	Pn	22 17 06.6	+0.9
BTMN				*i* S	Sg	22 17 30.7	+0.2
BTMN	Batman	1.70	242	P	Pn	22 17 06.6	+0.9
BTMN				S	Sg	22 17 30.7	+0.2

MEX 29 22:32:10.0±0.8, **18°.91N**×**102°.32W**, **h43**^{km}±51^{km}, **MD3.9**, **Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMIG	Aquila	1.15	238	*e*P	Pn	22 32 28.6	-1.0
MMIG				*e*S	Sn	22 32 41.7	-2.5
ZIIG	Zihuatanejo	1.53	148	*e*P	Pn	22 32 33.0	-1.9
ZIIG				*e*S	Sn	22 32 51.4	-2.2
ARIG	Puente Sto Nin	1.97	108	*e*P	Pn	22 32 39.5	-1.5
ARIG				*i* S	Sn	22 33 02.3	-2.2
IGIG	Irapuato, Guan	2.06	27	*i* P	Pn	22 32 40.1	-2.2
IGIG				*i* S	Sn	22 33 05.3	-1.6
CJM	Chamela	2.64	283	*e*P	Pn	22 32 48.3	-1.8
CJM				*i* S	Sn	22 33 19.0	-1.9
TLIG	Tlapa	3.81	110	*e*P	Pn	22 33 05.7	-0.6
TLIG				*i* S	Sn	22 33 48.4	-1.6

JMA 29 22:41:52.6±0.1, **39°.16N**×**142°.42E**, **h31**^{km}±1^{km}, **M3.5**, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	Ofunato	0.59	262	P	Pb	22 42 04.2	-0.3
OFUJ				*e*S	Sb	22 42 12.3	-0.4
MIYJ	Miyakonagasawa	0.62	312	P	Pb	22 42 04.7	-0.4
MIYJ				S	Sb	22 42 13.0	-0.7
JTH	Tanohata	0.89	331	P	Pn	22 42 08.6	-0.4
JTH				*e*S	Sb	22 42 21.0	-0.1
JOM	Ohasama	0.93	290	P	Pn	22 42 09.7	+0.2
JOM				*e*S	Sn	22 42 21.9	+0.1
JMK	Ichinoseki	0.96	258	P	Pn	22 42 09.9	0.0
JMK				*e*S	Sn	22 42 22.1	-0.4
JIO	Ouri	1.09	230	P	Pn	22 42 11.0	-0.8
JIO				*e*S	Sn	22 42 24.2	-1.6
JKZ	Kuzumaki	1.18	315	P	Pn	22 42 13.3	+0.3
JKZ				*e*S	Sb	22 42 28.8	-0.6
JANG	Nango	1.40	330	P	Pn	22 42 16.5	+0.5
JANG				*e*S	Sn	22 42 34.3	+0.9
JRG	Rokugo	1.41	280	P	Pn	22 42 17.1	+1.0
JRG				*e*S	Sb	22 42 35.9	+0.1

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*NEIC **29** 23:10:30.9±0.4, 16°.06N×97°.74W, h10^{km}, mb4.4/118, MW4.2, MD4.2(MEX), Error ellipse: s-maj=6.4km s-min=3.8km az=173.0, Moment Tensor Solution. s7 Moment tensor: Scale 10^{15}Nm; M$_{rr}$-1.05; M$_{\theta\theta}$1.46; M$_{\phi\phi}$-0.41; M$_{r\theta}$1.95; M$_{\theta\phi}$1.33; M$_{\phi r}$-0.92; Best double couple: M$_{0}$2.90000×10^{15} NP1:ϕ_s280.00000°, δ77.00000°, λ-54.00000°. NP2:ϕ_s28.00000°, δ38.00000°, λ-158.00000°. Principal axes: T 2.7200, Plg23.0000°, Azm344.0000°; N 0.2500, Plg35.0000°, Azm91.0000°; P -2.9700, Plg46.0000°, Azm227.0000°;*

NEIC Felt at Puebla.

*MEX **29** 23:10:35.0±0.5, 16°.26N×98°.09W, h4^{km}±3^{km}, MD4.1*

*IDC **29** 23:10:38.1±4.1, 16°.34N×97°.89W, h44^{km}±31^{km}, mb3.6/8, mb1 3.9/11, mb1mx3.7/49, mbtmp3.9/11, ML3.6/3, MS3.4/4, Ms1 3.4/4, ms1mx3.0/44, Error ellipse: s-maj=47.1km s-min=19.9km az=17.0*

ISC 29 23:10:33.8±1.1, **16°.28N**±0°.06×**98°.05W**±0°.05, **h15**^{km}±6^{km}, **n422**, σ**1ˢ30**/424, **mb4.5**/103, **Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	Pinotepa	0.13	324	*i* P	Pg	23 10 37.4	-0.1
PNIG				*e*S	Sg	23 10 40.1	+0.2
TLIG	Tlapa	1.37	339	*e*P	Pn	23 10 57.2	-1.3
TLIG				*e*S	Sg	23 11 14.5	-3.5
TLIG	Tlapa	1.37	339	*e*Pn	Pn	23 10 57.3	-1.2
HUIG	Huatulco	1.93	105	*e*P	Pn	23 11 05.8	-0.3
HUIG				*i* S	Sn	23 11 29.8	-0.4
TPIG	Tehuac#an	2.22	17	*e*P	Pn	23 11 10.1	-0.2
TPIG				*i* S	Sn	23 11 36.5	-1.1
CAIG	El Cayaco	2.26	290	*e*P	Pn	23 11 09.3	-1.4
CAIG				*i* S	Sn	23 11 36.8	-1.6
PLIG	Platanillo	2.52	327	*e*P	Pn	23 11 14.0	-0.3
PLIG				*i* S	Sn	23 11 44.1	-0.7
CMIG	Matias Romero 17nm,0.3s,baz=253,slow=11,SNR=178	3.13	75	P	Pn	23 11 21.2	-1.5
CMIG	51nm,0.3s,baz=310,slow=7.2,SNR=8.0			S	Sn	23 11 58.3	-1.6
CMIG	comp=Z,129nm,18.6s,baz=208,slow=31			LR	LR	23 12 09.2	
UNM	Universidad Na	3.21	341	*e*Pn	Pn	23 11 26.4	+2.3
MOIG	Morelia	4.51	319	*e*Pn	Pn	23 11 47.1	+5.2
833A	Chaparral WMA, baz=173	12.05	354	P	Pn	23 13 26.8	+1.8
833A	Chaparral WMA,	12.05	354	*e*Pn	Pn	23 13 26.0	+1.0
HKT	Hockley	13.75	8	*e*Pn	Pn	23 13 49.2	+1.0
TXAR	Lajitas Array 0.1nm,0.3s,baz=153,slow=12,SNR=6.1	13.98	339	P	Pn	23 13 54.1	+2.6
TXAR	comp=Z,208nm,21.4s,baz=0.0,slow=41			LR	LR	23 20 06.4	
TX31	Lajitas Ar. Si	13.98	339	*e*Pn	Pn	23 13 53.1	+1.6
JTS	JuntasAbangare 0.2nm,0.3s,baz=75,slow=5.5,SNR=3.1	14.06	113	P	Pn	23 13 53.1	+0.5
JCT	Junction City baz=172	14.22	354	P	P	23 14 02.3	+0.1
JCT	Junction City 10nm,0.8s	14.22	354	*e*Pn	Pn	23 13 55.1	+0.3
435B	Jarrell baz=181	14.44	2	P	P	23 14 04.1	-0.4
441A	DeRidder baz=197	15.07	16	P	Pn	23 14 10.9	+4.6
341A	Kurthwood baz=196	15.63	16	P	Pn	23 14 16.6	+3.0
WHTX	Lake Whitney, baz=181	15.65	2	P	Pn	23 14 14.8	+0.9
WHTX	Lake Whitney, 20nm,0.8s	15.65	2	*e*Pn	Pn	23 14 14.2	+0.3
NATX	Nacogdoches baz=191	15.71	11	P	Pn	23 14 18.6	+3.9
NATX	Nacogdoches 18nm,0.8s	15.71	11	*e*Pn	Pn	23 14 13.8	-0.9
342A	Flagon Creek P baz=199	15.90	18	P	Pn	23 14 19.9	+2.8
240A	Hunter Patters 20nm,0.8s	16.16	13	*e*Pn	Pn	23 14 19.9	-0.6
ABTX	Abilene, Hawle baz=174,SNR=19	16.33	355	P	Pn	23 14 24.5	+1.8
ABTX	Abilene, Hawle 38nm,0.9s	16.33	355	*e*Pn	Pn	23 14 25.2	+2.5
344A	Westbrook Farm baz=204	16.51	23	P	Pn	23 14 26.7	+1.8
MNTX	Cornudas Mount baz=154	16.74	338	P	Pn	23 14 30.2	+2.4
MNTX	Cornudas Mount 5.0nm,1.1s	16.74	338	*e*Pn	Pn	23 14 28.7	+0.9
447A	Lucedale baz=211	16.80	29	P	Pn	23 14 28.6	0.0
141A	Papa Simpson, baz=196	16.91	15	P	Pn	23 14 30.6	+0.7
244A	Avery, Jackson baz=204	17.05	22	P	Pn	23 14 31.2	-0.6
Z40A	Long Farm, Mag baz=194	17.41	13	P	Pn	23 14 37.1	+0.9
143A	Socs Landing, baz=200	17.42	19	P	Pn	23 14 37.3	+1.0
Z41A	Richland Creek baz=196	17.55	15	P	Pn	23 14 38.2	+0.3
MSTX	Muleshoe baz=165	18.12	347	P	Pn	23 14 45.2	+0.1
MSTX	Muleshoe 7.6nm,0.8s	18.12	347	*e*P	Pn	23 14 44.4	-0.7
146A	Union baz=207	18.20	25	P	Pn	23 14 45.5	-0.5
WMOK	Wichita Mounta 8.8nm,1.2s	18.39	358	*e*P	Pn	23 14 46.7	-1.6
121A	Cookes Peak, D baz=149	18.43	333	P	Pn	23 14 50.5	+1.5
X39A	Fountain Ranch baz=191	18.49	10	P	P	23 14 49.2	-0.2

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249A  Camden            18.51  30  P   P  23 14 48.3 -1.2
      baz=214
Z45A  Winona            18.61  22  P   P  23 14 49.5 -1.1
      baz=205
MIAR  Mount Ida         18.62  12  P   P  23 14 50.6 -0.2
      baz=192
MIAR  Mount Ida         18.62  12 eP   P  23 14 49.5 -1.3
X40A  Basin Creek Fa    18.72  14  P   P  23 14 51.9  0.0
      baz=195
AMTX  Amarillo          18.81 351  P   P  23 14 54.1 +1.2
      baz=168
AMTX  Amarillo          18.81 351 eP   P  23 14 54.0 +1.0
      23nm,1.0s
Y44A  Strider, Charl    18.96  20  P   P  23 14 54.0 -0.5
      baz=203
Z47A  Carrollton        19.10  26  P   P  23 14 55.0 -1.1
      baz=209
Y45A  Yeager Farm, C    19.11  22  P   P  23 14 55.5 -0.6
      baz=204
UALR  University of     19.11  14 eP   P  23 14 55.7 -0.5
      12nm,1.2s
149A  Jones             19.18  30  P   P  23 14 55.7 -1.2
      baz=214
W39A  Magazine          19.22  11  P   P  23 14 57.0 -0.3
      baz=192
W39A  Magazine          19.22  11 eP   P  23 14 57.4 +0.1
      45nm,1.6s
X43A  Marvell           19.26  18  P   P  23 14 56.3 -1.5
      baz=200
X43A  Marvell           19.26  18 eP   P  23 14 57.5 -0.4
      24nm,0.9s
W40A  Ferguson Farm,    19.35  12  P   P  23 14 58.7 -0.1
      baz=194
Y46A  Houston           19.38  24  P   P  23 14 58.0 -1.1
      baz=206,SNR=8.9
BNM   Barren Site       19.39 338 eP   P  23 15 01.6 +2.1
LRAL  Lakeview Retre    19.44  29  P   P  23 14 58.2 -1.6
      baz=212
LRAL  Lakeview Retre    19.44  29 eP   P  23 14 58.9 -0.9
      5.0nm,0.7s
Z48A  Northport         19.48  27  P   P  23 14 59.3 -0.9
      baz=210
251A  Midway            19.48  34  P   P  23 14 58.6 -1.7
      baz=218
W41B  Gary Mavity, V    19.52  14  P   P  23 15 00.2 -0.4
      baz=196
W41B  Gary Mavity, V    19.52  14 eP   P  23 14 59.9 -0.6
      10.0nm,1.1s
LENM  Lemitar           19.53 337 eP   P  23 15 02.4 +1.3
150A  Eclectic          19.57  32  P   P  23 15 00.1 -1.1
      baz=216
353A  Camilla           19.59  38  P   P  23 14 60.0 -1.5
      baz=222
WHAR  Wooly Hollow      19.62  14 eP   P  23 15 01.9 +0.2
      16nm,1.2s
TUL1  Leonard           19.65   5  P   P  23 15 00.4 -1.7
      baz=186
TUL1  Leonard           19.65   5 eP   P  23 15 00.8 -1.3
      44nm,1.3s
TUC   Tucson            19.70 326  P   P  23 15 04.6 +1.8
      baz=141
TUC   Tucson            19.70 326 eP   P  23 15 04.9 +2.2
      2.8nm,0.8s
OXF   Oxford            19.74  22  P   P  23 15 02.0 -1.0
      baz=204
OXF   Oxford            19.74  22 eP   P  23 15 01.0 -2.0
      15nm,0.9s
Z49A  Columbiana        19.79  30  P   P  23 15 02.4 -1.3
      baz=213
Y47A  UCPARC, Winfie    19.80  26  P   P  23 15 02.6 -1.1
      baz=209
LAZ   Ladron            19.81 337 eP   P  23 15 04.2 +0.2
151A  Opelika           19.86  33  P   P  23 15 02.6 -1.8
      baz=217
V39A  Pettigrew         19.87  11  P   P  23 15 04.0 -0.5
      baz=192,SNR=16
455A  Stateville        19.89  41  P   P  23 15 01.9 -2.8
      baz=226
V40A  Witts Springs     19.99  12  P   P  23 15 05.3 -0.6
      baz=194,SNR=6.7
V40A  Witts Springs     19.99  12 eP   P  23 15 05.0 -0.9
      10nm,0.6s
ANMO  Albuquerque       20.05 339  P   P  23 15 07.9 +1.2
      7.0nm,1.1s,baz=145,slow=12,SNR=9.9
ANMO                              LR  LR  23 23 32.2
      comp=Z,469nm,18.3s,baz=154,slow=39
ANMO  Albuquerque       20.05 339  P   P  23 15 07.5 +0.8
      baz=155
ANMO  Albuquerque       20.05 339 eP   P  23 15 08.0 +1.2
      8.9nm,1.1s
X46A  Booneville        20.08  23  P   P  23 15 06.2 -0.6
      baz=206,SNR=9.5
Y48A  Jasper            20.10  27  P   P  23 15 05.6 -1.4
      baz=211
V41A  Mountainview      20.12  14  P   P  23 15 06.7 -0.5
      baz=196
Z50A  Ashland           20.14  31  P   P  23 15 05.7 -1.7
      baz=215
152A  Waverly Hall      20.29  34  P   P  23 15 07.4 -1.7
      baz=218
V42A  Cord              20.33  16  P   P  23 15 08.9 -0.6
      baz=198
X47A  Russelville       20.33  25  P   P  23 15 08.1 -1.4
      baz=208
Y49A  Blount Mountai    20.40  29  P   P  23 15 08.8 -1.5
      baz=213
Y49A  Blount Mountai    20.40  29 eP   P  23 15 08.9 -1.3
      14nm,0.7s
W45A  Hickory Valley    20.40  21  P   P  23 15 09.2 -1.1
      baz=204
U39A  Green Forest      20.43  11  P   P  23 15 10.2 -0.4
      baz=192,SNR=11
U40A  Yellville         20.52  12  P   P  23 15 11.3 -0.2
      baz=193,SNR=8.9
254A  Abbeville         20.57  38  P   P  23 15 09.7 -2.4
      baz=223
214A  Organ Pipe Nat    20.58 322  P   P  23 15 13.9 +1.6
      baz=136
X48A  Hartselle         20.61  27  P   P  23 15 11.0 -1.5
      baz=210
X48A  Hartselle         20.61  27 eP   P  23 15 11.2 -1.3
      8.8nm,0.6s
PLAL  Pickwick Lake     20.65  24 eP   P  23 15 11.5 -1.5
      12nm,0.9s
U41A  Viola             20.71  14  P   P  23 15 13.1 -0.5
      baz=196
Y50A  Piedmont          20.74  30  P   P  23 15 12.3 -1.7
      baz=214
Z52A  Williamson        20.86  34  P   P  23 15 13.1 -2.1
      baz=218
GNAR  Gosnell           20.87  19 eP   P  23 15 15.6 +0.4
      61nm,1.1s
U42A  Revenden          20.88  16  P   P  23 15 14.8 -0.7
      baz=198,SNR=7.0
T38A  Diamond           20.94   8  P   P  23 15 16.7 +0.7
      baz=189,SNR=9.5
X49A  Woodville         20.98  28  P   P  23 15 15.3 -1.3
      baz=212
V45A  Humboldt          21.00  21  P   P  23 15 15.9 -0.9
      baz=204
T39A  Clever            21.07  10  P   P  23 15 17.3 -0.2
      baz=192
W47A  Westpoint         21.08  24  P   P  23 15 16.8 -0.8
      baz=208
Y51A  Rockmart          21.08  31  P   P  23 15 15.9 -1.7
      baz=216
154A  Montrose          21.15  37  P   P  23 15 16.1 -2.3
      baz=222
W48A  Pulaski           21.25  26  P   P  23 15 17.8 -1.6
      baz=210,SNR=6.3
X50B  Fort Payne        21.25  29  P   P  23 15 17.9 -1.6
      baz=214
T40A  Mansfield         21.35  12  P   P  23 15 19.4 -1.1
      baz=194,SNR=5.5
V46A  Holladay          21.36  23  P   P  23 15 19.2 -1.4
      baz=206,SNR=7.7
Z53A  Monticello        21.38  35  P   P  23 15 18.9 -2.0
      baz=220
T41A  Mountain View     21.41  14  P   P  23 15 20.5 -0.7
      baz=196
W18A  Petrified Fore    21.48 333 eP   P  23 15 23.4 +1.3
      8.8nm,1.1s
PBMO  Poplar Bluff      21.50  17 eP   P  23 15 22.7 +0.6
      17nm,0.6s
W49A  Belvidere         21.52  27  P   P  23 15 21.0 -1.3
      baz=211
T25A  Trinidad          21.52 346  P   P  23 15 23.5 +0.9
      baz=163,SNR=27
T25A  Trinidad          21.52 346 eP   P  23 15 24.0 +1.4
      30nm,0.9s
155A  Kite              21.54  38  P   P  23 15 19.8 -2.7
      baz=224
GOGA  Godfrey           21.54  35  P   P  23 15 20.3 -2.3
      baz=220,SNR=5.4
GOGA  Godfrey           21.54  35 eP   P  23 15 20.8 -1.8
      18nm,0.7s
T42A  Van Buren         21.56  15  P   P  23 15 22.2 -0.5
      baz=197,SNR=7.0
T42A  Van Buren         21.56  15 eP   P  23 15 23.1 +0.4
      11nm,0.8s
Y52A  Lilburn           21.56  33  P   P  23 15 21.0 -1.9
      baz=218,SNR=7.2
Y52A  Lilburn           21.56  33 eP   P  23 15 21.1 -1.7
      29nm,0.8s
S38A  Stockton          21.58   9  P   P  23 15 23.2 +0.3
      baz=190
UTMT  University of     21.58  20 eP   P  23 15 23.6 +0.6
      113nm,1.1s
V47A  Nunnelly          21.61  24  P   P  23 15 21.9 -1.3
      baz=207,SNR=10
X51A  Calhoun           21.71  31  P   P  23 15 22.7 -1.7
      baz=215
S39A  Bolivar           21.73  10  P   P  23 15 23.9 -0.6
      baz=191,SNR=5.5
S39A  Bolivar           21.73  10 eP   P  23 15 22.9 -1.7
      11nm,1.0s
SWET  Sewanee           21.75  28 eP   P  23 15 23.6 -1.3
      18nm,0.8s
WVT   Waverly           21.76  23  P   P  23 15 23.6 -1.3
      baz=206
WVT   Waverly           21.76  23 eP   P  23 15 23.0 -1.9
      15nm,0.9s
Z54A  Sparta            21.76  36  P   P  23 15 22.6 -2.4
      baz=222
S40A  Lebanon           21.79  12  P   P  23 15 24.4 -0.8
      baz=194,SNR=9.5
V48A  Smith Brothers    21.81  25  P   P  23 15 23.7 -1.8
      baz=209,SNR=12
V48A  Smith Brothers    21.81  25 eP   P  23 15 24.0 -1.4
      16nm,0.8s
Y53A  Monroe            21.81  34  P   P  23 15 23.2 -2.3
      baz=219
T43A  Greenville        21.83  17  P   P  23 15 24.2 -1.4
      baz=199,SNR=5.9
S41A  Jillco Farms,     21.94  13  P   P  23 15 26.1 -0.7
      baz=195,SNR=11
W50A  Signal Mountai    22.02  29  P   P  23 15 25.8 -1.9
      baz=213,SNR=7.4
W50A  Signal Mountai    22.02  29 eP   P  23 15 25.7 -1.9
      27nm,1.0s
R38A  Fenwick Farm,     22.12   9  P   P  23 15 28.2 -0.6
      baz=190
V49A  McMinnville       22.22  27  P   P  23 15 28.2 -1.7
      baz=211
X52A  Dahlonega         22.23  32  P   P  23 15 27.5 -2.4
      baz=217
U47A  Clarksville       22.24  23  P   P  23 15 28.8 -1.2
      baz=207
W51A  Cleveland         22.24  30  P   P  23 15 27.9 -2.2
      baz=215
Y54A  Tignall           22.31  35  P   P  23 15 28.1 -2.7
      baz=221,SNR=5.6
S42A  Caledonia         22.34  15  P   P  23 15 30.8 -0.3
      baz=198,SNR=5.2
SDCO  Great Sand Dun    22.37 344  P   P  23 15 32.0 +0.3
      baz=160,SNR=11
SDCO  Great Sand Dun    22.37 344 eP   P  23 15 32.3 +0.5
      4.2nm,0.7s
R39A  Chumby, Stover    22.38  10  P   P  23 15 31.5 -0.1
      baz=192
X53A  Estanollee        22.46  33  P   P  23 15 30.2 -2.2
      baz=219
CCM   Cathedral Cave    22.50  14  P   P  23 15 32.7 -0.1
      baz=196
CCM   Cathedral Cave    22.50  14 eP   P  23 15 32.8 -0.1
      10nm,0.8s
V50A  Pikevile          22.50  28  P   P  23 15 31.1 -1.7
      baz=213
R40A  Maddies Statio    22.50  12  P   P  23 15 32.3 -0.6
      baz=194,SNR=9.6
R40A  Maddies Statio    22.50  12 eP   P  23 15 32.0 -0.8
      11nm,0.7s
T46A  Princeton         22.55  22  P   P  23 15 32.0 -1.3
      baz=205
WUAZ  Wupatki           22.55 331  P   P  23 15 34.8 +1.2
      baz=144
WUAZ  Wupatki           22.55 331 eP   P  23 15 34.5 +0.8
      12nm,0.9s
GLA   Glamis            22.56 321 eP   P  23 15 35.2 +1.6
      7.7nm,1.0s
CPCT  Cooper Cave       22.59  30 eP   P  23 15 31.7 -2.1
      8.4nm,0.7s
U48A  Cassie Pea, Po    22.59  25  P   P  23 15 32.4 -1.4
      baz=209
W52A  Murphy            22.59  31  P   P  23 15 31.9 -2.0
      baz=216
FVM   French Village    22.64  16 eP   P  23 15 33.2 -1.1
      7.8nm,0.9s
S44A  Carbondale        22.70  18  P   P  23 15 34.1 -0.8
      baz=201
R41A  Rosebud           22.70  14  P   P  23 15 34.4 -0.5
      baz=196
SIUC  Southern Illin    22.73  18 eP   P  23 15 33.9 -1.3
      29nm,1.1s
Q37A  Longview Farm,    22.73   7  P   P  23 15 35.3 +0.1
      baz=188
S22A  4UR Ranch, Cre    22.74 342  P   P  23 15 36.6 +0.9
      baz=157,SNR=13
S22A  4UR Ranch, Cre    22.74 342 eP   P  23 15 36.8 +1.1
      5.5nm,0.8s
KSU1  Kansas State U    22.77   3  P   P  23 15 35.9 +0.2
      baz=183
KSU1  Kansas State U    22.77   3 eP   P  23 15 35.5 -0.1
      14nm,0.7s
T47A  Sharon Grove      22.79  23  P   P  23 15 34.9 -1.0
      baz=207
T47A  Sharon Grove      22.79  23 eP   P  23 15 34.0 -1.8
      25nm,1.3s
MVCO  Mesa Verde        22.81 338  P   P  23 15 37.1 +0.8
      baz=153,SNR=8.0
MVCO  Mesa Verde        22.81 338 eP   P  23 15 37.1 +0.8
      17nm,1.0s
R42A  Luebbering        22.82  15  P   P  23 15 35.9 -0.3
      baz=197
S45A  Carrier Mills     22.89  20  P   P  23 15 36.0 -0.9
      baz=203,SNR=6.3
U49A  Red Boiling Sp    22.91  26  P   P  23 15 35.8 -1.3
      baz=211,SNR=9.1
Q38A  Cooks Store, C    22.92   9  P   P  23 15 36.8 -0.5
      baz=190
V51A  Loudon            22.96  30  P   P  23 15 36.0 -1.7
      baz=215
V51A  Loudon            22.96  30 eP   P  23 15 36.1 -1.6
      30nm,1.5s
KSCO  Kaye Shedlock'    23.00 351  P   P  23 15 39.0 +0.8
      baz=168
BG3   Lake Jocassee     23.03  33 eP   P  23 15 36.8 -1.6
      12nm,0.7s
R43A  Red Bud           23.04  16  P   P  23 15 38.0 -0.5
      baz=199,SNR=6.5
W53A  Cullowhee         23.04  33  P   P  23 15 36.8 -2.0
      baz=218,SNR=5.8
TKL   Tuckaleechee C    23.12  31  P   P  23 15 38.5 -0.9
      3.0nm,0.8s,baz=312,slow=2.8,SNR=3.8
TKL   Tuckaleechee C    23.12  31 eP   P  23 15 37.6 -1.7
      15nm,1.1s
T48A  Bowling Green     23.17  24  P   P  23 15 38.3 -1.5
      baz=208
Q40A  Laux Farm, Aux    23.22  12  P   P  23 15 39.9 -0.5
      baz=194
U50A  Jamestown         23.23  28  P   P  23 15 39.2 -1.3
      baz=213
CSU   Charleston Sou    23.25  41 eP   P  23 15 38.6 -2.0
R44A  Waltonville       23.26  18  P   P  23 15 40.4 -0.3
      baz=201
BC3   Big Chuckawall    23.35 321  P   P  23 15 43.5 +1.6
      baz=134
Q41A  Truxton           23.36  13  P   P  23 15 41.4 -0.4
      baz=196,SNR=6.7
S47A  Hartford          23.41  23  P   P  23 15 40.9 -1.3
      baz=207
JSC   Jenkinsville      23.42  37 eP   P  23 15 40.4 -2.0
      11nm,0.9s
Q24A  Divide            23.44 346 eP   P  23 15 43.6 +0.7
      9.6nm,1.1s
USIN  University of     23.46  21 eP   P  23 15 42.0 -0.7
      37nm,1.0s
Q42A  Golden Eagle      23.49  15  P   P  23 15 42.4 -0.6
      baz=197
T49A  Edmonton          23.51  26  P   P  23 15 41.8 -1.5
      baz=210
IRM   Iron Mountain     23.52 322  P   P  23 15 44.3 +0.8
      baz=135
R45A  Skylar, Fairfi    23.55  20  P   P  23 15 43.2 -0.3
      baz=203
P39B  Salisbury         23.58  10  P   P  23 15 43.2 -0.6
      baz=192,SNR=5.5
U51A  La Follette       23.58  29  P   P  23 15 42.2 -1.8
      baz=215
P38A  Dawn              23.59   9  P   P  23 15 43.5 -0.4
      baz=190,SNR=7.8
P38A  Dawn              23.59   9 eP   P  23 15 42.8 -1.1
      18nm,1.1s
V53A  Saluda            23.61  32  P   P  23 15 42.4 -1.9
      baz=218
V53A  Saluda            23.61  32 eP   P  23 15 43.3 -1.0
      12nm,1.2s
PV01  Paradox Valley    23.66 339 eP   P  23 15 45.8 +0.8
Q43A  New Douglas       23.73  16  P   P  23 15 44.3 -1.0
      baz=199
R46A  Gibon Southern    23.73  21  P   P  23 15 44.8 -0.6
      baz=205
T50A  Nancy             23.74  27  P   P  23 15 43.8 -1.7
      baz=212
P40A  Paris             23.75  12  P   P  23 15 44.7 -0.8
      baz=194,SNR=8.9
P40A  Paris             23.75  12 eP   P  23 15 44.0 -1.5
      17nm,0.9s
PV13  Radium Mtn., P    23.77 339 eP   P  23 15 46.8 +0.8
      11nm,1.0s
S48A  Wiedeman Farm,    23.78  24  P   P  23 15 44.1 -1.7
      baz=209
PV05  Paradox Valley    23.79 338 eP   P  23 15 46.8 +0.5
U52A  Thorn Hill        23.90  30  P   P  23 15 44.9 -2.2
      baz=216
BELC  Belle Mtn. Jos    23.92 321  P   P  23 15 48.2 +0.8
      baz=133
PV17  East Wray Mesa    23.92 338 eP   P  23 15 48.3 +0.8
      6.2nm,0.7s
TZTN  Tazewell          23.94  30  P   P  23 15 45.5 -1.9
      baz=215
TZTN  Tazewell          23.94  30 eP   P  23 15 45.8 -1.6
      8.8nm,1.0s
PV20  West Nyswonger    23.98 338 eP   P  23 15 48.1 +0.1
      4.4nm,0.8s
KMSC  Kings Mountain    24.00  35  P   P  23 15 45.6 -2.5
      baz=222
PV10  Paradox Valley    24.04 338 eP   P  23 15 48.3 -0.3
O38A  Galt              24.08   9  P   P  23 15 48.0 -0.7
      baz=190
P41A  Barry, Barry      24.09  13  P   P  23 15 47.7 -1.0
      baz=196
T51A  Gray              24.09  29  P   P  23 15 47.5 -1.4
      baz=214
SMCO  Snowmass          24.11 343 eP   P  23 15 50.6 +1.1
      17nm,1.3s
Q45A  Warren Harvey,    24.14  19  P   P  23 15 47.8 -1.4
      baz=203
R47A  Wooly Knot Far    24.16  23  P   P  23 15 48.0 -1.4
      baz=207,SNR=9.0
P42A  Winchester        24.17  15  P   P  23 15 48.7 -0.8
      baz=197,SNR=8.8
P42A  Winchester        24.17  15 eP   P  23 15 48.2 -1.3
      24nm,1.0s
PV09  Paradox Valley    24.18 338 eP   P  23 15 51.4 +1.4
PV21  Cone Mtn., Par    24.18 339 eP   P  23 15 51.4 +1.4
      6.9nm,0.9s
WCI   Wyandotte Cave    24.18  23  P   P  23 15 48.7 -1.0
      baz=208
WCI   Wyandotte Cave    24.18  23 eP   P  23 15 49.0 -0.7
      14nm,0.8s
S49A  Springfield       24.20  25  P   P  23 15 48.0 -1.8
      baz=210
ISCO  Idaho Springs     24.34 346  P   P  23 15 51.9 +0.4
      baz=162,SNR=29
ISCO  Idaho Springs     24.34 346 eP   P  23 15 51.9 +0.4
      14nm,0.8s
O40A  La Belle          24.35  12  P   P  23 15 50.5 -0.7
      baz=194,SNR=6.1
P43A  Skaggs, Pawnee    24.43  16  P   P  23 15 51.2 -0.7
      baz=199
S50A  Richmond          24.48  27  P   P  23 15 50.6 -1.8
      baz=212
R48A  Northridge Ran    24.49  24  P   P  23 15 51.4 -1.1
      baz=208
P44A  Sand Creek, Wi    24.52  18  P   P  23 15 51.7 -1.1
      baz=201
O41A  Passleys Farm,    24.55  13  P   P  23 15 51.8 -1.1
      baz=196,SNR=10
N37A  Lee Faris, Mou    24.61   7 eP   P  23 15 52.4 -1.2
      18nm,1.1s
T52A  Hallie            24.66  30  P   P  23 15 52.0 -2.0
      baz=216
R49A  Shelbyville       24.68  25  P   P  23 15 52.7 -1.5
      baz=210
Q47A  Bedord North L    24.76  22  P   P  23 15 53.6 -1.3
      baz=207
N38A  Joes South For    24.78   9  P   P  23 15 54.2 -0.9
      baz=190,SNR=7.5
S51A  Beattyville       24.80  28  P   P  23 15 53.9 -1.5
      baz=214
S51A  Beattyville       24.80  28 eP   P  23 15 54.3 -1.0
      11nm,0.8s
P45A  Graceland, Par    24.84  19  P   P  23 15 54.5 -1.2
      baz=203
P45A  Graceland, Par    24.84  19 eP   P  23 15 54.5 -1.2
      9.7nm,0.7s
TUQ   Turquoise Moun    24.88 323  P   P  23 15 56.9 +0.7
      baz=135
N39A  Derby Farms, D    24.97  10  P   P  23 15 55.9 -0.9
      baz=192,SNR=5.1
N39A  Derby Farms, D    24.97  10 eP   P  23 15 56.1 -0.7
      22nm,0.7s
MTPU  Mount Pierson     25.00 333 eP   P  23 15 59.2 +1.7
      11nm,0.8s
Q48A  North Vernon      25.01  23  P   P  23 15 55.5 -1.6
      baz=208
R50A  Paris             25.02  26  P   P  23 15 55.8 -1.4
      baz=212
S52A  Salyersville      25.07  29  P   P  23 15 55.8 -2.0
      baz=215
P46A  Rosedale          25.10  20  P   P  23 15 56.5 -1.5
      baz=204
N41A  Harden Midland    25.12  13  P   P  23 15 57.1 -1.1
      baz=196
N41A  Harden Midland    25.12  13 eP   P  23 15 56.6 -1.5
      9.3nm,0.7s
N40A  Mertquake, Sal    25.14  12  P   P  23 15 57.5 -0.8
      baz=194
SRU   San Rafael Swe    25.23 337 eP   P  23 16 01.2 +1.8
      6.7nm,0.8s
SHPR  Sheep Range       25.23 326 eP   P  23 16 00.4 +1.0
      6.0nm,1.5s
M36A  Felix, Anita      25.24   6  P   P  23 15 58.7 -0.5
      baz=187
M37A  Trindle Farm,     25.27   7  P   P  23 15 59.0 -0.4
      baz=188,SNR=8.5
P47A  Martinsville      25.30  22  P   P  23 15 58.8 -1.0
      baz=206
R51A  Hillsboro         25.35  27  P   P  23 15 58.8 -1.4
      baz=213
O20A  White River Ci    25.37 342  P   P  23 16 00.9 +0.3
      baz=156,SNR=5.3
O20A  White River Ci    25.37 342 eP   P  23 16 01.5 +0.9
      14nm,0.9s
MSU   Marysvale         25.39 333 eP   P  23 16 01.8 +0.9
M38A  Pleasantville     25.39   9  P   P  23 15 59.9 -0.6
      baz=190,SNR=12
Q49A  Aurora            25.40  24  P   P  23 15 59.2 -1.5
      baz=210
N23A  Red Feather La    25.46 346  P   P  23 16 02.1 +0.5
      baz=162,SNR=14
P48A  Milroy            25.59  23  P   P  23 16 01.0 -1.4
      baz=208
P17A  Butcher Ranch,    25.63 337 eP   P  23 16 04.1 +1.1
      4.9nm,1.0s
Q50A  Georgetown        25.64  26  P   P  23 16 01.4 -1.5
      baz=212
TMUT  Trail Mountain    25.66 336 eP   P  23 16 03.6 +0.3
      3.3nm,0.7s
M40A  Post Highland     25.66  11  P   P  23 16 02.2 -0.9
      baz=194
SNCC  San Nicolas Is    25.71 315 eP   P  23 16 04.2 +0.6
      37nm,0.8s
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SFIN	Lafayette	25.82	19	P	P	23 16 03.6	-1.0
	baz=204						
SFIN	Lafayette	25.82	19	eP	P	23 16 03.4	-1.1
	20nm,1.0s						
M41A	Milan	25.83	13	P	P	23 16 03.6	-0.9
	baz=196						
SCIA	State Center	25.87	8	P	P	23 16 04.8	-0.1
	baz=190						
SCIA	State Center	25.87	8	eP	P	23 16 04.5	-0.4
	32nm,0.8s						
P49A	Miami Univ. Ec	25.93	24	P	P	23 16 04.2	-1.3
	baz=210						
O47A	Sheridan	26.00	21	P	P	23 16 05.3	-0.9
	baz=206						
L37A	Phoenix Point,	26.02	7	P	P	23 16 05.7	-0.5
	baz=189						
Q51A	Peebles	26.06	27	P	P	23 16 04.9	-1.8
	baz=213						
CNNC	Cliffs of the	26.09	40	eP	P	23 16 05.6	-1.4
	76nm,1.0s						
L38A	Oak Wood Farm,	26.14	9	P	P	23 16 06.7	-0.6
	baz=190,SNR=5.4						
TPNV	Topopah Spring	26.15	325	P	P	23 16 08.4	+0.7
	baz=137						
TPNV	Topopah Spring	26.15	325	eP	P	23 16 09.9	+2.2
	2.5nm,0.8s						
PSUT	Pine Spring	26.16	331	eP	P	23 16 09.3	+1.4
	3.3nm,0.8s						
M43A	Waltham Townsh	26.26	16	P	P	23 16 07.5	-1.0
	baz=199						
L39A	Vinton	26.27	10	P	P	23 16 07.6	-0.9
	baz=192						
L40A	Anamosa	26.35	11	P	P	23 16 08.4	-0.9
	baz=194						
L40A	Anamosa	26.35	11	eP	P	23 16 08.2	-1.1
	13nm,0.9s						
P50A	Jamestown	26.36	25	P	P	23 16 07.8	-1.6
	baz=211						
O48A	Farmland	26.39	23	P	P	23 16 07.9	-1.8
	baz=208						
N46A	Monticello	26.41	20	P	P	23 16 08.6	-1.2
	baz=204						
ARVC	Arvin	26.41	319	P	P	23 16 10.6	+0.7
	baz=130						
MPU	Maple Canyon	26.44	336	eP	P	23 16 12.0	+1.6
	6.8nm,1.1s						
M44A	Midewin, Midew	26.47	17	eP	P	23 16 09.5	-0.8
	24nm,0.8s						
L41A	Preston	26.51	13	P	P	23 16 10.0	-0.7
	baz=196						
RWWY	Rawlins	26.52	345	eP	P	23 16 10.7	-0.5
	32nm,1.6s						
RUSC	La Rusia	26.55	110	eP	P	23 16 05.8	-6.1
	5.3nm,1.5s						
NLU	North Lily Min	26.56	335	eP	P	23 16 12.6	+1.1
	8.8nm,1.2s						
L42A	Oliver, Polo	26.63	14	P	P	23 16 11.0	-0.7
	baz=197						
L42A	Oliver, Polo	26.63	14	eP	P	23 16 10.3	-1.5
	25nm,0.8s						
O49A	Covington	26.64	24	P	P	23 16 10.4	-1.4
	baz=210						
K37A	Belmond	26.66	7	P	P	23 16 11.3	-0.8
	baz=189,SNR=8.9						
R11A	Troy Canyon, C	26.85	328	P	P	23 16 14.6	+0.6
	baz=140						
K39A	Oelwein	26.86	10	P	P	23 16 12.8	-1.0
	baz=192,SNR=6.2						
O50A	Cable	26.89	25	P	P	23 16 12.6	-1.6
	baz=211						
K40A	Colesburg	26.98	11	P	P	23 16 14.0	-1.0
	baz=194						
K41A	Shullsburg	27.06	13	P	P	23 16 14.7	-1.0
	baz=196						
DUG	Dugway, Tooele	27.07	335	P	P	23 16 16.8	+0.8
	baz=147						
DUG	Dugway, Tooele	27.07	335	eP	P	23 16 17.8	+1.8
	3.9nm,0.9s						
J36A	Seneca 1, Swea	27.14	6	P	P	23 16 15.7	-0.7
	baz=187,SNR=11						
J36A	Seneca 1, Swea	27.14	6	eP	P	23 16 15.3	-1.1
	26nm,0.8s						
J37A	Redenius Farm,	27.21	7	P	P	23 16 16.6	-0.4
	baz=189						
K22A	Casper	27.26	346	P	P	23 16 18.3	+0.6
	baz=162						
J38A	Wedel Dairy, R	27.36	9	P	P	23 16 17.7	-0.7
	baz=191						
JFWS	Jewell Farm	27.37	13	P	P	23 16 17.5	-0.9
	baz=196						
JFWS	Jewell Farm	27.37	13	eP	P	23 16 17.9	-0.6
	14nm,1.0s						
ECSD	EROS Data Cent	27.39	2	P	P	23 16 18.1	-0.5
	baz=182,SNR=6.6						
ECSD	EROS Data Cent	27.39	2	eP	P	23 16 17.7	-0.9
	3.3nm,0.8s						
K42A	Prairie Point,	27.44	14	P	P	23 16 18.4	-0.7
	baz=198						
K43A	Burlington	27.61	16	eP	P	23 16 19.8	-0.9
	56nm,1.6s						
J40A	Soldiers Grove	27.73	11	P	P	23 16 20.9	-0.8
	baz=194						
HWUT	Hardware Ranch	27.80	338	eP	P	23 16 23.6	+1.0
	2.8nm,0.8s						
J41A	Loganville	27.85	13	P	P	23 16 21.9	-0.8
	baz=196						
SPUT	South Promonto	27.87	336	eP	P	23 16 23.5	+0.3
	2.6nm,0.9s						
I37A	Lemond, Waseca	27.92	7	P	P	23 16 23.2	-0.1
	baz=189						
J42A	Columbus	28.00	14	P	P	23 16 23.5	-0.6
	baz=198						
I39A	Houston	28.04	10	P	P	23 16 24.3	-0.1
	baz=193						
I38A	Scanlan Farm,	28.09	9	P	P	23 16 24.8	-0.1
	baz=191						
L48A	N Adams	28.13	22	P	P	23 16 24.4	-0.9
	baz=208						
BW06	Boulder Array	28.17	342	P	P	23 16 26.7	+0.8
	baz=156						
BW06	Boulder Array	28.17	342	eP	P	23 16 26.4	+0.5
	4.8nm,1.0s						
PD31	Pinedale Array	28.17	342	eP	P	23 16 26.6	+0.6
PDAR	Pinedale Array	28.17	342	P	P	23 16 26.3	+0.4
	0.3nm,0.4s,baz=124,slow=7.9,SNR=4.4						
PDAR				LR	LR	23 28 54.6	
	comp=Z,91nm,20.3s,baz=288,slow=39						
PDAR	Pinedale Array	28.17	342	eP	P	23 16 26.0	+0.1
NV11	Mina Array Sit	28.26	325	eP	P	23 16 28.1	+1.4
	0.5nm,1.6s						
NV01	Mina Array Sit	28.34	325	eP	P	23 16 29.0	+1.5
NVAR	Mina Array Bea	28.34	325	P	P	23 16 29.5	+2.0
	1.5nm,0.9s,baz=151,slow=10,SNR=9.5						
I41A	Arkdale	28.54	12	P	P	23 16 28.2	-0.8
	baz=196						
KVN	Kaiserville	28.68	326	eP	P	23 16 31.6	+1.1
	4.8nm,1.4s						
H39A	Augusta	28.88	10	P	P	23 16 31.1	-0.7
	baz=193						
H40A	Chili	28.98	11	P	P	23 16 32.0	-0.8
	baz=195						
SAO	San Andreas Ge	29.09	319	eP	P	23 16 34.5	+0.6
	18nm,1.1s						
SPMN	Marine on St.	29.19	8	P	P	23 16 33.9	-0.7
	baz=190						
BMN	Battle Mountai	29.26	329	eP	P	23 16 35.9	+0.3
	2.0nm,1.0s						
TPAW	Teton Pass	29.26	341	eP	P	23 16 36.4	+0.8
	4.2nm,0.9s						
LOHW	Long Hollow	29.26	341	eP	P	23 16 36.6	+1.0
	22nm,1.9s						
O56A	Blue Knob Stat	29.28	31	P	P	23 16 33.7	-1.9
	baz=220						
FXWY	Fox Creek	29.42	341	eP	P	23 16 37.8	+0.8
	3.2nm,1.3s						
MOOW	Moose Ponds	29.43	341	eP	P	23 16 38.5	+1.4
	2.2nm,0.8s						
G39A	Holcombe	29.49	10	P	P	23 16 36.6	-0.7
	baz=193						
SDMD	Soldier’s Deli	29.56	35	eP	P	23 16 35.7	-2.3
	15nm,1.6s						
G40A	Rib Lake	29.64	11	P	P	23 16 37.8	-0.9
	baz=195						
M54A	Oil Creek Stat	29.71	29	P	P	23 16 37.5	-1.9
	baz=217						
G42A	Mountain	29.98	14	P	P	23 16 41.0	-0.7
	baz=198						
F40A	Park Falls	30.28	11	P	P	23 16 43.5	-0.8
	baz=194						
HLID	Hailey	30.55	336	P	P	23 16 47.8	+0.9
	baz=148						
E39A	Mellen	30.65	10	P	P	23 16 46.8	-0.7
	baz=194						
E40A	Wakefield	30.83	11	P	P	23 16 48.5	-0.7
	baz=195,SNR=5.5						
F43A	Flat Rock, Esc	30.84	15	P	P	23 16 48.1	-1.1
	baz=200						
MCMT	McKenzie Canyo	31.07	339	eP	P	23 16 52.3	+0.7
F44A	Big Bay de Noc	31.16	16	P	P	23 16 51.4	-0.6
	baz=201						
BOZ	Bozeman (W)	31.37	342	P	P	23 16 55.4	+1.3
	baz=154						
E43A	Lone Tree Farm	31.39	15	P	P	23 16 53.3	-0.8
	baz=200						
E43A	Lone Tree Farm	31.39	15	eP	P	23 16 53.0	-1.1
	10.0nm,0.9s						
DLMT	Dillon	31.46	340	eP	P	23 16 55.8	+0.9
	4.1nm,0.7s						
MDND	Maddock	31.50	358	eP	P	23 16 54.5	-0.6
	32nm,1.1s						
D41A	Chassel	31.68	12	eP	P	23 16 55.4	-1.2
	16nm,1.0s						
LRM	Limekiln Ridge	31.82	341	eP	P	23 16 58.4	+0.1
AGMN	Agassiz Nation	31.98	3	P	P	23 16 59.0	-0.2
	baz=183						
AGMN	Agassiz Nation	31.98	3	eP	P	23 16 58.5	-0.8
	11nm,0.8s						
J08A	Circle Bar Ran	32.11	331	eP	P	23 17 01.1	+0.5
	6.0nm,0.8s						
HRY	Holter Researc	32.43	342	eP	P	23 17 04.7	+1.3
A33A	Warroad	32.64	3	P	P	23 17 05.2	+0.1
	baz=184						
F10A	Beach Ranch, E	33.66	336	eP	P	23 17 14.7	+0.5
	3.7nm,1.0s						
G08A	Pilot Rock	33.83	333	eP	P	23 17 16.1	+0.4
	2.8nm,1.0s						
ULM	Lac du Bonnet	33.92	2	P	P	23 17 14.7	-1.5
	1.9nm,0.5s,baz=214,slow=10,SNR=3.8						
I03D	Drain, OR	34.76	327	P	P	23 17 24.2	+0.7
	baz=134						
WALA	Waterton Lakes	35.16	342	eP	P	23 17 27.1	0.0
FFC	Flin Flon	38.48	356	eP	P	23 17 54.9	-0.3
	6.6nm,0.8s						
LLLB	Lillooet	39.24	336	eP	P	23 18 01.9	+0.3
	4.1nm,0.9s						
YKA	Yellowknife Ar	47.61	350	P	P	23 19 09.7	+0.9
	1.1nm,0.7s,baz=156,slow=7.5,SNR=4.3						
INK	Inuvik	56.67	345	eP	P	23 20 16.2	0.0
RIDG	Independ’e Rid	57.18	337	eP	P	23 20 20.3	+0.3
	5.4nm,1.0s						
IL1	Eielson Array	58.49	338	eP	P	23 20 28.1	-0.9
ILAR	Eielson Array	58.49	338	P	P	23 20 29.2	+0.2
	1.4nm,1.0s,baz=142,slow=4.4,SNR=10.0						
TRF	Thorofare Moun	59.12	336	eP	P	23 20 33.9	+0.2
	6.6nm,0.8s						
KTH	Kantishna Hill	59.42	336	eP	P	23 20 36.3	+0.7
	19nm,1.6s						
PPT	Papeete	60.90	239	eP	P	23 20 45.1	-1.3
PPTF	Pamatai, Papee	60.90	239	eP	P	23 20 44.3	-2.2
	392nm,2.0s						
ESDC	Sonseca Array	82.85	51	P	P	23 22 57.7	-0.4
	0.3nm,0.7s,baz=295,slow=6.9,SNR=3.8						
LZH	Lanzhou	123.95	339	ePKP	PKPdf	23 29 26.5	-5.7
LZH				pPKP	pPKPdf	23 29 37.0	-0.2
LZH				sPKP		23 29 42.0	
KSH	Kashi	124.21	6	ePKP	PKPdf	23 29 31.5	-1.0
KSH				ePP	PP	23 31 23.0	+7.1
KSH				PKS	PKSdf	23 33 08.3	-1.0

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*ISCJB **29** 23:30:34.0±1.0, 77°.42N±0°.06×7°.8E±0°.3, h10^{km}, Error ellipse: s-maj=9.8km s-min=9.3km az=163.9*

*CSEM **29** 23:30:35.8±0.6, 77°.51N×7°.74E, h8^{km}±5^{km}, ML2.8, Error ellipse: s-maj=10.4km s-min=8.0km az=28.0*

*NAO **29** 23:30:40.5±2.6, 77°.54N×8°.80E, h20^{km}±19^{km}, ML2.8*

*BER **29** 23:30:40.1±3.6, 77°.41N×8°.64E, h10^{km}, ML2.8, ML2.8(NAO)*

ISC 29 23:30:35.1±1.0, 77°.52N±0°.07×7°.44E±0°.06, h10^{km}, n13, σ1^s.53/16, Svalbard region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BRBA	Barentsburg A	1.54	66	Pg	Pg	23 31 05.2	+0.7
BRBA				Lg	Lg	23 31 21.4	
KBS	Kingsbay	1.69	31	Pg	Pg	23 31 07.9	+0.5
KBS				Lg	Lg	23 31 27.3	
KBS	Kingsbay	1.69	31	Pg	Pg	23 31 07.9	+0.5
KBS				eS	Sb	23 31 27.2	-0.2
	SNR=56						
KBS	Kingsbay	1.69	31	eP	Pg	23 31 07.7	+0.3
KBS				eS	Sb	23 31 27.2	-0.2
KBS				IAML		23 31 30.9	
	comp=Z,168nm,0.2s						
HSPB	Hornsund (broa	1.87	102	ePb	Pb	23 31 08.4	-0.8
HSPB				Lg	Lg	23 31 30.0	
HSPB	Hornsund (broa	1.87	102	Pg	Pb	23 31 08.2	-1.0
HSPB				Lg	Lg	23 31 30.0	
HSP	Hornsund	1.87	102	Pg	Pb	23 31 08.2	-1.0
HSP				Lg	Lg	23 31 30.0	
SPA0	Spitsbergen Ar	2.00	66	Pg	Pg	23 31 12.6	-0.8
	baz=265,slow=16						
SPA0				Lg	Lg	23 31 36.0	
	baz=229,slow=111						
SPA0	Spitsbergen Ar	2.00	66	Pg	Pg	23 31 12.6	-0.8
	SNR=784						
SPA0				Lg	Lg	23 31 36.0	
	SNR=8.3						
SPA0	Spitsbergen Ar	2.00	66	Pg	Pg	23 31 12.6	-0.8
	baz=265,slow=16						
SPA0				Lg	Lg	23 31 36.0	
	baz=229,slow=111						
DAG	Danmarks Havn	5.84	276	iP	Pn	23 32 03.7	+2.2
DAG				eS	Sn	23 33 04.2	-4.2
ARA0	ARCESS Array S	9.45	138	Pn	Pn	23 32 52.1	+1.1
	baz=331,slow=10						
ARA0				Sn	Sn	23 34 27.2	-10
	baz=329,slow=22						
ARA0	ARCESS Array S	9.45	138	Pn	Pn	23 32 52.1	+1.1
	baz=331,slow=10						
ARA0				Sn	Sn	23 34 27.2	-10
	baz=329,slow=22						

IDC 29 23:34:12.4±9.9, 6°.80S×129°.95E, h68^{km}±96^{km}, mb3.4/3, mb1 3.6/5, mb1mx3.3/46, mbtmp3.8/5, ML4.0/2, Error ellipse: s-maj=136.1km s-min=35.3km az=61.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	13.74	162	P	Pn	23 37 24.1	-0.2
	0.9nm,0.3s,baz=346,slow=13,SNR=15						
WRA				S	Sn	23 39 47.8	-7.6
	1.5nm,0.3s,baz=336,slow=23,SNR=7.6						
ASAR	Alice Springs	17.20	168	P	Pn	23 38 08.6	+0.2
	0.4nm,0.3s,baz=339,slow=9.9,SNR=20						
ASAR				S	Sn	23 41 08.6	-11
	0.2nm,0.3s,baz=352,slow=29,SNR=4.0						
STKA	Stephens Creek	27.22	158	P	P	23 39 50.0	0.0
	1.6nm,0.8s,baz=333,slow=9.0,SNR=2.3						
MKAR	Makanchi Array	68.03	327	P	P	23 45 05.0	+0.3
	0.2nm,0.4s,baz=129,slow=6.7,SNR=3.6						
KURBB	Kurchatov Arra	72.31	328	P	P	23 45 30.5	-0.2
	0.3nm,0.5s,baz=136,slow=4.8,SNR=3.0						

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*IDC **29** 23:34:15.3±5.6, 35°.89N×71°.50E, h85^{km}±38^{km}, mb3.3/3, mb1 3.3/8, mb1mx3.0/65, mbtmp3.6/8, Error ellipse: s-maj=69.7km s-min=25.0km az=145.0*

*ISCJB **29** 23:34:19.6±1.3, 36°.4N±0°.1×71°.2E±0°.1, h119^{km}, mb3.5/2, Error ellipse: s-maj=21.6km s-min=8.1km az=141.1*

*NNC **29** 23:34:23.5±5.5, 37°.05N×70°.54E, h0^{km}, mb4.2, mpv4.1, Error ellipse: s-maj=51.2km s-min=33.3km az=151.0*

ISC 29 23:34:20.3±2.1, 36°.3N±0°.2×71°.3E±0°.2, h119^{km}, n26, σ1^s.06/28, 2C-9D, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	4.13	24	⇓P	Pn	23 35 22.6	+0.8
	19nm,0.4s						
SFK				⇓S	Sn	23 36 09.9	+0.5
	5.6nm,0.2s						
AML	Almayashu	6.15	17	P	Pn	23 35 48.1	-0.9
	SNR=82						
MNAS	Manas	6.28	8	⇓P	Pn	23 35 49.6	-1.1
	4.7nm,0.4s						
MNAS				⇑S	Sn	23 36 55.5	-5.7
	12nm,0.5s						
UCH	Uchtor	6.46	22	P	Pn	23 35 52.6	-0.7
	SNR=26						
KZA	Kyzart	6.57	27	P	Pn	23 35 54.0	-0.7
	SNR=7.4						
EKS2	Erkin-Say	6.67	16	P	Pn	23 35 55.4	-0.5
	SNR=45						
AAK	Ala-Archa	6.83	20	P	Pn	23 35 58.0	-0.1
	11nm,0.3s,baz=175,slow=6.1,SNR=47						
AAK				S	Sn	23 37 10.2	-4.2
	0.9nm,0.3s,baz=355,slow=17,SNR=4.1						
AAK	Ala-Archa	6.83	20	⇓P	Pn	23 35 57.5	-0.6
	13nm,0.4s						
AAK				⇓S	Sn	23 37 11.9	-2.5
	6.4nm,0.7s						
AAK	Ala-Archa	6.83	20	P	Pn	23 35 57.9	-0.1
	SNR=8.0						
KK31	Karatay Array	6.86	355	P	Pn	23 35 56.6	-1.7
	3.2nm,0.3s,baz=178,slow=13,SNR=107						
KK31				⇓S	Sn	23 37 06.9	-7.9
	4.5nm,0.5s,baz=188,slow=23,SNR=7.7						
KBK	Karagaybulak	6.98	23	P	Pn	23 36 00.1	0.0
	SNR=7.6						
ULHL	Ulahol	7.10	31	P	Pn	23 36 01.2	-0.5
	SNR=8.0						
CHMS	Chumysh	7.23	21	P	Pn	23 36 02.7	-0.7
	SNR=11						
USP	Ospenovka	7.42	18	P	Pn	23 36 05.0	-0.9
	SNR=15						
TKM2	Tokmak 2	7.43	25	⇑P	Pn	23 36 05.9	-0.3
	7.2nm,0.5s						
TKM2				⇓S	Sn	23 37 28.5	-0.5
	0.8nm,0.4s						
TKM2	Tokmak 2	7.43	25	P	Pn	23 36 05.6	-0.6
	SNR=20						
GEYT	Alibeck	10.66	283	P	Pn	23 36 47.6	-2.1
	0.2nm,0.3s,baz=21,slow=33,SNR=4.7						
GEYT				S	Sn	23 38 39.3	-7.8
	0.3nm,0.3s,baz=293,slow=19,SNR=6.7						
MKAR	Makanchi Array	13.35	35	P	Pn	23 37 24.1	-0.9
	0.1nm,0.3s,baz=216,slow=12,SNR=6.3						
KURBB	Kurchatov Arra	15.27	18	P	Pn	23 37 50.0	+0.6
	0.1nm,0.3s,baz=211,slow=10,SNR=7.3						
AB31	Akbulak array	15.40	331	⇓P	Pn	23 37 51.6	+0.5
	0.2nm,0.3s,baz=145,slow=14,SNR=8.4						
BVAR	Borovoye Array	16.77	358	P	P	23 38 08.8	+0.7
	0.2nm,0.3s,baz=164,slow=12,SNR=5.0						
AKTO	Aktyubinsk	17.10	330	P	P	23 38 13.9	+2.1
	0.4nm,0.3s,baz=145,slow=12,SNR=10						
AKTO	Aktyubinsk	17.10	330	⇓P	P	23 38 13.1	+1.3
	1.5nm,0.5s						
ZALV	Zalesovo Beam	20.03	24	P	P	23 38 43.5	-0.1
	1.4nm,0.4s,baz=206,slow=12,SNR=7.9						
ARCES	ARCESS Array B	41.45	338	P	P	23 41 56.5	+1.6
	1.8nm,1.0s,baz=107,slow=8.2,SNR=4.4						
TORD	Torodi Ar. Bea	65.95	269	P	P	23 44 53.9	-0.2
	0.2nm,0.6s,baz=51,slow=5.8						

MEX 29 23:43:40.3±3.8, 24°.83N×99°.68W, h20^{km}, MD3.5, Central Mexico

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LNIG	Linares	0.21	71	eP	Pb	23 43 44.6	-1.0
	baz=275,slow=22						
LNIG				eS	Sb	23 43 48.0	-1.1

RSPR 30 00:08:38.2, 18°.68N×69°.02W, h132^{km}, MD3.6/6, 8C-1D, Dominican Republic region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DR12	Loma Pena Alta	0.36	287	⇑iP	Pn	00 08 56.5	-0.4
DR12				eS	Sn	00 09 10.8	-0.3
IDE	Isla Desecheo	1.50	101	eS	Sn	00 09 27.8	-0.1
IDE	Isla Desecheo	1.50	101	⇑eP	Pn	00 09 06.1	-0.4
AGPR	Aguadilla, PR	1.82	96	⇑eP	Pn	00 09 10.1	0.0
AGPR	Aguadilla, PR	1.82	96	eS	Sn	00 09 34.9	+0.3
LSP	Las Mesas	1.90	105	⇑eP	Pn	00 09 11.2	0.0
LSP	Las Mesas	1.90	105	eS	Sn	00 09 36.5	+0.1
CRPR	Cabo Rojo, PR	1.94	110	⇑eP	Pn	00 09 10.9	-0.5
CRPR	Cabo Rojo, PR	1.94	110	eS	Sn	00 09 37.3	+0.3
AOPR	Arecibo Observ	2.18	98	⇑eP	Pn	00 09 14.4	-0.1
AOPR	Arecibo Observ	2.18	98	eS	Sn	00 09 42.7	+0.4
OBIP	Obispado Ponce	2.38	105	⇓eP	Pn	00 09 16.8	-0.2
OBIP	Obispado Ponce	2.38	105	eS	Sn	00 09 47.5	+0.8
CBYP	Canovanas	3.03	97	⇑eP	Pn	00 09 25.4	0.0
HUMP	Col San Antoni	3.06	100	⇑eP	Pn	00 09 25.4	-0.3
MTP	Monte Pirata	3.34	99	⇑eP	Pn	00 09 29.6	+0.2

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*ATH **30** 00:31:41.5, 37°.08N×26°.62E, h28^{km}±1^{km}, ML2.6/5, Error ellipse: s-maj=2.0km s-min=1.2km az=275.0*

*ISCJB **30** 00:31:41.8±0.5, 37°.06N±0°.02×26°.58E±0°.02, h7^{km}±4^{km}, Error ellipse: s-maj=3.4km s-min=2.9km az=10.3*

*DDA **30** 00:31:41.0, 37°.05N×26°.55E, h5^{km}, Ml3.2*

*ISK **30** 00:31:42.1, 37°.09N×26°.62E, h10^{km}, ML2.6/12*

*THE **30** 00:31:42.6, 37°.07N×26°.60E, h8^{km}±2^{km}, ML2.5/5, Error ellipse: s-maj=2.6km s-min=1.0km az=47.0*

*CSEM **30** 00:31:42.2±0.1, 37°.07N×26°.58E, h10^{km}, ML2.6, Error ellipse: s-maj=2.5km s-min=2.0km az=9.0*

ISC 30 00:31:42.5±1.0, 37°.06N±0°.02×26°.59E±0°.01, h14^{km}±8^{km}, n92, σ1^s.25/139, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BODT	Bodrum	0.57	90	PG	Pg	00 31 53.4	-0.4
BODT				SG	Sb	00 32 01.5	-0.8
BODT	Bodrum	0.57	90	P	Pg	00 31 53.2	-0.6
BODT				S	Sb	00 32 01.8	-0.5
BODT	Bodrum	0.57	90	ePg	Pg	00 31 53.4	-0.4
BODT				eSg	Sb	00 32 01.5	-0.8
AMGA	Amorgos Island	0.60	248	P	Pg	00 31 53.1	-1.2
AMGA				S	Sb	00 32 03.2	+0.1
AMGA				AML	AML	00 32 05.4	
	comp=N,1715μm,0.3s						
AMGA				AML	AML	00 32 05.7	
	comp=E,1304μm,0.3s						
AMGA	Amorgos Island	0.60	248	P	Pg	00 31 53.7	-0.6
AMGA				S	Sb	00 32 03.4	+0.3
SMG	Samos	0.68	17	P	Pb	00 31 55.7	-0.3
SMG				S	Sb	00 32 05.3	+0.1
SMG				AML	AML	00 32 08.4	
	comp=E,4392μm,0.3s						
SMG				AML	AML	00 32 08.5	
	comp=N,3323μm,0.3s						
SMG	Samos	0.68	17	P	Pg	00 31 55.1	-0.6
SMG				S	Sb	00 32 05.1	-0.1
SMG	Samos	0.68	17	P	Pg	00 31 55.1	-0.6
SMG				S	Sb	00 32 04.7	-0.5
BDRM	Kayabasi	0.68	89	iP	Pg	00 31 55.3	-0.5
BDRM				iS	Sg	00 32 04.5	-0.2
BDRM	Kayabasi	0.68	89	P	Pg	00 31 55.3	-0.5
BDRM				S	Sg	00 32 04.6	-0.2
GCAM	G?zelcaml?	0.82	39	iP	Pb	00 31 58.3	-0.1
GCAM				iS	Sn	00 32 10.3	-1.1
GCAM	G?zelcaml?	0.82	39	P	Pb	00 31 58.3	-0.1
GCAM				S	Sn	00 32 10.3	-1.1
APE	Apeiranthos	0.85	271	P	Pg	00 31 57.9	-1.1
APE				S	Sg	00 32 09.9	-0.2
APE				AML	AML	00 32 13.2	
	comp=N,689μm,0.2s						
APE				AML	AML	00 32 14.1	
	comp=E,665μm,0.4s						
APE	Apeiranthos	0.85	271	P	Pb	00 31 59.3	+0.3
APE				S	Sb	00 32 10.6	+0.3
APE	Apeiranthos	0.85	271	P	Pg	00 31 58.2	-0.7
APE				S	Sb	00 32 10.5	+0.3
DAT	Datca	0.86	112	PG	Pb	00 31 58.9	-0.3
DAT	Datca	0.86	112	iP	Pb	00 31 59.1	0.0
DAT				iS	Sb	00 32 10.8	+0.3
DAT	Datca	0.86	112	ePg	Pb	00 31 58.9	-0.3
DAT	Datca	0.86	112	P	Pb	00 31 59.2	0.0
DAT				S	Sb	00 32 10.9	+0.3
DATC	Datca-Mugla	0.91	109	PG	Pb	00 31 59.9	-0.1
DATC	Datca-Mugla	0.91	109	ePg	Pb	00 31 59.9	-0.1
DGB	˜zmir	1.02	13	iP	Pg	00 32 01.1	-1.0
DGB				iS	Sb	00 32 15.5	+0.5

THR3	Thira Island,	1.16	236	P	Pg	00 32 05.4	+0.6
THR3	Thira Island,	1.16	236	P	Pg	00 32 04.7	-0.1
AYDN	Tasoluk	1.19	59	iP	Pb	00 32 03.5	-1.3
AYDN				iS	Sn	00 32 21.9	+1.3
AYDN	Tasoluk	1.19	59	P	Pb	00 32 03.5	-1.3
AYDN				S	Sn	00 32 21.9	+1.3
THR6	Thira Island,	1.19	234	P	Pg	00 32 05.9	+0.5
THR6	Thira Island,	1.19	234	P	Pg	00 32 05.2	-0.2
TNSA	Tinos	1.23	293	P	Pn	00 32 05.5	+0.2
TNSA				S	Sb	00 32 21.4	+0.1
TNSA	Tinos	1.23	293	P	Pn	00 32 05.2	0.0
TNSA				S	Sb	00 32 21.8	+0.5
URLA	Izmir	1.30	0	PN	Pb	00 32 06.5	-0.1
URLA	Izmir	1.30	0	iP	Pn	00 32 06.0	-0.1
URLA				iS	Sg	00 32 24.5	+0.1
URLA	Izmir	1.30	0	P	Pn	00 32 06.0	-0.1
URLA	Izmir	1.30	0	ePn	Pb	00 32 06.5	-0.1
URLA				S	Sg	00 32 24.5	+0.1
YER	Yerkesik	1.35	86	PN	Pn	00 32 07.1	+0.1
YER	Yerkesik	1.35	86	P	Pn	00 32 07.2	+0.2
YER	Yerkesik	1.35	86	P	Pn	00 32 07.2	+0.2
AYDB	Zeytinkoy-Aydi	1.36	49	PN	Pb	00 32 07.3	-0.5
AYDB	Zeytinkoy-Aydi	1.36	49	ePn	Pb	00 32 07.3	-0.5
BLCB	Balcova	1.37	15	PN	Pb	00 32 07.4	-0.4
BLCB	Balcova	1.37	15	ePn	Pb	00 32 07.4	-0.4
CHOS	Chios island	1.39	342	PN	Pb	00 32 07.9	-0.3
CHOS	Chios island	1.39	342	P	Pn	00 32 06.1	-1.4
CHOS				S	Sg	00 32 26.8	-0.5
CHOS	Chios island	1.39	342	P	Pn	00 32 06.7	-0.8
CHOS				S	Sb	00 32 25.9	0.0
CHOS	Chios island	1.39	342	P	Pn	00 32 06.7	-0.8
CHOS	Chios island	1.39	342	ePn	Pb	00 32 07.9	-0.3
CHOS				S	Sb	00 32 25.9	0.0
ARG	Arkhangelos	1.50	124	PN	Pb	00 32 09.7	-0.3
ARG	Arkhangelos	1.50	124	P	Pb	00 32 09.7	-0.3
ARG				S	Sn	00 32 26.8	-1.3
ARG				AML	AML	00 32 34.1	
	comp=N,97µm,0.8s						
ARG				AML	AML	00 32 34.9	
	comp=E,150µm,0.4s						
ARG	Arkhangelos	1.50	124	P	Pn	00 32 08.9	+0.1
ARG				S	Sn	00 32 28.1	0.0
ARG	Arkhangelos	1.50	124	P	Pn	00 32 09.0	+0.1
ARG	Arkhangelos	1.50	124	ePn	Pb	00 32 09.7	-0.3
ARG				S	Sn	00 32 28.1	0.0
KARP	Karpathos	1.58	163	P	Pn	00 32 08.2	-1.8
KARP	Karpathos	1.58	163	P	Pn	00 32 09.4	-0.6
KARP				S	Sn	00 32 29.4	-0.8
KARP	Karpathos	1.58	163	P	Pn	00 32 09.4	-0.6
KARP				S	Sn	00 32 29.4	-0.8
TURN	Turunc	1.62	96	PN	Pn	00 32 06.6	-4.0
TURN	Turunc	1.62	96	iP	Pn	00 32 06.3	-4.3
TURN				iS	Sn	00 32 25.4	-5.8
TURN	Turunc	1.62	96	P	Pn	00 32 06.3	-4.3
DALY	Dalyan (Mu˜la	1.67	98	PN	Pn	00 32 12.0	+0.8
DALY	Dalyan (Mu˜la	1.67	98	iP	Pn	00 32 11.4	+0.2
DALY				iS	Sg	00 32 37.0	+0.8
DALY	Dalyan (Mu˜la	1.67	98	P	Pn	00 32 11.4	+0.2
DALY	Dalyan (Mu˜la	1.67	98	ePn	Pn	00 32 12.0	+0.8
DALY				S	Sg	00 32 37.0	+0.8
TAVA	DENIZLI_Tavas	1.90	77	iP	Pn	00 32 15.4	+1.0
TAVA				iS	Sg	00 32 46.5	+3.0
TAVA	DENIZLI_Tavas	1.90	77	P	Pn	00 32 15.4	+1.0
NPS	Neapolis	1.96	204	P	Pn	00 32 13.5	-1.8
NPS	Neapolis	1.96	204	P	Pn	00 32 14.5	-0.8
FETY	Fethiye	2.04	101	PN	Pn	00 32 17.3	+0.9
FETY	Fethiye	2.04	101	ePn	Pn	00 32 17.3	+0.9
FETY	Fethiye	2.04	101	P	Pb	00 32 18.7	-0.6
FETY				S	Sb	00 32 46.0	+1.4
DNZL	Cakiroluk	2.05	71	iP	Pn	00 32 17.8	+1.1
DNZL				iS	Sg	00 32 54.2	+5.7
DNZL	Cakiroluk	2.05	71	P	Pn	00 32 17.8	+1.1
LAST	Lasithi	2.10	206	P	Pn	00 32 17.9	+0.7
LAST	Lasithi	2.10	206	P	Pn	00 32 17.7	+0.5
MANT	Manisa	2.11	47	iP	Pg	00 32 22.7	-0.3
MANT				iS	Sg	00 32 52.7	+2.2
KULA	Kula-Manisa	2.19	48	PN	Pn	00 32 19.1	+0.6
KULA	Kula-Manisa	2.19	48	ePn	Pn	00 32 19.1	+0.6
PRK	Paraskevi	2.20	354	P	Pn	00 32 17.5	-0.9
PRK				S	Sn	00 32 44.4	-1.0
PRK	Paraskevi	2.20	354	P	Pn	00 32 17.9	-0.6
PRK				S	Sn	00 32 44.7	-0.7
SIGR	SIGRI	2.22	345	P	Pn	00 32 18.1	-0.7
SIGR				S	Sn	00 32 47.3	+1.2
SIGR	SIGRI	2.22	345	P	Pn	00 32 18.4	-0.4
SIGR				S	Sn	00 32 46.5	+0.4
IDI	Anoyia	2.24	218	PN	Pn	00 32 20.7	+1.5
IDI	Anoyia	2.24	218	ePn	Pn	00 32 20.7	+1.5
DION	Dionisos Attik	2.34	296	P	Pn	00 32 21.2	+0.7
DION				S	Sn	00 32 49.3	+0.2
DION				AML	AML	00 33 00.6	
	comp=E,51µm,0.5s						
DION				AML	AML	00 33 03.8	
	comp=N,90µm,0.6s						
DION	Dionisos Attik	2.34	296	P	Pn	00 32 20.9	+0.4
DION				S	Sn	00 32 49.3	+0.2
STEP	BALIKESIR_Sava	2.48	21	iP	Pg	00 32 29.7	-0.3
STEP				iS	Sg	00 33 04.9	+2.9
AKAS	Kas	2.56	108	PN	Pn	00 32 24.8	+1.2
AKAS	Kas	2.56	108	iP	Pb	00 32 26.7	-1.5
AKAS				iS	Sb	00 33 01.4	+1.8
AKAS	Kas	2.56	108	ePn	Pn	00 32 24.8	+1.2
AKAS	Kas	2.56	108	P	Pb	00 32 26.7	-1.5
LIA	Limnos Island	3.04	339	P	Pn	00 32 30.2	+0.2
LIA	Limnos Island	3.04	339	P	Pn	00 32 30.2	+0.2
SMTH	Samothraki Isl	3.50	347	P	Pn	00 32 35.5	-0.9
SMTH	Samothraki Isl	3.50	347	P	Pn	00 32 36.1	-0.4

IDC ***30*** *00:44:10.1±2.9, 14.°84N×93.°74W, h0^{km}, mb3.8/5, mb1 4.0/7, mb1mx3.7/50, mbtmp3.7/7, ML3.4/2, MS2.7/2, Ms1 2.7/2, ms1mx2.3/44, Error ellipse: s-maj=85.7km s-min=38.0km az=43.0*

MEX ***30*** *00:44:19.0±0.5, 14.°87N×93.°78W, h15^{km}, MD4.1*

ISC 30 00:44:15.6±1.6**, 14.°8N**±0.°1×**93.°89W**±0.°08**, h35**^{km}**, n13, σ0.^{s}85**/15**, mb3.9**/5**, Near coast of Chiapas**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		1.09	36	eP	Pn	00 44 34.2	-0.1
PCIG				eS	Sn	00 44 46.7	-1.4
TGIG		2.08	21	eP	Pn	00 44 49.5	+1.4
TGIG				eS	Sn	00 45 12.6	-0.1
CCIG	Comitan	2.22	49	eP	Pn	00 44 51.1	+1.0
CCIG				eS	Sn	00 45 16.3	-0.2
HUIG	Huatulco	2.34	294	iP	Pn	00 44 58.9	+7.4
CMIG	Matias Romero	2.45	337	Pn	Pn	00 44 52.6	-0.5
	12nm,0.3s,baz=159,slow=11,SNR=49						
CMIG				Sn	Sn	00 45 22.8	+1.0
	13nm,0.3s,baz=135,slow=10.0,SNR=9.4						
CMIG				LR	LR	00 45 50.2	
	comp=Z,70nm,19.1s,baz=292,slow=40						
TXAR	Lajitas Array	17.03	330	P	P	00 48 12.6	-0.2
	0.0nm,0.3s,baz=139,slow=9.8,SNR=5.6						
TKL	Tuckaleechee C	22.64	22	LR	LR	00 58 46.0	
	comp=Z,38nm,21.1s,baz=235,slow=39						
NVAR	Mina Array Bea	31.89	322	P	P	00 50 38.8	+0.9
	0.8nm,0.7s,baz=141,slow=9.1,SNR=6.5						
YKA	Yellowknife Ar	49.82	348	P	P	00 53 03.7	-1.1
	1.0nm,0.7s,baz=153,slow=7.8,SNR=4.7						
INK	Inuvik	59.14	344	P	P	00 54 11.9	-0.4
	1.0nm,0.8s,baz=108,slow=5.8,SNR=3.0						
ILAR	Eielson Array	61.37	337	P	P	00 54 27.5	-0.2
	0.5nm,0.7s,baz=143,slow=4.3,SNR=6.6						
NB2	NORSAR Subarra	84.29	28	P	P	00 56 43.9	+0.2
	comp=Z,0.6nm,0.7s,baz=286,slow=5.1						
NOA	NORSAR Array B	84.29	28	P	P	00 56 44.1	+0.4
	comp=Z,0.9nm,0.7s,baz=290,slow=4.8,SNR=4.3						

NIED ***30*** *00:48:00, 39.°10N×142.°50E, h38^{km}, Mw4.1 Best double couple: M₀1.82000×10^{15} NP1:φ$_s$136.00000°, δ41.00000°, λ-30.00000°. NP2:φ$_s$249.00000°, δ71.00000°, λ-127.00000°.*

JMA ***30*** *00:48:05.9±0.1, 39.°15N×142.°42E, h33^{km}±1^{km}, M4.2*

JMA Felt I J1.

IDC ***30*** *00:48:08.1±2.2, 39.°03N×142.°47E, h47^{km}±22^{km}, mb3.7/12, mb1 3.9/15, mb1mx3.5/69, mbtmp4.0/15, ML3.5/3, MS3.3/17, Ms1 3.3/17, ms1mx3.0/67, Error ellipse: s-maj=23.1km s-min=14.0km az=97.0*

ISC 30 00:48:03.5±2.1**, 39.°11N**±0.°04×**142.°44E**±0.°08**, h11**^{km}±12^{km}**, n44, σ1.^{s}46**/36**, mb4.0**/12**, MS3.5**/11**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OFUJ	Ofunato	0.60	268	P	Pn	00 48 17.6	-0.5
OFUJ				S	Sb	00 48 25.6	+0.9
MIYJ	Miyakonagasawa	0.67	314	P	Pn	00 48 18.0	-1.1
MIYJ				S	Sb	00 48 26.5	-0.2
JTH	Tanohata	0.94	332	P	Pn	00 48 22.2	-0.6
JOM	Ohasama	0.96	293	P	Pn	00 48 22.9	-0.2
JOM				S	Sb	00 48 35.3	+0.2
JMK	Ichinoseki	0.96	261	P	Pn	00 48 23.0	-0.1
JMK				S	Sb	00 48 35.5	+0.4
JIO	Ouri	1.07	233	P	Pn	00 48 24.2	-0.4
JIO				S	Sg	00 48 37.7	-0.5
JKZ	Kuzumaki	1.23	316	P	Pg	00 48 26.9	-0.2
JKZ				S	Sb	00 48 42.4	-0.3
JRG	Rokugo	1.43	282	P	Pb	00 48 30.4	+0.1
JANG	Nango	1.45	331	P	Pb	00 48 29.9	-0.7
JOU	Okura	1.58	242	P	Pb	00 48 32.6	-0.1
JOU				eS	Sb	00 48 52.8	+0.1
MJAR	Matsushiro Arr	4.22	234	P	Pn	00 49 10.6	+2.7
	3.2nm,0.3s,baz=38,slow=11,SNR=40						
MJAR				LR	LR	00 50 53.3	
	comp=Z,94nm,21.5s,baz=75,slow=40						
MAT	Matsushiro	4.22	234	P	Pn	00 49 12.0	+4.1
MAT				eS	Sn	00 49 57.8	+0.6
ASAJ	Asahikawa	5.01	1	P	Pn	00 49 21.6	+2.9
	0.9nm,0.3s,baz=219,slow=14,SNR=3.0						
ASAJ				S	Sn	00 50 17.3	+0.8
	0.3nm,0.3s,baz=189,slow=19,SNR=2.0						
ASAJ				LR	LR	00 51 51.8	
	comp=Z,297nm,21.2s,baz=158,slow=44						
JHJ	Hachijo jima 2	6.35	201	P	Pn	00 49 37.4	+0.3
	9.0nm,0.3s,baz=45,slow=20,SNR=4.5						
JHJ				S	Sn	00 50 45.1	-4.5
	19nm,0.3s,baz=41,slow=19,SNR=3.3						
JHJ				LR	LR	00 52 20.7	
	comp=Z,113nm,20.9s,baz=67,slow=40						
USRK	Ussuriysk Ar.	9.33	306	LR	LR	00 53 39.2	
	comp=Z,143nm,21.5s,baz=110,slow=35						
JNU	Nakatsue	11.09	241	LR	LR	00 54 56.9	
	comp=Z,75nm,21.5s,baz=119,slow=37						
KLR	Kul'dur	12.69	326	LR	LR	00 55 58.1	
	comp=Z,10nm,19.0s,baz=144,slow=37						
PETK	Petropavlovsk-	17.49	32	LR	LR	00 59 28.8	
	comp=Z,45nm,19.9s,baz=307,slow=39						
MA2	Magadan	21.16	12	P	P	00 52 48.6	+0.1
	6.9nm,0.4s,baz=137,slow=4.3,SNR=4.4						
MA2				LR	LR	01 02 30.9	
	comp=Z,44nm,18.4s,baz=168,slow=41						
YAK	Yakutsk	24.25	345	LR	LR	01 03 30.6	
	comp=Z,56nm,18.6s,baz=268,slow=38						
SEY	Seymchan	24.60	11	P	P	00 53 24.8	+1.2
	1.7nm,0.5s,baz=196,slow=5.9,SNR=5.3						
SONM	Songino Array	27.37	300	P	P	00 53 50.1	+1.2
	0.3nm,0.4s,baz=99,slow=8.9,SNR=2.5						
H11N2	WAKE ISLAND Hy	28.60	125	T	T	01 24 24.7	
	baz=318,slow=75,SNR=428						
H11N1	WAKE ISLAND Hy	28.61	125	T	T	01 24 26.3	
	baz=318,slow=75,SNR=337						
H11N3	WAKE ISLAND Hy	28.62	125	T	T	01 24 27.0	
	baz=318,slow=75,SNR=511						
H11S1	WAKE ISLAND Hy	29.39	127	T	T	01 25 26.8	
	baz=319,slow=76,SNR=43						
H11S3	WAKE ISLAND Hy	29.39	127	T	T	01 25 25.0	
	baz=319,slow=76,SNR=82						
H11S2	WAKE ISLAND Hy	29.40	127	T	T	01 25 24.7	
	baz=319,slow=76,SNR=42						
ZALV	Zalesovo Beam	41.15	311	P	P	00 55 47.1	-0.5
	1.1nm,0.5s,baz=89,slow=6.6,SNR=5.1						
ZALV				LR	LR	01 13 37.3	
	comp=Z,68nm,18.3s,baz=76,slow=37						
MKAR	Makanchi Array	43.74	300	P	P	00 56 08.4	-0.4
	0.6nm,0.7s,baz=93,slow=9.8,SNR=6.0						
KURBB	Kurchatov Arra	45.39	307	P	P	00 56 21.6	-0.4
	1.1nm,0.4s,baz=80,slow=8.3,SNR=14						
ILAR	Eielson Array	47.31	33	P	P	00 56 36.2	-0.6
	0.6nm,0.6s,baz=282,slow=5.6,SNR=5.1						
BVAR	Borovoye Array	49.80	311	P	P	00 56 55.6	-0.5
	0.4nm,0.4s,baz=79,slow=7.6,SNR=5.8						
INK	Inuvik	52.18	28	P	P	00 57 14.6	+0.8
	1.5nm,0.8s,baz=257,slow=7.5,SNR=4.0						
WRA	Warramunga Arr	59.23	189	P	P	00 58 04.0	-0.9
	3.3nm,0.6s,baz=6.3,slow=7.0,SNR=19						
ASAR	Alice Springs	62.95	189	P	P	00 58 28.9	-1.3
	1.9nm,0.7s,baz=10,slow=5.1,SNR=13						
DZM	Mont Dzumac	64.88	155	LR	LR	01 23 08.8	
	comp=Z,49nm,21.1s,baz=41,slow=32						
FINES	FINESS Array B	67.36	332	P	P	00 58 59.8	+1.4
	0.7nm,0.7s,baz=46,slow=8.0,SNR=2.7						
FINES				LR	LR	01 30 40.9	
	comp=Z,28nm,18.4s,baz=38,slow=38						
HFS	Hagfors	72.53	336	LR	LR	01 36 17.6	
	comp=Z,29nm,18.5s,baz=8.5,slow=40						
NOA	NORSAR Array B	72.59	337	LR	LR	01 36 39.5	
	comp=Z,16nm,18.6s,baz=235,slow=40						
AKASG	Malin Array Be	73.15	322	LR	LR	01 34 38.0	
	comp=Z,26nm,20.2s,baz=55,slow=38						
MLR	Muntele Rosu	78.33	320	LR	LR	01 37 50.8	
	comp=Z,31nm,18.2s,baz=25,slow=38						
GERES	GERESS Array B	81.37	329	LR	LR	01 39 20.7	
	comp=Z,33nm,18.9s,baz=39,slow=38						
DAVOX	Davos/Dischmat	84.57	329	LR	LR	01 41 03.7	
	comp=Z,30nm,19.1s,baz=87,slow=38						

ISCJB ***30*** *00:56:19.9±0.3, 49.°85N±0.°02×18.°48E±0.°02, h0^{km}, Error ellipse: s-maj=3.2km s-min=2.0km az=15.4*

IPEC ***30*** *00:56:21.6±0.2, 49.°84N×18.°57E, h0^{km}±3^{km}, ML2.3/3, Error ellipse: s-maj=1.8km s-min=1.1km az=164.0*

CSEM ***30*** *00:56:21.0±0.2, 49.°84N×18.°53E, h1^{km}, ML3.0/13, Error ellipse: s-maj=4.8km s-min=2.6km az=14.0*

VIE ***30*** *00:56:21.5±1.5, 49.°82N×18.°51E, h0^{km}, mb2.1/4, ml2.8/4, Error ellipse: s-maj=13.6km s-min=9.5km az=15.0 19 km E of Ostrava Suspected Mining induced.*

ISC 30 00:56:20.6±0.7**, 49.°86N**±0.°02×**18.°54E**±0.°02**, h0**^{km}**, n62, σ0.^{s}68**/114**, 10C-8D, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.26	265	⇓iPG	Pb	00 56 27.6	-0.6
OKC				eSG	Sb	00 56 31.3	-1.8
	comp=Z,146nm,0.4s						
OKC	Ostrava-Krasne	0.26	265	Pg	Pb	00 56 27.6	-0.6
OKC				Sg	Sb	00 56 31.3	-1.8
	146nm,0.4s						
RAC	Raciborz	0.32	315	ePg	Pb	00 56 29.5	+0.3
RAC				eSg	Sb	00 56 35.3	+0.4
CHZP	Chorzow	0.52	34	ePg	Pb	00 56 32.7	0.0
CHZP				eSg	Sg	00 56 38.6	+1.3
MORC	Moravsky Berou	0.65	263	⇓iP	Pb	00 56 34.8	-0.1
MORC				S	Sb	00 56 43.8	-0.8
MORC	Moravsky Berou	0.65	263	ePg	Pb	00 56 34.4	-0.5
MORC	Moravsky Berou	0.65	263	⇓iP	Pb	00 56 34.8	-0.1
MORC				eSg	Sg	00 56 42.4	+0.8
	38nm,0.2s						
MORC				S	Sb	00 56 43.8	-0.8
MORC	Moravsky Berou	0.65	263	ePG	Pb	00 56 34.4	-0.5
MORC				eSG	Sg	00 56 42.5	+0.8
MORC	Moravsky Berou	0.65	263	ePg	Pb	00 56 34.4	-0.5
	baz=84						
MORC				eSg	Sg	00 56 42.4	+0.8
	38nm,0.2s,baz=84						
OJC	Ojcow	0.89	65	ePg	Pb	00 56 38.6	-0.3
OJC				eSg	Sb	00 56 50.6	-0.7
OJC	Ojcow	0.89	65	ePg	Pb	00 56 38.6	-0.3
OJC				eSg	Sb	00 56 50.6	-0.7
LANS	Liptovska Anna	0.93	139	ePG	Pg	00 56 39.0	+0.6
LANS				eSG	Sg	00 56 51.4	+0.9
JAVC	Velka Javorina	1.15	210	ePg	Pn	00 56 43.8	-0.3
JAVC	Velka Javorina	1.15	210	ePG	Pn	00 56 43.9	-0.2
JAVC	Velka Javorina	1.15	210	ePg	Pn	00 56 43.8	-0.3
	baz=31						
KRLC	Kraliky	1.16	281	ePG	Pb	00 56 43.1	-0.4
KRLC				eSG	Sb	00 56 58.6	-0.5
	comp=Z,15nm,0.3s						
KRLC	Kraliky	1.16	281	Pg	Pb	00 56 43.1	-0.4
KRLC				Sg	Sb	00 56 58.6	-0.5
	15nm,0.3s						
NIE	Niedzica	1.22	110	ePg	Pb	00 56 44.8	+0.1
NIE				eSg	Sn	00 57 02.9	+0.6
NIE	Niedzica	1.22	110	ePg	Pb	00 56 44.8	+0.1
NIE				eSg	Sn	00 57 02.9	+0.6
VYHS	Vyhne	1.38	172	ePN	Pg	00 56 46.9	-0.2
VYHS				eSN	Sg	00 57 05.1	+0.2
VYHS				eLG	Lg	00 57 07.3	
VYHS	Vyhne	1.38	172	ePn	Pg	00 56 46.9	-0.2
VYHS				eSn	Sg	00 57 05.1	+0.2
VRAC	Vranov	1.38	247	⇑iP	Pb	00 56 47.1	-0.3
VRAC	Vranov	1.38	247	⇑iP	Pb	00 56 47.1	-0.3
VRAC	Vranov	1.38	247	ePg	Pb	00 56 47.6	+0.2
VRAC				eSg	Sb	00 57 05.0	-0.5
	46nm,0.3s						
VRAC				S	Sn	00 57 07.2	+1.0
VRAC	Vranov	1.38	247	ePG	Pb	00 56 47.6	+0.2
VRAC				eSG	Sb	00 57 05.1	-0.5
VRAC	Vranov	1.38	247	ePg	Pb	00 56 47.6	+0.2
	baz=67						
VRAC				eSg	Sb	00 57 05.0	-0.5
	46nm,0.3s,baz=67						
DPC	Dobruska-Polom	1.51	290	ePG	Pb	00 56 49.7	+0.1
DPC				eSG	Sn	00 57 10.4	+1.0
	comp=Z,26nm,0.3s						
DPC	Dobruska-Polom	1.51	290	Pg	Pb	00 56 49.7	+0.1
DPC				Sg	Sn	00 57 10.4	+1.0
	26nm,0.3s						
KRUC	Moravsky	1.61	241	ePg	Pb	00 56 50.9	-0.3
KRUC				eSg	Sg	00 57 12.3	-0.1
	29nm,0.2s						
KRUC	Moravsky	1.61	241	ePG	Pb	00 56 51.0	-0.3
KRUC				eSG	Sg	00 57 12.3	-0.1
KRUC	Moravsky	1.61	241	ePg	Pb	00 56 50.9	-0.3
	baz=60						
KRUC				eSg	Sg	00 57 12.3	-0.1
	29nm,0.2s,baz=60						
MODS	Modra-Piesok	1.70	210	ePN	Pn	00 56 51.6	0.0
MODS				eSN	Sn	00 57 13.9	-0.2
MODS				eLG	Lg	00 57 14.5	
MODS	Modra-Piesok	1.70	210	ePn	Pn	00 56 51.6	0.0
MODS				eSn	Sn	00 57 13.9	-0.2
KSP	Ksiaz	1.75	305	ePb	Pn	00 56 52.5	+0.4
KSP				ePg	Pg	00 56 54.7	+0.6
KSP				eSg	Sg	00 57 17.3	+0.6
UPC	Upice	1.75	293	⇓ePG	Pg	00 56 54.3	+0.1
UPC				eSG	Sg	00 57 17.5	+0.6
	comp=Z,19nm,0.4s						
UPC	Upice	1.75	293	Pg	Pg	00 56 54.3	+0.1
UPC				Sg	Sg	00 57 17.5	+0.6
	19nm,0.4s						
PSZ	Piszkesteto	2.14	155	⇑iP	Pn	00 56 57.6	0.0
PSZ	Piszkesteto	2.14	155	⇑iP	Pn	00 56 57.6	0.0
PSZ				S	Sn	00 57 25.1	+0.2
GOPC	GO Pecny, Ondr	2.43	273	ePN	Pn	00 57 01.7	+0.1
GOPC				ePG	Pg	00 57 06.7	-0.5
GOPC				eSN	Sn	00 57 31.9	-0.1
GOPC				eSG	Sg	00 57 37.7	-0.9
	comp=Z,9.0nm,0.3s						
GOPC	GO Pecny, Ondr	2.43	273	Pn	Pn	00 57 01.7	+0.1
PRU	Pruhonice	2.59	274	⇓ePG	Pg	00 57 09.5	-0.7
PRU				eSN	Sn	00 57 35.7	-0.2
PRU				eSG	Sg	00 57 42.2	-1.6
	comp=Z,8.8nm,0.4s						
PRU	Pruhonice	2.59	274	Pg	Pg	00 57 09.5	-0.7
PRU				Sn	Sn	00 57 35.7	-0.2
PRU				Sg	Sg	00 57 42.2	-1.6
	8.8nm,0.4s						
CONA	Conrad Observa	2.62	223	ePn	Pn	00 57 03.9	-0.4
	1.5nm,0.3s						
CONA				ePg	Pg	00 57 12.1	+1.3
	1.7nm,0.3s						
CONA				Sn	Sn	00 57 37.0	+0.2
	2.3nm,0.4s						
CONA	Conrad Observa	2.62	223	Pn	Pn	00 57 03.9	-0.4
	1.5nm,0.3s						
PRA	Prague	2.66	276	⇓ePG	Pg	00 57 10.6	-1.0
PRA	Prague	2.66	276	Pg	Pg	00 57 10.6	-1.0
BRG	Berggiesshubel	3.12	291	PG	Pg	00 57 18.8	-1.5
BRG				SG	Sg	00 57 59.7	-0.9
	8.6nm,0.5s						
KHC	Kasperske Hory	3.32	259	ePN	Pn	00 57 14.4	+0.6
KHC				ePG	Pb	00 57 21.2	+0.9
KHC				eSG	Sg	00 58 05.1	-2.1
	comp=Z,9.6nm,0.3s						
KHC	Kasperske Hory	3.32	259	Pn	Pn	00 57 14.4	+0.6
MOA	Molln	3.47	236	ePn	Pn	00 57 15.6	-0.2
	0.2nm,0.1s						
MOA				Pg	Pg	00 57 25.7	-1.3
	1.4nm,0.4s						
MOA				Sg	Sg	00 58 12.2	+0.2
	7.9nm,0.7s						
MOA	Molln	3.47	236	Pn	Pn	00 57 15.6	-0.2
	0.2nm,0.1s						
CLL	Collm	3.82	294	ePg	Pg	00 57 34.0	+0.3
CLL				eSg	Sg	00 58 24.0	+0.8
	comp=Z,7.0nm,0.7s						
BMR	Baia Mare	3.94	122	⇑iP	Pn	00 57 22.2	-0.1
BMR	Baia Mare	3.94	122	⇑iP	Pn	00 57 22.2	-0.1
NKC	Novy Kostel	3.95	278	ePN	Pn	00 57 22.1	-0.3
NKC				ePG	Pg	00 57 34.8	-1.4
NKC				eSG	Sg	00 58 26.2	-1.1
	comp=Z,7.2nm,0.4s						
NKC	Novy Kostel	3.95	278	Pn	Pn	00 57 22.1	-0.3
DRGR		4.14	136	⇓iP	Pn	00 57 25.4	+0.2
DRGR		4.14	136	⇓iP	Pn	00 57 25.4	+0.2
DRGR				S	Sn	00 58 14.4	+0.1
BZS	Buzias	4.72	153	⇑iP	Pn	00 57 33.4	+0.3
BZS	Buzias	4.72	153	⇑iP	Pn	00 57 33.4	+0.3
BURAR	Bucovina Array	4.95	114	⇑iP	Pn	00 57 35.9	-0.5
BURAR	Bucovina Array	4.95	114	⇑iP	Pn	00 57 35.9	-0.5

KRSC ***30*** *01:29:15.5±2.2, 50.°24N×156.°97E, h75^{km}±20^{km}, ML5.2*

BJI ***30*** *01:29:17.1, 50.°80N×157.°06E, h105^{km}, mb4.5/6, mB4.6/6*

MOS ***30*** *01:29:17.6±1.1, 50.°37N×156.°59E, h77^{km}, mb4.9/26, Error ellipse: s-maj=9.9km s-min=3.2km az=76.6*

MOS Felt (II-III) at Severo-Kuril'sk.

ISCJB ***30*** *01:29:19.1±0.4, 50.°50N±0.°04×156.°52E±0.°04, h92^{km}±3^{km}, mb4.3/85, Error ellipse: s-maj=6.7km s-min=3.3km az=148.1*

SKHL ***30*** *01:29:19.3±0.4, 50.°36N×156.°77E, h77^{km}±5^{km}, mb5.3/6*

SKHL Felt (II-III) at Severo-Kurilsk.

IDC ***30*** *01:29:19.3±0.5, 50.°54N×156.°25E, h80^{km}±4^{km}, mb3.9/31, mb1 4.1/38, mb1mx4.0/76, mbtmp4.2/38, MS3.1/27, Ms1 3.1/27, ms1mx3.0/69, Error ellipse: s-maj=11.0km s-min=7.4km az=131.0*

NEIC ***30*** *01:29:21.2±0.6, 50.°61N×156.°27E, h97^{km}±5^{km}, mb4.6/24, Error ellipse: s-maj=6.4km s-min=3.6km az=149.0*

ISC 30 01:29:19.3±0.5**, 50.°40N**±0.°05×**156.°76E**±0.°05**, h85**^{km}±4^{km}**, n448, σ1.^{s}51**/482**, mb4.4**/86**, 9C-1D, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril's	0.50	305	iP	Pn	01 29 32.2	-1.3
SKR				AMB	AMB	01 29 32.6	
	37µm,0.5s						
SKR				iS	Sn	01 29 41.8	-2.2
SKR				A	A	01 29 42.2	
	57µm,0.7s						
SKR				A	A	01 29 42.2	
	37µm,0.7s						
SKR	Severo-Kuril's	0.50	305	iP	Pn	01 29 32.2	-1.3
SKR				eS	Sn	01 29 41.8	-2.2
SKR	Severo-Kuril's	0.50	305	PN	Pn	01 29 32.2	-1.3
SKR				S	Sn	01 29 41.8	-2.2
PAU	Pauzhetka	1.07	2	eP	Pn	01 29 39.0	-0.4
PAU				AMB	AMB	01 29 39.4	
	6µm,0.3s						
PAU				eS	Sn	01 29 53.6	-1.0
PAU				A	A	01 29 54.1	
	23µm,0.3s						
PAU	Pauzhetka	1.07	2	iP	Pn	01 29 39.1	-0.4
PAU				eS	Sn	01 29 53.8	-0.8
PAU	Pauzhetka	1.07	2	PN	Pn	01 29 39.1	-0.4
PAU				S	Sn	01 29 53.8	-0.8
KDTR	Khodutka, Kamc	1.64	30	eP	Pn	01 29 45.9	-0.7
KDTR				eS	Sn	01 30 05.8	-1.5
MIPR	Malaya Ipel'ka	1.88	360	eP	Pn	01 29 49.8	0.0
MIPR	Malaya Ipel'ka	1.88	360	PN	Pn	01 29 49.8	0.0
ASAK	Asacha	2.12	19	eP	Pn	01 29 53.4	+0.5
ASAK	Asacha	2.12	19	PN	Pn	01 29 53.4	+0.5
MTVR	Mutnovka	2.27	23	eP	Pn	01 29 55.3	+0.2
MTVR				eS	Sn	01 30 22.3	-0.1

MTVR	Mutnovka	2.27	23	PN	Pn	01 29 55.3	+0.2
MTVR				S	Sn	01 30 22.3	-0.1
GRL	Gorelyy	2.31	20	*e*P	Pn	01 29 56.6	+1.1
GRL				*e*S	Sn	01 30 24.1	+0.8
GRL	Gorelyy	2.31	20	PN	Pn	01 29 56.6	+1.1
GRL				S	Sn	01 30 24.1	+0.8
RUS	Russkaya	2.32	28	*e*P	Pn	01 29 55.0	-0.5
RUS				*i* P		01 29 55.1	
RUS				*e*S	Sn	01 30 21.7	-1.5
RUS	Russkaya	2.32	28	PN	Pn	01 29 55.0	-0.5
RUS				S	Sn	01 30 21.7	-1.5
APC	Apacha	2.55	5	*e*P	Pn	01 29 59.0	+0.5
APC	Apacha	2.55	5	PN	Pn	01 29 59.0	+0.5
PETK	Petropavlovsk-	2.78	12	P	Pn	01 30 02.4	+0.7
	baz=183,slow=13						
PETK				S	Sn	01 30 35.8	+1.4
	baz=202,slow=18						
PETK				LR	LR	01 31 19.0	
	comp=Z,223nm,21.9s,baz=184,slow=44						
PET	Petropavlovsk	2.88	23	*e*P	Pn	01 30 03.8	+0.7
PET				AMB	AMB	01 30 04.2	
	300nm,0.5s						
PET				*e*S	Sn	01 30 37.5	+0.7
PET				A	A	01 30 38.9	
	2µm,0.3s						
PET	Petropavlovsk	2.88	23	*e*Pn	Pn	01 30 03.6	+0.5
PET				*e*Sn	Sn	01 30 37.7	+0.9
PET	Petropavlovsk	2.88	23	*i* P	Pn	01 30 03.9	+0.8
PET	Petropavlovsk	2.88	23	⇑*i*PN	Pn	01 30 03.7	+0.7
PET				*i* S	Sn	01 30 37.3	+0.5
PET				pmax	pmax		
	comp=Z,305nm,0.5s						
PET				smax	smax		
	comp=E,2µm,0.5s						
PET				smax	smax		
	comp=N,2µm,0.4s						
PET				MLR	MLR		
	comp=Z,200nm,4.0s						
DALK	Dalny	2.92	24	*e*P	Pn	01 30 04.2	+0.7
DALK				*e*S	Sn	01 30 38.3	+0.7
DALK	Dalny	2.92	24	PN	Pn	01 30 04.2	+0.7
DALK				S	Sn	01 30 38.3	+0.7
UGLR	Uglovaya	3.10	24	*e*P	Pn	01 30 07.3	+1.2
UGLR	Uglovaya	3.10	24	PN	Pn	01 30 07.3	+1.2
AVH	Avacha	3.12	22	*e*P	Pn	01 30 07.8	+1.4
AVH	Avacha	3.12	22	PN	Pn	01 30 07.8	+1.4
KOK	Koryaka	3.13	21	*e*P	Pn	01 30 07.5	+1.0
KOK	Koryaka	3.13	21	PN	Pn	01 30 07.5	+1.0
SMAR	Somma	3.14	23	*e*P	Pn	01 30 07.7	+1.0
SMAR	Somma	3.14	23	PN	Pn	01 30 07.7	+1.0
SDLR	Sedlovina	3.17	24	*e*P	Pn	01 30 07.5	+0.4
SDLR	Sedlovina	3.17	24	PN	Pn	01 30 07.5	+0.4
KRX	Arik	3.19	21	*e*P	Pn	01 30 09.0	+1.6
KRX	Arik	3.19	21	PN	Pn	01 30 09.0	+1.6
NLC	Nalytchevo	3.21	29	*e*P	Pn	01 30 06.6	-0.9
NLC				*e*S	Sn	01 30 41.9	-2.8
NLC	Nalytchevo	3.21	29	PN	Pn	01 30 06.6	-0.9
NLC				S	Sn	01 30 41.9	-2.8
SPN	Mys Shipunski	3.38	36	*e*P	Pn	01 30 09.7	-0.1
SPN				*e*S	Sn	01 30 47.3	-1.5
SPN	Mys Shipunski	3.38	36	PN	Pn	01 30 09.7	-0.1
SPN				S	Sn	01 30 47.3	-1.5
GNL	Ganaly	3.38	12	*e*P	Pn	01 30 11.5	+1.5
GNL	Ganaly	3.38	12	PN	Pn	01 30 11.5	+1.5
KII	Karymskiy	4.00	23	*e*P	Pn	01 30 19.7	+1.4
KII				*e*S	Sn	01 31 05.2	+1.1
KII	Karymskiy	4.00	23	PN	Pn	01 30 19.7	+1.4
KII				S	Sn	01 31 05.2	+1.1
KZV	Kizimen	5.19	23	*e*P	Pn	01 30 35.5	+1.0
KZV				*e*S	Sn	01 31 35.4	+2.3
KZV	Kizimen	5.19	23	PN	Pn	01 30 35.5	+1.0
KZV				S	Sn	01 31 35.4	+2.3
TUMR	Tumrok	5.31	21	*e*P	Pn	01 30 37.2	+1.1
TUMR	Tumrok	5.31	21	PN	Pn	01 30 37.2	+1.1
ESO	Esso	5.66	11	*e*P	Pn	01 30 41.7	+0.9
ESO	Esso	5.66	11	PN	Pn	01 30 41.7	+0.9
KMNR	Kamenistaya	5.76	20	*e*P	Pn	01 30 44.0	+1.7
KMNR	Kamenistaya	5.76	20	PN	Pn	01 30 44.0	+1.7
KPT	Kopyto	5.96	19	*e*P	Pn	01 30 46.5	+1.6
KPT	Kopyto	5.96	19	PN	Pn	01 30 46.5	+1.6
KIRR	Kirishev	5.97	20	*e*P	Pn	01 30 45.9	+0.8
KIRR	Kirishev	5.97	20	PN	Pn	01 30 45.9	+0.8
KOZ	Kozyrevsk	5.97	17	*e*P	Pn	01 30 47.6	+2.6
KOZ	Kozyrevsk	5.97	17	PN	Pn	01 30 47.6	+2.6
BZMR	Bezymyannaya	5.99	21	*e*P	Pn	01 30 46.7	+1.4
BZMR	Bezymyannaya	5.99	21	PN	Pn	01 30 46.7	+1.4
BZWR	Bezymyannyi-We	6.01	20	*e*P	Pn	01 30 47.3	+1.6
BZWR	Bezymyannyi-We	6.01	20	PN	Pn	01 30 47.3	+1.6
ZLN	Zelenaya	6.13	22	*e*P	Pn	01 30 49.2	+1.9
ZLN	Zelenaya	6.13	22	PN	Pn	01 30 49.2	+1.9
LGNR	Loginova	6.17	21	*e*P	Pn	01 30 50.0	+2.1
LGNR	Loginova	6.17	21	PN	Pn	01 30 50.0	+2.1
CIRR	Tsirk	6.21	21	*e*P	Pn	01 30 49.7	+1.3
CIRR	Tsirk	6.21	21	PN	Pn	01 30 49.7	+1.3
KRSR	Krestovskiy	6.26	20	*e*P	Pn	01 30 49.1	+0.1
KRSR	Krestovskiy	6.26	20	PN	Pn	01 30 49.1	+0.1
KLY	Klyuchi	6.37	20	*e*P	Pn	01 30 50.9	+0.5
KLY	Klyuchi	6.37	20	PN	Pn	01 30 50.9	+0.5
BDR	Baidarnaya	6.73	22	*e*P	Pn	01 30 56.1	+0.7
BDR	Baidarnaya	6.73	22	PN	Pn	01 30 56.1	+0.7
SRKR	Sorokina	6.80	21	*e*P	Pn	01 30 57.0	+0.7
SRKR	Sorokina	6.80	21	PN	Pn	01 30 57.0	+0.7
SMKR	Semkarok	6.80	23	*e*P	Pn	01 30 56.6	+0.2
SMKR	Semkarok	6.80	23	PN	Pn	01 30 56.6	+0.2
KBTR	Krutoberegovo	6.86	30	*e*P	Pn	01 30 56.6	-0.5
KBTR				*e*S	Sn	01 32 14.4	+0.8
KBTR	Krutoberegovo	6.86	30	PN	Pn	01 30 56.6	-0.5
KBTR				S	Sn	01 32 14.4	+0.8
BKI	Bering	7.37	46	*e*P	Pn	01 31 02.9	-1.1
BKI				*e*S	Sn	01 32 17.5	-8.5
BKI	Bering	7.37	46	PN	Pn	01 31 02.9	-1.1
KUR	Kuril'sk	7.90	233	*i* P	Pn	01 31 14.3	+2.9
KUR				AMB	AMB	01 31 16.4	
	comp=Z,16nm,0.5s						
KUR				AMB	AMB	01 31 16.4	
	comp=Z,11nm,0.5s						
KUR				AMB	AMB	01 31 16.4	
	comp=Z,50nm,0.5s						
KUR				*i* S	Sn	01 32 37.0	-2.1
KUR	Kuril'sk	7.90	233	*i* PN	Pn	01 31 14.3	+2.9
KUR				*i* S	Sn	01 32 43.4	+4.3
KUR				pmax	pmax		
	comp=Z,46nm,0.6s						
KUR				pmax	pmax		
	comp=N,16nm,0.4s						
KUR				pmax	pmax		
	comp=E,11nm,0.4s						
TYV	Tymovskoe	8.98	278	*e*PN	Pn	01 31 26.4	+0.4
TYV				pmax	pmax		
	comp=Z,200nm,2.4s						
TYV				pmax	pmax		
	comp=Z,27nm,1.4s						
SHO	Shikotan	9.40	230	*i* P	Pn	01 31 29.9	-1.8
SHO				AMB	AMB	01 31 35.1	
	comp=Z,10.0nm,0.3s						
SHO				AMB	AMB	01 31 35.1	
	comp=Z,30nm,0.3s						
SHO				*e*S	Sn	01 33 11.1	-4.5
SHO				A	A	01 33 25.4	
	comp=Z,43nm,0.5s						
SHO	Shikotan	9.40	230	*i* PN	Pn	01 31 29.9	-1.8
SHO				pmax	pmax		
	comp=E,10.0nm,0.3s						
SHO				pmax	pmax		
	comp=Z,26nm,0.3s						
MA2	Magadan	9.82	342	P	Pn	01 31 36.1	-1.3
	comp=Z,0.7nm,0.3s,baz=137,slow=7.7,SNR=12						
MA2				S	Sn	01 33 20.8	-4.8
	comp=Z,1.7nm,0.3s,baz=198,slow=20,SNR=3.4						
MA2				LR	LR	01 35 23.2	
	comp=Z,61nm,21.9s,baz=148,slow=38						
MA2	Magadan	9.82	342	*e*P	Pn	01 31 38.7	+1.4
MA2	Magadan	9.82	342	*i* PN	Pn	01 31 38.8	+1.4
YSS	Yuzh-Sakhalins	9.88	255	*e*P	Pn	01 31 39.8	+1.5
YSS				AMB	AMB	01 31 41.1	
	comp=Z,30nm,1.0s						
YSS	Yuzh-Sakhalins	9.88	255	*e*PN	Pn	01 31 39.8	+1.5
YSS				*e*S	Sn	01 33 31.1	+3.7
YSS				pmax	pmax		
	comp=Z,30nm,1.0s						
YSS				MLR	MLR		
	comp=Z,100nm,16.0s						
ASAJ	Asahikawa	11.48	242	P	Pn	01 31 59.2	-0.9
	comp=Z,3.4nm,0.3s,baz=75,slow=13,SNR=24						
ASAJ				LR	LR	01 36 44.3	
	comp=Z,16nm,20.3s,baz=117,slow=40						
ERM	Erimo	12.59	233	*e*Pn	Pn	01 32 13.0	-2.1
	comp=Z,13nm,0.4s						
ERM				*e*Sn	Sn	01 34 22.0	-11
ERM	Erimo	12.59	233	⇑*e*PN	Pn	01 32 13.9	-1.2
SEY	Seymchan	12.79	351	P	Pn	01 32 17.1	-0.6
	comp=Z,0.3nm,0.3s,baz=156,slow=12,SNR=14						
SEY	Seymchan	12.79	351	*e*P	Pn	01 32 18.6	+1.0
SEY	Seymchan	12.79	351	⇑*e*PN	Pn	01 32 18.6	+1.0
GRNR	Gornyy	12.93	280	*e*PN	P	01 32 24.2	-2.7
KLR	Kul'dur	16.17	276	P	P	01 33 01.9	-0.9
	comp=Z,0.0nm,0.3s,baz=78,slow=13,SNR=18						
KLR	Kul'dur	16.17	276	*e*P	P	01 33 02.8	0.0
KLR	Kul'dur	16.17	276	*c i*P	P	01 33 02.8	0.0
USRK	Ussuriysk Ar.	17.86	259	P	P	01 33 20.3	-1.3
	baz=63,slow=13						
USRK				LR	LR	01 40 11.3	
	comp=Z,41nm,21.7s,baz=42,slow=37						
ZEA	Zeya	18.38	292	*e*P	P	01 33 26.8	-0.4
ZEA				pmax	pmax		
	comp=Z,29nm,1.0s						
YAK	Yakutsk	18.87	318	P	P	01 33 31.0	-1.5
	comp=Z,0.0nm,0.3s,baz=128,slow=17,SNR=6.1						
YAK	Yakutsk	18.87	318	*e*P	P	01 33 30.9	-1.5
	comp=Z,15nm,0.3s						
YAK	Yakutsk	18.87	318	*e*P	P	01 33 30.9	-1.5
YAK				*e*S	S	01 36 58.9	-3.1
YAK				pmax	pmax		
	comp=E,38nm,1.5s						
YAK				pmax	pmax		
	comp=Z,83nm,1.1s						
YAK				pmax	pmax		
	comp=N,13nm,1.4s						
YAK				smax	smax		
	comp=N,132nm,4.2s						
YAK				smax	smax		
	comp=E,59nm,2.3s						
MAJO	Matsushiro	19.24	231	*e*P	Pn	01 33 39.2	+0.7
MAJO	Matsushiro	19.24	231	*e*P	P	01 33 36.8	+0.1
	comp=E,12nm,0.6s						
MAJO	Matsushiro	19.24	231	*ce*P	Pn	01 33 39.2	+0.7
MAJO				pmax	pmax		
	comp=Z,8.0nm,0.5s						
MJAR	Matsushiro Arr	19.24	231	P	P	01 33 37.0	+0.3
	comp=Z,1.0nm,0.3s,baz=25,slow=7.9,SNR=10						
MJAR				LR	LR	01 41 02.3	
	comp=Z,26nm,20.2s,baz=65,slow=37						
MJAR	Matsushiro Arr	19.24	231	P	P	01 33 37.0	+0.3
KSRS	Korea Array	24.29	249	P	P	01 34 29.0	+0.5
	comp=Z,3.2nm,0.8s,baz=51,slow=10.0,SNR=9.1						
KSRS				LR	LR	01 44 17.0	
	comp=Z,21nm,18.3s,baz=56,slow=37						
KSAR	Wonju Array Be	24.32	249	P	P	01 34 29.0	+0.2
KSAR	Wonju Array Be	24.32	249	P	P	01 34 29.0	+0.2
JNU	Nakatsue	25.70	238	P	P	01 34 41.1	-0.3
	comp=Z,13nm,0.7s,baz=28,slow=9.6,SNR=7.9						
JNU				LR	LR	01 45 11.8	
	comp=Z,31nm,19.8s,baz=137,slow=37						
BOD	Bodaibo	25.77	303	*e*P	P	01 34 57.9	+16
BOD				pmax	pmax		
	comp=Z,6.0nm,1.7s						
KDAK	Kodiak Island	29.98	56	*e*P	P	01 35 20.5	+1.2
KDAK	Kodiak Island	29.98	56	*i* P	P	01 35 20.5	+1.2
H11N2	WAKE ISLAND Hy	31.64	162	T	T	02 09 18.4	
	baz=348,slow=76,SNR=1026						
H11N3	WAKE ISLAND Hy	31.66	162	T	T	02 09 18.5	
	baz=348,slow=76,SNR=1786						
H11N1	WAKE ISLAND Hy	31.66	162	T	T	02 09 18.0	
	baz=348,slow=76,SNR=446						
ULN	Ulaanbaatar	32.14	285	*e*P	P	01 35 41.4	+2.8
ULN	Ulaanbaatar	32.14	285	*de*P	P	01 35 41.4	+2.8
ULN				pmax	pmax		
	comp=Z,3.0nm,1.2s						
ILAR	Eielson Array	32.20	42	P	P	01 35 39.1	+0.4
	comp=Z,1.1nm,0.6s,baz=259,slow=6.0,SNR=24						
SONM	Songino Array	32.56	285	P	P	01 35 40.4	-1.8
	comp=Z,0.5nm,0.4s,baz=80,slow=8.9,SNR=4.0						
SONM				PcP	PcP	01 38 26.5	-0.3
	comp=Z,0.6nm,0.7s,baz=43,slow=2.6,SNR=2.4						
SONM				LR	LR	01 49 10.3	
	comp=Z,42nm,21.9s,baz=56,slow=37						
H11S1	WAKE ISLAND Hy	32.79	162	T	T	02 10 43.6	
	baz=348,slow=76,SNR=1935						
H11S3	WAKE ISLAND Hy	32.80	162	T	T	02 10 41.9	
	baz=348,slow=76,SNR=7681						
H11S2	WAKE ISLAND Hy	32.81	162	T	T	02 10 43.6	
	baz=348,slow=76,SNR=3309						
EGAK	Eagle	34.65	42	*e*P	P	01 36 00.2	+0.2
	comp=Z,4.3nm,0.6s						
DAWY	Dawson	35.50	43	*e*P	P	01 36 08.2	+0.8
	comp=Z,1.6nm,0.8s						
INK	Inuvik	37.27	35	P	P	01 36 23.4	+1.1
	comp=Z,2.5nm,0.5s,baz=302,slow=8.3,SNR=22						
ZALV	Zalesovo Beam	42.52	304	P	P	01 37 02.9	-3.0
	comp=Z,0.7nm,0.4s,baz=63,slow=10.0,SNR=3.3						
ZALV				PcP	PcP	01 38 57.4	+0.4
	comp=Z,1.8nm,0.8s,baz=48,slow=2.2,SNR=4.3						
ZALV				LR	LR	01 55 05.2	
	comp=Z,24nm,19.3s,baz=68,slow=37						
DGZ	Jazzator, Alta	43.02	297	⇑*e*P	P	01 37 10.4	+0.1
DGZ				pmax	pmax		
	comp=Z,1.0nm,0.5s						
YKA	Yellowknife Ar	46.56	40	P	P	01 37 38.5	+0.5
	comp=Z,1.2nm,0.5s,baz=292,slow=7.6,SNR=4.8						
KURK	Kurchatov	47.41	302	*e*P	P	01 37 42.5	-2.2
	comp=Z,19nm,0.4s						
KURK				PcP	PcP	01 39 12.8	-1.2
KURK	Kurchatov	47.41	302	*e*P	P	01 37 42.5	-2.2
KURK						01 39 12.8	
KURK				pmax	pmax		
	comp=Z,19nm,0.4s						
MKAR	Makanchi Array	47.47	296	P	P	01 37 42.6	-2.7
	comp=Z,1.0nm,0.3s,baz=62,slow=6.8,SNR=27						
MKAR				LR	LR	01 58 07.3	
	comp=Z,55nm,20.4s,baz=52,slow=37						
KURBB	Kurchatov Arra	47.51	302	P	P	01 37 43.4	-2.1
	comp=Z,1.9nm,0.4s,baz=63,slow=8.0,SNR=30						
KURBB				PcP	PcP	01 39 12.8	-1.5
	comp=Z,1.1nm,0.8s,baz=65,slow=3.5,SNR=5.8						
A04D	Lummi Island	49.80	59	P	P	01 38 05.3	+2.2
	baz=305						
B05A	Bryant	50.40	59	P	P	01 38 09.8	+2.2
	baz=305						
BVAR	Borovoye Array	50.45	309	P	P	01 38 05.4	-2.5
	comp=Z,1.9nm,0.6s,baz=47,slow=8.5,SNR=8.4						
BVAR				PcP	PcP	01 39 24.2	-0.7
	comp=Z,0.9nm,0.4s,baz=93,slow=2.3,SNR=2.5						
BRVK	Borovoye	50.48	309	⇑*e*P	P	01 38 05.9	-2.3
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.8s						
I03D	Drain, OR	52.38	64	P	P	01 38 25.3	+2.8
	baz=308						
G05D	Wamic, OR	52.60	62	P	P	01 38 26.3	+2.1
	baz=308						
I04A	Tendick Farm,	52.86	64	P	P	01 38 28.3	+2.2
	baz=308						
I05D	Terrebonne, OR	53.14	63	P	P	01 38 30.3	+2.1
	baz=308						
L02D	Cave Junction,	53.17	66	P	P	01 38 31.3	+2.9
	baz=309						
J04D	Umpqua Nationa	53.37	64	P	P	01 38 32.7	+2.7
	baz=308						
J05D	Fort Rock, OR	53.85	64	P	P	01 38 36.5	+3.0
	baz=309						
YBH	Yreka Blue Hor	53.96	66	P	P	01 38 37.3	+3.1
	comp=Z,5.0nm,0.6s,baz=338,slow=11,SNR=16						
YBH				LR	LR	02 00 51.0	
	comp=Z,17nm,18.0s,baz=308,slow=35						
ARU	Arti	53.97	317	*e*P	P	01 38 32.0	-2.0
ARU	Arti	53.97	317	P	P	01 38 32.2	-1.8
M02C	Callahan	54.09	66	P	P	01 38 38.4	+3.3
	baz=309						
AAK	Ala-Archa	54.40	296	LR	LR	02 02 07.5	
	comp=Z,40nm,20.9s,baz=24,slow=36						
AAK	Ala-Archa	54.40	296	*e*P	P	01 38 38.6	+1.1
AAK	Ala-Archa	54.40	296	⇑*e*P	P	01 38 38.6	+1.1
AAK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
M04C	Macdoel	54.44	65	P	P	01 38 40.7	+2.9
	baz=309						
N02D	Trinity Center	54.44	67	P	P	01 38 40.9	+3.2
	baz=310						
BMO	Blue Mountains	55.09	60	*e*P	P	01 38 44.2	+1.9
	comp=Z,3.8nm,1.1s						
BMO	Blue Mountains	55.09	60	*e*P	P	01 38 44.2	+1.9
BMO				pmax	pmax		
	comp=Z,4.0nm,1.1s						
LAMP	Lampang	55.09	256	P	P	01 38 44.2	+1.6
	comp=Z,6.4nm,0.7s,comp=Z,86nm						
UTTA	Uttaradit	55.11	255	P	P	01 38 43.9	+1.2
	comp=Z,3.9nm,0.8s						
ARCES	ARCESS Array B	55.19	341	P	P	01 38 40.1	-2.5
	comp=Z,0.8nm,0.5s,baz=47,slow=7.4,SNR=5.6						
MOD	Modoc Plateau	55.25	64	*e*P	P	01 38 46.2	+2.5
	comp=Z,8.0nm,0.6s						
CMMT	Chiang Mai	55.30	257	P	P	01 38 44.9	+0.8
	comp=Z,17nm,0.8s,comp=Z,413nm						
CHTO	Chiang Mai	55.30	257	*e*P	P	01 38 43.7	-0.4
	comp=Z,8.7nm,0.8s						
CHTO	Chiang Mai	55.30	257	*e*P	P	01 38 43.7	-0.4
CHTO				pmax	pmax		
	comp=Z,9.0nm,0.8s						
CHTO	Chiang Mai	55.30	257	P	P	01 38 45.0	+0.9
	comp=Z,78nm,0.8s						
O03D	Paynes Creek	55.40	67	P	P	01 38 46.7	+2.1
	baz=310,SNR=5.9						
KSH	Kashi	55.51	292	P	P	01 38 48.0	+2.5
KSH				sP	sP	01 39 28.5	+12
CMAR	Chiang Mai Arr	55.57	257	P	P	01 38 45.0	-1.0
	comp=Z,8.0nm,0.6s,baz=33,slow=7.2,SNR=27						
CMAR				LR	LR	02 02 53.1	
	comp=Z,16nm,20.6s,baz=200,slow=36						
CMAR	Chiang Mai Arr	55.57	257	P	P	01 38 45.0	-1.0
WVOR	Wild Horse Val	55.87	63	*e*P	P	01 38 50.2	+2.2
	comp=Z,12nm,0.9s						
WVOR	Wild Horse Val	55.87	63	*e*P	P	01 38 50.2	+2.2
WVOR				pmax	pmax		
	comp=Z,12nm,0.9s						
MFID	Camas Ranch	56.82	60	*e*P	P	01 38 56.9	+2.1
	comp=Z,2.4nm,0.9s						
SUMG	Summit	56.87	5	*i* P	P	01 38 54.7	-0.3
	comp=Z,13nm,0.8s						
SUMG	Summit	56.87	5	*i* P	P	01 38 54.7	-0.3
SUMG				pmax	pmax		
	comp=Z,13nm,0.8s						
EGMT	Eagleton	57.09	53	P	P	01 38 57.9	+1.4
	baz=311						
HLID	Hailey	57.51	60	P	P	01 39 02.0	+2.3
	baz=311,SNR=6.8						
HLID	Hailey	57.51	60	*e*P	P	01 39 01.9	+2.2
	comp=Z,3.9nm,1.2s						
BOZ	Bozeman (W)	57.69	56	P	P	01 39 03.0	+2.1
	baz=311,SNR=11						
BOZ	Bozeman (W)	57.69	56	*e*P	P	01 39 02.6	+1.7
	comp=Z,2.2nm,0.6s						
BOZ	Bozeman (W)	57.69	56	*e*P	P	01 39 02.6	+1.7
BOZ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
BMN	Battle Mountai	57.98	64	*e*P	P	01 39 05.3	+2.3
	comp=Z,9.0nm,1.1s						
BMN	Battle Mountai	57.98	64	*e*P	P	01 39 05.3	+2.3
BMN				pmax	pmax		
	comp=Z,9.0nm,1.1s						
AKTO	Aktyubinsk	58.10	312	LR	LR	02 04 14.3	
	comp=Z,23nm,21.3s,baz=64,slow=36						
NVAR	Mina Array Bea	58.67	66	P	P	01 39 10.5	+2.6
	comp=Z,5.4nm,0.6s,baz=296,slow=7.6,SNR=36						
NVAR				pP	pP	01 39 30.3	+1.1
	comp=Z,2.6nm,0.7s,baz=296,slow=7.3,SNR=8.0						
H17A	Grant Village	59.05	57	P	P	01 39 12.0	+1.5
	baz=312						
RLMT	Red Lodge	59.25	55	P	P	01 39 14.4	+2.5
	baz=312,SNR=6.1						
RLMT	Red Lodge	59.25	55	*e*P	P	01 39 13.9	+2.0
	comp=Z,7.8nm,1.1s						
TIN	Tinemaha, Big	59.63	67	P	P	01 39 16.8	+2.4
	baz=313						
SMMC	Simmler	59.75	70	P	P	01 39 18.4	+3.2
	baz=313						
LAO	LASA Array	59.77	52	P	P	01 39 17.3	+2.1
	baz=313						
VES	Vestal, Richgr	59.94	69	P	P	01 39 18.4	+2.0
	baz=313						
CWC	Cottonwood Cre	60.14	68	P	P	01 39 19.9	+2.0
	baz=313						
PKM	Mcpherson Peak	60.15	70	P	P	01 39 20.9	+2.8
	baz=313						
GRAC	Grapevine Rang	60.18	67	P	P	01 39 20.8	+2.6
	baz=313						
R11A	Troy Canyon, C	60.31	65	P	P	01 39 21.1	+2.0
	baz=313,SNR=11						
HWUT	Hardware Ranch	60.38	60	*e*P	P	01 39 21.2	+1.6
	comp=Z,3.1nm,0.7s						
DUG	Dugway, Tooele	60.64	62	P	P	01 39 23.6	+2.3
	baz=313,SNR=8.7						
DUG	Dugway, Tooele	60.64	62	*e*P	P	01 39 23.7	+2.3
	comp=Z,5.2nm,1.0s						
DUG	Dugway, Tooele	60.64	62	*e*P	P	01 39 23.7	+2.3
DUG				pmax	pmax		
	comp=Z,5.0nm,1.0s						
BW06	Boulder Array	60.69	57	P	P	01 39 23.8	+2.1
	baz=313,SNR=14						
BW06	Boulder Array	60.69	57	*e*P	P	01 39 23.1	+1.4
	comp=Z,8.2nm,0.9s						
PDAR	Pinedale Array	60.69	57	P	P	01 39 23.9	+2.1
	comp=Z,5.1nm,0.7s,baz=309,slow=2.8,SNR=54						
PDAR				pP	pP	01 39 43.9	+0.8
	comp=Z,1.3nm,0.7s,baz=341,slow=3.1,SNR=3.4						
MPMC	Manual Prospec	60.75	68	P	P	01 39 24.2	+2.1
	baz=314,SNR=5.1						
FURC	Furnace Creek,	60.84	67	P	P	01 39 24.8	+2.4
	baz=314,SNR=9.8						
TPNV	Topopah Spring	60.87	66	P	P	01 39 25.1	+2.1
	baz=314,SNR=9.1						
EDW2	Edwards Air Fo	61.25	69	P	P	01 39 27.6	+2.2
	baz=314						
SNCC	San Nicolas Is	61.45	71	P	P	01 39 28.7	+2.1
	baz=314						
GSC	Goldstone, Bar	61.67	68	P	P	01 39 30.4	+2.1
	baz=314						
FINES	FINESS Array B	61.75	336	P	P	01 39 25.2	-3.0
	comp=Z,0.5nm,0.4s,baz=22,slow=6.2,SNR=7.8						
FINES				LR	LR	02 09 03.2	
	comp=Z,19nm,19.2s,baz=2.0,slow=39						
FMP	Fort Macarthur	61.87	70	P	P	01 39 31.8	+2.3
	baz=314						
BFSC	Mount Baldy Ra	61.89	69	P	P	01 39 31.8	+2.0
	baz=314						
MURC	Murrieta	62.61	70	P	P	01 39 36.5	+2.0
	baz=314						
RSSD	Black Hills	62.66	53	P	P	01 39 36.6	+1.7
	baz=315						
RSSD	Black Hills	62.66	53	*e*P	P	01 39 36.1	+1.2
	comp=Z,7.5nm,0.9s						
RSSD	Black Hills	62.66	53	*e*P	P	01 39 36.1	+1.2
RSSD				pmax	pmax		
	comp=Z,8.0nm,0.9s						
GMRC	Granite Mounta	62.70	68	P	P	01 39 37.3	+2.1
	baz=314,SNR=6.4						
PFO	Pinyon Flats O	63.04	69	P	P	01 39 39.0	+1.5
	baz=315						
BELC	Belle Mtn. Jos	63.05	69	P	P	01 39 39.1	+1.6
	baz=315						
O20A	White River Ci	63.22	59	P	P	01 39 40.4	+1.7
	baz=315						
IRM	Iron Mountain	63.45	68	P	P	01 39 42.2	+2.1
	baz=315						
MONP2	Monument Peak	63.57	70	P	P	01 39 43.4	+2.3
	baz=315						
BC3	Big Chuckawall	63.61	69	P	P	01 39 42.9	+1.7
	baz=315						
IKP	In-Ko-Pah, Jac	63.92	70	P	P	01 39 45.2	+1.9
	baz=315						
N23A	Red Feather La	63.93	57	P	P	01 39 45.5	+2.1
	baz=316,SNR=6.6						
PDMCI	Parker Dam,Lak	63.94	67	P	P	01 39 45.2	+2.0
	baz=315						
Y12C	Blythe	64.10	68	P	P	01 39 46.4	+2.1
	baz=315						
GLA	Glamis	64.41	69	P	P	01 39 48.5	+2.1
	baz=315						
B35A	Bob, Littlefor	64.54	44	P	P	01 39 47.3	+0.4
	baz=319						
WUAZ	Wupatki	64.70	64	P	P	01 39 50.6	+2.2
	baz=315						
ISCO	Idaho Springs	64.89	57	P	P	01 39 52.1	+2.4
	baz=316,SNR=10.0						
ISCO	Idaho Springs	64.89	57	*e*P	P	01 39 51.7	+2.0
	comp=Z,9.8nm,1.3s						
MVCO	Mesa Verde	65.14	61	P	P	01 39 53.4	+2.1
	baz=316						
NB2	NORSAR Subarra	65.52	342	P	P	01 39 50.7	-2.4

	comp=Z,1.3nm,0.7s,baz=23,slow=6.9						
NOA	NORSAR Array B	65.52	342	P	P	01 39 51.0	-2.2
	comp=Z,1.0nm,0.7s,baz=24,slow=6.5,SNR=5.7						
NOA				LR	LR	02 14 05.1	
	comp=Z,11nm,18.0s,baz=20,slow=41						
NOA	NORSAR Array B	65.52	342	P	P	01 39 51.0	-2.2
S22A	4UR Ranch, Cre	65.69	60	P	P	01 39 57.3	+2.4
	baz=316,SNR=7.3						
Q24A	Divide	65.73	58	P	P	01 39 57.2	+1.9
	baz=316						
EYMN	Ely	65.83	43	*e*P	P	01 39 55.9	+0.6
HFS	Hagfors	65.85	341	P	P	01 39 53.3	-1.9
	comp=Z,0.9nm,0.4s,baz=26,slow=8.0,SNR=11						
HFS				LR	LR	02 12 10.9	
	comp=Z,21nm,18.7s,baz=35,slow=39						
C38A	Sawbill Land.	66.11	43	P	P	01 39 57.5	+0.5
	baz=320						
214A	Organ Pipe Nat	66.38	68	P	P	01 40 01.2	+2.0
	baz=316						
SDCO	Great Sand Dun	66.42	59	P	P	01 40 01.6	+2.0
	baz=317,SNR=6.0						
SDCO	Great Sand Dun	66.42	59	*e*P	P	01 40 01.6	+2.0
	comp=Z,7.6nm,1.5s						
ECSD	EROS Data Cent	66.64	49	P	P	01 40 01.2	+0.7
	baz=319,SNR=6.5						
ECSD	EROS Data Cent	66.64	49	*e*P	P	01 40 01.1	+0.6
	comp=Z,5.9nm,1.0s						
F38A	Pierce - Schro	67.18	45	P	P	01 40 05.0	+1.1
	baz=320						
H36A	Jessenland, He	67.28	47	P	P	01 40 06.0	+1.4
	baz=320						
SPMN	Marine on St.	67.31	46	P	P	01 40 05.8	+1.1
	baz=320						
TUC	Tucson	67.33	66	P	P	01 40 07.3	+2.2
	baz=317						
T25A	Trinidad	67.46	59	P	P	01 40 07.9	+1.8
	baz=317						
TASM	ASL Pad, Albuq	67.91	62	P	P	01 40 11.0	+2.1
	baz=317,SNR=6.4						
ANMO	Albuquerque	67.91	62	P	P	01 40 10.5	+1.6
	comp=Z,2.2nm,0.6s,baz=325,slow=12,SNR=12						
ANMO				pP	pP	01 40 31.1	+0.4
	comp=Z,0.6nm,0.6s,baz=313,slow=9.7,SNR=1.9						
ANMO				LR	LR	02 06 40.9	
	comp=Z,13nm,21.3s,baz=272,slow=33						
ANMO	Albuquerque	67.91	62	P	P	01 40 11.0	+2.1
	baz=317						
ANMO	Albuquerque	67.91	62	*ce*P	P	01 40 10.9	+1.9
ANMO				pmax	pmax		
	comp=Z,3.0nm,1.3s						
TASL	Snake Pit, Alb	67.91	62	P	P	01 40 11.0	+2.0
	baz=317,SNR=6.4						
I37A	Lemond, Waseca	67.96	47	P	P	01 40 10.3	+1.4
	baz=320						
J36A	Seneca 1, Swea	68.03	48	P	P	01 40 10.1	+0.8
	baz=320						
E41A	Kenton	68.08	43	P	P	01 40 10.1	+0.5
	baz=322						
J37A	Redenius Farm,	68.42	48	P	P	01 40 12.6	+0.8
	baz=320						
F41A	Three Lakes	68.58	43	P	P	01 40 13.5	+0.7
	baz=322						
K37A	Belmond	68.79	48	P	P	01 40 14.6	+0.5
	baz=320						
H40A	Chili	68.88	45	P	P	01 40 15.1	+0.5
	baz=321						
I39A	Houston	68.95	46	P	P	01 40 15.9	+0.8
	baz=321						
H41A	Junction City	69.21	44	P	P	01 40 16.9	+0.2
	baz=322						
L37A	Phoenix Point,	69.23	49	P	P	01 40 17.3	+0.5
	baz=320						
J39A	Decorah	69.27	47	P	P	01 40 17.0	0.0
	baz=321						
L38A	Oak Wood Farm,	69.60	48	P	P	01 40 19.3	+0.2
	baz=321						
SCIA	State Center	69.65	48	P	P	01 40 20.4	+1.0
	baz=321						
AKASG	Malin Array Be	69.82	328	P	P	01 40 17.3	-2.9
	comp=Z,0.8nm,0.4s,baz=29,slow=6.4,SNR=2.3						
AKASG				LR	LR	02 12 47.9	
	comp=Z,19nm,21.7s,baz=305,slow=38						
KVAR	Kislovodsk Arr	69.94	315	LR	LR	02 13 38.9	
	comp=Z,25nm,19.2s,slow=38						
KBZ	Khabaz	70.03	315	P	P	01 40 20.4	-1.2
	comp=Z,2.3nm,0.9s,baz=161,slow=1.5,SNR=3.5						
KBZ				LR	LR	02 13 06.6	
	comp=Z,17nm,18.3s,baz=30,slow=38						
L39A	Vinton	70.06	48	P	P	01 40 22.4	+0.5
	baz=321						
I42A	Draeger Farm,	70.11	44	P	P	01 40 22.6	+0.4
	baz=322						
F45A	CMU Biological	70.17	41	P	P	01 40 22.7	+0.2
	baz=324						
J42A	Columbus	70.47	45	P	P	01 40 24.4	0.0
	baz=322						
M39A	Webster	70.48	48	P	P	01 40 25.1	+0.6
	baz=321						
K42A	Prairie Point,	70.79	45	P	P	01 40 26.3	0.0
	baz=322						
P37A	Lathrop	70.88	51	P	P	01 40 27.4	+0.5
	baz=321						
MNTX	Cornudas Mount	70.90	63	P	P	01 40 29.1	+1.9
	baz=318						
MNTX	Cornudas Mount	70.90	63	*e*P	P	01 40 28.4	+1.2
	comp=Z,5.2nm,1.3s						
N40A	Mertquake, Sal	71.22	48	P	P	01 40 29.4	+0.4
	baz=322						
P38A	Dawn	71.25	50	P	P	01 40 29.7	+0.5
	baz=321						
Q37A	Longview Farm,	71.37	51	P	P	01 40 30.1	+0.2
	baz=321						
O40A	La Belle	71.68	49	P	P	01 40 32.2	+0.5
	baz=322						
Q38A	Cooks Store, C	71.72	51	P	P	01 40 32.2	+0.2
	baz=321,SNR=7.7						
P39B	Salisbury	71.74	50	P	P	01 40 32.2	+0.1
	baz=321						
GNI	Garni	71.97	312	LR	LR	02 14 38.3	
	comp=Z,33nm,18.6s,baz=47,slow=38						
Q39A	Willow Grove F	71.97	50	P	P	01 40 34.0	+0.5
	baz=321						
N42A	Yates City	72.00	47	P	P	01 40 34.0	+0.4
	baz=322						
P40A	Paris	72.05	49	P	P	01 40 34.4	+0.5
	baz=322						
R38A	Fenwick Farm,	72.18	51	P	P	01 40 34.2	-0.6
	baz=321						
WMOK	Wichita Mounta	72.29	57	P	P	01 40 36.7	+1.2
	baz=320,SNR=6.9						
WMOK	Wichita Mounta	72.29	57	*e*P	P	01 40 36.4	+0.9
	comp=Z,4.5nm,0.9s						
WMOK	Wichita Mounta	72.29	57	*e*P	P	01 40 36.4	+0.9
WMOK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
P41A	Barry, Barry	72.42	49	P	P	01 40 36.4	+0.3
	baz=322						
Q40A	Laux Farm, Aux	72.46	50	P	P	01 40 36.7	+0.3
	baz=322						
R39A	Chumby, Stover	72.51	51	P	P	01 40 36.9	+0.1
	baz=322,SNR=8.1						
S38A	Stockton	72.61	52	P	P	01 40 37.3	0.0
	baz=321						
WRA	Warramunga Arr	72.78	202	P	P	01 40 39.1	+0.8
	comp=Z,1.3nm,0.6s,baz=18,slow=6.1,SNR=8.8						
WRA				pP	pP	01 40 58.5	-1.9
	comp=Z,2.9nm,0.7s,baz=19,slow=6.3,SNR=9.8						
P42A	Winchester	72.83	48	P	P	01 40 38.9	+0.4
	baz=322						
T38A	Diamond	72.87	52	P	P	01 40 39.2	+0.3
	baz=321,SNR=7.2						
Q41A	Truxton	72.90	49	P	P	01 40 39.6	+0.6
	baz=322						
R40A	Maddies Statio	72.91	50	P	P	01 40 39.4	+0.3
	baz=322,SNR=5.5						
TUL1	Leonard	72.97	54	P	P	01 40 40.2	+0.7
	baz=321						
Q42A	Golden Eagle	73.27	49	P	P	01 40 42.0	+0.8
	baz=322						
S40A	Lebanon	73.33	51	P	P	01 40 41.6	0.0
	baz=322						
R41A	Rosebud	73.34	50	P	P	01 40 41.8	+0.2
	baz=322						
R42A	Luebbering	73.64	49	P	P	01 40 43.9	+0.5
	baz=322						
TXAR	Lajitas Array	73.65	64	P	P	01 40 45.8	+2.1
	comp=Z,6.1nm,0.7s,baz=298,slow=4.7,SNR=77						
TXAR				pP	pP	01 41 06.0	+0.2
	comp=Z,2.2nm,0.6s,baz=299,slow=4.9,SNR=6.1						
TXAR				LR	LR	02 11 58.6	
	comp=Z,12nm,19.5s,baz=0.0,slow=35						
T40A	Mansfield	73.67	51	P	P	01 40 43.8	+0.1
	baz=322						
S41A	Jillco Farms,	73.72	50	P	P	01 40 44.0	+0.1
	baz=322						
SFIN	Lafayette	73.72	46	P	P	01 40 44.1	+0.3
	baz=324						
P44A	Sand Creek, Wi	73.74	47	P	P	01 40 44.3	+0.4
	baz=323						
U39A	Green Forest	73.79	52	P	P	01 40 44.7	+0.4
	baz=322,SNR=11						
L49A	Milan	73.80	42	P	P	01 40 44.9	+0.6
	baz=325						
S42A	Caledonia	74.04	50	P	P	01 40 46.3	+0.5
	baz=322						
R43A	Red Bud	74.06	49	P	P	01 40 46.0	+0.2
	baz=323						
CLL	Collm	74.09	337	*e*P	P	01 40 45.0	-0.8
CLL	Collm	74.09	337	*e*P	P	01 40 45.0	-0.8
U40A	Yellville	74.13	52	P	P	01 40 46.5	+0.3
	baz=322,SNR=7.3						
V39A	Pettigrew	74.13	53	P	P	01 40 46.5	+0.1
	baz=322						
T41A	Mountain View	74.13	51	P	P	01 40 46.4	+0.1
	baz=322						
Q45A	Warren Harvey,	74.41	47	P	P	01 40 48.4	+0.6
	baz=324						
T42A	Van Buren	74.47	50	P	P	01 40 48.4	+0.2
	baz=322						
R44A	Waltonville	74.49	48	P	P	01 40 48.7	+0.4
	baz=323						
S43A	Fulton Ridge,	74.55	49	P	P	01 40 49.0	+0.3
	baz=323						
W39A	Magazine	74.56	53	P	P	01 40 49.5	+0.8
	baz=322						
V40A	Witts Springs	74.57	52	P	P	01 40 49.2	+0.3
	baz=322						
O48A	Farmland	74.69	44	P	P	01 40 49.5	0.0
	baz=325						
P47A	Martinsville	74.81	46	P	P	01 40 50.2	+0.1
	baz=324						
T43A	Greenville	74.83	50	P	P	01 40 50.7	+0.5
	baz=323						
X39A	Fountain Ranch	74.92	54	P	P	01 40 52.0	+1.1
	baz=322						
V41A	Mountainview	74.92	52	P	P	01 40 51.0	+0.1
	baz=322						
W40A	Ferguson Farm,	74.93	53	P	P	01 40 51.6	+0.7
	baz=322						
JCT	Junction City	74.97	60	P	P	01 40 52.4	+1.2
	baz=320						
WHTX	Lake Whitney,	75.10	58	P	P	01 40 52.9	+0.9
	baz=321						
O49A	Covington	75.11	44	P	P	01 40 52.6	+0.7
	baz=325						
N50A	Nevada	75.16	43	P	P	01 40 53.5	+1.4
	baz=326						
T44A	Benton	75.17	49	P	P	01 40 53.0	+0.8
	baz=323						
MIAR	Mount Ida	75.17	54	P	P	01 40 53.1	+0.8
	baz=322						
Q47A	Bedord North L	75.18	46	P	P	01 40 52.6	+0.3
	baz=324						
P48A	Milroy	75.22	45	P	P	01 40 52.6	+0.1
	baz=325						
W41B	Gary Mavity, V	75.36	52	P	P	01 40 54.2	+0.8
	baz=322						
LONY	Lake Ozonia	75.38	35	P	P	01 40 54.0	+0.6
	baz=329						
MLR	Muntele Rosu	75.41	327	P	P	01 40 52.5	-1.2
	comp=Z,1.5nm,0.5s,baz=337,slow=11,SNR=11						
MLR				LR	LR	02 16 35.4	
	comp=Z,37nm,18.4s,baz=24,slow=38						
O50A	Cable	75.47	44	P	P	01 40 54.3	+0.4
	baz=325						
Q48A	North Vernon	75.51	46	P	P	01 40 54.4	+0.3
	baz=325						
R47A	Wooly Knot Far	75.65	47	P	P	01 40 55.3	+0.3
	baz=324						
V43A	Jonesboro	75.73	51	P	P	01 40 55.9	+0.4
	baz=323						
X41A	Kaden, Bauxite	75.75	53	P	P	01 40 56.3	+0.7
	baz=322						
WCI	Wyandotte Cave	75.81	46	P	P	01 40 56.8	+0.8
	baz=324						
P50A	Jamestown	75.83	44	P	P	01 40 56.4	+0.5
	baz=325						
Q49A	Aurora	75.83	45	P	P	01 40 56.4	+0.4
	baz=325						
KHC	Kasperske Hory	75.95	336	*e*P	P	01 41 02.1	+5.5
KHC	Kasperske Hory	75.95	336	*e*P	P	01 41 02.1	+5.5
T46A	Princeton	76.02	48	P	P	01 40 58.2	+1.1
	baz=324						
M54A	Oil Creek Stat	76.03	40	P	P	01 40 57.4	+0.3
	baz=327						
GERES	GERESS Array B	76.18	336	P	P	01 40 56.4	-1.6
	comp=Z,0.2nm,0.3s,baz=34,slow=5.4,SNR=5.4						
GERES				LR	LR	02 17 12.3	
	comp=Z,16nm,19.6s,baz=66,slow=38						
Z40A	Long Farm, Mag	76.27	54	P	P	01 40 59.9	+1.3
	baz=322						
N54A	Moraine State	76.35	41	P	P	01 40 59.6	+0.6
	baz=327						
S48A	Wiedeman Farm,	76.39	47	P	P	01 40 59.8	+0.6
	baz=325						
CONA	Conrad Observa	76.43	334	*e*P	P	01 40 59.6	+0.2
	comp=Z,0.8nm,0.6s						
T47A	Sharon Grove	76.43	48	P	P	01 41 00.4	+0.9
	baz=324						
ASAR	Alice Springs	76.46	201	P	P	01 41 01.4	+1.7
	comp=Z,1.1nm,0.5s,baz=16,slow=5.5,SNR=15						
ASAR				pP	pP	01 41 21.4	-0.4
	comp=Z,1.8nm,0.8s,baz=15,slow=5.3,SNR=7.0						
Q51A	Peebles	76.50	44	P	P	01 41 00.2	+0.4
	baz=326						
S49A	Springfield	76.64	46	P	P	01 41 01.4	+0.8
	baz=325						
NATX	Nacogdoches	76.78	56	P	P	01 41 03.0	+1.5
	baz=322						
WVT	Waverly	76.78	49	P	P	01 41 02.4	+1.0
	baz=324						
U47A	Clarksville	76.79	48	P	P	01 41 02.3	+0.9
	baz=324						
V46A	Holladay	76.90	49	P	P	01 41 02.7	+0.6
	baz=324						
BINY	Binghamton	76.92	37	P	P	01 41 02.8	+0.7
	baz=329						
T49A	Edmonton	77.08	47	P	P	01 41 03.6	+0.5
	baz=325						
U48A	Cassie Pea, Po	77.09	48	P	P	01 41 04.0	+0.9
	baz=325						
OXF	Oxford	77.30	51	P	P	01 41 05.1	+0.8
	baz=324						
BRTR	Keskin Array B	77.33	319	P	P	01 41 03.4	-1.3
	comp=Z,1.0nm,0.7s,baz=43,slow=2.5,SNR=7.0						
BRTR				LR	LR	02 18 11.1	
	comp=Z,5.8nm,21.2s,baz=114,slow=38						
U49A	Red Boiling Sp	77.44	47	P	P	01 41 05.8	+0.7
	baz=325						
T50A	Nancy	77.47	46	P	P	01 41 06.1	+0.8
	baz=325						
S52A	Salyersville	77.73	45	P	P	01 41 07.4	+0.7
	baz=326						
SOKA	Soboth	77.80	334	*e*P	P	01 41 06.2	-0.9
	comp=Z,3.9nm,0.7s						
U50A	Jamestown	77.96	47	P	P	01 41 08.8	+0.8
	baz=325						
V49A	McMinnville	77.99	48	P	P	01 41 08.6	+0.4
	baz=325						
W48A	Pulaski	78.01	49	P	P	01 41 08.9	+0.6
	baz=325						
X47A	Russelville	78.06	50	P	P	01 41 09.0	+0.4
	baz=324						
Y46A	Houston	78.08	51	P	P	01 41 09.6	+0.9
	baz=324						
N59A	State Game Lan	78.10	38	P	P	01 41 08.9	+0.1
	baz=329						
WTTA	Wattenberg	78.17	337	P	P	01 41 11.0	+1.8
	comp=Z,4.6nm,1.0s						
MOTA	Moosalm	78.23	337	*e*P	P	01 41 08.6	-0.9
	comp=Z,2.2nm,0.7s						
W49A	Belvidere	78.34	48	P	P	01 41 10.7	+0.5
	baz=325						
U51A	La Follette	78.37	46	P	P	01 41 11.0	+0.7
	baz=326						
V50A	Pikevile	78.45	47	P	P	01 41 11.1	+0.4
	baz=325						
TZTN	Tazewell	78.45	46	P	P	01 41 11.6	+0.8
	baz=326						
Y47A	UCPARC, Winfie	78.56	50	P	P	01 41 11.9	+0.5
	baz=324						
DAVA	Damuels	78.59	338	PcP	P	01 41 14.2	+2.7
	comp=Z,2.7nm,0.8s						
FETA	Feichten	78.63	337	*e*P	P	01 41 10.7	-1.0
	comp=Z,2.1nm,0.8s						
HAU	Haudompre	78.72	340	*e*P	P	01 41 13.7	+1.7
HAU				pmax	pmax		
	comp=Z,3.0nm,0.8s						
W50A	Signal Mountai	78.73	48	P	P	01 41 12.7	+0.3
	baz=325						
PAL	Palisades	78.74	37	P	P	01 41 12.3	+0.1
	baz=330						
X49A	Woodville	78.81	49	P	P	01 41 13.3	+0.6
	baz=325						
V52A	Sevierville	79.01	46	P	P	01 41 14.4	+0.6
	baz=326						
Z47A	Carrollton	79.02	51	P	P	01 41 14.3	+0.5
	baz=324						
U53A	Fall Branch	79.04	45	P	P	01 41 14.7	+0.7
	baz=326						
DAVOX	Davos/Dischmat	79.06	338	P	P	01 41 12.0	-2.1
	comp=Z,3.2nm,0.8s,baz=24,slow=12,SNR=4.9						
DAVOX				LR	LR	02 21 05.1	
	comp=Z,31nm,18.0s,baz=78,slow=39						
Z48A	Northport	79.13	50	P	P	01 41 14.8	+0.3
	baz=324						
LDF	La Druitiere	79.41	345	*e*P	P	01 41 17.8	+2.1
LDF				pmax	pmax		
	comp=Z,24nm,1.5s						
Y50A	Piedmont	79.60	49	P	P	01 41 17.1	+0.1
	baz=325						
LRAL	Lakeview Retre	79.68	50	P	P	01 41 17.6	+0.1
	baz=325						
GRR	Gorron	79.73	345	*e*P	P	01 41 20.6	+3.1
GRR				pmax	pmax		
	comp=Z,28nm,1.4s						
W53A	Cullowhee	79.76	46	P	P	01 41 18.3	+0.3
	baz=326						
Z49A	Columbiana	79.78	50	P	P	01 41 18.4	+0.4
	baz=325						
X52A	Dahlonega	79.89	47	P	P	01 41 19.1	+0.4
	baz=326						
Y51A	Rockmart	79.91	48	P	P	01 41 19.0	+0.2
	baz=326						
Z50A	Ashland	80.03	49	P	P	01 41 19.9	+0.5
	baz=325						
SGMF	Saint Gilles	80.13	346	*e*P	P	01 41 19.1	-0.5
SGMF				pmax	pmax		
	comp=Z,18nm,1.3s						
149A	Jones	80.13	50	P	P	01 41 20.8	+0.8
	baz=325						
ROSF	Rostrenen	80.16	347	*e*P	P	01 41 20.0	+0.2
ROSF				pmax	pmax		
	comp=Z,64nm,1.7s						
SSF	Saint Saulge	80.21	342	*e*P	P	01 41 20.9	+0.8
SSF				pmax	pmax		
	comp=Z,5.0nm,1.0s						
249A	Camden	80.48	51	P	P	01 41 23.1	+1.4
	baz=325						
AVF	Avril sur Loir	80.50	342	*e*P	P	01 41 21.1	-0.6
AVF				pmax	pmax		
	comp=Z,5.0nm,0.8s						
150A	Eclectic	80.50	50	P	P	01 41 22.6	+0.7
	baz=325						
SMF	Signal de Mont	80.54	341	*e*P	P	01 41 22.7	+0.8
SMF				pmax	pmax		
	comp=Z,8.0nm,0.8s						
QUIF	Quistinic	80.55	346	*e*P	P	01 41 23.8	+1.9
QUIF				pmax	pmax		
	comp=Z,28nm,1.3s						
LPL	La Plagne	80.99	339	*e*P	P	01 41 24.5	-0.1
LPL				pmax	pmax		
	comp=Z,3.0nm,0.6s						
LPG	La Plagne	81.01	339	*e*P	P	01 41 24.6	-0.2
LPG				pmax	pmax		
	comp=Z,5.0nm,0.7s						
Y54A	Tignall	81.06	47	P	P	01 41 25.9	+1.1
	baz=327						
TCF	Toulx Ste Croi	81.21	342	*e*P	P	01 41 25.9	+0.4
TCF				pmax	pmax		
	comp=Z,2.0nm,0.7s						
251A	Midway	81.22	49	P	P	01 41 26.3	+0.6
	baz=326						
Z54A	Sparta	81.50	47	P	P	01 41 28.2	+1.0
	baz=327						
MBDF	Montbardon	81.73	339	*e*P	P	01 41 30.8	+2.4
MBDF				pmax	pmax		
	comp=Z,11nm,1.2s						
VIVF	Saint-Julien-l	82.08	340	*e*P	P	01 41 29.8	-0.3
VIVF				pmax	pmax		
	comp=Z,30nm,2.2s						
MMAI	Mount Meron Ar	82.13	314	P	P	01 41 29.9	-0.7
	comp=Z,1.3nm,0.5s,baz=32,slow=5.6,SNR=4.2						
RJF	Les Rejaudoux	82.29	343	*e*P	P	01 41 31.9	+0.8
RJF				pmax	pmax		
	comp=Z,7.0nm,1.0s						
353A	Camilla	82.41	49	P	P	01 41 33.3	+1.3
	baz=326						
CAF	Calviac	82.55	342	*e*P	P	01 41 32.0	-0.5
CAF				pmax	pmax		
	comp=Z,5.0nm,0.8s						
TIGA	Tifton	82.64	49	P	P	01 41 34.1	+0.9
	baz=326						
RAYN	Ar Rayn	84.72	301	*e*P	P	01 41 42.9	-1.2
	comp=Z,10nm,0.6s						
RAYN	Ar Rayn	84.72	301	*e*P	P	01 41 42.9	-1.2
RAYN				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SJPF	Ste Jean	84.91	344	*e*P	P	01 41 44.9	+0.3
SJPF				pmax	pmax		
	comp=Z,15nm,1.6s						
ETSF	Etsaut	85.00	343	*e*P	P	01 41 44.8	-0.3
ETSF				pmax	pmax		
	comp=Z,3.0nm,0.6s						
ESDC	Sonseca Array	88.72	345	P	P	01 42 01.8	-1.4
	comp=Z,1.0nm,0.6s,baz=8.1,slow=4.3,SNR=12						
KEST	Kesra	89.54	334	P	P	01 42 06.5	-0.6
	comp=Z,3.0nm,0.8s,baz=338,slow=4.3,SNR=6.6						
CPUP	Villa Florida	144.55	60	PKP	PKPbc	01 48 45.4	+0.9
	comp=Z,3.5nm,0.6s,baz=306,slow=4.2,SNR=12						
CPUP				pPKP	pPKPdf	01 49 07.1	-2.2
	comp=Z,1.3nm,0.6s,baz=356,slow=6.0,SNR=1.7						
PLCA	Paso Flores	146.02	92	PKPbc	PKPab	01 48 50.0	+0.5
	comp=Z,4.0nm,0.7s,baz=300,slow=3.7,SNR=8.9						
PLCA				pPKPbc	pPKPdf	01 49 11.9	+0.3
	comp=Z,2.4nm,0.9s,baz=265,slow=2.5,SNR=2.1						

DRS ***30*** *01:33:21.8±0.0, 41°.68N×45°.11E, h12^{km}*

TIF ***30*** *01:33:23.5, 41°.72N×45°.19E, h8^{km}*

MOS ***30*** *01:33:23.3±0.0, 41°.74N×45°.14E, h12^{km}, MPVA3.2*

ISCJB ***30*** *01:33:24.8±0.4, 41°.80N±0°.02×45°.16E±0°.02, h3^{km}±5^{km}, Error ellipse: s-maj=3.8km s-min=3.1km az=177.6*

NORS ***30*** *01:33:24.6±0.0, 41°.76N×45°.16E, h19^{km}*

DDA ***30*** *01:33:26.9, 41°.61N×44°.93E, h6^{km}, Ml2.6*

CSEM ***30*** *01:33:26.3±0.3, 41°.74N×45°.08E, h12^{km}, ML2.6, Error ellipse: s-maj=9.9km s-min=5.9km az=31.0*

ISC 30 01:33:25.5±0.9, **41°.74N**±0°.02×**45°.13E**±0°.02, **h17**^{km}±7^{km}, **n40, σ0^{s}.70**/76, **Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SEAG	Tbilisi Sea	0.24	277	P	Pb	01 33 31.6	+0.1
SEAG				S	Sb	01 33 36.5	+1.0
SEAG	Tbilisi Sea	0.24	277	P	Pb	01 33 31.6	+0.1
SEAG				S	Sb	01 33 36.5	+1.0
TBLG	Delisi	0.29	269	P	Pg	01 33 31.1	-0.7
TBLG				S	Sg	01 33 36.6	+0.5
TBLG	Delisi	0.29	269	P	Pg	01 33 31.3	-0.5
TBLG				S	Sg	01 33 36.6	+0.5
TBLG	Delisi	0.29	269	*e*Pg	Pg	01 33 31.1	-0.7
TBLG				*e*Sg	Sg	01 33 36.6	+0.5
DGRG	David-gareji	0.34	147	P	Pb	01 33 33.7	+0.6
DGRG				S	Sn	01 33 40.8	-1.4
DUS	Dusheti	0.48	318	P	Pg	01 33 34.8	-0.3
DUS				S	Sb	01 33 42.8	+0.6
DUS	Dusheti	0.48	318	P	Pg	01 33 34.8	-0.3
DUS				S	Sb	01 33 42.8	+0.6
DDFL	Dedoflistskaro	0.80	111	P	Pn	01 33 43.0	+1.0
DDFL	Dedoflistskaro	0.80	111	P	Pn	01 33 43.0	+1.0
BTLR	Botlikh	1.23	41	*e*Pg	Pn	01 33 47.0	-1.0

BTLR				eSg	Sb	01 34 03.4	-0.7
BGD	Bogdanovka	1.24	248	P	Pn	01 33 48.5	+0.3
BGD				S	Sg	01 34 07.1	+1.4
BGD	Bogdanovka	1.24	248	P	Pn	01 33 48.5	+0.3
BGD				S	Sg	01 34 07.1	+1.4
LACR	Lac	1.25	331	ePg	Pn	01 33 48.2	-0.2
LACR				eSg	Sn	01 34 05.1	+0.2
AKH	Akhalkalaki	1.27	256	P	Pn	01 33 48.4	-0.2
AKH				S	Sg	01 34 06.8	+0.2
AKH	Akhalkalaki	1.27	256	P	Pn	01 33 48.4	-0.2
AKH				S	Sg	01 34 06.8	+0.2
AKH	Akhalkalaki	1.27	256	ePg	Pn	01 33 48.4	-0.2
AKH				eSg	Sg	01 34 06.8	+0.2
KMGR	Komgaron	1.33	352	ePg	Pb	01 33 50.3	+0.2
KMGR				eSg	Sg	01 34 09.4	+0.7
VLKR	Vladikavkaz	1.35	346	ePg	Pb	01 33 50.4	0.0
VLKR				eSg	Sg	01 34 09.9	+0.6
ZEI	Tsey	1.39	320	ePg	Pn	01 33 50.0	-0.3
ZEI				eSg	Sn	01 34 06.9	-1.5
XNZR	Khunzakh	1.42	55	ePg	Pb	01 33 51.7	0.0
XNZR				eSg	Sg	01 34 11.2	-0.3
DVE	Vedeno	1.43	31	ePg	Pn	01 33 51.1	+0.4
DVE				eSg	Sb	01 34 10.4	+0.8
ONI	Oni	1.51	305	P	Pb	01 33 52.7	-0.4
ONI				S	Sg	01 34 13.8	-0.4
ONI	Oni	1.51	305	P	Pb	01 33 52.7	-0.4
ONI				S	Sg	01 34 13.9	-0.4
ONI	Oni	1.51	305	ePg	Pb	01 33 52.7	-0.4
ONI				eSg	Sg	01 34 13.8	-0.4
GNBR	Gunib	1.52	64	ePg	Pn	01 33 52.4	+0.4
GNBR				eSg	Sg	01 34 13.4	-1.0
GROC	Groznyy	1.55	18	ePg	Pg	01 33 55.1	-0.2
GROC				eSg	Sg	01 34 16.5	+1.0
EAK	Akyaka	1.55	228	i P	Pn	01 33 52.9	+0.3
EAK				i S	Sg	01 34 14.9	-0.7
EAK	Akyaka	1.55	228	P	Pn	01 33 52.8	+0.3
EAK				S	Sg	01 34 14.9	-0.7
KORR	Kora	1.56	330	ePg	Pb	01 33 54.0	0.0
KORR				eSg	Sb	01 34 14.7	+1.2
ARNR	Ardon	1.57	337	ePg	Pb	01 33 54.5	+0.4
ARNR				eSg	Sg	01 34 17.2	+0.9
DIGR	Digorskoe uzhe	1.63	316	i Pg	Pn	01 33 54.2	+0.6
DIGR				eSg	Sb	01 34 15.2	-0.4
BTKR	Batakoyurt	1.69	345	ePg	Pb	01 33 56.0	-0.1
BTKR				eSg	Sg	01 34 18.9	-1.2
DBC	Dubki	1.80	44	ePg	Pb	01 33 58.6	+0.5
DBC				eSg	Sg	01 34 23.9	+0.4
EPOS	Posof	1.81	263	i P	Pb	01 33 58.5	+0.2
EPOS				i S	Sg	01 34 23.5	-0.4
EPOS	Posof	1.81	263	P	Pb	01 33 58.5	+0.2
LSNR	Lesken	1.82	328	ePg	Pb	01 33 58.3	0.0
LSNR				eSg	Sb	01 34 22.7	+1.8
AKT	Akhty	1.97	97	ePg	Pb	01 34 00.4	-0.5
AKT				eSg	Sb	01 34 25.7	+0.5
IGDI	IGDIR	2.03	203	i P	Pb	01 34 01.2	-0.8
IGDI				i S	Sb	01 34 28.3	+1.4
MAK	Makhachkala	2.15	54	ePg	Pn	01 34 01.1	+0.6

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*ISCJB **30** 01:47:53.2±0.4, 21°.54S±0°.03×68°.45W±0°.06, h118^{km}±4^{km}, mb4.2/22, Error ellipse: s-maj=9.1km s-min=4.8km az=2.9*
*GUC **30** 01:47:54.9±0.7, 21°.49S×68°.71W, h127^{km}±5^{km}, ML4.6*
*NEIC **30** 01:47:55.0±0.0, 21°.49S×68°.70W, h125^{km}, mb4.3/11, ML4.6(GUC), After GUC.*
*IDC **30** 01:47:55.9±0.6, 21°.45S×68°.34W, h124^{km}±5^{km}, mb4.0/17, mb1 4.1/21, mb1mx4.0/43, mbtmp4.4/21, Error ellipse: s-maj=14.3km s-min=11.4km az=76.0*

ISC 30 01:47:54.7±0.5, 21°.58S±0°.03×68°.50W±0°.07, h121^{km}±4^{km}, n85, σ1^{s}.91/100, mb4.1/22, 10C-1D, Chile-Bolivia border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	0.72	252	⇑iP	Pn	01 48 15.1	+0.6
PB09				eS	Sn	01 48 29.9	+0.4
PB09				IAML		01 48 32.2	
	comp=E,23µm,0.7s						
PB01	IPOC Station P	1.06	300	ePn	Pn	01 48 17.0	-0.6
PB01				eSn	Sn	01 48 33.4	-1.4
PB01	IPOC Station P	1.06	300	⇑iP	Pn	01 48 16.9	-0.6
PB01				i S	Sn	01 48 33.1	-1.7
PB01				IAML		01 48 34.3	
	comp=N,23µm,0.4s						
PB03	IPOC Station P	1.25	248	⇑iP	Pn	01 48 19.6	0.0
PB03				eS	Sn	01 48 38.0	-0.5
PB03				IAML		01 48 38.8	
	comp=E,9µm,0.5s						
PB07	IPOC Station P	1.30	263	⇑iP	Pn	01 48 19.9	-0.2
PB07				eS	Sn	01 48 38.2	-1.2
PB07				IAML		01 48 39.1	
	comp=E,15µm,0.5s						
PB02	IPOC Station P	1.32	281	⇑iP	Pn	01 48 19.8	-0.6
PB02				eS	Sn	01 48 38.1	-1.6
PB02				IAML		01 48 38.8	
	comp=N,25µm,0.4s						
PB06	IPOC Station P	1.50	221	⇑iP	Pn	01 48 23.0	+0.6
PB06				i S	Sn	01 48 44.1	+0.7
PB06				IAML		01 48 44.8	
	comp=N,7µm,0.4s						
PB08	IPOC Station P	1.56	337	⇓iP	Pn	01 48 23.3	+0.1
PB08				eS	Sn	01 48 44.2	-0.8
PB08				IAML		01 48 44.9	
	comp=N,4µm,0.6s						
PB04	IPOC Station P	1.70	244	ePn	Pn	01 48 23.9	-0.9
PB04				eSn	Sn	01 48 46.2	-1.5
PB04	IPOC Station P	1.70	244	⇑iP	Pn	01 48 24.5	-0.2
PB04				eS	Sn	01 48 46.2	-1.5
PB04				IAML		01 48 52.3	
	comp=E,4µm,0.3s						
PB11	IPOC Station P	2.11	329	ePn	Pn	01 48 28.5	-1.2
PB11				eSn	Sn	01 48 52.2	-4.3
PB11	IPOC Station P	2.11	329	⇑iP	Pn	01 48 28.5	-1.2
PB11				eS	Sn	01 48 54.4	-2.1
PB11				IAML		01 48 55.6	
	comp=E,7µm,0.5s						
PSGC	Pisagua	2.49	322	eP	Pn	01 48 32.3	-2.2
PSGC				i S	Sn	01 49 01.8	-3.2
MNMC	Minye Minye	2.64	337	ePn	Pn	01 48 35.8	-0.9
MNMC				eSn	Sn	01 49 04.8	-4.1
MNMC	Minye Minye	2.64	337	eP	Pn	01 48 35.6	-1.1
MNMC				eS	Sn	01 49 07.3	-1.6
MNMC				IAML		01 49 09.6	
	comp=N,5µm,0.4s						
PB10	IPOC Station P	2.70	224	ePn	Pn	01 48 36.6	-0.6
PB10				eSn	Sn	01 49 04.7	-5.1
LPAZ	La Paz	5.28	4	P	Pn	01 49 12.1	+0.1
	comp=N,4.0nm,0.3s,baz=187,slow=7.7,SNR=76						
LPAZ				S	Sn	01 50 02.2	-10
	comp=N,1.2nm,0.3s,baz=228,slow=3.8,SNR=3.9						
LPAZ	La Paz	5.28	4	ePn	Pn	01 49 12.8	+0.8
LPAZ				S	Sn	01 50 02.2	-10
GO03	Copiap	6.19	194	ePn	Pn	01 49 21.8	-2.0
GO03				eSn	Sn	01 50 28.7	-4.6
LCO	Las Campanas	7.66	195	ePn	Pn	01 49 40.4	-3.5
LCO				eSn	Sn	01 51 05.4	-3.8
GO04	Tololo Observa	8.80	193	ePn	Pn	01 49 56.5	-2.7
SIV	San Ignacio	8.97	53	P	Pn	01 49 58.5	-2.8
	comp=N,6.9nm,0.3s,baz=249,slow=12,SNR=242						
SIV				S	Sn	01 51 30.8	-10
	comp=N,1.7nm,0.3s,baz=324,slow=23,SNR=4.7						
CPUP	Villa Florida	11.26	117	P	Pn	01 50 30.5	-1.6
	comp=N,0.6nm,0.3s,baz=306,slow=11,SNR=9.1						
CPUP	Villa Florida	11.26	117	ePn	Pn	01 50 26.5	-5.5
ROC1	El Roble	11.57	191	ePn	Pn	01 50 33.0	-3.4
SAML	Samuel	13.56	23	ePn	Pn	01 51 00.6	-1.6
SAML				eS	Sn	01 53 35.4	+3.5
TRQA	Tornquist	17.36	163	eP	Pn	01 51 49.9	+0.4
	comp=N,31nm,0.8s						
GO06	Curarrehue	18.13	187	eP	P	01 51 57.7	+0.2
	comp=N,21nm,0.8s						
PLCA	Paso Flores	19.17	185	P	Pn	01 52 10.4	-0.6
	comp=N,0.9nm,0.3s,baz=22,slow=12,SNR=20						
PLCA	Paso Flores	19.17	185	P	Pn	01 52 10.4	-0.6
	comp=N,15nm,0.8s						
SPB	Sao Paulo	19.56	100	eP	P	01 52 13.2	+0.2
	comp=N,18nm,0.8s						
BDFB	Brasilia	20.29	77	P	P	01 52 20.3	-0.8
	comp=N,17nm,0.6s,baz=253,slow=9.8,SNR=37						
BDFB	Brasilia	20.29	77	eP	P	01 52 20.5	-0.6
	comp=N,34nm,0.6s						
PTGA	Pitinga	22.33	23	P	P	01 52 40.8	-1.8
	comp=N,5.3nm,0.5s,baz=288,slow=23,SNR=19						
PTGA	Pitinga	22.33	23	eP	P	01 52 40.9	-1.8
	comp=N,8.6nm,0.6s						
PTGA				eS	S	01 56 34.4	-5.4
RUSC	La Rusia	27.67	350	eP	P	01 53 30.1	-1.9
	comp=N,4.8nm,1.2s						
PMSA	Palmer Station	43.28	177	P	P	01 55 44.4	+0.5
	comp=N,26nm,1.0s,baz=3.6,slow=16,SNR=3.3						
VNA3	Neumayer Olymp	59.88	161	P	P	01 57 48.8	+1.5
VNA1	Neumayer--Stat	60.08	160	P	P	01 57 50.9	+2.3
TXAR	Lajitas Array	60.91	325	P	P	01 57 55.3	+0.3
	comp=N,0.7nm,0.6s,baz=156,slow=8.7,SNR=12						
TXAR				pP	pP	01 58 25.4	+1.2
	comp=N,0.3nm,0.6s,baz=145,slow=8.4,SNR=2.6						
TXAR				sP	sP	01 58 38.3	+0.8
	comp=N,1.1nm,1.0s,baz=131,slow=8.5,SNR=4.2						
SNAA	Sanae	62.08	161	P	P	01 58 03.6	+1.3
ANMO	Albuquerque	66.77	327	P	P	01 58 34.0	+0.6
	comp=N,1.4nm,0.7s,baz=144,slow=17,SNR=8.7						
ANMO	Albuquerque	66.77	327	eP	P	01 58 34.0	+0.6
LIC	Lamto	68.05	74	eP	P	01 58 41.7	+0.1
	comp=N,34nm,1.4s						
TIC	Toumodi	68.24	73	eP	P	01 58 43.3	+0.4
KIC	Kosan Boka	68.36	74	eP	P	01 58 44.3	+0.7
	comp=N,36nm,1.1s						
DBIC	Dimbokro	68.39	73	P	P	01 58 43.4	-0.4
	comp=N,6.1nm,0.7s,baz=235,slow=8.3,SNR=7.2						
QSPA	South Pole Qui	68.61	180	P	P	01 58 46.1	+1.6
	comp=N,5.5nm,0.6s,baz=160,slow=5.7,SNR=27						
QSPA	South Pole Qui	68.61	180	eP	P	01 58 46.0	+1.5
	comp=N,38nm,1.1s						
KOWA	Kowa	72.70	66	P	P	01 59 09.6	-0.3
	comp=N,1.7nm,0.6s,baz=267,slow=18,SNR=6.5						
PDAR	Pinedale Array	74.37	330	P	P	01 59 19.8	+0.4
	comp=N,0.3nm,0.5s,baz=116,slow=6.7,SNR=4.1						
HWUT	Hardware Ranch	74.45	328	eP	P	01 59 20.2	+0.4
	comp=N,2.5nm,0.8s						
NVAR	Mina Array Bea	75.79	322	P	P	01 59 29.0	+1.3
	comp=N,0.9nm,0.8s,baz=161,slow=7.6,SNR=6.0						
SYO	Syowa Base	76.30	159	⇑eX	P	01 59 31.0	+1.2
SYO	Syowa Base	76.30	159	⇑ePcP	P	01 59 34.6	+4.8
VNDA	Vanda	76.84	190	P	P	01 59 35.2	+2.5
	comp=N,1.6nm,0.8s,baz=118,slow=5.3,SNR=12						
TORD	Torodi Ar. Bea	77.03	70	P	P	01 59 33.9	-1.0
	comp=N,2.8nm,0.5s,baz=255,slow=5.5						
HLID	Hailey	77.31	328	eP	P	01 59 37.6	+1.6
	comp=N,4.7nm,0.9s						
TSUM	Tsumeb	79.65	107	P	P	01 59 50.5	+1.0
	comp=N,1.8nm,0.8s,baz=234,slow=8.9,SNR=7.4						
BMO	Blue Mountains	79.69	327	eP	P	01 59 49.5	+0.5
	comp=N,2.4nm,0.8s						
YBH	Yreka Blue Hor	80.51	322	P	P	01 59 53.3	-0.1
	comp=N,1.0nm,0.6s,baz=141,slow=6.5,SNR=3.7						
BOSA	Boshof	83.08	118	P	P	02 00 06.6	-0.8
	comp=N,2.5nm,0.9s,baz=200,slow=1.9,SNR=3.5						
MAW	Mawson	84.14	163	P	P	02 00 13.3	+1.5
	comp=N,4.5nm,0.8s,baz=186,slow=5.1,SNR=11						
ESDC	Sonseca Array	85.62	44	P	P	02 00 21.1	+1.3
	comp=N,0.0nm,0.3s,baz=236,slow=4.6,SNR=3.2						
YKA	Yellowknife Ar	91.39	340	P	P	02 00 46.7	+0.3
	comp=N,3.4nm,0.7s,baz=131,slow=4.6,SNR=14						
YKA				pP	pP	02 01 18.6	+0.9
	comp=N,1.2nm,0.8s,baz=135,slow=5.5,SNR=2.5						
H11S2	WAKE ISLAND Hy	128.26	277	T	T	04 26 57.9	
	baz=102,slow=74,SNR=23						
H11S1	WAKE ISLAND Hy	128.27	277	T	T	04 27 01.3	
	baz=102,slow=74,SNR=23						
H11S3	WAKE ISLAND Hy	128.28	277	T	T	04 27 00.7	
	baz=102,slow=74,SNR=22						
H11N3	WAKE ISLAND Hy	128.34	279	T	T	04 27 13.7	
	baz=104,slow=74,SNR=20						
H11N2	WAKE ISLAND Hy	128.36	279	T	T	04 27 13.7	
	baz=104,slow=74,SNR=13						
H11N1	WAKE ISLAND Hy	128.36	279	T	T	04 27 13.7	
	baz=104,slow=74,SNR=14						
ASAR	Alice Springs	130.02	207	PKP	PKPdf	02 06 51.8	+0.8
	comp=N,1.6nm,0.5s,baz=148,slow=2.1,SNR=17						
WRA	Warramunga Arr	133.08	210	PKP	PKPdf	02 06 58.0	+1.2
	comp=N,2.4nm,0.6s,baz=156,slow=1.8,SNR=27						
BVAR	Borovoye Array	135.64	35	PKP	PKPdf	02 07 01.2	+0.7
	comp=N,0.8nm,0.6s,baz=289,slow=4.4,SNR=3.4						
KURK	Kurchatov	141.19	33	PKPpre	PKPpre	02 07 07.4	
KURBB	Kurchatov Arra	141.19	34	PKhKP	PKPpre	02 07 07.4	
	comp=N,0.5nm,0.7s,baz=291,slow=2.5,SNR=4.1						
ZALV	Zalesovo Beam	141.86	25	PKhKP	PKPpre	02 07 09.6	
	comp=N,0.9nm,0.5s,baz=297,slow=9.5,SNR=2.7						
ZALV				PKP	PKPdf	02 07 13.4	+1.6
	comp=N,1.3nm,0.5s,baz=293,slow=3.9,SNR=6.0						
MKAR	Makanchi Array	145.47	36	PKPbc	PKPab	02 07 19.6	+0.5
	comp=N,1.6nm,0.6s,baz=316,slow=3.9,SNR=16						
MKAR				pPKPbc	pPKPdf	02 07 52.2	+1.0
	comp=N,2.8nm,0.8s,baz=310,slow=2.8,SNR=7.6						
WMQ	Urumqi	150.31	36	P	PKPdf	02 07 23.5	-3.0
LEM	Lembang	151.51	172	PKPbc	PKPbc	02 07 37.4	+1.8
	comp=N,26nm,0.5s,baz=156,slow=20,SNR=3.9						
USRK	Ussuriysk Ar.	151.78	328	PKPbc	PKPbc	02 07 36.1	+0.9
	baz=354,slow=4.3						
MJAR	Matsushiro Arr	152.42	309	PKPbc	PKPbc	02 07 37.2	+0.4
	comp=N,0.7nm,0.3s,baz=72,slow=2.2,SNR=5.0						
SONM	Songino Array	153.48	8	PKP	PKPdf	02 07 32.3	+1.1
	comp=N,0.6nm,0.8s,baz=211,slow=1.7,SNR=2.9						
SONM				PKPbc	PKiKP	02 07 39.8	+0.7
	comp=N,0.3nm,0.5s,baz=17,slow=1.5,SNR=4.0						
BJT	Baijiatuau	161.19	349	ePKPdf	PKPdf	02 07 41.8	+0.9
LZH	Lanzhou	164.07	23	ePKP	PKPdf	02 07 37.5	-6.7
LZH				pPKP	pPKPdf	02 08 17.5	+0.4
LZH				sPKP		02 08 38.0	

NNC 30 01:56:00.0±3.4, 36°.53N×68°.64E, h0^{km}, mb3.7, mpv3.4, 1C-7D, Error ellipse: s-maj=25.5km s-min=20.3km az=2.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	5.17	46	⇓Pn	Pn	01 57 18.3	-0.6
	2.0nm,0.4s						
SFK				⇓Sn	Sn	01 58 20.4	+1.0
	2.0nm,0.3s						
SFK				⇓Lg	Lg	01 58 42.1	
	3.1nm,0.3s						
MNAS	Manas	6.66	25	⇓Pn	Pn	01 57 39.5	+0.3
	1.9nm,0.3s						
MNAS				⇓Sn	Sn	01 58 56.9	+1.1
	1.7nm,0.6s						
KK31	Karatay Array	6.72	12	⇓Pn	Pn	01 57 40.9	+0.9
	0.4nm,0.3s,baz=198,slow=15						
KK31				⇓Sn	Sn	01 58 59.2	+2.0
	1.4nm,0.6s,baz=194,slow=22						
KK31				⇑Lg	Lg	01 59 34.1	
	0.7nm,0.5s,baz=194,slow=29						

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*ATH **30** 01:59:14.7, 37°.80N×26°.68E, h23^{km}±1^{km}, ML2.8/4, Error ellipse: s-maj=1.9km s-min=1.0km az=182.0*
*THE **30** 01:59:15.4, 37°.83N×26°.64E, h0^{km}±1^{km}, ML2.7/4, Error ellipse: s-maj=2.6km s-min=0.7km az=226.0*
*DDA **30** 01:59:15.9, 37°.90N×26°.74E, h7^{km}, Ml2.7*
*CSEM **30** 01:59:15.2±0.1, 37°.83N×26°.68E, h8^{km}, ML2.8, Error ellipse: s-maj=3.5km s-min=2.5km az=46.0*
*ISCJB **30** 01:59:15.1±0.4, 37°.86N±0°.02×26°.69E±0°.03, h5^{km}±4^{km}, Error ellipse: s-maj=4.3km s-min=2.9km az=142.9*
*ISK **30** 01:59:15.1, 37°.88N×26°.73E, h7^{km}, ML2.7/17*

ISC 30 01:59:15.5±0.8, 37°.85N±0°.02×26°.69E±0°.02, h12^{km}±6^{km}, n88, σ0^{s}.77/115, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMG	Samos	0.18	140	P	Pg	01 59 19.5	-0.1
SMG				S	Sg	01 59 23.2	+0.8
SMG				AML	AML	01 59 23.9	
	comp=E,4116µm,0.2s						
SMG				AML	AML	01 59 24.1	
	comp=N,6500µm,0.2s						
SMG	Samos	0.18	140	P	Pg	01 59 19.5	-0.1
SMG				S	Sg	01 59 23.2	+0.8
SMG	Samos	0.18	140	P	Pg	01 59 19.5	-0.1
SMG				S	Sg	01 59 23.2	+0.8
DGB	˜zmir	0.25	37	i P	Pg	01 59 19.8	-1.0
DGB				i S	Sg	01 59 23.1	-1.3
GCAM	G?zelcaml?	0.46	109	i P	Pg	01 59 24.4	-0.1
GCAM				i S	Sg	01 59 31.3	+0.8
GCAM	G?zelcaml?	0.46	109	P	Pg	01 59 24.4	-0.1
GCAM				S	Sg	01 59 31.3	+0.8
URLA	Izmir	0.52	352	PG	Pg	01 59 25.1	-0.6
URLA				SG	Sg	01 59 32.4	-0.1
URLA	Izmir	0.52	352	i P	Pg	01 59 25.1	-0.6
URLA	Izmir	0.52	352	ePg	Pg	01 59 25.1	-0.6
URLA				eSg	Sg	01 59 32.4	-0.1
BLCB	Balcova	0.60	27	PG	Pg	01 59 26.5	-0.8
BLCB				SG	Sg	01 59 34.5	-0.7
BLCB	Balcova	0.60	27	ePg	Pg	01 59 26.5	-0.8
BLCB				eSg	Sg	01 59 34.5	-0.7
CHOS	Chios island	0.73	317	PG	Pg	01 59 29.6	-0.2
CHOS	Chios island	0.73	317	P	Pg	01 59 29.2	-0.6
CHOS				S	Sb	01 59 40.3	0.0
CHOS				AML	AML	01 59 41.1	
	comp=E,1783µm,0.4s						
CHOS				AML	AML	01 59 42.8	
	comp=N,1466µm,0.5s						
CHOS	Chios island	0.73	317	P	Pg	01 59 29.4	-0.4
CHOS				S	Sb	01 59 40.6	+0.2
CHOS	Chios island	0.73	317	ePg	Pg	01 59 29.6	-0.2
CHOS				S	Sb	01 59 40.5	+0.2
KRBN	Karaburun	0.75	352	PG	Pg	01 59 29.6	-0.5
KRBN	Karaburun	0.75	352	ePg	Pg	01 59 29.6	-0.5
FOCM	Foˆ§a	0.86	2	PG	Pg	01 59 31.5	-0.7
FOCM	Foˆ§a	0.86	2	ePg	Pg	01 59 31.5	-0.7
BODT	Bodrum	0.93	148	PG	Pb	01 59 33.5	-0.1
BODT	Bodrum	0.93	148	P	Pb	01 59 33.7	+0.1
BODT	Bodrum	0.93	148	ePg	Pb	01 59 33.5	-0.1
AYDB	Zeytinkoy-Aydi	0.95	84	PG	Pg	01 59 33.4	-0.6
AYDB	Zeytinkoy-Aydi	0.95	84	ePg	Pg	01 59 33.4	-0.6
AYDN	Tasoluk	0.96	101	i P	Pg	01 59 33.6	-0.5
AYDN				i S	Sg	01 59 45.7	-0.9
AYDN	Tasoluk	0.96	101	P	Pg	01 59 33.6	-0.5
AYDN				S	Sg	01 59 45.7	-0.9
BDRM	Kayabasi	0.99	142	i P	Pn	01 59 35.1	-0.1
BDRM				i S	Sn	01 59 49.9	+0.8
BDRM	Kayabasi	0.99	142	P	Pn	01 59 35.1	-0.1
BDRM				S	Sn	01 59 49.9	+0.8
MLSB	Milas	1.02	122	PG	Pb	01 59 35.0	-0.2
MLSB	Milas	1.02	122	ePg	Pb	01 59 35.0	-0.2
PSRA	Psara	1.12	308	P	Pb	01 59 36.7	-0.3
PSRA				S	Sn	01 59 54.2	+1.8
PSRA	Psara	1.12	308	P	Pb	01 59 36.6	-0.3
PSRA				S	Sn	01 59 53.4	+1.0
APE	Apeiranthos	1.21	230	P	Pb	01 59 38.3	0.0
APE	Apeiranthos	1.21	230	P	Pn	01 59 37.8	-0.5
APE	Apeiranthos	1.21	230	P	Pn	01 59 37.8	-0.5
DKL	Dikili	1.23	8	PN	Pn	01 59 38.4	-0.1
DKL	Dikili	1.23	8	ePn	Pn	01 59 38.4	-0.1
TNSA	Tinos	1.25	256	P	Pg	01 59 39.5	0.0
TNSA				S	Sb	01 59 54.4	-0.7
TNSA	Tinos	1.25	256	P	Pb	01 59 38.8	-0.2
TNSA				S	Sb	01 59 54.8	-0.3
DAT	Datca	1.32	147	PN	Pb	01 59 40.5	+0.1
DAT	Datca	1.32	147	i P	Pn	01 59 39.3	-0.6
DAT	Datca	1.32	147	P	Pn	01 59 39.3	-0.6
DAT	Datca	1.32	147	ePn	Pb	01 59 40.5	+0.1
PRK	Paraskevi	1.43	347	P	Pg	01 59 42.9	-0.2
PRK				S	Sg	02 00 03.2	+1.5
PRK				AML	AML	02 00 04.0	
	comp=N,819µm,0.4s						
PRK				AML	AML	02 00 09.8	
	comp=E,693µm,0.6s						
PRK	Paraskevi	1.43	347	P	Pb	01 59 42.4	+0.3
PRK				S	Sg	02 00 02.3	+0.7
PRK	Paraskevi	1.43	347	P	Pb	01 59 42.4	+0.3
PRK				S	Sg	02 00 02.3	+0.7
YER	Yerkesik	1.45	119	PN	Pb	01 59 42.2	-0.3
YER	Yerkesik	1.45	119	ePn	Pb	01 59 42.2	-0.3
AYVA	Ayvalik	1.46	0	i P	Pb	01 59 42.8	+0.3
AYVA	Ayvalik	1.46	0	P	Pb	01 59 42.8	+0.3
SIGR	SIGRI	1.51	335	P	Pn	01 59 40.8	-1.6
SIGR				S	Sb	02 00 03.0	+0.4
SIGR				AML	AML	02 00 10.2	
	comp=E,226µm,0.4s						
SIGR				AML	AML	02 00 13.8	
	comp=N,274µm,0.5s						
SIGR	SIGRI	1.51	335	P	Pn	01 59 41.9	-0.5
SIGR				S	Sn	02 00 00.6	-1.3
SIGR	SIGRI	1.51	335	P	Pn	01 59 41.9	-0.5
SIGR				S	Sg	02 00 03.4	-0.7
MANT	Manisa	1.60	66	i P	Pb	01 59 45.6	+0.4
MANT	Manisa	1.60	66	P	Pb	01 59 45.6	+0.4
KULA	Kula-Manisa	1.69	66	PN	Pn	01 59 45.2	+0.3
KULA	Kula-Manisa	1.69	66	ePn	Pn	01 59 45.2	+0.3
KARY	Karystos	1.79	277	P	Pn	01 59 46.0	-0.2
KARY	Karystos	1.79	277	P	Pn	01 59 46.2	0.0
TURN	Turunc	1.81	122	PN	Pn	01 59 44.9	-1.6
TURN	Turunc	1.81	122	i P	Pn	01 59 44.1	-2.4
TURN	Turunc	1.81	122	P	Pn	01 59 44.1	-2.4
TURN	Turunc	1.81	122	ePn	Pn	01 59 44.9	-1.6
DALY	Dalyan (Mu˜la	1.87	123	PN	Pn	01 59 48.2	+0.9
DALY	Dalyan (Mu˜la	1.87	123	ePn	Pn	01 59 48.2	+0.9
SERI	Serifos	1.88	249	P	Pn	01 59 46.2	-1.3
SERI	Serifos	1.88	249	P	Pn	01 59 47.0	-0.5
SERI	Serifos	1.88	249	P	Pn	01 59 47.0	-0.5
DEMI	Demirci	1.99	53	i P	Pg	01 59 53.2	-0.5
DEMI	Demirci	1.99	53	P	Pg	01 59 53.2	-0.5
BOZC	Bozcaada	2.05	346	PN	Pn	01 59 50.6	+0.8
BOZC	Bozcaada	2.05	346	ePn	Pn	01 59 50.6	+0.8
DION	Dionisos Attik	2.19	277	P	Pn	01 59 51.9	+0.2
DION	Dionisos Attik	2.19	277	P	Pn	01 59 52.0	+0.2
VLY	Voula,Athens	2.29	271	P	Pn	01 59 53.3	+0.2
VLY	Voula,Athens	2.29	271	P	Pn	01 59 53.4	+0.2
LPK	Lapseki	2.52	1	PN	Pn	01 59 57.2	+0.9
LPK	Lapseki	2.52	1	ePn	Pn	01 59 57.2	+0.9
GELI	Tayfur-Gelibol	2.55	356	PN	Pn	01 59 57.7	+1.0
GELI	Tayfur-Gelibol	2.55	356	ePn	Pn	01 59 57.7	+1.0
EDC	Edincik	2.66	20	PN	Pn	01 59 59.0	+0.9
EDC	Edincik	2.66	20	ePn	Pn	01 59 59.0	+0.9
TVSB	Tavsanli	2.69	53	PN	Pn	01 59 59.6	+0.8
TVSB	Tavsanli	2.69	53	ePn	Pn	01 59 59.6	+0.8
KCTX	Karacabey (Bur	2.74	28	PN	Pn	02 00 00.2	+0.9
KCTX	Karacabey (Bur	2.74	28	ePn	Pn	02 00 00.2	+0.9
ALN	Alexandroupoli	3.08	351	P	Pn	02 00 01.9	-2.1
ALN	Alexandroupoli	3.08	351	P	Pn	02 00 03.6	-0.4

NNC 30 02:02:34.9±2.7, 36°.54N×68°.77E, h0^{km}, mb4.0, mpv3.6, 4C-5D, Error ellipse: s-maj=21.2km s-min=18.8km az=158.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	5.09	46	⇑Pn	Pn	02 03 52.3	-0.4
	2.8nm,0.4s						
SFK				⇓Sn	Sn	02 04 54.0	+1.6
	4.7nm,0.3s						
SFK				⇓Lg	Lg	02 05 16.0	
	7.9nm,0.6s						
MNAS	Manas	6.61	25	⇑Pn	Pn	02 04 13.2	-0.2
	3.3nm,0.3s						
MNAS				⇑Sn	Sn	02 05 31.2	+1.7
	1.2nm,0.4s						
MNAS				⇓Lg	Lg	02 06 02.7	
	2.3nm,0.7s						
KK31	Karatay Array	6.69	11	⇓Pn	Pn	02 04 15.0	+0.6
	1.7nm,0.7s,baz=199,slow=15,SNR=19						
KK31				⇓Sn	Sn	02 05 33.1	+1.6
	0.7nm,0.4s,baz=199,slow=24,SNR=3.6						
KK31				⇑Lg	Lg	02 06 05.8	
	0.6nm,0.5s						
AML	Almayashu	6.77	33	P	Pn	02 04 15.5	-0.3
	SNR=16						
UCH	Uchtor	7.22	36	P	Pn	02 04 21.6	-0.4
	SNR=22						
KZA	Kyzart	7.47	40	P	Pn	02 04 25.0	-0.6
	SNR=6.5						
ULHL	Ulahol	8.12	43	P	Pn	02 04 33.4	-0.9
	SNR=5.9						
TKM2	Tokmak 2	8.26	37	P	Pn	02 04 35.3	-0.9
	SNR=6.7						

MAN 30 02:03:56.9, 7°.32N×123°.38E, h31^{km}, mb4.5, ML3.4, MS3.2, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAGZ	Pagadian	0.53	0	eP	Pn	02 04 08.7	+0.4
PAGZ				eS	Sn	02 04 16.4	+0.2
DCPH	Dipolog City	1.26	359	⇑eP	Pb	02 04 22.9	+2.8
SKMP	Bagumbayan, Su	1.40	124	eP	Pn	02 04 20.2	-0.1
SKMP				eS	Sn	02 04 35.5	-2.2

CGP	**Cagayan de Oro**	**1.73**	**49**⇑	*e*P	Pn	02 04 25.2	+0.5
CGP				*i* S	Sn	02 04 45.7	0.0
BUKP	**Musuan**	**1.76**	**71**	*e*P	Pn	02 04 25.5	+0.2
BUKP				*e*S	Sn	02 04 46.7	+0.1
DDMP	**Don Marcelino,**	**2.61**	**117**	*e*P	Pn	02 04 37.4	+0.4
DDMP				*e*S	Sb	02 05 11.2	-3.4

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*NIED **30** 02:16:00, 39°.10N×142°.40E, h62^{km}, Mw3.6 Best double couple: $M_0$2.98000×10^{14} NP1:ϕ_s98.00000°, δ75.00000°, λ2.00000°. NP2:ϕ_s8.00000°, δ88.00000°, λ165.00000°.*

*ISCJB **30** 02:16:48.1±1.2, 39°.07N±0°.05×142°.50E±0°.08, h30^{km}±6^{km}, mb3.6/3, Error ellipse: s-maj=9.9km s-min=7.6km az=11.6*

*JMA **30** 02:16:49.4±0.1, 39°.10N×142°.42E, h33^{km}±1^{km}, M3.5*

JMA Felt I J1.

*IDC **30** 02:16:54.0±5.0, 39°.04N×142°.40E, h74^{km}±47^{km}, mb3.3/3, mb1 3.4/4, mb1mx3.0/62, mbtmp3.4/4, ML2.8/1, Error ellipse: s-maj=44.3km s-min=30.1km az=98.0*

ISC 30 02:16:49.5±2.1, 39°.13N±0°.07×142°.4E±0°.1, h32^{km}±13^{km}, n20, σ1^{s}05/22, mb3.9/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**0.57**	**265**	P	**Pb**	**02 17 01.1**	**-0.1**
OFUJ				S	**Sb**	**02 17 09.2**	**0.0**
MIYJ	**Miyakonagasawa**	**0.63**	**315**	P	**Pb**	**02 17 02.1**	**-0.1**
MIYJ				S	**Sb**	**02 17 10.9**	**0.0**
JTH	**Tanohata**	**0.91**	**333**	P	**Pb**	**02 17 06.6**	**-0.2**
JTH				S	**Sb**	**02 17 18.5**	**0.0**
JOM	**Ohasama**	**0.93**	**292**	P	**Pb**	**02 17 06.8**	**-0.3**
JOM				S	**Sb**	**02 17 19.4**	**+0.3**
JMK	**Ichinoseki**	**0.94**	**259**	P	**Pn**	**02 17 06.4**	**-0.1**
JMK				S	**Sn**	**02 17 18.9**	**0.0**
JIO	**Ouri**	**1.07**	**231**	P	**Pn**	**02 17 07.4**	**-0.9**
JIO				S	**Sn**	**02 17 20.1**	**-1.9**
JKZ	**Kuzumaki**	**1.19**	**316**	P	**Pb**	**02 17 10.9**	**-0.6**
JKZ				S	**Sb**	**02 17 26.7**	**+0.1**
JRG	**Rokugo**	**1.40**	**281**	P	**Pb**	**02 17 14.1**	**-0.9**
JRG				S	**Sb**	**02 17 33.1**	**+0.6**
JANG	**Nango**	**1.42**	**331**	P	**Pb**	**02 17 14.1**	**-1.2**
JOU	**Okura**	**1.56**	**241**	P	**Pn**	**02 17 15.5**	**+0.4**
MJAR	**Matsushiro Arr**	**4.21**	**233**	P	**Pn**	**02 17 54.8**	**+3.2**
	0.6nm,0.3s,baz=40,slow=12,SNR=6.7						
H11N2	**WAKE ISLAND Hy**	**28.64**	**125**	T	T	02 53 06.1	
	baz=317,slow=75,SNR=8.7						
H11N1	**WAKE ISLAND Hy**	**28.65**	**125**	T	T	02 53 04.2	
	baz=317,slow=75,SNR=7.2						
H11N3	**WAKE ISLAND Hy**	**28.66**	**125**	T	T	02 53 07.6	
	baz=317,slow=75,SNR=7.0						
H11S1	**WAKE ISLAND Hy**	**29.43**	**127**	T	T	02 54 06.3	
	baz=319,slow=76,SNR=7.7						
H11S3	**WAKE ISLAND Hy**	**29.43**	**127**	T	T	02 54 07.4	
	baz=319,slow=76,SNR=8.8						
H11S2	**WAKE ISLAND Hy**	**29.44**	**127**	T	T	02 54 08.0	
	baz=319,slow=76,SNR=7.5						
KURBB	**Kurchatov Arra**	**45.35**	**307**	P	**P**	**02 25 05.1**	**+0.5**
	0.6nm,0.4s,baz=80,slow=8.5,SNR=6.3						
ILAR	**Eielson Array**	**47.31**	**33**	P	**P**	**02 25 20.3**	**+0.5**
	0.3nm,0.8s,baz=268,slow=6.3,SNR=4.2						
WRA	**Warramunga Arr**	**59.25**	**189**	P	**P**	**02 26 47.0**	**-1.0**
	0.4nm,0.4s,baz=5.4,slow=6.8,SNR=4.6						

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*ISCJB **30** 02:22:45.2±0.7, 29°.52N±0°.04×130°.17E±0°.06, h24^{km}±7^{km}, mb3.5/2, Error ellipse: s-maj=10.5km s-min=3.5km az=32.8*

*JMA **30** 02:22:45.4±0.1, 29°.57N×130°.15E, h25^{km}±2^{km}, M3.4*

JMA Felt I J1.

*IDC **30** 02:22:48.3±4.8, 29°.92N×128°.58E, h66^{km}±24^{km}, mb3.2/2, mb1 3.5/5, mb1mx3.1/67, mbtmp3.5/5, Error ellipse: s-maj=139.2km s-min=10.2km az=109.0*

ISC 30 02:22:43.3±1.2, 29°.47N±0°.03×130°.13E±0°.05, h6^{km}±10^{km}, n21, σ1^{s}78/34, Ryukyu Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JNN	**Nakanoshima**	**0.43**	**329**	P	**Pb**	**02 22 53.3**	**0.0**
JNN				*e*S	**Sb**	**02 22 58.9**	**-1.1**
JYAK	**Yakushimahirau**	**0.83**	**23**	P	**Pg**	**02 22 59.1**	**-0.1**
JYAK				*e*S	**Sg**	**02 23 10.0**	**0.0**
JTAJ	**Takarajima**	**0.87**	**249**	P	**Pn**	**02 23 03.0**	**+0.9**
JTAJ				*e*S	**Sn**	**02 23 14.8**	**-0.3**
JKC	**Kuchinoerabu**	**0.99**	**3**	P	**Pb**	**02 23 01.9**	**-0.9**
JKC				*e*S	**Sg**	**02 23 14.1**	**-0.9**
JMTN	**Minamitane**	**1.14**	**36**	P	**Pb**	**02 23 04.5**	**-0.9**
JMTN				*e*S	**Sb**	**02 23 19.2**	**-1.2**
JAM	**Amami Oshima**	**1.16**	**204**	P	**Pg**	**02 23 07.0**	**+1.6**
JAM				*e*S	**Sn**	**02 23 22.7**	**+0.6**
JZK	**Kikaishima**	**1.16**	**187**	P	**Pg**	**02 23 09.6**	**+4.0**
JTN	**Tanegashima 3**	**1.39**	**32**	P	**Pn**	**02 23 08.3**	**-0.9**
JTN				*e*S	**Sn**	**02 23 25.2**	**-2.7**
JAMN	**Amaminishikomi**	**1.49**	**215**	P	**Pg**	**02 23 11.4**	**-0.4**
JAMN				*e*S	**Sg**	**02 23 30.9**	**-0.1**
JTK	**Tokunoshima**	**1.98**	**212**	P	**Pb**	**02 23 18.8**	**-0.9**
JTK				*e*S	**Sb**	**02 23 43.8**	**-0.8**
JOKE	**Okinoerabujima**	**2.51**	**214**	P	**Pb**	**02 23 26.9**	**-2.0**
JOKE				*e*S	**Sb**	**02 23 57.2**	**-2.9**
JYRO	**Yoronjima**	**2.86**	**212**	P	**Pb**	**02 23 32.8**	**-1.9**
JYRO				*e*S	**Sb**	**02 24 07.2**	**-2.7**
JIH	**Iheya**	**3.09**	**219**	*e*S	**Sn**	**02 24 09.6**	**-0.3**
JOW	**Kunigami**	**3.10**	**212**	P	**Pb**	**02 23 35.8**	**-3.1**
	5.8nm,0.3s,baz=84,slow=16,SNR=11						
JOW				S	**Sn**	**02 24 10.6**	**+0.4**
	4.2nm,0.3s,baz=60,slow=20,SNR=3.1						
JOW	**Kunigami**	**3.10**	**212**	P	**Pb**	**02 23 35.9**	**-3.0**
JOW				*e*S	**Sn**	**02 24 10.9**	**+0.7**
JNU	**Nakatsue**	**3.69**	**10**	P	**Pn**	**02 23 42.7**	**+1.7**
	1.7nm,0.3s,baz=201,slow=14,SNR=9.6						
JNU				S	**Sn**	**02 24 27.3**	**+2.5**
	1.5nm,0.3s,baz=6.6,slow=16,SNR=3.5						
JMZ	**Minamidaito 2**	**3.77**	**165**	*e*S	**Sn**	**02 24 25.9**	**-0.7**
JAGN	**Aguni-jima**	**3.84**	**222**	*e*S	**Sn**	**02 24 29.4**	**+0.9**
MJAR	**Matsushiro Arr**	**9.78**	**42**	P	Pn	02 25 16.0	+12
	0.3nm,0.3s,baz=234,slow=17,SNR=3.1						
WRA	**Warramunga Arr**	**49.30**	**175**	P	**P**	**02 31 33.4**	**+0.2**
	0.9nm,0.8s,baz=353,slow=8.1,SNR=5.8						
ASAR	**Alice Springs**	**52.96**	**176**	P	**P**	**02 32 03.6**	**+2.9**
	0.1nm,0.3s,baz=5.3,slow=14,SNR=5.3						

IDC 30 02:35:28.8±2.2, 0°.76N×92°.03E, h0^{km}, mb3.5/3, mb1 3.7/4, mb1mx3.3/66, mbtmp3.6/4, ML3.6/1, Error ellipse: s-maj=70.6km s-min=30.4km az=52.0, Off west coast of northern Sumatera

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PSI	**Prapat**	**7.19**	**74**	Pn	Pn	02 37 15.1	-0.3
	1.0nm,0.3s,baz=180,slow=20,SNR=3.1						
WRA	**Warramunga Arr**	**46.28**	**119**	P	P	02 43 56.9	+0.3
	1.1nm,0.7s,baz=295,slow=8.5,SNR=6.4						
MKAR	**Makanchi Array**	**46.63**	**351**	P	P	02 43 59.1	+0.1
	0.3nm,0.8s,baz=168,slow=7.4,SNR=3.1						
ASAR	**Alice Springs**	**47.36**	**124**	P	P	02 44 04.6	-0.5
	0.2nm,0.3s,baz=302,slow=8.7,SNR=3.6						
TXAR	**Lajitas Array**	**146.52**	**25**	PKPbc	PKPdf	02 55 11.9	+0.2
	0.3nm,0.6s,baz=222,slow=1.2,SNR=5.8						

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*ISCJB **30** 02:38:44.8±1.0, 14°.8S±0°.2×73°.3W±0°.1, h98^{km}, mb4.2/2, Error ellipse: s-maj=24.6km s-min=8.8km az=30.4*

*IDC **30** 02:38:45.2±2.1, 14°.94S×73°.39W, h76^{km}±22^{km}, mb2.9/1, mb1 3.4/5, mb1mx3.2/46, mbtmp3.5/5, Error ellipse: s-maj=31.5km s-min=14.4km az=36.0*

ISC 30 02:38:46.5±1.0, 14°.8S±0°.2×73°.3W±0°.1, h98^{km}, n7, σ1^{s}08/8, Central Peru

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NNA	**Nana**	**4.45**	**309**	P	**Pn**	**02 39 51.9**	**+0.1**
	1.3nm,0.3s,baz=135,slow=14,SNR=4.6						
NNA				S	**Sn**	**02 40 41.1**	**-1.4**
	6.1nm,0.3s,baz=146,slow=6.3,SNR=7.3						
LPAZ	**La Paz**	**5.21**	**107**	P	**Pn**	**02 40 03.0**	**+0.4**
	0.3nm,0.3s,baz=294,slow=7.6,SNR=8.6						
SIV	**San Ignacio**	**11.87**	**97**	P	**Pn**	**02 41 31.4**	**-1.2**
	0.2nm,0.3s,baz=289,slow=18,SNR=5.1						
PTGA	**Pitinga**	**19.25**	**44**	P	**P**	**02 43 03.6**	**+0.1**
	0.2nm,0.3s,baz=287,slow=20,SNR=2.8						
PMSA	**Palmer Station**	**50.28**	**175**	P	**P**	**02 47 32.3**	**-0.3**
	25nm,0.6s,baz=0.0,slow=20,SNR=11						
TXAR	**Lajitas Array**	**52.79**	**326**	P	**P**	**02 47 53.5**	**+1.5**
	0.1nm,0.5s,baz=152,slow=9.8,SNR=4.7						
SONM	**Songino Array**	**147.10**	**0**	PKPbc	**PKPab**	**02 58 20.1**	**0.0**
	0.3nm,0.3s,baz=342,slow=3.3,SNR=2.8						

IDC 30 02:41:08.0±11.0, 2°.51N×127°.55E, h241^{km}±109^{km}, mb3.0/5, mb1 3.1/5, mb1mx2.9/56, mbtmp3.6/5, MS3.6/1, Ms1 3.6/1, ms1mx2.6/20, Error ellipse: s-maj=174.0km s-min=21.3km az=65.0, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**22.84**	**121**	LR	LR	02 56 47.3	
	comp=Z,156nm,19.8s,baz=49,slow=41						
WRA	**Warramunga Arr**	**23.29**	**164**	P	P	02 45 54.4	-0.2
	0.3nm,0.3s,baz=343,slow=9.8,SNR=9.0						
ASAR	**Alice Springs**	**26.74**	**167**	P	P	02 46 26.0	+0.2
	0.3nm,0.4s,baz=349,slow=6.9,SNR=5.6						
ASAR				PcP	PcP	02 49 42.4	-0.1
	0.2nm,0.5s,baz=329,slow=1.6,SNR=3.2						
MKAR	**Makanchi Array**	**59.02**	**325**	P	P	02 50 43.2	+0.5
	0.2nm,0.3s,baz=109,slow=7.1,SNR=7.4						
KURBB	**Kurchatov Arra**	**63.20**	**327**	P	P	02 51 10.5	-0.1
	0.6nm,0.6s,baz=124,slow=5.7,SNR=5.4						
BVAR	**Borovoye Array**	**68.78**	**327**	P	P	02 51 45.3	-0.8
	0.3nm,0.4s,baz=122,slow=5.2,SNR=2.5						

MEX 30 02:44:02.5±0.4, 16°.49N×98°.47W, h15^{km}±5^{km}, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.34**	**106**	*i* P	Pg	02 44 08.6	-0.9
PNIG				*e*S	Sg	02 44 13.9	-0.5
TLIG	**Tlapa**	**1.08**	**355**	*e*P	Pb	02 44 19.4	-3.6
TLIG				*e*S	Sb	02 44 32.4	-4.5
VHO	**Vista Hermosa**	**1.76**	**70**	*e*P	Pn	02 44 29.5	-3.3
VHO				*i* S	Sn	02 44 50.2	-4.8
CAIG	**El Cayaco**	**1.81**	**288**	*e*P	Pn	02 44 29.7	-3.4
CAIG				*i* S	Sn	02 44 51.5	-4.4
PLIG	**Platanillo**	**2.14**	**333**	*e*P	Pn	02 44 35.0	-2.8
PLIG				*i* S	Sn	02 44 59.9	-4.2
HUIG	**Huatulco**	**2.38**	**107**	*e*P	Pn	02 44 38.8	-2.2
HUIG				*i* S	Sn	02 45 06.1	-3.9

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*CSEM **30** 02:44:50.2, 38°.15N×20°.76E, h17^{km}, ML1.1/1*

ATH 30 02:44:50.2, 38°.15N×20°.76E, h17^{km}±4^{km}, ML1.1/1, Error ellipse: s-maj=5.7km s-min=1.7km az=201.0, Greece

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KFL	**Anninata**	**0.05**	**154**	P	Pg	02 44 53.3	0.0
KFL				S	Sg	02 44 55.8	+0.4
KFL				AML	AML	02 44 55.8	
	comp=E,225μm,0.1s						
KFL				AML	AML	02 44 55.8	
	comp=N,238μm,0.2s						
KFL	**Anninata**	**0.05**	**154**	P	Pg	02 44 53.4	+0.1
KFL				S	Sg	02 44 55.5	+0.1
KFL				AML	AML	02 44 55.8	
	comp=E,225μm,0.1s						
KFL				AML	AML	02 44 55.8	
	comp=N,238μm,0.2s						
KFL	**Anninata**	**0.05**	**154**	P	Pg	02 44 53.3	0.0
KFL				S	Sg	02 44 55.5	+0.1
VLS	**Valsamata**	**0.14**	**281**	P	Pg	02 44 54.0	-0.2
VLS				S	Sg	02 44 57.0	+0.1
VLS	**Valsamata**	**0.14**	**281**	P	Pg	02 44 53.9	-0.3
VLS				S	Sg	02 44 57.0	+0.1
VLS	**Valsamata**	**0.14**	**281**	P	Pg	02 44 54.0	-0.2
VLS				S	Sg	02 44 57.0	+0.1
FSK	**Fiskardo**	**0.34**	**333**	P	Pb	02 44 58.7	+0.7
FSK	**Fiskardo**	**0.34**	**333**	P	Pb	02 44 57.9	-0.1
FSK				S	Sg	02 45 02.5	+0.1
EVGI	**Lefkada island**	**0.48**	**350**	P	Pg	02 44 58.8	-1.1
EVGI	**Lefkada island**	**0.48**	**350**	P	Pg	02 44 59.2	-0.6
PDO	**Prodromos**	**0.56**	**36**	P	Pg	02 45 00.8	-0.5
PDO	**Prodromos**	**0.56**	**36**	P	Pg	02 45 01.0	-0.3

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*IDC **30** 02:51:37.5±0.6, 5°.10S×153°.17E, h0^{km}, mb4.3/17, mb1 4.3/18, mb1mx4.2/48, mbtmp4.3/18, ML2.7/1, MS3.4/13, Ms1 3.4/13, ms1mx3.2/43, Error ellipse: s-maj=23.9km s-min=13.8km az=86.0*

*ISCJB **30** 02:51:42.4±0.4, 5°.21S±0°.06×153°.10E±0°.08, h43^{km}, mb4.3/20, MS3.4/12, Error ellipse: s-maj=11.3km s-min=8.1km az=22.0*

*NEIC **30** 02:51:43.2±1.2, 5°.12S×153°.13E, h37^{km}±11^{km}, mb4.7/4, Error ellipse: s-maj=9.0km s-min=8.5km az=71.0*

ISC 30 02:51:44.1±0.5, 5°.18S±0°.08×153°.10E±0°.08, h43^{km}, n48, σ1^{s}29/46, mb4.3/20, MS3.4/12, New Ireland region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMG	**Port Moresby**	**7.24**	**234**	Pn	**Pn**	**02 53 27.4**	**0.0**
	6.6nm,0.3s,baz=48,slow=7.7,SNR=8.3						
PMG				Sn	**Sn**	**02 54 46.7**	**-1.6**
	2.8nm,0.3s,baz=94,slow=19,SNR=3.5						
PMG	**Port Moresby**	**7.24**	**234**	*e*Pn	**Pn**	**02 53 27.8**	**+0.4**
	29nm,0.8s						
PMG				*e*Sn	**Sn**	**02 54 47.6**	**-0.7**
HNR	**Honiara**	**8.00**	**122**	LR	LR	02 56 52.5	
	comp=Z,386nm,20.9s,baz=314,slow=40						
HNR	**Honiara**	**8.00**	**122**	*e*Pn	**Pn**	**02 53 36.8**	**-1.1**
HNR				*e*Sg	Sn	02 55 55.5	+48
GUMO	**Guam**	**20.36**	**336**	LR	LR	03 05 00.8	
	comp=Z,83nm,18.3s,baz=132,slow=40						
DZM	**Mont Dzumac**	**21.19**	**144**	P	**P**	**02 56 26.5**	**+0.3**
	5.0nm,0.5s,baz=340,slow=12,SNR=9.3						
DZM				LR	LR	03 03 44.4	
	comp=Z,168nm,20.6s,baz=346,slow=34						
WRAB	**Tennant Creek**	**23.41**	**230**	*e*P	**P**	**02 56 50.0**	**+0.5**
	3.3nm,0.8s						
WRA	**Warramunga Arr**	**23.42**	**230**	P	**P**	**02 56 48.9**	**-0.7**
	1.4nm,0.5s,baz=54,slow=9.9,SNR=6.8						
WRA				PcP	**PcP**	**03 00 35.2**	**0.0**
	0.8nm,0.4s,baz=53,slow=2.5,SNR=5.9						
ASAR	**Alice Springs**	**26.08**	**223**	P	**P**	**02 57 14.6**	**+0.6**
	1.2nm,0.6s,baz=60,slow=8.8,SNR=16						
ASAR				PcP	**PcP**	**03 00 41.1**	**+0.1**
	0.8nm,0.8s,baz=59,slow=3.6,SNR=4.1						
ASAR				ScP	**ScP**	**03 04 22.2**	**+4.7**
	0.3nm,0.5s,baz=47,slow=2.9,SNR=4.7						
H11S3	**WAKE ISLAND Hy**	**27.07**	**29**	T	T	03 25 42.6	
	baz=209,slow=74,SNR=7.0						
H11S2	**WAKE ISLAND Hy**	**27.08**	**29**	T	T	03 25 42.6	
	baz=209						
H11S1	**WAKE ISLAND Hy**	**27.09**	**29**	T	T	03 25 42.6	
	baz=209,slow=74,SNR=2.4						
STKA	**Stephens Creek**	**28.67**	**201**	P	**P**	**02 57 35.9**	**-1.1**
	1.3nm,0.7s,baz=356,slow=13,SNR=3.0						
STKA				LR	LR	03 09 28.1	
	comp=Z,68nm,18.5s,baz=21,slow=37						
MBWA	**Marble Bar**	**36.04**	**241**	*e*P	**P**	**02 58 41.4**	**-0.3**
JNU	**Nakatsue**	**43.53**	**333**	P	**P**	**02 59 43.0**	**-0.7**
	13nm,0.7s,baz=98,slow=3.0,SNR=13						
JNU				LR	LR	03 15 35.0	
	comp=Z,30nm,18.0s,baz=125,slow=33						
MJAR	**Matsushiro Arr**	**43.78**	**343**	LR	LR	03 16 01.4	
	comp=Z,49nm,21.1s,baz=100,slow=34						
KSRS	**Korea Array**	**48.47**	**333**	P	**P**	**03 00 22.1**	**-0.5**
	0.9nm,0.5s,baz=147,slow=8.6,SNR=4.5						
KSRS				LR	LR	03 20 09.5	
	comp=Z,29nm,18.4s,baz=182,slow=35						
KSAR	**Wonju Array Be**	**48.48**	**333**	P	**P**	**03 00 22.1**	**-0.6**
ASAJ	**Asahikawa**	**49.97**	**350**	LR	LR	03 18 57.8	
	comp=Z,37nm,21.0s,baz=16,slow=33						
PETK	**Petropavlovsk-**	**58.20**	**3**	P	**P**	**03 01 33.6**	**-0.1**
	3.6nm,0.6s,baz=168,slow=8.3						
PETK				LR	LR	03 22 33.8	
	comp=Z,35nm,21.4s,baz=146,slow=32						
CMAR	**Chiang Mai Arr**	**58.31**	**295**	P	**P**	**03 01 35.8**	**+0.6**
	2.0nm,0.4s,baz=115,slow=5.2,SNR=9.3						
CMAR				LR	LR	03 26 43.2	
	comp=Z,17nm,18.8s,baz=170,slow=36						
SONM	**Songino Array**	**66.80**	**328**	P	**P**	**03 02 31.7**	**+0.2**
	1.1nm,0.5s,baz=144,slow=4.8,SNR=6.8						
SONM				LR	LR	03 32 20.9	
	comp=Z,42nm,18.8s,baz=106,slow=37						
VNDA	**Vanda**	**72.44**	**178**	P	**P**	**03 03 06.0**	**+0.3**
	0.4nm,0.6s,baz=329,slow=6.3,SNR=5.0						
MKAR	**Makanchi Array**	**80.80**	**319**	P	**P**	**03 03 53.3**	**-0.1**
	5.0nm,0.9s,baz=103,slow=6.0,SNR=23						
ZALV	**Zalesovo Beam**	**81.63**	**326**	P	**P**	**03 03 56.8**	**-0.8**
	8.9nm,0.6s,baz=112,slow=5.5,SNR=29						
ZALV				LR	LR	03 40 06.7	
	comp=Z,16nm,20.8s,baz=68,slow=36						
ILAR	**Eielson Array**	**82.39**	**22**	P	**P**	**03 03 59.1**	**-2.3**
	0.6nm,0.7s,baz=247,slow=4.2,SNR=8.1						
KURK	**Kurchatov**	**84.25**	**322**	*e*P	**P**	**03 04 10.4**	**-0.8**
KURBB	**Kurchatov Arra**	**84.28**	**322**	P	**P**	**03 04 11.1**	**-0.3**
	3.2nm,0.8s,baz=106,slow=4.3,SNR=27						
TKM2	**Tokmak 2**	**84.41**	**314**	P	**P**	**03 04 12.6**	**+0.1**
	SNR=5.4						
KZA	**Kyzart**	**84.48**	**313**	P	**P**	**03 04 14.4**	**+1.2**
	SNR=6.5						
QSPA	**South Pole Qui**	**84.78**	**180**	P	**P**	**03 04 14.0**	**+0.1**
	1.8nm,0.6s,baz=63,slow=5.6,SNR=13						
QSPA	**South Pole Qui**	**84.78**	**180**	*e*P	**P**	**03 04 14.4**	**+0.5**
	3.0nm,0.5s						
UCH	**Uchtor**	**85.05**	**313**	P	**P**	**03 04 16.8**	**+0.8**
	SNR=5.6						
AAK	**Ala-Archa**	**85.14**	**313**	*e*P	**P**	**03 04 16.3**	**+0.1**
	2.5nm,0.5s						
USP	**Ospenovka**	**85.26**	**314**	P	**P**	**03 04 17.0**	**+0.4**
	SNR=5.5						
MAW	**Mawson**	**85.34**	**203**	P	**P**	**03 04 16.8**	**+0.4**
	1.0nm,0.5s,baz=116,slow=7.2,SNR=2.6						
AML	**Almayashu**	**85.62**	**313**	P	**P**	**03 04 20.1**	**+1.3**
	SNR=11						
EKS2	**Erkin-Say**	**85.66**	**313**	P	**P**	**03 04 19.7**	**+1.0**
	SNR=5.5						
INK	**Inuvik**	**88.70**	**21**	LR	LR	03 39 09.5	
	comp=Z,37nm,21.2s,baz=212,slow=32						
BVAR	**Borovoye Array**	**89.72**	**323**	P	**P**	**03 04 36.8**	**-1.0**
	4.0nm,0.6s,baz=118,slow=5.4,SNR=24						
BRVK	**Borovoye**	**89.79**	**323**	*e*P	**P**	**03 04 37.1**	**-0.9**
	4.8nm,0.5s						
KHC	**Kasperske Hory**	**124.42**	**329**	*e*PKP	**PKPdf**	**03 10 40.3**	**+1.6**
GERES	**GERESS Array B**	**124.53**	**329**	PKP	**PKPdf**	**03 10 39.4**	**+0.3**
	0.8nm,0.6s,baz=75,slow=2.1,SNR=9.8						
LPAZ	**La Paz**	**133.98**	**118**	PKP	**PKPdf**	**03 10 59.8**	**+1.3**
	1.1nm,0.7s,baz=246,slow=4.4,SNR=6.9						
MDT	**Midelt**	**145.52**	**326**	PKPbc	**PKPab**	**03 11 18.8**	**0.0**
	3.2nm,0.8s,baz=58,slow=1.7,SNR=15						
BDFB	**Brasilia**	**150.59**	**135**	PKPbc	**PKPbc**	**03 11 32.1**	**-0.5**
	3.2nm,0.6s,baz=270,slow=2.0,SNR=8.9						
TORD	**Torodi Ar. Bea**	**150.71**	**288**	PKPbc	**PKPbc**	**03 11 31.8**	**-0.9**
	baz=77,slow=2.2						
KOWA	**Kowa**	**155.65**	**294**	PKPbc	**PKPdf**	**03 11 38.6**	**+4.2**
	0.8nm,0.6s,baz=53,slow=5.1,SNR=1.7						
KOWA				PKPab	**PKPab**	**03 11 58.7**	**-1.9**
	1.4nm,0.7s,baz=2.7,slow=2.2,SNR=4.5						

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*DDA **30** 03:06:43.2, 37°.88N×26°.70E, h7^{km}, Ml2.5*

*ISK **30** 03:06:43.6, 37°.91N×26°.76E, h6^{km}, ML2.2/4*

*CSEM **30** 03:06:44.0±0.2, 37°.90N×26°.74E, h2^{km}, ML2.5, Error ellipse: s-maj=4.7km s-min=2.5km az=51.0*

ISC 30 03:06:43.6±1.2, 37°.89N±0°.03×26°.73E±0°.03, h8^{km}±9^{km}, n25, σ0^{s}57/45, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DGB	**˜zmir**	**0.21**	**37**	*i* P	**Pg**	**03 06 47.9**	**+0.2**
DGB				*i* S	**Sg**	**03 06 51.2**	**+0.6**
GCAM	**G?zelcaml?**	**0.44**	**115**	*i* P	**Pg**	**03 06 52.1**	**-0.1**
GCAM				*i* S	**Sb**	**03 06 59.5**	**-0.9**
GCAM	**G?zelcaml?**	**0.44**	**115**	P	**Pg**	**03 06 52.1**	**-0.1**
GCAM				S	**Sb**	**03 06 59.5**	**-0.9**
URLA	**Izmir**	**0.48**	**348**	PG	**Pg**	**03 06 52.8**	**-0.2**
URLA				SG	**Sg**	**03 07 00.2**	**+0.9**
URLA	**Izmir**	**0.48**	**348**	*i* P	**Pg**	**03 06 52.5**	**-0.5**
URLA				*i* S	**Sb**	**03 07 00.4**	**-1.3**
URLA	**Izmir**	**0.48**	**348**	P	**Pg**	**03 06 52.5**	**-0.5**
URLA	**Izmir**	**0.48**	**348**	*e*Pg	**Pg**	**03 06 52.8**	**-0.2**
URLA				*e*Sg	**Sg**	**03 07 00.2**	**+0.9**
BLCB	**Balcova**	**0.56**	**26**	PG	**Pg**	**03 06 54.2**	**-0.2**
BLCB				SG	**Sg**	**03 07 01.9**	**+0.3**
BLCB	**Balcova**	**0.56**	**26**	*e*Pg	**Pg**	**03 06 54.2**	**-0.2**
BLCB				*e*Sg	**Sg**	**03 07 01.9**	**+0.3**
CHOS	**Chios island**	**0.73**	**314**	PG	**Pb**	**03 06 58.2**	**-0.4**
CHOS				SG	**Sb**	**03 07 08.9**	**+0.1**
CHOS	**Chios island**	**0.73**	**314**	*e*Pg	**Pb**	**03 06 58.2**	**-0.4**
CHOS				*e*Sg	**Sb**	**03 07 08.9**	**+0.1**
AYDB	**Zeytinkoy-Aydi**	**0.92**	**86**	PG	**Pg**	**03 07 01.2**	**-0.1**
AYDB				SG	**Sb**	**03 07 14.0**	**-0.4**
AYDB	**Zeytinkoy-Aydi**	**0.92**	**86**	*e*Pg	**Pg**	**03 07 01.2**	**-0.1**
AYDB				*e*Sg	**Sb**	**03 07 14.0**	**-0.4**
AYDN	**Tasoluk**	**0.94**	**104**	*i* P	**Pb**	**03 07 01.9**	**-0.3**
AYDN				*i* S	**Sg**	**03 07 13.8**	**-0.1**
AYDN	**Tasoluk**	**0.94**	**104**	P	**Pb**	**03 07 01.9**	**-0.3**
AYDN				S	**Sg**	**03 07 13.8**	**-0.1**
BODT	**Bodrum**	**0.94**	**150**	PG	**Pb**	**03 07 02.3**	**0.0**
BODT	**Bodrum**	**0.94**	**150**	*e*Pg	**Pb**	**03 07 02.3**	**0.0**
BDRM	**Kayabasi**	**1.00**	**145**	*i* P	**Pb**	**03 07 03.4**	**+0.2**
BDRM				*i* S	**Sb**	**03 07 16.8**	**+0.3**
BDRM	**Kayabasi**	**1.00**	**145**	P	**Pb**	**03 07 03.4**	**+0.2**
BDRM				S	**Sb**	**03 07 16.8**	**+0.3**
AKHS	**Akhisar**	**1.31**	**40**	*i* P	**Pn**	**03 07 07.5**	**-0.7**
AKHS				*i* S	**Sn**	**03 07 27.6**	**+1.6**
AKHS	**Akhisar**	**1.31**	**40**	P	**Pn**	**03 07 07.5**	**-0.7**
AKHS				S	**Sn**	**03 07 27.5**	**+1.6**
SIGR	**SIGRI**	**1.49**	**333**	PN	**Pb**	**03 07 11.5**	**0.0**
SIGR	**SIGRI**	**1.49**	**333**	*e*Pn	**Pb**	**03 07 11.5**	**0.0**
MANT	**Manisa**	**1.56**	**67**	*i* P	**Pg**	**03 07 13.6**	**0.0**
MANT				*i* S	**Sb**	**03 07 32.9**	**-0.1**
MANT	**Manisa**	**1.56**	**67**	P	**Pg**	**03 07 13.6**	**0.0**
MANT				S	**Sb**	**03 07 32.9**	**-0.1**

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*IDC **30** 03:23:05.6±0.9, 1°.16N×85°.45W, h0^{km}, mb3.8/11, mb1 4.1/16, mb1mx3.9/52, mbtmp4.0/16, ML3.2/4, MS3.4/16, Ms1 3.4/16, ms1mx3.2/45, Error ellipse: s-maj=31.9km s-min=14.7km az=54.0*

*NEIC **30** 03:23:07.7±0.4, 1°.25N×85°.35W, h10^{km}, mb4.2/7, Error ellipse: s-maj=10.4km s-min=6.7km az=46.0*

*ISCJB **30** 03:23:08.9±0.4, 1°.23N±0°.05×85°.24W±0°.04, h33^{km}, mb3.8/15, MS3.3/12, Error ellipse: s-maj=7.4km s-min=4.2km az=27.6*

*IGQ **30** 03:23:14.0±0.8, 1°N±8°×8°5W±°, h10^{km}, mB5.0, mb4.9/6, MLv4.7/1, Mw(mB)4.3*

ISC 30 03:23:10.3±0.6, 1°.15N±0°.07×85°.32W±0°.06, h35^{km}, n74, σ1^{s}36/72, mb3.8/15, MS3.3/12, Off coast of Ecuador

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PAYG	**Puerto Ayora**	**5.29**	**250**	*e*Pn	**Pn**	**03 24 28.2**	**+1.4**
PAYG				*e*Sn	**Sn**	**03 25 21.8**	**-4.8**
MILO	**Milagro-Astudi**	**6.70**	**121**	P	**Pn**	**03 24 44.6**	**-1.6**
MILO				S	**Sn**	**03 25 58.7**	**-2.6**
ILLI	**Illinizas Sur**	**6.85**	**106**	P	**Pn**	**03 24 47.6**	**-1.1**
ILLI				S	**Sn**	**03 26 03.8**	**-2.0**
YANA	**Yana**	**6.87**	**101**	P	**Pn**	**03 24 48.7**	**-0.3**
PULU	**Pululahua**	**6.91**	**99**	P	**Pn**	**03 24 49.2**	**-0.3**
PAST	**Pastocalle**	**6.93**	**105**	P	**Pn**	**03 24 48.0**	**-1.7**
OTAV	**Otavalo**	**6.93**	**97**	*e*Pn	**Pn**	**03 24 49.3**	**-0.5**
	13nm,0.5s						
OTAV				*e*S	**Sn**	**03 26 06.0**	**-1.8**
OTAV	**Otavalo**	**6.93**	**97**	*e*P	**Pn**	**03 24 49.7**	**-0.1**
OTAV	**Otavalo**	**6.93**	**97**	P	**Pn**	**03 24 49.5**	**-0.3**
OTAV				S	**Sn**	**03 26 05.7**	**-2.0**
LITE1	**Lita**	**6.97**	**93**	P	**Pn**	**03 24 49.1**	**-1.0**
CUIC	**Cuicocha-Domo**	**7.01**	**97**	P	**Pn**	**03 24 50.7**	**-0.2**
COHC	**Cochancay**	**7.05**	**121**	P	**Pn**	**03 24 50.9**	**-0.2**
COHC				S	**Sn**	**03 26 06.7**	**-3.4**
BNAS	**Cotopaxi Volca**	**7.08**	**105**	P	**Pn**	**03 24 52.8**	**+1.0**
URCU	**Urcuqui**	**7.10**	**96**	P	**Pn**	**03 24 52.8**	**+0.7**
URCU				S	**Sn**	**03 26 09.6**	**-2.3**
BMOR	**Cotopaxi Volca**	**7.11**	**105**	P	**Pn**	**03 24 52.5**	**+0.1**
BREF	**Cotopaxi Volca**	**7.12**	**105**	P	**Pn**	**03 24 52.9**	**+0.4**
BVC2	**Cotopaxi Volca**	**7.14**	**105**	P	**Pn**	**03 24 53.5**	**+0.7**
VC1	**Cotopaxi 1**	**7.14**	**104**	P	**Pn**	**03 24 53.4**	**+0.6**
BTAM	**Cotopaxi Volca**	**7.16**	**105**	P	**Pn**	**03 24 53.5**	**+0.4**
IMBA	**Imbabura, San**	**7.17**	**97**	P	**Pn**	**03 24 54.5**	**+1.3**
ANTG	**Antisana-Guama**	**7.26**	**103**	P	**Pn**	**03 24 54.2**	**-0.2**
PIS1	**Pisayambo**	**7.28**	**108**	P	**Pn**	**03 24 55.3**	**+0.7**
RIOE1	**Riobamba**	**7.29**	**113**	P	**Pn**	**03 24 55.3**	**+0.7**
YAHU	**Yahuarcocha**	**7.29**	**96**	P	**Pn**	**03 24 55.6**	**+0.9**
ANTM	**Antisana-La Mi**	**7.29**	**103**	P	**Pn**	**03 24 55.3**	**+0.4**
ANTS	**Antisana-Sarah**	**7.34**	**103**	P	**Pn**	**03 24 56.2**	**+0.7**
PCON	**Cinco Dias**	**9.00**	**82**	*e*P	**Pn**	**03 25 18.2**	**-0.1**
JTS	**JuntasAbangare**	**9.09**	**2**	Pn	**Pn**	**03 25 18.6**	**-0.4**
	0.9nm,0.3s,baz=325,slow=18,SNR=6.8						

JTS				LR	LR	03 28 01.8	
	comp=Z,173nm,18.7s,baz=245,slow=33						
JTS	JuntasAbangare	9.09	2	*e*Pn	Pn	03 25 18.9	-0.1
	8.7nm,0.8s						
YOTC	Yotoco, Valle	9.40	72	*e*P	Pn	03 25 22.8	-0.5
PLMC	San Josˆ' del	9.76	67	*e*P	Pn	03 25 26.9	-1.5
GUYC	Guyana, Colomb	10.71	68	*e*P	Pn	03 25 43.4	+1.7
PRAC	Prado	10.73	76	*e*P	Pn	03 25 40.5	-1.1
ATAH	Atahualpa	10.75	140	Pn	Pn	03 25 45.5	+3.3
	10nm,0.3s,baz=348,slow=8.7,SNR=34						
DBBC	Dabeiba	10.79	57	*e*P	Pn	03 25 44.0	+1.5
HELC	Santa Helena	10.98	63	*e*P	Pn	03 25 45.8	+0.6
NORC	Norcasia	11.31	67	*e*P	Pn	03 25 51.9	+2.3
ROSC	El Rosal	11.58	71	Pn	Pn	03 25 54.1	+0.6
	0.9nm,0.3s,baz=298,slow=22,SNR=3.6						
ROSC				LR	LR	03 29 54.6	
	comp=Z,214nm,18.7s,baz=209,slow=35						
CHIC	Chingaza	12.08	73	*e*P	Pn	03 25 59.9	-0.4
PTBC	PUERTO BERRIO,	12.09	63	*e*P	Pn	03 25 59.3	-0.8
MOTC	Monteria, Cord	12.24	51	*e*P	Pn	03 26 01.2	-1.0
RUSC	La Rusia	13.09	69	*e*P	Pn	03 26 16.1	+1.8
BARC	Barichara	13.26	66	*e*P	Pn	03 26 16.4	0.0
NNA	Nana	15.54	147	Pn	Pn	03 26 47.5	+0.6
	2.7nm,0.3s,baz=328,slow=12,SNR=9.9						
NNA				LR	LR	03 31 57.3	
	comp=Z,179nm,21.8s,baz=316,slow=34						
NNA	Nana	15.54	147	*e*Pn	Pn	03 26 48.7	+1.8
	43nm,0.8s						
SDV	Santo Domingo	16.52	62	Pn	P	03 27 00.9	-1.0
	1.2nm,0.3s,baz=263,slow=7.0,SNR=4.6						
SDV	Santo Domingo	16.52	62	*e*Pn	Pn	03 27 00.3	+0.7
	8.8nm,0.8s						
CMIG	Matias Romero	18.42	330	P	Pn	03 27 23.0	0.0
	0.1nm,0.3s,baz=165,slow=11,SNR=4.2						
CMIG				LR	LR	03 33 00.2	
	comp=Z,122nm,19.9s,baz=142,slow=32						
SAML	Samuel	24.23	115	*e*P	P	03 28 24.6	+0.5
	19nm,1.4s						
LPAZ	La Paz	24.26	136	P	P	03 28 26.6	+1.6
	9.9nm,1.1s,baz=344,slow=11,SNR=16						
LPAZ				LR	LR	03 38 57.2	
	comp=Z,103nm,21.2s,baz=297,slow=39						
SJG	San Juan	25.27	47	LR	LR	03 38 01.6	
	comp=Z,56nm,21.3s,baz=253,slow=35						
SIV	San Ignacio	29.39	126	P	P	03 29 11.4	+0.8
	0.7nm,0.7s,baz=270,slow=6.4,SNR=3.7						
SIV				LR	LR	03 41 48.9	
	comp=Z,99nm,21.6s,baz=304,slow=38						
TXAR	Lajitas Array	33.03	330	P	P	03 29 42.9	+0.4
	0.6nm,0.8s,baz=143,slow=8.8,SNR=6.2						
TXAR				LR	LR	03 41 59.6	
	comp=Z,61nm,20.2s,baz=0.0,slow=34						
TKL	Tuckaleechee C	34.36	2	LR	LR	03 42 25.3	
	comp=Z,35nm,21.9s,baz=270,slow=34						
ANMO	Albuquerque	38.97	332	P	P	03 30 34.0	+0.6
	0.9nm,0.6s,baz=149,slow=12,SNR=5.4						
ANMO				LR	LR	03 45 53.7	
	comp=Z,34nm,19.8s,baz=164,slow=35						
ANMO	Albuquerque	38.97	332	*e*P	P	03 30 34.0	+0.6
	0.9nm,0.9s						
SDCO	Great Sand Dun	40.88	335	*e*P	P	03 30 49.7	+0.4
	1.8nm,1.0s						
ISCO	Idaho Springs	42.68	337	*e*P	P	03 31 04.5	+0.4
	18nm,2.0s						
PLCA	Paso Flores	43.81	164	P	P	03 31 13.3	+0.4
	1.2nm,0.6s,baz=8.8,slow=11,SNR=3.6						
HWUT	Hardware Ranch	46.71	333	*e*P	P	03 31 35.0	-1.1
	2.4nm,0.8s						
PDAR	Pinedale Array	46.77	335	P	P	03 31 35.9	-0.7
	0.8nm,0.8s,baz=157,slow=9.5,SNR=6.2						
PDAR				LR	LR	03 51 40.9	
	comp=Z,62nm,19.8s,baz=196,slow=37						
NVAR	Mina Array Bea	47.85	325	P	P	03 31 45.9	+0.9
	1.1nm,0.9s,baz=132,slow=7.0,SNR=6.8						
NVAR				LR	LR	03 49 57.9	
	comp=Z,47nm,19.1s,baz=274,slow=34						
YBH	Yreka Blue Hor	52.57	325	LR	LR	03 54 01.0	
	comp=Z,47nm,20.1s,baz=152,slow=35						
YKA	Yellowknife Ar	65.00	345	P	P	03 33 45.4	-1.0
	0.9nm,0.7s,baz=137,slow=6.0,SNR=5.1						
ILAR	Eielson Array	77.17	337	P	P	03 34 59.1	-1.1
	0.3nm,0.8s,baz=131,slow=2.5,SNR=3.4						
MDT	Midelt	81.56	57	P	P	03 35 27.3	+2.3
	1.2nm,0.9s,baz=254,slow=9.5,SNR=3.3						
ESDC	Sonseca Array	82.61	50	P	P	03 35 31.2	+1.0
	0.2nm,0.3s,baz=273,slow=4.0,SNR=8.5						
NOA	NORSAR Array B	92.17	29	LR	LR	04 13 11.1	
	comp=Z,8.0nm,21.9s,baz=225,slow=33						
HFS	Hagfors	93.50	30	LR	LR	04 18 36.3	
	comp=Z,11nm,18.2s,baz=299,slow=36						
FINES	FINESS Array B	99.08	27	LR	LR	04 17 41.2	
	comp=Z,18nm,21.9s,baz=250,slow=33						
WRA	Warramunga Arr	136.96	242	PKP	PKPdf	03 42 31.6	+1.2
	0.4nm,0.8s,baz=104,slow=2.2,SNR=2.6						
H01W1	Cape Leeuwin H	141.83	206	T	T	06 21 14.7	
	baz=144,slow=76,SNR=7.9						
H01W2	Cape Leeuwin H	141.84	206	T	T	06 21 16.4	
	baz=144,slow=76,SNR=6.3						
H01W3	Cape Leeuwin H	141.85	206	T	T	06 21 15.2	
	baz=144,slow=76,SNR=6.3						

NNC 30 03:30:41.1±1.7, 37°.25N×70°.67E, h0^{km}, mb3.7, mpv3.3, 3C-3D, Error ellipse: s-maj=13.2km s-min=10.5km az=169.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	3.54	38	⇑Pn	Pn	03 31 37.4	-0.1
	6.3nm,0.3s						
SFK				⇓Sn	Sn	03 32 21.6	+1.4
	10nm,0.4s						
MNAS	Manas	5.42	15	⇓Pn	Pn	03 32 02.9	-0.3
	1.2nm,0.5s						
MNAS				⇑Sn	Sn	03 33 07.1	+0.8
	13nm,0.6s						
KK31	Karatay Array	5.84	359	⇓Pn	Pn	03 32 09.8	+0.7
	0.7nm,0.3s,baz=178,slow=12						
KK31				⇑Sn	Sn	03 33 18.2	+1.5
	4.4nm,0.6s,baz=179,slow=21,SNR=17						

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*IDC **30** 03:34:56.7±0.7, 43°.78N×15°.09W, h0^{km}, mb3.9/21, mb1 4.0/22, mb1mx3.9/69, mbtmp3.9/22, ML6.8/1, MS3.4/23, Ms1 3.4/23, ms1mx3.1/66, Error ellipse: s-maj=17.2km s-min=15.2km az=14.0*

*CSEM **30** 03:34:57.8±0.1, 43°.93N×14°.95W, h10^{km}, mb5.8, Ms3.1, Error ellipse: s-maj=3.1km s-min=2.6km az=137.0*

*NEIC **30** 03:34:59.0±0.5, 43°.94N×14°.79W, h10^{km}, mb4.0/4, Error ellipse: s-maj=9.2km s-min=6.6km az=1.0*

*PDA **30** 03:34:58.3, 43°.88N×14°.97W, h10^{km}, mb4.5*

*MDD **30** 03:35:01.4±1.0, 43°.95N×14°.91W, h49^{km}, mb5.8/56, Error ellipse: s-maj=9.8km s-min=7.2km az=116.0, PRXIMO*

MDD EMS: II INTENSIDAD MAXIMA.

*SFS **30** 03:35:01.0, 43°.85N×14°.90W, h0^{km}, ML4.7*

*IGIL **30** 03:35:04.6, 43°.77N×14°.91W, h28^{km}, ML5.1*

*LDG **30** 03:35:04.5±0.3, 43°.97N×14°.61W, h51^{km}±2^{km}, Md4.8/3, Ml5.5/47, ms3.1/5, Error ellipse: s-maj=7.8km s-min=4.2km az=102.0*

*INMG **30** 03:35:05.8±2.2, 43°.79N×14°.91W, h26^{km}±14^{km}, MD4.2, ML4.9, Error ellipse: s-maj=8.6km s-min=5.5km az=78.0*

*CNRM **30** 03:35:17.4, 42°.36N×14°.35W, h10^{km}*

*BGS **30** 03:35:45.0±1.6, 46°.75N×12°.10W, h10^{km}, ML4.8*

ISC 30 03:34:58.4±0.4, 43°.79N±0°.05×14°.73W±0°.04, h10^{km}, n540, σ2^{s}.65/641, mb4.0/26, MS3.4/23, 9C-40D, North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
EMAZ	Mazaricos	4.28	99	⇓P	Pn	03 36 06.3	+2.8
	782nm,0.1s,SNR=18						
EMAZ				S	Sn	03 36 50.9	-2.6
	3μm,0.1s,SNR=7.9						
EMAZ	Mazaricos	4.28	99	P	Pn	03 36 06.3	+2.8
	782nm,0.1s,SNR=18						
EMAZ				S	Sn	03 36 50.9	-2.6
	3μm,0.1s,SNR=7.9						
EAGO	Agolada(Pontev	4.94	99	⇓P	Pn	03 36 15.4	+2.7
	448nm,0.1s,SNR=18						
EAGO				S	Sn	03 37 07.0	-3.0
	898nm,0.2s,SNR=7.9						
EAGO	Agolada(Pontev	4.94	99	P	Pn	03 36 15.4	+2.7
	448nm,0.1s,SNR=18						
EAGO				S	Sn	03 37 07.0	-3.0
	898nm,0.2s,SNR=7.9						
PGAV	Gavieira, Arco	5.08	109	⇓*e*P	Pn	03 36 17.9	+3.2
PGAV				*e*S	Sn	03 37 11.7	-1.8
PGAV				A	A	03 37 15.5	
	2μm,0.5s						
PGAV	Gavieira, Arco	5.08	109	⇓*e*P	Pn	03 36 17.9	+3.2
PGAV				*e*S	Sn	03 37 11.7	-1.8
PTO	Porto	5.25	118	*e*P	Pn	03 36 19.9	+3.1
PTO				*e*S	Sn	03 37 15.7	-1.7
PTO				A	A	03 37 16.3	
	1μm,0.5s						
PTO	Porto	5.25	118	P	Pn	03 36 19.9	+3.1
PTO				S	Sn	03 37 15.7	-1.7
	697nm,0.5s						
PTO	Porto	5.25	118	P	Pn	03 36 19.9	+3.1
PTO				S	Sn	03 37 15.7	-1.7
	697nm,0.5s						
ELOB	Lobios	5.26	109	⇓P	Pn	03 36 20.2	+3.0
	385nm,0.2s,SNR=18						
ELOB				S	Sn	03 37 15.5	-2.5
	1μm,0.2s,SNR=11						
ELOB	Lobios	5.26	109	P	Pn	03 36 20.2	+3.0
	385nm,0.2s,SNR=18						
ELOB				S	Sn	03 37 15.5	-2.5
	1μm,0.2s,SNR=11						
PCAB	Cabril	5.35	111	⇓*e*P	Pn	03 36 21.4	+3.1
PCAB				*e*S	Sn	03 37 18.4	-1.6
PCAB				A	A	03 37 20.9	
	1μm,0.4s						
PCAB	Cabril	5.35	111	P	Pn	03 36 21.4	+3.1
PCAB				S	Sn	03 37 18.4	-1.6
	669nm,0.4s						
PCAB	Cabril	5.35	111	P	Pn	03 36 21.4	+3.1
PCAB				S	Sn	03 37 18.4	-1.6
	669nm,0.4s						
EPON	Pontenova	5.53	92	⇓P	Pn	03 36 23.1	+2.4
	136nm,0.2s,SNR=18						
EPON				S	Sn	03 37 19.5	-4.8
	2μm,0.2s,SNR=11						
EPON	Pontenova	5.53	92	P	Pn	03 36 23.1	+2.4
	136nm,0.2s,SNR=18						
EPON				S	Sn	03 37 19.5	-4.8
	2μm,0.2s,SNR=11						
POLO	Lamas de Olo	5.66	113	⇓*e*P	Pn	03 36 25.3	+2.7
POLO				*e*S	Sn	03 37 25.6	-2.1
POLO				A	A	03 37 28.4	
	310nm,0.4s						
POLO	Lamas de Olo	5.66	113	⇓*e*P	Pn	03 36 25.3	+2.7
POLO				*e*S	Sn	03 37 25.6	-2.1
COI	Coimbra	5.91	125	⇓*e*P	Pn	03 36 28.6	+2.7
COI				*e*S	Sn	03 37 31.2	-2.5
COI				A	A	03 37 40.6	
	576nm,0.4s						
COI	Coimbra	5.91	125	P	Pn	03 36 28.6	+2.7
COI				S	Sn	03 37 31.2	-2.5
	288nm,0.4s						
COI	Coimbra	5.91	125	P	Pn	03 36 28.6	+2.7
COI				S	Sn	03 37 31.2	-2.5
	288nm,0.4s						
PVIS	Viseu	5.93	119	⇓*e*P	Pn	03 36 29.0	+2.8
PVIS				*e*S	Sn	03 37 31.7	-2.5
PVIS				A	A	03 37 36.4	
	301nm,0.1s						
PVIS	Viseu	5.93	119	P	Pn	03 36 29.0	+2.8
PVIS				S	Sn	03 37 31.7	-2.5
	151nm,0.1s						
PVIS	Viseu	5.93	119	P	Pn	03 36 29.0	+2.8
PVIS				S	Sn	03 37 31.7	-2.5
	151nm,0.1s						
PBRG	Braganca	6.20	106	⇓*e*P	Pn	03 36 33.0	+3.0
PBRG				*e*S	Sn	03 37 38.5	-2.4
PBRG				A	A	03 37 41.8	
	481nm,0.2s						
PBRG	Braganca	6.20	106	P	Pn	03 36 33.0	+3.0
PBRG				S	Sn	03 37 38.5	-2.4
	240nm,0.2s						
PBRG	Braganca	6.20	106	P	Pn	03 36 33.0	+3.0
PBRG				S	Sn	03 37 38.5	-2.4
	240nm,0.2s						
MVO	Moncorvo	6.27	112	*e*P	Pn	03 36 33.5	+2.6
MVO				*e*S	Sn	03 37 40.3	-2.3
MVO				A	A	03 37 54.6	
	626nm,0.6s						
MVO	Moncorvo	6.27	112	⇓P	Pn	03 36 33.5	+2.6
	812nm,0.2s,SNR=18						
MVO				S	Sn	03 37 38.7	-3.9
	151nm,0.1s,SNR=11						
MVO	Moncorvo	6.27	112	P	Pn	03 36 33.5	+2.6
	812nm,0.2s,SNR=18						
MVO				*e*S	Sn	03 37 40.3	-2.3
PTOM	Tomar	6.30	129	⇓*e*P	Pn	03 36 33.6	+2.3
PTOM				*e*S	Sn	03 37 39.6	-3.7
PTOM				A	A	03 37 43.2	
	830nm,0.3s						
PTOM	Tomar	6.30	129	P	Pn	03 36 33.6	+2.3
PTOM				S	Sn	03 37 39.6	-3.7
	415nm,0.3s						
PTOM	Tomar	6.30	129	P	Pn	03 36 33.6	+2.3
MTE	Manteigas	6.33	120	⇓*e*P	Pn	03 36 34.3	+2.6
MTE				*e*S	Sn	03 37 41.1	-3.0
MTE				A	A	03 37 57.1	
	737nm,0.6s						
MTE	Manteigas	6.33	120	P	Pn	03 36 34.3	+2.6
MTE				S	Sn	03 37 41.1	-3.0
	368nm,0.6s						
MTE	Manteigas	6.33	120	P	Pn	03 36 34.3	+2.6
MTE				S	Sn	03 37 41.1	-3.0
	368nm,0.6s						
PMAFR	Mafra	6.33	138	⇓*e*P	Pn	03 36 34.6	+2.8
PMAFR				*e*S	Sn	03 37 40.4	-3.7
PMAFR				A	A	03 37 45.1	
	2μm,0.3s						
PMAFR	Mafra	6.33	138	⇓P	Pn	03 36 34.6	+2.8
	254nm,0.2s,SNR=18						
PMAFR				S	Sn	03 37 39.9	-4.2
	1μm,0.2s,SNR=14						
PMAFR	Mafra	6.33	138	P	Pn	03 36 34.6	+2.8
	254nm,0.2s,SNR=18						
ALMR	Almeirim	6.54	133	*e*P	Pn	03 36 37.1	+2.5
ALMR				*e*S	Sn	03 37 45.3	-3.9
ALMR				AML	AML	03 37 46.6	
	comp=N,2μm,0.4s						
ALMR	Almeirim	6.54	133	⇓*e*P	Pn	03 36 37.1	+2.5
ALMR				*e*S	Sn	03 37 44.9	-4.3
ALMR				A	A	03 37 48.6	
	comp=N,2μm,0.4s						
ALMR	Almeirim	6.54	133	P	Pn	03 36 37.1	+2.5
ALMR				S	Sn	03 37 44.9	-4.3
	comp=N,915nm,0.4s						
ALMR	Almeirim	6.54	133	P	Pn	03 36 37.1	+2.5
PMST	Lisbon--Monsan	6.55	139	⇓*e*P	Pn	03 36 37.7	+3.0
PMST				*e*S	Sn	03 37 45.9	-3.6
PMST				A	A	03 37 50.8	
	comp=N,814nm,0.2s						
PMST	Lisbon--Monsan	6.55	139	⇓*e*P	Pn	03 36 37.7	+3.0
LIS	Lisbon	6.58	138	*e*P	Pn	03 36 38.1	+2.9
LIS				*e*S	Sn	03 37 46.6	-3.7
LIS				AML	AML	03 37 53.6	
	comp=N,3μm,0.4s						
LIS	Lisbon	6.58	138	⇓*e*P	Pn	03 36 38.1	+2.9
LIS				*e*S	Sn	03 37 46.9	-3.4
LIS				A	A	03 37 53.3	
	comp=N,1μm,0.4s						
LIS	Lisbon	6.58	138	P	Pn	03 36 38.1	+2.9
LIS				S	Sn	03 37 46.9	-3.4
	comp=N,1μm,0.4s						
LIS	Lisbon	6.58	138	⇓*e*P	Pn	03 36 38.1	+2.9
PCBR	Castelo Branco	6.70	124	*e*P	Pn	03 36 39.5	+2.7
PCBR				*e*S	Sn	03 37 49.4	-3.8
PCBR				A	A	03 37 53.0	
	comp=N,260nm,0.6s						
PCBR	Castelo Branco	6.70	124	P	Pn	03 36 39.5	+2.7
PCBR				S	Sn	03 37 49.4	-3.8
	comp=N,130nm,0.6s						
PCBR	Castelo Branco	6.70	124	P	Pn	03 36 39.5	+2.7
PMTG	Montargil	6.79	132	⇓*e*P	Pn	03 36 40.2	+2.2
PMTG				*e*S	Sn	03 37 51.1	-4.3
PMTG				A	A	03 37 56.5	
	comp=N,225nm,0.4s						
PMTG	Montargil	6.79	132	⇓*e*P	Pn	03 36 40.2	+2.2
EARI	Arriondas	6.93	91	⇓P	Pn	03 36 42.6	+2.5
	comp=N,86nm,0.2s,SNR=18						
EARI				S	Sn	03 37 54.4	-4.6
	comp=N,719nm,0.6s,SNR=9.3						
EARI	Arriondas	6.93	91	P	Pn	03 36 42.6	+2.5
	comp=N,86nm,0.2s,SNR=18						
EARI				S	Sn	03 37 54.4	-4.6
	comp=N,719nm,0.6s,SNR=9.3						
PMRV	Marv??o	7.01	126	*e*P	Pn	03 36 43.0	+1.9
PMRV				*e*S	Sn	03 37 57.0	-3.9
PMRV				A	A	03 38 02.6	
	comp=N,294nm,0.5s						
PMRV	Marv??o	7.01	126	P	Pn	03 36 43.0	+1.9
PMRV				S	Sn	03 37 57.0	-3.9
	comp=N,294nm,0.5s						
PMRV	Marv??o	7.01	126	P	Pn	03 36 43.0	+1.9
PESTR	Estremoz	7.28	130	⇓*e*P	Pn	03 36 46.6	+1.8
PESTR				*e*S	Sn	03 38 02.4	-5.1
PESTR				A	A	03 38 08.1	
	comp=N,258nm,0.4s						
PESTR	Estremoz	7.28	130	⇓*e*P	Pn	03 36 46.6	+1.8
PESTR				S	Sn	03 38 01.5	-6.0
EVO	Evora	7.30	134	⇓*e*P	Pn	03 36 47.1	+2.1
EVO				*e*S	Sn	03 38 03.1	-4.7
EVO				A	A	03 38 10.7	
	comp=N,352nm,0.3s						
EVO	Evora	7.30	134	P	Pn	03 36 47.0	+2.1
EVO				S	Sn	03 38 03.1	-4.7
	comp=N,352nm,0.3s						
EVO	Evora	7.30	134	⇓*e*P	Pn	03 36 47.1	+2.1
PNCL	Nicolau / Gran	7.36	138	⇓*e*P	Pn	03 36 48.2	+2.4
PNCL				*e*S	Sn	03 38 04.5	-4.9
PNCL				A	A	03 38 11.7	
	comp=N,304nm,0.5s						
PNCL	Nicolau / Gran	7.36	138	⇓*e*P	Pn	03 36 48.2	+2.4
EPLA	Plasencia	7.44	117	⇓P	Pn	03 36 50.0	+2.9
	comp=N,501nm,0.3s,SNR=18						
EPLA				S	Sn	03 38 07.6	-3.9
	comp=N,388nm,0.3s,SNR=19						
EPLA	Plasencia	7.44	117	P	Pn	03 36 50.0	+2.9
	comp=N,501nm,0.3s,SNR=18						
EBAD	Badajoz	7.68	128	P	Pn	03 36 51.8	+1.5
	comp=N,73nm,0.1s,SNR=251						
EBAD				S	Sn	03 38 12.7	-4.7
	comp=N,184nm,0.1s,SNR=11						
EBAD	Badajoz	7.68	128	P	Pn	03 36 51.8	+1.5
	comp=N,73nm,0.1s,SNR=251						
MESJ	Messejana	7.72	138	*e*P	Pn	03 36 53.1	+2.3
MESJ				*e*S	Sn	03 38 12.4	-6.0
MESJ				AML	AML	03 38 19.3	
	comp=N,662nm,0.1s						
MESJ	Messejana	7.72	138	*e*P	Pn	03 36 53.2	+2.4
MESJ				*e*S	Sn	03 38 13.5	-4.8
MESJ				A	A	03 38 19.2	
	comp=N,667nm,0.3s						
MESJ	Messejana	7.72	138	P	Pn	03 36 53.2	+2.4
MESJ				S	Sn	03 38 13.5	-4.8
	comp=N,667nm,0.3s						
MESJ	Messejana	7.72	138	P	Pn	03 36 53.2	+2.4
PTEO	Sao Teotonio	7.73	142	*e*P	Pn	03 36 53.4	+2.5
PTEO				*e*S	Sn	03 38 13.6	-4.8
PTEO				A	A	03 38 20.3	
	comp=N,1μm,0.5s						
PTEO	Sao Teotonio	7.73	142	P	Pn	03 36 53.4	+2.5
PTEO				S	Sn	03 38 13.6	-4.8
	comp=N,530nm,0.5s						
PTEO	Sao Teotonio	7.73	142	P	Pn	03 36 53.4	+2.5
PBEJ	Beja	7.75	136	⇓*e*P	Pn	03 36 54.3	+3.0
PBEJ				*e*S	Sn	03 38 14.8	-4.3
PBEJ				A	A	03 38 21.3	
	comp=N,342nm,0.5s						
PBEJ	Beja	7.75	136	P	Pn	03 36 54.3	+3.0
PBEJ				S	Sn	03 38 14.8	-4.3
	comp=N,171nm,0.5s						
PBEJ	Beja	7.75	136	P	Pn	03 36 54.3	+3.0
MORF	Marmelete	7.96	142	*e*P	Pn	03 36 56.4	+2.3
MORF				*e*S	Sn	03 38 17.7	-6.5
MORF				AML	AML	03 38 24.7	
	comp=N,1μm,0.1s						
MORF	Marmelete	7.96	142	*e*P	Pn	03 36 56.4	+2.3
MORF				*e*S	Sn	03 38 19.1	-5.1
MORF				A	A	03 38 26.2	
	comp=N,428nm,0.2s						
MORF	Marmelete	7.96	142	P	Pn	03 36 56.4	+2.3
MORF				S	Sn	03 38 19.1	-5.1
	comp=N,428nm,0.2s						
MORF	Marmelete	7.96	142	P	Pn	03 36 56.4	+2.3
PCVE	Castro Verde	7.98	138	*e*P	Pn	03 36 56.5	+2.2
PCVE				*e*S	Sn	03 38 18.8	-5.8
PCVE				A	A	03 38 25.3	
	comp=N,446nm,0.4s						
PCVE	Castro Verde	7.98	138	P	Pn	03 36 56.5	+2.2
PCVE				S	Sn	03 38 18.8	-5.8
	comp=N,446nm,0.4s						
PCVE	Castro Verde	7.98	138	P	Pn	03 36 56.5	+2.2
PFVI	Vila Bisbo	8.03	144	*e*P	Pn	03 36 57.3	+2.3
PFVI				*e*S	Sn	03 38 19.8	-6.0
PFVI				A	A	03 38 27.0	
	comp=N,318nm,0.5s						
PFVI	Vila Bisbo	8.03	144	P	Pn	03 36 57.0	+2.0
	comp=N,356nm,0.4s,SNR=111						
PFVI				S	Sn	03 38 19.5	-6.3
	comp=N,331nm,0.3s,SNR=9.9						
PFVI	Vila Bisbo	8.03	144	P	Pn	03 36 57.8	+2.8
PFVI				S	Sn	03 38 18.0	-7.8
PBAR	Barrancos	8.08	131	*e*P	Pn	03 36 58.0	+2.3
PBAR				*e*S	Sn	03 38 21.4	-5.7
PBAR				A	A	03 38 28.0	
	comp=N,323nm,0.6s						
PBAR	Barrancos	8.08	131	P	Pn	03 36 58.0	+2.3
PBAR				S	Sn	03 38 21.4	-5.7
	comp=N,323nm,0.6s						
PBAR	Barrancos	8.08	131	P	Pn	03 36 58.0	+2.3
ELAN	Lanestosa	8.23	90	⇓P	Pn	03 36 59.8	+2.0
	comp=N,57nm,0.2s,SNR=18						
ELAN				S	Sn	03 38 25.8	-5.0
	comp=N,2μm,0.7s,SNR=9.2						
ELAN	Lanestosa	8.23	90	P	Pn	03 36 59.8	+2.0
	comp=N,57nm,0.2s,SNR=18						
ELAN				S	Sn	03 38 25.8	-5.0
	comp=N,2μm,0.7s,SNR=9.2						
PVAQ	Vaqueiros	8.31	138	*e*P	Pn	03 37 01.0	+2.1
PVAQ				*e*S	Sn	03 38 27.3	-5.5
PVAQ				A	A	03 38 32.2	
	comp=N,554nm,0.3s						
PVAQ	Vaqueiros	8.31	138	P	Pn	03 37 01.0	+2.1
PVAQ				S	Sn	03 38 27.3	-5.5
	comp=N,554nm,0.3s						
PVAQ	Vaqueiros	8.31	138	P	Pn	03 37 01.2	+2.3
PVAQ				S	Sn	03 38 26.0	-6.8
EGRO	El Granado	8.33	136	P	Pn	03 37 01.6	+2.5
	comp=N,110nm,0.3s,SNR=160						
EGRO				S	Sn	03 38 27.2	-5.9
	comp=N,117nm,0.7s,SNR=8.8						
EGRO	El Granado	8.33	136	P	Pn	03 37 01.6	+2.5
	comp=N,110nm,0.3s,SNR=160						
PBDV	Barranco-do-Ve	8.34	139	*e*P	Pn	03 37 01.8	+2.5
PBDV				*e*S	Sn	03 38 27.9	-5.6
PBDV				A	A	03 38 35.2	
	comp=N,310nm,0.2s						
PBDV	Barranco-do-Ve	8.34	139	P	Pn	03 37 01.8	+2.5
PBDV				S	Sn	03 38 27.9	-5.6
	comp=N,310nm,0.2s						
PBDV	Barranco-do-Ve	8.34	139	P	Pn	03 37 01.8	+2.5
GUD	Guadarrama	8.45	108	⇑P	Pn	03 37 04.6	+3.6
	comp=N,221nm,0.2s,SNR=18						
GUD				S	Sn	03 38 32.6	-3.9
	comp=N,539nm,0.5s,SNR=9.7						
EMIN	Mina Concepcio	8.57	132	P	Pn	03 37 04.5	+2.0
	comp=N,231nm,0.2s,SNR=1385						
EMIN				S	Sn	03 38 32.6	-6.6
	comp=N,346nm,0.8s,SNR=5.6						
EMIN	Mina Concepcio	8.57	132	P	Pn	03 37 04.5	+2.0
	comp=N,230nm,0.1s,SNR=1000						
PAB	San Pablo	8.85	115	⇓P	Pn	03 37 09.3	+3.0
	comp=N,230nm,0.3s,SNR=18						
PAB				S	Sn	03 38 41.5	-4.7
	comp=N,134nm,0.2s,SNR=7.9						
PAB	San Pablo	8.85	115	*e*Pn	Pn	03 37 09.4	+3.1
	comp=N,231nm,0.4s						
PAB				*e*Sn	Sn	03 38 43.0	-3.1
PAB	San Pablo	8.85	115	P	Pn	03 37 09.3	+3.0
	comp=N,230nm,0.3s,SNR=18						
PAB				*e*Sn	Sn	03 38 43.0	-3.1
ESDC	Sonseca Array	9.04	113	Pn	Pn	03 37 12.2	+3.3
	comp=N,250nm,0.3s,baz=302,slow=13,SNR=1804						
ESDC				Sn	Sn	03 38 45.9	-4.8
	comp=N,81nm,0.3s,baz=297,slow=23,SNR=25						
ESDC				LR	LR	03 40 32.6	
	comp=N,210nm,20.8s,baz=265,slow=36						

ESDC	**Sonseca Array**	**9.04**	**113**	P	**Pn**	**03 37 11.8**	**+2.9**
	comp=N,480nm,0.2s,baz=301,slow=13,SNR=3013						
ESDC				S	**Sn**	**03 38 45.9**	**-4.8**
	comp=N,157nm,0.3s,baz=302,slow=24,SNR=15						
ESDC	**Sonseca Array**	**9.04**	**113**	P	**Pn**	**03 37 11.8**	**+2.9**
	comp=N,479nm,0.2s,SNR=1000						
QUIF	**Quistinic**	**9.06**	**59**	*e*Pn	**Pn**	**03 37 08.6**	**-0.5**
QUIF				*e*Sn	Sn	03 38 40.4	-11
	comp=N,229nm,0.2s						
QUIF	**Quistinic**	**9.06**	**59**	P	**Pn**	**03 37 08.6**	**-0.5**
QUIF				S	Sn	03 38 40.4	-11
	comp=N,114nm,0.2s						
QUIF	**Quistinic**	**9.06**	**59**	*e*Pn	**Pn**	**03 37 08.6**	**-0.5**
QUIF				*e*Sn	Sn	03 38 40.4	-11
QUIF	**Quistinic**	**9.06**	**59**	P	**Pn**	**03 37 08.6**	**-0.5**
ECAB	**El Cabril**	**9.06**	**126**	⇓P	**Pn**	**03 37 10.7**	**+1.4**
	comp=N,71nm,0.3s,SNR=18						
ECAB				S	Sn	03 38 46.0	-5.4
	comp=N,78nm,0.3s,SNR=9.8						
ECAB	**El Cabril**	**9.06**	**126**	P	**Pn**	**03 37 10.7**	**+1.4**
	comp=N,71nm,0.3s,SNR=18						
CCA1	**Carnmenellis**	**9.11**	**42**	*e*P	**Pn**	**03 37 09.7**	**-0.1**
CCA1				IAmb	IAmb	03 37 10.2	
	comp=Z,92nm,0.5s						
CCA1				IAML		03 37 10.4	
	comp=Z,64nm,0.3s						
CCA1	**Carnmenellis**	**9.11**	**42**	P	**Pn**	**03 37 09.4**	**-0.4**
ROSF	**Rostrenen**	**9.17**	**56**	*e*Pn	**Pn**	**03 37 10.1**	**-0.5**
ROSF				*e*Sn	Sn	03 38 42.3	-11
	comp=Z,525nm,0.3s						
ROSF	**Rostrenen**	**9.17**	**56**	P	**Pn**	**03 37 10.1**	**-0.5**
ROSF				S	Sn	03 38 42.3	-11
	comp=Z,262nm,0.3s						
ROSF	**Rostrenen**	**9.17**	**56**	*e*Pn	**Pn**	**03 37 10.1**	**-0.5**
ROSF				*e*Sn	Sn	03 38 42.3	-11
ROSF	**Rostrenen**	**9.17**	**56**	P	**Pn**	**03 37 10.1**	**-0.5**
HORN	**Hornachuelos**	**9.31**	**126**	P	**Pn**	**03 37 14.1**	**+1.5**
HORN				S	Sn	03 38 50.5	-6.9
EADA	**Adamuz**	**9.51**	**123**	P	**Pn**	**03 37 16.9**	**+1.6**
	comp=Z,149nm,0.2s,SNR=777						
EADA				S	**Sn**	**03 38 57.2**	**-5.1**
	comp=Z,43nm,0.1s,SNR=6.3						
EADA	**Adamuz**	**9.51**	**123**	P	**Pn**	**03 37 16.9**	**+1.6**
	comp=Z,149nm,0.2s,SNR=777						
SGMF	**Saint Gilles**	**9.57**	**58**	*e*Pn	**Pn**	**03 37 15.7**	**-0.4**
SGMF				*e*Sn	Sn	03 38 52.6	-11
	comp=Z,287nm,0.3s						
SGMF	**Saint Gilles**	**9.57**	**58**	P	**Pn**	**03 37 15.7**	**-0.4**
SGMF				S	Sn	03 38 52.6	-11
	comp=Z,144nm,0.3s						
SGMF	**Saint Gilles**	**9.57**	**58**	*e*Pn	**Pn**	**03 37 15.7**	**-0.4**
SGMF				*e*Sn	Sn	03 38 52.6	-11
SGMF	**Saint Gilles**	**9.57**	**58**	P	**Pn**	**03 37 15.7**	**-0.4**
EALK	**Alkurruntz**	**9.63**	**89**	⇑P	**Pn**	**03 37 18.8**	**+1.8**
	comp=Z,56nm,0.3s,SNR=18						
EALK				S	**Sn**	**03 38 59.2**	**-6.0**
	comp=Z,541nm,0.3s,SNR=10						
EALK	**Alkurruntz**	**9.63**	**89**	P	**Pn**	**03 37 18.8**	**+1.8**
	comp=Z,56nm,0.3s,SNR=18						
GIBL	**Gibalbin**	**9.64**	**133**	P	**Pn**	**03 37 20.0**	**+2.8**
GIBL	**Gibalbin**	**9.64**	**133**	P	**Pn**	**03 37 20.0**	**+2.8**
SFS	**San Fernando**	**9.80**	**135**	P	**Pn**	**03 37 23.3**	**+4.0**
SFS	**San Fernando**	**9.80**	**135**	P	**Pn**	**03 37 23.3**	**+4.0**
IPRE	**Itoiz**	**9.80**	**91**	P	Pn	03 37 24.6	+5.2
	comp=Z,30nm,0.5s,SNR=4.8						
IPRE				S	**Sn**	**03 39 06.0**	**-3.4**
	comp=Z,193nm,0.6s,SNR=9.5						
IPRE	**Itoiz**	**9.80**	**91**	S	**Sn**	**03 39 06.0**	**-3.4**
	comp=Z,193nm,0.6s,SNR=9.5						
EORO	**Oroz-Betelu**	**9.82**	**91**	P	**Pn**	**03 37 21.8**	**+2.2**
	comp=Z,37nm,0.3s,SNR=62						
EORO				S	**Sn**	**03 39 06.5**	**-3.4**
	comp=Z,620nm,0.5s,SNR=17						
EORO	**Oroz-Betelu**	**9.82**	**91**	P	**Pn**	**03 37 21.8**	**+2.2**
	comp=Z,37nm,0.3s,SNR=62						
EORO				S	**Sn**	**03 39 06.5**	**-3.4**
	comp=Z,620nm,0.5s,SNR=17						
SJPF	**Ste Jean**	**9.85**	**89**	*e*Pn	**Pn**	**03 37 21.2**	**+1.3**
SJPF				*e*Sn	Sn	03 39 02.7	-7.8
	comp=Z,116nm,0.2s						
SJPF	**Ste Jean**	**9.85**	**89**	P	**Pn**	**03 37 21.2**	**+1.3**
SJPF				S	Sn	03 39 02.7	-7.8
	comp=Z,58nm,0.2s						
SJPF	**Ste Jean**	**9.85**	**89**	*e*Pn	**Pn**	**03 37 21.2**	**+1.3**
SJPF				*e*Sn	Sn	03 39 02.7	-7.8
SJPF	**Ste Jean**	**9.85**	**89**	P	**Pn**	**03 37 21.2**	**+1.3**
ETOR	**Torete**	**9.85**	**103**	P	**Pn**	**03 37 23.3**	**+3.3**
	comp=Z,30nm,0.2s,SNR=75						
ETOR				S	**Sn**	**03 39 07.3**	**-3.3**
	comp=Z,5.2nm,0.3s,SNR=5.6						
ETOR	**Torete**	**9.85**	**103**	P	**Pn**	**03 37 23.3**	**+3.3**
	comp=Z,30nm,0.2s,SNR=75						
ETOR				S	**Sn**	**03 39 07.3**	**-3.3**
	comp=Z,5.2nm,0.3s,SNR=5.6						
IELO	**Elcoad**	**9.88**	**91**	P	**Pn**	**03 37 22.6**	**+2.2**
	comp=Z,15nm,0.2s,SNR=7.9						
IELO				S	**Sn**	**03 39 07.5**	**-4.0**
	comp=Z,210nm,0.2s,SNR=7.9						
IELO	**Elcoad**	**9.88**	**91**	P	**Pn**	**03 37 22.6**	**+2.2**
	comp=Z,15nm,0.2s,SNR=7.9						
IELO				S	**Sn**	**03 39 07.4**	**-4.0**
	comp=Z,210nm,0.2s,SNR=7.9						
LIJA	**Lijar**	**9.89**	**131**	P	**Pn**	**03 37 23.0**	**+2.4**
LIJA	**Lijar**	**9.89**	**131**	P	**Pn**	**03 37 23.0**	**+2.4**
BART	**Pico Bartolome**	**9.94**	**236**	*e*P	**Pn**	**03 37 18.9**	**-2.3**
	comp=Z,139nm,0.7s						
BART				*e*S	Sn	03 39 05.5	-7.3
BART	**Pico Bartolome**	**9.94**	**236**	*e*P	**Pn**	**03 37 18.9**	**-2.3**
	comp=Z,139nm,0.7s						
BART				*e*S	Sn	03 39 05.5	-7.3
CNIL	**Conil**	**9.95**	**135**	P	**Pn**	**03 37 25.0**	**+3.7**
CNIL	**Conil**	**9.95**	**135**	P	**Pn**	**03 37 25.0**	**+3.7**
HTL	**Hartland**	**10.00**	**40**	*e*P	**Pn**	**03 37 21.7**	**-0.3**
HTL				IAML		03 37 22.8	
	comp=Z,80nm,0.4s						
HTL				IAmb	IAmb	03 37 23.0	
	comp=Z,46nm,0.4s						
CMLA	**Cha da Macela**	**10.16**	**237**	*e*P	**Pn**	**03 37 22.9**	**-1.3**
	comp=Z,83nm,0.4s						
CMLA				*e*S	Sn	03 39 05.2	-13
CMLA	**Cha da Macela**	**10.16**	**237**	*e*Pn	**Pn**	**03 37 20.8**	**-3.4**
	comp=Z,35nm,0.5s						
CMLA				*e*Sn	Sn	03 39 05.0	-13
CMLA	**Cha da Macela**	**10.16**	**237**	*e*Pn	**Pn**	**03 37 20.8**	**-3.4**
	comp=Z,35nm,0.5s						
CMLA	**Cha da Macela**	**10.16**	**237**	*e*P	**Pn**	**03 37 22.9**	**-1.3**
	comp=Z,83nm,0.4s						
CMLA				*e*S	Sn	03 39 05.2	-13
GRON	**Grota Negra**	**10.16**	**237**	*e*P	Pn	03 37 19.1	-5.2
	comp=Z,12nm,0.5s						
GRON				*e*S	Sn	03 39 01.9	-16
JSA	**Saint Aubin**	**10.20**	**54**	P	**Pn**	**03 37 25.2**	**+0.5**
ATE	**Arette**	**10.23**	**89**	P	**Pn**	**03 37 25.7**	**+0.5**
	comp=Z,16nm,0.4s,SNR=7.9						
ATE				S	**Sn**	**03 39 15.6**	**-4.3**
	comp=Z,164nm,0.2s,SNR=7.9						
ATE	**Arette**	**10.23**	**89**	P	**Pn**	**03 37 25.7**	**+0.5**
	comp=Z,16nm,0.4s,SNR=7.9						
ATE				S	**Sn**	**03 39 15.6**	**-4.3**
	comp=Z,164nm,0.2s,SNR=7.9						
PSET	**Sete Cidades**	**10.24**	**238**	*e*P	**Pn**	**03 37 23.2**	**-2.2**
	comp=Z,100nm,0.4s						
PSET				*e*S	Sn	03 39 10.1	-10
PSET	**Sete Cidades**	**10.24**	**238**	*e*P	**Pn**	**03 37 23.2**	**-2.2**
	comp=Z,100nm,0.4s						
PSET				*e*S	Sn	03 39 10.1	-10
PDA	**Ponta Delgada**	**10.26**	**238**	*e*P	**Pn**	**03 37 23.1**	**-2.4**
	comp=Z,48nm,0.4s						
PDA				*e*S	Sn	03 39 07.9	-13
PDA	**Ponta Delgada**	**10.26**	**238**	*e*P	**Pn**	**03 37 23.1**	**-2.4**
	comp=Z,48nm,0.4s						
PDA				*e*S	Sn	03 39 07.9	-13
ETSF	**Etsaut**	**10.36**	**90**	*e*Pn	**Pn**	**03 37 29.0**	**+1.9**
ETSF				*e*Sn	**Sn**	**03 39 16.3**	**-6.9**
	comp=Z,469nm,0.5s						
ETSF	**Etsaut**	**10.36**	**90**	P	**Pn**	**03 37 29.0**	**+1.9**
ETSF				S	**Sn**	**03 39 16.3**	**-6.9**
	comp=Z,234nm,0.5s						
ETSF	**Etsaut**	**10.36**	**90**	*e*Pn	**Pn**	**03 37 29.0**	**+1.9**
ETSF				*e*Sn	**Sn**	**03 39 16.3**	**-6.9**
ETSF	**Etsaut**	**10.36**	**90**	P	**Pn**	**03 37 29.0**	**+1.9**
LRVF	**chˆ¢teau la Ri**	**10.39**	**79**	P	**Pn**	**03 37 28.9**	**+1.6**
PSMN	**Pico do Norte,**	**10.39**	**233**	*e*P	**Pn**	**03 37 26.1**	**-1.3**
	comp=Z,69nm,1.0s						
PSMN				*e*S	Sn	03 39 16.6	-7.3
PSMN	**Pico do Norte,**	**10.39**	**233**	*e*P	**Pn**	**03 37 26.1**	**-1.3**
	comp=Z,69nm,1.0s						
PSMN				*e*S	Sn	03 39 16.6	-7.3
PSMA	**Santa Maria**	**10.44**	**233**	*e*P	Pn	03 37 24.3	-3.7
	comp=Z,32nm,0.8s						
PSMA				*e*S	**Sn**	**03 39 23.8**	**-1.1**
EGOR	**Sierra Gorda,**	**10.48**	**126**	P	**Pn**	**03 37 30.8**	**+2.0**
	comp=Z,20nm,0.3s,SNR=7.9						
EGOR				S	Sn	03 39 21.1	-5.2
	comp=Z,122nm,0.5s,SNR=7.9						
EGOR	**Sierra Gorda,**	**10.48**	**126**	P	**Pn**	**03 37 30.8**	**+2.0**
	comp=Z,20nm,0.3s,SNR=7.9						
EMIJ	**Mijas**	**10.49**	**130**	P	**Pn**	**03 37 29.6**	**+0.8**
	comp=Z,20nm,0.3s,SNR=46						
EMIJ				S	Sn	03 39 19.6	-6.7
	comp=Z,93nm,0.5s,SNR=7.9						
EMIJ	**Mijas**	**10.49**	**130**	P	**Pn**	**03 37 29.6**	**+0.8**
	comp=Z,20nm,0.3s,SNR=46						
EMAL	**Malaga-Limoner**	**10.54**	**128**	*e*P	**Pn**	**03 37 32.4**	**+3.0**
PSCM	**Serra do Cume**	**10.62**	**246**	*e*P	**Pn**	**03 37 28.3**	**-2.3**
	comp=Z,41nm,0.6s						
PSCM				*e*S	Sn	03 39 20.5	-9.0
PSCM	**Serra do Cume**	**10.62**	**246**	*e*P	**Pn**	**03 37 28.3**	**-2.3**
	comp=Z,41nm,0.6s						
PSCM				*e*S	Sn	03 39 20.5	-9.0
ECEU	**Ceuta**	**10.66**	**135**	P	**Pn**	**03 37 34.5**	**+3.4**
	comp=Z,39nm,0.3s,SNR=93						
ECEU				S	**Sn**	**03 39 26.5**	**-4.1**
	comp=Z,99nm,0.5s,SNR=5.0						
ECEU	**Ceuta**	**10.66**	**135**	P	**Pn**	**03 37 34.5**	**+3.4**
	comp=Z,39nm,0.3s,SNR=93						
CEU	**Ceuta**	**10.66**	**135**	P	**Pn**	**03 37 34.9**	**+3.8**
CEU				S	**Sn**	**03 39 26.5**	**-4.0**
CEU	**Ceuta**	**10.66**	**135**	P	**Pn**	**03 37 34.9**	**+3.8**
EQES	**Quesada**	**10.66**	**120**	P	**Pn**	**03 37 33.9**	**+2.6**
	comp=Z,160nm,0.4s,SNR=339						
EQES				S	**Sn**	**03 39 26.3**	**-4.4**
	comp=Z,57nm,0.3s,SNR=5.5						
EQES	**Quesada**	**10.66**	**120**	P	**Pn**	**03 37 33.9**	**+2.6**
	comp=Z,160nm,0.4s,SNR=339						
MFF	**Saint Martin d**	**10.67**	**70**	*e*Pn	**Pn**	**03 37 31.6**	**+0.4**
MFF				*e*Sn	Sn	03 39 19.1	-12
	comp=Z,247nm,0.3s						
MFF	**Saint Martin d**	**10.67**	**70**	P	**Pn**	**03 37 31.6**	**+0.4**
MFF				S	Sn	03 39 19.1	-12
	comp=Z,124nm,0.3s						
MFF	**Saint Martin d**	**10.67**	**70**	*e*Pn	**Pn**	**03 37 31.6**	**+0.4**
MFF				*e*Sn	Sn	03 39 19.1	-12
MFF	**Saint Martin d**	**10.67**	**70**	P	**Pn**	**03 37 31.6**	**+0.4**
GRR	**Gorron**	**10.67**	**60**	*e*Pn	**Pn**	**03 37 30.8**	**-0.4**
GRR				*e*Sn	Sn	03 39 18.9	-12
	comp=Z,252nm,0.4s						
GRR	**Gorron**	**10.67**	**60**	P	**Pn**	**03 37 30.8**	**-0.4**
GRR				S	Sn	03 39 18.9	-12
	comp=Z,126nm,0.4s						
GRR	**Gorron**	**10.67**	**60**	*e*Pn	**Pn**	**03 37 30.8**	**-0.4**
GRR				*e*Sn	Sn	03 39 18.9	-12
GRR	**Gorron**	**10.67**	**60**	P	**Pn**	**03 37 30.8**	**-0.4**
ESAC	**San Caprasio**	**10.69**	**96**	P	**Pn**	**03 37 33.8**	**+2.3**
	comp=Z,143nm,0.2s,SNR=72						
ESAC				S	**Sn**	**03 39 26.1**	**-5.2**
	comp=Z,1µm,0.4s,SNR=12						
ESAC	**San Caprasio**	**10.69**	**96**	P	**Pn**	**03 37 33.8**	**+2.3**
	comp=Z,143nm,0.2s,SNR=72						
ESAC				S	**Sn**	**03 39 26.1**	**-5.2**
	comp=Z,1µm,0.4s,SNR=12						
CEUT	**Ceuta**	**10.70**	**134**	P	**Pn**	**03 37 34.9**	**+3.2**
CEUT				S	Sn	03 39 22.9	-8.5
CEUT	**Ceuta**	**10.70**	**134**	P	**Pn**	**03 37 35.6**	**+4.0**
CEUT				S	Sn	03 39 22.9	-8.5
ADH	**Angra Heroismo**	**10.72**	**246**	*e*P	**Pn**	**03 37 30.2**	**-1.7**
	comp=Z,19nm,0.4s						
ADH				*e*S	Sn	03 39 18.2	-14
ADH	**Angra Heroismo**	**10.72**	**246**	*e*P	**Pn**	**03 37 30.2**	**-1.7**
	comp=Z,19nm,0.4s						
ADH				*e*S	Sn	03 39 18.2	-14
PMPS	**Porto Santo**	**10.79**	**187**	*e*P	**Pn**	**03 37 34.0**	**+1.1**
PMPS				*e*S	Sn	03 39 22.0	-12
PMPS	**Porto Santo**	**10.79**	**187**	P	**Pn**	**03 37 34.0**	**+1.1**
PMPS				S	Sn	03 39 22.0	-12
SESP	**Santiago Espad**	**10.81**	**117**	⇑P	**Pn**	**03 37 35.8**	**+2.5**
	comp=Z,94nm,0.5s,SNR=18						
SESP				S	**Sn**	**03 39 29.6**	**-4.8**
	comp=Z,68nm,0.5s,SNR=7.9						
SESP	**Santiago Espad**	**10.81**	**117**	P	**Pn**	**03 37 35.9**	**+2.6**
SESP				S	**Sn**	**03 39 29.5**	**-4.9**
EQUE	**Quentar**	**10.82**	**124**	⇑P	**Pn**	**03 37 35.6**	**+2.3**
	comp=Z,60nm,0.3s,SNR=18						
EQUE				S	Sn	03 39 28.8	-5.6
	comp=Z,102nm,0.5s,SNR=6.2						
EQUE	**Quentar**	**10.82**	**124**	P	**Pn**	**03 37 35.6**	**+2.3**
	comp=Z,60nm,0.3s,SNR=18						
GORA	**Gorafe**	**10.88**	**121**	P	**Pn**	**03 37 36.8**	**+2.6**
	comp=Z,63nm,0.3s,SNR=7.9						
GORA				S	**Sn**	**03 39 31.8**	**-4.3**
	comp=Z,206nm,0.6s,SNR=7.9						
GORA	**Gorafe**	**10.88**	**121**	P	**Pn**	**03 37 36.8**	**+2.6**
	comp=Z,63nm,0.3s,SNR=7.9						
ELGU	**Los Guajares,**	**10.93**	**125**	P	**Pn**	**03 37 37.2**	**+2.4**
	comp=Z,28nm,0.3s,SNR=7.9						
ELGU				S	**Sn**	**03 39 32.6**	**-4.6**
	comp=Z,136nm,0.5s,SNR=7.9						
ELGU	**Los Guajares,**	**10.93**	**125**	P	**Pn**	**03 37 37.2**	**+2.4**
	comp=Z,28nm,0.3s,SNR=7.9						
ECHI	**Chisagues Biel**	**10.95**	**91**	P	**Pn**	**03 37 36.8**	**+1.6**
	comp=Z,11nm,0.4s,SNR=7.9						
ECHI				S	**Sn**	**03 39 33.7**	**-4.1**
	comp=Z,162nm,0.4s,SNR=7.9						
ECHI	**Chisagues Biel**	**10.95**	**91**	P	**Pn**	**03 37 36.8**	**+1.6**
	comp=Z,11nm,0.4s,SNR=7.9						
ECHI				S	**Sn**	**03 39 33.7**	**-4.1**
	comp=Z,162nm,0.4s,SNR=7.9						
EPF	**Esparros**	**10.99**	**89**	*e*Pn	**Pn**	**03 37 36.7**	**+1.0**
EPF				*e*Sn	Sn	03 39 30.3	-8.3
	comp=Z,102nm,0.2s						
EPF	**Esparros**	**10.99**	**89**	P	**Pn**	**03 37 36.7**	**+1.0**
EPF				S	Sn	03 39 30.3	-8.3
	comp=Z,51nm,0.2s						
EPF	**Esparros**	**10.99**	**89**	*e*Pn	**Pn**	**03 37 36.7**	**+1.0**
EPF				*e*Sn	Sn	03 39 30.3	-8.3
EPF	**Esparros**	**10.99**	**89**	P	**Pn**	**03 37 36.7**	**+1.0**
PGRA	**Graciosa**	**11.03**	**249**	*e*P	**Pn**	**03 37 34.7**	**-1.4**
	comp=Z,171nm,0.6s						
PGRA				*e*S	Sn	03 39 25.9	-14
PGRA	**Graciosa**	**11.03**	**249**	*e*P	**Pn**	**03 37 34.7**	**-1.4**
	comp=Z,171nm,0.6s						
PGRA				*e*S	Sn	03 39 25.9	-14
FLN	**La Foliniere**	**11.04**	**58**	*e*Pn	**Pn**	**03 37 36.1**	**-0.1**
	baz=246						
FLN				*e*Sn	Sn	03 39 27.6	-12
	comp=Z,207nm,0.3s						
FLN				*e*R			
	comp=Z,132nm,21.5s						
FLN	**La Foliniere**	**11.04**	**58**	P	**Pn**	**03 37 36.1**	**-0.1**
FLN				S	Sn	03 39 27.6	-12
	comp=Z,104nm,0.3s						
FLN	**La Foliniere**	**11.04**	**58**	*e*Pn	**Pn**	**03 37 36.1**	**-0.1**
FLN				*e*Sn	Sn	03 39 27.6	-12
FLN	**La Foliniere**	**11.04**	**58**	P	**Pn**	**03 37 36.1**	**-0.1**
ECHE	**Chera**	**11.11**	**107**	P	**Pn**	**03 37 41.0**	**+3.7**
	comp=Z,7.4nm,0.2s,SNR=7.9						
ECHE				S	**Sn**	**03 39 38.9**	**-2.7**
	comp=Z,19nm,0.2s,SNR=7.9						
PMOZ	**Porto Moniz, M**	**11.12**	**191**	⇓*e*P	**Pn**	**03 37 38.8**	**+1.3**
PMOZ				*e*S	Sn	03 39 32.0	-10
PMOZ	**Porto Moniz, M**	**11.12**	**191**	P	**Pn**	**03 37 38.4**	**+0.9**
	comp=Z,94nm,0.6s,SNR=7.9						
PMOZ				S	Sn	03 39 30.5	-11
	comp=Z,246nm,0.5s,SNR=7.9						
PMOZ	**Porto Moniz, M**	**11.12**	**191**	P	**Pn**	**03 37 39.0**	**+1.5**
PMOZ				S	Sn	03 39 27.5	-14
EMOS	**Mosqueruela**	**11.13**	**103**	P	**Pn**	**03 37 41.6**	**+3.8**
	comp=Z,64nm,0.3s,SNR=188						
EMOS				S	**Sn**	**03 39 37.8**	**-4.6**
	comp=Z,392nm,0.5s,SNR=7.4						
LFF	**La Frestale**	**11.14**	**79**	*e*Pn	**Pn**	**03 37 37.9**	**+0.3**
LFF				*e*Sn	Sn	03 39 31.7	-10
	comp=Z,293nm,0.3s						
LFF	**La Frestale**	**11.14**	**79**	P	**Pn**	**03 37 37.9**	**+0.3**
LFF				S	Sn	03 39 31.7	-10
	comp=Z,147nm,0.3s						
LFF	**La Frestale**	**11.14**	**79**	*e*Pn	**Pn**	**03 37 37.9**	**+0.3**
LFF				*e*Sn	Sn	03 39 31.7	-10
LFF	**La Frestale**	**11.14**	**79**	P	**Pn**	**03 37 37.9**	**+0.3**
ETOB	**Tobarra**	**11.18**	**113**	⇑P	**Pn**	**03 37 40.5**	**+2.3**
	comp=Z,85nm,0.2s,SNR=18						
ETOB				S	**Sn**	**03 39 37.8**	**-5.4**
	comp=Z,26nm,0.3s,SNR=4.9						
ETOB	**Tobarra**	**11.18**	**113**	P	**Pn**	**03 37 40.5**	**+2.3**
	comp=Z,85nm,0.2s,SNR=18						
PMAR	**Madeira**	**11.18**	**190**	*e*P	**Pn**	**03 37 40.1**	**+1.7**
PMAR				*e*S	Sn	03 39 30.5	-13
PMAR	**Madeira**	**11.18**	**190**	P	**Pn**	**03 37 40.1**	**+1.7**
PMAR				S	Sn	03 39 30.5	-13
PMAR	**Madeira**	**11.18**	**190**	P	**Pn**	**03 37 38.9**	**+0.5**
PMAR				S	Sn	03 39 29.5	-14
LDF	**La Druitiere**	**11.20**	**60**	*e*Pn	**Pn**	**03 37 38.2**	**-0.2**
LDF				*e*Sn	Sn	03 39 32.3	-11
	comp=Z,135nm,0.3s						
LDF	**La Druitiere**	**11.20**	**60**	*e*Pn	**Pn**	**03 37 38.2**	**-0.2**
LDF				*e*Sn	Sn	03 39 32.3	-11
RSA	**Sarsar**	**11.25**	**139**	P	**Pn**	**03 37 42.9**	**+3.7**
RSA				S	Sn	03 39 38.1	-6.9
RSA	**Sarsar**	**11.25**	**139**	P	**Pn**	**03 37 42.9**	**+3.7**
RSA				S	Sn	03 39 38.1	-6.9
FUL	**Funchal**	**11.26**	**189**	*e*P	**Pn**	**03 37 39.8**	**+0.6**
FUL				*e*S	Sn	03 39 33.5	-12
FUL	**Funchal**	**11.26**	**189**	P	**Pn**	**03 37 39.8**	**+0.6**
FUL				S	Sn	03 39 33.5	-12
CHEFC	**Chefchaouen**	**11.30**	**137**	P	**Pn**	**03 37 44.2**	**+4.3**
CHEFC				S	Sn	03 39 38.1	-8.1
PMAN	**Manadas**	**11.30**	**247**	*e*P	**Pn**	**03 37 38.2**	**-1.7**
	comp=Z,32nm,0.4s						
PMAN				*e*S	Sn	03 39 32.4	-14
PMAN	**Manadas**	**11.30**	**247**	*e*P	**Pn**	**03 37 38.2**	**-1.7**
	comp=Z,32nm,0.4s						
PMAN				*e*S	Sn	03 39 32.4	-14
BATH	**Bath**	**11.33**	**43**	*e*P	**Pn**	**03 37 40.4**	**+0.3**
BATH				IAmb	IAmb	03 37 42.2	
	comp=Z,475nm,0.3s						
BATH	**Bath**	**11.33**	**43**	*e*P	**Pn**	**03 37 40.4**	**+0.3**
MONM	**Monmouth**	**11.35**	**41**	*e*P	**Pn**	**03 37 40.1**	**-0.3**
MONM				IAML		03 37 42.0	
	comp=Z,122nm,0.8s						
MONM				IAmb	IAmb	03 37 42.2	
	comp=Z,92nm,0.5s						
MONM	**Monmouth**	**11.35**	**41**	*e*P	**Pn**	**03 37 40.1**	**-0.3**
EBER	**Berja**	**11.35**	**123**	P	**Pn**	**03 37 44.0**	**+3.3**
	comp=Z,92nm,0.3s,SNR=243						
EBER				S	**Sn**	**03 39 43.1**	**-4.5**
	comp=Z,114nm,0.4s,SNR=9.4						
EBER	**Berja**	**11.35**	**123**	P	**Pn**	**03 37 44.0**	**+3.3**
	comp=Z,92nm,0.3s,SNR=243						
ROSA	**Rosais**	**11.36**	**248**	*e*P	**Pn**	**03 37 38.9**	**-1.8**
	comp=Z,32nm,0.7s						
ROSA				*e*S	Sn	03 39 35.4	-12
ROSA	**Rosais**	**11.36**	**248**	P	**Pn**	**03 37 38.5**	**-2.2**
	comp=Z,6.8nm,0.2s,SNR=7.9						
ROSA	**Rosais**	**11.36**	**248**	*e*P	**Pn**	**03 37 38.9**	**-1.8**
	comp=Z,32nm,0.7s						
ROSA				*e*S	Sn	03 39 35.4	-12
MCH1	**Michaelchurch**	**11.36**	**40**	*e*P	**Pn**	**03 37 40.1**	**-0.5**
MCH1				IAML		03 37 41.6	
	comp=Z,228nm,0.2s						
MCH1				IAmb	IAmb	03 37 41.8	
	comp=Z,358nm,0.3s						
MCH1	**Michaelchurch**	**11.36**	**40**	*e*P	**Pn**	**03 37 40.1**	**-0.5**
MONQ	**Montcuq**	**11.47**	**82**	P	**Pn**	**03 37 43.3**	**+1.1**
ERTA	**Horta de San J**	**11.50**	**99**	P	**Pn**	**03 37 44.3**	**+1.8**
	comp=Z,11nm,0.2s,SNR=100						
ERTA				S	**Sn**	**03 39 44.8**	**-6.2**
	comp=Z,27nm,0.8s,SNR=10						
ERTA	**Horta de San J**	**11.50**	**99**	P	**Pn**	**03 37 44.3**	**+1.8**
	comp=Z,11nm,0.2s,SNR=100						
RTC	**Rabat Centre**	**11.54**	**145**	P	**Pn**	**03 37 44.9**	**+1.7**
RTC				S	Sn	03 39 41.5	-11
RTC	**Rabat Centre**	**11.54**	**145**	P	**Pn**	**03 37 44.9**	**+1.7**
RTC				S	Sn	03 39 41.5	-11
PICO	**Pico**	**11.60**	**248**	*e*P	**Pn**	**03 37 42.6**	**-1.4**
	comp=Z,21nm,0.3s						
PICO				*e*S	Sn	03 39 41.4	-12
PICO	**Pico**	**11.60**	**248**	*e*P	**Pn**	**03 37 42.6**	**-1.4**
	comp=Z,21nm,0.3s						
PICO				*e*S	Sn	03 39 41.4	-12
YRC	**Rhoscolyn**	**11.60**	**32**	*e*P	**Pn**	**03 37 42.9**	**-1.0**
SWN1	**Swindon**	**11.63**	**44**	*e*P	**Pn**	**03 37 45.5**	**+1.1**
SWN1				IAmb	IAmb	03 37 46.0	
	comp=Z,183nm,0.5s						
SWN1				IAML		03 37 46.5	
	comp=Z,170nm,0.3s						
SWN1	**Swindon**	**11.63**	**44**	*e*P	**Pn**	**03 37 45.5**	**+1.1**
EBR	**Ebro Roquetas**	**11.66**	**100**	P	**Pn**	**03 37 48.2**	**+3.5**
	comp=Z,112nm,0.3s,SNR=7.9						
EBR				S	**Sn**	**03 39 49.6**	**-5.2**
	comp=Z,1µm,0.3s,SNR=7.9						
PCAN	**Candelaria**	**11.66**	**248**	*e*P	**Pn**	**03 37 43.3**	**-1.4**
	comp=Z,29nm,0.7s						
PCAN				*e*S	**Sn**	**03 39 52.9**	**-2.0**
PCAN	**Candelaria**	**11.66**	**248**	*e*P	**Pn**	**03 37 43.3**	**-1.4**
	comp=Z,29nm,0.7s						
PCAN				*e*S	**Sn**	**03 39 52.9**	**-2.0**
LLW	**Llanuwychllyn**	**11.66**	**35**	*e*P	**Pn**	**03 37 43.6**	**-1.1**
LLW	**Llanuwychllyn**	**11.66**	**35**	*e*P	**Pn**	**03 37 43.6**	**-1.1**
CSOR	**Sort**	**11.69**	**91**	P	**Pn**	**03 37 46.3**	**+1.0**
	comp=Z,20nm,0.6s,SNR=33						
CSOR				S	**Sn**	**03 39 51.7**	**-4.1**
	comp=Z,117nm,0.3s,SNR=7.6						
CSOR	**Sort**	**11.69**	**91**	P	**Pn**	**03 37 46.3**	**+1.0**
	comp=Z,20nm,0.6s,SNR=33						
CSOR				S	**Sn**	**03 39 51.7**	**-4.1**
	comp=Z,117nm,0.3s,SNR=7.6						
RJF	**Les Rejaudoux**	**11.69**	**77**	*e*Pn	**Pn**	**03 37 45.6**	**+0.4**
RJF				*e*Sn	Sn	03 39 44.1	-12
	comp=Z,366nm,0.3s						
RJF				*e*R			
	comp=Z,257nm,21.0s						
RJF	**Les Rejaudoux**	**11.69**	**77**	P	**Pn**	**03 37 45.6**	**+0.4**
RJF				S	Sn	03 39 44.1	-12
	comp=Z,183nm,0.3s						
RJF	**Les Rejaudoux**	**11.69**	**77**	*e*Pn	**Pn**	**03 37 45.6**	**+0.4**
RJF				*e*Sn	Sn	03 39 44.1	-12
WLF1	**Llynfaes**	**11.70**	**32**	*e*P	**Pn**	**03 37 44.8**	**-0.4**
WLF1				IAML		03 37 45.8	
	comp=Z,171nm,0.4s						
WLF1				IAmb	IAmb	03 37 46.0	
	comp=Z,203nm,0.4s						
WLF1	**Llynfaes**	**11.70**	**32**	*e*P	**Pn**	**03 37 44.8**	**-0.4**
PCED	**Cedros**	**11.72**	**249**	*e*P	**Pn**	**03 37 44.1**	**-1.4**
PCED	**Cedros**	**11.72**	**249**	*e*P	**Pn**	**03 37 44.1**	**-1.4**
ENIJ	**Nijar**	**11.72**	**121**	P	**Pn**	**03 37 49.1**	**+3.5**
	comp=Z,95nm,0.3s,SNR=7.9						
ENIJ				S	**Sn**	**03 39 51.4**	**-5.1**
	comp=Z,96nm,0.5s,SNR=7.9						
ENIJ	**Nijar**	**11.72**	**121**	P	**Pn**	**03 37 49.1**	**+3.5**
	comp=Z,95nm,0.3s,SNR=7.9						
HOR	**Horta**	**11.72**	**248**	*e*P	**Pn**	**03 37 43.0**	**-2.6**
HOR	**Horta**	**11.72**	**248**	*e*P	**Pn**	**03 37 43.0**	**-2.6**
CALA	**Caldeira**	**11.74**	**248**	*e*P	**Pn**	**03 37 42.8**	**-3.1**
CALA				*e*S	**Sn**	**03 39 55.0**	**-2.1**
CALA	**Caldeira**	**11.74**	**248**	*e*P	**Pn**	**03 37 42.8**	**-3.1**
CALA				*e*S	**Sn**	**03 39 55.0**	**-2.1**
HLM1	**Long Mynd**	**11.77**	**38**	*e*P	**Pn**	**03 37 45.6**	**-0.6**
HLM1				IAML		03 37 47.6	
	comp=Z,27nm,0.3s						
HLM1	**Long Mynd**	**11.77**	**38**	*e*P	**Pn**	**03 37 45.6**	**-0.6**
PVLZ	**Peæn de**	**11.78**	**133**	*e*P	**Pn**	**03 37 48.0**	**+1.6**
EMUR	**La Murta**	**11.81**	**116**	⇑P	**Pn**	**03 37 50.1**	**+3.2**
	comp=Z,52nm,0.3s,SNR=18						
EMUR				S	**Sn**	**03 39 53.5**	**-5.3**
	comp=Z,20nm,0.7s,SNR=5.0						
EMUR	**La Murta**	**11.81**	**116**	P	**Pn**	**03 37 50.1**	**+3.2**
	comp=Z,52nm,0.3s,SNR=18						
WME	**Myndd Eilian**	**11.82**	**32**	*e*P	**Pn**	**03 37 46.3**	**-0.5**
WME	**Myndd Eilian**	**11.82**	**32**	*e*P	**Pn**	**03 37 46.3**	**-0.5**
AFON	**Font Roja**	**11.84**	**111**	P	**Pn**	**03 37 51.2**	**+3.9**
	comp=Z,47nm,0.3s,SNR=89						
AFON				S	**Sn**	**03 39 55.2**	**-4.3**
	comp=Z,26nm,0.3s,SNR=14						
WPM1	**Penmaenmawr**	**11.87**	**33**	*e*P	**Pn**	**03 37 47.0**	**-0.5**
SSW	**Stow on the Wo**	**11.89**	**42**	*e*P	**Pn**	**03 37 48.7**	**+0.9**
FOEL	**Foel Wylfa**	**11.89**	**36**	*e*P	**Pn**	**03 37 47.1**	**-0.7**
FOEL				IAmb	IAmb	03 37 48.6	
	comp=Z,95nm,0.5s						
FOEL				IAML		03 37 48.9	
	comp=Z,72nm,0.5s						
EPOB	**Poblet**	**11.91**	**96**	P	**Pn**	**03 37 49.8**	**+1.6**
	comp=Z,9.0nm,0.2s,SNR=23						
EPOB				S	Sn	03 39 52.3	-8.8
	comp=Z,28nm,0.6s,SNR=11						
EPOB	**Poblet**	**11.91**	**96**	P	**Pn**	**03 37 49.8**	**+1.6**
	comp=Z,9.0nm,0.2s,SNR=23						

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MPAL  Palemas           11.93 132  P      Pn    03 37 52.2 +3.7
MPAL                               S      Sn    03 39 49.4  -12
MPAL  Palemas           11.93 132  P      Pn    03 37 52.2 +3.7
MPAL                               S      Sn    03 39 49.4  -12
EBEN2 Beniarda presa    12.07 110  P      Pn    03 37 53.4 +3.0
      comp=Z,97nm,0.5s,SNR=7.9
EBEN2                              S      Sn    03 40 00.9 -4.2
      comp=Z,50nm,0.5s,SNR=7.9
EBEN2 Beniarda presa    12.07 110  P      Pn    03 37 53.4 +3.0
      comp=Z,97nm,0.5s,SNR=7.9
EBEN2                              S      Sn    03 40 00.9 -4.2
      comp=Z,50nm,0.5s,SNR=7.9
CAF   Calviac           12.08  79  ePn    Pn    03 37 50.1 -0.4
CAF                                eSn    Sn    03 39 54.1  -11
      comp=Z,177nm,0.2s
CAF   Calviac           12.08  79  P      Pn    03 37 50.1 -0.4
CAF                                S      Sn    03 39 54.1  -11
      comp=Z,88nm,0.2s
CAF   Calviac           12.08  79  ePn    Pn    03 37 50.1 -0.4
CAF                                eSn    Sn    03 39 54.1  -11
EMIR  Miracle           12.08  93  P      Pn    03 37 51.0 +0.5
      comp=Z,42nm,0.5s,SNR=43
EMIR                               S      Sn    03 39 57.1 -8.2
      comp=Z,186nm,0.4s,SNR=8.4
EMIR  Miracle           12.08  93  P      Pn    03 37 51.0 +0.5
      comp=Z,42nm,0.5s,SNR=43
CART  Cartagena         12.12 116  P      Pn    03 37 52.8 +1.8
CART  Cartagena         12.12 116  P      Pn    03 37 52.8 +1.8
SICH  Sidi Chahed       12.12 140  P      Pn    03 37 53.5 +2.4
SICH                               S      Sn    03 39 58.0 -8.3
TCF   Toulx Ste Croi    12.24  72  ePn    Pn    03 37 52.8 +0.1
TCF                                eSn    Sn    03 39 56.1  -13
      comp=Z,256nm,0.3s
TCF   Toulx Ste Croi    12.24  72  P      Pn    03 37 52.8 +0.1
TCF                                S      Sn    03 39 56.1  -13
      comp=Z,128nm,0.3s
TCF   Toulx Ste Croi    12.24  72  ePn    Pn    03 37 52.8 +0.1
TCF                                eSn    Sn    03 39 56.1  -13
TCF   Toulx Ste Croi    12.24  72  P      Pn    03 37 52.8 +0.1
CLLI  Llivia            12.28  90  P      Pn    03 37 54.6 +1.3
      comp=Z,8.7nm,0.3s,SNR=38
CLLI                               S      Sn    03 40 04.3 -5.9
      comp=Z,71nm,0.5s,SNR=8.1
CLLI  Llivia            12.28  90  P      Pn    03 37 54.6 +1.3
      comp=Z,8.7nm,0.3s,SNR=38
WIM   Isle of Man       12.28  29  eP     Pn    03 37 52.4 -0.7
FNEB  N^'bias           12.29  88  P      Pn    03 37 56.2 +2.8
MTLF  Montolieu         12.30  86  ePn    Pn    03 37 52.9 -0.6
MTLF                               eSn    Sn    03 39 59.8  -11
      comp=Z,125nm,0.3s
MTLF  Montolieu         12.30  86  P      Pn    03 37 52.9 -0.6
MTLF                               S      Sn    03 39 59.8  -11
      comp=Z,62nm,0.3s
MTLF  Montolieu         12.30  86  ePn    Pn    03 37 52.9 -0.6
MTLF                               eSn    Sn    03 39 59.8  -11
MTLF  Montolieu         12.30  86  P      Pn    03 37 52.9 -0.6
IOMK  Kirk Michael      12.40  29  eP     Pn    03 37 53.7 -1.1
IOMK                               IAmb   IAmb  03 37 54.8
      comp=Z,46nm,0.5s
IOMK                               IAML         03 37 55.1
      comp=Z,37nm,0.6s
EMEL  Melilla           12.42 129  P      Pn    03 37 57.9 +2.8
      comp=Z,42nm,0.2s,SNR=7.9
EMEL                               S      Sn    03 40 10.2 -3.3
      comp=Z,22nm,0.4s,SNR=7.9
EMLI  Melilla           12.42 129  P      Pn    03 37 57.9 +2.8
      comp=Z,42nm,0.2s,SNR=7.9
CWF   Charnwood Fore    12.63  40  eP     Pn    03 37 57.3 -0.7
CWF                                IAmb   IAmb  03 37 58.3
      comp=Z,37nm,0.3s
CWF                                IAML         03 37 58.4
      comp=Z,33nm,0.3s
HYF   Humbligny         12.66  68  ePn    Pn    03 37 58.3 -0.1
HYF                                eSn    Sn    03 40 04.8  -15
HYF   Humbligny         12.66  68  P      Pn    03 37 58.3 -0.1
HYF                                S      Sn    03 40 04.8  -15
HYF   Humbligny         12.66  68  ePn    Pn    03 37 58.3 -0.1
HYF                                eSn    Sn    03 40 04.8  -15
HYF   Humbligny         12.66  68  P      Pn    03 37 58.3 -0.1
BGF   Bois d'Agland     12.71  71  ePn    Pn    03 37 59.0  0.0
BGF                                eSn    Sn    03 40 07.4  -13
      comp=Z,792nm,0.4s
BGF   Bois d'Agland     12.71  71  P      Pn    03 37 59.0  0.0
BGF                                S      Sn    03 40 07.4  -13
      comp=Z,396nm,0.4s
BGF   Bois d'Agland     12.71  71  ePn    Pn    03 37 59.0  0.0
BGF                                eSn    Sn    03 40 07.4  -13
BGF   Bois d'Agland     12.71  71  P      Pn    03 37 59.0  0.0
PYM   Petit Puy Mans    12.76  75  P      Pn    03 38 00.4 +0.6
CFON  Fontmartina       12.77  93  P      Pn    03 38 01.5 +1.4
      comp=Z,51nm,0.2s,SNR=120
CFON                               S      Sn    03 40 15.8 -6.5
      comp=Z,193nm,0.3s,SNR=8.8
CFON  Fontmartina       12.77  93  P      Pn    03 38 01.5 +1.4
      comp=Z,51nm,0.2s,SNR=120
AGO   Saint Agoulin     12.86  74  P      Pn    03 38 02.5 +1.4
LBWR  Ladybower, Pea    12.88  37  eP     Pn    03 38 00.6 -0.8
LBWR                               IAmb   IAmb  03 38 02.6
      comp=Z,45nm,0.7s
LBWR                               IAML         03 38 03.7
      comp=Z,46nm,0.5s
LBL   Lubilhac          12.91  77  P      Pn    03 38 03.2 +1.3
SJAF  Saint Jean de     12.93  90  P      Pn    03 38 03.7 +1.6
      comp=Z,2.4nm,0.2s,SNR=7.9
SJAF                               S      Sn    03 40 20.4 -5.7
      comp=Z,26nm,0.2s,SNR=7.9
SJAF  Saint Jean de     12.93  90  P      Pn    03 38 03.7 +1.6
      comp=Z,2.4nm,0.2s,SNR=7.9
SJAF                               S      Sn    03 40 20.4 -5.7
      comp=Z,26nm,0.2s,SNR=7.9
EJON  La Jonquera       12.94  90  P      Pn    03 38 04.2 +1.9
      comp=Z,5.3nm,0.3s,SNR=11
EJON                               S      Sn    03 40 21.0 -5.4
      comp=Z,45nm,0.4s,SNR=6.7
EJON  La Jonquera       12.94  90  P      Pn    03 38 04.2 +1.9
      comp=Z,5.3nm,0.3s,SNR=11
EJON                               S      Sn    03 40 21.0 -5.4
      comp=Z,45nm,0.4s,SNR=6.7
EIBI  Ibiza             12.96 106  P      Pn    03 38 05.7 +3.1
      comp=Z,27nm,0.3s,SNR=66
EIBI                               S      Sn    03 40 19.7 -7.1
      comp=Z,29nm,0.6s,SNR=9.6
EIBI  Ibiza             12.96 106  P      Pn    03 38 05.7 +3.1
      comp=Z,27nm,0.3s,SNR=66
AVF   Avril sur Loir    13.08  70  ePn    Pn    03 38 03.3 -0.8
AVF                                eSn    Sn    03 40 15.4  -14
      comp=Z,129nm,0.4s
AVF   Avril sur Loir    13.08  70  P      Pn    03 38 03.3 -0.8
AVF                                S      Sn    03 40 15.4  -14
      comp=Z,65nm,0.4s
AVF   Avril sur Loir    13.08  70  ePn    Pn    03 38 03.3 -0.8
AVF                                eSn    Sn    03 40 15.4  -14
AVF   Avril sur Loir    13.08  70  P      Pn    03 38 03.3 -0.8
CZD   Col de Zad        13.14 142  P      Pn    03 38 06.1 +0.8
CZD                                S      Sn    03 40 19.9  -12
CZD   Col de Zad        13.14 142  P      Pn    03 38 06.1 +0.8
CZD                                S      Sn    03 40 19.9  -12
KESW  Keswick, Cumbr    13.19  31  eP     Pn    03 38 04.6 -1.0
KESW                               IAML         03 38 05.7
      comp=Z,36nm,0.2s
SSF   Saint Saulge      13.22  69  ePn    Pn    03 38 05.0 -1.0
SSF                                eSn    Sn    03 40 19.2  -14
      comp=Z,73nm,0.2s
SSF   Saint Saulge      13.22  69  P      Pn    03 38 05.0 -1.0
SSF                                S      Sn    03 40 19.2  -14
      comp=Z,36nm,0.2s
SSF   Saint Saulge      13.22  69  ePn    Pn    03 38 05.0 -1.0
SSF                                eSn    Sn    03 40 19.2  -14
SMF   Signal de Mont    13.40  71  ePn    Pn    03 38 08.2 -0.3
SMF                                eSn    Sn    03 40 22.5  -15
      comp=Z,82nm,0.3s
SMF   Signal de Mont    13.40  71  P      Pn    03 38 08.2 -0.3
SMF                                S      Sn    03 40 22.5  -15
      comp=Z,41nm,0.3s
SMF   Signal de Mont    13.40  71  ePn    Pn    03 38 08.2 -0.3
SMF                                eSn    Sn    03 40 22.5  -15
SMF   Signal de Mont    13.40  71  P      Pn    03 38 08.2 -0.3
LASF  Ste Croix         13.40  82  ePn    Pn    03 38 08.5  0.0
LASF                               eSn    Sn    03 40 25.7  -12
      comp=Z,227nm,0.4s
LASF  Ste Croix         13.40  82  P      Pn    03 38 08.5  0.0
LASF                               S      Sn    03 40 25.7  -12
      comp=Z,113nm,0.4s
LASF  Ste Croix         13.40  82  ePn    Pn    03 38 08.5  0.0
LASF                               eSn    Sn    03 40 25.7  -12
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LASF  Ste Croix         13.40  82  P      Pn    03 38 08.5  0.0
TRBF  Trabuc cave       13.47  82  P      Pn    03 38 10.3 +0.9
LOR   Lormes            13.48  69  ePn    Pn    03 38 08.5 -1.1
      baz=255
LOR                                eSn    Sn    03 40 23.1  -16
      comp=Z,93nm,0.4s
LOR                                eR
      comp=Z,191nm,22.3s
LOR   Lormes            13.48  69  P      Pn    03 38 08.5 -1.1
LOR                                S      Sn    03 40 23.1  -16
      comp=Z,46nm,0.4s
LOR   Lormes            13.48  69  ePn    Pn    03 38 08.5 -1.1
LOR                                eSn    Sn    03 40 23.1  -16
LOR   Lormes            13.48  69  P      Pn    03 38 08.5 -1.1
MDT   Midelt            13.52 141  Pn     Pn    03 38 12.7 +2.4
      comp=Z,15nm,0.3s,baz=334,slow=13,SNR=230
MDT                                Sn     Sn    03 40 31.1  -10
      comp=Z,24nm,0.3s,baz=278,slow=3.9,SNR=16
MDT   Midelt            13.52 141  P      Pn    03 38 12.7 +2.4
MDT                                S      Sn    03 40 30.5  -10
MDT                                Sn     Sn    03 40 31.1  -10
WACR  West Acre         13.56  43  eP     Pn    03 38 11.3 +0.7
WACR  West Acre         13.56  43  eP     Pn    03 38 11.3 +0.7
OUK   Oukaimeden        13.68 154  P      Pn    03 38 14.7 +2.0
OUK                                S      Sn    03 40 29.1  -16
OUK   Oukaimeden        13.68 154  P      Pn    03 38 14.7 +2.0
OUK                                S      Sn    03 40 29.1  -16
ETOS  Mallorca          13.69 101  P      Pn    03 38 16.1 +3.6
      comp=Z,5.6nm,0.3s,SNR=24
ETOS                               S      Sn    03 40 35.2 -9.4
      comp=Z,9.7nm,0.8s,SNR=5.2
ESK   Eskdalemuir       13.72  29  ePn    Pn    03 38 11.3 -1.5
      comp=Z,27nm,0.6s
ESK                                eSn    Sn    03 40 32.4  -13
ESK   Eskdalemuir       13.72  29  eP     Pn    03 38 11.3 -1.5
ESK                                IAML         03 38 19.4
      comp=Z,20nm,0.6s
ESK   Eskdalemuir       13.72  29  eP     Pn    03 38 11.4 -1.5
ESK                                eSn    Sn    03 40 32.4  -13
EKA   Eskdalemuir Ar    13.75  29  Pn     Pn    03 38 12.1 -1.2
      baz=212,slow=13,SNR=156
EKA                                Sn     Sn    03 40 31.6  -14
      baz=218,slow=24,SNR=4.2
EDMD  Edmundbyers       13.81  32  eP     Pn    03 38 12.9 -1.1
EDMD                               IAML         03 38 15.5
      comp=Z,23nm,0.5s
EDMD  Edmundbyers       13.81  32  eP     Pn    03 38 12.9 -1.1
VIVF  Saint-Julien-l    13.93  79  ePn    Pn    03 38 16.0 +0.2
VIVF                               eSn    Sn    03 40 36.9  -14
      comp=Z,96nm,0.3s
VIVF  Saint-Julien-l    13.93  79  P      Pn    03 38 16.0 +0.2
VIVF                               S      Sn    03 40 36.9  -14
      comp=Z,48nm,0.3s
VIVF  Saint-Julien-l    13.93  79  ePn    Pn    03 38 16.0 +0.2
VIVF                               eSn    Sn    03 40 36.9  -14
VIVF  Saint-Julien-l    13.93  79  P      Pn    03 38 16.0 +0.2
BAIF  Baives            14.36  57  ePn    Pn    03 38 21.4 -0.2
BAIF                               eSn    Sn    03 40 46.2  -15
      comp=Z,69nm,0.3s
BAIF  Baives            14.36  57  P      Pn    03 38 21.4 -0.2
BAIF                               S      Sn    03 40 46.2  -15
      comp=Z,35nm,0.3s
BAIF  Baives            14.36  57  ePn    Pn    03 38 21.4 -0.2
BAIF                               eSn    Sn    03 40 46.2  -15
SFTF  Sexfontaines      14.42  65  ePn    Pn    03 38 21.5 -0.9
      baz=252
SFTF                               eSn    Sn    03 40 47.2  -15
      comp=Z,89nm,0.3s
SFTF  Sexfontaines      14.42  65  P      Pn    03 38 21.5 -0.9
SFTF                               S      Sn    03 40 47.2  -15
      comp=Z,89nm,0.3s
SFTF  Sexfontaines      14.42  65  ePn    Pn    03 38 21.5 -0.9
SFTF                               eSn    Sn    03 40 47.2  -15
MEZF  Maizieres J'vi    14.49  64  ePn    Pn    03 38 22.1 -1.2
      baz=264
MEZF                               eSn    Sn    03 40 47.1  -17
      comp=Z,68nm,0.4s
MEZF  Maizieres J'vi    14.49  64  P      Pn    03 38 22.1 -1.2
MEZF                               S      Sn    03 40 47.1  -17
      comp=Z,68nm,0.4s
MEZF  Maizieres J'vi    14.49  64  ePn    Pn    03 38 22.1 -1.2
MEZF                               eSn    Sn    03 40 47.1  -17
SMRF  Simiane la Rot    14.64  82  ePn    Pn    03 38 26.2 +0.6
SMRF                               eSn    Sn    03 40 55.5  -12
      comp=Z,44nm,0.4s
SMRF  Simiane la Rot    14.64  82  P      Pn    03 38 26.2 +0.6
SMRF                               S      Sn    03 40 55.5  -12
      comp=Z,44nm,0.4s
SMRF  Simiane la Rot    14.64  82  ePn    Pn    03 38 26.2 +0.6
SMRF                               eSn    Sn    03 40 55.5  -12
SMRF  Simiane la Rot    14.64  82  ePn    Pn    03 38 26.2 +0.6
EFAM  Famara            14.67 176  S      Sn    03 40 60.0 -8.5
      SNR=7.9
MAHO  Mahon             14.68  99  P      Pn    03 38 28.9 +3.0
MAHO                               S      Sn    03 40 59.2 -9.4
GIVF  Givet             14.75  58  ePn    Pn    03 38 26.9  0.0
GIVF                               eSn    Sn    03 40 54.3  -16
      comp=Z,180nm,0.5s
GIVF  Givet             14.75  58  P      Pn    03 38 26.9  0.0
GIVF                               S      Sn    03 40 54.3  -16
      comp=Z,90nm,0.5s
GIVF  Givet             14.75  58  ePn    Pn    03 38 26.9  0.0
GIVF                               eSn    Sn    03 40 54.3  -16
ORIF  Oris-en-Rattie    14.79  78  ePn    Pn    03 38 29.3 +1.8
ORIF                               eSn    Sn    03 40 58.9  -12
      comp=Z,36nm,0.6s
ORIF                               eR
      comp=Z,212nm,21.0s
ORIF  Oris-en-Rattie    14.79  78  P      Pn    03 38 29.3 +1.8
ORIF                               S      Sn    03 40 58.9  -12
      comp=Z,18nm,0.6s
ORIF  Oris-en-Rattie    14.79  78  ePn    Pn    03 38 29.3 +1.8
ORIF                               eSn    Sn    03 40 58.9  -12
ORIF  Oris-en-Rattie    14.79  78  ePn    Pn    03 38 29.3 +1.8
PAGF  Fort de Pagny     14.94  64  ePn    Pn    03 38 28.1 -1.3
      baz=245
PAGF                               eSn    Sn    03 41 00.8  -14
      comp=Z,98nm,0.6s
PAGF  Fort de Pagny     14.94  64  ePn    Pn    03 38 28.1 -1.3
PAGF                               eSn    Sn    03 41 00.8  -14
CABF  La Chapelle       14.94  72  ePn    Pn    03 38 29.2 -0.4
CABF                               eSn    Sn    03 41 00.0  -15
      comp=Z,75nm,0.6s
CABF  La Chapelle       14.94  72  P      Pn    03 38 29.2 -0.4
CABF                               S      Sn    03 41 00.0  -15
      comp=Z,37nm,0.6s
CABF  La Chapelle       14.94  72  ePn    Pn    03 38 29.2 -0.4
CABF                               eSn    Sn    03 41 00.0  -15
CFUE  Fuerteventura     15.13 177  S      Sn    03 41 08.6  -11
      SNR=7.9
HAU   Haudompre         15.26  67  ePn    Pn    03 38 32.4 -1.3
HAU                                eSn    Sn    03 41 05.2  -17
      comp=Z,45nm,0.3s
HAU   Haudompre         15.26  67  P      Pn    03 38 32.4 -1.3
HAU                                S      Sn    03 41 05.2  -17
      comp=Z,23nm,0.3s
HAU   Haudompre         15.26  67  ePn    Pn    03 38 32.4 -1.3
HAU                                eSn    Sn    03 41 05.2  -17
HAU   Haudompre         15.26  67  ePn    Pn    03 38 32.4 -1.3
TBT   Taburiente        15.30 191  S      Sn    03 41 03.6  -20
      SNR=7.9
CFTV  Fuerteventura     15.36 178  S      Sn    03 41 15.9 -9.4
      SNR=7.9
LPL   La Plagne         15.37  76  ePn    Pn    03 38 38.5 +3.1
LPL   La Plagne         15.37  76  P      Pn    03 38 38.5 +3.1
LPL   La Plagne         15.37  76  ePn    Pn    03 38 38.5 +3.1
LPG   La Plagne         15.38  76  eP     P     03 38 39.1 -1.2
LPG   La Plagne         15.38  76  P      P     03 38 39.1 -1.2
LPG   La Plagne         15.38  76  eP     P     03 38 39.1 -1.2
LPG   La Plagne         15.38  76  P      P     03 38 39.1 -1.2
LMR   La Mourre         15.40  84  ePn    Pn    03 38 38.3 +2.7
LMR                                eSn    Sn    03 41 14.6  -12
      comp=Z,33nm,0.3s
LMR   La Mourre         15.40  84  P      Pn    03 38 38.3 +2.7
LMR                                S      Sn    03 41 14.6  -12
      comp=Z,16nm,0.3s
LMR   La Mourre         15.40  84  ePn    Pn    03 38 38.3 +2.7
LMR                                eSn    Sn    03 41 14.6  -12
MBDF  Montbardon        15.43  79  ePn    Pn    03 38 39.1 +2.9
MBDF                               eSn    Sn    03 41 16.4  -11
      comp=Z,38nm,0.6s
MBDF  Montbardon        15.43  79  P      Pn    03 38 39.1 +2.9
MBDF                               S      Sn    03 41 16.4  -11
      comp=Z,19nm,0.6s
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MBDF  Montbardon        15.43  79  ePn    Pn    03 38 39.1 +2.9
MBDF                               eSn    Sn    03 41 16.4  -11
MBDF  Montbardon        15.43  79  P      Pn    03 38 39.1 +2.9
FRF   La Foret Royal    15.47  83  ePn    Pn    03 38 37.6 +1.1
FRF                                eSn    Sn    03 41 15.6  -12
      comp=Z,66nm,0.5s
FRF   La Foret Royal    15.47  83  P      Pn    03 38 37.6 +1.1
FRF                                S      Sn    03 41 15.6  -12
      comp=Z,33nm,0.5s
FRF   La Foret Royal    15.47  83  ePn    Pn    03 38 37.6 +1.1
FRF                                eSn    Sn    03 41 15.6  -12
FRF   La Foret Royal    15.47  83  ePn    Pn    03 38 37.6 +1.1
HINF  Hinteralfeld      15.57  67  ePn    Pn    03 38 36.0 -1.8
HINF                               eSn    Sn    03 41 12.8  -17
      comp=Z,40nm,0.4s
HINF  Hinteralfeld      15.57  67  P      Pn    03 38 36.0 -1.8
HINF                               S      Sn    03 41 12.8  -17
      comp=Z,20nm,0.4s
HINF  Hinteralfeld      15.57  67  ePn    Pn    03 38 36.0 -1.8
HINF                               eSn    Sn    03 41 12.8  -17
HINF  Hinteralfeld      15.57  67  ePn    Pn    03 38 36.0 -1.8
HGN   Heimansgroeve     15.63  56  eP     Pn    03 38 38.3 -0.3
      comp=Z,57nm,0.3s
HGN                                ePg          03 41 14.5
HGN                                eSg    Sn    03 41 24.3 -7.3
CDF   Champ du Feu      15.93  65  ePn    Pn    03 38 41.1 -1.4
CDF                                eSn    Sn    03 41 20.4  -19
      comp=Z,39nm,0.5s
CDF   Champ du Feu      15.93  65  P      Pn    03 38 41.1 -1.4
CDF                                S      Sn    03 41 20.4  -19
      comp=Z,20nm,0.5s
CDF   Champ du Feu      15.93  65  ePn    Pn    03 38 41.1 -1.4
CDF                                eSn    Sn    03 41 20.4  -19
CDF   Champ du Feu      15.93  65  ePn    Pn    03 38 41.1 -1.4
SBF   Sospel            15.99  82  ePn    Pn    03 38 44.9 +1.5
SBF                                eSn    Sn    03 41 31.6 -9.1
      comp=Z,45nm,0.4s
SBF   Sospel            15.99  82  P      Pn    03 38 44.9 +1.5
SBF                                S      Sn    03 41 31.6 -9.1
      comp=Z,22nm,0.4s
SBF   Sospel            15.99  82  ePn    Pn    03 38 44.9 +1.5
SBF                                eSn    Sn    03 41 31.6 -9.1
SBF   Sospel            15.99  82  P      Pn    03 38 44.9 +1.5
WTSB  Winterswijk       16.55  53  eP     P     03 38 52.4 -0.5
      comp=Z,56nm,1.2s
WTSB                               ePg          03 41 39.5
      comp=Z,15nm,0.4s
BFO   Black Forest      16.61  66  ePn    Pn    03 38 50.5 -0.8
      comp=Z,0.8nm,0.5s
BFO                                eSn    Sn    03 41 38.6  -17
BFO   Black Forest      16.61  66  ePn    Pn    03 38 50.5 -0.8
      comp=Z,0.8nm,0.5s
BFO                                eSn    Sn    03 41 38.6  -17
PGF   Pioggiola         17.34  86  ePn    P     03 39 05.1 +3.2
PGF                                eSn    Sn    03 42 01.0  -13
      comp=Z,29nm,0.4s
PGF   Pioggiola         17.34  86  P      P     03 39 05.1 +3.2
PGF                                S      Sn    03 42 01.0  -13
      comp=Z,15nm,0.4s
PGF   Pioggiola         17.34  86  ePn    P     03 39 05.1 +3.2
PGF                                eSn    Sn    03 42 01.0  -13
DAVOX Davos/Dischmat    17.55  72  P      P     03 39 06.4 +2.1
      comp=Z,2.6nm,0.3s,baz=291,slow=13,SNR=33
DAVOX                              S      Sn    03 42 03.8  -15
      comp=Z,0.5nm,0.3s,baz=274,slow=17,SNR=3.1
DAVOX                              LR     LR    03 45 16.4
      comp=Z,91nm,21.9s,baz=270,slow=35
DAVA  Damuels           17.57  70  ePn    P     03 39 05.5 +1.1
      comp=Z,5.1nm,0.4s,SNR=11
DAVA                               eSn    Sn    03 42 05.9  -13
      comp=Z,11nm,0.6s
FETA  Feichten          18.14  71  eP     P     03 39 14.8 +4.0
      comp=Z,5.0nm,0.7s,SNR=10
FETA                               eSn    Sn    03 42 21.1  -12
      comp=Z,0.6nm,0.2s
RETA  Reutte            18.17  69  epP    P     03 39 13.7 +2.7
      comp=Z,2.4nm,0.4s,SNR=5.6
RETA                               eSn    Sn    03 42 19.1  -14
      comp=Z,3.3nm,0.4s
MOTA  Moosalm           18.40  70  epP    P     03 39 17.7 +4.1
      comp=Z,4.6nm,0.4s,SNR=6.7
MOTA                               eSn    Sn    03 42 27.8  -11
      comp=Z,3.7nm,0.4s
WATA  Walderalm         18.72  70  eP     Pn    03 39 22.6 +5.1
      comp=Z,1.5nm,0.2s
WATA                               eSn    Sn    03 42 34.6  -12
      comp=Z,4.2nm,0.6s
WTTA  Wattenberg        18.76  70  eP     Pn    03 39 23.3 +5.3
      comp=Z,7.1nm,0.3s,SNR=6.6
WTTA                               Sn     Sn    03 42 35.2  -13
      comp=Z,2.8nm,0.4s
ABTA  Abfaltersbach     19.36  72  eP     Pn    03 39 29.6 +4.5
      comp=Z,7.1nm,0.8s
ABTA                               eSn    Sn    03 42 51.2  -11
      comp=Z,4.6nm,0.5s
NKC   Novy Kostel       19.55  61  eP     Pn    03 39 33.0 +5.7
NKC                                eS     Sn    03 42 54.0  -13
KBA   Koelnbreinsper    19.93  71  eP     Pn    03 39 35.8 +3.8
      comp=Z,0.5nm,0.1s
KBA                                S      S     03 43 01.4  -13
      comp=Z,6.1nm,0.6s
CLL   Collm             20.08  58  e(P)   Pn    03 39 35.0 +1.4
      comp=Z,6.0nm,1.5s
CLL                                e            03 39 37.0
CLL                                e            03 39 41.0
CLL                                eS     Sn    03 43 20.0 +0.6
CLL                                Lm     MLR   06 11 00.0
      comp=Z,100nm,21.0s
KEST  Kesra             20.13 105  P      Pn    03 39 35.9 +1.5
      comp=Z,9.1nm,0.7s,baz=223,slow=2.6,SNR=16
KEST                               LR     LR    03 46 45.1
      comp=Z,133nm,20.5s,baz=277,slow=35
KHC   Kasperske Hory    20.15  65  eP     Pn    03 39 40.3 +5.8
KHC                                ex     x     03 39 49.1
KHC                                eS     S     03 43 04.3  -14
GERES GERESS Array B    20.21  66  P      Pn    03 39 35.6 +0.3
      comp=Z,2.3nm,0.4s,baz=267,slow=10,SNR=15
GERES                              S      S     03 43 06.0  -14
      comp=Z,0.6nm,0.3s,baz=283,slow=23,SNR=6.1
GERES                              LR     LR    03 47 10.9
      comp=Z,51nm,19.8s,baz=276,slow=36
JAVS  Javornik          20.48  74  eP     Pn    03 39 38.2 -0.3
JAVS  Javornik          20.48  74  eP     Pn    03 39 38.2 -0.2
MOA   Molln             20.55  68  ePn    Pn    03 39 39.2 +0.1
      comp=Z,0.2nm,0.2s
MOA                                eS     S     03 43 15.3  -11
      comp=Z,1.3nm,0.2s
BRG   Berggiesshubel    20.59  60  eP     Pn    03 39 42.9 +3.3
      comp=Z,3.9nm,1.0s
BRG                                S      S     03 43 29.0 +1.6
      comp=N,55nm,14.2s
      comp=E,127nm,19.2s
      comp=Z,214nm,14.5s
OBKA  Obir              20.77  72  epP    P     03 39 42.2 +2.8
      comp=Z,6.1nm,0.6s
OBKA                               S      S     03 43 28.3 -3.0
      comp=Z,8.1nm,1.2s
VISS  Visnje            21.03  74  i P    P     03 39 44.5 +2.4
SOKA  Soboth            21.10  72  ePn    P     03 39 44.7 +1.7
      comp=Z,1.4nm,0.5s
SOKA                               S      S     03 43 34.4 -3.3
      comp=Z,0.9nm,0.5s
SOKA  Soboth            21.10  72  Pn     P     03 39 44.7 +1.7
      comp=Z,1.4nm,0.5s
SOKA                               S      S     03 43 34.4 -3.3
      comp=Z,0.9nm,0.5s
PERS  Pernice           21.16  72  eP     P     03 39 45.4 +1.8
PERS  Pernice           21.16  72  eP     P     03 39 45.4 +1.8
BOJS  Bojanci           21.34  75  eP     P     03 39 50.4 +4.9
ARSA  Arzberg           21.41  70  epP    P     03 39 48.2 +1.9
      comp=Z,4.0nm,0.7s
ARSA                               eS     S     03 43 39.8 -3.9
      comp=Z,1.6nm,0.5s
CONA  Conrad Observa    21.62  68  eP     P     03 39 52.0 +3.4
      comp=Z,2.5nm,0.6s
CONA                               S      S     03 43 42.5 -5.5
      comp=Z,1.4nm,0.4s
UPC   Upice             21.85  61  eP     P     03 39 54.9 +4.0
UPC                                ex     x     03 40 02.9
UPC                                AMS    AMS   03 48 30.0
      comp=Z,100nm,14.5s
KRUC  Moravsky          22.00  65  eP     P     03 39 56.8 +4.3
VRAC  Vranov            22.14  65  P      P     03 39 57.1 +3.2
      comp=Z,2.1nm,0.4s,baz=265,slow=11,SNR=4.7
VRAC                               LR     LR    03 47 26.4
      comp=Z,63nm,21.6s,baz=267,slow=34
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VRAC	Vranov	22.14	65	*e*P	P	03 39 57.2	+3.2
BSD	Bornholm Skovb	22.17	49	*i* P	P	03 40 10.4	+16
MODS	Modra-Piesok	22.57	67	*e*P	P	03 39 58.9	+0.2
VAE	Valguarnera	22.92	96	LR	LR	03 47 53.4	
	comp=Z,115nm,18.1s,baz=336,slow=34						
NB2	NORSAR Subarra	23.17	33	P	P	03 40 05.3	+0.5
	comp=Z,6.2nm,0.9s,baz=232,slow=9.3						
NOA	NORSAR Array B	23.17	33	P	P	03 40 06.3	+1.5
	comp=Z,0.4nm,0.6s,baz=230,slow=10,SNR=4.7						
NOA				LR	LR	03 49 45.0	
	comp=Z,88nm,18.3s,baz=230,slow=38						
VYHS	Vyhne	23.61	67	*e*P	P	03 40 11.1	+1.8
HFS	Hagfors	23.68	36	P	P	03 40 11.6	+1.7
	comp=Z,1.3nm,0.5s,baz=224,slow=10.0,SNR=9.9						
HFS				LR	LR	03 48 49.0	
	comp=Z,55nm,21.5s,baz=239,slow=35						
BBLS	Lazići	24.53	78	*e*P	P	03 40 20.1	+2.1
PDG	Podgorica	24.75	81	⇓*i*P	P	03 40 23.3	+3.4
IVAS	Ivanjica	25.12	78	*e*P	P	03 40 26.1	+2.8
BZS	Buzias	25.76	73	⇑*i*P	P	03 40 30.9	+1.8
SELS	Selova	25.88	79	*e*P	P	03 40 30.7	+0.4
MDVR	Moldovita	25.97	75	⇑*i*P	P	03 40 32.8	+1.7
HERR	Herculane	26.44	75	⇓*i*P	P	03 40 36.9	+1.6
BARS	Barje	26.48	79	*e*P	P	03 40 37.2	+1.6
BURAR	Bucovina Array	27.94	68	⇓*i*P	P	03 40 51.5	+2.7
MLR	Muntele Rosu	28.77	72	P	P	03 40 58.1	+1.8
	comp=Z,1.6nm,0.6s,baz=199,slow=11,SNR=3.8						
MLR				LR	LR	03 53 30.5	
	comp=Z,56nm,18.5s,baz=262,slow=38						
MLR	Muntele Rosu	28.77	72	⇑*i*P	P	03 40 57.9	+1.6
FINES	FINESS Array B	29.75	39	P	P	03 41 06.3	+1.7
	comp=Z,0.7nm,0.5s,baz=239,slow=6.6,SNR=8.8						
FINES				LR	LR	03 53 04.8	
	comp=Z,54nm,20.5s,baz=235,slow=36						
SFJD	Kangerlussuaq	30.15	333	LR	LR	03 50 31.2	
	comp=Z,56nm,18.1s,baz=152,slow=31						
AKASG	Malin Array Be	30.26	61	P	P	03 41 09.8	+0.6
	comp=Z,1.5nm,0.6s,baz=281,slow=8.2,SNR=3.0						
ARCES	ARCESS Array B	32.86	25	P	P	03 41 32.6	+0.7
	comp=Z,1.1nm,0.7s,baz=232,slow=8.4,SNR=14						
TORD	Torodi Ar. Bea	33.64	150	P	P	03 41 39.4	+0.2
	comp=Z,1.3nm,0.5s,baz=333,slow=8.3						
BRTR	Keskin Array B	35.90	79	P	P	03 42 01.1	+2.4
	comp=Z,4.9nm,0.7s,baz=283,slow=6.1,SNR=32						
BRTR				LR	LR	03 57 46.7	
	comp=Z,19nm,19.4s,baz=262,slow=38						
KLMR	Klimovskoe	36.05	42	*e*P	P	03 42 05.1	+5.5
KLMR				AMP		03 42 14.1	
	comp=Z,11nm,1.3s						
KBZ	Khabaz	40.88	69	P	P	03 42 42.9	+2.6
	comp=Z,12nm,0.8s,baz=285,slow=6.7,SNR=19						
ASF	Jabal al Asfar	41.70	88	P	P	03 42 48.9	+1.6
	comp=Z,3.6nm,0.9s,baz=288,slow=3.2,SNR=4.6						
AKTO	Aktyubinsk	48.12	55	LR	LR	04 05 58.5	
	comp=Z,54nm,18.1s,baz=298,slow=38						
TKL	Tuckaleechee C	52.33	286	LR	LR	04 04 09.2	
	comp=Z,20nm,20.2s,baz=353,slow=34						
BVAR	Borovoye Array	54.07	48	P	P	03 44 24.6	+1.8
	comp=Z,0.4nm,0.4s,baz=308,slow=10,SNR=3.1						
BVAR				LR	LR	04 09 03.0	
	comp=Z,38nm,18.2s,baz=303,slow=38						
CCM	Cathedral Cave	56.18	292	*e*P	P	03 44 37.2	-1.0
	comp=Z,6.0nm,0.6s						
INK	Inuvik	59.30	338	*e*P	P	03 45 00.5	+0.7
	comp=Z,1.2nm,0.9s						
KURK	Kurchatov	59.64	47	P	P	03 45 03.1	+0.8
KURBB	Kurchatov Arra	59.64	47	P	P	03 45 03.1	+0.8
	comp=Z,0.7nm,0.6s,baz=310,slow=6.6,SNR=8.9						
ZALV	Zalesovo Beam	60.97	42	P	P	03 45 12.5	+1.1
	comp=Z,1.0nm,0.5s,baz=323,slow=9.6,SNR=4.3						
MKAR	Makanchi Array	63.88	49	P	P	03 45 31.9	+0.9
	comp=Z,0.8nm,0.6s,baz=307,slow=5.5,SNR=11						
MKAR				LR	LR	04 14 07.4	
	comp=Z,46nm,19.9s,baz=246,slow=37						
PDAR	Pinedale Array	65.06	306	P	P	03 45 37.2	-1.9
	comp=Z,0.4nm,0.6s,baz=48,slow=6.4,SNR=6.5						
PDAR				LR	LR	04 12 29.6	
	comp=Z,26nm,19.5s,baz=102,slow=35						
ILAR	Eielson Array	65.50	340	P	P	03 45 40.7	-0.6
	comp=Z,0.2nm,0.6s,baz=28,slow=5.2,SNR=3.5						
DUG	Dugway, Tooele	68.58	305	*e*P	P	03 46 00.6	-0.8
	comp=Z,0.8nm,0.6s						
JTS	JuntasAbangare	68.68	264	LR	LR	04 10 54.9	
	comp=Z,30nm,20.9s,baz=172,slow=32						
TXAR	Lajitas Array	69.65	291	P	P	03 46 07.7	-0.5
	comp=Z,0.4nm,0.6s,baz=66,slow=7.4,SNR=6.3						
TXAR				LR	LR	04 13 57.0	
	comp=Z,40nm,21.0s,baz=0.0,slow=34						
SONM	Songino Array	75.08	37	P	P	03 46 40.4	+0.1
	comp=Z,1.0nm,0.6s,baz=284,slow=7.1,SNR=5.5						
SONM				LR	LR	04 21 45.1	
	comp=Z,48nm,18.2s,baz=83,slow=37						
LPIG	La Paz	77.55	291	LR	LR	04 19 38.6	
	comp=Z,50nm,18.8s,baz=254,slow=35						
BOSA	Boshof	80.83	145	P	P	03 47 12.8	+0.5
	comp=Z,1.0nm,0.5s,baz=315,slow=4.3,SNR=3.9						
BOSA				LR	LR	04 24 41.3	
	comp=Z,56nm,18.1s,baz=207,slow=37						
CMAR	Chiang Mai Arr	93.38	61	LR	LR	04 34 28.7	
	comp=Z,16nm,18.6s,baz=235,slow=38						
WRA	Warramunga Arr	144.91	57	PKPbc	PKPab	03 54 35.2	+0.2
	comp=Z,1.5nm,0.5s,baz=330,slow=3.2,SNR=24						
VNDA	Vanda	146.13	179	PKPbc	PKPdf	03 54 36.6	+0.4
	comp=Z,0.1nm,0.4s,baz=242,slow=15,SNR=2.8						
ASAR	Alice Springs	147.37	62	PKPbc	PKPbc	03 54 42.8	+0.3
	comp=Z,5.9nm,0.6s,baz=322,slow=2.6,SNR=58						

MEX 30 03:53:19.0±0.6**, 18°.40N×102°.59W, h111**^{km}±12^{km}**, MD3.7, Michoacan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MMIG	Aquila	0.73	261	*e*P	Pn	03 53 36.6	-1.1
MMIG				*e*S	Sn	03 53 50.2	-1.7
ZIIG	Zihuatanejo	1.33	126	*e*P	Pn	03 53 43.0	-0.8
ZIIG				*e*S	Sn	03 54 00.7	-2.1
ARIG	Puente Sto Nin	2.13	93	*e*P	Pn	03 53 52.5	-1.2
ARIG				*i* S	Sn	03 54 18.8	-1.5
CJM	Chamela	2.57	296	*e*P	Pn	03 53 57.4	-1.9
CJM				*i* S	Sn	03 54 28.6	-1.8

*IDC **30** 03:59:35.1±1.2, 0°.22S×123°.43E, h0^{km}, mb3.4/4, mb1 3.6/4, mb1mx3.4/50, mbtmp3.5/4, Error ellipse: s-maj=211.9km s-min=21.0km az=62.0*

*ISCJB **30** 03:59:46.3±0.5, 0°.40S±0°.04×123°.98E±0°.03, h100^{km}, mb3.3/4, Error ellipse: s-maj=5.8km s-min=4.4km az=0.2*

*DJA **30** 03:59:47.6±0.3, 0°S±3°×12°4E±°, h80^{km}±8^{km}, M4.3/13, mB5.0/1, mb4.6/2, MLv4.1/13, Mw(mB)4.3/1*

ISC 30 03:59:46.9±0.9**, 0°.35S**±0°.05×**123°.99E**±0°.04**, h100**^{km}**, n16, σ1^{s}.56**/27**, mb3.3**/4**, Minahassa Peninsula, Sulawesi**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KMSI	Cibinong	0.92	360	P	Pn	04 00 07.2	+0.8
KMSI				S	Sn	04 00 21.3	+0.2
LUWI	Luwuk	1.40	240	P	Pn	04 00 12.2	+0.3
LUWI				S	Sn	04 00 29.5	-1.3
MRSI	Marisa	2.21	292	P	Pn	04 00 21.8	-0.3
MRSI				S	Sn	04 00 47.0	-2.1
APSI	Ampana	2.41	257	P	Pn	04 00 25.4	+0.7
SANI	Sanana	2.62	130	P	Pn	04 00 27.4	-0.2
SANI				S	Sn	04 00 55.7	-3.1
LBMI	Labuha	3.52	95	P	Pn	04 00 40.3	+0.6
LBMI				S	Sn	04 01 20.3	-0.2
KDI	Kendari	3.84	201	P	Pn	04 00 43.8	-0.1
KDI				S	Sn	04 01 27.9	-0.2
MPSI	Mapaga	4.15	279	P	Pn	04 00 50.4	+2.3
NLAI	Namlea	4.23	133	P	Pn	04 00 49.5	+0.3
NLAI				S	Sn	04 01 37.9	+0.3
TTSI	Tana Toraja	4.95	237	P	Pn	04 01 00.2	+1.2
TTSI				S	Sn	04 01 53.0	-2.1
SPSI	Sidrap Palu	5.54	230	P	Pn	04 01 08.5	+1.6
SPSI				S	Sn	04 02 09.2	-0.1
BKSI	Bulukumba	6.27	218	P	Pn	04 01 18.3	+1.4
BKSI				S	Sn	04 02 25.3	-1.8
WRA	Warramunga Arr	21.95	153	P	P	04 04 33.9	+1.3
	0.7nm,0.8s,baz=328,slow=11,SNR=5.3						
ASAR	Alice Springs	25.10	158	P	P	04 05 05.8	+3.4
	0.5nm,0.9s,baz=337,slow=11,SNR=3.2						
ASAR				PcP	PcP	04 08 35.3	+0.8
	0.1nm,0.3s,baz=352,slow=2.0,SNR=4.4						
MKAR	Makanchi Array	59.43	328	P	P	04 09 37.3	-1.8
	0.4nm,0.4s,baz=124,slow=8.4,SNR=10						
KURBB	Kurchatov Arra	63.76	330	P	P	04 10 06.0	-2.1
	0.4nm,0.6s,baz=136,slow=6.2,SNR=4.8						

*THE **30** 04:31:41.9, 37°.85N×26°.67E, h0^{km}±1^{km}, ML2.5/3, Error ellipse: s-maj=2.8km s-min=0.8km az=234.0*

*CSEM **30** 04:31:42.1±0.2, 37°.85N×26°.67E, h2^{km}, ML2.5, Error ellipse: s-maj=4.1km s-min=2.5km az=63.0*

*DDA **30** 04:31:42.1, 37°.88N×26°.74E, h7^{km}, Ml2.8*

*ISK **30** 04:31:42.4, 37°.91N×26°.73E, h5^{km}, ML2.8/12*

ISC 30 04:31:41.8±0.9**, 37°.87N**±0°.02×**26°.69E**±0°.02**, h12**^{km}±7^{km}**, n64, σ0^{s}.64**/98**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMG	Samos	0.20	143	P	Pg	04 31 46.2	+0.1
SMG				S	Sg	04 31 49.0	-0.1
SMG	Samos	0.20	143	P	Pg	04 31 46.2	+0.1
SMG				S	Sg	04 31 49.0	-0.1
DGB	˜zmir	0.24	40	*i* P	Pg	04 31 46.4	-0.4
DGB				*i* S	Sg	04 31 50.0	-0.2
URLA	Izmir	0.50	352	PG	Pg	04 31 51.6	+0.1
URLA				SG	Sg	04 31 58.8	+0.7
URLA	Izmir	0.50	352	*i* P	Pg	04 31 51.1	-0.4
URLA				*i* S	Sb	04 31 59.3	-0.4
URLA	Izmir	0.50	352	P	Pg	04 31 51.1	-0.4
URLA	Izmir	0.50	352	*e*Pg	Pg	04 31 51.6	+0.1
URLA				*e*Sg	Sg	04 31 58.8	+0.7
URLA				S	Sb	04 31 59.3	-0.4
BLCB	Balcova	0.59	28	PG	Pg	04 31 53.2	0.0
BLCB				SG	Sg	04 32 01.2	+0.2
BLCB	Balcova	0.59	28	*e*Pg	Pg	04 31 53.2	0.0
BLCB				*e*Sg	Sg	04 32 01.2	+0.2
CHOS	Chios island	0.72	316	PG	Pb	04 31 56.7	+0.4
CHOS				SG	Sb	04 32 07.1	+0.9
CHOS	Chios island	0.72	316	P	Pb	04 31 55.8	-0.5
CHOS				S	Sb	04 32 06.8	+0.6
CHOS	Chios island	0.72	316	P	Pb	04 31 55.8	-0.5
CHOS	Chios island	0.72	316	*e*Pg	Pb	04 31 56.7	+0.4
CHOS				S	Sb	04 32 06.8	+0.6
CHOS				*e*Sg	Sb	04 32 07.1	+0.9
KRBN	Karaburun	0.73	352	PG	Pb	04 31 56.3	-0.2
KRBN	Karaburun	0.73	352	*e*Pg	Pb	04 31 56.3	-0.2
FOCM	Foˆ§a	0.84	2	PG	Pb	04 31 58.3	-0.1
FOCM	Foˆ§a	0.84	2	*e*Pg	Pb	04 31 58.3	-0.1
BODT	Bodrum	0.95	148	PG	Pn	04 32 01.4	+0.5
BODT	Bodrum	0.95	148	P	Pg	04 31 59.6	-0.4
BODT				S	Sn	04 32 13.8	-0.6
BODT	Bodrum	0.95	148	P	Pg	04 31 59.6	-0.4
BODT	Bodrum	0.95	148	*e*Pg	Pn	04 32 01.4	+0.5
BODT				S	Sn	04 32 13.8	-0.6
AYDB	Zeytinkoy-Aydi	0.96	85	PG	Pg	04 32 00.4	+0.2
AYDB	Zeytinkoy-Aydi	0.96	85	*e*Pg	Pg	04 32 00.4	+0.2
AYDN	Tasoluk	0.97	102	*i* P	Pb	04 32 00.6	+0.1
AYDN				*i* S	Sg	04 32 12.8	-0.3
AYDN	Tasoluk	0.97	102	P	Pb	04 32 00.6	+0.1
AYDN				S	Sg	04 32 12.8	-0.3
BDRM	Kayabasi	1.00	143	*i* P	Pn	04 32 01.8	+0.1
BDRM				*i* S	Sb	04 32 14.5	+0.2
BDRM	Kayabasi	1.00	143	P	Pn	04 32 01.8	+0.1
BDRM				S	Sb	04 32 14.5	+0.2
MLSB	Milas	1.04	123	PG	Pn	04 32 02.6	+0.4
MLSB	Milas	1.04	123	*e*Pg	Pn	04 32 02.6	+0.4
AMGA	Amorgos Island	1.21	212	P	Pg	04 32 04.8	-0.3
AMGA	Amorgos Island	1.21	212	P	Pg	04 32 04.8	-0.3
APE	Apeiranthos	1.22	229	P	Pn	04 32 04.1	-0.6
APE	Apeiranthos	1.22	229	P	Pn	04 32 04.1	-0.6
AKHS	Akhisar	1.34	41	*i* P	Pb	04 32 07.2	+0.3
AKHS				*i* S	Sg	04 32 25.1	+0.1
AKHS	Akhisar	1.34	41	P	Pb	04 32 07.2	+0.3
AKHS				S	Sg	04 32 25.1	+0.1
DAT	Datca	1.34	148	PN	Pg	04 32 08.6	+1.1
DAT	Datca	1.34	148	*e*Pn	Pg	04 32 08.6	+1.1
PRK	Paraskevi	1.41	347	P	Pg	04 32 08.6	-0.3
PRK				S	Sg	04 32 28.8	+1.5
PRK	Paraskevi	1.41	347	P	Pg	04 32 08.6	-0.3
PRK				S	Sg	04 32 28.8	+1.5
YER	Yerkesik	1.47	120	PN	Pg	04 32 09.9	0.0
YER	Yerkesik	1.47	120	*e*Pn	Pg	04 32 09.9	0.0
SIGR	SIGRI	1.49	334	PN	Pg	04 32 10.2	-0.2
SIGR	SIGRI	1.49	334	P	Pn	04 32 08.2	-0.2
SIGR	SIGRI	1.49	334	P	Pn	04 32 08.2	-0.2
SIGR	SIGRI	1.49	334	*e*Pn	Pg	04 32 10.2	-0.2
MANT	Manisa	1.60	67	*i* P	Pg	04 32 12.5	0.0
MANT				*i* S	Sb	04 32 31.8	+0.1
MANT	Manisa	1.60	67	P	Pg	04 32 12.5	0.0
MANT				S	Sb	04 32 31.8	+0.1
KULA	Kula-Manisa	1.68	67	PN	Pb	04 32 12.5	-0.3
KULA	Kula-Manisa	1.68	67	*e*Pn	Pb	04 32 12.5	-0.3
STEP	BALIKESIR_Sava	1.71	28	*i* P	Pb	04 32 12.9	-0.3
STEP				*i* S	Sg	04 32 37.4	+0.7
STEP	BALIKESIR_Sava	1.71	28	P	Pb	04 32 12.9	-0.3
STEP				S	Sg	04 32 37.4	+0.7
TURN	Turunc	1.82	122	PN	Pn	04 32 12.7	-0.2
TURN	Turunc	1.82	122	*e*Pn	Pn	04 32 12.7	-0.2
BAYC	CANAKKALE_Bayr	1.87	357	*i* P	Pn	04 32 12.0	-1.7
BAYC				*i* S	Sg	04 32 42.1	+0.1
BAYC	CANAKKALE_Bayr	1.87	357	P	Pn	04 32 12.0	-1.7
BAYC				S	Sg	04 32 42.1	+0.1
BALY	Balya	2.01	21	*i* P	Pb	04 32 18.8	+0.6
BALY				*i* S	Sg	04 32 46.4	+0.1
BALY	Balya	2.01	21	P	Pb	04 32 18.8	+0.6
BALY				S	Sg	04 32 46.4	+0.1
BOZC	Bozcaada	2.03	346	PN	Pb	04 32 17.7	-0.9
BOZC	Bozcaada	2.03	346	*i* P	Pb	04 32 17.8	-0.9
BOZC				*i* S	Sg	04 32 47.6	+0.5
BOZC	Bozcaada	2.03	346	*e*Pn	Pb	04 32 17.7	-0.9
DURS	Dursunbey	2.22	38	*i* P	Pb	04 32 22.1	+0.1
DURS				*i* S	Sg	04 32 51.8	-1.5
DURS	Dursunbey	2.22	38	P	Pb	04 32 22.1	+0.1
DURS				S	Sg	04 32 51.8	-1.5
GELI	Tayfur-Gelibol	2.53	356	PN	Pn	04 32 24.7	+2.0
GELI	Tayfur-Gelibol	2.53	356	*e*Pn	Pn	04 32 24.7	+2.0

*IDC **30** 04:49:45.9±1.6, 2°.33N×90°.27E, h0^{km}, mb3.8/5, mb1 4.0/8, mb1mx3.7/65, mbtmp3.9/8, ML4.0/3, MS3.1/3, Ms1 3.1/3, ms1mx2.6/61, Error ellipse: s-maj=41.5km s-min=23.6km az=37.0*

*DJA **30** 04:49:54.9±1.1, 2°N±11°×9°1E±°, h10^{km}, M4.7/6, mB4.9/2, mb4.7/6, MLv4.7/6, Mw(mB)4.2/2*

ISC 30 04:49:50.2±1.1**, 2°.3N**±0°.1×**90°.57E**±0°.07**, h35**^{km}**, n23, σ2^{s}.52**/19**, mb3.7**/5**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSI	Banda Aceh	5.70	56	P	Pn	04 51 12.7	+0.3
	29nm,0.5s,0.7nm						
SNSI	Sinabang, Aceh	5.75	89	P	Pn	04 51 12.5	-0.7
	72nm,0.7s,0.7nm						
SNSI				S	Sn	04 52 14.6	-3.4
	72nm,0.7s,0.7nm						
MLSI	Meulaboh, Aceh	6.15	71	P	Pn	04 51 20.9	+2.3
	108nm,0.8s,0.5nm						
MLSI				S	Sn	04 52 25.0	-2.8
	108nm,0.8s,0.5nm						
TPTI		6.67	81	P	Pn	04 51 26.4	+0.6
	29nm,0.6s,1µm0.2nm						
TPTI				S	Sn	04 52 38.0	-2.7
	29nm,0.6s,1µm0.2nm						
GSI	Gunungsitoli	7.07	98	P	Pn	04 51 29.1	-2.2
	30nm,0.6s,0.2nm						
KCSI	Kotacane, Aceh	7.30	80	P	Pn	04 51 36.8	+2.4
KCSI				S	Sn	04 52 52.4	-3.7
PSI	Prapat	8.36	86	Pn	Pn	04 51 53.9	+4.7
	0.8nm,0.3s,baz=180,slow=8.2,SNR=3.9						
PALK	Pallekele	11.01	297	Pn	Pn	04 52 22.3	-3.0
	0.9nm,0.3s,baz=116,slow=8.7,SNR=3.7						
PALK				Sn	Sn	04 54 12.7	-15
	3.3nm,0.3s,baz=123,slow=0.6,SNR=8.8						
CMAR	Chiang Mai Arr	18.05	26	P	P	04 54 00.7	+2.1
	0.3nm,0.3s,baz=205,slow=7.9,SNR=2.6						
CMAR				LR	LR	04 59 56.7	
	comp=Z,47nm,20.1s,baz=196,slow=34						
H08S2	Diego Garcia H	20.55	241	T	T	05 15 26.6	
	baz=59,slow=75,SNR=32						
H08S3	Diego Garcia H	20.55	241	T	T	05 15 25.3	
	baz=59,slow=75,SNR=153						
H08S1	Diego Carcia H	20.57	241	T	T	05 15 28.9	
	baz=59,slow=75,SNR=25						
H01W3	Cape Leeuwin H	43.07	151	T	T	05 43 53.9	
	baz=326,slow=75,SNR=14						
H01W2	Cape Leeuwin H	43.09	151	T	T	05 43 54.3	
	baz=326,slow=75,SNR=22						
H01W1	Cape Leeuwin H	43.09	151	T	T	05 43 58.6	
	baz=326,slow=75,SNR=15						
MKAR	Makanchi Array	44.92	352	P	P	04 58 01.0	-0.6
	0.5nm,0.7s,baz=161,slow=7.7,SNR=7.2						
SONM	Songino Array	47.40	14	P	P	04 58 21.9	+0.6
	2.6nm,0.6s,baz=199,slow=9.1,SNR=9.4						
WRA	Warramunga Arr	48.28	119	P	P	04 58 31.1	+2.7
	0.8nm,0.7s,baz=297,slow=8.6,SNR=3.7						
KURBB	Kurchatov Arra	49.24	350	P	P	04 58 34.9	-0.2
	0.4nm,0.5s,baz=171,slow=7.1,SNR=6.7						
JHJ	Hachijo jima 2	55.30	51	LR	LR	05 23 42.0	
	comp=Z,26nm,20.9s,baz=122,slow=37						
AKTO	Aktyubinsk	55.32	335	LR	LR	05 22 59.7	
	comp=Z,12nm,19.6s,baz=125,slow=36						
GERES	GERESS Array B	79.65	319	P	P	05 01 54.6	+0.3
	0.6nm,0.7s,baz=91,slow=5.3,SNR=4.6						
TXAR	Lajitas Array	145.74	22	PKPbc	PKPab	05 09 27.3	+0.6
	0.2nm,0.5s,baz=240,slow=1.7,SNR=5.3						

CASC 30 05:09:50.2±1.8**, 8°.47N×83°.17W, h16**^{km}±6^{km}**, MD4.0, 1C, Costa Rica**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ACR	Cerro Adams	0.18	2	⇑*i*P	Pg	05 09 54.9	+0.2
ACR				*e*S	Sb	05 09 59.2	+0.6
TBS2		0.60	58	*e*P	Pg	05 10 01.9	-0.3
TBS2				*e*S	Sb	05 10 11.4	+0.6
BUS	Buena Vista	1.22	332	*e*P	Pn	05 10 11.4	-1.7
QCR1	Quepos	1.37	314	*e*P	Pn	05 10 13.6	-1.0
URSC	Urasca	1.48	336	*e*P	Pn	05 10 15.1	-1.3
SJS	Escuela Geolog	1.70	329	*e*P	Pn	05 10 19.7	+0.3
HDC	Heredia	1.78	329	*e*P	Pn	05 10 20.4	-0.1
HDC				*e*S	Sb	05 10 43.9	-0.9
CGA2	Cerro Gallo 2	2.00	320	*e*P	Pn	05 10 23.6	+0.2
SRA1	San Ramˆ‡n	2.06	321	*e*P	Pn	05 10 24.8	+0.5
ARE1	Arenal 1	2.50	322	*e*P	Pn	05 10 31.1	+0.8
JTS	JuntasAbangare	2.52	316	*e*P	Pn	05 10 30.2	-0.4
PNME	Penonome	2.81	89	*e*P	Pn	05 10 31.9	-2.7
PNME				*e*S	Sn	05 11 08.3	+0.1
VCR	Vista de Mar	2.93	304	*e*P	Pn	05 10 36.0	-0.3
AZU	Azuero	2.95	103	*e*P	Pn	05 10 35.6	-0.8
AZU				*e*S	Sn	05 11 12.2	+0.6
BCIP	Isla Barro Col	3.37	78	*e*P	Pn	05 10 41.1	-1.1
UPA	Univ. de Panam	3.63	82	*e*P	Pn	05 10 47.7	+1.9

*IDC **30** 05:19:40.5±0.5, 1°.87S×80°.80W, h0^{km}, mb4.4/23, mb1 4.6/29, mb1mx4.5/49, mbtmp4.5/29, ML4.1/5, MS4.1/34, Ms1 4.1/34, ms1mx4.0/53, Error ellipse: s-maj=17.5km s-min=10.7km az=57.0*

*ISCJB **30** 05:19:43.6±0.2, 1°.94S±0°.02×80°.92W±0°.01, h33^{km}, mb4.8/275, MS4.1/34, Error ellipse: s-maj=3.3km s-min=2.0km az=8.8*

*IGQ **30** 05:19:44.1±0.6, 2°S±3°×8°1W±°, h10^{km}, M5.3/41, MLv5.3/41*

*NEIC **30** 05:19:46.9±0.5, 1°.90S×80°.75W, h47^{km}±4^{km}, mb4.8/263, MW4.9(IGQ), Error ellipse: s-maj=4.3km s-min=2.9km az=59.0*

NEIC Felt [IV] at Guayaquil, Jipijapa and Salinas. Also felt at Cuenca, La Libertad, Manta, Pajan, Samborondon and Santa Elena.

*GCMT **30** 05:19:46.9±0.3, 2°.01S×80°.99W, h24^{km}±1^{km}, MW5.0/84, Moment Tensor Solution. s23,c28; s84,c118; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.28±.14; $M_{\theta\theta}$2.85±.10; $M_{\phi\phi}$-3.12±.13; $M_{r\theta}$0.66±.12; $M_{\theta\phi}$-0.41±.08; $M_{\phi r}$-1.69±.19; Best double couple: $M_0$3.47200×10^{16} NP1:ϕ_s319.00000°, δ87.00000°, λ-29.00000°. NP2: ϕ_s51.00000°, δ61.00000°, λ-177.00000°. Principal axes: T 3.1250, Plg18.0000°, Azm9.0000°; N 0.7040, Plg61.0000°, Azm134.0000°; P -3.8200, Plg22.0000°, Azm271.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*BJI **30** 05:19:47.2, 1°.90S×80°.70W, h30^{km}, mB5.3/3, Ms5.0/3, Ms7 4.7/2*

ISC 30 05:19:44.7±1.6**, 1°.92S**±0°.04×**80°.86W**±0°.05**, h27**^{km}±11^{km}**, n907, σ1^{s}.24**/898**, mb4.8**/275**, MS4.1**/34**, 1C-1D, Near coast of Ecuador**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AGUAY	Guayaquil	0.91	99	P	Pn	05 19 58.1	-3.7
AGUAY				S	Sb	05 20 09.8	-3.9
AMANT	Manta	0.98	7	P	Pn	05 20 00.0	-2.7
AMANT				S	Sn	05 20 15.6	-0.1
AMANT	Manta	0.98	7	P	Pn	05 20 00.0	-2.7
AMANT				S	Sn	05 20 15.6	-0.1
AMIL	Milagro (Trans	1.28	100	P	Pn	05 20 04.8	-2.0
AMIL	Milagro (Trans	1.28	100	P	Pn	05 20 04.8	-2.0
MILO	Milagro-Astudi	1.35	105	P	Pn	05 20 04.6	-3.1
MILO	Milagro-Astudi	1.35	105	P	Pn	05 20 04.6	-3.1
AQUE	Quevedo	1.61	58	P	Pn	05 20 10.0	-1.4
AQUE				S	Sn	05 20 30.7	-0.7
AQUE	Quevedo	1.61	58	P	Pn	05 20 10.0	-1.4
AQUE				S	Sn	05 20 30.7	-0.7
COHC	Cochancay	1.69	109	P	Pn	05 20 09.4	-3.1
COHC	Cochancay	1.69	109	P	Pn	05 20 09.4	-3.1
MAG1	Magdalena	2.13	31	P	Pn	05 20 16.9	-1.7
MAG1	Magdalena	2.13	31	P	Pn	05 20 16.9	-1.7
RIOE1	Riobamba	2.23	86	P	Pn	05 20 18.9	-1.4
RIOE1	Riobamba	2.23	86	P	Pn	05 20 18.9	-1.4
AAM1	Ambato 1 (Muni	2.33	73	P	Pn	05 20 21.7	+0.1
AAM1	Ambato 1 (Muni	2.33	73	P	Pn	05 20 21.7	+0.1
ASDO	Santo Domingo	2.39	46	P	Pn	05 20 21.7	-0.5
ASDO	Santo Domingo	2.39	46	P	Pn	05 20 21.7	-0.5
BMAS	Trigal station	2.41	80	P	Pn	05 20 24.3	+1.6
BMAS	Trigal station	2.41	80	P	Pn	05 20 24.3	+1.6
BBIL	Ulba Tungurahu	2.41	79	P	Pn	05 20 22.7	0.0
BBIL	Ulba Tungurahu	2.41	79	P	Pn	05 20 22.7	0.0
ARRY	Arrayan	2.43	80	P	Pn	05 20 22.5	-0.5
ARRY	Arrayan	2.43	80	P	Pn	05 20 22.6	-0.5
ILLI	Illinizas Sur	2.44	61	P	Pn	05 20 22.4	-0.9
ILLI	Illinizas Sur	2.44	61	P	Pn	05 20 22.4	-0.9
POND	Pondoa	2.45	78	P	Pn	05 20 23.4	+0.1
POND				S	Sn	05 20 53.6	+1.0
POND	Pondoa	2.45	78	P	Pn	05 20 23.4	+0.1
POND				S	Sn	05 20 53.6	+1.0
RETU	Refugio	2.45	79	P	Pn	05 20 23.6	+0.2
RETU	Refugio	2.45	79	P	Pn	05 20 23.6	+0.2
BPAT	Tungurahua Vol	2.46	80	P	Pn	05 20 23.2	-0.3
BPAT	Tungurahua Vol	2.46	80	P	Pn	05 20 23.2	-0.3
RUN5	Runtun	2.48	78	P	Pn	05 20 23.9	+0.2
RUN5	Runtun	2.48	78	P	Pn	05 20 23.9	+0.2
BULB	Ulba Tungurahu	2.49	79	P	Pn	05 20 24.0	+0.1
BULB				S	Sn	05 20 54.9	+1.3
BULB	Ulba Tungurahu	2.49	79	P	Pn	05 20 24.0	+0.1
BULB				S	Sn	05 20 54.9	+1.3
BRUN	Tungurahua Vol	2.49	79	P	Pn	05 20 23.8	0.0
BRUN	Tungurahua Vol	2.49	79	P	Pn	05 20 23.8	0.0
PAST	Pastocalle	2.53	61	P	Pn	05 20 24.2	-0.2
PAST	Pastocalle	2.53	61	P	Pn	05 20 24.2	-0.2
PIS1	Pisayambo	2.61	71	P	Pn	05 20 26.1	+0.5
PIS1				S	Sn	05 20 58.0	+1.2
PIS1	Pisayambo	2.61	71	P	Pn	05 20 26.1	+0.5
PIS1				S	Sn	05 20 58.0	+1.2
PISA	Pisayambo	2.61	71	P	Pn	05 20 26.2	+0.6
PISA	Pisayambo	2.61	71	P	Pn	05 20 26.2	+0.6
BMOR	Cotopaxi Volca	2.67	64	P	Pn	05 20 27.3	+0.8
BMOR	Cotopaxi Volca	2.67	64	P	Pn	05 20 27.3	+0.8
BNAS	Cotopaxi Volca	2.68	62	P	Pn	05 20 27.7	+1.1
BNAS	Cotopaxi Volca	2.68	62	P	Pn	05 20 27.7	+1.1
NAS2	Nasa	2.70	62	P	Pn	05 20 28.1	+1.2
NAS2	Nasa	2.70	62	P	Pn	05 20 28.1	+1.2
BREF	Cotopaxi Volca	2.71	63	P	Pn	05 20 28.2	+1.0
BREF	Cotopaxi Volca	2.71	63	P	Pn	05 20 28.2	+1.0
BVC2	Cotopaxi Volca	2.75	63	P	Pn	05 20 28.6	+1.1
BVC2	Cotopaxi Volca	2.75	63	P	Pn	05 20 28.6	+1.1
BTAM	Cotopaxi Volca	2.75	63	P	Pn	05 20 28.8	+1.2
BTAM	Cotopaxi Volca	2.75	63	P	Pn	05 20 28.8	+1.2
VC1	Cotopaxi 1	2.76	63	P	Pn	05 20 28.9	+1.2
VC1	Cotopaxi 1	2.76	63	P	Pn	05 20 28.9	+1.2
PITA	Cotopaxi Volc	2.77	61	P	Pn	05 20 28.2	+0.4
PITA	Cotopaxi Volc	2.77	61	P	Pn	05 20 28.2	+0.4
COV1	Cotopaxi Volc	2.80	64	P	Pn	05 20 28.4	0.0

COV1	**Cotopaxi Volc**	**2.80**	**64**	P	**Pn**	**05 20 28.4**	**0.0**
PUYO	**Puyo, Santa Ro**	**2.86**	**82**	P	**Pn**	**05 20 29.6**	**+0.9**
PUYO	**Puyo, Santa Ro**	**2.86**	**82**	P	**Pn**	**05 20 29.6**	**+0.9**
YANA	**Yana**	**2.90**	**52**	P	**Pn**	**05 20 28.9**	**-0.7**
YANA	**Yana**	**2.90**	**52**	P	**Pn**	**05 20 28.9**	**-0.7**
ANTG	**Antisana-Guama**	**2.96**	**62**	P	**Pn**	**05 20 32.1**	**+1.7**
ANTG	**Antisana-Guama**	**2.96**	**62**	P	**Pn**	**05 20 32.1**	**+1.7**
ANTM	**Antisana-La Mi**	**2.97**	**62**	P	**Pn**	**05 20 32.1**	**+1.6**
ANTM	**Antisana-La Mi**	**2.97**	**62**	P	**Pn**	**05 20 32.1**	**+1.6**
ANTS	**Antisana-Sarah**	**3.03**	**62**	P	**Pn**	**05 20 33.1**	**+1.6**
ANTS	**Antisana-Sarah**	**3.03**	**62**	P	**Pn**	**05 20 33.1**	**+1.6**
PULU	**Pululahua**	**3.04**	**51**	P	**Pn**	**05 20 31.6**	**+0.1**
PULU	**Pululahua**	**3.04**	**51**	P	**Pn**	**05 20 31.6**	**+0.1**
ARDO	**Archidona, Ten**	**3.19**	**73**	P	**Pn**	**05 20 34.3**	**+1.2**
ARDO	**Archidona, Ten**	**3.19**	**73**	P	**Pn**	**05 20 34.3**	**+1.2**
OTAV	**Otavalo**	**3.22**	**48**	*e*Pn	**Pn**	**05 20 33.6**	**-0.4**
OTAV	**Otavalo**	**3.22**	**48**	*e*P	**Pn**	**05 20 33.6**	**-0.4**
OTAV	**Otavalo**	**3.22**	**48**	P	**Pn**	**05 20 33.7**	**-0.3**
OTAV	**Otavalo**	**3.22**	**48**	*e*P	**Pn**	**05 20 33.6**	**-0.4**
OTAV	**Otavalo**	**3.22**	**48**	P	**Pn**	**05 20 33.7**	**-0.3**
CUIC	**Cuicocha-Domo**	**3.33**	**49**	P	**Pn**	**05 20 35.9**	**+0.5**
CUIC	**Cuicocha-Domo**	**3.33**	**49**	P	**Pn**	**05 20 35.9**	**+0.5**
COTA	**Cotacachi**	**3.37**	**48**	P	**Pn**	**05 20 36.6**	**+0.6**
COTA	**Cotacachi**	**3.37**	**48**	P	**Pn**	**05 20 36.6**	**+0.6**
IMBA	**Imbabura, San**	**3.44**	**51**	P	**Pn**	**05 20 39.8**	**+2.9**
IMBA	**Imbabura, San**	**3.44**	**51**	P	**Pn**	**05 20 39.8**	**+2.9**
CAYA	**Cayambe**	**3.48**	**55**	P	**Pn**	**05 20 39.7**	**+2.1**
CAYA	**Cayambe**	**3.48**	**55**	P	**Pn**	**05 20 39.7**	**+2.1**
URCU	**Urcuqui**	**3.50**	**48**	P	**Pn**	**05 20 39.1**	**+1.3**
URCU	**Urcuqui**	**3.50**	**48**	P	**Pn**	**05 20 39.1**	**+1.3**
AIB2	**Ibarra (Univer**	**3.55**	**51**	P	**Pn**	**05 20 41.0**	**+2.7**
AIB2	**Ibarra (Univer**	**3.55**	**51**	P	**Pn**	**05 20 41.0**	**+2.7**
YAHU	**Yahuarcocha**	**3.59**	**51**	P	**Pn**	**05 20 40.8**	**+1.8**
YAHU	**Yahuarcocha**	**3.59**	**51**	P	**Pn**	**05 20 40.8**	**+1.8**
LITE1	**Lita**	**3.67**	**43**	P	**Pn**	**05 20 40.4**	**+0.5**
LITE1	**Lita**	**3.67**	**43**	P	**Pn**	**05 20 40.4**	**+0.5**
CMBC	**Cumbal**	**4.15**	**47**	*e*P	**Pn**	**05 20 48.9**	**+2.1**
CMBC	**Cumbal**	**4.15**	**47**	*e*P	**Pn**	**05 20 48.9**	**+2.1**
TUMC	**Tumaco**	**4.28**	**30**	*e*Pn	**Pn**	**05 20 48.6**	**+0.4**
TUMC	**Tumaco**	**4.28**	**30**	*e*P	**Pn**	**05 20 48.2**	**0.0**
TUMC	**Tumaco**	**4.28**	**30**	*e*P	**Pn**	**05 20 48.2**	**0.0**
GCUF	**Volcan Galeras**	**4.70**	**48**	*e*P	**Pn**	**05 20 56.9**	**+2.6**
GCUF	**Volcan Galeras**	**4.70**	**48**	*e*P	**Pn**	**05 20 56.9**	**+2.6**
CPAS2	**Pasto**	**4.77**	**49**	*e*P	Pb	05 21 01.9	-5.8
CPAS2	**Pasto**	**4.77**	**49**	*e*P	Pb	05 21 01.9	-5.8
CRUC	**La Cruz**	**5.22**	**48**	*e*P	**Pn**	**05 21 03.5**	**+2.1**
CRUC	**La Cruz**	**5.22**	**48**	*e*P	**Pn**	**05 21 03.5**	**+2.1**
ATAH	**Atahualpa**	**5.73**	**155**	Pn	**Pn**	**05 21 08.4**	**-0.1**
	7.2nm,0.3s,baz=4.9,slow=7.6,SNR=27						
ATAH				Sn	**Sn**	**05 22 14.3**	**+0.7**
	5.9nm,0.3s,baz=300,slow=20,SNR=2.7						
SOTA	**Rioblanco**	**5.85**	**47**	*e*P	**Pn**	**05 21 11.5**	**+1.3**
SOTA	**Rioblanco**	**5.85**	**47**	*e*P	**Pn**	**05 21 11.5**	**+1.3**
POPC	**Popayan, Colom**	**6.09**	**43**	*e*P	**Pn**	**05 21 13.0**	**-0.2**
POPC	**Popayan, Colom**	**6.09**	**43**	*e*P	**Pn**	**05 21 13.0**	**-0.2**
PCON	**Cinco Dias**	**6.14**	**47**	*e*P	**Pn**	**05 21 15.7**	**+1.6**
PCON	**Cinco Dias**	**6.14**	**47**	*e*P	**Pn**	**05 21 15.7**	**+1.6**
MARP	**Paez Belalcaza**	**6.81**	**46**	*e*P	**Pn**	**05 21 26.2**	**+3.1**
MARP	**Paez Belalcaza**	**6.81**	**46**	*e*P	**Pn**	**05 21 26.2**	**+3.1**
HORQ	**Saladito**	**6.83**	**38**	*e*P	**Pn**	**05 21 21.0**	**-2.5**
HORQ	**Saladito**	**6.83**	**38**	*e*P	**Pn**	**05 21 21.0**	**-2.5**
BETC	**Betania**	**7.08**	**50**	*e*P	**Pn**	**05 21 30.3**	**+3.6**
BETC	**Betania**	**7.08**	**50**	*e*P	**Pn**	**05 21 30.3**	**+3.6**
YOTC	**Yotoco, Valle**	**7.39**	**38**	*e*P	**Pn**	**05 21 27.3**	**-3.8**
YOTC	**Yotoco, Valle**	**7.39**	**38**	*e*P	**Pn**	**05 21 27.3**	**-3.8**
PLMC	**San Jos˜' del**	**8.17**	**34**	*e*P	**Pn**	**05 21 40.0**	**-1.8**
PLMC	**San Jos˜' del**	**8.17**	**34**	*e*P	**Pn**	**05 21 40.0**	**-1.8**
PRAC	**Prado**	**8.18**	**47**	*e*Pn	**Pn**	**05 21 42.0**	**+0.3**
PRAC	**Prado**	**8.18**	**47**	*e*P	**Pn**	**05 21 42.2**	**+0.5**
PRAC	**Prado**	**8.18**	**47**	*e*P	**Pn**	**05 21 42.2**	**+0.5**
ANIL	**Santa Ana**	**8.38**	**41**	*e*P	**Pn**	**05 21 47.7**	**+2.9**
ANIL	**Santa Ana**	**8.38**	**41**	*e*P	**Pn**	**05 21 47.7**	**+2.9**
TOLC	**Tolima**	**8.51**	**41**	*e*P	**Pn**	**05 21 47.7**	**+1.2**
TOLC	**Tolima**	**8.51**	**41**	*e*P	**Pn**	**05 21 47.7**	**+1.2**
SJAC	**San Juan de Ar**	**8.62**	**53**	*e*P	**Pn**	**05 21 51.3**	**+3.4**
SJAC	**San Juan de Ar**	**8.62**	**53**	*e*P	**Pn**	**05 21 51.3**	**+3.4**
GUYC	**Guyana, Colomb**	**8.95**	**38**	*e*P	**Pn**	**05 21 55.8**	**+3.0**
GUYC	**Guyana, Colomb**	**8.95**	**38**	*e*P	**Pn**	**05 21 55.8**	**+3.0**
VILC	**Villavicencio,**	**9.33**	**50**	*e*P	**Pn**	**05 21 58.6**	**+0.9**
VILC	**Villavicencio,**	**9.33**	**50**	*e*P	**Pn**	**05 21 58.6**	**+0.9**
ROSC	**El Rosal**	**9.37**	**44**	Pn	**Pn**	**05 21 56.8**	**-1.5**
	1.5nm,0.3s,baz=248,slow=19,SNR=5.4						
ROSC	**El Rosal**	**9.37**	**44**	*e*Pn	**Pn**	**05 21 59.4**	**+1.0**
PAYG	**Puerto Ayora**	**9.51**	**277**	*e*Pn	**Pn**	**05 22 00.6**	**+0.6**
NORC	**Norcasia**	**9.54**	**39**	*e*P	**Pn**	**05 22 01.1**	**+0.6**
NORC	**Norcasia**	**9.54**	**39**	*e*P	**Pn**	**05 22 01.1**	**+0.6**
CHIC	**Chingaza**	**9.64**	**48**	*e*P	**Pn**	**05 22 01.6**	**-0.6**
CHIC	**Chingaza**	**9.64**	**48**	*e*P	**Pn**	**05 22 01.6**	**-0.6**
HELC	**Santa Helena**	**9.65**	**33**	*e*Pn	**Pn**	**05 22 02.9**	**+0.7**
HELC	**Santa Helena**	**9.65**	**33**	*e*P	**Pn**	**05 22 02.8**	**+0.5**
HELC	**Santa Helena**	**9.65**	**33**	*e*P	**Pn**	**05 22 02.8**	**+0.5**
PTBC	**PUERTO BERRIO,**	**10.55**	**37**	*e*P	**Pn**	**05 22 13.2**	**-1.2**
PTBC	**PUERTO BERRIO,**	**10.55**	**37**	*e*P	**Pn**	**05 22 13.2**	**-1.2**
NNA	**Nana**	**10.77**	**158**	Pn	**Pn**	**05 22 16.6**	**-0.6**
	10nm,0.3s,baz=334,slow=11,SNR=25						
NNA				Sn	**Sn**	**05 24 11.5**	**-5.5**
	7.7nm,0.3s,baz=152,slow=17,SNR=6.5						
NNA	**Nana**	**10.77**	**158**	*e*Pn	**Pn**	**05 22 16.2**	**-1.1**
NNA				Sn	**Sn**	**05 24 11.5**	**-5.5**
NNA	**Nana**	**10.77**	**158**	P	**Pn**	**05 22 16.5**	**-0.8**
NNA	**Nana**	**10.77**	**158**	P	**Pn**	**05 22 16.5**	**-0.8**
RUSC	**La Rusia**	**10.97**	**45**	*e*Pn	**Pn**	**05 22 22.4**	**+1.9**
RUSC	**La Rusia**	**10.97**	**45**	*e*P	**Pn**	**05 22 24.1**	**+3.6**
RUSC	**La Rusia**	**10.97**	**45**	*e*P	**Pn**	**05 22 24.1**	**+3.6**
ZARC	**Zaragoza, Cauc**	**11.10**	**33**	*e*P	Pn	05 22 27.1	+5.3
ZARC	**Zaragoza, Cauc**	**11.10**	**33**	*e*P	Pn	05 22 27.1	+5.3
BARC	**Barichara**	**11.41**	**42**	*e*P	**Pn**	**05 22 29.1**	**+2.9**
BARC	**Barichara**	**11.41**	**42**	*e*P	**Pn**	**05 22 29.1**	**+2.9**
MOTC	**Monteria, Cord**	**11.82**	**26**	*e*P	**Pn**	**05 22 32.0**	**+0.4**
MOTC	**Monteria, Cord**	**11.82**	**26**	*e*P	**Pn**	**05 22 32.0**	**+0.4**
JTS	**JuntasAbangare**	**12.80**	**341**	Pn	**Pn**	**05 22 45.3**	**+0.3**
	0.2nm,0.3s,baz=287,slow=5.0,SNR=4.9						
SJCC	**San Jacinto, C**	**13.03**	**26**	*e*P	**Pn**	**05 22 47.7**	**-0.5**
SJCC	**San Jacinto, C**	**13.03**	**26**	*e*P	**Pn**	**05 22 47.7**	**-0.5**
ESPN	**Las Esperanzas**	**14.43**	**346**	*e*Pn	**Pn**	**05 23 09.3**	**+1.9**
SDV	**Santo Domingo**	**14.80**	**43**	Pn	**Pn**	**05 23 12.3**	**-0.2**
	1.6nm,0.3s,baz=240,slow=11,SNR=10						
SDV				LR	LR	05 29 03.4	
	comp=Z,2µm,21.7s,baz=230,slow=38						
SDV	**Santo Domingo**	**14.80**	**43**	*e*Pn	**Pn**	**05 23 10.6**	**-1.9**
SAML	**Samuel**	**18.92**	**112**	*e*P	**P**	**05 24 02.9**	**-0.8**
	63nm,1.0s						
LPAZ	**La Paz**	**19.00**	**139**	P	**Pn**	**05 24 06.0**	**+0.1**
	1.0nm,0.3s,baz=322,slow=8.4,SNR=40						
LPAZ				LR	LR	05 32 44.6	
	comp=Z,2µm,20.7s,baz=309,slow=41						
LPAZ	**La Paz**	**19.00**	**139**	*e*P	**P**	**05 24 05.4**	**+0.3**
	29nm,0.8s						
PCRV	**Puerto La Cruz**	**20.13**	**53**	P	**P**	**05 24 16.1**	**-0.8**
	15nm,0.5s,baz=220,slow=3.6,SNR=13						
PCRV				LR	LR	05 32 50.3	
	comp=Z,1µm,18.1s,baz=210,slow=39						
MNMC	**Minye Minye**	**20.35**	**148**	*e*P	**P**	**05 24 20.5**	**+0.9**
	31nm,0.8s						
PB11	**IPOC Station P**	**20.84**	**149**	*e*P	**P**	**05 24 25.4**	**+0.6**
	58nm,0.8s						
PTGA	**Pitinga**	**20.92**	**87**	P	**P**	**05 24 24.1**	**-1.4**
	25nm,0.8s,baz=271,slow=9.9,SNR=44						
PTGA				LR	LR	05 32 45.6	
	comp=Z,1µm,20.2s,baz=270,slow=38						
PTGA	**Pitinga**	**20.92**	**87**	*e*P	**P**	**05 24 24.6**	**-0.8**
	38nm,0.9s						
CCIG	**Comitan**	**21.24**	**329**	*e*P	**P**	**05 24 30.4**	**+1.3**
	50nm,1.4s						
LGNH	**LØogne**	**21.86**	**21**	*e*P	**P**	**05 24 36.5**	**+1.0**
	171nm,1.2s						
PB01	**IPOC Station P**	**22.00**	**151**	*e*P	**P**	**05 24 39.1**	**+2.0**
	20nm,0.7s						
GTBY	**Guantanamo Bay**	**22.43**	**14**	*e*P	**P**	**05 24 41.0**	**-0.5**
	101nm,1.1s						
BANI	**BANI**	**22.67**	**27**	*e*P	**P**	**05 24 43.4**	**-1.0**
CMIG	**Matias Romero**	**23.42**	**324**	LR	LR	05 32 26.2	
	comp=Z,368nm,18.8s,baz=152,slow=33						
PB10	**IPOC Station P**	**23.68**	**156**	*e*P	**P**	**05 24 58.1**	**+3.8**
	49nm,1.2s						
CRPR	**Cabo Rojo, PR**	**23.99**	**34**	*e*P	**P**	**05 24 58.2**	**+1.0**
	46nm,0.8s						
SIV	**San Ignacio**	**23.99**	**127**	P	**P**	**05 24 57.5**	**+0.1**
	43nm,1.1s,baz=311,slow=10,SNR=33						
SIV				LR	LR	05 35 08.0	
	comp=Z,595nm,21.9s,baz=306,slow=39						
MPR	**Mayaguez**	**24.14**	**33**	*e*P	**P**	**05 24 59.1**	**+0.5**
	55nm,0.9s						
OBIP	**Obispado Ponce**	**24.30**	**35**	*e*P	**P**	**05 25 00.1**	**-0.1**
	27nm,0.8s						
AOPR	**Arecibo Observ**	**24.46**	**34**	*e*P	**P**	**05 25 01.9**	**+0.2**
	80nm,0.7s						
SJG	**San Juan**	**24.61**	**35**	P	**P**	**05 25 02.9**	**-0.1**
	48nm,0.7s,baz=191,slow=6.7,SNR=20						
SJG				LR	LR	05 37 05.4	
	comp=Z,520nm,18.3s,baz=206,slow=43						
SJG	**San Juan**	**24.61**	**35**	*e*P	**P**	**05 25 02.9**	**-0.1**
	51nm,0.7s						
HUMP	**Col San Antoni**	**24.81**	**36**	*e*P	**P**	**05 25 05.1**	**+0.3**
	49nm,0.8s						
CBYP	**Canovanas**	**24.91**	**36**	*e*P	**P**	**05 25 06.2**	**+0.4**
	126nm,1.0s						
MTP	**Monte Pirata**	**24.95**	**37**	*e*P	**P**	**05 25 06.4**	**+0.3**
	64nm,1.1s						
TLIG	**Tlapa**	**26.07**	**319**	*e*P	**P**	**05 25 17.9**	**+1.5**
	13nm,1.1s						
061Z	**Ochoppi**	**27.62**	**360**	P	**P**	**05 25 30.5**	**+0.4**
	baz=180						
060Z	**West Palm Beac**	**28.16**	**1**	P	**P**	**05 25 37.3**	**+2.4**
	baz=180						
060A	**Indiantown**	**28.79**	**1**	P	**P**	**05 25 42.6**	**+2.1**
	baz=181						
859A	**Kempfer Cattle**	**29.80**	**360**	P	**P**	**05 25 53.1**	**+3.6**
	baz=180						
DWPF	**Disney Wildern**	**29.86**	**359**	P	**P**	**05 25 53.0**	**+3.0**
	baz=179						
857A	**Zephyrhills**	**30.04**	**358**	P	**P**	**05 25 50.7**	**-0.9**
	baz=177						
758A	**Lake Helen**	**30.71**	**359**	P	**P**	**05 25 59.4**	**+1.9**
	baz=179						
655A	**Horseshoe Beac**	**31.34**	**356**	P	**P**	**05 26 05.6**	**+2.6**
	baz=175						
657A	**Interlachen**	**31.34**	**358**	P	**P**	**05 26 06.4**	**+3.4**
	baz=178						
557A	**Orange Park**	**31.77**	**359**	P	**P**	**05 26 07.0**	**+0.3**
	baz=178						
556A	**Lake Butler**	**31.77**	**357**	P	**P**	**05 26 07.7**	**+0.8**
	baz=177						
555A	**McAlpin**	**31.92**	**357**	P	**P**	**05 26 09.3**	**+1.2**
	baz=176						
553A	**Crawfordville**	**32.11**	**354**	P	**P**	**05 26 09.3**	**-0.5**
	baz=173						
LNIG	**Linares**	**32.19**	**327**	*e*P	**P**	**05 26 10.9**	**+0.2**
	3.7nm,0.8s						
455A	**Stateville**	**32.55**	**357**	P	**P**	**05 26 16.2**	**+2.6**
	baz=176						
454A	**Quitman**	**32.56**	**356**	P	**P**	**05 26 14.9**	**+1.2**
	baz=175						
452A	**Marianna**	**32.84**	**353**	P	**P**	**05 26 20.9**	**+4.6**
	baz=172						
449A	**Pace**	**33.06**	**350**	P	**P**	**05 26 20.8**	**+2.7**
	baz=168						
CPUP	**Villa Florida**	**33.17**	**139**	P	**P**	**05 26 20.0**	**+0.8**
	1.0nm,0.7s,baz=349,slow=16,SNR=2.1						
CPUP				LR	LR	05 42 40.5	
	comp=Z,412nm,20.7s,baz=317,slow=42						
353A	**Camilla**	**33.24**	**355**	P	**P**	**05 26 22.3**	**+2.6**
	baz=174						
TIGA	**Tifton**	**33.27**	**356**	P	**P**	**05 26 21.7**	**+1.7**
	baz=175						
TIGA	**Tifton**	**33.27**	**356**	*e*P	**P**	**05 26 19.9**	**-0.1**
	15nm,0.7s						
351A	**Pinckard**	**33.32**	**353**	P	**P**	**05 26 21.9**	**+1.5**
	baz=171						
448A	**Bay Minette**	**33.34**	**349**	P	**P**	**05 26 21.9**	**+1.3**
	baz=167						
352A	**Blakely**	**33.44**	**354**	*e*P	**P**	**05 26 23.4**	**+2.0**
	16nm,1.1s						
350A	**Dozier**	**33.56**	**352**	P	**P**	**05 26 24.3**	**+1.8**
	baz=170						
349A	**Repton**	**33.63**	**350**	P	**P**	**05 26 24.9**	**+1.8**
	baz=168						
255A	**Hazlehurst**	**33.69**	**358**	P	**P**	**05 26 27.6**	**+4.0**
	baz=177						
254A	**Abbeville**	**33.76**	**356**	P	**P**	**05 26 26.5**	**+2.3**
	baz=175						
444A	**Pine Grove**	**33.79**	**345**	P	**P**	**05 26 23.3**	**-1.2**
	baz=162						
348A	**Jackson**	**33.82**	**349**	P	**P**	**05 26 28.0**	**+3.3**
	baz=167						
541A	**Lake Charles**	**33.91**	**341**	P	**P**	**05 26 28.6**	**+3.1**
	baz=157						
347A	**Saraland**	**33.93**	**348**	P	**P**	**05 26 28.1**	**+2.4**
	baz=166						
253A	**Americus**	**33.94**	**355**	P	**P**	**05 26 27.8**	**+2.0**
	baz=174						
253A	**Americus**	**33.94**	**355**	*e*P	**P**	**05 26 25.9**	**+0.1**
	42nm,1.1s						
250A	**Grady**	**34.10**	**352**	P	**P**	**05 26 27.8**	**+0.6**
	baz=170						
251A	**Midway**	**34.10**	**353**	P	**P**	**05 26 26.8**	**-0.3**
	baz=172,SNR=9.9						
346A	**Big Creek Wild**	**34.12**	**347**	P	**P**	**05 26 28.4**	**+1.0**
	baz=164						
249A	**Camden**	**34.23**	**351**	P	**P**	**05 26 29.3**	**+1.0**
	baz=169						
155A	**Kite**	**34.39**	**358**	P	**P**	**05 26 29.9**	**+0.3**
	baz=177						
156A	**Sylvania**	**34.39**	**359**	P	**P**	**05 26 29.6**	**0.0**
	baz=179						
154A	**Montrose**	**34.41**	**357**	P	**P**	**05 26 30.7**	**+0.8**
	baz=176						
154A	**Montrose**	**34.41**	**357**	*e*P	**P**	**05 26 29.7**	**-0.1**
	33nm,0.8s						
248A	**Dixon Mills**	**34.45**	**350**	P	**P**	**05 26 30.9**	**+0.7**
	baz=168						
344A	**Westbrook Farm**	**34.49**	**345**	P	**P**	**05 26 32.7**	**+2.2**
	baz=162						
344A	**Westbrook Farm**	**34.49**	**345**	*e*P	**P**	**05 26 31.6**	**+1.0**
	23nm,1.0s						
153A	**Fort Valley**	**34.50**	**356**	P	**P**	**05 26 31.8**	**+1.2**
	baz=175						
441A	**DeRidder**	**34.55**	**341**	P	**P**	**05 26 33.8**	**+2.8**
	baz=158						
247A	**Quitman**	**34.58**	**348**	P	**P**	**05 26 31.7**	**+0.4**
	baz=166						
152A	**Waverly Hall**	**34.59**	**354**	P	**P**	**05 26 31.1**	**-0.3**
	baz=173,SNR=8.8						
152A	**Waverly Hall**	**34.59**	**354**	*e*P	**P**	**05 26 31.1**	**-0.3**
	20nm,1.0s						
150A	**Eclectic**	**34.68**	**352**	P	**P**	**05 26 32.2**	**0.0**
	baz=171,SNR=11						
HKT	**Hockley**	**34.77**	**337**	*e*P	**P**	**05 26 33.1**	**+0.2**
	12nm,1.4s						
149A	**Jones**	**34.79**	**351**	P	**P**	**05 26 33.8**	**+0.7**
	baz=169						
245A	**Little AP, Sta**	**34.84**	**346**	P	**P**	**05 26 35.7**	**+2.1**
	baz=164						
NHSC	**New Hope**	**34.84**	**1**	P	**P**	**05 26 34.6**	**+1.0**
	baz=181						
342A	**Flagon Creek P**	**34.86**	**343**	P	**P**	**05 26 35.4**	**+1.6**
	baz=160						
342A	**Flagon Creek P**	**34.86**	**343**	*e*P	**P**	**05 26 35.9**	**+2.2**
	38nm,1.4s						
148A	**Greensboro**	**34.96**	**350**	P	**P**	**05 26 35.6**	**+1.0**
	baz=168						
Z54A	**Sparta**	**35.02**	**357**	P	**P**	**05 26 37.1**	**+2.0**
	baz=176						
341A	**Kurthwood**	**35.08**	**341**	*e*P	**P**	**05 26 36.8**	**+1.1**
	12nm,1.0s						
Z52A	**Williamson**	**35.08**	**355**	P	**P**	**05 26 35.3**	**-0.4**
	baz=174,SNR=8.2						
Z53A	**Monticello**	**35.10**	**356**	P	**P**	**05 26 35.3**	**-0.5**
	baz=175,SNR=5.3						
147A	**Livingston**	**35.11**	**349**	P	**P**	**05 26 38.0**	**+2.1**
	baz=167						
147A	**Livingston**	**35.11**	**349**	*e*P	**P**	**05 26 37.7**	**+1.7**
	19nm,1.1s						
BDFB	**Brasilia**	**35.12**	**115**	P	**P**	**05 26 37.5**	**+1.1**
	11nm,1.0s,baz=262,slow=8.6,SNR=10.0						
BDFB				LR	LR	05 43 06.9	
	comp=Z,822nm,19.4s,baz=292,slow=40						
BDFB	**Brasilia**	**35.12**	**115**	*e*P	**P**	**05 26 35.9**	**-0.6**
	32nm,1.1s						
GOGA	**Godfrey**	**35.23**	**356**	P	**P**	**05 26 36.1**	**-0.8**
	baz=175,SNR=5.6						
GOGA	**Godfrey**	**35.23**	**356**	*e*P	**P**	**05 26 36.1**	**-0.8**
	11nm,0.9s						
146A	**Union**	**35.23**	**348**	*e*P	**P**	**05 26 38.0**	**+1.0**
	43nm,1.2s						
LRAL	**Lakeview Retre**	**35.25**	**351**	P	**P**	**05 26 39.4**	**+2.4**
	baz=169						
LRAL	**Lakeview Retre**	**35.25**	**351**	*e*P	**P**	**05 26 36.8**	**-0.3**
	14nm,0.8s						
Z51A	**Franklin**	**35.28**	**354**	P	**P**	**05 26 38.6**	**+1.2**
	baz=172						
Z50A	**Ashland**	**35.31**	**353**	P	**P**	**05 26 38.2**	**+0.6**
	baz=171						
Z50A	**Ashland**	**35.31**	**353**	*e*P	**P**	**05 26 37.4**	**-0.2**
	15nm,0.9s						
Z49A	**Columbiana**	**35.33**	**352**	P	**P**	**05 26 40.2**	**+2.3**
	baz=170						
Z47A	**Carrollton**	**35.59**	**350**	P	**P**	**05 26 40.7**	**+0.7**
	baz=167						
Y54A	**Tignall**	**35.63**	**357**	P	**P**	**05 26 39.7**	**-0.7**
	baz=177,SNR=5.2						
241A	**Mo Tay, Goldon**	**35.64**	**342**	*e*P	**P**	**05 26 41.8**	**+1.3**
	15nm,1.2s						
Z48A	**Northport**	**35.67**	**350**	P	**P**	**05 26 41.7**	**+1.0**
	baz=168						
Y53A	**Monroe**	**35.68**	**356**	P	**P**	**05 26 40.1**	**-0.7**
	baz=175,SNR=5.3						
Y52A	**Lilburn**	**35.72**	**355**	P	**P**	**05 26 40.6**	**-0.6**
	baz=174						
Y52A	**Lilburn**	**35.72**	**355**	*e*P	**P**	**05 26 40.6**	**-0.6**
	6.7nm,0.8s						
Z46A	**Louisville**	**35.75**	**348**	P	**P**	**05 26 42.9**	**+1.5**
	baz=166						
Y51A	**Rockmart**	**35.85**	**354**	P	**P**	**05 26 41.7**	**-0.6**
	baz=173						
Y50A	**Piedmont**	**35.91**	**353**	P	**P**	**05 26 43.4**	**+0.6**
	baz=172						
240A	**Hunter Patters**	**35.92**	**341**	P	**P**	**05 26 43.1**	**+0.2**
	baz=158						
240A	**Hunter Patters**	**35.92**	**341**	*e*P	**P**	**05 26 42.4**	**-0.6**
	55nm,0.9s						
Y49A	**Blount Mountai**	**35.97**	**352**	P	**P**	**05 26 43.6**	**+0.3**
	baz=170						
Y49A	**Blount Mountai**	**35.97**	**352**	*e*P	**P**	**05 26 42.6**	**-0.7**
	8.2nm,0.8s						
JSC	**Jenkinsville**	**36.01**	**359**	*e*P	**P**	**05 26 42.7**	**-1.0**
	16nm,1.1s						
Z45A	**Winona**	**36.08**	**347**	P	**P**	**05 26 45.2**	**+1.0**
	baz=165						
Z45A	**Winona**	**36.08**	**347**	*e*P	**P**	**05 26 45.1**	**+0.9**
	34nm,1.0s						
Y48A	**Jasper**	**36.13**	**351**	P	**P**	**05 26 44.8**	**+0.1**
	baz=169						
435B	**Jarrell**	**36.22**	**335**	P	**P**	**05 26 46.2**	**+0.7**
	baz=151						
435B	**Jarrell**	**36.22**	**335**	*e*P	**P**	**05 26 46.5**	**+1.1**
	9.9nm,1.0s						
Y47A	**UCPARC, Winfie**	**36.23**	**350**	P	**P**	**05 26 45.1**	**-0.5**
	baz=168						
X53A	**Estanollee**	**36.30**	**357**	P	**P**	**05 26 46.4**	**+0.3**
	baz=176						
Y46A	**Houston**	**36.40**	**349**	P	**P**	**05 26 46.6**	**-0.3**
	baz=166,SNR=9.7						
140A	**Cam and Jess,**	**36.42**	**342**	*e*P	**P**	**05 26 49.6**	**+2.4**
	16nm,0.8s						
X52A	**Dahlonega**	**36.44**	**356**	P	**P**	**05 26 46.5**	**-0.9**
	baz=175						
X50B	**Fort Payne**	**36.47**	**353**	P	**P**	**05 26 48.7**	**+1.1**
	baz=172						
X51A	**Calhoun**	**36.49**	**354**	P	**P**	**05 26 46.0**	**-1.7**
	baz=173						
X51A	**Calhoun**	**36.49**	**354**	*e*P	**P**	**05 26 47.4**	**-0.3**
	19nm,1.2s						
Y45A	**Yeager Farm, C**	**36.52**	**348**	P	**P**	**05 26 47.6**	**-0.4**
	baz=165,SNR=8.7						
X49A	**Woodville**	**36.60**	**352**	P	**P**	**05 26 49.6**	**+0.9**
	baz=171						
X48A	**Hartselle**	**36.64**	**351**	P	**P**	**05 26 49.1**	**+0.1**
	baz=170						
X48A	**Hartselle**	**36.64**	**351**	*e*P	**P**	**05 26 48.6**	**-0.4**
	12nm,1.0s						
Z41A	**Richland Creek**	**36.76**	**343**	P	**P**	**05 26 50.8**	**+0.7**
	baz=160						
Z41A	**Richland Creek**	**36.76**	**343**	*e*P	**P**	**05 26 51.4**	**+1.4**
	29nm,1.3s						
BG3	**Lake Jocassee**	**36.77**	**357**	*e*P	**P**	**05 26 50.2**	**0.0**
	13nm,1.0s						
X47A	**Russelville**	**36.84**	**350**	P	**P**	**05 26 49.7**	**-1.0**
	baz=168,SNR=7.3						
KMSC	**Kings Mountain**	**36.87**	**359**	*e*P	**P**	**05 26 50.0**	**-1.0**
	15nm,0.9s						
JCT	**Junction City**	**36.94**	**332**	P	**P**	**05 26 51.9**	**+0.2**
	baz=147,SNR=7.4						
JCT	**Junction City**	**36.94**	**332**	*e*P	**P**	**05 26 52.8**	**+1.1**
	12nm,0.9s						
W53A	**Cullowhee**	**36.96**	**357**	P	**P**	**05 26 51.3**	**-0.6**
	baz=176,SNR=5.5						
X46A	**Booneville**	**37.00**	**349**	P	**P**	**05 26 53.9**	**+1.8**
	baz=167						
Y42A	**Garnett, Star**	**37.02**	**345**	P	**P**	**05 26 53.6**	**+1.3**
	baz=162						
X45A	**UM Field Stati**	**37.03**	**348**	P	**P**	**05 26 53.0**	**+0.7**
	baz=166						
RPN	**Rapa Nui**	**37.06**	**225**	LR	LR	05 37 40.5	
	comp=Z,370nm,20.9s,baz=53,slow=29						
W51A	**Cleveland**	**37.07**	**355**	P	**P**	**05 26 54.1**	**+1.4**
	baz=173						
CCAR	**Cane Creek**	**37.10**	**345**	*e*P	**P**	**05 26 53.5**	**+0.7**
	48nm,1.3s						
OXF	**Oxford**	**37.12**	**348**	P	**P**	**05 26 53.2**	**+0.1**
	baz=166						
OXF	**Oxford**	**37.12**	**348**	*e*P	**P**	**05 26 53.0**	**-0.1**
	35nm,1.0s						
W50A	**Signal Mountai**	**37.16**	**354**	P	**P**	**05 26 53.2**	**-0.3**
	baz=172						
W50A	**Signal Mountai**	**37.16**	**354**	*e*P	**P**	**05 26 53.5**	**0.0**
	9.2nm,0.8s						
W49A	**Belvidere**	**37.19**	**353**	P	**P**	**05 26 53.2**	**-0.5**
	baz=171						
WHTX	**Lake Whitney,**	**37.22**	**336**	P	**P**	**05 26 54.4**	**+0.5**
	baz=152						
WHTX	**Lake Whitney,**	**37.22**	**336**	*e*P	**P**	**05 26 54.2**	**+0.3**
	11nm,0.9s						
SWET	**Sewanee**	**37.25**	**353**	*e*P	**P**	**05 26 53.2**	**-1.0**
	13nm,0.9s						
W48A	**Pulaski**	**37.30**	**352**	P	**P**	**05 26 55.8**	**+1.2**
	baz=170						
PLAL	**Pickwick Lake**	**37.33**	**350**	*e*P	**P**	**05 26 54.0**	**-0.8**
	9.5nm,1.0s						
CPCT	**Cooper Cave**	**37.33**	**355**	*e*P	**P**	**05 26 54.3**	**-0.6**
	13nm,1.0s						
HPIG		**37.35**	**322**	*e*P	**P**	**05 26 56.7**	**+1.3**
	4.9nm,0.8s						
V53A	**Saluda**	**37.44**	**357**	P	**P**	**05 26 55.7**	**-0.1**
	baz=177						
V53A	**Saluda**	**37.44**	**357**	*e*P	**P**	**05 26 55.1**	**-0.8**
	14nm,1.3s						
TKL	**Tuckaleechee C**	**37.48**	**356**	P	**P**	**05 26 55.6**	**-0.6**
	6.0nm,1.0s,baz=176,slow=8.7,SNR=5.4						
TKL				LR	LR	05 43 01.9	
	comp=Z,375nm,18.2s,baz=182,slow=37						
TKL	**Tuckaleechee C**	**37.48**	**356**	*e*P	**P**	**05 26 53.9**	**-2.3**
	12nm,1.1s						
V50A	**Pikevile**	**37.60**	**354**	P	**P**	**05 26 57.2**	**0.0**
	baz=173						
Y40A	**Okolona**	**37.60**	**343**	P	**P**	**05 26 56.5**	**-0.7**
	baz=159						
V52A	**Sevierville**	**37.65**	**356**	P	**P**	**05 26 56.6**	**-1.1**
	baz=175,SNR=5.5						
V52A	**Sevierville**	**37.65**	**356**	*e*P	**P**	**05 26 56.5**	**-1.1**
	19nm,1.3s						
X42A	**Stuttgart**	**37.66**	**345**	P	**P**	**05 26 59.0**	**+1.3**
	baz=162						
V51A	**Loudon**	**37.67**	**355**	P	**P**	**05 26 57.4**	**-0.3**
	baz=174						
V51A	**Loudon**	**37.67**	**355**	*e*P	**P**	**05 26 57.5**	**-0.3**
	11nm,1.1s						
W45A	**Hickory Valley**	**37.70**	**349**	P	**P**	**05 26 58.1**	**+0.1**
	baz=166						
V49A	**McMinnville**	**37.78**	**353**	P	**P**	**05 26 58.2**	**-0.5**
	baz=172						
NCAT	**North Carolina**	**37.81**	**1**	*e*P	**P**	**05 26 58.8**	**-0.2**
	21nm,1.4s						
X41A	**Kaden, Bauxite**	**37.84**	**344**	P	**P**	**05 27 00.2**	**+1.0**
	baz=161						
V48A	**Smith Brothers**	**37.88**	**352**	P	**P**	**05 26 59.3**	**-0.2**
	baz=170						
V48A	**Smith Brothers**	**37.88**	**352**	*e*P	**P**	**05 26 59.1**	**-0.4**
	22nm,1.2s						
X40A	**Basin Creek Fa**	**37.92**	**344**	P	**P**	**05 27 00.3**	**+0.4**
	baz=160						
X40A	**Basin Creek Fa**	**37.92**	**344**	*e*P	**P**	**05 27 00.9**	**+1.0**
	9.3nm,1.3s						
W43A	**Forest City**	**37.95**	**347**	P	**P**	**05 27 01.7**	**+1.6**
	baz=164						
TXAR	**Lajitas Array**	**37.98**	**327**	P	**P**	**05 27 01.1**	**+0.6**
	1.2nm,0.6s,baz=145,slow=10.0,SNR=28						
TXAR				LR	LR	05 41 10.3	
	comp=Z,100nm,19.1s,baz=0.0,slow=34						

TX31	**Lajitas Ar. Si**	**37.98**	**327**	*e*P	**P**	**05 27 01.1**	**+0.5**
UALR	**University of** 19nm,1.1s	**38.06**	**345**	*e*P	**P**	**05 27 01.7**	**+0.7**
V47A	**Nunnelly** baz=169	**38.06**	**351**	P	**P**	**05 27 01.7**	**+0.6**
U53A	**Fall Branch** baz=177	**38.12**	**358**	P	**P**	**05 27 00.9**	**-0.7**
V46A	**Holladay** baz=168	**38.13**	**350**	P	**P**	**05 27 01.2**	**-0.5**
U52A	**Thorn Hill** baz=176	**38.19**	**357**	P	**P**	**05 27 02.4**	**+0.2**
MIAR	**Mount Ida** baz=159	**38.19**	**343**	P	**P**	**05 27 03.1**	**+1.0**
MIAR	**Mount Ida** 9.3nm,1.0s	**38.19**	**343**	*e*P	**P**	**05 27 03.0**	**+0.8**
U51A	**La Follette** baz=175	**38.21**	**356**	P	**P**	**05 27 03.2**	**+0.8**
X39A	**Fountain Ranch** baz=158	**38.32**	**342**	P	**P**	**05 27 03.7**	**+0.4**
U50A	**Jamestown** baz=173,SNR=6.0	**38.32**	**355**	P	**P**	**05 27 02.6**	**-0.6**
TZTN	**Tazewell** baz=176	**38.35**	**357**	P	**P**	**05 27 02.9**	**-0.6**
TZTN	**Tazewell** 15nm,1.4s	**38.35**	**357**	*e*P	**P**	**05 27 02.9**	**-0.6**
WVT	**Waverly** baz=169	**38.41**	**351**	P	**P**	**05 27 02.6**	**-1.3**
WVT	**Waverly** 18nm,1.4s	**38.41**	**351**	*e*P	**P**	**05 27 03.0**	**-1.0**
W41B	**Gary Mavity, V** baz=161	**38.41**	**345**	P	**P**	**05 27 04.4**	**+0.4**
W41B	**Gary Mavity, V** 25nm,1.2s	**38.41**	**345**	*e*P	**P**	**05 27 04.0**	**0.0**
U49A	**Red Boiling Sp** baz=172	**38.51**	**354**	P	**P**	**05 27 04.0**	**-0.8**
WHAR	**Wooly Hollow** 16nm,0.9s	**38.53**	**345**	*e*P	**P**	**05 27 05.0**	**0.0**
U48A	**Cassie Pea, Po** baz=171	**38.60**	**353**	P	**P**	**05 27 06.4**	**+0.9**
W40A	**Ferguson Farm,** baz=160	**38.65**	**344**	P	**P**	**05 27 07.3**	**+1.3**
ABTX	**Abilene, Hawle** baz=149	**38.68**	**334**	P	**P**	**05 27 07.9**	**+1.5**
ABTX	**Abilene, Hawle** 11nm,1.0s	**38.68**	**334**	*e*P	**P**	**05 27 07.0**	**+0.6**
U45A	**Rockin P Farm,** baz=167	**38.78**	**350**	P	**P**	**05 27 08.0**	**+0.9**
T51A	**Gray** baz=175	**38.79**	**356**	P	**P**	**05 27 08.0**	**+0.8**
V42A	**Cord** baz=163	**38.80**	**346**	P	**P**	**05 27 08.8**	**+1.6**
W39A	**Magazine** baz=159,SNR=9.7	**38.86**	**343**	P	**P**	**05 27 08.0**	**+0.3**
W39A	**Magazine** 20nm,1.0s	**38.86**	**343**	*e*P	**P**	**05 27 07.8**	**+0.1**
U44B	**Burton Farm, H** baz=166	**38.88**	**349**	P	**P**	**05 27 08.3**	**+0.4**
T52A	**Hallie** baz=176	**38.88**	**357**	P	**P**	**05 27 09.6**	**+1.6**
T50A	**Nancy** baz=174	**38.92**	**355**	P	**P**	**05 27 08.0**	**-0.3**
BLA	**Blacksburg** baz=180	**38.93**	**1**	P	**P**	**05 27 09.7**	**+1.2**
V41A	**Mountainview** baz=162,SNR=9.6	**38.97**	**345**	P	**P**	**05 27 08.4**	**-0.3**
T49A	**Edmonton** baz=172	**39.07**	**354**	P	**P**	**05 27 08.7**	**-0.8**
T49A	**Edmonton** 9.3nm,1.0s	**39.07**	**354**	*e*P	**P**	**05 27 08.1**	**-1.5**
T47A	**Sharon Grove** baz=170	**39.14**	**352**	P	**P**	**05 27 09.0**	**-1.1**
V40A	**Witts Springs** baz=161	**39.16**	**345**	P	**P**	**05 27 10.1**	**-0.2**
V40A	**Witts Springs** 7.1nm,0.8s	**39.16**	**345**	*e*P	**P**	**05 27 11.0**	**+0.7**
T48A	**Bowling Green** baz=171	**39.17**	**353**	P	**P**	**05 27 10.7**	**+0.3**
PARMO	**Parma** 52nm,0.9s	**39.27**	**349**	*e*P	**P**	**05 27 11.4**	**+0.3**
U42A	**Revenden** baz=163	**39.28**	**347**	P	**P**	**05 27 10.6**	**-0.7**
T46A	**Princeton** baz=169	**39.31**	**351**	P	**P**	**05 27 11.0**	**-0.5**
T45A	**Paducah** 23nm,0.6s	**39.41**	**350**	*e*P	**P**	**05 27 12.0**	**-0.4**
V39A	**Pettigrew** baz=160	**39.42**	**344**	P	**P**	**05 27 12.0**	**-0.5**
U41A	**Viola** baz=162,SNR=6.0	**39.44**	**346**	P	**P**	**05 27 12.5**	**-0.1**
S51A	**Beattyville** baz=176	**39.44**	**357**	P	**P**	**05 27 12.3**	**-0.3**
S51A	**Beattyville** 11nm,0.9s	**39.44**	**357**	*e*P	**P**	**05 27 11.3**	**-1.3**
S52A	**Salyersville** baz=176	**39.45**	**357**	P	**P**	**05 27 11.8**	**-0.9**
PBMO	**Poplar Bluff** 10nm,1.0s	**39.52**	**348**	*e*P	**P**	**05 27 12.9**	**-0.3**
S50A	**Richmond** baz=174	**39.53**	**356**	P	**P**	**05 27 12.8**	**-0.6**
S48A	**Wiedeman Farm,** baz=172	**39.67**	**354**	P	**P**	**05 27 12.6**	**-2.0**
U40A	**Yellville** baz=161,SNR=17	**39.69**	**345**	P	**P**	**05 27 14.9**	**+0.2**
S47A	**Hartford** baz=170	**39.71**	**353**	P	**P**	**05 27 13.7**	**-1.1**
S49A	**Springfield** baz=173,SNR=6.5	**39.72**	**355**	P	**P**	**05 27 13.5**	**-1.4**
PLCA	**Paso Flores** 3.8nm,0.9s,baz=24,slow=11,SNR=5.4	**39.75**	**168**	P	**P**	**05 27 17.1**	**+1.8**
PLCA	 comp=Z,262nm,19.6s,baz=14,slow=32			LR	LR	05 40 35.3	
PLCA	**Paso Flores** 15nm,1.1s	**39.75**	**168**	*e*P	**P**	**05 27 15.0**	**-0.2**
T43A	**Greenville** baz=165	**39.78**	**348**	P	**P**	**05 27 15.3**	**-0.2**
U39A	**Green Forest** baz=160,SNR=11	**39.88**	**344**	P	**P**	**05 27 16.0**	**-0.3**
CVRD	**Centerville Ro** 11nm,0.9s	**39.89**	**4**	*e*P	**P**	**05 27 15.0**	**-1.3**
T42A	**Van Buren** baz=164,SNR=12	**39.90**	**347**	P	**P**	**05 27 15.7**	**-0.7**
T42A	**Van Buren** 15nm,0.9s	**39.90**	**347**	*e*P	**P**	**05 27 15.8**	**-0.7**
HHAR	**Hobbs** 11nm,0.9s	**39.91**	**343**	*e*P	**P**	**05 27 17.0**	**+0.4**
TRQA	**Tornquist** 19nm,1.0s	**39.92**	**157**	*e*P	**P**	**05 27 15.8**	**-0.8**
PTRD	**Partlow Road** 15nm,0.9s	**39.95**	**4**	*e*P	**P**	**05 27 16.3**	**-0.5**
PTRD				*e*S	**S**	**05 33 18.6**	**-1.9**
S45A	**Carrier Mills** baz=168	**40.04**	**350**	P	**P**	**05 27 17.1**	**-0.5**
T41A	**Mountain View** baz=163	**40.07**	**346**	P	**P**	**05 27 17.4**	**-0.5**
R51A	**Hillsboro** baz=176,SNR=8.0	**40.10**	**357**	P	**P**	**05 27 17.0**	**-1.0**
R50A	**Paris** baz=174	**40.13**	**356**	P	**P**	**05 27 17.4**	**-0.9**
TUL1	**Leonard** baz=156,SNR=9.7	**40.13**	**341**	P	**P**	**05 27 18.6**	**+0.1**
TUL1	**Leonard** 32nm,1.0s	**40.13**	**341**	*e*P	**P**	**05 27 18.8**	**+0.3**
WMOK	**Wichita Mounta** baz=151,SNR=7.7	**40.16**	**337**	P	**P**	**05 27 18.5**	**-0.2**
WMOK	**Wichita Mounta** 7.3nm,1.0s	**40.16**	**337**	*e*P	**P**	**05 27 18.8**	**+0.2**
S44A	**Carbondale** baz=167	**40.17**	**350**	P	**P**	**05 27 17.9**	**-0.8**
USIN	**University of** 62nm,1.5s	**40.18**	**352**	*e*P	**P**	**05 27 17.7**	**-1.0**
SIUC	**Southern Illin** 15nm,0.8s	**40.19**	**350**	*e*P	**P**	**05 27 18.1**	**-0.7**
R49A	**Shelbyville** baz=173	**40.21**	**355**	P	**P**	**05 27 18.7**	**-0.3**
S43A	**Fulton Ridge,** baz=166	**40.21**	**349**	P	**P**	**05 27 18.5**	**-0.5**
WCI	**Wyandotte Cave** baz=171	**40.26**	**353**	P	**P**	**05 27 18.3**	**-1.1**
WCI	**Wyandotte Cave** 11nm,1.0s	**40.26**	**353**	*e*P	**P**	**05 27 18.4**	**-1.1**
T40A	**Mansfield** baz=162,SNR=12	**40.35**	**346**	P	**P**	**05 27 19.2**	**-1.0**
T39A	**Clever** baz=160,SNR=12	**40.45**	**344**	P	**P**	**05 27 21.4**	**+0.3**
S42A	**Caledonia** baz=164	**40.55**	**348**	P	**P**	**05 27 21.9**	**+0.1**
S41A	**Jillco Farms,** baz=163,SNR=8.8	**40.58**	**347**	P	**P**	**05 27 22.0**	**-0.1**

GDL2	**Guadalupe Moun**	**40.59**	**329**	*e*P	**P**	**05 27 23.5**	**+1.1**
R45A	**Skylar, Fairfi** baz=168	**40.59**	**351**	P	**P**	**05 27 21.4**	**-0.8**
Q50A	**Georgetown** baz=175	**40.66**	**356**	P	**P**	**05 27 23.0**	**+0.2**
FVM	**French Village** 14nm,1.0s	**40.68**	**348**	*e*P	**P**	**05 27 23.6**	**+0.7**
R44A	**Waltonville** baz=167	**40.68**	**350**	P	**P**	**05 27 22.4**	**-0.5**
T38A	**Diamond** baz=159	**40.72**	**343**	P	**P**	**05 27 21.9**	**-1.3**
MNTX	**Cornudas Mount** baz=140,SNR=20	**40.74**	**327**	P	**P**	**05 27 23.1**	**-0.5**
MNTX	**Cornudas Mount** 11nm,1.0s	**40.74**	**327**	*e*P	**P**	**05 27 23.6**	**+0.1**
S40A	**Lebanon** baz=162,SNR=9.9	**40.77**	**346**	P	**P**	**05 27 23.5**	**-0.1**
Q51A	**Peebles** baz=176,SNR=5.1	**40.81**	**357**	P	**P**	**05 27 22.9**	**-1.1**
R43A	**Red Bud** baz=166	**40.86**	**349**	P	**P**	**05 27 23.6**	**-0.8**
Q49A	**Aurora** baz=174	**40.89**	**355**	P	**P**	**05 27 23.5**	**-1.1**
Q48A	**North Vernon** baz=172	**40.89**	**354**	P	**P**	**05 27 24.1**	**-0.6**
CCM	**Cathedral Cave** baz=164	**40.92**	**347**	P	**P**	**05 27 25.5**	**+0.7**
CCM	**Cathedral Cave** 15nm,1.1s	**40.92**	**347**	*e*P	**P**	**05 27 24.8**	**0.0**
Q47A	**Bedord North L** baz=171	**40.98**	**353**	P	**P**	**05 27 24.5**	**-0.8**
OLIL	**Olney** 23nm,1.0s	**41.00**	**351**	*e*P	**P**	**05 27 24.8**	**-0.7**
R42A	**Luebbering** baz=165	**41.04**	**348**	P	**P**	**05 27 25.4**	**-0.5**
S39A	**Bolivar** baz=161,SNR=20	**41.07**	**345**	P	**P**	**05 27 26.3**	**+0.2**
S39A	**Bolivar** 24nm,1.0s	**41.07**	**345**	*e*P	**P**	**05 27 26.5**	**+0.4**
Q45A	**Warren Harvey,** baz=169	**41.17**	**351**	P	**P**	**05 27 25.5**	**-1.4**
S38A	**Stockton** baz=160,SNR=10	**41.17**	**344**	P	**P**	**05 27 26.9**	**-0.1**
R41A	**Rosebud** baz=164	**41.18**	**347**	P	**P**	**05 27 26.5**	**-0.5**
MSTX	**Muleshoe** baz=146,SNR=11	**41.23**	**332**	P	**P**	**05 27 28.0**	**+0.4**
MSTX	**Muleshoe** 27nm,0.9s	**41.23**	**332**	*e*P	**P**	**05 27 28.2**	**+0.6**
SLM	**Saint Louis** 17nm,1.0s	**41.27**	**349**	*e*P	**P**	**05 27 26.7**	**-1.0**
Q44A	**Meyer Farm, Va** baz=168	**41.31**	**350**	P	**P**	**05 27 26.7**	**-1.3**
R40A	**Maddies Statio** baz=162	**41.38**	**346**	P	**P**	**05 27 27.9**	**-0.7**
R40A	**Maddies Statio** 11nm,1.0s	**41.38**	**346**	*e*P	**P**	**05 27 27.9**	**-0.7**
P48A	**Milroy** baz=173	**41.39**	**355**	P	**P**	**05 27 27.6**	**-1.1**
P50A	**Jamestown** baz=175	**41.41**	**357**	P	**P**	**05 27 27.7**	**-1.2**
Q43A	**New Douglas** baz=166	**41.47**	**350**	P	**P**	**05 27 28.8**	**-0.5**
AMTX	**Amarillo** baz=148	**41.49**	**334**	P	**P**	**05 27 30.6**	**+0.8**
AMTX	**Amarillo** 17nm,0.8s	**41.49**	**334**	*e*P	**P**	**05 27 29.8**	**+0.1**
P47A	**Martinsville** baz=172	**41.50**	**354**	P	**P**	**05 27 29.1**	**-0.6**
R39A	**Chumby, Stover** baz=161	**41.58**	**346**	P	**P**	**05 27 29.9**	**-0.5**
Q42A	**Golden Eagle** baz=165	**41.60**	**349**	P	**P**	**05 27 30.5**	**+0.1**
R38A	**Fenwick Farm,** baz=160	**41.69**	**344**	P	**P**	**05 27 31.0**	**-0.2**
P45A	**Graceland, Par** baz=170	**41.73**	**352**	P	**P**	**05 27 31.8**	**+0.3**
Q41A	**Truxton** baz=164	**41.78**	**348**	P	**P**	**05 27 31.4**	**-0.5**
P44A	**Sand Creek, Wi** baz=168	**41.80**	**351**	P	**P**	**05 27 31.5**	**-0.5**
O50A	**Cable** baz=176	**41.94**	**357**	P	**P**	**05 27 32.0**	**-1.2**
Q40A	**Laux Farm, Aux** baz=163	**42.00**	**347**	P	**P**	**05 27 33.5**	**-0.2**
O49A	**Covington** baz=175	**42.02**	**356**	P	**P**	**05 27 32.7**	**-1.2**
O56A	**Blue Knob Stat** baz=183	**42.04**	**3**	P	**P**	**05 27 33.5**	**-0.5**
O56A	**Blue Knob Stat** 14nm,1.2s	**42.04**	**3**	*e*P	**P**	**05 27 33.1**	**-0.9**
P43A	**Skaggs, Pawnee** baz=167	**42.12**	**350**	P	**P**	**05 27 33.3**	**-1.3**
HSIG	 3.8nm,0.9s	**42.16**	**319**	*e*P	**P**	**05 27 35.8**	**+0.6**
O48A	**Farmland** baz=173	**42.16**	**355**	P	**P**	**05 27 34.7**	**-0.3**
P42A	**Winchester** baz=166	**42.21**	**349**	P	**P**	**05 27 35.2**	**-0.2**
P42A	**Winchester** 8.4nm,0.9s	**42.21**	**349**	*e*P	**P**	**05 27 34.5**	**-0.9**
O47A	**Sheridan** baz=172	**42.23**	**354**	P	**P**	**05 27 34.2**	**-1.4**
Q39A	**Willow Grove F** baz=162	**42.26**	**346**	P	**P**	**05 27 35.4**	**-0.5**
Q38A	**Cooks Store, C** baz=161,SNR=8.4	**42.34**	**345**	P	**P**	**05 27 36.6**	**+0.1**
P41A	**Barry, Barry** baz=165	**42.44**	**348**	P	**P**	**05 27 37.6**	**+0.4**
SSPA	**Standing Stone** baz=184	**42.44**	**3**	P	**P**	**05 27 35.9**	**-1.3**
SSPA	**Standing Stone** 21nm,1.3s	**42.44**	**3**	*e*P	**P**	**05 27 37.1**	**-0.2**
O44A	**Mansfield** baz=169	**42.45**	**351**	P	**P**	**05 27 37.9**	**+0.6**
SFIN	**Lafayette** baz=171	**42.48**	**353**	P	**P**	**05 27 37.0**	**-0.5**
P40A	**Paris** baz=163	**42.51**	**347**	P	**P**	**05 27 37.6**	**-0.2**
P40A	**Paris** 4.9nm,0.8s	**42.51**	**347**	*e*P	**P**	**05 27 37.3**	**-0.5**
N50A	**Nevada** baz=176	**42.54**	**357**	P	**P**	**05 27 37.7**	**-0.4**
LUPA	**Lehigh Univers** 1.4nm,1.0s	**42.61**	**6**	*e*P	**P**	**05 27 38.3**	**-0.4**
P39B	**Salisbury** baz=162	**42.63**	**346**	P	**P**	**05 27 39.2**	**+0.4**
N54A	**Moraine State** baz=181	**42.68**	**1**	P	**P**	**05 27 39.1**	**-0.2**
N54A	**Moraine State** 24nm,1.2s	**42.68**	**1**	*e*P	**P**	**05 27 37.8**	**-1.5**
121A	**Cookes Peak, D** baz=138,SNR=7.8	**42.70**	**326**	P	**P**	**05 27 39.9**	**+0.1**
O41A	**Passleys Farm,** baz=165	**42.83**	**349**	P	**P**	**05 27 39.4**	**-1.1**
N59A	**State Game Lan** baz=187	**42.88**	**6**	P	**P**	**05 27 41.2**	**+0.3**
N59A	**State Game Lan** 11nm,0.8s	**42.88**	**6**	*e*P	**P**	**05 27 40.3**	**-0.6**
P38A	**Dawn** 7.6nm,1.0s	**42.95**	**346**	*e*P	**P**	**05 27 41.2**	**-0.2**
N44A	**Piper City** baz=169	**43.03**	**352**	P	**P**	**05 27 40.6**	**-1.4**
O40A	**La Belle** baz=164	**43.04**	**348**	P	**P**	**05 27 41.3**	**-0.8**
P37A	**Lathrop** baz=160	**43.12**	**345**	P	**P**	**05 27 43.2**	**+0.4**
M50A	**Fremont** baz=177	**43.16**	**358**	P	**P**	**05 27 42.5**	**-0.6**
PAL	**Palisades** baz=190	**43.19**	**8**	P	**P**	**05 27 43.3**	**0.0**
M54A	**Oil Creek Stat** baz=182	**43.24**	**1**	P	**P**	**05 27 43.6**	**-0.2**
M54A	**Oil Creek Stat** 14nm,1.1s	**43.24**	**1**	*e*P	**P**	**05 27 42.1**	**-1.7**
M49A	**Liberty Center** baz=175	**43.28**	**357**	P	**P**	**05 27 43.7**	**-0.3**
BNM	**Barren Site**	**43.30**	**328**	*e*P	**P**	**05 27 45.9**	**+1.2**
KSU1	**Kansas State U** baz=157	**43.32**	**342**	P	**P**	**05 27 43.7**	**-0.8**
KSU1	**Kansas State U** 55nm,0.9s	**43.32**	**342**	*e*P	**P**	**05 27 44.9**	**+0.5**
N43A	**Stutzman Famil** baz=168	**43.32**	**351**	P	**P**	**05 27 44.2**	**-0.2**
N42A	**Yates City** baz=166	**43.36**	**350**	P	**P**	**05 27 43.9**	**-0.8**
ALLY	**Alegheny Colle** 19nm,1.1s	**43.37**	**1**	*e*P	**P**	**05 27 44.3**	**-0.5**

N41A	**Harden Midland** baz=165	**43.39**	**349**	P	**P**	**05 27 44.2**	**-0.8**
N41A	**Harden Midland** 6.6nm,0.6s	**43.39**	**349**	*e*P	**P**	**05 27 43.1**	**-1.8**
LENM	**Lemitar**	**43.49**	**328**	*e*P	**P**	**05 27 45.8**	**-0.3**
KSPA	**Keystone Colle** 14nm,1.1s	**43.52**	**6**	*e*P	**P**	**05 27 45.2**	**-0.8**
M44A	**Midewin, Midew** baz=169	**43.60**	**352**	P	**P**	**05 27 45.2**	**-1.4**
LAZ	**Ladron**	**43.76**	**328**	*e*P	**P**	**05 27 49.8**	**+1.5**
L48A	**N Adams** baz=175	**43.78**	**356**	P	**P**	**05 27 46.9**	**-1.2**
TASL	**Snake Pit, Alb** baz=141,SNR=28	**43.82**	**329**	P	**P**	**05 27 47.5**	**-1.3**
ANMO	**Albuquerque** 16nm,0.7s,baz=137,slow=7.6,SNR=68	**43.82**	**329**	P	**P**	**05 27 49.6**	**+0.8**
ANMO	**Albuquerque** baz=141	**43.82**	**329**	P	**P**	**05 27 47.5**	**-1.3**
ANMO	**Albuquerque** 15nm,0.8s	**43.82**	**329**	*e*P	**P**	**05 27 50.0**	**+1.2**
TASM	**ASL Pad, Albuq** baz=141,SNR=30	**43.83**	**329**	P	**P**	**05 27 48.1**	**-0.8**
N39A	**Derby Farms, D** baz=163	**43.90**	**347**	P	**P**	**05 27 48.8**	**-0.2**
N39A	**Derby Farms, D** 13nm,1.0s	**43.90**	**347**	*e*P	**P**	**05 27 47.6**	**-1.4**
L49A	**Milan** baz=176	**43.90**	**357**	P	**P**	**05 27 49.0**	**-0.1**
N38A	**Joes South For** baz=162	**43.98**	**346**	P	**P**	**05 27 50.1**	**+0.3**
AAM	**Ann Arbor** 23nm,1.3s	**44.09**	**357**	*e*P	**P**	**05 27 49.7**	**-0.8**
CBKS	**Cedar Bluff** baz=152	**44.11**	**339**	P	**P**	**05 27 50.3**	**-0.5**
CBKS	**Cedar Bluff** 16nm,0.8s	**44.11**	**339**	*e*P	**P**	**05 27 50.0**	**-0.8**
BINY	**Binghamton** baz=187	**44.13**	**5**	P	**P**	**05 27 50.7**	**-0.3**
BINY	**Binghamton** 14nm,0.8s	**44.13**	**5**	*e*P	**P**	**05 27 50.2**	**-0.8**
N37A	**Lee Faris, Mou** baz=161	**44.19**	**345**	P	**P**	**05 27 51.2**	**-0.2**
N37A	**Lee Faris, Mou** 20nm,0.8s	**44.19**	**345**	*e*P	**P**	**05 27 51.5**	**+0.1**
TUC	**Tucson** baz=134	**44.29**	**323**	P	**P**	**05 27 52.6**	**+0.1**
TUC	**Tucson** 8.3nm,1.0s	**44.29**	**323**	*e*P	**P**	**05 27 53.1**	**+0.6**
M39A	**Webster** baz=164	**44.40**	**348**	P	**P**	**05 27 52.3**	**-0.8**
L42A	**Oliver, Polo** baz=167	**44.44**	**351**	P	**P**	**05 27 52.9**	**-0.5**
MMNY	**Mt. Morris Dam** 32nm,1.4s	**44.52**	**3**	*e*P	**P**	**05 27 53.3**	**-0.8**
M38A	**Pleasantville** baz=162	**44.57**	**347**	P	**P**	**05 27 53.9**	**-0.5**
T25A	**Trinidad** baz=145,SNR=16	**44.59**	**333**	P	**P**	**05 27 55.6**	**+0.7**
T25A	**Trinidad** 16nm,0.8s	**44.59**	**333**	*e*P	**P**	**05 27 55.7**	**+0.7**
L41A	**Preston** baz=166	**44.65**	**350**	P	**P**	**05 27 54.3**	**-0.8**
M37A	**Trindle Farm,** baz=161	**44.76**	**346**	P	**P**	**05 27 56.3**	**+0.3**
L40A	**Anamosa** baz=165	**44.77**	**349**	P	**P**	**05 27 55.5**	**-0.5**
L40A	**Anamosa** 24nm,1.3s	**44.77**	**349**	*e*P	**P**	**05 27 55.5**	**-0.5**
TRY	**Troy** 26nm,1.3s	**44.92**	**8**	*e*P	**P**	**05 27 55.9**	**-1.3**
K43A	**Burlington** baz=169	**44.93**	**352**	P	**P**	**05 27 55.0**	**-2.3**
K43A	**Burlington** 21nm,1.1s	**44.93**	**352**	*e*P	**P**	**05 27 55.9**	**-1.4**
L39A	**Vinton** baz=164	**44.98**	**348**	P	**P**	**05 27 57.5**	**-0.2**
M36A	**Felix, Anita** baz=160	**44.99**	**345**	P	**P**	**05 27 58.4**	**+0.6**
SCIA	**State Center** 21nm,1.0s	**45.04**	**347**	*e*P	**P**	**05 27 58.0**	**-0.2**
K41A	**Shullsburg** baz=166	**45.14**	**350**	P	**P**	**05 27 58.4**	**-0.5**
K42A	**Prairie Point,** baz=168	**45.15**	**351**	P	**P**	**05 27 59.3**	**+0.3**
L38A	**Oak Wood Farm,** baz=163	**45.20**	**347**	P	**P**	**05 27 59.0**	**-0.5**
214A	**Organ Pipe Nat** baz=132,SNR=9.9	**45.31**	**321**	P	**P**	**05 28 01.0**	**+0.4**
L37A	**Phoenix Point,** baz=162	**45.37**	**347**	P	**P**	**05 28 00.8**	**+0.1**
K40A	**Colesburg** baz=165	**45.37**	**349**	P	**P**	**05 27 59.7**	**-1.1**
KSCO	**Kaye Shedlock'** 36nm,1.4s	**45.39**	**336**	*e*P	**P**	**05 28 01.2**	**0.0**
JFWS	**Jewell Farm** baz=167	**45.42**	**350**	P	**P**	**05 28 00.1**	**-1.1**
JFWS	**Jewell Farm** 9.6nm,0.9s	**45.42**	**350**	*e*P	**P**	**05 28 00.1**	**-1.1**
K39A	**Oelwein** baz=164,SNR=5.4	**45.52**	**349**	P	**P**	**05 28 00.7**	**-1.3**
L36A	**Harm Buss Farm** baz=160	**45.57**	**346**	P	**P**	**05 28 01.8**	**-0.5**
SDCO	**Great Sand Dun** baz=144,SNR=32	**45.59**	**332**	P	**P**	**05 28 03.9**	**+0.9**
SDCO	**Great Sand Dun** 16nm,0.8s	**45.59**	**332**	*e*P	**P**	**05 28 04.1**	**+1.1**
J43A	**Natural Harves** baz=169	**45.60**	**352**	P	**P**	**05 28 02.1**	**-0.6**
K38A	**Parkersburg** baz=163	**45.65**	**348**	P	**P**	**05 28 02.5**	**-0.5**
K38A	**Parkersburg** 12nm,0.9s	**45.65**	**348**	*e*P	**P**	**05 28 02.5**	**-0.5**
J41A	**Loganville** baz=167	**45.83**	**351**	P	**P**	**05 28 03.5**	**-0.8**
BGNE	**Belgrade** baz=156	**45.90**	**342**	P	**P**	**05 28 05.1**	**0.0**
BGNE	**Belgrade** 23nm,0.9s	**45.90**	**342**	*e*P	**P**	**05 28 07.3**	**+2.2**
K37A	**Belmond** baz=162	**45.95**	**347**	P	**P**	**05 28 05.4**	**0.0**
J40A	**Soldiers Grove** baz=166	**45.98**	**350**	P	**P**	**05 28 05.0**	**-0.6**
K36A	**Gilmore City** baz=161,SNR=6.6	**46.02**	**346**	P	**P**	**05 28 04.8**	**-1.1**
I43A	**Langenfeld Bro** baz=170	**46.06**	**353**	P	**P**	**05 28 04.0**	**-2.3**
J39A	**Decorah** baz=165	**46.09**	**349**	P	**P**	**05 28 05.7**	**-0.8**
I42A	**Draeger Farm,** baz=169	**46.17**	**352**	P	**P**	**05 28 05.1**	**-2.0**
S22A	**4UR Ranch, Cre** baz=143,SNR=6.7	**46.21**	**331**	P	**P**	**05 28 08.1**	**+0.2**
S22A	**4UR Ranch, Cre** 11nm,1.3s	**46.21**	**331**	*e*P	**P**	**05 28 08.3**	**+0.4**
J38A	**Wedel Dairy, R** baz=164	**46.23**	**348**	P	**P**	**05 28 07.0**	**-0.5**
Q24A	**Divide** 6.9nm,0.8s	**46.42**	**334**	*e*P	**P**	**05 28 10.0**	**+0.4**
I40A	**Norwalk** baz=166	**46.44**	**350**	P	**P**	**05 28 08.6**	**-0.6**
J37A	**Redenius Farm,** baz=162	**46.45**	**347**	P	**P**	**05 28 09.1**	**-0.3**
I41A	**Arkdale** baz=167	**46.48**	**351**	P	**P**	**05 28 09.5**	**0.0**
SADO	**Sadowa** 18nm,1.2s	**46.51**	**2**	*e*P	**P**	**05 28 08.1**	**-1.6**
I39A	**Houston** baz=165,SNR=5.8	**46.56**	**349**	P	**P**	**05 28 08.9**	**-1.2**
I39A	**Houston** 12nm,0.8s	**46.56**	**349**	*e*P	**P**	**05 28 08.6**	**-1.6**
H43A	**Windswept, Lux** baz=170	**46.59**	**353**	P	**P**	**05 28 10.4**	**0.0**
H43A	**Windswept, Lux** 23nm,0.8s	**46.59**	**353**	*e*P	**P**	**05 28 09.6**	**-0.8**
MVCO	**Mesa Verde** baz=140	**46.62**	**329**	P	**P**	**05 28 11.0**	**0.0**
MVCO	**Mesa Verde** 7.7nm,0.8s	**46.62**	**329**	*e*P	**P**	**05 28 10.9**	**-0.2**
LBNH	**Lisbon** baz=192	**46.64**	**9**	P	**P**	**05 28 10.1**	**-0.7**
J36A	**Seneca 1, Swea** baz=161,SNR=8.6	**46.65**	**346**	P	**P**	**05 28 10.3**	**-0.6**
J36A	**Seneca 1, Swea** 14nm,0.7s	**46.65**	**346**	*e*P	**P**	**05 28 10.8**	**-0.1**
GLMI	**Grayling** baz=175	**46.66**	**356**	P	**P**	**05 28 10.3**	**-0.7**
GLMI	**Grayling** 30nm,1.0s	**46.66**	**356**	*e*P	**P**	**05 28 09.9**	**-1.0**

LONY	Lake Ozonia baz=188	46.67	6	P	P	05 28 10.4	-0.6
LONY	Lake Ozonia 29nm,1.5s	46.67	6	*e*P	P	05 28 09.7	-1.3
H42A	Shiocton baz=169	46.73	352	P	P	05 28 10.0	-1.4
H42A	Shiocton 8.4nm,1.0s	46.73	352	*e*P	P	05 28 10.4	-1.0
OGNE	Ogallala baz=150	46.82	338	P	P	05 28 12.3	-0.1
OGNE	Ogallala 14nm,0.8s	46.82	338	*e*P	P	05 28 12.8	+0.4
PLVO	Plevna 17nm,1.2s	46.87	4	*e*P	P	05 28 11.7	-0.9
I38A	Scanlan Farm, baz=164	46.90	349	P	P	05 28 11.4	-1.4
WUAZ	Wupatki baz=136	46.91	325	P	P	05 28 13.0	-0.3
WUAZ	Wupatki 18nm,0.9s	46.91	325	*e*P	P	05 28 12.1	-1.2
H41A	Junction City 8.6nm,1.0s	46.99	351	*e*P	P	05 28 12.4	-1.1
I37A	Lemond, Waseca baz=163	47.09	348	P	P	05 28 12.3	-2.0
H40A	Chili baz=167	47.11	351	P	P	05 28 13.3	-1.1
I36A	Fitzsimmons Fa baz=162	47.23	347	P	P	05 28 13.4	-2.0
GLA	Glamis baz=131	47.31	320	P	P	05 28 15.8	-0.5
GLA	Glamis 7.8nm,0.8s	47.31	320	*e*P	P	05 28 16.9	+0.7
ISCO	Idaho Springs baz=145	47.31	334	P	P	05 28 17.0	+0.5
ISCO	Idaho Springs 5.9nm,0.9s	47.31	334	*e*P	P	05 28 16.5	0.0
H39A	Augusta baz=166	47.32	350	P	P	05 28 15.5	-0.6
G43A	Wallace baz=171	47.36	353	P	P	05 28 14.9	-1.4
G43A	Wallace 15nm,0.8s	47.36	353	*e*P	P	05 28 15.8	-0.6
PV01	Paradox Valley	47.37	330	*e*P	P	05 28 17.8	+0.9
SMCO	Snowmass 9.7nm,1.0s	47.42	332	*e*P	P	05 28 17.0	-0.5
G42A	Mountain baz=170	47.44	353	P	P	05 28 15.2	-1.7
H38A	Maiden Rock baz=164	47.50	349	P	P	05 28 17.5	0.0
PV02	Paradox Valley 15nm,0.8s	47.51	330	*e*P	P	05 28 17.3	-0.6
PV13	Radium Mtn., P 17nm,0.8s	47.51	330	*e*P	P	05 28 18.9	+0.9
Y12C	Blythe baz=131	47.57	321	P	P	05 28 18.4	+0.2
Y12C	Blythe 12nm,1.2s	47.57	321	*e*P	P	05 28 17.8	-0.4
PV05	Paradox Valley	47.59	330	*e*P	P	05 28 19.3	+0.7
ECSD	EROS Data Cent baz=158,SNR=13	47.60	345	P	P	05 28 17.5	-0.7
ECSD	EROS Data Cent 9.1nm,0.8s	47.60	345	*e*P	P	05 28 17.8	-0.5
PV03	Paradox Valley	47.60	330	*e*P	P	05 28 19.4	+0.8
F46A	Macinaw City C baz=175	47.61	356	P	P	05 28 18.2	-0.1
PV18	Skein Mesa, Pa 13nm,0.8s	47.62	330	*e*P	P	05 28 18.8	0.0
PV12	Saucer Basin, 23nm,0.8s	47.63	330	*e*P	P	05 28 19.9	+1.0
PV11	David Mesa, Pa 16nm,0.8s	47.65	330	*e*P	P	05 28 19.9	+0.9
PV17	East Wray Mesa 12nm,0.9s	47.68	330	*e*P	P	05 28 20.1	+0.9
PV16	Nyswonger Mesa 8.3nm,0.9s	47.68	330	*e*P	P	05 28 20.1	+0.8
G40A	Rib Lake baz=167	47.71	351	P	P	05 28 17.7	-1.5
PV19	Morning Glory 5.8nm,0.8s	47.71	330	*e*P	P	05 28 20.2	+0.7
PV20	West Nyswonger 6.4nm,0.8s	47.73	330	*e*P	P	05 28 20.1	+0.5
H36A	Jessenland, He baz=162	47.74	347	P	P	05 28 19.4	0.0
PV14	Lion Creek, Pa 16nm,1.3s	47.78	330	*e*P	P	05 28 20.5	+0.4
PV14				*e*S	S	05 35 11.6	-3.8
PV22	Blue Mesa, Par 8.5nm,0.9s	47.79	330	*e*P	P	05 28 20.9	+0.9
PV10	Paradox Valley	47.79	330	*e*P	P	05 28 20.4	+0.3
PV23	Carpenter Ridg 7.1nm,0.8s	47.83	330	*e*P	P	05 28 20.7	+0.2
SWSC	Sam W. Stewart baz=130	47.87	319	P	P	05 28 20.4	-0.1
F43A	Flat Rock, Esc baz=171	47.87	354	P	P	05 28 22.0	+1.7
IKP	In-Ko-Pah, Jac baz=129	47.88	319	P	P	05 28 21.4	+0.6
G39A	Holcombe baz=166	47.89	350	P	P	05 28 19.9	-0.6
G38A	Ridgeland baz=165	47.89	350	P	P	05 28 20.0	-0.6
PV21	Cone Mtn., Par 3.4nm,0.9s	47.90	330	*e*P	P	05 28 21.3	+0.3
PV09	Paradox Valley	47.93	330	*e*P	P	05 28 21.9	+0.6
F44A	Big Bay de Noc baz=172	47.94	355	P	P	05 28 20.8	-0.1
H35A	Sunnyside Ranc baz=161	48.06	347	P	P	05 28 21.5	-0.3
PKME	Peaks-Kenny Pk baz=195	48.09	11	P	P	05 28 21.3	-0.7
BC3	Big Chuckawall baz=130,SNR=10	48.10	320	P	P	05 28 23.3	+0.8
SPMN	Marine on St. baz=164	48.13	349	P	P	05 28 21.5	-0.8
SPMN	Marine on St. 8.8nm,1.1s	48.13	349	*e*P	P	05 28 21.0	-1.3
IRM	Iron Mountain baz=131,SNR=8.2	48.23	321	P	P	05 28 24.2	+0.8
MONP2	Monument Peak baz=129	48.24	319	P	P	05 28 23.3	-0.4
BAR	Barrett 8.0nm,1.0s	48.27	319	*e*P	P	05 28 25.0	+1.3
N23A	Red Feather La baz=145	48.36	335	P	P	05 28 24.2	-0.3
E43A	Lone Tree Farm baz=172	48.39	354	P	P	05 28 23.2	-1.2
E43A	Lone Tree Farm 11nm,0.8s	48.39	354	*e*P	P	05 28 22.8	-1.6
E42A	Champion baz=170	48.55	353	P	P	05 28 24.9	-0.6
BELC	Belle Mtn. Jos baz=130,SNR=5.6	48.66	320	P	P	05 28 27.6	+0.8
109C	Camp Elliot, M baz=128	48.69	319	P	P	05 28 27.3	+0.4
CPE	Camp Elliot 8.9nm,0.6s	48.69	319	*e*P	P	05 28 26.6	-0.3
XPFO	Piæon Flat 8.6nm,1.0s	48.71	320	*e*P	P	05 28 26.8	-0.4
PFO	Pinyon Flats O baz=129	48.71	320	P	P	05 28 28.0	+0.8
PFO	Pinyon Flats O 9.3nm,1.1s	48.71	320	*e*P	P	05 28 26.7	-0.5
FRD	Ford Ranch, An baz=129,SNR=5.5	48.73	319	P	P	05 28 28.5	+1.2
O20A	White River Ci baz=142	48.77	332	P	P	05 28 28.3	+0.6
O20A	White River Ci 15nm,1.3s	48.77	332	*e*P	P	05 28 26.4	-1.3
KNB	Kanab 10nm,1.3s	48.80	326	*e*P	P	05 28 27.4	-0.5
E40A	Wakefield baz=168	48.81	352	P	P	05 28 27.6	-0.1
GMRC	Granite Mounta baz=131	48.96	321	P	P	05 28 29.7	+0.5
LCMT	Little Creek M 5.8nm,1.0s	49.03	325	*e*P	P	05 28 29.7	0.0
SRU	San Rafael Swe 13nm,1.1s	49.10	329	*e*P	P	05 28 29.5	-0.7
MURC	Murrieta baz=128	49.19	319	P	P	05 28 30.8	+0.1
D41A	Chassel baz=170	49.24	353	P	P	05 28 30.0	-0.9
P18A	Preston Nutter	49.35	330	*e*P	P	05 28 32.0	-0.3
SZCU	Shurtz Canyon 11nm,1.2s	49.36	326	*e*P	P	05 28 32.2	0.0
BBRC	Big Bear Solar baz=129	49.42	320	P	P	05 28 33.7	+1.0
CCUT	Cedar City 11nm,1.1s	49.48	326	*e*P	P	05 28 33.7	+0.5
P17A	Butcher Ranch, 12nm,0.9s	49.48	330	*e*P	P	05 28 33.4	+0.3
MSU	Marysvale	49.52	328	*e*P	P	05 28 33.6	+0.1
RWWY	Rawlins 18nm,1.1s	49.55	334	*e*P	P	05 28 33.0	-0.6
TMUT	Trail Mountain 10nm,1.5s	49.59	329	*e*P	P	05 28 34.2	+0.1
TCRU	Three Creeks R 8.3nm,0.8s	49.73	327	*e*P	P	05 28 35.6	+0.5
SHPR	Sheep Range 3.3nm,0.9s	49.80	324	*e*P	P	05 28 35.3	-0.2
CIS	Catalina Islan baz=127	49.87	318	P	P	05 28 36.0	0.0
BFSC	Mount Baldy Ra baz=128	49.88	320	P	P	05 28 37.0	+0.8
GSC	Goldstone, Bar baz=130,SNR=6.5	50.01	321	P	P	05 28 38.2	+1.2
GSC	Goldstone, Bar 20nm,1.3s	50.01	321	*e*P	P	05 28 38.1	+1.0
K22A	Casper baz=146	50.05	335	P	P	05 28 38.2	+0.9
K22A	Casper 5.7nm,0.8s	50.05	335	*e*P	P	05 28 37.8	+0.5
RSSD	Black Hills baz=149	50.31	338	P	P	05 28 39.6	+0.3
RSSD	Black Hills 12nm,0.9s	50.31	338	*e*P	P	05 28 39.9	+0.5
MPU	Maple Canyon 4.1nm,0.8s	50.34	329	*e*P	P	05 28 39.8	+0.2
C37A	Embarrass baz=165	50.43	350	P	P	05 28 40.7	+0.8
PSUT	Pine Spring 6.3nm,0.9s	50.45	326	*e*P	P	05 28 40.8	+0.3
EDW2	Edwards Air Fo baz=129,SNR=5.6	50.50	320	P	P	05 28 41.5	+0.8
C36A	Pine Crest Far baz=164	50.57	350	P	P	05 28 41.2	+0.2
LRMC	Laurel Mtn Rad baz=129	50.67	321	P	P	05 28 42.4	+0.2
JLU	Jordanelle 12nm,1.0s	50.69	330	*e*P	P	05 28 42.8	+0.4
TPNV	Topopah Spring baz=132,SNR=7.4	50.74	323	P	P	05 28 43.9	+1.3
TPNV	Topopah Spring 10.0nm,1.3s	50.74	323	*e*P	P	05 28 43.3	+0.6
FURC	Furnace Creek, baz=131,SNR=7.2	50.80	322	P	P	05 28 43.3	+0.5
CTU	Camp Tracy 6.6nm,0.9s	50.91	330	*e*P	P	05 28 44.7	+0.8
MPMC	Manual Prospec baz=130,SNR=5.9	50.92	321	P	P	05 28 44.7	+0.7
TCUT	Toone Canyon 14nm,0.8s	51.06	330	*e*P	P	05 28 45.7	+0.6
DUG	Dugway, Tooele baz=137	51.09	329	P	P	05 28 45.8	+0.6
DUG	Dugway, Tooele 5.6nm,1.0s	51.09	329	*e*P	P	05 28 45.4	+0.2
DAC	Darwin (Calif) 3.7nm,0.8s	51.13	322	*e*P	P	05 28 44.2	-1.4
ARVC	Arvin baz=128	51.19	320	P	P	05 28 45.9	+0.1
ISA	Isabella, Lake baz=129	51.29	320	P	P	05 28 46.7	0.0
ISA	Isabella, Lake 4.7nm,0.9s	51.29	320	*e*P	P	05 28 47.5	+0.8
R11A	Troy Canyon, C baz=133,SNR=10	51.30	325	P	P	05 28 48.0	+1.2
R11A	Troy Canyon, C 4.5nm,0.9s	51.30	325	*e*P	P	05 28 46.3	-0.5
GRAC	Grapevine Rang baz=130	51.45	322	P	P	05 28 47.9	0.0
BW06	Boulder Array baz=142	51.46	333	P	P	05 28 48.6	+0.5
BW06	Boulder Array 7.3nm,1.0s	51.46	333	*e*P	P	05 28 47.4	-0.6
PD31	Pinedale Array	51.46	333	*e*P	P	05 28 47.9	-0.2
PDAR	Pinedale Array 0.8nm,0.6s,baz=120,slow=8.5,SNR=9.2	51.46	333	P	P	05 28 47.9	-0.2
PDAR	comp=Z,141nm,19.3s,baz=143,slow=36			LR	LR	05 50 50.2	
HWUT	Hardware Ranch 20nm,0.9s	51.51	331	*e*P	P	05 28 48.6	+0.2
CWC	Cottonwood Cre baz=129	51.53	321	P	P	05 28 49.1	+0.5
B34A	Aery, Baudette baz=162,SNR=7.9	51.62	348	P	P	05 28 48.7	-0.1
AGMN	Agassiz Nation baz=161,SNR=8.8	51.69	347	P	P	05 28 49.5	+0.2
AGMN	Agassiz Nation 13nm,0.6s	51.69	347	*e*P	P	05 28 48.8	-0.6
SPUT	South Promonto 16nm,1.0s	51.72	330	*e*P	P	05 28 50.3	+0.4
BGU	Big Grassy Mou 9.2nm,0.9s	51.73	329	*e*P	P	05 28 50.4	+0.4
VES	Vestal, Richgr baz=128	51.79	320	P	P	05 28 51.6	+1.2
SMMC	Simmler baz=127	52.06	319	P	P	05 28 53.0	+0.6
AHID	Auburn Hatcher 8.8nm,0.9s	52.17	332	*e*P	P	05 28 53.5	+0.2
A33A	Warroad baz=161,SNR=10	52.20	348	P	P	05 28 53.2	+0.1
MDND	Maddock baz=156	52.20	344	P	P	05 28 52.6	-0.6
MDND	Maddock 108nm,1.2s	52.20	344	*e*P	P	05 28 51.3	-1.9
HVU	Hansel Valley 7.0nm,0.9s	52.23	330	*e*P	P	05 28 54.1	+0.3
REDW	Red Top Meadow 16nm,1.1s	52.52	333	*e*P	P	05 28 55.9	0.0
SNOW	Snow King Moun 11nm,1.3s	52.55	333	*e*P	P	05 28 56.1	0.0
LOHW	Long Hollow 7.7nm,1.0s	52.60	333	*e*P	P	05 28 56.7	+0.2
TPAW	Teton Pass 6.2nm,0.8s	52.66	333	*e*P	P	05 28 55.8	-1.2
MLAC	Mammoth, Mammo baz=129	52.75	322	P	P	05 28 57.6	-0.2
MOOW	Moose Ponds 4.6nm,0.9s	52.77	333	*e*P	P	05 28 57.4	-0.3
FXWY	Fox Creek 3.7nm,0.8s	52.81	333	*e*P	P	05 28 57.8	-0.3
OMMB	Old Mammoth Mi 14nm,0.9s	52.84	322	*e*P	P	05 28 58.5	0.0
NV11	Mina Array Sit 1.0nm,1.2s	52.86	323	*e*P	P	05 28 56.8	-1.6
MDPB	Devils Postpil 13nm,1.1s	52.90	322	*e*P	P	05 28 59.4	+0.5
NV01	Mina Array Sit	52.94	323	*e*P	P	05 28 59.9	+0.8
NVAR	Mina Array Bea 5.2nm,0.8s,baz=139,slow=7.4,SNR=36	52.94	323	P	P	05 29 00.2	+1.1
NVAR	comp=Z,90nm,19.5s,baz=234,slow=35			LR	LR	05 50 40.3	
IMW	Indian Meadow 9.5nm,1.0s	52.97	333	*e*P	P	05 28 59.4	0.0
FLWY	Flagg Ranch 14nm,0.9s	53.01	333	*e*P	P	05 28 59.0	-0.5
YPP	Pitchstone Pla 5.2nm,0.9s	53.20	333	*e*P	P	05 29 01.4	+0.4
KVN	Kaiserville 6.6nm,1.2s	53.23	324	*e*P	P	05 29 00.3	-0.9
ULM	Lac du Bonnet 12nm,0.5s,baz=155,slow=8.0,SNR=17	53.54	348	P	P	05 29 02.7	-0.3
ULM	Lac du Bonnet 28nm,0.6s	53.54	348	*e*P	P	05 29 02.7	-0.3
YMR	Madison River 16nm,1.2s	53.59	334	*e*P	P	05 29 04.7	+0.9
BMN	Battle Mountai 14nm,1.1s	53.64	326	*e*P	P	05 29 04.8	+0.6
YHB	Horse Butte 5.7nm,0.7s	53.75	333	*e*P	P	05 29 04.3	-0.7
YERR	Yerington 12nm,1.5s	53.86	323	*e*P	P	05 29 06.1	+0.2
GCMT	Greycliff	53.92	335	*e*P	P	05 29 05.5	-0.5
DGMT	Dagmar 12nm,0.9s	54.13	341	*e*P	P	05 29 07.4	-0.1
PNTR	Pine Nut 7.4nm,0.9s	54.14	323	*e*P	P	05 29 09.1	+1.2
VCNR	Virginia City 6.5nm,1.0s	54.30	323	*e*P	P	05 29 10.1	+1.0
HLID	Hailey baz=137,SNR=11	54.37	330	P	P	05 29 09.9	+0.5
HLID	Hailey 11nm,0.9s	54.37	330	*e*P	P	05 29 09.9	+0.5
PAHR	Pah Rah Range 9.2nm,1.4s	54.41	324	*e*P	P	05 29 09.8	0.0
MCMT	McKenzie Canyo	54.56	332	*e*P	P	05 29 11.9	+1.0
BOZ	Bozeman (W) baz=141,SNR=31	54.60	334	P	P	05 29 11.6	+0.5
BOZ	Bozeman (W) 12nm,0.8s	54.60	334	*e*P	P	05 29 11.3	+0.3
AFDM	Forest Hills D 8.7nm,1.3s	54.89	322	*e*P	P	05 29 12.6	-0.5
MFID	Camas Ranch 13nm,1.0s	54.97	329	*e*P	P	05 29 13.8	+0.1
BEKR	Beckworth 7.4nm,0.9s	55.09	323	*e*P	P	05 29 14.7	-0.1
LRM	Limekiln Ridge	55.14	333	*e*P	P	05 29 15.1	0.0
HRY	Holter Researc	55.56	335	*e*P	P	05 29 18.3	+0.3
ORV	Oroville 24nm,1.4s	55.58	322	*e*P	P	05 29 18.2	+0.1
EGMT	Eagleton baz=144	55.76	337	P	P	05 29 19.3	+0.1
EGMT	Eagleton 9.9nm,0.8s	55.76	337	*e*P	P	05 29 19.6	+0.4
WVOR	Wild Horse Val 8.9nm,0.9s	55.78	327	*e*P	P	05 29 19.8	+0.2
O03D	Paynes Creek baz=128	56.22	323	P	P	05 29 21.2	-1.5
J08A	Circle Bar Ran 6.3nm,0.8s	56.31	328	*e*P	P	05 29 23.3	-0.1
MOD	Modoc Plateau 5.2nm,1.0s	56.36	325	*e*P	P	05 29 23.8	0.0
RKT	Rikitea 189nm,25.5s	56.48	243	*e*LR	LR	05 45 53.3	
RKT	Rikitea 15nm,0.3s	56.48	243	*e*T	T	06 29 57.5	
BMO	Blue Mountains 4.3nm,1.0s	56.74	330	*e*P	P	05 29 25.2	-1.1
M04C	Macdoel baz=129	57.17	324	P	P	05 29 29.1	-0.4
N02D	Trinity Center baz=128	57.18	323	P	P	05 29 29.2	-0.4
K05A	Summer Lake 11nm,0.8s	57.22	326	*e*P	P	05 29 31.2	+1.3
I07A	Izee 6.6nm,0.8s	57.35	328	*e*P	P	05 29 31.6	+0.9
JTMT	Jette 8.6nm,0.7s	57.42	334	*e*P	P	05 29 30.7	-0.5
F10A	Beach Ranch, E 8.0nm,0.7s	57.49	331	*e*P	P	05 29 31.4	-0.3
M02C	Callahan baz=128	57.52	323	P	P	05 29 31.3	-0.7
YBH	Yreka Blue Hor 2.9nm,0.7s,baz=81,slow=6.8,SNR=16	57.65	324	P	P	05 29 32.4	-0.4
YBH	comp=Z,107nm,18.6s,baz=138,slow=36			LR	LR	05 54 12.0	
YBH	Yreka Blue Hor 4.9nm,0.8s	57.65	324	*e*P	P	05 29 31.3	-1.5
SCHQ	Schefferville comp=Z,79nm,18.4s,baz=241,slow=38	57.73	10	LR	LR	05 56 08.9	
J05D	Fort Rock, OR baz=130,SNR=10.0	57.77	326	P	P	05 29 34.4	+0.6
G08A	Pilot Rock 17nm,0.9s	57.89	329	*e*P	P	05 29 35.0	+0.5
PINE	Pine Mountain 25nm,1.0s	57.94	327	*e*P	P	05 29 35.3	+0.3
J04D	Umpqua Nationa baz=129,SNR=6.0	58.24	325	P	P	05 29 37.3	+0.2
WALA	Waterton Lakes 12nm,0.7s	58.27	335	*e*P	P	05 29 35.6	-1.5
E09A	Wood Farm, Sta 13nm,0.7s	58.33	331	*e*P	P	05 29 36.4	-1.0
L02D	Cave Junction, baz=127	58.43	324	P	P	05 29 39.1	+0.8
I05D	Terrebonne, OR baz=130,SNR=7.4	58.51	327	P	P	05 29 39.6	+0.8
I04A	Tendick Farm, baz=129	58.76	326	P	P	05 29 40.5	-0.1
HAWA	Hanford 8.7nm,0.8s	58.93	330	*e*P	P	05 29 41.6	0.0
D08A	Wollman Farm, 6.9nm,0.8s	59.09	331	*e*P	P	05 29 42.2	-0.5
G05D	Wamic, OR baz=131	59.09	328	P	P	05 29 43.6	+0.8
H04A	Detroit Lake 7.2nm,0.9s	59.20	327	*e*P	P	05 29 43.2	-0.3
I03D	Drain, OR baz=128	59.23	325	P	P	05 29 43.1	-0.5
C09A	Chrisman Ranch 6.4nm,0.8s	59.30	332	*e*P	P	05 29 44.7	+0.6
TAOE	Nuku Hiva Isla 125nm,0.3s	59.37	261	*e*T	T	06 33 41.2	
LTY	Liberty 5.0nm,0.8s	60.09	330	*e*P	P	05 29 48.7	-1.0
G03D	McMinnville, O baz=129	60.12	327	P	P	05 29 49.9	0.0
B08A	Colville Reser 2.6nm,0.9s	60.19	331	*e*P	P	05 29 50.1	-0.3
LON	Longmire 7.8nm,0.8s	60.34	329	*e*P	P	05 29 51.3	-0.1
D05A	Enumclaw 11nm,0.8s	60.72	329	*e*P	P	05 29 52.8	-1.1
E03A	Lebam 19nm,0.8s	61.13	328	*e*P	P	05 29 56.5	-0.1
B06A	Marblemount 10nm,0.8s	61.35	330	*e*P	P	05 29 57.9	-0.2
NLWA	Neilton Lookou 8.9nm,0.8s	61.83	328	*e*P	P	05 30 01.5	+0.1
YKA	Yellowknife Ar 1.4nm,0.8s,baz=137,slow=5.7,SNR=5.9	69.12	344	P	P	05 30 47.9	-0.3
PPT2	Papeete2 112nm,24.2s	69.15	252	*e*LR	LR	05 51 52.3	
DLBC	Dease Lake 8.3nm,0.9s	71.61	335	*e*P	P	05 31 04.2	+0.6
SFJD	Kangerlussuaq comp=Z,100nm,19.6s,baz=204,slow=36	72.01	12	LR	LR	06 03 04.5	
PUH	Pauahi 185nm,1.4s	75.91	290	*e*P	P	05 31 30.5	+0.8
LIC	Lamto 50nm,1.0s	76.13	83	*e*P	P	05 31 29.9	-1.1
TIC	Toumodi	76.17	83	*e*P	P	05 31 30.1	-1.1
DBIC	Dimbokro 9.4nm,0.9s,baz=268,slow=6.2,SNR=7.2	76.33	83	P	P	05 31 31.0	-1.0
DBIC	comp=Z,144nm,19.5s,baz=242,slow=34			LR	LR	06 03 08.0	
DBIC	Dimbokro 19nm,1.0s	76.33	83	*e*P	P	05 31 31.1	-1.0
KIC	Kosan Boka 56nm,0.9s	76.42	83	*e*P	P	05 31 31.8	-0.8
KOWA	Kowa 5.2nm,0.9s,baz=280,slow=6.3,SNR=8.4	77.75	75	P	P	05 31 39.4	-0.6
KOWA	comp=Z,208nm,21.8s,baz=236,slow=34			LR	LR	06 03 29.4	
KOWA	Kowa 13nm,0.9s	77.75	75	*e*P	P	05 31 38.0	-2.0
SUMG	Summit 21nm,1.1s	79.01	12	*e*P	P	05 31 45.8	-0.6
SUMG	Summit 15nm,1.0s	79.01	12	*i* P	P	05 31 46.3	-0.1
BORG	Borgarnes comp=Z,68nm,21.0s,baz=239,slow=34	79.20	22	LR	LR	06 04 20.3	
MDT	Midelt comp=Z,90nm,19.3s,baz=261,slow=35	79.50	56	LR	LR	06 05 49.6	
EGAK	Eagle 5.8nm,1.0s	79.51	338	*e*P	P	05 31 48.9	+0.2
ESDC	Sonseca Array 0.6nm,0.5s,baz=266,slow=5.0,SNR=7.3	81.15	50	P	P	05 31 57.8	-0.4
ESDC	comp=Z,49nm,20.6s,baz=210,slow=34			LR	LR	06 05 32.3	
ES19	SONSECA Array	81.21	50	*e*P	P	05 31 55.6	-2.9
IL1	Eielson Array	81.72	337	*e*P	P	05 31 59.5	-1.1
ILAR	Eielson Array 0.4nm,0.8s,baz=136,slow=3.7,SNR=3.5	81.72	337	P	P	05 32 00.1	-0.4
ILAR	1.4nm,1.0s,baz=112,slow=5.6,SNR=5.8			PP	PP	05 35 12.7	+5.0
ILAR	comp=Z,77nm,19.6s,baz=128,slow=37			LR	LR	06 10 12.8	
VNA3	Neumayer Olymp	82.20	162	P	P	05 32 02.3	-0.7
VNA1	Neumayer--Stat	82.47	161	P	P	05 32 04.2	-0.2
BPAW	Bear Paw Mtn. 11nm,1.0s	83.15	335	*e*P	P	05 32 08.2	+0.1
TOA0	Torodi Ar. Sit 3.6nm,0.9s	83.18	77	*e*P	P	05 32 07.8	-1.4
TORD	Torodi Ar. Bea 0.7nm,0.7s,baz=289,slow=5.0	83.18	77	P	P	05 32 07.5	-1.8
TORD	comp=Z,128nm,21.5s,baz=285,slow=34			LR	LR	06 06 44.0	
CAST	Castle Rocks 7.0nm,1.0s	83.40	335	*e*P	P	05 32 08.2	-1.2
TOLK	Toolik Lake Re baz=110	84.15	340	P	P	05 32 12.7	-0.5
SNAA	Sanae	84.42	162	P	P	05 32 13.5	-1.0
SNAA	Sanae 5.2nm,1.0s	84.42	162	*e*P	P	05 32 13.7	-0.9

EKA	Eskdalemuir Ar	84.58	34	LR	LR	06 05 53.5	
	comp=Z,52nm,21.8s,baz=225,slow=33						
IM3	Indian Mountai	84.84	337	*e*P	P	05 32 15.6	-1.0
DAG	Danmarks Havn	85.70	12	*i* P	P	05 32 20.3	-0.4
	3.5nm,0.9s						
QSPA	South Pole Qui	88.14	180	P	P	05 32 33.0	0.0
	4.0nm,0.6s,baz=198,slow=1.7,SNR=33						
QSPA	South Pole Qui	88.14	180	*e*P	P	05 32 33.1	+0.1
	11nm,1.1s						
SNF	Seneffe	88.37	40	⇓P	P	05 32 32.8	-1.4
UNV	Unalaska Valle	88.96	324	*e*P	P	05 32 37.8	+0.9
	81nm,1.4s						
BCLA	Clavier	89.01	40	⇑P	P	05 32 36.2	-1.0
DAVOX	Davos/Dischmat	91.89	43	LR	LR	06 12 36.7	
	comp=Z,56nm,19.0s,baz=266,slow=35						
NOA	NORSAR Array B	92.67	29	LR	LR	06 12 21.4	
	comp=Z,18nm,20.5s,baz=275,slow=34						
SPITS	Spitsbergen Ar	93.35	12	LR	LR	06 16 09.2	
	comp=Z,78nm,20.0s,baz=280,slow=36						
VNDA	Vanda	93.86	191	P	P	05 32 59.1	-0.1
	1.3nm,0.9s,baz=121,slow=2.8,SNR=6.5						
VNDA				LR	LR	06 06 28.6	
	comp=Z,84nm,21.8s,baz=122,slow=30						
VNDA	Vanda	93.86	191	*e*P	P	05 32 60.0	+0.8
	2.0nm,0.9s						
HFS	Hagfors	93.93	30	LR	LR	06 10 44.5	
	comp=Z,77nm,21.5s,baz=276,slow=33						
GERES	GERESS Array B	94.44	41	P	P	05 33 01.9	-0.7
	0.2nm,0.2s,baz=242,slow=2.9,SNR=3.6						
GERES				LR	LR	06 12 23.7	
	comp=Z,49nm,20.9s,baz=270,slow=34						
TSUM	Tsumeb	97.34	110	LR	LR	06 16 15.4	
	comp=Z,252nm,19.1s,baz=321,slow=35						
FINES	FINESS Array B	99.73	28	LR	LR	06 13 31.4	
	comp=Z,43nm,21.8s,baz=250,slow=32						
H11N3	WAKE ISLAND Hy	111.56	290	T	T	07 39 00.5	
	baz=86,slow=75,SNR=6.4						
H11N2	WAKE ISLAND Hy	111.57	290	T	T	07 39 02.4	
	baz=86,slow=75,SNR=5.1						
H11N1	WAKE ISLAND Hy	111.58	290	T	T	07 39 01.9	
	baz=86,slow=75,SNR=8.5						
H11S2	WAKE ISLAND Hy	111.87	289	T	T	07 39 28.0	
	baz=85,slow=75,SNR=30						
H11S1	WAKE ISLAND Hy	111.87	289	T	T	07 39 28.3	
	baz=85,slow=75,SNR=28						
H11S3	WAKE ISLAND Hy	111.89	289	T	T	07 39 29.3	
	baz=85,slow=75,SNR=24						
BVAR	Borovoye Array	123.76	20	PKP	PKPdf	05 38 38.7	-1.5
	0.2nm,0.3s,baz=311,slow=3.1,SNR=2.2						
ZALV	Zalesovo Beam	126.81	11	PKP	PKPdf	05 38 44.7	-1.3
	1.6nm,0.7s,baz=268,slow=4.5,SNR=5.6						
KURK	Kurchatov	128.37	17	*e*PKPdf	PKPdf	05 38 48.5	-0.5
KURBB	Kurchatov Arra	128.43	17	PKP	PKPdf	05 38 48.5	-0.7
	1.6nm,0.7s,baz=326,slow=2.3,SNR=13						
CN2	Changchun	132.20	334	*e*PKP	PKPdf	05 38 59.0	+2.5
MK31	Makanchi Array	132.95	16	*e*PKPdf	PKPdf	05 38 54.8	-3.1
MKAR	Makanchi Array	132.95	16	PKhKP	PKPpre	05 38 47.5	
	0.4nm,0.5s,baz=159,slow=8.1,SNR=4.2						
MKAR				PKP	PKPdf	05 38 55.3	-2.6
	0.5nm,0.7s,baz=152,slow=3.0,SNR=4.2						
MKAR	Makanchi Array	132.95	16	PKPpre	PKPpre	05 38 47.5	
MKAR				*e*PKPdf	PKPdf	05 38 54.7	-3.2
MK01	Makanchi Array	132.97	16	*e*PKPdf	PKPdf	05 38 54.4	-3.5
SONM	Songino Array	133.83	353	PKP	PKPdf	05 38 58.8	-0.9
	1.0nm,0.6s,baz=280,slow=1.0,SNR=3.6						
KSRS	Korea Array	135.83	327	PKP	PKPdf	05 39 03.4	-0.1
	0.8nm,0.6s,baz=4.2,slow=0.5,SNR=3.4						
KSAR	Wonju Array Be	135.86	327	PKP	PKPdf	05 39 03.4	-0.1
KSH	Kashi	137.04	27	*e*PKP	PKPdf	05 39 06.8	+0.9
KSH				*e*PP	PP	05 41 53.8	+5.1
KSH				PKS	PKSdf	05 42 41.8	-0.4
WMQ	Urumqi	137.05	12	PKP	PKPdf	05 39 04.5	-1.2
WMQ				LR	LR		
	comp=N,410nm,23.9s						
WMQ				LR	LR		
	comp=Z,120nm,23.9s						
AS01	Alice Springs	137.66	231	*e*PKPdf	PKPdf	05 39 04.5	-2.9
ASAR	Alice Springs	137.69	231	PKhKP	PKPpre	05 38 58.5	
	0.5nm,0.4s,baz=117,slow=3.8,SNR=7.0						
ASAR				PKP	PKPdf	05 39 05.4	-2.0
	2.3nm,0.8s,baz=111,slow=1.7,SNR=12						
WC3	Warramunga Arr	139.17	236	*e*PKPdf	PKPdf	05 39 11.4	+1.2
WB2	Warramunga Arr	139.20	236	*e*PKPdf	PKPdf	05 39 11.4	+1.2
WRA	Warramunga Arr	139.21	236	PKhKP	PKPpre	05 39 01.4	
	1.5nm,0.8s,baz=126,slow=2.3,SNR=7.4						
WRA				PKP	PKPdf	05 39 08.8	-1.5
	3.8nm,0.7s,baz=111,slow=2.1,SNR=19						
HHC	Hu-ho-hao-te	139.65	345	*e*PKP	PKPdf	05 39 11.0	+0.4
GTA	Gaotai	142.68	359	*e*PKP	PKPdf	05 39 20.5	+4.4
GTA				pPKP	pPKPdf	05 39 27.0	+2.0
GTA				sPKP		05 39 30.8	
NJ2	Nanjing	144.74	330	*e*PKP	PKPbc	05 39 18.8	+0.2
MTN	Manton Dam	145.03	244	*e*PKPbc	PKPab	05 39 20.4	+0.4
LZH	Lanzhou	145.72	353	*e*PKPbc	PKPab	05 39 22.5	+0.3
LZH				pPKP	sPKPdf	05 39 33.0	-0.5
LZH				sPKP		05 39 36.3	
LZH				LR	LR		
	comp=E,130nm,18.0s						
LZH				LR	LR		
	comp=Z,170nm,20.2s						
XAN	Xi’an	146.76	345	PKPbc	PKPab	05 39 30.5	+4.4
FITZ	Fitzroy Crossi	147.19	232	PKPbc	PKPdf	05 39 25.1	+0.8
	9.8nm,0.9s,baz=157,slow=4.1,SNR=12						
FITZ	Fitzroy Crossi	147.19	232	*e*PKPdf	PKPdf	05 39 24.9	+0.6
MBWA	Marble Bar	149.47	220	*e*PKPbc	PKPbc	05 39 31.3	-1.2

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*ISCJB **30** 05:20:33.8±0.7, 7°.9S±0°.1×119°.29E±0°.05, h300^{km}, mb3.3/3, Error ellipse: s-maj=15.8km s-min=7.1km az=9.8*

*IDC **30** 05:20:36.0±5.8, 7°.36S×119°.69E, h293^{km}±53^{km}, mb2.9/3, mb1 3.1/5, mb1mx2.9/54, mbtmp3.7/5, Error ellipse: s-maj=187.9km s-min=20.4km az=57.0*

*DJA **30** 05:20:36.5±0.6, 8°S±10°×11°9E±°, h263^{km}±6^{km}, M4.0/8, mB5.1/1, mb4.7/1, MLv3.6/8, Mw(mB)4.4/1*

ISC 30 05:20:34.6±1.1, 7°.9S±0°.1×119°.32E±0°.06, h300^{km}, n11, σ2^s.22/17, mb3.4/3, Flores Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	1.77	178	P	Pn	05 21 19.3	-0.5
WBSI				S	S	05 21 53.0	-2.7
PLAI	Plampang	1.80	238	P	Pn	05 21 19.7	-0.2
PLAI				S	S	05 21 53.7	-2.3
EDFI	Ende, Flores	2.51	111	P	Pn	05 21 25.0	-0.9
EDFI				S	S	05 22 02.0	-4.7
TWSI	Taliwang, Sumb	2.56	250	P	Pn	05 21 26.1	-0.2
TWSI				S	S	05 22 05.8	-1.6
BATI	Baumata	4.88	119	P	Pn	05 21 51.8	+0.9
	13nm,0.3s,baz=180,slow=2.3,SNR=5.3						
BATI				S	S	05 22 51.9	-0.3
	5.3nm,0.3s,baz=135,slow=8.6,SNR=2.1						
BATI	Baumata	4.88	119	P	Pn	05 21 51.8	+0.9
SOEI	Soe	5.24	111	P	Pn	05 21 55.2	+0.1
SOEI				S	S	05 22 56.5	-3.3
WRA	Warramunga Arr	18.87	131	P	P	05 24 36.4	+2.6
	0.2nm,0.3s,baz=304,slow=12,SNR=17						
ASAR	Alice Springs	21.04	140	P	P	05 24 59.4	+3.3
	0.4nm,0.3s,baz=319,slow=9.2,SNR=9.0						
MKAR	Makanchi Array	63.59	332	P	P	05 30 34.0	0.0
	0.5nm,0.7s,baz=127,slow=8.1,SNR=5.7						
KURBB	Kurchatov Arra	68.09	333	P	P	05 31 02.9	+0.5
	0.3nm,0.4s,baz=153,slow=6.9,SNR=3.8						

KRSC 30 05:21:48.7±1.3, 49°.33N×157°.09E, h16^{km}±22^{km}, ML3.9, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril’s	1.49	335	*e*P	Pn	05 22 14.4	-0.5
SKR				*e*S	Sb	05 22 34.8	0.0
PAU	Pauzhetka	2.15	355	*e*P	Pb	05 22 25.6	-1.6
PAU				*e*S	Sb	05 22 52.9	-0.7
KDTR	Khodutka, Kamc	2.56	14	*e*P	Pb	05 22 31.9	-2.3
MTVR	Mutnovka	3.23	12	*e*P	Pn	05 22 42.3	+3.4
RUS	Russkaya	3.23	16	*e*P	Pn	05 22 41.5	+2.7
RUS				*e*S	Sn	05 23 20.9	+3.9
APC	Apacha	3.60	1	*e*P	Pn	05 22 46.5	+2.7
DALK	Dalny	3.85	15	*e*P	Pn	05 22 51.3	+4.0
UGLR	Uglovaya	4.03	15	*e*P	Pn	05 22 54.5	+4.6
AVH	Avacha	4.07	14	*e*P	Pn	05 22 54.3	+3.9
SMAR	Somma	4.08	15	*e*P	Pn	05 22 55.2	+4.5
SDLR	Sedlovina	4.11	15	*e*P	Pn	05 22 53.9	+2.9
KRX	Arik	4.15	13	*e*P	Pn	05 22 55.8	+4.3
SPN	Mys Shipunski	4.20	25	*e*P	Pn	05 22 56.0	+4.0
SPN				*e*S	Sn	05 23 44.6	+3.9
GNL	Ganaly	4.40	7	*e*P	Pn	05 22 59.3	+4.3

MEX 30 05:25:38.5±0.5, 16°.25N×95°.97W, h32^{km}±11^{km}, MD3.7, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HUIG	Huatulco	0.50	195	*e*P	Pb	05 25 47.1	-1.9
HUIG				*e*S	Sb	05 25 54.2	-2.1
VHO	Vista Hermosa	1.09	318	*e*P	Pn	05 25 56.1	-1.7
VHO				*e*S	Sn	05 26 09.1	-2.9
PNIG	Pinotepa	2.08	274	*e*P	Pn	05 26 09.8	-1.4
PNIG				*e*S	Sn	05 26 33.6	-2.4
TPIG	Tehuac#an	2.53	329	*i* P	Pn	05 26 16.6	-1.0
TPIG				*i* S	Sn	05 26 44.6	-2.8

NNC 30 05:29:09.1±0.8, 54°.17N×86°.37E, h0^{km}, mb3.6, mpv2.9, 6C-2D, Error ellipse: s-maj=14.9km s-min=3.9km az=173.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	0.94	257	⇓P	Pg	05 29 27.1	0.0
	1.6nm,0.6s						
ZAA0				⇓S	Sb	05 29 40.3	-1.0
	1.1nm,0.6s						
KURK	Kurchatov	5.87	237	⇑Pn	Pn	05 30 38.1	+0.9
	3.0nm,1.0s						
KURK				⇑Lg	Lg	05 32 15.7	
	8.3nm,1.1s						
KURBB	Kurchatov Arra	5.97	237	⇑Pn	Pn	05 30 39.0	+0.4
	3.5nm,0.8s						
KURBB				⇑Lg	Lg	05 32 19.7	
	5.9nm,0.8s						
MK31	Makanchi Array	7.83	201	⇑Pn	Pn	05 31 03.4	-0.7
	0.3nm,0.5s,baz=25,slow=13,SNR=9.9						
MK31				⇑Lg	Lg	05 33 17.0	
	5.1nm,1.1s,baz=25,slow=29,SNR=3.7						

KRSC 30 05:36:09.6±2.1, 49°.29N×157°.37E, h7^{km}±42^{km}, ML3.8, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SKR	Severo-Kuril’s	1.61	330	*e*P	Pn	05 36 37.5	-1.0
SKR				*e*S	Sn	05 36 58.0	-1.5
PAU	Pauzhetka	2.21	351	*e*P	Pb	05 36 48.6	-1.3
PAU				*e*S	Sb	05 37 16.3	-1.1
KDTR	Khodutka, Kamc	2.57	10	*e*P	Pb	05 36 54.2	-1.7
KDTR				*e*S	Sb	05 37 26.6	-1.0
ASAK	Asacha	3.12	6	*e*P	Pb	05 37 02.6	-2.8
RUS	Russkaya	3.23	13	*e*P	Pn	05 37 03.9	+3.2
RUS				*e*S	Sb	05 37 44.0	-2.8
MTVR	Mutnovka	3.24	9	*e*P	Pn	05 37 02.9	+1.9
DALK	Dalny	3.85	13	*e*P	Pn	05 37 13.2	+4.0
UGLR	Uglovaya	4.03	13	*e*P	Pn	05 37 16.3	+4.5
AVH	Avacha	4.08	12	*e*P	Pb	05 37 17.1	-4.6
SMAR	Somma	4.08	12	*e*P	Pn	05 37 16.4	+3.8
KOK	Koryaka	4.09	11	P	Pn	05 37 16.8	+4.2
SDLR	Sedlovina	4.11	13	*e*P	Pn	05 37 16.2	+3.3
KRX	Arik	4.16	11	P	Pn	05 37 17.2	+3.7
SPN	Mys Shipunski	4.17	23	*e*P	Pn	05 37 17.6	+4.1
GNL	Ganaly	4.43	4	*e*P	Pn	05 37 22.4	+5.1
KBTR	Krutoberegovo	7.68	23	*e*P	Pn	05 38 05.9	+4.2

MEX 30 05:43:25.9±0.6, 17°.18N×100°.30W, h44^{km}±5^{km}, MD3.8, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	El Cayaco	0.13	168	*i* P	Pn	05 43 31.6	-1.6
CAIG				*i* S	Sn	05 43 36.5	-1.7
MEIG	Mezcala	0.98	41	*e*P	Pn	05 43 41.8	-1.6
MEIG				*e*S	Sn	05 43 54.7	-1.5
ARIG	Puente Sto Nin	1.10	358	*e*P	Pn	05 43 43.3	-1.6
ARIG				*e*S	Sn	05 43 55.9	-3.0
ZIIG	Zihuatanejo	1.19	291	*e*P	Pn	05 43 44.6	-1.5
ZIIG				*e*S	Sn	05 43 59.4	-1.8
PLIG	Platanillo	1.43	32	*e*P	Pn	05 43 47.9	-1.6
PLIG				*e*S	Sn	05 44 04.2	-2.9
TLIG	Tlapa	1.70	77	*e*P	Pn	05 43 51.5	-1.7
TLIG				*e*S	Sn	05 44 11.6	-2.1

MEX 30 05:49:30.8±0.5, 16°.29N×98°.31W, h6^{km}±4^{km}, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.20	61	*e*P	Pg	05 49 34.4	-0.4
PNIG				*e*S	Sg	05 49 37.5	-0.1
TLIG	Tlapa	1.29	349	*e*P	Pn	05 49 52.1	-3.3
TLIG				*e*S	Sg	05 50 07.7	-4.5
VHO	Vista Hermosa	1.70	63	*e*P	Pn	05 49 57.8	-3.3
VHO				*e*S	Sn	05 50 18.3	-5.0
CAIG	El Cayaco	2.02	292	*e*P	Pn	05 50 01.9	-3.5
CAIG				*e*S	Sn	05 50 26.1	-4.8
PLIG	Platanillo	2.38	332	*e*P	Pn	05 50 07.3	-3.1
PLIG				*i* S	Sn	05 50 34.7	-5.2

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*ISCJB **30** 06:01:42.7±0.8, 29°.36S±0°.10×178°.8W±0°.2, h300^{km}, mb3.4/4, Error ellipse: s-maj=21.9km s-min=10.8km az=24.2*

*IDC **30** 06:01:43.3±0.6, 29°.22S×178°.87W, h288^{km}±7^{km}, mb3.2/4, mb1 3.4/5, mb1mx3.1/45, mbtmp3.9/5, Error ellipse: s-maj=31.9km s-min=21.4km az=143.0*

ISC 30 06:01:43.7±0.7, 29°.5S±0°.1×178°.7W±0°.2, h300^{km}, n17, σ1^s.18/19, mb3.3/4, Kermadec Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RAO	Raoul Island	0.71	74	P	Pn	06 02 21.9	-1.1
	283nm,0.3s,baz=99,slow=12,SNR=7.4						
RAO				S	S	06 02 52.3	-1.8
	97nm,0.3s,baz=90,slow=20,SNR=3.6						
URZ	Urewera	9.46	201	P	Pn	06 03 56.5	+1.5
	0.9nm,0.3s,baz=269,slow=5.3,SNR=12						
URZ				S	S	06 05 40.1	-1.9
	4.0nm,0.3s,baz=318,slow=22,SNR=15						
ASAR	Alice Springs	42.56	266	P	P	06 09 10.6	-0.4
	0.3nm,0.4s,baz=106,slow=7.3,SNR=4.9						
WRA	Warramunga Arr	43.46	272	P	P	06 09 17.0	-1.1
	0.7nm,0.5s,baz=109,slow=7.9,SNR=7.5						
PETK	Petropavlovsk-	84.74	346	P	P	06 13 44.2	+0.2
	2.0nm,0.7s,baz=139,slow=6.8						
NVAR	Mina Array Bea	87.95	43	P	P	06 14 00.7	+0.5
	0.5nm,0.8s,baz=213,slow=8.1,SNR=3.2						
MKAR	Makanchi Array	116.70	311	PKP	PKPdf	06 19 51.5	-0.7
	0.1nm,0.4s,baz=85,slow=1.7,SNR=3.0						
KURBB	Kurchatov Arra	119.99	314	PKP	PKPdf	06 19 58.3	0.0
	0.6nm,0.6s,baz=101,slow=1.7,SNR=5.9						
BVAR	Borovoye Array	125.30	316	PKP	PKPdf	06 20 08.5	0.0
	0.6nm,0.4s,baz=5.7,slow=1.4,SNR=4.4						
ARCES	ARCESS Array B	137.53	348	PKP	PKPdf	06 20 31.7	+0.7
	1.0nm,0.7s,baz=28,slow=5.5,SNR=4.0						
FINES	FINESS Array B	144.04	340	PKP	PKPab	06 20 41.5	+0.1
	3.4nm,0.5s,baz=59,slow=3.8,SNR=31						
NB2	NORSAR Subarra	147.72	351	PKP	PKPbc	06 20 52.5	0.0
	comp=Z,0.7nm,0.6s,baz=14,slow=2.9						
NOA	NORSAR Array B	147.72	351	PKPbc	PKPbc	06 20 52.5	0.0
	comp=Z,0.8nm,0.6s,baz=15,slow=4.4,SNR=4.2						
HFS	Hagfors	148.19	348	PKPbc	PKPbc	06 20 53.0	-0.7
	comp=Z,2.5nm,0.7s,baz=103,slow=5.0,SNR=4.4						
AKASG	Malin Array Be	150.18	323	PKPbc	PKPbc	06 20 58.1	-0.8
	comp=Z,1.7nm,0.4s,baz=45,slow=3.1,SNR=7.3						
MMAI	Mount Meron Ar	150.70	286	PKPbc	PKPbc	06 21 03.1	+2.3
	comp=Z,1.3nm,0.3s,baz=97,slow=6.0,SNR=4.7						
TORD	Torodi Ar. Bea	163.78	181	PKPab	PKPab	06 22 07.1	+1.6
	baz=174,slow=4.9						

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*ATH **30** 06:02:00.8, 37°.84N×26°.70E, h16^{km}±7^{km}, ML3.2/5, Error ellipse: s-maj=7.6km s-min=1.1km az=99.0*

*ISK **30** 06:02:00.1, 37°.88N×26°.72E, h10^{km}, ML3.3/17*

*DDA **30** 06:02:00.1, 37°.86N×26°.70E, h9^{km}, Ml3.3*

*CSEM **30** 06:02:00.5±0.1, 37°.86N×26°.69E, h5^{km}, ML3.2, Error ellipse: s-maj=3.1km s-min=2.1km az=66.0*

*ISCJB **30** 06:02:00.5±0.4, 37°.88N±0°.01×26°.71E±0°.02, h1^{km}±4^{km}, Error ellipse: s-maj=2.9km s-min=2.4km az=169.0*

*THE **30** 06:02:01.0, 37°.87N×26°.69E, h5^{km}±1^{km}, ML3.1/3, Error ellipse: s-maj=1.6km s-min=0.5km az=229.0*

ISC 30 06:02:00.8±0.8, 37°.87N±0°.01×26°.72E±0°.02, h15^{km}±5^{km}, n109, σ0^s.74/153, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMG	Samos	0.18	149	P	Pg	06 02 05.2	+0.1
SMG				S	Sg	06 02 07.8	-0.2
SMG				AML	AML	06 02 08.6	
	comp=E,27973µm,0.4s						
SMG				AML	AML	06 02 09.0	
	comp=N,26622µm,0.4s						
SMG	Samos	0.18	149	P	Pg	06 02 05.2	+0.1
SMG				S	Sg	06 02 08.3	+0.3
SMG				AML	AML	06 02 08.6	
	comp=E,27973µm,0.4s						
SMG				AML	AML	06 02 09.0	
	comp=N,26622µm,0.4s						
SMG	Samos	0.18	149	P	Pg	06 02 05.2	+0.1
SMG				S	Sg	06 02 08.4	+0.3
SMG	Samos	0.18	149	P	Pg	06 02 05.2	+0.1
SMG				S	Sg	06 02 08.3	+0.3
DGB	˜zmir	0.23	35	*i* P	Pg	06 02 05.4	-0.4
DGB				*i* S	Sg	06 02 08.7	-0.5
URLA	Izmir	0.50	349	PG	Pg	06 02 10.1	-0.7
URLA				SG	Sg	06 02 17.5	-0.1
URLA	Izmir	0.50	349	*i* P	Pg	06 02 10.1	-0.7
URLA				*i* S	Sg	06 02 17.4	-0.1
URLA	Izmir	0.50	349	P	Pg	06 02 10.1	-0.7
URLA				S	Sg	06 02 17.4	-0.1
BLCB	Balcova	0.58	26	PG	Pg	06 02 11.7	-0.5
BLCB				SG	Sg	06 02 19.7	-0.2
BLCB	Balcova	0.58	26	*e*Pg	Pg	06 02 11.7	-0.5
BLCB				*e*Sg	Sg	06 02 19.7	-0.2
CHOS	Chios island	0.74	315	PG	Pg	06 02 14.4	-0.7
CHOS	Chios island	0.74	315	P	Pg	06 02 13.5	-1.7
CHOS				S	Sg	06 02 23.3	-1.6
CHOS				AML	AML	06 02 26.3	
	comp=E,4645µm,0.5s						
CHOS				AML	AML	06 02 28.2	
	comp=N,4501µm,0.4s						
CHOS	Chios island	0.74	315	P	Pg	06 02 14.1	-1.0
CHOS				S	Sb	06 02 26.0	+0.6
CHOS				AML	AML	06 02 28.2	
	comp=N,4501µm,0.4s						
CHOS				AML	AML	06 02 29.0	
	comp=E,3868µm,0.3s						
CHOS	Chios island	0.74	315	P	Pg	06 02 14.5	-0.7
CHOS				S	Sb	06 02 25.9	+0.6
CHOS	Chios island	0.74	315	P	Pg	06 02 14.6	-0.6
CHOS				S	Sb	06 02 25.8	+0.4
KRBN	Karaburun	0.74	350	PG	Pg	06 02 14.5	-0.7
KRBN	Karaburun	0.74	350	*e*Pg	Pg	06 02 14.5	-0.7
FOCM	Foˆ§a	0.85	1	PG	Pg	06 02 16.7	-0.5
FOCM	Foˆ§a	0.85	1	*e*Pg	Pg	06 02 16.7	-0.5
AYDB	Zeytinkoy-Aydi	0.93	85	PG	Pb	06 02 18.8	+0.1
AYDB	Zeytinkoy-Aydi	0.93	85	*e*Pg	Pb	06 02 18.8	+0.1
BODT	Bodrum	0.93	149	PG	Pb	06 02 18.5	-0.1
BODT	Bodrum	0.93	149	P	Pb	06 02 18.4	-0.2
BODT				S	Sn	06 02 32.7	+0.2
BODT	Bodrum	0.93	149	*e*Pg	Pb	06 02 18.5	-0.2
BODT				S	Sn	06 02 32.7	+0.2
AYDN	Tasoluk	0.94	102	*i* P	Pb	06 02 18.9	0.0
AYDN				*i* S	Sg	06 02 31.7	+0.3
AYDN	Tasoluk	0.94	102	P	Pb	06 02 18.9	0.0
AYDN				S	Sg	06 02 31.7	+0.3
BDRM	Kayabasi	0.99	144	*i* P	Pn	06 02 20.5	+0.4
BDRM				*i* S	Sg	06 02 33.1	+0.4
BDRM	Kayabasi	0.99	144	P	Pn	06 02 20.5	+0.4
BDRM				S	Sg	06 02 33.1	+0.4
MLSB	Milas	1.01	124	PG	Pb	06 02 20.1	0.0
MLSB	Milas	1.01	124	*e*Pg	Pb	06 02 20.1	0.0
PSRA	Psara	1.13	307	P	Pb	06 02 20.7	-1.3
PSRA	Psara	1.13	307	P	Pg	06 02 23.1	+0.5
PSRA	Psara	1.13	307	P	Pg	06 02 22.7	+0.1
DKL	Dikili	1.21	7	PN	Pn	06 02 23.5	+0.3
DKL	Dikili	1.21	7	*e*Pn	Pn	06 02 23.5	+0.3
AMGA	Amorgos Island	1.22	213	P	Pn	06 02 23.1	-0.3
AMGA				S	Sg	06 02 42.4	+2.1
AMGA				AML	AML	06 02 44.4	
	comp=E,1262µm,0.5s						
AMGA				AML	AML	06 02 46.6	
	comp=N,1266µm,0.3s						
AMGA	Amorgos Island	1.22	213	P	Pb	06 02 23.9	+0.2
AMGA				S	Sn	06 02 39.9	+0.1
AMGA				AML	AML	06 02 45.9	
	comp=E,1256µm,0.3s						
AMGA				AML	AML	06 02 46.6	
	comp=N,1266µm,0.3s						
AMGA	Amorgos Island	1.22	213	P	Pn	06 02 23.5	+0.1
AMGA	Amorgos Island	1.22	213	P	Pn	06 02 23.6	+0.1
AMGA				S	Sn	06 02 39.8	+0.1
APE	Apeiranthos	1.24	230	P	Pn	06 02 22.2	-1.4
APE				S	Sg	06 02 41.1	+0.4
APE				AML	AML	06 02 42.4	
	comp=N,697µm,0.2s						
APE				AML	AML	06 02 43.3	
	comp=E,698µm,0.4s						
APE	Apeiranthos	1.24	230	P	Pn	06 02 22.5	-1.1
APE				S	Sg	06 02 40.7	0.0
APE				AML	AML	06 02 42.4	
	comp=N,697µm,0.2s						
APE				AML	AML	06 02 47.5	
	comp=E,733µm,0.3s						
APE	Apeiranthos	1.24	230	P	Pn	06 02 23.0	-0.5
APE				S	Sg	06 02 40.8	+0.1
APE	Apeiranthos	1.24	230	P	Pn	06 02 23.1	-0.5
APE				S	Sg	06 02 40.5	-0.2
TNSA	Tinos	1.28	256	P	Pg	06 02 25.2	-0.2
NISR	Nisiros	1.29	165	P	Pg	06 02 25.7	0.0
DAT	Datca	1.33	149	PN	Pb	06 02 25.4	0.0
DAT	Datca	1.33	149	*i* P	Pn	06 02 24.8	-0.1
DAT				*i* S	Sg	06 02 43.7	+0.1
DAT	Datca	1.33	149	P	Pn	06 02 24.8	-0.1
DAT	Datca	1.33	149	*e*Pn	Pb	06 02 25.4	0.0
DAT				S	Sg	06 02 43.7	+0.1
AKHS	Akhisar	1.33	40	*i* P	Pn	06 02 25.1	+0.2
AKHS				*i* S	Sg	06 02 44.2	+0.6
AKHS	Akhisar	1.33	40	P	Pn	06 02 25.1	+0.2
AKHS				S	Sg	06 02 44.2	+0.6
PRK	Paraskevi	1.42	346	P	Pb	06 02 27.2	+0.2
PRK				S	Sn	06 02 43.9	-0.7
PRK				AML	AML	06 02 49.2	
	comp=N,2932µm,0.5s						
PRK				AML	AML	06 02 54.3	
	comp=E,1943µm,0.6s						
PRK	Paraskevi	1.42	346	P	Pg	06 02 28.2	+0.1
PRK				S	Sg	06 02 47.9	+1.3
PRK				AML	AML	06 02 54.3	
	comp=E,1943µm,0.6s						
PRK				AML	AML	06 02 57.2	
	comp=N,3335µm,0.7s						
PRK	Paraskevi	1.42	346	P	Pg	06 02 28.1	0.0
AYVA	Ayvalik	1.44	359	*i* P	Pb	06 02 27.4	+0.1
AYVA				*i* S	Sg	06 02 48.1	+0.9
AYVA	Ayvalik	1.44	359	P	Pb	06 02 27.4	+0.1
AYVA				S	Sg	06 02 48.1	+0.9
YER	Yerkesik	1.44	120	PN	Pn	06 02 26.9	+0.4
YER	Yerkesik	1.44	120	P	Pb	06 02 27.1	-0.3
YER				S	Sg	06 02 46.8	-0.5
YER	Yerkesik	1.44	120	P	Pb	06 02 27.1	-0.3
YER				S	Sg	06 02 46.8	-0.5
SIGR	SIGRI	1.50	334	PN	Pn	06 02 27.6	+0.4
SIGR	SIGRI	1.50	334	P	Pn	06 02 27.1	-0.2
SIGR				AML	AML	06 02 54.8	
	comp=N,853µm,0.7s						
SIGR				AML	AML	06 02 55.6	
	comp=E,659µm,0.4s						
SIGR	SIGRI	1.50	334	P	Pn	06 02 27.0	-0.2
SIGR	SIGRI	1.50	334	P	Pn	06 02 27.0	-0.2
SIGR	SIGRI	1.50	334	*e*Pn	Pn	06 02 27.6	+0.4
MANT	Manisa	1.58	66	*i* P	Pg	06 02 30.9	-0.2
MANT				*i* S	Sb	06 02 50.3	+0.6
MANT	Manisa	1.58	66	P	Pg	06 02 30.9	-0.2
MANT				S	Sb	06 02 50.3	+0.6
GPNR	Gulpinar-Canak	1.65	344	PN	Pn	06 02 29.8	+0.5
GPNR	Gulpinar-Canak	1.65	344	*e*Pn	Pn	06 02 29.8	+0.5
KULA	Kula-Manisa	1.66	66	PN	Pn	06 02 30.2	+0.7

KULA	Kula-Manisa	1.66	66	ePn	Pn	06 02 30.2	+0.7
STEP	BALIKESIR_Sava	1.70	27	i P	Pg	06 02 32.8	-0.6
STEP				i S	Sg	06 02 55.8	+0.3
STEP	BALIKESIR_Sava	1.70	27	P	Pg	06 02 32.8	-0.6
STEP				S	Sg	06 02 55.8	+0.3
THR2	Thira island,	1.75	216	P	Pn	06 02 31.7	+1.1
THR8	Santorini-Mono	1.76	215	P	Pg	06 02 34.1	-0.5
THT2	Imerovigli	1.77	216	P	Pb	06 02 33.7	+0.9
THR7	Fira-Santorini	1.77	216	P	Pb	06 02 33.2	+0.2
SAP2K	Karterados	1.77	215	P	Pb	06 02 34.0	+1.0
THR3	Thira Island,	1.79	216	P	Pg	06 02 34.6	-0.7
TURN	Turunc	1.80	123	PN	Pn	06 02 29.2	-2.1
TURN	Turunc	1.80	123	ePn	Pn	06 02 29.2	-2.1
SANT	Santorini	1.80	214	P	Pb	06 02 33.6	+0.1
SAP3	Santorini-Thir	1.80	218	P	Pb	06 02 34.0	+0.5
SAP3				S	Sg	06 02 57.7	-1.0
THT1	Athinios (Pele	1.80	215	P	Pb	06 02 34.0	+0.5
KARY	Karystos	1.81	276	P	Pb	06 02 33.5	-0.1
KARY				S	Sb	06 02 55.9	-0.3
KARY				AML	AML	06 02 59.6	
	comp=N,119µm,0.4s						
KARY				AML	AML	06 02 59.8	
	comp=E,91µm,0.3s						
THR5	Thira Island,	1.81	218	P	Pg	06 02 35.0	-0.6
SAP1	Santorini-Akro	1.84	215	P	Pb	06 02 34.3	+0.2
THR6	Thira Island,	1.84	215	P	Pb	06 02 35.1	+0.9
THR9	Santorini-Faro	1.86	216	P	Pb	06 02 34.5	+0.1
DALY	Dalyan (Mu˜la	1.86	124	PN	Pn	06 02 33.1	+0.9
DALY	Dalyan (Mu˜la	1.86	124	ePn	Pn	06 02 33.1	+0.9
BALB	Balikesir	1.99	27	PN	Pn	06 02 34.7	+0.8
BALB	Balikesir	1.99	27	ePn	Pn	06 02 34.7	+0.8
ARG	Arkhangelos	2.00	145	P	Pb	06 02 36.4	-0.3
BOZC	Bozcaada	2.04	345	PN	Pn	06 02 35.3	+0.7
BOZC	Bozcaada	2.04	345	ePn	Pn	06 02 35.3	+0.7
MHLO	Agia Marina, M	2.19	238	P	Pn	06 02 36.8	+0.2
DION	Dionisos Attik	2.21	276	P	Pn	06 02 36.4	-0.6
VLY	Voula,Athens	2.31	271	P	Pn	06 02 39.7	+1.3
KARP	Karpathos	2.34	171	P	Pb	06 02 42.0	-0.8
LIA	Limnos Island	2.36	330	P	Pn	06 02 38.0	-0.9
LPK	Lapseki	2.50	1	PN	Pn	06 02 41.9	+0.9
LPK	Lapseki	2.50	1	ePn	Pn	06 02 41.9	+0.9
AOS	Alonnisos	2.58	301	P	Pn	06 02 43.3	+1.3
NPS	Neapolis	2.75	199	P	Pn	06 02 45.8	+1.5
SMTH	Samothraki Isl	2.76	341	P	Pn	06 02 43.7	-0.8
KSL	Kastellorizon	2.86	126	P	Pb	06 02 49.1	-2.5
KSL				S	Sb	06 03 24.5	-1.9
SKIA	Skiathos	2.86	298	P	Pn	06 02 46.1	+0.2
LAST	Lasithi	2.88	201	P	Pn	06 02 47.3	+1.1
ALN	Alexandroupoli	3.07	350	P	Pn	06 02 51.5	+2.8

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*KRSC **30** 06:02:37.7±0.6, 54°.40N×161°.24E, h61^{km}±16^{km}, ML4.7*
*MOS **30** 06:02:38.6±0.7, 54°.39N×161°.28E, h57^{km}, mb4.2/6, Error ellipse: s-maj=10.4km s-min=4.1km az=79.8*
*ISCJB **30** 06:02:39.2±0.4, 54°.45N±0°.03×161°.10E±0°.09, h84^{km}±4^{km}, mb3.8/21, Error ellipse: s-maj=9.1km s-min=2.6km az=24.3*
*IDC **30** 06:02:40.0±0.7, 54°.68N×160°.79E, h75^{km}±6^{km}, mb3.6/15, mb1 3.9/16, mb1mx3.6/73, mbtmp4.0/16, MS2.8/3, Ms1 2.8/3, ms1mx2.4/69, Error ellipse: s-maj=17.8km s-min=8.8km az=139.0*
ISC 30 06:02:39.2±0.6**, 54°.44N**±0°.03×**161°.11E**±0°.05**, h70**^{km}±5^{km}**, n119, σ1^{s}39**/155**, mb4.0**/22**, 1D, Near east coast of Kamchatka Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KZV	Kizimen	0.82	325	eP	Pn	06 02 55.9	+0.2
KZV				eS	Sn	06 03 08.0	+0.1
KZV	Kizimen	0.82	325	PN	Pn	06 02 55.9	+0.2
KZV				S	Sn	06 03 08.0	+0.1
TUMD	Tumrok D	0.87	332	i P	Pn	06 02 56.0	-0.1
TUMD				i S	Sn	06 03 08.2	-0.4
TUMR	Tumrok	1.01	327	i P	Pn	06 02 58.6	+0.7
TUMR				i S	Sn	06 03 12.8	+0.9
TUMR	Tumrok	1.01	327	PN	Pn	06 02 58.6	+0.7
TUMR				S	Sn	06 03 12.8	+0.9
KII	Karymskiy	1.06	248	eP	Pn	06 02 59.0	+0.6
KII				eS	Sn	06 03 13.6	+0.8
KII	Karymskiy	1.06	248	PN	Pn	06 02 59.0	+0.6
KII				S	Sn	06 03 13.6	+0.8
KMNR	Kamenistaya	1.41	339	i P	Pn	06 03 04.1	+1.0
KMNR				eS	Sn	06 03 23.4	+2.4
KMNR	Kamenistaya	1.41	339	PN	Pn	06 03 04.1	+1.0
KMNR				S	Sn	06 03 23.4	+2.4
SPN	Mys Shipunski	1.49	206	i P	Pn	06 03 04.1	+0.1
SPN				eS	Sn	06 03 22.9	+0.2
SPN	Mys Shipunski	1.49	206	PN	Pn	06 03 04.1	+0.1
SPN				S	Sn	06 03 22.9	+0.2
BZMR	Bezymyannaya	1.54	347	eP	Pn	06 03 05.9	+1.1
BZMR	Bezymyannaya	1.54	347	PN	Pn	06 03 05.9	+1.1
BZWR	Bezymyannyi-We	1.57	347	eP	Pn	06 03 06.3	+1.1
BZWR	Bezymyannyi-We	1.57	347	PN	Pn	06 03 06.3	+1.1
KIRR	Kirishev	1.58	344	i P	Pn	06 03 06.2	+0.9
KIRR				eS	Sn	06 03 26.8	+1.8
KIRR	Kirishev	1.58	344	PN	Pn	06 03 06.2	+0.9
KIRR				S	Sn	06 03 26.8	+1.8
ZLN	Zelenaya	1.59	354	eP	Pn	06 03 06.5	+1.1
ZLN	Zelenaya	1.59	354	PN	Pn	06 03 06.5	+1.1
KPT	Kopyto	1.61	342	eP	Pn	06 03 06.4	+0.7
KPT				eS	Sn	06 03 27.7	+2.0
KPT	Kopyto	1.61	342	PN	Pn	06 03 06.4	+0.7
KPT				S	Sn	06 03 27.7	+2.0
NLC	Nalytchevo	1.65	220	eP	Pn	06 03 06.9	+0.8
NLC				eS	Sn	06 03 27.7	+1.3
NLC	Nalytchevo	1.65	220	PN	Pn	06 03 06.9	+0.8
NLC				S	Sn	06 03 27.7	+1.3
LGNR	Loginova	1.67	352	eP	Pn	06 03 07.9	+1.3
LGNR				eS	Sn	06 03 29.8	+2.5
LGNR	Loginova	1.67	352	PN	Pn	06 03 07.9	+1.3
LGNR				S	Sn	06 03 29.8	+2.5
CIRR	Tsirk	1.69	353	eP	Pn	06 03 07.8	+1.0
CIRR	Tsirk	1.69	353	PN	Pn	06 03 07.8	+1.0
SDLR	Sedlovina	1.76	230	eP	Pn	06 03 08.7	+1.0
SDLR				eS	Sn	06 03 31.0	+1.7
SDLR	Sedlovina	1.76	230	PN	Pn	06 03 08.7	+1.0
SDLR				S	Sn	06 03 31.0	+1.7
KOZ	Kozyrevsk	1.77	337	eP	Pn	06 03 08.5	+0.8
KOZ				eS	Sn	06 03 31.0	+1.6
KOZ	Kozyrevsk	1.77	337	PN	Pn	06 03 08.5	+0.8
KOZ				S	Sn	06 03 31.0	+1.6
SMAR	Somma	1.81	230	eP	Pn	06 03 09.4	+1.0
SMAR				eS	Sn	06 03 32.0	+1.5
SMAR	Somma	1.81	230	PN	Pn	06 03 09.4	+1.0
SMAR				S	Sn	06 03 32.0	+1.5
KRSR	Krestovskiy	1.81	350	eP	Pn	06 03 08.9	+0.6
KRSR	Krestovskiy	1.81	350	PN	Pn	06 03 08.9	+0.6
KRX	Arik	1.82	234	eP	Pn	06 03 09.5	+1.0
KRX				eS	Sn	06 03 32.1	+1.4
KRX	Arik	1.82	234	PN	Pn	06 03 09.5	+1.0
KRX				S	Sn	06 03 32.1	+1.4
UGLR	Uglovaya	1.83	229	eP	Pn	06 03 09.9	+1.2
UGLR				eS	Sn	06 03 32.6	+1.6
UGLR	Uglovaya	1.83	229	PN	Pn	06 03 09.9	+1.2
UGLR				S	Sn	06 03 32.6	+1.6
AVH	Avacha	1.83	231	eP	Pn	06 03 09.9	+1.2
AVH	Avacha	1.83	231	PN	Pn	06 03 09.9	+1.2
KOK	Koryaka	1.86	233	eP	Pn	06 03 10.2	+1.1
KOK	Koryaka	1.86	233	PN	Pn	06 03 10.2	+1.1
KLY	Klyuchi	1.90	352	eP	Pn	06 03 09.9	+0.5
KLY				eS	Sn	06 03 32.5	+0.2
KLY	Klyuchi	1.90	352	PN	Pn	06 03 09.9	+0.5
KLY				S	Sn	06 03 32.5	+0.2
DALK	Dalny	1.99	226	eP	Pn	06 03 11.6	+1.0
DALK				eS	Sn	06 03 35.7	+1.1
DALK	Dalny	1.99	226	PN	Pn	06 03 11.6	+1.0
DALK				S	Sn	06 03 35.7	+1.1
GNL	Ganaly	2.01	250	eP	Pn	06 03 12.2	+1.1
GNL	Ganaly	2.01	250	PN	Pn	06 03 12.2	+1.1
KBTR	Krutoberegovo	2.02	28	eP	Pn	06 03 11.5	+0.4
KBTR				eS	Sn	06 03 35.8	+0.4
KBTR	Krutoberegovo	2.02	28	PN	Pn	06 03 11.5	+0.4
KBTR				S	Sn	06 03 35.8	+0.4
ESO	Esso	2.03	318	eP	Pn	06 03 11.5	+0.2
ESO	Esso	2.03	318	PN	Pn	06 03 11.5	+0.2
KBG	Krutoberegovo	2.03	26	eP	Pn	06 03 11.5	+0.3
KBG				eS	Sn	06 03 35.4	-0.2
KBG	Krutoberegovo	2.03	26	PN	Pn	06 03 11.5	+0.3
KBG				S	Sn	06 03 35.4	-0.2
PET	Petropavlovsk	2.04	227	i P	Pn	06 03 12.5	+1.2
PET	Petropavlovsk	2.04	227	⇓iPN	Pn	06 03 12.4	+1.2
PET				eS	Sn	06 03 36.8	+1.1
PET				pmax	pmax		
	comp=Z,1µm,1.2s						
PET				smax	smax		
	comp=N,2µm,0.6s						
PET				smax	smax		
	comp=E,2µm,0.6s						
BDR	Baidarnaya	2.13	1	eP	Pn	06 03 13.9	+1.2
BDR	Baidarnaya	2.13	1	PN	Pn	06 03 13.9	+1.2
SMKR	Semkarok	2.16	5	i P	Pn	06 03 14.0	+1.0
SMKR	Semkarok	2.16	5	PN	Pn	06 03 14.0	+1.0
SRKR	Sorokina	2.22	1	i P	Pn	06 03 14.9	+1.1
SRKR	Sorokina	2.22	1	PN	Pn	06 03 14.9	+1.1
PETK	Petropavlovsk-	2.43	238	P	Pn	06 03 17.4	+0.8
	baz=69,slow=17						
PETK				S	Sn	06 03 48.7	+3.5
	baz=54,slow=24						
PETK				LR	LR	06 04 18.5	
	comp=E,116nm,20.3s,baz=66,slow=41						
RUS	Russkaya	2.54	219	eP	Pn	06 03 18.5	+0.4
RUS				eP		06 03 18.6	
RUS				eS	Sn	06 03 48.5	+0.6
RUS	Russkaya	2.54	219	PN	Pn	06 03 18.5	+0.4
RUS				S	Sn	06 03 48.5	+0.6
GRL	Gorelyy	2.62	225	eP	Pn	06 03 21.1	+1.8
GRL	Gorelyy	2.62	225	PN	Pn	06 03 21.1	+1.8
MTVR	Mutnovka	2.63	223	eP	Pn	06 03 20.9	+1.5
MTVR				eS	Sn	06 03 52.5	+2.2
MTVR	Mutnovka	2.63	223	PN	Pn	06 03 20.9	+1.5
MTVR				S	Sn	06 03 52.5	+2.2
ASAK	Asacha	2.82	224	eP	Pn	06 03 23.6	+1.6
ASAK	Asacha	2.82	224	PN	Pn	06 03 23.6	+1.6
MIPR	Malaya Ipel'ka	3.39	232	eP	Pn	06 03 31.2	+1.5
MIPR	Malaya Ipel'ka	3.39	232	PN	Pn	06 03 31.2	+1.5
PAU	Pauzhetka	3.95	223	eP	Pn	06 03 39.3	+2.0
PAU	Pauzhetka	3.95	223	PN	Pn	06 03 39.3	+2.0
PALN	Palana	4.70	353	eP	Pn	06 03 51.1	+3.6
PALN	Palana	4.70	353	PN	Pn	06 03 51.1	+3.6
SKR	Severo-Kuril's	4.84	221	eP	Pn	06 03 50.6	+1.2
SKR	Severo-Kuril's	4.84	221	PN	Pn	06 03 50.6	+1.2
TILK	Tilichiki	6.61	22	i P	Pn	06 04 15.1	+1.6
TILK	Tilichiki	6.61	22	PN	Pn	06 04 15.1	+1.6
MA2	Magadan	7.64	317	P	Pn	06 04 28.7	+1.1
	comp=E,1.0nm,0.3s,baz=128,slow=11,SNR=10						
MA2				LR	LR	06 08 11.8	
	comp=E,21nm,18.2s,baz=206,slow=45						
MA2	Magadan	7.64	317	i PN	Pn	06 04 45.5	+18
SEY	Seymchan	9.64	336	i PN	Pn	06 05 12.0	+17
ERM	Erimo	17.19	231	i P	Pn	06 06 34.3	-0.2
KLR	Kul'dur	18.80	266	P	P	06 06 52.1	-0.7
	comp=E,0.0nm,0.3s,baz=66,slow=13,SNR=5.3						
MAJO	Matsushiro	23.86	231	i P	P	06 07 45.4	-0.6
MAJO				pmax	pmax		
	comp=Z,6.0nm,0.7s						
MAT	Matsushiro	23.86	231	P	P	06 07 44.3	-1.7
MJAR	Matsushiro Arr	23.86	231	P	P	06 07 45.2	-0.8
	comp=Z,2.7nm,0.5s,baz=16,slow=7.2,SNR=8.0						
BOD	Bodaibo	26.05	297	eP	P	06 08 13.5	+7.9
BOD				pmax	pmax		
	comp=Z,5.0nm,1.7s						
ILAR	Eielson Array	27.44	47	P	P	06 08 18.1	0.0
	comp=Z,0.3nm,0.6s,baz=269,slow=7.7,SNR=5.5						
ILAR	Eielson Array	27.44	47	eP	P	06 08 21.9	+3.8
ILAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
INK	Inuvik	32.44	39	P	P	06 09 02.2	+0.1
	comp=Z,0.5nm,0.4s,baz=207,slow=33,SNR=5.7						
SONM	Songino Array	34.20	282	P	P	06 09 15.8	-2.0
	comp=Z,0.3nm,0.4s,baz=101,slow=7.5,SNR=2.3						
H11N2	WAKE ISLAND Hy	34.93	170	T	T	06 46 36.1	
	baz=354,slow=76,SNR=301						
H11N3	WAKE ISLAND Hy	34.94	170	T	T	06 46 20.1	
	baz=354,slow=76,SNR=301						
H11N1	WAKE ISLAND Hy	34.95	170	T	T	06 46 37.3	
	baz=354,slow=76,SNR=481						
H11S1	WAKE ISLAND Hy	36.12	171	T	T	06 47 48.3	
	baz=352,slow=76,SNR=17						
H11S3	WAKE ISLAND Hy	36.13	171	T	T	06 47 50.9	
	baz=352,slow=76,SNR=17						
H11S2	WAKE ISLAND Hy	36.14	171	T	T	06 47 51.1	
	baz=352,slow=76,SNR=14						
YKA	Yellowknife Ar	41.77	44	P	P	06 10 22.4	+1.3
	comp=Z,0.5nm,0.5s,baz=99,slow=31,SNR=5.3						
KURK	Kurchatov	47.54	301	i P	pP	06 11 20.3	-4.3
KURK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KURBB	Kurchatov Arra	47.65	301	P	P	06 11 04.5	-3.5
	comp=Z,0.3nm,0.4s,baz=55,slow=7.7,SNR=5.3						
KURBB				pP	pP	06 11 24.5	-1.0
	comp=Z,1.4nm,0.7s,baz=55,slow=7.8,SNR=8.9						
MKAR	Makanchi Array	48.12	295	P	P	06 11 10.1	-1.7
	comp=Z,0.3nm,0.7s,baz=68,slow=5.3,SNR=2.8						
MKAR				pP	pP	06 11 28.3	-0.9
	comp=Z,0.7nm,0.6s,baz=60,slow=8.4,SNR=7.4						
MKAR	Makanchi Array	48.12	295	eP	pP	06 11 29.5	+0.2
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.6s						
BVAR	Borovoye Array	50.03	308	pP	pP	06 11 42.1	-1.7
	comp=Z,0.6nm,0.6s,baz=70,slow=9.3,SNR=3.2						
BRVK	Borovoye	50.06	308	i P	pP	06 11 42.1	-1.9
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
ARU	Arti	52.82	317	i P	pP	06 12 05.4	+0.7
ARU				pmax	pmax		
	comp=Z,2.0nm,1.0s						
NVAR	Mina Array Bea	54.73	72	P	P	06 12 03.4	+1.9
	comp=Z,2.1nm,0.6s,baz=302,slow=7.4,SNR=21						
AAK	Ala-Archa	55.03	296	i P	pP	06 12 21.5	+0.2
AAK				pmax	pmax		
	comp=Z,2.0nm,0.9s						
PDAR	Pinedale Array	56.35	62	P	P	06 12 14.2	+1.2
	comp=Z,0.9nm,0.7s,baz=307,slow=2.1,SNR=9.8						
FINES	FINESS Array B	59.12	337	P	P	06 12 30.2	-1.6
	comp=Z,1.5nm,0.9s,baz=57,slow=7.0,SNR=4.8						
HFS	Hagfors	62.85	342	P	P	06 12 54.8	-2.4
	comp=Z,6.4nm,1.2s,baz=23,slow=7.8,SNR=2.9						
TXAR	Lajitas Array	69.56	68	P	P	06 13 41.9	+1.2
	comp=Z,2.1nm,0.5s,baz=296,slow=5.1,SNR=61						
WRA	Warramunga Arr	77.56	206	P	P	06 14 27.2	-0.2
	comp=Z,2.1nm,0.6s,baz=22,slow=6.1,SNR=20						
WRA				pP	pP	06 14 46.5	+0.3
	comp=Z,0.9nm,0.7s,baz=20,slow=6.1,SNR=2.6						
FITZ	Fitzroy Crossi	78.35	214	P	P	06 14 31.7	-0.1
	comp=Z,4.2nm,0.9s,baz=8.9,slow=6.8,SNR=7.9						
ASAR	Alice Springs	81.24	205	P	P	06 14 47.7	+0.4
	comp=Z,2.3nm,0.7s,baz=16,slow=5.3,SNR=22						
ASAR				pP	pP	06 15 07.5	+1.3
	comp=Z,0.6nm,0.7s,baz=19,slow=5.9,SNR=2.3						
PPT	Papeete	83.12	133	LR	LR	06 45 20.9	
	comp=Z,29nm,20.6s,baz=178,slow=31						

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*ISK **30** 06:04:50.6, 37°.87N×26°.69E, h13^{km}, ML2.8/11*
*CSEM **30** 06:04:51.3±0.1, 37°.90N×26°.75E, h2^{km}, ML2.7, Error ellipse: s-maj=3.6km s-min=2.8km az=67.0*
*ISCJB **30** 06:04:51.2±0.4, 37°.89N±0°.02×26°.74E±0°.03, h4^{km}±4^{km}, Error ellipse: s-maj=3.6km s-min=2.9km az=159.8*
*THE **30** 06:04:51.2, 37°.88N×26°.70E, h1^{km}±1^{km}, ML2.7/4, Error ellipse: s-maj=2.0km s-min=0.6km az=57.0*
*DDA **30** 06:04:51.4, 37°.89N×26°.77E, h7^{km}, Ml2.9*
*ATH **30** 06:04:51.5, 37°.87N×26°.70E, h10^{km}±1^{km}, ML2.7/6, Error ellipse: s-maj=2.1km s-min=0.8km az=77.0*
ISC 30 06:04:51.3±0.8**, 37°.87N**±0°.01×**26°.72E**±0°.02**, h13**^{km}±6^{km}**, n83, σ0^{s}84**/120**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMG	Samos	0.19	149	P	Pg	06 04 55.4	-0.1
SMG				S	Sg	06 04 58.2	-0.3
SMG				AML	AML	06 04 59.1	
	comp=E,10590µm,0.4s						
SMG				AML	AML	06 04 59.5	
	comp=N,7438µm,0.4s						
SMG	Samos	0.19	149	P	Pg	06 04 55.4	-0.1
SMG				S	Sg	06 04 59.0	+0.6
SMG				AML	AML	06 04 59.1	
	comp=E,10590µm,0.4s						
SMG				AML	AML	06 04 59.5	
	comp=N,7438µm,0.4s						
SMG	Samos	0.19	149	P	Pg	06 04 55.6	+0.1
SMG				S	Sg	06 04 58.6	+0.2
SMG	Samos	0.19	149	P	Pg	06 04 55.6	+0.1
SMG				S	Sg	06 04 58.6	+0.2
DGB	˜zmir	0.22	36	i P	Pg	06 04 55.8	-0.4
DGB				i S	Sg	06 04 59.0	-0.4
URLA	Izmir	0.50	349	PG	Pg	06 05 00.6	-0.6
URLA				SG	Sg	06 05 08.1	+0.3
URLA	Izmir	0.50	349	i P	Pg	06 05 00.6	-0.6
URLA				i S	Sg	06 05 08.2	+0.4
URLA	Izmir	0.50	349	P	Pg	06 05 00.6	-0.6
URLA				eSg	Sg	06 05 08.1	+0.3
BLCB	Balcova	0.57	26	PG	Pg	06 05 02.2	-0.4
BLCB	Balcova	0.57	26	ePg	Pg	06 05 02.2	-0.4
CHOS	Chios island	0.73	315	PG	Pg	06 05 04.9	-0.7
CHOS	Chios island	0.73	315	P	Pg	06 05 04.1	-1.4
CHOS				S	Sb	06 05 16.4	+0.4
CHOS				AML	AML	06 05 16.8	
	comp=E,1918µm,0.5s						
CHOS				AML	AML	06 05 18.7	
	comp=N,1878µm,0.4s						
CHOS	Chios island	0.73	315	P	Pg	06 05 05.1	-0.4
CHOS				S	Sb	06 05 15.9	-0.1
CHOS				AML	AML	06 05 16.8	
	comp=E,1918µm,0.5s						
CHOS				AML	AML	06 05 18.7	
	comp=N,1878µm,0.4s						
CHOS	Chios island	0.73	315	P	Pg	06 05 05.2	-0.4
CHOS				S	Sb	06 05 16.3	+0.3
CHOS	Chios island	0.73	315	ePg	Pg	06 05 04.9	-0.7
CHOS	Chios island	0.73	315	P	Pg	06 05 05.2	-0.4
CHOS				S	Sg	06 05 15.7	+0.4
KRBN	Karaburun	0.73	350	PG	Pg	06 05 05.3	-0.3
KRBN	Karaburun	0.73	350	ePg	Pg	06 05 05.3	-0.3
FOCM	Foˆ§a	0.84	1	PG	Pg	06 05 07.4	-0.2
FOCM	Foˆ§a	0.84	1	ePg	Pg	06 05 07.4	-0.2
AYDB	Zeytinkoy-Aydi	0.93	85	PG	Pg	06 05 09.1	-0.2
AYDB	Zeytinkoy-Aydi	0.93	85	ePg	Pg	06 05 09.1	-0.2
BODT	Bodrum	0.93	149	PG	Pg	06 05 09.4	+0.1
BODT	Bodrum	0.93	149	P	Pb	06 05 09.9	+0.5
BODT				S	Sn	06 05 24.4	+1.0
BODT	Bodrum	0.93	149	ePg	Pg	06 05 09.4	+0.1
BODT	Bodrum	0.93	149	P	Pb	06 05 09.9	+0.5
BODT				S	Sn	06 05 24.4	+1.0
AYDN	Tasoluk	0.94	102	i P	Pg	06 05 08.3	-1.3
AYDN				i S	Sg	06 05 21.9	0.0
AYDN	Tasoluk	0.94	102	P	Pg	06 05 08.3	-1.3
AYDN				S	Sg	06 05 21.9	0.0
BDRM	Kayabasi	0.99	144	i P	Pn	06 05 11.2	+0.3
BDRM				i S	Sb	06 05 24.2	+1.0
BDRM	Kayabasi	0.99	144	P	Pn	06 05 11.2	+0.3
BDRM				S	Sb	06 05 24.2	+1.0
MLSB	Milas	1.02	124	PG	Pb	06 05 10.9	+0.1
MLSB	Milas	1.02	124	ePg	Pb	06 05 10.9	+0.1
PSRA	Psara	1.13	307	P	Pg	06 05 14.4	+1.3
PSRA				S	Sn	06 05 29.2	+1.1
PSRA	Psara	1.13	307	P	Pb	06 05 12.7	0.0
PSRA	Psara	1.13	307	P	Pb	06 05 12.6	-0.1
DKL	Dikili	1.21	7	PN	Pn	06 05 13.8	-0.1
DKL	Dikili	1.21	7	ePn	Pn	06 05 13.8	-0.1
AMGA	Amorgos Island	1.23	213	P	Pn	06 05 13.2	-1.0
AMGA				S	Sb	06 05 29.5	-0.6
AMGA				AML	AML	06 05 37.1	
	comp=N,637µm,0.3s						
AMGA				AML	AML	06 05 37.2	
	comp=E,610µm,0.3s						
AMGA	Amorgos Island	1.23	213	P	Pn	06 05 14.2	+0.1
AMGA				S	Sg	06 05 31.8	+0.9
AMGA				AML	AML	06 05 36.8	
	comp=E,554µm,0.3s						
AMGA				AML	AML	06 05 37.1	
	comp=N,637µm,0.3s						
AMGA	Amorgos Island	1.23	213	P	Pn	06 05 13.9	-0.3
AMGA				S	Sg	06 05 31.8	+0.9
AMGA	Amorgos Island	1.23	213	P	Pn	06 05 14.3	+0.1
AMGA				S	Sg	06 05 31.5	+0.6
APE	Apeiranthos	1.24	230	P	Pn	06 05 14.5	+0.2
APE				S	Sb	06 05 27.6	-2.8
APE				AML	AML	06 05 32.9	
	comp=N,538µm,0.2s						
APE				AML	AML	06 05 33.8	
	comp=E,472µm,0.2s						
APE	Apeiranthos	1.24	230	P	Pg	06 05 15.3	+0.2
APE				S	Sn	06 05 31.1	+0.2
APE				AML	AML	06 05 33.2	
	comp=N,446µm,0.2s						
APE				AML	AML	06 05 33.8	
	comp=E,473µm,0.2s						
APE	Apeiranthos	1.24	230	P	Pn	06 05 13.6	-0.7
APE	Apeiranthos	1.24	230	P	Pb	06 05 15.0	+0.5
APE				S	Sn	06 05 31.3	+0.4
TNSA	Tinos	1.28	255	P	Pn	06 05 15.0	+0.2
TNSA	Tinos	1.28	255	P	Pn	06 05 15.1	+0.3
AKHS	Akhisar	1.33	40	i P	Pn	06 05 15.4	-0.1
AKHS				i S	Sn	06 05 33.5	+0.4
AKHS	Akhisar	1.33	40	P	Pn	06 05 15.4	-0.1
AKHS				S	Sn	06 05 33.5	+0.4
DAT	Datca	1.33	149	PN	Pn	06 05 15.5	-0.2
DAT	Datca	1.33	149	ePn	Pn	06 05 15.5	-0.2
PRK	Paraskevi	1.42	346	P	Pn	06 05 17.1	+0.3
PRK				S	Sg	06 05 39.8	+2.8
PRK				AML	AML	06 05 44.8	
	comp=E,866µm,0.6s						
PRK				AML	AML	06 05 47.7	
	comp=N,1137µm,0.8s						
PRK	Paraskevi	1.42	346	P	Pb	06 05 17.6	0.0
YER	Yerkesik	1.45	120	PN	Pn	06 05 17.4	+0.2
YER	Yerkesik	1.45	120	ePn	Pn	06 05 17.4	+0.2
SIGR	SIGRI	1.50	333	PN	Pn	06 05 17.6	-0.3
SIGR	SIGRI	1.50	333	P	Pn	06 05 18.1	+0.1
SIGR				S	Sg	06 05 39.9	+0.3
SIGR				AML	AML	06 05 46.0	
	comp=E,264µm,0.4s						
SIGR				AML	AML	06 05 49.2	
	comp=N,319µm,0.6s						
SIGR	SIGRI	1.50	333	P	Pn	06 05 17.7	-0.2
SIGR				S	Sn	06 05 36.0	-1.3
SIGR	SIGRI	1.50	333	ePn	Pn	06 05 17.6	-0.3
SIGR	SIGRI	1.50	333	P	Pb	06 05 18.8	-0.2
SIGR				S	Sg	06 05 40.0	+0.3
MANT	Manisa	1.58	66	i P	Pb	06 05 20.3	-0.2
MANT				i S	Sn	06 05 39.2	-0.4
MANT	Manisa	1.58	66	P	Pb	06 05 20.3	-0.2
MANT				S	Sn	06 05 39.2	-0.4
KULA	Kula-Manisa	1.66	67	PN	Pn	06 05 20.7	+0.5
KULA	Kula-Manisa	1.66	67	ePn	Pn	06 05 20.7	+0.5
THR2	Thira island,	1.75	216	P	Pb	06 05 24.3	+1.0
THR2	Thira island,	1.75	216	P	Pb	06 05 24.1	+0.8
THR3	Thira Island,	1.80	216	P	Pb	06 05 24.6	+0.5
THR3	Thira Island,	1.80	216	P	Pb	06 05 24.6	+0.5
TURN	Turunc	1.80	123	PN	Pn	06 05 20.0	-2.0
TURN	Turunc	1.80	123	ePn	Pn	06 05 20.0	-2.0
SAP3	Santorini-Thir	1.80	218	P	Pb	06 05 23.7	-0.5
SAP3				S	Sg	06 05 48.4	-0.9
KARY	Karystos	1.81	276	P	Pn	06 05 22.4	+0.3
KARY				S	Sn	06 05 43.7	-1.3
KARY				AML	AML	06 05 52.2	
	comp=E,49µm,0.2s						
KARY				AML	AML	06 05 52.9	
	comp=N,65µm,0.2s						
THR5	Thira Island,	1.82	217	P	Pg	06 05 25.8	-0.4
THR5	Thira Island,	1.82	217	P	Pb	06 05 25.3	+0.9
THR6	Thira Island,	1.84	215	P	Pb	06 05 25.6	+0.7
THR6	Thira Island,	1.84	215	P	Pb	06 05 25.4	+0.6
SERI	Serifos	1.91	249	P	Pn	06 05 22.6	-1.0
SERI				S	Sn	06 05 44.5	-3.0
SERI				AML	AML	06 05 55.7	
	comp=N,90µm,0.3s						
SERI				AML	AML	06 05 59.6	
	comp=E,84µm,0.4s						
BOZC	Bozcaada	2.04	345	PN	Pn	06 05 25.4	+0.1
BOZC	Bozcaada	2.04	345	ePn	Pn	06 05 25.4	+0.1
LIA	Limnos Island	2.35	330	P	Pb	06 05 33.0	-0.5
LIA	Limnos Island	2.35	330	P	Pb	06 05 32.7	-0.8
SMTH	Samothraki Isl	2.76	341	P	Pn	06 05 37.8	+2.6
SMTH	Samothraki Isl	2.76	341	P	Pn	06 05 37.9	+2.7

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*IDC **30** 06:18:16.6±1.5, 3°.07N×96°.98E, h0^{km}, mb3.8/8, mb1 3.9/8, mb1mx3.7/63, mbtmp3.8/8, MS2.9/1, Ms1 3.1/1, ms1mx2.5/66, Error ellipse: s-maj=53.1km s-min=16.4km az=45.0*
*ISCJB **30** 06:18:20.0±0.7, 3°.20N±0°.05×97°.21E±0°.04, h6^{km}±4^{km},*

mb3.8/8, Error ellipse: s-maj=7.7km s-min=5.8km az=12.8
*DJA **30** 06:18:21.3±0.2, 3°N±2°×9°7E±°, h10km, M4.4/12, mB4.8/1, mb4.8/1, MLv4.2/12, Mw(mB)4.1/1*
ISC 30 06:18:19.8±0.8, **3°.24N**±0°.03×**97°.23E**±0°.03, **h11**km±5km, **n23**, σ**1ˢ28**/27, **mb3.8**/8, **Northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TPTI		0.05	294	P	Pg	06 18 21.8	-0.2
TPTI				S	Sg	06 18 23.2	-0.4
KCSI	Kotacane, Aceh	0.61	63	P	Pb	06 18 32.2	-0.3
KCSI				S	Sb	06 18 40.9	-0.3
SNSI	Sinabang, Aceh	1.22	228	P	Pg	06 18 43.6	+0.3
SNSI				S	Sg	06 19 01.4	+2.2
MLSI	Meulaboh, Aceh	1.31	321	P	Pb	06 18 44.1	-0.4
MLSI				S	Sg	06 19 04.1	+2.0
TSI	Tuntungan	1.36	79	P	Pg	06 18 46.6	+0.6
TSI				S	Sg	06 19 05.5	+1.8
PSI	Prapat	1.75	104	Pn	Pb	06 18 52.0	-0.1
	14nm,0.3s,baz=359,slow=5.6,SNR=57						
PSI				Sn	Sg	06 19 16.4	+0.3
	90nm,0.3s,baz=0.1,slow=20,SNR=13						
PSI				LR	LR	06 19 23.4	
	comp=Z,113nm,18.7s,baz=88,slow=34						
GSI	Gunungsitoli	1.95	170	P	Pb	06 18 53.8	-1.6
LHMI	Lhok Sumawe	2.00	352	P	Pg	06 18 56.6	-1.6
LHMI				S	Sg	06 19 25.3	+1.2
BSI	Banda Aceh	2.96	319	P	Pn	06 19 08.4	+1.7
MNSI	Mandailing Nat	3.38	136	P	Pn	06 19 13.0	+0.5
PBSI	Pulau Batu	3.44	162	P	Pn	06 19 14.7	+1.4
CMAR	Chiang Mai Arr	15.22	6	Pn	P	06 22 00.6	+0.7
	0.7nm,0.3s,baz=198,slow=12,SNR=5.4						
CMAR				LR	LR	06 28 47.4	
	comp=Z,38nm,18.8s,baz=195,slow=41						
H08S2	Diego Garcia H	26.94	246	T	T	06 51 29.4	
	baz=63						
H08S3	Diego Garcia H	26.95	246	T	T	06 51 45.8	
	baz=63						
H08S1	Diego Carcia H	26.96	246	T	T	06 51 41.1	
	baz=63						
WRA	Warramunga Arr	43.11	124	P	P	06 26 19.4	-1.1
	2.0nm,0.5s,baz=304,slow=9.0,SNR=12						
ASAR	Alice Springs	44.62	129	P	P	06 26 32.0	-0.6
	0.4nm,0.4s,baz=299,slow=8.0,SNR=10						
SONM	Songino Array	45.12	9	P	P	06 26 37.5	+1.1
	0.4nm,0.4s,baz=171,slow=10,SNR=2.6						
MKAR	Makanchi Array	45.28	346	P	P	06 26 35.0	-2.6
	0.3nm,0.5s,baz=159,slow=9.3,SNR=6.4						
KURBB	Kurchatov Arra	49.78	344	P	P	06 27 10.8	-1.6
	0.3nm,0.5s,baz=162,slow=6.7,SNR=3.8						
ZALV	Zalesovo Beam	51.56	351	P	P	06 27 25.6	-0.1
	1.4nm,0.5s,baz=184,slow=8.8,SNR=4.1						
BVAR	Borovoye Array	54.35	340	P	P	06 27 46.1	-0.3
	0.6nm,0.5s,baz=129,slow=5.9,SNR=3.2						
ARCES	ARCESS Array B	80.64	340	P	P	06 30 31.9	-0.4
	2.1nm,0.9s,baz=90,slow=4.9,SNR=5.8						

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*KRNET **30** 06:23:05.4±0.1, 41°.01N×69°.77E, h11km, mb2.5*
ISC 30 06:23:04.8±1.4, **40°.96N**±0°.05×**69°.76E**±0°.06, **h6**km±15km, **n8**, σ**1ˢ22**/16, **14C**, **Tajikistan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TAS	Tashkent	0.51	316	⇑iP	Pg	06 23 14.9	+0.3
	baz=13						
TAS				⇑iS	Sg	06 23 21.9	+0.6
	baz=13						
BTK	Batken	1.21	138	⇑iP	Pg	06 23 29.1	+1.0
	baz=39						
BTK				⇑iS	Sn	06 23 46.7	+1.4
	baz=39						
ARK	Arkit	1.86	63	⇑iP	Pb	06 23 39.4	+0.1
	baz=64						
ARK				⇑iS	Sg	06 24 05.2	+0.7
	baz=64						
KK31	Karatay Array	2.21	14	Pn	Pb	06 23 44.6	-0.6
	1.7nm,0.3s,baz=204,slow=16,SNR=64						
KK31				Sn	Sg	06 24 14.3	-1.5
	14nm,0.6s,baz=208,slow=27,SNR=20						
ARSB	Arslanbob	2.46	81	⇑iP	Pb	06 23 49.0	-0.6
	baz=82						
ARSB				⇑iS	Sb	06 24 20.6	+0.4
	baz=82						
MNAS	Manas	2.56	53	⇑Pn	Pb	06 23 50.5	-0.7
	2.1nm,0.5s						
MNAS				⇑Sn	Sb	06 24 24.2	+1.2
	3.2nm,0.4s						
MNAS	Manas	2.56	53	⇑iP	Pb	06 23 50.4	-0.8
	baz=53						
MNAS				⇑iS	Sb	06 24 22.9	-0.1
	baz=53						
SFK	Sufi-Kurgan	3.01	107	⇑iP	Pb	06 23 56.8	-2.2
	baz=8.0						
SFK				⇑iS	Sb	06 24 34.3	-1.8
	baz=8.0						

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*ISCJB **30** 06:27:49.6±0.8, 37°.87N±0°.03×26°.69E±0°.05, h4km±6km, Error ellipse: s-maj=7.6km s-min=5.0km az=155.9*
*ISK **30** 06:27:49.7, 37°.90N×26°.74E, h18km, ML2.4/5*
*DDA **30** 06:27:49.9, 37°.88N×26°.70E, h7km, Ml2.6*
*CSEM **30** 06:27:50.0±0.3, 37°.88N×26°.69E, h10km, ML2.4, Error ellipse: s-maj=8.4km s-min=4.1km az=59.0*
ISC 30 06:27:50.1±1.2, **37°.89N**±0°.04×**26°.71E**±0°.04, **h12**km±8km, **n27**, σ**0ˢ56**/42, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGB	˜zmir	0.22	40	i P	Pg	06 27 54.7	-0.1
DGB				i S	Sg	06 27 58.0	+0.1
URLA	Izmir	0.48	350	PG	Pg	06 27 59.6	0.0
URLA				SG	Sg	06 28 06.8	+0.8
URLA	Izmir	0.48	350	i P	Pg	06 27 59.0	-0.6
URLA				i S	Sb	06 28 07.4	-0.2
URLA	Izmir	0.48	350	P	Pg	06 27 59.0	-0.6
URLA	Izmir	0.48	350	ePg	Pg	06 27 59.6	0.0
URLA				eSg	Sg	06 28 06.8	+0.8
URLA				S	Sb	06 28 07.4	-0.2
BLCB	Balcova	0.56	28	PG	Pg	06 28 00.8	-0.4
BLCB				SG	Sg	06 28 09.1	+0.4
BLCB	Balcova	0.56	28	ePg	Pg	06 28 00.8	-0.4
BLCB				eSg	Sg	06 28 09.1	+0.4
CHOS	Chios island	0.72	314	PG	Pb	06 28 04.4	-0.2
CHOS	Chios island	0.72	314	ePg	Pb	06 28 04.4	-0.2
AYDB	Zeytinkoy-Aydi	0.94	86	PG	Pg	06 28 07.6	-0.7
AYDB	Zeytinkoy-Aydi	0.94	86	ePg	Pg	06 28 07.6	-0.7
BODT	Bodrum	0.95	150	PG	Pb	06 28 08.7	+0.1
BODT	Bodrum	0.95	150	ePg	Pb	06 28 08.7	+0.1
AYDN	Tasoluk	0.96	103	i P	Pb	06 28 08.8	+0.2
AYDN				i S	Sb	06 28 21.9	+0.6
AYDN	Tasoluk	0.96	103	P	Pb	06 28 08.9	+0.2
AYDN				S	Sb	06 28 21.9	+0.6
BDRM	Kayabasi	1.01	144	i P	Pb	06 28 09.5	0.0
BDRM				i S	Sb	06 28 23.5	+0.7
BDRM	Kayabasi	1.01	144	P	Pb	06 28 09.5	0.0
BDRM				S	Sb	06 28 23.5	+0.7
DAT	Datca	1.35	149	PN	Pn	06 28 14.4	-0.5
DAT	Datca	1.35	149	ePn	Pn	06 28 14.4	-0.5
SIGR	SIGRI	1.48	334	PN	Pn	06 28 16.2	-0.4
SIGR	SIGRI	1.48	334	ePn	Pn	06 28 16.2	-0.4
MANT	Manisa	1.58	67	i P	Pg	06 28 20.4	-0.1
MANT				i S	Sn	06 28 38.9	+0.3
MANT	Manisa	1.58	67	P	Pg	06 28 20.4	-0.1
MANT				S	Sn	06 28 38.9	+0.3
KULA	Kula-Manisa	1.66	67	PN	Pn	06 28 18.1	-1.1
KULA	Kula-Manisa	1.66	67	ePn	Pn	06 28 18.1	-1.1
BAYC	CANAKKALE_Bayr	1.86	356	i P	Pn	06 28 21.2	-0.6
BAYC				i S	Sb	06 28 48.3	+1.1
BAYC	CANAKKALE_Bayr	1.86	356	P	Pn	06 28 21.2	-0.6
BAYC				S	Sb	06 28 48.3	+1.1

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*ISCJB **30** 06:35:10.9±0.5, 37°.85N±0°.02×26°.69E±0°.03, h2km±4km, Error ellipse: s-maj=4.0km s-min=2.8km az=169.8*
*ISK **30** 06:35:10.9, 37°.88N×26°.71E, h10km, ML2.9/15*
*ATH **30** 06:35:11.2, 37°.82N×26°.67E, h19km±2km, ML2.8/6, Error ellipse: s-maj=3.3km s-min=1.3km az=136.0*
*CSEM **30** 06:35:11.0±0.2, 37°.84N×26°.67E, h5km, ML2.8, Error ellipse: s-maj=4.3km s-min=3.0km az=70.0*
*THE **30** 06:35:11.2, 37°.86N×26°.66E, h0km±1km, ML2.7/4, Error ellipse: s-maj=1.3km s-min=0.5km az=40.0*
*DDA **30** 06:35:11.2, 37°.87N×26°.71E, h12km, Ml2.9*
ISC 30 06:35:11.4±0.9, **37°.86N**±0°.01×**26°.68E**±0°.02, **h11**km±6km, **n70**, σ**0ˢ84**/112, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMG	Samos	0.19	141	P	Pg	06 35 15.8	+0.2
SMG				S	Sg	06 35 18.6	+0.1
SMG				AML	AML	06 35 19.2	
	comp=E,7411µm,0.3s						
SMG				AML	AML	06 35 21.0	
	comp=N,6287µm,0.3s						
SMG	Samos	0.19	141	P	Pg	06 35 15.8	+0.2
SMG				S	Sg	06 35 19.2	+0.7
SMG	Samos	0.19	141	P	Pg	06 35 15.8	+0.2
SMG				S	Sg	06 35 18.9	+0.4
DGB	˜zmir	0.25	39	i P	Pg	06 35 16.2	-0.4
DGB				i S	Sg	06 35 19.5	-0.5
URLA	Izmir	0.51	352	PG	Pg	06 35 20.9	-0.4
URLA				SG	Sg	06 35 28.3	+0.3
URLA	Izmir	0.51	352	i P	Pg	06 35 21.0	-0.4
URLA				i S	Sb	06 35 29.5	-0.3
URLA	Izmir	0.51	352	P	Pg	06 35 21.0	-0.4
URLA				eSg	Sg	06 35 28.3	+0.3
URLA				S	Sb	06 35 29.5	-0.3
BLCB	Balcova	0.60	28	PG	Pg	06 35 22.5	-0.6
BLCB				SG	Sg	06 35 30.3	-0.6
BLCB	Balcova	0.60	28	ePg	Pg	06 35 22.5	-0.6
BLCB				eSg	Sg	06 35 30.3	-0.6
CHOS	Chios island	0.72	317	PG	Pg	06 35 25.1	-0.3
CHOS	Chios island	0.72	317	P	Pg	06 35 25.3	-0.1
CHOS				S	Sb	06 35 36.8	+0.8
CHOS				AML	AML	06 35 37.8	
	comp=E,3713µm,0.2s						
CHOS				AML	AML	06 35 39.0	
	comp=N,2643µm,0.6s						
CHOS	Chios island	0.72	317	P	Pg	06 35 25.4	-0.1
CHOS				S	Sb	06 35 36.5	+0.4
CHOS	Chios island	0.72	317	ePg	Pg	06 35 25.1	-0.3
CHOS	Chios island	0.72	317	P	Pg	06 35 25.4	-0.1
CHOS				S	Sb	06 35 36.5	+0.4
KRBN	Karaburun	0.74	352	PG	Pg	06 35 25.3	-0.5
KRBN	Karaburun	0.74	352	ePg	Pg	06 35 25.3	-0.5
FOCM	Foˆ§a	0.85	3	PG	Pg	06 35 27.4	-0.5
FOCM	Foˆ§a	0.85	3	ePg	Pg	06 35 27.4	-0.5
BODT	Bodrum	0.94	148	PG	Pg	06 35 29.3	-0.2
BODT	Bodrum	0.94	148	P	Pg	06 35 29.1	-0.4
BODT				S	Sn	06 35 44.4	+0.4
BODT	Bodrum	0.94	148	P	Pg	06 35 29.1	-0.4
BODT				S	Sn	06 35 44.4	+0.4
AYDB	Zeytinkoy-Aydi	0.96	84	PG	Pg	06 35 29.4	-0.5
AYDB	Zeytinkoy-Aydi	0.96	84	ePg	Pg	06 35 29.4	-0.5
AYDN	Tasoluk	0.97	101	i P	Pg	06 35 29.5	-0.6
AYDN				i S	Sg	06 35 42.7	0.0
AYDN	Tasoluk	0.97	101	P	Pg	06 35 29.5	-0.6
AYDN				S	Sg	06 35 42.7	0.0
BDRM	Kayabasi	1.00	142	i P	Pb	06 35 30.8	0.0
BDRM				i S	Sb	06 35 44.1	+0.2
BDRM	Kayabasi	1.00	142	P	Pb	06 35 30.8	0.0
BDRM				S	Sb	06 35 44.1	+0.2
MLSB	Milas	1.03	123	PG	Pg	06 35 31.0	-0.4
MLSB	Milas	1.03	123	ePg	Pg	06 35 31.0	-0.4
AMGA	Amorgos Island	1.20	212	P	Pg	06 35 34.1	-0.4
AMGA				S	Sb	06 35 48.6	-1.2
AMGA				AML	AML	06 35 55.0	
	comp=E,672µm,0.3s						
AMGA				AML	AML	06 35 57.2	
	comp=N,542µm,0.4s						
AMGA	Amorgos Island	1.20	212	P	Pb	06 35 33.4	-0.8
AMGA				S	Sn	06 35 51.3	+0.8
AMGA	Amorgos Island	1.20	212	P	Pb	06 35 33.7	-0.5
AMGA				S	Sb	06 35 48.9	-0.9
APE	Apeiranthos	1.21	230	P	Pb	06 35 33.3	-1.1
APE				S	Sb	06 35 49.5	-0.5
APE				AML	AML	06 35 53.0	
	comp=N,299µm,0.2s						
APE				AML	AML	06 35 53.9	
	comp=E,333µm,0.4s						
APE	Apeiranthos	1.21	230	P	Pb	06 35 33.6	-0.8
APE				S	Sn	06 35 51.2	+0.4
APE	Apeiranthos	1.21	230	P	Pb	06 35 33.6	-0.8
APE				S	Sb	06 35 49.6	-0.5
DKL	Dikili	1.22	8	PN	Pn	06 35 34.3	-0.2
DKL	Dikili	1.22	8	ePn	Pn	06 35 34.3	-0.2
DAT	Datca	1.33	147	PN	Pn	06 35 36.1	0.0
DAT	Datca	1.33	147	i P	Pn	06 35 35.4	-0.7
DAT				i S	Sg	06 35 57.6	+3.2
DAT	Datca	1.33	147	P	Pn	06 35 35.4	-0.7
DAT	Datca	1.33	147	ePn	Pn	06 35 36.1	0.0
DAT				S	Sg	06 35 57.6	+3.2
AKHS	Akhisar	1.35	41	i P	Pn	06 35 36.2	-0.1
AKHS				i S	Sn	06 35 54.2	-0.1
AKHS	Akhisar	1.35	41	P	Pn	06 35 36.2	-0.1
AKHS				S	Sn	06 35 54.2	-0.1
PRK	Paraskevi	1.42	347	P	Pg	06 35 40.1	+1.3
PRK				S	Sg	06 35 59.9	+2.7
PRK				AML	AML	06 36 00.4	
	comp=N,1537µm,0.5s						
PRK				AML	AML	06 36 03.4	
	comp=E,1099µm,0.5s						
PRK	Paraskevi	1.42	347	P	Pg	06 35 39.4	+0.7
AYVA	Ayvalik	1.45	0	i P	Pn	06 35 36.1	-1.5
AYVA				i S	Sg	06 35 59.1	+1.1
AYVA	Ayvalik	1.45	0	P	Pn	06 35 36.1	-1.5
AYVA				S	Sg	06 35 59.1	+1.1
YER	Yerkesik	1.46	119	PN	Pn	06 35 37.9	0.0
YER	Yerkesik	1.46	119	ePn	Pn	06 35 37.9	0.0
SIGR	SIGRI	1.50	335	P	Pn	06 35 37.6	-0.7
SIGR				S	Sg	06 36 01.8	+2.1
SIGR				AML	AML	06 36 06.3	
	comp=E,341µm,0.4s						
SIGR				AML	AML	06 36 10.1	
	comp=N,504µm,0.5s						
SIGR	SIGRI	1.50	335	P	Pn	06 35 37.9	-0.4
SIGR	SIGRI	1.50	335	P	Pb	06 35 38.6	-0.7
SIGR				S	Sg	06 36 01.1	+1.5
MANT	Manisa	1.61	66	i P	Pb	06 35 41.6	+0.3
MANT				i S	Sn	06 36 00.6	-0.2
MANT	Manisa	1.61	66	P	Pb	06 35 41.6	+0.3
MANT				S	Sn	06 36 00.6	-0.2
KULA	Kula-Manisa	1.69	67	PN	Pn	06 35 40.9	-0.1
KULA	Kula-Manisa	1.69	67	ePn	Pn	06 35 40.9	-0.1
STEP	BALIKESIR_Sava	1.72	28	i P	Pb	06 35 43.0	-0.1
STEP				i S	Sg	06 36 05.9	-0.8
STEP	BALIKESIR_Sava	1.72	28	P	Pb	06 35 43.0	-0.1
STEP				S	Sg	06 36 05.9	-0.8
TURN	Turunc	1.82	122	PN	Pn	06 35 40.6	-2.1
TURN	Turunc	1.82	122	ePn	Pn	06 35 40.6	-2.1
BAYC	CANAKKALE_Bayr	1.88	357	i P	Pn	06 35 42.3	-1.3
BAYC				i S	Sb	06 36 09.7	+0.3
BAYC	CANAKKALE_Bayr	1.88	357	P	Pn	06 35 42.3	-1.3
BAYC				S	Sb	06 36 09.7	+0.3
DEMI	Demirci	1.99	53	i P	Pb	06 35 47.6	0.0
DEMI				i S	Sb	06 36 13.2	+0.8
DEMI	Demirci	1.99	53	P	Pb	06 35 47.6	0.0
DEMI				S	Sb	06 36 13.2	+0.8
BOZC	Bozcaada	2.04	346	PN	Pn	06 35 45.9	+0.2
BOZC	Bozcaada	2.04	346	ePn	Pn	06 35 45.9	+0.2
LPK	Lapseki	2.51	1	PN	Pn	06 35 52.6	+0.4
LPK	Lapseki	2.51	1	ePn	Pn	06 35 52.6	+0.4
TVSB	Tavsanli	2.69	53	PN	Pn	06 35 55.2	+0.4
TVSB	Tavsanli	2.69	53	ePn	Pn	06 35 55.2	+0.4

WEL 30 06:37:31.9, **38°S**±14°×**18°0W**±1°3, **h33**km, **ML3.5**/8, **East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUZ	Puketiti	1.58	265	P	Pn	06 37 58.1	+0.5
PUZ				S	Sn	06 38 16.9	0.0
PKGZ	Pakihiroa	1.72	271	P	Pn	06 37 59.5	0.0
PKGZ				S	Sn	06 38 19.4	-1.1
TWGZ	Tauwhareparae	1.81	262	P	Pn	06 38 01.8	+1.0
TWGZ				S	Sn	06 38 24.0	+1.4
TKGZ	Te Karaka	1.96	255	P	Pn	06 38 03.8	+1.1
TKGZ				S	Sn	06 38 28.0	+1.9
HAZ	Te Kaha	1.97	275	P	Pn	06 38 03.5	+0.7
RUGZ	Raukumara Rang	2.04	269	P	Pn	06 38 04.7	+0.7
MWZ	Matawai	2.19	259	P	Pn	06 38 06.5	+0.6
MWZ				S	Sn	06 38 32.2	+0.4
KNZ	Kokohu	2.29	241	P	Pn	06 38 08.6	+1.2
KNZ				S	Sn	06 38 36.6	+2.2
URZ	Urewera	2.50	262	P	Pn	06 38 11.8	+1.6
URZ				S	Sn	06 38 40.4	+0.9
RTZ	Ruatahuna	2.66	254	P	Pn	06 38 14.3	+1.8
RTZ				S	Sn	06 38 45.8	+2.1

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*ISCJB **30** 06:50:55.7±0.4, 24°.76N±0°.02×122°.07E±0°.02, h79km±3km, Error ellipse: s-maj=3.5km s-min=2.6km az=162.2*
*JMA **30** 06:50:55.3, 24°.79N×122°.07E, h83km, M3.1*
*TAP **30** 06:50:55.7, 24°.74N×122°.02E, h81km, ML4.0, B*
ISC 30 06:50:55.9±1.3, **24°.76N**±0°.03×**122°.07E**±0°.02, **h80**km±6km, **n85**, σ**0ˢ90**/158, **13C**, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EGS		0.15	306	P	Pn	06 51 07.8	+0.3
	baz=324						
EOS1	EOS1	0.21	164	⇑iP	Pn	06 51 08.0	+0.4
	baz=154						
EOS1				S	Sn	06 51 17.2	+0.9
	baz=154						
NTC	Toucheng	0.23	295	eP	Pn	06 51 07.6	-0.1
	baz=302						
NTC				eS	Sn	06 51 16.5	0.0
	baz=302						
TWC	Suao	0.24	233	⇑iP	Pn	06 51 07.7	-0.1
	baz=228						
TWC				S	Sn	06 51 16.1	-0.5
	baz=228						
TWB1	Santiao Chiao	0.26	345	eP	Pn	06 51 07.9	0.0
	baz=350						
TWB1				eS	Sn	06 51 15.1	-1.7
	baz=350						
ILA	Ilan	0.29	272	eP	Pn	06 51 08.2	+0.2
	baz=284						
ILA				eS	Sn	06 51 17.3	+0.3
	baz=284						
TIPB	Shuangxi	0.30	315	⇑P	Pn	06 51 08.2	0.0
	baz=311						
TIPB				S	Sn	06 51 16.9	-0.4
	baz=311						
TWE	Neicheng	0.36	265	P	Pn	06 51 08.7	+0.2
	baz=270						
TWE				eS	Sn	06 51 18.2	+0.3
	baz=270						
NWF	Wu-fen Shan	0.41	321	i P	Pn	06 51 08.9	0.0
	baz=322						
NWF				S	Sn	06 51 18.3	-0.3
	baz=322						
WFSB	Wu-fen Shan	0.41	321	P	Pn	06 51 08.9	+0.1
	baz=325						
WFSB				eS	Sn	06 51 18.6	+0.1
	baz=325						
NANB	Nanao	0.43	221	⇑P	Pn	06 51 09.3	+0.3
	baz=215						
NANB				eS	Sn	06 51 18.9	+0.1
	baz=215						
ENA	Nanau	0.44	222	⇑iP	Pn	06 51 09.4	+0.3
	baz=215						
ENA				S	Sn	06 51 19.3	+0.4
	baz=215						
ENTT	Nioudou	0.47	256	⇑iP	Pn	06 51 09.7	+0.4
	baz=256						
ENTT				S	Sn	06 51 20.6	+1.3
	baz=256						
TWA	Mucha	0.49	297	P	Pn	06 51 09.4	-0.1
	baz=301						
TWA				eS	Sn	06 51 19.1	-0.5
	baz=301						
NWLT	Wulai	0.51	272	eP	Pn	06 51 09.8	+0.1
	baz=283						
NWLT				eS	Sn	06 51 20.4	+0.4
	baz=283						
TATO	Taipei	0.57	293	⇑P	Pn	06 51 10.1	-0.1
	baz=295						
TATO				eS	Sn	06 51 19.7	-1.1
	baz=295						
YM11	YM11	0.60	313	eP	Pn	06 51 11.4	+0.8
	baz=316						
YM11				eS	Sn	06 51 22.1	+0.5
	baz=316						
YM10	YM10	0.61	311	P	Pn	06 51 10.5	-0.2
	baz=314						
YM10				eS	Sn	06 51 21.0	-0.6
	baz=314						
YM05	YM05	0.61	312	P	Pn	06 51 10.4	-0.3
	baz=315						
YM05				eS	Sn	06 51 21.1	-0.6
	baz=315						
YM08	YM08	0.61	315	eP	Pn	06 51 10.2	-0.4
	baz=318						
YM08				eS	Sn	06 51 20.4	-1.2
	baz=318						
YM04	YM04	0.62	310	P	Pn	06 51 10.5	-0.2
	baz=312						
YM04				eS	Sn	06 51 21.0	-0.8
	baz=312						
YHNB	Yeheng	0.63	262	⇑P	Pn	06 51 11.2	+0.2
	baz=272						
YHNB				S	Sn	06 51 22.2	+0.1
	baz=272						
YM03	YM03	0.64	312	eP	Pn	06 51 10.7	-0.2
	baz=314						
YM03				eS	Sn	06 51 22.6	+0.4
	baz=314						
NSK	Sanguang	0.65	263	⇑iP	Pn	06 51 11.3	+0.2
	baz=272						
NSK				S	Sn	06 51 22.2	-0.1
	baz=272						
TWY	Chenhua	0.67	321	eP	Pn	06 51 11.4	+0.2
	baz=324						
TWS1	Kuangyinshan	0.68	300	⇑iP	Pn	06 51 11.4	+0.1
	baz=310						
TWS1				S	Sn	06 51 22.7	0.0
	baz=310						
NTST	Danshui	0.69	306	eP	Pn	06 51 11.5	+0.1
	baz=314						
NTST				eS	Sn	06 51 23.2	+0.2
	baz=314						
NNSB	Datong	0.70	242	⇑P	Pn	06 51 12.1	+0.4
	baz=233						
NNSB				eS	Sn	06 51 23.5	+0.1
	baz=233						
NNSH	Datong	0.70	242	eP	Pn	06 51 12.1	+0.4
	baz=235						
NNSH				eS	Sn	06 51 23.7	+0.4
	baz=235						
NNS	Nan Shan	0.70	244	⇑iP	Pn	06 51 12.2	+0.5
	baz=242						
NNS				eS	Sn	06 51 23.7	+0.2
	baz=242						
NACB	Ninganchiao	0.72	217	⇑P	Pn	06 51 11.2	-0.6
	baz=208						
NACB				eS	Sn	06 51 22.8	-0.8
	baz=208						
WLTB	Daxi	0.74	278	eP	Pn	06 51 11.8	-0.1
	baz=279						
WLTB				eS	Sn	06 51 24.7	+0.8
	baz=279						
TWD	Chiawan	0.80	212	i P	Pn	06 51 12.1	-0.5
	baz=222						
TWD				eS	Sn	06 51 24.2	-0.7
	baz=222						
NCU	National Centr	0.82	285	eP	Pn	06 51 13.1	+0.2
	baz=277						
NCU				eS	Sn	06 51 26.4	+0.9
	baz=277						
NCUH	Zhongli	0.83	285	eP	Pn	06 51 13.4	+0.5
	baz=277						
NCUH				eS	Sn	06 51 26.1	+0.5
	baz=277						
JYNG	Yonagunijimaku	0.86	111	P	Pn	06 51 13.2	0.0
JYNG				eS	Sn	06 51 26.0	-0.1
PCYT	Pengchaiyu	0.87	0	eP	Pn	06 51 13.8	+0.4
	baz=2.0						
HWA	Hwalien	0.88	208	eP	Pn	06 51 13.8	+0.2
	baz=198						
YOJ	Yonaguni jima	0.91	109	P	Pn	06 51 13.8	0.0
	baz=112						
YOJ				eS	Sn	06 51 27.3	0.0
	baz=112						
YOJ	Yonaguni jima	0.91	109	P	Pn	06 51 13.8	0.0
YOJ				eS	Sn	06 51 27.1	-0.1
ENLB	Shoufeng	0.95	207	eP	Pn	06 51 14.0	-0.3
	baz=198						
ENLB				eS	Sn	06 51 28.1	+0.1

	baz=198						
WHF	**Hehuan Shan** baz=226	**0.95**	**230**	P	**Pn**	**06 51 14.7**	**0.0**
WHF	baz=226			*e*S	**Sn**	**06 51 28.6**	**-0.1**
TWT	**Tachien** baz=231	**0.95**	**238**	P	**Pn**	**06 51 15.4**	**+0.9**
TWT	baz=231			S	**Sn**	**06 51 28.8**	**+0.4**
LIOB	**Emei** baz=264	**0.96**	**264**	P	**Pn**	**06 51 14.6**	**+0.2**
LIOB	baz=264			S	**Sn**	**06 51 28.6**	**+0.2**
TDCB	**Techi** baz=231	**0.97**	**239**	P	**Pn**	**06 51 15.3**	**+0.7**
TDCB	baz=231			S	**Sn**	**06 51 28.8**	**+0.2**
NSTT	**Nanjuang** baz=263	**0.98**	**263**	P	**Pn**	**06 51 14.7**	**+0.1**
NSTT	baz=263			*e*S	**Sn**	**06 51 28.5**	**-0.1**
SBCB	**Hsinchu** baz=273	**0.98**	**272**	*e*P	**Pn**	**06 51 15.1**	**+0.4**
SBCB	baz=273			*e*S	**Sn**	**06 51 29.3**	**+0.6**
HSN	**Hsinchu** baz=275	**1.00**	**273**	*e*P	**Pn**	**06 51 14.8**	**0.0**
HSN	baz=275			S	**Sn**	**06 51 28.8**	**-0.2**
CHGB	**Renai** baz=229	**1.07**	**230**	P	**Pn**	**06 51 16.3**	**+0.3**
CHGB	baz=229			*e*S	**Sn**	**06 51 30.9**	**0.0**
ESL	**Shilin** baz=217	**1.10**	**212**	*e*P	**Pn**	**06 51 14.9**	**-1.3**
ESL	baz=217			*e*S	**Sn**	**06 51 29.4**	**-1.9**
NMLH	**Miaoli** baz=259	**1.18**	**260**	*e*P	**Pn**	**06 51 17.8**	**+0.7**
NMLH	baz=259			*e*S	**Sn**	**06 51 33.6**	**+0.5**
EGFH	**Guangfu** baz=215	**1.23**	**208**	*e*P	**Pn**	**06 51 17.5**	**-0.2**
EGFH	baz=215			*e*S	**Sn**	**06 51 32.9**	**-1.2**
NSY	**Sanyi** baz=254	**1.23**	**254**	P	**Pn**	**06 51 18.3**	**+0.5**
NSY	baz=254			S	**Sn**	**06 51 34.7**	**+0.4**
DPDB	**Guoxing** baz=234	**1.26**	**235**	*e*P	**Pn**	**06 51 18.9**	**+0.7**
DPDB	baz=234			*e*S	**Sn**	**06 51 36.3**	**+1.3**
PTSB	**Yuanli** baz=256	**1.28**	**256**	*e*P	**Pn**	**06 51 18.6**	**+0.3**
PTSB	baz=256			*e*S	**Sn**	**06 51 35.1**	**-0.1**
TYC	**Yuchr** baz=231	**1.39**	**233**	*e*P	**Pn**	**06 51 20.3**	**+0.5**
TYC	baz=231			*e*S	**Sn**	**06 51 38.8**	**+1.0**
SSLB	**Suanglung** baz=226	**1.40**	**227**	*e*P	**Pn**	**06 51 20.5**	**+0.6**
SSLB	baz=226			*e*S	**Sn**	**06 51 38.7**	**+0.7**
YULB	**Yu-li** baz=208	**1.53**	**207**	P	**Pn**	**06 51 19.9**	**-1.6**
WJS	**Zhushan** baz=242	**1.53**	**233**	*e*P	**Pn**	**06 51 23.3**	**+1.6**
WJS	baz=242			*e*S	**Sn**	**06 51 42.2**	**+1.1**
IRIF	**Iriomote-Funau**	**1.57**	**105**	P	**Pn**	**06 51 21.9**	**-0.2**
IRIF				S	**Sn**	**06 51 42.2**	**+0.2**
YUS	**Yu-Shan** baz=210	**1.62**	**219**	P	**Pn**	**06 51 23.3**	**+0.1**
YUS	baz=210			*e*S	**Sn**	**06 51 44.1**	**+0.2**
FULB	**Fuli** baz=209	**1.70**	**205**	*e*P	**Pn**	**06 51 23.5**	**-0.4**
FULB	baz=209			*e*S	**Sn**	**06 51 44.6**	**-0.5**
CHN5	**Tsauling** baz=236	**1.71**	**228**	*e*P	**Pn**	**06 51 24.6**	**+0.6**
CHN5	baz=236			*e*S	**Sn**	**06 51 46.7**	**+1.3**
RLNB	**Erlin** baz=240	**1.78**	**241**	*e*S	**Sn**	**06 51 46.7**	**0.0**
ELDTW	**Lidau** baz=204	**1.83**	**212**	*e*P	**Pn**	**06 51 26.1**	**+0.4**
ELDTW	baz=204			*e*S	**Sn**	**06 51 47.7**	**-0.5**
JKRS	**Kuro-shima**	**1.84**	**106**	P	**Pn**	**06 51 26.4**	**+0.7**
JKRS				*e*S	**Sn**	**06 51 49.0**	**+0.6**
JIJ	**Ishigaki jima**	**1.93**	**101**	P	**Pn**	**06 51 26.7**	**-0.1**
JIJ				*e*S	**Sn**	**06 51 49.9**	**-0.5**
TPUB	**Ta-pu** baz=231	**1.96**	**222**	*e*P	**Pn**	**06 51 28.9**	**+1.7**
TPUB	baz=231			*e*S	**Sn**	**06 51 53.0**	**+1.9**
STYT	**Tauyuan** baz=209	**1.99**	**217**	P	**Pn**	**06 51 28.9**	**+1.2**
STYT	baz=209			*e*S	**Sn**	**06 51 54.3**	**+2.4**
WTP	**Ta-pu** baz=230	**2.00**	**222**	*e*P	**Pn**	**06 51 28.5**	**+0.6**
WTP	baz=230			*e*S	**Sn**	**06 51 54.9**	**+2.6**
WSF	**Szhu** baz=236	**2.02**	**237**	*e*S	**Sn**	**06 51 52.7**	**+0.3**
JISG	**Ishigakijimahi**	**2.05**	**94**	P	**Pn**	**06 51 28.7**	**+0.3**
JISG				S	**Sn**	**06 51 54.6**	**+1.4**
TWK	**Hsinying** baz=223	**2.07**	**225**	P	**Pn**	**06 51 29.3**	**+0.6**
TWK	baz=223			*e*S	**Sn**	**06 51 56.1**	**+2.4**
CHN1	**Nanshi** baz=230	**2.10**	**222**	P	**Pn**	**06 51 29.6**	**+0.4**
CHN1	baz=230			*e*S	**Sn**	**06 51 55.8**	**+1.2**
TWH	**Lutao** baz=187	**2.11**	**195**	*e*P	**Pn**	**06 51 28.1**	**-1.1**
TWH	baz=187			*e*S	**Sn**	**06 51 51.7**	**-2.9**
TWG	**Pinlang** baz=198	**2.13**	**205**	*e*P	**Pn**	**06 51 28.7**	**-0.8**
TWG	baz=198			*e*S	**Sn**	**06 51 52.5**	**-2.7**
TWGBT	**Beinan** baz=198	**2.13**	**205**	*e*P	**Pn**	**06 51 28.6**	**-0.9**
TWGBT	baz=198			*e*S	**Sn**	**06 51 52.6**	**-2.6**
CHN8	**Yiju** baz=230	**2.20**	**231**	*e*P	**Pn**	**06 51 30.5**	**+0.1**
CHN8	baz=230			*e*S	**Sn**	**06 51 58.5**	**+1.6**
MATB	**Ma-tsu** baz=306	**2.37**	**306**	*e*P	**Pn**	**06 51 32.2**	**-0.5**
VWUC	**VWUC** baz=276	**2.39**	**276**	P	**Pn**	**06 51 32.4**	**-0.6**
VWUC	baz=276			*e*S	**Sn**	**06 51 58.9**	**-2.4**
SSD	**Sandimen** baz=213	**2.39**	**214**	*e*P	**Pn**	**06 51 34.7**	**+1.6**
JTJ	**Tarama**	**2.40**	**92**	S	**Sn**	**06 52 02.5**	**+0.9**
MASBT	**Mashibuluo** baz=212	**2.51**	**212**	*e*P	**Pn**	**06 51 35.8**	**+1.3**
PHUB	**P’eng-hu** baz=241	**2.59**	**242**	*e*P	**Pn**	**06 51 33.8**	**-1.9**
PHUB	baz=241			*e*S	**Sn**	**06 52 03.1**	**-3.1**
JIRB	**Irabujima**	**2.83**	**88**	S	**Sn**	**06 52 12.3**	**+0.4**

MEX 30 06:56:16.5±0.7, 16°.35N×98°.26W, h8^{km}±4^{km}, MD3.5, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.13**	**71**	*e*P	Pg	06 56 18.6	-0.8
PNIG				*e*S	Sg	06 56 21.6	0.0
TLIG	**Tlapa**	**1.24**	**346**	*e*P	Pn	06 56 36.5	-3.8
TLIG				*e*S	Sb	06 56 52.2	-4.3
VHO	**Vista Hermosa**	**1.63**	**64**	*e*P	Pn	06 56 42.7	-3.0
VHO				*e*S	Sn	06 57 01.4	-5.4
CAIG	**El Cayaco**	**2.05**	**290**	*i* P	Pn	06 56 47.6	-3.6
CAIG				*i* S	Sn	06 57 12.9	-4.0
PLIG	**Platanillo**	**2.35**	**330**	*e*P	Pn	06 56 52.0	-3.6
PLIG				*i* S	Sn	06 57 20.6	-4.1

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*ISCJB **30** 07:03:17.1±1.2, 24°.1S±0°.1×180°.0W±0°.2, h500^{km}, mb3.9/6, Error ellipse: s-maj=23.1km s-min=14.2km az=170.9*

*IDC **30** 07:03:18.2±5.2, 24°.19S×179°.92W, h502^{km}±52^{km}, mb3.6/6, mb1 3.7/7, mb1mx3.3/44, mbtmp4.4/7, Error ellipse: s-maj=37.8km s-min=25.5km az=35.0*

ISC 30 07:03:18.1±0.9, 24°.2S±0°.1×179°.9W±0°.2, h500^{km}, n14, σ1^{s}.04/16, mb4.0/6, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera** 0.1nm,0.3s,baz=171,slow=19,SNR=1.5	**14.22**	**190**	P	**P**	**07 06 19.6**	**-0.3**
URZ	0.9nm,0.3s,baz=53,slow=20,SNR=8.9			S	**S**	**07 08 50.0**	**+0.1**
CTA	**Charters Tower** 15nm,0.3s,baz=96,slow=11,SNR=47	**31.56**	**271**	P	**P**	**07 08 59.8**	**+0.7**
ASAR	**Alice Springs** 1.7nm,0.3s,baz=95,slow=7.0,SNR=43	**42.06**	**261**	P	**P**	**07 10 25.4**	**-0.2**
ASAR	0.5nm,1.0s,baz=106,slow=4.9,SNR=2.7			PcP	**PcP**	**07 12 08.6**	**-0.5**
WRA	**Warramunga Arr** 7.0nm,0.5s,baz=97,slow=8.4,SNR=198	**42.47**	**266**	P	**P**	**07 10 28.2**	**-0.7**
WRA	0.4nm,0.7s,baz=102,slow=3.0,SNR=2.3			PcP	**PcP**	**07 12 10.0**	**-0.5**
FITZ	**Fitzroy Crossi** 2.8nm,0.4s,baz=112,slow=5.6,SNR=24	**50.89**	**266**	P	**P**	**07 11 32.2**	**-0.4**
MAW	**Mawson** 0.7nm,0.6s,baz=139,slow=13,SNR=6.7	**77.48**	**200**	P	**P**	**07 14 21.6**	**+0.5**
TXAR	**Lajitas Array** 0.1nm,0.7s,baz=251,slow=5.6,SNR=2.5	**90.53**	**58**	P	**P**	**07 15 26.7**	**+0.1**
MKAR	**Makanchi Array** 0.2nm,0.5s,baz=206,slow=1.7,SNR=2.5	**112.43**	**313**	PKiKP	**PKiKP**	**07 20 54.9**	**-1.9**
ARCES	**ARCESS Array B** 2.2nm,1.0s,baz=339,slow=3.1,SNR=3.7	**132.22**	**348**	PKP	**PKPdf**	**07 21 32.8**	**-1.2**
FINES	**FINESS Array B** 1.1nm,0.8s,baz=64,slow=3.5,SNR=2.8	**138.78**	**341**	PKP	**PKPdf**	**07 21 47.4**	**+1.0**
HFS	**Hagfors** 2.0nm,0.4s,baz=48,slow=2.1,SNR=22	**142.88**	**349**	PKhKP	PKPpre	07 21 49.9	
AKASG	**Malin Array Be** 0.5nm,0.3s,baz=48,slow=4.8,SNR=3.0	**145.28**	**327**	PKPbc	**PKPdf**	**07 21 57.9**	**-0.3**
BRTR	**Keskin Array B** 1.0nm,0.5s,baz=107,slow=4.8,SNR=2.9	**147.84**	**307**	PKPbc	**PKPdf**	**07 22 05.5**	**+2.5**
MMAI	**Mount Meron Ar** 3.1nm,0.5s,baz=76,slow=6.1,SNR=3.6	**147.91**	**294**	PKPbc	**PKPbc**	**07 22 07.1**	**0.0**

MEX 30 07:06:54.7±0.6, 16°.33N×98°.22W, h13^{km}±3^{km}, MD3.9, Near coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.11**	**55**	*e*P	Pg	07 06 56.8	-0.9
PNIG				*e*S	Sg	07 06 59.4	-0.5
TLIG	**Tlapa**	**1.27**	**345**	*e*P	Pn	07 07 14.2	-4.1
TLIG				*e*S	Sb	07 07 30.4	-4.6
VHO	**Vista Hermosa**	**1.60**	**62**	*e*P	Pn	07 07 20.0	-3.0
VHO				*e*S	Sn	07 07 38.5	-5.2
CAIG	**El Cayaco**	**2.09**	**290**	*e*P	Pn	07 07 26.9	-2.6
CAIG				*e*S	Sn	07 07 51.0	-4.4
PLIG	**Platanillo**	**2.39**	**329**	*e*P	Pn	07 07 30.7	-3.0
PLIG				*e*S	Sn	07 07 59.6	-3.3

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*IDC **30** 07:09:22.3±1.6, 3°.25S×129°.84E, h0^{km}, mb3.9/5, mb1 4.0/7, mb1mx3.8/52, mbtmp3.9/7, ML3.3/2, Error ellipse: s-maj=107.5km s-min=21.9km az=75.0*

*DJA **30** 07:09:24.9±0.6, 3°S±2°×12°9E±°, h14^{km}±4^{km}, M4.1/9, mb4.7/1, MLv3.8/9*

*ISCJB **30** 07:09:25.8±0.5, 3°.36S±0°.04×129°.38E±0°.04, h33^{km}, mb3.9/4, Error ellipse: s-maj=6.6km s-min=5.2km az=26.8*

ISC 30 07:09:27.7±0.8, 3°.40S±0°.05×129°.37E±0°.04, h35^{km}, n16, σ1^{s}.76/20, mb3.8/4, Seram

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSAI	**Masohi**	**0.45**	**277**	P	**Pn**	**07 09 33.9**	**-3.7**
AAI	**Ambon**	**1.21**	**257**	P	**Pn**	**07 09 47.1**	**-1.0**
BNDI	**Bandanaira**	**1.23**	**155**	P	**Pn**	**07 09 46.5**	**-1.9**
BNDI				S	**Sn**	**07 10 05.8**	**+2.0**
NLAI	**Namlea**	**2.28**	**274**	P	Pn	07 10 11.6	+8.8
FAKI	**Fak Fak**	**2.91**	**81**	P	**Pn**	**07 10 11.6**	**+0.1**
FAKI				S	**Sn**	**07 10 44.2**	**-1.1**
SWI	**Sorong**	**3.15**	**37**	P	**Pn**	**07 10 13.2**	**-1.6**
SWI				S	**Sn**	**07 10 52.8**	**+1.6**
LBMI	**Labuha**	**3.32**	**326**	P	**Pn**	**07 10 16.3**	**-0.9**
LBMI				S	**Sn**	**07 10 54.7**	**-0.8**
SANI	**Sanana**	**3.64**	**292**	P	**Pn**	**07 10 20.4**	**-1.1**
SANI				S	**Sn**	**07 11 04.7**	**+1.4**
RKPI	**Ransiki, Papua**	**5.15**	**69**	P	**Pn**	**07 10 39.9**	**-2.5**
FITZ	**Fitzroy Crossi** 0.1nm,0.3s,baz=4.1,slow=14,SNR=2.2	**15.05**	**194**	Pn	**Pn**	**07 12 59.6**	**+1.7**
WRA	**Warramunga Arr** 0.1nm,0.3s,baz=348,slow=13,SNR=4.7	**17.14**	**164**	P	**Pn**	**07 13 22.2**	**-2.4**
ASAR	**Alice Springs** 7.0nm,0.7s,baz=350,slow=11,SNR=69	**20.61**	**168**	P	**P**	**07 14 04.8**	**+0.7**
SONM	**Songino Array** 0.9nm,0.8s,baz=142,slow=7.5,SNR=3.7	**54.86**	**341**	P	**P**	**07 18 54.1**	**-0.5**
MKAR	**Makanchi Array** 0.6nm,0.7s,baz=131,slow=8.3,SNR=6.7	**64.90**	**326**	P	**P**	**07 20 04.5**	**+0.9**
KURBB	**Kurchatov Arra** 1.9nm,0.7s,baz=130,slow=5.4,SNR=17	**69.14**	**328**	P	**P**	**07 20 30.9**	**+0.5**
BVAR	**Borovoye Array** 0.7nm,0.6s,baz=98,slow=7.6,SNR=4.9	**74.71**	**328**	P	**P**	**07 21 05.3**	**+1.5**

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*ISK **30** 07:13:53.8, 37°.87N×26°.67E, h5^{km}, ML3.4/17*

*DDA **30** 07:13:54.8, 37°.87N×26°.71E, h6^{km}, Ml3.0*

*CSEM **30** 07:13:54.8±0.1, 37°.84N×26°.67E, h5^{km}, ML3.1, Error ellipse: s-maj=3.5km s-min=2.6km az=62.0*

*ISCJB **30** 07:13:54.6±0.5, 37°.84N±0°.02×26°.71E±0°.03, h0^{km}±4^{km}, Error ellipse: s-maj=3.8km s-min=3.1km az=157.3*

*THE **30** 07:13:55.1, 37°.81N×26°.61E, h1^{km}±1^{km}, ML3.2/5, Error ellipse: s-maj=1.8km s-min=0.7km az=144.0*

*ATH **30** 07:13:55.1, 37°.82N×26°.70E, h18^{km}±6^{km}, ML3.1/6, Error ellipse: s-maj=6.5km s-min=1.2km az=97.0*

ISC 30 07:13:55.2±0.8, 37°.85N±0°.02×26°.68E±0°.02, h13^{km}±6^{km}, n83, σ0^{s}.87/115, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMG	**Samos**	**0.19**	**139**	P	**Pg**	**07 13 59.4**	**0.0**
SMG	comp=E,24326µm,0.4s			AML	AML	07 14 03.0	
SMG				S	**Sg**	**07 14 03.0**	**+0.6**
SMG	comp=N,30994µm,0.5s			AML	AML	07 14 03.4	
SMG	**Samos**	**0.19**	**139**	P	**Pg**	**07 13 59.5**	**0.0**
SMG				S	**Sg**	**07 14 02.8**	**+0.4**
SMG	**Samos**	**0.19**	**139**	P	**Pg**	**07 13 59.5**	**0.0**
SMG				S	**Sg**	**07 14 02.8**	**+0.4**
DGB	**˜zmir**	**0.26**	**38**	*i* P	**Pg**	**07 13 59.7**	**-0.9**
DGB				*i* S	**Sg**	**07 14 03.1**	**-1.2**
URLA	**Izmir**	**0.51**	**352**	PG	**Pg**	**07 14 04.7**	**-0.6**
URLA				SG	**Sg**	**07 14 12.7**	**+0.5**
URLA	**Izmir**	**0.51**	**352**	*i* P	**Pg**	**07 14 04.4**	**-1.0**
URLA				*i* S	**Sg**	**07 14 12.5**	**+0.3**
URLA	**Izmir**	**0.51**	**352**	P	**Pg**	**07 14 04.4**	**-1.0**
URLA	**Izmir**	**0.51**	**352**	*e*Pg	**Pg**	**07 14 04.7**	**-0.6**
URLA				S	**Sg**	**07 14 12.5**	**+0.3**
BLCB	**Balcova**	**0.60**	**28**	PG	**Pg**	**07 14 06.3**	**-0.7**
BLCB	**Balcova**	**0.60**	**28**	*e*Pg	**Pg**	**07 14 06.3**	**-0.7**
CHOS	**Chios island**	**0.73**	**317**	PG	**Pg**	**07 14 08.7**	**-0.7**
CHOS	**Chios island**	**0.73**	**317**	P	**Pg**	**07 14 08.5**	**-0.9**
CHOS				S	**Sb**	**07 14 19.9**	**+0.2**
CHOS	comp=E,6266µm,0.2s			AML	AML	07 14 21.4	
CHOS	comp=N,4751µm,0.5s			AML	AML	07 14 22.6	
CHOS	**Chios island**	**0.73**	**317**	P	**Pg**	**07 14 08.9**	**-0.5**
CHOS				S	**Sb**	**07 14 20.1**	**+0.4**
CHOS	**Chios island**	**0.73**	**317**	*e*Pg	**Pg**	**07 14 08.7**	**-0.7**
CHOS	**Chios island**	**0.73**	**317**	P	**Pg**	**07 14 09.1**	**-0.3**
CHOS				S	**Sb**	**07 14 20.1**	**+0.4**
KRBN	**Karaburun**	**0.75**	**352**	PG	**Pg**	**07 14 08.7**	**-1.1**
KRBN	**Karaburun**	**0.75**	**352**	*e*Pg	**Pg**	**07 14 08.7**	**-1.1**
FOCM	**Foˆ§a**	**0.86**	**2**	PG	**Pg**	**07 14 11.3**	**-0.6**
FOCM	**Foˆ§a**	**0.86**	**2**	*e*Pg	**Pg**	**07 14 11.3**	**-0.6**
BODT	**Bodrum**	**0.93**	**147**	PG	**Pb**	**07 14 13.1**	**-0.1**
BODT	**Bodrum**	**0.93**	**147**	P	**Pb**	**07 14 12.6**	**-0.6**
BODT	**Bodrum**	**0.93**	**147**	P	**Pb**	**07 14 12.6**	**-0.6**
BODT	**Bodrum**	**0.93**	**147**	*e*Pg	**Pb**	**07 14 13.1**	**-0.1**
AYDB	**Zeytinkoy-Aydi**	**0.96**	**84**	PG	**Pb**	**07 14 13.5**	**-0.2**
AYDB	**Zeytinkoy-Aydi**	**0.96**	**84**	*e*Pg	**Pb**	**07 14 13.5**	**-0.2**
AYDN	**Tasoluk**	**0.97**	**101**	*i* P	**Pb**	**07 14 13.1**	**-0.7**
AYDN				*i* S	**Sb**	**07 14 25.2**	**-1.3**
AYDN	**Tasoluk**	**0.97**	**101**	P	**Pb**	**07 14 13.1**	**-0.7**
AYDN				S	**Sb**	**07 14 25.2**	**-1.3**
BDRM	**Kayabasi**	**0.99**	**142**	*i* P	**Pn**	**07 14 14.7**	**0.0**
BDRM				*i* S	**Sn**	**07 14 28.5**	**0.0**
BDRM	**Kayabasi**	**0.99**	**142**	P	**Pn**	**07 14 14.7**	**0.0**
BDRM				S	**Sn**	**07 14 28.5**	**0.0**
MLSB	**Milas**	**1.03**	**122**	PG	**Pb**	**07 14 14.9**	**0.0**
MLSB	**Milas**	**1.03**	**122**	*e*Pg	**Pb**	**07 14 14.9**	**0.0**
PSRA	**Psara**	**1.12**	**308**	P	**Pg**	**07 14 17.8**	**+1.0**
PSRA				S	**Sn**	**07 14 34.0**	**+2.3**
PSRA	comp=N,1416µm,0.3s			AML	AML	07 14 36.5	
PSRA	comp=E,855µm,0.2s			AML	AML	07 14 37.5	
PSRA	**Psara**	**1.12**	**308**	P	**Pg**	**07 14 17.3**	**+0.5**
AMGA	**Amorgos Island**	**1.20**	**212**	P	**Pg**	**07 14 18.4**	**+0.2**
AMGA				S	**Sg**	**07 14 33.7**	**-0.1**
AMGA	comp=E,1280µm,0.2s			AML	AML	07 14 40.6	
AMGA	comp=N,929µm,0.2s			AML	AML	07 14 41.7	
AMGA	**Amorgos Island**	**1.20**	**212**	P	**Pn**	**07 14 16.9**	**-0.6**
AMGA				S	**Sb**	**07 14 32.5**	**-0.5**
AMGA	**Amorgos Island**	**1.20**	**212**	P	**Pb**	**07 14 17.9**	**+0.3**
AMGA				S	**Sg**	**07 14 33.7**	**-0.1**
APE	**Apeiranthos**	**1.20**	**230**	P	**Pn**	**07 14 16.8**	**-0.9**
APE				S	**Sg**	**07 14 33.9**	**-0.1**
APE	comp=N,633µm,0.2s			AML	AML	07 14 37.9	
APE	comp=E,625µm,0.2s			AML	AML	07 14 38.7	
APE	**Apeiranthos**	**1.20**	**230**	P	**Pn**	**07 14 17.1**	**-0.6**
APE				S	**Sg**	**07 14 35.9**	**+1.9**
APE	**Apeiranthos**	**1.20**	**230**	P	**Pn**	**07 14 17.3**	**-0.4**
APE				S	**Sg**	**07 14 34.2**	**+0.2**
DKL	**Dikili**	**1.23**	**8**	PN	**Pn**	**07 14 17.9**	**-0.1**
DKL	**Dikili**	**1.23**	**8**	*e*Pn	**Pn**	**07 14 17.9**	**-0.1**
DAT	**Datca**	**1.33**	**147**	PN	**Pg**	**07 14 20.5**	**-0.2**
DAT	**Datca**	**1.33**	**147**	*i* P	**Pn**	**07 14 18.9**	**-0.6**
DAT	**Datca**	**1.33**	**147**	P	**Pn**	**07 14 18.9**	**-0.6**
DAT	**Datca**	**1.33**	**147**	*e*Pn	**Pg**	**07 14 20.5**	**-0.2**
AKHS	**Akhisar**	**1.36**	**41**	*i* P	**Pn**	**07 14 19.5**	**-0.3**
AKHS				*i* S	**Sb**	**07 14 38.4**	**+0.6**
AKHS	**Akhisar**	**1.36**	**41**	P	**Pn**	**07 14 19.5**	**-0.3**
AKHS				S	**Sb**	**07 14 38.4**	**+0.6**
AKS	**Akhisar**	**1.36**	**40**	PN	**Pb**	**07 14 20.9**	**+0.4**
AKS	**Akhisar**	**1.36**	**40**	*e*Pn	**Pb**	**07 14 20.9**	**+0.4**
PRK	**Paraskevi**	**1.43**	**347**	P	**Pg**	**07 14 22.6**	**-0.1**
PRK				S	**Sg**	**07 14 42.6**	**+1.3**
PRK	comp=N,3454µm,0.6s			AML	AML	07 14 44.1	
PRK	comp=E,2669µm,0.5s			AML	AML	07 14 49.7	
PRK	**Paraskevi**	**1.43**	**347**	P	**Pb**	**07 14 21.8**	**+0.1**
PRK				S	**Sg**	**07 14 42.4**	**+1.1**
PRK	**Paraskevi**	**1.43**	**347**	P	**Pb**	**07 14 21.8**	**+0.1**
PRK				S	**Sg**	**07 14 42.4**	**+1.1**
YER	**Yerkesik**	**1.46**	**119**	PN	**Pb**	**07 14 22.5**	**+0.3**
YER	**Yerkesik**	**1.46**	**119**	P	**Pn**	**07 14 21.6**	**+0.4**
YER	**Yerkesik**	**1.46**	**119**	P	**Pn**	**07 14 21.6**	**+0.4**
YER	**Yerkesik**	**1.46**	**119**	*e*Pn	**Pb**	**07 14 22.5**	**+0.3**
SIGR	**SIGRI**	**1.51**	**335**	P	**Pn**	**07 14 21.5**	**-0.3**
SIGR	**SIGRI**	**1.51**	**335**	P	**Pn**	**07 14 21.5**	**-0.3**
MANT	**Manisa**	**1.61**	**66**	*i* P	**Pb**	**07 14 24.8**	**-0.1**
MANT				*i* S	**Sn**	**07 14 43.6**	**-0.6**
MANT	**Manisa**	**1.61**	**66**	P	**Pb**	**07 14 24.8**	**-0.1**
MANT				S	**Sn**	**07 14 43.6**	**-0.6**
GPNR	**Gulpinar-Canak**	**1.66**	**345**	PN	**Pb**	**07 14 25.0**	**-0.6**
GPNR	**Gulpinar-Canak**	**1.66**	**345**	*e*Pn	**Pb**	**07 14 25.0**	**-0.6**
KULA	**Kula-Manisa**	**1.69**	**66**	PN	**Pb**	**07 14 25.6**	**-0.6**
KULA	**Kula-Manisa**	**1.69**	**66**	*e*Pn	**Pb**	**07 14 25.6**	**-0.6**
STEP	**BALIKESIR_Sava**	**1.73**	**28**	*i* P	**Pb**	**07 14 26.4**	**-0.4**
STEP				*i* S	**Sg**	**07 14 50.5**	**-0.3**
STEP	**BALIKESIR_Sava**	**1.73**	**28**	P	**Pb**	**07 14 26.4**	**-0.4**
STEP				S	**Sg**	**07 14 50.5**	**-0.3**
TAVA	**DENIZLI_Tavas**	**1.81**	**102**	*i* P	**Pn**	**07 14 25.1**	**-1.0**
TAVA	**DENIZLI_Tavas**	**1.81**	**102**	P	**Pn**	**07 14 25.1**	**-1.0**
TURN	**Turunc**	**1.81**	**122**	PN	**Pn**	**07 14 25.1**	**-0.9**
TURN	**Turunc**	**1.81**	**122**	*e*Pn	**Pn**	**07 14 25.1**	**-0.9**
SERI	**Serifos**	**1.88**	**249**	P	**Pn**	**07 14 26.5**	**-0.5**
SERI				S	**Sn**	**07 14 48.7**	**-1.8**
SERI	**Serifos**	**1.88**	**249**	P	**Pn**	**07 14 26.5**	**-0.5**
SERI				S	**Sn**	**07 14 48.7**	**-1.8**
BALB	**Balikesir**	**2.02**	**27**	PN	**Pn**	**07 14 30.2**	**+1.3**
BALB	**Balikesir**	**2.02**	**27**	*e*Pn	**Pn**	**07 14 30.2**	**+1.3**
FETY	**Fethiye**	**2.27**	**122**	PN	**Pn**	**07 14 34.1**	**+1.8**
FETY	**Fethiye**	**2.27**	**122**	P	**Pn**	**07 14 33.9**	**+1.6**
FETY	**Fethiye**	**2.27**	**122**	P	**Pn**	**07 14 33.9**	**+1.6**
TVSB	**Tavsanli**	**2.70**	**53**	PN	**Pn**	**07 14 39.9**	**+1.6**
TVSB	**Tavsanli**	**2.70**	**53**	*e*Pn	**Pn**	**07 14 39.9**	**+1.6**
AKAS	**Kas**	**2.84**	**124**	PN	**Pn**	**07 14 42.5**	**+2.2**
AKAS	**Kas**	**2.84**	**124**	*e*Pn	**Pn**	**07 14 42.5**	**+2.2**
KORT	**Korkueli**	**3.04**	**105**	PN	**Pn**	**07 14 45.0**	**+2.0**
KORT	**Korkueli**	**3.04**	**105**	*e*Pn	**Pn**	**07 14 45.0**	**+2.0**

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*ISCJB **30** 07:14:07.3±0.7, 22°.1S±0°.1×179°.6W±0°.1, h550^{km}, mb3.6/8, Error ellipse: s-maj=18.8km s-min=12.5km az=21.9*

*IDC **30** 07:14:07.6±11.0, 22°.11S×179°.54W, h543^{km}±144^{km}, mb3.2/8, mb1 3.5/9, mb1mx3.2/44, mbtmp4.1/9, Error ellipse: s-maj=74.8km s-min=27.1km az=6.0*

ISC 30 07:14:07.8±0.9, 22°.3S±0°.2×179°.5W±0°.2, h550^{km}, n10, σ0^{s}.73/10, mb3.6/8, South of Fiji Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
URZ	**Urewera** 0.7nm,0.3s,baz=270,slow=3.2,SNR=4.4	**16.20**	**190**	P	**P**	**07 17 29.6**	**+0.6**
URZ	0.3nm,0.3s,baz=119,slow=19,SNR=3.4			S	**S**	**07 20 12.1**	**-1.1**
CTA	**Charters Tower** 5.7nm,0.5s,baz=87,slow=11,SNR=10	**31.96**	**267**	P	**P**	**07 19 49.4**	**+0.2**
ASAR	**Alice Springs** 7.2nm,0.8s,baz=97,slow=8.0,SNR=66	**42.77**	**259**	P	**P**	**07 21 18.1**	**+0.6**
WRA	**Warramunga Arr** 2.5nm,0.3s,baz=94,slow=8.0,SNR=115	**43.00**	**264**	P	**P**	**07 21 18.7**	**-0.6**
FITZ	**Fitzroy Crossi** 1.2nm,0.3s,baz=124,slow=6.8,SNR=13	**51.43**	**264**	P	**P**	**07 22 22.7**	**+0.1**
NVAR	**Mina Array Bea** 0.1nm,0.5s,baz=219,slow=6.8,SNR=5.3	**83.27**	**44**	P	**P**	**07 25 37.6**	**+0.4**
TXAR	**Lajitas Array** 0.4nm,0.9s,baz=219,slow=5.8,SNR=4.3	**89.19**	**58**	P	**P**	**07 26 06.0**	**+0.5**
ILAR	**Eielson Array** 0.3nm,0.8s,baz=223,slow=3.8,SNR=4.5	**90.35**	**13**	P	**P**	**07 26 08.9**	**-1.0**
PDAR	**Pinedale Array** 0.3nm,0.7s,baz=207,slow=2.7,SNR=3.4	**91.21**	**44**	P	**P**	**07 26 14.8**	**0.0**
HFS	**Hagfors** 2.7nm,1.1s,baz=67,slow=3.7,SNR=7.9	**141.04**	**350**	PKhKP	PKPpre	07 32 28.2	

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*DDA **30** 07:19:17.4, 37°.86N×26°.72E, h7^{km}, Ml2.9*

*ISK **30** 07:19:17.0, 37°.89N×26°.66E, h9^{km}, ML3.0/19*

*CSEM **30** 07:19:17.9±0.1, 37°.88N×26°.73E, h2^{km}, ML2.9, Error ellipse: s-maj=3.8km s-min=2.7km az=81.0*

*ISCJB **30** 07:19:17.5±0.5, 37°.87N±0°.01×26°.72E±0°.03, h0^{km}±4^{km}, Error ellipse: s-maj=3.7km s-min=2.4km az=176.3*

*ATH **30** 07:19:18.0, 37°.84N×26°.66E, h8^{km}±2^{km}, ML2.9/6, Error ellipse: s-maj=2.8km s-min=0.9km az=75.0*

*THE **30** 07:19:18.2, 37°.85N×26°.66E, h0^{km}±1^{km}, ML2.9/5, Error ellipse: s-maj=1.7km s-min=0.7km az=207.0*

ISC 30 07:19:18.0±0.9, 37°.87N±0°.01×26°.68E±0°.02, h8^{km}±7^{km}, n105, σ0^{s}.91/145, Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMG	**Samos**	**0.20**	**143**	P	**Pg**	**07 19 22.6**	**+0.4**
SMG				S	**Sg**	**07 19 24.8**	**-0.2**
SMG	comp=E,11988µm,0.4s			AML	AML	07 19 25.9	
SMG	comp=N,12665µm,0.2s			AML	AML	07 19 26.0	
SMG	**Samos**	**0.20**	**143**	P	**Pg**	**07 19 22.4**	**+0.2**
SMG				S	**Sg**	**07 19 25.6**	**+0.6**
SMG	**Samos**	**0.20**	**143**	P	**Pg**	**07 19 22.4**	**+0.2**
SMG				S	**Sg**	**07 19 25.6**	**+0.6**
DGB	**˜zmir**	**0.24**	**42**	*i* P	**Pg**	**07 19 22.4**	**-0.4**
DGB				*i* S	**Sg**	**07 19 25.9**	**-0.3**

URLA	Izmir	0.49	352	PG	Pg	07 19 26.7	-0.9
URLA				SG	Sg	07 19 33.7	-0.4
URLA	Izmir	0.49	352	*i* P	Pg	07 19 22.7	-4.9
URLA				*i* S	Sg	07 19 34.5	+0.4
URLA	Izmir	0.49	352	P	Pg	07 19 22.7	-4.9
URLA	Izmir	0.49	352	*e*Pg	Pg	07 19 26.7	-0.9
URLA				*e*Sg	Sg	07 19 33.7	-0.4
URLA				S	Sg	07 19 34.5	+0.4
BLCB	Balcova	0.59	29	PG	Pg	07 19 28.8	-0.6
BLCB				SG	Sg	07 19 36.9	-0.2
BLCB	Balcova	0.59	29	*e*Pg	Pg	07 19 28.8	-0.6
BLCB				*e*Sg	Sg	07 19 36.9	-0.2
CHOS	Chios island	0.71	316	PG	Pg	07 19 30.8	-1.0
CHOS	Chios island	0.71	316	P	Pg	07 19 30.1	-1.6
CHOS				AML	AML	07 19 43.6	
	comp=E,4162µm,0.4s						
CHOS				S	Sb	07 19 43.7	+1.0
CHOS				AML	AML	07 19 45.1	
	comp=N,3521µm,0.4s						
CHOS	Chios island	0.71	316	P	Pg	07 19 31.0	-0.8
CHOS				S	Sb	07 19 43.0	+0.3
CHOS	Chios island	0.71	316	*e*Pg	Pg	07 19 30.8	-1.0
CHOS	Chios island	0.71	316	P	Pg	07 19 31.0	-0.8
CHOS				S	Sb	07 19 42.8	+0.1
KRBN	Karaburun	0.73	352	PG	Pg	07 19 31.1	-0.9
KRBN	Karaburun	0.73	352	*e*Pg	Pg	07 19 31.1	-0.9
FOCM	Foˆ§a	0.84	3	PG	Pg	07 19 33.3	-0.9
FOCM				SG	Sg	07 19 45.2	0.0
FOCM	Foˆ§a	0.84	3	*e*Pg	Pg	07 19 33.3	-0.9
FOCM				*e*Sg	Sg	07 19 45.2	0.0
BODT	Bodrum	0.95	148	PG	Pg	07 19 36.0	-0.3
BODT	Bodrum	0.95	148	P	Pb	07 19 36.5	-0.2
BODT				S	Sb	07 19 50.5	+1.1
BODT	Bodrum	0.95	148	*e*Pg	Pg	07 19 36.0	-0.3
BODT	Bodrum	0.95	148	P	Pb	07 19 36.5	-0.2
BODT				S	Sb	07 19 50.5	+1.1
AYDB	Zeytinkoy-Aydi	0.96	85	PG	Pg	07 19 36.2	-0.3
AYDB	Zeytinkoy-Aydi	0.96	85	*e*Pg	Pg	07 19 36.2	-0.3
AYDN	Tasoluk	0.97	102	*i* P	Pg	07 19 35.9	-0.8
AYDN				*i* S	Sg	07 19 48.6	-0.8
AYDN	Tasoluk	0.97	102	P	Pg	07 19 35.9	-0.8
AYDN				S	Sg	07 19 48.6	-0.8
BDRM	Kayabasi	1.01	143	*i* P	Pb	07 19 37.8	+0.1
BDRM				*i* S	Sg	07 19 50.7	+0.2
BDRM	Kayabasi	1.01	143	P	Pb	07 19 37.8	+0.1
BDRM				S	Sg	07 19 50.7	+0.2
MLSB	Milas	1.04	123	PG	Pg	07 19 37.9	-0.2
MLSB	Milas	1.04	123	*e*Pg	Pg	07 19 37.9	-0.2
DKL	Dikili	1.21	8	PN	Pb	07 19 40.4	-0.7
DKL	Dikili	1.21	8	*e*Pn	Pb	07 19 40.4	-0.7
AMGA	Amorgos Island	1.21	211	P	Pg	07 19 41.0	-0.4
AMGA				S	Sg	07 19 55.4	-1.6
AMGA				AML	AML	07 20 01.8	
	comp=N,773µm,0.2s						
AMGA				AML	AML	07 20 03.8	
	comp=E,775µm,0.3s						
AMGA	Amorgos Island	1.21	211	P	Pg	07 19 40.9	-0.4
AMGA				S	Sg	07 19 56.0	-1.1
AMGA	Amorgos Island	1.21	211	P	Pg	07 19 40.9	-0.4
AMGA				S	Sg	07 19 55.9	-1.1
APE	Apeiranthos	1.22	229	P	Pg	07 19 39.7	-1.7
APE				S	Sg	07 19 55.1	-2.0
APE				AML	AML	07 19 59.5	
	comp=N,640µm,0.2s						
APE				AML	AML	07 20 01.5	
	comp=E,473µm,0.2s						
APE	Apeiranthos	1.22	229	P	Pg	07 19 40.1	-1.2
APE				S	Sn	07 19 58.3	+0.4
APE	Apeiranthos	1.22	229	P	Pg	07 19 40.1	-1.2
APE				S	Sn	07 19 58.3	+0.4
AKS	Akhisar	1.34	41	PN	Pn	07 19 42.5	-0.5
AKS	Akhisar	1.34	41	*e*Pn	Pn	07 19 42.5	-0.5
AKHS	Akhisar	1.34	41	*i* P	Pn	07 19 42.8	-0.3
AKHS				*i* S	Sb	07 20 00.9	+0.1
AKHS	Akhisar	1.34	41	P	Pn	07 19 42.8	-0.3
AKHS				S	Sb	07 20 00.9	+0.1
DAT	Datca	1.35	148	PN	Pn	07 19 42.8	-0.4
DAT	Datca	1.35	148	*i* P	Pn	07 19 41.2	-2.0
DAT	Datca	1.35	148	P	Pn	07 19 41.2	-2.0
DAT	Datca	1.35	148	*e*Pn	Pn	07 19 42.8	-0.4
PRK	Paraskevi	1.41	347	P	Pg	07 19 45.5	+0.4
PRK				S	Sg	07 20 06.0	+2.6
PRK				AML	AML	07 20 12.5	
	comp=E,1578µm,0.6s						
PRK				AML	AML	07 20 14.3	
	comp=N,2474µm,0.8s						
PRK	Paraskevi	1.41	347	P	Pg	07 19 44.9	-0.2
PRK				S	Sg	07 20 05.3	+2.0
PRK	Paraskevi	1.41	347	P	Pg	07 19 44.9	-0.2
PRK				S	Sg	07 20 05.3	+2.0
AYVA	Ayvalik	1.44	0	*i* P	Pn	07 19 44.5	+0.2
AYVA				*i* S	Sg	07 20 05.5	+1.4
AYVA	Ayvalik	1.44	0	P	Pn	07 19 44.5	+0.2
AYVA				S	Sg	07 20 05.5	+1.4
YER	Yerkesik	1.47	119	PN	Pn	07 19 44.7	-0.1
YER	Yerkesik	1.47	119	*e*Pn	Pn	07 19 44.7	-0.1
SIGR	SIGRI	1.49	334	PN	Pn	07 19 44.2	-0.8
SIGR	SIGRI	1.49	334	P	Pn	07 19 44.6	-0.4
SIGR				S	Sb	07 20 05.3	+0.5
SIGR				AML	AML	07 20 12.5	
	comp=E,522µm,0.4s						
SIGR				AML	AML	07 20 16.2	
	comp=N,607µm,0.5s						
SIGR	SIGRI	1.49	334	P	Pn	07 19 45.1	+0.1
SIGR	SIGRI	1.49	334	*e*Pn	Pn	07 19 44.2	-0.8
SIGR	SIGRI	1.49	334	P	Pn	07 19 45.4	+0.4
SIGR				S	Sg	07 20 06.1	+0.3
MANT	Manisa	1.60	67	*i* P	Pb	07 19 48.4	+0.4
MANT				*i* S	Sn	07 20 06.9	-0.9
MANT	Manisa	1.60	67	P	Pb	07 19 48.4	+0.4
MANT				S	Sn	07 20 06.9	-0.9
ANAF	Anafi Island	1.68	206	P	Pg	07 19 49.5	-0.6
ANAF	Anafi Island	1.68	206	P	Pb	07 19 49.2	+0.1
KULA	Kula-Manisa	1.69	67	PN	Pn	07 19 47.5	-0.3
KULA	Kula-Manisa	1.69	67	*e*Pn	Pn	07 19 47.5	-0.3
STEP	BALIKESIR_Sava	1.71	28	*i* P	Pb	07 19 49.3	-0.4
STEP				*i* S	Sg	07 20 12.9	-0.1
STEP	BALIKESIR_Sava	1.71	28	P	Pb	07 19 49.3	-0.4
STEP				S	Sg	07 20 12.9	-0.1
THR2	Thira island,	1.73	215	P	Pg	07 19 51.8	+0.5
THR2	Thira island,	1.73	215	P	Pg	07 19 50.9	-0.4
THR3	Thira Island,	1.78	215	P	Pg	07 19 51.5	-0.7
THR3	Thira Island,	1.78	215	P	Pb	07 19 51.1	+0.2
STAX	Taxiarchis Har	1.79	215	P	Pg	07 19 52.5	+0.2
STAX	Taxiarchis Har	1.79	215	P	Pg	07 19 51.6	-0.7
THR5	Thira Island,	1.80	217	P	Pb	07 19 50.5	-0.7
THR5	Thira Island,	1.80	217	P	Pb	07 19 50.8	-0.4
THR6	Thira Island,	1.83	215	P	Pb	07 19 51.0	-0.7
THR6	Thira Island,	1.83	215	P	Pb	07 19 51.2	-0.4
TURN	Turunc	1.83	122	PN	Pn	07 19 47.4	-2.3
TURN	Turunc	1.83	122	*e*Pn	Pn	07 19 47.4	-2.3
BAYC	CANAKKALE_Bayr	1.87	357	*i* P	Pn	07 19 50.3	0.0
BAYC				*i* S	Sb	07 20 16.8	+0.9
BAYC	CANAKKALE_Bayr	1.87	357	P	Pn	07 19 50.3	0.0
BAYC				S	Sb	07 20 16.8	+0.9
DALY	Dalyan (Mu˜la	1.89	123	PN	Pn	07 19 50.7	+0.2
DALY	Dalyan (Mu˜la	1.89	123	*e*Pn	Pn	07 19 50.7	+0.2
BALB	Balikesir	2.00	28	PN	Pn	07 19 51.9	-0.1
BALB	Balikesir	2.00	28	*e*Pn	Pn	07 19 51.9	-0.1
BOZC	Bozcaada	2.03	346	PN	Pn	07 19 52.0	-0.4
BOZC	Bozcaada	2.03	346	*e*Pn	Pn	07 19 52.0	-0.4
LIA	Limnos Island	2.34	330	P	Pn	07 19 57.2	+0.6
LIA	Limnos Island	2.34	330	P	Pn	07 19 58.2	+1.5
KARP	Karpathos	2.35	170	P	Pn	07 19 57.6	+0.7
KARP	Karpathos	2.35	170	P	Pn	07 19 58.2	+1.3
LPK	Lapseki	2.50	1	PN	Pn	07 19 58.7	-0.2
LPK	Lapseki	2.50	1	*e*Pn	Pn	07 19 58.7	-0.2
GELI	Tayfur-Gelibol	2.53	356	PN	Pn	07 19 59.1	-0.2
GELI	Tayfur-Gelibol	2.53	356	*e*Pn	Pn	07 19 59.1	-0.2
AOS	Alonnisos	2.55	301	P	Pb	07 20 02.9	-1.1
AOS	Alonnisos	2.55	301	P	Pb	07 20 02.5	-1.5
TVSB	Tavsanli	2.69	53	PN	Pn	07 20 01.8	+0.2
TVSB	Tavsanli	2.69	53	*e*Pn	Pn	07 20 01.8	+0.2
LAST	Lasithi	2.87	200	P	Pn	07 20 05.9	+1.7
LAST	Lasithi	2.87	200	P	Pn	07 20 06.0	+1.9
ALN	Alexandroupoli	3.06	351	P	Pn	07 20 09.0	+2.4
ALN	Alexandroupoli	3.06	351	P	Pn	07 20 09.3	+2.7
ANKY	Antikythira Is	3.37	235	P	Pn	07 20 12.3	+1.4
ANKY	Antikythira Is	3.37	235	P	Pn	07 20 12.7	+1.9

NNC 30 07:34:02.0±2.1, 53°.61N×87°.97E, h0^{km}, mb3.5, mpv3.2, 4C-4D, Error ellipse: s-maj=22.9km s-min=11.0km az=38.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	1.90	282	⇓Pn	Pn	07 34 35.1	-0.5
	4.8nm,0.5s						
ZAA0				⇑Sn	Sb	07 35 01.4	-0.4
	39nm,0.8s						
KURK	Kurchatov	6.44	247	⇓Pn	Pn	07 35 38.3	+0.3
	0.7nm,0.4s						
KURK				⇑Lg	Lg	07 37 23.8	
	8.4nm,0.8s						
KURBB	Kurchatov Arra	6.54	247	⇑Pn	Pn	07 35 39.5	+0.2
	3.1nm,0.5s						
KURBB				⇓Lg	Lg	07 37 26.8	
	6.9nm,0.7s						
MK31	Makanchi Array	7.73	210	⇓Pn	Pn	07 35 57.0	+1.3
	0.7nm,0.8s,baz=27,slow=13,SNR=17						
MK31				⇑Lg	Lg	07 38 04.2	
	2.2nm,0.8s,baz=32,slow=29,SNR=5.3						

MEX 30 07:38:31.3±0.7, 18°.97N×102°.76W, h58^{km}±23^{km}, MD3.7, Michoacan

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MMIG	Aquila	0.88	219	*e*P	Pn	07 38 45.8	-1.9
MMIG				*e*S	Sn	07 38 58.4	-1.4
MOIG	Morelia	1.64	64	*i* P	Pn	07 38 55.9	-2.1
MOIG				*e*S	Sn	07 39 16.1	-2.1
ZIIG	Zihuatanejo	1.83	138	*i* P	Pn	07 38 58.5	-2.0
ZIIG				*e*S	Sn	07 39 20.1	-2.4
CJM	Chamela	2.22	284	*e*P	Pn	07 39 04.6	-1.2
CJM				*e*S	Sn	07 39 30.7	-1.4
ARIG	Puente Sto Nin	2.39	106	*e*P	Pn	07 39 07.4	-0.6
ARIG				*i* S	Sn	07 39 33.5	-2.7

*ISCJB **30** 08:27:26.3±0.7, 39°.04N±0°.03×29°.78E±0°.05, h3^{km}±7^{km}, Error ellipse: s-maj=6.9km s-min=4.5km az=33.7*

*ISK **30** 08:27:26.3, 39°.06N×29°.74E, h8^{km}±2^{km}, ML1.9/3*

*CSEM **30** 08:27:26.5±0.1, 39°.05N×29°.77E, h8^{km}, ML2.6, Error ellipse: s-maj=3.2km s-min=1.7km az=125.0*

*DDA **30** 08:27:27.9, 39°.00N×29°.68E, h7^{km}, Ml2.6*

ISC 30 08:27:26.9±1.0, **39°.05N**±0°.03×**29°.75E**±0°.03, **h11**^{km}±8^{km}, **n22**, σ**0^s.31**/36, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GDZ	Gediz	0.21	280	*i* P	Pg	08 27 31.6	0.0
GDZ				*i* S	Sg	08 27 34.6	0.0
GDZ	Gediz	0.21	280	P	Pg	08 27 31.5	0.0
GDZ				S	Sg	08 27 34.6	0.0
KUTH	Kutahya	0.40	32	PG	Pg	08 27 34.6	-0.3
KUTH				SG	Sg	08 27 40.7	+0.4
KUTH	Kutahya	0.40	32	*e*Pg	Pg	08 27 34.6	-0.3
KUTH				*e*Sg	Sg	08 27 40.7	+0.4
SHAP	Saphane-Kutahy	0.41	266	PG	Pg	08 27 34.7	-0.4
SHAP				SG	Sg	08 27 40.8	+0.2
SHAP	Saphane-Kutahy	0.41	266	*e*Pg	Pg	08 27 34.7	-0.4
SHAP				*e*Sg	Sg	08 27 40.8	+0.2
TVSB	Tavsanli	0.45	331	PG	Pg	08 27 35.5	-0.4
TVSB				SG	Sg	08 27 42.1	+0.2
TVSB	Tavsanli	0.45	331	*e*Pg	Pg	08 27 35.5	-0.4
TVSB				*e*Sg	Sg	08 27 42.1	+0.2
KHAL	Karahalli	0.71	197	*i* P	Pg	08 27 40.8	+0.1
KHAL				*i* S	Sg	08 27 49.8	-0.2
KHAL	Karahalli	0.71	197	P	Pg	08 27 40.8	+0.1
KHAL				S	Sg	08 27 49.8	-0.2
AUBOZ	BOZOYUK	0.88	14	PG	Pg	08 27 43.7	-0.3
AUBOZ	BOZOYUK	0.88	14	*e*Pg	Pg	08 27 43.7	-0.3
BORA	Eskisehir	0.99	33	PG	Pg	08 27 45.6	-0.4
BORA	Eskisehir	0.99	33	*e*Pg	Pg	08 27 45.6	-0.4
KULA	Kula-Manisa	1.01	238	PG	Pg	08 27 45.9	-0.4
KULA	Kula-Manisa	1.01	238	*e*Pg	Pg	08 27 45.9	-0.4
MANT	Manisa	1.09	239	*i* P	Pb	08 27 47.6	-0.2
MANT				*i* S	Sb	08 28 02.1	0.0
MANT	Manisa	1.09	239	P	Pb	08 27 47.6	-0.2
MANT				S	Sb	08 28 02.1	0.0
DURS	Dursunbey	1.13	299	*i* P	Pn	08 27 49.3	+0.6
DURS				*i* S	Sn	08 28 04.2	-0.1
DURS	Dursunbey	1.13	299	P	Pn	08 27 49.3	+0.6
DURS				S	Sn	08 28 04.2	-0.1
CAVI	Cavuskoy	1.15	4	PN	Pb	08 27 48.6	-0.2
CAVI	Cavuskoy	1.15	4	*e*Pn	Pb	08 27 48.6	-0.2

NNC 30 08:27:48.6±2.4, 53°.53N×87°.75E, h0^{km}, mb3.9, mpv3.5, 2C-6D, Error ellipse: s-maj=22.4km s-min=10.7km az=54.0, Suspected Mining explosion., Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	1.79	285	⇑Pn	Pn	08 28 20.2	-0.6
	9.5nm,0.3s						
ZAA0				⇓Sn	Sb	08 28 45.3	+0.1
	16nm,0.5s						
KURK	Kurchatov	6.29	247	⇓Pn	Pn	08 29 22.6	+0.1
	1.8nm,0.5s						
KURK				⇓Lg	Lg	08 31 05.7	
	16nm,1.1s						
KURBB	Kurchatov Arra	6.38	247	⇑Pn	Pn	08 29 25.1	+1.2
	6.1nm,0.3s						
KURBB				⇓Lg	Lg	08 31 11.7	
	9.2nm,0.5s						
MK31	Makanchi Array	7.59	210	Pn	Pn	08 29 42.7	+2.2
	0.5nm,0.3s,baz=30,slow=14,SNR=78						
MK31				⇓Sn	Sn	08 31 07.0	-0.3
	1.0nm,0.6s,baz=35,slow=25,SNR=4.6						
MK31				⇓Lg	Lg	08 31 49.4	
	6.4nm,1.1s,baz=31,slow=34,SNR=4.6						

*IDC **30** 08:30:39.4±1.5, 17°.54N×94°.00E, h0^{km}, mb3.7/5, mb1 3.9/6, mb1mx3.5/68, mbtmp3.7/6, ML4.4/1, MS3.6/2, Ms1 3.6/2, ms1mx2.6/67, Error ellipse: s-maj=56.8km s-min=21.6km az=59.0*

*ISCJB **30** 08:30:41.5±1.0, 17°.6N±0°.1×94°.0E±0°.1, h28^{km}, mb3.7/5, MS3.6/2, Error ellipse: s-maj=19.3km s-min=13.7km az=13.9*

ISC 30 08:30:43.8±1.4, **17°.6N**±0°.2×**94°.1E**±0°.2, **h28**^{km}, **n15**, σ**0^s.50**/10, **mb3.8**/5, **Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	4.72	79	Pn	Pn	08 31 52.9	-0.3
	4.5nm,0.3s,baz=258,slow=14,SNR=24						
CMAR				Lg	Lg	08 33 00.1	
	baz=252,slow=31,SNR=5.1						
CHTO	Chiang Mai	4.79	75	P	Pn	08 31 54.2	0.0
	149nm,0.7s						
CMMT	Chiang Mai	4.79	75	P	Pn	08 31 54.0	-0.2
	35nm,0.6s,809nm						
LAMP	Lampang	5.37	79	P	Pn	08 32 02.9	+0.7
	91nm,0.5s,2µm						
UTTA	Uttaradit	6.19	88	P	Pn	08 32 13.5	+0.1
MKAR	Makanchi Array	30.68	344	P	P	08 36 55.8	-0.4
	0.3nm,0.5s,baz=170,slow=8.0,SNR=4.9						
H08S3	Diego Garcia H	32.92	222	T	T	09 11 44.6	
	baz=39,slow=76,SNR=25						
H08S2	Diego Garcia H	32.92	222	T	T	09 11 45.9	
	baz=39,slow=76,SNR=14						
H08S1	Diego Carcia H	32.94	222	T	T	09 11 46.1	
	baz=39,slow=76,SNR=9.3						
KURBB	Kurchatov Arra	35.20	343	P	P	08 37 35.9	+0.4
	0.1nm,0.3s,baz=150,slow=8.0,SNR=3.8						
ATD	Arta Tunnel	49.82	270	LR	LR	08 58 02.6	
	comp=Z,38nm,18.2s,baz=234,slow=33						
WRA	Warramunga Arr	54.37	132	P	P	08 40 07.7	-0.8
	0.7nm,0.8s,baz=318,slow=7.3,SNR=5.8						
ASAR	Alice Springs	56.54	135	P	P	08 40 24.4	+0.3
	0.5nm,0.5s,baz=312,slow=6.9,SNR=9.2						
STKA	Stephens Creek	67.06	137	P	P	08 41 35.0	+0.2
	1.0nm,0.3s,baz=319,slow=9.3,SNR=4.3						
KOWA	Kowa	93.16	286	LR	LR	09 33 27.1	
	comp=Z,34nm,18.1s,baz=327,slow=40						

WEL 30 08:56:11.1±1.2, **35°S**±17°×**17°9W**±2°1, **h33**^{km}, **ML4.4**/13, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PKGZ	Pakihiroa	3.91	221	P	Pn	08 57 09.0	+0.1
PKGZ				S	Sn	08 57 54.0	+0.3
PUZ	Puketiti	3.95	218	P	Pn	08 57 09.9	+0.4
PUZ				S	Sn	08 57 54.0	-0.7
HAZ	Te Kaha	3.98	225	P	Pn	08 57 10.3	+0.6
HAZ				S	Sn	08 57 57.9	+2.6
TWGZ	Tauwhareparae	4.17	219	P	Pn	08 57 13.2	+0.7
TWGZ				S	Sn	08 58 01.6	+1.4
RUGZ	Raukumara Rang	4.18	223	P	Pn	08 57 13.0	+0.3
CNGZ	Carnagh Statio	4.30	215	P	Pn	08 57 15.3	+1.1
TKGZ	Te Karaka	4.44	218	P	Pn	08 57 16.1	-0.1
TKGZ				S	Sn	08 58 06.9	+0.2
MWZ	Matawai	4.53	221	P	Pn	08 57 17.3	-0.1
MWZ				S	Sn	08 58 09.0	0.0
RAGZ	Rawiri	4.71	221	P	Pn	08 57 20.0	+0.2
URZ	Urewera	4.71	225	P	Pn	08 57 19.4	-0.4
KUZ	Kuaotunu	4.88	247	P	Pn	08 57 21.3	-0.8
KNZ	Kokohu	4.98	215	P	Pn	08 57 22.3	-1.3
RTZ	Ruatahuna	5.03	222	P	Pn	08 57 24.5	+0.2
MUGZ	Murupara	5.05	225	P	Pn	08 57 24.4	-0.2
MTHZ	Maungataniwha	5.28	221	P	Pn	08 57 28.3	+0.6
NMHZ	Naumai	5.47	220	P	Pn	08 57 30.3	-0.1
BKZ	Black Stump Fm	5.69	221	P	Pn	08 57 32.6	-0.8

*TIR **30** 09:01:01.1, 44°.73N×19°.55E, h6^{km}, Md4.3/5*

*BJI **30** 09:01:15.5, 44°.20N×17°.80E, h8^{km}, mb4.6/8, mB4.9/3, Ms4.3/2, Ms7 4.0/2*

*MOS **30** 09:01:16.2±1.0, 44°.20N×17°.79E, h12^{km}, mb4.6/9, Error ellipse: s-maj=4.0km s-min=2.7km az=108.6*

*IDC **30** 09:01:16.7±0.6, 44°.28N×17°.90E, h0^{km}, mb3.9/16, mb1 4.0/32, mb1mx3.9/72, mbtmp3.9/32, ML4.1/13, MS3.4/33, Ms1 3.4/33, ms1mx3.3/72, Error ellipse: s-maj=9.8km s-min=7.6km az=35.0*

*ROM **30** 09:01:17.4±0.1, 44°.233N±0°.007×17°.96E±0°.02, h10^{km}, ML4.6/85*

*CSEM **30** 09:01:17.0±0.1, 44°.23N×17°.89E, h2^{km}, mb4.5/14, ML4.7/8, Mw4.2, Error ellipse: s-maj=2.1km s-min=1.4km az=40.0*

*PDG **30** 09:01:17.4±0.4, 44°.15N×17°.99E, h9^{km}, MD4.5/12, ML4.3/11, Error ellipse: s-maj=0.9km s-min=1.0km az=0.0*

*LDG **30** 09:01:17.0±0.1, 44°.26N×17°.96E, h2^{km}, Ml4.5/22, ms3.3/6, Error ellipse: s-maj=3.1km s-min=1.8km az=28.0*

*BEO **30** 09:01:17.1±0.3, 44°.20N×17°.87E, h9^{km}±3^{km}, ML4.4/20*

*NEIC **30** 09:01:18.4±0.9, 44°.24N×17°.85E, h12^{km}±6^{km}, mb4.4/12, MW4.2, Error ellipse: s-maj=3.0km s-min=1.9km az=211.0, Moment Tensor Solution. s24 Moment tensor: Scale 10^{15}Nm; M_{rr}0.30; $M_{\theta\theta}$-1.34; $M_{\phi\phi}$1.05; $M_{r\theta}$-0.38; $M_{\theta\phi}$2.20; $M_{\phi r}$0.86; Best double couple: $M_0$2.70000×10^{15} NP1: ϕ_s345.00000°, δ90.00000°, λ160.00000°. NP2: ϕ_s76.00000°, δ70.00000°, λ0.00000°. Principal axes: T 2.5000, Plg15.0000°, Azm299.0000°; N 0.3400, Plg70.0000°, Azm164.0000°; P -2.8400, Plg14.0000°, Azm32.0000°;*

NEIC Felt at Jajce, Sarajevo and Zenica. Also felt at Slavonski Brod, Croatia.

*PRU **30** 09:01:20.3, 44°.20N×17°.89E, h20^{km}*

ISC 30 09:01:16.9±0.9, **44°.23N**±0°.02×**17°.89E**±0°.01, **h4**^{km}±6^{km}, **n859**, σ**1^s.92**/1050, **mb4.2**/31, **MS3.6**/24, **72C-35D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DOB	Doboj	0.53	17	⇑*i*Pg	Pg	09 01 27.0	-0.1
DOB				*e*Sg	Sb	09 01 35.7	-1.0
DOB	Doboj	0.53	17	⇑*i*Pg	Pg	09 01 27.0	-0.1
DOB				*e*Sg	Sb	09 01 35.7	-1.0
BLY	Banja Luka	0.72	316	*e*Pg	Pb	09 01 31.5	-0.5
BLY				*e*Sg	Sb	09 01 41.8	-0.5
BLY	Banja Luka	0.72	316	⇑*i*P	Pb	09 01 31.8	-0.3
BLY				S	Sb	09 01 42.0	-0.3
BLY	Banja Luka	0.72	316	*e*Pg	Pb	09 01 31.8	-0.3
BLY				*e*Sg	Sg	09 01 40.9	+0.7
BLY	Banja Luka	0.72	316	⇑*i*Pg	Pg	09 01 31.1	+0.3
BLY	Banja Luka	0.72	316	⇑*i*P	Pb	09 01 31.8	-0.3
BLY				*e*Sg	Sg	09 01 40.9	+0.7
BLY				S	Sb	09 01 42.0	-0.3
BLY	Banja Luka	0.72	316	P	Pb	09 01 31.6	-0.5
BLY				AML	AML		
	comp=E,67250µm,0.4s						
BLY				AML	AML		
	comp=N,38300µm,0.5s						
BLY				AML	AML		
	comp=E,67250µm,0.4s						
BLY				AML	AML		
	comp=N,38300µm,0.5s						
BLY				AML	AML		
	comp=E,67250µm,0.4s						
BLY				AML	AML		
	comp=N,38300µm,0.5s						
BLY				END			
BLY	Banja Luka	0.72	316	⇑*i*Pg	Pg	09 01 31.1	+0.3
BLY				*e*Sg	Sb	09 01 41.6	-0.7
HAPS	Han Pijesak,Bl	0.78	100	*e*Pg	Pg	09 01 31.0	-0.9
HAPS				*e*Sg	Sg	09 01 42.1	+0.1
HAPS	Han Pijesak,Bl	0.78	100	⇑*i*Pg	Pg	09 01 31.0	-0.9
HAPS				*e*Sg	Sg	09 01 42.1	+0.1
HAPS	Han Pijesak,Bl	0.78	100	⇑*i*Pg	Pg	09 01 31.0	-0.9
HAPS				*e*Sg	Sg	09 01 42.1	+0.1
MRAK	Mrakovica	1.05	318	*e*Pg	Pg	09 01 37.0	-0.1
MRAK				*e*Sg	Sb	09 01 51.4	-0.5
MRAK	Mrakovica	1.05	318	*e*Pg	Pg	09 01 37.0	-0.1
MRAK				*e*Sg	Sb	09 01 51.4	-0.5
BBLS	Lazići	1.15	108	*e*Pg	Pg	09 01 38.5	-0.6
BBLS				*e*Sg	Sg	09 01 54.3	+0.3
BBLS	Lazići	1.15	108	⇑*i*Pg	Pg	09 01 38.5	-0.6
BBLS				*e*Sg	Sg	09 01 54.3	+0.3
BBLS	Lazići	1.15	108	⇑*i*Pg	Pg	09 01 38.5	-0.6
BBLS				*e*Sg	Sg	09 01 54.3	+0.3
TEKS	Tekeris	1.22	74	*e*Pg	Pn	09 01 40.8	0.0
TEKS				*e*Sg	Sb	09 01 56.8	+0.1
TEKS	Tekeris	1.22	74	*e*Pg	Pn	09 01 40.8	0.0
TEKS				*e*Sg	Sb	09 01 56.8	+0.1
TEKS	Tekeris	1.22	74	*e*Pg	Pg	09 01 39.9	-0.4
TEKS				*e*Sg	Sb	09 01 57.0	+0.3
UPM	Unac-Piva	1.27	144	⇑*i*Pg	Pg	09 01 39.4	-1.8
UPM				*i* Sg	Sg	09 01 56.5	-1.1
UPM	Unac-Piva	1.27	144	⇑*i*Pg	Pg	09 01 39.6	-1.6
UPM				*i* Sg	Sg	09 01 56.5	-1.1
UPM	Unac-Piva	1.27	144	⇑*i*Pg	Pg	09 01 39.6	-1.6
UPM				*e*Sg	Sg	09 01 56.0	-1.6
STON	Ston	1.36	186	*e*Pg	Pn	09 01 41.0	-1.7
STON				*e*Sg	Sg	09 01 59.2	-1.6
STON	Ston	1.36	186	*i* Pg	Pn	09 01 41.1	-1.5
STON				Sg	Sg	09 01 59.5	-1.2
STON	Ston	1.36	186	*e*Pg	Pn	09 01 41.0	-1.7
STON				*e*Sg	Sg	09 01 59.2	-1.6
STON	Ston	1.36	186	P	Pn	09 01 41.2	-1.5
STON				AML	AML		
	comp=E,11650µm,0.8s						
STON				AML	AML		
	comp=N,6745µm,0.6s						
STON				AML	AML		
	comp=E,11650µm,0.8s						
STON				AML	AML		
	comp=N,6745µm,0.6s						
STON				AML	AML		
	comp=E,11650µm,0.8s						
STON				AML	AML		
	comp=N,6745µm,0.6s						
STON				END			
STON	Ston	1.36	186	*e*Pg	Pn	09 01 40.4	-2.3
STON				*e*Sg	Sg	09 01 58.9	-1.9
BRY	Bratogost	1.41	160	⇑*i*Pg	Pn	09 01 41.8	-1.7
BRY				*i* Sg	Sg	09 02 01.1	-1.2
BRY	Bratogost	1.41	160	P	Pn	09 01 41.4	-2.1
BRY				S	Sg	09 02 01.0	-1.2
BRY	Bratogost	1.41	160	P	Pn	09 01 41.4	-2.1
BRY	Bratogost	1.41	160	⇑*i*Pg	Pn	09 01 41.8	-1.7
BRY				S	Sg	09 02 01.0	-1.2
BRY	Bratogost	1.41	160	⇑*i*Pg	Pn	09 01 41.6	-1.9
BRY				*e*Sg	Sg	09 02 00.8	-1.4
PLE	Pljevlja	1.41	129	⇑*i*Pg	Pn	09 01 42.1	-1.4

PLE				*i* Sg	Sb	09 02 02.1	-0.2
PLE	**Pljevlja**	1.41	129	P	Pn	09 01 42.1	-1.4
PLE				S	Sb	09 02 02.0	-0.2
PLE	**Pljevlja**	1.41	129	⇑*i*Pg	Pn	09 01 42.1	-1.4
PLE				S	Sb	09 02 02.0	-0.2
DIVS	**Divibare**	1.52	94	*e*Pg	Pn	09 01 44.5	-0.5
DIVS				*e*Sg	Sg	09 02 06.0	+0.2
DIVS	**Divibare**	1.52	94	*e*Pn	Pn	09 01 44.8	-0.2
DIVS				*e*Sn	Sg	09 02 05.8	0.0
DIVS	**Divibare**	1.52	94	*e*Pg	Pn	09 01 44.5	-0.5
DIVS	**Divibare**	1.52	94	*e*Pn	Pn	09 01 44.8	-0.2
DIVS				*e*Sn	Sg	09 02 05.8	0.0
DIVS	**Divibare**	1.52	94	P	Pn	09 01 44.4	-0.6
DIVS				AML	AML		
	comp=E,6210µm,0.7s						
DIVS				AML	AML		
	comp=N,7830µm,1.3s						
DIVS				AML	AML		
	comp=E,6210µm,0.7s						
DIVS				AML	AML		
	comp=N,7830µm,1.3s						
DIVS				AML	AML		
	comp=E,6210µm,0.7s						
DIVS				AML	AML		
	comp=N,7830µm,1.3s						
DIVS				END			
DIVS	**Divibare**	1.52	94	*e*Pg	Pn	09 01 44.5	-0.5
DIVS				*e*Sg	Sg	09 02 06.0	+0.2
TREB	**Trebinje**	1.55	167	*e*Pg	Pn	09 01 44.3	-1.0
TREB				*e*Sg	Sb	09 02 06.1	0.0
TREB	**Trebinje**	1.55	167	⇓*i*Pn	Pn	09 01 44.4	-0.9
TREB				*e*Sn	Sn	09 02 04.7	-1.1
TREB				*e*Sg	Sb	09 02 06.1	0.0
TREB	**Trebinje**	1.55	167	⇓*i*Pn	Pn	09 01 44.4	-0.9
TREB				*e*Sn	Sn	09 02 04.7	-1.1
UDBI	**Udbina**	1.55	282	*i* Pn	Pn	09 01 44.9	-0.5
UDBI				Sn	Sg	09 02 08.4	+1.7
NKY	**Niksic**	1.63	150	⇑*i*Pg	Pn	09 01 45.7	-0.8
NKY				*i* Sg	Sg	09 02 09.7	+0.4
NKY	**Niksic**	1.63	150	⇑*i*Pg	Pn	09 01 45.7	-0.8
NKY				*i* Sg	Sg	09 02 09.7	+0.4
NKME	**Niksic**	1.66	152	⇓*i*Pg	Pn	09 01 46.0	-0.8
NKME				*i* Sg	Sg	09 02 10.3	+0.2
NKME	**Niksic**	1.66	152	⇓*i*Pg	Pn	09 01 46.0	-0.8
NKME				*i* Sg	Sg	09 02 10.3	+0.2
IVAS	**Ivanjica**	1.76	111	*e*Pg	Pn	09 01 48.0	-0.3
IVAS				*e*Sg	Sb	09 02 12.7	+0.4
IVAS	**Ivanjica**	1.76	111	*e*Pg	Pn	09 01 48.0	-0.3
IVAS				*e*Sg	Sb	09 02 12.7	+0.4
SJES	**Sjenica**	1.80	122	*e*Pg	Pn	09 01 48.8	0.0
SJES				*e*Sg	Sg	09 02 14.8	+0.2
TRUS	**Trudelj**	1.81	89	*e*Pg	Pn	09 01 48.6	-0.3
TRUS				*e*Sg	Sg	09 02 15.7	+0.6
TRUS	**Trudelj**	1.81	89	*e*Pg	Pn	09 01 48.6	-0.3
TRUS				*e*Sg	Sg	09 02 15.7	+0.6
KOME	**Kolasin**	1.82	139	⇑*i*Pn	Pn	09 01 49.4	+0.4
KOME				*i* Sn	Sb	09 02 13.8	-0.1
KOME	**Kolasin**	1.82	139	⇑*i*Pn	Pn	09 01 49.4	+0.4
KOME				*i* Sn	Sb	09 02 13.8	-0.1
HCY	**Herceg Novi**	1.84	166	⇓*i*Pn	Pn	09 01 49.6	+0.4
HCY				*i* Sn	Sb	09 02 14.8	+0.4
HCY	**Herceg Novi**	1.84	166	P	Pn	09 01 49.6	+0.4
HCY				S	Sb	09 02 14.0	-0.4
HCY	**Herceg Novi**	1.84	166	⇓*i*Pn	Pn	09 01 49.6	+0.4
HCY				S	Sb	09 02 14.0	-0.4
HCY	**Herceg Novi**	1.84	166	*e*Pn	Pn	09 01 48.1	-1.1
HCY				*e*Sn	Sn	09 02 11.7	-1.2
CEME	**Cevo**	1.84	156	⇑*i*Pn	Pn	09 01 49.0	-0.4
CEME				*i* Sn	Sb	09 02 15.2	+0.6
CEME	**Cevo**	1.84	156	⇑*i*Pn	Pn	09 01 49.0	-0.4
CEME				*i* Sn	Sb	09 02 15.2	+0.6
BEO	**Beograd**	1.94	72	*e*Pn	Pn	09 01 48.9	-1.7
BEO				*e*Sg	Sg	09 02 20.3	+1.1
BEO	**Beograd**	1.94	72	P	Pn	09 01 49.2	-1.4
BEO				S	Sb	09 02 17.8	+0.5
BEO	**Beograd**	1.94	72	*e*Pn	Pn	09 01 48.9	-1.7
BEO	**Beograd**	1.94	72	P	Pn	09 01 49.2	-1.4
BEO				S	Sb	09 02 17.8	+0.5
BEO				*e*Sg	Sg	09 02 20.3	+1.1
BEY	**Berane**	1.99	132	⇓*i*Pn	Pn	09 01 51.7	+0.2
BEY				*i* Sn	Sb	09 02 18.0	-1.0
IVA	**Berane**	1.99	132	⇓*i*Pn	Pn	09 01 51.7	+0.2
IVA				*i* Sn	Sb	09 02 18.0	-1.0
MORH	**Mˆ‡rˆ¡gy, Hung**	2.06	15	⇓*e*Pn	Pn	09 01 52.4	+0.2
MORH	**Mˆ‡rˆ¡gy, Hung**	2.06	15	*e*Pn	Pn	09 01 52.3	+0.1
MORH				*e*Sn	Sb	09 02 20.0	-0.7
MORH	**Mˆ‡rˆ¡gy, Hung**	2.06	15	*e*Pn	Pn	09 01 52.3	+0.1
MORH				*e*Sn	Sb	09 02 20.0	-0.7
PDG	**Podgorica**	2.06	150	*e*Pg	Pn	09 01 52.7	+0.5
PDG				*e*Sg	Sg	09 02 22.3	-0.7
PDG	**Podgorica**	2.06	150	⇑*i*P	Pn	09 01 53.1	+0.9
PDG	**Podgorica**	2.06	150	P	Pn	09 01 52.8	+0.5
PDG	**Podgorica**	2.06	150	⇑*i*Pn	Pn	09 01 52.7	+0.5
PDG	**Podgorica**	2.06	150	⇑*i*P	Pn	09 01 53.1	+0.9
PDG				*i* Sn	Sn	09 02 19.1	+0.8
PDG				*e*Sg	Sg	09 02 22.3	-0.7
PDG	**Podgorica**	2.06	150	*e*Pn	Pn	09 01 51.3	-0.9
PDG				*e*Sn	Sn	09 02 17.4	-0.9
TTG	**Podgorica**	2.06	150	⇑*i*Pn	Pn	09 01 52.7	+0.5
TTG				*i* Sn	Sn	09 02 19.1	+0.8
TTG	**Podgorica**	2.06	150	*e*Pn	Pn	09 01 52.9	+0.7
TTG				*e*Sn	Sn	09 02 19.5	+1.2
TTG	**Podgorica**	2.06	150	*e*P	Pn	09 01 52.9	+0.7
TTG				*e*		09 02 19.5	
TTG	**Podgorica**	2.06	150	*e*P	Pn	09 01 52.9	+0.7
TTG				*e*S	Sn	09 02 19.5	+1.2
GRUS	**Gruza**	2.07	99	*e*Pn	Pn	09 01 52.4	0.0
GRUS				*e*Sg	Sg	09 02 22.4	-1.0
GRUS	**Gruza**	2.07	99	*e*Pn	Pn	09 01 52.4	0.0
GRUS				*e*Sg	Sg	09 02 22.4	-1.0
ZAG	**Zagreb**	2.09	321	*e*Pn	Pn	09 01 53.3	+0.6
ZAG				*e*Sn	Sb	09 02 20.3	-1.3
ZAG	**Zagreb**	2.09	321	*e*Pn	Pn	09 01 53.3	+0.6
ZAG				*e*Sn	Sb	09 02 20.3	-1.3
NVLJ	**Novalja**	2.19	280	*e*Pn	Pn	09 01 55.3	+1.3
NVLJ				Sn	Sb	09 02 23.3	-1.1
OZLJ	**Ozalj**	2.21	310	*e*Pn	Pn	09 01 54.8	+0.5
PVY	**Plav**	2.23	137	⇓*i*Pn	Pn	09 01 55.2	+0.5
PVY				*i* Sn	Sn	09 02 23.9	+1.2
DRME	**Dracevica, Mon**	2.25	155	⇑*i*Pn	Pb	09 01 56.8	-1.3
DRME				*i* Sn	Sn	09 02 24.7	+1.6
DRME	**Dracevica, Mon**	2.25	155	*e*Pn	Pn	09 01 54.6	-0.3
DRME				*i* Sn	Sn	09 02 24.7	+1.6
DRME	**Dracevica, Mon**	2.25	155	*e*Pn	Pn	09 01 54.6	-0.3
DRME				*e*Sn	Sn	09 02 21.8	-1.3
BOJS	**Bojanci**	2.27	305	*i* Pn	Pn	09 01 56.0	+0.9
BOJS				*i* Sn	Sn	09 02 24.9	+1.4
	comp=Z,1µm,0.4s						
BOJS	**Bojanci**	2.27	305	*i* Pn	Pn	09 01 56.0	+0.9
BOJS				*i* Sn	Sn	09 02 24.9	+1.4
	comp=Z,1µm,0.4s						
BOJS	**Bojanci**	2.27	305	P	Pn	09 01 56.1	+1.0
BOJS				AML	AML		
	comp=E,4975µm,0.7s						
BOJS				AML	AML		
	comp=N,4135µm,0.9s						
BOJS				AML	AML		
	comp=E,4975µm,0.7s						
BOJS				AML	AML		
	comp=N,4135µm,0.9s						
BOJS				END			
CRES	**Cresnjev**	2.35	314	⇑*i*Pn	Pn	09 01 56.8	+0.5
CRES				*e*Sn	Sn	09 02 26.3	+0.8
CRES	**Cresnjev**	2.35	314	⇑*i*Pn	Pn	09 01 56.8	+0.5
CRES				*e*Sn	Sn	09 02 26.3	+0.8
BEHE	**Becsehely**	2.37	341	⇓*e*Pn	Pn	09 01 57.8	+1.1
BEHE				*e*Sn	Sb	09 02 29.1	-0.7
BEHE	**Becsehely**	2.37	341	⇓*i*Pn	Pn	09 01 57.7	+1.1
BEHE				*e*Sn	Sn	09 02 27.7	+1.6
BEHE	**Becsehely**	2.37	341	⇓*i*Pn	Pn	09 01 57.7	+1.1
BEHE				*e*Sn	Sn	09 02 27.7	+1.6
SVIS	**Svilajnac**	2.39	88	*e*Pn	Pn	09 01 55.9	-0.9
SVIS				*e*Sg	Sg	09 02 33.5	-0.3
SVIS	**Svilajnac**	2.39	88	*e*Pn	Pn	09 01 55.9	-0.9
SVIS				*e*Sg	Sg	09 02 33.5	-0.3
BCI	**Bajram Curri**	2.45	139	*i* Pn	Pn	09 01 59.1	+1.4
BCI				*i* Sn	Sb	09 02 31.1	-0.9
BCI	**Bajram Curri**	2.45	139	*i* PN	Pn	09 01 59.1	+1.4
BCI				*i* SN	Sb	09 02 31.1	-0.9
ULC	**Ulcinj**	2.47	156	⇑*i*Pn	Pn	09 01 59.6	+1.6
ULC				*i* Sn	Sn	09 02 30.0	+1.4
ULC	**Ulcinj**	2.47	156	⇑*i*Pn	Pn	09 01 59.6	+1.6
ULC				*i* Sn	Sn	09 02 30.0	+1.4
KOGS	**Kog**	2.50	333	P	Pn	09 01 59.0	+0.6
KOGS				AML	AML		
	comp=E,12250µm,0.8s						
KOGS				AML	AML		
	comp=N,11600µm,1.5s						
KOGS				AML	AML		
	comp=E,12250µm,0.8s						
KOGS				AML	AML		
	comp=N,11600µm,1.5s						
KOGS				END			
SELS	**Selova**	2.55	112	*e*Pn	Pn	09 01 58.8	-0.3
SELS				*e*Sg	Sg	09 02 38.2	-0.7
SELS	**Selova**	2.55	112	*e*Pn	Pn	09 01 58.8	-0.3
SELS				*e*Sg	Sg	09 02 38.2	-0.7
BANR	**Banloc**	2.58	62	⇓*i*P	Pn	09 02 00.8	+1.3
BANR	**Banloc**	2.58	62	⇓*i*P	Pn	09 02 00.8	+1.3
PUK	**Puka**	2.63	145	*i* Pn	Pb	09 02 03.0	-1.7
PUK	**Puka**	2.63	145	P	Pn	09 02 01.9	+1.6
PUK				AML	AML		
	comp=E,3280µm,0.7s						
PUK				AML	AML		
	comp=N,3970µm,0.8s						
PUK				AML	AML		
	comp=E,3280µm,0.7s						
PUK				AML	AML		
	comp=N,3970µm,0.8s						
PUK				END			
PUK	**Puka**	2.63	145	*i* PN	Pb	09 02 03.0	-1.7
PUK				*i* SN	Sb	09 02 39.3	+1.9
RIY	**Rijeka**	2.66	296	*e*Pn	Pn	09 02 01.2	+0.7
RIY				*e*Sn	Sn	09 02 33.6	+0.4
MDVR	**Moldovita**	2.79	77	⇓*i*P	Pn	09 02 02.1	-0.3
MDVR	**Moldovita**	2.79	77	⇓*i*P	Pn	09 02 02.1	-0.3
MDVR				S	Sn	09 02 36.6	0.0
BOVS	**Bovan**	2.82	101	*e*Pn	Pn	09 02 02.5	-0.3
BOVS				*e*Sg	Sg	09 02 46.2	-1.4
BOVS	**Bovan**	2.82	101	*e*Pn	Pn	09 02 02.5	-0.3
BOVS				*e*Sg	Sg	09 02 46.2	-1.4
CEY	**Cerknica**	2.88	303	⇑*i*Pn	Pn	09 02 04.4	+0.8
CEY				*e*Sn	Sn	09 02 39.4	+0.7
CEY	**Cerknica**	2.88	303	⇑*i*Pn	Pn	09 02 04.4	+0.8
CEY				*e*Sn	Sn	09 02 39.4	+0.7
MSAG	**Monte S. Angel**	2.91	211	P	Pn	09 02 05.4	+1.4
MSAG				AML	AML		
	comp=E,3625µm,0.6s						
MSAG				AML	AML		
	comp=N,6450µm,0.6s						
MSAG				AML	AML		
	comp=E,3835µm,0.6s						
MSAG				AML	AML		
	comp=N,6630µm,0.6s						
MSAG				AML	AML		
	comp=E,3835µm,0.6s						
MSAG				AML	AML		
	comp=E,3625µm,0.6s						
MSAG				AML	AML		
	comp=N,6630µm,0.6s						
MSAG				AML	AML		
	comp=N,6450µm,0.6s						
MSAG				END			
SGRT	**San Giovanni R**	2.93	213	P	Pn	09 02 04.9	+0.5
SGRT				AML	AML		
	comp=E,3700µm,0.7s						
SGRT				AML	AML		
	comp=N,3580µm,0.7s						
SGRT				AML	AML		
	comp=E,3700µm,0.7s						
SGRT				AML	AML		
	comp=N,3580µm,0.7s						
SGRT				END			
LJU	**Ljubljana**	2.99	309	*e*Pn	Pn	09 02 05.7	+0.6
LJU				*e*		09 02 13.5	
LJU				*i* Sn	Sn	09 02 40.1	-1.3
LJU				*e*		09 02 51.4	
	comp=Z,1µm,0.8s						
LJU	**Ljubljana**	2.99	309	⇑*i*Pn	Pn	09 02 05.5	+0.4
LJU				*e*Sn	Sn	09 02 41.6	+0.2
LJU	**Ljubljana**	2.99	309	P	Pn	09 02 05.8	+0.7
LJU				AML	AML		
	comp=E,5090µm,0.6s						
LJU				AML	AML		
	comp=N,4760µm,0.7s						
LJU				AML	AML		
	comp=N,4760µm,0.7s						
LJU				AML	AML		
	comp=E,5090µm,0.6s						
LJU				END			
LJU	**Ljubljana**	2.99	309	⇑*i*Pn	Pn	09 02 05.5	+0.4
LJU				*e*Sn	Sn	09 02 41.6	+0.2
BZS	**Buzias**	2.99	61	*e*Pn	Pn	09 02 04.1	-1.0
BZS				*e*Sg	Sg	09 02 53.2	+0.2
BZS	**Buzias**	2.99	61	⇓*i*P	Pn	09 02 04.3	-0.8
BZS	**Buzias**	2.99	61	⇓*i*P	Pn	09 02 04.3	-0.8
BZS				S	Sn	09 02 40.6	-0.8
BZS				*e*Sg	Sg	09 02 53.2	+0.2
BZS	**Buzias**	2.99	61	P	Pn	09 02 04.3	-0.8
BZS				AML	AML		
	comp=E,2840µm,0.5s						
BZS				AML	AML		
	comp=N,2470µm,0.6s						
BZS				AML	AML		
	comp=E,2890µm,0.5s						
BZS				AML	AML		
	comp=N,2485µm,0.6s						
BZS				AML	AML		
	comp=N,2485µm,0.6s						
BZS				AML	AML		
	comp=N,2470µm,0.6s						
BZS				AML	AML		
	comp=E,2890µm,0.5s						
BZS				AML	AML		
	comp=E,2840µm,0.5s						
BZS				END			
CSKK	**Csˆ‡kako**	3.15	5	⇑*e*Pn	Pn	09 02 08.4	+1.2
CSKK				*e*Sn	Sn	09 02 43.9	-1.3
PHP	**Peshkopia**	3.16	143	P	Pn	09 02 10.2	+2.7
PHP	**Peshkopia**	3.16	143	P	Pn	09 02 10.2	+2.7
PHP	**Peshkopia**	3.16	143	P	Pn	09 02 10.2	+2.7
PHP	**Peshkopia**	3.16	143	*i* Pn	Pn	09 02 09.2	+1.8
PHP	**Peshkopia**	3.16	143	P	Pn	09 02 10.2	+2.7
PHP				*i* Sn	Sn	09 02 48.2	+2.6
PHP	**Peshkopia**	3.16	143	*i* PN	Pn	09 02 09.2	+1.8
PHP				*i* SN	Sn	09 02 48.2	+2.6
SOKA	**Soboth**	3.17	322	*e*Pn	Pn	09 02 08.2	+0.6
	SNR=32						
SOKA				*i* Sn	Sn	09 02 45.0	-0.8
	comp=E,356nm,0.4s						
SOKA	**Soboth**	3.17	322	Pn	Pn	09 02 08.2	+0.6
	SNR=32						
SOKA				Sn	Sn	09 02 45.0	-0.8
	comp=E,356nm,0.4s						
BARS	**Barje**	3.19	115	*e*Pn	Pn	09 02 07.9	+0.1
BARS				*e*Sg	Sg	09 02 57.9	-1.4
BARS	**Barje**	3.19	115	*e*Pn	Pn	09 02 07.9	+0.1
BARS				*e*Sg	Sg	09 02 57.9	-1.4
BAI	**Bari**	3.21	194	*e*Pn	Pn	09 02 07.8	-0.2
BAI	**Bari**	3.21	194	*e*Pn	Pn	09 02 07.8	-0.2
MELA	**Melanico ??? S**	3.23	220	P	Pn	09 02 09.6	+1.1
MELA				AML	AML		
	comp=E,5355µm,0.9s						
MELA				AML	AML		
	comp=N,5885µm,0.7s						
MELA				AML	AML		
	comp=E,5610µm,0.9s						
MELA				AML	AML		
	comp=N,6070µm,0.6s						
MELA				AML	AML		
	comp=N,5885µm,0.7s						
MELA				AML	AML		
	comp=N,6070µm,0.6s						
MELA				AML	AML		
	comp=E,5355µm,0.9s						
MELA				AML	AML		
	comp=E,5610µm,0.9s						
MELA				END			
OBKA	**Obir**	3.27	315	*e*Pn	Pn	09 02 10.4	+1.3
	comp=E,18nm,0.2s,SNR=31						
OBKA				Pg	Pg	09 02 20.4	+0.7
	comp=E,493nm,0.5s						
OBKA				*e*Sn	Sn	09 02 49.8	+1.3
	comp=E,223nm,0.4s						
OBKA	**Obir**	3.27	315	Pn	Pn	09 02 10.4	+1.3
	comp=E,18nm,0.2s,SNR=31						
TRI	**Trieste**	3.28	298	*e*Pn	Pn	09 02 10.2	+1.2
TRI				*e*Sn	Sn	09 02 47.5	-0.9
TRI	**Trieste**	3.28	298	*e*P	Pn	09 02 10.2	+1.2
TRI				*e*		09 02 47.5	
TRI	**Trieste**	3.28	298	*e*P	Pn	09 02 10.2	+1.2
TRI				*e*S	Sn	09 02 47.5	-0.9
TRI	**Trieste**	3.28	298	P	Pn	09 02 09.9	+0.9
TRI				AML	AML		
	comp=E,2480µm,0.8s						
TRI				AML	AML		
	comp=N,2335µm,0.9s						
TRI				AML	AML		
	comp=N,2335µm,0.9s						
TRI				AML	AML		
	comp=E,2480µm,0.8s						
TRI				END			
HERR	**Herculane**	3.30	77	⇑*i*P	Pn	09 02 09.5	+0.1
HERR	**Herculane**	3.30	77	⇑*i*P	Pn	09 02 09.5	+0.1
HERR				S	Sn	09 02 48.2	-0.8
DJES	**Djerdap**	3.35	81	*e*Pn	Pn	09 02 10.3	+0.3
DJES				*e*Sg	Sg	09 03 04.1	-0.3
DJES	**Djerdap**	3.35	81	*e*Pn	Pn	09 02 10.3	+0.3
DJES				*e*Sg	Sg	09 03 04.1	-0.3
BUD	**Budapest**	3.35	13	⇑*e*Pn	Pn	09 02 10.6	+0.6
BUD				*e*Pg	Pg	09 02 20.9	-0.2
BUD				*e*Sn	Sn	09 02 48.4	-1.8
BUD	**Budapest**	3.35	13	P	Pn	09 02 10.9	+0.9
BUD	**Budapest**	3.35	13	P	Pn	09 02 10.9	+0.9
VOJS	**Vojsko**	3.36	304	*i* Pn	Pn	09 02 11.5	+1.3
VOJS				*i*		09 02 19.4	
VOJS				*e*Sn	Sn	09 02 53.7	+3.2
	comp=Z,1µm,0.6s						
VOJS	**Vojsko**	3.36	304	*i* Pn	Pn	09 02 11.5	+1.3
VOJS				*e*Sn	Sn	09 02 53.7	+3.2
	comp=Z,1µm,0.6s						
SENI	**Senigallia**	3.40	263	P	Pn	09 02 11.9	+1.2
SENI				AML	AML		
	comp=E,3620µm,0.9s						
SENI				AML	AML		
	comp=N,4335µm,0.9s						
SENI				AML	AML		
	comp=E,3620µm,0.9s						
SENI				AML	AML		
	comp=N,4335µm,0.9s						
SENI				END			
MRVN	**Minervino Murg**	3.40	202	P	Pn	09 02 11.0	+0.2
MRVN				AML	AML		
	comp=E,1620µm,1.1s						
MRVN				AML	AML		
	comp=N,1089µm,0.9s						
MRVN				AML	AML		
	comp=E,1620µm,1.1s						
MRVN				AML	AML		
	comp=N,1089µm,0.9s						
MRVN				END			
FASA	**Fasano**	3.43	187	*e*Pn	Pn	09 02 14.1	+2.9
FASA	**Fasano**	3.43	187	*e*Pn	Pn	09 02 14.1	+2.9
ARSA	**Arzberg**	3.44	332	*e*Pn	Pn	09 02 12.3	+1.0
	comp=N,367nm,0.5s,SNR=172						
ARSA				*e*Sn	Sn	09 02 50.9	-1.7
	comp=N,182nm,0.6s						
ARSA	**Arzberg**	3.44	332	Pn	Pn	09 02 12.3	+1.0
	comp=N,367nm,0.5s,SNR=172						
ARSA				Sn	Sn	09 02 50.9	-1.7
	comp=N,182nm,0.6s						
ARSA	**Arzberg**	3.44	332	P	Pn	09 02 12.3	+1.0
ARSA				AML	AML		
	comp=E,804µm,1.4s						
ARSA				AML	AML		
	comp=N,604µm,0.5s						
ARSA				AML	AML		
	comp=N,604µm,0.5s						
ARSA				AML	AML		
	comp=E,804µm,1.4s						
ARSA				END			
SKO	**Skopje**	3.44	130	P	Pn	09 02 11.6	+0.3
SKO	**Skopje**	3.44	130	P	Pn	09 02 11.6	+0.3
SKO	**Skopje**	3.44	130	*i* Pn	Pn	09 02 11.5	+0.3
SKO	**Skopje**	3.44	130	P	Pn	09 02 11.6	+0.3
SKO	**Skopje**	3.44	130	P	Pn	09 02 11.6	+0.3
AMUR	**Altamura**	3.45	196	P	Pn	09 02 11.7	+0.2
AMUR				AML	AML		
	comp=E,1885µm,0.7s						
AMUR				AML	AML		
	comp=N,1225µm,0.6s						
AMUR				AML	AML		
	comp=N,1225µm,0.6s						
AMUR				AML	AML		
	comp=E,1885µm,0.7s						
AMUR				END			
TRIV	**Trivento**	3.47	226	P	Pn	09 02 13.4	+1.7
TRIV				AML	AML		
	comp=E,2330µm,1.1s						
TRIV				AML	AML		
	comp=N,2715µm,0.7s						
TRIV				AML	AML		
	comp=E,2330µm,1.1s						
TRIV				AML	AML		
	comp=N,2715µm,0.7s						
TRIV				END			
GATE	**Gambatesa**	3.49	220	P	Pn	09 02 13.4	+1.4
GATE				AML	AML		
	comp=E,2210µm,1.0s						
GATE				AML	AML		
	comp=N,2685µm,1.0s						
GATE				AML	AML		
	comp=E,1465µm,0.6s						
GATE				AML	AML		
	comp=N,1875µm,0.8s						
GATE				AML	AML		
	comp=E,1465µm,0.6s						
GATE				AML	AML		
	comp=E,2210µm,1.0s						
GATE				AML	AML		
	comp=N,1875µm,0.8s						
GATE				AML	AML		
	comp=N,2685µm,1.0s						
GATE				END			
NOCI	**Noci**	3.49	190	P	Pn	09 02 11.7	-0.3
NOCI				AML	AML		
	comp=E,1825µm,1.1s						
NOCI				AML	AML		
	comp=N,2430µm,0.7s						
NOCI				AML	AML		
	comp=N,2430µm,0.7s						
NOCI				AML	AML		
	comp=E,1825µm,1.1s						
NOCI				END			
MOCO	**Biccari - m.te**	3.49	216	P	Pn	09 02 13.8	+1.8
MOCO				AML	AML		
	comp=E,1652µm,0.9s						
MOCO				AML	AML		
	comp=N,1155µm,1.0s						
MOCO				AML	AML		
	comp=E,1680µm,0.9s						
MOCO				AML	AML		
	comp=N,1178µm,1.0s						
MOCO				AML	AML		
	comp=N,1155µm,1.0s						
MOCO				AML	AML		
	comp=N,1178µm,1.0s						
MOCO				AML	AML		
	comp=E,1680µm,0.9s						
MOCO				AML	AML		
	comp=E,1652µm,0.9s						
MOCO				END			
SABO	**M.te Sabotino**	3.50	301	P	Pn	09 02 13.4	+1.3
SABO				AML	AML		
	comp=E,4615µm,0.7s						
SABO				AML	AML		
	comp=N,5885µm,0.6s						
SABO				AML	AML		
	comp=N,5885µm,0.6s						
SABO				AML	AML		
	comp=E,4615µm,0.7s						
SABO				END			
TERO	**Teramo**	3.51	244	P	Pn	09 02 13.2	+0.9
TERO				AML	AML		
	comp=E,666µm,0.9s						
TERO				AML	AML		
	comp=N,762µm,1.1s						
TERO				AML	AML		
	comp=N,762µm,1.1s						
TERO				AML	AML		

	comp=E,666µm,0.9s						
TERO				END			
CADS	Cadrg	3.55	306	*i* Pn	Pn	09 02 13.6	+0.8
CADS				*e*		09 02 22.5	
CADS	Cadrg	3.55	306	*i* Pn	Pn	09 02 13.6	+0.8
ZAPS	Zavoj	3.57	104	*e*Pn	Pn	09 02 13.9	+0.8
ZAPS				*e*Sg	Sg	09 03 10.5	-1.1
SOP	Sopron	3.58	345⇑	*e*Pn	Pn	09 02 14.1	+1.0
SOP				*e*Pg	Pb	09 02 18.9	-1.8
SOP				*e*Sn	Sn	09 02 54.1	-1.7
SOP	Sopron	3.58	345	P	Pn	09 02 14.5	+1.4
SOP	Sopron	3.58	345	P	Pn	09 02 14.5	+1.4
PALZ	Palazzo San Ge	3.58	204	P	Pn	09 02 14.8	+1.6
PALZ				AML	AML		
	comp=E,6680µm,1.0s						
PALZ				AML	AML		
	comp=N,4800µm,1.5s						
PALZ				AML	AML		
	comp=N,4800µm,1.5s						
PALZ				AML	AML		
	comp=E,6680µm,1.0s						
PALZ				END			
CGL1	Ceglie Messapi	3.59	185	*e*Pn	Pn	09 02 15.1	+1.8
CGL1	Ceglie Messapi	3.59	185	*e*Pn	Pn	09 02 15.1	+1.8
SGTA	Sant Agata di	3.61	212	P	Pn	09 02 14.3	+0.6
SGTA				AML	AML		
	comp=E,1895µm,0.9s						
SGTA				AML	AML		
	comp=N,1535µm,0.8s						
SGTA				AML	AML		
	comp=E,1895µm,0.9s						
SGTA				AML	AML		
	comp=N,1535µm,0.8s						
SGTA				END			
BSSO	Busso	3.61	223	P	Pn	09 02 13.5	-0.2
BSSO				AML	AML		
	comp=E,2280µm,1.0s						
BSSO				AML	AML		
	comp=N,1930µm,0.8s						
BSSO				AML	AML		
	comp=E,2380µm,1.0s						
BSSO				AML	AML		
	comp=N,1940µm,0.8s						
BSSO				AML	AML		
	comp=E,2380µm,1.0s						
BSSO				AML	AML		
	comp=E,2280µm,1.0s						
BSSO				AML	AML		
	comp=N,1940µm,0.8s						
BSSO				AML	AML		
	comp=N,1930µm,0.8s						
BSSO				END			
MASS	Massafra	3.64	189	*e*Pn	Pn	09 02 16.2	+2.2
MASS	Massafra	3.64	189	*e*Pn	Pn	09 02 16.2	+2.2
INTR	Introdacqua	3.66	234	P	Pn	09 02 15.0	+0.6
INTR				AML	AML		
	comp=E,2900µm,0.7s						
INTR				AML	AML		
	comp=N,4635µm,0.8s						
INTR				AML	AML		
	comp=N,4635µm,0.8s						
INTR				AML	AML		
	comp=E,2900µm,0.7s						
INTR				END			
CAMP	Campotosto	3.68	244	P	Pn	09 02 15.4	+0.8
CAMP				END			
SMA1	SAN MARTINO	3.68	246	P	Pn	09 02 15.4	+0.8
SMA1				AML	AML		
	comp=E,2745µm,0.6s						
SMA1				AML	AML		
	comp=N,2780µm,0.7s						
SMA1				AML	AML		
	comp=E,2745µm,0.6s						
SMA1				AML	AML		
	comp=N,2780µm,0.7s						
SMA1				END			
FDMO	Fiordimonte	3.68	253	P	Pn	09 02 15.9	+1.3
FDMO				END			
MATE	Matera	3.68	194⇑	*i*P	Pn	09 02 14.7	+0.1
MATE	Matera	3.68	194⇑	*i*P	Pn	09 02 14.7	+0.1
MATE	Matera	3.68	194	END			
MIDA	Miranda	3.71	227	P	Pn	09 02 15.8	+0.7
MIDA				AML	AML		
	comp=E,1425µm,0.8s						
MIDA				AML	AML		
	comp=N,1330µm,0.9s						
MIDA				AML	AML		
	comp=E,1470µm,1.3s						
MIDA				AML	AML		
	comp=N,1465µm,0.6s						
MIDA				AML	AML		
	comp=N,1465µm,0.6s						
MIDA				AML	AML		
	comp=E,1425µm,0.8s						
MIDA				AML	AML		
	comp=E,1470µm,1.3s						
MIDA				AML	AML		
	comp=N,1330µm,0.9s						
MIDA				END			
FSSB	Fossombrone	3.73	263	P	Pn	09 02 16.0	+0.8
FSSB				AML	AML		
	comp=E,3295µm,0.7s						
FSSB				AML	AML		
	comp=N,3375µm,0.4s						
FSSB				AML	AML		
	comp=N,3375µm,0.4s						
FSSB				AML	AML		
	comp=E,3295µm,0.7s						
FSSB				END			
TAR1	Taranto	3.73	187	*e*Pn	Pn	09 02 15.8	+0.6
TAR1	Taranto	3.73	187	*e*Pn	Pn	09 02 15.8	+0.6
TAR1				Sn	Sg	09 03 25.5	+8.8
ACER	Acerenza	3.73	203	AML	AML		
	comp=E,4350µm,0.7s						
ACER				AML	AML		
	comp=E,4170µm,0.8s						
ACER				AML	AML		
	comp=N,4090µm,1.2s						
ACER				AML	AML		
	comp=E,4350µm,0.7s						
ACER				AML	AML		
	comp=N,4285µm,1.2s						
ACER				AML	AML		
	comp=E,4170µm,0.8s						
ACER				AML	AML		
	comp=N,4090µm,1.2s						
ACER				AML	AML		
	comp=N,4285µm,1.2s						
ACER				END			
NRCA	Norcia	3.74	250	P	Pn	09 02 16.2	+0.8
NRCA				AML	AML		
	comp=E,1440µm,0.9s						
NRCA				AML	AML		
	comp=N,1880µm,1.1s						
NRCA				AML	AML		
	comp=E,1440µm,0.9s						
NRCA				AML	AML		
	comp=N,1880µm,1.1s						
NRCA				END			
CAFE	Carife	3.75	212	P	Pn	09 02 16.7	+1.1
CAFE				AML	AML		
	comp=E,1717µm,0.7s						
CAFE				AML	AML		
	comp=N,1342µm,0.9s						
CAFE				AML	AML		
	comp=E,1840µm,0.7s						
CAFE				AML	AML		
	comp=N,1310µm,0.9s						
CAFE				AML	AML		
	comp=N,1342µm,0.9s						
CAFE				AML	AML		
	comp=N,1310µm,0.9s						
CAFE				AML	AML		
	comp=E,1717µm,0.7s						
CAFE				AML	AML		
	comp=E,1840µm,0.7s						
CAFE				END			
MPAG	Monte Paganucc	3.75	263	P	Pn	09 02 16.3	+0.7
MPAG				AML	AML		
	comp=E,2335µm,0.6s						
MPAG				AML	AML		
	comp=N,2695µm,1.0s						
MPAG				AML	AML		
	comp=N,2695µm,1.0s						
MPAG				AML	AML		
	comp=E,2335µm,0.6s						
MPAG				END			
PSB1	Pescosannita	3.76	218	P	Pn	09 02 15.8	+0.1
PSB1				AML	AML		
	comp=E,1102µm,1.4s						
PSB1				AML	AML		
	comp=N,1083µm,0.8s						
PSB1				AML	AML		
	comp=E,1125µm,0.9s						
PSB1				AML	AML		
	comp=N,1135µm,1.6s						
PSB1				AML	AML		
	comp=E,1125µm,0.9s						
PSB1				AML	AML		
	comp=N,1135µm,1.6s						
PSB1				AML	AML		
	comp=N,1083µm,0.8s						
PSB1				AML	AML		
	comp=E,1102µm,1.4s						
PSB1				END			
AQU	L'Aquila	3.77	242	*e*Pn	Pn	09 02 15.6	-0.3
AQU	L'Aquila	3.77	242	*e*P	Pn	09 02 15.6	-0.3
AQU	L'Aquila	3.77	242	*e*P	Pn	09 02 15.6	-0.3
AQU				*e*Sn	Sn	09 02 58.9	-1.8
AQU	L'Aquila	3.77	242	*e*Pn	Pn	09 02 15.0	-0.9
AQU				*e*Sn	Sn	09 02 58.9	-1.8
MIGL	Miglionico	3.78	197	AML	AML		
	comp=E,6030µm,1.4s						
MIGL				AML	AML		
	comp=N,6235µm,0.9s						
MIGL				AML	AML		
	comp=N,6235µm,0.9s						
MIGL				AML	AML		
	comp=E,6030µm,1.4s						
MIGL				END			
KRUS	Krusevo	3.78	138	*i* Pn	Pn	09 02 17.5	+1.5
PTRJ	Pietraroja	3.78	222	P	Pn	09 02 16.9	+0.9
PTRJ				AML	AML		
	comp=E,2815µm,0.6s						
PTRJ				AML	AML		
	comp=N,3790µm,0.5s						
PTRJ				AML	AML		
	comp=N,3790µm,0.5s						
PTRJ				AML	AML		
	comp=E,2815µm,0.6s						
PTRJ				END			
OHR	Ohrid	3.79	144	*i* Pn	Pn	09 02 18.5	+2.5
OHR	Ohrid	3.79	144	P	Pn	09 02 19.2	+3.1
OHR	Ohrid	3.79	144	P	Pn	09 02 19.2	+3.1
CESI	CESI - Serrava	3.82	253	P	Pn	09 02 17.4	+0.9
CESI				AML	AML		
	comp=E,567µm,1.6s						
CESI				AML	AML		
	comp=N,1460µm,0.6s						
CESI				AML	AML		
	comp=N,1460µm,0.6s						
CESI				AML	AML		
	comp=E,567µm,1.6s						
CESI				END			
MYKA	Terra Mystica	3.83	310	*e*Pn	Pn	09 02 18.6	+1.9
	SNR=15						
MYKA				Pg	Pg	09 02 28.7	-1.6
	comp=E,300nm,0.6s						
MYKA	Terra Mystica	3.83	310	Pn	Pn	09 02 18.6	+1.9
	SNR=15						
VINO	Villanova	3.83	304	P	Pn	09 02 18.0	+1.3
VINO				AML	AML		
	comp=E,1870µm,0.7s						
VINO				AML	AML		
	comp=N,2345µm,0.6s						
VINO				AML	AML		
	comp=N,2345µm,0.6s						
VINO				AML	AML		
	comp=E,1870µm,0.7s						
VINO				END			
SRE	Strehaia	3.83	82⇑	*i*P	Pn	09 02 17.9	+1.2
SRE	Strehaia	3.83	82	P	Pn	09 02 17.7	+1.0
SRE	Strehaia	3.83	82	P	Pn	09 02 17.7	+1.0
SGG	Gregorio Mates	3.84	223	P	Pn	09 02 18.3	+1.5
SGG				AML	AML		
	comp=E,1360µm,0.7s						
SGG				AML	AML		
	comp=N,1188µm,0.5s						
SGG				AML	AML		
	comp=E,1360µm,0.7s						
SGG				AML	AML		
	comp=N,1188µm,0.5s						
SGG				END			
SNAL	S. Angelo Dei	3.85	212	AML	AML		
	comp=N,2020µm,0.9s						
SNAL				AML	AML		
	comp=E,1870µm,0.8s						
SNAL				AML	AML		
	comp=N,2020µm,0.9s						
SNAL				AML	AML		
	comp=E,1870µm,0.8s						
SNAL				END			
ACOM	Acomizza, Ital	3.85	308	P	Pn	09 02 18.2	+1.1
ACOM				AML	AML		
	comp=E,2755µm,0.8s						
ACOM				AML	AML		
	comp=N,2135µm,0.8s						
ACOM				AML	AML		
	comp=E,2755µm,0.8s						
ACOM				AML	AML		
	comp=N,2135µm,0.8s						
ACOM				END			
PTCC	Patocco-Chiusa	3.87	306	P	Pn	09 02 18.4	+1.2
PTCC				AML	AML		
	comp=E,1170µm,0.6s						
PTCC				AML	AML		
	comp=N,1040µm,1.0s						
PTCC				AML	AML		
	comp=N,1040µm,1.0s						
PTCC				AML	AML		
	comp=E,1170µm,0.6s						
PTCC				END			
CERA	Filignano	3.87	229	P	Pn	09 02 18.7	+1.4
CERA				AML	AML		
	comp=E,2245µm,0.8s						
CERA				AML	AML		
	comp=N,1640µm,0.8s						
CERA				AML	AML		
	comp=N,1640µm,0.8s						
CERA				AML	AML		
	comp=E,2245µm,0.8s						
CERA				END			
LNSS	Leonessa	3.89	247	P	Pn	09 02 18.4	+0.9
LNSS				AML	AML		
	comp=E,2145µm,0.6s						
LNSS				AML	AML		
	comp=N,2570µm,0.7s						
LNSS				AML	AML		
	comp=E,2145µm,0.6s						
LNSS				AML	AML		
	comp=N,2570µm,0.7s						
LNSS				END			
VVLD	Villa Vallelon	3.91	234	P	Pn	09 02 18.9	+1.0
VVLD				AML	AML		
	comp=E,1235µm,0.9s						
VVLD				AML	AML		
	comp=N,1420µm,0.6s						
VVLD				AML	AML		
	comp=N,1420µm,0.6s						
VVLD				AML	AML		
	comp=E,1235µm,0.9s						
VVLD				END			
DEV	Deva	3.92	63⇑	*i*P	Pn	09 02 18.9	+1.0
DEV	Deva	3.92	63	P	Pn	09 02 17.8	-0.1
DEV	Deva	3.92	63	P	Pn	09 02 17.8	-0.1
GEPF	Gemona	3.93	303	P	Pn	09 02 19.1	+1.2
GEPF				AML	AML		
	comp=E,2035µm,0.8s						
GEPF				AML	AML		
	comp=N,2435µm,0.7s						
GEPF				AML	AML		
	comp=E,2035µm,0.8s						
GEPF				AML	AML		
	comp=N,2435µm,0.7s						
GEPF				END			
ATBU	Serra di Buran	3.93	261	P	Pn	09 02 19.1	+1.0
ATBU				AML	AML		
	comp=E,4225µm,0.6s						
ATBU				AML	AML		
	comp=N,5340µm,0.9s						
ATBU				AML	AML		
	comp=E,4225µm,0.6s						
ATBU				AML	AML		
	comp=N,5340µm,0.9s						
ATBU				END			
ATCC	AVT- Casa Cast	3.94	256	P	Pn	09 02 19.8	+1.6
ATCC				AML	AML		
	comp=E,3695µm,1.2s						
ATCC				AML	AML		
	comp=N,2960µm,0.9s						
ATCC				AML	AML		
	comp=N,2960µm,0.9s						
ATCC				AML	AML		
	comp=E,3695µm,1.2s						
ATCC				END			
PSZ	Piszkesteto	3.94	20⇓	*i*P	Pn	09 02 18.2	-0.1
PSZ	Piszkesteto	3.94	20⇓	*e*Pdiff	Pn	09 02 18.2	-0.1
PSZ				*e*Sn	Sn	09 03 03.7	-1.3
PSZ	Piszkesteto	3.94	20	*e*Pn	Pn	09 02 18.1	-0.2
PSZ	Piszkesteto	3.94	20	*e*P	Pn	09 02 18.1	-0.2
PSZ	Piszkesteto	3.94	20	*e*P	Pn	09 02 18.1	-0.2
PTQR	Pietraquaria	3.96	238	P	Pn	09 02 20.0	+1.5
PTQR				AML	AML		
	comp=E,632µm,0.9s						
PTQR				AML	AML		
	comp=N,753µm,0.9s						
PTQR				AML	AML		
	comp=N,753µm,0.9s						
PTQR				AML	AML		
	comp=E,632µm,0.9s						
PTQR				END			
CONA	Conrad Observa	3.96	340	*i* Pn	Pn	09 02 19.6	+1.2
	comp=E,32nm,0.3s,SNR=70						
CONA				*e*Sn	Sn	09 03 05.2	-0.1
	comp=E,212nm,0.6s						
CONA	Conrad Observa	3.96	340	Pn	Pn	09 02 19.6	+1.2
	comp=E,32nm,0.3s,SNR=70						
CONA				Sn	Sn	09 03 05.2	-0.1
	comp=E,212nm,0.6s						
POFI	Posta Fibreno	3.96	232	P	Pn	09 02 19.5	+1.0
POFI				AML	AML		
	comp=E,918µm,0.7s						
POFI				AML	AML		
	comp=N,1050µm,0.7s						
POFI				AML	AML		
	comp=N,1050µm,0.7s						
POFI				AML	AML		
	comp=E,918µm,0.7s						
POFI				END			
ASSB	Assisi San Ben	3.98	254	P	Pn	09 02 19.5	+0.8
ASSB				AML	AML		
	comp=E,1935µm,0.4s						
ASSB				AML	AML		
	comp=N,1955µm,0.7s						
ASSB				AML	AML		
	comp=E,1935µm,0.4s						
ASSB				AML	AML		
	comp=N,1955µm,0.7s						
ASSB				END			
MCRV	Calabrutti - M	3.99	211	END			
MCRV				AML	AML		
	comp=E,1130µm,0.8s						
MCRV				AML	AML		
	comp=N,814µm,0.9s						
MCRV				AML	AML		
	comp=E,1130µm,0.8s						
MCRV				AML	AML		
	comp=N,814µm,0.9s						
FIAM	Fiamignano	4.00	242	P	Pn	09 02 20.4	+1.4
FIAM				AML	AML		
	comp=E,2045µm,0.8s						
FIAM				AML	AML		
	comp=N,1425µm,0.7s						
FIAM				AML	AML		
	comp=E,2045µm,0.8s						
FIAM				AML	AML		
	comp=N,1425µm,0.7s						
FIAM				END			
MURB	Monte Urbino	4.00	258	P	Pn	09 02 20.2	+1.2
MURB				AML	AML		
	comp=E,4060µm,0.8s						
MURB				AML	AML		
	comp=N,3865µm,0.9s						
MURB				AML	AML		
	comp=E,4225µm,0.7s						
MURB				AML	AML		
	comp=N,4210µm,0.9s						
MURB				AML	AML		
	comp=N,4210µm,0.9s						
MURB				AML	AML		
	comp=N,3865µm,0.9s						
MURB				AML	AML		
	comp=E,4060µm,0.8s						
MURB				AML	AML		
	comp=E,4225µm,0.7s						
MURB				END			
ATPI	Pietralunga -	4.04	261	P	Pn	09 02 20.6	+1.0
ATPI				AML	AML		
	comp=E,2285µm,0.8s						
ATPI				AML	AML		
	comp=N,1955µm,0.9s						
ATPI				AML	AML		
	comp=N,1955µm,0.9s						
ATPI				AML	AML		
	comp=E,2285µm,0.8s						
ATPI				END			
ARRO	Arrone	4.08	248	P	Pn	09 02 21.5	+1.4
ARRO				AML	AML		
	comp=E,742µm,0.8s						
ARRO				AML	AML		
	comp=N,847µm,0.6s						
ARRO				AML	AML		
	comp=N,847µm,0.6s						
ARRO				AML	AML		
	comp=E,742µm,0.8s						
ARRO				END			
PARC	Parchiule	4.12	264	P	Pn	09 02 21.4	+0.7
PARC				AML	AML		
	comp=E,1540µm,0.9s						
PARC				AML	AML		
	comp=N,1675µm,1.2s						
PARC				AML	AML		
	comp=N,1675µm,1.2s						
PARC				AML	AML		
	comp=E,1540µm,0.9s						
PARC				END			
BADI	Badiali	4.14	262	P	Pn	09 02 21.7	+0.8
BADI				AML	AML		
	comp=E,1680µm,1.0s						
BADI				AML	AML		
	comp=N,2515µm,0.9s						
BADI				AML	AML		
	comp=E,1680µm,1.0s						
BADI				AML	AML		
	comp=N,2515µm,0.9s						
BADI				END			
MODS	Modra-Piesok	4.17	354	*e*P	Pn	09 02 21.6	+0.3
MODS				*e*		09 03 07.8	
MODS				smax	smax		
	comp=N,484nm,0.5s						
MODS	Modra-Piesok	4.17	354	*e*PN	Pn	09 02 21.6	+0.3
MODS				*e*SN	Sn	09 03 07.8	-2.6
MODS				*e*LG	Lg	09 03 13.6	
MODS	Modra-Piesok	4.17	354	*e*Pn	Pn	09 02 21.6	+0.3
MODS				*e*S	Sn	09 03 07.8	-2.6
ATVA	AVT- Monte Val	4.17	259	P	Pn	09 02 22.8	+1.5
ATVA				AML	AML		
	comp=E,1525µm,0.9s						
ATVA				AML	AML		
	comp=N,1475µm,1.0s						
ATVA				AML	AML		
	comp=N,1475µm,1.0s						
ATVA				AML	AML		
	comp=E,1525µm,0.9s						
ATVA				END			
SLCN	Sala Consilina	4.18	204	AML	AML		
	comp=E,1125µm,0.6s						
SLCN				AML	AML		
	comp=N,1098µm,1.3s						
SLCN				AML	AML		
	comp=E,1200µm,0.6s						
SLCN				AML	AML		
	comp=N,1188µm,1.2s						
SLCN				AML	AML		
	comp=N,1188µm,1.2s						
SLCN				AML	AML		
	comp=N,1098µm,1.3s						
SLCN				AML	AML		

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      comp=E,1200µm,0.6s
SLCN                             AML     AML
      comp=E,1125µm,0.6s
SLCN                             END
ATMC  Monte Cedrone    4.19 261  P       Pn      09 02 23.2 +1.5
ATMC                             AML     AML
      comp=E,2055µm,1.2s
ATMC                             AML     AML
      comp=N,2495µm,0.7s
ATMC                             AML     AML
      comp=N,2495µm,0.7s
ATMC                             AML     AML
      comp=E,2055µm,1.2s
ATMC                             END
KBN   Korca            4.20 148  P       Pn      09 02 24.4 +2.7
KBN   Korca            4.20 148  P       Pn      09 02 24.4 +2.7
KBN   Korca            4.20 148  P       Pn      09 02 24.4 +2.7
KBN   Korca            4.20 148 i Pn     Pn      09 02 26.0 +4.3
KBN   Korca            4.20 148 i PN     Pn      09 02 26.0 +4.3
KBN                             i SN     Sb      09 03 18.4  -3.9
MCEL  Monticello       4.20 202  END
MCEL                             AML     AML
      comp=E,914µm,0.9s
MCEL                             AML     AML
      comp=N,876µm,0.8s
MCEL                             AML     AML
      comp=E,914µm,0.9s
MCEL                             AML     AML
      comp=N,876µm,0.8s
CDRU  Civita di Ruta   4.20 208  P       Pn      09 02 21.9 +0.2
CDRU                             AML     AML
      comp=E,416µm,0.8s
CDRU                             AML     AML
      comp=N,365µm,0.7s
CDRU                             AML     AML
      comp=N,365µm,0.7s
CDRU                             AML     AML
      comp=E,416µm,0.8s
CDRU                             END
VTS   Vitosha          4.21 111 ePn      Pn      09 02 22.0  0.0
VTS   Vitosha          4.21 111 eP       Pn      09 02 22.0  0.0
VTS   Vitosha          4.21 111 eP       Pn      09 02 22.0  0.0
SCHR  S. Chirico Rap   4.25 199  AML     AML
      comp=E,574µm,0.7s
SCHR                             AML     AML
      comp=E,574µm,0.7s
SCHR                             AML     AML
      comp=N,494µm,1.1s
SCHR                             AML     AML
      comp=N,494µm,1.1s
SCHR                             END
DRGR                   4.25  51⇓iP       Pn      09 02 22.5  0.0
DRGR                   4.25  51  P       Pn      09 02 24.3 +1.8
DRGR                   4.25  51  P       Pn      09 02 24.3 +1.8
MTSN  Montesano sull   4.27 203  END
MTSN                             AML     AML
      comp=E,864µm,0.7s
MTSN                             AML     AML
      comp=N,650µm,0.5s
MTSN                             AML     AML
      comp=N,650µm,0.5s
MTSN                             AML     AML
      comp=E,864µm,0.7s
KBA   Koelnbreinsper   4.27 313 ePn      Pn      09 02 24.5 +1.6
      comp=E,13nm,0.2s,SNR=39
KBA                              Pg      Pg      09 02 41.0 +2.2
      comp=E,2.8nm,0.2s
KBA                             eSn      Sn      09 03 12.6  -0.6
      comp=E,96nm,0.5s
KBA   Koelnbreinsper   4.27 313  P       Pn      09 02 24.5 +1.6
KBA   Koelnbreinsper   4.27 313  P       Pn      09 02 24.5 +1.6
KBA   Koelnbreinsper   4.27 313  Pg      Pg      09 02 41.0 +2.2
      comp=E,2.8nm,0.2s
KBA                              Sn      Sn      09 03 12.6  -0.6
      comp=E,96nm,0.5s
SMOL  Smolenice        4.30 356 eP       Pn      09 02 24.5 +1.5
SMOL                            e                09 03 12.7
SMOL  Smolenice        4.30 356 ePN      Pn      09 02 24.5 +1.5
SMOL                            eSN      Sn      09 03 12.7  -0.9
SMOL  Smolenice        4.30 356 ePn      Pn      09 02 24.5 +1.5
SMOL                            eSn      Sn      09 03 12.7  -0.9
FNA   Florina          4.30 142 ePn      Pn      09 02 24.7 +1.5
FNA   Florina          4.30 142  P       Pn      09 02 25.0 +1.8
FNA   Florina          4.30 142 eP       Pn      09 02 24.7 +1.5
FNA   Florina          4.30 142 eP       Pn      09 02 24.7 +1.5
SIRI  Monte Sirino -   4.31 201  AML     AML
      comp=N,776µm,1.3s
SIRI                             AML     AML
      comp=E,652µm,0.4s
SIRI                             AML     AML
      comp=N,794µm,1.3s
SIRI                             AML     AML
      comp=E,631µm,0.4s
SIRI                             AML     AML
      comp=E,652µm,0.4s
SIRI                             AML     AML
      comp=E,631µm,0.4s
SIRI                             AML     AML
      comp=N,776µm,1.3s
SIRI                             AML     AML
      comp=N,794µm,1.3s
SIRI                             END
VYHS  Vyhne            4.32   8 eP       Pn      09 02 23.8 +0.5
VYHS                            e                09 03 11.9
VYHS                             smax    smax
      comp=N,367nm,0.6s
VYHS  Vyhne            4.32   8 ePN      Pn      09 02 23.8 +0.5
VYHS                            eSN      Sn      09 03 11.9  -2.1
VYHS                            eLG      Lg      09 03 15.8
VYHS  Vyhne            4.32   8 ePn      Pn      09 02 23.8 +0.5
VYHS                            eS       Sn      09 03 11.9  -2.1
GIUL  Giuliano Di Ro   4.33 233  P       Pn      09 02 23.9 +0.5
GIUL                             AML     AML
      comp=E,453µm,0.6s
GIUL                             AML     AML
      comp=N,543µm,0.9s
GIUL                             AML     AML
      comp=N,543µm,0.9s
GIUL                             AML     AML
      comp=E,453µm,0.6s
GIUL                             END
CRE   Caprese Michel   4.33 264  P       Pn      09 02 25.3 +1.7
CRE                              AML     AML
      comp=E,1060µm,0.7s
CRE                              AML     AML
      comp=N,1148µm,1.3s
CRE                              AML     AML
      comp=E,1060µm,0.7s
CRE                              AML     AML
      comp=N,1148µm,1.3s
CRE                              END
CAFI  Castiglion Fio   4.38 260  P       Pn      09 02 25.9 +1.7
CAFI                             AML     AML
      comp=E,846µm,0.8s
CAFI                             AML     AML
      comp=N,1240µm,0.6s
CAFI                             AML     AML
      comp=N,1240µm,0.6s
CAFI                             AML     AML
      comp=E,846µm,0.8s
CAFI                             END
MOA   Molln            4.41 326 i Pn     Pn      09 02 26.3 +1.7
      comp=E,73nm,0.4s,SNR=85
MOA                             eSn      Sn      09 03 18.4 +2.0
      comp=E,238nm,0.3s
MOA   Molln            4.41 326  Pn      Pn      09 02 26.3 +1.7
      comp=E,73nm,0.4s,SNR=85
MOA                              Sn      Sn      09 03 18.4 +2.0
      comp=E,238nm,0.3s
ASQU  Asqua            4.42 266  P       Pn      09 02 25.9 +1.1
ASQU                             AML     AML
      comp=E,1267µm,0.9s
ASQU                             AML     AML
      comp=N,1050µm,1.4s
ASQU                             AML     AML
      comp=N,1050µm,1.4s
ASQU                             AML     AML
      comp=E,1267µm,0.9s
ASQU                             END
MGR   Morigerati       4.44 204  P       Pn      09 02 25.2 +0.2
MGR                              AML     AML
      comp=E,564µm,0.6s
MGR                              AML     AML
      comp=N,534µm,0.6s
MGR                              AML     AML
      comp=E,461µm,0.6s
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MGR                              AML     AML
      comp=N,627µm,0.6s
MGR                              AML     AML
      comp=N,627µm,0.6s
MGR                              AML     AML
      comp=E,564µm,0.6s
MGR                              AML     AML
      comp=E,461µm,0.6s
MGR                              AML     AML
      comp=N,534µm,0.6s
MGR                              END
NEST  Nestorio         4.48 147  P       Pn      09 02 27.7 +2.1
NEST  Nestorio         4.48 147  P       Pn      09 02 27.7 +2.1
SALB  San Lorenzo Be   4.50 195  P       Pn      09 02 25.5  -0.4
SALB                             AML     AML
      comp=E,512µm,1.4s
SALB                             AML     AML
      comp=N,470µm,0.8s
SALB                             AML     AML
      comp=E,512µm,1.4s
SALB                             AML     AML
      comp=N,470µm,0.8s
SALB                             END
CUC   Castrocucco      4.50 201 ePn      Pn      09 02 26.9 +0.9
CUC   Castrocucco      4.50 201 ePn      Pn      09 02 26.9 +0.9
VAY   Valandovo        4.51 129  P       Pn      09 02 26.9 +0.9
VAY   Valandovo        4.51 129  P       Pn      09 02 26.9 +0.9
VAY   Valandovo        4.51 129 i Pn     Pn      09 02 26.8 +0.9
VAY   Valandovo        4.51 129  P       Pn      09 02 26.9 +0.9
VAY   Valandovo        4.51 129  P       Pn      09 02 26.9 +0.9
BULG  Bulgheria - Ca   4.55 205  AML     AML
      comp=E,536µm,0.9s
BULG                             AML     AML
      comp=N,1010µm,0.6s
BULG                             AML     AML
      comp=N,1010µm,0.6s
BULG                             AML     AML
      comp=E,536µm,0.9s
BULG                             END
TEOL  Teolo            4.57 286  P       Pn      09 02 26.9 +0.2
TEOL                             AML     AML
      comp=E,5980µm,0.7s
TEOL                             AML     AML
      comp=N,6455µm,1.1s
TEOL                             AML     AML
      comp=N,6455µm,1.1s
TEOL                             AML     AML
      comp=E,5980µm,0.7s
TEOL                             END
LAV9  Lanuvio          4.58 238  END
CGRP  Cima Grappa      4.62 293  P       Pn      09 02 27.6  0.0
CGRP                             AML     AML
      comp=E,2630µm,0.8s
CGRP                             AML     AML
      comp=N,2405µm,0.8s
CGRP                             AML     AML
      comp=N,2405µm,0.8s
CGRP                             AML     AML
      comp=E,2630µm,0.8s
CGRP                             END
KECS  Kecovo           4.62  22 eP       Pn      09 02 28.3 +0.8
KECS  Kecovo           4.62  22 ePN      Pn      09 02 28.3 +0.8
KECS  Kecovo           4.62  22 eP       Pn      09 02 28.3 +0.8
SRN   Sarande          4.62 159  P       Pn      09 02 27.9 +0.4
SRN   Sarande          4.62 159  P       Pn      09 02 27.9 +0.4
JAVC  Velka Javorina   4.63 358 ePN      Pn      09 02 29.3 +1.6
GRG   Griva            4.67 133  P       Pn      09 02 29.1 +0.9
GRG   Griva            4.67 133  P       Pn      09 02 29.1 +0.9
GRG   Griva            4.67 133  P       Pn      09 02 29.1 +0.9
GRG   Griva            4.67 133  P       Pn      09 02 29.1 +0.9
KEK   Kerkira          4.73 162  P       Pn      09 02 29.2 +0.2
KEK   Kerkira          4.73 162  P       Pn      09 02 29.2 +0.2
KEK   Kerkira          4.73 162  P       Pn      09 02 29.7 +0.7
KEK                              AML     AML
      comp=E,128µm,1.1s
KEK                              AML     AML
      comp=N,122µm,1.3s
KEK                              AML     AML
      comp=N,122µm,1.3s
KEK                              AML     AML
      comp=E,128µm,1.1s
KEK                              END
KNT   Kendrikon        4.80 128  P       Pn      09 02 30.7 +0.7
KNT   Kendrikon        4.80 128  P       Pn      09 02 30.7 +0.7
KNT   Kendrikon        4.80 128  P       Pn      09 02 30.7 +0.7
KNT   Kendrikon        4.80 128  P       Pn      09 02 30.7 +0.7
TOLF  Tolfa            4.82 245  AML     AML
      comp=N,372µm,0.8s
TOLF                             AML     AML
      comp=E,416µm,0.7s
TOLF                             AML     AML
      comp=E,416µm,0.7s
TOLF                             AML     AML
      comp=N,372µm,0.8s
KZN   Kozani           4.87 142  P       Pn      09 02 33.3 +2.4
KZN   Kozani           4.87 142  P       Pn      09 02 33.3 +2.4
KZN   Kozani           4.87 142  P       Pn      09 02 33.3 +2.4
KZN   Kozani           4.87 142  P       Pn      09 02 33.3 +2.4
RISI  Rein             4.90 306  P       Pn      09 02 33.2 +1.7
RISI                             AML     AML
      comp=E,1395µm,0.6s
RISI                             AML     AML
      comp=N,1585µm,0.5s
RISI                             AML     AML
      comp=N,1585µm,0.5s
RISI                             AML     AML
      comp=E,1395µm,0.6s
RISI                             END
ARR   Arges            4.94  74⇑iP       Pn      09 02 33.8 +1.9
ARR   Arges            4.94  74⇑iP       Pn      09 02 33.8 +1.9
SGD   Sagiada          4.94 158  P       Pn      09 02 32.1 +0.3
SGD   Sagiada          4.94 158  P       Pn      09 02 32.1 +0.3
KRUC  Moravsky         4.94 349 ePN      Pn      09 02 31.7  -0.2
KRUC                            eSN      Sn      09 03 26.6  -2.8
ZCCA  Zocca            4.96 274  P       Pn      09 02 34.6 +2.4
ZCCA                             AML     AML
      comp=E,660µm,1.0s
ZCCA                             AML     AML
      comp=N,982µm,1.1s
ZCCA                             AML     AML
      comp=E,587µm,0.9s
ZCCA                             AML     AML
      comp=N,914µm,1.1s
ZCCA                             AML     AML
      comp=E,660µm,1.0s
ZCCA                             AML     AML
      comp=E,587µm,0.9s
ZCCA                             AML     AML
      comp=N,982µm,1.1s
ZCCA                             AML     AML
      comp=N,914µm,1.1s
ZCCA                             END
LADO  San Nicola del   4.99 188  END
LADO                             AML     AML
      comp=E,148µm,0.9s
LADO                             AML     AML
      comp=N,129µm,0.6s
LADO                             AML     AML
      comp=N,129µm,0.6s
LADO                             AML     AML
      comp=E,148µm,0.9s
KPRO  Kipourio         4.99 148  P       Pn      09 02 34.0 +1.3
KPRO  Kipourio         4.99 148  P       Pn      09 02 34.0 +1.3
IGT   Igoumenitsa      5.04 158  P       Pn      09 02 33.4 +0.2
IGT   Igoumenitsa      5.04 158  P       Pn      09 02 33.2  0.0
IGT   Igoumenitsa      5.04 158  P       Pn      09 02 33.2  0.0
NDIM  Novi di Modena   5.04 280  END
LANS  Liptovska Anna   5.04  12 eP       Pn      09 02 34.8 +1.5
LANS                            e                09 03 31.0
LANS  Liptovska Anna   5.04  12 ePN      Pn      09 02 34.8 +1.5
LANS                            eSN      Sn      09 03 31.0  -1.0
LANS  Liptovska Anna   5.04  12 ePn      Pn      09 02 34.8 +1.5
LANS                            eSn      Sn      09 03 31.0  -1.0
HUMR  Humele           5.09  84⇓iP       Pn      09 02 34.3 +0.3
HUMR  Humele           5.09  84⇓iP       Pn      09 02 34.3 +0.3
KOSI  Kohlern          5.10 298  AML     AML
      comp=E,1505µm,0.8s
KOSI                             AML     AML
      comp=N,1106µm,0.9s
KOSI                             AML     AML
      comp=N,1106µm,0.9s
KOSI                             AML     AML
      comp=E,1505µm,0.8s
KOSI                             END
TIP   Timpagrande      5.12 190⇓iP       Pn      09 02 35.1 +0.7
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TIP   Timpagrande      5.12 190 ePn      Pn      09 02 34.7 +0.3
TIP   Timpagrande      5.12 190  P       Pn      09 02 35.0 +0.7
TIP   Timpagrande      5.12 190 ePn      Pn      09 02 34.7 +0.3
TIP   Timpagrande      5.12 190⇓iP       Pn      09 02 35.1 +0.7
TIP   Timpagrande      5.12 190  P       Pn      09 02 34.8 +0.4
TIP                              AML     AML
      comp=E,234µm,0.8s
TIP                              AML     AML
      comp=N,344µm,1.1s
TIP                              AML     AML
      comp=N,344µm,1.1s
TIP                              AML     AML
      comp=E,234µm,0.8s
TIP                              END
VRAC  Vranov           5.16 351  Pn      Pn      09 02 35.3 +0.4
      comp=E,3.7nm,0.3s,baz=182,slow=14,SNR=11
VRAC                             Sn      Sn      09 03 32.6  -2.2
      comp=E,37nm,0.3s,baz=226,slow=17,SNR=13
VRAC  Vranov           5.16 351⇑iP       Pn      09 02 35.3 +0.4
VRAC  Vranov           5.16 351  P       Pn      09 02 35.3 +0.4
VRAC                             Sn      Sn      09 03 32.6  -2.2
VRAC                             S       Sn      09 03 34.4  -0.4
VRAC  Vranov           5.16 351 ePN      Pn      09 02 34.9  0.0
VRAC                            eSN      Sn      09 03 31.3  -3.5
MTUR  Matau            5.21  76⇑iP       Pn      09 02 37.2 +1.5
MTUR  Matau            5.21  76⇑iP       Pn      09 02 37.2 +1.5
SRS   Serrai           5.23 125  P       Pn      09 02 36.5 +0.6
SRS   Serrai           5.23 125  P       Pn      09 02 36.5 +0.6
SRS   Serrai           5.23 125  P       Pn      09 02 36.5 +0.6
SRS   Serrai           5.23 125  P       Pn      09 02 36.5 +0.6
VOIR                   5.24  74⇑iP       Pn      09 02 37.3 +1.3
VOIR                   5.24  74⇑iP       Pn      09 02 37.3 +1.3
ABSI  Aberstueckl      5.25 301  AML     AML
      comp=E,2145µm,0.6s
ABSI                             AML     AML
      comp=N,2220µm,0.8s
ABSI                             AML     AML
      comp=N,2220µm,0.8s
ABSI                             AML     AML
      comp=E,2145µm,0.6s
ABSI                             END
NVR   Nevrokopi        5.25 121  P       Pn      09 02 36.9 +0.7
NVR   Nevrokopi        5.25 121  P       Pn      09 02 36.9 +0.7
NVR   Nevrokopi        5.25 121  P       Pn      09 02 36.9 +0.7
CRVS  Cervenica-Dubn   5.28  27 eP       Pn      09 02 37.3 +0.7
CRVS  Cervenica-Dubn   5.28  27 ePN      Pn      09 02 37.2 +0.7
CRVS  Cervenica-Dubn   5.28  27 ePn      Pn      09 02 37.3 +0.7
SOH   Sokhos           5.28 128  P       Pn      09 02 37.4 +0.8
SOH   Sokhos           5.28 128  P       Pn      09 02 37.4 +0.8
SOH   Sokhos           5.28 128  P       Pn      09 02 37.4 +0.8
SOH   Sokhos           5.28 128  P       Pn      09 02 37.4 +0.8
HORT  Hortiatis        5.30 131  P       Pn      09 02 37.5 +0.6
HORT  Hortiatis        5.30 131  P       Pn      09 02 37.5 +0.6
HORT  Hortiatis        5.30 131  P       Pn      09 02 37.5 +0.6
CASP  Castiglione de   5.30 257  AML     AML
      comp=E,182µm,0.5s
CASP                             AML     AML
      comp=N,137µm,1.5s
CASP                             AML     AML
      comp=E,182µm,0.5s
CASP                             AML     AML
      comp=N,137µm,1.5s
CASP                             END
UZH   Uzhgorod         5.35  33 eP       Pn      09 02 38.8 +1.3
UZH                             eS       Sn      09 03 41.8 +2.3
UZH   Uzhgorod         5.35  33 eP       Pn      09 02 38.8 +1.3
UZH                             eS       Sn      09 03 41.8 +2.3
LIT   Litokhoron       5.36 139 ePn      Pn      09 02 39.2 +1.5
LIT   Litokhoron       5.36 139  P       Pn      09 02 39.5 +1.8
LIT   Litokhoron       5.36 139 eP       Pn      09 02 39.2 +1.5
LIT   Litokhoron       5.36 139 eP       Pn      09 02 39.2 +1.5
VLC   Villacollemand   5.39 272 ePn      Pn      09 02 39.3 +1.2
VLC   Villacollemand   5.39 272 ePn      Pn      09 02 39.3 +1.2
VLC   Villacollemand   5.39 272  END
GEA0  GERESS Array S   5.44 329 ePn      Pn      09 02 39.6 +0.8
GEA0  GERESS Array S   5.44 329 ePn      Pn      09 02 39.6 +0.8
GEC2  GERESS Array S   5.44 329 ePn      Pn      09 02 39.9 +1.0
GEC2                            eSn      Sn      09 03 40.5  -1.5
GEC2  GERESS Array S   5.44 329 eP       Pn      09 02 39.9 +1.0
GEC2                            e                09 03 40.5
GEC2  GERESS Array S   5.44 329 eP       Pn      09 02 39.9 +1.0
GEC2                            eS       Sn      09 03 40.5  -1.5
GERES GERESS Array B   5.44 329  Pn      Pn      09 02 40.1 +1.2
      comp=N,8.0nm,0.3s,baz=150,slow=14,SNR=78
GERES                            Sn      Sn      09 03 40.5  -1.5
      comp=N,16nm,0.3s,baz=156,slow=23,SNR=7.3
NIE   Niedzica         5.45  17 eP       Pn      09 02 40.9 +2.0
NIE                             eS       Sn      09 03 40.0  -2.0
NIE   Niedzica         5.45  17 eP       Pn      09 02 40.9 +2.0
NIE                             eS       Sn      09 03 40.0  -2.0
NIE   Niedzica         5.45  17 eP       Pn      09 02 40.9 +2.0
MABI  Malga Bissina    5.53 292  END
MORC  Moravsky Berou   5.55 358⇑iP       Pn      09 02 41.6 +1.3
MORC  Moravsky Berou   5.55 358 ePn      Pn      09 02 41.1 +0.8
MORC  Moravsky Berou   5.55 358 eP       Pn      09 02 41.1 +0.8
MORC  Moravsky Berou   5.55 358 eP       Pn      09 02 41.1 +0.8
MORC  Moravsky Berou   5.55 358 ePN      Pn      09 02 41.3 +1.0
THL   Klokotos Trika   5.59 145  P       Pn      09 02 41.3 +0.6
OKC   Ostrava-Krasne   5.61   2 ePN      Pn      09 02 42.6 +1.5
OKC                             eSN      Sn      09 03 44.8  -1.2
OKC                              AMS     AMS     09 05 40.0
      comp=N,800nm,9.3s
OKC   Ostrava-Krasne   5.61   2 eP       Pn      09 02 42.6 +1.5
OKC                             e                09 03 44.8
OKC                              MLR     MLR
      comp=Z,800nm,9.3s
OKC   Ostrava-Krasne   5.61   2  Pn      Pn      09 02 42.6 +1.5
OKC                              Sn      Sn      09 03 44.8  -1.2
DSL   Palaion Diasel   5.63 154  P       Pn      09 02 42.2 +0.8
DSL   Palaion Diasel   5.63 154  P       Pn      09 02 42.2 +0.8
DSL   Palaion Diasel   5.63 154  P       Pn      09 02 42.2 +0.8
KHC   Kasperske Hory   5.73 330 ePN      Pn      09 02 44.4 +1.7
KHC                             eSN      Sn      09 03 47.6  -1.3
KHC                              AMS     AMS     09 05 20.0
      comp=Z,700nm,8.4s
KHC   Kasperske Hory   5.73 330 ePn      Pn      09 02 44.0 +1.3
KHC   Kasperske Hory   5.73 330 eP       Pn      09 02 44.4 +1.7
KHC                             e                09 03 47.6
KHC                              MLR     MLR
      comp=Z,700nm,8.4s
KHC   Kasperske Hory   5.73 330 ePn      Pn      09 02 44.0 +1.3
KHC                              Sn      Sn      09 03 47.6  -1.3
SGRR  Singureni        5.81  87⇑iP       Pn      09 02 44.3 +0.5
MLR   Muntele Rosu     5.87  75  Pn      Pn      09 02 46.6 +1.8
      comp=Z,1.5nm,0.3s,baz=275,slow=3.6,SNR=12
MLR                              Sn      Sn      09 03 51.4  -1.0
      comp=Z,3.2nm,0.3s,baz=263,slow=23,SNR=3.4
MLR                              LR      LR      09 05 02.6
      comp=Z,591nm,18.7s,baz=269,slow=39
MLR   Muntele Rosu     5.87  75⇑iP       Pn      09 02 46.5 +1.8
FUORN Ofenpass-Fuorn   5.87 297 ePn      Pn      09 02 46.6 +1.7
FUORN Ofenpass-Fuorn   5.87 297 ePn      Pn      09 02 46.6 +1.7
FUORN Ofenpass-Fuorn   5.87 297  END
PLAC  Placanica        5.88 191  END
KRLC  Kraliky          5.90 353 ePN      Pn      09 02 47.7 +2.7
KRLC                            eSN      Sn      09 03 50.1  -2.9
KRLC  Kraliky          5.90 353 eP       Pn      09 02 47.7 +2.7
KRLC                            e                09 03 50.1
KRLC  Kraliky          5.90 353  Pn      Pn      09 02 47.7 +2.7
OUR   Ouranopolis      5.96 129  P       Pn      09 02 46.5 +0.6
OUR   Ouranopolis      5.96 129  P       Pn      09 02 46.5 +0.6
OUR   Ouranopolis      5.96 129  P       Pn      09 02 46.5 +0.6
OUR   Ouranopolis      5.96 129  P       Pn      09 02 46.5 +0.6
EVGI  Lefkada island   5.98 159  P       Pn      09 02 45.4  -0.7
WET   Wettzell         6.00 327  P       Pn      09 02 48.3 +1.8
WET   Wettzell         6.00 327  P       Pn      09 02 48.3 +1.8
FUR   Furstenfeldbru   6.04 313  P       Pn      09 02 48.4 +1.4
FUR   Furstenfeldbru   6.04 313  P       Pn      09 02 48.4 +1.4
GOPC  GO Pecny, Ondr   6.07 341 ePN      Pn      09 02 49.3 +1.9
GOPC                            eSN      Sn      09 03 55.7  -1.5
GOPC                            ex       x       09 04 06.5
GOPC                             AMS     AMS     09 05 40.0
      comp=Z,400nm,8.8s
GOPC  GO Pecny, Ondr   6.07 341 eP       Pn      09 02 49.3 +1.9
GOPC                            e                09 03 55.7
GOPC                             MLR     MLR
      comp=Z,400nm,8.8s
GOPC  GO Pecny, Ondr   6.07 341  Pn      Pn      09 02 49.3 +1.9
GOPC                             Sn      Sn      09 03 55.7  -1.5
EVR   Evrytania        6.07 150  P       Pn      09 02 49.0 +1.5
EVR   Evrytania        6.07 150  P       Pn      09 02 49.0 +1.5
EVR   Evrytania        6.07 150  P       Pn      09 02 49.0 +1.5
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PAIG  Paliouri          6.09 133   P      Pn      09 02 48.1 +0.5
PAIG  Paliouri          6.09 133   P      Pn      09 02 48.1 +0.5
PAIG  Paliouri          6.09 133   P      Pn      09 02 48.1 +0.5
PAIG  Paliouri          6.09 133   P      Pn      09 02 48.1 +0.5
FSK   Fiskardo          6.11 160   P      Pn      09 02 46.8 -1.1
BUR04 Bucovina Ar. S    6.13  54  ePn     Pn      09 02 50.8 +2.5
BUR04 Bucovina Ar. S    6.13  54  ePn     Pn      09 02 50.8 +2.5
BURAR Bucovina Array    6.13  54⇓iP     Pn      09 02 49.4 +1.1
OJC   Ojcow             6.13  12  eP      Pn      09 02 49.4 +1.2
OJC                               eS      Sn      09 03 55.3 -3.5
OJC   Ojcow             6.13  12  ePn     Pn      09 02 48.5 +0.3
OJC   Ojcow             6.13  12  eP      Pn      09 02 49.4 +1.2
OJC                               eS      Sn      09 03 55.3 -3.5
OJC   Ojcow             6.13  12  ePn     Pn      09 02 48.5 +0.3
OJC   Ojcow             6.13  12  eP      Pn      09 02 49.4 +1.2
BUR08 Bucovina Ar. S    6.14  54  ePn     Pn      09 02 50.2 +1.8
BUR08 Bucovina Ar. S    6.14  54  ePn     Pn      09 02 50.2 +1.8
PDO   Prodromos         6.15 155   P      Pn      09 02 48.1 -0.4
CEL   Celeste           6.15 195  ePn     Pn      09 02 49.5 +0.9
CEL   Celeste           6.15 195  ePn     Pn      09 02 49.5 +0.9
AGG   Agios Georgios    6.18 146  ePn     Pn      09 02 49.5 +0.6
AGG   Agios Georgios    6.18 146   P      Pn      09 02 49.1 +0.2
AGG   Agios Georgios    6.18 146  eP      Pn      09 02 49.5 +0.6
AGG   Agios Georgios    6.18 146  eP      Pn      09 02 49.5 +0.6
DAVOX Davos/Dischmat    6.18 297   Pn     Pn      09 02 50.5 +1.4
      comp=Z,19nm,0.3s,baz=115,slow=11,SNR=56
DAVOX                              Sn     Sn      09 04 02.2 +2.0
      comp=Z,4.3nm,0.3s,baz=81,slow=18,SNR=5.1
DAVOX                              LR     LR      09 05 46.3
      comp=Z,503nm,20.2s,baz=84,slow=44
DAVOX Davos/Dischmat    6.18 297   END
PRU   Pruhonice         6.20 340  ePN     Pn      09 02 52.5 +3.4
PRU                               ex      x       09 02 58.0
PRU                               ex      x       09 03 02.8
PRU                               eSN     Sn      09 04 00.6 +0.3
PRU                               ex      x       09 04 12.3
PRU                                AMS    AMS     09 05 50.0
      comp=Z,500nm,7.6s
PRU   Pruhonice         6.20 340  eP      Pn      09 02 52.5 +3.4
PRU                               e               09 04 00.6
PRU                                MLR    MLR
      comp=Z,500nm,7.6s
DPC   Dobruska-Polom    6.21 351  ePN     Pn      09 02 50.5 +1.1
DPC                               ex      x       09 02 53.3
DPC                               eSN     Sn      09 03 58.4 -2.5
DPC                                AMS    AMS     09 05 10.0
      comp=Z,800nm,10.7s
DPC   Dobruska-Polom    6.21 351  eP      Pn      09 02 50.5 +1.1
DPC                               e               09 03 58.4
DPC                                MLR    MLR
      comp=Z,800nm,10.7s
DPC   Dobruska-Polom    6.21 351   Pn     Pn      09 02 50.5 +1.1
ISR   Istrita           6.24  79⇑iP     Pn      09 02 51.3 +1.6
XOR   Xorichti          6.27 139   P      Pn      09 02 50.2  0.0
XOR   Xorichti          6.27 139   P      Pn      09 02 50.2  0.0
XOR   Xorichti          6.27 139   P      Pn      09 02 50.2  0.0
PRA   Prague            6.30 339   AMS    AMS     09 05 50.0
      comp=Z,700nm,8.1s
PRA   Prague            6.30 339  eP      Pb      09 02 59.7 -7.4
PRA                               e               09 04 13.9
PRA                                MLR    MLR
      comp=Z,700nm,8.1s
KWP   Kalwaria Pacla    6.33  30  eP      Pn      09 02 53.4 +2.4
KWP                               eS      Sn      09 04 04.8 +1.1
KWP   Kalwaria Pacla    6.33  30  ePn     Pn      09 02 53.2 +2.2
KWP   Kalwaria Pacla    6.33  30  eP      Pn      09 02 53.4 +2.4
KWP                               eS      Sn      09 04 04.8 +1.1
KWP   Kalwaria Pacla    6.33  30  ePn     Pn      09 02 53.2 +2.2
KWP                               eS      Sn      09 04 04.8 +1.1
BIZ   Bicaz             6.37  62⇑iP     Pn      09 02 52.8 +1.3
DAVA  Damuels           6.38 301  ePn     Pn      09 02 53.9 +2.1
      comp=Z,7.0nm,0.2s,SNR=6.6
DAVA                               Pg     Pg      09 03 18.5 -0.6
      comp=Z,96nm,0.6s
DAVA  Damuels           6.38 301   Pn     Pn      09 02 53.9 +2.1
      comp=Z,7.0nm,0.2s,SNR=6.6
VLS   Valsamata         6.38 160   P      Pn      09 02 50.4 -1.3
ANX   Ano Chora         6.39 150   P      Pn      09 02 53.1 +1.1
UPC   Upice             6.41 349  ePN     Pn      09 02 53.3 +1.3
UPC                               ex      x       09 03 02.6
UPC                               eSN     Sn      09 04 03.5 -2.1
UPC                                AMS    AMS     09 05 20.0
      comp=Z,900nm,11.0s
UPC   Upice             6.41 349  eP      Pn      09 02 53.3 +1.3
UPC                               e               09 04 03.5
UPC                                MLR    MLR
      comp=Z,900nm,11.0s
UPC   Upice             6.41 349   Pn     Pn      09 02 53.3 +1.3
TUE   Stuetta           6.42 293  ePn     Pn      09 02 53.3 +0.9
TUE   Stuetta           6.42 293  ePn     Pn      09 02 53.3 +0.9
VRI   Vrincioaia        6.47  72⇓iP     Pn      09 02 54.1 +1.1
KFL   Anninata          6.49 159   P      Pn      09 02 52.4 -0.8
EFP   Efpalio           6.54 151   P      Pn      09 02 54.7 +0.9
SERG  Sergoula          6.60 150   P      Pn      09 02 56.0 +1.2
SMPL  Sampolo           6.64 254   P      Pn      09 02 56.5 +1.2
TRIZ  Trizonia          6.65 150   P      Pn      09 02 56.1 +0.7
KALE  Kalithea          6.65 150   P      Pn      09 02 56.4 +0.9
KALE  Kalithea          6.65 150   P      Pn      09 02 56.4 +0.9
KALE  Kalithea          6.65 150   P      Pn      09 02 56.4 +0.9
PGF   Pioggiola         6.69 259  ePn     Pn      09 02 57.0 +1.0
PGF                               eSn     Sn      09 04 07.4 -5.3
      comp=Z,59nm,0.7s
PGF   Pioggiola         6.69 259  ePn     Pn      09 02 57.0 +1.0
PGF                               eSn     Sn      09 04 07.4 -5.3
PGF   Pioggiola         6.69 259  eP      Pn      09 02 57.0 +1.0
PGF                               e               09 04 07.4
PGF   Pioggiola         6.69 259  ePn     Pn      09 02 57.0 +1.0
PGF   Pioggiola         6.69 259   END
KSP   Ksiaz             6.70 351  eP      Pn      09 02 59.8 +3.7
KSP   Ksiaz             6.70 351  eP      Pn      09 02 59.8 +3.7
LAKA  Lakka             6.73 151   P      Pn      09 02 57.0 +0.5
LAKA  Lakka             6.73 151   P      Pn      09 02 57.0 +0.5
LAKA  Lakka             6.73 151   P      Pn      09 02 57.0 +0.5
AOS   Alonnisos         6.76 136   P      Pn      09 02 57.3 +0.5
AOS   Alonnisos         6.76 136   P      Pn      09 02 57.3 +0.5
AOS   Alonnisos         6.76 136   P      Pn      09 02 57.3 +0.5
LKR   Lokris            6.77 144   P      Pn      09 02 57.3 +0.3
LKR   Lokris            6.77 144   P      Pn      09 02 57.3 +0.3
LKR   Lokris            6.77 144   P      Pn      09 02 57.3 +0.3
DSF   Desfina           6.78 147   P      Pn      09 02 56.6 -0.6
DSF   Desfina           6.78 147   P      Pn      09 02 56.6 -0.6
DSF   Desfina           6.78 147   P      Pn      09 02 56.6 -0.6
ALN   Alexandroupoli    6.88 116  ePn     Pn      09 03 00.1 +1.7
ALN   Alexandroupoli    6.88 116   P      Pn      09 02 59.4 +0.9
ALN   Alexandroupoli    6.88 116  eP      Pn      09 03 00.2 +1.7
ALN   Alexandroupoli    6.88 116  eP      Pn      09 03 00.2 +1.7
DRO   Drossia           6.90 154   P      Pn      09 02 59.1 +0.2
LIA   Limnos Island     6.94 126   P      Pn      09 02 59.5 +0.1
LIA   Limnos Island     6.94 126   P      Pn      09 02 59.5 +0.1
LIA   Limnos Island     6.94 126   P      Pn      09 02 59.5 +0.1
KLV   Kalavryta, Ach    6.97 151  ePn     Pn      09 03 00.0 +0.2
KLV   Kalavryta, Ach    6.97 151   P      Pn      09 03 00.0 +0.2
KLV   Kalavryta, Ach    6.97 151  ePn     Pn      09 03 00.0 +0.2
KLV   Kalavryta, Ach    6.97 151   END
LVV   L’vov             6.99  35  eP      Pn      09 03 03.5 +3.5
LVV                               eS      Sn      09 04 20.9 +1.0
LVV                                MLR    MLR
      comp=N,440nm,10.0s
LVV                                MLR    MLR
      comp=E,460nm,10.0s
LVV                                MLR    MLR
      comp=Z,650nm,10.0s
NKC   Novy Kostel       7.05 330  ePN     Pn      09 03 02.8 +1.9
NKC                                AMS    AMS     09 06 10.0
      comp=Z,600nm,6.8s
NKC   Novy Kostel       7.05 330  eP      Pn      09 03 02.8 +1.9
NKC                                MLR    MLR
      comp=Z,600nm,6.8s
NKC   Novy Kostel       7.05 330   Pn     Pn      09 03 02.8 +1.9
GRFO  Grafenberg        7.11 323  ePn     Pn      09 03 02.5 +0.8
GRFO  Grafenberg        7.11 323  eP      Pn      09 03 02.5 +0.8
GRFO  Grafenberg        7.11 323  eP      Pn      09 03 02.5 +0.8
BRG   Berggiesshubel    7.16 340   PN     Pn      09 03 01.6 -0.7
BRG                                PG     Pb      09 03 21.0 -0.7
BRG                                SG     Sb      09 04 46.9 -0.6
      comp=Z,56nm,0.5s
      comp=N,746nm,10.9s
      comp=E,2µm,12.0s
      comp=Z,369nm,11.8s
BRG   Berggiesshubel    7.16 340   P      Pn      09 03 01.6 -0.7
BRG                                MLR    MLR
      comp=N,746nm,10.9s
BRG                                MLR    MLR
      comp=E,2µm,12.0s
BRG                                MLR    MLR
      comp=Z,369nm,11.8s
BRG   Berggiesshubel    7.16 340   P      Pn      09 03 01.6 -0.7
      comp=Z,369nm,11.8s
GUT   Gutenstein        7.20 305   P      Pn      09 03 03.7 +0.8
VAE   Valguarnera       7.24 202   Pn     Pn      09 03 06.3 +2.8
      comp=Z,1.3nm,0.3s,baz=146,slow=3.6,SNR=3.1
VAE                                LR     LR      09 05 56.7
      comp=Z,198nm,19.7s,baz=353,slow=38
TLB   Topalu            7.28  84⇓iP     Pn      09 03 03.6 -0.4
LTK   Loutraki          7.29 147  ePn     Pn      09 03 03.1 -1.1
LTK   Loutraki          7.29 147   P      Pn      09 03 03.1 -1.1
LTK   Loutraki          7.29 147  ePn     Pn      09 03 03.1 -1.1
CFR   Carcaliu          7.37  79⇓iP     Pn      09 03 05.1  0.0
SLE   Schleitheim       7.43 302   P      Pn      09 03 06.7 +0.6
SLE   Schleitheim       7.43 302   P      Pn      09 03 06.7 +0.6
STU   Stuttgart         7.52 310  ePn     Pn      09 03 08.2 +0.9
STU   Stuttgart         7.52 310  ePn     Pn      09 03 08.2 +0.9
CLTB  Caltabellotta     7.53 210  ePn     Pn      09 03 09.5 +2.0
CLTB  Caltabellotta     7.53 210  ePn     Pn      09 03 09.5 +2.0
SBF   Sospel            7.54 271  ePn     Pn      09 03 07.5 -0.1
SBF                               eSn     Sn      09 04 26.7 -6.8
      comp=Z,141nm,0.6s
SBF   Sospel            7.54 271  ePn     Pn      09 03 07.5 -0.1
SBF                               eSn     Sn      09 04 26.7 -6.8
SBF   Sospel            7.54 271  eP      Pn      09 03 07.5 -0.1
SBF                               e               09 04 26.7
SBF   Sospel            7.54 271  ePn     Pn      09 03 07.5 -0.1
TIRR  Tirgusor          7.55  85⇓iP     Pn      09 03 07.5 -0.2
LUCF  Luceram           7.60 271   P      Pn      09 03 08.4 -0.1
VLX   Vlachokerasia     7.65 152  ePn     Pn      09 03 09.9 +0.7
VLX   Vlachokerasia     7.65 152   P      Pn      09 03 09.9 +0.7
VLX   Vlachokerasia     7.65 152  ePn     Pn      09 03 09.9 +0.7
ITM   Ithomi            7.68 155  ePn     Pn      09 03 09.6 +0.1
ITM   Ithomi            7.68 155  ePn     Pn      09 03 09.6 +0.1
MOX   Moxa              7.70 329   P      Pn      09 03 11.6 +1.9
MOX                                pmax   pmax
      comp=Z,26nm,0.6s
MOX   Moxa              7.70 329   P      Pn      09 03 11.6 +1.9
      comp=Z,26nm,0.6s
SENIN Lac Senin/Sane    7.76 290  ePn     Pn      09 03 12.0 +1.2
SENIN Lac Senin/Sane    7.76 290  ePn     Pn      09 03 12.0 +1.2
VLY   Voula,Athens      7.78 143   P      Pn      09 03 10.8  0.0
BFO   Black Forest      7.79 305  ePn     Pn      09 03 11.2 +0.2
BFO   Black Forest      7.79 305ceP     Pn      09 03 11.4 +0.4
BFO                                pmax   pmax
      comp=Z,7.0nm,0.8s
BFO   Black Forest      7.79 305  eP      Pn      09 03 11.4 +0.4
      comp=Z,7.0nm,0.8s
ISO   Isola             7.79 273   P      Pn      09 03 10.9 -0.1
CLL   Collm             7.81 337  ePn     Pn      09 03 16.0 +4.8
CLL                               ePg     Pb      09 03 38.0 +5.3
CLL                               e               09 03 51.0
CLL                               eSn     Sn      09 04 24.0  -16
CLL                               e               09 04 47.0
CLL                               e               09 04 55.0
CLL                                Lmax           09 05 00.0
CLL                               eSb     Sb      09 05 05.0 -1.0
CLL                               eSg     Sg      09 05 20.0 -7.4
CLL                               eSglp           09 05 23.0
      comp=N,600nm,17.2s
CLL                               eSglp           09 05 23.0
      comp=E,1µm,17.6s
CLL                               eSglp           09 05 23.0
      comp=Z,100nm,25.5s
CLL   Collm             7.81 337  ePn     Pn      09 03 11.8 +0.6
CLL   Collm             7.81 337  eP      Pn      09 03 16.0 +4.8
CLL   Collm             7.81 337  ePn     Pn      09 03 11.8 +0.6
DID   Didima            7.84 147   P      Pn      09 03 10.7 -1.1
TLCR                    7.84  79⇑iP     Pn      09 03 12.4 +0.7
KIZ   Kirchzarten       7.87 302   P      Pn      09 03 12.3 +0.3
PYL   PYLOS             7.89 157   P      Pn      09 03 10.7 -1.7
VSL   Villasalto        7.92 236   END
CALF  Calern            7.92 270   P      Pn      09 03 13.1 +0.2
OPP   Oppenau           7.95 306   P      Pn      09 03 13.1 -0.1
MBDF  Montbardon        7.97 277  ePn     Pn      09 03 12.0 -1.6
MBDF                              eSn     Sn      09 04 37.1 -7.0
      comp=Z,165nm,0.8s
MBDF  Montbardon        7.97 277  ePn     Pn      09 03 12.0 -1.6
MBDF                              eSn     Sn      09 04 37.1 -7.0
MBDF  Montbardon        7.97 277  eP      Pn      09 03 12.0 -1.6
MBDF                              e               09 04 37.1
MBDF  Montbardon        7.97 277  ePn     Pn      09 03 12.0 -1.6
LPG   La Plagne         8.01 283  ePn     Pn      09 03 14.9 +0.6
LPG                               eSn     Sn      09 04 39.1 -6.4
      comp=Z,167nm,0.7s
LPG   La Plagne         8.01 283  ePn     Pn      09 03 14.9 +0.6
LPG                               eSn     Sn      09 04 39.1 -6.4
LPG   La Plagne         8.01 283  eP      Pn      09 03 15.4 +1.1
LPG   La Plagne         8.01 283  ePn     Pn      09 03 14.9 +0.6
LPG   La Plagne         8.01 283  eP      Pn      09 03 15.4 +1.1
LPL   La Plagne         8.03 283  ePn     Pn      09 03 15.1 +0.6
LPL                               eSn     Sn      09 04 39.5 -6.2
      comp=Z,194nm,0.7s
LPL   La Plagne         8.03 283  ePn     Pn      09 03 15.1 +0.6
LPL                               eSn     Sn      09 04 39.5 -6.2
LPL   La Plagne         8.03 283  ePn     Pn      09 03 15.1 +0.6
BNI   Bardonecchia      8.04 280  ePn     Pn      09 03 13.5 -1.0
BNI   Bardonecchia      8.04 280  eP      Pn      09 03 13.5 -1.0
BNI   Bardonecchia      8.04 280  eP      Pn      09 03 13.5 -1.0
CGL   Cagliari Serpe    8.05 236   END
FRF   La Foret Royal    8.15 269  ePn     Pn      09 03 15.8 -0.1
FRF                               eSn     Sn      09 04 41.7 -6.7
      comp=Z,38nm,0.6s
FRF   La Foret Royal    8.15 269  ePn     Pn      09 03 15.8 -0.1
FRF                               eSn     Sn      09 04 41.7 -6.7
FRF   La Foret Royal    8.15 269  eP      Pn      09 03 15.8 -0.1
FRF                               e               09 04 41.7
FRF   La Foret Royal    8.15 269  ePn     Pn      09 03 15.8 -0.1
LMR   La Mourre         8.28 268  ePn     Pn      09 03 17.6 -0.1
LMR                               eSn     Sn      09 04 45.1 -6.6
      comp=Z,30nm,0.5s
LMR   La Mourre         8.28 268  ePn     Pn      09 03 17.6 -0.1
LMR                               eSn     Sn      09 04 45.1 -6.6
LMR   La Mourre         8.28 268  eP      Pn      09 03 17.6 -0.1
LMR                               e               09 04 45.1
LMR   La Mourre         8.28 268  ePn     Pn      09 03 17.6 -0.1
VLI   Veliai            8.43 151   P      Pn      09 03 18.0 -1.8
ECH   Echery            8.44 302  ePn     Pn      09 03 19.7 -0.2
ECH   Echery            8.44 302  eP      Pn      09 03 19.7 -0.2
ECH   Echery            8.44 302  eP      Pn      09 03 19.7 -0.2
CDF   Champ du Feu      8.45 303  ePn     Pn      09 03 20.4 +0.3
CDF   Champ du Feu      8.45 303  ePn     Pn      09 03 20.4 +0.3
CDF   Champ du Feu      8.45 303  eP      Pn      09 03 20.4 +0.3
CDF   Champ du Feu      8.45 303  ePn     Pn      09 03 20.4 +0.3
HINF  Hinteralfeld      8.47 299  ePn     Pn      09 03 20.5 +0.1
HINF                              eSn     Sn      09 04 50.4 -6.0
      comp=Z,56nm,0.7s
HINF  Hinteralfeld      8.47 299  ePn     Pn      09 03 20.5 +0.1
HINF                              eSn     Sn      09 04 50.4 -6.0
HINF  Hinteralfeld      8.47 299  eP      Pn      09 03 20.5 +0.1
HINF                              e               09 04 50.4
HINF  Hinteralfeld      8.47 299  ePn     Pn      09 03 20.5 +0.1
ORIF  Oris-en-Rattie    8.60 279  ePn     Pn      09 03 22.5 +0.3
ORIF                              eSn     Sn      09 04 53.3 -6.3
      comp=Z,170nm,0.7s
ORIF                              eR
      comp=Z,377nm,23.2s
ORIF  Oris-en-Rattie    8.60 279  ePn     Pn      09 03 22.5 +0.3
ORIF                              eSn     Sn      09 04 53.3 -6.3
ORIF  Oris-en-Rattie    8.60 279  eP      Pn      09 03 22.5 +0.3
ORIF                              e               09 04 53.3
ORIF  Oris-en-Rattie    8.60 279  ePn     Pn      09 03 22.5 +0.3
CABF  La Chapelle       8.63 290  ePn     Pn      09 03 23.5 +0.8
CABF                              eSn     Sn      09 04 54.1 -6.4
      comp=Z,87nm,0.9s
CABF  La Chapelle       8.63 290  ePn     Pn      09 03 23.5 +0.8
CABF                              eSn     Sn      09 04 54.1 -6.4
CABF  La Chapelle       8.63 290  eP      Pn      09 03 23.5 +0.8
CABF                              e               09 04 54.1
CABF  La Chapelle       8.63 290  ePn     Pn      09 03 23.5 +0.8
HAU   Haudompre         8.86 299  ePn     Pn      09 03 25.9 +0.2
HAU                               eSn     Sn      09 04 58.8 -7.1
      comp=Z,92nm,0.8s
HAU   Haudompre         8.86 299  ePn     Pn      09 03 25.9 +0.2
HAU                               eSn     Sn      09 04 58.8 -7.1
HAU   Haudompre         8.86 299  eP      Pn      09 03 25.9 +0.2
HAU                               e               09 04 58.8
HAU   Haudompre         8.86 299  ePn     Pn      09 03 25.9 +0.2
SMRF  Simiane la Rot    8.87 273  ePn     Pn      09 03 25.7 -0.1
SMRF                              eSn     Sn      09 04 59.3 -6.8
      comp=Z,39nm,0.7s
SMRF  Simiane la Rot    8.87 273  ePn     Pn      09 03 25.7 -0.1
SMRF                              eSn     Sn      09 04 59.3 -6.8
SMRF  Simiane la Rot    8.87 273  ePn     Pn      09 03 25.7 -0.1
ANKY  Antikythira Is    9.32 152   P      Pn      09 03 30.7 -1.3
PAGF  Fort de Pagny     9.45 302  ePn     Pn      09 03 33.0 -0.7
      baz=118
PAGF  Fort de Pagny     9.45 302  ePn     Pn      09 03 33.0 -0.7
PAGF  Fort de Pagny     9.45 302  ePn     Pn      09 03 33.0 -0.7
VIVF  Saint-Julien-l    9.46 278  ePn     Pn      09 03 32.6 -1.3
VIVF                              eSn     Sn      09 05 11.9 -8.7
      comp=Z,19nm,0.6s
VIVF  Saint-Julien-l    9.46 278  ePn     Pn      09 03 32.6 -1.3
VIVF                              eSn     Sn      09 05 11.9 -8.7
VIVF  Saint-Julien-l    9.46 278  eP      Pn      09 03 32.6 -1.3
VIVF                              e               09 05 11.9
VIVF  Saint-Julien-l    9.46 278  ePn     Pn      09 03 32.6 -1.3
SSB   Saint Sauveur     9.55 281  ePn     Pn      09 03 34.2 -1.0
SSB   Saint Sauveur     9.55 281  eP      Pn      09 03 34.2 -1.0
SSB   Saint Sauveur     9.55 281  eP      Pn      09 03 34.2 -1.0
WLF   Walferdange       9.69 308 ⇑P      Pn      09 03 40.0 +3.0
WLF   Walferdange       9.69 308  ePn     Pn      09 03 37.5 +0.5
WLF   Walferdange       9.69 308  eP      Pn      09 03 37.5 +0.5
WLF   Walferdange       9.69 308  eP      Pn      09 03 37.5 +0.5
SFTF  Sexfontaines      9.75 299  ePn     Pn      09 03 39.4 +1.5
      baz=113
SFTF  Sexfontaines      9.75 299  ePn     Pn      09 03 39.4 +1.5
SFTF  Sexfontaines      9.75 299  ePn     Pn      09 03 39.4 +1.5
KIEV  Kiev             10.02  46  ePn     Pn      09 03 42.8 +1.2
KIEV  Kiev             10.02  46ceP     Pn      09 03 43.9 +2.3
KIEV                               pmax   pmax
      comp=Z,6.0nm,1.7s
KIEV  Kiev             10.02  46  ePn     Pn      09 03 42.8 +1.2
KIEV  Kiev             10.02  46  eP      Pn      09 03 43.9 +2.3
      comp=Z,6.0nm,1.7s
AKASG Malin Array Be   10.04  46   Pn     Pn      09 03 41.5 -0.2
      comp=Z,0.9nm,0.3s,baz=230,slow=12,SNR=8.5
AKASG Malin Array Be   10.04  46ceP     Pn      09 03 43.5 +1.8
AKASG Malin Array Be   10.04  46  eP      Pn      09 03 43.5 +1.8
AKBB  Malin Array Si   10.04  46  ePn     Pn      09 03 41.5 -0.2
AKBB  Malin Array Si   10.04  46  eP      Pn      09 03 41.5 -0.2
AKBB  Malin Array Si   10.04  46  eP      Pn      09 03 41.5 -0.2
LASF  Ste Croix        10.09 274  ePn     Pn      09 03 41.2 -1.3
LASF                              eSn     Sn      09 05 28.3 -7.8
      comp=Z,12nm,0.5s
LASF  Ste Croix        10.09 274  ePn     Pn      09 03 41.2 -1.3
LASF                              eSn     Sn      09 05 28.3 -7.8
LASF  Ste Croix        10.09 274  ePn     Pn      09 03 41.2 -1.3
SMF   Signal de Mont   10.16 289  ePn     Pn      09 03 42.9 -0.6
SMF                               eSn     Sn      09 05 28.9 -9.0
      comp=Z,78nm,0.8s
SMF   Signal de Mont   10.16 289  ePn     Pn      09 03 42.9 -0.6
SMF                               eSn     Sn      09 05 28.9 -9.0
SMF   Signal de Mont   10.16 289  eP      Pn      09 03 42.9 -0.6
SMF   Signal de Mont   10.16 289  ePn     Pn      09 03 42.9 -0.6
LOR   Lormes           10.27 292  ePn     Pn      09 03 44.6 -0.3
      baz=116
LOR                               eR
      comp=Z,326nm,17.2s
LOR   Lormes           10.27 292  ePn     Pn      09 03 44.6 -0.3
LOR   Lormes           10.27 292  eP      Pn      09 03 44.6 -0.3
MEM   Membach          10.27 313 ⇑P      Pn      09 03 46.9 +2.0
      comp=Z,14nm,0.5s
SUW   Suwalki          10.38  18  eP      Pn      09 03 48.4 +1.9
SUW   Suwalki          10.38  18  ePn     Pn      09 03 47.5 +1.0
SUW   Suwalki          10.38  18  eP      Pn      09 03 48.4 +1.9
SUW   Suwalki          10.38  18  ePn     Pn      09 03 47.5 +1.0
SUW   Suwalki          10.38  18  eP      Pn      09 03 48.4 +1.9
IDI   Anoyia           10.43 147   Pn     Pn      09 03 48.1 +0.9
      comp=Z,1.4nm,0.3s,baz=319,slow=14,SNR=5.9
IDI                                Sn     Sn      09 05 36.8 -7.7
      comp=Z,1.3nm,0.3s,baz=288,slow=20,SNR=3.9
IDI                                LR     LR      09 08 16.2
      comp=Z,179nm,20.9s,baz=278,slow=40
SSF   Saint Saulge     10.46 291  ePn     Pn      09 03 48.6 +1.0
SSF                               eSn     Sn      09 05 37.3 -7.8
      comp=Z,24nm,0.6s
SSF   Saint Saulge     10.46 291  ePn     Pn      09 03 48.6 +1.0
SSF                               eSn     Sn      09 05 37.3 -7.8
SSF   Saint Saulge     10.46 291  eP      Pn      09 03 48.6 +1.0
SSF                               e               09 05 37.3
SSF   Saint Saulge     10.46 291  ePn     Pn      09 03 48.6 +1.0
AVF   Avril sur Loir   10.52 289  ePn     Pn      09 03 48.6 +0.2
AVF                               eSn     Sn      09 05 37.7 -8.9
      comp=Z,66nm,1.1s
AVF   Avril sur Loir   10.52 289  ePn     Pn      09 03 48.6 +0.2
AVF                               eSn     Sn      09 05 37.7 -8.9
AVF   Avril sur Loir   10.52 289  eP      Pn      09 03 48.6 +0.2
AVF                               e               09 05 37.7
AVF   Avril sur Loir   10.52 289  ePn     Pn      09 03 48.6 +0.2
BCLA  Clavier          10.54 310 ⇑P      Pn      09 03 50.9 +2.2
GIVF  Givet            10.65 308  ePn     Pn      09 03 53.0 +2.8
GIVF  Givet            10.65 308  ePn     Pn      09 03 53.0 +2.8
GIVF  Givet            10.65 308  ePn     Pn      09 03 53.0 +2.8
KEST  Kesra            10.72 221   Pn     Pn      09 03 56.4 +5.2
      comp=Z,2.7nm,0.3s,baz=309,slow=4.5,SNR=25
KEST                               LR     LR      09 08 16.0
      comp=Z,171nm,19.6s,baz=154,slow=39
KEST  Kesra            10.72 221  ePn     Pn      09 03 52.6 +1.5
KEST  Kesra            10.72 221  ePn     Pn      09 03 52.7 +1.5
DOU   Dourbes          10.78 308 ⇑P      Pn      09 03 54.4 +2.5
      comp=Z,12nm,0.8s
BGF   Bois d’Agland    10.83 288  ePn     Pn      09 03 52.7  0.0
BGF                               eSn     Sn      09 05 45.3 -9.0
      comp=Z,71nm,0.8s
BGF   Bois d’Agland    10.83 288  ePn     Pn      09 03 52.7  0.0
BGF                               eSn     Sn      09 05 45.3 -9.0
BGF   Bois d’Agland    10.83 288  eP      Pn      09 03 52.7  0.0
BGF                               e               09 05 45.3
BGF   Bois d’Agland    10.83 288  ePn     Pn      09 03 52.7  0.0
BAIF  Baives           10.98 307  ePn     Pn      09 03 57.2 +2.5
BAIF  Baives           10.98 307  ePn     Pn      09 03 57.2 +2.5
BAIF  Baives           10.98 307  eP      Pn      09 03 57.2 +2.5
BAIF  Baives           10.98 307  ePn     Pn      09 03 57.2 +2.5
HYF   Humbligny        11.08 291  ePn     Pn      09 03 56.1  0.0
HYF   Humbligny        11.08 291  ePn     Pn      09 03 56.1  0.0
HYF   Humbligny        11.08 291  ePn     Pn      09 03 56.1  0.0
TCF   Toulx Ste Croi   11.24 286  ePn     Pn      09 03 58.1 -0.2
TCF                               eSn     Sn      09 05 55.7 -8.7
      comp=Z,30nm,0.7s
TCF   Toulx Ste Croi   11.24 286  ePn     Pn      09 03 58.1 -0.2
TCF                               eSn     Sn      09 05 55.7 -8.7
TCF   Toulx Ste Croi   11.24 286  eP      Pn      09 03 58.1 -0.2
TCF                               e               09 05 55.7
TCF   Toulx Ste Croi   11.24 286  ePn     Pn      09 03 58.1 -0.2
CAF   Calviac          11.31 279  ePn     Pn      09 03 58.5 -0.8
CAF                               eSn     Sn      09 05 57.9 -8.1
      comp=Z,17nm,0.7s
CAF   Calviac          11.31 279  ePn     Pn      09 03 58.5 -0.8
CAF                               eSn     Sn      09 05 57.9 -8.1
CAF   Calviac          11.31 279  eP      Pn      09 03 58.5 -0.8
CAF                               e               09 05 57.9
CAF   Calviac          11.31 279  ePn     Pn      09 03 58.5 -0.8
MTLF  Montolieu        11.37 271  ePn     Pn      09 03 59.7 -0.3
MTLF                              eSn     Sn      09 05 58.0 -9.4
      comp=Z,5.3nm,0.6s
MTLF  Montolieu        11.37 271  ePn     Pn      09 03 59.7 -0.3
MTLF                              eSn     Sn      09 05 58.0 -9.4
MTLF  Montolieu        11.37 271  eP      Pn      09 03 59.7 -0.3
MTLF  Montolieu        11.37 271  ePn     Pn      09 03 59.7 -0.3
BR101 Keskin Array S   12.55 106  ePn     Pn      09 04 17.4 +1.1
BR101 Keskin Array S   12.55 106  ePn     Pn      09 04 17.5 +1.1
BR131 Keskin Array S   12.55 106  ePn     Pn      09 04 18.0 +1.6
BR131 Keskin Array S   12.55 106  ePn     Pn      09 04 18.0 +1.6
BRTR  Keskin Array B   12.55 106   Pn     Pn      09 04 17.4 +1.1
      comp=Z,0.1nm,0.3s,baz=291,slow=10,SNR=8.5
BRTR                               LR     LR      09 10 08.5
      comp=Z,114nm,18.1s,baz=292,slow=42
BRTR  Keskin Array B   12.55 106ceP     Pn      09 04 21.2 +4.8
EPF   Esparros         12.77 271  ePn     Pn      09 04 17.1 -2.2
EPF   Esparros         12.77 271  ePn     Pn      09 04 17.1 -2.2
EPF   Esparros         12.77 271  eP      Pn      09 04 17.1 -2.2
MFF   Saint Martin d   12.89 287  ePn     Pn      09 04 21.6 +0.8
MFF                               eSn     Sn      09 06 50.3 +5.7
      comp=Z,8.8nm,0.6s
MFF   Saint Martin d   12.89 287  ePn     Pn      09 04 21.6 +0.8
MFF                               eSn     Sn      09 06 50.3 +5.7
MFF   Saint Martin d   12.89 287  eP      Pn      09 04 21.6 +0.8
MFF                               e               09 06 50.3
MFF   Saint Martin d   12.89 287  ePn     Pn      09 04 21.6 +0.8
FLN   La Foliniere     13.44 296  ePn     Pn      09 04 26.7 -1.5
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	baz=117						
FLN				eR			
	comp=Z,234nm,15.5s						
FLN	La Foliniere	13.44	296	ePn	Pn	09 04 26.7	-1.5
ETSF	Etsaut	13.45	271	ePn	Pn	09 04 25.8	-2.7
ETSF	Etsaut	13.45	271	ePn	Pn	09 04 25.8	-2.7
ETSF	Etsaut	13.45	271	eP	Pn	09 04 25.8	-2.7
SJPF	Ste Jean	13.88	272	ePn	Pn	09 04 31.8	-2.5
SJPF	Ste Jean	13.88	272	ePn	Pn	09 04 31.8	-2.5
SJPF	Ste Jean	13.88	272	eP	Pn	09 04 31.8	-2.5
SGMF	Saint Gilles	14.70	293	ePn	Pn	09 04 44.1	-1.4
SGMF	Saint Gilles	14.70	293	ePn	Pn	09 04 44.1	-1.4
SGMF	Saint Gilles	14.70	293	eP	Pn	09 04 44.1	-1.4
VSU	Vasula	15.26	18	deP	Pn	09 04 53.4	+0.4
VSR	Storozhevoye	15.90	56	eP	Pn	09 05 01.5	+0.1
VSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
VSR				MLR	MLR		
	comp=Z,360nm,12.0s						
VORD	Divnogorie	15.90	57	eP	Pn	09 04 59.6	-1.8
VORD				pmax	pmax		
	comp=Z,5.0nm,0.9s						
HFS	Hagfors	16.13	352	Pn	Pn	09 05 01.1	-3.1
	comp=Z,0.3nm,0.3s,baz=165,slow=12,SNR=3.4						
HFS				LR	LR	09 11 16.1	
	comp=Z,53nm,18.2s,baz=187,slow=37						
OBN	Obninsk	16.22	41	⇓eP	Pn	09 05 04.4	-1.0
OBN				pmax	pmax		
	comp=Z,33nm,1.3s						
OBN				MLR	MLR		
	comp=Z,206nm,18.0s						
LPSR	Galich'ya Gora	16.24	52	eP	Pn	09 05 04.2	-1.5
LPSR				pmax	pmax		
	comp=Z,10.0nm,0.6s						
ES19	SONSECA Array	16.81	262	ePn	Pn	09 05 13.3	+0.2
ES19	SONSECA Array	16.81	262	ePn	Pn	09 05 13.3	+0.2
ESDC	Sonseca Array	16.86	262	Pn	P	09 05 15.1	-0.9
	comp=Z,0.4nm,0.3s,baz=68,slow=12,SNR=17						
ESLA	Sonseca Array	16.86	262	ePn	Pn	09 05 13.9	+0.1
	comp=Z,6.9nm,0.8s						
ESLA	Sonseca Array	16.86	262	ePn	Pn	09 05 13.9	+0.1
	comp=Z,6.9nm,0.8s						
PAB	San Pablo	17.19	262	ePn	Pn	09 05 17.6	-0.3
	comp=Z,9.2nm,1.1s						
PAB	San Pablo	17.19	262	ePn	Pn	09 05 17.6	-0.3
	comp=Z,9.2nm,1.1s						
NB2	NORSAR Subarra	17.30	349	P	Pn	09 05 18.6	-0.5
	comp=Z,2.7nm,0.8s,baz=164,slow=11						
NOA	NORSAR Array B	17.30	349	Pn	Pn	09 05 16.6	-2.6
	comp=Z,0.0nm,0.3s,baz=28,slow=19,SNR=2.3						
NOA				LR	LR	09 12 14.2	
	comp=Z,70nm,18.1s,baz=180,slow=38						
VRH	Novokhopyorsk	17.44	58	eP	Pn	09 05 21.2	+0.3
VRH				pmax	pmax		
	comp=Z,6.0nm,0.4s						
VRH				MLR	MLR		
	comp=Z,250nm,12.0s						
EKA	Eskdalemuir Ar	17.48	317	P	P	09 05 23.2	+0.6
	baz=112,slow=11,SNR=4.8						
MMAI	Mount Meron Ar	17.64	123	P	Pn	09 05 23.7	0.0
	comp=Z,1.6nm,0.3s,baz=307,slow=12,SNR=2.6						
MMAI				LR	LR	09 13 22.4	
	comp=Z,90nm,18.1s,baz=20,slow=41						
KIV	Kislovodsk	17.80	82	⇑eP	P	09 05 27.6	+1.2
KIV				eS	S	09 08 50.2	-1.3
KIV				pmax	pmax		
	comp=Z,6.0nm,1.2s						
KIV				MLR	MLR		
	comp=Z,144nm,19.0s						
KVAR	Kislovodsk Arr	17.81	82	LR	LR	09 13 55.3	
	comp=Z,152nm,19.2s,baz=296,slow=43						
FIA0	FINESS Array S	17.91	13	ePn	Pn	09 05 25.6	-1.0
FIA0	FINESS Array S	17.91	13	eP	Pn	09 05 25.6	-1.0
FINES	FINESS Array B	17.91	13	P	Pn	09 05 25.6	-1.0
	comp=Z,0.7nm,0.3s,baz=188,slow=11,SNR=17						
FINES				LR	LR	09 12 55.7	
	comp=Z,87nm,21.6s,baz=224,slow=39						
FIA1	FINESS Array S	17.91	13	ePn	Pn	09 05 25.4	-1.3
KBZ	Khabaz	17.99	83	P	Pn	09 05 26.6	-1.1
	comp=Z,0.1nm,0.3s,baz=164,slow=7.4,SNR=2.4						
PESTR	Estremoz	19.77	263	eP	P	09 05 48.2	+0.3
	comp=Z,6.0nm,1.0s						
PESTR	Estremoz	19.77	263	eP	P	09 05 48.2	+0.3
	comp=Z,6.0nm,1.0s						
EIL	Elat	19.87	131	P	P	09 05 49.0	0.0
	comp=Z,0.4nm,0.3s,baz=11,slow=16,SNR=2.3						
GNI	Garni	20.27	92	P	P	09 05 52.2	-1.3
	comp=Z,3.6nm,0.5s,baz=32,slow=19,SNR=1.9						
GNI				LR	LR	09 16 26.8	
	comp=Z,77nm,18.7s,baz=311,slow=45						
GNI	Garni	20.27	92	eP	P	09 05 52.2	-1.3
GNI				eP	P	09 05 53.8	+0.3
GNI	Garni	20.27	92	ceP	Pn	09 05 55.9	+0.4
GNI				pmax	pmax		
	comp=Z,85nm,1.7s						
MDT	Midelt	20.90	245	P	P	09 05 59.4	-0.9
	comp=Z,2.4nm,0.9s,baz=50,slow=6.1,SNR=4.8						
MDT				LR	LR	09 13 29.4	
	comp=Z,35nm,18.6s,baz=66,slow=35						
KLMR	Klimovskoe	21.05	30	eP	P	09 06 01.0	-0.5
KLMR				pmax	pmax		
	comp=Z,22nm,1.0s						
KLMR	Klimovskoe	21.05	30	eP	P	09 06 01.1	-0.5
KLMR				AMP		09 06 05.1	
	comp=Z,22nm,1.0s						
MAK	Makhachkala	21.44	83	eP	P	09 06 04.3	-1.6
MAK				eS	S	09 10 02.6	-1.5
MAK				pmax	pmax		
	comp=Z,138nm,1.2s						
MAK				MLR	MLR		
	comp=Z,136nm,13.0s						
MAK	Makhachkala	21.44	83	eP	P	09 06 04.3	-1.6
	comp=Z,138nm,1.2s						
PRGR	Permogore	23.85	33	eP	P	09 06 30.5	-0.4
PRGR				pmax	pmax		
	comp=Z,12nm,0.8s						
ARA0	ARCESS Array S	25.67	6	eP	P	09 06 45.5	-1.9
ARCES	ARCESS Array B	25.67	6	P	P	09 06 45.5	-1.9
	comp=Z,1.1nm,0.7s,baz=200,slow=10,SNR=5.9						
ARCES	ARCESS Array B	25.67	6	eP	P	09 06 47.5	+0.1
ARCES	ARCESS Array B	25.67	6	eP	P	09 06 47.5	+0.1
AKTO	Aktyubinsk	27.64	63	P	P	09 07 05.2	-0.2
	comp=Z,1.8nm,0.7s,baz=270,slow=9.5,SNR=5.6						
AKTO				LR	LR	09 18 06.8	
	comp=Z,56nm,19.2s,baz=263,slow=37						
ARU	Arti	28.25	50	P	P	09 07 10.1	-0.6
	comp=Z,5.0nm,0.2s,baz=254,slow=4.9,SNR=3.8						
ARU				LR	LR	09 19 19.6	
	comp=Z,130nm,21.2s,baz=296,slow=38						
ARU	Arti	28.25	50	eP	P	09 07 10.1	-0.6
	comp=Z,4.0nm,0.6s						
ARU	Arti	28.25	50	d iP	P	09 07 10.2	-0.6
ARU						09 07 57.0	
ARU				S	S	09 11 56.8	-0.3
ARU				pmax	pmax		
	comp=Z,4.0nm,0.8s						
ARU				MLR	MLR		
	comp=Z,71nm,9.0s						
BORG	Borgarnes	29.91	327	LR	LR	09 18 53.9	
	comp=Z,41nm,20.6s,baz=137,slow=35						
TOA1	Torodi Ar. Sit	33.94	209	eP	P	09 08 00.6	-0.6
TORD	Torodi Ar. Bea	33.94	209	P	P	09 08 00.6	-0.6
	comp=Z,0.8nm,0.5s,baz=12,slow=11						
SPITS	Spitsbergen Ar	34.07	359	LR	LR	09 22 34.1	
	comp=Z,69nm,19.4s,baz=270,slow=38						
BRVK	Borovoye	35.02	56	eP	P	09 08 11.4	+1.2
	comp=Z,6.3nm,0.7s						
BRVK	Borovoye	35.02	56	deP	P	09 08 10.9	+0.6
BRVK				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KOWA	Kowa	35.02	219	LR	LR	09 24 36.9	
	comp=Z,45nm,18.4s,baz=32,slow=40						
BVAR	Borovoye Array	35.08	56	P	P	09 08 11.4	+0.6
	comp=Z,3.1nm,0.8s,baz=265,slow=7.1,SNR=16						
KK31	Karatay Array	37.54	73	eP	P	09 08 32.9	+0.9
KK31	Karatay Array	37.54	73	eP	P	09 08 32.9	+0.9
KKAR	Karatay Array	37.54	73	eP	P	09 08 32.9	+0.9
KKAR	Karatay Array	37.54	73	eP	P	09 08 32.9	+0.9
AAK	Ala-Archa	40.44	72	LR	LR	09 28 09.1	
	comp=Z,70nm,18.7s,baz=219,slow=40						
AAK	Ala-Archa	40.44	72	ceP	P	09 08 55.9	-0.5
AAK				pmax	pmax		
	comp=Z,23nm,2.5s						
KURBB	Kurchatov Arra	40.51	59	P	P	09 08 55.5	-1.2
	comp=Z,1.0nm,0.8s,baz=287,slow=9.4,SNR=6.4						
KURK	Kurchatov	40.54	59	eP	P	09 08 55.5	-1.4
KURK	Kurchatov	40.54	59	i P	P	09 08 55.3	-1.6
KURK				pmax	pmax		
	comp=Z,2.0nm,1.0s						
SFJD	Kangerlussuaq	42.04	327	LR	LR	09 25 58.2	
	comp=Z,36nm,19.5s,baz=99,slow=35						
DBIC	Dimbokro	42.37	215	P	P	09 09 13.0	+0.7
	comp=Z,2.7nm,0.6s,baz=9.3,slow=10,SNR=7.3						
KSH	Kashi	42.73	75	P	P	09 09 14.5	-0.7
ZALV	Zalesovo Beam	43.35	52	LR	LR	09 29 15.9	
	comp=Z,107nm,18.1s,baz=250,slow=39						
MK31	Makanchi Array	44.07	63	eP	P	09 09 26.2	+0.4
MK31	Makanchi Array	44.07	63	eP	P	09 09 26.2	+0.4
MK32	Makanchi Array	44.07	63	eP	P	09 09 25.8	-0.1
MKAR	Makanchi Array	44.07	63	P	P	09 09 25.8	-0.1
	comp=Z,3.0nm,0.7s,baz=284,slow=6.6,SNR=26						
MKAR				LR	LR	09 31 23.0	
	comp=Z,26nm,18.4s,baz=268,slow=41						
MKAR	Makanchi Array	44.07	63	eP	P	09 09 26.2	+0.4
	comp=Z,16nm,0.7s						
MKAR	Makanchi Array	44.07	63	ceP	P	09 09 26.1	+0.3
MK01	Makanchi Array	44.09	63	eP	P	09 09 26.0	0.0
WMQ	Urumqi	48.76	65	P	P	09 10 06.3	+3.6
WMQ				LR	LR		
	comp=Z,150nm,21.5s						
WMQ				LR	LR		
	comp=Z,96nm,22.5s						
SONA1	Songino Array	58.24	52	eP	P	09 11 13.1	+0.6
SONA0	Songino Array	58.25	52	eP	P	09 11 13.2	+0.8
SONM	Songino Array	58.25	52	P	P	09 11 13.2	+0.8
	comp=Z,3.2nm,0.8s,baz=291,slow=8.9,SNR=18						
SONM				LR	LR	09 37 22.4	
	comp=Z,82nm,19.3s,baz=282,slow=37						
ULN	Ulaanbaatar	58.60	52	ceP	P	09 11 15.7	+0.8
ULN				pmax	pmax		
	comp=Z,4.0nm,1.7s						
LZH	Lanzhou	63.34	65	eP	P	09 11 46.0	-1.3
LZH				pP	sP	09 11 50.5	+1.3
LZH				sP	pP	09 11 54.3	+5.6
LZH				ePP	PP	09 14 10.0	+3.8
LZH				pmax	pmax		
	comp=Z,14nm,1.1s						
LZH				pmax	pmax		
	comp=Z,100nm,4.8s						
HHC	Hu-ho-hao-te	65.30	56	eP	P	09 12 00.5	+0.5
HHC				S	S	09 20 42.8	-1.5
HHC				sS	sS	09 20 53.3	+6.7
HHC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
HHC				pmax	pmax		
	comp=Z,110nm,6.6s						
YKA	Yellowknife Ar	67.03	338	P	P	09 12 09.9	-0.7
	comp=Z,0.6nm,0.9s,baz=27,slow=6.9,SNR=3.6						
ULM	Lac du Bonnet	69.69	321	LR	LR	09 42 13.8	
	comp=Z,37nm,20.8s,baz=352,slow=35						
ILAR	Eielson Array	70.68	353	P	P	09 12 34.0	+0.7
	comp=Z,0.2nm,0.8s,baz=0.3,slow=6.2,SNR=2.9						
CMAR	Chiang Mai Arr	71.05	82	LR	LR	09 50 40.6	
	comp=Z,42nm,18.6s,baz=206,slow=42						
CN2	Changchun	71.19	47	eP	P	09 12 39.3	+2.5
CN2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
GYA	Guiyang	71.23	71	eP	P	09 12 39.0	+1.6
GYA				pmax	pmax		
	comp=Z,1.0nm,1.0s						
L40A	Anamosa	73.22	313	eP	P	09 12 46.1	-2.8
	comp=Z,6.0nm,0.8s						
TKL	Tuckaleechee C	73.44	304	LR	LR	09 44 21.0	
	comp=Z,30nm,19.5s,baz=350,slow=35						
N37A	Lee Faris, Mou	75.72	313	eP	P	09 13 03.8	+0.3
	comp=Z,5.5nm,0.8s						
KS01	Wonju Array Si	76.97	50	eP	P	09 13 11.3	+0.7
KSAR	Wonju Array Be	76.99	50	P	P	09 13 10.8	+0.1
KSAR	Wonju Array Be	76.99	50	P	P	09 13 10.8	+0.1
KSRS	Korea Array	77.00	50	P	P	09 13 10.8	0.0
	comp=Z,1.5nm,0.7s,baz=310,slow=4.7,SNR=5.5						
KSRS				LR	LR	09 48 58.4	
	comp=Z,30nm,19.1s,baz=292,slow=37						
S39A	Bolivar	77.47	311	eP	P	09 13 14.0	+0.5
	comp=Z,3.6nm,0.9s						
W41B	Gary Mavity, V	78.70	308	eP	P	09 13 20.9	+0.6
	comp=Z,5.5nm,1.0s						
PHWY	Pilot Hill	80.83	320	eP	P	09 13 32.3	+0.1
	comp=Z,2.3nm,0.8s						
PD31	Pinedale Array	81.46	324	eP	P	09 13 35.8	+0.4
PDAR	Pinedale Array	81.46	324	P	P	09 13 35.8	+0.4
	comp=Z,0.3nm,0.5s,baz=51,slow=4.6,SNR=5.0						
PDAR				LR	LR	09 49 29.3	
	comp=Z,32nm,20.4s,baz=40,slow=36						
JNU	Nakatsue	81.81	51	LR	LR	09 53 32.1	
	comp=Z,38nm,18.7s,baz=310,slow=38						
MJAR	Matsushiro Arr	83.12	44	LR	LR	09 53 41.8	
	comp=Z,49nm,18.3s,baz=280,slow=38						
ANMO	Albuquerque	86.38	317	LR	LR	09 52 42.5	
	comp=Z,33nm,18.2s,baz=53,slow=36						
ANMO	Albuquerque	86.38	317	eP	P	09 14 01.8	+1.2
ANMO				pmax	pmax		
	comp=Z,1.0nm,1.0s						
NVAR	Mina Array Bea	88.69	327	P	P	09 14 12.6	+0.9
	comp=Z,0.1nm,0.3s,baz=35,slow=5.0,SNR=2.3						
NVAR				LR	LR	09 54 25.5	
	comp=Z,22nm,18.4s,baz=20,slow=36						
LTX	Lajitas	89.41	312	eP	P	09 14 15.7	+0.6
LTX	Lajitas	89.41	312	eP	P	09 14 15.7	+0.6
TX31	Lajitas Ar. Si	89.41	312	eP	P	09 14 15.4	+0.3
TX31				eP	P	09 14 15.7	+0.6
TXAR	Lajitas Array	89.41	312	P	P	09 14 15.7	+0.6
	comp=Z,0.9nm,0.8s,baz=60,slow=3.7,SNR=10						
TXAR				LR	LR	09 54 01.1	
	comp=Z,19nm,18.0s,baz=0.0,slow=35						
WR1	Warramunga Arr	122.48	87	ePKPdf	PKPdf	09 20 14.6	+0.9
WRA	Warramunga Arr	122.48	87	PKP	PKPdf	09 20 14.6	+0.9
	comp=Z,0.5nm,1.0s,baz=319,slow=1.7,SNR=3.2						
ASAR	Alice Springs	124.51	91	PKP	PKPdf	09 20 19.5	+2.0
	comp=Z,0.5nm,0.7s,baz=325,slow=2.0,SNR=5.4						

ATH ***30*** *09:18:06.1, 37°.90N×26°.72E, h12^{km}±3^{km}, ML2.6/4, Error ellipse: s-maj=3.6km s-min=1.2km az=78.0*
CSEM ***30*** *09:18:06.9±0.1, 37°.88N×26°.70E, h5^{km}, ML2.6, Error ellipse: s-maj=3.1km s-min=2.5km az=78.0*
DDA ***30*** *09:18:06.6, 37°.91N×26°.68E, h6^{km}, Ml2.7*
ISK ***30*** *09:18:06.8, 37°.91N×26°.75E, h8^{km}, ML2.6/10*
ISC 30 09:18:06.8±0.9**, 37°.90N**±0°.02×**26°.70E**±0°.02**, h8**^{km}±8^{km}**,**
n51, σ0^{s}50/76**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
DGB	˜zmir	0.21	44	i P	Pg	09 18 11.2	0.0
DGB				i S	Sg	09 18 14.5	+0.4
SMG	Samos	0.22	149	P	Pg	09 18 10.9	-0.3
SMG				S	Sg	09 18 14.2	0.0
SMG				AML	AML	09 18 14.3	
	comp=E,5485μm,0.4s						
SMG				AML	AML	09 18 14.8	
	comp=N,5160μm,0.4s						
SMG	Samos	0.22	149	P	Pg	09 18 10.8	-0.3
SMG				S	Sg	09 18 14.1	0.0
URLA	Izmir	0.47	350	PG	Pg	09 18 15.9	0.0
URLA				SG	Sg	09 18 23.0	+0.9
URLA	Izmir	0.47	350	i P	Pg	09 18 15.6	-0.3
URLA				i S	Sg	09 18 22.1	0.0
URLA	Izmir	0.47	350	P	Pg	09 18 15.6	-0.3
URLA	Izmir	0.47	350	ePg	Pg	09 18 15.9	0.0
URLA				S	Sg	09 18 22.1	0.0
URLA				eSg	Sg	09 18 23.0	+0.9
BLCB	Balcova	0.56	29	PG	Pg	09 18 17.5	-0.1
BLCB				SG	Sg	09 18 25.5	+0.6
BLCB	Balcova	0.56	29	ePg	Pg	09 18 17.5	-0.1
BLCB				eSg	Sg	09 18 25.5	+0.6
CHOS	Chios island	0.70	314	PG	Pb	09 18 21.3	0.0
CHOS				SG	Sb	09 18 31.9	+0.7
CHOS	Chios island	0.70	314	P	Pg	09 18 20.6	+0.3
CHOS				S	Sb	09 18 31.0	-0.2
CHOS				AML	AML	09 18 32.5	
	comp=E,1494μm,0.2s						
CHOS				AML	AML	09 18 33.8	
	comp=N,1128μm,0.4s						
CHOS	Chios island	0.70	314	P	Pg	09 18 20.2	-0.1
CHOS	Chios island	0.70	314	ePg	Pb	09 18 21.3	0.0
CHOS				S	Sg	09 18 30.4	+0.9
CHOS				eSg	Sb	09 18 31.9	+0.7
KRBN	Karaburun	0.70	351	PG	Pb	09 18 20.9	-0.4
KRBN				SG	Sb	09 18 31.0	-0.2
KRBN	Karaburun	0.70	351	ePg	Pb	09 18 20.9	-0.4
KRBN				eSg	Sb	09 18 31.0	-0.2
AYDB	Zeytinkoy-Aydi	0.95	87	PG	Pg	09 18 24.7	-0.3
AYDB	Zeytinkoy-Aydi	0.95	87	ePg	Pg	09 18 24.7	-0.3
BODT	Bodrum	0.97	149	PG	Pb	09 18 25.7	0.0
BODT	Bodrum	0.97	149	ePg	Pb	09 18 25.7	0.0
AYDN	Tasoluk	0.97	104	i P	Pg	09 18 25.0	-0.3
AYDN	Tasoluk	0.97	104	P	Pg	09 18 25.0	-0.3
MLSB	Milas	1.05	125	PG	Pg	09 18 26.8	-0.1
MLSB	Milas	1.05	125	ePg	Pg	09 18 26.8	-0.1
DKL	Dikili	1.19	8	PN	Pn	09 18 29.6	0.0
DKL	Dikili	1.19	8	ePn	Pn	09 18 29.6	0.0
AMGA	Amorgos Island	1.24	211	P	Pn	09 18 30.0	-0.4
AMGA				S	Sn	09 18 47.5	+0.2
AMGA	Amorgos Island	1.24	211	P	Pn	09 18 29.8	-0.6
AMGA				S	Sg	09 18 47.2	+0.6
APE	Apeiranthos	1.24	229	P	Pn	09 18 28.5	-2.0
APE				S	Sn	09 18 47.5	+0.2
APE				AML	AML	09 18 48.7	
	comp=E,259μm,0.2s						
APE				AML	AML	09 18 49.1	
	comp=N,269μm,0.2s						
APE	Apeiranthos	1.24	229	P	Pn	09 18 29.1	-1.3
APE				S	Sg	09 18 47.3	+0.6
AKHS	Akhisar	1.32	42	i P	Pg	09 18 32.3	+0.3
AKHS				i S	Sn	09 18 49.8	+0.5
AKHS	Akhisar	1.32	42	P	Pg	09 18 32.3	+0.3
AKHS				S	Sn	09 18 49.8	+0.5
DAT	Datca	1.36	149	PN	Pb	09 18 32.5	0.0
DAT	Datca	1.36	149	ePn	Pb	09 18 32.5	0.0
SIGR	SIGRI	1.47	334	P	Pn	09 18 32.9	-0.6
SIGR				S	Sg	09 18 53.8	-0.2
SIGR	SIGRI	1.47	334	P	Pn	09 18 33.3	-0.2
SIGR				S	Sg	09 18 53.9	-0.1
YER	Yerkesik	1.47	121	PN	Pn	09 18 33.8	+0.1
YER	Yerkesik	1.47	121	ePn	Pn	09 18 33.8	+0.1
MANT	Manisa	1.58	67	i P	Pg	09 18 37.0	-0.1
MANT	Manisa	1.58	67	P	Pg	09 18 37.0	-0.1
IOSP	Ios island	1.62	224	P	Pb	09 18 37.5	+0.6
IOSP				S	Sb	09 18 58.5	+1.0
IOSP				AML	AML	09 19 01.2	
	comp=N,433μm,0.4s						
IOSP				AML	AML	09 19 02.9	
	comp=E,324μm,0.2s						
IOSP	Ios island	1.62	224	P	Pb	09 18 37.1	+0.2
IOSP				S	Sg	09 18 58.8	0.0
KULA	Kula-Manisa	1.67	68	PN	Pn	09 18 36.4	+0.1
KULA	Kula-Manisa	1.67	68	ePn	Pn	09 18 36.4	+0.1
STEP	BALIKESIR_Sava	1.68	28	i P	Pb	09 18 37.6	-0.4
STEP	BALIKESIR_Sava	1.68	28	P	Pb	09 18 37.6	-0.4
DEMI	Demirci	1.96	54	i P	Pb	09 18 42.1	-0.6
DEMI	Demirci	1.96	54	P	Pb	09 18 42.1	-0.6
BALY	Balya	1.98	21	i P	Pg	09 18 44.1	-0.6
BALY	Balya	1.98	21	P	Pg	09 18 44.1	-0.6
DURS	Dursunbey	2.20	39	i P	Pg	09 18 48.2	-0.7
DURS	Dursunbey	2.20	39	P	Pg	09 18 48.2	-0.7

ATH ***30*** *09:19:45.1, 37°.87N×26°.77E, h23^{km}±2^{km}, ML2.6/4, Error ellipse: s-maj=2.9km s-min=0.9km az=127.0*
ISCJB ***30*** *09:19:46.1±0.5, 37°.87N±0°.02×26°.72E±0°.03, h3^{km}±4^{km}, Error ellipse: s-maj=4.1km s-min=3.2km az=169.7*
CSEM ***30*** *09:19:46.2±0.2, 37°.86N×26°.68E, h2^{km}, ML2.6, Error ellipse: s-maj=5.3km s-min=4.3km az=106.0*
ISK ***30*** *09:19:46.1, 37°.90N×26°.75E, h12^{km}, ML2.7/11*
DDA ***30*** *09:19:48.3, 37°.92N×26°.92E, h4^{km}, Ml2.7*
ISC 30 09:19:46.2±0.8**, 37°.89N**±0°.02×**26°.74E**±0°.02**, h14**^{km}±6^{km}**,**
n49, σ0^{s}49/76**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	 ISC	Time h m s	Res ISC
DGB	˜zmir	0.19	35	i P	Pg	09 19 50.8	+0.1
DGB				i S	Sg	09 19 54.2	+0.5
SMG	Samos	0.20	158	P	Pg	09 19 50.7	-0.1
SMG				S	Sg	09 19 53.5	-0.3
SMG				AML	AML	09 19 54.0	
	comp=E,6070μm,0.3s						
SMG				AML	AML	09 19 54.8	
	comp=N,7037μm,0.4s						
SMG	Samos	0.20	158	P	Pg	09 19 50.5	-0.2
SMG				S	Sg	09 19 53.8	0.0
URLA	Izmir	0.48	346	PG	Pg	09 19 55.7	-0.1
URLA				SG	Sb	09 20 03.2	-0.2
URLA	Izmir	0.48	346	i P	Pg	09 19 55.5	-0.3
URLA				i S	Sb	09 20 03.0	-0.4
URLA	Izmir	0.48	346	P	Pg	09 19 55.5	-0.3
URLA	Izmir	0.48	346	ePg	Pg	09 19 55.7	-0.1
URLA				S	Sb	09 20 03.0	-0.4
BLCB	Balcova	0.55	25	PG	Pb	09 19 57.1	-0.4
BLCB				SG	Sb	09 20 05.2	0.0
BLCB	Balcova	0.55	25	ePg	Pb	09 19 57.1	-0.4
BLCB				eSg	Sb	09 20 05.2	0.0
KRBN	Karaburun	0.72	348	PG	Pb	09 20 00.4	-0.1
KRBN				SG	Sb	09 20 10.8	+0.7
KRBN	Karaburun	0.72	348	ePg	Pb	09 20 00.4	-0.1
KRBN				eSg	Sb	09 20 10.8	+0.7
CHOS	Chios island	0.73	312	PG	Pb	09 20 00.9	+0.1
CHOS	Chios island	0.73	312	P	Pg	09 19 59.9	-0.6
CHOS				S	Sb	09 20 11.3	+0.5
CHOS				AML	AML	09 20 11.5	
	comp=E,903μm,0.5s						
CHOS				AML	AML	09 20 13.1	
	comp=N,827μm,0.4s						
CHOS	Chios island	0.73	312	P	Pg	09 19 59.9	-0.6
CHOS	Chios island	0.73	312	ePg	Pb	09 20 00.9	+0.1
CHOS				S	Sb	09 20 11.0	+0.3
FOCM	Foˆ§a	0.82	359	PG	Pb	09 20 02.4	+0.2
FOCM	Foˆ§a	0.82	359	ePg	Pb	09 20 02.4	+0.2
AYDB	Zeytinkoy-Aydi	0.91	86	PG	Pb	09 20 04.0	+0.2
AYDN	Tasoluk	0.93	104	i P	Pb	09 20 04.1	0.0
AYDN				i S	Sb	09 20 16.0	-0.3
BODT	Bodrum	0.94	151	PG	Pn	09 20 04.9	-0.1
MLSB	Milas	1.01	126	PG	Pn	09 20 06.0	0.0
DKL	Dikili	1.18	6	PN	Pg	09 20 08.9	-0.1
DKL	Dikili	1.18	6	ePn	Pg	09 20 08.9	-0.1
AMGA	Amorgos Island	1.26	213	P	Pn	09 20 08.3	-1.1
AMGA				S	Sn	09 20 26.9	+0.9
AMGA	Amorgos Island	1.26	213	P	Pn	09 20 08.5	-0.8
AMGA				S	Sb	09 20 26.5	+0.8
APE	Apeiranthos	1.27	230	P	Pn	09 20 08.5	-1.0
APE				S	Sb	09 20 26.8	+0.7
APE	Apeiranthos	1.27	230	P	Pn	09 20 08.9	-0.6
APE				S	Sb	09 20 26.8	+0.7
AKHS	Akhisar	1.29	40	i P	Pg	09 20 11.1	-0.1
AKHS	Akhisar	1.29	40	P	Pg	09 20 11.1	-0.1
DAT	Datca	1.34	150	PN	Pb	09 20 11.2	+0.1
PRK	Paraskevi	1.40	345	P	Pb	09 20 12.6	+0.4
PRK				S	Sg	09 20 31.1	-0.3
PRK				AML	AML	09 20 40.6	
	comp=E,531μm,0.6s						
PRK				AML	AML	09 20 42.8	
	comp=N,839μm,0.7s						
PRK	Paraskevi	1.40	345	P	Pb	09 20 12.1	0.0
PRK				S	Sg	09 20 31.0	-0.4
YER	Yerkesik	1.44	121	PN	Pb	09 20 12.7	-0.1
SIGR	SIGRI	1.49	332	P	Pn	09 20 12.2	-0.3
SIGR				S	Sn	09 20 32.3	+0.6
SIGR				AML	AML	09 20 40.0	
	comp=N,189μm,0.6s						
SIGR				AML	AML	09 20 40.9	
	comp=E,154μm,0.3s						
SIGR	SIGRI	1.49	332	P	Pn	09 20 12.5	0.0
SIGR				S	Sb	09 20 32.7	+0.3
MANT	Manisa	1.55	67	i P	Pg	09 20 15.9	-0.1
MANT				i S	Sb	09 20 34.0	-0.3
MANT	Manisa	1.55	67	P	Pg	09 20 15.9	-0.1
MANT				S	Sb	09 20 34.0	-0.3
KULA	Kula-Manisa	1.63	67	PN	Pb	09 20 15.4	-0.7
KULA	Kula-Manisa	1.63	67	ePn	Pb	09 20 15.4	-0.7
STEP	BALIKESIR_Sava	1.67	27	i P	Pb	09 20 17.1	+0.4
STEP				i S	Sg	09 20 40.4	+0.5
STEP	BALIKESIR_Sava	1.67	27	P	Pb	09 20 17.1	+0.4
STEP				S	Sg	09 20 40.4	+0.5
TAVA	DENIZLI_Tavas	1.77	103	i P	Pn	09 20 16.7	+0.2
DEMI	Demirci	1.93	53	i P	Pg	09 20 22.2	-1.0
DEMI				i S	Sg	09 20 48.0	-0.3
DEMI	Demirci	1.93	53	P	Pg	09 20 22.2	-1.0
DEMI				S	Sg	09 20 48.0	-0.3
BALY	Balya	1.97	20	i P	Pg	09 20 23.6	-0.4
BALY	Balya	1.97	20	P	Pg	09 20 23.6	-0.4
DURS	Dursunbey	2.18	38	i P	Pb	09 20 26.3	+0.9

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DURS	**Dursunbey**	**2.18**	**38**	P	**Pb**	**09 20 26.3**	**+0.9**
KHAL	**Karahalli**	**2.22**	**77**	*i* P	**Pg**	**09 20 29.5**	**+0.7**

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*ISCJB **30** 09:32:59.7±0.6, 13°.3S±0°.1×172°.2E±0°.1, h600^{km}, mb4.2/15, Error ellipse: s-maj=17.0km s-min=10.0km az=137.9*

*IDC **30** 09:33:01.8±2.1, 13°.42S×172°.26E, h613^{km}±24^{km}, mb3.6/15, mb1 3.8/16, mb1mx3.4/47, mbtmp4.6/16, Error ellipse: s-maj=19.5km s-min=14.2km az=124.0*

ISC 30 09:33:00.9±0.7**, 13°.3S**±0°.1×**172°.2E**±0°.1**, h600**^{km}**, n40,** σ**0ˢ.99**/44**, mb4.1**/15**, Vanuatu Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DZM	**Mont Dzumac**	**10.25**	**211**	P	**P**	**09 35 23.5**	**+1.3**
	2.7nm,0.3s,baz=160,slow=20,SNR=34						
EIDS	**Eidsvold**	**23.17**	**236**	P	**P**	**09 37 23.4**	**+0.4**
	baz=26,SNR=6.3						
RMQ	**Roma**	**25.54**	**236**	P	**P**	**09 37 45.3**	**+1.4**
	baz=29,SNR=12						
CTA	**Charters Tower**	**25.68**	**251**	P	**P**	**09 37 46.3**	**+1.1**
	6.5nm,0.5s,baz=77,slow=10,SNR=12						
MTSU	**Mount Surprise**	**27.20**	**256**	P	**P**	**09 37 58.7**	**+0.1**
	baz=30,SNR=7.5						
COEN	**Coen**	**28.16**	**265**	P	**P**	**09 38 05.9**	**-1.0**
	baz=31,SNR=8.8						
QLP	**Quilpie**	**29.29**	**239**	P	**P**	**09 38 17.1**	**+0.6**
	baz=32,SNR=13						
CNB	**Canberra Magne**	**30.03**	**219**	P	**P**	**09 38 21.7**	**-1.2**
	baz=33,SNR=10						
CMSA	**Cobar Meteorol**	**30.31**	**229**	P	**P**	**09 38 25.7**	**+0.4**
	baz=33,SNR=23						
QIS	**Mount Isa**	**31.91**	**253**	P	**P**	**09 38 39.9**	**+0.8**
	baz=35,SNR=15						
STKA	**Stephens Creek**	**33.54**	**232**	P	**P**	**09 38 53.8**	**+1.2**
	43nm,0.3s,baz=64,slow=8.9,SNR=322						
STKA	**Stephens Creek**	**33.54**	**232**	P	**P**	**09 38 53.8**	**+1.2**
	baz=36,SNR=295						
TOO	**Toolangi**	**33.87**	**220**	P	**P**	**09 38 55.7**	**+0.3**
	baz=37,SNR=9.3						
ARPS	**Mount Arapiles**	**35.78**	**224**	P	**P**	**09 39 12.0**	**+0.9**
	baz=39,SNR=11						
HTT	**Hallett**	**36.24**	**231**	P	**P**	**09 39 15.9**	**+0.9**
	baz=39,SNR=20						
WRA	**Warramunga Arr**	**36.77**	**255**	P	**P**	**09 39 19.6**	**+0.1**
	16nm,0.4s,baz=81,slow=6.0,SNR=416						
WRA				S	**S**	**09 44 19.2**	**-2.9**
	0.8nm,0.9s,baz=89,slow=15,SNR=4.0						
ASAR	**Alice Springs**	**37.60**	**249**	P	**P**	**09 39 26.7**	**+0.5**
	25nm,0.4s,baz=75,slow=9.4,SNR=591						
ASAR				PcP	**PcP**	**09 41 27.7**	**0.0**
	0.9nm,0.7s,baz=84,slow=3.8,SNR=5.1						
ASAR				ScP	**ScP**	**09 44 18.5**	**-0.4**
	1.0nm,0.8s,baz=94,slow=3.9,SNR=5.8						
ASAR				S	**S**	**09 44 31.8**	**-2.6**
	0.9nm,1.0s,baz=82,slow=16,SNR=3.9						
BBOO	**Buckleboo**	**38.20**	**233**	P	**P**	**09 39 31.6**	**+0.7**
	baz=41,SNR=110						
KDU	**Kakadu**	**38.64**	**266**	P	**P**	**09 39 35.5**	**+0.8**
	baz=42,SNR=11						
MTN	**Manton Dam**	**39.93**	**266**	P	**P**	**09 39 46.1**	**+1.1**
	baz=43,SNR=6.6						
KNRA	**Kununurra**	**42.02**	**261**	P	**P**	**09 40 02.2**	**+0.6**
	baz=45,SNR=14						
WRKA	**Warakurna**	**42.85**	**248**	P	**P**	**09 40 08.7**	**+0.8**
	baz=46,SNR=209						
FORT	**Forrest**	**44.09**	**239**	P	**P**	**09 40 17.8**	**+0.4**
	baz=47,SNR=39						
FITZ	**Fitzroy Crossi**	**44.94**	**258**	P	**P**	**09 40 25.0**	**+0.9**
	4.0nm,0.7s,baz=107,slow=8.0,SNR=21						
FITZ	**Fitzroy Crossi**	**44.94**	**258**	P	**P**	**09 40 24.5**	**+0.5**
	baz=48,SNR=9.6						
MEEK	**Meekatharra**	**51.69**	**247**	P	**P**	**09 41 14.3**	**+0.3**
	baz=55,SNR=11						
KLBR	**Kellerberrin**	**52.92**	**240**	P	**P**	**09 41 22.6**	**0.0**
	baz=56,SNR=7.6						
NWAO	**Narrogin (SRO)**	**53.53**	**239**	P	**P**	**09 41 26.4**	**-0.5**
	16nm,0.5s,baz=330,slow=5.6,SNR=20						
NWAO	**Narrogin (SRO)**	**53.53**	**239**	P	**P**	**09 41 26.9**	**0.0**
	baz=57,SNR=15						
MORW	**Morawa**	**54.14**	**244**	P	**P**	**09 41 31.7**	**+0.5**
	baz=57,SNR=4.1						
LEM	**Lembang**	**63.73**	**269**	P	**P**	**09 42 36.6**	**+0.9**
	18nm,0.5s,baz=315,slow=19,SNR=3.7						
VNDA	**Vanda**	**64.41**	**182**	P	**P**	**09 42 37.9**	**-0.8**
	0.6nm,0.5s,baz=14,slow=5.8,SNR=7.2						
PETK	**Petropavlovsk-**	**67.33**	**351**	P	**P**	**09 42 58.3**	**+1.3**
	3.1nm,0.7s,baz=151,slow=12						
QSPA	**South Pole Qui**	**76.69**	**180**	P	**P**	**09 43 50.5**	**-0.7**
	1.3nm,0.5s,baz=321,slow=2.2,SNR=14						
NVAR	**Mina Array Bea**	**82.80**	**48**	P	**P**	**09 44 24.4**	**+0.7**
	0.6nm,0.7s,baz=229,slow=9.3,SNR=5.4						
ILAR	**Eielson Array**	**83.80**	**16**	P	**P**	**09 44 26.5**	**-1.2**
	2.4nm,0.6s,baz=235,slow=5.3,SNR=50						
MAW	**Mawson**	**84.93**	**201**	P	**P**	**09 44 33.2**	**-0.1**
	1.9nm,0.6s,baz=141,slow=6.6,SNR=7.0						
PDAR	**Pinedale Array**	**90.54**	**46**	P	**P**	**09 44 60.0**	**-0.4**
	0.1nm,0.3s,baz=224,slow=5.0,SNR=3.2						
YKA	**Yellowknife Ar**	**94.16**	**26**	P	**P**	**09 45 15.8**	**-0.3**
	0.6nm,0.5s,baz=255,slow=5.0,SNR=9.4						
ARCES	**ARCESS Array B**	**120.03**	**347**	PKP	**PKPdf**	**09 50 42.8**	**-0.9**
	2.0nm,1.0s,baz=64,slow=3.1,SNR=6.2						

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*ISCJB **30** 09:36:54.6±0.5, 39°.66N±0°.03×29°.38E±0°.06, h0^{km}, Error ellipse: s-maj=6.3km s-min=4.1km az=11.7*

*CSEM **30** 09:36:54.8±0.2, 39°.65N×29°.40E, h1^{km}, ML2.1, Error ellipse: s-maj=4.5km s-min=3.1km az=102.0, Suspected Mining explosion.*

*ISK **30** 09:36:54.8, 39°.64N×29°.46E, h11^{km}, ML2.1/7, Suspected Mining explosion.*

*DDA **30** 09:36:54.8, 39°.66N×29°.42E, h7^{km}, Ml2.5, Suspected Mining explosion.*

ISC 30 09:36:54.6±0.9**, 39°.66N**±0°.02×**29°.36E**±0°.05**, h0**^{km}**, n31,** σ**0ˢ.61**/35**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
TVSB	**Tavsanli**	**0.22**	**160**	PG	**Pg**	**09 36 59.4**	**+0.6**
TVSB				SG	**Sg**	**09 37 02.7**	**+1.1**
TVSB	**Tavsanli**	**0.22**	**160**	*e*Pg	**Pg**	**09 36 59.4**	**+0.6**
TVSB				*e*Sg	**Sg**	**09 37 02.7**	**+1.1**
GDZ	**Gediz**	**0.57**	**171**	*i* P	**Pg**	**09 37 05.7**	**+0.1**
GDZ	**Gediz**	**0.57**	**171**	P	**Pg**	**09 37 05.7**	**+0.1**
CAVI	**Cavuskoy**	**0.66**	**34**	PG	**Pg**	**09 37 07.5**	**+0.2**
CAVI				SG	**Sg**	**09 37 16.7**	**+0.9**
CAVI	**Cavuskoy**	**0.66**	**34**	*e*Pg	**Pg**	**09 37 07.5**	**+0.2**
CAVI				*e*Sg	**Sg**	**09 37 16.7**	**+0.9**
DURS	**Dursunbey**	**0.69**	**266**	*i* P	**Pb**	**09 37 08.5**	**-1.0**
DURS	**Dursunbey**	**0.69**	**266**	P	**Pb**	**09 37 08.5**	**-1.0**
DEMI	**Demirci**	**0.79**	**220**	*i* P	**Pb**	**09 37 10.8**	**-0.5**
DEMI	**Demirci**	**0.79**	**220**	P	**Pb**	**09 37 10.8**	**-0.5**
MDNY	**Mudanya-Bursa**	**0.80**	**333**	PG	**Pb**	**09 37 11.5**	**+0.1**
MDNY	**Mudanya-Bursa**	**0.80**	**333**	*e*Pg	**Pb**	**09 37 11.5**	**+0.1**
BORA	**Eskisehir**	**0.87**	**75**	PG	**Pg**	**09 37 10.8**	**-0.5**
BORA	**Eskisehir**	**0.87**	**75**	*i* P	**Pg**	**09 37 10.8**	**-0.5**
BORA	**Eskisehir**	**0.87**	**75**	P	**Pg**	**09 37 10.8**	**-0.5**
YLV	**Yalova**	**0.91**	**0**	PG	**Pb**	**09 37 12.9**	**-0.4**
YLV	**Yalova**	**0.91**	**0**	*e*Pg	**Pb**	**09 37 12.9**	**-0.4**
SBT5	**Esenkoy-Cinarc**	**1.04**	**339**	PN	**Pn**	**09 37 16.0**	**-0.4**
SBT5	**Esenkoy-Cinarc**	**1.04**	**339**	*e*Pn	**Pn**	**09 37 16.0**	**-0.4**
HRT	**Hereke**	**1.19**	**11**	PN	**Pg**	**09 37 17.6**	**+0.2**
HRT	**Hereke**	**1.19**	**11**	*e*Pn	**Pg**	**09 37 17.6**	**+0.2**
KULA	**Kula-Manisa**	**1.26**	**206**	PN	**Pn**	**09 37 19.1**	**-0.5**
KULA	**Kula-Manisa**	**1.26**	**206**	*e*Pn	**Pn**	**09 37 19.1**	**-0.5**
KHAL	**Karahalli**	**1.29**	**175**	*i* P	**Pg**	**09 37 19.4**	**+0.1**
KHAL	**Karahalli**	**1.29**	**175**	P	**Pg**	**09 37 19.4**	**+0.1**
STEP	**BALIKESIR_Sava**	**1.30**	**258**	*i* P	**Pn**	**09 37 19.4**	**-0.7**
STEP	**BALIKESIR_Sava**	**1.30**	**258**	P	**Pn**	**09 37 19.4**	**-0.7**
MANT	**Manisa**	**1.32**	**209**	*i* P	**Pn**	**09 37 20.1**	**-0.4**
MANT	**Manisa**	**1.32**	**209**	P	**Pn**	**09 37 20.1**	**-0.4**
BALY	**Balya**	**1.35**	**274**	*i* P	**Pn**	**09 37 21.4**	**+0.7**
BALY	**Balya**	**1.35**	**274**	P	**Pn**	**09 37 21.4**	**+0.7**

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*ISK **30** 09:44:42.4, 37°.89N×26°.73E, h4^{km}, ML2.6/15*

*CSEM **30** 09:44:42.8±0.1, 37°.86N×26°.68E, h2^{km}, ML2.6, Error ellipse: s-maj=3.9km s-min=2.9km az=76.0*

*ATH **30** 09:44:42.5, 37°.84N×26°.71E, h20^{km}±1^{km}, ML2.6/6, Error ellipse: s-maj=1.8km s-min=0.9km az=106.0*

*DDA **30** 09:44:43.0, 37°.90N×26°.71E, h6^{km}, Ml2.8*

*ISCJB **30** 09:44:42.7±0.5, 37°.86N±0°.02×26°.69E±0°.03, h1^{km}±5^{km}, Error ellipse: s-maj=4.3km s-min=3.0km az=173.3*

*THE **30** 09:44:43.1, 37°.82N×26°.62E, h2^{km}±2^{km}, ML2.6/5, Error ellipse: s-maj=2.6km s-min=0.7km az=177.0*

ISC 30 09:44:43.1±0.8**, 37°.86N**±0°.02×**26°.68E**±0°.02**, h13**^{km}±6^{km}**, n72,** σ**0ˢ.65**/103**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMG	**Samos**	**0.19**	**141**	P	**Pg**	**09 44 47.5**	**0.0**
SMG				S	**Sg**	**09 44 50.8**	**+0.3**
SMG				AML	AML	09 44 50.9	
	comp=E,7565µm,0.3s						
SMG				AML	AML	09 44 51.3	
	comp=N,5782µm,0.3s						
SMG	**Samos**	**0.19**	**141**	P	**Pg**	**09 44 47.4**	**-0.1**
SMG				S	**Sg**	**09 44 50.3**	**-0.2**
SMG	**Samos**	**0.19**	**141**	P	**Pg**	**09 44 47.4**	**-0.1**
SMG				S	**Sg**	**09 44 50.3**	**-0.2**
URLA	**Izmir**	**0.51**	**352**	PG	**Pg**	**09 44 52.4**	**-0.7**
URLA				SG	**Sg**	**09 45 00.2**	**+0.3**
URLA	**Izmir**	**0.51**	**352**	*e*Pg	**Pg**	**09 44 52.4**	**-0.7**
URLA				*e*Sg	**Sg**	**09 45 00.2**	**+0.3**
BLCB	**Balcova**	**0.60**	**28**	PG	**Pg**	**09 44 53.8**	**-1.0**
BLCB				SG	**Sg**	**09 45 02.0**	**-0.8**
BLCB	**Balcova**	**0.60**	**28**	*e*Pg	**Pg**	**09 44 53.8**	**-1.0**
BLCB				*e*Sg	**Sg**	**09 45 02.0**	**-0.8**
CHOS	**Chios island**	**0.72**	**317**	PG	**Pg**	**09 44 57.2**	**0.0**
CHOS				SG	**Sb**	**09 45 07.9**	**+0.4**
CHOS	**Chios island**	**0.72**	**317**	P	**Pg**	**09 44 56.5**	**-0.7**
CHOS				AML	AML	09 45 08.2	
	comp=E,1040µm,0.3s						
CHOS				S	**Sb**	**09 45 08.5**	**+1.0**
CHOS				AML	AML	09 45 10.2	
	comp=N,885µm,0.4s						
CHOS	**Chios island**	**0.72**	**317**	P	**Pg**	**09 44 56.7**	**-0.5**
CHOS				S	**Sb**	**09 45 07.9**	**+0.4**
CHOS	**Chios island**	**0.72**	**317**	P	**Pg**	**09 44 56.8**	**-0.5**
CHOS	**Chios island**	**0.72**	**317**	*e*Pg	**Pg**	**09 44 57.2**	**0.0**
CHOS				S	**Sb**	**09 45 07.9**	**+0.4**
KRBN	**Karaburun**	**0.74**	**352**	PG	**Pg**	**09 44 56.9**	**-0.6**
KRBN				SG	**Sg**	**09 45 07.7**	**+0.4**
KRBN	**Karaburun**	**0.74**	**352**	*e*Pg	**Pg**	**09 44 56.9**	**-0.6**
KRBN				*e*Sg	**Sg**	**09 45 07.7**	**+0.4**
FOCM	**Foˆ§a**	**0.85**	**2**	PG	**Pg**	**09 44 58.9**	**-0.8**
FOCM	**Foˆ§a**	**0.85**	**2**	*e*Pg	**Pg**	**09 44 58.9**	**-0.8**
BODT	**Bodrum**	**0.94**	**148**	PG	**Pg**	**09 45 01.2**	**-0.1**
BODT	**Bodrum**	**0.94**	**148**	P	**Pg**	**09 45 01.1**	**-0.2**
BODT				S	**Sn**	**09 45 15.1**	**-0.2**
BODT	**Bodrum**	**0.94**	**148**	P	**Pg**	**09 45 01.1**	**-0.2**
BODT				S	**Sn**	**09 45 15.1**	**-0.2**
AYDB	**Zeytinkoy-Aydi**	**0.96**	**84**	PG	**Pg**	**09 45 00.7**	**-1.0**
AYDB	**Zeytinkoy-Aydi**	**0.96**	**84**	*e*Pg	**Pg**	**09 45 00.7**	**-1.0**
MLSB	**Milas**	**1.03**	**123**	PG	**Pb**	**09 45 02.6**	**-0.3**
MLSB	**Milas**	**1.03**	**123**	*e*Pg	**Pb**	**09 45 02.6**	**-0.3**
AMGA	**Amorgos Island**	**1.20**	**212**	P	**Pn**	**09 45 05.5**	**-0.1**
AMGA				S	**Sg**	**09 45 22.1**	**+0.1**
AMGA	**Amorgos Island**	**1.20**	**212**	P	**Pn**	**09 45 05.4**	**-0.2**
AMGA				S	**Sb**	**09 45 20.9**	**-0.3**
AMGA	**Amorgos Island**	**1.20**	**212**	P	**Pn**	**09 45 05.4**	**-0.2**
AMGA				S	**Sg**	**09 45 22.0**	**+0.1**
APE	**Apeiranthos**	**1.21**	**230**	P	**Pn**	**09 45 04.6**	**-1.1**
APE				S	**Sn**	**09 45 22.6**	**+0.6**
APE				AML	AML	09 45 24.3	
	comp=N,266µm,0.2s						
APE				AML	AML	09 45 27.1	
	comp=E,207µm,0.2s						
APE	**Apeiranthos**	**1.21**	**230**	P	**Pn**	**09 45 04.0**	**-1.7**
APE				S	**Sb**	**09 45 20.7**	**-0.7**
APE	**Apeiranthos**	**1.21**	**230**	P	**Pn**	**09 45 05.1**	**-0.6**
APE				S	**Sn**	**09 45 22.6**	**+0.6**
DKL	**Dikili**	**1.22**	**8**	PN	**Pn**	**09 45 05.8**	**-0.1**
DKL	**Dikili**	**1.22**	**8**	*e*Pn	**Pn**	**09 45 05.8**	**-0.1**
DAT	**Datca**	**1.33**	**147**	PN	**Pb**	**09 45 08.5**	**+0.4**
DAT	**Datca**	**1.33**	**147**	*e*Pn	**Pb**	**09 45 08.5**	**+0.4**
AKHS	**Akhisar**	**1.35**	**41**	*i* P	**Pn**	**09 45 07.2**	**-0.5**
AKHS	**Akhisar**	**1.35**	**41**	P	**Pn**	**09 45 07.2**	**-0.5**
PRK	**Paraskevi**	**1.42**	**347**	P	**Pb**	**09 45 09.4**	**0.0**
PRK				S	**Sg**	**09 45 30.0**	**+1.0**
PRK				AML	AML	09 45 32.5	
	comp=N,685µm,0.6s						
PRK				AML	AML	09 45 36.2	
	comp=E,572µm,0.5s						
PRK	**Paraskevi**	**1.42**	**347**	P	**Pb**	**09 45 09.5**	**0.0**
PRK				S	**Sg**	**09 45 29.6**	**+0.6**
PRK	**Paraskevi**	**1.42**	**347**	P	**Pb**	**09 45 09.5**	**0.0**
PRK				S	**Sg**	**09 45 29.6**	**+0.6**
YER	**Yerkesik**	**1.46**	**119**	PN	**Pb**	**09 45 10.2**	**0.0**
YER	**Yerkesik**	**1.46**	**119**	P	**Pn**	**09 45 09.2**	**-0.1**
YER	**Yerkesik**	**1.46**	**119**	P	**Pn**	**09 45 09.2**	**-0.1**
YER	**Yerkesik**	**1.46**	**119**	*e*Pn	**Pb**	**09 45 10.2**	**0.0**
SIGR	**SIGRI**	**1.50**	**335**	PN	**Pb**	**09 45 10.8**	**0.0**
SIGR	**SIGRI**	**1.50**	**335**	P	**Pn**	**09 45 10.2**	**+0.5**
SIGR				S	**Sg**	**09 45 31.2**	**-0.2**
SIGR				AML	AML	09 45 34.7	
	comp=E,206µm,0.5s						
SIGR				AML	AML	09 45 36.8	
	comp=N,287µm,0.4s						
SIGR	**SIGRI**	**1.50**	**335**	P	**Pn**	**09 45 10.5**	**+0.8**
SIGR	**SIGRI**	**1.50**	**335**	*e*Pn	**Pb**	**09 45 10.8**	**0.0**
SIGR				S	**Sg**	**09 45 31.3**	**-0.2**
IOSP	**Ios island**	**1.59**	**225**	P	**Pb**	**09 45 12.4**	**+0.1**
IOSP				S	**Sg**	**09 45 33.6**	**-0.6**
IOSP				AML	AML	09 45 36.7	
	comp=N,439µm,0.3s						
IOSP				AML	AML	09 45 37.5	
	comp=E,485µm,0.3s						
IOSP	**Ios island**	**1.59**	**225**	P	**Pb**	**09 45 12.1**	**-0.2**
IOSP				S	**Sb**	**09 45 33.3**	**+1.0**
MANT	**Manisa**	**1.61**	**66**	*i* P	**Pg**	**09 45 13.7**	**-0.3**
MANT				*i* S	**Sn**	**09 45 30.7**	**-1.3**
MANT	**Manisa**	**1.61**	**66**	P	**Pg**	**09 45 13.7**	**-0.3**
MANT				S	**Sn**	**09 45 30.7**	**-1.3**
KULA	**Kula-Manisa**	**1.69**	**67**	PN	**Pn**	**09 45 12.9**	**+0.5**
KULA	**Kula-Manisa**	**1.69**	**67**	*e*Pn	**Pn**	**09 45 12.9**	**+0.5**
STEP	**BALIKESIR_Sava**	**1.72**	**28**	*i* P	**Pb**	**09 45 14.4**	**-0.1**
STEP				*i* S	**Sg**	**09 45 37.8**	**-0.6**
STEP	**BALIKESIR_Sava**	**1.72**	**28**	P	**Pb**	**09 45 14.4**	**-0.1**
BAYC	**CANAKKALE_Bayr**	**1.88**	**357**	*i* P	**Pn**	**09 45 14.2**	**-0.8**
BAYC	**CANAKKALE_Bayr**	**1.88**	**357**	P	**Pn**	**09 45 14.2**	**-0.8**
DALY	**Dalyan (Mu˜la**	**1.88**	**123**	PN	**Pn**	**09 45 16.1**	**+1.2**
DALY	**Dalyan (Mu˜la**	**1.88**	**123**	*e*Pn	**Pn**	**09 45 16.1**	**+1.2**
EZN	**Ezine**	**1.98**	**352**	PN	**Pn**	**09 45 17.5**	**+1.2**
EZN	**Ezine**	**1.98**	**352**	*e*Pn	**Pn**	**09 45 17.5**	**+1.2**
DEMI	**Demirci**	**1.99**	**53**	*i* P	**Pb**	**09 45 19.7**	**+0.6**
DEMI	**Demirci**	**1.99**	**53**	P	**Pb**	**09 45 19.7**	**+0.6**
BALY	**Balya**	**2.02**	**21**	*i* P	**Pb**	**09 45 20.0**	**+0.3**
BALY	**Balya**	**2.02**	**21**	P	**Pb**	**09 45 20.0**	**+0.3**
BOZC	**Bozcaada**	**2.04**	**346**	PN	**Pn**	**09 45 18.3**	**+1.2**
BOZC	**Bozcaada**	**2.04**	**346**	*i* P	**Pb**	**09 45 19.8**	**-0.2**
BOZC	**Bozcaada**	**2.04**	**346**	*e*Pn	**Pn**	**09 45 18.3**	**+1.2**
DURS	**Dursunbey**	**2.23**	**38**	*i* P	**Pg**	**09 45 25.8**	**-0.2**
KHAL	**Karahalli**	**2.27**	**76**	*i* P	**Pb**	**09 45 25.0**	**+1.0**
KHAL	**Karahalli**	**2.27**	**76**	P	**Pb**	**09 45 25.0**	**+1.0**
TVSB	**Tavsanli**	**2.69**	**53**	PN	**Pn**	**09 45 27.2**	**+1.0**
TVSB	**Tavsanli**	**2.69**	**53**	*e*Pn	**Pn**	**09 45 27.2**	**+1.0**

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*ISCJB **30** 09:47:53.4±0.7, 45°.8N±0°.1×151°.7E±0°.1, h100^{km}, mb3.6/7, Error ellipse: s-maj=21.1km s-min=5.0km az=150.1*

*SKHL **30** 09:47:57.1±0.2, 46°.34N×151°.05E, h119^{km}±5^{km}, mb4.4/2, msh5.1/6*

*MOS **30** 09:47:57.2±1.2, 45°.99N×151°.25E, h121^{km}, mb4.0/2, Error ellipse: s-maj=28.0km s-min=11.6km az=143.1*

*JMA **30** 09:47:58.7±0.4, 45°.37N×151°.33E, h121^{km}, M3.7*

*IDC **30** 09:47:58.0±2.9, 46°.36N×151°.16E, h129^{km}±25^{km}, mb3.3/6, mb1 3.4/8, mb1mx3.1/71, mbtmp3.6/8, Error ellipse: s-maj=46.1km s-min=23.6km az=161.0*

ISC 30 09:47:53.0±0.8**, 45°.6N**±0°.1×**151°.75E**±0°.08**, h100**^{km}**, n53,** σ**2ˢ.77**/60**, mb3.6**/7**, 3C, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KUR	**Kuril'sk**	**2.77**	**263**	*i* P	**Pn**	**09 48 38.0**	**+2.4**
KUR				AMB	AMB	09 48 46.0	
	23nm,0.3s						
KUR				AMB	AMB	09 48 46.0	
	36nm,0.3s						
KUR				AMB	AMB	09 48 46.0	
	54nm,0.3s						
KUR				*i* S	**Sn**	**09 49 08.9**	**+0.5**
KUR				A	A	09 49 10.0	
	65nm,0.2s						
KUR				A	A	09 49 10.0	
	53nm,0.2s						
KUR	**Kuril'sk**	**2.77**	**263**⇑	*i*PN	**Pn**	**09 48 38.2**	**+2.6**
KUR				*i* S	**Sn**	**09 49 09.7**	**+1.3**
KUR				pmax	pmax		
	comp=E,9.0nm,0.2s						
KUR				pmax	pmax		
	comp=Z,56nm,0.2s						
KUR				pmax	pmax		
	comp=N,18nm,0.1s						
KUR				smax	smax		
	comp=N,651nm,0.2s						
KUR				smax	smax		
	comp=E,533nm,0.3s						
SHO	**Shikotan**	**3.93**	**245**	*i* P	**Pn**	**09 48 53.7**	**+2.5**
SHO				AMB	AMB	09 48 54.0	
	comp=E,8.0nm,0.2s						
SHO				*i* S	**Sn**	**09 49 36.0**	**-0.3**
SHO				A	A	09 49 43.0	
	comp=E,14nm,0.2s						
SHO				A	A	09 49 43.0	
	comp=E,24nm,0.2s						
SHO	**Shikotan**	**3.93**	**245***c*	*i*PN	**Pn**	**09 48 54.2**	**+3.0**
SHO				*i* S	**Sn**	**09 49 35.2**	**-1.1**
SHO				pmax	pmax		
	comp=Z,8.0nm,0.2s						
SHO				smax	smax		
	comp=N,144nm,0.2s						
SHO				smax	smax		
	comp=E,24nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**4.49**	**251**	*i* P	**Pn**	**09 49 01.0**	**+2.3**
YUK				*i* S	**Sn**	**09 49 50.0**	**+0.2**
YUK				A	A	09 49 58.0	
	comp=E,18nm,0.3s						
YUK				A	A	09 49 58.0	
	comp=E,89nm,0.3s						
YUK	**Yuzh-Kuril'sk**	**4.49**	**251***c*	*i*PN	**Pn**	**09 49 01.6**	**+2.9**
YUK				*i* S	**Sn**	**09 49 50.9**	**+1.1**
YUK				smax	smax		
	comp=N,177nm,0.4s						
YUK				smax	smax		
	comp=E,89nm,0.1s						
LAGR	**Lagunnoye**	**4.53**	**252**	*i* P	**Pn**	**09 49 04.0**	**+4.7**
LAGR				*i* S	**Sn**	**09 49 52.0**	**+1.2**
LAGR				A	A	09 50 06.0	
	comp=E,28nm,0.4s						
LAGR				A	A	09 50 06.0	
	comp=E,27nm,0.4s						
LAGR	**Lagunnoye**	**4.53**	**252**	*i* PN	**Pn**	**09 49 04.0**	**+4.7**
LAGR				*i* S	**Sn**	**09 49 55.8**	**+5.0**
LAGR				smax	smax		
	comp=N,275nm,0.4s						
LAGR				smax	smax		
	comp=E,269nm,0.4s						
GRPR	**Tuman**	**4.56**	**251**	*i* P	**Pn**	**09 49 02.0**	**+2.2**
GRPR				*i* S	**Sn**	**09 49 51.0**	**-0.7**
GRPR				A	A	09 50 01.0	
	comp=E,16nm,0.3s						
GRPR				A	A	09 50 01.0	
	comp=E,57nm,0.3s						
GRPR	**Tuman**	**4.56**	**251**	*i* PN	**Pn**	**09 49 02.0**	**+2.2**
GRPR				*i* S	**Sn**	**09 49 51.3**	**-0.3**
GRPR				smax	smax		
	comp=E,57nm,0.2s						
GRPR				smax	smax		
	comp=N,160nm,0.3s						
GLVR	**Golovnino**	**4.83**	**249**	*e*P	**Pn**	**09 49 07.0**	**+3.6**
GLVR				*i* S	**Sn**	**09 50 00.0**	**+1.8**
GLVR				A	A	09 50 06.0	
	comp=N,22nm,0.3s						
GLVR				A	A	09 50 06.0	
	comp=N,16nm,0.3s						
GLVR	**Golovnino**	**4.83**	**249**	PN	**Pn**	**09 49 07.1**	**+3.6**
GLVR				*i* S	**Sn**	**09 50 00.0**	**+1.8**
GLVR				smax	smax		
	comp=E,164nm,0.2s						
GLVR				smax	smax		
	comp=N,223nm,0.3s						
NEM2	**Nemuro 2**	**4.87**	**244**	P	**Pn**	**09 49 05.6**	**+1.8**
NEM2				*e*S	**Sn**	**09 49 57.5**	**-1.4**
JNK	**Nakash**	**5.43**	**250**	P	**Pn**	**09 49 13.8**	**+2.3**
JAK	**Akkeshi**	**5.71**	**245**	P	**Pn**	**09 49 16.8**	**+1.5**
JAK				*e*S	**Sn**	**09 50 17.9**	**-1.6**
SKR	**Severo-Kuril's**	**5.83**	**28**	*e*P	**Pn**	**09 49 15.5**	**-1.3**
JTKR	**Abashiri--Toko**	**5.83**	**256**	P	**Pn**	**09 49 19.1**	**+2.2**
JAR	**Ashorobuto**	**6.17**	**250**	P	**Pn**	**09 49 24.5**	**+2.9**
JOB	**Onbets**	**6.31**	**247**	*e*S	**Sn**	**09 50 32.5**	**-1.5**
YSS	**Yuzh-Sakhalins**	**6.37**	**285**	*e*PN	**Pn**	**09 49 25.9**	**+1.7**
ASAJ	**Asahikawa**	**6.68**	**260**	P	**Pn**	**09 49 30.9**	**+2.4**
	comp=N,0.6nm,0.3s,baz=77,slow=17,SNR=8.9						
MYR	**Moyori**	**6.97**	**244**	*e*P	**Pn**	**09 49 34.1**	**+1.7**
ERM	**Erimo**	**7.20**	**243**	*e*P	**Pn**	**09 49 38.4**	**+2.9**
ERM	**Erimo**	**7.20**	**243**	*e*PN	**Pn**	**09 49 38.4**	**+2.9**
JNB	**Noboribetsu**	**8.34**	**251**	*e*S	**Sn**	**09 51 21.2**	**-2.3**
PETK	**Petropavlovsk-**	**8.41**	**25**	P	**Pn**	**09 49 50.2**	**-1.8**
	baz=204,slow=11						
JKB	**Kayabe**	**8.62**	**248**	*e*S	**Sn**	**09 51 25.8**	**-4.4**
JTM	**Tenmabayashi**	**9.19**	**242**	*e*S	**Sn**	**09 51 37.9**	**-6.2**
OFUJ	**Ofunato**	**9.93**	**232**	*e*S	**Sn**	**09 51 57.7**	**-4.5**
JRG	**Rokugo**	**10.31**	**237**	*e*S	**Sn**	**09 52 07.7**	**-3.7**
JIO	**Ouri**	**10.55**	**231**	*e*S	**Sn**	**09 52 12.4**	**-4.9**
MAJO	**Matsushiro**	**13.66**	**233**	*e*P	**Pn**	**09 51 07.1**	**+4.6**
MAJO	**Matsushiro**	**13.66**	**233**	*e*P	**Pn**	**09 51 07.1**	**+4.6**
H11N2	**WAKE ISLAND Hy**	**28.71**	**149**	T	T	10 25 33.7	
	baz=337,slow=76,SNR=177						
H11N1	**WAKE ISLAND Hy**	**28.73**	**149**	T	T	10 25 27.9	
	baz=337,slow=76,SNR=114						
H11N3	**WAKE ISLAND Hy**	**28.73**	**149**	T	T	10 25 32.1	
	baz=337,slow=76,SNR=156						
H11S1	**WAKE ISLAND Hy**	**29.77**	**150**	T	T	10 26 48.8	
	baz=338,slow=76,SNR=195						
H11S3	**WAKE ISLAND Hy**	**29.78**	**150**	T	T	10 26 51.4	
	baz=338,slow=76,SNR=138						
H11S2	**WAKE ISLAND Hy**	**29.79**	**150**	T	T	10 26 53.0	
	baz=338,slow=76,SNR=130						
ILAR	**Eielson Array**	**38.00**	**38**	P	**P**	**09 55 00.6**	**-0.3**
	comp=N,0.3nm,0.8s,baz=254,slow=7.9,SNR=4.1						
ILAR	**Eielson Array**	**38.00**	**38**	*e*P	**P**	**09 55 02.9**	**+2.0**
ILAR	**Eielson Array**	**38.00**	**38**	*e*P	**P**	**09 55 02.9**	**+2.0**
YKA	**Yellowknife Ar**	**52.38**	**36**	P	**P**	**09 56 54.4**	**+0.1**
	comp=N,0.4nm,0.6s,baz=286,slow=6.8,SNR=3.1						
ARU	**Arti**	**55.19**	**318**	*e*P	**P**	**09 57 12.4**	**-2.5**
ARU	**Arti**	**55.19**	**318**	*e*P	**P**	**09 57 12.5**	**-2.5**
ARU				pmax	pmax		
	comp=Z,2.0nm,1.2s						
FINES	**FINESS Array B**	**64.63**	**334**	P	P	09 58 15.2	-4.3
	comp=Z,1.6nm,0.7s,baz=57,slow=7.0,SNR=4.2						
FINES	**FINESS Array B**	**64.63**	**334**	*e*P	**P**	**09 58 17.1**	**-2.3**
FINES	**FINESS Array B**	**64.63**	**334**	*e*P	**P**	**09 58 17.1**	**-2.3**
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
PDAR	**Pinedale Array**	**66.17**	**53**	P	**P**	**09 58 32.0**	**+2.1**
	comp=Z,0.2nm,0.6s,baz=291,slow=6.5,SNR=3.7						
HFS	**Hagfors**	**69.16**	**339**	P	**P**	**09 58 45.2**	**-2.9**
	comp=Z,1.0nm,0.5s,baz=57,slow=5.3,SNR=8.8						
TXAR	**Lajitas Array**	**78.86**	**59**	P	**P**	**09 59 46.2**	**+0.9**
	comp=Z,0.3nm,0.5s,baz=305,slow=4.4,SNR=8.4						
TXAR	**Lajitas Array**	**78.86**	**59**	*e*P	**P**	**09 59 47.0**	**+1.7**
TXAR	**Lajitas Array**	**78.86**	**59**	*e*P	**P**	**09 59 47.1**	**+1.7**

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*CSEM **30** 09:51:24.9±1.3, 48°.79N×13°.16E, h2^{km}, ML1.9, Error ellipse: s-maj=28.2km s-min=19.5km az=21.0, Suspected Mining explosion.*

VIE 30 09:51:23.9±0.3**, 48°.81N**×**13°.13E, h0**^{km}**, mb1.7**/2**, ml1.9**/4**, Error ellipse: s-maj=2.7km s-min=1.7km az=61.0 45 km NNW of Schrding Suspected Mining explosion., Austria**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MOA	**Molln**	**1.23**	**141**	*e*Pn	Pb	09 51 48.0	0.0
	0.8nm,0.1s						
MOA				Sg	Sb	09 52 03.8	-0.5
	2.5nm,0.2s						
MOA	**Molln**	**1.23**	**141**	Pn	Pb	09 51 48.0	0.0
	0.8nm,0.1s						
MOA				Sg	Sb	09 52 03.8	-0.5
	2.5nm,0.2s						
KBA	**Koelnbreinsper**	**1.74**	**175**	*e*Pn	Pb	09 51 56.3	-0.6
	0.5nm,0.2s						
KBA				Sn	Sg	09 52 19.7	-0.1
	2.0nm,0.4s						

KBA	**Koelnbreinsper**	1.74	175	Pn	Pb	09 51 56.3	-0.5
	0.5nm,0.2s						
KBA				Sn	Sg	09 52 19.7	-0.1
	2.0nm,0.4s						
CONA	**Conrad Observa**	2.02	115	Sn	Sb	09 52 27.3	-0.1
	3.7nm,0.5s						
CONA	**Conrad Observa**	2.02	115	Sn	Sb	09 52 27.3	-0.1
	3.7nm,0.5s						

MAN 30 10:02:41.8, 10°.32N×125°.07E, h8^{km}, mb4.6, ML3.5, MS3.3, 2C-2D, Leyte

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MSLP	**Maasin**	0.28	229	*e*P	Pb	10 02 48.5	-0.6
MSLP				*e*S	Sb	10 02 55.2	+1.3
SCPH	**Surigao**	0.67	143	*e*P	Pg	10 02 54.4	-0.4
SCPH				*e*S	Sg	10 03 04.0	+0.5
PLP	**Palo**	0.85	354	⇑*e*P	Pg	10 02 57.6	-0.4
PLP				*i* S	Sb	10 03 10.4	+0.1
OCLP	**Ormoc**	0.86	328	*e*P	Pg	10 02 58.4	+0.1
OCLP				*e*S	Sn	10 03 17.5	+4.5
LLP	**Lapu-Lapu**	1.09	270	⇓*e*P	Pg	10 03 02.7	-0.1
LLP				*e*S	Sn	10 03 18.7	0.0
BESP	**Borongan**	1.32	16	*e*P	Pn	10 03 05.4	-1.2
BESP				*e*S	Sb	10 03 20.6	-3.4
TBP	**Tagbilaran**	1.35	243	*e*P	Pn	10 03 06.3	-0.6
CGP	**Cagayan de Oro**	1.89	191	⇓*e*P	Sn	10 03 38.7	+0.3
CNP	**Catarman**	2.21	350	*e*P	Pn	10 03 19.4	+0.6
CNP				*e*S	Sb	10 03 49.5	-0.2
BUKP	**Musuan**	2.42	180	*e*P	Pn	10 03 23.0	+1.3
BUKP				*e*S	Sn	10 03 52.5	+0.8
GUIM	**Jordan**	2.46	277	*e*P	Pn	10 03 22.1	-0.1
GUIM				*e*S	Sn	10 03 53.2	+0.7
RCP	**Roxas**	2.60	299	⇑*e*P	Pn	10 03 25.9	+1.8

WEL 30 10:16:33.8, 38°S±9°×18°0W±°, h33^{km}, ML3.8/15, East of North Island

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
WMGZ	**Waiomatatini S**	1.54	270	P	Pn	10 16 59.6	+0.7
WMGZ				S	Sn	10 17 18.0	+0.3
PKGZ	**Pakihiroa**	1.80	268	P	Pn	10 17 02.9	+0.2
PKGZ				S	Sn	10 17 23.4	-1.0
CNGZ	**Carnagh Statio**	1.81	249	P	Pb	10 17 04.7	-1.6
TWGZ	**Tauwhareparae**	1.91	259	P	Pn	10 17 05.5	+1.4
TWGZ				S	Sn	10 17 27.8	+0.9
HAZ	**Te Kaha**	2.04	272	P	Pn	10 17 06.5	+0.7
HAZ				S	Sn	10 17 28.4	-1.7
TKGZ	**Te Karaka**	2.06	252	P	Pn	10 17 07.4	+1.3
TKGZ				S	Sn	10 17 32.3	+1.6
RUGZ	**Raukumara Rang**	2.12	266	P	Pn	10 17 08.1	+1.1
MWZ	**Matawai**	2.28	257	P	Pn	10 17 09.8	+0.6
MWZ				S	Sn	10 17 36.3	+0.1
MHGZ	**Mahia Peninsul**	2.32	235	P	Pn	10 17 11.7	+1.9
RAGZ	**Rawiri**	2.41	253	S	Sn	10 17 40.1	+0.8
KNZ	**Kokohu**	2.41	240	P	Pn	10 17 12.3	+1.4
KNZ				S	Sn	10 17 41.3	+2.0
URZ	**Urewera**	2.59	260	P	Pn	10 17 14.7	+1.3
URZ				S	Sn	10 17 43.7	-0.1
RTZ	**Ruatahuna**	2.77	253	P	Pn	10 17 17.6	+1.7
RTZ				S	Sn	10 17 49.4	+1.2
MUGZ	**Murupara**	2.90	256	P	Pn	10 17 18.3	+0.7
MTHZ	**Maungataniwha**	2.94	249	P	Pn	10 17 19.7	+1.4
NMHZ	**Naumai**	3.05	245	P	Pn	10 17 21.4	+1.5
MCHZ	**McNeill Hill**	3.28	240	P	Pn	10 17 24.5	+1.6
BKZ	**Black Stump Fm**	3.31	245	P	Pn	10 17 24.6	+1.3
KWHZ	**Kaweka Forest**	3.46	242	P	Pn	10 17 26.5	+1.0
BHHZ	**Black Hill Sta**	3.74	243	P	Pn	10 17 30.5	+1.2

*ISCJB **30** 10:18:54.7±0.2, 6°.83N±0°.02×73°.10W±0°.03, h163^{km}±2^{km}, mb4.0/26, Error ellipse: s-maj=4.5km s-min=3.8km az=28.4*
*CASC **30** 10:18:55.6±1.3, 7°.26N×73°.37W, h0^{km}±118^{km}, mb4.3(NEIC)*
*IDC **30** 10:18:55.4±0.5, 6°.74N×72°.87W, h164^{km}±5^{km}, mb3.5/13, mb1 3.8/19, mb1mx3.6/50, mbtmp4.1/19, Error ellipse: s-maj=11.1km s-min=7.3km az=128.0*
*RSNC **30** 10:18:56.7±0.9, 6°.82N×73°.14W, h154^{km}±5^{km}, ML4.3, Mw4.5*
*NEIC **30** 10:18:56.0±0.6, 6°.80N×73°.03W, h157^{km}±7^{km}, mb4.3/16, Error ellipse: s-maj=9.0km s-min=7.5km az=116.0*
ISC 30 10:18:55.3±0.5, **6°.87N**±0°.03×**73°.07W**±0°.04, **h158**^{km}±4^{km}, **n87, σ1^s.78**/116, **mb4.1**/26, **3C-7D, Northern Colombia**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BARC	**Barichara**	0.30	201	*i* P	**Pn**	**10 19 17.3**	**+0.1**
BARC				*i*		10 19 34.5	
	comp=Z,3µm,0.3s						
PAMC	**Pamplona, Colo**	0.59	39	*i* P	**Pn**	**10 19 20.1**	**+1.4**
PAMC				*e*S	**Sn**	**10 19 37.4**	**+0.9**
BRRC	**Barranca, Sant**	0.68	290	⇑*i*P	**Pn**	**10 19 19.2**	**+0.7**
BRRC				*e*S	**Sn**	**10 19 36.6**	**+0.3**
BRRC				*i*		10 19 40.0	
	comp=Z,3µm,0.2s						
RUSC	**La Rusia**	0.97	181	⇓*i*P	**Pn**	**10 19 21.2**	**-0.1**
RUSC				*e*S	**Sn**	**10 19 40.3**	**-0.8**
RUSC				*i*		10 19 42.6	
	comp=Z,2µm,0.5s						
TAMC	**Tame, Arauca**	1.35	109	⇑*i*P	**Pn**	**10 19 25.5**	**+1.5**
TAMC				*i*		10 19 25.9	
	comp=Z,3µm,0.3s						
TAMC				*e*S	**Sn**	**10 19 46.9**	**+0.9**
OCAC	**Ocana**	1.38	350	⇓*i*P	**Pn**	**10 19 25.4**	**+0.9**
OCAC				*e*S	**Sn**	**10 19 47.9**	**+0.9**
OCAC				*i*		10 19 52.4	
	comp=Z,7µm,0.3s						
PTBC	**PUERTO BERRIO,**	1.41	257	⇓*i*P	**Pn**	**10 19 23.8**	**-0.8**
PTBC				*e*S	**Sn**	**10 19 45.9**	**-1.3**
PTBC				*i*		10 19 52.9	
	comp=Z,3µm,0.4s						
YOPC	**Yopal, Colombi**	1.64	157	*i* P	**Pn**	**10 19 27.8**	**+0.7**
YOPC				*e*S	**Sn**	**10 19 50.7**	**-1.0**
YOPC				*i*		10 19 55.1	
	comp=Z,1µm,0.3s						
ZARC	**Zaragoza, Cauc**	1.88	289	*e*P	**Pn**	**10 19 29.4**	**-0.1**
ZARC				*e*S	**Sn**	**10 19 55.7**	**-0.2**
ZARC				*i*		10 20 01.9	
	comp=Z,3µm,0.4s						
NORC	**Norcasia**	2.21	234	*e*P	**Pn**	**10 19 32.9**	**-0.5**
CHIC	**Chingaza**	2.32	196	⇓*i*P	**Pn**	**10 19 35.0**	**-0.1**
CHIC				*e*S	**Sn**	**10 20 04.4**	**-1.4**
CHIC				*i*		10 20 13.1	
	comp=Z,1µm,0.4s						
ROSC	**El Rosal**	2.37	212	P	**Pn**	**10 19 36.6**	**+1.0**
	comp=Z,402nm,0.3s,baz=15,slow=2.3,SNR=338						
ROSC				S	**Sn**	**10 20 07.9**	**+1.1**
	comp=Z,408nm,0.3s,baz=27,slow=23,SNR=4.8						
ROSC	**El Rosal**	2.37	212	*e*Pn	**Pn**	**10 19 36.8**	**+1.1**
ROSC				*e*Sn	**Sn**	**10 20 04.8**	**-2.0**
ROSC	**El Rosal**	2.37	212	⇓*i*P	**Pn**	**10 19 36.8**	**+1.1**
ROSC				*i*		10 20 15.1	
	comp=Z,3µm,0.4s						
HELC	**Santa Helena**	2.53	255	*e*P	**Pn**	**10 19 37.1**	**-0.5**
HELC				*i*		10 20 15.3	
	comp=Z,1µm,0.7s						
UREC	**San Jos˜' de U**	2.59	290	*e*P	**Pn**	**10 19 37.1**	**-0.9**
UREC				*i*		10 20 25.4	
	comp=Z,1µm,0.3s						
VILC	**Villavicencio,**	2.81	193	*i* P	**Pn**	**10 19 40.3**	**-0.5**
VILC				*i*		10 20 24.6	
	comp=Z,752nm,0.5s						
GUYC	**Guyana, Colomb**	2.83	235	*e*S	**Sn**	**10 20 15.8**	**-1.0**
CODC	**Agust˜›n Codaz**	3.06	353	*e*P	**Pn**	**10 19 44.6**	**+0.8**
SDV	**Santo Domingo**	3.14	50	P	**Pn**	**10 19 46.0**	**+1.0**
	comp=Z,147nm,0.3s,baz=211,slow=2.4,SNR=76						
SDV				S	**Sn**	**10 20 22.6**	**-0.8**
	comp=Z,174nm,0.3s,baz=341,slow=7.8,SNR=36						
SDV	**Santo Domingo**	3.14	50	*e*Pn	**Pn**	**10 19 46.7**	**+1.7**
SDV				*e*Sn	**Sn**	**10 20 23.8**	**+0.3**
SDV	**Santo Domingo**	3.14	50	*e*P	**Pn**	**10 19 46.5**	**+1.6**
SDV				*i*		10 20 26.0	
	comp=Z,505nm,0.5s						
TOLC	**Tolima**	3.19	225	*e*P	**Pn**	**10 19 45.6**	**-0.2**
ANIL	**Santa Ana**	3.31	225	*e*P	**Pn**	**10 19 47.3**	**0.0**
ANIL				*e*S	**Sn**	**10 20 26.9**	**-0.7**
PRAC	**Prado**	3.62	210	*e*P	**Pn**	**10 19 49.9**	**-1.0**
PRAC				*e*S	**Sn**	**10 20 32.3**	**-1.9**
PRAC				*i*		10 20 38.0	
	comp=Z,988nm,0.3s						
SJCC	**San Jacinto, C**	3.66	325	*e*P	**Pn**	**10 19 50.8**	**-0.6**
SJCC				*e*S	**Sn**	**10 20 28.4**	**-6.7**
SJAC	**San Juan de Ar**	3.68	194	*e*P	**Pn**	**10 19 52.8**	**+1.0**
SJAC				*i*		10 20 46.0	
	comp=Z,1µm,0.4s						
PLMC	**San Jos˜' del**	3.74	239	*e*P	**Pn**	**10 19 52.9**	**+0.3**
PLMC				*i*		10 20 44.3	
	comp=Z,514nm,0.5s						
YOTC	**Yotoco, Valle**	4.34	229	*e*P	**Pn**	**10 19 59.5**	**-0.9**
YOTC				*i*		10 20 02.8	
	comp=Z,323nm,0.3s						
HORQ	**Saladito**	4.88	227	*e*P	**Pn**	**10 20 06.6**	**-1.0**
UPD2	**Meteti**	5.17	289	*e*P	**Pn**	**10 20 09.9**	**-1.3**
UPD2				*e*S	**Sn**	**10 21 06.7**	**-3.8**
PCON	**Cinco Dias**	5.60	216	*e*P	**Pn**	**10 20 17.5**	**+0.1**
PCON				*i*		10 20 19.2	
	comp=Z,99nm,0.3s						
UPA	**Univ. de Panam**	6.73	289	⇓*e*P	**Pn**	**10 20 30.3**	**-1.6**
UPA				*e*S	**Sn**	**10 21 45.2**	**-2.5**
ZANG	**Zanguenga, Cho**	7.04	288	*e*P	**Pn**	**10 20 34.5**	**-1.5**
BCIP	**Isla Barro Col**	7.08	289	*e*Pn	**Pn**	**10 20 35.0**	**-1.4**
BCIP	**Isla Barro Col**	7.08	289	⇓*e*P	**Pn**	**10 20 34.9**	**-1.6**
AZU	**Azuero**	7.20	278	*e*P	**Pn**	**10 20 37.2**	**-0.9**
PNME	**Penonome**	7.37	283	*e*P	**Pn**	**10 20 40.5**	**+0.2**
CMBC	**Cumbal**	7.56	219	*e*P	**Pn**	**10 20 43.3**	**0.0**
OTAV	**Otavalo**	8.50	219	*e*Pn	**Pn**	**10 20 56.2**	**+0.4**
PCRV	**Puerto La Cruz**	8.97	68	P	**Pn**	**10 21 00.9**	**-0.8**
	comp=Z,3.3nm,0.3s,baz=21,slow=1.6,SNR=18						
PCRV				S	**Sn**	**10 22 38.6**	**-2.8**
	comp=Z,2.1nm,0.3s,baz=266,slow=15,SNR=3.2						
GWJ	**Greenwich**	11.69	343	*i* P	**Pn**	**10 21 38.9**	**+1.4**
STH	**Stony Hill**	11.72	342	*i* P	**Pn**	**10 21 40.8**	**+3.0**
BANI	**BANI**	11.75	13	*e*Pn	**Pn**	**10 21 39.9**	**+1.6**
MTDJ	**Mount Denham**	12.09	339	*e*Pn	**Pn**	**10 21 45.4**	**+2.7**
MTDJ				*e*Sn	**Sn**	**10 23 52.6**	**-4.1**
BBJ	**Bamboo Saint A**	12.15	341	⇑*i*P	**P**	**10 21 47.2**	**-2.2**
JTS	**JuntasAbangare**	12.23	287	P	**Pn**	**10 21 46.6**	**+2.1**
	comp=Z,1.0nm,0.3s,baz=331,slow=6.1,SNR=11						
ESPN	**Las Esperanzas**	12.27	296	*e*Pn	**P**	**10 21 55.1**	**+4.4**
SJG	**San Juan**	13.05	31	P	**Pn**	**10 21 54.9**	**0.0**
	comp=Z,6.1nm,0.3s,baz=194,slow=14,SNR=9.1						
SJG	**San Juan**	13.05	31	*e*Pn	**Pn**	**10 21 55.0**	**+0.1**
GTBY	**Guantanamo Bay**	13.13	352	*e*Pn	**P**	**10 22 00.0**	**-0.2**
HUMP	**Col San Antoni**	13.23	31	*e*Pn	**Pn**	**10 21 57.9**	**+0.7**
CDVI	**St. Croix**	13.51	36	*e*Pn	**Pn**	**10 22 00.8**	**-0.1**
PTGA	**Pitinga**	15.10	120	P	**Pn**	**10 22 19.3**	**-1.5**
	comp=Z,1.4nm,0.3s,baz=298,slow=16,SNR=4.3						
PTGA				S	**Sn**	**10 25 01.7**	**-7.3**
	comp=Z,0.5nm,0.3s,baz=287,slow=19,SNR=4.0						
PTGA	**Pitinga**	15.10	120	*e*Pn	**Pn**	**10 22 20.4**	**-0.4**
	comp=Z,15nm,1.1s						
PTGA				*e*S	**S**	**10 25 17.8**	**+4.4**
SAML	**Samuel**	18.55	148	*e*P	**P**	**10 23 00.1**	**-0.1**
	comp=Z,4.9nm,0.8s						
LPAZ	**La Paz**	23.52	168	P	**P**	**10 23 50.8**	**-1.2**
	comp=Z,0.6nm,0.5s,baz=325,slow=6.5,SNR=6.1						
LPAZ				pP	**pP**	**10 24 22.1**	**-0.3**
	comp=Z,5.1nm,0.9s,baz=348,slow=10,SNR=7.9						
SIV	**San Ignacio**	25.64	152	P	**P**	**10 24 07.4**	**-3.1**
	comp=Z,0.9nm,0.6s,baz=344,slow=7.8,SNR=5.8						
SIV				pP	**pP**	**10 24 41.3**	**-2.0**
	comp=Z,0.9nm,0.4s,baz=320,slow=7.9,SNR=3.7						
V48A	**Smith Brothers**	31.38	338	*e*P	**P**	**10 25 02.9**	**+1.6**
	comp=Z,9.1nm,0.9s						
WVT	**Waverly**	32.10	337	*e*P	**P**	**10 25 09.3**	**+1.7**
	comp=Z,4.7nm,0.7s						
T47A	**Sharon Grove**	32.59	339	*e*P	**P**	**10 25 13.7**	**+1.9**
	comp=Z,7.2nm,0.8s						
BDFB	**Brasilia**	33.41	132	P	**P**	**10 25 17.7**	**-1.6**
	comp=Z,2.3nm,0.5s,baz=313,slow=11,SNR=3.2						
V40A	**Witts Springs**	34.02	331	*e*P	**P**	**10 25 25.9**	**+1.7**
	comp=Z,3.6nm,0.3s						
T42A	**Van Buren**	34.22	334	*e*P	**P**	**10 25 27.4**	**+1.5**
	comp=Z,4.5nm,1.0s						
CCM	**Cathedral Cave**	35.15	335	*e*P	**P**	**10 25 35.7**	**+1.9**
	comp=Z,9.1nm,0.8s						
TXAR	**Lajitas Array**	36.46	312	P	**P**	**10 25 46.9**	**+1.5**
	comp=Z,0.9nm,0.7s,baz=128,slow=9.1,SNR=15						
TXAR				PcP	**PcP**	**10 28 07.5**	**+1.5**
	comp=Z,0.2nm,0.5s,baz=147,slow=2.4,SNR=3.3						
TX31	**Lajitas Ar. Si**	36.46	312	*e*P	**P**	**10 25 47.0**	**+1.6**
JFWS	**Jewell Farm**	38.96	340	*e*P	**P**	**10 26 07.1**	**+1.0**
	comp=Z,9.4nm,0.6s						
MNTX	**Cornudas Mount**	38.97	314	*e*P	**P**	**10 26 08.5**	**+2.2**
	comp=Z,1.2nm,0.7s						
B35A	**Bob, Littlefor**	44.91	341	*e*P	**P**	**10 26 55.0**	**+0.9**
	comp=Z,3.2nm,0.6s						
B35A				*e*pP	**pP**	**10 27 28.8**	**-0.6**
AGMN	**Agassiz Nation**	45.59	339	*e*P	**P**	**10 27 00.4**	**+0.8**
	comp=Z,3.0nm,0.6s						
P18A	**Preston Nutter**	46.64	320	*e*P	**P**	**10 27 05.5**	**-2.8**
	comp=Z,2.7nm,1.0s						
ULM	**Lac du Bonnet**	47.25	340	P	**P**	**10 27 12.9**	**+0.4**
	comp=Z,3.3nm,0.3s,baz=135,slow=6.0,SNR=9.1						
PDAR	**Pinedale Array**	48.06	324	P	**P**	**10 27 20.3**	**+1.2**
	comp=Z,0.5nm,0.6s,baz=114,slow=8.9,SNR=6.2						
SCHQ	**Schefferville**	48.09	5	P	**P**	**10 27 19.2**	**+0.4**
	comp=Z,6.0nm,0.4s,baz=194,slow=7.2,SNR=16						
SCHQ	**Schefferville**	48.09	5	*e*P	**P**	**10 27 20.5**	**+1.7**
	comp=Z,8.6nm,0.6s						
NVAR	**Mina Array Bea**	51.48	315	P	**P**	**10 27 46.0**	**+1.0**
	comp=Z,0.2nm,0.6s,baz=106,slow=6.7,SNR=3.2						
MFID	**Camas Ranch**	52.22	321	*e*P	**P**	**10 27 52.0**	**+1.7**
	comp=Z,1.4nm,0.7s						
YKA	**Yellowknife Ar**	63.23	340	P	**P**	**10 29 07.3**	**+0.8**
	comp=Z,2.6nm,0.5s,baz=132,slow=6.5,SNR=38						
SUMG	**Summit**	68.93	11	*e*P	**P**	**10 29 44.5**	**+1.2**
	comp=Z,21nm,0.7s						
TORD	**Torodi Ar. Bea**	73.68	78	P	**P**	**10 30 09.8**	**-2.6**
	comp=Z,0.9nm,1.1s,baz=295,slow=7.4						
ILAR	**Eielson Array**	76.94	335	P	**P**	**10 30 30.8**	**+0.8**
	comp=Z,0.3nm,0.5s,baz=98,slow=4.2,SNR=5.2						
ARCES	**ARCESS Array B**	86.61	20	P	**P**	**10 31 20.5**	**-0.1**
	comp=Z,1.6nm,1.0s,baz=293,slow=4.7,SNR=4.4						
FINES	**FINESS Array B**	88.37	28	P	**P**	**10 31 27.6**	**-1.4**
	comp=Z,1.3nm,0.8s,baz=282,slow=4.2,SNR=2.2						
MKAR	**Makanchi Array**	122.26	20	PKP	**PKPdf**	**10 37 30.8**	**-0.9**
	comp=Z,0.2nm,0.4s,baz=241,slow=2.8,SNR=2.7						
ASAR	**Alice Springs**	149.18	234	PKP	**PKPdf**	**10 38 19.9**	**-1.8**
	comp=Z,0.3nm,0.9s,baz=141,slow=3.2,SNR=3.7						
ASAR				PKPbc	**PKPbc**	**10 38 24.6**	**-1.4**
	comp=Z,1.0nm,0.5s,baz=116,slow=3.8,SNR=26						
ASAR				pPKPbc	**pPKPbc**	**10 39 07.5**	**0.0**
	comp=Z,0.4nm,0.5s,baz=112,slow=4.0,SNR=2.1						
WRA	**Warramunga Arr**	150.40	241	PKP	**PKPdf**	**10 38 23.1**	**-0.5**
	comp=Z,0.4nm,0.9s,baz=113,slow=2.1,SNR=4.1						
WRA				PKPbc	**PKPbc**	**10 38 27.9**	**-1.1**
	comp=Z,0.9nm,0.5s,baz=108,slow=2.6,SNR=32						

*JMA **30** 10:54:58.7±0.2, 37°.32N×142°.45E, h9^{km}±3^{km}, M3.5*
*ISCJB **30** 10:54:59.2±1.8, 37°.26N±0°.04×142°.45E±0°.08, h13^{km}±12^{km}, mb3.6/5, Error ellipse: s-maj=10.8km s-min=7.0km az=171.3*
*IDC **30** 10:55:03.4±1.5, 36°.92N×142°.07E, h0^{km}, mb3.6/5, mb1 3.7/6, mb1mx3.4/64, mbtmp3.7/6, ML3.0/2, Error ellipse: s-maj=34.2km s-min=26.5km az=95.0*
ISC 30 10:54:60.0±2.4, **37°.32N**±0°.05×**142°.29E**±0°.08, **h4**^{km}±13^{km}, **n24, σ1^s.40**/23, **mb3.8**/5, **Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JFK	**Kawauchi**	1.13	273	P	**Pn**	**10 55 22.0**	**-0.6**
JFK				*e*S	**Sn**	**10 55 38.9**	**+0.3**
ONAJ	**Iwakimizuishiy**	1.21	260	P	**Pg**	**10 55 23.4**	**+0.2**
JMM	**Marumori**	1.31	295	P	**Pn**	**10 55 24.4**	**-0.7**
JMM				*e*S	**Sg**	**10 55 43.9**	**+1.8**
JIO	**Ouri**	1.36	327	P	**Pn**	**10 55 24.7**	**-1.0**
JIO				*e*S	**Sn**	**10 55 43.5**	**-0.7**
JFT	**Otama**	1.57	278	P	**Pb**	**10 55 29.3**	**-0.3**
JFT				*e*S	**Sg**	**10 55 50.4**	**0.0**
JOU	**Okura**	1.66	310	P	**Pn**	**10 55 30.0**	**+0.1**
JOU				*e*S	**Sb**	**10 55 51.9**	**-0.5**
JYS	**Shirataka**	1.98	298	P	**Pb**	**10 55 35.3**	**-1.3**
JFY	**Yanaizu**	2.06	273	P	**Pb**	**10 55 36.3**	**-1.7**
JFY				*e*S	**Sb**	**10 56 02.7**	**-1.3**
JYK	**Kaneyama**	2.21	317	P	**Pn**	**10 55 37.6**	**+0.2**
JOM	**Ohasama**	2.29	340	*e*S	**Sb**	**10 56 08.7**	**-1.9**
JAG	**Ashikaga**	2.44	250	P	**Pn**	**10 55 41.3**	**+0.7**
MJAR	**Matsushiro Arr**	3.36	258	Pn	**Pn**	**10 55 55.3**	**+2.1**
	0.9nm,0.3s,baz=85,slow=14,SNR=11						
MJAR				Sn	**Sb**	**10 56 39.0**	**-2.4**
	0.2nm,0.3s,baz=80,slow=30,SNR=3.8						
JHJ	**Hachijo jima 2**	4.66	207	Pn	**Pn**	**10 56 10.4**	**-0.7**
	4.3nm,0.3s,baz=65,slow=17,SNR=3.1						
JHJ				Sn	**Sn**	**10 57 04.4**	**-1.3**
	4.7nm,0.3s,baz=158,slow=11,SNR=2.5						
H11N2	**WAKE ISLAND Hy**	27.70	122	T	T	11 29 36.7	
	baz=318						
H11N1	**WAKE ISLAND Hy**	27.71	122	T	T	11 29 39.3	
	baz=318						
H11N3	**WAKE ISLAND Hy**	27.72	122	T	T	11 29 40.4	
	baz=318						
H11S1	**WAKE ISLAND Hy**	28.43	125	T	T	11 30 34.4	
	baz=316						
H11S3	**WAKE ISLAND Hy**	28.43	125	T	T	11 30 34.0	
	baz=316						
H11S2	**WAKE ISLAND Hy**	28.45	125	T	T	11 30 35.6	
	baz=316						
ZALV	**Zalesovo Beam**	42.24	312	P	P	11 02 58.6	+4.5
	0.5nm,0.3s,baz=90,slow=10,SNR=2.4						
MKAR	**Makanchi Array**	44.56	302	P	P	11 03 18.0	+5.1
	0.2nm,0.5s,baz=88,slow=10.0,SNR=5.6						
KURBB	**Kurchatov Arra**	46.38	308	P	**P**	**11 03 30.2**	**+3.0**
	0.5nm,0.4s,baz=82,slow=7.8,SNR=4.1						
WRA	**Warramunga Arr**	57.44	189	P	**P**	**11 04 49.9**	**0.0**
	0.4nm,0.8s,baz=8.1,slow=6.9,SNR=3.1						
YKA	**Yellowknife Ar**	63.21	30	P	P	11 05 37.1	+8.1
	0.4nm,0.7s,baz=298,slow=7.7,SNR=2.9						

*ISN **30** 11:02:16.0±0.9, 32°.95N×46°.64E, h0^{km}±5^{km}, ML2.5*
TEH 30 11:02:17.7, 32°.99N×46°.69E, h10^{km}, ML2.5, Iran-Iraq border region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
IKFM	**Kafar-mosalman**	1.10	61	*e*Pg	Pn	11 02 39.2	0.0
IKFM				*e*Sg	Sn	11 02 55.5	+1.0
IKFM				*e*		11 03 00.2	
	comp=Z,99nm,0.3s						
KCHF	**Cheshme Sefid,**	1.32	13	*e*Pn	Pg	11 02 43.0	0.0
IKOM	**Komasi**	1.37	30	*e*Pg	Pg	11 02 43.8	-0.2
IKOM				*e*		11 02 47.0	
	comp=Z,99nm,0.1s						
IVIS	**Veis**	1.54	5	*e*Pn	Pb	11 02 46.1	-0.3
IVIS				*e*		11 03 12.8	
	comp=Z,565nm,0.2s						

*NNC **30** 11:35:12.9±2.6, 44°.07N×83°.83E, h0^{km}, mb2.9, mpv2.6, Error ellipse: s-maj=23.5km s-min=10.5km az=118.0*
*SOME **30** 11:35:14.5, 44°.13N×83°.88E, h15^{km}*
ISC 30 11:35:15.2±2.2, **44°.03N**±0°.09×**84°.1E**±0°.1, **h20**^{km}, **n12, σ1^s.67**/18, **4C-3D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KTMS	**Ketmen**	2.76	259	*e*P	**Pb**	**11 36 01.9**	**-2.0**
	1.8nm,0.1s						
KTMS				*e*S	**Sb**	**11 36 36.9**	**-0.5**
	26nm,0.4s						
MK31	**Makanchi Array**	3.04	336	⇑Pn	**Pn**	**11 36 00.3**	**-1.9**
	0.2nm,0.3s,baz=159,slow=14,SNR=68						
MK31				Pg	**Pb**	**11 36 06.9**	**-1.8**
	1.3nm,0.3s,baz=155,slow=16,SNR=32						
MK31				Lg	Lg	11 36 45.2	
	5.1nm,0.3s,baz=149,slow=30,SNR=21						
DJR	**Jarkent**	3.10	277	*e*P	**Pb**	**11 36 08.4**	**-1.3**
	3.3nm,0.2s						
DJR				*e*S	**Sb**	**11 36 47.2**	**+0.2**
	15nm,0.2s						
MAKZ	**Makanchi**	3.15	333	⇓Pg	**Pb**	**11 36 09.1**	**-1.4**
	2.1nm,0.5s						
MAKZ				⇓Lg	Lg	11 36 49.4	
	9.6nm,0.7s						
PDGK	**Podgornoye**	3.40	260	⇑Pg	**Pb**	**11 36 12.4**	**-2.4**
	1.4nm,0.6s						
PDGK				⇑Lg	Lg	11 36 53.9	
	11nm,0.6s						
SHLS	**Shalkode**	3.46	257	*e*P	**Pn**	**11 36 09.9**	**+1.9**
	6.2nm,0.4s						
SHLS				*e*S	**Sn**	**11 36 49.8**	**+1.3**
	43nm,0.4s						
ZSN	**Zaisan**	3.47	9	*e*P	**Pb**	**11 36 15.9**	**-0.1**
	4.2nm,0.2s						
ZSN				*e*S	**Sb**	**11 36 59.7**	**+2.1**
	12nm,0.2s						
KAPS	**Kapalarasan**	3.59	292	*e*P	**Pb**	**11 36 18.1**	**0.0**
	1.7nm,0.2s						
KAPS				*e*S	**Sb**	**11 37 03.7**	**+2.5**
	13nm,0.5s						
UZB	**Uzynbulak**	3.77	258	*e*P	**Pb**	**11 36 20.6**	**-0.6**
	1.3nm,0.5s						
UZB				*e*S	**Sb**	**11 37 08.3**	**+1.7**
	5.7nm,0.5s						
KPKS	**Kokpek**	3.94	264	*e*P	**Pb**	**11 36 22.7**	**-1.4**
	3.1nm,0.3s						
KPKS				*e*S	**Sb**	**11 37 11.8**	**+0.3**
	30nm,0.5s						
KURBB	**Kurchatov Arra**	7.60	332	⇑Lg	Lg	11 39 09.6	
	11nm,0.8s						
KURK	**Kurchatov**	7.64	333	⇓Lg	Lg	11 39 10.9	
	6.4nm,0.8s						

*ATH **30** 11:37:00.8, 37°.82N×26°.72E, h25^{km}±1^{km}, ML2.4/4, Error ellipse: s-maj=3.0km s-min=1.4km az=90.0*
*ISK **30** 11:37:00.8, 37°.87N×26°.66E, h2^{km}, ML2.6/10*
*ISCJB **30** 11:37:01.7±0.5, 37°.86N±0°.03×26°.69E±0°.04, h5^{km}±5^{km}, Error ellipse: s-maj=5.7km s-min=3.7km az=150.3*
*CSEM **30** 11:37:01.6±0.2, 37°.84N×26°.66E, h8^{km}, ML2.4, Error ellipse: s-maj=3.8km s-min=3.0km az=57.0*
*DDA **30** 11:37:01.9, 37°.88N×26°.74E, h7^{km}, Ml2.9*
ISC 30 11:37:01.5±0.9, **37°.87N**±0°.02×**26°.69E**±0°.03, **h14**^{km}±6^{km}, **n30, σ0^s.34**/45, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMG	**Samos**	0.20	145	P	**Pb**	**11 37 06.5**	**-0.4**
SMG				S	**Sg**	**11 37 08.8**	**-0.3**
SMG				AML	AML	11 37 09.6	
	comp=E,2491µm,0.4s						
SMG				AML	AML	11 37 10.8	
	comp=N,2387µm,0.3s						
SMG	**Samos**	0.20	145	P	**Pg**	**11 37 06.2**	**+0.2**
SMG				S	**Sg**	**11 37 09.2**	**+0.1**
DGB	**˜zmir**	0.24	39	*i* P	**Pg**	**11 37 06.5**	**-0.2**
DGB				*i* S	**Sg**	**11 37 09.8**	**-0.4**
URLA	**Izmir**	0.50	351	PG	**Pg**	**11 37 11.4**	**+0.1**
URLA				SG	**Sb**	**11 37 19.2**	**+0.1**
URLA	**Izmir**	0.50	351	*i* P	**Pg**	**11 37 11.3**	**-0.1**
URLA				*i* S	**Sb**	**11 37 18.8**	**-0.3**
URLA	**Izmir**	0.50	351	*e*Pg	**Pg**	**11 37 11.4**	**+0.1**
URLA				S	**Sb**	**11 37 18.8**	**-0.3**
URLA				*e*Sg	**Sb**	**11 37 19.2**	**+0.1**
BLCB	**Balcova**	0.58	28	PG	**Pb**	**11 37 13.4**	**-0.1**
BLCB	**Balcova**	0.58	28	*e*Pg	**Pb**	**11 37 13.4**	**-0.1**
CHOS	**Chios island**	0.72	316	P	**Pg**	**11 37 15.4**	**-0.1**
CHOS				S	**Sn**	**11 37 27.8**	**-0.4**
CHOS				AML	AML	11 37 28.1	
	comp=E,751µm,0.4s						
CHOS				AML	AML	11 37 29.3	
	comp=N,731µm,0.3s						
CHOS	**Chios island**	0.72	316	P	**Pg**	**11 37 15.7**	**+0.1**
CHOS				S	**Sn**	**11 37 27.4**	**-0.8**
KRBN	**Karaburun**	0.73	351	PG	**Pb**	**11 37 15.8**	**-0.2**
KRBN	**Karaburun**	0.73	351	*e*Pg	**Pb**	**11 37 15.8**	**-0.2**
BODT	**Bodrum**	0.94	148	PG	**Pn**	**11 37 20.2**	**-0.1**
AYDB	**Zeytinkoy-Aydi**	0.95	85	PG	**Pn**	**11 37 20.3**	**-0.2**
AYDB	**Zeytinkoy-Aydi**	0.95	85	*e*Pg	**Pn**	**11 37 20.3**	**-0.2**
AYDN	**Tasoluk**	0.96	102	*i* P	**Pb**	**11 37 20.0**	**0.0**
AYDN				*i* S	**Sb**	**11 37 32.5**	**-0.1**
BDRM	**Kayabasi**	1.00	143	*e*P	**Pn**	**11 37 21.5**	**+0.4**
BDRM				*i* S	**Sn**	**11 37 34.8**	**-0.2**
MLSB	**Milas**	1.03	123	PG	**Pn**	**11 37 21.9**	**+0.3**
APE	**Apeiranthos**	1.22	230	P	**Pn**	**11 37 24.3**	**+0.2**
APE				S	**Sb**	**11 37 40.1**	**+0.1**
APE				AML	AML	11 37 43.9	
	comp=N,99µm,0.2s						
APE				AML	AML	11 37 46.9	
	comp=E,89µm,0.2s						
APE	**Apeiranthos**	1.22	230	P	**Pn**	**11 37 24.1**	**-0.1**
APE				S	**Sb**	**11 37 40.4**	**+0.4**
AKS	**Akhisar**	1.34	41	PN	**Pg**	**11 37 27.6**	**+0.3**
AKS	**Akhisar**	1.34	41	*e*Pn	**Pg**	**11 37 27.6**	**+0.3**

DAT	Datca	1.34	148	PN	Pg	11 37 27.4	+0.1
PRK	Paraskevi	1.41	347	P	Pg	11 37 28.2	-0.5
PRK				S	Sg	11 37 48.0	+1.0
PRK				AML	AML	11 37 55.3	
	comp=E,223µm,0.7s						
PRK				AML	AML	11 37 58.2	
	comp=N,346µm,0.7s						
PRK	Paraskevi	1.41	347	P	Pb	11 37 28.0	+0.4
PRK				S	Sg	11 37 47.7	+0.6
YER	Yerkesik	1.46	120	PN	Pg	11 37 29.4	-0.2
SIGR	SIGRI	1.49	334	P	Pn	11 37 27.6	-0.2
SIGR	SIGRI	1.49	334	P	Pn	11 37 28.2	+0.4
KULA	Kula-Manisa	1.68	67	PN	Pb	11 37 32.6	+0.4
KULA	Kula-Manisa	1.68	67	ePn	Pb	11 37 32.6	+0.4

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*IDC **30** 11:43:44.7±1.1, 33°.14N×76°.90E, h0km, mb3.8/12, mb1 4.0/15, mb1mx3.7/69, mbtmp3.8/15, ML3.5/3, MS4.0/1, Ms1 4.0/1, ms1mx2.3/66, Error ellipse: s-maj=36.0km s-min=14.9km az=58.0*

*ISCJB **30** 11:43:45.6±0.7, 33°.31N±0°.06×77°.1E±0°.1, h10km, mb3.7/11, MS4.0/1, Error ellipse: s-maj=13.8km s-min=7.2km az=162.3*

*NNC **30** 11:43:50.1±5.7, 33°.48N×76°.76E, h0km, mb4.2, mpv4.0, Error ellipse: s-maj=46.5km s-min=40.6km az=26.0*

ISC 30 11:43:47.5±0.8**, 33°.27N**±0°.06×**76°.9E**±0°.1**, h10km, n22, σ1ˢ95**/28**, mb3.8**/11**, 4C-6D, Kashmir-India border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NDI	New Delhi	4.58	177	eP	Pb	11 45 10.5	+2.5
SFK	Sufi-Kurgan	7.26	339	⇓Pn	Pn	11 45 35.7	+1.8
	5.1nm,0.4s						
SFK				⇓Sn	Sn	11 46 59.6	+3.1
	9.6nm,0.4s						
AAK	Ala-Archa	9.54	349	Pn	Pn	11 46 07.7	+2.6
	0.6nm,0.3s,baz=157,slow=7.7,SNR=2.8						
AAK				Sn	Sn	11 47 53.6	+1.3
	0.3nm,0.3s,baz=193,slow=14,SNR=2.0						
MNAS	Manas	9.83	341	⇑Pn	Pn	11 46 09.7	+0.6
	2.7nm,0.5s						
MNAS				⇑Sn	Sn	11 47 55.9	-3.7
	5.5nm,0.7s						
PDGK	Podgornoye	10.24	11	⇓Pn	Pn	11 46 16.1	+1.5
	2.5nm,0.4s						
PDGK				⇓Sn	Sn	11 48 09.0	-0.6
	0.7nm,0.4s						
KK31	Karatay Array	11.03	335	⇓Pn	Pn	11 46 25.0	-0.2
	2.0nm,0.5s,baz=151,slow=14,SNR=24						
KK31				⇑Sn	Sn	11 48 26.0	-2.6
	3.7nm,0.5s,baz=152,slow=22,SNR=13						
MK31	Makanchi Array	14.11	15	⇑P	Pn	11 47 07.9	+0.5
	1.0nm,0.6s,baz=197,slow=12,SNR=10.0						
MK31				⇓S	Sn	11 49 48.8	+4.7
	1.5nm,0.6s,baz=185,slow=24,SNR=4.3						
MKAR	Makanchi Array	14.11	15	Pn	Pn	11 47 07.9	+0.5
	0.2nm,0.3s,baz=196,slow=12,SNR=11						
MKAR				Sn	Sn	11 49 41.5	-2.6
	0.3nm,0.3s,baz=142,slow=19,SNR=5.5						
KURBB	Kurchatov Arra	17.38	3	P	Pn	11 47 48.6	-1.3
	0.1nm,0.3s,baz=187,slow=11,SNR=14						
BVAR	Borovoye Array	20.29	349	P	P	11 48 23.9	+0.7
	1.1nm,0.4s,baz=160,slow=12,SNR=9.5						
ZALV	Zalesovo Beam	21.42	13	P	P	11 48 36.2	+0.9
	1.1nm,0.5s,baz=212,slow=13,SNR=2.9						
AKTO	Aktyubinsk	22.08	327	P	P	11 48 41.8	-0.7
	2.0nm,0.5s,baz=126,slow=14,SNR=4.8						
CMAR	Chiang Mai Arr	24.64	121	P	P	11 49 08.1	-0.3
	3.6nm,0.8s,baz=306,slow=9.6,SNR=14						
SONM	Songino Array	26.51	48	P	P	11 49 24.7	-0.5
	0.5nm,0.5s,baz=231,slow=9.4,SNR=3.9						
FINES	FINESS Array B	42.85	327	P	P	11 51 45.5	0.0
	0.9nm,0.5s,baz=110,slow=11,SNR=6.7						
JOW	Kunigami	44.56	84	LR	LR	12 13 19.8	
	comp=Z,181nm,21.1s,baz=178,slow=40						
ARCES	ARCESS Array B	45.98	338	P	P	11 52 10.7	+0.3
	2.9nm,0.6s,baz=108,slow=8.4,SNR=19						
HFS	Hagfors	48.57	323	P	P	11 52 30.2	-0.5
	1.1nm,0.6s,baz=93,slow=13,SNR=3.6						
WRA	Warramunga Arr	76.16	125	P	P	11 55 34.0	-2.0
	0.8nm,0.8s,baz=320,slow=6.4,SNR=7.4						
ILAR	Eielson Array	76.45	18	P	P	11 55 36.5	-0.6
	0.3nm,0.7s,baz=312,slow=4.7,SNR=4.8						
ASAR	Alice Springs	78.44	128	P	P	11 55 46.6	-2.1
	0.3nm,0.6s,baz=316,slow=6.2,SNR=8.2						
YKA	Yellowknife Ar	84.12	5	P	P	11 56 17.2	-1.0
	0.5nm,0.6s,baz=345,slow=5.4,SNR=4.9						

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*ATH **30** 11:44:44.5, 37°.82N×26°.68E, h21km±1km, ML2.6/3, Error ellipse: s-maj=2.4km s-min=1.0km az=136.0*

*ISK **30** 11:44:44.9, 37°.90N×26°.73E, h8km, ML2.4/7*

*CSEM **30** 11:44:45.0±0.2, 37°.84N×26°.66E, h5km, ML2.6, Error ellipse: s-maj=4.8km s-min=3.5km az=56.0*

*THE **30** 11:44:45.1, 37°.88N×26°.70E, h2km±3km, ML2.4/2, Error ellipse: s-maj=16.7km s-min=0.5km az=52.0*

*DDA **30** 11:44:45.6, 37°.89N×26°.76E, h7km, Ml2.9*

ISC 30 11:44:45.0±0.9**, 37°.86N**±0°.02×**26°.67E**±0°.02**, h11**km±7km**, n44, σ0ˢ69**/73**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMG	Samos	0.20	139	P	Pg	11 44 49.4	+0.1
SMG				S	Sg	11 44 52.6	+0.5
SMG				AML	AML	11 44 53.8	
	comp=N,2368µm,0.2s						
SMG				AML	AML	11 44 53.9	
	comp=E,2974µm,0.5s						
SMG	Samos	0.20	139	P	Pg	11 44 49.3	+0.1
SMG				S	Sg	11 44 52.7	+0.6
SMG	Samos	0.20	139	P	Pg	11 44 49.3	+0.1
SMG				S	Sg	11 44 52.6	+0.5
DGB	˜zmir	0.26	41	i P	Pg	11 44 49.2	-1.1
DGB				i S	Sg	11 44 53.1	-0.7
URLA	Izmir	0.50	353	PG	Pg	11 44 54.6	-0.3
URLA				SG	Sg	11 45 01.9	+0.4
URLA	Izmir	0.50	353	i P	Pg	11 44 54.5	-0.3
URLA				i S	Sb	11 45 02.4	-0.9
URLA	Izmir	0.50	353	ePg	Pg	11 44 54.6	-0.3
URLA				S	Sb	11 45 02.4	-0.9
BLCB	Balcova	0.60	29	PG	Pg	11 44 56.1	-0.6
BLCB				SG	Sg	11 45 03.5	-1.1
BLCB	Balcova	0.60	29	ePg	Pg	11 44 56.1	-0.6
CHOS	Chios island	0.72	318	PG	Pg	11 44 59.1	+0.2
CHOS				SG	Sb	11 45 09.7	+0.3
CHOS	Chios island	0.72	318	P	Pg	11 44 58.9	+0.1
CHOS				S	Sb	11 45 10.2	+0.7
CHOS				AML	AML	11 45 11.0	
	comp=E,1003µm,0.4s						
CHOS				AML	AML	11 45 12.3	
	comp=N,887µm,0.5s						
CHOS	Chios island	0.72	318	P	Pg	11 44 58.9	+0.1
CHOS				S	Sb	11 45 10.1	+0.7
CHOS	Chios island	0.72	318	ePg	Pg	11 44 59.1	+0.2
CHOS				eSg	Sb	11 45 09.7	+0.3
CHOS				S	Sg	11 45 10.0	+1.7
BODT	Bodrum	0.94	147	PG	Pb	11 45 03.7	+0.3
BODT	Bodrum	0.94	147	P	Pb	11 45 03.5	+0.1
BODT				S	Sb	11 45 17.0	+1.1
BODT	Bodrum	0.94	147	P	Pb	11 45 03.5	+0.1
AYDB	Zeytinkoy-Aydi	0.97	84	PG	Pg	11 45 03.2	-0.4
AYDB	Zeytinkoy-Aydi	0.97	84	ePg	Pg	11 45 03.2	-0.4
AYDN	Tasoluk	0.98	101	i P	Pb	11 45 03.8	-0.2
AYDN				i S	Sg	11 45 15.8	-0.8
AYDN	Tasoluk	0.98	101	P	Pb	11 45 03.8	-0.2
AYDN				S	Sg	11 45 15.8	-0.8
BDRM	Kayabasi	1.00	142	eP	Pb	11 45 04.9	+0.5
BDRM				i S	Sb	11 45 18.2	+0.6
BDRM	Kayabasi	1.00	142	P	Pb	11 45 04.9	+0.5
MLSB	Milas	1.04	122	PG	Pb	11 45 05.1	0.0
MLSB	Milas	1.04	122	ePg	Pb	11 45 05.1	0.0
AMGA	Amorgos Island	1.20	211	P	Pb	11 45 05.1	-2.6
AMGA				S	Sg	11 45 24.3	+0.8
AMGA	Amorgos Island	1.20	211	S	Sg	11 45 23.5	0.0
APE	Apeiranthos	1.20	229	P	Pb	11 45 06.7	-1.1
APE				S	Sg	11 45 22.8	-0.9
APE	Apeiranthos	1.20	229	P	Pb	11 45 06.8	-1.0
APE				S	Sg	11 45 23.0	-0.7
DAT	Datca	1.34	147	PN	Pb	11 45 10.6	+0.4
DAT	Datca	1.34	147	ePn	Pb	11 45 10.6	+0.4
PRK	Paraskevi	1.42	347	P	Pg	11 45 12.0	-0.2
PRK				S	Sg	11 45 31.7	+1.0
PRK				AML	AML	11 45 38.6	
	comp=E,384µm,0.6s						
PRK				AML	AML	11 45 41.5	
	comp=N,822µm,0.8s						
PRK	Paraskevi	1.42	347	P	Pg	11 45 11.9	-0.3
SIGR	SIGRI	1.49	335	PN	Pn	11 45 12.5	+0.8
SIGR	SIGRI	1.49	335	P	Pb	11 45 13.2	+0.4
SIGR				S	Sg	11 45 33.4	+0.3
SIGR	SIGRI	1.49	335	ePn	Pn	11 45 12.5	+0.8
SIGR	SIGRI	1.49	335	P	Pb	11 45 13.0	+0.3
SIGR				S	Sg	11 45 33.5	+0.5
MANT	Manisa	1.61	66	i P	Pg	11 45 15.7	-0.3
MANT				i S	Sn	11 45 34.8	+0.2
MANT	Manisa	1.61	66	P	Pg	11 45 15.7	-0.3
MANT				S	Sn	11 45 34.8	+0.2
KULA	Kula-Manisa	1.70	67	PN	Pn	11 45 14.9	+0.2
KULA	Kula-Manisa	1.70	67	ePn	Pn	11 45 14.9	+0.2
STEP	BALIKESIR_Sava	1.72	28	i P	Pg	11 45 17.6	-0.4
STEP				i S	Sg	11 45 40.9	+0.5
STEP	BALIKESIR_Sava	1.72	28	P	Pg	11 45 17.6	-0.4
STEP				S	Sg	11 45 40.9	+0.5
BAYC	CANAKKALE_Bayr	1.88	357	i P	Pn	11 45 16.1	-1.0
BAYC				i S	Sg	11 45 46.1	+0.6
BAYC	CANAKKALE_Bayr	1.88	357	P	Pn	11 45 16.1	-1.0
BAYC				S	Sg	11 45 46.1	+0.6

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*NIED **30** 12:00:00, 37°.40N×142°.40E, h5km, Mw3.7 Best double couple: M₀4.67000×10¹⁴ NP1:φₛ314.00000°, δ10.00000°, λ-126.00000°. NP2:φₛ171.00000°, δ82.00000°, λ-84.00000°.*

*IDC **30** 12:00:45.8±2.2, 37°.27N×142°.51E, h0km, mb3.7/3, mb1 3.6/6, mb1mx3.4/65, mbtmp3.6/6, ML3.4/3, Error ellipse: s-maj=47.6km s-min=24.0km az=93.0*

*ISCJB **30** 12:00:46.7±0.9, 37°.29N±0°.04×142°.47E±0°.09, h21km, mb3.6/3, Error ellipse: s-maj=10.4km s-min=5.7km az=1.6*

*JMA **30** 12:00:47.4±0.3, 37°.35N×142°.36E, h18km±4km, M3.7*

ISC 30 12:00:49.7±1.3**, 37°.33N**±0°.05×**142°.27E**±0°.09**, h21km, n19, σ1ˢ15**/26**, mb3.6**/3**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JFK	Kawauchi	1.11	272	P	Pn	12 01 09.0	-1.1
ONAJ	Iwakimizuishiy	1.20	259	P	Pn	12 01 10.2	-1.0
JMM	Marumori	1.29	295	P	Pn	12 01 11.3	-1.2
JIO	Ouri	1.34	327	P	Pn	12 01 11.6	-1.5
JIO				eS	Sn	12 01 28.8	-1.5
JFT	Otama	1.55	278	P	Pn	12 01 16.2	+0.1
JFT				eS	Sb	12 01 36.9	0.0
JOU	Okura	1.64	310	P	Pn	12 01 17.0	-0.3
JOU				eS	Sn	12 01 38.4	+0.7
JMK	Ichinoseki	1.82	333	P	Pn	12 01 19.0	-0.7
JYS	Shirataka	1.96	298	P	Pn	12 01 22.2	+0.5
JFY	Yanaizu	2.04	273	P	Pn	12 01 23.2	+0.3
JYK	Kaneyama	2.19	317	P	Pn	12 01 24.6	-0.2
JOM	Ohasama	2.27	341	P	Pn	12 01 25.9	-0.1
JOM				eS	Sn	12 01 55.3	+1.9
JAG	Ashikaga	2.43	249	P	Pn	12 01 28.1	-0.1
MJAR	Matsushiro Arr	3.35	258	Pn	Pn	12 01 42.0	+1.3
	1.8nm,0.3s,baz=82,slow=14,SNR=18						
MJAR				Sn	Sb	12 02 28.3	-0.3
	1.2nm,0.3s,baz=46,slow=12,SNR=5.1						
MAT	Matsushiro	3.35	258	P	Pn	12 01 43.1	+2.3
MAT				eS	Sb	12 02 26.2	-2.4
JHJ	Hachijo jima 2	4.67	207	Pn	Pn	12 01 58.0	-1.0
	7.7nm,0.3s,baz=252,slow=19,SNR=1.6						
JHJ				Sn	Sn	12 02 51.9	-0.6
	7.4nm,0.3s,baz=270,slow=20,SNR=1.5						
ASAJ	Asahikawa	6.78	2	Pn	Pn	12 02 27.0	-1.0
	0.7nm,0.3s,baz=223,slow=6.3,SNR=9.0						
SONM	Songino Array	28.19	303	P	P	12 06 41.5	+0.7
	0.6nm,0.7s,baz=105,slow=9.3,SNR=3.9						
KURBB	Kurchatov Arra	46.36	308	P	P	12 09 15.0	+0.9
	1.0nm,0.8s,baz=81,slow=7.9,SNR=5.9						
WRA	Warramunga Arr	57.45	189	P	P	12 10 36.4	-0.7
	0.6nm,1.0s,baz=6.9,slow=7.5,SNR=2.7						

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*ISCJB **30** 12:10:09.5±0.4, 39°.96N±0°.03×33°.56E±0°.03, h0km, Error ellipse: s-maj=4.1km s-min=3.5km az=141.4*

*CSEM **30** 12:10:09.6±0.2, 39°.97N×33°.56E, h1km, ML2.6, Error ellipse: s-maj=3.8km s-min=3.2km az=126.0, Suspected Mining explosion.*

*ISK **30** 12:10:09.0, 39°.97N×33°.54E, h4km, ML2.1/6, Suspected Mining explosion.*

*DDA **30** 12:10:09.8, 39°.93N×33°.59E, h7km, Ml2.6*

ISC 30 12:10:09.3±0.8**, 39°.98N**±0°.03×**33°.55E**±0°.03**, h0km, n32, σ0ˢ61**/43**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ELDT	Eldivan	0.51	349	i P	Pg	12 10 19.7	+0.6
ELDT	Eldivan	0.51	349	P	Pg	12 10 19.7	+0.6
BBAL	Bala	0.55	217	i P	Pg	12 10 20.1	+0.3
BBAL	Bala	0.55	217	P	Pg	12 10 20.1	+0.3
ANTO	Ankara	0.59	259	PG	Pg	12 10 20.9	+0.2
LOD	Lodumlu	0.61	261	PG	Pg	12 10 21.2	+0.1
KAMT	Kaman	0.63	169	PG	Pg	12 10 21.6	+0.3
KAMT				SG	Sg	12 10 30.6	+1.2
KAMT	Kaman	0.63	169	ePg	Pg	12 10 21.6	+0.3
KAMT				eSg	Sg	12 10 30.6	+1.2
AFSR	Af¯ar-Bala (A	0.65	215	PG	Pg	12 10 22.0	+0.2
AFSR				SG	Sg	12 10 31.5	+1.2
CDAG	Cicekdag	0.73	119	i P	Pg	12 10 23.4	+0.2
CDAG	Cicekdag	0.73	119	P	Pg	12 10 23.4	+0.2
CORM	Corum	0.85	76	PG	Pg	12 10 26.1	+0.5
CORM				SG	Sb	12 10 38.6	-0.4
CORM	Corum	0.85	76	ePg	Pg	12 10 26.1	+0.5
CORM				eSg	Sb	12 10 38.6	-0.4
CMDR	Camlidere-ANKA	0.97	302	i P	Pn	12 10 30.2	-0.1
CMDR				i S	Sn	12 10 44.3	-0.6
CMDR	Camlidere-ANKA	0.97	302	P	Pn	12 10 30.2	-0.1
ILGA	Ilgaz	1.07	7	i P	Pb	12 10 30.4	-0.5
ILGA	Ilgaz	1.07	7	P	Pb	12 10 30.4	-0.5
COAL	Corum-Alaca	1.13	76	i P	Pg	12 10 30.8	-0.2
COAL				i S	Sn	12 10 51.3	+2.5
COAL	Corum-Alaca	1.13	76	P	Pg	12 10 30.8	-0.2
CTAK	Corum_Osmancik	1.16	55	i P	Pb	12 10 31.9	-0.3
CTAK				i S	Sn	12 10 49.0	-0.5
CTAK	Corum_Osmancik	1.16	55	P	Pb	12 10 32.0	-0.3
CTAK				S	Sn	12 10 49.0	-0.5
AKSY	AKSARAY - Alti	1.34	173	i P	Pg	12 10 34.8	-0.2
AKSY				i S	Sg	12 10 52.3	-0.1
AKSY	AKSARAY - Alti	1.34	173	P	Pg	12 10 34.8	-0.2
AKSY				S	Sg	12 10 52.3	-0.1
YOZ	Yozgat	1.40	104	PN	Pg	12 10 36.0	-0.2
AUMIH	MIHALICIK	1.59	266	PN	Pn	12 10 38.7	-0.2
AUMIH	MIHALICIK	1.59	266	ePn	Pn	12 10 38.7	-0.2
AUSIV	SIVRIHISAR	1.65	251	PN	Pn	12 10 39.4	-0.2
AUSIV	SIVRIHISAR	1.65	251	ePn	Pn	12 10 39.4	-0.2
KIZT	Kizilcal	1.70	230	PN	Pn	12 10 40.0	-0.3
KIZT	Kizilcal	1.70	230	ePn	Pn	12 10 40.0	-0.3
SULT	Sultanhani-AKS	1.78	181	PN	Pn	12 10 41.2	-0.2
SULT	Sultanhani-AKS	1.78	181	ePn	Pn	12 10 41.2	-0.2

JMA 30 12:12:18.8, 43°.42N×142°.55E, h3km±1km**, M-0.3, Hokkaido region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JKK2	Kamakawa 2	0.47	18	eS	Sg	12 12 34.6	+0.5

WEL 30 12:19:12.4±1.5**, 47°S**±8°×**16°6E**±°**, h5km, ML4.0**/7**, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PYZ	Puysegur Point	0.60	48	P	Pb	12 19 24.7	-0.6
PYZ				S	Sb	12 19 33.6	-0.5
DCZ	Deep Cove	1.35	36	P	Pn	12 19 34.4	-3.4
DCZ				S	Sb	12 19 50.5	-5.1
APZ	The Paps	1.37	102	P	Pn	12 19 37.4	-0.8
APZ				S	Sb	12 19 55.7	-0.7
WHZ	Wether Hill Ro	1.49	64	P	Pn	12 19 39.2	-0.6
WHZ				S	Sn	12 19 58.3	-1.3
MLZ	Mavora Lakes	1.88	51	P	Pn	12 19 46.0	+0.7
MLZ				S	Sg	12 20 13.3	+0.5
MSZ	Milford Sound	2.31	36	P	Pb	12 19 53.7	-0.8
TUZ	Tuapeka	2.57	78	P	Pn	12 19 55.4	+0.8
EAZ	Earnscleugh	2.65	61	P	Pn	12 19 57.2	+1.5
WKZ	Wanaka	2.72	51	P	Pb	12 19 59.6	-1.9
ODZ	Otahua Downs	3.56	66	P	Pn	12 20 06.9	-1.4
LBZ	Lake Benmore	3.64	55	P	Pn	12 20 09.9	+0.5

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*ISCJB **30** 12:38:51.2±0.8, 52°.3N±0°.1×170°.48W±0°.08, h10km, mb3.5/4, MS2.6/1, Error ellipse: s-maj=19.0km s-min=4.1km az=160.7*

*NEIC **30** 12:38:54.4±0.0, 52°.42N×170°.58W, h26km, ML3.6(AEIC), After AEIC.*

*IDC **30** 12:39:06.4±9.4, 51°.76N×166°.92W, h0km, mb3.6/4, mb1 4.0/6, mb1mx3.4/84, mbtmp3.7/6, ML3.0/2, MS2.8/2, Ms1 2.9/2, ms1mx2.3/63, Error ellipse: s-maj=163.5km s-min=38.3km az=88.0*

ISC 30 12:38:52.1±1.0**, 52°.3N**±0°.1×**170°.48W**±0°.06**, h10km, n30, σ1ˢ51**/27**, mb3.5**/4**, Fox Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NIKH	Nikolski High	1.21	54	P	Pb	12 39 14.5	-0.5
NIKH				S	Sb	12 39 30.0	-0.7
OKSO	Okmok South	1.77	52	P	Pn	12 39 23.3	+0.5
OKAK	Okmok	1.83	44	P	Pn	12 39 22.8	-0.7
OKAK				S	Sn	12 39 43.1	-3.5
OKTU	Okmok Mt. Tuli	1.85	52	P	Pn	12 39 24.2	+0.4
OKER	Okmok East Rim	1.88	50	P	Pn	12 39 25.1	+0.8
KOFP	Korovin Flat P	2.22	271	P	Pn	12 39 29.3	+0.3
KOKL	Mount Kliuchef	2.29	273	P	Pn	12 39 30.1	+0.3
ATKA	Atka Island	2.29	270	P	Pn	12 39 29.5	-0.3
ATKA				S	Sn	12 39 56.4	-1.6
KOWE	Korovin West	2.32	274	P	Pn	12 39 31.0	+0.7
MREP	Makushin Rep't	2.73	54	P	Pn	12 39 36.4	+0.5
MSW	Makushin Switc	2.77	52	P	Pn	12 39 37.8	+1.4
MSW				S	Sn	12 40 08.9	-0.9
MTBL	Makushin Table	2.85	52	P	Pn	12 39 38.8	+1.3
UNV	Unalaska Valle	2.87	55	P	Pn	12 39 39.0	+1.2
UNV				S	Sn	12 40 12.8	+0.5
AKRB	Akutan Reef Bi	3.23	53	P	Pn	12 39 44.7	+1.8
AKGG	Akutan Green G	3.31	53	P	Pn	12 39 45.0	+1.2
GSMY	Great Sitkin M	3.44	268	P	Pn	12 39 46.5	+0.8
SPIA	Saint Paul Isl	4.91	1	P	Pn	12 40 05.9	+0.1
KDAK	Kodiak Island	11.64	55	Pn	Pn	12 41 37.4	-0.5
	0.2nm,0.3s,baz=119,slow=18,SNR=5.7						
ILAR	Eielson Array	17.41	35	Pn	P	12 43 00.8	+4.7
	0.0nm,0.3s,baz=240,slow=14,SNR=16						
ILAR				LR	LR	12 50 09.5	
	comp=Z,43nm,18.1s,baz=105,slow=40						
DLBC	Dease Lake	23.51	59	P	P	12 44 01.9	-0.1
	4.9nm,1.1s,baz=278,slow=9.3,SNR=6.0						
H11N2	WAKE ISLAND Hy	36.97	217	T	T	13 25 10.3	
	baz=22,slow=75,SNR=12						
H11N3	WAKE ISLAND Hy	36.97	217	T	T	13 25 23.6	
	baz=22,slow=75,SNR=13						
H11N1	WAKE ISLAND Hy	36.98	217	T	T	13 25 16.9	
	baz=22,slow=75,SNR=11						
H11S1	WAKE ISLAND Hy	38.16	217	T	T	13 27 03.7	
	baz=22,slow=76,SNR=61						
H11S2	WAKE ISLAND Hy	38.17	217	T	T	13 27 11.6	
	baz=22,slow=76,SNR=82						
H11S3	WAKE ISLAND Hy	38.18	217	T	T	13 27 11.8	
	baz=22,slow=76,SNR=51						
NVAR	Mina Array Bea	38.34	90	P	P	12 46 10.7	-2.4
	0.3nm,0.7s,baz=281,slow=9.1,SNR=2.9						
MJAR	Matsushiro Arr	39.01	267	LR	LR	13 01 50.7	
	comp=Z,9.7nm,21.9s,baz=235,slow=33						
PDAR	Pinedale Array	41.09	78	P	P	12 46 35.2	-0.8
	0.3nm,0.3s,baz=306,slow=5.4,SNR=5.0						
TXAR	Lajitas Array	53.43	88	P	P	12 48 10.9	-1.2
	0.6nm,0.8s,baz=295,slow=5.8,SNR=7.9						

WEL 30 12:43:41.5, 40°.1S±0°.9×**17°5E**±°**, h27**km±2km**, ML3.7**/51**, Cook Strait**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WAZ	Wanganui	0.31	9	P	Pn	12 43 49.5	-0.7
WAZ				S	Sn	12 43 55.5	-0.3
OHWZ	Ohakea	0.33	117	P	Pb	12 43 49.2	0.0
OHWZ				S	Sb	12 43 55.2	+0.8
LREZ	Lake Rotokare	0.72	326	P	Pn	12 43 56.7	+0.8
LREZ				S	Sn	12 44 08.7	+2.6
POWZ	Post Office Ro	0.73	118	P	Pb	12 43 55.6	0.0
POWZ				S	Sb	12 44 05.7	+0.5
OGWZ	Otaki Gorge	0.78	166	P	Pb	12 43 56.3	-0.3
OGWZ				S	Sb	12 44 06.3	-0.5
MRZ	Mangatainoka R	0.78	141	P	Pb	12 43 56.6	0.0
MRZ				S	Sb	12 44 06.9	+0.1
MTVZ	Mangateitei	0.79	32	P	Pb	12 43 56.4	-0.3
MTVZ				S	Sn	12 44 08.0	0.0
TSZ	Takapari Road	0.80	90	P	Pb	12 43 56.5	-0.3
TSZ				S	Sb	12 44 06.8	-0.4
KIW	Kapiti Island	0.80	181	P	Pb	12 43 56.2	-0.7
KIW				S	Sb	12 44 06.2	-1.2
PKVZ	Pokaka	0.83	23	P	Pb	12 43 56.7	-0.7
TRVZ	Turoa	0.90	33	P	Pn	12 43 57.9	-0.6
MOVZ	Moawhango	0.91	45	P	Pn	12 43 57.8	-0.8
MOVZ				S	Sb	12 44 09.7	-0.8
DRZ	Dome Shelter	0.92	32	P	Pn	12 43 58.5	-0.5
PREZ	Palmer Road	0.93	320	P	Pb	12 44 00.0	+1.0
PREZ				S	Sn	12 44 14.3	+3.1
WHVZ	Whangaehu Hut	0.93	34	P	Pn	12 43 58.4	-0.6
FWVZ	Far West T-bar	0.94	31	P	Pn	12 43 58.4	-0.7
VRZ	Vera Road	0.94	352	P	Pb	12 43 59.5	+0.3
PRWZ	Pori Road	0.94	122	P	Pb	12 43 59.5	+0.2
HOWZ	Holdsworth Sta	0.95	152	P	Pn	12 43 59.2	+0.1
HOWZ				S	Sn	12 44 11.8	-0.1
TUVZ	Tukino	0.97	36	P	Pn	12 43 59.3	-0.2
COVZ	Chateau Observ	0.98	29	P	Pn	12 43 59.0	-0.6
DVHZ	Dannevirke	0.98	105	P	Pb	12 43 60.0	+0.1
PNHZ	Pukenui	0.99	82	P	Pn	12 43 59.4	-0.2
PNHZ				S	Sb	12 44 12.3	-0.5
NGZ	Ngauruhoe	1.02	31	P	Pn	12 43 59.8	-0.4
TIWZ	Tintock	1.03	135	P	Pb	12 44 00.7	+0.1
DREZ	Durham Road	1.03	327	P	Pb	12 44 01.6	+0.8
NMEZ	Namu Road	1.03	308	P	Pb	12 44 01.7	+1.0
KHEZ	Kahui Hut	1.04	317	P	Pb	12 44 01.9	+1.1
BHHZ	Black Hill Sta	1.04	57	P	Pn	12 43 59.6	-0.8
CAW	Cannon Point	1.05	174	P	Pn	12 44 00.5	-0.1
TWVZ	Taurewa	1.06	22	P	Pn	12 44 00.1	-0.6
DUWZ	D'Urville Isla	1.07	226	P	Pn	12 44 00.5	-0.2
WTVZ	West Tongariro	1.07	29	P	Pn	12 44 00.4	-0.4
MHEZ	Mangahewa	1.08	334	P	Pb	12 44 02.6	+1.0
KRVZ	Karewarewa	1.11	30	P	Pn	12 44 01.1	-0.3
PKE	Pukeiti	1.13	320	P	Pb	12 44 03.1	+0.8
WPHZ	Waipukurau	1.16	91	P	Pb	12 44 03.3	+0.4
MTW	Mount Morrison	1.18	158	P	Pb	12 44 02.8	-0.5
BFZ	Birch Farm	1.19	122	P	Pn	12 44 02.5	+0.2
KRHZ	Kereru	1.19	70	P	Pn	12 44 02.4	0.0
KATZ	Kakaramea	1.23	29	P	Pn	12 44 03.3	+0.2
ANWZ	Angora Road	1.25	109	P	Pn	12 44 03.8	+0.6
TCW	Tory Channel	1.25	203	P	Pn	12 44 03.1	-0.2
TMWZ	Te Maipa	1.28	145	P	Pn	12 44 04.0	+0.4
CPWZ	Castlepoint	1.29	132	P	Pb	12 44 05.7	+0.5
RITZ	Rihia Road	1.30	34	P	Pn	12 44 04.5	+0.6
KWHZ	Kaweka Forest	1.32	62	P	Pn	12 44 04.6	+0.4
PRHZ	Porangahau	1.33	100	P	Pb	12 44 06.0	+0.2
BHW	Baring Head	1.35	182	P	Pn	12 44 05.3	+0.7
RATZ	Rangitukua	1.36	29	P	Pn	12 44 05.0	+0.3
PAWZ	Paruwai Farm	1.38	164	P	Pb	12 44 06.0	-0.6
MSWZ	Moikau Station	1.38	170	P	Pn	12 44 05.6	+0.6
TRWZ	Traveller	1.46	157	P	Pb	12 44 07.6	-0.4
HATZ	Hinemaiaia	1.47	38	P	Pn	12 44 06.8	+0.4
PXZ	Pawanui	1.49	90	P	Pb	12 44 08.9	+0.4
MCHZ	McNeill Hill	1.50	66	P	Pb	12 44 08.6	0.0
BKZ	Black Stump Fm	1.50	54	P	Pn	12 44 07.5	+0.8
KAHZ	Kahuranaki	1.52	81	P	Pb	12 44 08.2	-0.9
PLWZ	Palliser	1.53	171	P	Pn	12 44 08.0	+0.9
HIZ	Hauiti	1.54	358	P	Pn	12 44 08.0	+0.8
TUWZ	Tuamarina	1.56	208	P	Pn	12 44 07.6	+0.2
WHTZ	Whakaora	1.60	30	P	Pb	12 44 11.9	+1.4
NNZ	Nelson	1.65	225	P	Pn	12 44 09.2	+0.5
MRHZ	Matea Rd	1.68	44	P	Pn	12 44 09.7	+0.5
KUTZ	Kaahu Road	1.71	24	P	Pn	12 44 10.5	+0.9
NMHZ	Naumai	1.74	57	P	Pb	12 44 12.1	-0.7
CMWZ	Cape Campbell	1.77	197	P	Pb	12 44 13.4	0.0
ARHZ	Aropaoanui	1.78	64	P	Pb	12 44 13.5	0.0
TLZ	Tolley Road	1.79	16	P	Pn	12 44 10.4	-0.2
WPRZ	Whakapapatarin	1.81	32	P	Pn	12 44 11.8	+0.9

BSWZ	Blackbirch Sta	1.84	205	P	Pn	12 44 12.6	+1.3
ALRZ	Allen Road	1.85	37	P	Pn	12 44 12.0	+0.5
MTHZ	Maungataniwha	1.91	52	P	Pn	12 44 11.4	-1.0
PRRZ	Plateau Road	1.93	37	P	Pn	12 44 13.1	+0.6
HRRZ	Handcock Road	1.97	33	P	Pb	12 44 17.0	+0.2
QRZ	Quartz Range	1.98	246	P	Pn	12 44 14.0	+0.8
HSRZ	Hossack Road	2.02	31	P	Pn	12 44 15.0	+1.2
RAHZ	Arahi	2.02	56	P	Pb	12 44 16.4	-1.2
WHHZ	Waihua	2.04	62	P	Pb	12 44 19.9	+2.1
RRRZ	Republican Roa	2.11	36	P	Pn	12 44 15.8	+0.6
MUGZ	Murupara	2.13	43	P	Pn	12 44 17.3	+1.9
RTZ	Ruatahuna	2.15	49	P	Pn	12 44 17.7	+2.0
SNGZ	Shannon Statio	2.26	57	P	Pn	12 44 19.3	+2.1
THZ	Tophouse	2.29	221	P	Pn	12 44 18.7	+1.1
RAGZ	Rawiri	2.48	52	P	Pb	12 44 24.2	-1.3
TGRZ	Tauranga	2.55	25	P	Pb	12 44 24.6	-1.9
OPRZ	Ohinepanea	2.55	30	P	Pb	12 44 23.9	-2.7
KHZ	Kahutara	2.58	203	P	Pn	12 44 21.9	+0.5
DSZ	Denniston Nort	2.91	234	P	Pn	12 44 27.2	+1.2
MKAZ	Moumakai	2.95	4	P	Pn	12 44 26.9	+0.2
AWAZ	Awhitu Peninsu	3.00	356	P	Pn	12 44 28.8	+1.6
ETAZ	East Tamaki Re	3.10	0	P	Pn	12 44 29.3	+0.7
LTZ	Lake Taylor	3.38	215	P	Pn	12 44 32.6	+0.1
INZ	Inchbonnie	3.74	223	P	Pn	12 44 37.7	+0.3
OXZ	Oxford	3.92	213	P	Pn	12 44 38.7	-1.2
AKCZ	Akaroa Harbour	4.10	201	P	Pn	12 44 41.3	-1.0
WVZ	Waitaha Valley	4.35	225	P	Pn	12 44 48.9	+3.0

MEX ***30*** *13:04:03.6±0.4, 15°.59N×98°.81W, h16^{km}±999^{km}, MD3.9*
IDC ***30*** *13:04:05.0±6.7, 15°.95N×98°.39W, h0^{km}, mb3.5/4, mb1 3.8/5, mb1mx3.6/46, mbtmp3.4/5, ML3.0/1, MS2.9/1, Ms1 3.0/1, ms1mx2.3/29, Error ellipse: s-maj=191.3km s-min=105.0km az=78.0*
ISC 30 13:04:08.2±2.0, **16°.0N**±0°.1×**98°.56W**±0°.07, **h17**^{km}, **n10, σ1^{s}48**/13, **mb3.3**/3, **Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.57	47	*e*P	Pb	13 04 19.9	+0.1
PNIG				*e*S	Sn	13 04 32.4	+1.7
TLIG	Tlapa	1.55	360	*e*P	Pn	13 04 33.4	-1.7
TLIG				*e*S	Sn	13 04 56.5	+1.4
CAIG	El Cayaco	1.94	303	*e*P	Pn	13 04 33.9	-6.4
CAIG				*e*S	Sn	13 04 56.8	-7.6
VHO	Vista Hermosa	2.05	59	*e*P	Pn	13 04 40.3	-1.8
VHO				*e*S	Sb	13 05 09.4	-1.1
PLIG	Platanillo	2.54	339	*e*P	Pn	13 04 46.2	-2.5
PLIG				*i* S	Sn	13 05 18.9	-0.5
TXAR	Lajitas Array	14.08	341	Pn	Pn	13 07 28.0	+1.0
	0.0nm,0.3s,baz=166,slow=8.4,SNR=2.8						
ANMO	Albuquerque	20.15	341	P	P	13 08 42.9	+1.0
	0.7nm,0.4s,baz=152,slow=12,SNR=4.0						
PDAR	Pinedale Array	28.29	343	P	P	13 10 01.4	+0.4
	0.5nm,0.8s,baz=154,slow=7.0,SNR=5.3						
NVAR	Mina Array Bea	28.29	326	P	P	13 10 02.0	+0.9
	0.5nm,0.8s,baz=148,slow=8.6,SNR=4.8						
NVAR				LR	LR	13 22 34.3	
	comp=Z,23nm,18.8s,baz=254,slow=39						
ILAR	Eielson Array	58.56	338	P	P	13 14 03.8	+0.1
	0.6nm,0.9s,baz=134,slow=3.9,SNR=7.6						

ISK ***30*** *13:07:52.5, 37°.87N×26°.71E, h2^{km}, ML3.3/13*
ATH ***30*** *13:07:52.1, 37°.85N×26°.76E, h27^{km}±1^{km}, ML3.1/4, Error ellipse: s-maj=3.2km s-min=1.2km az=84.0*
ISCJB ***30*** *13:07:52.8±0.5, 37°.85N±0°.02×26°.67E±0°.02, h2^{km}±3^{km}, Error ellipse: s-maj=3.4km s-min=2.7km az=153.2*
DDA ***30*** *13:07:52.4, 37°.85N×26°.70E, h19^{km}, Ml3.0*
CSEM ***30*** *13:07:53.2±0.1, 37°.83N×26°.66E, h8^{km}, ML3.1, Error ellipse: s-maj=3.1km s-min=2.6km az=53.0*
THE ***30*** *13:07:53.3, 37°.83N×26°.64E, h0^{km}±1^{km}, ML3.0/5, Error ellipse: s-maj=1.6km s-min=0.7km az=229.0*
ISC 30 13:07:53.2±0.8, **37°.86N**±0°.01×**26°.71E**±0°.02, **h16**^{km}±5^{km}, **n88, σ0^{s}67**/134, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMG	Samos	0.18	147	P	Pg	13 07 57.7	+0.1
SMG				S	Sg	13 08 00.8	+0.1
SMG				AML	AML	13 08 01.0	
	comp=E,11954μm,0.3s						
SMG				AML	AML	13 08 01.8	
	comp=N,10861μm,0.3s						
SMG	Samos	0.18	147	P	Pg	13 07 57.6	-0.1
SMG				S	Sg	13 08 01.0	+0.4
SMG	Samos	0.18	147	P	Pg	13 07 57.6	-0.1
SMG				S	Sg	13 08 01.0	+0.4
DGB	˜zmir	0.23	35	*i* P	Pg	13 07 57.8	-0.6
DGB				*i* S	Sg	13 08 01.3	-0.8
URLA	Izmir	0.51	350	PG	Pg	13 08 02.7	-0.6
URLA				SG	Sb	13 08 10.6	-0.4
URLA	Izmir	0.51	350	*i* P	Pg	13 08 02.8	-0.6
URLA				*i* S	Sg	13 08 10.4	+0.2
URLA	Izmir	0.51	350	P	Pg	13 08 02.8	-0.6
URLA				S	Sg	13 08 10.4	+0.2
BLCB	Balcova	0.58	26	PG	Pg	13 08 04.5	-0.3
BLCB	Balcova	0.58	26	*e*Pg	Pg	13 08 04.5	-0.3
CHOS	Chios island	0.74	316	PG	Pg	13 08 07.4	-0.3
CHOS				SG	Sb	13 08 18.3	+0.6
CHOS	Chios island	0.74	316	P	Pg	13 08 07.0	-0.6
CHOS				S	Sb	13 08 18.2	+0.5
CHOS				AML	AML	13 08 20.7	
	comp=N,3802μm,0.3s						
CHOS				AML	AML	13 08 21.5	
	comp=E,3996μm,0.3s						
CHOS	Chios island	0.74	316	P	Pg	13 08 07.1	-0.6
CHOS				S	Sb	13 08 18.5	+0.8
CHOS	Chios island	0.74	316	P	Pg	13 08 07.1	-0.6
CHOS	Chios island	0.74	316	*e*Pg	Pg	13 08 07.4	-0.3
CHOS				S	Sb	13 08 18.3	+0.6
KRBN	Karaburun	0.74	350	PG	Pg	13 08 07.5	-0.2
KRBN				SG	Sb	13 08 18.5	+0.8
KRBN	Karaburun	0.74	350	*e*Pg	Pg	13 08 07.5	-0.2
KRBN				*e*Sg	Sb	13 08 18.5	+0.8
FOCM	Foˆ§a	0.85	1	PG	Pb	13 08 09.5	-0.2
FOCM	Foˆ§a	0.85	1	*e*Pg	Pb	13 08 09.5	-0.2
BODT	Bodrum	0.93	149	PG	Pg	13 08 11.2	0.0
BODT	Bodrum	0.93	149	P	Pg	13 08 11.2	0.0
BODT				S	Sn	13 08 25.3	+0.6
BODT	Bodrum	0.93	149	P	Pg	13 08 11.2	0.0
BODT				S	Sn	13 08 25.3	+0.6
AYDB	Zeytinkoy-Aydi	0.94	84	PG	Pb	13 08 11.3	+0.1
AYDB	Zeytinkoy-Aydi	0.94	84	*e*Pg	Pb	13 08 11.3	+0.1
AYDN	Tasoluk	0.95	102	*i* P	Pb	13 08 11.4	+0.1
AYDN				*i* S	Sb	13 08 23.7	0.0
AYDN	Tasoluk	0.95	102	P	Pb	13 08 11.4	+0.1
AYDN				S	Sb	13 08 23.7	0.0
MLSB	Milas	1.02	123	PG	Pn	13 08 12.8	-0.1
MLSB	Milas	1.02	123	*e*Pg	Pn	13 08 12.8	-0.1
PSRA	Psara	1.13	307	P	Pg	13 08 16.1	+1.0
PSRA				S	Sg	13 08 30.2	+0.3
PSRA	Psara	1.13	307	P	Pg	13 08 15.2	+0.1
PSRA				S	Sg	13 08 30.4	+0.5
AMGA	Amorgos Island	1.22	213	P	Pb	13 08 15.7	-0.2
AMGA	Amorgos Island	1.22	213	P	Pb	13 08 15.7	-0.2
AMGA				S	Sg	13 08 33.5	+0.9
AMGA	Amorgos Island	1.22	213	P	Pn	13 08 15.5	-0.1
AMGA				S	Sg	13 08 33.5	+0.9
APE	Apeiranthos	1.23	230	P	Pn	13 08 15.3	-0.5
APE				S	Sb	13 08 31.7	-0.1
APE				AML	AML	13 08 36.2	
	comp=N,345μm,0.3s						
APE				AML	AML	13 08 36.5	
	comp=E,367μm,0.2s						
APE	Apeiranthos	1.23	230	P	Pn	13 08 15.5	-0.3
APE				S	Sn	13 08 31.9	-0.2
APE	Apeiranthos	1.23	230	P	Pn	13 08 15.5	-0.3
APE				S	Sn	13 08 31.9	-0.2
DAT	Datca	1.32	148	PN	Pg	13 08 18.6	-0.2
DAT	Datca	1.32	148	*i* P	Pb	13 08 17.6	-0.2
DAT				*i* S	Sn	13 08 35.3	+0.7
DAT	Datca	1.32	148	P	Pb	13 08 17.6	-0.2
DAT	Datca	1.32	148	*e*Pn	Pg	13 08 18.6	-0.2
DAT				S	Sn	13 08 35.3	+0.7
AKS	Akhisar	1.33	40	PN	Pg	13 08 18.7	-0.3
AKS	Akhisar	1.33	40	*e*Pn	Pg	13 08 18.7	-0.3
AKHS	Akhisar	1.34	40	*i* P	Pg	13 08 18.6	-0.4
AKHS				*i* S	Sg	13 08 36.7	+0.3
AKHS	Akhisar	1.34	40	P	Pg	13 08 18.5	-0.4
AKHS				S	Sg	13 08 36.7	+0.3
PRK	Paraskevi	1.43	346	P	Pn	13 08 17.6	-0.9
PRK				S	Sn	13 08 36.7	-0.2
PRK				AML	AML	13 08 45.5	
	comp=E,1285μm,0.7s						
PRK				AML	AML	13 08 50.0	
	comp=N,1911μm,0.6s						
PRK	Paraskevi	1.43	346	P	Pg	13 08 20.2	-0.5
PRK				S	Sg	13 08 40.4	+1.2
PRK	Paraskevi	1.43	346	P	Pg	13 08 20.2	-0.5
PRK				S	Sb	13 08 37.2	-0.2
YER	Yerkesik	1.45	120	PN	Pg	13 08 20.5	-0.5
YER	Yerkesik	1.45	120	*e*Pn	Pg	13 08 20.5	-0.5
SIGR	SIGRI	1.51	334	PN	Pb	13 08 21.2	+0.4
SIGR	SIGRI	1.51	334	P	Pn	13 08 19.3	-0.3
SIGR	SIGRI	1.51	334	P	Pn	13 08 19.6	0.0
SIGR	SIGRI	1.51	334	P	Pn	13 08 19.6	0.0
SIGR	SIGRI	1.51	334	*e*Pn	Pb	13 08 21.2	+0.4
MANT	Manisa	1.58	66	*i* P	Pg	13 08 23.3	-0.4
MANT				*i* S	Sb	13 08 43.2	+1.0
MANT	Manisa	1.58	66	P	Pg	13 08 23.3	-0.4
MANT				S	Sb	13 08 43.2	+1.0
KULA	Kula-Manisa	1.67	66	PN	Pb	13 08 23.6	-0.1
KULA	Kula-Manisa	1.67	66	*e*Pn	Pb	13 08 23.6	-0.1
STEP	BALIKESIR_Sava	1.71	27	*i* P	Pg	13 08 25.3	-0.7
STEP				*i* S	Sg	13 08 47.5	-0.8
STEP	BALIKESIR_Sava	1.71	27	P	Pg	13 08 25.3	-0.7
STEP				S	Sg	13 08 47.5	-0.8
TAVA	DENIZLI_Tavas	1.79	102	*i* P	Pn	13 08 23.5	-0.1
TAVA				*i* S	Sg	13 08 50.8	-0.1
TAVA	DENIZLI_Tavas	1.79	102	P	Pn	13 08 23.5	-0.1
TAVA				S	Sg	13 08 50.8	-0.1
TURN	Turunc	1.80	123	PN	Pn	13 08 23.2	-0.4
TURN	Turunc	1.80	123	*e*Pn	Pn	13 08 23.2	-0.4
DALY	Dalyan (Mu˜la	1.87	123	*i* P	Pb	13 08 26.0	-0.9
DALY				*i* S	Sg	13 08 51.9	-1.4
DALY	Dalyan (Mu˜la	1.87	123	P	Pb	13 08 26.0	-0.9
DALY				S	Sg	13 08 51.9	-1.4
BAYC	CANAKKALE_Bayr	1.88	356	*i* P	Pn	13 08 24.8	0.0
BAYC				*i* S	Sn	13 08 48.0	-0.3
BAYC	CANAKKALE_Bayr	1.88	356	P	Pn	13 08 24.8	0.0
BAYC				S	Sn	13 08 48.0	-0.3
SERI	Serifos	1.90	249	P	Pn	13 08 24.6	-0.5
SERI				S	Sn	13 08 47.2	-1.6
SERI	Serifos	1.90	249	P	Pn	13 08 24.6	-0.5
SERI				S	Sn	13 08 47.2	-1.6
DEMI	Demirci	1.97	53	*i* P	Pg	13 08 30.7	-0.3
DEMI				*i* S	Sb	13 08 54.7	+1.6
DEMI	Demirci	1.97	53	P	Pg	13 08 30.7	-0.3
DEMI				S	Sb	13 08 54.7	+1.6
BALB	Balikesir	2.00	27	PN	Pb	13 08 28.2	-1.0
BALB	Balikesir	2.00	27	*e*Pn	Pb	13 08 28.2	-1.0
BALY	Balya	2.01	20	*i* P	Pb	13 08 29.6	+0.2
BALY	Balya	2.01	20	P	Pb	13 08 29.6	+0.2
BOZC	Bozcaada	2.04	346	PN	Pb	13 08 28.8	-1.2
BOZC	Bozcaada	2.04	346	*i* P	Pb	13 08 30.2	+0.2
BOZC				*i* S	Sb	13 08 57.0	+1.8
BOZC	Bozcaada	2.04	346	*e*Pn	Pb	13 08 28.8	-1.2
DION	Dionisos Attik	2.21	276	P	Pn	13 08 29.6	+0.3
DION	Dionisos Attik	2.21	276	P	Pn	13 08 29.7	+0.4
DURS	Dursunbey	2.22	38	*i* P	Pg	13 08 35.0	-0.8
DURS	Dursunbey	2.22	38	P	Pg	13 08 35.0	-0.8
VLY	Voula,Athens	2.31	271	P	Pn	13 08 31.2	+0.6
VLY	Voula,Athens	2.31	271	P	Pn	13 08 31.2	+0.6
TVSB	Tavsanli	2.67	53	PN	Pn	13 08 37.8	+2.0
TVSB	Tavsanli	2.67	53	*e*Pn	Pn	13 08 37.8	+2.0
DID	Didima	2.78	264	P	Pn	13 08 36.6	-0.6
DID	Didima	2.78	264	P	Pn	13 08 37.2	+0.1

GUC 30 13:27:03.9±0.5, **23°.58S**×**67°.98W, h166**^{km}±8^{km}, **ML3.5, 4C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB15	IPOC Station P	1.42	285⇑	*i*P	Pn	13 27 34.8	+0.6
PB15				*e*S	Sn	13 27 58.6	+1.2
PB06	IPOC Station P	1.70	300⇑	*i*P	Pn	13 27 38.1	+1.0
PB06				*e*S	Sn	13 28 04.0	+1.5
PB06				IAML		13 28 06.8	
	comp=N,604nm,0.2s						
PB09	IPOC Station P	2.12	327	*e*P	Pn	13 27 43.8	+2.2
PB09				*e*S	Sn	13 28 14.2	+3.3
PB05	IPOC Station P	2.17	289	*e*P	Pn	13 27 43.2	+1.1
PB05				*e*S	Sn	13 28 13.0	+1.5
PB05				IAML		13 28 19.4	
	comp=N,73nm,0.2s						
PB03	IPOC Station P	2.23	313⇑	*i*P	Pn	13 27 44.3	+1.3
PB03				*e*S	Sn	13 28 15.0	+1.9
PB03				IAML		13 28 16.9	
	comp=N,195nm,0.1s						
PB04	IPOC Station P	2.35	301	*e*P	Pn	13 27 45.5	+1.2
PB04				*e*S	Sn	13 28 17.2	+1.6
PB04				IAML		13 28 20.4	
	comp=N,231nm,0.3s						
PB10	IPOC Station P	2.36	271	*e*P	Pn	13 27 45.3	+1.1
PB07	IPOC Station P	2.55	316⇑	*i*P	Pn	13 27 48.2	+1.6
PB07				*e*S	Sn	13 28 21.0	+1.3
PB07				IAML		13 28 23.0	
	comp=N,352nm,0.3s						
PB01	IPOC Station P	2.88	331	*e*P	Pn	13 27 51.9	+1.2
PB01				*e*S	Sn	13 28 28.6	+1.7

MAN 30 13:29:51.1, 11°.37N×**124°.51E, h20**^{km}, **mb3.8, ML2.5, MS2.1, 2C, Leyte**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OCLP	Ormoc	0.34	164	*e*P	Pn	13 29 59.9	-1.0
OCLP				*e*S	Sn	13 30 08.8	+1.7
PLP	Palo	0.50	114⇑	*e*P	Pb	13 30 02.1	+0.9
PLP				*i* S	Sn	13 30 12.3	+1.1
LLP	Lapu-Lapu	1.18	207	*e*P	Pn	13 30 11.9	-0.6
LLP				*e*S	Sn	13 30 29.4	+1.4
RCP	Roxas	1.74	276⇑	*e*P	Pn	13 30 18.6	-1.7
RCP				*e*S	Sn	13 30 39.4	-2.5

WEL 30 13:37:59.5, 38°S±12°×**18°0W**±°, **h33**^{km}, **ML3.6**/13, **East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUZ	Puketiti	1.67	261	P	Pn	13 38 27.2	+0.7
PUZ				S	Sn	13 38 47.6	+0.8
PKGZ	Pakihiroa	1.80	268	P	Pn	13 38 28.4	+0.1
PKGZ				S	Sn	13 38 50.7	+0.7
CNGZ	Carnagh Statio	1.81	249	P	Pb	13 38 30.7	-1.3
TWGZ	Tauwhareparae	1.91	259	P	Pn	13 38 30.6	+1.0
TWGZ				S	Sn	13 38 54.1	+1.6
HAZ	Te Kaha	2.04	272	P	Pn	13 38 32.5	+1.0
HAZ				S	Sn	13 38 55.5	-0.3
TKGZ	Te Karaka	2.06	252	P	Pn	13 38 32.9	+1.1
TKGZ				S	Sn	13 38 58.4	+2.0
RUGZ	Raukumara Rang	2.12	266	P	Pn	13 38 33.2	+0.5
PRGZ	Paritu Road	2.22	240	P	Pn	13 38 36.3	+2.3
MWZ	Matawai	2.28	257	P	Pn	13 38 35.6	+0.7
MWZ				S	Sn	13 39 02.5	+0.6
MHGZ	Mahia Peninsul	2.32	235	P	Pn	13 38 37.3	+1.9
KNZ	Kokohu	2.41	240	P	Pn	13 38 37.9	+1.3
KNZ				S	Sn	13 39 07.2	+2.2
SNGZ	Shannon Statio	2.55	247	P	Pn	13 38 39.9	+1.4
URZ	Urewera	2.59	260	P	Pn	13 38 40.4	+1.3
RTZ	Ruatahuna	2.77	253	P	Pn	13 38 43.5	+2.0
MTHZ	Maungataniwha	2.94	249	P	Pn	13 38 45.3	+1.4

ISCJB ***30*** *13:44:41.4±0.6, 24°.93N±0°.04×122°.53E±0°.03, h8^{km}±4^{km}, Error ellipse: s-maj=7.2km s-min=3.5km az=20.3*
JMA ***30*** *13:44:42.4, 24°.61N×122°.44E, h55^{km}, M2.2*
TAP ***30*** *13:44:42.5, 24°.91N×122°.49E, h5^{km}±1^{km}, ML3.1, D*
ISC 30 13:44:40.8±1.2, **24°.85N**±0°.05×**122°.55E**±0°.03, **h16**^{km}±10^{km}, **n35, σ0^{s}55**/46, **Taiwan region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
EOS1	EOS1	0.49	232	P	Pb	13 44 52.1	+1.1
	baz=222						
EOS1				*e*S	Sn	13 44 59.6	-1.6
	baz=222						
TWB1	Santiao Chiao	0.53	287	P	Pg	13 44 51.4	0.0
	baz=282						
TWB1				S	Sg	13 44 57.4	-1.2
	baz=282						
JYNG	Yonagunijimaku	0.54	138	P	Pn	13 44 53.9	+0.1
JYNG				*e*S	Sn	13 45 02.5	0.0
YOJ	Yonaguni jima	0.57	133	*i* P	Pn	13 44 54.6	+0.3
	baz=133						
YOJ	Yonaguni jima	0.57	133	P	Pn	13 44 54.5	+0.3
YOJ				*e*S	Sn	13 45 03.0	-0.3
NTC	Toucheng	0.65	270	P	Pb	13 44 53.5	-0.3
	baz=264						
TIPB	Shuangxi	0.67	280	*i* P	Pb	13 44 54.2	+0.1
	baz=276						
TIPB				*e*S	Sb	13 45 02.7	-0.4
	baz=276						
TWC	Suao	0.68	249	P	Pb	13 44 54.5	+0.2
	baz=242						
WFSB	Wu-fen Shan	0.73	288	P	Pb	13 44 55.5	+0.4
	baz=284						
WFSB				*e*S	Sb	13 45 05.6	+0.7
	baz=284						
TWE	Neicheng	0.81	261	*e*P	Pb	13 44 56.5	0.0
	baz=255						
TWE				*e*S	Sb	13 45 06.8	-0.5
	baz=255						
SLBB	Yuanshan	0.84	264	*e*P	Pg	13 44 57.7	+0.6
	baz=258						
ENA	Nanau	0.85	240	*e*P	Pg	13 44 57.8	+0.5
	baz=234						
ENA				*e*S	Sn	13 45 09.8	-0.3
	baz=234						
TWA	Mucha	0.89	279	*e*P	Pb	13 44 58.2	+0.4
	baz=274						
ENTT	Nioudou	0.92	257	*e*P	Pg	13 44 59.2	+0.5
	baz=252						
YM08	YM08	0.93	291	P	Pb	13 44 59.1	+0.4
	baz=288						
NWLT	Wulai	0.95	266	P	Pb	13 44 59.5	+0.5
	baz=261						
YM04	YM04	0.97	288	P	Pb	13 44 60.0	+0.8
	baz=285						
TATO	Taipei	0.97	278	P	Pb	13 44 59.5	+0.2
	baz=274						
TATO				S	Sb	13 45 11.8	-0.1
	baz=274						
YM03	YM03	0.97	290	*e*P	Pb	13 45 00.2	+0.9
	baz=287						
YHNB	Yeheng	1.08	261	P	Pn	13 45 01.8	+0.4
	baz=256						
NSK	Sanguang	1.10	261	P	Pg	13 45 02.4	+0.3
	baz=257						
NACB	Ninganchiao	1.10	232	P	Pn	13 45 02.0	+0.5
	baz=228						
NNSB	Datong	1.14	249	*e*P	Pb	13 45 02.2	-0.1
	baz=244						
NNSH	Datong	1.14	249	*e*P	Pb	13 45 02.1	-0.1
	baz=244						
NNS	Nan Shan	1.15	249	P	Pg	13 45 03.3	+0.3
	baz=245						
IRIF	Iriomote-Funau	1.19	115	P	Pn	13 45 03.4	+0.6
WHF	Hehuan Shan	1.36	239	P	Pg	13 45 07.3	+0.1
	baz=235						
ESL	Shilin	1.45	225	P	Pg	13 45 09.5	+0.8
	baz=221						
ESL				*e*S	Sg	13 45 27.8	+0.2
	baz=221						
CHGB	Renai	1.48	238	*i* P	Pg	13 45 09.5	+0.2
	baz=234						
JISG	Ishigakijimahi	1.62	99	P	Pb	13 45 10.6	+0.2
DPDB	Guoxing	1.69	241	*e*P	Pg	13 45 12.8	-0.5
	baz=238						
SMLT	Sun Moon Lake	1.79	238	*e*P	Pg	13 45 14.6	-0.5
	baz=234						
SSLB	Suanglung	1.80	234	*e*P	Pb	13 45 13.7	+0.3
	baz=231						
SSLB				*e*S	Sg	13 45 38.0	-0.8
	baz=231						
TYC	Yuchr	1.81	239	*e*P	Pg	13 45 15.3	-0.3
	baz=235						
JTJ	Tarama	1.97	96	P	Pb	13 45 15.8	-0.5

NEIC ***30*** *13:47:38.8±0.8, 15°.57S×167°.98E, h108^{km}±7^{km}, mb4.4/9, Error ellipse: s-maj=13.0km s-min=9.2km az=109.0*
ISCJB ***30*** *13:47:41.6±2.4, 15°.69S±0°.08×167°.7E±0°.1, h140^{km}±20^{km}, mb4.2/21, Error ellipse: s-maj=19.2km s-min=11.9km az=154.8*
IDC ***30*** *13:47:42.1±2.5, 15°.67S×167°.80E, h131^{km}±21^{km}, mb4.0/17, mb1 4.1/18, mb1mx3.9/47, mbtmp4.4/18, MS3.2/4, Ms1 3.2/4, ms1mx2.7/43, Error ellipse: s-maj=19.8km s-min=12.6km az=73.0*
ISC 30 13:47:42.5±2.3, **15°.7S**±0°.1×**167°.9E**±0°.1, **h137**^{km}±18^{km}, **n54, σ0^{s}93**/55, **mb4.3**/21, **Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	6.49	192	P	Pn	13 49 16.7	+0.9
	11nm,0.3s,baz=111,slow=11,SNR=77						
DZM				S	Sn	13 50 26.6	-2.1
	3.7nm,0.3s,baz=279,slow=23,SNR=3.2						
HNR	Honiara	9.91	308	LR	LR	13 53 33.1	
	comp=Z,208nm,19.9s,baz=147,slow=36						
EIDS	Eidsvold	18.41	236	*e*P	Pn	13 51 48.6	-0.4
	17nm,1.3s						
CTA	Charters Tower	21.02	255	P	P	13 52 16.4	+1.0
	4.2nm,0.7s,baz=97,slow=14,SNR=5.3						
URZ	Urewera	23.92	162	P	P	13 52 45.7	+1.9
	7.5nm,0.7s,baz=342,slow=16,SNR=4.0						
RPZ	Rata Peaks	28.07	175	P	P	13 53 21.7	+0.6
	13nm,0.7s,baz=22,slow=4.3,SNR=6.1						
STKA	Stephens Creek	28.83	231	P	P	13 53 28.3	+0.4
	2.7nm,0.7s,baz=27,slow=13,SNR=7.6						
STKA				PcP	PcP	13 56 34.5	+0.2
	5.1nm,0.8s,baz=134,slow=0.7,SNR=8.9						
STKA				LR	LR	14 05 18.5	
	comp=Z,48nm,18.3s,baz=14,slow=37						
STKA	Stephens Creek	28.83	231	*e*P	P	13 53 28.0	0.0
	3.3nm,1.5s						
STKA				*e*PcP	PcP	13 56 34.0	-0.3
WB2	Warramunga Arr	32.15	257	*e*P	P	13 53 59.8	+2.4
WB2				*e*PcP	PcP	13 56 42.6	-0.7
WR1	Warramunga Arr	32.16	257	*e*P	P	13 53 55.8	-1.6
	18nm,1.5s						
WR1				*e*PcP	PcP	13 56 43.2	-0.1
WRA	Warramunga Arr	32.16	257	P	P	13 53 55.8	-1.7
	1.6nm,0.7s,baz=86,slow=9.2,SNR=22						
WRA				PcP	PcP	13 56 43.2	-0.1
	1.0nm,0.9s,baz=93,slow=2.9,SNR=7.1						
AS01	Alice Springs	32.84	251	*e*P	P	13 54 02.6	-0.7
AS31	Alice Springs	32.88	251	*e*P	P	13 54 02.1	-1.6
	4.6nm,1.5s						
ASAR	Alice Springs	32.88	251	P	P	13 54 02.7	-1.0
	2.5nm,0.6s,baz=83,slow=8.7,SNR=74						
ASAR				PcP	PcP	13 56 44.6	-0.7
	1.0nm,0.8s,baz=81,slow=3.3,SNR=7.3						
ASAR				ScP	ScP	14 00 17.6	+0.7
	0.8nm,0.9s,baz=88,slow=3.5,SNR=5.1						
FITZ	Fitzroy Crossi	40.41	260	P	P	13 55 06.9	-0.6
	5.1nm,0.5s,baz=75,slow=9.2,SNR=26						
FITZ				LR	LR	14 12 33.0	
	comp=Z,49nm,19.0s,baz=71,slow=37						
MJAR	Matsushiro Arr	59.01	332	P	P	13 57 27.7	-0.2
	2.7nm,0.9s,baz=171,slow=7.0,SNR=6.5						
MAJO	Matsushiro	59.01	332	*e*P	P	13 57 27.7	-0.3
VNDA	Vanda	61.93	181	P	P	13 57 47.5	+0.4
	2.3nm,0.8s,baz=6.5,slow=7.3,SNR=16						
VNDA	Vanda	61.93	181	*e*P	P	13 57 47.1	0.0
	6.6nm,1.3s						
SBA	Scott Base	62.19	180	*e*P	P	13 57 50.1	+1.3
	18nm,1.2s						
KSRS	Korea Array	64.84	326	P	P	13 58 06.8	0.0
	0.9nm,0.8s,baz=137,slow=9.2,SNR=4.6						
KSRS				LR	LR	14 26 11.3	
	comp=Z,8.4nm,18.5s,baz=162,slow=36						
KS15	Wonju Array Si	64.86	326	*e*P	P	13 58 06.3	-0.7
KSAR	Wonju Array Be	64.86	326	P	P	13 58 06.8	-0.1
USRK	Ussuriysk Ar.	67.99	333	P	P	13 58 27.9	+1.2
	3.4nm,0.8s,baz=114,slow=6.5						
QSPA	South Pole Qui	74.35	180	P	P	13 59 05.2	+0.2
	23nm,0.8s,baz=13,slow=2.7,SNR=70						
CMAR	Chiang Mai Arr	75.86	294	P	P	13 59 15.6	+1.3
	0.3nm,0.3s,baz=126,slow=4.6,SNR=3.2						
MAW	Mawson	81.22	202	P	P	13 59 42.8	+0.1
	4.8nm,1.0s,baz=92,slow=6.9,SNR=7.3						
MAW	Mawson	81.22	202	*e*P	P	13 59 42.9	+0.1
	2.4nm,1.2s						

ULN	Ulaanbaatar	83.24	324	*e*P	P	13 59 54.0	+0.3
	11nm,0.9s						
SONA0	Songino Array	83.60	323	*e*P	P	13 59 55.7	+0.1
SONM	Songino Array	83.60	323	P	P	13 59 55.7	+0.1
	5.2nm,1.0s,baz=139,slow=5.5,SNR=24						
SONA1	Songino Array	83.60	323	*e*P	P	13 59 55.5	-0.1
ILAR	Eielson Array	87.26	18	P	P	14 00 11.8	-1.4
	0.7nm,0.6s,baz=229,slow=4.7,SNR=11						
ILB	Eielson Array	87.26	18	*e*P	P	14 00 12.1	-1.0
SNAA	Sanae	92.63	183	P	P	14 00 37.9	-0.5
SNAA	Sanae	92.63	183	*e*P	P	14 00 37.9	-0.5
	8.2nm,0.7s						
VNA3	Neumayer Olymp	93.27	181	P	P	14 00 40.6	-0.7
VNA1	Neumayer--Stat	93.84	181	P	P	14 00 43.6	-0.3
T25A	Trinidad	97.53	54	*e*pP	pP	14 01 27.4	-9.3
MK32	Makanchi Array	98.28	316	*e*P	Pdif	14 01 04.9	+0.5
MKAR	Makanchi Array	98.28	316	P	Pdif	14 01 04.9	+0.5
	0.3nm,0.5s,baz=103,slow=5.5,SNR=3.9						
AKTO	Aktyubinsk	114.56	319	PKP	PKPdf	14 06 06.1	-0.2
	1.4nm,0.7s,baz=135,slow=1.4,SNR=4.4						
ARA0	ARCESS Array S	121.31	345	*e*PKPdf	PKPdf	14 06 18.0	-0.7
ARCES	ARCESS Array B	121.31	345	PKP	PKPdf	14 06 18.0	-0.8
	1.1nm,0.7s,baz=57,slow=3.3,SNR=5.7						
AKASG	Malin Array Be	131.84	326	PKP	PKPdf	14 06 37.4	-1.9
	0.4nm,0.4s,baz=56,slow=1.2,SNR=4.4						
BR101	Keskin Array S	133.56	310	*e*PKPdf	PKPdf	14 06 43.6	+0.4
BRTR	Keskin Array B	133.56	310	PKP	PKPdf	14 06 43.6	+0.4
	1.0nm,0.9s,baz=163,slow=4.7,SNR=4.0						
GERES	GERESS Array B	140.75	333	PKP	PKPdf	14 06 55.9	-0.2
	0.5nm,0.2s,baz=60,slow=3.7,SNR=5.1						
FUORN	Ofenpass-Fuorn	143.95	333	*e*PKPdf	PKPbc	14 07 00.8	+0.5
TUE	Stuetta	144.45	334	*e*PKPdf	PKPbc	14 07 02.3	+0.5
SENIN	Lac Senin/Sane	145.37	336	*e*PKPbc	PKPdf	14 07 04.3	-0.2
KEST	Kesra	152.31	320	PKPbc	PKPbc	14 07 23.3	+0.6
	8.7nm,0.7s,baz=226,slow=1.0,SNR=13						
TORD	Torodi Ar. Bea	166.36	261	PKP	PKPdf	14 07 31.6	-0.8
	0.9nm,1.0s,baz=13,slow=1.9						
TOA1	Torodi Ar. Sit	166.37	261	*e*PKPdf	PKPdf	14 07 31.6	-0.8

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*CSEM **30** 13:55:50.6±0.2, 37°.83N×26°.70E, h2^{km}, ML2.3, Error ellipse: s-maj=5.0km s-min=3.7km az=71.0*
*THE **30** 13:55:50.8, 37°.87N×26°.71E, h6^{km}±2^{km}, ML2.3/3, Error ellipse: s-maj=3.5km s-min=0.4km az=54.0*
*ISK **30** 13:55:50.4, 37°.87N×26°.74E, h8^{km}, ML2.4/8*
*DDA **30** 13:55:51.0, 37°.90N×26°.75E, h10^{km}, Ml2.6*
ISC 30 13:55:50.6±0.9, **37°.86N**±0°.02×**26°.71E**±0°.02, **h14**^{km}±6^{km}, **n47**, σ**0^{s}.57**/69, **Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SMG	Samos	0.18	146	P	Pg	13 55 55.0	+0.1
SMG				S	Sg	13 55 57.9	+0.2
SMG	Samos	0.18	146	P	Pg	13 55 55.0	+0.1
SMG				S	Sg	13 55 57.9	+0.2
DGB	˜zmir	0.24	35	*i* P	Pg	13 55 55.3	-0.4
DGB				*i* S	Sg	13 55 59.0	-0.3
URLA	Izmir	0.51	350	PG	Pg	13 56 00.2	-0.5
URLA				SG	Sg	13 56 07.9	+0.4
URLA	Izmir	0.51	350	*i* P	Pg	13 56 00.1	-0.5
URLA				*i* S	Sg	13 56 07.0	-0.5
URLA	Izmir	0.51	350	*e*Pg	Pg	13 56 00.2	-0.5
URLA				S	Sg	13 56 07.0	-0.5
BLCB	Balcova	0.59	26	PG	Pg	13 56 01.9	-0.3
BLCB	Balcova	0.59	26	*e*Pg	Pg	13 56 01.9	-0.3
CHOS	Chios island	0.74	316	PG	Pg	13 56 05.3	+0.3
CHOS	Chios island	0.74	316	P	Pg	13 56 04.5	-0.5
CHOS				S	Sb	13 56 15.8	+0.5
CHOS	Chios island	0.74	316	P	Pg	13 56 04.5	-0.5
CHOS	Chios island	0.74	316	*e*Pg	Pg	13 56 05.3	+0.3
CHOS				S	Sb	13 56 15.8	+0.5
KRBN	Karaburun	0.74	351	PG	Pg	13 56 05.1	0.0
KRBN	Karaburun	0.74	351	*e*Pg	Pg	13 56 05.1	0.0
FOCM	Foˆ§a	0.85	1	PG	Pg	13 56 07.1	-0.1
FOCM	Foˆ§a	0.85	1	*e*Pg	Pg	13 56 07.1	-0.1
BODT	Bodrum	0.93	149	PG	Pg	13 56 08.6	0.0
BODT	Bodrum	0.93	149	P	Pg	13 56 08.6	0.0
BODT				S	Sn	13 56 22.1	-0.3
BODT	Bodrum	0.93	149	*e*Pg	Pg	13 56 08.6	0.0
BODT				S	Sn	13 56 22.1	-0.3
AYDB	Zeytinkoy-Aydi	0.94	84	PG	Pg	13 56 08.3	-0.5
AYDB	Zeytinkoy-Aydi	0.94	84	*e*Pg	Pg	13 56 08.3	-0.5
AYDN	Tasoluk	0.95	102	*i* P	Pg	13 56 09.0	0.0
AYDN				*i* S	Sg	13 56 21.2	-0.2
AYDN	Tasoluk	0.95	102	P	Pg	13 56 09.0	0.0
AYDN				S	Sg	13 56 21.2	-0.2
MLSB	Milas	1.02	123	PG	Pb	13 56 10.0	-0.1
MLSB	Milas	1.02	123	*e*Pg	Pb	13 56 10.0	-0.1
AMGA	Amorgos Island	1.21	213	P	Pn	13 56 13.0	-0.2
AMGA				S	Sg	13 56 30.2	+0.4
AMGA	Amorgos Island	1.21	213	P	Pn	13 56 13.0	-0.2
AMGA				S	Sg	13 56 30.2	+0.4
DKL	Dikili	1.22	7	PN	Pb	13 56 13.9	+0.4
DKL	Dikili	1.22	7	*e*Pn	Pb	13 56 13.9	+0.4
APE	Apeiranthos	1.23	230	P	Pn	13 56 13.6	+0.2
APE	Apeiranthos	1.23	230	P	Pn	13 56 13.6	+0.2
DAT	Datca	1.32	148	PN	Pb	13 56 15.7	+0.4
DAT	Datca	1.32	148	*i* P	Pn	13 56 13.4	-1.5
DAT	Datca	1.32	148	P	Pn	13 56 13.4	-1.5
DAT	Datca	1.32	148	*e*Pn	Pb	13 56 15.7	+0.4
AKHS	Akhisar	1.34	40	*i* P	Pg	13 56 18.2	+1.8
AKHS				*i* S	Sg	13 56 33.4	-0.4
AKHS	Akhisar	1.34	40	P	Pg	13 56 18.2	+1.8
AKHS				S	Sg	13 56 33.4	-0.4
SIGR	SIGRI	1.51	334	PN	Pb	13 56 18.4	0.0
SIGR	SIGRI	1.51	334	*e*Pn	Pb	13 56 18.4	0.0
MANT	Manisa	1.59	66	*i* P	Pb	13 56 20.5	+0.5
MANT				*i* S	Sn	13 56 38.9	-0.1
MANT	Manisa	1.59	66	P	Pb	13 56 20.5	+0.5
MANT				S	Sn	13 56 38.9	-0.1
KULA	Kula-Manisa	1.67	66	PN	Pn	13 56 20.3	+0.7
KULA	Kula-Manisa	1.67	66	*e*Pn	Pn	13 56 20.3	+0.7
STEP	BALIKESIR_Sava	1.71	27	*i* P	Pg	13 56 23.3	-0.2
STEP				*i* S	Sg	13 56 45.5	-0.2
STEP	BALIKESIR_Sava	1.71	27	P	Pg	13 56 23.3	-0.2
STEP				S	Sg	13 56 45.5	-0.2
BALY	Balya	2.01	20	*i* P	Pb	13 56 27.7	+0.7
BALY				*i* S	Sg	13 56 54.1	-1.2
BALY	Balya	2.01	20	P	Pb	13 56 27.7	+0.7
BALY				S	Sg	13 56 54.1	-1.2

GUC 30 13:57:22.8±0.6, **21°.51S**×**68°.54W**, **h136**^{km}±5^{km}, **ML3.6, 7C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PB09	IPOC Station P	0.71	247	⇑*i*P	Pn	13 57 44.9	+0.8
PB09				*e*S	Sn	13 58 01.4	+1.1
PB01	IPOC Station P	1.00	298	⇑*i*P	Pn	13 57 46.9	+0.5
PB01				*e*S	Sn	13 58 05.1	+0.8
PB01				IAML		13 58 06.9	
	comp=E,1µm,0.2s						
PB03	IPOC Station P	1.25	244	⇑*i*P	Pn	13 57 49.5	+0.7
PB03				*e*S	Sn	13 58 09.0	+0.3
PB03				IAML		13 58 10.5	
	comp=E,913nm,0.2s						
PB07	IPOC Station P	1.27	260	⇑*i*P	Pn	13 57 50.0	+0.9
PB07				*e*S	Sn	13 58 10.2	+1.1
PB07				IAML		13 58 10.6	
	comp=N,1µm,0.1s						
PB02	IPOC Station P	1.28	278	⇑*i*P	Pn	13 57 49.9	+0.8
PB02				*e*S	Sn	13 58 10.2	+1.1
PB02				IAML		13 58 11.3	
	comp=E,1µm,0.1s						
PB08	IPOC Station P	1.48	337	⇑*i*P	Pn	13 57 52.6	+1.0
PB08				*i* S	Sn	13 58 14.7	+1.2
PB06	IPOC Station P	1.52	219	⇑*e*P	Pn	13 57 52.4	+0.6
PB06				*i* S	Sn	13 58 14.7	+0.8
PB06				IAML		13 58 15.2	
	comp=E,630nm,0.4s						
PB04	IPOC Station P	1.70	241	*e*P	Pn	13 57 54.4	+0.6
PB04				*e*S	Sn	13 58 17.8	+0.3
PB04				IAML		13 58 21.3	
	comp=E,388nm,0.2s						

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*ISK **30** 14:13:15.7, 37°.15N×37°.13E, h5^{km}, ML2.1/5*
*ISCJB **30** 14:13:16.9±0.6, 37°.14N±0°.03×37°.15E±0°.04, h3^{km}±5^{km}, Error ellipse: s-maj=5.7km s-min=4.7km az=42.4*
*CSEM **30** 14:13:16.6±0.3, 37°.14N×37°.17E, h8^{km}, ML2.1, Error ellipse: s-maj=6.8km s-min=5.2km az=43.0*
*DDA **30** 14:13:17.1, 37°.14N×37°.18E, h7^{km}, Ml2.6*
ISC 30 14:13:16.5±0.9, **37°.14N**±0°.03×**37°.16E**±0°.03, **h4**^{km}±6^{km}, **n21**, σ**0^{s}.64**/35, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
GAZ	Gaziantep	0.05	48	PG	Pg	14 13 17.5	-0.3
GAZ				SG	Sg	14 13 19.5	+0.7
GAZ	Gaziantep	0.05	48	*e*Pg	Pg	14 13 17.5	-0.3
GAZ				*e*Sg	Sg	14 13 19.5	+0.7
KUZU	Kuzuini	0.37	191	*i* P	Pg	14 13 24.5	+0.9
KUZU				*i* S	Sb	14 13 30.7	-1.0
KUZU	Kuzuini	0.37	191	P	Pg	14 13 24.5	+0.9
KUZU				S	Sb	14 13 30.7	-1.0
KMRS	Kahramanmaras	0.42	331	PG	Pg	14 13 24.1	-0.6
KMRS				SG	Sg	14 13 30.1	-0.1
KMRS	Kahramanmaras	0.42	331	*e*Pg	Pg	14 13 24.1	-0.6
KMRS				*e*Sg	Sg	14 13 30.1	-0.1
ANDN	Andirin	0.79	305	*i* P	Pb	14 13 32.8	0.0
ANDN				*i* S	Sb	14 13 44.4	+0.5
ANDN	Andirin	0.79	305	P	Pb	14 13 32.8	0.0
ANDN				S	Sb	14 13 44.4	+0.5
TAHT	Tahtakopru-Hat	1.09	226	PN	Pg	14 13 37.0	-0.4
TAHT	Tahtakopru-Hat	1.09	226	*e*Pn	Pg	14 13 37.0	-0.4
SURC	SANLIURFA_SURC	1.19	102	*i* P	Pg	14 13 39.0	-0.3
SURC				*i* S	Sn	14 13 57.0	+0.4
SURC	SANLIURFA_SURC	1.19	102	P	Pg	14 13 39.0	-0.3
SURC				S	Sn	14 13 57.0	+0.4
SAIM	ADANA	1.20	315	*i* P	Pg	14 13 39.6	+0.2
SAIM				*i* S	Sn	14 13 57.2	+0.3
SAIM	ADANA	1.20	315	P	Pg	14 13 39.7	+0.2
SAIM				S	Sn	14 13 57.2	+0.3
AKCD	Akcadag	1.30	27	*i* P	Pg	14 13 41.6	+0.1
AKCD				*i* S	Sn	14 14 01.1	+1.5
AKCD	Akcadag	1.30	27	P	Pg	14 13 41.6	+0.1
AKCD				S	Sn	14 14 01.1	+1.5
URFA	Urfa	1.36	77	PN	Pb	14 13 42.3	-0.2
URFA	Urfa	1.36	77	*e*Pn	Pb	14 13 42.3	-0.2
SARI	SarD1z-Kayseri	1.40	335	PN	Pn	14 13 42.2	-0.8
DARE	Darende-Malaty	1.46	10	PN	Pn	14 13 43.3	-0.4
DARE	Darende-Malaty	1.46	10	*e*Pn	Pn	14 13 43.3	-0.4

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*NIED **30** 14:21:00, 37°.90N×141°.70E, h62^{km}, Mw3.6 Best double couple: $M_0$2.95000×10^{14} NP1:ϕ_s199.00000°, δ40.00000°, λ89.00000°. NP2:ϕ_s20.00000°, δ50.00000°, λ91.00000°.*
*ISCJB **30** 14:21:03.5±0.8, 37°.88N±0°.04×141°.77E±0°.10, h67^{km}±7^{km}, mb3.5/8, Error ellipse: s-maj=13.5km s-min=5.6km az=18.0*
*JMA **30** 14:21:04.6, 37°.89N×141°.71E, h57^{km}±1^{km}, M3.8*
*IDC **30** 14:21:04.6±2.1, 37°.92N×141°.84E, h63^{km}±19^{km}, mb3.2/8, mb1 3.5/12, mb1mx3.3/70, mbtmp3.6/12, Error ellipse: s-maj=24.4km s-min=13.5km az=99.0*
ISC 30 14:21:04.0±1.5, **37°.88N**±0°.05×**141°.8E**±0°.1, **h54**^{km}±12^{km}, **n31**, σ**1^{s}.26**/37, **mb3.6**/8, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIO	Ouri	0.67	329	P	Pn	14 21 18.0	+0.5
JIO				S	Sn	14 21 27.3	0.0
JMM	Marumori	0.79	269	P	Pn	14 21 19.1	+0.1
JMM				S	Sn	14 21 29.7	-0.3
JFK	Kawauchi	0.89	235	P	Pn	14 21 20.6	+0.2
JFK				*e*S	Sn	14 21 32.2	-0.2
JOU	Okura	1.01	299	P	Pn	14 21 22.1	+0.1
JOU				S	Sn	14 21 35.2	0.0
JMK	Ichinoseki	1.16	337	P	Pn	14 21 24.6	+0.7
JMK				*e*S	Sn	14 21 39.1	+0.4
JFT	Otama	1.21	253	P	Pn	14 21 25.2	+0.6
JFT				S	Sn	14 21 40.5	+0.5
JYS	Shirataka	1.40	284	P	Pn	14 21 27.5	+0.3
JYK	Kaneyama	1.53	313	P	Pn	14 21 29.4	+0.5
JOM	Ohasama	1.64	346	P	Pn	14 21 31.4	+1.0
JOM				S	Sn	14 21 51.3	+1.0
JFY	Yanaizu	1.72	255	P	Pn	14 21 32.2	+0.6
JFY				*e*S	Sn	14 21 51.9	-0.6
JRG	Rokugo	1.76	329	P	Pn	14 21 33.2	+1.1
JRG				*e*S	Sn	14 21 54.8	+1.4
JYA	Atsumi	1.78	294	P	Pn	14 21 32.6	+0.2
MJAR	Matsushiro Arr	3.16	246	P	Pn	14 21 52.7	+1.5
	1.3nm,0.3s,baz=67,slow=20,SNR=14						
MAT	Matsushiro	3.16	246	P	Pn	14 21 52.8	+1.6
MAT				*e*S	Sn	14 22 32.3	+4.6
JHJ	Hachijo jima 2	5.03	200	P	Pn	14 22 18.8	+1.9
	6.6nm,0.3s,baz=179,slow=4.3,SNR=3.7						
JHJ				S	Sn	14 23 10.8	-2.8
	8.8nm,0.3s,baz=351,slow=13,SNR=2.5						
ASAJ	Asahikawa	6.26	5	P	Pn	14 22 33.8	+0.1
	0.4nm,0.3s,baz=211,slow=12,SNR=8.0						
ASAJ				S	Sn	14 23 42.3	-1.5
	0.4nm,0.3s,baz=198,slow=6.4,SNR=2.3						
USRK	Ussuriysk Ar.	9.72	314	P	Pn	14 23 22.6	+1.5
	baz=123,slow=14						
H11N2	WAKE ISLAND Hy	28.34	123	T	T	14 57 13.7	
	baz=316,slow=75,SNR=72						
H11N1	WAKE ISLAND Hy	28.34	123	T	T	14 57 14.4	
	baz=316,slow=75,SNR=82						
H11N3	WAKE ISLAND Hy	28.36	123	T	T	14 57 13.2	
	baz=316,slow=75,SNR=89						
H11S1	WAKE ISLAND Hy	29.08	125	T	T	14 58 07.2	
	baz=317,slow=76,SNR=45						
H11S3	WAKE ISLAND Hy	29.08	125	T	T	14 58 09.2	
	baz=317,slow=76,SNR=71						
H11S2	WAKE ISLAND Hy	29.10	125	T	T	14 58 07.9	
	baz=317,slow=76,SNR=41						
MKAR	Makanchi Array	43.93	301	P	P	14 29 05.0	-0.4
	0.1nm,0.4s,baz=92,slow=7.6,SNR=2.6						
KURBB	Kurchatov Arra	45.72	307	P	P	14 29 19.1	-0.4
	0.3nm,0.3s,baz=81,slow=8.2,SNR=4.5						
ILAR	Eielson Array	48.62	33	P	P	14 29 42.5	+0.5
	0.3nm,0.8s,baz=261,slow=6.0,SNR=3.5						
BVAR	Borovoye Array	50.23	312	P	P	14 29 54.1	-0.2
	0.3nm,0.4s,baz=71,slow=9.6,SNR=2.6						
WRA	Warramunga Arr	57.94	188	P	P	14 30 50.5	-0.3
	0.7nm,0.7s,baz=7.7,slow=7.6,SNR=6.2						
ASAR	Alice Springs	61.67	188	P	P	14 31 15.5	-0.9
	0.6nm,0.9s,baz=1.9,slow=5.6,SNR=3.9						
FINES	FINESS Array B	68.20	332	P	P	14 31 58.1	-0.3
	1.0nm,0.7s,baz=34,slow=15,SNR=2.4						
TXAR	Lajitas Array	89.37	53	P	P	14 33 54.1	-0.9
	0.2nm,0.7s,baz=280,slow=1.6,SNR=4.0						

IDC 30 14:42:02.9±1.6, **29°.53N**×**100°.89E**, **h0**^{km}, **mb3.3**/3, **mb1 3.6**/3, **mb1mx3.1**/69, **mbtmp3.3**/3, **MS2.9**/1, **Ms1 2.9**/1, **ms1mx2.3**/40, **Error ellipse: s-maj=471.8km s-min=29.1km az=55.0, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
MKAR	Makanchi Array	22.51	325	P	P	14 47 03.9	-0.2
	0.4nm,0.5s,baz=129,slow=11,SNR=5.4						
AAK	Ala-Archa	24.91	309	LR	LR	14 59 46.1	
	comp=Z,26nm,18.2s,baz=160,slow=43						
WRA	Warramunga Arr	58.81	143	P	P	14 52 02.7	-0.6
	1.2nm,1.2s,baz=326,slow=9.2,SNR=2.2						
ASAR	Alice Springs	61.69	145	P	P	14 52 23.6	+0.6
	0.5nm,1.0s,baz=331,slow=6.6,SNR=4.3						

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*ISCJB **30** 15:20:14.0±0.5, 38°.15N±0°.04×38°.25E±0°.05, h0^{km}, Error ellipse: s-maj=6.2km s-min=4.3km az=136.7*
*DDA **30** 15:20:14.0, 38°.15N×38°.18E, h7^{km}, Ml2.8*
*CSEM **30** 15:20:14.2±0.2, 38°.15N×38°.26E, h1^{km}, ML2.8, Error ellipse: s-maj=4.8km s-min=4.1km az=54.0, Suspected Mining explosion.*
*ISK **30** 15:20:14.1, 38°.14N×38°.24E, h6^{km}, ML1.8/6*
ISC 30 15:20:13.2±1.0, **38°.17N**±0°.03×**38°.24E**±0°.03, **h0**^{km}, **n29**, σ**0^{s}.28**/33, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
AKCD	Akcadag	0.28	297	*i* P	Pb	15 20 20.7	-0.6
AKCD	Akcadag	0.28	297	P	Pb	15 20 20.7	-0.6
ELZG	Elazig	0.67	60	*i* P	Pb	15 20 28.1	+0.2
ELZG	Elazig	0.67	60	P	Pb	15 20 28.1	+0.2
DARE	Darende-Malaty	0.72	304	PG	Pb	15 20 28.7	0.0
DARE				SG	Sb	15 20 39.3	+0.1
DARE	Darende-Malaty	0.72	304	*e*Pg	Pb	15 20 28.7	0.0
DARE				*e*Sg	Sb	15 20 39.3	+0.1
HEKM	Malatya_Hekimh	0.75	343	*i* P	Pb	15 20 29.1	-0.1
HEKM	Malatya_Hekimh	0.75	343	P	Pb	15 20 29.1	-0.1
URFA	Urfa	0.86	147	PG	Pb	15 20 30.5	-0.5
URFA				SG	Sb	15 20 42.7	-0.3
URFA	Urfa	0.86	147	*e*Pg	Pb	15 20 30.5	-0.5
URFA				*e*Sg	Sb	15 20 42.7	-0.3
SVRC	Sivrice-ELAZID	0.86	75	PG	Pb	15 20 31.2	0.0
SVRC	Sivrice-ELAZID	0.86	75	*e*Pg	Pb	15 20 31.2	0.0
KEMA	Kemaliye	1.12	10	*i* P	Pb	15 20 35.1	-0.3
KEMA	Kemaliye	1.12	10	P	Pb	15 20 35.2	-0.3
SANL	SANLIURFA_Merk	1.16	149	*i* P	Pb	15 20 36.2	+0.1
SANL	SANLIURFA_Merk	1.16	149	P	Pb	15 20 36.2	+0.1
PTK	Pertek	1.16	51	PN	Pn	15 20 36.9	+0.1
PTK	Pertek	1.16	51	*e*Pn	Pn	15 20 36.9	+0.1
KMRS	Kahramanmaras	1.25	239	PN	Pn	15 20 38.2	+0.2
KMRS	Kahramanmaras	1.25	239	*e*Pn	Pn	15 20 38.2	+0.2
GAZ	Gaziantep	1.29	220	PN	Pn	15 20 38.8	+0.3
GAZ	Gaziantep	1.29	220	*e*Pn	Pn	15 20 38.8	+0.3
SURC	SANLIURFA_SURC	1.32	167	*i* P	Pn	15 20 39.1	+0.2
SURC	SANLIURFA_SURC	1.32	167	P	Pn	15 20 39.1	+0.2
SARI	SarD1z-Kayseri	1.46	280	PN	Pb	15 20 41.7	+0.4
ANDN	Andirin	1.61	249	*i* P	Pn	15 20 43.2	+0.2
ANDN	Andirin	1.61	249	P	Pn	15 20 43.2	+0.2
KUZU	Kuzuini	1.67	214	*i* P	Pb	15 20 44.8	-0.1
KUZU	Kuzuini	1.67	214	P	Pb	15 20 44.8	-0.1

IDC 30 15:33:25.8±403.0, **46°.63N**×**45°.91E**, **h0**^{km}, **Error ellipse: s-maj=174.0km s-min=136.1km az=169.0, Ukraine-Moldova-Southwestern Russia region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
I31KZ	AKTYUBINSK INF	8.89	60	*i*		16 32 15.0	
	baz=249,slow=332,SNR=2.3						
I43RU	DUBNA INFRASON	11.45	335	*i*		16 46 40.0	
	baz=144,slow=322,SNR=1.0						
I26DE	FREYUNG INFRAS	21.68	288	*i*		17 43 20.0	
	baz=84,slow=299,SNR=1.4						
I48TN	KESRA INFRASON	29.32	262	*i*		18 34 00.0	
	baz=59,slow=320,SNR=1.3						

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*IDC **30** 15:43:27.0±0.5, 17°.56N×120°.85E, h0^{km}, mb4.1/28, mb1 4.2/29, mb1mx4.1/66, mbtmp4.1/29, ML3.7/1, MS3.5/28, Ms1 3.5/28, ms1mx3.3/64, Error ellipse: s-maj=17.7km s-min=11.5km az=77.0*
*MAN **30** 15:43:26.1, 18°.01N×120°.44E, h1^{km}, mb5.5, ML4.4, MS4.7*
*ISCJB **30** 15:43:29.3±0.8, 17°.85N±0°.03×120°.61E±0°.03, h11^{km}±5^{km}, mb4.3/60, MS3.5/33, Error ellipse: s-maj=4.4km s-min=4.2km az=31.9*
*BJI **30** 15:43:33.4, 18°.25N×120°.47E, h8^{km}, mb4.4/30, mB4.6/19, Ms4.2/18, Ms7 3.8/17*
*MOS **30** 15:43:34.8±0.9, 17°.63N×120°.80E, h75^{km}, mb4.7/17, Error ellipse: s-maj=12.1km s-min=6.4km az=104.7*
*NEIC **30** 15:43:36.0±1.2, 17°.62N×120°.73E, h68^{km}±12^{km}, mb4.4/20, Error ellipse: s-maj=7.9km s-min=6.3km az=96.0*
NEIC Felt [III PIVS] at Badoc, Currimao and Pinili; [II PIVS] at Laoag, Paoay, San Nicolas, Sinait and Vigan.
ISC 30 15:43:29.2±1.2, **17°.86N**±0°.04×**120°.61E**±0°.04, **h6**^{km}±7^{km}, **n148**, σ**1^{s}.74**/105, **mb4.4**/60, **MS3.5**/33, **10C-4D, Luzon**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ABRA	Dolores	0.23	155	*e*P	Pg	15 43 34.1	+0.3
ABRA				*e*S	Sg	15 43 37.6	+0.8
APYP	Conner	0.60	90	*e*P	Pg	15 43 41.2	+0.3
APYP				*e*S	Sg	15 43 49.7	+1.0
CVP	Callao Caves	1.17	97	⇑*i*P	Pg	15 43 51.1	-0.5
CVP				*i* S	Sg	15 44 05.2	-1.6
SGCP	Mt. Cagua	1.42	74	*e*P	Pb	15 43 55.4	-0.7
SGCP				*e*S	Sg	15 44 16.5	+1.6
CAUP	Cauayan	1.47	128	*e*P	Pn	15 43 57.0	+0.7
CAUP				*e*S	Sg	15 44 21.4	+4.8
BOLP	Bolinao	1.61	204	*e*P	Pn	15 43 56.9	-1.3
BOLP				*e*S	Sg	15 44 20.7	-0.4
SCZP	Santa Cruz	2.17	198	*e*P	Pn	15 44 05.7	-0.2
SCZP				*e*S	Sg	15 44 41.4	+2.2
PCPH	Palayan	2.33	168	⇑*e*P	Pn	15 44 06.7	-1.4
PCPH				*e*S	Sn	15 44 36.5	-0.6
QVPH	Quezon City--P	3.22	172	*e*P	Pb	15 44 24.8	-1.9
QVPH				*e*S	Sg	15 45 12.9	+0.2
TGY	Tagaytay City	3.75	175	Pg	Pn	15 44 30.5	+2.8
	152nm,0.3s,baz=298,slow=0.9,SNR=14						
TGY				Lg	Lg	15 45 23.4	
	85nm,0.3s,baz=94,slow=16,SNR=3.1						
LQP	Lukban	3.83	166	⇑*e*P	Pn	15 44 20.2	-8.7
GQP	Guinayangan	4.31	156	⇑*e*P	Pb	15 44 46.8	+1.4
GQP				*i* S	Sn	15 45 29.2	+3.3
SJMP	San Jose	5.39	175	*e*P	Pn	15 44 54.3	+4.1
SJMP				*e*S	Sg	15 46 25.8	+3.4
YOJ	Yonaguni jima	6.94	18	*e*Pn	Pn	15 45 06.9	-4.6
YOJ	Yonaguni jima	6.94	18	*e*P	Pn	15 45 06.9	-4.6
GZH	Guangzhou	8.57	309	P	Pn	15 45 35.0	+1.2
GZH				S	Sn	15 47 15.3	+4.5
QIZ	Qiongzhong	10.28	278	P	Pn	15 45 58.0	+0.6
QIZ				S	Sn	15 47 54.8	+1.7
QIZ				LR	LR		
	comp=N,520nm,14.2s						
QIZ				LR	LR		
	comp=E,280nm,12.7s						
QIZ				LR	LR		
	comp=Z,250nm,10.3s						
QIZ	Qiongzhong	10.28	278	*e*Pn	Pn	15 45 56.3	-1.1
JOW	Kunigami	11.40	37	LR	LR	15 50 17.7	
	comp=Z,271nm,21.7s,baz=223,slow=36						
DAV	Davao City (W)	11.77	155	LR	LR	15 51 30.2	
	comp=Z,506nm,19.1s,baz=326,slow=42						
WHN	Wuhan	13.86	337	*e*P	P	15 46 58.5	+3.9
GYA	Guiyang	15.48	306	*e*P	P	15 47 11.0	-1.9
GYA				pmax	pmax		
	comp=Z,10.0nm,0.6s						
SBUM	Sibu	17.39	209	*e*P	P	15 47 32.7	-1.2
	18nm,1.4s						
JNU	Nakatsue	17.79	29	P	P	15 47 39.0	+0.7
	0.2nm,0.3s,baz=183,slow=5.0,SNR=5.3						
JNU				LR	LR	15 54 12.5	
	comp=Z,109nm,21.6s,baz=128,slow=36						
JNU	Nakatsue	17.79	29	*e*Pn	P	15 47 40.8	+2.5
	21nm,1.1s						
PBKT	Sadao Pong	18.80	269	*e*P	Pn	15 47 51.6	+1.6
	16nm,1.4s						
KSM	Kuching	19.17	213	*e*P	Pn	15 47 53.7	-0.8
	18nm,0.9s						
XAN	Xi'an	19.21	329	P	Pn	15 47 57.3	+2.4
XAN				pP	sP	15 48 05.3	+8.7
XAN				pmax	pmax		
	comp=Z,11nm,1.1s						
XAN				LR	LR		
	comp=N,300nm,13.0s						
XAN				LR	LR		
	comp=E,250nm,9.1s						
XAN				LR	LR		
	comp=Z,190nm,12.5s						
TJN	Taejon	19.39	17	*i* P	Pn	15 47 58.2	+1.2
MTKI	Muara Teweh, K	19.51	197	P	Pn	15 47 59.3	+0.7
STKI	Sintang	19.83	208	P	Pn	15 48 02.6	+0.2
KS15	Wonju Array Si	20.53	17	*e*P	Pn	15 48 09.3	-1.2
KSAR	Wonju Array Be	20.53	17	P	Pn	15 48 09.4	-1.0
KSAR	Wonju Array Be	20.53	17	P	Pn	15 48 09.5	-1.0
KSRS	Korea Array	20.55	17	P	Pn	15 48 09.4	-1.3
	4.6nm,0.8s,baz=197,slow=11,SNR=29						
KS01	Wonju Array Si	20.57	17	*e*P	Pn	15 48 09.6	-1.3
CM01	Chiang Mai Arr	20.58	275	*e*P	Pn	15 48 09.1	-2.2
CMMT	Chiang Mai	20.58	276	P	Pn	15 48 12.3	+1.0
	11nm,1.2s						
CHTO	Chiang Mai	20.59	276	*e*P	Pn	15 48 10.7	-0.6
	10nm,1.0s						
CHTO	Chiang Mai	20.59	276	*e*P	Pn	15 48 10.7	-0.6
CHTO				pmax	pmax		
	comp=Z,11nm,1.0s						
CHTO	Chiang Mai	20.59	276	P	Pn	15 48 12.4	+1.1
	comp=Z,48nm,1.2s						
CMAR	Chiang Mai Arr	20.60	275	P	Pn	15 48 11.9	+0.5
	comp=Z,4.8nm,0.8s,baz=90,slow=8.6,SNR=27						
CMAR				LR	LR	15 55 57.4	
	comp=Z,117nm,18.2s,baz=62,slow=36						
CMAR	Chiang Mai Arr	20.60	275	P	Pn	15 48 12.0	+0.6
BJT	Baijiatuau	22.41	351	*e*P	P	15 48 30.1	+1.5
	comp=Z,39nm,1.2s						
BJT	Baijiatuau	22.41	351	*e*P	P	15 48 30.1	+1.5
BJT				pmax	pmax		

	comp=Z,39nm,1.2s						
BJI	**Beijing**	**22.44**	**351**	⇓*e*P	**P**	**15 48 30.3**	**+1.5**
BJI				S	**S**	**15 52 35.0**	**-0.5**
BJI				pmax	pmax		
	comp=Z,34nm,1.2s						
BJI				LR	LR		
	comp=Z,230nm,13.0s						
BJI				LR	LR		
	comp=Z,500nm,15.8s						
BJI				LR	LR		
	comp=Z,270nm,27.5s						
LZH	**Lanzhou**	**23.45**	**324**	*e*P	**P**	**15 48 41.0**	**+1.4**
LZH				pP	sP	15 48 45.0	+2.7
LZH				sP	pP	15 48 47.3	+5.9
LZH				*e*PP	PnPn	15 49 11.3	+5.4
LZH				*e*S	**S**	**15 52 54.5**	**+0.9**
LZH				sS	Sn	15 52 59.5	-13
LZH				pmax	pmax		
	comp=Z,23nm,1.1s						
LZH				pmax	pmax		
	comp=Z,120nm,4.8s						
LZH				LR	LR		
	comp=Z,370nm,15.2s						
LZH				LR	LR		
	comp=Z,560nm,15.2s						
LZH				LR	LR		
	comp=Z,600nm,16.3s						
GUMO	**Guam**	**23.73**	**97**	LR	LR	15 56 05.0	
	comp=Z,80nm,20.4s,baz=287,slow=32						
HHC	**Hu-ho-hao-te**	**24.20**	**343**	*e*P	**P**	**15 48 48.8**	**+2.1**
HHC				sP	sP	15 48 59.8	+10
HHC				S	**S**	**15 53 07.0**	**+1.6**
HHC				pmax	pmax		
	comp=Z,20nm,1.2s						
HHC				pmax	pmax		
	comp=Z,90nm,6.1s						
HHC				LR	LR		
	comp=Z,150nm,10.4s						
HHC				LR	LR		
	comp=Z,250nm,13.8s						
HHC				LR	LR		
	comp=Z,170nm,13.7s						
MJAR	**Matsushiro Arr**	**24.25**	**36**	P	**P**	**15 48 50.5**	**+3.5**
	comp=Z,0.6nm,0.5s,baz=225,slow=10,SNR=3.5						
PSI	**Prapat**	**26.00**	**237**	P	**P**	**15 49 03.3**	**0.0**
	comp=Z,5.2nm,0.6s,baz=179,slow=3.7,SNR=4.3						
PSI				LR	LR	15 58 22.5	
	comp=Z,61nm,18.7s,baz=58,slow=34						
PSI	**Prapat**	**26.00**	**237**	*e*P	**P**	**15 49 02.7**	**-0.6**
	comp=Z,11nm,1.0s						
PSI	**Prapat**	**26.00**	**237**	*e*P	**P**	**15 49 02.7**	**-0.6**
PSI				pmax	pmax		
	comp=Z,11nm,1.0s						
CN2	**Changchun**	**26.18**	**8**	*e*P	**P**	**15 49 06.3**	**+1.8**
CN2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
MSHR	**Mys Shultsa**	**26.23**	**18**	*c i*P	**P**	**15 49 06.5**	**+1.6**
MNSI	**Mandailing Nat**	**26.73**	**233**	P	**P**	**15 49 12.3**	**+2.6**
MDJ	**Mudanjiang**	**27.72**	**14**	P	**P**	**15 49 19.5**	**+1.1**
MDJ				S	**S**	**15 53 59.0**	**-2.1**
MDJ				PcS	**PcS**	**15 56 16.8**	**-0.1**
MDJ				ScS	**ScS**	**16 00 10.3**	**+1.9**
MDJ				pmax	pmax		
	comp=Z,9.0nm,1.5s						
MDJ				pmax	pmax		
	comp=Z,92nm,3.0s						
MDJ				LR	LR		
	comp=Z,110nm,3.8s						
MDJ				LR	LR		
	comp=Z,160nm,3.6s						
MDJ				LR	LR		
	comp=Z,130nm,3.8s						
USRK	**Ussuriysk Ar.**	**27.95**	**18**	P	**P**	**15 49 21.9**	**+1.5**
	comp=Z,0.8nm,0.7s,baz=211,slow=9.8,SNR=2.9						
ULN	**Ulaanbaatar**	**31.92**	**343**	*e*P	P	15 49 57.8	+2.0
	comp=Z,3.0nm,0.8s						
ULN	**Ulaanbaatar**	**31.92**	**343**	*ce*P	P	15 49 57.9	+2.2
ULN				pmax	pmax		
	comp=Z,5.0nm,1.7s						
ASAJ	**Asahikawa**	**32.06**	**31**	LR	LR	16 02 24.9	
	comp=Z,70nm,21.9s,baz=305,slow=35						
SONM	**Songino Array**	**32.08**	**342**	P	P	15 49 58.8	+1.7
	comp=Z,1.7nm,0.9s,baz=144,slow=9.0,SNR=6.4						
SONM				LR	LR	16 03 40.0	
	comp=Z,66nm,21.5s,baz=157,slow=37						
KLR	**Kul'dur**	**32.57**	**14**	P	P	15 50 02.7	+1.5
	comp=Z,0.7nm,0.9s,baz=233,slow=5.7,SNR=16						
KLR				LR	LR	16 03 10.0	
	comp=Z,6.4nm,20.2s,baz=193,slow=36						
YSS	**Yuzh-Sakhalins**	**34.27**	**27**	*e*P	**P**	**15 50 15.8**	**-0.3**
YSS				pmax	pmax		
	comp=Z,35nm,1.4s						
ZAK	**Zakamensk**	**35.29**	**341**	*e*P	P	15 50 26.2	+1.2
ZAK				pmax	pmax		
	comp=Z,3.0nm,1.4s						
FITZ	**Fitzroy Crossi**	**36.07**	**172**	LR	LR	16 07 14.4	
	comp=Z,28nm,18.9s,baz=16,slow=40						
ZEA	**Zeya**	**36.18**	**7**	*e*P	P	15 50 34.2	+1.8
ZEA				pmax	pmax		
	comp=Z,20nm,1.0s						
TLY	**Talaya**	**36.32**	**342**	*e*P	P	15 50 36.7	+3.0
TLY				pmax	pmax		
	comp=Z,10.0nm,1.9s						
TLY				MLR	MLR		
	comp=Z,44nm,12.0s						
MOY	**Mondy**	**37.14**	**340**	*e*P	P	15 50 47.6	+6.9
WMQ	**Urumqi**	**37.91**	**320**	P	P	15 50 49.8	+2.5
WMQ				pP	sP	15 50 53.5	+3.4
WMQ				pmax	pmax		
	comp=Z,20nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,110nm,3.8s						
WMQ				LR	LR		
	comp=Z,110nm,17.9s						
WMQ				LR	LR		
	comp=Z,130nm,15.9s						
WMQ				LR	LR		
	comp=Z,120nm,17.3s						
WRA	**Warramunga Arr**	**39.91**	**160**	P	P	15 50 59.3	-4.9
	comp=Z,2.0nm,0.7s,baz=341,slow=8.9,SNR=14						
WRA				PcP	**PcP**	**15 53 09.0**	**-1.0**
	comp=Z,0.9nm,0.8s,baz=338,slow=3.4,SNR=5.4						
WRA	**Warramunga Arr**	**39.91**	**160**	*ce*P	**P**	**15 51 01.1**	**-3.1**
BOD	**Bodaibo**	**40.20**	**355**	*e*P	P	15 51 07.4	+1.2
BOD				pmax	pmax		
	comp=Z,8.0nm,1.6s						
PALK	**Pallekele**	**40.26**	**260**	LR	LR	16 07 51.6	
	comp=Z,65nm,18.7s,baz=231,slow=36						
DGZ	**Jazzator, Alta**	**41.46**	**328**	*i* P	P	15 51 19.1	+2.1
DGZ				pmax	pmax		
	comp=Z,2.0nm,1.1s						
MK01	**Makanchi Array**	**42.69**	**321**	*e*P	P	15 51 28.3	+1.4
MK31	**Makanchi Array**	**42.70**	**321**	*e*P	P	15 51 28.8	+1.8
MKAR	**Makanchi Array**	**42.70**	**321**	P	P	15 51 29.3	+2.3
	comp=Z,3.7nm,0.8s,baz=118,slow=9.1,SNR=22						
MKAR				PcP	**PcP**	**15 53 19.9**	**+1.1**
	comp=Z,0.8nm,0.8s,baz=134,slow=4.2,SNR=3.2						
MKAR				LR	LR	16 10 21.2	
	comp=Z,58nm,20.9s,baz=81,slow=38						
MKAR	**Makanchi Array**	**42.70**	**321**	*e*P	P	15 51 28.8	+1.8
	comp=Z,30nm,0.8s						
MKAR				PcP	**PcP**	**15 53 19.9**	**+1.1**
MAKZ	**Makanchi**	**42.90**	**321**	*e*P	**P**	**15 51 28.8**	**+0.2**
	comp=Z,3.4nm,0.8s						
MAKZ	**Makanchi**	**42.90**	**321**	*e*P	**P**	**15 51 28.8**	**+0.2**
MAKZ				pmax	pmax		
	comp=Z,3.0nm,0.8s						
PDGK	**Podgornoye**	**42.95**	**315**	P	P	15 51 31.6	+2.4
PDGK				pmax	pmax		
	comp=Z,6.0nm,0.9s						
AS31	**Alice Springs**	**43.26**	**162**	*e*P	**P**	**15 51 28.9**	**-2.8**
	comp=Z,1.0nm,0.8s						
ASAR	**Alice Springs**	**43.27**	**162**	P	P	15 51 27.0	-4.7
	comp=Z,1.6nm,0.6s,baz=338,slow=6.8,SNR=32						
ASAR				LR	LR	16 10 59.3	
	comp=Z,59nm,19.7s,baz=330,slow=38						
AS01	**Alice Springs**	**43.28**	**162**	*e*P	**P**	**15 51 27.7**	**-4.1**
KSH	**Kashi**	**44.16**	**309**	*e*P	P	15 51 42.8	+3.8
KSH				sP	sP	15 51 50.0	+8.2
YAK	**Yakutsk**	**44.59**	**6**	⇑*e*P	**P**	**15 51 43.0**	**+1.2**
YAK				pmax	pmax		
	comp=Z,26nm,1.7s						
NIL	**Nilore**	**45.07**	**300**	*e*P	**P**	**15 51 46.8**	**+0.6**
	comp=Z,14nm,0.6s						
NIL	**Nilore**	**45.07**	**300**	*e*P	**P**	**15 51 46.8**	**+0.6**
NIL				pmax	pmax		
	comp=Z,14nm,0.6s						
ZAA0	**Zalesovo Array**	**45.37**	**331**	*e*P	**P**	**15 51 48.4**	**+0.2**
	comp=Z,5.4nm,0.9s						
ZALV	**Zalesovo Beam**	**45.37**	**331**	P	P	15 51 49.1	+0.9
	comp=Z,2.5nm,0.7s,baz=142,slow=13,SNR=9.8						
ZALV				LR	LR	16 12 03.5	
	comp=Z,50nm,20.4s,baz=70,slow=38						
ZALV	**Zalesovo Beam**	**45.37**	**331**	*e*P	**P**	**15 51 48.6**	**+0.4**
ZALV	**Zalesovo Beam**	**45.37**	**331**	*e*P	**P**	**15 51 48.6**	**+0.4**
PETK	**Petropavlovsk-**	**45.48**	**31**	P	**P**	**15 51 48.4**	**-0.7**
	comp=Z,3.4nm,0.9s,baz=212,slow=5.1,SNR=3.3						
PETK				LR	LR	16 12 44.0	
	comp=Z,39nm,18.3s,baz=249,slow=38						
KURK	**Kurchatov**	**46.74**	**324**	*e*P	**P**	**15 51 59.8**	**+0.7**
	comp=Z,10nm,1.1s						
KURK	**Kurchatov**	**46.74**	**324**	*de*P	P	15 52 00.5	+1.4
KURK				pmax	pmax		
	comp=Z,76nm,1.3s						
KURBB	**Kurchatov Arra**	**46.74**	**324**	P	P	15 52 00.5	+1.3
	comp=Z,3.0nm,0.5s,baz=120,slow=8.5,SNR=12						
HNR	**Honiara**	**47.38**	**122**	LR	LR	16 10 02.7	
	comp=Z,34nm,21.9s,baz=280,slow=34						
KK31	**Karatay Array**	**49.08**	**312**	*e*P	P	15 52 18.4	+1.0
KK31	**Karatay Array**	**49.08**	**312**	*e*P	P	15 52 18.4	+1.0
KKAR	**Karatay Array**	**49.08**	**312**	*e*P	P	15 52 18.4	+1.0
KKAR	**Karatay Array**	**49.08**	**312**	*e*P	P	15 52 18.4	+1.0
SEY	**Seymchan**	**50.10**	**18**	*i* P	**P**	**15 52 25.7**	**+0.9**
BVAR	**Borovoye Array**	**52.34**	**324**	P	P	15 52 43.3	+1.5
	comp=Z,1.6nm,0.8s,baz=99,slow=8.9,SNR=6.2						
BRVK	**Borovoye**	**52.41**	**324**	*e*P	**P**	**15 52 42.4**	**+0.1**
	comp=Z,4.9nm,0.9s						
BRVK	**Borovoye**	**52.41**	**324**	*ce*P	P	15 52 44.0	+1.7
BRVK				pmax	pmax		
	comp=Z,13nm,1.3s						
STKA	**Stephens Creek**	**53.39**	**158**	P	**P**	**15 52 45.8**	**-4.0**
	comp=Z,1.4nm,0.8s,baz=308,slow=18,SNR=3.7						
NRIK	**Noril'sk**	**55.37**	**346**	P	**P**	**15 53 04.8**	**+1.1**
	comp=Z,4.8nm,0.6s,baz=331,slow=24,SNR=4.3						
NRIK				LR	LR	16 18 22.0	
	comp=Z,60nm,20.1s,baz=241,slow=38						
ABKAR	**Akbulak array**	**57.59**	**317**	*e*P	**P**	**15 53 20.4**	**+0.6**
GEYT	**Alibeck**	**57.70**	**304**	P	P	15 53 22.2	+1.3
	comp=Z,1.7nm,0.8s,baz=98,slow=7.9,SNR=3.3						
GEYT				LR	LR	16 22 22.4	
	comp=Z,56nm,18.6s,baz=200,slow=40						
AKTO	**Aktyubinsk**	**59.02**	**319**	P	**P**	**15 53 30.7**	**+0.8**
	comp=Z,1.1nm,0.5s,baz=73,slow=11,SNR=4.0						
AKTO				LR	LR	16 19 11.6	
	comp=Z,53nm,20.9s,baz=100,slow=36						
DZM	**Mont Dzumac**	**59.89**	**130**	P	**P**	**15 53 32.4**	**-4.0**
	comp=Z,6.3nm,1.0s,baz=0.0,slow=18,SNR=2.4						
ARU	**Arti**	**59.90**	**325**	*d i*P	**P**	**15 53 35.7**	**-0.1**
ARU						15 55 45.5	
ARU				S	**S**	**16 01 48.4**	**+0.3**
ARU				SS	**SS**	**16 05 46.3**	**+2.2**
ARU				pmax	pmax		
	comp=Z,5.0nm,1.2s						
GNI	**Garni**	**68.04**	**307**	LR	LR	16 27 16.4	
	comp=Z,32nm,21.8s,baz=76,slow=38						
KBZ	**Khabaz**	**69.09**	**311**	P	**P**	**15 54 36.4**	**+0.2**
	comp=Z,3.8nm,1.0s,baz=107,slow=3.6,SNR=4.5						
KBZ				LR	LR	16 28 18.7	
	comp=Z,49nm,18.4s,baz=30,slow=39						
KIV	**Kislovodsk**	**69.22**	**311**	⇑*e*P	**P**	**15 54 37.5**	**+0.4**
KIV				*e*		15 54 59.4	
KIV				*e*S	S	16 03 57.1	+13
KIV				pmax	pmax		
	comp=Z,6.0nm,0.9s						
KIV				MLR	MLR		
	comp=Z,45nm,17.0s						
VSR	**Storozhevoye**	**70.97**	**319**	*e*P	**P**	**15 54 47.2**	**-0.4**
VSR				pmax	pmax		
	comp=Z,7.0nm,0.9s						
OBN	**Obninsk**	**72.16**	**323**	⇓*e*P	**P**	**15 54 55.0**	**+0.3**
OBN				*e*		15 55 12.9	
OBN				*e*		15 57 37.6	
OBN				pmax	pmax		
	comp=Z,3.0nm,0.9s						
OBN				MLR	MLR		
	comp=Z,42nm,18.0s						
CAST	**Castle Rocks**	**73.00**	**28**	*e*P	**P**	**15 55 00.7**	**+1.1**
	comp=Z,8.9nm,1.1s						
MLY	**Manley**	**73.41**	**26**	*e*P	**P**	**15 55 02.4**	**+0.4**
	comp=Z,3.7nm,0.8s						
BPAW	**Bear Paw Mtn.**	**73.41**	**27**	*e*P	**P**	**15 55 02.3**	**+0.3**
	comp=Z,6.5nm,1.1s						
AFI	**Afiamalu**	**73.78**	**111**	LR	LR	16 22 24.4	
	comp=Z,16nm,20.5s,baz=214,slow=32						
MDM	**Murphy Dome**	**74.48**	**26**	*e*P	**P**	**15 55 09.1**	**+0.9**
	comp=Z,3.6nm,0.8s						
ILAR	**Eielson Array**	**75.08**	**26**	P	**P**	**15 55 11.6**	**-0.1**
	comp=Z,0.6nm,0.8s,baz=283,slow=4.5,SNR=4.3						
ARCES	**ARCESS Array B**	**75.19**	**339**	P	**P**	**15 55 13.4**	**+1.2**
	comp=Z,0.9nm,0.7s,baz=77,slow=8.4,SNR=3.1						
SPITS	**Spitsbergen Ar**	**75.53**	**348**	LR	LR	16 33 01.4	
	comp=Z,34nm,18.8s,baz=25,slow=39						
BRTR	**Keskin Array B**	**76.53**	**308**	P	P	15 55 22.0	+1.3
	comp=Z,0.5nm,0.7s,baz=123,slow=5.3,SNR=2.7						
FINES	**FINESS Array B**	**76.64**	**331**	P	**P**	**15 55 21.4**	**+0.8**
	comp=Z,1.8nm,0.8s,baz=84,slow=14,SNR=3.2						
FINES				LR	LR	16 31 44.2	
	comp=Z,41nm,19.1s,baz=76,slow=38						
AKASG	**Malin Array Be**	**77.26**	**319**	P	**P**	**15 55 24.1**	**-0.2**
	comp=Z,0.3nm,0.4s,baz=63,slow=4.5,SNR=3.0						
KIEV	**Kiev**	**77.27**	**319**	*i* P	P	15 55 26.1	+1.7
KIEV				pmax	pmax		
	comp=Z,2.0nm,0.9s						
EGAK	**Eagle**	**77.47**	**26**	*e*P	**P**	**15 55 25.6**	**+0.4**
	comp=Z,3.4nm,1.0s						
BUR04	**Bucovina Ar. S**	**80.57**	**317**	*e*P	**P**	**15 55 42.5**	**-0.2**
MLR	**Muntele Rosu**	**80.67**	**315**	LR	LR	16 35 34.2	
	comp=Z,39nm,21.0s,baz=58,slow=39						
OPO	**Ambohidratompo**	**80.72**	**247**	P	**P**	**15 55 42.8**	**-1.3**
	comp=Z,2.8nm,0.7s,baz=86,slow=16,SNR=2.5						
DAG	**Danmarks Havn**	**82.51**	**351**	P	P	15 55 57.4	+5.1
DAG				pmax	pmax		
	comp=Z,11nm,1.0s						
CRVS	**Cervenica-Dubn**	**82.58**	**319**	*e*P	P	15 55 55.1	+1.8
CRVS	**Cervenica-Dubn**	**82.58**	**319**	*e*P	P	15 55 55.0	+1.7
HFS	**Hagfors**	**82.81**	**331**	P	**P**	**15 55 54.7**	**+0.5**
	comp=Z,2.8nm,0.9s,baz=36,slow=12,SNR=2.9						
HFS				LR	LR	16 35 24.0	
	comp=Z,53nm,20.4s,baz=35,slow=38						
NB2	**NORSAR Subarra**	**83.55**	**332**	P	**P**	**15 55 58.7**	**+0.6**
	comp=Z,1.0nm,0.6s,baz=66,slow=4.6						
NOA	**NORSAR Array B**	**83.55**	**332**	P	**P**	**15 55 58.3**	**+0.2**
	comp=Z,0.4nm,0.6s,baz=64,slow=4.6,SNR=4.6						
NOA				LR	LR	16 36 17.7	
	comp=Z,53nm,20.5s,baz=65,slow=38						
VYHS	**Vyhne**	**84.36**	**319**	*e*P	P	15 56 04.9	+2.5
VYHS	**Vyhne**	**84.36**	**319**	*e*P	P	15 56 04.9	+2.5
GERES	**GERESS Array B**	**87.37**	**321**	LR	LR	16 37 46.2	
	comp=Z,22nm,19.7s,baz=84,slow=37						
YKA	**Yellowknife Ar**	**88.99**	**22**	P	**P**	**15 56 22.5**	**-2.2**
	comp=Z,0.7nm,0.7s,baz=318,slow=4.6,SNR=3.9						
YBH	**Yreka Blue Hor**	**96.78**	**42**	LR	LR	16 33 08.0	
	comp=Z,12nm,20.2s,baz=324,slow=31						
TXAR	**Lajitas Array**	**116.54**	**43**	PKP	**PKPdf**	**16 02 15.0**	**+0.1**
	comp=Z,0.4nm,0.7s,baz=183,slow=1.8,SNR=3.5						
TXAR	**Lajitas Array**	**116.54**	**43**	PKP	**PKPdf**	**16 02 15.0**	**+0.1**
TXAR	**Lajitas Array**	**116.54**	**43**	PKIKP	**PKPdf**	**16 02 15.0**	**+0.1**

*IDC **30** 15:50:57.1±1.4, 3°.28N×128°.45E, h0^{km}, mb3.8/6, mb1 4.0/6, mb1mx3.5/59, mbtmp3.9/6, Error ellipse: s-maj=89.2km s-min=18.0km az=70.0*

*ISCJB **30** 15:51:12.4±0.7, 3°.06N±0°.07×128°.24E±0°.07, h150^{km}, mb3.8/8, Error ellipse: s-maj=10.9km s-min=7.7km az=39.7*

*NEIC **30** 15:51:12.6±1.9, 3°.08N×128°.43E, h137^{km}±15^{km}, mb4.0/5, Error ellipse: s-maj=26.6km s-min=8.0km az=58.0*

*DJA **30** 15:51:15.0±1.2, 3°N±12°×12°8E±°, h138^{km}±16^{km}, M4.0/7, mb4.3/2, MLv3.9/7*

ISC 30 15:51:14.4±1.2**, 3°.0N**±0°.1×**128°.21E**±0°.09**, h150^{km}, n18, σ0s.41**/19**, mb3.8**/8**, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	**Ternate**	**2.35**	**201**	P	**Pn**	**15 51 54.1**	**+0.4**
TNTI	**Ternate**	**2.35**	**201**	*e*Pn	**Pn**	**15 51 53.6**	**-0.1**
KMSI	**Cibinong**	**4.85**	**241**	P	**Pn**	**15 52 25.6**	**-0.3**
KMSI				S	**Sn**	**15 53 21.3**	**-0.4**
SWI	**Sorong**	**4.89**	**141**	S	**Sn**	**15 53 22.7**	**+0.2**
MRSI	**Marisa**	**6.74**	**248**	P	**Pn**	**15 52 51.8**	**+0.8**
MTN	**Manton Dam**	**15.99**	**170**	*e*Pn	**Pn**	**15 54 50.3**	**-0.8**
	76nm,1.8s						
KSM	**Kuching**	**17.95**	**266**	*e*P	**Pn**	**15 55 14.9**	**+0.2**
	6.9nm,0.9s						
FITZ	**Fitzroy Crossi**	**21.10**	**187**	P	**P**	**15 55 47.8**	**+0.5**
	1.3nm,0.8s,baz=5.7,slow=10,SNR=2.8						
WR1	**Warramunga Arr**	**23.56**	**165**	*e*P	**P**	**15 56 11.2**	**-0.2**
	6.3nm,0.6s						
WRA	**Warramunga Arr**	**23.56**	**165**	P	**P**	**15 56 11.2**	**-0.3**
	6.6nm,0.6s,baz=345,slow=10,SNR=53						
AS31	**Alice Springs**	**27.06**	**168**	*e*P	**P**	**15 56 42.8**	**-0.3**
	1.8nm,1.4s						
ASAR	**Alice Springs**	**27.06**	**168**	P	**P**	**15 56 43.1**	**0.0**
	0.5nm,0.8s,baz=352,slow=7.4,SNR=6.2						
STKA	**Stephens Creek**	**36.93**	**161**	P	**P**	**15 58 09.5**	**+0.5**
	1.3nm,0.3s,baz=342,slow=7.9,SNR=13						
STKA	**Stephens Creek**	**36.93**	**161**	*e*P	**P**	**15 58 09.0**	**+0.1**
	4.4nm,1.8s						
MK32	**Makanchi Array**	**59.01**	**325**	*e*P	**P**	**16 00 58.5**	**0.0**
MKAR	**Makanchi Array**	**59.01**	**325**	P	**P**	**16 00 58.5**	**0.0**
	0.4nm,0.4s,baz=118,slow=8.9,SNR=6.6						
KURBB	**Kurchatov Arra**	**63.16**	**327**	P	**P**	**16 01 26.0**	**-0.3**
	0.6nm,0.3s,baz=109,slow=5.3,SNR=2.4						
KURK	**Kurchatov**	**63.16**	**327**	*e*P	**P**	**16 01 25.9**	**-0.3**

MEX 30 15:54:45.5±0.8**, 17°.03N×100°.11W, h5^{km}, MD3.8, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CAIG	**El Cayaco**	**0.15**	**278**	*e*P	Pg	15 54 48.2	-0.4
CAIG				*e*S	Sg	15 54 50.7	0.0
ACP2	**Acapulco**	**0.26**	**125**	*e*P	Pg	15 54 49.9	-0.7
ACP2				*e*S	Sg	15 54 53.7	-0.3
MEIG	**Mezcala**	**1.01**	**27**	*e*P	Pg	15 55 02.1	-2.8
MEIG				*e*S	Sg	15 55 15.0	-3.0
ARIG	**Puente Sto Nin**	**1.27**	**350**	*e*P	Pg	15 55 06.6	-3.2
ARIG				*e*S	Sg	15 55 22.0	-4.3
ZIIG	**Zihuatanejo**	**1.42**	**294**	*e*P	Pn	15 55 08.5	-3.5
ZIIG				*e*S	Sb	15 55 26.2	-4.7
PLIG	**Platanillo**	**1.48**	**23**	*e*P	Pn	15 55 09.0	-3.8
PLIG				*e*S	Sn	15 55 27.1	-5.5
TLIG	**Tlapa**	**1.57**	**70**	*e*P	Pn	15 55 11.2	-2.9
TLIG				*e*S	Sn	15 55 30.9	-4.0
PNIG	**Pinotepa**	**2.00**	**108**	*e*P	Pn	15 55 16.9	-3.1
PNIG				*i* S	Sn	15 55 41.5	-3.9

IDC 30 16:17:13.4±999.0**, 47°.46N×46°.03E, h0^{km}, Error ellipse: s-maj=434.0km s-min=198.8km az=133.0, Ukraine-Moldova-Southwestern Russia region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I43RU	**DUBNA INFRASON**	**10.74**	**333**	*i*		17 29 50.0	
	baz=144,slow=320,SNR=1.3						
I26DE	**FREYUNG INFRAS**	**21.52**	**286**	*i*		18 25 20.0	
	baz=83,slow=295,SNR=1.0						
I48TN	**KESRA INFRASON**	**29.54**	**260**	*i*		19 20 00.0	
	baz=54,slow=286,SNR=0.4						

*ISK **30** 16:23:49.9, 37°.89N×26°.74E, h8^{km}, ML2.3/10*

*CSEM **30** 16:23:50.1±0.3, 37°.84N×26°.69E, h5^{km}, ML2.3, Error ellipse: s-maj=8.3km s-min=4.0km az=57.0*

*DDA **30** 16:23:50.4, 37°.86N×26°.72E, h7^{km}, Ml2.9*

ISC 30 16:23:50.2±1.1**, 37°.86N**±0°.03×**26°.70E**±0°.03**, h9^{km}**±9^{km}**, n40, σ0s.47**/55**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DGB	**˜zmir**	**0.24**	**36**	*i* P	**Pg**	**16 23 55.1**	**+0.1**
DGB				*i* S	**Sg**	**16 23 58.6**	**+0.2**
GCAM	**G?zelcaml?**	**0.45**	**110**	PG	**Pg**	**16 23 58.9**	**0.0**
GCAM	**G?zelcaml?**	**0.45**	**110**	*e*Pg	**Pg**	**16 23 58.9**	**0.0**
URLA	**Izmir**	**0.51**	**350**	PG	**Pg**	**16 23 59.9**	**-0.2**
URLA				SG	**Sg**	**16 24 07.0**	**+0.2**
URLA	**Izmir**	**0.51**	**350**	*i* P	**Pg**	**16 23 59.8**	**-0.3**
URLA				*i* S	**Sb**	**16 24 08.6**	**-0.3**
URLA	**Izmir**	**0.51**	**350**	*e*Pg	**Pg**	**16 23 59.9**	**-0.2**
URLA				*e*Sg	**Sg**	**16 24 07.0**	**+0.2**
URLA				S	**Sb**	**16 24 08.6**	**-0.3**
BLCB	**Balcova**	**0.59**	**27**	PG	**Pg**	**16 24 01.2**	**-0.4**
BLCB				SG	**Sg**	**16 24 09.3**	**-0.1**
BLCB	**Balcova**	**0.59**	**27**	*e*Pg	**Pg**	**16 24 01.2**	**-0.4**
BLCB				*e*Sg	**Sg**	**16 24 09.3**	**-0.1**
CHOS	**Chios island**	**0.74**	**316**	PG	**Pg**	**16 24 04.5**	**+0.1**
CHOS				SG	**Sb**	**16 24 15.2**	**-0.2**
CHOS	**Chios island**	**0.74**	**316**	*e*Pg	**Pg**	**16 24 04.5**	**+0.1**
CHOS				*e*Sg	**Sb**	**16 24 15.2**	**-0.2**
FOCM	**Foˆ§a**	**0.85**	**1**	PG	**Pg**	**16 24 06.3**	**-0.3**
FOCM	**Foˆ§a**	**0.85**	**1**	*e*Pg	**Pg**	**16 24 06.3**	**-0.3**
BODT	**Bodrum**	**0.93**	**148**	PG	**Pb**	**16 24 08.4**	**0.0**
BODT	**Bodrum**	**0.93**	**148**	*e*Pg	**Pb**	**16 24 08.4**	**0.0**
AYDB	**Zeytinkoy-Aydi**	**0.94**	**84**	PG	**Pg**	**16 24 08.0**	**-0.3**
AYDB	**Zeytinkoy-Aydi**	**0.94**	**84**	*e*Pg	**Pg**	**16 24 08.0**	**-0.3**
AYDN	**Tasoluk**	**0.95**	**102**	*i* P	**Pb**	**16 24 08.6**	**-0.3**
AYDN				*i* S	**Sb**	**16 24 21.5**	**-0.1**
AYDN	**Tasoluk**	**0.95**	**102**	P	**Pb**	**16 24 08.6**	**-0.3**
AYDN				S	**Sb**	**16 24 21.5**	**-0.1**
BDRM	**Kayabasi**	**0.99**	**143**	*i* S	**Sb**	**16 24 22.8**	**+0.3**
BDRM	**Kayabasi**	**0.99**	**143**	S	**Sb**	**16 24 22.8**	**+0.3**
MLSB	**Milas**	**1.02**	**123**	PG	**Pb**	**16 24 09.8**	**-0.2**
MLSB	**Milas**	**1.02**	**123**	*e*Pg	**Pb**	**16 24 09.8**	**-0.2**
DKL	**Dikili**	**1.22**	**7**	PN	**Pb**	**16 24 13.2**	**-0.2**
DKL	**Dikili**	**1.22**	**7**	*e*Pn	**Pb**	**16 24 13.2**	**-0.2**
DAT	**Datca**	**1.32**	**148**	PN	**Pb**	**16 24 15.4**	**+0.2**
DAT	**Datca**	**1.32**	**148**	*e*Pn	**Pb**	**16 24 15.4**	**+0.2**
AKHS	**Akhisar**	**1.34**	**40**	*i* S	**Sn**	**16 24 33.2**	**+0.1**
AKHS	**Akhisar**	**1.34**	**40**	S	**Sn**	**16 24 33.2**	**+0.1**
YER	**Yerkesik**	**1.45**	**119**	PN	**Pn**	**16 24 16.9**	**+0.3**
YER	**Yerkesik**	**1.45**	**119**	*e*Pn	**Pn**	**16 24 16.9**	**+0.3**
SIGR	**SIGRI**	**1.51**	**334**	PN	**Pn**	**16 24 17.7**	**+0.4**
SIGR	**SIGRI**	**1.51**	**334**	*e*Pn	**Pn**	**16 24 17.7**	**+0.4**
MANT	**Manisa**	**1.59**	**66**	*i* P	**Pg**	**16 24 21.5**	**+0.8**
MANT				*i* S	**Sn**	**16 24 39.7**	**+0.2**
MANT	**Manisa**	**1.59**	**66**	P	**Pg**	**16 24 21.5**	**+0.8**
MANT				S	**Sn**	**16 24 39.7**	**+0.2**
KULA	**Kula-Manisa**	**1.68**	**66**	PN	**Pn**	**16 24 19.9**	**+0.2**
KULA	**Kula-Manisa**	**1.68**	**66**	*e*Pn	**Pn**	**16 24 19.9**	**+0.2**
STEP	**BALIKESIR_Sava**	**1.71**	**27**	*i* P	**Pg**	**16 24 22.8**	**-0.2**
STEP				*i* S	**Sg**	**16 24 46.2**	**+0.9**
STEP	**BALIKESIR_Sava**	**1.71**	**27**	P	**Pg**	**16 24 22.8**	**-0.2**
STEP				S	**Sg**	**16 24 46.2**	**+0.9**
TURN	**Turunc**	**1.80**	**122**	PN	**Pn**	**16 24 19.7**	**-1.7**
TURN	**Turunc**	**1.80**	**122**	*e*Pn	**Pn**	**16 24 19.7**	**-1.7**

*IDC **30** 16:41:06.3±3.8, 23°.46S×179°.88W, h498^{km}±34^{km}, mb3.4/5, mb1 3.5/6, mb1mx3.1/45, mbtmp4.3/6, Error ellipse: s-maj=37.4km s-min=24.2km az=39.0*

*ISCJB **30** 16:41:09.4±2.5, 23°.8S±0°.2×179°.9E±0°.4, h532^{km}, mb3.8/5, Error ellipse: s-maj=45.7km s-min=15.5km az=157.3*

ISC 30 16:41:10.6±1.3**, 23°.9S**±0°.1×**179°.9E**±0°.2**, h532^{km}, n11, σ1s.33**/13**, mb3.9**/5**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	**Urewera**	**14.50**	**189**	P	**P**	**16 44 14.8**	**-0.1**
	0.7nm,0.3s,baz=82,slow=9.3,SNR=4.4						
URZ				S	**S**	**16 46 45.6**	**-1.3**
	0.7nm,0.3s,baz=252,slow=22,SNR=8.5						
STKA	**Stephens Creek**	**34.66**	**248**	P	**P**	**16 47 16.3**	**+0.6**
	5.2nm,1.3s,baz=95,slow=13,SNR=3.6						
ASAR	**Alice Springs**	**41.97**	**261**	P	**P**	**16 48 15.1**	**-0.1**
	2.0nm,0.5s,baz=94,slow=7.4,SNR=68						
ASAR				ScP	**ScP**	**16 52 59.4**	**+1.4**
	0.6nm,0.8s,baz=105,slow=5.0,SNR=8.8						
WRA	**Warramunga Arr**	**42.34**	**266**	P	**P**	**16 48 17.6**	**-0.6**
	1.9nm,0.3s,baz=91,slow=8.3,SNR=133						
FITZ	**Fitzroy Crossi**	**50.77**	**266**	P	**P**	**16 49 21.6**	**-0.3**
	1.8nm,0.5s,baz=93,slow=6.6,SNR=13						
QSPA	**South Pole Qui**	**66.16**	**180**	P	**P**	**16 51 06.6**	**+1.4**
	1.8nm,0.8s,baz=137,slow=0.6,SNR=6.3						
KURBB	**Kurchatov Arra**	**115.22**	**316**	PKP	**PKPdf**	**16 58 48.6**	**-2.6**
	0.2nm,0.6s,baz=123,slow=3.4,SNR=4.0						
HFS	**Hagfors**	**142.55**	**349**	PKhKP	PKPpre	16 59 37.0	
	0.9nm,0.3s,baz=56,slow=3.6,SNR=13						
AKASG	**Malin Array Be**	**144.96**	**327**	PKP	**PKPdf**	**16 59 45.6**	**-1.3**
	0.5nm,0.3s,baz=43,slow=4.8,SNR=5.6						
BRTR	**Keskin Array B**	**147.54**	**307**	PKPbc	**PKPdf**	**16 59 53.2**	**+1.4**
	0.4nm,0.7s,baz=64,slow=6.6,SNR=2.4						
BRTR				PKPab	**PKiKP**	**16 59 57.4**	**+0.5**

	0.9nm,0.6s,baz=78,slow=2.6,SNR=4.8						
MMAI	**Mount Meron Ar**	**147.66**	**294**	PKPbc	**PKPbc**	**16 59 55.4**	**-0.3**
	1.2nm,0.5s,baz=76,slow=6.1,SNR=4.6						

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*MOS **30** 16:46:46.9±2.3, 55°.23N×164°.51E, h61^{km}, mb4.2/1, Error ellipse: s-maj=7.6km s-min=7.4km az=170.9*

KRSC 30 16:46:46.9±1.9**, 55°.23N×164°.51E, h61**^{km}±28^{km}**, ML4.0, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**0.84**	**91**	*e*P	Pn	16 47 04.0	+1.1
BKI				*e*S	Sn	16 47 15.3	+0.7
BKI	**Bering**	**0.84**	**91**	PN	Pn	16 47 04.0	+1.1
BKI				S	Sn	16 47 15.3	+0.7
KBTR	**Krutoberegovo**	**1.37**	**316**	*e*P	Pn	16 47 09.8	+0.1
KBTR				*e*S	Sn	16 47 25.6	-1.3
KBTR	**Krutoberegovo**	**1.37**	**316**	PN	Pn	16 47 09.8	+0.1
KBTR				S	Sn	16 47 25.6	-1.3
KBG	**Krutoberegovo**	**1.44**	**316**	*e*P	Pn	16 47 11.3	+0.5
KBG				*e*S	Sn	16 47 27.4	-1.3
KBG	**Krutoberegovo**	**1.44**	**316**	PN	Pn	16 47 11.3	+0.5
KBG				S	Sn	16 47 27.4	-1.3
SMKR	**Semkarok**	**2.18**	**310**	*e*P	Pn	16 47 23.0	+2.2
SMKR				*e*S	Sn	16 47 49.9	+3.2
SMKR	**Semkarok**	**2.18**	**310**	PN	Pn	16 47 23.0	+2.2
SMKR				S	Sn	16 47 49.9	+3.2
ZLN	**Zelenaya**	**2.24**	**292**	*e*P	Pn	16 47 25.2	+3.5
ZLN	**Zelenaya**	**2.24**	**292**	PN	Pn	16 47 25.2	+3.5
BZGR	**Bezymyannyi-Gr**	**2.28**	**290**	*e*P	Pn	16 47 25.7	+3.6
BZGR	**Bezymyannyi-Gr**	**2.28**	**290**	PN	Pn	16 47 25.7	+3.6
BDR	**Baidarnaya**	**2.29**	**307**	*e*P	Pn	16 47 24.9	+2.6
BDR	**Baidarnaya**	**2.29**	**307**	PN	Pn	16 47 24.9	+2.6
LGNR	**Loginova**	**2.32**	**293**	*e*P	Pn	16 47 26.5	+3.5
LGNR	**Loginova**	**2.32**	**293**	PN	Pn	16 47 26.5	+3.5
TUMD	**Tumrok D**	**2.35**	**271**	*e*P	Pn	16 47 26.5	+3.4
SRKR	**Sorokina**	**2.36**	**309**	*e*P	Pn	16 47 26.1	+2.9
SRKR	**Sorokina**	**2.36**	**309**	PN	Pn	16 47 26.1	+2.9
BZMR	**Bezymyannaya**	**2.39**	**289**	*e*P	Pn	16 47 27.4	+3.7
BZMR	**Bezymyannaya**	**2.39**	**289**	PN	Pn	16 47 27.4	+3.7
BZWR	**Bezymyannyi-We**	**2.39**	**289**	*e*P	Pn	16 47 26.9	+3.1
BZWR	**Bezymyannyi-We**	**2.39**	**289**	PN	Pn	16 47 26.9	+3.1
KZV	**Kizimen**	**2.42**	**269**	*e*P	Pn	16 47 27.3	+3.2
KZV				*e*S	Sn	16 47 55.9	+3.2
KZV	**Kizimen**	**2.42**	**269**	PN	Pn	16 47 27.3	+3.2
KZV				S	Sn	16 47 55.9	+3.2
KLY	**Klyuchi**	**2.43**	**298**	*e*P	Pn	16 47 26.1	+2.0
KLY				*e*S	Sn	16 47 54.6	+1.9
KLY	**Klyuchi**	**2.43**	**298**	PN	Pn	16 47 26.1	+2.0
KLY				S	Sn	16 47 54.6	+1.9
KRSR	**Krestovskiy**	**2.44**	**295**	*e*P	Pn	16 47 27.0	+2.7
KRSR	**Krestovskiy**	**2.44**	**295**	PN	Pn	16 47 27.0	+2.7
KIRR	**Kirishev**	**2.47**	**289**	*e*P	Pn	16 47 28.9	+4.1
KIRR				*e*S	Sn	16 47 58.6	+4.7
KIRR	**Kirishev**	**2.47**	**289**	PN	Pn	16 47 28.9	+4.1
KIRR				S	Sn	16 47 58.6	+4.7
KMNR	**Kamenistaya**	**2.48**	**284**	*e*P	Pn	16 47 28.9	+3.9
KMNR	**Kamenistaya**	**2.48**	**284**	PN	Pn	16 47 28.9	+3.9
TUMR	**Tumrok**	**2.50**	**273**	*e*P	Pn	16 47 28.9	+3.8
TUMR	**Tumrok**	**2.50**	**273**	PN	Pn	16 47 26.5	+1.4
KPT	**Kopyto**	**2.54**	**289**	*e*P	Pn	16 47 29.4	+3.7
KPT	**Kopyto**	**2.54**	**289**	PN	Pn	16 47 29.4	+3.7
KOZ	**Kozyrevsk**	**2.75**	**289**	*e*P	Pn	16 47 32.8	+4.2
KOZ	**Kozyrevsk**	**2.75**	**289**	PN	Pn	16 47 32.8	+4.2
KII	**Karymskiy**	**3.17**	**250**	*e*P	Pn	16 47 38.5	+4.1
KII				*e*S	Sn	16 48 14.3	+3.3
KII	**Karymskiy**	**3.17**	**250**	PN	Pn	16 47 38.5	+4.1
KII				S	Sn	16 48 14.3	+3.3
ESO	**Esso**	**3.37**	**284**	*e*P	Pn	16 47 40.9	+3.9
ESO	**Esso**	**3.37**	**284**	PN	Pn	16 47 40.9	+3.9
SPN	**Mys Shipunski**	**3.39**	**233**	*e*P	Pn	16 47 40.8	+3.5
SPN				*e*S	Sn	16 48 16.2	-0.1
SPN	**Mys Shipunski**	**3.39**	**233**	PN	Pn	16 47 40.8	+3.5
SPN				S	Sn	16 48 16.2	-0.1
NLC	**Nalytchevo**	**3.67**	**238**	*e*P	Pn	16 47 44.8	+3.8
NLC				*e*S	Sn	16 48 26.1	+3.1
NLC	**Nalytchevo**	**3.67**	**238**	PN	Pn	16 47 44.8	+3.8
NLC				S	Sn	16 48 26.1	+3.1
SDLR	**Sedlovina**	**3.83**	**242**	*e*P	Pn	16 47 47.9	+4.5
SDLR				*e*S	Sn	16 48 29.5	+2.2
SDLR	**Sedlovina**	**3.83**	**242**	PN	Pn	16 47 47.9	+4.5
SDLR				S	Sn	16 48 29.5	+2.2
SMAR	**Somma**	**3.88**	**242**	*e*P	Pn	16 47 48.5	+4.3
SMAR				*e*S	Sn	16 48 31.2	+2.6
SMAR	**Somma**	**3.88**	**242**	PN	Pn	16 47 48.5	+4.3
SMAR				S	Sn	16 48 31.2	+2.6
UGLR	**Uglovaya**	**3.90**	**241**	*e*P	Pn	16 47 48.4	+4.0
UGLR				*e*S	Sn	16 48 32.4	+3.5
UGLR	**Uglovaya**	**3.90**	**241**	PN	Pn	16 47 48.4	+4.0
UGLR				S	Sn	16 48 32.4	+3.5
AVH	**Avacha**	**3.92**	**242**	*e*P	Pn	16 47 49.3	+4.8
AVH				*e*S	Sn	16 48 31.1	+1.9
AVH	**Avacha**	**3.92**	**242**	PN	Pn	16 47 49.3	+4.8
AVH				S	Sn	16 48 31.1	+1.9
KOK	**Koryaka**	**3.95**	**243**	*e*P	Pn	16 47 49.8	+4.8
KOK				*e*S	Sn	16 48 33.4	+3.3
KOK	**Koryaka**	**3.95**	**243**	PN	Pn	16 47 49.8	+4.8
KOK				S	Sn	16 48 33.4	+3.3
DALK	**Dalny**	**4.04**	**239**	*e*P	Pn	16 47 50.2	+4.1
DALK				*e*S	Sn	16 48 34.2	+2.1
DALK	**Dalny**	**4.04**	**239**	PN	Pn	16 47 50.2	+4.1
DALK				S	Sn	16 48 34.2	+2.1
PET	**Petropavlovsk**	**4.09**	**240**	*e*P	Pn	16 47 51.4	+4.6
PET				*e*S	Sn	16 48 35.6	+2.2
PET	**Petropavlovsk**	**4.09**	**240**	*e*PN	Pn	16 47 51.4	+4.6
PET				*e*S	Sn	16 48 35.2	+1.8
PET				smax	smax		
	comp=N,127nm,0.5s						
PET				smax	smax		
	comp=E,162nm,0.7s						
OSSR	**Ossora**	**4.10**	**350**	*e*S	Sn	16 48 33.4	-0.2
GNL	**Ganaly**	**4.13**	**251**	*e*P	Pn	16 47 52.1	+4.7
GNL	**Ganaly**	**4.13**	**251**	PN	Pn	16 47 52.1	+4.7
RUS	**Russkaya**	**4.52**	**234**	*e*P	Pn	16 47 56.5	+3.8
RUS				*e*S	Sn	16 48 44.6	+0.6
RUS	**Russkaya**	**4.52**	**234**	PN	Pn	16 47 56.5	+3.8
RUS				S	Sn	16 48 44.6	+0.6
MTVR	**Mutnovka**	**4.65**	**236**	*e*P	Pn	16 47 58.5	+3.9
MTVR				*e*S	Sn	16 48 49.0	+1.8
MTVR	**Mutnovka**	**4.65**	**236**	PN	Pn	16 47 58.5	+3.9
MTVR				S	Sn	16 48 49.0	+1.8
ASAK	**Asacha**	**4.84**	**237**	*e*P	Pn	16 48 02.3	+5.1
ASAK				*e*S	Sn	16 48 55.4	+3.4
ASAK	**Asacha**	**4.84**	**237**	PN	Pn	16 48 02.3	+5.1
ASAK				S	Sn	16 48 55.4	+3.4
APC	**Apacha**	**4.91**	**245**	S	Sn	16 48 58.6	+5.3
KDTR	**Khodutka, Kamc**	**5.14**	**231**	*e*P	Pn	16 48 04.4	+3.2
KDTR				*e*S	Sn	16 48 57.5	-1.7
SKR	**Severo-Kuril's**	**6.81**	**231**	*e*P	Pn	16 48 29.6	+5.6
SKR				*e*S	Sn	16 49 39.0	-1.1
SKR	**Severo-Kuril's**	**6.81**	**231**	PN	Pn	16 48 29.6	+5.6
KMSK	**Kamenskaya**	**7.31**	**6**	*e*P	Pn	16 48 34.4	+3.6
KMSK	**Kamenskaya**	**7.31**	**6**	PN	Pn	16 48 34.4	+3.6

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*IDC **30** 16:54:05.4±1.3, 6°.71S×130°.02E, h0^{km}, mb3.7/3, mb1 4.1/7, mb1mx3.7/51, mbtmp4.0/7, ML4.2/4, Error ellipse: s-maj=43.2km s-min=21.4km az=75.0*

*ISCJB **30** 16:54:19.8±1.1, 7°.49S±0°.08×129°.54E±0°.08, h146^{km}, mb3.5/3, Error ellipse: s-maj=12.0km s-min=10.4km az=150.8*

ISC 30 16:54:22.0±1.3**, 7°.56S**±0°.10×**129°.5E**±0°.1**, h146**^{km}**, n7, σ2^{s}.53**/11**, mb3.5**/3**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BATI	**Baumata**	**6.36**	**245**	Pn	**Pn**	**16 55 53.7**	**+0.2**
	12nm,0.3s,baz=111,slow=3.5,SNR=19						
BATI				Sn	**Sn**	**16 57 05.0**	**-0.1**
	8.8nm,0.3s,baz=83,slow=18,SNR=5.7						
FITZ	**Fitzroy Crossi**	**11.14**	**199**	Pn	**Pn**	**16 56 57.9**	**+0.8**
	1.2nm,0.3s,baz=28,slow=11,SNR=46						
FITZ				Sn	**Sn**	**16 58 58.5**	**-1.8**
	3.3nm,0.3s,baz=88,slow=19,SNR=8.8						
WRA	**Warramunga Arr**	**13.17**	**160**	Pn	**Pn**	**16 57 22.9**	**-0.6**
	0.8nm,0.3s,baz=340,slow=14,SNR=51						
WRA				Sn	**Sn**	**16 59 44.9**	**-4.2**
	2.6nm,0.3s,baz=335,slow=23,SNR=15						
ASAR	**Alice Springs**	**16.56**	**166**	P	**P**	**16 58 08.7**	**+2.9**
	0.4nm,0.3s,baz=342,slow=9.5,SNR=32						
ASAR				S	**Sn**	**17 01 10.0**	**-0.7**
	0.3nm,0.3s,baz=350,slow=27,SNR=6.7						
STKA	**Stephens Creek**	**26.68**	**157**	P	**P**	**16 59 51.4**	**+3.9**
	1.4nm,0.5s,baz=329,slow=12,SNR=3.8						
MKAR	**Makanchi Array**	**68.43**	**327**	P	**P**	**17 05 07.0**	**-1.2**
	0.3nm,0.4s,baz=120,slow=7.7,SNR=7.1						
KURBB	**Kurchatov Arra**	**72.74**	**329**	P	**P**	**17 05 32.1**	**-1.9**
	0.2nm,0.4s,baz=130,slow=5.3,SNR=4.8						

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*ISCJB **30** 16:56:41.6±1.4, 24°.7N±0°.2×95°.2E±0°.4, h10^{km}, mb3.2/5, Error ellipse: s-maj=59.5km s-min=18.0km az=154.7*

*IDC **30** 16:56:42.5±1.5, 24°.89N×95°.34E, h0^{km}, mb3.3/5, mb1 3.4/5, mb1mx3.2/69, mbtmp3.3/5, Error ellipse: s-maj=77.4km s-min=16.6km az=65.0*

ISC 30 16:56:43.8±1.9**, 24°.9N**±0°.3×**95°.3E**±0°.5**, h10**^{km}**, n7, σ1^{s}.02**/5**, mb3.4**/5**, Myanmar**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SHL	**Shillong**	**3.19**	**284**	*e*P	Pg	16 57 53.0	+8.1
CMAR	**Chiang Mai Arr**	**7.20**	**151**	Pg	Pg	16 58 55.9	-5.8
	0.1nm,0.3s,baz=337,slow=16,SNR=3.0						
CMAR				Lg	Lg	17 00 33.3	
	0.0nm,0.3s,baz=315,slow=28,SNR=3.3						
MKAR	**Makanchi Array**	**24.25**	**338**	P	**P**	**17 02 01.2**	**+0.3**
	0.5nm,0.4s,baz=139,slow=9.9,SNR=8.8						
SONM	**Songino Array**	**24.56**	**18**	P	**P**	**17 02 04.1**	**+0.2**
	0.3nm,0.6s,baz=193,slow=10,SNR=2.4						
KURBB	**Kurchatov Arra**	**28.81**	**338**	P	**P**	**17 02 41.6**	**-0.3**
	0.1nm,0.4s,baz=141,slow=9.8,SNR=2.9						
WRA	**Warramunga Arr**	**58.52**	**136**	P	**P**	**17 06 39.6**	**-1.0**
	0.3nm,0.8s,baz=315,slow=8.0,SNR=2.8						
ASAR	**Alice Springs**	**61.04**	**139**	P	**P**	**17 06 58.9**	**+1.0**
	0.3nm,0.8s,baz=326,slow=7.9,SNR=3.3						

MAN 30 16:56:47.8, 5°.26N×126°.50E, h1^{km}**, mb5.0, ML4.0, MS4.0, 1C-1D, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DDMP	**Don Marcelino,**	**1.15**	**317**	*e*P	Pg	16 57 09.7	-0.2
DDMP				*e*S	Sg	16 57 25.0	+0.1
MATI	**Mati**	**1.69**	**352**	*e*P	Pn	16 57 18.5	-0.1
MATI				*e*S	Sn	16 57 37.5	-3.5
GSPH	**General Santos**	**1.75**	**298**	⇓*i*P	Pn	16 57 18.5	-1.0
GSPH				*i* S	Sn	16 57 37.5	-5.0
DMPH	**Davao City--Mi**	**2.06**	**331**	⇑*i*P	Pg	16 57 29.7	+2.2
DMPH				*i* S	Sg	16 58 01.1	+6.9
SKMP	**Bagumbayan, Su**	**2.32**	**303**	*e*P	Pn	16 57 28.1	+1.0
SKMP				*e*S	Sn	16 57 57.7	+1.4
BUKP	**Musuan**	**2.97**	**331**	*e*P	Pn	16 57 37.0	+0.8
BUKP				*e*S	Sn	16 58 13.3	+0.8

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*IDC **30** 17:00:03.4±1.4, 16°.76N×100°.27W, h0^{km}, mb3.7/3, mb1 3.9/6, mb1mx3.7/51, mbtmp3.5/6, ML3.3/3, MS3.2/8, Ms1 3.2/8, ms1mx2.9/45, Error ellipse: s-maj=30.8km s-min=19.2km az=22.0*

*ISCJB **30** 17:00:05.3±0.5, 16°.89N±0°.04×100°.26W±0°.02, h20^{km}, mb3.5/3, MS3.0/4, Error ellipse: s-maj=5.2km s-min=3.1km az=16.7*

*MEX **30** 17:00:08.0±0.7, 16°.86N×100°.26W, h13^{km}±2^{km}, MD4.7*

ISC 30 17:00:06.5±0.8**, 16°.85N**±0°.05×**100°.26W**±0°.03**, h20**^{km}**, n34, σ1^{s}.52**/51**, mb3.6**/3**, MS3.0**/4**, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CAIG	**El Cayaco**	**0.19**	**359**	*e*P	**Pb**	**17 00 11.5**	**-0.1**
CAIG				*e*S	**Sb**	**17 00 14.8**	**-0.3**
ACP2	**Acapulco**	**0.36**	**86**	*e*P	**Pb**	**17 00 13.9**	**-0.3**
ACP2				*e*S	**Sb**	**17 00 19.3**	**-0.2**
ACX	**Acapulco**	**0.39**	**87**	*i* P	**Pb**	**17 00 15.0**	**+0.3**
ACX				*i* S	**Sb**	**17 00 18.9**	**-1.3**
MEIG	**Mezcala**	**1.23**	**30**	*e*P	**Pn**	**17 00 27.2**	**-1.5**
MEIG				*e*S	**Sb**	**17 00 42.7**	**-1.9**
ZIIG	**Zihuatanejo**	**1.37**	**303**	*i* P	**Pn**	**17 00 29.2**	**-1.3**
ZIIG				*i* S	**Sn**	**17 00 45.3**	**-2.8**
ARIG	**Puente Sto Nin**	**1.42**	**357**	*i* P	**Pn**	**17 00 30.0**	**-1.3**
ARIG				*i* S	**Sn**	**17 00 47.3**	**-2.1**
PLIG	**Platanillo**	**1.69**	**25**	*e*P	**Pn**	**17 00 33.9**	**-1.2**
PLIG				*i* S	**Sn**	**17 00 53.9**	**-2.3**
TLIG	**Tlapa**	**1.77**	**66**	*e*P	**Pn**	**17 00 35.3**	**-0.8**
TLIG				*i* S	**Sn**	**17 00 55.5**	**-2.7**
HMTT	**Tlapaneco**	**1.88**	**60**	*e*P	**Pn**	**17 00 36.7**	**-0.9**
HMTT				*i* S	**Sn**	**17 00 58.1**	**-2.7**
PNIG	**Pinotepa**	**2.10**	**102**	*e*P	**Pn**	**17 00 39.2**	**-1.3**
PNIG				*i* S	**Sn**	**17 01 04.6**	**-1.6**
YAIG	**Yautepec**	**2.30**	**30**	*e*P	**Pn**	**17 00 42.3**	**-1.2**
YAIG				*i* S	**Sn**	**17 01 09.9**	**-1.4**
UNM	**Universidad Na**	**2.67**	**23**	*e*P	**Pn**	**17 00 49.0**	**+0.3**
UNM				*i* S	**Sn**	**17 01 18.8**	**-1.8**
PPM	**Popocatepetl**	**2.70**	**35**	*e*P	**Pn**	**17 00 47.7**	**-1.5**
PPM				*i* S	**Sn**	**17 01 21.2**	**-0.4**
PHPU	**Puebla**	**2.96**	**42**	*e*P	**Pn**	**17 00 53.4**	**+0.8**
TPIG	**Tehuac#an**	**3.18**	**60**	*e*P	**Pn**	**17 00 55.0**	**-0.6**
TPIG				*i* S	**Sn**	**17 01 32.4**	**-0.5**
MMIG	**Aquila**	**3.27**	**296**	*e*P	**Pn**	**17 00 56.8**	**+0.1**
MMIG				*i* S	**Sn**	**17 01 34.2**	**-0.8**
DEIG	**Demacu**	**3.62**	**19**	*e*P	**Pn**	**17 01 01.3**	**-0.5**
DEIG				*i* S	**Sn**	**17 01 42.6**	**-1.4**
HUIG	**Huatulco**	**4.13**	**105**	*i* P	**Pn**	**17 01 08.6**	**+0.1**
HUIG				*i* S	**Sn**	**17 01 55.1**	**-1.3**
LVIG	**Laguna Verde**	**4.64**	**51**	*e*P	**Pn**	**17 01 16.4**	**+0.9**
LVIG				*e*S	**Sn**	**17 02 07.8**	**-1.0**
CMIG	**Matias Romero**	**5.15**	**87**	Pn	**Pn**	**17 01 23.1**	**+0.5**
	1.1nm,0.3s,baz=267,slow=12,SNR=7.1						
CMIG				Pg	**Pb**	**17 01 36.4**	**+0.4**
	1.7nm,0.3s,baz=269,slow=14,SNR=11						
CMIG				Lg	Lg	17 02 47.2	
	11nm,0.3s,baz=69,slow=7.7,SNR=8.7						
CMIG				LR	LR	17 03 38.8	
	comp=Z,188nm,20.3s,baz=204,slow=42						
CJM	**Chamela**	**5.25**	**301**	*e*P	**Pn**	**17 01 24.4**	**+0.5**
CJM				*i* S	**Sn**	**17 02 23.2**	**-0.7**
TGIG		**6.84**	**90**	*e*P	**Pn**	**17 01 49.1**	**+3.3**
PCIG		**6.86**	**99**	*e*P	**Pn**	**17 01 46.8**	**+0.8**
LNIG	**Linares**	**8.04**	**5**	*i* P	**Pn**	**17 02 07.0**	**+4.7**
LPIG	**La Paz**	**11.85**	**309**	LR	LR	17 07 09.8	
	comp=Z,134nm,18.5s,baz=89,slow=36						
TXAR	**Lajitas Array**	**12.81**	**346**	Pn	**Pn**	**17 03 10.0**	**+2.3**
	0.0nm,0.3s,baz=164,slow=14,SNR=3.3						
TXAR				Lg	Lg	17 06 49.1	
	0.0nm,0.3s,baz=164,slow=27,SNR=3.5						
TXAR				LR	LR	17 09 01.3	
	comp=Z,118nm,18.4s,baz=0.0,slow=42						
ANMO	**Albuquerque**	**18.85**	**344**	P	**Pn**	**17 04 27.5**	**+1.3**
	0.1nm,0.3s,baz=169,slow=5.2,SNR=3.1						
ANMO				LR	LR	17 12 42.9	
	comp=Z,132nm,18.0s,baz=103,slow=40						
NVAR	**Mina Array Bea**	**26.69**	**327**	P	**P**	**17 05 45.5**	**+0.9**
	1.0nm,0.6s,baz=157,slow=9.6,SNR=10						
NVAR				LR	LR	17 16 49.7	
	comp=Z,36nm,18.2s,baz=272,slow=38						
PDAR	**Pinedale Array**	**27.02**	**345**	P	**P**	**17 05 47.8**	**+0.2**
	0.3nm,0.4s,baz=140,slow=10.0,SNR=3.2						
PDAR				LR	LR	17 17 44.8	
	comp=Z,55nm,18.7s,baz=188,slow=39						
ILAR	**Eielson Array**	**57.17**	**338**	P	**P**	**17 09 52.5**	**+0.7**
	1.0nm,0.7s,baz=140,slow=5.7,SNR=9.1						
BORG	**Borgarnes**	**70.18**	**27**	LR	LR	17 43 01.5	
	comp=Z,8.2nm,18.2s,baz=243,slow=37						
NOA	**NORSAR Array B**	**85.35**	**27**	LR	LR	17 52 51.7	
	comp=Z,4.4nm,18.5s,baz=30,slow=37						
WRA	**Warramunga Arr**	**128.28**	**258**	PKP	**PKPdf**	**17 19 11.9**	**-0.5**
	0.9nm,0.7s,baz=78,slow=2.6,SNR=8.2						
ASAR	**Alice Springs**	**128.98**	**253**	PKP	**PKPdf**	**17 19 13.7**	**0.0**
	0.4nm,0.9s,baz=78,slow=3.2,SNR=4.1						

KRSC 30 17:03:22.1±1.4**, 55°.16N×164°.48E, h47**^{km}±30^{km}**, ML3.6, Komandorsky Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BKI	**Bering**	**0.86**	**87**	*e*P	Pn	17 03 39.1	+1.3
BKI				*e*S	Sn	17 03 50.6	+1.4
KBTR	**Krutoberegovo**	**1.41**	**319**	*e*P	Pn	17 03 44.9	-0.3
KBTR				*e*S	Sn	17 04 01.4	-1.2
KBG	**Krutoberegovo**	**1.48**	**318**	*e*P	Pn	17 03 45.7	-0.6
KBG				*e*S	Sn	17 04 03.6	-0.9
SMKR	**Semkarok**	**2.21**	**311**	*e*P	Pn	17 03 58.1	+1.8
ZLN	**Zelenaya**	**2.25**	**294**	P	Pn	17 04 00.4	+3.5
BZGR	**Bezymyannyi-Gr**	**2.29**	**292**	*e*P	Pn	17 04 01.1	+3.8
BDR	**Baidarnaya**	**2.32**	**309**	P	Pn	17 04 01.0	+3.2
LGNR	**Loginova**	**2.34**	**295**	*e*P	Pn	17 04 01.6	+3.4
TUMD	**Tumrok D**	**2.34**	**273**	*e*P	Pn	17 04 01.0	+3.0
TUMD				*e*S	Sn	17 04 29.6	+4.1
SRKR	**Sorokina**	**2.39**	**310**	*e*P	Pn	17 04 01.4	+2.7
BZMR	**Bezymyannaya**	**2.39**	**291**	*e*P	Pn	17 04 02.7	+3.8
BZWR	**Bezymyannyi-We**	**2.40**	**291**	*e*P	Pn	17 04 02.8	+3.8
KZV	**Kizimen**	**2.40**	**271**	*e*P	Pn	17 04 02.4	+3.4
KZV				*e*S	Sn	17 04 30.3	+3.1
KLY	**Klyuchi**	**2.45**	**300**	*e*P	Pn	17 04 01.4	+1.9
KLY				*e*S	Sn	17 04 30.7	+2.5
KRSR	**Krestovskiy**	**2.45**	**297**	*e*P	Pn	17 04 02.6	+3.0
KIRR	**Kirishev**	**2.48**	**290**	*e*P	Pn	17 04 02.8	+2.8
KIRR				*e*S	Sn	17 04 34.0	+4.9
TUMR	**Tumrok**	**2.48**	**275**	*e*P	Pn	17 04 04.1	+4.0
TUMR				*e*S	Sn	17 04 32.3	+3.1
KMNR	**Kamenistaya**	**2.49**	**286**	*e*P	Pn	17 04 04.0	+3.9
KPT	**Kopyto**	**2.55**	**290**	*e*P	Pn	17 04 04.6	+3.7
KOZ	**Kozyrevsk**	**2.76**	**291**	*e*P	Pn	17 04 08.6	+4.8
KII	**Karymskiy**	**3.13**	**251**	*e*S	Sn	17 04 49.3	+4.2
SPN	**Mys Shipunski**	**3.34**	**234**	*e*P	Pn	17 04 15.8	+4.1
SPN				*e*S	Sn	17 04 51.8	+1.8
ESO	**Esso**	**3.37**	**285**	*e*P	Pn	17 04 16.7	+4.6
NLC	**Nalytchevo**	**3.62**	**239**	*e*S	Sn	17 05 00.2	+3.4
SDLR	**Sedlovina**	**3.79**	**242**	*e*P	Pn	17 04 22.8	+4.9
SDLR				*e*S	Sn	17 05 04.8	+3.6
SMAR	**Somma**	**3.84**	**243**	*e*S	Sn	17 05 06.3	+3.7
UGLR	**Uglovaya**	**3.85**	**242**	*e*P	Pn	17 04 24.3	+5.4
UGLR				*e*S	Sn	17 05 07.0	+4.1
KRX	**Arik**	**3.87**	**245**	*e*S	Sn	17 05 07.2	+4.0
AVH	**Avacha**	**3.87**	**243**	*e*P	Pn	17 04 24.3	+5.3
AVH				*e*S	Sn	17 05 06.6	+3.4
KOK	**Koryaka**	**3.91**	**244**	*e*S	Sn	17 05 09.4	+5.3
DALK	**Dalny**	**3.99**	**240**	*e*P	Pn	17 04 25.1	+4.5
DALK				*e*S	Sn	17 05 09.1	+3.1
PET	**Petropavlovsk**	**4.04**	**240**	*e*P	Pn	17 04 25.5	+4.2
PET				*e*S	Sn	17 05 10.8	+3.5
RUS	**Russkaya**	**4.47**	**235**	*e*P	Pn	17 04 31.5	+4.3
RUS				*e*S	Sn	17 05 20.3	+2.5
KDTR	**Khodutka, Kamc**	**5.09**	**231**	*e*P	Pn	17 04 39.8	+4.2
KDTR				*e*S	Sn	17 05 34.4	+1.4

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*IDC **30** 17:11:20.8±1.4, 15°.26N×93°.82E, h0^{km}, mb3.6/6, mb1 3.7/6, mb1mx3.3/72, mbtmp3.6/6, Error ellipse: s-maj=54.0km s-min=17.6km az=62.0*

ISC 30 17:11:21.6±4.3**, 15°.1N**±0°.9×**9°4E**±°**, h10**^{km}**, n7, σ0^{s}.40**/6**, mb3.5**/6**, Bay of Bengal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
CMAR	**Chiang Mai Arr**	**6.14**	**56**	Pg	Pb	17 13 07.0	-1.7
	0.1nm,0.3s,baz=247,slow=15,SNR=3.2						
MKAR	**Makanchi Array**	**32.96**	**346**	P	**P**	**17 17 56.9**	**+0.4**
	0.2nm,0.6s,baz=176,slow=8.7,SNR=3.0						
KURBB	**Kurchatov Arra**	**37.45**	**344**	P	**P**	**17 18 34.7**	**-0.3**
	0.3nm,0.8s,baz=160,slow=8.3,SNR=3.3						
ZALV	**Zalesovo Beam**	**39.35**	**352**	P	**P**	**17 18 51.0**	**-0.1**
	0.3nm,0.4s,baz=186,slow=10,SNR=2.5						
FITZ	**Fitzroy Crossi**	**45.70**	**135**	P	**P**	**17 19 42.8**	**-0.3**
	2.5nm,0.9s,baz=312,slow=11,SNR=5.4						
WRA	**Warramunga Arr**	**53.12**	**130**	P	**P**	**17 20 39.8**	**0.0**
	0.7nm,0.7s,baz=310,slow=7.8,SNR=6.8						
ASAR	**Alice Springs**	**55.14**	**134**	P	**P**	**17 20 55.0**	**+0.3**
	0.3nm,0.4s,baz=309,slow=6.9,SNR=16						

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*NIED **30** 17:17:00, 38°.00N×141°.70E, h53^{km}, Mw4.2 Best double couple: M$_0$2.43000×10^{15} NP1:ϕ_s270.00000°, δ25.00000°, λ-139.00000°. NP2:ϕ_s143.00000°, δ74.00000°, λ-70.00000°.*

*BJI **30** 17:17:36.5, 38°.00N×142°.20E, h30^{km}, mb4.5/8, mB4.6/4, Ms4.1/2, Ms7 3.7/1*

*MOS **30** 17:17:39.4±1.0, 37°.96N×142°.03E, h44^{km}, mb4.5/15, Error ellipse: s-maj=10.0km s-min=7.1km az=86.6*

*ISCJB **30** 17:17:40.3±0.6, 38°.00N±0°.03×141°.89E±0°.05, h45^{km}±5^{km}, mb4.1/33, MS3.2/10, Error ellipse: s-maj=7.2km s-min=4.0km az=23.5*

*IDC **30** 17:17:42.2±0.7, 38°.05N×141°.74E, h44^{km}±5^{km}, mb3.8/17, mb1 4.0/23, mb1mx3.7/76, mbtmp4.0/23, ML3.7/5, MS3.1/15, Ms1 3.1/15, ms1mx2.9/70, Error ellipse: s-maj=15.0km s-min=12.8km az=112.0*

*JMA **30** 17:17:42.7±0.1, 38°.04N×141°.68E, h49^{km}±1^{km}, M4.1*

JMA Felt II J1.

*NEIC **30** 17:17:42.6±0.9, 38°.03N×141°.80E, h49^{km}±8^{km}, mb4.8/3, Error ellipse: s-maj=11.8km s-min=7.0km az=123.0*

NEIC Recorded [2 JMA] in Miyagi.

ISC 30 17:17:39.9±0.6**, 37°.99N**±0°.04×**141°.92E**±0°.05**, h26**^{km}±3^{km}**, h26**^{km}**:pP-P, n95, σ1^{s}.28**/100**, mb4.2**/33**, MS3.0**/10**, 5C-2D, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIO	**Ouri**	**0.65**	**316**	P	**Pn**	**17 17 53.8**	**+0.4**
JIO				S	**Sb**	**17 18 01.3**	**+0.1**
JMM	**Marumori**	**0.90**	**263**	P	**Pb**	**17 17 56.6**	**-0.2**
JMM				*e*S	**Sb**	**17 18 07.0**	**-1.3**
JFK	**Kawauchi**	**1.03**	**234**	P	**Pb**	**17 17 59.3**	**+0.2**
JFK				*e*S	**Sb**	**17 18 11.6**	**-0.7**
JOU	**Okura**	**1.06**	**291**	P	**Pn**	**17 17 59.0**	**-0.1**
JOU				*e*S	**Sb**	**17 18 10.6**	**-2.4**
JMK	**Ichinoseki**	**1.11**	**331**	P	**Pb**	**17 18 00.3**	**-0.1**
JMK				S	**Sb**	**17 18 12.7**	**-1.7**
JFT	**Otama**	**1.34**	**250**	P	**Pb**	**17 18 03.6**	**-0.7**
JFT				*e*S	**Sn**	**17 18 19.0**	**-0.8**
JYS	**Shirataka**	**1.48**	**280**	P	**Pn**	**17 18 04.9**	**+0.1**
JYS				*e*S	**Sn**	**17 18 21.4**	**-1.9**
JYK	**Kaneyama**	**1.54**	**308**	P	**Pn**	**17 18 05.7**	**+0.1**
JYK				S	**Sn**	**17 18 22.8**	**-2.0**
JOM	**Ohasama**	**1.56**	**342**	P	**Pn**	**17 18 07.0**	**+1.0**
JOM				*e*S	**Sn**	**17 18 25.0**	**-0.4**
JRG	**Rokugo**	**1.73**	**325**	P	**Pn**	**17 18 09.3**	**+1.0**
JRG				*e*S	**Sn**	**17 18 29.3**	**-0.2**
JYA	**Atsumi**	**1.84**	**290**	P	**Pn**	**17 18 09.7**	**0.0**
JFY	**Yanaizu**	**1.85**	**252**	P	**Pn**	**17 18 10.7**	**+0.8**
MJA0	**Matsu Arr-Jizo**	**3.26**	**245**	*e*P	**Pn**	**17 18 31.4**	**+2.0**
MJA0				pmax	pmax		
	comp=Z,9.0nm,0.3s						
MJAR	**Matsushiro Arr**	**3.29**	**245**	P	**Pn**	**17 18 30.8**	**+1.0**
	comp=Z,9.3nm,0.3s,baz=55,slow=10,SNR=62						
MJAR				LR	LR	17 20 03.8	
	comp=Z,554nm,20.1s,baz=55,slow=45						
MAJO	**Matsushiro**	**3.29**	**245**	*e*Pn	**Pn**	**17 18 30.7**	**+0.9**
MAJO	**Matsushiro**	**3.29**	**245***c*	*i*P	**Pn**	**17 18 31.6**	**+1.8**
MAT	**Matsushiro**	**3.29**	**245**	P	**Pn**	**17 18 31.5**	**+1.7**
MAT				S	**Sn**	**17 19 09.4**	**+1.3**
ERM	**Erimo**	**4.14**	**13**	*e*Pn	**Pn**	**17 18 41.9**	**+0.6**
ERM	**Erimo**	**4.14**	**13***c*	*e*P	**Pn**	**17 18 40.8**	**-0.5**
ERM				pmax	pmax		
	comp=Z,8.0nm,0.5s						
JHJ	**Hachijo jima 2**	**5.16**	**200**	P	**Pn**	**17 18 57.2**	**+1.8**
	comp=Z,32nm,0.3s,baz=329,slow=21,SNR=12						
JHJ				S	**Sn**	**17 19 53.8**	**-0.3**
	comp=Z,61nm,0.3s,baz=49,slow=18,SNR=6.2						
JHJ				LR	LR	17 21 16.4	
	comp=Z,163nm,21.0s,baz=94,slow=42						
ASAJ	**Asahikawa**	**6.15**	**5**	P	**Pn**	**17 19 09.5**	**+0.6**
	comp=Z,3.0nm,0.3s,baz=212,slow=10,SNR=33						
ASAJ				S	**Sn**	**17 20 19.3**	**+0.9**
	comp=Z,3.5nm,0.3s,baz=46,slow=15,SNR=4.4						
ASAJ				LR	LR	17 21 42.4	
	comp=Z,88nm,20.0s,baz=134,slow=39						
YUK	**Yuzh-Kuril'sk**	**6.74**	**25**	*i* P	**Pn**	**17 19 17.4**	**+0.3**
YUK				*i* S	**Sn**	**17 20 29.9**	**-3.0**
YUK				pmax	pmax		
	comp=N,20nm,0.2s						
YUK				pmax	pmax		
	comp=E,27nm,0.2s						
YUK				pmax	pmax		
	comp=Z,121nm,0.2s						
SHO	**Shikotan**	**6.96**	**31**	*i* P	**Pn**	**17 19 20.5**	**+0.5**
SHO				*i* S	**Sn**	**17 20 34.9**	**-3.4**
SHO				pmax	pmax		
	comp=Z,18nm,0.5s						
SHO				pmax	pmax		
	comp=N,8.0nm,0.3s						
SHO				pmax	pmax		
	comp=E,5.0nm,0.3s						

KUR	Kuril'sk	8.50	30	⇓iP	Pn	17 19 43.0	+1.8
KUR				iS	Sn	17 21 13.7	-2.5
KUR				pmax	pmax		
	comp=Z,26nm,0.7s						
KUR				pmax	pmax		
	comp=N,9.0nm,0.3s						
KUR				pmax	pmax		
	comp=E,5.0nm,0.1s						
KUR				smax	smax		
	comp=E,108nm,0.4s						
KUR				smax	smax		
	comp=N,51nm,0.3s						
YSS	Yuzh-Sakhalins	8.98	4	eP	Pn	17 19 53.6	+5.7
YSS				MLR	MLR		
	comp=Z,200nm,12.0s						
USRK	Ussuriysk Ar.	9.73	313	P	Pn	17 19 58.8	+0.7
	baz=143,slow=13						
JNU	Nakatsue	10.22	245	P	Pn	17 20 06.6	+1.8
	comp=Z,0.3nm,0.3s,baz=61,slow=7.5,SNR=6.5						
JNU				LR	LR	17 24 15.6	
	comp=Z,237nm,20.2s,baz=119,slow=39						
KSRS	Korea Array	11.10	272	P	Pn	17 20 18.5	+1.6
	comp=Z,0.2nm,0.3s,baz=85,slow=14,SNR=12						
KSRS				LR	LR	17 24 04.0	
	comp=Z,134nm,21.2s,baz=76,slow=35						
KSAR	Wonju Array Be	11.13	272	P	Pn	17 20 18.5	+1.2
KSAR	Wonju Array Be	11.13	272	P	Pn	17 20 18.5	+1.2
PETK	Petropavlovsk-	18.66	31	LR	LR	17 28 38.5	
	comp=Z,47nm,21.3s,baz=221,slow=35						
ZEA	Zeya	18.71	332	eP	Pn	17 21 59.1	+2.3
MA2	Magadan	22.34	12	P	P	17 22 37.0	+1.5
	comp=Z,6.6nm,1.0s,baz=153,slow=16,SNR=3.8						
MA2				LR	LR	17 31 27.7	
	comp=Z,24nm,19.6s,baz=203,slow=37						
YAK	Yakutsk	25.23	346	LR	LR	17 33 20.4	
	comp=Z,47nm,18.1s,baz=239,slow=37						
YAK	Yakutsk	25.23	346	iP	P	17 23 03.1	-0.3
YAK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
SEY	Seymchan	25.78	11	P	P	17 23 08.5	+0.2
	comp=Z,5.0nm,0.9s,baz=202,slow=5.4,SNR=8.9						
XAN	Xi'an	26.90	272	P	P	17 23 18.0	-0.8
XAN				pP	pP	17 23 25.8	-0.6
XAN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
ULN	Ulaanbaatar	27.17	303	iP	P	17 23 21.8	+0.6
ULN				pmax	pmax		
	comp=Z,1.0nm,1.0s						
SONM	Songino Array	27.60	302	P	P	17 23 25.0	-0.1
	comp=Z,0.8nm,0.8s,baz=102,slow=7.9,SNR=6.3						
SONM				LR	LR	17 34 35.2	
	comp=Z,40nm,18.2s,baz=98,slow=37						
SONM	Songino Array	27.60	302	eP	P	17 23 28.7	+3.6
SONM				pmax	pmax		
	comp=Z,1.0nm,0.7s						
H11N2	WAKE ISLAND Hy	28.31	123	T	T	17 53 50.2	
	baz=316,slow=75,SNR=1198						
H11N1	WAKE ISLAND Hy	28.32	123	T	T	17 53 46.6	
	baz=316,slow=75,SNR=2025						
H11N3	WAKE ISLAND Hy	28.33	123	T	T	17 53 51.5	
	baz=316,slow=75,SNR=1213						
H11S1	WAKE ISLAND Hy	29.06	125	T	T	17 54 40.2	
	baz=318,slow=76,SNR=509						
H11S3	WAKE ISLAND Hy	29.06	125	T	T	17 54 40.3	
	baz=318,slow=76,SNR=753						
H11S2	WAKE ISLAND Hy	29.07	125	T	T	17 54 43.2	
	baz=318,slow=76,SNR=488						
DGZ	Jazzator, Alta	40.17	305	iP	P	17 25 13.5	-0.4
DGZ				pmax	pmax		
	comp=Z,2.0nm,0.6s						
ZALV	Zalesovo Beam	41.58	312	P	P	17 25 24.2	-1.0
	comp=Z,0.7nm,0.3s,baz=102,slow=6.6,SNR=4.2						
ZALV				pP	sP	17 25 35.5	-0.6
	comp=Z,4.0nm,0.8s,baz=89,slow=7.2,SNR=8.0						
ZALV				LR	LR	17 42 51.1	
	comp=Z,21nm,19.1s,baz=70,slow=36						
CMAR	Chiang Mai Arr	42.13	255	LR	LR	17 45 36.1	
	comp=Z,8.1nm,18.7s,baz=195,slow=40						
MKAR	Makanchi Array	43.96	301	P	P	17 25 43.5	-1.1
	comp=Z,0.7nm,0.7s,baz=82,slow=9.6,SNR=6.9						
MKAR				pP	sP	17 25 56.1	+0.4
	comp=Z,1.7nm,0.7s,baz=86,slow=10,SNR=11						
MKAR	Makanchi Array	43.96	301	eP	P	17 25 44.6	-0.1
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.7s						
KURK	Kurchatov	45.67	307	eP	P	17 25 56.2	-1.9
	comp=Z,85nm,0.9s						
KURK				pP	sP	17 26 09.7	+0.5
KURK	Kurchatov	45.67	307	iP	P	17 25 57.3	-0.9
KURK				pmax	pmax		
	comp=Z,3.0nm,0.8s						
KURBB	Kurchatov Arra	45.74	307	P	P	17 25 57.5	-1.2
	comp=Z,1.0nm,0.4s,baz=82,slow=8.1,SNR=13						
KURBB				pP	sP	17 26 09.7	0.0
	comp=Z,8.3nm,0.9s,baz=81,slow=8.2,SNR=20						
PDGK	Podgornoye	46.69	297	P	P	17 26 08.5	+2.0
PDGK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
ILAR	Eielson Array	48.48	33	P	P	17 26 19.8	-0.2
	comp=Z,1.0nm,0.5s,baz=275,slow=6.1,SNR=7.3						
BVAR	Borovoye Array	50.23	312	P	P	17 26 32.7	-0.8
	comp=Z,0.6nm,0.6s,baz=99,slow=9.1,SNR=4.3						
BRVK	Borovoye	50.29	312	iP	P	17 26 35.4	+1.5
BRVK				pmax	pmax		
	comp=Z,1.0nm,0.9s						
KSH	Kashi	50.39	294	eP	P	17 26 42.0	+7.0
AAK	Ala-Archa	50.39	298	iP	P	17 26 34.7	-0.4
AAK				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MNAS	Manas	51.83	298	P	P	17 26 45.1	-0.8
MNAS				pmax	pmax		
	comp=Z,6.0nm,0.8s						
SFK	Sufi-Kurgan	51.99	295	P	P	17 26 47.6	+0.4
SFK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
KIP	Kipapa	53.85	90	ceP	P	17 26 56.0	-4.8
ARU	Arti	55.92	318	eP	P	17 27 16.9	+1.6
	comp=Z,6.4nm,0.9s						
ARU	Arti	55.92	318	d iP	P	17 27 26.6	+11
ARU				pmax	pmax		
	comp=Z,6.0nm,0.8s						
FITZ	Fitzroy Crossi	57.85	198	LR	LR	17 51 18.0	
	comp=Z,12nm,19.3s,baz=249,slow=35						
WRAB	Tennant Creek	58.05	188	eP	P	17 27 29.6	-1.1
WRAB	Tennant Creek	58.05	188	eP	P	17 27 29.6	-1.1
WRA	Warramunga Arr	58.06	188	P	P	17 27 30.1	-0.7
	comp=Z,2.2nm,0.8s,baz=6.0,slow=7.3,SNR=19						
WRA	Warramunga Arr	58.06	188	eP	P	17 27 31.0	+0.2
WRA				pmax	pmax		
	comp=Z,2.0nm,0.8s						
ASAR	Alice Springs	61.78	188	P	P	17 27 56.8	+0.4
	comp=Z,0.7nm,0.6s,baz=8.6,slow=4.9,SNR=15						
ARCES	ARCESS Array B	63.25	339	P	P	17 28 05.0	-0.6
	comp=Z,1.4nm,0.7s,baz=54,slow=11,SNR=3.9						
ARCES	ARCESS Array B	63.25	339	eP	P	17 28 05.8	+0.2
ARCES				pmax	pmax		
	comp=Z,1.0nm,0.7s						
SGF	Sodankyl	64.23	337	P	P	17 28 11.4	-0.7
SGF				pmax	pmax		
	comp=Z,6.0nm,1.8s						
OUL	Oulu	65.90	335	P	P	17 28 23.7	+0.8
OUL				pmax	pmax		
	comp=Z,7.0nm,1.5s						
FINES	FINESS Array B	68.16	332	P	P	17 28 36.2	-1.2
	comp=Z,1.5nm,0.7s,baz=60,slow=7.5,SNR=4.9						
FINES	FINESS Array B	68.16	332	eP	P	17 28 36.9	-0.5
FINES				pmax	pmax		
	comp=Z,2.0nm,0.7s						
KIV	Kislovodsk	70.59	311	⇑eP	P	17 28 52.2	-0.6
KIV				e		17 29 16.1	
KIV				e		17 31 27.3	
KIV				pmax	pmax		
	comp=Z,8.0nm,1.0s						
EGMT	Eagleton	73.29	42	eP	P	17 29 10.4	+1.4
	comp=Z,3.9nm,0.8s						
NB2	NORSAR Subarra	73.46	337	P	P	17 29 08.7	-1.0
	comp=Z,2.3nm,1.0s,baz=38,slow=6.5						
NOA	NORSAR Array B	73.46	337	P	P	17 29 07.9	-1.8
	comp=Z,1.2nm,0.8s,baz=38,slow=5.9,SNR=4.8						
NOA				pP	sP	17 29 20.6	-0.4
	comp=Z,1.3nm,0.7s,baz=39,slow=6.0,SNR=4.0						
NOA				LR	LR	18 04 03.5	
	comp=Z,16nm,21.9s,baz=30,slow=38						
NOA	NORSAR Array B	73.46	337	eP	P	17 29 09.2	-0.5
NOA				pmax	pmax		
	comp=Z,1.0nm,0.8s						
AKASG	Malin Array Be	73.79	322	P	P	17 29 09.8	-2.0
	comp=Z,1.0nm,0.5s,baz=51,slow=6.0,SNR=5.2						
AKASG				pP	sP	17 29 23.4	+0.3
	comp=Z,2.0nm,0.7s,baz=48,slow=6.7,SNR=3.4						
NVAR	Mina Array Bea	74.10	54	P	P	17 29 14.9	+0.8
	comp=Z,1.6nm,0.7s,baz=290,slow=6.6,SNR=10						
PDAR	Pinedale Array	76.72	46	P	P	17 29 29.7	+0.6
	comp=Z,1.7nm,0.7s,baz=254,slow=2.5,SNR=9.0						
MUD	Monsted U'grnd	77.76	335	P	P	17 29 34.3	0.0
MUD				pmax	pmax		
	comp=Z,16nm,1.7s						
MLR	Muntele Rosu	78.92	320	LR	LR	18 07 41.3	
	comp=Z,33nm,18.5s,baz=176,slow=38						
VYHS	Vyhne	80.17	326	eP	P	17 29 47.6	-0.1
VYHS	Vyhne	80.17	326	eP	P	17 29 47.6	-0.1
MOO	Moorlands	80.19	176	P	P	17 29 45.0	-2.5
	baz=5.3						
GERES	GERESS Array B	82.11	328	LR	LR	18 08 46.1	
	comp=Z,16nm,19.2s,baz=181,slow=37						
ANMO	Albuquerque	83.67	50	ceP	P	17 30 03.6	-3.0
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.1s						
RPZ	Rata Peaks	85.50	159	LR	LR	18 01 30.7	
	comp=Z,192nm,20.2s,baz=236,slow=31						
TXAR	Lajitas Array	89.22	53	P	P	17 30 35.0	+1.2
	comp=Z,1.3nm,0.6s,baz=301,slow=3.0,SNR=19						
TXAR				pP	sP	17 30 48.5	+3.2
	comp=Z,0.5nm,0.7s,baz=308,slow=4.2,SNR=4.2						
LPAZ	La Paz	145.86	59	PKPbc	PKPdf	17 37 18.0	+0.6
	comp=Z,3.1nm,0.8s,baz=338,slow=3.9,SNR=8.1						

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*AUST **30** 17:25:18.9±0.6, 37°.74S×150°.50E, h2^{km}, Error ellipse: s-maj=5.8km s-min=4.4km az=95.0*
*IDC **30** 17:25:55.4±9.1, 34°.23S×149°.16E, h0^{km}, mb1 3.5/3, mb1mx3.4/37, mbtmp3.3/3, ML3.1/3, Error ellipse: s-maj=187.6km s-min=52.8km az=5.0*
ISC 30 17:25:22.6±2.3**, 37°.6S**±0°.1×**150°.4E**±0°.1**, h10^{km}, n11, σ0^s.94**/14**, Near southeast coast of Australia**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MILA	Mila	1.14	295	P	Pg	17 25 43.7	-0.7
	baz=1.3						
MILA				S	Sn	17 25 59.7	-0.5
	baz=1.3						
CNB	Canberra Magne	2.39	338	P	Pn	17 26 02.6	+0.7
	baz=2.6						
CNB				S	Sb	17 26 34.5	-0.9
	baz=2.6						
CAN	Canberra	2.51	332	P	Pn	17 26 04.7	+1.2
	baz=2.7						
CAN				S	Sb	17 26 37.5	-1.2
	baz=2.7						
YNG	Young	3.64	332	P	Pn	17 26 20.7	+1.7
	baz=3.8						
RIV	Riverview	3.76	9	P	Pn	17 26 20.2	-0.4
	baz=3.9						
TOO	Toolangi	3.93	268	P	Pn	17 26 22.5	-0.5
	baz=4.0						
TOO				S	Sn	17 27 09.7	+0.6
	baz=4.0						
MGCD	Mangrove Creek	4.36	7	P	Pn	17 26 28.8	-0.1
	baz=4.6						
MOO	Moorlands	5.49	206	P	Pn	17 26 38.9	-5.4
	baz=5.3						
STKA	Stephens Creek	9.22	305	Pn	Pn	17 27 36.2	+0.7
	0.2nm,0.3s,baz=118,slow=15,SNR=7.6						
STKA				Lg	Lg	17 29 30.2	
	0.8nm,0.3s,baz=219,slow=23,SNR=5.5						
ASAR	Alice Springs	19.81	310	Pn	Pn	17 29 55.5	+0.7
	0.1nm,0.3s,baz=134,slow=9.3,SNR=10.0						
WRA	Warramunga Arr	22.46	317	P	P	17 30 22.3	+0.4
	0.0nm,0.3s,baz=140,slow=8.7,SNR=4.3						

GUC 30 17:29:16.5±0.3**, 24°.01S×67°.67W, h221^{km}**±6^{km}**, ML3.7, 5C, Chile-Argentina border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PB15	IPOC Station P	1.84	295	⇑eP	Pn	17 29 56.6	+1.3
PB15				eS	S	17 30 27.3	+1.9
PB15				IAML		17 30 28.6	
	comp=E,801nm,0.4s						
PB06	IPOC Station P	2.18	306	⇑iP	Pn	17 30 00.3	+1.7
PB06				eS	S	17 30 33.4	+2.1
PB06				IAML		17 30 35.8	
	comp=N,212nm,0.4s						
PB05	IPOC Station P	2.60	296	⇑eP	Pn	17 30 05.0	+2.0
PB05				eS	S	17 30 41.2	+2.1
PB05				IAML		17 30 44.0	
	comp=N,64nm,0.7s						
PB09	IPOC Station P	2.64	326	eP	Pn	17 30 05.5	+2.0
PB09				eS	S	17 30 42.5	+2.5
PB09				IAML		17 30 43.7	
	comp=N,153nm,0.6s						
PB10	IPOC Station P	2.69	280	eP	Pn	17 30 05.5	+1.7
PB10				eS	S	17 30 42.9	+2.3
PB10				IAML		17 30 47.5	
	comp=E,68nm,0.4s						
PB03	IPOC Station P	2.74	315	eP	Pn	17 30 06.4	+1.8
PB03				eS	S	17 30 44.3	+2.3
PB03				IAML		17 30 48.0	
	comp=N,148nm,0.5s						
PB04	IPOC Station P	2.83	306	eP	Pn	17 30 07.5	+1.9
PB04				eS	S	17 30 46.2	+2.5
PB04				IAML		17 30 51.4	
	comp=E,153nm,0.5s						
PB07	IPOC Station P	3.06	318	⇑eP	Pn	17 30 10.1	+1.9
PB07				eS	S	17 30 50.6	+2.1
PB02	IPOC Station P	3.38	322	⇑eP	Pn	17 30 13.3	+1.5
PB02				eS	S	17 30 56.5	+1.4

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*GUC **30** 17:33:06.5±0.4, 29°.62S×71°.91W, h42^{km}±4^{km}, ML3.5*
*SJA **30** 17:33:09.8±0.9, 29°.70S×72°.02W, h48^{km}±26^{km}, ML3.7, MW3.9*
ISC 30 17:33:05.5±2.6**, 29°.57S**±0°.04×**71°.9W**±0°.1**, h2^{km}**±14^{km}**, n16, σ2^s.17**/22**, 2D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
TLL	Tololo Astrono	1.12	122	⇓iP	Pg	17 33 27.7	+0.7
TLL				eS	Sn	17 33 43.5	-1.0
TLL				IAML		17 33 49.4	
	comp=E,2μm,0.5s						
GO04	Tololo Observa	1.13	123	⇓iP	Pg	17 33 27.7	+0.6
GO04				eS	Sn	17 33 43.6	-1.1
LCO	Las Campanas	1.18	62	eP	Pb	17 33 29.5	+0.7
LCO				eS	Sn	17 33 46.9	+0.8
LCO				IAML		17 33 49.4	
	comp=E,2μm,0.7s						
VACH	Vallenar	1.41	45	eP	Pn	17 33 31.8	-0.3
VACH				eS	Sn	17 33 51.4	+0.2
GO03	Copiap	2.45	37	eP	Pn	17 33 46.5	0.0
GO03				eS	Sn	17 34 17.4	+0.3
AGUA	GUANDACOL	2.97	89	eP	Pb	17 33 58.6	-0.5
AGUA				eS	Sb	17 34 34.3	-1.6
AMOG	MOGNA	3.25	116	eP	Pb	17 34 01.2	-2.7
VCA	Vinchina	3.33	76	eP	Pb	17 34 03.8	-1.6
VCA				IAML		17 34 11.3	
	comp=Z,307nm,0.3s						
AUSP	Uspallata	3.41	141	eP	Pn	17 34 02.5	+2.5
RTLL	Cerro Villicun	3.44	122	eP	Pn	17 34 03.4	+3.3
RTCV	Cerro Valdivia	3.69	129	eP	Pb	17 34 07.3	-4.0
FCH	Farellones	3.99	160	eP	Pn	17 34 07.8	-0.1
FCH				eS	Sn	17 34 55.5	0.0
ASAL	Salagasta	4.00	140	eP	Pn	17 34 11.3	+3.4
ARCO	CERRO ARCO	4.13	143	eP	Pn	17 34 13.4	+3.6
ARCO				IAML		17 35 36.5	
	comp=Z,55nm,0.5s						
AAGR	Agrelo	4.38	144	eP	Pn	17 34 16.3	+3.2
MRA	San Martin	6.02	120	IAML		17 36 03.2	
	comp=Z,22nm,0.5s						

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*IDC **30** 17:46:48.9±4.8, 11°.67S×167°.40E, h0^{km}, mb3.9/6, mb1 4.1/6, mb1mx3.7/50, mbtmp3.9/6, Error ellipse: s-maj=120.9km s-min=40.7km az=113.0*
ISC 30 17:46:54.3±4.6**, 11°.7S**±0°.4×**167°.4E**±0°.8**, h35^{km}, n6, σ0^s.79**/6**, mb3.8**/6**, Santa Cruz Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
STKA	Stephens Creek	31.11	226	P	P	17 53 10.1	+0.5
	2.8nm,1.1s,baz=46,slow=10,SNR=3.6						
WRA	Warramunga Arr	32.77	251	P	P	17 53 24.3	-0.1
	0.5nm,0.5s,baz=83,slow=8.7,SNR=8.1						
ASAR	Alice Springs	33.95	245	P	P	17 53 33.9	-0.7
	0.8nm,0.6s,baz=72,slow=9.8,SNR=17						
FITZ	Fitzroy Crossi	40.76	256	P	P	17 54 32.3	-0.1
	1.7nm,0.8s,baz=85,slow=12,SNR=6.6						
CMAR	Chiang Mai Arr	73.81	293	P	P	17 58 26.7	+0.9
	0.4nm,0.4s,baz=126,slow=5.7,SNR=3.5						
MKAR	Makanchi Array	95.06	317	P	P	18 00 13.1	-0.6
	0.2nm,0.4s,baz=90,slow=7.2,SNR=4.3						

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*NIED **30** 18:05:00, 34°.50N×138°.60E, h14^{km}, Mw3.6 Best double couple: M$_0$2.76000×10^{14} NP1:φ$_s$41.00000°, δ38.00000°, λ28.00000°. NP2:φ$_s$288.00000°, δ73.00000°, λ124.00000°.*
*IDC **30** 18:05:15.7±1.0, 34°.26N×138°.49E, h0^{km}, mb3.3/5, mb1 3.5/7, mb1mx3.3/69, mbtmp3.3/7, ML3.1/2, Error ellipse: s-maj=31.0km s-min=14.6km az=59.0*
*ISCJB **30** 18:05:17.4±0.7, 34°.40N±0°.04×138°.55E±0°.04, h12^{km}±5^{km}, mb3.2/5, Error ellipse: s-maj=6.7km s-min=4.1km az=31.7*
*JMA **30** 18:05:18.2, 34°.46N×138°.61E, h27^{km}±2^{km}, M3.3*
JMA Felt I J1.
ISC 30 18:05:17.2±1.2**, 34°.40N**±0°.04×**138°.57E**±0°.03**, h14^{km}**±10^{km}**, n22, σ0^s.82**/30**, mb3.4**/5**, 1C-5D, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JIZS	Izushimoda	0.41	38	⇓P	Pg	18 05 25.7	+0.3
JSG	Sagara	0.42	312	⇓P	Pb	18 05 27.5	+1.1
JKO	Kozu shima	0.52	114	P	Pb	18 05 28.2	+0.2
JKO				eS	Sb	18 05 35.5	+0.1
JSKK	Shikinejimakit	0.54	96	P	Pb	18 05 28.4	0.0
JSKK				S	Sb	18 05 36.0	0.0
TK04	Tokai 4	0.57	269	⇑P	Pb	18 05 29.4	+0.4
TK04				X		18 05 38.8	
JNIO	Niijimaoohara	0.59	94	P	Pb	18 05 29.5	+0.3
JNIO				S	Sb	18 05 37.4	0.0
JTHY	Toshimahigashi	0.61	78	P	Pb	18 05 29.7	+0.1
JTHY				S	Sg	18 05 37.3	+0.1
SHZ3	Shizuoka 3	0.73	336	⇓P	Pg	18 05 31.2	-0.2
JIM2	Oshima 3	0.78	65	P	Pg	18 05 32.4	0.0
TK02	Tokai 2	0.81	237	P	Pn	18 05 33.2	-0.8
TK02				X		18 05 45.7	
JOD2	Odawara 2	0.97	26	⇓P	Pb	18 05 34.9	-0.9
JMKN	Mikurajimanish	0.99	120	P	Pg	18 05 36.1	-0.1
JMKN				eS	Sg	18 05 49.3	+0.2
JYN	Shimob	1.10	359	⇓P	Pb	18 05 36.8	-1.3
JHJ	Hachijo jima 2	1.63	141	Pn	Pn	18 05 45.7	+0.2
	34nm,0.3s,baz=84,slow=2.1,SNR=8.6						
JHJ				Sn	Sg	18 06 09.1	-0.5
	37nm,0.3s,baz=204,slow=21,SNR=3.7						
MJAR	Matsushiro Arr	2.16	352	Pn	Pn	18 05 53.5	+0.7
	7.8nm,0.3s,baz=176,slow=14,SNR=59						
MJAR				Sn	Sb	18 06 22.2	-0.6
	7.9nm,0.3s,baz=131,slow=28,SNR=5.5						
MAT	Matsushiro	2.16	352	P	Pn	18 05 53.7	+0.8
MAT				S	Sb	18 06 22.0	-0.9
JNU	Nakatsue	6.53	261	Pn	Pn	18 06 52.8	-0.1
	0.4nm,0.3s,baz=30,slow=4.7,SNR=5.8						
ZALV	Zalesovo Beam	42.05	315	P	P	18 13 10.9	+2.8
	0.4nm,0.5s,baz=91,slow=10,SNR=2.6						
MKAR	Makanchi Array	43.61	304	P	P	18 13 21.3	+0.3
	0.2nm,0.7s,baz=81,slow=9.1,SNR=3.1						
KURBB	Kurchatov Arra	45.85	310	P	P	18 13 39.2	+0.4
	0.4nm,0.9s,baz=84,slow=8.5,SNR=3.9						
WRA	Warramunga Arr	54.19	185	P	P	18 14 40.9	-1.4
	0.5nm,0.8s,baz=0.3,slow=7.4,SNR=6.9						
ASAR	Alice Springs	57.91	185	P	P	18 15 08.2	-0.7
	0.1nm,0.5s,baz=11,slow=10,SNR=5.7						

MAN 30 18:09:42.5, 6°.97N×126°.00E, h22^{km}, mb4.7, ML3.6, MS3.4, 2C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
MATI	Mati	0.25	94	eP	Pn	18 09 50.2	-0.7
MATI				eS	Sn	18 09 57.7	+1.5
DMPH	Davao City--Mi	0.51	283	⇑iP	Pn	18 09 59.0	+4.6
DMPH				iS	Sn	18 10 06.5	+4.1
DDMP	Don Marcelino,	0.90	199	eP	Pb	18 09 55.0	-4.4
DDMP				eS	Sb	18 10 05.8	-5.3
BUKP	Musuan	1.30	314	eP	Pn	18 10 04.3	-1.1
BUKP				eS	Sb	18 10 23.1	+0.5
GSPH	General Santos	1.36	230	⇑iP	Pn	18 10 02.8	-3.5
GSPH				iS	Sn	18 10 18.6	-5.2
SKMP	Bagumbayan, Su	1.52	253	eP	Pn	18 10 04.7	-3.6
SKMP				eS	Sn	18 10 27.8	+0.4

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*JMA **30** 18:42:34.1±0.1, 36°.63N×141°.28E, h26^{km}±1^{km}, M3.3*
*IDC **30** 18:42:34.3±1.4, 36°.37N×141°.17E, h0^{km}, mb3.5/5, mb1 3.6/6, mb1mx3.4/66, mbtmp3.4/6, ML2.8/1, MS2.9/3, Ms1 2.9/3, ms1mx2.4/58, Error ellipse: s-maj=30.7km s-min=28.9km az=43.0*
ISC 30 18:42:34.4±2.2**, 36°.65N**±0°.05×**141°.24E**±0°.09**, h2^{km}**±13^{km}**, n24, σ1^s.35**/21**, mb3.5**/5**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHO	Hitachi	0.54	266	P	Pg	18 42 45.0	+0.2
JHO				S	Sg	18 42 53.2	+1.4
ONAJ	Iwakimizuishiy	0.57	322	P	Pg	18 42 45.9	+0.5
JHYU	Hitachinakayam	0.61	240	P	Pg	18 42 46.4	+0.3
JHYU				S	Sg	18 42 55.3	+1.3
JFFD	Fukushimafurud	0.70	309	P	Pg	18 42 48.0	+0.2
JFK	Kawauchi	0.77	338	P	Pg	18 42 49.0	-0.2
JFK				eS	Sg	18 42 59.8	+0.6
JYT	Yasato	0.94	244	P	Pg	18 42 51.3	-1.2
JSB	Shiboa	1.10	287	P	Pb	18 42 55.2	-1.0
JFT	Otama	1.13	320	P	Pb	18 42 54.7	-1.9
JFT				eS	Sb	18 43 09.6	-2.1
MJAR	Matsushiro Arr	2.44	268	Pn	Pn	18 43 14.6	-0.7
	2.5nm,0.3s,baz=84,slow=9.9,SNR=26						
MJAR				Sn	Sb	18 43 50.8	+1.2
	6.7nm,0.3s,baz=83,slow=28,SNR=8.9						
MAT	Matsushiro	2.44	268	P	Pn	18 43 14.5	-0.8
MAT				eS	Sb	18 43 49.2	-0.4
JNU	Nakatsue	9.21	251	LR	LR	18 48 18.8	
	comp=Z,43nm,18.2s,baz=294,slow=38						
KSRS	Korea Array	10.68	278	LR	LR	18 48 55.7	
	comp=Z,35nm,19.7s,baz=108,slow=36						
H11N2	WAKE ISLAND Hy	28.07	120	T	T	19 17 46.8	
	baz=313,slow=75,SNR=1504						
H11N1	WAKE ISLAND Hy	28.08	120	T	T	19 17 42.8	
	baz=313,slow=75,SNR=1081						
H11N3	WAKE ISLAND Hy	28.09	120	T	T	19 17 48.2	
	baz=313,slow=75,SNR=668						
H11S1	WAKE ISLAND Hy	28.77	122	T	T	19 18 38.9	
	baz=315,slow=76,SNR=512						
H11S3	WAKE ISLAND Hy	28.77	122	T	T	19 18 38.9	
	baz=315,slow=76,SNR=611						
H11S2	WAKE ISLAND Hy	28.79	122	T	T	19 18 40.1	
	baz=315,slow=76,SNR=650						
ZALV	Zalesovo Beam	42.07	313	P	P	18 50 29.0	+1.7
	0.8nm,0.8s,baz=65,slow=8.0,SNR=3.1						
MKAR	Makanchi Array	44.20	302	P	P	18 50 46.2	+1.4
	0.3nm,0.6s,baz=93,slow=9.9,SNR=5.5						
KURBB	Kurchatov Arra	46.13	308	P	P	18 51 00.4	+0.5
	0.5nm,0.7s,baz=84,slow=7.8,SNR=6.6						
ILAR	Eielson Array	49.89	32	P	P	18 51 31.1	+2.2
	0.2nm,0.3s,baz=271,slow=7.8,SNR=3.4						
WRA	Warramunga Arr	56.66	188	P	P	18 52 17.2	-1.9
	0.8nm,1.0s,baz=2.6,slow=7.2,SNR=5.9						
FINES	FINESS Array B	69.09	332	LR	LR	19 29 03.7	
	comp=Z,17nm,18.4s,baz=178,slow=40						

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*IDC **30** 18:49:38.2±0.7, 35°.77S×74°.25W, h0^{km}, mb4.2/11, mb1 4.3/13, mb1mx4.1/41, mbtmp4.2/13, ML4.4/2, MS3.2/6, Ms1 3.2/6, ms1mx2.9/43, Error ellipse: s-maj=28.0km s-min=16.6km az=90.0*
*ISCJB **30** 18:49:41.9±0.6, 35°.74S±0°.03×74°.16W±0°.06, h33^{km}, mb4.2/10, MS3.0/4, Error ellipse: s-maj=7.1km s-min=4.1km az=16.2*
*GUC **30** 18:49:41.9±0.5, 35°.77S×74°.08W, h29^{km}±4^{km}, ML4.2*
*NEIC **30** 18:49:44.6±1.8, 35°.77S×74°.16W, h44^{km}±14^{km}, mb4.8/1,*

Error ellipse: s-maj=19.3km s-min=9.1km az=96.0

ISC 30 18:49:43.4±0.7, **35°.71S**±0°.04×**74°.23W**±0°.08, **h35**^{km}, **n42, σ1^{s}.53**/56, **mb4.4**/10, **MS2.9**/4, **1D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCSP	San Pedro de C	1.45	142	eP	Pn	18 50 04.5	-2.6
CCSP				eS	Sn	18 50 20.9	-4.0
CCSP				IAML		18 50 22.3	
	comp=N,5µm,0.6s						
CCHI	Chillan	1.96	118	eP	Pn	18 50 13.4	-0.7
CCHI				eS	Sn	18 50 36.5	-1.0
CCHI				IAML		18 50 42.8	
	comp=N,3µm,0.5s						
GO05	HualaæØ	2.01	70	⇓iP	Pn	18 50 13.4	-1.4
GO05				eS	Sn	18 50 37.3	-1.4
GO05				IAML		18 50 37.9	
	comp=E,3µm,0.3s						
TMU	Temuco	3.29	157	eP	Pn	18 50 31.1	-1.3
TMU				eS	Sn	18 51 08.0	-2.3
TMU				IAML		18 51 13.1	
	comp=N,904nm,0.6s						
CANA	Caviahue	3.35	131	eP	Pn	18 50 34.1	+0.7
CANA				eS	Sn	18 51 16.1	+4.2
CANA				IAML		18 51 31.6	
	comp=Z,166nm,0.7s						
LMEL	Las Melosas	3.80	62	eP	Pn	18 50 39.1	-0.5
LMEL				eS	Sn	18 51 23.6	+0.5
ROCH	El Roble	3.81	45	eP	Pn	18 50 38.2	-1.7
ROCH				eS	Sn	18 51 22.4	-1.2
CLCH	Cerro Calan	3.82	54	eP	Pn	18 50 38.9	-1.0
CLCH				eS	Sn	18 51 22.1	-1.5
PEL	Peldehue	3.89	50	eP	Pn	18 50 39.8	-1.0
PEL				eS	Sn	18 51 24.6	-0.7
FCH	Farellones	4.03	55	eP	Pn	18 50 41.7	-1.2
FCH				eS	Sn	18 51 27.8	-1.2
AAGR	Agrelo	5.18	61	eP	Pn	18 51 00.1	+1.6
ARCO	CERRO ARCO	5.24	58	eP	Pn	18 51 00.5	+1.1
AUSP	Uspallata	5.32	51	eP	Pn	18 51 01.6	+1.0
ASAL	Salagasta	5.45	57	eP	Pn	18 51 04.0	+1.8
RTLS	Leoncito	5.67	48	eP	Pn	18 51 06.3	+0.9
RTLS				IAML		18 51 16.3	
	comp=Z,49nm,0.3s						
PLCA	Paso Flores	5.79	151	Pn	Pn	18 51 06.5	-0.3
	comp=Z,3.9nm,0.3s,baz=350,slow=11,SNR=48						
PLCA				Sn	Sn	18 52 16.6	+4.5
	comp=Z,1.3nm,0.3s,baz=38,slow=14,SNR=3.2						
PLCA				LR	LR	18 53 32.2	
	comp=Z,192nm,21.3s,baz=20,slow=41						
RTCV	Cerro Valdivia	6.10	53	eP	Pn	18 51 11.6	+0.5
AMOG	MOGNA	6.76	47	eP	Pn	18 51 19.9	-0.3
ACAN	Cantantal	6.78	62	eP	Pn	18 51 20.6	+0.2
ACDV	Cuesta del Vie	7.00	39	eP	Pn	18 51 24.2	+0.7
AGUA	GUANDACOL	7.87	40	eP	Pn	18 51 35.1	-0.4
CPUP	Villa Florida	17.22	62	P	Pn	18 53 41.8	+0.6
	comp=Z,0.1nm,0.3s,baz=254,slow=10,SNR=5.6						
CPUP				LR	LR	19 01 36.4	
	comp=Z,121nm,19.6s,baz=226,slow=42						
LPAZ	La Paz	20.09	17	P	P	18 54 15.9	+1.2
	comp=Z,3.5nm,0.9s,baz=173,slow=8.9,SNR=7.7						
SIV	San Ignacio	22.89	34	P	P	18 54 44.5	+0.4
	comp=Z,2.1nm,0.6s,baz=220,slow=15,SNR=12						
SIV				LR	LR	19 05 13.7	
	comp=Z,36nm,18.8s,baz=110,slow=41						
NNA	Nana	23.74	354	LR	LR	19 01 19.6	
	comp=Z,40nm,21.8s,baz=204,slow=30						
ATAH	Atahualpa	28.70	351	LR	LR	19 04 00.5	
	comp=Z,43nm,21.9s,baz=189,slow=30						
SNAA	Sanae	50.70	157	P	P	18 58 39.3	+0.2
	comp=Z,3.9nm,0.8s,baz=272,slow=7.4,SNR=14						
QSPA	South Pole Qui	54.53	180	P	P	18 59 08.0	+0.4
	comp=Z,3.6nm,1.0s,baz=158,slow=0.6,SNR=7.7						
QSPA	South Pole Qui	54.53	180	eP	P	18 59 08.1	+0.5
	comp=Z,11nm,1.1s						
TXAR	Lajitas Array	70.39	333	P	P	19 00 54.4	+0.5
	comp=Z,1.0nm,0.6s,baz=150,slow=8.8,SNR=12						
TXAR				LR	LR	19 27 29.2	
	comp=Z,24nm,18.1s,baz=0.0,slow=32						
MAW	Mawson	72.05	164	P	P	19 01 03.2	-0.1
	comp=Z,4.6nm,1.0s,baz=214,slow=6.4,SNR=8.6						
DBIC	Dimbokro	77.43	72	P	P	19 01 35.9	+0.5
	comp=Z,3.5nm,0.7s,baz=255,slow=3.1,SNR=7.6						
BOSA	Boshof	80.86	119	P	P	19 01 54.2	+0.1
	comp=Z,4.2nm,0.9s,baz=18,slow=1.6,SNR=4.4						
KOWA	Kowa	82.98	67	P	P	19 02 04.9	-0.3
	comp=Z,2.2nm,0.4s,baz=178,slow=4.2,SNR=5.3						
NVAR	Mina Array Bea	84.29	327	P	P	19 02 12.9	+1.3
	comp=Z,0.4nm,0.6s,baz=144,slow=6.3,SNR=3.8						
TORD	Torodi Ar. Bea	86.48	71	P	P	19 02 21.6	-1.3
	comp=Z,1.7nm,1.0s,baz=256,slow=2.7						
WRA	Warramunga Arr	118.38	211	PKP	PKPdf	19 08 25.9	-1.8
	comp=Z,0.4nm,0.8s,baz=148,slow=1.8,SNR=4.0						
BVAR	Borovoye Array	149.76	44	PKPbc	PKPbc	19 09 29.9	+0.9
	comp=Z,1.6nm,0.5s,baz=296,slow=2.9,SNR=12						
KURBB	Kurchatov Arra	155.35	44	PKP	PKPdf	19 09 32.6	+0.1
	comp=Z,0.4nm,0.8s,baz=291,slow=2.4,SNR=3.5						
KURBB				PKPbc	pPKPdf	19 09 41.3	-2.7
	comp=Z,0.5nm,0.8s,baz=302,slow=3.2,SNR=4.4						
KURBB				PKPab	sPKPbc	19 09 58.6	+1.7
	comp=Z,0.5nm,0.8s,baz=304,slow=4.6,SNR=5.3						
KURK	Kurchatov	155.36	44	PKP	PKPdf	19 09 32.6	+0.1
KURK				PKPbc	pPKPdf	19 09 41.3	-2.7
KURK				PKPab	sPKPbc	19 09 58.6	+1.7
ZALV	Zalesovo Beam	156.63	32	PKP	PKPdf	19 09 34.0	-0.1
	comp=Z,1.0nm,0.8s,baz=270,slow=1.5,SNR=5.3						
ZALV				PKPbc	pPKPdf	19 09 43.9	-1.7
	comp=Z,1.7nm,0.9s,baz=278,slow=2.2,SNR=4.8						
ZALV				PKPab	PKPab	19 10 04.2	+0.8
	comp=Z,0.9nm,0.6s,baz=309,slow=5.2,SNR=3.2						
MKAR	Makanchi Array	159.24	51	PKP	PKPdf	19 09 37.4	-0.2
	comp=Z,0.6nm,0.9s,baz=318,slow=1.6,SNR=3.9						
MKAR				PKPab	PKPab	19 10 15.3	+0.3
	comp=Z,0.8nm,0.7s,baz=292,slow=4.1,SNR=7.7						

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*ISCJB **30** 19:03:49.7±0.5, 38°.03N±0°.04×35°.49E±0°.03, h9^{km}±5^{km}, Error ellipse: s-maj=6.3km s-min=4.1km az=161.1*

*DDA **30** 19:03:49.5, 38°.02N×35°.50E, h7^{km}, Ml2.7*

*CSEM **30** 19:03:49.7±0.2, 38°.04N×35°.49E, h5^{km}, ML2.7, Error ellipse: s-maj=5.2km s-min=3.1km az=162.0*

*ISK **30** 19:03:49.5, 38°.00N×35°.47E, h5^{km}, ML2.0/9*

ISC 30 19:03:49.0±1.0, **38°.03N**±0°.04×**35°.39E**±0°.03, **h20**^{km}±4^{km}, **n28, σ0^{s}.70**/42, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
YAHY	KAYSERI_Yahyal	0.07	341	iP	Pg	19 03 53.0	+0.2
YAHY				iS	Sg	19 03 55.1	-0.3
YAHY	KAYSERI_Yahyal	0.07	341	P	Pg	19 03 53.0	+0.2
YAHY				S	Sg	19 03 55.1	-0.3
SAIM	ADANA	0.55	96	iP	Pb	19 03 59.5	-0.5
SAIM				iS	Sb	19 04 06.1	-1.4
SAIM	ADANA	0.55	96	P	Pb	19 03 59.5	-0.5
SAIM				S	Sb	19 04 06.1	-1.4
NIG	Nigde	0.62	277	PG	Pn	19 04 03.2	+0.2
NIG				SG	Sn	19 04 12.9	+0.4
NIG	Nigde	0.62	277	ePg	Pn	19 04 03.2	+0.2
NIG				eSg	Sn	19 04 12.9	+0.4
KARA	Karaisali	0.82	199	PG	Pn	19 04 05.5	+0.1
KARA				SG	Sn	19 04 17.3	+0.4
KARA	Karaisali	0.82	199	ePg	Pn	19 04 05.5	+0.1
KARA				eSg	Sn	19 04 17.3	+0.4
ANDN	Andirin	0.88	121	iP	Pb	19 04 05.6	-0.1
ANDN				iS	Sb	19 04 17.0	-0.1
ANDN	Andirin	0.88	121	P	Pb	19 04 05.6	-0.1
ANDN				S	Sb	19 04 17.0	-0.1
SARI	SarD1z-Kayseri	0.89	65	PG	Pb	19 04 06.3	+0.4
GULE	Gulek	0.89	213	iP	Pn	19 04 06.8	+0.2
GULE				iS	Sn	19 04 20.8	+1.7
GULE	Gulek	0.89	213	P	Pn	19 04 06.8	+0.2
GULE				S	Sn	19 04 20.8	+1.7
KMRS	Kahramanmaras	1.31	113	PN	Pb	19 04 13.6	+0.7
KMRS	Kahramanmaras	1.31	113	ePn	Pb	19 04 13.6	+0.7
ELBS	KAHRAMANMARAS	1.40	78	iP	Pn	19 04 13.6	0.0
ELBS	KAHRAMANMARAS	1.40	78	P	Pn	19 04 13.6	0.0
CUALT	Altinyayla-SIV	1.64	40	iP	Pb	19 04 19.1	+0.5
CUALT				iS	Sn	19 04 37.6	+0.2
CUALT	Altinyayla-SIV	1.64	40	P	Pb	19 04 19.1	+0.5
CUALT				S	Sn	19 04 37.6	+0.2
KIZK	Mersin	1.84	213	PN	Pb	19 04 22.8	+0.8
IKL	Isikli	2.25	218	PN	Pb	19 04 28.7	-0.3
IKL	Isikli	2.25	218	ePn	Pb	19 04 28.7	-0.3
AKKU	Akkuyu-Mersin	2.38	219	PN	Pb	19 04 30.5	-0.7
AKKU	Akkuyu-Mersin	2.38	219	ePn	Pb	19 04 30.5	-0.7
BERE	Bereket-Mersin	2.41	226	PN	Pb	19 04 31.2	-0.7
BERE	Bereket-Mersin	2.41	226	ePn	Pb	19 04 31.2	-0.7
TEKE	Tekeli-Mersin	2.62	225	PN	Pb	19 04 34.1	-1.2
TEKE	Tekeli-Mersin	2.62	225	ePn	Pb	19 04 34.1	-1.2

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*ISCJB **30** 19:04:59.3±0.9, 41°.01N±0°.09×112°.9W±0°.1, h0^{km}, Error ellipse: s-maj=14.9km s-min=10.8km az=142.7*

*NEIC **30** 19:04:59.5±0.8, 40°.96N×112°.88W, h0^{km}, ML1.8, Error ellipse: s-maj=15.5km s-min=8.6km az=144.0, Suspected Mining explosion.*

NEIC 67 km [41 miles] NW of Tooele.

*IDC **30** 19:05:02.6±1.0, 41°.21N×112°.78W, h0^{km}, mb1 2.6/1, mb1mx2.5/69, mbtmp2.2/1, ML2.9/1, Error ellipse: s-maj=57.4km s-min=7.0km az=147.0*

ISC 30 19:04:58.8±1.1, **40°.96N**±0°.07×**112°.92W**±0°.06, **h0**^{km}, **n8, σ1^{s}.77**/9, **Utah**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DUG	Dugway, Tooele	0.77	174	ePn	Pn	19 05 18.1	+1.1
HWUT	Hardware Ranch	1.21	57	ePn	Pg	19 05 21.4	-0.6
HLID	Hailey	2.83	337	ePn	Pn	19 05 46.3	+0.9
BW06	Boulder Array	3.09	53	ePn	Pn	19 05 50.0	+0.9
PDAR	Pinedale Array	3.09	53	Pn	Pn	19 05 50.2	+1.1
	0.2nm,0.3s,baz=225,slow=13,SNR=4.2						
PDAR				Pg	Pb	19 05 54.9	0.0
	1.3nm,0.3s,baz=232,slow=15,SNR=16						
PDAR				Lg	Lg	19 06 35.5	
	1.2nm,0.3s,baz=231,slow=26,SNR=9.7						
BMN	Battle Mountai	3.31	262	ePn	Pn	19 05 53.6	+1.5
NVAR	Mina Array Bea	4.86	240	Pg	Pg	19 06 32.4	+0.5
	0.2nm,0.3s,baz=48,slow=14,SNR=4.7						
NVAR				Sn	Sb	19 07 20.6	-3.4
	0.3nm,0.3s,baz=52,slow=23,SNR=4.8						
NVAR				Lg	Lg	19 07 42.0	
	0.3nm,0.3s,baz=56,slow=28,SNR=4.5						
I56US	NEWPORT INFRAS	7.90	339	i		19 48 40.0	
	baz=158,slow=314,SNR=8.2						

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*NEIC **30** 19:35:06.0±0.0, 35°.50N×96°.82W, h5^{km}, ML3.4(TUL), After TUL.*

NEIC Felt [III] at Meeker and [II] at Shawnee. Also felt at Earlsboro, Lawton, Muskogee, Norman, Oklahoma City, Prague, Sparks, Stillwater and Tulsa. Felt at Springdale, Arkansas; Joplin, Missouri; Derby and South Haven, Kansas.

ISC 30 19:35:06.7±1.4, **35°.53N**±0°.05×**96°.81W**±0°.04, **h11**^{km}±10^{km}, **n53, σ1^{s}.77**/63, **Oklahoma**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TUL1	Leonard	0.91	65	P	Pg	19 35 23.6	-0.6
	baz=244						
TUL1				S	Sg	19 35 36.6	+0.5
	baz=244						
TUL1	Leonard	0.91	65	ePg	Pg	19 35 23.6	-0.6
WMOK	Wichita Mounta	1.80	244	P	Pn	19 35 37.8	+0.1
	baz=64						
WMOK				S	Sb	19 36 01.3	-0.9
	baz=64						
WMOK	Wichita Mounta	1.80	244	ePn	Pn	19 35 37.7	0.0
X39A	Fountain Ranch	2.44	114	P	Pn	19 35 47.1	+0.7
	baz=295						
X39A				S	Sn	19 36 17.0	+0.7
	baz=295						
HHAR	Hobbs	2.45	71	ePn	Pn	19 35 47.7	+1.0
W39A	Magazine	2.50	97	P	Pn	19 35 47.8	+0.6
	baz=278						
W39A				S	Sn	19 36 19.0	+1.3
	baz=278						
W39A	Magazine	2.50	97	ePn	Pn	19 35 47.7	+0.4
T38A	Diamond	2.53	53	P	Pn	19 35 49.1	+1.4
	baz=234						
V39A	Pettigrew	2.59	82	P	Pn	19 35 49.1	+0.4
	baz=263						
V39A				S	Sn	19 36 21.6	+1.3
	baz=263						
MIAR	Mount Ida	2.83	109	P	Pn	19 35 52.8	+0.9
	baz=291						
MIAR				S	Sn	19 36 26.9	+0.9
	baz=291						
MIAR	Mount Ida	2.83	109	ePn	Pn	19 35 53.3	+1.4
U39A	Green Forest	2.83	72	P	Pn	19 35 52.9	+1.0
	baz=253						
U39A				S	Sn	19 36 27.7	+1.6
	baz=253						
W40A	Ferguson Farm,	3.08	95	P	Pn	19 35 56.0	+0.8
	baz=277						
W40A				S	Sn	19 36 33.4	+1.4
	baz=277						
W40A	Ferguson Farm,	3.08	95	ePn	Pn	19 35 56.0	+0.8
S38A	Stockton	3.14	47	P	Pn	19 35 57.1	+1.0
	baz=229						
S38A				S	Sn	19 36 35.0	+1.4
	baz=229						
V40A	Witts Springs	3.26	84	ePn	Pn	19 35 58.5	+0.7
S39A	Bolivar	3.54	51	ePn	Pn	19 36 02.6	+1.0
KSU1	Kansas State U	3.56	3	ePn	Pn	19 36 04.3	+2.4
WHAR	Wooly Hollow	3.70	92	ePn	Pn	19 36 02.3	-1.5
ABTX	Abilene, Hawle	3.73	220	ePn	Pn	19 36 05.1	+0.8
UALR	University of	3.74	100	ePn	Pn	19 36 02.2	-2.1
UALR				eSg	Sg	19 37 05.9	-0.8
W41B	Gary Mavity, V	3.75	94	ePn	Pn	19 36 05.2	+0.7
CBKS	Cedar Bluff	4.02	325	ePn	Pn	19 36 06.2	-2.1
AMTX	Amarillo	4.04	262	ePn	Pn	19 36 09.4	+0.9
R40A	Maddies Statio	4.56	52	ePn	Pn	19 36 16.4	+0.8
R40A				eSn	Sn	19 37 08.2	-0.4
435B	Jarrell	4.78	188	ePn	Pn	19 36 20.0	+1.3
P38A	Dawn	4.84	32	ePn	Pn	19 36 15.5	-4.1
T42A	Van Buren	4.86	70	ePn	Pn	19 36 20.0	+0.3
CCM	Cathedral Cave	5.13	59	ePn	Pn	19 36 25.4	+2.0
PBMO	Poplar Bluff	5.31	75	ePn	Pn	19 36 27.6	+1.7
P40A	Paris	5.50	42	ePg	Pb	19 36 46.8	+4.1
N37A	Lee Faris, Mou	5.60	21	ePg	Pb	19 36 49.0	+4.4
JCT	Junction City	5.63	207	ePn	Pn	19 36 29.9	-0.5
FVM	French Village	5.68	63	eSn	Sn	19 37 33.2	-3.1
PARMO	Parma	5.83	77	eSg	Sg	19 38 10.7	-3.0
BGNE	Belgrade	5.96	350	ePn	Pn	19 36 37.7	+2.8
SLM	Saint Louis	6.10	58	eSg	Sg	19 38 18.0	-4.5
N39A	Derby Farms, D	6.32	31	ePn	Pn	19 36 39.9	+0.1
P42A	Winchester	6.54	50	eSn	Sn	19 37 55.9	-1.4
SCIA	State Center	6.96	23	ePn	Pn	19 36 47.3	-1.2
PLAL	Pickwick Lake	7.17	92	ePn	Pn	19 36 50.3	-1.1
SDCO	Great Sand Dun	7.33	290	ePn	Pn	19 36 54.8	+0.9
L40A	Anamosa	7.84	32	ePn	Pn	19 36 59.8	-0.9
MNTX	Cornudas Mount	8.11	244	ePn	Pn	19 37 04.7	+0.4
BNM	Barren Site	8.19	263	ePn	Pn	19 37 09.4	+3.8
ECSD	EROS Data Cent	8.19	1	ePn	Pn	19 37 04.0	-1.5
TX31	Lajitas Ar. Si	8.47	225	ePn	Pn	19 37 08.0	-1.4
JFWS	Jewell Farm	8.96	33	ePn	Pn	19 37 14.7	-1.3
BLA	Blacksburg	13.32	78	ePn	Pn	19 38 10.1	-5.6
MINS	Minaret Summit	17.99	283	ePcP	PcP	19 43 51.9	-0.3
RYS	Reyes Peak	18.47	274	eP	P	19 39 21.9	-0.8
BMW	Boistfort Moun	22.63	307	ePcP	PcP	19 43 58.1	-2.2

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*IDC **30** 19:39:55.6±0.4, 52°.69S×18°.43E, h0^{km}, mb4.5/21, mb1 4.6/21, mb1mx4.4/54, mbtmp4.5/21, MS4.0/33, Ms1 4.0/33, ms1mx3.9/49, Error ellipse: s-maj=18.9km s-min=12.7km az=78.0*

*ISCJB **30** 19:39:56.3±0.4, 52°.66S±0°.06×18°.3E±0°.2, h13^{km}, mb4.6/25, MS4.0/33, Error ellipse: s-maj=14.5km s-min=8.2km az=175.1*

*NEIC **30** 19:39:57.2±0.2, 52°.69S×18°.44E, h10^{km}, mb4.9/3, Error ellipse: s-maj=11.2km s-min=7.2km az=81.0*

*GCMT **30** 19:39:57.2±0.4, 52°.85S×19°.11E, h18^{km}±1^{km}, MW5.0/76, Moment Tensor Solution. s39,c46; s76,c105; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-3.67±.25; $M_{\theta\theta}$2.40±.18; $M_{\phi\phi}$1.27±.15; $M_{r\theta}$-0.31±.39; $M_{\theta\phi}$-0.91±.10; $M_{\phi r}$-1.70±.39; Best double couple: $M_0$3.60500×10^{16} NP1:ϕ_s319.00000°, δ53.00000°, λ-68.00000°. NP2: ϕ_s105.00000°, δ42.00000°, λ-117.00000°. Principal axes: T 2.9620, Plg6.0000°, Azm33.0000°; N 1.2850, Plg18.0000°, Azm125.0000°; P -4.2470, Plg71.0000°, Azm286.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

ISC 30 19:39:57.7±0.4, **52°.65S**±0°.09×**18°.4E**±0°.1, **h13**^{km}, **n81, σ0^{s}.85**/54, **mb4.7**/25, **MS4.0**/33, **Southwest of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SUR	Sutherland	20.34	6	P	Pn	19 44 35.3	-0.4
	18nm,0.9s,baz=196,slow=10,SNR=13						
SUR				LR	LR	19 50 33.2	
	comp=Z,663nm,19.9s,baz=184,slow=31						
SNAA	Sanae	21.26	198	P	P	19 44 44.7	+1.4
SNAA	Sanae	21.26	198	P	P	19 44 44.3	+1.0
	20nm,0.9s,baz=36,slow=8.4,SNR=34						
SNAA				LR	LR	19 50 45.6	
	comp=Z,458nm,21.3s,baz=26,slow=31						
VNA1	Neumayer--Stat	21.70	204	P	P	19 44 49.0	+1.1
VNA3	Neumayer Olymp	22.44	204	P	P	19 44 56.5	+0.6
BOSA	Boshof	24.55	15	P	P	19 45 17.3	+0.2
	4.8nm,1.0s,baz=188,slow=12,SNR=5.6						
BOSA				LR	LR	19 53 04.8	
	comp=Z,591nm,20.7s,baz=190,slow=32						
MAW	Mawson	25.96	142	P	P	19 45 28.5	-0.9
	20nm,1.0s,baz=283,slow=8.6,SNR=24						
MAW				LR	LR	19 53 46.1	
	comp=Z,118nm,21.2s,baz=257,slow=32						
LBTB	Lobatse	28.14	14	LR	LR	19 55 23.6	
	comp=Z,522nm,19.3s,baz=176,slow=33						
TSUM	Tsumeb	33.39	359	LR	LR	19 58 03.6	
	comp=Z,388nm,21.0s,baz=182,slow=32						
QSPA	South Pole Qui	37.58	180	P	P	19 47 11.8	+0.4
	28nm,0.9s,baz=232,slow=3.8,SNR=68						
OPO	Ambohidratompo	40.76	44	LR	LR	20 03 18.3	
	comp=Z,221nm,18.2s,baz=180,slow=34						
PMSA	Palmer Station	41.34	220	LR	LR	20 00 26.5	
	comp=Z,520nm,20.0s,baz=76,slow=30						
CASY	Casey	44.27	145	eP	P	19 48 06.5	+0.2
	33nm,1.4s						
VNDA	Vanda	48.12	170	P	P	19 48 36.8	+0.3
	8.2nm,1.0s,baz=235,slow=8.2,SNR=26						
VNDA				LR	LR	20 07 50.7	
	comp=Z,196nm,20.4s,baz=205,slow=35						
SBA	Scott Base	48.30	171	eP	P	19 48 38.8	+0.9
	13nm,1.1s						
H10S2	ASCENSION HYDR	51.16	316	T	T	20 44 23.4	
	baz=154,slow=75,SNR=20						
H10S3	ASCENSION HYDR	51.17	316	T	T	20 44 16.6	
	baz=154,slow=75,SNR=21						
H10S1	ASCENSION HYDR	51.17	316	T	T	20 44 15.6	
	baz=154,slow=75,SNR=23						
PLCA	Paso Flores	58.40	243	P	P	19 49 51.7	-1.0
	3.7nm,0.9s,baz=147,slow=7.4,SNR=5.2						
PLCA				LR	LR	20 12 42.8	
	comp=Z,123nm,18.2s,baz=186,slow=34						
CPUP	Villa Florida	61.02	264	P	P	19 50 09.7	-1.1
	6.6nm,0.8s,baz=158,slow=5.8,SNR=10						
CPUP				LR	LR	20 13 16.4	
	comp=Z,42nm,18.1s,baz=169,slow=33						
LIC	Lamto	61.95	333	eP	P	19 50 15.0	-2.1
	56nm,1.4s						
KIC	Kosan Boka	62.00	334	eP	P	19 50 18.2	+0.8
	126nm,2.3s						
DBIC	Dimbokro	62.33	334	P	P	19 50 19.1	-0.5
	11nm,0.9s,baz=149,slow=5.3,SNR=8.8						
DBIC				LR	LR	20 10 47.1	
	comp=Z,100nm,21.8s,baz=128,slow=30						
TIC	Toumodi	62.35	334	eP	P	19 50 19.6	-0.2
BDFB	Brasilia	63.43	279	P	P	19 50 26.8	-0.4
	2.6nm,0.5s,baz=104,slow=6.5,SNR=3.6						
TORD	Torodi Ar. Bea	67.10	342	P	P	19 50 50.2	-0.5
	5.3nm,1.1s,baz=181,slow=5.8						
ATD	Arta Tunnel	67.29	26	LR	LR	20 19 14.5	
	comp=Z,101nm,19.4s,baz=220,slow=35						
NWAO	Narrogin (SRO)	69.49	117	LR	LR	20 14 00.3	
	comp=Z,69nm,21.5s,baz=12,slow=29						
KOWA	Kowa	69.62	337	P	P	19 51 06.8	+0.3
	6.3nm,0.8s,baz=175,slow=7.7,SNR=10						
KOWA				LR	LR	20 15 57.0	
	comp=Z,81nm,20.8s,baz=167,slow=31						
LPAZ	La Paz	75.14	263	P	P	19 51 41.4	+1.0
	7.2nm,1.0s,baz=105,slow=5.8,SNR=15						
LPAZ				LR	LR	20 20 29.6	
	comp=Z,77nm,21.5s,baz=128,slow=32						
SAML	Samuel	77.84	271	eP	P	19 51 55.2	+0.2
	9.5nm,0.9s						
PALK	Pallekele	79.56	63	LR	LR	20 18 40.9	
	comp=Z,93nm,21.4s,baz=287,slow=29						
STKA	Stephens Creek	82.36	134	P	P	19 52 18.6	-0.5
	6.5nm,0.9s,baz=298,slow=2.3,SNR=9.7						
LEM	Lembang	84.15	94	LR	LR	20 20 59.6	
	comp=Z,60nm,20.3s,baz=198,slow=29						
ASAR	Alice Springs	85.64	124	P	P	19 52 35.4	-0.7
	4.1nm,1.0s,baz=208,slow=4.3,SNR=16						
ASAR				LR	LR	20 23 08.6	
	comp=Z,55nm,20.9s,baz=190,slow=30						
ASF	Jabal al Asfar	86.00	16	P	P	19 52 38.6	+1.2
	1.6nm,0.8s,baz=182,slow=5.1,SNR=3.8						
MMAI	Mount Meron Ar	86.59	14	LR	LR	20 31 43.1	
	comp=Z,102nm,18.7s,baz=170,slow=36						
MDT	Midelt	87.45	341	P	P	19 52 46.0	+1.5
	2.3nm,0.9s,baz=75,slow=4.7,SNR=3.8						
MDT				LR	LR	20 26 32.3	
	comp=Z,41nm,21.7s,baz=164,slow=32						
IDI	Anoyia	87.76	5	LR	LR	20 33 44.7	
	comp=Z,122nm,20.2s,baz=242,slow=37						
KEST	Kesra	88.37	353	P	P	19 52 48.7	0.0
	6.5nm,1.2s,baz=133,slow=11,SNR=2.0						
KEST				LR	LR	20 32 40.2	
	comp=Z,88nm,20.3s,baz=264,slow=36						
WRA	Warramunga Arr	88.96	122	P	P	19 52 51.5	-0.6
	2.9nm,1.1s,baz=214,slow=3.0,SNR=5.9						
BATI	Baumata	91.05	108	LR	LR	20 31 45.0	
	comp=Z,54nm,18.0s,baz=183,slow=34						
BRTR	Keskin Array B	92.95	12	P	P	19 53 11.8	+1.7
	0.2nm,0.5s,baz=60,slow=8.5,SNR=2.8						
BRTR				LR	LR	20 35 28.8	
	comp=Z,40nm,19.8s,baz=184,slow=36						
ESDC	Sonseca Array	93.98	343	P	P	19 53 16.4	+1.6
	0.8nm,0.8s,baz=164,slow=4.1,SNR=8.6						
GNI	Garni	95.21	20	LR	LR	20 38 29.7	
	comp=Z,72nm,18.2s,baz=212,slow=37						
ROSC	El Rosal	95.47	271	LR	LR	20 34 05.1	
	comp=Z,41nm,18.1s,baz=125,slow=34						
GEYT	Alibeck	96.59	31	LR	LR	20 40 04.0	
	comp=Z,36nm,18.4s,baz=350,slow=37						
MLR	Muntele Rosu	97.98	5	LR	LR	20 42 04.5	
	comp=Z,88nm,18.4s,baz=186,slow=38						
KBZ	Khabaz	98.30	18	LR	LR	20 37 32.7	
	comp=Z,87nm,20.9s,baz=182,slow=35						
KVAR	Kislovodsk Arr	98.48	17	LR	LR	20 37 48.5	
	comp=Z,85nm,20.6s,slow=35						
CMAR	Chiang Mai Arr	98.89	71	LR	LR	20 31 33.0	
	comp=Z,23nm,18.8s,baz=198,slow=31						
DAVOX	Davos/Dischmat	99.33	354	LR	LR	20 39 52.1	
	comp=Z,42nm,20.2s,baz=116,slow=36						
TBI	Tubuai	103.58	191	eLR	LR	20 27 53.6	
	215nm,35.5s						
PPT2	Papeete2	109.28	192	eLR	LR	20 30 29.6	
	103nm,24.8s						
KURBB	Kurchatov Arra	114.71	37	PKP	PKPdf	19 58 36.1	-0.5
	0.4nm,0.8s,baz=222,slow=1.2,SNR=3.2						
KURK	Kurchatov	114.82	37	PKP	PKPdf	19 58 36.1	-0.7
ZALV	Zalesovo Beam	119.71	39	PKP	PKPdf	19 58 44.6	-1.6
	1.0nm,0.7s,baz=194,slow=5.4,SNR=5.2						
ARCES	ARCESS Array B	121.99	3	PKP	PKPdf	19 58 50.0	-0.1
	3.1nm,1.0s,baz=191,slow=3.7,SNR=6.5						
GOGA	Godfrey	122.64	284	ePKPdf	PKPdf	19 58 52.9	+0.4
SONM	Songino Array	124.86	55	PKP	PKPdf	19 58 55.6	-0.9
	2.0nm,0.8s,baz=221,slow=3.3,SNR=11						
TXAR	Lajitas Array	131.99	265	PKP	PKPdf	19 59 10.4	-0.2
	0.4nm,0.8s,baz=172,slow=3.5,SNR=5.9						
DGMT	Dagmar	144.13	287	ePKPdf	PKPbc	19 59 31.1	+0.8
BW06	Boulder Array	144.34	275	ePKPbc	PKPab	19 59 30.7	-0.3
PDAR	Pinedale Array	144.34	275	PKP	PKPab	19 59 30.9	-0.2
	8.9nm,1.0s,baz=112,slow=4.0,SNR=48						
DUG	Dugway, Tooele	144.81	269	ePKPdf	PKPdf	19 59 33.2	-0.5
HWUT	Hardware Ranch	144.89	272	ePKPdf	PKPab	19 59 33.0	-0.1
TIXI	Tiksi	145.05	31	ePKPdf	PKPbc	19 59 31.9	-0.6
DAC	Darwin (Calif)	145.21	260	ePKPdf	PKPdf	19 59 34.7	0.0
AHID	Auburn Hatcher	145.27	274	ePKPdf	PKPbc	19 59 34.2	-0.2
RLMT	Red Lodge	145.45	279	ePKPdf	PKPbc	19 59 34.9	0.0
NVAR	Mina Array Bea	147.05	262	PKPbc	PKPbc	19 59 40.4	+0.6
	7.9nm,0.8s,baz=137,slow=4.7,SNR=51						
BOZ	Bozeman (W)	147.12	278	ePKPdf	PKPbc	19 59 38.9	-0.8
EGMT	Eagleton	147.19	283	ePKPdf	PKPbc	19 59 38.8	-1.0
HLID	Hailey	147.73	273	ePKPbc	PKPbc	19 59 42.1	+0.5
MFID	Camas Ranch	148.51	272	ePKPbc	PKPbc	19 59 44.2	+0.7
WALA	Waterton Lakes	150.12	282	ePKPbc	PKPbc	19 59 47.4	0.0
BMO	Blue Mountains	150.18	273	ePKPdf	PKPdf	19 59 42.7	+0.2
YKA	Yellowknife Ar	153.55	310	PKPbc	PKPbc	19 59 54.1	-0.3

	1.5nm,0.7s,baz=96,slow=2.5,SNR=7.2						
YKA				PKPab	PKPab	20 00 05.7	-1.4
	0.8nm,0.7s,baz=87,slow=4.0,SNR=4.6						
SEY	Seymchan	153.99	49	PKPbc	PKPbc	19 59 55.3	-0.1
	baz=254,slow=2.9						
INK	Inuvik	159.39	330	PKPab	PKPab	20 00 32.2	+0.1
	2.3nm,0.8s,baz=270,slow=1.0,SNR=3.5						
ILAR	Eielson Array	165.70	334	PKPab	PKPab	20 01 01.2	+1.4
	2.7nm,0.9s,baz=17,slow=3.7,SNR=19						

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*IDC **30** 19:40:46.1±1.0, 70°.94N×6°.49W, h0^{km}, mb3.2/3, mb1 3.5/7, mb1mx3.2/79, mbtmp3.5/7, ML2.7/3, MS2.9/6, Ms1 2.9/6, ms1mx2.5/38, Error ellipse: s-maj=28.8km s-min=14.4km az=9.0*

*CSEM **30** 19:40:47.9±0.2, 71°.11N×6°.25W, h10^{km}, ML3.8, Error ellipse: s-maj=7.5km s-min=3.2km az=136.0*

*NAO **30** 19:40:48.0±3.3, 71°.08N×6°.25W, h14^{km}±37^{km}, ML3.8*

*BER **30** 19:40:49.2±3.3, 71°.02N×6°.21W, h3^{km}±37^{km}, ML3.0, ML3.8(NAO)*

*REY **30** 19:40:52.8, 70°.78N×7°.17W, h10^{km}*

ISC 30 19:40:48.6±1.6**, 71°.1N**±0°.1×**6°.29W**±0°.08**, h15**^{km}±13^{km}**, n40, σ0s.74**/46**, mb3.0**/3**, MS3.1**/3**, 3C, Jan Mayen Island region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JNE	Jan Mayen East	0.66	262	⇑iP	Pg	19 41 01.9	+0.3
JNE				eS	Sg	19 41 10.7	+0.4
JNE				IAML		19 41 12.6	
	comp=Z,972nm,0.1s						
JNW	Jan Mayen West	0.70	266	⇑iP	Pg	19 41 02.2	0.0
JNW				eS	Sg	19 41 11.5	0.0
JNW				IAML		19 41 16.1	
	comp=Z,838nm,0.3s						
JMIC	Jan Mayen	0.73	263	Pg	Pg	19 41 02.6	-0.2
JMIC				Lg	Lg	19 41 12.6	
JMIC	Jan Mayen	0.73	263	Pn	Pg	19 41 02.6	-0.2
	comp=Z,22nm,0.3s,baz=66,slow=5.2,SNR=46						
JMIC				Sn	Sg	19 41 12.1	-0.4
	comp=Z,168nm,0.3s,baz=180,slow=19,SNR=110						
JMIC	Jan Mayen	0.73	263	Pg	Pg	19 41 02.6	-0.2
JMIC				Lg	Lg	19 41 12.6	
JMIC	Jan Mayen	0.73	263	⇑iP	Pg	19 41 02.6	-0.2
JMIC				eS	Sg	19 41 12.3	-0.2
JMIC				IAML		19 41 14.3	
	comp=Z,469nm,0.4s						
JMI	Jan Mayen	0.82	260	eP	Pg	19 41 04.4	0.0
JMI				eS	Sg	19 41 14.8	-0.3
JMI				IAML		19 41 16.4	
	comp=Z,543nm,0.3s						
ILEI	Leirhofn	5.98	223	S	Sn	19 43 24.4	-0.2
	baz=222						
IGIL	Gilhagi	6.23	221	P	Pn	19 42 20.6	+0.7
	baz=220						
IGIL				S	Sn	19 43 30.1	-0.7
	baz=220						
IHED	Heoinshofoi	6.44	224	P	Pn	19 42 23.1	+0.4
	baz=223						
IHED				S	Sn	19 43 34.8	-1.0
	baz=223						
IDIM	Dimmadalsˆ¡s	6.45	222	P	Pn	19 42 24.1	+1.1
	baz=221						
IDIM				S	Sn	19 43 36.0	-0.3
	baz=221						
IDIM	Dimmadalsˆ¡s	6.45	222	P	Pn	19 42 24.0	+1.1
IDIM				S	Sn	19 43 36.0	-0.3
IGHA	Grjothals	6.50	221	P	Pn	19 42 23.9	+0.4
	baz=220						
IGRS	Grimsstaoir	6.56	218	P	Pn	19 42 25.4	+0.9
	baz=217						
IGRS	Grimsstaoir	6.56	218	P	Pn	19 42 25.4	+0.9
IGRA	Granastaoir	6.63	224	S	Sn	19 43 40.3	-0.4
	baz=223						
IGRA	Granastaoir	6.63	224	S	Sn	19 43 40.3	-0.4
IMEL	Melhnausar	6.73	220	P	Pn	19 42 27.4	+0.6
	baz=219						
IMEL				S	Sn	19 43 43.6	+0.5
	baz=219						
IADA	Aoalbol	7.01	214	P	Pn	19 42 31.1	+0.5
	baz=213						
HSPB	Hornsund (broa	8.38	35	eP	Pn	19 42 49.0	-0.2
	baz=262,slow=14						
HSP	Hornsund	8.38	35	Pn	Pn	19 42 49.0	-0.3
BORG	Borgarnes	8.49	229	LR	LR	19 45 35.9	
	comp=Z,41nm,20.0s,baz=60,slow=35						
KBS	Kingsbay	9.11	22	Pn	Pn	19 42 58.5	-0.8
KBS	Kingsbay	9.11	22	eP	Pn	19 42 58.6	-0.7
	baz=214,slow=22						
SPA0	Spitsbergen Ar	9.22	30	Pn	Pn	19 43 01.0	+0.1
	baz=226,slow=16						
SPA0	Spitsbergen Ar	9.22	30	Pn	Pn	19 43 01.0	+0.1
	baz=226,slow=16						
SPITS	Spitsbergen Ar	9.22	30	Pn	Pn	19 43 01.0	+0.1
	baz=216,slow=15,SNR=27						
SPITS				LR	LR	19 45 43.2	
	comp=Z,61nm,20.9s,baz=245,slow=32						
ARA0	ARCESS Array S	10.76	83	Pn	Pn	19 43 20.6	-1.3
	baz=293,slow=12						
ARA0	ARCESS Array S	10.76	83	Pn	Pn	19 43 20.6	-1.3
	baz=293,slow=12						
ARCES	ARCESS Array B	10.76	83	Pn	Pn	19 43 21.2	-0.7
	comp=Z,0.1nm,0.3s,baz=292,slow=10,SNR=4.0						
HFS	Hagfors	13.64	134	Pn	Pn	19 44 02.3	+1.0
	baz=329,slow=12						
HFS	Hagfors	13.64	134	Pn	Pn	19 44 00.7	-0.5
	comp=Z,0.3nm,0.3s,baz=346,slow=9.6,SNR=9.3						
HFS				LR	LR	19 48 16.1	
	comp=Z,45nm,21.1s,baz=351,slow=33						
HFS	Hagfors	13.64	134	Pn	Pn	19 44 02.3	+1.0
	baz=329,slow=12						
FINES	FINESS Array B	15.97	111	Pn	Pn	19 44 32.5	+0.1
	comp=Z,0.0nm,0.3s,baz=324,slow=9.3,SNR=2.5						
GERES	GERESS Array B	24.20	147	P	P	19 46 02.8	-1.5
	comp=Z,0.1nm,0.3s,baz=346,slow=10,SNR=2.1						
AKASG	Malin Array Be	26.06	123	P	P	19 46 19.7	-1.2
	comp=Z,0.1nm,0.3s,baz=325,slow=9.5,SNR=2.3						
MLR	Muntele Rosu	30.01	131	LR	LR	19 59 27.4	
	comp=Z,49nm,19.4s,baz=308,slow=37						
ARU	Arti	30.34	85	LR	LR	19 58 34.3	
	comp=Z,18nm,19.1s,baz=246,slow=35						
KURBB	Kurchatov Arra	41.62	73	P	P	19 48 37.5	+1.9
	comp=Z,0.4nm,0.7s,baz=325,slow=7.9,SNR=3.3						
MKAR	Makanchi Array	46.18	72	LR	LR	20 09 41.1	
	comp=Z,25nm,20.6s,baz=234,slow=38						

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*BEO **30** 19:45:37.1±0.3, 44°.20N×17°.87E, h5^{km}±2^{km}, ML2.8/11*

*CSEM **30** 19:45:37.0±0.1, 44°.20N×17°.97E, h2^{km}, ML2.8, Error ellipse: s-maj=3.5km s-min=2.0km az=52.0*

*PDG **30** 19:45:37.8±0.5, 44°.10N×17°.98E, h10^{km}±1^{km}, ML3.0/11, Error ellipse: s-maj=1.9km s-min=2.9km az=0.0*

*PRU **30** 19:45:39.4, 44°.14N×17°.85E, h21^{km}*

ISC 30 19:45:37.3±1.1**, 44°.21N**±0°.01×**18°.00E**±0°.02**, h5**^{km}±9^{km}**, n135, σ1s.40**/235**, 33C-16D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DOB	Doboj	0.53	8	ePg	Pg	19 45 47.3	-0.2
DOB				eSg	Sg	19 45 55.1	+0.7
DOB	Doboj	0.53	8	ePg	Pg	19 45 47.3	-0.2
DOB				eSg	Sg	19 45 55.1	+0.7
DOB	Doboj	0.53	8	⇑iPg	Pg	19 45 47.3	-0.2
DOB				eSg	Sb	19 45 56.0	-1.0
HAPS	Han Pijesak,BI	0.70	100	ePg	Pg	19 45 50.5	-0.2
HAPS				eSg	Sb	19 46 01.6	-0.4
HAPS	Han Pijesak,BI	0.70	100	ePg	Pg	19 45 50.5	-0.2
HAPS				eSg	Sb	19 46 01.0	-1.0
HAPS	Han Pijesak,BI	0.70	100	⇑iPg	Pg	19 45 50.4	-0.2
HAPS				eSg	Sb	19 46 01.0	-1.0
BLY	Banja Luka	0.79	313	ePg	Pg	19 45 51.4	-1.1
BLY				eSg	Sg	19 46 01.3	-1.5
BLY	Banja Luka	0.79	313	⇑iP	Pg	19 45 51.6	-0.9
BLY				S	Sg	19 46 02.7	-0.1
BLY	Banja Luka	0.79	313	⇑iP	Pg	19 45 51.6	-0.9
BLY				eSg	Sg	19 46 01.3	-1.5
BLY				S	Sg	19 46 02.7	-0.1
BLY	Banja Luka	0.79	313	⇑iPg	Pg	19 45 51.6	-0.9
BLY				eSg	Sg	19 46 02.6	-0.2
BBLS	Lazići	1.07	108	ePg	Pg	19 45 57.8	-0.1
BBLS				eSg	Sn	19 46 14.2	-0.1
BBLS	Lazići	1.07	108	⇑iPg	Pg	19 45 58.0	+0.1
BBLS				eSg	Sb	19 46 13.1	+0.4
BBLS	Lazići	1.07	108	⇑iPg	Pg	19 45 58.0	+0.1
BBLS				eSg	Sb	19 46 13.1	+0.4
BLJ	Bijeljina	1.08	57	ePn	Pg	19 45 58.1	+0.2
BLJ	Bijeljina	1.08	57	ePn	Pg	19 45 58.1	+0.2
MRAK	Mrakovica	1.12	316	ePg	Pg	19 45 56.8	-2.0
MRAK				eSg	Sg	19 46 12.7	-0.7
MRAK	Mrakovica	1.12	316	ePg	Pg	19 45 56.8	-2.0
MRAK				eSg	Sg	19 46 12.7	-0.7
TEKS	Tekeris	1.15	72	ePg	Pb	19 45 59.9	+0.2
TEKS				eSg	Sn	19 46 17.0	+0.8
TEKS	Tekeris	1.15	72	ePg	Pb	19 45 59.9	+0.2
TEKS				eSg	Sn	19 46 16.3	+0.1
TEKS	Tekeris	1.15	72	ePg	Pg	19 45 58.9	-0.5
TEKS				eSg	Sn	19 46 16.3	+0.1
UPM	Unac-Piva	1.20	146	⇑iPg	Pg	19 45 59.2	-1.1
UPM				i Sg	Sg	19 46 15.4	-0.5
UPM	Unac-Piva	1.20	146	⇑iPg	Pg	19 45 59.2	-1.1
UPM				eSg	Sg	19 46 15.7	-0.2
UPM	Unac-Piva	1.20	146	⇑iPg	Pg	19 45 58.8	-1.5
UPM				eSg	Sg	19 46 15.7	-0.2
PLE	Pljevlja	1.34	131	⇓iPg	Pn	19 46 02.4	-0.3
PLE				i Sg	Sn	19 46 22.5	+1.6
PLE	Pljevlja	1.34	131	⇓iPg	Pn	19 46 02.4	-0.3
PLE				i Sg	Sn	19 46 22.5	+1.6
STON	Ston	1.35	189	ePg	Pn	19 46 01.1	-1.7
STON				eSg	Sb	19 46 19.1	-1.6
STON	Ston	1.35	189	i Pg	Pn	19 46 01.0	-1.7
STON				Sg	Sb	19 46 19.4	-1.3
STON	Ston	1.35	189	ePg	Pn	19 46 01.1	-1.7
STON				eSg	Sb	19 46 19.1	-1.6
STON	Ston	1.35	189	ePg	Pn	19 46 01.0	-1.7
STON				eSg	Sb	19 46 18.9	-1.8
BRY	Bratogost	1.36	163	⇓iPg	Pn	19 46 01.7	-1.4
BRY				i Sg	Sb	19 46 21.0	-0.2
BRY	Bratogost	1.36	163	⇓iPg	Pn	19 46 01.7	-1.4
BRY				i Sg	Sb	19 46 21.0	-0.2
BRY	Bratogost	1.36	163	⇓iPg	Pn	19 46 01.6	-1.5
BRY				eSg	Sb	19 46 20.1	-1.1
DIVS	Divibare	1.44	94	ePg	Pb	19 46 04.8	+0.1
DIVS				eSg	Sg	19 46 25.5	+1.9
DIVS	Divibare	1.44	94	ePg	Pb	19 46 04.8	+0.1
DIVS				eSg	Sg	19 46 25.1	+1.5
DIVS	Divibare	1.44	94	ePg	Pn	19 46 03.8	-0.3
DIVS				eSg	Sg	19 46 25.1	+1.5
TREB	Trebinje	1.51	170	ePg	Pn	19 46 05.0	-0.1
TREB				eSg	Sn	19 46 25.1	0.0
TREB	Trebinje	1.51	170	ePg	Pn	19 46 05.0	-0.1
TREB				eSg	Sn	19 46 25.1	0.0
TREB	Trebinje	1.51	170	⇓iPg	Pn	19 46 04.9	-0.1
TREB				eSg	Sn	19 46 24.9	-0.2
NKME	Niksic	1.60	154	⇑iPg	Pn	19 46 05.2	-1.1
NKME				i Sg	Sb	19 46 28.1	+0.2
NKME	Niksic	1.60	154	⇑iPg	Pn	19 46 05.2	-1.1
NKME				i Sg	Sb	19 46 28.1	+0.2
UDBI	Udbina	1.63	282	ePn	Pn	19 46 04.8	-1.9
IVAS	Ivanjica	1.68	111	ePn	Pn	19 46 08.0	+0.6
IVAS				eSn	Sb	19 46 30.6	+0.4
IVAS	Ivanjica	1.68	111	ePn	Pn	19 46 08.0	+0.6
IVAS				eSn	Sb	19 46 30.6	+0.4
SJES	Sjenica	1.72	123	ePn	Pn	19 46 08.5	+0.6
SJES				eSn	Sg	19 46 32.1	-0.4
TRUS	Trudelj	1.73	89	ePn	Pb	19 46 10.1	+0.5
TRUS				eSn	Sg	19 46 32.7	-0.3
TRUS	Trudelj	1.73	89	ePn	Pb	19 46 10.1	+0.5
TRUS				eSn	Sg	19 46 32.7	-0.3
KOME	Kolasin	1.75	140	⇑iPn	Pn	19 46 08.9	+0.5
KOME				i Sn	Sb	19 46 32.7	+0.5
KOME	Kolasin	1.75	140	⇑iPn	Pn	19 46 08.9	+0.5
KOME				i Sn	Sb	19 46 32.7	+0.5
CEME	Cevo	1.79	158	⇑iPn	Pn	19 46 09.3	+0.4
CEME				i Sn	Sb	19 46 34.1	+0.7
CEME	Cevo	1.79	158	⇑iPn	Pn	19 46 09.3	+0.4
CEME				i Sn	Sb	19 46 34.1	+0.7
HCY	Herceg Novi	1.80	168	⇓iPn	Pb	19 46 10.7	0.0
HCY				i Sn	Sb	19 46 34.0	+0.5
HCY	Herceg Novi	1.80	168	⇓iPn	Pb	19 46 10.7	0.0
HCY				eSn	Sn	19 46 32.0	-0.1
HCY	Herceg Novi	1.80	168	eSn	Sn	19 46 32.0	-0.1
BEY	Berane	1.92	133	⇑iPn	Pb	19 46 12.0	-0.8
BEY				i Sn	Sb	19 46 38.0	+0.9
IVA	Berane	1.92	133	⇑iPn	Pb	19 46 12.0	-0.8
IVA				i Sn	Sb	19 46 38.0	+0.9
GRUS	Gruza	1.99	98	ePn	Pn	19 46 11.8	+0.3
GRUS	Gruza	1.99	98	ePn	Pn	19 46 11.8	+0.3
PDG	Podgorica	2.00	152	ePn	Pn	19 46 12.8	+1.1
PDG				eSn	Sb	19 46 38.5	-0.8
PDG	Podgorica	2.00	152	⇓iP	Pn	19 46 12.9	+1.2
PDG	Podgorica	2.00	152	ePn	Pn	19 46 12.1	+0.4
PDG	Podgorica	2.00	152	⇓iP	Pn	19 46 12.9	+1.2
PDG				eSn	Sb	19 46 38.5	-0.8
PDG				S	Sg	19 46 42.1	+0.5
PDG	Podgorica	2.00	152	ePn	Pn	19 46 12.1	+0.4
PDG				eSn	Sn	19 46 37.2	+0.1
TTG	Podgorica	2.00	152	⇓iPn	Pn	19 46 11.6	-0.1
TTG				i Sn	Sb	19 46 39.3	0.0
BUM	Brajici-Budva	2.02	161	⇑iPn	Pb	19 46 13.8	-0.7
BUM				i Sn	Sb	19 46 39.4	-0.5
BUM	Brajici-Budva	2.02	161	⇑iPn	Pb	19 46 13.8	-0.7
BUM				i Sn	Sb	19 46 39.4	-0.5
MORH	Mˆ‡rˆ¡gy, Hung	2.06	13	⇓ePn	Pn	19 46 11.9	-0.6
MORH				eSn	Sg	19 46 43.0	-0.4
MORH	Mˆ‡rˆ¡gy, Hung	2.06	13	ePn	Pn	19 46 13.6	+1.1
MORH				eSn	Sb	19 46 39.9	-1.1
MORH	Mˆ‡rˆ¡gy, Hung	2.06	13	ePn	Pn	19 46 13.6	+1.1
MORH				eSn	Sb	19 46 39.9	-1.1
PVY	Plav	2.16	138	⇑iPn	Pn	19 46 14.5	+0.5
PVY				i Sn	Sb	19 46 43.0	-0.9
PVY	Plav	2.16	138	⇑iPn	Pn	19 46 14.5	+0.5
PVY				i Sn	Sb	19 46 43.0	-0.9
ZAG	Zagreb	2.16	319	eSn	Sn	19 46 40.8	-0.1
ZAG	Zagreb	2.16	319	eSn	Sn	19 46 40.8	-0.1
DRME	Dracevica, Mon	2.20	156	⇑iPn	Pn	19 46 14.7	+0.2
DRME				i Sn	Sn	19 46 43.5	+1.5
DRME	Dracevica, Mon	2.20	156	⇑iPn	Pn	19 46 14.7	+0.2
DRME				i Sn	Sn	19 46 43.5	+1.5
DRME	Dracevica, Mon	2.20	156	ePn	Pn	19 46 14.7	+0.2
DRME				eSn	Sn	19 46 41.8	-0.2
NVLJ	Novalja	2.27	280	ePn	Pn	19 46 15.4	0.0
NVLJ				Sn	Sb	19 46 45.7	-1.3
OZLJ	Ozalj	2.28	309	ePn	Pn	19 46 14.7	-0.9
CRES	Cresnjev	2.42	313	ePn	Pn	19 46 17.1	-0.4
CRES				eSn	Sn	19 46 47.4	-0.1
CRES	Cresnjev	2.42	313	ePn	Pn	19 46 17.1	-0.4
CRES				eSn	Sn	19 46 47.4	-0.1
ULC	Ulcinj	2.42	157	⇑iPn	Pn	19 46 18.0	+0.4
ULC				i Sn	Sn	19 46 49.2	+1.6
ULC	Ulcinj	2.42	157	⇑iPn	Pn	19 46 18.0	+0.4
ULC				i Sn	Sn	19 46 49.2	+1.6
SELS	Selova	2.47	113	ePn	Pn	19 46 18.3	+0.1
SELS	Selova	2.47	113	ePn	Pn	19 46 18.3	+0.1
BANR	Banloc	2.52	61	⇑iP	Pn	19 46 15.9	-3.0
BANR	Banloc	2.52	61	⇑iP	Pn	19 46 15.9	-3.0
BANR				S	Sn	19 46 50.2	+0.2
MDVR	Moldovita	2.72	77	⇑iP	Pn	19 46 20.9	-0.8
MDVR	Moldovita	2.72	77	⇑iP	Pn	19 46 20.9	-0.8
MDVR				S	Sn	19 46 53.9	-1.1
BOVS	Bovan	2.74	101	ePn	Pn	19 46 22.0	+0.1
BOVS	Bovan	2.74	101	ePn	Pn	19 46 22.0	+0.1
BZS	Buzias	2.93	60	⇑iP	Pn	19 46 24.0	-0.5
BZS	Buzias	2.93	60	⇑iP	Pn	19 46 24.0	-0.5
BZS				S	Sn	19 46 59.6	-0.5
CEY	Cerknica	2.96	302	ePn	Pn	19 46 25.3	+0.4
CEY				eSn	Sn	19 46 59.9	-0.9
CEY	Cerknica	2.96	302	ePn	Pn	19 46 25.3	+0.4
CEY				eSn	Sn	19 46 59.9	-0.9
LJU	Ljubljana	3.06	308	ePn	Pn	19 46 26.4	0.0
LJU	Ljubljana	3.06	308	ePn	Pn	19 46 26.4	0.0
CSKK	Csˆ‡kako	3.16	3	ex	Pn	19 46 27.9	+0.2
HERR	Herculane	3.23	76	⇓iP	Pn	19 46 27.9	-0.7
HERR	Herculane	3.23	76	⇓iP	Pn	19 46 27.9	-0.7
HERR				S	Sn	19 47 06.1	-1.4
SOKA	Soboth	3.23	321	i Pn	Pn	19 46 28.4	-0.3
	0.5nm,0.2s						
SOKA				eSn	Sg	19 47 18.8	-2.3
	1.9nm,0.3s						
SOKA	Soboth	3.23	321	Pn	Pn	19 46 28.4	-0.3
	0.5nm,0.2s						
OBKA	Obir	3.35	315	ePn	Pn	19 46 31.5	+1.2
	0.8nm,0.2s						
OBKA				eSn	Sn	19 47 13.4	+2.9
	7.7nm,0.4s						
OBKA	Obir	3.35	315	Pn	Pn	19 46 31.5	+1.2
	0.8nm,0.2s						
OBKA				Sn	Sn	19 47 13.4	+2.9
	7.7nm,0.4s						
ZAPS	Zavoj	3.49	104	ePn	Pn	19 46 33.0	+0.8
ARSA	Arzberg	3.50	331	ePn	Pn	19 46 31.8	-0.6
	4.3nm,0.5s						
ARSA				eSn	Sn	19 47 14.2	0.0
	2.8nm,0.4s						
ARSA	Arzberg	3.50	331	Pn	Pn	19 46 31.8	-0.6
	4.3nm,0.5s						
ARSA				Sn	Sn	19 47 14.2	0.0
	2.8nm,0.4s						
MYKA	Terra Mystica	3.91	310	ePn	Pn	19 46 37.5	-0.5
	0.9nm,0.3s						
MYKA				Sn	Sb	19 47 37.5	+3.3
	3.5nm,0.6s						
MYKA	Terra Mystica	3.91	310	Pn	Pn	19 46 37.5	-0.5
	0.9nm,0.3s						
PSZ	Piszkesteto	3.94	19	⇓iP	Pn	19 46 37.8	-0.6
PSZ	Piszkesteto	3.94	19	⇑ePn	Pn	19 46 37.8	-0.6
PSZ				eSn	Sg	19 47 46.3	+2.5
PSZ	Piszkesteto	3.94	19	⇓iP	Pn	19 46 37.8	-0.6
CONA	Conrad Observa	4.01	339	i Pn	Pn	19 46 39.3	-0.1
CONA				eSn	Sn	19 47 28.0	+1.3
	2.0nm,0.3s						
CONA	Conrad Observa	4.01	339	Pn	Pn	19 46 39.3	-0.1
CONA				Sn	Sn	19 47 28.0	+1.3
	2.0nm,0.3s						
MODS	Modra-Piesok	4.20	353	ePN	Pn	19 46 42.4	+0.5
MODS				eSN	Sn	19 47 28.0	-3.3
MODS				eLG	Lg	19 47 32.5	
MODS	Modra-Piesok	4.20	353	ePn	Pn	19 46 42.4	+0.5
MODS				eSn	Sn	19 47 28.0	-3.3
SMOL	Smolenice	4.32	355	ePN	Pn	19 46 44.6	+0.9
SMOL				eSN	Sn	19 47 31.8	-2.6
SMOL	Smolenice	4.32	355	ePn	Pn	19 46 44.6	+0.9
SMOL				eSn	Sn	19 47 31.8	-2.6
VYHS	Vyhne	4.33	7	ePN	Pn	19 46 43.8	+0.1
VYHS				eSN	Sn	19 47 31.4	-3.1
VYHS				eLG	Lg	19 47 35.5	
VYHS	Vyhne	4.33	7	ePn	Pn	19 46 43.8	+0.1
VYHS				eSn	Sn	19 47 31.4	-3.1
MOA	Molln	4.47	326	i Pn	Pn	19 46 46.1	+0.4
	1.1nm,0.2s						
MOA				eSn	Sn	19 47 40.7	+2.6
	1.7nm,0.3s						
MOA	Molln	4.47	326	Pn	Pn	19 46 46.1	+0.4
	1.1nm,0.2s						
MOA				Sn	Sn	19 47 40.7	+2.6
	1.7nm,0.3s						
ABTA	Abfaltersbach	4.62	305	i Pn	Pn	19 46 48.3	+0.5
	0.8nm,0.2s						
ABTA				Sg	Sg	19 48 10.4	+4.8
	3.1nm,0.6s						
ABTA	Abfaltersbach	4.62	305	Pn	Pn	19 46 48.3	+0.5
	0.8nm,0.2s						
WATA	Walderalm	5.47	307	ePn	Pn	19 46 60.0	+0.4
	1.9nm,0.4s						
WATA				Sg	Sg	19 48 35.9	+3.0
	0.8nm,0.3s						
WATA	Walderalm	5.47	307	Pn	Pn	19 47 00.0	+0.4
	1.9nm,0.4s						
OKC	Ostrava-Krasne	5.63	1	eSN	Sn	19 48 04.5	-2.1
MOTA	Moosalm	5.75	305	ePn	Pn	19 47 04.6	+1.2
	2.7nm,0.4s						
MOTA				Sg	Sg	19 48 49.7	+7.8
	0.9nm,0.4s						
MOTA	Moosalm	5.75	305	Pn	Pn	19 47 04.6	+1.2
	2.7nm,0.4s						
KHC	Kasperske Hory	5.79	330	ePN	Pn	19 47 04.9	+1.1
KHC				ex	x	19 47 09.5	
KHC				eSN	Sn	19 48 07.0	-3.5
FETA	Feichten	5.82	301	ePn	Pn	19 47 06.0	+1.6
	0.5nm,0.4s						
FETA				Sg	Sg	19 48 51.7	+7.5
	1.9nm,0.8s						
FETA	Feichten	5.82	301	Pn	Pn	19 47 06.0	+1.6
	0.5nm,0.4s						
GOPC	GO Pecny, Ondr	6.11	340	eSN	Sn	19 48 16.5	-2.0
GOPC				ex	x	19 48 25.7	
GOPC	GO Pecny, Ondr	6.11	340	Sn	Sn	19 48 16.5	-2.0
PRU	Pruhonice	6.24	339	eSN	Sn	19 48 19.4	-2.3
PRU				ex	x	19 48 30.3	
DPC	Dobruska-Polom	6.25	350	eSN	Sn	19 48 21.1	-0.8
DPC	Dobruska-Polom	6.25	350	Sn	Sn	19 48 21.1	-0.8

IDC 30 19:55:05.7±9.4**, 22°.65S**×**172°.99E, h67**^{km}±68^{km}**, mb3.4**/3**, mb1 3.7**/4**, mb1mx3.2**/46**, mbtmp3.7**/4**, ML3.6**/1**, MS3.3**/5**, Ms1 3.4**/5**, ms1mx3.0**/23**, Error ellipse: s-maj=111.6km s-min=42.3km az=155.0, Southeast of Loyalty Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	6.09	274	P	Pn	19 56 32.6	-0.5
	1.6nm,0.3s,baz=128,slow=16,SNR=14						
DZM				S	Sn	19 57 42.9	+1.4
	1.1nm,0.3s,baz=258,slow=0.9,SNR=3.4						
HNR	Honiara	18.14	314	LR	LR	20 05 10.3	
	comp=Z,63nm,19.6s,baz=166,slow=33						
RPZ	Rata Peaks	21.07	184	LR	LR	20 06 57.6	
	comp=Z,162nm,20.4s,baz=5.0,slow=34						
RAR	Rarotonga	25.29	92	LR	LR	20 10 20.5	
	comp=Z,40nm,18.8s,baz=132,slow=36						
ASAR	Alice Springs	35.88	261	P	P	20 01 59.7	+0.2
	0.8nm,0.9s,baz=82,slow=10,SNR=4.3						
WRA	Warramunga Arr	36.05	267	P	P	20 02 00.2	-0.8
	0.6nm,0.9s,baz=97,slow=8.4,SNR=6.3						
GUMO	Guam	45.34	320	LR	LR	20 18 51.2	
	comp=Z,46nm,21.6s,baz=131,slow=31						
VNDA	Vanda	55.19	183	LR	LR	20 24 05.2	
	comp=Z,50nm,20.4s,baz=360,slow=32						
ILAR	Eielson Array	92.47	16	P	P	20 08 09.1	+0.3
	0.6nm,0.8s,baz=226,slow=6.9,SNR=5.3						

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*IDC **30** 19:55:27.9±1.2, 28°.40N×105°.03E, h0^{km}, mb3.4/5, mb1 3.5/6, mb1mx3.2/79, mbtmp3.3/6, ML3.1/1, MS2.7/2, Ms1 2.8/2, ms1mx2.4/47, Error ellipse: s-maj=41.4km s-min=20.8km az=61.0*

*ISCJB **30** 19:55:28.5±1.0, 28°.4N±0°.1×105°.1E±0°.2, h19^{km}, mb3.3/5, MS2.6/1, Error ellipse: s-maj=28.8km s-min=16.5km az=151.3*

ISC 30 19:55:30.7±1.4**, 28°.4N**±0°.2×**105°.1E**±0°.2**, h19**^{km}**, n7, σ0s.34**/6**, mb3.4**/5**, Sichuan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMAR	Chiang Mai Arr	11.42	211	LR	LR	20 02 56.0	
	comp=Z,31nm,18.2s,baz=75,slow=40						
SONM	Songino Array	19.39	3	P	Pn	19 59 57.2	+0.4
	0.1nm,0.3s,baz=187,slow=10,SNR=2.2						
KSRS	Korea Array	21.13	59	P	P	20 00 14.2	-0.3
	1.0nm,0.7s,baz=245,slow=10,SNR=7.1						
KSRS				LR	LR	20 10 05.8	
	comp=Z,25nm,18.4s,baz=246,slow=42						
MKAR	Makanchi Array	25.57	322	P	P	20 00 58.3	-0.1
	0.4nm,0.6s,baz=120,slow=9.9,SNR=3.8						
KURBB	Kurchatov Arra	29.88	325	P	P	20 01 36.7	-0.3
	0.3nm,0.5s,baz=136,slow=9.2,SNR=4.6						
WRA	Warramunga Arr	55.80	146	P	P	20 05 06.8	+0.1
	0.3nm,0.6s,baz=336,slow=8.3,SNR=10						
ASAR	Alice Springs	58.78	149	P	P	20 05 27.9	+0.1
	0.2nm,0.6s,baz=330,slow=6.9,SNR=4.9						

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*IDC **30** 20:14:36.8±2.2, 24°.35S×179°.88E, h496^{km}±22^{km}, mb3.5/14, mb1 3.7/15, mb1mx3.4/49, mbtmp4.3/15, Error ellipse: s-maj=21.3km s-min=16.3km az=154.0*

*ISCJB **30** 20:14:37.9±0.6, 24°.4S±0°.2×179°.8E±0°.1, h517^{km}, mb3.9/14, Error ellipse: s-maj=22.2km s-min=13.4km az=164.6*

ISC 30 20:14:38.8±0.7**, 24°.3S**±0°.2×**179°.8E**±0°.1**, h517**^{km}**, n21, σ0s.98**/23**, mb3.9**/14**, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	12.51	278	P	P	20 17 22.5	-0.3
	0.6nm,0.3s,baz=89,slow=18,SNR=5.6						
CTA	Charters Tower	31.32	271	P	P	20 20 17.0	+0.4
	29nm,0.6s,baz=99,slow=12,SNR=48						
STKA	Stephens Creek	34.41	249	P	P	20 20 42.7	0.0
	5.8nm,0.6s,baz=97,slow=11,SNR=38						

ASAR	Alice Springs	41.80	261	P	P	20 21 42.5	-0.6
	4.7nm,0.8s,baz=95,slow=6.9,SNR=100						
ASAR				ScP	ScP	20 26 29.7	+1.4
	0.6nm,0.8s,baz=111,slow=4.5,SNR=3.9						
WRA	Warramunga Arr	42.22	267	P	P	20 21 45.4	-1.0
	11nm,0.6s,baz=100,slow=8.3,SNR=158						
WRA				ScP	ScP	20 26 33.0	+3.1
	2.7nm,0.9s,baz=100,slow=4.0,SNR=10						
BATI	Baumata	55.10	274	P	P	20 23 23.1	+0.9
	15nm,0.6s,baz=288,slow=22,SNR=2.5						
QSPA	South Pole Qui	65.74	180	P	P	20 24 31.7	-0.2
	0.7nm,0.5s,baz=8.8,slow=2.4,SNR=2.4						
MJAR	Matsushiro Arr	72.17	326	P	P	20 25 10.0	-0.9
	1.2nm,0.8s,baz=168,slow=5.8,SNR=3.7						
MAW	Mawson	77.28	200	P	P	20 25 39.0	-0.2
	1.3nm,0.6s,baz=118,slow=5.0,SNR=12						
KSRS	Korea Array	78.48	320	P	P	20 25 46.7	+0.6
	0.7nm,0.6s,baz=125,slow=5.8,SNR=4.1						
NVAR	Mina Array Bea	85.18	44	P	P	20 26 21.7	+1.1
	0.2nm,0.3s,baz=226,slow=7.5,SNR=3.6						
CMAR	Chiang Mai Arr	89.53	290	P	P	20 26 41.6	+0.3
	1.1nm,0.9s,baz=120,slow=3.6,SNR=4.8						
TXAR	Lajitas Array	90.80	58	P	P	20 26 47.1	+0.1
	1.3nm,0.8s,baz=219,slow=7.0,SNR=16						
ANMO	Albuquerque	91.36	52	P	P	20 26 48.9	-0.7
	1.1nm,0.7s,baz=214,slow=4.9,SNR=3.1						
PDAR	Pinedale Array	93.12	44	P	P	20 26 57.2	-0.3
	0.3nm,0.6s,baz=199,slow=2.5,SNR=2.7						
FINES	FINESS Array B	138.81	341	PKhKP	PKPpre	20 32 56.3	
	1.3nm,0.9s,baz=108,slow=4.5,SNR=3.5						
FINES				SKPbc	SKPbc	20 35 50.7	-0.8
	1.4nm,0.7s,baz=34,slow=5.2,SNR=6.8						
HFS	Hagfors	142.95	349	PKhKP	PKPpre	20 33 08.8	
	1.2nm,0.4s,baz=75,slow=2.3,SNR=14						
AKASG	Malin Array Be	145.25	327	PKPbc	PKPdf	20 33 16.6	-0.5
	0.4nm,0.3s,baz=46,slow=4.1,SNR=4.0						
BRTR	Keskin Array B	147.71	307	PKPbc	PKPbc	20 33 24.6	-0.9
	0.6nm,0.6s,baz=162,slow=6.0,SNR=3.8						
BRTR				PKPab	PKPab	20 33 29.3	-0.3
	1.2nm,0.6s,baz=81,slow=4.7,SNR=7.7						
MMAI	Mount Meron Ar	147.73	294	PKPbc	PKPbc	20 33 25.8	+0.2
	1.8nm,0.5s,baz=83,slow=4.6,SNR=7.2						
MLR	Muntele Rosu	150.16	322	PKPbc	PKPbc	20 33 30.3	-0.9
	1.0nm,0.6s,baz=80,slow=17,SNR=2.2						

PRE 30 20:28:23.2±1.7,29°.72S×25°.97E,h5km,ML3.7,South Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOSA	Boshof	1.27	330	*e*P	Pg	20 28 46.8	-0.7
BOSA				*e*S	Sn	20 29 06.0	+0.9
BOSA				AML	AML	20 29 16.2	
	comp=Z,853nm,0.6s						
SWZ	Schweizer	2.59	347	*e*P	Pn	20 29 06.5	+0.6
SWZ				*e*S	Sn	20 29 37.6	-0.2
SWZ				AML	AML	20 29 58.0	
	comp=Z,522nm,0.6s						
PKA	Prieska	2.80	270	*e*P	Pn	20 29 10.1	+1.4
PKA				*e*S	Sn	20 29 43.1	+0.2
PKA				AML	AML	20 29 57.8	
	comp=Z,197nm,0.5s						
SOE	Somerset East	3.00	187	*e*P	Pn	20 29 12.3	+0.8
SOE				*e*S	Sn	20 29 46.8	-1.2
SOE				AML	AML	20 29 57.7	
	comp=Z,330nm,0.6s						
PRYS	Parys	3.04	24	*e*P	Pn	20 29 13.6	+1.5
PRYS				*e*S	Sn	20 29 49.3	+0.3
PRYS				AML	AML	20 30 02.7	
	comp=Z,1µm,0.4s						
KSD	Kokstad	3.09	106	*e*P	Pn	20 29 14.1	+1.3
KSD				*e*S	Sn	20 29 49.2	-1.0
KSD				AML	AML	20 29 56.9	
	comp=Z,121nm,0.2s						
WDLM	Western Deep L	3.52	22	*e*P	Pn	20 29 19.1	+0.3
WDLM				*e*S	Sn	20 30 00.6	-0.4
WDLM				AML	AML	20 30 25.3	
	comp=Z,498nm,0.3s						
GRM	Grahamstown	3.61	173	*e*P	Pn	20 29 21.6	+1.7
GRM				*e*S	Sn	20 30 02.2	-0.7
GRM				AML	AML	20 30 24.8	
	comp=Z,479nm,0.7s						
KLOF	Kloof	3.66	24	*e*P	Pn	20 29 20.1	-0.5
KLOF				*e*S	Sn	20 30 03.5	-0.7
KLOF				AML	AML	20 30 22.8	
	comp=Z,358nm,0.3s						
ERPM	east rand prop	3.92	31	*e*P	Pn	20 29 26.1	+1.9
ERPM				*e*S	Sn	20 30 13.0	+2.4
ERPM				AML	AML	20 30 34.2	
	comp=Z,84nm,0.4s						
KSR	Koster	3.94	12	*e*P	Pn	20 29 25.4	+0.9
KSR				*e*S	Sn	20 30 09.5	-1.7
KSR				AML	AML	20 30 42.6	
	comp=Z,165nm,0.6s						
UPI	Upington	4.35	287	*e*P	Pn	20 29 30.8	+0.7
UPI				*e*S	Sn	20 30 19.4	-1.8
UPI				AML	AML	20 30 49.1	
	comp=Z,557nm,0.5s						
SLR	Silverton	4.46	28	*e*P	Pn	20 29 32.3	+0.6
SLR				*e*S	Sn	20 30 21.3	-2.9
SLR				AML	AML	20 30 50.3	
	comp=Z,276nm,0.7s						
KEIM	Keimoes	4.49	282	*e*P	Pn	20 29 32.8	+0.8
KEIM				*e*S	Sn	20 30 22.3	-2.3
KEIM				AML	AML	20 30 54.2	
	comp=Z,161nm,0.6s						
ROSN	Rosenhof	4.54	195	*e*P	Pn	20 29 33.1	+0.6
ROSN				*e*S	Sn	20 30 23.6	-2.1
ROSN				AML	AML	20 30 43.5	
	comp=Z,95nm,0.6s						
BUFB	Buffelsbos	4.54	193	*e*P	Pn	20 29 32.8	+0.2
BUFB				*e*S	Sn	20 30 24.1	-1.7
BUFB				AML	AML	20 30 45.9	
	comp=Z,151nm,0.5s						
KROM	Kromhout	4.56	194	*e*P	Pn	20 29 33.2	+0.4
KROM				*e*S	Sn	20 30 25.5	-0.7
KROM				AML	AML	20 30 50.4	
	comp=Z,70nm,0.5s						
LBTB	Lobatse	4.70	356	*e*P	Pn	20 29 35.3	+0.4
LBTB				*e*S	Sn	20 30 27.9	-2.0
LBTB				AML	AML	20 30 57.1	
	comp=Z,392nm,0.6s						
AUGR	Augrabies	5.05	281	*e*P	Pn	20 29 40.1	+0.4
AUGR				*e*S	Sn	20 30 36.4	-2.1
AUGR				AML	AML	20 31 08.8	
	comp=Z,472nm,0.6s						
SUR	Sutherland	5.16	238	*e*P	Pn	20 29 43.1	+1.8
SUR				AML	AML	20 31 08.0	
	comp=Z,805nm,0.7s						
CVNA	Calvinia	5.64	250	*e*P	Pn	20 29 49.8	+2.1
CVNA				*e*S	Sn	20 30 50.3	-2.6
CVNA				AML	AML	20 31 25.0	
	comp=Z,350nm,0.5s						
ARMS	Ukamas	5.72	286	*e*P	Pn	20 29 51.1	+2.2
ARMS				*e*S	Sn	20 30 52.0	-2.9
ARMS				AML	AML	20 31 29.5	
	comp=Z,136nm,0.4s						
KOMG	Komaggas	7.38	267	*e*P	Pn	20 30 14.1	+2.4
KOMG				*e*S	Sn	20 31 31.9	-3.9
KOMG				AML	AML	20 32 35.7	
	comp=Z,110nm,0.7s						
MSNA	Messina	8.20	27	*e*P	Pn	20 30 22.2	-0.7
MSNA				*e*S	Sn	20 31 49.7	-6.2
MSNA				AML	AML	20 32 11.8	
	comp=Z,25nm,0.7s						

*DDA **30** 20:30:38.7,38°.73N×43°.67E,h7km,Ml2.6*
*ISK **30** 20:30:38.6,38°.77N×43°.56E,h7km,ML2.1/5*
*CSEM **30** 20:30:39.0±0.2,38°.75N×43°.62E,h10km,ML2.1,Error ellipse: s-maj=6.2km s-min=3.6km az=112.0*

ISC 30 20:30:39.3±1.0,38°.76N±0°.02×43°.63E±0°.03,h19km±1km, n30,σ1s.19/53,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VMUR	Van-Muradiye	0.23	348	*i* P	Pg	20 30 44.3	-0.8
VMUR				*i* S	Sb	20 30 49.6	+1.1
VMUR	Van-Muradiye	0.23	348	P	Pg	20 30 44.3	-0.8
VMUR				S	Sb	20 30 49.6	+1.1
VANB	Van	0.25	229	PG	Pb	20 30 44.8	-0.4
VANB				SG	Sb	20 30 49.3	+0.2
VANB	Van	0.25	229	*e*Pg	Pb	20 30 44.8	-0.4
VANB				*e*Sg	Sb	20 30 49.3	+0.2
TVAN	Van	0.29	218	*i* P	Pg	20 30 44.8	-1.2
TVAN				*i* S	Sb	20 30 50.2	-0.3
TVAN	Van	0.29	218	P	Pg	20 30 44.8	-1.2
TVAN				S	Sb	20 30 50.2	-0.3
CLDR	Caldiran	0.44	30	PG	Pg	20 30 48.0	-0.5
CLDR				SG	Sb	20 30 55.1	0.0
CLDR	Caldiran	0.44	30	*i* P	Pg	20 30 47.7	-0.8
CLDR				*i* S	Sb	20 30 55.3	+0.2
CLDR	Caldiran	0.44	30	P	Pg	20 30 47.7	-0.8
CLDR	Caldiran	0.44	30	*e*Pg	Pg	20 30 48.0	-0.5
CLDR				*e*Sg	Sb	20 30 55.1	0.0
GEVA	Gevas	0.64	225	*i* P	Pg	20 30 50.5	-1.5
GEVA				*i* S	Sb	20 31 00.8	+0.4
GEVA	Gevas	0.64	225	P	Pg	20 30 50.5	-1.5
GEVA				S	Sb	20 31 00.8	+0.4
TUTA	Tutak	0.91	315	*i* P	Pb	20 30 55.9	-0.7
TUTA				*i* S	Sg	20 31 09.2	+0.1
TUTA	Tutak	0.91	315	P	Pb	20 30 55.9	-0.7
TUTA				S	Sg	20 31 09.2	+0.1
AGRB	Hanur-Agry	0.95	329	PG	Pb	20 30 56.9	-0.5
AGRB				SG	Sg	20 31 10.0	-0.6
AGRB	Hanur-Agry	0.95	329	*e*Pg	Pb	20 30 56.9	-0.5
AGRB				*e*Sg	Sg	20 31 10.0	-0.6
HAKT	HAKKARI	1.20	177	*i* P	Pn	20 31 01.0	-0.4
HAKT				*i* S	Sg	20 31 20.6	+2.2
HAKT	HAKKARI	1.20	177	P	Pn	20 31 01.0	-0.4
HAKT				S	Sg	20 31 20.6	+2.2
GURO	Guroymak-BITLI	1.27	261	PN	Pn	20 31 01.7	-0.5
GURO	Guroymak-BITLI	1.27	261	*e*Pn	Pn	20 31 01.7	-0.5
EKAR	Karacoban	1.32	293	*i* P	Pb	20 31 03.4	-0.3
EKAR				*i* S	Sg	20 31 26.1	+3.9
EKAR	Karacoban	1.32	293	P	Pb	20 31 03.4	-0.3
EKAR				S	Sg	20 31 26.1	+3.9
EATA	Eleskirt	1.41	322	*i* P	Pg	20 31 06.1	-0.6
EATA				*i* S	Sg	20 31 26.7	+1.5
EATA	Eleskirt	1.41	322	P	Pg	20 31 06.1	-0.6
EATA				S	Sg	20 31 26.7	+1.5
CUKT	Cukurca	1.51	181	PN	Pb	20 31 06.9	+0.1
CUKT	Cukurca	1.51	181	*e*Pn	Pb	20 31 06.9	+0.1
SRTM	Siirt_Merkez	1.55	241	*i* P	Pb	20 31 07.8	+0.3
SRTM				*i* S	Sg	20 31 31.1	+1.7
SRTM	Siirt_Merkez	1.55	241	P	Pb	20 31 07.8	+0.3
SRTM				S	Sg	20 31 31.1	+1.7
GNI	Garni	1.63	31	PN	Pb	20 31 08.9	0.0
GNI	Garni	1.63	31	*e*Pn	Pb	20 31 08.9	0.0

IDC 30 20:36:29.9±4.2,4°.30S×137°.86E,h188km±44km,mb3.4/3, mb1 3.5/6,mb1mx3.1/45,mbtmp4.0/6,Error ellipse: s-maj=65.8km s-min=23.7km az=109.0,Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	15.92	192	P	P	20 40 02.4	-1.4
	0.8nm,0.3s,baz=15,slow=12,SNR=44						
WRA				S	S	20 43 00.4	-0.2
	0.1nm,0.3s,baz=16,slow=21,SNR=4.5						
FITZ	Fitzroy Crossi	18.19	220	P	P	20 40 28.3	-0.4
	0.2nm,0.3s,baz=37,slow=9.2,SNR=12						
ASAR	Alice Springs	19.62	191	P	P	20 40 44.1	-0.1
	1.1nm,0.3s,baz=20,slow=10,SNR=122						
ASAR				S	S	20 44 16.4	+0.9
	0.3nm,0.3s,baz=12,slow=20,SNR=22						
STKA	Stephens Creek	27.65	173	P	P	20 42 00.0	-0.2
	0.8nm,0.7s,baz=354,slow=11,SNR=4.4						
VNDA	Vanda	74.28	175	P	P	20 47 46.4	+0.4
	0.5nm,0.6s,baz=320,slow=8.1,SNR=5.3						
QSPA	South Pole Qui	85.65	180	P	P	20 48 47.5	+0.3
	1.0nm,0.6s,baz=333,slow=5.3,SNR=3.8						

MEX 30 20:46:25.3±0.6,16°.06N×97°.53W,h16km±11km,MD3.5, Oaxaca

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.66	301	*e*P	Pg	20 46 35.9	-2.4
PNIG				*e*S	Sg	20 46 43.9	-3.2
VHO	Vista Hermosa	1.27	37	*e*P	Pn	20 46 45.0	-3.6
VHO				*e*S	Sb	20 46 59.8	-5.4
TLIG	Tlapa	1.80	327	*e*P	Pn	20 46 52.7	-3.1
TLIG				*e*S	Sn	20 47 13.5	-4.8

MAN 30 20:47:34.7,6°.48N×125°.49E,h0km,mb4.3,ML3.1,MS2.9, 1C,Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	0.43	149	*e*P	Pg	20 47 43.4	+0.4
DDMP				*e*S	Sb	20 47 56.1	+3.9
GSPH	General Santos	0.66	234⇑	*i*P	Pg	20 47 44.1	-3.3
GSPH				*i* S	Sg	20 47 55.8	-0.2
SKMP	Bagumbayan, Su	0.94	273	*e*P	Pg	20 47 52.3	-0.5
SKMP				*e*S	Sn	20 48 10.0	+0.5

*ISK **30** 20:49:14.6,38°.76N×38°.20E,h6km,ML2.2/7*
*CSEM **30** 20:49:15.0±0.2,38°.76N×38°.19E,h2km,ML2.7,Error ellipse: s-maj=4.5km s-min=3.7km az=170.0*
*DDA **30** 20:49:15.3,38°.79N×38°.22E,h7km,Ml2.7*

ISC 30 20:49:15.2±1.0,38°.76N±0°.02×38°.20E±0°.02,h8km±9km, n30,σ0s.75/51,Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HEKM	Malatya_Hekimh	0.22	303	*i* P	Pg	20 49 19.8	+0.1
HEKM				*i* S	Sg	20 49 23.1	+0.3
HEKM	Malatya_Hekimh	0.22	303	P	Pg	20 49 19.8	+0.1
HEKM				S	Sg	20 49 23.1	+0.3
AKCD	Akcadag	0.51	205	*i* P	Pb	20 49 25.7	-0.7
AKCD				*i* S	Sb	20 49 34.6	+0.5
AKCD	Akcadag	0.51	205	P	Pb	20 49 25.7	-0.7
KEMA	Kemaliye	0.56	24	*i* P	Pg	20 49 25.6	-0.5
KEMA				*i* S	Sg	20 49 33.6	+0.2
KEMA	Kemaliye	0.56	24	P	Pg	20 49 25.6	-0.5
KEMA				S	Sg	20 49 33.6	+0.2
DARE	Darende-Malaty	0.59	252	PG	Pg	20 49 26.4	-0.2
DARE				SG	Sg	20 49 35.2	+0.9
DARE	Darende-Malaty	0.59	252	*e*Pg	Pg	20 49 26.4	-0.2
DARE				*e*Sg	Sg	20 49 35.2	+0.9
ELZG	Elazig	0.67	113	*i* P	Pb	20 49 28.6	-0.6
ELZG				*i* S	Sb	20 49 38.6	-0.1
ELZG	Elazig	0.67	113	P	Pb	20 49 28.6	-0.6
ELZG				S	Sb	20 49 38.6	-0.1
ILIC	ilic-Erzincan	0.75	22	PG	Pg	20 49 29.5	-0.2
ILIC				SG	Sb	20 49 40.3	-0.8
ILIC	ilic-Erzincan	0.75	22	*e*Pg	Pg	20 49 29.5	-0.2
ILIC				*e*Sg	Sb	20 49 40.3	-0.8
PTK	Pertek	0.94	81	PG	Pg	20 49 33.2	-0.1
PTK				SG	Sb	20 49 46.7	0.0
PTK	Pertek	0.94	81	*e*Pg	Pg	20 49 33.2	-0.1
PTK				*e*Sg	Sb	20 49 46.7	0.0
SVRC	Sivrice-ELAZID	0.95	113	PG	Pg	20 49 33.3	-0.1
SVRC	Sivrice-ELAZID	0.95	113	*e*Pg	Pg	20 49 33.3	-0.1
TNCL	Tunceli-Merkez	1.11	71	*i* P	Pg	20 49 34.9	-1.6
TNCL				*i* S	Sb	20 49 51.4	+0.1
TNCL	Tunceli-Merkez	1.11	71	P	Pg	20 49 34.9	-1.6
TNCL				S	Sb	20 49 51.4	+0.1
CUALT	Altinyayla-SIV	1.23	295	*i* P	Pg	20 49 36.7	-2.2
CUALT				*i* S	Sn	20 49 56.9	+1.1
CUALT	Altinyayla-SIV	1.23	295	P	Pg	20 49 36.7	-2.2
CUALT				S	Sn	20 49 56.9	+1.1
EZC	Erzincan	1.34	42	*e*Pn	Pg	20 49 41.9	+1.0
URFA	Urfa	1.40	159	PN	Pn	20 49 41.4	+0.3
URFA	Urfa	1.40	159	*e*Pn	Pn	20 49 41.4	+0.3
ERZN	Erzincan	1.45	55	PN	Pn	20 49 41.9	+0.1
SUSE	Susehri	1.45	0	*i* P	Pb	20 49 42.5	0.0
SUSE				*i* S	Sg	20 50 02.8	+1.0
SUSE	Susehri	1.45	0	P	Pb	20 49 42.5	0.0
SUSE				S	Sg	20 50 02.8	+1.0
SVSK	Karacayir	1.48	322	PN	Pb	20 49 42.6	-0.4
SVSK	Karacayir	1.48	322	*e*Pn	Pb	20 49 42.6	-0.4
KELT	Kelkit	1.61	30	*i* P	Pb	20 49 45.4	+0.1
KELT				*i* S	Sg	20 50 06.6	-0.5
KELT	Kelkit	1.61	30	P	Pb	20 49 45.4	+0.1
KELT				S	Sg	20 50 06.6	-0.5

*IDC **30** 21:02:41.3±0.9,22°.72S×173°.18E,h0km,mb4.4/13, mb1 4.5/14,mb1mx4.2/49,mbtmp4.4/14,ML3.9/1,MS3.5/15, Ms1 3.5/15,ms1mx3.3/44,Error ellipse: s-maj=22.8km s-min=22.3km az=44.0*
*NEIC **30** 21:02:42.8±0.6,22°.73S×173°.18E,h10km,mb4.4/2,Error ellipse: s-maj=15.1km s-min=13.4km az=200.0*
*ISCJB **30** 21:02:45.5±0.7,22°.8S±0°.1×173°.02E±0°.09,h35km, mb4.3/14,MS3.6/12,Error ellipse: s-maj=19.1km s-min=10.2km az=17.3*

ISC 30 21:02:47.1±0.7,22°.8S±0°.1×173°.08E±0°.10,h35km,n34, σ0s.91/25,mb4.3/14,MS3.6/12,1C-1D,Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	6.18	275	Pn	Pn	21 04 15.5	-0.5
	2.9nm,0.3s,baz=116,slow=23,SNR=12						
DZM				Sn	Sn	21 05 25.4	-0.1
	1.8nm,0.3s,baz=321,slow=23,SNR=1.1						
DZM				LR	LR	21 06 29.5	
	comp=Z,310nm,18.4s,baz=152,slow=36						
URZ	Urewera	15.84	168	LR	LR	21 11 05.4	
	comp=Z,257nm,21.1s,baz=9.5,slow=32						
AFI	Afiamalu	16.84	61	LR	LR	21 11 53.2	
	comp=Z,102nm,18.4s,baz=200,slow=33						
CTA	Charters Tower	25.10	271	P	P	21 08 10.2	+1.4
	5.9nm,0.7s,baz=99,slow=9.5,SNR=9.2						
STKA	Stephens Creek	29.33	245	P	P	21 08 47.4	+0.8
	3.3nm,0.9s,baz=4.5,slow=2.1,SNR=5.6						
STKA				LR	LR	21 19 03.3	
	comp=Z,70nm,19.8s,baz=44,slow=33						
PPT	Papeete	35.37	89	LR	LR	21 22 47.0	
	comp=Z,31nm,19.2s,baz=179,slow=34						
ASAR	Alice Springs	35.95	261	P	P	21 09 43.7	-0.9
	3.2nm,0.8s,baz=90,slow=7.9,SNR=18						
WRA	Warramunga Arr	36.13	267	P	P	21 09 45.5	-0.6
	2.0nm,0.7s,baz=106,slow=8.4,SNR=4.7						
H11S2	WAKE ISLAND Hy	41.46	351	T	T	21 54 39.5	
	baz=171,slow=76,SNR=20						
H11S3	WAKE ISLAND Hy	41.47	351	T	T	21 54 40.0	
	baz=171,slow=76,SNR=18						
H11S1	WAKE ISLAND Hy	41.48	351	T	T	21 54 40.9	
	baz=171,slow=76,SNR=24						
FITZ	Fitzroy Crossi	44.56	267	P	P	21 10 55.4	-0.6
	6.5nm,0.7s,baz=158,slow=7.9,SNR=7.0						
GUMO	Guam	45.48	320	LR	LR	21 26 47.3	
	comp=Z,48nm,21.5s,baz=140,slow=32						
NWAO	Narrogin (SRO)	49.92	245	P	P	21 11 37.4	-0.2
	10nm,0.7s,baz=330,slow=9.7,SNR=2.4						
NWAO				LR	LR	21 31 20.9	
	comp=Z,72nm,18.8s,baz=298,slow=34						
VNDA	Vanda	55.09	183	P	P	21 12 15.7	+0.6
	0.9nm,0.8s,baz=291,slow=3.6,SNR=4.2						
VNDA				LR	LR	21 31 39.3	
	comp=Z,93nm,21.3s,baz=5.0,slow=32						
DAV	Davao City (W)	55.12	297	LR	LR	21 35 19.4	
	comp=Z,16nm,18.6s,baz=4.5,slow=36						
SBA	Scott Base	55.24	182	*e*P	P	21 12 15.4	-0.8
	1.2nm,0.8s						
LEM	Lembang	64.78	273	P	P	21 13 23.0	+0.1
	27nm,0.7s,baz=340,slow=3.3,SNR=5.7						
QSPA	South Pole Qui	67.32	180	P	P	21 13 38.3	0.0
	6.1nm,0.8s,baz=17,slow=2.3,SNR=12						
QSPA	South Pole Qui	67.32	180	*e*P	P	21 13 38.1	-0.2
	3.7nm,0.6s						
MAW	Mawson	76.53	202	P	P	21 14 32.8	-0.5
	4.9nm,0.9s,baz=110,slow=8.6,SNR=8.7						
MAW				LR	LR	21 42 11.1	
	comp=Z,38nm,20.2s,baz=56,slow=31						
PETK	Petropavlovsk-	76.72	351	P	P	21 14 33.9	-0.4
	3.9nm,0.7s,baz=144,slow=11,SNR=3.9						
PETK				LR	LR	21 41 31.8	
	comp=Z,34nm,21.7s,baz=144,slow=30						
PMSA	Palmer Station	82.37	159	LR	LR	21 46 40.4	
	comp=Z,88nm,18.6s,baz=192,slow=32						
SYO	Syowa Base	82.54	195⇑	*e*P	P	21 15 05.4	-0.5
SYO	Syowa Base	82.54	195⇓	*e*pP	P	21 15 07.3	+1.4
CMAR	Chiang Mai Arr	83.20	293	P	P	21 15 11.7	+1.5
	0.3nm,0.3s,baz=122,slow=3.6,SNR=2.5						
YBH	Yreka Blue Hor	87.38	42	LR	LR	21 52 46.5	
	comp=Z,24nm,18.0s,baz=302,slow=34						
NVAR	Mina Array Bea	88.49	47	LR	LR	21 49 47.2	
	comp=Z,19nm,18.7s,baz=87,slow=32						
ILAR	Eielson Array	92.55	16	P	P	21 15 54.3	+0.1
	0.6nm,0.9s,baz=226,slow=4.8,SNR=4.0						
ILAR				LR	LR	21 51 13.3	
	comp=Z,36nm,20.1s,baz=248,slow=32						
ARCES	ARCESS Array B	129.35	346	PKP	PKPdf	21 21 51.8	+0.6
	1.3nm,0.7s,baz=64,slow=3.1,SNR=3.7						
MLR	Muntele Rosu	144.96	318	PKP	PKPab	21 22 18.9	-1.1
	1.5nm,0.9s,baz=180,slow=4.0,SNR=3.4						
CLL	Collm	147.58	336	*i* PKPbc	PKPdf	21 22 25.6	+0.8
	comp=Z,4.0nm,1.1s						
CLL				*i* PKPab	PKPbc	21 22 28.1	+0.6
	comp=Z,4.0nm,1.0s						
GERES	GERESS Array B	149.25	333	PKPbc	PKPbc	21 22 29.8	-2.2
	comp=Z,1.0nm,0.7s,baz=64,slow=3.4,SNR=4.2						
TORD	Torodi Ar. Bea	167.42	222	PKPab	PKPab	21 23 55.1	-0.5
	comp=Z,1.4nm,0.8s,baz=142,slow=5.4,SNR=6.4						

*GII **30** 21:03:27.6±0.0,33°.31N×35°.36E,h10km,MD1.0/2*
*CSEM **30** 21:03:29.2,33°.34N×35°.49E,h25km,ML2.5*
*GRAL **30** 21:03:29.2±0.3,33°.34N×35°.49E,h26km±7km,MD2.5*

ISC 30 21:03:26.6±1.0,33°.34N±0°.03×35°.40E±0°.05,h26km±7km, n17,σ0s.78/32,Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSDI	Kefar Szold	0.26	124	Pg	Pb	21 03 33.8	+0.7
KSDI				Sg	Sb	21 03 38.0	+0.5
SHBL	Chebaa	0.28	88	*e*P	Pn	21 03 34.8	-0.6
SHBL				*e*S	Sb	21 03 39.0	+0.6
SHBL	Chebaa	0.28	88	*e*P	Pn	21 03 34.8	-0.6
SHBL				*e*S	Sb	21 03 39.0	+0.6
NATI	Neve Ativ	0.29	105	Pg	Pn	21 03 34.4	-0.8
NATI				Sg	Sn	21 03 39.3	-1.4
QRWL	Qaraoun	0.31	48	*e*P	Pn	21 03 35.3	-0.4
QRWL				*e*S	Sb	21 03 39.9	+0.8
QRWL	Qaraoun	0.31	48	*e*P	Pn	21 03 35.3	-0.4
QRWL				*e*S	Sb	21 03 39.8	+0.8
HNTI	Hanita	0.32	217	Pg	Pb	21 03 33.4	-0.6
HNTI				Sg	Sb	21 03 37.7	-1.3
MMA0B	Mount Meron ar	0.32	180	Pg	Pb	21 03 33.7	-0.4
MMA0B				Sg	Sb	21 03 38.8	-0.4
DQRL	Deir Qamar	0.39	21	*e*P	Pn	21 03 36.9	+0.1
DQRL				*e*S	Sn	21 03 42.6	-0.9
DQRL	Deir Qamar	0.39	21	*e*P	Pn	21 03 36.9	+0.1
DQRL				*e*S	Sn	21 03 42.6	-0.9
KSHT	Keshet	0.49	136	Pg	Pn	21 03 37.8	-0.3
KSHT				Sg	Sn	21 03 45.0	-0.9
BHL	Bhannes	0.60	20	*e*P	Pn	21 03 40.1	+0.4
BHL	Bhannes	0.60	20	*e*P	Pn	21 03 40.1	+0.4
OFRI	‘Ofer	0.80	206	Pg	Pb	21 03 42.2	+0.3
OFRI				Sg	Sn	21 03 53.0	-0.3
MMLI	Mount Malkishu	0.90	179	Pg	Pn	21 03 44.1	+0.4
MMLI				Sg	Sn	21 03 56.0	+0.2
HMDT	Nahal Hemdat	1.09	175	Pg	Pb	21 03 47.4	+0.6
HMDT				Sg	Sb	21 04 02.2	+1.7
SLTI	Sal’it	1.14	196	Pg	Pb	21 03 48.0	+0.4
SLTI				Sg	Sb	21 04 03.3	+1.3

*ISCJB **30** 21:09:41.9±0.4,37°.84N±0°.02×26°.66E±0°.03,h2km±3km, Error ellipse: s-maj=3.6km s-min=2.6km az=155.4*
*DDA **30** 21:09:41.6,37°.85N×26°.65E,h14km,Ml3.2*
*ISK **30** 21:09:42.1,37°.87N×26°.73E,h7km,ML3.0/26*
*CSEM **30** 21:09:42.3±0.1,37°.83N×26°.67E,h5km,ML2.7,Error ellipse: s-maj=3.0km s-min=2.1km az=59.0*
*ATH **30** 21:09:42.2,37°.79N×26°.66E,h22km±2km,ML2.7/6,Error ellipse: s-maj=2.7km s-min=1.2km az=124.0*
*THE **30** 21:09:43.0,37°.80N×26°.62E,h2km±2km,ML2.8/5,Error ellipse: s-maj=2.9km s-min=0.8km az=151.0*

ISC 30 21:09:42.7±0.8,37°.83N±0°.01×26°.66E±0°.02,h14km±6km, n104,σ0s.77/145,Dodecanese Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMG	Samos	0.19	132	P	Pg	21 09 47.1	+0.1
SMG				S	Sg	21 09 50.3	+0.3
SMG				AML	AML	21 09 50.4	
	comp=E,8683µm,0.4s						
SMG				AML	AML	21 09 51.3	
	comp=N,7690µm,0.3s						
SMG	Samos	0.19	132	P	Pg	21 09 47.1	+0.1

SMG				S	Sg	21 09 50.2	+0.3
SMG	Samos	0.19	132	P	Pg	21 09 47.1	+0.1
SMG				S	Sg	21 09 50.2	+0.3
DGB	˜zmir	0.28	39	*i* P	Pg	21 09 47.5	-1.1
DGB				*i* S	Sg	21 09 50.9	-1.6
GCAM	G?zelcaml?	0.47	106	*i* P	Pg	21 09 51.5	-0.6
GCAM				*i* S	Sg	21 09 58.6	+0.2
GCAM	G?zelcaml?	0.47	106	P	Pg	21 09 51.5	-0.6
GCAM				S	Sg	21 09 58.6	+0.2
URLA	Izmir	0.53	354	PG	Pg	21 09 52.1	-1.0
URLA				SG	Sg	21 09 59.6	-0.7
URLA	Izmir	0.53	354	*i* P	Pg	21 09 52.4	-0.8
URLA				*i* S	Sg	21 09 59.5	-0.7
URLA	Izmir	0.53	354	P	Pg	21 09 52.3	-0.8
URLA				S	Sg	21 09 59.5	-0.7
CESE	ˆe¯me	0.57	330	PG	Pg	21 09 53.8	-0.2
CESE	ˆe¯me	0.57	330	*e*Pg	Pg	21 09 53.8	-0.2
BLCB	Balcova	0.63	28	PG	Pg	21 09 53.8	-1.2
BLCB	Balcova	0.63	28	*e*Pg	Pg	21 09 53.8	-1.2
DIDI	Didim-Aydin	0.65	135	PG	Pg	21 09 54.8	-0.6
DIDI	Didim-Aydin	0.65	135	*e*Pg	Pg	21 09 54.8	-0.6
CHOS	Chios island	0.73	319	PG	Pb	21 09 56.9	-0.4
CHOS	Chios island	0.73	319	P	Pg	21 09 56.1	-0.9
CHOS				S	Sb	21 10 08.1	+0.9
CHOS				AML	AML	21 10 09.2	
	comp=E,1982µm,0.3s						
CHOS				AML	AML	21 10 10.3	
	comp=N,1771µm,0.3s						
CHOS	Chios island	0.73	319	P	Pg	21 09 56.7	-0.3
CHOS				S	Sb	21 10 07.8	+0.6
CHOS	Chios island	0.73	319	P	Pg	21 09 56.6	-0.4
CHOS	Chios island	0.73	319	*e*Pg	Pb	21 09 56.9	-0.4
CHOS				S	Sb	21 10 07.8	+0.6
KRBN	Karaburun	0.76	354	PG	Pg	21 09 56.9	-0.7
KRBN	Karaburun	0.76	354	*e*Pg	Pg	21 09 56.9	-0.7
FOCM	Foˆ§a	0.88	3	PG	Pg	21 09 58.9	-0.9
FOCM	Foˆ§a	0.88	3	*e*Pg	Pg	21 09 58.9	-0.9
BODT	Bodrum	0.93	146	PG	Pg	21 10 00.3	-0.4
BODT	Bodrum	0.93	146	P	Pg	21 10 00.3	-0.4
BODT				S	Sb	21 10 14.0	+1.2
BODT	Bodrum	0.93	146	P	Pg	21 10 00.3	-0.4
BODT				S	Sb	21 10 14.0	+1.2
AYDB	Zeytinkoy-Aydi	0.98	83	PG	Pg	21 10 00.3	-1.3
AYDB	Zeytinkoy-Aydi	0.98	83	*e*Pg	Pg	21 10 00.3	-1.3
AYDN	Tasoluk	0.98	100	*i* P	Pg	21 10 01.0	-0.7
AYDN				*i* S	Sg	21 10 13.3	-1.2
AYDN	Tasoluk	0.98	100	P	Pg	21 10 01.0	-0.7
AYDN				S	Sg	21 10 13.3	-1.2
BDRM	Kayabasi	0.99	141	*i* P	Pn	21 10 02.7	+0.5
BDRM				*i* S	Sb	21 10 15.4	+0.9
BDRM	Kayabasi	0.99	141	P	Pn	21 10 02.7	+0.5
BDRM				S	Sb	21 10 15.4	+0.9
MLSB	Milas	1.04	121	PG	Pg	21 10 01.9	-0.8
MLSB	Milas	1.04	121	*e*Pg	Pg	21 10 01.9	-0.8
AMGA	Amorgos Island	1.17	212	P	Pn	21 10 05.1	+0.3
AMGA				AML	AML	21 10 26.1	
	comp=E,624µm,0.3s						
AMGA				AML	AML	21 10 27.6	
	comp=N,639µm,0.3s						
AMGA	Amorgos Island	1.17	212	P	Pg	21 10 04.5	-0.8
AMGA				S	Sb	21 10 20.0	+0.1
AMGA	Amorgos Island	1.17	212	P	Pg	21 10 04.5	-0.8
AMGA				S	Sb	21 10 20.0	+0.1
APE	Apeiranthos	1.18	230	P	Pn	21 10 05.6	+0.7
APE				S	Sb	21 10 20.2	+0.1
APE				AML	AML	21 10 24.5	
	comp=N,224µm,0.2s						
APE				AML	AML	21 10 25.1	
	comp=E,231µm,0.2s						
APE	Apeiranthos	1.18	230	P	Pb	21 10 04.9	-0.1
APE				S	Sg	21 10 20.0	-0.9
APE	Apeiranthos	1.18	230	P	Pb	21 10 04.9	-0.1
APE				S	Sb	21 10 20.3	+0.1
DKL	Dikili	1.25	9	PN	Pn	21 10 05.7	-0.1
DKL	Dikili	1.25	9	*e*Pn	Pn	21 10 05.7	-0.1
DAT	Datca	1.32	146	PN	Pb	21 10 07.4	0.0
DAT	Datca	1.32	146	*i* P	Pn	21 10 06.8	-0.1
DAT				*i* S	Sg	21 10 24.7	-0.7
DAT	Datca	1.32	146	P	Pn	21 10 06.8	-0.1
DAT	Datca	1.32	146	*e*Pn	Pb	21 10 07.4	0.0
DAT				S	Sg	21 10 24.7	-0.7
AKS	Akhisar	1.38	41	PN	Pn	21 10 07.5	-0.1
AKS	Akhisar	1.38	41	*e*Pn	Pn	21 10 07.5	-0.1
PRK	Paraskevi	1.44	348	P	Pg	21 10 10.0	-0.5
PRK				S	Sg	21 10 31.6	+2.4
PRK				AML	AML	21 10 34.7	
	comp=E,754µm,0.6s						
PRK				AML	AML	21 10 39.3	
	comp=N,987µm,0.6s						
PRK	Paraskevi	1.44	348	P	Pg	21 10 09.8	-0.7
PRK				S	Sg	21 10 29.8	+0.6
PRK	Paraskevi	1.44	348	P	Pg	21 10 09.8	-0.7
PRK				S	Sg	21 10 29.8	+0.6
YER	Yerkesik	1.47	118	PN	Pn	21 10 08.9	+0.1
YER	Yerkesik	1.47	118	*e*Pn	Pn	21 10 08.9	+0.1
SIGR	SIGRI	1.51	336	PN	Pn	21 10 10.2	+0.8
SIGR	SIGRI	1.51	336	P	Pn	21 10 09.9	+0.4
SIGR				AML	AML	21 10 35.1	
	comp=E,224µm,0.3s						
SIGR				AML	AML	21 10 40.9	
	comp=N,332µm,0.6s						
SIGR	SIGRI	1.51	336	*e*Pn	Pn	21 10 10.2	+0.8
MANT	Manisa	1.63	66	*i* P	Pb	21 10 13.2	+0.4
MANT				*i* S	Sn	21 10 31.8	-0.4
MANT	Manisa	1.63	66	P	Pb	21 10 13.2	+0.4
MANT				S	Sn	21 10 31.8	-0.4
GPNR	Gulpinar-Canak	1.67	346	PN	Pn	21 10 12.3	+0.7
GPNR	Gulpinar-Canak	1.67	346	*e*Pn	Pn	21 10 12.3	+0.7
KULA	Kula-Manisa	1.71	66	PN	Pn	21 10 12.2	-0.1
KULA	Kula-Manisa	1.71	66	*e*Pn	Pn	21 10 12.2	-0.1
STEP	BALIKESIR_Sava	1.75	28	*i* P	Pn	21 10 13.8	+1.1
STEP				*i* S	Sg	21 10 38.3	-0.7
STEP	BALIKESIR_Sava	1.75	28	P	Pn	21 10 13.8	+1.1
STEP				S	Sg	21 10 38.3	-0.7
KARY	Karystos	1.77	277	P	Pn	21 10 12.9	0.0
KARY	Karystos	1.77	277	P	Pn	21 10 13.4	+0.4
TURN	Turunc	1.82	121	PN	Pn	21 10 11.8	-1.8
TURN	Turunc	1.82	121	*e*Pn	Pn	21 10 11.8	-1.8
TAVA	DENIZLI_Tavas	1.82	101	*i* P	Pn	21 10 13.3	-0.4
TAVA				*i* S	Sg	21 10 42.3	+0.9
TAVA	DENIZLI_Tavas	1.82	101	P	Pn	21 10 13.4	-0.4
TAVA				S	Sg	21 10 42.3	+0.9
SERI	Serifos	1.86	249	P	Pn	21 10 12.9	-1.2
SERI	Serifos	1.86	249	P	Pn	21 10 13.9	-0.3
DALY	Dalyan (Mu˜la	1.88	122	PN	Pn	21 10 15.1	+0.6
DALY	Dalyan (Mu˜la	1.88	122	*e*Pn	Pn	21 10 15.1	+0.6
BAYC	CANAKKALE_Bayr	1.91	357	*i* P	Pn	21 10 14.1	-0.7
BAYC				*i* S	Sb	21 10 41.8	+0.8
BAYC	CANAKKALE_Bayr	1.91	357	P	Pn	21 10 14.1	-0.7
BAYC				S	Sb	21 10 41.8	+0.8
ARG	Arkhangelos	2.00	144	PN	Pn	21 10 16.9	+0.9
ARG	Arkhangelos	2.00	144	*e*Pn	Pn	21 10 16.9	+0.9
DEMI	Demirci	2.01	53	*i* P	Pn	21 10 17.4	+1.0
DEMI				*i* S	Sb	21 10 44.5	+0.4
DEMI	Demirci	2.01	53	P	Pn	21 10 17.4	+1.0
DEMI				S	Sb	21 10 44.5	+0.4
BALB	Balikesir	2.04	27	PN	Pn	21 10 17.1	+0.5
BALB	Balikesir	2.04	27	*e*Pn	Pn	21 10 17.1	+0.5
BOZC	Bozcaada	2.06	347	PN	Pn	21 10 17.9	+1.0
BOZC	Bozcaada	2.06	347	*e*Pn	Pn	21 10 17.9	+1.0
DION	Dionisos Attik	2.17	277	P	Pn	21 10 19.2	+0.7
DION	Dionisos Attik	2.17	277	P	Pn	21 10 19.3	+0.8
DURS	Dursunbey	2.26	38	*i* P	Pn	21 10 20.7	+0.9
DURS				*i* S	Sb	21 10 52.4	+1.1
DURS	Dursunbey	2.26	38	P	Pn	21 10 20.7	+0.9
DURS				S	Sb	21 10 52.4	+1.1
FETY	Fethiye	2.27	121	PN	Pn	21 10 20.6	+0.7
FETY	Fethiye	2.27	121	*e*Pn	Pn	21 10 20.6	+0.7
FETY	Fethiye	2.27	121	P	Pn	21 10 21.2	+1.3
FETY				S	Sb	21 10 51.0	-0.5
LPK	Lapseki	2.54	2	PN	Pn	21 10 24.4	+0.9
LPK	Lapseki	2.54	2	*e*Pn	Pn	21 10 24.4	+0.9
GELI	Tayfur-Gelibol	2.56	357	PN	Pn	21 10 24.9	+1.0
GELI	Tayfur-Gelibol	2.56	357	*e*Pn	Pn	21 10 24.9	+1.0
EDC	Edincik	2.68	20	PN	Pn	21 10 26.2	+0.8
EDC	Edincik	2.68	20	*e*Pn	Pn	21 10 26.2	+0.8
TVSB	Tavsanli	2.72	53	PN	Pn	21 10 26.6	+0.5
TVSB	Tavsanli	2.72	53	*e*Pn	Pn	21 10 26.6	+0.5
KCTX	Karacabey (Bur	2.76	28	PN	Pn	21 10 27.1	+0.5
KCTX	Karacabey (Bur	2.76	28	*e*Pn	Pn	21 10 27.1	+0.5
RKY	Sarkoy-Tekirda	2.88	8	PN	Pn	21 10 29.2	+1.0
RKY	Sarkoy-Tekirda	2.88	8	*e*Pn	Pn	21 10 29.2	+1.0

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*ISCJB **30** 21:15:05.5±1.1, 38°.84N±0°.04×43°.62E±0°.07, h24^{km}±8^{km}, Error ellipse: s-maj=9.9km s-min=5.8km az=24.2*

*CSEM **30** 21:15:05.3±0.2, 38°.85N×43°.55E, h15^{km}, ML2.8, Error ellipse: s-maj=6.7km s-min=4.5km az=133.0*

*DDA **30** 21:15:05.9, 38°.85N×43°.54E, h7^{km}, Ml2.8*

*ISK **30** 21:15:05.0, 38°.84N×43°.52E, h11^{km}, ML2.0/4*

ISC 30 21:15:05.7±0.9**, 38°.84N**±0°.03×**43°.56E**±0°.03**, h16**^{km}±7^{km}**, n18, σ0^{s}.74**/31**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VMUR	Van-Muradiye	0.15	5	*i* P	Pg	21 15 09.1	-0.8
VMUR				*i* S	Sg	21 15 13.5	+0.9
VMUR	Van-Muradiye	0.15	5	P	Pg	21 15 09.1	-0.8
VMUR				S	Sg	21 15 13.5	+0.9
VANB	Van	0.28	208	PG	Pb	21 15 12.2	-0.2
VANB				SG	Sb	21 15 17.8	+0.9
VANB	Van	0.28	208	*e*Pg	Pb	21 15 12.2	-0.2
TVAN	Van	0.33	201	*i* P	Pg	21 15 12.1	-0.7
TVAN				*i* S	Sb	21 15 18.8	+0.2
TVAN	Van	0.33	201	P	Pg	21 15 12.1	-0.7
TVAN				S	Sb	21 15 18.8	+0.2
CLDR	Caldiran	0.41	43	PG	Pg	21 15 14.0	-0.1
CLDR				SG	Sb	21 15 20.5	-0.4
CLDR	Caldiran	0.41	43	*i* P	Pg	21 15 13.7	-0.4
CLDR				*i* S	Sb	21 15 21.6	+0.8
CLDR	Caldiran	0.41	43	P	Pg	21 15 13.7	-0.4
CLDR	Caldiran	0.41	43	*e*Pg	Pg	21 15 14.0	-0.1
CLDR				*e*Sg	Sb	21 15 20.5	-0.4
CLDR				S	Sb	21 15 21.6	+0.8
ADCV	BITLIS_Adilcev	0.65	267	*i* P	Pb	21 15 18.2	-0.5
ADCV				*i* S	Sb	21 15 29.0	+1.4
ADCV	BITLIS_Adilcev	0.65	267	P	Pb	21 15 18.2	-0.5
ADCV				S	Sb	21 15 29.0	+1.4
TUTA	Tutak	0.80	314	*i* P	Pg	21 15 20.4	-1.0
TUTA				*i* S	Sb	21 15 32.9	+0.8
TUTA	Tutak	0.80	314	P	Pg	21 15 20.4	-1.0
TUTA				S	Sb	21 15 32.9	+0.8
AGRB	Hanur-Agry	0.85	329	PG	Pg	21 15 21.6	-0.7
AGRB	Hanur-Agry	0.85	329	*e*Pg	Pg	21 15 21.6	-0.7
GURO	Guroymak-BITLI	1.23	257	PN	Pn	21 15 28.3	0.0
GURO	Guroymak-BITLI	1.23	257	*e*Pn	Pn	21 15 28.3	0.0

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*NIED **30** 21:16:00, 35°.80N×139°.90E, h80^{km}, Mw3.8 Best double couple: M$_0$5.95000×10^{14} NP1:ϕ_s46.00000°, δ41.00000°, λ-168.00000°. NP2:ϕ_s307.00000°, δ82.00000°, λ-49.00000°.*

*ISCJB **30** 21:16:30.3±0.5, 35°.69N±0°.04×139°.84E±0°.07, h95^{km}±4^{km}, mb3.7/12, Error ellipse: s-maj=10.0km s-min=5.7km az=160.2*

*JMA **30** 21:16:31.0±0.2, 35°.76N×139°.89E, h84^{km}±2^{km}, M3.9 Broadband fault plane solution: P waves. NP1: ϕ_s310.00000°, δ88.00000°, λ-53.00000°. NP2:ϕ_s43.00000°, δ37.00000°, λ-177.00000°. Principal axes: T Plg33.0000°, Azm10.0000°; N Plg37.0000°, Azm129.0000°; P Plg36.0000°, Azm252.0000°;*

JMA Felt II J1.

*IDC **30** 21:16:31.7±1.1, 35°.65N×139°.81E, h93^{km}±10^{km}, mb3.5/12, mb1 3.7/16, mb1mx3.5/75, mbtmp3.9/16, MS2.4/1, Ms1 2.4/1, ms1mx2.0/57 Error ellipse: s-maj=20.3km s-min=6.4km az=68.0*

ISC 30 21:16:30.8±0.8**, 35°.75N**±0°.05×**139°.94E**±0°.07**, h84**^{km}±7^{km}**, n33, σ1^{s}.22**/35**, mb3.7**/12**, 6C-1D, Near south coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TOK	Tokyo	0.16	246	P	Pn	21 16 44.0	+1.1
JCN	Nagara	0.40	148	⇑P	Pn	21 16 45.5	+1.4
JAG	Ashikaga	0.78	330	⇓P	Pn	21 16 47.8	+0.2
JOD2	Odawara 2	0.85	235	⇑P	Pn	21 16 48.0	-0.4
JOD2				S	Sn	21 17 00.5	-1.1
BSO3	Boso 3	1.06	154	⇑P	Pn	21 16 51.0	+0.5
BSO3				X		21 17 07.2	
JIM2	Oshima 3	1.11	202	⇑P	Pn	21 16 50.8	-0.7
JIM2				S	Sn	21 17 06.1	-0.9
JKT	Katashina	1.16	331	⇑P	Pn	21 16 52.2	+0.1
JKT				S	Sn	21 17 08.5	+0.5
JYN	Shimob	1.17	258	⇑P	Pn	21 16 52.1	-0.1
JYN				S	Sn	21 17 08.1	-0.1
MJAR	Matsushiro Arr	1.61	300	P	Pn	21 16 58.1	+0.4
	18nm,0.3s,baz=51,slow=33,SNR=94						
MJAR				S	Sn	21 17 18.1	0.0
	37nm,0.3s,baz=148,slow=17,SNR=17						
MAT	Matsushiro	1.61	300	P	Pn	21 16 58.2	+0.5
MAT				S	Sn	21 17 17.2	-0.9
JHJ	Hachijo jima 2	2.63	183	P	Pn	21 17 11.6	+0.3
	185nm,0.3s,baz=303,slow=15,SNR=34						
JHJ				S	Sn	21 17 41.5	-0.9
	132nm,0.3s,baz=46,slow=24,SNR=9.3						
JNU	Nakatsue	7.93	253	P	Pn	21 18 22.6	-0.8
	0.9nm,0.3s,baz=37,slow=5.0,SNR=8.3						
JNU				LR	LR	21 20 57.8	
	comp=Z,31nm,21.1s,baz=313,slow=34						
ASAJ	Asahikawa	8.60	13	P	Pn	21 18 30.5	-1.9
	1.4nm,0.3s,baz=223,slow=14,SNR=6.0						
ASAJ				S	Sn	21 20 03.5	-4.1
	0.4nm,0.3s,baz=325,slow=7.5,SNR=3.5						
KSRS	Korea Array	9.81	283	P	Pn	21 18 51.1	+2.2
	0.3nm,0.3s,baz=95,slow=14,SNR=9.4						
USRK	Ussuriysk Ar.	10.40	327	P	Pn	21 18 58.9	+1.9
	0.2nm,0.3s,baz=138,slow=13,SNR=4.8						
H11N2	WAKE ISLAND Hy	28.57	117	T	T	21 51 59.6	
	baz=308,slow=75,SNR=72						
H11N1	WAKE ISLAND Hy	28.58	117	T	T	21 52 03.6	
	baz=308,slow=75,SNR=55						
H11N3	WAKE ISLAND Hy	28.59	117	T	T	21 52 06.0	
	baz=308,slow=75,SNR=59						
H11S1	WAKE ISLAND Hy	29.22	119	T	T	21 52 48.6	
	baz=310,slow=76,SNR=20						
H11S3	WAKE ISLAND Hy	29.22	119	T	T	21 52 51.0	
	baz=310,slow=76,SNR=18						
H11S2	WAKE ISLAND Hy	29.24	119	T	T	21 52 52.2	
	baz=310,slow=76,SNR=16						
ZALV	Zalesovo Beam	41.91	313	P	P	21 24 12.8	-0.1
	0.5nm,0.3s,baz=79,slow=7.7,SNR=4.1						
MKAR	Makanchi Array	43.80	303	P	P	21 24 28.2	-0.1
	0.9nm,0.7s,baz=92,slow=10,SNR=12						
KURBB	Kurchatov Arra	45.86	309	P	P	21 24 44.0	-0.5
	1.5nm,0.6s,baz=86,slow=8.2,SNR=9.1						
ILAR	Eielson Array	51.21	32	P	P	21 25 26.0	+0.7
	0.9nm,0.7s,baz=275,slow=6.4,SNR=8.7						
FITZ	Fitzroy Crossi	55.25	197	P	P	21 25 54.6	-0.7
	2.3nm,0.5s,baz=36,slow=7.3,SNR=11						
WRA	Warramunga Arr	55.65	186	P	P	21 25 56.7	-1.6
	0.8nm,0.3s,baz=0.7,slow=7.6,SNR=40						
ASAR	Alice Springs	59.37	186	P	P	21 26 23.4	-0.9
	0.3nm,0.4s,baz=358,slow=5.1,SNR=5.5						
ARCES	ARCESS Array B	64.77	339	P	P	21 27 00.3	+0.4
	0.9nm,0.9s,baz=58,slow=7.4,SNR=3.8						
FINES	FINESS Array B	69.39	332	P	P	21 27 28.8	-0.5
	0.9nm,0.8s,baz=69,slow=7.6,SNR=2.8						
NVAR	Mina Array Bea	76.71	52	P	P	21 28 14.9	+1.7
	0.7nm,0.7s,baz=285,slow=5.8,SNR=4.5						
PDAR	Pinedale Array	79.41	45	P	P	21 28 28.0	0.0
	0.4nm,0.5s,baz=289,slow=2.8,SNR=2.4						
TXAR	Lajitas Array	91.84	51	P	P	21 29 31.1	+1.1
	0.1nm,0.5s,baz=289,slow=2.8,SNR=2.5						

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*ISCJB **30** 21:36:39.3±0.5, 21°.28S±0°.04×68°.28W±0°.08, h107^{km}±6^{km}, mb3.9/11, Error ellipse: s-maj=11.9km s-min=6.6km az=11.3*

*GUC **30** 21:36:40.9±0.5, 21°.30S×68°.62W, h123^{km}±4^{km}, ML3.9*

*IDC **30** 21:36:43.7±2.4, 21°.19S×68°.08W, h132^{km}±21^{km}, mb3.7/11, mb1 3.8/15, mb1mx3.7/41, mbtmp4.1/15, MS2.3/1, Ms1 2.4/1, ms1mx2.2/40, Error ellipse: s-maj=20.4km s-min=15.1km az=87.0*

ISC 30 21:36:40.2±0.8**, 21°.29S**±0°.05×**68°.31W**±0°.07**, h103**^{km}±8^{km}**, n30, σ1^{s}.21**/40**, mb4.1**/11**, 6C-3D, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	IPOC Station P	1.00	240	⇑*i*P	Pn	21 37 02.1	+1.0
PB09				*e*S	Sn	21 37 17.5	+0.7
PB09				IAML		21 37 18.2	
	comp=N,3µm,0.6s						
PB01	IPOC Station P	1.13	282	⇓*i*P	Pn	21 37 02.3	-0.1
PB01				*e*S	Sn	21 37 18.5	-0.6
PB01				IAML		21 37 20.5	
	comp=E,2µm,0.2s						
PB08	IPOC Station P	1.39	325	⇓*i*P	Pn	21 37 07.4	+1.6
PB08				*e*S	Sn	21 37 27.0	+2.0
PB08				IAML		21 37 29.0	
	comp=N,989nm,0.6s						
PB02	IPOC Station P	1.48	269	⇑*i*P	Pn	21 37 06.1	-0.4
PB02				*e*S	Sn	21 37 25.1	-1.3
PB02				IAML		21 37 27.2	
	comp=E,5µm,0.8s						
PB07	IPOC Station P	1.53	253	⇑*i*P	Pn	21 37 06.7	-0.5
PB07				*e*S	Sn	21 37 26.1	-1.6
PB07				IAML		21 37 27.0	
	comp=E,3µm,0.5s						
PB03	IPOC Station P	1.54	241	⇑*i*P	Pn	21 37 07.1	-0.2
PB03				*e*S	Sn	21 37 26.8	-1.0
PB03				IAML		21 37 27.7	
	comp=E,4µm,0.7s						
PB06	IPOC Station P	1.83	220	⇑*i*P	Pn	21 37 11.1	+0.1
PB06				*e*S	Sn	21 37 34.2	-0.1
PB06				IAML		21 37 35.3	
	comp=E,995nm,0.2s						
PB11	IPOC Station P	1.98	320	⇓*i*P	Pn	21 37 13.0	+0.2
PB11				*e*S	Sn	21 37 37.9	+0.2
PB15	IPOC Station P	2.19	209	⇑*i*P	Pn	21 37 16.1	+0.5
PB15				*e*S	Sn	21 37 43.6	+1.0
LPAZ	La Paz	4.98	2	P	Pn	21 37 56.7	+3.4
	comp=E,3.9nm,0.3s,baz=194,slow=6.6,SNR=106						
LPAZ				LR	LR	21 40 31.8	
	comp=E,32nm,20.3s,baz=223,slow=47						
SIV	San Ignacio	8.65	54	P	Pn	21 38 42.7	+0.1
	comp=E,10nm,0.3s,baz=250,slow=12,SNR=310						
SIV				S	Sn	21 40 15.8	-2.7
	comp=E,0.5nm,0.3s,baz=302,slow=19,SNR=3.6						
PLCA	Paso Flores	19.47	185	P	Pn	21 41 03.2	+1.9
	comp=E,0.1nm,0.3s,baz=28,slow=12,SNR=5.1						
BDFB	Brasilia	20.04	77	P	P	21 41 04.5	-0.9
	comp=E,1.0nm,0.3s,baz=264,slow=8.3,SNR=6.8						
PTGA	Pitinga	22.00	23	P	P	21 41 24.8	-1.4
	comp=E,2.7nm,0.3s,baz=316,slow=22,SNR=11						
TXAR	Lajitas Array	60.78	325	P	P	21 46 41.0	-0.6
	comp=E,0.1nm,0.4s,baz=139,slow=5.9,SNR=2.5						
SNAA	Sanae	62.29	161	P	P	21 46 49.7	-1.5
	comp=E,1.9nm,0.6s,baz=292,slow=11,SNR=7.9						
QSPA	South Pole Qui	68.90	180	P	P	21 47 35.0	+1.2
	comp=E,1.4nm,0.5s,baz=273,slow=1.1,SNR=4.0						
KOWA	Kowa	72.42	66	P	P	21 47 55.9	+0.1
	comp=E,1.3nm,0.7s,baz=225,slow=4.3,SNR=2.8						
NVAR	Mina Array Bea	75.68	322	P	P	21 48 15.6	+0.9
	comp=E,0.9nm,0.8s,baz=153,slow=6.9,SNR=5.4						
TORD	Torodi Ar. Bea	76.76	70	P	P	21 48 19.9	-1.1
	comp=E,2.7nm,0.6s,baz=255,slow=5.1,SNR=21						
VNDA	Vanda	77.15	190	P	P	21 48 23.8	+1.7
	comp=E,0.3nm,0.6s,baz=79,slow=7.6,SNR=3.2						
BOSA	Boshof	83.05	118	P	P	21 48 54.8	-0.1
	comp=E,2.0nm,0.8s,baz=205,slow=5.2,SNR=4.2						
MAW	Mawson	84.37	163	P	P	21 49 01.0	+0.4
	comp=E,1.9nm,0.8s,baz=229,slow=11,SNR=5.2						
YKA	Yellowknife Ar	91.18	340	P	P	21 49 32.9	-0.2
	comp=E,2.4nm,0.6s,baz=134,slow=4.8,SNR=10						
BVAR	Borovoye Array	135.31	35	PKP	PKPdf	21 55 48.1	+0.4
	comp=E,0.2nm,0.5s,baz=264,slow=1.3,SNR=2.3						
KURBB	Kurchatov Arra	140.85	34	PKP	PKPdf	21 55 56.8	-1.1
	comp=E,0.1nm,0.3s,baz=289,slow=2.8,SNR=2.6						
ZALV	Zalesovo Beam	141.53	25	PKP	PKPdf	21 55 57.9	-1.1
	comp=E,0.8nm,0.6s,baz=238,slow=1.4,SNR=4.2						
MKAR	Makanchi Array	145.13	36	PKP	PKPdf	21 56 05.9	+0.2
	comp=E,3.1nm,0.7s,baz=328,slow=3.6,SNR=36						
MJAR	Matsushiro Arr	152.38	309	PKPbc	PKPbc	21 56 23.9	-0.7
	comp=E,0.3nm,0.3s,baz=158,slow=1.3,SNR=4.1						
SONM	Songino Array	153.18	8	PKPbc	PKPbc	21 56 26.2	+0.1
	comp=E,0.4nm,0.5s,baz=292,slow=3.0,SNR=2.9						

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*IDC **30** 21:46:48.2±0.7, 3°.26S×143°.03E, h0^{km}, mb4.5/16, mb1 4.6/18, mb1mx4.3/46, mbtmp4.5/18, ML1.9/1, MS3.4/11, Ms1 3.4/11, ms1mx3.2/47, Error ellipse: s-maj=25.5km s-min=13.5km az=83.0*

*ISCJB **30** 21:46:50.7±0.3, 3°.35S±0°.04×142°.88E±0°.04, h22^{km}, mb4.7/41, MS3.5/11, Error ellipse: s-maj=6.4km s-min=5.8km az=167.2*

*BJI **30** 21:46:50.0, 3°.53S×143°.19E, h33^{km}, mb4.7/30, mB5.0/15, Ms4.6/3, Ms7 4.5/3*

*NEIC **30** 21:46:52.4±2.3, 3°.29S×142°.87E, h23^{km}±16^{km}, mb4.7/17, Error ellipse: s-maj=6.6km s-min=6.2km az=137.0*

*DJA **30** 21:46:54.3±1.2, 3°S±6°×14°3E±°, h32^{km}±10^{km}, M5.0/15, mB5.2/2, mb4.9/15, MLv5.0/5, Mw(mB)4.6/2*

ISC 30 21:46:52.7±0.4**, 3°.39S**±0°.06×**142°.85E**±0°.06**, h22**^{km}**, n100, σ1^{s}.48**/93**, mb4.7**/41**, MS3.5**/11**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	2.31	292	P	Pn	21 47 27.8	-1.8
GENI	Genyem	2.80	286	P	Pn	21 47 36.5	+0.3
WAMI	Wamena	4.16	263	P	Pn	21 47 55.6	+0.6
MANU	Manus Island	4.70	74	*e*Pn	Pn	21 48 00.9	-1.5
BAKI	Biak	7.09	288	P	Pn	21 48 34.4	-0.8
PMG	Port Moresby	7.35	145	Pn	Pn	21 48 36.3	-2.5
	1.0nm,0.3s,baz=315,slow=17,SNR=2.0						
PMG	Port Moresby	7.35	145	*e*Pn	Pn	21 48 39.2	+0.4
MTN	Manton Dam	14.92	230	*e*Pn	Pn	21 50 21.9	-0.5
GUMO	Guam	16.99	7	LR	LR	21 56 27.0	
	comp=Z,68nm,19.9s,baz=201,slow=34						
WB2	Warramunga Arr	18.42	206	*e*P	P	21 51 06.5	-0.2
WRA	Warramunga Arr	18.43	206	P	P	21 51 06.7	-0.1
	2.9nm,0.3s,baz=34,slow=11,SNR=61						
WRA				S	S	21 54 35.5	-0.7
	0.1nm,0.3s,baz=25,slow=22,SNR=4.2						
WRA				Lg	Lg	21 56 33.7	
	0.1nm,0.3s,baz=26,slow=26,SNR=2.8						
KMSI	Cibinong	19.27	281	P	Pn	21 51 18.6	+1.4
SOEI	Soe	19.51	250	P	Pn	21 51 20.4	+0.3
SOEI	Soe	19.51	250	*e*P	Pn	21 51 19.5	-0.6
	94nm,0.8s						
DAV	Davao City (W)	20.13	301	LR	LR	21 59 16.3	
	comp=Z,92nm,18.6s,baz=167,slow=37						
LUWI	Luwuk	20.20	276	P	P	21 51 27.1	+0.9
LUWI	Luwuk	20.20	276	*e*P	P	21 51 26.9	+0.7
	77nm,0.9s						
BATI	Baumata	20.21	249	P	Pn	21 51 27.8	-0.6
	125nm,0.8s,baz=90,slow=1.9,SNR=18						
BATI	Baumata	20.21	249	P	Pn	21 51 28.0	-0.4
MRSI	Marisa	21.25	280	P	P	21 51 37.6	0.0
APSI	Ampana	21.33	276	P	P	21 51 39.8	+1.3
AS01	Alice Springs	21.91	202	*e*P	P	21 51 44.3	-0.4
AS31	Alice Springs	21.93	202	*e*P	P	21 51 45.8	+0.9
	3.5nm,0.8s						
ASAR	Alice Springs	21.93	202	P	P	21 51 45.5	+0.6
	8.7nm,0.8s,baz=29,slow=11,SNR=30						
ASAR				LR	LR	22 01 07.9	
	comp=Z,225nm,21.1s,baz=30,slow=39						
PCI	Palu	23.13	276	P	P	21 51 58.1	+0.4
EIDS	Eidsvold	23.24	161	*e*P	P	21 51 59.9	+1.2
	12nm,0.8s						
STKA	Stephens Creek	28.36	182	P	P	21 52 45.8	+0.5
	9.0nm,0.7s,baz=356,slow=8.5,SNR=33						
STKA				LR	LR	22 06 21.9	
	comp=Z,74nm,18.2s,baz=14,slow=41						
STKA	Stephens Creek	28.36	182	*e*P	P	21 52 46.5	+1.2
	2.1nm,0.7s						
MBWA	Marble Bar	28.59	230	*e*P	P	21 52 47.3	-0.3
	16nm,1.0s						
DZM	Mont Dzumac	29.48	131	LR	LR	22 03 25.0	
	comp=Z,99nm,19.3s,baz=360,slow=34						
DZM	Mont Dzumac	29.48	131	*e*P	P	21 52 55.8	+0.3
	18nm,1.2s						
BBOO	Buckleboo	29.95	192	*e*P	P	21 53 00.4	+0.9
	24nm,1.3s						
FORT	Forrest	30.61	206	*e*P	P	21 53 06.7	+1.4
	46nm,0.7s						
H11S3	WAKE ISLAND Hy	32.00	46	T	T	22 26 42.8	
	baz=229,slow=75,SNR=958						
H11S2	WAKE ISLAND Hy	32.01	46	T	T	22 26 45.8	
	baz=229,slow=75,SNR=452						
H11S1	WAKE ISLAND Hy	32.02	46	T	T	22 26 46.5	
	baz=229,slow=75,SNR=480						
H11N1	WAKE ISLAND Hy	32.95	45	T	T	22 28 01.7	
	baz=228						

H11N2	WAKE ISLAND Hy	32.96	45	T	T	22 28 03.6	
	baz=228						
H11N3	WAKE ISLAND Hy	32.96	45	T	T	22 28 02.7	
	baz=228						
LEM	Lembang	35.25	263	LR	LR	22 09 29.0	
	comp=Z,103nm,19.3s,baz=98,slow=38						
NWAO	Narrogin (SRO)	37.92	216	P	P	21 54 09.1	+0.4
	7.6nm,0.6s,baz=124,slow=7.3,SNR=9.2						
NWAO				LR	LR	22 10 55.2	
	comp=Z,88nm,20.2s,baz=268,slow=38						
MJAR	Matsushiro Arr	39.96	354	LR	LR	22 10 39.7	
	comp=Z,25nm,18.1s,baz=135,slow=36						
NJ2	Nanjing	41.98	329	eP	P	21 54 42.5	+0.2
NJ2				pmax	pmax		
	comp=Z,9.0nm,0.7s						
PSI	Prapat	44.34	277	P	P	21 54 59.8	-2.0
	13nm,0.7s,baz=0.1,slow=1.7,SNR=8.1						
PSI	Prapat	44.34	277	eP	P	21 54 59.9	-2.0
	24nm,1.0s						
GSI	Gunungsitoli	45.50	275	eP	P	21 55 08.8	-2.2
	16nm,0.9s						
GYA	Guiyang	45.88	312	eP	P	21 55 14.8	+0.9
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
AFI	Afiamalu	45.97	106	LR	LR	22 12 20.4	
	comp=Z,63nm,19.6s,baz=200,slow=33						
KMI	Kunming	48.15	308	P	P	21 55 32.8	+1.0
KMI				pmax	pmax		
	comp=Z,12nm,1.0s						
CM01	Chiang Mai Arr	48.35	298	eP	P	21 55 32.3	-0.9
CMAR	Chiang Mai Arr	48.38	298	P	P	21 55 33.2	-0.3
	2.1nm,0.5s,baz=122,slow=6.2,SNR=13						
CMAR				LR	LR	22 17 55.1	
	comp=Z,18nm,18.1s,baz=157,slow=38						
CN2	Changchun	49.52	343	eP	P	21 55 43.0	+1.3
CN2				pmax	pmax		
	comp=Z,10.0nm,0.7s						
BJI	Beijing	49.67	333	P	P	21 55 41.5	-1.4
BJI				pmax	pmax		
	comp=Z,8.0nm,1.6s						
JOHN	Johnston Islan	51.10	65	eP	P	21 55 54.4	+0.2
	229nm,1.0s						
HHC	Hu-ho-hao-te	52.49	330	eP	P	21 56 05.8	+1.5
HHC				pP	sP	21 56 15.5	+1.6
HHC				S	S	22 03 32.5	+2.7
HHC				sS	sS	22 03 43.3	+2.1
HHC				pmax	pmax		
	comp=Z,28nm,1.1s						
HHC				pmax	pmax		
	comp=Z,97nm,6.0s						
MCQ	Macquarie Isla	52.61	168	eP	P	21 56 05.5	+0.7
	262nm,1.4s						
LZH	Lanzhou	53.57	321	eP	P	21 56 14.0	+1.6
LZH				pP	sP	21 56 23.0	+1.0
LZH				sP	pP	21 56 27.5	+8.2
LZH				ePP	PP	21 58 15.3	+2.0
LZH				pmax	pmax		
	comp=Z,20nm,1.0s						
LZH				pmax	pmax		
	comp=Z,230nm,5.4s						
LZH				LR	LR		
	comp=N,220nm,15.5s						
LZH				LR	LR		
	comp=E,220nm,15.7s						
LZH				LR	LR		
	comp=Z,390nm,19.3s						
PETK	Petropavlovsk-	57.67	11	LR	LR	22 17 26.9	
	comp=Z,22nm,21.7s,baz=258,slow=32						
GTA	Gaotai	58.12	321	P	P	21 56 44.8	-0.2
GTA				pP	sP	21 56 55.0	+0.4
GTA				sP	pP	21 56 58.8	+6.8
GTA				pmax	pmax		
	comp=Z,4.0nm,1.1s						
ULN	Ulaanbaatar	59.89	333	eP	P	21 56 56.8	-0.3
	4.7nm,1.2s						
SONM	Songino Array	60.16	333	P	P	21 56 58.2	-0.7
	0.7nm,0.6s,baz=148,slow=7.1,SNR=5.5						
SONM				PcP	PcP	21 57 43.4	-1.0
	0.6nm,0.8s,baz=145,slow=5.3,SNR=2.6						
SONA1	Songino Array	60.17	333	eP	P	21 56 58.3	-0.7
WMQ	Urumqi	68.14	320	P	P	21 57 52.8	+1.4
MK01	Makanchi Array	72.86	321	eP	P	21 58 19.4	-0.7
MK31	Makanchi Array	72.88	321	eP	P	21 58 19.6	-0.6
MKAR	Makanchi Array	72.88	321	P	P	21 58 19.6	-0.6
	2.9nm,0.6s,baz=94,slow=9.0,SNR=39						
MKAR	Makanchi Array	72.88	321	eP	P	21 58 19.6	-0.6
	40nm,1.4s						
MAKZ	Makanchi	73.08	321	eP	P	21 58 20.9	-0.5
	5.8nm,0.6s						
KSH	Kashi	74.58	312	P	P	21 58 31.8	+1.4
KSH				epP	sP	21 58 42.0	+1.8
KSH				ePcP	PcP	21 58 47.0	+2.3
KSH				ePP	PP	22 01 21.0	+3.7
KSH				S	S	22 08 02.5	-2.5
KSH				SKS	SKSac	22 08 31.0	-6.8
KSH				pmax	pmax		
	comp=Z,17nm,1.6s						
KSH				pmax	pmax		
	comp=Z,120nm,5.7s						
ZAA0	Zalesovo Array	74.63	329	eP	P	21 58 28.9	-1.3
	3.6nm,0.8s						
ZALV	Zalesovo Beam	74.63	329	P	P	21 58 28.9	-1.4
	3.6nm,0.7s,baz=114,slow=5.5,SNR=12						
ZALV	Zalesovo Beam	74.63	329	eP	P	21 58 28.5	-1.7
VNDA	Vanda	74.77	176	P	P	21 58 30.3	-0.4
	1.5nm,0.7s,baz=329,slow=6.3,SNR=13						
VNDA	Vanda	74.77	176	eP	P	21 58 31.2	+0.6
	2.6nm,1.0s						
NIL	Nilore	75.06	306	eP	P	21 58 33.3	+0.1
	9.3nm,0.7s						
KURK	Kurchatov	76.67	324	P	P	21 58 41.1	-0.9
KURBB	Kurchatov Arra	76.69	324	P	P	21 58 41.1	-1.0
	0.8nm,0.6s,baz=113,slow=6.1,SNR=6.3						
NRIK	Noril’sk	81.56	343	P	P	21 59 07.1	-1.2
	3.2nm,0.8s,baz=151,slow=24,SNR=4.3						
BVAR	Borovoye Array	82.25	324	P	P	21 59 11.5	-0.9
	4.1nm,0.8s,baz=110,slow=6.4,SNR=30						
BRVK	Borovoye	82.32	324	eP	P	21 59 12.1	-0.6
	3.0nm,0.8s						
IM3	Indian Mountai	82.57	22	eP	P	21 59 15.1	+1.4
MAW	Mawson	83.06	202	P	P	21 59 16.9	+0.7
	3.0nm,0.7s,baz=75,slow=5.7,SNR=6.3						
DHY	Denali Highway	83.99	25	eP	P	21 59 20.5	-0.8
	18nm,1.5s						
CCB	Clear Creek Bu	84.34	24	eP	P	21 59 21.2	-1.7
	5.3nm,0.8s						
IL1	Eielson Array	84.76	24	eP	P	21 59 22.3	-2.7
ILAR	Eielson Array	84.76	24	P	P	21 59 22.4	-2.6
	2.1nm,0.9s,baz=255,slow=5.5,SNR=11						
ILB	Eielson Array	84.76	24	eP	P	21 59 23.8	-1.2
QSPA	South Pole Qui	86.56	180	P	P	21 59 33.6	-0.5
	4.0nm,0.6s,baz=212,slow=0.5,SNR=19						
QSPA	South Pole Qui	86.56	180	eP	P	21 59 33.5	-0.5
	35nm,1.0s						
MDPB	Devils Postpil	98.45	53	eP	P	22 00 29.1	-0.9
	9.7nm,1.0s						
MDPB				eS	S	22 12 02.1	+4.2
GERES	GERESS Array B	117.42	325	PKP	PKPdf	22 05 35.9	-1.0
	0.3nm,0.4s,baz=51,slow=3.1,SNR=3.6						
DAVOX	Davos/Dischmat	120.69	324	PKP	PKPdf	22 05 42.1	-1.3
	2.0nm,0.7s,baz=7.5,slow=2.0,SNR=5.0						
TORD	Torodi Ar. Bea	140.42	287	PKP	PKPdf	22 06 20.7	-0.6
	0.8nm,1.0s,baz=90,slow=2.9,SNR=3.6						
LPAZ	La Paz	143.66	123	PKP	PKPbc	22 06 25.2	0.0
	0.5nm,0.5s,baz=255,slow=3.1,SNR=3.0						
KOWA	Kowa	145.52	291	PKPbc	PKPdf	22 06 29.8	-0.4
	9.3nm,0.8s,baz=59,slow=4.4,SNR=16						
KOWA	Kowa	145.52	291	ePKPdf	PKPdf	22 06 30.2	-0.1
KIC	Kosan Boka	147.58	276	ePKIKP	PKPbc	22 06 35.9	-0.6
	54nm,1.3s						
DBIC	Dimbokro	147.68	277	PKPbc	PKPbc	22 06 36.6	-0.1
	7.1nm,0.7s,baz=76,slow=3.2,SNR=10.0						
TIC	Toumodi	147.84	277	ePKIKP	PKPbc	22 06 36.4	-0.8
LIC	Lamto	147.88	276	ePKIKP	PKPbc	22 06 36.2	-1.1
	41nm,0.9s						

IDC 30 21:58:38.3±6.8**, 32°.27S**×**178°.88W, h0^{km}, mb3.5**/2**, mb1 3.7**/2**, mb1mx3.4**/44**, mbtmp3.5**/2**, Error ellipse: s-maj=292.6km s-min=64.0km az=159.0, South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ASAR	Alice Springs	42.30	269	P	P	22 06 33.2	-0.7
	0.4nm,0.4s,baz=115,slow=7.8,SNR=4.8						
WRA	Warramunga Arr	43.46	275	P	P	22 06 43.9	+0.6
	0.6nm,1.0s,baz=115,slow=7.8,SNR=2.7						
FINES	FINESS Array B	146.62	338	PKPbc	PKPdf	22 18 20.2	+0.7
	1.8nm,1.1s,baz=25,slow=5.0,SNR=3.7						

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*ISCJB **30** 22:05:59.5±0.6, 36°.55N±0°.04×70°.69E±0°.07, h35^{km}, mb3.6/3, Error ellipse: s-maj=8.4km s-min=6.2km az=5.6*

*NNC **30** 22:06:05.0±2.1, 36°.97N×70°.84E, h0^{km}, mb3.4, mpv3.0, Error ellipse: s-maj=16.6km s-min=13.9km az=165.0*

*IDC **30** 22:06:07.7±6.5, 38°.05N×70°.31E, h0^{km}, mb3.7/3, mb1 3.6/5, mb1mx3.3/63, mbtmp3.6/5, ML3.1/2, Error ellipse: s-maj=114.9km s-min=33.7km az=155.0*

ISC 30 22:06:01.0±0.9**, 36°.49N**±0°.06×**70°.82E**±0°.09**, h35^{km}, n11, σ1^{s}.55**/15**, mb3.7**/3**, 3C-1D, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CEP	Cherat	2.81	161	P	Pn	22 06 44.5	+1.0
CHCP	Chirah Chowk	3.46	144	P	Pn	22 06 52.8	+0.4
THW	Thamme Wali	3.77	168	P	Pn	22 06 57.2	+0.6
SFK	Sufi-Kurgan	4.10	30	⇑Pn	Pn	22 07 03.3	+2.0
	1.7nm,0.4s						
SFK				⇑Sn	Sn	22 07 49.1	+0.8
	5.6nm,0.3s						
MNAS	Manas	6.13	12	⇓Pn	Pn	22 07 30.7	+1.5
	0.7nm,0.3s						
MNAS				⇑Sn	Sn	22 08 36.7	-1.3
	4.7nm,0.6s						
KK31	Karatay Array	6.61	358	Pn	Pn	22 07 37.3	+1.7
	0.5nm,0.3s,baz=178,slow=12,SNR=11						
KK31				Sn	Sn	22 08 49.5	-0.1
	1.2nm,0.4s,baz=179,slow=22,SNR=4.3						
GEYT	Alibeck	10.23	282	Pn	Pn	22 08 27.1	+1.8
	0.1nm,0.3s,baz=85,slow=19,SNR=4.8						
GEYT				Sn	Sn	22 10 17.9	-0.9
	0.3nm,0.3s,baz=215,slow=17,SNR=5.4						
ZALV	Zalesovo Beam	19.98	25	P	P	22 10 27.5	-2.6
	0.4nm,0.3s,baz=218,slow=10,SNR=6.2						
FINES	FINESS Array B	37.41	326	P	P	22 13 08.1	-2.2
	0.5nm,0.6s,baz=113,slow=6.7,SNR=4.1						
ARCES	ARCESS Array B	41.10	338	P	P	22 13 40.4	-0.6
	1.1nm,0.7s,baz=129,slow=9.8,SNR=5.2						
HFS	Hagfors	42.98	322	P	P	22 13 56.6	+0.1
	1.6nm,0.8s,baz=111,slow=11,SNR=4.5						

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*BEO **30** 22:20:29.2±0.6, 43°.64N×16°.96E, h0^{km}, ML2.4/8*

*CSEM **30** 22:20:29.0±0.4, 43°.60N×16°.94E, h10^{km}, ML2.5, Error ellipse: s-maj=10.8km s-min=5.4km az=54.0*

*PDG **30** 22:20:33.2±0.1, 43°.27N×17°.19E, h13^{km}, ML2.4/7, Error ellipse: s-maj=0.3km s-min=0.5km az=0.0*

ISC 30 22:20:28.2±1.2**, 43°.58N**±0°.03×**16°.95E**±0°.03**, h9^{km}**±**9^{km}, n56, σ0^{s}.94**/102**, 10C-7D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STON	Ston	0.89	142	ePg	Pg	22 20 44.9	-0.4
STON				eSg	Sn	22 20 58.9	-0.9
STON	Ston	0.89	142	ePg	Pg	22 20 44.3	-1.1
STON				Sg	Sn	22 20 59.0	-0.9
STON	Ston	0.89	142	ePg	Pg	22 20 44.9	-0.4
STON				eSg	Sn	22 20 58.9	-0.9
STON	Ston	0.89	142	⇑iPg	Pg	22 20 44.7	-0.6
STON				eSg	Sn	22 20 58.9	-0.9
BLY	Banja Luka	1.19	8	ePg	Pb	22 20 50.4	-0.4
BLY				eSg	Sb	22 21 05.7	-0.6
BLY	Banja Luka	1.19	8	⇑iPg	Pb	22 20 50.1	-0.7
BLY				eSg	Sb	22 21 05.7	-0.6
BLY	Banja Luka	1.19	8	⇑iPg	Pb	22 20 50.1	-0.7
BLY				eSg	Sg	22 21 06.0	-0.3
UDBI	Udbina	1.28	319	ePn	Pb	22 20 52.1	-0.4
UDBI				Sg	Sn	22 21 11.3	+1.8
TREB	Trebinje	1.34	129	ePg	Pb	22 20 53.3	-0.1
TREB				eSg	Sg	22 21 13.0	+1.8
TREB	Trebinje	1.34	129	ePg	Pb	22 20 53.3	-0.1
TREB				eSg	Sg	22 21 12.4	+1.2
TREB	Trebinje	1.34	129	⇓iPg	Pn	22 20 52.4	-0.6
TREB				eSg	Sg	22 21 12.4	+1.2
BRY	Bratogost	1.34	120	⇑iPg	Pn	22 20 52.9	-0.3
BRY				i Sg	Sb	22 21 09.7	-1.3
BRY	Bratogost	1.34	120	ePg	Pg	22 20 53.7	-0.3
BRY				eSg	Sg	22 21 12.5	+1.1
BRY	Bratogost	1.34	120	ePg	Pg	22 20 53.7	-0.3
BRY				eSg	Sg	22 21 12.5	+1.1
UPM	Unac-Piva	1.48	104	⇓iPg	Pg	22 20 56.6	+0.1
UPM				i Sg	Sg	22 21 16.3	+0.7
UPM	Unac-Piva	1.48	104	⇓iPg	Pg	22 20 56.6	+0.1
UPM				eSg	Sg	22 21 16.3	+0.7
UPM	Unac-Piva	1.48	104	ePg	Pg	22 20 56.1	-0.4
UPM				eSg	Sg	22 21 16.3	+0.7
HAPS	Han Pijesak,Bl	1.54	70	ePg	Pb	22 20 56.9	0.0
HAPS				eSg	Sb	22 21 16.2	-0.3
HAPS	Han Pijesak,Bl	1.54	70	⇓iPn	Pn	22 20 55.8	-0.1
HAPS	Han Pijesak,Bl	1.54	70	ePg	Pb	22 20 56.9	0.0
HAPS				eSg	Sb	22 21 16.2	-0.3
HAPS	Han Pijesak,Bl	1.54	70	⇓iPn	Pn	22 20 55.8	-0.1
HAPS				eSn	Sb	22 21 16.2	-0.3
HCY	Herceg Novi	1.60	134	⇓iPg	Pn	22 20 56.7	+0.2
HCY				i Sg	Sn	22 21 16.4	-1.0
HCY	Herceg Novi	1.60	134	ePn	Pn	22 20 56.8	+0.2
HCY				i Sg	Sn	22 21 16.4	-1.0
HCY				eSn	Sb	22 21 18.2	0.0
HCY	Herceg Novi	1.60	134	ePn	Pn	22 20 56.8	+0.2
HCY				eSn	Sb	22 21 18.2	0.0
NVLJ	Novalja	1.79	304	i Pn	Pb	22 21 01.0	-0.2
NVLJ				Sn	Sg	22 21 26.5	+0.7
PLE	Pljevlja	1.80	97	⇑iPn	Pg	22 21 03.0	+0.4
PLE				i Sn	Sg	22 21 26.6	+0.7
PLE	Pljevlja	1.80	97	⇑iPn	Pg	22 21 03.0	+0.4
PLE				i Sn	Sg	22 21 26.6	+0.7
BBLS	Lazići	1.81	80	ePn	Pb	22 21 00.5	-1.0
BBLS				eSn	Sb	22 21 25.0	+0.8
BBLS	Lazići	1.81	80	ePn	Pb	22 21 00.4	-1.0
BBLS				eSn	Sb	22 21 24.1	-0.1
BBLS	Lazići	1.81	80	ePn	Pb	22 21 00.4	-1.0
BBLS				eSn	Sb	22 21 24.1	-0.1
BUM	Brajici-Budva	1.92	131	⇑iPn	Pb	22 21 02.7	-0.6
BUM				i Sn	Sn	22 21 25.9	+0.7
BUM	Brajici-Budva	1.92	131	⇑iPn	Pb	22 21 02.7	-0.6
BUM				i Sn	Sn	22 21 25.9	+0.7
PDG	Podgorica	2.04	123	ePn	Pb	22 21 05.1	-0.3
PDG				eSn	Sg	22 21 32.4	-1.4
PDG	Podgorica	2.04	123	ePn	Pn	22 21 03.8	+1.1
PDG				eSn	Sn	22 21 29.6	+1.3
PDG	Podgorica	2.04	123	ePn	Pn	22 21 03.8	+1.1
PDG				eSn	Sn	22 21 29.6	+1.3
TTG	Podgorica	2.04	123	⇓iPn	Pb	22 21 04.6	-0.8
TTG				i Sn	Sn	22 21 29.5	+1.3
SJES	Sjenica	2.23	97	ePn	Pb	22 21 07.4	-1.2
SJES				eSn	Sb	22 21 35.0	-1.3
DIVS	Divibare	2.27	76	ePn	Pb	22 21 07.6	-1.7
DIVS				eSn	Sb	22 21 35.8	-1.6
DIVS	Divibare	2.27	76	ePn	Pn	22 21 06.1	+0.3
DIVS				eSn	Sb	22 21 35.8	-1.6
DIVS	Divibare	2.27	76	ePn	Pn	22 21 06.1	+0.3
DIVS				eSn	Sn	22 21 34.0	+0.1
BEY	Berane	2.27	107	⇑iPn	Pb	22 21 08.8	-0.5
BEY				i Sn	Sb	22 21 36.6	-0.8
IVA	Berane	2.27	107	⇑iPn	Pb	22 21 08.8	-0.5
IVA				i Sn	Sb	22 21 36.6	-0.8
OZLJ	Ozalj	2.30	333	ePn	Pb	22 21 08.1	-1.7
IVAS	Ivanjica	2.33	89	ePn	Pb	22 21 09.1	-1.2
IVAS	Ivanjica	2.33	89	ePn	Pb	22 21 09.1	-1.2
CRES	Cresnjev	2.49	335	ePn	Pn	22 21 08.9	+0.1
CRES				eSn	Sn	22 21 39.8	+0.5
CRES	Cresnjev	2.49	335	ePn	Pn	22 21 08.9	+0.1
CRES				eSn	Sn	22 21 39.8	+0.5
GRUS	Gruza	2.75	82	ePn	Pn	22 21 14.4	+2.0
GRUS	Gruza	2.75	82	ePn	Pn	22 21 14.4	+2.0
CEY	Cerknica	2.81	321	ePn	Pn	22 21 14.3	+1.0
CEY				eSn	Sn	22 21 47.3	0.0
CEY	Cerknica	2.81	321	ePn	Pn	22 21 14.3	+1.0
CEY				eSn	Sn	22 21 47.3	0.0
MORH	Mˆ‡rˆ¡gy, Hung	2.90	24	ePn	Pn	22 21 14.2	-0.3
MORH	Mˆ‡rˆ¡gy, Hung	2.90	24	ePn	Pn	22 21 14.2	-0.3
SELS	Selova	3.06	95	ePn	Pn	22 21 19.0	+2.3
SELS	Selova	3.06	95	ePn	Pn	22 21 19.0	+2.3
ZAPS	Zavoj	4.15	92	ePn	Pn	22 21 33.7	+1.9

IDC 30 22:26:01.6±3.4**, 5°.10N**×**32°.67W, h0^{km}, mb4.1**/5**, mb1 4.2**/5**, mb1mx3.6**/60**, mbtmp4.1**/5**, MS3.6**/6**, Ms1 3.6**/6**, ms1mx3.1**/57**, Error ellipse: s-maj=104.5km s-min=30.5km az=13.0, Central Mid-Atlantic Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H10N3	ASCENSION HYDR	22.22	125	T	T	22 54 12.6	
	baz=305,slow=75,SNR=193						
H10N2	ASCENSION HYDR	22.23	125	T	T	22 54 12.9	
	baz=305,slow=75,SNR=193						
H10N1	ASCENSION HYDR	22.24	125	T	T	22 54 14.1	
	baz=305,slow=75,SNR=191						
H10S3	ASCENSION HYDR	22.74	128	T	T	22 54 51.6	
	baz=308,slow=75,SNR=200						
H10S1	ASCENSION HYDR	22.75	128	T	T	22 54 53.4	
	baz=308,slow=75,SNR=162						
H10S2	ASCENSION HYDR	22.76	128	T	T	22 54 52.9	
	baz=308,slow=75,SNR=239						
BDFB	Brasilia	25.61	216	LR	LR	22 40 47.4	
	comp=Z,106nm,20.1s,baz=147,slow=35						
DBIC	Dimbokro	27.71	85	P	P	22 31 52.5	+0.6
	6.6nm,0.9s,baz=264,slow=10,SNR=4.6						
H05S1	Guadeloupe/Mar	29.23	291	T	T	23 02 23.4	
	SNR=14						
KOWA	Kowa	29.70	70	P	P	22 32 09.3	-0.4
	4.5nm,1.1s,baz=270,slow=3.0,SNR=4.0						
H05N1	Guadeloupe/Mar	29.99	294	T	T	23 03 19.5	
TORD	Torodi Ar. Bea	34.82	74	P	P	22 32 54.3	-0.3
	2.4nm,0.8s,baz=267,slow=8.8						
MDT	Midelt	38.02	40	LR	LR	22 48 01.5	
	comp=Z,76nm,18.2s,baz=224,slow=35						
CPUP	Villa Florida	39.34	216	LR	LR	22 49 34.0	
	comp=Z,73nm,18.2s,baz=48,slow=36						
LPAZ	La Paz	41.01	238	LR	LR	22 49 20.9	
	comp=Z,65nm,18.2s,baz=78,slow=34						
ROSC	El Rosal	41.49	272	LR	LR	22 52 42.9	
	comp=Z,20nm,18.0s,baz=320,slow=39						
NOA	NORSAR Array B	64.75	22	P	P	22 36 41.9	+0.2
	1.3nm,1.0s,baz=214,slow=9.2,SNR=3.0						
PDAR	Pinedale Array	76.93	313	P	P	22 37 56.4	-0.1
	0.3nm,0.7s,baz=66,slow=7.0,SNR=3.6						
NRIK	Noril’sk	95.47	18	LR	LR	23 23 13.4	
	comp=Z,80nm,19.4s,baz=242,slow=36						

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*ISCJB **30** 22:30:40.0±0.5, 50°.64N±0°.01×87°.35E±0°.02, h3^{km}±3^{km}, mb4.8/253, MS4.5/81, Error ellipse: s-maj=2.5km s-min=2.1km az=156.1*

*IDC **30** 22:30:40.7±0.3, 50°.63N×87°.49E, h0^{km}, mb4.6/46, mb1 4.7/53, mb1mx4.6/72, mbtmp4.6/53, ML4.5/8, MS4.3/48, Ms1 4.3/48, ms1mx4.2/73, Error ellipse: s-maj=8.2km s-min=6.8km az=174.0*

*BJI **30** 22:30:41.2, 50°.62N×87°.35E, h14^{km}, mb4.8/62, mB4.9/41, ML5.8/7, Ms5.4/66, Ms7 4.9/62*

*MOS **30** 22:30:41.4±1.1, 50°.54N×87°.35E, h13^{km}, mb5.1/92, MS4.6/24, Error ellipse: s-maj=4.9km s-min=3.9km az=124.1*

*ASRS **30** 22:30:42.5±0.6, 50°.59N×87°.39E, h15^{km}, Ms5.1/3*

*GCMT **30** 22:30:44.1±0.2, 50°.61N×87°.36E, h26^{km}, MW5.1/107, Moment Tensor Solution. s60,c77; s107,c195; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}0.50±.14; $M_{\theta\theta}$-5.63±.11; $M_{\phi\phi}$5.13±.11; $M_{r\theta}$-1.24±.24; $M_{\theta\phi}$1.31±.09; $M_{\phi r}$-0.69±.21; Best double couple: $M_0$5.71200×10^{16} NP1:ϕ_s52.00000°,δ90.00000°,λ-14.00000°. NP2: ϕ_s142.00000°,δ76.00000°,λ-180.00000°. Principal axes: T 5.4310, Plg10.0000°, Azm98.0000°; N 0.5590, Plg76.0000°, Azm231.0000°; P -5.9930, Plg10.0000°, Azm6.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*NEIC **30** 22:30:44.1±1.6, 50°.63N×87°.34E, h19^{km}±9^{km}, mb4.9/106 Error ellipse: s-maj=3.9km s-min=2.7km az=176.0*

NEIC Felt at Abaza and Biysk.

*NNC **30** 22:30:45.3±2.4, 50°.63N×86°.85E, h0^{km}, mb5.8, mpv5.9, Error ellipse: s-maj=19.6km s-min=12.1km az=77.0*

*SOME **30** 22:30:53.8, 50°.12N×87°.60E, h15^{km}*

ISC 30 22:30:43.6±0.4**, 50°.65N**±0°.02×**87°.34E**±0°.02**, h15^{km}**±**2^{km}, h15^{km}:pP-P, n933, σ1^{s}.86**/1011**, mb4.9**/273**, MS4.5**/83**, 47C-40D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKAR	Aktash	0.37	151	i Pg	Pg	22 30 48.1	-3.1
AKAR				i Sg	Sg	22 30 52.6	-3.8
AKAR	Aktash	0.37	151	i PG	Pg	22 30 48.1	-3.1
AKAR				i		22 30 52.6	
DGZ	Jazzator, Alta	0.95	176	i PG	Pb	22 30 58.0	-3.8
UKR	Ust’-Kan	1.65	281	ePg	Pb	22 31 14.3	+0.5
UKR				eSg	Sg	22 31 37.8	+1.0
UKR	Ust’-Kan	1.65	281	ePN	Pb	22 31 14.3	+0.5
UKR				e		22 31 37.8	
TASR	Tashtagol	2.14	9	ePg	Pb	22 31 22.9	+0.8
TASR				eSg	Sg	22 31 52.6	+0.1
TASR	Tashtagol	2.14	9	ePN	Pb	22 31 22.9	+0.8
TASR				e		22 31 52.6	
ELT	Eltsovka	2.71	346	ePg	Pb	22 31 29.6	-2.0
ELT				eSg	Sb	22 32 07.2	+2.6
ELT	Eltsovka	2.71	346	ePN	Pb	22 31 29.6	-2.0
ELT				e		22 32 07.2	
CERR	Cheremushki	3.36	47	ePn	Pn	22 31 38.4	+2.9
CERR				ePg	Pb	22 31 44.8	+2.0
CERR				eSg	Sg	22 32 28.8	-2.7
CERR	Cheremushki	3.36	47	ePN	Pn	22 31 38.4	+2.9
CERR				e		22 31 44.8	
CERR				e		22 32 28.8	
ZSN	Zaisan	3.59	208	eP	Pb	22 31 46.6	-0.1
	1µm,0.8s						
ZSN				eS	Sn	22 32 24.1	+3.4
	3µm,0.8s						
ZAA0	Zalesovo Array	3.65	336	ePn	Pn	22 31 40.6	+1.2
ZAA0				eSn	Sn	22 32 19.3	-2.9
ZALV	Zalesovo Beam	3.65	336	Pn	Pn	22 31 40.7	+1.2
	248nm,0.3s,baz=158,slow=13,SNR=2084						
ZALV				Pg	Pb	22 31 46.4	-1.3
	779nm,0.3s,baz=158,slow=14,SNR=135						
ZALV				Sn	Sn	22 32 24.6	+2.4
	615nm,0.3s,baz=124,slow=14,SNR=12						
ZALV				Lg	Lg	22 32 36.3	
	744nm,0.3s,baz=161,slow=28,SNR=13						
ZALV				LR	LR	22 33 19.1	
	comp=Z,4µm,18.5s,baz=156,slow=43						
ZALV	Zalesovo Beam	3.65	336	ePn	Pn	22 31 39.9	+0.4
ZALV				Pg	Pb	22 31 46.4	-1.3
ZALV				eSn	Sn	22 32 17.4	-4.8
ZALV				Sn	Sn	22 32 24.6	+2.4
ZALV	Zalesovo Beam	3.65	336	ePN	Pn	22 31 39.9	+0.4
ZALV						22 32 24.6	
HVS	Khovu-Aksy	4.06	81c	iPN	Pn	22 31 46.9	+1.7
SEM	Semipalatinsk	4.53	270	eP	Pb	22 32 05.4	+2.6
	3µm,0.8s						
SEM				eS	Sb	22 33 01.4	+4.2
	4µm,0.5s						
NVS	Novosibirsk	4.88	331	ePn	Pn	22 31 57.5	+1.1
NVS				i Pg	Pb	22 32 12.4	+3.7
NVS				eSn	Sn	22 32 54.2	+1.6
NVS				i Sg	Sg	22 33 16.6	-3.6
NVS	Novosibirsk	4.88	331	ePN	Pn	22 31 57.5	+1.1
NVS				i		22 32 12.4	
NVS				eS	Sn	22 32 54.2	+1.6
NVS				i		22 33 16.6	
MK31	Makanchi Array	5.10	223	Pn	Pn	22 32 01.9	+2.5
	1µm,0.7s,baz=44,slow=13						
MK31				⇓Sn	Sn	22 32 58.9	+0.9
	977nm,0.5s,baz=54,slow=20,SNR=5.4						
MK31	Makanchi Array	5.10	223	ePn	Pn	22 32 01.4	+2.0
MK31	Makanchi Array	5.10	223	ePN	Pn	22 32 01.4	+2.0
MKAR	Makanchi Array	5.10	223	Pn	Pn	22 32 01.6	+2.2
	238nm,0.3s,baz=42,slow=13,SNR=9709						
MKAR				Sn	Sn	22 32 59.5	+1.4
	307nm,0.3s,baz=43,slow=18,SNR=3.9						
MKAR				Lg	Lg	22 33 20.5	
	766nm,0.3s,baz=48,slow=28,SNR=14						
MKAR				LR	LR	22 34 01.0	
	comp=Z,4µm,19.6s,baz=24,slow=39						
MKAR	Makanchi Array	5.10	223	ePn	Pn	22 32 00.6	+1.2
MKAR				eSn	Sn	22 32 56.5	-1.5
MKAR	Makanchi Array	5.10	223	i PN	Pn	22 32 01.2	+1.8
MKAR				pmax	pmax		
	comp=Z,590nm,0.4s						

MK01	Makanchi Array	5.11	223	*e*Pn	Pn	22 32 01.3	+1.7
MK01				*e*Sn	Sn	22 32 59.5	+1.1
MAKZ	Makanchi	5.23	225	⇑Pn	Pn	22 32 03.6	+2.5
	comp=Z,745nm,0.6s						
MAKZ				⇑Sn	Sn	22 33 01.0	-0.2
	comp=Z,2µm,0.5s						
MAKZ	Makanchi	5.23	225	*e*Pn	Pn	22 32 03.1	+2.0
MAKZ	Makanchi	5.23	225	*e*PN	Pn	22 32 03.1	+2.0
KURK	Kurchatov	5.54	274	⇑Pn	Pn	22 32 05.8	+0.4
	comp=Z,659nm,0.5s						
KURK				⇓Lg	Lg	22 33 33.4	
	comp=Z,10µm,0.9s						
KURK	Kurchatov	5.54	274	*e*Pn	Pn	22 32 05.8	+0.4
KURK				*e*Sn	Sn	22 33 06.7	-2.1
KURK	Kurchatov	5.54	274	*ce*PN	Pn	22 32 05.6	+0.2
KURK				pmax	pmax		
	comp=Z,1µm,0.8s						
KURBB	Kurchatov Arra	5.60	273	Pn	Pn	22 32 07.5	+1.2
	comp=Z,83nm,0.3s,baz=86,slow=14,SNR=1268						
KURBB				Sn	Sn	22 33 09.3	-1.0
	comp=Z,57nm,0.3s,baz=82,slow=28,SNR=6.4						
KURBB				Lg	Lg	22 33 36.2	
	comp=Z,73nm,0.3s,baz=90,slow=32,SNR=10						
KURBB	Kurchatov Arra	5.60	273	⇑Pn	Pn	22 32 07.3	+1.1
	comp=Z,2µm,0.5s						
KURBB				⇓Sn	Sn	22 33 09.5	-0.8
	comp=Z,4µm,0.8s						
KURBB				⇓Lg	Lg	22 33 37.0	
	comp=Z,5µm,0.7s						
WMQ	Urumqi	6.83	178	Pn	Pn	22 32 23.8	+0.6
WMQ				Sn	Sn	22 33 46.5	+5.8
WMQ				smax	smax		
	comp=Z,4µm,1.7s						
WMQ				smax	smax		
	comp=Z,6µm,1.1s						
WMQ				LR	LR		
	comp=Z,33µm,10.9s						
WMQ				LR	LR		
	comp=Z,27µm,13.1s						
WMQ				LR	LR		
	comp=Z,23µm,13.5s						
KAPS	Kapalarasan	7.58	228	*e*P	Pn	22 32 34.7	+1.3
DJR	Jarkent	8.12	222	*e*P	Pn	22 32 42.3	+1.3
TDK	Taldyqorghan	8.24	230	*e*P	Pn	22 32 43.0	+0.5
KTMS	Ketmen	8.63	216	*e*P	Pn	22 32 47.1	-0.9
MOY	Mondy	8.65	78	*e*P	Pn	22 32 51.3	+3.1
PDGK	Podgornoye	9.07	219	⇑Pn	Pn	22 32 53.5	-0.5
	comp=Z,151nm,0.4s						
PDGK				⇑Sn	Sn	22 34 33.3	-2.5
	comp=Z,513nm,0.8s						
PDGK	Podgornoye	9.07	219	*i* P	Pn	22 32 53.4	-0.5
PDGK				pmax	pmax		
	comp=Z,151nm,0.4s						
SHLS	Shalkode	9.22	219	*e*P	Pn	22 32 53.0	-3.1
KPKS	Kokpek	9.29	223	*e*P	Pn	22 32 57.1	+0.1
BRZS	Berezniki	9.41	272	*e*P	Pn	22 32 57.1	-1.4
SATY	Saty	9.74	222	*e*P	Pn	22 33 03.9	+0.7
KUU	Kurty	10.07	232	*e*P	Pn	22 33 05.9	-1.6
ZAK	Zakamensk	10.16	85	*e*P	Pn	22 33 09.8	+0.9
ZAK				*e*S	Sn	22 35 02.9	+0.3
ZAK				smax	smax		
	comp=N,3µm,1.6s						
KNDC	Almaty	10.27	228	⇑Pn	Pn	22 33 09.5	-0.8
	comp=N,157nm,0.7s						
KNDC				⇑Lg	Lg	22 36 03.9	
	comp=N,576nm,0.8s						
MDOK	Medeo	10.27	227	*e*P	Pn	22 33 09.8	-0.6
AAA	Alma-Ata	10.29	228	*e*P	Pn	22 33 10.3	-0.4
AAA				pmax	pmax		
	comp=Z,100nm,0.6s						
AAA				MLR	MLR		
	comp=Z,5µm,3.0s						
AAA	Alma-Ata	10.29	228	*e*P	Pn	22 33 10.6	-0.1
TLY	Talaya	10.30	78	*e*Pn	Pn	22 33 11.2	+0.5
	comp=Z,51nm,0.9s						
TLY	Talaya	10.30	78	*e*P	Pn	22 33 13.2	+2.5
TLY				pmax	pmax		
	comp=Z,8.0nm,1.3s						
TLY				MLR	MLR		
	comp=Z,2µm,12.0s						
IRK	Irkutsk	10.69	75	*e*P	Pn	22 33 09.6	-6.4
BVA0	Borovoye Array	10.76	289	⇑Pn	Pn	22 33 15.2	-1.7
	comp=Z,79nm,0.7s,baz=93,slow=15,SNR=475						
BVA0				⇓Sn	Sn	22 35 11.7	-5.2
	comp=Z,472nm,0.8s,baz=99,slow=24,SNR=11						
BVA0	Borovoye Array	10.76	289	P	Pn	22 33 15.2	-1.7
BVA0				S	Sn	22 35 11.7	-5.2
BVA0				pmax	pmax		
	comp=Z,79nm,0.7s						
BVA0				smax	smax		
	comp=N,472nm,0.8s						
BVAR	Borovoye Array	10.76	289	Pn	Pn	22 33 16.0	-0.9
	comp=N,23nm,0.3s,baz=103,slow=14,SNR=409						
BVAR				Sn	Sn	22 35 10.2	-6.7
	comp=N,46nm,0.3s,baz=96,slow=21,SNR=17						
BVAR				LR	LR	22 37 57.3	
	comp=N,775nm,19.0s,baz=94,slow=40						
BRVK	Borovoye	10.82	289	*e*Pn	Pn	22 33 15.9	-1.9
BRVK				*e*Sn	Sn	22 35 11.9	-6.6
BRVK	Borovoye	10.82	289	*ce*P	Pn	22 33 15.8	-1.9
BRVK				pmax	pmax		
	comp=Z,147nm,1.7s						
TKM2	Tokmak 2	11.15	231	⇓Pn	Pn	22 33 21.9	-0.7
	comp=Z,56nm,0.6s						
TKM2				⇓Lg	Lg	22 36 27.6	
	comp=Z,1µm,1.4s						
TKM2	Tokmak 2	11.15	231	P	Pn	22 33 21.0	-1.5
	SNR=58						
TKM2	Tokmak 2	11.15	231	*i* P	Pn	22 33 21.8	-0.7
TKM2				pmax	pmax		
	comp=Z,56nm,0.5s						
ULHL	Ulahol	11.35	227	P	Pn	22 33 26.1	+0.7
	SNR=95						
USP	Ospenovka	11.45	235	P	Pn	22 33 25.5	-1.1
	SNR=54						
CHMS	Chumysh	11.51	233	P	Pn	22 33 26.6	-0.7
	SNR=24						
KBK	Karagaybulak	11.66	232	P	Pn	22 33 28.2	-1.3
	SNR=81						
FRU	Bishkek	11.70	233	*e*P	Pn	22 33 30.0	+0.1
FRU				*e*S	Sn	22 35 48.0	+7.8
FRU				pmax	pmax		
	comp=Z,87nm,1.4s						
FRU				smax	smax		
	comp=N,790nm,1.3s						
FRU				MLR	MLR		
	comp=E,21µm,8.5s						
AAK	Ala-Archa	11.91	233	Pn	Pn	22 33 32.6	-0.2
	comp=E,4.8nm,0.3s,baz=56,slow=8.0,SNR=30						
AAK				Sn	Sn	22 35 39.9	-5.5
	comp=E,13nm,0.3s,baz=250,slow=20,SNR=7.7						
AAK				Lg	Lg	22 36 52.8	
	comp=E,7.9nm,0.3s,baz=217,slow=20,SNR=3.3						
AAK				LR	LR	22 38 20.7	
	comp=E,1µm,22.0s,baz=20,slow=38						
AAK	Ala-Archa	11.91	233	⇓Pn	Pn	22 33 32.7	-0.2
	comp=E,62nm,0.7s						
AAK				⇑Sn	Sn	22 35 40.9	-4.5
	comp=E,107nm,0.9s						
AAK				⇓Lg	Lg	22 36 56.5	
	comp=E,1µm,1.2s						
AAK	Ala-Archa	11.91	233	P	Pn	22 33 33.0	+0.2
	SNR=19						
AAK	Ala-Archa	11.91	233	*e*Pn	Pn	22 33 32.6	-0.2
AAK				*e*Sn	Sn	22 35 41.7	-3.7
AAK	Ala-Archa	11.91	233	*i* P	Pn	22 33 32.5	-0.4
	SNR=24						
AAK	Ala-Archa	11.91	233	*d i*P	Pn	22 33 32.2	-0.6
AAK				pmax	pmax		
	comp=Z,62nm,0.6s						
KZA	Kyzart	11.95	229	P	Pn	22 33 33.9	+0.3
	SNR=21						
UCH	Uchtor	12.20	231	P	Pn	22 33 37.2	+0.1
	SNR=33						
EKS2	Erkin-Say	12.26	235	P	Pn	22 33 37.3	-0.3
	SNR=29						
AML	Almayashu	12.68	233	P	Pn	22 33 43.4	-0.2
	SNR=31						
SONM	Songino Array	12.77	95	Pn	Pn	22 33 43.4	-1.2
	comp=Z,0.3nm,0.3s,baz=278,slow=12,SNR=15						
SONM				Lg	Lg	22 37 19.4	
	comp=Z,1.9nm,0.3s,baz=295,slow=21,SNR=4.5						
SONM				LR	LR	22 38 48.4	
	comp=Z,2µm,19.3s,baz=290,slow=38						
SONA1	Songino Array	12.77	95	*e*Pn	Pn	22 33 44.2	-0.4
SONA1				*e*Sn	Sn	22 36 06.5	+0.1
MNAS	Manas	13.05	237	P	Pn	22 33 46.3	-2.1
MNAS				pmax	pmax		
	comp=Z,31nm,0.7s						
ULN	Ulaanbaatar	13.17	95	*e*Pn	Pn	22 33 50.0	-0.1
ULN				*e*Sn	Sn	22 36 14.7	-1.6
ULN	Ulaanbaatar	13.17	95	*c i*P	Pn	22 33 49.8	-0.3
KSH	Kashi	13.70	220	P	P	22 34 03.8	-2.2
KSH				pP	Pn	22 34 07.3	+10
KSH				sP		22 34 11.8	
KSH				PP	PnPn	22 34 15.3	+10
KSH				S	Sn	22 36 39.5	+10
KSH				SS	S	22 36 58.5	+6.5
KSH				pmax	pmax		
	comp=Z,61nm,0.9s						
KSH				pmax	pmax		
	comp=Z,370nm,3.0s						
KSH				LR	LR		
	comp=Z,2µm,6.4s						
KSH				LR	LR		
	comp=Z,6µm,9.9s						
KSH				LR	LR		
	comp=Z,5µm,10.9s						
KK31	Karatay Array	13.74	243	⇓Pn	Pn	22 33 54.4	-3.4
	comp=Z,15nm,0.5s,baz=49,slow=14,SNR=273						
KK31				Sn	Sn	22 36 25.8	-4.2
	comp=Z,80nm,0.7s,baz=50,slow=24,SNR=4.9						
KK31				⇑Lg	Lg	22 37 55.5	
	comp=Z,813nm,1.1s,baz=55,slow=27,SNR=6.8						
KK31	Karatay Array	13.74	243	*e*Pn	Pn	22 33 54.1	-3.6
KK31				*e*Sn	Sn	22 36 24.9	-5.1
KK31	Karatay Array	13.74	243	*i* P	Pn	22 33 54.3	-3.4
KK31				pmax	pmax		
	comp=Z,15nm,0.4s						
GTA	Gaotai	14.26	137	⇑P	Pn	22 34 02.5	-2.5
GTA				pP	P	22 34 07.0	-5.2
GTA				sP		22 34 09.5	
GTA				S	Sn	22 36 39.5	-3.4
GTA				sS	S	22 36 47.3	-16
GTA				pmax	pmax		
	comp=Z,12nm,1.2s						
GTA				pmax	pmax		
	comp=Z,110nm,4.9s						
GTA				LR	LR		
	comp=Z,10µm,10.3s						
GTA				LR	LR		
	comp=Z,13µm,9.8s						
GTA				LR	LR		
	comp=Z,5µm,14.9s						
SFK	Sufi-Kurgan	14.39	228	⇑Pn	Pn	22 34 05.9	-0.9
	comp=Z,78nm,0.9s						
SFK				⇓Lg	Lg	22 38 14.7	
	comp=Z,550nm,1.5s						
SFK	Sufi-Kurgan	14.39	228	*i* P	Pn	22 34 05.9	-0.9
SFK				pmax	pmax		
	comp=Z,78nm,0.9s						
TAS	Tashkent	15.59	240	⇑Pn	P	22 34 26.2	-0.7
	comp=Z,173nm,0.7s						
TAS				⇑Lg	Lg	22 38 54.7	
	comp=Z,1µm,1.4s						
TAS	Tashkent	15.59	240	*i* P	P	22 34 26.2	-0.7
TAS				pmax	pmax		
	comp=Z,173nm,0.6s						
SVE	Sverdlovsk	16.89	302	*d i*P	Pn	22 34 35.9	-3.3
SVE				*e*S	Sn	22 37 44.5	-1.9
SVE				pmax	pmax		
	comp=Z,140nm,1.2s						
SVE				MLR	MLR		
	comp=Z,2µm,11.0s						
AB31	Akbulak array	17.65	276	⇑Pn	Pn	22 34 45.0	-3.7
	comp=Z,70nm,0.9s						
AB31	Akbulak array	17.65	276	*i* P	Pn	22 34 44.9	-3.7
AB31				pmax	pmax		
	comp=Z,70nm,0.9s						
ABKAR	Akbulak array	17.65	276	*e*Pn	Pn	22 34 44.7	-4.0
ARU	Arti	17.97	300	Pn	Pn	22 34 49.7	-2.9
	comp=Z,0.0nm,0.3s,baz=98,slow=8.2,SNR=30						
ARU				Sn	Sn	22 37 56.7	-16
	comp=Z,0.0nm,0.3s,baz=307,slow=20,SNR=3.1						
ARU				LR	LR	22 42 18.3	
	comp=Z,2µm,18.2s,baz=92,slow=39						
ARU	Arti	17.97	300	*e*Pn	Pn	22 34 49.5	-3.0
	comp=Z,45nm,0.8s						
ARU				Sn	Sn	22 37 56.7	-16
ARU				*e*Sn	Sn	22 38 06.3	-6.1
ARU	Arti	17.97	300	*c i*P	Pn	22 34 49.5	-3.0
ARU				S	Sn	22 38 07.7	-4.8
ARU				pmax	pmax		
	comp=Z,120nm,1.7s						
ARU				MLR	MLR		
	comp=Z,2µm,20.0s						
AKTO	Aktyubinsk	18.59	281	Pn	P	22 34 57.1	-2.8
	comp=Z,4.3nm,0.3s,baz=74,slow=11,SNR=92						
AKTO				Sn	Sn	22 38 17.4	-10
	comp=Z,1.0nm,0.3s,baz=218,slow=17,SNR=2.8						
AKTO				Lg	Lg	22 40 21.7	
	comp=Z,0.5nm,0.3s,baz=211,slow=12,SNR=2.0						
AKTO				LR	LR	22 42 23.6	
	comp=Z,683nm,19.8s,baz=79,slow=38						
AKTO	Aktyubinsk	18.59	281	⇓Pn	P	22 34 56.6	-3.4
	comp=Z,92nm,0.8s						
AKTO	Aktyubinsk	18.59	281	*i* P	P	22 34 56.5	-3.4
AKTO				pmax	pmax		
	comp=Z,92nm,0.7s						
BTO	Baotou	18.70	114	*e*P	P	22 34 57.5	-3.9
BTO				S	S	22 38 33.3	-0.6
NRIK	Noril’sk	18.75	0	P	P	22 35 00.8	-0.8
	comp=Z,5.0nm,0.3s,baz=331,slow=24,SNR=50						
NRIK				Lg	Lg	22 40 34.3	
	comp=Z,0.2nm,0.3s,baz=323,slow=20,SNR=1.7						
NRIK				LR	LR	22 43 28.6	
	comp=Z,242nm,21.9s,baz=242,slow=41						
LZH	Lanzhou	18.80	134	⇓P	P	22 35 02.3	-0.2
LZH				pP	sP	22 35 08.3	-0.4
LZH				sP	pP	22 35 12.3	+5.5
LZH				PP	PnPn	22 35 20.8	+5.8
LZH				S	Sn	22 38 32.0	-1.0
LZH				sS	S	22 38 38.8	+2.9
LZH				pmax	pmax		
	comp=Z,64nm,1.2s						
LZH				pmax	pmax		
	comp=Z,300nm,4.3s						
LZH				LR	LR		
	comp=Z,19µm,10.8s						
LZH				LR	LR		
	comp=Z,22µm,11.4s						
LZH				LR	LR		
	comp=Z,7µm,11.9s						
HHC	Hu-ho-hao-te	19.46	111	*e*P	P	22 35 09.5	-0.1
HHC				sP	sP	22 35 17.0	+1.1
HHC				PP	PnPn	22 35 26.3	+2.3
HHC				S	S	22 38 49.8	+0.7
HHC				sS	sS	22 38 58.0	+2.1
HHC				pmax	pmax		
	comp=Z,83nm,1.1s						
HHC				pmax	pmax		
	comp=Z,440nm,5.1s						
HHC				LR	LR		
	comp=Z,5µm,8.8s						
HHC				LR	LR		
	comp=Z,6µm,11.0s						
HHC				LR	LR		
	comp=Z,1µm,8.1s						
NIL	Nilore	19.88	217	*e*P	P	22 35 12.5	-1.7
	comp=Z,565nm,0.8s						
NIL	Nilore	19.88	217	*e*P	P	22 35 12.5	-1.7
NIL				pmax	pmax		
	comp=Z,565nm,0.8s						
HIA	Hailar	20.81	81	*e*P	P	22 35 24.7	+0.5
	comp=Z,27nm,0.7s						
HIA	Hailar	20.81	81	*e*P	P	22 35 24.7	+0.5
HIA				pmax	pmax		
	comp=Z,27nm,0.7s						
KBL	Kabul	20.89	227	*e*P	P	22 35 24.8	-0.6
	comp=Z,86nm,1.0s						
KBL	Kabul	20.89	227	*e*P	P	22 35 24.8	-0.6
KBL				pmax	pmax		
	comp=Z,87nm,1.0s						
LSA	Lhasa	21.12	171	P	P	22 35 28.5	+0.4
LSA	Lhasa	21.12	171	*e*P	P	22 35 29.1	+1.0
	comp=Z,148nm,1.3s						
LSA	Lhasa	21.12	171	*i* P	P	22 35 30.7	+2.6
	SNR=17						
LSA	Lhasa	21.12	171	*e*P	P	22 35 29.1	+1.0
LSA				pmax	pmax		
	comp=Z,148nm,1.3s						
TIY	Taiyuan	22.03	116	*e*P	P	22 35 41.3	+3.9
TIY				pP	sP	22 35 47.3	+3.6
TIY				PP	PnPn	22 36 01.8	+2.6
TIY				S	S	22 39 31.5	-8.5
TIY				sS	sS	22 39 44.3	-2.6
TIY				SS	SnSn	22 40 11.0	+5.1
TIY				pmax	pmax		
	comp=Z,80nm,1.1s						
TIY				LR	LR		
	comp=Z,2µm,7.4s						
TIY				LR	LR		
	comp=Z,2µm,8.8s						
TIY				LR	LR		
	comp=Z,3µm,13.1s						
DANN	Dangsing	22.43	188	*e*P	P	22 35 41.7	-0.3
	comp=Z,95nm,0.6s						
GKN	Gorkha	22.71	186	*e*P	P	22 35 45.0	+0.2
	comp=Z,162nm,0.9s						
GUN	Gumba	22.73	183	*e*P	P	22 35 45.5	+0.2
	comp=Z,232nm,0.7s						
BJI	Beijing	22.74	107	⇑*e*P	P	22 35 45.0	+0.2
BJI				S	S	22 39 57.0	+4.2
BJI				pmax	pmax		
	comp=Z,53nm,1.3s						
BJI				pmax	pmax		
	comp=Z,380nm,3.8s						
BJI				LR	LR		
	comp=Z,9µm,11.8s						
BJI				LR	LR		
	comp=Z,6µm,14.2s						
BJI				LR	LR		
	comp=Z,2µm,20.8s						
BJT	Baijiatuau	22.75	107	*e*P	P	22 35 45.7	+0.8
	comp=Z,26nm,0.8s						
BJT	Baijiatuau	22.75	107	*e*P	P	22 35 45.7	+0.8
BJT				pmax	pmax		
	comp=Z,26nm,0.8s						
PYUN	Piuthan	22.76	190	*e*P	P	22 35 44.3	-1.1
	comp=Z,164nm,0.8s						
KKN	Kakani	22.88	185	*e*P	P	22 35 46.4	-0.3
	comp=Z,74nm,0.6s						
XAN	Xi’an	22.89	128	P	P	22 35 44.5	-2.0
XAN				pP	pP	22 35 50.8	-0.1
XAN				PP	PnPn	22 36 14.0	+3.0
XAN				S	S	22 39 55.5	-0.2
XAN				pmax	pmax		
	comp=Z,16nm,1.4s						
XAN				LR	LR		
	comp=Z,6µm,12.5s						
XAN				LR	LR		
	comp=Z,8µm,16.3s						
XAN				LR	LR		
	comp=Z,4µm,11.5s						
JIRN	Jiri	22.97	183	*e*P	P	22 35 47.5	-0.3
	comp=Z,76nm,0.5s						
KOLN	Koldanda	23.02	188	*e*P	P	22 35 47.3	-0.8
	comp=Z,86nm,0.8s						
DMN	Daman	23.07	185	*e*P	P	22 35 48.3	-0.4
PKIN	Phulchoki	23.09	184	*e*P	P	22 35 48.8	-0.1
	comp=Z,43nm,0.8s						
CD2	Chengdu	23.21	142	P	P	22 35 50.5	+0.6
CD2				pP	sP	22 35 55.3	-0.9
CD2				sP	pP	22 35 57.3	+3.0
CD2				S	S	22 40 02.5	+1.3
CD2				sS	sS	22 40 10.5	+1.7
CD2				pmax	pmax		
	comp=Z,50nm,0.7s						
CD2				pmax	pmax		
	comp=Z,300nm,5.6s						
CD2				LR	LR		
	comp=Z,7µm,15.4s						
CD2				LR	LR		
	comp=Z,17µm,13.4s						
CD2				LR	LR		
	comp=Z,3µm,11.9s						
TAPN	Taplejung	23.27	179	*e*P	P	22 35 50.6	-0.1
	comp=Z,43nm,0.5s						
RAMN	Ramite	23.67	182	*e*P	P	22 35 53.6	-1.1
	comp=Z,103nm,0.9s						
ODAN	Odare	23.75	180	*e*P	P	22 35 54.8	-0.7
	comp=Z,35nm,0.6s						
GEYT	Alibeck	24.30	250	P	P	22 35 60.0	-0.3
	comp=Z,4.7nm,0.7s,baz=46,slow=4.2,SNR=18						
GEYT				Lg	Lg	22 43 45.8	
	comp=Z,11nm,1.1s,baz=81,slow=26,SNR=2.8						
GEYT				LR	LR	22 47 42.2	
	comp=Z,382nm,19.8s,baz=245,slow=42						
ZEA	Zeya	24.44	67	*e*P	P	22 36 02.8	+1.4
ZEA				*e*		22 40 26.0	
ZEA				pmax	pmax		
	comp=Z,23nm,1.0s						
ZEA				MLR	MLR		
	comp=E,3µm,11.0s						
ZEA				MLR	MLR		
	comp=Z,4µm,11.0s						
PRGR	Permogore	25.24	312	⇓*e*P	P	22 36 07.8	-0.7
PRGR				pmax	pmax		
	comp=Z,44nm,0.7s						
SHL	Shillong	25.28	170	*e*P	P	22 36 09.5	+0.1
	comp=Z,24nm,0.7s						
SHL	Shillong	25.28	170	*e*P	P	22 36 11.0	+1.6
SHL	Shillong	25.28	170	*e*P	P	22 36 09.5	+0.1
SHL				pmax	pmax		
	comp=Z,24nm,0.7s						
YAK	Yakutsk	25.59	47	P	P	22 36 11.2	-0.5
	comp=Z,11nm,0.7s,baz=277,slow=23,SNR=11						
YAK				Lg	Lg	22 43 57.9	
	comp=Z,1.8nm,0.3s,baz=180,slow=20,SNR=1.5						
YAK	Yakutsk	25.59	47	*e*P	P	22 36 11.6	-0.1
	comp=Z,124nm,0.7s						
YAK	Yakutsk	25.59	47	*e*P	P	22 36 10.8	-0.9
YAK				*e**PP	pP	22 36 17.1	+0.8
YAK				*e*S	S	22 40 37.8	-0.9
YAK				*e**SS	sS	22 40 48.6	+2.3
YAK				*e*SSS	SSS	22 41 41.6	
YAK				pmax	pmax		
	comp=Z,86nm,0.8s						
YAK				pmax	pmax		
	comp=E,24nm,1.1s						
YAK				smax	smax		
	comp=N,36nm,2.0s						
YAK				smax	smax		
	comp=E,79nm,2.5s						
YAK				MLR	MLR		
	comp=Z,720nm,16.0s						
YAK				MLR	MLR		
	comp=E,494nm,16.0s						
TIA	Tai’an	25.79	113	P	P	22 36 10.0	-3.7
TIA				pmax	pmax		
	comp=E,18nm,1.9s						
TIA				LR	LR		
	comp=E,1µm,13.2s						
TIA				LR	LR		
	comp=E,740nm,11.3s						
TIA				LR	LR		
	comp=E,780nm,13.5s						
ENH	Enshi	26.24	132	*e*P	P	22 36 20.0	+2.1
	comp=E,35nm,0.7s						
SNY	Shenyang	26.35	95	⇑P	P	22 36 20.3	+1.6
SNY				S	S	22 40 55.3	+4.2
SNY				pmax	pmax		
	comp=E,11nm,0.5s						
SNY				pmax	pmax		
	comp=E,120nm,4.3s						
SNY				LR	LR		
	comp=E,1µm,6.9s						
SNY				LR	LR		
	comp=E,2µm,8.8s						
SNY				LR	LR		
	comp=E,2µm,11.2s						
CN2	Changchun	26.54	90	*e*P	P	22 36 24.0	+3.5
CN2				*e*sP	sP	22 36 31.5	+4.5
CN2				*e*S	S	22 40 56.5	+2.3
CN2				pmax	pmax		
	comp=E,10.0nm,0.6s						
CN2				pmax	pmax		
	comp=E,200nm,4.0s						
CN2				LR	LR		
	comp=E,3µm,10.0s						
CN2				LR	LR		
	comp=E,2µm,10.0s						
CN2				LR	LR		
	comp=E,3µm,11.0s						
MAK	Makhachkala	28.05	270	*e*P	P	22 36 38.0	+4.0
MAK				*e*		22 37 27.2	
MAK				*e*S	S	22 41 22.9	+5.0
MAK				pmax	pmax		

	comp=Z,236nm,1.1s						
MAK				MLR	MLR		
	comp=Z,484nm,11.0s						
KMI	**Kunming**	**28.12**	**149**	P	**P**	**22 36 39.5**	**+4.5**
KMI				pP	sP	22 36 45.5	+4.0
KMI				PP	**PnPn**	**22 37 29.5**	**+6.8**
KMI				pmax	pmax		
	comp=Z,10.0nm,0.9s						
KMI				LR	LR		
	comp=Z,1µm,12.1s						
KMI				LR	LR		
	comp=Z,1µm,9.7s						
KMI				LR	LR		
	comp=Z,1µm,12.6s						
KLMR	**Klimovskoe**	**28.15**	**310**	*e*P	**P**	**22 36 33.4**	**-1.3**
KLMR				*e*S	**S**	**22 41 18.1**	**-1.1**
KLMR				pmax	pmax		
	comp=Z,109nm,1.4s						
KLMR				MLR	MLR		
	comp=Z,3µm,13.0s						
KLMR	**Klimovskoe**	**28.15**	**310**	*e*P	**P**	**22 36 33.5**	**-1.3**
KLMR				AMP		22 36 45.9	
	comp=Z,109nm,1.4s						
KLMR				*e*S	**S**	**22 41 18.2**	**-1.0**
KLMR				LQ	LQ	22 45 12.6	
KLMR				LQ	LQ	22 45 12.6	
KLMR				LR	LR	22 47 08.1	
KLMR				AMP		22 48 54.7	
	comp=Z,3µm,12.9s						
KLR	**Kul'dur**	**28.30**	**75**	P	**P**	**22 36 36.0**	**-0.3**
	comp=Z,0.1nm,0.8s,baz=61,slow=17,SNR=4.4						
KLR				Lg	Lg	22 45 37.5	
	comp=Z,0.3nm,1.0s,baz=10,slow=16,SNR=7.2						
KLR	**Kul'dur**	**28.30**	**75**	*e*P	**P**	**22 36 35.4**	**-0.8**
GYA	**Guiyang**	**28.32**	**141**	⇑*i*P	**P**	**22 36 35.5**	**-1.2**
GYA				PP	**PnPn**	**22 37 31.0**	**+5.7**
GYA				PcP	**PcP**	**22 39 51.3**	**+1.9**
GYA				S	**S**	**22 41 24.5**	**+1.8**
GYA				SS	**SnSn**	**22 42 48.5**	**+8.5**
GYA				pmax	pmax		
	comp=Z,40nm,0.8s						
GYA				pmax	pmax		
	comp=Z,130nm,5.0s						
GYA				LR	LR		
	comp=Z,4µm,13.7s						
GYA				LR	LR		
	comp=Z,8µm,12.8s						
GYA				LR	LR		
	comp=Z,3µm,13.7s						
VRH	**Novokhopyorsk**	**28.41**	**289**	*e*P	**P**	**22 36 37.2**	**+0.1**
VRH				*e*S	**S**	**22 41 26.4**	**+3.0**
VRH				pmax	pmax		
	comp=Z,50nm,0.8s						
VRH				smax	smax		
	comp=N,90nm,1.2s						
VRH				MLR	MLR		
	comp=Z,950nm,13.0s						
WHN	**Wuhan**	**28.45**	**125**	P	P	22 36 44.3	+6.7
WHN				S	S	22 41 33.8	+10
WHN				LR	LR		
	comp=N,5µm,13.5s						
WHN				LR	LR		
	comp=E,7µm,10.5s						
WHN				LR	LR		
	comp=Z,5µm,12.4s						
AKT	**Akhty**	**28.67**	**267**	*e*P	**P**	**22 36 39.7**	**0.0**
AKT				*e*		22 37 30.8	
AKT				pmax	pmax		
	comp=Z,24nm,0.7s						
MDJ	**Mudanjiang**	**28.80**	**85**	P	**P**	**22 36 37.0**	**-3.7**
MDJ				S	**S**	**22 41 31.0**	**+1.3**
MDJ				ScS	**ScS**	**22 47 21.0**	**-3.2**
MDJ				pmax	pmax		
	comp=Z,10.0nm,1.6s						
MDJ				pmax	pmax		
	comp=Z,76nm,3.0s						
MDJ				LR	LR		
	comp=Z,3µm,10.0s						
MDJ				LR	LR		
	comp=Z,3µm,9.2s						
MDJ				LR	LR		
	comp=Z,3µm,10.4s						
GROC	**Groznyy**	**29.02**	**271**	*e*P	**P**	**22 36 42.3**	**-0.3**
GROC				*e*		22 37 34.1	
GROC				*e*		22 39 50.0	
GROC				*e*S	**S**	**22 41 36.9**	**+3.8**
GROC				pmax	pmax		
	comp=Z,23nm,1.0s						
LPSR	**Galich'ya Gora**	**29.67**	**293**	*e*P	**P**	**22 36 48.1**	**-0.2**
LPSR				pmax	pmax		
	comp=Z,40nm,0.9s						
MOS	**Moscow**	**29.68**	**299**	*e*P	**P**	**22 36 48.5**	**+0.1**
MOS				*e*		22 36 54.8	
MOS				*e*		22 37 44.9	
MOS				*e*PPP	PPP	22 37 58.3	
MOS				*e*S	**S**	**22 41 47.4**	**+4.1**
MOS				*e*SS	**SnSn**	**22 43 19.4**	**+7.2**
MOS				pmax	pmax		
	comp=Z,41nm,1.0s						
MOS				MLR	MLR		
	comp=Z,900nm,18.0s						
NJ2	**Nanjing**	**29.76**	**117**	*e*P	**P**	**22 36 51.5**	**+2.2**
NJ2				sP	**sP**	**22 36 55.8**	**0.0**
NJ2				pmax	pmax		
	comp=Z,20nm,0.5s						
NJ2				LR	LR		
	comp=Z,3µm,15.7s						
NJ2				LR	LR		
	comp=Z,3µm,14.4s						
NJ2				LR	LR		
	comp=Z,3µm,14.1s						
VORR	**Voronezh**	**29.77**	**291**	P	**P**	**22 36 47.0**	**-2.2**
VORR				pmax	pmax		
	comp=Z,250nm,1.2s						
GOF	**Gofitskoye**	**29.89**	**277**	⇑*i*P	**P**	**22 36 50.4**	**0.0**
GOF				pmax	pmax		
	comp=Z,70nm,1.2s						
VSR	**Storozhevoye**	**29.94**	**290**	*e*P	**P**	**22 36 50.7**	**0.0**
VSR				*e*S	**S**	**22 41 48.7**	**+1.3**
VSR				pmax	pmax		
	comp=Z,30nm,0.8s						
VSR				smax	smax		
	comp=E,80nm,1.8s						
VSR				MLR	MLR		
	comp=Z,1µm,19.0s						
VORD	**Divnogorie**	**29.94**	**290**	*e*P	**P**	**22 36 50.9**	**+0.2**
VORD				pmax	pmax		
	comp=Z,40nm,0.8s						
NCK	**Nalchik**	**30.27**	**274**	*i* P	**P**	**22 36 53.7**	**-0.1**
NCK				pmax	pmax		
	comp=Z,14nm,1.0s						
OBN	**Obninsk**	**30.40**	**298**	*e*P	**P**	**22 36 54.3**	**-0.4**
	comp=Z,120nm,0.4s						
OBN	**Obninsk**	**30.40**	**298**	*de*P	**P**	**22 36 54.5**	**-0.2**
OBN				*e*		22 37 49.1	
OBN				pmax	pmax		
	comp=Z,48nm,1.1s						
OBN				MLR	MLR		
	comp=Z,318nm,12.0s						
ZEI	**Tsey**	**30.43**	**272**	*e*P	**P**	**22 36 52.2**	**-3.2**
ZEI				pmax	pmax		
	comp=Z,15nm,0.4s						
USRK	**Ussuriysk Ar.**	**30.51**	**85**	P	**P**	**22 36 55.6**	**-0.3**
	comp=Z,8.8nm,0.9s,baz=309,slow=6.9						
KBZ	**Khabaz**	**30.60**	**274**	P	**P**	**22 36 57.5**	**+0.9**
	comp=Z,3.4nm,0.6s,baz=64,slow=7.3,SNR=5.8						
KBZ				LR	LR	22 50 46.1	
	comp=Z,687nm,19.2s,baz=120,slow=39						
KIV	**Kislovodsk**	**30.63**	**275**	*e*P	**P**	**22 36 57.1**	**+0.1**
	comp=Z,30nm,0.8s						
KIV	**Kislovodsk**	**30.63**	**275**	P	**P**	**22 36 57.8**	**+0.8**
KIV	**Kislovodsk**	**30.63**	**275**	⇓*e*P	**P**	**22 36 57.5**	**+0.5**
KIV				*e*		22 37 58.0	
KIV				*e*S	**S**	**22 42 06.0**	**+7.4**
KIV				pmax	pmax		
	comp=Z,25nm,1.7s						
KIV				MLR	MLR		
	comp=Z,270nm,17.0s						
NEY	**Neytrino**	**30.95**	**274**	*d i*P	**P**	**22 37 01.4**	**+1.4**
NEY				pmax	pmax		
	comp=Z,6.0nm,0.8s						
APA	**Apatity**	**31.14**	**323**	⇓*i*P	P	22 37 08.9	+7.8
APA				*i*		22 38 09.6	
APA				*i* S	S	22 42 16.0	+10
APA				*i* SS	**SnSn**	**22 43 57.0**	**+10**
APA				pmax	pmax		
	comp=Z,7.0nm,0.7s						
APA				MLR	MLR		
	comp=Z,4µm,14.0s						
GNI	**Garni**	**31.29**	**267**	P	**P**	**22 37 04.1**	**+1.1**
	comp=Z,8.8nm,1.1s,baz=214,slow=7.3,SNR=4.4						
GNI	**Garni**	**31.29**	**267**	*e*P	**P**	**22 37 03.6**	**+0.6**
	comp=Z,90nm,0.8s						
GNI	**Garni**	**31.29**	**267**	P	**P**	**22 37 03.7**	**+0.6**
GNI	**Garni**	**31.29**	**267**	*ce*P	**P**	**22 37 03.6**	**+0.6**
GNI				pmax	pmax		
	comp=Z,39nm,1.2s						
AKH	**Akhalkalaki**	**31.40**	**270**	⇓*i*P	**P**	**22 37 05.6**	**+1.6**
KS01	**Wonju Array Si**	**31.57**	**99**	*e*P	**P**	**22 37 04.9**	**-0.3**
KSAR	**Wonju Array Be**	**31.58**	**99**	P	**P**	**22 37 05.5**	**+0.1**
KSAR	**Wonju Array Be**	**31.58**	**99**	P	**P**	**22 37 05.5**	**+0.1**
KSRS	**Korea Array**	**31.60**	**99**	P	**P**	**22 37 05.5**	**0.0**
	comp=Z,4.1nm,0.9s,baz=301,slow=6.7,SNR=20						
KSRS				LR	LR	22 50 03.9	
	comp=Z,348nm,21.2s,baz=284,slow=37						
MSF	**Maaselka**	**32.80**	**320**	*e*P	**P**	**22 37 16.2**	**+0.4**
MSF				pmax	pmax		
	comp=Z,21nm,1.1s						
CHTO	**Chiang Mai**	**33.08**	**160**	*e*P	**P**	**22 37 21.6**	**+2.9**
	comp=Z,7.7nm,0.8s						
CHTO	**Chiang Mai**	**33.08**	**160**	P	**P**	**22 37 21.5**	**+2.9**
CHTO				pmax	pmax		
	comp=Z,8.0nm,0.9s						
CHTO	**Chiang Mai**	**33.08**	**160**	P	**P**	**22 37 23.3**	**+4.7**
	comp=Z,47nm,1.2s						
CMMT	**Chiang Mai**	**33.08**	**160**	P	**P**	**22 37 23.2**	**+4.6**
	comp=Z,10nm,1.2s						
CMAR	**Chiang Mai Arr**	**33.42**	**160**	P	**P**	**22 37 21.2**	**-0.4**
	comp=Z,2.6nm,0.6s,baz=340,slow=8.9,SNR=12						
CMAR				LR	LR	22 52 19.2	
	comp=Z,268nm,18.7s,baz=348,slow=39						
CM01	**Chiang Mai Arr**	**33.46**	**160**	*e*P	**P**	**22 37 21.1**	**-0.8**
ANN	**Anapa**	**33.54**	**280**	*e*P	**P**	**22 37 20.9**	**-1.5**
ANN				pmax	pmax		
	comp=Z,127nm,1.4s						
ANN				MLR	MLR		
	comp=Z,346nm,12.0s						
KEV	**Kevo**	**33.63**	**327**	*e*P	**P**	**22 37 27.3**	**+4.4**
	comp=Z,10nm,0.9s						
KEV	**Kevo**	**33.63**	**327**	*e*P	**P**	**22 37 27.3**	**+4.4**
KEV				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HYB	**Hyderabad**	**33.89**	**195**	*i* P	**P**	**22 37 25.0**	**-0.7**
ARCES	**ARCESS Array B**	**34.15**	**326**	P	**P**	**22 37 27.9**	**+0.4**
	comp=Z,2.4nm,0.6s,baz=78,slow=8.6,SNR=17						
ARE0	**ARCESS Array S**	**34.15**	**326**	*e*P	**P**	**22 37 27.2**	**-0.2**
	comp=Z,0.5nm,1.0s						
ARE0	**ARCESS Array S**	**34.15**	**326**	*e*P	**P**	**22 37 27.6**	**+0.1**
ARE0				IAmb	IAmb	22 37 27.9	
	comp=Z,0.5nm,1.0s						
OUL	**Oulu**	**34.16**	**319**	P	**P**	**22 37 28.0**	**+0.4**
OUL				pmax	pmax		
	comp=Z,38nm,1.1s						
SHME	**Shamm**	**34.24**	**236**	P	**P**	**22 37 28.1**	**-0.6**
BANOM	**Banah**	**34.26**	**236**	P	**P**	**22 37 28.5**	**-0.3**
	SNR=15						
BANOM	**Banah**	**34.26**	**236**	*i* P	**P**	**22 37 28.2**	**-0.7**
	SNR=15						
UTTA	**Uttaradit**	**34.49**	**157**	P	**P**	**22 37 35.4**	**+4.6**
	comp=Z,8.0nm,0.8s,comp=Z,56nm						
FINES	**FINESS Array B**	**34.57**	**312**	P	**P**	**22 37 31.6**	**+0.4**
	comp=Z,4.2nm,0.5s,baz=64,slow=8.7,SNR=38						
FINES				LR	LR	22 51 00.0	
	comp=Z,614nm,19.3s,baz=84,slow=35						
FINES	**FINESS Array B**	**34.57**	**312**	*ce*P	**P**	**22 37 31.3**	**+0.1**
FINES				pmax	pmax		
	comp=Z,4.0nm,0.4s						
MDH	**Madha**	**34.76**	**235**	P	**P**	**22 37 32.2**	**-1.0**
MSFE	**Esma-Masafi**	**34.79**	**235**	P	**P**	**22 37 33.1**	**-0.3**
HAMF	**Hammerfest**	**34.79**	**328**	*e*P	**P**	**22 37 32.5**	**-0.5**
HAMF				IAmb	IAmb	22 37 34.4	
	comp=Z,30nm,1.2s						
NONG	**Nongkai**	**34.87**	**153**	P	**P**	**22 37 38.5**	**+4.3**
	comp=Z,0.4nm,0.9s						
VSU	**Vasula**	**34.88**	**307**	*de*P	**P**	**22 37 33.2**	**-0.7**
VSU				pmax	pmax		
	comp=Z,86nm,1.0s						
KTK1	**Kautokeino**	**34.96**	**326**	*e*P	**P**	**22 37 33.0**	**-1.5**
UOSS	**Minazif**	**35.10**	**235**	*e*P	**P**	**22 37 35.4**	**-0.8**
	comp=Z,8.8nm,0.8s						
UOSS	**Minazif**	**35.10**	**235**	P	**P**	**22 37 35.2**	**-0.9**
HATD	**Hatta, Dubai**	**35.23**	**235**	P	**P**	**22 37 36.4**	**-0.9**
WSAR	**Wadi Sarin**	**35.30**	**230**	P	**P**	**22 37 37.8**	**0.0**
	comp=Z,7.9nm,1.0s,baz=58,slow=4.8,SNR=6.0						
WSAR				LR	LR	22 52 36.2	
	comp=Z,720nm,21.1s,baz=94,slow=37						
ASHO	**Ashiyiah**	**35.39**	**235**	P	**P**	**22 37 38.1**	**-0.6**
	SNR=12						
ASHO	**Ashiyiah**	**35.39**	**235**	*i* P	**P**	**22 37 38.2**	**-0.6**
	SNR=12						
MICGM	**Minsk**	**35.40**	**300**	*e*	**P**	**22 37 39.0**	**+0.6**
MNK	**Minsk**	**35.40**	**300**	*e*P	**P**	**22 37 39.0**	**+0.6**
SIM	**Simferopol'**	**35.55**	**282**	*e*P	**P**	**22 37 39.4**	**-0.4**
SIM				*e*S	**S**	**22 43 16.0**	**+1.3**
SIM				*e*SS	**SnSn**	**22 45 41.0**	**+6.1**
SIM				pmax	pmax		
	comp=Z,49nm,1.1s						
SIM				MLR	MLR		
	comp=Z,300nm,13.0s						
UMPA	**Umpang Tak**	**35.59**	**161**	P	P	22 37 48.7	+8.3
PBKT	**Sadao Pong**	**35.72**	**157**	*e*P	**P**	**22 37 45.8**	**+4.4**
	comp=Z,11nm,0.7s						
PBKT	**Sadao Pong**	**35.72**	**157**	P	P	22 37 46.2	+4.8
	comp=Z,18nm,0.9s,comp=Z,2µm						
ASUD	**Al Ashush, Dub**	**35.82**	**236**	P	**P**	**22 37 42.3**	**0.0**
	SNR=9.5						
ASUD	**Al Ashush, Dub**	**35.82**	**236**	*i* P	**P**	**22 37 42.0**	**-0.3**
	SNR=9.5						
NACGM	**Naroch**	**35.88**	**301**	*e*	**P**	**22 37 42.0**	**-0.5**
NACGM				*e*LR	LR	22 51 29.0	
AKASG	**Malin Array Be**	**36.00**	**293**	P	**P**	**22 37 43.7**	**+0.1**
	comp=Z,12nm,0.6s,baz=55,slow=8.9,SNR=19						
AKASG				LR	LR	22 51 25.3	
	comp=Z,217nm,19.8s,baz=70,slow=34						
KIEV	**Kiev**	**36.01**	**293**	*e*P	**P**	**22 37 43.2**	**-0.4**
	comp=Z,18nm,0.9s						
KIEV	**Kiev**	**36.01**	**293**	*i* P	**P**	**22 37 43.0**	**-0.7**
KIEV				pmax	pmax		
	comp=Z,8.0nm,0.7s						
ISAL	**Salakas**	**36.02**	**302**	*e*P	**P**	**22 37 44.2**	**+0.5**
ISAL				IAmb	IAmb	22 38 02.3	
	comp=Z,12nm,0.7s						
MA2	**Magadan**	**36.03**	**51**	*e*P	**P**	**22 37 44.3**	**+0.5**
	comp=Z,70nm,0.8s						
MA2	**Magadan**	**36.03**	**51**	*e*P	**P**	**22 37 44.6**	**+0.8**
MA2				pmax	pmax		
	comp=Z,21nm,0.9s						
IIGN	**Ignalina**	**36.03**	**302**	*e*P	**P**	**22 37 44.4**	**+0.6**
IIGN				IAmb	IAmb	22 37 54.9	
	comp=Z,21nm,1.0s						
SEY	**Seymchan**	**36.04**	**45**	*e*P	**P**	**22 37 44.4**	**+0.6**
ALNE	**Al Ain**	**36.06**	**234**	P	**P**	**22 37 43.9**	**-0.5**
SKNT	**Sakolnakorn**	**36.15**	**152**	P	**P**	**22 37 49.6**	**+4.4**
	comp=Z,7.5nm,0.8s						
JNU	**Nakatsue**	**36.23**	**102**	LR	LR	22 52 51.1	
	comp=Z,262nm,18.3s,baz=300,slow=37						
QIZ	**Qiongzhong**	**36.26**	**142**	P	**P**	**22 37 48.5**	**+2.4**
QIZ				pP	**sP**	**22 37 52.0**	**-0.6**
QIZ				S	**S**	**22 43 30.8**	**+4.8**
QIZ				LR	LR		
	comp=Z,2µm,15.7s						
QIZ				LR	LR		
	comp=Z,4µm,14.7s						
QIZ				LR	LR		
	comp=Z,2µm,11.8s						
QIZ	**Qiongzhong**	**36.26**	**142**	*e*P	**P**	**22 37 46.0**	**-0.1**
	comp=Z,31nm,0.7s						
UTHA	**Uthaitani**	**36.34**	**160**	P	P	22 37 52.5	+5.7
	comp=Z,5.3nm,0.8s						
KHON	**Khomkaen**	**36.42**	**154**	P	**P**	**22 37 52.2**	**+4.7**
	comp=Z,8.7nm,0.7s						
TRO	**Tromso**	**36.45**	**327**	*e*P	**P**	**22 37 47.3**	**+0.1**
TRO				IAmb	IAmb	22 37 53.9	
	comp=Z,20nm,0.9s						
SPA0	**Spitsbergen Ar**	**37.12**	**341**	*e*P	**P**	**22 37 51.9**	**-1.0**
SPA0	**Spitsbergen Ar**	**37.12**	**341**	*e*P	**P**	**22 37 51.6**	**-1.3**
SPA0				IAmb	IAmb	22 37 53.1	
	comp=Z,13nm,0.8s						
SPITS	**Spitsbergen Ar**	**37.12**	**341**	P	**P**	**22 37 53.3**	**+0.4**
	comp=Z,7.2nm,0.6s,baz=79,slow=15,SNR=8.1						
SPITS				LR	LR	22 56 19.5	
	comp=Z,937nm,19.7s,baz=75,slow=41						
SORM	**Soroca**	**37.60**	**290**	⇓*i*P	**P**	**22 37 56.6**	**-0.6**
SORM	**Soroca**	**37.60**	**290**	P	**P**	**22 37 56.6**	**-0.6**
KIS	**Kishinev**	**37.84**	**288**	*e*P	**P**	**22 38 00.0**	**+0.7**
KIS				XM		22 38 07.0	
	comp=Z,200nm,1.6s						
KIS				*e*SS	SS	22 46 28.0	-7.5
KIS				*e*SSS	SSS	22 46 54.0	
KIS				*e*LQ	LQ	22 51 06.0	
	comp=Z,2µm,16.0s						
KIS				LRM	MLR	22 53 56.0	
	comp=Z,500nm,12.0s						
KIS	**Kishinev**	**37.84**	**288**	*e*P	**P**	**22 38 00.0**	**+0.7**
KIS				*i*		22 38 05.0	
KIS				*e*		22 46 28.0	
KIS				*e*		22 46 54.0	
KIS				MLR	MLR		
	comp=Z,900nm,12.0s						
SLMH	**Al Salmeh**	**37.95**	**267**	*e*P	P	22 37 51.6	-8.8
NAYO	**Nakonayok**	**37.97**	**158**	P	P	22 38 07.1	+6.5
	comp=Z,0.3nm,0.8s						
STEI	**Steigen**	**38.01**	**324**	*e*P	**P**	**22 38 01.6**	**+1.2**
STEI				IAmb	IAmb	22 38 09.7	
	comp=Z,52nm,1.0s						
SUW	**Suwalki**	**38.16**	**301**	*e*P	**P**	**22 38 01.2**	**-0.7**
SUW	**Suwalki**	**38.16**	**301**	*e*P	**P**	**22 38 01.2**	**-0.7**
HORU	**Horodok**	**38.26**	**292**	P	**P**	**22 38 02.4**	**-0.5**
LEOM	**Leova**	**38.43**	**287**	⇓*i*P	**P**	**22 38 05.0**	**+0.8**
LEOM	**Leova**	**38.43**	**287**	P	**P**	**22 38 05.0**	**+0.8**
IAS	**Iasi**	**38.50**	**289**	⇑*i*P	**P**	**22 38 07.4**	**+2.5**
IAS	**Iasi**	**38.50**	**289**	P	**P**	**22 38 07.4**	**+2.5**
BR131	**Keskin Array S**	**38.59**	**275**	*e*P	**P**	**22 38 06.1**	**+0.2**
BRTR	**Keskin Array B**	**38.59**	**275**	P	**P**	**22 38 06.5**	**+0.6**
	comp=Z,16nm,0.8s,baz=79,slow=6.5,SNR=62						
BRTR				LR	LR	22 56 32.3	
	comp=Z,258nm,19.9s,baz=50,slow=40						
BRTR	**Keskin Array B**	**38.59**	**275**	*ce*P	**P**	**22 38 06.5**	**+0.6**
BRTR				pmax	pmax		
	comp=Z,14nm,0.7s						
LOF	**Lofoten**	**38.60**	**325**	*e*P	**P**	**22 38 04.1**	**-1.3**
LOF				IAmb	IAmb	22 38 23.4	
	comp=Z,27nm,0.8s						
ERM	**Erimo**	**38.67**	**81**	*e*P	**P**	**22 38 07.0**	**+0.7**
	comp=Z,24nm,1.1s						
ERM	**Erimo**	**38.67**	**81**	*e*P	**P**	**22 38 07.0**	**+0.7**
ERM				pmax	pmax		
	comp=Z,24nm,1.1s						
MOR8	**Moi Rana**	**38.67**	**322**	*e*P	**P**	**22 38 04.5**	**-1.6**
MOR8				IAmb	IAmb	22 38 11.1	
	comp=Z,14nm,0.6s						
MJAR	**Matsushiro Arr**	**38.67**	**91**	P	**P**	**22 38 04.3**	**-2.1**
	comp=Z,0.8nm,0.6s,baz=310,slow=11,SNR=4.1						
MJAR				LR	LR	22 54 43.2	
	comp=Z,384nm,18.1s,baz=320,slow=37						
ANTO	**Ankara**	**39.05**	**276**	⇑*i*P	**P**	**22 38 10.3**	**+0.7**
ANTO	**Ankara**	**39.05**	**276**	*e*P	**P**	**22 38 08.3**	**-1.3**
	comp=Z,24nm,0.8s						
ANTO	**Ankara**	**39.05**	**276**	*e*P	**P**	**22 38 08.3**	**-1.3**
ANTO				pmax	pmax		
	comp=Z,24nm,0.8s						
BR231	**Keskin MP Arra**	**39.08**	**276**	*e*P	**P**	**22 38 10.9**	**+1.0**
JOW	**Kunigami**	**39.11**	**112**	LR	LR	22 55 51.0	
	comp=Z,751nm,19.1s,baz=131,slow=39						
KONS	**Konsvik**	**39.12**	**322**	*e*P	**P**	**22 38 09.8**	**+0.1**
KONS				IAmb	IAmb	22 38 16.3	
	comp=Z,17nm,0.4s						
CFR	**Carcaliu**	**39.13**	**286**	⇓*i*P	**P**	**22 38 10.7**	**+0.6**
CFR	**Carcaliu**	**39.13**	**286**	P	**P**	**22 38 10.6**	**+0.5**
PRAR	**RASCA**	**39.23**	**290**	⇓*i*P	**P**	**22 38 11.5**	**+0.5**
TIRR	**Tirgusor**	**39.32**	**285**	⇓*i*P	**P**	**22 38 12.1**	**+0.3**
TIRR	**Tirgusor**	**39.32**	**285**	*e*P	**P**	**22 38 11.3**	**-0.4**
	comp=Z,30nm,1.1s						
TIRR	**Tirgusor**	**39.32**	**285**	*e*P	**P**	**22 38 11.3**	**-0.4**
TIRR				pmax	pmax		
	comp=Z,30nm,1.1s						
TESR	**Tescani**	**39.38**	**288**	⇑*i*P	**P**	**22 38 12.4**	**+0.2**
LVV	**L'vov**	**39.40**	**294**	*e*P	**P**	**22 38 15.9**	**+3.6**
LVV				*e*		22 39 44.8	
LVV				*e*S	**S**	**22 44 19.0**	**+5.9**
LVV				MLR	MLR		
	comp=N,150nm,15.0s						
LVV				MLR	MLR		
	comp=E,300nm,15.0s						
LVV				MLR	MLR		
	comp=Z,200nm,15.0s						
KSV	**Kosov**	**39.47**	**292**	P	**P**	**22 38 14.0**	**+1.0**
TLB	**Topalu**	**39.49**	**285**	⇓*i*P	**P**	**22 38 13.6**	**+0.4**
TLB	**Topalu**	**39.49**	**285**	P	**P**	**22 38 13.5**	**+0.4**
VRI	**Vrincioaia**	**39.65**	**287**	⇑*i*P	**P**	**22 38 16.1**	**+1.6**
VRI	**Vrincioaia**	**39.65**	**287**	P	**P**	**22 38 16.1**	**+1.6**
PLOR	**Plostina**	**39.70**	**287**	⇓*i*P	**P**	**22 38 16.4**	**+1.4**
PLOR	**Plostina**	**39.70**	**287**	P	**P**	**22 38 16.4**	**+1.4**
BURAR	**Bucovina Array**	**39.71**	**291**	⇓*i*P	**P**	**22 38 15.7**	**+0.6**
BURAR	**Bucovina Array**	**39.71**	**291**	P	**P**	**22 38 15.7**	**+0.6**
NSS	**Namsos**	**40.10**	**319**	*e*P	**P**	**22 38 17.8**	**-0.2**
ISR	**Istrita**	**40.13**	**287**	⇓*i*P	**P**	**22 38 20.3**	**+1.6**
ISR	**Istrita**	**40.13**	**287**	P	**P**	**22 38 20.2**	**+1.6**
KWP	**Kalwaria Pacla**	**40.25**	**295**	*e*P	**P**	**22 38 20.2**	**+0.8**
KWP				LMZ	LR	22 55 20.6	
	comp=Z,600nm,20.6s						
KWP	**Kalwaria Pacla**	**40.25**	**295**	*e*P	**P**	**22 38 19.9**	**+0.4**
	comp=Z,745nm,1.4s						
KWP	**Kalwaria Pacla**	**40.25**	**295**	*e*P	**P**	**22 38 20.2**	**+0.8**
KWP				MLR	MLR		
	comp=Z,600nm,20.6s						
MLR	**Muntele Rosu**	**40.31**	**287**	P	**P**	**22 38 21.2**	**+1.1**
	comp=Z,6.7nm,0.5s,baz=48,slow=18,SNR=23						
MLR				LR	LR	22 57 04.9	
	comp=Z,438nm,20.1s,baz=46,slow=39						
MLR	**Muntele Rosu**	**40.31**	**287**	⇑*i*P	**P**	**22 38 21.2**	**+1.1**
BEL	**Belsk**	**40.36**	**298**	*e*P	**P**	**22 38 22.7**	**+2.4**
BEL	**Belsk**	**40.36**	**298**	*e*P	**P**	**22 38 22.7**	**+2.4**
DOPR	**Dopca**	**40.41**	**288**	⇑*i*P	**P**	**22 38 22.1**	**+1.3**
HWQ	**Hawqa**	**40.42**	**266**	*e*P	**P**	**22 38 21.9**	**+0.8**
ARCR	**ARCALIA**	**40.48**	**290**	⇑*i*P	**P**	**22 38 23.0**	**+1.6**
QASN	**Qassioun**	**40.69**	**265**	*e*P	**P**	**22 38 23.8**	**+0.4**
BMR	**Baia Mare**	**40.70**	**292**	⇓*i*P	P	22 38 32.5	+9.3
TOTH	**TOTAH**	**40.71**	**265**	*e*P	**P**	**22 38 24.5**	**+1.0**
HFS	**Hagfors**	**40.77**	**313**	P	**P**	**22 38 23.6**	**0.0**
	comp=Z,13nm,0.7s,baz=88,slow=10,SNR=32						
HFS				LR	LR	22 57 30.4	
	comp=Z,87nm,18.3s,baz=70,slow=39						
BHL	**Bhannes**	**40.85**	**266**	*e*P	**P**	**22 38 24.3**	**-0.4**
VOIR		**40.88**	**288**	⇓*i*P	**P**	**22 38 26.6**	**+1.7**
VOIR		**40.88**	**288**	P	**P**	**22 38 26.5**	**+1.7**
UZH	**Uzhgorod**	**40.95**	**293**	*e*P	**P**	**22 38 29.3**	**+4.1**
UZH				*i*		22 38 35.7	
UZH				*e*		22 39 56.3	
UZH				*e*		22 40 32.3	
UZH				*e*S	**S**	**22 44 40.7**	**+4.4**
BRBR	**Barbar**	**40.98**	**265**	*e*P	**P**	**22 38 26.2**	**+0.3**
DQRL	**Deir Qamar**	**41.03**	**266**	*e*P	**P**	**22 38 26.8**	**+0.7**
TRPA	**Tarpa**	**41.05**	**293**	⇑*i*P	**P**	**22 38 26.4**	**+0.4**
TRPA	**Tarpa**	**41.05**	**293**	*e*P	**P**	**22 38 28.3**	**+2.3**
SHBL	**Chebaa**	**41.15**	**265**	*e*P	**P**	**22 38 27.2**	**0.0**
ARR	**Arges**	**41.17**	**288**	⇓*i*P	**P**	**22 38 28.6**	**+1.4**
ASF	**Jabal al Asfar**	**41.19**	**263**	P	**P**	**22 38 28.5**	**+1.0**
	comp=Z,21nm,0.8s,baz=345,slow=1.3,SNR=37						
CRVS	**Cervenica-Dubn**	**41.31**	**294**	*e*P	**P**	**22 38 29.4**	**+1.2**
CRVS				pmax	pmax		
	comp=Z,9.0nm,1.2s						
CRVS	**Cervenica-Dubn**	**41.31**	**294**	*e*P	**P**	**22 38 29.4**	**+1.2**
CRVS				*e*PP	**PnPn**	**22 40 08.6**	**+0.6**
NC405	**NORSAR Array S**	**41.33**	**315**	*e*P	**P**	**22 38 27.5**	**-0.7**
NC303	**NORSAR Array S**	**41.45**	**315**	*e*P	**P**	**22 38 29.6**	**+0.4**
NC303	**NORSAR Array S**	**41.45**	**315**	*e*P	**P**	**22 38 29.6**	**+0.4**
NC303				IAmb	IAmb	22 38 30.3	
	comp=Z,32nm,1.3s						
NB201	**NORSAR Array S**	**41.55**	**315**	*e*P	**P**	**22 38 29.8**	**-0.2**
NC602	**NORSAR Array S**	**41.55**	**314**	*e*P	**P**	**22 38 29.7**	**-0.3**
MMAI	**Mount Meron Ar**	**41.58**	**265**	P	**P**	**22 38 31.4**	**+0.7**
	comp=Z,8.2nm,0.6s,baz=48,slow=8.7,SNR=30						
NB2	**NORSAR Subarra**	**41.58**	**315**	P	**P**	**22 38 29.4**	**-0.9**
	comp=Z,13nm,0.6s,baz=66,slow=7.9						
NB2	**NORSAR Subarra**	**41.58**	**315**	P	**P**	**22 38 29.4**	**-0.9**
	baz=66,slow=7.9						
NOA	**NORSAR Array B**	**41.58**	**315**	P	**P**	**22 38 29.6**	**-0.7**
	comp=Z,8.0nm,0.9s,baz=64,slow=7.8,SNR=46						
NOA				LR	LR	22 56 24.1	
	comp=Z,539nm,19.4s,baz=65,slow=37						
MAMC	**Mammari**	**41.59**	**270**	P	**P**	**22 38 27.2**	**-3.4**
ZIMR		**41.62**	**285**	⇑*i*P	**P**	**22 38 31.3**	**+0.6**
OJC	**Ojcow**	**41.65**	**297**	*e*P	**P**	**22 38 31.9**	**+1.0**
OJC				LMZ	LR	22 56 13.2	

	comp=Z,700nm,19.5s						
OJC	Ojcow	41.65	297	*e*P	P	22 38 31.9	+1.0
OJC				MLR	MLR		
	comp=Z,700nm,19.5s						
CSS	Mathiatis	41.65	269	P	P	22 38 31.5	+0.3
LOT	Lotru	41.65	288	⇓*i*P	P	22 38 32.4	+1.2
GKP	Gorka Klasztor	41.69	302	*e*P	P	22 38 31.8	+0.6
GKP	Gorka Klasztor	41.69	302	*e*P	P	22 38 31.8	+0.6
NC204	NORSAR Array S	41.70	315	*e*P	P	22 38 30.9	-0.4
NIE	Niedzica	41.74	295	*e*P	P	22 38 33.0	+1.3
NIE				*e*S	S	22 44 53.6	+5.5
NIE				LMZ	LR	22 56 20.5	
	comp=Z,300nm,22.8s						
NIE	Niedzica	41.74	295	*e*P	P	22 38 33.0	+1.3
NIE				*e*S	S	22 44 53.6	+5.5
NIE				MLR	MLR		
	comp=Z,300nm,22.8s						
NBO00	NORSAR Array S	41.79	315	*e*P	P	22 38 31.2	-0.7
NAO01	NORSAR Array S	41.81	314	*e*P	P	22 38 31.1	-1.0
JHJ	Hachijo jima 2	41.84	94	LR	LR	22 55 22.6	
	comp=Z,130nm,18.8s,baz=264,slow=36						
PETK	Petropavlovsk-	41.91	58	P	P	22 38 33.6	+0.6
	comp=Z,2.5nm,0.4s,baz=2.9,slow=5.8						
PETK				LR	LR	22 57 00.5	
	comp=Z,307nm,18.0s,baz=297,slow=38						
ALFC	Alefka	41.99	270	P	P	22 38 33.4	-0.6
SZAC	Souni	42.07	269	P	P	22 38 34.6	0.0
BSD	Bornholm Skovb	42.13	305	*i* P	P	22 38 38.6	+3.8
BSD	Bornholm Skovb	42.13	305	*i* P	P	22 38 38.6	+3.8
RAYN	Ar Rayn	42.15	246	*e*P	P	22 38 34.7	-0.7
	comp=Z,17nm,0.7s						
RAYN	Ar Rayn	42.15	246	*i* P	P	22 38 34.7	-0.7
	SNR=21						
RAYN	Ar Rayn	42.15	246	*e*P	P	22 38 34.7	-0.7
RAYN				pmax	pmax		
	comp=Z,17nm,0.7s						
DOMB	Dombas	42.17	317	*e*P	P	22 38 35.1	-0.1
DOMB				IAmb	IAmb	22 38 36.0	
	comp=Z,15nm,1.0s						
OSL	Oslo	42.23	313	*e*P	P	22 38 36.9	+1.4
OSL				IAmb	IAmb	22 38 44.1	
	comp=Z,12nm,0.8s						
AKMC	Akamas	42.25	270	P	P	22 38 40.3	+4.3
PPCY	Paphos	42.33	270	P	P	22 38 36.0	-0.6
LANS	Liptovska Anna	42.34	295	*e*P	P	22 38 39.3	+2.6
LANS	Liptovska Anna	42.34	295	*e*P	P	22 38 39.3	+2.6
MOL	Molde	42.63	318	*e*	P	22 38 39.1	+0.4
PSZ	Piszkesteto	42.70	294	*e*P	P	22 38 42.1	+2.4
HERR	Herculane	42.76	288	⇓*i*P	P	22 38 40.9	+0.8
OKC	Ostrava-Krasne	42.77	297	*e*P	P	22 38 42.9	+2.8
OKC				*e*S	S	22 45 01.4	-1.7
OKC				AMS	AMS	22 56 50.0	
	comp=Z,700nm,11.9s						
OKC	Ostrava-Krasne	42.77	297	*e*P	P	22 38 42.9	+2.8
OKC				*e*S	S	22 45 01.4	-1.7
OKC				MLR	MLR		
	comp=Z,700nm,11.9s						
KONO	Kongsberg	42.86	313	*e*P	P	22 38 40.6	-0.1
KONO				IAmb	IAmb	22 38 46.7	
	comp=Z,13nm,0.9s						
AKN	Aaknes	43.02	317	*e*P	P	22 38 41.0	-1.0
AKN				IAmb	IAmb	22 38 53.7	
	comp=Z,44nm,1.3s						
VYHS	Vyhne	43.03	295	*e*P	P	22 38 43.4	+1.2
VYHS				pmax	pmax		
	comp=Z,17nm,1.4s						
VYHS	Vyhne	43.03	295	*e*P	P	22 38 43.4	+1.2
VYHS				*e*PP	PcP	22 40 27.7	-4.5
MORC	Moravsky Berou	43.14	297	⇓*i*P	P	22 38 44.4	+1.3
MORC	Moravsky Berou	43.14	297	*e*P	P	22 38 44.2	+1.1
MDVR	Moldovita	43.24	289	⇑*i*P	P	22 38 44.8	+0.8
KSP	Ksiaz	43.32	299	*e*P	P	22 38 45.1	+0.5
KSP				LMZ	LR	22 57 33.4	
	comp=Z,800nm,17.7s						
KSP	Ksiaz	43.32	299	*e*P	P	22 38 45.1	+0.5
KSP				MLR	MLR		
	comp=Z,800nm,17.7s						
KRLC	Kraliky	43.42	298	*e*P	P	22 38 46.8	+1.4
KRLC				*e*pP	sP	22 38 52.1	+0.1
KRLC	Kraliky	43.42	298	*e*P	P	22 38 46.8	+1.4
KRLC				*e*		22 38 52.1	
BUD	Budapest	43.43	294	⇑*e*P	P	22 38 49.1	+3.7
JAVC	Velka Javorina	43.52	296	*e*P	P	22 38 48.3	+2.1
VTS	Vitosha	43.52	285	⇓*i*P	P	22 38 47.3	+0.9
DPC	Dobruska-Polom	43.55	298	*e*P	P	22 38 47.5	+1.1
DPC				*e*PP	PcP	22 40 31.3	-2.6
DPC				AMS	AMS	22 57 40.0	
	comp=Z,800nm,12.7s						
DPC	Dobruska-Polom	43.55	298	*e*P	P	22 38 47.5	+1.1
DPC				*e*		22 40 31.3	
DPC				MLR	MLR		
	comp=Z,800nm,12.7s						
PALK	Pallekele	43.59	190	P	P	22 38 50.0	+3.0
	comp=Z,4.8nm,0.6s,baz=296,slow=7.2,SNR=4.7						
PALK				LR	LR	22 58 20.1	
	comp=Z,683nm,18.9s,baz=335,slow=38						
PALK	Pallekele	43.59	190	P	P	22 38 50.0	+3.0
UPC	Upice	43.64	299	*e*P	P	22 38 47.8	+0.6
UPC				AMS	AMS	22 57 40.0	
	comp=Z,900nm,10.9s						
UPC	Upice	43.64	299	*e*P	P	22 38 47.8	+0.6
UPC				MLR	MLR		
	comp=Z,900nm,10.9s						
HYA	Hoyanger	43.78	316	*e*P	P	22 38 47.3	-0.8
HYA				IAmb	IAmb	22 38 55.5	
	comp=Z,24nm,0.8s						
SMOL	Smolenice	43.83	296	*e*P	P	22 38 51.0	+2.3
SMOL	Smolenice	43.83	296	*e*P	P	22 38 51.0	+2.3
VRAC	Vranov	43.91	297	⇑*i*P	P	22 38 50.2	+0.9
VRAC	Vranov	43.91	297	P	P	22 38 50.1	+0.8
VRAC	Vranov	43.91	297	*e*P	P	22 38 50.3	+0.9
CSKK	Csˆ‡kako	43.94	294	*e*S	P	22 38 51.8	+2.3
HOMB	Homborsund	43.96	312	*e*P	P	22 38 49.5	-0.1
HOMB				IAmb	IAmb	22 38 56.5	
	comp=Z,23nm,0.8s						
MODS	Modra-Piesok	43.99	296	*e*P	P	22 38 55.6	+5.6
MODS				pmax	pmax		
	comp=Z,12nm,1.0s						
MODS	Modra-Piesok	43.99	296	*e*P	P	22 38 55.6	+5.6
SRS	Serrai	44.11	283	P	P	22 38 52.2	+1.2
KRUC	Moravsky	44.14	297	*e*P	P	22 38 52.7	+1.5
MORH	Mˆ‡rˆ¡gy, Hung	44.31	292	*e*P	P	22 38 55.8	+3.3
BLS5	Blasjo	44.41	314	*e*P	P	22 38 53.5	+0.3
BLS5				IAmb	IAmb	22 38 54.8	
	comp=Z,7.3nm,1.0s						
MUD	Monsted U’grnd	44.45	309	*i* P	P	22 38 54.1	+0.6
MUD	Monsted U’grnd	44.45	309	*i* P	P	22 38 54.1	+0.6
BER	Bergen	44.50	315	*e*P	P	22 38 53.8	0.0
BER				IAmb	IAmb	22 39 00.1	
	comp=Z,12nm,0.9s						
ASK	Askoy	44.52	316	*e*P	P	22 38 53.2	-0.8
ASK				IAmb	IAmb	22 38 56.5	
	comp=Z,21nm,1.2s						
KNT	Kendrikon	44.52	284	P	P	22 38 55.4	+1.1
KNT	Kendrikon	44.52	284	P	P	22 38 55.4	+1.1
KNT	Kendrikon	44.52	284	P	P	22 38 55.4	+1.1
SNART	Snartemo	44.54	312	*e*P	P	22 38 56.2	+2.0
SNART				IAmb	IAmb	22 38 56.8	
	comp=Z,8.0nm,0.6s						
BRG	Berggiesshubel	44.61	300	*e*P	P	22 38 55.1	+0.2
	comp=Z,4.1nm,0.7s						
BRG				*e*PP	PP	22 40 47.0	+8.3
	comp=Z,38nm,1.8s						
BRG				S	S	22 45 29.0	-1.0
BRG				SS	SS	22 48 43.0	-6.7
	comp=N,429nm,10.6s						
	comp=E,696nm,19.6s						
	comp=Z,919nm,15.0s						
BRG	Berggiesshubel	44.61	300	*e*P	P	22 38 55.1	+0.2
BRG				*e*		22 40 47.0	
BRG				S	S	22 45 29.0	-1.0
BRG				SS	SS	22 48 43.0	-6.7
BRG				pmax	pmax		
	comp=Z,4.0nm,0.7s						
BRG				MLR	MLR		
	comp=N,429nm,10.6s						
BRG				MLR	MLR		
	comp=E,696nm,19.6s						
BRG				MLR	MLR		
	comp=Z,919nm,15.0s						
GOPC	GO Pecny, Ondr	44.62	299	*e*P	P	22 38 55.7	+0.7
GOPC				AMS	AMS	22 58 50.0	
	comp=Z,800nm,10.2s						
GOPC	GO Pecny, Ondr	44.62	299	*e*P	P	22 38 55.7	+0.7
GOPC				MLR	MLR		
	comp=Z,800nm,10.2s						
PLG	Polygyros	44.63	282	P	P	22 38 55.6	+0.4
PLG	Polygyros	44.63	282	P	P	22 38 55.6	+0.4
PLG	Polygyros	44.63	282	P	P	22 38 55.6	+0.4
DIVS	Divibare	44.65	289	*e*P	P	22 38 55.0	-0.3
	comp=Z,14nm,0.7s						
PRU	Pruhonice	44.72	299	*e*P	P	22 38 56.8	+1.0
PRU				*e*PP	PP	22 40 44.7	+4.7
PRU				*e*S	S	22 45 29.5	-2.2
PRU				AMS	AMS	22 58 10.0	
	comp=Z,700nm,11.1s						
PRU	Pruhonice	44.72	299	*e*P	P	22 38 56.8	+1.0
PRU				*e*		22 40 44.7	
PRU				*e*S	S	22 45 29.5	-2.2
PRU				MLR	MLR		
	comp=Z,700nm,11.1s						
PRA	Prague	44.74	299	AMS	AMS	22 58 30.0	
	comp=Z,700nm,10.5s						
PAIG	Paliouri	44.75	282	P	P	22 38 56.7	+0.6
PAIG	Paliouri	44.75	282	P	P	22 38 56.7	+0.6
PAIG	Paliouri	44.75	282	P	P	22 38 56.7	+0.6
SOP	Sopron	44.76	295	*e*S	P	22 38 58.4	+2.3
SOP	Sopron	44.76	295	P	P	22 38 59.1	+3.0
CLL	Collm	44.91	301	*e*P	P	22 38 57.0	-0.2
	comp=Z,19nm,0.7s						
CLL				*e*		22 39 00.0	
CLL				*e*pP	sP	22 39 03.0	-0.8
	comp=Z,26nm,0.6s						
CLL				*e*sP	pP	22 39 06.0	+4.0
CLL				*e*PcP	PcP	22 40 37.0	-1.5
CLL				*e*PP	PP	22 40 43.0	+1.1
CLL				*e*S	S	22 45 31.0	-3.3
CLL				*e*SS	ScS	22 48 48.0	-5.6
CLL				Lmax		22 58 00.0	
CLL				LmV		22 59 00.0	
	comp=Z,700nm,18.7s						
CLL	Collm	44.91	301	*e*P	P	22 38 57.0	-0.2
CLL				*e*		22 39 00.0	
CLL				*e*		22 39 03.0	
CLL				*e*S	S	22 45 31.0	-3.3
CLL				pmax	pmax		
	comp=Z,19nm,0.7s						
CLL				MLR	MLR		
	comp=Z,700nm,18.7s						
CONA	Conrad Observa	45.03	296	*e*P	P	22 38 59.7	+1.3
	comp=Z,11nm,1.3s						
XOR	Xorichti	45.38	281	P	P	22 39 00.7	-0.5
XOR	Xorichti	45.38	281	P	P	22 39 00.7	-0.5
KRUS	Krusevo	45.41	285	*i* P	P	22 39 02.2	+0.7
ARSA	Arzberg	45.58	295	*e*pP	pP	22 39 05.7	-1.7
	comp=Z,3.4nm,0.8s						
FNA	Florina	45.68	284	*e*P	P	22 39 04.8	+1.2
	comp=Z,9.1nm,0.8s						
FNA	Florina	45.68	284	*e*P	P	22 39 04.8	+1.2
FNA				pmax	pmax		
	comp=Z,9.0nm,0.8s						
KHC	Kasperske Hory	45.70	298	*e*P	P	22 39 05.3	+1.7
KHC				*e*pP	sP	22 39 10.4	+0.2
KHC				*e*S	S	22 45 44.6	-1.3
KHC				AMS	AMS	22 58 40.0	
	comp=Z,1µm,15.1s						
KHC	Kasperske Hory	45.70	298	*e*P	P	22 39 05.3	+1.7
KHC				*e*		22 39 10.4	
KHC				*e*S	S	22 45 44.6	-1.3
KHC				MLR	MLR		
	comp=Z,1µm,15.1s						
PTL	Penteli	45.75	280	P	P	22 39 03.9	-0.2
PTL	Penteli	45.75	280	P	P	22 39 03.9	-0.2
NKC	Novy Kostel	45.76	300	*e*P	P	22 39 05.7	+1.7
NKC				*e*pP	pP	22 39 09.1	+0.3
NKC				AMS	AMS	22 58 50.0	
	comp=Z,1µm,12.5s						
NKC	Novy Kostel	45.76	300	*e*P	P	22 39 05.7	+1.7
NKC				*e*		22 39 09.1	
NKC				MLR	MLR		
	comp=Z,1µm,12.5s						
GEC2	GERESS Array S	45.78	298	*e*P	P	22 39 05.6	+1.3
	comp=Z,6.0nm,0.8s						
GEC2	GERESS Array S	45.78	298	*e*P	P	22 39 05.6	+1.3
GEC2				pmax	pmax		
	comp=Z,6.0nm,0.8s						
GERES	GERESS Array B	45.78	298	P	P	22 39 05.5	+1.2
	comp=Z,2.7nm,0.8s,baz=59,slow=8.4,SNR=18						
GEA0	GERESS Array S	45.78	298	*e*P	P	22 39 05.0	+0.6
VLY	Voula,Athens	45.91	279	P	P	22 39 05.3	-0.1
VLY	Voula,Athens	45.91	279	P	P	22 39 05.3	-0.1
MOA	Molln	45.98	296	*e*pP	P	22 39 07.8	+1.9
	comp=Z,6.5nm,1.1s						
TTG	Podgorica	46.03	287	*e*P	P	22 39 06.7	+0.5
	comp=Z,17nm,0.7s						
TTG	Podgorica	46.03	287	*e*P	P	22 39 06.7	+0.5
TTG				pmax	pmax		
	comp=Z,17nm,0.7s						
AGG	Agios Georgios	46.12	282	*e*P	P	22 39 07.5	+0.4
	comp=Z,45nm,0.9s						
AGG	Agios Georgios	46.12	282	*e*P	P	22 39 07.5	+0.4
AGG				pmax	pmax		
	comp=Z,45nm,0.9s						
PERS	Pernice	46.15	295	*e*P	P	22 39 07.5	+0.3
SOKA	Soboth	46.17	295	*e*P	P	22 39 08.7	+1.2
	comp=Z,1.4nm,0.4s						
LTK	Loutraki	46.33	280	P	P	22 39 08.5	-0.2
LTK	Loutraki	46.33	280	P	P	22 39 08.5	-0.2
DID	Didima	46.47	279	P	P	22 39 08.7	-1.1
DID	Didima	46.47	279	P	P	22 39 08.7	-1.1
THAL	Thalero	46.51	280	P	P	22 39 09.7	-0.4
OBKA	Obir	46.54	295	*e*P	P	22 39 10.8	+0.4
	comp=Z,7.1nm,0.7s						
KALE	Kalithea	46.62	281	P	P	22 39 10.2	-0.8
KALE	Kalithea	46.62	281	P	P	22 39 10.2	-0.8
ANX	Ano Chora	46.64	281	P	P	22 39 10.8	-0.4
SERG	Sergoula	46.66	281	P	P	22 39 10.0	-1.3
TRIZ	Trizonia	46.68	281	P	P	22 39 10.6	-0.8
BOJS	Bojanci	46.69	293	*e*P	P	22 39 14.4	+3.0
TRAZ	Trapeza	46.71	281	P	P	22 39 09.5	-2.2
GRFO	Grafenberg	46.72	300	*e*P	P	22 39 13.2	+1.7
	comp=Z,10.0nm,0.8s						
GRFO	Grafenberg	46.72	300	*e*P	P	22 39 13.3	+1.7
GRFO				pmax	pmax		
	comp=Z,10.0nm,0.8s						
EFP	Efpalio	46.75	281	P	P	22 39 11.6	-0.3
VISS	Visnje	46.76	294	*e*P	P	22 39 11.9	-0.1
GUR	Goura	46.77	280	P	P	22 39 11.4	-0.9
GUR	Goura	46.77	280	P	P	22 39 11.4	-0.9
IDI	Anoyia	46.81	276	P	P	22 39 11.3	-1.3
	comp=Z,16nm,0.7s,baz=133,slow=19,SNR=9.1						
IDI	Anoyia	46.81	276	⇑*i*P	P	22 39 11.3	-1.3
LAKA	Lakka	46.81	281	P	P	22 39 12.3	-0.2
LAKA	Lakka	46.81	281	P	P	22 39 12.3	-0.2
DSL	Palaion Diasel	46.83	283	P	P	22 39 12.1	-0.5
DSL	Palaion Diasel	46.83	283	P	P	22 39 12.1	-0.5
KLV	Kalavryta, Ach	46.83	281	P	P	22 39 11.9	-0.7
KLV	Kalavryta, Ach	46.83	281	P	P	22 39 11.9	-0.7
KBA	Koelnbreinsper	46.93	296	*e*P	P	22 39 14.7	+1.3
	comp=Z,7.0nm,0.6s						
MYKA	Terra Mystica	47.00	295	*e*P	P	22 39 12.9	-1.0
	comp=Z,2.2nm,0.4s						
TRIP	Tripoli	47.07	280	P	P	22 39 14.1	-0.4
SGD	Sagiada	47.07	284	P	P	22 39 13.8	-0.6
PDO	Prodromos	47.09	282	P	P	22 39 13.6	-1.0
VLX	Vlachokerasia	47.10	280	P	P	22 39 13.7	-1.1
VLX	Vlachokerasia	47.10	280	P	P	22 39 13.7	-1.1
DRO	Drossia	47.16	281	P	P	22 39 15.0	-0.2
JAVS	Javornik	47.16	294	*e*P	P	22 39 15.6	+0.3
AMT	Artemida-Makis	47.42	280	P	P	22 39 16.1	-1.1
ANKY	Antikythira Is	47.45	278	P	P	22 39 15.5	-1.9
ANKY	Antikythira Is	47.45	278	P	P	22 39 15.5	-1.9
ITM	Ithomi	47.50	280	*e*P	P	22 39 16.8	-1.0
	comp=Z,30nm,0.7s						
ABTA	Abfaltersbach	47.59	296	*e*P	P	22 39 18.4	0.0
	comp=Z,2.5nm,0.5s						
PYL	PYLOS	47.79	280	P	P	22 39 17.8	-2.3
PYL	PYLOS	47.79	280	P	P	22 39 17.8	-2.3
WATA	Walderalm	47.79	297	*i* P	P	22 39 19.0	-1.1
	comp=Z,3.4nm,0.4s						
WTTA	Wattenberg	47.80	297	*e*P	P	22 39 21.1	+0.9
	comp=Z,7.2nm,0.6s						
MOTA	Moosalm	48.05	297	*e*P	P	22 39 21.5	-0.7
RETA	Reutte	48.17	298	*e*P	P	22 39 23.7	+0.7
	comp=Z,7.1nm,0.6s,SNR=5.9						
FETA	Feichten	48.45	297	*e*P	P	22 39 26.1	+0.9
	comp=Z,0.9nm,0.5s						
PSI	Prapat	48.67	165	P	P	22 39 26.6	-0.6
	comp=Z,2.0nm,0.4s,baz=180,slow=2.0,SNR=1.9						
PSI				LR	LR	23 01 43.0	
	comp=Z,300nm,20.7s,baz=274,slow=38						
DAVA	Damuels	48.78	298	*e*P	P	22 39 27.9	+0.2
	comp=Z,8.5nm,0.5s,SNR=12						
FUORN	Ofenpass-Fuorn	48.94	297	*e*P	P	22 39 29.6	+0.5
	comp=Z,52nm,1.3s						
BFO	Black Forest	49.05	300	*e*P	P	22 39 30.2	+0.5
	comp=Z,6.0nm,0.9s						
BFO	Black Forest	49.05	300	*ce*P	P	22 39 30.8	+1.1
DAVOX	Davos/Dischmat	49.06	297	P	P	22 39 30.8	+0.8
	comp=Z,10.0nm,0.7s,baz=70,slow=12,SNR=23						
DAVOX				LR	LR	23 01 25.6	
	comp=Z,762nm,18.6s,baz=50,slow=38						
TIP	Timpagrande	49.48	285	⇑*i*P	P	22 39 33.3	+0.2
TIP	Timpagrande	49.48	285	*e*P	P	22 39 33.6	+0.4
	comp=Z,26nm,1.0s						
TIP	Timpagrande	49.48	285	P	P	22 39 33.4	+0.3
WLF	Walferdange	49.49	302	⇑AP	pP	22 39 39.7	+2.0
BCLA	Clavier	49.52	304	⇓AP	pP	22 39 38.8	+0.9
TUE	Stuetta	49.54	297	*e*P	P	22 39 34.5	+0.8
	comp=Z,13nm,1.1s						
CUC	Castrocucco	49.56	287	*e*P	P	22 39 33.7	0.0
	comp=Z,18nm,0.7s						
CDF	Champ du Feu	49.59	300	*e*P	P	22 39 33.7	-0.2
CDF				pmax	pmax		
	comp=Z,7.0nm,0.8s						
SFI	Santa Sofia	49.59	293	P	P	22 39 35.7	+1.8
ECH	Echery	49.76	300	*e*P	P	22 39 35.1	0.0
	comp=Z,8.8nm,0.8s						
ECH	Echery	49.76	300	*e*P	P	22 39 35.1	0.0
ECH				pmax	pmax		
	comp=Z,9.0nm,0.8s						
GSI	Gunungsitoli	49.93	167	P	P	22 39 38.7	+2.1
GSI	Gunungsitoli	49.93	167	*e*P	P	22 39 36.5	-0.1
	comp=Z,24nm,0.6s						
GIVF	Givet	49.95	303	*e*P	P	22 39 37.0	+0.5
GIVF				pmax	pmax		
	comp=Z,13nm,1.0s						
SNF	Seneffe	50.01	304	⇓AP	pP	22 39 42.5	+0.8
DOU	Dourbes	50.08	304	⇑AP	pP	22 39 42.3	+0.1
HINF	Hinteralfeld	50.16	300	*e*P	P	22 39 38.2	0.0
HINF				pmax	pmax		
	comp=Z,9.0nm,0.8s						
BAIF	Baives	50.30	304	*e*P	P	22 39 39.7	+0.6
BAIF				pmax	pmax		
	comp=Z,15nm,0.9s						
HAU	Haudompre	50.33	300	*e*P	P	22 39 39.3	-0.1
HAU				pmax	pmax		
	comp=Z,13nm,0.7s						
CEL	Celeste	50.58	285	*e*P	P	22 39 42.8	+1.4
	comp=Z,41nm,1.0s						
MNSI	Mandailing Nat	50.75	164	P	P	22 39 40.6	-2.2
SENIN	Lac Senin/Sane	50.76	298	*e*P	P	22 39 43.3	+0.4
	comp=Z,8.2nm,0.8s						
ESK	Eskdalemuir	51.00	313	*e*P	P	22 39 44.3	0.0
	comp=Z,13nm,1.0s						
ESK	Eskdalemuir	51.00	313	*e*P	P	22 39 44.3	0.0
ESK				pmax	pmax		
	comp=Z,13nm,1.0s						
CABF	La Chapelle	51.29	299	*e*P	P	22 39 46.2	-0.5
CABF				pmax	pmax		
	comp=Z,10.0nm,0.8s						
SUMG	Summit	51.45	342	*i* P	P	22 40 02.5	+15
LPG	La Plagne	51.58	298	*e*P	P	22 39 49.7	+0.5
LPG				pmax	pmax		
	comp=Z,33nm,0.9s						
LPL	La Plagne	51.58	298	*e*P	P	22 39 49.2	+0.1
LPL				pmax	pmax		
	comp=Z,8.0nm,0.4s						
BNI	Bardonecchia	51.89	297	*e*P	P	22 39 50.9	-0.4
	comp=Z,22nm,0.8s						
BNI	Bardonecchia	51.89	297	*e*P	P	22 39 50.9	-0.4
BNI				pmax	pmax		
	comp=Z,22nm,0.8s						
VAE	Valguarnera	51.98	285	P	P	22 39 53.4	+1.4
	comp=Z,3.7nm,0.6s,baz=148,slow=9.5,SNR=2.5						
VAE				LR	LR	23 06 36.1	
	comp=Z,197nm,19.8s,baz=138,slow=41						
MBDF	Montbardon	52.03	297	*e*P	P	22 39 51.8	-0.6
MBDF				pmax	pmax		
	comp=Z,51nm,0.9s						
SBF	Sospel	52.18	296	*e*P	P	22 39 52.9	-0.5
SBF				pmax	pmax		
	comp=Z,31nm,0.8s						
ORIF	Oris-en-Rattie	52.42	298	*e*P	P	22 39 54.9	-0.3
ORIF				pmax	pmax		
	comp=Z,14nm,0.8s						
BORG	Borgarnes	52.47	329	LR	LR	23 02 22.6	
	comp=Z,203nm,19.0s,baz=52,slow=36						
SMF	Signal de Mont	52.51	300	*e*P	P	22 39 55.1	-0.6
SMF				pmax	pmax		
	comp=Z,13nm,0.8s						
AVF	Avril sur Loir	52.69	301	*e*P	P	22 39 56.5	-0.5
AVF				pmax	pmax		
	comp=Z,12nm,0.8s						
FRF	La Foret Royal	52.81	296	*e*P	P	22 39 59.5	+1.5
FRF				pmax	pmax		
	comp=Z,16nm,0.9s						
SSB	Saint Sauveur	52.95	299	*e*P	P	22 39 59.5	+0.4
	comp=Z,8.1nm,0.9s						
SSB	Saint Sauveur	52.95	299	*e*P	P	22 39 59.5	+0.4
SSB				pmax	pmax		
	comp=Z,8.0nm,0.9s						
BGF	Bois d’Agland	53.11	301	*e*P	P	22 39 59.2	-1.0
BGF				pmax	pmax		
	comp=Z,6.0nm,0.7s						
VIVF	Saint-Julien-l	53.14	298	*e*P	P	22 39 59.7	-0.7
VIVF				pmax	pmax		
	comp=Z,12nm,0.8s						
ATD	Arta Tunnel	53.25	239	LR	LR	23 03 41.0	
	comp=Z,505nm,20.0s,baz=35,slow=37						
LDF	La Druitiere	53.46	304	*e*P	P	22 40 02.2	-0.5
LDF				pmax	pmax		
	comp=Z,20nm,0.6s						
TCF	Toulx Ste Croi	53.62	301	*e*P	P	22 40 03.7	-0.3
TCF				pmax	pmax		
	comp=Z,10.0nm,0.8s						
TOLK	Toolik Lake Re	53.83	22	P	P	22 40 04.3	-0.9
	baz=319						
GRR	Gorron	53.97	305	*e*P	P	22 40 05.9	-0.5
GRR				pmax	pmax		
	comp=Z,18nm,0.7s						
CAF	Calviac	54.55	300	*e*P	P	22 40 11.1	+0.3
CAF				pmax	pmax		
	comp=Z,5.0nm,0.8s						
MFF	Saint Martin d	54.70	302	*e*P	P	22 40 11.6	-0.2
MFF				pmax	pmax		
	comp=Z,12nm,0.6s						
IM3	Indian Mountai	54.72	26	*e*P	P	22 40 10.6	-1.0
COLD	Coldfoot	54.74	24	*e*P	P	22 40 12.0	+0.2
	comp=Z,22nm,0.9s						
SGMF	Saint Gilles	54.94	305	*e*P	P	22 40 13.3	-0.2
SGMF				pmax	pmax		
	comp=Z,110nm,0.7s						
ROSF	Rostrenen	55.26	306	*e*P	P	22 40 16.5	+0.7
ROSF				pmax	pmax		
	comp=Z,17nm,0.9s						
LFF	La Frestale	55.27	300	*e*P	P	22 40 16.3	+0.4
LFF				pmax	pmax		
	comp=Z,20nm,0.8s						
MTLF	Montolieu	55.47	298	*e*P	P	22 40 17.4	0.0
MTLF				pmax	pmax		
	comp=Z,3.0nm,0.6s						
QUIF	Quistinic	55.47	305	*e*P	P	22 40 17.1	-0.2
QUIF				pmax	pmax		
	comp=Z,22nm,0.6s						
KEST	Kesra	56.21	287	P	P	22 40 23.1	+0.2
	comp=Z,7.6nm,0.8s,baz=243,slow=8.3,SNR=7.1						
KEST	Kesra	56.21	287	*e*P	P	22 40 23.9	+1.0
	comp=Z,21nm,1.3s						
MLY	Manley	56.27	26	*e*P	P	22 40 23.1	+0.2
	comp=Z,8.1nm,1.0s						
EPF	Esparros	56.72	299	*e*P	P	22 40 25.5	-0.9
EPF				pmax	pmax		
	comp=Z,6.0nm,0.7s						
THTN	Thala	56.73	287	*e*P	P	22 40 28.3	+1.7
	comp=Z,30nm,1.2s						
BPAW	Bear Paw Mtn.	56.91	26	*e*P	P	22 40 27.3	-0.1
	comp=Z,8.8nm,0.8s						
MDM	Murphy Dome	57.00	25	*e*P	P	22 40 28.2	+0.2
	comp=Z,11nm,0.9s						
CAST	Castle Rocks	57.11	27	*e*P	P	22 40 29.4	+0.5
	comp=Z,6.9nm,0.8s						
ETSF	Etsaut	57.30	299	*e*P	P	22 40 31.9	+1.3

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ETSF                                  pmax   pmax
      comp=Z,4.0nm,0.8s
CCB   Clear Creek Bu     57.36  25   eP     P      22 40 30.4 -0.1
      comp=Z,15nm,1.2s
WRH   Wood River Hil     57.42  25   eP     P      22 40 30.8 -0.2
      comp=Z,8.3nm,0.7s
PPLA  Purkeypile         57.48  28   eP     P      22 40 32.1 +0.6
      comp=Z,42nm,1.4s
IL1   Eielson Array      57.51  24   eP     P      22 40 29.9 -1.6
ILAR  Eielson Array      57.51  24    P     P      22 40 31.1 -0.5
      comp=Z,6.2nm,0.6s,baz=315,slow=4.1,SNR=56
ILAR                                  LR     LR     23 08 00.0
      comp=Z,270nm,20.9s,baz=326,slow=39
ILB   Eielson Array      57.51  24   eP     P      22 40 31.3 -0.3
INK   Inuvik             57.53  17   eP     P      22 40 32.1 +0.4
      comp=Z,33nm,1.4s
INK   Inuvik             57.53  17   eP     P      22 40 32.1 +0.4
INK                                   pmax   pmax
      comp=Z,33nm,1.4s
TRF   Thorofare Moun     57.61  27   eP     P      22 40 32.9 +0.3
      comp=Z,14nm,1.2s
SVW2  Sparrevohn         57.78  31   eP     P      22 40 35.0 +1.5
      comp=Z,12nm,0.7s
SKT   Skwentna           58.38  28   eP     P      22 40 37.8  0.0
      comp=Z,13nm,1.0s
SFJD  Kangerlussuaq      58.45 342    LR     LR     23 09 31.7
      comp=Z,280nm,18.9s,baz=24,slow=40
DHY   Denali Highway     58.72  26   eP     P      22 40 39.6 -0.7
      comp=Z,11nm,0.8s
RIDG  Independ'e Rid     58.87  24   eP     P      22 40 40.4 -0.8
      comp=Z,15nm,1.0s
SCRK  Sand Creek         58.90  24   eP     P      22 40 41.0 -0.5
      comp=Z,10nm,1.2s
EGAK  Eagle              58.94  22   eP     P      22 40 41.3 -0.2
      comp=Z,8.1nm,0.7s
GHO   Glory Hole Cre     59.32  27   eP     P      22 40 44.6 +0.3
      comp=Z,11nm,0.8s
PAX   Paxson             59.33  25   eP     P      22 40 43.8 -0.6
      comp=Z,14nm,1.3s
PAX   Paxson             59.33  25   eP     P      22 40 43.8 -0.6
PAX                                   pmax   pmax
      comp=Z,14nm,1.3s
SML   Sawmill            59.46  27   eP     P      22 40 45.0 -0.3
      comp=Z,14nm,0.8s
SML   Sawmill            59.46  27   eP     P      22 40 45.0 -0.3
SML                                   pmax   pmax
      comp=Z,14nm,0.8s
SCM   Sheep Creek Mo     59.73  27   eP     P      22 40 47.1 -0.1
      comp=Z,16nm,0.7s
SCM   Sheep Creek Mo     59.73  27   eP     P      22 40 47.1 -0.1
SCM                                   pmax   pmax
      comp=Z,16nm,0.7s
LEM   Lembang            59.87 157    LR     LR     23 09 07.4
      comp=Z,435nm,18.2s,baz=331,slow=39
DAWY  Dawson             59.95  22   eP     P      22 40 48.4 -0.3
      comp=Z,12nm,1.1s
FID   Port Fidalgo       60.85  27   eP     P      22 40 55.1 +0.3
      comp=Z,27nm,0.7s
BMRM  Bremner River      61.20  26   eP     P      22 40 57.8 +0.5
      comp=Z,21nm,1.1s
KDAK  Kodiak Island      61.30  32c  eP     P      22 40 57.7 -0.1
ES19  SONSECA Array      61.31 298   eP     P      22 40 58.5 +0.2
ESDC  Sonseca Array      61.37 298    P     P      22 40 58.8 +0.1
      comp=Z,2.1nm,0.5s,baz=42,slow=6.8,SNR=32
ESDC                                  LR     LR     23 06 50.8
      comp=Z,260nm,19.5s,baz=40,slow=35
ESLA  Sonseca Array      61.37 298   eP     P      22 40 59.2 +0.6
      comp=Z,12nm,0.6s
PBRG  Braganca           61.43 302   eP     P      22 41 00.0 +1.0
      comp=Z,15nm,2.0s
PAB   San Pablo          61.67 299   eP     P      22 41 00.9 +0.2
      comp=Z,6.6nm,0.9s
PAB   San Pablo          61.67 299   eP     P      22 41 00.9 +0.2
PAB                                   pmax   pmax
      comp=Z,7.0nm,0.9s
TGL   Tana Glacier       61.87  25   eP     P      22 41 02.6 +0.9
      comp=Z,24nm,0.8s
MVO   Moncorvo           62.03 302   eP     P      22 41 03.8 +0.7
      comp=Z,22nm,1.5s
MVO   Moncorvo           62.03 302   eLR    LR     23 04 20.3
      comp=Z,454nm,18.0s
PGAV  Gavieira, Arco     62.14 303   eLR    LR     23 03 14.1
      comp=Z,541nm,16.0s
PCAB  Cabril             62.19 303   eP     P      22 41 09.0 +4.9
      comp=Z,31nm,1.4s
PVIS  Viseu              62.81 302   eP     P      22 41 15.2 +6.9
MTE   Manteigas          62.84 301   eP     P      22 41 09.0 +0.4
      comp=Z,24nm,1.2s
MTE   Manteigas          62.84 301   eLR    LR     23 04 28.8
      comp=Z,361nm,22.0s
PMRV  Marv??o            63.44 300   eP     P      22 41 14.0 +1.5
      comp=Z,18nm,1.5s
PMRV  Marv??o            63.44 300   eLR    LR     23 04 58.7
      comp=Z,368nm,20.0s
PESTR Estremoz           63.94 300   eP     P      22 41 18.1 +2.3
      comp=Z,24nm,2.0s
PESTR                                 A      A      23 08 59.7
      comp=Z,315nm,16.0s
PESTR Estremoz           63.94 300   eP     P      22 41 16.2 +0.3
      comp=Z,7.6nm,0.8s
WHY   Whitehorse         63.96  22   eP     P      22 41 15.2 -0.6
      comp=Z,6.3nm,0.9s
PBAR  Barrancos          64.13 299   eP     P      22 41 18.1 +1.1
      comp=Z,35nm,1.5s
PMTG  Montargil          64.15 301   eP     P      22 41 17.3 +0.2
      comp=Z,18nm,1.6s
ALMR  Almeirim           64.28 301   eP     P      22 41 18.1  0.0
ALMR                                  AMS    AMS    23 12 36.2
      comp=E,991nm,15.0s
ALMR  Almeirim           64.28 301   eP     P      22 41 18.9 +0.9
      comp=E,40nm,2.3s
ALMR  Almeirim           64.28 301   eP     P      22 41 18.0  0.0
EVO   Evora              64.41 300   eP     P      22 41 20.6 +1.7
      comp=E,16nm,1.5s
PBEJ  Beja               64.69 300   eP     P      22 41 24.1 +3.4
      comp=E,21nm,1.4s
PNCL  Nicolau / Gran     65.00 300   eP     P      22 41 24.7 +2.0
      comp=E,25nm,1.6s
MESJ  Messejana          65.02 300   eP     P      22 41 22.9 +0.1
MESJ                                  AMS    AMS    23 08 17.4
      comp=E,729nm,17.6s
MESJ  Messejana          65.02 300   eP     P      22 41 25.0 +2.2
      comp=E,29nm,1.9s
MESJ  Messejana          65.02 300   eP     P      22 41 22.9 +0.1
PVAQ  Vaqueiros          65.05 299   eLR    LR     23 07 06.3
      comp=E,465nm,20.0s
PCVE  Castro Verde       65.07 299   eP     P      22 41 26.9 +3.7
      comp=E,24nm,1.7s
PBDV  Barranco-do-Ve     65.29 299   eP     P      22 41 28.1 +3.5
YKA   Yellowknife Ar     65.87  11    P     P      22 41 27.1 -0.8
      comp=E,6.9nm,0.8s,baz=343,slow=7.0,SNR=14
MDT   Midelt             66.56 293    P     P      22 41 33.1 +0.1
      comp=E,2.7nm,0.6s,baz=67,slow=7.5,SNR=14
MDT                                   LR     LR     23 12 31.4
      comp=E,232nm,18.4s,baz=46,slow=38
DLBC  Dease Lake         67.06  20   eP     P      22 41 36.2 +0.4
      comp=E,6.9nm,1.0s
TAM   Tamanrasset        67.62 279   eP     P      22 41 41.2 +1.3
      comp=E,4.1nm,0.9s
TAM   Tamanrasset        67.62 279   eP     P      22 41 41.2 +1.3
TAM                                   pmax   pmax
      comp=Z,4.0nm,0.9s
BATI  Baumata            68.34 141    P     P      22 41 41.8 -2.4
      comp=Z,10nm,0.5s,baz=108,slow=20,SNR=1.9
SCHQ  Schefferville      72.70 345    P     P      22 42 08.9 -1.5
      comp=Z,7.8nm,0.9s,baz=26,slow=6.5,SNR=11
SCHQ                                  LR     LR     23 17 06.0
      comp=Z,178nm,19.4s,baz=20,slow=38
SCHQ  Schefferville      72.70 345   eP     P      22 42 09.2 -1.2
      comp=Z,10nm,1.0s
PMOZ  Porto Moniz, M     73.65 302   eLR    LR     23 10 05.9
      comp=Z,346nm,18.0s
FITZ  Fitzroy Crossi     76.28 143    P     P      22 42 30.1 -1.4
      comp=Z,8.8nm,0.9s,baz=230,slow=7.9,SNR=11
TORD  Torodi Ar. Bea     77.21 275    P     P      22 42 36.0 -0.9
      comp=Z,1.3nm,0.4s,baz=53,slow=5.6
OPO   Ambohidratompo     77.44 219    LR     LR     23 16 20.5
      comp=Z,114nm,18.1s,baz=3.0,slow=35
B05A  Bryant             78.27  20    P     P      22 42 42.0 -0.5
      baz=341
NLWA  Neilton Lookou     78.71  21   eP     P      22 42 46.2 +1.3
      comp=Z,27nm,1.3s
B08A  Colville Reser     78.75  18   eP     P      22 42 45.5 +0.3
      comp=Z,8.9nm,0.9s
ULM   Lac du Bonnet      79.44   2    P     P      22 42 47.4 -1.5
      comp=Z,8.8nm,0.8s,baz=354,slow=6.4,SNR=13
ULM                                   LR     LR     23 22 44.9
      comp=Z,273nm,18.2s,baz=5.0,slow=39
C09A  Chrisman Ranch     79.48  17   eP     P      22 42 49.6 +0.5
      comp=Z,10nm,0.7s
LON   Longmire           79.77  20   eP     P      22 42 51.4 +0.6
      comp=Z,4.6nm,0.8s
LON   Longmire           79.77  20   eP     P      22 42 51.4 +0.6
LON                                   pmax   pmax
      comp=Z,5.0nm,0.8s
KOWA  Kowa               79.79 280    P     P      22 42 50.8 -0.5
      comp=Z,3.4nm,0.8s,baz=349,slow=5.2,SNR=6.0
KOWA  Kowa               79.79 280   eP     P      22 42 52.4 +1.2
      comp=Z,9.8nm,0.8s
F03A  Seaside            80.16  21   eP     P      22 42 54.1 +1.3
      comp=Z,22nm,0.9s
JTMT  Jette              80.23  15   eP     P      22 42 53.6 +0.2
      comp=Z,21nm,1.2s
EGMT  Eagleton           80.62  12    P     P      22 42 54.5 -0.8
      baz=349
EGMT  Eagleton           80.62  12   eP     P      22 42 54.8 -0.6
      comp=Z,11nm,0.9s
E09A  Wood Farm, Sta     80.75  18   eP     P      22 42 56.4 +0.4
      comp=Z,10nm,1.0s
PQI   Presque Isle       80.75 343   eP     P      22 42 55.9 -0.1
      comp=Z,19nm,1.4s
DGMT  Dagmar             80.77   8    P     P      22 42 55.1 -1.0
      baz=353
DGMT  Dagmar             80.77   8   eP     P      22 42 56.2 +0.1
      comp=Z,32nm,1.0s
A33A  Warroad            80.77   2    P     P      22 42 54.9 -1.1
      baz=358
G03D  McMinnville, O     80.90  21    P     P      22 42 56.8  0.0
      baz=341
B34A  Aery, Baudette     81.23   1    P     P      22 42 56.6 -1.9
      baz=359
B35A  Bob, Littlefor     81.37   1    P     P      22 42 58.0 -1.2
      baz=359
AGMN  Agassiz Nation     81.40   2    P     P      22 42 58.1 -1.3
      baz=358
AGMN  Agassiz Nation     81.40   2   eP     P      22 42 58.0 -1.4
      comp=Z,7.3nm,0.9s
F10A  Beach Ranch, E     81.44  17   eP     P      22 43 00.2 +0.5
      comp=Z,9.2nm,0.9s
G06A  Carlson Farm,      81.47  20   eP     P      22 43 00.8 +1.0
      comp=Z,7.8nm,0.9s
COR   Corvallis          81.48  22   eP     P      22 43 02.1 +2.2
      comp=Z,24nm,0.9s
COR   Corvallis          81.48  22    P     P      22 43 02.1 +2.2
COR                                   pmax   pmax
      comp=Z,24nm,1.0s
WRAB  Tennant Creek      81.54 136   eP     P      22 42 59.3 -1.0
      comp=Z,15nm,0.8s
WRAB  Tennant Creek      81.54 136   eP     P      22 42 58.6 -1.8
WRAB                                  pmax   pmax
      comp=Z,11nm,1.1s
WRA   Warramunga Arr     81.55 136    P     P      22 42 58.8 -1.6
      comp=Z,6.2nm,0.9s,baz=340,slow=5.6,SNR=15
G08A  Pilot Rock         81.76  18   eP     P      22 43 02.1 +0.6
      comp=Z,6.0nm,1.3s
EYMN  Ely                81.78 359    P     P      22 43 00.3 -1.1
      baz=0.8
EYMN  Ely                81.78 359   eP     P      22 43 00.8 -0.6
      comp=Z,14nm,0.9s
C36A  Pine Crest Far     81.98   0    P     P      22 43 01.2 -1.3
      baz=360
C37A  Embarrass          82.00 360    P     P      22 43 01.3 -1.3
      baz=0.3
C38A  Sawbill Land.      82.01 359    P     P      22 43 01.5 -1.1
      baz=0.9
I05D  Terrebonne, OR     82.17  20    P     P      22 43 02.5 -1.1
      baz=342
I03D  Drain, OR          82.31  22    P     P      22 43 05.0 +0.8
      baz=341,SNR=10
PKME  Peaks-Kenny Pk     82.34 344    P     P      22 43 05.1 +0.7
      baz=15
LRM   Limekiln Ridge     82.40  14   eP     P      22 43 04.5 -0.5
I04A  Tendick Farm,      82.44  21    P     P      22 43 05.2 +0.2
      baz=342,SNR=9.1
BMO   Blue Mountains     82.50  17   eP     P      22 43 05.0 -0.4
      comp=Z,4.7nm,0.8s
BMO   Blue Mountains     82.50  17   eP     P      22 43 05.0 -0.4
BMO                                   pmax   pmax
      comp=Z,5.0nm,0.8s
D36A  Goodland           82.56   0    P     P      22 43 04.6 -0.9
      baz=360
D36A  Goodland           82.56   0   eP     P      22 43 04.4 -1.1
      comp=Z,25nm,1.1s
BOZ   Bozeman (W)        82.74  13    P     P      22 43 05.7 -1.0
      baz=348
BOZ   Bozeman (W)        82.74  13   eP     P      22 43 06.4 -0.3
      comp=Z,5.5nm,1.0s
BOZ   Bozeman (W)        82.74  13   eP     P      22 43 06.4 -0.3
BOZ                                   pmax   pmax
      comp=Z,6.0nm,1.0s
I07A  Izee               82.81  19   eP     P      22 43 08.3 +1.3
      comp=Z,7.9nm,1.1s
GCMT  Greycliff          82.82  12   eP     P      22 43 06.9 -0.1
J04D  Umpqua Nationa     83.04  21    P     P      22 43 08.2 -0.1
      baz=342,SNR=6.7
E38A  The Farm, Brul     83.12 359    P     P      22 43 07.4 -1.0
      baz=0.7
J05D  Fort Rock, OR      83.19  21    P     P      22 43 09.3 +0.2
      baz=342,SNR=18
E41A  Kenton             83.22 357    P     P      22 43 08.1 -0.9
      baz=2.4
E43A  Lone Tree Farm     83.23 356    P     P      22 43 07.9 -1.1
      baz=3.6
E40A  Wakefield          83.26 358    P     P      22 43 08.0 -1.2
      baz=1.8,SNR=5.0
MCMT  McKenzie Canyo     83.30  14   eP     P      22 43 09.6 -0.1
E39A  Mellen             83.34 359    P     P      22 43 08.5 -1.1
      baz=1.3
HUMO  Hull Mountain      83.44  22   eP     P      22 43 10.6 +0.4
LSZ   Lusaka             83.50 237   eP     P      22 43 10.4 -0.4
      comp=Z,23nm,1.5s
LSZ   Lusaka             83.50 237   eP     P      22 43 10.4 -0.4
LSZ                                   pmax   pmax
      comp=Z,23nm,1.5s
RLMT  Red Lodge          83.53  12    P     P      22 43 10.4 -0.5
      baz=350
RLMT  Red Lodge          83.53  12   eP     P      22 43 10.6 -0.2
      comp=Z,7.0nm,1.0s
K04D  Chiloquin, OR      83.70  21    P     P      22 43 10.8 -0.8
      baz=342
J08A  Circle Bar Ran     83.71  19   eP     P      22 43 12.5 +0.8
      comp=Z,13nm,0.9s
F38A  Pierce - Schro     83.77 359    P     P      22 43 11.4 -0.4
      baz=0.5
F43A  Flat Rock, Esc     83.79 356    P     P      22 43 11.1 -0.7
      baz=3.5
LBNH  Lisbon             83.79 345    P     P      22 43 12.0  0.0
      baz=13
F40A  Park Falls         83.79 358    P     P      22 43 11.2 -0.8
      baz=1.6
F39A  Loretta            83.81 359    P     P      22 43 11.3 -0.7
      baz=1.1
LONY  Lake Ozonia        83.82 347    P     P      22 43 11.9 -0.1
      baz=11
LONY  Lake Ozonia        83.82 347   eP     P      22 43 12.2 +0.1
      comp=Z,20nm,1.0s
F41A  Three Lakes        83.95 357    P     P      22 43 12.1 -0.6
      baz=2.3
F37A  Hinrichs Farm,     84.01 360    P     P      22 43 12.3 -0.7
H17A  Grant Village      84.07  13   eP     P      22 43 15.5 +1.8
YPP   Pitchstone Pla     84.16  13   eP     P      22 43 15.8 +1.6
      comp=Z,5.8nm,1.2s
MFID  Camas Ranch        84.17  17   eP     P      22 43 13.4 -0.6
      comp=Z,9.9nm,0.9s
HLID  Hailey             84.28  16    P     P      22 43 13.7 -0.9
      baz=346
HLID  Hailey             84.28  16   eP     P      22 43 14.3 -0.4
      comp=Z,3.7nm,1.0s
YBH   Yreka Blue Hor     84.32  22    P     P      22 43 15.0 +0.2
      comp=Z,4.3nm,0.8s,baz=30,slow=2.1,SNR=10
YBH                                   LR     LR     23 23 45.8
      comp=Z,135nm,18.1s,baz=336,slow=38
YBH   Yreka Blue Hor     84.32  22   eP     P      22 43 15.2 +0.4
      comp=Z,4.7nm,0.9s
YBH   Yreka Blue Hor     84.32  22   eP     P      22 43 15.2 +0.4
YBH                                   pmax   pmax
      comp=Z,5.0nm,0.9s
G43A  Wallace            84.38 356    P     P      22 43 13.9 -1.0
      baz=3.2
G42A  Mountain           84.42 357    P     P      22 43 13.9 -1.2
      baz=2.7
G39A  Holcombe           84.44 359    P     P      22 43 13.9 -1.3
      baz=0.9
G40A  Rib Lake           84.44 358    P     P      22 43 13.9 -1.3
      baz=1.6
M04C  Macdoel            84.48  21    P     P      22 43 15.7 +0.1
      baz=342
G38A  Ridgeland          84.56 359    P     P      22 43 14.8 -1.0
      baz=0.5
WVOR  Wild Horse Val     84.57  19   eP     P      22 43 16.5 +0.5
M02C  Callahan           84.61  22    P     P      22 43 16.3  0.0
      baz=341
ASAR  Alice Springs      84.63 138    P     P      22 43 15.2 -1.1
      comp=Z,2.4nm,0.7s,baz=334,slow=5.5,SNR=19
MOD   Modoc Plateau      84.72  20   eP     P      22 43 17.7 +0.8
      comp=Z,15nm,0.8s
H35A  Sunnyside Ranc     85.02   2    P     P      22 43 17.7 -0.4
      baz=359
H39A  Augusta            85.05 359    P     P      22 43 17.7 -0.5
      baz=0.9
H38A  Maiden Rock        85.06 360    P     P      22 43 17.1 -1.3
      baz=0.2
H41A  Junction City      85.08 358    P     P      22 43 17.3 -1.2
      baz=1.9
H40A  Chili              85.09 358    P     P      22 43 17.2 -1.3
      baz=1.4
RSSD  Black Hills        85.10   8    P     P      22 43 17.9 -0.9
      baz=353
RSSD  Black Hills        85.10   8   eP     P      22 43 18.7 -0.1
      comp=Z,16nm,0.9s
RSSD  Black Hills        85.10   8   eP     P      22 43 18.7 -0.1
RSSD                                  pmax   pmax
      comp=Z,17nm,0.9s
H36A  Jessenland, He     85.15   1    P     P      22 43 17.2 -1.6
      baz=359
H37A  Dierke Farm, C     85.15   0    P     P      22 43 18.3 -0.5
      baz=360
HRV   Adam Dziewonsk     85.42 345    P     P      22 43 20.9 +0.8
      baz=13
TRY   Troy               85.54 346   eP     P      22 43 22.3 +1.6
      comp=Z,15nm,1.1s
I38A  Scanlan Farm,      85.69 360    P     P      22 43 20.8 -0.7
      baz=0.2
BW06  Boulder Array      85.81  12    P     P      22 43 21.3 -1.1
      baz=349
PDAR  Pinedale Array     85.81  12    P     P      22 43 21.1 -1.3
      comp=Z,1.3nm,0.5s,baz=47,slow=3.1,SNR=15
PDAR                                  LR     LR     23 27 50.8
      comp=Z,144nm,18.0s,baz=359,slow=40
I40A  Norwalk            85.83 359    P     P      22 43 21.0 -1.2
      baz=1.3
ECSD  EROS Data Cent     85.94   3    P     P      22 43 21.5 -1.3
      baz=358,SNR=12
ECSD  EROS Data Cent     85.94   3   eP     P      22 43 22.1 -0.7
      comp=Z,14nm,1.0s
DBIC  Dimbokro           86.29 276    P     P      22 43 23.9 -0.9
      comp=Z,2.4nm,0.6s,baz=351,slow=6.6,SNR=4.7
J40A  Soldiers Grove     86.32 359    P     P      22 43 23.3 -1.4
      baz=1.2
J41A  Loganville         86.34 358    P     P      22 43 23.4 -1.4
      baz=1.7,SNR=5.3
J42A  Columbus           86.37 357    P     P      22 43 23.9 -1.0
      baz=2.2
BINY  Binghamton         86.39 348    P     P      22 43 24.3 -0.7
      baz=10
BINY  Binghamton         86.39 348   eP     P      22 43 25.6 +0.5
      comp=Z,16nm,1.0s
J36A  Seneca 1, Swea     86.39   1    P     P      22 43 23.8 -1.2
      baz=359
J39A  Decorah            86.39 359    P     P      22 43 23.7 -1.3
      baz=0.6,SNR=5.9
TIC   Toumodi            86.41 276   eP     P      22 43 25.4 -0.1
J38A  Wedel Dairy, R     86.42 360    P     P      22 43 24.0 -1.1
      baz=0.1
J37A  Redenius Farm,     86.42   1    P     P      22 43 24.2 -0.9
      baz=359,SNR=5.4
KIC   Kosan Boka         86.45 276   eP     P      22 43 25.5 -0.2
      comp=Z,60nm,1.5s
HWUT  Hardware Ranch     86.65  14   eP     P      22 43 26.2 -0.3
      comp=Z,10nm,0.8s
LIC   Lamto              86.73 276   eP     P      22 43 27.9 +0.8
      comp=Z,53nm,1.7s
JFWS  Jewell Farm        86.80 358    P     P      22 43 25.7 -1.3
      baz=1.5,SNR=9.7
JFWS  Jewell Farm        86.80 358   eP     P      22 43 26.1 -0.9
      comp=Z,39nm,0.9s
JFWS  Jewell Farm        86.80 358   eP     P      22 43 26.1 -0.9
JFWS                                  pmax   pmax
      comp=Z,39nm,0.9s
K42A  Prairie Point,     86.91 358    P     P      22 43 26.3 -1.3
      baz=2.1
K43A  Burlington         86.95 357    P     P      22 43 26.5 -1.3
      baz=2.8
K37A  Belmond            86.96   1    P     P      22 43 26.5 -1.3
      baz=359
K40A  Colesburg          87.03 359    P     P      22 43 26.7 -1.4
      baz=1.0,SNR=13
K39A  Oelwein            87.03 359    P     P      22 43 26.2 -1.9
      baz=0.5,SNR=7.9
K36A  Gilmore City       87.08   1    P     P      22 43 27.4 -1.0
      baz=359,SNR=5.5
K41A  Shullsburg         87.10 358    P     P      22 43 27.0 -1.4
      baz=1.5,SNR=6.3
NWAO  Narrogin (SRO)     87.31 155    LR     LR     23 25 58.7
      comp=Z,165nm,19.2s,baz=164,slow=38
L43A  Garden Prairie     87.49 357    P     P      22 43 29.0 -1.4
      baz=2.5
L48A  N Adams            87.51 354    P     P      22 43 29.2 -1.3
      baz=5.2
M54A  Oil Creek Stat     87.52 350    P     P      22 43 29.4 -1.1
      baz=8.2
L38A  Oak Wood Farm,     87.59   0    P     P      22 43 29.6 -1.2
      baz=360,SNR=8.1
L37A  Phoenix Point,     87.60   1    P     P      22 43 29.5 -1.3
      baz=359
L39A  Vinton             87.61 360    P     P      22 43 29.4 -1.5
      baz=0.4,SNR=6.0
L36A  Harm Buss Farm     87.62   1    P     P      22 43 29.9 -1.1
      baz=359
N59A  State Game Lan     87.62 347    P     P      22 43 30.3 -0.7
      baz=11
L41A  Preston            87.64 358    P     P      22 43 29.6 -1.4
      baz=1.4
L40A  Anamosa            87.66 359    P     P      22 43 29.8 -1.3
      baz=0.9
L42A  Oliver, Polo       87.69 358    P     P      22 43 29.9 -1.4
      baz=1.9
SCIA  State Center       87.83   0    P     P      22 43 30.9 -1.1
      baz=360
DUG   Dugway, Tooele     87.83  15    P     P      22 43 32.4 +0.2
      baz=347,SNR=17
DUG   Dugway, Tooele     87.83  15   eP     P      22 43 32.4 +0.2
      comp=Z,17nm,1.0s
DUG   Dugway, Tooele     87.83  15   eP     P      22 43 32.4 +0.2
DUG                                   pmax   pmax
      comp=Z,17nm,1.0s
M49A  Liberty Center     87.94 353    P     P      22 43 31.7 -0.9
      baz=5.5
M48A  Edgerton           87.99 354    P     P      22 43 32.5 -0.2
      baz=5.0
N23A  Red Feather La     88.10  10    P     P      22 43 33.4 -0.3
      baz=352,SNR=6.2
N54A  Moraine State      88.10 350    P     P      22 43 32.6 -0.7
      baz=8.0
M46A  Old House Fiel     88.16 355    P     P      22 43 32.8 -0.8
      baz=4.0
SSPA  Standing Stone     88.18 349    P     P      22 43 32.9 -0.8
      baz=9.3
M43A  Waltham Townsh     88.24 357    P     P      22 43 32.9 -1.0
      baz=2.4
M39A  Webster            88.25 360    P     P      22 43 32.8 -1.2
      baz=0.3
M44A  Midewin, Midew     88.26 357    P     P      22 43 33.2 -0.8
      baz=2.9
M36A  Felix, Anita       88.26   2    P     P      22 43 33.0 -1.1
      baz=359
M38A  Pleasantville      88.31   0    P     P      22 43 33.1 -1.1
      baz=360,SNR=9.4
M37A  Trindle Farm,      88.32   1    P     P      22 43 33.7 -0.6
      baz=359
M40A  Post Highland      88.32 359    P     P      22 43 32.8 -1.5
      baz=0.7
M41A  Milan              88.34 358    P     P      22 43 33.2 -1.2
      baz=1.3
OGNE  Ogallala           88.42   7    P     P      22 43 34.0 -1.0
      baz=354
NVAR  Mina Array Bea     88.48  20    P     P      22 43 35.6 +0.2
      comp=Z,5.0nm,0.9s,baz=334,slow=3.5,SNR=29
NVAR                                  LR     LR     23 26 37.5
      comp=Z,79nm,20.9s,baz=30,slow=38
O20A  White River Ci     88.57  12    P     P      22 43 35.6 -0.2
      baz=350,SNR=8.1
N50A  Nevada             88.58 353    P     P      22 43 35.2 -0.4
      baz=6.0
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O56A	Blue Knob Stat	88.62	349	P	P	22 43 35.2	-0.6
	baz=8.9						
N46A	Monticello	88.69	356	P	P	22 43 35.6	-0.4
	baz=3.8						
N43A	Stutzman Famil	88.74	357	P	P	22 43 35.8	-0.5
	baz=2.2						
N45A	Kentland	88.77	356	P	P	22 43 35.9	-0.5
	baz=3.3						
N40A	Mertquake, Sal	88.84	359	P	P	22 43 35.7	-1.0
	baz=0.7						
N44A	Piper City	88.85	357	P	P	22 43 35.8	-1.0
	baz=2.9						
N39A	Derby Farms, D	88.86	360	P	P	22 43 35.7	-1.1
	baz=0.1						
N42A	Yates City	88.88	358	P	P	22 43 36.6	-0.4
	baz=1.7						
N36A	Muff Farm, Cla	88.89	2	P	P	22 43 36.6	-0.5
	baz=358						
N37A	Lee Faris, Mou	88.96	1	P	P	22 43 36.5	-0.9
	baz=359						
N41A	Harden Midland	89.01	359	P	P	22 43 36.5	-1.1
	baz=1.1,SNR=5.0						
R11A	Troy Canyon, C	89.12	18	P	P	22 43 37.6	-0.8
	baz=346						
SFIN	Lafayette	89.22	356	P	P	22 43 37.6	-0.9
	baz=3.5						
O48A	Farmland	89.24	354	P	P	22 43 37.4	-1.3
	baz=4.8						
O50A	Cable	89.24	353	P	P	22 43 37.3	-1.4
	baz=5.7						
O49A	Covington	89.25	354	P	P	22 43 37.5	-1.2
	baz=5.3						
O47A	Sheridan	89.32	355	P	P	22 43 38.0	-1.1
	baz=4.1						
O45A	Potomac	89.38	356	P	P	22 43 38.4	-1.0
	baz=3.1						
O44A	Mansfield	89.50	357	P	P	22 43 39.2	-0.7
	baz=2.7						
O41A	Passleys Farm,	89.60	359	P	P	22 43 39.1	-1.2
	baz=1.1						
O38A	Galt	89.61	1	P	P	22 43 39.4	-1.0
	baz=360,SNR=5.5						
O40A	La Belle	89.61	359	P	P	22 43 39.3	-1.0
	baz=0.5						
P50A	Jamestown	89.79	353	P	P	22 43 39.9	-1.4
	baz=5.6						
P49A	Miami Univ. Ec	89.93	354	P	P	22 43 40.6	-1.3
	baz=5.0						
P46A	Rosedale	89.99	356	P	P	22 43 41.0	-1.2
	baz=3.5						
P48A	Milroy	90.05	354	P	P	22 43 41.1	-1.4
	baz=4.6						
P45A	Graceland, Par	90.10	356	P	P	22 43 42.0	-0.7
	baz=3.1						
P42A	Winchester	90.12	358	P	P	22 43 41.6	-1.1
	baz=1.5						
P40A	Paris	90.20	360	P	P	22 43 42.6	-0.6
	baz=0.4						
Q51A	Peebles	90.33	353	P	P	22 43 43.3	-0.5
	baz=5.9						
TPNV	Topopah Spring	90.34	19	P	P	22 43 43.4	-0.7
	baz=345						
Q49A	Aurora	90.47	354	P	P	22 43 43.7	-0.7
	baz=4.9						
Q50A	Georgetown	90.56	353	P	P	22 43 43.7	-1.2
	baz=5.5						
Q48A	North Vernon	90.59	355	P	P	22 43 43.8	-1.2
	baz=4.4						
Q39A	Willow Grove F	90.69	0	P	P	22 43 44.7	-0.7
	baz=360						
Q40A	Laux Farm, Aux	90.73	360	P	P	22 43 45.4	-0.3
	baz=0.4						
ISA	Isabella, Lake	91.09	21	P	P	22 43 46.8	-0.7
	baz=344						
S22A	4UR Ranch, Cre	91.10	11	P	P	22 43 47.1	-0.7
	baz=351,SNR=6.6						
R49A	Shelbyville	91.19	354	P	P	22 43 47.3	-0.5
	baz=4.7						
SDCO	Great Sand Dun	91.26	10	P	P	22 43 47.4	-1.1
	baz=352,SNR=6.7						
SDCO	Great Sand Dun	91.26	10	*e*P	P	22 43 48.0	-0.5
	comp=Z,5.1nm,1.1s						
R47A	Wooly Knot Far	91.27	355	P	P	22 43 47.2	-1.0
	baz=3.9						
WCI	Wyandotte Cave	91.32	355	P	P	22 43 46.9	-1.5
	baz=4.0						
R45A	Skylar, Fairfi	91.35	357	P	P	22 43 47.5	-1.1
	baz=2.8						
R39A	Chumby, Stover	91.42	0	P	P	22 43 47.6	-1.3
	baz=360						
R43A	Red Bud	91.42	358	P	P	22 43 48.5	-0.3
	baz=1.7						
R41A	Rosebud	91.42	359	P	P	22 43 47.4	-1.5
	baz=0.8						
R40A	Maddies Statio	91.44	360	P	P	22 43 47.4	-1.5
	baz=0.2						
LRMC	Laurel Mtn Rad	91.45	20	P	P	22 43 48.6	-0.6
	baz=344						
PKM	Mcpherson Peak	91.53	22	P	P	22 43 48.5	-1.2
	baz=343						
R38A	Fenwick Farm,	91.54	1	P	P	22 43 48.0	-1.4
	baz=359						
S51A	Beattyville	91.73	353	P	P	22 43 49.8	-0.5
	baz=5.7						
S50A	Richmond	91.75	353	P	P	22 43 49.1	-1.3
	baz=5.2						
S48A	Wiedeman Farm,	91.88	355	P	P	22 43 50.1	-0.9
	baz=4.2						
T25A	Trinidad	91.98	9	P	P	22 43 50.9	-0.8
	baz=353						
S39A	Bolivar	92.04	1	P	P	22 43 50.5	-1.3
	baz=360						
S38A	Stockton	92.09	1	P	P	22 43 50.7	-1.3
	baz=359						
S40A	Lebanon	92.13	360	P	P	22 43 51.0	-1.2
	baz=0.1						
S41A	Jillco Farms,	92.14	359	P	P	22 43 50.9	-1.3
	baz=0.6						
T49A	Edmonton	92.40	354	P	P	22 43 53.0	-0.4
	baz=4.5						
T51A	Gray	92.42	353	P	P	22 43 52.1	-1.4
	baz=5.5						
T50A	Nancy	92.44	354	P	P	22 43 52.1	-1.5
	baz=5.0						
T48A	Bowling Green	92.44	355	P	P	22 43 52.7	-0.9
	baz=4.0						
TSUM	Tsumeb	92.52	243	LR	LR	23 31 01.2	
	comp=Z,146nm,19.3s,baz=32,slow=39						
GMRC	Granite Mounta	92.55	19	P	P	22 43 53.9	-0.5
	baz=346						
T47A	Sharon Grove	92.60	356	P	P	22 43 53.5	-0.9
	baz=3.5						
T43A	Greenville	92.62	358	P	P	22 43 52.9	-1.5
	baz=1.5						
WUAZ	Wupatki	92.63	15	*e*P	P	22 43 55.3	+0.5
	comp=Z,6.4nm,0.9s						
T39A	Clever	92.70	1	P	P	22 43 54.2	-0.7
	baz=360						
U53A	Fall Branch	92.91	352	P	P	22 43 54.4	-1.4
	baz=6.4						
U52A	Thorn Hill	92.95	353	P	P	22 43 54.8	-1.1
	baz=5.9						
U49A	Red Boiling Sp	93.00	354	P	P	22 43 55.6	-0.5
	baz=4.4						
U51A	La Follette	93.01	353	P	P	22 43 55.7	-0.6
	baz=5.5						
U50A	Jamestown	93.04	354	P	P	22 43 55.8	-0.6
	baz=5.0						
U48A	Cassie Pea, Po	93.05	355	P	P	22 43 55.5	-0.9
	baz=3.9						
U47A	Clarksville	93.16	356	P	P	22 43 56.4	-0.5
	baz=3.4						
BELC	Belle Mtn. Jos	93.23	19	P	P	22 43 57.9	+0.4
	baz=345						
IRM	Iron Mountain	93.26	19	P	P	22 43 57.9	+0.4
	baz=346						
U39A	Green Forest	93.34	1	P	P	22 43 56.9	-0.9
	baz=360						
U40A	Yellville	93.37	0	P	P	22 43 57.5	-0.4
	baz=360						
U41A	Viola	93.38	359	P	P	22 43 57.5	-0.4
	baz=0.5						
WVT	Waverly	93.49	356	P	P	22 43 57.6	-0.8
	baz=3.1						
V52A	Sevierville	93.51	353	P	P	22 43 58.4	-0.2
	baz=5.7						
V51A	Loudon	93.61	353	P	P	22 43 58.9	-0.1
	baz=5.3						
V53A	Saluda	93.62	352	P	P	22 43 58.7	-0.4
	baz=6.2						
TKL	Tuckaleechee C	93.71	353	P	P	22 43 59.8	+0.3
	comp=Z,2.1nm,0.8s,baz=202,slow=9.5,SNR=2.2						
TKL				LR	LR	23 28 11.6	
	comp=Z,234nm,20.0s,baz=9.5,slow=37						
V50A	Pikevile	93.79	354	P	P	22 43 59.2	-0.6
	baz=4.8						
V46A	Holladay	93.83	356	P	P	22 43 59.5	-0.5
	baz=2.9						
ANMO	Albuquerque	93.91	11	P	P	22 44 01.5	+0.8
	comp=Z,3.4nm,0.9s,baz=339,slow=3.1,SNR=8.6						
ANMO				LR	LR	23 32 25.7	
	comp=Z,190nm,18.4s,baz=356,slow=40						
ANMO	Albuquerque	93.91	11	P	P	22 44 00.8	+0.1
	baz=351						
ANMO	Albuquerque	93.91	11	*e*P	P	22 44 01.3	+0.6
	comp=Z,2.6nm,0.7s						
ANMO	Albuquerque	93.91	11	*ce*P	P	22 44 00.4	-0.3
ANMO				pmax	pmax		
	comp=Z,4.0nm,1.0s						
TASM	ASL Pad, Albuq	93.91	11	P	P	22 44 00.7	+0.1
	baz=351						
TASL	Snake Pit, Alb	93.91	11	P	P	22 44 01.0	+0.3
	baz=351						
V40A	Witts Springs	93.92	0	P	P	22 43 59.6	-0.8
	baz=360						
V41A	Mountainview	93.94	360	P	P	22 43 59.9	-0.6
	baz=0.3						
W51A	Cleveland	94.28	354	P	P	22 44 00.8	-1.3
	baz=5.0						
W49A	Belvidere	94.42	355	P	P	22 44 02.1	-0.6
	baz=4.1						
W41B	Gary Mavity, V	94.55	360	P	P	22 44 02.7	-0.7
	baz=0.3						
WMOK	Wichita Mounta	94.81	5	P	P	22 44 04.2	-0.3
	baz=356						
X53A	Estanollee	94.82	352	P	P	22 44 04.2	-0.4
	baz=5.9						
STKA	Stephens Creek	95.10	136	P	P	22 44 03.7	-1.9
	comp=Z,1.9nm,0.6s,baz=335,slow=8.6,SNR=3.7						
OXF	Oxford	95.16	357	P	P	22 44 04.9	-1.2
	baz=2.1						
MSTX	Muleshoe	95.28	8	P	P	22 44 06.2	-0.7
	baz=354						
Y54A	Tignall	95.40	352	P	P	22 44 06.9	-0.3
	baz=6.3						
Y53A	Monroe	95.48	352	P	P	22 44 07.2	-0.5
	baz=5.8						
Y52A	Lilburn	95.51	353	P	P	22 44 07.4	-0.4
	baz=5.5						
Y51A	Rockmart	95.55	354	P	P	22 44 07.5	-0.5
	baz=4.8						
Y49A	Blount Mountai	95.68	355	P	P	22 44 08.1	-0.4
	baz=4.0						
GOGA	Godfrey	95.91	352	P	P	22 44 09.0	-0.6
	baz=5.8						
BOSA	Boshof	96.05	231	LR	LR	23 32 19.1	
	comp=Z,91nm,18.5s,baz=22,slow=38						
Z52A	Williamson	96.21	353	P	P	22 44 10.3	-0.7
	baz=5.2						
Z50A	Ashland	96.25	354	P	P	22 44 09.7	-1.5
	baz=4.3						
251A	Midway	97.37	354	P	P	22 44 15.7	-0.6
	baz=4.6						
TXAR	Lajitas Array	99.78	10	P	Pdif	22 44 26.9	-0.3
	comp=Z,0.2nm,0.3s,baz=39,slow=5.8,SNR=3.2						
TXAR				LR	LR	23 32 11.8	
	comp=Z,114nm,21.4s,baz=0.0,slow=37						
SAML	Samuel	131.81	319	*e*PKPdf	PKPdf	22 49 55.7	-0.5
SAML	Samuel	131.81	319	*e*PKIKP	PKPdf	22 49 55.7	-0.5
VNDA	Vanda	135.70	163	PKP	PKPdf	22 49 59.6	-2.0
	comp=Z,0.7nm,0.7s,baz=6.5,slow=6.0,SNR=4.6						
QSPA	South Pole Qui	140.42	180	PKhKP	PKPpre	22 50 02.9	
	comp=Z,1.2nm,0.6s,baz=264,slow=2.5,SNR=3.2						
CPUP	Villa Florida	143.74	299	PKhKP	PKPpre	22 50 14.0	
	comp=Z,5.1nm,0.8s,baz=41,slow=2.9,SNR=13						
PLCA	Paso Flores	161.71	294	PKP	PKPdf	22 50 43.0	-0.4
	comp=Z,2.0nm,0.9s,baz=14,slow=4.2,SNR=2.6						
PLCA	Paso Flores	161.71	294	PKIKP	PKPdf	22 50 43.0	-0.4

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*IPEC **30** 22:36:34.7±0.2, 49°.82N×18°.58E, h2^{km}±4^{km}, ML1.3/3, Error ellipse: s-maj=1.7km s-min=1.1km az=163.0*
*PRU **30** 22:36:35.4, 49°.85N×18°.53E, h0^{km}*
CSEM 30 22:36:34.5±0.2**, 49°.83N×18°.53E, h1**^{km}**, ML2.0**/6**, Error ellipse: s-maj=5.0km s-min=2.4km az=8.0, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OKC	Ostrava-Krasne	0.25	272	*e*PG	Pg	22 36 40.5	+1.3
OKC				*e*SG	Sg	22 36 44.6	+2.2
	comp=Z,18nm,0.4s						
OKC	Ostrava-Krasne	0.25	272	Pg	Pg	22 36 40.5	+1.3
OKC				Sg	Sg	22 36 44.6	+2.2
	18nm,0.4s						
MORC	Moravsky Berou	0.64	266	*e*Pg	Pg	22 36 47.6	+0.8
	baz=86						
MORC				*e*Sg	Sg	22 36 55.9	+0.8
	5.6nm,0.2s,baz=86						
MORC	Moravsky Berou	0.64	266	*e*PG	Pb	22 36 47.7	-0.8
MORC				*e*SG	Sg	22 36 56.0	+0.9
MORC	Moravsky Berou	0.64	266	*e*Pg	Pg	22 36 47.6	+0.8
	baz=86						
MORC				*e*Sg	Sg	22 36 55.9	+0.8
	5.6nm,0.2s,baz=86						
OJC	Ojcow	0.91	64	*e*Pg	Pg	22 36 51.5	-0.4
OJC				*e*Sg	Sg	22 37 04.6	+1.0
OJC	Ojcow	0.91	64	*e*Pg	Pg	22 36 51.5	-0.4
OJC				*e*Sg	Sg	22 37 04.6	+0.9
LANS	Liptovska Anna	0.92	138	*e*PG	Pg	22 36 52.1	+0.1
LANS				*e*SG	Sg	22 37 04.8	+1.0
LANS	Liptovska Anna	0.92	138	*e*Pg	Pg	22 36 52.1	+0.1
LANS				*e*Sg	Sg	22 37 04.8	+1.0
JAVC	Velka Javorina	1.12	210	*e*Pg	Pb	22 36 56.8	+0.1
	baz=31						
JAVC	Velka Javorina	1.12	210	*e*PG	Pb	22 36 56.8	+0.1
JAVC	Velka Javorina	1.12	210	*e*Pg	Pb	22 36 56.8	+0.1
	baz=31						
KRLC	Kraliky	1.16	283	*e*PG	Pg	22 36 56.6	0.0
KRLC				*e*SG	Sb	22 37 12.7	-0.1
	comp=Z,1.9nm,0.2s						
KRLC	Kraliky	1.16	283	Pg	Pg	22 36 56.6	0.0
KRLC				Sg	Sb	22 37 12.7	-0.1
	1.9nm,0.2s						
NIE	Niedzica	1.22	109	*e*Pg	Pg	22 36 57.8	-0.2
NIE				*e*Sg	Sn	22 37 16.5	+0.5
NIE	Niedzica	1.22	109	*e*Pg	Pg	22 36 57.8	-0.1
NIE				*e*Sg	Sn	22 37 16.5	+0.5
VYHS	Vyhne	1.35	171	*e*PN	Pg	22 36 59.9	-0.5
VYHS				*e*LG	Lg	22 37 18.1	
VYHS	Vyhne	1.35	171	*e*Pn	Pg	22 36 59.9	-0.5
VRAC	Vranov	1.36	248	*e*Pg	Pg	22 37 00.5	-0.1
	baz=68						
VRAC				*e*Sg	Sg	22 37 18.2	0.0
	5.3nm,0.3s,baz=68						
VRAC	Vranov	1.36	248	*e*PG	Pg	22 37 00.6	0.0
VRAC				*e*SG	Sg	22 37 18.2	0.0
VRAC	Vranov	1.36	248	*e*Pg	Pg	22 37 00.5	-0.1
	baz=68						
VRAC				*e*Sg	Sg	22 37 18.2	0.0
	5.3nm,0.3s,baz=68						
DPC	Dobruska-Polom	1.51	291	*e*PG	Pn	22 37 02.8	0.0
DPC				*e*SG	Sb	22 37 23.1	0.0
	comp=Z,2.2nm,0.3s						
DPC	Dobruska-Polom	1.51	291	Pg	Pn	22 37 02.8	0.0
DPC				Sg	Sb	22 37 23.1	0.0
	2.2nm,0.3s						
KRUC	Moravsky	1.59	242	*e*Pg	Pn	22 37 04.0	+0.2
	baz=61						
KRUC				*e*Sg	Sg	22 37 25.4	-0.1
	2.9nm,0.2s,baz=61						
KRUC	Moravsky	1.59	242	*e*PG	Pn	22 37 04.1	+0.3
KRUC				*e*SG	Sg	22 37 25.4	-0.1
KRUC	Moravsky	1.59	242	*e*Pg	Pn	22 37 04.0	+0.2
	baz=61						
KRUC				*e*Sg	Sg	22 37 25.4	-0.1
	2.9nm,0.2s,baz=61						
UPC	Upice	1.75	294	*e*SG	Sg	22 37 31.4	+0.6
UPC	Upice	1.75	294	Sg	Sg	22 37 31.4	+0.6
GOPC	GO Pecny, Ondr	2.42	273	*e*PG	Pg	22 37 21.5	+0.6
GOPC				*e*SG	Sg	22 37 50.8	-1.5
GOPC	GO Pecny, Ondr	2.42	273	Pg	Pg	22 37 21.5	+0.6
GOPC				Sg	Sg	22 37 50.8	-1.5
PRU	Pruhonice	2.58	275	*e*SG	Sg	22 37 56.8	-0.6
PRU	Pruhonice	2.58	275	Sg	Sg	22 37 56.8	-0.6
KHC	Kasperske Hory	3.30	260	*e*SG	Sg	22 38 19.1	-1.4
KHC	Kasperske Hory	3.30	260	Sg	Sg	22 38 19.1	-1.4

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*ISCJB **30** 22:39:12.9±0.5, 39°.03N±0°.02×25°.73E±0°.03, h5^{km}±4^{km}, Error ellipse: s-maj=4.5km s-min=3.5km az=18.4*
*DDA **30** 22:39:12.8, 39°.04N×25°.74E, h7^{km}, Ml2.9*
*ISK **30** 22:39:12.5, 39°.02N×25°.75E, h9^{km}, ML2.5/14*
*CSEM **30** 22:39:13.1±0.2, 39°.03N×25°.73E, h5^{km}, ML2.3, Error ellipse: s-maj=3.6km s-min=3.0km az=84.0*
*ATH **30** 22:39:13.2, 39°.05N×25°.74E, h15^{km}±3^{km}, ML2.3/6, Error ellipse: s-maj=3.3km s-min=1.0km az=80.0*
ISC 30 22:39:13.3±0.9**, 39°.03N**±0°.02×**25°.74E**±0°.02**, h13**^{km}±7^{km}**, n56, σ0^{s}.58**/78**, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIGR	SIGRI	0.20	27	PG	Pg	22 39 17.6	-0.2
SIGR				SG	Sg	22 39 20.8	-0.1
SIGR	SIGRI	0.20	27	P	Pg	22 39 17.7	-0.2
SIGR				S	Sg	22 39 21.4	+0.5
SIGR				AML	AML	22 39 21.8	
	comp=N,1975µm,0.3s						
SIGR				AML	AML	22 39 21.9	
	comp=E,1365µm,0.2s						
SIGR	SIGRI	0.20	27	P	Pg	22 39 17.6	-0.2
SIGR				*e*Sg	Sg	22 39 20.8	-0.1
SIGR				S		22 39 21.1	
PRK	Paraskevi	0.47	62	P	Pg	22 39 22.3	-0.2
PRK				S	Sg	22 39 28.9	+0.1
PRK				AML	AML	22 39 30.8	
	comp=N,473µm,0.3s						
PRK				AML	AML	22 39 33.9	
	comp=E,484µm,0.3s						
PRK	Paraskevi	0.47	62	P	Pg	22 39 22.3	-0.2
PRK				S	Sg	22 39 28.8	+0.1
PSRA	Psara	0.51	196	P	Pb	22 39 24.0	0.0
PSRA				AML	AML	22 39 31.9	
	comp=E,2414µm,0.2s						
PSRA				AML	AML	22 39 32.3	
	comp=N,1956µm,0.1s						
PSRA				S	Sb	22 39 32.4	+1.1
PSRA	Psara	0.51	196	P	Pb	22 39 23.8	-0.2
GPNR	Gulpinar-Canak	0.52	36	PG	Pg	22 39 23.2	-0.4
GPNR				SG	Sb	22 39 31.2	-0.6
CHOS	Chios island	0.69	159	PG	Pg	22 39 26.1	-0.6
CHOS				SG	Sg	22 39 35.9	+0.1
CHOS	Chios island	0.69	159	P	Pg	22 39 26.4	-0.4
CHOS				S	Sg	22 39 35.2	-0.7
CHOS				AML	AML	22 39 38.6	
	comp=N,532µm,0.3s						
CHOS				AML	AML	22 39 39.3	
	comp=E,965µm,0.2s						
CHOS	Chios island	0.69	159	*e*Pg	Pg	22 39 26.1	-0.6
CHOS	Chios island	0.69	159	P	Pg	22 39 26.6	-0.1
CHOS				S	Sg	22 39 35.9	+0.1
KRBN	Karaburun	0.77	124	PG	Pg	22 39 27.7	-0.6
KRBN	Karaburun	0.77	124	*e*Pg	Pg	22 39 27.7	-0.6
AYVA	Ayvalik	0.79	69	*i* P	Pb	22 39 28.6	-0.2
AYVA				*i* S	Sb	22 39 39.4	-0.1
FOCM	Foˆ§a	0.84	112	PG	Pg	22 39 28.8	-0.7
FOCM	Foˆ§a	0.84	112	*e*Pg	Pg	22 39 28.8	-0.7
BOZC	Bozcaada	0.84	17	PG	Pg	22 39 28.8	-0.9
BOZC	Bozcaada	0.84	17	*i* P	Pg	22 39 28.7	-1.0
BOZC				*i* S	Sb	22 39 41.3	+0.2
BOZC	Bozcaada	0.84	17	*e*Pg	Pg	22 39 28.8	-0.9
DKL	Dikili	0.91	87	PG	Pg	22 39 30.3	-0.6
SKY	Skiros Island	0.94	261	P	Pg	22 39 30.9	-0.6
SKY				S	Sb	22 39 44.1	+0.3
SKY				AML	AML	22 39 46.4	
	comp=N,358µm,0.2s						
SKY				AML	AML	22 39 46.8	
	comp=E,287µm,0.2s						
SKY	Skiros Island	0.94	261	P	Pg	22 39 31.0	-0.4
SKY				S	Sb	22 39 44.1	+0.3
BAYC	CANAKKALE_Bayr	0.95	41	*i* P	Pg	22 39 30.7	-0.9
BAYC				*i* S	Sb	22 39 44.5	+0.5
BAYC	CANAKKALE_Bayr	0.95	41	P	Pg	22 39 30.7	-0.9
BAYC				S	Sb	22 39 44.5	+0.5
URLA	Izmir	0.95	135	PG	Pg	22 39 30.9	-0.7
URLA	Izmir	0.95	135	*i* P	Pg	22 39 30.9	-0.7
URLA				*i* S	Sb	22 39 45.2	+1.1
URLA	Izmir	0.95	135	P	Pg	22 39 30.9	-0.7
URLA				S	Sb	22 39 45.2	+1.1
LIA	Limnos Island	0.97	334	P	Pg	22 39 31.2	-0.7
LIA				S	Sg	22 39 43.6	-1.0
LIA				AML	AML	22 39 45.3	
	comp=E,307µm,0.4s						
LIA				AML	AML	22 39 46.2	
	comp=N,341µm,0.4s						
LIA	Limnos Island	0.97	334	P	Pg	22 39 31.3	-0.7
LIA				S	Sg	22 39 44.1	-0.5
BLCB	Balcova	1.21	122	PN	Pb	22 39 35.5	-0.5
BLCB	Balcova	1.21	122	*e*Pn	Pb	22 39 35.5	-0.5
AOS	Alonnisos	1.45	276	PN	Pn	22 39 39.8	+0.6
AOS	Alonnisos	1.45	276	*e*Pn	Pn	22 39 39.8	+0.6
GELI	Tayfur-Gelibol	1.48	22	PN	Pn	22 39 39.9	+0.3
GELI	Tayfur-Gelibol	1.48	22	*e*Pn	Pn	22 39 39.9	+0.3
LPK	Lapseki	1.55	30	PN	Pn	22 39 41.2	+0.6
LPK	Lapseki	1.55	30	*e*Pn	Pn	22 39 41.2	+0.6
STEP	BALIKESIR_Sava	1.58	77	*i* P	Pb	22 39 42.7	+0.4
STEP				*i* S	Sg	22 40 04.1	0.0
STEP	BALIKESIR_Sava	1.58	77	P	Pb	22 39 42.7	+0.4
STEP				S	Sg	22 40 04.1	0.0
ERIK	Erikli-Kesan	1.74	20	PN	Pn	22 39 43.9	+0.7
ERIK	Erikli-Kesan	1.74	20	*e*Pn	Pn	22 39 43.9	+0.7
BALB	Balikesir	1.77	69	PN	Pn	22 39 43.9	+0.3
BALB	Balikesir	1.77	69	*e*Pn	Pn	22 39 43.9	+0.3
ALN	Alexandroupoli	1.88	7	PN	Pn	22 39 45.8	+0.7
ALN	Alexandroupoli	1.88	7	P	Pb	22 39 47.7	+0.3
ALN	Alexandroupoli	1.88	7	*e*Pn	Pn	22 39 45.8	+0.7
ALN	Alexandroupoli	1.88	7	P	Pb	22 39 47.3	-0.1
RKY	Sarkoy-Tekirda	1.99	33	PN	Pn	22 39 47.4	+0.7
RKY	Sarkoy-Tekirda	1.99	33	*e*Pn	Pn	22 39 47.4	+0.7
AYDB	Zeytinkoy-Aydi	2.01	122	PN	Pn	22 39 46.5	-0.5
AYDB	Zeytinkoy-Aydi	2.01	122	*e*Pn	Pn	22 39 46.5	-0.5
EDC	Edincik	2.10	51	PN	Pn	22 39 48.9	+0.8
EDC	Edincik	2.10	51	*e*Pn	Pn	22 39 48.9	+0.8
DURS	Dursunbey	2.20	74	*i* P	Pb	22 39 52.6	-0.3
DURS	Dursunbey	2.20	74	P	Pb	22 39 52.6	-0.3

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*IDC **30** 22:50:11.4±1.2, 3°.26S×143°.02E, h0^{km}, mb4.2/9, mb1 4.4/10, mb1mx3.9/54, mbtmp4.2/10, ML4.1/1, MS3.6/3, Ms1 3.6/3, ms1mx2.9/48, Error ellipse: s-maj=39.9km s-min=18.3km az=87.0*
*ISCJB **30** 22:50:12.9±0.6, 3°.30S±0°.08×143°.0E±0°.1, h22^{km}, mb4.1/11, MS3.5/3, Error ellipse: s-maj=15.1km s-min=11.1km az=166.9*
*NEIC **30** 22:50:16.5±0.4, 3°.31S×143°.03E, h35^{km}, mb4.4/5, Error ellipse: s-maj=10.5km s-min=7.8km az=77.0*
ISC 30 22:50:14.7±0.8**, 3°.3S**±0°.1×**143°.0E**±0°.1**, h22**^{km}**, n24, σ0^{s}.56**/17**, mb4.1**/11**, MS3.4**/3**, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
HNR	Honiara	17.88	111	Pn	Pn	22 54 22.1	-0.1
	10nm,0.3s						
WRAB	Tennant Creek	18.60	206	*e*P	Pn	22 54 31.3	+0.3
	17nm,0.9s						
WRA	Warramunga Arr	18.61	206	P	P	22 54 29.4	-1.4
	0.6nm,0.3s,baz=25,slow=13,SNR=20						
BATI	Baumata	20.42	249	P	P	22 54 51.0	+0.3
	52nm,0.8s,baz=179,slow=2.3,SNR=6.9						
ASAR	Alice Springs	22.11	203	P	P	22 55 08.1	-0.7
	3.4nm,0.8s,baz=28,slow=9.6,SNR=18						
ASAR				LR	LR	23 05 09.5	
	comp=Z,69nm,18.4s,baz=34,slow=41						
FITZ	Fitzroy Crossi	22.52	228	P	P	22 55 13.2	0.0
	9.7nm,0.9s,baz=16,slow=7.3,SNR=13						
FITZ				LR	LR	23 03 47.1	
	comp=Z,140nm,21.5s,baz=32,slow=36						
STKA	Stephens Creek	28.48	183	P	P	22 56 09.2	+0.8
	3.1nm,0.7s,baz=356,slow=9.0,SNR=8.0						
H11S3	WAKE ISLAND Hy	31.79	46	T	T	23 30 06.5	
	baz=229,slow=76,SNR=247						
H11S2	WAKE ISLAND Hy	31.80	46	T	T	23 30 07.1	
	baz=229,slow=76,SNR=208						
H11S1	WAKE ISLAND Hy	31.81	46	T	T	23 30 08.4	

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
	baz=229,slow=76,SNR=189						
H11N1	WAKE ISLAND Hy	32.74	45	T	T	23 31 31.0	
	baz=228,slow=76,SNR=7.3						
H11N2	WAKE ISLAND Hy	32.75	45	T	T	23 31 32.0	
	baz=228,slow=76,SNR=7.4						
H11N3	WAKE ISLAND Hy	32.75	45	T	T	23 31 31.5	
	baz=228,slow=76,SNR=5.5						
QIZ	Qiongzhong	39.47	305	P	P	22 57 44.0	+0.2
	20nm,1.3s						
TAU	Tasmania Unive	39.65	175	P	P	22 57 44.6	-0.3
	24nm,1.6s						
CMAR	Chiang Mai Arr	48.49	298	P	P	22 58 56.2	-0.1
	2.9nm,1.0s,baz=113,slow=6.9,SNR=7.1						
ULN	Ulaanbaatar	59.87	333	P	P	23 00 19.0	+0.1
	0.3nm,0.3s						
MKAR	Makanchi Array	72.90	321	P	P	23 01 42.5	+0.3
	1.3nm,0.8s,baz=103,slow=6.9,SNR=9.5						
ZALV	Zalesovo Beam	74.63	329	P	P	23 01 51.5	-0.7
	1.2nm,0.6s,baz=116,slow=6.8,SNR=5.1						
VNDA	Vanda	74.87	176	P	P	23 01 53.7	+0.5
	0.7nm,0.8s,baz=339,slow=6.9,SNR=4.6						
BVAR	Borovoye Array	82.26	324	P	P	23 02 34.7	+0.3
	1.7nm,0.8s,baz=122,slow=5.4,SNR=9.1						
MAW	Mawson	83.23	202	LR	LR	23 36 39.0	
	comp=Z,69nm,18.7s,baz=58,slow=34						
KOWA	Kowa	145.65	291	PKPbc	PKPab	23 09 52.7	-0.3
	3.6nm,0.8s,baz=68,slow=5.5,SNR=7.5						
DBIC	Dimbokro	147.84	277	PKPbc	PKPbc	23 09 59.1	-0.1
	4.4nm,0.9s,baz=89,slow=5.6,SNR=3.5						

NNC 30 22:52:48.6±4.6, 50°.85N×86°.94E, h0km, mb3.8, mpv3.4, 7C-7D, Error ellipse: s-maj=38.4km s-min=20.2km az=94.0, Southwestern Siberia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZAA0	Zalesovo Array	3.37	338	⇓Pg	Pb	22 53 46.5	-2.7
	2.8nm,0.4s						
ZAA0				⇑Lg	Lg	22 54 32.7	
	2.6nm,0.3s						
MK31	Makanchi Array	5.09	219	⇑Pn	Pn	22 54 08.4	+2.3
	1.6nm,0.4s,baz=41,slow=13,SNR=9.0						
MK31				⇑Sn	Sn	22 55 07.4	+1.8
	6.1nm,0.6s,baz=51,slow=26,SNR=4.0						
MK31				⇑Lg	Lg	22 55 25.5	
	9.9nm,0.6s,baz=52,slow=28,SNR=4.5						
MAKZ	Makanchi	5.20	221	⇓Pn	Pn	22 54 09.7	+2.0
	2.1nm,0.3s						
MAKZ				⇓Sn	Sn	22 55 04.3	-4.1
	3.2nm,0.5s						
MAKZ				⇓Lg	Lg	22 55 28.9	
	7.0nm,0.5s						
KURK	Kurchatov	5.28	272	⇑Pn	Pn	22 54 11.5	+2.8
	2.2nm,0.5s						
KURK				⇑Sn	Sn	22 55 13.5	+3.3
	5.8nm,0.6s						
KURK				⇓Lg	Lg	22 55 32.2	
	8.2nm,0.7s						
KURBB	Kurchatov Arra	5.35	271	⇓Pn	Pn	22 54 13.0	+3.4
	5.3nm,0.5s						
KURBB				⇓Sn	Sn	22 55 13.0	+1.2
	21nm,0.7s						
KURBB				⇑Lg	Lg	22 55 33.5	
	7.9nm,0.6s						

IDC 30 23:08:49.0±5.3, 7°.73N×137°.50E, h0km, mb3.8/5, mb1 3.8/5, mb1mx3.6/54, mbtmp3.8/5, Error ellipse: s-maj=267.8km s-min=20.9km az=78.0, Western Caroline Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	27.67	186	P	P	23 14 38.6	-0.3
	0.7nm,0.9s,baz=5.5,slow=10,SNR=3.4						
H11S3	WAKE ISLAND Hy	30.32	66	T	T	23 48 10.6	
	baz=253,slow=75,SNR=5.1						
H11S1	WAKE ISLAND Hy	30.34	66	T	T	23 48 11.0	
	baz=253,slow=75,SNR=3.5						
H11S2	WAKE ISLAND Hy	30.34	66	T	T	23 48 10.4	
	baz=253,slow=75,SNR=5.5						
ASAR	Alice Springs	31.40	186	P	P	23 15 12.3	+0.4
	0.4nm,0.6s,baz=18,slow=13,SNR=4.0						
SONM	Songino Array	47.90	332	P	P	23 17 29.8	+0.7
	1.0nm,0.6s,baz=133,slow=8.7,SNR=5.1						
MKAR	Makanchi Array	60.95	320	P	P	23 19 03.9	-0.2
	1.5nm,0.7s,baz=104,slow=8.7,SNR=17						
KURBB	Kurchatov Arra	64.64	323	P	P	23 19 28.1	-0.4
	0.8nm,0.7s,baz=113,slow=5.7,SNR=6.3						

*SJA **30** 23:16:23.1±2.0, 35°.44S×73°.27W, h78km, ML3.2, MW3.2*
*GUC **30** 23:16:32.8±0.5, 35°.07S×72°.28W, h27km±2km, ML3.6*
ISC 30 23:16:27.4±2.2, 34°.95S±0°.06×72°.4W±0°.1, h5km±15km, n12, σ1ˢ.78/19, 1C, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GO05	HualaæØ	0.35	101	⇑eP	Pn	23 16 39.3	0.0
GO05				eS	Sb	23 16 44.7	+2.5
GO05					IAML	23 16 45.4	
	comp=E,13µm,0.2s						
NICH	Los Niches	0.92	94	eP	Pn	23 16 47.7	+0.6
NICH				eS	Sb	23 16 59.1	+0.5
CCHI	Chillan	1.67	172	eP	Pb	23 16 58.4	-0.4
CCHI				eS	Sn	23 17 17.8	-1.4
CCHI					IAML	23 17 26.1	
	comp=N,781nm,0.3s						
ANTU	Antumapu	1.98	47	eP	Pg	23 17 05.9	+0.6
ANTU				eS	Sg	23 17 31.8	+0.8
LMEL	Las Melosas	2.09	59	eP	Pg	23 17 07.0	-0.5
LMEL				eS	Sb	23 17 33.7	+1.4
LMEL					IAML	23 17 37.4	
	comp=N,741nm,0.2s						
CLCH	Cerro Calan	2.16	45	eP	Pg	23 17 08.6	-0.2
CLCH				eS	Sg	23 17 35.9	-0.8
CLCH					IAML	23 17 45.3	
	comp=N,444nm,0.3s						
AAGR	Agrelo	3.46	59	eP	Pb	23 17 28.9	-0.5
AVIZ	Vizcacheras	3.50	66	eP	Pb	23 17 28.2	-1.8
ARCO	CERRO ARCO	3.53	55	eP	Pb	23 17 30.6	0.0
ARCO					IAML	23 17 51.0	
	comp=Z,24nm,0.3s						
AUSP	Uspallata	3.67	43	eP	Pb	23 17 33.4	+0.4
ASAL	Salagasta	3.75	52	eP	Pb	23 17 32.6	-1.7
AMOG	MOGNA	5.15	40	eP	Pn	23 17 48.4	+3.1
AMOG				eS	Sb	23 18 55.9	-4.3

*IDC **30** 23:24:27.6±1.1, 3°.28S×142°.75E, h0km, mb4.0/8, mb1 4.2/9, mb1mx3.9/48, mbtmp4.0/9, ML3.9/1, MS3.5/16, Ms1 3.5/16, ms1mx3.2/48, Error ellipse: s-maj=45.2km s-min=19.0km az=97.0*
*ISCJB **30** 23:24:30.2±0.9, 3°.30S±0°.10×142°.6E±0°.2, h26km, mb3.9/8, MS3.5/12, Error ellipse: s-maj=35.9km s-min=12.9km az=10.3*
*NEIC **30** 23:24:33.1±0.8, 3°.31S×142°.65E, h35km, mb4.1/1, Error ellipse: s-maj=32.9km s-min=12.3km az=100.0*
ISC 30 23:24:31.7±1.1, 3°.3S±0°.1×142°.7E±0°.3, h26km, n26, σ1ˢ.01/10, mb4.0/8, MS3.5/12, Near north coast of New Guinea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUMO	Guam	16.93	7	LR	LR	23 34 57.6	
	comp=Z,67nm,18.1s,baz=200,slow=37						
HNR	Honiara	18.17	110	LR	LR	23 35 29.5	
	comp=Z,140nm,19.2s,baz=285,slow=36						
WRAB	Tennant Creek	18.42	206	eP	Pn	23 28 45.5	0.0
	14nm,1.1s						
WRA	Warramunga Arr	18.43	206	P	Pn	23 28 45.5	-0.1
	0.4nm,0.3s,baz=34,slow=12,SNR=12						
WRA				LR	LR	23 36 34.8	
	comp=Z,302nm,21.2s,baz=15,slow=39						
DAV	Davao City (W)	19.96	301	LR	LR	23 36 55.6	
	comp=Z,76nm,18.9s,baz=172,slow=37						
ASAR	Alice Springs	21.95	202	P	P	23 29 24.7	+1.1
	2.3nm,0.9s,baz=24,slow=9.9,SNR=10						
ASAR				LR	LR	23 38 45.9	
	comp=Z,216nm,18.5s,baz=27,slow=39						
FITZ	Fitzroy Crossi	22.26	227	P	P	23 29 25.9	-1.1
	7.3nm,0.9s,baz=43,slow=4.4,SNR=2.4						
FITZ				LR	LR	23 38 37.9	
	comp=Z,190nm,19.6s,baz=52,slow=38						
STKA	Stephens Creek	28.43	182	P	P	23 30 24.2	-0.3
	2.1nm,0.7s,baz=352,slow=12,SNR=5.1						
STKA				LR	LR	23 42 29.9	
	comp=Z,104nm,18.2s,baz=13,slow=38						
DZM	Mont Dzumac	29.64	131	LR	LR	23 41 28.1	
	comp=Z,149nm,18.2s,baz=264,slow=34						
H11S3	WAKE ISLAND Hy	32.05	47	T	T	00 04 18.3	
	baz=229,slow=76,SNR=298						
H11S2	WAKE ISLAND Hy	32.07	47	T	T	00 04 17.2	
	baz=229,slow=76,SNR=243						
H11S1	WAKE ISLAND Hy	32.07	47	T	T	00 04 20.5	
	baz=229,slow=76,SNR=228						
H11N1	WAKE ISLAND Hy	32.99	45	T	T	00 05 25.9	
	baz=228,slow=76,SNR=13						
H11N2	WAKE ISLAND Hy	33.01	45	T	T	00 05 26.0	
	baz=228,slow=76,SNR=16						
H11N3	WAKE ISLAND Hy	33.01	45	T	T	00 05 40.7	
	baz=228,slow=76,SNR=6.8						
LEM	Lembang	35.12	263	LR	LR	23 47 07.0	
	comp=Z,105nm,18.8s,baz=76,slow=39						
NWAO	Narrogin (SRO)	37.90	216	LR	LR	23 48 33.9	
	comp=Z,118nm,19.7s,baz=283,slow=38						
AFI	Afiamalu	46.13	106	LR	LR	23 49 59.3	
	comp=Z,56nm,20.4s,baz=272,slow=33						
CMAR	Chiang Mai Arr	48.22	298	LR	LR	23 54 22.3	
	comp=Z,11nm,19.2s,baz=235,slow=37						
MKAR	Makanchi Array	72.72	321	P	P	23 35 58.0	+0.3
	0.5nm,0.6s,baz=118,slow=7.2,SNR=6.2						
ZALV	Zalesovo Beam	74.49	329	P	P	23 36 06.2	-1.6
	0.6nm,0.5s,baz=191,slow=3.0,SNR=3.6						
ZALV				LR	LR	00 07 37.5	
	comp=Z,19nm,20.6s,baz=61,slow=35						
BVAR	Borovoye Array	82.10	324	P	P	23 36 51.4	+1.4
	1.7nm,0.8s,baz=79,slow=3.1,SNR=4.0						
ILAR	Eielson Array	84.74	24	P	P	23 37 03.0	-0.3
	1.6nm,0.8s,baz=255,slow=5.1,SNR=11						
ILAR				LR	LR	00 10 00.8	
	comp=Z,18nm,20.9s,baz=232,slow=32						
QSPA	South Pole Qui	86.64	180	P	P	23 37 13.0	+0.1
	1.2nm,0.7s,baz=336,slow=10,SNR=4.5						
YBH	Yreka Blue Hor	95.61	49	LR	LR	00 13 21.1	
	comp=Z,20nm,21.6s,baz=327,slow=31						
NVAR	Mina Array Bea	99.09	52	LR	LR	00 15 49.2	
	comp=Z,30nm,19.8s,baz=86,slow=31						

*ISCJB **30** 23:29:12.8±0.5, 33°.31N±0°.02×35°.34E±0°.04, h4km±8km, Error ellipse: s-maj=6.2km s-min=3.0km az=30.2*
*GII **30** 23:29:13.0±0.0, 33°.27N×35°.37E, h3km, MD1.3/2*
*CSEM **30** 23:29:15.8, 33°.35N×35°.46E, h0km, ML2.6*
*GRAL **30** 23:29:15.8±0.3, 33°.35N×35°.46E, h0km±56km, MD2.6*
ISC 30 23:29:13.1±1.0, 33°.31N±0°.03×35°.37E±0°.04, h11km±9km, n24, σ0ˢ.67/40, Jordan-Syria region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KSDI	Kefar Szold	0.27	115	Pg	Pg	23 29 19.0	+0.4
KSDI				Sg	Sg	23 29 23.1	+0.9
HNTI	Hanita	0.28	217	Pg	Pg	23 29 18.3	-0.4
HNTI				Sg	Sg	23 29 22.3	-0.2
MMA0B	Mount Meron ar	0.29	174	Pg	Pg	23 29 18.8	-0.2
MMA0B				Sg	Sb	23 29 24.1	-1.2
NATI	Neve Ativ	0.31	98	Pg	Pg	23 29 19.5	+0.1
NATI				Sg	Sg	23 29 24.4	+0.9
SHBL	Chebaa	0.32	82	eP	Pg	23 29 20.0	+0.4
SHBL				eS	Sg	23 29 23.2	-0.7
SHBL	Chebaa	0.32	82	eP	Pg	23 29 20.0	+0.4
SHBL				eS	Sg	23 29 23.2	-0.7
QRWL	Qaraoun	0.36	47	eP	Pb	23 29 20.6	-1.0
QRWL				eS	Sg	23 29 24.2	-0.9
QRWL	Qaraoun	0.36	47	eP	Pb	23 29 20.6	-1.0
QRWL				eS	Sg	23 29 24.2	-0.9
DQRL	Deir Qamar	0.43	23	eP	Pg	23 29 22.2	+0.5
DQRL				eS	Sg	23 29 27.1	-0.4
DQRL	Deir Qamar	0.43	23	eP	Pg	23 29 22.2	+0.5
DQRL				eS	Sg	23 29 27.1	-0.4
RCY	Rachaya	0.43	64	eP	Pb	23 29 22.0	-1.0
KSHT	Keshet	0.49	131	Pg	Pb	23 29 23.5	-0.3
KSHT				Sg	Sb	23 29 30.4	-0.7
BLGI	Bet Lehem HaGe	0.59	195	Pg	Pg	23 29 24.5	-0.1
BLGI				Sg	Sg	23 29 32.9	+0.6
BHL	Bhannes	0.64	22	eP	Pb	23 29 26.2	-0.3
BHL	Bhannes	0.64	22	eP	Pb	23 29 26.2	-0.3
OFRI	‘Ofer	0.76	205	Pg	Pg	23 29 27.4	-0.3
OFRI				Sg	Sg	23 29 38.7	+1.1
MMLI	Mount Malkishu	0.87	177	Pg	Pg	23 29 29.3	-0.5
MMLI				Sg	Sb	23 29 41.9	+0.1
HMDT	Nahal Hemdat	1.06	173	Pg	Pg	23 29 32.8	-0.7
HMDT				Sg	Sb	23 29 47.8	+0.5
HWQ	Hawqa	1.08	26	eP	Pb	23 29 33.9	-0.1
HWQ	Hawqa	1.08	26	eP	Pb	23 29 33.9	-0.1
SLTI	Sal’it	1.10	195	Pg	Pg	23 29 33.7	-0.5
SLTI				Sg	Sg	23 29 48.7	+0.2
DSI	Dead Sea	1.73	180	Pn	Pn	23 29 43.8	+0.6
AMAZ	Amatzia	1.81	192	Pn	Pn	23 29 45.3	+1.0
YTIR	Yattir	1.95	186	Pn	Pn	23 29 47.3	+1.0

*ISCJB **30** 23:32:38.1±0.6, 15°.54N±0°.06×93°.29W±0°.05, h98km±4km, mb3.9/7, Error ellipse: s-maj=11.2km s-min=6.7km az=26.0*
*IDC **30** 23:32:39.4±2.2, 15°.60N×93°.04W, h92km±24km, mb3.6/7, mb1 3.8/10, mb1mx3.5/53, mbtmp3.9/10, Error ellipse: s-maj=80.0km s-min=18.2km az=44.0*
*MEX **30** 23:32:40.2±0.7, 15°.60N×93°.32W, h98km±6km, MD4.0*
ISC 30 23:32:39.7±0.8, 15°.53N±0°.07×93°.28W±0°.05, h96km±7km, n15, σ1ˢ.67/22, mb4.0/7, Near coast of Chiapas

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PCIG		0.18	17	eP	Pn	23 32 52.6	-0.8
PCIG				eS	Sn	23 33 02.4	-1.1
THIG		1.16	122	eP	Pn	23 33 01.4	-0.2
THIG				eS	Sn	23 33 18.7	+0.7
TGIG		1.25	7	eP	Pn	23 33 01.9	-0.9
TGIG				eS	Sn	23 33 17.6	-2.6
CCIG	Comitan	1.33	56	eP	Pn	23 33 03.1	-0.7
CCIG				eS	Sn	23 33 20.5	-1.5
CMIG	Matias Romero	2.19	315	P	Pn	23 33 14.8	+0.2
	13nm,0.3s,baz=136,slow=10,SNR=164						
CMIG				S	Sn	23 33 39.4	-1.9
	118nm,0.3s,baz=134,slow=11,SNR=18						
HUIG	Huatulco	2.74	275	eP	Pn	23 33 20.5	-1.4
HUIG				i S	Sn	23 33 52.0	-2.4
JTS	JuntasAbangare	9.64	122	P	Pn	23 34 54.6	-1.0
	1.4nm,0.3s,baz=356,slow=14,SNR=4.3						
TXAR	Lajitas Array	16.75	327	P	P	23 36 31.1	+1.9
	0.1nm,0.3s,baz=151,slow=14,SNR=19						
ANMO	Albuquerque	22.67	331	P	P	23 37 34.4	+1.0
	1.3nm,0.5s,baz=149,slow=15,SNR=5.8						
NVAR	Mina Array Bea	31.71	321	P	P	23 38 55.8	+1.1
	1.3nm,0.8s,baz=125,slow=8.9,SNR=6.3						
NVAR				pP	pP	23 39 20.1	+3.8
	2.2nm,0.7s,baz=132,slow=8.8,SNR=13						
YKA	Yellowknife Ar	49.27	347	P	P	23 41 17.4	-1.0
	0.3nm,0.5s,baz=146,slow=7.5,SNR=3.9						
DLBC	Dease Lake	50.76	336	P	P	23 41 31.0	+1.1
	1.9nm,0.6s,baz=194,slow=4.2,SNR=5.3						
BDFB	Brasilia	54.38	123	P	P	23 41 55.5	-1.7
	1.7nm,0.5s,baz=280,slow=6.1,SNR=3.3						
INK	Inuvik	58.63	344	P	P	23 42 26.1	-0.3
	1.0nm,0.5s,baz=121,slow=5.9,SNR=3.5						
ILAR	Eielson Array	60.95	337	P	P	23 42 42.7	+0.2
	0.7nm,0.6s,baz=123,slow=6.5,SNR=7.1						

*IDC **30** 23:59:23.6±2.1, 21°.15S×169°.30E, h0km, mb3.9/4, mb1 4.1/5, mb1mx3.8/46, mbtmp3.8/5, ML2.9/1, MS2.9/3, Ms1 2.9/3, ms1mx2.6/46, Error ellipse: s-maj=119.8km s-min=26.6km az=153.0*
*ISCJB **30** 23:59:27.0±1.7, 21°.0S±0°.6×169°.1E±0°.4, h30km, mb3.8/4, MS2.8/1, Error ellipse: s-maj=100.4km s-min=13.5km az=151.7*
ISC 30 23:59:28.4±1.9, 21°.1S±0°.7×169°.1E±0°.4, h30km, n7, σ1ˢ.55/7, mb3.9/4, Southeast of Loyalty Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	2.68	248	Pn	Pn	00 00 07.9	-1.7
	1.9nm,0.3s,baz=323,slow=23,SNR=17						
DZM				Sn	Sn	00 00 40.7	-0.3
	9.4nm,0.3s,baz=89,slow=20,SNR=7.5						
DZM				LR	LR	00 01 03.1	
	comp=Z,148nm,21.2s,baz=60,slow=35						
AFI	Afiamalu	19.55	72	LR	LR	00 09 49.8	
	comp=Z,54nm,19.2s,baz=284,slow=32						
STKA	Stephens Creek	26.81	241	P	P	00 05 08.1	+2.0
	0.9nm,0.6s,baz=58,slow=9.5,SNR=2.9						
STKA				LR	LR	00 14 21.7	
	comp=Z,25nm,20.2s,baz=31,slow=33						
WRA	Warramunga Arr	32.56	266	P	P	00 05 58.2	+1.0
	0.7nm,0.5s,baz=96,slow=8.2,SNR=6.9						
ASAR	Alice Springs	32.62	259	P	P	00 05 58.5	+0.8
	1.0nm,0.6s,baz=95,slow=9.4,SNR=11						
NVAR	Mina Array Bea	90.11	49	P	P	00 12 24.9	-0.9
	0.7nm,0.7s,baz=227,slow=8.4,SNR=6.4						
GERES	GERESS Array B	146.06	331	PKPbc	PKPbc	00 19 05.7	+0.2
	0.5nm,0.6s,baz=20,slow=4.3,SNR=4.8						

*IDC **31** 00:10:16.5±1.5, 42°.36N×24°.26E, h0km, mb3.3/3, mb1 3.4/4, mb1mx3.1/68, mbtmp3.3/4, ML3.3/1, MS3.5/1, Ms1 3.5/1, ms1mx2.1/39, Error ellipse: s-maj=24.3km s-min=14.3km az=124.0*
*ISCJB **31** 00:10:20.3±0.3, 42°.63N±0°.01×23°.00E±0°.02, h3km±2km, mb3.6/2, MS3.6/1, Error ellipse: s-maj=2.4km s-min=2.1km az=31.5*
*PDG **31** 00:10:21.3±0.6, 42°.63N×23°.00E, h17km±1km, ML3.3/9, Error ellipse: s-maj=0.7km s-min=0.8km az=0.0*
*BEO **31** 00:10:21.4±0.2, 42°.60N×23°.05E, h10km±2km, ML3.2/14*
*SKO **31** 00:10:21.6, 42°.64N×23°.07E, h8km*
*SOF **31** 00:10:21.4, 42°.54N×23°.10E, h7km, MD3.3*
*CSEM **31** 00:10:21.0±0.1, 42°.61N×23°.01E, h2km, MD3.3, Error ellipse: s-maj=2.6km s-min=2.1km az=26.0*
*THE **31** 00:10:22.2, 42°.54N×23°.06E, h0km±4km, ML3.3/4, Error ellipse: s-maj=4.9km s-min=0.9km az=314.0*
*TIR **31** 00:10:25.2, 42°.27N×22°.75E, h6km, Md3.7/5*
ISC 31 00:10:21.3±0.9, 42°.61N±0°.02×23°.03E±0°.02, h7km±6km, n197, σ0ˢ.86/264, 40C-31D, Bulgaria

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VTS	Vitosha	0.14	97	ePg	Pg	00 10 24.3	0.0
VTS				eSg	Sg	00 10 26.6	+0.2
VTS	Vitosha	0.14	97	⇑iP	Pg	00 10 24.4	+0.1
VTS				S	Sg	00 10 26.5	+0.2
VTS	Vitosha	0.14	97	i Pg	Pg	00 10 24.0	-0.3
VTS	Vitosha	0.14	97	P	Pg	00 10 23.7	-0.6
VTS				S	Sg	00 10 26.6	+0.2
VTS	Vitosha	0.14	97	P	Pg	00 10 23.7	-0.6
VTS	Vitosha	0.14	97	ePg	Pg	00 10 24.3	0.0
	baz=1.0						
VTS				S	Sg	00 10 26.6	+0.2
SOF	Sofiya	0.24	71	i Pg	Pg	00 10 26.5	+0.4
SOF	Sofiya	0.24	71	i Pg	Pg	00 10 26.5	+0.4
ZAPS	Zavoj	0.72	337	ePg	Pb	00 10 35.9	-0.4
ZAPS				eSg	Sb	00 10 47.1	+0.6
KKB	Krupnik	0.74	177	i Pg	Pg	00 10 35.6	0.0
KKB	Krupnik	0.74	177	i Pg	Pg	00 10 35.6	0.0
PGB	Panagyurishte	0.84	94	i P	Pg	00 10 37.0	-0.6
PGB	Panagyurishte	0.84	94	i P	Pg	00 10 37.0	-0.6
BARS	Barje	0.92	284	ePg	Pg	00 10 38.4	-0.5
BARS				eSg	Sb	00 10 51.7	-0.3
BARS	Barje	0.92	284	ePg	Pg	00 10 38.4	-0.5
	baz=2.0						
BARS				eSg	Sb	00 10 51.7	-0.3
	baz=3.0						
MMB	Musomiste	1.14	153	i Pg	Pg	00 10 43.2	-0.1
MMB	Musomiste	1.14	153	i Pg	Pg	00 10 43.2	-0.1
VAY	Valandovo	1.33	195	ePg	Pn	00 10 45.7	-0.6
VAY				eSg	Sb	00 11 03.8	0.0
VAY	Valandovo	1.33	195	P	Pn	00 10 45.6	-0.7
VAY	Valandovo	1.33	195	⇑iPg	Pb	00 10 46.5	-0.1
VAY				i Sg	Sn	00 11 05.0	+0.7
VAY	Valandovo	1.33	195	P	Pn	00 10 45.6	-0.7
VAY				eSg	Sb	00 11 03.8	0.0
	baz=1.0						
SKO	Skopje	1.34	242	P	Pn	00 10 46.5	+0.1
SKO	Skopje	1.34	242	⇑iPg	Pn	00 10 46.6	+0.1
SKO				i Sg	Sn	00 11 05.2	+0.7
SKO	Skopje	1.34	242	P	Pn	00 10 46.5	+0.1
PLD	Plovdiv	1.34	111	ePg	Pn	00 10 45.0	-1.4
PLD				eSg	Sn	00 11 04.7	+0.2
PLD	Plovdiv	1.34	111	ePg	Pn	00 10 45.0	-1.4
	baz=1.0						
PLD				eSg	Sn	00 11 04.7	+0.2
	baz=2.0						
NVR	Nevrokopi	1.40	153	P	Pn	00 10 47.2	-0.1
NVR				S	Sg	00 11 06.7	+0.3
NVR	Nevrokopi	1.40	153	P	Pn	00 10 47.2	-0.1
NVR				S	Sg	00 11 06.7	+0.3
BOVS	Bovan	1.41	317	ePg	Pn	00 10 47.1	-0.3
BOVS				eSg	Sb	00 11 06.1	0.0
BOVS	Bovan	1.41	317	ePg	Pn	00 10 47.1	-0.3
BOVS				eSg	Sb	00 11 06.1	0.0
	baz=8.0						
KNT	Kendrikon	1.45	184	P	Pn	00 10 47.9	0.0
KNT				S	Sn	00 11 06.2	-1.0
KNT	Kendrikon	1.45	184	P	Pn	00 10 47.9	0.0
KNT				S	Sn	00 11 06.2	-1.0
SELS	Selova	1.53	294	ePg	Pn	00 10 48.8	-0.3
SELS	Selova	1.53	294	ePg	Pn	00 10 48.8	-0.3
	baz=4.0						
SRS	Serrai	1.55	164	P	Pn	00 10 49.1	-0.2
SRS				S	Sg	00 11 11.2	+0.1
SRS	Serrai	1.55	164	P	Pn	00 10 49.1	-0.2
SRS				S	Sg	00 11 11.2	+0.1
RZN	Rozhen	1.56	126	i P	Pn	00 10 49.1	-0.5
RZN	Rozhen	1.56	126	i P	Pn	00 10 49.1	-0.5
GRG	Griva	1.71	196	P	Pn	00 10 51.4	-0.2
GRG	Griva	1.71	196	P	Pn	00 10 51.4	-0.2
PVL	Pavlikeni	1.80	69	P	Pn	00 10 51.4	-1.4
PVL	Pavlikeni	1.80	69	P	Pn	00 10 51.4	-1.4
SOH	Sokhos	1.80	172	P	Pn	00 10 52.7	-0.1
SOH				S	Sn	00 11 16.1	+0.1
SOH	Sokhos	1.80	172	P	Pn	00 10 52.7	-0.1
SOH				S	Sn	00 11 16.1	+0.1
CRAR	CRAIOVA	1.81	18	S	Sn	00 11 16.6	+0.6
CRAR	CRAIOVA	1.81	18	S	Sn	00 11 16.6	+0.6
KRUS	Krusevo	1.81	228	⇑iPn	Pn	00 10 53.5	+0.5
KRUS				i Sn	Sn	00 11 16.7	+0.4
DIM	Dimitrovgrad	1.94	106	P	Pn	00 10 55.3	+0.6
DIM	Dimitrovgrad	1.94	106	P	Pn	00 10 55.3	+0.6
KAVA	Kavala	1.96	145	P	Pn	00 10 55.5	+0.6
KAVA	Kavala	1.96	145	P	Pn	00 10 55.5	+0.6
THE	Thessaloniki	1.98	181	P	Pn	00 10 56.2	+1.1
THE	Thessaloniki	1.98	181	P	Pn	00 10 56.2	+1.1
ZIMR		2.01	58	⇑iP	Pn	00 10 56.3	+0.7
HORT	Hortiatis	2.01	178	P	Pn	00 10 56.5	+0.8
HORT	Hortiatis	2.01	178	P	Pn	00 10 56.5	+0.8
KDZ	Kurdzhali	2.02	118	P	Pb	00 10 58.1	-0.2
KDZ	Kurdzhali	2.02	118	P	Pb	00 10 58.1	-0.2
SRE	Strehaia	2.06	4	⇑iP	Pn	00 10 56.0	-0.3
SRE	Strehaia	2.06	4	⇑iP	Pn	00 10 56.0	-0.3
DJES	Djerdap	2.09	350	ePg	Pb	00 10 58.5	-1.1
DJES				eSg	Sg	00 11 28.1	-0.4
SVIS	Svilajnac	2.12	322	ePn	Pn	00 10 55.7	-1.4
SVIS				eSn	Sn	00 11 23.9	+0.2
GRUS	Gruza	2.12	308	ePn	Pn	00 10 57.1	-0.1
GRUS				eSn	Sn	00 11 23.4	-0.3
GRUS	Gruza	2.12	308	ePn	Pn	00 10 57.1	-0.1
GRUS				eSn	Sn	00 11 23.4	-0.3
	baz=3.0						
PHP	Peshkopia	2.13	245	i PN	Pg	00 11 03.3	+1.1
PHP				i SN	Sg	00 11 31.4	+1.5
BCI	Bajram Curri	2.20	265	i Pn	Pn	00 10 58.1	-0.2
	baz=52						
BCI				i Sn	Sn	00 11 24.1	-1.7
	baz=52						
BCI	Bajram Curri	2.20	265	i PN	Pn	00 10 58.1	-0.2
BCI				i SN	Sn	00 11 24.1	-1.7
SZH	Strazhica	2.23	72	i P	Pn	00 10 59.6	+0.9
SZH	Strazhica	2.23	72	i P	Pn	00 10 59.6	+0.9
OHR	Ohrid	2.24	229	i Pn	Pn	00 10 59.4	+0.6
PLG	Polygyros	2.25	172	P	Pn	00 10 59.3	+0.3
PLG	Polygyros	2.25	172	P	Pn	00 10 59.3	+0.3
PVY	Plav	2.27	271	⇑iPn	Pn	00 10 58.1	-1.2
PVY				i Sn	Sb	00 11 29.6	-1.3
HERR	Herculane	2.31	349	⇓iP	Pn	00 10 59.4	-0.4
HERR	Herculane	2.31	349	⇓iP	Pn	00 10 59.4	-0.4
HERR				S	Sn	00 11 28.7	+0.1
IVAS	Ivanjica	2.32	296	ePn	Pn	00 10 59.0	-0.9
IVAS				eSn	Sn	00 11 28.7	0.0

IVAS	**Ivanjica**	2.32	296	ePn	Pn	00 10 59.0	-0.9
IVAS				eSn	Sn	00 11 28.7	0.0
	baz=1.0						
BEY	**Berane**	2.32	278	⇓iPn	Pn	00 11 00.5	+0.4
BEY				i Sn	Sn	00 11 28.6	-0.3
IVA	**Berane**	2.32	278	⇓iPn	Pn	00 11 00.5	+0.4
IVA				i Sn	Sn	00 11 28.6	-0.3
SJES	**Sjenica**	2.33	287	ePn	Pn	00 11 00.5	+0.3
SJES				eSn	Sn	00 11 29.0	-0.2
MDVR	**Moldovita**	2.37	337	⇑iP	Pn	00 11 00.9	+0.2
MDVR	**Moldovita**	2.37	337	⇑iP	Pn	00 11 00.9	+0.2
RDO	**Rodhopi**	2.38	127	P	Pn	00 11 01.2	+0.5
RDO	**Rodhopi**	2.38	127	P	Pn	00 11 01.2	+0.5
OUR	**Ouranopolis**	2.38	162	P	Pn	00 11 00.6	-0.1
OUR	**Ouranopolis**	2.38	162	P	Pn	00 11 00.6	-0.1
HUMR	**Humele**	2.39	36	⇑iP	Pn	00 11 01.0	+0.2
HUMR	**Humele**	2.39	36	⇑iP	Pn	00 11 01.0	+0.2
PUK	**Puka**	2.39	257	i Pn	Pn	00 11 01.0	0.0
	baz=73						
PUK				i Sn	Sn	00 11 28.3	-2.3
	baz=73						
PUK	**Puka**	2.39	257	i PN	Pn	00 11 01.0	0.0
PUK				i SN	Sn	00 11 28.3	-2.2
KZN	**Kozani**	2.49	203	P	Pn	00 11 02.9	+0.6
KZN	**Kozani**	2.49	203	P	Pn	00 11 02.9	+0.6
TRUS	**Trudelj**	2.50	311	ePn	Pn	00 11 02.1	-0.3
TRUS				eSn	Sn	00 11 33.7	+0.6
TRUS	**Trudelj**	2.50	311	ePn	Pn	00 11 02.1	-0.3
	baz=4.0						
TRUS				eSn	Sn	00 11 33.7	+0.6
	baz=3.0						
LIT	**Litokhoron**	2.54	189	P	Pn	00 11 02.3	-0.6
LIT	**Litokhoron**	2.54	189	P	Pn	00 11 02.3	-0.6
KBN	**Korca**	2.60	221	i Pn	Pn	00 11 04.8	+1.0
	baz=23						
KBN				i Sn	Sn	00 11 34.4	-1.2
	baz=23						
KBN	**Korca**	2.60	221	i PN	Pn	00 11 04.8	+1.0
KBN				i SN	Sn	00 11 34.4	-1.2
KOME	**Kolasin**	2.60	277	⇑iPn	Pn	00 11 04.4	+0.6
KOME				i Sn	Sn	00 11 36.4	+0.7
KOME	**Kolasin**	2.60	277	⇑iPn	Pn	00 11 04.4	+0.6
KOME				i Sn	Sn	00 11 36.4	+0.7
DIVS	**Divibare**	2.67	305	ePn	Pn	00 11 04.2	-0.6
DIVS				eSn	Sn	00 11 38.1	+0.7
DIVS	**Divibare**	2.67	305	ePn	Pn	00 11 04.2	-0.6
	baz=7.0						
DIVS				eSn	Sn	00 11 38.1	+0.7
	baz=7.0						
SGRR	**Singureni**	2.69	52	⇑iP	Pn	00 11 05.4	+0.5
SGRR	**Singureni**	2.69	52	⇑iP	Pn	00 11 05.4	+0.5
PAIG	**Paliouri**	2.72	169	P	Pn	00 11 05.0	-0.4
PAIG	**Paliouri**	2.72	169	P	Pn	00 11 05.0	-0.4
PLE	**Pljevlja**	2.77	286	⇓iPn	Pn	00 11 06.8	+0.6
PLE				i Sn	Sn	00 11 38.9	-1.0
PLE	**Pljevlja**	2.77	286	⇓iPn	Pn	00 11 06.8	+0.6
PLE				i Sn	Sn	00 11 38.9	-1.0
BUC1	**Bucharest**	2.79	50	S	Sn	00 11 41.9	+1.6
BUC1	**Bucharest**	2.79	50	S	Sn	00 11 41.9	+1.6
PDG	**Podgorica**	2.79	268	⇓iP	Pn	00 11 07.7	+1.3
PDG	**Podgorica**	2.79	268	⇓iPn	Pn	00 11 07.1	+0.7
PDG	**Podgorica**	2.79	268	⇓iP	Pn	00 11 07.7	+1.3
PDG				S	Sn	00 11 41.3	+1.0
TTG	**Podgorica**	2.79	268	⇓iPn	Pn	00 11 07.1	+0.7
TTG				i Sn	Sn	00 11 41.7	+1.4
DRME	**Dracevica, Mon**	2.88	263	⇑iPn	Pn	00 11 08.3	+0.7
DRME				i Sn	Sn	00 11 43.3	+0.9
DRME	**Dracevica, Mon**	2.88	263	⇑iPn	Pn	00 11 08.3	+0.7
DRME				i Sn	Sn	00 11 43.3	+0.9
ULC	**Ulcinj**	2.88	258	⇑iPn	Pn	00 11 08.2	+0.6
ULC				i Sn	Sn	00 11 43.6	+1.1
ULC	**Ulcinj**	2.88	258	⇑iPn	Pn	00 11 08.2	+0.6
ULC				i Sn	Sn	00 11 43.6	+1.1
LOT	**Lotru**	2.89	10	⇓iP	Pn	00 11 07.6	-0.3
LOT	**Lotru**	2.89	10	⇓iP	Pn	00 11 07.6	-0.3
BBLS	**Lazići**	2.93	297	ePn	Pn	00 11 08.9	+0.5
BBLS	**Lazići**	2.93	297	ePn	Pn	00 11 08.9	+0.5
	baz=5.0						
NKY	**Niksic**	2.98	275	⇑iPn	Pn	00 11 09.7	+0.6
NKY				i Sn	Sn	00 11 45.5	+0.4
NKY	**Niksic**	2.98	275	⇑iPn	Pn	00 11 09.7	+0.6
NKY				i Sn	Sn	00 11 45.5	+0.4
ARR	**Arges**	2.99	22	⇑iP	Pn	00 11 09.2	0.0
ARR	**Arges**	2.99	22	⇑iP	Pn	00 11 09.2	0.0
NKME	**Niksic**	3.01	274	⇑iPn	Pn	00 11 10.1	+0.7
NKME				i Sn	Sn	00 11 46.0	+0.3
NKME	**Niksic**	3.01	274	⇑iPn	Pn	00 11 10.1	+0.7
NKME				i Sn	Sn	00 11 46.0	+0.3
CEME	**Cevo**	3.04	270	⇓iPn	Pn	00 11 10.8	+1.0
CEME				i Sn	Sn	00 11 47.9	+1.5
CEME	**Cevo**	3.04	270	⇓iPn	Pn	00 11 10.8	+1.0
CEME				i Sn	Sn	00 11 47.9	+1.5
BUM	**Brajici-Budva**	3.07	266	⇑iPn	Pn	00 11 11.5	+1.2
BUM				i Sn	Sn	00 11 47.9	+0.5
BUM	**Brajici-Budva**	3.07	266	⇑iPn	Pn	00 11 11.5	+1.2
BUM				i Sn	Sn	00 11 47.9	+0.5
UPM	**Unac-Piva**	3.09	283	ePn	Pn	00 11 10.7	+0.1
BANR	**Banloc**	3.09	334	⇓iP	Pn	00 11 12.9	+2.4
BANR	**Banloc**	3.09	334	⇓iP	Pn	00 11 12.9	+2.4
BZS	**Buzias**	3.17	342	⇓iP	Pn	00 11 11.1	-0.6
BZS	**Buzias**	3.17	342	⇓iP	Pn	00 11 11.1	-0.6
BZS				S	Sn	00 11 49.5	-0.3
VOIR		3.18	27	⇑iP	Pn	00 11 12.2	+0.3
VOIR		3.18	27	⇑iP	Pn	00 11 12.2	+0.3
TEKS	**Tekeris**	3.20	309	ePn	Pn	00 11 11.7	-0.3
TEKS	**Tekeris**	3.20	309	ePn	Pn	00 11 11.7	-0.3
	baz=3.0						
PRD	**Provadia**	3.27	78	i P	Pn	00 11 13.7	+0.8
PRD	**Provadia**	3.27	78	i P	Pn	00 11 13.7	+0.8
BRY	**Bratogost**	3.32	277	⇑iPn	Pn	00 11 14.5	+0.7
BRY				i Sn	Sn	00 11 53.4	-0.1
BRY	**Bratogost**	3.32	277	⇑iPn	Pn	00 11 14.5	+0.7
BRY				i Sn	Sn	00 11 53.4	-0.1
HAPS	**Han Pijesak,Bl**	3.32	298	ePn	Pn	00 11 13.0	-0.8
HCY	**Herceg Novi**	3.35	269	⇓iPn	Pn	00 11 14.7	+0.6
HCY				i Sn	Sn	00 11 54.3	+0.1
HCY	**Herceg Novi**	3.35	269	⇓iPn	Pn	00 11 14.7	+0.6
HCY				i Sn	Sn	00 11 54.3	+0.1
TREB	**Trebinje**	3.45	273	ePn	Pn	00 11 17.4	+1.9
MLR	**Muntele Rosu**	3.57	35	Pg	Pn	00 11 18.9	+1.6
	4.0nm,0.3s,baz=166,slow=12,SNR=62						
MLR				Lg	Lg	00 12 03.8	
	3.9nm,0.3s,baz=174,slow=20,SNR=11						
MLR	**Muntele Rosu**	3.57	35	⇓iP	Pn	00 11 18.8	+1.6
DOPR	**Dopca**	3.76	26	⇓iP	Pn	00 11 20.6	+0.8
DOPR	**Dopca**	3.76	26	⇓iP	Pn	00 11 20.6	+0.8
STON	**Ston**	3.93	276	ePn	Pn	00 11 23.7	+1.7
STON				Sn	Sn	00 12 10.2	+1.8
STON	**Ston**	3.93	276	ePn	Pn	00 11 22.0	-0.1
TLB	**Topalu**	4.14	60	⇑iP	Pn	00 11 25.8	+0.8
TLB	**Topalu**	4.14	60	⇑iP	Pn	00 11 25.8	+0.8
PLOR	**Plostina**	4.16	38	⇓iP	Pn	00 11 26.9	+1.7
PLOR	**Plostina**	4.16	38	⇓iP	Pn	00 11 26.9	+1.7
VRI	**Vrincioaia**	4.21	38	⇑iP	Pn	00 11 27.7	+1.9
VRI	**Vrincioaia**	4.21	38	⇑iP	Pn	00 11 27.7	+1.9
CFR	**Carcaliu**	4.50	53	⇓iP	Pn	00 11 30.5	+0.7
CFR	**Carcaliu**	4.50	53	⇓iP	Pn	00 11 30.5	+0.7
TESR	**Tescani**	4.68	32	⇓iP	Pn	00 11 33.7	+1.3
TESR	**Tescani**	4.68	32	⇓iP	Pn	00 11 33.7	+1.3
BLY	**Banja Luka**	4.75	299	⇑iP	Pn	00 11 34.1	+0.8
BLY	**Banja Luka**	4.75	299	ePn	Pn	00 11 33.1	-0.2
BLY	**Banja Luka**	4.75	299	⇑iP	Pn	00 11 34.1	+0.8
MORH	**Mˆ‡rˆ¡gy, Hung**	4.78	320	ePn	Pn	00 11 32.8	-0.9
TLCR		4.91	56	⇑iP	Pn	00 11 36.6	+1.1
TLCR		4.91	56	⇑iP	Pn	00 11 36.6	+1.1
BURAR	**Bucovina Array**	5.24	16	⇓iP	Pn	00 11 41.7	+1.6
BURAR	**Bucovina Array**	5.24	16	⇓iP	Pn	00 11 41.7	+1.6
UDBI	**Udbina**	5.61	292	ePn	Pn	00 11 47.5	+2.3
VYHS	**Vyhne**	6.58	335	ePN	Pn	00 11 59.8	+1.4
VYHS				e		00 12 23.8	
VYHS	**Vyhne**	6.58	335	eSN	Sn	00 13 08.9	-4.8
SOKA	**Soboth**	7.00	308	i Pn	Pn	00 12 04.2	-0.1
	0.6nm,0.3s						
SOKA	**Soboth**	7.00	308	Pn	Pn	00 12 04.2	-0.1
	0.6nm,0.3s						
ARSA	**Arzberg**	7.06	314	ePn	Pn	00 12 05.5	+0.4
	0.7nm,0.2s						
ARSA	**Arzberg**	7.06	314	Pn	Pn	00 12 05.5	+0.4
	0.7nm,0.2s						
OBKA	**Obir**	7.20	306	ePn	Pn	00 12 06.3	-0.8
	0.4nm,0.1s						
OBKA	**Obir**	7.20	306	Pn	Pn	00 12 06.3	-0.8
	0.4nm,0.1s						
CONA	**Conrad Observa**	7.34	319	ePn	Pn	00 12 09.0	+0.1
	0.5nm,0.3s						
CONA	**Conrad Observa**	7.34	319	Pn	Pn	00 12 09.0	+0.1
	0.5nm,0.3s						
MOA	**Molln**	8.10	313	ePn	Pn	00 12 19.0	-0.4
	0.5nm,0.3s						
MOA	**Molln**	8.10	313	Pn	Pn	00 12 19.0	-0.4
	0.5nm,0.3s						
KBA	**Koelnbreinsper**	8.20	306	ePn	Pn	00 12 20.9	0.0
	0.7nm,0.3s						
KBA	**Koelnbreinsper**	8.20	306	Pn	Pn	00 12 20.9	0.0
	0.7nm,0.3s						
ABTA	**Abfaltersbach**	8.56	303	ePn	Pn	00 12 26.1	+0.5
	1.4nm,0.7s						
ABTA	**Abfaltersbach**	8.56	303	Pn	Pn	00 12 26.1	+0.5
	1.4nm,0.7s						
GERES	**GERESS Array B**	9.02	317	Pn	Pn	00 12 40.7	+8.7
	0.1nm,0.3s,baz=142,slow=14,SNR=3.4						
MOTA	**Moosalm**	9.68	303	ePn	Pn	00 12 41.4	+0.3
	0.3nm,0.2s						
MOTA	**Moosalm**	9.68	303	Pn	Pn	00 12 41.4	+0.3
	0.3nm,0.2s						
NOA	**NORSAR Array B**	19.79	343	P	P	00 14 51.8	-0.1
	0.3nm,0.5s,baz=146,slow=10,SNR=2.8						
TORD	**Torodi Ar. Bea**	34.68	219	P	P	00 17 11.6	-0.1
	0.5nm,0.9s,baz=33,slow=8.0,SNR=2.9						
SONM	**Songino Array**	56.23	54	P	P	00 19 53.8	-8.3
	0.3nm,0.3s,baz=292,slow=7.6,SNR=3.3						
TSUM	**Tsumeb**	61.70	186	LR	LR	00 52 00.4	
	comp=Z,40nm,18.8s,baz=332,slow=41						

NIED ***31*** *00:21:00, 44°.00N×148°.00E, h41km, Mw3.6 Best double couple: $M_0$2.54000×10^{14} NP1:ϕ_s232.00000°, δ68.00000°, λ-163.00000°. NP2:ϕ_s135.00000°, δ75.00000°, λ-23.00000°.*

JMA ***31*** *00:21:05.7±0.3, 44°.01N×148°.01E, h0km, M4.1*

SKHL ***31*** *00:21:06.2±0.2, 44°.35N×148°.26E, h35km±1km, mb4.0/6*

ISC 31 00:21:03.3±2.6, **44°.3N**±0°.1×**148°.3E**±0°.2, **h15**km±28km, **n14**, σ**1^{s}59**/28, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	0.98	343	i P	Pg	00 21 22.0	-0.3
KUR				AMB	AMB	00 21 22.0	
	15nm,0.3s						
KUR				AMB	AMB	00 21 22.0	
	13nm,0.3s						
KUR				AMB	AMB	00 21 22.0	
	47nm,0.3s						
KUR				i S	Sg	00 21 34.0	-1.1
KUR				A	A	00 21 34.0	
	391nm,0.4s						
KUR				A	A	00 21 34.0	
	943nm,0.4s						
SHO	**Shikotan**	1.12	248	i P	Pb	00 21 25.0	+0.5
SHO				AMB	AMB	00 21 26.0	
	42nm,0.2s						
SHO				AMB	AMB	00 21 26.0	
	43nm,0.2s						
SHO				AMB	AMB	00 21 26.0	
	13nm,0.2s						
SHO				eS	Sb	00 21 39.0	+0.1
SHO				A	A	00 21 40.0	
	297nm,0.2s						
SHO				A	A	00 21 40.0	
	718nm,0.2s						
YUK	**Yuzh-Kuril'sk**	1.75	262	i P	Pn	00 21 33.0	-0.2
YUK				AMB	AMB	00 21 34.0	
	61nm,0.2s						
YUK				AMB	AMB	00 21 34.0	
	71nm,0.2s						
YUK				AMB	AMB	00 21 34.0	
	19nm,0.2s						
YUK				i S	Sn	00 21 54.0	-1.3
YUK				A	A	00 22 03.0	
	627nm,0.2s						
YUK				A	A	00 22 03.0	
	332nm,0.2s						
LAGR	**Lagunnoye**	1.80	263	i P	Pn	00 21 35.0	+1.1
LAGR				AMB	AMB	00 21 35.0	
	49nm,0.2s						
LAGR				AMB	AMB	00 21 35.0	
	96nm,0.2s						
LAGR				AMB	AMB	00 21 35.0	
	22nm,0.2s						
LAGR				i S	Sn	00 21 55.0	-1.5
LAGR				A	A	00 22 03.0	
	97nm,0.2s						
LAGR				A	A	00 22 03.0	
	191nm,0.2s						
GRPR	**Tuman**	1.82	261	i P	Pn	00 21 35.0	+0.8
GRPR				AMB	AMB	00 21 37.0	
	154nm,0.2s						
GRPR				AMB	AMB	00 21 37.0	
	90nm,0.2s						
GRPR				AMB	AMB	00 21 37.0	
	177nm,0.2s						
GRPR				i S	Sn	00 21 55.0	-2.0
GRPR				A	A	00 22 00.0	
	60nm,0.2s						
GRPR				A	A	00 22 00.0	
	51nm,0.2s						
NEM2	**Nemuro 2**	2.05	244	P	Pn	00 21 37.8	+0.5
NEM2				eS	Sn	00 22 01.5	-1.2
GLVR	**Golovnino**	2.06	255	i P	Pn	00 21 38.0	+0.6
GLVR				AMB	AMB	00 21 39.0	
	56nm,0.5s						
GLVR				AMB	AMB	00 21 39.0	
	36nm,0.5s						
GLVR				AMB	AMB	00 21 39.0	
	120nm,0.5s						
GLVR				i S	Sn	00 22 02.0	-0.9
GLVR				A	A	00 22 06.0	
	42nm,0.2s						
GLVR				A	A	00 22 06.0	
	57nm,0.2s						
JRA	**Rausu**	2.29	262	P	Pn	00 21 42.6	+1.9
JRA				eS	Sn	00 22 09.6	+0.9
JNK	**Nakash**	2.66	256	P	Pn	00 21 47.3	+1.6
JNK				eS	Sn	00 22 17.6	-0.1
JAK	**Akkeshi**	2.90	245	P	Pn	00 21 49.9	+0.9
JAK				eS	Sn	00 22 23.1	-0.5
JAR	**Ashorobuto**	3.41	255	P	Pn	00 21 58.1	+2.1
JAR				eS	Sn	00 22 38.0	+1.9
JCH	**Churui**	3.95	247	P	Pn	00 22 04.9	+1.5
JCH				eS	Sn	00 22 48.0	-1.5
JKB	**Kayabe**	5.82	248	P	Pn	00 22 30.9	+1.8
JKB				eS	Sn	00 23 33.6	-2.0
JANG	**Nango**	6.36	234	P	Pn	00 22 37.4	+0.9
JANG				eS	Sn	00 23 44.6	-4.2

CASC 31 00:21:09.3±1.4, **13°.68N**×**88°.79W**, **h6**km±3km, **ML3.7**, **mb4.0**(NEIC), **4C**, **El Salvador**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SNVI	**San Vicente**	0.09	217	⇑iP	Pg	00 21 11.8	+0.4
LBRS	**Las Brisas**	0.26	283	⇑iP	Pg	00 21 15.3	+1.0
LFRS	**El Faro**	0.27	258	⇑iP	Pg	00 21 15.2	+0.5
UESV	**Ojushtada**	0.30	181	eP	Pg	00 21 11.1	-4.0
LFU	**La Fuente**	0.33	282	⇑iP	Pg	00 21 16.4	+0.8
TECA	**Tecapa**	0.33	124	eP	Pg	00 21 16.0	+0.1
UDBS	**Soyapango**	0.36	277	eP	Pg	00 21 17.0	+0.6
UDBS				eS	Sb	00 21 23.0	-1.2
UDBS				IAML		00 21 24.4	
	comp=Z,14µm,0.3s						
UESS	**San Salvador**	0.40	273	eP	Pg	00 21 18.0	+0.8
UESS				eS	Sb	00 21 24.4	-1.0
OPAM	**San Salvador**	0.40	275	eP	Pg	00 21 17.9	+0.7
OPAM				eS	Sb	00 21 24.3	-1.0
SNET	**Serv Nac Est T**	0.43	271	eP	Pg	00 21 18.2	+0.5
SNET				eS	Sg	00 21 24.7	+1.3
SNET				IAML		00 21 27.0	
	comp=Z,6µm,0.2s						
UEES	**San Salvador**	0.45	276	eP	Pg	00 21 18.6	+0.6
UEES				eS	Sb	00 21 26.1	-0.5
UEES				IAML		00 21 29.8	
	comp=Z,6µm,0.2s						
BOQS	**Boqueron**	0.48	276	i P	Pg	00 21 19.4	+0.7
COLS	**Colinas**	0.50	268	i P	Pg	00 21 19.4	+0.5
LLGN	**La Laguna**	0.51	342	i P	Pg	00 21 19.8	+0.5
LLGN				eS	Sb	00 21 27.9	-0.6
LCY	**Lacayo**	0.54	118	eP	Pg	00 21 20.1	+0.3
VSM	**San Miguel**	0.56	117	eP	Pg	00 21 20.2	+0.1
SBLS	**San Blas**	0.83	281	eP	Pb	00 21 25.8	-0.5
RTR	**El Retiro**	0.86	285	eP	Pg	00 21 26.2	+0.4
RTR				eS	Sb	00 21 38.6	-0.1
MTO3	**Montecristo**	0.91	322	eP	Pg	00 21 26.6	-0.1
MTO3				eS	Sb	00 21 39.6	-0.4
LCND	**La Caˆ–ada**	0.95	113	eP	Pg	00 21 27.0	-0.5
LCND				eS	Sb	00 21 40.7	-0.2
LCND				IAML		00 21 45.4	
	comp=Z,2µm,0.3s						
IXG	**Ixpaco**	1.69	287	eP	Pn	00 21 40.0	+0.4
ESTN	**Estel**	2.42	103	eP	Pn	00 21 49.0	-0.6
RCON	**San Juan de Ri**	2.57	94	eP	Pn	00 21 53.5	+1.9
MATN	**Matagalpa**	2.88	105	eP	Pn	00 21 54.7	-1.2
BOAB	**BOACO BROADBAN**	3.28	112	eP	Pn	00 21 59.8	-1.4
BOAB				eS	Sb	00 22 48.5	+0.4
BOAB				IAML		00 22 51.0	
	comp=N,17nm,0.8s						

NIED ***31*** *00:33:00, 37°.40N×141°.70E, h44km, Mw3.6 Best double couple: $M_0$2.52000×10^{14} NP1:ϕ_s184.00000°, δ25.00000°, λ135.00000°. NP2:ϕ_s317.00000°, δ73.00000°, λ72.00000°.*

JMA ***31*** *00:33:36.4±0.1, 37°.41N×141°.69E, h44km±2km, M3.8*

IDC ***31*** *00:33:37.5±5.8, 37°.23N×141°.75E, h52km±47km, mb3.3/4, mb1 3.5/6, mb1mx3.2/64, mbtmp3.6/6, ML3.5/2, MS2.4/2, Ms1 2.4/2, ms1mx2.1/34, Error ellipse: s-maj=42.5km s-min=16.0km az=59.0*

ISC 31 00:33:31.6±1.8, **37°.34N**±0°.04×**141°.74E**±0°.07, **h5**km±11km, **n23**, σ**1^{s}21**/28, **mb3.6**/4, **Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JFK	**Kawauchi**	0.69	273	P	Pn	00 33 49.2	+1.2
JFK				S	Sn	00 33 58.1	-1.0
ONAJ	**Iwakimizuishiy**	0.78	253	P	Pn	00 33 50.9	+1.6
ONAJ				S	Sn	00 34 01.2	-0.3
JMM	**Marumori**	0.92	305	P	Pn	00 33 52.0	+0.9
JMM				S	Sb	00 34 02.7	+0.3
JFFD	**Fukushimafurud**	0.97	256	P	Pn	00 33 53.4	+1.6
JFFD				S	Sn	00 34 05.6	-0.4
JFT	**Otama**	1.13	280	P	Pn	00 33 56.1	+2.1
JFT				S	Sn	00 34 09.9	0.0
JIO	**Ouri**	1.16	345	P	Pn	00 33 54.9	+0.5
JIO				S	Sg	00 34 07.6	-1.2
JOU	**Okura**	1.33	321	P	Pg	00 33 58.1	+1.0
JOU				S	Sb	00 34 13.9	-0.5
JYS	**Shirataka**	1.59	304	P	Pg	00 34 02.4	+0.3
JYS				S	Sb	00 34 22.2	+0.3
JFY	**Yanaizu**	1.62	273	P	Pg	00 34 02.9	+0.3
JMK	**Ichinoseki**	1.66	346	P	Pb	00 34 02.4	-0.3
MJAR	**Matsushiro Arr**	2.94	255	P	Pb	00 34 22.1	-2.3
	3.0nm,0.3s,baz=63,slow=15,SNR=9.3						
MJAR				S	Sn	00 34 55.7	+1.2
	2.1nm,0.3s,baz=39,slow=44,SNR=3.7						
MJAR				LR	LR	00 35 57.3	
	comp=Z,34nm,19.4s,baz=75,slow=48						
MAT	**Matsushiro**	2.94	255	P	Pb	00 34 23.0	-1.4
MAT				S	Sb	00 35 00.8	+0.2
JHJ	**Hachijo jima 2**	4.50	201	P	Pn	00 34 42.7	+2.3
	15nm,0.3s,baz=81,slow=19,SNR=3.7						
JHJ				S	Sn	00 35 31.0	-2.1
	24nm,0.3s,baz=108,slow=16,SNR=3.1						
JHJ				LR	LR	00 36 09.3	
	comp=Z,95nm,20.5s,baz=270,slow=34						
H11N2	**WAKE ISLAND Hy**	28.08	122	T	T	01 09 01.0	
	baz=318,slow=75						
H11N1	**WAKE ISLAND Hy**	28.09	122	T	T	01 09 02.8	
	baz=318,slow=75						
H11N3	**WAKE ISLAND Hy**	28.10	122	T	T	01 09 02.5	
	baz=318,slow=75						
H11S1	**WAKE ISLAND Hy**	28.81	124	T	T	01 09 58.9	
	baz=314,slow=76						
H11S3	**WAKE ISLAND Hy**	28.81	124	T	T	01 09 55.4	
	baz=314,slow=76,SNR=12						
H11S2	**WAKE ISLAND Hy**	28.83	124	T	T	01 09 56.5	
	baz=314,slow=76						
MKAR	**Makanchi Array**	44.18	302	P	P	00 41 41.1	-0.2
	0.4nm,0.6s,baz=89,slow=10,SNR=3.8						
KURBB	**Kurchatov Arra**	46.02	308	P	P	00 41 55.3	-0.5
	0.6nm,0.7s,baz=82,slow=7.8,SNR=5.4						
BVAR	**Borovoye Array**	50.56	312	P	P	00 42 31.1	+0.3
	0.1nm,0.3s,baz=64,slow=9.8,SNR=2.4						
WRA	**Warramunga Arr**	57.40	188	P	P	00 43 20.6	-0.5
	0.8nm,0.5s,baz=6.3,slow=7.4,SNR=9.0						

MAN 31 00:38:42.3, 9°.84N×126°.22E, h24km**, mb4.7, ML3.6, MS3.5, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SCPH	**Surigao**	0.72	266	i P	Pb	00 38 56.1	-0.1
SCPH				i S	Sb	00 39 06.0	+0.3
BUTP	**Butuan**	1.05	214	eP	Pn	00 38 60.0	-1.5
BUTP				eS	Sb	00 39 15.0	0.0
MSLP	**Maasin**	1.37	282	eP	Pn	00 39 06.5	+0.6
MSLP				eS	Sb	00 39 23.9	-0.5
BESP	**Borongan**	1.91	336	eP	Pn	00 39 12.0	-1.4
BESP				eS	Sb	00 39 40.7	+0.7
BUKP	**Musuan**	2.26	211	eP	Pn	00 39 19.2	+1.0
BUKP				eS	Sb	00 39 48.0	-1.9

NIED ***31*** *00:40:00, 26°.30N×142°.10E, h5km, Mw4.4 Best double couple: $M_0$4.45000×10^{15} NP1:ϕ_s164.00000°, δ8.00000°, λ80.00000°. NP2:ϕ_s353.00000°, δ82.00000°, λ91.00000°.*

IDC ***31*** *00:40:29.4±0.7, 26°.30N×141°.65E, h0km, mb3.9/13, mb1 4.1/13, mb1mx3.8/64, mbtmp3.9/13, MS3.0/5, Ms1 3.0/5, ms1mx2.7/57, Error ellipse: s-maj=24.3km s-min=16.6km az=99.0*

ISCJB ***31*** *00:40:33.4±0.6, 26°.29N±0°.06×141°.70E±0°.07, h40km, mb3.8/15, MS2.8/2, Error ellipse: s-maj=10.7km s-min=6.1km az=37.4*

NEIC ***31*** *00:40:33.5±3.9, 26°.29N×141°.63E, h28km±27km, mb4.0/2, Error ellipse: s-maj=14.2km s-min=11.4km az=134.0*

NEIC Recorded [1 JMA] in the Hahajima-retto.

JMA ***31*** *00:40:36.3±0.1, 26°.34N×142°.07E, h46km, M4.1*

JMA Felt I J1.

ISC 31 00:40:34.9±0.7, **26°.26N**±0°.08×**141°.9E**±0°.1, **h40**km, **n29**, σ**1^{s}48**/29, **mb3.8**/15, **Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
JHHJ	**Haha-jima-NKT**	0.47	38	P	Pn	00 40 45.0	-0.2
JHHJ				S	Sn	00 40 51.3	-1.2
CBIJ	**Chichi jima**	0.88	20	Pn	Pn	00 40 50.9	+0.1
CBIJ				Sn	Sn	00 41 00.8	-1.7
CBIJ	**Chichi jima**	0.88	20	P	Pn	00 40 50.9	+0.1
CBIJ				eS	Sn	00 41 01.0	-1.5
JCJ	**Chichijima**	0.88	20	Pn	Pn	00 40 50.9	+0.1
	221nm,0.3s,baz=300,slow=20,SNR=56						
JCJ				Sn	Sn	00 41 00.8	-1.7
	581nm,0.3s,baz=302,slow=19,SNR=44						
BSO3	**Boso 3**	8.59	353	P	Pn	00 42 39.2	+2.8
BSO4	**Boso 4**	8.80	352	eS	Sn	00 44 19.4	+2.2
JNU	**Nakatsue**	11.73	308	LR	LR	00 47 30.7	
	comp=Z,55nm,19.1s,baz=116,slow=36						
JOW	**Kunigami**	12.17	276	LR	LR	00 46 37.6	
	comp=Z,224nm,19.7s,baz=78,slow=31						
KSRS	**Korea Array**	16.24	317	LR	LR	00 50 20.3	
	comp=Z,40nm,18.1s,baz=105,slow=37						
TATO	**Taipei**	18.41	270	Pn	P	00 44 43.9	-2.9
	6.2nm,0.5s						
KLR	**Kul'dur**	24.24	344	P	P	00 45 48.9	+1.0
	0.2nm,0.6s,baz=152,slow=8.1,SNR=6.7						
KLR				LR	LR	00 55 29.8	
	comp=Z,5.3nm,18.3s,baz=142,slow=37						
BJT	**Baijiatuau**	25.40	309	P	P	00 45 56.7	-1.9
	1.0nm,0.3s						
WRA	**Warramunga Arr**	46.51	190	P	P	00 48 59.8	+1.4
	5.9nm,0.8s,baz=11,slow=8.6,SNR=16						
ASAR	**Alice Springs**	50.23	189	P	P	00 49 26.6	-0.4
	0.2nm,0.6s,baz=10,slow=6.0,SNR=2.8						
KURK	**Kurchatov**	53.36	315	P	P	00 49 48.1	-2.1
KURBB	**Kurchatov Arra**	53.41	315	P	P	00 49 48.1	-2.5
	0.3nm,0.4s,baz=92,slow=7.7,SNR=5.5						
BVAR	**Borovoye Array**	58.46	318	P	P	00 50 27.1	+0.5
	0.6nm,0.6s,baz=77,slow=7.4,SNR=4.6						

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
ILAR	**Eielson Array**	58.58	28	P	P	00 50 27.6	+0.2
	0.7nm,0.8s,baz=271,slow=5.3,SNR=5.0						
YKA	**Yellowknife Ar**	73.01	28	P	P	00 52 00.0	-0.2
	0.8nm,0.7s,baz=296,slow=5.5,SNR=3.3						
ARCES	**ARCESS Array B**	74.23	341	P	P	00 52 06.0	-1.3
	1.4nm,0.8s,baz=64,slow=6.1,SNR=3.4						
YBH	**Yreka Blue Hor**	76.81	50	LR	LR	01 17 57.1	
	comp=Z,21nm,20.6s,baz=4.0,slow=29						
FINES	**FINESS Array B**	78.56	334	P	P	00 52 32.8	+0.9
	1.2nm,0.4s,baz=76,slow=5.1,SNR=14						
NVAR	**Mina Array Bea**	81.27	52	P	P	00 52 48.6	+1.2
	0.5nm,0.7s,baz=301,slow=5.5,SNR=5.9						
HFS	**Hagfors**	84.07	337	P	P	00 53 01.0	-0.1
	1.7nm,0.8s,baz=100,slow=4.4,SNR=3.2						
NOA	**NORSAR Array B**	84.27	338	P	P	00 53 01.7	-0.6
	0.4nm,0.5s,baz=47,slow=4.6,SNR=2.7						
PDAR	**Pinedale Array**	85.01	44	P	P	00 53 06.5	-0.2
	0.4nm,0.6s,baz=318,slow=2.0,SNR=3.7						
TXAR	**Lajitas Array**	96.34	53	P	P	00 54 01.6	+1.7
	0.3nm,0.8s,baz=339,slow=1.3,SNR=4.2						
PLCA	**Paso Flores**	149.56	126	PKPbc	PKPbc	01 00 20.6	+0.5
	1.1nm,0.8s,baz=254,slow=7.4,SNR=2.8						
LPAZ	**La Paz**	150.41	76	PKPbc	PKPbc	01 00 24.9	+1.3
	1.5nm,0.7s,baz=302,slow=4.9,SNR=5.0						

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*NIED **31** 00:43:00, 37°.70N×143°.70E, h8^{km}, Mw3.9 Best double couple: M₀7.69000×10^{14} NP1:φs39.00000°, δ31.00000°, λ-55.00000°. NP2:φs180.00000°, δ65.00000°, λ-109.00000°.*

*IDC **31** 00:43:53.7±0.7, 37°.52N×143°.98E, h0^{km}, mb3.8/15, mb1 4.0/19, mb1mx3.8/71, mbtmp3.9/19, ML4.0/4, MS3.3/2, Ms1 3.3/2, ms1mx2.5/59, Error ellipse: s-maj=18.6km s-min=16.1km az=133.0*

*ISCJB **31** 00:43:57.2±0.4, 37°.68N±0°.04×143°.78E±0°.04, h33^{km}, mb4.0/21, MS3.4/2, Error ellipse: s-maj=6.4km s-min=4.4km az=172.4*

*JMA **31** 00:43:57.7±0.2, 37°.70N×143°.71E, h44^{km}, M4.0*

*NEIC **31** 00:43:59.1±0.5, 37°.62N×143°.90E, h35^{km}, mb4.0/5, Error ellipse: s-maj=11.7km s-min=8.4km az=159.0*

ISC 31 00:43:59.2±0.6**, 37°.72N**±0°.05×**143°.88E**±0°.06**, h35**^{km}**, n52, σ2^{s}19**/56**, mb3.9**/21**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JIO	**Ouri**	2.13	291	P	Pn	00 44 30.5	-1.8
JIO				S	Sn	00 44 54.7	-2.8
OFUJ	**Ofunato**	2.21	309	P	Pn	00 44 31.7	-1.7
JMK	**Ichinoseki**	2.43	301	P	Pn	00 44 34.9	-1.5
JMK				S	Sn	00 45 02.8	-2.1
JOM	**Ohasama**	2.68	312	P	Pn	00 44 38.8	-1.1
JOM				S	Sn	00 45 09.1	-2.0
JFT	**Otama**	2.82	267	P	Pn	00 44 40.2	-1.6
JFT				S	Sn	00 45 11.8	-2.8
JYK	**Kaneyama**	3.02	295	P	Pn	00 44 43.6	-0.9
JYK				S	Sn	00 45 17.5	-1.9
JANG	**Nango**	3.23	326	P	Pn	00 44 46.5	-0.9
JAW	**Awa shima**	3.73	283	P	Pn	00 44 54.1	-0.1
JAG	**Ashikaga**	3.77	251	P	Pn	00 44 52.8	-2.0
JAG				S	Sn	00 45 33.4	-4.5
JOT	**Ohata**	4.27	330	P	Pn	00 45 01.7	+0.1
ERM	**Erimo**	4.33	353	*e*Pn	Pn	00 45 01.9	-0.6
JOD2	**Odawara 2**	4.57	239	P	Pn	00 45 02.9	-3.0
MJAR	**Matsushiro Arr**	4.68	257	Pn	Pn	00 45 06.8	-0.6
	3.7nm,0.3s,baz=89,slow=15,SNR=29						
MAJO	**Matsushiro**	4.68	257	*e*Pn	Pn	00 45 06.7	-0.7
MAT	**Matsushiro**	4.68	257	P	Pn	00 45 06.9	-0.5
MAT				*e*S	Sn	00 45 59.3	-1.2
JKB	**Kayabe**	4.71	333	P	Pn	00 45 08.2	+0.5
JKB				*e*S	Sn	00 45 58.2	-2.8
JCH	**Churui**	4.91	356	P	Pn	00 45 09.1	-1.3
JCH				*e*S	Sn	00 46 01.7	-4.3
JHJ	**Hachijo jima 2**	5.68	217	Pn	Pn	00 45 16.7	-4.4
	7.6nm,0.3s,baz=42,slow=15,SNR=3.6						
JHJ				Sn	Sn	00 46 08.7	-16
	12nm,0.3s,baz=42,slow=12,SNR=1.9						
NEM2	**Nemuro 2**	5.82	14	P	Pn	00 45 20.7	-2.2
NEM2				*e*S	Sn	00 46 22.5	-5.9
ASAJ	**Asahikawa**	6.47	352	Pn	Pn	00 45 31.2	-0.6
	6.8nm,0.3s,baz=174,slow=12,SNR=14						
ASAJ				Sn	Sn	00 46 37.2	-7.2
	0.7nm,0.3s,baz=198,slow=19,SNR=2.3						
KSRS	**Korea Array**	12.67	274	Pn	Pn	00 46 57.5	+0.7
	0.3nm,0.3s,baz=87,slow=14,SNR=6.6						
KSAR	**Wonju Array Be**	12.70	274	Pn	Pn	00 46 57.5	+0.3
SEY	**Seymchan**	25.78	9	P	P	00 49 28.4	+2.0
	2.7nm,0.7s,baz=180,slow=7.2,SNR=6.0						
H11N2	**WAKE ISLAND Hy**	26.87	125	T	T	01 17 53.9	
	baz=317,slow=74,SNR=4.1						
H11N1	**WAKE ISLAND Hy**	26.88	125	T	T	01 17 52.9	
	baz=317,slow=74,SNR=3.8						
H11N3	**WAKE ISLAND Hy**	26.89	125	T	T	01 17 53.3	
	baz=317,slow=74,SNR=4.5						
H11S1	**WAKE ISLAND Hy**	27.64	128	T	T	01 18 49.6	
	baz=312						
H11S3	**WAKE ISLAND Hy**	27.65	128	T	T	01 18 50.2	
	baz=312						
H11S2	**WAKE ISLAND Hy**	27.66	128	T	T	01 18 48.9	
	baz=312						
SONM	**Songino Array**	29.06	302	P	P	00 49 58.8	+2.6
	0.4nm,0.4s,baz=113,slow=11,SNR=2.7						
ZALV	**Zalesovo Beam**	42.92	312	P	P	00 51 57.1	+2.9
	0.7nm,0.5s,baz=90,slow=10,SNR=2.4						
MKAR	**Makanchi Array**	45.42	302	P	P	00 52 15.0	+0.5
	0.8nm,0.7s,baz=86,slow=8.7,SNR=6.9						
MKAR				LR	LR	01 11 51.3	
	comp=Z,32nm,18.8s,baz=60,slow=37						
KURK	**Kurchatov**	47.06	308	P	P	00 52 28.0	+0.8
KURBB	**Kurchatov Arra**	47.13	308	P	P	00 52 28.0	+0.2
	1.2nm,0.5s,baz=82,slow=8.1,SNR=9.4						
COLA	**College**	47.45	33	P	P	00 52 31.2	+1.2
	0.1nm,0.1s						
ILAR	**Eielson Array**	47.86	33	P	P	00 52 32.2	-1.0
	2.0nm,0.7s,baz=267,slow=5.9,SNR=13						
BVAR	**Borovoye Array**	51.57	312	P	P	00 53 01.9	+0.3
	0.6nm,0.5s,baz=80,slow=8.1,SNR=5.0						
PSI	**Prapat**	53.84	241	LR	LR	01 17 19.7	
	comp=Z,32nm,18.3s,baz=103,slow=37						
POHA	**Pohakuloa**	55.14	91	*e*P	P	00 53 27.8	-0.8
	19nm,0.3s						
WRA	**Warramunga Arr**	58.05	191	P	P	00 53 47.1	-1.6
	1.3nm,0.6s,baz=13,slow=7.2,SNR=5.1						
AKTO	**Aktyubinsk**	59.68	312	P	P	00 53 60.0	+0.1
	1.7nm,0.8s,baz=66,slow=10.0,SNR=4.7						
ASAR	**Alice Springs**	61.77	190	P	P	00 54 12.7	-1.6
	0.4nm,0.5s,baz=6.9,slow=7.4,SNR=3.5						
YKA	**Yellowknife Ar**	62.22	31	P	P	00 54 18.2	+1.3
	0.7nm,0.8s,baz=299,slow=6.3,SNR=3.0						
CMB	**Columbia Colle**	71.87	56	P	P	00 55 18.8	+0.1
	0.8nm,0.4s						
NVAR	**Mina Array Bea**	73.00	54	P	P	00 55 26.9	+1.3
	0.3nm,0.8s,baz=266,slow=3.6,SNR=3.1						
HFS	**Hagfors**	74.26	337	P	P	00 55 33.7	+1.3
	2.5nm,1.0s,baz=98,slow=4.4,SNR=4.4						
AKASG	**Malin Array Be**	74.95	323	P	P	00 55 36.4	-0.1
	0.5nm,0.4s,baz=46,slow=5.6,SNR=4.4						
BW06	**Boulder Array**	75.78	47	P	P	00 55 42.2	+0.5
	2.5nm,1.4s						
PDAR	**Pinedale Array**	75.78	47	P	P	00 55 42.4	+0.7
	0.4nm,0.5s,baz=318,slow=2.0,SNR=5.0						
ISCO	**Idaho Springs**	79.96	47	P	P	00 56 05.7	+0.6
	0.5nm,0.4s						
CLL	**Collm**	81.47	331	*e*P	P	00 56 13.0	+0.5
WMOK	**Wichita Mounta**	87.39	47	P	P	00 56 43.4	+0.5
	10nm,2.1s						

GUC 31 00:44:28.6±0.5**, 21°.77S**×**68°.59W, h137**^{km}±4^{km}**, ML3.7, 4C, Chile-Bolivia border region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB09	**IPOC Station P**	0.61	267	⇑*i*P	Pn	00 44 49.8	+0.5
PB09				*e*S	Sn	00 45 06.2	+1.1
PB09				IAML		00 45 08.2	
	comp=N,670nm,0.3s						
PB01	**IPOC Station P**	1.11	310	*e*P	Pn	00 44 53.6	+0.4
PB01				*e*S	Sn	00 45 12.7	+0.7
PB01				IAML		00 45 14.0	
	comp=N,2µm,0.3s						
PB03	**IPOC Station P**	1.12	255	⇑*i*P	Pn	00 44 54.0	+0.6
PB03				*e*S	Sn	00 45 13.1	+0.8
PB03				IAML		00 45 14.6	
	comp=E,1µm,0.2s						
PB07	**IPOC Station P**	1.21	272	*e*P	Pn	00 44 55.2	+0.8
PB07				*e*S	Sn	00 45 15.0	+1.1
PB07				IAML		00 45 16.0	
	comp=N,3µm,0.1s						
PB02	**IPOC Station P**	1.30	290	*e*P	Pn	00 44 56.0	+0.8
PB02				*e*S	Sn	00 45 16.4	+1.1
PB02				IAML		00 45 18.1	
	comp=E,2µm,0.3s						
PB06	**IPOC Station P**	1.31	224	⇑*i*P	Pn	00 44 55.8	+0.4
PB06				*e*S	Sn	00 45 16.6	+0.9
PB06				IAML		00 45 18.5	
	comp=E,717nm,0.4s						
PB04	**IPOC Station P**	1.56	248	⇑*i*P	Pn	00 44 58.8	+0.8
PB04				*e*S	Sn	00 45 21.1	+0.7
PB08	**IPOC Station P**	1.70	342	*e*P	Pn	00 45 00.8	+0.9
PB08				*e*S	Sn	00 45 25.3	+1.5

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*NIED **31** 00:54:00, 32°.20N×140°.80E, h83^{km}, Mw3.7 Best double couple: M₀4.30000×10^{14} NP1:φs282.00000°, δ29.00000°, λ26.00000°. NP2:φs168.00000°, δ78.00000°, λ116.00000°.*

*ISCJB **31** 00:54:03.5±1.5, 32°.00N±0°.09×140°.7E±0°.2, h78^{km}±12^{km}, mb3.5/5, Error ellipse: s-maj=21.9km s-min=14.6km az=0.2*

*IDC **31** 00:54:06.2±2.9, 31°.69N×140°.03E, h67^{km}±56^{km}, mb3.2/5, mb1 3.3/6, mb1mx3.1/69, mbtmp3.4/6, ML2.9/1, MS2.9/1, Ms1 2.9/1, ms1mx2.2/21, Error ellipse: s-maj=178.8km s-min=19.1km az=71.0*

*JMA **31** 00:54:06.3±0.2, 32°.17N×140°.76E, h36^{km}, M3.5*

ISC 31 00:54:03.3±2.5**, 31°.9N**±0°.1×**140°.7E**±0°.1**, h58**^{km}±22^{km}**, n13, σ1^{s}57**/17**, mb3.5**/5**, Southeast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHCJ	**Hachijojimakas**	1.40	328	P	Pn	00 54 27.3	+0.7
JHCJ				S	Sn	00 54 42.9	-1.2
JHJ2	**Mitsune**	1.43	329	P	Pn	00 54 27.7	+0.8
JHJ2				*e*S	Sn	00 54 43.7	-1.0
JHJ	**Hachijo jima 2**	1.45	329	P	Pn	00 54 28.2	+1.0
	22nm,0.3s,baz=30,slow=23,SNR=7.0						
JHJ				S	Sn	00 54 43.5	-1.8
	134nm,0.3s,baz=82,slow=22,SNR=14						
JMKN	**Mikurajimanish**	2.21	336	P	Pn	00 54 38.4	+0.9
JMKN				S	Sn	00 55 02.3	-1.3
BSO1	**Boso 1**	2.77	5	P	Pn	00 54 45.6	+0.8
BSO1				*e*S	Sn	00 55 15.5	-1.3
JOD2	**Odawara 2**	3.62	339	*e*S	Sn	00 55 37.4	-1.1
MJAR	**Matsushiro Arr**	5.08	337	P	Pn	00 55 20.9	+4.1
	0.5nm,0.3s,baz=171,slow=12,SNR=3.4						
MJAR				S	Sn	00 56 18.2	+4.0
	0.9nm,0.3s,baz=209,slow=11,SNR=4.2						
YAK	**Yakutsk**	30.99	350	LR	LR	01 14 06.0	
	comp=Z,21nm,19.6s,baz=110,slow=39						
KURBB	**Kurchatov Arra**	48.83	312	P	P	01 02 42.9	+0.2
	0.2nm,0.5s,baz=78,slow=6.6,SNR=3.5						
WRA	**Warramunga Arr**	51.89	188	P	P	01 03 05.5	-0.5
	0.5nm,0.7s,baz=1.0,slow=7.7,SNR=5.0						
BVAR	**Borovoye Array**	53.69	315	P	P	01 03 18.5	-0.5
	0.3nm,0.6s,baz=76,slow=6.1,SNR=2.9						
ASAR	**Alice Springs**	55.62	188	P	P	01 03 34.2	+0.9
	0.2nm,0.5s,baz=8.4,slow=9.6,SNR=3.6						
BRTR	**Keskin Array B**	81.82	312	P	P	01 06 15.5	-0.9
	0.5nm,0.7s,baz=46,slow=6.4,SNR=3.7						

NNC 31 00:59:02.4±3.4**, 36°.75N**×**70°.28E, h0**^{km}**, mb3.6, mpv3.2, 5C-1D, Error ellipse: s-maj=26.7km s-min=24.5km az=153.0, Hindu Kush region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	**Sufi-Kurgan**	4.13	37	⇑Pn	Pn	01 00 06.3	-0.7
	3.2nm,0.4s						
SFK				⇓Sn	Sn	01 00 57.7	+1.5
	5.4nm,0.3s						
MNAS	**Manas**	5.99	16	⇑Pn	Pn	01 00 34.1	+1.7
	3.0nm,0.9s						
MNAS				⇑Sn	Sn	01 01 42.4	+0.7
	2.4nm,0.5s						
KK31	**Karatay Array**	6.35	2	⇑Pn	Pn	01 00 36.9	-0.5
	0.3nm,0.3s,baz=174,slow=12,SNR=11						
KK31				⇑Sn	Sn	01 01 51.9	+1.3
	0.4nm,0.3s,baz=183,slow=26,SNR=5.0						

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*SOME **31** 01:00:38.4, 44°.15N×81°.38E, h5^{km}*

*NNC **31** 01:00:38.7±1.8, 44°.15N×81°.38E, h0^{km}, mb2.9, mpv2.6, Error ellipse: s-maj=27.7km s-min=3.9km az=128.0*

ISC 31 01:00:37.1±1.8**, 44°.13N**±0°.05×**81°.39E**±0°.07**, h9**^{km}±13^{km}**, n12, σ1^{s}45**/22**, 5C-1D, Northern Xinjiang**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KTMS	**Ketmen**	1.02	228	*e*P	Pn	01 00 58.6	+0.9
	20nm,0.3s						
KTMS				*e*S	Sb	01 01 13.0	+2.4
	50nm,0.2s						
DJR	**Jarkent**	1.17	280	*e*P	Pn	01 01 00.3	+0.5
	9.4nm,0.2s						
DJR				*e*S	Sg	01 01 15.8	+1.1
	16nm,0.2s						
PDGK	**Podgornoye**	1.59	240	⇑P	Pb	01 01 07.6	+0.7
	6.2nm,0.4s						
PDGK				⇑S	Sg	01 01 29.8	+1.4
	18nm,0.7s						
SHLS	**Shalkode**	1.71	236	*e*P	Pn	01 01 06.0	-1.2
	34nm,0.2s						
SHLS				*e*S	Sn	01 01 26.2	-3.1
	163nm,0.4s						
KAPS	**Kapalarasan**	1.85	309	*e*P	Pb	01 01 11.4	+0.1
	7.4nm,0.3s						
KAPS				*e*S	Sb	01 01 35.1	+0.5
	54nm,0.3s						
UZB	**Uzynbulak**	1.98	241	*e*P	Pb	01 01 13.7	+0.2
	12nm,0.3s						
UZB				*e*S	Sb	01 01 39.5	+1.1
	18nm,0.5s						
KPKS	**Kokpek**	2.07	252	*e*P	Pb	01 01 15.8	+0.8
	24nm,0.3s						
KPKS				*e*S	Sb	01 01 43.1	+2.3
	41nm,0.3s						
TDK	**Taldyqorghan**	2.31	293	*e*P	Pb	01 01 19.3	+0.4
	20nm,0.1s						
TDK				*e*S	Sb	01 01 49.4	+1.9
	49nm,0.4s						
MAKZ	**Makanchi**	2.71	9	⇓Pg	Pg	01 01 28.5	-0.5
	1.1nm,0.5s						
MAKZ				⇑Lg	Lg	01 02 04.2	
	2.6nm,0.3s						
MK31	**Makanchi Array**	2.74	13	⇑Pg	Pg	01 01 28.8	-0.7
	0.6nm,0.3s,baz=194,slow=16,SNR=30						
MK31				⇑Lg	Lg	01 02 03.3	
	4.7nm,0.5s,baz=195,slow=28,SNR=19						
KOTS	**Kotyrbulak**	3.23	255	*e*P	Pg	01 01 37.8	-1.2
	4.8nm,0.3s						
KOTS				*e*S	Sg	01 02 20.7	-0.2
	12nm,0.4s						
KTBS	**Karatobe**	3.43	265	*e*P	Pg	01 01 41.1	-1.7
	2.9nm,0.4s						
KTBS				*e*S	Sg	01 02 26.6	-0.6
	14nm,0.5s						

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*ISCJB **31** 01:07:32.8±2.0, 6°.68S±0°.03×75°.45W±0°.04, h13^{km}±13^{km}, mb4.5/51, Error ellipse: s-maj=7.2km s-min=5.4km az=153.9*

*IDC **31** 01:07:32.5±0.5, 6°.61S×75°.52W, h0^{km}, mb4.2/17, mb1 4.3/25, mb1mx4.2/47, mbtmp4.2/25, ML4.0/7, MS3.2/5, Ms1 3.2/5, ms1mx2.8/43, Error ellipse: s-maj=16.4km s-min=11.9km az=77.0*

*NEIC **31** 01:07:35.9±1.5, 6°.70S×75°.48W, h22^{km}±10^{km}, mb4.6/38, Error ellipse: s-maj=6.7km s-min=4.6km az=60.0*

ISC 31 01:07:36.3±2.7**, 6°.67S**±0°.04×**75°.43W**±0°.06**, h24**^{km}±19^{km}**, n96, σ1^{s}54**/111**, mb4.6**/51**, Northern Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ATAH	**Atahualpa**	2.98	261	Pn	Pn	01 08 20.5	-2.0
	21nm,0.3s,baz=73,slow=13,SNR=59						
ATAH				Lg	Lg	01 08 58.5	
	50nm,0.3s,baz=272,slow=16,SNR=13						
ATAH				LR	LR	01 09 46.9	
	comp=Z,689nm,18.3s,baz=76,slow=46						
NNA	**Nana**	5.46	195	Pn	Pn	01 08 54.6	-1.7
	14nm,0.3s,baz=6.5,slow=11,SNR=18						
NNA				Sn	Sn	01 09 59.5	+1.0
	12nm,0.3s,baz=261,slow=18,SNR=8.1						
NNA				LR	LR	01 11 33.4	
	comp=Z,150nm,19.7s,baz=358,slow=44						
NNA	**Nana**	5.46	195	*e*Pn	Pn	01 08 55.2	-1.1
NNA				*e*Sn	Sn	01 09 58.2	-0.3
OTAV	**Otavalo**	7.50	336	*e*Pn	Pn	01 09 26.8	+2.1
ROSC	**El Rosal**	11.49	6	Pn	Pn	01 10 18.2	-1.1
	0.8nm,0.3s,baz=111,slow=14,SNR=2.6						
ROSC				Lg	Lg	01 13 44.9	
	2.1nm,0.3s,baz=99,slow=19,SNR=2.8						
ROSC				LR	LR	01 15 36.4	
	comp=Z,154nm,18.5s,baz=238,slow=42						
LPAZ	**La Paz**	11.93	144	Pn	Pn	01 10 27.4	+1.7
	0.4nm,0.3s,baz=321,slow=7.3,SNR=9.8						
LPAZ				Lg	Lg	01 14 03.9	
	0.3nm,0.3s,baz=55,slow=5.6,SNR=4.5						
LPAZ				LR	LR	01 15 55.8	
	comp=Z,40nm,19.3s,baz=342,slow=42						
LPAZ	**La Paz**	11.93	144	*e*Pn	Pn	01 10 26.2	+0.6
LPAZ				*e*Sn	Sn	01 12 35.8	-2.6
LPAZ				Lg	Lg	01 14 03.9	
SAML	**Samuel**	12.34	101	*e*Pn	Pn	01 10 30.7	0.0
SAML				*e*Sn	Sn	01 12 48.9	+1.3
MNMC	**Minye Minye**	13.62	156	*e*Pn	Pn	01 10 48.4	-0.1
SDV	**Santo Domingo**	16.18	17	Pn	Pn	01 11 21.9	-0.6
	1.0nm,0.3s,baz=215,slow=17,SNR=7.7						
SDV				Sn	Sn	01 14 22.0	+0.6
	0.2nm,0.3s,baz=317,slow=19,SNR=1.8						
SDV				LR	LR	01 18 34.4	
	comp=Z,96nm,20.7s,baz=220,slow=41						
SDV	**Santo Domingo**	16.18	17	*e*Pn	Pn	01 11 22.4	0.0
	21nm,1.2s						
SDV				*e*Sn	Sn	01 14 22.0	+0.6
PTGA	**Pitinga**	16.52	70	Pn	Pn	01 11 26.2	-0.4
	2.0nm,0.3s,baz=250,slow=16,SNR=18						
PTGA				Sn	Sn	01 14 24.5	-4.9
	0.4nm,0.3s,baz=37,slow=20,SNR=3.2						
PTGA	**Pitinga**	16.52	70	*e*Pn	Pn	01 11 27.3	+0.7
	18nm,0.8s						
PTGA				*e*Sn	Sn	01 14 24.1	-5.3
PTGA				*e*		01 14 24.5	
SIV	**San Ignacio**	16.84	125	Pn	Pn	01 11 30.1	-0.6
	0.4nm,0.3s,baz=315,slow=14,SNR=12						
SIV				Lg	Lg	01 16 26.5	
	0.3nm,0.3s,baz=239,slow=20,SNR=4.7						
PCRV	**Puerto La Cruz**	19.89	33	P	P	01 12 06.8	+0.5
	0.8nm,0.3s,baz=186,slow=10,SNR=3.1						
CPUP	**Villa Florida**	26.07	141	P	P	01 13 08.4	+0.2
	2.4nm,0.7s,baz=331,slow=10,SNR=7.2						
CPUP	**Villa Florida**	26.07	141	*e*P	P	01 13 08.4	+0.2
	11nm,1.4s						
SJG	**San Juan**	26.27	20	P	P	01 13 08.6	-1.4
	5.9nm,0.4s,baz=250,slow=16,SNR=3.2						
SMRT	**St. Maarten**	27.43	26	*e*P	P	01 13 21.2	+0.7
	75nm,0.6s						
PLCA	**Paso Flores**	34.20	173	P	P	01 14 20.6	+0.5
	0.7nm,0.6s,baz=51,slow=6.5,SNR=5.2						
PLCA				PcP	PcP	01 16 57.6	+1.0
	0.7nm,0.6s,baz=354,slow=7.4,SNR=3.4						
PLCA	**Paso Flores**	34.20	173	*e*P	P	01 14 20.6	+0.5
	2.6nm,1.0s						
PLCA				*e*PP	PnPn	01 15 35.9	+1.6
656A	**Willston**	36.48	350	*e*P	P	01 14 42.0	+2.4
	94nm,1.4s						
V48A	**Smith Brothers**	43.53	347	*e*P	P	01 15 37.6	-0.5
	17nm,1.5s						
LTX	**Lajitas**	44.94	324	*e*P	P	01 15 49.0	-0.6
TXAR	**Lajitas Array**	44.94	324	P	P	01 15 49.0	-0.6
	0.4nm,0.7s,baz=145,slow=8.2,SNR=5.7						
TXAR				PcP	PcP	01 17 30.4	-0.5
	0.1nm,0.6s,baz=144,slow=7.8,SNR=2.1						
ABTX	**Abilene, Hawle**	45.37	331	*e*P	P	01 15 53.6	+0.6
	12nm,1.2s						
MNTX	**Cornudas Mount**	47.68	325	*e*P	P	01 16 10.9	-0.2
	4.7nm,1.5s						
BINY	**Binghamton**	48.64	359	*e*P	P	01 16 19.2	+0.9
	9.9nm,0.9s						
ANMO	**Albuquerque**	50.70	327	P	P	01 16 34.0	-0.4
	2.5nm,0.9s,baz=151,slow=10,SNR=6.2						
ANMO	**Albuquerque**	50.70	327	*e*P	P	01 16 34.3	-0.1
	5.6nm,1.3s						
FRNY	**Flat Rock**	51.30	2	*e*P	P	01 16 39.2	+0.8
	8.0nm,0.9s						
T25A	**Trinidad**	51.32	330	*e*P	P	01 16 39.8	+0.7
	10nm,1.5s						
SDCO	**Great Sand Dun**	52.33	330	*e*P	P	01 16 46.6	0.0
	8.7nm,1.4s						
S22A	**4UR Ranch, Cre**	53.00	329	*e*P	P	01 16 52.2	+0.5
	3.0nm,1.5s						
PV02	**Paradox Valley**	54.34	328	*e*P	P	01 17 01.9	+0.5
	11nm,1.4s						
PV13	**Radium Mtn., P**	54.35	328	*e*P	P	01 17 01.3	-0.1
	6.9nm,1.2s						
PKCU	**Pink Cliffs**	55.77	325	*e*P	P	01 17 12.8	+1.0
	18nm,0.9s						
KNB	**Kanab**	55.77	324	*e*P	P	01 17 12.3	+0.7
	1.9nm,0.6s						
LCMT	**Little Creek M**	56.02	324	*e*P	P	01 17 14.1	+0.7
	7.9nm,1.4s						
MSU	**Marysvale**	56.44	326	*e*P	P	01 17 12.6	-3.8
CCUT	**Cedar City**	56.45	324	*e*P	P	01 17 18.1	+1.5
	5.0nm,0.7s						
SHPR	**Sheep Range**	56.83	322	*e*P	P	01 17 20.0	+0.8
	6.9nm,1.5s						
PSUT	**Pine Spring**	57.40	325	*e*P	P	01 17 23.0	-0.3
	9.2nm,0.7s						
DUG	**Dugway, Tooele**	57.97	327	*e*P	P	01 17 27.3	+0.1
	6.1nm,1.3s						
RCWM	**Renegade Canyo**	58.03	320	*e*P	P	01 17 22.9	-4.7
PD31	**Pinedale Array**	58.17	331	*e*P	P	01 17 27.4	-1.3
PD31				*e*PcP	PcP	01 18 18.8	-1.2
PDAR	**Pinedale Array**	58.17	331	P	P	01 17 27.4	-1.3
	0.3nm,0.4s,baz=152,slow=6.6,SNR=4.5						
PDAR				PcP	PcP	01 18 18.8	-1.2
	0.3nm,0.4s,baz=122,slow=3.4,SNR=3.9						
R11A	**Troy Canyon, C**	58.29	323	*e*P	P	01 17 30.2	+0.7
	1.5nm,0.9s						
R11A				*e*PcP	PcP	01 18 17.0	-3.5
HWUT	**Hardware Ranch**	58.31	329	*e*P	P	01 17 29.0	-0.6
	2.2nm,1.0s						
ULM	**Lac du Bonnet**	59.40	345	P	P	01 17 35.1	-1.6
	2.2nm,0.6s,baz=144,slow=9.4,SNR=4.4						
ULM				PcP	PcP	01 18 23.7	-0.7
	1.5nm,0.5s,baz=135,slow=1.9,SNR=4.3						
NV01	**Mina Array Sit**	59.98	322	*e*P	P	01 17 41.1	-0.2
NVAR	**Mina Array Bea**	59.98	322	P	P	01 17 40.8	-0.5
	1.3nm,1.0s,baz=130,slow=6.0,SNR=9.0						
GCMT	**Greycliff**	60.52	333	*e*P	P	01 17 45.0	+0.3
BOZ	**Bozeman (W)**	61.27	332	*e*P	P	01 17 49.5	-0.3
	4.6nm,1.2s						
MCMT	**McKenzie Canyo**	61.30	330	*e*P	P	01 17 50.8	+0.7
SCHQ	**Schefferville**	61.70	6	*e*P	P	01 17 52.6	+0.2
	17nm,1.5s						
MFID	**Camas Ranch**	61.82	328	*e*P	P	01 17 53.6	+0.1
	5.6nm,1.0s						
ORV	**Oroville**	62.64	321	*e*P	P	01 17 59.6	+0.7
	11nm,1.3s						
LAB	**Little Aspen B**	64.60	323	*e*P	P	01 18 07.7	-4.4
BUOR	**Burton Butte**	64.71	323	*e*P	P	01 18 08.5	-4.3
C09A	**Chrisman Ranch**	66.06	330	*e*P	P	01 18 20.8	-0.4
	22nm,0.2s						
LIC	**Lamto**	71.41	81	*e*P	P	01 18 55.1	-0.2
	90nm,2.0s						
TIC	**Toumodi**	71.48	81	*e*P	P	01 18 56.0	+0.3
DBIC	**Dimbokro**	71.65	81	P	P	01 18 57.6	+0.9
	5.1nm,0.4s,baz=254,slow=6.9,SNR=28						
DBIC	**Dimbokro**	71.65	81	*e*P	P	01 18 57.6	+0.9
	33nm,1.4s						
KIC	**Kosan Boka**	71.71	81	*e*P	P	01 18 57.3	+0.2
	18nm,0.9s						
KOWA	**Kowa**	73.86	73	P	P	01 19 10.6	+0.8
	7.6nm,0.5s,baz=257,slow=6.4,SNR=48						
YKA	**Yellowknife Ar**	75.21	342	P	P	01 19 15.7	-0.9
	1.1nm,0.8s,baz=144,slow=5.7,SNR=5.5						
YKB5	**Yellowknife Ar**	75.21	342	*e*P	P	01 19 15.7	-0.9
SNAA	**Sanae**	78.26	162	P	P	01 19 34.5	+0.6
	1.2nm,0.8s,baz=315,slow=8.6,SNR=3.4						
SNAA	**Sanae**	78.26	162	*e*P	P	01 19 34.5	+0.6
	6.0nm,1.4s						
TOA1	**Torodi Ar. Sit**	79.07	75	*e*P	P	01 19 38.7	-0.7
TOA0	**Torodi Ar. Sit**	79.08	75	*e*P	P	01 19 40.0	+0.6
TORD	**Torodi Ar. Bea**	79.08	75	P	P	01 19 38.7	-0.7
	4.6nm,0.8s,baz=271,slow=3.9						
ESDC	**Sonseca Array**	80.20	48	P	P	01 19 46.1	+1.1
	0.5nm,0.7s,baz=260,slow=6.4,SNR=5.3						

ES19	SONSECA Array	80.25	48	*e*P	P	01 19 46.9	+1.5
QSPA	South Pole Qui	83.43	180	P	P	01 20 02.7	+1.0
	3.3nm,1.1s,baz=158,slow=5.3,SNR=4.0						
TAM	Tamanrasset	84.28	66	*e*P	P	01 20 09.0	+2.1
	4.4nm,1.1s						
IL1	Eielson Array	88.22	336	*e*P	P	01 20 23.9	-1.3
ILAR	Eielson Array	88.22	336	P	P	01 20 24.1	-1.1
	1.8nm,1.1s,baz=125,slow=2.9,SNR=7.9						
ILB	Eielson Array	88.22	336	*e*P	P	01 20 24.1	-1.1
MDM	Murphy Dome	88.82	336	*e*P	P	01 20 27.7	-0.4
	23nm,1.4s						
SKT	Skwentna	89.37	333	*e*P	P	01 20 30.6	-0.1
	19nm,1.3s						
RSO	Redoubt South	89.56	331	*e*P	P	01 20 29.6	-2.2
BPAW	Bear Paw Mtn.	89.70	335	*e*P	P	01 20 32.0	-0.2
	8.4nm,1.2s						
CAST	Castle Rocks	89.99	334	*e*P	P	01 20 33.1	-0.5
	18nm,1.5s						
VNDA	Vanda	90.24	191	P	P	01 20 34.1	-0.4
	0.6nm,0.9s,baz=117,slow=2.3,SNR=3.2						
GEC2	GERESS Array S	94.40	41	*e*P	P	01 20 58.0	+3.5
	0.9nm,0.8s						
GERES	GERESS Array B	94.40	41	P	P	01 20 57.9	+3.5
	0.2nm,0.5s,baz=238,slow=5.6,SNR=2.6						
ZAA1	Zalesovo Array	130.22	15	*e*PKPdf	PKPdf	01 26 43.6	-0.8
ZALV	Zalesovo Beam	130.22	15	PKP	PKPdf	01 26 43.7	-0.8
	0.5nm,0.4s,baz=221,slow=1.3,SNR=3.7						
AS31	Alice Springs	138.41	223	*e*PKPdf	PKPdf	01 27 00.3	-0.4
ASAR	Alice Springs	138.41	223	PKP	PKPdf	01 27 00.3	-0.4
	0.6nm,0.7s,baz=132,slow=1.4,SNR=3.4						
WR1	Warramunga Arr	140.53	227	*e*PKPpre	PKPpre	01 26 57.5	
WR1				*e*PKPdf	PKiKP	01 27 06.4	-0.9
WRA	Warramunga Arr	140.53	227	PKhKP	PKPpre	01 26 57.4	
	0.8nm,1.0s,baz=119,slow=1.8,SNR=2.9						
WRA				PKP	PKiKP	01 27 06.4	-0.9
	0.6nm,0.6s,baz=123,slow=2.0,SNR=6.3						
FITZ	Fitzroy Crossi	147.78	220	PKPbc	PKPbc	01 27 20.5	+0.4
	4.8nm,0.9s,baz=160,slow=10,SNR=4.6						

JMA ***31*** *01:12:45.3±0.1, 34°.96N×141°.31E, h42^{km}±2^{km}, M3.2*
ISCJB ***31*** *01:12:46.5±0.6, 34°.90N±0°.05×141°.17E±0°.07, h48^{km}, mb3.8/9, MS3.1/2, Error ellipse: s-maj=8.8km s-min=7.0km az=171.3*
IDC ***31*** *01:12:50.5±2.7, 34°.96N×140°.88E, h63^{km}±24^{km}, mb3.5/9, mb1 3.7/11, mb1mx3.4/69, mbtmp3.8/11, ML3.3/2, MS3.1/4, Ms1 3.1/4, ms1mx2.7/57, Error ellipse: s-maj=28.7km s-min=16.1km az=78.0*
ISC 31 01:12:48.0±0.8**, 34°.90N**±0°.05×**141°.20E**±0°.08**, h48^{km}, n31, σ2.^{s}00**/24**, mb3.7**/9**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BSO1	Boso 1	0.31	216	P	Pn	01 12 54.8	-1.6
BSO3	Boso 3	0.58	260	P	Pn	01 12 58.8	-1.0
BSO3				X		01 13 08.1	
BSO4	Boso 4	0.71	277	P	Pn	01 13 00.4	-1.4
BSO4				*e*X		01 13 10.9	
KTR	Katsuura	0.77	289	P	Pn	01 13 00.9	-1.6
KTR				S	Sn	01 13 11.5	-1.6
CHOJ	Chosi	0.84	341	P	Pn	01 13 00.4	-3.2
JCN	Nagara	0.97	302	*e*S	Sn	01 13 16.6	-1.3
JIM2	Oshima 3	1.47	263	P	Pn	01 13 10.4	-1.7
JYT	Yasato	1.56	328	P	Pn	01 13 12.0	-1.2
JHO	Hitachi	1.78	343	P	Pn	01 13 13.9	-2.4
JHJ	Hachijo jima 2	2.13	214	P	Pn	01 13 21.4	+0.3
	26nm,0.3s,baz=338,slow=18,SNR=11						
JHJ				S	Sn	01 13 43.0	-3.5
	38nm,0.3s,baz=66,slow=20,SNR=5.1						
MJAR	Matsushiro Arr	2.93	305	P	Pn	01 13 32.6	+0.5
	4.9nm,0.3s,baz=98,slow=13,SNR=19						
MAT	Matsushiro	2.93	305	P	Pn	01 13 34.1	+1.9
MAT				*e*S	Sn	01 14 10.0	+3.8
JNU	Nakatsue	8.75	261	LR	LR	01 18 39.9	
	comp=Z,197nm,19.4s,baz=121,slow=41						
KSRS	Korea Array	11.03	287	LR	LR	01 19 54.7	
	comp=Z,49nm,19.6s,baz=114,slow=39						
PETK	Petropavlovsk-	21.63	28	LR	LR	01 26 16.1	
	comp=Z,39nm,20.7s,baz=194,slow=37						
H11N2	WAKE ISLAND Hy	27.27	117	T	T	01 47 01.6	
	baz=310,slow=75,SNR=42						
H11N1	WAKE ISLAND Hy	27.28	117	T	T	01 47 00.8	
	baz=310,slow=75,SNR=34						
H11N3	WAKE ISLAND Hy	27.29	117	T	T	01 47 02.9	
	baz=310,slow=75,SNR=28						
H11S1	WAKE ISLAND Hy	27.91	119	T	T	01 47 53.1	
	baz=312,slow=75,SNR=55						
H11S3	WAKE ISLAND Hy	27.91	119	T	T	01 47 47.4	
	baz=312,slow=75,SNR=43						
H11S2	WAKE ISLAND Hy	27.93	119	T	T	01 47 51.2	
	baz=312,slow=75,SNR=40						
ZALV	Zalesovo Beam	43.24	314	P	P	01 20 44.7	+0.3
	0.6nm,0.3s,baz=84,slow=5.2,SNR=4.4						
MKAR	Makanchi Array	45.13	304	P	P	01 20 57.4	-2.3
	0.3nm,0.7s,baz=88,slow=9.0,SNR=2.4						
KURBB	Kurchatov Arra	47.20	310	P	P	01 21 13.3	-2.5
	1.2nm,0.9s,baz=86,slow=7.6,SNR=4.9						
ILAR	Eielson Array	51.39	31	P	P	01 21 47.9	+0.3
	0.5nm,0.7s,baz=262,slow=6.6,SNR=5.2						
WRA	Warramunga Arr	54.93	188	P	P	01 22 15.1	+1.0
	5.9nm,0.8s,baz=5.7,slow=7.5,SNR=24						
ASAR	Alice Springs	58.66	188	P	P	01 22 42.2	+1.7
	1.2nm,0.9s,baz=17,slow=9.1,SNR=5.7						
AKTO	Aktyubinsk	59.98	313	LR	LR	01 50 00.2	
	comp=Z,22nm,18.1s,baz=342,slow=37						
FINES	FINESS Array B	70.62	333	P	P	01 23 57.9	-0.1
	1.7nm,0.7s,baz=49,slow=4.6,SNR=6.9						
NOA	NORSAR Array B	76.08	337	P	P	01 24 30.9	+0.7
	0.6nm,0.8s,baz=39,slow=5.8,SNR=4.0						
NVAR	Mina Array Bea	76.41	53	P	P	01 24 34.9	+2.1
	0.7nm,0.8s,baz=288,slow=5.7,SNR=6.2						

NEIC ***31*** *01:18:59.2±0.0, 46°.21S×165°.81E, h5^{km}, ML4.5(WEL), After WEL.*
WEL 31 01:19:00.8±1.2**, 47°S**±7°×**16°6E**±°**, h5^{km}, ML4.7**/13**, Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PYZ	Puysegur Point	0.55	33	P*	Pg	01 19 11.4	+0.1
PYZ				Sg	Sb	01 19 20.3	-0.7
PYZ	Puysegur Point	0.55	33	P	Pg	01 19 11.4	+0.2
PYZ				S	Sb	01 19 20.4	-0.6
APZ	The Paps	1.21	100	*e*Pn	Pb	01 19 24.4	+0.1
APZ	The Paps	1.21	100	P	Pn	01 19 24.4	-0.1
DCZ	Deep Cove	1.32	29	*e*Pn	Pn	01 19 21.2	-4.7
DCZ				*e*Sn	Sg	01 19 36.6	-6.5
DCZ	Deep Cove	1.32	29	P	Pn	01 19 21.2	-4.7
WHZ	Wether Hill Ro	1.39	59	*e*Pn	Pn	01 19 25.7	-1.1
WHZ				*e*Sn	Sb	01 19 42.3	-2.8
WHZ	Wether Hill Ro	1.39	59	P	Pn	01 19 25.7	-1.1
WHZ				S	Sn	01 19 45.7	+0.2
MLZ	Mavora Lakes	1.81	47	*e*Pn	Pn	01 19 33.1	+0.4
MLZ				*e*Sn	Sn	01 19 50.2	-5.8
MLZ	Mavora Lakes	1.81	47	P	Pn	01 19 32.3	-0.4
MSZ	Milford Sound	2.28	32	P	Pn	01 19 40.0	+1.0
TUZ	Tuapeka	2.44	75	P	Pn	01 19 41.2	0.0
TUZ				S	Sn	01 20 11.9	+0.6
EAZ	Earnscleugh	2.55	58	*e*Pn	Pn	01 19 42.9	+0.1
EAZ	Earnscleugh	2.55	58	P	Pn	01 19 42.9	+0.1
EAZ				S	Sn	01 20 16.2	+2.0
WKZ	Wanaka	2.64	48	*e*Pn	Pn	01 19 46.2	+2.1
WKZ				*e*Sn	Sn	01 20 13.3	-3.2
WKZ	Wanaka	2.64	48	P	Pn	01 19 44.6	+0.5
JCZ	Jackson Bay	3.11	36	P	Pn	01 19 52.1	+1.5
ODZ	Otahua Downs	3.45	64	*e*Sn	Sn	01 20 29.8	-6.7
ODZ	Otahua Downs	3.45	64	P	Pn	01 19 53.5	-1.7
LBZ	Lake Benmore	3.56	52	*e*Sn	Sn	01 20 32.4	-6.7
LBZ	Lake Benmore	3.56	52	P	Pn	01 19 55.7	-1.0
FOZ	Fox Glacier	3.99	41	*e*Pn	Pn	01 20 02.7	+0.1
FOZ				*e*Sn	Sn	01 20 46.1	-3.6
FOZ	Fox Glacier	3.99	41	P	Pn	01 20 02.8	+0.2
FOZ				S	Sn	01 20 49.7	0.0
WVZ	Waitaha Valley	4.77	44	P	Pn	01 20 13.8	+0.5
OXZ	Oxford	5.26	53	P	Pn	01 20 19.6	-0.5
INZ	Inchbonnie	5.38	45	P	Pn	01 20 20.4	-1.2
INZ				S	Sn	01 21 23.3	-0.6

ISCJB ***31*** *01:26:38.2±0.3, 4°.54N±0°.02×75°.95W±0°.03, h66^{km}±3^{km}, mb4.4/115, Error ellipse: s-maj=4.3km s-min=3.6km az=7.5*
NEIC ***31*** *01:26:39.8±0.4, 4°.56N×75°.92W, h63^{km}±4^{km}, mb4.5/104, ML4.2(RSNC), Error ellipse: s-maj=4.5km s-min=3.5km az=76.0*
NEIC Felt [IV] at Armenia and Pereira and [II] at Cali. Also felt at Bogota, Calarca, Manizales and Marsella.
RSNC ***31*** *01:26:39.0±1.2, 4°.55N×75°.99W, h17^{km}±4^{km}, ML4.2, Mw4.2*
IDC ***31*** *01:26:41.5±1.4, 4°.50N×75°.89W, h88^{km}±12^{km}, mb3.7/18, mb1 4.0/23, mb1mx3.8/49, mbtmp4.1/23, MS3.4/22, Ms1 3.4/22, ms1mx3.3/45, Error ellipse: s-maj=14.0km s-min=10.6km az=58.0*
ISC 31 01:26:37.7±0.6**, 4°.54N**±0°.03×**75°.99W**±0°.03**, h44^{km}**±5^{km}**, n353, σ1.^{s}13**/358**, mb4.5**/115**, MS3.4**/17**, 4C-2D, Colombia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PLMC	San Jos˜' del	0.47	321	⇑*i*P	Pn	01 26 48.5	+0.2
ANIL	Santa Ana	0.58	94	⇓*i*P	Pn	01 26 50.3	+0.3
ANIL				*e*S	Sn	01 26 59.0	+0.3
YOTC	Yotoco, Valle	0.66	213	⇑*i*P	Pn	01 26 50.4	-0.4
YOTC				*e*S	Sn	01 27 00.2	0.0
YOTC				*i*		01 27 02.7	
	comp=Z,18µm,0.2s						
TOLC	Tolima	0.66	86	*e*P	Pn	01 26 50.7	-0.4
TOLC				*e*S	Sn	01 27 00.6	-0.1
GUYC	Guyana, Colomb	0.90	41	*e*P	Pn	01 26 54.6	+0.2
GUYC				*i*		01 27 08.2	
	comp=Z,5µm,0.4s						
PRAC	Prado	1.37	127	*e*Pn	Pn	01 27 02.3	+1.9
PRAC	Prado	1.37	127	⇓*i*P	Pn	01 27 02.3	+1.9
PRAC				*e*S	Sn	01 27 20.7	+3.4
PRAC				*i*		01 27 21.9	
	comp=Z,7µm,0.3s						
MALC	Bahia Malaga	1.44	249	*e*P	Pn	01 27 03.9	+2.5
NORC	Norcasia	1.51	47	*e*P	Pn	01 27 04.0	+1.7
NORC				*e*S	Sn	01 27 23.0	+2.2
MARP	Paez Belalcaza	1.68	179	*e*P	Pn	01 27 07.3	+2.4
MARP				*e*S	Sn	01 27 29.2	+3.8
MARP				*i*		01 27 34.5	
	comp=Z,2µm,0.4s						
ROSC	El Rosal	1.69	80	P	Pn	01 27 08.3	+3.2
	comp=Z,260nm,0.3s,baz=38,slow=3.2,SNR=159						
ROSC				S	Sn	01 27 30.2	+4.6
	comp=Z,202nm,0.3s,baz=332,slow=21,SNR=7.0						
ROSC				LR	LR	01 27 38.7	
	comp=Z,713nm,18.9s,baz=192,slow=36						
ROSC	El Rosal	1.69	80	*e*Pn	Pn	01 27 08.3	+3.2
ROSC				*e*Sn	Sn	01 27 23.7	-2.0
ROSC	El Rosal	1.69	80	⇑*i*P	Pn	01 27 08.3	+3.2
HELC	Santa Helena	1.71	15	*e*Pn	Pn	01 27 06.8	+1.4
HELC	Santa Helena	1.71	15	*e*P	Pn	01 27 06.7	+1.4
HELC				*e*S	Sn	01 27 28.5	+2.4
HELC				*i*		01 27 33.8	
	comp=Z,998nm,0.4s						
BETC	Betania	1.92	164	*e*P	Pn	01 27 09.9	+1.9
POPC	Popayan, Colom	2.10	199	*e*P	Pn	01 27 12.1	+1.5
POPC				*i*		01 27 48.6	
	comp=Z,3µm,0.3s						
SOLC	Bahia Solano	2.20	320	*e*P	Pn	01 27 13.4	+1.7
CHIC	Chingaza	2.25	88	*e*P	Pn	01 27 15.6	+2.8
CHIC				*i*		01 27 24.4	
	comp=Z,666nm,0.6s						
VILC	Villavicencio,	2.32	100	*e*P	Pn	01 27 16.2	+2.6
VILC				*i*		01 27 52.5	
	comp=Z,975nm,0.6s						
SOTA	Rioblanco	2.47	195	*e*P	Pn	01 27 18.2	+2.3
SOTA				*i*		01 28 02.0	
	comp=Z,1µm,0.7s						
PTBC	PUERTO BERRIO,	2.50	37	⇑*i*P	Pn	01 27 17.7	+1.7
PTBC				*e*S	Sn	01 27 47.6	+2.3
PTBC				*i*		01 27 50.5	
	comp=Z,400nm,0.6s						
ZARC	Zaragoza, Cauc	3.14	21	*e*P	Pn	01 27 26.9	+2.1
ZARC				*i*		01 28 08.8	
	comp=Z,428nm,0.4s						
RUSC	La Rusia	3.19	65	*e*Pn	Pn	01 27 27.6	+1.8
TUMC	Tumaco	3.84	226	*e*Pn	Pn	01 27 36.7	+2.4
OTAV	Otavalo	4.93	210	*e*Pn	Pn	01 27 52.6	+2.8
OTAV				*e*Sn	Sn	01 28 45.0	-0.8
BCIP	Isla Barro Col	5.98	320	*e*Pn	Pn	01 28 05.0	+1.3
BCIP				*e*Sn	Sn	01 29 11.4	+0.4
SDV	Santo Domingo	6.85	51	P	Pn	01 28 17.7	+1.9
	comp=Z,7.9nm,0.3s,baz=238,slow=12,SNR=39						
SDV				S	Sn	01 29 33.7	+1.1
	comp=Z,3.8nm,0.3s,baz=330,slow=20,SNR=2.2						
SDV	Santo Domingo	6.85	51	*e*Pn	Pn	01 28 17.6	+1.8
SDV				Sn	Sn	01 29 35.2	+2.6
JTS	JuntasAbangare	10.57	303	P	Pn	01 29 11.2	+4.5
	comp=Z,0.4nm,0.3s,baz=118,slow=3.7,SNR=4.2						
JTS				LR	LR	01 33 14.7	
	comp=Z,488nm,20.7s,baz=204,slow=37						
ESPN	Las Esperanzas	11.20	313	*e*Pn	Pn	01 29 17.7	+2.4
ATAH	Atahualpa	11.84	192	P	Pn	01 29 26.4	+1.9
	comp=Z,0.4nm,0.3s,baz=19,slow=6.1,SNR=3.6						
ATAH				LR	LR	01 35 42.5	
	comp=Z,82nm,20.8s,baz=37,slow=46						
PCRV	Puerto La Cruz	12.57	63	P	Pn	01 29 35.4	+1.4
	comp=Z,2.0nm,0.3s,baz=24,slow=3.4,SNR=6.4						
PCRV				LR	LR	01 35 28.1	
	comp=Z,331nm,20.1s,baz=227,slow=42						
GTBY	Guantanamo Bay	15.32	3	*e*Pn	P	01 30 14.4	-0.7
	comp=Z,53nm,1.3s						
CBCY	The Bluff, Cay	15.55	347	*e*Pn	Pn	01 30 14.9	+0.9
	comp=Z,57nm,1.0s						
ICMP	Isla Caja de M	16.18	34	*e*Pn	Pn	01 30 22.9	+0.9
	comp=Z,140nm,1.7s						
AOPR	Arecibo Observ	16.43	33	*e*Pn	Pn	01 30 24.9	-0.3
	comp=Z,32nm,0.9s						
NNA	Nana	16.44	183	LR	LR	01 38 32.3	
	comp=Z,224nm,18.6s,baz=356,slow=43						
SJG	San Juan	16.57	35	LR	LR	01 38 05.4	
	comp=Z,60nm,21.0s,baz=249,slow=41						
HUMP	Col San Antoni	16.77	35	*e*P	P	01 30 30.9	-0.3
	comp=Z,45nm,1.2s						
PTGA	Pitinga	16.84	108	P	Pn	01 30 29.1	-1.4
	comp=Z,0.6nm,0.3s,baz=290,slow=17,SNR=9.2						
CBYP	Canovanas	16.86	35	*e*Pn	Pn	01 30 28.9	-1.9
	comp=Z,33nm,1.0s						
SAML	Samuel	18.50	136	*e*P	P	01 30 50.4	0.0
	comp=Z,22nm,1.1s						
LPAZ	La Paz	22.10	160	P	P	01 31 28.6	-1.5
	comp=Z,1.6nm,0.7s,baz=3.6,slow=13,SNR=6.4						
LPAZ				LR	LR	01 40 46.6	
	comp=Z,157nm,21.9s,baz=344,slow=38						
LPAZ	La Paz	22.10	160	*e*P	P	01 31 28.6	-1.5
	comp=Z,8.7nm,0.8s						
MNMC	Minye Minye	24.35	165	*e*P	P	01 31 53.1	+1.2
	comp=Z,23nm,0.9s						
PB11	IPOC Station P	24.93	166	*e*P	P	01 31 57.0	-0.1
	comp=Z,27nm,1.0s						
SIV	San Ignacio	25.18	144	P	P	01 31 58.1	-1.1
	comp=Z,5.8nm,0.6s,baz=336,slow=10,SNR=32						
SIV				LR	LR	01 42 12.2	
	comp=Z,244nm,19.1s,baz=310,slow=37						
PB01	IPOC Station P	26.21	166	*e*P	P	01 32 09.2	+0.6
	comp=Z,20nm,1.1s						
256A	Glennville	27.86	349	P	P	01 32 23.5	+0.3
	baz=167						
255A	Hazlehurst	27.92	348	P	P	01 32 24.9	+1.2
	baz=166						
252A	Lumpkin	28.52	344	P	P	01 32 30.2	+1.0
	baz=161						
251A	Midway	28.80	343	P	P	01 32 32.4	+0.7
	baz=160						
Z55A	Blythe	29.11	349	P	P	01 32 35.0	+0.7
	baz=167						
152A	Waverly Hall	29.16	345	P	P	01 32 35.6	+0.8
	baz=162						
151A	Opelika	29.19	344	P	P	01 32 36.0	+0.9
	baz=161						
347A	Saraland	29.21	338	P	P	01 32 35.8	+0.5
	baz=154						
249A	Camden	29.23	340	P	P	01 32 36.7	+1.4
	baz=157						
Z54A	Sparta	29.26	348	P	P	01 32 37.0	+1.3
	baz=166						
150A	Eclectic	29.46	343	P	P	01 32 38.7	+1.3
	baz=159						
248A	Dixon Mills	29.55	339	P	P	01 32 40.0	+1.8
	baz=156						
346A	Big Creek Wild	29.56	336	P	P	01 32 38.9	+0.5
	baz=152						
Z52A	Williamson	29.57	346	P	P	01 32 39.6	+1.1
	baz=163						
149A	Jones	29.69	341	P	P	01 32 40.6	+1.1
	baz=158						
Y53A	Monroe	30.02	347	P	P	01 32 43.4	+1.1
	baz=165						
Z50A	Ashland	30.04	343	P	P	01 32 43.7	+1.1
	baz=160						
LRAL	Lakeview Retre	30.16	341	P	P	01 32 44.7	+1.0
	baz=158						
Z49A	Columbiana	30.16	342	P	P	01 32 45.2	+1.5
	baz=159						
Z48A	Northport	30.66	341	P	P	01 32 49.0	+1.0
	baz=157						
Y49A	Blount Mountai	30.75	343	*e*P	P	01 32 49.0	+0.2
	comp=Z,31nm,1.7s						
X52A	Dahlonega	30.80	347	P	P	01 32 50.2	+0.8
	baz=164						
Z46A	Louisville	30.97	339	P	P	01 32 52.3	+1.5
	baz=154						
BG3	Lake Jocassee	30.98	349	*e*P	P	01 32 51.4	+0.5
	comp=Z,9.0nm,1.0s						
X51A	Calhoun	30.99	346	P	P	01 32 51.9	+0.9
	baz=163						
Y48A	Jasper	31.03	342	P	P	01 32 52.0	+0.7
	baz=158						
X50B	Fort Payne	31.10	344	P	P	01 32 52.6	+0.6
	baz=161						
Y47A	UCPARC, Winfie	31.23	341	P	P	01 32 53.5	+0.4
	baz=157						
X48A	Hartselle	31.49	342	P	P	01 32 55.9	+0.6
	baz=158						
W51A	Cleveland	31.54	346	P	P	01 32 56.9	+1.1
	baz=163						
Y46A	Houston	31.56	339	P	P	01 32 56.6	+0.6
	baz=155						
V53A	Saluda	31.62	349	P	P	01 32 58.0	+1.4
	baz=167						
W50A	Signal Mountai	31.71	345	P	P	01 32 58.4	+1.1
	baz=162						
Y45A	Yeager Farm, C	31.79	338	P	P	01 32 59.2	+1.2
	baz=154						
TKL	Tuckaleechee C	31.79	348	LR	LR	01 46 12.2	
	comp=Z,36nm,21.5s,baz=255,slow=37						
X47A	Russelville	31.80	341	P	P	01 32 58.4	+0.3
	baz=157						
W49A	Belvidere	31.89	344	P	P	01 33 00.0	+1.2
	baz=160						
V52A	Sevierville	31.93	348	P	P	01 33 00.4	+1.1
	baz=166						
V51A	Loudon	32.06	347	P	P	01 33 02.0	+1.6
	baz=164						
V51A	Loudon	32.06	347	*e*P	P	01 33 00.9	+0.6
	comp=Z,9.3nm,0.8s						
W48A	Pulaski	32.09	343	P	P	01 33 01.7	+1.0
	baz=159						
V50A	Pikevile	32.10	346	P	P	01 33 02.2	+1.4
	baz=163						
U53A	Fall Branch	32.25	350	P	P	01 33 03.0	+0.9
	baz=168						
OXF	Oxford	32.32	339	P	P	01 33 03.2	+0.5
	baz=154						
W47A	Westpoint	32.40	342	P	P	01 33 04.1	+0.7
	baz=158						
V49A	McMinnville	32.40	345	P	P	01 33 04.5	+1.1
	baz=161						
U51A	La Follette	32.54	348	P	P	01 33 05.7	+1.1
	baz=165						
V48A	Smith Brothers	32.62	344	P	P	01 33 06.1	+0.8
	baz=160,SNR=7.2						
V48A	Smith Brothers	32.62	344	*e*P	P	01 33 06.1	+0.8
	comp=Z,12nm,0.8s						
U50A	Jamestown	32.76	347	P	P	01 33 07.6	+1.1
	baz=164						
V47A	Nunnelly	32.91	343	P	P	01 33 08.2	+0.4
	baz=158						
U49A	Red Boiling Sp	33.07	345	P	P	01 33 10.3	+1.0
	baz=162						
T51A	Gray	33.09	348	P	P	01 33 10.9	+1.5
	baz=165						
U48A	Cassie Pea, Po	33.27	344	P	P	01 33 12.0	+1.0
	baz=160						
WVT	Waverly	33.28	342	P	P	01 33 11.5	+0.4
	baz=158						
WVT	Waverly	33.28	342	*e*P	P	01 33 11.2	+0.1
	comp=Z,3.8nm,0.9s						
T50A	Nancy	33.33	347	P	P	01 33 12.4	+0.8
	baz=164						
U47A	Clarksville	33.41	343	P	P	01 33 12.6	+0.4
	baz=159						
X41A	Kaden, Bauxite	33.52	335	P	P	01 33 13.2	+0.1
	baz=149						
T49A	Edmonton	33.58	346	P	P	01 33 14.3	+0.7
	baz=163						
T49A	Edmonton	33.58	346	*e*P	P	01 33 13.8	+0.2
	comp=Z,6.3nm,0.7s						
X40A	Basin Creek Fa	33.65	334	P	P	01 33 14.8	+0.4
	baz=149						
T48A	Bowling Green	33.79	345	P	P	01 33 16.1	+0.6
	baz=161						
T47A	Sharon Grove	33.87	344	P	P	01 33 16.4	+0.2
	baz=160						
T47A	Sharon Grove	33.87	344	*e*P	P	01 33 16.9	+0.8
	comp=Z,9.3nm,0.8s						
S50A	Richmond	33.87	348	P	P	01 33 17.2	+1.0
	baz=165						
WHTX	Lake Whitney,	33.93	326	*e*P	P	01 33 16.9	+0.1
	comp=Z,6.8nm,0.8s						
T46A	Princeton	34.15	343	P	P	01 33 19.5	+0.9
	baz=158						
S49A	Springfield	34.17	347	P	P	01 33 19.3	+0.6
	baz=163,SNR=5.6						
BDFB	Brasilia	34.19	126	LR	LR	01 47 48.1	
	comp=Z,301nm,19.9s,baz=239,slow=37						
V42A	Cord	34.21	337	P	P	01 33 19.1	-0.1
	baz=152						
S48A	Wiedeman Farm,	34.23	346	P	P	01 33 19.9	+0.6
	baz=162						
X39A	Fountain Ranch	34.24	333	P	P	01 33 20.0	+0.6
	baz=146						
R51A	Hillsboro	34.31	349	P	P	01 33 21.0	+1.0
	baz=166						
W40A	Ferguson Farm,	34.35	335	*e*P	P	01 33 20.9	+0.5
	comp=Z,19nm,1.2s						
S47A	Hartford	34.38	345	P	P	01 33 20.7	+0.1
	baz=160						
R50A	Paris	34.44	348	P	P	01 33 22.0	+0.9
	baz=165						
V41A	Mountainview	34.49	336	P	P	01 33 21.7	+0.1
	baz=151						
R49A	Shelbyville	34.63	347	P	P	01 33 23.2	+0.5
	baz=164						
U42A	Revenden	34.63	338	P	P	01 33 22.3	-0.5
	baz=152						
W39A	Magazine	34.67	334	P	P	01 33 22.9	-0.2
	baz=148						
W39A	Magazine	34.67	334	*e*P	P	01 33 23.3	+0.2
	comp=Z,4.3nm,0.8s						
S46A	Don Dixon Farm	34.69	344	P	P	01 33 23.2	0.0
	baz=159						
V40A	Witts Springs	34.78	336	P	P	01 33 23.6	-0.5
	baz=150,SNR=5.4						
V40A	Witts Springs	34.78	336	*e*P	P	01 33 24.1	-0.1
	comp=Z,7.1nm,0.9s						
WCI	Wyandotte Cave	34.83	346	P	P	01 33 24.7	+0.2
	baz=162						
WCI	Wyandotte Cave	34.83	346	*e*P	P	01 33 24.7	+0.2
	comp=Z,7.7nm,0.6s						
U41A	Viola	34.88	337	P	P	01 33 25.0	0.0
	baz=151						
R48A	Northridge Ran	34.89	346	P	P	01 33 25.5	+0.5
	baz=162						
Q50A	Georgetown	34.91	349	P	P	01 33 26.0	+0.8
	baz=166						
T43A	Greenville	34.95	340	P	P	01 33 26.0	+0.5
	baz=154						
R47A	Wooly Knot Far	34.95	345	P	P	01 33 25.4	0.0
	baz=161						
Q51A	Peebles	34.98	350	P	P	01 33 26.5	+0.7
	baz=167						
R46A	Gibon Southern	35.13	344	P	P	01 33 26.9	-0.1
	baz=160						
V39A	Pettigrew	35.15	335	P	P	01 33 27.2	-0.1
	baz=148						
T42A	Van Buren	35.18	339	P	P	01 33 26.7	-0.8
	baz=153,SNR=6.0						
T42A	Van Buren	35.18	339	*e*P	P	01 33 26.4	-1.1
	comp=Z,5.2nm,0.8s						
U40A	Yellville	35.27	336	P	P	01 33 27.6	-0.6
	baz=150,SNR=7.1						
S43A	Fulton Ridge,	35.31	340	P	P	01 33 28.3	-0.4
	baz=155						

Q48A	North Vernon	35.36	347	P	P	01 33 29.4	+0.4
	baz=163						
R45A	Skylar, Fairfi	35.42	343	P	P	01 33 29.5	-0.1
	baz=158						
T41A	Mountain View	35.44	338	P	P	01 33 29.8	0.0
	baz=152						
Q47A	Bedord North L	35.53	346	P	P	01 33 30.9	+0.4
	baz=162,SNR=5.6						
U39A	Green Forest	35.54	335	P	P	01 33 30.8	+0.1
	baz=149						
CPUP	Villa Florida	35.61	150	P	P	01 33 28.6	-2.7
	comp=Z,1.2nm,0.5s,baz=331,slow=5.1,SNR=4.8						
CPUP				LR	LR	01 48 22.9	
	comp=Z,110nm,21.4s,baz=354,slow=37						
ABTX	Abilene, Hawle	35.64	324	P	P	01 33 31.4	-0.2
	baz=137						
ABTX	Abilene, Hawle	35.64	324	eP	P	01 33 31.8	+0.3
	comp=Z,7.7nm,0.8s						
O56A	Blue Knob Stat	35.65	357	P	P	01 33 32.0	+0.4
	baz=176						
O56A	Blue Knob Stat	35.65	357	eP	P	01 33 31.8	+0.2
	comp=Z,12nm,1.1s						
HHAR	Hobbs	35.65	335	eP	P	01 33 31.2	-0.4
	comp=Z,6.4nm,0.8s						
P49A	Miami Univ. Ec	35.73	348	P	P	01 33 32.3	+0.1
	baz=165						
S42A	Caledonia	35.74	340	P	P	01 33 31.5	-0.8
	baz=154						
BLO	Bloomington	35.78	346	eP	P	01 33 33.5	+0.9
	comp=Z,15nm,0.8s						
FVM	French Village	35.81	340	eP	P	01 33 32.9	0.0
	comp=Z,8.2nm,0.7s						
T40A	Mansfield	35.82	337	P	P	01 33 32.5	-0.5
	baz=151						
S41A	Jillco Farms,	35.91	338	P	P	01 33 33.9	+0.1
	baz=152						
Q45A	Warren Harvey,	35.94	344	P	P	01 33 33.7	-0.3
	baz=159						
SSPA	Standing Stone	35.98	358	P	P	01 33 35.5	+1.2
	baz=177						
TXAR	Lajitas Array	35.99	316	P	P	01 33 35.6	+0.9
	comp=Z,0.4nm,0.4s,baz=131,slow=11,SNR=0.3						
TXAR				PcP	PcP	01 36 00.9	+0.2
	comp=Z,1.0nm,0.8s,baz=147,slow=5.4,SNR=6.6						
P47A	Martinsville	36.02	346	P	P	01 33 34.7	0.0
	baz=162						
O50A	Cable	36.12	350	P	P	01 33 35.8	+0.3
	baz=167						
CCM	Cathedral Cave	36.15	339	P	P	01 33 36.1	+0.3
	baz=154						
CCM	Cathedral Cave	36.15	339	eP	P	01 33 36.2	+0.3
	comp=Z,5.8nm,0.8s						
TUL1	Leonard	36.17	332	P	P	01 33 35.5	-0.5
	baz=145						
TUL1	Leonard	36.17	332	eP	P	01 33 36.0	-0.1
	comp=Z,11nm,0.9s						
R42A	Luebbering	36.20	340	P	P	01 33 35.8	-0.4
	baz=154						
Q44A	Meyer Farm, Va	36.20	343	P	P	01 33 36.0	-0.2
	baz=158						
S40A	Lebanon	36.21	338	P	P	01 33 35.7	-0.6
	baz=151,SNR=8.4						
N59A	State Game Lan	36.22	0	P	P	01 33 36.6	+0.2
	baz=180						
O49A	Covington	36.28	349	P	P	01 33 36.8	-0.1
	baz=166						
P45A	Graceland, Par	36.42	345	P	P	01 33 37.6	-0.5
	baz=160						
T38A	Diamond	36.44	335	P	P	01 33 37.2	-1.1
	baz=148,SNR=5.5						
N54A	Moraine State	36.44	355	P	P	01 33 39.1	+0.8
	baz=173						
N54A	Moraine State	36.44	355	eP	P	01 33 38.4	+0.1
	comp=Z,7.1nm,0.8s						
O48A	Farmland	36.51	348	P	P	01 33 38.9	0.0
	baz=164,SNR=5.8						
S39A	Bolivar	36.61	337	P	P	01 33 38.8	-0.9
	baz=150,SNR=6.9						
S39A	Bolivar	36.61	337	eP	P	01 33 39.1	-0.6
	comp=Z,6.9nm,0.8s						
O47A	Sheridan	36.71	347	P	P	01 33 40.3	-0.2
	baz=163						
R40A	Maddies Statio	36.73	338	P	P	01 33 39.9	-0.8
	baz=152						
R40A	Maddies Statio	36.73	338	eP	P	01 33 40.1	-0.6
	comp=Z,4.1nm,0.8s						
WMOK	Wichita Mounta	36.73	328	P	P	01 33 40.3	-0.6
	baz=140						
WMOK	Wichita Mounta	36.73	328	eP	P	01 33 40.5	-0.4
	comp=Z,4.5nm,1.1s						
Q41A	Truxton	36.95	340	P	P	01 33 42.0	-0.6
	baz=154						
M54A	Oil Creek Stat	36.96	355	P	P	01 33 42.8	+0.1
	baz=174						
M54A	Oil Creek Stat	36.96	355	eP	P	01 33 41.8	-0.9
	comp=Z,8.2nm,0.8s						
R39A	Chumby, Stover	37.04	337	P	P	01 33 42.4	-1.0
	baz=151						
SFIN	Lafayette	37.06	346	P	P	01 33 42.7	-0.8
	baz=161						
R38A	Fenwick Farm,	37.27	336	P	P	01 33 44.2	-1.2
	baz=150,SNR=5.6						
Q40A	Laux Farm, Aux	37.28	339	P	P	01 33 44.4	-1.0
	baz=153						
M49A	Liberty Center	37.47	350	P	P	01 33 46.8	-0.1
	baz=167						
BINY	Binghamton	37.50	360	eP	P	01 33 47.9	+0.7
	comp=Z,63nm,1.9s						
Q39A	Willow Grove F	37.65	338	P	P	01 33 47.6	-1.0
	baz=152						
N44A	Piper City	37.72	345	P	P	01 33 48.2	-0.8
	baz=160						
P40A	Paris	37.75	340	P	P	01 33 48.2	-1.2
	baz=153						
Q38A	Cooks Store, C	37.82	337	P	P	01 33 49.3	-0.7
	baz=150						
P39B	Salisbury	37.96	339	P	P	01 33 50.9	-0.3
	baz=152						
L48A	N Adams	38.00	350	P	P	01 33 51.5	-0.1
	baz=166						
O40A	La Belle	38.22	340	P	P	01 33 52.2	-1.1
	baz=154						
LPIG	La Paz	38.35	304	LR	LR	01 49 52.5	
	comp=Z,60nm,19.4s,baz=136,slow=36						
P38A	Dawn	38.37	338	P	P	01 33 53.9	-0.8
	baz=151						
P38A	Dawn	38.37	338	eP	P	01 33 53.6	-1.0
	comp=Z,4.4nm,0.6s						
MSTX	Muleshoe	38.44	323	eP	P	01 33 55.5	+0.1
	comp=Z,14nm,1.0s						
MNTX	Cornudas Mount	38.61	318	P	P	01 33 57.1	+0.3
	baz=128,SNR=5.3						
MNTX	Cornudas Mount	38.61	318	eP	P	01 33 57.4	+0.6
	comp=Z,3.4nm,0.8s						
LBNH	Lisbon	39.70	5	P	P	01 34 06.3	+0.6
	baz=186						
LONY	Lake Ozonia	39.94	2	P	P	01 34 08.4	+0.7
	baz=182						
SADO	Sadowa	40.17	357	eP	P	01 34 09.5	-0.1
	comp=Z,9.9nm,0.9s						
PLVO	Plevna	40.35	359	eP	P	01 34 11.1	+0.1
	comp=Z,7.8nm,1.0s						
ANMO	Albuquerque	41.35	321	P	P	01 34 19.3	-0.4
	comp=Z,1.9nm,0.9s,baz=149,slow=9.4,SNR=6.3						
ANMO				LR	LR	01 54 20.9	
	comp=Z,19nm,19.9s,baz=129,slow=40						
ANMO	Albuquerque	41.35	321	P	P	01 34 20.3	+0.6
	baz=130						
ANMO	Albuquerque	41.35	321	eP	P	01 34 21.2	+1.4
	comp=Z,6.7nm,1.1s						
TASL	Snake Pit, Alb	41.35	321	P	P	01 34 20.4	+0.6
	baz=130,SNR=5.1						
TASM	ASL Pad, Albuq	41.36	321	P	P	01 34 20.1	+0.3
	baz=130,SNR=5.0						
LAZ	Ladron	41.44	320	eP	P	01 34 20.3	-0.2
TRQ	Mont Tremblant	41.54	1	eP	P	01 34 21.3	+0.4
T25A	Trinidad	41.60	325	eP	P	01 34 22.3	+0.6
	comp=Z,18nm,1.5s						
F45A	CMU Biological	41.82	350	P	P	01 34 22.7	-0.4
	baz=166						
I38A	Scanlan Farm,	41.90	342	P	P	01 34 23.4	-0.4
	baz=155						
G40A	Rib Lake	42.43	345	P	P	01 34 27.7	-0.5
	baz=159						
SDCO	Great Sand Dun	42.64	325	P	P	01 34 29.9	-0.4
	baz=134,SNR=9.2						
SDCO	Great Sand Dun	42.64	325	eP	P	01 34 31.5	+1.1
	comp=Z,7.1nm,1.1s						
TUC	Tucson	42.69	315	eP	P	01 34 32.2	+1.6
	comp=Z,7.8nm,1.1s						
G39A	Holcombe	42.71	344	P	P	01 34 29.6	-0.7
	baz=157						
E43A	Lone Tree Farm	42.76	349	eP	P	01 34 31.0	+0.2
	comp=Z,28nm,1.3s						
G38A	Ridgeland	42.79	343	P	P	01 34 30.6	-0.4
	baz=156						
F40A	Park Falls	43.02	346	P	P	01 34 32.2	-0.7
	baz=159						
ECSD	EROS Data Cent	43.08	338	P	P	01 34 31.6	-1.8
	baz=149						
ECSD	EROS Data Cent	43.08	338	eP	P	01 34 32.8	-0.6
	comp=Z,5.0nm,1.1s						
SPMN	Marine on St.	43.12	343	P	P	01 34 32.7	-1.0
	baz=155						
F39A	Loretta	43.22	345	P	P	01 34 34.8	+0.2
	baz=158						
E41A	Kenton	43.26	347	P	P	01 34 34.7	-0.1
	baz=161						
S22A	4UR Ranch, Cre	43.42	324	P	P	01 34 36.8	+0.2
	baz=132,SNR=5.7						
S22A	4UR Ranch, Cre	43.42	324	eP	P	01 34 37.0	+0.5
	comp=Z,3.7nm,0.9s						
E40A	Wakefield	43.46	346	P	P	01 34 35.8	-0.6
	baz=160						
E39A	Mellen	43.56	345	P	P	01 34 36.9	-0.4
	baz=159						
MVCO	Mesa Verde	44.07	322	P	P	01 34 42.4	+0.7
	baz=130						
MVCO	Mesa Verde	44.07	322	eP	P	01 34 42.5	+0.7
ISCO	Idaho Springs	44.14	327	P	P	01 34 42.6	+0.2
	baz=135						
ISCO	Idaho Springs	44.14	327	eP	P	01 34 43.1	+0.8
	comp=Z,16nm,1.9s						
SMCO	Snowmass	44.46	325	eP	P	01 34 45.6	+0.5
	comp=Z,7.7nm,1.4s						
PV01	Paradox Valley	44.71	323	eP	P	01 34 47.6	+0.7
PV02	Paradox Valley	44.85	323	eP	P	01 34 49.7	+1.6
	comp=Z,8.2nm,1.1s						
PV13	Radium Mtn., P	44.87	323	eP	P	01 34 48.5	+0.3
	comp=Z,5.7nm,0.9s						
WUAZ	Wupatki	44.89	318	eP	P	01 34 49.4	+1.1
	comp=Z,9.1nm,0.9s						
PV03	Paradox Valley	44.95	323	eP	P	01 34 50.0	+1.2
PV18	Skein Mesa, Pa	44.98	323	eP	P	01 34 49.1	+0.1
	comp=Z,8.9nm,1.3s						
PV16	Nyswonger Mesa	45.03	323	eP	P	01 34 50.3	+0.9
	comp=Z,15nm,1.6s						
RPN	Rapa Nui	45.05	224	LR	LR	01 49 05.6	
	comp=Z,68nm,21.2s,baz=145,slow=30						
N23A	Red Feather La	45.09	328	eP	P	01 34 50.4	+0.5
	comp=Z,19nm,1.7s						
PV22	Blue Mesa, Par	45.10	323	eP	P	01 34 50.5	+0.6
	comp=Z,2.7nm,0.8s						
EYMN	Ely	45.25	345	P	P	01 34 50.7	0.0
	baz=158						
PLCA	Paso Flores	45.32	174	P	P	01 34 51.8	+0.3
	comp=Z,0.7nm,0.4s,baz=1.6,slow=9.3,SNR=6.0						
PLCA	Paso Flores	45.32	174	eP	P	01 34 52.0	+0.6
	comp=Z,45nm,2.0s						
C36A	Pine Crest Far	45.43	344	P	P	01 34 52.6	+0.4
	baz=156						
RWWY	Rawlins	46.33	328	eP	P	01 34 59.6	0.0
	comp=Z,4.4nm,0.6s						
SRU	San Rafael Swe	46.51	323	eP	P	01 35 00.8	-0.2
	comp=Z,8.2nm,1.1s						
RSSD	Black Hills	46.52	332	P	P	01 35 01.2	+0.2
	baz=140						
RSSD	Black Hills	46.52	332	eP	P	01 35 01.2	+0.2
	comp=Z,5.8nm,0.9s						
PKCU	Pink Cliffs	46.62	320	eP	P	01 35 02.6	+0.4
	comp=Z,6.9nm,1.1s						
P18A	Preston Nutter	46.67	323	eP	P	01 35 02.7	+0.3
	comp=Z,4.3nm,1.0s						
KNB	Kanab	46.71	319	eP	P	01 35 03.4	+0.8
	comp=Z,12nm,1.4s						
AGMN	Agassiz Nation	46.80	342	P	P	01 35 03.1	+0.1
	baz=152						
P17A	Butcher Ranch,	46.87	323	eP	P	01 35 03.9	+0.1
	comp=Z,22nm,1.9s						
LCMT	Little Creek M	46.98	318	eP	P	01 35 05.4	+0.7
	comp=Z,4.9nm,1.3s						
TMUT	Trail Mountain	47.04	322	eP	P	01 35 05.6	+0.3
	comp=Z,9.1nm,1.7s						
MSU	Marysvale	47.16	321	eP	P	01 35 07.7	+1.5
SZCU	Shurtz Canyon	47.21	319	eP	P	01 35 08.3	+1.7
	comp=Z,3.5nm,0.9s						
A33A	Warroad	47.23	343	P	P	01 35 06.0	-0.2
	baz=153						
CCUT	Cedar City	47.37	319	eP	P	01 35 08.6	+0.8
	comp=Z,4.1nm,1.1s						
SHPR	Sheep Range	47.99	317	eP	P	01 35 13.4	+0.8
	comp=Z,12nm,2.0s						
BW06	Boulder Array	48.33	327	P	P	01 35 15.3	+0.1
	baz=132						
BW06	Boulder Array	48.33	327	eP	P	01 35 15.4	+0.2
	comp=Z,4.6nm,1.2s						
PD31	Pinedale Array	48.33	327	eP	P	01 35 16.6	+1.4
PD31				epP	sP	01 35 30.0	-2.7
PDAR	Pinedale Array	48.33	327	P	P	01 35 15.0	-0.2
	comp=Z,1.4nm,0.8s,baz=113,slow=7.1,SNR=11						
PDAR				LR	LR	01 59 27.5	
	comp=Z,18nm,18.1s,baz=106,slow=41						
PDAR	Pinedale Array	48.33	327	eP	P	01 35 14.9	-0.3
ULM	Lac du Bonnet	48.54	343	P	P	01 35 15.2	-1.1
	comp=Z,2.0nm,0.6s,baz=145,slow=9.7,SNR=3.7						
ULM				LR	LR	01 58 23.1	
	comp=Z,35nm,18.3s,baz=154,slow=39						
DUG	Dugway, Tooele	48.57	322	eP	P	01 35 17.1	+0.2
	comp=Z,4.8nm,0.9s						
HWUT	Hardware Ranch	48.70	324	eP	P	01 35 17.3	-0.7
	comp=Z,3.6nm,0.9s						
SPUT	South Promonto	49.03	324	eP	P	01 35 21.7	+1.2
	comp=Z,4.1nm,1.0s						
BGU	Big Grassy Mou	49.14	323	eP	P	01 35 21.4	0.0
	comp=Z,4.2nm,1.0s						
REDW	Red Top Meadow	49.44	327	eP	P	01 35 24.2	+0.6
	comp=Z,7.7nm,0.9s						
LOHW	Long Hollow	49.47	327	eP	P	01 35 24.4	+0.5
	comp=Z,4.7nm,1.1s						
TPAW	Teton Pass	49.57	327	eP	P	01 35 24.0	-0.8
	comp=Z,4.2nm,0.8s						
MOOW	Moose Ponds	49.63	327	eP	P	01 35 25.5	+0.4
	comp=Z,8.6nm,1.5s						
FXWY	Fox Creek	49.71	327	eP	P	01 35 26.1	+0.3
	comp=Z,2.5nm,0.9s						
RLMT	Red Lodge	49.80	329	P	P	01 35 26.4	0.0
	baz=134						
IMW	Indian Meadow	49.84	327	eP	P	01 35 27.4	+0.6
	comp=Z,4.1nm,0.6s						
GCMT	Greycliff	50.47	330	eP	P	01 35 31.6	+0.3
NV01	Mina Array Sit	51.13	317	eP	P	01 35 37.3	+0.8
NVAR	Mina Array Bea	51.13	317	P	P	01 35 37.0	+0.5
	comp=Z,1.1nm,0.8s,baz=140,slow=6.4,SNR=9.1						
NVAR				PcP	PcP	01 36 51.4	-0.4
	comp=Z,1.1nm,0.7s,baz=130,slow=3.6,SNR=2.9						
KVN	Kaiserville	51.31	318	eP	P	01 35 38.0	+0.1
	comp=Z,1.9nm,1.0s						
BOZ	Bozeman (W)	51.34	328	P	P	01 35 38.0	+0.1
	baz=132,SNR=6.6						
BOZ	Bozeman (W)	51.34	328	eP	P	01 35 38.1	+0.1
	comp=Z,4.8nm,1.0s						
RYN	Ryan	51.38	317	eP	P	01 35 39.0	+0.7
	comp=Z,5.3nm,1.1s						
BMN	Battle Mountai	51.47	320	eP	P	01 35 40.3	+1.3
	comp=Z,3.2nm,0.9s						
MCMT	McKenzie Canyo	51.48	327	eP	P	01 35 39.6	+0.5
HLID	Hailey	51.56	325	P	P	01 35 39.9	+0.3
	baz=128						
HLID	Hailey	51.56	325	eP	P	01 35 40.3	+0.7
	comp=Z,3.0nm,0.9s						
DLMT	Dillon	51.69	328	eP	P	01 35 40.2	-0.3
	comp=Z,3.6nm,1.0s						
PMPB	Monarch Peak	51.82	314	eP	P	01 35 42.2	+0.6
	comp=Z,15nm,1.0s						
LRM	Limekiln Ridge	51.92	328	eP	P	01 35 42.7	+0.4
WAKR	Walker	51.94	317	eP	P	01 35 44.2	+1.6
	comp=Z,7.8nm,1.4s						
HRY	Holter Researc	52.19	329	eP	P	01 35 44.5	+0.4
MFID	Camas Ranch	52.30	324	eP	P	01 35 45.9	+0.8
	comp=Z,4.7nm,1.1s						
PNTR	Pine Nut	52.34	317	eP	P	01 35 46.0	+0.4
	comp=Z,5.6nm,0.9s						
PAHR	Pah Rah Range	52.50	318	eP	P	01 35 46.9	+0.2
	comp=Z,3.4nm,0.9s						
WVOR	Wild Horse Val	53.44	321	eP	P	01 35 54.0	+0.5
	comp=Z,11nm,1.0s						
JTMT	Jette	54.13	329	eP	P	01 35 57.6	-0.8
	comp=Z,4.9nm,0.9s						
G08A	Pilot Rock	55.21	324	eP	P	01 36 07.5	+1.1
	comp=Z,5.9nm,0.8s						
LAB	Little Aspen B	55.53	320	eP	P	01 36 10.9	+2.1
PINE	Pine Mountain	55.59	322	eP	P	01 36 09.2	-0.1
	comp=Z,5.4nm,0.9s						
YBH	Yreka Blue Hor	55.70	319	LR	LR	02 02 58.5	
	comp=Z,23nm,20.7s,baz=125,slow=39						
YKA	Yellowknife Ar	64.45	341	P	P	01 37 07.8	-1.6
	comp=Z,2.1nm,0.8s,baz=134,slow=6.3,SNR=14						
SFJD	Kangerlussuaq	64.77	11	LR	LR	02 07 31.9	
	comp=Z,18nm,18.0s,baz=162,slow=38						
DLBC	Dease Lake	67.99	333	eP	P	01 37 32.9	+0.6
	comp=Z,4.3nm,0.8s						
TIC	Toumodi	70.61	85	eP	P	01 37 46.7	-2.5
LIC	Lamto	70.62	85	eP	P	01 37 46.1	-3.1
	comp=Z,38nm,1.3s						
DBIC	Dimbokro	70.77	85	P	P	01 37 47.7	-2.4
	comp=Z,4.1nm,0.8s,baz=258,slow=6.4,SNR=5.9						
DBIC				LR	LR	02 07 10.7	
	comp=Z,20nm,19.1s,baz=234,slow=34						
KIC	Kosan Boka	70.90	85	eP	P	01 37 48.2	-2.7
	comp=Z,41nm,1.2s						
KOWA	Kowa	71.43	76	P	P	01 37 52.3	-1.8
	comp=Z,2.1nm,0.8s,baz=274,slow=11,SNR=5.0						
KOWA				LR	LR	02 09 33.4	
	comp=Z,27nm,19.5s,baz=190,slow=36						
BORG	Borgarnes	71.44	22	LR	LR	02 06 34.6	
	comp=Z,9.4nm,20.9s,baz=211,slow=34						
SUMG	Summit	71.75	11	eP	P	01 37 55.4	0.0
	comp=Z,61nm,1.1s						
SUMG	Summit	71.75	11	i P	P	01 37 54.7	-0.8
SUMG				i		01 38 11.5	
ESDC	Sonseca Array	73.30	50	P	P	01 38 04.0	-0.9
	comp=Z,0.6nm,0.5s,baz=270,slow=5.6,SNR=7.3						
ES19	SONSECA Array	73.35	50	eP	P	01 38 04.3	-0.9
ES19				epP	pP	01 38 18.1	-0.1
RIDG	Independ’e Rid	76.68	335	eP	P	01 38 24.5	+0.6
	comp=Z,8.2nm,0.9s						
TORD	Torodi Ar. Bea	77.00	78	LR	LR	02 10 11.2	
	comp=Z,34nm,21.7s,baz=190,slow=34						
IL1	Eielson Array	77.83	336	eP	P	01 38 29.0	-1.3
ILAR	Eielson Array	77.83	336	P	P	01 38 29.1	-1.2
	comp=Z,1.0nm,0.9s,baz=111,slow=3.9,SNR=8.4						
MDM	Murphy Dome	78.44	336	eP	P	01 38 33.6	0.0
	comp=Z,3.7nm,0.7s						
BPAW	Bear Paw Mtn.	79.40	334	eP	P	01 38 38.4	-0.6
	comp=Z,12nm,0.4s						
MLY	Manley	79.49	335	eP	P	01 38 38.9	-0.5
	comp=Z,21nm,0.3s						
DAVA	Damuels	83.89	43	eP	P	01 39 03.3	+0.1
	comp=Z,2.1nm,0.6s						
FETA	Feichten	84.47	43	ePKiKP	PKiKP	01 44 19.7	-0.2
	comp=Z,0.6nm,0.5s						
NB2	NORSAR Subarra	84.70	29	P	pP	01 39 21.5	+1.4
	comp=Z,1.1nm,0.7s,baz=269,slow=5.1						
NOA	NORSAR Array B	84.70	29	P	P	01 39 06.6	-0.3
	comp=Z,0.7nm,0.8s,baz=273,slow=4.9,SNR=2.9						
ABTA	Abfaltersbach	85.70	44	eP	P	01 39 11.7	-0.5
	comp=Z,1.0nm,0.6s						
CLL	Collm	85.86	39	epP	pP	01 39 28.0	+2.0
GERES	GERESS Array B	86.41	41	P	P	01 39 15.1	-0.6
	comp=Z,0.6nm,0.7s,baz=267,slow=2.7,SNR=5.5						
GEA0	GERESS Array S	86.41	41	eP	P	01 39 14.9	-0.7
SNAA	Sanae	89.03	162	P	P	01 39 26.0	-1.6
	comp=Z,0.7nm,0.7s,baz=232,slow=5.9,SNR=4.1						
QSPA	South Pole Qui	94.56	180	P	P	01 39 53.1	-0.3
	comp=Z,2.2nm,1.0s,baz=178,slow=4.1,SNR=4.8						
QSPA	South Pole Qui	94.56	180	eP	P	01 39 54.2	+0.8
	comp=Z,12nm,1.4s						
TSUM	Tsumeb	94.84	109	LR	LR	02 18 59.3	
	comp=Z,75nm,21.7s,baz=344,slow=33						

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*MOS **31** 01:35:49.8±0.8, 50°.23N×156°.53E, h65^{km}, mb3.9/4, Error ellipse: s-maj=19.4km s-min=4.6km az=75.5*

MOS Felt (II-III) at Severo-Kuril’sk.

*KRSC **31** 01:35:49.7±2.0, 50°.25N×157°.11E, h42^{km}±21^{km}, ML4.6*

*SKHL **31** 01:35:51.5±0.4, 50°.40N×156°.30E, h77^{km}±2^{km}, mb5.4/4*

SKHL Felt (II-III) at Severo-Kurilsk.

*IDC **31** 01:35:55.6±2.4, 50°.75N×156°.25E, h95^{km}±21^{km}, mb3.4/10, mb1 3.8/13, mb1mx3.4/76, mbtmp3.8/13, MS3.1/7, Ms1 3.1/7, ms1mx2.6/47, Error ellipse: s-maj=28.3km s-min=13.1km az=156.0*

ISC 31 01:35:49.9±1.2**, 50°.17N**±0°.08×**156°.74E**±0°.07**, h51**^{km}±11^{km}**, n96, σ1^{s}.89**/111**, mb3.8**/13**, MS3.1**/5**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SKR	Severo-Kuril’s	0.65	322	i P	Pn	01 36 03.7	+0.7
SKR				AMB	AMB	01 36 04.1	
	9μm,0.5s						
SKR				i S	Sn	01 36 12.6	+0.1
SKR				A	A	01 36 13.1	
	31μm,0.6s						
SKR				A	A	01 36 13.1	
	25μm,0.6s						
SKR	Severo-Kuril’s	0.65	322	eP	Pn	01 36 03.7	+0.7
SKR				eS	Sn	01 36 12.8	+0.3
SKR	Severo-Kuril’s	0.65	322	PN	Pn	01 36 03.7	+0.7
SKR				S	Sn	01 36 12.8	+0.3
PAU	Pauzhetka	1.30	2	eP	Pn	01 36 11.7	+0.1
PAU				AMB	AMB	01 36 12.2	
	236nm,0.2s						
PAU				eS	Sn	01 36 26.6	-1.3
PAU				A	A	01 36 27.4	
	9μm,0.3s						
PAU	Pauzhetka	1.30	2	eP	Pn	01 36 11.8	+0.1
PAU				eS	Sn	01 36 26.8	-1.1
PAU	Pauzhetka	1.30	2	PN	Pn	01 36 11.8	+0.1
PAU				S	Sn	01 36 26.8	-1.1
KDTR	Khodutka, Kamc	1.84	27	eP	Pn	01 36 18.7	-0.4
KDTR				eS	Sn	01 36 39.0	-2.2
MIPR	Malaya Ipel’ka	2.10	0	eP	Pn	01 36 23.1	+0.4
MIPR	Malaya Ipel’ka	2.10	0	PN	Pn	01 36 23.1	+0.4
ASAK	Asacha	2.33	18	eP	Pn	01 36 26.5	+0.7
ASAK				eS	Sn	01 36 53.8	+0.5
ASAK	Asacha	2.33	18	PN	Pn	01 36 26.5	+0.7
ASAK				S	Sn	01 36 53.8	+0.5
MTVR	Mutnovka	2.48	21	eP	Pn	01 36 28.3	+0.3
MTVR				eS	Sn	01 36 56.3	-0.9
MTVR	Mutnovka	2.48	21	PN	Pn	01 36 28.3	+0.3
MTVR				S	Sn	01 36 56.3	-0.9
RUS	Russkaya	2.52	26	eP	Pn	01 36 27.9	-0.5
RUS				eS	Sn	01 36 55.5	-2.3
RUS	Russkaya	2.52	26	PN	Pn	01 36 27.9	-0.5
RUS				S	Sn	01 36 55.5	-2.3
GRL	Gorelyy	2.52	19	eP	Pn	01 36 29.3	+0.7
GRL	Gorelyy	2.52	19	PN	Pn	01 36 29.3	+0.7
APC	Apacha	2.77	5	eP	Pn	01 36 32.4	+0.7
APC	Apacha	2.77	5	PN	Pn	01 36 32.4	+0.7
PETK	Petropavlovsk-	3.00	11	P	Pn	01 36 35.9	+0.9
	baz=181,slow=13						
PETK				S	Sn	01 37 14.6	+5.0
	baz=207,slow=21						
PET	Petropavlovsk	3.09	22	eP	Pn	01 36 36.7	+0.5
PET				AMB	AMB	01 36 38.3	
	900nm,0.5s						
PET				eS	Sn	01 37 11.0	-0.9
PET				A	A	01 37 14.3	
	4μm,0.5s						
PET	Petropavlovsk	3.09	22	eP	Pn	01 36 37.1	+0.9
PET				eS	Sn	01 37 11.8	-0.1
PET	Petropavlovsk	3.09	22	ePN	Pn	01 36 37.4	+1.2
PET				eS	Sn	01 37 11.5	-0.4
PET				pmax	pmax		
	comp=Z,100nm,0.4s						
PET				smax	smax		
	comp=N,456nm,0.5s						
PET				smax	smax		
	comp=E,600nm,0.7s						
PET				smax	smax		
	comp=E,550nm,0.6s						
DALK	Dalny	3.12	23	eP	Pn	01 36 37.2	+0.6
DALK				eS	Sn	01 37 12.4	-0.3
DALK	Dalny	3.12	23	PN	Pn	01 36 37.2	+0.6
DALK				S	Sn	01 37 12.4	-0.3
UGLR	Uglovaya	3.31	22	eP	Pn	01 36 40.5	+1.3
UGLR	Uglovaya	3.31	22	PN	Pn	01 36 40.5	+1.3
AVH	Avacha	3.34	21	eP	Pn	01 36 41.7	+2.1
AVH	Avacha	3.34	21	PN	Pn	01 36 41.7	+2.1
KOK	Koryaka	3.34	20	eP	Pn	01 36 42.0	+2.3
KOK				eS	Sn	01 37 20.4	+2.3

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KOK   Koryaka            3.34  20  PN     Pn     01 36 42.0 +2.3
KOK                                S      Sn     01 37 20.4 +2.3
SMAR  Somma              3.35  22 eP      Pn     01 36 42.5 +2.6
SMAR  Somma              3.35  22  PN     Pn     01 36 42.5 +2.6
SDLR  Sedlovina          3.38  22 eP      Pn     01 36 41.1 +0.8
SDLR  Sedlovina          3.38  22  PN     Pn     01 36 41.1 +0.8
KRX   Arik               3.40  20 eP      Pn     01 36 43.3 +2.7
KRX                                S      Sn     01 37 21.5 +1.7
KRX   Arik               3.40  20  PN     Pn     01 36 43.3 +2.7
KRX                                S      Sn     01 37 21.5 +1.7
SPN   Mys Shipunski      3.57  34 eP      Pn     01 36 43.1 +0.3
SPN                               eS      Sn     01 37 22.4  -1.3
SPN   Mys Shipunski      3.57  34  PN     Pn     01 36 43.1 +0.3
SPN                                S      Sn     01 37 22.4  -1.3
GNL   Ganaly             3.60  11 eP      Pn     01 36 45.0 +1.7
GNL   Ganaly             3.60  11  PN     Pn     01 36 45.0 +1.7
KZV   Kizimen            5.40  22 eP      Pn     01 37 09.7 +1.7
KZV   Kizimen            5.40  22  PN     Pn     01 37 09.7 +1.7
TUMD  Tumrok D           5.51  22 eP      Pn     01 37 10.6 +1.3
TUMR  Tumrok             5.52  21 eP      Pn     01 37 13.2 +3.6
TUMR  Tumrok             5.52  21  PN     Pn     01 37 10.6 +1.0
KMNR  Kamenistaya        5.98  19 eP      Pn     01 37 19.7 +3.9
KMNR  Kamenistaya        5.98  19  PN     Pn     01 37 19.7 +3.9
BZMR  Bezymyannaya       6.20  20 eP      Pn     01 37 21.9 +3.0
BZMR  Bezymyannaya       6.20  20  PN     Pn     01 37 21.9 +3.0
BZGR  Bezymyannyi-Gr     6.25  21 eP      Pn     01 37 22.1 +2.6
BZGR  Bezymyannyi-Gr     6.25  21  PN     Pn     01 37 22.1 +2.6
ZLN   Zelenaya           6.34  21 eP      Pn     01 37 22.6 +1.8
ZLN   Zelenaya           6.34  21  PN     Pn     01 37 22.6 +1.8
KBTR  Krutoberegovo      7.06  29 eP      Pn     01 37 30.6 +0.1
KBTR  Krutoberegovo      7.06  29  PN     Pn     01 37 30.6 +0.1
SHO   Shikotan           9.24 231 eP      Pn     01 38 01.8 +1.3
SHO                                AMB    AMB    01 38 06.9
      comp=E,230nm,0.7s
SHO                               eS      Sn     01 39 39.7  -3.3
SHO                                A      A      01 39 42.1
      comp=E,260nm,1.0s
YSS   Yuzh-Sakhalins     9.81 256 eP      Pn     01 38 03.9  -4.4
YSS   Yuzh-Sakhalins     9.81 256 ePN     Pn     01 38 03.9  -4.4
MA2   Magadan           10.03 342  LR     LR     01 41 41.9
      comp=E,34nm,18.6s,baz=275,slow=37
ASAJ  Asahikawa         11.37 243  P      Pn     01 38 33.4 +3.8
      comp=E,0.9nm,0.3s,baz=74,slow=13,SNR=13
ERM   Erimo             12.45 234 eP      Pn     01 38 44.4 +0.1
ERM   Erimo             12.45 234 i PN    Pn     01 38 44.4 +0.1
KLR   Kul'dur           16.18 276  P      P      01 39 36.7 +0.6
      comp=E,0.0nm,0.3s,baz=82,slow=6.6,SNR=9.6
KLR   Kul'dur           16.18 276 i P     Pn     01 39 33.8 +0.2
YAK   Yakutsk           19.02 319  LR     LR     01 46 58.6
      comp=E,35nm,19.1s,baz=94,slow=36
MAJO  Matsushiro        19.09 232 eP      Pn     01 40 09.7 +0.2
MAJO  Matsushiro        19.09 232 i P     Pn     01 40 09.7 +0.2
MAJO                               pmax   pmax
      comp=Z,7.0nm,0.6s
MJAR  Matsushiro Arr    19.09 231  P      Pn     01 40 11.0 +1.5
      comp=Z,0.6nm,0.3s,baz=33,slow=11,SNR=5.6
KSRS  Korea Array       24.20 249  P      P      01 41 03.5 +2.0
      comp=Z,1.7nm,0.7s,baz=48,slow=11,SNR=9.7
KSRS                               LR     LR     01 49 13.2
      comp=Z,19nm,19.0s,baz=205,slow=33
KSRS  Korea Array       24.20 249 eP      P      01 41 04.5 +3.0
KSRS                               pmax   pmax
      comp=Z,2.0nm,0.7s
H11N2 WAKE ISLAND Hy    31.43 161  T      T      02 15 47.8
      baz=348,slow=76,SNR=23
H11N1 WAKE ISLAND Hy    31.45 161  T      T      02 15 53.3
      baz=348,slow=76,SNR=41
H11N3 WAKE ISLAND Hy    31.45 161  T      T      02 15 51.2
      baz=348,slow=76,SNR=40
JOW   Kunigami          31.90 234  LR     LR     01 56 23.3
      comp=Z,196nm,18.6s,baz=306,slow=38
H11S1 WAKE ISLAND Hy    32.58 162  T      T      02 17 14.2
      baz=348,slow=76,SNR=280
H11S3 WAKE ISLAND Hy    32.59 162  T      T      02 17 12.9
      baz=348,slow=76,SNR=299
H11S2 WAKE ISLAND Hy    32.60 162  T      T      02 17 12.0
      baz=348,slow=76,SNR=82
SONM  Songino Array     32.60 286  LR     LR     01 54 50.2
      comp=Z,28nm,21.4s,baz=262,slow=35
YKA   Yellowknife Ar    46.74  40  P      P      01 44 10.8  -2.6
      comp=Z,0.2nm,0.4s,baz=293,slow=7.6,SNR=4.1
YKA   Yellowknife Ar    46.74  40 eP      P      01 44 14.5 +1.1
YKA   Yellowknife Ar    46.74  40 i P     P      01 44 14.6 +1.1
KURK  Kurchatov         47.52 302 eP      P      01 44 17.5  -2.2
KURK  Kurchatov         47.52 302 i P     P      01 44 17.6  -2.2
KURK                               pmax   pmax
      comp=Z,1.0nm,0.9s
MKAR  Makanchi Array    47.55 296  P      P      01 44 16.6  -3.5
      comp=Z,0.3nm,0.5s,baz=61,slow=6.4,SNR=6.9
MKAR                               LR     LR     02 05 23.5
      comp=Z,22nm,21.1s,baz=59,slow=38
KURBB Kurchatov Arra    47.62 302  P      P      01 44 17.2  -3.2
      comp=Z,0.4nm,0.5s,baz=62,slow=7.4,SNR=4.2
BVAR  Borovoye Array    50.57 309  P      P      01 44 39.1  -4.0
      comp=Z,0.4nm,0.4s,baz=46,slow=6.2,SNR=5.2
BRVK  Borovoye          50.61 309 i P     P      01 44 40.7  -2.6
BRVK                               pmax   pmax
      comp=Z,1.0nm,0.8s
AAK   Ala-Archa         54.49 296 eP      P      01 45 11.1  -1.2
AAK   Ala-Archa         54.49 296 i P     P      01 45 11.1  -1.2
AAK                                pmax   pmax
      comp=Z,1.0nm,0.8s
CMAR  Chiang Mai Arr    55.51 257  P      P      01 45 20.1 +0.2
      comp=Z,1.1nm,0.3s,baz=34,slow=6.7,SNR=6.5
NVAR  Mina Array Bea    58.77  66  P      P      01 45 44.1 +1.3
      comp=Z,0.8nm,0.8s,baz=301,slow=7.5,SNR=6.4
PDAR  Pinedale Array    60.82  57  P      P      01 45 57.8 +0.9
      comp=Z,0.9nm,0.7s,baz=302,slow=2.8,SNR=7.6
ANMO  Albuquerque       68.03  62  LR     LR     02 18 35.5
      comp=Z,18nm,18.1s,baz=92,slow=38
TXAR  Lajitas Array     73.76  64  P      P      01 47 19.8 +1.0
      comp=Z,0.8nm,0.7s,baz=307,slow=4.6,SNR=14
ESDC  Sonseca Array     88.93 345  P      P      01 48 36.1  -2.7
      comp=Z,0.1nm,0.4s,baz=345,slow=4.9,SNR=3.5
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IDC ***31*** *01:41:48.3±0.6, 1°71S×139°04E, h0^{km}, mb4.3/14, mb1 4.4/15, mb1mx4.2/46, mbtmp4.3/15, ML4.3/1, MS3.3/7, Ms1 3.3/7, ms1mx2.9/46, Error ellipse: s-maj=24.7km s-min=14.9km az=76.0*

ISCJB ***31*** *01:41:51.1±0.3, 1°82S±0°04×138°90E±0°05, h29^{km}, mb4.5/25, MS3.3/4, Error ellipse: s-maj=7.0km s-min=5.5km az=163.6*

NEIC ***31*** *01:41:54.0±0.2, 1°76S×138°89E, h35^{km}, mb4.8/15, Error ellipse: s-maj=9.7km s-min=5.8km az=89.0*

DJA ***31*** *01:41:55.2±0.6, 2°S±9°×13°9E±°, h63^{km}±8^{km}, M4.6/6, mB5.3/1, mb4.7/6, MLv4.6/6, Mw(mB)4.7/1*

ISC 31 01:41:53.1±0.5, **1°88S**±0°06×**139°03E**±0°05, **h29**^{km}**, n85,** σ**1^{s}52**/73, **mb4.6**/24, **MS3.3**/4, **Near north coast of Irian Jaya**

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Code  Station Name       Δ°   AZ°  Phase ID           Time      Res
                                   Op     ISC      h  m  s     ISC
GENI  Genyem             1.33 122  P      Pn     01 42 16.7 +0.9
JAY   Jayapura           1.78 111  P      Pn     01 42 21.3  -0.7
SRPI  Serui, Papua       2.79 270  P      Pb     01 42 42.9 +0.5
BAKI  Biak               3.00 283  P      Pn     01 42 42.3 +3.5
RKPI  Ransiki, Papua     4.87 274  P      Pn     01 43 10.2 +5.7
FAKI  Fak Fak            6.86 261  P      Pn     01 43 33.1 +1.3
FAKI  Fak Fak            6.86 261 ePn     Pn     01 43 31.2  -0.7
FAKI                              eSn     Sn     01 44 45.8  -3.1
PMG   Port Moresby      11.01 133  LR     LR     01 49 04.4
      comp=Z,172nm,19.6s,baz=252,slow=39
COEN  Coen              12.68 161 ePn     Pn     01 44 47.6  -4.0
COEN                              eSn     Sn     01 47 14.6 +2.6
MTN   Manton Dam        13.41 215 ePn     Pn     01 45 01.6  -0.1
MTN                               eSn     Sn     01 47 26.4  -3.4
DAV   Davao City (W)    16.11 304  LR     LR     01 50 12.4
      comp=Z,38nm,20.6s,baz=224,slow=32
GUMO  Guam              16.42  20  LR     LR     01 51 50.1
      comp=Z,80nm,18.1s,baz=180,slow=37
SOEI  Soe               16.63 241  P      P      01 45 48.3 +1.6
BATI  Baumata           17.37 241  P      P      01 45 56.8 +2.1
      5.0nm,0.3s,baz=19,slow=3.0,SNR=7.7
BATI  Baumata           17.37 241  P      P      01 45 57.4 +2.7
WRAB  Tennant Creek     18.52 194 eP      Pn     01 46 09.9 +2.2
      14nm,0.6s
WB2   Warramunga Arr    18.52 194 eP      P      01 46 07.7 +0.3
WR1   Warramunga Arr    18.53 194 eP      P      01 46 08.2 +0.7
WR1                               eSn     Sn     01 49 24.4  -10
WRA   Warramunga Arr    18.53 194  P      P      01 46 08.2 +0.7
      1.0nm,0.3s,baz=19,slow=11,SNR=27
WRA                                S      Sn     01 49 24.4  -10
      0.1nm,0.3s,baz=14,slow=23,SNR=3.6
CTAO  Charters Tower    19.42 159 eP      P      01 46 14.8  -2.5
      12nm,1.3s
FITZ  Fitzroy Crossi    20.80 218  P      P      01 46 32.6 +0.4
      4.8nm,0.9s,baz=53,slow=16,SNR=4.5
FITZ                               S      S      01 50 08.8  -14
      4.2nm,1.0s,baz=101,slow=19,SNR=2.0
AS31  Alice Springs     22.22 193 eP      P      01 46 49.3 +1.7
      3.1nm,0.6s
ASAR  Alice Springs     22.22 193  P      P      01 46 48.6 +1.1
      8.0nm,0.7s,baz=22,slow=11,SNR=44
ASAR                               S      S      01 50 50.2  -0.6
      1.6nm,0.9s,baz=13,slow=23,SNR=4.5
SBUM  Sibu              27.15 279 eP      P      01 47 33.0  -1.3
      7.7nm,0.5s
STKA  Stephens Creek    29.93 176  P      P      01 47 59.8 +1.0
      2.3nm,0.8s,baz=329,slow=7.3,SNR=3.2
STKA                               LR     LR     02 01 26.1
      comp=Z,110nm,18.8s,baz=16,slow=39
STKA  Stephens Creek    29.93 176 eP      P      01 47 59.8 +1.0
      1.0nm,1.1s
FORT  Forrest           30.56 199 eP      P      01 48 03.2  -1.2
      41nm,1.4s
DZM   Mont Dzumac       33.36 129  LR     LR     02 00 41.2
      comp=Z,113nm,18.0s,baz=144,slow=34
H11S3 WAKE ISLAND Hy    33.92  52  T      T      02 24 19.5
      baz=236,slow=75,SNR=46
H11S2 WAKE ISLAND Hy    33.93  52  T      T      02 24 17.7
      baz=236,slow=75,SNR=48
H11S1 WAKE ISLAND Hy    33.93  52  T      T      02 24 17.9
      baz=236,slow=75,SNR=58
H11N1 WAKE ISLAND Hy    34.76  51  T      T      02 25 34.7
      baz=229,slow=76,SNR=7.4
H11N2 WAKE ISLAND Hy    34.77  51  T      T      02 25 34.5
      baz=229,slow=76,SNR=9.2
H11N3 WAKE ISLAND Hy    34.78  51  T      T      02 25 35.0
      baz=229,slow=76,SNR=5.7
JNU   Nakatsue          35.66 348  LR     LR     02 01 24.6
      comp=Z,25nm,19.0s,baz=99,slow=33
KULM  Kulim             39.00 281 eP      P      01 49 14.8  -2.6
      39nm,1.5s
PSI   Prapat            40.37 277  P      P      01 49 27.7  -1.3
      7.8nm,0.8s,baz=0.2,slow=16,SNR=6.3
PSI   Prapat            40.37 277 eP      P      01 49 28.0  -1.0
      13nm,1.0s
KSRS  Korea Array       40.47 346  LR     LR     02 02 08.2
      comp=Z,24nm,21.5s,baz=174,slow=30
GSI   Gunungsitoli      41.57 274 eP      P      01 49 36.4  -2.4
      19nm,0.7s
KMI   Kunming           44.24 310  P      P      01 50 04.5 +4.0
KMI                                pmax   pmax
      comp=Z,14nm,0.5s
CM31  Chiang Mai Arr    44.32 299 eP      P      01 49 59.8  -1.1
CMAR  Chiang Mai Arr    44.32 299  P      P      01 49 59.8  -1.1
      comp=Z,1.7nm,0.7s,baz=118,slow=6.5,SNR=6.1
SONA0 Songino Array     57.12 334 eP      P      01 51 36.2  -0.9
SONM  Songino Array     57.12 334  P      P      01 51 36.2  -0.9
      comp=Z,0.8nm,0.5s,baz=149,slow=5.3,SNR=4.7
SONA1 Songino Array     57.12 334 eP      P      01 51 36.1  -1.0
MK01  Makanchi Array    69.32 322 eP      P      01 52 57.4  -0.6
MK31  Makanchi Array    69.34 322 eP      P      01 52 57.8  -0.3
MK32  Makanchi Array    69.34 322 eP      P      01 52 57.5  -0.6
MKAR  Makanchi Array    69.34 322  P      P      01 52 57.5  -0.6
      comp=Z,3.1nm,0.6s,baz=108,slow=7.7,SNR=29
MKAR  Makanchi Array    69.34 322 eP      P      01 52 57.8  -0.3
      comp=Z,22nm,0.9s
MAKZ  Makanchi          69.54 322 eP      P      01 52 58.8  -0.5
      comp=Z,20nm,1.4s
KSH   Kashi             70.76 313 eP      P      01 53 08.0 +0.9
KSH                                sP     PcP    01 53 26.5  -1.3
ZALV  Zalesovo Beam     71.39 330  P      P      01 53 08.6  -1.8
      comp=Z,1.8nm,0.6s,baz=126,slow=7.3,SNR=8.2
ZAA1  Zalesovo Array    71.39 330 eP      P      01 53 08.6  -1.8
KURK  Kurchatov         73.23 325 eP      P      01 53 20.6  -0.8
KURBB Kurchatov Arra    73.24 325  P      P      01 53 20.7  -0.9
      comp=Z,3.4nm,0.8s,baz=109,slow=5.5,SNR=20
VNDA  Vanda             76.57 175  P      P      01 53 41.0 +0.7
      comp=Z,0.9nm,0.6s,baz=306,slow=7.5,SNR=8.0
BVAR  Borovoye Array    78.82 325  P      P      01 53 52.7  -0.7
      comp=Z,6.5nm,0.7s,baz=120,slow=7.1,SNR=36
BRVK  Borovoye          78.89 325 eP      P      01 53 53.4  -0.3
      comp=Z,6.5nm,0.8s
ABKAR Akbulak array     84.30 320 eP      P      01 54 22.0  -0.4
DIV   Divide            84.52  28 eP      P      01 54 23.4 +0.1
      comp=Z,7.4nm,0.8s
CCB   Clear Creek Bu    84.54  24 eP      P      01 54 22.1  -1.1
      comp=Z,7.1nm,1.4s
ILAR  Eielson Array     84.95  24  P      P      01 54 23.4  -1.9
      comp=Z,2.1nm,0.9s,baz=256,slow=4.4,SNR=12
ILB   Eielson Array     84.95  24 eP      P      01 54 23.3  -2.0
IL1   Eielson Array     84.95  24 eP      P      01 54 22.9  -2.4
AKTO  Aktyubinsk        85.72 321  P      P      01 54 28.4  -1.1
      comp=Z,0.9nm,0.6s,baz=77,slow=6.8,SNR=5.4
EGAK  Eagle             87.35  25 eP      P      01 54 37.4 +0.2
      comp=Z,6.5nm,1.2s
DAWY  Dawson            87.99  26 eP      P      01 54 40.2  -0.1
      comp=Z,5.8nm,0.9s
O03D  Paynes Creek      98.21  50 eP      Pdif   01 55 28.8 +0.7
ARA0  ARCESS Array S    99.84 341 ePdif   Pdif   01 55 32.9  -1.6
ARCES ARCESS Array B    99.84 341  P      Pdif   01 55 32.9  -1.6
      comp=Z,1.0nm,0.6s,baz=55,slow=6.4,SNR=4.6
PLCA  Paso Flores      129.74 151  PKP    PKPdf  02 01 01.4 +1.2
      comp=Z,1.8nm,0.8s,baz=236,slow=3.6,SNR=5.3
TORD  Torodi Ar. Bea   136.33 287  PKP    PKPdf  02 01 13.5 +0.4
      comp=Z,0.7nm,1.0s,baz=127,slow=2.8
TOA1  Torodi Ar. Sit   136.33 287 ePKPdf  PKPdf  02 01 13.5 +0.4
DBIC  Dimbokro         143.69 279  PKP    PKPbc  02 01 23.9  -0.2
      comp=Z,3.8nm,0.8s,baz=37,slow=7.6,SNR=3.9
PB11  IPOC Station P   144.57 129 ePKPdf  PKPdf  02 01 28.3 +0.2
MNMC  Minye Minye      144.96 128 ePKPbc  PKPdf  02 01 29.7 +0.8
LPAZ  La Paz           147.66 125  PKPbc  PKPdf  02 01 35.6 +1.7
      comp=Z,3.7nm,0.9s,baz=343,slow=2.9,SNR=10
LPAZ  La Paz           147.66 125 ePKPbc  PKPbc  02 01 38.2 +1.5
CPUP  Villa Florida    147.80 152  PKPbc  PKPdf  02 01 35.0 +1.8
      comp=Z,4.1nm,0.9s,baz=224,slow=5.2,SNR=5.5
SDV   Santo Domingo    149.68  76  PKPbc  PKPbc  02 01 41.4  -0.1
      comp=Z,7.5nm,0.8s,baz=338,slow=5.4,SNR=8.1
SDV   Santo Domingo    149.68  76 ePKPbc  PKPbc  02 01 41.8 +0.3
SJG   San Juan         150.49  55  PKPbc  PKPbc  02 01 42.8  -0.3
      comp=Z,4.5nm,0.3s,baz=19,slow=17,SNR=4.5
SIV   San Ignacio      153.35 133  PKPbc  PKPbc  02 01 50.1 +0.4
      comp=Z,0.3nm,0.6s,baz=43,slow=1.7,SNR=6.2
```

ISCJB ***31*** *01:46:06.0±0.5, 1°56S±0°04×77°63W±0°10, h181^{km}, mb3.4/8, Error ellipse: s-maj=13.9km s-min=5.8km az=5.7*

IDC ***31*** *01:46:07.7±2.2, 1°43S×77°40W, h195^{km}±22^{km}, mb3.2/8, mb1 3.4/12, mb1mx3.3/46, mbtmp3.8/12, Error ellipse: s-maj=21.7km s-min=13.2km az=61.0*

ISC 31 01:46:06.1±0.6, **1°52S**±0°07×**77°6W**±0°1, **h181**^{km}**, n25,** σ**1^{s}62**/27, **mb3.4**/8, **Ecuador**

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Code  Station Name       Δ°   AZ°  Phase ID           Time      Res
                                   Op     ISC      h  m  s     ISC
OTAV  Otavalo            1.93 335 eP      Pn     01 46 44.6 +1.6
CMBC  Cumbal             2.45 356 eP      Pn     01 46 51.2 +2.3
GCUF  Volcan Galeras     2.75   6 eP      Pn     01 46 53.9 +1.5
CRUC  La Cruz            3.15  13 eP      Pn     01 46 59.2 +2.2
SOTA  Rioblanco          3.78  16 eP      Pn     01 47 06.2 +1.2
POPC  Popayan, Colom     4.15  13 eP      Pn     01 47 09.7 +0.2
HORQ  Saladito           5.08  12 eP      Pn     01 47 20.4  -1.0
YOTC  Yotoco, Valle      5.62  13 eP      Pn     01 47 25.3  -3.1
ATAH  Atahualpa          5.62 188  P      Pn     01 47 30.4 +1.8
      10nm,0.3s,baz=18,slow=10,SNR=40
ATAH                               S      Sn     01 48 31.8  -1.8
      8.1nm,0.3s,baz=42,slow=22,SNR=12
PRAC  Prado              5.89  28 eP      Pn     01 47 31.4  -0.4
SJAC  San Juan de Ar     6.03  38 eP      Pn     01 47 37.0 +3.3
TOLC  Tolima             6.50  21 eP      Pn     01 47 41.0 +1.0
VILC  Villavicencio,     6.85  35 eP      Pn     01 47 45.8 +1.3
SDV   Santo Domingo     12.48  34  P      Pn     01 48 57.3  -0.6
      1.3nm,0.3s,baz=281,slow=9.7,SNR=6.1
LPAZ  La Paz            17.41 148  P      Pn     01 49 59.1 +0.1
      0.3nm,0.3s,baz=359,slow=7.7,SNR=6.7
PTGA  Pitinga           17.69  88  P      P      01 49 58.8  -1.3
      0.3nm,0.3s,baz=270,slow=20,SNR=3.9
SIV   San Ignacio       21.76 132  P      P      01 50 43.5  -0.2
      0.7nm,0.4s,baz=298,slow=10,SNR=7.4
TXAR  Lajitas Array     39.51 323  P      P      01 53 20.0 +0.5
      0.2nm,0.5s,baz=139,slow=8.1,SNR=3.9
TXAR                               PcP    PcP    01 55 24.0 +0.5
      0.2nm,0.6s,baz=141,slow=5.8,SNR=3.0
PLCA  Paso Flores       39.56 172  P      P      01 53 20.6 +0.9
      0.9nm,0.4s,baz=13,slow=8.3,SNR=6.7
ANMO  Albuquerque       45.21 326  P      P      01 54 06.8 +1.2
      1.5nm,0.5s,baz=108,slow=9.6,SNR=9.7
NVAR  Mina Array Bea    54.60 321  P      P      01 55 17.3 +1.0
      0.3nm,0.7s,baz=98,slow=6.5,SNR=3.9
TORD  Torodi Ar. Bea    79.97  76  P      P      01 57 53.3  -2.5
      0.1nm,0.4s,baz=287,slow=6.9
ILAR  Eielson Array     82.65 336  P      P      01 58 07.8  -1.1
      0.6nm,0.8s,baz=130,slow=4.3,SNR=6.1
QSPA  South Pole Qui    88.54 180  P      P      01 58 38.8 +0.7
      2.2nm,0.8s,baz=159,slow=5.3,SNR=6.6
KURBB Kurchatov Arra   127.07  19  PKP    PKPdf  02 04 47.8  -1.1
      0.2nm,0.5s,baz=328,slow=3.0,SNR=3.8
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ISCJB ***31*** *02:07:27.5±0.6, 6°07N±0°03×127°03E±0°06, h93^{km}±4^{km}, mb4.5/33, Error ellipse: s-maj=9.6km s-min=4.2km az=160.0*

NEIC ***31*** *02:07:28.6±0.8, 6°16N×127°20E, h92^{km}±6^{km}, mb4.5/14, Error ellipse: s-maj=10.7km s-min=4.1km az=59.0*

MAN ***31*** *02:07:29.0, 6°05N×126°92E, h60^{km}, mb4.7, ML3.6, MS3.5*

IDC ***31*** *02:07:29.4±2.4, 6°16N×127°12E, h97^{km}±17^{km}, mb4.1/16, mb1 4.2/16, mb1mx3.8/64, mbtmp4.5/16, MS2.7/4, Ms1 2.8/4, ms1mx2.5/57, Error ellipse: s-maj=38.4km s-min=9.7km az=66.0*

BJI ***31*** *02:07:29.6, 5°90N×127°11E, h122^{km}, mb4.6/23, mB5.0/13*

DJA ***31*** *02:07:34.9±0.6, 6°N±4°×12°7E±°, h70^{km}, M4.9/7, mB4.8/3, mb4.9/7, MLv4.9/6, Mw(mB)4.1/3*

ISC 31 02:07:28.5±0.9, **6°02N**±0°04×**127°00E**±0°07, **h85**^{km}±7^{km}**, n82,** σ**1^{s}79**/100, **mb4.5**/33, **3C-2D, Philippine Islands region**

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Code  Station Name       Δ°   AZ°  Phase ID           Time      Res
                                   Op     ISC      h  m  s     ISC
MATI  Mati               1.18 321 eP      Pn     02 07 49.1  -1.1
MATI                              eS      Sn     02 08 04.6  -1.8
DDMP  Don Marcelino,     1.28 274 eP      Pn     02 07 50.6  -0.7
DDMP                              eS      Sn     02 08 04.6  -4.0
DAV   Davao City (W)     1.76 307  P      Pn     02 07 58.9 +1.4
      131nm,0.3s,baz=162,slow=2.0,SNR=8.1
DAV                                S      Sn     02 08 21.6 +2.2
      406nm,0.3s,baz=245,slow=23,SNR=56
DAV                                LR     LR     02 09 02.0
      comp=Z,384nm,19.9s,baz=150,slow=52
DMPH  Davao City--Mi     1.82 306⇑iP      Pn     02 08 03.4 +5.1
DMPH                              i S     Sn     02 08 25.1 +4.2
GSPH  General Santos     2.04 272⇑iP      Pn     02 07 59.7  -1.6
GSPH                              i S     Sn     02 08 23.1  -3.1
BIPH  Bislig             2.24 344⇓iP      Pn     02 08 04.8 +0.9
BIPH                              i S     Sn     02 08 28.6  -2.2
SKMP  Bagumbayan, Su     2.49 282 eP      Pn     02 08 07.0  -0.2
SKMP                              eS      Sn     02 08 36.5  -0.3
BUKP  Musuan             2.67 314 eP      Pn     02 08 10.5 +0.9
BUKP                              eS      Sn     02 08 40.2  -0.9
CTBH  Cotabato--PC H     2.99 294⇑eP      Pn     02 08 13.6  -0.2
CTBH                              i S     Sn     02 08 47.8  -0.9
BUTP  Butuan             3.24 335 eP      Pn     02 08 18.5 +1.3
BUTP                              eS      Sn     02 08 58.6 +3.9
CGP   Cagayan de Oro     3.33 317⇓eP      Pn     02 08 18.9 +0.4
TNTI  Ternate            5.22 176  P      Pn     02 08 46.0 +1.8
TNTI  Ternate            5.22 176 ePn     Pn     02 08 46.2 +1.9
TNTI                              eSn     Sn     02 09 46.3 +3.1
KMSI  Cibinong           6.19 209  P      Pn     02 08 58.1 +0.7
LBMI  Labuha             6.63 176  P      Pn     02 09 05.5 +2.1
MRSI  Marisa             7.47 223  P      Pn     02 09 16.4 +1.5
MRSI                               S      Sn     02 10 35.2  -2.9
LUWI  Luwuk              8.19 211 ePn     Pn     02 09 28.7 +4.1
MYLDM Lahad Datu         8.50 265 ePn     Pn     02 09 31.6 +2.7
APSI  Ampana             8.71 218  P      Pn     02 09 41.3 +9.5
FAKI  Fak Fak           10.31 149 ePn     Pn     02 09 53.3  -0.4
FAKI                              eSn     Sn     02 11 42.3  -5.2
SBUM  Sibu              15.16 257 ePn     Pn     02 10 60.0 +1.9
      38nm,0.7s
SOEI  Soe               15.90 190 ePn     Pn     02 11 05.4  -2.2
      36nm,0.8s
KSM   Kuching           17.25 255 eP      P      02 11 25.6 +1.2
      13nm,0.7s
GUMO  Guam              19.14  66  LR     LR     02 18 21.2
      comp=Z,22nm,20.8s,baz=178,slow=34
MTN   Manton Dam        19.18 168 eP      P      02 11 45.7 +0.1
      34nm,1.1s
LEM   Lembang           23.17 237  LR     LR     02 23 30.6
      comp=Z,33nm,18.1s,baz=119,slow=41
FITZ  Fitzroy Crossi    24.00 183  P      P      02 12 37.1 +1.6
      4.2nm,0.4s,baz=5.9,slow=6.9,SNR=33
COEN  Coen              25.52 141 eP      P      02 12 48.1  -1.3
      28nm,1.5s
WRAB  Tennant Creek     26.78 165 eP      P      02 13 01.6 +0.9
      9.4nm,0.7s
WR1   Warramunga Arr    26.79 165 eP      P      02 13 00.8 +0.1
WR1                               ePcP    PcP    02 16 25.2 +3.3
WR1                               eScP    ScP    02 19 52.8  -1.8
WRA   Warramunga Arr    26.79 165  P      P      02 13 00.8 +0.1
      5.7nm,0.5s,baz=346,slow=10,SNR=27
WRA                                PcP    PcP    02 16 25.2 +3.3
      0.3nm,0.4s,baz=337,slow=2.2,SNR=3.2
WRA                                ScP    ScP    02 19 52.8  -1.8
      0.8nm,1.0s,baz=336,slow=3.2,SNR=4.6
WB2   Warramunga Arr    26.79 165 eP      P      02 13 01.2 +0.4
      18nm,1.4s
NJ2   Nanjing           27.00 345 eP      P      02 13 03.3 +0.8
NJ2                                pmax   pmax
      comp=Z,10.0nm,0.5s
GYA   Guiyang           28.10 319 eP      P      02 13 13.5 +0.9
GYA                                pmax   pmax
      comp=Z,10.0nm,0.7s
KMI   Kunming           30.01 312  P      P      02 13 30.3 +0.6
KMI                                pmax   pmax
      comp=Z,12nm,1.0s
CMAR  Chiang Mai Arr    30.02 297  LR     LR     02 25 13.2
      comp=Z,15nm,21.9s,baz=192,slow=35
AS31  Alice Springs     30.26 167 eP      P      02 13 32.4 +0.8
      1.1nm,0.6s
AS31                              ePcP    PcP    02 16 34.1 +3.6
ASAR  Alice Springs     30.26 167  P      P      02 13 32.4 +0.8
      2.1nm,0.5s,baz=348,slow=7.5,SNR=28
ASAR                               PcP    PcP    02 16 34.1 +3.6
      0.7nm,0.4s,baz=352,slow=2.7,SNR=3.9
ASAR                               ScP    ScP    02 20 02.8  -2.6
      0.5nm,0.6s,baz=347,slow=3.1,SNR=4.0
AS01  Alice Springs     30.27 167 eP      P      02 13 30.9  -0.9
KSRS  Korea Array       31.30   1  LR     LR     02 28 10.1
      comp=Z,6.6nm,18.9s,baz=163,slow=40
CD2   Chengdu           33.00 321 eP      P      02 13 56.0 +0.3
CD2                                pmax   pmax
      comp=Z,10.0nm,0.5s
CD2                                pmax   pmax
      comp=Z,120nm,5.0s
LZH   Lanzhou           36.70 328 eP      P      02 14 27.0  -0.6
LZH                                pP     sP     02 14 56.8  -0.7
LZH                                sP     pP     02 15 11.0  +23
LZH                               ePP     PnPn   02 15 57.5 +3.8
LZH                                pmax   pmax
      comp=Z,17nm,1.0s
LZH                                pmax   pmax
      comp=Z,160nm,4.9s
LZH                                LR     LR
      comp=N,300nm,12.6s
LZH                                LR     LR
      comp=E,300nm,12.5s
LZH                                LR     LR
      comp=Z,440nm,14.9s
HHC   Hu-ho-hao-te      37.34 341 eP      P      02 14 34.3 +1.5
HHC                                pmax   pmax
      comp=Z,10.0nm,1.0s
HHC                                pmax   pmax
      comp=Z,60nm,5.5s
NWAO  Narrogin (SRO)    39.83 193  P      P      02 14 55.0 +1.4
      21nm,0.9s,baz=315,slow=1.4,SNR=5.4
STKA  Stephens Creek    40.17 161  P      P      02 14 57.3 +0.8
      3.9nm,0.5s,baz=336,slow=8.1,SNR=15
STKA  Stephens Creek    40.17 161 eP      P      02 14 57.3 +0.8
      2.2nm,1.1s
GTA   Gaotai            41.30 328 eP      P      02 15 07.0 +1.1
GTA                                pmax   pmax
      comp=Z,3.0nm,1.0s
SONA0 Songino Array     45.24 340 eP      P      02 15 36.7  -0.8
SONM  Songino Array     45.24 340  P      P      02 15 36.7  -0.8
      0.4nm,0.4s,baz=134,slow=8.3,SNR=3.0
WMQ   Urumqi            51.03 324  P      P      02 16 23.0 +0.9
WMQ                                pP     sP     02 16 51.5  -1.2
WMQ                                pmax   pmax
      comp=Z,24nm,0.7s
WMQ                                pmax   pmax
      comp=Z,150nm,3.7s
WMQ                                LR     LR
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	comp=N,53nm,22.3s						
WMQ				LR	LR		
	comp=Z,64nm,23.3s						
MK01	Makanchi Array	55.84	324	eP	P	02 16 56.8	-0.4
MK01				ePcP	PcP	02 17 54.3	-0.9
MK31	Makanchi Array	55.85	324	eP	P	02 16 57.1	-0.2
MK32	Makanchi Array	55.85	324	eP	P	02 16 57.1	-0.2
MK32				ePcP	PcP	02 17 54.7	-0.5
MKAR	Makanchi Array	55.85	324	P	P	02 16 57.1	-0.2
	7.2nm,0.4s,baz=117,slow=7.7,SNR=101						
MKAR				PcP	PcP	02 17 54.7	-0.5
	1.6nm,0.7s,baz=117,slow=3.6,SNR=4.1						
MKAR	Makanchi Array	55.85	324	eP	P	02 16 57.1	-0.2
	69nm,0.4s						
MAKZ	Makanchi	56.05	324	eP	P	02 16 58.5	-0.1
	5.2nm,0.6s						
KSH	Kashi	56.64	314	eP	P	02 17 05.5	+2.3
NIL	Nilore	56.77	306	eP	P	02 17 04.2	+0.1
	6.8nm,0.7s						
ZALV	Zalesovo Beam	58.69	332	P	P	02 17 15.9	-1.2
	1.7nm,0.4s,baz=145,slow=6.0,SNR=6.1						
ZALV	Zalesovo Beam	58.69	332	eP	P	02 17 16.1	-1.0
ZAA1	Zalesovo Array	58.70	332	eP	P	02 17 15.9	-1.2
KURK	Kurchatov	59.98	327	eP	P	02 17 25.8	-0.3
KURBB	Kurchatov Arra	59.98	327	P	P	02 17 25.7	-0.3
	14nm,0.6s,baz=127,slow=6.3,SNR=116						
KK31	Karatay Array	61.77	316	eP	P	02 17 38.0	-0.4
KKAR	Karatay Array	61.77	316	eP	P	02 17 38.0	-0.4
BVAR	Borovoye Array	65.57	326	P	P	02 18 02.6	-0.5
	7.7nm,0.6s,baz=133,slow=8.6,SNR=31						
BRVK	Borovoye	65.64	326	eP	P	02 18 03.4	-0.2
	9.4nm,0.7s						
GEYT	Alibeck	69.69	308	P	P	02 18 29.2	-0.3
	0.7nm,0.3s,baz=93,slow=4.9,SNR=5.9						
ABKAR	Akbulak array	70.57	320	eP	P	02 18 34.0	-0.6
AKTO	Aktyubinsk	72.05	321	P	P	02 18 42.8	-0.7
	2.6nm,0.6s,baz=77,slow=9.4,SNR=12						
ARU	Arti	73.16	327	eP	P	02 18 49.2	-0.7
	5.4nm,0.7s						
RAYN	Ar Rayn	79.85	293	eP	P	02 19 27.7	-0.7
	4.1nm,1.0s						
KLMR	Klimovskoe	83.56	331	eP	P	02 19 46.1	-1.0
KLMR				AMP		02 19 47.9	
	comp=Z,3.0nm,0.7s						
ASF	Jabal al Asfar	86.92	302	P	P	02 20 05.1	+0.5
	comp=Z,3.0nm,0.8s,baz=61,slow=4.1,SNR=7.3						
ARA0	ARCESS Array S	88.41	340	eP	P	02 20 09.2	-1.6
ARCES	ARCESS Array B	88.41	340	P	P	02 20 09.2	-1.6
	comp=Z,0.7nm,0.5s,baz=88,slow=6.6,SNR=8.8						
BR101	Keskin Array S	88.78	310	eP	P	02 20 11.8	-1.6
BRTR	Keskin Array B	88.78	310	P	P	02 20 11.8	-1.6
	comp=Z,0.9nm,0.8s,baz=136,slow=3.7,SNR=6.2						
FIA0	FINESS Array S	89.96	332	eP	P	02 20 16.5	-1.7
FINES	FINESS Array B	89.96	332	P	P	02 20 16.5	-1.7
	comp=Z,0.7nm,0.6s,baz=44,slow=6.1,SNR=4.7						
TORD	Torodi Ar. Bea	122.44	290	PKP	PKPdf	02 26 13.1	-1.9
	comp=Z,0.4nm,0.6s,baz=118,slow=2.5						
TOA1	Torodi Ar. Sit	122.44	290	ePKPdf	PKPdf	02 26 13.1	-1.9

*MOS **31** 02:20:07.2±2.8, 20°.81S×175°.47W, h33^{km}, mb5.0/23, Error ellipse: s-maj=12.0km s-min=8.3km az=139.0*

*BJI **31** 02:20:11.2, 20°.35S×175°.41W, h35^{km}, mb5.1/16, mB5.3/11, Ms4.9/3, Ms7 4.7/3*

*ISCJB **31** 02:20:15.2±0.1, 21°.02S±0°.03×175°.49W±0°.03, h90^{km}, mb4.6/114, Error ellipse: s-maj=5.1km s-min=2.5km az=35.4*

*GCMT **31** 02:20:16.6±0.2, 20°.96S×175°.11W, h116^{km}±3^{km}, MW5.0/83, Moment Tensor Solution. s35,c39; s83,c114; Duration: 0 Moment tensor: Scale 10^{16}Nm; M_{rr}-0.06±.13; $M_{\theta\theta}$-1.12±.17; $M_{\phi\phi}$1.18±.16; $M_{r\theta}$1.01±.10; $M_{\theta\phi}$2.31±.14; $M_{\phi r}$-2.46±.08; Best double couple: $M_0$3.68900×10^{16} NP1:ϕ_s346.00000°, δ88.00000°, λ-135.00000°. NP2: ϕ_s254.00000°, δ45.00000°, λ-2.00000°. Principal axes: T 3.4850, Plg29.0000°, Azm110.0000°; N 0.4040, Plg45.0000°, Azm348.0000°; P -3.8930, Plg32.0000°, Azm220.0000°; nsta1 refers to body waves, cutoff=40s. nsta2 refers to surface waves, cutoff=50s.*

*IDC **31** 02:20:16.8±0.6, 20°.80S×175°.50W, h89^{km}±5^{km}, mb4.3/23, mb1 4.5/23, mb1mx4.4/46, mbtmp4.7/23, MS3.5/30, Ms1 3.5/30, ms1mx3.4/45 Error ellipse: s-maj=14.1km s-min=10.4km az=147.0*

*NEIC **31** 02:20:16.6±0.1, 20°.96S×175°.55W, mb4.7/86, Error ellipse: s-maj=7.1km s-min=3.6km az=137.0*

*WEL **31** 02:20:16.0, 20°.96S×175°.55W, h91^{km}*

ISC 31 02:20:16.7±0.5**, 20°.97S**±0°.06×**175°.33W**±0°.06**, h90**^{km}±4^{km}**, h91**^{km}**:pP-P, n433,** σ1^s**33**/457**, mb4.7**/115**, 19C-11D, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIUE	Niue	5.42	71	P	Pn	02 21 29.2	-5.9
	baz=5.4,SNR=157						
AFI	Afiamalu	7.79	26	P	Pn	02 21 58.5	-9.0
	21nm,0.3s,baz=205,slow=2.8,SNR=11						
AFI				S	Sn	02 23 15.6	-19
	5.6nm,0.3s,baz=218,slow=19,SNR=2.8						
AFI	Afiamalu	7.79	26	ePn	Pn	02 22 00.6	-6.9
AFI				eSn	Sn	02 23 20.9	-13
AFI	Afiamalu	7.79	26	eP	Pn	02 22 00.6	-6.9
RIZ	Raoul Island	8.57	195	P	Pn	02 22 14.2	-3.8
GLKZ	Green Lake	8.59	195	P	Pn	02 22 18.6	+0.5
GLKZ				S	Sn	02 23 53.1	-0.2
RAR	Rarotonga	14.53	94	P	Pn	02 23 34.1	-3.7
	0.9nm,0.3s,baz=281,slow=4.2,SNR=4.4						
RAR				S	Sn	02 26 02.3	-16
	11nm,0.3s,baz=96,slow=19,SNR=9.4						
RAR				LR	LR	02 28 35.6	
	comp=Z,130nm,19.6s,baz=276,slow=34						
RAR	Rarotonga	14.53	94	ePn	Pn	02 23 34.1	-3.8
RAR				eSn	Sn	02 26 04.2	-14
DZM	Mont Dzumac	16.99	263	eP	P	02 24 12.0	+2.6
	272nm,1.4s						
DZM				eLR	LR	02 28 10.7	
	794nm,27.7s						
DZM	Mont Dzumac	16.99	263	P	P	02 24 12.5	+3.1
	2.4nm,0.3s,baz=84,slow=19,SNR=20						
DZM				LR	LR	02 29 37.4	
	comp=Z,414nm,21.2s,baz=60,slow=33						
DZM	Mont Dzumac	16.99	263	ePn	P	02 24 13.0	+3.7
	101nm,1.1s						
OUZ	Omahuta	17.21	212	ePn	Pn	02 24 08.1	-3.3
	82nm,1.0s						
OUZ	Omahuta	17.21	212	P	P	02 24 13.3	+1.7
GRZ	Great Barrier	17.23	206	P	Pn	02 24 12.5	+1.0
WCZ	Waipu Caves	17.44	209	P	Pn	02 24 16.6	+2.5
KUZ	Kuaotunu	17.55	204	P	Pn	02 24 17.3	+1.8
HAZ	Te Kaha	17.76	198	P	P	02 24 16.1	-1.5
URZ	Urewera	18.43	199	P	P	02 24 20.3	-4.6
	0.7nm,0.3s,baz=270,slow=2.0,SNR=8.9						
URZ				S	S	02 27 34.1	-16
	1.2nm,0.3s,baz=51,slow=16,SNR=5.1						
URZ	Urewera	18.43	199	eP	P	02 24 25.4	+0.5
URZ				eS	S	02 27 50.4	+0.1
TLZ	Tolley Road	19.02	203	P	Pn	02 24 33.7	+0.6
HIZ	Hauiti	19.43	204	P	P	02 24 38.0	+2.2
BKZ	Black Stump Fm	19.45	199	eP	P	02 24 33.8	-2.4
	73nm,1.5s						
BKZ				eS	S	02 27 58.5	-13
BKZ	Black Stump Fm	19.45	199	P	P	02 24 34.5	-1.6
BKZ				S	S	02 27 57.7	-14
RITZ	Rihia Road	19.48	201	P	P	02 24 36.9	+0.4
KATZ	Kakaramea	19.54	201	P	P	02 24 37.7	+0.5
MCHZ	McNeill Hill	19.64	199	P	P	02 24 38.3	+0.1
KRVZ	Karewarewa	19.66	201	P	P	02 24 37.8	-0.7
WTVZ	West Tongariro	19.70	201	P	P	02 24 37.1	-1.8
KWHZ	Kaweka Forest	19.71	199	P	P	02 24 37.7	-1.3
KWHZ				S	S	02 28 04.2	-12
TWVZ	Taurewa	19.71	202	P	P	02 24 38.6	-0.4
NGZ	Ngauruhoe	19.75	201	P	P	02 24 39.1	-0.4
WHVZ	Whangaehu Hut	19.85	201	P	P	02 24 39.6	-1.1
BHHZ	Black Hill Sta	19.88	200	P	P	02 24 38.9	-1.9
BHHZ				S	S	02 28 06.3	-13
MOVZ	Moawhango	19.91	201	P	P	02 24 39.2	-1.9
KAHZ	Kahuranaki	19.92	198	P	P	02 24 40.3	-0.9
KRHZ	Kereru	19.93	199	P	P	02 24 39.7	-1.6
PKVZ	Pokaka	19.94	202	P	P	02 24 40.6	-0.8
VRZ	Vera Road	20.00	203	P	P	02 24 35.1	-7.0
PXZ	Pawanui	20.14	198	P	P	02 24 42.8	-0.7
PNHZ	Pukenui	20.23	199	P	P	02 24 42.6	-1.9
KHEZ	Kahui Hut	20.43	204	P	P	02 24 49.3	+2.5
TSZ	Takapari Road	20.43	199	P	P	02 24 44.8	-2.0
DVHZ	Dannevirke	20.59	199	P	P	02 24 47.3	-1.1
ANWZ	Angora Road	20.65	198	P	P	02 24 50.6	+1.6
POWZ	Post Office Ro	20.80	199	P	P	02 24 50.0	-0.6
BFZ	Birch Farm	20.92	198	eP	P	02 24 51.0	-0.9
	46nm,0.8s						
BFZ	Birch Farm	20.92	198	P	P	02 24 50.8	-1.1
MRZ	Mangatainoka R	21.10	200	P	P	02 24 51.2	-2.7
HOWZ	Holdsworth Sta	21.34	199	P	P	02 24 54.5	-1.9
OGWZ	Otaki Gorge	21.37	200	P	P	02 24 54.4	-2.4
TMWZ	Te Maipa	21.41	198	P	P	02 24 56.2	-1.0
KIW	Kapiti Island	21.50	201	P	P	02 24 55.6	-2.5
MTW	Mount Morrison	21.58	199	P	P	02 24 57.1	-1.8
CAW	Cannon Point	21.67	200	P	P	02 24 59.3	-0.6
TRWZ	Traveller	21.74	198	P	P	02 25 00.6	-0.1
DUWZ	D'Urville Isla	21.78	202	P	P	02 24 58.4	-2.8
PAWZ	Paruwai Farm	21.81	199	P	P	02 24 59.8	-1.6
MSWZ	Moikau Station	21.89	199	P	P	02 25 00.2	-2.1
SNZO	South Karori	21.97	200	eP	P	02 25 01.3	-1.8
	92nm,1.3s						
BHW	Baring Head	22.00	200	P	P	02 25 01.7	-1.7
TCW	Tory Channel	22.02	201	P	P	02 25 00.5	-3.2
PLWZ	Palliser	22.03	199	P	P	02 25 02.3	-1.5
TUWZ	Tuamarina	22.33	202	P	P	02 25 03.8	-3.2
NNZ	Nelson	22.34	203	P	P	02 25 04.4	-2.7
THZ	Tophouse	22.99	203	eP	P	02 25 11.2	-2.6
	44nm,1.0s						
THZ				eS	S	02 29 14.8	-2.4
KHZ	Kahutara	23.34	201	eP	P	02 25 15.6	-1.4
	82nm,1.1s						
TBI	Tubuai	24.07	100	eP	P	02 25 22.9	-0.8
	202nm,1.2s						
TBI				eS	S	02 29 30.0	-4.8
	121nm,28.4s						
TBI				eLQ	LQ	02 30 16.1	
	379nm,29.2s						
TBI				eLR	LR	02 31 08.7	
	448nm,35.8s						
TBI	Tubuai	24.07	100	eT	T	02 49 40.2	
	16nm,0.3s						
LTZ	Lake Taylor	24.11	203	eP	P	02 25 22.6	-1.4
	100nm,1.2s						
LTZ	Lake Taylor	24.11	203	P	P	02 25 25.2	+1.2
INZ	Inchbonnie	24.37	204	P	P	02 25 26.6	+0.3
PAE	Paea	24.52	87	eP	P	02 25 27.3	-0.5
	14nm,1.1s						
PAE	Paea	24.52	87	eT	T	02 50 19.0	
	10nm,0.3s						
PPT2	Papeete2	24.53	87	eP	P	02 25 28.0	-0.1
	113nm,1.2s						
PPT2				eS	S	02 29 39.5	-3.0
	440nm,31.6s						
PPT2				eLQ	LQ	02 30 37.0	
	591nm,31.8s						
PPT2				eLR	LR	02 31 14.1	
	848nm,33.8s						
PPT2	Papeete2	24.53	87	eT	T	02 50 21.9	
	11nm,0.3s						
PPT	Papeete	24.54	87	P	P	02 25 28.0	0.0
	87nm,1.0s,baz=62,slow=22,SNR=8.6						
PPT				LR	LR	02 32 51.0	
	comp=Z,125nm,20.9s,baz=252,slow=31						
PPTF	Pamatai, Papee	24.54	87	eP	P	02 25 28.1	-0.1
	144nm,1.1s						
OXZ	Oxford	24.67	202	eP	P	02 25 29.0	0.0
	84nm,0.6s						
OXZ	Oxford	24.67	202	P	P	02 25 30.1	+1.1
TIAR	Tiarei	24.75	87	eP	P	02 25 29.8	-0.3
	32nm,1.0s						
MQZ	McQueen's Vall	24.79	201	eP	P	02 25 30.6	+0.6
	52nm,1.1s						
MQZ	McQueen's Vall	24.79	201	P	P	02 25 32.0	+2.0
TVO	Taravao	24.80	87	eP	P	02 25 30.1	-0.4
	26nm,1.1s						
TVO	Taravao	24.80	87	eT	T	02 50 47.1	
	4.9nm,0.4s						
WVZ	Waitaha Valley	24.94	205	P	P	02 25 31.8	+0.3
RPZ	Rata Peaks	25.36	203	P	P	02 25 36.4	+1.1
	44nm,0.5s,baz=346,slow=1.5,SNR=8.9						
RPZ				LR	LR	02 35 43.6	
	comp=Z,162nm,21.1s,baz=42,slow=36						
RPZ	Rata Peaks	25.36	203	eP	P	02 25 36.8	+1.4
FOZ	Fox Glacier	25.69	205	eP	P	02 25 38.4	+0.2
	192nm,1.1s						
FOZ	Fox Glacier	25.69	205	P	P	02 25 38.7	+0.5
LBZ	Lake Benmore	26.26	204	P	P	02 25 42.5	-1.0
HNR	Honiara	26.42	292	LR	LR	02 35 36.1	
	comp=Z,64nm,19.2s,baz=118,slow=35						
JCZ	Jackson Bay	26.55	206	P	P	02 25 46.6	+0.4
PMOR	Pomariorio Ree	26.74	82	eP	P	02 25 48.6	+0.6
	82nm,1.3s						
PMOR	Pomariorio Ree	26.74	82	eT	T	02 52 55.8	
	3.4nm,0.4s						
VAH	Vaihoa	26.92	82	eT	T	02 53 30.7	
	5.2nm,0.2s						
WKZ	Wanaka	27.09	205	P	P	02 25 50.9	0.0
EAZ	Earnscleugh	27.31	204	P	P	02 25 54.3	+1.5
TUZ	Tuapeka	27.80	203	P	P	02 25 58.8	+1.6
MLZ	Mavora Lakes	27.89	205	P	P	02 25 59.7	+1.7
ARMA	Armidale	31.13	246	P	P	02 26 27.7	+0.7
	baz=31,SNR=11						
ARMA	Armidale	31.13	246	eP	P	02 26 26.1	-0.9
	26nm,1.1s						
EIDS	Eidsvold	31.14	255	eP	P	02 26 25.4	-1.6
	18nm,0.8s						
MGCD	Mangrove Creek	32.13	241	P	P	02 26 36.8	+1.2
	baz=32,SNR=7.9						
RMQ	Roma	33.26	253	P	P	02 26 45.9	+0.3
	baz=33,SNR=16						
CAN	Canberra	34.35	238	eP	P	02 26 53.0	-1.9
	34nm,1.4s						
CAN	Canberra	34.35	238	eP	P	02 26 53.0	-1.9
CAN				pmax	pmax		
	comp=Z,34nm,1.4s						
CTAO	Charters Tower	35.93	264	eP	P	02 27 07.6	-1.1
	comp=Z,33nm,0.6s						
CTAO	Charters Tower	35.93	264	eP	P	02 27 07.6	-1.1
CTAO				pmax	pmax		
	comp=Z,33nm,0.6s						
TAOE	Nuku Hiva Isla	35.98	76	eLR	LR	02 36 44.7	
	comp=Z,394nm,30.6s						
TAOE	Nuku Hiva Isla	35.98	76	eT	T	03 04 55.8	
	comp=Z,109nm,0.2s						
CMSA	Cobar Meteorol	36.34	245	P	P	02 27 11.0	-1.0
	baz=36,SNR=29						
QLP	Quilpie	37.31	253	P	P	02 27 19.3	-1.1
	baz=37,SNR=9.7						
RKT	Rikitea	37.39	101	eLR	LR	02 37 09.0	
	comp=Z,425nm,35.0s						
RKT	Rikitea	37.39	101	eT	T	03 06 23.9	
	comp=Z,16nm,0.4s						
TOO	Toolangi	37.66	235	P	P	02 27 22.6	-0.6
	baz=38,SNR=12						
PMG	Port Moresby	37.88	282	P	P	02 27 24.0	-1.2
	comp=Z,46nm,0.8s,baz=90,slow=5.7,SNR=12						
PMG	Port Moresby	37.88	282	eP	P	02 27 24.5	-0.7
	comp=Z,48nm,0.7s						
PMG	Port Moresby	37.88	282	eP	P	02 27 24.5	-0.7
PMG				pmax	pmax		
	comp=Z,48nm,0.7s						
MTSU	Mount Surprise	38.06	267	P	P	02 27 24.7	-2.1
	baz=38,SNR=24						
TAU	Tasmania Unive	38.08	226	eP	P	02 27 26.2	-0.3
	comp=Z,90nm,1.4s						
TAU	Tasmania Unive	38.08	226	eP	P	02 27 26.2	-0.3
TAU				pmax	pmax		
	comp=Z,90nm,1.4s						
STKA	Stephens Creek	39.84	245	P	P	02 27 40.2	-1.3
	comp=Z,13nm,0.6s,baz=94,slow=10,SNR=38						
STKA				LR	LR	02 41 39.6	
	comp=Z,75nm,19.2s,baz=40,slow=32						
STKA	Stephens Creek	39.84	245	P	P	02 27 40.4	-1.1
	baz=40,SNR=36						
STKA	Stephens Creek	39.84	245	eP	P	02 27 40.5	-1.1
	comp=Z,3.0nm,0.6s						
STKA	Stephens Creek	39.84	245	eP	P	02 27 40.4	-1.1
COEN	Coen	40.10	273	P	P	02 27 43.2	-0.6
	baz=40,SNR=18						
COEN	Coen	40.10	273	eP	P	02 27 43.4	-0.4
	comp=Z,32nm,1.1s						
ARPS	Mount Arapiles	40.33	238	P	P	02 27 44.4	-1.0
	baz=40,SNR=12						
QIS	Mount Isa	42.03	262	P	P	02 27 57.7	-1.9
	baz=42,SNR=3.4						
HTT	Hallett	42.23	243	P	P	02 27 59.6	-1.5
	baz=42,SNR=13						
BBOO	Buckleboo	44.58	244	P	P	02 28 17.8	-2.2
	baz=45,SNR=15						
BBOO	Buckleboo	44.58	244	eP	P	02 28 18.1	-1.9
	comp=Z,15nm,0.8s						
AS01	Alice Springs	46.80	257	eP	P	02 28 34.5	-3.1
AS01				ePcP	PcP	02 30 08.6	-0.9
AS31	Alice Springs	46.84	257	eP	P	02 28 36.2	-1.7
	comp=Z,7.2nm,0.8s						
AS31				ePcP	PcP	02 30 09.2	-0.4
AS31				eScP	ScP	02 33 57.0	+1.7
AS31				eS	S	02 35 22.9	+0.9
ASAR	Alice Springs	46.84	257	P	P	02 28 36.2	-1.7
	comp=Z,32nm,0.8s,baz=88,slow=8.4,SNR=160						
ASAR				PcP	PcP	02 30 09.2	-0.4
	comp=Z,3.2nm,0.5s,baz=110,slow=4.0,SNR=9.2						
ASAR				ScP	ScP	02 33 57.0	+1.7
	comp=Z,2.2nm,1.0s,baz=88,slow=4.7,SNR=5.7						
ASAR				S	S	02 35 22.9	+0.9
	comp=Z,0.3nm,0.7s,baz=97,slow=16,SNR=2.6						
ASAR				LR	LR	02 46 15.0	
	comp=Z,106nm,20.3s,baz=96,slow=33						
WB2	Warramunga Arr	47.00	262	eP	P	02 28 37.1	-2.1
	comp=Z,27nm,0.8s						
WRAB	Tennant Creek	47.00	262	eP	P	02 28 37.5	-1.7
	comp=Z,24nm,1.0s						
WRAB	Tennant Creek	47.00	262	ceP	P	02 28 37.0	-2.2
WRAB				pmax	pmax		
	comp=Z,28nm,0.8s						
WR1	Warramunga Arr	47.01	262	eP	P	02 28 37.0	-2.2
WR1				ePcP	PcP	02 30 09.6	-0.7
WR1				eScP	ScP	02 33 57.0	+1.0
WRA	Warramunga Arr	47.01	262	P	P	02 28 37.0	-2.2
	comp=Z,21nm,0.7s,baz=95,slow=7.7,SNR=150						
WRA				PcP	PcP	02 30 09.6	-0.7
	comp=Z,3.5nm,0.9s,baz=97,slow=4.1,SNR=5.0						
WRA				ScP	ScP	02 33 57.0	+1.0
	comp=Z,1.8nm,1.0s,baz=97,slow=3.9,SNR=3.9						
KDU	Kakadu	50.45	271	P	P	02 29 05.0	-0.6
	baz=50,SNR=8.1						
FORT	Forrest	51.41	247	P	P	02 29 11.6	-1.0
	baz=51,SNR=8.0						
FORT	Forrest	51.41	247	eP	P	02 29 11.1	-1.5
	comp=Z,51nm,0.8s						
MTN	Manton Dam	51.66	270	P	P	02 29 12.2	-2.5
	baz=52,SNR=5.2						
WRKA	Warakurna	51.74	254	P	P	02 29 13.2	-2.0
	baz=52,SNR=89						
GUMO	Guam	52.04	308	LR	LR	02 49 06.5	
	comp=Z,17nm,21.4s,baz=248,slow=33						
KNRA	Kununurra	53.12	266	P	P	02 29 24.0	-1.5
	baz=53,SNR=3.4						
FITZ	Fitzroy Crossi	55.44	262	P	P	02 29 40.6	-1.6
	comp=Z,5.2nm,0.8s,baz=149,slow=4.8,SNR=14						
FITZ				LR	LR	02 52 23.5	
	comp=Z,80nm,18.5s,baz=106,slow=35						
SBA	Scott Base	57.59	184	eP	P	02 29 60.0	+3.4
	comp=Z,12nm,0.9s						
SBA	Scott Base	57.59	184	eP	P	02 30 00.0	+3.4
SBA				pmax	pmax		
	comp=Z,12nm,0.9s						
VNDA	Vanda	57.68	186	P	P	02 29 59.8	+2.5
	comp=Z,3.4nm,0.9s,baz=16,slow=7.5,SNR=20						
VNDA	Vanda	57.68	186	eP	P	02 30 00.3	+3.0
	comp=Z,5.7nm,1.0s						
VNDA	Vanda	57.68	186	eP	P	02 30 00.3	+3.0
VNDA				pmax	pmax		
	comp=Z,6.0nm,1.0s						
SOEI	Soe	59.01	271	eP	P	02 30 07.2	-0.5
	comp=Z,64nm,0.8s						
BATI	Baumata	59.43	270	LR	LR	02 54 21.7	
	comp=Z,103nm,21.1s,baz=124,slow=34						
RPN	Rapa Nui	59.99	110	LR	LR	02 52 29.9	
	comp=Z,39nm,18.4s,baz=268,slow=32						
KLBR	Kellerberrin	60.12	245	P	P	02 30 13.7	-1.3
	baz=60,SNR=5.0						
MEEK	Meekatharra	60.12	251	P	P	02 30 13.4	-1.6
	baz=60,SNR=12						
MBWA	Marble Bar	60.19	257	eP	P	02 30 13.6	-1.9
	comp=Z,35nm,1.3s						
NWAO	Narrogin (SRO)	60.39	243	LR	LR	02 54 04.9	
	comp=Z,51nm,20.4s,baz=304,slow=34						
BLDU	Ballidu	61.14	246	P	P	02 30 20.4	-1.5
	baz=61,SNR=32						
MUN	Mundaring	61.37	244	P	P	02 30 22.6	-0.9
	baz=61,SNR=3.7						
MORW	Morawa	61.96	247	P	P	02 30 25.8	-1.6
	baz=62,SNR=6.8						
CASY	Casey	64.61	206	eP	P	02 30 45.3	+1.1
	comp=Z,14nm,0.9s						
GIRL	Giralia	64.83	254	P	P	02 30 46.2	-0.2
	baz=65,SNR=4.1						
QSPA	South Pole Qui	69.11	180	P	P	02 31 14.3	+1.3
	comp=Z,29nm,0.9s,baz=36,slow=4.0,SNR=73						
QSPA	South Pole Qui	69.11	180	eP	P	02 31 14.7	+1.7
MJAR	Matsushiro Arr	72.09	322	P	P	02 31 29.3	-2.0
	comp=Z,1.0nm,0.4s,baz=166,slow=6.5,SNR=6.4						
MJAR				LR	LR	02 57 55.5	
	comp=Z,8.7nm,21.3s,baz=280,slow=31						
MAJO	Matsushiro	72.09	322	eP	P	02 31 29.3	-2.0
MAJO	Matsushiro	72.09	322	eP	P	02 31 29.3	-2.0
MAT	Matsushiro	72.09	322	P	P	02 31 29.7	-1.6
JNU	Nakatsue	74.34	315	LR	LR	02 56 53.0	
	comp=Z,18nm,21.9s,baz=121,slow=30						
UNV	Unalaska Valle	74.89	5	eP	P	02 31 46.0	-1.2
	comp=Z,32nm,1.4s						
LEM	Lembang	75.52	268	LR	LR	03 04 30.4	
	comp=Z,37nm,21.8s,baz=185,slow=35						
SMMC	Simmler	76.70	44	P	P	02 31 59.9	+1.8
	baz=232						
ARVC	Arvin	77.35	44	P	P	02 32 02.1	+0.4
	baz=233						
PETK	Petropavlovsk-	77.39	344	P	P	02 32 00.5	-1.0
	comp=Z,1.8nm,0.5s,baz=116,slow=6.8						
PETK				LR	LR	03 00 29.2	
	comp=Z,15nm,21.1s,baz=93,slow=31						
PEA1	Petropavlovsk-	77.39	344	eP	P	02 32 00.5	-1.0
LPIG	La Paz	77.52	58	LR	LR	02 57 18.6	
	comp=Z,46nm,21.6s,baz=218,slow=29						
MURC	Murrieta	77.54	47	P	P	02 32 03.2	+0.4
	baz=234						
BFSC	Mount Baldy Ra	77.60	46	P	P	02 32 03.7	+0.4
	baz=234						
VES	Vestal, Richgr	77.61	44	P	P	02 32 03.6	+0.4
	baz=233						
MONP2	Monument Peak	77.66	48	P	P	02 32 04.0	+0.3
	baz=235						
EDW2	Edwards Air Fo	77.75	45	P	P	02 32 04.1	+0.1
	baz=234,SNR=5.9						
FRD	Ford Ranch, An	77.88	47	P	P	02 32 05.1	+0.3
	baz=235,SNR=8.3						
ISA	Isabella, Lake	77.90	44	P	P	02 32 05.3	+0.4
	baz=233,SNR=5.4						
ISA	Isabella, Lake	77.90	44	eP	P	02 32 05.8	+0.9
	comp=Z,15nm,1.1s						
ISA				epP	pP	02 32 30.0	+1.6
ISA	Isabella, Lake	77.90	44	eP	P	02 32 05.8	+0.9
ISA				pmax	pmax		
	comp=Z,15nm,1.1s						
PFO	Pinyon Flats O	78.04	47	P	P	02 32 06.2	+0.5
	baz=235						
PFO	Pinyon Flats O	78.04	47	eP	P	02 32 06.5	+0.7
	comp=Z,8.3nm,1.1s						
PFO	Pinyon Flats O	78.04	47	eP	P	02 32 06.5	+0.7
PFO				pmax	pmax		
	comp=Z,8.0nm,1.1s						
XPFO	Piæon Flat	78.05	47	eP	P	02 32 06.5	+0.7
	comp=Z,8.3nm,1.1s						
SWSC	Sam W. Stewart	78.12	48	P	P	02 32 06.5	+0.5
	baz=236						
CMB	Columbia Colle	78.14	41	eP	P	02 32 06.7	+0.6
	comp=Z,6.3nm,1.0s						
CMB				epP	pP	02 32 30.7	+1.1
CMB	Columbia Colle	78.14	41	eP	P	02 32 06.7	+0.6
CMB				pmax	pmax		
	comp=Z,6.0nm,1.0s						
AFDM	Forest Hills D	78.35	40	eP	P	02 32 08.1	+0.9
	comp=Z,8.2nm,1.3s						
WDC	Whiskeytown Da	78.47	38	eP	P	02 32 09.0	+1.2
	comp=Z,6.9nm,1.1s						
WDC	Whiskeytown Da	78.47	38	eP	P	02 32 09.0	+1.2
WDC				pmax	pmax		
	comp=Z,7.0nm,1.1s						
BELC	Belle Mtn. Jos	78.58	47	P	P	02 32 08.9	+0.2
	baz=235,SNR=8.8						
CWC	Cottonwood Cre	78.62	44	P	P	02 32 09.4	+0.5
	baz=233						
N02D	Trinity Center	78.63	38	P	P	02 32 09.4	+0.7

	baz=229						
MDPB	Devils Postpil	78.70	42	eP	P	02 32 10.7	+1.2
	comp=Z,9.9nm,1.1s						
O03D	Paynes Creek	78.71	39	P	P	02 32 09.2	0.0
	baz=230						
OMMB	Old Mammoth Mi	78.74	42	eP	P	02 32 10.6	+0.9
	comp=Z,8.2nm,1.2s						
OMMB				epP	pP	02 32 34.8	+1.4
BC3	Big Chuckawall	78.76	47	P	P	02 32 10.1	+0.4
	baz=236						
MPMC	Manual Prospec	78.78	44	P	P	02 32 10.1	+0.3
	baz=234						
GSC	Goldstone, Bar	78.79	45	P	P	02 32 09.7	0.0
	baz=234,SNR=7.8						
GSC	Goldstone, Bar	78.79	45	eP	P	02 32 10.4	+0.6
	comp=Z,10nm,1.1s						
GSC				epP	pP	02 32 34.3	+0.9
GSC	Goldstone, Bar	78.79	45	eP	P	02 32 10.4	+0.6
GSC				pmax	pmax		
	comp=Z,10.0nm,1.1s						
M02C	Callahan	78.82	37	P	P	02 32 10.3	+0.5
	baz=229						
GLA	Glamis	78.85	48	P	P	02 32 10.8	+0.7
	baz=236,SNR=8.3						
GLA	Glamis	78.85	48	eP	P	02 32 11.4	+1.3
	comp=Z,14nm,1.2s						
GLA	Glamis	78.85	48	eP	P	02 32 11.4	+1.3
GLA				pmax	pmax		
	comp=Z,14nm,1.2s						
TIN	Tinemaha, Big	78.89	43	P	P	02 32 11.0	+0.7
	baz=233						
KSRS	Korea Array	78.91	317	P	P	02 32 09.8	-0.5
	comp=Z,0.7nm,0.4s,baz=135,slow=6.3,SNR=4.9						
KSRS				LR	LR	03 00 56.0	
	comp=Z,18nm,21.2s,baz=82,slow=31						
KS15	Wonju Array Si	78.92	317	eP	P	02 32 09.8	-0.6
KSAR	Wonju Array Be	78.92	317	P	P	02 32 09.8	-0.5
KSAR	Wonju Array Be	78.92	317	P	P	02 32 09.8	-0.5
WAKR	Walker	79.01	41	eP	P	02 32 12.0	+0.9
	comp=Z,12nm,1.1s						
WAKR				epP	pP	02 32 36.3	+1.6
YBH	Yreka Blue Hor	79.12	37	P	P	02 32 11.6	+0.2
	comp=Z,4.0nm,1.0s,baz=203,slow=4.3,SNR=7.8						
YBH				LR	LR	03 00 03.2	
	comp=Z,22nm,21.1s,baz=210,slow=30						
YBH	Yreka Blue Hor	79.12	37	eP	P	02 32 12.4	+0.9
	comp=Z,8.4nm,1.1s						
YBH	Yreka Blue Hor	79.12	37	eP	P	02 32 12.4	+0.9
YBH				pmax	pmax		
	comp=Z,8.0nm,1.1s						
IRM	Iron Mountain	79.25	47	P	P	02 32 13.0	+0.7
	baz=236,SNR=8.8						
GMRC	Granite Mounta	79.26	46	P	P	02 32 13.0	+0.5
	baz=235						
PNTR	Pine Nut	79.27	41	eP	P	02 32 13.8	+1.3
	comp=Z,16nm,1.0s						
PNTR				epP	pP	02 32 38.2	+2.0
GRAC	Grapevine Rang	79.41	44	P	P	02 32 13.7	+0.6
	baz=234,SNR=5.6						
YERR	Yerington	79.43	41	eP	P	02 32 14.0	+0.7
	comp=Z,8.2nm,1.0s						
YERR				epP	pP	02 32 38.2	+1.2
Y12C	Blythe	79.45	48	P	P	02 32 13.8	+0.5
	baz=236						
Y12C	Blythe	79.45	48	eP	P	02 32 14.4	+1.1
	comp=Z,11nm,1.1s						
M04C	Macdoel	79.65	38	P	P	02 32 14.8	+0.4
	baz=230						
RYN	Ryan	79.66	42	eP	P	02 32 15.4	+0.8
	comp=Z,5.8nm,0.9s						
NV01	Mina Array Sit	79.67	42	eP	P	02 32 14.3	-0.3
NV01				epP	pP	02 32 39.1	+0.8
NVAR	Mina Array Bea	79.67	42	P	P	02 32 15.4	+0.7
	comp=Z,7.4nm,0.9s,baz=224,slow=9.3,SNR=30						
NVAR				pP	pP	02 32 39.1	+0.8
	comp=Z,5.6nm,0.8s,baz=222,slow=8.0,SNR=8.0						
214A	Organ Pipe Nat	79.68	50	P	P	02 32 15.1	+0.5
	baz=238						
NV11	Mina Array Sit	79.77	42	eP	P	02 32 15.7	+0.6
	comp=Z,0.8nm,1.0s						
NV11				epP	pP	02 32 39.6	+0.8
PAHR	Pah Rah Range	79.78	40	eP	P	02 32 15.8	+0.6
	comp=Z,8.1nm,1.1s						
PAHR				epP	pP	02 32 40.1	+1.3
PDMCI	Parker Dam,Lak	80.02	47	P	P	02 32 17.0	+0.6
	baz=236						
TPNV	Topopah Spring	80.11	44	P	P	02 32 17.2	+0.2
	baz=235,SNR=8.9						
TPNV	Topopah Spring	80.11	44	eP	P	02 32 17.9	+0.8
	comp=Z,7.6nm,1.0s						
KVN	Kaiserville	80.17	42	eP	P	02 32 17.8	+0.5
	comp=Z,5.3nm,1.0s						
KVN				epP	pP	02 32 42.0	+0.9
KVN	Kaiserville	80.17	42	eP	P	02 32 17.8	+0.5
KVN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
J04D	Umpqua Nationa	80.44	36	P	P	02 32 20.0	+1.3
	baz=230						
SHPR	Sheep Range	80.57	45	eP	P	02 32 20.6	+1.1
	comp=Z,6.5nm,1.0s						
SHPR				epP	pP	02 32 44.5	+1.3
MOD	Modoc Plateau	80.61	38	eP	P	02 32 20.0	+0.4
	comp=Z,8.0nm,1.0s						
MOD				epP	pP	02 32 44.3	+1.1
I04A	Tendick Farm,	80.64	36	P	P	02 32 20.2	+0.7
	baz=229						
USRK	Ussuriysk Ar.	80.77	325	P	P	02 32 20.3	+0.1
	comp=Z,1.2nm,0.5s,baz=96,slow=5.6						
K05A	Summer Lake	80.79	37	eP	P	02 32 21.4	+0.8
	comp=Z,15nm,1.0s						
K05A				epP	pP	02 32 45.4	+1.1
J05D	Fort Rock, OR	80.96	37	P	P	02 32 21.7	+0.3
	baz=230,SNR=5.7						
TUC	Tucson	81.32	51	P	P	02 32 24.1	+0.6
	baz=239						
TUC	Tucson	81.32	51	eP	P	02 32 24.8	+1.3
	comp=Z,5.5nm,1.0s						
TUC	Tucson	81.32	51	eP	P	02 32 24.8	+1.3
TUC				pmax	pmax		
	comp=Z,6.0nm,1.0s						
R11A	Troy Canyon, C	81.35	43	P	P	02 32 23.9	+0.3
	baz=235						
R11A	Troy Canyon, C	81.35	43	eP	P	02 32 24.1	+0.5
	comp=Z,1.4nm,0.9s						
PINE	Pine Mountain	81.45	37	eP	P	02 32 24.5	+0.5
	comp=Z,12nm,1.0s						
PINE				epP	pP	02 32 49.3	+1.5
BMN	Battle Mountai	81.54	41	eP	P	02 32 25.2	+0.6
	comp=Z,5.2nm,1.0s						
BMN				epP	pP	02 32 49.6	+1.3
BMN	Battle Mountai	81.54	41	eP	P	02 32 25.2	+0.6
BMN				pmax	pmax		
	comp=Z,5.0nm,1.0s						
WVOR	Wild Horse Val	81.91	39	eP	P	02 32 26.9	+0.5
	comp=Z,7.2nm,1.0s						
WVOR				epP	pP	02 32 51.0	+0.8
WVOR	Wild Horse Val	81.91	39	eP	P	02 32 26.9	+0.5
WVOR				pmax	pmax		
	comp=Z,7.0nm,1.0s						
MAW	Mawson	81.96	199	P	P	02 32 27.0	+0.9
	comp=Z,6.6nm,0.5s,baz=165,slow=4.0,SNR=22						
MAW				LR	LR	03 10 41.4	
	comp=Z,21nm,18.1s,baz=207,slow=37						
MAW	Mawson	81.96	199	P	P	02 32 27.1	+1.0
	baz=82,SNR=15						
MAW	Mawson	81.96	199	eP	P	02 32 27.2	+1.0
	comp=Z,1.9nm,0.8s						
NJ2	Nanjing	82.11	309	eP	P	02 32 29.3	+1.8
NJ2				pmax	pmax		
	comp=Z,11nm,0.5s						
LCMT	Little Creek M	82.13	46	eP	P	02 32 28.8	+1.1
	comp=Z,6.0nm,1.1s						
LCMT				epP	pP	02 32 52.8	+1.3
CCUT	Cedar City	82.35	45	eP	P	02 32 30.3	+1.4
	comp=Z,8.2nm,1.1s						
CCUT				epP	pP	02 32 54.5	+1.7
KNB	Kanab	82.41	46	eP	P	02 32 30.6	+1.4
	comp=Z,12nm,1.2s						
KNB				epP	pP	02 32 54.6	+1.5
KNB	Kanab	82.41	46	eP	P	02 32 30.6	+1.4
KNB				pmax	pmax		
	comp=Z,12nm,1.2s						
SZCU	Shurtz Canyon	82.55	45	eP	P	02 32 31.9	+1.9
	comp=Z,7.4nm,1.1s						
J08A	Circle Bar Ran	82.57	38	eP	P	02 32 30.6	+0.7
	comp=Z,9.0nm,1.3s						
WUAZ	Wupatki	82.59	48	P	P	02 32 30.8	+0.6
	baz=238						
WUAZ	Wupatki	82.59	48	eP	P	02 32 32.2	+2.0
	comp=Z,11nm,1.3s						
PKCU	Pink Cliffs	82.99	46	eP	P	02 32 34.5	+2.1
	comp=Z,31nm,1.3s						
PKCU				epP	pP	02 32 58.4	+2.2
D05A	Enumclaw	83.08	33	eP	P	02 32 25.9	-6.3
	comp=Z,22nm,1.4s						
D05A				epP	pP	02 32 58.5	+2.5
G08A	Pilot Rock	83.49	36	eP	P	02 32 35.1	+0.5
	comp=Z,10.0nm,1.1s						
G08A				epP	pP	02 32 59.2	+0.8
W18A	Petrified Fore	83.52	49	P	P	02 32 35.8	+0.8
	baz=239						
121A	Cookes Peak, D	83.62	52	P	P	02 32 36.5	+0.9
	baz=240						
MSU	Marysvale	83.66	45	eP	P	02 32 37.2	+1.5
MSU				epP	pP	02 33 00.2	+0.7
MSU	Marysvale	83.66	45	eP	P	02 32 37.2	+1.5
HAWA	Hanford	83.87	35	eP	P	02 32 35.4	-0.8
	comp=Z,5.6nm,0.8s						
HAWA				epP	pP	02 33 01.5	+1.4
MFID	Camas Ranch	84.15	39	eP	P	02 32 38.4	+0.5
	comp=Z,6.4nm,1.0s						
MFID				epP	pP	02 33 02.4	+0.6
BMO	Blue Mountains	84.15	37	eP	P	02 32 38.1	+0.3
	comp=Z,3.7nm,1.1s						
BMO				epP	pP	02 33 02.1	+0.4
BMO	Blue Mountains	84.15	37	eP	P	02 32 38.1	+0.3
BMO				pmax	pmax		
	comp=Z,4.0nm,1.1s						
DUG	Dugway, Tooele	84.17	43	P	P	02 32 38.2	0.0
	baz=236						
DUG	Dugway, Tooele	84.17	43	eP	P	02 32 39.1	+1.0
	comp=Z,3.3nm,1.0s						
DUG	Dugway, Tooele	84.17	43	eP	P	02 32 39.1	+1.0
DUG				pmax	pmax		
	comp=Z,3.0nm,1.0s						
CN2	Changchun	84.21	321	eP	P	02 32 40.3	+2.3
KLR	Kul'dur	84.22	328	P	P	02 32 37.3	-0.7
	comp=Z,0.1nm,0.8s,baz=87,slow=5.7,SNR=3.9						
KLR	Kul'dur	84.22	328	ceP	P	02 32 36.7	-1.3
D08A	Wollman Farm,	84.61	35	eP	P	02 32 40.6	+0.6
	comp=Z,10nm,1.3s						
D08A				epP	pP	02 33 04.7	+0.8
TMUT	Trail Mountain	84.72	45	eP	P	02 32 42.5	+1.4
	comp=Z,11nm,1.1s						
TMUT				epP	pP	02 33 06.0	+1.0
F10A	Beach Ranch, E	84.87	36	eP	P	02 32 41.3	-0.2
	comp=Z,5.1nm,0.9s						
MNTX	Cornudas Mount	85.00	53	P	P	02 32 43.0	+0.6
	baz=242						
MNTX	Cornudas Mount	85.00	53	eP	P	02 32 43.0	+0.6
	comp=Z,10nm,1.2s						
MNTX				epP	pP	02 33 07.4	+1.1
LENM	Lemitar	85.01	51	eP	P	02 32 43.8	+1.3
LENM				epP	pP	02 33 07.5	+1.1
SRU	San Rafael Swe	85.07	45	eP	P	02 32 44.0	+1.3
	comp=Z,9.6nm,1.1s						
SRU				epP	pP	02 33 06.2	-0.4
SRU	San Rafael Swe	85.07	45	eP	P	02 32 44.1	+1.3
SRU				pmax	pmax		
	comp=Z,10.0nm,1.1s						
HLID	Hailey	85.07	40	P	P	02 32 43.7	+1.0
	baz=235						
HLID	Hailey	85.07	40	eP	P	02 32 43.3	+0.6
	comp=Z,5.3nm,1.1s						
HLID				epP	pP	02 33 07.4	+0.9
CTU	Camp Tracy	85.12	43	epP	pP	02 33 08.0	+1.2
P17A	Butcher Ranch,	85.12	45	eP	P	02 32 44.5	+1.5
	comp=Z,15nm,1.5s						
P17A				epP	pP	02 33 08.2	+1.3
B08A	Colville Reser	85.21	34	epP	pP	02 33 07.1	+0.2
TX31	Lajitas Ar. Si	85.22	56	eP	P	02 32 44.1	+0.5
TX31				epP	pP	02 33 08.2	+0.6
LTX	Lajitas	85.22	56	eP	P	02 32 44.5	+0.9
LTX	Lajitas	85.22	56	eP	P	02 32 44.5	+0.9
TXAR	Lajitas Array	85.22	56	P	P	02 32 44.5	+0.9
	comp=Z,4.2nm,1.0s,baz=211,slow=8.1,SNR=35						
TXAR				LR	LR	03 02 46.4	
	comp=Z,12nm,20.9s,baz=0.0,slow=30						
P18A	Preston Nutter	85.52	45	eP	P	02 32 45.8	+0.7
	comp=Z,3.3nm,1.1s						
P18A				epP	pP	02 33 10.1	+1.0
TASM	ASL Pad, Albuq	85.76	50	P	P	02 32 47.1	+0.8
	baz=241						
ANMO	Albuquerque	85.77	50	P	P	02 32 47.0	+0.7
	comp=Z,3.7nm,1.1s,baz=221,slow=5.3,SNR=8.2						
ANMO				LR	LR	03 03 43.1	
	comp=Z,20nm,18.2s,baz=250,slow=30						
ANMO	Albuquerque	85.77	50	P	P	02 32 46.8	+0.4
	baz=241						
ANMO	Albuquerque	85.77	50	eP	P	02 32 47.2	+0.9
	comp=Z,4.7nm,1.0s						
ANMO				epP	pP	02 33 11.3	+1.0
ANMO	Albuquerque	85.77	50	ceP	P	02 32 47.3	+0.9
ANMO				pmax	pmax		
	comp=Z,6.0nm,1.3s						
TASL	Snake Pit, Alb	85.77	50	P	P	02 32 46.8	+0.4
	baz=241						
LNIG	Linares	86.66	62	eP	P	02 32 50.1	-0.6
	comp=Z,19nm,1.2s						
MCMT	McKenzie Canyo	86.71	39	eP	P	02 32 49.1	-1.7
MCMT				epP	pP	02 33 14.4	-0.4
SYO	Syowa Base	86.81	192	⇑eP	P	02 32 49.6	-1.0
SYO	Syowa Base	86.81	192	⇓ePcP	P	02 32 51.4	+0.8
S22A	4UR Ranch, Cre	86.87	48	epP	pP	02 33 19.1	+3.3
PSI	Prapat	87.02	274	LR	LR	03 12 56.8	
	comp=Z,75nm,18.8s,baz=90,slow=36						
PLCA	Paso Flores	87.13	133	P	P	02 32 54.5	+1.6
	comp=Z,2.8nm,1.1s,baz=254,slow=5.1,SNR=5.8						
PLCA	Paso Flores	87.13	133	eP	P	02 32 54.5	+1.6
	comp=Z,4.9nm,1.1s						
SNAA	Sanae	87.46	178	P	P	02 32 54.2	+0.3
SNAA	Sanae	87.46	178	P	P	02 32 54.1	+0.3
	comp=Z,4.4nm,0.7s,baz=200,slow=8.1,SNR=17						
SNAA				LR	LR	03 07 54.2	
	comp=Z,27nm,21.3s,baz=344,slow=33						
SNAA	Sanae	87.46	178	eP	P	02 32 53.8	-0.1
	comp=Z,4.3nm,0.7s						
SNAA	Sanae	87.46	178	ceP	P	02 32 54.7	+0.8
SMCO	Snowmass	87.47	46	eP	P	02 32 55.7	+0.9
	comp=Z,2.2nm,1.0s						
SMCO				epP	pP	02 33 19.2	+0.4
VNA3	Neumayer Olymp	87.50	175	P	P	02 32 54.5	+0.5
PD31	Pinedale Array	87.61	42	eP	P	02 32 55.0	-0.1
PD31				epP	pP	02 33 19.4	+0.2
PDAR	Pinedale Array	87.61	42	P	P	02 32 55.0	-0.1
	comp=Z,0.4nm,0.7s,baz=182,slow=2.3,SNR=4.2						
PDAR				pP	pP	02 33 19.4	+0.2
	comp=Z,1.4nm,0.7s,baz=195,slow=3.0,SNR=8.8						
PDAR				LR	LR	03 07 23.9	
	comp=Z,27nm,18.3s,baz=233,slow=32						
MSTX	Muleshoe	88.00	52	P	P	02 32 57.4	+0.3
	baz=243						
833A	Chaparral WMA,	88.15	59	P	P	02 32 58.3	+0.6
	baz=245						
VNA1	Neumayer--Stat	88.18	176	P	P	02 32 58.2	+1.0
IM3	Indian Mountai	88.22	9	eP	P	02 32 59.1	+1.9
ILAR	Eielson Array	88.24	12	P	P	02 32 56.5	-0.8
	comp=Z,0.4nm,0.9s,baz=193,slow=3.5,SNR=3.8						
ILB	Eielson Array	88.24	12	eP	P	02 32 56.5	-0.8
NVL	N'lazarevskaya	88.38	182	eP	P	02 32 56.0	-2.1
NVL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
N23A	Red Feather La	89.00	45	P	P	02 33 02.7	+0.8
	baz=241						
GYA	Guiyang	89.06	299	eP	P	02 33 02.8	+0.6
GYA				pmax	pmax		
	comp=Z,10.0nm,1.0s						
ABTX	Abilene, Hawle	89.77	55	P	P	02 33 06.2	+0.9
	baz=245						
ABTX	Abilene, Hawle	89.77	55	eP	P	02 33 06.8	+1.5
	comp=Z,8.3nm,1.1s						
PBKT	Sadao Pong	90.14	288	eP	P	02 33 08.2	+0.9
	comp=Z,6.3nm,0.9s						
XAN	Xi'an	90.41	306	P	P	02 33 08.0	-0.3
XAN				pmax	pmax		
	comp=Z,8.0nm,0.9s						
HHC	Hu-ho-hao-te	91.47	313	eP	P	02 33 15.3	+2.1
HHC				pP	pP	02 33 24.8	-12
HHC				SKS	SKSac	02 43 41.8	+4.2
HHC				S	ScS	02 44 14.0	+6.0
HHC				pmax	pmax		
	comp=Z,19nm,1.1s						
HHC				pmax	pmax		
	comp=Z,97nm,5.4s						
LAO	LASA Array	91.64	40	P	P	02 33 15.0	+1.2
	baz=241						
OGNE	Ogallala	91.65	47	P	P	02 33 14.9	+0.9
	baz=244						
HKT	Hockley	91.66	59	eP	P	02 33 15.5	+1.5
HKT				pmax	pmax		
	comp=Z,19nm,1.2s						
RSSD	Black Hills	91.77	43	P	P	02 33 15.4	+0.8
	baz=242						
CM01	Chiang Mai Arr	92.60	289	eP	P	02 33 18.1	-0.6
CM31	Chiang Mai Arr	92.63	289	eP	P	02 33 19.1	+0.2
CMAR	Chiang Mai Arr	92.63	289	P	P	02 33 19.1	+0.2
	comp=Z,1.1nm,0.3s,baz=112,slow=2.3,SNR=7.4						
CMAR				LR	LR	03 17 39.9	
	comp=Z,5.7nm,18.1s,baz=205,slow=37						
CD2	Chengdu	93.15	302	eP	P	02 33 21.5	+0.4
CD2				pmax	pmax		
	comp=Z,10.0nm,0.5s						
CD2				pmax	pmax		
	comp=Z,140nm,5.0s						
NNA	Nana	93.53	104	LR	LR	03 06 03.0	
	comp=Z,12nm,19.9s,baz=217,slow=29						
JTS	JuntasAbangare	93.97	81	LR	LR	03 06 16.3	
	comp=Z,33nm,21.8s,baz=336,slow=29						
LZH	Lanzhou	95.04	307	eP	P	02 33 30.5	+0.7
LZH				pP	pP	02 33 41.3	-13
LZH				sP	PcP	02 33 45.0	+15
LZH				ePP	PP	02 37 22.8	+2.2
LZH				pmax	pmax		
	comp=Z,21nm,1.0s						
LZH				pmax	pmax		
	comp=Z,130nm,4.3s						
LZH				LR	LR		
	comp=Z,170nm,16.4s						
LZH				LR	LR		
	comp=Z,120nm,15.2s						
LZH				LR	LR		
	comp=Z,290nm,19.3s						
YKA	Yellowknife Ar	95.91	24	pP	pP	02 33 56.1	-0.9
	comp=Z,0.5nm,0.7s,baz=251,slow=4.0,SNR=3.3						
ULM	Lac du Bonnet	99.38	40	LR	LR	03 11 21.7	
	comp=Z,27nm,21.8s,baz=136,slow=31						
LPAZ	La Paz	99.57	112	LR	LR	03 09 37.3	
	comp=Z,26nm,22.0s,baz=226,slow=30						
MK32	Makanchi Array	113.34	313	ePKiKP	PKiKP	02 38 42.4	-1.6
MKAR	Makanchi Array	113.34	313	PKiKP	PKiKP	02 38 42.4	-1.6
	comp=Z,0.6nm,0.4s,baz=178,slow=0.7,SNR=12						
MKAR	Makanchi Array	113.34	313	c iPKIKP	PKiKP	02 38 43.0	-0.9
KURK	Kurchatov	116.03	317	ePKPdf	PKPdf	02 38 46.9	-2.0
KURK	Kurchatov	116.03	317	ePKIKP	PKPdf	02 38 46.9	-2.0
KURBB	Kurchatov Arra	116.08	317	PKP	PKPdf	02 38 46.9	-2.2
	comp=Z,0.7nm,0.6s,baz=109,slow=2.0,SNR=7.5						
BVAR	Borovoye Array	121.04	320	PKP	PKPdf	02 38 56.4	-2.1
	comp=Z,1.0nm,0.4s,baz=85,slow=1.1,SNR=9.8						
BRVK	Borovoye	121.10	320	c iPKIKP	PKPdf	02 38 57.9	-0.7
BRVK				pmax	pmax		
	comp=Z,6.0nm,1.3s						
ARU	Arti	127.00	326	i PKIKP	PKPdf	02 39 08.8	-1.0
ARU						02 46 17.4	
ARA0	ARCESS Array S	129.81	351	ePKPdf	PKPdf	02 39 14.4	-0.4
ARCES	ARCESS Array B	129.81	351	PKP	PKPdf	02 39 14.4	-0.4
	comp=Z,1.0nm,0.5s,baz=358,slow=1.4,SNR=18						
FIA0	FINESS Array S	136.89	345	ePKPpre	PKPpre	02 39 23.1	
FIA0	FINESS Array S	136.89	345	ePKHKP	PKPpre	02 39 23.1	
FINES	FINESS Array B	136.89	345	PKhKP	PKPpre	02 39 23.1	
	comp=Z,0.7nm,0.7s,baz=90,slow=2.8,SNR=2.4						
FINES	FINESS Array B	136.89	345	c iPKIKP	PKPdf	02 39 29.8	+1.5
NOA	NORSAR Array B	139.70	355	PKP	PKPdf	02 39 33.7	+0.2
	comp=Z,0.3nm,0.6s,baz=47,slow=2.3,SNR=2.8						
HFS	Hagfors	140.35	353	PKhKP	PKPpre	02 39 24.9	
	comp=Z,1.1nm,0.7s,baz=344,slow=4.7,SNR=3.8						
HFS	Hagfors	140.35	353	PKHKP	PKPpre	02 39 25.0	
ONI	Oni	141.06	313	⇑iPKHKP	PKPpre	02 39 33.4	
AKASG	Malin Array Be	144.60	333	PKP	PKPab	02 39 39.7	-1.6
	comp=Z,1.6nm,0.3s,baz=41,slow=4.1,SNR=15						
AKASG				pPKP	pPKPdf	02 40 06.2	-1.5
	comp=Z,1.8nm,0.6s,baz=39,slow=4.2,SNR=1.8						
AKBB	Malin Array Si	144.60	333	ePKPdf	PKPab	02 39 40.0	-1.3
AKBB				epPKPdf	pPKPdf	02 40 06.2	-1.5
SORM	Soroca	146.87	331	⇓PKIKP	PKPbc	02 39 47.4	-1.1
BURAR	Bucovina Array	148.65	333	⇓PKIKP	PKPbc	02 39 53.2	-0.3
TLCR		148.72	326	⇓PKIKP	PKPdf	02 39 51.2	+1.6
KSP	Ksiaz	148.81	346	ePKP	PKPbc	02 39 53.6	0.0
KSP	Ksiaz	148.81	346	ePKIKP	PKPbc	02 39 53.6	0.0
BR101	Keskin Array S	148.99	314	ePKPbc	PKPbc	02 39 53.7	-0.9
BRTR	Keskin Array B	148.99	314	PKPbc	PKPbc	02 39 53.7	-0.9
	comp=Z,2.0nm,0.5s,baz=146,slow=5.8,SNR=22						
UZH	Uzhgorod	148.99	337	ePKIKP	PKPbc	02 39 54.0	-0.1
UZH				e		02 39 59.0	
CLL	Collm	149.02	350	⇓iPKPbc	PKPbc	02 39 53.7	-0.4
	comp=Z,7.0nm,0.8s						
CLL				i PKPab	PKPab	02 39 58.8	+0.3
CLL				epPKPbc	pPKPbc	02 40 19.0	-0.1
CLL	Collm	149.02	350	⇓iPKIKP	PKPbc	02 39 53.7	-0.4
CLL				pmax	pmax		
	comp=Z,7.0nm,0.8s						
CRVS	Cervenica-Dubn	149.06	338	ePKIKP	PKPbc	02 39 54.1	-0.2
CRVS	Cervenica-Dubn	149.06	338	ePKP	PKPbc	02 39 54.1	-0.2
CFR	Carcaliu	149.07	327	⇑PKP2	PKPab	02 39 56.2	-2.7
ASF	Jabal al Asfar	149.20	298	PKPbc	PKPbc	02 39 55.1	-0.2
	comp=Z,1.2nm,0.4s,baz=133,slow=0.5,SNR=4.4						
DPC	Dobruska-Polom	149.26	345	⇑ePKP	PKPbc	02 39 55.2	+0.4
DPC	Dobruska-Polom	149.26	345	ePKP2	PKPbc	02 39 55.2	+0.4
BRG	Berggiesshubel	149.28	348	ePKP	PKPbc	02 39 54.4	-0.3
	comp=Z,3.9nm,0.8s						
BRG	Berggiesshubel	149.28	348	ePKIKP	PKPbc	02 39 54.4	-0.3
BRG				pmax	pmax		
	comp=Z,4.0nm,0.8s						
VRI	Vrincioaia	149.28	329	⇑PKIKP	PKPbc	02 39 54.3	-0.7
ANTO	Ankara	149.48	314	⇓PKIKP	PKPbc	02 39 55.4	-0.4
MORC	Moravsky Berou	149.49	343	⇓PKIKP	PKPbc	02 39 55.3	-0.1
MORC	Moravsky Berou	149.49	343	ePKP	PKPbc	02 39 55.1	-0.3
MLR	Muntele Rosu	149.93	329	PKPbc	PKPbc	02 39 56.0	-0.7
	comp=Z,6.0nm,1.0s,baz=80,slow=5.0,SNR=5.7						
PRU	Pruhonice	150.00	347	⇑ePKP	PKPbc	02 39 56.9	+0.3
PRU				ex	x	02 40 19.9	
GOPC	GO Pecny, Ondr	150.02	347	⇑ePKP	PKPbc	02 39 56.5	-0.2
VRAC	Vranov	150.16	344	⇑PKHKP	PKPbc	02 39 55.8	-1.2
VRAC	Vranov	150.16	344	ePKP	PKPbc	02 39 56.9	-0.1
MMAI	Mount Meron Ar	150.21	300	PKPbc	PKPbc	02 39 57.7	0.0
	comp=Z,2.9nm,0.5s,baz=77,slow=4.8,SNR=10						
VYHS	Vyhne	150.27	341	ePKIKP	PKPbc	02 39 57.1	-0.2
VYHS	Vyhne	150.27	341	ePKP	PKPbc	02 39 57.1	-0.2
JAVC	Velka Javorina	150.29	343	ePKP	PKPbc	02 39 58.1	+0.7
VOIR		150.39	330	⇓PKIKP	PKPbc	02 39 57.7	-0.1
MEM	Membach	150.40	358	⇑PKP	PKPbc	02 39 57.1	-0.4
KRUC	Moravsky	150.44	344	ePKP	PKPbc	02 39 57.4	-0.3
MODS	Modra-Piesok	150.84	343	ePKIKP	PKPbc	02 39 59.0	+0.4
MODS				e		02 40 07.7	
MODS	Modra-Piesok	150.84	343	ePKP	PKPbc	02 39 59.0	+0.4
MODS				e		02 40 07.7	
DOU	Dourbes	150.93	0	⇑PKP	PKPbc	02 39 58.6	-0.1
KHC	Kasperske Hory	151.01	348	⇑ePKP	PKPbc	02 39 59.0	-0.1
KHC				ex	x	02 40 24.1	
KHC	Kasperske Hory	151.01	348	ePKIKP	PKPbc	02 39 59.0	-0.1
GEC2	GERESS Array S	151.26	348	ePKPbc	PKPbc	02 39 59.2	-0.5
GEC2				epPKPdf	pPKPbc	02 40 24.3	-0.5
GEC2	GERESS Array S	151.26	348	ePKIKP	PKPbc	02 39 59.2	-0.5
GERES	GERESS Array B	151.26	348	PKPbc	PKPbc	02 39 59.2	-0.5
	comp=Z,1.1nm,0.5s,baz=22,slow=2.0,SNR=16						
GERES				pPKPbc	pPKPbc	02 40 24.3	-0.5
	comp=Z,1.8nm,0.7s,baz=41,slow=2.5,SNR=5.4						
WLF	Walferdange	151.34	358	⇓PKP	PKPbc	02 39 59.9	+0.2
CONA	Conrad Observa	151.62	344	ePKiKP	PKPbc	02 40 00.2	-0.3
	comp=Z,5.7nm,1.3s						
BZS	Buzias	151.75	334	⇑PKIKP	PKPbc	02 40 00.4	-0.4
MOA	Molln	152.08	346	ePKPbc	PKPbc	02 40 01.0	-0.5
	comp=Z,1.4nm,0.5s						
SOKA	Soboth	153.00	344	PKPdf	PKPdf	02 39 56.1	-0.2
	comp=Z,4.6nm,1.3s						
KBA	Koelnbreinsper	153.01	347	ePKPdf	PKPdf	02 39 55.3	-1.2
	comp=Z,2.7nm,0.8s						
WATA	Walderalm	153.10	350	ePKiKP	PKiKP	02 40 04.5	+0.4
	comp=Z,1.9nm,0.5s						
WTTA	Wattenberg	153.16	349	ePKPdf	PKPdf	02 39 56.5	-0.2
	comp=Z,3.0nm,0.6s						
MOTA	Moosalm	153.17	350	ePKPbc	PKPbc	02 40 03.5	-0.6
	comp=Z,3.6nm,1.1s						
DAVA	Damuels	153.41	352	ePKiKP	PKiKP	02 40 04.8	0.0
	comp=Z,6.9nm,1.3s						
VTS	Vitosha	153.41	328	⇓PKIKP	PKPbc	02 40 01.4	-3.4
ABTA	Abfaltersbach	153.50	348	ePKiKP	PKPbc	02 40 04.4	-0.4

	comp=Z,3.2nm,0.5s						
FETA	Feichten	153.55	351	*e*PKiKP	PKPbc	02 40 04.7	-0.3
	comp=Z,5.3nm,1.1s						
DAVOX	Davos/Dischmat	153.90	352	PKPbc	PKPbc	02 40 05.8	0.0
	comp=Z,1.3nm,0.4s,baz=207,slow=5.7,SNR=8.1						
ESDC	Sonseca Array	159.94	20	PKPab	PKPab	02 40 44.9	-0.3
	comp=Z,0.2nm,0.6s,baz=333,slow=3.8,SNR=3.3						

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*ISCJB **31** 02:28:39.5±0.8, 26°.4N±0°.1×141°.6E±0°.2, h40^{km}, mb3.7/8, Error ellipse: s-maj=24.8km s-min=10.1km az=35.3*
*IDC **31** 02:28:41.4±1.8, 26°.45N×141°.80E, h40^{km}±15^{km}, mb3.5/8, mb1 3.7/8, mb1mx3.3/64, mbtmp3.7/8, Error ellipse: s-maj=28.9km s-min=17.2km az=101.0*
ISC 31 02:28:41.2±0.8, **26°.4N**±0°.1×**141°.8E**±0°.2, **h40^{km}, n11, σ0^{s}80**/12, **mb3.6**/8, **Bonin Islands region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JCJ	Chichijima	0.78	29	P	Pn	02 28 56.1	+0.4
	baz=270,slow=20						
JCJ				S	Sn	02 29 06.4	+0.1
	baz=270,slow=20						
WRA	Warramunga Arr	46.64	190	P	P	02 37 05.1	-0.7
	3.0nm,0.7s,baz=10,slow=8.6,SNR=15						
ASAR	Alice Springs	50.36	189	P	P	02 37 35.6	+1.2
	0.2nm,0.5s,baz=14,slow=12,SNR=3.7						
KURBB	Kurchatov Arra	53.25	315	P	P	02 37 54.8	-0.9
	0.2nm,0.4s,baz=93,slow=8.1,SNR=3.5						
BVAR	Borovoye Array	58.29	318	P	P	02 38 32.2	+0.4
	0.5nm,0.5s,baz=73,slow=9.8,SNR=4.3						
ILAR	Eielson Array	58.49	28	P	P	02 38 32.7	-0.4
	0.4nm,0.7s,baz=251,slow=5.5,SNR=3.7						
YKA	Yellowknife Ar	72.92	28	P	P	02 40 04.9	-1.1
	0.5nm,0.6s,baz=299,slow=5.6,SNR=2.9						
FINES	FINESS Array B	78.39	334	P	P	02 40 38.2	+0.9
	1.3nm,0.4s,baz=73,slow=4.7,SNR=16						
PDAR	Pinedale Array	84.96	44	P	P	02 41 13.3	+0.5
	0.1nm,0.4s,baz=258,slow=2.5,SNR=3.1						
PLCA	Paso Flores	149.72	126	PKPbc	PKPbc	02 48 26.5	-0.4
	0.8nm,0.6s,baz=251,slow=2.8,SNR=5.1						
LPAZ	La Paz	150.46	76	PKPbc	PKPbc	02 48 29.9	-0.1
	0.9nm,0.7s,baz=185,slow=1.1,SNR=4.0						

WEL 31 02:35:27.8±1.3, **46°S**±8°×**16°6E**±°, **h12^{km}, ML3.7**/8, **Off west coast of South Island**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PYZ	Puysegur Point	0.44	77	P	Pb	02 35 37.9	+0.4
PYZ				S	Sb	02 35 45.1	+1.0
DCZ	Deep Cove	1.11	44	P	Pb	02 35 46.2	-2.7
DCZ				S	Sb	02 35 58.4	-4.8
WHZ	Wether Hill Ro	1.36	75	P	Pn	02 35 52.0	-0.7
WHZ				S	Sb	02 36 09.7	-1.0
APZ	The Paps	1.45	114	P	Pn	02 35 53.5	-0.3
APZ				S	Sn	02 36 12.6	-0.1
MLZ	Mavora Lakes	1.70	59	P	Pn	02 35 57.2	-0.1
MLZ				S	Sb	02 36 19.8	-0.4
EAZ	Earnscleugh	2.50	67	P	Pn	02 36 08.7	+0.5
TUZ	Tuapeka	2.50	84	P	Pn	02 36 08.9	+0.6
TUZ				S	Sn	02 36 39.1	+0.3
WKZ	Wanaka	2.53	56	P	Pn	02 36 10.0	+1.3
JCZ	Jackson Bay	2.92	42	P	Pn	02 36 14.9	+0.7
ODZ	Otahua Downs	3.44	71	P	Pn	02 36 19.8	-1.3

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*ISK **31** 02:40:30.5, 34°.66N×32°.24E, h6^{km}, ML2.2/7*
*ISCJB **31** 02:40:31.1±1.1, 34°.63N±0°.06×32°.27E±0°.06, h10^{km}±5^{km}, Error ellipse: s-maj=9.6km s-min=8.2km az=14.5*
*CSEM **31** 02:40:31.8±0.4, 34°.67N×32°.30E, h5^{km}, ML3.1, Error ellipse: s-maj=8.3km s-min=6.3km az=18.0*
*NIC **31** 02:40:31.5±0.3, 34°.66N×32°.23E, h25^{km}, ML3.1*
ISC 31 02:40:25.8±1.8, **34°.49N**±0°.06×**32°.09E**±0°.05, **h14^{km}**±15^{km}, **n29, σ0^{s}67**/41, **Cyprus region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PPCY	Paphos	0.45	28	P	Pn	02 40 37.3	-0.4
	baz=202						
PPCY	Paphos	0.45	28	P	Pn	02 40 37.3	-0.4
AKMC	Akamas	0.57	20	P	Pn	02 40 39.5	0.0
	baz=192						
AKMC	Akamas	0.57	20	P	Pn	02 40 39.5	0.0
SZAC	Souni	0.70	68	P	Pn	02 40 41.7	+0.4
	baz=259						
SZAC				S	Sb	02 40 49.8	+0.4
SZAC	Souni	0.70	68	P	Pn	02 40 41.7	+0.4
SZAC				S	Sb	02 40 49.8	+0.4
ALFC	Alefka	0.78	32	P	Pn	02 40 42.5	+0.1
	baz=211						
ALFC				S	Sb	02 40 51.3	-0.4
ALFC	Alefka	0.78	32	P	Pn	02 40 42.5	+0.1
ALFC				S	Sb	02 40 51.3	-0.4
LEF	Lefka	0.91	46	PG	Pb	02 40 43.9	+0.6
LEF	Lefka	0.91	46	*e*Pg	Pb	02 40 43.9	+0.6
CSS	Mathiatis	1.12	65	P	Pn	02 40 48.1	+1.0
	baz=251						
CSS				S	Sb	02 41 00.2	-1.3
CSS	Mathiatis	1.12	65	P	Pn	02 40 48.1	+1.0
CSS				S	Sb	02 41 00.2	-1.3
MAMC	Mammari	1.15	54	P	Pg	02 40 48.3	+0.4
	baz=238						
MAMC	Mammari	1.15	54	P	Pg	02 40 48.3	+0.4
GAZI	Gazipasa	1.75	6	PN	Pg	02 40 58.7	-0.6
GAZI	Gazipasa	1.75	6	*e*Pn	Pg	02 40 58.7	-0.6
TEKE	Tekeli-Mersin	1.85	27	PN	Pg	02 41 00.8	-0.4
TEKE				SN	Sb	02 41 22.8	+0.5
TEKE	Tekeli-Mersin	1.85	27	*e*Pn	Pg	02 41 00.8	-0.4
TEKE				*e*Sn	Sb	02 41 22.8	+0.5
AKKU	Akkuyu-Mersin	2.05	35	PN	Pb	02 41 03.0	+0.3
AKKU				SN	Sb	02 41 27.2	-0.8
AKKU	Akkuyu-Mersin	2.05	35	*e*Pn	Pb	02 41 03.0	+0.3
AKKU				*e*Sn	Sb	02 41 27.2	-0.8
BERE	Bereket-Mersin	2.07	26	PN	Pb	02 41 04.3	+1.1
BERE	Bereket-Mersin	2.07	26	*e*Pn	Pb	02 41 04.3	+1.1
IKL	Isikli	2.18	36	PN	Pb	02 41 05.1	+0.2
IKL				SN	Sb	02 41 30.7	-1.0
IKL	Isikli	2.18	36	*e*Pn	Pb	02 41 05.1	+0.2
IKL				*e*Sn	Sb	02 41 30.7	-1.0
KIZK	Mersin	2.60	40	PN	Pb	02 41 11.9	-0.2
FETY	Fethiye	3.25	312	PN	Pb	02 41 23.9	+0.6
FETY	Fethiye	3.25	312	*e*Pn	Pb	02 41 23.9	+0.6
MMLI	Mount Malkishu	3.46	125	PN	Pb	02 41 26.5	-0.3
MMLI	Mount Malkishu	3.46	125	*e*Pn	Pb	02 41 26.5	-0.3

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*CSEM **31** 02:56:12.5, 38°.66N×27°.91W, h11^{km}, ML2.2*
PDA 31 02:56:12.5±0.7, **38°.66N**×**27°.91W, h11^{km}**±2^{km}, **MD3.5, ML2.2, 6C-4D, Error ellipse: s-maj=2.0km s-min=1.4km az=153.0, Azores Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PMAN	Manadas	0.14	259	⇑*i*P	Pg	02 56 15.5	-0.4
PMAN				*e*S	Sg	02 56 18.0	-0.3
PMAN				A	A	02 56 18.6	
	1μm,0.2s						
PMAN	Manadas	0.14	259	⇑*i*P	Pg	02 56 15.5	-0.4
PMAN				*e*S	Sg	02 56 18.0	-0.3
ROSA	Rosais	0.27	283	⇓*i*P	Pg	02 56 17.2	-0.8
ROSA				*e*S	Sg	02 56 21.3	-0.4
ROSA				A	A	02 56 24.6	
	160nm,0.3s						
ROSA	Rosais	0.27	283	⇓*i*P	Pg	02 56 17.2	-0.8
ROSA				*e*S	Sg	02 56 21.3	-0.4
PGRA	Graciosa	0.37	351	⇑*i*P	Pg	02 56 19.0	-0.9
PGRA				*e*S	Sg	02 56 23.9	-1.0
PGRA				A	A	02 56 26.1	
	220nm,0.2s						
PGRA	Graciosa	0.37	351	⇑*i*P	Pg	02 56 19.0	-0.9
PGRA				*e*S	Sg	02 56 23.9	-1.0
PICO	Pico	0.43	249	*e*P	Pg	02 56 20.1	-1.0
PICO				*e*S	Sg	02 56 25.8	-1.1
PICO				A	A	02 56 27.9	
	171nm,0.2s						
PICO	Pico	0.43	249	*e*P	Pg	02 56 20.1	-1.0
PICO				*e*S	Sg	02 56 25.8	-1.1
PCAN	Candelaria	0.49	247	*e*P	Pg	02 56 20.7	-1.4
PCAN				*e*S	Sg	02 56 27.1	-1.6
PCAN				A	A	02 56 32.6	
	80nm,0.2s						
PCAN	Candelaria	0.49	247	*e*P	Pg	02 56 20.7	-1.4
PCAN				*e*S	Sg	02 56 27.1	-1.6
ADH	Angra Heroismo	0.53	90	⇓*i*P	Pg	02 56 21.4	-1.4
ADH				*e*S	Sg	02 56 28.1	-1.7
ADH				A	A	02 56 30.5	
	41nm,0.2s						
ADH	Angra Heroismo	0.53	90	⇓*i*P	Pg	02 56 21.4	-1.4
ADH				*e*S	Sg	02 56 28.1	-1.7
HOR	Horta	0.58	257	*e*P	Pg	02 56 21.5	-2.3
HOR				*e*S	Sg	02 56 29.1	-2.4
HOR				A	A	02 56 35.3	
	106nm,0.2s						
HOR	Horta	0.58	257	*e*P	Pg	02 56 21.5	-2.3
HOR				*e*S	Sg	02 56 29.1	-2.4
PSCM	Serra do Cume	0.62	86	⇑*i*P	Pg	02 56 22.6	-2.0
PSCM				*e*S	Sg	02 56 30.0	-2.8
PSCM				A	A	02 56 32.5	
	32nm,0.2s						
PSCM	Serra do Cume	0.62	86	⇑*i*P	Pg	02 56 22.6	-2.0
PSCM				*e*S	Sg	02 56 30.0	-2.8
PCED	Cedros	0.62	267	*e*P	Pg	02 56 22.2	-2.4
PCED				*e*S	Sg	02 56 30.1	-2.7
PCED				A	A	02 56 37.6	
	35nm,0.3s						
PCED	Cedros	0.62	267	*e*P	Pg	02 56 22.2	-2.4
PCED				*e*S	Sg	02 56 30.1	-2.7
CALA	Caldeira	0.63	263	*e*S	Sg	02 56 30.4	-2.6
CALA	Caldeira	0.63	263	*e*S	Sg	02 56 30.4	-2.6

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*NORS **31** 03:19:33.0±0.0, 42°.90N×46°.47E, h1^{km}*
*MOS **31** 03:19:34.1±0.0, 42°.91N×46°.47E, h14^{km}, MPVA4.5*
*MOS **31** 03:19:35.9±1.0, 42°.96N×46°.52E, h11^{km}, mb4.0/3, Error ellipse: s-maj=6.3km s-min=4.5km az=28.8*
*DRS **31** 03:19:35.1±0.0, 42°.92N×46°.27E, h18^{km}*
*CSEM **31** 03:19:36.2±0.2, 43°.00N×46°.51E, h2^{km}, ML3.8/5, Error ellipse: s-maj=4.3km s-min=2.5km az=23.0*
*AZER **31** 03:19:36.5±4.3, 42°.71N×46°.30E, h0^{km}, ml3.1/12, Error ellipse: s-maj=2.9km s-min=1.3km az=331.0*
*DDA **31** 03:20:04.6, 41°.48N×44°.24E, h7^{km}, Ml2.9*
ISC 31 03:19:36.5±0.8, **42°.96N**±0°.02×**46°.50E**±0°.01, **h9^{km}**±6^{km}, **n170, σ1^{s}41**/296, **37C-19D, Eastern Caucasus**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DLMR	Dylym	0.15	41	*e*Pg	Pg	03 19 39.8	0.0
DLMR				*e*Sg	Sg	03 19 43.8	+1.8
DBC	Dubki	0.25	76	⇓*i*PG	Pg	03 19 41.6	0.0
DBC				*i*		03 19 46.5	
DBC	Dubki	0.25	76	*i* Pg	Pg	03 19 41.6	0.0
DBC				*i* Sg	Sg	03 19 46.5	+1.4
DBC	Dubki	0.25	76	*e*Pg	Pg	03 19 41.6	0.0
DBC				*e*Sg	Sg	03 19 46.6	+1.6
DVE	Vedeno	0.27	270	⇓*i*PG	Pg	03 19 40.9	-1.1
DVE	Vedeno	0.27	270	*i* Pg	Pg	03 19 40.9	-1.1
DVE	Vedeno	0.27	270	*i* Pg	Pg	03 19 40.9	-1.1
DVE				*e*Sg	Sg	03 19 45.2	-0.4
KRNR	Karanay	0.33	113	*e*PG	Pg	03 19 42.5	-0.6
KRNR				*e*S	Sg	03 19 48.0	+0.5
KRNR				pmax	pmax		
	comp=Z,310nm,0.2s						
KRNR	Karanay	0.33	113	*e*Pg	Pg	03 19 42.5	-0.6
	comp=Z,310nm,0.2s						
KRNR				*e*Sg	Sg	03 19 48.0	+0.5
KRNR	Karanay	0.33	113	*e*Pg	Pg	03 19 42.5	-0.6
KRNR				*e*Sg	Sg	03 19 48.0	+0.5
UNCR	Uncukul	0.33	138	⇓*i*PG	Pg	03 19 42.0	-1.0
UNCR				*e*S	Sg	03 19 47.0	-0.4
UNCR				pmax	pmax		
	comp=Z,2μm,0.2s						
UNCR	Uncukul	0.33	138	*i* Pg	Pg	03 19 42.0	-1.0
	comp=Z,2μm,0.2s						
UNCR				*e*Sg	Sg	03 19 47.0	-0.4
UNCR	Uncukul	0.33	138	*i* Pg	Pg	03 19 42.0	-1.0
UNCR				*e*Sg	Sg	03 19 47.0	-0.4
BTLR	Botlikh	0.36	214	⇓*i*PG	Pg	03 19 41.9	-1.7
BTLR				pmax	pmax		
	comp=Z,1μm,0.6s						
BTLR	Botlikh	0.36	214	*i* Pg	Pg	03 19 41.9	-1.7
	comp=Z,1μm,0.6s						
BTLR	Botlikh	0.36	214	*i* Pg	Pg	03 19 42.0	-1.6
BTLR				*i* Sg	Sg	03 19 47.1	-1.2
XNZR	Khunzakh	0.44	160	⇓*e*PG	Pg	03 19 44.8	-0.4
XNZR				*e*		03 19 51.2	
XNZR	Khunzakh	0.44	160	*e*Pg	Pg	03 19 44.8	-0.4
XNZR				*e*Sg	Sg	03 19 51.2	+0.1
XNZR	Khunzakh	0.44	160	*e*Pg	Pg	03 19 45.0	-0.2
XNZR				*e*Sg	Sg	03 19 51.0	-0.1
BUJR	Buynaksk	0.47	106	⇑*i*PG	Pg	03 19 46.0	+0.4
BUJR				*e*S	Sb	03 19 54.5	+0.5
BUJR				pmax	pmax		
	comp=Z,339nm,0.2s						
BUJR	Buynaksk	0.47	106	*i* Pg	Pg	03 19 46.0	+0.4
	comp=Z,339nm,0.2s						
BUJR				*e*Sg	Sb	03 19 54.5	+0.5
BUJR	Buynaksk	0.47	106	*i* Pg	Pg	03 19 46.0	+0.4
BUJR				*e*Sg	Sb	03 19 54.5	+0.5
ARKR	Arakani	0.51	134	⇓*i*PG	Pg	03 19 45.8	-0.6
ARKR				*e*S	Sg	03 19 53.3	+0.2
ARKR				pmax	pmax		
	comp=Z,298nm,0.2s						
ARKR	Arakani	0.51	134	*i* Pg	Pg	03 19 45.8	-0.6
	comp=Z,298nm,0.2s						
ARKR				*e*Sg	Sg	03 19 53.3	+0.2
ARKR	Arakani	0.51	134	*i* Pg	Pg	03 19 45.8	-0.6
ARKR				*e*Sg	Sg	03 19 53.3	+0.2
GROC	Groznyy	0.57	296	*e*PG	Pg	03 19 47.8	+0.3
GROC				*e*		03 19 56.7	
GROC				pmax	pmax		
	comp=Z,465nm,0.5s						
GROC				smax	smax		
	comp=N,625nm,0.7s						
GROC				smax	smax		
	comp=N,729nm,0.6s						
GROC	Groznyy	0.57	296	*e*Pg	Pg	03 19 47.8	+0.3
	comp=N,465nm,0.5s						
GROC				*e*Sg	Sb	03 19 56.7	-0.1
	comp=N,729nm,0.6s						
GROC	Groznyy	0.57	296	*e*Pg	Pg	03 19 47.4	-0.1
GROC				*e*Sg	Sg	03 19 55.8	+0.8
GNBR	Gunib	0.67	149	⇓*i*PG	Pg	03 19 49.1	-0.3
GNBR				*e*		03 19 59.2	
GNBR				pmax	pmax		
	comp=Z,371nm,0.6s						
GNBR				smax	smax		
	comp=N,1μm,0.5s						
GNBR	Gunib	0.67	149	*i* Pg	Pg	03 19 49.1	-0.3
	comp=N,371nm,0.6s						
GNBR				*e*Sg	Sb	03 19 59.2	-0.5
	comp=N,1μm,0.5s						
GNBR	Gunib	0.67	149	*e*Pg	Pg	03 19 48.8	-0.6
GNBR				*e*Sg	Sg	03 19 57.6	-0.5
MAK	Makhachkala	0.74	89	*e*PG	Pb	03 19 51.5	0.0
MAK				*e*		03 20 05.0	
MAK				pmax	pmax		
	comp=Z,350nm,0.3s						
MAK				smax	smax		
	comp=E,3μm,0.4s						
MAK				smax	smax		
	comp=E,4μm,0.5s						
MAK	Makhachkala	0.74	89	*e*Pg	Pb	03 19 51.5	0.0
	comp=E,350nm,0.3s						
MAK				*e*Sg	Sn	03 20 05.0	+0.5
MAK	Makhachkala	0.74	89	*e*Pg	Pn	03 19 53.6	+0.5
MAK				*e*Sg	Sn	03 20 04.2	-0.3
KMKR	Kumukh	0.94	151	*e*PG	Pg	03 19 54.0	-0.6
KMKR				*e*S	Sg	03 20 06.5	-0.3
KMKR				pmax	pmax		
	comp=Z,117nm,0.2s						
KMKR	Kumukh	0.94	151	*e*Pg	Pg	03 19 54.0	-0.6
	comp=Z,117nm,0.2s						
KMKR				*e*Sg	Sg	03 20 06.5	-0.3
KMKR	Kumukh	0.94	151	*e*Pg	Pg	03 19 54.0	-0.6
KMKR				*e*Sg	Sg	03 20 06.5	-0.3
SGKR	Sergokala	0.99	120	*e*PG	Pg	03 19 55.0	-0.5
SGKR				*i* S	Sb	03 20 09.0	0.0
SGKR				pmax	pmax		
	comp=Z,538nm,0.3s						
SGKR	Sergokala	0.99	120	*e*Pg	Pg	03 19 55.0	-0.5
	comp=Z,538nm,0.3s						
SGKR				*i* Sg	Sb	03 20 09.0	0.0
SGKR	Sergokala	0.99	120	*e*Pg	Pg	03 19 55.0	-0.5
SGKR				*i* Sg	Sb	03 20 09.0	0.0
URKR	Urkarakh	1.16	133	*e*PG	Pg	03 19 58.1	-0.6
URKR				*e*S	Sn	03 20 15.7	+0.8
URKR	Urkarakh	1.16	133	*e*Pg	Pg	03 19 58.1	-0.6
URKR				*e*Sg	Sn	03 20 15.7	+0.8
URKR	Urkarakh	1.16	133	*e*Pg	Pg	03 19 58.2	-0.6
URKR				*e*Sg	Sn	03 20 15.8	+0.8
KMGR	Komgaron	1.20	275	*e*PG	Pg	03 19 59.5	0.0
KMGR				*e*S	Sn	03 20 18.2	+2.3
KMGR	Komgaron	1.20	275	*e*Pg	Pg	03 19 59.5	0.0
KMGR				*e*Sg	Sn	03 20 18.2	+2.3
KMGR	Komgaron	1.20	275	*e*Pg	Pg	03 19 58.6	-0.9
KMGR				*e*Sg	Sg	03 20 14.7	-0.4
ZKTA	Zakatala	1.32	176	⇓P	Pn	03 20 00.6	-0.6
	SNR=11						
ZKTA				⇓S	Sb	03 20 18.2	-0.4
VLKR	Vladikavkaz	1.34	274	*e*PG	Pn	03 20 01.6	+0.2
VLKR				*e*S	Sn	03 20 22.3	+3.0
VLKR	Vladikavkaz	1.34	274	*e*Pg	Pn	03 20 01.6	+0.2
VLKR				*e*Sg	Sn	03 20 22.3	+3.0
VLKR	Vladikavkaz	1.34	274	*e*Pg	Pn	03 20 00.8	-0.6
VLKR				*e*Sg	Sb	03 20 18.8	-0.3
BTKR	Batakoyurt	1.49	287	⇑*i*PG	Pg	03 20 04.9	-0.1
BTKR				*e*S	Sg	03 20 27.1	+2.7
BTKR	Batakoyurt	1.49	287	*i* Pg	Pg	03 20 04.9	-0.1
BTKR				*e*Sg	Sg	03 20 27.1	+2.7
BTKR	Batakoyurt	1.49	287	*e*Pg	Pg	03 20 05.0	-0.1
BTKR				*e*Sg	Sg	03 20 26.2	+1.8
TRKR	Terskaya	1.50	301	*e*PG	Pb	03 20 04.3	-0.1
TRKR				*e*S	Sg	03 20 26.1	+1.5
TRKR	Terskaya	1.50	301	*e*Pg	Pb	03 20 04.3	-0.1
TRKR				*e*Sg	Sg	03 20 26.1	+1.5
TRKR	Terskaya	1.50	301	*e*Pg	Pn	03 20 03.9	+0.3
TRKR				*e*Sg	Sb	03 20 24.1	+0.5
DDFL	Dedoflistskaro	1.54	191	P	Pg	03 20 08.1	+2.1
DDFL				S	Sg	03 20 32.7	+6.8
DUS	Dusheti	1.58	237	P	Pn	03 20 05.3	+0.5
DUS				S	Sg	03 20 27.3	-0.2
DUS	Dusheti	1.58	237	*e*PG	Pn	03 20 05.3	+0.5
DUS				*e*S	Sg	03 20 27.3	-0.2
DUS	Dusheti	1.58	237	*e*Pg	Pn	03 20 05.3	+0.5
DUS				*e*Sg	Sg	03 20 27.3	-0.2
LACR	Lac	1.62	266	*e*PN	Pn	03 20 04.9	-0.5
LACR				*e*S	Sn	03 20 27.2	+0.8
LACR	Lac	1.62	266	*e*Pn	Pn	03 20 04.9	-0.5
LACR				*e*Sg	Sn	03 20 27.2	+0.8
LACR	Lac	1.62	266	*i* Pg	Pn	03 20 05.3	-0.1
LACR				*e*Sg	Sn	03 20 26.9	+0.5
ARNR	Ardon	1.64	279	*e*PN	Pn	03 20 06.2	+0.7
ARNR				*e*S	Sg	03 20 30.1	+1.0
ARNR	Ardon	1.64	279	*e*Pn	Pn	03 20 06.2	+0.7
ARNR				*e*Sg	Sg	03 20 30.1	+1.0
ARNR	Ardon	1.64	279	*e*Pg	Pn	03 20 05.8	+0.3
ARNR				*e*Sg	Sb	03 20 27.7	+0.2
DRN	Derbent	1.64	124	⇓*i*PN	Pb	03 20 07.4	+0.5
DRN				*e*		03 20 31.4	
DRN				pmax	pmax		
	comp=Z,89nm,0.7s						
DRN				smax	smax		
	comp=N,206nm,0.6s						
DRN	Derbent	1.64	124	*i* Pn	Pb	03 20 07.4	+0.5
	comp=N,89nm,0.7s						
DRN				*e*Sg	Sg	03 20 31.4	+2.1
	comp=N,206nm,0.6s						
DRN	Derbent	1.64	124	*e*Pg	Pg	03 20 07.8	-0.2
DRN				*e*Sg	Sg	03 20 30.8	+1.5
DGRG	David-gareji	1.72	209	P	Pb	03 20 08.5	+0.2
DGRG				S	Sg	03 20 33.7	+1.8
DGRG	David-gareji	1.72	209	*e*PN	Pb	03 20 08.5	+0.2
DGRG				*e*S	Sg	03 20 33.7	+1.8
DGRG	David-gareji	1.72	209	P	Pn	03 20 07.3	+0.6
DGRG	David-gareji	1.72	209	*e*Pn	Pb	03 20 08.5	+0.2
DGRG				S	Sg	03 20 33.3	+1.4
SEAG	Tbilisi Sea	1.73	227	P	Pb	03 20 09.0	+0.5
SEAG				S	Sg	03 20 34.3	+2.1
AKT	Akhty	1.74	148	⇑*i*PN	Pb	03 20 08.3	-0.3
AKT				*e*		03 20 34.8	
AKT				pmax	pmax		
	comp=Z,84nm,0.4s						
AKT				smax	smax		
	comp=N,205nm,0.4s						
AKT				smax	smax		
	comp=E,304nm,0.4s						
AKT				smax	smax		
	comp=E,354nm,0.4s						
AKT	Akhty	1.74	148	*i* Pn	Pb	03 20 08.3	-0.3
	comp=E,84nm,0.4s						
AKT				*e*Sg	Sg	03 20 34.8	+2.4
	comp=E,205nm,0.4s						
AKT	Akhty	1.74	148	*i* Pg	Pb	03 20 08.4	-0.3
AKT				*e*Sg	Sg	03 20 33.0	+0.6
KORR	Kora	1.79	275	*e*PN	Pn	03 20 07.7	+0.1
KORR				*e*S	Sg	03 20 33.3	-0.6
KORR	Kora	1.79	275	*e*Pn	Pn	03 20 07.7	+0.1
KORR				*e*Sg	Sg	03 20 33.3	-0.6
KORR	Kora	1.79	275	*i* Pg	Pn	03 20 07.6	+0.1
KORR				*e*Sg	Sn	03 20 31.5	+1.2
TBLG	Delisi	1.79	227	P	Pn	03 20 08.3	+0.7
TBLG				S	Sg	03 20 34.2	+0.2
TBLG	Delisi	1.79	227	*e*PN	Pn	03 20 08.3	+0.7
TBLG				*e*S	Sg	03 20 34.2	+0.2
TBLG	Delisi	1.79	227	P	Pn	03 20 07.3	-0.3
TBLG	Delisi	1.79	227	*e*Pn	Pn	03 20 08.3	+0.7
TBLG				S	Sg	03 20 33.3	-0.7
TBLG				*e*Sg	Sg	03 20 34.2	+0.2
PRTR	Priterechnaya	1.80	297	*e*PN	Pb	03 20 09.9	+0.3
PRTR				*e*S	Sg	03 20 35.4	+1.1
PRTR	Priterechnaya	1.80	297	*e*Pn	Pb	03 20 09.9	+0.3
PRTR				*e*Sg	Sg	03 20 35.4	+1.1
PRTR	Priterechnaya	1.80	297	*e*Pg	Pn	03 20 08.2	+0.5
PRTR				*e*Sg	Sb	03 20 32.4	+0.2
SEKA	Sheki	1.82	163	⇑P	Pb	03 20 10.0	-0.1
	SNR=8.0						
SEKA				⇑S	Sg	03 20 36.0	+0.9
SEKA	Sheki	1.82	163	⇑P	Pb	03 20 10.0	-0.1
	SNR=8.0						
SEKA				⇑S	Sg	03 20 36.0	+0.9
STDR	Stavd-Durt	1.83	284	*e*Pg	Pn	03 20 08.7	+0.6
STDR				*e*Sg	Sb	03 20 32.9	-0.2
ZEI	Tsey	1.92	266	*e*PN	Pn	03 20 10.6	+1.1
ZEI				*e*S	Sb	03 20 36.0	+0.2
ZEI	Tsey	1.92	266	*e*Pn	Pn	03 20 10.6	+1.1
ZEI				*e*Sg	Sb	03 20 36.0	+0.2
ZEI	Tsey	1.92	266	*e*Pg	Pn	03 20 09.5	0.0
ZEI				*e*Sg	Sn	03 20 34.8	+1.0
QSAR	Qusar	1.95	137	⇓P	Pg	03 20 13.2	-0.7
	SNR=4.8						
QSAR	Qusar	1.95	137	⇓P	Pg	03 20 13.2	-0.7
	SNR=4.8						
QSAR				⇑S	Sg	03 20 41.7	+2.6
LSNR	Lesken	1.98	280	*e*PN	Pb	03 20 12.1	-0.6
LSNR				*e*S	Sg	03 20 41.1	+0.9
LSNR	Lesken	1.98	280	*e*Pn	Pb	03 20 12.1	-0.6
LSNR				*e*Sg	Sg	03 20 41.1	+0.9
LSNR	Lesken	1.98	280	*e*Pg	Pn	03 20 10.4	+0.2
LSNR				*e*Sg	Sb	03 20 36.9	-0.6
QZX	Qazax, Azerbai	2.08	204	⇑P	Pn	03 20 13.0	+1.5
	SNR=7.9						
QZX				⇓S	Sb	03 20 40.6	+0.4
QZX	Qazax, Azerbai	2.08	204	⇑P	Pn	03 20 13.0	+1.5
	SNR=7.9						
QZX				⇓S	Sb	03 20 40.6	+0.4
DIGR	Digorskoe uzhe	2.14	269	*e*PN	Pn	03 20 13.9	+1.3
DIGR				*e*S	Sb	03 20 42.0	-0.3
DIGR	Digorskoe uzhe	2.14	269	*e*Pn	Pn	03 20 13.9	+1.3
DIGR				*e*Sn	Sb	03 20 42.0	-0.3
DIGR	Digorskoe uzhe	2.14	269	*i* Pg	Pn	03 20 13.0	+0.4
DIGR				*e*Sg	Sn	03 20 40.8	+1.4
XNQ	Khinaliq	2.16	145	⇓P	Pb	03 20 16.4	+0.4
	SNR=14						
XNQ	Khinaliq	2.16	145	⇓P	Pb	03 20 16.4	+0.4
	SNR=14						
XNQ				⇑S	Sg	03 20 47.9	+1.9
QUBA	Quba, Azerbaij	2.18	137	⇑P	Pb	03 20 17.0	+0.8
	SNR=6.5						
QUBA	Quba, Azerbaij	2.18	137	⇑P	Pb	03 20 17.0	+0.8
	SNR=6.5						
QUBA				⇑S	Sg	03 20 48.9	+2.2
NCK	Nalchik	2.19	285	*c* *i*PN	Pn	03 20 12.9	-0.1
NCK	Nalchik	2.19	285	*i* Pn	Pn	03 20 12.9	-0.1
NCK	Nalchik	2.19	285	*e*Pg	Pn	03 20 13.8	+0.8

NCK				eSg	Sn	03 20 42.2	+2.0
ONI	Oni	2.27	262	P	Pn	03 20 15.3	+1.1
ONI				S	Sb	03 20 46.5	+0.6
ONI	Oni	2.27	262	ePN	Pn	03 20 15.3	+1.1
ONI				eS	Sb	03 20 46.5	+0.6
ONI	Oni	2.27	262	ePn	Pn	03 20 15.3	+1.1
ONI				eSn	Sb	03 20 46.5	+0.6
GDB	GEDABAY	2.30	194	⇑P	Pn	03 20 16.0	+1.2
	SNR=24						
GDB				⇑S	Sn	03 20 45.2	+1.9
GDB	GEDABAY	2.30	194	⇑P	Pn	03 20 16.0	+1.2
	SNR=24						
GDB				⇑S	Sn	03 20 45.2	+1.9
GANJ	Ganja	2.31	183	⇑P	Pn	03 20 16.1	+1.3
	SNR=9.8						
GANJ				⇑S	Sb	03 20 46.3	-0.8
GANJ	Ganja	2.31	183	⇑P	Pn	03 20 16.1	+1.3
	SNR=9.8						
GANJ				⇑S	Sb	03 20 46.3	-0.8
KBTC	Kuba-Taba	2.41	292	ePN	Pn	03 20 15.9	-0.2
KBTC				eS	Sb	03 20 51.8	+2.0
KBTC	Kuba-Taba	2.41	292	ePn	Pn	03 20 15.9	-0.2
KBTC				eSb	Sb	03 20 51.8	+2.0
KBTC	Kuba-Taba	2.41	292	ePn	Pn	03 20 15.8	-0.3
KBTC				eSn	Sn	03 20 46.5	+0.7
SIZA	Siyzn	2.60	136	⇑P	Pb	03 20 22.9	-0.4
SIZA	Siyzn	2.60	136	⇑P	Pb	03 20 22.9	-0.4
PQL	Pirkuli	2.67	143	⇑P	Pb	03 20 25.0	+0.4
	SNR=5.8						
PQL	Pirkuli	2.67	143	⇑P	Pb	03 20 25.1	+0.4
	SNR=5.8						
PQL				⇑S	Sg	03 21 02.3	-0.1
AKH	Akhalkalaki	2.72	236	P	Pb	03 20 23.7	-1.6
AKH				S	Sb	03 20 59.7	+0.9
AKH	Akhalkalaki	2.72	236	ePN	Pb	03 20 23.7	-1.6
AKH				eS	Sb	03 20 59.7	+0.9
AKH	Akhalkalaki	2.72	236	ePn	Pb	03 20 23.7	-1.6
AKH				eSn	Sb	03 20 59.7	+0.9
BGD	Bogdanovka	2.74	233	P	Pb	03 20 24.3	-1.5
BGD				S	Sb	03 20 59.8	+0.3
NEY	Neytrino	2.78	277	i PN	Pn	03 20 20.3	-1.0
NEY	Neytrino	2.78	277	i Pn	Pn	03 20 20.3	-1.0
NEY	Neytrino	2.78	277	ePn	Pn	03 20 21.6	+0.3
NEY				eSn	Sn	03 20 56.6	+1.6
SHA1	Shidzhatmaz	2.91	287	ePN	Pn	03 20 22.3	-0.8
SHA1				eS	Sb	03 21 05.6	+1.2
SHA1	Shidzhatmaz	2.91	287	ePn	Pn	03 20 22.3	-0.8
SHA1				eSb	Sb	03 21 05.6	+1.2
SHA1	Shidzhatmaz	2.91	287	ePn	Pn	03 20 22.3	-0.8
SHA1				eSn	Sn	03 20 58.8	+0.5
KIV	Kislovodsk	2.95	291	ePN	Pn	03 20 22.7	-0.9
KIV				i		03 20 31.4	
KIV				i		03 20 34.2	
KIV				i		03 20 58.3	
KIV				pmax	pmax		
	comp=Z,10.0nm,0.6s						
KIV				smax	smax		
	comp=E,42nm,0.6s						
KIV	Kislovodsk	2.95	291	ePn	Pn	03 20 22.7	-0.9
	comp=E,10.0nm,0.6s						
KIV	Kislovodsk	2.95	291	i Pg	Pg	03 20 34.2	+1.2
KIV				i Sn	Sn	03 20 58.3	-0.8
GNI	Garni	3.10	206	i PN	Pn	03 20 25.9	+0.2
GNI	Garni	3.10	206	i Pn	Pn	03 20 25.9	+0.2
EAK	Akyaka	3.13	225	i P	Pb	03 20 30.7	-1.8
EAK				i S	Sb	03 21 12.2	+1.4
EAK	Akyaka	3.13	225	P	Pb	03 20 30.7	-1.8
EPOS	Posof	3.15	244	i P	Pn	03 20 26.8	+0.3
EPOS				i S	Sb	03 21 08.3	-3.1
EPOS	Posof	3.15	244	P	Pn	03 20 26.8	+0.3
EPOS				S	Sb	03 21 08.3	-3.1
GOF	Gofitskoye	3.26	311	ePN	Pg	03 20 37.5	-1.4
GOF				eS	Sn	03 21 07.7	+1.1
GOF				pmax	pmax		
	comp=Z,40nm,0.5s						
GOF				smax	smax		
	comp=N,30nm,0.4s						
GOF	Gofitskoye	3.26	311	ePn	Pg	03 20 37.5	-1.4
	comp=N,40nm,0.5s						
GOF				eSn	Sn	03 21 07.7	+1.1
	comp=N,30nm,0.4s						
SBZ	Shahbuz	3.63	192	⇑P	Pn	03 20 34.4	+1.5
SBZ				⇓S	Sn	03 21 16.5	+0.6
SBZ	Shahbuz	3.63	192	⇑P	Pn	03 20 34.4	+1.5
SBZ				⇓S	Sn	03 21 16.5	+0.6
ARTV	Artvin	3.83	244	i P	Pn	03 20 38.5	+2.6
ARTV				i S	Sg	03 21 36.1	-3.5
ARTV	Artvin	3.83	244	P	Pn	03 20 38.5	+2.6
DAGI	Agillar	3.90	243	i P	Pn	03 20 38.8	+2.1
DBOC	Borcka	3.94	247	i P	Pn	03 20 40.4	+3.3
DBOC	Borcka	3.94	247	P	Pn	03 20 40.4	+3.3
ORD	Ordubad	4.04	186	⇑P	Pn	03 20 41.0	+2.4
ORD				⇑S	Sn	03 21 28.9	+2.7
ORD	Ordubad	4.04	186	⇑P	Pn	03 20 41.0	+2.4
ORD				⇑S	Sn	03 21 28.9	+2.7
DBAD	Bademkaya	4.07	243	i P	Pn	03 20 41.1	+2.1
DBAD				i S	Sb	03 21 41.5	+3.8
DBAD	Bademkaya	4.07	243	P	Pn	03 20 41.1	+2.1
DDEM	Demirkent	4.10	241	i P	Pn	03 20 41.4	+2.0
DDEM	Demirkent	4.10	241	P	Pn	03 20 41.4	+2.0
VSR	Storozhevoye	9.65	331	eP	Pn	03 21 52.1	-3.3
VSR				pmax	pmax		
	comp=Z,4.0nm,0.5s						
VSR	Storozhevoye	9.65	331	eP	Pn	03 21 52.1	-3.3
	comp=Z,4.0nm,0.5s						
AKTO	Aktyubinsk	10.88	43	⇑Pn	Pn	03 22 10.6	-1.6
	comp=Z,1.3nm,0.2s						
AKTO				⇑Sn	Sn	03 24 06.3	-7.7
	comp=Z,2.4nm,0.3s						
AKTO	Aktyubinsk	10.88	43	P	Pn	03 22 10.6	-1.6
AKTO				pmax	pmax		
	comp=Z,1.0nm,0.3s						
AB31	Akbulak array	11.25	51	⇑Pn	Pn	03 22 16.1	-1.3
	comp=Z,0.3nm,0.2s,baz=235,slow=12,SNR=29						
AB31				⇓Sn	Sn	03 24 18.5	-4.7
	comp=Z,2.0nm,0.6s,baz=241,slow=22,SNR=4.4						
AB31	Akbulak array	11.25	51	P	Pn	03 22 16.1	-1.3
AB31				S	Sn	03 24 18.5	-4.7
AB31				pmax	pmax		
	comp=Z,3.0nm,0.3s						
AB31				smax	smax		
	comp=N,2.0nm,0.6s						
KIEV	Kiev	14.12	309	i P	Pn	03 22 55.9	-0.6
KIEV				pmax	pmax		
	comp=Z,6.0nm,1.4s						
KIEV	Kiev	14.12	309	i P	Pn	03 22 55.9	-0.6
	comp=Z,6.0nm,1.4s						
BRVK	Borovoye	18.77	49	i P	Pn	03 23 56.2	+0.1
BRVK				pmax	pmax		
	comp=Z,2.0nm,0.7s						
AAK	Ala-Archa	20.52	81	i P	Pn	03 24 17.1	-0.1
AAK				pmax	pmax		
	comp=Z,1.0nm,0.7s						
FINES	FINESS Array B	22.17	334	i P	P	03 24 37.1	+4.6
FINES				pmax	pmax		
	comp=Z,1.0nm,0.3s						
KURK	Kurchatov	23.16	59	i P	P	03 24 44.1	+1.1
KURK				pmax	pmax		
	comp=Z,2.0nm,1.2s						

ISCJB ***31*** *03:57:48.8±0.5, 7°.02S±0°.05×126°.75E±0°.08, h412^{km}, mb3.6/6, Error ellipse: s-maj=11.4km s-min=7.2km az=7.1*

IDC ***31*** *03:57:51.7±2.4, 7°.10S×126°.53E, h433^{km}±27^{km}, mb3.3/6, mb1 3.4/10, mb1mx3.1/51, mbtmp4.1/10, Error ellipse: s-maj=61.2km s-min=12.4km az=64.0*

DJA ***31*** *03:57:53.8±1.2, 7°S±12°×12°6E±1°5, h361^{km}±14^{km}, M4.2/7, mb4.2/3, MLv4.3/7*

ISC 31 03:57:49.7±0.8, **7°.05S**±0°.07×**126°.7E**±0°.1, **h412**^{km}, **n16**, σ**1^{s}.51**/21, **mb3.6**/6, **Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SOEI	Soe	3.59	221	P	P	03 59 00.6	+1.7
SOEI				S	S	03 59 54.8	-0.3
AAI	Ambon	3.67	24	P	P	03 58 59.4	-0.1
MSAI	Masohi	4.31	31	P	P	03 59 04.7	-0.7
BATI	Baumata	4.32	223	P	P	03 59 07.7	+2.3
	34nm,0.3s,baz=54,slow=1.4,SNR=20						
BATI				S	S	04 00 03.8	-3.5
	11nm,0.3s,baz=19,slow=2.9,SNR=6.1						
BATI	Baumata	4.32	223	P	P	03 59 07.8	+2.3
BATI				S	S	04 00 06.2	-1.1
EDFI	Ende, Flores	5.22	251	P	P	03 59 14.8	+0.3
	8.3nm,0.5s,0.1nm						
LBMI	Labuha	6.43	7	P	P	03 59 27.9	+0.7
FITZ	Fitzroy Crossi	11.03	185	P	P	04 00 19.9	+1.4
	0.3nm,0.3s,baz=1.4,slow=13,SNR=6.7						
WRA	Warramunga Arr	14.82	151	P	P	04 01 00.6	+0.7
	1.0nm,0.3s,baz=325,slow=12,SNR=34						
WRA				S	S	04 03 34.5	-2.8
	0.2nm,0.3s,baz=317,slow=21,SNR=5.2						
ASAR	Alice Springs	17.92	158	P	P	04 01 34.1	+1.0
	1.8nm,0.3s,baz=334,slow=8.4,SNR=51						
ASAR				S	S	04 04 38.8	+1.2
	0.2nm,0.3s,baz=340,slow=21,SNR=5.7						
SONM	Songino Array	57.51	344	P	P	04 06 58.3	+0.3
	0.6nm,0.5s,baz=170,slow=5.6,SNR=3.4						
MKAR	Makanchi Array	66.50	328	P	P	04 07 57.2	+0.3
	0.7nm,0.5s,baz=125,slow=8.0,SNR=9.7						
ZALV	Zalesovo Beam	70.21	335	P	P	04 08 18.9	-0.4
	1.6nm,0.4s,baz=132,slow=4.4,SNR=6.8						
KURBB	Kurchatov Arra	70.86	330	P	P	04 08 23.4	+0.1
	1.4nm,0.6s,baz=132,slow=4.8,SNR=18						
BVAR	Borovoye Array	76.37	329	P	P	04 08 54.7	-0.3
	0.7nm,0.6s,baz=120,slow=8.5,SNR=4.1						
AKTO	Aktyubinsk	82.11	323	P	P	04 09 25.1	-0.6
	0.7nm,0.4s,baz=153,slow=6.8,SNR=4.4						

TRN 31 04:18:02.9, 15°.00N×59°.71W, h2^{km}, MD3.5, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MVM	Montagne Vaucl	1.23	249	eP	Pn	04 18 29.0	+1.8
LPMF	Morne Lapointe	1.29	251	eP	Pn	04 18 29.7	+1.7
ZAM	Aeronautique	1.35	252	eP	Pb	04 18 30.6	+1.7
TRMF	Trois Ilets	1.38	251	eP	Pb	04 18 31.1	+1.6
BIM	Bigot	1.40	250	eP	Pb	04 18 31.6	+1.7
BIM				eS	Sn	04 18 52.2	+3.5
BAMF	Morne Balai	1.41	263	eP	Pb	04 18 32.5	+2.5
FDF	Fort de France	1.42	259	eP	Pb	04 18 31.9	+1.7
FDF				eS	Sn	04 18 55.2	+6.0
GBMF	Grand Be	1.42	262	eP	Pb	04 18 32.4	+2.1
CXM	Morne La Croix	1.43	262	eP	Pb	04 18 32.7	+2.4
CXM				eS	Sn	04 18 53.6	+4.2
PML	Morne Lenard	1.44	261	eP	Pg	04 18 32.9	+2.2
PCM	Pelee Case Pet	1.46	263	eP	Pg	04 18 32.1	+1.1
PCM	Pelee Case Pet	1.46	263	eP	Pg	04 18 32.9	+1.9
SLB	Belfond	1.74	228	eP	Pg	04 18 36.0	-0.3
SSV	Crater Summit	2.20	221	eP	Pb	04 18 43.4	-0.1
SSV				eS	Sb	04 19 12.4	+1.0
SVCV	St. Vincent, C	2.21	219	eP	Pb	04 18 43.9	+0.2
SVCV				eS	Sb	04 19 12.7	+1.1
SVV	Soufriere Volc	2.22	221	eP	Pb	04 18 44.1	+0.2
SVV				eS	Sb	04 19 13.1	+1.2
SVB	Belmont	2.28	221	eP	Pb	04 18 45.0	+0.1
SVB				eS	Sb	04 19 14.7	+1.1
GRGR	Grenville	3.42	214	eP	Pb	04 19 01.2	-3.2
GRGR				eS	Sn	04 19 41.9	+3.3

ISCJB ***31*** *04:27:06.9±1.0, 41°.79N±0°.05×19°.42E±0°.04, h1^{km}±5^{km}, Error ellipse: s-maj=8.7km s-min=4.6km az=14.9*

TIR ***31*** *04:27:06.5, 41°.78N×19°.43E, h6^{km}, Md2.4/3*

CSEM ***31*** *04:27:07.4±1.0, 41°.77N×19°.43E, h5^{km}, ML1.9, Error ellipse: s-maj=17.9km s-min=9.0km az=19.0*

BEO ***31*** *04:27:09.4±1.0, 41°.81N×19°.40E, h13^{km}±3^{km}, ML1.9/6*

ISC 31 04:27:07.6±1.3, **41°.78N**±0°.05×**19°.44E**±0°.03, **h5**^{km}±10^{km}, **n21**, σ**0^{s}.81**/39, **Albania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PUK	Puka	0.42	52	i Pg	Pg	04 27 15.6	-0.2
	baz=2.0						
PUK				i Sg	Sg	04 27 21.9	+0.5
	baz=2.0						
PUK	Puka	0.42	52	i PG	Pg	04 27 15.6	-0.2
PUK				i SG	Sg	04 27 21.9	+0.5
PDG	Podgorica	0.66	348	ePg	Pg	04 27 20.2	-0.1
PDG				eSg	Sb	04 27 31.1	0.0
PDG	Podgorica	0.66	348	ePg	Pg	04 27 20.2	-0.1
	baz=7.0						
PDG				eSg	Sb	04 27 31.1	0.0
	baz=2.0						
BCI	Bajram Curri	0.75	38	i Pg	Pg	04 27 21.3	-0.7
	baz=8.0						
BCI				i Sg	Sg	04 27 32.4	+0.8
	baz=8.0						
BCI	Bajram Curri	0.75	38	i PG	Pg	04 27 21.3	-0.7
BCI				i SG	Sg	04 27 32.4	+0.8
PHP	Peshkopia	0.75	97	i Pg	Pg	04 27 21.6	-0.4
	baz=7.0						
PHP				i Sg	Sg	04 27 32.8	+1.0
	baz=7.0						
PHP	Peshkopia	0.75	97	i PG	Pg	04 27 21.6	-0.4
PHP				i SG	Sg	04 27 32.8	+1.0
TREB	Trebinje	1.24	319	ePg	Pn	04 27 31.6	+0.1
TREB				eSg	Sn	04 27 48.1	-0.5
TREB	Trebinje	1.24	319	ePg	Pn	04 27 31.6	+0.1
	baz=6.0						
TREB				eSg	Sn	04 27 48.1	-0.5
	baz=5.0						
SJES	Sjenica	1.53	15	ePg	Pg	04 27 37.4	+0.5
SJES				eSg	Sg	04 27 57.0	+0.2
SJES	Sjenica	1.53	15	ePg	Pg	04 27 37.4	+0.5
	baz=8.0						
SJES				eSg	Sg	04 27 57.0	+0.2
	baz=4.0						
STON	Ston	1.69	311	ePg	Pb	04 27 38.9	-0.2
STON				eSg	Sg	04 28 01.0	-0.9
STON	Ston	1.69	311	ePn	Pg	04 27 39.5	-0.5
STON				Sn	Sg	04 28 04.6	+2.7
STON	Ston	1.69	311	ePg	Pb	04 27 38.9	-0.2
	baz=2.0						
STON				eSg	Sg	04 28 01.0	-0.9
	baz=9.0						
IVAS	Ivanjica	1.87	16	ePn	Pb	04 27 41.1	-1.1
IVAS				eSn	Sn	04 28 04.5	+0.3
IVAS	Ivanjica	1.87	16	ePn	Pb	04 27 41.1	-1.1
	baz=4.0						
IVAS				eSn	Sn	04 28 04.5	+0.3
	baz=4.0						
SELS	Selova	1.90	40	ePn	Pn	04 27 41.2	+0.6
SELS				eSn	Sn	04 28 04.5	-0.4
BBLS	Lazići	2.08	359	eSn	Sn	04 28 09.4	-0.1
BBLS	Lazići	2.08	359	eSn	Sn	04 28 09.4	-0.1
	baz=4.0						
UDBI	Udbina	3.84	317	Sn	Sn	04 28 55.0	+2.1

MAN 31 04:30:00.6, 6°.11N×125°.72E, h74^{km}, mb4.0, ML2.8, MS2.4, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DDMP	Don Marcelino,	0.01	267	eP	Pn	04 30 11.6	+0.3
DDMP				eS	Sn	04 30 19.3	+0.2
GSPH	General Santos	0.77	269	⇑iP	Pn	04 30 16.1	-0.6
GSPH				i S	Sn	04 30 26.8	-1.8
MATI	Mati	0.99	33	eP	Pn	04 30 20.1	+0.8
MATI				eS	Sn	04 30 34.6	+1.4
SKMP	Bagumbayan, Su	1.24	289	eP	Pn	04 30 22.8	+0.4
SKMP				eS	Sn	04 30 40.5	+1.8

GUC ***31*** *04:38:59.2±0.5, 32°.42S×71°.17W, h14^{km}±5^{km}, ML2.9*

SJA ***31*** *04:38:59.2±0.6, 32°.44S×71°.25W, h3^{km}±5^{km}, ML2.4, MW3.4*

ISC 31 04:38:58.7±2.5, **32°.44S**±0°.05×**71°.3W**±0°.1, **h8**^{km}±13^{km}, **n14**, σ**0^{s}.98**/23, **5D, Near coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ROCH	El Roble	0.58	157	⇓iP	Pb	04 39 11.3	+0.1
ROCH				eS	Sb	04 39 20.6	+0.9
ROCH				IAML		04 39 21.1	
	comp=N,971nm,0.1s						
ROC1	El Roble	0.58	158	i P	Pb	04 39 11.3	0.0
ROC1				i S	Sb	04 39 20.9	+1.1
PEL	Peldehue	0.86	145	eP	Pb	04 39 15.7	-0.3
PEL				eS	Sn	04 39 28.7	-1.3
PEL				IAML		04 39 30.1	
	comp=E,816nm,0.4s						
CLCH	Cerro Calan	1.14	147	⇓iP	Pb	04 39 20.7	0.0
CLCH				i S	Sn	04 39 36.8	-0.2
CLCH				IAML		04 39 37.8	
	comp=E,624nm,0.3s						
FCH	Farellones	1.22	137	⇓iP	Pg	04 39 21.9	-0.3
FCH				eS	Sn	04 39 39.3	+0.2
FCH				IAML		04 39 40.3	
	comp=E,461nm,0.2s						
ANTU	Antumapu	1.25	154	⇓iP	Pn	04 39 22.2	-0.3
ANTU				i S	Sn	04 39 39.9	+0.3
ANTU				IAML		04 39 41.0	
	comp=E,295nm,0.2s						
AUSP	Uspallata	1.62	83	i P	Pg	04 39 30.2	+0.5
LMEL	Las Melosas	1.67	148	⇓iP	Pn	04 39 28.9	+0.5
LMEL				i S	Sg	04 39 51.7	-0.8
LMEL				IAML		04 39 54.9	
	comp=N,377nm,0.1s						
RTLS	Leoncito	1.80	70	i P	Pg	04 39 33.6	+0.4
RTLS				IAML		04 39 59.1	
	comp=Z,31nm,0.3s						
RTLS				i S	Sg	04 39 59.3	+2.7
ARCO	CERRO ARCO	2.02	102	i P	Pg	04 39 36.8	-0.7
ARCO				i S	Sg	04 40 03.4	-0.3
ARCO				IAML		04 40 11.0	
	comp=Z,31nm,0.3s						
ASAL	Salagasta	2.07	95	i P	Pg	04 39 36.9	-1.5
RTCV	Cerro Valdivia	2.39	77	i P	Pb	04 39 41.4	-0.6
RTLL	Cerro Villicun	2.63	66	i P	Pb	04 39 44.8	-1.3
AROD	Rodeo	2.74	35	i P	Pb	04 39 47.4	-0.7

MEX 31 04:39:33.7±0.5, **15°.95N**×**97°.60W**, **h16**^{km}±8^{km}, **MD3.7, Near coast of Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.67	311	eP	Pg	04 39 44.5	-2.4
PNIG				eS	Sg	04 39 52.8	-3.0
VHO	Vista Hermosa	1.39	37	eP	Pn	04 39 55.0	-3.6
VHO				eS	Sn	04 40 11.3	-5.6
HUIG	Huatulco	1.45	97	eP	Pn	04 39 55.2	-4.0
HUIG				i S	Sn	04 40 13.2	-4.8
TLIG	Tlapa	1.85	330	eP	Pn	04 40 01.8	-3.1
TLIG				eS	Sn	04 40 23.2	-4.8
TPIG	Tehuac#an	2.46	5	eP	Pn	04 40 10.9	-2.5
TPIG				i S	Sn	04 40 39.4	-3.9
CAIG	El Cayaco	2.78	293	eP	Pn	04 40 15.2	-2.4
CAIG				i S	Sn	04 40 46.3	-4.5

CSEM ***31*** *05:00:28.5±0.2, 45°.22N×23°.10E, h5^{km}, ML2.0, Error ellipse: s-maj=4.6km s-min=2.9km az=150.0*

BUC ***31*** *05:00:28.4±1.0, 45°.24N×23°.12E, h8^{km}±10^{km}, MD2.5/4, Error ellipse: s-maj=9.7km s-min=6.1km az=333.0*

BEO ***31*** *05:00:29.1±0.4, 45°.23N×23°.03E, h5^{km}±3^{km}, ML2.0/5*

ISC 31 05:00:28.3±1.1, **45°.23N**±0°.03×**23°.07E**±0°.02, **h4**^{km}±10^{km}, **n38**, σ**0^{s}.52**/59, **12C-12D, Romania**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LOT	Lotru	0.54	66	⇑iP	Pg	05 00 38.7	+0.1
LOT	Lotru	0.54	66	⇑iP	Pg	05 00 38.7	+0.1
LOT				i S	Sg	05 00 45.6	0.0
LOT	Lotru	0.54	66	⇑iP	Pg	05 00 38.7	+0.1
LOT				S	Sg	05 00 45.6	0.0
HERR	Herculane	0.58	233	⇓iP	Pb	05 00 41.2	+0.2
HERR	Herculane	0.58	233	⇓iP	Pb	05 00 41.2	+0.2
HERR				i S	Sb	05 00 49.1	-0.5
HERR	Herculane	0.58	233	⇓iP	Pb	05 00 41.2	+0.2
HERR				S	Sb	05 00 49.1	-0.5
DEV	Deva	0.66	350	⇑iP	Pg	05 00 41.9	+0.9
DEV	Deva	0.66	350	⇑iP	Pg	05 00 41.9	+0.9
DEV				i S	Sb	05 00 51.0	-1.0
DEV	Deva	0.66	350	⇑iP	Pg	05 00 41.9	+0.9
DEV				S	Sb	05 00 51.0	-1.0
MDVR	Moldovita	1.06	246	⇓iP	Pb	05 00 49.7	+0.5
MDVR	Moldovita	1.06	246	⇓iP	Pb	05 00 49.7	+0.5
MDVR				i S	Sb	05 01 04.0	+0.5
MDVR	Moldovita	1.06	246	⇓iP	Pb	05 00 49.7	+0.5
MDVR				S	Sb	05 01 04.0	+0.5
BZS	Buzias	1.09	291	ePg	Pg	05 00 48.9	-0.4
BZS				eSg	Sg	05 01 02.5	-1.0
BZS	Buzias	1.09	291	⇑iP	Pg	05 00 49.8	+0.5
BZS	Buzias	1.09	291	⇑iP	Pg	05 00 49.8	+0.5
BZS	Buzias	1.09	291	ePg	Pg	05 00 48.9	-0.4
	baz=7.0						
BZS	Buzias	1.09	291	⇑iP	Pg	05 00 49.8	+0.5
BZS				eSg	Sg	05 01 02.5	-1.0
	baz=4.0						
ARR	Arges	1.11	82	⇓iP	Pg	05 00 49.2	-0.4
ARR	Arges	1.11	82	⇓iP	Pg	05 00 49.2	-0.4
ARR	Arges	1.11	82	⇓iP	Pg	05 00 49.2	-0.4
VOIR		1.41	81	⇑iP	Pg	05 00 55.3	0.0
VOIR		1.41	81	⇑iP	Pg	05 00 55.3	0.0
VOIR				i S	Sn	05 01 14.4	+0.5
VOIR		1.41	81	⇑iP	Pg	05 00 55.3	0.0
VOIR				S	Sn	05 01 14.4	+0.5
CJR	Cluj-Napoca	1.53	14	⇓iP	Pb	05 00 56.9	-0.3
CJR	Cluj-Napoca	1.53	14	⇓iP	Pb	05 00 56.9	-0.3
CJR				i S	Sb	05 01 17.0	+0.1
CJR	Cluj-Napoca	1.53	14	⇓iP	Pb	05 00 56.9	-0.3
CJR				S	Sb	05 01 17.0	+0.1
SVIS	Svilajnac	1.64	235	eSn	Sb	05 01 20.2	+0.2
BOVS	Bovan	1.87	212	ePn	Pn	05 01 01.6	+0.6
BOVS				eSn	Sn	05 01 25.2	+0.1
BOVS	Bovan	1.87	212	ePn	Pn	05 01 01.6	+0.6
	baz=2.0						
BOVS				eSn	Sn	05 01 25.2	+0.1
	baz=2.0						
ZAPS	Zavoj	1.98	189	ePg	Pb	05 01 04.8	-0.1
ZAPS				eSg	Sg	05 01 31.9	0.0
MLR	Muntele Rosu	2.04	82	ePg	Pg	05 01 06.6	-0.8
MLR				eSg	Sg	05 01 34.7	+0.8
MLR	Muntele Rosu	2.04	82	ePg	Pg	05 01 06.6	-0.8
	baz=3.0						
MLR				eSg	Sg	05 01 34.7	+0.8
	baz=3.0						
TRUS	Trudelj	2.15	243	ePg	Pb	05 01 06.8	-0.9
GRUS	Gruza	2.15	232	ePn	Pn	05 01 04.9	0.0
GRUS				eSn	Sn	05 01 31.8	-0.2
GRUS	Gruza	2.15	232	ePn	Pn	05 01 04.9	0.0
	baz=3.0						
GRUS				eSn	Sn	05 01 31.8	-0.2
	baz=2.0						
SELS	Selova	2.45	216	eSg	Sg	05 01 46.6	-0.4
DIVS	Divibare	2.47	244	eSn	Sn	05 01 39.8	-0.2
DIVS	Divibare	2.47	244	eSn	Sn	05 01 39.8	-0.2
	baz=2.0						

IDC 31 05:16:27.1±6.0, **5°.59S**×**147°.55E**, **h198**^{km}±62^{km}, **mb3.2**/2, **mb1 3.3**/4, **mb1mx2.9**/49, **mbtmp3.6**/4, **Error ellipse: s-maj=107.3km s-min=47.5km az=129.0, Eastern New Guinea region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	3.81	186	P	Pn	05 17 28.0	+1.5
	4.3nm,0.3s,baz=23,slow=13,SNR=8.0						
PMG				S	Sn	05 18 12.7	-0.6
	3.9nm,0.3s,baz=202,slow=19,SNR=3.3						
WRA	Warramunga Arr	19.20	221	P	P	05 20 35.8	-0.3
	0.3nm,0.3s,baz=39,slow=11,SNR=22						
ASAR	Alice Springs	22.26	215	P	P	05 21 09.1	+1.0
	0.5nm,0.5s,baz=51,slow=8.6,SNR=4.2						
FITZ	Fitzroy Crossi	24.74	238	P	P	05 21 30.6	0.0
	3.4nm,0.9s,baz=57,slow=12,SNR=4.3						
TORD	Torodi Ar. Bea	145.51	285	PKPbc	PKPdf	05 35 41.6	-1.0
	baz=60,slow=3.5						

KRAR ***31*** *05:18:09.1±0.3, 53°.47N×87°.49E, M2.0, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*

NNC ***31*** *05:18:14.5±2.6, 53°.49N×87°.59E, h0^{km}, mb3.4, mpv3.0, Error ellipse: s-maj=19.5km s-min=10.2km az=65.0, Suspected Mining explosion.*

IDC 31 05:18:14.5±2.5, **53°.46N**×**87°.70E**, **h0**^{km}, **mb1 3.3**/2, **mb1mx3.1**/72, **mbtmp3.3**/2, **ML3.1**/2, **8C-3D, Error ellipse: s-maj=22.1km s-min=14.3km az=64.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA baz=107,slow=338,SNR=2.3	1.78	287	*i*		05 29 54.9	
ZAA0	Zalesovo Array 5.1nm,0.6s	1.78	287	⇑Pg	Pn	05 18 45.1	-1.4
ZAA0	5.1nm,0.4s			⇓Lg	Lg	05 19 10.1	
ZALV	Zalesovo Beam 3.1nm,0.3s,baz=104,slow=14,SNR=30	1.78	287	Pn	Pn	05 18 45.2	-1.3
ZALV	4.3nm,0.3s,baz=109,slow=29,SNR=16			Lg	Lg	05 19 11.1	
KURK	Kurchatov 1.7nm,0.8s	6.23	247	⇑Pn	Pn	05 19 48.0	+0.4
KURK	1.5nm,0.8s			⇓Sn	Sn	05 20 58.1	-1.4
KURK	3.9nm,0.7s			⇑Lg	Lg	05 21 33.5	
KURBB	Kurchatov Arra 0.3nm,0.3s,baz=62,slow=14,SNR=20	6.33	247	Pn	Pn	05 19 49.6	+0.6
KURBB	0.1nm,0.3s,baz=64,slow=24,SNR=3.2			Sn	Sn	05 21 01.2	-0.7
KURBB	0.1nm,0.3s,baz=61,slow=34,SNR=4.3			Lg	Lg	05 21 34.2	
KURBB	Kurchatov Arra 2.8nm,0.4s	6.33	247	⇓Pn	Pn	05 19 49.2	+0.3
KURBB	2.0nm,0.5s			⇑Sn	Sn	05 21 00.9	-1.0
KURBB	4.7nm,0.7s			⇑Lg	Lg	05 21 35.9	
MK31	Makanchi Array 0.1nm,0.3s,baz=28,slow=12,SNR=16	7.52	210	⇑Pn	Pn	05 20 06.0	+0.7
MK31	0.5nm,0.6s,baz=31,slow=26,SNR=3.5			⇑Sn	Sn	05 21 33.0	+1.7
MK31	1.5nm,0.7s			⇑Lg	Lg	05 22 13.4	
MKAR	Makanchi Array 0.4nm,0.3s,baz=28,slow=13,SNR=16	7.52	210	Pn	Pn	05 20 06.6	+1.2
MKAR	0.1nm,0.3s,baz=28,slow=25,SNR=6.3			Sn	Sn	05 21 31.7	+0.4
MKAR	0.1nm,0.3s,baz=31,slow=31,SNR=5.4			Lg	Lg	05 22 14.5	

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*IDC **31** 05:19:49.5±1.6, 56°.19S×147°.75E, h0^{km}, mb3.8/6, mb1 4.0/6, mb1mx3.9/41, mbtmp3.8/6, MS3.5/10, Ms1 3.5/10, ms1mx3.2/37, Error ellipse: s-maj=139.1km s-min=17.7km az=81.0*

ISC 31 05:19:50.9±1.2**, 56°.2S**±0°.2×**147°.9E**±0°.7**, h10^{km}, n22, σ0^{s}.80**/12**, mb3.9**/6**, MS3.4**/9**, West of Macquarie Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RPZ	Rata Peaks comp=Z,192nm,18.5s,baz=234,slow=34	19.31	60	LR	LR	05 30 39.5	
VNDA	Vanda 1.2nm,0.8s,baz=323,slow=12,SNR=6.0	22.01	172	P	P	05 24 44.9	+0.1
VNDA	comp=Z,30nm,18.4s,baz=342,slow=36			LR	LR	05 32 52.2	
STKA	Stephens Creek 2.0nm,0.6s,baz=162,slow=10,SNR=5.8	24.68	347	P	P	05 25 13.1	+1.3
STKA	comp=Z,68nm,18.1s,baz=202,slow=32			LR	LR	05 33 08.6	
URZ	Urewera comp=Z,100nm,18.4s,baz=216,slow=35	26.43	60	LR	LR	05 35 18.5	
H01W1	Cape Leeuwin H baz=143,slow=75,SNR=243	31.30	299	T	T	05 58 45.6	
H01W2	Cape Leeuwin H baz=143,slow=75,SNR=296	31.31	298	T	T	05 58 46.0	
H01W3	Cape Leeuwin H baz=143,slow=75,SNR=155	31.32	299	T	T	05 58 47.3	
NWAO	Narrogin (SRO) comp=Z,40nm,18.6s,baz=194,slow=31	31.44	305	LR	LR	05 35 58.1	
QSPA	South Pole Qui 1.8nm,0.9s,baz=353,slow=8.6,SNR=3.7	33.94	180	P	P	05 26 34.5	+0.5
ASAR	Alice Springs 1.1nm,0.7s,baz=169,slow=9.2,SNR=7.1	34.05	337	P	P	05 26 34.9	-0.3
DZM	Mont Dzumac comp=Z,161nm,18.7s,baz=213,slow=30	36.72	30	LR	LR	05 38 29.5	
WRA	Warramunga Arr 2.2nm,0.8s,baz=158,slow=7.8,SNR=30	37.56	339	P	P	05 27 05.6	+0.3
MAW	Mawson comp=Z,88nm,18.1s,baz=62,slow=35	38.35	218	LR	LR	05 42 08.5	
PMG	Port Moresby comp=Z,58nm,18.1s,baz=233,slow=35	46.64	359	LR	LR	05 46 59.2	
SNAA	Sanae 0.6nm,0.6s,baz=178,slow=6.0,SNR=5.0	50.81	192	P	P	05 28 51.0	+0.1
SNAA	comp=Z,89nm,19.0s,baz=170,slow=36			LR	LR	05 50 16.0	
LEM	Lembang comp=Z,23nm,18.3s,baz=224,slow=36	58.55	311	LR	LR	05 54 51.7	
MKAR	Makanchi Array 0.1nm,0.4s,baz=122,slow=1.9,SNR=3.4	116.33	316	PKP	PKPdf	05 38 33.1	-0.5
KURBB	Kurchatov Arra 0.3nm,0.7s,baz=135,slow=2.4,SNR=2.9	120.89	316	PKP	PKPdf	05 38 40.9	-1.3
YKA	Yellowknife Ar 0.6nm,0.8s,baz=217,slow=3.7,SNR=3.5	140.18	46	PKP	PKPdf	05 39 17.9	-0.3
FINES	FINESS Array B 1.7nm,0.7s,baz=127,slow=3.7,SNR=5.5	150.30	305	PKPbc	PKPbc	05 39 41.2	+0.4
GERES	GERESS Array B 0.4nm,0.3s,baz=102,slow=3.2,SNR=5.9	151.62	275	PKPbc	PKPbc	05 39 43.8	-0.7
ARCES	ARCESS Array B 2.4nm,0.6s,baz=116,slow=2.1,SNR=15	151.80	321	PKPbc	PKPbc	05 39 43.2	-0.9

WEL 31 05:23:54.3, 38°S±15°×**18°0W**±1°0**, h33^{km}, ML3.5**/17**, East of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WMGZ	Waiomatatini S	1.47	268	P	Pn	05 24 18.9	+0.4
MXZ	Matakaoa Point	1.57	278	P	Pn	05 24 20.3	+0.5
MXZ				S	Sn	05 24 39.0	-0.1
PUZ	Puketiti	1.61	259	P	Pn	05 24 21.3	+0.8
PUZ				S	Sn	05 24 40.8	+0.6
PKGZ	Pakihiroa	1.73	266	P	Pn	05 24 22.5	+0.3
CNGZ	Carnagh Statio	1.77	246	P	Pb	05 24 24.5	-1.6
TWGZ	Tauwhareparae	1.85	257	P	Pn	05 24 24.9	+1.1
HAZ	Te Kaha	1.97	270	P	Pn	05 24 26.3	+1.0
HAZ				S	Sn	05 24 48.1	-0.8
TKGZ	Te Karaka	2.01	250	P	Pn	05 24 27.4	+1.4
TKGZ				S	Sn	05 24 51.2	+1.2
RUGZ	Raukumara Rang	2.06	264	P	Pn	05 24 27.3	+0.6
PRGZ	Paritu Road	2.19	238	P	Pb	05 24 31.4	-1.9
MWZ	Matawai	2.23	255	P	Pn	05 24 29.4	+0.5
MWZ				S	Sn	05 24 55.5	+0.1
MHGZ	Mahia Peninsul	2.30	233	P	Pn	05 24 31.8	+1.9
RAGZ	Rawiri	2.35	252	P	Pn	05 24 31.9	+1.1
RAGZ				S	Sn	05 24 59.0	+0.5
KNZ	Kokohu	2.38	238	P	Pn	05 24 32.4	+1.4
URZ	Urewera	2.54	258	P	Pn	05 24 34.6	+1.5
URZ				S	Sn	05 25 03.2	+0.3
RTZ	Ruatahuna	2.72	251	P	Pn	05 24 37.5	+1.8
RAHZ	Arahi	2.74	245	P	Pn	05 24 37.7	+1.7
MTHZ	Maungataniwha	2.90	247	P	Pn	05 24 39.6	+1.5
NMHZ	Naumai	3.01	243	P	Pn	05 24 41.9	+2.1
BKZ	Black Stump Fm	3.27	244	P	Pn	05 24 44.7	+1.4
BHHZ	Black Hill Sta	3.70	241	P	Pn	05 24 50.5	+1.2
MRZ	Mangatainoka R	4.63	230	P	Pn	05 25 02.0	0.0

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*IDC **31** 05:32:15.4±0.7, 31°.62S×179°.59E, h456^{km}±7^{km}, mb3.5/10, mb1 3.7/13, mb1mx3.4/52, mbtmp4.4/13, Error ellipse: s-maj=14.7km s-min=10.8km az=131.0*

*ISCJB **31** 05:32:16.1±0.3, 31°.57S±0°.04×179°.72E±0°.09, h451^{km}, mb3.8/10, Error ellipse: s-maj=10.5km s-min=4.3km az=19.2*

*WEL **31** 05:32:19.6±0.9, 32°S±5°×18°0W±1°2, h420^{km}±14^{km}*

ISC 31 05:32:15.2±0.5**, 31°.60S**±0°.07×**179°.73E**±0°.09**, h451^{km}, n75, σ2^{s}.40**/90**, mb3.9**/10**, Kermadec Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	Green Lake	3.09	42	P	P	05 33 23.5	+0.4
GLKZ				S	S	05 34 18.8	+0.7
RIZ	Raoul Island	3.10	41	P	P	05 33 24.7	+1.6
RAO	Raoul Island 142nm,0.3s,baz=307,slow=20,SNR=6.4	3.10	41	P	P	05 33 24.6	+1.5
RAO	295nm,0.3s,baz=239,slow=19,SNR=3.1			S	S	05 34 20.1	+1.9
GRZ	Great Barrier	5.84	216	P	P	05 33 51.6	+3.8
GRZ				P	P	05 33 51.5	+3.8
MXZ	Matakaoa Point	6.06	191	P	P	05 33 52.9	+3.0
KUZ	Kuaotunu	6.11	212	P	P	05 33 54.7	+4.2
WCZ	Waipu Caves	6.23	225	P	P	05 33 55.3	+3.5
OUZ	Omahuta	6.27	233	P	P	05 33 55.7	+3.5
WMGZ	Waiomatatini S	6.29	190	P	P	05 33 54.4	+2.0
WMGZ				S	S	05 35 12.7	+0.7
HAZ	Te Kaha	6.34	194	P	P	05 33 55.5	+2.6
HAZ				S	S	05 35 13.1	+0.3
PKGZ	Pakihiroa	6.42	192	P	P	05 33 56.6	+2.8
PKGZ				S	S	05 35 14.2	-0.2
WIAZ	Waiheke Island	6.43	215	P	P	05 33 58.0	+4.2
ABAZ	Army Bay	6.43	218	P	P	05 33 58.5	+4.7
MTAZ	Motutapu	6.54	216	P	P	05 33 59.3	+4.4
PUZ	Puketiti	6.57	190	P	P	05 33 57.8	+2.6
PUZ				S	S	05 35 15.5	-1.7
RUGZ	Raukumara Rang	6.57	194	P	P	05 33 57.2	+1.9
RUGZ				S	S	05 35 17.3	-0.1
ETAZ	East Tamaki Re	6.65	215	P	P	05 34 00.6	+4.4
MKAZ	Moumakai	6.66	213	P	P	05 34 00.4	+4.2
HBAZ	Herne Bay Bore	6.67	217	P	P	05 34 00.4	+4.0
EPAZ	Eden Park BICE	6.69	217	P	P	05 34 01.1	+4.6
RVAZ	Riverhead Bore	6.69	218	P	P	05 34 00.5	+4.0
TWGZ	Tauwhareparae	6.71	192	P	P	05 33 59.5	+2.7
TWGZ				S	S	05 35 22.2	+2.2
OPRZ	Ohinepanea	6.75	202	P	P	05 34 01.2	+4.1
KBAZ	Karaka Road Bo	6.79	215	P	P	05 34 02.3	+4.8
AWAZ	Awhitu Peninsu	6.88	216	P	P	05 34 02.6	+4.0
MWZ	Matawai	6.95	194	P	P	05 34 00.1	+0.8
KMRZ	Kaimai	6.96	206	P	P	05 34 04.5	+5.1
CNGZ	Carnagh Statio	6.98	190	P	P	05 34 02.8	+3.3
URZ	Urewera 31nm,0.3s,baz=179,slow=0.4,SNR=75	6.98	197	P	P	05 34 00.3	+0.8
URZ	5.1nm,0.3s,baz=237,slow=22,SNR=9.9			S	S	05 35 22.9	-2.2
URZ	Urewera	6.98	197	P	P	05 34 00.3	+0.8
URZ				S	S	05 35 22.8	-2.3
TKGZ	Te Karaka	6.99	192	P	P	05 34 02.5	+2.8
OMRZ	Omania	7.05	202	P	P	05 34 04.5	+4.2
RAGZ	Rawiri	7.13	195	P	P	05 34 02.3	+1.1
RTZ	Ruatahuna	7.35	197	P	P	05 34 05.3	+1.8
SNGZ	Shannon Statio	7.42	195	P	P	05 34 06.7	+2.4
PRGZ	Paritu Road	7.46	191	P	P	05 34 08.6	+4.0
KNZ	Kokohu	7.59	192	P	P	05 34 08.3	+2.3
MTHZ	Maungataniwha	7.61	197	P	P	05 34 07.5	+1.2
RAHZ	Arahi	7.61	196	P	P	05 34 08.3	+2.0
NMHZ	Naumai	7.85	197	P	P	05 34 09.6	+0.7
HIZ	Hauiti	7.97	209	P	P	05 34 14.5	+4.4
BKZ	Black Stump Fm	8.00	198	P	P	05 34 11.1	+0.7
WTVZ	West Tongariro	8.22	203	P	P	05 34 14.7	+1.7
TWVZ	Taurewa	8.23	204	P	P	05 34 14.8	+1.7
KWHZ	Kaweka Forest	8.26	198	P	P	05 34 14.5	+1.2
NGZ	Ngauruhoe	8.27	203	P	P	05 34 14.5	+0.9
FWVZ	Far West T-bar	8.36	203	P	P	05 34 15.5	+0.9
WHVZ	Whangaehu Hut	8.37	203	P	P	05 34 16.8	+2.1
MOVZ	Moawhango	8.43	202	P	P	05 34 16.1	+0.9
PKVZ	Pokaka	8.46	204	P	P	05 34 17.0	+1.5
VRZ	Vera Road	8.53	207	P	P	05 34 18.8	+2.6
DZM	Mont Dzumac 0.4nm,0.3s,baz=125,slow=16,SNR=3.5	15.18	305	P	P	05 35 28.3	-0.2
AFI	Afiamalu 3.7nm,0.3s,baz=234,slow=8.7,SNR=3.9	19.26	26	P	P	05 36 12.3	+2.3
CTA	Charters Tower 3.0nm,0.4s,baz=101,slow=6.0,SNR=5.8	32.11	283	P	P	05 38 03.9	-0.1
STKA	Stephens Creek 3.8nm,0.4s,baz=109,slow=11,SNR=14	32.33	259	P	P	05 38 05.7	+0.1
ASAR	Alice Springs 2.4nm,0.5s,baz=107,slow=7.2,SNR=22	41.12	269	P	P	05 39 17.4	-1.3
ASAR	0.5nm,0.5s,baz=123,slow=3.5,SNR=3.6			PcP	PP	05 41 06.9	+1.1
ASAR	0.4nm,0.7s,baz=96,slow=4.7,SNR=3.8			ScP	ScP	05 44 12.6	-1.5
WRA	Warramunga Arr 5.3nm,0.3s,baz=111,slow=8.1,SNR=138	42.23	275	P	P	05 39 25.9	-1.5
WRA	1.0nm,0.7s,baz=119,slow=3.0,SNR=4.3			PcP	PcP	05 41 10.3	-1.2
WRA	1.1nm,0.9s,baz=110,slow=4.2,SNR=3.8			ScP	ScP	05 44 17.6	-1.0
FITZ	Fitzroy Crossi 3.0nm,0.5s,baz=148,slow=4.9,SNR=14	50.43	272	P	P	05 40 28.4	-1.7
QSPA	South Pole Qui 1.6nm,0.7s,baz=312,slow=11,SNR=5.5	58.51	180	P	P	05 41 27.4	+0.8
SNAA	Sanae 0.8nm,0.7s,baz=184,slow=13,SNR=4.1	77.00	179	P	P	05 43 20.9	+1.0
KSRS	Korea Array 1.1nm,0.6s,baz=143,slow=5.7,SNR=5.0	84.03	321	P	P	05 43 57.1	+0.1
PETK	Petropavlovsk- 2.8nm,0.6s,baz=163,slow=6.0	86.51	347	P	P	05 44 08.7	0.0
NVAR	Mina Array Bea 0.5nm,0.7s,baz=217,slow=7.2,SNR=4.5	90.45	44	P	P	05 44 29.1	+1.3
KURBB	Kurchatov Arra 1.8nm,1.0s,baz=112,slow=2.0,SNR=5.3	120.50	314	PKP	PKPdf	05 50 12.2	-1.9
BVAR	Borovoye Array 0.8nm,0.5s,baz=90,slow=1.4,SNR=5.2	125.90	315	PKP	PKPdf	05 50 23.9	-0.5
ARCES	ARCESS Array B 2.1nm,1.0s,baz=336,slow=2.7,SNR=5.3	139.32	346	PKP	PKPdf	05 50 48.8	-0.3
KBZ	Khabaz 4.1nm,0.9s,baz=334,slow=1.7,SNR=5.6	144.13	302	PKP	PKPbc	05 50 56.5	-1.1
FINES	FINESS Array B 5.2nm,0.5s,baz=46,slow=4.7,SNR=35	145.56	338	PKPbc	PKPdf	05 51 00.6	+0.3
NB2	NORSAR Subarra comp=Z,0.7nm,0.5s,baz=15,slow=4.3	149.60	349	PKP	PKPbc	05 51 11.3	-0.8
NOA	NORSAR Array B comp=Z,0.8nm,0.5s,baz=15,slow=4.1,SNR=5.2	149.60	349	PKPbc	PKPbc	05 51 11.3	-0.8
NOA	comp=Z,1.3nm,0.7s,baz=24,slow=3.4,SNR=5.4			PKPab	PKPab	05 51 18.1	-1.0
MMAI	Mount Meron Ar comp=Z,0.9nm,0.3s,baz=160,slow=4.6,SNR=4.7	149.90	282	PKPbc	PKPbc	05 51 14.2	+0.3
HFS	Hagfors comp=Z,2.8nm,0.8s,baz=64,slow=3.4,SNR=4.6	149.99	346	PKPbc	PKPbc	05 51 11.2	-1.8
HFS	comp=Z,1.8nm,0.6s,baz=56,slow=2.6,SNR=7.1			PKPab	PKPab	05 51 18.8	-1.9
AKASG	Malin Array Be comp=Z,1.0nm,0.5s,baz=50,slow=1.5,SNR=5.6	151.01	320	PKPbc	PKPbc	05 51 14.2	-1.6
BRTR	Keskin Array B comp=Z,1.4nm,0.7s,baz=124,slow=2.2,SNR=6.0	151.41	296	PKPbc	PKPbc	05 51 16.4	-0.8
BRTR	comp=Z,1.3nm,0.7s,baz=108,slow=4.0,SNR=5.2			PKPab	PKPab	05 51 26.6	-1.0
TORD	Torodi Ar. Bea baz=186,slow=3.0	161.54	186	PKPab	PKPab	05 52 08.4	-3.0

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*NIED **31** 05:40:00, 35°.60N×142°.70E, h8^{km}, Mw3.8 Best double couple: M$_0$5.94000×10^{14} NP1:φ$_s$173.00000°, δ45.00000°, λ-101.00000°. NP2:φ$_s$8.00000°, δ46.00000°, λ-80.00000°.*

*IDC **31** 05:40:48.8±0.8, 35°.45N×142°.67E, h0^{km}, mb3.7/10, mb1 3.9/14, mb1mx3.7/71, mbtmp3.7/14, ML3.5/4, MS2.5/3, Ms1 2.5/3, ms1mx2.2/61, Error ellipse: s-maj=17.9km s-min=17.7km az=90.0*

*JMA **31** 05:40:51.8±0.2, 35°.58N×142°.71E, h64^{km}, M3.9*

*ISCJB **31** 05:40:53.9±0.6, 35°.49N±0°.05×142°.54E±0°.06, h56^{km}, mb3.8/10, Error ellipse: s-maj=7.1km s-min=6.6km az=176.9*

ISC 31 05:40:55.8±0.7**, 35°.57N**±0°.06×**142°.61E**±0°.07**, h56^{km}, n26, σ2^{s}.09**/33**, mb3.8**/10**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CHOJ	Chosi	1.43	276	P	Pn	05 41 17.4	-2.0
CHOJ				S	Sn	05 41 35.9	-1.3
BSO1	Boso 1	1.62	236	P	Pn	05 41 19.1	-2.4
BSO1				S	Sn	05 41 40.3	-0.6
JHYU	Hitachinakayam	1.81	296	P	Pn	05 41 22.5	-2.1
JHYU				S	Sn	05 41 44.7	-1.8
BSO3	Boso 3	1.88	247	P	Pn	05 41 24.1	-1.2
JHO	Hitachi	1.95	303	P	Pn	05 41 23.6	-2.9
JFK	Kawauchi	2.28	323	P	Pn	05 41 28.1	-2.9
JFT	Otama	2.67	317	P	Pn	05 41 34.4	-2.0
JAG	Ashikaga	2.70	289	P	Pn	05 41 34.7	-2.0
JOD2	Odawara 2	2.89	265	P	Pn	05 41 37.6	-1.8
JHJ	Hachijo jima 2 13nm,0.3s,baz=357,slow=19,SNR=11	3.38	225	Pn	Pn	05 41 43.0	-3.0
JHJ	217nm,0.3s,baz=103,slow=22,SNR=16			Sn	Sn	05 42 21.2	-3.7
MJAR	Matsushiro Arr 2.8nm,0.3s,baz=93,slow=11,SNR=10	3.70	287	Pn	Pn	05 41 48.9	-1.4
MJAR	3.6nm,0.3s,baz=238,slow=8.7,SNR=1.9			Sn	Sn	05 42 33.6	+0.9
MJAR	comp=Z,54nm,20.6s,baz=105,slow=44			LR	LR	05 43 32.4	
MAT	Matsushiro	3.70	287	P	Pn	05 41 50.1	-0.3
MAT				*e*S	Sn	05 42 32.9	+0.2
ASAJ	Asahikawa 0.8nm,0.3s,baz=209,slow=13,SNR=3.0	8.54	360	Pn	Pn	05 42 53.5	-3.1
ASAJ	1.2nm,0.3s,baz=35,slow=15,SNR=6.1			Sn	Sn	05 44 26.1	-5.3
JNU	Nakatsue comp=Z,63nm,18.7s,baz=234,slow=41	10.00	259	LR	LR	05 47 37.5	
KSRS	Korea Array 0.3nm,0.3s,baz=92,slow=14,SNR=4.3	11.97	283	Pn	Pn	05 43 41.5	-2.0
KSRS	comp=Z,12nm,20.8s,baz=141,slow=32			LR	LR	05 47 10.4	
SONM	Songino Array 0.5nm,0.5s,baz=108,slow=9.3,SNR=3.0	29.41	306	P	P	05 46 55.5	+1.6
ZALV	Zalesovo Beam 0.9nm,0.5s,baz=101,slow=7.5,SNR=2.8	43.62	314	P	P	05 48 55.6	+1.2
MKAR	Makanchi Array 0.8nm,0.6s,baz=80,slow=9.2,SNR=7.0	45.72	304	P	P	05 49 12.5	+1.2
MKAR	0.5nm,0.8s,baz=79,slow=3.1,SNR=3.0			PcP	PcP	05 50 49.9	+1.6
KURBB	Kurchatov Arra 0.5nm,0.4s,baz=85,slow=7.6,SNR=8.1	47.67	309	P	P	05 49 27.0	+0.6
ILAR	Eielson Array 0.5nm,0.7s,baz=257,slow=6.5,SNR=6.1	50.22	32	P	P	05 49 46.4	+0.7
WRA	Warramunga Arr 1.7nm,0.8s,baz=8.3,slow=7.6,SNR=13	55.76	189	P	P	05 50 26.0	-0.9
ASAR	Alice Springs 0.5nm,0.7s,baz=14,slow=7.8,SNR=5.0	59.48	189	P	P	05 50 52.9	-0.2
AKTO	Aktyubinsk 0.4nm,0.3s,baz=69,slow=8.6,SNR=2.8	60.38	313	P	P	05 50 59.6	+0.7
NVAR	Mina Array Bea 0.4nm,0.7s,baz=293,slow=6.0,SNR=4.6	75.09	53	P	P	05 52 33.3	+1.2
TXAR	Lajitas Array 0.2nm,0.5s,baz=256,slow=3.6,SNR=3.2	90.24	53	P	P	05 53 52.0	+1.3
LPAZ	La Paz 0.5nm,0.5s,baz=325,slow=3.4,SNR=4.7	146.55	63	PKPbc	PKPbc	06 00 33.0	+0.9

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*CSEM **31** 05:44:11.6, 36°.77N×24°.31W, h10^{km}, ML2.0*

PDA 31 05:44:11.6±0.4**, 36°.77N×24°.31W, h10^{km}, MD3.7, ML2.0, Error ellipse: s-maj=3.7km s-min=2.5km az=87.0, Azores Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSMN	Pico do Norte,	0.64	291	*e*P	Pg	05 44 22.0	-2.1
PSMN				*e*S	Sg	05 44 29.9	-2.6
PSMN	18nm,0.1s			A	A	05 44 30.6	
PSMN	Pico do Norte,	0.64	291	*e*P	Pg	05 44 22.0	-2.1
PSMN				*e*S	Sg	05 44 29.9	-2.6
PSMA	Santa Maria	0.69	289	*e*P	Pg	05 44 22.7	-2.2
PSMA				*e*S	Sg	05 44 31.0	-3.0
PSMA	38nm,0.2s			A	A	05 44 32.8	
BART	Pico Bartolome	1.21	326	*e*S	Sb	05 44 43.7	-6.7
BART	8.9nm,0.1s			A	A	05 44 44.2	
BART	Pico Bartolome	1.21	326	*e*S	Sb	05 44 43.7	-6.7
GRON	Grota Negra	1.39	316	*e*P	Pn	05 44 31.4	-5.7
GRON				*e*S	Sb	05 44 46.3	-9.2
GRON	5.4nm,0.2s			A	A	05 44 49.1	
PDA	Ponta Delgada	1.45	312	*e*P	Pn	05 44 33.2	-4.7
PDA				*e*S	Sn	05 44 49.4	-7.5
PDA	7.6nm,0.1s			A	A	05 44 50.2	
PDA	Ponta Delgada	1.45	312	*e*P	Pn	05 44 33.2	-4.7
PDA				*e*S	Sn	05 44 49.4	-7.5
PSET	Sete Cidades	1.54	313	*e*S	Sn	05 44 51.7	-7.4
PSET	13nm,0.2s			A	A	05 44 55.0	
PSET	Sete Cidades	1.54	313	*e*S	Sn	05 44 51.7	-7.4

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*SOME **31** 05:53:56.4, 49°.50N×83°.73E, h0^{km}*

*NNC **31** 05:54:00.6±2.8, 49°.61N×83°.42E, h0^{km}, mb3.1, mpv2.8, Error ellipse: s-maj=33.1km s-min=10.5km az=63.0, Suspected Mining explosion.*

ISC 31 05:53:56.7±2.7**, 49°.9N**±0°.2×**83°.9E**±0°.2**, h0^{km}, n6, σ1^{s}.13**/10**, 4C-6D, Eastern Kazakhstan**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SEM	Semipalatinsk 7.0nm,0.3s	2.38	284	*e*P	Pg	05 54 42.5	+0.2
SEM	17nm,0.1s			*e*S	Sg	05 55 14.9	+1.9
ZSN	Zaisan 3.6nm,0.3s	2.53	164	*e*P	Pn	05 54 39.6	+0.6
ZSN	13nm,0.4s			*e*S	Sn	05 55 10.7	+0.2
MK31	Makanchi Array 3.4nm,0.7s,baz=23,slow=13,SNR=53	3.26	199	⇑Pn	Pn	05 54 48.7	-0.4
MK31	4.4nm,0.4s,baz=23,slow=27,SNR=21			⇓Lg	Lg	05 55 31.2	
MAKZ	Makanchi 3.3nm,0.5s	3.32	203	⇓Pn	Pn	05 54 49.7	-0.2
MAKZ	5.2nm,0.5s			⇑Lg	Lg	05 55 33.0	
KURK	Kurchatov 2.5nm,1.4s	3.46	286	⇑Pn	Pn	05 54 51.9	+0.2
KURK	1.1nm,0.3s			⇓Pg	Pg	05 55 01.9	-1.0
KURK	7.1nm,0.6s			⇓Lg	Lg	05 55 44.8	
KURBB	Kurchatov Arra 0.4nm,0.3s	3.49	284	⇑Pn	Pn	05 54 52.1	-0.1
KURBB	1.3nm,0.3s			⇓Pg	Pg	05 55 01.8	-1.9
KURBB	8.4nm,0.4s			⇓Lg	Lg	05 55 46.3	

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*IDC **31** 05:55:18.1±2.0, 13°.89N×59°.92W, h0^{km}, mb3.6/6, mb1 4.0/8, mb1mx3.6/58, mbtmp3.7/8, ML4.4/3, MS2.5/1, Ms1 2.5/1, ms1mx2.1/41, Error ellipse: s-maj=39.8km s-min=28.3km az=87.0*

*NEIC **31** 05:55:23.8±0.0, 13°.94N×60°.34W, h16^{km}, MD4.0(TRN), After TRN.*

*TRN **31** 05:55:24.0, 13°.96N×60°.34W, h20^{km}, MD4.0*

ISC 31 05:55:23.9±1.1**, 13°.99N**±0°.02×**60°.32W**±0°.03**, h19^{km}**±3^{km}**, n94, σ1^{s}.49**/123**, mb3.7**/6**, 16C-3D, Windward Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SLW	Petit Monier	0.60	273	⇑*e*P	Pn	05 55 38.2	+0.6
H05S1	Guadeloupe/Mar	0.67	311	Pn	Pn	05 55 39.0	+0.6
H05S1				Sn	Sn	05 55 48.5	+0.1
SLB	Belfond	0.72	258	*e*P	Pn	05 55 39.7	+0.4
SLB				*e*S	Sn	05 55 50.6	+0.8
SLB	Belfond	0.72	258	*e*P	Pn	05 55 39.7	+0.4
SLB				*e*S	Sn	05 55 50.6	+0.8
MVM	Montagne Vaucl	0.80	315	⇓*i*P	Pn	05 55 40.8	+0.5
LPMF	Morne Lapointe	0.86	313	⇓*i*P	Pn	05 55 41.8	+0.7
TRMF	Trois Ilets	0.90	308	⇑*e*P	Pn	05 55 42.4	+0.8
BIM	Bigot	0.90	306	⇑*i*P	Pn	05 55 42.5	+0.7
BIM				*e*S	Sn	05 55 55.4	+1.1
ZAM	Aeronautique	0.90	310	⇑*i*P	Pn	05 55 42.5	+0.8
SVCV	St. Vincent, C	1.07	229	*e*P	Pb	05 55 44.0	+0.1
SVCV				*e*S	Sn	05 55 59.1	+0.7
SSV	Crater Summit	1.07	233	*e*P	Pb	05 55 44.1	+0.1
SSV	Crater Summit	1.07	233	*e*P	Pb	05 55 44.1	+0.1
FDF	Fort de France	1.10	313	*e*P	Pg	05 55 44.9	-0.4
FDF				*e*S	Sn	05 56 00.7	+1.6
FDF	Fort de France	1.10	313	*e*P	Pg	05 55 44.9	-0.4
FDF				*e*S	Sn	05 56 00.7	+1.6
SVV	Soufriere Volc	1.10	233	*e*P	Pb	05 55 44.5	+0.1
SVV				*e*S	Sn	05 56 01.0	+2.0
SVV	Soufriere Volc	1.10	233	*e*P	Pb	05 55 44.5	+0.1
SVV				*e*S	Sn	05 56 01.0	+2.0
BBGH	Gun Hill	1.11	139	*e*P	Pg	05 55 45.8	+0.2
BBGH				*e*S	Sn	05 56 01.3	+1.8
BBGH	Gun Hill	1.11	139	*e*	Pb	05 55 43.3	-1.4
BBGH	Gun Hill	1.11	139	*e*P	Pg	05 55 45.8	+0.2
BBGH				*e*S	Sn	05 56 01.3	+1.8
GBMF	Grand Be	1.15	315	⇑*e*P	Pg	05 55 46.0	-0.3
SVB	Belmont	1.15	232	*e*P	Pn	05 55 45.2	0.0
SVB				*e*S	Sg	05 56 01.8	+0.3
SVB	Belmont	1.15	232	*e*P	Pn	05 55 45.2	0.0
SVB				*e*S	Sg	05 56 01.8	+0.3
BAMF	Morne Balai	1.15	316	⇑*e*P	Pg	05 55 46.1	-0.3
PML	Morne Lenard	1.15	313	⇑*e*P	Pg	05 55 46.1	-0.2
CXM	Morne La Croix	1.16	315	⇑*e*P	Pg	05 55 46.3	-0.2
CXM				*e*S	Sg	05 56 02.4	+0.6
SVN	Savane Anatole	1.19	316	*e*P	Pg	05 55 46.5	-0.4
PCM	Pelee Case Pet	1.20	314	*e*P	Pn	05 55 45.7	0.0
PCM	Pelee Case Pet	1.20	314	⇑*i*P	Pg	05 55 46.8	-0.4
BBSP	Saint Philip	1.21	136	*e*P	Pg	05 55 47.7	+0.3
BBSP	Saint Philip	1.21	136	*e*P	Pg	05 55 47.7	+0.3

DLPL	La Plaine	1.61	326	eP	Pb	05 55 52.6	-0.6
DLPL				eS	Sg	05 56 15.1	-1.0
DLPL	La Plaine	1.61	326	eP	Pb	05 55 52.6	-0.6
DLPL				eS	Sb	05 56 13.9	+0.7
BBL	Barber's Block	1.90	324	⇑iP	Pn	05 55 56.5	+1.2
MDPO	Dominica; Chan	1.93	325	eP	Pn	05 55 56.9	+1.1
MDPO				eS	Sb	05 56 21.8	-0.4
GRSS	Sisters	2.10	217	eP	Pn	05 55 59.6	+1.5
GRSS				eS	Sn	05 56 25.8	+2.0
GRSS	Sisters	2.10	217	eP	Pn	05 55 59.6	+1.5
GRSS				eS	Sn	05 56 24.3	+0.5
MGG	Marie-Galante	2.15	333	⇓iP	Pn	05 55 59.2	+0.3
GRHS	Sauteurs	2.17	217	eP	Pn	05 56 00.6	+1.4
GRHS				eS	Sn	05 56 26.7	+1.1
GRHS	Sauteurs	2.17	217	eP	Pn	05 56 00.6	+1.4
GRHS				eS	Sn	05 56 26.7	+1.1
GRGR	Grenville	2.26	215	eP	Pn	05 56 01.1	+0.8
GRGR				eS	Sn	05 56 28.2	+0.5
GRGR	Grenville	2.26	215	eP	Pn	05 56 01.1	+0.8
GRGR				eS	Sn	05 56 28.2	+0.5
TBG	Guadaloupe-3	2.26	325	⇑eP	Pn	05 56 01.5	+1.2
PHG	Guadaloupe-2	2.39	328	⇑eP	Pn	05 56 03.6	+1.3
DOG	Dongo Capester	2.39	328	⇑eP	Pn	05 56 03.4	+1.2
HMG	Houelmont	2.39	326	eP	Pn	05 56 04.4	+2.2
ECG	Echelle	2.42	328	eP	Pn	05 56 03.9	+1.2
TAG	Tarade	2.42	328	⇑eP	Pn	05 56 04.2	+1.5
TAG				eS	Sn	05 56 32.8	+0.8
H05N1	Guadeloupe/Mar	2.42	343	Pn	Pn	05 56 02.6	0.0
H05N1				Sn	Sn	05 56 30.0	-1.9
	SNR=978						
BCG	Bois Riant Cap	2.44	329	⇑iP	Pn	05 56 04.0	+1.2
MLG	Mont-d'or	2.46	327	eP	Pn	05 56 04.4	+1.1
SEG	Port Louis	2.66	335	⇑eP	Pn	05 56 07.1	+1.2
TOSP	Speyside	2.68	185	eP	Pn	05 56 06.6	+0.4
TOSP				eS	Sn	05 56 38.4	+0.3
TOSP	Speyside	2.68	185	eP	Pn	05 56 07.1	+1.0
TOSP				eS	Sn	05 56 38.4	+0.3
MLYT	Lee's Yard	3.27	327	eP	Pn	05 56 16.7	+2.5
MLYT				eS	Sn	05 56 53.5	+0.8
BPA	Boggy Peak	3.39	334	eP	Pn	05 56 18.8	+2.9
BPA	Boggy Peak	3.39	334	eP	Pn	05 56 18.5	+2.6
TRN	Trinidad (W)	3.48	198	eP	Pn	05 56 17.7	+0.5
TRN				eS	Sn	05 56 58.4	+0.4
TRN	Trinidad (W)	3.48	198	eP	Pn	05 56 17.7	+0.5
TRN	Trinidad (W)	3.48	198	e	Sn	05 56 56.0	-1.9
TRN				eS	Sn	05 56 58.4	+0.4
TBH	Brigand Hill	3.56	192	eP	Pn	05 56 19.0	+0.8
TBH	Brigand Hill	3.56	192	eP	Pn	05 56 19.0	+0.8
NEV	Hard Times	3.81	326	eP	Pn	05 56 24.8	+3.1
NEV	Hard Times	3.81	326	eP	Pn	05 56 24.8	+3.1
NVRH	Round Hill, Ne	3.87	326	eP	Pn	05 56 24.9	+2.4
ANWB	Willy Bob	3.92	339	eP	Pn	05 56 25.9	+2.6
ANWB				eS	Sn	05 57 10.9	+2.1
ANWB	Willy Bob	3.92	339	eP	Pn	05 56 25.9	+2.6
ANWB	Willy Bob	3.92	339	e	Sn	05 57 07.5	-1.4
ANWB				eS	Sn	05 57 10.9	+2.1
SEUS	St. Eustatius	4.33	324	eP	Pn	05 56 31.2	+2.3
SEUS				eS	Sn	05 57 20.7	+1.8
SEUS	St. Eustatius	4.33	324	eP	Pn	05 56 31.2	+2.3
SABA	Saba	4.58	322	eP	Pn	05 56 34.6	+2.3
SABA				eS	Sn	05 57 26.2	+1.1
SABA	Saba	4.58	322	eP	Pn	05 56 34.6	+2.3
SMRT	St. Maarten	4.83	327	eP	Pn	05 56 37.2	+1.4
SMRT	St. Maarten	4.83	327	eS	Sn	05 57 31.7	+0.4
PCRV	Puerto La Cruz	5.67	229	Pn	Pn	05 56 47.8	+0.4
	1.8nm,0.3s,baz=38,slow=1.8,SNR=40						
PCRV				Sn	Sn	05 57 47.9	-4.2
	0.6nm,0.3s,baz=101,slow=10,SNR=1.9						
SJG	San Juan	6.95	307	Pn	Pn	05 57 06.8	+2.0
	35nm,0.3s,baz=225,slow=22,SNR=82						
SJG				Sn	Sn	05 58 21.2	-2.2
	2.6nm,0.3s,baz=13,slow=13,SNR=2.8						
SJG				LR	LR	05 59 50.1	
	comp=Z,36nm,20.1s,baz=103,slow=37						
OCAC	Ocana	13.97	247	eP	P	05 58 51.1	+1.9
PTGA	Pitinga	14.63	179	Pn	Pn	05 58 43.8	-6.3
	1.7nm,0.3s,baz=4.3,slow=21,SNR=20						
PTGA				Sn	Sn	06 01 17.6	-14
	0.7nm,0.3s,baz=77,slow=21,SNR=9.3						
RUSC	La Rusia	14.92	239	eP	P	05 59 04.5	+4.4
PTBC	PUERTO BERRIO,	15.75	243	eP	P	05 59 08.0	-0.9
SJAC	San Juan de Ar	17.16	233	eP	P	05 59 27.5	+2.9
PRAC	Prado	17.63	236	eP	Pn	05 59 29.1	+0.2
YOTC	Yotoco, Valle	18.68	239	eP	P	05 59 36.9	-4.4
TXAR	Lajitas Array	42.83	298	P	P	06 03 20.6	-0.5
	0.2nm,0.5s,baz=128,slow=8.9,SNR=5.3						
ULM	Lac du Bonnet	46.28	329	P	P	06 03 47.0	-1.3
	1.1nm,0.4s,baz=119,slow=7.9,SNR=4.8						
H10N3	ASCENSION HYDR	50.37	113	T	T	06 58 02.5	
	baz=295,slow=75,SNR=9.5						
H10N2	ASCENSION HYDR	50.38	113	T	T	06 58 04.9	
	baz=295,slow=75,SNR=7.8						
H10N1	ASCENSION HYDR	50.39	113	T	T	06 58 04.8	
	baz=295,slow=75,SNR=8.4						
H10S3	ASCENSION HYDR	50.71	114	T	T	06 58 32.1	
	baz=296,slow=75,SNR=8.0						
H10S1	ASCENSION HYDR	50.72	114	T	T	06 58 31.4	
	baz=296,slow=75,SNR=8.9						
H10S2	ASCENSION HYDR	50.73	114	T	T	06 58 33.4	
	baz=296,slow=75,SNR=8.5						
PDAR	Pinedale Array	51.01	314	P	P	06 04 24.6	-0.5
	0.5nm,0.6s,baz=113,slow=10,SNR=5.9						
NVAR	Mina Array Bea	56.44	307	P	P	06 05 05.4	+0.5
	0.6nm,0.8s,baz=92,slow=8.9,SNR=4.7						
YKA	Yellowknife Ar	61.59	335	P	P	06 05 39.7	-0.2
	0.4nm,0.6s,baz=110,slow=7.8,SNR=3.4						
ILAR	Eielson Array	76.00	334	P	P	06 07 07.3	-2.4
	0.2nm,0.6s,baz=60,slow=5.3,SNR=3.6						

MEX 31 06:04:55.2±0.8**, 16°.84N×94°.07W, h140**^{km}±11^{km}**, MD3.8, Oaxaca**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGIG		0.91	94	iP	Pn	06 05 17.3	-1.0
TGIG				eS	Sn	06 05 33.6	-2.1
PCIG		1.39	144	eP	Pn	06 05 22.0	-0.9
PCIG				eS	Sn	06 05 42.1	-1.8
CCIG	Comitan	1.94	106	eP	Pn	06 05 27.5	-1.6
CCIG				eS	Sn	06 05 52.6	-2.4
HUIG	Huatulco	2.23	242	eP	Pn	06 05 30.3	-2.2
HUIG				eS	Sn	06 05 59.2	-1.9
TPIG	Tehuac#an	3.51	297	eP	Pn	06 05 48.0	-0.9
TPIG				iS	Sn	06 06 29.1	-1.4

ISCJB ***31*** *06:32:41.7±0.6, 7°.66S±0°.04×129°.85E±0°.06, h50*^{km}*, mb3.6/1, MS2.9/1, Error ellipse: s-maj=8.8km s-min=6.0km az=14.6*

IDC ***31*** *06:32:43.9±2.3, 7°.50S×129°.85E, h94*^{km}*±28*^{km}*, mb3.4/1, mb1 4.0/6, mb1mx3.4/52, mbtmp4.2/6, MS3.0/1, Ms1 3.0/1, ms1mx2.3/32, Error ellipse: s-maj=38.9km s-min=22.5km az=94.0*

DJA ***31*** *06:32:45.7±0.4, 7°S±4°×13°0E±°, h137*^{km}*±21*^{km}*, M4.5/9, mB4.9/2, mb4.3/8, MLv4.6/9, Mw(mB)4.1/2*

ISC 31 06:32:43.2±1.0**, 7°.72S**±0°.07×**129°.88E**±0°.09**, h50**^{km}**, n16, σ1**^{s}**93**/18**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	3.17	0	P	Pn	06 33 31.0	+0.3
AAI	Ambon	4.34	337	P	Pn	06 33 46.1	-0.6
FAKI	Fak Fak	5.32	26	P	Pn	06 33 59.8	-0.3
	37nm,0.5s,0.5nm						
SOEI	Soe	5.91	250	P	Pn	06 34 10.9	+2.5
	51nm,0.6s,0.6nm						
BATI	Baumata	6.62	248	P	Pn	06 34 20.4	+2.3
	14nm,0.3s,baz=294,slow=0.7,SNR=7.5						
BATI				S	Sn	06 35 30.9	-1.5
	20nm,0.3s,baz=192,slow=8.1,SNR=8.6						
BATI	Baumata	6.62	248	P	Pn	06 34 21.7	+3.6
	30nm,0.9s,0.3nm						
SIJI	Sorong	6.94	12	P	Pn	06 34 20.1	-2.2
	2.3nm,0.3s,baz=214,slow=23,SNR=14						
SIJI				S	Sn	06 35 29.3	-11
	2.4nm,0.3s,baz=217,slow=20,SNR=2.8						
SWI	Sorong	6.94	11	P	Pn	06 34 22.1	-0.3
	31nm,0.5s,0.3nm						
RKPI	Ransiki, Papua	7.50	35	P	Pn	06 34 30.6	+0.5
	35nm,0.7s,0.5nm						
EDFI	Ende, Flores	8.18	262	P	Pn	06 34 40.8	+1.4
FITZ	Fitzroy Crossi	11.12	201	P	Pn	06 35 21.5	+2.0
	3.0nm,0.3s,baz=35,slow=12,SNR=68						
FITZ				S	Sn	06 37 19.2	-3.3
	1.8nm,0.3s,baz=174,slow=17,SNR=6.7						
PLAI	Plampang	12.03	264	P	Pn	06 35 31.3	-0.8
WRA	Warramunga Arr	12.90	161	P	Pn	06 35 45.9	+1.9
	1.6nm,0.3s,baz=338,slow=12,SNR=54						
WRA				S	Sn	06 38 05.0	-1.1
	2.5nm,0.3s,baz=333,slow=22,SNR=13						
ASAR	Alice Springs	16.32	167	P	P	06 36 31.5	+0.1
	0.7nm,0.3s,baz=340,slow=11,SNR=18						
ASAR				S	Sn	06 39 28.6	-0.7
	0.6nm,0.3s,baz=358,slow=24,SNR=5.9						
NWAO	Narrogin (SRO)	27.70	203	LR	LR	06 50 12.2	
	comp=Z,28nm,20.1s,baz=308,slow=38						
MKAR	Makanchi Array	68.76	327	P	P	06 43 36.7	-5.3
	0.3nm,0.4s,baz=140,slow=7.6,SNR=6.2						

BJI 31 06:40:44.5, 38°.02N×121°.07E, h8^{km}**, ML3.9**/14**, 1D, Northeastern China**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TIA	Tai'an	3.63	241	Pg	Pb	06 41 48.0	-1.0
TIA				Sg	Sb	06 42 32.5	-0.7
TIA				smax	smax		
	comp=E,95nm,0.9s						
SNY	Shenyang	4.26	26	⇓Pg	Pb	06 42 02.5	+2.8
SNY				Sn	Sn	06 42 34.3	-5.3
SNY				Sg	Sb	06 42 53.3	+2.0
SNY				smax	smax		
	comp=N,580nm,0.6s						
SNY				smax	smax		
	comp=E,460nm,0.8s						
BJI	Beijing	4.31	299	Pn	Pn	06 41 49.0	-1.4
BJI				smax	smax		
	comp=N,150nm,0.6s						
BJI				smax	smax		
	comp=E,110nm,0.5s						
NJ2	Nanjing	6.22	198	ePg	Pg	06 42 41.0	-2.7
NJ2				Sg	Sg	06 43 56.5	-7.9
NJ2				smax	smax		
	comp=N,82nm,0.8s						
NJ2				smax	smax		
	comp=E,91nm,0.7s						
CN2	Changchun	6.66	28	ePg	Pg	06 42 57.0	+5.0
CN2				eSg	Sn	06 43 47.5	+8.9
CN2				smax	smax		
	comp=N,110nm,0.6s						
CN2				smax	smax		
	comp=E,140nm,0.6s						
HHC	Hu-ho-hao-te	7.88	294	eP	Pn	06 42 37.8	-1.7
WMQ	Urumqi	25.76	294	eP	P	06 46 15.5	-0.2

ISCJB ***31*** *06:45:40.7±1.2, 18°.1S±0°.1×168°.6E±0°.2, h69*^{km}*, mb3.9/7, Error ellipse: s-maj=31.5km s-min=12.0km az=18.0*

IDC ***31*** *06:45:40.1±5.6, 17°.94S×168°.78E, h51*^{km}*±49*^{km}*, mb3.8/7, mb1 3.9/7, mb1mx3.6/46, mbtmp4.0/7, ML5.1/1, Error ellipse: s-maj=34.4km s-min=31.8km az=87.0*

ISC 31 06:45:42.0±1.3**, 18°.1S**±0°.1×**168°.7E**±0°.2**, h69**^{km}**, n8, σ1**^{s}**53**/9**, mb4.2**/7**, Vanuatu Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.47	208	P	Pn	06 46 48.3	+1.0
	78nm,0.3s,baz=48,slow=8.7,SNR=763						
DZM				S	Sn	06 47 35.6	-2.5
	81nm,0.3s,baz=312,slow=23,SNR=21						
WRA	Warramunga Arr	32.53	261	P	P	06 52 06.0	-0.7
	0.7nm,0.8s,baz=85,slow=8.9,SNR=8.5						
ASAR	Alice Springs	32.94	254	P	P	06 52 10.4	+0.1
	2.4nm,0.6s,baz=82,slow=8.9,SNR=24						
FITZ	Fitzroy Crossi	40.88	263	P	P	06 53 18.5	+0.8
	2.5nm,0.6s,baz=104,slow=9.3,SNR=5.3						
MJAR	Matsushiro Arr	61.56	332	P	P	06 55 51.8	-0.3
	0.6nm,0.3s,baz=166,slow=8.6,SNR=4.2						
QSPA	South Pole Qui	71.91	180	P	P	06 56 59.0	+1.2
	0.8nm,0.3s,baz=51,slow=4.3,SNR=5.2						
SONM	Songino Array	86.05	323	P	P	06 58 15.9	+0.6
	1.4nm,0.7s,baz=140,slow=6.0,SNR=6.8						
ILAR	Eielson Array	89.33	17	P	P	06 58 28.4	-1.9
	0.2nm,0.6s,baz=231,slow=6.9,SNR=3.1						

ISCJB ***31*** *06:48:23.6±0.5, 38°.67N±0°.02×27°.62E±0°.03, h5*^{km}*±5*^{km}*, Error ellipse: s-maj=4.5km s-min=3.6km az=37.7*

CSEM ***31*** *06:48:23.8±0.1, 38°.68N×27°.62E, h10*^{km}*, ML2.6, Error ellipse: s-maj=2.2km s-min=1.8km az=130.0*

DDA ***31*** *06:48:23.2, 38°.67N×27°.60E, h15*^{km}*, Ml2.6*

ISK ***31*** *06:48:23.6, 38°.63N×27°.64E, h9*^{km}*±1*^{km}*, ML2.0/3*

ISC 31 06:48:23.6±0.9**, 38°.67N**±0°.02×**27°.63E**±0°.02**, h15**^{km}±8^{km}**, n24, σ0**^{s}**29**/46**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AKHS	Akhisar	0.25	35	iP	Pg	06 48 29.1	-0.1
AKHS				iS	Sb	06 48 33.8	-0.4
AKHS	Akhisar	0.25	35	P	Pg	06 48 29.0	-0.1
AKHS				S	Sb	06 48 33.8	-0.4
BLCB	Balcova	0.54	238	PG	Pg	06 48 34.3	-0.1
BLCB				SG	Sb	06 48 42.2	-0.3
BLCB	Balcova	0.54	238	ePg	Pg	06 48 34.3	-0.1
BLCB				eSg	Sb	06 48 42.2	-0.3
STEP	BALIKESIR_Sava	0.71	6	iP	Pg	06 48 37.4	0.0
STEP				iS	Sg	06 48 47.0	+0.2
STEP	BALIKESIR_Sava	0.71	6	P	Pg	06 48 37.4	0.0
STEP				S	Sg	06 48 47.0	+0.2
MANT	Manisa	0.75	104	iP	Pb	06 48 38.9	+0.3
MANT				iS	Sb	06 48 48.9	+0.2
MANT	Manisa	0.75	104	P	Pb	06 48 38.9	+0.3
MANT				S	Sb	06 48 48.9	+0.2
AYDB	Zeytinkoy-Aydi	0.75	164	PG	Pg	06 48 37.9	-0.5
AYDB				SG	Sg	06 48 47.9	-0.4
AYDB	Zeytinkoy-Aydi	0.75	164	ePg	Pg	06 48 37.9	-0.5
AYDB				eSg	Sg	06 48 47.9	-0.4
KULA	Kula-Manisa	0.82	101	PG	Pb	06 48 40.3	+0.6
KULA				SG	Sg	06 48 50.5	0.0
KULA	Kula-Manisa	0.82	101	ePg	Pb	06 48 40.3	+0.6
KULA				eSg	Sg	06 48 50.5	0.0
URLA	Izmir	0.87	249	PG	Pb	06 48 40.5	0.0
URLA				SG	Sb	06 48 52.4	+0.5
URLA	Izmir	0.87	249	ePg	Pb	06 48 40.5	0.0
URLA				eSg	Sb	06 48 52.4	+0.5
DEMI	Demirci	0.93	66	iP	Pn	06 48 42.2	-0.1
DEMI				iS	Sn	06 48 55.1	-0.2
DEMI	Demirci	0.93	66	P	Pn	06 48 42.2	-0.1
DEMI				S	Sn	06 48 55.1	-0.2
AYDN	Tasoluk	1.03	169	iP	Pg	06 48 43.6	0.0
AYDN				iS	Sg	06 48 57.4	+0.4
AYDN	Tasoluk	1.03	169	P	Pg	06 48 43.6	0.0
AYDN				S	Sg	06 48 57.4	+0.4
BALY	Balya	1.07	360	iP	Pb	06 48 43.8	-0.1
BALY				iS	Sb	06 48 57.9	+0.3
BALY	Balya	1.07	360	P	Pb	06 48 43.8	-0.1
BALY				S	Sb	06 48 57.9	+0.3
DURS	Dursunbey	1.14	35	iP	Pb	06 48 44.9	-0.2
DURS				iS	Sb	06 49 00.0	+0.3
DURS	Dursunbey	1.14	35	P	Pb	06 48 44.9	-0.2
DURS				S	Sb	06 49 00.0	+0.3
CHOS	Chios island	1.27	257	PN	Pg	06 48 48.1	0.0
CHOS	Chios island	1.27	257	ePn	Pg	06 48 48.1	0.0

BJI ***31*** *06:50:12.0, 4°.90S×103°.00E, h63*^{km}*, mb5.1/54, mB5.1/36, Ms4.7/23, Ms7 4.4/15*

DJA ***31*** *06:50:14.2±0.2, 5°S±2°×10°3E±°, h61*^{km}*±4*^{km}*, M4.9/24, mb5.0/24, mB5.3/11, MLv5.2/21, Mw(mB)4.7/11*

ISCJB ***31*** *06:50:14.7±0.4, 4°.78S±0°.03×103°.11E±0°.03, h76*^{km}*±2*^{km}*, mb5.0/138, Error ellipse: s-maj=6.5km s-min=2.8km az=42.6*

MOS ***31*** *06:50:14.8±1.1, 4°.60S×103°.13E, h71*^{km}*, mb5.3/55, Error ellipse: s-maj=8.8km s-min=4.5km az=116.9*

NEIC ***31*** *06:50:15.6±0.5, 4°.77S×103°.09E, h70*^{km}*±3*^{km}*, mb5.2/44, Error ellipse: s-maj=6.0km s-min=3.0km az=222.0*

IDC ***31*** *06:50:16.1±1.3, 4°.74S×103°.16E, h75*^{km}*±10*^{km}*, mb4.7/46, mb1 4.7/48, mb1mx4.6/66, mbtmp5.0/48, MS3.4/35, Ms1 3.4/35, ms1mx3.3/62, Error ellipse: s-maj=11.8km s-min=6.4km az=38.0*

ISC 31 06:50:15.0±0.6**, 4°.85S**±0°.04×**103°.00E**±0°.04**, h68**^{km}±4^{km}**, n785, σ1**^{s}**13**/809**, mb5.1**/139**, 30C-17D, Southern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MNAI	Manna	0.48	355	P	Pn	06 50 27.4	-0.1
MNAI	Manna	0.48	355	ePn	Pn	06 50 27.3	-0.2
MNAI				eSn	Sn	06 50 36.1	-0.5
LWLI	Liwa	1.07	99	P	Pn	06 50 33.7	-0.7
LWLI				S	Sn	06 50 47.4	-1.4
LHSI	Lahat	1.14	27	P	Pn	06 50 36.6	+1.4
LHSI				S	Sn	06 50 53.7	+3.5
MDSI	Maura Dua	1.23	73	P	Pn	06 50 36.8	+0.5
KASI	Kota Agung	1.64	114	P	Pn	06 50 40.8	-0.9
KLI	Kotabumi	1.85	91	P	Pn	06 50 45.2	+0.6
KLI	Kotabumi	1.85	91	P	Pn	06 50 44.9	+0.3
MASI	Maura Aman, Be	1.85	336	P	Pn	06 50 46.2	+1.5
BLSI	Bandar Lampung	2.30	103	P	Pn	06 50 50.6	0.0
PMBI	Palembang	2.60	43	P	Pn	06 50 56.9	+2.1
KRJI	Kerinci	3.14	331	P	Pn	06 51 03.8	+1.6
CGJI	Cibinong	3.21	123	P	Pn	06 51 02.1	-0.9
SBJI	Serang	3.37	112	P	Pn	06 51 06.0	+0.8
PPSI	Pulau Pagai	3.63	305	P	Pn	06 51 09.3	+0.5
DBJI	Dramaga	4.10	115	P	Pn	06 51 16.0	+0.8
RGRI	Rengat	4.52	352	P	Pn	06 51 23.9	+3.0
DSRI	Dabo	4.62	20	P	Pn	06 51 24.8	+2.5
LEM	Lembang	5.00	113	P	Pn	06 51 29.0	+1.4
	31nm,0.3s,baz=171,slow=5.2,SNR=28						
LEM				S	Sn	06 52 32.0	+7.8
	31nm,0.3s,baz=52,slow=17,SNR=3.8						
LEM				LR	LR	06 53 48.0	
	comp=Z,516nm,19.1s,baz=273,slow=43						
LEM	Lembang	5.00	113	P	Pn	06 51 30.4	+2.7
	3µm,0.7s,29µm11nm						
SISI	Saibi	5.24	312	P	Pn	06 51 30.6	-0.2
BKNI	Bangkinang	5.50	339	P	Pn	06 51 35.6	+1.2
BKNI	Bangkinang	5.50	339	ePn	Pn	06 51 35.1	+0.8
CMJI	Cimerak	6.15	119	P	Pn	06 51 43.5	+0.2
	2µm,0.5s,12nm						
KPJI	Karang Pucung	6.40	113	P	Pn	06 51 48.3	+1.7
MNSI	Mandailing Nat	6.56	329	P	Pn	06 51 48.7	-0.2
	71nm,0.4s,0.6nm						
MYKOM	Kota Tinggi	6.65	7	ePn	Pn	06 51 50.6	+0.5
PBSI	Pulau Batu	6.70	315	P	Pn	06 51 51.3	+0.5
	96nm,0.7s,1.1nm						
UGM	Wanagama	8.07	113	P	Pn	06 52 09.7	0.0
UGM	Wanagama	8.07	113	ePn	Pn	06 52 10.5	+0.8
GSI	Gunungsitoli	8.16	318	P	Pn	06 52 10.0	-0.9
	111nm,0.7s						
GSI	Gunungsitoli	8.16	318	ePn	Pn	06 52 09.8	-1.1
WOJI	Wonogiri, Jawa	8.42	111	P	Pn	06 52 14.2	-0.1
PSI	Prapat	8.62	332	P	Pn	06 52 15.3	-1.9
	2.2nm,0.3s,baz=0.1,slow=7.0,SNR=6.4						
PSI				LR	LR	06 55 58.2	
	comp=Z,341nm,21.3s,baz=93,slow=40						
PCJI	Pacitan	8.78	113	P	Pn	06 52 18.8	-0.5
	67nm,0.5s						
PWJI	Pagerwojo	9.30	110	P	Pn	06 52 27.3	+0.9
	80nm,0.7s						
IPM	Ipoh	9.47	348	ePn	Pn	06 52 30.6	+1.8
COCO	West Island	9.51	219	ePn	Pn	06 52 26.1	-3.1
COCO	West Island	9.51	219	iP	Pn	06 52 26.5	-2.7
KSM	Kuching	9.63	49	ePn	Pn	06 52 30.0	-0.9
KCSI	Kotacane, Aceh	9.82	328	P	Pn	06 52 31.4	-2.1
	25nm,0.4s,601nm						
SNSI	Sinabang, Aceh	9.82	317	P	Pn	06 52 33.0	-0.5
	105nm,0.8s						
TPTI		9.93	324	P	Pn	06 52 33.4	-1.6
	32nm,0.5s						
KULM	Kulim	10.34	347	ePn	Pn	06 52 41.0	+0.5
GMJI	Gumukmas	10.92	109	P	Pn	06 52 49.0	+0.5
MLSI	Meulaboh, Aceh	11.20	324	P	Pn	06 52 50.2	-2.1
	104nm,0.7s						
JAGI	Jajag, Banyuwa	11.65	109	P	Pn	06 52 57.7	-0.8
	145nm,0.7s,3µm						
JAGI	Jajag, Banyuwa	11.65	109	ePn	Pn	06 52 57.8	-0.8
SBUM	Sibu	11.72	52	ePn	Pn	06 52 59.1	-0.4
SKLT	Songkhla	12.17	349	P	Pn	06 53 10.5	+4.9
	38nm,0.9s						
SRBI	Singaraja	12.55	105	P	Pn	06 53 11.7	+0.8
TRTT	Trang	13.02	345	P	Pn	06 53 18.8	+1.6
	9.5nm,0.8s						
KBKI	Kotabaru	13.22	84	P	P	06 53 30.0	+2.5
TWSI	Taliwang, Sumb	14.32	106	P	Pn	06 53 31.0	-3.4
	72nm,0.6s						
PLAI	Plampang	15.20	106	P	Pn	06 53 41.6	-4.2
	125nm,0.6s,2µm						
PCI	Palu	17.26	77	P	P	06 54 17.0	+4.7
PCI				pmax	pmax		
	comp=Z,121nm,1.0s						
MPSI	Mapaga	17.65	73	P	P	06 54 19.2	+2.6
	comp=Z,38nm,0.6s,comp=Z,444nm						
MYLDM	Lahad Datu	18.41	57	eP	Pn	06 54 27.8	+2.1
	comp=Z,61nm,1.0s						
SRAK	Srakaew	18.76	357	P	Pn	06 54 31.2	+1.3
	comp=Z,134nm,0.6s,comp=Z,1µm						
EDFI	Ende, Flores	18.96	103	P	P	06 54 29.9	-1.2
	comp=Z,32nm,0.5s						
APSI	Ampana	19.03	79	P	Pn	06 54 34.1	+1.0
	comp=Z,100nm,0.9s,comp=Z,852nm						
NAYO	Nakonayok	19.11	355	P	Pn	06 54 35.6	+1.6
	comp=Z,0.5nm,0.8s						
MMRI	Maumere	19.47	102	eP	P	06 54 35.9	-0.7
	comp=Z,55nm,0.6s						
KDI	Kendari	19.58	88	P	Pn	06 54 39.4	-0.3
	comp=Z,78nm,1.3s						
MRSI	Marisa	19.65	75	P	Pn	06 54 39.6	-0.9
LUWI	Luwuk	20.10	80	eP	P	06 54 42.0	-1.4
	comp=Z,85nm,0.7s						
UBPT	Khong Chiam	20.15	7	P	P	06 54 44.1	+0.3
UTHA	Uthaitani	20.58	350	P	Pn	06 54 50.0	-1.3
	comp=Z,23nm,0.8s,comp=Z,177nm						
CHAI	Chaiyaphum	20.64	357	P	Pn	06 54 51.5	-0.6
	comp=Z,21nm,0.8s,comp=Z,198nm						
GIRL	Giralia	20.76	149	P	P	06 54 51.6	+1.1
	baz=21,SNR=5.2						
KHON	Khomkaen	21.05	360	P	P	06 54 56.4	+2.8
	comp=Z,46nm,0.7s						
BATI	Baumata	21.16	106	P	P	06 54 54.3	-0.6
	comp=Z,61nm,0.3s,baz=45,slow=1.8,SNR=9.4						
BATI				S	S	06 58 43.0	-3.8
	comp=Z,34nm,0.6s,baz=288,slow=19,SNR=3.9						
UMPA	Umpang Tak	21.31	349	P	P	06 54 57.2	+0.7
PBKT	Sadao Pong	21.37	355	eP	P	06 54 57.6	+0.6
	comp=Z,24nm,0.8s						
PBKT	Sadao Pong	21.37	355	P	P	06 54 59.1	+2.1
	comp=Z,38nm,0.9s						
SOEI	Soe	21.65	104	eP	P	06 54 58.6	-1.6
	comp=Z,84nm,1.0s						
SOEI				eS	S	06 58 53.4	-3.2
PHIT	Phitsanulok	22.04	353	P	P	06 55 05.3	+1.1
	comp=Z,91nm,0.8s,comp=Z,873nm						
LAMP	Lampang	23.46	352	P	P	06 55 18.8	+0.1
CM01	Chiang Mai Arr	23.46	350	eP	P	06 55 18.0	-0.7
CM31	Chiang Mai Arr	23.50	350	eP	P	06 55 19.0	-0.1
CM31				ePcP	PcP	06 59 04.3	+1.1
CMAR	Chiang Mai Arr	23.50	350	P	P	06 55 18.8	-0.3
	comp=Z,26nm,0.6s,baz=183,slow=8.7,SNR=76						
CMAR				PcP	PcP	06 59 04.3	+1.1
	comp=Z,1.9nm,0.6s,baz=211,slow=3.9,SNR=4.1						
CMAR				LR	LR	07 04 55.0	
	comp=Z,93nm,18.1s,baz=189,slow=38						
CMMT	Chiang Mai	23.85	350	P	P	06 55 21.6	-0.6
CHTO	Chiang Mai	23.85	350	eP	P	06 55 21.7	-0.5
	comp=Z,26nm,0.7s						
CHTO	Chiang Mai	23.85	350	eP	P	06 55 21.7	-0.5
CHTO				pmax	pmax		
	comp=Z,26nm,0.7s						
CHTO	Chiang Mai	23.85	350	P	P	06 55 21.7	-0.5
PAYA	Payao	24.25	353	P	P	06 55 25.9	0.0
PALK	Pallekele	25.30	298	LR	LR	07 04 32.8	
	comp=Z,78nm,20.7s,baz=114,slow=34						
DAV	Davao City (W)	25.46	62	LR	LR	07 06 36.6	
	comp=Z,112nm,19.7s,baz=341,slow=39						
FITZ	Fitzroy Crossi	25.76	123	P	P	06 55 39.5	0.0
	comp=Z,31nm,0.5s,baz=321,slow=7.4,SNR=128						
FITZ				PcP	PcP	06 59 07.5	-0.7
	comp=Z,4.0nm,0.6s,baz=314,slow=4.4,SNR=3.3						
FITZ				LR	LR	07 07 19.6	
	comp=Z,41nm,20.3s,baz=294,slow=40						
KNRA	Kununurra	27.50	115	P	P	06 55 54.6	-0.8
	baz=28,SNR=12						
SIJI	Sorong	28.50	83	P	P	06 56 03.4	-0.9
	comp=Z,7.2nm,0.6s,baz=191,slow=9.8,SNR=3.8						
MTN	Manton Dam	28.89	108	P	P	06 56 06.1	-1.6

	baz=29,SNR=32						
MTN	**Manton Dam**	28.89	108	*e*P	**P**	**06 56 06.6**	**-1.1**
	comp=Z,26nm,0.5s						
BRDH	**Bariadhala**	29.52	338	LR	LR	07 09 44.7	
	comp=Z,158nm,19.4s,baz=190,slow=40						
KMI	**Kunming**	29.79	360	P	**P**	**06 56 17.5**	**+1.7**
KMI				pP	pP	06 56 32.5	+0.4
KMI				sP	sP	06 56 40.5	+0.5
KMI				S	**S**	**07 01 11.5**	**+3.7**
KMI				SS	**SnSn**	**07 02 47.5**	**+3.2**
KMI				pmax	pmax		
	comp=Z,24nm,0.8s						
KMI				pmax	pmax		
	comp=Z,150nm,3.5s						
KMI				LR	LR		
	comp=Z,400nm,15.1s						
KMI				LR	LR		
	comp=Z,140nm,13.5s						
KMI				LR	LR		
	comp=Z,320nm,16.4s						
KDU	**Kakadu**	30.13	107	P	**P**	**06 56 16.8**	**-1.9**
	baz=30,SNR=8.0						
H08S2	**Diego Garcia H**	30.45	263	T	T	07 28 34.7	
	baz=86,slow=75,SNR=38						
H08S3	**Diego Garcia H**	30.45	263	T	T	07 28 26.8	
	baz=86,slow=75,SNR=49						
H08S1	**Diego Carcia H**	30.46	263	T	T	07 28 27.6	
	baz=86,slow=75,SNR=42						
NWAO	**Narrogin (SRO)**	30.94	156	LR	LR	07 07 20.3	
	comp=Z,139nm,21.8s,baz=138,slow=33						
GYA	**Guiyang**	31.32	6	*e*P	**P**	**06 56 32.0**	**+2.8**
GYA				pmax	pmax		
	comp=Z,20nm,0.8s						
WRKA	**Warakurna**	31.51	132	P	**P**	**06 56 31.8**	**+1.0**
	baz=32,SNR=17						
H01W3	**Cape Leeuwin H**	31.62	162	T	T	07 30 08.4	
	baz=340,slow=76						
H01W2	**Cape Leeuwin H**	31.63	162	T	T	07 30 08.2	
	baz=340,slow=76						
H01W1	**Cape Leeuwin H**	31.63	162	T	T	07 30 07.6	
	baz=340,slow=76						
H08N1	**Diego Carcia H**	31.86	266	T	T	07 30 40.9	
	baz=151,slow=76						
H08N2	**Diego Garcia H**	31.88	266	T	T	07 30 44.3	
	baz=151,slow=76						
H08N3	**Diego Garcia H**	31.89	266	T	T	07 30 40.3	
	baz=151,slow=76						
SHL	**Shillong**	32.10	341	*e*P	**P**	**06 56 35.4**	**-0.7**
	comp=Z,38nm,0.5s						
SHL				*e*S	**S**	**07 01 39.4**	**-4.5**
SHL	**Shillong**	32.10	341	*e*P	**P**	**06 56 35.4**	**-0.7**
SHL				*e*S	**S**	**07 01 39.4**	**-4.5**
SHL				pmax	pmax		
	comp=Z,38nm,0.5s						
WR1	**Warramunga Arr**	33.99	119	*e*P	**P**	**06 56 52.2**	**-0.4**
	comp=Z,33nm,0.5s						
WR1				*e*PcP	**PcP**	**06 59 30.0**	**+0.5**
WR1				*e*S	**S**	**07 02 09.8**	**-3.4**
WRA	**Warramunga Arr**	33.99	119	P	**P**	**06 56 52.2**	**-0.4**
	comp=Z,23nm,0.5s,baz=305,slow=8.6,SNR=265						
WRA				PcP	**PcP**	**06 59 30.0**	**+0.5**
	comp=Z,5.4nm,0.5s,baz=303,slow=2.0,SNR=8.3						
WRA				S	**S**	**07 02 09.8**	**-3.4**
	comp=Z,0.9nm,0.9s,baz=272,slow=12,SNR=3.6						
WRA				LR	LR	07 12 41.8	
	comp=Z,50nm,19.4s,baz=285,slow=40						
WRAB	**Tennant Creek**	34.00	119	*e*P	**P**	**06 56 52.7**	**+0.1**
	comp=Z,27nm,0.6s						
WRAB	**Tennant Creek**	34.00	119	*ce*P	**P**	**06 56 52.3**	**-0.3**
WRAB				pmax	pmax		
	comp=Z,23nm,0.6s						
WB2	**Warramunga Arr**	34.00	119	*e*P	**P**	**06 56 52.2**	**-0.4**
WB2				*e*P	**P**	**06 56 52.4**	**-0.3**
WB2				*e*PcP	**PcP**	**06 59 30.1**	**+0.6**
ODAN	**Odare**	34.95	335	*e*P	**P**	**06 57 01.2**	**+0.2**
	comp=Z,36nm,0.6s						
ASAR	**Alice Springs**	35.17	125	P	**P**	**06 57 03.1**	**+0.3**
	comp=Z,12nm,0.3s,baz=300,slow=8.3,SNR=191						
ASAR				PcP	**PcP**	**06 59 33.8**	**+0.9**
	comp=Z,6.5nm,0.5s,baz=309,slow=2.5,SNR=14						
ASAR				S	**S**	**07 02 29.4**	**-2.0**
	comp=Z,1.1nm,0.8s,baz=295,slow=16,SNR=6.1						
ASAR				ScP	**ScP**	**07 03 14.2**	**+1.3**
	comp=Z,0.8nm,0.9s,baz=305,slow=3.3,SNR=6.5						
AS31	**Alice Springs**	35.17	125	*e*P	**P**	**06 57 03.1**	**+0.4**
	comp=Z,14nm,0.4s						
AS31				*e*PcP	**PcP**	**06 59 33.8**	**+0.9**
AS31				*e*S	**S**	**07 02 29.4**	**-2.0**
AS01	**Alice Springs**	35.21	125	*e*P	**P**	**06 57 02.9**	**-0.1**
AS01				*e*PcP	**PcP**	**06 59 33.2**	**+0.2**
TAPN	**Taplejung**	35.25	336	*e*P	**P**	**06 57 04.0**	**+0.4**
	comp=Z,33nm,0.6s						
RAMN	**Ramite**	35.37	334	*e*P	**P**	**06 57 05.2**	**+0.6**
	comp=Z,26nm,0.4s						
CD2	**Chengdu**	35.56	1	*e*P	**P**	**06 57 05.8**	**-0.1**
CD2				S	**S**	**07 02 39.5**	**+2.5**
CD2				pmax	pmax		
	comp=Z,60nm,0.5s						
CD2				pmax	pmax		
	comp=Z,290nm,5.5s						
CD2				LR	LR		
	comp=Z,420nm,15.9s						
CD2				LR	LR		
	comp=Z,460nm,10.9s						
JIRN	**Jiri**	36.16	334	*e*P	**P**	**06 57 11.8**	**+0.3**
	comp=Z,167nm,0.7s						
LSA	**Lhasa**	36.18	342	*e*P	**P**	**06 57 11.2**	**-0.5**
	comp=Z,21nm,0.9s						
LSA	**Lhasa**	36.18	342	*e*P	**P**	**06 57 11.3**	**-0.5**
LSA				pmax	pmax		
	comp=Z,21nm,0.9s						
PKIN	**Phulchoki**	36.44	333	*e*P	**P**	**06 57 14.9**	**+1.1**
	comp=Z,36nm,0.7s						
GUN	**Gumba**	36.52	334	*e*P	**P**	**06 57 14.9**	**+0.4**
	comp=Z,146nm,0.6s						
DMN	**Daman**	36.60	333	*e*P	**P**	**06 57 15.3**	**+0.2**
	comp=Z,28nm,0.5s						
KKN	**Kakani**	36.68	333	*e*P	**P**	**06 57 16.2**	**+0.5**
	comp=Z,81nm,0.7s						
WHN	**Wuhan**	36.83	16	P	**P**	**06 57 16.3**	**-0.4**
GKN	**Gorkha**	37.15	333	*e*P	**P**	**06 57 20.3**	**+0.6**
	comp=Z,61nm,0.5s						
KOLN	**Koldanda**	37.44	331	*e*P	**P**	**06 57 22.9**	**+0.7**
	comp=Z,163nm,0.7s						
DANN	**Dangsing**	37.85	332	*e*P	**P**	**06 57 26.1**	**+0.3**
	comp=Z,203nm,0.7s						
PYUN	**Piuthan**	38.01	331	*e*P	**P**	**06 57 27.4**	**+0.4**
	comp=Z,83nm,0.6s						
QIS	**Mount Isa**	38.84	117	P	**P**	**06 57 33.7**	**-0.3**
	baz=39,SNR=12						
XAN	**Xi’an**	39.08	8	P	**P**	**06 57 35.0**	**-0.7**
XAN				pmax	pmax		
	comp=Z,27nm,0.9s						
NJ2	**Nanjing**	39.68	21	*e*P	**P**	**06 57 43.3**	**+2.7**
NJ2				pmax	pmax		
	comp=Z,8.0nm,0.5s						
JOW	**Kunigami**	39.87	37	LR	LR	07 13 10.6	
	comp=Z,109nm,22.0s,baz=186,slow=35						
COEN	**Coen**	40.60	106	P	**P**	**06 57 47.2**	**-1.4**
	baz=41,SNR=9.8						
LZH	**Lanzhou**	40.73	1	⇓P	**P**	**06 57 50.3**	**+0.9**
LZH				pP	pP	06 58 05.0	-1.2
LZH				sP	sP	06 58 12.0	-2.0
LZH				*e*PP	**PnPn**	**06 59 29.5**	**+0.4**
LZH				pmax	pmax		
	comp=Z,72nm,1.1s						
LZH				pmax	pmax		
	comp=Z,170nm,5.4s						
LZH				LR	LR		
	comp=Z,280nm,15.0s						
LZH				LR	LR		
	comp=Z,280nm,15.2s						
LZH				LR	LR		
	comp=Z,380nm,18.7s						
BBOO	**Buckleboo**	41.53	136	P	**P**	**06 57 55.6**	**-0.4**
	baz=42,SNR=15						
MTSU	**Mount Surprise**	42.47	112	P	**P**	**06 58 04.2**	**+0.4**
	baz=42,SNR=36						
TIA	**Tai’an**	42.93	17	P	**P**	**06 58 06.8**	**-0.5**
TIA				pmax	pmax		
	comp=Z,11nm,0.8s						
HTT	**Hallett**	43.88	135	P	**P**	**06 58 15.9**	**+0.9**
	baz=44,SNR=16						
PMG	**Port Moresby**	44.03	98	P	**P**	**06 58 15.3**	**-1.1**
	comp=Z,17nm,0.5s,baz=154,slow=1.8,SNR=8.9						
PMG				LR	LR	07 20 28.7	
	comp=Z,42nm,18.4s,baz=150,slow=41						
GTA	**Gaotai**	44.13	356	⇑P	**P**	**06 58 17.3**	**+0.3**
GTA				pP	pP	06 58 32.3	-1.7
GTA				sP	sP	06 58 37.5	-4.2
GTA				S	**S**	**07 04 49.3**	**+4.1**
GTA				pmax	pmax		
	comp=Z,16nm,0.9s						
GTA				pmax	pmax		
	comp=Z,54nm,5.6s						
GTA				LR	LR		
	comp=Z,340nm,18.4s						
GTA				LR	LR		
	comp=Z,240nm,18.1s						
CTA	**Charters Tower**	44.70	114	P	**P**	**06 58 22.3**	**+0.5**
	comp=Z,43nm,0.7s,baz=281,slow=10,SNR=41						
CTAO	**Charters Tower**	44.70	114	*e*P	**P**	**06 58 22.2**	**+0.4**
	comp=Z,44nm,0.6s						
CTAO	**Charters Tower**	44.70	114	*e*P	**P**	**06 58 22.2**	**+0.4**
CTAO				pmax	pmax		
	comp=Z,44nm,0.6s						
QLP	**Quilpie**	44.90	123	P	**P**	**06 58 24.2**	**+1.0**
	baz=45,SNR=6.0						
STKA	**Stephens Creek**	45.03	131	P	**P**	**06 58 24.6**	**+0.4**
	comp=Z,28nm,0.7s,baz=305,slow=8.4,SNR=57						
STKA				LR	LR	07 19 24.9	
	comp=Z,28nm,20.2s,baz=20,slow=39						
STKA	**Stephens Creek**	45.03	131	P	**P**	**06 58 25.1**	**+0.9**
	baz=45,SNR=31						
STKA	**Stephens Creek**	45.03	131	*e*P	**P**	**06 58 25.1**	**+0.9**
	comp=Z,5.0nm,0.6s						
GUMO	**Guam**	45.42	66	P	**P**	**06 58 25.0**	**-2.4**
	comp=Z,129nm,0.5s,baz=184,slow=3.1,SNR=14						
GUMO				LR	LR	07 18 37.8	
	comp=Z,8.6nm,21.1s,baz=252,slow=38						
JNU	**Nakatsue**	46.09	33	P	**P**	**06 58 32.3**	**-0.2**
	comp=Z,23nm,0.8s,baz=210,slow=4.7,SNR=12						
JNU				LR	LR	07 19 11.5	
	comp=Z,22nm,18.3s,baz=149,slow=38						
JNU	**Nakatsue**	46.09	33	*e*P	**P**	**06 58 32.6**	**+0.1**
	comp=Z,24nm,0.8s						
HHC	**Hu-ho-hao-te**	46.15	9	*e*P	**P**	**06 58 34.0**	**+1.1**
HHC				S	**S**	**07 05 18.5**	**+4.3**
HHC				SS	**SS**	**07 08 32.8**	**-7.5**
HHC				pmax	pmax		
	comp=Z,35nm,0.9s						
HHC				pmax	pmax		
	comp=Z,90nm,4.5s						
HHC				LR	LR		
	comp=Z,200nm,13.7s						
HHC				LR	LR		
	comp=Z,190nm,14.2s						
BJT	**Baijiatuau**	46.26	14	*e*P	**P**	**06 58 34.0**	**+0.3**
	comp=Z,24nm,0.6s						
BJT	**Baijiatuau**	46.26	14	*e*P	**P**	**06 58 34.0**	**+0.3**
BJT				pmax	pmax		
	comp=Z,24nm,0.6s						
TJN	**Taejon**	46.92	27	⇑*e*P	**P**	**06 58 39.1**	**+0.2**
NIL	**Nilore**	47.52	326	*e*P	**P**	**06 58 43.6**	**-0.1**
	comp=Z,50nm,0.4s						
NIL	**Nilore**	47.52	326	*e*P	**P**	**06 58 43.6**	**-0.1**
NIL				pmax	pmax		
	comp=Z,50nm,0.4s						
ARPS	**Mount Arapiles**	47.68	137	P	**P**	**06 58 45.7**	**+0.8**
	baz=48,SNR=7.8						
CMSA	**Cobar Meteorol**	48.01	129	P	**P**	**06 58 48.6**	**+1.1**
	baz=48,SNR=28						
KS15	**Wonju Array Si**	48.03	27	*e*P	**P**	**06 58 48.0**	**+0.5**
KS15				*e*PcP	**PcP**	**07 00 15.1**	**+0.5**
KSAR	**Wonju Array Be**	48.03	27	P	**P**	**06 58 48.0**	**+0.5**
KSAR				PcP	**PcP**	**07 00 15.1**	**+0.5**
KSAR	**Wonju Array Be**	48.03	27	P	**P**	**06 58 48.0**	**+0.5**
KSAR						07 00 15.1	
KSRS	**Korea Array**	48.06	27	P	**P**	**06 58 48.0**	**+0.3**
	comp=Z,8.3nm,0.6s,baz=230,slow=7.2,SNR=56						
KSRS				PcP	**PcP**	**07 00 15.1**	**+0.4**
	comp=Z,3.2nm,0.8s,baz=207,slow=3.9,SNR=9.1						
KS01	**Wonju Array Si**	48.07	27	*e*P	**P**	**06 58 47.8**	**0.0**
KS01				*e*PcP	**PcP**	**07 00 14.7**	**0.0**
EIDS	**Eidsvold**	50.36	119	P	**P**	**06 59 05.8**	**+0.2**
	baz=50,SNR=3.7						
WMQ	**Urumqi**	50.37	346	P	**P**	**06 59 06.3**	**+0.9**
WMQ				pP	pP	06 59 22.5	-0.1
WMQ				sP	sP	06 59 29.0	-1.3
WMQ				pmax	pmax		
	comp=Z,99nm,0.7s						
WMQ				pmax	pmax		
	comp=Z,240nm,3.9s						
WMQ				LR	LR		
	comp=Z,150nm,26.9s						
KBL	**Kabul**	50.58	323	P	**P**	**06 59 09.3**	**+2.0**
KBL				pmax	pmax		
	comp=Z,12nm,0.8s						
TOO	**Toolangi**	50.60	136	P	**P**	**06 59 08.1**	**+0.9**
	baz=51,SNR=4.2						
KSH	**Kashi**	50.70	333	P	**P**	**06 59 06.8**	**-1.2**
KSH				sP	sP	06 59 30.3	-2.6
KSH				*e*PcP	**PcP**	**07 00 22.8**	**-1.7**
KSH				pmax	pmax		
	comp=Z,27nm,0.5s						
KSH				pmax	pmax		
	comp=Z,70nm,5.4s						
KSH				LR	LR		
	comp=Z,220nm,11.0s						
KSH				LR	LR		
	comp=Z,160nm,12.3s						
YNG	**Young**	51.22	131	P	**P**	**06 59 13.3**	**+1.4**
	baz=51,SNR=11						
WSAR	**Wadi Sarin**	51.52	305	P	**P**	**06 59 15.9**	**+1.7**
	comp=Z,3.5nm,0.5s,baz=145,slow=8.7,SNR=5.0						
PRZ	**Przheval’sk**	52.14	337	*e*P	**P**	**06 59 19.6**	**+0.8**
	comp=Z,34nm,0.4s						
PRZ	**Przheval’sk**	52.14	337	*e*P	**P**	**06 59 19.6**	**+0.8**
PRZ				pmax	pmax		
	comp=Z,34nm,0.4s						
SFK	**Sufi-Kurgan**	52.24	331	P	**P**	**06 59 20.1**	**+0.5**
SFK				pmax	pmax		
	comp=Z,30nm,1.1s						
PDGK	**Podgornoye**	52.45	338	P	**P**	**06 59 21.1**	**+0.1**
PDGK				pmax	pmax		
	comp=Z,75nm,0.8s						
CN2	**Changchun**	52.49	20	*e*P	**P**	**06 59 20.3**	**-0.8**
CN2				pmax	pmax		
	comp=Z,20nm,1.0s						
SONA0	**Songino Array**	52.54	3	*e*P	**P**	**06 59 22.3**	**+0.7**
SONA0				*e*PcP	**PcP**	**07 00 31.4**	**+0.3**
SONM	**Songino Array**	52.54	3	P	**P**	**06 59 22.3**	**+0.7**
	comp=Z,18nm,0.5s,baz=182,slow=9.1,SNR=87						
SONM				PcP	**PcP**	**07 00 31.4**	**+0.3**
	comp=Z,4.4nm,0.3s,baz=188,slow=4.1,SNR=15						
SONM				LR	LR	07 24 13.2	
	comp=Z,60nm,18.5s,baz=156,slow=39						
SONA1	**Songino Array**	52.55	3	*e*P	**P**	**06 59 22.2**	**+0.5**
ULN	**Ulaanbaatar**	52.61	3	*e*P	**P**	**06 59 22.4**	**+0.3**
	comp=Z,22nm,1.2s						
ULN	**Ulaanbaatar**	52.61	3	*ce*P	**P**	**06 59 22.4**	**+0.3**
ULN				pmax	pmax		
	comp=Z,22nm,1.3s						
MAJO	**Matsushiro**	52.70	36	*e*P	**P**	**06 59 21.5**	**-1.3**
	comp=Z,10.0nm,0.9s						
MAJO				*e*PcP	**PcP**	**07 00 32.1**	**+0.2**
MAJO	**Matsushiro**	52.70	36	*de*P	**P**	**06 59 21.6**	**-1.3**
MAJO				pmax	pmax		
	comp=Z,9.0nm,0.9s						
MAT	**Matsushiro**	52.70	36	P	**P**	**06 59 20.8**	**-2.1**
MJAR	**Matsushiro Arr**	52.71	36	P	**P**	**06 59 21.3**	**-1.6**
	comp=Z,11nm,0.8s,baz=220,slow=8.0,SNR=31						
MJAR				PcP	**PcP**	**07 00 32.1**	**+0.2**
	comp=Z,3.6nm,0.8s,baz=209,slow=5.3,SNR=4.7						
MJAR				LR	LR	07 24 12.2	
	comp=Z,13nm,18.5s,baz=240,slow=39						
MJB9	**Matsu-Tunnel**	52.71	36	*e*P	**P**	**06 59 21.6**	**-1.3**
	comp=Z,10nm,0.9s						
ULHL	**Ulahol**	52.81	335	P	**P**	**06 59 25.4**	**+1.6**
	SNR=15						
KZA	**Kyzart**	53.09	334	P	**P**	**06 59 26.8**	**+0.7**
	SNR=9.5						
UCH	**Uchtor**	53.54	334	P	**P**	**06 59 29.6**	**+0.1**
	SNR=23						
TKM2	**Tokmak 2**	53.64	335	P	**P**	**06 59 30.4**	**+0.5**
	SNR=6.2						
TKM2	**Tokmak 2**	53.64	335	*i* P	**P**	**06 59 29.4**	**-0.5**
TKM2				pmax	pmax		
	comp=Z,47nm,0.4s						
MSHR	**Mys Shultsa**	53.68	26	⇓*e*P	**P**	**06 59 29.2**	**-0.7**
KBK	**Karagaybulak**	53.70	335	P	**P**	**06 59 31.0**	**+0.8**
	SNR=9.4						
AML	**Almayashu**	53.82	333	P	**P**	**06 59 31.9**	**+0.4**
	SNR=10						
AAK	**Ala-Archa**	53.88	334	*e*P	**P**	**06 59 31.6**	**+0.1**
	comp=Z,13nm,0.7s						
AAK	**Ala-Archa**	53.88	334	*e*P	**P**	**06 59 31.6**	**+0.1**
AAK				pmax	pmax		
	comp=Z,13nm,0.7s						
EKS2	**Erkin-Say**	54.21	334	P	**P**	**06 59 34.6**	**+0.6**
	SNR=48						
USP	**Ospenovka**	54.38	335	P	**P**	**06 59 35.0**	**0.0**
	SNR=9.2						
MK01	**Makanchi Array**	54.56	343	*e*P	**P**	**06 59 35.9**	**-0.4**
MK31	**Makanchi Array**	54.59	343	*e*P	**P**	**06 59 36.1**	**-0.3**
MK31	**Makanchi Array**	54.59	343	*ce*P	**P**	**06 59 35.7**	**-0.8**
MK31				pmax	pmax		
	comp=Z,18nm,0.6s						
MK32	**Makanchi Array**	54.59	343	*e*P	**P**	**06 59 36.2**	**-0.3**
MKAR	**Makanchi Array**	54.59	343	P	**P**	**06 59 36.2**	**-0.3**
	comp=Z,24nm,0.6s,baz=145,slow=8.0,SNR=199						
MKAR				LR	LR	07 27 10.2	
	comp=Z,32nm,18.6s,baz=226,slow=41						
MKAR	**Makanchi Array**	54.59	343	*e*P	**P**	**06 59 36.1**	**-0.3**
	comp=Z,163nm,0.6s						
MNAS	**Manas**	54.65	333	P	**P**	**06 59 37.3**	**+0.2**
MNAS				pmax	pmax		
	comp=Z,38nm,0.6s						
MAKZ	**Makanchi**	54.70	342	*e*P	**P**	**06 59 36.8**	**-0.5**
	comp=Z,12nm,0.9s						
MAKZ	**Makanchi**	54.70	342	*i* P	**P**	**06 59 36.2**	**-1.0**
MAKZ				pmax	pmax		
	comp=Z,13nm,0.9s						
ZAK	**Zakamensk**	55.01	0	*e*P	**P**	**06 59 39.5**	**0.0**
ZAK				pmax	pmax		
	comp=Z,7.0nm,0.9s						
USRK	**Ussuriysk Ar.**	55.35	25	P	**P**	**06 59 41.6**	**-0.3**
	comp=Z,24nm,0.7s,baz=216,slow=5.4						
USRK				LR	LR	07 24 43.1	
	comp=Z,44nm,18.9s,baz=125,slow=38						
USA0B	**Ussuriysk Arra**	55.35	25	*e*P	**P**	**06 59 41.2**	**-0.8**
	comp=Z,23nm,0.8s						
DGZ	**Jazzator, Alta**	55.98	348	*i* P	**P**	**06 59 46.9**	**+0.3**
DGZ				pmax	pmax		
	comp=Z,27nm,0.8s						
KK31	**Karatay Array**	56.05	332	*e*P	**P**	**06 59 46.6**	**-0.4**
KK31	**Karatay Array**	56.05	332	*e*P	**P**	**06 59 46.6**	**-0.4**
KKAR	**Karatay Array**	56.05	332	*e*P	**P**	**06 59 46.7**	**-0.4**
KKAR	**Karatay Array**	56.05	332	*e*P	**P**	**06 59 46.7**	**-0.4**
OPO	**Ambohidratompo**	56.10	251	P	**P**	**06 59 49.7**	**+1.7**
	comp=Z,1.1nm,0.4s,baz=4.8,slow=12,SNR=3.0						
TLY	**Talaya**	56.31	0	*e*P	**P**	**06 59 49.7**	**+1.0**
	comp=Z,15nm,0.7s						
TLY	**Talaya**	56.31	0	*e*P	**P**	**06 59 49.4**	**+0.7**
TLY				pmax	pmax		
	comp=Z,12nm,0.8s						
MOY	**Mondy**	56.32	358	*e*P	**P**	**06 59 49.5**	**+0.6**
HVS	**Khovu-Aksy**	56.33	353	⇓*e*P	**P**	**06 59 48.8**	**-0.2**
HVS				pmax	pmax		
	comp=Z,10.0nm,0.9s						
HNR	**Honiara**	56.64	98	LR	LR	07 27 05.7	
	comp=Z,19nm,18.3s,baz=290,slow=39						
KURBB	**Kurchatov Arra**	59.13	342	P	**P**	**07 00 07.5**	**-1.0**
	comp=Z,16nm,0.7s,baz=160,slow=6.7,SNR=99						
KURBB				PcP	**PcP**	**07 00 56.5**	**0.0**
	comp=Z,7.2nm,0.6s,baz=156,slow=3.4,SNR=10.0						
KURK	**Kurchatov**	59.19	342	*e*P	**P**	**07 00 07.5**	**-1.4**
KURK				*e*PcP	**PcP**	**07 00 56.5**	**-0.2**
KURK	**Kurchatov**	59.19	342	*c i*P	**P**	**07 00 08.5**	**-0.4**
KURK				pmax	pmax		
	comp=Z,30nm,0.8s						
ERM	**Erimo**	59.23	34	⇑*e*P	**P**	**07 00 08.5**	**-0.9**
ERM				pmax	pmax		
	comp=Z,15nm,0.9s						
KLR	**Kul’dur**	59.38	21	*de*P	**P**	**07 00 09.8**	**-0.5**
GEYT	**Alibeck**	59.54	320	P	**P**	**07 00 11.4**	**-0.2**
	comp=Z,6.9nm,0.4s,baz=190,slow=6.8,SNR=11						
GEYT				LR	LR	07 27 01.6	
	comp=Z,27nm,22.0s,baz=225,slow=37						
GYA0B	**ALIBECK ARRAY**	59.54	320	*e*P	**P**	**07 00 11.9**	**+0.2**
	comp=Z,23nm,0.9s						
ASAJ	**Asahikawa**	60.34	32	P	**P**	**07 00 17.0**	**0.0**
	comp=Z,18nm,0.5s,baz=226,slow=6.4,SNR=15						
ASAJ				LR	LR	07 26 33.1	
	comp=Z,26nm,20.0s,baz=166,slow=36						
ASAJ	**Asahikawa**	60.34	32	*e*P	**P**	**07 00 17.5**	**+0.5**
	comp=Z,18nm,0.7s						
ZAA0	**Zalesovo Array**	60.53	348	*e*P	**P**	**07 00 17.4**	**-0.6**
	comp=Z,30nm,0.6s						
ZALV	**Zalesovo Beam**	60.53	348	P	**P**	**07 00 17.6**	**-0.4**
	comp=Z,25nm,0.4s,baz=166,slow=5.3,SNR=84						
ZALV				LR	LR	07 29 44.8	
	comp=Z,100nm,19.1s,baz=70,slow=39						
ZALV	**Zalesovo Beam**	60.53	348	*e*P	**P**	**07 00 17.3**	**-0.7**
ZALV	**Zalesovo Beam**	60.53	348	*e*P	**P**	**07 00 17.3**	**-0.7**
ZAA1	**Zalesovo Array**	60.54	348	*e*P	**P**	**07 00 17.6**	**-0.4**
NVS	**Novosibirsk**	61.71	347	*e*P	**P**	**07 00 24.4**	**-1.6**
NVS				pmax	pmax		
	comp=N,10.0nm,1.4s						
NVS				pmax	pmax		
	comp=Z,13nm,1.4s						
ZEA	**Zeya**	61.82	16	*e*P	**P**	**07 00 27.2**	**+0.4**
ZEA				pmax	pmax		
	comp=Z,31nm,0.8s						
YSS	**Yuzh-Sakhalins**	62.38	30	⇑*e*P	**P**	**07 00 30.2**	**-0.4**
YSS				pmax	pmax		
	comp=Z,50nm,1.0s						
RAYN	**Ar Rayn**	62.73	299	*e*P	**P**	**07 00 34.3**	**+0.7**
	comp=Z,4.6nm,0.8s						
RAYN	**Ar Rayn**	62.73	299	*e*P	**P**	**07 00 34.3**	**+0.7**
RAYN				pmax	pmax		
	comp=Z,5.0nm,0.8s						
BOD	**Bodaibo**	63.09	7	*e*P	**P**	**07 00 34.1**	**-1.1**
BOD				pmax	pmax		
	comp=Z,16nm,1.1s						
DZM	**Mont Dzumac**	63.60	112	P	**P**	**07 00 39.5**	**+0.1**
	comp=Z,5.2nm,0.6s,baz=229,slow=20,SNR=5.4						
DZM				LR	LR	07 29 13.6	
	comp=Z,51nm,18.7s,baz=3.5,slow=37						
BVA0	**Borovoye Array**	63.89	339	P	**P**	**07 00 38.7**	**-1.8**
BVA0				pmax	pmax		
	comp=Z,23nm,0.7s						
BVAR	**Borovoye Array**	63.89	339	P	**P**	**07 00 40.1**	**-0.5**
	comp=Z,30nm,0.6s,baz=143,slow=8.9,SNR=147						
BVAR				LR	LR	07 33 34.4	
	comp=Z,22nm,19.1s,baz=123,slow=41						
BRVK	**Borovoye**	63.95	339	*e*P	**P**	**07 00 40.5**	**-0.4**
	comp=Z,22nm,0.6s						
BRVK	**Borovoye**	63.95	339	*c i*P	**P**	**07 00 40.2**	**-0.7**
BRVK				pmax	pmax		
	comp=Z,16nm,0.6s						
AB31	**Akbulak array**	65.56	331	*ce*P	**P**	**07 00 51.0**	**-0.5**
AB31				pmax	pmax		
	comp=Z,17nm,0.6s						
ABKAR	**Akbulak array**	65.56	331	*e*P	**P**	**07 00 51.2**	**-0.3**
AKTO	**Aktyubinsk**	67.28	331	P	**P**	**07 01 01.6**	**-0.8**
	comp=Z,3.9nm,0.3s,baz=140,slow=7.9,SNR=19						
AKTO				LR	LR	07 33 30.3	
	comp=Z,15nm,20.6s,baz=154,slow=39						
MAW	**Mawson**	68.32	195	LR	LR	07 24 26.1	
	comp=Z,113nm,21.6s,baz=60,slow=30						
GNI	**Garni**	69.64	316	⇑*e*P	**P**	**07 01 16.1**	**-1.5**
GNI				pmax	pmax		
	comp=Z,13nm,0.8s						
YAK	**Yakutsk**	69.77	13	*e*P	**P**	**07 01 17.0**	**-0.7**
	comp=Z,61nm,0.6s						
YAK	**Yakutsk**	69.77	13	*e*P	**P**	**07 01 16.3**	**-1.4**
YAK				*e*		07 01 37.9	
YAK				*e*		07 03 57.3	
YAK				*e*S	**S**	**07 10 21.5**	**0.0**
YAK				*e**SS	**pS**	**07 10 40.3**	**-3.0**
YAK				*e*SS	**SS**	**07 14 42.3**	**-9.0**
YAK				pmax	pmax		
	comp=Z,30nm,0.8s						
YAK				pmax	pmax		
	comp=N,5.0nm,0.9s						
YAK				pmax	pmax		
	comp=E,3.0nm,0.8s						
YAK				smax	smax		
	comp=N,26nm,2.7s						
YAK				smax	smax		
	comp=E,23nm,2.3s						
SVE	**Sverdlovsk**	70.45	337	*e*P	**P**	**07 01 22.3**	**+0.3**
SVE				pmax	pmax		
	comp=Z,25nm,1.1s						
ARU	**Arti**	71.00	336	*e*P	**P**	**07 01 24.9**	**-0.4**
	comp=Z,20nm,1.1s						
ARU	**Arti**	71.00	336	*c i*P	**P**	**07 01 25.2**	**-0.2**
ARU						07 04 02.9	

ARU				S	S	07 10 40.0	+3.9
ARU				SS	SS	07 15 06.0	-4.5
ARU				pmax	pmax		
	comp=Z,19nm,1.0s						
ZEI	Tsey	71.34	318	*e*P	P	07 01 28.0	0.0
NCK	Nalchik	71.85	319⇑	*e*P	P	07 01 31.5	+0.7
NCK				pmax	pmax		
	comp=Z,18nm,0.9s						
NEY	Neytrino	72.32	318⇑	*e*P	P	07 01 34.8	+1.0
NEY				pmax	pmax		
	comp=Z,4.0nm,0.8s						
KBZ	Khabaz	72.41	319	P	P	07 01 34.1	+0.1
	comp=Z,16nm,0.8s,baz=108,slow=4.9,SNR=28						
KIV	Kislovodsk	72.64	319⇓	*e*P	P	07 01 36.2	+0.6
KIV				pmax	pmax		
	comp=Z,8.0nm,0.9s						
ASF	Jabal al Asfar	72.67	306	P	P	07 01 37.3	+1.2
	comp=Z,11nm,0.8s,baz=270,slow=1.0,SNR=21						
PETK	Petropavlovsk-	73.73	31	P	P	07 01 40.4	-1.3
	comp=Z,3.1nm,0.6s,baz=204,slow=2.8						
PETK				LR	LR	07 33 04.3	
	comp=Z,12nm,21.8s,baz=246,slow=35						
PEA1	Petropavlovsk-	73.73	31	*e*P	P	07 01 40.4	-1.3
MMAI	Mount Meron Ar	74.12	306	P	P	07 01 46.0	+1.5
	comp=Z,8.7nm,0.6s,baz=99,slow=8.9,SNR=10						
MMAI				LR	LR	07 35 53.5	
	comp=Z,31nm,19.1s,baz=190,slow=37						
MA2	Magadan	74.42	23	*e*P	P	07 01 45.7	+0.1
MA2				pmax	pmax		
	comp=Z,6.0nm,1.0s						
URZ	Urewera	74.54	128	P	P	07 01 46.5	-0.3
	comp=Z,8.0nm,0.8s,baz=247,slow=7.7,SNR=3.0						
NRIK	Noril'sk	74.79	354	P	P	07 01 46.8	-0.7
	comp=Z,7.9nm,0.4s,baz=323,slow=20,SNR=21						
VRH	Novokhopyorsk	76.35	325	*e*P	P	07 01 55.2	-1.6
VRH				pmax	pmax		
	comp=Z,110nm,1.2s						
BOSA	Boshof	76.94	242	P	P	07 02 01.0	+0.1
	comp=Z,3.2nm,0.9s,baz=127,slow=5.5,SNR=4.3						
BOSA				LR	LR	07 29 22.1	
	comp=Z,82nm,19.3s,baz=46,slow=30						
BOSA	Boshof	76.94	242	*e*P	P	07 02 01.0	+0.1
SEY	Seymchan	77.17	21⇓	*e*P	P	07 02 01.3	+0.1
BR101	Keskin Array S	77.44	312	*e*P	P	07 02 03.5	0.0
BR131	Keskin Array S	77.44	312	*e*P	P	07 02 03.5	0.0
BRTR	Keskin Array B	77.44	312	P	P	07 02 03.5	0.0
	comp=Z,9.6nm,0.6s,baz=138,slow=7.2,SNR=45						
BRTR				LR	LR	07 39 19.0	
	comp=Z,10nm,18.6s,baz=144,slow=38						
VORD	Divnogorie	77.64	325	*e*P	P	07 02 03.6	-0.4
VORD				pmax	pmax		
	comp=Z,10.0nm,0.5s						
VSR	Storozhevoye	77.81	325	*e*P	P	07 02 04.6	-0.4
VSR				pmax	pmax		
	comp=Z,30nm,0.5s						
LPSR	Galich'ya Gora	78.51	326	*e*P	P	07 02 08.5	-0.3
LPSR				pmax	pmax		
	comp=Z,40nm,0.9s						
SIM	Simferopol'	78.71	318*d*	*i*P	P	07 02 03.0	-7.1
SIM				pmax	pmax		
	comp=Z,49nm,0.5s						
VNDA	Vanda	78.81	169	P	P	07 02 10.8	+0.7
	comp=Z,1.3nm,0.8s,baz=312,slow=6.6,SNR=13						
VNDA				LR	LR	07 32 15.9	
	comp=Z,35nm,21.9s,baz=297,slow=32						
VNDA	Vanda	78.81	169	*e*P	P	07 02 11.1	+1.0
VNDA	Vanda	78.81	169	*e*P	P	07 02 11.1	+1.0
PRGR	Permogore	79.47	336	*e*P	P	07 02 13.6	-0.2
PRGR				pmax	pmax		
	comp=Z,72nm,0.9s						
OBN	Obninsk	80.78	328*c*	*i*P	P	07 02 21.5	+0.4
OBN				*i* *PP	pP	07 02 38.9	-0.6
OBN				pmax	pmax		
	comp=Z,25nm,0.9s						
TIRR	Tirgusor	82.47	316⇓	*i*P	P	07 02 31.2	+1.0
TIRR	Tirgusor	82.47	316	P	P	07 02 31.2	+1.0
TLB	Topalu	82.76	316⇓	*i*P	P	07 02 32.6	+0.9
IDI	Anoyia	83.12	306	P	P	07 02 34.7	+0.7
	comp=Z,11nm,0.5s,baz=92,slow=6.7,SNR=10						
IDI	Anoyia	83.12	306⇓	*i*P	P	07 02 35.7	+1.7
SORM	Soroca	83.43	319⇑	*i*P	P	07 02 35.9	+0.8
SORM	Soroca	83.43	319	P	P	07 02 35.8	+0.7
AKASG	Malin Array Be	83.55	322	P	P	07 02 35.6	0.0
	comp=Z,5.2nm,0.5s,baz=86,slow=5.2,SNR=22						
AKBB	Malin Array Si	83.55	322	*e*P	P	07 02 35.7	0.0
	comp=Z,11nm,0.8s						
AKBB	Malin Array Si	83.55	322	*e*P	P	07 02 35.7	0.0
AKBB				pmax	pmax		
	comp=Z,11nm,0.8s						
KIEV	Kiev	83.56	322	*e*P	P	07 02 35.7	0.0
	comp=Z,10nm,0.7s						
KIEV	Kiev	83.56	322*c*	*i*P	P	07 02 35.6	-0.1
KIEV				pmax	pmax		
	comp=Z,9.0nm,0.9s						
AK11	Malin Array Si	83.58	322	*e*P	P	07 02 35.6	-0.2
VRI	Vrincioaia	83.96	317⇑	*i*P	P	07 02 39.5	+1.5
VRI	Vrincioaia	83.96	317	P	P	07 02 39.5	+1.5
VRI				pmax	pmax		
	comp=Z,185nm,0.9s						
PLOR	Plostina	84.01	317⇓	*i*P	P	07 02 39.7	+1.5
PLOR	Plostina	84.01	317	P	P	07 02 39.6	+1.4
TSUM	Tsumeb	84.10	251	P	P	07 02 40.3	+0.9
	comp=Z,2.2nm,0.5s,baz=68,slow=5.4,SNR=6.1						
TSUM				LR	LR	07 34 53.6	
	comp=Z,37nm,20.9s,baz=325,slow=32						
TESR	Tescani	84.16	318⇑	*i*P	P	07 02 40.3	+1.4
MLR	Muntele Rosu	84.41	316	P	P	07 02 41.1	+0.7
	comp=Z,8.5nm,0.6s,baz=67,slow=1.5,SNR=14						
MLR	Muntele Rosu	84.41	316⇑	*i*P	P	07 02 41.8	+1.4
MLR	Muntele Rosu	84.41	316	*e*P	P	07 02 40.9	+0.5
	comp=Z,27nm,1.2s						
MLR	Muntele Rosu	84.41	316	*e*P	P	07 02 40.9	+0.5
MLR				pmax	pmax		
	comp=Z,27nm,1.2s						
BIZ	Bicaz	84.62	318⇑	*i*P	P	07 02 42.7	+1.4
VOIR		85.02	316⇑	*i*P	P	07 02 43.7	+0.3
VOIR		85.02	316	P	P	07 02 43.7	+0.3
QSPA	South Pole Qui	85.13	180	P	P	07 02 44.2	+0.6
	comp=Z,0.8nm,0.5s,baz=307,slow=10,SNR=6.4						
BURAR	Bucovina Array	85.36	318⇓	*i*P	P	07 02 47.3	+2.2
BURAR	Bucovina Array	85.36	318	P	P	07 02 47.3	+2.2
BUR04	Bucovina Ar. S	85.36	318	*e*P	P	07 02 46.4	+1.3
BUR08	Bucovina Ar. S	85.38	318	*e*P	P	07 02 47.0	+1.8
VTS	Vitosha	85.77	313⇑	*i*P	P	07 02 48.1	+0.8
VTS	Vitosha	85.77	313	*e*P	P	07 02 47.7	+0.4
	comp=Z,7.8nm,0.8s						
VTS	Vitosha	85.77	313	*e*P	P	07 02 47.7	+0.4
VTS				pmax	pmax		
	comp=Z,8.0nm,0.8s						
LIT	Litokhoron	85.86	311	*e*P	P	07 02 47.8	+0.2
	comp=Z,24nm,0.6s						
LIT	Litokhoron	85.86	311	*e*P	P	07 02 47.8	+0.2
LIT				pmax	pmax		
	comp=Z,24nm,0.6s						
GRG	Griva	86.07	311	P	P	07 02 49.3	+0.6
GRG				pmax	pmax		
	comp=Z,14nm,0.8s						
APA	Apatity	86.80	339⇓	*i*P	P	07 02 49.1	-2.5
APA				pmax	pmax		
	comp=Z,9.0nm,0.9s						
VSU	Vasula	86.96	329*c*	*i*P	P	07 02 53.1	+0.6
VSU				pmax	pmax		
	comp=Z,59nm,0.6s						
MDVR	Moldovita	87.21	315⇑	*i*P	P	07 02 55.2	+1.0
TRPA	Tarpa	87.23	319⇑	*i*P	P	07 02 54.6	+0.5
KWP	Kalwaria Pacla	87.39	320	*e*P	P	07 02 56.0	+1.1
KWP	Kalwaria Pacla	87.39	320	*e*P	P	07 02 55.7	+0.8
	comp=Z,90nm,0.8s						
KWP	Kalwaria Pacla	87.39	320	*e*P	P	07 02 56.0	+1.1
BZS	Buzias	87.42	316⇓	*i*P	P	07 02 56.4	+1.3
MSF	Maaselka	87.91	337	P	P	07 02 57.3	+0.3
MSF				pmax	pmax		
	comp=Z,73nm,0.7s						
SUW	Suwalki	87.92	324	*e*P	P	07 02 57.9	+0.6
SUW	Suwalki	87.92	324	*e*P	P	07 02 57.9	+0.6
	comp=Z,66nm,0.9s						
SUW	Suwalki	87.92	324	*e*P	P	07 02 57.9	+0.6
FIA1	FINESS Array S	88.01	332	*e*P	P	07 02 58.1	+0.6
FIA1				*e*P	P	07 02 58.3	+0.8
FIA0	FINESS Array S	88.01	332	*e*P	P	07 02 58.2	+0.7
FIA0	FINESS Array S	88.01	332	*e*P	P	07 02 58.2	+0.7
FINES	FINESS Array B	88.01	332	P	P	07 02 58.2	+0.7
	comp=Z,16nm,0.6s,baz=112,slow=5.4,SNR=89						
CRVS	Cervenica-Dubn	88.07	319	*e*P	P	07 02 58.9	+0.8
CRVS				pmax	pmax		
	comp=Z,4.0nm,0.9s						
CRVS	Cervenica-Dubn	88.07	319	*e*P	P	07 02 58.9	+0.8
SUF	Sumiainen	88.28	333	P	P	07 02 59.4	+0.6
SUF				pmax	pmax		
	comp=Z,31nm,0.8s						
DIVS	Divibare	88.33	314	*e*P	P	07 02 59.9	+0.3
	comp=Z,24nm,1.5s						
PDG	Podgorica	88.62	313⇓	*i*P	P	07 03 01.9	+1.0
NIE	Niedzica	88.90	320	*e*P	P	07 03 03.6	+1.5
NIE	Niedzica	88.90	320	*e*P	P	07 03 03.6	+1.5
OUL	Oulu	88.96	336	P	P	07 03 02.5	+0.6
OUL				pmax	pmax		
	comp=Z,74nm,0.9s						
SGF	Sodankyl	89.28	338	P	P	07 03 03.9	+0.5
SGF				pmax	pmax		
	comp=Z,25nm,1.0s						
KEV	Kevo	89.70	340	*e*P	P	07 03 05.3	0.0
	comp=Z,15nm,0.9s						
KEV	Kevo	89.70	340	*e*P	P	07 03 05.3	0.0
KEV				pmax	pmax		
	comp=Z,15nm,0.9s						
VYHS	Vyhne	89.73	319	*e*P	P	07 03 07.1	+1.1
VYHS				pmax	pmax		
	comp=Z,4.0nm,1.4s						
VYHS	Vyhne	89.73	319	*e*P	P	07 03 07.0	+1.1
ARA0	ARCESS Array S	90.15	340	*e*P	P	07 03 06.9	-0.6
ARCES	ARCESS Array B	90.15	340	P	P	07 03 06.9	-0.6
	comp=Z,9.4nm,0.6s,baz=96,slow=5.3,SNR=51						
ARCES	ARCESS Array B	90.15	340	*e*P	P	07 03 07.8	+0.3
ARCES	ARCESS Array B	90.15	340	*e*P	P	07 03 07.8	+0.3
ARE0	ARCESS Array S	90.15	340	*e*P	P	07 03 07.6	+0.2
	comp=Z,0.7nm,0.8s						
SNAA	Sanae	90.37	198	LR	LR	07 37 20.5	
	comp=Z,54nm,20.1s,baz=264,slow=31						
SNAA	Sanae	90.37	198⇑	*e*P	P	07 03 09.1	+0.5
SNAA				pmax	pmax		
	comp=Z,118nm,1.3s						
BLY	Banja Luka	90.40	315⇑	*i*P	P	07 03 10.6	+1.5
BLY	Banja Luka	90.40	315	*e*P	P	07 03 10.1	+0.9
	comp=Z,14nm,0.9s						
JAVC	Velka Javorina	90.54	319	*e*P	P	07 03 11.7	+1.9
MORC	Moravsky Berou	90.73	320⇑	*i*P	P	07 03 12.0	+1.4
MORC	Moravsky Berou	90.73	320	*e*P	P	07 03 10.6	0.0
	comp=Z,7.2nm,0.8s						
MORC	Moravsky Berou	90.73	320	*e*P	P	07 03 10.6	0.0
MORC				pmax	pmax		
	comp=Z,7.0nm,0.8s						
MORC	Moravsky Berou	90.73	320	*e*P	P	07 03 12.0	+1.4
MODS	Modra-Piesok	90.74	318	*e*P	P	07 03 12.0	+1.3
MODS				pmax	pmax		
	comp=Z,16nm,1.5s						
MODS	Modra-Piesok	90.74	318	*e*P	P	07 03 12.0	+1.3
DPC	Dobruska-Polom	91.57	320	*e*P	P	07 03 16.5	+2.0
DPC	Dobruska-Polom	91.57	320	*e*P	P	07 03 16.5	+2.0
BOJS	Bojanci	91.84	315	*i* P	P	07 03 17.1	+1.3
PERS	Pernice	92.03	316	*i* P	P	07 03 18.4	+1.7
BRG	Berggiesshubel	93.12	321	*e*P	P	07 03 22.7	+1.1
	comp=Z,5.0nm,0.7s						
BRG	Berggiesshubel	93.12	321	*e*P	P	07 03 22.7	+1.1
BRG				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GEA0	GERESS Array S	93.15	319	*e*P	P	07 03 22.2	+0.4
GEC2	GERESS Array S	93.15	319	*e*P	P	07 03 22.0	+0.1
	comp=Z,7.1nm,1.3s						
GEC2	GERESS Array S	93.15	319	*e*P	P	07 03 22.0	+0.1
GEC2				pmax	pmax		
	comp=Z,7.0nm,1.3s						
GERES	GERESS Array B	93.15	319	P	P	07 03 22.0	+0.1
	comp=Z,2.0nm,0.7s,baz=85,slow=4.6,SNR=12						
GERES	GERESS Array B	93.15	319	P	P	07 03 22.0	+0.1
KHC	Kasperske Hory	93.25	319	*e*P	P	07 03 23.0	+0.7
KHC	Kasperske Hory	93.25	319	*e*P	P	07 03 23.0	+0.7
HFS	Hagfors	93.82	330	P	P	07 03 24.4	-0.1
	comp=Z,4.9nm,0.6s,baz=122,slow=5.2,SNR=20						
SPITS	Spitsbergen Ar	94.02	348	P	P	07 03 24.1	-1.1
	comp=Z,6.0nm,0.6s,baz=87,slow=7.4,SNR=12						
SPITS				LR	LR	07 51 36.7	
	comp=Z,47nm,20.7s,baz=140,slow=39						
NB2	NORSAR Subarra	95.07	331	P	P	07 03 30.3	-0.1
	comp=Z,4.3nm,0.8s,baz=92,slow=4.6						
NOA	NORSAR Array B	95.07	331	P	P	07 03 30.6	+0.2
	comp=Z,2.1nm,0.7s,baz=92,slow=4.6,SNR=9.9						
NOA				LR	LR	07 50 54.5	
	comp=Z,9.9nm,20.0s,baz=100,slow=38						
NC204	NORSAR Array S	95.29	331	*e*P	P	07 03 31.8	+0.4
DAVOX	Davos/Dischmat	95.64	316	P	P	07 03 33.7	+0.2
	comp=Z,2.6nm,0.6s,baz=311,slow=10,SNR=4.0						
KEST	Kesra	95.76	305	P	P	07 03 34.9	+0.7
	comp=Z,1.9nm,0.5s,baz=84,slow=10,SNR=2.9						
KONO	Kongsberg	95.87	329⇑	*e*P	P	07 03 33.6	-0.4
KONO				pmax	pmax		
	comp=Z,5.0nm,0.9s						
TOLK	Toolik Lake Re	100.80	21	P	Pdif	07 03 56.0	0.0
	baz=284						
TORD	Torodi Ar. Bea	102.08	282	P	Pdif	07 04 02.9	+0.1
	comp=Z,0.2nm,0.7s,baz=65,slow=3.8						
TOA1	Torodi Ar. Sit	102.08	282	*e*Pdif	Pdif	07 04 02.9	+0.1
YKA	Yellowknife Ar	116.16	18	PKP	PKPdf	07 08 49.2	-1.0
	comp=Z,0.7nm,0.7s,baz=318,slow=1.7,SNR=3.6						
B05A	Bryant	122.17	34	P	PKPdf	07 09 02.6	+0.4
	baz=304						
G03D	McMinnville, O	123.12	38	P	PKPdf	07 09 04.9	+0.8
	baz=301						
LON	Longmire	123.17	35	*e*PKPdf	PKPdf	07 09 04.5	+0.2
LON	Longmire	123.17	35	*e*PKIKP	PKPdf	07 09 04.5	+0.2
LTY	Liberty	123.53	34	*e*PKPdf	PKPdf	07 09 05.1	+0.1
B08A	Colville Reser	123.63	33	*e*PKPdf	PKPdf	07 09 05.5	+0.3
I03D	Drain, OR	123.83	39	P	PKPdf	07 09 06.3	+0.8
	baz=300,SNR=5.3						
H04A	Detroit Lake	124.04	38	*e*PKPdf	PKPdf	07 09 06.4	+0.4
G05D	Wamic, OR	124.27	37	P	PKPdf	07 09 06.9	+0.5
	baz=303						
I04A	Tendick Farm,	124.36	39	P	PKPdf	07 09 06.9	+0.2
	baz=301,SNR=8.0						
HUMO	Hull Mountain	124.61	40	*e*PKPdf	PKPdf	07 09 08.1	+1.0
D08A	Wollman Farm,	124.62	34	*e*PKPdf	PKPdf	07 09 07.9	+0.9
HAWA	Hanford	124.67	35	*e*PKPdf	PKPdf	07 09 08.3	+1.2
I05D	Terrebonne, OR	124.74	38	P	PKPdf	07 09 07.9	+0.5
	baz=302						
J04D	Umpqua Nationa	124.84	39	P	PKPdf	07 09 08.3	+0.5
	baz=301,SNR=6.8						
E08A	Dider Farm, El	124.88	34	*e*PKPdf	PKPdf	07 09 08.2	+0.7
YBH	Yreka Blue Hor	125.20	41	PKP	PKPdf	07 09 07.5	-0.9
	comp=Z,1.1nm,0.7s,baz=42,slow=2.9,SNR=3.9						
M02C	Callahan	125.27	41	P	PKPdf	07 09 09.3	+0.8
	baz=299						
PINE	Pine Mountain	125.28	38	*e*PKPdf	PKPdf	07 09 10.1	+1.5
J05D	Fort Rock, OR	125.36	39	P	PKPdf	07 09 09.5	+0.8
	baz=302,SNR=7.5						
N02D	Trinity Center	125.57	42	P	PKPdf	07 09 09.8	+0.7
	baz=299						
M04C	Macdoel	125.75	41	P	PKPdf	07 09 10.4	+0.9
	baz=300						
K05A	Summer Lake	125.87	39	*e*PKPdf	PKPdf	07 09 11.1	+1.3
O03D	Paynes Creek	126.50	42	P	PKPdf	07 09 11.1	+0.1
	baz=299						
MOD	Modoc Plateau	126.67	40	*e*PKPdf	PKPdf	07 09 12.4	+1.1
J08A	Circle Bar Ran	127.01	37	*e*PKPdf	PKPdf	07 09 13.0	+1.2
WVOR	Wild Horse Val	127.43	38	*e*PKPdf	PKPdf	07 09 14.1	+1.4
WVOR	Wild Horse Val	127.43	38	*e*PKIKP	PKPdf	07 09 14.1	+1.4
AFDM	Forest Hills D	127.72	43	*e*PKPdf	PKPdf	07 09 14.6	+1.4
VCNR	Virginia City	128.44	42	*e*PKPdf	PKPdf	07 09 15.6	+0.8
MFID	Camas Ranch	128.55	36	*e*PKPdf	PKPdf	07 09 15.9	+1.1
PNTR	Pine Nut	128.58	42	*e*PKPdf	PKPdf	07 09 16.4	+1.3
EGMT	Eagleton	128.67	28	P	PKPdf	07 09 15.5	+0.7
	baz=316						
HLID	Hailey	129.27	35	P	PKPdf	07 09 16.7	+0.5
	baz=309						
BOZ	Bozeman (W)	129.45	31	P	PKPdf	07 09 17.4	+0.8
	baz=313						
BOZ	Bozeman (W)	129.45	31	*e*PKPdf	PKPdf	07 09 17.3	+0.8
BOZ	Bozeman (W)	129.45	31	*e*PKIKP	PKPdf	07 09 17.3	+0.8
SCHQ	Schefferville	129.49	352	PKP	PKPdf	07 09 15.8	-0.2
	comp=Z,3.0nm,0.5s,baz=226,slow=0.4,SNR=4.7						
KVN	Kaiserville	129.60	42	*e*PKPdf	PKPdf	07 09 17.8	+0.8
KVN	Kaiserville	129.60	42	*e*PKIKP	PKPdf	07 09 17.8	+0.8
NV01	Mina Array Sit	129.78	42	*e*PKPdf	PKPdf	07 09 18.3	+0.9
NVAR	Mina Array Bea	129.78	42	PKP	PKPdf	07 09 18.1	+0.7
	comp=Z,1.2nm,0.5s,baz=305,slow=2.3,SNR=21						
NVAR				SKPbc	SKPbc	07 12 34.0	-0.1
	comp=Z,0.7nm,0.7s,baz=286,slow=3.4,SNR=5.2						
YHB	Horse Butte	130.25	32	*e*PKPdf	PKPdf	07 09 18.8	+0.6
CWC	Cottonwood Cre	130.95	45	P	PKPdf	07 09 20.4	+0.8
	baz=300						
FXWY	Fox Creek	131.09	33	*e*PKPdf	PKPdf	07 09 21.0	+1.2
SNOW	Snow King Moun	131.36	33	*e*PKPdf	PKPdf	07 09 20.5	+0.2
REDW	Red Top Meadow	131.38	33	*e*PKPdf	PKPdf	07 09 20.8	+0.5
MPMC	Manual Prospec	131.55	45	P	PKPdf	07 09 22.0	+1.2
	baz=300,SNR=5.0						
R11A	Troy Canyon, C	131.63	41	P	PKPdf	07 09 22.2	+1.3
	baz=304						
R11A	Troy Canyon, C	131.63	41	*e*PKPdf	PKPdf	07 09 22.4	+1.5
EDW2	Edwards Air Fo	131.77	46	P	PKPdf	07 09 22.2	+1.1
	baz=299						
FURC	Furnace Creek,	131.78	44	P	PKPdf	07 09 22.4	+1.5
	baz=301						
TPNV	Topopah Spring	131.95	43	P	PKPdf	07 09 22.6	+1.1
	baz=302						
ULM	Lac du Bonnet	132.04	16	PKP	PKPdf	07 09 19.9	-1.1
	comp=Z,3.9nm,0.8s,baz=30,slow=1.9,SNR=8.2						
ULM				SKPbc	SKPbc	07 12 38.2	-3.3
	comp=Z,1.4nm,0.5s,baz=351,slow=3.2,SNR=4.2						
HWUT	Hardware Ranch	132.14	35	*e*PKPdf	PKPdf	07 09 22.4	+0.6
DUG	Dugway, Tooele	132.29	37	P	PKPdf	07 09 23.4	+1.4
	baz=308						
BFSC	Mount Baldy Ra	132.32	47	P	PKPdf	07 09 23.4	+1.2
	baz=299						
GSC	Goldstone, Bar	132.41	45	P	PKPdf	07 09 23.8	+1.5
	baz=300						
GSC	Goldstone, Bar	132.41	45	*e*PKPdf	PKPdf	07 09 23.6	+1.3
GSC	Goldstone, Bar	132.41	45	*e*PKIKP	PKPdf	07 09 23.6	+1.3
PD31	Pinedale Array	132.47	32	*e*PKPdf	PKPdf	07 09 22.5	+0.1
PDAR	Pinedale Array	132.47	32	PKP	PKPdf	07 09 22.6	+0.2
	comp=Z,0.7nm,0.5s,baz=157,slow=1.7,SNR=11						
PDAR				SKPbc	SKPbc	07 12 43.2	-0.4
	comp=Z,0.8nm,0.9s,baz=30,slow=4.2,SNR=4.3						
PDAR	Pinedale Array	132.47	32	*e*PKPdf	PKPdf	07 09 21.9	-0.5
SHOC	Shoshone, Teco	132.48	44	P	PKPdf	07 09 23.9	+1.6
	baz=301						
BBRC	Big Bear Solar	132.84	46	P	PKPdf	07 09 24.6	+1.3
	baz=299						
SHPR	Sheep Range	132.92	43	*e*PKPdf	PKPdf	07 09 24.9	+1.6
TUQ	Turquoise Moun	132.96	45	P	PKPdf	07 09 24.5	+1.1
	baz=301						
FRD	Ford Ranch, An	133.45	47	P	PKPdf	07 09 25.5	+1.2
	baz=299						
PFO	Pinyon Flats O	133.50	47	P	PKPdf	07 09 25.7	+1.3
	baz=299						
BELC	Belle Mtn. Jos	133.64	46	P	PKPdf	07 09 25.9	+1.2
	baz=300						
SZCU	Shurtz Canyon	133.68	40	*e*PKPdf	PKPdf	07 09 26.6	+1.8
MSU	Marysvale	133.71	39	*e*PKPdf	PKPdf	07 09 25.4	+0.6
MSU	Marysvale	133.71	39	*e*PKIKP	PKPdf	07 09 25.4	+0.6
AGMN	Agassiz Nation	133.80	17	P	PKPdf	07 09 24.9	+0.5
	baz=334						
MONP2	Monument Peak	133.87	48	P	PKPdf	07 09 26.1	+0.8
	baz=299						
LCMT	Little Creek M	133.92	41	*e*PKPdf	PKPdf	07 09 25.9	+0.8
B34A	Aery, Baudette	133.98	16	P	PKPdf	07 09 25.0	+0.2
	baz=335						
K22A	Casper	134.14	30	P	PKPdf	07 09 25.1	-0.3
	baz=317						
P18A	Preston Nutter	134.18	36	*e*PKPdf	PKPdf	07 09 27.0	+1.2
SRU	San Rafael Swe	134.35	37	*e*PKPdf	PKPdf	07 09 25.6	-0.4
SRU	San Rafael Swe	134.35	37	*e*PKIKP	PKPdf	07 09 25.6	-0.4
GLA	Glamis	134.96	47	*e*PKPdf	PKPdf	07 09 27.2	+0.2
GLA	Glamis	134.96	47	*e*PKIKP	PKPdf	07 09 27.3	+0.2
O20A	White River Ci	135.00	34	*e*PKPdf	PKPdf	07 09 28.0	+0.8
WUAZ	Wupatki	136.01	42	*e*PKPdf	PKPdf	07 09 28.8	-0.4
ECSD	EROS Data Cent	137.58	21	*e*PKPdf	PKPdf	07 09 31.3	-0.3
TUC	Tucson	138.24	45	*e*PKPdf	PKPdf	07 09 33.9	+0.6
J36A	Seneca 1, Swea	138.72	19	*e*PKPdf	PKPdf	07 09 33.7	0.0
T25A	Trinidad	139.23	34	*e*PKPdf	PKPdf	07 09 36.1	+1.0
ANMO	Albuquerque	139.52	38	PKhKP	PKPpre	07 09 29.1	
	comp=Z,0.6nm,0.7s,baz=227,slow=1.9,SNR=2.4						
ANMO				SKPbc	SKPbc	07 13 03.4	-2.1
	comp=Z,1.0nm,0.8s,baz=296,slow=7.5,SNR=1.8						
ANMO	Albuquerque	139.52	38⇓	*i*PKIKP	PKPdf	07 09 37.1	+1.4
ANMO				pmax	pmax		
	comp=Z,2.0nm,1.3s						
CPUP	Villa Florida	143.61	211	PKP	PKPbc	07 09 41.0	+0.6
	comp=Z,1.5nm,0.5s,baz=119,slow=1.1,SNR=3.2						
S38A	Stockton	143.90	23	P	PKPab	07 09 39.7	-0.7
	baz=331,SNR=5.2						
R40A	Maddies Statio	143.92	21	P	PKPab	07 09 40.0	-0.4
	baz=334,SNR=16						
O48A	Farmland	143.99	11	P	PKPbc	07 09 41.0	-0.2
	baz=346						
WMOK	Wichita Mounta	144.06	31	P	PKPab	07 09 41.0	-0.1
	baz=321,SNR=29						
N59A	State Game Lan	144.07	358	*e*PKPdf	PKPbc	07 09 41.8	+0.3
S39A	Bolivar	144.07	22	P	PKPab	07 09 40.2	-0.8
	baz=332,SNR=8.1						
P45A	Graceland, Par	144.13	14	P	PKPab	07 09 41.3	+0.2
	baz=342						
P45A	Graceland, Par	144.13	14	*e*PKPdf	PKPbc	07 09 41.9	+0.3
Q43A	New Douglas	144.16	17	P	PKPab	07 09 41.2	-0.1
	baz=338						
R41A	Rosebud	144.22	20	P	PKPab	07 09 41.4	-0.2
	baz=335,SNR=8.5						
T38A	Diamond	144.26	24	P	PKPab	07 09 41.4	-0.4
	baz=330,SNR=13						
O50A	Cable	144.35	9	P	PKPab	07 09 41.7	-0.4
	baz=349,SNR=7.7						
SSPA	Standing Stone	144.36	1	*e*PKPdf	PKPab	07 09 41.5	-0.5
Q44A	Meyer Farm, Va	144.39	16	P	PKPab	07 09 41.9	-0.2
	baz=339						
R42A	Luebbering	144.43	19	P	PKPab	07 09 42.0	-0.3
	baz=336,SNR=23						
S40A	Lebanon	144.46	21	P	PKPab	07 09 41.9	-0.6
	baz=333,SNR=22						
CCM	Cathedral Cave	144.49	20	P	PKPab	07 09 42.6	+0.1
	baz=335						
CCM	Cathedral Cave	144.49	20	*e*PKPdf	PKPbc	07 09 43.0	+0.2
CCM	Cathedral Cave	144.49	20	*e*PKIKP	PKPbc	07 09 43.0	+0.2
P47A	Martinsville	144.51	12	P	PKPab	07 09 42.4	-0.2
	baz=344,SNR=6.7						
TUL1	Leonard	144.57	27	P	PKPab	07 09 42.7	-0.2
	baz=326,SNR=23						
TUL1	Leonard	144.57	27	*e*PKPdf	PKPab	07 09 43.0	0.0
Q45A	Warren Harvey,	144.63	15	P	PKPab	07 09 42.8	-0.2
	baz=340,SNR=8.0						
T39A	Clever	144.63	23	P	PKPab	07 09 42.6	-0.5
	baz=331,SNR=33						
R43A	Red Bud	144.70	18	P	PKPab	07 09 42.8	-0.5
	baz=337,SNR=16						
O56A	Blue Knob Stat	144.71	2	P	PKPab	07 09 43.2	-0.1
	baz=357,SNR=10						
O56A	Blue Knob Stat	144.71	2	*e*PKPdf	PKPab	07 09 43.2	-0.1
P48A	Milroy	144.71	11	P	PKPab	07 09 42.6	-0.7
	baz=345,SNR=11						
S41A	Jillco Farms,	144.74	20	P	PKPab	07 09 43.2	-0.3
	baz=334,SNR=41						
BLO	Bloomington	144.76	13	*e*PKPdf	PKPab	07 09 43.5	0.0
BLO	Bloomington	144.76	13	*e*PKIKP	PKPab	07 09 43.5	0.0
P49A	Miami Univ. Ec	144.77	10	P	PKPab	07 09 42.9	-0.6
	baz=346,SNR=8.4						
PAGS	Pennsylvania G	144.78	360	*e*PKPdf	PKPab	07 09 43.0	-0.5
OLIL	Olney	144.79	15	*e*PKPdf	PKPab	07 09 43.1	-0.6
BDFB	Brasilia	144.81	234	PKPbc	PKPdf	07 09 46.0	+0.6
	comp=Z,8.5nm,0.4s,baz=122,slow=3.3,SNR=25						
BDFB	Brasilia	144.81	234	*e*PKPbc	PKPdf	07 09 45.9	+0.4
BDFB				*e*PKPbc	PKPbc	07 09 46.0	+1.4
BDFB	Brasilia	144.81	234	*e*PKIKP	PKPdf	07 09 45.9	+0.4
FVM	French Village	144.82	19	*e*PKPdf	PKPdf	07 09 44.5	-0.3
FVM	French Village	144.82	19	*e*PKIKP	PKPdf	07 09 44.5	-0.3
P50A	Jamestown	144.85	9	P	PKPab	07 09 43.3	-0.6
	baz=348,SNR=19						
S42A	Caledonia	144.89	19	P	PKPab	07 09 43.5	-0.5
	baz=336,SNR=51						
HPIG		144.92	48	*e*PKPdf	PKPdf	07 09 45.4	-0.1
LTX	Lajitas	144.93	43	*e*PKPdf	PKPdf	07 09 45.4	0.0
LTX	Lajitas	144.93	43	*e*PKIKP	PKPdf	07 09 45.4	0.0
TX31	Lajitas Ar. Si	144.93	43	*e*PKPdf	PKPbc	07 09 44.9	+0.3
TX31				*e*PKPdf	PKPdf	07 09 45.3	0.0
TXAR	Lajitas Array	144.93	43	PKP	PKPdf	07 09 45.4	0.0
	comp=Z,11nm,0.5s,baz=276,slow=1.2,SNR=198						
TXAR				SKPbc	SKPbc	07 13 19.3	+0.2
	comp=Z,0.6nm,0.7s,baz=219,slow=1.2,SNR=6.4						
R44A	Waltonville	144.98	17	P	PKPab	07 09 44.0	-0.3
	baz=339,SNR=13						
MVL	Millersville	145.00	359	*e*PKPbc	PKPab	07 09 44.5	+0.1
Q47A	Bedord North L	145.00	13	P	PKPbc	07 09 44.1	-0.3
	baz=343,SNR=28						
HHAR	Hobbs	145.05	24	*e*PKPbc	PKPbc	07 09 43.9	-0.8
U39A	Green Forest	145.15	24	P	PKPbc	07 09 44.3	-0.7
	baz=330,SNR=51						
Q48A	North Vernon	145.16	12	P	PKPbc	07 09 44.7	-0.3
	baz=345,SNR=32						
R45A	Skylar, Fairfi	145.16	16	P	PKPbc	07 09 44.8	-0.2
	baz=340,SNR=23						

ABTX	Abilene, Hawle	145.20	35	P	PKPab	07 09 45.4	0.0
	baz=318,SNR=12						
ABTX	Abilene, Hawle	145.20	35	*e*PKPbc	PKPdf	07 09 45.7	+0.1
T41A	Mountain View	145.22	21	P	PKPbc	07 09 44.7	-0.5
	baz=334,SNR=70						
MCWV	Mont Chateau	145.25	4	P	PKPbc	07 09 45.1	-0.1
	baz=355,SNR=15						
MCWV	Mont Chateau	145.25	4	*e*PKPbc	PKPab	07 09 45.4	0.0
Q49A	Aurora	145.25	11	P	PKPbc	07 09 44.7	-0.5
	baz=346,SNR=14						
S43A	Fulton Ridge,	145.31	18	P	PKPbc	07 09 44.6	-0.9
	baz=337,SNR=19						
U40A	Yellville	145.42	23	P	PKPdf	07 09 45.4	-0.4
	baz=331,SNR=78						
SIUC	Southern Illin	145.44	17	*e*PKPbc	PKPdf	07 09 45.7	-0.1
R46A	Gibon Southern	145.44	15	P	PKPdf	07 09 45.4	-0.4
	baz=341,SNR=15						
S44A	Carbondale	145.44	17	P	PKPdf	07 09 45.7	-0.1
	baz=338,SNR=22						
T42A	Van Buren	145.46	20	P	PKPdf	07 09 45.5	-0.3
	baz=335,SNR=96						
T42A	Van Buren	145.46	20	*e*PKPbc	PKPdf	07 09 45.5	-0.3
Q51A	Peebles	145.49	9	P	PKPdf	07 09 45.4	-0.5
	baz=349,SNR=16						
V39A	Pettigrew	145.55	24	P	PKPdf	07 09 45.6	-0.6
	baz=330,SNR=36						
Q50A	Georgetown	145.57	10	P	PKPdf	07 09 45.4	-0.6
	baz=348,SNR=7.8						
SDMD	Soldier's Deli	145.59	360	*e*PKPdf	PKPdf	07 09 46.1	+0.1
R47A	Wooly Knot Far	145.59	13	P	PKPdf	07 09 45.9	-0.2
	baz=343,SNR=14						
USIN	University of	145.63	15	*e*PKPdf	PKPab	07 09 46.6	-0.1
R48A	Northridge Ran	145.64	12	P	PKPdf	07 09 46.2	+0.1
	baz=344,SNR=17						
S45A	Carrier Mills	145.65	16	P	PKPdf	07 09 46.3	+0.1
	baz=339,SNR=12						
T43A	Greenville	145.68	19	P	PKPdf	07 09 46.0	-0.3
	baz=336,SNR=24						
WCI	Wyandotte Cave	145.71	13	P	PKPdf	07 09 46.4	+0.1
	baz=343						
WCI	Wyandotte Cave	145.71	13	*e*PKPdf	PKPbc	07 09 46.6	-0.1
WCI	Wyandotte Cave	145.71	13	*e*PKIKP	PKPbc	07 09 46.6	-0.1
U41A	Viola	145.78	22	P	PKPdf	07 09 46.5	0.0
	baz=333,SNR=40						
S46A	Don Dixon Farm	145.88	15	P	PKPdf	07 09 46.6	0.0
	baz=341,SNR=9.2						
R49A	Shelbyville	145.89	12	P	PKPdf	07 09 46.7	+0.1
	baz=345,SNR=24						
T44A	Benton	145.90	18	P	PKPdf	07 09 46.7	+0.1
	baz=337,SNR=7.9						
PBMO	Poplar Bluff	145.91	19	*e*PKPdf	PKPdf	07 09 46.8	+0.1
V40A	Witts Springs	145.91	23	P	PKPdf	07 09 46.8	0.0
	baz=331,SNR=36						
V40A	Witts Springs	145.91	23	*e*PKPdf	PKPdf	07 09 46.6	-0.2
U42A	Revenden	146.02	21	P	PKPdf	07 09 47.2	+0.4
	baz=334,SNR=32						
W39A	Magazine	146.05	25	P	PKPdf	07 09 47.0	0.0
	baz=329,SNR=6.0						
W39A	Magazine	146.05	25	*e*PKPdf	PKPbc	07 09 47.7	-0.1
R50A	Paris	146.06	10	P	PKPdf	07 09 46.8	-0.1
	baz=347,SNR=11						
R51A	Hillsboro	146.17	9	P	PKPdf	07 09 47.1	0.0
	baz=348,SNR=7.9						
S47A	Hartford	146.18	14	P	PKPdf	07 09 47.2	+0.1
	baz=342						
V41A	Mountainview	146.19	22	P	PKPdf	07 09 47.4	+0.2
	baz=332,SNR=37						
PARMO	Parma	146.24	19	*e*PKPdf	PKPdf	07 09 46.9	-0.3
T45A	Paducah	146.25	17	P	PKPbc	07 09 47.8	-0.5
	baz=339						
T45A	Paducah	146.25	17	*e*PKPdf	PKPdf	07 09 46.6	-0.6
R52A	Catlettsburg	146.27	8	P	PKPdf	07 09 47.7	+0.5
	baz=350,SNR=5.6						
U43A	Rector	146.29	20	P	PKPdf	07 09 47.7	+0.4
	baz=335,SNR=9.5						
S48A	Wiedeman Farm,	146.31	13	P	PKPbc	07 09 48.1	-0.5
	baz=344,SNR=26						
W40A	Ferguson Farm,	146.35	24	P	PKPbc	07 09 48.3	-0.4
	baz=330,SNR=17						
W40A	Ferguson Farm,	146.35	24	*e*PKPdf	PKPdf	07 09 47.9	+0.5
S49A	Springfield	146.35	12	P	PKPbc	07 09 48.7	+0.1
	baz=345,SNR=21						
T46A	Princeton	146.44	16	P	PKPbc	07 09 48.6	-0.3
	baz=340,SNR=22						
V42A	Cord	146.46	21	P	PKPbc	07 09 48.4	-0.6
	baz=333,SNR=29						
X39A	Fountain Ranch	146.49	26	P	PKPbc	07 09 49.2	0.0
	baz=328,SNR=21						
WHAR	Wooly Hollow	146.57	23	*e*PKPdf	PKPbc	07 09 49.1	-0.3
S50A	Richmond	146.63	11	P	PKPbc	07 09 49.4	0.0
	baz=346						
JCT	Junction City	146.66	37	P	PKPbc	07 09 50.0	+0.2
	baz=316,SNR=36						
JCT	Junction City	146.66	37	*e*PKPdf	PKPbc	07 09 49.1	-0.7
JCT	Junction City	146.66	37	*e*PKP2	PKPbc	07 09 49.1	-0.7
U44B	Burton Farm, H	146.66	18	P	PKPbc	07 09 49.5	-0.1
	baz=337						
MIAR	Mount Ida	146.69	25	P	PKPbc	07 09 49.5	-0.2
	baz=329,SNR=58						
MIAR	Mount Ida	146.69	25	*e*PKPdf	PKPbc	07 09 49.1	-0.7
MIAR	Mount Ida	146.69	25	*e*PKP2	PKPbc	07 09 49.1	-0.7
W41B	Gary Mavity, V	146.69	23	P	PKPbc	07 09 49.1	-0.6
	baz=332,SNR=11						
W41B	Gary Mavity, V	146.69	23	*e*PKPdf	PKPbc	07 09 49.5	-0.2
T47A	Sharon Grove	146.70	15	P	PKPbc	07 09 49.1	-0.6
	baz=341,SNR=12						
T47A	Sharon Grove	146.70	15	*e*PKPdf	PKPbc	07 09 49.4	-0.3
T48A	Bowling Green	146.76	14	P	PKPbc	07 09 49.6	-0.3
	baz=343,SNR=16						
V43A	Jonesboro	146.78	20	P	PKPbc	07 09 49.5	-0.4
	baz=335						
CBN	Corbin Frederi	146.79	1	P	PKPbc	07 09 49.6	-0.3
	baz=359,SNR=5.6						
CBN	Corbin Frederi	146.79	1	*e*PKPdf	PKPbc	07 09 49.4	-0.5
S51A	Beattyville	146.81	10	P	PKPbc	07 09 49.3	-0.7
	baz=348,SNR=14						
S51A	Beattyville	146.81	10	*e*PKPdf	PKPbc	07 09 49.3	-0.7
U45A	Rockin P Farm,	146.84	18	P	PKPbc	07 09 49.8	-0.3
	baz=338,SNR=5.3						
S52A	Salyersville	146.85	9	P	PKPbc	07 09 49.6	-0.5
	baz=349,SNR=13						
WHTX	Lake Whitney,	146.89	33	P	PKPbc	07 09 49.6	-0.8
	baz=320						
CVRD	Centerville Ro	146.92	1	*e*PKPdf	PKPbc	07 09 49.6	-0.7
T49A	Edmonton	146.96	13	P	PKPbc	07 09 49.4	-1.0
	baz=344,SNR=11						
T49A	Edmonton	146.96	13	*e*PKPdf	PKPbc	07 09 49.8	-0.7
UALR	University of	147.00	24	*e*PKPdf	PKPdf	07 09 48.0	-0.6
X40A	Basin Creek Fa	147.05	24	P	PKPbc	07 09 50.2	-0.6
	baz=330						
U47A	Clarksville	147.16	15	P	PKPbc	07 09 50.7	-0.3
	baz=341,SNR=14						
X41A	Kaden, Bauxite	147.18	24	P	PKPbc	07 09 50.3	-0.8
	baz=331,SNR=7.9						
T50A	Nancy	147.18	12	P	PKPbc	07 09 50.1	-1.0
	baz=345,SNR=11						
Y40A	Okolona	147.28	26	P	PKPbc	07 09 50.9	-0.5
	baz=329,SNR=5.8						
U48A	Cassie Pea, Po	147.29	14	P	PKPbc	07 09 50.8	-0.6
	baz=342,SNR=12						
WVT	Waverly	147.31	16	P	PKPbc	07 09 51.0	-0.4
	baz=340						
WVT	Waverly	147.31	16	*e*PKPdf	PKPbc	07 09 50.3	-1.1
WVT	Waverly	147.31	16	*e*PKP2	PKPbc	07 09 50.3	-1.1
V45A	Humboldt	147.34	18	P	PKPbc	07 09 50.9	-0.6
	baz=338						
W43A	Forest City	147.35	21	P	PKPbc	07 09 51.0	-0.6
	baz=334						
T51A	Gray	147.41	10	P	PKPbc	07 09 51.0	-0.7
	baz=347,SNR=21						
T52A	Hallie	147.43	9	P	PKPbc	07 09 51.1	-0.7
	baz=349,SNR=7.8						
U49A	Red Boiling Sp	147.47	13	P	PKPbc	07 09 51.3	-0.6
	baz=344,SNR=42						
X42A	Stuttgart	147.48	23	P	PKPbc	07 09 51.2	-0.7
	baz=332						
V46A	Holladay	147.54	17	P	PKPbc	07 09 51.5	-0.6
	baz=339,SNR=11						
BLA	Blacksburg	147.64	5	P	PKPbc	07 09 51.8	-0.5
	baz=354						
Y41A	Eaglette Beard	147.67	25	P	PKPbc	07 09 52.3	-0.2
	baz=330,SNR=5.5						
V47A	Nunnelly	147.68	16	P	PKPbc	07 09 52.0	-0.5
	baz=340,SNR=11						
435B	Jarrell	147.73	35	P	PKPbc	07 09 52.7	0.0
	baz=319						
435B	Jarrell	147.73	35	*e*PKPdf	PKPdf	07 09 50.5	+0.6
U50A	Jamestown	147.77	12	P	PKPbc	07 09 52.1	-0.6
	baz=345,SNR=38						
X43A	Marvell	147.79	22	P	PKPbc	07 09 52.6	-0.2
	baz=333						
W45A	Hickory Valley	147.80	19	P	PKPbc	07 09 52.0	-0.7
	baz=337,SNR=7.6						
Z40A	Long Farm, Mag	147.86	26	P	PKPbc	07 09 53.0	0.0
	baz=328,SNR=6.4						
TZTN	Tazewell	147.89	10	P	PKPbc	07 09 52.5	-0.5
	baz=348,SNR=12						
TZTN	Tazewell	147.89	10	*e*PKPbc	PKPbc	07 09 52.6	-0.5
V48A	Smith Brothers	147.95	15	P	PKPbc	07 09 52.5	-0.7
	baz=341,SNR=19						
V48A	Smith Brothers	147.95	15	*e*PKPbc	PKPbc	07 09 52.7	-0.5
U51A	La Follette	147.96	11	P	PKPbc	07 09 52.1	-1.1
	baz=347,SNR=5.5						
Y42A	Garnett, Star	148.05	24	P	PKPbc	07 09 53.2	-0.3
	baz=331						
U52A	Thorn Hill	148.06	10	P	PKPbc	07 09 53.0	-0.5
	baz=348,SNR=9.3						
X44A	Crenshaw	148.07	21	P	PKPbc	07 09 53.3	-0.2
	baz=335						
Z41A	Richland Creek	148.12	26	P	PKPbc	07 09 53.7	0.0
	baz=329						
Z41A	Richland Creek	148.12	26	*e*PKPbc	PKPbc	07 09 52.6	-1.1
V49A	McMinnville	148.15	14	P	PKPbc	07 09 52.9	-0.8
	baz=343,SNR=15						
W47A	Westpoint	148.20	17	P	PKPbc	07 09 53.3	-0.6
	baz=340,SNR=32						
U53A	Fall Branch	148.22	9	P	PKPbc	07 09 53.0	-0.9
	baz=349,SNR=6.3						
PLAL	Pickwick Lake	148.31	17	*e*PKPbc	PKPbc	07 09 53.4	-0.8
Y43A	Makayla and Ka	148.31	22	P	PKPbc	07 09 53.8	-0.3
	baz=333						
OXF	Oxford	148.32	20	P	PKPbc	07 09 53.5	-0.6
	baz=336						
OXF	Oxford	148.32	20	*e*PKPbc	PKPbc	07 09 54.0	-0.2
OXF	Oxford	148.32	20	*e*PKP2	PKPbc	07 09 54.0	-0.2
X45A	UM Field Stati	148.40	20	P	PKPbc	07 09 53.8	-0.6
	baz=336						
833A	Chaparral WMA,	148.42	40	P	PKPbc	07 09 55.0	+0.4
	baz=314						
833A	Chaparral WMA,	148.42	40	*e*PKPdf	PKPdf	07 09 49.0	-2.1
V50A	Pikevile	148.43	13	P	PKPbc	07 09 53.7	-0.7
	baz=344,SNR=30						
V51A	Loudon	148.46	11	P	PKPbc	07 09 53.9	-0.6
	baz=346						
V51A	Loudon	148.46	11	*e*PKPbc	PKPbc	07 09 54.2	-0.3
Z42A	Norrel Spur, H	148.47	24	P	PKPbc	07 09 54.5	-0.1
	baz=331						
W48A	Pulaski	148.49	16	P	PKPbc	07 09 53.8	-0.9
	baz=341,SNR=42						
NATX	Nacogdoches	148.52	30	P	PKPbc	07 09 54.6	-0.2
	baz=325						
NATX	Nacogdoches	148.52	30	*e*PKPdf	PKPdf	07 09 52.9	+1.7
Y44A	Strider, Charl	148.54	21	P	PKPbc	07 09 54.6	-0.1
	baz=334						
X46A	Booneville	148.55	19	P	PKPbc	07 09 54.0	-0.8
	baz=337,SNR=7.5						
V52A	Sevierville	148.56	10	P	PKPbc	07 09 54.5	-0.3
	baz=347,SNR=11						
V52A	Sevierville	148.56	10	*e*PKPbc	PKPbc	07 09 54.6	-0.3
141A	Papa Simpson,	148.64	26	P	PKPbc	07 09 54.9	-0.1
	baz=328						
SWET	Sewanee	148.67	14	*e*PKPbc	PKPbc	07 09 54.6	-0.5
W49A	Belvidere	148.68	15	P	PKPbc	07 09 54.5	-0.6
	baz=342,SNR=18						
TKL	Tuckaleechee C	148.71	11	PKPbc	PKPbc	07 09 54.8	-0.4
	comp=Z,14nm,0.5s,baz=316,slow=2.2,SNR=39						
TKL	Tuckaleechee C	148.71	11	*e*PKPbc	PKPbc	07 09 54.9	-0.3
TKL	Tuckaleechee C	148.71	11	*e*PKP2	PKPbc	07 09 54.9	-0.3
240A	Hunter Patters	148.72	28	P	PKPbc	07 09 55.4	+0.1
	baz=326						
CPCT	Cooper Cave	148.76	12	*e*PKPbc	PKPbc	07 09 55.3	0.0
X47A	Russelville	148.81	17	P	PKPbc	07 09 54.4	-1.1
	baz=339,SNR=9.8						
NCAT	North Carolina	148.81	4	*e*PKPbc	PKPbc	07 09 54.9	-0.5
W50A	Signal Mountai	148.83	13	P	PKPbc	07 09 54.9	-0.6
	baz=344,SNR=12						
W50A	Signal Mountai	148.83	13	*e*PKPbc	PKPbc	07 09 55.1	-0.4
Y45A	Yeager Farm, C	148.86	20	P	PKPbc	07 09 55.3	-0.3
	baz=335						
V53A	Saluda	148.86	9	P	PKPbc	07 09 55.4	-0.2
	baz=349,SNR=14						
V53A	Saluda	148.86	9	*e*PKPbc	PKPbc	07 09 55.4	-0.2
W51A	Cleveland	148.99	12	P	PKPbc	07 09 55.6	-0.3
	baz=345,SNR=5.3						
Z44A	Pea Ridge, Bel	149.07	22	P	PKPbc	07 09 55.9	-0.2
	baz=333						
Y46A	Houston	149.08	19	P	PKPbc	07 09 55.6	-0.5
	baz=336,SNR=12						
X48A	Hartselle	149.10	16	P	PKPbc	07 09 55.4	-0.8
	baz=340,SNR=26						
X48A	Hartselle	149.10	16	*e*PKPbc	PKPbc	07 09 55.5	-0.8
241A	Mo Tay, Goldon	149.12	27	P	PKPbc	07 09 56.6	+0.3
	baz=328						
241A	Mo Tay, Goldon	149.12	27	*e*PKPbc	PKPbc	07 09 56.0	-0.3
143A	Socs Landing,	149.19	24	P	PKPbc	07 09 56.4	0.0
	baz=331						
W52A	Murphy	149.23	11	P	PKPbc	07 09 56.4	-0.2
	baz=346,SNR=13						
W52A	Murphy	149.23	11	*e*PKPbc	PKPbc	07 09 56.5	0.0
X49A	Woodville	149.24	15	P	PKPbc	07 09 56.1	-0.4
	baz=342,SNR=15						
W53A	Cullowhee	149.29	10	P	PKPbc	07 09 56.8	-0.1
	baz=348,SNR=17						
HKT	Hockley	149.34	33	*e*PKPbc	PKPbc	07 09 56.2	-0.6
HKT	Hockley	149.34	33	*e*PKP2	PKPbc	07 09 57.6	+0.8
Y47A	UCPARC, Winfie	149.38	18	P	PKPbc	07 09 56.0	-0.9
	baz=338,SNR=13						
X50B	Fort Payne	149.46	14	P	PKPbc	07 09 56.5	-0.6
	baz=343						
BG3	Lake Jocassee	149.50	10	*e*PKPbc	PKPbc	07 09 57.3	+0.1
ZAIG	Zacatecas	149.54	52	*e*PKPbc	PKPbc	07 09 55.8	-2.2
X51A	Calhoun	149.54	13	P	PKPbc	07 09 56.7	-0.6
	baz=344,SNR=6.2						
X51A	Calhoun	149.54	13	*e*PKPbc	PKPbc	07 09 56.0	-1.3
Y48A	Jasper	149.57	17	P	PKPbc	07 09 56.5	-0.9
	baz=340,SNR=9.8						
KMSC	Kings Mountain	149.59	7	P	PKPbc	07 09 56.9	-0.4
	baz=351,SNR=9.8						
KMSC	Kings Mountain	149.59	7	*e*PKPbc	PKPbc	07 09 56.7	-0.7
144A	Alexander Plac	149.64	23	P	PKPbc	07 09 58.0	+0.4
	baz=333						
Z46A	Louisville	149.68	20	P	PKPbc	07 09 57.6	0.0
	baz=336						
X52A	Dahlonega	149.71	11	P	PKPbc	07 09 57.5	-0.2
	baz=346,SNR=9.4						
CNNC	Cliffs of the	149.75	1	P	PKPbc	07 09 56.8	-0.9
	baz=358						
Y49A	Blount Mountai	149.84	16	P	PKPbc	07 09 57.5	-0.6
	baz=341,SNR=15						
Y49A	Blount Mountai	149.84	16	*e*PKPbc	PKPbc	07 09 57.7	-0.4
PAULI	Pauline	149.84	8	*e*PKPbc	PKPbc	07 09 57.1	-0.9
145A	Houston Renfro	149.86	22	P	PKPbc	07 09 58.3	+0.2
	baz=334						
X53A	Estanollee	149.92	10	P	PKPbc	07 09 58.2	0.0
	baz=347,SNR=15						
Z48A	Northport	149.96	18	P	PKPbc	07 09 57.6	-0.8
	baz=339,SNR=6.6						
Z47A	Carrollton	149.96	19	P	PKPbc	07 09 57.9	-0.4
	baz=338,SNR=7.7						
Y50A	Piedmont	149.98	15	P	PKPbc	07 09 57.9	-0.5
	baz=342,SNR=6.1						
244A	Avery, Jackson	150.06	24	P	PKPbc	07 09 58.8	+0.2
	baz=332						
441A	DeRidder	150.06	29	P	PKPbc	07 09 58.9	+0.3
	baz=326						
Y51A	Rockmart	150.14	14	P	PKPbc	07 09 58.2	-0.5
	baz=344,SNR=11						
146A	Union	150.14	21	P	PKPbc	07 09 59.2	+0.4
	baz=335,SNR=6.9						
146A	Union	150.14	21	*e*PKPbc	PKPbc	07 09 58.8	0.0
BBSR	BB Station	150.29	339	*e*PKPdf	PKPdf	07 09 53.5	-0.4
HODGE	Hodges	150.36	9	*e*PKPdf	PKPdf	07 09 55.1	+1.1
245A	Little AP, Sta	150.38	23	P	PKPbc	07 09 59.3	-0.1
	baz=333						
147A	Livingston	150.38	19	P	PKPbc	07 09 59.2	-0.2
	baz=337,SNR=5.9						
147A	Livingston	150.38	19	*e*PKPbc	PKPbc	07 09 58.1	-1.2
Y52A	Lilburn	150.39	12	P	PKPbc	07 09 59.5	+0.2
	baz=346,SNR=8.0						
Y52A	Lilburn	150.39	12	*e*PKPbc	PKPbc	07 09 59.6	+0.2
LRAL	Lakeview Retre	150.44	17	*e*PKPbc	PKPbc	07 09 59.4	-0.1
JSC	Jenkinsville	150.45	7	*e*PKPbc	PKPbc	07 09 59.2	-0.3
JSC	Jenkinsville	150.45	7	*e*PKIKP	PKPbc	07 09 59.2	-0.3
Y53A	Monroe	150.50	11	P	PKPbc	07 09 59.7	+0.1
	baz=346,SNR=12						
Z50A	Ashland	150.54	15	P	PKPbc	07 09 59.2	-0.5
	baz=342,SNR=7.8						
Z50A	Ashland	150.54	15	*e*PKPbc	PKPbc	07 09 59.5	-0.3
344A	Westbrook Farm	150.56	24	P	PKPbc	07 09 60.0	+0.2
	baz=331						
344A	Westbrook Farm	150.56	24	*e*PKPbc	PKPbc	07 09 59.5	-0.4
LNIG	Linares	150.62	45	*e*PKPbc	PKPbc	07 09 59.0	-1.2
148A	Greensboro	150.63	18	P	PKPbc	07 09 59.8	-0.2
	baz=338						
Y54A	Tignall	150.65	10	P	PKPbc	07 09 60.0	0.0
	baz=348,SNR=10						
247A	Quitman	150.83	21	P	PKPbc	07 10 00.9	+0.5
	baz=336						
GOGA	Godfrey	150.95	11	P	PKPbc	07 10 00.5	-0.2
	baz=347,SNR=6.8						
GOGA	Godfrey	150.95	11	*e*PKPbc	PKPbc	07 10 01.0	+0.3
GOGA				*e*PKPab	PKPab	07 10 06.6	-1.5
GOGA	Godfrey	150.95	11	*e*PKIKP	PKPbc	07 10 01.0	+0.3
GOGA				*e*		07 10 06.6	
Z52A	Williamson	150.97	13	P	PKPbc	07 10 00.9	+0.2
	baz=345,SNR=6.0						
345A	Thompson Farm,	150.97	23	P	PKPbc	07 10 01.0	+0.2
	baz=332						
Z53A	Monticello	151.06	11	P	PKPbc	07 10 00.8	-0.2
	baz=346,SNR=6.0						
248A	Dixon Mills	151.09	19	P	PKPbc	07 10 01.1	+0.1
	baz=337						
346A	Big Creek Wild	151.12	22	P	PKPbc	07 10 00.8	-0.3
	baz=334						
150A	Eclectic	151.12	16	P	PKPbc	07 10 00.8	-0.3
	baz=341						
Z54A	Sparta	151.23	10	P	PKPbc	07 10 01.1	-0.3
	baz=348						
445A	Amite	151.35	24	P	PKPbc	07 10 00.5	-1.2
	baz=331						
Z55A	Blythe	151.37	9	P	PKPbc	07 10 01.5	-0.1
	baz=349						
151A	Opelika	151.38	15	P	PKPbc	07 10 01.3	-0.4
	baz=342						
249A	Camden	151.39	18	P	PKPbc	07 10 02.0	+0.2
	baz=338,SNR=8.9						
152A	Waverly Hall	151.40	14	P	PKPbc	07 10 01.5	-0.2
	baz=344,SNR=6.7						
152A	Waverly Hall	151.40	14	*e*PKPbc	PKPbc	07 10 01.9	+0.2
347A	Saraland	151.44	21	P	PKPbc	07 10 02.6	+0.7
	baz=335,SNR=5.5						
153A	Fort Valley	151.61	12	P	PKPbc	07 10 02.3	+0.1
	baz=346						
250A	Grady	151.65	17	P	PKPbc	07 10 02.4	0.0
	baz=340						
250A	Grady	151.65	17	*e*PKPbc	PKPbc	07 10 02.0	-0.3
250A				*e*PKPab	PKPab	07 10 10.6	-0.4
348A	Jackson	151.66	20	P	PKPbc	07 10 02.6	+0.2
	baz=337						
348A	Jackson	151.66	20	*e*PKPbc	PKPbc	07 10 02.8	+0.4
251A	Midway	151.77	15	P	PKPbc	07 10 02.9	+0.3
	baz=342,SNR=16						
154A	Montrose	151.79	11	P	PKPbc	07 10 02.7	0.0
	baz=347						
154A	Montrose	151.79	11	*e*PKPbc	PKPbc	07 10 00.7	-2.0
349A	Repton	151.95	19	P	PKPbc	07 10 03.6	+0.5
	baz=338						
156A	Sylvania	152.02	8	P	PKPbc	07 10 03.3	+0.2
	baz=350						
252A	Lumpkin	152.03	14	P	PKPbc	07 10 03.1	-0.1
	baz=343,SNR=5.3						
253A	Americus	152.11	13	P	PKPbc	07 10 03.4	0.0
	baz=345						
350A	Dozier	152.15	17	P	PKPbc	07 10 03.7	+0.2
	baz=340						
254A	Abbeville	152.40	12	P	PKPbc	07 10 04.1	+0.1
	baz=346						
352A	Blakely	152.48	15	P	PKPbc	07 10 04.6	+0.4
	baz=343						
352A	Blakely	152.48	15	*e*PKPbc	PKPbc	07 10 04.7	+0.5
449A	Pace	152.49	19	P	PKPbc	07 10 04.5	+0.2
	baz=338						
351A	Pinckard	152.49	16	P	PKPbc	07 10 04.4	+0.1
	baz=341						
LPAZ	La Paz	157.24	203	PKP	PKPdf	07 10 04.9	-0.1
	comp=Z,1.4nm,0.9s,baz=339,slow=2.4,SNR=5.7						

MEX 31 06:58:26.8±0.4, 15°.87N×98°.47W, h16^{km}±38^{km}, MD3.8, Off coast of Guerrero

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PNIG	**Pinotepa**	**0.61**	**32**	*i* P	Pg	06 58 36.7	-2.2
PNIG				*e*S	Sg	06 58 44.3	-2.8
TLIG	**Tlapa**	**1.69**	**357**	*e*P	Pn	06 58 52.1	-3.7
TLIG				*e*S	Sn	06 59 12.0	-5.1
VHO	**Vista Hermosa**	**2.05**	**54**	*e*P	Pn	06 58 57.7	-3.0
VHO				*i* S	Sn	06 59 21.5	-4.6

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*TEH **31** 07:11:14.8, 28°.56N×56°.74E, h16^{km}, ML3.6*

*CSEM **31** 07:11:15.3±0.3, 28°.56N×56°.74E, h10^{km}, ML3.6, Error ellipse: s-maj=16.3km s-min=4.9km az=95.0*

*DSN **31** 07:11:16.7±1.3, 28°.44N×57°.01E, h15^{km}, ML3.5/4, Error ellipse: s-maj=59.3km s-min=9.5km az=111.0*

*OMAN **31** 07:11:18.9±2.7, 28°.21N×57°.52E, h16^{km}±87^{km}, Error ellipse: s-maj=96.6km s-min=9.4km az=7.0*

ISC 31 07:11:17.3±1.2, 28°.54N±0°.03×56°.93E±0°.06, h31^{km}, n55, σ2^{s}.04/58, Southern Iran

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
NIAN	**Nian**	**0.98**	**185**	*e*Pg	**Pn**	**07 11 34.1**	**-0.8**
NIAN				*e*		07 11 52.4	
	comp=Z,99nm,0.1s						
NIAN				*e*		07 11 52.7	
	comp=E,99nm,0.1s						
NIAN				*e*		07 11 53.3	
	comp=N,99nm,0.1s						
NIAN	**Nian**	**0.98**	**185**	*e*Pg	**Pn**	**07 11 34.1**	**-0.8**
NGRK	**Negar Kerman**	**1.12**	**351**	*e*Pg	**Pn**	**07 11 35.5**	**-1.7**
NGRK				*e*Sg	**Sn**	**07 11 52.1**	**+0.4**
NGRK				*e*		07 11 53.2	
	comp=Z,99nm,0.2s						
NGRK				*e*		07 11 53.4	
	comp=N,99nm,0.2s						
NGRK				*e*		07 11 54.3	
	comp=E,99nm,0.1s						
NGRK	**Negar Kerman**	**1.12**	**351**	*e*Pg	**Pn**	**07 11 35.5**	**-1.7**
NGRK				*e*Sg	**Sn**	**07 11 52.1**	**+0.4**
IBND	**Bandar-abas**	**1.14**	**198**	*e*Pg	**Pn**	**07 11 34.8**	**-2.3**
GENO	**Geno**	**1.31**	**211**	*e*Pg	**Pn**	**07 11 40.8**	**+1.1**
GENO				*e*		07 12 04.4	
	comp=E,99nm,0.1s						
GENO				*e*		07 12 06.9	
	comp=N,99nm,0.2s						
GENO				*e*		07 12 07.1	
	comp=Z,99nm,0.1s						
GENO	**Geno**	**1.31**	**211**	*e*Pg	**Pn**	**07 11 40.8**	**+1.1**
BNDS	**Bandar-Abbas**	**1.31**	**211**	*e*Pg	Pn	07 11 34.8	-4.9
BNDS	**Bandar-Abbas**	**1.31**	**211**	*e*Pg	Pn	07 11 34.8	-4.9
CHMN	**Cheshme madani**	**1.42**	**22**	*e*Pn	**Pn**	**07 11 38.3**	**-3.1**
CHMN				*e*		07 11 56.7	
	comp=N,99nm,0.2s						
CHMN				*e*		07 11 59.4	
	comp=E,99nm,0.2s						
CHMN				*e*		07 12 02.7	
	comp=Z,99nm,0.1s						
KRBR	**Kerman**	**1.45**	**354**	*e*Pg	**Pn**	**07 11 40.6**	**-1.1**
KRBR	**Kerman**	**1.45**	**354**	*e*Pg	**Pn**	**07 11 40.6**	**-1.1**
KRBR				*e*Sg	**Sn**	**07 12 00.7**	**+0.9**
TVBK	**TV Kerman**	**1.45**	**354**	*e*Pn	**Pn**	**07 11 40.9**	**-0.8**
TVBK				*e*		07 12 02.9	
	comp=E,99nm,0.2s						
TVBK				*e*		07 12 03.5	
	comp=N,99nm,0.1s						
TVBK	**TV Kerman**	**1.45**	**354**	*e*Pn	**Pn**	**07 11 40.9**	**-0.8**
KHSK	**Kohestak**	**1.78**	**176**	*e*Pn	**Pn**	**07 11 46.6**	**+0.7**
KHSK				*e*		07 12 15.6	
	comp=Z,99nm,0.1s						
KHSK				*e*		07 12 16.6	
	comp=E,99nm,0.1s						
KHSK				*e*		07 12 17.2	
	comp=N,99nm,0.1s						
KHSK	**Kohestak**	**1.78**	**176**	*e*Pn	**Pn**	**07 11 46.6**	**+0.7**
KHGB	**Koh Gabri**	**1.87**	**348**	*e*Pn	**Pn**	**07 11 48.1**	**+0.6**
KHGB				*e*		07 11 52.1	

	comp=Z,99nm,0.2s						
KHGB				e		07 12 20.9	
	comp=N,99nm,0.2s						
KHGB				e		07 12 23.1	
	comp=E,99nm,0.3s						
KHGB	Koh Gabri	1.87	348	ePn	Pn	07 11 48.1	+0.6
SHME	Shamm	2.58	196	eP	Pn	07 11 56.5	-0.4
	SNR=8.5						
SHME				S	Sn	07 12 28.2	+1.0
SHME	Shamm	2.58	196	ePn	Pn	07 11 56.7	-0.2
SHME	Shamm	2.58	196	P	Pn	07 11 56.5	-0.4
	SNR=8.5						
SHME				S	Sn	07 12 29.1	+1.9
BANOM	Banah	2.66	192	P	Pn	07 11 57.4	-0.7
	SNR=28						
BANOM	Banah	2.66	192	eP	Pn	07 11 57.3	-0.8
	SNR=28						
BANOM	Banah	2.66	192	P	Pn	07 11 57.4	-0.7
	SNR=28						
MSFE	Esma-Masafi	3.24	192	ePn	Pn	07 12 07.4	+1.4
MSFE	Esma-Masafi	3.24	192	ePn	Pn	07 12 07.4	+1.4
ISRV	Sarvestan	3.44	285	e		07 13 01.9	
	comp=E,699nm,0.1s						
ISRV				e		07 13 06.5	
	comp=Z,342nm,0.2s						
ISRV				e		07 13 16.5	
	comp=N,690nm,0.2s						
GHIR	Ghir-Karzin	3.48	267	ePn	Pn	07 12 06.6	-2.8
GHIR	Ghir-Karzin	3.48	267	eP	Pn	07 12 06.6	-2.8
IMEH	Mehriz	3.48	325	e		07 13 14.5	
	comp=Z,258nm,0.3s						
IMEH				e		07 13 17.3	
	comp=N,413nm,0.2s						
ZHSF	Zahedan	3.54	71	ePn	Pn	07 12 12.6	+2.4
ZHSF	Zahedan	3.54	71	ePn	Pn	07 12 12.6	+2.4
IPAR	Pars	3.63	292	e		07 13 32.7	
	comp=E,536nm,0.4s						
IPAR				e		07 13 38.5	
	comp=N,527nm,0.4s						
IPAR				e		07 13 38.5	
	comp=Z,250nm,0.3s						
UOSS	Minazif	3.63	190	P	Pn	07 12 11.8	+0.3
UOSS	Minazif	3.63	190	P	Pn	07 12 11.6	+0.2
UOSS	Minazif	3.63	190	P	Pn	07 12 11.8	+0.3
NAZ	Nazwa, Dubai	3.71	198	ePn	Pn	07 12 12.3	-0.2
NAZ	Nazwa, Dubai	3.71	198	ePn	Pn	07 12 12.3	-0.2
HATD	Hatta, Dubai	3.76	191	ePn	Pn	07 12 16.6	+3.3
ASHO	Ashiyiah	3.92	192	P	Pn	07 12 16.4	+1.0
	SNR=8.6						
ASHO	Ashiyiah	3.92	192	i P	Pn	07 12 16.0	+0.6
	SNR=8.2						
ASHO	Ashiyiah	3.92	192	P	Pn	07 12 16.0	+0.6
	SNR=8.2						
ASUD	Al Ashush, Dub	4.15	201	P	Pn	07 12 19.6	+1.1
	SNR=9.9						
ASUD				S	Sn	07 13 10.1	+4.1
ASUD	Al Ashush, Dub	4.15	201	i P	Pn	07 12 19.2	+0.7
	SNR=9.7						
ASUD	Al Ashush, Dub	4.15	201	P	Pn	07 12 19.2	+0.7
	SNR=9.7						
ASUD				S	Sn	07 13 10.1	+4.1
TPRV	Parvadeh(Tabas	4.48	357	ePn	Pn	07 12 25.3	+2.1
TPRV				e		07 13 45.9	
	comp=Z,99nm,0.7s						
TPRV	Parvadeh(Tabas	4.48	357	ePn	Pn	07 12 25.3	+2.1
TKDS	Koohdasht(Taba	5.06	2	ePn	Pn	07 12 32.8	+1.6
TKDS	Koohdasht(Taba	5.06	2	ePn	Pn	07 12 32.8	+1.6
TABS	Tabas	5.10	2	ePn	Pn	07 12 31.8	+0.1
TABS	Tabas	5.10	2	ePn	Pn	07 12 31.8	+0.1
IRAM	Ramesheh	5.11	311	e		07 13 40.0	
	comp=E,93nm,0.1s						
IRAM				e		07 13 43.6	
	comp=Z,65nm,0.1s						
TNSJ	Nastanj	5.42	357	ePn	Pn	07 12 38.9	+2.9
TNSJ				e		07 14 36.1	
	comp=Z,99nm,0.3s						
WSAR	Wadi Sarin	5.50	163	P	Pn	07 12 34.1	-2.9
WSAR				S	Sn	07 13 33.6	-5.7
WBK	Wadi Bani Khal	6.18	162	P	Pn	07 12 44.0	-2.6
WBK				S	Sn	07 13 49.7	-6.5

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*IDC **31** 07:39:55.8±6.8, 5°.30S×152°.66E, h94^{km}±50^{km}, mb3.5/6, mb1 3.7/7, mb1mx3.3/55, mbtmp3.9/7, MS3.2/2, Ms1 3.2/2, ms1mx2.5/34, Error ellipse: s-maj=44.3km s-min=41.5km az=15.0*

ISC 31 07:39:48.2±1.8**, 5°.1S**±0°.3×**153°.0E**±0°.2**, h40^{km}, n10, σ1^{s}.30**/9**, mb3.7**/6**, New Britain region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PMG	Port Moresby	7.19	233	P	Pn	07 41 33.1	+2.2
	3.2nm,0.3s,baz=191,slow=5.2,SNR=4.5						
PMG				S	Sn	07 42 50.1	-1.3
	6.7nm,0.3s,baz=193,slow=9.0,SNR=6.2						
GUMO	Guam	20.18	337	LR	LR	07 51 29.8	
	comp=Z,14nm,19.4s,baz=162,slow=34						
WRA	Warramunga Arr	23.39	229	P	P	07 44 52.2	-1.5
	1.5nm,0.6s,baz=56,slow=10.0,SNR=25						
ASAR	Alice Springs	26.07	223	P	P	07 45 17.3	-0.9
	0.6nm,0.5s,baz=56,slow=9.6,SNR=13						
STKA	Stephens Creek	28.73	200	P	P	07 45 41.9	-0.1
	0.9nm,0.6s,baz=53,slow=10,SNR=3.9						
FITZ	Fitzroy Crossi	29.67	242	P	P	07 45 50.4	-0.1
	2.2nm,0.8s,baz=56,slow=7.3,SNR=2.9						
PSI	Prapat	54.53	277	LR	LR	08 18 52.5	
	comp=Z,95nm,18.3s,baz=267,slow=43						
VNDA	Vanda	72.58	178	P	P	07 51 11.2	+0.4
	0.5nm,0.7s,baz=322,slow=4.5,SNR=3.9						
QSPA	South Pole Qui	84.91	180	P	P	07 52 18.7	-0.2
	1.0nm,0.6s,baz=337,slow=4.5,SNR=6.3						
TORD	Torodi Ar. Bea	150.53	288	PKPbc	PKPbc	07 59 36.4	-0.4
	baz=59,slow=3.4						

JMA 31 07:54:06.2, 37°.68N×139°.95E, h8^{km}±1^{km}, M0.1, Eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JHK	Hiroka	0.86	240	S	Sg	07 54 33.8	-0.1

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*ISCJB **31** 07:54:24.5±1.2, 36°.87N±0°.04×141°.82E±0°.06, h15^{km}±8^{km}, mb3.6/12, MS3.8/1, Error ellipse: s-maj=9.0km s-min=6.3km az=34.1*

*IDC **31** 07:54:24.4±0.8, 37°.03N×141°.76E, h0^{km}, mb3.7/12, mb1 3.9/15, mb1mx3.7/73, mbtmp3.6/15, ML3.3/3, MS2.7/4, Ms1 2.7/4, ms1mx2.3/71, Error ellipse: s-maj=20.6km s-min=17.2km az=162.0*

*JMA **31** 07:54:25.5±0.2, 36°.81N×141°.77E, h42^{km}±4^{km}, M3.3*

ISC 31 07:54:24.6±1.9**, 36°.88N**±0°.05×**141°.75E**±0°.06**, h5^{km}**±11^{km}**, n35, σ1^{s}.02**/37**, mb3.8**/12**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ONAJ	Iwakimizuishiy	0.80	287	P	Pg	07 54 40.8	+0.9
ONAJ				S	Sb	07 54 52.9	+0.8
JFK	Kawauchi	0.85	305	P	Pg	07 54 41.7	+0.7
JFK				S	Sb	07 54 53.6	-0.2
JFFD	Fukushimafurud	0.98	283	P	Pg	07 54 43.7	+0.3
JFFD				S	Sg	07 54 56.8	+0.7
JHO	Hitachi	0.99	255	P	Pg	07 54 43.3	-0.3
JHO				S	Sg	07 54 55.8	-0.6
JHYU	Hitachinakayam	1.08	241	P	Pb	07 54 44.3	-1.5
JHYU				S	Sb	07 54 58.1	-2.1
JMM	Marumori	1.25	322	P	Pn	07 54 47.7	-1.0
JMM				S	Sb	07 55 03.7	-1.4
JFT	Otama	1.30	300	P	Pn	07 54 49.5	0.0
JFT				S	Sb	07 55 06.2	-0.4
JIO	Ouri	1.61	349	P	Pn	07 54 54.0	+0.4
JFY	Yanaizu	1.72	288	P	Pn	07 54 55.2	-0.1
MJAR	Matsushiro Arr	2.87	264	Pn	Pn	07 55 11.4	+0.4
	4.4nm,0.3s,baz=87,slow=14,SNR=19						
MJAR				Sn	Sn	07 55 45.7	-0.3
	3.1nm,0.3s,baz=82,slow=15,SNR=5.1						
MAT	Matsushiro	2.87	264	P	Pn	07 55 11.3	+0.2
MAT				S	Sn	07 55 47.7	+1.7
ASAJ	Asahikawa	7.26	5	Pn	Pn	07 56 11.8	+0.5
	0.8nm,0.3s,baz=211,slow=14,SNR=4.6						
ASAJ				Sn	Sn	07 57 33.2	-0.9
	0.2nm,0.3s,baz=296,slow=16,SNR=3.2						
ASAJ				LR	LR	07 59 09.1	
	comp=Z,41nm,20.7s,baz=307,slow=40						
JNU	Nakatsue	9.68	250	LR	LR	07 59 59.9	
	comp=Z,13nm,19.9s,baz=120,slow=34						
KSRS	Korea Array	11.05	277	Pn	Pn	07 57 05.7	+2.4
	0.1nm,0.3s,baz=89,slow=13,SNR=2.4						
KSRS				LR	LR	08 01 08.7	
	comp=Z,31nm,18.0s,baz=154,slow=36						
H11N2	WAKE ISLAND Hy	27.83	121	T	T	08 29 13.7	
	baz=314,slow=75,SNR=41						
H11N1	WAKE ISLAND Hy	27.84	121	T	T	08 29 15.2	
	baz=314,slow=75,SNR=32						
H11N3	WAKE ISLAND Hy	27.85	121	T	T	08 29 14.1	
	baz=314,slow=75,SNR=33						
SONM	Songino Array	28.10	304	P	P	08 00 17.0	-0.3
	0.3nm,0.4s,baz=106,slow=11,SNR=3.7						
H11S1	WAKE ISLAND Hy	28.55	123	T	T	08 30 20.0	
	baz=316,slow=76,SNR=28						
H11S3	WAKE ISLAND Hy	28.55	123	T	T	08 30 20.4	
	baz=316,slow=76,SNR=23						
H11S2	WAKE ISLAND Hy	28.56	123	T	T	08 30 19.4	
	baz=316,slow=76,SNR=22						
ZALV	Zalesovo Beam	42.22	313	P	P	08 02 18.3	-0.1
	0.4nm,0.3s,baz=90,slow=8.6,SNR=2.3						
MKAR	Makanchi Array	44.43	302	P	P	08 02 36.2	-0.2
	0.4nm,0.7s,baz=93,slow=10.0,SNR=5.8						
KURBB	Kurchatov Arra	46.31	308	P	P	08 02 51.0	-0.2
	0.4nm,0.4s,baz=80,slow=7.8,SNR=4.8						
ILAR	Eielson Array	49.48	32	P	P	08 03 15.2	-0.4
	0.9nm,0.7s,baz=264,slow=6.4,SNR=11						
WRA	Warramunga Arr	56.95	188	P	P	08 04 13.3	+2.4
	0.9nm,0.9s,baz=9.1,slow=7.5,SNR=4.0						
ASAR	Alice Springs	60.67	188	P	P	08 04 38.2	+1.3
	0.4nm,0.8s,baz=16,slow=6.9,SNR=3.4						
NB2	NORSAR Subarra	74.44	337	P	P	08 06 03.6	+0.1
	comp=Z,0.8nm,0.6s,baz=40,slow=6.2						
NOA	NORSAR Array B	74.44	337	P	P	08 06 03.6	+0.1
	comp=Z,0.7nm,0.6s,baz=39,slow=5.9,SNR=3.9						
AKASG	Malin Array Be	74.59	322	P	P	08 06 02.6	-1.8
	comp=Z,0.3nm,0.4s,baz=44,slow=6.7,SNR=2.9						
NVAR	Mina Array Bea	74.86	53	P	P	08 06 06.4	-0.2
	comp=Z,1.1nm,0.8s,baz=282,slow=6.6,SNR=9.5						
PDAR	Pinedale Array	77.58	46	P	P	08 06 22.0	0.0
	comp=Z,0.2nm,0.6s,baz=300,slow=4.1,SNR=3.0						
TXAR	Lajitas Array	90.00	53	P	P	08 07 25.8	+0.2
	comp=Z,0.5nm,0.7s,baz=299,slow=3.1,SNR=7.3						
VAE	Valguarnera	91.43	321	LR	LR	08 53 38.5	
	comp=Z,30nm,18.4s,baz=246,slow=39						
LPAZ	La Paz	146.53	60	PKPbc	PKPdf	08 14 07.5	+0.6
	comp=Z,0.6nm,0.6s,baz=235,slow=4.0,SNR=3.6						

IDC 31 08:04:44.9±4.3**, 55°.47N**×**86°.34E, h0^{km}, mb1 2.8**/2**, mb1mx2.7**/76**, mbtmp2.8**/2**, ML2.5**/2**, Error ellipse: s-maj=40.4km s-min=25.7km az=29.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.76	211	i		08 16 30.0	
	baz=27,slow=287,SNR=4.3						
ZALV	Zalesovo Beam	1.76	211	Pn	Pn	08 05 15.9	-0.7
	3.2nm,0.3s,baz=32,slow=16,SNR=23						
ZALV				Sn	Sb	08 05 40.9	+0.4
	4.0nm,0.3s,baz=30,slow=27,SNR=10						
KURBB	Kurchatov Arra	6.76	227	Pn	Pn	08 06 25.6	+0.3
	0.1nm,0.3s,baz=42,slow=14,SNR=5.6						
KURBB				Lg	Lg	08 08 20.2	
	0.0nm,0.3s,baz=37,slow=32,SNR=7.6						
MKAR	Makanchi Array	9.05	198	Pn	Pn	08 06 56.9	+0.1
	0.1nm,0.3s,baz=18,slow=11,SNR=4.7						
MKAR				Lg	Lg	08 09 30.4	
	0.0nm,0.3s,baz=15,slow=23,SNR=5.4						

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*CSEM **31** 08:08:39.4±0.1, 44°.21N×17°.94E, h2^{km}, ML3.2/7, Error ellipse: s-maj=3.3km s-min=1.8km az=49.0*

*BEO **31** 08:08:39.7±0.3, 44°.18N×17°.87E, h5^{km}±2^{km}, ML3.2/9*

*PDG **31** 08:08:40.8±0.4, 44°.13N×17°.99E, h10^{km}±1^{km}, MD3.2/4, ML3.4/11, Error ellipse: s-maj=1.5km s-min=2.1km az=0.0*

*PRU **31** 08:08:42.4, 44°.15N×17°.89E, h21^{km}*

ISC 31 08:08:39.3±1.1**, 44°.20N**±0°.01×**17°.95E**±0°.02**, h4^{km}**±9^{km}**, n161, σ1^{s}.10**/264**, 45C-6D, Northwestern Balkan Peninsula**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DOB	Doboj	0.55	12	ePg	Pg	08 08 50.0	+0.2
DOB				eSg	Sb	08 08 58.9	-0.8
DOB	Doboj	0.55	12	ePg	Pg	08 08 50.0	+0.2
DOB				eSg	Sb	08 08 58.4	-1.3
DOB	Doboj	0.55	12	⇑iPg	Pg	08 08 49.7	-0.1
DOB				eSg	Sb	08 08 58.4	-1.3
HAPS	Han Pijesak,Bl	0.73	98	ePg	Pg	08 08 53.4	+0.1
HAPS				eSg	Sb	08 09 04.4	-0.7
HAPS	Han Pijesak,Bl	0.73	98	ePg	Pg	08 08 53.4	+0.1
HAPS				eSg	Sb	08 09 04.4	-0.7
HAPS	Han Pijesak,Bl	0.73	98	⇑iPg	Pg	08 08 53.3	0.0
HAPS				eSg	Sb	08 09 04.4	-0.7
BLY	Banja Luka	0.78	316	ePg	Pg	08 08 54.3	+0.1
BLY				eSg	Sg	08 09 04.0	-0.3
BLY	Banja Luka	0.78	316	⇑iP	Pg	08 08 54.3	+0.1
BLY				S	Sg	08 09 04.2	0.0
BLY	Banja Luka	0.78	316	⇑iP	Pg	08 08 54.3	+0.1
BLY				S	Sg	08 09 04.2	0.0
BLY	Banja Luka	0.78	316	⇑iPg	Pg	08 08 54.3	+0.1
BLY				eSg	Sg	08 09 04.3	0.0
BBLS	Lazići	1.10	107	ePg	Pg	08 09 00.5	+0.1
BBLS				eSg	Sn	08 09 17.4	+0.1
BBLS	Lazići	1.10	107	⇑iPg	Pg	08 09 00.7	+0.3
BBLS				eSg	Sn	08 09 16.8	-0.5
BBLS	Lazići	1.10	107	⇑iPg	Pg	08 09 00.7	+0.3
BBLS				eSg	Sn	08 09 16.8	-0.5
MRAK	Mrakovica	1.11	318	ePg	Pg	08 08 59.9	-0.6
MRAK				eSg	Sg	08 09 14.8	-0.1
MRAK	Mrakovica	1.11	318	ePg	Pg	08 08 59.9	-0.6
MRAK				eSg	Sg	08 09 14.8	-0.1
BLJ	Bijeljina	1.11	58	eSg	Pg	08 09 00.4	-0.2
BLJ	Bijeljina	1.11	58	ePg	Sg	08 09 15.6	+0.5
BLJ	Bijeljina	1.11	58	ePg	Pg	08 08 59.6	-1.0
BLJ	Bijeljina	1.11	58	ePg	Pg	08 08 59.6	-1.0
TEKS	Tekeris	1.19	72	eSg	Pg	08 09 02.9	+0.8
TEKS	Tekeris	1.19	72	ePg	Sg	08 09 19.1	+1.5
TEKS	Tekeris	1.19	72	ePg	Pg	08 09 02.0	-0.1
TEKS				eSg	Sg	08 09 19.0	+1.5
TEKS	Tekeris	1.19	72	ePg	Pg	08 09 02.0	-0.1
TEKS				eSg	Sg	08 09 19.0	+1.5
UPM	Unac-Piva	1.21	145	⇑iPg	Pg	08 09 02.1	-0.4
UPM				i Sg	Sn	08 09 20.6	+0.5
UPM	Unac-Piva	1.21	145	⇑iPg	Pg	08 09 02.1	-0.4
UPM				eSg	Sb	08 09 18.8	-0.2
UPM	Unac-Piva	1.21	145	⇑iPg	Pg	08 09 02.1	-0.4
UPM				eSg	Sb	08 09 18.8	-0.2
STON	Ston	1.33	188	ePg	Pn	08 09 03.8	-0.9
STON				eSg	Sg	08 09 21.7	-0.4
STON	Ston	1.33	188	ePg	Pn	08 09 04.6	0.0
STON				Sg	Sn	08 09 22.9	0.0
STON	Ston	1.33	188	ePg	Pn	08 09 03.8	-0.9
STON				eSg	Sg	08 09 21.8	-0.4
STON	Ston	1.33	188	ePg	Pn	08 09 03.8	-0.9
STON				eSg	Sg	08 09 21.8	-0.4
PLE	Pljevlja	1.36	129	⇑iPg	Pn	08 09 04.8	-0.3
PLE				i Sg	Sn	08 09 25.5	+1.9
PLE	Pljevlja	1.36	129	⇑iPg	Pn	08 09 04.8	-0.3
PLE				i Sg	Sn	08 09 25.5	+1.9
BRY	Bratogost	1.36	161	⇑iPg	Pn	08 09 04.9	-0.3
BRY				i Sg	Sb	08 09 23.4	+0.1
BRY	Bratogost	1.36	161	⇑iPg	Pn	08 09 04.9	-0.3
BRY				i Sg	Sb	08 09 23.4	+0.1
BRY	Bratogost	1.36	161	⇑iPg	Pn	08 09 04.2	-1.0
BRY				eSg	Sg	08 09 22.9	-0.2
DIVS	Divibare	1.48	93	ePg	Pn	08 09 06.4	-0.3
DIVS				eSg	Sg	08 09 27.4	+0.7
DIVS	Divibare	1.48	93	⇑iPg	Pn	08 09 06.8	+0.1
DIVS				eSg	Sg	08 09 27.7	+1.0
DIVS	Divibare	1.48	93	⇑iPg	Pn	08 09 06.8	+0.1
DIVS				eSg	Sg	08 09 27.7	+1.0
TREB	Trebinje	1.51	169	ePg	Pn	08 09 07.4	+0.3
TREB				eSg	Sn	08 09 27.2	+0.1
TREB	Trebinje	1.51	169	ePg	Pn	08 09 07.4	+0.3
TREB				eSg	Sb	08 09 27.5	+0.2
TREB	Trebinje	1.51	169	⇑iPg	Pn	08 09 06.8	-0.3
TREB				eSg	Sb	08 09 27.5	+0.2
NKY	Niksic	1.58	151	⇑iPg	Pn	08 09 08.6	+0.5
NKY				i Sg	Sg	08 09 31.8	+1.8
NKY	Niksic	1.58	151	⇑iPg	Pn	08 09 08.6	+0.5
NKY				i Sg	Sg	08 09 31.8	+1.8
UDBI	Udbina	1.60	283	ePn	Pn	08 09 07.6	-0.8
IVAS	Ivanjica	1.71	110	ePn	Pn	08 09 09.8	-0.1
IVAS				eSn	Sg	08 09 34.1	-0.2
IVAS	Ivanjica	1.71	110	ePn	Pn	08 09 09.8	-0.1
IVAS				eSn	Sg	08 09 34.1	-0.2
SJES	Sjenica	1.74	122	ePn	Pb	08 09 11.2	-0.7
KOME	Kolasin	1.76	139	⇑iPn	Pb	08 09 11.7	-0.5
KOME				i Sn	Sg	08 09 37.3	+1.4
KOME	Kolasin	1.76	139	⇑iPn	Pb	08 09 11.7	-0.5
KOME				i Sn	Sg	08 09 37.3	+1.4
TRUS	Trudelj	1.77	88	ePn	Pn	08 09 11.4	+0.7
TRUS				eSn	Sg	08 09 36.0	-0.1
TRUS	Trudelj	1.77	88	ePn	Pn	08 09 11.4	+0.7
TRUS				eSn	Sg	08 09 36.0	-0.1
HCY	Herceg Novi	1.79	167	⇑iPn	Pb	08 09 13.0	+0.3
HCY				i Sn	Sg	08 09 37.4	+0.5
HCY	Herceg Novi	1.79	167	ePn	Pn	08 09 11.4	+0.4
HCY				eSn	Sn	08 09 34.7	+0.5
HCY	Herceg Novi	1.79	167	ePn	Pn	08 09 11.4	+0.4
HCY				eSn	Sn	08 09 34.7	+0.5
CEME	Cevo	1.79	156	ePn	Pn	08 09 11.9	+0.8
CEME				i Sn	Sg	08 09 37.4	+0.5
CEME	Cevo	1.79	156	ePn	Pn	08 09 11.9	+0.8
BEY	Berane	1.94	132	⇓iPn	Pb	08 09 14.3	-0.9
BEY				i Sn	Sg	08 09 41.0	-0.5
IVA	Berane	1.94	132	⇓iPn	Pb	08 09 14.3	-0.9
IVA				i Sn	Sg	08 09 41.0	-0.5
PDG	Podgorica	2.01	151	ePn	Pn	08 09 14.7	+0.8
PDG				eSn	Sn	08 09 40.4	+1.0
PDG	Podgorica	2.01	151	⇑iP	Pb	08 09 17.0	+0.7
PDG	Podgorica	2.01	151	S	Sg	08 09 44.5	+0.8
PDG	Podgorica	2.01	151	ePn	Pn	08 09 14.7	+0.8
PDG	Podgorica	2.01	151	⇑iP	Pb	08 09 17.0	+0.7
PDG				eSn	Sn	08 09 40.4	+1.0
PDG	Podgorica	2.01	151	ePn	Pn	08 09 14.9	+1.0
PDG				eSn	Sn	08 09 40.3	+0.9
TTG	Podgorica	2.01	151	⇑iPn	Pb	08 09 15.7	-0.6
TTG				i Sn	Sg	08 09 42.9	-0.8
BUM	Brajici-Budva	2.02	160	⇑iPn	Pb	08 09 16.0	-0.5
BUM				i Sn	Sg	08 09 43.2	-0.9
BUM	Brajici-Budva	2.02	160	⇑iPn	Pb	08 09 16.0	-0.5
GRUS	Gruza	2.02	98	ePn	Pn	08 09 14.5	+0.4
GRUS	Gruza	2.02	98	ePn	Pn	08 09 14.5	+0.4
MORH	Mˆ‡rˆ¡gy, Hung	2.08	13	⇑ePn	Pn	08 09 14.7	-0.2
MORH				ePg	Pg	08 09 19.2	+0.1
MORH				eSn	Sg	08 09 45.9	-0.2
MORH	Mˆ‡rˆ¡gy, Hung	2.08	13	ePn	Pn	08 09 16.2	+1.3
MORH				eSn	Sn	08 09 42.3	+1.1
MORH	Mˆ‡rˆ¡gy, Hung	2.08	13	ePn	Pn	08 09 16.2	+1.3
MORH				eSn	Sn	08 09 42.3	+1.1
ZAG	Zagreb	2.14	320	eSn	Sn	08 09 43.3	+0.5
ZAG	Zagreb	2.14	320	eSn	Sn	08 09 43.3	+0.5
PVY	Plav	2.17	137	⇑iPn	Pn	08 09 17.7	+1.4
PVY				i Sn	Sb	08 09 45.9	-0.6
PVY	Plav	2.17	137	⇑iPn	Pn	08 09 17.7	+1.4
PVY				i Sn	Sb	08 09 45.9	-0.6
DRME	Dracevica, Mon	2.20	155	⇑iPn	Pb	08 09 19.4	-0.3
DRME				i Sn	Sb	08 09 46.4	-0.9
DRME	Dracevica, Mon	2.20	155	ePn	Pn	08 09 17.1	+0.5
DRME				eSn	Sn	08 09 45.1	+0.8
DRME	Dracevica, Mon	2.20	155	ePn	Pn	08 09 17.1	+0.5
DRME				eSn	Sn	08 09 45.1	+0.8
NVLJ	Novalja	2.23	281	ePn	Pn	08 09 18.1	+1.1
OZLJ	Ozalj	2.26	310	ePn	Pn	08 09 18.1	+0.7
BOJS	Bojanci	2.32	305	i Pn	Pn	08 09 19.7	+1.4
BOJS	Bojanci	2.32	305	i Pn	Pn	08 09 19.7	+1.4
SVIS	Svilajnac	2.35	87	ePn	Pn	08 09 19.9	+1.2
SVIS	Svilajnac	2.35	87	ePn	Pn	08 09 19.9	+1.2
CRES	Cresnjev	2.40	314	i Pn	Pn	08 09 20.8	+1.4
CRES	Cresnjev	2.40	314	ePn	Pn	08 09 19.9	+0.5
CRES				eSn	Sn	08 09 49.5	+0.2
CRES	Cresnjev	2.40	314	ePn	Pn	08 09 19.9	+0.5
CRES				eSn	Sn	08 09 49.5	+0.2
ULC	Ulcinj	2.42	156	⇑iPn	Pb	08 09 21.9	-1.6
ULC				i Sn	Sb	08 09 52.8	-0.9
ULC	Ulcinj	2.42	156	⇑iPn	Pb	08 09 21.9	-1.6
SELS	Selova	2.50	112	ePn	Pn	08 09 20.9	+0.2
SELS				eSn	Sn	08 09 53.2	+1.5
SELS	Selova	2.50	112	ePn	Pn	08 09 20.9	+0.2
SELS				eSn	Sn	08 09 53.2	+1.5
RIY	Rijeka	2.71	296	ePn	Pn	08 09 23.3	-0.3
RIY				eSn	Sn	08 09 57.2	+0.3
MDVR	Moldovita	2.76	76	⇑iP	Pn	08 09 24.7	+0.4
MDVR	Moldovita	2.76	76	⇑iP	Pn	08 09 24.7	+0.4
BOVS	Bovan	2.77	100	ePn	Pn	08 09 24.8	+0.3
BOVS	Bovan	2.77	100	ePn	Pn	08 09 24.8	+0.3
CEY	Cerknica	2.94	303	ePn	Pn	08 09 27.0	+0.3
CEY				eSn	Sn	08 10 02.7	+0.3
CEY	Cerknica	2.94	303	ePn	Pn	08 09 27.0	+0.3
CEY				eSn	Sn	08 10 02.7	+0.3
BZS	Buzias	2.97	60	⇑iP	Pn	08 09 26.8	-0.4
BZS	Buzias	2.97	60	⇑iP	Pn	08 09 26.8	-0.4
BZS				S	Sn	08 10 02.4	-0.8
LJU	Ljubljana	3.04	309	ePn	Pn	08 09 29.0	+0.8
LJU				eSn	Sn	08 10 04.5	-0.6
LJU	Ljubljana	3.04	309	ePn	Pn	08 09 29.0	+0.8
LJU				eSn	Sn	08 10 04.5	-0.6
BARS	Barje	3.13	115	ePn	Pn	08 09 30.2	+0.7
BARS	Barje	3.13	115	ePn	Pn	08 09 30.2	+0.7
PERS	Pernice	3.15	322	i Pn	Pn	08 09 30.6	+0.9
PERS				i Sn	Sn	08 10 05.0	-2.8
PERS	Pernice	3.15	322	i Pn	Pn	08 09 30.6	+0.9
PERS				i Sn	Sn	08 10 05.0	-2.8
SOKA	Soboth	3.22	321	i Pn	Pn	08 09 29.8	-0.9
	0.1nm,0.0s,SNR=5.0						
SOKA				eSn	Sn	08 10 06.5	-3.0
	12nm,0.3s						
SOKA	Soboth	3.22	321	Pn	Pn	08 09 29.8	-0.9
	0.1nm,0.0s,SNR=5.0						
SOKA				Sn	Sn	08 10 06.5	-3.0
	12nm,0.3s						
HERR	Herculane	3.27	76	⇑iP	Pn	08 09 31.8	+0.5
HERR	Herculane	3.27	76	S	Sn	08 10 09.3	-1.3
HERR	Herculane	3.27	76	⇑iP	Pn	08 09 31.8	+0.5
OBKA	Obir	3.33	315	i Pn	Pn	08 09 32.3	+0.1
	0.1nm,0.1s						
OBKA				i Sn	Sn	08 10 12.3	+0.1
	15nm,0.3s						
OBKA	Obir	3.33	315	Pn	Pn	08 09 32.3	+0.1
	0.1nm,0.1s						
OBKA				Sn	Sn	08 10 12.3	+0.1
	15nm,0.3s						
ARSA	Arzberg	3.49	332	i Pn	Pn	08 09 34.6	+0.2
	8.9nm,0.5s						
ARSA				eSn	Sn	08 10 16.7	+0.5
	2.5nm,0.3s						
ARSA	Arzberg	3.49	332	Pn	Pn	08 09 34.6	+0.2
	8.9nm,0.5s						
ARSA				Sn	Sn	08 10 16.7	+0.5
	2.5nm,0.3s						
ZAPS	Zavoj	3.52	104	ePn	Pn	08 09 35.6	+0.8
MATE	Matera	3.66	195	⇓iP	Pb	08 09 41.5	-3.0
MATE	Matera	3.66	195	⇓iP	Pb	08 09 41.5	-3.0
KRUS	Krusevo	3.73	138	i Pn	Pn	08 09 39.4	+1.7
PSZ	Piszkesteto	3.96	19	⇑iP	Pn	08 09 40.5	-0.4
PSZ	Piszkesteto	3.96	19	⇑ePn	Pn	08 09 40.5	-0.4
PSZ				eSn	Sg	08 10 49.2	+2.7
PSZ	Piszkesteto	3.96	19	⇑iP	Pn	08 09 40.5	-0.4
CONA	Conrad Observa	4.00	340	i Pn	Pn	08 09 41.0	-0.5
	0.1nm,0.1s						
CONA				eSn	Sn	08 10 26.5	-2.4
	7.0nm,0.4s						
CONA	Conrad Observa	4.00	340	Pn	Pn	08 09 41.0	-0.5
	0.1nm,0.1s						
CONA				Sn	Sn	08 10 26.5	-2.4
	7.0nm,0.4s						
VTS	Vitosha	4.16	111	⇓iP	Pn	08 09 44.9	+1.3
VTS	Vitosha	4.16	111	⇓iP	Pn	08 09 44.9	+1.3
MODS	Modra-Piesok	4.21	354	ePN	Pn	08 09 45.2	+1.0
MODS				eSN	Sn	08 10 31.4	-2.3
MODS				eLG	Lg	08 10 34.9	
MODS	Modra-Piesok	4.21	354	ePn	Pn	08 09 45.2	+1.0
MODS				eSn	Sn	08 10 31.4	-2.3
KBA	Koelnbreinsper	4.33	313	ePn	Pn	08 09 45.8	-0.2
	1.5nm,0.2s						
KBA				eSn	Sn	08 10 34.3	-2.6
	3.7nm,0.3s						
KBA	Koelnbreinsper	4.33	313	Pn	Pn	08 09 45.8	-0.2

	1.5nm,0.2s						
KBA				Sn	Sn	08 10 34.3	-2.6
	3.7nm,0.3s						
SMOL	Smolenice	4.33	355	ePN	Pn	08 09 46.8	+0.9
SMOL				eSN	Sn	08 10 35.5	-1.4
SMOL	Smolenice	4.33	355	ePn	Pn	08 09 46.8	+0.9
SMOL				eSn	Sn	08 10 35.5	-1.4
VYHS	Vyhne	4.34	8	ePN	Pn	08 09 46.5	+0.4
VYHS				eSN	Sn	08 10 35.5	-1.6
VYHS				eLG	Lg	08 10 37.8	
VYHS	Vyhne	4.34	8	ePn	Pn	08 09 46.5	+0.4
VYHS				eSn	Sn	08 10 35.5	-1.6
MOA	Molln	4.46	326	iPn	Pn	08 09 47.8	+0.1
	1.3nm,0.2s						
MOA				eSn	Sn	08 10 38.3	-1.8
	10nm,0.5s						
MOA	Molln	4.46	326	Pn	Pn	08 09 47.8	+0.1
	1.3nm,0.2s						
MOA				Sn	Sn	08 10 38.3	-1.8
	10nm,0.5s						
ABTA	Abfaltersbach	4.59	306	ePn	Pn	08 09 50.9	+1.3
	1.4nm,0.2s						
ABTA				Sg	Sb	08 10 59.2	+3.0
	1.3nm,0.4s						
ABTA	Abfaltersbach	4.59	306	Pn	Pn	08 09 50.9	+1.3
	1.4nm,0.2s						
KECS	Kecovo	4.63	21	ePN	Pn	08 09 50.4	+0.3
KECS	Kecovo	4.63	21	ePn	Pn	08 09 50.4	+0.3
CRVS	Cervenica-Dubn	5.29	26	ePN	Pn	08 10 00.1	+1.0
CRVS	Cervenica-Dubn	5.29	26	ePn	Pn	08 10 00.1	+1.0
WTTA	Wattenberg	5.38	307	iPn	Pn	08 10 00.6	+0.2
	0.2nm,0.1s						
WTTA				eSn	Sn	08 11 04.5	+1.7
	0.8nm,0.1s						
WTTA	Wattenberg	5.38	307	Pn	Pn	08 10 03.2	+2.8
WTTA				Sn	Sn	08 11 04.5	+1.7
	0.8nm,0.1s						
WATA	Walderalm	5.45	307	ePn	Pn	08 10 01.6	+0.2
	1.3nm,0.2s						
WATA				eSn	Sn	08 11 06.4	+1.8
	5.5nm,0.5s						
WATA	Walderalm	5.45	307	Pn	Pn	08 10 01.6	+0.2
	1.3nm,0.2s						
WATA				Sn	Sn	08 11 06.4	+1.8
	5.5nm,0.5s						
MORC	Moravsky Berou	5.59	357	⇑iP	Pn	08 10 02.3	-0.9
MORC	Moravsky Berou	5.59	357	⇑iP	Pn	08 10 02.3	-0.9
MOTA	Moosalm	5.73	306	ePn	Pn	08 10 06.2	+1.0
	1.5nm,0.3s						
MOTA				Sg	Sb	08 11 33.3	+4.4
	2.9nm,0.4s						
MOTA	Moosalm	5.73	306	Pn	Pn	08 10 06.2	+1.0
	1.5nm,0.3s						
KHC	Kasperske Hory	5.78	330	ePN	Pn	08 10 05.8	0.0
KHC				ex	x	08 10 11.0	
KHC				eSN	Sn	08 11 09.7	-2.8
KHC	Kasperske Hory	5.78	330	Pn	Pn	08 10 05.8	0.0
FETA	Feichten	5.80	302	ePn	Pn	08 10 07.5	+1.3
	0.5nm,0.3s						
FETA				Sg	Sg	08 11 49.2	+3.8
	2.1nm,0.5s						
FETA	Feichten	5.80	302	Pn	Pn	08 10 07.5	+1.3
	0.5nm,0.3s						
GOPC	GO Pecny, Ondr	6.11	340	eSN	Sn	08 11 19.9	-0.8
GOPC				ex	x	08 11 28.3	
GOPC	GO Pecny, Ondr	6.11	340	Sn	Sn	08 11 19.9	-0.8
PRU	Pruhonice	6.24	339	eSN	Sn	08 11 24.6	+0.7
PRU				ex	x	08 11 36.5	
PRU	Pruhonice	6.24	339	Sn	Sn	08 11 24.6	+0.7
DPC	Dobruska-Polom	6.26	350	eSN	Sn	08 11 25.2	+0.9
DPC	Dobruska-Polom	6.26	350	Sn	Sn	08 11 25.2	+0.9

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*GUC **31** 08:10:01.7±0.8, 31°.22S×72°.88W, h26^{km}±22^{km}, ML3.6*

ISC 31 08:09:49.0±3.4**, 31°.05S**±0°.06×**73°.6W**±0°.2**, h10**^{km}**, n17, σ1^{s}.56**/25**, 4C-3D, Off coast of central Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TLL	Tololo Astrono	2.54	70	⇓iP	Pg	08 10 37.6	0.0
TLL				iS	Sb	08 11 05.9	-0.2
GO04	Tololo Observa	2.54	71	⇓iP	Pg	08 10 37.7	0.0
GO04				iS	Sb	08 11 05.9	-0.3
ROCH	El Roble	2.90	132	IAML		08 11 14.7	
	comp=E,217nm,0.6s						
LCO	Las Campanas	3.21	51	⇓iP	Pb	08 10 47.1	+0.9
LCO				iS	Sb	08 11 23.5	-2.0
LCO				IAML		08 11 24.4	
	comp=E,154nm,0.3s						
PEL	Peldehue	3.22	131	eP	Pb	08 10 46.2	0.0
PEL				iS	Sn	08 11 19.3	+1.3
PEL				IAML		08 11 20.1	
	comp=E,256nm,0.2s						
CLCH	Cerro Calan	3.48	133	⇑iP	Pb	08 10 50.0	-0.6
CLCH				iS	Sn	08 11 26.0	+1.6
CLCH				IAML		08 11 28.0	
	comp=N,261nm,0.3s						
ANTU	Antumapu	3.53	136	⇑iP	Pb	08 10 51.2	-0.4
ANTU				iS	Sn	08 11 28.2	+2.3
ANTU				IAML		08 11 30.1	
	comp=E,215nm,0.2s						
FCH	Farellones	3.59	130	⇑iP	Pb	08 10 51.7	-1.0
FCH				iS	Sn	08 11 29.2	+1.6
FCH				IAML		08 11 32.1	
	comp=E,163nm,0.2s						
AROD	Rodeo	3.64	77	iP	Pb	08 10 55.5	+1.9
RTLS	Leoncito	3.73	103	iP	Pb	08 10 56.6	+1.5
RTLS				iS	Sb	08 11 37.5	-2.9
RTLS				IAML		08 11 40.3	
	comp=Z,49nm,0.5s						
ACDV	Cuesta del Vie	3.93	78	iP	Pb	08 10 59.5	+1.0
LMEL	Las Melosas	3.98	135	⇑iP	Pb	08 10 57.8	-1.6
LMEL				iS	Sn	08 11 40.0	+2.9
AMOG	MOGNA	4.36	90	iP	Pb	08 11 04.8	-0.9
RTCV	Cerro Valdivia	4.37	102	iP	Pb	08 11 05.4	-0.5
RTLL	Cerro Villicun	4.37	95	iP	Pb	08 11 04.8	-1.1
AGUA	GUANDACOL	4.66	72	iP	Pb	08 11 09.8	-1.0
VCA	Vinchina	5.19	65	iP	Pb	08 11 17.7	-2.3
VCA				IAML		08 11 19.7	
	comp=Z,46nm,0.2s						

IDC 31 08:15:52.4±1.7**, 7°.00S**×**127°.64E, h0**^{km}**, mb3.5**/2**, mb1 3.9**/5**, mb1mx3.6**/49**, mbtmp3.7**/5**, ML3.8**/3**, Error ellipse: s-maj=100.3km s-min=24.6km az=72.0, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FITZ	Fitzroy Crossi	11.20	190	Pn	Pn	08 18 35.1	+1.2
	0.4nm,0.3s,baz=17,slow=10,SNR=11						
FITZ				Sn	Sn	08 20 27.1	-13
	0.5nm,0.3s,baz=80,slow=18,SNR=5.0						
WRA	Warramunga Arr	14.42	154	Pn	Pn	08 19 17.4	-0.5
	0.5nm,0.3s,baz=325,slow=13,SNR=18						
WRA				Sn	Sn	08 21 41.6	-17
	1.1nm,0.3s,baz=243,slow=32,SNR=14						
ASAR	Alice Springs	17.63	161	P	Pn	08 19 58.8	-0.9
	0.7nm,0.3s,baz=335,slow=11,SNR=44						
ASAR				S	Sn	08 23 02.2	-15
	0.3nm,0.3s,baz=328,slow=23,SNR=7.2						
MKAR	Makanchi Array	66.96	328	P	P	08 26 47.7	+0.8
	0.2nm,0.4s,baz=130,slow=8.9,SNR=3.1						
KURBB	Kurchatov Arra	71.30	329	P	P	08 27 12.9	-0.8
	0.3nm,0.6s,baz=136,slow=5.0,SNR=4.1						

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*DDA **31** 08:26:14.1, 36°.26N×28°.94E, h7^{km}, Ml3.8*
*CSEM **31** 08:26:14.3±0.1, 36°.21N×29°.00E, h15^{km}, ML3.0, Error ellipse: s-maj=3.8km s-min=2.8km az=4.0*
*ATH **31** 08:26:14.3, 36°.30N×29°.00E, h36^{km}±2^{km}, ML3.1/6, Error ellipse: s-maj=2.3km s-min=0.8km az=141.0*
*ISCJB **31** 08:26:14.3±0.5, 36°.17N±0°.03×29°.00E±0°.02, h25^{km}±4^{km}, Error ellipse: s-maj=4.3km s-min=3.2km az=10.4*
*NIC **31** 08:26:14.2±0.4, 36°.37N×29°.22E, h12^{km}, ML3.5*
*THE **31** 08:26:14.2, 36°.28N×28°.96E, h0^{km}, ML3.0/3, Error ellipse: s-maj=0.7km s-min=0.4km az=167.0*
*ISK **31** 08:26:14.2, 36°.27N×28°.93E, h11^{km}, ML3.8/5*
ISC 31 08:26:14.5±1.1**, 36°.26N**±0°.02×**28°.99E**±0°.02**, h15**^{km}±9^{km}**, n115, σ1^{s}.10**/162**, Dodecanese Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
FETY	Fethiye	0.38	12	PG	Pb	08 26 22.3	-0.6
FETY				SG	Sb	08 26 28.5	-0.2
FETY	Fethiye	0.38	12	P	Pb	08 26 22.4	-0.5
FETY				S	Sb	08 26 28.8	+0.1
FETY	Fethiye	0.38	12	P	Pb	08 26 22.4	-0.5
FETY				iSg	Sb	08 26 28.5	-0.2
KSL	Kastellorizon	0.49	103	P	Pb	08 26 24.8	-0.1
KSL				S	Sb	08 26 34.1	+2.2
KSL				AML	AML	08 26 37.1	
	comp=N,5150µm,0.3s						
KSL				AML	AML	08 26 37.6	
	comp=E,14752µm,0.4s						
KSL	Kastellorizon	0.49	103	P	Pb	08 26 24.9	+0.1
KSL				S	Sb	08 26 34.1	+2.2
KSL	Kastellorizon	0.49	103	P	Pb	08 26 25.0	+0.1
KSL				S	Sb	08 26 33.7	+1.8
AKAS	Kas	0.50	93	PG	Pb	08 26 25.2	+0.2
AKAS	Kas	0.50	93	iP	Pb	08 26 25.2	+0.2
AKAS				iS	Sb	08 26 35.1	+2.9
AKAS	Kas	0.50	93	P	Pb	08 26 25.2	+0.2
AKAS				S	Sb	08 26 35.1	+2.9
DALY	Dalyan (Mu˜la	0.61	334	PG	Pg	08 26 26.0	-0.6
DALY				SG	Sb	08 26 34.6	-0.8
DALY	Dalyan (Mu˜la	0.61	334	iP	Pg	08 26 25.9	-0.7
DALY				iS	Sb	08 26 35.1	-0.3
DALY	Dalyan (Mu˜la	0.61	334	ePg	Pg	08 26 26.0	-0.6
DALY				eSg	Sb	08 26 34.6	-0.8
DALY				S	Sb	08 26 35.1	-0.3
TURN	Turunc	0.68	333	PG	Pn	08 26 29.1	-0.5
TURN	Turunc	0.68	333	iP	Pn	08 26 29.6	0.0
TURN				iS	Sn	08 26 40.2	+0.3
TURN	Turunc	0.68	333	ePg	Pn	08 26 29.1	-0.5
TURN	Turunc	0.68	333	P	Pn	08 26 29.6	0.0
TURN				S	Sn	08 26 40.2	+0.3
ARG	Arkhangelos	0.70	266	PG	Pg	08 26 27.5	-0.6
ARG	Arkhangelos	0.70	266	P	Pg	08 26 27.8	-0.3
ARG				S	Sn	08 26 39.9	-0.4
ARG				AML	AML	08 26 43.8	
	comp=E,3072µm,0.5s						
ARG				AML	AML	08 26 44.7	
	comp=N,1633µm,1.0s						
ARG	Arkhangelos	0.70	266	P	Pb	08 26 28.3	0.0
ARG				S	Sn	08 26 39.6	-0.7
ARG	Arkhangelos	0.70	266	ePg	Pg	08 26 27.5	-0.6
ARG	Arkhangelos	0.70	266	P	Pb	08 26 28.3	0.0
ARG				S	Sn	08 26 39.6	-0.7
MRSB	Marmaris-Mugla	0.78	306	PG	Pg	08 26 28.8	-0.9
MRSB	Marmaris-Mugla	0.78	306	ePg	Pg	08 26 28.8	-0.9
ELL	Elmali	0.89	57	PG	Pn	08 26 32.2	-0.3
ELL	Elmali	0.89	57	ePg	Pn	08 26 32.2	-0.3
YER	Yerkesik	1.04	327	PG	Pb	08 26 33.9	-0.3
YER	Yerkesik	1.04	327	P	Pb	08 26 33.9	-0.3
YER				S	Sn	08 26 49.0	+0.2
YER	Yerkesik	1.04	327	P	Pb	08 26 33.9	-0.3
YER				S	Sn	08 26 49.0	+0.2
GOLH	Golhisar	1.08	25	iP	Pn	08 26 34.9	-0.2
GOLH				iS	Sn	08 26 52.3	+2.5
GOLH	Golhisar	1.08	25	P	Pn	08 26 34.9	-0.2
GOLH				S	Sn	08 26 52.3	+2.5
DATC	Datca-Mugla	1.18	295	PN	Pb	08 26 36.3	-0.2
DATC	Datca-Mugla	1.18	295	ePn	Pb	08 26 36.3	-0.2
TAVA	DENIZLI_Tavas	1.20	357	iP	Pg	08 26 37.0	-0.7
TAVA				iS	Sn	08 26 54.3	+1.4
TAVA	DENIZLI_Tavas	1.20	357	P	Pg	08 26 37.0	-0.7
TAVA				S	Sn	08 26 54.3	+1.4
DAT	Datca	1.23	293	PN	Pg	08 26 37.7	-0.4
DAT	Datca	1.23	293	iP	Pn	08 26 37.0	-0.2
DAT				iS	Sn	08 26 54.0	+0.4
DAT	Datca	1.23	293	P	Pn	08 26 37.0	-0.2
DAT	Datca	1.23	293	ePn	Pg	08 26 37.7	-0.4
DAT				S	Sn	08 26 54.0	+0.4
KORT	Korkueli	1.32	56	PN	Pg	08 26 39.9	0.0
KORT	Korkueli	1.32	56	iP	Pg	08 26 39.2	-0.7
KORT				iS	Sg	08 26 60.0	+2.8
KORT	Korkueli	1.32	56	P	Pg	08 26 39.2	-0.7
KORT	Korkueli	1.32	56	ePn	Pg	08 26 39.9	0.0
KORT				S	Sg	08 27 00.0	+2.8
MLSB	Milas	1.42	317	PN	Pb	08 26 40.3	-0.3
MLSB	Milas	1.42	317	ePn	Pb	08 26 40.3	-0.3
DNZL	Cakiroluk	1.43	2	iP	Pb	08 26 40.5	-0.3
DNZL				iS	Sg	08 27 00.4	-0.1
DNZL	Cakiroluk	1.43	2	P	Pb	08 26 40.5	-0.3
DNZL				S	Sg	08 27 00.4	-0.1
BDRM	Kayabasi	1.48	303	iP	Pb	08 26 41.8	+0.2
BDRM				iS	Sb	08 27 00.7	+0.5
BDRM	Kayabasi	1.48	303	P	Pb	08 26 41.8	+0.2
BDRM				S	Sb	08 27 00.7	+0.5
ANTB	Antalya	1.48	64	PN	Pg	08 26 42.9	-0.1
ANTB	Antalya	1.48	64	ePn	Pg	08 26 42.9	-0.1
DENT	Denizli	1.49	1	PN	Pb	08 26 41.1	-0.8
DENT	Denizli	1.49	1	ePn	Pb	08 26 41.1	-0.8
BODT	Bodrum	1.57	301	PN	Pn	08 26 41.3	-0.5
BODT	Bodrum	1.57	301	P	Pn	08 26 41.1	-0.7
BODT	Bodrum	1.57	301	ePn	Pn	08 26 41.3	-0.5
KARP	Karpathos	1.65	245	P	Pn	08 26 42.6	-0.2
KARP				S	Sn	08 27 04.3	+0.6
KARP				AML	AML	08 27 16.1	
	comp=E,766µm,0.6s						
KARP				AML	AML	08 27 17.1	
	comp=N,629µm,0.6s						
KARP	Karpathos	1.65	245	P	Pn	08 26 43.0	+0.1
KARP				S	Sn	08 27 04.8	+1.1
KARP	Karpathos	1.65	245	P	Pn	08 26 42.8	-0.1
KARP				S	Sn	08 27 04.1	+0.4
BRDR	BURDUR-Merkez	1.67	31	iP	Pn	08 26 43.1	-0.2
BRDR				iS	Sg	08 27 07.5	-0.8
BRDR	BURDUR-Merkez	1.67	31	P	Pn	08 26 43.1	-0.2
BRDR				S	Sg	08 27 07.5	-0.8
AYDB	Zeytinkoy-Aydi	1.90	333	PN	Pn	08 26 46.9	+0.5
AYDB	Zeytinkoy-Aydi	1.90	333	ePn	Pn	08 26 46.9	+0.5
ISP	Isparta	1.98	38	PN	Pb	08 26 48.9	-1.4
ISP	Isparta	1.98	38	ePn	Pb	08 26 48.9	-1.4
SUTC	Sutluce-Ispart	2.02	53	PN	Pb	08 26 50.2	-0.7
SUTC	Sutluce-Ispart	2.02	53	ePn	Pb	08 26 50.2	-0.7
KHL	Karahalli	2.10	12	PN	Pn	08 26 50.2	+1.0
KHL	Karahalli	2.10	12	ePn	Pn	08 26 50.2	+1.0
SMG	Samos	2.25	311	P	Pn	08 26 50.5	-0.6
SMG				S	Sn	08 27 18.3	-0.3
SMG				AML	AML	08 27 22.4	
	comp=N,859µm,0.4s						
SMG				AML	AML	08 27 28.9	
	comp=E,535µm,0.5s						
SMG	Samos	2.25	311	P	Pn	08 26 50.9	-0.2
SMG				S	Sn	08 27 18.4	-0.2
SMG	Samos	2.25	311	P	Pn	08 26 50.9	-0.2
SMG				S	Sn	08 27 18.4	-0.2
KULA	Kula-Manisa	2.26	354	PN	Pn	08 26 51.3	-0.1
KULA	Kula-Manisa	2.26	354	ePn	Pn	08 26 51.3	-0.1
ZKR	Zakros	2.53	244	P	Pn	08 26 56.2	+1.2
ZKR				AML	AML	08 27 27.3	
	comp=E,470µm,1.0s						
ZKR				AML	AML	08 27 27.9	
	comp=N,266µm,0.5s						
ZKR	Zakros	2.53	244	P	Pn	08 26 55.8	+0.8
BLCB	Balcova	2.62	324	PN	Pn	08 26 57.1	+0.8
BLCB	Balcova	2.62	324	ePn	Pn	08 26 57.1	+0.8
SHAP	Saphane-Kutahy	2.76	4	PN	Pn	08 26 58.9	+0.6
SHAP	Saphane-Kutahy	2.76	4	ePn	Pn	08 26 58.9	+0.6
URLA	Izmir	2.83	318	PN	Pn	08 26 59.9	+0.7
URLA	Izmir	2.83	318	ePn	Pn	08 26 59.9	+0.7
NPS	Neapolis	2.92	251	P	Pn	08 26 60.0	-0.4
NPS	Neapolis	2.92	251	P	Pn	08 27 00.4	0.0
AKMC	Akamas	2.99	113	P	Pn	08 26 59.4	-1.9
	baz=298						
AKMC	Akamas	2.99	113	P	Pn	08 26 59.4	-1.9
LAST	Lasithi	3.06	250	P	Pn	08 27 01.3	-1.1
LAST				S	Sn	08 27 39.2	+0.5
LAST	Lasithi	3.06	250	P	Pn	08 27 02.0	-0.3
LAST				S	Sn	08 27 38.7	0.0
PPCY	Paphos	3.06	116	P	Pn	08 27 00.8	-1.5
	baz=301						
PPCY	Paphos	3.06	116	P	Pn	08 27 00.8	-1.5
ALFC	Alefka	3.14	110	P	Pn	08 27 01.5	-1.9
	baz=294						
ALFC				S	Sn	08 27 37.6	-3.1
ALFC	Alefka	3.14	110	P	Pn	08 27 01.5	-1.9
ALFC				S	Sn	08 27 37.6	-3.1
CHOS	Chios island	3.15	313	P	Pn	08 27 02.7	-1.0
CHOS				S	Sn	08 27 38.4	-2.7
CHOS				AML	AML	08 27 45.2	
	comp=E,205µm,0.3s						
CHOS				AML	AML	08 27 45.6	
	comp=N,227µm,0.5s						
CHOS	Chios island	3.15	313	P	Pn	08 27 03.2	-0.5
CHOS				S	Sn	08 27 39.0	-2.1
SZAC	Souni	3.52	114	P	Pn	08 27 06.6	-2.0
	baz=299						
SZAC				S	Sn	08 27 48.5	-1.4
SZAC	Souni	3.52	114	P	Pn	08 27 06.6	-2.0
SZAC				S	Sn	08 27 48.5	-1.4
MAMC	Mammari	3.61	106	P	Pn	08 27 08.4	-1.5
	baz=291						
MAMC	Mammari	3.61	106	P	Pn	08 27 08.4	-1.5
PRK	Paraskevi	3.67	325	P	Pn	08 27 12.4	+1.7
PRK	Paraskevi	3.67	325	P	Pn	08 27 11.6	+0.9
SIGR	SIGRI	3.85	321	P	Pn	08 27 12.6	-0.5
SIGR	SIGRI	3.85	321	P	Pn	08 27 12.9	-0.2
IMMV	Iera Moni Meta	4.14	260	P	Pn	08 27 18.1	+0.9
IMMV	Iera Moni Meta	4.14	260	P	Pn	08 27 18.0	+0.9
ANKY	Antikythira Is	4.62	267	P	Pn	08 27 23.0	-0.8
ANKY	Antikythira Is	4.62	267	P	Pn	08 27 23.9	+0.1
KYTH	Kithira	4.80	272	P	Pn	08 27 27.0	+0.8
KYTH	Kithira	4.80	272	P	Pn	08 27 27.2	+1.0
VLI	Veliai	4.90	277	P	Pn	08 27 28.8	+1.3
VLI	Veliai	4.90	277	P	Pn	08 27 28.6	+1.1
SMTH	Samothraki Isl	5.00	328	P	Pn	08 27 31.1	+2.1
SMTH	Samothraki Isl	5.00	328	P	Pn	08 27 30.3	+1.3
SKIA	Skiathos	5.25	305	P	Pn	08 27 35.2	+2.8
SKIA	Skiathos	5.25	305	P	Pn	08 27 34.2	+1.8
PYL	PYLOS	5.86	278	P	Pn	08 27 42.0	+1.2
PYL	PYLOS	5.86	278	P	Pn	08 27 42.1	+1.2

MEX 31 09:15:56.5±0.5**, 15°.93N**×**98°.68W, h15**^{km}±14^{km}**, MD3.6, Off coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.70	49	eP	Pg	09 16 08.1	-2.2
PNIG				eS	Sg	09 16 17.0	-2.6
TLIG	Tlapa	1.63	4	eP	Pn	09 16 21.5	-3.3
TLIG				eS	Sn	09 16 40.4	-5.2
CAIG	El Cayaco	1.89	306	eP	Pn	09 16 25.6	-2.6
CAIG				iS	Sn	09 16 46.7	-5.1
VHO	Vista Hermosa	2.19	58	eP	Pn	09 16 28.8	-3.8
VHO				iS	Sn	09 16 54.4	-5.0

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*ISCJB **31** 09:18:32.6±0.9, 49°.03N±0°.04×11°.49E±0°.05, h0^{km}, Error ellipse: s-maj=6.4km s-min=3.8km az=138.9*
*VIE **31** 09:18:34.5±0.6, 48°.94N×11°.38E, h0^{km}, mb1.8/7, ml2.5/11, Error ellipse: s-maj=5.5km s-min=4.0km az=141.0 19 km NW of Altmuehltal Suspected Mining explosion.*
ISC 31 09:18:34.0±1.5**, 49°.03N**±0°.06×**11°.44E**±0°.05**, h0**^{km}**, n12, σ0^{s}.95**/20**, Germany**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RETA	Reutte	1.61	197	Sg	Sg	09 19 26.5	+0.8
	52nm,0.7s						
WATA	Walderalm	1.70	177	ePn	Pn	09 19 04.4	-0.6
	0.5nm,0.1s						
WATA				Sg	Sg	09 19 29.1	+0.5
	3.2nm,0.2s						
MOTA	Moosalm	1.70	188	ePn	Pn	09 19 04.4	-0.7
	1.6nm,0.3s						
MOTA				Sg	Sg	09 19 29.8	+1.1
	6.1nm,0.3s						
WTTA	Wattenberg	1.77	176	ePn	Pn	09 19 04.4	-1.7
	0.5nm,0.1s						
WTTA				Sg	Sg	09 19 31.7	+0.7
	22nm,0.5s						
DAVA	Damuels	2.04	211	ePn	Pn	09 19 08.7	-0.9
	1.4nm,0.2s						
DAVA				Sg	Sg	09 19 40.5	+1.2
	10nm,0.4s						
FETA	Feichten	2.07	194	ePg	Pn	09 19 11.3	+1.1
	0.4nm,0.1s						
FETA				Sg	Sg	09 19 40.6	+0.2
	1.8nm,0.3s						
MOA	Molln	2.22	121	ePg	Pg	09 19 17.5	+1.0
	1.8nm,0.3s						
MOA				Sg	Sg	09 19 45.5	+0.1
	11nm,0.4s						
KBA	Koelnbreinsper	2.34	146	Sg	Sg	09 19 48.7	-0.3
	2.4nm,0.3s						
ABTA	Abfaltersbach	2.40	162	Pg	Pb	09 19 16.9	-1.2
	0.3nm,0.1s						
ABTA				Sn	Sn	09 19 45.2	+0.5
	5.0nm,0.5s						
BRG	Berggiesshubel	2.45	40	SG	Sg	09 19 53.3	+0.6
	9.9nm,0.6s						
CONA	Conrad Observa	3.14	109	iSn	Sn	09 20 02.7	-0.3
	0.6nm,0.1s						
CONA				Sg	Sg	09 20 16.1	+1.2
	7.6nm,0.3s						
ARSA	Arzberg	3.26	122	Sg	Sg	09 20 19.7	+0.9
	7.5nm,0.5s						

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*KRAR **31** 09:24:10.5±0.3, 53°.51N×87°.30E, M2.3, Industrial explosion (after: The Earthquakes of Russia in 2012. Obninsk, GS RAS, 224p + CD-ROM, 2014)*
*NNC **31** 09:24:18.2±1.4, 53°.46N×87°.51E, h0^{km}, mb3.4, mpv3.1, Error ellipse: s-maj=11.1km s-min=5.7km az=57.0, Suspected Mining explosion.*
IDC 31 09:24:16.8±2.8**, 53°.54N**×**87°.68E, h0**^{km}**, mb1 3.4**/2**, mb1mx3.1**/74**, mbtmp3.4**/2**, ML3.1**/2**, 8C-3D, Error ellipse: s-maj=26.2km s-min=18.6km az=76.0, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
I46RU	ZALESOVO INFRA	1.75	285	i		09 35 38.1	
	baz=100,slow=328,SNR=1.1						
ZAA0	Zalesovo Array	1.75	285	⇑P	Pn	09 24 48.0	-0.3
	7.7nm,0.6s						
ZAA0				⇑S	Sn	09 25 11.3	-0.1
	13nm,0.8s						
ZALV	Zalesovo Beam	1.75	285	Pn	Pn	09 24 48.1	-0.3
	4.2nm,0.3s,baz=101,slow=14,SNR=24						
ZALV				Sn	Sb	09 25 11.8	-0.4
	7.1nm,0.3s,baz=120,slow=28,SNR=13						
KURK	Kurchatov	6.26	247	⇑Pn	Pn	09 25 50.9	+0.6
	3.3nm,1.3s						
KURK				⇓Sn	Sn	09 27 01.1	-1.3
	1.6nm,0.7s						
KURK				⇑Lg	Lg	09 27 34.2	
	4.9nm,0.7s						
KURBB	Kurchatov Arra	6.35	246	Pn	Pn	09 25 52.3	+0.7
	0.2nm,0.3s,baz=62,slow=14,SNR=16						
KURBB				Sn	Sn	09 27 04.1	-0.7
	0.1nm,0.3s,baz=49,slow=16,SNR=3.9						
KURBB				Lg	Lg	09 27 39.2	
	0.1nm,0.3s,baz=64,slow=32,SNR=6.8						
KURBB	Kurchatov Arra	6.35	246	⇑Pn	Pn	09 25 51.7	+0.1
	3.4nm,0.6s						
KURBB				⇓Sn	Sn	09 27 04.6	-0.2
	5.1nm,0.7s						
KURBB				⇓Lg	Lg	09 27 35.1	
	6.4nm,0.6s						
MK31	Makanchi Array	7.59	209	⇑Pn	Pn	09 26 09.7	+1.1
	0.1nm,0.2s,baz=28,slow=13,SNR=24						
MK31				⇑Sn	Sn	09 27 34.1	-1.2
	0.6nm,0.6s						
MK31				⇑Lg	Lg	09 28 13.9	
	1.8nm,0.7s,baz=33,slow=30,SNR=5.1						
MKAR	Makanchi Array	7.59	209	Pn	Pn	09 26 09.9	+1.3
	0.4nm,0.3s,baz=26,slow=13,SNR=18						
MKAR				Sn	Sn	09 27 34.4	-0.9
	0.1nm,0.3s,baz=18,slow=29,SNR=4.5						
MKAR				Lg	Lg	09 28 14.0	
	0.1nm,0.3s,baz=34,slow=30,SNR=5.9						

IDC 31 09:35:30.6±11.0**, 2°.12S**×**144°.75E, h0**^{km}**, mb3.4**/3**, mb1 3.7**/3**, mb1mx3.4**/45**, mbtmp3.5**/3**, Error ellipse: s-maj=167.0km s-min=92.4km az=10.0, Ninigo Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	20.43	209	P	P	09 40 09.8	+0.2
	0.6nm,0.4s,baz=31,slow=11,SNR=13						
ASAR	Alice Springs	23.86	205	P	P	09 40 45.2	-0.6
	0.4nm,0.4s,baz=35,slow=7.6,SNR=7.0						

STKA	Stephens Creek	29.75	185	P	P	09 41 39.4	+0.5
	1.9nm,1.1s,baz=6.9,slow=11,SNR=3.1						

CSEM 31 09:52:41.7, 44°.18N×22°.18E, h0^{km}, ML1.5, Mining explosion.

BEO 31 09:52:41.7±0.8, 44°.18N×22°.18E, h0^{km}±9^{km}, ML1.5/6, Mining explosion., Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BOVS	Bovan	0.64	212	ePg	Pg	09 52 52.8	-1.2
BOVS				eSg	Sg	09 53 02.5	+0.3
BOVS	Bovan	0.64	212	ePg	Pg	09 52 52.8	-1.2
BOVS				eSg	Sg	09 53 02.5	+0.3
ZAPS	Zavoj	0.96	160	ePg	Pg	09 52 59.3	-0.8
ZAPS				eSg	Sg	09 53 12.4	-0.2
GRUS	Gruza	1.09	255	ePg	Pg	09 53 01.7	-0.9
GRUS				eSg	Sg	09 53 16.4	-0.4
GRUS	Gruza	1.09	255	ePg	Pg	09 53 01.7	-0.9
GRUS				eSg	Sg	09 53 16.4	-0.4
SELS	Selova	1.23	219	ePg	Pg	09 53 03.0	-2.2
SELS				eSg	Sg	09 53 21.2	+0.1
TRUS	Trudelj	1.27	273	ePg	Pg	09 53 04.4	-1.7
TRUS				eSg	Sg	09 53 22.7	0.0
TRUS	Trudelj	1.27	273	ePg	Pg	09 53 04.4	-1.7
TRUS				eSg	Sg	09 53 22.7	0.0
BZS	Buzias	1.49	345	ePn	Pn	09 53 08.7	-1.1
BZS				eSn	Sn	09 53 31.0	+1.0
BZS	Buzias	1.49	345	ePn	Pn	09 53 08.7	-1.1
BZS				eSn	Sn	09 53 31.0	+1.0
IVAS	Ivanjica	1.58	248	ePg	Pn	09 53 10.1	-1.0
IVAS				eSg	Sn	09 53 31.2	-1.1
IVAS	Ivanjica	1.58	248	ePg	Pn	09 53 10.1	-1.0
IVAS				eSg	Sn	09 53 31.2	-1.1

SJA 31 09:53:44.6±0.6, 23°.27S×69°.51W, h90^{km}, ML3.9, MW3.8

ISCJB 31 09:53:46.3±0.3, 23°.37S±0°.03×69°.25W±0°.06, h97^{km}±5^{km}, mb3.7/8, Error ellipse: s-maj=8.9km s-min=4.8km az=172.7

GUC 31 09:53:47.5±0.4, 23°.28S×69°.25W, h87^{km}±4^{km}, ML4.1

IDC 31 09:53:48.3±2.7, 23°.33S×68°.94W, h93^{km}±23^{km}, mb3.7/8, mb1 3.7/12, mb1mx3.5/45, mbtmp4.0/12, Error ellipse: s-maj=27.2km s-min=15.7km az=93.0

ISC 31 09:53:47.1±0.8, 23°.34S±0°.05×69°.22W±0°.06, h84^{km}±8^{km}, n44, σ1^{s}.35/46, mb4.0/8, 6C-3D, Northern Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PB06	IPOC Station P	0.71	332	⇓iP	Pn	09 54 03.7	+0.2
PB06				i S	Sn	09 54 16.0	+0.5
PB06				IAML		09 54 16.6	
	comp=N,17μm,0.3s						
PB05	IPOC Station P	1.03	298	⇑iP	Pn	09 54 07.1	+0.2
PB05				i S	Sn	09 54 22.4	+0.7
PB05				IAML		09 54 26.8	
	comp=N,2μm,0.1s						
PB10	IPOC Station P	1.24	262	⇑iP	Pn	09 54 10.1	+0.7
PB10				i S	Sn	09 54 27.0	+0.9
PB10				IAML		09 54 32.4	
	comp=E,2μm,0.4s						
PB04	IPOC Station P	1.32	319	⇑iP	Pn	09 54 10.7	+0.2
PB04				i S	Sn	09 54 28.4	+0.3
PB04				IAML		09 54 32.7	
	comp=E,4μm,0.5s						
PB03	IPOC Station P	1.37	339	⇓iP	Pn	09 54 11.6	+0.4
PB03				i S	Sn	09 54 29.9	+0.6
PB03				IAML		09 54 33.1	
	comp=N,5μm,0.3s						
PB14	IPOC Station P	1.68	220	IAML		09 54 43.3	
	comp=E,2μm,0.5s						
PB07	IPOC Station P	1.72	339	⇓iP	Pn	09 54 16.1	+0.5
PB07				i S	Sn	09 54 37.9	+0.7
PB07				IAML		09 54 42.8	
	comp=E,4μm,0.3s						
PB02	IPOC Station P	2.10	343	⇑iP	Pn	09 54 21.1	+0.4
PB02				IAML		09 54 52.5	
	comp=E,6μm,0.3s						
PB01	IPOC Station P	2.29	354	⇑iP	Pn	09 54 23.7	+0.5
PB01				i S	Sn	09 54 51.0	+0.3
PB01				IAML		09 54 58.1	
	comp=E,3μm,0.2s						
PB08	IPOC Station P	3.18	1	⇑iP	Pn	09 54 35.6	+0.2
PB08				i S	Sn	09 55 13.2	+0.6
PB08				IAML		09 55 26.3	
	comp=N,503nm,0.3s						
SLA	San Lorenzo	3.67	113	eP	Pn	09 54 44.7	+3.0
SLA				IAML		09 54 53.3	
	comp=Z,24nm,0.8s						
SLA				eS	Sn	09 55 36.6	+13
AHML	Horco Molle	4.92	135	eP	Pn	09 55 01.0	+2.3
AHML				IAML		09 55 02.5	
	comp=Z,33nm,0.5s						
AHML				eS	Sn	09 55 57.1	+2.8
VCA	Vinchina	5.46	171	eP	Pn	09 55 07.1	+1.0
VCA				IAML		09 55 12.3	
	comp=Z,146nm,0.3s						
CYA	Choya	5.94	150	eP	Pn	09 55 13.7	+1.1
CYA				IAML		09 55 15.4	
	comp=Z,24nm,0.7s						
AGUA	GUANDACOL	6.16	174	eP	Pn	09 55 15.6	-0.1
ACDV	Cuesta del Vie	6.81	179	eP	Pn	09 55 23.9	-0.7
ACDV				IAML		09 55 30.6	
	comp=Z,21nm,0.6s						
AROD	Rodeo	6.81	182	eP	Pn	09 55 24.9	+0.3
LPAZ	La Paz	7.09	8	P	Pn	09 55 30.4	+1.6
	comp=Z,1.1nm,0.3s,baz=155,slow=4.9,SNR=24						
AMOG	MOGNA	7.60	175	eP	Pn	09 55 33.6	-1.7
RTLL	Cerro Villicun	7.99	175	eP	Pn	09 55 38.6	-1.9
RTLL				IAML		09 55 38.9	
	comp=Z,32nm,0.4s						
RTLS	Leoncito	8.43	180	eP	Pn	09 55 44.6	-2.1
RTLS				IAML		09 58 00.1	
	comp=Z,17nm,0.5s						
RTCV	Cerro Valdivia	8.52	176	eP	Pn	09 55 45.7	-2.0
SIV	San Ignacio	10.59	48	P	Pn	09 56 13.8	-2.3
	comp=Z,4.0nm,0.3s,baz=248,slow=12,SNR=114						
SIV				S	Sn	09 58 03.9	-9.1
	comp=Z,0.3nm,0.3s,baz=343,slow=19,SNR=2.4						
CPUP	Villa Florida	11.20	108	P	Pn	09 56 22.2	-2.1
	comp=Z,0.1nm,0.3s,baz=278,slow=10,SNR=5.0						
PLCA	Paso Flores	17.38	183	P	Pn	09 57 44.1	-0.1
	comp=Z,0.1nm,0.3s,baz=24,slow=11,SNR=6.7						
PTGA	Pitinga	24.20	23	P	P	09 58 55.2	-0.8
	comp=Z,1.3nm,0.6s,baz=278,slow=7.1,SNR=4.2						
SNAA	Sanae	60.65	161	P	P	10 03 49.2	+0.2
	comp=Z,0.7nm,0.8s,baz=293,slow=7.7,SNR=8.6						
TXAR	Lajitas Array	61.97	326	P	P	10 03 59.6	+1.1
	comp=Z,0.1nm,0.6s,baz=144,slow=7.8,SNR=3.6						
QSPA	South Pole Qui	66.86	180	P	P	10 04 31.1	+1.1
	comp=Z,2.9nm,0.5s,baz=115,slow=3.6,SNR=21						
KOWA	Kowa	74.01	66	P	P	10 05 13.0	-1.2
	comp=Z,1.1nm,0.4s,baz=254,slow=3.0,SNR=3.4						
VNDA	Vanda	75.00	190	P	P	10 05 18.4	-0.5
	comp=Z,0.2nm,0.4s,baz=146,slow=7.3,SNR=2.9						
TORD	Torodi Ar. Bea	78.24	70	P	P	10 05 36.9	-1.3
	comp=Z,1.6nm,0.6s,baz=253,slow=5.1						
MAW	Mawson	82.66	163	P	P	10 06 00.4	-0.6
	comp=Z,1.3nm,0.5s,baz=214,slow=7.3,SNR=6.9						
MODS	Modra-Piesok	104.84	44	ePDIFF	Pdif	10 07 47.8	+3.5
H11S2	WAKE ISLAND Hy	127.80	276	T	T	12 33 03.6	
	baz=104,slow=74,SNR=20						
H11S1	WAKE ISLAND Hy	127.81	276	T	T	12 33 06.4	
	baz=104,slow=74,SNR=15						
H11S3	WAKE ISLAND Hy	127.82	276	T	T	12 33 07.4	
	baz=104,slow=74,SNR=14						
H11N3	WAKE ISLAND Hy	127.93	277	T	T	12 33 05.2	
	baz=104,slow=74,SNR=6.9						
H11N2	WAKE ISLAND Hy	127.95	277	T	T	12 33 11.9	
	baz=104,slow=74,SNR=5.8						
H11N1	WAKE ISLAND Hy	127.95	277	T	T	12 33 10.3	
	baz=104						
ASAR	Alice Springs	128.16	207	PKP	PKPdf	10 12 44.3	-0.1
	comp=Z,0.3nm,0.5s,baz=119,slow=1.7,SNR=5.1						
WRA	Warramunga Arr	131.23	210	PKP	PKPdf	10 12 50.6	+0.3
	comp=Z,0.2nm,0.4s,baz=152,slow=1.6,SNR=5.0						
ZALV	Zalesovo Beam	143.72	26	PKP	PKPdf	10 13 12.9	+0.9
	comp=Z,0.6nm,0.4s,baz=298,slow=3.1,SNR=2.8						
MKAR	Makanchi Array	147.27	37	PKPbc	PKPdf	10 13 19.4	+0.9
	comp=Z,1.0nm,0.7s,baz=338,slow=2.6,SNR=5.6						

CSEM 31 09:54:15.0, 45°.54N×26°.99E, h18^{km}, MD3.6/3

SIGU 31 09:54:15.2±1.2, 45°.5N±0°.7×27°.0E±0°.9, h11^{km}±1^{km}, mb2.5/5

BUC 31 09:54:15.0±0.5, 45°.54N×26°.99E, h18^{km}±4^{km}, MD3.6/3, Error ellipse: s-maj=5.1km s-min=3.5km az=53.0

ISCJB 31 09:54:16.6±0.3, 45°.53N±0°.01×26°.98E±0°.02, h19^{km}±3^{km}, Error ellipse: s-maj=2.9km s-min=2.2km az=155.8

ISC 31 09:54:16.3±0.9, 45°.52N±0°.01×27°.01E±0°.02, h19^{km}±2^{km}, n127, σ0^{s}.93/188, 66C-42D, Romania

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GRER		0.14	189	⇓iP	Pg	09 54 20.7	+0.1
GRER		0.14	189	S	Sg	09 54 24.0	+0.6
GRER		0.14	189	⇓iP	Pg	09 54 20.7	+0.1
GRER				i S	Sg	09 54 24.0	+0.6
GRER		0.14	189	⇓iP	Pg	09 54 20.7	+0.1
GRER				i S	Sg	09 54 24.0	+0.6
ODBI	Odobesti	0.24	8	S	Sg	09 54 26.4	+0.4
ODBI	Odobesti	0.24	8	i S	Sg	09 54 26.4	+0.4
ODBI	Odobesti	0.24	8	i S	Sg	09 54 26.4	+0.4
VRI	Vrincioaia	0.40	331	⇓iP	Pg	09 54 22.9	-1.7
VRI	Vrincioaia	0.40	331	⇓iP	Pg	09 54 22.9	-1.7
VRI				i S	Sg	09 54 30.0	-0.2
VRI	Vrincioaia	0.40	331	⇓iP	Pg	09 54 22.9	-1.7
VRI				i S	Sg	09 54 30.0	-0.2
PLOR	Plostina	0.41	323	⇓iP	Pg	09 54 23.2	-1.7
PLOR	Plostina	0.41	323	⇓iP	Pg	09 54 23.2	-1.7
PLOR				i S	Sg	09 54 30.2	-0.5
PLOR	Plostina	0.41	323	⇓iP	Pg	09 54 23.2	-1.7
PLOR				i S	Sg	09 54 30.2	-0.5
ISR	Istrita	0.52	219	⇑iP	Pb	09 54 26.7	0.0
ISR	Istrita	0.52	219	⇑iP	Pb	09 54 26.7	0.0
ISR				i S	Sb	09 54 35.2	+1.4
ISR	Istrita	0.52	219	⇑iP	Pb	09 54 26.7	0.0
ISR				i S	Sb	09 54 35.2	+1.4
PGOR	Pogoanele	0.61	181	⇑iP	Pn	09 54 29.3	-0.6
PGOR				S	Sg	09 54 37.5	+0.9
PGOR	Pogoanele	0.61	181	⇑iP	Pn	09 54 29.3	-0.6
PGOR				i S	Sg	09 54 37.5	+0.9
PGOR	Pogoanele	0.61	181	⇑iP	Pn	09 54 29.3	-0.6
PGOR				i S	Sg	09 54 37.5	+0.9
MLR	Muntele Rosu	0.75	268	⇑iP	Pb	09 54 29.0	-1.7
MLR	Muntele Rosu	0.75	268	⇑iP	Pb	09 54 29.0	-1.7
MLR				i S	Sb	09 54 39.7	-0.8
MLR	Muntele Rosu	0.75	268	⇑iP	Pb	09 54 29.0	-1.7
MLR				i S	Sb	09 54 39.7	-0.8
SECR		0.82	234	⇓iP	Pb	09 54 31.5	-0.4
SECR		0.82	234	⇓iP	Pb	09 54 31.5	-0.4
SECR		0.82	234	⇓iP	Pb	09 54 31.5	-0.4
GIUM	Giurgiulesti	0.85	92	S	Sn	09 54 45.3	+0.3
GIUM	Giurgiulesti	0.85	92	i S	Sn	09 54 45.3	+0.3
GIUM	Giurgiulesti	0.85	92	i S	Sn	09 54 45.3	+0.3
CFR	Carcaliu	0.87	113	⇑iP	Pb	09 54 31.9	-0.8
CFR	Carcaliu	0.87	113	⇑iP	Pb	09 54 31.9	-0.8
CFR				i S	Sg	09 54 45.0	+0.3
CFR	Carcaliu	0.87	113	⇑iP	Pb	09 54 31.9	-0.8
CFR				i S	Sg	09 54 45.0	+0.3
PLAR	PLOIESTI	0.92	229	⇑iP	Pb	09 54 33.2	-0.3
PLAR	PLOIESTI	0.92	229	⇑iP	Pb	09 54 33.2	-0.3
PLAR				i S	Sb	09 54 45.3	0.0
PLAR	PLOIESTI	0.92	229	⇑iP	Pb	09 54 33.2	-0.3
PLAR				i S	Sb	09 54 45.3	0.0
AMRR	Amara	0.94	165	⇑iP	Pb	09 54 33.4	-0.5
AMRR	Amara	0.94	165	⇑iP	Pb	09 54 33.4	-0.5
AMRR				i S	Sn	09 54 47.9	+0.6
AMRR	Amara	0.94	165	⇑iP	Pb	09 54 33.4	-0.5
AMRR				i S	Sn	09 54 47.9	+0.6
SULR		0.99	213	⇓iP	Pb	09 54 34.4	-0.4
SULR		0.99	213	⇓iP	Pb	09 54 34.4	-0.4
SULR				i S	Sn	09 54 49.6	+1.0
SULR		0.99	213	⇓iP	Pb	09 54 34.4	-0.4
SULR				i S	Sn	09 54 49.6	+1.0
TESR	Tescani	1.02	346	⇓iP	Pb	09 54 34.7	-0.6
TESR	Tescani	1.02	346	⇓iP	Pb	09 54 34.7	-0.6
TESR				i S	Sb	09 54 48.7	+0.3
TESR	Tescani	1.02	346	⇓iP	Pb	09 54 34.7	-0.6
TESR				i S	Sb	09 54 48.7	+0.3
OZUR		1.03	304	⇑iP	Pb	09 54 34.2	-1.3
OZUR				S	Sg	09 54 50.0	+0.2
OZUR		1.03	304	⇑iP	Pb	09 54 34.2	-1.3
OZUR				i S	Sg	09 54 50.0	+0.2
OZUR		1.03	304	⇑iP	Pb	09 54 34.2	-1.3
OZUR				i S	Sg	09 54 50.0	+0.2
HARR	Harsova	1.06	141	⇑iP	Pb	09 54 35.2	-0.7
HARR	Harsova	1.06	141	⇑iP	Pb	09 54 35.2	-0.7
HARR	Harsova	1.06	141	⇑iP	Pb	09 54 35.2	-0.7
TLB	Topalu	1.19	141	⇑iP	Pn	09 54 37.2	-0.6
TLB	Topalu	1.19	141	⇑iP	Pn	09 54 37.2	-0.6
TLB				i S	Sn	09 54 54.1	+0.7
TLB	Topalu	1.19	141	⇑iP	Pn	09 54 37.2	-0.6
TLB				i S	Sn	09 54 54.1	+0.7
DOPR	Dopca	1.22	292	⇓iP	Pn	09 54 36.5	-1.7
DOPR	Dopca	1.22	292	⇓iP	Pn	09 54 36.5	-1.7
DOPR				i S	Sn	09 54 54.1	-0.1
DOPR	Dopca	1.22	292	⇓iP	Pn	09 54 36.5	-1.7
DOPR				i S	Sn	09 54 54.1	-0.1
LEOM	Leova	1.29	42	⇑iP	Pb	09 54 40.0	+0.2
LEOM				S	Sg	09 54 57.5	-0.5
LEOM	Leova	1.29	42	⇑iP	Pb	09 54 40.0	+0.2
LEOM				i S	Sg	09 54 57.5	-0.5
LEOM	Leova	1.29	42	⇑iP	Pb	09 54 40.0	+0.2
LEOM				i S	Sg	09 54 57.5	-0.5
TLCR		1.32	104	⇑iP	Pb	09 54 40.4	0.0
TLCR		1.32	104	⇑iP	Pb	09 54 40.4	0.0
TLCR				i S	Sg	09 54 58.8	-0.2
TLCR		1.32	104	⇑iP	Pb	09 54 40.4	0.0
TLCR				i S	Sg	09 54 58.8	-0.2
BUC1	Bucharest	1.36	211	⇓iP	Pn	09 54 40.4	+0.2
BUC1	Bucharest	1.36	211	⇓iP	Pn	09 54 40.4	+0.2
BUC1				i S	Sb	09 54 58.9	+0.8
BUC1	Bucharest	1.36	211	⇓iP	Pn	09 54 40.4	+0.2
BUC1				i S	Sb	09 54 58.9	+0.8
VOIR		1.38	267	⇓iP	Pn	09 54 39.7	-0.8
VOIR		1.38	267	⇓iP	Pn	09 54 39.7	-0.8
VOIR				i S	Sb	09 54 59.0	+0.3
VOIR		1.38	267	⇓iP	Pn	09 54 39.7	-0.8
VOIR				i S	Sb	09 54 59.0	+0.3
CVDA	Cernavoda	1.40	148	⇓iP	Pn	09 54 40.2	-0.4
CVDA	Cernavoda	1.40	148	⇓iP	Pn	09 54 40.2	-0.4
CVDA				i S	Sg	09 55 00.5	-0.9
CVDA	Cernavoda	1.40	148	⇓iP	Pn	09 54 40.2	-0.4
CVDA				i S	Sg	09 55 00.5	-0.9
MTUR	Matau	1.40	259	⇓iP	Pn	09 54 41.1	+0.3
MTUR	Matau	1.40	259	⇓iP	Pn	09 54 41.1	+0.3
MTUR	Matau	1.40	259	⇓iP	Pn	09 54 41.1	+0.3
TIRR	Tirgusor	1.46	136	⇑iP	Pn	09 54 41.1	-0.4
TIRR	Tirgusor	1.46	136	⇑iP	Pn	09 54 41.1	-0.4
TIRR				i S	Sb	09 55 00.9	0.0
TIRR	Tirgusor	1.46	136	⇑iP	Pn	09 54 41.1	-0.4
TIRR				i S	Sb	09 55 00.9	0.0
GIRR	Girov	1.48	346	⇑iP	Pn	09 54 42.0	+0.2
GIRR	Girov	1.48	346	⇑iP	Pn	09 54 42.0	+0.2
GIRR	Girov	1.48	346	⇑iP	Pn	09 54 42.0	+0.2
SGRR	Singureni	1.49	210	⇓iP	Pb	09 54 43.2	-0.1
SGRR	Singureni	1.49	210	⇓iP	Pb	09 54 43.2	-0.1
SGRR				i S	Sb	09 55 02.3	+0.5
SGRR	Singureni	1.49	210	⇓iP	Pb	09 54 43.2	-0.1
SGRR				i S	Sb	09 55 02.3	+0.5
ICOR	Ion Corvin	1.51	158	⇑iP	Pn	09 54 41.8	-0.5
ICOR	Ion Corvin	1.51	158	⇑iP	Pn	09 54 41.8	-0.5
ICOR				i S	Sg	09 55 04.1	-1.0
ICOR	Ion Corvin	1.51	158	⇑iP	Pn	09 54 41.8	-0.5
ICOR				i S	Sg	09 55 04.1	-1.0
BIZ	Bicaz	1.55	337	⇑iP	Pn	09 54 42.8	0.0
BIZ	Bicaz	1.55	337	⇑iP	Pn	09 54 42.8	0.0
BIZ	Bicaz	1.55	337	⇑iP	Pn	09 54 42.8	0.0
ARR	Arges	1.68	266	⇑iP	Pn	09 54 44.8	+0.2
ARR	Arges	1.68	266	⇑iP	Pn	09 54 44.8	+0.2
ARR				i S	Sb	09 55 07.5	+0.3
ARR	Arges	1.68	266	⇑iP	Pn	09 54 44.8	+0.2
ARR				i S	Sb	09 55 07.5	+0.3
HUMR	Humele	1.75	236	⇑iP	Pn	09 54 45.9	+0.4
HUMR	Humele	1.75	236	⇑iP	Pn	09 54 45.9	+0.4
HUMR				i S	Sb	09 55 08.3	-0.8
HUMR	Humele	1.75	236	⇑iP	Pn	09 54 45.9	+0.4
HUMR				i S	Sb	09 55 08.3	-0.8
EFOR	EFORIE	1.85	141	⇑iP	Pb	09 54 49.0	-0.4
EFOR	EFORIE	1.85	141	⇑iP	Pb	09 54 49.0	-0.4
EFOR				i S	Sb	09 55 12.0	-0.1
EFOR	EFORIE	1.85	141	⇑iP	Pb	09 54 49.0	-0.4
EFOR				i S	Sb	09 55 12.0	-0.1
PRAR	RASCA	1.92	344	⇓iP	Pn	09 54 49.0	+1.1
PRAR	RASCA	1.92	344	⇓iP	Pn	09 54 49.0	+1.1
PRAR	RASCA	1.92	344	⇓iP	Pn	09 54 49.0	+1.1
LOT	Lotru	2.28	269	⇑iP	Pn	09 54 53.8	+0.9
LOT	Lotru	2.28	269	⇑iP	Pn	09 54 53.8	+0.9
LOT	Lotru	2.28	269	⇑iP	Pn	09 54 53.8	+0.9
BURAR	Bucovina Array	2.43	330	⇑iP	Pn	09 54 55.1	+0.1
BURAR	Bucovina Array	2.43	330	⇑iP	Pn	09 54 55.1	+0.1
BURAR	Bucovina Array	2.43	330	⇑iP	Pn	09 54 55.1	+0.1
KMPD	K-Podol'skiy	3.07	353	eP	Pn	09 55 06.2	+2.6
KMPD				i S	Sn	09 55 43.3	+3.6
NDNU	Novodnistrovsk	3.08	4	i P	Pn	09 55 04.7	+0.8
NDNU				i S	Sn	09 55 42.7	+2.5
KSV	Kosov	3.10	335	eP	Pn	09 55 05.6	+1.5
KSV				Pm		09 55 07.1	
KSV				eS	Sn	09 55 42.8	+2.3
KSV				Sm		09 56 08.9	
RAKU	Rahkiv	3.18	323	i P	Pn	09 55 06.3	+1.1
RAKU				Pm		09 55 26.7	
RAKU				i S	Sn	09 55 44.5	+2.0
RAKU				Sm		09 55 47.6	
NSLU	Nyzhne Selyshc	3.20	328	eP	Pb	09 55 12.7	+0.3
NSLU				Pm		09 55 18.4	
NSLU				i S	Sg	09 55 56.4	-2.6
NSLU				Sm		09 55 57.1	
HERR	Herculane	3.31	260	⇑iP	Pn	09 55 08.0	+1.1
HERR	Herculane	3.31	260	⇑iP	Pn	09 55 08.0	+1.1
HERR	Herculane	3.31	260	⇑iP	Pn	09 55 08.0	+1.1
STNU	Starunia	3.62	333	P	Pn	09 55 12.7	+1.4
HORU	Horodok	3.72	354	eP	Pn	09 55 14.5	+1.9
HORU				i S	Sn	09 55 58.4	+2.6
BZS	Buzias	3.79	273	⇑iP	Pn	09 55 13.5	0.0
BZS	Buzias	3.79	273	⇑iP	Pn	09 55 13.5	0.0
BZS	Buzias	3.79	273	⇑iP	Pn	09 55 13.5	0.0
MDVR	Moldovita	3.82	261	⇓iP	Pn	09 55 13.5	-0.5
MDVR	Moldovita	3.82	261	⇓iP	Pn	09 55 13.5	-0.5
MDVR	Moldovita	3.82	261	⇓iP	Pn	09 55 13.5	-0.5
MORS	Morshin	4.19	331	i P	Pn	09 55 20.3	+1.3
SHIU	Shidnytsya	4.46	328	eP	Pn	09 55 24.8	+2.1
STZU	Stuzhytsa	4.60	321	i P	Pn	09 55 26.0	+1.3
SEV	Sevastopol'	4.82	99	P	Pn	09 55 26.8	-0.9
SEV				Pm		09 55 27.4	
SEV				S	Sn	09 56 22.2	-0.8
SEV				Sm		09 56 26.7	
SUDU	Sudak	5.69	94	P	Pn	09 55 39.2	-0.4
SUDU				Pm		09 55 40.5	
SUDU				S	Sn	09 56 42.3	-2.0
SUDU				Sm		09 56 50.1	

ISCJB 31 10:07:52.2±1.4, 16°.1S±0°.6×175°.0W±0°.4, h300^{km}, mb3.8/5, Error ellipse: s-maj=94.8km s-min=10.7km az=150.3

IDC 31 10:07:53.5±2.1, 16°.29S×174°.81W, h304^{km}±23^{km}, mb3.7/5, mb1 3.9/6, mb1mx3.3/50, mbtmp4.3/6, Error ellipse: s-maj=121.9km s-min=17.8km az=143.0

ISC 31 10:07:53.3±1.5, 16°.0S±0°.5×174°.9W±0°.3, h300^{km}, n9, σ1^{s}.12/10, mb3.6/5, Tonga Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
AFI	Afiamalu	3.68	56	P	Pn	10 08 57.6	+1.4
	17nm,0.3s,baz=122,slow=2.1,SNR=13						
AFI				S	S	10 09 44.7	-1.8
	26nm,0.3s,baz=44,slow=22,SNR=10						
STKA	Stephens Creek	42.47	240	P	P	10 15 19.4	-0.3
	3.2nm,1.0s,baz=70,slow=8.7,SNR=6.0						
WRA	Warramunga Arr	48.28	257	P	P	10 16 04.8	-0.5
	3.5nm,0.7s,baz=96,slow=8.1,SNR=65						
ASAR	Alice Springs	48.53	252	P	P	10 16 07.0	-0.2
	28nm,0.6s,baz=87,slow=7.8,SNR=431						
FITZ	Fitzroy Crossi	56.65	259	P	P	10 17 06.7	+0.4
	1.8nm,0.8s,baz=153,slow=2.3,SNR=3.7						
ILAR	Eielson Array	83.31	12	P	P	10 19 47.2	+0.9
	0.4nm,0.4s,baz=230,slow=5.7,SNR=11						
ARCES	ARCESS Array B	124.98	351	PKP	PKPdf	10 26 16.0	-1.2
	1.0nm,0.7s,baz=22,slow=4.3,SNR=5.8						
BRTR	Keskin Array B	145.66	319	PKPbc	PKPab	10 26 58.2	0.0
	1.0nm,0.8s,baz=53,slow=3.7,SNR=3.8						
GERES	GERESS Array B	146.48	350	PKPbc	PKPab	10 27 00.3	-0.8
	0.2nm,0.3s,baz=348,slow=1.4,SNR=3.6						

SOME 31 10:10:18.8, 44°.72N×82°.15E, h20^{km}

NNC 31 10:10:19.4±2.2, 44°.78N×81°.80E, h0^{km}, mb3.0, mpv2.5, Error ellipse: s-maj=42.2km s-min=7.8km az=118.0

ISCJB 31 10:10:21.9±1.3, 44°.73N±0°.07×82°.3E±0°.1, h33^{km}, Error ellipse: s-maj=14.8km s-min=7.8km az=31.9

ISC 31 10:10:23.7±2.1, 44°.74N±0°.08×82°.2E±0°.1, h35^{km}, n7, σ1^{s}.82/11, 4C-2D, Northern Xinjiang

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DJR	Jarkent	1.76	258	eP	Pn	10 10 49.8	-1.9
	1.1nm,0.1s						
DJR				eS	Sn	10 11 11.9	-1.2
	3.0nm,0.3s						
KTMS	Ketmen	1.85	226	eP	Pn	10 10 51.6	-1.4
	1.3nm,0.2s						
KTMS				eS	Sn	10 11 15.4	+0.2
	8.9nm,0.3s						
MK31	Makanchi Array	2.06	2	⇑Pn	Pn	10 10 55.6	-0.2
	1.9nm,0.2s,baz=181,slow=13,SNR=129						
MK31				⇑Lg	Lg	10 11 23.1	
	1.9nm,0.3s,baz=184,slow=28,SNR=8.7						
MAKZ	Makanchi	2.08	356	⇑Pn	Pn	10 10 55.3	-0.8
	1.4nm,0.5s						
MAKZ				⇑Lg	Lg	10 11 23.6	
	4.3nm,0.6s						
KAPS	Kapalarasan	2.08	286	eP	Pn	10 10 55.7	-0.4
	1.5nm,0.1s						
KAPS				eS	Sn	10 11 22.1	+1.2
	3.9nm,0.3s						
PDGK	Podgornoye	2.40	235	⇓Pg	Pn	10 10 59.0	-1.6
	2.5nm,1.0s						
PDGK				⇓Lg	Lg	10 11 31.0	
	11nm,0.7s						
UZB	Uzynbulak	2.79	236	eP	Pn	10 11 07.2	+1.3
	0.6nm,0.2s						
UZB				eS	Sn	10 11 42.0	+3.6
	1.9nm,0.2s						

IDC 31 10:16:40.8±1.6, 2°.54S×137°.76E, h0^{km}, mb3.6/2, mb1 4.0/5, mb1mx3.6/51, mbtmp3.8/5, ML3.9/3, Error ellipse: s-maj=34.8km s-min=28.8km az=113.0

ISCJB 31 10:16:44.6±0.6, 2°.69S±0°.08×137°.75E±0°.05, h35^{km}, mb3.6/2, Error ellipse: s-maj=11.8km s-min=6.2km az=11.6

DJA 31 10:16:46.2±1.8, 2°S±9°×13°8E±°, h29^{km}±17^{km}, M4.3/6, mb4.4/1, MLv4.2/6

ISC 31 10:16:45.2±0.9, 2°.73S±0°.08×137°.77E±0°.04, h35^{km}, n10, σ2^{s}.54/15, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SRPI	Serui, Papua	1.75	299	P	Pn	10 17 13.7	+0.6
SRPI				S	Sn	10 17 33.6	-0.6
BAKI	Biak	2.26	313	P	Pn	10 17 18.6	-1.5
GENI	Genyem	2.40	87	P	Pn	10 17 23.4	+1.4
GENI				S	Sn	10 17 52.0	+1.8
JAY	Jayapura	2.94	86	Pn	Pn	10 17 29.8	+0.3
	12nm,0.3s,baz=243,slow=10,SNR=26						
JAY				Sn	Sn	10 18 00.8	-2.8
	11nm,0.3s,baz=49,slow=23,SNR=7.3						
JAY	Jayapura	2.94	86	P	Pn	10 17 29.8	+0.3
FAKI	Fak Fak	5.52	268	P	Pn	10 18 07.1	+2.1
WRA	Warramunga Arr	17.43	191	Pn	Pn	10 20 46.1	+0.3
	0.4nm,0.3s,baz=15,slow=12,SNR=17						
WRA				S	Sn	10 23 52.0	-7.0
	0.4nm,0.3s,baz=11,slow=22,SNR=5.8						
FITZ	Fitzroy Crossi	19.36	217	P	Pn	10 21 11.3	+2.0
	0.5nm,0.3s,baz=66,slow=16,SNR=11						
FITZ				S	S	10 24 35.4	-10
	0.2nm,0.3s,baz=204,slow=17,SNR=4.8						
ASAR	Alice Springs	21.15	190	P	P	10 21 29.2	+1.8
	1.6nm,0.4s,baz=13,slow=10,SNR=40						
ASAR				S	S	10 25 21.8	+0.8
	2.5nm,0.7s,baz=12,slow=23,SNR=9.3						
MKAR	Makanchi Array	69.23	323	P	P	10 27 48.4	-0.3

0.3nm,0.5s,baz=117,slow=8.7,SNR=3.7

NEIC ***31*** *10:27:28.4±0.0, 39°.01N×111°.50W, h1^{km}, mb3.9/1, MW3.9, ML3.7(SLC), Moment Tensor Solution. s67 Moment tensor: Scale 10^{14}Nm; M$_{rr}$-5.27; M$_{\theta\theta}$-0.12; M$_{\phi\phi}$5.39; M$_{r\theta}$0.58; M$_{\theta\phi}$0.48; M$_{\phi r}$7.75; Best double couple: M$_{0}$9.40000×10^{14} NP1:ϕ_s184.00000°, δ73.00000°, λ-90.00000°. NP2:ϕ_s6.00000°, δ17.00000°, λ-89.00000°. Principal axes: T 9.5200, Plg28.0000°, Azm275.0000°; N -0.1600, Plg0.0000°, Azm185.0000°; P -9.3500, Plg62.0000°, Azm94.0000°; After SLC.*

NEIC Felt at Farmington, Salina and Salt Lake City.

IDC ***31*** *10:27:29.9±0.8, 39°.08N×111°.36W, h0^{km}, mb3.6/1, mb1 3.7/7, mb1mx3.5/70, mbtmp3.5/7, ML3.2/6, MS3.2/6, Ms1 3.2/6, ms1mx2.7/60 Error ellipse: s-maj=10.0km s-min=8.7km az=121.0*

ISCJB ***31*** *10:27:30.3±0.2, 39°.07N±0°.02×111°.46W±0°.02, h10^{km}, mb3.8/2, MS3.0/2, Error ellipse: s-maj=2.3km s-min=1.8km az=25.9*

ISC 31 10:27:30.6±0.6**, 39°.02N**±0°.03×**111°.44W**±0°.02**, h10**^{km}**, n146, σ1**^{s}**71**/169**, Utah**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TMUT	Trail Mountain	0.32	33	ePg	Pg	10 27 35.8	-1.5
P17A	Butcher Ranch,	0.70	50	ePg	Pg	10 27 42.3	-1.9
SRU	San Rafael Swe	0.71	83	ePg	Pg	10 27 42.7	-1.7
MSU	Marysvale	0.77	229	ePg	Pg	10 27 42.5	-3.0
TCRU	Three Creeks R	0.89	243	ePg	Pg	10 27 45.2	-2.7
MPU	Maple Canyon	1.00	351	ePg	Pg	10 27 47.6	-2.3
NLU	North Lily Min	1.05	332	ePg	Pg	10 27 49.0	-1.8
NLU				eSn	Sn	10 28 06.3	-0.2
P18A	Preston Nutter	1.10	56	ePg	Pg	10 27 49.9	-1.9
P18A				eSn	Sg	10 28 04.3	-1.8
JLU	Jordanelle	1.58	360	ePn	Pn	10 27 58.3	-0.6
DUG	Dugway, Tooele	1.58	318	P	Pn	10 27 56.6	-2.3
	baz=139						
DUG				S	Sn	10 28 18.2	-1.2
	baz=139						
DUG	Dugway, Tooele	1.58	318	ePn	Pn	10 27 56.8	-2.1
CTU	Camp Tracy	1.68	352	ePn	Pn	10 27 59.5	-0.8
PKCU	Pink Cliffs	1.72	204	ePn	Pn	10 28 00.1	-0.8
PV09	Paradox Valley	1.88	106	ePn	Pb	10 28 03.8	-1.3
SZCU	Shurtz Canyon	1.93	223	ePn	Pn	10 28 02.8	-0.9
SZCU				eSn	Sb	10 28 29.3	-0.9
PSUT	Pine Spring	1.95	256	ePn	Pn	10 28 03.2	-0.8
PV21	Cone Mtn., Par	1.98	103	ePn	Pn	10 28 05.2	+0.8
PV21				eSn	Sb	10 28 31.2	-0.4
PV23	Carpenter Ridg	1.98	106	ePn	Pb	10 28 05.7	-1.2
PV23				eSn	Sg	10 28 33.2	-1.1
PV10	Paradox Valley	1.98	108	ePn	Pn	10 28 03.6	-0.8
PV14	Lion Creek, Pa	2.00	108	ePn	Pn	10 28 05.4	+0.8
PV19	Morning Glory	2.05	110	ePn	Pn	10 28 05.8	+0.5
PV19				eSn	Sn	10 28 30.6	-0.4
PV20	West Nyswonger	2.05	109	ePn	Pb	10 28 06.4	-1.6
PV20				eSn	Sb	10 28 34.1	+0.5
PV05	Paradox Valley	2.06	117	ePn	Pb	10 28 07.0	-1.3
PV17	East Wray Mesa	2.08	110	ePn	Pb	10 28 06.8	-1.7
TCUT	Toone Canyon	2.09	1	ePn	Pn	10 28 06.0	+0.1
PV16	Nyswonger Mesa	2.10	109	ePn	Pn	10 28 06.7	+0.7
PV16				eSn	Sb	10 28 34.4	-0.7
CCUT	Cedar City	2.11	226	ePn	Pn	10 28 05.9	-0.3
PV18	Skein Mesa, Pa	2.13	111	ePn	Pn	10 28 07.2	+0.9
PV18				eSn	Sb	10 28 35.6	-0.2
PV22	Blue Mesa, Par	2.13	102	ePn	Pn	10 28 07.1	+0.7
PV22				eSn	Sb	10 28 34.7	-1.1
PV11	David Mesa, Pa	2.13	109	ePn	Pn	10 28 07.1	+0.6
PV03	Paradox Valley	2.17	110	ePn	Pn	10 28 07.6	+0.7
PV12	Saucer Basin,	2.18	108	ePn	Pn	10 28 07.8	+0.7
PV13	Radium Mtn., P	2.22	112	ePn	Pn	10 28 08.5	+0.8
BGU	Big Grassy Mou	2.26	328	ePn	Pn	10 28 06.6	-1.5
PV02	Paradox Valley	2.27	110	ePn	Pn	10 28 09.2	+0.8
PV02				eSn	Sn	10 28 35.2	-1.2
SPUT	South Promonto	2.41	342	ePn	Pn	10 28 09.7	-0.5
PV15	Paradox Valley	2.41	106	ePn	Pn	10 28 08.7	-1.6
PV01	Paradox Valley	2.42	111	ePn	Pn	10 28 11.0	+0.6
LCMT	Little Creek M	2.46	216	ePn	Pn	10 28 10.6	-0.4
LCMT				eSn	Sb	10 28 44.7	-0.9
HWUT	Hardware Ranch	2.58	358	ePn	Pn	10 28 12.8	+0.2
O20A	White River Ci	2.71	65	Pb	Pb	10 28 17.9	-1.3
	baz=247						
O20A				Sb	Sg	10 28 55.1	-2.4
	baz=247						
O20A	White River Ci	2.71	65	ePn	Pb	10 28 16.5	-2.7
HVU	Hansel Valley	2.94	340	ePn	Pn	10 28 16.6	-0.8
MVCO	Mesa Verde	2.94	127	P	Pn	10 28 18.6	+1.0
	baz=308						
MVCO				Sb	Sg	10 29 02.3	-2.8
	baz=308						
MVCO	Mesa Verde	2.94	127	ePn	Pn	10 28 18.5	+0.9
R11A	Troy Canyon, C	3.32	260	P	Pn	10 28 22.9	+0.2
	baz=77						
R11A				Sb	Sb	10 29 12.4	+2.3
	baz=77						
R11A	Troy Canyon, C	3.32	260	ePn	Pn	10 28 22.4	-0.3
SMCO	Snowmass	3.48	86	ePn	Pn	10 28 26.8	+1.7
WUAZ	Wupatki	3.50	179	P	Pn	10 28 27.5	+2.2
	baz=358						
WUAZ				S	Sn	10 29 09.7	+2.8
	baz=358						
WUAZ	Wupatki	3.50	179	ePn	Pn	10 28 26.2	+1.0
AHID	Auburn Hatcher	3.75	4	ePn	Pn	10 28 29.8	+1.2
S22A	4UR Ranch, Cre	3.84	108	P	Pn	10 28 30.8	+0.8
	baz=290						
S22A				Sb	Sb	10 29 29.4	+4.2
	baz=290						
S22A	4UR Ranch, Cre	3.84	108	ePn	Pn	10 28 29.5	-0.5
SHPR	Sheep Range	3.88	231	ePn	Pn	10 28 30.9	+0.5
BW06	Boulder Array	4.00	20	P	Pn	10 28 32.7	+0.6
	baz=202						
BW06	Boulder Array	4.00	20	ePn	Pn	10 28 32.8	+0.6
PD31	Pinedale Array	4.00	20	ePn	Pn	10 28 32.7	+0.6
PD31				eLg	Lg	10 29 33.9	
PDAR	Pinedale Array	4.00	20	Pn	Pn	10 28 32.8	+0.6
	1.1nm,0.3s,baz=192,slow=13,SNR=29						
PDAR				Pg	Pb	10 28 42.1	+0.8
	4.9nm,0.3s,baz=194,slow=14,SNR=28						
PDAR				Lg	Lg	10 29 33.9	
	3.7nm,0.3s,baz=135,slow=15,SNR=5.4						
PDAR	Pinedale Array	4.00	20	ePn	Pn	10 28 31.9	-0.3
PDAR				Pg	Pb	10 28 42.1	+0.8
PDAR				Lg	Lg	10 29 33.9	
W18A	Petrified Fore	4.13	160	P	Pn	10 28 34.6	+0.7
	baz=341						
W18A				Sb	Sb	10 29 37.7	+4.2
	baz=341						
W18A	Petrified Fore	4.13	160	ePn	Pn	10 28 35.1	+1.2
RWWY	Rawlins	4.18	49	ePn	Pn	10 28 35.2	+0.5
TPNV	Topopah Spring	4.33	243	P	Pn	10 28 36.3	-0.4
	baz=60						
TPNV	Topopah Spring	4.33	243	ePn	Pn	10 28 36.7	+0.1
REDW	Red Top Meadow	4.36	6	ePn	Pn	10 28 37.8	+0.8
SNOW	Snow King Moun	4.46	6	ePn	Pn	10 28 39.5	+1.0
TPAW	Teton Pass	4.48	5	ePn	Pn	10 28 39.4	+0.7
ISCO	Idaho Springs	4.58	78	P	Pn	10 28 42.6	+2.5
	baz=262						
ISCO	Idaho Springs	4.58	78	ePn	Pn	10 28 42.8	+2.6
N23A	Red Feather La	4.62	64	ePn	Pn	10 28 42.8	+2.2
FXWY	Fox Creek	4.62	4	ePn	Pn	10 28 40.8	+0.1
LOHW	Long Hollow	4.63	8	ePn	Pn	10 28 40.0	-0.8
BMN	Battle Mountai	4.68	289	ePn	Pn	10 28 43.5	+2.1
MOOW	Moose Ponds	4.75	6	ePn	Pn	10 28 41.9	-0.5
SDCO	Great Sand Dun	4.83	103	ePn	Pn	10 28 44.8	+1.2
IMW	Indian Meadow	4.88	4	ePn	Pn	10 28 44.5	+0.2
Q24A	Divide	4.90	89	ePn	Pn	10 28 46.2	+1.6
LDFC	Landfair	4.91	218	ePn	Pn	10 28 46.3	+1.7
HLID	Hailey	5.06	335	ePn	Pn	10 28 46.8	+0.2
FLWY	Flagg Ranch	5.08	6	ePn	Pn	10 28 48.7	+1.7
PHWY	Pilot Hill	5.11	62	ePn	Pn	10 28 48.9	+1.4
KVN	Kaiserville	5.19	272	ePn	Pn	10 28 49.3	+0.8
K22A	Casper	5.20	44	ePn	Pn	10 28 50.7	+2.2
YPP	Pitchstone Pla	5.26	5	ePn	Pn	10 28 52.1	+2.6
NV11	Mina Array Sit	5.29	266	ePn	Pn	10 28 52.6	+2.8
NV01	Mina Array Sit	5.40	266	ePn	Pn	10 28 53.6	+2.2
NV01				eLg	Lg	10 30 18.0	
NV01				e		10 31 11.7	
NVAR	Mina Array Bea	5.40	266	Pn	Pn	10 28 53.5	+2.1
	0.6nm,0.3s,baz=80,slow=12,SNR=16						
NVAR				Pg	Pb	10 29 06.9	+1.7
	1.4nm,0.3s,baz=86,slow=15,SNR=14						
NVAR				Lg	Lg	10 30 18.0	
	1.4nm,0.3s,baz=171,slow=34,SNR=3.1						
NVAR				LR	LR	10 31 11.7	
	comp=Z,313nm,19.8s,baz=274,slow=42						
H17A	Grant Village	5.41	7	ePn	Pn	10 28 52.1	+0.6
YFT	Old Faithful	5.44	5	ePn	Pn	10 28 52.8	+0.8
MFID	Camas Ranch	5.50	324	ePn	Pn	10 28 55.1	+2.6
RYN	Ryan	5.55	268	ePn	Pn	10 28 55.4	+2.0
LKWY	Lake	5.59	8	ePn	Pn	10 28 55.1	+1.1
MLNR	Milner Canyon	5.62	257	ePg	Pb	10 29 10.8	+2.0
MLNR				eSg	Sb	10 30 15.4	-0.9
YMR	Madison River	5.65	3	ePn	Pn	10 28 56.9	+2.1
GSC	Goldstone, Bar	5.67	231	ePn	Pn	10 28 55.5	+0.5
ANMO	Albuquerque	5.70	134	Pn	Pn	10 28 55.0	-0.4
	4.0nm,0.3s,baz=320,slow=12,SNR=45						
ANMO				Pg	Pb	10 29 13.9	+3.8
	2.9nm,0.3s,baz=326,slow=14,SNR=9.2						
ANMO				Lg	Lg	10 30 26.7	
	2.2nm,0.3s,baz=202,slow=8.1,SNR=8.9						
ANMO				LR	LR	10 31 25.5	
	comp=Z,221nm,18.2s,baz=326,slow=41						
YHB	Horse Butte	5.72	2	ePn	Pn	10 28 57.5	+1.6
QLMT	Earthquake Lak	5.80	0	ePn	Pn	10 28 57.4	+0.5
Y12C	Blythe	5.82	206	ePn	Pn	10 28 59.6	+2.6
T25A	Trinidad	5.85	107	ePn	Pn	10 28 59.6	+2.0
MCMT	McKenzie Canyo	5.89	350	ePn	Pn	10 29 01.5	+3.3
LENM	Lemitar	6.03	142	ePn	Pn	10 29 01.4	+1.4
YERR	Yerington	6.08	272	ePn	Pn	10 29 02.1	+1.4
LPM	Los Pinos Moun	6.08	139	ePn	Pn	10 29 02.4	+1.6
LPM				ePg	Pg	10 29 21.9	-5.2
LPM				eLg	Lg	10 30 47.0	
OMMB	Old Mammoth Mi	6.11	259	ePn	Pn	10 29 05.0	+3.8
Y22D	IRIS PASSCAL I	6.13	142	ePn	Pn	10 29 02.5	+1.1
PAHR	Pah Rah Range	6.20	279	ePn	Pn	10 29 04.5	+2.3
BNM	Barren Site	6.21	140	ePn	Pn	10 29 04.7	+2.1
WAKR	Walker	6.28	268	ePn	Pn	10 29 05.8	+2.4
PNTR	Pine Nut	6.36	273	ePn	Pn	10 29 06.3	+1.8
VCNR	Virginia City	6.39	275	ePn	Pn	10 29 06.1	+1.1
DLMT	Dillon	6.39	353	ePn	Pn	10 29 08.0	+3.1
WVOR	Wild Horse Val	6.44	304	ePn	Pn	10 29 08.0	+2.4
ISA	Isabella, Lake	6.53	241	ePn	Pn	10 29 09.4	+2.6
GLA	Glamis	6.56	206	ePn	Pn	10 29 08.8	+1.6
BOZ	Bozeman (W)	6.57	359	ePn	Pn	10 29 10.5	+3.1
TUC	Tucson	6.72	175	ePn	Pn	10 29 13.3	+3.9
RUBR	Rubicon Trail	6.79	273	ePn	Pn	10 29 11.9	+1.4
LRM	Limekiln Ridge	6.83	354	ePn	Pn	10 29 12.8	+1.7
J08A	Circle Bar Ran	6.85	311	ePn	Pn	10 29 12.8	+1.7
KSCO	Kaye Shedlock'	6.86	87	ePn	Pn	10 29 12.1	+0.7
GCMT	Greycliff	6.89	10	ePn	Pn	10 29 11.4	-0.3
BEKR	Beckworth	6.96	280	ePn	Pn	10 29 14.3	+1.5
MWC	Mount Wilson	7.16	230	ePn	Pn	10 29 18.1	+2.5
BMO	Blue Mountains	7.28	325	ePn	Pn	10 29 19.4	+2.3
MOD	Modoc Plateau	7.35	296	ePn	Pn	10 29 20.5	+2.5
AFDM	Forest Hills D	7.43	272	ePn	Pn	10 29 20.2	+1.1
OGNE	Ogallala	7.47	72	ePn	Pn	10 29 20.8	+1.1
OGNE				eLg	Lg	10 31 30.1	
RSSD	Black Hills	7.53	45	ePn	Pn	10 29 20.2	-0.4
HRY	Holter Researc	7.69	358	ePn	Pn	10 29 23.5	+0.8
ORV	Oroville	7.83	277	ePn	Pn	10 29 26.0	+1.5
ORV				eLg	Lg	10 31 44.6	
G08A	Pilot Rock	8.39	321	ePn	Pn	10 29 33.0	+0.7
LAO	LASA Array	8.56	25	ePn	Pn	10 29 34.1	-0.5
VSP	Spence Mountai	8.65	296	eSg	Sg	10 32 06.6	-1.4
AMTX	Amarillo	8.83	115	ePn	Pn	10 29 39.1	+0.7
AMTX				eSg	Sg	10 32 10.3	-3.7
E09A	Wood Farm, Sta	8.96	329	ePn	Pn	10 29 41.0	+1.0
YBH	Yreka Blue Hor	9.02	291	Pn	Pn	10 29 43.5	+2.6
	0.1nm,0.3s,baz=133,slow=10,SNR=7.1						
CBKS	Cedar Bluff	9.12	88	ePn	Pn	10 29 44.0	+1.7
HSO	Harness Mounta	9.86	301	eSn	Sn	10 31 44.4	+1.3
LTX	Lajitas	11.60	144	ePn	Pn	10 30 19.0	+2.6
TXAR	Lajitas Array	11.60	144	Pn	Pn	10 30 19.0	+2.6
	0.0nm,0.3s,baz=333,slow=9.8,SNR=6.7						
TXAR				Lg	Lg	10 33 37.7	
	0.1nm,0.3s,baz=314,slow=28,SNR=6.1						
TXAR				LR	LR	10 35 10.2	
	comp=Z,98nm,19.9s,baz=0.0,slow=40						
ULM	Lac du Bonnet	15.73	39	Pn	Pn	10 31 08.7	-3.5
	0.2nm,0.3s,baz=222,slow=14,SNR=3.1						
ULM				LR	LR	10 37 25.2	
	comp=Z,75nm,19.5s,baz=302,slow=38						
TKL	Tuckaleechee C	22.21	90	LR	LR	10 41 26.9	
	comp=Z,90nm,21.9s,baz=6.0,slow=38						
DLBC	Dease Lake	22.83	334	eP	P	10 32 34.5	+0.9
	3.9nm,0.9s						
SADO	Sadowa	24.61	66	LR	LR	10 43 15.6	
	comp=Z,34nm,20.3s,baz=268,slow=38						
ILAR	Eielson Array	33.02	333	P	P	10 34 06.4	+0.8
	0.8nm,0.8s,baz=133,slow=10.0,SNR=11						

IDC 31 10:27:53.6±31.0**, 15°.83S**×**175°.46W, h0**^{km}**, mb4.1**/4**, mb1 4.2**/4**, mb1mx3.6**/53**, mbtmp4.1**/4**, Error ellipse: s-maj=606.0km s-min=152.3km az=85.0, Tonga Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	Stephens Creek	42.10	240	P	P	10 35 47.8	+0.2
	2.8nm,1.1s,baz=67,slow=7.7,SNR=3.6						
WRA	Warramunga Arr	47.81	257	P	P	10 36 32.7	-0.6
	0.3nm,0.2s,baz=83,slow=7.4,SNR=22						
ASAR	Alice Springs	48.09	252	P	P	10 36 35.0	-0.5
	4.0nm,0.5s,baz=88,slow=8.1,SNR=74						
FITZ	Fitzroy Crossi	56.18	259	P	P	10 37 36.2	+0.5
	1.8nm,0.7s,baz=63,slow=9.0,SNR=2.8						

ISCJB ***31*** *10:46:09.7±0.5, 7°.99S±0°.07×119°.82E±0°.04, h218^{km}±5^{km}, mb3.8/9, Error ellipse: s-maj=12.5km s-min=6.5km az=15.5*

IDC ***31*** *10:46:12.8±1.7, 7°.98S×119°.99E, h238^{km}±16^{km}, mb3.6/10, mb1 3.7/13, mb1mx3.4/58, mbtmp4.2/13, Error ellipse: s-maj=30.3km s-min=7.7km az=55.0*

DJA ***31*** *10:46:12.5±0.5, 8°S±7°×12°0E±°, h202^{km}±5^{km}, M4.4/11, mB4.8/1, mb4.8/1, MLv4.2/11, Mw(mB)4.0/1*

ISC 31 10:46:10.7±0.8**, 8°.12S**±0°.08×**119°.85E**±0°.05**, h219**^{km}±7^{km}**, n24, σ1**^{s}**49**/33**, mb3.8**/9**, Flores region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WBSI	Waikabubak, Su	1.58	197	P	Pn	10 46 46.9	+0.1
WBSI				S	S	10 47 14.0	-0.9
WSI	Waingapu	1.60	164	P	Pn	10 46 47.6	+0.7
WSI				S	S	10 47 14.5	-0.7
EDFI	Ende, Flores	1.92	109	P	Pn	10 46 50.9	+0.9
EDFI				S	S	10 47 19.9	-0.5
PLAI	Plampang	2.17	251	P	Pn	10 46 53.4	+1.1
PLAI				S	S	10 47 24.0	-0.6
MMRI	Maumere	2.42	102	P	Pn	10 46 56.3	+1.4
MMRI				S	S	10 47 30.0	+0.8
TWSI	Taliwang, Sumb	3.00	258	P	Pn	10 47 02.5	+1.2
TWSI				S	S	10 47 40.9	+0.1
BATI	Baumata	4.30	119	P	Pn	10 47 18.1	+1.2
	35nm,0.3s,baz=340,slow=1.0,SNR=47						
BATI				S	S	10 48 05.1	-3.8
	33nm,0.3s,baz=276,slow=2.6,SNR=4.0						
BATI	Baumata	4.30	119	P	Pn	10 47 18.2	+1.3
SOEI	Soe	4.66	111	P	Pn	10 47 22.4	+1.0
FITZ	Fitzroy Crossi	11.41	151	P	Pn	10 48 49.4	+1.8
	0.6nm,0.3s,baz=339,slow=5.6,SNR=10						
FITZ				S	S	10 50 50.2	-3.5
	0.8nm,0.3s,baz=321,slow=11,SNR=3.6						
WRA	Warramunga Arr	18.30	131	P	P	10 50 09.8	+1.1
	2.1nm,0.3s,baz=304,slow=12,SNR=228						
WRA				S	S	10 53 26.4	-0.1
	0.2nm,0.3s,baz=303,slow=20,SNR=3.4						
ASAR	Alice Springs	20.50	141	P	P	10 50 33.8	+1.4
	5.6nm,0.4s,baz=318,slow=8.9,SNR=121						
ASAR				S	S	10 54 09.1	-0.2
	1.6nm,0.9s,baz=317,slow=20,SNR=6.6						
STKA	Stephens Creek	31.11	142	P	P	10 52 11.1	+2.2
	4.1nm,0.4s,baz=324,slow=9.0,SNR=26						
CMAR	Chiang Mai Arr	33.51	322	P	P	10 52 29.8	-0.1
	0.6nm,0.4s,baz=145,slow=9.7,SNR=4.3						
MJAR	Matsushiro Arr	47.65	20	P	P	10 54 22.5	-2.6
	0.5nm,0.5s,baz=196,slow=7.8,SNR=3.5						
SONM	Songino Array	56.97	349	P	P	10 55 33.7	+0.3
	0.5nm,0.5s,baz=161,slow=10,SNR=3.6						
MKAR	Makanchi Array	64.07	332	P	P	10 56 21.4	+0.1
	2.7nm,0.4s,baz=149,slow=7.9,SNR=33						
ZALV	Zalesovo Beam	68.53	339	P	P	10 56 48.4	-1.0
	4.6nm,0.5s,baz=142,slow=4.9,SNR=17						
KURBB	Kurchatov Arra	68.56	333	P	P	10 56 49.1	-0.5
	1.1nm,0.6s,baz=144,slow=5.9,SNR=10						
PETK	Petropavlovsk-	68.94	23	P	P	10 56 52.1	+0.2
	2.0nm,0.8s,baz=197,slow=4.5						
BVAR	Borovoye Array	73.93	331	P	P	10 57 22.0	+0.3
	0.5nm,0.4s,baz=137,slow=5.1,SNR=4.4						
TORD	Torodi Ar. Bea	119.13	281	PKP	PKPdf	11 04 32.5	-2.0
	0.3nm,0.6s,baz=67,slow=1.4						
NVAR	Mina Array Bea	119.81	50	PKP	PKPdf	11 04 36.6	+1.0
	0.4nm,0.7s,baz=252,slow=3.0,SNR=3.5						
TKL	Tuckaleechee C	145.10	35	PKP	PKPbc	11 05 21.8	-0.7
	4.5nm,0.5s,baz=45,slow=1.4,SNR=12						

ISCJB ***31*** *11:05:28.4±0.5, 3°.99N±0°.09×127°.7E±0°.2, h71^{km}, mb4.1/13, Error ellipse: s-maj=23.6km s-min=7.9km az=155.6*

IDC ***31*** *11:05:37.2±2.7, 3°.90N×127°.96E, h144^{km}±29^{km}, mb3.8/13, mb1 3.9/14, mb1mx3.6/57, mbtmp4.2/14, Error ellipse: s-maj=31.0km s-min=11.3km az=79.0*

ISC 31 11:05:30.3±0.7**, 4°.0N**±0°.1×**127°.7E**±0°.2**, h71**^{km}**, n17, σ1**^{s}**62**/14**, mb4.1**/13**, Talaud Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SIJI	Sorong	5.96	144	P	Pn	11 07 02.4	+6.4
	1.9nm,0.3s,baz=117,slow=14,SNR=20						
SIJI				S	Sn	11 08 05.6	+2.6
	11nm,0.3s,baz=102,slow=23,SNR=19						
FITZ	Fitzroy Crossi	22.03	185	P	P	11 10 18.5	-0.6
	2.1nm,0.5s,baz=17,slow=11,SNR=13						
WRA	Warramunga Arr	24.63	165	P	P	11 10 43.7	-0.7
	4.8nm,0.4s,baz=343,slow=10.0,SNR=104						
ASAR	Alice Springs	28.12	168	P	P	11 11 15.2	-0.6
	7.2nm,0.5s,baz=356,slow=8.1,SNR=179						
CMAR	Chiang Mai Arr	31.63	299	P	P	11 11 48.6	+1.7
	0.7nm,0.4s,baz=97,slow=6.0,SNR=4.4						
KSRS	Korea Array	33.33	0	P	P	11 12 00.9	-0.5
	2.1nm,0.7s,baz=176,slow=9.9,SNR=14						
MJAR	Matsushiro Arr	33.82	15	P	P	11 12 04.6	-1.2
	1.2nm,0.7s,baz=182,slow=10,SNR=4.7						
STKA	Stephens Creek	38.01	161	P	P	11 12 40.5	-1.2
	2.8nm,0.4s,baz=342,slow=9.0,SNR=18						
USRK	Ussuriysk Ar.	40.24	5	P	P	11 13 01.0	+0.9
	1.1nm,0.5s,baz=148,slow=8.5						
H11S3	WAKE ISLAND Hy	40.71	66	T	T	11 56 26.9	
	baz=253,slow=75,SNR=8.0						
H11S1	WAKE ISLAND Hy	40.73	66	T	T	11 56 26.7	
	baz=253,slow=75,SNR=4.5						
H11S2	WAKE ISLAND Hy	40.73	66	T	T	11 56 27.0	
	baz=253,slow=75,SNR=8.4						
SONM	Songino Array	47.40	341	P	P	11 14 00.0	+2.3
	0.4nm,0.4s,baz=159,slow=8.5,SNR=2.2						
MKAR	Makanchi Array	57.94	325	P	P	11 15 15.6	+0.2
	3.0nm,0.4s,baz=116,slow=8.0,SNR=50						
KURBB	Kurchatov Arra	62.09	327	P	P	11 15 43.5	-0.1
	3.9nm,0.7s,baz=125,slow=6.1,SNR=29						
BVAR	Borovoye Array	67.67	327	P	P	11 16 19.7	-0.2
	1.7nm,0.6s,baz=120,slow=8.5,SNR=6.5						
ARCES	ARCESS Array B	90.57	340	P	P	11 18 21.6	-2.8
	2.1nm,0.9s,baz=76,slow=5.1,SNR=4.1						

MAN 31 11:18:34.2, 8°.48N×**126°.88E, h6**^{km}**, mb3.6, ML2.3, MS1.7, 1C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BIPH	Bislig	0.59	240	⇑iP	Pb	11 18 47.5	+0.5
BIPH				i S	Sg	11 18 54.2	+0.7
BUTP	Butuan	1.33	291	eP	Pn	11 18 58.6	-0.8
BUTP				eS	Sn	11 19 17.9	+0.3
BUKP	Musuan	1.90	252	eP	Pn	11 19 07.2	-0.1
BUKP				eS	Sn	11 19 32.2	+0.7

GUC ***31*** *11:20:50.1±0.6, 19°.65S×70°.65W, h38^{km}±2^{km}, ML3.9*

IDC ***31*** *11:20:59.2±3.1, 19°.52S×70°.17W, h102^{km}±28^{km}, mb3.8/4, mb1 3.7/6, mb1mx3.4/44, mbtmp4.1/6, MS3.0/5, Ms1 3.0/5, ms1mx2.7/44, Error ellipse: s-maj=34.9km s-min=23.1km az=96.0*

ISC 31 11:20:50.4±1.7**, 19°.61S**±0°.04×**70°.60W**±0°.08**, h26**^{km}±12^{km}**, n25, σ1**^{s}**63**/25**, mb4.0**/4**, 2C-5D, Near coast of northern Chile**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PSGC	Pisagua	0.45	89	⇓iP	Pn	11 21 00.8	-0.4
PSGC				eS	Sn	11 21 08.3	-0.3
PB12	IPOC Station P	1.02	15	⇓iP	Pb	11 21 09.2	-0.3
PB12				i S	Sn	11 21 23.8	+1.2
PB12				IAML		11 21 25.9	
	comp=E,5μm,0.3s						
MNMC	Minye Minye	1.06	64	⇓iP	Pn	11 21 11.2	+1.4
MNMC				eS	Sn	11 21 23.7	-0.2
MNMC				IAML		11 21 29.5	
	comp=E,8μm,0.2s						
PB08	IPOC Station P	1.46	112	⇓iP	Pb	11 21 17.1	0.0
PB08				eS	Sb	11 21 37.0	+1.6
PB08				IAML		11 21 42.0	
	comp=N,2μm,0.7s						
PB16	IPOC Station P	1.63	39	⇓iP	Pb	11 21 20.3	+0.2
PB16				i S	Sb	11 21 42.6	+2.0
PB16				IAML		11 21 47.9	
	comp=N,2μm,0.3s						
PB01	IPOC Station P	1.77	144	⇑iP	Pn	11 21 20.1	+0.7
PB01				i S	Sb	11 21 42.8	-1.2
PB01				IAML		11 21 48.5	
	comp=E,1μm,0.3s						
PB02	IPOC Station P	1.83	159	⇑iP	Pn	11 21 20.3	+0.1
PB02				eS	Sn	11 21 42.1	-0.5
PB02				IAML		11 21 50.9	
	comp=E,3μm,0.7s						
PB07	IPOC Station P	2.21	163	eP	Pn	11 21 25.4	-0.2
PB07				i S	Sn	11 21 52.7	+0.5
PB07				IAML		11 22 04.6	
	comp=E,1μm,0.3s						
PB03	IPOC Station P	2.56	162	eP	Pn	11 21 30.1	-0.3
PB03				i S	Sn	11 21 59.2	-1.4
PB03				IAML		11 22 12.5	
	comp=N,553nm,0.5s						
LPAZ	La Paz	4.05	36	P	Pb	11 21 56.8	-4.6
	comp=N,2.3nm,0.3s,baz=224,slow=4.1,SNR=37						
LPAZ				LR	LR	11 23 40.2	
	comp=N,135nm,20.2s,baz=230,slow=43						
NNA	Nana	9.67	321	LR	LR	11 27 02.2	
	comp=N,29nm,18.4s,baz=148,slow=37						
SIV	San Ignacio	9.76	70	P	Pn	11 23 10.3	+1.1
	comp=N,1.3nm,0.3s,baz=262,slow=9.2,SNR=18						
SIV				LR	LR	11 27 14.6	
	comp=N,81nm,19.7s,baz=291,slow=40						
PLCA	Paso Flores	21.06	180	P	P	11 25 35.9	+3.3
	comp=N,2.6nm,1.1s,baz=29,slow=13,SNR=2.8						
PTGA	Pitinga	21.46	30	P	P	11 25 35.9	-1.0
	comp=N,15nm,0.3s,baz=312,slow=23,SNR=65						
BDFB	Brasilia	21.88	83	LR	LR	11 35 54.5	
	comp=N,65nm,19.3s,baz=208,slow=42						
RPN	Rapa Nui	36.23	251	LR	LR	11 38 43.4	
	comp=N,56nm,19.2s,baz=75,slow=29						
ANMO	Albuquerque	64.06	328	P	P	11 31 23.2	+0.9
	comp=N,0.6nm,0.4s,baz=250,slow=7.3,SNR=3.5						
TORD	Torodi Ar. Bea	78.23	71	P	P	11 32 46.0	-2.4
	comp=N,1.2nm,0.7s,baz=245,slow=5.4						
H11S2	WAKE ISLAND Hy	126.05	279	T	T	13 59 00.6	
	baz=101,slow=74,SNR=69						
H11S1	WAKE ISLAND Hy	126.05	279	T	T	13 58 59.9	
	baz=101,slow=74,SNR=56						
H11S3	WAKE ISLAND Hy	126.06	279	T	T	13 59 02.0	
	baz=101,slow=74,SNR=49						
H11N3	WAKE ISLAND Hy	126.08	281	T	T	13 59 02.6	
	baz=100,slow=74,SNR=27						
H11N2	WAKE ISLAND Hy	126.10	281	T	T	13 59 04.1	
	baz=100,slow=74,SNR=25						
H11N1	WAKE ISLAND Hy	126.10	280	T	T	13 59 02.3	
	baz=100,slow=74,SNR=9.0						
MKAR	Makanchi Array	144.98	33	PKP	PKPab	11 40 24.6	0.0
	comp=N,1.2nm,0.6s,baz=320,slow=4.3,SNR=12						

IDC ***31*** *11:24:09.4±3.8, 54°.82N×160°.12W, h0^{km}, mb3.9/4, mb1 3.8/7, mb1mx3.4/87, mbtmp3.7/7, ML3.2/3, MS2.9/5, Ms1 2.9/5, ms1mx2.5/72, Error ellipse: s-maj=100.4km s-min=19.8km az=151.0*

ISCJB ***31*** *11:24:12.4±0.8, 54°.56N±0°.07×159°.96W±0°.08, h33^{km},* *mb3.8/4, MS2.8/3, Error ellipse: s-maj=10.5km s-min=4.5km az=150.8*

NEIC ***31*** *11:24:13.5±0.0, 54°.70N×160°.15W, h16^{km}, ML3.4(AEIC), After AEIC.*

ISC 31 11:24:13.5±1.0**, 54°.71N**±0°.08×**159°.98W**±0°.05**, h33**^{km}**, n39,** σ**1^{s}.37**/33**, mb3.9**/4**, MS2.9**/3**, South of Alaska**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SDPT	Sand Point	0.70	336	P	Pn	11 24 26.8	-0.2
SDPT				S	Sn	11 24 36.5	-0.1
DOL	Dolgoi Island	1.17	293	P	Pn	11 24 33.1	-0.4
PVV	Pavlof Volcano	1.23	303	P	Pn	11 24 34.8	+0.4
PS4A	Pavlof South-4	1.25	301	P	Pn	11 24 35.0	+0.4
DRIA	Deer Island	1.34	282	P	Pn	11 24 35.0	-0.8
DRIA				S	Sn	11 24 52.4	-0.2
DT1	Dutton Round H	1.38	288	P	Pn	11 24 36.1	-0.3
VNWF	Veniaminof 8	1.46	9	P	Pb	11 24 39.7	-0.4
VNHG	Veniaminof 1	1.58	17	P	Pb	11 24 41.1	-1.1
VNHG				S	Sb	11 25 03.8	+2.0
VNFG	Veniaminof 2	1.59	9	P	Pb	11 24 41.9	-0.5
CHGN	Chignik	1.82	29	P	Pn	11 24 44.0	+1.5
CHGN				S	Sb	11 25 07.5	-1.1
FALS	False Pass	1.99	276	P	Pn	11 24 45.2	+0.4
AZAC	Aniakchak	2.40	24	P	Pb	11 24 53.6	-2.5
ANNW	Aniakchak Nort	2.47	23	P	Pn	11 24 54.5	+3.1
WESE	West Dahl East	2.69	267	P	Pn	11 24 55.7	+1.3
WECS	Westdahl Cape	2.79	268	P	Pn	11 24 57.6	+1.7
AKSA	Akutan Strait	3.39	262	P	Pn	11 25 05.2	+1.2
SII	Sitkinak Islan	3.77	58	P	Pn	11 25 10.0	+0.7
UNV	Unalaska Valle	3.92	260	P	Pn	11 25 11.6	+0.4
MSW	Makushin Switc	4.06	261	P	Pn	11 25 13.7	+0.5
CAHL	Cahill	4.24	36	P	Pn	11 25 17.3	+1.6
KDAK	Kodiak Island	5.15	50	Pn	Pn	11 25 28.1	0.0
	0.7nm,0.3s,baz=190,slow=5.5,SNR=18						
KDAK				Sn	Sn	11 26 22.8	-3.5
	0.8nm,0.3s,baz=324,slow=19,SNR=3.7						
ILAR	Eielson Array	12.02	28	Pn	Pn	11 26 56.0	-6.2
	0.0nm,0.3s,baz=218,slow=12,SNR=3.8						
DAWY	Dawson	13.99	40	*e*Pn	Pn	11 27 31.6	+2.4
	4.7nm,1.0s						
INK	Inuvik	18.34	32	P	P	11 28 23.9	-0.8
	0.2nm,0.3s,baz=227,slow=13,SNR=7.5						
INK				LR	LR	11 36 35.3	
	comp=Z,34nm,18.2s,baz=250,slow=41						
BBB	Bella Bella	19.06	84	LR	LR	11 34 11.4	
	comp=Z,34nm,20.9s,baz=142,slow=32						
PETK	Petropavlovsk-	24.71	284	P	P	11 29 31.5	+0.2
	2.1nm,0.5s,baz=79,slow=13						
MA2	Magadan	26.64	301	LR	LR	11 39 46.1	
	comp=Z,19nm,20.2s,baz=108,slow=35						
YBH	Yreka Blue Hor	27.66	102	LR	LR	11 38 20.0	
	comp=Z,28nm,19.6s,baz=346,slow=31						
H11N2	WAKE ISLAND Hy	43.02	229	T	T	12 18 04.9	
	baz=28,slow=76,SNR=10						
H11N3	WAKE ISLAND Hy	43.02	229	T	T	12 18 03.5	
	baz=28,slow=76,SNR=9.1						
H11N1	WAKE ISLAND Hy	43.04	229	T	T	12 18 09.0	
	baz=28,slow=76,SNR=7.4						
H11S1	WAKE ISLAND Hy	44.18	228	T	T	12 19 51.9	
	baz=28,slow=75,SNR=14						
H11S2	WAKE ISLAND Hy	44.20	228	T	T	12 19 53.3	
	baz=28,slow=75,SNR=12						
H11S3	WAKE ISLAND Hy	44.20	228	T	T	12 19 51.4	
	baz=28,slow=75,SNR=7.5						
TXAR	Lajitas Array	47.32	99	LR	LR	11 52 41.4	
	comp=Z,12nm,18.3s,baz=0.0,slow=36						
KSRS	Korea Array	50.57	281	P	P	11 33 09.3	+0.8
	0.5nm,0.6s,baz=49,slow=6.9,SNR=4.3						
KSAR	Wonju Array Be	50.60	281	P	P	11 33 09.3	+0.5
AKASG	Malin Array Be	74.67	354	P	P	11 35 48.3	-0.8
	0.6nm,0.5s,baz=14,slow=6.1,SNR=3.5						
ESDC	Sonseca Array	83.76	18	P	P	11 36 39.7	+0.7
	0.5nm,0.5s,baz=345,slow=5.3,SNR=5.3						

IDC ***31*** *11:24:25.1±1.1, 3°.79N×92°.51E, h0^{km}, mb3.9/9, mb1 4.0/12, mb1mx3.7/77, mbtmp3.9/12, ML4.0/3, MS3.0/5, Ms1 3.1/5, ms1mx2.7/78, Error ellipse: s-maj=35.5km s-min=17.4km az=44.0*

ISCJB ***31*** *11:24:26.4±0.6, 3°.89N±0°.07×92°.79E±0°.05, h19^{km}, mb4.1/12, Error ellipse: s-maj=10.6km s-min=6.2km az=25.9*

NEIC ***31*** *11:24:26.6±0.5, 3°.85N×92°.56E, h10^{km}, mb4.4/3, Error ellipse: s-maj=12.4km s-min=6.5km az=214.0*

DJA ***31*** *11:24:33.2±1.9, 4°N±10°×9°3E±2°7, h28^{km}±49^{km}, M4.4/6, MLv4.4/6*

ISC 31 11:24:28.3±0.8**, 3°.89N**±0°.08×**92°.84E**±0°.08**, h19**^{km}**, n43,** σ**1^{s}.43**/37**, mb4.2**/12**, Off west coast of northern Sumatera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BSI	Banda Aceh	2.92	57	P	Pn	11 25 14.8	+1.0
BSI				S	Sn	11 25 47.8	-0.6
MLSI	Meulaboh, Aceh	3.58	84	P	Pn	11 25 22.9	+0.2
MLSI				S	Sn	11 26 01.4	-3.1
SNSI	Sinabang, Aceh	3.78	113	P	Pn	11 25 25.2	-0.4
LHMI	Lhok Sumawe	4.30	72	P	Pn	11 25 33.1	+0.3
TPTI		4.38	98	P	Pn	11 25 34.0	+0.2
KCSI	Kotacane, Aceh	4.94	94	P	Pn	11 25 41.2	-0.3
GSI	Gunungsitoli	5.38	118	*e*Pn	Pn	11 25 51.7	+4.0
PSI	Prapat	6.17	100	Pn	Pn	11 26 00.1	+1.5
	1.7nm,0.3s,baz=180,slow=8.8,SNR=3.7						
PSI				Sn	Sn	11 27 06.6	-2.1
	1.5nm,0.3s,baz=180,slow=19,SNR=3.1						
PSI	Prapat	6.17	100	*e*Pn	Pn	11 26 00.6	+2.1
PSI				*e*Sn	Sn	11 27 06.6	-2.1
PBSI	Pulau Batu	6.70	126	P	Pn	11 26 04.6	-1.2
KULM	Kulim	7.91	80	*e*Pn	Pn	11 26 23.6	+1.3
PALK	Pallekele	12.54	286	Pn	Pn	11 27 20.0	-5.8
	0.4nm,0.3s,baz=114,slow=6.6,SNR=2.4						
PALK				Sn	Sn	11 29 29.3	-16
	1.7nm,0.3s,baz=116,slow=8.8,SNR=3.7						
CMAR	Chiang Mai Arr	15.66	22	Pn	Pn	11 28 09.1	+1.0
	0.5nm,0.3s,baz=219,slow=14,SNR=8.0						
CMAR				LR	LR	11 35 17.4	
	comp=Z,67nm,18.1s,baz=197,slow=41						
CHTO	Chiang Mai	15.99	21	P	P	11 28 26.4	+11
	35nm,1.0s						
CMMT	Chiang Mai	15.99	21	P	P	11 28 26.3	+11
LAMP	Lampang	15.99	24	P	P	11 28 26.3	+11
	4.1nm,0.8s						
LEM	Lembang	18.19	126	LR	LR	11 36 15.0	
	comp=Z,44nm,18.2s,baz=259,slow=39						
SHL	Shillong	21.57	358	*e*P	P	11 29 16.9	-0.2
	12nm,0.8s						
H01W3	Cape Leeuwin H	43.46	154	T	T	12 19 30.2	
	baz=330,slow=76,SNR=2.6						
H01W2	Cape Leeuwin H	43.47	154	T	T	12 19 33.9	
	baz=330,slow=76,SNR=2.8						
H01W1	Cape Leeuwin H	43.48	154	T	T	12 19 30.8	
	baz=330,slow=76,SNR=2.9						
MK01	Makanchi Array	43.68	350	*e*P	P	11 32 31.8	-0.2
MK31	Makanchi Array	43.70	350	*e*P	P	11 32 32.3	+0.2
MK32	Makanchi Array	43.70	350	*e*P	P	11 32 32.2	+0.1
MKAR	Makanchi Array	43.70	350	P	P	11 32 32.2	+0.1
	2.1nm,0.7s,baz=163,slow=8.6,SNR=15						
MKAR				LR	LR	11 53 29.0	
	comp=Z,11nm,18.5s,baz=241,slow=40						
SONA0	Songino Array	45.31	13	*e*P	P	11 32 46.4	+1.4
SONM	Songino Array	45.31	13	P	P	11 32 46.4	+1.4
	0.7nm,0.5s,baz=210,slow=8.3,SNR=4.0						
JNU	Nakatsue	45.88	46	LR	LR	11 54 01.7	
	comp=Z,35nm,19.7s,baz=300,slow=38						
WR1	Warramunga Arr	47.15	122	*e*P	P	11 33 01.4	+1.5
	3.1nm,1.1s						
WRA	Warramunga Arr	47.15	122	P	P	11 33 01.4	+1.5
	0.7nm,0.9s,baz=298,slow=8.6,SNR=3.0						
KURBB	Kurchatov Arra	48.10	348	P	P	11 33 07.0	+0.3
	2.7nm,0.7s,baz=171,slow=7.1,SNR=28						
KURK	Kurchatov	48.17	348	*e*P	P	11 33 07.0	-0.2
ASAR	Alice Springs	48.48	126	P	P	11 33 12.0	+1.8
	0.2nm,0.6s,baz=329,slow=6.9,SNR=2.6						
ZAA0	Zalesovo Array	50.33	354	*e*P	P	11 33 23.9	+0.2
	5.1nm,0.5s						
ZALV	Zalesovo Beam	50.33	354	P	P	11 33 24.3	+0.6
	4.0nm,0.4s,baz=179,slow=7.3,SNR=17						
ZALV	Zalesovo Beam	50.33	354	*e*P	P	11 33 23.8	+0.1
ZAA1	Zalesovo Array	50.33	354	*e*P	P	11 33 24.3	+0.6
GUMO	Guam	52.22	76	LR	LR	11 59 02.5	
	comp=Z,9.0nm,18.4s,baz=276,slow=40						
AKTO	Aktyubinsk	54.86	333	P	P	11 33 55.9	-1.4
	1.4nm,0.5s,baz=120,slow=8.1,SNR=4.3						
BR101	Keskin Array S	64.09	313	*e*P	P	11 34 59.7	-1.8
BRTR	Keskin Array B	64.09	313	P	P	11 34 59.7	-1.8
	0.6nm,0.7s,baz=108,slow=4.7,SNR=3.1						
GEA0	GERESS Array S	79.93	319	*e*P	P	11 36 35.6	-0.6
GERES	GERESS Array B	79.93	319	P	P	11 36 36.2	-0.1
	0.4nm,0.3s,baz=89,slow=5.6,SNR=7.3						

SOME ***31*** *11:27:41.8, 39°.33N×73°.65E, h5^{km}*

IDC ***31*** *11:27:45.6±0.9, 39°.42N×73°.71E, h0^{km}, mb3.7/9, mb1 3.8/14, mb1mx3.6/77, mbtmp3.7/14, ML3.2/4, MS2.4/2, Ms1 2.4/2, ms1mx2.1/76, Error ellipse: s-maj=18.1km s-min=14.3km az=114.0*

NNC ***31*** *11:27:46.9±2.2, 39°.60N×73°.74E, h0^{km}, mb3.9, mpv3.6, Error ellipse: s-maj=29.0km s-min=10.3km az=58.0*

KRNET ***31*** *11:27:48.2±0.1, 39°.66N×73°.47E, mb3.4*

ISC 31 11:27:48.2±0.9**, 39°.76N**±0°.06×**73°.66E**±0°.04**, h10**^{km}**, n50,** σ**1^{s}.79**/72**, mb3.6**/9**, 24C-14D, Tajikistan-Xinjiang border region**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SFK	Sufi-Kurgan	0.28	334	⇓P	Pb	11 27 55.3	-0.3
	174nm,0.4s						
SFK				⇑S	Sb	11 28 02.4	+1.9
	315nm,0.3s						
SFK	Sufi-Kurgan	0.28	334	⇓*i*P	Pb	11 27 55.4	-0.2
	baz=4.0						
SFK				⇓*i*S	Sb	11 28 00.7	+0.2
	baz=4.0						
AML	Almayashu	2.37	1	P	Pg	11 28 32.5	-1.3
	SNR=19						
AML	Almayashu	2.37	1	⇑*i*P	Pg	11 28 32.2	-1.5
	baz=4.0						
AML				⇑*i*S	Sg	11 29 04.0	-0.5
	baz=4.0						
UCH	Uchtor	2.55	14	P	Pb	11 28 35.0	+0.7
	SNR=153						
UCH	Uchtor	2.55	14	⇓*i*P	Pb	11 28 34.8	+0.5
	baz=17						
UCH				⇓*i*S	Sg	11 29 09.1	-1.1
	baz=17						
KZA	Kyzart	2.61	27	P	Pg	11 28 36.5	-1.8
	SNR=40						
KZA	Kyzart	2.61	27	⇑*i*P	Pb	11 28 36.0	+0.6
	baz=29						
KZA				⇑*i*S	Sg	11 29 11.1	-1.1
	baz=29						
MNAS	Manas	2.86	343	⇑Pn	Pb	11 28 37.6	-1.9
	9.2nm,0.4s						
MNAS				⇑Lg	Lg	11 29 23.3	
	61nm,0.4s						
MNAS	Manas	2.86	343	⇓*i*P	Pb	11 28 38.1	-1.4
	baz=46						
MNAS				⇓*i*S	Sb	11 29 14.3	-0.4
	baz=46						
EKS2	Erkin-Say	2.90	2	P	Pb	11 28 40.1	-0.1
	SNR=16						
EKS2	Erkin-Say	2.90	2	⇑*i*P	Pb	11 28 39.0	-1.2
	baz=4.0						
EKS2				⇑*i*S	Sb	11 29 16.4	+0.6
	baz=4.0						
AAK	Ala-Archa	2.94	12	Pn	Pb	11 28 40.7	-0.1
	6.0nm,0.3s,baz=182,slow=8.9,SNR=22						
AAK				Sn	Sg	11 29 23.2	+0.4
	7.3nm,0.3s,baz=14,slow=9.2,SNR=6.1						
AAK				LR	LR	11 30 05.6	
	comp=Z,65nm,21.6s,baz=176,slow=43						
AAK	Ala-Archa	2.94	12	⇑Pn	Pb	11 28 38.5	-2.4
	12nm,0.4s						
AAK				⇓Lg	Lg	11 29 26.5	
	38nm,0.6s						
AAK	Ala-Archa	2.94	12	P	Pb	11 28 40.8	-0.1
	SNR=18						
AAK	Ala-Archa	2.94	12	⇑*i*P	Pb	11 28 40.1	-0.8
	baz=14						
AAK				⇑*i*S	Sb	11 29 18.1	+1.1
	baz=14						
MRKS	Merke	3.00	354	*e*P	Pg	11 28 43.7	-2.0
	16nm,0.4s						
MRKS				*e*S	Sg	11 29 26.6	+1.9
	107nm,0.3s						
KBK	Karagaybulak	3.05	18	P	Pb	11 28 43.6	+0.8
	SNR=8.5						
KBK	Karagaybulak	3.05	18	⇓*e*P	Pb	11 28 42.1	-0.7
	baz=20						
KBK				⇓*i*S	Sb	11 29 20.9	+0.7
	baz=20						
ULHL	Ulahol	3.16	37	P	Pb	11 28 45.6	+1.0
	SNR=15						
ULHL	Ulahol	3.16	37	⇓*i*P	Pb	11 28 43.7	-0.9
	baz=38						
ULHL				⇓*i*S	Sb	11 29 24.4	+1.1
	baz=38						
CHMS	Chumysh	3.34	14	P	Pb	11 28 45.9	-1.6
	SNR=11						
CHMS	Chumysh	3.34	14	⇑*i*P	Pb	11 28 45.6	-2.0
	baz=16						
CHMS				⇑*i*S	Sb	11 29 27.4	-0.9
	baz=16						
TKM2	Tokmak 2	3.48	24	⇑Pn	Pb	11 28 45.9	-4.1
	10nm,0.6s						
TKM2				⇑Lg	Lg	11 29 42.9	
	65nm,0.8s						
TKM2	Tokmak 2	3.48	24	P	Pb	11 28 47.9	-2.1
	SNR=15						
TKM2	Tokmak 2	3.48	24	⇑*i*P	Pb	11 28 47.6	-2.4
	baz=25						
TKM2				⇑*e*S	Sb	11 29 31.8	-0.6
	baz=25						
USP	Ospenovka	3.56	10	⇑*i*P	Pb	11 28 48.4	-2.9
	baz=12						
USP				⇑*i*S	Sb	11 29 32.7	-2.0
	baz=12						
IUG	Iuzhnay	3.64	312	*e*P	Pb	11 28 54.0	+1.3
	18nm,0.4s						
IUG				*e*S	Sg	11 29 43.9	-1.3
	38nm,0.8s						
KST	Kastek	3.71	27	*e*P	Pb	11 28 55.7	+1.7
	12nm,0.4s						
KST				*e*S	Sg	11 29 48.8	+1.4
	41nm,0.8s						
DGS	Degeres	3.83	24	*e*P	Pg	11 28 59.9	-1.6
	14nm,0.4s						
DGS				*e*S	Sg	11 29 54.5	+3.5
	58nm,0.7s						
IZV	Izvestkoviy	3.96	33	*e*P	Pg	11 29 01.8	-2.2
	13nm,0.5s						
IZV				*e*S	Sg	11 29 57.4	+2.1
	56nm,0.7s						
MTBS	Maitube	3.96	31	*e*P	Pg	11 29 01.2	-2.8
	8.1nm,0.5s						
MTBS				*e*S	Sg	11 29 57.3	+1.9
	38nm,0.6s						
KK31	Karatay Array	4.10	326	⇑Pn	Pn	11 28 54.3	+3.4
	2.6nm,0.3s,baz=126,slow=13,SNR=41						
KK31				⇑Sn	Sb	11 29 45.5	-4.5
	5.9nm,0.4s,baz=332,slow=65,SNR=4.2						
KK31				⇑Lg	Lg	11 30 01.4	
	22nm,0.6s,baz=134,slow=29,SNR=5.0						
MDOK	Medeo	4.25	36	*e*P	Pg	11 29 06.7	-2.9
	4.9nm,0.4s						
MDOK				*e*S	Sg	11 30 06.0	+1.4
	31nm,0.9s						
KUU	Kurty	4.59	25	*e*P	Pg	11 29 12.3	-3.8
	5.7nm,0.5s						
KUU				*e*S	Sg	11 30 15.1	-0.5
	35nm,0.7s						
PDGK	Podgornoye	5.64	49	⇓Pn	Pn	11 29 14.6	+2.3
	3.1nm,0.5s						
PDGK				⇑Pg	Pg	11 29 31.0	-5.2
	6.0nm,0.8s						
PDGK				⇓Lg	Lg	11 30 49.5	
	39nm,1.1s						
MKAR	Makanchi Array	9.43	39	Pn	Pn	11 30 08.7	+4.6
	0.0nm,0.3s,baz=218,slow=9.1,SNR=3.1						
MKAR				LR	LR	11 34 09.0	
	comp=Z,25nm,21.8s,baz=356,slow=40						
BVAR	Borovoye Array	13.46	351	Pn	Pn	11 30 59.9	+0.8
	baz=157,slow=16,SNR=3.7						
AKTO	Aktyubinsk	15.33	319	Pn	Pn	11 31 25.6	+1.1
	0.3nm,0.3s,baz=121,slow=14,SNR=4.6						
ZALV	Zalesovo Beam	16.09	24	Pn	P	11 31 36.7	-0.9
	0.3nm,0.3s,baz=204,slow=10,SNR=3.0						
BRTR	Keskin Array B	30.60	283	P	P	11 34 04.2	+1.8
	0.3nm,0.3s,baz=72,slow=9.3,SNR=2.6						
FINES	FINESS Array B	36.05	323	P	P	11 34 50.9	+1.4
	1.2nm,0.5s,baz=106,slow=12,SNR=5.2						
ARCES	ARCESS Array B	39.00	335	P	P	11 35 16.2	+1.9
	1.2nm,0.5s,baz=106,slow=8.9,SNR=20						
HFS	Hagfors	41.88	320	P	P	11 35 39.5	+1.2
	1.2nm,0.5s,baz=90,slow=11,SNR=4.1						
NB2	NORSAR Subarra	43.11	321	P	P	11 35 49.1	+0.7
	comp=Z,0.5nm,0.5s,baz=88,slow=7.4						
NOA	NORSAR Array B	43.11	321	P	P	11 35 48.7	+0.4
	comp=Z,0.6nm,0.6s,baz=91,slow=7.9,SNR=5.2						
TORD	Torodi Ar. Bea	67.89	269	P	P	11 38 45.2	-1.9
	comp=Z,0.4nm,0.5s,baz=40,slow=5.5						
ILAR	Eielson Array	71.06	17	P	P	11 39 06.1	0.0
	comp=Z,0.2nm,0.6s,baz=328,slow=4.3,SNR=3.3						
WRA	Warramunga Arr	82.00	124	P	P	11 40 06.4	-2.1
	comp=Z,0.3nm,0.7s,baz=321,slow=4.5,SNR=5.8						
ASAR	Alice Springs	84.46	127	P	P	11 40 19.4	-1.8
	comp=Z,0.2nm,0.5s,baz=331,slow=5.6,SNR=4.9						

MAN 31 11:30:03.8, 8°.58N×126°.82E, h5^{km}**, mb4.4, ML3.2, MS3.0, 1C, Mindanao**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
BIPH	Bislig	0.60	229	⇑*i*P	Pb	11 30 16.9	+0.1
BIPH				*i* S	Sg	11 30 23.5	+0.3
BUTP	Butuan	1.25	288	*e*P	Pg	11 30 26.7	-1.0
BUTP				*e*S	Sn	11 30 45.3	+0.2
BUKP	Musuan	1.88	248	*e*P	Pn	11 30 36.5	-0.1
BUKP				*e*S	Sn	11 31 01.2	+0.5

JMA 31 11:47:11.1±0.1**, 35°.87N×140°.46E, h33**^{km}±1^{km}**, M0.7, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JYT	Yasato	0.42	329	P	Pb	11 47 20.2	-0.2

IDC ***31*** *11:50:50.6±0.6, 28°.66N×82°.43E, h0^{km}, mb4.3/25, mb1 4.3/28, mb1mx4.1/81, mbtmp4.2/28, ML4.2/2, MS3.4/4, Ms1 3.4/4, ms1mx2.7/67, Error ellipse: s-maj=15.8km s-min=12.7km az=35.0*

ISCJB ***31*** *11:50:52.0±0.8, 28°.61N±0°.03×82°.32E±0°.02, h24^{km}±6^{km}, mb4.2/38, MS3.4/4, Error ellipse: s-maj=5.0km s-min=3.1km az=29.6*

NEIC ***31*** *11:50:52.3±0.3, 28°.74N×82°.46E, h10^{km}, mb4.5/15, Error ellipse: s-maj=6.3km s-min=4.1km az=214.0*

NDI ***31*** *11:50:53.8±2.4, 28°.62N×82°.45E, h10^{km}, ML4.3, mb4.5(NEIC)*

DMN ***31*** *11:50:56.3±0.7, 28°.58N×82°.48E, h2^{km}, Ml5.0/7, Error ellipse: s-maj=17.8km s-min=11.5km az=49.0*

ISC 31 11:50:54.0±1.3**, 28°.58N**±0°.04×**82°.37E**±0°.04**, h25**^{km}±10^{km}**, n121,** σ**2^{s}.07**/144**, mb4.3**/38**, MS3.1**/4**, Nepal**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
PYUN	Piuthan	0.73	131	*e*Pg	Pb	11 51 08.2	0.0
PYUN				*e*Sg	Sb	11 51 17.3	-0.6
	2µm,0.3s						
DANN	Dangsing	1.25	100	*e*Pg	Pn	11 51 16.3	+0.2
KOLN	Koldanda	1.36	126	*e*Pg	Pb	11 51 20.4	+1.6
KOLN				*e*Sg	Sb	11 51 37.0	+1.2
	8µm,0.4s						
GKN	Gorkha	2.08	106	*e*Pn	Pb	11 51 29.8	-1.4
GKN	Gorkha	2.08	106	*e*Pn	Pb	11 51 29.8	-1.4
GKN				*e*Sg	Sb	11 51 57.3	+0.6
	7µm,0.3s						
DMN	Daman	2.61	111	*e*Pn	Pn	11 51 37.1	+2.4
DMN				*e*Sn	Sn	11 52 05.7	0.0
	4µm,0.7s						
KKN	Kakani	2.69	106	*e*Pn	Pn	11 51 37.7	+1.9
KKN	Kakani	2.69	106	*e*Pn	Pn	11 51 37.7	+1.9
PKIN	Phulchoki	2.86	110	*e*Pn	Pn	11 51 40.1	+1.9
PKIN				*e*Sn	Sn	11 52 12.8	+0.9
	1µm,0.3s						
GUN	Gumba	3.17	101	*e*Pn	Pn	11 51 43.9	+1.3
JIRN	Jiri	3.50	104	*e*Pn	Pn	11 51 48.9	+1.8
JIRN				*e*Sn	Sn	11 52 29.4	+1.5
	443nm,0.2s						
RAMN	Ramite	4.09	112	*e*Pn	Pn	11 51 57.0	+1.9
RAMN				*e*Sn	Sn	11 52 42.6	+0.3
	558nm,0.3s						
DDI	Dehra Dun	4.14	296	*e*P	Pn	11 51 59.0	+3.4
DDI				*e*S	Sn	11 52 44.6	+1.3
ODAN	Odare	4.77	110	*e*Pn	Pn	11 52 06.4	+1.9
ODAN				*e*Sn	Sn	11 53 00.8	+1.7
	381nm,0.3s						
TAPN	Taplejung	4.88	103	*e*Pn	Pn	11 52 08.0	+1.9
TAPN				*e*Sn	Sn	11 53 02.5	+0.6
SMLA	Simla	5.18	301	*e*P	Pn	11 52 11.2	+1.4
GTK	Tadong	5.66	101	*e*P	Pn	11 52 16.9	+0.4
GTK				*e*S	Sn	11 53 17.0	-3.8
BOK	Bokaro	5.72	146	*e*P	Pn	11 52 19.0	+1.7
BOK				*e*S	Sn	11 53 21.6	-0.7
BOK				IAML		11 54 00.9	
	comp=N,426nm,0.4s						
BOK				IAML		11 54 02.6	
	comp=E,309nm,0.7s						
DHRM	DHARAMSHALA	6.39	306	*e*P	Pn	11 52 27.6	+0.9
DHRM				*e*S	Sn	11 53 38.6	-0.4
BHPL	Bhopal	6.94	221	*e*P	Pn	11 52 36.3	+2.2
DHUB	DHUBRI	7.25	109	*e*P	Pn	11 52 39.3	+1.0
TURI	Tura	7.72	111	*e*P	Pn	11 52 43.2	-1.5
TURI				*e*S	Sn	11 54 04.8	-6.5
TURI				IAML		11 54 11.7	
	comp=N,180nm,0.5s						
TURI				IAML		11 54 12.0	
	comp=E,194nm,0.2s						
LSA	Lhasa	7.76	80	*e*Pn	Pn	11 52 45.1	-0.6
NGP	Nagpur	7.99	203	*e*P	Pn	11 52 50.8	+2.3
NGP				*e*S	Sn	11 54 16.8	-1.3
GUWA	GUWAHATI	8.62	104	*e*P	Pn	11 52 57.5	+0.3
GUWA				*e*x	x	11 54 31.7	
SHL	Shillong	9.00	107	*e*Pn	Pn	11 53 01.2	-1.3
SHL	Shillong	9.00	107	*e*P	Pn	11 53 01.6	-0.9
SHL				*e*S	Sn	11 54 36.5	-6.6
NIL	Nilore	9.30	305	*e*Pn	Pn	11 53 06.8	+0.3
TEZP	TEZPUR	9.46	100	*e*P	Pn	11 53 07.2	-1.4
RPR	Rampur	10.08	197	*e*P	Pn	11 53 19.2	+2.0
RPR				*e*S	Sn	11 55 06.2	-3.3
CHLP	Challavanipeta	10.15	171	*e*P	Pn	11 53 20.1	+1.9
CHLP				*e*S	Sn	11 55 08.8	-2.3
SRSP	Sriramsagar	10.29	202	*e*P	Pn	11 53 20.2	+0.1
SRSP				*e*S	Sn	11 55 10.9	-3.8
KOHI	KOHIMA	10.84	103	*e*x	Pn	11 53 26.4	-1.3
VIS	Vishakhapatnam	10.85	175	*e*P	Pn	11 53 29.5	+1.8
VIS				*e*x	x	11 55 27.3	
IMP	Imphal	11.00	107	*e*P	Pn	11 53 29.9	0.0
PVM	Polavaram	11.30	184	*e*P	Pn	11 53 34.0	+0.1
PVM				*e*S	Sn	11 55 34.0	-5.5
HYBB	Hyderabad (bro	11.65	198	*e*P	Pn	11 53 37.4	-1.4
HYBB				*e*S	Sn	11 55 40.8	-7.4
HYB	Hyderabad	11.65	198	*i* P	Pn	11 53 41.0	+2.2
HYB	Hyderabad	11.65	198	*e*P	Pn	11 53 39.3	+0.5
HYB				*e*S	Sn	11 55 40.6	-7.6
POO	Poona	12.69	220	*e*P	Pn	11 53 52.4	-0.6
POO				*e*x	x	11 56 08.7	
POO				IAML		11 56 10.5	
	comp=E,28nm,3.1s						
POO				IAML		11 56 12.2	
	comp=N,405nm,1.1s						
KBL	Kabul	12.82	301	*e*Pn	Pn	11 53 53.8	-1.0
SRLM	Srisailam	12.83	195	*e*P	Pn	11 53 54.2	-0.6
SRLM				*e*S	Sn	11 56 12.0	-5.0
PRZ	Przheval'sk	14.24	348	*e*Pn	Pn	11 54 11.8	-2.4
URV	Uravakonda	14.37	200	*e*P	Pn	11 54 15.5	-0.5
AAK	Ala-Archa	15.40	338	Pn	Pn	11 54 28.7	-1.0
	comp=N,0.7nm,0.3s,baz=163,slow=7.0,SNR=4.4						
AAK	Ala-Archa	15.40	338	*e*Pn	Pn	11 54 28.4	-1.3
	comp=N,8.7nm,0.8s						
AAK				*e*Pn	Pn	11 54 28.7	-1.0
KK31	Karatay Array	17.36	330	*e*Pn	Pn	11 54 51.1	-3.3
KK31				*e*Sn	Sn	11 57 54.4	-13
KKAR	Karatay Array	17.36	330	*e*Pn	Pn	11 54 51.1	-3.4
KKAR				*e*Sn	Sn	11 57 54.8	-12
MK01	Makanchi Array	18.16	360	*e*Pn	Pn	11 55 01.6	-2.7
MK31	Makanchi Array	18.18	360	*e*Pn	Pn	11 55 01.7	-2.9
MK32	Makanchi Array	18.18	360	*e*Pn	Pn	11 55 01.9	-2.6
MKAR	Makanchi Array	18.18	360	P	Pn	11 55 01.9	-2.6
	comp=N,0.9nm,0.3s,baz=188,slow=11,SNR=30						

MKAR	Makanchi Array	18.18	360	ePn	Pn	11 55 02.4	-2.2
	comp=N,24nm,0.6s						
MAKZ	Makanchi	18.20	359	eP	Pn	11 55 04.2	-0.6
	comp=N,3.2nm,0.7s						
CM31	Chiang Mai Arr	18.22	120	ePn	Pn	11 55 04.9	-0.3
CMAR	Chiang Mai Arr	18.22	120	P	Pn	11 55 04.9	-0.3
	baz=308,slow=12,SNR=7.6						
CM01	Chiang Mai Arr	18.25	120	ePn	Pn	11 55 05.3	-0.3
UTTA	Uttaradit	19.87	119	P	Pn	11 55 30.4	+5.3
	comp=N,2.6nm,1.2s,comp=N,66nm						
UTHA	Uthaitani	20.42	126	P	Pn	11 55 39.7	+8.1
	comp=N,3.9nm,1.2s						
PBKT	Sadao Pong	20.89	121	P	Pn	11 55 40.4	+3.3
	comp=N,16nm,1.0s						
WSAR	Wadi Sarin	21.99	261	P	P	11 55 49.7	+3.4
	comp=N,3.7nm,0.5s,baz=115,slow=8.7,SNR=2.1						
CHAI	Chaiyaphum	22.07	121	P	P	11 55 53.6	+6.4
	comp=N,5.5nm,0.9s						
KURBB	Kurchatov Arra	22.20	354	P	P	11 55 47.0	-1.3
	comp=N,8.5nm,0.7s,baz=179,slow=10.0,SNR=84						
KURBB				PcP	PcP	11 59 45.2	+1.0
	comp=N,0.6nm,0.6s,baz=193,slow=1.8,SNR=4.2						
KURK	Kurchatov	22.29	354	eP	P	11 55 47.0	-2.2
KURK				ePcP	PcP	11 59 45.2	+0.8
ENH	Enshi	23.66	79	eP	P	11 56 03.6	+0.1
	comp=N,9.8nm,0.8s						
ZAA0	Zalesovo Array	25.41	3	eP	P	11 56 18.6	-0.6
	comp=N,7.1nm,0.6s						
ZALV	Zalesovo Beam	25.41	3	P	P	11 56 19.1	-0.2
	comp=N,8.5nm,0.6s,baz=192,slow=10,SNR=22						
ZALV	Zalesovo Beam	25.41	3	eP	P	11 56 17.8	-1.5
ZAA1	Zalesovo Array	25.41	3	eP	P	11 56 19.1	-0.2
BVAR	Borovoye Array	25.98	343	P	P	11 56 24.3	-0.1
	comp=N,2.6nm,0.6s,baz=146,slow=12,SNR=10						
BRVK	Borovoye	26.03	343	eP	P	11 56 23.7	-1.3
	comp=N,3.8nm,0.6s						
SONA0	Songino Array	26.76	38	eP	P	11 56 32.6	+0.8
SONM	Songino Array	26.76	38	P	P	11 56 32.6	+0.8
	comp=N,4.4nm,0.7s,baz=223,slow=8.2,SNR=17						
SONM				LR	LR	12 07 53.0	
	comp=N,46nm,18.3s,baz=230,slow=38						
SONA1	Songino Array	26.77	38	eP	P	11 56 31.4	-0.5
ABKAR	Akbulak array	26.85	326	eP	P	11 56 33.4	+1.0
ULN	Ulaanbaatar	27.13	38	eP	P	11 56 34.8	-0.4
	comp=N,5.9nm,0.9s						
AKTO	Aktyubinsk	28.56	327	P	P	11 56 47.8	+0.1
	comp=N,1.3nm,0.5s,baz=127,slow=15,SNR=6.5						
ARU	Arti	32.57	335	P	P	11 57 23.0	0.0
	comp=N,2.4nm,0.3s,baz=112,slow=7.2,SNR=4.0						
ARU	Arti	32.57	335	eP	P	11 57 23.0	0.0
	comp=N,4.8nm,0.4s						
KSAR	Wonju Array Be	38.87	65	P	P	11 58 16.9	-0.3
KSRS	Korea Array	38.90	65	P	P	11 58 16.9	-0.5
	comp=N,1.9nm,0.7s,baz=271,slow=8.9,SNR=13						
KSRS				LR	LR	12 13 56.4	
	comp=N,21nm,19.0s,baz=244,slow=36						
JOW	Kunigami	40.49	81	LR	LR	12 15 20.7	
	comp=N,385nm,19.5s,baz=126,slow=36						
BR101	Keskin Array S	41.38	299	eP	P	11 58 40.1	+1.9
BRTR	Keskin Array B	41.38	299	P	P	11 58 40.1	+1.9
	comp=N,0.6nm,0.8s,baz=111,slow=6.8,SNR=3.8						
KLR	Kul'dur	42.71	47	P	P	11 58 48.4	-0.5
	comp=N,0.2nm,0.6s,baz=258,slow=9.1,SNR=5.1						
AKASG	Malin Array Be	45.35	314	P	P	11 59 09.4	-0.5
	comp=N,1.0nm,0.5s,baz=73,slow=7.4,SNR=5.8						
AKBB	Malin Array Si	45.35	314	eP	P	11 59 09.4	-0.5
	comp=N,4.3nm,0.8s						
MLR	Muntele Rosu	47.12	307	P	P	11 59 26.5	+2.3
	comp=N,12nm,0.9s,baz=124,slow=3.6,SNR=10						
MLR	Muntele Rosu	47.12	307	eP	P	11 59 26.2	+2.0
	comp=N,11nm,0.9s						
BUR04	Bucovina Ar. S	47.69	310	eP	P	11 59 29.5	+1.0
BUR08	Bucovina Ar. S	47.70	310	eP	P	11 59 28.4	-0.1
FIA0	FINESS Array S	49.31	328	eP	P	11 59 40.5	-0.1
FINES	FINESS Array B	49.31	328	P	P	11 59 40.5	-0.1
	comp=N,1.5nm,0.4s,baz=101,slow=8.4,SNR=12						
ASAJ	Asahikawa	49.86	55	LR	LR	12 22 25.9	
	comp=N,26nm,20.5s,baz=231,slow=38						
TIXI	Tiksi	49.97	17	P	P	11 59 45.2	-0.3
	comp=N,4.6nm,0.5s,baz=162,slow=4.2,SNR=7.7						
ARA0	ARCESS Array S	52.08	338	eP	P	12 00 01.6	+0.2
ARCES	ARCESS Array B	52.08	338	P	P	12 00 01.6	+0.2
	comp=N,1.6nm,0.6s,baz=87,slow=7.8,SNR=12						
HFS	Hagfors	55.10	325	P	P	12 00 23.3	-0.4
	comp=N,5.8nm,0.6s,baz=99,slow=9.3,SNR=17						
GERES	GERESS Array B	55.34	312	P	P	12 00 26.2	+0.5
	comp=N,0.9nm,0.4s,baz=87,slow=8.0,SNR=5.4						
SEY	Seymchan	55.89	31	P	P	12 00 29.0	-0.3
	comp=N,2.4nm,0.6s,baz=281,slow=6.3,SNR=8.3						
NB2	NORSAR Subarra	56.35	326	P	P	12 00 32.0	-0.7
	comp=Z,1.0nm,0.6s,baz=90,slow=7.4						
NOA	NORSAR Array B	56.35	326	P	P	12 00 32.3	-0.4
	comp=Z,1.8nm,0.7s,baz=92,slow=6.9,SNR=9.8						
SENIN	Lac Senin/Sane	59.98	309	eP	P	12 00 59.3	+0.7
	comp=Z,4.4nm,0.6s						
WR1	Warramunga Arr	69.61	128	eP	P	12 02 01.9	+0.5
	comp=Z,5.5nm,0.8s						
WRA	Warramunga Arr	69.61	128	P	P	12 02 01.9	+0.5
	comp=Z,3.2nm,0.8s,baz=320,slow=6.5,SNR=25						
ES19	SONSECA Array	69.70	305	eP	P	12 02 02.2	+0.4
ESDC	Sonseca Array	69.75	305	P	P	12 02 01.7	-0.4
	comp=Z,0.7nm,0.5s,baz=59,slow=6.4,SNR=8.2						
AS31	Alice Springs	71.84	131	eP	P	12 02 15.7	+0.8
	comp=Z,1.7nm,1.0s						
ASAR	Alice Springs	71.84	131	P	P	12 02 15.7	+0.8
	comp=Z,1.2nm,0.4s,baz=314,slow=6.2,SNR=22						
TOA0	Torodi Ar. Sit	75.73	277	eP	P	12 02 38.6	+0.6
TOA0				eP	P	12 02 39.4	+1.4
TOA1	Torodi Ar. Sit	75.73	277	eP	P	12 02 38.6	+0.7
TORD	Torodi Ar. Bea	75.73	277	P	P	12 02 38.6	+0.7
	comp=Z,1.9nm,0.9s,baz=46,slow=4.8						
FYU	Fort Yukon	78.52	18	eP	P	12 02 52.9	+0.2
	comp=Z,22nm,1.2s						
CAST	Castle Rocks	78.75	22	eP	P	12 02 54.3	+0.3
	comp=Z,3.0nm,0.7s						
BOSA	Boshof	78.86	229	P	P	12 02 56.4	+1.1
	comp=Z,4.6nm,1.0s,baz=140,slow=7.9,SNR=2.8						
ILAR	Eielson Array	79.40	19	P	P	12 02 57.0	-0.5
	comp=Z,0.7nm,0.8s,baz=300,slow=4.2,SNR=9.5						
KOWA	Kowa	80.09	281	P	P	12 03 04.0	+1.9
	comp=Z,1.5nm,0.4s,baz=38,slow=2.1,SNR=4.8						
KDAK	Kodiak Island	82.45	26	P	P	12 03 13.9	0.0
	comp=Z,4.0nm,0.8s,baz=310,slow=5.2,SNR=5.4						
LTX	Lajitas	122.12	6	ePKPdf	PKPdf	12 09 47.8	+0.8
TXAR	Lajitas Array	122.12	6	PKP	PKPdf	12 09 47.8	+0.8
	comp=Z,0.3nm,0.5s,baz=116,slow=1.0,SNR=6.8						
LPAZ	La Paz	150.20	288	PKPbc	PKPbc	12 10 43.7	-0.4
	comp=Z,0.6nm,0.4s,baz=45,slow=5.7,SNR=3.9						

IDC 31 11:56:46.2±4.2, 18.°05N×147.°42E, h0^{km}, mb3.7/3, mb1 4.0/3, mb1mx3.3/78, mbtmp3.7/3, Error ellipse: s-maj=307.8km s-min=31.4km az=122.0, Mariana Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	39.88	199	P	P	12 04 22.0	0.0
	0.8nm,0.6s,baz=21,slow=9.0,SNR=12						
ASAR	Alice Springs	43.51	198	P	P	12 04 51.4	-0.3
	0.3nm,0.4s,baz=15,slow=8.1,SNR=3.6						
NVAR	Mina Array Bea	82.25	52	P	P	12 09 10.1	0.0
	0.5nm,0.6s,baz=268,slow=5.9,SNR=5.6						

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*IDC **31** 11:58:27.6±0.6, 28.°74N×82.°51E, h0^{km}, mb4.2/28, mb1 4.3/30, mb1mx4.1/82, mbtmp4.2/30, ML4.3/2, MS3.1/5, Ms1 3.1/5, ms1mx2.7/66, Error ellipse: s-maj=16.7km s-min=12.8km az=28.0*

*NEIC **31** 11:58:29.2±0.3, 28.°75N×82.°44E, h10^{km}, mb4.4/11, Error ellipse: s-maj=7.6km s-min=5.3km az=212.0*

*NDI **31** 11:58:30.8±2.3, 28.°72N×82.°42E, h10^{km}, ML4.3, mb4.4(NEIC)*

*ISCJB **31** 11:58:31.0±0.4, 28.°65N±0.°03×82.°37E±0.°03, h39^{km}±5^{km}, mb4.2/35, MS3.4/3, Error ellipse: s-maj=5.3km s-min=3.5km az=23.3*

*BJI **31** 11:58:32.5, 28.°94N×82.°24E, h40^{km}, mb4.1/8, mB4.5/4*

*DMN **31** 11:58:33.0±0.3, 28.°53N×82.°41E, h2^{km}, Ml4.8/7, Error ellipse: s-maj=9.0km s-min=4.9km az=38.0*

ISC 31 11:58:31.9±1.3, 28.°65N±0.°05×82.°40E±0.°04, h32^{km}±10^{km}, n111, σ1.^{s}67/128, mb4.3/35, MS3.3/3, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PYUN	Piuthan	0.75	136	ePg	Pn	11 58 44.8	-1.7
PYUN				eSg	Sn	11 58 55.3	-1.6
DANN	Dangsing	1.23	104	ePg	Pn	11 58 53.2	0.0
DANN				eSg	Sb	11 59 10.7	+0.2
KOLN	Koldanda	1.37	129	ePn	Pb	11 58 57.0	-0.1
KOLN				eSg	Sb	11 59 14.3	-0.1
KOLN				eSg		11 59 14.7	
	2μm,0.3s						
GKN	Gorkha	2.07	107	ePn	Pn	11 59 06.9	+2.3
DMN	Daman	2.60	113	ePn	Pn	11 59 14.1	+2.1
KKN	Kakani	2.68	108	ePn	Pn	11 59 15.0	+2.0
KKN				eSn	Sn	11 59 46.0	+1.5
	607nm,0.3s						
PKIN	Phulchoki	2.85	111	ePn	Pn	11 59 17.1	+1.7
PKIN	Phulchoki	2.85	111	ePn	Pn	11 59 17.5	+2.1
PKIN				eSn	Sn	11 59 50.0	+1.2
	2μm,0.5s						
PKIN				eSn	Sn	11 59 50.5	+1.7
	968nm,0.4s						
GUN	Gumba	3.15	103	ePn	Pn	11 59 21.6	+1.9
JIRN	Jiri	3.48	105	ePn	Pn	11 59 26.2	+1.9
RAMN	Ramite	4.08	113	ePn	Pn	11 59 34.2	+1.8
RAMN				eSn	Sn	12 00 18.4	-0.8
	581nm,0.3s						
DDI	Dehra Dun	4.14	295	eP	Pn	11 59 34.2	+1.3
DDI				eS	Sn	12 00 21.0	+0.7
NDI	New Delhi	4.56	272	eP	Pn	11 59 40.0	+1.3
ODAN	Odare	4.76	111	ePn	Pn	11 59 43.4	+1.7
ODAN				eSn	Sn	12 00 35.1	-0.9
	342nm,0.3s						
TAPN	Taplejung	4.87	104	ePn	Pn	11 59 44.9	+1.7
TAPN				eSn	Sn	12 00 37.8	-0.8
	173nm,0.3s						
SMLA	Simla	5.18	300	eP	Pn	11 59 47.8	+0.7
GTK	Tadong	5.64	102	eP	Pn	11 59 55.1	+1.5
GTK				eS	Sn	12 00 56.4	-1.0
BOK	Bokaro	5.75	146	eP	Pn	11 59 56.8	+1.6
BOK				eS	Sn	12 00 59.7	-0.3
DHRM	DHARAMSHALA	6.38	306	eP	Pn	12 00 04.2	+0.3
BHPL	Bhopal	7.00	221	eP	Pn	12 00 13.0	+0.7
BHPL				eS	Sn	12 01 29.9	-0.9
DHUB	DHUBRI	7.24	109	eP	Pn	12 00 16.4	+0.9
TURI	Tura	7.71	112	eP	Pn	12 00 21.2	-0.7
TURI				eS	Sn	12 01 43.7	-4.5
TURI				IAML		12 01 47.7	
	comp=N,158nm,0.3s						
TURI				IAML		12 01 48.5	
	comp=E,150nm,0.3s						
LSA	Lhasa	7.72	80	ePn	Pn	12 00 27.2	+4.7
NGP	Nagpur	8.06	203	eP	Pn	12 00 27.7	+0.9
NGP				eS	Sn	12 01 55.8	-1.0
GUWA	GUWAHATI	8.61	104	eP	Pn	12 00 34.8	+0.5
SHL	Shillong	8.99	108	ePn	Pn	12 00 39.8	+0.1
SHL	Shillong	8.99	108	eP	Pn	12 00 39.1	-0.6
NIL	Nilore	9.29	305	ePn	Pn	12 00 43.4	-0.3
BELO	BELONIA	9.75	121	eP	Pn	12 00 51.1	+1.2
KOHI	KOHIMA	10.82	103	eP	Pn	12 01 09.3	+4.5
VIS	Vishakhapatnam	10.91	175	eP	Pn	12 01 06.4	+0.6
VIS				i x	x	12 03 59.9	
VIS				ex	x	12 04 00.8	
	comp=N,109nm,0.7s						
VIS				ex	x	12 04 11.3	
	comp=E,144nm,0.8s						
SAIH	SAIHA	11.35	120	eP	Pn	12 01 11.1	-0.9
SAIH				eS	Sn	12 03 13.3	-4.4
HYB	Hyderabad	11.72	198	i P	Pn	12 01 17.0	0.0
HYB				eS	Sn	12 03 31.0	+4.2
KBL	Kabul	12.81	301	ePn	Pn	12 01 30.3	-1.7
AAK	Ala-Archa	15.36	337	Pn	Pn	12 02 06.2	-0.2
	comp=E,1.3nm,0.3s,baz=162,slow=6.4,SNR=2.6						
KK31	Karatay Array	17.32	330	ePn	Pn	12 02 28.7	-2.5
KKAR	Karatay Array	17.32	330	ePn	Pn	12 02 28.7	-2.5
GTA	Gaotai	17.96	49	eP	Pn	12 02 38.5	-0.7
GTA				pP	P	12 02 43.5	+4.0
GTA				pmax	pmax		
	comp=E,5.0nm,1.0s						
MK01	Makanchi Array	18.09	360	ePn	Pn	12 02 38.1	-2.6
MK31	Makanchi Array	18.12	360	ePn	P	12 02 41.5	+0.3
MK32	Makanchi Array	18.12	360	ePn	Pn	12 02 38.3	-2.7
MKAR	Makanchi Array	18.12	360	P	Pn	12 02 38.3	-2.7
	comp=E,1.0nm,0.3s,baz=189,slow=11,SNR=23						
MKAR				LR	LR	12 09 26.4	
	comp=E,15nm,19.3s,baz=200,slow=36						
MAKZ	Makanchi	18.14	359	ePn	Pn	12 02 41.0	-0.2
	comp=E,3.0nm,0.8s						
CM31	Chiang Mai Arr	18.22	120	ePn	Pn	12 02 43.0	+0.5
CMAR	Chiang Mai Arr	18.22	120	P	Pn	12 02 43.0	+0.5
	comp=E,0.4nm,0.3s,baz=303,slow=12,SNR=3.3						
CMAR				LR	LR	12 11 59.9	
	comp=E,21nm,18.4s,baz=285,slow=45						
KMI	Kunming	18.48	96	P	Pn	12 02 50.8	+5.1
KMI				pP	sP	12 03 03.8	+5.7
KMI				sP	pP	12 03 09.0	+15
KMI				pmax	pmax		
	comp=E,8.0nm,0.8s						
KMI				pmax	pmax		
	comp=E,98nm,4.1s						
PBKT	Sadao Pong	20.90	121	eP	Pn	12 03 15.6	+1.3
	comp=E,8.6nm,0.8s						
WSAR	Wadi Sarin	22.03	261	P	P	12 03 26.7	+2.9
	comp=E,2.2nm,0.6s,baz=98,slow=14,SNR=3.0						
KURBB	Kurchatov Arra	22.14	353	P	P	12 03 23.5	-1.3
	comp=E,5.6nm,0.7s,baz=179,slow=9.9,SNR=66						
KURBB				PcP	PcP	12 07 22.3	+1.3
	comp=E,0.6nm,0.6s,baz=193,slow=1.8,SNR=4.8						
KURK	Kurchatov	22.23	354	eP	P	12 03 23.5	-2.2
KURK				ePcP	PcP	12 07 22.3	+1.2
ZAA0	Zalesovo Array	25.34	3	eP	P	12 03 55.6	-0.1
	comp=E,6.6nm,0.6s						
ZALV	Zalesovo Beam	25.34	3	P	P	12 03 55.6	-0.1
	comp=E,7.7nm,0.6s,baz=192,slow=10,SNR=21						
ZALV	Zalesovo Beam	25.34	3	eP	P	12 03 55.5	-0.3
ZAA1	Zalesovo Array	25.35	3	eP	P	12 03 55.6	-0.2
BVAR	Borovoye Array	25.92	343	P	P	12 04 00.9	-0.2
	comp=E,2.5nm,0.5s,baz=144,slow=11,SNR=9.3						
BVAR				PcP	PcP	12 07 29.0	-0.1
	comp=E,0.9nm,0.5s,baz=196,slow=2.7,SNR=3.9						
SONA0	Songino Array	26.69	38	eP	P	12 04 09.1	+0.9
SONM	Songino Array	26.69	38	P	P	12 04 09.1	+0.9
	comp=E,3.2nm,0.7s,baz=229,slow=9.4,SNR=14						
SONA1	Songino Array	26.70	38	eP	P	12 04 09.4	+1.1
ABKAR	Akbulak array	26.81	326	eP	P	12 04 10.5	+1.4
ULN	Ulaanbaatar	27.06	38	eP	P	12 04 15.3	+3.7
	comp=E,3.4nm,0.9s						
AKTO	Aktyubinsk	28.53	326	P	P	12 04 24.6	+0.2
	comp=E,2.5nm,0.6s,baz=142,slow=14,SNR=4.4						
ARU	Arti	32.52	335	P	P	12 04 59.3	-0.3
	comp=E,3.5nm,0.4s,baz=98,slow=7.0,SNR=4.9						
ARU	Arti	32.52	335	eP	P	12 04 59.3	-0.3
	comp=E,4.9nm,0.5s						
KBZ	Khabaz	34.90	306	P	P	12 05 21.5	+1.1
	comp=E,1.4nm,0.5s,baz=167,slow=4.5,SNR=3.6						
KS15	Wonju Array Si	38.81	65	eP	P	12 05 53.1	-0.7
KSAR	Wonju Array Be	38.81	65	P	P	12 05 53.1	-0.7
KSRS	Korea Array	38.84	65	P	P	12 05 53.1	-0.9
	comp=E,0.9nm,0.5s,baz=272,slow=8.9,SNR=5.5						
BR101	Keskin Array S	41.37	299	eP	P	12 06 15.2	0.0
BRTR	Keskin Array B	41.37	299	P	P	12 06 15.2	0.0
	comp=E,0.4nm,0.4s,baz=98,slow=8.9,SNR=4.0						
LEM	Lembang	42.83	142	LR	LR	12 26 08.7	
	comp=E,30nm,19.4s,baz=164,slow=39						
AKASG	Malin Array Be	45.33	314	P	P	12 06 46.8	0.0
	comp=E,0.2nm,0.3s,baz=75,slow=7.2,SNR=4.2						
AKBB	Malin Array Si	45.33	314	eP	P	12 06 47.6	+0.8
	comp=E,3.7nm,0.8s						
KIEV	Kiev	45.34	314	eP	P	12 06 47.2	+0.4
	comp=E,3.5nm,0.7s						
MLR	Muntele Rosu	47.11	307	P	P	12 07 03.3	+2.2
	comp=E,11nm,0.8s,baz=180,slow=5.1,SNR=12						
MLR	Muntele Rosu	47.11	307	eP	P	12 07 03.7	+2.6
	comp=E,13nm,0.9s						
BUR04	Bucovina Ar. S	47.67	310	eP	P	12 07 06.2	+0.9
BUR08	Bucovina Ar. S	47.68	310	eP	P	12 07 07.1	+1.7
FIA0	FINESS Array S	49.27	328	eP	P	12 07 17.5	+0.2
FINES	FINESS Array B	49.27	328	P	P	12 07 17.5	+0.2
	comp=E,2.5nm,0.6s,baz=114,slow=8.8,SNR=14						
FINES				LR	LR	12 29 26.7	
	comp=E,76nm,18.4s,baz=72,slow=38						
CRVS	Cervenica-Dubn	50.20	311	eP	P	12 07 20.0	-4.6
ARA0	ARCESS Array S	52.03	338	eP	P	12 07 38.4	+0.4
ARCES	ARCESS Array B	52.03	338	P	P	12 07 38.4	+0.4
	comp=E,1.5nm,0.6s,baz=88,slow=7.9,SNR=12						
BRG	Berggiesshubel	55.01	314	eP	P	12 08 00.9	+0.8
	comp=E,3.4nm,0.5s						
HFS	Hagfors	55.07	325	P	P	12 08 00.5	+0.1
	comp=E,5.3nm,0.6s,baz=99,slow=9.2,SNR=16						
GERES	GERESS Array B	55.32	312	P	P	12 08 02.9	+0.3
	comp=E,1.2nm,0.5s,baz=85,slow=8.2,SNR=5.3						
GERES				LR	LR	12 35 13.7	
	comp=E,21nm,18.1s,baz=290,slow=40						
SEY	Seymchan	55.82	31	P	P	12 08 05.5	-0.3
	comp=E,1.2nm,0.5s,baz=222,slow=15,SNR=7.8						
SEY	Seymchan	55.82	31	eP	P	12 08 05.5	-0.3
NB2	NORSAR Subarra	56.32	326	P	P	12 08 09.2	-0.2
	comp=Z,0.6nm,0.5s,baz=79,slow=8.6						
NOA	NORSAR Array B	56.32	326	P	P	12 08 09.1	-0.4
	comp=Z,2.0nm,0.7s,baz=92,slow=6.8,SNR=7.7						
SENIN	Lac Senin/Sane	59.97	309	eP	P	12 08 33.9	-1.5
WR1	Warramunga Arr	69.63	128	eP	P	12 09 38.9	+0.5
	comp=Z,4.6nm,0.8s						
WRA	Warramunga Arr	69.63	128	P	P	12 09 38.9	+0.5
	comp=Z,3.1nm,0.8s,baz=320,slow=6.4,SNR=14						
ES19	SONSECA Array	69.69	305	eP	P	12 09 38.8	+0.1
ESDC	Sonseca Array	69.74	305	P	P	12 09 39.5	+0.5
	comp=Z,2.6nm,0.8s,baz=60,slow=6.4,SNR=13						
ASAR	Alice Springs	71.86	131	P	P	12 09 52.2	+0.3
	comp=Z,1.7nm,0.8s,baz=314,slow=6.2,SNR=14						
TOA0	Torodi Ar. Sit	75.76	277	eP	P	12 10 14.4	-0.6
TOA1	Torodi Ar. Sit	75.76	277	eP	P	12 10 14.8	-0.2
TORD	Torodi Ar. Bea	75.76	277	P	P	12 10 14.8	-0.2
	comp=Z,2.5nm,0.6s,baz=72,slow=4.3						
CAST	Castle Rocks	78.68	22	eP	P	12 10 31.3	+0.7
	comp=Z,2.7nm,0.7s						
ILAR	Eielson Array	79.33	19	P	P	12 10 34.0	-0.1
	comp=Z,0.4nm,0.7s,baz=300,slow=4.7,SNR=6.2						
ILAR				PP	PP	12 13 28.6	-4.9
	comp=Z,0.3nm,0.6s,baz=304,slow=6.4,SNR=5.2						
ILB	Eielson Array	79.33	19	ePP	PP	12 13 28.6	-4.9
INK	Inuvik	79.74	13	P	P	12 10 35.7	-0.5
	comp=Z,2.2nm,0.9s,baz=318,slow=8.1,SNR=3.1						
INK	Inuvik	79.74	13	eP	P	12 10 35.7	-0.5
	comp=Z,2.7nm,0.9s						
KOWA	Kowa	80.11	281	P	P	12 10 40.7	+1.6
	comp=Z,3.4nm,0.6s,baz=65,slow=10.0,SNR=6.6						
KDAK	Kodiak Island	82.38	26	P	P	12 10 49.8	-0.7
	comp=Z,3.4nm,0.7s,baz=321,slow=6.5,SNR=5.7						
DBIC	Dimbokro	84.45	275	P	P	12 11 03.7	+1.8
	comp=Z,3.7nm,0.7s,baz=123,slow=1.7,SNR=3.8						
YKA	Yellowknife Ar	88.16	8	P	P	12 11 19.0	-0.2
	comp=Z,1.1nm,0.6s,baz=108,slow=22,SNR=3.9						
LTX	Lajitas	122.06	6	ePKPdf	PKPdf	12 17 23.6	-0.1
TXAR	Lajitas Array	122.06	6	PKP	PKPdf	12 17 23.6	-0.1
	comp=Z,0.2nm,0.5s,baz=164,slow=1.0,SNR=4.7						
CPUP	Villa Florida	144.32	264	PKP	PKPdf	12 18 04.4	-0.7
	comp=Z,2.5nm,0.9s,baz=327,slow=4.5,SNR=4.0						
LPAZ	La Paz	150.21	288	PKPbc	PKPbc	12 18 22.6	+1.5
	comp=Z,1.0nm,0.7s,baz=171,slow=3.4,SNR=4.1						

NEIC 31 12:03:35.6±0.0, 64.°38N×161.°19W, h20^{km}, ML2.8(AEIC), After AEIC., Northern Alaska

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ANM	Nome	1.82	278	P	Pn	12 04 06.5	+0.7
ANM				S	Sn	12 04 29.0	+0.8
GCSA	Galena City Sc	1.90	77	P	Pn	12 04 07.0	+0.2
GCSA				S	Sn	12 04 31.1	+1.0
TT01	Tatalina	2.74	120	P	Pn	12 04 18.7	+0.3
IM3	Indian Mountai	3.53	59	P	Pn	12 04 29.4	+0.2
RDOG	Red Dog Mine	3.76	350	P	Pn	12 04 33.1	+0.8
CHUM	Lake Minchumin	3.92	93	P	Pn	12 04 35.3	+0.7
CAST	Castle Rocks	4.14	99	P	Pn	12 04 38.0	+0.4
SVW2	Sparrevohn	4.18	139	P	Pn	12 04 38.3	0.0
BPAW	Bear Paw Mtn.	4.46	89	P	Pn	12 04 42.8	+0.7
KTH	Kantishna Hill	4.60	96	P	Pn	12 04 44.5	+0.5
COLD	Coldfoot	5.35	53	P	Pn	12 04 54.3	+0.1
MDM	Murphy Dome	5.59	78	P	Pn	12 04 56.9	-0.7
ILB	Eielson Array	6.17	80	P	Pn	12 05 05.0	-0.6

IDC 31 12:05:09.5±1.2, 28.°70N×82.°34E, h0^{km}, mb3.7/7, mb1 3.7/8, mb1mx3.4/76, mbtmp3.7/8, ML3.3/1, MS3.5/2, Ms1 3.5/2, ms1mx2.5/64, Error ellipse: s-maj=30.8km s-min=24.1km az=64.0, Nepal

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
MKAR	Makanchi Array	18.07	360	P	Pn	12 09 20.1	-1.9
	0.1nm,0.3s,baz=189,slow=11,SNR=5.3						
KURBB	Kurchatov Arra	22.09	354	P	P	12 10 05.6	-0.5
	1.0nm,0.7s,baz=179,slow=10.0,SNR=15						
ZALV	Zalesovo Beam	25.29	3	P	P	12 10 37.9	+0.4
	1.2nm,0.4s,baz=187,slow=9.7,SNR=3.4						
SONM	Songino Array	26.68	38	P	P	12 10 50.8	+0.4
	0.4nm,0.5s,baz=238,slow=8.2,SNR=3.1						
FINES	FINESS Array B	49.20	328	P	P	12 13 59.2	0.0
	0.4nm,0.3s,baz=116,slow=13,SNR=2.8						
MA2	Magadan	54.86	35	LR	LR	12 39 23.6	
	comp=Z,20nm,18.8s,baz=359,slow=37						
HFS	Hagfors	54.99	325	P	P	12 14 42.7	+0.3
	1.3nm,0.6s,baz=104,slow=11,SNR=3.4						
OPO	Ambohidratompo	57.99	220	LR	LR	12 37 08.2	
	comp=Z,81nm,18.6s,baz=354,slow=33						
WRA	Warramunga Arr	69.70	128	P	P	12 16 21.3	-0.1
	0.7nm,0.8s,baz=323,slow=6.3,SNR=4.1						
TORD	Torodi Ar. Bea	75.70	277	P	P	12 16 57.2	-0.1
	0.4nm,0.8s,baz=72,slow=4.7						

IDC 31 12:27:49.5±1.9, 17.°84S×167.°43E, h0^{km}, mb3.7/3, mb1 4.0/4, mb1mx3.6/51, mbtmp3.7/4, ML3.2/1, MS3.0/1, Ms1 3.0/1, ms1mx2.3/43, Error ellipse: s-maj=55.6km s-min=32.6km az=131.0, Vanuatu Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DZM	Mont Dzumac	4.31	192	Pn	Pn	12 28 56.4	-0.1
	1.3nm,0.3s,baz=126,slow=18,SNR=50						
DZM				Sn	Sn	12 29 41.8	-5.7
	5.1nm,0.3s,baz=131,slow=19,SNR=14						
WRA	Warramunga Arr	31.35	261	P	P	12 34 12.0	-0.1
	0.6nm,0.8s,baz=84,slow=7.5,SNR=3.6						
ASAR	Alice Springs	31.83	254	P	P	12 34 16.4	0.0
	0.6nm,0.6s,baz=82,slow=8.0,SNR=11						
ASAR				LR	LR	12 47 21.2	
	comp=Z,26nm,19.6s,baz=142,slow=37						
ILAR	Eielson Array	89.42	18	P	P	12 40 47.8	0.0
	0.5nm,0.7s,baz=240,slow=5.3,SNR=8.0						

MAN 31 12:30:25.0, 10.°08N×123.°16E, h1^{km}, mb4.4, ML3.2, MS3.0, Cebu

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GUIM	Jordan	0.78	314	eP	Pg	12 30 40.2	+0.2
GUIM				eS	Sb	12 30 52.2	-0.3
MSLP	Maasin	1.67	88	eP	Pn	12 30 55.0	-0.5
MSLP				eS	Sg	12 31 18.9	0.0

IDC 31 12:50:39.4±1.6, 9.°10S×157.°95E, h0^{km}, mb3.7/3, mb1 3.9/3, mb1mx3.5/44, mbtmp3.7/3, Error ellipse: s-maj=50.3km s-min=26.7km az=171.0, Bougainville-Solomon Islands region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	Honiara	2.00	100	Pn	Pn	12 51 14.0	-0.3
	13nm,0.3s,baz=198,slow=15,SNR=7.6						
HNR				Sn	Sn	12 51 37.0	-3.1
	36nm,0.3s,baz=180,slow=20,SNR=6.9						
HNR	Honiara	2.00	100	P	Pg	12 51 20.0	+2.3
WRA	Warramunga Arr	25.23	242	P	P	12 56 06.3	-1.0
	2.1nm,0.8s,baz=68,slow=9.6,SNR=9.2						
ASAR	Alice Springs	27.17	235	P	P	12 56 25.4	+0.6
	0.6nm,1.0s,baz=69,slow=8.2,SNR=5.7						
MKAR	Makanchi Array	86.91	318	P	P	13 03 26.9	+0.5
	0.5nm,0.6s,baz=97,slow=5.3,SNR=5.4						

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*NEIC **31** 13:06:26.0±0.0, 35.°53N×117.°51W, h8^{km}, ML2.9(PAS), After PAS.*

NEIC Felt at Apple Valley.

ISC 31 13:06:25.5±1.0, 35.°53N±0.°02×117.°51W±0.°02, h5^{km}±10^{km}, n63, σ0.^{s}99/92, Central California

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LRMC	Laurel Mtn Rad	0.15	251	P	Pg	13 06 29.1	+0.6

	baz=70,SNR=1000						
LRMC				S	Sg	13 06 30.8	+0.3
	baz=70						
RCWM	Renegade Canyo	0.44	345	ePg	Pg	13 06 34.0	+0.1
VPEM	Volcano Peak E	0.49	329	ePg	Pg	13 06 35.0	0.0
MPMC	Manual Prospec	0.53	2	P	Pg	13 06 35.6	-0.1
	baz=181,SNR=249						
MPMC				S	Sg	13 06 42.4	-0.3
	baz=181						
WCHM	Chimney Peak	0.58	308	ePg	Pg	13 06 36.7	0.0
GSC	Goldstone, Bar	0.62	111	P	Pg	13 06 37.5	+0.2
	baz=292,SNR=134						
GSC				S	Sg	13 06 45.5	+0.1
	baz=292						
GSC	Goldstone, Bar	0.62	111	ePg	Pg	13 06 37.4	0.0
WORM	Onyx Ranch	0.62	286	ePg	Pg	13 06 37.4	0.0
DAC	Darwin (Calif)	0.75	355	ePg	Pg	13 06 39.2	-0.7
EDW2	Edwards Air Fo	0.76	212	P	Pg	13 06 39.9	-0.1
	baz=31,SNR=15						
EDW2				S	Sg	13 06 49.9	+0.1
	baz=31						
RRX	Edison Barstow	0.77	147	P	Pg	13 06 40.4	+0.1
	baz=328						
RRX				S	Sg	13 06 50.7	+0.4
	baz=328						
ISA	Isabella, Lake	0.80	280	P	Pg	13 06 40.7	-0.1
	baz=99,SNR=143						
ISA				S	Sg	13 06 50.8	-0.4
	baz=99						
ISA	Isabella, Lake	0.80	280	ePg	Pg	13 06 40.6	-0.2
ISA				eSg	Sg	13 06 50.1	-1.0
WASM	Alta Sierra Ca	0.88	284	eSg	Sg	13 06 53.4	-0.4
CWC	Cottonwood Cre	1.02	333	P	Pg	13 06 44.7	-0.4
	baz=153						
CWC				S	Sg	13 06 58.0	-0.4
	baz=153						
SHOC	Shoshone, Teco	1.07	69	P	Pg	13 06 45.7	-0.3
	baz=250,SNR=9.6						
SHOC				S	Sg	13 07 00.2	+0.3
	baz=250						
FURC	Furnace Creek,	1.07	29	P	Pg	13 06 45.8	-0.3
	baz=209,SNR=22						
FURC				S	Sg	13 07 00.5	+0.4
	baz=209						
ARVC	Arvin	1.15	250	P	Pg	13 06 47.1	-0.5
	baz=69,SNR=16						
ARVC				S	Sg	13 07 03.1	+0.7
	baz=69						
HEC	Hector,Ludlow	1.19	126	P	Pg	13 06 47.7	-0.5
	baz=307,SNR=20						
HEC				S	Sg	13 07 03.5	-0.1
	baz=307						
BFSC	Mount Baldy Ra	1.29	186	P	Pn	13 06 49.6	-0.7
	baz=5.5,SNR=20						
BFSC				S	Sb	13 07 06.7	-0.5
	baz=5.5						
TUQ	Turquoise Moun	1.30	94	P	Pn	13 06 49.0	-1.4
	baz=275,SNR=50						
TUQ				S	Sb	13 07 07.3	-0.2
	baz=275						
VES	Vestal, Richgr	1.32	284	P	Pn	13 06 49.9	-0.6
	baz=103,SNR=25						
VES				S	Sb	13 07 06.7	-1.3
	baz=103						
SSK	Sunset Peak	1.32	187	ePn	Pb	13 06 51.2	+0.4
OSI	Osito Audit: C	1.35	228	S	Sb	13 07 08.7	-0.2
	baz=47						
OSI	Osito Audit: C	1.35	228	ePn	Pn	13 06 50.0	-1.1
OSI				eSn	Sb	13 07 07.8	-1.0
BBRC	Big Bear Solar	1.35	159	Pb	Pn	13 06 50.9	-0.4
	baz=340,SNR=12						
BBRC				S	Sb	13 07 09.2	+0.1
	baz=340						
MWC	Mount Wilson	1.38	199	ePn	Pn	13 06 51.0	-0.5
DECC	Green Verdugo	1.44	208	S	Sb	13 07 11.8	+0.3
	baz=28						
PASC	Pasadena Art C	1.46	203	ePn	Pn	13 06 52.2	-0.3
GRAC	Grapevine Rang	1.47	4	Pb	Pn	13 06 52.4	-0.3
	baz=184						
GRAC				S	Sn	13 07 11.9	-0.5
	baz=184						
GMRC	Granite Mounta	1.69	116	P	Pn	13 06 53.8	-1.9
	baz=297						
GMRC				Sb	Sb	13 07 19.1	+0.5
	baz=297						
TPNV	Topopah Spring	1.75	35	P	Pn	13 06 55.8	-0.8
	baz=216,SNR=40						
TPNV				Sb	Sb	13 07 20.9	+0.4
	baz=216						
TPNV	Topopah Spring	1.75	35	ePn	Pn	13 06 55.9	-0.8
TPNV				eSn	Sg	13 07 21.4	-0.2
CRGC	Crocker Grade	1.83	262	ePn	Pb	13 06 59.8	+0.3
BLG	Laguna Peak, P	1.91	223	Sb	Sb	13 07 25.9	+1.0
	baz=42						
MURC	Murrieta	1.94	172	Pb	Pb	13 07 00.7	-0.6
	baz=353						
MURC				Sb	Sb	13 07 26.7	+0.9
	baz=353						
BELC	Belle Mtn. Jos	1.97	140	P	Pn	13 06 58.7	-0.9
	baz=322,SNR=12						
BELC				Sb	Sb	13 07 27.8	+1.0
	baz=322						
LDFC	Landfair	2.01	102	ePn	Pn	13 06 58.0	-2.3
LDFC				eSn	Sn	13 07 26.9	+1.1
PFO	Pinyon Flats O	2.10	155	Sb	Sb	13 07 31.8	+1.3
	baz=336						
PFO	Pinyon Flats O	2.10	155	ePn	Pn	13 07 00.7	-0.8
XPFO	Piæon Flat	2.10	155	ePn	Pn	13 07 00.7	-0.7
XPFO				eSn	Sb	13 07 30.8	+0.2
SHPR	Sheep Range	2.14	62	ePn	Pn	13 07 01.4	-0.7
FRD	Ford Ranch, An	2.16	159	P	Pn	13 07 01.9	-0.3
	baz=340,SNR=14						
FRD				Sb	Sb	13 07 33.9	+1.6
	baz=340						
PAGB	Antelope Grade	2.24	276	ePn	Pn	13 07 03.7	+0.4
CIS	Catalina Islan	2.25	200	Sb	Sg	13 07 36.8	-0.9
	baz=19						
IRM	Iron Mountain	2.38	124	P	Pn	13 07 03.3	-1.8
	baz=306						
IRM				Sb	Sb	13 07 40.2	+1.7
	baz=306						
OMMB	Old Mammoth Mi	2.40	330	ePn	Pb	13 07 09.2	-0.2
MDPB	Devils Postpil	2.45	329	ePn	Pn	13 07 07.1	+0.7
NEE2	Needles Airpor	2.49	107	Sb	Sb	13 07 42.7	+1.1
	baz=289						
BC3	Big Chuckawall	2.52	137	Sb	Sg	13 07 45.5	-1.0
	baz=319						
PMPB	Monarch Peak	2.76	285	ePn	Pn	13 07 11.6	+1.2
MONP2	Monument Peak	2.78	161	P	Pn	13 07 09.2	-1.6
	baz=342,SNR=6.3						
MONP2				Sb	Sb	13 07 52.7	+2.5
	baz=342						
BAR	Barrett	2.92	166	ePn	Pn	13 07 12.4	-0.3
NV11	Mina Array Sit	2.94	350	ePn	Pn	13 07 13.1	0.0
NV01	Mina Array Sit	2.97	348	ePn	Pn	13 07 12.9	-0.5
Y12C	Blythe	3.03	125	P	Pn	13 07 12.6	-1.5
	baz=307						
Y12C				Sb	Sb	13 08 00.1	+2.8
	baz=307						
Y12C	Blythe	3.03	125	ePn	Pn	13 07 12.5	-1.6
IKP	In-Ko-Pah, Jac	3.10	158	Sb	Sb	13 08 02.0	+2.8
	baz=338						
RYN	Ryan	3.20	346	ePn	Pn	13 07 15.8	-0.8
R11A	Troy Canyon, C	3.21	28	Sb	Sb	13 08 05.4	+2.8
	baz=209						
R11A	Troy Canyon, C	3.21	28	ePn	Pn	13 07 15.5	-1.3
KVN	Kaiserville	3.55	353	ePn	Pn	13 07 21.4	0.0
LCMT	Little Creek M	3.75	65	ePn	Pn	13 07 24.2	+0.1

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*IDC **31** 13:08:33.7±1.0, 17°.00S×178°.09W, h0km, mb3.7/7, mb1 4.0/7, mb1mx3.7/47, mbtmp3.7/7, Error ellipse: s-maj=48.8km s-min=21.9km az=144.0*

*ISCJB **31** 13:08:37.1±0.8, 17°.1S±0°.2×178°.1W±0°.2, h33km, mb3.7/7, Error ellipse: s-maj=35.5km s-min=18.9km az=135.5*

ISC 31 13:08:38.9±1.0, **17°.1S**±0°.2×**178°.1W**±0°.2, **h35km, n7, σ0ˢ.71**/7, **mb3.7**/7, **Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
URZ	Urewera	21.55	190	P	P	13 13 25.2	0.0
	12nm,0.8s,baz=119,slow=9.5,SNR=3.3						
WRA	Warramunga Arr	45.09	259	P	P	13 16 52.1	+0.1
	0.3nm,0.8s,baz=93,slow=6.6,SNR=8.0						
ASAR	Alice Springs	45.31	253	P	P	13 16 53.8	0.0
	0.4nm,0.4s,baz=89,slow=8.4,SNR=11						
NVAR	Mina Array Bea	78.60	44	P	P	13 20 38.5	+1.1
	0.6nm,0.7s,baz=219,slow=8.3,SNR=6.4						
ILAR	Eielson Array	84.99	13	P	P	13 21 10.0	-0.1
	0.2nm,0.4s,baz=217,slow=5.6,SNR=4.2						
TXAR	Lajitas Array	85.29	58	P	P	13 21 12.5	-0.1
	0.6nm,0.7s,baz=210,slow=4.9,SNR=8.3						
PDAR	Pinedale Array	86.53	43	P	P	13 21 17.8	-0.9
	0.2nm,0.6s,baz=145,slow=3.6,SNR=3.6						

MEX 31 13:17:20.4±0.6, **16°.03N**×**98°.95W, h12km**±14km, **MD3.7, Near coast of Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PNIG	Pinotepa	0.86	65	eP	Pg	13 17 34.6	-2.5
PNIG				eS	Sg	13 17 45.4	-3.0
TLIG	Tlapa	1.57	13	eP	Pn	13 17 44.1	-4.1
TLIG				eS	Sn	13 18 04.0	-4.6
CAIG	El Cayaco	1.62	309	eP	Pn	13 17 45.6	-3.3
VHO	Vista Hermosa	2.36	64	eP	Pn	13 17 56.5	-2.7
VHO				eS	Sn	13 18 24.6	-3.7
HUIG	Huatulco	2.74	95	eP	Pn	13 18 01.9	-2.4
HUIG				i S	Sn	13 18 32.8	-4.6

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*ISCJB **31** 13:19:04.5±0.5, 23°.53S±0°.03×179°.99W±0°.05, h539km±6km, mb4.2/65, Error ellipse: s-maj=7.0km s-min=4.9km az=20.9*

*WEL **31** 13:19:05.0, 23°.58S×179°.94W, h544km*

*NEIC **31** 13:19:05.5±0.6, 23°.58S×179°.94W, h544km±6km, mb4.3/49, Error ellipse: s-maj=6.4km s-min=4.8km az=152.0*

*IDC **31** 13:19:05.3±0.6, 23°.51S×179°.96W, h534km±6km, mb3.9/26, mb1 4.0/27, mb1mx3.9/47, mbtmp4.8/27, Error ellipse: s-maj=9.7km s-min=9.2km az=23.0*

ISC 31 13:19:04.8±0.5, **23°.58S**±0°.05×**179°.92W**±0°.06, **h536km**±5km, **h536km:pP-P, n180, σ1ˢ.41**/213, **mb4.3**/65, **1C-1D, South of Fiji Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RIZ	Raoul Island	5.92	163	P	P	13 20 43.0	+1.0
RAO	Raoul Island	5.93	163	P	P	13 20 43.0	+1.0
	178nm,0.3s,baz=29,slow=19,SNR=5.3						
GLKZ	Green Lake	5.94	163	P	P	13 20 43.3	+1.2
GLKZ				S	S	13 22 02.7	+0.9
AFI	Afiamalu	12.32	40	S	S	13 23 48.7	-12
	0.9nm,0.3s,baz=246,slow=20,SNR=2.7						
AFI	Afiamalu	12.32	40	eP	P	13 21 46.1	-0.9
AFI				S	S	13 23 48.7	-12
DZM	Mont Dzumac	12.66	274	P	P	13 21 51.6	+1.2
	0.9nm,0.3s,baz=85,slow=18,SNR=6.0						
OUZ	Omahuta	12.90	204	eP	P	13 21 55.2	+2.7
OUZ	Omahuta	12.90	204	P	P	13 21 55.0	+2.5
WCZ	Waipu Caves	13.28	201	P	P	13 21 58.9	+2.4
KUZ	Kuaotunu	13.65	195	P	P	13 22 01.3	+0.9
WIAZ	Waiheke Island	13.85	197	P	P	13 22 03.7	+1.3
MXZ	Matakaoa Point	14.02	186	eP	P	13 22 04.1	-0.1
MXZ	Matakaoa Point	14.02	186	P	P	13 22 05.8	+1.6
ETAZ	East Tamaki Re	14.05	197	P	P	13 22 06.3	+1.9
MKAZ	Moumakai	14.13	196	P	P	13 22 06.5	+1.2
WMGZ	Waiomatatini S	14.27	185	P	P	13 22 06.2	-0.5
HAZ	Te Kaha	14.27	187	P	P	13 22 06.9	+0.1
HAZ				S	S	13 24 34.4	-2.3
PKGZ	Pakihiroa	14.37	186	P	P	13 22 07.9	0.0
PKGZ				S	S	13 24 35.9	-2.9
TGRZ	Tauranga	14.48	192	P	P	13 22 09.9	+0.9
RUGZ	Raukumara Rang	14.49	188	P	P	13 22 08.6	-0.6
RUGZ				S	S	13 24 39.7	-1.5
PUZ	Puketiti	14.53	186	P	P	13 22 09.2	-0.4
PUZ				S	S	13 24 35.9	-6.0
OPRZ	Ohinepanea	14.54	191	P	P	13 22 11.8	+2.3
KMRZ	Kaimai	14.66	193	P	P	13 22 11.9	+1.1
TWGZ	Tauwhareparae	14.66	187	P	P	13 22 09.4	-1.5
TWGZ				S	S	13 24 42.2	-2.2
OMRZ	Omania	14.83	191	P	P	13 22 15.3	+2.7
URZ	Urewera	14.86	189	P	P	13 22 10.2	-2.6
	4.1nm,0.3s,baz=68,slow=1.9,SNR=25						
URZ				S	S	13 24 41.1	-6.8
	2.6nm,0.3s,baz=208,slow=22,SNR=15						
URZ	Urewera	14.86	189	P	P	13 22 10.1	-2.7
URZ				S	S	13 24 43.7	-4.2
MWZ	Matawai	14.87	188	P	P	13 22 11.9	-1.1
MWZ				S	S	13 24 45.5	-2.8
TKGZ	Te Karaka	14.94	187	P	P	13 22 12.1	-1.6
FUNA	Funafuti	14.99	357	eP	P	13 22 11.8	-2.8
RAGZ	Rawiri	15.05	188	P	P	13 22 12.3	-2.6
TLZ	Tolley Road	15.21	194	P	P	13 22 17.3	+0.8
KUTZ	Kaahu Road	15.30	193	P	P	13 22 21.1	+3.5
SNGZ	Shannon Statio	15.34	188	P	P	13 22 16.2	-1.7
SNGZ				S	S	13 24 53.4	-3.3
MTHZ	Maungataniwha	15.48	190	P	P	13 22 17.6	-1.8
RAHZ	Arahi	15.50	189	P	P	13 22 17.7	-1.9
MRHZ	Matea Rd	15.53	191	P	P	13 22 17.9	-2.0
KNZ	Kokohu	15.53	187	P	P	13 22 19.2	-0.6
HIZ	Hauiti	15.54	195	eP	P	13 22 20.6	+0.6
	194nm,1.5s						
RATZ	Rangitukua	15.68	193	P	P	13 22 20.8	-0.6
NMHZ	Naumai	15.72	189	P	P	13 22 20.3	-1.6
RITZ	Rihia Road	15.77	192	P	P	13 22 24.3	+2.0
BKZ	Black Stump Fm	15.84	190	eP	P	13 22 20.1	-2.9
	188nm,1.8s						
BKZ	Black Stump Fm	15.84	190	P	P	13 22 19.6	-3.4
COVZ	Chateau Observ	16.05	193	P	P	13 22 25.4	+0.3
BFZ	Birch Farm	17.36	190	eP	P	13 22 36.7	-0.6
	641nm,1.9s						
SNZO	South Karori	18.25	193	eP	P	13 22 46.1	+0.7
	424nm,1.8s						
RAR	Rarotonga	18.78	87	eP	P	13 22 52.4	+1.8
	353nm,1.9s						
THZ	Tophouse	19.10	197	eP	P	13 22 52.5	-0.8
	40nm,1.2s						
KHZ	Kahutara	19.56	195	eP	P	13 22 56.7	-0.7
	250nm,1.8s						
OXZ	Oxford	20.79	197	eP	P	13 23 07.5	-1.0
	64nm,1.2s						
RPZ	Rata Peaks	21.42	198	P	P	13 23 14.1	-0.1
	11nm,0.5s,baz=360,slow=19,SNR=3.5						
PPT	Papeete	29.00	84	P	P	13 24 22.0	+0.4
	14nm,0.6s,baz=324,slow=13,SNR=4.2						
CTA	Charters Tower	31.55	270	P	P	13 24 44.5	+1.0
	38nm,0.3s,baz=94,slow=11,SNR=76						
CTAO	Charters Tower	31.55	270	eP	P	13 24 44.2	+0.7
	47nm,0.8s						
PMG	Port Moresby	34.45	289	P	P	13 25 08.4	+0.2
	45nm,0.7s,baz=90,slow=6.0,SNR=12						
STKA	Stephens Creek	34.91	248	P	P	13 25 12.8	+1.0
	7.2nm,0.6s,baz=94,slow=11,SNR=24						
STKA				ScP	ScP	13 30 25.3	+1.2
	1.1nm,0.7s,baz=126,slow=19,SNR=3.4						
STKA	Stephens Creek	34.91	248	eP	P	13 25 12.7	+1.0
	1.6nm,0.6s						
STKA				ScP	ScP	13 30 25.3	+1.2
AS01	Alice Springs	42.12	260	eP	P	13 26 10.3	-0.1
AS31	Alice Springs	42.16	260	eP	P	13 26 10.4	-0.2
	5.5nm,0.8s						
ASAR	Alice Springs	42.16	260	P	P	13 26 10.9	+0.3
	18nm,0.8s,baz=101,slow=7.0,SNR=130						
ASAR				pP	pP	13 27 45.9	-0.8
	1.4nm,0.7s,baz=89,slow=7.7,SNR=2.7						
ASAR				ScP	ScP	13 30 54.4	+2.1
	4.4nm,0.8s,baz=108,slow=4.3,SNR=16						
ASAR				S	S	13 31 50.5	-1.6
	0.9nm,0.7s,baz=100,slow=13,SNR=9.8						
WB2	Warramunga Arr	42.49	266	eP	P	13 26 12.7	-0.6
WRAB	Tennant Creek	42.49	266	eP	P	13 26 12.7	-0.6
	24nm,0.9s						
WR1	Warramunga Arr	42.50	266	eP	P	13 26 13.0	-0.4
	30nm,0.8s						
WR1				epP	pP	13 27 48.5	-1.1
WRA	Warramunga Arr	42.50	266	P	P	13 26 13.0	-0.4
	12nm,0.3s,baz=90,slow=5.8,SNR=1695						
WRA				pP	pP	13 27 48.5	-1.2
	1.7nm,0.7s,baz=101,slow=7.3,SNR=2.4						
WRA				ScP	ScP	13 30 55.4	+1.7
	3.1nm,1.0s,baz=104,slow=4.0,SNR=6.8						
WRA				S	S	13 31 53.1	-3.9
	2.0nm,0.7s,baz=100,slow=14,SNR=6.2						
JAY	Jayapura	43.45	293	P	P	13 26 20.7	-0.2
	15nm,0.4s,baz=157,slow=4.6,SNR=29						
GUMO	Guam	50.50	313	P	P	13 27 13.9	0.0
	30nm,0.4s,baz=192,slow=18,SNR=3.5						
SBA	Scott Base	54.70	183	eP	P	13 27 45.5	+2.5
	19nm,0.9s						
VNDA	Vanda	54.71	185	P	P	13 27 45.1	+2.0
	3.0nm,0.7s,baz=1.8,slow=8.2,SNR=24						
VNDA	Vanda	54.71	185	eP	P	13 27 44.5	+1.4
	5.1nm,0.9s						
SOEI	Soe	54.89	275	eP	P	13 27 46.5	+1.1
	50nm,1.0s						
BATI	Baumata	55.27	274	P	P	13 27 49.3	+1.2
	18nm,0.3s,baz=182,slow=2.6,SNR=4.9						
CASY	Casey	60.43	206	eP	P	13 28 22.1	0.0
	6.6nm,0.6s						
QSPA	South Pole Qui	66.51	180	P	P	13 29 02.7	+1.5
	26nm,0.7s,baz=4.0,slow=0.5,SNR=139						
QSPA	South Pole Qui	66.51	180	eP	P	13 29 02.4	+1.2
	32nm,0.8s						
MJAR	Matsushiro Arr	71.67	326	P	P	13 29 31.3	-1.1
	3.3nm,0.8s,baz=166,slow=5.6,SNR=9.7						
MAJO	Matsushiro	71.67	326	eP	P	13 29 31.3	-1.2
ASAJ	Asahikawa	75.61	333	P	P	13 29 56.1	+1.5
	5.5nm,0.9s,baz=222,slow=12,SNR=5.0						
ASAJ	Asahikawa	75.61	333	eP	P	13 29 55.8	+1.1
	100nm,1.9s						
KSRS	Korea Array	78.04	320	P	P	13 30 09.1	+1.0
	1.8nm,0.7s,baz=137,slow=6.2,SNR=14						
KS15	Wonju Array Si	78.06	320	eP	P	13 30 08.3	+0.1
KSAR	Wonju Array Be	78.06	320	P	P	13 30 09.1	+0.9
KS01	Wonju Array Si	78.08	320	eP	P	13 30 08.6	+0.3
MAW	Mawson	78.08	200	P	P	13 30 09.0	+1.2
	6.2nm,0.6s,baz=131,slow=5.7,SNR=34						
MAW	Mawson	78.08	200	eP	P	13 30 08.8	+0.9
	1.6nm,0.6s						
PETK	Petropavlovsk-	78.80	346	P	P	13 30 12.1	+0.2
	6.0nm,0.6s,baz=120,slow=8.5						
PEA1	Petropavlovsk-	78.81	346	eP	P	13 30 12.1	+0.2
USRK	Ussuriysk Ar.	80.53	327	P	P	13 30 22.1	+1.0
	1.7nm,0.5s,baz=97,slow=4.5						
ISA	Isabella, Lake	82.75	46	eP	P	13 30 33.5	+0.7
	6.3nm,0.9s						
CMB	Columbia Colle	82.92	43	eP	P	13 30 34.0	+0.5
	6.0nm,0.9s						
SYO	Syowa Base	83.34	193⇓	eP	P	13 30 34.4	-0.7
SYO	Syowa Base	83.34	193⇑	ePcP	P	13 30 36.2	+1.1
MDPB	Devils Postpil	83.51	44	eP	P	13 30 37.2	+0.4
	6.0nm,1.2s						
OMMB	Old Mammoth Mi	83.55	44	eP	P	13 30 37.1	+0.1
	7.3nm,1.5s						
GSC	Goldstone, Bar	83.65	47	eP	P	13 30 35.0	-2.3
	6.4nm,1.1s						
GLA	Glamis	83.77	50	eP	P	13 30 38.5	+0.7
	8.6nm,0.9s						
YBH	Yreka Blue Hor	83.79	39	P	P	13 30 38.5	+0.6
	1.3nm,0.7s,baz=223,slow=9.4,SNR=3.8						
WAKR	Walker	83.80	43	eP	P	13 30 38.8	+0.7
	6.6nm,1.0s						
YERR	Yerington	84.21	43	eP	P	13 30 40.3	+0.1
	7.1nm,1.1s						
HSIG		84.47	55	eP	P	13 30 40.3	-1.1
	7.6nm,0.9s						
NV01	Mina Array Sit	84.47	44	eP	P	13 30 40.6	-0.9
NVAR	Mina Array Bea	84.47	44	P	P	13 30 42.0	+0.5
	1.7nm,0.9s,baz=221,slow=8.4,SNR=12						
NV11	Mina Array Sit	84.57	44	eP	P	13 30 41.6	-0.2
	0.3nm,1.1s						
TPNV	Topopah Spring	84.95	46	eP	P	13 30 44.3	+0.5
	2.0nm,0.8s						
KVN	Kaiserville	84.96	44	eP	P	13 30 44.1	+0.3
	4.1nm,1.2s						
SNAA	Sanae	84.99	179	P	P	13 30 42.8	-0.5
SNAA	Sanae	84.99	179	P	P	13 30 42.9	-0.4
	3.3nm,0.5s,baz=207,slow=7.7,SNR=29						
SNAA	Sanae	84.99	179	eP	P	13 30 42.5	-0.8
	22nm,1.1s						
VNA3	Neumayer Olymp	85.19	177	P	P	13 30 43.9	-0.4
VNA1	Neumayer--Stat	85.85	177	P	P	13 30 47.3	0.0
PINE	Pine Mountain	86.09	38	eP	P	13 30 50.2	+1.0
	17nm,1.5s						
TUC	Tucson	86.27	52	eP	P	13 30 51.1	+1.0
	6.3nm,0.9s						
LCMT	Little Creek M	87.00	47	eP	P	13 30 54.3	+0.8
	3.6nm,1.0s						
CCUT	Cedar City	87.21	47	eP	P	13 30 54.9	+0.3
	3.4nm,1.1s						
J08A	Circle Bar Ran	87.26	40	eP	P	13 30 54.9	+0.3
	8.6nm,1.3s						
PSUT	Pine Spring	87.41	46	eP	P	13 30 55.8	+0.3
	7.3nm,1.8s						
WUAZ	Wupatki	87.50	49	eP	P	13 30 56.3	+0.4
	10nm,1.6s						
PKCU	Pink Cliffs	87.86	47	eP	P	13 30 58.9	+1.1
	6.6nm,1.0s						
G08A	Pilot Rock	88.13	38	eP	P	13 30 59.0	+0.4
	6.0nm,1.1s						
PLCA	Paso Flores	88.44	134	P	P	13 31 01.3	+1.0
	2.9nm,0.9s,baz=310,slow=4.3,SNR=6.5						
PLCA	Paso Flores	88.44	134	eP	P	13 31 01.0	+0.8
	50nm,1.8s						
MFID	Camas Ranch	88.87	41	eP	P	13 31 02.6	+0.5
	4.8nm,1.0s						
CM01	Chiang Mai Arr	89.45	290	eP	P	13 31 06.0	+0.8
CM31	Chiang Mai Arr	89.48	290	eP	P	13 31 05.3	0.0
CMAR	Chiang Mai Arr	89.48	290	P	P	13 31 06.2	+0.9
	1.9nm,0.9s,baz=125,slow=4.1,SNR=6.5						
F10A	Beach Ranch, E	89.51	38	eP	P	13 31 04.7	-0.3
	2.9nm,0.9s						
TMUT	Trail Mountain	89.57	46	eP	P	13 31 06.5	+0.9
	8.0nm,0.8s						
HLID	Hailey	89.81	41	eP	P	13 31 07.0	+0.5
	2.6nm,1.0s						
HVU	Hansel Valley	89.86	44	eP	P	13 31 06.2	-0.5
	3.7nm,0.8s						
SRU	San Rafael Swe	89.93	47	eP	P	13 31 06.0	-1.2
	7.0nm,0.9s						
MNTX	Cornudas Mount	89.97	55	eP	P	13 31 07.8	+0.5
	3.3nm,0.9s						
TX31	Lajitas Ar. Si	90.20	58	eP	P	13 31 08.9	+0.4
TXAR	Lajitas Array	90.20	58	P	P	13 31 09.8	+1.2
	2.6nm,0.8s,baz=211,slow=6.5,SNR=41						
TCUT	Toone Canyon	90.38	45	eP	P	13 31 10.1	+0.8
	12nm,1.0s						
HWUT	Hardware Ranch	90.53	44	eP	P	13 31 10.0	+0.1
	3.2nm,0.8s						
ANMO	Albuquerque	90.70	52	eP	P	13 31 11.0	+0.2
	3.3nm,1.1s						
ILAR	Eielson Array	91.70	14	P	P	13 31 13.5	-1.0
	0.3nm,0.6s,baz=224,slow=5.9,SNR=7.2						
S22A	4UR Ranch, Cre	91.77	49	eP	P	13 31 15.7	-0.2
	3.0nm,0.9s						
SMCO	Snowmass	92.36	48	eP	P	13 31 18.5	-0.1
	1.7nm,0.8s						
PD31	Pinedale Array	92.41	44	eP	P	13 31 17.7	-0.9
PDAR	Pinedale Array	92.41	44	P	P	13 31 18.8	+0.2
	0.9nm,0.7s,baz=204,slow=3.3,SNR=8.7						
PDAR	Pinedale Array	92.41	44	eP	P	13 31 17.6	-0.9
MK32	Makanchi Array	111.98	313	ePKiKP	PKiKP	13 36 37.6	-1.5
MK32				ePKKPab	PKKPab	13 47 43.4	+1.1
MKAR	Makanchi Array	111.98	313	PKiKP	PKiKP	13 36 37.6	-1.5
	0.6nm,0.6s,baz=149,slow=1.6,SNR=7.2						
MKAR				PKKPab	PKKPab	13 47 43.4	+1.1
	0.6nm,0.6s,baz=263,slow=4.8,SNR=4.9						
KURK	Kurchatov	115.01	317	ePKPdf	PKPdf	13 36 43.8	-0.9
KURBB	Kurchatov Arra	115.06	316	PKP	PKPdf	13 36 43.8	-1.0
	0.9nm,0.6s,baz=109,slow=2.1,SNR=8.9						
BVAR	Borovoye Array	120.24	319	PKP	PKPdf	13 36 54.1	-0.6
	1.3nm,0.4s,baz=107,slow=1.9,SNR=11						
AKTO	Aktyubinsk	128.11	316	PKP	PKPdf	13 37 09.1	-0.8
	1.6nm,0.6s,baz=60,slow=7.1,SNR=5.2						
ARA0	ARCESS Array S	131.58	348	ePKPdf	PKPdf	13 37 15.0	-0.9
ARA0				eSKPbc	SKPbc	13 39 51.6	+0.1
ARCES	ARCESS Array B	131.58	348	PKP	PKPdf	13 37 15.0	-0.9
	1.9nm,0.7s,baz=27,slow=0.5,SNR=8.0						
ARCES				SKPbc	SKPbc	13 39 51.6	+0.1
	2.2nm,0.9s,baz=47,slow=4.0,SNR=3.7						
FIA0	FINESS Array S	138.16	342	ePKPpre	PKPpre	13 37 18.1	
FIA0				ePKPdf	PKPdf	13 37 28.1	-0.2
FIA0				eSKPbc	SKPbc	13 40 12.0	-0.3
FINES	FINESS Array B	138.16	342	PKhKP	PKPpre	13 37 18.1	
	1.2nm,0.7s,baz=98,slow=3.9,SNR=7.7						
FINES				PKP	PKPdf	13 37 28.1	-0.2
	0.9nm,0.3s,baz=103,slow=4.7,SNR=6.2						
FINES				SKPbc	SKPbc	13 40 12.0	-0.3
	3.2nm,0.6s,baz=43,slow=3.3,SNR=10						
NB2	NORSAR Subarra	141.77	351	PKP	PKPpre	13 37 30.2	
	comp=Z,0.8nm,0.5s,baz=13,slow=3.1						
NB200	NORSAR Array S	141.77	351	ePKPpre	PKPpre	13 37 30.4	
NB200				eSKPdf	SKPdf	13 40 18.9	+0.2
NOA	NORSAR Array B	141.77	351	PKhKP	PKPpre	13 37 30.4	
	comp=Z,1.1nm,0.6s,baz=16,slow=4.7,SNR=6.9						

NOA				SKP		13 40 18.9	
	comp=Z,0.5nm,0.7s,baz=13,slow=4.1,SNR=3.6						
HFS	**Hagfors**	**142.24**	**349**	PKhKP	PKPpre	13 37 31.7	
	comp=Z,8.6nm,0.3s,baz=61,slow=3.6,SNR=101						
AKASG	**Malin Array Be**	**144.74**	**328**	PKP	PKPdf	13 37 39.9	-0.5
	comp=Z,3.2nm,0.5s,baz=47,slow=4.5,SNR=14						
AKASG				SKPbc	SKPbc	13 40 28.9	-0.2
	comp=Z,0.5nm,0.3s,baz=52,slow=2.7,SNR=5.3						
AKBB	**Malin Array Si**	**144.74**	**328**	*e*PKPdf	PKPdf	13 37 39.8	-0.5
KIEV	**Kiev**	**144.75**	**328**	*e*PKPdf	PKPdf	13 37 39.9	-0.5
AK11	**Malin Array Si**	**144.78**	**328**	*e*PKPdf	PKPdf	13 37 39.6	-0.9
ASF	**Jabal al Asfar**	**146.47**	**293**	PKPbc	PKPbc	13 37 46.0	-0.5
	comp=Z,2.1nm,0.6s,baz=20,slow=2.8,SNR=4.8						
BR101	**Keskin Array S**	**147.44**	**308**	*e*PKPbc	PKPbc	13 37 48.8	-0.2
BR101				*e*PKPab	PKPab	13 37 53.0	+0.2
BR101				*e*pPKPdf	pPKPbc	13 39 52.7	-0.3
BR131	**Keskin Array S**	**147.44**	**308**	*e*PKPbc	PKPbc	13 37 48.7	-0.2
BRTR	**Keskin Array B**	**147.44**	**308**	PKPbc	PKPbc	13 37 48.8	-0.2
	comp=Z,2.5nm,0.5s,baz=138,slow=4.8,SNR=7.0						
BRTR				PKPab	PKPab	13 37 53.0	+0.2
	comp=Z,2.7nm,0.5s,baz=98,slow=4.0,SNR=12						
BRTR				pPKPbc	pPKPbc	13 39 52.7	-0.3
	comp=Z,0.8nm,0.8s,baz=132,slow=2.1,SNR=2.9						
MMAI	**Mount Meron Ar**	**147.63**	**295**	PKPbc	PKPbc	13 37 50.5	+1.0
	comp=Z,6.1nm,0.4s,baz=78,slow=6.5,SNR=16						
BUR08	**Bucovina Ar. S**	**148.73**	**326**	*e*PKPbc	PKPbc	13 37 52.6	+0.7
BUR04	**Bucovina Ar. S**	**148.74**	**326**	*e*PKPdf	PKPdf	13 37 46.8	-0.5
BUR04				*e*PKPbc	PKiKP	13 37 52.6	-0.3
CRVS	**Cervenica-Dubn**	**149.61**	**332**	*e*PKP	PKPbc	13 37 54.4	+0.6
LANS	**Liptovska Anna**	**150.25**	**334**	*e*PKP	PKPbc	13 37 56.9	+1.6
CLL	**Collm**	**150.57**	**343**	*i* PKPbc	PKPbc	13 37 55.7	-0.2
	comp=Z,10.0nm,0.7s						
CLL				*i* PKPab	PKPab	13 38 04.8	-0.3
	comp=Z,4.0nm,0.6s						
CLL				*e*pPKPab	pPKPab	13 40 05.0	-0.3
CLL	**Collm**	**150.57**	**343**	*e*PKPbc	PKPbc	13 37 55.3	-0.6
BRG	**Berggiesshubel**	**150.70**	**342**	*e*PKP	PKPbc	13 37 56.5	+0.2
	comp=Z,6.9nm,0.5s						
BRG				*e*		13 38 00.7	
	comp=Z,3.1nm,0.6s						
BRG				*e*		13 40 06.8	
	comp=Z,8.2nm,1.3s						
VYHS	**Vyhne**	**151.03**	**334**	*e*PKP	PKPbc	13 37 57.5	+0.4
VYHS				*e*		13 38 07.1	
MODS	**Modra-Piesok**	**151.74**	**335**	*e*PKP	PKPbc	13 37 59.3	+0.6
GERES	**GERESS Array B**	**152.58**	**340**	PKPbc	PKPbc	13 37 59.6	-1.1
	comp=Z,0.4nm,0.4s,baz=352,slow=4.0,SNR=4.1						
GERES				pPKPbc	pPKPbc	13 40 06.1	+0.1
	comp=Z,0.4nm,0.2s,baz=51,slow=3.1,SNR=1.7						
DAVOX	**Davos/Dischmat**	**155.54**	**344**	PKPab	PKPab	13 38 25.6	-1.0
	comp=Z,4.1nm,0.6s,baz=0.0,slow=0.0,SNR=5.4						
DBIC	**Dimbokro**	**162.53**	**163**	PKPab	PKPab	13 38 58.3	+0.7
	comp=Z,3.8nm,0.7s,baz=153,slow=6.8,SNR=3.6						
TOA0	**Torodi Ar. Sit**	**169.51**	**189**	*e*PKPdf	PKPdf	13 38 09.5	-2.1
TOA0				*e*PKPab	PKPab	13 39 26.7	-1.7
TORD	**Torodi Ar. Bea**	**169.51**	**189**	PKP	PKPdf	13 38 10.3	-1.3
	comp=Z,2.6nm,1.1s,baz=153,slow=0.6						
TORD				PKPab	PKPab	13 39 26.7	-1.6
	baz=158,slow=4.9						
TOA1	**Torodi Ar. Sit**	**169.52**	**189**	*e*PKPdf	PKPdf	13 38 10.3	-1.3
TOA1				*e*PKPab	PKPab	13 39 26.7	-1.7

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*ISCJB **31** 13:26:57.5±0.6, 40°.06N±0°.04×38°.86E±0°.04, h9km±9km, Error ellipse: s-maj=6.3km s-min=5.3km az=174.1*
*CSEM **31** 13:26:57.5±0.3, 40°.04N×38°.87E, h10km, ML2.6, Error ellipse: s-maj=6.7km s-min=5.0km az=155.0*
*DDA **31** 13:26:57.2, 40°.02N×38°.84E, h7km, Ml2.6*
*ISK **31** 13:26:58.4, 40°.13N×38°.91E, h22km, ML2.2/2*
ISC 31 13:26:56.8±1.3, **40°.03N**±0°.04×**38°.92E**±0°.04, **h4**km±12km, **n14**, σ**0s.37**/25, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KELT	**Kelkit**	**0.29**	**64**	*i* P	Pb	13 27 04.5	-0.1
KELT				*i* S	Sb	13 27 09.2	-0.6
KELT	**Kelkit**	**0.29**	**64**	P	Pb	13 27 04.5	-0.1
KELT				S	Sb	13 27 09.2	-0.6
SUSE	**Susehri**	**0.58**	**289**	*i* P	Pg	13 27 07.5	-0.4
SUSE				*i* S	Sg	13 27 15.5	+0.1
SUSE	**Susehri**	**0.58**	**289**	P	Pg	13 27 07.5	-0.4
SUSE				S	Sg	13 27 15.5	+0.1
REFA	**Refahiye_ERZ˜**	**0.64**	**191**	*i* P	Pg	13 27 00.5	-8.6
REFA				*i* S	Sg	13 27 02.4	-15
ERZN	**Erzincan**	**0.76**	**125**	PG	Pn	13 27 14.9	+0.6
KEMA	**Kemaliye**	**0.82**	**204**	*i* P	Pg	13 27 12.2	-0.4
KEMA				*i* S	Sb	13 27 25.6	+0.5
KEMA	**Kemaliye**	**0.82**	**204**	P	Pg	13 27 12.2	-0.4
KEMA				S	Sb	13 27 25.6	+0.5
ESPY	**Espiye-Giresun**	**0.90**	**351**	PG	Pg	13 27 14.2	+0.1
ESPY				SG	Sg	13 27 26.2	+0.4
ESPY	**Espiye-Giresun**	**0.90**	**351**	*e*Pg	Pg	13 27 14.2	+0.1
ESPY				*e*Sg	Sg	13 27 26.2	+0.4
BAYT	**Ayd˜–ntepe-Bay**	**1.01**	**68**	PG	Pn	13 27 18.0	+0.2
BAYT				SG	Sb	13 27 30.6	+0.1
BAYT	**Ayd˜–ntepe-Bay**	**1.01**	**68**	*e*Pg	Pn	13 27 18.0	+0.2
BAYT				*e*Sg	Sb	13 27 30.6	+0.1
SVSK	**Karacayir**	**1.48**	**266**	PN	Pb	13 27 24.8	0.0
SVSK				SN	Sn	13 27 43.5	-0.4
SVSK	**Karacayir**	**1.48**	**266**	*e*Pn	Pb	13 27 24.8	0.0
SVSK				*e*Sn	Sn	13 27 43.5	-0.4

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*IDC **31** 13:28:07.2±0.8, 52°.78S×18°.68E, h0km, mb4.2/8, mb1 4.3/8, mb1mx4.0/52, mbtmp4.3/8, MS3.7/21, Ms1 3.7/21, ms1mx3.5/47, Error ellipse: s-maj=37.5km s-min=17.5km az=88.0*
*NEIC **31** 13:28:07.7±0.4, 52°.77S×18°.43E, h10km, mb4.7/4, Error ellipse: s-maj=21.5km s-min=12.9km az=84.0*
ISC 31 13:28:08.3±0.7, **52°.6S**±0°.1×**18°.5E**±0°.2, **h10**km, **n66**, σ**1s.56**/41, **mb4.3**/8, **MS3.7**/21, **3C**, **Southwest of Africa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SYO	**Syowa Base**	**19.18**	**157**⇑	*e*pPn	Pn	13 32 32.0	-0.5
SYO	**Syowa Base**	**19.18**	**157**⇑	*e*P	Pn	13 32 37.0	+4.5
SYO	**Syowa Base**	**19.18**	**157**⇑	*e*PnPn	Pn	13 32 43.6	+11
SUR	**Sutherland**	**20.32**	**6**	P	Pn	13 32 47.8	+1.2
	7.3nm,1.0s,baz=120,slow=20,SNR=2.1						
SUR				LR	LR	13 39 05.8	
	comp=Z,216nm,18.5s,baz=177,slow=32						
SUR	**Sutherland**	**20.32**	**6**	*e*P	Pn	13 32 47.6	+1.1
	69nm,1.4s						
SNAA	**Sanae**	**21.30**	**198**	P	P	13 32 55.5	+0.8
SNAA	**Sanae**	**21.30**	**198**	P	P	13 32 59.0	+4.3
SNAA	**Sanae**	**21.30**	**198**	P	P	13 32 55.5	+0.8
	11nm,0.8s,baz=21,slow=14,SNR=14						
SNAA				LR	LR	13 39 07.4	
	comp=Z,170nm,21.5s,baz=12,slow=31						
SNAA	**Sanae**	**21.30**	**198**	*e*P	P	13 32 54.8	+0.1
	22nm,1.1s						
VNA1	**Neumayer--Stat**	**21.74**	**204**	P	P	13 33 00.5	+1.1
VNA1	**Neumayer--Stat**	**21.74**	**204**	P	P	13 33 03.2	+3.8
VNA3	**Neumayer Olymp**	**22.48**	**204**	P	P	13 33 06.7	-0.7
VNA3	**Neumayer Olymp**	**22.48**	**204**	P	P	13 33 08.6	+1.3
BOSA	**Boshof**	**24.52**	**14**	P	P	13 33 30.9	+3.0
	15nm,0.7s,baz=187,slow=18,SNR=16						
BOSA				LR	LR	13 41 16.0	
	comp=Z,220nm,21.4s,baz=207,slow=32						
BOSA	**Boshof**	**24.52**	**14**	*e*P	P	13 33 30.4	+2.5
	17nm,0.8s						
MAW	**Mawson**	**25.93**	**142**	P	P	13 33 39.7	-0.5
	5.1nm,0.8s,baz=288,slow=9.1,SNR=10						
MAW				LR	LR	13 41 57.6	
	comp=Z,58nm,21.7s,baz=248,slow=32						
MAW	**Mawson**	**25.93**	**142**	*e*P	P	13 33 39.7	-0.5
	1.4nm,0.9s						
LBTB	**Lobatse**	**28.11**	**14**	LR	LR	13 43 23.5	
	comp=Z,256nm,19.3s,baz=180,slow=32						
TSUM	**Tsumeb**	**33.38**	**358**	LR	LR	13 46 14.8	
	comp=Z,195nm,21.1s,baz=154,slow=32						
QSPA	**South Pole Qui**	**37.59**	**180**	P	P	13 35 22.3	-0.3
	13nm,0.9s,baz=244,slow=6.6,SNR=27						
QSPA				LR	LR	13 50 02.7	
	comp=Z,214nm,20.5s,baz=252,slow=35						
QSPA	**South Pole Qui**	**37.59**	**180**	*e*P	P	13 35 21.8	-0.8
	12nm,0.8s						
PMSA	**Palmer Station**	**41.39**	**220**	LR	LR	13 50 20.1	
	comp=Z,314nm,18.9s,baz=98,slow=32						
VNDA	**Vanda**	**48.12**	**170**	P	P	13 36 46.6	-1.0
	1.3nm,0.8s,baz=232,slow=8.2,SNR=4.0						
VNDA	**Vanda**	**48.12**	**170**	*e*P	P	13 36 47.0	-0.6
H10S2	**ASCENSION HYDR**	**51.19**	**316**	T	T	14 32 37.1	
	baz=155,slow=75,SNR=12						
H10S3	**ASCENSION HYDR**	**51.21**	**316**	T	T	14 32 36.0	
	baz=155,slow=75,SNR=13						
H10S1	**ASCENSION HYDR**	**51.21**	**316**	T	T	14 32 37.4	
	baz=155,slow=75,SNR=11						
CPUP	**Villa Florida**	**61.08**	**264**	LR	LR	13 59 53.8	
	comp=Z,46nm,20.0s,baz=196,slow=31						
DBIC	**Dimbokro**	**62.34**	**334**	LR	LR	14 00 12.7	
	comp=Z,42nm,20.1s,baz=126,slow=31						
H01W2	**Cape Leeuwin H**	**66.27**	**117**	T	T	14 51 25.8	
	baz=219						
H01W3	**Cape Leeuwin H**	**66.28**	**117**	T	T	14 51 26.9	
	baz=219						
H01W1	**Cape Leeuwin H**	**66.28**	**117**	T	T	14 51 25.2	
	baz=219						
ATD	**Arta Tunnel**	**67.25**	**26**	LR	LR	14 07 25.8	
	comp=Z,65nm,18.9s,baz=302,slow=35						
KOWA	**Kowa**	**69.64**	**337**	LR	LR	14 03 47.9	
	comp=Z,43nm,20.1s,baz=184,slow=31						
LPAZ	**La Paz**	**75.21**	**263**	LR	LR	14 08 52.3	
	comp=Z,45nm,21.4s,baz=141,slow=32						
ASAR	**Alice Springs**	**85.59**	**124**	P	P	13 40 46.4	-0.6
	1.8nm,1.0s,baz=207,slow=3.8,SNR=11						
AS01	**Alice Springs**	**85.62**	**124**	*e*P	P	13 40 45.7	-1.4
MMAI	**Mount Meron Ar**	**86.56**	**14**	LR	LR	14 18 22.4	
	comp=Z,43nm,19.8s,baz=90,slow=35						
IDI	**Anoyia**	**87.74**	**5**	LR	LR	14 21 56.3	
	comp=Z,45nm,20.6s,baz=38,slow=37						
WR1	**Warramunga Arr**	**88.91**	**122**	*e*P	P	13 41 01.8	-1.2
	25nm,1.5s						
WRA	**Warramunga Arr**	**88.91**	**122**	P	P	13 41 01.8	-1.2
	0.7nm,0.8s,baz=216,slow=4.1,SNR=4.1						
BRTR	**Keskin Array B**	**92.92**	**12**	LR	LR	14 23 29.0	
	comp=Z,20nm,20.6s,baz=186,slow=36						
GNI	**Garni**	**95.18**	**20**	LR	LR	14 26 40.7	
	comp=Z,31nm,18.4s,baz=210,slow=37						
GEYT	**Alibeck**	**96.55**	**30**	LR	LR	14 25 26.3	
	comp=Z,18nm,21.1s,baz=240,slow=36						
MLR	**Muntele Rosu**	**97.96**	**5**	LR	LR	14 30 06.5	
	comp=Z,38nm,18.6s,baz=184,slow=38						
KBZ	**Khabaz**	**98.27**	**18**	LR	LR	14 25 01.0	
	comp=Z,41nm,21.7s,baz=188,slow=35						
DAVOX	**Davos/Dischmat**	**99.32**	**354**	LR	LR	14 28 03.7	
	comp=Z,23nm,19.5s,baz=81,slow=36						
SONA0	**Songino Array**	**124.80**	**55**	*e*PKPdf	PKPdf	13 47 06.2	-1.3
SONM	**Songino Array**	**124.80**	**55**	PKP	PKPdf	13 47 06.2	-1.3
	0.7nm,0.9s,baz=225,slow=1.4,SNR=3.8						
PD31	**Pinedale Array**	**144.40**	**275**	*e*PKPdf	PKPab	13 47 41.2	-1.2
PDAR	**Pinedale Array**	**144.40**	**275**	PKP	PKPab	13 47 41.9	-0.5
	1.2nm,0.7s,baz=124,slow=4.5,SNR=12						
PDAR	**Pinedale Array**	**144.40**	**275**	*e*PKPdf	PKPab	13 47 41.4	-1.1
BW06	**Boulder Array**	**144.40**	**275**	*e*PKPdf	PKPab	13 47 41.5	-0.9
PSUT	**Pine Spring**	**144.48**	**266**	*e*PKPdf	PKPab	13 47 42.4	-0.4
DUG	**Dugway, Tooele**	**144.88**	**269**	*e*PKPdf	PKPbc	13 47 43.9	-0.3
HWUT	**Hardware Ranch**	**144.96**	**272**	*e*PKPdf	PKPbc	13 47 43.3	-1.2
R11A	**Troy Canyon, C**	**145.42**	**264**	*e*PKPbc	PKPdf	13 47 45.5	-0.6
NV11	**Mina Array Sit**	**147.03**	**262**	*e*PKPbc	PKPbc	13 47 50.9	+0.1
NV01	**Mina Array Sit**	**147.11**	**262**	*e*PKPbc	PKPbc	13 47 50.8	-0.4
NVAR	**Mina Array Bea**	**147.11**	**262**	PKPbc	PKPbc	13 47 51.6	+0.5
	1.9nm,0.8s,baz=143,slow=4.3,SNR=13						
KVN	**Kaiserville**	**147.38**	**263**	*e*PKPbc	PKPbc	13 47 51.5	-0.3
BMO	**Blue Mountains**	**150.24**	**273**	*e*PKPbc	PKPbc	13 47 58.6	-0.2
G08A	**Pilot Rock**	**151.47**	**272**	*e*PKPbc	PKPbc	13 48 01.9	+0.2
FL2	**Flat Top 2**	**153.99**	**271**	*e*PKPdf	PKPdf	13 47 59.0	-0.3
IL1	**Eielson Array**	**165.72**	**334**	*e*PKPab	PKPab	13 49 12.0	+0.9
ILAR	**Eielson Array**	**165.72**	**334**	PKPab	PKPab	13 49 10.6	-0.5
	0.7nm,0.9s,baz=37,slow=3.3,SNR=6.2						

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*NIED **31** 13:35:00, 44°.00N×148°.00E, h65km, Mw3.6 Best double couple: M0 3.22000×10^14 NP1:ϕs126.00000°, δ24.00000°, λ-26.00000°. NP2:ϕs240.00000°, δ80.00000°, λ-112.00000°.*
*MOS **31** 13:35:41.9±0.8, 44°.38N×148°.37E, h37km, mb4.2/1, Error ellipse: s-maj=25.2km s-min=15.7km az=161.6*
*SKHL **31** 13:35:41.9±0.2, 44°.38N×148°.37E, h37km±3km, mb4.0/6*
*JMA **31** 13:35:43.2±0.3, 44°.03N×147°.98E, h0km, M4.1*
ISC 31 13:35:42.0±2.6, **44°.40N**±0°.07×**148°.3E**±0°.2, **h29**km±15km, **n22**, σ**1s.15**/39, **1C-3D**, **Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.88**	**341**	*i* P	Pn	13 35 58.0	-0.4
KUR				AMB	AMB	13 35 59.0	
	199nm,0.2s						
KUR				AMB	AMB	13 35 59.0	
	174nm,0.2s						
KUR				AMB	AMB	13 35 59.0	
	373nm,0.2s						
KUR				*i* S	Sb	13 36 10.0	-0.1
KUR				A	A	13 36 12.0	
	2μm,0.3s						
KUR				A	A	13 36 12.0	
	689nm,0.3s						
KUR	**Kuril'sk**	**0.88**	**341**	*d i*PN	Pn	13 35 58.9	+0.5
KUR				*i* S	Sn	13 36 10.2	0.0
KUR				pmax	pmax		
	comp=Z,373nm,0.3s						
KUR				pmax	pmax		
	comp=N,199nm,0.1s						
KUR				pmax	pmax		
	comp=E,174nm,0.1s						
KUR				smax	smax		
	comp=N,2μm,0.3s						
KUR				smax	smax		
	comp=E,689nm,0.3s						
SHO	**Shikotan**	**1.16**	**243**	*i* P	Pb	13 36 03.0	-0.5
SHO				AMB	AMB	13 36 05.0	
	comp=E,12nm,0.2s						
SHO				AMB	AMB	13 36 05.0	
	comp=E,37nm,0.2s						
SHO				AMB	AMB	13 36 05.0	
	comp=E,50nm,0.2s						
SHO				*i* S	Sn	13 36 16.0	-1.2
SHO				A	A	13 36 21.0	
	comp=E,407nm,0.2s						
SHO				A	A	13 36 21.0	
	comp=E,468nm,0.2s						
SHO	**Shikotan**	**1.16**	**243**	*c i*PN	Pb	13 36 03.2	-0.3
SHO				*i* S	Sn	13 36 16.6	-0.6
SHO				pmax	pmax		
	comp=N,12nm,0.1s						
SHO				pmax	pmax		
	comp=E,37nm,0.1s						
SHO				pmax	pmax		
	comp=Z,50nm,0.1s						
SHO				smax	smax		
	comp=N,407nm,0.2s						
SHO				smax	smax		
	comp=E,468nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**1.77**	**259**	*i* P	Pn	13 36 11.0	+0.4
YUK				AMB	AMB	13 36 13.0	
	comp=E,62nm,0.2s						
YUK				AMB	AMB	13 36 13.0	
	comp=E,70nm,0.2s						
YUK				AMB	AMB	13 36 13.0	
	comp=E,14nm,0.2s						
YUK				*e*S	Sn	13 36 31.0	-1.1
YUK				A	A	13 36 34.0	
	comp=E,319nm,0.2s						
YUK				A	A	13 36 34.0	
	comp=E,104nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**1.77**	**259**	*d i*PN	Pn	13 36 11.1	+0.4
YUK				*e*S	Sn	13 36 31.9	-0.2
YUK				pmax	pmax		
	comp=Z,142nm,0.2s						
YUK				pmax	pmax		
	comp=N,62nm,0.1s						
YUK				pmax	pmax		
	comp=E,70nm,0.1s						
YUK				smax	smax		
	comp=N,319nm,0.2s						
YUK				smax	smax		
	comp=E,104nm,0.2s						
LAGR	**Lagunnoye**	**1.82**	**260**	*e*P	Pn	13 36 11.9	+0.6
LAGR				AMB	AMB	13 36 16.0	
	comp=E,62nm,0.2s						
LAGR				AMB	AMB	13 36 16.0	
	comp=E,13nm,0.2s						
LAGR				AMB	AMB	13 36 16.0	
	comp=E,16nm,0.2s						
LAGR				*e*S	Sn	13 36 32.0	-1.3
LAGR				A	A	13 36 38.0	
	comp=E,98nm,0.2s						
LAGR				A	A	13 36 38.0	
	comp=E,602nm,0.2s						
LAGR	**Lagunnoye**	**1.82**	**260**	*e*PN	Pn	13 36 11.8	+0.5
LAGR				*e*S	Sn	13 36 32.6	-0.7
LAGR				pmax	pmax		
	comp=N,62nm,0.1s						
LAGR				pmax	pmax		
	comp=Z,163nm,0.1s						
LAGR				pmax	pmax		
	comp=E,13nm,0.2s						
LAGR				smax	smax		
	comp=N,977nm,0.5s						
LAGR				smax	smax		
	comp=E,602nm,0.2s						
GRPR	**Tuman**	**1.84**	**258**	*e*P	Pn	13 36 11.0	-0.6
GRPR				AMB	AMB	13 36 14.0	
	comp=E,14nm,0.2s						
GRPR				*e*S	Sn	13 36 33.0	-0.9
GRPR				A	A	13 36 35.0	
	comp=E,523nm,0.4s						
GRPR				A	A	13 36 35.0	
	comp=E,400nm,0.4s						
GRPR	**Tuman**	**1.84**	**258**	*e*PN	Pn	13 36 11.8	+0.2
GRPR				*e*S	Sn	13 36 33.0	-0.9
GRPR				pmax	pmax		
	comp=Z,144nm,0.1s						
GRPR				smax	smax		
	comp=N,523nm,0.4s						
GRPR				smax	smax		
	comp=E,400nm,0.4s						
GLVR	**Golovnino**	**2.09**	**252**	*e*P	Pn	13 36 15.0	0.0
GLVR				AMB	AMB	13 36 20.0	
	comp=E,13nm,0.2s						
GLVR				*e*S	Sn	13 36 39.0	-1.0
GLVR				A	A	13 36 44.0	
	comp=E,51nm,0.2s						
GLVR				A	A	13 36 44.0	
	comp=E,647nm,0.2s						
GLVR	**Golovnino**	**2.09**	**252**	*e*PN	Pn	13 36 15.5	+0.5
GLVR				*e*S	Sn	13 36 39.6	-0.4
GLVR				pmax	pmax		
	comp=Z,129nm,0.1s						
GLVR				smax	smax		
	comp=N,505nm,0.2s						
GLVR				smax	smax		
	comp=E,647nm,0.2s						
NEM2	**Nemuro 2**	**2.10**	**241**	P	Pn	13 36 15.1	-0.1
NEM2				*e*S	Sn	13 36 38.6	-1.7
JRA	**Rausu**	**2.31**	**260**	P	Pn	13 36 19.6	+1.5
JRA				*e*S	Sn	13 36 46.8	+1.3
JNK	**Nakash**	**2.69**	**254**	P	Pn	13 36 24.6	+1.3
JNK				*e*S	Sn	13 36 55.1	+0.3
JAK	**Akkeshi**	**2.95**	**243**	P	Pn	13 36 27.3	+0.5
JAK				*e*S	Sn	13 37 00.2	-1.0
JTKR	**Abashiri--Toko**	**3.17**	**264**	P	Pn	13 36 32.2	+2.4
JAR	**Ashorobuto**	**3.44**	**253**	P	Pn	13 36 35.4	+1.8
ERM	**Erimo**	**4.43**	**239**	*d i*PN	Pn	13 36 50.2	+3.0
YSS	**Yuzh-Sakhalins**	**4.63**	**305**	*i* PN	Pn	13 36 50.9	+1.0
JKB	**Kayabe**	**5.86**	**247**	P	Pn	13 37 08.3	+1.5
JKB				*e*S	Sn	13 38 10.9	-2.1
JOT	**Ohata**	**6.10**	**243**	P	Pn	13 37 10.7	+0.5

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*IDC **31** 13:51:00.1±1.8, 10°.00S×159°.93E, h0km, mb3.7/5, mb1 3.9/5, mb1mx3.6/50, mbtmp3.7/5, Error ellipse: s-maj=50.6km s-min=9.5km az=102.0*
*ISCJB **31** 13:51:03.2±1.8, 9°.9S±0°.1×159°.9E±0°.3, h32km, mb3.5/5, Error ellipse: s-maj=51.6km s-min=10.2km az=19.8*
ISC 31 13:51:04.8±2.1, **9°.8S**±0°.2×**159°.9E**±0°.4, **h32**km, **n13**, σ**1s.92**/8, **mb3.6**/5, **Bougainville-Solomon Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HNR	**Honiara**	**0.39**	**5**	LR	LR	13 51 10.6	
	comp=Z,63nm,18.5s,baz=142,slow=19						
HNR				Pg	Pb	13 51 11.7	-1.9
	573nm,0.3s,baz=205,slow=5.6,SNR=143						
HNR				Lg	Lg	13 51 18.0	
	5μm,0.3s,baz=207,slow=16,SNR=199						
HNR	**Honiara**	**0.39**	**5**	*i* P	Pb	13 51 11.0	-2.7
HNR				*i* S	Sb	13 51 21.5	+1.8
WRA	**Warramunga Arr**	**26.65**	**245**	P	P	13 56 40.7	-0.3
	1.6nm,1.0s,baz=73,slow=9.6,SNR=6.3						
ASAR	**Alice Springs**	**28.39**	**238**	P	P	13 56 55.6	-1.0
	0.2nm,0.5s,baz=61,slow=10,SNR=6.6						
H11S2	**WAKE ISLAND Hy**	**28.91**	**13**	T	T	14 25 48.3	
	baz=191						
H11S3	**WAKE ISLAND Hy**	**28.91**	**13**	T	T	14 25 48.3	
	baz=191						
H11S1	**WAKE ISLAND Hy**	**28.93**	**13**	T	T	14 25 50.6	
	baz=191						
H11N1	**WAKE ISLAND Hy**	**30.14**	**13**	T	T	14 27 22.4	
	baz=203						
H11N3	**WAKE ISLAND Hy**	**30.15**	**13**	T	T	14 27 21.5	
	baz=203						
H11N2	**WAKE ISLAND Hy**	**30.16**	**13**	T	T	14 27 22.6	
	baz=203						
SONM	**Songino Array**	**74.36**	**326**	P	P	14 02 41.2	+1.6
	0.2nm,0.3s,baz=124,slow=6.7,SNR=2.5						
ILAR	**Eielson Array**	**84.26**	**20**	P	P	14 03 33.7	+0.7
	0.3nm,0.5s,baz=244,slow=5.5,SNR=6.3						
MKAR	**Makanchi Array**	**88.74**	**318**	P	P	14 03 55.9	+0.5
	0.3nm,0.5s,baz=101,slow=7.5,SNR=5.1						

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*IDC **31** 13:52:49.4±0.6, 33°.00S×179°.19W, h0km, mb4.3/11, mb1 4.5/12, mb1mx4.2/46, mbtmp4.4/12, ML4.2/1, MS3.5/13, Ms1 3.5/13, ms1mx3.3/39, Error ellipse: s-maj=22.5km s-min=17.3km az=65.0*
*NEIC **31** 13:52:51.0±0.3, 33°.17S×179°.11W, h10km, mb4.7/11, Error ellipse: s-maj=12.4km s-min=6.2km az=109.0*
*WEL **31** 13:52:52.8±0.8, 33°S±8°×17°9W±2°1, h12km, ML5.4/29*
*ISCJB **31** 13:52:54.2±0.4, 33°.26S±0°.03×179°.16W±0°.09, h45km, mb4.4/15, MS3.5/12, Error ellipse: s-maj=11.6km s-min=3.4km az=19.4*
ISC 31 13:52:55.5±0.5, **33°.26S**±0°.05×**178°.99W**±0°.10, **h45**km, **n150**, σ**1s.79**/130, **mb4.5**/15, **MS3.5**/12, **2C**, **South of Kermadec Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GLKZ	**Green Lake**	**4.09**	**13**	P	Pn	13 53 55.8	+0.2
GLKZ				S	Sn	13 54 41.8	-0.3
RAO	**Raoul Island**	**4.10**	**13**	Sn	Sn	13 54 41.9	-0.5
	70nm,0.3s,baz=125,slow=4.6,SNR=2.4						
MXZ	**Matakaoa Point**	**4.83**	**206**	*e*Pn	Pn	13 54 05.5	-0.1
MXZ	**Matakaoa Point**	**4.83**	**206**	P	Pn	13 54 06.7	+1.1
MXZ				S	Sn	13 54 58.8	-1.5
WMGZ	**Waiomatatini S**	**5.02**	**204**	P	Pn	13 54 09.0	+0.8
WMGZ				S	Sn	13 55 07.6	+2.7
PKGZ	**Pakihiroa**	**5.20**	**206**	P	Pn	13 54 10.9	+0.1
HAZ	**Te Kaha**	**5.20**	**209**	P	Pn	13 54 11.4	+0.7
HAZ				S	Sn	13 55 13.2	+3.8
PUZ	**Puketiti**	**5.30**	**204**	P	Pn	13 54 11.2	-0.9
PUZ				S	Sn	13 55 11.0	-0.9
RUGZ	**Raukumara Rang**	**5.42**	**209**	P	Pn	13 54 14.2	+0.3
TWGZ	**Tauwhareparae**	**5.49**	**206**	P	Pn	13 54 14.7	0.0
TWGZ				S	Sn	13 55 17.7	+1.1
CNGZ	**Carnagh Statio**	**5.69**	**203**	P	Pn	13 54 17.3	-0.2
TKGZ	**Te Karaka**	**5.77**	**205**	P	Pn	13 54 17.6	-0.9
MWZ	**Matawai**	**5.80**	**208**	P	Pn	13 54 19.1	+0.1
MWZ				S	Sn	13 55 24.9	+0.7
OPRZ	**Ohinepanea**	**5.84**	**217**	P	Pn	13 54 21.4	+1.9
MARZ	**Manawahe**	**5.89**	**216**	P	Pn	13 54 22.4	+2.2
TGRZ	**Tauranga**	**5.90**	**220**	P	Pn	13 54 23.4	+3.0
URZ	**Urewera**	**5.91**	**211**	Pn	Pn	13 54 19.5	-0.9
	5.5nm,0.3s,baz=48,slow=4.5,SNR=49						
URZ				Sn	Sn	13 55 25.9	-0.9
	22nm,0.3s,baz=107,slow=19,SNR=8.9						
URZ	**Urewera**	**5.91**	**211**	P	Pn	13 54 19.6	-0.8
URZ				S	Sn	13 55 26.2	-0.6
EDRZ	**Edgecumbe**	**5.95**	**214**	P	Pn	13 54 23.4	+2.2
RAGZ	**Rawiri**	**5.98**	**208**	P	Pn	13 54 20.9	-0.6
KARZ	**Kaharoa**	**6.13**	**218**	P	Pn	13 54 26.2	+2.6
OMRZ	**Omania**	**6.13**	**217**	P	Pn	13 54 26.6	+3.1
KMRZ	**Kaimai**	**6.16**	**221**	P	Pn	13 54 27.7	+3.7
TARZ	**Mount Tarawera**	**6.17**	**215**	P	Pn	13 54 27.8	+3.7
PRGZ	**Paritu Road**	**6.19**	**203**	P	Pn	13 54 25.9	+1.6
MUGZ	**Murupara**	**6.24**	**212**	P	Pn	13 54 25.2	+0.2
RRRZ	**Republican Roa**	**6.25**	**214**	P	Pn	13 54 27.0	+1.9
SNGZ	**Shannon Statio**	**6.26**	**207**	P	Pn	13 54 24.8	-0.6
SNGZ				S	Sn	13 55 34.8	-0.8
RTZ	**Ruatahuna**	**6.26**	**210**	P	Pn	13 54 24.0	-1.4
KNZ	**Kokohu**	**6.35**	**204**	P	Pn	13 54 24.8	-1.7

MHGZ	Mahia Peninsul	6.39	202	P	Pn	13 54 25.8	-1.3
PRRZ	Plateau Road	6.43	214	P	Pn	13 54 28.3	+0.7
OUZ	Omahuta	6.44	250	*e*Pn	Pn	13 54 29.8	+2.0
RAHZ	Arahi	6.47	208	P	Pn	13 54 27.7	-0.5
ALRZ	Allen Road	6.50	214	P	Pn	13 54 29.1	+0.4
MTHZ	Maungataniwha	6.52	210	P	Pn	13 54 29.0	+0.1
WHHZ	Waihua	6.56	207	P	Pn	13 54 29.8	+0.4
MRHZ	Matea Rd	6.69	212	P	Pn	13 54 31.2	-0.1
KUTZ	Kaahu Road	6.70	217	P	Pn	13 54 33.5	+2.2
TLZ	Tolley Road	6.73	220	P	Pn	13 54 34.4	+2.6
NMHZ	Naumai	6.74	209	P	Pn	13 54 31.8	-0.2
ARHZ	Aropaoanui	6.81	207	P	Pn	13 54 33.3	+0.5
BKZ	Black Stump Fm	6.93	210	*e*Pn	Pn	13 54 32.4	-2.1
BKZ	Black Stump Fm	6.93	210	P	Pn	13 54 32.5	-2.0
MCHZ	McNeill Hill	7.08	208	P	Pn	13 54 36.1	-0.5
KWHZ	Kaweka Forest	7.18	210	P	Pn	13 54 36.8	-1.2
HIZ	Hauiti	7.24	222	*e*Pn	Pn	13 54 41.5	+2.8
HIZ	Hauiti	7.24	222	P	Pn	13 54 42.3	+3.6
KRVZ	Karewarewa	7.26	215	P	Pn	13 54 40.2	+1.0
WTVZ	West Tongariro	7.30	215	P	Pn	13 54 40.6	+0.9
KAHZ	Kahuranaki	7.32	206	P	Pn	13 54 37.6	-2.2
NGZ	Ngauruhoe	7.34	215	P	Pn	13 54 41.0	+0.8
BHHZ	Black Hill Sta	7.38	211	P	Pn	13 54 39.3	-1.5
KRHZ	Kereru	7.38	209	P	Pn	13 54 38.9	-1.9
TUVZ	Tukino	7.39	214	P	Pn	13 54 41.3	+0.3
FWVZ	Far West T-bar	7.43	215	P	Pn	13 54 41.9	+0.4
MOVZ	Moawhango	7.46	213	P	Pn	13 54 40.1	-1.7
MTVZ	Mangateitei	7.57	215	P	Pn	13 54 42.5	-0.8
PNHZ	Pukenui	7.68	209	P	Pn	13 54 42.4	-2.4
PRHZ	Porangahau	7.82	205	P	Pn	13 54 45.3	-1.4
TSZ	Takapari Road	7.90	209	P	Pn	13 54 45.4	-2.5
BFZ	Birch Farm	8.33	206	*e*Pn	Pn	13 54 53.1	-0.6
SNZO	South Karori	9.47	210	*e*Pn	Pn	13 55 04.8	-4.5
THZ	Tophouse	10.64	215	*e*Pn	Pn	13 55 22.0	-3.4
KHZ	Kahutara	10.88	211	*e*Pn	Pn	13 55 24.2	-4.3
LTZ	Lake Taylor	11.73	213	*e*Pn	Pn	13 55 36.0	-4.2
OXZ	Oxford	12.26	212	*e*Pn	Pn	13 55 41.2	-6.3
MQZ	McQueen’s Vall	12.30	210	*e*Pn	Pn	13 55 41.2	-6.8
RPZ	Rata Peaks	13.02	214	Sn	Sn	13 58 06.5	-15
	1.4nm,0.3s,baz=127,slow=20,SNR=3.2						
RPZ	Rata Peaks	13.02	214	*e*Pn	Pn	13 55 51.9	-5.9
RPZ				Sn	Sn	13 58 06.5	-15
FOZ	Fox Glacier	13.48	217	*e*Pn	Pn	13 55 59.1	-5.0
ODZ	Otahua Downs	14.23	211	*e*Pn	Pn	13 56 08.5	-5.8
WKZ	Wanaka	14.82	215	*e*Pn	Pn	13 56 15.5	-6.6
MLZ	Mavora Lakes	15.65	216	*e*Pn	Pn	13 56 27.0	-5.9
	123nm,1.7s						
WHZ	Wether Hill Ro	16.11	215	*e*Pn	Pn	13 56 38.0	-0.8
	98nm,1.5s						
PYZ	Puysegur Point	16.92	216	*e*Pn	Pn	13 56 46.8	-2.2
	99nm,1.2s						
DZM	Mont Dzumac	17.03	307	*e*LR	LR	14 00 37.0	
	603nm,25.9s						
DZM	Mont Dzumac	17.03	307	LR	LR	14 01 54.5	
	comp=Z,400nm,21.2s,baz=104,slow=33						
RAR	Rarotonga	20.84	60	LR	LR	14 06 35.3	
	comp=Z,26nm,18.8s,baz=256,slow=40						
TBI	Tubuai	27.73	77	*e*LR	LR	14 05 43.7	
	242nm,29.0s						
TBI	Tubuai	27.73	77	*e*T	T	14 27 45.7	
	36nm,0.3s						
PAE	Paea	30.63	67	*e*T	T	14 31 11.1	
	9.2nm,0.2s						
PPT2	Papeete2	30.67	67	*e*LR	LR	14 07 14.0	
	174nm,26.5s						
PPT2	Papeete2	30.67	67	*e*T	T	14 31 14.0	
	13nm,0.3s						
PPT	Papeete	30.68	67	LR	LR	14 08 08.4	
	comp=Z,58nm,21.9s,baz=188,slow=30						
TVO	Taravao	30.81	67	*e*T	T	14 31 24.2	
	1.5nm,0.4s						
TIAR	Tiarei	30.87	67	*e*T	T	14 31 27.7	
	1.7nm,0.3s						
PMOR	Pomariorio Ree	33.52	65	*e*T	T	14 34 43.9	
	4.8nm,0.3s						
CTA	Charters Tower	33.55	284	P	P	13 59 30.1	-1.1
	3.3nm,0.6s,baz=106,slow=11,SNR=8.5						
VAH	Vaihoa	33.58	65	*e*T	T	14 34 49.2	
	33nm,0.2s						
PMG	Port Moresby	39.17	300	P	P	14 00 15.4	-3.7
	17nm,0.7s,baz=141,slow=6.5,SNR=5.6						
PMG				LR	LR	14 13 30.0	
	comp=Z,90nm,19.3s,baz=100,slow=32						
RKT	Rikitea	39.84	87	*e*LR	LR	14 11 28.2	
	163nm,25.5s						
RKT	Rikitea	39.84	87	*e*T	T	14 43 04.3	
	2.7nm,0.2s						
AS01	Alice Springs	42.16	271	*e*P	P	14 00 43.4	-0.5
AS31	Alice Springs	42.20	271	*e*P	P	14 00 43.9	-0.4
	1.6nm,0.4s						
ASAR	Alice Springs	42.20	271	P	P	14 00 44.1	-0.1
	4.5nm,0.6s,baz=106,slow=7.1,SNR=65						
ASAR				PcP	PcP	14 02 35.1	-2.8
	0.6nm,0.8s,baz=104,slow=5.0,SNR=3.6						
TAOE	Nuku Hiva Isla	43.25	65	*e*LR	LR	14 13 05.4	
	164nm,26.1s						
WB2	Warramunga Arr	43.44	276	*e*P	P	14 00 53.3	-0.9
	8.3nm,0.8s						
WR1	Warramunga Arr	43.45	276	*e*P	P	14 00 53.8	-0.5
	8.6nm,0.8s						
WRA	Warramunga Arr	43.45	276	P	P	14 00 53.8	-0.5
	5.5nm,0.6s,baz=113,slow=8.0,SNR=55						
WRA				PcP	PcP	14 02 40.8	-1.2
	0.8nm,0.9s,baz=113,slow=4.4,SNR=3.0						
VNDA	Vanda	45.17	186	P	P	14 01 09.5	+2.2
	0.6nm,0.8s,baz=11,slow=6.6,SNR=2.8						
CASY	Casey	52.23	209	*e*P	P	14 02 00.8	-0.8
	9.5nm,0.6s						
QSPA	South Pole Qui	56.86	180	P	P	14 02 38.8	+3.4
	4.0nm,0.6s,baz=344,slow=1.2,SNR=23						
QSPA	South Pole Qui	56.86	180	*e*P	P	14 02 36.5	+1.1
	8.4nm,0.8s						
BATI	Baumata	57.24	280	LR	LR	14 25 51.4	
	comp=Z,93nm,20.2s,baz=143,slow=35						
RPN	Rapa Nui	59.53	104	LR	LR	14 24 27.3	
	comp=Z,21nm,19.4s,baz=255,slow=32						
MAW	Mawson	69.34	201	P	P	14 03 58.7	+0.8
	2.8nm,0.8s,baz=118,slow=6.6,SNR=7.2						
MAW				LR	LR	14 33 49.9	
	comp=Z,47nm,18.2s,baz=230,slow=35						
MAW	Mawson	69.34	201	*e*P	P	14 03 59.1	+1.2
	1.2nm,1.0s						
LEM	Lembang	72.40	273	LR	LR	14 34 33.5	
	comp=Z,56nm,21.0s,baz=192,slow=35						
SYO	Syowa Base	74.15	194	⇑*e*P	P	14 04 26.9	+0.2
SYO	Syowa Base	74.15	194	⇑*e*PcP	PcP	14 04 39.0	-2.6
SNAA	Sanae	75.33	179	P	P	14 04 35.9	+2.2
SNAA	Sanae	75.33	179	P	P	14 04 35.4	+1.8
	1.7nm,0.7s,baz=188,slow=7.1,SNR=7.0						
SNAA	Sanae	75.33	179	*e*P	P	14 04 34.9	+1.2
	14nm,1.7s						
VNA3	Neumayer Olymp	75.51	176	P	P	14 04 36.5	+1.8
VNA1	Neumayer--Stat	76.17	177	P	P	14 04 40.6	+2.2
JNU	Nakatsue	81.15	319	LR	LR	14 33 25.3	
	comp=Z,30nm,21.1s,baz=249,slow=30						
PLCA	Paso Flores	81.18	133	P	P	14 05 08.7	+2.1
	2.4nm,0.8s,baz=272,slow=7.2,SNR=8.3						
PLCA	Paso Flores	81.18	133	*e*P	P	14 05 08.1	+1.5
	30nm,1.6s						
PETK	Petropavlovsk-	88.37	346	P	P	14 05 43.0	+1.0
	2.3nm,0.8s,baz=139,slow=9.0						
PEA1	Petropavlovsk-	88.38	346	*e*P	P	14 05 43.0	+1.0
YBH	Yreka Blue Hor	90.80	39	LR	LR	14 37 21.7	
	comp=Z,18nm,20.9s,baz=182,slow=30						
NV01	Mina Array Sit	90.90	43	*e*P	P	14 05 54.8	+0.3
NVAR	Mina Array Bea	90.90	43	P	P	14 05 56.8	+2.2
	0.8nm,0.8s,baz=218,slow=6.0,SNR=5.5						
NVAR				LR	LR	14 43 09.4	
	comp=Z,14nm,18.5s,baz=106,slow=33						
NNA	Nana	93.44	107	LR	LR	14 43 11.5	
	comp=Z,28nm,18.2s,baz=181,slow=32						
TXAR	Lajitas Array	94.63	58	LR	LR	14 40 40.1	
	comp=Z,18nm,21.3s,baz=0.0,slow=30						
SONA0	Songino Array	104.69	318	*e*Pdif	Pdif	14 06 57.2	+0.7
SONM	Songino Array	104.69	318	Pdiff	Pdif	14 06 57.2	+0.7
	0.3nm,0.3s,baz=104,slow=6.1,SNR=4.2						
KURK	Kurchatov	122.39	313	*e*PKPdf	PKPdf	14 11 43.4	-1.8
KURBB	Kurchatov Arra	122.42	313	PKP	PKPdf	14 11 43.4	-1.9
	1.4nm,0.9s,baz=110,slow=1.8,SNR=5.0						
BVAR	Borovoye Array	127.82	314	PKP	PKPdf	14 11 55.9	+0.3
	1.1nm,0.7s,baz=122,slow=6.4,SNR=4.2						
SPITS	Spitsbergen Ar	134.49	356	PKP	PKPdf	14 12 06.6	-1.0
	5.7nm,0.8s,baz=51,slow=7.8,SNR=3.2						
ARA0	ARCESS Array S	141.18	347	*e*PKPpre	PKPpre	14 12 15.1	
ARCES	ARCESS Array B	141.18	347	PKhKP	PKPpre	14 12 15.1	
	1.7nm,0.8s,baz=352,slow=7.3,SNR=4.2						
FIA1	FINESS Array S	147.50	338	*e*PKPdf	PKPbc	14 12 32.9	-0.9
FIA0	FINESS Array S	147.50	338	*e*PKPdf	PKPbc	14 12 33.2	-0.6
FINES	FINESS Array B	147.50	338	PKPbc	PKPbc	14 12 33.2	-0.6
	9.4nm,0.7s,baz=90,slow=3.8,SNR=27						
NC303	NORSAR Array S	151.22	350	*e*PKPbc	PKPbc	14 12 43.0	-0.1
MMAI	Mount Meron Ar	151.27	279	PKPbc	PKPbc	14 12 44.4	+0.2
	6.1nm,0.6s,baz=90,slow=5.8,SNR=11						
NB2	NORSAR Subarra	151.42	350	PKP	PKPbc	14 12 43.3	-0.4
	comp=Z,3.8nm,0.7s,baz=17,slow=2.6						
NB200	NORSAR Array S	151.42	350	*e*PKPbc	PKPbc	14 12 43.9	+0.2
NOA	NORSAR Array B	151.42	350	PKPbc	PKPbc	14 12 43.9	+0.2
	comp=Z,4.6nm,0.7s,baz=13,slow=4.1,SNR=25						
NC602	NORSAR Array S	151.66	349	*e*PKPbc	PKPbc	14 12 43.7	-0.5
HFS	Hagfors	151.85	347	PKPbc	PKPbc	14 12 44.3	-0.3
	comp=Z,10.0nm,0.8s,baz=162,slow=0.9,SNR=14						
AKASG	Malin Array Be	152.97	319	PKPbc	PKPbc	14 12 45.7	-1.7
	comp=Z,0.3nm,0.3s,baz=80,slow=2.1,SNR=4.4						
AKBB	Malin Array Si	152.97	319	*e*PKPbc	PKPbc	14 12 46.3	-1.1
DBIC	Dimbokro	152.99	167	PKPbc	PKPbc	14 12 50.5	+1.9
	comp=Z,3.3nm,0.7s,baz=194,slow=13,SNR=3.3						
BR101	Keskin Array S	153.08	293	*e*PKPbc	PKPbc	14 12 47.5	-0.7
BRTR	Keskin Array B	153.08	293	PKPbc	PKPbc	14 12 47.5	-0.7
	comp=Z,1.2nm,0.7s,baz=97,slow=5.1,SNR=5.6						
TOA0	Torodi Ar. Sit	159.97	182	*e*PKPab	PKPab	14 13 29.5	-0.2

IDC 31 13:53:06.5±410.0, 46°.30N×46°.15E, h0^{km}, Error ellipse: s-maj=178.9km s-min=139.8km az=171.0, Ukraine-Moldova-Southwestern Russia region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
I31KZ	AKTYUBINSK INF	8.92	58	*i*		14 51 40.0	
	baz=247,slow=314,SNR=1.4						
I43RU	DUBNA INFRASON	11.81	335	*i*		15 06 30.0	
	baz=145,slow=318,SNR=1.3						
I26DE	FREYUNG INFRAS	21.94	289	*i*		16 07 50.0	
	baz=83,slow=307,SNR=1.9						
I48TN	KESRA INFRASON	29.44	262	*i*		16 51 20.0	
	baz=58,slow=315,SNR=0.6						

NNC 31 13:56:17.3±15.0, 36°.94N×70°.73E, h0^{km}, mb3.7, mpv3.4, 2C-3D, Error ellipse: s-maj=116.4km s-min=98.2km az=167.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	3.77	35	⇑Pn	Pn	13 57 17.1	+0.3
	4.0nm,0.3s						
SFK				⇑Sn	Sn	13 58 05.1	+3.1
	7.6nm,0.5s						
MNAS	Manas	5.71	13	⇓Pn	Pn	13 57 42.4	-1.0
	2.5nm,0.7s						
MNAS				⇓Sn	Sn	13 58 50.2	+0.5
	8.1nm,0.6s						
KK31	Karatay Array	6.16	359	⇓Pn	Pn	13 57 47.9	-1.6
	1.0nm,0.3s,baz=172,slow=12,SNR=23						
KK31				Sn	Sn	13 59 00.1	-0.5
	2.7nm,0.5s,baz=165,slow=23,SNR=13						

DJA 31 13:59:17.1±1.0, 10°S±4°×11°1E±°, h17^{km}±6^{km}, M4.3/12, MLv4.3/12, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
PCJI	Pacitan	2.08	16	P	Pn	13 59 48.2	-3.0
PCJI				S	Sn	14 00 18.2	+1.5
UGM	Wanagama	2.28	358	P	Pn	13 59 53.8	-0.3
WOJI	Wonogiri, Jawa	2.38	8	P	Pn	13 59 52.4	-2.9
WOJI				S	Sn	14 00 25.5	+1.4
WOJI				Sg	Sg	14 00 36.5	+2.8
PWJI	Pagerwojo	2.47	29	P	Pn	13 59 54.9	-1.7
NGJI	Ngawi	2.95	17	P	Pn	14 00 03.8	+0.6
SMRI	Semarang	3.15	357	P	Pn	14 00 05.9	0.0
CMJI	Cimerak	3.22	318	P	Pn	14 00 08.2	+1.3
KPJI	Karang Pucung	3.31	330	P	Pn	14 00 08.7	+0.6
GMJI	Gumukmas	3.40	56	P	Pn	14 00 10.8	+1.5
GRJI	Gresik	3.76	30	P	Pn	14 00 15.0	+0.6
BLJI	Banyuglugur	3.83	51	P	Pn	14 00 15.8	+0.4
JAGI	Jajag, Banyuwa	3.90	64	P	Pn	14 00 16.8	+0.5

IDC 31 14:00:02.1±1.8, 9°.93S×110°.40E, h0^{km}, mb3.9/6, mb1 4.0/6, mb1mx3.6/56, mbtmp3.9/6, MS2.8/3, Ms1 2.8/3, ms1mx2.5/54, Error ellipse: s-maj=67.5km s-min=22.7km az=55.0, South of Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
LEM	Lembang	4.13	318	LR	LR	14 03 03.5	
	comp=Z,74nm,19.6s,baz=203,slow=44						
PSI	Prapat	17.04	317	LR	LR	14 10 27.2	
	comp=Z,56nm,18.3s,baz=96,slow=37						
SIJI	Sorong	22.62	68	LR	LR	14 16 17.4	
	comp=Z,19nm,19.6s,baz=168,slow=43						
WRA	Warramunga Arr	25.15	116	P	P	14 05 28.8	-0.5
	1.9nm,0.8s,baz=296,slow=11,SNR=6.0						
WRA				PcP	PcP	14 09 02.3	-1.3
	0.4nm,0.8s,baz=313,slow=1.9,SNR=3.0						
ASAR	Alice Springs	26.27	124	P	P	14 05 40.2	+0.9
	1.4nm,0.8s,baz=302,slow=8.8,SNR=6.9						
ASAR				PcP	PcP	14 09 05.5	-0.7
	0.2nm,0.6s,baz=304,slow=1.9,SNR=3.2						
KSRS	Korea Array	49.91	18	P	P	14 08 57.0	-0.5
	0.8nm,0.8s,baz=203,slow=10,SNR=6.6						
MKAR	Makanchi Array	61.80	338	P	P	14 10 22.5	-0.2
	0.5nm,0.5s,baz=145,slow=6.7,SNR=4.4						
ZALV	Zalesovo Beam	67.22	344	P	P	14 10 58.7	+0.7
	0.7nm,0.4s,baz=152,slow=6.5,SNR=3.4						
PETK	Petropavlovsk-	74.57	27	P	P	14 11 42.8	+0.1
	4.3nm,0.8s,baz=227,slow=3.3						
TXAR	Lajitas Array	142.76	54	PKP	PKPdf	14 19 39.2	+0.9
	0.2nm,0.5s,baz=247,slow=1.9,SNR=3.2						

IDC 31 14:00:36.2±3.5, 12°.52S×116°.75E, h0^{km}, mb4.0/1, mb1 3.7/3, mb1mx3.3/54, mbtmp3.5/3, ML2.9/2, Error ellipse: s-maj=122.2km s-min=30.5km az=51.0, South of Sumbawa

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
WRA	Warramunga Arr	18.42	116	P	P	14 04 53.5	+0.2
	0.1nm,0.3s,baz=292,slow=12,SNR=4.5						
ASAR	Alice Springs	19.69	127	P	P	14 05 05.7	-1.6
	0.0nm,0.3s,baz=307,slow=9.0,SNR=7.1						
SONM	Songino Array	60.79	352	P	P	14 10 50.6	+0.5
	1.3nm,0.8s,baz=168,slow=6.2,SNR=4.6						

MEX 31 14:02:00.7±0.7, 18°.12N×100°.67W, h47^{km}±8^{km}, MD3.7, Guerrero

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
ARIG	Puente Sto Nin	0.34	63	*e*P	Pn	14 02 08.2	-1.9
ARIG				*e*S	Sn	14 02 15.1	-1.6
ZIIG	Zihuatanejo	0.91	236	*e*P	Pn	14 02 15.8	-1.4
ZIIG				*e*S	Sn	14 02 27.0	-2.2
MEIG	Mezcala	1.02	101	*e*P	Pn	14 02 17.2	-1.5
MEIG				*e*S	Sn	14 02 29.2	-2.7
PLIG	Platanillo	1.14	76	*e*P	Pn	14 02 19.0	-1.4
PLIG				*e*S	Sn	14 02 33.4	-1.6
YAIG	Yautepec	1.69	64	*e*P	Pn	14 02 25.6	-2.3
YAIG				*i* S	Sn	14 02 46.5	-2.0

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*KRNET **31** 14:05:05.6±0.1, 40°.33N×75°.03E, h30^{km}, mb3.4*
*NNC **31** 14:05:06.6±1.0, 40°.47N×74°.89E, h0^{km}, mb3.8, mpv3.5, Error ellipse: s-maj=11.4km s-min=3.3km az=133.0*
*SOME **31** 14:05:06.0, 40°.53N×74°.97E, h0^{km}*
*ISCJB **31** 14:05:09.6±0.8, 40°.45N±0°.05×74°.79E±0°.06, h10^{km}, Error ellipse: s-maj=7.8km s-min=4.5km az=138.9*

ISC 31 14:05:05.6±1.0, 40°.46N±0°.04×74°.93E±0°.03, h10^{km}, n47, σ1°.68/78, 19C-26D, Kyrgyzstan-Xinjiang border region

Code	Station Name	Δ°	AZ°	Phase ID Op	ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	1.18	248	⇑P	Pb	14 05 27.8	-0.6
	14nm,0.5s						
SFK				⇑S	Sb	14 05 44.7	+0.9
	30nm,0.4s						
SFK	Sufi-Kurgan	1.18	248	⇑*i*P	Pb	14 05 27.7	-0.6
	baz=56						
SFK				⇑*i*S	Sb	14 05 43.5	-0.3
	baz=56						
KZA	Kyzart	1.63	8	P	Pb	14 05 35.4	-0.6
	SNR=29						
KZA	Kyzart	1.63	8	⇓*i*P	Pn	14 05 35.3	+0.5
	baz=5.0						
KZA				⇓*i*S	Sg	14 05 59.3	+1.2
	baz=5.0						
ARSB	Arslanbob	1.71	301	⇓*i*P	Pb	14 05 37.7	+0.5
	baz=3.0						
ARSB				⇓*i*S	Sg	14 06 01.2	+0.6
	baz=3.0						
UCH	Uchtor	1.79	350	P	Pb	14 05 38.8	0.0
	SNR=33						
UCH	Uchtor	1.79	350	⇑*i*P	Pb	14 05 38.6	-0.2
	baz=49						
UCH				⇑*i*S	Sg	14 06 04.1	+0.9
	baz=49						
AML	Almayashu	1.91	331	P	Pb	14 05 40.9	+0.2
	SNR=27						
AML	Almayashu	1.91	331	⇑*i*P	Pb	14 05 41.0	+0.2
	baz=31						
AML				⇑*i*S	Sg	14 06 07.3	+0.3
	baz=31						
ULHL	Ulahol	2.03	29	P	Pb	14 05 42.8	0.0
	SNR=20						
ULHL	Ulahol	2.03	29	⇓*i*P	Pb	14 05 42.2	-0.6
	baz=25						
ULHL				⇓*i*S	Sg	14 06 09.3	-1.7
	baz=25						
BOOM	Boomskoye usch	2.16	20	⇓*i*P	Pb	14 05 43.8	-1.1
	baz=17						
BOOM				⇓*i*S	Sb	14 06 12.3	+0.4
	baz=17						
KBK	Karagaybulak	2.19	0	P	Pg	14 05 47.4	-0.2
	SNR=12						
KBK	Karagaybulak	2.19	0	⇑*i*P	Pb	14 05 45.0	-0.4
	baz=58						
KBK				⇑*i*S	Sb	14 06 13.8	+1.1
	baz=58						
AAK	Ala-Archa	2.20	352	⇑Pg	Pb	14 05 46.7	+1.1
	16nm,0.5s						
AAK				⇓Lg	Lg	14 06 16.6	
	79nm,0.9s						
AAK	Ala-Archa	2.20	352	P	Pg	14 05 47.0	-0.8
	SNR=18						
AAK	Ala-Archa	2.20	352	⇓*i*P	Pb	14 05 45.3	-0.2
	baz=50						
AAK				⇓*i*S	Sb	14 06 13.7	+0.8
	baz=50						
FRU1	Bishkek	2.35	355	⇑*e*P	Pb	14 05 46.6	-1.6
	baz=53						
FRU1				⇑*i*S	Sb	14 06 16.9	-0.4
	baz=53						
EKS2	Erkin-Say	2.36	339	P	Pb	14 05 49.1	+0.8
	SNR=6.7						
EKS2	Erkin-Say	2.36	339	⇓*i*P	Pb	14 05 47.3	-1.0
	baz=38						
EKS2				⇓*i*S	Sb	14 06 17.9	+0.3
	baz=38						
TKM2	Tokmak 2	2.50	11	⇓Pn	Pb	14 05 50.5	-0.4
	24nm,0.4s						
TKM2				⇑Lg	Lg	14 06 25.1	
	33nm,0.4s						
TKM2	Tokmak 2	2.50	11	P	Pb	14 05 51.7	+0.9
	SNR=20						
TKM2	Tokmak 2	2.50	11	⇓*i*P	Pb	14 05 49.5	-1.3
	baz=9.0						
TKM2				⇓*i*S	Sb	14 06 21.3	-0.5
	baz=9.0						
CHMS	Chumysh	2.54	357	P	Pb	14 05 52.8	+1.6
	SNR=31						
CHMS	Chumysh	2.54	357	⇓*i*P	Pb	14 05 49.8	-1.4
	baz=56						
CHMS				⇓*i*S	Sb	14 06 22.2	-0.3
	baz=56						
MRKS	Merke	2.61	331	*e*P	Pb	14 05 53.6	+1.0
	33nm,0.5s						
MRKS				*e*S	Sg	14 06 27.9	-1.6
	51nm,0.6s						
KST	Kastek	2.69	16	*e*P	Pb	14 05 55.1	+1.2
	22nm,0.5s						
KST				*e*S	Sg	14 06 29.5	-2.5
	92nm,0.4s						
MNAS	Manas	2.72	319	⇓Pg	Pb	14 05 55.3	+0.8
	13nm,0.6s						
MNAS				⇑Lg	Lg	14 06 32.1	
	22nm,0.6s						
MNAS	Manas	2.72	319	⇑*i*P	Pb	14 05 52.5	-2.0
	baz=20						
MNAS				⇑*i*S	Sb	14 06 26.3	-1.7
	baz=20						
USP	Ospenovka	2.82	354	P	Pb	14 05 57.3	+1.2
	SNR=40						
DGS	Degeres	2.85	12	*e*P	Pb	14 05 57.9	+1.3
	30nm,0.5s						
DGS				*e*S	Sg	14 06 34.9	-2.1
	90nm,0.6s						
IZV	Izvestkoviy	2.86	26	*e*P	Pg	14 05 59.7	-0.7
	46nm,0.8s						
IZV				*e*S	Sg	14 06 38.0	+0.5
	72nm,0.7s						
MTBS	Maitube	2.89	22	*e*P	Pb	14 05 58.9	+1.6
	13nm,0.3s						
MTBS				*e*S	Sg	14 06 36.7	-1.7
	64nm,0.4s						
MDOK	Medeo	3.13	30	*e*P	Pb	14 06 02.5	+1.2
	23nm,0.7s						
MDOK				*e*S	Sg	14 06 43.2	-2.8
	53nm,0.8s						
KNDC	Almaty	3.14	28	⇓Pg	Pb	14 06 03.3	+1.7
	59nm,0.8s						
KNDC				⇑Lg	Lg	14 06 46.1	
	193nm,0.8s						
KOTS	Kotyrbulak	3.21	30	*e*P	Pg	14 06 05.5	-1.6
	21nm,0.4s						
KOTS				*e*S	Sg	14 06 47.9	-0.8
	67nm,0.5s						
PRZ	Przheval’sk	3.29	51	⇓*e*P	Pn	14 05 58.4	+1.0
	baz=49						
PRZ				⇓*e*S	Sn	14 06 38.3	+1.5
	baz=49						
KTBS	Karatobe	3.50	21	*e*P	Pb	14 06 08.9	+1.3
	9.7nm,0.4s						
KTBS				*e*S	Sg	14 06 54.7	-3.2
	26nm,0.5s						
KUU	Kurty	3.58	16	*e*P	Pb	14 06 11.1	+2.1
	0.9nm,0.2s						
KUU				*e*S	Sg	14 06 58.0	-2.7
	30nm,0.6s						
CHKK	Chushkaly	3.72	24	*e*P	Pb	14 06 13.2	+1.8
	6.0nm,0.5s						
CHKK				*e*S	Sg	14 07 01.1	-3.8
	23nm,0.3s						
IUG	Iuzhnay	4.06	296	*e*P	Pg	14 06 21.6	-1.7
	7.6nm,0.4s						
IUG				*e*S	Sg	14 07 15.8	-0.1
	15nm,0.5s						
KK31	Karatay Array	4.23	310	Pg	Pb	14 06 22.2	+2.1
	1.1nm,0.3s,baz=126,slow=16,SNR=14						
KK31				⇑Lg	Lg	14 07 19.2	
	3.2nm,0.4s,baz=127,slow=28,SNR=6.7						
ARXS	Arharly	4.32	29	*e*P	Pb	14 06 22.7	+1.1
	6.2nm,0.8s						
ARXS				*e*S	Sb	14 07 17.7	+3.9
	17nm,0.6s						
PDGK	Podgornoye	4.45	48	⇓Pg	Pg	14 06 29.1	-1.6
	10nm,0.7s						
PDGK				⇓Lg	Lg	14 07 27.2	
	27nm,0.8s						
PDGK	Podgornoye	4.45	48	⇓*e*P	Pn	14 06 14.8	+1.6
	baz=46						
PDGK				⇓*e*S	Sn	14 07 05.0	0.0
	baz=46						
BRLS	Borolday	4.59	306	*e*P	Pb	14 06 30.2	+3.9
	0.6nm,0.5s						
BRLS				*e*S	Sg	14 07 29.9	-3.3
	1.9nm,0.9s						
KTMS	Ketmen	5.02	52	*e*P	Pb	14 06 36.8	+3.2
	2.4nm,0.7s						
KTMS				*e*S	Sg	14 07 41.6	-5.2
	9.1nm,0.5s						

NNC 31 14:07:57.9±1.8, 38°.77N×70°.25E, h0^{km}, mb3.8, mpv3.4, 5C-4D, Error ellipse: s-maj=14.0km s-min=10.1km az=44.0, Afghanistan-Tajikistan border region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	2.81	63	⇑Pn	Pn	14 08 45.0	+0.6
	7.6nm,0.4s						
SFK				⇓Lg	Lg	14 09 26.1	
	73nm,0.5s						
MNAS	Manas	4.09	24	⇑Pn	Pn	14 09 00.9	-1.0
	8.9nm,0.5s						
MNAS				⇑Sn	Sn	14 09 51.9	+1.2
	18nm,0.7s						
MNAS				⇓Lg	Lg	14 10 08.1	
	19nm,1.0s						
KK31	Karatay Array	4.34	3	⇑Pn	Pn	14 09 05.2	0.0
	2.4nm,0.4s,baz=175,slow=12,SNR=27						
KK31				⇑Pg	Pb	14 09 16.7	+1.6
	1.6nm,0.3s,baz=184,slow=18,SNR=4.8						
KK31				⇓Sn	Sn	14 09 58.2	+1.8
	3.1nm,0.4s,baz=182,slow=31,SNR=3.7						
KK31				⇓Lg	Lg	14 10 15.3	
	3.1nm,0.4s,baz=184,slow=30						

MEX 31 14:16:24.4±0.7**, 17°.35N×100°.88W, h29km**±21km**, MD3.7, Guerrero**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ZIIG	Zihuatanejo	0.62	295	*e*P	Pb	14 16 34.4	-2.3
ZIIG				*e*S	Sb	14 16 43.1	-2.0
ARIG	Puente Sto Nin	1.05	29	*e*P	Pn	14 16 40.5	-2.8
ARIG				*e*S	Sn	14 16 53.7	-3.4
ACP2	Acapulco	1.06	116	*i* P	Pn	14 16 41.5	-1.8
ACP2				*i* S	Sn	14 16 54.0	-3.1
ACX	Acapulco	1.09	116	*i* P	Pn	14 16 41.1	-2.6
ACX				*e*S	Sn	14 16 52.7	-5.1
MEIG	Mezcala	1.33	64	*e*P	Pn	14 16 45.3	-1.8
MEIG				*e*S	Sn	14 17 00.5	-3.4
PLIG	Platanillo	1.67	51	*e*P	Pn	14 16 50.4	-1.5
PLIG				*e*S	Sn	14 17 10.0	-2.4
TLIG	Tlapa	2.22	84	*e*P	Pn	14 16 57.1	-2.2
TLIG				*i* S	Sn	14 17 23.4	-2.4
YAIG	Yautepec	2.29	49	*i* P	Pn	14 16 57.8	-2.6
YAIG				*i* S	Sn	14 17 25.0	-2.6

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*ISCJB **31** 14:25:22.0±0.7, 50°.26N±0°.05×19°.19E±0°.04, h0km, Error ellipse: s-maj=6.9km s-min=2.9km az=17.0*
*CSEM **31** 14:25:23.0±0.3, 50°.25N×19°.22E, h1km, ML2.7/7, Error ellipse: s-maj=7.8km s-min=3.3km az=12.0*
*PRU **31** 14:25:23.9, 50°.24N×19°.23E, h0km*
*WAR **31** 14:25:24.9, 50°.16N×19°.34E, h1km, Mw2.3*
ISC 31 14:25:23.1±0.8**, 50°.13N**±0°.04×**19°.23E**±0°.02**, h0km, n27, σ0ˢ.65**/43**, Poland**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OJC	Ojcow	0.38	76	*e*Pg	Pg	14 25 30.6	+0.3
OJC				*e*Sg	Sg	14 25 35.0	-0.1
OJC	Ojcow	0.38	76	*e*Pg	Pg	14 25 30.6	+0.3
OJC				*e*Sg	Sg	14 25 35.0	-0.1
OJC	Ojcow	0.38	76	*e*Pg	Pg	14 25 30.6	+0.3
OJC				*e*Sg	Sg	14 25 35.0	-0.1
OKC	Ostrava-Krasne	0.76	248	*e*SG	Sb	14 25 51.0	+1.0
	comp=Z,14nm,0.4s						
OKC	Ostrava-Krasne	0.76	248	Sg	Sb	14 25 51.0	+1.0
	14nm,0.4s						
LANS	Liptovska Anna	0.99	171	*e*PG	Pn	14 25 44.1	-0.2
LANS				*e*SG	Sn	14 25 58.3	-0.8
LANS	Liptovska Anna	0.99	171	*e*Pg	Pn	14 25 44.1	-0.2
LANS				*e*Sg	Sn	14 25 58.3	-0.8
NIE	Niedzica	0.99	135	*e*Pg	Pn	14 25 44.2	-0.1
NIE				*e*Sg	Sn	14 25 58.8	-0.3
NIE	Niedzica	0.99	135	*e*Pg	Pn	14 25 44.2	-0.1
NIE				*e*Sg	Sn	14 25 58.8	-0.3
NIE	Niedzica	0.99	135	*e*Pg	Pn	14 25 44.2	-0.1
NIE				*e*Sg	Sn	14 25 58.8	-0.3
MORC	Moravsky Berou	1.15	253	*e*Pg	Pn	14 25 46.8	+0.4
MORC				*e*Sg	Sn	14 26 02.7	-0.2
MORC	Moravsky Berou	1.15	253	*e*PG	Pn	14 25 46.8	+0.4
MORC				*e*SG	Sn	14 26 02.7	-0.2
KRLC	Kraliky	1.58	269	*e*PG	Pg	14 25 53.3	0.0
KRLC				*e*SG	Sg	14 26 15.4	+1.7
	comp=Z,4.9nm,0.3s						
KRLC	Kraliky	1.58	269	Pg	Pg	14 25 53.3	0.0
KRLC				Sg	Sg	14 26 15.4	+1.7
	4.9nm,0.3s						
VYHS	Vyhne	1.66	189	*e*PN	Pb	14 25 54.4	-0.1
VYHS				*e*SN	Sg	14 26 16.8	+0.5
VYHS				*e*LG	Lg	14 26 18.0	
VYHS	Vyhne	1.66	189	*e*Pn	Pb	14 25 54.4	-0.1
VYHS				*e*Sn	Sg	14 26 16.8	+0.5
DPC	Dobruska-Polom	1.88	278	*e*PG	Pb	14 25 57.8	-0.5
DPC				*e*SG	Sg	14 26 23.3	-0.2
	comp=Z,7.7nm,0.3s						
DPC	Dobruska-Polom	1.88	278	Pg	Pb	14 25 57.8	-0.5
DPC				Sg	Sg	14 26 23.3	-0.2
	7.7nm,0.3s						
UPC	Upice	2.10	282	*e*SG	Sg	14 26 30.2	-0.2
	comp=Z,7.6nm,0.3s						
UPC	Upice	2.10	282	Sg	Sg	14 26 30.2	-0.2
	7.6nm,0.3s						
GOPC	GO Pecny, Ondr	2.87	267	*e*SG	Sg	14 26 54.3	-1.1
	comp=Z,4.6nm,0.5s						
GOPC	GO Pecny, Ondr	2.87	267	Sg	Sg	14 26 54.3	-1.1
	4.6nm,0.5s						
PRU	Pruhonice	3.02	269	*e*SG	Sg	14 26 59.4	-0.8
	comp=Z,3.3nm,0.4s						
PRU	Pruhonice	3.02	269	Sg	Sg	14 26 59.4	-0.8
	3.3nm,0.4s						
BRG	Berggiesshubel	3.46	284	SG	Sg	14 27 14.9	+0.8
	4.1nm,0.5s						
KHC	Kasperske Hory	3.81	257	*e*SG	Sg	14 27 24.4	-1.0
	comp=Z,2.8nm,0.4s						
KHC	Kasperske Hory	3.81	257	Sg	Sg	14 27 24.4	-1.0
	2.8nm,0.4s						

IDC 31 14:36:11.5±17.0**, 17°.95S×177°.86W, h434km**±143km**, mb3.1**/3**, mb1 3.4**/3**, mb1mx2.8**/48**, mbtmp3.9**/3**, Error ellipse: s-maj=189.8km s-min=39.5km az=132.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	45.14	259	P	P	14 43 47.0	-1.0
	0.4nm,0.5s,baz=97,slow=7.2,SNR=10						
WRA				PcP	PcP	14 45 19.5	-0.3
	0.3nm,0.9s,baz=91,slow=3.3,SNR=2.8						
ASAR	Alice Springs	45.28	254	P	P	14 43 49.5	+0.4
	5.0nm,0.6s,baz=88,slow=8.1,SNR=66						
ASAR				PcP	PcP	14 45 20.4	+0.1
	0.2nm,0.5s,baz=107,slow=4.3,SNR=3.8						
ILAR	Eielson Array	85.81	13	P	P	14 48 03.9	+0.5
	0.2nm,0.5s,baz=213,slow=5.8,SNR=4.0						
BRTR	Keskin Array B	145.18	315	PKPbc	PKPbc	14 54 59.6	-0.2
	0.5nm,0.6s,baz=101,slow=7.5,SNR=2.8						
GERES	GERESS Array B	147.79	346	PKPbc	PKPdf	14 55 04.7	+1.6
	0.4nm,0.5s,baz=28,slow=4.4,SNR=3.0						

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*IDC **31** 14:43:39.8±3.4, 9°.18S×113°.32E, h31km±22km, mb3.9/13, mb1 4.0/13, mb1mx3.8/55, mbtmp4.1/13, MS3.1/6, Ms1 3.1/6, ms1mx2.7/51, Error ellipse: s-maj=37.7km s-min=13.8km az=57.0*
*DJA **31** 14:43:40.3±0.8, 9°S±4°×11°3E±°, h16km±6km, M4.3/18, mb4.7/1, MLv4.2/18*
*NEIC **31** 14:43:41.0±0.7, 9°.20S×113°.36E, h46km±6km, mb4.3/7, Error ellipse: s-maj=10.2km s-min=5.1km az=211.0*
ISC 31 14:43:38.0±1.4**, 9°.41S**±0°.07×**113°.24E**±0°.04**, h24km**±10km**, n61, σ1ˢ.63**/66**, mb4.3**/15**, MS3.0**/6**, South of Jawa**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
GMJI	Gumukmas	1.15	10	P	Pb	14 43 59.1	0.0
JAGI	Jajag, Banyuwa	1.30	44	P	Pb	14 44 01.3	-0.4
JAGI	Jajag, Banyuwa	1.30	44	*e*Pn	Pb	14 44 01.3	-0.4
BLJI	Banyuglugur	1.69	12	P	Pb	14 44 08.7	+0.3
BLJI				S	Sb	14 44 29.4	+0.2
IGBI	Denpasar	1.97	73	P	Pb	14 44 11.4	-1.8
PWJI	Pagerwojo	1.98	314	P	Pn	14 44 11.1	+1.2
PWJI				S	Sn	14 44 33.3	-0.6
PWJI				Sg	Sb	14 44 40.6	+3.1
DNP	Denpasar	2.08	70	P	Pb	14 44 12.8	-2.2
SRBI	Singaraja	2.35	56	P	Pb	14 44 17.7	-2.0
PCJI	Pacitan	2.37	300	P	Pn	14 44 16.6	+1.3
GRJI	Gresik	2.59	343	P	Pn	14 44 20.2	+1.8
NGJI	Ngawi	2.68	319	P	Pb	14 44 22.6	-2.7
WOJI	Wonogiri, Jawa	2.77	304	P	Pn	14 44 23.2	+2.4
UGM	Wanagama	3.07	299	P	Pn	14 44 27.9	+2.9
UGM	Wanagama	3.07	299	*e*Pn	Pn	14 44 27.6	+2.6
SMRI	Semarang	3.63	310	*e*Pn	Pn	14 44 35.1	+2.4
TWSI	Taliwang, Sumb	3.66	80	P	Pn	14 44 36.7	+3.6
PLAI	Plampang	4.52	83	P	Pn	14 44 47.9	+3.0
KPJI	Karang Pucung	4.74	295	P	Pn	14 44 51.5	+3.6
KSM	Kuching	11.20	345	*e*Pn	Pn	14 46 14.8	-1.8
MNAI	Manna	11.37	295	*e*Pn	Pn	14 46 20.7	+1.7
SBUM	Sibu	11.82	355	*e*Pn	Pn	14 46 29.1	+3.9
MBWA	Marble Bar	13.25	153	*e*Pn	Pn	14 46 41.8	-2.9
MTN	Manton Dam	17.89	103	*e*Pn	Pn	14 47 44.0	-1.3
	29nm,1.3s						
SAUI	Saumlaki	17.91	87	*e*Pn	Pn	14 47 44.1	-1.5
	940nm,1.2s						
GSI	Gunungsitoli	18.89	303	*e*P	P	14 47 56.1	-0.7
	22nm,1.3s						
FAKI	Fak Fak	19.96	72	*e*P	P	14 48 07.4	-1.2
	94nm,1.4s						
DAV	Davao City (W)	20.47	37	LR	LR	14 56 52.2	
	comp=Z,30nm,20.7s,baz=170,slow=39						
WRA	Warramunga Arr	22.91	120	P	P	14 48 41.1	+0.8
	1.3nm,0.4s,baz=298,slow=11,SNR=28						
WRA				PcP	PcP	14 52 31.9	+1.3
	0.4nm,0.7s,baz=312,slow=2.1,SNR=3.0						
WRA				ScP	ScP	14 56 06.2	-0.9
	0.2nm,0.5s,baz=295,slow=2.1,SNR=2.8						
WR1	Warramunga Arr	22.91	120	*e*P	P	14 48 41.1	+0.8
	22nm,1.5s						
WR1				*e*PcP	PcP	14 52 31.9	+1.3
WR1				*e*ScP	ScP	14 56 06.2	-0.9
WRAB	Tennant Creek	22.92	120	*e*PcP	PcP	14 52 29.8	-0.8
NWAO	Narrogin (SRO)	23.69	172	LR	LR	14 59 29.9	
	comp=Z,51nm,18.2s,baz=118,slow=40						
AS31	Alice Springs	24.31	128	*e*P	P	14 48 55.2	+1.3
	1.0nm,0.6s						
ASAR	Alice Springs	24.31	128	P	P	14 48 55.5	+1.7
	2.8nm,0.6s,baz=303,slow=8.5,SNR=42						
ASAR				PcP	PcP	14 52 34.7	+1.1
	0.3nm,0.7s,baz=310,slow=2.0,SNR=3.6						
ASAR				ScP	ScP	14 56 10.7	-0.2
	0.2nm,0.6s,baz=328,slow=3.3,SNR=3.8						
CMAR	Chiang Mai Arr	31.08	333	P	P	14 49 54.8	+0.4
	0.9nm,0.7s,baz=162,slow=7.7,SNR=5.2						
CMAR				LR	LR	15 04 46.7	
	comp=Z,25nm,18.5s,baz=190,slow=41						
STKA	Stephens Creek	34.50	134	P	P	14 50 26.3	+1.9
	4.7nm,0.7s,baz=317,slow=9.4,SNR=15						
STKA				LR	LR	15 05 18.5	
	comp=Z,50nm,19.0s,baz=209,slow=38						
STKA	Stephens Creek	34.50	134	*e*P	P	14 50 26.4	+2.1
	1.2nm,0.6s						
H08S2	Diego Garcia H	40.32	269	T	T	15 34 02.5	
	baz=95						
H08S3	Diego Garcia H	40.33	269	T	T	15 34 01.7	
	baz=95						
H08S1	Diego Carcia H	40.34	269	T	T	15 34 03.4	
	baz=95						
KS15	Wonju Array Si	48.58	16	*e*P	P	14 52 18.2	-1.3
KSAR	Wonju Array Be	48.58	16	P	P	14 52 18.9	-0.6
KSRS	Korea Array	48.60	16	P	P	14 52 18.9	-0.7
	0.6nm,0.3s,baz=208,slow=8.4,SNR=5.3						
KSRS				LR	LR	15 14 56.8	
	comp=Z,16nm,18.2s,baz=270,slow=39						
USRK	Ussuriysk Ar.	56.00	16	P	P	14 53 13.3	-1.2
	7.2nm,0.8s,baz=182,slow=4.2						
SONA0	Songino Array	57.31	355	*e*P	P	14 53 23.7	-0.3
SONA0				*e*PcP	PcP	14 54 18.5	+0.6
SONM	Songino Array	57.31	355	P	P	14 53 23.7	-0.3
	2.7nm,0.5s,baz=172,slow=8.8,SNR=14						
SONM				PcP	PcP	14 54 18.5	+0.6
	0.6nm,0.5s,baz=186,slow=3.6,SNR=2.8						
SONM				LR	LR	15 19 47.1	
	comp=Z,21nm,18.9s,baz=166,slow=38						
SONA1	Songino Array	57.32	355	*e*P	P	14 53 22.4	-1.6
MK01	Makanchi Array	62.37	336	*e*P	P	14 53 57.4	-1.2
MK31	Makanchi Array	62.39	337	*e*P	P	14 53 57.9	-0.8
MK32	Makanchi Array	62.39	337	*e*P	P	14 53 58.2	-0.5
MKAR	Makanchi Array	62.39	337	P	P	14 53 58.2	-0.5
	2.0nm,0.5s,baz=146,slow=7.9,SNR=30						
KURBB	Kurchatov Arra	66.95	337	P	P	14 54 27.1	-1.3
	1.1nm,0.8s,baz=158,slow=4.7,SNR=6.3						
ZALV	Zalesovo Beam	67.55	342	P	P	14 54 30.8	-1.2
	1.2nm,0.4s,baz=154,slow=3.9,SNR=8.0						
ZALV	Zalesovo Beam	67.55	342	*e*P	P	14 54 30.4	-1.7
ZAA1	Zalesovo Array	67.55	342	*e*P	P	14 54 30.8	-1.3
BVAR	Borovoye Array	72.09	334	P	P	14 54 59.7	-0.4
	0.4nm,0.5s,baz=126,slow=9.7,SNR=2.5						
ABKAR	Akbulak array	74.71	327	*e*P	P	14 55 15.0	-0.6
BR101	Keskin Array S	88.05	311	*e*P	P	14 56 27.4	+0.6
BRTR	Keskin Array B	88.05	311	P	P	14 56 27.4	+0.6
	1.3nm,0.9s,baz=122,slow=4.7,SNR=5.3						
SNAA	Sanae	89.03	197	P	P	14 56 32.4	+1.7
	1.4nm,0.9s,baz=183,slow=1.9,SNR=5.4						
SNAA	Sanae	89.03	197	*e*P	P	14 56 32.4	+1.7
	10nm,1.5s						
CRVS	Cervenica-Dubn	98.18	318	*e*P	P	14 57 12.0	-1.0

IDC 31 15:09:49.9±1.6**, 1°.64N×127°.09E, h0km, mb3.6**/4**, mb1 3.8**/4**, mb1mx3.4**/58**, mbtmp3.7**/4**, Error ellipse: s-maj=163.6km s-min=20.0km az=67.0, Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	22.60	162	P	P	15 14 52.5	+0.2
	1.3nm,0.3s,baz=341,slow=11,SNR=58						
ASAR	Alice Springs	26.02	166	P	P	15 15 24.7	-0.2
	0.2nm,0.3s,baz=345,slow=11,SNR=19						
ASAR				PcP	PcP	15 18 53.1	-0.2
	0.3nm,1.0s,baz=359,slow=2.3,SNR=3.5						
MKAR	Makanchi Array	59.47	326	P	P	15 19 54.6	-0.1
	0.4nm,0.3s,baz=119,slow=7.7,SNR=12						
KURBB	Kurchatov Arra	63.68	328	P	P	15 20 23.0	-0.1
	0.3nm,0.4s,baz=119,slow=7.6,SNR=6.7						

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*TIR **31** 15:13:18.5, 38°.64N×21°.52E, h15km, Md3.9/5*
*IDC **31** 15:13:22.3±0.9, 38°.88N×21°.26E, h0km, mb3.6/9, mb1 3.7/15, mb1mx3.5/68, mbtmp3.6/15, ML3.4/5, MS3.0/7, Ms1 3.0/7, ms1mx2.6/73, Error ellipse: s-maj=16.2km s-min=15.7km az=25.0*
*ATH **31** 15:13:24.9, 38°.81N×21°.29E, h30km±1km, ML3.4/12, Error ellipse: s-maj=1.3km s-min=0.7km az=220.0*
*CSEM **31** 15:13:25.5±0.2, 38°.83N×21°.27E, h18km±1km, ML3.4, Error ellipse: s-maj=3.5km s-min=2.5km az=45.0*
*THE **31** 15:13:25.8, 38°.82N×21°.27E, h23km±1km, ML3.4/13, Error ellipse: s-maj=1.4km s-min=0.6km az=210.0*
*BEO **31** 15:13:26.9±1.4, 38°.90N×21°.39E, h12km±7km, ML3.2/3*
*PDG **31** 15:13:27.7±0.1, 39°.16N×21°.17E, h15km, MD5.3/1, ML3.6/9, Error ellipse: s-maj=0.5km s-min=0.4km az=90.0*
ISC 31 15:13:25.1±0.8**, 38°.84N**±0°.01×**21°.26E**±0°.01**, h18km**±2km**, n187, σ1ˢ.33**/269**, mb3.6**/9**, 15C-10D, Greece**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PDO	Prodromos	0.24	194	P	Pg	15 13 31.9	+1.2
PDO				AML	AML	15 13 36.7	
	comp=E,84638μm,0.4s						
PDO				S	Sg	15 13 36.8	+2.3
PDO				AML	AML	15 13 37.8	
PDO	Prodromos	0.24	194	P	Pg	15 13 31.6	+0.9
PDO				S	Sg	15 13 36.1	+1.5
PDO	Prodromos	0.24	194	P	Pg	15 13 31.6	+0.9
PDO				S	Sg	15 13 36.1	+1.5
PVO	Paravola	0.30	136	P	Pb	15 13 32.3	+0.4
PVO	Paravola	0.30	136	P	Pb	15 13 32.2	+0.3
PVO				S	Sb	15 13 37.6	+1.2
PVO	Paravola	0.30	136	P	Pb	15 13 32.2	+0.3
DSL	Palaion Diasel	0.33	337	P	Pb	15 13 32.4	0.0
DSL				S	Sb	15 13 38.2	+0.9
DSL				AML	AML	15 13 39.3	
	comp=N,44182μm,0.5s						
DSL				AML	AML	15 13 39.8	
	comp=E,44451μm,0.3s						
DSL	Palaion Diasel	0.33	337	P	Pb	15 13 32.8	+0.4
DSL				S	Sb	15 13 38.7	+1.5
DSL	Palaion Diasel	0.33	337	P	Pb	15 13 32.9	+0.5
DSL				S	Sb	15 13 38.8	+1.5
MGNA	Meganis¸„	0.41	244	P	Pn	15 13 35.1	-0.9
MGNA				S	Sn	15 13 41.8	-1.3
MGNA				AML	AML	15 13 44.0	
	comp=N,6941μm,0.2s						
MGNA				AML	AML	15 13 44.7	
	comp=E,9688μm,0.3s						
MGNA	Meganis¸„	0.41	244	P	Pb	15 13 34.7	+0.9
MGNA				S	Sn	15 13 41.5	-1.6
EVR	Evrytania	0.43	79	P	Pb	15 13 34.2	-0.1
EVR				S	Sb	15 13 41.4	+0.8
EVR				AML	AML	15 13 45.4	
	comp=N,5065μm,0.4s						
EVR				AML	AML	15 13 48.3	
	comp=E,6507μm,0.9s						
EVR	Evrytania	0.43	79	P	Pb	15 13 34.2	-0.1
EVR				S	Sb	15 13 41.6	+1.0
EVR	Evrytania	0.43	79	P	Pb	15 13 34.3	0.0
EVR				S	Sb	15 13 41.4	+0.8
LKD2	Lefkada island	0.47	265	P	Pb	15 13 35.0	+0.1
LKD2				S	Sn	15 13 44.4	-0.4
LKD2				AML	AML	15 13 49.6	
	comp=E,12863μm,0.4s						
LKD2				AML	AML	15 13 51.5	
	comp=N,13765μm,0.5s						
LKD2	Lefkada island	0.47	265	P	Pb	15 13 35.1	+0.2
LKD2				S	Sn	15 13 43.6	-1.2
LKD2	Lefkada island	0.47	265	P	Pb	15 13 35.2	+0.3
LKD2				S	Sn	15 13 43.6	-1.2
EVGI	Lefkada island	0.52	246	P	Pg	15 13 35.4	-0.1
EVGI	Lefkada island	0.52	246	P	Pg	15 13 35.5	0.0
EVGI				S	Sb	15 13 43.3	+0.5
EVGI	Lefkada island	0.52	246	P	Pb	15 13 35.7	+0.1
EVGI				S	Sb	15 13 43.3	+0.5
ANX	Ano Chora	0.57	115	P	Pb	15 13 36.4	-0.1
ANX	Ano Chora	0.57	115	P	Pb	15 13 36.4	-0.1
ANX				S	Sb	15 13 45.6	+1.3
ANX	Ano Chora	0.57	115	P	Pb	15 13 36.4	-0.1
ANX				S	Sb	15 13 45.6	+1.3
EFP	Efpalio	0.65	129	P	Pb	15 13 37.6	-0.2
EFP				S	Sg	15 13 47.4	+0.8
EFP	Efpalio	0.65	129	P	Pb	15 13 37.5	-0.3
EFP	Efpalio	0.65	129	P	Pb	15 13 37.6	-0.2
EFP				S	Sg	15 13 47.1	+0.5
FSK	Fiskardo	0.66	236	P	Pb	15 13 37.2	-0.8
FSK				S	Sn	15 13 50.2	+0.7
FSK	Fiskardo	0.66	236	P	Pb	15 13 37.6	-0.4
FSK				S	Sn	15 13 49.4	0.0
SERG	Sergoula	0.75	124	P	Pb	15 13 39.5	-0.1
SERG				S	Sg	15 13 50.2	+0.3
SERG	Sergoula	0.75	124	P	Pb	15 13 39.1	-0.5
SERG	Sergoula	0.75	124	P	Pb	15 13 39.5	-0.1
SERG				S	Sg	15 13 50.1	+0.3
TRIZ	Trizonia	0.79	126	P	Pb	15 13 39.9	-0.4
TRIZ				S	Sb	15 13 50.5	0.0
TRIZ	Trizonia	0.79	126	P	Pb	15 13 39.7	-0.5
TRIZ	Trizonia	0.79	126	P	Pb	15 13 40.0	-0.2
TRIZ				S	Sg	15 13 50.8	-0.2
RLS	Riolos of Patr	0.79	168	P	Pg	15 13 40.4	-0.2
RLS				S	Sg	15 13 51.6	+0.4
RLS				AML	AML	15 14 00.2	
	comp=E,2513μm,0.3s						
RLS				AML	AML	15 14 00.9	
	comp=N,3362μm,0.4s						
RLS	Riolos of Patr	0.79	168	P	Pb	15 13 40.2	-0.1
RLS				S	Sn	15 13 53.2	+0.6
RLS	Riolos of Patr	0.79	168	P	Pb	15 13 40.2	-0.1
RLS				S	Sg	15 13 51.5	+0.4
KFL	Anninata	0.81	207	P	Pb	15 13 40.5	-0.2
KFL				S	Sn	15 13 53.1	-0.1
KFL	Anninata	0.81	207	P	Pb	15 13 40.5	-0.2
KFL				S	Sn	15 13 53.1	-0.1
LAKA	Lakka	0.82	136	P	Pg	15 13 40.9	-0.2
LAKA				S	Sg	15 13 52.4	+0.5
LAKA				AML	AML	15 13 56.2	
	comp=E,2729μm,0.6s						
LAKA				AML	AML	15 13 56.7	
	comp=N,3001μm,0.4s						
LAKA	Lakka	0.82	136	P	Pb	15 13 40.6	-0.1
LAKA	Lakka	0.82	136	P	Pb	15 13 40.6	-0.1
LAKA				S	Sg	15 13 52.2	+0.3
KALE	Kalithea	0.82	122	P	Pb	15 13 40.5	-0.2
KALE	Kalithea	0.82	122	P	Pb	15 13 40.6	-0.2
KALE	Kalithea	0.82	122	P	Pb	15 13 40.6	-0.2
VLS	Valsamata	0.84	219	P	Pb	15 13 39.9	-1.2
VLS				S	Sn	15 13 55.0	+1.1
VLS				AML	AML	15 13 58.7	
	comp=E,4386μm,0.2s						
VLS				AML	AML	15 13 59.8	
	comp=N,5042μm,0.2s						
VLS	Valsamata	0.84	219	P	Pb	15 13 40.5	-0.6
VLS				S	Sn	15 13 54.0	+0.1
VLS	Valsamata	0.84	219	P	Pb	15 13 40.7	-0.4
VLS				S	Sn	15 13 54.3	+0.4
AGG	Agios Georgios	0.85	77	P	Pg	15 13 41.9	+0.1
AGG	Agios Georgios	0.85	77	P	Pg	15 13 41.7	-0.1
AGG				S	Sn	15 13 54.3	0.0
AGG	Agios Georgios	0.85	77	P	Pg	15 13 41.7	-0.1
AGG				S	Sn	15 13 54.3	0.0
JAN	Janina	0.88	339	P	Pn	15 13 43.5	+1.0
JAN				S	Sn	15 13 56.2	+1.3
JAN				AML	AML	15 14 00.5	
	comp=E,8113μm,1.2s						
JAN				AML	AML	15 14 01.4	
	comp=N,3504μm,0.5s						
JAN	Janina	0.88	339	P	Pn	15 13 42.9	+0.3
JAN				S	Sn	15 13 57.0	+2.1
JAN	Janina	0.88	339	P	Pn	15 13 42.9	+0.3
JAN				S	Sn	15 13 56.0	+1.1
THL	Klokotos Trika	0.94	39	P	Pg	15 13 43.5	+0.2
THL				S	Sn	15 13 57.4	+1.2
THL				AML	AML	15 14 02.3	
	comp=E,2813μm,0.7s						
THL				AML	AML	15 14 03.5	
	comp=N,1754μm,0.6s						
THL	Klokotos Trika	0.94	39	P	Pn	15 13 43.2	-0.1
THL	Klokotos Trika	0.94	39	P	Pn	15 13 43.2	-0.1
THL				S	Sn	15 13 57.0	+0.8
DRO	Drossia	0.95	158	P	Pb	15 13 42.5	-0.5
DRO				S	Sb	15 13 55.1	-0.1
DRO				AML	AML	15 14 02.7	
	comp=N,4071μm,0.2s						
DRO				AML	AML	15 14 06.2	
	comp=E,7273μm,0.4s						
DRO	Drossia	0.95	158	P	Pb	15 13 42.5	-0.5
DRO	Drossia	0.95	158	P	Pb	15 13 42.7	-0.3
DRO				S	Sg	15 13 55.6	-0.5
IGT	Igoumenitsa	1.00	314	*e*Pg	Pg	15 13 45.9	+1.3
IGT				*e*Sg	Sn	15 14 00.3	+2.4
IGT	Igoumenitsa	1.00	314	*e*Pg	Pg	15 13 45.9	+1.3
IGT				*e*Sg	Sn	15 14 00.3	+2.4
DLFA	Delphi	1.03	110	P	Pg	15 13 45.4	+0.3
DLFA				S	Sb	15 13 57.2	-0.3
DLFA	Delphi	1.03	110	P	Pg	15 13 44.8	-0.3
DLFA				S	Sb	15 13 57.8	+0.2
KLV	Kalavryta, Ach	1.05	138	P	Pb	15 13 44.2	-0.5
KLV	Kalavryta, Ach	1.05	138	P	Pb	15 13 44.3	-0.5
KLV	Kalavryta, Ach	1.05	138	P	Pb	15 13 44.4	-0.4
DSF	Desfina	1.08	113	P	Pb	15 13 44.7	-0.5
DSF				S	Sn	15 13 59.9	0.0
DSF				AML	AML	15 14 07.0	
	comp=N,3936μm,0.5s						
DSF				AML	AML	15 14 07.0	
	comp=E,2356μm,0.3s						
DSF	Desfina	1.08	113	P	Pb	15 13 44.8	-0.4
DSF	Desfina	1.08	113	P	Pb	15 13 44.8	-0.4
DSF				S	Sn	15 13 59.8	0.0
SRN	Sarande	1.43	317	*i* Pn	Pg	15 13 52.0	-0.6
SRN	Sarande	1.43	317	*i* PN	Pg	15 13 52.0	-0.6
SRN				*i* SN	Sg	15 14 16.8	+5.5
KBN	Korca	1.82	349	*i* Pn	Pg	15 14 00.0	-0.1
KBN	Korca	1.82	349	*i* PN	Pg	15 14 00.0	-0.1
KBN				*i* SN	Sg	15 14 28.0	+4.2
FNA	Florina	1.95	3	*e*Pg	Pb	15 14 00.2	+0.1
FNA				*e*Sg	Sg	15 14 26.5	-1.4
FNA	Florina	1.95	3	*e*Pg	Pb	15 14 00.2	+0.1
FNA				*e*Sg	Sg	15 14 26.5	-1.4
OHR	Ohrid	2.30	351	*i* Pn	Pb	15 14 05.1	-1.0
KRUS	Krusevo	2.53	360	*i* Pn	Pb	15 14 07.7	-2.3
KRUS				*e*Sn	Sb	15 14 39.6	-1.3
VAY	Valandovo	2.68	22	*e*Pn	Pn	15 14 08.5	+1.3
VAY	Valandovo	2.68	22	*i* Pn	Pb	15 14 11.4	-1.0

VAY				*e*Sn	Sn	15 14 41.8	+2.6
VAY	**Valandovo**	2.68	22	*e*Pn	Pn	15 14 08.5	+1.3
SRS	**Serrai**	2.90	37	*e*Pn	Pn	15 14 11.9	+1.6
SRS				*e*Sn	Sn	15 14 45.1	+0.4
SRS	**Serrai**	2.90	37	*e*Pn	Pn	15 14 11.9	+1.6
SRS				*e*Sn	Sn	15 14 45.1	+0.4
PHP	**Peshkopia**	2.92	348	*i* Pn	Pn	15 14 10.9	+0.4
PHP	**Peshkopia**	2.92	348	*i* PN	Pn	15 14 10.9	+0.4
PHP				*i* SN	Sg	15 14 59.1	+0.4
SKO	**Skopje**	3.14	2	*e*Pn	Pn	15 14 15.0	+1.4
SKO	**Skopje**	3.14	2	*e*Pn	Pn	15 14 16.1	+2.5
SKO	**Skopje**	3.14	2	*e*Pn	Pn	15 14 15.0	+1.4
KKB	**Krupnik**	3.33	24	*i* P	Pn	15 14 19.6	+3.3
MMB	**Musomiste**	3.34	34	*i* P	Pn	15 14 18.5	+2.2
PUK	**Puka**	3.37	342	*i* Pn	Pn	15 14 18.2	+1.4
PUK	**Puka**	3.37	342	*i* PN	Pn	15 14 18.2	+1.4
PUK				*i* SN	Pn	15 14 15.1	-1.7
CGL1	**Ceglie Messapi**	3.44	303	*e*P	Pg	15 14 33.6	+2.7
ULC	**Ulcinj**	3.48	334	⇑*i*Pn	Pn	15 14 18.9	+0.6
ULC				*i* Sn	Sn	15 14 57.8	-1.3
ULC	**Ulcinj**	3.48	334	⇑*i*Pn	Pn	15 14 18.9	+0.6
ULC				*i* Sn	Sn	15 14 57.8	-1.3
TIP	**Timpagrande**	3.52	277	⇓*i*P	Pn	15 14 21.8	+2.9
MASS	**Massafra**	3.65	301	*e*P	Pn	15 14 21.8	+1.2
MASS	**Massafra**	3.65	301	*e*P	Pn	15 14 21.8	+1.2
DRME	**Dracevica, Mon**	3.70	335	⇓*i*Pn	Pn	15 14 22.0	+0.7
DRME				*i* Sn	Sn	15 15 03.4	-1.1
DRME	**Dracevica, Mon**	3.70	335	⇓*i*Pn	Pn	15 14 22.0	+0.7
DRME				*i* Sn	Sn	15 15 03.4	-1.1
RZN	**Rozhen**	3.89	42	*i* P	Pn	15 14 26.3	+2.3
PDG	**Podgorica**	3.90	338	*e*Pn	Pn	15 14 25.3	+1.3
PDG	**Podgorica**	3.90	338	⇑*i*P	Pn	15 14 25.6	+1.6
BUM	**Brajici-Budva**	3.90	333	⇑*i*Pn	Pn	15 14 24.8	+0.7
BUM				*i* Sn	Sn	15 15 08.0	-1.5
BUM	**Brajici-Budva**	3.90	333	⇑*i*Pn	Pn	15 14 24.8	+0.7
BUM				*i* Sn	Sn	15 15 08.0	-1.5
MATE	**Matera**	3.95	299	⇑*i*P	Pn	15 14 26.5	+1.8
BARS	**Barje**	4.00	6	*e*Pn	Pn	15 14 27.5	+2.1
BARS	**Barje**	4.00	6	*e*Pn	Pn	15 14 27.5	+2.1
VTS	**Vitosha**	4.03	21	*e*Pn	Pn	15 14 27.3	+1.3
VTS	**Vitosha**	4.03	21	*i* P	Pn	15 14 29.6	+3.6
VTS	**Vitosha**	4.03	21	*e*Pn	Pn	15 14 27.3	+1.3
VTS	**Vitosha**	4.03	21	⇓*i*P	Pn	15 14 29.2	+3.2
SG1	**Sgolgore (BA)**	4.06	301	*i* P	Pn	15 14 27.6	+1.4
SG1	**Sgolgore (BA)**	4.06	301	⇑*i*P	Pn	15 14 27.6	+1.4
BAI	**Bari**	4.06	305	*e*P	Pn	15 14 27.7	+1.5
BAI	**Bari**	4.06	305	*e*P	Pn	15 14 27.7	+1.5
CEME	**Cevo**	4.11	335	⇑*i*Pn	Pn	15 14 27.5	+0.5
CEME				*i* Sn	Sn	15 15 13.1	-1.6
CEME	**Cevo**	4.11	335	⇑*i*Pn	Pn	15 14 27.5	+0.5
CEME				*i* Sn	Sn	15 15 13.1	-1.6
HCY	**Herceg Novi**	4.18	331	⇓*i*Pn	Pn	15 14 28.4	+0.5
HCY				*i* Sn	Sn	15 15 14.6	-1.6
HCY	**Herceg Novi**	4.18	331	⇓*i*Pn	Pn	15 14 28.4	+0.5
HCY				*i* Sn	Sn	15 15 14.6	-1.6
KOME	**Kolasin**	4.22	342	⇓*i*Pn	Pn	15 14 29.1	+0.5
KOME				*i* Sn	Sn	15 15 15.7	-1.8
KOME	**Kolasin**	4.22	342	⇓*i*Pn	Pn	15 14 29.1	+0.5
KOME				*i* Sn	Sn	15 15 15.7	-1.8
KDZ	**Kurdzhali**	4.25	47	*i* P	Pn	15 14 31.1	+2.3
NKY	**Niksic**	4.33	337	⇑*i*Pn	Pn	15 14 30.4	+0.3
NKY				*i* Sn	Sn	15 15 17.9	-2.2
NKY	**Niksic**	4.33	337	⇑*i*Pn	Pn	15 14 30.4	+0.3
NKY				*i* Sn	Sn	15 15 17.9	-2.2
SELS	**Selova**	4.38	359	*e*Pn	Pn	15 14 31.6	+0.9
TREB	**Trebinje**	4.46	331	*e*Pn	Pn	15 14 31.8	0.0
SJES	**Sjenica**	4.53	348	*e*Pn	Pn	15 14 35.0	+2.2
SJES	**Sjenica**	4.53	348	*e*Pn	Pn	15 14 35.0	+2.2
ZAPS	**Zavoj**	4.55	13	*e*Pn	Pn	15 14 33.6	+0.5
BRY	**Bratogost**	4.56	334	⇓*i*Pn	Pn	15 14 33.8	+0.6
BRY				*i* Sn	Sn	15 15 23.7	-2.0
BRY	**Bratogost**	4.56	334	⇓*i*Pn	Pn	15 14 33.8	+0.6
BRY				*i* Sn	Sn	15 15 23.7	-2.0
IDI	**Anoyia**	4.58	140	Pn	Pn	15 14 35.4	+2.0
	comp=E,1.9nm,0.3s,baz=304,slow=13,SNR=9.1						
IDI				Sn	Sn	15 15 26.5	+0.3
	comp=E,2.2nm,0.3s,baz=285,slow=18,SNR=3.0						
PLE	**Pljevlja**	4.71	343	⇑*i*Pn	Pn	15 14 35.7	+0.4
PLE				*i* Sn	Sn	15 15 27.1	-2.3
PLE	**Pljevlja**	4.71	343	⇑*i*Pn	Pn	15 14 35.7	+0.4
PLE				*i* Sn	Sn	15 15 27.1	-2.3
UPM	**Unac-Piva**	4.71	339	⇑*i*Pn	Pn	15 14 35.6	+0.2
UPM				*i* Sn	Sn	15 15 27.2	-2.5
UPM	**Unac-Piva**	4.71	339	⇑*i*Pn	Pn	15 14 35.6	+0.2
UPM				*i* Sn	Sn	15 15 27.2	-2.5
BOVS	**Bovan**	4.81	4	*e*Pn	Pn	15 14 37.9	+1.4
BOVS	**Bovan**	4.81	4	*e*Pn	Pn	15 14 37.9	+1.4
IVAS	**Ivanjica**	4.81	350	*e*Pn	Pn	15 14 38.0	+1.4
IVAS	**Ivanjica**	4.81	350	*e*Pn	Pn	15 14 38.0	+1.4
STON	**Ston**	4.85	327	*e*Pn	Pn	15 14 37.2	+0.1
STON				Sn	Sn	15 15 29.0	-3.8
STON	**Ston**	4.85	327	*e*Pn	Pn	15 14 35.2	-1.9
GRUS	**Gruza**	5.07	356	*e*Pn	Pn	15 14 41.5	+1.4
GRUS	**Gruza**	5.07	356	*e*Pn	Pn	15 14 41.5	+1.4
BBLS	**Lazići**	5.22	345	*e*Pn	Pn	15 14 43.1	+0.9
BBLS	**Lazići**	5.22	345	*e*Pn	Pn	15 14 43.1	+0.9
DIVS	**Divibare**	5.34	350	*e*Pn	Pn	15 14 44.9	+0.9
DIVS	**Divibare**	5.34	350	*e*Pn	Pn	15 14 44.9	+0.9
HAPS	**Han Pijesak,BI**	5.53	342	*e*Pn	Pn	15 14 47.0	+0.5
HAPS	**Han Pijesak,BI**	5.53	342	*e*Pn	Pn	15 14 47.0	+0.5
VAE	**Valguarnera**	5.56	258	Pn	Pn	15 14 48.7	+1.7
	comp=E,2.6nm,0.3s,baz=168,slow=19,SNR=2.2						
VAE				Sn	Sn	15 15 48.1	-2.3
	comp=E,1.0nm,0.3s,baz=52,slow=14,SNR=2.3						
BLY	**Banja Luka**	6.65	334	*e*Pn	Pn	15 15 01.8	0.0
UDBI	**Udbina**	7.02	326	*e*Pn	Pn	15 15 08.2	+1.3
UDBI				Sn	Sn	15 16 21.1	-5.1
NVLJ	**Novalja**	7.46	322	*e*Pn	Pn	15 15 13.0	+0.2
NVLJ				Sn	Sn	15 16 32.2	-4.7
MLR	**Muntele Rosu**	7.50	26	Pn	Pn	15 15 15.7	+2.0
	comp=E,0.2nm,0.3s,baz=232,slow=12,SNR=2.2						
CRES	**Cresnjev**	8.20	330	*e*Pn	Pn	15 15 22.4	-0.7
CEY	**Cerknica**	8.55	326	*e*Pn	Pn	15 15 27.2	-0.8
LJU	**Ljubljana**	8.75	328	*e*Pn	Pn	15 15 29.1	-1.6
SOKA	**Soboth**	9.07	332	*e*Pn	Pn	15 15 34.9	-0.3
	comp=E,2.9nm,0.4s						
SOKA	**Soboth**	9.07	332	Pn	Pn	15 15 34.9	-0.3
	comp=E,2.9nm,0.4s						
OBKA	**Obir**	9.12	329	*e*Pn	Pn	15 15 36.7	+0.9
	comp=E,2.1nm,0.5s						
OBKA	**Obir**	9.12	329	Pn	Pn	15 15 36.7	+0.9
	comp=E,2.1nm,0.5s						
ARSA	**Arzberg**	9.40	335	*e*Pn	Pn	15 15 38.6	-0.9
	comp=E,1.1nm,0.5s						
ARSA	**Arzberg**	9.40	335	Pn	Pn	15 15 38.6	-0.9
	comp=E,1.1nm,0.5s						
BRTR	**Keskin Array B**	9.64	81	Pn	Pn	15 15 45.2	+2.3
	comp=E,0.1nm,0.3s,baz=260,slow=14,SNR=4.1						
KBA	**Koelnbreinsper**	10.07	327	*e*Pn	Pn	15 15 49.1	+0.2
	comp=E,2.0nm,0.6s						
KBA	**Koelnbreinsper**	10.07	327	Pn	Pn	15 15 49.1	+0.2
	comp=E,2.0nm,0.6s						
ABTA	**Abfaltersbach**	10.19	324	*e*Pn	Pn	15 15 50.3	-0.1
	comp=E,0.1nm,0.2s						
ABTA	**Abfaltersbach**	10.19	324	Pn	Pn	15 15 50.3	-0.1
	comp=E,0.1nm,0.2s						
VRAC	**Vranov**	10.99	344	LR	LR	15 21 23.0	
	comp=E,81nm,18.8s,baz=166,slow=44						
GERES	**GERESS Array B**	11.39	334	Pn	Pn	15 16 07.4	+0.5
	comp=E,0.2nm,0.3s,baz=157,slow=14,SNR=4.8						
GERES				LR	LR	15 21 37.6	
	comp=E,116nm,19.4s,baz=126,slow=44						
DAVOX	**Davos/Dischmat**	11.52	317	LR	LR	15 22 51.7	
	comp=E,57nm,18.5s,baz=266,slow=50						
MMAI	**Mount Meron Ar**	12.84	113	LR	LR	15 22 52.0	
	comp=E,44nm,18.7s,baz=220,slow=44						
GNI	**Garni**	18.16	78	LR	LR	15 24 50.4	
	comp=E,34nm,20.4s,baz=260,slow=38						
ESDC	**Sonseca Array**	19.54	280	P	P	15 17 51.9	+0.3
	baz=79,slow=11,SNR=5.8						
HFS	**Hagfors**	21.85	350	P	P	15 18 15.6	-0.7
	comp=E,1.3nm,0.4s,baz=163,slow=11,SNR=12						
FINES	**FINESS Array B**	22.83	6	P	P	15 18 25.1	-1.7
	comp=E,2.7nm,0.9s,baz=190,slow=9.7,SNR=4.2						
NB2	**NORSAR Subarra**	23.10	348	P	P	15 18 28.8	-0.8
	comp=Z,1.1nm,0.6s,baz=154,slow=10						
NOA	**NORSAR Array B**	23.10	348	P	P	15 18 27.9	-1.7
	comp=Z,0.5nm,0.5s,baz=163,slow=11,SNR=3.7						
NOA				LR	LR	15 28 26.7	
	comp=Z,15nm,21.6s,baz=175,slow=39						
GEYT	**Alibeck**	28.78	80	P	P	15 19 22.4	+0.5
	comp=Z,0.6nm,0.5s,baz=320,slow=13,SNR=3.2						
ARCES	**ARCESS Array B**	30.85	3	P	P	15 19 38.5	-1.2
	comp=Z,0.5nm,0.4s,baz=186,slow=11,SNR=6.1						
TORD	**Torodi Ar. Bea**	30.91	219	P	P	15 19 40.6	-0.1
	comp=Z,0.7nm,0.9s,baz=10,slow=8.8						
KURBB	**Kurchatov Arra**	41.37	54	P	P	15 21 09.1	-0.7
	comp=Z,0.1nm,0.3s,baz=285,slow=9.0,SNR=3.0						
MKAR	**Makanchi Array**	44.47	59	P	P	15 21 34.3	-0.7
	comp=Z,0.4nm,0.5s,baz=280,slow=7.5,SNR=8.8						
ZALV	**Zalesovo Beam**	44.82	49	P	P	15 21 37.0	-0.7
	comp=Z,1.8nm,0.4s,baz=278,slow=8.0,SNR=9.3						
YBH	**Yreka Blue Hor**	93.36	334	LR	LR	16 10 11.4	
	comp=Z,18nm,18.4s,baz=330,slow=36						

IDC 31 15:23:16.8±52.0**, 16°.53S**×**178°.18W, h0^{km}, mb3.8**/3**, mb1 4.0**/3**, mb1mx3.6**/50**, mbtmp3.8**/3**, Error ellipse: s-maj=954.4km s-min=169.1km az=77.0, Fiji Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
STKA	**Stephens Creek**	39.50	240	P	P	15 30 49.9	+0.5
	1.8nm,1.1s,baz=66,slow=10.0,SNR=2.8						
WRA	**Warramunga Arr**	45.11	258	P	P	15 31 35.1	-0.3
	0.6nm,0.9s,baz=92,slow=8.1,SNR=8.2						
ASAR	**Alice Springs**	45.39	253	P	P	15 31 37.1	-0.4
	1.3nm,0.4s,baz=89,slow=8.7,SNR=51						

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*NIED **31** 15:27:00, 39°.60N×143°.30E, h23^{km}, Mw3.7 Best double couple: M$_0$4.35000×10^{14} NP1:φ$_s$192.00000°, δ19.00000°, λ77.00000°. NP2:φ$_s$26.00000°, δ72.00000°, λ95.00000°.*

*ISCJB **31** 15:27:17.5±0.7, 39°.59N±0°.05×143°.40E±0°.07, h11^{km}, mb3.6/10, MS3.0/2, Error ellipse: s-maj=8.5km s-min=6.3km az=136.5*

*IDC **31** 15:27:17.2±1.4, 39°.59N×143°.39E, h0^{km}, mb3.7/10, mb1 3.7/12, mb1mx3.5/71, mbtmp3.7/12, ML3.3/2, MS2.9/4, Ms1 2.9/4, ms1mx2.4/69, Error ellipse: s-maj=34.8km s-min=19.5km az=90.0*

*JMA **31** 15:27:19.2±0.2, 39°.65N×143°.33E, h23^{km}±3^{km}, M3.7*

ISC 31 15:27:19.4±1.0**, 39°.67N**±0°.06×**143°.32E**±0°.08**, h11^{km}, n34,** σ**1^s.44**/32**, mb3.7**/10**, Off east coast of Honshu**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JTH	**Tanohata**	1.15	284	P	Pn	15 27 40.4	-1.0
JTH				*e*S	Sb	15 27 55.6	-0.6
MIYJ	**Miyakonagasawa**	1.16	266	P	Pn	15 27 40.1	-1.5
OFUJ	**Ofunato**	1.41	246	P	Pn	15 27 43.9	-1.0
JANG	**Nango**	1.55	297	P	Pn	15 27 46.0	-0.9
JOM	**Ohasama**	1.58	263	P	Pn	15 27 46.8	-0.5
JOM				S	Sn	15 28 06.7	-1.0
JMK	**Ichinoseki**	1.78	247	P	Pn	15 27 49.5	-0.5
JMK				*e*S	Sn	15 28 11.4	-1.2
JIO	**Ouri**	1.96	232	P	Pn	15 27 51.4	-1.1
JTM	**Tenmabayashi**	2.05	304	P	Pn	15 27 53.7	-0.1
JRG	**Rokugo**	2.09	263	P	Pn	15 27 54.4	0.0
JAH	**Hinai**	2.12	285	P	Pn	15 27 55.2	+0.4
JYK	**Kaneyama**	2.42	253	P	Pn	15 27 58.9	+0.1
JOT	**Ohata**	2.43	315	P	Pn	15 27 59.2	+0.2
ASAJ	**Asahikawa**	4.47	353	Pn	Pn	15 28 28.4	+1.3
	1.1nm,0.3s,baz=201,slow=13,SNR=18						
ASAJ				Sn	Sn	15 29 15.2	-3.9
	0.4nm,0.3s,baz=131,slow=18,SNR=2.4						
MJAR	**Matsushiro Arr**	5.10	234	Pn	Pn	15 28 36.9	+1.1
	1.6nm,0.3s,baz=41,slow=12,SNR=24						
MAT	**Matsushiro**	5.10	234	P	Pn	15 28 36.5	+0.8
MAT				*e*S	Sn	15 29 35.0	+0.4
USRK	**Ussuriysk Ar.**	9.57	302	Pn	Pn	15 29 40.5	+3.4
	baz=103,slow=14						
USRK				LR	LR	15 33 10.5	
	comp=Z,74nm,19.3s,baz=283,slow=37						
KSRS	**Korea Array**	12.25	264	Pn	Pn	15 30 17.8	+4.0
	0.1nm,0.3s,baz=84,slow=13,SNR=4.0						
KSRS				LR	LR	15 34 08.9	
	comp=Z,30nm,21.8s,baz=100,slow=33						
SEY	**Seymchan**	23.93	10	P	P	15 32 33.6	+0.6
	1.8nm,0.8s,baz=204,slow=11,SNR=4.1						
SONM	**Songino Array**	27.68	299	P	P	15 33 07.7	+0.3
	0.5nm,0.4s,baz=87,slow=9.5,SNR=3.8						
SONM				LR	LR	15 44 04.6	
	comp=Z,35nm,18.7s,baz=88,slow=36						
H11N2	**WAKE ISLAND Hy**	28.39	128	T	T	16 03 05.4	
	baz=320,slow=74,SNR=21						
H11N1	**WAKE ISLAND Hy**	28.40	128	T	T	16 03 09.8	
	baz=320,slow=74,SNR=16						
H11N3	**WAKE ISLAND Hy**	28.41	128	T	T	16 03 06.6	
	baz=320,slow=74,SNR=19						
H11S1	**WAKE ISLAND Hy**	29.21	129	T	T	16 04 06.3	
	baz=321,slow=76,SNR=6.5						
H11S3	**WAKE ISLAND Hy**	29.21	130	T	T	16 04 05.2	
	baz=321,slow=76,SNR=4.3						
H11S2	**WAKE ISLAND Hy**	29.22	129	T	T	16 04 05.7	
	baz=321,slow=76,SNR=6.1						
ZALV	**Zalesovo Beam**	41.30	310	P	P	15 35 04.4	-0.2
	1.2nm,0.5s,baz=103,slow=8.7,SNR=4.4						
CMAR	**Chiang Mai Arr**	43.63	254	P	P	15 35 23.5	-0.5
	0.3nm,0.5s,baz=27,slow=6.2,SNR=3.0						
MKAR	**Makanchi Array**	44.04	300	P	P	15 35 26.8	-0.2
	1.0nm,0.8s,baz=83,slow=9.1,SNR=9.4						
KURBB	**Kurchatov Arra**	45.61	306	P	P	15 35 39.1	-0.3
	1.3nm,0.7s,baz=82,slow=8.4,SNR=11						
BVAR	**Borovoye Array**	49.94	311	P	P	15 36 13.2	+0.2
	0.7nm,0.6s,baz=72,slow=9.3,SNR=4.9						
WRA	**Warramunga Arr**	59.89	190	P	P	15 37 24.1	-1.2
	0.2nm,0.4s,baz=7.1,slow=6.9,SNR=4.8						
ASAR	**Alice Springs**	63.62	190	P	P	15 37 49.5	-0.9
	0.3nm,0.8s,baz=348,slow=7.6,SNR=3.1						
HFS	**Hagfors**	72.30	336	P	P	15 38 44.8	+0.3
	0.5nm,0.4s,baz=353,slow=6.1,SNR=5.7						
NOA	**NORSAR Array B**	72.33	338	LR	LR	16 14 26.8	
	comp=Z,7.1nm,19.6s,baz=240,slow=39						

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*ISCJB **31** 15:35:39.6±0.8, 6°.12S±0°.07×127°.7E±0°.1, h408^{km}, mb3.2/2, Error ellipse: s-maj=14.1km s-min=8.9km az=17.6*

*IDC **31** 15:35:41.8±3.0, 6°.28S×127°.48E, h408^{km}±32^{km}, mb2.9/2, mb1 3.0/5, mb1mx2.7/52, mbtmp3.8/5, Error ellipse: s-maj=48.3km s-min=13.5km az=64.0*

ISC 31 15:35:40.2±1.0**, 6°.13S**±0°.09×**127°.7E**±0°.1**, h408^{km}, n6,** σ**2^s.59**/9**, Banda Sea**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BATI	**Baumata**	5.67	224	P	P	15 37 10.2	+0.7
	4.1nm,0.3s,baz=44,slow=4.3,SNR=4.3						
BATI				S	S	15 38 18.4	-4.2
	3.5nm,0.3s,baz=49,slow=20,SNR=4.8						
SIJI	**Sorong**	6.33	35	S	S	15 38 32.3	-3.3
	1.0nm,0.3s,baz=233,slow=20,SNR=5.1						
WRA	**Warramunga Arr**	15.18	155	P	P	15 38 55.7	+1.2
	0.3nm,0.3s,baz=334,slow=11,SNR=30						
WRA				S	S	15 41 33.9	-1.4
	0.2nm,0.3s,baz=339,slow=20,SNR=7.8						
ASAR	**Alice Springs**	18.44	162	P	P	15 39 30.4	+1.2
	0.2nm,0.3s,baz=347,slow=12,SNR=24						
ASAR				S	S	15 42 38.7	+1.0
	0.1nm,0.3s,baz=345,slow=17,SNR=4.6						
MKAR	**Makanchi Array**	66.25	328	P	P	15 45 48.2	+2.0
	0.3nm,0.4s,baz=120,slow=7.3,SNR=8.8						
KURBB	**Kurchatov Arra**	70.58	329	P	P	15 46 13.7	+1.2
	0.4nm,0.5s,baz=130,slow=4.8,SNR=4.4						

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*NEIC **31** 15:36:45.3±0.0, 37°.04S×176°.74E, h289^{km}, ML4.3(WEL), After WEL.*

WEL 31 15:36:42.8, 37°S±6°×**17°7E**±°**, h316^{km}**±8^{km}**, Off east coast of North Island**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TGRZ	**Tauranga**	0.81	206	P	Pn	15 37 24.3	+0.3
KUZ	**Kuaotunu**	0.83	288	Pn	Pn	15 37 23.9	-0.3
KUZ	**Kuaotunu**	0.83	288	P	Pn	15 37 23.9	-0.3
OPRZ	**Ohinepanea**	0.85	188	P	Pn	15 37 24.0	-0.2
MARZ	**Manawahe**	0.98	181	Pn	Pn	15 37 24.7	0.0
MARZ	**Manawahe**	0.98	181	P	Pn	15 37 24.7	0.0
KMRZ	**Kaimai**	1.04	216	P	Pn	15 37 25.6	+0.5
KARZ	**Kaharoa**	1.08	200	P	Pn	15 37 25.5	+0.3
OMRZ	**Omania**	1.14	193	P	Pn	15 37 25.7	+0.2
HAZ	**Te Kaha**	1.14	132	P	Pn	15 37 24.8	-0.6
HAZ				S	S	15 37 56.1	-3.3
NGRZ	**Ngongotaha**	1.18	200	P	Pn	15 37 26.2	+0.6
RUGZ	**Raukumara Rang**	1.23	142	P	Pn	15 37 25.0	-1.1
RUGZ				S	S	15 37 56.7	-3.9
RUGZ	**Raukumara Rang**	1.23	142	P	S	15 37 54.1	-6.5
MKAZ	**Moumakai**	1.24	265	P	Pn	15 37 26.1	+0.2
TARZ	**Mount Tarawera**	1.24	187	Pn	Pn	15 37 26.4	+0.3
TARZ	**Mount Tarawera**	1.24	187	P	Pn	15 37 26.9	+0.8
UTU	**Utuhina**	1.24	199	P	Pn	15 37 26.7	+0.7
WIAZ	**Waiheke Island**	1.28	279	P	Pn	15 37 26.3	0.0
URZ	**Urewera**	1.30	166	Pn	Pn	15 37 25.5	-0.7
URZ				Sn	S	15 37 57.5	-3.4
URZ	**Urewera**	1.30	166	P	Pn	15 37 25.5	-0.7
URZ				S	S	15 37 58.0	-2.9
RRRZ	**Republican Roa**	1.35	186	P	Pn	15 37 26.6	0.0
HSRZ	**Hossack Road**	1.36	196	P	Pn	15 37 27.5	+0.9
MXZ	**Matakaoa Point**	1.39	114	Pn	Pn	15 37 26.4	-0.4
MXZ	**Matakaoa Point**	1.39	114	P	Pn	15 37 26.6	-0.2
MXZ				S	S	15 37 59.2	-2.8
MXZ	**Matakaoa Point**	1.39	114	P	S	15 37 56.5	-5.4
PKGZ	**Pakihiroa**	1.41	130	P	Pn	15 37 26.0	-0.9
ETAZ	**East Tamaki Re**	1.43	271	P	Pn	15 37 27.3	+0.2
HRRZ	**Handcock Road**	1.43	193	P	Pn	15 37 27.3	+0.2
GRRZ	**Galatos Road**	1.43	199	P	Pn	15 37 27.6	+0.5
KBAZ	**Karaka Road Bo**	1.46	266	P	Pn	15 37 27.7	+0.5
MUGZ	**Murupara**	1.48	178	P	Pn	15 37 27.0	-0.3
MUGZ				S	S	15 38 01.1	-1.7
MWZ	**Matawai**	1.48	154	Pn	Pn	15 37 27.0	-0.4
MWZ				Sn	S	15 38 00.2	-2.8
MWZ	**Matawai**	1.48	154	P	Pn	15 37 27.0	-0.3
MWZ				S	S	15 38 00.3	-2.7
PRRZ	**Plateau Road**	1.52	189	Pn	Pn	15 37 27.5	-0.1
PRRZ	**Plateau Road**	1.52	189	P	Pn	15 37 27.6	0.0
TWGZ	**Tauwhareparae**	1.55	140	Pn	Pn	15 37 28.3	+0.4
TWGZ	**Tauwhareparae**	1.55	140	P	Pn	15 37 28.3	+0.5
TWGZ				S	S	15 38 03.1	-0.6
WPRZ	**Whakapapatarin**	1.58	196	Pn	Pn	15 37 28.1	+0.1
WPRZ	**Whakapapatarin**	1.58	196	P	Pn	15 37 28.2	+0.2
ALRZ	**Allen Road**	1.59	190	Pn	Pn	15 37 27.8	-0.2
ALRZ	**Allen Road**	1.59	190	P	Pn	15 37 28.0	0.0
WMGZ	**Waiomatatini S**	1.59	122	Pn	Pn	15 37 28.1	+0.1
WMGZ	**Waiomatatini S**	1.59	122	P	Pn	15 37 28.1	+0.2
WMGZ				S	S	15 38 02.5	-1.6
WMGZ	**Waiomatatini S**	1.59	122	P	S	15 37 57.3	-6.8
RAGZ	**Rawiri**	1.59	160	Pn	Pn	15 37 28.0	-0.1
RAGZ	**Rawiri**	1.59	160	P	Pn	15 37 28.1	0.0
RAGZ	**Rawiri**	1.59	160	P	S	15 38 01.8	-2.6
TLZ	**Tolley Road**	1.62	215	P	Pn	15 37 28.9	+0.7
RTZ	**Ruatahuna**	1.63	172	P	Pn	15 37 28.0	-0.3
PUZ	**Puketiti**	1.63	131	Pn	Pn	15 37 28.0	-0.3
PUZ	**Puketiti**	1.63	131	P	Pn	15 37 28.0	-0.3
PUZ	**Puketiti**	1.63	131	P	S	15 37 59.1	-5.6
KUTZ	**Kaahu Road**	1.64	205	P	Pn	15 37 29.0	+0.6
AWAZ	**Awhitu Peninsu**	1.65	267	P	Pn	15 37 28.7	+0.3
TKGZ	**Te Karaka**	1.70	148	Pn	Pn	15 37 28.8	+0.1
TKGZ	**Te Karaka**	1.70	148	P	Pn	15 37 28.8	+0.1
TKGZ	**Te Karaka**	1.70	148	P	S	15 38 04.5	-0.9
WHTZ	**Whakaora**	1.77	199	P	Pn	15 37 31.4	+2.1
MRHZ	**Matea Rd**	1.84	187	P	Pn	15 37 29.6	-0.2
SNGZ	**Shannon Statio**	1.85	164	Pn	Pn	15 37 30.0	+0.2
SNGZ	**Shannon Statio**	1.85	164	P	Pn	15 37 30.0	+0.2
SNGZ	**Shannon Statio**	1.85	164	P	S	15 38 04.6	-2.7
MTHZ	**Maungataniwha**	1.85	177	P	Pn	15 37 29.6	-0.2
CNGZ	**Carnagh Statio**	1.90	142	Pn	Pn	15 37 30.6	+0.5
CNGZ	**Carnagh Statio**	1.90	142	P	Pn	15 37 30.7	+0.5
RAHZ	**Arahi**	1.94	171	P	Pn	15 37 30.8	+0.3
RAHZ	**Arahi**	1.94	171	P	S	15 38 08.7	+0.2
HATZ	**Hinemaiaia**	1.95	194	P	Pn	15 37 30.7	+0.2
RATZ	**Rangitukua**	2.00	201	P	Pn	15 37 31.1	+0.1
RITZ	**Rihia Road**	2.08	198	Pn	Pn	15 37 31.9	+0.4
RITZ	**Rihia Road**	2.08	198	P	Pn	15 37 32.0	+0.4
NMHZ	**Naumai**	2.10	178	Pn	Pn	15 37 32.3	+0.6
NMHZ	**Naumai**	2.10	178	P	Pn	15 37 32.3	+0.6
HIZ	**Hauiti**	2.11	224	P	Pn	15 37 32.3	+0.6
WHHZ	**Waihua**	2.12	169	P	Pn	15 37 32.0	+0.3
WHHZ	**Waihua**	2.12	169	P	S	15 38 11.2	+0.3
PRGZ	**Paritu Road**	2.13	155	Pn	Pn	15 37 32.3	+0.4
PRGZ	**Paritu Road**	2.13	155	P	Pn	15 37 32.4	+0.5
KNZ	**Kokohu**	2.16	160	Pn	Pn	15 37 32.0	-0.1
KNZ	**Kokohu**	2.16	160	P	Pn	15 37 32.0	-0.1
KNZ	**Kokohu**	2.16	160	P	S	15 38 05.9	-5.6
BKZ	**Black Stump Fm**	2.17	184	Pn	Pn	15 37 31.9	-0.4
BKZ				Sn	S	15 38 09.6	-2.2
BKZ	**Black Stump Fm**	2.17	184	P	Pn	15 37 31.9	-0.3
WCZ	**Waipu Caves**	2.18	298	P	Pn	15 37 32.3	-0.1
KRVZ	**Karewarewa**	2.25	202	Pn	Pn	15 37 32.9	-0.1
KRVZ	**Karewarewa**	2.25	202	P	Pn	15 37 33.4	+0.3
ARHZ	**Aropaoanui**	2.27	174	Pn	Pn	15 37 33.3	+0.3
ARHZ	**Aropaoanui**	2.27	174	P	Pn	15 37 33.3	+0.3
ARHZ	**Aropaoanui**	2.27	174	P	S	15 38 12.8	-0.4
WTVZ	**West Tongariro**	2.29	202	P	Pn	15 37 33.2	-0.1
TWVZ	**Taurewa**	2.30	205	P	Pn	15 37 33.4	+0.1
OTVZ	**Oturere**	2.31	201	Pn	Pn	15 37 33.5	-0.1
NGZ	**Ngauruhoe**	2.34	202	Pn	Pn	15 37 33.9	+0.1
NGZ	**Ngauruhoe**	2.34	202	P	Pn	15 37 33.8	+0.1
MHGZ	**Mahia Peninsul**	2.35	157	Pn	Pn	15 37 33.9	+0.2
MHGZ	**Mahia Peninsul**	2.35	157	P	Pn	15 37 33.9	+0.3
COVZ	**Chateau Observ**	2.38	202	P	Pn	15 37 33.9	-0.2
TUVZ	**Tukino**	2.41	200	Pn	Pn	15 37 34.2	-0.1
TUVZ	**Tukino**	2.41	200	P	Pn	15 37 34.3	0.0
FWVZ	**Far West T-bar**	2.43	202	Pn	Pn	15 37 34.4	-0.2
FWVZ	**Far West T-bar**	2.43	202	P	Pn	15 37 34.4	-0.2
KWHZ	**Kaweka Forest**	2.43	185	P	Pn	15 37 34.4	-0.1
MCHZ	**McNeill Hill**	2.44	180	Pn	Pn	15 37 34.7	+0.2
MCHZ	**McNeill Hill**	2.44	180	P	Pn	15 37 34.7	+0.3
WHVZ	**Whangaehu Hut**	2.44	201	Pn	Pn	15 37 34.8	0.0
WHVZ	**Whangaehu Hut**	2.44	201	P	Pn	15 37 34.8	+0.1
TRVZ	**Turoa**	2.47	201	P	Pn	15 37 35.2	+0.2
WNVZ	**Wahianoa**	2.48	200	Pn	Pn	15 37 34.7	-0.3
MOVZ	**Moawhango**	2.52	197	Pn	Pn	15 37 34.7	-0.5
MOVZ	**Moawhango**	2.52	197	P	Pn	15 37 34.8	-0.4
PKVZ	**Pokaka**	2.52	205	Pn	Pn	15 37 35.1	-0.2
PKVZ	**Pokaka**	2.52	205	P	Pn	15 37 35.1	-0.2
BHHZ	**Black Hill Sta**	2.54	191	Pn	Pn	15 37 35.0	-0.4
BHHZ	**Black Hill Sta**	2.54	191	P	Pn	15 37 35.0	-0.4
MTVZ	**Mangateitei**	2.57	202	Pn	Pn	15 37 35.5	-0.2
MTVZ	**Mangateitei**	2.57	202	P	Pn	15 37 35.5	-0.2
VRZ	**Vera Road**	2.62	215	Pn	Pn	15 37 36.5	+0.4
VRZ	**Vera Road**	2.62	215	P	Pn	15 37 36.6	+0.5
KRHZ	**Kereru**	2.65	186	P	Pn	15 37 35.9	-0.5
CKHZ	**Cape Kidnapper**	2.67	174	Pn	Pn	15 37 36.5	+0.1
CKHZ	**Cape Kidnapper**	2.67	174	P	Pn	15 37 36.6	+0.1
KAHZ	**Kahuranaki**	2.79	177	Pn	Pn	15 37 37.6	0.0
KAHZ	**Kahuranaki**	2.79	177	P	Pn	15 37 37.7	+0.1
PNHZ	**Pukenui**	2.94	188	Pn	Pn	15 37 38.2	-0.7
PNHZ	**Pukenui**	2.94	188	P	Pn	15 37 38.3	-0.7
PXZ	**Pawanui**	3.03	178	Pn	Pn	15 37 39.5	-0.3
PXZ	**Pawanui**	3.03	178	P	Pn	15 37 39.7	-0.1
LREZ	**Lake Rotokare**	3.05	216	P	Pn	15 37 41.1	+1.1
NEZ	**North Egmont**	3.06	221	Pn	Pn	15 37 41.7	+1.4
WAZ	**Wanganui**	3.06	206	Pn	Pn	15 37 39.8	-0.4
WAZ	**Wanganui**	3.06	206	P	Pn	15 37 39.7	-0.4
WPHZ	**Waipukurau**	3.07	184	Pn	Pn	15 37 39.6	-0.6
WPHZ	**Waipukurau**	3.07	184	P	Pn	15 37 39.8	-0.4
OUZ	**Omahuta**	3.08	304	P	Pn	15 37 40.0	-0.5
TSZ	**Takapari Road**	3.11	191	Pn	Pn	15 37 39.8	-0.8
TSZ	**Takapari Road**	3.11	191	P	Pn	15 37 39.9	-0.7
KHEZ	**Kahui Hut**	3.12	222	P	Pn	15 37 42.0	+1.2
PRHZ	**Porangahau**	3.26	181	Pn	Pn	15 37 41.8	-0.3
PRHZ	**Porangahau**	3.26	181	P	Pn	15 37 41.8	-0.3
DVHZ	**Dannevirke**	3.32	187	Pn	Pn	15 37 41.8	-0.9
DVHZ	**Dannevirke**	3.32	187	P	Pn	15 37 41.8	-0.9
OHWZ	**Ohakea**	3.38	198	P	Pn	15 37 43.2	-0.1
ANWZ	**Angora Road**	3.46	183	P	Pn	15 37 43.7	-0.3
POWZ	**Post Office Ro**	3.47	192	Pn	Pn	15 37 43.0	-1.1
POWZ	**Post Office Ro**	3.47	192	P	Pn	15 37 43.1	-1.0
BFZ	**Birch Farm**	3.69	185	Pn	Pn	15 37 45.6	-0.9
BFZ	**Birch Farm**	3.69	185	P	Pn	15 37 45.7	-0.8
MRZ	**Mangatainoka R**	3.76	193	Pn	Pn	15 37 45.8	-1.4
MRZ	**Mangatainoka R**	3.76	193	P	Pn	15 37 45.9	-1.3
TIWZ	**Tintock**	3.83	189	Pn	Pn	15 37 46.9	-1.0
TIWZ	**Tintock**	3.83	189	P	Pn	15 37 47.1	-0.8
OGWZ	**Otaki Gorge**	4.00	197	Pn	Pn	15 37 48.4	-1.2
OGWZ	**Otaki Gorge**	4.00	197	P	Pn	15 37 48.5	-1.2
HOWZ	**Holdsworth Sta**	4.00	193	Pn	Pn	15 37 48.3	-1.5
HOWZ	**Holdsworth Sta**	4.00	193	P	Pn	15 37 48.3	-1.5
KIW	**Kapiti Island**	4.10	199	Pn	Pn	15 37 49.6	-1.3
KIW	**Kapiti Island**	4.10	199	P	Pn	15 37 49.5	-1.3
TMWZ	**Te Maipa**	4.15	189	P	Pn	15 37 50.5	-0.9
MTW	**Mount Morrison**	4.26	192	Pn	Pn	15 37 51.0	-1.6
MTW	**Mount Morrison**	4.26	192	P	Pn	15 37 50.0	-2.5

CAW	Cannon Point	4.30	197	Pn	Pn	15 37 51.4	-1.5
CAW	Cannon Point	4.30	197	P	Pn	15 37 51.4	-1.5
DUWZ	D'Urville Isla	4.37	209	Pn	Pn	15 37 52.2	-1.6
DUWZ	D'Urville Isla	4.37	209	P	Pn	15 37 52.2	-1.6
TRWZ	Traveller	4.46	190	*e*Pn	Pn	15 37 53.7	-1.1
TRWZ	Traveller	4.46	190	P	Pn	15 37 53.7	-1.1
PAWZ	Paruwai Farm	4.49	192	Pn	Pn	15 37 53.5	-1.6
PAWZ	Paruwai Farm	4.49	192	P	Pn	15 37 53.5	-1.5
WEL	Wellington	4.54	199	Pn	Pn	15 37 54.4	-1.2
MSWZ	Moikau Station	4.55	194	Pn	Pn	15 37 54.0	-1.8
MSWZ	Moikau Station	4.55	194	P	Pn	15 37 54.1	-1.7
SNZO	South Karori	4.58	199	*e*Pn	Pn	15 37 54.0	-2.0
TCW	Tory Channel	4.61	203	Pn	Pn	15 37 55.1	-1.3
TCW	Tory Channel	4.61	203	P	Pn	15 37 55.0	-1.4
BHW	Baring Head	4.63	197	Pn	Pn	15 37 54.6	-1.9
BHW	Baring Head	4.63	197	P	Pn	15 37 55.0	-1.6
PLWZ	Palliser	4.70	193	Pn	Pn	15 37 55.6	-1.9
PLWZ	Palliser	4.70	193	P	Pn	15 37 55.7	-1.8
TUWZ	Tuamarina	4.92	205	Pn	Pn	15 37 58.2	-1.6
TUWZ	Tuamarina	4.92	205	P	Pn	15 37 58.4	-1.5
NNZ	Nelson	4.94	211	Pn	Pn	15 37 58.2	-1.9
NNZ	Nelson	4.94	211	P	Pn	15 37 58.3	-1.9
QRZ	Quartz Range	5.02	219	Pn	Pn	15 37 59.0	-2.0
QRZ	Quartz Range	5.02	219	P	Pn	15 37 58.9	-2.1
BSWZ	Blackbirch Sta	5.20	204	Pn	Pn	15 38 01.8	-1.2
BSWZ	Blackbirch Sta	5.20	204	P	Pn	15 38 01.8	-1.2
THZ	Tophouse	5.59	211	Pn	Pn	15 38 05.6	-2.1
THZ	Tophouse	5.59	211	P	Pn	15 38 05.6	-2.1
KHZ	Kahutara	5.94	203	P	Pn	15 38 10.1	-1.5
LTZ	Lake Taylor	6.71	209	Pn	Pn	15 38 18.7	-2.1
LTZ	Lake Taylor	6.71	209	P	Pn	15 38 18.7	-2.1
INZ	Inchbonnie	7.00	214	P	Pn	15 38 21.9	-2.4
OXZ	Oxford	7.26	208	Pn	Pn	15 38 24.4	-3.0
OXZ	Oxford	7.26	208	P	Pn	15 38 24.6	-2.8
MQZ	McQueen's Vall	7.38	204	Pn	Pn	15 38 26.4	-2.4
MQZ	McQueen's Vall	7.38	204	P	Pn	15 38 26.1	-2.7
WVZ	Waitaha Valley	7.60	215	Pn	Pn	15 38 29.0	-2.5
WVZ	Waitaha Valley	7.60	215	P	Pn	15 38 28.9	-2.6

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*SJA **31** 15:43:22.8±0.3, 32°.81S×72°.01W, h10^{km}, ML3.2, MW3.0*
*GUC **31** 15:43:27.1±0.5, 32°.63S×71°.63W, h14^{km}±1^{km}, ML3.0*
ISC 31 15:43:26.6±2.5, 32°.73S±0°.05×71°.7W±0°.1, h3^{km}±12^{km}, n19, σ1^{s}.41/31, 1C-1D, Near coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
ROCH	El Roble	0.64	112⇓	*e*P	Pg	15 43 40.1	+1.2
ROCH				*e*S	Sb	15 43 49.8	-0.2
ROCH				IAML		15 43 50.3	
	comp=N,937nm,0.3s						
PEL	Peldehue	0.96	115⇑	*e*P	Pg	15 43 44.8	-0.2
PEL				*e*S	Sb	15 43 58.5	-0.5
PEL				*e*S	Sg	15 43 58.7	+1.2
PEL				IAML		15 44 01.2	
	comp=N,909nm,0.2s						
CLCH	Cerro Calan	1.19	124	*e*P	Pg	15 43 48.9	-0.6
CLCH				*e*S	Sb	15 44 05.2	-0.5
CLCH				*e*S	Sn	15 44 05.6	-1.4
ANTU	Antumapu	1.23	133	*e*P	Pg	15 43 49.8	-0.4
ANTU				*e*S	Sb	15 44 07.3	+0.4
ANTU				IAML		15 44 09.5	
	comp=N,376nm,0.4s						
FCH	Farellones	1.34	117	*e*P	Pg	15 43 51.0	-1.2
FCH				*e*S	Sb	15 44 09.3	-0.8
FCH				IAML		15 44 10.4	
	comp=E,426nm,0.3s						
LMEL	Las Melosas	1.69	132	*e*P	Pn	15 43 57.1	+0.1
LMEL				*e*S	Sg	15 44 20.4	-0.4
LMEL				IAML		15 44 24.4	
	comp=N,462nm,0.1s						
AUSP	Uspallata	2.04	76	*e*P	Pn	15 44 03.7	+1.7
RTLS	Leoncito	2.25	66	*e*P	Pn	15 44 06.6	+1.6
RTLS				*e*S	Sg	15 44 39.1	+0.1
ARCO	CERRO ARCO	2.35	93	*e*P	Pn	15 44 07.4	+1.2
ARCO				IAML		15 44 46.9	
	comp=Z,44nm,0.5s						
ASAL	Salagasta	2.44	87	*e*P	Pn	15 44 08.7	+1.4
ASAL				*e*S	Sg	15 44 42.9	-2.0
AAGR	Agrelo	2.46	99	*e*P	Pn	15 44 09.0	+1.3
TLL	Tololo Astrono	2.68	17	*e*P	Pn	15 44 10.5	-0.3
TLL				*e*S	Sn	15 44 43.6	-0.2
TLL				IAML		15 44 49.8	
	comp=N,131nm,0.4s						
RTCV	Cerro Valdivia	2.83	73	*e*P	Pn	15 44 14.3	+1.6
AROD	Rodeo	3.20	37	*e*P	Pn	15 44 19.7	+1.6
AMOG	MOGNA	3.28	58	*e*P	Pn	15 44 20.5	+1.6
ACDV	Cuesta del Vie	3.39	42	*e*P	Pn	15 44 22.2	+1.7
ACDV				*e*S	Sb	15 45 06.1	-2.9
ACAN	Cantantal	3.85	84	*e*P	Pn	15 44 28.6	+1.7
AGUA	GUANDACOL	4.26	41	*e*P	Pn	15 44 34.3	+1.9
VCA	Vinchina	5.00	38	*e*P	Pn	15 44 44.9	+2.2
VCA				IAML		15 45 56.8	
	comp=Z,29nm,0.4s						

IDC 31 15:53:30.5±1.7, 6°.81S×128°.13E, h0^{km}, mb3.5/1, mb1 3.6/4, mb1mx3.4/50, mbtmp3.5/4, ML3.6/3, Error ellipse: s-maj=57.3km s-min=29.0km az=77.0, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	Sorong	6.68	28	Pn	Pn	15 55 12.0	+2.1
	1.8nm,0.3s,baz=142,slow=19,SNR=16						
SIJI				Sn	Sn	15 56 16.3	-11
	3.8nm,0.3s,baz=264,slow=23,SNR=12						
WRA	Warramunga Arr	14.38	156	Pn	Pn	15 56 54.3	-1.2
	0.3nm,0.3s,baz=344,slow=13,SNR=16						
WRA				Sn	Sn	15 59 18.9	-17
	0.9nm,0.3s,baz=342,slow=23,SNR=9.0						
ASAR	Alice Springs	17.66	162	P	P	15 57 39.1	0.0
	0.1nm,0.3s,baz=337,slow=9.1,SNR=11						
ASAR				S	Sn	16 00 43.1	-12
	0.3nm,0.3s,baz=342,slow=25,SNR=8.0						
MKAR	Makanchi Array	67.06	328	P	P	16 04 25.2	-0.5
	0.3nm,0.5s,baz=126,slow=7.3,SNR=3.3						

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*NIED **31** 15:58:00, 39°.90N×142°.50E, h41^{km}, Mw3.6 Best double couple: M$_0$2.89000×10^{14} NP1:φ$_s$253.00000°, δ35.00000°, λ-173.00000°. NP2:φ$_s$157.00000°, δ86.00000°, λ-55.00000°.*
JMA 31 15:58:03.5±0.1, 39°.90N×142°.48E, h36^{km}±1^{km}, M3.7, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTH	Tanohata	0.48	275	P	Pn	15 58 13.7	0.0
JTH				S	Sn	15 58 20.7	-0.2
MIYJ	Miyakonagasawa	0.60	238	P	Pn	15 58 15.3	-0.4
MIYJ				S	Sn	15 58 23.5	-0.6
JANG	Nango	0.88	303	P	Pn	15 58 19.0	-0.3
JKZ	Kuzumaki	0.89	276	P	Pn	15 58 19.9	+0.4
JKZ				S	Sn	15 58 31.4	+0.2
JOM	Ohasama	1.01	245	P	Pn	15 58 21.5	+0.4
JOM				S	Sn	15 58 34.5	+0.4
OFUJ	Ofunato	1.03	218	P	Pn	15 58 21.6	+0.2
OFUJ				S	Sn	15 58 34.7	+0.1
JMK	Ichinoseki	1.36	226	P	Pn	15 58 26.5	+0.6
JMK				S	Sn	15 58 43.5	+0.8
JTM	Tenmabayashi	1.40	310	P	Pn	15 58 27.2	+0.8
JTM				S	Sn	15 58 44.5	+0.9
JAH	Hinai	1.45	282	P	Pn	15 58 28.2	+1.1
JAH				S	Sn	15 58 47.6	+2.8
JRG	Rokugo	1.51	251	P	Pn	15 58 29.8	+1.8
JRG				S	Sn	15 58 49.6	+3.2

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*ISCJB **31** 16:03:28.9±0.5, 6°.49S±0°.07×131°.5E±0°.2, h10^{km}, mb4.4/5, MS2.3/1, Error ellipse: s-maj=23.6km s-min=7.2km az=164.1*
*NEIC **31** 16:03:31.3±0.5, 6°.43S×131°.50E, h10^{km}, mb4.7/2, Error ellipse: s-maj=22.1km s-min=8.1km az=75.0*
*IDC **31** 16:03:31.2±1.7, 6°.83S×130°.33E, h0^{km}, mb4.2/3, mb1 4.0/5, mb1mx3.6/48, mbtmp3.9/5, ML3.6/2, MS2.5/1, Ms1 2.5/1, ms1mx2.2/48, Error ellipse: s-maj=117.7km s-min=28.5km az=72.0*
ISC 31 16:03:31.2±0.8, 6°.45S±0°.09×131°.5E±0°.2, h10^{km}, n22, σ1^{s}.09/18, mb4.5/5, Tanimbar Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
FAKI	Fak Fak	3.59	12	*e*Pn	Pn	16 04 24.9	-2.0
MTN	Manton Dam	6.36	183	*e*Pn	Pn	16 05 00.3	-4.7
MMRI	Maumere	9.43	256	*e*Pn	Pn	16 05 37.3	-10
WRAB	Tennant Creek	13.69	169	*e*Pn	Pn	16 06 45.6	+0.1
WR1	Warramunga Arr	13.69	169	*e*Pn	Pn	16 06 44.5	-1.0
WR1				*e*Sn	Sn	16 09 09.3	-8.6
WRA	Warramunga Arr	13.69	169	Pn	Pn	16 06 44.5	-1.0
	0.3nm,0.3s,baz=344,slow=13,SNR=15						
WRA				Sn	Sn	16 09 09.3	-8.6
	0.0nm,0.3s,baz=332,slow=25,SNR=3.8						
WB2	Warramunga Arr	13.70	169	*e*Pn	Pn	16 06 44.4	-1.2
COEN	Coen	13.70	124	*e*Pn	Pn	16 06 46.0	+0.3
AS31	Alice Springs	17.27	173	*e*Pn	P	16 07 33.8	-0.3
	2.0nm,1.4s						
ASAR	Alice Springs	17.27	173	P	Pn	16 07 32.4	-0.3
	0.2nm,0.3s,baz=350,slow=14,SNR=15						
AS01	Alice Springs	17.28	172	*e*Pn	Pn	16 07 32.2	-0.6
GUMO	Guam	23.93	34	LR	LR	16 20 08.5	
	comp=Z,11nm,19.6s,baz=159,slow=40						
PSI	Prapat	33.79	285	*e*P	P	16 10 07.0	-6.8
	6.9nm,1.0s						
SONA0	Songino Array	58.41	340	*e*P	P	16 13 27.1	0.0
SONM	Songino Array	58.41	340	P	P	16 13 27.1	0.0
	0.5nm,0.5s,baz=163,slow=6.0,SNR=2.4						
MK01	Makanchi Array	68.57	326	*e*P	P	16 14 33.1	-1.1
MK31	Makanchi Array	68.59	326	*e*P	P	16 14 34.2	-0.2
MK32	Makanchi Array	68.59	326	*e*P	P	16 14 34.9	+0.5
MKAR	Makanchi Array	68.59	326	P	P	16 14 34.9	+0.5
	0.7nm,0.5s,baz=121,slow=7.9,SNR=9.8						
KURBB	Kurchatov Arra	72.83	328	P	P	16 15 00.3	+0.3
	2.5nm,0.2s,baz=126,slow=4.9,SNR=7.0						
KURK	Kurchatov	72.83	328	*e*P	P	16 15 00.3	+0.3
GHO	Glory Hole Cre	90.73	28	*e*P	P	16 16 37.0	+2.8
	5.5nm,0.8s						

ISC 31 16:04:39.5±2.1, 51°.21N±0°.10×16°.07E±0°.06, h0^{km}, n11, σ1^{s}.37/19, Poland

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
KSP	Ksiaz	0.40	159	*e*Pg	Pg	16 04 46.6	-0.4
KSP				*e*Sg	Sb	16 04 55.8	-0.1
UPC	Upice	0.71	183	*e*PG	Pg	16 04 52.9	-0.1
UPC				*e*SG	Sb	16 05 05.8	+0.9
	comp=Z,24nm,0.3s						
DPC	Dobruska-Polom	0.88	170	*e*PG	Pg	16 04 55.7	-0.6
DPC				*e*SG	Sb	16 05 10.3	+0.4
	comp=Z,7.7nm,0.3s						
KRLC	Kraliky	1.23	158	*e*PG	Pg	16 05 02.1	-0.8
KRLC				*e*SG	Sn	16 05 20.4	-0.8
	comp=Z,3.5nm,0.4s						
BRG	Berggiesshubel	1.39	257	PG	Pn	16 05 02.1	-4.0
BRG				SG	Sg	16 05 22.0	-2.0
	15nm,0.6s						
GOPC	GO Pecny, Ondr	1.54	213	*e*PG	Pn	16 05 07.7	-0.5
GOPC				*e*SG	Sn	16 05 28.7	-0.1
	comp=Z,3.3nm,0.2s						
PRU	Pruhonice	1.57	219	*e*PG	Pn	16 05 09.5	+1.0
PRU				*e*SG	Sn	16 05 30.7	+1.2
	comp=Z,6.9nm,0.3s						
OKC	Ostrava-Krasne	1.91	135	*e*SG	Sg	16 05 40.8	0.0
	comp=Z,7.2nm,0.4s						
CLL	Collm	1.93	274	*e*Pg	Pn	16 05 10.0	-3.5
CLL				*e*Sg	Sn	16 05 36.0	-2.5
NKC	Novy Kostel	2.50	248	*e*PG	Pn	16 05 24.6	+3.2
NKC				*e*SG	Sb	16 05 57.7	+1.0
	comp=Z,8.4nm,0.4s						
KHC	Kasperske Hory	2.63	219	*e*SN	Sn	16 05 54.0	-1.8
KHC				*e*SG	Sg	16 06 03.7	-0.2
	comp=Z,2.4nm,0.3s						

IDC 31 16:17:36.0±7.8, 21°.66S×178°.78W, h495^{km}±45^{km}, mb3.1/5, mb1 3.2/6, mb1mx2.8/49, mbtmp4.0/6, Error ellipse: s-maj=125.8km s-min=22.7km az=36.0, Fiji Islands region

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
RAO	Raoul Island	7.60	174	P	P	16 19 28.6	+0.6
	230nm,0.3s,baz=0.0,slow=20,SNR=4.8						
URZ	Urewera	16.92	191	P	P	16 21 04.4	-1.7
	0.6nm,0.3s,baz=29,slow=19,SNR=6.3						
CTA	Charters Tower	32.67	266	P	P	16 23 27.1	+0.4
	1.6nm,0.4s,baz=89,slow=12,SNR=6.1						
STKA	Stephens Creek	36.64	245	P	P	16 24 00.2	+0.3
	1.7nm,0.9s,baz=65,slow=11,SNR=3.9						
ASAR	Alice Springs	43.56	258	P	P	16 24 55.4	-0.2
	1.8nm,0.8s,baz=99,slow=8.0,SNR=29						
WRA	Warramunga Arr	43.73	263	P	P	16 24 56.5	-0.6
	0.6nm,0.3s,baz=96,slow=7.8,SNR=6.9						
QSPA	South Pole Qui	68.42	180	P	P	16 27 47.7	+0.2
	1.0nm,0.6s,baz=127,slow=3.1,SNR=5.4						

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*ISN **31** 16:46:21.9±3.1, 37°.24N×42°.57E, h15^{km}, ML3.0*
*ISK **31** 16:46:22.8, 37°.35N×42°.57E, h5^{km}, ML2.6/7*
*ISCJB **31** 16:46:23.5±0.9, 37°.33N±0°.06×42°.61E±0°.04, h2^{km}±6^{km}, Error ellipse: s-maj=10.8km s-min=4.5km az=12.8*
*DDA **31** 16:46:23.2, 37°.32N×42°.57E, h8^{km}, Ml3.0*
*CSEM **31** 16:46:24.2±0.4, 37°.36N×42°.64E, h10^{km}, ML2.6, Error ellipse: s-maj=13.9km s-min=5.1km az=9.0*
ISC 31 16:46:23.4±1.4, 37°.34N±0°.06×42°.65E±0°.03, h2^{km}±10^{km}, n43, σ1^{s}.10/61, Turkey

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIRT	Sirnak	0.23	313	PG	Pg	16 46 27.3	-0.6
SIRN	S˜–rnak	0.24	309	*i* P	Pg	16 46 27.4	-0.8
SIRN				*i* S	Sg	16 46 31.9	+0.6
SIRN	S˜–rnak	0.24	309	P	Pg	16 46 27.4	-0.8
SIRN				S	Sg	16 46 31.9	+0.6
CUKT	Cukurca	0.77	97	PG	Pg	16 46 39.7	+1.5
CUKT				SG	Sn	16 46 52.2	-1.4
CUKT	Cukurca	0.77	97	*i* P	Pg	16 46 39.4	+1.2
CUKT				*i* S	Sn	16 46 51.6	-2.0
CUKT	Cukurca	0.77	97	P	Pg	16 46 39.4	+1.2
CUKT	Cukurca	0.77	97	*e*Pg	Pg	16 46 39.7	+1.5
CUKT				S	Sn	16 46 51.6	-2.0
HAKT	HAKKARI	0.87	75	*i* P	Pg	16 46 40.0	-0.1
HAKT				*i* S	Sn	16 46 55.0	-1.2
HAKT	HAKKARI	0.87	75	P	Pg	16 46 40.0	-0.1
HAKT				S	Sn	16 46 55.0	-1.2
SRTM	Siirt_Merkez	0.87	318	*i* P	Pb	16 46 39.7	-1.6
SRTM				*i* S	Sn	16 46 57.0	+1.0
SRTM	Siirt_Merkez	0.87	318	P	Pb	16 46 39.7	-1.6
SRTM				S	Sn	16 46 57.0	+1.0
BTMN	Batman	1.23	297	*i* P	Pn	16 46 47.2	-0.4
BTMN				*i* S	Sb	16 47 05.4	+1.7
BTMN	Batman	1.23	297	P	Pn	16 46 47.2	-0.4
BTMN				S	Sb	16 47 05.4	+1.7
GURO	Guroymak-BITLI	1.30	338	PN	Pn	16 46 47.9	-0.8
GURO	Guroymak-BITLI	1.30	338	*e*Pn	Pn	16 46 47.9	-0.8
VANB	Van	1.38	25	PN	Pn	16 46 49.4	-0.4
VANB	Van	1.38	25	*e*Pn	Pn	16 46 49.4	-0.4
SVAN	Silvan-Diyarba	1.41	305	PN	Pn	16 46 49.3	-0.8
SVAN				SN	Sn	16 47 08.9	-0.3
SVAN	Silvan-Diyarba	1.41	305	*i* P	Pn	16 46 49.6	-0.5
SVAN				*i* S	Sn	16 47 08.9	-0.3
SVAN	Silvan-Diyarba	1.41	305	*e*Pn	Pn	16 46 49.3	-0.8
SVAN	Silvan-Diyarba	1.41	305	P	Pn	16 46 49.6	-0.5
SVAN				*e*Sn	Sn	16 47 08.9	-0.3
MARD	Mardin	1.49	269	*i* P	Pn	16 46 50.2	-1.1
MARD				*i* S	Sn	16 47 12.5	+1.0
MAZI	Mazidag	1.76	274	PN	Pn	16 46 54.0	-1.0
MAZI	Mazidag	1.76	274	*e*Pn	Pn	16 46 54.0	-1.0
EKAR	Karacoban	1.96	347	*i* P	Pn	16 46 59.6	+1.7
EKAR	Karacoban	1.96	347	P	Pn	16 46 59.6	+1.7
BNGL	BINGOL	2.00	324	*i* P	Pn	16 46 58.9	+0.6
BNGL				*i* S	Sb	16 47 28.2	+2.2
DIY	Diyarbakir	2.00	287	*e*Pn	Pn	16 46 59.5	+1.2
HANI	Diyarbakir_Han	2.08	302	*i* P	Pn	16 46 58.0	-1.4
HANI	Diyarbakir_Han	2.08	302	P	Pn	16 46 58.0	-1.4
DYBB	Diyarbakir	2.08	288	PN	Pn	16 46 59.5	0.0
DIYA	Diyarbakir	2.09	287	*i* P	Pn	16 47 01.1	+1.5
DIYA				*i* S	Sn	16 47 26.6	+0.4
DIYA	Diyarbakir	2.09	287	P	Pn	16 47 01.1	+1.5
DIYA				S	Sn	16 47 26.6	+0.4
AGRB	Hanur-Agry	2.24	7	PN	Pn	16 47 02.1	+0.3
AGRB	Hanur-Agry	2.24	7	*e*Pn	Pn	16 47 02.1	+0.3
BNGB	Bingˆ¶l	2.26	317	PN	Pn	16 47 01.6	-0.4
BINT	Bingol	2.29	313	*e*Pn	Pn	16 47 01.6	-0.8
SVRC	Sivrice-ELAZID	2.84	292	PN	Pn	16 47 08.8	-1.2
SVRC	Sivrice-ELAZID	2.84	292	*e*Pn	Pn	16 47 08.8	-1.2
PTK	Pertek	3.00	302	PN	Pn	16 47 11.9	-0.3
PTK	Pertek	3.00	302	*e*Pn	Pn	16 47 11.9	-0.3
URFA	Urfa	3.05	273	PN	Pn	16 47 13.2	+0.4
URFA	Urfa	3.05	273	*e*Pn	Pn	16 47 13.2	+0.4

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*ISCJB **31** 16:54:20.9±0.5, 52°.68S±0°.08×18°.7E±0°.3, h10^{km}, mb4.3/10, MS3.3/8, Error ellipse: s-maj=22.0km s-min=11.6km az=1.5*
*IDC **31** 16:54:21.2±0.8, 52°.70S×18°.87E, h0^{km}, mb4.0/8, mb1 4.1/8, mb1mx3.8/52, mbtmp4.0/8, MS3.4/8, Ms1 3.4/8, ms1mx3.1/48, Error ellipse: s-maj=46.4km s-min=17.6km az=81.0*
*NEIC **31** 16:54:22.5±0.5, 52°.77S×18°.73E, h10^{km}, mb4.7/6, Error ellipse: s-maj=25.9km s-min=12.9km az=80.0*
ISC 31 16:54:23.1±0.7, 52°.71S±0°.10×18°.5E±0°.2, h10^{km}, n37, σ1^{s}.31/29, mb4.2/10, MS3.3/8, 2C, Southwest of Africa

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SYO	Syowa Base	19.12	157⇑	*e*pP	P	16 58 45.0	-0.8
SYO	Syowa Base	19.12	157⇑	*e*P	Pn	16 58 50.2	+3.5
SUR	Sutherland	20.38	6	P	P	16 59 01.2	+1.1
	8.9nm,0.9s,baz=180,slow=13,SNR=2.0						
SUR				LR	LR	17 04 56.4	
	comp=Z,135nm,19.4s,baz=165,slow=31						
SUR	Sutherland	20.38	6	*e*P	P	16 59 02.1	+2.1
	198nm,1.9s						
SNAA	Sanae	21.23	199	P	P	16 59 09.7	+0.9
SNAA	Sanae	21.23	199	P	P	16 59 09.7	+0.9
	6.2nm,1.0s,baz=55,slow=7.3,SNR=14						
SNAA				LR	LR	17 05 31.7	
	comp=Z,60nm,20.5s,baz=267,slow=32						
SNAA	Sanae	21.23	199	*e*P	P	16 59 09.5	+0.7
	14nm,1.1s						
VNA1	Neumayer--Stat	21.68	204	P	P	16 59 13.1	-0.4
VNA3	Neumayer Olymp	22.42	204	P	P	16 59 22.8	+1.3
BOSA	Boshof	24.59	14	LR	LR	17 07 39.4	
	comp=Z,88nm,20.1s,baz=194,slow=32						
MAW	Mawson	25.89	142	LR	LR	17 07 22.6	
	comp=Z,66nm,21.5s,baz=240,slow=30						
LBTB	Lobatse	28.17	14	LR	LR	17 09 14.3	
	comp=Z,92nm,19.3s,baz=173,slow=32						
TSUM	Tsumeb	33.44	358	LR	LR	17 12 29.6	
	comp=Z,63nm,19.8s,baz=178,slow=32						
QSPA	South Pole Qui	37.52	180	P	P	17 01 36.8	-0.1
	4.4nm,0.7s,baz=255,slow=3.1,SNR=20						
QSPA	South Pole Qui	37.52	180	*e*P	P	17 01 36.8	-0.1
	32nm,1.9s						
VNDA	Vanda	48.06	170	P	P	17 03 01.2	-0.7
	1.2nm,0.9s,baz=245,slow=7.7,SNR=5.2						
VNDA				LR	LR	17 21 17.9	
	comp=Z,53nm,21.3s,baz=206,slow=34						
VNDA	Vanda	48.06	170	*e*P	P	17 03 01.5	-0.5
H10S2	ASCENSION HYDR	51.23	316	T	T	17 58 57.5	
	baz=157						
H10S3	ASCENSION HYDR	51.24	316	T	T	17 58 55.8	
	baz=157						
H10S1	ASCENSION HYDR	51.25	316	T	T	17 58 58.6	
	baz=157						
DBIC	Dimbokro	62.40	334	LR	LR	17 26 26.5	
	comp=Z,30nm,18.7s,baz=114,slow=31						
TORD	Torodi Ar. Bea	67.16	342	P	P	17 05 16.8	-0.3
	0.7nm,0.9s,baz=181,slow=1.6,SNR=3.5						
TOA1	Torodi Ar. Sit	67.17	342	*e*P	P	17 05 16.8	-0.3
KOWA	Kowa	69.69	337	P	P	17 05 32.6	-0.2
	1.3nm,0.4s,baz=144,slow=8.7,SNR=2.9						
SAML	Samuel	77.90	271	*e*P	P	17 06 20.8	-0.4
	3.6nm,0.8s						
ASAR	Alice Springs	85.56	124	P	P	17 07 00.4	-1.2
	0.8nm,0.7s,baz=202,slow=4.8,SNR=13						
AS31	Alice Springs	85.57	124	*e*P	P	17 06 59.5	-2.1
	3.9nm,1.6s						
WR1	Warramunga Arr	88.88	122	*e*P	P	17 07 15.9	-1.8
	48nm,1.9s						
WRA	Warramunga Arr	88.88	122	P	P	17 07 15.9	-1.8
	1.4nm,1.2s,baz=212,slow=4.4,SNR=3.1						
PD31	Pinedale Array	144.40	275	*e*PKPdf	PKPab	17 13 56.3	-1.0
PDAR	Pinedale Array	144.40	275	PKP	PKPab	17 13 56.5	-0.7
	1.4nm,0.7s,baz=123,slow=4.3,SNR=11						
R11A	Troy Canyon, C	145.40	264	*e*PKPdf	PKPdf	17 14 00.8	0.0
MFID	Camas Ranch	148.57	271	*e*PKPdf	PKPdf	17 14 07.1	+1.2
J08A	Circle Bar Ran	150.15	269	*e*PKPdf	PKPdf	17 14 06.5	-1.9
IL1	Eielson Array	165.77	334	*e*PKPab	PKPab	17 15 26.5	+0.4
ILAR	Eielson Array	165.77	334	PKPab	PKPab	17 15 27.1	+1.0
	1.0nm,0.8s,baz=17,slow=4.2,SNR=6.9						
ILB	Eielson Array	165.77	334	*e*PKPab	PKPab	17 15 27.1	+1.0

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*JMA **31** 16:56:14.8±0.2, 38°.28N×142°.50E, h35^{km}±2^{km}, M3.3*
*ISCJB **31** 16:56:15.1±1.0, 38°.25N±0°.05×142°.51E±0°.09, h35^{km}, mb3.5/3, Error ellipse: s-maj=11.2km s-min=6.5km az=24.0*
*IDC **31** 16:56:18.6±3.2, 38°.26N×142°.69E, h64^{km}±25^{km}, mb3.2/3, mb1 3.3/5, mb1mx3.0/69, mbtmp3.4/5, ML2.9/2, MS2.3/1, Ms1 2.3/1, ms1mx2.0/31, Error ellipse: s-maj=32.7km s-min=13.2km az=116.0*
ISC 31 16:56:17.0±1.4, 38°.24N±0°.06×142°.37E±0°.10, h35^{km}, n20, σ1^{s}.09/19, mb3.5/3, Near east coast of eastern Honshu

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JIO	Ouri	0.83	285	P	Pn	16 56 31.5	-0.7
JIO				*e*S	Sn	16 56 43.5	+0.3
OFUJ	Ofunato	1.00	327	P	Pn	16 56 33.2	-1.4
OFUJ				*e*S	Sn	16 56 46.1	-1.3
JMK	Ichinoseki	1.14	309	P	Pn	16 56 35.9	-0.6
JMM	Marumori	1.30	254	P	Pn	16 56 38.1	-0.5
JOU	Okura	1.34	276	P	Pn	16 56 39.6	+0.3
JFK	Kawauchi	1.47	234	P	Pn	16 56 40.1	-0.9
JOM	Ohasama	1.49	326	P	Pn	16 56 40.8	-0.5
JYK	Kaneyama	1.71	294	P	Pn	16 56 44.7	+0.3
JFT	Otama	1.76	246	P	Pn	16 56 45.7	+0.7
JFT				*e*S	Sn	16 57 08.6	+2.4
JRG	Rokugo	1.78	311	P	Pn	16 56 45.9	+0.6
JYS	Shirataka	1.81	270	P	Pn	16 56 46.3	+0.6
MJAR	Matsushiro Arr	3.72	244	P	Pn	16 57 15.1	+3.1
	0.9nm,0.3s,baz=57,slow=10,SNR=9.5						
MJAR				S	Sn	16 58 02.5	+8.0
	0.3nm,0.3s,baz=109,slow=29,SNR=3.3						
ASAJ	Asahikawa	5.87	2	P	Pn	16 57 43.1	+1.6
	0.2nm,0.3s,baz=196,slow=15,SNR=5.5						
ASAJ				S	Sn	16 58 49.0	+1.4
	0.0nm,0.3s,baz=151,slow=19,SNR=3.4						
KSRS	Korea Array	11.45	271	LR	LR	17 03 32.2	
	comp=Z,15nm,20.2s,baz=180,slow=37						
H11N2	WAKE ISLAND Hy	28.16	124	T	T	17 31 39.4	
	baz=321						
H11N1	WAKE ISLAND Hy	28.16	124	T	T	17 31 38.3	
	baz=321						
H11N3	WAKE ISLAND Hy	28.17	124	T	T	17 31 40.0	
	baz=321						
MKAR	Makanchi Array	44.13	301	P	P	17 04 22.2	+0.2
	0.3nm,0.7s,baz=97,slow=7.4,SNR=3.2						
KURBB	Kurchatov Arra	45.87	307	P	P	17 04 35.5	-0.1
	1.2nm,0.5s,baz=80,slow=7.9,SNR=8.6						
WRA	Warramunga Arr	58.36	189	P	P	17 06 07.7	-1.1
	0.4nm,1.0s,baz=3.9,slow=7.0,SNR=2.7						

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*IDC **31** 17:02:31.5±2.8, 36°.16N×71°.04E, h75^{km}±25^{km}, mb3.8/17, mb1 3.9/23, mb1mx3.7/70, mbtmp4.1/23, Error ellipse: s-maj=17.1km s-min=13.3km az=171.0*
*ISCJB **31** 17:02:33.8±0.2, 36°.36N±0°.02×70°.93E±0°.03, h100^{km}, mb4.3/44, Error ellipse: s-maj=3.7km s-min=2.9km az=144.7*
*BJI **31** 17:02:34.9, 36°.51N×70°.77E, h116^{km}, mb4.6/12, mB4.7/7*
*NEIC **31** 17:02:35.8±0.7, 36°.41N×70°.99E, h104^{km}±7^{km}, mb4.5/21, Error ellipse: s-maj=7.4km s-min=6.6km az=172.0*
*MOS **31** 17:02:35.9±1.2, 36°.46N×71°.01E, h117^{km}, mb4.4/18, Error ellipse: s-maj=8.3km s-min=4.8km az=86.8*
*NNC **31** 17:02:38.0±4.0, 37°.01N×70°.39E, h0^{km}, mb4.8, mpv4.5, Error ellipse: s-maj=32.1km s-min=22.6km az=167.0*
ISC 31 17:02:35.4±0.4, 36°.37N±0°.04×70°.89E±0°.04, h100^{km}, n170, σ2^{s}.12/193, mb4.3/43, 16C-11D, Hindu Kush region

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

KBL	Kabul	2.36	220	ePn	Pn	17 03 16.5	+3.6
KBL				eSn	Sn	17 03 45.8	+4.2
KBL	Kabul	2.36	220	ePN	Pn	17 03 16.5	+3.6
KBL				e		17 03 45.8	
NIL	Nilore	3.33	144	ePn	Pn	17 03 28.6	+3.0
NIL				eSn	Sn	17 04 04.0	-0.4
NIL	Nilore	3.33	144	ePN	Pn	17 03 28.6	+3.0
SFK	Sufi-Kurgan	4.18	29	⇓P	Pn	17 03 39.3	+2.1
	86nm,0.6s						
SFK				⇓S	Sn	17 04 25.7	+0.6
	134nm,0.4s						
SFK	Sufi-Kurgan	4.18	29	i PN	Pn	17 03 39.1	+1.9
SFK				pmax	pmax		
	comp=Z,86nm,0.5s						
KSH	Kashi	5.10	50	P	Pn	17 03 47.5	-2.1
KSH				sP		17 04 12.5	
KSH				S	Sn	17 04 35.5	-12
KSH				smax	smax		
	comp=Z,750nm,0.7s						
KSH				smax	smax		
	comp=Z,530nm,0.7s						
DHRM	DHARAMSHALA	6.08	131	eP	Pn	17 04 03.6	+0.7
DHRM				eS	Sn	17 05 09.8	-1.3
DHRM				IAML		17 05 15.3	
	comp=N,95nm,0.2s						
DHRM				IAML		17 05 16.4	
	comp=E,144nm,0.5s						
AML	Almayashu	6.15	20	P	Pn	17 04 04.5	+0.5
	SNR=154						
MNAS	Manas	6.24	11	⇑P	Pn	17 04 05.2	+0.2
	comp=E,20nm,0.5s						
MNAS				⇑S	Sn	17 05 12.6	-2.3
	comp=E,53nm,0.5s						
MNAS	Manas	6.24	11	i PN	Pn	17 04 05.1	+0.2
MNAS				pmax	pmax		
	comp=Z,20nm,0.5s						
UCH	Uchtor	6.49	25	P	Pn	17 04 08.7	-0.1
	SNR=38						
KZA	Kyzart	6.63	29	P	Pn	17 04 10.5	-0.1
	SNR=16						
EKS2	Erkin-Say	6.67	19	P	Pn	17 04 11.6	+0.7
	SNR=28						
KK31	Karatay Array	6.73	358	⇓P	Pn	17 04 11.6	+0.1
	comp=Z,30nm,0.5s,baz=192,slow=15,SNR=264						
KK31				⇓S	Sn	17 05 22.2	-4.6
	comp=Z,27nm,0.5s,baz=188,slow=24						
KK31	Karatay Array	6.73	358	ePn	Pn	17 04 11.7	+0.1
KK31				eSn	Sn	17 05 21.1	-5.6
KK31	Karatay Array	6.73	358	cePN	Pn	17 04 11.5	-0.1
KK31				pmax	pmax		
	comp=Z,30nm,0.4s						
KKAR	Karatay Array	6.73	358	ePn	Pn	17 04 11.7	+0.1
KKAR				eSn	Sn	17 05 21.1	-5.6
KKAR	Karatay Array	6.73	358	ePN	Pn	17 04 11.7	+0.1
AAK	Ala-Archa	6.85	23	P	Pn	17 04 13.3	-0.1
	comp=Z,7.8nm,0.3s,baz=194,slow=7.2,SNR=31						
AAK				S	Sn	17 05 28.7	-1.2
	comp=Z,4.2nm,0.3s,baz=329,slow=22,SNR=15						
AAK	Ala-Archa	6.85	23	⇑P	Pn	17 04 13.6	+0.3
	comp=Z,20nm,0.6s						
AAK				⇑S	Sn	17 05 28.7	-1.2
	comp=Z,71nm,0.7s						
AAK	Ala-Archa	6.85	23	P	Pn	17 04 14.3	+0.9
	SNR=19						
AAK	Ala-Archa	6.85	23	ePn	Pn	17 04 13.3	-0.1
AAK				eSn	Sn	17 05 18.8	-11
AAK	Ala-Archa	6.85	23	dePN	Pn	17 04 13.7	+0.3
AAK				pmax	pmax		
	comp=Z,20nm,0.5s						
KBK	Karagaybulak	7.02	25	P	Pn	17 04 16.8	+1.2
	SNR=8.0						
FRU1	Bishkek	7.05	23	ePn	Pn	17 04 16.4	+0.4
FRU1				eSn	Sn	17 05 24.5	-10
FRU1	Bishkek	7.05	23	ePN	Pn	17 04 16.4	+0.4
ULHL	Ulahol	7.19	34	P	Pn	17 04 19.3	+1.4
	SNR=8.8						
CHMS	Chumysh	7.26	23	P	Pn	17 04 18.9	+0.2
	SNR=26						
SMLA	Simla	7.39	133	eP	Pn	17 04 20.8	+0.2
SMLA				eS	Sn	17 05 38.5	-4.3
SMLA				IAML		17 05 45.2	
	comp=E,56nm,0.0s						
SMLA				IAML		17 05 46.7	
	comp=N,55nm,0.4s						
USP	Ospenovka	7.43	21	P	Pn	17 04 21.9	+0.9
	SNR=13						
TKM2	Tokmak 2	7.49	28	⇑P	Pn	17 04 22.0	0.0
	comp=N,9.7nm,0.6s						
TKM2				⇓S	Sn	17 05 45.8	+0.5
	comp=N,32nm,0.9s						
TKM2	Tokmak 2	7.49	28	P	Pn	17 04 22.1	+0.1
	SNR=18						
TKM2	Tokmak 2	7.49	28	PN	Pn	17 04 22.0	0.0
TKM2				S	Sn	17 05 45.8	+0.5
TKM2				pmax	pmax		
	comp=Z,10.0nm,0.6s						
TKM2				smax	smax		
	comp=N,32nm,0.9s						
PRZ	Przheval'sk	8.43	41	ePn	Pn	17 04 35.6	+0.8
PRZ	Przheval'sk	8.43	41	ePN	Pn	17 04 35.6	+0.8
KHET	Khetri	9.26	152	eP	Pn	17 04 44.4	-1.6
KHET				eS	Sn	17 06 20.8	-7.5
KHET				IAML		17 06 25.0	
	comp=N,18nm,0.5s						
KHET				IAML		17 06 26.1	
	comp=E,16nm,0.2s						
KUDL	Kundal	9.47	148	eP	Pn	17 04 48.4	-0.4
KUDL				eS	Sn	17 06 26.9	-6.6
KUDL				IAML		17 06 33.4	
	comp=N,19nm,0.8s						
PDGK	Podgornoye	9.59	41	P	Pn	17 04 50.7	+0.2
PDGK				pmax	pmax		
	comp=Z,8.0nm,0.8s						
GEYT	Alibeck	10.31	283	P	Pn	17 04 59.3	-1.0
	comp=Z,1.0nm,0.3s,baz=123,slow=9.3,SNR=13						
GEYT				S	Sn	17 06 53.6	-0.3
	comp=Z,2.3nm,0.3s,baz=117,slow=32,SNR=7.5						
GYA0B	ALIBECK ARRAY	10.31	283	ePn	Pn	17 04 59.1	-1.2
GYA0B				eSn	Sn	17 06 46.9	-7.0
PYUN	Piuthan	13.14	125	eP	Pn	17 05 36.8	-1.5
	comp=Z,32nm,0.7s						
MAKZ	Makanchi	13.32	35	ePn	Pn	17 05 37.8	-2.5
MAKZ	Makanchi	13.32	35	eP	Pn	17 05 37.8	-2.5
MK01	Makanchi Array	13.44	36	ePn	Pn	17 05 39.2	-2.7
MK31	Makanchi Array	13.45	36	ePn	Pn	17 05 40.4	-1.6
MK31	Makanchi Array	13.45	36	ceP	Pn	17 05 40.7	-1.4
MK31				pmax	pmax		
	comp=Z,2.0nm,0.6s						
MK32	Makanchi Array	13.45	36	ePn	Pn	17 05 39.9	-2.1
MKAR	Makanchi Array	13.45	36	P	Pn	17 05 39.9	-2.1
	comp=Z,0.1nm,0.3s,baz=222,slow=13,SNR=13						
MKAR	Makanchi Array	13.45	36	ePn	Pn	17 05 39.0	-3.1
MKAR	Makanchi Array	13.45	36	eP	Pn	17 05 39.0	-3.1
KOLN	Koldanda	13.76	125	eP	Pn	17 05 44.9	-1.5
	comp=Z,10nm,0.5s						
GKN	Gorkha	14.31	122	eP	Pn	17 05 51.4	-2.0
	comp=Z,66nm,0.9s						
WMQ	Urumqi	14.85	55	P	Pn	17 06 00.5	+0.4
DMN	Daman	14.88	122	eP	Pn	17 05 58.9	-1.9
	comp=Z,56nm,1.1s						
KKN	Kakani	14.89	121	eP	Pn	17 05 59.0	-1.9
PKIN	Phulchoki	15.10	121	eP	Pn	17 06 02.0	-1.6
	comp=Z,18nm,0.5s						
AB31	Akbulak array	15.16	332	⇓P	Pn	17 06 02.6	-1.3
	comp=Z,2.6nm,0.4s						
AB31				⇑S	Sn	17 08 42.7	-8.4
	comp=Z,1.7nm,0.4s,baz=148,slow=23,SNR=10						
AB31	Akbulak array	15.16	332	i P	Pn	17 06 01.7	-2.2
AB31				pmax	pmax		
	comp=Z,3.0nm,0.4s						
ABKAR	Akbulak array	15.16	332	ePn	Pn	17 06 02.4	-1.5
GUN	Gumba	15.23	119	eP	Pn	17 06 03.7	-1.6
	comp=Z,36nm,0.9s						
KURBB	Kurchatov Arra	15.28	19	P	Pn	17 06 02.9	-2.5
	comp=Z,0.0nm,0.3s,baz=215,slow=13,SNR=4.9						
KURK	Kurchatov	15.38	19	ePn	Pn	17 06 02.9	-3.9
KURK	Kurchatov	15.38	19	⇑eP	Pn	17 06 07.1	+0.4
JIRN	Jiri	15.60	119	eP	Pn	17 06 08.3	-1.7
	comp=Z,28nm,0.3s						
RAMN	Ramite	16.33	121	eP	Pn	17 06 18.4	-0.5
	comp=Z,19nm,0.7s						
BVAR	Borovoye Array	16.66	359	P	Pn	17 06 21.8	-0.8
	comp=Z,1.0nm,0.3s,baz=172,slow=12,SNR=18						
BRVK	Borovoye	16.70	359	ePn	Pn	17 06 21.0	-2.0
	comp=Z,19nm,1.6s						
BRVK	Borovoye	16.70	359	⇓eP	Pn	17 06 22.6	-0.4
BRVK				pmax	pmax		
	comp=Z,13nm,1.7s						
AKTO	Aktyubinsk	16.85	331	P	Pn	17 06 25.3	+0.3
	comp=Z,1.4nm,0.3s,baz=150,slow=11,SNR=40						
AKTO				S	Sn	17 09 20.4	-11
	comp=Z,0.1nm,0.3s,baz=109,slow=18,SNR=3.6						
AKTO	Aktyubinsk	16.85	331	⇓P	Pn	17 06 25.2	+0.3
	comp=Z,23nm,0.8s						
AKTO				⇓S	Sn	17 09 23.4	-8.5
	comp=Z,8.5nm,1.1s						
ODAN	Odare	16.93	119	eP	Pn	17 06 26.1	-0.3
	comp=Z,26nm,0.7s						
DGZ	Jazzator, Alta	17.94	37	⇑eP	P	17 06 36.3	-1.3
LSA	Lhasa	18.23	106	eP	Pn	17 06 42.6	+0.3
	comp=Z,12nm,1.4s						
LSA	Lhasa	18.23	106	eP	Pn	17 06 42.6	+0.3
LSA				pmax	pmax		
	comp=Z,12nm,1.4s						
ZAA0	Zalesovo Array	20.07	24	eP	P	17 06 59.9	-0.6
	comp=Z,16nm,0.6s						
ZALV	Zalesovo Beam	20.07	24	P	P	17 07 00.5	-0.1
	comp=Z,17nm,0.5s,baz=222,slow=11,SNR=51						
ZALV	Zalesovo Beam	20.07	24	eP	P	17 06 59.2	-1.3
ZALV	Zalesovo Beam	20.07	24	eP	P	17 06 59.3	-1.3
ZAA1	Zalesovo Array	20.08	24	eP	P	17 07 00.5	-0.1
NVS	Novosibirsk	20.34	21	eP	P	17 07 03.4	0.0
NVS				eS	S	17 10 43.3	-2.3
NVS				pmax	pmax		
	comp=Z,14nm,1.0s						
NVS				pmax	pmax		
	comp=N,9.0nm,0.7s						
NVS				smax	smax		
	comp=N,6.0nm,1.4s						
NVS				smax	smax		
	comp=E,8.0nm,1.2s						
GNI	Garni	20.85	288	⇑eP	P	17 07 08.9	-0.3
GNI				pmax	pmax		
	comp=Z,64nm,1.4s						
SHL	Shillong	20.93	115	eP	P	17 07 11.6	+1.3
	comp=Z,15nm,0.3s						
SHL	Shillong	20.93	115	eP	Pn	17 07 12.2	-1.5
SHL	Shillong	20.93	115	eP	P	17 07 11.6	+1.3
SHL				pmax	pmax		
	comp=Z,15nm,0.3s						
TBLG	Delisi	20.96	293	eP	P	17 07 11.8	+1.5
	comp=Z,14nm,0.8s						
TBLG	Delisi	20.96	293	eP	P	17 07 11.8	+1.5
TBLG				pmax	pmax		
	comp=Z,14nm,0.8s						
SVE	Sverdlovsk	21.60	345	eP	P	17 07 17.7	+0.8
SVE				pmax	pmax		
	comp=Z,20nm,1.1s						
ARU	Arti	21.73	341	P	P	17 07 19.1	+0.8
	comp=Z,5.2nm,0.5s,baz=134,slow=4.7,SNR=11						
ARU	Arti	21.73	341	eP	P	17 07 18.0	-0.3
	comp=Z,6.7nm,0.7s						
ARU	Arti	21.73	341	c iP	P	17 07 19.2	+0.9
ARU						17 07 52.4	
ARU				S	S	17 11 14.7	+2.0
ARU				SS	SnSn	17 11 54.4	+8.0
ARU				pmax	pmax		
	comp=Z,12nm,1.2s						
AKH	Akhalkalaki	21.86	292	eP	P	17 07 21.0	+0.9
	comp=Z,7.4nm,0.7s						
AKH	Akhalkalaki	21.86	292	eP	P	17 07 21.0	+0.9
AKH				pmax	pmax		
	comp=Z,7.0nm,0.7s						
HVS	Khovu-Aksy	22.00	41	⇑eP	P	17 07 22.6	+1.3
HVS				pmax	pmax		
	comp=Z,3.0nm,1.0s						
NCK	Nalchik	22.04	297	⇑eP	P	17 07 24.6	+2.8
NCK				pmax	pmax		
	comp=Z,3.0nm,0.5s						
MOKO	MOKOCHONG	22.48	110	eP	P	17 07 28.6	+2.0
KBZ	Khabaz	22.58	298	P	P	17 07 27.9	+0.5
	comp=Z,1.2nm,0.5s,baz=230,slow=5.6,SNR=3.3						
NEY	Neytrino	22.63	296	⇓eP	P	17 07 31.7	+3.6
KVAR	Kislovodsk Arr	22.76	298	P	P	17 07 30.3	+1.0
	comp=Z,3.0nm,0.5s,baz=126,slow=17,SNR=3.4						
KIV	Kislovodsk	22.77	298	eP	P	17 07 31.4	+2.1
	comp=Z,7.6nm,0.9s						
KIV	Kislovodsk	22.77	298	eP	P	17 07 32.3	+2.9
KIV				pmax	pmax		
	comp=Z,5.0nm,0.7s						
GTA	Gaotai	22.99	74	eP	P	17 07 33.5	+1.9
GTA				pP	pP	17 07 56.5	+5.0
GTA				sP	sP	17 08 04.3	+0.4
SAIH	SAIHA	23.63	120	eP	P	17 07 38.9	+1.2
RAYN	Ar Rayn	25.36	247	eP	P	17 07 54.2	+1.0
	comp=Z,9.9nm,1.4s						
RAYN	Ar Rayn	25.36	247	eP	P	17 07 54.2	+1.0
RAYN				pmax	pmax		
	comp=Z,10.0nm,1.4s						
LZH	Lanzhou	26.52	81	eP	P	17 08 05.5	+1.8
LZH				pP	pP	17 08 28.5	+2.6
LZH				sP	sP	17 08 43.8	+6.3
LZH				ePP	PnPn	17 08 54.0	+4.0
LZH				pmax	pmax		
	comp=Z,16nm,0.9s						
LZH				pmax	pmax		
	comp=Z,330nm,5.4s						
BR101	Keskin Array S	29.39	288	eP	P	17 08 31.1	+1.9
BR131	Keskin Array S	29.39	288	eP	P	17 08 31.8	+2.6
BRTR	Keskin Array B	29.39	288	P	P	17 08 31.1	+1.9
	comp=Z,0.5nm,0.6s,baz=110,slow=9.3,SNR=3.7						
PRGR	Permogore	29.85	336	eP	P	17 08 33.0	+0.1
PRGR				pmax	pmax		
	comp=Z,9.0nm,0.8s						
OBN	Obninsk	29.98	320	⇑iP	P	17 08 35.3	+1.3
OBN				i *PP	pP	17 08 59.7	+3.3
OBN				pmax	pmax		
	comp=Z,3.0nm,0.7s						
KLMR	Klimovskoe	31.55	331	eP	P	17 08 46.5	-1.3
KLMR				pmax	pmax		
	comp=Z,5.0nm,0.8s						
KLMR	Klimovskoe	31.55	331	eP	P	17 08 46.6	-1.3
KLMR				AMP		17 08 48.6	
	comp=Z,5.0nm,0.8s						
HHC	Hu-ho-hao-te	31.89	69	P	P	17 08 52.5	+1.2
HHC				pmax	pmax		
	comp=Z,14nm,1.0s						
HHC				pmax	pmax		
	comp=Z,84nm,7.0s						
GYA	Guiyang	31.94	98	eP	P	17 08 53.5	+1.7
GYA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
FIA0	FINESS Array S	37.54	326	eP	P	17 09 40.4	+1.0
FIA0	FINESS Array S	37.54	326	eP	P	17 09 40.4	+1.0
FIA1	FINESS Array S	37.54	326	eP	P	17 09 39.8	+0.4
FINES	FINESS Array B	37.54	326	P	P	17 09 40.4	+1.0
	comp=Z,1.8nm,0.5s,baz=120,slow=9.4,SNR=17						
CRVS	Cervenica-Dubn	37.81	305	eP	P	17 09 42.0	+0.1
CRVS	Cervenica-Dubn	37.81	305	eP	P	17 09 42.0	+0.1
VYHS	Vyhne	39.56	305	eP	P	17 09 57.6	+1.1
VYHS	Vyhne	39.56	305	eP	P	17 09 57.6	+1.1
KEV	Kevo	40.89	338	eP	P	17 10 08.2	+1.0
	comp=Z,78nm,2.0s						
KEV	Kevo	40.89	338	eP	P	17 10 08.2	+1.0
KEV				pmax	pmax		
	comp=Z,78nm,2.0s						
ARA0	ARCESS Array S	41.23	338	eP	P	17 10 11.1	+1.1
ARCES	ARCESS Array B	41.23	338	P	P	17 10 11.1	+1.1
	comp=Z,5.0nm,0.6s,baz=114,slow=8.3,SNR=40						
ARCES	ARCESS Array B	41.23	338	eP	P	17 10 11.0	+1.0
ARE0	ARCESS Array S	41.23	338	eP	P	17 10 11.1	+1.1
	comp=Z,2.5nm,1.8s						
HFS	Hagfors	43.11	322	P	P	17 10 25.9	+0.6
	comp=Z,5.1nm,0.7s,baz=95,slow=13,SNR=9.6						
YAK	Yakutsk	44.13	35	⇑eP	P	17 10 31.5	-1.9
YAK				i AP	pP	17 11 00.0	+3.2
YAK				pmax	pmax		
	comp=Z,4.0nm,0.9s						
NC405	NORSAR Array S	44.20	323	eP	P	17 10 34.6	+0.5
NC303	NORSAR Array S	44.38	323	eP	P	17 10 35.8	+0.3
NB201	NORSAR Array S	44.39	323	eP	P	17 10 36.0	+0.3
NB2	NORSAR Subarra	44.43	323	P	P	17 10 35.8	-0.2
	comp=Z,1.5nm,0.6s,baz=98,slow=7.9						
NOA	NORSAR Array B	44.43	323	P	P	17 10 36.1	+0.1
	comp=Z,3.4nm,0.7s,baz=97,slow=7.8,SNR=17						
GRFO	Grafenberg	44.47	307	eP	P	17 10 38.8	+2.4
	comp=Z,6.0nm,0.7s						
GRFO	Grafenberg	44.47	307	eP	P	17 10 38.8	+2.4
GRFO				pmax	pmax		
	comp=Z,6.0nm,0.7s						
NBO00	NORSAR Array S	44.64	323	eP	P	17 10 38.0	+0.3
NC204	NORSAR Array S	44.67	323	eP	P	17 10 38.3	+0.4
KS15	Wonju Array Si	44.98	71	eP	P	17 10 41.2	+0.6
KSAR	Wonju Array Be	44.98	71	P	P	17 10 39.3	-1.3
KSAR	Wonju Array Be	44.98	71	P	P	17 10 39.3	-1.3
KSRS	Korea Array	45.01	71	P	P	17 10 39.3	-1.5
	comp=Z,0.4nm,0.6s,baz=258,slow=8.5,SNR=3.6						
SPA0	Spitsbergen Ar	47.60	347	eP	P	17 11 01.7	+1.1
SPITS	Spitsbergen Ar	47.60	347	P	P	17 11 01.5	+1.0
	comp=Z,3.4nm,0.6s,baz=90,slow=7.6,SNR=5.1						
DAG	Danmarks Havn	54.83	344	P	P	17 11 56.1	+1.6
DAG				pmax	pmax		
	comp=Z,8.0nm,0.8s						
ANGG	Ammassalik, Gr	64.49	334	eP	P	17 13 01.2	+0.4
	comp=Z,82nm,1.7s						
TOA1	Torodi Ar. Sit	65.62	269	eP	P	17 13 06.7	-2.3
TOA0	Torodi Ar. Sit	65.62	269	eP	P	17 13 07.4	-1.7
TORD	Torodi Ar. Bea	65.62	269	P	P	17 13 06.7	-2.3
	comp=Z,1.0nm,0.9s,baz=36,slow=6.2						
IM3	Indian Mountai	72.33	18	eP	P	17 13 48.8	-0.9
SPIA	Saint Paul Isl	73.56	30	eP	P	17 13 58.8	+1.6
	comp=Z,1µm,1.8s						
INK	Inuvik	74.05	9	eP	P	17 14 00.8	+1.0
	comp=Z,12nm,1.4s						
INK	Inuvik	74.05	9	eP	P	17 14 00.8	+1.0
INK				pmax	pmax		
	comp=Z,12nm,1.4s						
LBTB	Lobatse	74.52	222	P	P	17 14 02.1	-1.1
	baz=56,slow=11						
LBTB	Lobatse	74.52	222	eP	P	17 14 04.0	+0.7
	comp=Z,27nm,1.6s						
CAST	Castle Rocks	74.84	19	eP	P	17 14 05.0	+0.5
	comp=Z,17nm,2.0s						
BWN	Browne	74.85	17	eP	P	17 14 06.2	+1.6
	comp=Z,18nm,0.5s						
ILAR	Eielson Array	74.93	16	P	P	17 14 03.5	-1.5
	comp=Z,0.7nm,0.9s,baz=311,slow=8.2,SNR=4.7						
BOSA	Boshof	77.59	220	P	P	17 14 19.6	-1.0
	comp=Z,3.7nm,1.0s,baz=160,slow=7.3,SNR=3.8						
YKA	Yellowknife Ar	81.38	3	P	P	17 14 41.4	+0.8
	comp=Z,1.1nm,0.7s,baz=317,slow=7.3,SNR=2.9						
WR1	Warramunga Arr	82.00	122	eP	P	17 14 42.4	-2.1
	comp=Z,33nm,1.8s						
WRA	Warramunga Arr	82.00	122	P	P	17 14 42.4	-2.1
	comp=Z,0.7nm,0.5s,baz=324,slow=4.9,SNR=16						
WRA	Warramunga Arr	82.00	122	i P	P	17 14 42.7	-1.8
WRA				pmax	pmax		
	comp=Z,1.0nm,0.5s						
WB2	Warramunga Arr	82.01	122	eP	P	17 14 42.7	-1.8
	comp=Z,28nm,1.8s						
WC3	Warramunga Arr	82.03	122	eP	P	17 14 42.9	-1.7
	comp=Z,23nm,1.5s						
AS31	Alice Springs	84.25	125	eP	P	17 14 54.2	-1.9
	comp=Z,1.4nm,1.1s						
ASAR	Alice Springs	84.25	125	P	P	17 14 54.0	-2.1
	comp=Z,0.8nm,0.6s,baz=309,slow=5.0,SNR=16						
ASAR	Alice Springs	84.25	125	P	P	17 14 54.0	-2.1

IDC ***31*** *17:16:43.9±1.4, 51°.79N×96°.30E, h0km, mb3.8/5, mb1 3.6/9, mb1mx3.3/76, mbtmp3.6/9, ML2.7/4, MS3.9/1, Ms1 3.9/1, ms1mx2.3/76, Error ellipse: s-maj=26.5km s-min=17.0km az=171.0*

MOS ***31*** *17:16:44.9±2.8, 51°.72N×96°.11E, h10km, mb4.2/4, Error ellipse: s-maj=13.6km s-min=8.5km az=173.9*

NNC ***31*** *17:16:46.6±4.0, 51°.70N×95°.97E, h0km, mb4.0, Error ellipse: s-maj=58.6km s-min=29.9km az=0.0*

NEIC ***31*** *17:16:49.0±0.5, 52°.35N×95°.46E, h10km, mb4.4/11, Error ellipse: s-maj=12.4km s-min=7.1km az=180.0*

ISC 31 17:16:45.6±0.6**, 51°.94N**±0°.09×**96°.19E**±0°.04**, h10km, n71, σ1s.99**/58**, mb4.5**/10**, 11C-5D, Southwestern Siberia**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
HVS	Khovu-Aksy	1.75	244	d iPN	Pn	17 17 12.7	-3.3
ORL	Orlik	2.31	73	ePN	Pb	17 17 27.3	0.0
ORL				e		17 17 59.5	
ORL				pmax	pmax		
	comp=Z,112nm,0.4s						
ORL				smax	smax		
	comp=N,408nm,1.0s						
MOY	Mondy	3.00	93	ePN	Pn	17 17 33.8	+0.6
MOY				e		17 17 39.5	
MOY				e		17 18 20.5	
MOY				pmax	pmax		
	comp=Z,81nm,0.4s						
MOY				smax	smax		
	comp=N,401nm,1.0s						
ARS	Arshan	3.86	88	ePN	Pn	17 17 47.5	+2.5
ARS				e		17 17 55.4	
ARS				e		17 18 46.6	
ARS				pmax	pmax		
	comp=Z,97nm,0.4s						
ARS				smax	smax		
	comp=E,1µm,0.9s						
TLY	Talaya	4.63	90	ePn	Pb	17 18 06.2	-0.7
TLY				eSn	Sb	17 19 05.5	+2.8
TLY	Talaya	4.63	90	ePN	Pb	17 18 09.8	+2.9
TLY				eSG	Sg	17 19 10.4	-3.8
TLY				pmax	pmax		
	comp=Z,16nm,0.6s						
TLY				smax	smax		
	comp=N,70nm,0.7s						
ZAK	Zakamensk	4.73	106	ePN	Pb	17 18 08.7	+0.2
ZAK				e		17 19 12.5	
ZAK				pmax	pmax		
	comp=Z,51nm,0.9s						
ZAK				smax	smax		
	comp=N,144nm,0.6s						
IRK	Irkutsk	4.99	83	ePN	Pb	17 18 14.9	+1.9
IRK				e		17 19 19.7	
IRK				pmax	pmax		
	comp=Z,42nm,0.4s						
IRK				smax	smax		
	comp=N,371nm,0.8s						
DGZ	Jazzator, Alta	5.99	251	ePN	Pn	17 18 17.0	+2.7
ZAA0	Zalesovo Array	7.16	291	ePn	Pn	17 18 25.1	-5.1
ZAA0				eSg	Sn	17 19 56.2	+4.6
ZALV	Zalesovo Beam	7.16	291	Pn	Pn	17 18 31.2	+1.0
	comp=N,0.2nm,0.3s,baz=106,slow=11,SNR=3.2						
ZALV				Lg	Lg	17 20 24.7	
	comp=N,1.4nm,0.3s,baz=110,slow=25,SNR=7.5						
ZALV	Zalesovo Beam	7.16	291	ePn	Pn	17 18 24.9	-5.4
ZALV				Lg	Lg	17 20 24.7	
ZALV	Zalesovo Beam	7.16	291	eP	Pn	17 18 24.9	-5.3
ZAA1	Zalesovo Array	7.16	291	ePn	Pn	17 18 31.2	+1.0
SONA1	Songino Array	7.76	118	ePn	Pb	17 18 49.4	-11
SONA1				eSn	Sb	17 20 30.7	-2.1
SONA0	Songino Array	7.76	118	ePn	Pb	17 19 02.1	+1.8
SONM	Songino Array	7.76	118	Pg	Pb	17 19 02.1	+1.8
	comp=N,0.7nm,0.3s,baz=302,slow=18,SNR=9.7						
SONM				Lg	Lg	17 20 47.6	
	comp=N,2.3nm,0.3s,baz=307,slow=30,SNR=9.2						
ULN	Ulaanbaatar	8.11	116	ePn	Pb	17 18 54.8	-11
ULN				eSn	Sb	17 20 36.6	-6.2
ULN	Ulaanbaatar	8.11	116	⇑eP	Pn	17 18 33.7	-10
MK31	Makanchi Array	10.42	246	⇓Pn	Pn	17 19 13.3	-1.6
	comp=N,0.6nm,0.6s,baz=58,slow=13,SNR=5.8						
MK31				⇓Pg		17 19 52.0	
	comp=N,11nm,1.4s,baz=81,slow=15,SNR=5.6						
MK31				⇑Lg	Lg	17 22 12.8	
	comp=N,8.1nm,0.8s,baz=51,slow=28,SNR=5.9						
MK31	Makanchi Array	10.42	246	ePn	Pn	17 19 13.2	-1.8
MK31	Makanchi Array	10.42	246	eP	Pn	17 19 13.2	-1.8
MK32	Makanchi Array	10.42	246	ePn	Pn	17 19 15.0	0.0
MKAR	Makanchi Array	10.42	246	Pn	Pn	17 19 15.0	0.0
	comp=N,0.1nm,0.3s,baz=56,slow=13,SNR=5.4						
MKAR				Lg	Lg	17 22 12.6	
	comp=N,0.3nm,0.3s,baz=54,slow=27,SNR=4.6						
MKAR	Makanchi Array	10.42	246	ePn	Pn	17 19 15.8	+0.8
MKAR				Lg	Lg	17 22 12.6	
MKAR	Makanchi Array	10.42	246	i P	Pn	17 19 17.2	+2.2
MKAR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
MK01	Makanchi Array	10.43	246	ePn	Pn	17 19 14.7	-0.4
MAKZ	Makanchi	10.59	247	⇑Pn	Pn	17 19 17.5	+0.1
	comp=Z,1.7nm,0.8s						
MAKZ				⇑Pg		17 19 55.2	
	comp=Z,7.4nm,1.4s						
MAKZ				⇑Lg	Lg	17 22 16.7	
	comp=Z,16nm,1.1s						
MAKZ	Makanchi	10.59	247	ePn	Pn	17 19 17.4	+0.1
MAKZ	Makanchi	10.59	247	eP	Pn	17 19 17.4	+0.1
KURK	Kurchatov	11.06	271	⇑Lg	Lg	17 22 32.6	

Code	Station Name	Δ°	AZ°	Op	ISC	h m s	Res ISC
	comp=Z,18nm,1.0s						
KURK	**Kurchatov**	**11.06**	**271**	*e*Pn	**Pn**	**17 19 25.0**	**+1.3**
KURK				Lg	Lg	17 22 32.4	
KURK	**Kurchatov**	**11.06**	**271**	⇑*e*P	**Pn**	**17 19 24.8**	**+1.1**
KURBB	**Kurchatov Arra**	**11.14**	**270**	Pn	**Pn**	**17 19 25.0**	**+0.2**
	comp=Z,0.1nm,0.3s,baz=77,slow=16,SNR=4.8						
KURBB				Lg	Lg	17 22 32.4	
	comp=Z,0.1nm,0.3s,baz=81,slow=33,SNR=7.1						
KURBB	**Kurchatov Arra**	**11.14**	**270**	⇑Lg	Lg	17 22 34.6	
	comp=Z,11nm,0.7s						
HIA	**Hailar**	**15.18**	**91**	*e*Pn	**P**	**17 20 26.6**	**+1.7**
	comp=Z,9.9nm,0.8s						
HIA	**Hailar**	**15.18**	**91**	*e*P	**P**	**17 20 26.6**	**+1.7**
HIA				pmax	pmax		
	comp=Z,10.0nm,0.8s						
BVAR	**Borovoye Array**	**15.73**	**284**	Pn	**Pn**	**17 20 26.4**	**-0.6**
	comp=Z,0.1nm,0.3s,baz=78,slow=15,SNR=7.6						
BRVK	**Borovoye**	**15.79**	**284**	*e*Pn	**Pn**	**17 20 27.6**	**-0.2**
	comp=Z,1.6nm,0.8s						
BRVK	**Borovoye**	**15.79**	**284**	⇑*e*P	**P**	**17 20 31.6**	**-0.1**
AAK	**Ala-Archa**	**17.36**	**246**	*e*Pn	**P**	**17 20 48.0**	**-1.3**
	comp=Z,17nm,1.9s						
AAK	**Ala-Archa**	**17.36**	**246**	⇑*e*P	**P**	**17 20 50.8**	**+1.5**
AAK				pmax	pmax		
	comp=Z,2.0nm,1.3s						
YAK	**Yakutsk**	**20.61**	**48**	*e*P	**P**	**17 21 26.6**	**+2.0**
	comp=Z,8.4nm,1.2s						
YAK	**Yakutsk**	**20.61**	**48**	⇑*e*P	P	17 21 16.8	-7.8
YAK				pmax	pmax		
	comp=Z,3.0nm,0.9s						
ARU	**Arti**	**22.27**	**297**	P	**P**	**17 21 44.5**	**+2.0**
	comp=Z,0.9nm,0.3s,baz=277,slow=19,SNR=2.6						
ARU	**Arti**	**22.27**	**297**	*e*P	**P**	**17 21 39.8**	**-2.7**
	comp=Z,4.1nm,1.2s						
ARU	**Arti**	**22.27**	**297**	*d i*P	**P**	**17 21 45.5**	**+3.0**
ARU						17 22 08.1	
ARU				SS	Sn	17 26 26.8	+28
ARU				pmax	pmax		
	comp=Z,6.0nm,2.5s						
ABKAR	**Akbulak array**	**23.01**	**278**	*e*P	**P**	**17 21 47.9**	**-2.5**
AKTO	**Aktyubinsk**	**23.80**	**282**	P	**P**	**17 21 58.1**	**-0.1**
	comp=Z,2.2nm,0.5s,baz=76,slow=13,SNR=6.6						
TIXI	**Tiksi**	**24.50**	**24**	P	**P**	**17 22 06.2**	**+1.7**
	comp=Z,6.0nm,0.7s,baz=285,slow=3.3,SNR=3.6						
TIXI	**Tiksi**	**24.50**	**24**	*e*P	**P**	**17 22 04.1**	**-0.4**
	comp=Z,9.9nm,0.8s						
TIXI	**Tiksi**	**24.50**	**24**	⇓*e*P	**P**	**17 22 00.2**	**-4.3**
TIXI				pmax	pmax		
	comp=Z,3.0nm,0.9s						
KS01	**Wonju Array Si**	**26.52**	**111**	*e*P	P	17 22 36.5	+13
KS15	**Wonju Array Si**	**26.53**	**111**	*e*P	P	17 22 36.2	+13
CHTO	**Chiang Mai**	**33.13**	**175**	*e*P	P	17 23 35.3	+13
	comp=Z,18nm,1.7s						
MJB9	**Matsu-Tunnel**	**33.28**	**101**	*e*P	P	17 23 32.6	+10
	comp=Z,5.3nm,0.6s						
MAJO	**Matsushiro**	**33.28**	**101**	*e*P	P	17 23 32.9	+10
	comp=Z,5.2nm,0.6s						
MAJO	**Matsushiro**	**33.28**	**101**	*e*P	P	17 23 32.9	+10
MAJO				pmax	pmax		
	comp=Z,5.0nm,0.6s						
JOW	**Kunigami**	**34.79**	**124**	LR	LR	17 38 16.0	
	comp=Z,184nm,19.2s,baz=148,slow=37						
FIA1	**FINESS Array S**	**37.82**	**313**	*e*P	**P**	**17 23 58.9**	**-2.9**
	comp=Z,23nm,1.4s						
KBS	**Kingsbay**	**38.51**	**342**	*e*P	**P**	**17 24 05.3**	**-2.1**
	comp=Z,14nm,0.9s						
KBS	**Kingsbay**	**38.51**	**342**	*e*P	**P**	**17 24 05.3**	**-2.1**
KBS				pmax	pmax		
	comp=Z,14nm,0.9s						
BR101	**Keskin Array S**	**43.95**	**280**	*e*P	**P**	**17 24 52.9**	**+0.2**
BRTR	**Keskin Array B**	**43.95**	**280**	P	**P**	**17 24 52.9**	**+0.2**
	comp=Z,1.0nm,0.8s,baz=67,slow=7.1,SNR=5.4						
BRTR	**Keskin Array B**	**43.95**	**280**	*i* P	**P**	**17 24 56.4**	**+3.7**
BRTR				pmax	pmax		
	comp=Z,1.0nm,0.8s						
NC404	**NORSAR Array S**	**44.35**	**316**	*e*P	**P**	**17 24 56.5**	**+1.0**
NOA	**NORSAR Array B**	**44.57**	**316**	P	**P**	**17 24 56.8**	**-0.4**
	comp=Z,0.6nm,0.7s,baz=60,slow=7.9,SNR=2.5						
NC203	**NORSAR Array S**	**44.63**	**317**	*e*P	**P**	**17 24 56.7**	**-1.1**
CRVS	**Cervenica-Dubn**	**45.76**	**297**	*e*P	**P**	**17 25 04.0**	**-2.8**
CRVS	**Cervenica-Dubn**	**45.76**	**297**	*e*P	**P**	**17 25 04.0**	**-2.8**
CLL	**Collm**	**48.89**	**304**	*e*P	**P**	**17 25 30.0**	**-1.2**
CLL				*e*		17 25 35.0	

NEIC ***31*** *17:28:34.6±1.0, 41°.01N×112°.55W, h0^{km}, ML1.4, Error ellipse: s-maj=16.8km s-min=12.6km az=90.0, Suspected Mining explosion.*
NEIC 54 km [33 miles] WSW of Ogden.
IDC ***31*** *17:28:34.5±3.7, 41°.13N×112°.99W, h0^{km}, mb1 2.5/1, mb1mx2.5/64, mbtmp2.0/1, ML3.0/1, Error ellipse: s-maj=68.0km s-min=26.8km az=147.0*

ISC 31 17:28:32.9±1.3**, 41°.15N**±0°.10×**112°.90W**±0°.06**, h0^{km}, n7, σ0.^{s}58**/6**, Utah**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
DUG	**Dugway, Tooele**	**0.95**	**176**	*e*Pn	**Pn**	**17 28 53.7**	**0.0**
HWUT	**Hardware Ranch**	**1.10**	**65**	*e*Pn	**Pb**	**17 28 55.3**	**+0.4**
HLID	**Hailey**	**2.66**	**336**	Pn	**Pb**	**17 29 21.7**	**+0.2**
PDAR	**Pinedale Array**	**2.97**	**56**	Pn	**Pb**	**17 29 26.0**	**-0.8**
	0.2nm,0.3s,baz=241,slow=13,SNR=2.7						
PDAR				Pg	**Pg**	**17 29 30.0**	**+0.2**
	0.6nm,0.3s,baz=227,slow=14,SNR=5.9						
PDAR				Lg	Lg	17 30 10.2	
	0.6nm,0.3s,baz=230,slow=25,SNR=4.4						
MFID	**Camas Ranch**	**3.14**	**317**	*e*Pn	**Pb**	**17 29 29.4**	**-0.3**
I56US	**NEWPORT INFRAS**	**7.73**	**338**	*i*		18 13 40.0	
	baz=157,slow=320,SNR=3.5						
I57US	**PINON FLAT INF**	**8.04**	**202**	*i*		18 19 20.0	
	baz=16,slow=319,SNR=0.4						

IDC 31 17:42:20.9±5.2**, 4°.45N×128°.52E, h166^{km}**±86^{km}**, mb3.2**/4**, mb1 3.4**/5**, mb1mx3.0**/58**, mbtmp3.7**/5**, Error ellipse: s-maj=347.3km s-min=19.2km az=70.0, North of Halmahera**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIJI	**Sorong**	**5.95**	**153**	P	Pn	17 43 49.0	+1.8
	1.7nm,0.3s,baz=139,slow=20,SNR=10						
SIJI				S	Sn	17 44 53.5	-1.4
	0.2nm,0.3s,baz=18,slow=20,SNR=4.5						
WRA	**Warramunga Arr**	**24.90**	**167**	P	P	17 47 29.1	+0.4
	1.0nm,0.3s,baz=348,slow=11,SNR=24						
ASAR	**Alice Springs**	**28.43**	**170**	P	P	17 48 00.1	-0.2
	0.4nm,0.5s,baz=348,slow=7.8,SNR=10						
MKAR	**Makanchi Array**	**58.01**	**324**	P	P	17 51 55.7	-0.7
	0.3nm,0.4s,baz=124,slow=7.0,SNR=5.1						
KURBB	**Kurchatov Arra**	**62.12**	**326**	P	P	17 52 24.4	+0.2
	0.4nm,0.5s,baz=128,slow=6.2,SNR=5.8						

IDC 31 17:47:33.8±1.9**, 3°.05S×143°.29E, h0^{km}, mb3.3**/3**, mb1 3.5**/5**, mb1mx3.3**/46**, mbtmp3.4**/5**, ML3.4**/2**, Error ellipse: s-maj=40.9km s-min=27.4km az=88.0, Near north coast of New Guinea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JAY	**Jayapura**	**2.64**	**282**	Pn	Pn	17 48 18.2	+0.5
	4.3nm,0.3s,baz=137,slow=11,SNR=11						
JAY				Sn	Sn	17 48 50.7	+0.2
	5.0nm,0.3s,baz=133,slow=18,SNR=3.1						
WRA	**Warramunga Arr**	**18.93**	**207**	P	P	17 51 55.7	-0.7
	0.2nm,0.3s,baz=25,slow=12,SNR=7.8						
ASAR	**Alice Springs**	**22.42**	**203**	P	P	17 52 34.8	+0.6
	0.5nm,0.8s,baz=36,slow=11,SNR=4.2						
MKAR	**Makanchi Array**	**72.89**	**321**	P	P	17 59 05.0	+0.1
	0.3nm,0.7s,baz=117,slow=5.0,SNR=3.1						
KURBB	**Kurchatov Arra**	**76.67**	**324**	P	P	17 59 26.5	-0.1
	0.2nm,0.5s,baz=110,slow=6.6,SNR=2.6						

ISCJB ***31*** *18:00:04.8±0.6, 52°.73S±0°.08×18°.4E±0°.2, h10^{km}, mb4.4/12, MS3.6/13, Error ellipse: s-maj=20.1km s-min=11.5km az=176.4*
IDC ***31*** *18:00:04.5±1.0, 52°.86S×18°.52E, h0^{km}, mb4.0/5, mb1 4.0/5, mb1mx3.7/52, mbtmp4.0/5, MS3.6/13, Ms1 3.6/13, ms1mx3.4/49, Error ellipse: s-maj=51.1km s-min=23.1km az=77.0*
NEIC ***31*** *18:00:06.3±0.4, 52°.72S×18°.35E, h10^{km}, mb4.6/10, Error ellipse: s-maj=16.8km s-min=9.8km az=83.0*

ISC 31 18:00:06.2±0.6**, 52°.74S**±0°.10×**18°.4E**±0°.2**, h10^{km}, n39, σ1.^{s}15**/27**, mb4.4**/12**, MS3.6**/13**, Southwest of Africa**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SUR	**Sutherland**	**20.42**	**6**	P	**P**	**18 04 45.2**	**+1.6**
	7.8nm,1.1s,baz=354,slow=19,SNR=1.8						
SUR				LR	LR	18 10 30.2	
	comp=Z,237nm,20.4s,baz=177,slow=30						
SUR	**Sutherland**	**20.42**	**6**	*e*P	**P**	**18 04 44.9**	**+1.3**
	148nm,1.6s						
SNAA	**Sanae**	**21.19**	**199**	P	**P**	**18 04 52.9**	**+1.4**
	3.9nm,0.9s,baz=31,slow=6.2,SNR=8.9						
SNAA				LR	LR	18 10 55.1	
	comp=Z,105nm,21.2s,baz=18,slow=31						
SNAA	**Sanae**	**21.19**	**199**	*e*P	**P**	**18 04 53.1**	**+1.6**
	16nm,1.4s						
BOSA	**Boshof**	**24.62**	**14**	LR	LR	18 13 00.6	
	comp=Z,157nm,21.4s,baz=204,slow=31						
BOSA	**Boshof**	**24.62**	**14**	*e*P	**P**	**18 05 27.4**	**+0.6**
	49nm,1.8s						
MAW	**Mawson**	**25.88**	**142**	P	**P**	**18 05 36.3**	**-1.4**
	4.8nm,1.1s,baz=277,slow=12,SNR=5.9						
MAW				LR	LR	18 13 30.6	
	comp=Z,83nm,21.7s,baz=249,slow=31						
MAW	**Mawson**	**25.88**	**142**	*e*P	**P**	**18 05 37.9**	**+0.3**
	4.2nm,1.5s						
LBTB	**Lobatse**	**28.21**	**14**	LR	LR	18 15 30.3	
	comp=Z,132nm,18.7s,baz=176,slow=33						
TSUM	**Tsumeb**	**33.48**	**359**	LR	LR	18 17 36.0	
	comp=Z,112nm,21.8s,baz=183,slow=31						
QSPA	**South Pole Qui**	**37.49**	**180**	P	**P**	**18 07 19.9**	**+0.2**
	5.2nm,1.0s,baz=223,slow=3.1,SNR=12						
QSPA	**South Pole Qui**	**37.49**	**180**	*e*P	**P**	**18 07 19.8**	**0.0**
	7.9nm,1.0s						
OPO	**Ambohidratompo**	**40.80**	**44**	LR	LR	18 21 48.8	
	comp=Z,108nm,18.1s,baz=196,slow=32						
PMSA	**Palmer Station**	**41.29**	**220**	LR	LR	18 20 23.2	
	comp=Z,209nm,19.9s,baz=96,slow=30						
CASY	**Casey**	**44.19**	**145**	*e*P	**P**	**18 08 15.1**	**+0.4**
	10nm,1.5s						
VNDA	**Vanda**	**48.03**	**170**	P	**P**	**18 08 41.8**	**-3.1**
	1.8nm,1.1s,baz=169,slow=5.2,SNR=2.3						
VNDA				LR	LR	18 27 49.9	
	comp=Z,88nm,20.9s,baz=193,slow=35						
VNDA	**Vanda**	**48.03**	**170**	*e*P	**P**	**18 08 45.5**	**+0.6**
SBA	**Scott Base**	**48.22**	**171**	*e*P	**P**	**18 08 47.7**	**+1.4**
	20nm,1.8s						
H10S2	**ASCENSION HYDR**	**51.24**	**316**	T	T	19 04 32.5	
	baz=154						
H10S3	**ASCENSION HYDR**	**51.25**	**316**	T	T	19 04 34.7	
	baz=154						
H10S1	**ASCENSION HYDR**	**51.25**	**316**	T	T	19 04 33.4	
	baz=154						
DBIC	**Dimbokro**	**62.41**	**334**	LR	LR	18 29 57.3	
	comp=Z,38nm,22.0s,baz=168,slow=29						
DBIC	**Dimbokro**	**62.41**	**334**	*e*P	**P**	**18 10 29.2**	**0.0**
	40nm,1.7s						
LPAZ	**La Paz**	**75.16**	**263**	LR	LR	18 42 49.7	
	comp=Z,31nm,19.2s,baz=144,slow=34						
LPAZ	**La Paz**	**75.16**	**263**	*e*P	**P**	**18 11 49.6**	**+0.2**
HMDM	**Hanimaadhoo**	**75.19**	**57**	*e*P	**P**	**18 11 48.6**	**-0.2**
	58nm,0.8s						
SAML	**Samuel**	**77.87**	**271**	*e*P	**P**	**18 12 02.5**	**-1.6**
	5.5nm,1.1s						
ASAR	**Alice Springs**	**85.57**	**124**	P	**P**	**18 12 45.1**	**+0.4**
	0.4nm,0.8s,baz=209,slow=4.6,SNR=4.9						
AS31	**Alice Springs**	**85.57**	**124**	*e*P	**P**	**18 12 45.1**	**+0.3**
	1.3nm,1.0s						
MMAI	**Mount Meron Ar**	**86.67**	**14**	LR	LR	18 50 28.3	
	comp=Z,35nm,19.5s,baz=85,slow=35						
KBZ	**Khabaz**	**98.37**	**18**	LR	LR	18 58 39.1	
	comp=Z,23nm,18.6s,baz=186,slow=36						
SONA0	**Songino Array**	**124.89**	**55**	*e*PKPdf	**PKPdf**	**18 19 04.2**	**-1.4**
SONM	**Songino Array**	**124.89**	**55**	PKP	**PKPdf**	**18 19 04.2**	**-1.4**
	0.2nm,0.5s,baz=222,slow=1.9,SNR=3.7						
PD31	**Pinedale Array**	**144.37**	**275**	*e*PKPdf	**PKPab**	**18 19 39.6**	**-0.6**
PDAR	**Pinedale Array**	**144.37**	**275**	PKP	**PKPab**	**18 19 39.6**	**-0.6**
	1.2nm,0.9s,baz=108,slow=4.8,SNR=9.3						
NV01	**Mina Array Sit**	**147.06**	**262**	*e*PKPbc	**PKPbc**	**18 19 49.0**	**0.0**
NVAR	**Mina Array Bea**	**147.06**	**262**	PKPbc	**PKPbc**	**18 19 48.5**	**-0.4**
	1.5nm,0.9s,baz=137,slow=5.2,SNR=9.2						
ILAR	**Eielson Array**	**165.79**	**334**	PKPab	**PKPab**	**18 21 09.8**	**+0.5**
	0.8nm,0.9s,baz=27,slow=3.0,SNR=4.6						
ILB	**Eielson Array**	**165.79**	**334**	*e*PKPab	**PKPab**	**18 21 09.8**	**+0.5**

IDC ***31*** *18:04:40.5±0.6, 24°.99N×135°.18E, h0^{km}, mb4.1/18, mb1 4.2/22, mb1mx4.0/72, mbtmp4.1/22, ML3.7/3, MS3.0/7, Ms1 3.0/7, ms1mx2.7/62, Error ellipse: s-maj=27.6km s-min=13.7km az=73.0*
ISCJB ***31*** *18:04:41.0±2.3, 24°.93N±0°.05×135°.13E±0°.07, h15^{km}±16^{km}, mb4.3/31, MS3.2/3, Error ellipse: s-maj=11.5km s-min=7.8km az=162.0*
NEIC ***31*** *18:04:46.0±0.7, 24°.94N×135°.12E, h38^{km}±6^{km}, mb4.7/14, Error ellipse: s-maj=7.9km s-min=5.3km az=73.0*

ISC 31 18:04:46.9±2.3**, 25°.01N**±0°.09×**135°.1E**±0°.1**, h42^{km}**±21^{km}**, n70, σ0.^{s}76**/64**, mb4.3**/31**, MS3.5**/3**, West of Bonin Islands**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JOW	**Kunigami**	**6.37**	**288**	Pn	Pn	18 06 18.1	-0.2
	5.6nm,0.3s,baz=116,slow=22,SNR=6.2						
JOW				Sn	Sn	18 07 23.6	-6.1
	8.8nm,0.3s,baz=112,slow=25,SNR=8.3						
JOW				LR	LR	18 08 45.6	
	comp=Z,157nm,19.9s,baz=172,slow=38						
JOW	**Kunigami**	**6.37**	**288**	*e*Pn	Pn	18 06 17.1	-1.1
JOW				*e*Sn	Sn	18 07 24.0	-5.7
CBIJ	**Chichi jima**	**6.74**	**71**	*e*Pn	Pn	18 06 20.5	-2.9
CBIJ				*e*Sn	Sn	18 07 30.2	-8.7
JNU	**Nakatsue**	**8.87**	**337**	Pn	Pn	18 06 51.4	-1.1
	0.7nm,0.3s,baz=347,slow=3.8,SNR=10						
JNU				Sn	Sn	18 08 27.7	-3.5
	0.4nm,0.3s,baz=211,slow=18,SNR=2.9						
JNU	**Nakatsue**	**8.87**	**337**	*e*Pn	Pn	18 06 51.9	-0.7
JNU				*e*Sn	**Sn**	**18 08 27.9**	**-3.3**
INU	**Inuyama**	**10.45**	**9**	*e*Pn	**Pn**	**18 07 14.1**	**0.0**
MAJO	**Matsushiro**	**11.81**	**12**	*e*Pn	**Pn**	**18 07 34.1**	**+1.3**
MJAR	**Matsushiro Arr**	**11.81**	**13**	Pn	**Pn**	**18 07 34.1**	**+1.3**
	0.8nm,0.3s,baz=187,slow=13,SNR=21						
MJAR				LR	LR	18 11 28.1	
	comp=Z,64nm,18.4s,baz=190,slow=35						
MJB9	**Matsu-Tunnel**	**11.81**	**12**	*e*Pn	**Pn**	**18 07 34.1**	**+1.3**
KSRS	**Korea Array**	**13.82**	**336**	Pn	Pn	18 07 59.6	-0.6
	0.1nm,0.3s,baz=152,slow=12,SNR=2.2						
KSRS				LR	LR	18 12 21.6	
	comp=Z,20nm,19.2s,baz=135,slow=33						
KSAR	**Wonju Array Be**	**13.82**	**335**	Pn	Pn	18 07 59.6	-0.6
GUMO	**Guam**	**14.65**	**139**	LR	LR	18 12 15.5	
	comp=Z,34nm,21.4s,baz=30,slow=31						
USRK	**Ussuriysk Ar.**	**19.31**	**353**	P	**P**	**18 09 09.2**	**+0.9**
	baz=174,slow=11						
ASAJ	**Asahikawa**	**20.03**	**16**	LR	LR	18 16 49.9	
	comp=Z,28nm,19.6s,baz=172,slow=36						
KLR	**Kul'dur**	**24.32**	**355**	P	**P**	**18 10 01.7**	**+1.3**
	0.2nm,0.6s,baz=190,slow=7.3,SNR=7.7						
H11S3	**WAKE ISLAND Hy**	**30.04**	**96**	T	T	18 42 28.0	
	baz=289						
H11S1	**WAKE ISLAND Hy**	**30.05**	**96**	T	T	18 42 31.6	
	baz=289						
H11S2	**WAKE ISLAND Hy**	**30.06**	**96**	T	T	18 42 29.6	
	baz=289						
SONA0	**Songino Array**	**32.10**	**323**	*e*P	**P**	**18 11 10.6**	**+0.4**
SONM	**Songino Array**	**32.10**	**323**	P	**P**	**18 11 10.6**	**+0.4**
	0.8nm,0.7s,baz=136,slow=8.6,SNR=4.3						
SONA1	**Songino Array**	**32.11**	**323**	*e*P	**P**	**18 11 10.5**	**+0.3**
MA2	**Magadan**	**36.25**	**13**	*e*P	P	18 11 44.1	-1.6
	20nm,1.2s						
MTN	**Manton Dam**	**37.82**	**186**	*e*P	P	18 11 57.1	-2.3
	52nm,1.4s						
LSA	**Lhasa**	**39.10**	**287**	*e*P	**P**	**18 12 12.2**	**+1.4**
	3.0nm,0.8s						
WB2	**Warramunga Arr**	**44.69**	**181**	*e*P	P	18 12 53.5	-2.3
	23nm,1.8s						
WR1	**Warramunga Arr**	**44.69**	**181**	*e*P	**P**	**18 12 55.3**	**-0.5**
	26nm,1.6s						
WR1				*e*PcP	**PcP**	**18 14 38.0**	**+0.2**
WRA	**Warramunga Arr**	**44.69**	**181**	P	**P**	**18 12 55.3**	**-0.5**
	1.1nm,0.7s,baz=352,slow=8.7,SNR=10						
WRA				PcP	**PcP**	**18 14 38.0**	**+0.2**
	0.5nm,0.8s,baz=353,slow=4.2,SNR=3.9						
CTAO	**Charters Tower**	**46.13**	**165**	*e*P	**P**	**18 13 07.5**	**+0.2**
	41nm,1.8s						
MK01	**Makanchi Array**	**46.94**	**312**	*e*P	**P**	**18 13 13.4**	**0.0**
MK31	**Makanchi Array**	**46.95**	**312**	*e*P	**P**	**18 13 13.8**	**+0.3**
MK32	**Makanchi Array**	**46.95**	**312**	*e*P	**P**	**18 13 14.2**	**+0.7**
MK32				*e*PcP	**PcP**	**18 14 45.2**	**-0.3**
MKAR	**Makanchi Array**	**46.95**	**312**	P	**P**	**18 13 14.2**	**+0.7**
	1.1nm,0.7s,baz=99,slow=9.3,SNR=13						
MKAR				PcP	**PcP**	**18 14 45.2**	**-0.3**
	0.3nm,0.6s,baz=111,slow=3.5,SNR=2.8						
MKAR	**Makanchi Array**	**46.95**	**312**	*e*P	**P**	**18 13 13.8**	**+0.4**
	7.6nm,0.7s						
MKAR				PcP	**PcP**	**18 14 45.2**	**-0.3**
ZAA0	**Zalesovo Array**	**46.99**	**322**	*e*P	**P**	**18 13 13.4**	**-0.3**
	2.9nm,1.1s						
ZALV	**Zalesovo Beam**	**46.99**	**322**	P	**P**	**18 13 13.9**	**+0.3**
	1.0nm,0.4s,baz=117,slow=7.9,SNR=3.9						
ZALV				PcP	**PcP**	**18 14 44.9**	**-0.5**
	0.8nm,0.5s,baz=87,slow=3.2,SNR=3.2						
ZALV	**Zalesovo Beam**	**46.99**	**322**	*e*P	**P**	**18 13 13.4**	**-0.3**
ZALV				PcP	**PcP**	**18 14 44.9**	**-0.5**
ZAA1	**Zalesovo Array**	**46.99**	**322**	*e*P	**P**	**18 13 13.9**	**+0.3**
ZAA1				*e*PcP	**PcP**	**18 14 44.9**	**-0.5**
MAKZ	**Makanchi**	**47.16**	**312**	*e*P	**P**	**18 13 15.1**	**0.0**
	8.4nm,1.8s						
MBWA	**Marble Bar**	**48.25**	**199**	*e*P	**P**	**18 13 23.0**	**-0.7**
	52nm,2.0s						
AS01	**Alice Springs**	**48.40**	**181**	*e*P	**P**	**18 13 24.6**	**-0.3**
AS31	**Alice Springs**	**48.40**	**181**	*e*P	**P**	**18 13 24.1**	**-0.8**
	1.3nm,1.0s						
ASAR	**Alice Springs**	**48.40**	**181**	P	**P**	**18 13 24.0**	**-0.9**
	0.4nm,0.6s,baz=18,slow=11,SNR=9.2						
ASAR				PcP	**PcP**	**18 14 51.3**	**+0.4**
	0.7nm,0.9s,baz=9.6,slow=7.8,SNR=3.9						
KURK	**Kurchatov**	**49.95**	**316**	*e*P	**P**	**18 13 37.1**	**+0.6**
KURK				*e*PcP	**PcP**	**18 14 56.0**	**-0.2**
KURBB	**Kurchatov Arra**	**49.99**	**316**	P	**P**	**18 13 37.1**	**+0.3**
	2.4nm,0.7s,baz=99,slow=7.9,SNR=23						
KURBB				PcP	**PcP**	**18 14 56.0**	**-0.3**
	0.3nm,0.6s,baz=109,slow=3.7,SNR=4.2						
BVAR	**Borovoye Array**	**55.28**	**318**	P	**P**	**18 14 15.9**	**0.0**
	2.5nm,0.6s,baz=72,slow=9.3,SNR=15						
STKA	**Stephens Creek**	**56.91**	**173**	P	**P**	**18 14 27.5**	**-0.2**
	2.7nm,0.9s,baz=324,slow=9.4,SNR=3.7						
STKA	**Stephens Creek**	**56.91**	**173**	*e*P	**P**	**18 14 27.1**	**-0.6**
	6.0nm,1.9s						
ABKAR	**Akbulak array**	**61.94**	**314**	*e*P	**P**	**18 15 02.0**	**-0.3**
ILAR	**Eielson Array**	**62.59**	**28**	P	**P**	**18 15 04.9**	**-1.5**
	0.4nm,0.2s,baz=258,slow=4.3,SNR=4.4						
ARA0	**ARCESS Array S**	**73.33**	**340**	*e*P	**P**	**18 16 13.4**	**-0.4**
ARCES	**ARCESS Array B**	**73.33**	**340**	P	**P**	**18 16 13.4**	**-0.4**
	3.3nm,0.8s,baz=64,slow=8.4,SNR=11						
KBZ	**Khabaz**	**74.64**	**311**	P	**P**	**18 16 22.7**	**+0.9**
	3.6nm,0.8s,baz=95,slow=4.2,SNR=8.8						
FIA0	**FINESS Array S**	**76.88**	**332**	*e*P	**P**	**18 16 34.2**	**-0.2**
FINES	**FINESS Array B**	**76.88**	**332**	P	**P**	**18 16 34.2**	**-0.2**
	3.0nm,0.6s,baz=76,slow=5.6,SNR=22						
AKASG	**Malin Array Be**	**80.38**	**322**	P	**P**	**18 16 53.5**	**-0.3**
	0.7nm,0.5s,baz=55,slow=6.4,SNR=3.3						
AKBB	**Malin Array Si**	**80.38**	**322**	*e*P	**P**	**18 16 53.1**	**-0.7**
	24nm,2.0s						
BR101	**Keskin Array S**	**82.58**	**310**	*e*P	**P**	**18 17 06.2**	**+0.3**
BR131	**Keskin Array S**	**82.58**	**310**	*e*P	**P**	**18 17 05.8**	**0.0**
BRTR	**Keskin Array B**	**82.58**	**310**	P	**P**	**18 17 06.2**	**+0.3**
	1.5nm,0.7s,baz=82,slow=3.7,SNR=7.2						
BRTR				LR	LR	18 59 34.3	
	comp=Z,21nm,19.1s,baz=238,slow=40						
HFS	**Hagfors**	**82.67**	**334**	P	**P**	**18 17 05.1**	**-0.6**
	0.7nm,0.5s,baz=80,slow=3.2,SNR=5.5						
NB2	**NORSAR Subarra**	**83.03**	**336**	P	**P**	**18 17 06.5**	**-1.1**
	comp=Z,0.7nm,0.6s,baz=44,slow=5.3						
NOA	**NORSAR Array B**	**83.03**	**336**	P	**P**	**18 17 07.1**	**-0.6**
	comp=Z,1.3nm,0.7s,baz=46,slow=5.3,SNR=6.8						
BUR08	**Bucovina Ar. S**	**84.18**	**320**	*e*P	**P**	**18 17 14.7**	**+0.8**
BUR04	**Bucovina Ar. S**	**84.19**	**320**	*e*P	**P**	**18 17 14.2**	**+0.3**
MMAI	**Mount Meron Ar**	**84.25**	**304**	P	**P**	**18 17 15.3**	**+0.8**
	comp=Z,1.4nm,0.7s,baz=358,slow=8.7,SNR=3.7						
WVOR	**Wild Horse Val**	**84.61**	**46**	*e*P	P	18 17 11.8	-4.4
	comp=Z,19nm,1.9s						
MLR	**Muntele Rosu**	**84.84**	**318**	LR	LR	18 57 09.7	
	comp=Z,21nm,21.4s,baz=208,slow=37						
LMCR	**Lookout Mounta**	**86.68**	**50**	*e*P	P	18 17 23.6	-3.1
NV01	**Mina Array Sit**	**86.78**	**49**	*e*P	**P**	**18 17 27.2**	**0.0**
NVAR	**Mina Array Bea**	**86.78**	**49**	P	**P**	**18 17 27.7**	**+0.5**
	comp=Z,1.1nm,0.7s,baz=283,slow=6.2,SNR=8.9						

NIED ***31*** *18:44:00, 38°.90N×142°.00E, h53^{km}, Mw3.7 Best double couple: $M_0$3.47000×10^{14} NP1:ϕ_s180.00000°, δ28.00000°, λ72.00000°. NP2:ϕ_s20.00000°, δ63.00000°, λ99.00000°.*
IDC ***31*** *18:44:41.9±2.2, 39°.05N×142°.85E, h0^{km}, mb3.8/7, mb1 3.8/9, mb1mx3.6/65, mbtmp3.7/9, ML3.0/2, MS2.4/1, Ms1 2.4/1, ms1mx2.0/65, Error ellipse: s-maj=52.0km s-min=27.8km az=77.0*
ISCJB ***31*** *18:44:49.9±0.8, 38°.90N±0°.04×142°.17E±0°.08, h54^{km}±5^{km}, mb4.0/11, Error ellipse: s-maj=11.2km s-min=5.7km az=13.2*
JMA ***31*** *18:44:52.0±0.1, 38°.88N×141°.98E, h49^{km}±1^{km}, M3.6*
JMA Felt I J1.
NEIC ***31*** *18:44:52.3±0.8, 38°.88N×142°.29E, h71^{km}±6^{km}, mb4.4/4, Error ellipse: s-maj=10.9km s-min=6.8km az=110.0*

ISC 31 18:44:50.7±1.5**, 38°.86N**±0°.05×**142°.2E**±0°.1**, h47^{km}**±12^{km}**, n45, σ1.^{s}77**/48**, mb3.8**/11**, Near east coast of eastern Honshu**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
OFUJ	**Ofunato**	**0.45**	**299**	P	**Pn**	**18 45 01.3**	**+0.2**
OFUJ				S	**Sn**	**18 45 07.6**	**-1.0**
JMK	**Ichinoseki**	**0.75**	**277**	P	**Pn**	**18 45 04.5**	**-0.5**
JMK				S	**Sn**	**18 45 13.3**	**-2.0**
JIO	**Ouri**	**0.77**	**238**	P	**Pn**	**18 45 05.0**	**-0.2**
JIO				S	**Sn**	**18 45 13.8**	**-1.8**
JOM	**Ohasama**	**0.92**	**312**	P	**Pn**	**18 45 07.1**	**-0.1**
JOM				S	**Sn**	**18 45 18.0**	**-1.3**
JOU	**Okura**	**1.28**	**248**	P	**Pn**	**18 45 11.7**	**-0.5**
JOU				S	**Sn**	**18 45 26.5**	**-1.8**
JRG	**Rokugo**	**1.31**	**294**	P	**Pn**	**18 45 11.9**	**-0.7**
JRG				S	**Sn**	**18 45 27.5**	**-1.4**
JYK	**Kaneyama**	**1.42**	**273**	P	**Pn**	**18 45 13.4**	**-0.6**
JMM	**Marumori**	**1.47**	**228**	P	**Pn**	**18 45 14.4**	**-0.4**
JMM				S	**Sn**	**18 45 31.1**	**-1.8**
JANG	**Nango**	**1.59**	**342**	P	**Pn**	**18 45 16.7**	**+0.3**
JANG				S	**Sn**	**18 45 36.0**	**+0.2**
ERM	**Erimo**	**3.24**	**13**	*e*Pn	**Pn**	**18 45 41.5**	**+2.5**
MJAR	**Matsushiro Arr**	**3.91**	**235**	Pn	**Pn**	**18 45 49.8**	**+1.6**
	1.1nm,0.3s,baz=37,slow=11,SNR=39						
MAJO	**Matsushiro**	**3.91**	**235**	*e*Pn	**Pn**	**18 45 50.6**	**+2.4**
MAT	**Matsushiro**	**3.91**	**235**	P	**Pn**	**18 45 51.2**	**+3.0**
MAT				*e*S	**Sn**	**18 46 36.4**	**+3.6**
MJB9	**Matsu-Tunnel**	**3.91**	**235**	*e*Pn	**Pn**	**18 45 50.5**	**+2.3**
ASAJ	**Asahikawa**	**5.26**	**3**	*e*Pn	**Pn**	**18 46 06.1**	**-0.6**
INU	**Inuyama**	**5.41**	**231**	*e*Pn	**Pn**	**18 46 11.0**	**+2.2**
JHJ2	**Mitsune**	**6.05**	**199**	*e*Pn	**Pn**	**18 46 20.8**	**+3.2**
USRK	**Ussuriysk Ar.**	**9.31**	**308**	Pn	**Pn**	**18 47 05.9**	**+3.6**
	baz=124,slow=15						
KSRS	**Korea Array**	**11.31**	**267**	Pn	**Pn**	**18 47 33.5**	**+4.0**
	0.1nm,0.3s,baz=85,slow=13,SNR=4.3						
KSRS				LR	LR	18 51 35.0	
	comp=Z,19nm,20.1s,baz=60,slow=35						
KS15	**Wonju Array Si**	**11.34**	**267**	*e*Pn	**Pn**	**18 47 33.0**	**+2.9**
KSAR	**Wonju Array Be**	**11.34**	**267**	Pn	**Pn**	**18 47 33.5**	**+3.5**
SONA0	**Songino Array**	**27.31**	**301**	*e*P	**P**	**18 50 31.6**	**+0.5**
SONM	**Songino Array**	**27.31**	**301**	P	**P**	**18 50 31.6**	**+0.5**
	0.3nm,0.3s,baz=85,slow=6.4,SNR=2.9						
H11N2	**WAKE ISLAND Hy**	**28.63**	**125**	T	T	19 21 10.0	
	baz=317,slow=75,SNR=61						
H11N1	**WAKE ISLAND Hy**	**28.64**	**125**	T	T	19 21 10.9	
	baz=317,slow=75,SNR=167						
H11N3	**WAKE ISLAND Hy**	**28.65**	**125**	T	T	19 21 11.5	
	baz=317,slow=75,SNR=106						
H11S1	**WAKE ISLAND Hy**	**29.41**	**127**	T	T	19 22 06.7	
	baz=318,slow=76,SNR=53						
H11S3	**WAKE ISLAND Hy**	**29.41**	**127**	T	T	19 22 07.2	
	baz=318,slow=76,SNR=111						
H11S2	**WAKE ISLAND Hy**	**29.42**	**127**	T	T	19 22 08.0	
	baz=318,slow=76,SNR=69						
ATKA	**Atka Island**	**32.83**	**52**	*e*P	**P**	**18 51 18.1**	**-1.4**
	39nm,1.0s						
ZAA0	**Zalesovo Array**	**41.15**	**311**	*e*P	**P**	**18 52 27.8**	**-2.3**
	1.8nm,0.9s						
ZAA1	**Zalesovo Array**	**41.15**	**311**	*e*P	**P**	**18 52 30.0**	**-0.1**
ZALV	**Zalesovo Beam**	**41.15**	**311**	P	**P**	**18 52 30.0**	**-0.1**
	1.7nm,0.8s,baz=95,slow=8.7,SNR=4.2						
ZALV	**Zalesovo Beam**	**41.15**	**311**	*e*P	**P**	**18 52 29.3**	**-0.9**
MK01	**Makanchi Array**	**43.68**	**301**	*e*P	**P**	**18 52 50.1**	**-0.7**
MK31	**Makanchi Array**	**43.68**	**301**	*e*P	**P**	**18 52 50.4**	**-0.4**

MK32	Makanchi Array	43.68	301	eP	P	18 52 50.8	-0.1
MKAR	Makanchi Array	43.68	301	P	P	18 52 50.8	-0.1
	1.5nm,0.8s,baz=87,slow=9.2,SNR=13						
MAKZ	Makanchi	43.89	301	eP	P	18 52 51.5	-1.0
	1.9nm,1.0s						
KURK	Kurchatov	45.30	307	eP	P	18 53 03.9	+0.2
KURBB	Kurchatov Arra	45.37	307	P	P	18 53 03.9	-0.3
	2.3nm,0.6s,baz=80,slow=8.2,SNR=20						
BVAR	Borovoye Array	49.80	311	P	P	18 53 38.0	-0.5
	0.9nm,0.5s,baz=79,slow=7.0,SNR=7.1						
AKTO	Aktyubinsk	57.91	311	P	P	18 54 37.7	-0.1
	0.7nm,0.4s,baz=67,slow=7.7,SNR=3.1						
WR1	Warramunga Arr	58.95	189	eP	P	18 54 44.9	-0.4
	18nm,1.4s						
WRA	Warramunga Arr	58.95	189	P	P	18 54 44.9	-0.4
	0.2nm,0.6s,baz=5.4,slow=6.9,SNR=4.3						

MAN 31 18:58:09.6, 8°41N×123°38E, h32^{km}, mb3.8, ML2.6, MS2.1, 1C, Mindanao

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DCPH	Dipolog City	0.18	352⇑	eP	Pn	18 58 16.8	+0.6
DCPH				i S	Sn	18 58 21.0	+0.8
PAGZ	Pagadian	0.56	179	eP	Pn	18 58 21.9	+0.6
PAGZ				eS	Sn	18 58 30.5	+1.0
BUKP	Musuan	1.75	107	eP	Pn	18 58 37.1	-0.7
BUKP				eS	Sb	18 59 13.6	+11

TRN 31 19:23:33.0, 12°15N×59°63W, h173^{km}, MD3.7, Windward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BBSP	Saint Philip	0.96	10	eP	Pn	19 24 01.1	+1.4
SVCV	St. Vincent, C	1.85	307	eP	Pn	19 24 07.7	-0.3
SVCV				eS	Sn	19 24 34.6	-0.4
SSV	Crater Summit	1.92	308	eP	Pn	19 24 09.4	+0.6
SSV				eS	Sn	19 24 36.1	-0.4
SVV	Soufriere Volc	1.93	307	eP	Pn	19 24 09.3	+0.5
SVV				eS	Sn	19 24 36.9	+0.3
SVB	Belmont	1.93	305	eP	Pn	19 24 10.4	+1.5
SVB				eS	Sn	19 24 37.2	+0.6
GRGR	Grenville	1.98	270	eP	Pn	19 24 10.8	+1.5
GRGR				eS	Sn	19 24 37.6	+0.2
MCLT	Moule a Chique	2.00	321	eP	Pn	19 24 09.6	0.0
SLB	Belfond	2.16	321	eP	Pn	19 24 12.4	+1.0
SLB				eS	Sn	19 24 40.9	-0.3
MVM	Montagne Vaucl	2.69	333	eP	Pn	19 24 17.7	+0.2
BIM	Bigot	2.73	329	eP	Pn	19 24 18.6	+0.4
BIM				eS	Sn	19 24 51.3	-2.0
TRMF	Trois Ilets	2.74	330	eP	Pn	19 24 18.8	+0.6
ZAM	Aeronautique	2.76	331	eP	Pn	19 24 18.9	+0.5
FDF	Fort de France	2.96	330	eP	Pn	19 24 22.1	+1.2
FDF				eS	Sn	19 24 57.8	-0.4
PML	Morne Lenard	3.02	330	eP	Pn	19 24 22.8	+1.3
BAMF	Morne Balai	3.03	331	eP	Pn	19 24 22.7	+0.9
CXM	Morne La Croix	3.04	331	eP	Pn	19 24 23.0	+1.1
PCM	Pelee Case Pet	3.06	330	eP	Pn	19 24 22.6	+0.5
PCM	Pelee Case Pet	3.06	330	eP	Pn	19 24 23.4	+1.3

IDC 31 19:23:34.5±2.2, 52°63S×18°92E, h0^{km}, mb3.7/4, mb1 3.8/4, mb1mx3.5/46, mbtmp3.8/4, MS3.1/1, Ms1 3.0/1, ms1mx2.6/45, Error ellipse: s-maj=48.1km s-min=47.5km az=96.0, Southwest of Africa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SNAA	Sanae	21.39	199	P	P	19 28 23.4	+0.1
	1.5nm,0.7s,baz=117,slow=2.3,SNR=6.3						
BOSA	Boshof	24.45	14	LR	LR	19 37 25.4	
	comp=Z,45nm,18.4s,baz=206,slow=34						
MAW	Mawson	25.79	142	P	P	19 29 06.9	+0.2
	2.1nm,0.8s,baz=288,slow=15,SNR=5.5						
QSPA	South Pole Qui	37.60	180	P	P	19 30 50.2	-0.3
	2.0nm,0.8s,baz=251,slow=5.0						
H10S2	ASCENSION HYDR	51.36	316	T	T	20 28 15.5	
	baz=147						
H10S3	ASCENSION HYDR	51.37	316	T	T	20 28 16.4	
	baz=147						
H10S1	ASCENSION HYDR	51.38	316	T	T	20 28 17.9	
	baz=147						
ASAR	Alice Springs	85.39	124	P	P	19 36 13.6	-0.2
	0.5nm,1.1s,baz=208,slow=3.2,SNR=4.3						
NVAR	Mina Array Bea	147.37	261	PKPbc	PKPbc	19 43 19.1	-0.7
	0.6nm,0.8s,baz=145,slow=5.9,SNR=4.6						

IDC 31 19:37:16.5±1.7, 4°80S×139°20E, h0^{km}, mb3.3/1, mb1 3.7/4, mb1mx3.3/43, mbtmp3.5/4, ML3.4/3, MS2.7/1, Ms1 2.7/1, ms1mx2.2/22, Error ellipse: s-maj=59.6km s-min=21.0km az=112.0, Irian Jaya

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
JAY	Jayapura	2.72	34	Pn	Pn	19 38 02.1	+0.6
	2.3nm,0.3s,baz=204,slow=11,SNR=14						
JAY				Sn	Sn	19 38 34.9	-0.3
	3.4nm,0.3s,baz=111,slow=21,SNR=5.9						
WRA	Warramunga Arr	15.78	197	Pn	Pn	19 40 58.4	-2.0
	0.2nm,0.3s,baz=12,slow=13,SNR=9.2						
WRA				Sn	Sn	19 43 51.5	-4.6
	0.1nm,0.3s,baz=15,slow=24,SNR=2.8						
WRA				Lg	Lg	19 45 36.7	
	0.1nm,0.3s,baz=20,slow=27,SNR=3.2						
ASAR	Alice Springs	19.45	195	P	Pn	19 41 46.0	0.0
	0.4nm,0.3s,baz=26,slow=10.0,SNR=36						
KSRS	Korea Array	43.33	347	LR	LR	20 01 24.2	
	comp=Z,8.2nm,19.4s,baz=285,slow=33						
MKAR	Makanchi Array	71.73	323	P	P	19 48 40.4	-0.2
	0.2nm,0.6s,baz=119,slow=7.0,SNR=2.5						

*ISCJB **31** 20:01:49.3±0.5, 43°68N±0°03×105°31W±0°05, h0^{km}, Error ellipse: s-maj=5.8km s-min=4.4km az=160.6*

*NEIC **31** 20:01:50.5±0.3, 43°71N×105°27W, h0^{km}, ML3.4, Error ellipse: s-maj=4.7km s-min=4.0km az=78.0, Suspected Mining explosion.*

NEIC 67 km [42 miles] SSE of Gillette.

*IDC **31** 20:01:50.1±1.2, 43°94N×105°62W, h0^{km}, mb1 3.4/4, mb1mx3.2/66, mbtmp3.0/4, ML2.2/2, Error ellipse: s-maj=22.9km s-min=10.1km az=150.0*

ISC 31 20:01:50.8±1.0, 43°72N±0°05×105°39W±0°05, h0^{km}, n58, σ1^{s}36/57, Wyoming

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
RSSD	Black Hills	1.06	67	ePg	Pg	20 02 09.8	-1.3
K22A	Casper	1.35	218	ePn	Pg	20 02 15.3	-1.4
PHWY	Pilot Hill	2.41	181	ePn	Pn	20 02 32.2	+0.4
RWWY	Rawlins	2.43	214	ePn	Pn	20 02 32.5	+0.5
N23A	Red Feather La	2.85	189	ePn	Pn	20 02 38.0	+0.2
LAO	LASA Array	3.03	349	ePn	Pn	20 02 41.6	+1.5
RLMT	Red Lodge	3.12	298	ePn	Pn	20 02 42.5	+1.1
BW06	Boulder Array	3.19	254	ePn	Pn	20 02 43.4	+0.9
PD31	Pinedale Array	3.19	254	ePn	Pn	20 02 43.2	+0.8
PDAR	Pinedale Array	3.19	254	Pn	Pn	20 02 43.0	+0.6
	2.6nm,0.3s,baz=75,slow=14,SNR=23						
PDAR				Lg	Lg	20 03 28.2	
	3.0nm,0.3s,baz=70,slow=29,SNR=5.9						
GCMT	Greycliff	3.69	306	ePn	Pn	20 02 49.5	+0.4
OGNE	Ogallala	3.72	137	ePn	Pn	20 02 49.5	-0.1
LOHW	Long Hollow	3.79	270	ePn	Pn	20 02 52.2	+1.6
FLWY	Flagg Ranch	3.86	277	ePn	Pn	20 02 52.7	+1.2
MOOW	Moose Ponds	3.88	272	ePn	Pn	20 02 52.6	+0.6
SNOW	Snow King Moun	3.91	268	ePn	Pn	20 02 55.9	+3.6
ISCO	Idaho Springs	3.92	183	ePn	Pn	20 02 53.6	+1.1
YPP	Pitchstone Pla	3.95	280	ePn	Pn	20 02 52.6	-0.3
REDW	Red Top Meadow	3.99	267	ePn	Pn	20 02 54.2	+0.8
YFT	Old Faithful	3.99	282	ePn	Pn	20 02 56.3	+2.8
IMW	Indian Meadow	4.02	274	ePn	Pn	20 02 53.6	-0.3
TPAW	Teton Pass	4.05	269	ePn	Pn	20 02 53.9	-0.4
FXWY	Fox Creek	4.09	271	ePn	Pn	20 02 55.7	+0.9
O20A	White River Ci	4.16	212	ePn	Pn	20 02 56.2	+0.5
AHID	Auburn Hatcher	4.28	259	ePn	Pn	20 02 59.5	+2.1
SMCO	Snowmass	4.69	195	ePn	Pn	20 03 02.8	-0.4
DGMT	Dagmar	4.83	9	ePn	Pn	20 03 05.4	+0.7
BOZ	Bozeman (W)	4.83	295	ePn	Pn	20 03 05.8	+0.8
KSCO	Kaye Shedlock'	5.14	155	ePn	Pn	20 03 08.1	-1.0
EGMT	Eagleton	5.28	326	ePn	Pn	20 03 09.8	-1.1
DLMT	Dillon	5.41	290	ePn	Pn	20 03 12.8	0.0
HRY	Holter Researc	5.45	306	ePn	Pn	20 03 13.7	+0.4
LRM	Limekiln Ridge	5.45	295	ePn	Pn	20 03 14.4	+0.9
P18A	Preston Nutter	5.47	223	ePn	Pn	20 03 14.5	+0.7
PV22	Blue Mesa, Par	5.78	208	ePn	Pn	20 03 18.6	+0.7
PV21	Cone Mtn., Par	5.82	209	ePn	Pn	20 03 16.9	-1.6
P17A	Butcher Ranch,	5.84	225	ePn	Pn	20 03 18.9	+0.2
PV23	Carpenter Ridg	5.93	209	ePn	Pn	20 03 18.8	-1.3
PV09	Paradox Valley	5.93	210	ePn	Pn	20 03 19.1	-1.0
PV12	Saucer Basin,	5.98	207	ePn	Pn	20 03 20.8	0.0
PV14	Lion Creek, Pa	6.00	208	ePn	Pn	20 03 21.8	+0.7
SRU	San Rafael Swe	6.01	222	ePn	Pn	20 03 21.2	+0.1
PV11	David Mesa, Pa	6.02	207	ePn	Pn	20 03 22.1	+0.8
PV16	Nyswonger Mesa	6.02	207	ePn	Pn	20 03 21.8	+0.4
PV03	Paradox Valley	6.05	207	ePn	Pn	20 03 22.0	+0.3
PV02	Paradox Valley	6.06	206	ePn	Pn	20 03 20.6	-1.2
PV17	East Wray Mesa	6.07	208	ePn	Pn	20 03 20.7	-1.2
PV18	Skein Mesa, Pa	6.08	207	ePn	Pn	20 03 21.8	-0.3
PV13	Radium Mtn., P	6.13	206	ePn	Pn	20 03 23.8	+1.0
TMUT	Trail Mountain	6.21	227	ePn	Pn	20 03 23.6	-0.3
ECSD	EROS Data Cent	6.36	87	ePn	Pn	20 03 23.1	-2.6
DUG	Dugway, Tooele	6.56	240	ePn	Pn	20 03 29.2	+0.6
T25A	Trinidad	6.61	173	ePn	Pn	20 03 29.9	+0.5
MSU	Marysvale	7.30	227	ePn	Pn	20 03 40.0	+1.1
ULM	Lac du Bonnet	9.21	42	Pn	Pn	20 04 01.7	-3.1
	0.2nm,0.3s,baz=228,slow=12,SNR=3.3						
ULM				Lg	Lg	20 06 33.6	
	0.4nm,0.3s,baz=302,slow=19,SNR=2.5						
DPW	Davenport	9.87	299	ePn	Pn	20 04 08.0	-5.9
DPW				eSn	Sn	20 06 01.2	-4.1
NVAR	Mina Array Bea	11.09	246	Pn	Pn	20 04 31.6	+0.9
	0.1nm,0.3s,baz=49,slow=7.7,SNR=2.4						
TXAR	Lajitas Array	14.42	174	Pn	Pn	20 05 20.1	+3.9
	baz=351,slow=11,SNR=2.9						
TXAR				Pg	P	20 06 18.9	+56
	0.1nm,0.3s,baz=3.5,slow=16,SNR=4.0						

*IDC **31** 20:19:37.1±0.7, 0°26N×126°17E, h0^{km}, mb3.9/12, mb1 4.0/12, mb1mx3.8/56, mbtmp4.0/12, Error ellipse: s-maj=55.2km s-min=13.9km az=72.0*

*NEIC **31** 20:19:39.9±3.0, 0°26N×126°40E, h23^{km}±22^{km}, mb4.5/11, Error ellipse: s-maj=12.3km s-min=7.7km az=58.0*

*ISCJB **31** 20:19:40.6±0.3, 0°29N±0°04×126°27E±0°05, h44^{km}, mb4.5/23, Error ellipse: s-maj=7.1km s-min=5.8km az=147.1*

*DJA **31** 20:19:43.4±0.8, 0°N±4°×12°6E±°, h27^{km}±8^{km}, M4.2/9, mb4.8/1, mB5.0/1, MLv3.9/9, Mw(mB)4.3/1*

ISC 31 20:19:42.4±0.5, 0°27N±0°06×126°19E±0°05, h44^{km}, n51, σ1^{s}80/54, mb4.2/23, Northern Molucca Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TNTI	Ternate	1.28	67	P	Pn	20 20 05.6	+1.8
TNTI				S	Sn	20 20 24.8	+5.1
TNTI	Ternate	1.28	67	ePn	Pn	20 20 02.5	-1.2
LBMI	Labuha	1.59	124	P	Pn	20 20 08.8	+0.8
LBMI				S	Sn	20 20 31.7	+4.3
KMSI	Cibinong	2.23	278	P	Pn	20 20 17.2	+0.3
KMSI				S	Sn	20 20 44.8	+1.5
KMSI				Sg		20 20 56.5	
SANI	Sanana	2.31	185	P	Pn	20 20 19.1	+1.1
LUWI	Luwuk	3.66	249	P	Pn	20 20 37.2	+0.7
LUWI	Luwuk	3.66	249	ePn	Pn	20 20 39.2	+2.7
MRSI	Marisa	4.26	273	P	Pn	20 20 45.3	+0.6
APSI	Ampana	4.69	256	P	Pn	20 20 51.6	+0.9
KDI	Kendari	5.51	220	P	Pn	20 21 02.4	+0.5
FAKI	Fak Fak	6.83	118	ePn	Pn	20 21 15.8	-4.3
MYLDM	Lahad Datu	9.10	303	ePn	Pn	20 21 51.1	-0.1
SAUI	Saumlaki	9.65	148	ePn	Pn	20 21 53.1	-5.6
KSM	Kuching	15.93	274	ePn	P	20 23 26.1	-0.5
	12nm,0.7s						
WR1	Warramunga Arr	21.61	159	eP	P	20 24 28.3	-0.6
	8.4nm,0.8s						
WRA	Warramunga Arr	21.61	159	P	P	20 24 28.3	-0.6
	5.4nm,0.5s,baz=336,slow=11,SNR=24						
WB2	Warramunga Arr	21.62	159	eP	P	20 24 26.9	-1.9
	9.3nm,0.6s						
COEN	Coen	21.97	131	eP	P	20 24 29.8	-2.9
	37nm,1.4s						
AS31	Alice Springs	24.94	163	eP	P	20 25 01.2	-0.5
	2.9nm,1.1s						
ASAR	Alice Springs	24.94	163	P	P	20 25 03.0	+1.2
	2.7nm,0.7s,baz=346,slow=13,SNR=23						
ASAR				PcP	PcP	20 28 37.4	+0.8
	0.5nm,0.8s,baz=354,slow=2.8,SNR=4.4						
AS01	Alice Springs	24.95	163	eP	P	20 25 01.6	-0.2
BBOO	Buckleboo	34.19	165	eP	P	20 26 24.2	+0.4
	63nm,1.7s						
JHJ2	Mitsune	35.10	20	eP	P	20 26 30.0	-1.5
	2µm,1.7s						
STKA	Stephens Creek	35.14	157	P	P	20 26 32.0	+0.1
	1.7nm,0.7s,baz=332,slow=12,SNR=4.9						
STKA	Stephens Creek	35.14	157	eP	P	20 26 31.1	-0.8
	5.4nm,1.8s						
KS15	Wonju Array Si	37.02	2	eP	P	20 26 48.5	+0.6
KSAR	Wonju Array Be	37.02	2	P	P	20 26 48.4	+0.4
KSRS	Korea Array	37.04	2	P	P	20 26 48.4	+0.3
	1.0nm,0.6s,baz=181,slow=10,SNR=8.4						
USA0B	Ussuriysk Arra	44.05	6	eP	P	20 27 47.4	+1.6
	15nm,1.4s						
USRK	Ussuriysk Ar.	44.05	6	P	P	20 27 47.2	+1.4
	1.4nm,0.7s,baz=156,slow=8.1						
SONA0	Songino Array	50.41	343	eP	P	20 28 34.8	-0.8
SONM	Songino Array	50.41	343	P	P	20 28 34.8	-0.8
	0.4nm,0.6s,baz=163,slow=7.1,SNR=2.4						
MK01	Makanchi Array	60.09	327	eP	P	20 29 44.8	-0.3
MK31	Makanchi Array	60.11	327	eP	P	20 29 45.2	-0.1
MK32	Makanchi Array	60.11	327	eP	P	20 29 44.6	-0.7
MKAR	Makanchi Array	60.11	327	P	P	20 29 44.6	-0.7
	1.0nm,0.6s,baz=123,slow=7.9,SNR=12						
MKAR	Makanchi Array	60.11	327	eP	P	20 29 45.5	+0.2
	8.7nm,0.8s						
MAKZ	Makanchi	60.29	327	eP	P	20 29 46.2	-0.3
	8.4nm,1.7s						
BFZ	Birch Farm	60.97	138	eP	P	20 29 47.8	-3.5
	186nm,1.3s						
ZALV	Zalesovo Beam	63.43	334	P	P	20 30 10.3	+2.8
	0.7nm,0.5s,baz=150,slow=4.6,SNR=1.9						
ZAA1	Zalesovo Array	63.43	334	eP	P	20 30 10.3	+2.8
KURBB	Kurchatov Arra	64.37	329	P	P	20 30 14.9	+1.2
	1.6nm,0.7s,baz=130,slow=6.1,SNR=14						
KURK	Kurchatov	64.38	329	eP	P	20 30 13.9	+0.1
	3.3nm,0.8s						
BVAR	Borovoye Array	69.93	328	P	P	20 30 50.0	+1.0
	0.8nm,0.6s,baz=124,slow=7.2,SNR=4.4						
ABKAR	Akbulak array	74.49	322	eP	P	20 31 16.8	+0.5
SPIA	Saint Paul Isl	75.74	30	eP	P	20 31 21.6	-1.6
	1µm,1.9s						
AKTO	Aktyubinsk	76.04	322	P	P	20 31 26.5	+1.4
	1.9nm,0.7s,baz=96,slow=11,SNR=4.4						
VNDA	Vanda	80.08	173	P	P	20 31 48.0	+1.0
	0.5nm,0.8s,baz=288,slow=5.9,SNR=3.0						
VNDA	Vanda	80.08	173	eP	P	20 31 46.8	-0.3
TORD	Torodi Ar. Bea	123.41	286	PKP	PKPdf	20 38 39.1	+3.3
	0.1nm,0.6s,baz=96,slow=1.4						
TOA1	Torodi Ar. Sit	123.42	286	ePKPdf	PKPdf	20 38 39.1	+3.3

DJA 31 20:25:11.6±0.8, 8°S±4°×10°7E±°, h19^{km}±7^{km}, M4.2/15, MLv4.2/15, Jawa

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CMJI	Cimerak	1.11	76	P	Pn	20 25 31.0	-1.1
CMJI				S	Sb	20 25 44.8	-1.5
LEM	Lembang	1.24	12	P	Pn	20 25 34.3	+0.2
SKJI	Sukabumi	1.31	322	P	Pn	20 25 34.3	-0.6
SKJI				S	Sn	20 25 50.8	-1.0
DBJI	Dramaga	1.60	338	P	Pn	20 25 39.1	+0.1
KPJI	Karang Pucung	1.71	66	P	Pn	20 25 40.2	-0.2
CGJI	Cibinong	2.18	311	P	Pn	20 25 45.7	-1.2
SBJI	Serang	2.27	327	P	Pn	20 25 48.7	+0.5
UGM	Wanagama	3.14	88	P	Pn	20 25 59.3	-0.8
SMRI	Semarang	3.21	72	P	Pn	20 26 02.3	+1.2
WOJI	Wonogiri, Jawa	3.54	87	P	Pn	20 26 06.2	+0.7
PCJI	Pacitan	3.78	92	P	Pn	20 26 08.7	-0.2
KASI	Kota Agung	3.79	311	P	Pn	20 26 09.2	+0.1
PWJI	Pagerwojo	4.40	90	P	Pn	20 26 17.1	-0.3
MDSI	Maura Dua	4.75	318	P	Pn	20 26 23.9	+1.7

*ISCJB **31** 20:27:01.2±0.3, 5°74S±0°03×131°35E±0°04, h54^{km}, mb4.5/18, MS3.4/1, Error ellipse: s-maj=5.4km s-min=3.8km az=1.2*

*NEIC **31** 20:27:04.6±0.8, 5°69S×131°42E, h73^{km}±8^{km}, mb4.5/19, Error ellipse: s-maj=10.2km s-min=5.8km az=68.0*

*IDC **31** 20:27:04.5±3.2, 5°61S×131°37E, h65^{km}±26^{km}, mb3.8/7, mb1 4.0/9, mb1mx3.6/49, mbtmp4.2/9, ML4.8/3, MS3.4/1, Ms1 3.4/1, ms1mx2.4/47, Error ellipse: s-maj=45.3km s-min=19.1km az=88.0*

*DJA **31** 20:27:05.8±0.3, 6°S±3°×13°1E±°, h74^{km}±18^{km}, M4.8/12, mB5.5/3, mb4.7/6, MLv4.8/12, Mw(mB)5.0/3*

ISC 31 20:27:02.1±0.4, 5°77S±0°04×131°45E±0°05, h54^{km}, n67, σ2^{s}21/75, mb4.4/18, Banda Sea

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
BNDI	Bandanaira	1.98	309	P	Pn	20 27 34.9	+1.7
BNDI				S	Sn	20 27 56.7	-0.1
SAUI	Saumlaki	2.20	184	P	Pn	20 27 42.6	+6.3
FAKI	Fak Fak	2.94	16	P	Pn	20 27 49.8	+3.4
FAKI				S	Sn	20 28 21.2	+0.7
FAKI	Fak Fak	2.94	16	ePn	Pn	20 27 49.7	+3.4
FAKI				eSn	Sn	20 28 18.3	-2.2
MSAI	Masohi	3.48	314	P	Pn	20 27 55.1	+1.3
MSAI				S	Sn	20 28 29.6	-4.2
AAI	Ambon	3.85	302	P	Pn	20 28 01.2	+2.4
SIJI	Sorong	4.87	358	P	Pn	20 28 13.6	+0.8
	81nm,0.3s,baz=11,slow=14,SNR=686						
SIJI				S	Sn	20 29 02.5	-5.5
	29nm,0.3s,baz=185,slow=23,SNR=11						
SWI	Sorong	4.88	358	P	Pn	20 28 13.7	+0.8
RKPI	Ransiki, Papua	5.03	33	P	Pn	20 28 18.3	+3.3
RKPI				S	Sn	20 29 13.8	+1.9
SRPI	Serui, Papua	6.15	51	P	Pn	20 28 34.3	+3.9
LBMI	Labuha	6.45	322	P	Pn	20 28 34.8	+0.4
MTN	Manton Dam	7.04	183	ePn	Pn	20 28 47.6	+5.1
MTN				eSn	Sn	20 30 02.7	+1.5
TNTI	Ternate	7.67	328	ePn	Pn	20 28 52.1	+0.8
SOEI	Soe	8.15	240	P	Pn	20 29 01.6	+3.7
	49nm,0.7s						
SOEI	Soe	8.15	240	ePn	Pn	20 29 01.5	+3.6
SOEI				eSn	Sn	20 30 28.2	-0.5
BATI	Baumata	8.88	240	P	Pn	20 29 10.7	+2.8
	7.0nm,0.3s,baz=107,slow=1.9,SNR=24						
BATI				S	Sn	20 30 44.9	-1.8
	5.6nm,0.3s,baz=270,slow=20,SNR=4.3						
BATI	Baumata	8.88	240	P	Pn	20 29 10.8	+2.9
COEN	Coen	14.12	126	ePn	P	20 30 23.6	-1.9
COEN				eSn	Sn	20 32 51.8	-2.9
WR1	Warramunga Arr	14.37	169	ePn	Pn	20 30 23.2	+0.6
WR1				eSn	Sn	20 32 56.0	-4.6
WRA	Warramunga Arr	14.37	169	P	Pn	20 30 23.2	+0.6
	2.9nm,0.3s,baz=351,slow=13,SNR=78						
WRA				S	Sn	20 32 56.0	-4.6
	2.2nm,0.3s,baz=354,slow=21,SNR=6.6						
WB2	Warramunga Arr	14.37	169	ePn	Pn	20 30 23.9	+1.2
WB2				eSn	Sn	20 32 55.5	-5.2
MYLDM	Lahad Datu	16.90	310	ePn	Pn	20 30 53.1	-1.9
	69nm,1.4s						
JAGI	Jajag, Banyuwa	17.37	260	ePn	Pn	20 30 57.4	-3.6
	32nm,1.1s						
AS31	Alice Springs	17.95	173	eP	Pn	20 31 10.5	+2.5
	5.7nm,0.7s						
ASAR	Alice Springs	17.95	173	P	Pn	20 31 10.8	+2.8
	1.9nm,0.3s,baz=343,slow=10,SNR=84						
ASAR				S	Sn	20 34 17.4	-10
	0.0nm,0.3s,baz=355,slow=29,SNR=2.9						
AS01	Alice Springs	17.95	173	eP	Pn	20 31 10.1	+2.1
MBWA	Marble Bar	19.06	216	eP	P	20 31 21.6	+1.5
	42nm,1.8s						
KKM	Kota Kinabalu	19.21	307	eP	P	20 31 22.4	+0.5
	79nm,1.5s						
SBUM	Sibu	20.87	293	eP	P	20 31 41.6	+1.8
	10nm,1.8s						
UGM	Wanagama	20.89	263	eP	P	20 31 42.1	+2.0
	290nm,1.6s						
EIDS	Eidsvold	27.08	138	eP	P	20 32 41.7	+1.9
	37nm,1.7s						
BBOO	Buckleboo	27.25	172	eP	P	20 32 41.0	-0.2
	52nm,1.7s						
STKA	Stephens Creek	27.65	161	P	P	20 32 40.4	-4.5
	1.1nm,0.4s,baz=332,slow=6.9,SNR=9.4						
STKA	Stephens Creek	27.65	161	eP	P	20 32 40.4	-4.5
	6.3nm,1.8s						
MYKOM	Kota Tinggi	28.57	284	eP	P	20 32 54.0	+0.8
	14nm,1.1s						
NWAO	Narrogin (SRO)	30.09	204	eP	P	20 33 07.6	+1.1
	122nm,1.8s						
JHJ	Hachijo jima 2	39.48	11	LR	LR	20 47 28.3	
	comp=Z,51nm,20.2s,baz=276,slow=31						
CM01	Chiang Mai Arr	40.06	308	eP	P	20 34 31.6	-0.8
CM31	Chiang Mai Arr	40.09	308	eP	P	20 34 30.5	-2.2
CMAR	Chiang Mai Arr	40.09	308	P	P	20 34 32.2	-0.4
	1.4nm,0.5s,baz=136,slow=7.3,SNR=11						
CHTO	Chiang Mai	40.29	308	eP	P	20 34 33.0	-1.3
	18nm,1.8s						
LSA	Lhasa	52.34	315	eP	P	20 36 09.4	+0.1
	2.5nm,0.8s						
SONA0	Songino Array	57.76	340	eP	P	20 36 46.8	-0.9
SONM	Songino Array	57.76	340	P	P	20 36 46.8	-0.9
	0.5nm,0.5s,baz=156,slow=7.9,SNR=4.0						
SONA1	Songino Array	57.77	340	eP	P	20 36 48.2	+0.4
CASY	Casey	62.14	189	eP	P	20 37 20.0	+2.8
	15nm,1.8s						
MK01	Makanchi Array	67.99	326	eP	P	20 37 56.1	+0.5
MK31	Makanchi Array	68.01	326	eP	P	20 37 56.5	+0.7
MK32	Makanchi Array	68.01	326	eP	P	20 37 56.2	+0.5
MKAR	Makanchi Array	68.01	326	P	P	20 37 56.2	+0.5
	2.2nm,0.5s,baz=121,slow=8.1,SNR=29						
MKAR	Makanchi Array	68.01	326	eP	P	20 37 55.9	+0.1
	17nm,0.7s						
MAKZ	Makanchi	68.19	326	eP	P	20 37 57.1	+0.3
	2.1nm,0.6s						
ZAA0	Zalesovo Array	71.14	333	eP	P	20 38 14.4	-0.4
	8.3nm,1.8s						
ZALV	Zalesovo Beam	71.14	333	P	P	20 38 14.7	-0.1
	1.0nm,0.5s,baz=113,slow=5.1,SNR=3.5						
ZALV	Zalesovo Beam	71.14	333	eP	P	20 38 14.2	-0.6
ZAA1	Zalesovo Array	71.14	333	eP	P	20 38 14.7	-0.2
KURBB	Kurchatov Arra	72.23	328	P	P	20 38 21.7	+0.3
	0.9nm,0.5s,baz=126,slow=4.8,SNR=9.7						
KURK	Kurchatov	72.24	328	eP	P	20 38 21.7	+0.2
KK31	Karatay Array	73.38	318	eP	P	20 38 28.8	+0.3
KKAR	Karatay Array	73.38	318	eP	P	20 38 28.8	+0.3
HON	Honolulu	74.17	66	eP	P	20 38 34.4	+0.9
	149nm,0.9s						
MAW	Mawson	76.62	202	P	P	20 38 48.6	+2.0
	0.4nm,0.4s,baz=79,slow=4.9,SNR=4.6						
MAW	Mawson	76.62	202	eP	P	20 38 48.5	+1.9
	3.5nm,1.8s						
WSAR	Wadi Sarin	76.64	295	P	P	20 38 48.1	+0.5
	4.0nm,0.7s,baz=121,slow=12,SNR=3.2						
RSO	Redoubt South	88.04	29	eP	P	20 39 43.9	-2.7
TORD	Torodi Ar. Bea	129.97	282	PKP	PKPdf	20 46 08.2	+1.3
	0.8nm,0.8s,baz=87,slow=1.7						
TOA1	Torodi Ar. Sit	129.98	282	ePKPdf	PKPdf	20 46 08.2	+1.3

*NEIC **31** 20:40:13.8±0.0, 37°21S×176°63E, h162^{km}, ML4.0(WEL), After WEL.*

WEL 31 20:40:12.8, 37°S±3°×17°7E±°, h189^{km}±5^{km}, North Island

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OPRZ	Ohinepanea	0.53	197	P	Pn	20 40 38.5	-0.2
TGRZ	Tauranga	0.55	225	P	Pn	20 40 39.0	+0.1
MARZ	Manawahe	0.65	186	P	Pn	20 40 39.5	+0.2
OMRZ	Omania	0.82	202	P	Pn	20 40 40.8	+0.4
TARZ	Mount Tarawera	0.91	192	P	Pn	20 40 42.2	+1.2
HAZ	Te Kaha	0.92	117	P	Pn	20 40 40.3	-0.5
HAZ				S	Sn	20 41 02.4	-0.1
URZ	Urewera	0.96	163	ePn	Pn	20 40 40.8	-0.4
URZ				eSn	Sn	20 41 02.1	-1.2
URZ	Urewera	0.96	163	P	Pn	20 40 40.7	-0.4
URZ				S	Sn	20 41 02.1	-1.2
RUGZ	Raukumara Rang	0.96	131	P	Pn	20 40 40.2	-1.1
RUGZ				S	Sn	20 41 01.9	-1.6
KUZ	Kuaotunu	1.02	305	P	Pn	20 40 41.3	-0.3
MUGZ	Murupara	1.13	179	P	Pn	20 40 42.7	+0.2
MWZ	Matawai	1.16	148	ePn	Pn	20 40 42.3	-0.4
MWZ				eSn	Sn	20 41 04.3	-1.8
MWZ				e		20 41 14.8	
MWZ	Matawai	1.16	148	P	Pn	20 40 42.3	-0.4

MWZ				S	Sn	20 41 04.6	-1.4
PKGZ	**Pakihiroa**	**1.18**	**118**	P	Pn	20 40 43.0	+0.1
MXZ	**Matakaoa Point**	**1.25**	**101**	ePn	Pn	20 40 42.9	-0.5
MXZ				eSn	Sn	20 41 10.3	+3.2
MXZ	**Matakaoa Point**	**1.25**	**101**	P	Pn	20 40 43.2	-0.2
MXZ				S	Sn	20 41 06.3	-0.8
RAGZ	**Rawiri**	**1.27**	**156**	P	Pn	20 40 43.6	0.0
TWGZ	**Tauwhareparae**	**1.28**	**131**	ePn	Pn	20 40 44.4	+0.7
TWGZ	**Tauwhareparae**	**1.28**	**131**	P	Pn	20 40 44.6	+0.9
RTZ	**Ruatahuna**	**1.28**	**172**	P	Pn	20 40 43.8	+0.1
RTZ				S	Sn	20 41 06.7	-1.2
MKAZ	**Moumakai**	**1.29**	**280**	P	Pn	20 40 44.2	+0.5
TLZ	**Tolley Road**	**1.38**	**224**	P	Pn	20 40 45.4	+0.8
TKGZ	**Te Karaka**	**1.40**	**142**	P	Pn	20 40 44.4	-0.2
PUZ	**Puketiti**	**1.40**	**122**	P	Pn	20 40 44.5	-0.2
WMGZ	**Waiomatatini S**	**1.40**	**110**	P	Pn	20 40 44.7	+0.1
WMGZ				S	Sn	20 41 08.6	-0.8
WIAZ	**Waiheke Island**	**1.41**	**292**	P	Pn	20 40 45.0	+0.3
GRZ	**Great Barrier**	**1.51**	**316**	P	Pn	20 40 45.5	-0.1
MTHZ	**Maungataniwha**	**1.51**	**177**	P	Pn	20 40 45.8	+0.1
ETAZ	**East Tamaki Re**	**1.51**	**284**	P	Pn	20 40 46.4	+0.7
SNGZ	**Shannon Statio**	**1.51**	**162**	P	Pn	20 40 46.0	+0.3
MRHZ	**Matea Rd**	**1.51**	**190**	P	Pn	20 40 46.3	+0.6
RAHZ	**Arahi**	**1.59**	**171**	P	Pn	20 40 47.0	+0.5
CNGZ	**Carnagh Statio**	**1.62**	**135**	P	Pn	20 40 47.7	+1.0
AWAZ	**Awhitu Peninsu**	**1.71**	**279**	P	Pn	20 40 48.1	+0.5
NMHZ	**Naumai**	**1.75**	**179**	P	Pn	20 40 49.0	+0.9
WHHZ	**Waihua**	**1.77**	**168**	P	Pn	20 40 48.8	+0.6
WTAZ	**Waiatarua**	**1.79**	**283**	P	Pn	20 40 49.1	+0.7
PRGZ	**Paritu Road**	**1.81**	**151**	P	Pn	20 40 48.8	+0.2
KNZ	**Kokohu**	**1.83**	**157**	ePn	Pn	20 40 48.8	+0.1
KNZ				eSn	Sn	20 41 16.7	0.0
KNZ	**Kokohu**	**1.83**	**157**	P	Pn	20 40 48.8	+0.1
BKZ	**Black Stump Fm**	**1.83**	**186**	ePn	Pn	20 40 48.5	-0.3
BKZ				eSn	Sn	20 41 15.9	-1.1
BKZ				e		20 41 26.0	
BKZ	**Black Stump Fm**	**1.83**	**186**	P	Pn	20 40 48.6	-0.3
HIZ	**Hauiti**	**1.90**	**232**	ePn	Pn	20 40 50.3	+0.8
ARHZ	**Aropaoanui**	**1.93**	**174**	P	Pn	20 40 50.2	+0.5
OTVZ	**Oturere**	**2.01**	**205**	ePn	Pn	20 40 51.6	+0.8
MHGZ	**Mahia Peninsul**	**2.02**	**154**	P	Pn	20 40 51.2	+0.5
NGZ	**Ngauruhoe**	**2.04**	**206**	P	Pn	20 40 52.3	+1.2
KWHZ	**Kaweka Forest**	**2.10**	**187**	P	Pn	20 40 51.7	+0.1
MCHZ	**McNeill Hill**	**2.10**	**181**	P	Pn	20 40 52.2	+0.6
TUVZ	**Tukino**	**2.11**	**204**	ePn	Pn	20 40 52.3	+0.5
TUVZ	**Tukino**	**2.11**	**204**	P	Pn	20 40 52.3	+0.5
FWVZ	**Far West T-bar**	**2.13**	**206**	ePn	Pn	20 40 52.8	+0.6
FWVZ	**Far West T-bar**	**2.13**	**206**	P	Pn	20 40 52.8	+0.6
WHVZ	**Whangaehu Hut**	**2.14**	**205**	P	Pn	20 40 52.7	+0.4
WNVZ	**Wahianoa**	**2.18**	**204**	ePn	Pn	20 40 52.9	+0.3
MOVZ	**Moawhango**	**2.21**	**201**	ePn	Pn	20 40 52.5	-0.3
MOVZ	**Moawhango**	**2.21**	**201**	P	Pn	20 40 52.5	-0.3
BHHZ	**Black Hill Sta**	**2.21**	**194**	P	Pn	20 40 52.5	-0.3
MTVZ	**Mangateitei**	**2.27**	**206**	ePn	Pn	20 40 54.0	+0.5
MTVZ	**Mangateitei**	**2.27**	**206**	P	Pn	20 40 54.1	+0.5
KRHZ	**Kereru**	**2.32**	**187**	P	Pn	20 40 53.6	-0.4
CKHZ	**Cape Kidnapper**	**2.33**	**174**	P	Pn	20 40 54.3	+0.2
WCZ	**Waipu Caves**	**2.39**	**305**	P	Pn	20 40 55.2	+0.3
KAHZ	**Kahuranaki**	**2.45**	**178**	P	Pn	20 40 55.6	+0.1
PNHZ	**Pukenui**	**2.60**	**189**	P	Pn	20 40 56.8	-0.5
PXZ	**Pawanui**	**2.69**	**178**	ePn	Pn	20 40 57.7	-0.4
PXZ				eSn	Sn	20 41 35.6	+1.9
PXZ	**Pawanui**	**2.69**	**178**	P	Pn	20 40 57.7	-0.4
WPHZ	**Waipukurau**	**2.73**	**185**	P	Pn	20 40 58.1	-0.6
WAZ	**Wanganui**	**2.78**	**209**	P	Pn	20 41 00.2	+0.9
TSZ	**Takapari Road**	**2.78**	**193**	P	Pn	20 40 58.8	-0.5
PRHZ	**Porangahau**	**2.92**	**182**	P	Pn	20 41 00.4	-0.6
DVHZ	**Dannevirke**	**2.99**	**189**	P	Pn	20 41 00.6	-1.1
ANWZ	**Angora Road**	**3.12**	**184**	P	Pn	20 41 02.6	-0.6
POWZ	**Post Office Ro**	**3.14**	**194**	P	Pn	20 41 02.8	-0.8
OUZ	**Omahuta**	**3.32**	**309**	ePn	Pn	20 41 05.1	-0.6
BFZ	**Birch Farm**	**3.36**	**187**	ePn	Pn	20 41 04.8	-1.3
BFZ				eSn	Sn	20 41 40.2	-7.9
BFZ	**Birch Farm**	**3.36**	**187**	P	Pn	20 41 05.0	-1.2
MRZ	**Mangatainoka R**	**3.44**	**195**	ePn	Pn	20 41 05.7	-1.5
MRZ	**Mangatainoka R**	**3.44**	**195**	P	Pn	20 41 05.7	-1.5
TIWZ	**Tintock**	**3.50**	**191**	P	Pn	20 41 06.7	-1.2
HOWZ	**Holdsworth Sta**	**3.68**	**195**	P	Pn	20 41 08.5	-1.6
OGWZ	**Otaki Gorge**	**3.68**	**199**	P	Pn	20 41 09.0	-1.2
KIW	**Kapiti Island**	**3.79**	**202**	P	Pn	20 41 09.8	-1.8
CAW	**Cannon Point**	**3.98**	**199**	eSn	Sn	20 42 01.1	-0.9
CAW	**Cannon Point**	**3.98**	**199**	P	Pn	20 41 11.9	-2.0
TRWZ	**Traveller**	**4.13**	**191**	ePn	Pn	20 41 13.9	-2.0
TRWZ	**Traveller**	**4.13**	**191**	P	Pn	20 41 13.9	-2.0
PAWZ	**Paruwai Farm**	**4.16**	**194**	ePn	Pn	20 41 13.9	-2.4
PAWZ				eSn	Sn	20 42 04.7	-1.4
PAWZ	**Paruwai Farm**	**4.16**	**194**	P	Pn	20 41 13.8	-2.4
MSWZ	**Moikau Station**	**4.23**	**196**	P	Pn	20 41 14.7	-2.4
SNZO	**South Karori**	**4.27**	**201**	ePn	Pn	20 41 14.5	-3.0
SNZO				eSn	Sn	20 42 03.4	-5.0
BHW	**Baring Head**	**4.32**	**199**	P	Pn	20 41 15.9	-2.2
TCW	**Tory Channel**	**4.32**	**206**	ePn	Pn	20 41 16.4	-1.8
TCW				eSn	Sn	20 42 11.3	+1.8
TCW	**Tory Channel**	**4.32**	**206**	P	Pn	20 41 16.1	-2.0
TUWZ	**Tuamarina**	**4.63**	**207**	P	Pn	20 41 20.1	-2.0
THZ	**Tophouse**	**5.32**	**213**	ePn	Pn	20 41 28.9	-2.2
THZ				eSn	Sn	20 42 24.1	-8.7
THZ	**Tophouse**	**5.32**	**213**	P	Pn	20 41 29.9	-1.3
KHZ	**Kahutara**	**5.64**	**205**	ePn	Pn	20 41 30.7	-4.4
KHZ				eSn	Sn	20 42 35.1	-5.0
LTZ	**Lake Taylor**	**6.43**	**211**	ePn	Pn	20 41 40.2	-5.2
OXZ	**Oxford**	**6.98**	**210**	ePn	Pn	20 41 47.1	-5.5
OXZ				eSn	Sn	20 43 03.4	-8.2
MQZ	**McQueen's Vall**	**7.08**	**205**	ePn	Pn	20 41 48.3	-5.6
MQZ				eSn	Sn	20 43 02.1	-12
FOZ	**Fox Glacier**	**8.13**	**218**	ePn	Pn	20 42 01.9	-5.8
LBZ	**Lake Benmore**	**8.62**	**213**	ePn	Pn	20 42 08.9	-5.1
ODZ	**Otahua Downs**	**8.96**	**209**	ePn	Pn	20 42 16.6	-1.9

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*IDC **31** 20:40:23.8±2.3, 46°.28N×154°.44E, h0^{km}, mb3.9/9, mb1 4.0/11, mb1mx3.6/76, mbtmp3.9/11, Error ellipse: s-maj=59.1km s-min=22.8km az=173.0*
*ISCJB **31** 20:40:25.4±0.8, 46°.4N±0°.1×154°.4E±0°.1, h20^{km}, mb4.4/12, Error ellipse: s-maj=18.6km s-min=7.7km az=147.5*
*NEIC **31** 20:40:28.8±0.8, 46°.36N×154°.47E, h32^{km}±5^{km}, mb4.9/2, Error ellipse: s-maj=15.1km s-min=6.1km az=151.0*
ISC 31 20:40:27.6±1.0**, 46°.4N**±0°.2×**154°.4E**±0°.1**, h20**^{km}**, n33,** σ**1^{s}.45**/32**, mb4.2**/12**, East of Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PEA0B	**Petropavlovsk-**	**7.02**	**16**	ePn	**Pn**	**20 42 09.2**	**-0.1**
PETK	**Petropavlovsk-**	**7.02**	**16**	Pn	**Pn**	**20 42 09.9**	**+0.7**
	baz=178,slow=13						
PETK	**Petropavlovsk-**	**7.02**	**16**	ePn	**Pn**	**20 42 11.1**	**+1.8**
PEA1	**Petropavlovsk-**	**7.03**	**16**	ePn	**Pn**	**20 42 09.9**	**+0.6**
ASAJ	**Asahikawa**	**8.66**	**259**	ePn	**Pn**	**20 42 30.8**	**-0.9**
ERM	**Erimo**	**9.21**	**245**	ePn	**Pn**	**20 42 40.5**	**+1.3**
USRK	**Ussuriysk Ar.**	**15.93**	**270**	Pn	**Pn**	**20 44 10.3**	**-0.1**
	baz=68,slow=12						
ATKA	**Atka Island**	**21.15**	**63**	eP	**P**	**20 45 10.5**	**-0.6**
	100nm,1.3s						
KS01	**Wonju Array Si**	**21.58**	**255**	eP	**P**	**20 45 16.2**	**+0.3**
KS15	**Wonju Array Si**	**21.61**	**255**	eP	**P**	**20 45 16.2**	**+0.1**
ILAR	**Eielson Array**	**36.24**	**38**	P	**P**	**20 47 29.5**	**+0.6**
	0.5nm,0.5s,baz=247,slow=8.0,SNR=5.9						
ILB	**Eielson Array**	**36.24**	**38**	eP	**P**	**20 47 31.1**	**+2.2**
ZAA1	**Zalesovo Array**	**43.53**	**306**	eP	**P**	**20 48 28.9**	**-0.6**
ZALV	**Zalesovo Beam**	**43.54**	**306**	P	**P**	**20 48 28.9**	**-0.6**
	0.6nm,0.4s,baz=68,slow=6.0,SNR=2.7						
MK31	**Makanchi Array**	**47.90**	**298**	eP	**P**	**20 49 04.0**	**-0.2**
MK32	**Makanchi Array**	**47.90**	**298**	eP	**P**	**20 49 04.3**	**+0.1**
MKAR	**Makanchi Array**	**47.90**	**298**	P	**P**	**20 49 04.3**	**+0.1**
	1.8nm,0.8s,baz=67,slow=7.4,SNR=16						
MK01	**Makanchi Array**	**47.90**	**298**	eP	**P**	**20 49 04.3**	**+0.1**
KURK	**Kurchatov**	**48.30**	**304**	eP	**P**	**20 49 07.1**	**0.0**
KURBB	**Kurchatov Arra**	**48.39**	**304**	P	**P**	**20 49 07.1**	**-0.8**
	2.5nm,0.8s,baz=69,slow=8.2,SNR=15						
BVAR	**Borovoye Array**	**51.77**	**310**	P	**P**	**20 49 34.7**	**+1.2**
	0.8nm,0.5s,baz=60,slow=6.6,SNR=5.2						
ARU	**Arti**	**55.87**	**318**	P	**P**	**20 50 03.2**	**-0.1**
	3.7nm,0.5s,baz=64,slow=3.6,SNR=9.1						
ARU	**Arti**	**55.87**	**318**	eP	**P**	**20 50 03.0**	**-0.4**
	4.1nm,0.5s						
ABKAR	**Akbulak array**	**59.33**	**311**	eP	**P**	**20 50 27.8**	**0.0**
FIA0	**FINESS Array S**	**64.72**	**335**	eP	**P**	**20 51 03.7**	**-0.2**
FINES	**FINESS Array B**	**64.72**	**335**	P	**P**	**20 51 03.7**	**-0.2**
	1.4nm,0.9s,baz=25,slow=5.7,SNR=7.6						
HFS	**Hagfors**	**69.08**	**340**	P	**P**	**20 51 31.5**	**-0.1**
	1.1nm,0.5s,baz=38,slow=5.4,SNR=6.4						
LTX	**Lajitas**	**76.86**	**61**	eP	**P**	**20 52 18.0**	**-0.3**
TXAR	**Lajitas Array**	**76.86**	**61**	P	**P**	**20 52 18.0**	**-0.3**
	0.4nm,0.6s,baz=293,slow=4.4,SNR=6.2						
AAM	**Ann Arbor**	**77.71**	**40**	eP	**P**	**20 52 19.0**	**-3.8**
	70nm,0.3s						
X43A	**Marvell**	**80.29**	**50**	eP	**P**	**20 52 40.7**	**+3.7**
	88nm,0.6s						
CPCT	**Cooper Cave**	**82.78**	**45**	epP	pP	20 52 59.0	+2.2
Z50A	**Ashland**	**83.84**	**47**	eSKSac	**SKSac**	**21 03 13.4**	**-4.2**

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*ISCJB **31** 20:45:35.5±0.4, 49°.85N±0°.02×18°.46E±0°.03, h0^{km}, Error ellipse: s-maj=3.5km s-min=2.2km az=16.6*
*IPEC **31** 20:45:36.8±0.2, 49°.84N×18°.58E, h0^{km}±3^{km}, ML2.1/4, Error ellipse: s-maj=1.4km s-min=1.1km az=156.0*
*CSEM **31** 20:45:36.6±0.2, 49°.85N×18°.49E, h2^{km}, ML2.7/15, Error ellipse: s-maj=5.1km s-min=2.8km az=11.0*
*VIE **31** 20:45:37.0±1.9, 49°.77N×18°.51E, h0^{km}, mb2.3/5, ml2.3/5, Error ellipse: s-maj=14.3km s-min=12.6km az=80.0 20 km ESE of Ostrava Suspected Mining induced.*
*PRU **31** 20:45:37.8, 49°.82N×18°.49E, h0^{km}*
ISC 31 20:45:35.8±0.7**, 49°.84N**±0°.02×**18°.55E**±0°.02**, h0**^{km}**, n51,** σ**0^{s}.84**/103**, 3D, Czech and Slovak Republics**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	**Ostrava-Krasne**	**0.26**	**269**	⇓ePG	**Pb**	**20 45 42.7**	**-0.7**
OKC				eSG	**Sg**	**20 45 46.3**	**+2.1**
	comp=Z,120nm,0.5s						
OKC	**Ostrava-Krasne**	**0.26**	**269**	Pg	**Pb**	**20 45 42.7**	**-0.7**
OKC				Sg	**Sg**	**20 45 46.3**	**+2.1**
	120nm,0.5s						
MORC	**Moravsky Berou**	**0.66**	**265**	ePg	**Pb**	**20 45 49.8**	**-0.4**
MORC				eSg	**Sg**	**20 45 57.8**	**+0.9**
	57nm,0.5s						
MORC	**Moravsky Berou**	**0.66**	**265**	ePG	**Pb**	**20 45 49.8**	**-0.4**
MORC				eSG	**Sg**	**20 45 57.9**	**+1.0**
MORC	**Moravsky Berou**	**0.66**	**265**	ePg	**Pb**	**20 45 49.8**	**-0.4**
	baz=84						
MORC				eSg	**Sg**	**20 45 57.8**	**+0.9**
	57nm,0.5s,baz=84						
OJC	**Ojcow**	**0.89**	**64**	ePg	**Pb**	**20 45 53.7**	**-0.4**
OJC				eSg	**Sb**	**20 46 06.8**	**+0.3**
OJC	**Ojcow**	**0.89**	**64**	ePg	**Pb**	**20 45 53.7**	**-0.4**
OJC				eSg	**Sb**	**20 46 06.8**	**+0.3**
LANS	**Liptovska Anna**	**0.92**	**139**	ePG	**Pb**	**20 45 54.2**	**-0.4**
LANS				eSG	**Sb**	**20 46 06.6**	**-0.7**
LANS	**Liptovska Anna**	**0.92**	**139**	ePg	**Pb**	**20 45 54.2**	**-0.4**
LANS				eSg	**Sb**	**20 46 06.6**	**-0.7**
JAVC	**Velka Javorina**	**1.14**	**211**	ePg	**Pn**	**20 45 58.9**	**-0.2**
JAVC				eSg	**Sg**	**20 46 12.8**	**+0.4**
	24nm,0.6s						
JAVC	**Velka Javorina**	**1.14**	**211**	ePG	**Pn**	**20 45 58.9**	**-0.2**
JAVC				eSG	**Sg**	**20 46 12.8**	**+0.4**
JAVC	**Velka Javorina**	**1.14**	**211**	ePg	**Pn**	**20 45 58.9**	**-0.2**
	baz=31						
JAVC				eSg	**Sg**	**20 46 12.8**	**+0.4**
	24nm,0.6s,baz=31						
KRLC	**Kraliky**	**1.17**	**282**	ePG	**Pg**	**20 45 58.2**	**0.0**
KRLC				eSG	**Sb**	**20 46 14.4**	**-0.2**
	comp=Z,7.9nm,0.3s						
KRLC	**Kraliky**	**1.17**	**282**	Pg	**Pg**	**20 45 58.2**	**0.0**
KRLC				Sg	**Sb**	**20 46 14.4**	**-0.2**
	7.9nm,0.3s						
NIE	**Niedzica**	**1.21**	**110**	ePg	**Pn**	**20 45 59.9**	**-0.2**
NIE				eSg	**Sn**	**20 46 18.0**	**+0.8**
NIE	**Niedzica**	**1.21**	**110**	ePg	**Pn**	**20 45 59.9**	**-0.2**
NIE				eSg	**Sn**	**20 46 18.0**	**+0.8**
VYHS	**Vyhne**	**1.36**	**172**	ePN	**Pb**	**20 46 02.0**	**-0.2**
VYHS				eSN	**Sn**	**20 46 20.3**	**-0.6**
VYHS				eLG	Lg	20 46 24.8	
VYHS	**Vyhne**	**1.36**	**172**	ePn	**Pb**	**20 46 02.0**	**-0.2**
VYHS				eSn	**Sn**	**20 46 20.3**	**-0.6**
VRAC	**Vranov**	**1.38**	**248**	ePg	**Pb**	**20 46 02.7**	**+0.2**
VRAC				eSg	**Sg**	**20 46 20.4**	**+0.2**
	24nm,0.3s						
VRAC	**Vranov**	**1.38**	**248**	ePG	**Pb**	**20 46 02.7**	**+0.2**
VRAC				eSG	**Sg**	**20 46 20.5**	**+0.2**
VRAC	**Vranov**	**1.38**	**248**	ePg	**Pb**	**20 46 02.7**	**+0.2**
	baz=67						
VRAC				eSg	**Sg**	**20 46 20.4**	**+0.2**
	24nm,0.3s,baz=67						
SMOL	**Smolenice**	**1.52**	**209**	ePN	**Pb**	**20 46 04.7**	**-0.2**
SMOL				eSN	**Sg**	**20 46 24.2**	**-0.4**
SMOL	**Smolenice**	**1.52**	**209**	ePn	**Pb**	**20 46 04.7**	**-0.2**
SMOL				eSn	**Sg**	**20 46 24.2**	**-0.4**
DPC	**Dobruska-Polom**	**1.52**	**290**	ePG	**Pb**	**20 46 05.0**	**+0.1**
DPC				eSG	**Sn**	**20 46 25.6**	**+0.7**
	comp=Z,15nm,0.4s						
DPC	**Dobruska-Polom**	**1.52**	**290**	Pg	**Pb**	**20 46 05.0**	**+0.1**
DPC				Sg	**Sn**	**20 46 25.6**	**+0.7**
	15nm,0.4s						
KRUC	**Moravsky**	**1.61**	**242**	ePg	**Pb**	**20 46 06.1**	**-0.3**
KRUC				eSg	**Sg**	**20 46 27.6**	**+0.1**
	10nm,0.2s						
KRUC	**Moravsky**	**1.61**	**242**	ePG	**Pb**	**20 46 06.1**	**-0.3**
KRUC				eSG	**Sg**	**20 46 27.7**	**+0.2**
KRUC	**Moravsky**	**1.61**	**242**	ePg	**Pb**	**20 46 06.1**	**-0.3**
	baz=60						
KRUC				eSg	**Sg**	**20 46 27.6**	**+0.1**
	10nm,0.2s,baz=60						
MODS	**Modra-Piesok**	**1.69**	**210**	ePN	**Pb**	**20 46 07.4**	**-0.4**
MODS				eSN	**Sn**	**20 46 28.9**	**-0.1**
MODS				eLG	Lg	20 46 31.2	
MODS	**Modra-Piesok**	**1.69**	**210**	ePn	**Pb**	**20 46 07.4**	**-0.4**
MODS				eSn	**Sn**	**20 46 28.9**	**-0.1**
KSP	**Ksiaz**	**1.76**	**306**	ePg	**Pg**	**20 46 10.0**	**+0.5**
KSP				eSg	**Sg**	**20 46 33.5**	**+1.2**
UPC	**Upice**	**1.76**	**293**	⇓ePG	**Pg**	**20 46 09.4**	**-0.2**
UPC				eSG	**Sg**	**20 46 32.8**	**+0.4**
	comp=Z,13nm,0.4s						
UPC	**Upice**	**1.76**	**293**	Pg	**Pg**	**20 46 09.4**	**-0.2**
UPC				Sg	**Sg**	**20 46 32.8**	**+0.4**
	13nm,0.4s						
CRVS	**Cervenica-Dubn**	**2.12**	**115**	ePN	**Pg**	**20 46 16.2**	**-0.2**
CRVS				eSN	**Sb**	**20 46 42.4**	**+0.4**
CRVS				eLG	Lg	20 46 50.9	
CRVS	**Cervenica-Dubn**	**2.12**	**115**	ePn	**Pg**	**20 46 16.2**	**-0.2**
CRVS				eSn	**Sb**	**20 46 42.4**	**+0.4**
GOPC	**GO Pecny, Ondr**	**2.44**	**273**	ePN	**Pn**	**20 46 16.7**	**-0.2**
GOPC				ePG	**Pg**	**20 46 21.9**	**-0.6**
GOPC				eSN	**Sn**	**20 46 46.7**	**-0.7**
GOPC				eSG	**Sg**	**20 46 52.9**	**-1.1**
	comp=Z,9.1nm,0.5s						
GOPC	**GO Pecny, Ondr**	**2.44**	**273**	Pn	**Pn**	**20 46 16.7**	**-0.2**
PRU	**Pruhonice**	**2.60**	**275**	⇓ePG	**Pb**	**20 46 24.0**	**+0.8**
PRU				eSN	**Sn**	**20 46 51.0**	**-0.3**
PRU				eSG	**Sg**	**20 46 57.7**	**-1.5**
	comp=Z,5.4nm,0.4s						
PRU	**Pruhonice**	**2.60**	**275**	Pg	**Pb**	**20 46 24.0**	**+0.8**
PRU				Sn	**Sn**	**20 46 51.0**	**-0.3**
PRU				Sg	**Sg**	**20 46 57.7**	**-1.5**
	5.4nm,0.4s						
CONA	**Conrad Observa**	**2.61**	**224**	Pn	**Pn**	**20 46 18.6**	**-0.7**
	1.0nm,0.4s						
CONA				Pg	**Pg**	**20 46 27.1**	**+1.3**
	0.9nm,0.2s						
CONA				Sn	**Sn**	**20 46 51.6**	**-0.2**
	5.7nm,0.6s						
CONA	**Conrad Observa**	**2.61**	**224**	Pn	**Pn**	**20 46 18.6**	**-0.7**
	1.0nm,0.4s						
BRG	**Berggiesshubel**	**3.13**	**291**	PG	**Pg**	**20 46 34.2**	**-1.5**
BRG				SG	**Sg**	**20 47 14.8**	**-1.4**
	5.6nm,0.6s						
KHC	**Kasperske Hory**	**3.32**	**259**	ePN	**Pn**	**20 46 30.3**	**+1.3**
KHC				ePG	**Pg**	**20 46 38.5**	**-0.9**
KHC				eSN	**Sn**	**20 47 08.1**	**-1.1**
KHC				eSG	**Sg**	**20 47 20.2**	**-2.2**
	comp=Z,6.5nm,0.4s						
KHC	**Kasperske Hory**	**3.32**	**259**	Pn	**Pn**	**20 46 30.3**	**+1.3**
MOA	**Molln**	**3.46**	**236**	ePn	**Pn**	**20 46 31.1**	**+0.1**
	0.5nm,0.2s						
MOA				eSn	**Sn**	**20 47 12.7**	**0.0**
	1.1nm,0.3s						
MOA	**Molln**	**3.46**	**236**	Pn	**Pn**	**20 46 31.1**	**+0.1**
	0.5nm,0.2s						
MOA				Sn	**Sn**	**20 47 12.7**	**0.0**
	1.1nm,0.3s						
CLL	**Collm**	**3.83**	**295**	eSg	**Sg**	**20 47 39.0**	**+0.3**
	comp=Z,5.0nm,0.7s						
NKC	**Novy Kostel**	**3.95**	**278**	eSG	**Sg**	**20 47 42.3**	**-0.5**
	comp=Z,6.0nm,0.4s						
NKC	**Novy Kostel**	**3.95**	**278**	Sg	**Sg**	**20 47 42.3**	**-0.5**
	comp=Z,6.0nm,0.4s						
KBA	**Koelnbreinsper**	**4.43**	**233**	eSn	**Sn**	**20 47 36.7**	**-0.1**
	comp=Z,0.8nm,0.3s						
KBA				eSg	**Sg**	**20 48 01.6**	**+3.4**
	comp=Z,0.9nm,0.3s						
KBA	**Koelnbreinsper**	**4.43**	**233**	Sn	**Sn**	**20 47 36.7**	**-0.1**
	comp=Z,0.8nm,0.3s						
KBA				Sg	**Sg**	**20 48 01.6**	**+3.4**
	comp=Z,0.9nm,0.3s						

IDC 31 20:46:21.6±3.8**, 7°.79S**×**67°.51E, h0**^{km}**, mb3.7**/5**, mb1 3.8**/5**, mb1mx3.4**/70**, mbtmp3.7**/5**, MS3.3**/3**, Ms1 3.3**/3**, ms1mx2.7**/63**, Error ellipse: s-maj=104.3km s-min=34.6km az=64.0, Mid-Indian Ridge**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H08N3	**Diego Garcia H**	**3.74**	**68**	Pn	Pn	20 47 16.6	-3.8
H08N3				Sn	Sn	20 48 04.2	-0.8
H08N2	**Diego Garcia H**	**3.75**	**67**	Pn	Pn	20 47 16.6	-3.9
H08N2				Sn	Sn	20 48 05.1	-0.3
H08N1	**Diego Carcia H**	**3.76**	**68**	Pn	Pn	20 47 16.7	-4.0
H08N1				Sn	Sn	20 48 05.6	+0.1
H08S1	**Diego Carcia H**	**4.92**	**89**	Pn	Pn	20 47 31.7	-4.9
H08S1				Sn	Sn	20 48 28.7	-5.5
H08S3	**Diego Garcia H**	**4.93**	**88**	Pn	Pn	20 47 31.8	-4.9
H08S3				Sn	Sn	20 48 28.9	-5.5
H08S2	**Diego Garcia H**	**4.94**	**89**	Pn	Pn	20 47 32.1	-4.8
H08S2				Sn	Sn	20 48 29.1	-5.5
PALK	**Pallekele**	**19.92**	**42**	LR	LR	20 57 11.7	
	comp=Z,72nm,18.1s,baz=134,slow=33						
PSI	**Prapat**	**33.06**	**73**	LR	LR	21 05 26.6	
	comp=Z,60nm,19.0s,baz=81,slow=35						
CMAR	**Chiang Mai Arr**	**40.52**	**50**	P	P	20 54 02.6	-0.2
	1.0nm,0.8s,baz=246,slow=8.8,SNR=5.6						
H01W3	**Cape Leeuwin H**	**50.49**	**129**	T	T	21 48 32.5	
	baz=290,slow=75,SNR=78						
H01W2	**Cape Leeuwin H**	**50.50**	**129**	T	T	21 48 54.1	
	baz=290,slow=75,SNR=125						
H01W1	**Cape Leeuwin H**	**50.51**	**129**	T	T	21 48 33.8	
	baz=290,slow=75,SNR=107						
MKAR	**Makanchi Array**	**55.92**	**12**	P	P	20 56 01.3	0.0
	0.6nm,0.8s,baz=204,slow=7.3,SNR=6.3						
KBZ	**Khabaz**	**55.93**	**339**	LR	LR	21 18 07.3	
	comp=Z,24nm,19.0s,baz=140,slow=34						
KURBB	**Kurchatov Arra**	**58.96**	**8**	P	P	20 56 22.7	0.0
	0.8nm,0.9s,baz=206,slow=7.1,SNR=6.5						
SONM	**Songino Array**	**65.16**	**28**	P	P	20 57 04.6	-0.1
	1.6nm,0.9s,baz=236,slow=6.5,SNR=6.1						
ASAR	**Alice Springs**	**65.31**	**112**	P	P	20 57 06.1	0.0
	0.6nm,0.7s,baz=266,slow=6.0,SNR=4.0						

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*JMA **31** 21:20:10.8±0.4, 43°.94N×148°.04E, h0^{km}, M3.5*
*SKHL **31** 21:20:10.6±0.8, 44°.34N×148°.38E, h49^{km}±3^{km}, mb4.2/5*
ISC 31 21:20:08.5±3.0**, 44°.30N**±0°.10×**148°.3E**±0°.2**, h6**^{km}±15^{km}**, n13,** σ**1^{s}.21**/21**, Kuril Islands**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
KUR	**Kuril'sk**	**0.97**	**344**	i P	**Pg**	**21 20 27.0**	**-0.1**
KUR				AMB	AMB	21 20 28.0	
	40nm,0.1s						
KUR				AMB	AMB	21 20 28.0	
	34nm,0.1s						
KUR				AMB	AMB	21 20 28.0	
	117nm,0.1s						
KUR				eS	**Sg**	**21 20 39.0**	**-0.7**
KUR				A	A	21 20 41.0	
	82nm,0.2s						
KUR				A	A	21 20 41.0	
	229nm,0.2s						
SHO	**Shikotan**	**1.11**	**248**	i P	**Pb**	**21 20 30.0**	**0.0**
SHO				AMB	AMB	21 20 32.0	
	15nm,0.3s						
SHO				AMB	AMB	21 20 32.0	
	21nm,0.3s						
SHO				AMB	AMB	21 20 32.0	
	22nm,0.3s						
SHO				i S	**Sg**	**21 20 44.0**	**-0.1**
SHO				A	A	21 20 47.0	
	179nm,0.2s						
SHO				A	A	21 20 47.0	
	81nm,0.2s						
YUK	**Yuzh-Kuril'sk**	**1.74**	**262**	i P	**Pn**	**21 20 39.0**	**-0.1**
YUK				AMB	AMB	21 20 40.0	
	18nm,0.2s						
YUK				AMB	AMB	21 20 40.0	
	19nm,0.2s						
YUK				AMB	AMB	21 20 40.0	
	57nm,0.2s						
YUK				i S	**Sn**	**21 21 00.0**	**-1.5**
YUK				A	A	21 21 04.0	
	90nm,0.4s						
YUK				A	A	21 21 04.0	
	157nm,0.4s						
GRPR	**Tuman**	**1.81**	**261**	eP	**Pn**	**21 20 41.0**	**+0.9**
GRPR				AMB	AMB	21 20 42.0	
	53nm,0.2s						
GRPR				eS	**Sn**	**21 21 04.0**	**+0.7**
GRPR				A	A	21 21 07.0	
	184nm,0.2s						
GRPR				A	A	21 21 07.0	
	116nm,0.2s						
NEM2	**Nemuro 2**	**2.04**	**244**	P	**Pn**	**21 20 42.8**	**-0.5**
NEM2				eS	**Sn**	**21 21 06.0**	**-3.0**
GLVR	**Golovnino**	**2.05**	**255**	eP	**Pn**	**21 20 44.0**	**+0.6**
GLVR				AMB	AMB	21 20 45.0	
	27nm,0.3s						
GLVR				eS	**Sn**	**21 21 10.0**	**+0.8**
GLVR				A	A	21 21 14.0	
	158nm,0.2s						
GLVR				A	A	21 21 14.0	
	204nm,0.2s						
JRA	**Rausu**	**2.28**	**262**	P	**Pn**	**21 20 47.8**	**+1.2**
JNK	**Nakash**	**2.65**	**256**	P	**Pn**	**21 20 52.5**	**+0.9**
JNK				eS	**Sn**	**21 21 22.9**	**-1.1**
JAK	**Akkeshi**	**2.89**	**244**	P	**Pn**	**21 20 55.2**	**+0.3**
JAR	**Ashorobuto**	**3.39**	**254**	P	**Pn**	**21 21 03.7**	**+1.8**
JAR				eS	**Sn**	**21 21 42.4**	**0.0**
JNBK	**Urakawa-nobuka**	**4.49**	**245**	P	**Pn**	**21 21 18.2**	**+1.2**
JKB	**Kayabe**	**5.81**	**248**	P	**Pn**	**21 21 36.3**	**+1.3**
JOT	**Ohata**	**6.04**	**244**	P	**Pn**	**21 21 38.9**	**+0.6**

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*DDA **31** 21:43:23.6, 38°.59N×43°.09E, h7^{km}, Ml2.5*
*ISK **31** 21:43:23.5, 38°.60N×43°.15E, h17^{km}±3^{km}, ML2.0/4*
*CSEM **31** 21:43:24.3±0.3, 38°.62N×43°.15E, h15^{km}, ML2.0, Error ellipse: s-maj=5.9km s-min=4.9km az=139.0*
*ISCJB **31** 21:43:25.0±0.5, 38°.64N±0°.03×43°.13E±0°.03, h5^{km}±8^{km}, Error ellipse: s-maj=5.0km s-min=4.6km az=178.1*
ISC 31 21:43:24.7±1.0**, 38°.64N**±0°.03×**43°.17E**±0°.02**, h15**^{km}±8^{km}**, n21,** σ**0^{s}.83**/38**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	**Van**	**0.18**	**105**	PG	**Pg**	**21 43 28.9**	**-0.2**
VANB				SG	**Sb**	**21 43 33.1**	**0.0**
VANB	**Van**	**0.18**	**105**	ePg	**Pg**	**21 43 28.9**	**-0.2**
VANB				eSg	**Sb**	**21 43 33.1**	**0.0**
GEVA	**Gevas**	**0.34**	**195**	i P	**Pg**	**21 43 31.2**	**-0.5**
GEVA	**Gevas**	**0.34**	**195**	P	**Pg**	**21 43 31.2**	**-0.5**
ADCV	**BITLIS_Adilcev**	**0.39**	**296**	i S	**Sb**	**21 43 40.1**	**+0.8**
ADCV	**BITLIS_Adilcev**	**0.39**	**296**	S	**Sb**	**21 43 40.1**	**+0.8**
VMUR	**Van-Muradiye**	**0.47**	**42**	i P	**Pb**	**21 43 34.2**	**-0.5**
VMUR				i S	**Sb**	**21 43 43.0**	**+1.4**
VMUR	**Van-Muradiye**	**0.47**	**42**	P	**Pb**	**21 43 34.2**	**-0.5**
VMUR				S	**Sb**	**21 43 43.0**	**+1.4**
CLDR	**Caldiran**	**0.77**	**49**	PG	**Pg**	**21 43 39.5**	**-0.2**
CLDR				SG	**Sn**	**21 43 51.7**	**-1.0**
CLDR	**Caldiran**	**0.77**	**49**	i P	**Pg**	**21 43 39.5**	**-0.2**
CLDR				i S	**Sn**	**21 43 52.3**	**-0.4**
CLDR	**Caldiran**	**0.77**	**49**	P	**Pg**	**21 43 39.5**	**-0.2**
CLDR				eSg	**Sn**	**21 43 51.7**	**-1.0**
CLDR				S	**Sn**	**21 43 52.3**	**-0.4**
TUTA	**Tutak**	**0.81**	**340**	i P	**Pg**	**21 43 39.8**	**-0.7**
TUTA				i S	**Sb**	**21 43 52.1**	**+0.6**
TUTA	**Tutak**	**0.81**	**340**	P	**Pg**	**21 43 39.8**	**-0.7**
TUTA				S	**Sb**	**21 43 52.1**	**+0.6**
GURO	**Guroymak-BITLI**	**0.90**	**265**	PG	**Pb**	**21 43 40.9**	**-1.1**
GURO				SG	**Sb**	**21 43 53.5**	**-0.3**
GURO	**Guroymak-BITLI**	**0.90**	**265**	ePg	**Pb**	**21 43 40.9**	**-1.1**

GURO				*e*Sg	Sb	21 43 53.5	-0.3
AGRB	Hanur-Agry	0.94	352	PG	Pb	21 43 42.6	-0.3
AGRB				SG	Sn	21 43 56.9	0.0
AGRB	Hanur-Agry	0.94	352	*e*Pg	Pb	21 43 42.6	-0.3
AGRB				*e*Sg	Sn	21 43 56.9	0.0
HAKT	HAKKARI	1.16	158	*e*P	Pb	21 43 45.5	-1.1
HAKT				*i* S	Sn	21 44 04.5	+2.2
HAKT	HAKKARI	1.16	158	P	Pb	21 43 45.5	-1.1
SRTM	Siirt_Merkez	1.18	237	*i* P	Pg	21 43 47.6	+0.2
SRTM				*i* S	Sg	21 44 03.9	+1.2
SRTM	Siirt_Merkez	1.18	237	P	Pg	21 43 47.6	+0.2
SRTM				S	Sg	21 44 03.9	+1.2

IDC 31 21:58:10.3±1.3, 20.°92N×121.°77E, h0^{km}, mb3.6/6, mb1 3.7/7, mb1mx3.4/61, mbtmp3.6/7, ML3.6/1, MS3.0/9, Ms1 3.1/9, ms1mx2.8/60, Error ellipse: s-maj=71.9km s-min=20.7km az=68.0

ISCJB 31 21:58:13.3±0.8, 20.°9N±0.°1×121.°7E±0.°2, h33^{km}, mb3.5/6, MS3.1/6, Error ellipse: s-maj=33.1km s-min=14.2km az=165.4

ISC 31 21:58:15.1±1.2**, 21.°0N**±0.°2×**121.°9E**±0.°3**, h35^{km}, n20, σ1^{s}24**/7**, mb3.4**/6**, MS3.1**/6**, Philippine Islands region**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DAV	Davao City (W)	14.29	165	LR	LR	22 06 42.1	
	comp=Z,74nm,20.0s,baz=340,slow=36						
JNU	Nakatsue	14.50	32	LR	LR	22 06 56.3	
	comp=Z,37nm,18.1s,baz=291,slow=36						
KSRS	Korea Array	17.24	16	P	P	22 02 15.2	+0.9
	0.2nm,0.3s,baz=201,slow=9.1,SNR=2.5						
KSRS				LR	LR	22 09 12.8	
	comp=Z,35nm,18.3s,baz=225,slow=38						
CMAR	Chiang Mai Arr	21.73	267	LR	LR	22 11 17.8	
	comp=Z,28nm,21.9s,baz=100,slow=36						
GUMO	Guam	23.14	105	LR	LR	22 10 05.9	
	comp=Z,14nm,20.2s,baz=336,slow=31						
SONM	Songino Array	29.56	339	P	P	22 04 15.4	-1.2
	0.6nm,0.8s,baz=139,slow=12,SNR=3.7						
SONM				LR	LR	22 17 00.9	
	comp=Z,35nm,18.9s,baz=192,slow=38						
MKAR	Makanchi Array	41.11	318	P	P	22 05 56.5	+0.9
	0.7nm,0.8s,baz=111,slow=8.6,SNR=5.8						
H11N1	WAKE ISLAND Hy	42.12	83	T	T	22 50 55.4	
	baz=280,slow=75,SNR=58						
H11N2	WAKE ISLAND Hy	42.13	83	T	T	22 50 57.9	
	baz=280,slow=75,SNR=71						
H11N3	WAKE ISLAND Hy	42.14	83	T	T	22 50 59.4	
	baz=280,slow=75,SNR=43						
H11S3	WAKE ISLAND Hy	42.16	85	T	T	22 50 55.9	
	baz=281,slow=75,SNR=300						
H11S1	WAKE ISLAND Hy	42.16	85	T	T	22 50 59.0	
	baz=281,slow=75,SNR=164						
H11S2	WAKE ISLAND Hy	42.17	85	T	T	22 50 59.6	
	baz=281,slow=75,SNR=345						
WRA	Warramunga Arr	42.46	162	P	P	22 06 05.9	-0.9
	0.7nm,0.8s,baz=344,slow=8.8,SNR=2.5						
ZALV	Zalesovo Beam	43.28	329	P	P	22 06 12.6	-0.6
	1.9nm,0.8s,baz=128,slow=9.3,SNR=5.2						
KURBB	Kurchatov Arra	44.98	322	P	P	22 06 27.9	+1.1
	1.1nm,0.9s,baz=130,slow=6.7,SNR=6.3						
ASAR	Alice Springs	45.90	165	P	P	22 06 35.2	+0.8
	0.4nm,0.8s,baz=340,slow=6.6,SNR=2.1						
AKTO	Aktyubinsk	57.52	317	LR	LR	22 33 52.6	
	comp=Z,27nm,18.1s,baz=105,slow=37						
HFS	Hagfors	80.66	331	LR	LR	22 49 34.5	
	comp=Z,33nm,18.9s,baz=200,slow=38						
NOA	NORSAR Array B	81.34	333	LR	LR	22 48 35.6	
	comp=Z,12nm,20.4s,baz=235,slow=37						

DDA 31 21:58:35.9, 38.°66N×43.°09E, h21^{km}, Ml3.9

ISK 31 21:58:35.5, 38.°68N×43.°03E, h5^{km}, ML3.5/22

IDC 31 21:58:35.9±1.9, 38.°79N×43.°19E, h0^{km}, mb3.5/3, mb1 3.3/5, mb1mx3.1/57, mbtmp3.3/5, ML2.3/2, MS3.0/3, Ms1 3.0/3, ms1mx2.4/50, Error ellipse: s-maj=35.2km s-min=17.1km az=167.0

CSEM 31 21:58:36.8±0.1, 38.°66N×43.°07E, h10^{km}, ML3.5, Error ellipse: s-maj=3.3km s-min=2.2km az=156.0

ISCJB 31 21:58:36.1±0.4, 38.°64N±0.°02×43.°11E±0.°02, h6^{km}±3^{km}, mb3.2/3, MS3.6/1, Error ellipse: s-maj=3.5km s-min=2.1km az=158.2

AZER 31 21:58:39.2±1.3, 38.°59N×43.°15E, h21^{km}, ml3.5/21, Error ellipse: s-maj=13.8km s-min=7.3km az=63.0

ISC 31 21:58:36.8±0.9**, 38.°66N**±0.°02×**43.°05E**±0.°02**, h15^{km}**±6^{km}**, n149, σ1^{s}25**/206**, mb3.3**/3**, 21C-30D, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	Van	0.28	104	PG	Pg	21 58 42.6	-0.1
VANB				SG	Sb	21 58 47.9	-0.2
VANB	Van	0.28	104	*e*Pg	Pg	21 58 42.6	-0.1
ADCV	BITLIS_Adilcev	0.29	300	*i* P	Pg	21 58 43.0	0.0
ADCV				*i* S	Sb	21 58 48.5	-0.1
ADCV	BITLIS_Adilcev	0.29	300	P	Pg	21 58 43.0	0.0
ADCV				S	Sb	21 58 48.5	-0.1
GEVA	Gevas	0.35	178	*i* P	Pg	21 58 42.9	-1.1
GEVA				*i* S	Sg	21 58 49.1	+0.2
GEVA	Gevas	0.35	178	P	Pg	21 58 42.9	-1.1
GEVA				S	Sg	21 58 49.1	+0.2
ERCV	ERCIS-VAN	0.42	32	PG	Pg	21 58 44.2	-1.2
ERCV	ERCIS-VAN	0.42	32	*e*Pg	Pg	21 58 44.2	-1.2
VMUR	Van-Muradiye	0.53	51	*i* P	Pg	21 58 46.5	-0.7
VMUR				*i* S	Sb	21 58 55.3	-0.1
VMUR	Van-Muradiye	0.53	51	P	Pg	21 58 46.5	-0.7
VMUR				S	Sb	21 58 55.3	-0.1
GURO	Guroymak-BITLI	0.80	262	PG	Pg	21 58 51.3	-1.1
GURO				SG	Sg	21 59 01.9	-1.1
GURO	Guroymak-BITLI	0.80	262	*e*Pg	Pg	21 58 51.3	-1.1
GURO				*e*Sg	Sg	21 59 01.9	-1.1
CLDR	Caldiran	0.83	54	PG	Pg	21 58 51.4	-1.6
CLDR				SG	Sb	21 59 04.2	0.0
CLDR	Caldiran	0.83	54	*i* P	Pg	21 58 51.3	-1.7
CLDR				*i* S	Sb	21 59 04.1	-0.2
CLDR	Caldiran	0.83	54	*e*Pg	Pg	21 58 51.4	-1.6
CLDR				S	Sb	21 59 04.1	-0.2
AGRB	Hanur-Agry	0.91	357	PG	Pb	21 58 53.2	-1.3
AGRB				SG	Sb	21 59 05.8	-0.8
AGRB	Hanur-Agry	0.91	357	*e*Pg	Pb	21 58 53.2	-1.3
AGRB				*e*Sg	Sb	21 59 05.8	-0.8
EKAR	Karacoban	0.97	308	*i* P	Pb	21 58 54.8	-0.7
EKAR	Karacoban	0.97	308	P	Pb	21 58 54.8	-0.7
DYDN	Diyadin	1.01	29	*i* P	Pb	21 58 55.0	-1.2
DYDN				*i* S	Sg	21 59 10.0	+0.3
DYDN	Diyadin	1.01	29	P	Pb	21 58 55.0	-1.2
DYDN				S	Sg	21 59 10.0	+0.3
SRTM	Siirt_Merkez	1.11	233	*i* P	Pb	21 58 57.7	0.0
SRTM				*i* S	Sn	21 59 13.3	+0.3
SRTM	Siirt_Merkez	1.11	233	P	Pb	21 58 57.7	0.0
SRTM				S	Sn	21 59 13.3	+0.3
SIRT	Sirnak	1.25	203	PN	Pb	21 59 00.1	-0.1
SIRT	Sirnak	1.25	203	*e*Pn	Pb	21 59 00.1	-0.1
SIRN	S˜–rnak	1.27	203	*i* P	Pg	21 59 00.8	-0.4
SIRN				*i* S	Sg	21 59 20.2	+2.5
SIRN	S˜–rnak	1.27	203	P	Pg	21 59 00.8	-0.4
SIRN				S	Sg	21 59 20.2	+2.5
EATA	Eleskirt	1.27	340	*i* P	Pn	21 58 59.9	-0.6
EATA				*i* S	Sg	21 59 18.7	+0.7
EATA	Eleskirt	1.27	340	P	Pn	21 58 59.8	-0.6
EATA				S	Sg	21 59 18.7	+0.7
VRTB	Varto-Mus	1.34	292	PN	Pn	21 59 01.3	+0.2
VRTB	Varto-Mus	1.34	292	*i* P	Pn	21 59 01.3	+0.2
VRTB				*i* S	Sg	21 59 21.3	+1.3
VRTB	Varto-Mus	1.34	292	P	Pn	21 59 01.3	+0.2
VRTB				S	Sg	21 59 21.3	+1.3
IGDI	IGDIR	1.45	33	*i* P	Pn	21 59 02.8	+0.3
IGDI				*i* S	Sg	21 59 24.7	+1.2
CUKT	Cukurca	1.48	162	PN	Pn	21 59 03.3	+0.3
CUKT	Cukurca	1.48	162	*i* P	Pn	21 59 03.3	+0.3
CUKT	Cukurca	1.48	162	*e*Pn	Pn	21 59 03.3	+0.3
BNGL	BINGOL	1.51	282	*i* P	Pn	21 59 04.0	+0.5
BNGL				*i* S	Sg	21 59 25.5	0.0
SVAN	Silvan-Diyarba	1.54	251	PN	Pb	21 59 04.7	-0.3
SVAN	Silvan-Diyarba	1.54	251	*i* P	Pb	21 59 05.3	+0.2
SVAN				*i* S	Sg	21 59 26.3	-0.1
SVAN	Silvan-Diyarba	1.54	251	*e*Pn	Pb	21 59 04.7	-0.3
SVAN	Silvan-Diyarba	1.54	251	P	Pb	21 59 05.3	+0.2
SVAN				S	Sg	21 59 26.3	-0.1
BTMN	Batman	1.60	242	*i* P	Pb	21 59 06.6	+0.6
BTMN				*i* S	Sg	21 59 28.9	+0.7
BTMN	Batman	1.60	242	P	Pb	21 59 06.6	+0.6
BTMN				S	Sg	21 59 28.9	+0.7
TASB	TASBURUN-IGDIR	1.61	35	PN	Pn	21 59 05.2	+0.4
TASB	TASBURUN-IGDIR	1.61	35	*e*Pn	Pn	21 59 05.2	+0.4
HOMI	Horasan	1.64	328	*i* P	Pb	21 59 06.7	-0.2
HYR	Heyderabad	1.76	52	⇑P	Pb	21 59 08.0	-0.8
HYR				⇓S	Sb	21 59 29.5	-1.1
HYR	Heyderabad	1.76	52	⇑P	Pb	21 59 08.0	-0.8
HYR				⇓S	Sb	21 59 29.5	-1.1
DIGO	Kars	1.77	8	*i* P	Pn	21 59 06.1	-1.0
ERZM	Erzurum	1.80	314	*i* P	Pb	21 59 09.3	-0.4
ERZM	Erzurum	1.80	314	P	Pb	21 59 09.3	-0.4
ECAT	Cat-ERZURUM	1.87	301	*i* P	Pb	21 59 09.7	-1.1
ECAT				*i* S	Sg	21 59 36.7	-0.2
ECAT	Cat-ERZURUM	1.87	301	P	Pb	21 59 09.7	-1.1
ECAT				S	Sg	21 59 36.7	-0.2
BNGB	Bingˆ¶l	1.88	281	PN	Pb	21 59 09.8	-1.1
KARS	Kars	1.96	1	PN	Pb	21 59 10.9	-1.5
KARS	Kars	1.96	1	*e*Pn	Pb	21 59 10.9	-1.5
SENK	Senkaya-Erzuru	1.97	344	PN	Pn	21 59 10.8	+0.9
SENK	Senkaya-Erzuru	1.97	344	*e*Pn	Pn	21 59 10.8	+0.9
NAX	Nakhchivan	1.98	74	⇓P	Pn	21 59 10.8	+1.0
	SNR=3.4						
NAX				⇑S	Sb	21 59 36.0	-1.0
NAX	Nakhchivan	1.98	74	⇓P	Pn	21 59 10.8	+1.0
	SNR=3.4						
NAX				⇑S	Sb	21 59 36.0	-1.0
GNI	Garni	1.98	41	Pn	Pn	21 59 10.2	+0.2
	9.2nm,0.3s,baz=242,slow=3.3,SNR=23						
GNI				Sn	Sg	21 59 42.4	+1.8
	12nm,0.3s,baz=73,slow=19,SNR=3.4						
GNI				LR	LR	22 00 03.9	
	comp=Z,93nm,18.6s,baz=205,slow=49						
GNI	Garni	1.98	41	PN	Pn	21 59 10.5	+0.5
GNI	Garni	1.98	41	*e*Pn	Pn	21 59 10.5	+0.5
BINT	Bingol	2.01	277	*e*Pn	Pn	21 59 09.8	-0.5
EAK	Akyaka	2.07	12	*i* P	Pg	21 59 15.6	-0.9
EAK	Akyaka	2.07	12	P	Pg	21 59 15.6	-0.9
SBZ	Shahbuz	2.09	69	⇓P	Pn	21 59 12.0	+0.7
SBZ				⇓S	Sn	21 59 36.6	-0.5
SBZ	Shahbuz	2.09	69	⇓P	Pn	21 59 12.0	+0.7
SBZ				⇓S	Sn	21 59 36.6	-0.5
HANI	Diyarbakir_Han	2.09	264	*i* P	Pn	21 59 11.9	+0.5
HANI	Diyarbakir_Han	2.09	264	P	Pn	21 59 11.9	+0.5
YEDI	Yedisu-Bingol	2.10	292	PN	Pn	21 59 11.9	+0.3
YEDI	Yedisu-Bingol	2.10	292	*e*Pn	Pn	21 59 11.9	+0.3
MARD	Mardin	2.24	234	*i* P	Pn	21 59 14.1	+0.6
ORD	Ordubad	2.32	82	⇑P	Pn	21 59 15.1	+0.5
ORD				⇓S	Sn	21 59 43.0	+0.1
ORD	Ordubad	2.32	82	⇑P	Pn	21 59 15.1	+0.5
ORD				⇓S	Sn	21 59 43.0	+0.1
DIY	Diyarbakir	2.35	252	*e*Pn	Pn	21 59 16.4	+1.5
MAZI	Mazidag	2.38	240	PN	Pn	21 59 16.1	+0.7
MAZI	Mazidag	2.38	240	*e*Pn	Pn	21 59 16.1	+0.7
DYBB	Diyarbakir	2.39	254	PN	Pn	21 59 16.4	+0.8
KOPT	Kop Dagi	2.40	305	*e*P	Pn	21 59 17.1	+1.3
KOPT	Kop Dagi	2.40	305	P	Pn	21 59 17.1	+1.3
DIYA	Diyarbakir	2.42	253	*i* P	Pn	21 59 17.3	+1.4
DIYA	Diyarbakir	2.42	253	P	Pn	21 59 17.3	+1.4
DDEM	Demirkent	2.44	336	*i* P	Pn	21 59 18.2	+2.0
DDEM	Demirkent	2.44	336	P	Pn	21 59 18.2	+2.0
DAGI	Agillar	2.56	341	*i* P	Pn	21 59 19.2	+1.3
DBAD	Bademkaya	2.57	337	*i* P	Pn	21 59 20.3	+2.2
DBAD	Bademkaya	2.57	337	P	Pn	21 59 20.3	+2.2
BGD	Bogdanovka	2.63	9	P	Pg	21 59 27.2	-0.1
BGD				S	Sg	22 00 02.0	+0.5
ARTV	Artvin	2.66	342	*i* P	Pn	21 59 20.7	+1.3
ARTV	Artvin	2.66	342	P	Pn	21 59 20.7	+1.3
ERZN	Erzincan	2.75	291	PN	Pn	21 59 21.3	+0.9
AKH	Akhalkalaki	2.77	7	PN	Pn	21 59 21.7	+0.9
AKH	Akhalkalaki	2.77	7	P	Pg	21 59 29.0	-0.8
AKH				S	Sg	22 00 10.2	+4.5
AKH	Akhalkalaki	2.77	7	*e*Pn	Pn	21 59 21.7	+0.9
BAYT	Ayd˜–ntepe-Bay	2.83	308	PN	Pn	21 59 22.6	+0.9
BAYT	Ayd˜–ntepe-Bay	2.83	308	*e*Pn	Pn	21 59 22.6	+0.9
EPOS	Posof	2.85	355	*i* P	Pb	21 59 26.8	-0.6
EPOS	Posof	2.85	355	P	Pb	21 59 26.8	-0.6
PTK	Pertek	2.87	276	PN	Pn	21 59 23.0	+0.8
PTK	Pertek	2.87	276	*e*Pn	Pn	21 59 23.0	+0.8
DBOC	Borcka	2.88	339	*i* P	Pb	21 59 28.7	+0.7
GDB	GEDABAY	2.93	45	⇑P	Pn	21 59 24.4	+1.4
	SNR=11						
GDB				⇑S	Sn	21 59 59.9	+1.8
SVRC	Sivrice-ELAZID	2.95	266	PN	Pn	21 59 24.1	+0.8
SVRC	Sivrice-ELAZID	2.95	266	*e*Pn	Pn	21 59 24.1	+0.8
BCA	Borcka	2.99	339	PN	Pn	21 59 24.9	+1.2
BCA	Borcka	2.99	339	*e*Pn	Pn	21 59 24.9	+1.2
QZX	Qazax, Azerbai	2.99	36	⇓P	Pn	21 59 25.3	+1.6
	SNR=6.9						
QZX				⇓S	Sn	22 00 01.6	+2.4
CHOM	Cayeli-Rize	3.00	325	PN	Pn	21 59 25.0	+1.1
CHOM	Cayeli-Rize	3.00	325	*e*Pn	Pn	21 59 25.0	+1.1
GANJ	Ganja	3.21	51	⇓P	Pn	21 59 28.5	+1.7
	SNR=12						
GANJ				⇓S	Sn	22 00 07.2	+2.4
KELT	Kelkit	3.29	298	*i* P	Pb	21 59 35.9	+0.9
DGRG	David-gareji	3.31	32	P	Pn	21 59 30.7	+2.6
DGRG				S	Sg	22 00 21.8	-1.3
TBLG	Delisi	3.33	22	P	Pb	21 59 36.3	+0.8
TBLG				S	Sg	22 00 20.3	-3.3
URFA	Urfa	3.55	251	PN	Pn	21 59 32.7	+1.2
URFA	Urfa	3.55	251	*e*Pn	Pn	21 59 32.7	+1.2
DDFL	Dedoflistskaro	3.65	39	P	Pg	21 59 50.0	+3.4
DUS	Dusheti	3.65	20	P	Pb	21 59 43.5	+2.4
DUS				S	Sg	22 00 34.1	+0.1
MNGR	Mingechevir, A	3.76	55	⇑P	Pn	21 59 36.5	+2.2
ZRD	Zardab	3.94	64	⇑P	Pn	21 59 37.9	+1.3
ZRD	Zardab	3.94	64	⇑P	Pn	21 59 37.9	+1.3
ONI	Oni	3.94	4	P	Pb	21 59 47.6	+1.7
ZKTA	Zakatala	4.04	42	⇑P	Pn	21 59 39.3	+1.1
ZKTA				⇑S	Sn	22 00 28.1	+2.9
SEKA	Sheki	4.08	50	⇑P	Pn	21 59 40.4	+1.6
SEKA				⇑S	Sn	22 00 29.4	+3.2
LRK	Lerik	4.14	89	⇓P	Pn	21 59 39.8	+0.1
LRK				⇓S	Sn	22 00 28.6	+0.6
LRK	Lerik	4.14	89	⇓P	Pn	21 59 39.8	+0.1
LRK				⇓S	Sn	22 00 28.6	+0.6
GLBA	Clilabad	4.21	80	⇓P	Pn	21 59 40.3	-0.1
GLBA				⇓S	Sn	22 00 31.4	+2.1
GLBA	Clilabad	4.21	80	⇓P	Pn	21 59 40.3	-0.1
GLBA				⇓S	Sn	22 00 31.4	+2.1
QBL	Gabala	4.34	57	⇑P	Pn	21 59 43.7	+1.4
QBL				⇓S	Sn	22 00 33.5	+0.9
IML	Ismayilli	4.50	60	⇓P	Pn	21 59 45.7	+1.3
IML				⇑S	Sn	22 00 36.2	-0.2
ASTR	Astara	4.50	90	⇓P	Pn	21 59 44.8	+0.3
ASTR	Astara	4.50	90	⇓P	Pn	21 59 44.8	+0.3
XNQ	Khinaliq	4.65	56	⇓P	Pn	21 59 47.3	+0.6
PQL	Pirkuli	4.78	62	⇓P	Pn	21 59 49.0	+0.6
QSAR	Qusar	4.91	53	⇑P	Pn	21 59 51.7	+1.6
QSAR				⇑S	Sn	22 00 47.5	+0.8
QSAR	Qusar	4.91	53	⇑P	Pn	21 59 51.7	+1.6
QSAR				⇑S	Sn	22 00 47.5	+0.8
GBS	Qobustan	4.92	66	⇓P	Pn	21 59 50.9	+0.6
ATGJ	Altiaghaj	5.04	62	⇓P	Pn	21 59 52.3	+0.3
KBZ	Khabaz	5.06	359	Pn	Pn	21 59 53.6	+1.4
	0.1nm,0.3s,baz=203,slow=15,SNR=1.7						
KBZ				LR	LR	22 02 06.9	
	comp=Z,68nm,18.5s,baz=295,slow=43						
BRTR	Keskin Array B	7.38	281	Pn	Pn	22 00 28.6	+4.5
	0.1nm,0.3s,baz=113,slow=16,SNR=2.1						
BRTR				Pg	Pg	22 00 55.1	-2.9
	0.0nm,0.3s,baz=106,slow=15,SNR=4.4						
ASF	Jabal al Asfar	8.19	220	Pn	Pn	22 00 43.4	+8.1
	0.2nm,0.3s,baz=50,slow=9.6,SNR=1.8						
ASF				Lg	Lg	22 02 57.5	
	0.1nm,0.3s,baz=343,slow=19,SNR=1.5						
MMAI	Mount Meron Ar	8.38	230	Pn	Pn	22 00 45.4	+7.6
	0.3nm,0.3s,baz=73,slow=15,SNR=2.6						
MMAI				Lg	Lg	22 02 55.5	
	0.3nm,0.3s,baz=70,slow=19,SNR=1.2						
MMAI				LR	LR	22 04 19.2	
	comp=Z,53nm,18.8s,baz=210,slow=40						
AKASG	Malin Array Be	15.51	325	Pn	P	22 02 18.6	-0.5
	0.4nm,0.3s,baz=136,slow=10,SNR=5.9						
CRVS	Cervenica-Dubn	18.59	310	*e*PN	P	22 02 49.1	-4.2
VYHS	Vyhne	20.03	307	*e*PN	P	22 03 08.7	-0.4
KURBB	Kurchatov Arra	27.66	53	P	P	22 04 25.0	+1.1
	0.5nm,0.7s,baz=262,slow=8.8,SNR=4.4						
MKAR	Makanchi Array	29.70	61	P	P	22 04 43.0	+0.9
	0.1nm,0.5s,baz=263,slow=5.7,SNR=1.9						
DBIC	Dimbokro	53.62	246	LR	LR	22 34 43.4	
	comp=Z,46nm,18.0s,baz=124,slow=40						
KSRS	Korea Array	64.38	62	P	P	22 09 10.9	-1.2
	0.2nm,0.3s,baz=291,slow=7.5,SNR=4.2						

ISK 31 22:00:42.5, 38.°65N×43.°03E, h13^{km}±3^{km}, ML2.5/2

DDA 31 22:00:43.7, 38.°66N×43.°09E, h7^{km}, Ml3.0

CSEM 31 22:00:43.3±0.2, 38.°67N×43.°02E, h10^{km}, ML2.5, Error ellipse: s-maj=4.0km s-min=3.7km az=163.0

ISC 31 22:00:43.2±1.1**, 38.°66N**±0.°03×**43.°03E**±0.°03**, h14^{km}**±12^{km}**, n16, σ0^{s}39**/32**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADCV	BITLIS_Adilcev	0.28	303	*i* P	Pb	22 00 50.2	+0.1
ADCV				*i* S	Sb	22 00 55.4	+0.7
ADCV	BITLIS_Adilcev	0.28	303	P	Pb	22 00 50.2	+0.1
ADCV				S	Sb	22 00 55.4	+0.7
VANB	Van	0.29	102	PG	Pg	22 00 49.6	+0.2
VANB				SG	Sb	22 00 54.9	-0.1
VANB	Van	0.29	102	*e*Pg	Pg	22 00 49.6	+0.2
VANB				*e*Sg	Sb	22 00 54.9	-0.1
GEVA	Gevas	0.35	176	*i* P	Pg	22 00 50.4	+0.1
GEVA				*i* S	Sb	22 00 56.4	-0.2
GEVA	Gevas	0.35	176	P	Pg	22 00 50.4	+0.1
GEVA				S	Sb	22 00 56.4	-0.2
VMUR	Van-Muradiye	0.54	52	*i* P	Pg	22 00 53.8	-0.1
VMUR				*i* S	Sb	22 01 02.3	+0.1
VMUR	Van-Muradiye	0.54	52	P	Pg	22 00 53.8	-0.1
VMUR				S	Sb	22 01 02.3	+0.1
TUTA	Tutak	0.76	348	*i* P	Pg	22 00 57.6	-0.4
TUTA				*i* S	Sg	22 01 07.8	-0.3
TUTA	Tutak	0.76	348	P	Pg	22 00 57.6	-0.4
TUTA				S	Sg	22 01 07.8	-0.3
GURO	Guroymak-BITLI	0.79	262	PG	Pg	22 00 58.3	-0.2
GURO				SG	Sb	22 01 09.4	+0.1
GURO	Guroymak-BITLI	0.79	262	*e*Pg	Pg	22 00 58.3	-0.2
GURO				*e*Sg	Sb	22 01 09.4	+0.1
CLDR	Caldiran	0.85	55	PG	Pg	22 00 59.3	-0.4
CLDR				SG	Sb	22 01 11.7	+0.6
CLDR	Caldiran	0.85	55	*e*Pg	Pg	22 00 59.3	-0.4
CLDR				*e*Sg	Sb	22 01 11.7	+0.6
AGRB	Hanur-Agry	0.92	358	PG	Pg	22 01 00.6	-0.4
AGRB				SG	Sb	22 01 13.9	+0.8
AGRB	Hanur-Agry	0.92	358	*e*Pg	Pg	22 01 00.6	-0.4
AGRB				*e*Sg	Sb	22 01 13.9	+0.8

ISK 31 22:01:44.6, 38.°68N×43.°04E, h15^{km}±1^{km}, ML2.2/3

ISCJB 31 22:01:45.6±0.6, 38.°68N±0.°04×43.°03E±0.°05, h13^{km}±6^{km}, Error ellipse: s-maj=7.3km s-min=5.1km az=39.9

CSEM 31 22:01:45.4±0.2, 38.°68N×43.°03E, h10^{km}, ML2.2, Error ellipse: s-maj=4.3km s-min=4.3km az=85.0

DDA 31 22:01:45.6, 38.°67N×43.°08E, h7^{km}, Ml2.6

ISC 31 22:01:44.9±1.6**, 38.°67N**±0.°03×**43.°05E**±0.°03**, h16^{km}**±13^{km}**, n17, σ0^{s}59**/31**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	Van	0.28	105	PG	Pb	22 01 51.8	+0.2
VANB				SG	Sb	22 01 57.2	+1.1
VANB	Van	0.28	105	*e*Pg	Pb	22 01 51.8	+0.2
VANB				*e*Sg	Sb	22 01 57.2	+1.1
ADCV	BITLIS_Adilcev	0.29	299	*i* P	Pb	22 01 52.2	+0.4
ADCV				*i* S	Sb	22 01 57.2	+0.8
ADCV	BITLIS_Adilcev	0.29	299	P	Pb	22 01 52.2	+0.4
ADCV				S	Sb	22 01 57.2	+0.8
GEVA	Gevas	0.35	178	*i* P	Pb	22 01 52.6	-0.3
GEVA				*i* S	Sb	22 01 58.8	+0.5
GEVA	Gevas	0.35	178	P	Pb	22 01 52.6	-0.3
GEVA				S	Sb	22 01 58.8	+0.5
VMUR	Van-Muradiye	0.52	52	*i* P	Pb	22 01 55.6	-0.2
VMUR				*i* S	Sb	22 02 04.3	+1.1
VMUR	Van-Muradiye	0.52	52	P	Pb	22 01 55.6	-0.2
VMUR				S	Sb	22 02 04.3	+1.1
TUTA	Tutak	0.76	346	*i* P	Pb	22 01 59.8	-0.1
TUTA				*i* S	Sb	22 02 10.3	+0.3
TUTA	Tutak	0.76	346	P	Pb	22 01 59.8	-0.1
TUTA				S	Sb	22 02 10.3	+0.3
GURO	Guroymak-BITLI	0.80	262	PG	Pb	22 02 00.6	+0.1
GURO	Guroymak-BITLI	0.80	262	*e*Pg	Pb	22 02 00.6	+0.1
CLDR	Caldiran	0.83	55	PG	Pb	22 02 00.9	-0.2
CLDR	Caldiran	0.83	55	*i* P	Pb	22 02 00.8	-0.2
CLDR				*i* S	Sn	22 02 13.6	-0.6
CLDR	Caldiran	0.83	55	*e*Pg	Pb	22 02 00.9	-0.2
CLDR				S	Sn	22 02 13.6	-0.6
AGRB	Hanur-Agry	0.91	357	PG	Pg	22 02 02.4	-0.2
AGRB				SG	Sn	22 02 15.3	-0.8
AGRB	Hanur-Agry	0.91	357	*e*Pg	Pg	22 02 02.4	-0.2
AGRB				*e*Sg	Sn	22 02 15.3	-0.8

ISK 31 22:02:18.5, 38.°69N×43.°04E, h5^{km}, ML2.2/3

DDA 31 22:02:19.7, 38.°67N×43.°07E, h7^{km}, Ml2.9

CSEM 31 22:02:19.4±0.3, 38.°69N×43.°03E, h5^{km}, ML2.2, Error ellipse: s-maj=5.4km s-min=5.3km az=57.0

ISC 31 22:02:19.1±1.1**, 38.°67N**±0.°03×**43.°04E**±0.°03**, h16^{km}**±11^{km}**, n16, σ0^{s}40**/27**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADCV	BITLIS_Adilcev	0.28	299	*i* P	Pb	22 02 26.0	+0.1
ADCV				*i* S	Sb	22 02 31.3	+0.8
ADCV	BITLIS_Adilcev	0.28	299	P	Pb	22 02 26.0	+0.1
ADCV				S	Sb	22 02 31.3	+0.8
VANB	Van	0.28	106	PG	Pg	22 02 25.5	+0.2
VANB				SG	Sb	22 02 30.9	+0.4
VANB	Van	0.28	106	*e*Pg	Pg	22 02 25.5	+0.2
VANB				*e*Sg	Sb	22 02 30.9	+0.4
GEVA	Gevas	0.36	178	*i* P	Pg	22 02 26.4	-0.2
GEVA				*i* S	Sb	22 02 32.8	+0.1
GEVA	Gevas	0.36	178	P	Pg	22 02 26.4	-0.2
GEVA				S	Sb	22 02 32.8	+0.1
VMUR	Van-Muradiye	0.52	53	*i* P	Pg	22 02 29.4	-0.2
VMUR				*i* S	Sb	22 02 37.9	+0.4
VMUR	Van-Muradiye	0.52	53	P	Pg	22 02 29.4	-0.2
VMUR				S	Sb	22 02 37.9	+0.4
TUTA	Tutak	0.75	347	*i* S	Pg	22 02 33.5	-0.3
TUTA				*i* P	Pg	22 02 33.6	-0.3
TUTA	Tutak	0.75	347	P	Pg	22 02 33.6	-0.3
GURO	Guroymak-BITLI	0.80	262	PG	Pg	22 02 34.4	-0.3
GURO	Guroymak-BITLI	0.80	262	*e*Pg	Pg	22 02 34.4	-0.3
CLDR	Caldiran	0.83	55	PG	Pg	22 02 35.2	-0.2
CLDR	Caldiran	0.83	55	*e*Pg	Pg	22 02 35.2	-0.2
AGRB	Hanur-Agry	0.90	358	PG	Pb	22 02 35.9	-0.6
AGRB				SG	Sg	22 02 48.8	+0.2
AGRB	Hanur-Agry	0.90	358	*e*Pg	Pb	22 02 35.9	-0.6
AGRB				*e*Sg	Sg	22 02 48.8	+0.2

ISK 31 22:03:26.3, 38.°68N×43.°06E, h20^{km}±1^{km}, ML2.4/4

ISCJB 31 22:03:27.2±0.6, 38.°65N±0.°04×43.°03E±0.°05, h14^{km}±6^{km}, Error ellipse: s-maj=7.3km s-min=5.2km az=39.3

DDA 31 22:03:27.4, 38.°63N×43.°09E, h7^{km}, Ml2.7

CSEM 31 22:03:27.2±0.2, 38.°67N×43.°04E, h10^{km}, ML2.4, Error ellipse: s-maj=4.7km s-min=4.5km az=160.0

ISC 31 22:03:26.9±1.1**, 38.°67N**±0.°03×**43.°05E**±0.°03**, h10^{km}**±14^{km}**, n18, σ0^{s}32**/32**, Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	Van	0.28	106	PG	Pb	22 03 33.7	-0.4
VANB				SG	Sb	22 03 39.1	+0.2
VANB	Van	0.28	106	*e*Pg	Pb	22 03 33.7	-0.4
VANB				*e*Sg	Sb	22 03 39.1	+0.2
ADCV	BITLIS_Adilcev	0.29	298	*i* P	Pb	22 03 34.2	-0.1
ADCV				*i* S	Sb	22 03 39.5	+0.3
ADCV	BITLIS_Adilcev	0.29	298	P	Pb	22 03 34.2	-0.1
ADCV				S	Sb	22 03 39.5	+0.3
GEVA	Gevas	0.36	179	*i* P	Pg	22 03 34.4	+0.3
GEVA				*i* S	Sg	22 03 38.6	-0.3
GEVA	Gevas	0.36	179	P	Pg	22 03 34.4	+0.3
GEVA				S	Sg	22 03 38.6	-0.3
VMUR	Van-Muradiye	0.52	52	*i* P	Pg	22 03 37.5	+0.4
VMUR				*i* S	Sb	22 03 46.2	+0.3
VMUR	Van-Muradiye	0.52	52	P	Pg	22 03 37.5	+0.4
VMUR				S	Sb	22 03 46.2	+0.3

TUTA	Tutak	0.75	346	*i* P	Pg	22 03 41.9	+0.4
TUTA				*i* S	Sb	22 03 52.4	-0.3
TUTA	Tutak	0.75	346	P	Pg	22 03 41.9	+0.4
TUTA				S	Sb	22 03 52.4	-0.3
GURO	Guroymak-BITLI	0.81	262	PG	Pg	22 03 42.6	+0.1
GURO	Guroymak-BITLI	0.81	262	*e*Pg	Pg	22 03 42.6	+0.1
CLDR	Caldiran	0.82	55	PG	Pg	22 03 42.6	-0.3
CLDR	Caldiran	0.82	55	*i* P	Pg	22 03 43.1	+0.2
CLDR				*i* S	Sb	22 03 55.3	+0.6
CLDR	Caldiran	0.82	55	*e*Pg	Pg	22 03 42.6	-0.3
CLDR	Caldiran	0.82	55	P	Pg	22 03 43.1	+0.2
CLDR				S	Sb	22 03 55.3	+0.6
AGRB	Hanur-Agry	0.90	357	PG	Pg	22 03 44.2	-0.2
AGRB				SG	Sb	22 03 57.1	+0.1
AGRB	Hanur-Agry	0.90	357	*e*Pg	Pg	22 03 44.2	-0.2
AGRB				*e*Sg	Sb	22 03 57.1	+0.1

*ISK **31** 22:04:55.5, 38°.68N×43°.04E, h10^{km}±5^{km}, ML2.3/3*
*ISCJB **31** 22:04:56.7±0.5, 38°.70N±0°.03×43°.05E±0°.04, h8^{km}±6^{km}, Error ellipse: s-maj=5.0km s-min=4.5km az=138.3*
*CSEM **31** 22:04:56.0±0.2, 38°.69N×43°.04E, h15^{km}, ML2.3, Error ellipse: s-maj=4.1km s-min=3.5km az=138.0*
*DDA **31** 22:04:56.4, 38°.69N×43°.08E, h7^{km}, Ml2.8*
ISC 31 22:04:56.1±1.1, **38°.69N**±0°.03×**43°.05E**±0°.02, **h9**^{km}±10^{km}, **n20, σ0^{s}.63**/36, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADCV	BITLIS_Adilcev	0.28	296	*i* P	Pb	22 05 03.0	-0.5
ADCV				*i* S	Sb	22 05 07.5	-0.9
ADCV	BITLIS_Adilcev	0.28	296	P	Pb	22 05 03.0	-0.5
ADCV				S	Sb	22 05 07.5	-0.9
VANB	Van	0.28	109	PG	Pb	22 05 02.6	-0.9
VANB				SG	Sb	22 05 07.9	-0.6
VANB	Van	0.28	109	*e*Pg	Pb	22 05 02.6	-0.9
VANB				*e*Sg	Sb	22 05 07.9	-0.6
GEVA	Gevas	0.38	178	*i* P	Pg	22 05 03.2	-0.4
GEVA				*i* S	Sg	22 05 09.6	+1.1
GEVA	Gevas	0.38	178	P	Pg	22 05 03.2	-0.4
GEVA				S	Sg	22 05 09.6	+1.1
VMUR	Van-Muradiye	0.51	54	*i* P	Pg	22 05 06.4	+0.4
VMUR				*i* S	Sb	22 05 14.9	-0.1
VMUR	Van-Muradiye	0.51	54	P	Pg	22 05 06.4	+0.4
VMUR				S	Sb	22 05 14.9	-0.1
TUTA	Tutak	0.73	346	*i* P	Pb	22 05 10.7	-0.6
TUTA				*i* S	Sb	22 05 20.9	-0.7
TUTA	Tutak	0.73	346	P	Pb	22 05 10.7	-0.6
TUTA				S	Sb	22 05 20.9	-0.7
GURO	Guroymak-BITLI	0.81	261	PG	Pg	22 05 11.4	-0.3
GURO	Guroymak-BITLI	0.81	261	*e*Pg	Pg	22 05 11.4	-0.3
CLDR	Caldiran	0.82	56	PG	Pg	22 05 11.8	-0.1
CLDR	Caldiran	0.82	56	*i* P	Pg	22 05 11.5	-0.4
CLDR				*i* S	Sb	22 05 23.8	-0.1
CLDR	Caldiran	0.82	56	P	Pg	22 05 11.5	-0.4
CLDR	Caldiran	0.82	56	*e*Pg	Pg	22 05 11.8	-0.1
CLDR				S	Sb	22 05 23.8	-0.1
AGRB	Hanur-Agry	0.89	357	PG	Pg	22 05 13.2	0.0
AGRB				SG	Sb	22 05 25.9	0.0
AGRB	Hanur-Agry	0.89	357	*e*Pg	Pg	22 05 13.2	0.0
AGRB				*e*Sg	Sb	22 05 25.9	0.0
SRTM	Siirt_Merkez	1.12	232	*i* P	Pn	22 05 18.2	0.0
SRTM				*i* S	Sn	22 05 35.2	+1.3
SRTM	Siirt_Merkez	1.12	232	P	Pn	22 05 18.2	0.0
SRTM				S	Sn	22 05 35.2	+1.3

*ISK **31** 22:06:17.9, 38°.68N×43°.04E, h13^{km}±2^{km}, ML2.5/3*
*DDA **31** 22:06:18.6, 38°.69N×43°.08E, h7^{km}, Ml2.9*
*CSEM **31** 22:06:18.5±0.2, 38°.70N×43°.04E, h10^{km}, ML2.5, Error ellipse: s-maj=4.9km s-min=4.8km az=138.0*
ISC 31 22:06:18.5±1.1, **38°.70N**±0°.03×**43°.05E**±0°.03, **h13**^{km}±13^{km}, **n18, σ0^{s}.53**/32, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADCV	BITLIS_Adilcev	0.28	294	*i* P	Pb	22 06 25.5	-0.1
ADCV				*i* S	Sb	22 06 29.9	-0.4
ADCV	BITLIS_Adilcev	0.28	294	P	Pb	22 06 25.5	-0.1
ADCV				S	Sb	22 06 29.9	-0.4
VANB	Van	0.28	111	PG	Pb	22 06 25.1	-0.4
VANB				SG	Sb	22 06 30.5	+0.2
VANB	Van	0.28	111	*e*Pg	Pb	22 06 25.1	-0.4
VANB				*e*Sg	Sb	22 06 30.5	+0.2
GEVA	Gevas	0.38	179	*i* P	Pg	22 06 25.9	-0.3
GEVA				*i* S	Sg	22 06 32.2	+0.8
GEVA	Gevas	0.38	179	P	Pg	22 06 26.0	-0.3
GEVA				S	Sg	22 06 32.2	+0.8
VMUR	Van-Muradiye	0.50	54	*i* P	Pg	22 06 27.6	-0.8
VMUR				*i* S	Sb	22 06 36.5	-0.1
VMUR	Van-Muradiye	0.50	54	P	Pg	22 06 27.5	-0.8
VMUR				S	Sb	22 06 36.5	-0.1
TUTA	Tutak	0.73	345	*i* P	Pg	22 06 32.0	-0.7
TUTA				*i* S	Sb	22 06 43.4	+0.1
TUTA	Tutak	0.73	345	P	Pg	22 06 32.0	-0.7
TUTA				S	Sb	22 06 43.4	+0.1
CLDR	Caldiran	0.81	56	PG	Pg	22 06 34.4	+0.2
CLDR	Caldiran	0.81	56	*i* P	Pg	22 06 33.7	-0.5
CLDR				*i* S	Sb	22 06 46.1	+0.5
CLDR	Caldiran	0.81	56	P	Pg	22 06 33.7	-0.5
CLDR	Caldiran	0.81	56	*e*Pg	Pg	22 06 34.4	+0.2
CLDR				S	Sb	22 06 46.1	+0.5
GURO	Guroymak-BITLI	0.81	260	PG	Pg	22 06 33.9	-0.4
GURO	Guroymak-BITLI	0.81	260	*e*Pg	Pg	22 06 33.9	-0.4
AGRB	Hanur-Agry	0.88	357	PG	Pg	22 06 35.7	+0.2
AGRB				SG	Sb	22 06 48.5	+0.9
AGRB	Hanur-Agry	0.88	357	*e*Pg	Pg	22 06 35.7	+0.2
AGRB				*e*Sg	Sb	22 06 48.5	+0.9

*ISK **31** 22:06:51.9, 38°.67N×43°.04E, h14^{km}±4^{km}, ML2.7/3*
*DDA **31** 22:06:52.1, 38°.66N×43°.01E, h7^{km}, Ml3.3*
*CSEM **31** 22:06:52.5±0.2, 38°.67N×43°.02E, h10^{km}, ML3.3, Error ellipse: s-maj=4.0km s-min=4.0km az=52.0*
ISC 31 22:06:51.9±1.0, **38°.63N**±0°.03×**43°.03E**±0°.03, **h28**^{km}±7^{km}, **n17, σ0^{s}.38**/31, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	Van	0.28	96	PG	Pb	22 06 58.9	-0.1
VANB				SG	Sb	22 07 04.3	+0.4
VANB	Van	0.28	96	*e*Pg	Pb	22 06 58.9	-0.1
VANB				*e*Sg	Sb	22 07 04.3	+0.4
ADCV	BITLIS_Adilcev	0.30	307	*i* P	Pb	22 06 59.2	-0.1
ADCV				*i* S	Sb	22 07 03.9	-0.5
ADCV	BITLIS_Adilcev	0.30	307	P	Pb	22 06 59.2	-0.1
ADCV				S	Sb	22 07 03.9	-0.5
GEVA	Gevas	0.31	176	*i* P	Pb	22 06 59.4	-0.1
GEVA				*i* S	Sn	22 07 06.0	-0.5
GEVA	Gevas	0.31	176	P	Pb	22 06 59.4	-0.1
GEVA				S	Sn	22 07 06.0	-0.5
VMUR	Van-Muradiye	0.56	49	*i* P	Pb	22 07 02.9	-0.4
VMUR				*i* S	Sb	22 07 11.6	+0.5
VMUR	Van-Muradiye	0.56	49	P	Pb	22 07 02.9	-0.4
VMUR				S	Sb	22 07 11.6	+0.5
GURO	Guroymak-BITLI	0.79	265	PG	Pn	22 07 07.8	+0.6
GURO	Guroymak-BITLI	0.79	265	*e*Pg	Pn	22 07 07.8	+0.6
TUTA	Tutak	0.79	348	*i* P	Pb	22 07 07.0	-0.3
TUTA				*i* S	Sb	22 07 17.6	-0.2
TUTA	Tutak	0.79	348	P	Pb	22 07 07.0	-0.3
TUTA				S	Sb	22 07 17.6	-0.2
CLDR	Caldiran	0.86	53	PG	Pn	22 07 08.2	-0.2
CLDR	Caldiran	0.86	53	*i* P	Pn	22 07 08.0	-0.4
CLDR				*i* S	Sn	22 07 20.6	+0.4
CLDR	Caldiran	0.86	53	*e*Pg	Pn	22 07 08.2	-0.2
CLDR				S	Sn	22 07 20.6	+0.4
AGRB	Hanur-Agry	0.95	358	PG	Pb	22 07 09.8	-0.1
AGRB				SG	Sn	22 07 22.6	+0.3
AGRB	Hanur-Agry	0.95	358	*e*Pg	Pb	22 07 09.8	-0.1
AGRB				*e*Sg	Sn	22 07 22.6	+0.3

*ISK **31** 22:07:37.8, 38°.69N×43°.05E, h3^{km}, ML3.1/10*
*DDA **31** 22:07:38.0, 38°.68N×43°.02E, h5^{km}, Ml3.5*
*CSEM **31** 22:07:39.2±0.1, 38°.69N×43°.06E, h5^{km}, ML3.5, Error ellipse: s-maj=3.3km s-min=2.6km az=126.0*
ISC 31 22:07:39.1±1.0, **38°.68N**±0°.01×**43°.04E**±0°.02, **h6**^{km}±9^{km}, **n92, σ0^{s}.88**/132, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADCV	BITLIS_Adilcev	0.28	298	*i* P	Pb	22 07 45.4	-1.3
ADCV				*i* S	Sb	22 07 51.0	-0.7
ADCV	BITLIS_Adilcev	0.28	298	P	Pb	22 07 45.4	-1.3
ADCV				S	Sb	22 07 51.0	-0.7
VANB	Van	0.29	107	PG	Pg	22 07 44.9	+0.2
VANB				SG	Sb	22 07 50.4	-1.4
VANB	Van	0.29	107	*e*Pg	Pg	22 07 44.9	+0.2
VANB				*e*Sg	Sb	22 07 50.4	-1.4
GEVA	Gevas	0.37	178	*i* P	Pg	22 07 45.7	-0.5
GEVA				*i* S	Sg	22 07 51.7	+0.6
GEVA	Gevas	0.37	178	P	Pg	22 07 45.7	-0.5
GEVA				S	Sg	22 07 51.7	+0.6
ERCV	ERCIS-VAN	0.41	34	PG	Pg	22 07 46.5	-0.7
ERCV	ERCIS-VAN	0.41	34	*e*Pg	Pg	22 07 46.5	-0.7
VMUR	Van-Muradiye	0.52	53	*i* P	Pg	22 07 48.8	-0.3
VMUR				*i* S	Sb	22 07 57.7	-0.9
VMUR	Van-Muradiye	0.52	53	P	Pg	22 07 48.8	-0.3
TUTA	Tutak	0.74	346	*i* P	Pg	22 07 53.0	-0.4
TUTA				*i* S	Sg	22 08 03.4	+0.2
TUTA	Tutak	0.74	346	P	Pg	22 07 53.0	-0.4
TUTA				S	Sg	22 08 03.3	+0.2
GURO	Guroymak-BITLI	0.80	261	PG	Pg	22 07 53.8	-0.6
GURO				SG	Sg	22 08 04.3	-0.5
GURO	Guroymak-BITLI	0.80	261	*e*Pg	Pg	22 07 53.8	-0.6
GURO				*e*Sg	Sg	22 08 04.3	-0.5
CLDR	Caldiran	0.83	56	PG	Pg	22 07 53.9	-1.1
CLDR				SG	Sb	22 08 06.5	-1.0
CLDR	Caldiran	0.83	56	*i* P	Pg	22 07 53.7	-1.3
CLDR				*i* S	Sb	22 08 06.9	-0.6
CLDR	Caldiran	0.83	56	*e*Pg	Pg	22 07 53.9	-1.1
CLDR				*e*Sg	Sb	22 08 06.5	-1.0
AGRB	Hanur-Agry	0.90	358	PG	Pg	22 07 55.9	-0.4
AGRB				SG	Sg	22 08 08.3	+0.3
AGRB	Hanur-Agry	0.90	358	*e*Pg	Pg	22 07 55.9	-0.4
AGRB				*e*Sg	Sg	22 08 08.3	+0.3
EKAR	Karacoban	0.95	307	*i* P	Pb	22 07 58.2	0.0
EKAR				*i* S	Sn	22 08 14.4	+1.0
EKAR	Karacoban	0.95	307	P	Pb	22 07 58.2	0.0
DYDN	Diyadin	1.00	30	*i* P	Pg	22 07 58.1	-0.2
DYDN				*i* S	Sb	22 08 11.6	-1.0
DYDN	Diyadin	1.00	30	P	Pg	22 07 58.1	-0.2
DYDN				S	Sb	22 08 11.6	-1.0
SRTM	Siirt_Merkez	1.11	232	*i* P	Pb	22 08 00.4	-0.4
SRTM				*i* S	Sn	22 08 16.3	-0.8
SRTM	Siirt_Merkez	1.11	232	P	Pb	22 08 00.4	-0.4
SRTM				S	Sn	22 08 16.3	-0.8
HAKT	HAKKARI	1.24	155	*i* P	Pg	22 08 00.6	-2.2
HAKT				*i* S	Sn	22 08 21.8	+1.5
EATA	Eleskirt	1.26	340	*i* P	Pg	22 08 02.5	-0.7
EATA				*i* S	Sn	22 08 21.4	+0.5
EATA	Eleskirt	1.26	340	P	Pg	22 08 02.5	-0.7
EATA				S	Sn	22 08 21.4	+0.5
SIRT	Sirnak	1.27	202	PN	Pg	22 08 03.1	-0.3
SIRT	Sirnak	1.27	202	*e*Pn	Pg	22 08 03.1	-0.3
SIRN	S˜–rnak	1.28	203	*i* P	Pg	22 08 04.1	+0.5
SIRN				*i* S	Sn	22 08 23.0	+1.9
SIRN	S˜–rnak	1.28	203	P	Pg	22 08 04.1	+0.5
SIRN				S	Sn	22 08 23.0	+1.9
VRTB	Varto-Mus	1.33	292	PN	Pn	22 08 03.9	-0.4
VRTB	Varto-Mus	1.33	292	*i* P	Pg	22 08 04.2	-0.3
VRTB				*i* S	Sn	22 08 22.9	+0.5
VRTB	Varto-Mus	1.33	292	*e*Pn	Pn	22 08 03.9	-0.4
VRTB	Varto-Mus	1.33	292	P	Pg	22 08 04.2	-0.3
VRTB				S	Sn	22 08 22.9	+0.5
IGDI	IGDIR	1.44	34	*i* P	Pn	22 08 05.6	-0.2
IGDI				*i* S	Sg	22 08 27.3	+2.1
CUKT	Cukurca	1.50	162	PN	Pn	22 08 06.2	-0.5
CUKT	Cukurca	1.50	162	*i* P	Pb	22 08 07.0	-0.4
CUKT				*i* S	Sg	22 08 29.6	+2.4
CUKT	Cukurca	1.50	162	*e*Pn	Pn	22 08 06.2	-0.5
CUKT	Cukurca	1.50	162	P	Pb	22 08 07.0	-0.4
BNGL	BINGOL	1.50	281	*i* P	Pn	22 08 06.7	-0.1
BNGL				*i* S	Sg	22 08 28.0	+0.7
SVAN	Silvan-Diyarba	1.54	251	PN	Pb	22 08 07.7	-0.3
SVAN	Silvan-Diyarba	1.54	251	*i* P	Pb	22 08 07.7	-0.3
SVAN				*i* S	Sg	22 08 29.4	+0.9
SVAN	Silvan-Diyarba	1.54	251	P	Pb	22 08 07.7	-0.3
SVAN				S	Sg	22 08 29.4	+0.9
BTMN	Batman	1.60	241	*i* P	Pb	22 08 09.1	0.0
BTMN				*i* S	Sg	22 08 31.2	+0.8
BTMN	Batman	1.60	241	P	Pb	22 08 09.1	0.0
BTMN				S	Sg	22 08 31.2	+0.8
TASB	TASBURUN-IGDIR	1.60	35	PN	Pb	22 08 08.2	-0.9
TASB	TASBURUN-IGDIR	1.60	35	*e*Pn	Pb	22 08 08.2	-0.9
HOMI	Horasan	1.62	328	*i* P	Pb	22 08 09.4	-0.3
DIGO	Kars	1.75	8	*i* P	Pg	22 08 11.9	-0.8
DIGO				*i* S	Sg	22 08 37.1	+1.6
DIGO	Kars	1.75	8	P	Pg	22 08 11.9	-0.8
ERZM	Erzurum	1.79	314	*i* P	Pb	22 08 11.7	-0.7
ERZM	Erzurum	1.79	314	P	Pb	22 08 11.7	-0.7
ECAT	Cat-ERZURUM	1.85	301	*i* P	Pb	22 08 12.5	-1.0
ECAT				*i* S	Sg	22 08 39.7	+1.0
ECAT	Cat-ERZURUM	1.85	301	P	Pb	22 08 12.5	-1.0
BNGB	Bingˆ¶l	1.87	280	PN	Pn	22 08 12.2	+0.4
KARS	Kars	1.95	1	PN	Pn	22 08 12.5	-0.4
KARS	Kars	1.95	1	*e*Pn	Pn	22 08 12.5	-0.4
SENK	Senkaya-Erzuru	1.96	344	PN	Pn	22 08 12.9	-0.1
SENK	Senkaya-Erzuru	1.96	344	*e*Pn	Pn	22 08 12.9	-0.1
GNI	Garni	1.97	41	PN	Pn	22 08 13.3	0.0
GNI	Garni	1.97	41	*e*Pn	Pn	22 08 13.3	0.0
BINT	Bingol	2.00	276	*e*Pn	Pn	22 08 12.2	-1.4
EAK	Akyaka	2.05	12	*i* P	Pg	22 08 18.7	+0.2
EAK				*i* S	Sg	22 08 49.3	+4.2
YEDI	Yedisu-Bingol	2.08	292	PN	Pn	22 08 14.8	0.0
YEDI	Yedisu-Bingol	2.08	292	*e*Pn	Pn	22 08 14.8	0.0
HANI	Diyarbakir_Han	2.09	264	*i* P	Pb	22 08 17.6	+0.2
HANI				*i* S	Sg	22 08 45.7	-0.5
HANI	Diyarbakir_Han	2.09	264	P	Pb	22 08 17.6	+0.2
MARD	Mardin	2.25	233	*i* P	Pb	22 08 19.1	-1.1
MARD				*i* S	Sb	22 08 48.1	-0.1
DIY	Diyarbakir	2.35	251	*e*Pn	Pn	22 08 19.3	+1.0
MAZI	Mazidag	2.38	240	PN	Pn	22 08 18.9	+0.1
MAZI	Mazidag	2.38	240	*e*Pn	Pn	22 08 18.9	+0.1
DYBB	Diyarbakir	2.39	253	PN	Pn	22 08 19.3	+0.4
DIYA	Diyarbakir	2.42	253	*i* P	Pn	22 08 19.8	+0.6
DIYA	Diyarbakir	2.42	253	P	Pn	22 08 19.8	+0.6
DDEM	Demirkent	2.42	336	*i* P	Pb	22 08 22.7	-0.5
DAGI	Agillar	2.55	340	*i* P	Pn	22 08 21.6	+0.5
DBAD	Bademkaya	2.56	337	*i* P	Pb	22 08 26.1	+0.7
TNCL	Tunceli-Merkez	2.76	280	*i* P	Pb	22 08 29.3	+0.3
EUZM	Uzumlu	2.79	293	*e*P	Pb	22 08 28.6	-0.8
BAYT	Ayd˜–ntepe-Bay	2.82	308	PN	Pn	22 08 25.2	+0.3
BAYT	Ayd˜–ntepe-Bay	2.82	308	*e*Pn	Pn	22 08 25.2	+0.3
PTK	Pertek	2.86	275	PN	Pn	22 08 25.8	+0.4
PTK	Pertek	2.86	275	*e*Pn	Pn	22 08 25.8	+0.4
SVRC	Sivrice-ELAZID	2.94	265	PN	Pn	22 08 27.3	+0.7
SVRC	Sivrice-ELAZID	2.94	265	*e*Pn	Pn	22 08 27.3	+0.7
BCA	Borcka	2.97	339	PN	Pn	22 08 27.3	+0.5
BCA	Borcka	2.97	339	*e*Pn	Pn	22 08 27.3	+0.5
CHOM	Cayeli-Rize	2.98	325	PN	Pn	22 08 27.8	+0.8
CHOM	Cayeli-Rize	2.98	325	*e*Pn	Pn	22 08 27.8	+0.8
KELT	Kelkit	3.28	298	*i* P	Pb	22 08 39.4	+1.6

*ISK **31** 22:10:07.6, 38°.67N×43°.04E, h5^{km}, ML2.2/4*
*ISCJB **31** 22:10:08.5±0.5, 38°.69N±0°.03×43°.07E±0°.04, h8^{km}±9^{km}, Error ellipse: s-maj=5.8km s-min=4.7km az=43.9*
*CSEM **31** 22:10:08.4±0.2, 38°.69N×43°.05E, h5^{km}, ML2.5, Error ellipse: s-maj=5.5km s-min=3.9km az=138.0*
*DDA **31** 22:10:08.3, 38°.67N×43°.07E, h7^{km}, Ml2.5*
ISC 31 22:10:08.7±1.1, **38°.69N**±0°.03×**43°.05E**±0°.03, **h10**^{km}±11^{km}, **n20, σ0^{s}.63**/33, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	Van	0.28	109	PG	Pg	22 10 14.5	+0.1
VANB	Van	0.28	109	*e*Pg	Pg	22 10 14.5	+0.1
ADCV	BITLIS_Adilcev	0.28	295	*i* P	Pg	22 10 14.3	-0.2
ADCV				*i* S	Sb	22 10 20.6	-0.4
ADCV	BITLIS_Adilcev	0.28	295	P	Pg	22 10 14.3	-0.2
GEVA	Gevas	0.37	179	*i* P	Pg	22 10 15.2	-1.0
GEVA				*i* S	Sg	22 10 21.4	+0.3
GEVA	Gevas	0.37	179	P	Pg	22 10 15.2	-1.0
GEVA				S	Sg	22 10 21.4	+0.3
VMUR	Van-Muradiye	0.51	53	*e*P	Pg	22 10 18.3	-0.3
VMUR				*i* S	Sb	22 10 27.0	-0.3
VMUR	Van-Muradiye	0.51	53	P	Pg	22 10 18.3	-0.3
VMUR				S	Sb	22 10 27.0	-0.3
TUTA	Tutak	0.74	345	*i* P	Pg	22 10 22.8	-0.2
TUTA				*i* S	Sg	22 10 32.9	+0.2
TUTA	Tutak	0.74	345	P	Pg	22 10 22.8	-0.2
TUTA				S	Sg	22 10 32.9	+0.2
GURO	Guroymak-BITLI	0.81	261	PG	Pg	22 10 23.4	-1.0
GURO	Guroymak-BITLI	0.81	261	*e*Pg	Pg	22 10 23.4	-1.0
CLDR	Caldiran	0.81	56	PG	Pg	22 10 24.3	-0.1
CLDR				SG	Sb	22 10 36.2	-0.1
CLDR	Caldiran	0.81	56	*e*P	Pg	22 10 22.9	-1.5
CLDR				*i* S	Sb	22 10 35.9	-0.4
CLDR	Caldiran	0.81	56	P	Pg	22 10 22.9	-1.5
CLDR	Caldiran	0.81	56	*e*Pg	Pg	22 10 24.3	-0.1
CLDR				S	Sb	22 10 35.9	-0.4
CLDR				*e*Sg	Sb	22 10 36.2	-0.1
AGRB	Hanur-Agry	0.89	357	PG	Pg	22 10 25.4	-0.5
AGRB	Hanur-Agry	0.89	357	*e*Pg	Pg	22 10 25.4	-0.5
SRTM	Siirt_Merkez	1.13	232	*i* P	Pn	22 10 31.4	+0.7
SRTM				*i* S	Sb	22 10 45.5	+0.3
SRTM	Siirt_Merkez	1.13	232	P	Pn	22 10 31.4	+0.7
SRTM				S	Sb	22 10 45.5	+0.3

*ISCJB **31** 22:10:49.9±0.7, 38°.64N±0°.04×43°.05E±0°.06, h29^{km}±5^{km}, Error ellipse: s-maj=7.6km s-min=6.8km az=31.0*
*CSEM **31** 22:10:49.6±0.3, 38°.64N×43°.05E, h20^{km}, ML2.0, Error ellipse: s-maj=6.0km s-min=5.2km az=147.0*
*ISK **31** 22:10:49.2, 38°.67N×43°.06E, h20^{km}, ML2.0/2*
*DDA **31** 22:10:50.1, 38°.67N×43°.06E, h7^{km}, Ml2.6*
ISC 31 22:10:49.7±1.0, **38°.65N**±0°.04×**43°.07E**±0°.04, **h28**^{km}±9^{km}, **n18, σ0^{s}.72**/32, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	Van	0.26	101	PG	Pb	22 10 56.6	+0.1
VANB	Van	0.26	101	*e*Pg	Pb	22 10 56.6	+0.1
ADCV	BITLIS_Adilcev	0.31	301	*i* P	Pb	22 10 57.0	-0.4
ADCV				*i* S	Sb	22 11 02.7	+0.1
ADCV	BITLIS_Adilcev	0.31	301	P	Pb	22 10 57.0	-0.4
ADCV				S	Sb	22 11 02.7	+0.1
GEVA	Gevas	0.33	181	*i* P	Pb	22 10 56.9	-0.8
GEVA				*i* S	Sb	22 11 03.8	+0.8
GEVA	Gevas	0.33	181	P	Pb	22 10 56.8	-0.8
GEVA				S	Sb	22 11 03.8	+0.8
VMUR	Van-Muradiye	0.52	49	*i* P	Pb	22 10 58.8	-1.8
VMUR				*i* S	Sn	22 11 09.0	-0.6
VMUR	Van-Muradiye	0.52	49	P	Pb	22 10 58.8	-1.8
VMUR				S	Sn	22 11 09.0	-0.6
TUTA	Tutak	0.78	345	*e*P	Pb	22 11 04.8	-0.2
TUTA				*i* S	Sb	22 11 15.2	-0.1
TUTA	Tutak	0.78	345	P	Pb	22 11 04.8	-0.2
TUTA				S	Sb	22 11 15.2	-0.1
GURO	Guroymak-BITLI	0.82	264	PG	Pn	22 11 05.4	-0.1
GURO	Guroymak-BITLI	0.82	264	*e*Pg	Pn	22 11 05.4	-0.1
CLDR	Caldiran	0.83	53	PG	Pn	22 11 05.3	-0.5
CLDR				SG	Sn	22 11 17.5	+0.3
CLDR	Caldiran	0.83	53	*i* P	Pb	22 11 06.5	+0.9
CLDR				*i* S	Sn	22 11 18.0	+0.8
CLDR	Caldiran	0.83	53	*e*Pg	Pn	22 11 05.3	-0.5
CLDR	Caldiran	0.83	53	P	Pb	22 11 06.6	+0.9
CLDR				*e*Sg	Sn	22 11 17.5	+0.3
CLDR				S	Sn	22 11 18.0	+0.8
AGRB	Hanur-Agry	0.93	356	PG	Pn	22 11 07.5	+0.3
AGRB				SG	Sn	22 11 20.3	+0.6
AGRB	Hanur-Agry	0.93	356	*e*Pg	Pn	22 11 07.5	+0.3
AGRB				*e*Sg	Sn	22 11 20.3	+0.6

MAN 31 22:12:49.4, 15°.47N×119°.35E, h15^{km}, mb4.8, ML3.7, MS3.7, 1C, Luzon

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SCZP	Santa Cruz	0.62	61	*e*P	Pg	22 13 01.6	0.0
SCZP				*e*S	Sg	22 13 08.2	-1.6
BOLP	Bolinao	1.05	31	*e*P	Pb	22 13 07.2	-2.1
BOLP				*e*S	Sb	22 13 20.4	-2.6
PCPH	Palayan	1.69	87⇑	*e*P	Pn	22 13 18.2	-0.1
PCPH				*e*S	Sn	22 13 37.0	-2.7
BALP	Baler	2.16	83	*e*P	Pn	22 13 25.4	+0.5
BALP				*e*S	Sn	22 13 52.3	+0.9
ABRA	Dolores	2.53	31	*e*P	Pn	22 13 30.2	+0.3
ABRA				*e*S	Sn	22 14 02.8	+2.3
APYP	Conner	2.99	37	*e*P	Pb	22 13 39.9	-2.5
APYP				*e*S	Sn	22 14 13.2	+1.3

*ISK **31** 22:19:42.8, 38°.67N×43°.06E, h20^{km}±3^{km}, ML1.8/2*
*CSEM **31** 22:19:43.8±0.2, 38°.67N×43°.04E, h10^{km}, ML1.8, Error ellipse: s-maj=4.7km s-min=4.4km az=159.0*
*ISCJB **31** 22:19:44.0±0.6, 38°.67N±0°.04×43°.03E±0°.05, h13^{km}±7^{km}, Error ellipse: s-maj=7.3km s-min=5.1km az=39.5*
*DDA **31** 22:19:44.0, 38°.67N×43°.10E, h7^{km}, Ml2.5*
ISC 31 22:19:43.8±1.1, **38°.66N**±0°.03×**43°.04E**±0°.03, **h17**^{km}±11^{km}, **n18, σ0^{s}.58**/32, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	Van	0.28	103	PG	Pg	22 19 50.1	+0.1
VANB				SG	Sb	22 19 55.4	+0.3
VANB	Van	0.28	103	*e*Pg	Pg	22 19 50.1	+0.1
VANB				*e*Sg	Sb	22 19 55.4	+0.3
ADCV	BITLIS_Adilcev	0.29	301	*i* P	Pb	22 19 50.7	0.0
ADCV				*i* S	Sb	22 19 56.2	+0.9
ADCV	BITLIS_Adilcev	0.29	301	P	Pb	22 19 50.7	0.0
ADCV				S	Sb	22 19 56.2	+0.9
GEVA	Gevas	0.35	177	*i* P	Pg	22 19 50.8	-0.4
GEVA				*i* S	Sb	22 19 57.1	+0.1
GEVA	Gevas	0.35	177	P	Pg	22 19 50.8	-0.4
GEVA				S	Sb	22 19 57.1	+0.1
VMUR	Van-Muradiye	0.53	52	*i* P	Pg	22 19 54.2	-0.3
VMUR				*i* S	Sb	22 20 02.8	+0.5
VMUR	Van-Muradiye	0.53	52	P	Pg	22 19 54.2	-0.3
VMUR				S	Sb	22 20 02.8	+0.5
TUTA	Tutak	0.76	347	*i* P	Pg	22 19 58.2	-0.6
TUTA				*i* S	Sg	22 20 09.0	+0.1
TUTA	Tutak	0.76	347	P	Pg	22 19 58.2	-0.6
TUTA				S	Sg	22 20 09.0	+0.1
GURO	Guroymak-BITLI	0.80	262	PG	Pg	22 19 58.9	-0.5
GURO	Guroymak-BITLI	0.80	262	*e*Pg	Pg	22 19 58.9	-0.5
CLDR	Caldiran	0.84	55	PG	Pg	22 19 59.2	-1.0
CLDR	Caldiran	0.84	55	*i* P	Pg	22 19 59.5	-0.7
CLDR				*i* S	Sb	22 20 12.0	+0.8
CLDR	Caldiran	0.84	55	*e*Pg	Pg	22 19 59.2	-1.0
CLDR	Caldiran	0.84	55	P	Pg	22 19 59.5	-0.7
CLDR				S	Sb	22 20 12.0	+0.8
AGRB	Hanur-Agry	0.92	358	PG	Pg	22 20 01.1	-0.6
AGRB				SG	Sb	22 20 13.9	+0.5
AGRB	Hanur-Agry	0.92	358	*e*Pg	Pg	22 20 01.1	-0.6
AGRB				*e*Sg	Sb	22 20 13.9	+0.5

*ISK **31** 22:22:51.7, 38°.68N×43°.03E, h5^{km}, ML2.3/2*
*ISCJB **31** 22:22:52.9±0.5, 38°.69N±0°.03×43°.04E±0°.04, h9^{km}±6^{km}, Error ellipse: s-maj=5.1km s-min=4.2km az=135.8*
*CSEM **31** 22:22:52.4±0.2, 38°.69N×43°.05E, h15^{km}, ML2.8, Error ellipse: s-maj=4.5km s-min=3.6km az=140.0*
*DDA **31** 22:22:52.5, 38°.68N×43°.04E, h7^{km}, Ml2.8*
ISC 31 22:22:52.7±1.0, **38°.69N**±0°.02×**43°.05E**±0°.03, **h13**^{km}±10^{km}, **n20, σ0^{s}.52**/37, **Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
ADCV	BITLIS_Adilcev	0.28	296	*i* P	Pb	22 22 59.3	-0.4
ADCV				*i* S	Sb	22 23 04.8	+0.4
ADCV	BITLIS_Adilcev	0.28	296	P	Pb	22 22 59.3	-0.4
ADCV				S	Sb	22 23 04.8	+0.4
VANB	Van	0.28	109	PG	Pg	22 22 58.7	+0.1
VANB				SG	Sb	22 23 04.1	-0.4
VANB	Van	0.28	109	*e*Pg	Pg	22 22 58.7	+0.1
VANB				*e*Sg	Sb	22 23 04.1	-0.4
GEVA	Gevas	0.37	178	*i* P	Pg	22 22 59.4	-0.8
GEVA				*i* S	Sg	22 23 06.0	+0.6
GEVA	Gevas	0.37	178	P	Pg	22 22 59.4	-0.8
GEVA				S	Sg	22 23 05.9	+0.6
VMUR	Van-Muradiye	0.51	53	*i* P	Pg	22 23 02.5	-0.3
VMUR				*i* S	Sb	22 23 11.2	+0.1
VMUR	Van-Muradiye	0.51	53	P	Pg	22 23 02.5	-0.3
VMUR				S	Sb	22 23 11.2	+0.1

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
TUTA	Tutak	0.74	346	*i* P	Pg	22 23 06.9	-0.1
TUTA				*i* S	Sg	22 23 17.0	+0.2
TUTA	Tutak	0.74	346	P	Pg	22 23 06.9	-0.1
TUTA				S	Sg	22 23 17.0	+0.2
GURO	Guroymak-BITLI	0.81	261	PG	Pg	22 23 07.6	-0.7
GURO	Guroymak-BITLI	0.81	261	*e*Pg	Pg	22 23 07.6	-0.7
CLDR	Caldiran	0.82	56	PG	Pg	22 23 08.1	-0.5
CLDR				SG	Sb	22 23 20.3	+0.3
CLDR	Caldiran	0.82	56	*i* P	Pg	22 23 07.8	-0.8
CLDR				*i* S	Sb	22 23 20.9	+0.9
CLDR	Caldiran	0.82	56	P	Pg	22 23 07.8	-0.8
CLDR	Caldiran	0.82	56	*e*Pg	Pg	22 23 08.1	-0.5
CLDR				*e*Sg	Sb	22 23 20.3	+0.3
AGRB	Hanur-Agry	0.89	357	PG	Pg	22 23 09.4	-0.5
AGRB				SG	Sb	22 23 22.1	+0.1
AGRB	Hanur-Agry	0.89	357	*e*Pg	Pg	22 23 09.4	-0.5
AGRB				*e*Sg	Sb	22 23 22.1	+0.1
SRTM	Siirt_Merkez	1.12	232	*i* P	Pn	22 23 14.6	+0.4
SRTM				*i* S	Sb	22 23 29.4	+0.8
SRTM	Siirt_Merkez	1.12	232	P	Pn	22 23 14.6	+0.4
SRTM				S	Sb	22 23 29.4	+0.8

KRSC 31 22:26:35.4±1.6,48°.76N×156°.52E,h15^{km}±23^{km},ML3.8, East of Kuril Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
PAU	Pauzhetka	2.72	4	*e*P	Pn	22 27 20.9	+2.4
PAU				*e*S	Sb	22 27 54.0	-2.8
KDTR	Khodutka, Kamc	3.21	17	*e*P	Pn	22 27 28.3	+3.1
KDTR				*e*S	Sb	22 28 07.6	-3.4
ASAK	Asacha	3.73	13	*e*P	Pn	22 27 35.6	+3.1
MTVR	Mutnovka	3.88	15	*e*P	Pn	22 27 37.1	+2.6
APC	Apacha	4.19	5	P	Pn	22 27 42.2	+3.5
UGLR	Uglovaya	4.69	17	*e*P	Pn	22 27 50.6	+5.0
AVH	Avacha	4.72	16	*e*P	Pn	22 27 51.6	+5.5
KRX	Arik	4.80	15	*e*P	Pn	22 27 52.2	+5.0
SPN	Mys Shipunski	4.88	26	*e*P	Pn	22 27 52.1	+4.0
SPN				*e*S	Sn	22 28 48.7	+4.5
GNL	Ganaly	5.02	10	*e*P	Pn	22 27 54.0	+3.8
KBTR	Krutoberegovo	8.39	25	*e*P	Pn	22 28 40.9	+4.6

*IDC **31** 22:34:37.9±0.6, 14°.40S×76°.10W, h0^{km}, mb4.2/20, mb1 4.3/24, mb1mx4.2/44, mbtmp4.1/24, ML3.4/4, MS3.6/11, Ms1 3.6/11, ms1mx3.4/36, Error ellipse: s-maj=20.6km s-min=11.4km az=64.0*

*ISCJB **31** 22:34:39.9±0.4, 14°.51S±0°.05×76°.12W±0°.06, h29^{km}, mb4.3/32, MS3.8/8, Error ellipse: s-maj=10.2km s-min=4.8km az=147.2*

*NEIC **31** 22:34:42.7±0.4, 14°.39S×76°.04W, h35^{km}, mb4.5/14, ML4.5(ARE), Error ellipse: s-maj=13.0km s-min=6.1km az=52.0*

NEIC Felt [II] at Ica and Pisco.

ISC 31 22:34:41.6±0.5**,14°.40S**±0°.05×**76°.18W**±0°.08**,h29**^{km}**,n83,** σ**2^s.01**/79**,mb4.4**/31**,MS3.6**/8**,1C,Near coast of Peru**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
NNA	Nana	2.48	345	Pn	Pn	22 35 20.2	+0.1
	28nm,0.3s,baz=163,slow=13,SNR=22						
NNA				Pg	Pb	22 35 24.3	-1.2
	30nm,0.3s,baz=171,slow=16,SNR=28						
NNA				Sn	Sb	22 35 53.5	-2.2
	89nm,0.3s,baz=229,slow=13,SNR=7.4						
NNA	Nana	2.48	345	*e*Pn	Pb	22 35 23.1	-2.5
NNA				*e*S	Sn	22 35 52.4	+3.0
ATAH	Atahualpa	7.54	343	Pn	Pn	22 36 29.0	-0.9
	0.3nm,0.3s,baz=272,slow=16,SNR=2.1						
ATAH				Sn	Sn	22 37 59.3	+4.6
	0.5nm,0.3s,baz=319,slow=20,SNR=1.8						
ATAH				LR	LR	22 38 39.2	
	comp=Z,107nm,22.0s,baz=184,slow=32						
MNMC	Minye Minye	7.87	128	*e*Pn	Pn	22 36 32.8	-1.6
LPAZ	La Paz	7.99	105	Pn	Pn	22 36 33.2	-3.1
	0.1nm,0.3s,baz=282,slow=6.2,SNR=3.9						
LPAZ				LR	LR	22 40 22.7	
	comp=Z,266nm,19.9s,baz=288,slow=44						
LPAZ	La Paz	7.99	105	*e*Pn	Pn	22 36 33.6	-2.7
PB11	IPOC Station P	8.21	131	*e*Pn	Pn	22 36 37.3	-1.6
PB01	IPOC Station P	9.18	137	*e*Pn	Pn	22 36 51.4	-0.9
PB01				*e*Sn	Sn	22 38 29.5	-5.2
PB04	IPOC Station P	9.75	145	*e*Pn	Pn	22 36 58.1	-1.9
SAML	Samuel	13.83	68	*e*Pn	Pn	22 37 54.8	-0.9
SAML				*e*S	Sn	22 40 33.4	+5.0
SIV	San Ignacio	14.67	98	Pn	Pn	22 38 04.9	-2.4
	0.4nm,0.3s,baz=278,slow=15,SNR=11						
SIV				LR	LR	22 44 31.3	
	comp=Z,716nm,19.3s,baz=288,slow=41						
OTAV	Otavalo	14.71	351	Pn	Pn	22 38 06.8	-1.4
	5.9nm,0.8s						
OTAV				*e*S	S	22 41 00.8	-8.1
ROSC	El Rosal	19.20	6	LR	LR	22 47 30.9	
	comp=Z,134nm,19.2s,baz=217,slow=40						
RUSC	La Rusia	20.39	9	*e*P	Pn	22 39 19.4	+0.4
	4.7nm,0.9s						
PTGA	Pitinga	21.01	51	P	P	22 39 23.9	+0.9
	9.3nm,0.8s,baz=224,slow=12,SNR=17						
PTGA				Lg	Lg	22 45 35.6	
	2.2nm,0.3s,baz=330,slow=20,SNR=3.7						
CPUP	Villa Florida	21.26	127	P	P	22 39 25.6	+0.1
	8.4nm,1.1s,baz=303,slow=11,SNR=7.3						
CPUP	Villa Florida	21.26	127	*e*P	P	22 39 25.1	-0.5
	14nm,1.2s						
SDV	Santo Domingo	23.78	14	P	P	22 39 52.3	+0.2
	12nm,0.5s,baz=190,slow=7.7,SNR=4.7						
SDV	Santo Domingo	23.78	14	*e*P	P	22 39 52.2	+0.2
	15nm,0.6s						
JTS	JuntasAbangare	26.02	340	LR	LR	22 50 17.9	
	comp=Z,126nm,18.6s,baz=219,slow=36						
PLCA	Paso Flores	26.70	170	P	P	22 40 18.5	+0.1
	1.3nm,0.8s,baz=6.3,slow=12,SNR=3.4						
BDFB	Brasilia	27.22	96	P	P	22 40 23.1	-0.3
	3.2nm,0.7s,baz=257,slow=12,SNR=4.9						
BDFB				LR	LR	22 52 04.2	
	comp=Z,398nm,18.3s,baz=212,slow=38						
RPN	Rapa Nui	33.38	242	LR	LR	22 50 54.6	
	comp=Z,95nm,21.2s,baz=74,slow=29						
W50A	Signal Mountai	50.08	350	*e*P	P	22 43 32.4	-1.6
	9.9nm,0.9s						
TXAR	Lajitas Array	50.94	329	P	P	22 43 42.2	+1.6
	0.7nm,0.6s,baz=146,slow=8.7,SNR=11						
TXAR				LR	LR	23 03 47.2	
	comp=Z,53nm,18.1s,baz=0.0,slow=34						
TX31	Lajitas Ar. Si	50.94	329	*e*P	P	22 43 40.8	+0.1
ANMO	Albuquerque	56.87	330	P	P	22 44 24.9	+0.9
	0.7nm,0.4s,baz=108,slow=6.4,SNR=4.4						
SDCO	Great Sand Dun	58.73	333	*e*P	P	22 44 34.8	-2.4
	1.6nm,0.9s						
DUG	Dugway, Tooele	64.10	329	*e*P	P	22 45 11.6	-1.7
	3.4nm,0.7s						
R11A	Troy Canyon, C	64.15	326	*e*P	P	22 45 14.4	+0.8
	1.8nm,0.9s						
HWUT	Hardware Ranch	64.60	331	*e*P	P	22 45 13.5	-3.0
	4.3nm,1.0s						
PDAR	Pinedale Array	64.61	333	P	P	22 45 16.8	+0.1
	0.6nm,0.8s,baz=161,slow=6.0,SNR=4.0						
PDAR	Pinedale Array	64.61	333	*e*P	P	22 45 16.0	-0.7
BW06	Boulder Array	64.61	333	*e*P	P	22 45 14.9	-1.8
	11nm,0.8s						
NV01	Mina Array Sit	65.70	325	*e*P	P	22 45 24.2	+0.4
NVAR	Mina Array Bea	65.70	325	P	P	22 45 25.7	+1.9
	0.5nm,0.7s,baz=115,slow=6.1,SNR=3.6						
ULM	Lac du Bonnet	66.66	346	P	P	22 45 29.4	+0.1
	2.2nm,0.5s,baz=175,slow=4.4,SNR=4.2						
ULM	Lac du Bonnet	66.66	346	*e*P	P	22 45 28.9	-0.4
	3.4nm,0.7s						
PAHR	Pah Rah Range	67.19	325	*e*P	P	22 45 35.4	+2.2
	3.9nm,0.9s						
MCMT	McKenzie Canyo	67.70	333	*e*P	P	22 45 38.1	+1.6
MFID	Camas Ranch	68.01	330	*e*P	P	22 45 37.4	-0.8
	3.4nm,0.8s						
SCHQ	Schefferville	69.41	6	P	P	22 45 46.8	+0.2
	1.0nm,0.6s,baz=233,slow=12,SNR=4.3						
YBH	Yreka Blue Hor	70.42	325	LR	LR	23 16 16.2	
	comp=Z,25nm,18.9s,baz=90,slow=36						
SNAA	Sanae	71.20	161	P	P	22 45 58.4	+0.8
	3.2nm,0.7s,baz=280,slow=8.2,SNR=12						
SNAA				LR	LR	23 13 54.0	
	comp=Z,34nm,21.2s,baz=338,slow=33						
SNAA	Sanae	71.20	161	*e*P	P	22 45 58.2	+0.7
	3.7nm,0.8s						
WALA	Waterton Lakes	71.46	335	*e*P	P	22 46 00.7	+1.3
	3.7nm,0.7s						
DBIC	Dimbokro	73.76	79	LR	LR	23 17 10.9	
	comp=Z,104nm,19.4s,baz=53,slow=35						
QSPA	South Pole Qui	75.75	180	P	P	22 46 25.9	+1.4
	2.8nm,0.7s,baz=145,slow=2.0,SNR=10.0						
KOWA	Kowa	76.94	71	P	P	22 46 33.0	+1.1
	2.6nm,0.6s,baz=264,slow=9.1,SNR=5.6						
TOA0	Torodi Ar. Sit	81.81	74	*e*P	P	22 46 58.6	0.0
TORD	Torodi Ar. Bea	81.81	74	P	P	22 46 58.6	+0.1
	8.9nm,0.8s,baz=241,slow=4.8						
PCVE	Castro Verde	82.17	48	*e*P	P	22 47 03.2	+3.3
	30nm,2.0s						
YKA	Yellowknife Ar	82.32	343	P	P	22 47 00.7	+0.6
	1.2nm,0.6s,baz=144,slow=6.2,SNR=5.7						
PMTG	Montargil	82.64	47	*e*P	P	22 47 04.9	+2.5
	19nm,1.6s						
PBAR	Barrancos	83.11	48	*e*P	P	22 47 07.2	+2.4
	26nm,1.7s						
SYO	Syowa Base	85.49	161	⇑*e*P	P	22 47 17.6	+1.3
ESDC	Sonseca Array	85.91	47	P	P	22 47 20.6	+1.5
	0.6nm,0.6s,baz=254,slow=5.7,SNR=7.9						
ES19	SONSECA Array	85.97	47	*e*P	P	22 47 20.3	+1.0
MAW	Mawson	93.00	165	P	P	22 47 52.6	+0.7
	1.0nm,0.6s,baz=251,slow=3.2,SNR=6.5						
ILAR	Eielson Array	94.94	336	P	P	22 48 00.8	+0.1
	0.3nm,0.7s,baz=160,slow=3.7,SNR=2.7						
DAVOX	Davos/Dischmat	97.68	44	P	Pdif	22 48 15.1	+1.1
	2.1nm,0.7s,baz=336,slow=17,SNR=5.7						
GERES	GERESS Array B	100.61	42	P	Pdif	22 48 25.9	-0.9
	0.5nm,0.9s,baz=257,slow=2.6,SNR=3.3						
H11N3	WAKE ISLAND Hy	119.74	285	T	T	01 04 25.2	
	baz=96,slow=74,SNR=181						
H11N2	WAKE ISLAND Hy	119.75	285	T	T	01 04 33.5	
	baz=96,slow=74,SNR=194						
H11N1	WAKE ISLAND Hy	119.76	285	T	T	01 04 33.3	
	baz=96,slow=74,SNR=83						
H11S2	WAKE ISLAND Hy	119.80	283	T	T	01 04 26.7	
	baz=97,slow=75,SNR=33						
H11S1	WAKE ISLAND Hy	119.81	283	T	T	01 04 24.1	
	baz=97,slow=75,SNR=25						
H11S3	WAKE ISLAND Hy	119.82	283	T	T	01 04 28.0	
	baz=97,slow=75,SNR=26						
ASAR	Alice Springs	132.08	218	PKP	PKPdf	22 53 53.8	+0.4
	0.4nm,0.7s,baz=106,slow=2.4,SNR=4.0						
WRA	Warramunga Arr	134.55	222	PKP	PKPdf	22 53 58.4	+0.3
	0.6nm,0.7s,baz=143,slow=1.5,SNR=5.7						
ZALV	Zalesovo Beam	137.80	17	PKP	PKPdf	22 54 04.8	+1.8
	11nm,1.3s,baz=316,slow=10,SNR=4.4						
ZALV	Zalesovo Beam	137.80	17	*e*PKPdf	PKPdf	22 54 04.3	+1.3
KURK	Kurchatov	138.43	24	PKP	PKPdf	22 54 05.8	+1.6
KURBB	Kurchatov Arra	138.46	24	PKP	PKPdf	22 54 05.8	+1.5
	1.0nm,0.7s,baz=297,slow=2.2,SNR=8.9						
MKAR	Makanchi Array	143.02	25	PKP	PKPdf	22 54 12.0	-0.7
	0.3nm,0.6s,baz=292,slow=3.0,SNR=3.1						
KSH	Kashi	145.02	39	*e*PKP	PKPbc	22 54 15.5	-0.4
KSH				pPKP	pPKPbc	22 54 26.0	+0.3
KSH				sPKP		22 54 30.0	
KSH				PP	PP	22 57 37.3	+2.8
KSH				PKS	PKSdf	22 57 49.3	-2.9
ULN	Ulaanbaatar	146.52	356	*e*PKPdf	PKPdf	22 54 18.2	-0.8
SONA1	Songino Array	146.58	357	*e*PKPdf	PKPab	22 54 21.2	-0.3
SONM	Songino Array	146.59	357	PKPbc	PKPab	22 54 21.7	+0.2
	4.1nm,0.7s,baz=333,slow=1.7,SNR=31						
KSRS	Korea Array	148.60	321	PKPbc	PKPbc	22 54 27.9	+1.8
	0.9nm,0.6s,baz=30,slow=1.2,SNR=6.5						
KS01	Wonju Array Si	148.60	321	*e*PKPbc	PKPbc	22 54 26.2	0.0
KSAR	Wonju Array Be	148.63	321	PKPbc	PKPbc	22 54 27.9	+1.7
LZH	Lanzhou	158.40	360	*e*PKP	PKPdf	22 54 35.8	-1.0
LZH				pPKP	pPKPdf	22 54 46.5	+0.1
LZH				sPKP		22 54 49.5	
LZH				LR	LR		
	comp=N,42nm,18.2s						
LZH				LR	LR		
	comp=E,47nm,18.0s						
LZH				LR	LR		
	comp=Z,53nm,20.1s						

*ISK **31** 22:39:39.9, 38°.66N×43°.01E, h5^{km}, ML2.0/2*

*CSEM **31** 22:39:40.8±0.2, 38°.68N×43°.03E, h5^{km}, ML2.0, Error ellipse: s-maj=4.9km s-min=4.1km az=152.0*

*ISCJB **31** 22:39:41.2±0.9, 38°.65N±0°.03×43°.05E±0°.04, h21^{km}±12^{km}, Error ellipse: s-maj=6.0km s-min=4.7km az=145.2*

*DDA **31** 22:39:41.1, 38°.64N×43°.08E, h7^{km}, Ml2.6*

ISC 31 22:39:40.7±1.0**,38°.67N**±0°.03×**43°.07E**±0°.03**,h23**^{km}±8^{km}**, n19,**σ**0^s.82**/36**,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	Van	0.26	107	PG	Pb	22 39 47.1	-0.1
VANB				SG	Sb	22 39 52.5	+1.0
VANB	Van	0.26	107	*e*Pg	Pb	22 39 47.1	-0.1
VANB				*e*Sg	Sb	22 39 52.5	+1.0
ADCV	BITLIS_Adilcev	0.30	297	*i* P	Pb	22 39 47.5	-0.3
ADCV				*i* S	Sb	22 39 53.2	+0.6
ADCV	BITLIS_Adilcev	0.30	297	P	Pb	22 39 47.5	-0.3
ADCV				S	Sb	22 39 53.2	+0.6
GEVA	Gevas	0.36	181	*i* P	Pb	22 39 47.7	-0.9
GEVA				*i* S	Sb	22 39 53.4	-0.6
GEVA	Gevas	0.36	181	P	Pb	22 39 47.7	-0.9
GEVA				S	Sb	22 39 53.4	-0.6
VMUR	Van-Muradiye	0.51	51	*i* P	Pb	22 39 51.0	-0.1
VMUR				*i* S	Sn	22 39 59.8	-0.9
VMUR	Van-Muradiye	0.51	51	P	Pb	22 39 51.0	-0.1
VMUR				S	Sn	22 39 59.8	-0.9
TUTA	Tutak	0.76	345	*i* P	Pb	22 39 54.9	-0.4
TUTA				*i* S	Sb	22 40 05.5	+0.2
TUTA	Tutak	0.76	345	P	Pb	22 39 54.9	-0.4
TUTA				S	Sb	22 40 05.5	+0.2
CLDR	Caldiran	0.81	54	PG	Pn	22 39 56.8	-0.1
CLDR	Caldiran	0.81	54	*i* P	Pb	22 39 56.3	0.0
CLDR				*i* S	Sn	22 40 08.4	0.0
CLDR	Caldiran	0.81	54	P	Pb	22 39 56.3	0.0
CLDR	Caldiran	0.81	54	*e*Pg	Pn	22 39 56.8	-0.1
CLDR				S	Sn	22 40 08.4	0.0
GURO	Guroymak-BITLI	0.82	262	PG	Pb	22 39 55.2	-1.2
GURO				SG	Sb	22 40 06.4	-0.7
GURO	Guroymak-BITLI	0.82	262	*e*Pg	Pb	22 39 55.2	-1.2
GURO				*e*Sg	Sb	22 40 06.4	-0.7
AGRB	Hanur-Agry	0.90	356	PG	Pb	22 39 57.9	+0.1
AGRB				SG	Sn	22 40 10.9	+0.3
AGRB	Hanur-Agry	0.90	356	*e*Pg	Pb	22 39 57.9	+0.1
AGRB				*e*Sg	Sn	22 40 10.9	+0.3
SRTM	Siirt_Merkez	1.13	233	*i* P	Pb	22 40 04.4	+2.8
SRTM				*i* S	Sn	22 40 17.5	+1.6

TRN 31 22:53:38.6,20°.00N×63°.66W,h40^{km},MD4.7,North Atlantic Ocean

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SMRT	St. Maarten	2.02	164	*e*P	Pn	22 54 12.2	+2.0
SMRT				*e*S	Sn	22 54 35.5	+1.3
SABA	Saba	2.40	170	*e*P	Pn	22 54 17.7	+2.3
SABA				*e*S	Sn	22 54 45.8	+2.1
SEUS	St. Eustatius	2.58	165	*e*P	Pn	22 54 19.8	+2.0
SEUS				*e*S	Sn	22 54 49.5	+1.5
ANWB	Willy Bob	2.92	142	*e*P	Pn	22 54 24.2	+1.6
ANWB				*e*S	Sn	22 54 58.1	+1.6
NVRH	Round Hill, Ne	2.98	160	*e*P	Pn	22 54 24.8	+1.4
NEV	Hard Times	3.04	160	*e*P	Pn	22 54 26.2	+2.1
BPA	Boggy Peak	3.41	149	*e*P	Pn	22 54 31.3	+2.1
MBWH		3.53	156	*e*P	Pn	22 54 33.0	+2.0
MLYT	Lee’s Yard	3.55	157	*e*P	Pn	22 54 33.6	+2.4
MLYT				*e*S	Sn	22 55 13.2	+1.2
SEG	Port Louis	4.13	150	*e*P	Pn	22 54 41.1	+2.0
SSG	Sans Toucher	4.33	154	*e*P	Pn	22 54 44.0	+1.9
TBG	Guadaloupe-3	4.55	155	*e*P	Pn	22 54 46.7	+1.7
TBG	Guadaloupe-3	4.55	155	*e*S	Sn	22 55 36.6	-0.1
MGG	Marie-Galante	4.64	151	*e*P	Pn	22 54 48.8	+2.6
MDPO	Dominica; Chan	4.88	154	*e*P	Pn	22 54 51.8	+2.3
MDPO	Dominica; Chan	4.88	154	*e*S	Sn	22 55 45.9	+1.1
BBL	Barber’s Block	4.92	155	*e*P	Pn	22 54 52.3	+2.3
PCM	Pelee Case Pet	5.67	155	*e*P	Pn	22 55 02.2	+1.9
PCM	Pelee Case Pet	5.67	155	*e*P	Pn	22 55 02.8	+2.4
CXM	Morne La Croix	5.69	155	*e*P	Pn	22 55 02.1	+1.4
CXM				*e*S	Sn	22 55 14.6	-50
BAMF	Morne Balai	5.69	155	*e*P	Pn	22 55 02.8	+2.1
PML	Morne Lenard	5.71	155	*e*P	Pn	22 55 03.1	+2.2
LPMF	Morne Lapointe	5.98	154	*e*P	Pn	22 55 00.1	-4.5
TRMF	Trois Ilets	5.98	155	*e*P	Pn	22 55 01.3	-3.3
BIM	Bigot	5.99	155	*e*P	Pn	22 55 02.4	-2.4
BIM				*e*S		22 55 12.2	
MVM	Montagne Vaucl	6.03	154	*e*P	Pn	22 54 59.9	-5.4
MCLT	Moule a Chique	6.78	157	*e*P	Pn	22 55 17.5	+1.9

MAN 31 23:05:18.6,13°.51N×120°.56E,h159^{km},mb4.1,ML2.9, MS2.6,1D,Mindoro

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
LUBP	Lubang	0.38	306	*e*P	Pn	23 05 41.5	+1.1
LUBP				*e*S	Sn	23 05 59.3	+2.1
PGP	Puerto Galera	0.38	91	⇓*i*P	Pn	23 05 42.1	+1.5
PGP				*i* S	Sn	23 05 59.3	+2.0
SJMP	San Jose	1.18	152	*e*P	Pn	23 05 46.0	+0.2
SJMP				*e*S	Sn	23 06 07.6	+1.0

*NEIC **31** 23:12:11.4±0.0, 38°.68N×43°.05E, h5^{km}, mb4.1/11, ML3.9(ISK), After ISK.*

*ISN **31** 23:12:11.2±0.7, 38°.57N×43°.04E, h0^{km}±49^{km}, ML4.2*

*ISK **31** 23:12:11.5, 38°.68N×43°.04E, h5^{km}, ML3.9/23*

*MOS **31** 23:12:12.9±1.4, 38°.64N×43°.10E, h11^{km}, mb4.2/8, Error ellipse: s-maj=6.3km s-min=4.9km az=90.0*

*ISCJB **31** 23:12:12.3±0.4, 38°.66N±0°.01×43°.15E±0°.01, h4^{km}±3^{km}, mb4.0/35, MS3.3/16, Error ellipse: s-maj=2.6km s-min=1.7km az=154.6*

*DDA **31** 23:12:12.6, 38°.66N×43°.05E, h22^{km}, Ml4.2*

*IDC **31** 23:12:12.5±0.8, 38°.74N×43°.18E, h0^{km}, mb3.7/15, mb1 3.8/22, mb1mx3.7/73, mbtmp3.8/22, ML3.6/7, MS3.3/19, Ms1 3.3/19, ms1mx3.1/62, Error ellipse: s-maj=16.4km s-min=9.5km az=163.0*

*CSEM **31** 23:12:13.0±0.1, 38°.66N×43°.10E, h2^{km}, mb4.2/17, Ms3.0, Error ellipse: s-maj=2.8km s-min=2.1km az=162.0*

*AZER **31** 23:12:15.8±0.3, 38°.71N×43°.15E, h19^{km}±7^{km}, ml4.0/27, ms3.0/1, Error ellipse: s-maj=8.8km s-min=2.0km az=60.0*

*GII **31** 23:12:17.5±0.0, 38°.69N×43°.09E, h19^{km}*

ISC 31 23:12:14.0±0.7**,38°.67N**±0°.01×**43°.09E**±0°.01**,h11**^{km}±4^{km}**, n384,**σ**1^s.58**/471**,mb4.1**/36**,MS3.4**/16**,66C-73D,Turkey**

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	Van	0.24	107	PG	Pg	23 12 19.1	0.0
VANB				SG	Sg	23 12 24.8	+2.2
VANB	Van	0.24	107	*e*Pg	Pg	23 12 19.1	0.0
ADCV	BITLIS_Adilcev	0.32	296	⇓*i*P	Pg	23 12 19.6	-1.0
ADCV				*i* S	Sg	23 12 25.2	+0.2
ADCV	BITLIS_Adilcev	0.32	296	P	Pg	23 12 19.6	-1.0
ADCV				S	Sg	23 12 25.2	+0.2
GEVA	Gevas	0.35	184	⇓*i*P	Pg	23 12 19.6	-1.6
GEVA				*i* S	Sg	23 12 26.1	+0.1
GEVA	Gevas	0.35	184	P	Pg	23 12 19.6	-1.6
GEVA				S	Sg	23 12 26.1	+0.1
ERCV	ERCIS-VAN	0.40	28	PG	Pg	23 12 20.7	-1.4
ERCV	ERCIS-VAN	0.40	28	*e*Pg	Pg	23 12 20.7	-1.4
VMUR	Van-Muradiye	0.49	49	⇑*i*P	Pg	23 12 23.1	-0.6
VMUR				*i* S	Sb	23 12 31.7	-0.5
VMUR	Van-Muradiye	0.49	49	P	Pg	23 12 23.1	-0.6
VMUR				S	Sb	23 12 31.7	-0.5
TUTA	Tutak	0.77	344	⇓*i*P	Pg	23 12 27.2	-1.7
TUTA				*i* S	Sg	23 12 37.4	-1.6
TUTA	Tutak	0.77	344	P	Pg	23 12 27.2	-1.7
TUTA				S	Sg	23 12 37.4	-1.6
CLDR	Caldiran	0.80	53	PG	Pg	23 12 27.9	-1.6
CLDR	Caldiran	0.80	53	⇑*i*P	Pg	23 12 27.9	-1.6
CLDR				*i* S	Sb	23 12 41.2	+0.2
CLDR	Caldiran	0.80	53	P	Pg	23 12 27.9	-1.6
CLDR				S	Sb	23 12 41.2	+0.2
GURO	Guroymak-BITLI	0.84	262	PG	Pg	23 12 27.9	-2.4
GURO	Guroymak-BITLI	0.84	262	*e*Pg	Pg	23 12 27.9	-2.4
AGRB	Hanur-Agry	0.91	355	PG	Pg	23 12 29.8	-1.9
AGRB				SG	Sg	23 12 42.8	-0.8
AGRB	Hanur-Agry	0.91	355	*e*Pg	Pg	23 12 29.8	-1.9
AGRB				*e*Sg	Sg	23 12 42.8	-0.8
DYDN	Diyadin	0.99	28	⇑*i*P	Pg	23 12 31.5	-1.7
DYDN				*i* S	Sn	23 12 48.4	+0.2
DYDN	Diyadin	0.99	28	P	Pg	23 12 31.5	-1.7
DYDN				S	Sn	23 12 48.4	+0.2
EKAR	Karacoban	0.99	307	⇓*i*P	Pg	23 12 31.4	-1.8
EKAR				*i* S	Sn	23 12 47.5	-0.8
EKAR	Karacoban	0.99	307	P	Pg	23 12 31.5	-1.8
EKAR				S	Sn	23 12 47.5	-0.8
SRTM	Siirt_Merkez	1.14	234	⇑*i*P	Pb	23 12 33.7	-2.1
SRTM				*i* S	Sn	23 12 51.7	0.0
SRTM	Siirt_Merkez	1.14	234	P	Pb	23 12 33.7	-2.1
SRTM				S	Sn	23 12 51.7	0.0
HAKT	HAKKARI	1.21	156	⇓*i*P	Pn	23 12 34.7	-2.4
HAKT				*i* S	Sn	23 12 54.1	+0.5
HAKT	HAKKARI	1.21	156	P	Pn	23 12 34.7	-2.4
HAKT				S	Sn	23 12 54.1	+0.5
SIRT	Sirnak	1.27	204	PN	Pn	23 12 36.5	-1.4
SIRT	Sirnak	1.27	204	*e*Pn	Pn	23 12 36.5	-1.4
EATA	Eleskirt	1.28	339	⇓*i*P	Pn	23 12 36.3	-1.9
EATA				*i* S	Sg	23 12 55.5	+0.1
EATA	Eleskirt	1.28	339	P	Pn	23 12 36.3	-1.9
EATA				S	Sg	23 12 55.5	+0.1
SIRN	S˜–rnak	1.29	205	*i* P	Pn	23 12 36.9	-1.1
SIRN				*i* S	Sg	23 12 56.6	+1.1
SIRN	S˜–rnak	1.29	205	P	Pn	23 12 36.9	-1.1
SIRN				S	Sg	23 12 56.6	+1.1
IGDI	IGDIR	1.42	32	⇑*i*P	Pn	23 12 39.3	-0.6
IGDI				*i* S	Sg	23 12 60.0	+0.1
CUKT	Cukurca	1.47	164	PN	Pn	23 12 39.3	-1.4
CUKT	Cukurca	1.47	164	⇓*i*P	Pn	23 12 39.5	-1.1
CUKT				*i* S	Sg	23 13 02.5	+1.0
CUKT	Cukurca	1.47	164	P	Pn	23 12 39.5	-1.1
CUKT				S	Sg	23 13 02.5	+1.0
BNGL	BINGOL	1.54	281	⇓*i*P	Pn	23 12 39.9	-1.8
BNGL				*i* S	Sb	23 13 02.5	+0.1
SVAN	Silvan-Diyarba	1.57	252	PN	Pn	23 12 41.1	-0.9
SVAN	Silvan-Diyarba	1.57	252	⇑*i*P	Pn	23 12 41.5	-0.5
SVAN				*i* S	Sn	23 13 02.6	+0.2
SVAN	Silvan-Diyarba	1.57	252	*e*Pn	Pn	23 12 41.1	-0.9
SVAN	Silvan-Diyarba	1.57	252	P	Pn	23 12 41.5	-0.5
SVAN				S	Sn	23 13 02.6	+0.2
TASB	TASBURUN-IGDIR	1.59	34	PN	Pn	23 12 41.6	-0.6
TASB	TASBURUN-IGDIR	1.59	34	*e*Pn	Pn	23 12 41.6	-0.6
BTMN	Batman	1.63	242	⇑*i*P	Pn	23 12 42.7	-0.1
BTMN				*i* S	Sb	23 13 04.9	+0.1
BTMN	Batman	1.63	242	P	Pn	23 12 42.7	-0.1
BTMN				S	Sb	23 13 04.9	+0.1
HOMI	Horasan	1.66	327	⇓*i*P	Pn	23 12 42.9	-0.3
HOMI				*i* S	Sg	23 13 14.9	+7.5
HYR	Heyderabad	1.72	52	⇑P	Pn	23 12 44.5	+0.5
HYR				⇓S	Sn	23 13 05.7	-0.4
HYR	Heyderabad	1.72	52	⇑P	Pn	23 12 44.5	+0.5
HYR				⇓S	Sn	23 13 05.7	-0.4
DIGO	Kars	1.76	7	*i* P	Pn	23 12 45.4	+0.6
DIGO				*i* S	Sg	23 13 12.3	+1.6
DIGO	Kars	1.76	7	P	Pn	23 12 45.3	+0.6
ERZM	Erzurum	1.82	313	⇓*i*P	Pn	23 12 45.4	-0.2
ERZM				*i* S	Sg	23 13 12.1	-0.6
ERZM	Erzurum	1.82	313	P	Pn	23 12 45.4	-0.2
ERZM				S	Sg	23 13 12.1	-0.6
ECAT	Cat-ERZURUM	1.90	300	⇓*i*P	Pn	23 12 45.6	-0.9
ECAT				*i* S	Sg	23 13 20.1	+5.1
ECAT	Cat-ERZURUM	1.90	300	P	Pn	23 12 45.6	-0.9
BNGB	Bingˆ¶l	1.91	280	PN	Pn	23 12 45.4	-1.3
NAX	Nakhchivan	1.94	74	P	Pn	23 12 47.2	+0.2
NAX	Nakhchivan	1.94	74	P	Pn	23 12 47.2	+0.2
NAX				⇓S	Sn	23 13 11.4	-0.1
NAX	Nakhchivan	1.94	74	⇑P	Pn	23 12 47.3	+0.2
	SNR=117						
NAX				⇓S	Sn	23 13 11.4	-0.1
GNI	Garni	1.96	40	Pn	Pn	23 12 47.5	+0.1
	16nm,0.3s,baz=187,slow=3.2,SNR=29						
GNI				Lg	Lg	23 13 16.7	
	50nm,0.3s,baz=64,slow=12,SNR=7.7						
GNI				LR	LR	23 13 41.3	
	comp=Z,290nm,19.6s,baz=216,slow=48						
GNI	Garni	1.96	40	PN	Pn	23 12 47.4	+0.1
GNI	Garni	1.96	40	*c* *i*P	Pn	23 12 47.3	0.0
GNI	Garni	1.96	40	*i* P	Pn	23 12 47.3	0.0
KARS	Kars	1.96	360	PN	Pn	23 12 47.3	0.0
KARS	Kars	1.96	360	P	Pn	23 12 46.6	-0.7
KARS	Kars	1.96	360	P	Pn	23 12 46.6	-0.7
KARS	Kars	1.96	360	*e*Pn	Pn	23 12 47.3	0.0
SENK	Senkaya-Erzuru	1.98	343	PN	Pn	23 12 47.3	-0.4
SENK	Senkaya-Erzuru	1.98	343	*e*Pn	Pn	23 12 47.3	-0.4

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BINT  Bingol             2.05 277   P     Pn     23 12 46.1 -2.4
BINT  Bingol             2.05 277   P     Pn     23 12 46.1 -2.4
SBZ   Shahbuz            2.05  68 ⇑P      Pn     23 12 48.5 -0.1
SBZ                               ⇑S      Sn     23 13 13.7 -0.5
SBZ   Shahbuz            2.05  68 ⇑P      Pn     23 12 48.5 -0.1
SBZ                               ⇑S      Sn     23 13 13.7 -0.5
EAK   Akyaka             2.06  11⇓iP      Pb     23 12 51.9 +0.4
EAK                                i S    Sg     23 13 23.6 +3.5
EAK   Akyaka             2.06  11   P     Pb     23 12 51.9 +0.4
HANI  Diyarbakir_Han     2.13 264⇑iP      Pn     23 12 49.9 +0.2
HANI                               i S    Sb     23 13 19.7 +0.6
HANI  Diyarbakir_Han     2.13 264   P     Pn     23 12 49.8 +0.2
HANI                                S     Sb     23 13 19.7 +0.6
YEDI  Yedisu-Bingol      2.13 292   PN    Pn     23 12 48.7 -1.0
YEDI  Yedisu-Bingol      2.13 292  ePn    Pn     23 12 48.7 -1.0
MARD  Mardin             2.27 234⇑iP      Pn     23 12 50.7 -0.9
MARD                               i S    Sb     23 13 22.1 -1.2
ORD   Ordubad            2.28  83 ⇓P      Pn     23 12 51.9 +0.2
ORD                               ⇑S      Sn     23 13 19.4 -0.4
ORD   Ordubad            2.28  83 ⇓P      Pn     23 12 51.9 +0.2
ORD                               ⇑S      Sn     23 13 19.4 -0.4
DIY   Diyarbakir         2.38 252  ePn    Pn     23 12 53.4 +0.3
MAZI  Mazidag            2.41 241   PN    Pn     23 12 52.5 -1.0
MAZI  Mazidag            2.41 241  ePn    Pn     23 12 52.5 -1.0
KOPT  Kop Dagi           2.42 305⇓iP      Pn     23 12 54.0 +0.2
KOPT                               i S    Sg     23 13 39.3 +7.4
KOPT  Kop Dagi           2.42 305   P     Pn     23 12 54.0 +0.2
DYBB  Diyarbakir         2.43 254   PN    Pn     23 12 53.4 -0.4
DDEM  Demirkent          2.45 335⇓iP      Pn     23 12 53.8 -0.3
DDEM                               i S    Sg     23 13 32.6 -0.2
DDEM  Demirkent          2.45 335   P     Pn     23 12 53.8 -0.3
DIYA  Diyarbakir         2.45 253  i P    Pn     23 12 54.3 +0.2
DIYA                               i S    Sn     23 13 26.0 +1.9
DIYA  Diyarbakir         2.45 253   P     Pn     23 12 54.3 +0.2
DIYA                                S     Sn     23 13 26.0 +1.9
DAGI  Agillar            2.57 340  i P    Pn     23 12 56.0 +0.3
DAGI                               i S    Sg     23 13 41.5 +4.8
DBAD  Bademkaya          2.58 336  i P    Pn     23 12 56.0 +0.1
DBAD                               i S    Sg     23 13 38.1 +1.0
DBAD  Bademkaya          2.58 336   P     Pn     23 12 56.0 +0.1
BGD   Bogdanovka         2.62   8   P     Pb     23 13 02.1 +0.9
BGD                                 S     Sg     23 13 37.0 -1.3
ARTV  Artvin             2.67 341  i P    Pn     23 12 56.9 -0.3
ARTV  Artvin             2.67 341   P     Pn     23 12 56.9 -0.3
AKH   Akhalkalaki        2.76   6   PN    Pn     23 12 58.2 -0.1
AKH   Akhalkalaki        2.76   6   P     Pb     23 13 03.6 +0.2
AKH                                 S     Sg     23 13 45.1 +2.5
AKH   Akhalkalaki        2.76   6⇑iP      Pb     23 13 03.7 +0.3
AKH   Akhalkalaki        2.76   6  ePn    Pn     23 12 59.8 +1.5
AKH   Akhalkalaki        2.76   6  eP     Pn     23 12 59.8 +1.5
AKH   Akhalkalaki        2.76   6  ePn    Pn     23 12 58.2 -0.1
AKH   Akhalkalaki        2.76   6  eP     Pn     23 12 59.8 +1.5
ERZN  Erzincan           2.78 290   PN    Pn     23 12 58.1 -0.5
TNCL  Tunceli-Merkez     2.81 280  i P    Pn     23 13 00.8 +1.9
TNCL                               i S    Sg     23 13 41.7 -2.5
TNCL  Tunceli-Merkez     2.81 280   P     Pn     23 13 00.9 +1.9
EUZM  Uzumlu             2.84 293  eP     Pn     23 13 00.5 +1.1
EUZM                               i S    Sg     23 13 47.0 +1.8
EUZM  Uzumlu             2.84 293   P     Pn     23 13 00.5 +1.1
BAYT  Ayd˜–ntepe-Bay     2.86 308   PN    Pn     23 12 59.1 -0.7
BAYT  Ayd˜–ntepe-Bay     2.86 308  ePn    Pn     23 12 59.1 -0.7
DBOC  Borcka             2.89 338  i P    Pb     23 13 05.1 -0.5
PTK   Pertek             2.90 276   PN    Pn     23 12 59.6 -0.7
PTK   Pertek             2.90 276  ePn    Pn     23 12 59.6 -0.7
GDB   GEDABAY            2.90  44 ⇓P      Pn     23 13 00.4 +0.1
      SNR=19
GDB                               ⇓S      Sn     23 13 35.1 -0.2
GDB   GEDABAY            2.90  44 ⇓P      Pn     23 13 00.4 +0.1
      SNR=19
GDB                               ⇓S      Sn     23 13 35.1 -0.2
QZX   Qazax, Azerbai     2.96  36 ⇑P      Pn     23 13 01.0 -0.1
      SNR=25
QZX                               ⇑S      Sn     23 13 36.2 -0.4
QZX   Qazax, Azerbai     2.96  36 ⇑P      Pn     23 13 01.0 -0.1
      SNR=25
QZX                               ⇑S      Sn     23 13 36.2 -0.4
SVRC  Sivrice-ELAZID     2.98 266   PN    Pn     23 13 00.8 -0.7
SVRC  Sivrice-ELAZID     2.98 266  ePn    Pn     23 13 00.8 -0.7
BCA   Borcka             3.00 338   PN    Pn     23 13 01.5  0.0
BCA   Borcka             3.00 338  ePn    Pn     23 13 01.5  0.0
CHOM  Cayeli-Rize        3.02 324   PN    Pn     23 13 01.7 -0.1
CHOM  Cayeli-Rize        3.02 324  ePn    Pn     23 13 01.7 -0.1
GANJ  Ganja              3.18  51   P     Pn     23 13 04.8 +0.8
GANJ  Ganja              3.18  51 ⇑P      Pn     23 13 04.1 +0.1
      SNR=11
GANJ                              ⇓S      Sn     23 13 41.8 -0.2
GANJ  Ganja              3.18  51 ⇑P      Pn     23 13 04.1 +0.1
      SNR=11
GANJ                              ⇓S      Sn     23 13 41.8 -0.2
DGRG  David-gareji       3.29  31   P     Pb     23 13 13.9 +1.5
DGRG                                S     Sg     23 13 59.0 -0.5
DGRG  David-gareji       3.29  31   P     Pn     23 13 07.4 +1.9
DGRG  David-gareji       3.29  31   P     Pn     23 13 07.4 +1.9
TBLG  Delisi             3.31  22   PN    Pn     23 13 06.2 +0.4
TBLG  Delisi             3.31  22   P     Pb     23 13 13.2 +0.4
TBLG                                S     Sg     23 13 58.0 -2.3
TBLG  Delisi             3.31  22  ePn    Pn     23 13 05.5 -0.3
TBLG  Delisi             3.31  22  eP     Pn     23 13 05.5 -0.3
TBLG  Delisi             3.31  22  eP     Pn     23 13 05.5 -0.3
KELT  Kelkit             3.32 298  i P    Pn     23 13 06.8 +0.7
KELT  Kelkit             3.32 298   P     Pn     23 13 06.8 +0.7
SEAG  Tbilisi Sea        3.36  22   P     Pb     23 13 14.9 +1.3
SEAG                                S     Sg     23 13 59.1 -2.8
MACK  Trabzon            3.42 313  i P    Pb     23 13 15.0 +0.3
KTUT  Trabzon            3.45 313   PN    Pn     23 13 07.8 +0.1
KTUT  Trabzon            3.45 313  ePn    Pn     23 13 07.8 +0.1
BRDA  Brd                3.54  62 ⇓P      Pn     23 13 09.0  0.0
BRDA  Brd                3.54  62 ⇓P      Pn     23 13 09.0  0.0
SANL  SANLIURFA_Merk     3.57 247  i P    Pn     23 13 10.8 +1.4
SANL  SANLIURFA_Merk     3.57 247   P     Pn     23 13 10.8 +1.4
URFA  Urfa               3.59 251   PN    Pn     23 13 09.9 +0.2
URFA  Urfa               3.59 251  ePn    Pn     23 13 09.9 +0.2
ILIC  ilic-Erzincan      3.61 284   PN    Pn     23 13 10.2 +0.2
ILIC  ilic-Erzincan      3.61 284  ePn    Pn     23 13 10.2 +0.2
DDFL  Dedoflistskaro     3.62  39   P     Pg     23 13 21.4 -1.9
DDFL                                S     Sg     23 14 15.1 +4.9
DUS   Dusheti            3.63  19   P     Pb     23 13 18.2 -0.1
KEMA  Kemaliye           3.63 281  i P    Pn     23 13 11.0 +0.7
KEMA  Kemaliye           3.63 281   P     Pn     23 13 11.0 +0.7
MNGR  Mingechevir, A     3.73  54   P     Pn     23 13 12.0 +0.5
MNGR  Mingechevir, A     3.73  54 ⇑P      Pn     23 13 11.5  0.0
MNGR                              ⇓S      Sn     23 13 55.1 -0.3
MNGR  Mingechevir, A     3.73  54 ⇑P      Pn     23 13 11.5  0.0
MNGR                              ⇓S      Sn     23 13 55.1 -0.3
ZRD   Zardab             3.90  64 ⇑P      Pn     23 13 13.9  0.0
      SNR=21
ZRD                               ⇓S      Sn     23 13 59.3 -0.3
ZRD   Zardab             3.90  64 ⇑P      Pn     23 13 13.9  0.0
      SNR=21
ZRD                               ⇓S      Sn     23 13 59.3 -0.3
ONI   Oni                3.93   4   P     Pb     23 13 24.7 +1.4
ONI                                 S     Sg     23 14 16.5 -3.7
SURC  SANLIURFA_SURC     3.97 245  i P    Pn     23 13 15.5 +0.6
SURC  SANLIURFA_SURC     3.97 245   P     Pn     23 13 15.5 +0.6
ZKTA  Zakatala           4.01  41   P     Pn     23 13 16.9 +1.4
ZKTA  Zakatala           4.01  41   P     Pn     23 13 16.9 +1.4
ZKTA  Zakatala           4.01  41 ⇑P      Pn     23 13 15.6 +0.1
      SNR=8.8
ZKTA                              ⇑S      Sn     23 14 02.3 -0.2
ESPY  Espiye-Giresun     4.04 305   PN    Pn     23 13 16.1 +0.2
ESPY  Espiye-Giresun     4.04 305  ePn    Pn     23 13 16.1 +0.2
SEKA  Sheki              4.05  50   P     Pn     23 13 17.4 +1.4
SEKA  Sheki              4.05  50 ⇑P      Pn     23 13 16.8 +0.8
      SNR=9.8
SEKA                              ⇑S      Sn     23 14 04.5 +1.0
SEKA  Sheki              4.05  50 ⇑P      Pn     23 13 16.8 +0.8
      SNR=9.8
SEKA                              ⇑S      Sn     23 14 04.5 +1.0
SUSE  Susehri            4.09 294  i P    Pb     23 13 21.9 -4.2
LRK   Lerik              4.11  89 ⇑P      Pn     23 13 16.8 -0.1
      SNR=6.5
LRK   Lerik              4.11  89 ⇑P      Pn     23 13 16.8 -0.1
      SNR=6.5
ZEI   Tsey               4.16   8  eP     Pb     23 13 24.8 -2.6
ZEI                                pmax   pmax
      comp=Z,34nm,0.7s
GLBA  Clilabad           4.17  80 ⇓P      Pn     23 13 17.7 +0.1
      SNR=8.0
GLBA                              ⇑S      Sn     23 14 06.1 -0.2
GLBA  Clilabad           4.17  80 ⇓P      Pn     23 13 17.7 +0.1
      SNR=8.0
GLBA                              ⇑S      Sn     23 14 06.1 -0.2
KDMR  Kurdemir           4.29  65 ⇓P      Pn     23 13 19.2  0.0
      SNR=6.6
KDMR                              ⇓S      Sn     23 14 09.0 -0.3
KDMR  Kurdemir           4.29  65 ⇓P      Pn     23 13 19.2  0.0
      SNR=6.6
KDMR                              ⇓S      Sn     23 14 09.0 -0.3
QBL   Gabala             4.30  57 ⇓P      Pn     23 13 19.4 -0.1
      SNR=11
QBL                               ⇓S      Sn     23 14 09.2 -0.5
QBL   Gabala             4.30  57 ⇓P      Pn     23 13 19.4 -0.1
      SNR=11
QBL                               ⇓S      Sn     23 14 09.2 -0.5
SAAT  Saatly             4.30  72 ⇑P      Pn     23 13 19.1 -0.3
      SNR=7.2
SAAT  Saatly             4.30  72 ⇑P      Pn     23 13 19.1 -0.3
      SNR=7.2
GRSN  GIRESUNGRSN        4.35 303  i P    Pn     23 13 20.7 +0.6
GRSN  GIRESUNGRSN        4.35 303   P     Pn     23 13 20.7 +0.6
IML   Ismayilli          4.46  60 ⇑P      Pn     23 13 21.5 -0.1
      SNR=10
IML                               ⇑S      Sn     23 14 13.2 -0.4
IML   Ismayilli          4.46  60 ⇑P      Pn     23 13 21.5 -0.1
      SNR=10
IML                               ⇑S      Sn     23 14 13.2 -0.4
ASTR  Astara             4.46  90 ⇑P      Pn     23 13 21.7 +0.1
      SNR=3.1
ASTR  Astara             4.46  90 ⇑P      Pn     23 13 21.7 +0.1
      SNR=3.1
AKT   Akhty              4.53  50  eP     Pn     23 13 23.6 +0.9
AKT                                eS     Sn     23 14 12.2 -3.2
AKT                                 smax  smax
      comp=E,17nm,0.6s
AKT                                 smax  smax
      comp=N,19nm,0.7s
AKT   Akhty              4.53  50  eP     Pn     23 13 23.6 +0.9
AKT                                eS     Sn     23 14 12.2 -3.2
      comp=N,19nm,0.7s
NEY   Neytrino           4.59 357⇑eP      Pn     23 13 28.1 +4.6
NEY   Neytrino           4.59 357  eP     Pn     23 13 28.1 +4.6
XNQ   Khinaliq           4.62  56 ⇑P      Pn     23 13 23.8 -0.2
      SNR=8.0
XNQ   Khinaliq           4.62  56 ⇑P      Pn     23 13 23.8 -0.2
      SNR=8.0
PQL   Pirkuli            4.74  62 ⇑P      Pn     23 13 25.4 -0.2
      SNR=6.2
PQL   Pirkuli            4.74  62 ⇑P      Pn     23 13 25.4 -0.2
      SNR=6.2
ALIB  &Auml;li-Bayra     4.76  72 ⇑P      Pn     23 13 25.7  0.0
      SNR=2.8
ALIB  &Auml;li-Bayra     4.76  72 ⇑P      Pn     23 13 25.7  0.0
      SNR=2.8
NCK   Nalchik            4.84   4  i P    Pn     23 13 24.4 -2.4
NCK   Nalchik            4.84   4  i P    Pn     23 13 24.4 -2.4
QSAR  Qusar              4.88  53 ⇓P      Pn     23 13 27.3 -0.1
      SNR=6.1
QSAR  Qusar              4.88  53 ⇓P      Pn     23 13 27.3 -0.1
      SNR=6.1
GBS   Qobustan           4.89  66 ⇓P      Pn     23 13 27.4 -0.1
      SNR=6.2
GBS   Qobustan           4.89  66 ⇓P      Pn     23 13 27.4 -0.1
      SNR=6.2
QUBA  Quba, Azerbaij     4.94  55 ⇓P      Pn     23 13 28.1 -0.1
      SNR=11
QUBA  Quba, Azerbaij     4.94  55 ⇓P      Pn     23 13 28.1 -0.1
      SNR=11
ATGJ  Altiaghaj          5.01  62 ⇑P      Pn     23 13 29.1 -0.1
      SNR=6.0
ATGJ  Altiaghaj          5.01  62 ⇑P      Pn     23 13 29.1 -0.1
      SNR=6.0
KBZ   Khabaz             5.06 358   Pn    Pn     23 13 35.6 +5.9
      comp=N,0.1nm,0.3s,baz=260,slow=6.1,SNR=3.1
KBZ                                 LR    LR     23 15 43.8
      comp=N,269nm,18.6s,baz=244,slow=42
SIZA  Siyzn              5.07  60 ⇓P      Pn     23 13 30.0 -0.1
      SNR=5.9
SIZA  Siyzn              5.07  60 ⇓P      Pn     23 13 30.0 -0.1
      SNR=5.9
SIZA                              ⇓P      Pn     23 13 30.0 -0.1
      SNR=5.9
KIV   Kislovodsk         5.29 357  ePn    Pn     23 13 34.3 +1.2
KIV   Kislovodsk         5.29 357deP      Pn     23 13 34.9 +1.8
KIV                                eS     Sn     23 14 35.0 +0.9
KIV                                 pmax  pmax
      comp=Z,9.0nm,1.1s
KIV   Kislovodsk         5.29 357  ePn    Pn     23 13 34.3 +1.2
KIV   Kislovodsk         5.29 357  eP     Pn     23 13 34.9 +1.8
      comp=Z,9.0nm,1.1s
KIV                                eS     Sn     23 14 35.0 +0.9
KVAR  Kislovodsk Arr     5.29 357   Pn    Pn     23 13 36.8 +3.7
      baz=176,slow=16,SNR=2.2
KVAR                                LR    LR     23 15 51.5
      comp=Z,164nm,19.3s,baz=132,slow=42
MAK   Makhachkala        5.44  37  eP     Pn     23 13 33.2 -1.8
MAK                                eS     Sn     23 14 34.5 -3.1
MAK                                 pmax  pmax
      comp=Z,177nm,1.4s
MAK                                 MLR   MLR
      comp=Z,495nm,15.0s
MAK   Makhachkala        5.44  37  eP     Pn     23 13 33.2 -1.8
      comp=Z,177nm,1.4s
BHD   Baghdad            5.49 169  ePn    Pn     23 13 35.0 -0.7
      SNR=4.0
SOC   Sochi              5.53 334  eP     Pn     23 13 37.0 +0.7
SOC                                e             23 14 43.0
SOC                                 pmax  pmax
      comp=Z,6.0nm,0.5s
SOC                                 smax  smax
      comp=E,18nm,0.7s
SOC                                 MLR   MLR
      comp=Z,132nm,8.0s
SOC   Sochi              5.53 334  eP     Pn     23 13 37.0 +0.7
      comp=Z,6.0nm,0.5s
RTB   Rutbah             6.06 203  ePn    Pn     23 13 43.0 -0.7
      SNR=4.0
HWQ   Hawqa              7.23 235  eP     Pn     23 14 02.7 +2.9
BR131 Keskin Array S     7.42 281  ePn    Pn     23 14 04.3 +2.0
BR131 Keskin Array S     7.42 281  ePn    Pn     23 14 04.3 +2.0
BRTR  Keskin Array B     7.42 281   Pn    Pn     23 14 05.9 +3.5
      comp=Z,0.1nm,0.3s,baz=115,slow=14,SNR=4.5
BHL   Bhannes            7.66 234  eP     Pn     23 14 12.5 +6.8
DQRL  Deir Qamar         7.84 233  eP     Pn     23 14 11.5 +3.4
SHBL  Chebaa             7.97 231  eP     Pn     23 14 12.2 +2.2
NSR   Nassriya           8.04 161  ePn    Pn     23 14 11.0 +0.3
      SNR=4.0
NATI  Neve Ativ          8.04 230   Pn    Pn     23 14 12.8 +2.1
ANTO  Ankara             8.08 282⇓iP      Pn     23 14 13.5 +2.1
ANTO  Ankara             8.08 282 ⇓P      Pn     23 14 13.5 +2.1
ANTO  Ankara             8.08 282   P     Pn     23 14 13.5 +2.1
KSDI  Kefar Szold        8.13 230   Pn    Pn     23 14 14.1 +2.1
KSHT  Keshet             8.19 228   Pn    Pn     23 14 15.6 +2.7
ASF   Jabal al Asfar     8.22 220   Pn    Pn     23 14 14.8 +1.5
      comp=Z,0.5nm,0.3s,baz=347,slow=17,SNR=13
ASF                                 Lg    Lg     23 16 39.4
      comp=Z,1.2nm,0.3s,baz=291,slow=21,SNR=7.1
MMAI  Mount Meron Ar     8.41 230   Pn    Pn     23 14 18.2 +2.3
      comp=Z,1.5nm,0.3s,baz=61,slow=15,SNR=9.3
MMAI                                Lg    Lg     23 16 44.6
      comp=Z,1.7nm,0.3s,baz=62,slow=25,SNR=4.8
MMAI                                LR    LR     23 17 55.3
      comp=Z,268nm,19.3s,baz=30,slow=40
HNTI  Hanita             8.50 231   Pn    Pn     23 14 20.0 +2.9
CSS   Mathiatis          8.66 248   Pn    Pn     23 14 22.8 +3.6
BLGI  Bet Lehem HaGe     8.73 230   Pn    Pn     23 14 22.6 +2.3
MMLI  Mount Malkishu     8.81 227   Pn    Pn     23 14 23.8 +2.4
HMDT  Nahal Hemdat       8.89 226   Pn    Pn     23 14 25.0 +2.6
OFRI  ‘Ofer              8.94 230   Pn    Pn     23 14 26.1 +3.0
SLTI  Sal’it             9.18 228   Pn    Pn     23 14 29.4 +3.0
ISP   Isparta            9.93 269⇓iP      Pn     23 14 38.9 +2.2
ISP   Isparta            9.93 269 ⇓P      Pn     23 14 38.9 +2.2
ISP   Isparta            9.93 269⇓iP      Pn     23 14 38.9 +2.2
EIL   Elat              11.22 219   Lg    Lg     23 18 14.4
      comp=Z,0.3nm,0.3s,baz=97,slow=17,SNR=3.2
VSR   Storozhevoye      12.85 349  eP     Pn     23 15 18.1 +1.6
VSR                                 pmax  pmax
      comp=Z,3.0nm,0.7s
VSR   Storozhevoye      12.85 349  eP     Pn     23 15 18.1 +1.6
      comp=Z,3.0nm,0.7s
PLOR  Plostina          14.12 306⇓iP      Pn     23 15 35.3 +1.3
PLOR  Plostina          14.12 306 ⇓P      Pn     23 15 35.3 +1.3
PLOR  Plostina          14.12 306   P     Pn     23 15 35.3 +1.3
TESR  Tescani           14.41 308⇓iP      Pn     23 15 39.2 +1.3
MLR   Muntele Rosu      14.43 304   Pn    Pn     23 15 40.5 +2.2
      comp=Z,0.1nm,0.3s,baz=112,slow=12,SNR=3.1
MLR                                 LR    LR     23 22 01.9
      comp=Z,69nm,20.6s,baz=138,slow=41
MLR   Muntele Rosu      14.43 304⇑iP      Pn     23 15 39.7 +1.4
MLR   Muntele Rosu      14.43 304 ⇑P      Pn     23 15 39.7 +1.4
IDI   Anoyia            14.94 263   Pn    Pn     23 15 47.2 +2.1
      comp=Z,0.4nm,0.3s,baz=38,slow=17,SNR=3.0
DOPR  Dopca             14.97 305⇑iP      Pn     23 15 46.9 +1.3
VOIR                    15.00 303⇓iP      Pn     23 15 47.3 +1.3
VOIR                    15.00 303 ⇓P      Pn     23 15 47.3 +1.3
RAYN  Ar Rayn           15.24 172  ePn    Pn     23 15 47.5 -1.7
      comp=Z,32nm,1.8s
RAYN  Ar Rayn           15.24 172  eP     Pn     23 15 47.5 -1.7
RAYN                                pmax  pmax
      comp=Z,32nm,1.8s
RAYN  Ar Rayn           15.24 172  ePn    Pn     23 15 47.5 -1.7
      comp=Z,32nm,1.8s
AKASG Malin Array Be    15.53 325   Pn    Pn     23 15 51.4 -1.4
      comp=Z,0.4nm,0.3s,baz=132,slow=12,SNR=8.2
KIEV  Kiev              15.53 325  ePn    Pn     23 15 53.6 +0.8
      comp=Z,6.9nm,0.8s
KIEV  Kiev              15.53 325⇑eP      Pn     23 15 52.5 -0.3
KIEV  Kiev              15.53 325  ePn    Pn     23 15 53.6 +0.8
      comp=Z,6.9nm,0.8s
VTS   Vitosha           15.59 291⇓iP      Pn     23 15 55.5 +1.6
VTS   Vitosha           15.59 291  ePn    Pn     23 15 54.7 +0.8
      comp=Z,12nm,1.5s
VTS   Vitosha           15.59 291  eP     Pn     23 15 54.7 +0.8
VTS                                 pmax  pmax
      comp=Z,12nm,1.5s
VTS   Vitosha           15.59 291  ePn    Pn     23 15 54.7 +0.8
      comp=Z,12nm,1.5s
BURAR Bucovina Array    15.79 310⇓iP      P      23 15 58.5 -1.7
BURAR Bucovina Array    15.79 310 ⇓P      P      23 15 58.5 -1.7
BURAR Bucovina Array    15.79 310⇓iP      P      23 15 58.5 -1.7
BUR04 Bucovina Ar. S    15.79 310  ePn    Pn     23 15 56.9 +0.5
BUR04 Bucovina Ar. S    15.79 310  ePn    Pn     23 15 56.9 +0.5
BUR08 Bucovina Ar. S    15.81 310  ePn    P      23 15 58.8 -1.7
BUR08 Bucovina Ar. S    15.81 310  ePn    P      23 15 58.8 -1.7
AKTO  Aktyubinsk        15.82  37   Pn    Pn     23 15 54.6 -2.1
      comp=Z,0.1nm,0.3s,baz=227,slow=15,SNR=7.3
AKTO                                LR    LR     23 23 38.6
      comp=Z,116nm,19.0s,baz=219,slow=44
ABKAR Akbulak array     16.06  43  ePn    Pn     23 16 00.3 +0.6
OBN   Obninsk           17.03 347⇓eP      Pn     23 16 07.3 -4.7
OBN                                 pmax  pmax
      comp=Z,5.0nm,0.8s
OBN                                 MLR   MLR
      comp=Z,47nm,15.0s
MDVR  Moldovita         17.07 298⇓iP      P      23 16 14.6 +0.2
MDVR  Moldovita         17.07 298⇓iP      P      23 16 14.6 +0.2
UOSS  Minazif           17.62 137  ePn    P      23 16 21.9 +1.4
      comp=Z,50nm,1.7s
UOSS  Minazif           17.62 137  ePn    P      23 16 21.9 +1.4
      comp=Z,50nm,1.7s
TRPA  Tarpa             17.63 309⇓iP      P      23 16 21.3 +0.8
TRPA  Tarpa             17.63 309⇓iP      P      23 16 21.3 +0.8
DIVS  Divibare          18.14 295  ePn    P      23 16 26.4 +0.2
      comp=Z,11nm,1.3s
DIVS  Divibare          18.14 295  ePn    P      23 16 26.4 +0.2
      comp=Z,11nm,1.3s
CRVS  Cervenica-Dubn    18.61 310  eP     P      23 16 30.1 -1.2
CRVS  Cervenica-Dubn    18.61 310  eP     P      23 16 30.0 -1.2
CRVS  Cervenica-Dubn    18.61 310  eP     P      23 16 30.1 -1.2
PSZ   Piszkesteto       19.19 306⇑iP      Pn     23 16 40.4 +1.7
PSZ   Piszkesteto       19.19 306  eP     Pn     23 16 40.8 +2.1
PSZ   Piszkesteto       19.19 306  eP     Pn     23 16 40.1 +1.5
      comp=Z,18nm,1.4s
PSZ   Piszkesteto       19.19 306 ⇑P      Pn     23 16 40.4 +1.7
MORH  Mˆ‡rˆ¡gy, Hung    19.51 301  eP     Pn     23 16 41.8 -0.6
NIE   Niedzica          19.52 311   P     Pn     23 16 43.7 +1.2
NIE                                 pmax  pmax
      comp=Z,3.0nm,1.4s
VYHS  Vyhne             20.05 307  eP     P      23 16 47.4 +0.3
VYHS  Vyhne             20.05 307  eP     P      23 16 47.3 +0.2
VYHS  Vyhne             20.05 307  eP     P      23 16 47.4 +0.3
WSAR  Wadi Sarin        20.30 135   P     P      23 16 49.0 -0.9
      comp=Z,5.7nm,0.8s,baz=342,slow=6.4,SNR=2.5
WSAR                                LR    LR     23 26 02.3
      comp=Z,87nm,19.7s,baz=309,slow=41
ARU   Arti              20.52  25   P     P      23 16 50.8 -1.3
      comp=Z,1.3nm,0.5s,baz=198,slow=9.5,SNR=7.7
ARU                                 LR    LR     23 27 11.6
      comp=Z,86nm,19.3s,baz=222,slow=44
ARU   Arti              20.52  25  eP     P      23 16 51.1 -1.0
      comp=Z,9.2nm,1.0s
ARU   Arti              20.52  25c iP     P      23 16 51.4 -0.7
ARU                                 PPP   PPP    23 17 15.4
ARU                                 S     S      23 20 41.1 -0.3
ARU                                 SS    SnSn   23 20 59.3 -0.8
ARU                                 pmax  pmax
      comp=Z,10.0nm,1.2s
MODS  Modra-Piesok      21.00 306  eP     Pn     23 17 00.8 +0.9
MODS  Modra-Piesok      21.00 306  eP     Pn     23 17 00.8 +0.9
KK31  Karatay Array     21.16  69  eP     P      23 17 00.3 +1.2
KK31  Karatay Array     21.16  69  eP     P      23 17 00.3 +1.2
KKAR  Karatay Array     21.16  69  eP     P      23 16 59.8 +0.7
KKAR  Karatay Array     21.16  69  eP     P      23 16 59.8 +0.7
KBL   Kabul             21.21  93  eP     P      23 17 01.2 +1.3
      comp=Z,8.6nm,1.1s
KBL                                eS     Sn     23 21 02.3 -0.3
KBL   Kabul             21.21  93  eP     P      23 17 01.2 +1.3
KBL                                eS     Sn     23 21 02.3 -0.3
KBL                                 pmax  pmax
      comp=Z,9.0nm,1.1s
KBL   Kabul             21.21  93  eP     P      23 17 01.2 +1.3
      comp=Z,8.6nm,1.1s
KBL                                eS     Sn     23 21 02.3 -0.3
ZAG   Zagreb            21.24 298   P     P      23 16 59.5 -0.4
ZAG                                 pmax  pmax
      comp=Z,68nm,0.6s
SOP   Sopron            21.26 304   P     P      23 17 02.6 +2.4
SOP                                 pmax  pmax
      comp=Z,13nm,1.2s
SVE   Sverdlovsk        21.55  27  eP     P      23 17 12.4 +9.3
VRAC  Vranov            21.72 308   P     P      23 17 05.4 +0.3
      comp=Z,0.7nm,0.5s,baz=112,slow=13,SNR=3.0
CONA  Conrad Observa    21.78 304  eP     P      23 17 05.9 +0.1
      comp=Z,8.7nm,1.0s
CONA  Conrad Observa    21.78 304   P     P      23 17 05.9 +0.1
      comp=Z,8.7nm,1.0s
KLMR  Klimovskoe        22.32 355  eP     P      23 17 09.1 -2.3
KLMR                                pmax  pmax
      comp=Z,11nm,1.2s
KLMR  Klimovskoe        22.32 355  eP     P      23 17 09.2 -2.2
KLMR                                AMP          23 17 18.4
      comp=Z,11nm,1.2s
VSU   Vasula            22.46 337deP      P      23 17 14.9 +2.0
VSU                                 pmax  pmax
      comp=Z,33nm,0.8s
MNAS  Manas             22.61  71   P     P      23 17 17.0 +2.2
MNAS                                pmax  pmax
      comp=Z,6.0nm,1.6s
MNAS  Manas             22.61  71   P     P      23 17 17.0 +2.2
      comp=Z,6.0nm,1.6s
MOA   Molln             22.80 303  eP     P      23 17 17.4 +0.7
      comp=Z,7.8nm,0.9s
PRU   Pruhonice         23.20 308  eS     S      23 21 31.1 -1.3
PRA   Prague            23.30 309   AMS   AMS    23 30 00.0
      comp=Z,100nm,10.5s
GERES GERESS Array B    23.41 305   P     P      23 17 22.7 -0.3
      comp=Z,0.8nm,0.8s,baz=102,slow=9.1,SNR=2.8
GERES                               LR    LR     23 27 09.8
      comp=Z,58nm,20.3s,baz=122,slow=38
SFK   Sufi-Kurgan       23.51  77   P     P      23 17 25.7 +1.5
SFK                                 pmax  pmax
      comp=Z,4.0nm,1.1s
SFK   Sufi-Kurgan       23.51  77   P     P      23 17 25.7 +1.5
      comp=Z,4.0nm,1.1s
KHC   Kasperske Hory    23.56 306  eP     P      23 17 28.3 +3.9
KHC                                eS     S      23 21 38.5 +0.2
KHC                                 AMS   AMS    23 29 10.0
      comp=Z,100nm,16.7s
KHC   Kasperske Hory    23.56 306  eP     P      23 17 28.2 +3.9
      comp=Z,3.0nm,1.4s
KHC   Kasperske Hory    23.56 306  eP     P      23 17 28.3 +3.9
KHC                                eS     S      23 21 38.5 +0.2
KHC                                 MLR   MLR
      comp=Z,100nm,16.7s
KHC   Kasperske Hory    23.56 306  eP     P      23 17 28.2 +3.9
      comp=Z,3.0nm,1.4s
KHC                                eS     S      23 21 38.5 +0.2
BRVK  Borovoye          23.59  44  eP     P      23 17 23.5 -1.1
      comp=Z,3.7nm,0.6s
BRVK  Borovoye          23.59  44  eP     P      23 17 23.5 -1.1
BRVK                                pmax  pmax
      comp=Z,4.0nm,0.6s
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BVAR	Borovoye Array	23.64	44	P	P	23 17 24.5	-0.6
	comp=Z,3.5nm,1.2s,baz=229,slow=11,SNR=5.6						
AAK	Ala-Archa	24.08	70	P	P	23 17 29.8	+0.2
	comp=Z,1.3nm,0.3s,baz=236,slow=5.1,SNR=4.6						
AAK				LR	LR	23 28 59.8	
	comp=Z,137nm,18.1s,baz=268,slow=42						
AAK	Ala-Archa	24.08	70	⇓eP	P	23 17 30.2	+0.6
AAK				pmax	pmax		
	comp=Z,3.0nm,1.4s						
WTTA	Wattenberg	24.44	301	eP	P	23 17 34.8	+2.0
	comp=Z,7.7nm,0.9s						
WTTA	Wattenberg	24.44	301	P	P	23 17 34.8	+2.0
	comp=Z,7.7nm,0.9s						
WATA	Walderalm	24.49	301	eP	P	23 17 32.6	-0.7
	comp=Z,7.0nm,0.9s						
WATA	Walderalm	24.49	301	P	P	23 17 32.6	-0.7
	comp=Z,7.0nm,0.9s						
CLL	Collm	24.56	311	epP	pP	23 17 37.0	0.0
CLL				esP	sP	23 17 40.0	+1.6
CLL				e		23 17 51.0	
CLL				eS	S	23 21 48.0	-6.2
CLL				eSSS	SSS	23 22 54.0	
CLL				LmV		23 30 00.0	
	comp=Z,100nm,18.6s						
CLL	Collm	24.56	311	eP	pP	23 17 37.0	0.0
CLL				e		23 17 40.0	
MOTA	Moosalm	24.81	301	epP	P	23 17 36.2	0.0
	comp=Z,19nm,1.2s						
MOTA	Moosalm	24.81	301	P	P	23 17 36.2	0.0
	comp=Z,19nm,1.2s						
FETA	Feichten	25.01	300	P	P	23 17 40.4	+2.3
	comp=Z,5.4nm,1.3s						
RETA	Reutte	25.06	301	pP	P	23 17 38.5	+0.1
	comp=Z,5.3nm,1.1s						
RETA	Reutte	25.06	301	P	P	23 17 38.5	+0.1
	comp=Z,5.3nm,1.1s						
FINES	FINESS Array B	25.12	341	P	P	23 17 37.8	-0.8
	comp=Z,2.1nm,0.9s,baz=148,slow=8.2,SNR=3.9						
FINES	FINESS Array B	25.12	341	ceP	P	23 17 45.5	+6.8
GRF	Grafenberg Arr	25.19	306	P	P	23 17 42.2	+2.8
GRF				pmax	pmax		
	comp=Z,38nm,1.1s						
GRFO	Grafenberg	25.19	306	eP	P	23 17 41.0	+1.6
GRFO	Grafenberg	25.19	306	eP	P	23 17 41.0	+1.6
KSH	Kashi	25.46	78	P	P	23 17 41.3	-0.8
KSH				PP	PnPn	23 18 18.3	+1.1
KSH				pmax	pmax		
	comp=Z,10.0nm,1.5s						
KSH				pmax	pmax		
	comp=Z,25nm,2.9s						
DAVOX	Davos/Dischmat	25.56	299	P	P	23 17 42.7	-0.3
	comp=Z,1.9nm,0.5s,baz=114,slow=18,SNR=3.2						
DAVA	Damuels	25.62	300	pP	P	23 17 44.0	+0.4
	comp=Z,2.0nm,0.5s						
KURBB	Kurchatov Arra	27.63	53	P	P	23 18 01.4	-0.1
	comp=Z,0.5nm,0.6s,baz=263,slow=7.4,SNR=4.3						
HFS	Hagfors	28.35	329	P	P	23 18 06.6	-1.2
	comp=Z,6.0nm,1.1s,baz=117,slow=18,SNR=3.5						
HFS				LR	LR	23 29 33.4	
	comp=Z,41nm,20.9s,baz=22,slow=37						
MKAR	Makanchi Array	29.66	61	P	P	23 18 19.0	-0.6
	comp=Z,0.5nm,0.7s,baz=256,slow=5.8,SNR=3.9						
MKAR				LR	LR	23 32 14.2	
	comp=Z,97nm,18.9s,baz=240,slow=41						
MKAR	Makanchi Array	29.66	61	ceP	P	23 18 24.2	+4.6
NOA	NORSAR Array B	29.88	329	LR	LR	23 30 06.6	
	comp=Z,14nm,20.7s,baz=125,slow=36						
ZALV	Zalesovo Beam	32.09	48	LR	LR	23 33 54.4	
	comp=Z,59nm,18.1s,baz=246,slow=41						
DGZ	Jazzator, Alta	33.20	56	eP	P	23 18 50.7	-0.1
DGZ				pmax	pmax		
	comp=Z,1.0nm,1.3s						
WMQ	Urumqi	33.62	67	P	P	23 18 57.5	+3.1
WMQ				LR	LR		
	comp=N,140nm,19.5s						
WMQ				LR	LR		
	comp=E,97nm,20.3s						
WMQ				LR	LR		
	comp=Z,120nm,21.1s						
ES19	SONSECA Array	36.12	287	eP	P	23 19 18.9	+2.8
ESDC	Sonseca Array	36.17	287	P	P	23 19 15.1	-1.4
	comp=Z,0.9nm,0.8s,baz=69,slow=9.7,SNR=5.6						
NRIK	Noril'sk	38.74	23	LR	LR	23 39 17.3	
	comp=Z,78nm,19.3s,baz=241,slow=42						
MDT	Midelt	38.81	276	LR	LR	23 39 11.3	
	comp=Z,64nm,19.0s,baz=205,slow=42						
TORD	Torodi Ar. Bea	44.55	247	P	P	23 20 27.4	+1.4
	comp=Z,0.8nm,1.0s,baz=58,slow=13						
SONM	Songino Array	45.83	57	LR	LR	23 41 11.1	
	comp=Z,62nm,19.6s,baz=262,slow=38						
ULN	Ulaanbaatar	46.26	57	eP	P	23 20 39.7	+0.2
	comp=Z,1.3nm,0.2s						
ULN	Ulaanbaatar	46.26	57	eP	P	23 20 39.7	+0.2
ULN				pmax	pmax		
	comp=Z,1.0nm,0.2s						
LZH	Lanzhou	47.57	73	eP	P	23 20 49.3	-0.6
LZH				pP	pP	23 20 53.0	-0.4
LZH				sP	sP	23 20 56.8	+2.1
LZH				PP	PP	23 22 39.5	-1.7
LZH				pmax	pmax		
	comp=Z,17nm,1.0s						
LZH				pmax	pmax		
	comp=Z,340nm,4.9s						
HHC	Hu-ho-hao-te	51.44	64	P	P	23 21 21.3	+2.0
HHC				S	S	23 28 41.3	+2.2
HHC	Hu-ho-hao-te	51.44	64	SS	SS	23 32 11.3	-3.3
HHC				pmax	pmax		
	comp=Z,21nm,1.0s						
HHC				AMB	AMB		
	comp=Z,260nm,5.2s						
CMAR	Chiang Mai Arr	52.20	96	P	P	23 21 24.1	-1.0
	comp=Z,1.4nm,0.3s,baz=300,slow=7.2,SNR=5.6						
CMAR				LR	LR	23 47 05.7	
	comp=Z,21nm,18.9s,baz=205,slow=40						
KSRS	Korea Array	64.35	62	P	P	23 22 48.4	-1.4
	comp=Z,0.5nm,0.3s,baz=293,slow=7.7,SNR=4.0						
MJAR	Matsushiro Arr	71.78	58	LR	LR	23 58 00.4	
	comp=Z,38nm,18.8s,baz=235,slow=38						
PETK	Petropavlovsk-	72.55	35	LR	LR	23 59 23.5	
	comp=Z,44nm,18.3s,baz=341,slow=39						

PRU 31 23:13:25.2, 49°.86N×18°.38E, h0^{km}, Czech and Slovak Republics

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
OKC	Ostrava-Krasne	0.15	262	ePG	Pg	23 13 27.7	-0.4
OKC				eSG	Sg	23 13 30.7	+0.6
	comp=Z,6.8nm,0.3s						
DPC	Dobruska-Polom	1.41	291	eSG	Sg	23 14 10.3	-0.3

NNC 31 23:20:31.1±2.9, 36°.68N×70°.08E, h0^{km}, mb3.5, mpv3.1, 5C-1D, Error ellipse: s-maj=22.9km s-min=21.1km az=152.0, Hindu Kush region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFK	Sufi-Kurgan	4.28	38	⇑Pn	Pn	23 21 37.0	-0.6
	2.2nm,0.3s						
SFK				⇑Sn	Sn	23 22 29.9	+1.5
	2.2nm,0.2s						
MNAS	Manas	6.09	17	⇓Pn	Pn	23 22 03.3	+0.8
	0.8nm,0.5s						
MNAS				⇑Sn	Sn	23 23 14.2	+1.2
	1.2nm,0.5s						
KK31	Karatay Array	6.42	3	⇑Pn	Pn	23 22 07.5	+0.6
	0.4nm,0.3s,baz=186,slow=14,SNR=8.9						
KK31				⇑Sn	Sn	23 23 21.7	+0.8
	0.5nm,0.3s,baz=194,slow=24,SNR=4.0						

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*ISK **31** 23:24:09.3, 38°.69N×43°.06E, h21^{km}, ML1.8/3*

*CSEM **31** 23:24:10.5±0.3, 38°.69N×43°.03E, h10^{km}, ML1.8, Error ellipse: s-maj=6.1km s-min=5.7km az=69.0*

*DDA **31** 23:24:10.9, 38°.66N×43°.07E, h7^{km}, Ml2.7*

ISC 31 23:24:10.3±1.1, 38°.69N±0°.03×43°.06E±0°.03, h10^{km}±14^{km}, n16, σ0^{s}.47/28, Turkey

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
VANB	Van	0.27	110	PG	Pb	23 24 16.9	-0.5
VANB				SG	Sb	23 24 22.3	+0.2
VANB	Van	0.27	110	ePg	Pb	23 24 16.9	-0.5
VANB				eSg	Sb	23 24 22.3	+0.2
ADCV	BITLIS_Adilcev	0.29	294	i P	Pb	23 24 17.4	-0.2
ADCV				i S	Sb	23 24 22.9	+0.3
ADCV	BITLIS_Adilcev	0.29	294	P	Pb	23 24 17.4	-0.2
ADCV				S	Sb	23 24 22.9	+0.3
GEVA	Gevas	0.38	180	i P	Pg	23 24 17.8	-0.1
GEVA				i S	Sg	23 24 23.3	+0.4
GEVA	Gevas	0.38	180	P	Pg	23 24 17.8	-0.1
GEVA				S	Sg	23 24 23.3	+0.4
VMUR	Van-Muradiye	0.50	53	i P	Pb	23 24 21.0	-0.3
VMUR				i S	Sb	23 24 29.5	+0.9
VMUR	Van-Muradiye	0.50	53	P	Pb	23 24 21.0	-0.3
VMUR				S	Sb	23 24 29.5	+0.9
TUTA	Tutak	0.74	345	i P	Pg	23 24 25.1	+0.5
TUTA				i S	Sb	23 24 35.8	+0.2
TUTA	Tutak	0.74	345	P	Pg	23 24 25.0	+0.5
TUTA				S	Sb	23 24 35.8	+0.2
CLDR	Caldiran	0.81	56	PG	Pg	23 24 25.6	-0.3
CLDR	Caldiran	0.81	56	ePg	Pg	23 24 25.6	-0.3
GURO	Guroymak-BITLI	0.82	260	PG	Pg	23 24 25.7	-0.4
GURO	Guroymak-BITLI	0.82	260	ePg	Pg	23 24 25.7	-0.4
AGRB	Hanur-Agry	0.89	357	PG	Pg	23 24 26.6	-0.8
AGRB				SG	Sb	23 24 40.1	+0.3
AGRB	Hanur-Agry	0.89	357	ePg	Pg	23 24 26.6	-0.8
AGRB				eSg	Sb	23 24 40.1	+0.3

IDC 31 23:24:41.9±3.6, 5°.76S×150°.60E, h0^{km}, mb3.4/2, mb1 3.7/2, mb1mx3.3/45, mbtmp3.5/2, Error ellipse: s-maj=149.0km s-min=46.5km az=118.0, New Britain region

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
WRA	Warramunga Arr	21.18	227	P	P	23 29 29.2	+0.1
	0.6nm,0.5s,baz=53,slow=11,SNR=7.0						
ASAR	Alice Springs	23.98	220	P	P	23 29 58.5	+0.2
	1.1nm,0.6s,baz=56,slow=9.3,SNR=8.0						
TORD	Torodi Ar. Bea	148.49	286	PKPbc	PKPbc	23 44 30.9	-0.8
	baz=85,slow=3.2						

IDC 31 23:29:48.2±1.1, 39°.06S×78°.59E, h0^{km}, mb4.0/6, mb1 4.1/6, mb1mx3.7/63, mbtmp4.0/6, MS3.7/15, Ms1 3.7/15, ms1mx3.4/53, Error ellipse: s-maj=37.9km s-min=28.9km az=168.0, Mid-Indian Ridge

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
H01W2	Cape Leeuwin H	28.58	93	T	T	00 05 53.6	
	baz=252,slow=75,SNR=4080						
H01W3	Cape Leeuwin H	28.59	93	T	T	00 05 54.0	
	baz=252,slow=75,SNR=3665						
H01W1	Cape Leeuwin H	28.60	93	T	T	00 05 54.9	
	baz=252,slow=75,SNR=2865						
MAW	Mawson	29.90	192	LR	LR	23 45 48.3	
	comp=Z,131nm,19.1s,baz=46,slow=32						
H08S2	Diego Garcia H	31.76	348	T	T	00 09 02.5	
	baz=171,slow=76,SNR=92						
H08S1	Diego Carcia H	31.76	348	T	T	00 09 02.9	
	baz=171,slow=76,SNR=67						
H08S3	Diego Garcia H	31.78	348	T	T	00 09 02.8	
	baz=171,slow=76,SNR=311						
LEM	Lembang	41.40	47	LR	LR	23 51 04.3	
	comp=Z,67nm,20.0s,baz=188,slow=31						
BOSA	Boshof	44.95	267	P	P	23 38 04.2	-1.0
	3.7nm,0.9s,baz=143,slow=10.0,SNR=3.5						
PALK	Pallekele	46.14	3	LR	LR	23 53 00.3	
	comp=Z,107nm,20.3s,baz=97,slow=30						
ASAR	Alice Springs	48.95	89	P	P	23 38 35.4	-1.0
	0.4nm,0.9s,baz=238,slow=5.9,SNR=1.9						
ASAR				LR	LR	23 57 02.1	
	comp=Z,20nm,18.3s,baz=235,slow=33						
BATI	Baumata	49.33	67	LR	LR	23 56 45.1	
	comp=Z,60nm,21.6s,baz=192,slow=33						
VNDA	Vanda	50.77	164	LR	LR	23 58 44.5	
	comp=Z,133nm,18.0s,baz=270,slow=34						
SNAA	Sanae	50.80	204	LR	LR	23 56 07.6	
	comp=Z,40nm,21.6s,baz=353,slow=31						
STKA	Stephens Creek	50.91	102	LR	LR	23 56 40.9	
	comp=Z,94nm,19.5s,baz=206,slow=32						
QSPA	South Pole Qui	51.10	180	P	P	23 38 52.9	+0.6
	2.2nm,1.0s,baz=310,slow=4.8,SNR=4.0						
WRA	Warramunga Arr	51.31	85	P	P	23 38 54.0	-0.4
	3.5nm,0.8s,baz=235,slow=7.3,SNR=7.9						
TSUM	Tsumeb	55.82	272	LR	LR	23 59 17.8	
	comp=Z,124nm,21.1s,baz=144,slow=32						
PMG	Port Moresby	67.50	84	LR	LR	00 10 37.4	
	comp=Z,44nm,18.0s,baz=216,slow=36						
DZM	Mont Dzumac	74.84	106	LR	LR	00 09 32.8	
	comp=Z,72nm,18.2s,baz=121,slow=32						
HNR	Honiara	77.43	92	LR	LR	00 12 52.0	
	comp=Z,34nm,20.8s,baz=241,slow=33						
MKAR	Makanchi Array	85.54	3	P	P	23 42 27.7	0.0
	0.4nm,0.7s,baz=163,slow=5.1,SNR=3.5						
TORD	Torodi Ar. Bea	88.28	288	LR	LR	00 21 57.7	
	comp=Z,59nm,18.3s,baz=255,slow=36						
DBIC	Dimbokro	89.09	279	LR	LR	00 19 59.5	
	comp=Z,43nm,19.8s,baz=90,slow=34						
SONM	Songino Array	89.99	18	P	P	23 42 50.6	+1.4
	0.3nm,0.5s,baz=208,slow=4.9,SNR=2.8						
KOWA	Kowa	93.39	286	LR	LR	00 23 59.2	
	comp=Z,66nm,20.2s,baz=52,slow=35						

GUC 31 23:38:31.7±0.5, 37°.42S×74°.18W, h32^{km}±3^{km}, ML3.7, 1D, Off coast of central Chile

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
CCSP	San Pedro de C	1.03	56	eP	Pn	23 38 49.6	-0.3
CCSP				eS	Sn	23 39 02.7	-0.5
CCSP				IAML		23 39 11.2	
	comp=N,4µm,0.6s						
TMU	Temuco	1.81	137	eP	Pn	23 39 01.5	+0.9
TMU				eS	Sb	23 39 24.5	-1.9
CCHI	Chillan	1.87	65	eP	Pn	23 39 02.0	+0.6
CCHI				eS	Sn	23 39 25.6	+1.6
CCHI				IAML		23 39 38.6	
	comp=E,2µm,0.4s						
GO05	HualaæØ	3.02	38	⇓eP	Pn	23 39 18.3	+1.0
GO05				eS	Sn	23 39 53.3	+1.0
GO05				IAML		23 40 20.2	
	comp=N,390nm,1.0s						
GO06	Curarrehue	3.03	136	eP	Pn	23 39 19.0	+1.5
GO06				eS	Sn	23 39 54.2	+1.5
GO06				IAML		23 40 10.0	
	comp=N,96nm,1.3s						
PLCA	Paso Flores	4.35	141	eP	Pn	23 39 36.7	+1.2

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*IDC **31** 23:44:38.0±0.6, 6°.98N×76°.79W, h0^{km}, mb3.8/15, mb1 4.0/18, mb1mx3.9/48, mbtmp3.8/18, ML3.7/3, MS3.4/14, Ms1 3.4/14, ms1mx3.2/49, Error ellipse: s-maj=21.3km s-min=9.6km az=39.0*

*RSNC **31** 23:44:41.3±1.1, 7°.08N×76°.68W, h4^{km}±6^{km}, ML3.8, Mw4.2*

*NEIC **31** 23:44:45.7±0.8, 6°.99N×76°.64W, h52^{km}±8^{km}, mb4.3/15, Error ellipse: s-maj=11.5km s-min=6.9km az=222.0*

ISC 31 23:44:41.8±1.1, 7°.05N±0°.03×76°.63W±0°.03, h16^{km}±7^{km}, n69, σ1^{s}.83/77, mb4.1/29, MS3.3/11, 2C-2D, Northern Colombia

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
DBBC	Dabeiba	0.41	95	i P	Pg	23 44 50.0	-0.2
DBBC				eS	Sg	23 44 55.6	-0.3
SOLC	Bahia Solano	1.13	224	eP	Pb	23 45 00.6	-2.3
UREC	San Jos˜' de U	1.29	57	⇑iP	Pn	23 45 04.3	-0.9
UREC				eS	Sb	23 45 21.4	-0.6
UREC				i		23 45 24.3	
	comp=Z,2µm,0.3s						
HELC	Santa Helena	1.39	128	ePg	Pn	23 45 07.0	+0.2
HELC				eSg	Sg	23 45 26.1	-0.5
HELC	Santa Helena	1.39	128	⇓iP	Pn	23 45 07.0	+0.2
HELC				eS	Sg	23 45 26.8	+0.2
HELC				i		23 45 30.5	
	comp=Z,1µm,0.4s						
CAPC	Capurgana	1.73	335	i	Pg	23 45 17.4	+2.4
	comp=Z,722nm,0.5s						
CAPC				eS	Sn	23 45 33.4	+0.4
ZARC	Zaragoza, Cauc	1.81	76	⇑iP	Pn	23 45 12.3	0.0
ZARC				eS	Sn	23 45 36.2	+1.3
ZARC				i		23 45 37.7	
	comp=Z,2µm,0.6s						
MOTC	Monteria, Cord	1.96	29	eP	Pn	23 45 12.8	-1.6
MOTC				i		23 45 53.7	
	comp=Z,165nm,0.6s						
PTBC	PUERTO BERRIO,	2.21	103	⇓iP	Pn	23 45 19.0	+1.1
PTBC				eS	Sn	23 45 46.3	+1.3
PTBC				i		23 45 59.2	
	comp=Z,766nm,0.7s						
ANIL	Santa Ana	2.82	154	eS	Sn	23 46 01.8	+1.5
BRRC	Barranca, Sant	2.89	89	eS	Sn	23 46 04.5	+2.7
BRRC				i		23 46 19.5	
	comp=Z,371nm,0.4s						
ROSC	El Rosal	3.18	134	Pg	Pb	23 45 36.2	-1.9
	comp=Z,48nm,0.3s,baz=211,slow=17,SNR=45						
ROSC				Lg	Lg	23 46 20.4	
	comp=Z,36nm,0.3s,baz=318,slow=22,SNR=5.1						
ROSC				LR	LR	23 47 07.9	
	comp=Z,605nm,18.9s,baz=306,slow=46						
HORQ	Saladito	3.54	180	eP	Pn	23 45 35.3	-1.2
HORQ				i		23 46 21.9	
	comp=Z,394nm,0.5s						
RUSC	La Rusia	3.70	108	ePn	Pn	23 45 40.7	+1.9
RUSC				eSn	Sn	23 46 25.4	+2.9
RUSC	La Rusia	3.70	108	eS	Sn	23 46 25.1	+2.6
RUSC				i		23 46 35.2	
	comp=Z,338nm,0.8s						
PRAC	Prado	3.74	152	ePn	Pn	23 45 42.9	+3.9
PRAC				eSg	Sg	23 46 40.5	-1.5
BCIP	Isla Barro Col	3.81	304	ePn	Pn	23 45 42.6	+2.8
BCIP	Isla Barro Col	3.81	304	eP	Pn	23 45 38.4	-1.5
BCIP				i		23 45 59.3	
	comp=Z,77nm,0.7s						
POPC	Popayan, Colom	4.48	181	eP	Pn	23 45 48.8	-0.5
POPC				eS	Sn	23 46 41.6	+0.3
POPC				i		23 46 48.7	
	comp=Z,206nm,0.3s						
SDV	Santo Domingo	6.21	73	Pn	Pn	23 46 13.5	+0.4
	comp=Z,5.1nm,0.3s,baz=322,slow=14,SNR=9.5						
SDV				Sn	Sn	23 47 21.9	-1.9
	comp=Z,7.1nm,0.3s,baz=24,slow=12,SNR=2.1						
SDV	Santo Domingo	6.21	73	ePn	Pn	23 46 14.9	+1.9
SDV				Sn	Sn	23 47 21.9	-1.9
OTAV	Otavalo	7.01	195	ePn	Pn	23 46 25.1	+0.9
JTS	JuntasAbangare	8.84	292	LR	LR	23 50 09.1	
	comp=Z,239nm,21.0s,baz=166,slow=38						
JTS	JuntasAbangare	8.84	292	ePn	Pn	23 46 50.9	+1.8
PCRV	Puerto La Cruz	12.25	74	Pn	Pn	23 47 36.9	+1.1
	comp=Z,0.8nm,0.3s,baz=0.0,slow=5.1,SNR=3.1						
PCRV				Sn	Sn	23 49 51.2	-1.0
	comp=Z,0.3nm,0.3s,baz=83,slow=17,SNR=2.9						
SJG	San Juan	15.00	42	LR	LR	23 53 52.0	
	comp=Z,97nm,21.7s,baz=232,slow=36						
PTGA	Pitinga	18.33	114	P	Pn	23 48 54.8	-0.8
	comp=Z,0.5nm,0.3s,baz=304,slow=15,SNR=6.0						
PTGA				S	S	23 52 24.1	-0.8
	comp=Z,0.3nm,0.3s,baz=14,slow=6.4,SNR=4.3						
PTGA	Pitinga	18.33	114	ePn	P	23 48 56.5	+0.8
	comp=Z,5.0nm,0.8s						
PTGA				S	S	23 52 24.1	-0.8
CMIG	Matias Romero	20.43	301	LR	LR	23 58 24.8	
	comp=Z,141nm,18.7s,baz=120,slow=41						
SAML	Samuel	20.79	140	eP	P	23 49 21.4	-1.1
	comp=Z,6.3nm,0.8s						
LPAZ	La Paz	24.67	160	P	P	23 50 02.1	-0.7
	comp=Z,1.0nm,0.4s,baz=351,slow=10,SNR=4.8						
LPAZ	La Paz	24.67	160	eP	P	23 50 04.7	+1.9
	comp=Z,14nm,1.7s						
SIV	San Ignacio	27.59	146	P	P	23 50 27.4	-1.2
	comp=Z,0.6nm,0.6s,baz=348,slow=6.9,SNR=5.5						
SIV				LR	LR	00 01 40.3	
	comp=Z,177nm,20.0s,baz=71,slow=37						
HKT	Hockley	29.07	324	eP	P	23 50 43.9	+2.4
	comp=Z,3.9nm,0.3s						
TKL	Tuckaleechee C	29.22	348	LR	LR	00 03 10.9	
	comp=Z,68nm,18.4s,baz=168,slow=38						
V40A	Witts Springs	32.24	335	eP	P	23 51 10.3	+0.7
	comp=Z,8.2nm,1.0s						
T42A	Van Buren	32.62	338	eP	P	23 51 13.1	+0.2
	comp=Z,8.5nm,0.9s						
CCM	Cathedral Cave	33.59	339	eP	P	23 51 21.9	+0.6
	comp=Z,12nm,0.8s						
TXAR	Lajitas Array	33.76	314	P	P	23 51 20.8	-2.3
	comp=Z,0.2nm,0.8s,baz=106,slow=9.5,SNR=2.4						
TXAR				LR	LR	00 10 06.5	
	comp=Z,39nm,18.1s,baz=0.0,slow=45						
S39A	Bolivar	34.06	336	eP	P	23 51 29.1	+3.6
	comp=Z,8.1nm,1.0s						
R40A	Maddies Statio	34.17	338	eP	P	23 51 27.1	+0.7
	comp=Z,6.8nm,0.9s						
P42A	Winchester	34.66	341	eP	P	23 51 30.8	+0.2
	comp=Z,12nm,0.9s						
P40A	Paris	35.19	339	eP	P	23 51 38.8	+3.6
	comp=Z,15nm,1.3s						
BDFB	Brasilia	36.22	129	P	P	23 51 43.2	-1.2
	comp=Z,2.9nm,0.8s,baz=306,slow=9.8,SNR=4.0						
BDFB				LR	LR	00 07 34.4	
	comp=Z,155nm,18.2s,baz=179,slow=38						
CPUP	Villa Florida	38.10	151	LR	LR	00 08 56.1	
	comp=Z,162nm,20.0s,baz=214,slow=38						
ANMO	Albuquerque	39.03	320	P	P	23 52 07.8	-0.3
	comp=Z,0.7nm,0.7s,baz=127,slow=10,SNR=3.0						
ANMO				LR	LR	00 10 07.0	
	comp=Z,23nm,20.6s,baz=356,slow=39						
ANMO	Albuquerque	39.03	320	eP	P	23 52 08.0	-0.1
	comp=Z,1.2nm,0.8s						
G43A	Wallace	39.26	348	eP	P	23 52 12.7	+3.1
	comp=Z,16nm,1.2s						
SDCO	Great Sand Dun	40.24	324	eP	P	23 52 19.0	+0.7
	comp=Z,3.2nm,1.3s						
ECSD	EROS Data Cent	40.52	338	eP	P	23 52 22.6	+2.4
	comp=Z,3.7nm,1.0s						
PDAR	Pinedale Array	45.90	326	P	P	23 53 02.1	-1.9
	comp=Z,0.5nm,0.9s,baz=134,slow=2.6,SNR=4.5						
PDAR				LR	LR	00 16 20.8	
	comp=Z,31nm,18.6s,baz=93,slow=42						
ULM	Lac du Bonnet	45.97	343	P	P	23 53 02.1	-1.9
	comp=Z,2.0nm,0.8s,baz=180,slow=9.1,SNR=2.0						
ULM				LR	LR	00 13 32.9	
	comp=Z,54nm,18.2s,baz=176,slow=38						
ULM	Lac du Bonnet	45.97	343	eP	P	23 53 07.9	+3.9
	comp=Z,5.2nm,0.8s						
DUG	Dugway, Tooele	46.21	321	eP	P	23 53 07.5	+1.2
	comp=Z,1.5nm,0.8s						
REDW	Red Top Meadow	47.00	326	eP	P	23 53 17.1	+4.5
	comp=Z,8.7nm,1.4s						
LOHW	Long Hollow	47.03	326	eP	P	23 53 17.3	+4.5
	comp=Z,3.6nm,1.3s						
PLCA	Paso Flores	47.88	174	P	P	23 53 18.5	-0.7
	comp=Z,1.3nm,0.7s,baz=14,slow=8.8,SNR=4.3						
SCHQ	Schefferville	48.29	8	LR	LR	00 15 10.5	
	comp=Z,30nm,19.8s,baz=72,slow=38						
NVAR	Mina Array Bea	48.87	316	P	P	23 53 25.2	-1.9
	comp=Z,0.6nm,0.8s,baz=123,slow=6.6,SNR=4.6						
YKA	Yellowknife Ar	61.88	341	P	P	23 54 57.9	-2.3
	comp=Z,0.9nm,0.7s,baz=125,slow=6.4,SNR=3.7						
BORG	Borgarnes	69.36	22	LR	LR	00 24 39.8	
	comp=Z,17nm,19.6s,baz=208,slow=35						
KOWA	Kowa	71.48	77	P	P	23 56 02.1	-0.2
	comp=Z,1.8nm,0.5s,baz=264,slow=7.0,SNR=9.8						
ESDC	Sonseca Array	72.19	51	P	P	23 56 07.1	+0.8
	comp=Z,0.8nm,0.8s,baz=266,slow=6.3,SNR=8.1						
ES19	SONSECA Array	72.24	51	eP	P	23 56 07.0	+0.4
ILAR	Eielson Array	75.30	335	P	P	23 56 22.9	-1.1
	comp=Z,0.3nm,0.6s,baz=97,slow=3.6,SNR=3.1						
TORD	Torodi Ar. Bea	77.10	78	P	P	23 56 34.5	-0.6
	comp=Z,1.3nm,1.0s,baz=279,slow=5.4						
GERES	GERESS Array B	84.96	42	P	P	23 57 16.8	+0.2
	comp=Z,0.5nm,0.8s,baz=268,slow=2.9,SNR=5.0						
ASAR	Alice Springs	146.36	237	PKPbc	PKPdf	00 04 20.5	-1.2
	comp=Z,0.7nm,0.6s,baz=121,slow=3.1,SNR=7.5						
WRA	Warramunga Arr	147.35	244	PKPbc	PKPdf	00 04 22.1	-1.2
	comp=Z,1.4nm,1.0s,baz=103,slow=3.3,SNR=4.6						

TRN 31 23:51:20.1, 16°.21N×61°.04W, h35^{km}, MD3.5, 1C-1D, Leeward Islands

Code	Station Name	Δ°	AZ°	Phase ID Op	Phase ID ISC	Time h m s	Res ISC
SFG	Saint Francois	0.16	285	⇑iP	Pb	23 51 28.0	+1.5
MGG	Marie-Galante	0.40	223	⇓iP	Pn	23 51 31.1	+1.6
MGG				eS	Sn	23 51 38.3	+2.6
DOG	Dongo Capester	0.59	252	eP	Pb	23 51 33.6	+1.4
PHG	Guadaloupe-2	0.61	251	eP	Pb	23 51 34.5	+1.7
TAG	Tarade	0.63	254	eP	Pb	23 51 34.8	+1.9
TBG	Guadaloupe-3	0.69	239	eP	Pb	23 51 35.4	+1.5
TBG				eS	Sb	23 51 45.9	+2.7
MDPO	Dominica; Chan	0.75	212	eP	Pb	23 51 35.8	+0.9
MDPO				eS	Sb	23 51 46.6	+1.7

BBL	Barber's Block	0.80	212	eP	Pb	23 51 36.5	+0.7
BBL				eS	Sb	23 51 47.2	+0.9
DLPL	La Plaine	0.90	193	eP	Pb	23 51 37.5	+0.1
DLPL				eS	Sb	23 51 50.7	+1.6
MDN	Morne-Daniel	0.95	201	eP	Pb	23 51 38.7	+0.4
MDN				eS	Sb	23 51 51.3	+0.7
DBCT	Belle View Cho	0.98	198	eP	Pb	23 51 39.5	+0.7
DBCT				eS	Sb	23 51 52.4	+0.9
DPMT	Pointe Michel	1.00	199	eP	Pb	23 51 40.0	+0.9
DSHT	Scott's Head	1.04	198	eP	Pb	23 51 40.6	+0.8
DSHT				eS	Sb	23 51 54.5	+1.3
BPA	Boggy Peak	1.14	317	eP	Pb	23 51 40.7	-0.8
BPA				eS	Sb	23 51 57.1	+1.0
MLYT	Lee's Yard	1.22	295	eP	Pb	23 51 42.4	-0.4
MLYT				eS	Sb	23 51 58.8	+0.5
MBWH		1.23	296	eP	Pb	23 51 42.0	-0.9
BAMF	Morne Balai	1.39	184	eP	Pb	23 51 44.7	-1.0
CXM	Morne La Croix	1.40	185	eP	Pb	23 51 45.0	-0.9
CXM				eS	Sb	23 52 02.5	-0.9
PCM	Pelee Case Pet	1.40	187	eP	Pn	23 51 44.3	+1.1
PCM	Pelee Case Pet	1.40	187	eP	Pb	23 51 44.7	-1.1
PML	Morne Lenard	1.43	186	eP	Pn	23 51 45.0	+1.3
FDF	Fort de France	1.47	184	eP	Pn	23 51 45.3	+1.0
FDF				eS	Sb	23 52 04.7	-0.8
ANWB	Willy Bob	1.62	334	eP	Pb	23 51 47.8	-1.6
ANWB				eS	Sb	23 52 08.0	-1.5
LPMF	Morne Lapointe	1.63	178	eP	Pn	23 51 47.5	+1.1
MVM	Montagne Vaucl	1.65	175	eP	Pb	23 51 48.5	-1.6
TRMF	Trois Ilets	1.67	181	eP	Pn	23 51 48.3	+1.4
BIM	Bigot	1.69	181	eP	Pb	23 51 48.9	-1.7
BIM				eS	Sn	23 52 09.2	+1.6
NEV	Hard Times	1.73	302	eP	Pn	23 51 49.2	+1.3
NEV				eS	Sb	23 52 11.2	-1.7
SLB	Belfond	2.37	180	eP	Pn	23 51 58.5	+1.8
SLB				eS	Sn	23 52 26.0	+1.4
MCLT	Moule a Chique	2.49	178	eP	Pn	23 52 00.4	+2.2
MCLT				eS	Sn	23 52 30.0	+2.6
SVV	Soufriere Volc	2.88	183	eP	Pn	23 52 06.1	+2.4
SVV				eS	Sn	23 52 38.4	+1.2
SVCV	St. Vincent, C	2.92	182	eP	Pn	23 52 06.5	+2.3
SVCV				eS	Sn	23 52 39.6	+1.4

IDC 31 23:53:19.3±1.7**, 14°.23N×88°.22W, h0**^{km}**, mb3.3**/3, **mb1 3.8**/5**, mb1mx3.5**/47**, mbtmp3.5**/5**, ML3.8**/2**, MS3.1**/1**, Ms1 3.1**/1**, ms1mx2.5**/25**, Error ellipse: s-maj=70.9km s-min=22.4km az=45.0, Honduras**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
JTS	JuntasAbangare	5.05	141	Pn	Pn	23 54 35.8	-0.6
	12nm,0.3s,baz=359,slow=6.5,SNR=33						
JTS				Sn	Sn	23 55 38.9	+3.3
	0.4nm,0.3s,baz=220,slow=18,SNR=5.5						
CMIG	Matias Romero	7.02	295	Pn	Pn	23 55 02.5	-1.0
	0.5nm,0.3s,baz=117,slow=8.0,SNR=2.0						
CMIG				Sn	Sn	23 56 24.9	+0.8
	0.2nm,0.3s,baz=249,slow=18,SNR=1.3						
ROSC	El Rosal	16.57	123	LR	LR	00 04 28.9	
	comp=Z,66nm,18.8s,baz=296,slow=40						
TXAR	Lajitas Array	20.74	319	P	Pn	23 58 03.1	-1.0
	0.3nm,0.5s,baz=143,slow=11,SNR=9.1						
NVAR	Mina Array Bea	35.88	318	P	P	00 00 21.5	0.0
	0.1nm,0.3s,baz=148,slow=7.0,SNR=1.7						
YKA	Yellowknife Ar	51.71	345	P	P	00 02 27.3	-0.7
	0.6nm,0.7s,baz=129,slow=9.0,SNR=4.3						

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*IDC **31** 23:55:08.8±1.1, 38°.99N×25°.75E, h0^{km}, mb3.3/4, mb1 3.5/9, mb1mx3.4/66, mbtmp3.4/9, ML3.6/5, MS2.9/2, Ms1 2.9/2, ms1mx2.2/40, Error ellipse: s-maj=18.0km s-min=14.4km az=106.0*

*ATH **31** 23:55:09.3, 39°.05N×25°.76E, h29^{km}, ML3.7/19, Error ellipse: s-maj=1.2km s-min=0.7km az=81.0*

*ISCJB **31** 23:55:09.4±0.3, 39°.04N±0°.01×25°.71E±0°.01, h12^{km}±2^{km}, mb3.2/4, MS3.1/1, Error ellipse: s-maj=2.0km s-min=1.9km az=33.7*

*ISK **31** 23:55:09.1, 39°.02N×25°.69E, h16^{km}, ML4.0/18*

*DDA **31** 23:55:09.4, 39°.04N×25°.70E, h39^{km}, Ml3.6*

*THE **31** 23:55:10.4, 39°.04N×25°.75E, h14^{km}, ML3.7/13, Error ellipse: s-maj=1.1km s-min=0.4km az=90.0*

*CSEM **31** 23:55:10.4±0.1, 39°.01N×25°.74E, h15^{km}, ML3.7, Error ellipse: s-maj=1.6km s-min=1.5km az=178.0*

*BEO **31** 23:55:12.2±1.2, 39°.23N×25°.84E, h10^{km}, ML3.2/2*

ISC 31 23:55:09.8±0.9**, 39°.03N**±0°.01×**25°.74E**±0°.01**, h13**^{km}±7^{km}**, n378, σ1^{s}06**/462**, mb3.2**/4**, 28C-19D, Aegean Sea**

Code	Station Name	Δ°	AZ°	Phase ID		Time	Res
				Op	ISC	h m s	ISC
SIGR	SIGRI	0.20	27	PG	Pb	23 55 14.5	-0.8
SIGR				SG	Sb	23 55 18.3	-0.8
SIGR	SIGRI	0.20	27	P	Pb	23 55 14.5	-0.8
SIGR				S	Sg	23 55 17.4	+0.1
SIGR				AML	AML	23 55 18.8	
	comp=N,88944µm,0.3s						
SIGR				AML	AML	23 55 19.2	
	comp=E,54285µm,0.4s						
SIGR	SIGRI	0.20	27	P	Pb	23 55 14.9	-0.4
SIGR				S	Sb	23 55 18.2	-0.8
SIGR	SIGRI	0.20	27	ePg	Pb	23 55 14.5	-0.8
SIGR	SIGRI	0.20	27	P	Pb	23 55 14.9	-0.4
SIGR				eSg	Sb	23 55 18.3	-0.8
PRK	Paraskevi	0.47	63	P	Pb	23 55 20.0	+0.2
PRK				S	Sb	23 55 26.4	-0.2
PRK				AML	AML	23 55 26.5	
	comp=N,24441µm,0.5s						
PRK				AML	AML	23 55 28.6	
	comp=E,24440µm,0.8s						
PRK	Paraskevi	0.47	63	P	Pb	23 55 19.5	-0.4
PRK				S	Sb	23 55 26.2	-0.5
PRK	Paraskevi	0.47	63	P	Pb	23 55 19.5	-0.4
PRK				S	Sb	23 55 26.2	-0.5
PSRA	Psara	0.51	196	P	Pn	23 55 21.6	-1.2
PSRA				S	Sb	23 55 28.8	+0.9
PSRA				AML	AML	23 55 29.0	
	comp=E,71402µm,0.3s						
PSRA				AML	AML	23 55 29.9	
	comp=N,45367µm,0.2s						
PSRA	Psara	0.51	196	P	Pb	23 55 21.0	+0.4
PSRA				S	Sb	23 55 28.7	+0.8
GPNR	Gulpinar-Canak	0.52	36	PG	Pb	23 55 20.5	-0.3
GPNR	Gulpinar-Canak	0.52	36	ePg	Pb	23 55 20.5	-0.3
CHOS	Chios island	0.69	159	PG	Pb	23 55 23.3	-0.5
CHOS				SG	Sb	23 55 33.2	0.0
CHOS	Chios island	0.69	159	P	Pn	23 55 24.3	-1.1
CHOS				S	Sb	23 55 32.9	-0.3
CHOS				AML	AML	23 55 35.7	
	comp=N,34294µm,0.6s						
CHOS				AML	AML	23 55 37.4	
	comp=E,35340µm,0.6s						
CHOS	Chios island	0.69	159	P	Pb	23 55 23.8	0.0
CHOS				S	Sb	23 55 33.4	+0.2
CHOS	Chios island	0.69	159	ePg	Pb	23 55 23.3	-0.5
CHOS	Chios island	0.69	159	P	Pb	23 55 23.8	0.0
CHOS				S	Sb	23 55 33.2	0.0
KRBN	Karaburun	0.77	124	PG	Pn	23 55 25.7	-0.7
KRBN				SG	Sn	23 55 36.7	-1.2
KRBN	Karaburun	0.77	124	ePg	Pn	23 55 25.7	-0.7
KRBN				eSg	Sn	23 55 36.7	-1.2
AYVA	Ayvalik	0.79	69	iP	Pb	23 55 25.2	-0.2
AYVA				iS	Sn	23 55 36.5	-1.8
AYVA	Ayvalik	0.79	69	P	Pb	23 55 25.2	-0.2
AYVA				S	Sn	23 55 36.5	-1.8
CESE	ˆe¯me	0.83	148	PG	Pn	23 55 26.2	-1.0
CESE	ˆe¯me	0.83	148	ePg	Pn	23 55 26.2	-1.0
FOCM	Foˆ§a	0.84	112	PG	Pn	23 55 26.4	-0.9
FOCM	Foˆ§a	0.84	112	ePg	Pn	23 55 26.4	-0.9
BOZC	Bozcaada	0.84	17	PG	Pg	23 55 25.9	-0.3
BOZC				SG	Sn	23 55 38.9	-0.8
BOZC	Bozcaada	0.84	17	iP	Pg	23 55 25.8	-0.3
BOZC				iS	Sn	23 55 38.9	-0.8
BOZC	Bozcaada	0.84	17	ePg	Pg	23 55 25.9	-0.3
BOZC				eSg	Sn	23 55 38.9	-0.8
DKL	Dikili	0.91	87	PG	Pn	23 55 28.3	0.0
DKL	Dikili	0.91	87	ePg	Pn	23 55 28.3	0.0
SKY	Skiros Island	0.94	261	P	Pn	23 55 28.7	-0.1
SKY				S	Sn	23 55 42.0	-0.1
SKY	Skiros Island	0.94	261	P	Pn	23 55 28.3	-0.5
SKY				S	Sn	23 55 40.9	-1.2
SKY	Skiros Island	0.94	261	P	Pn	23 55 28.3	-0.5
SKY				S	Sn	23 55 40.9	-1.2
BAYC	CANAKKALE_Bayr	0.94	41	iP	Pg	23 55 27.6	-0.4
BAYC				iS	Sn	23 55 41.8	-0.4
BAYC	CANAKKALE_Bayr	0.94	41	P	Pg	23 55 27.6	-0.4
BAYC				S	Sn	23 55 41.8	-0.4
URLA	Izmir	0.95	135	PG	Pg	23 55 27.9	-0.2
URLA	Izmir	0.95	135	iP	Pn	23 55 28.5	-0.4
URLA				iS	Sn	23 55 42.2	-0.1
URLA	Izmir	0.95	135	ePg	Pg	23 55 27.9	-0.2
URLA	Izmir	0.95	135	P	Pn	23 55 28.5	-0.4
URLA				S	Sn	23 55 42.2	-0.1
LIA	Limnos Island	0.97	334	P	Pn	23 55 28.8	-0.3
LIA				S	Sn	23 55 42.2	-0.5
LIA				AML	AML	23 55 42.5	
	comp=E,23886µm,0.4s						
LIA				AML	AML	23 55 43.2	
	comp=N,30189µm,0.4s						
LIA	Limnos Island	0.97	334	P	Pn	23 55 28.4	-0.7
LIA				S	Sn	23 55 41.9	-0.8
LIA	Limnos Island	0.97	334	P	Pn	23 55 28.4	-0.7
LIA				S	Sn	23 55 41.9	-0.8
BLCB	Balcova	1.21	122	PN	Pn	23 55 31.7	-0.7
BLCB	Balcova	1.21	122	ePn	Pn	23 55 31.7	-0.7
DGB	˜zmir	1.33	137	iP	Pb	23 55 33.7	-0.8
DGB				iS	Sg	23 55 53.8	+1.2
KARY	Karystos	1.43	226	P	Pn	23 55 33.9	-1.6
KARY	Karystos	1.43	226	P	Pn	23 55 34.8	-0.7
KARY				S	Sb	23 55 54.6	+0.2
KARY	Karystos	1.43	226	P	Pn	23 55 34.8	-0.7
KARY				S	Sb	23 55 54.6	+0.2
SMTH	Samothraki Isl	1.45	354	P	Pn	23 55 35.1	-0.6
SMTH				S	Sb	23 55 54.1	-0.9
SMTH				AML	AML	23 55 57.5	
	comp=E,1618µm,0.6s						
SMTH				AML	AML	23 56 00.3	
	comp=N,1517µm,0.4s						
SMTH	Samothraki Isl	1.45	354	P	Pn	23 55 35.2	-0.5
SMTH				S	Sn	23 55 53.5	-1.1
SMTH	Samothraki Isl	1.45	354	P	Pn	23 55 35.2	-0.5
SMTH				S	Sb	23 55 54.2	-0.7
AOS	Alonnisos	1.45	276	PN	Pn	23 55 35.0	-0.8
AOS	Alonnisos	1.45	276	P	Pn	23 55 34.9	-0.9
AOS				S	Sg	23 55 57.5	+0.9
AOS				AML	AML	23 56 00.7	
	comp=N,4118µm,0.5s						
AOS				AML	AML	23 56 00.7	
	comp=E,2904µm,0.5s						
AOS	Alonnisos	1.45	276	P	Pn	23 55 35.4	-0.4
AOS				S	Sg	23 55 56.5	-0.2
AOS	Alonnisos	1.45	276	ePn	Pn	23 55 35.0	-0.8
AOS	Alonnisos	1.45	276	P	Pn	23 55 35.4	-0.4
AOS				S	Sg	23 55 56.3	-0.4
GELI	Tayfur-Gelibol	1.48	22	PN	Pn	23 55 35.4	-0.7
GELI	Tayfur-Gelibol	1.48	22	ePn	Pn	23 55 35.4	-0.7
LPK	Lapseki	1.55	30	PN	Pb	23 55 37.4	-1.0
LPK	Lapseki	1.55	30	ePn	Pb	23 55 37.4	-1.0
STEP	BALIKESIR_Sava	1.57	77	iP	Pb	23 55 37.8	-1.0
STEP				iS	Sg	23 56 02.8	+2.3
STEP	BALIKESIR_Sava	1.57	77	P	Pb	23 55 37.8	-1.0
SMG	Samos	1.58	147	P	Pn	23 55 37.0	-0.5
SMG				S	Sg	23 55 59.3	-1.3
SMG				AML	AML	23 56 03.8	
	comp=N,9131µm,0.5s						
SMG				AML	AML	23 56 04.0	
	comp=E,12598µm,0.4s						
SMG	Samos	1.58	147	P	Pn	23 55 37.2	-0.3
SMG				S	Sb	23 55 58.5	-0.2
SMG	Samos	1.58	147	P	Pn	23 55 37.2	-0.3
SMG				S	Sb	23 55 58.5	-0.2
BALY	Balya	1.62	64	iP	Pb	23 55 38.4	-1.2
BALY				iS	Sb	23 55 59.5	-0.4
BALY	Balya	1.62	64	P	Pb	23 55 38.4	-1.2
BALY				S	Sb	23 55 59.5	-0.4
AKS	Akhisar	1.62	95	PN	Pb	23 55 38.5	-1.1
AKS	Akhisar	1.62	95	ePn	Pb	23 55 38.5	-1.1
AKHS	Akhisar	1.62	95	iP	Pb	23 55 38.5	-1.1
AKHS				iS	Sg	23 56 03.0	+0.9
AKHS	Akhisar	1.62	95	P	Pb	23 55 38.5	-1.1
AKHS				S	Sg	23 56 03.0	+0.9
DION	Dionisos Attik	1.71	237	P	Pn	23 55 37.8	-1.5
DION				S	Sb	23 56 02.8	+0.3
DION				AML	AML	23 56 07.3	
	comp=N,2011µm,0.4s						
DION				AML	AML	23 56 07.7	
	comp=E,2205µm,0.4s						
DION	Dionisos Attik	1.71	237	P	Pn	23 55 38.6	-0.7
DION				S	Sb	23 56 02.1	-0.4
ENEZ	Enez	1.73	10	PN	Pn	23 55 39.4	-0.2
ENEZ	Enez	1.73	10	ePn	Pn	23 55 39.4	-0.2
ERIK	Erikli-Kesan	1.74	20	PN	Pn	23 55 39.9	+0.2
ERIK	Erikli-Kesan	1.74	20	ePn	Pn	23 55 39.9	+0.2
THAS	Thassos island	1.76	334	P	Pn	23 55 39.2	-0.8
THAS				S	Sb	23 56 04.2	+0.4
THAS				AML	AML	23 56 08.1	
	comp=E,2703µm,0.3s						
THAS				AML	AML	23 56 08.6	
	comp=N,1381µm,0.4s						
THAS	Thassos island	1.76	334	P	Pn	23 55 39.2	-0.8
THAS				S	Sb	23 56 03.4	-0.5
THAS	Thassos island	1.76	334	P	Pn	23 55 39.5	-0.5
THAS				S	Sb	23 56 03.1	-0.8
BALB	Balikesir	1.77	69	PN	Pb	23 55 40.4	-1.7
BALB	Balikesir	1.77	69	ePn	Pb	23 55 40.4	-1.7
PTL	Penteli	1.77	237	P	Pn	23 55 38.4	-1.8
PTL				S	Sb	23 56 04.6	+0.3
PTL				AML	AML	23 56 14.9	
	comp=E,1754µm,0.8s						
PTL				AML	AML	23 56 15.1	
	comp=N,1764µm,0.5s						
PTL	Penteli	1.77	237	P	Pn	23 55 39.4	-0.8
PTL				S	Sn	23 56 00.5	-2.1
PTL	Penteli	1.77	237	P	Pn	23 55 39.4	-0.8
PTL				S	Sn	23 56 00.5	-2.1
SKIA	Skiathos	1.77	275	P	Pn	23 55 39.6	-0.7
SKIA				S	Sn	23 56 02.8	+0.1
SKIA				AML	AML	23 56 10.7	
	comp=N,3816µm,0.7s						
SKIA				AML	AML	23 56 10.9	
	comp=E,4137µm,0.8s						
SKIA	Skiathos	1.77	275	P	Pn	23 55 39.9	-0.3
SKIA	Skiathos	1.77	275	P	Pn	23 55 39.9	-0.3
SKIA				S	Sn	23 56 02.8	+0.1
GONE	Gonen-Balikesi	1.81	55	PN	Pb	23 55 41.2	-1.7
GONE	Gonen-Balikesi	1.81	55	ePn	Pb	23 55 41.2	-1.7
PAIG	Paliouri	1.83	300	P	Pn	23 55 40.6	-0.4
PAIG				S	Sn	23 56 04.2	+0.2
PAIG				AML	AML	23 56 10.2	
	comp=E,670µm,0.8s						
PAIG				AML	AML	23 56 10.5	
	comp=N,850µm,0.9s						
PAIG	Paliouri	1.83	300	P	Pn	23 55 40.7	-0.2
PAIG				S	Sb	23 56 05.8	-0.1
PAIG	Paliouri	1.83	300	P	Pn	23 55 40.8	-0.2
PAIG				S	Sn	23 56 04.2	+0.2
KNL	Bal˜–kesir	1.85	48	iP	Pn	23 55 41.6	+0.4
KNL				iS	Sb	23 56 05.4	-1.2
ATHU	Athens Univers	1.87	236	P	Pn	23 55 39.6	-1.9
ATHU	Athens Univers	1.87	236	P	Pn	23 55 40.6	-0.9
ATHU	Athens Univers	1.87	236	P	Pn	23 55 40.6	-0.9
ALN	Alexandroupoli	1.88	7	PN	Pn	23 55 42.0	+0.4
ALN	Alexandroupoli	1.88	7	P	Pn	23 55 41.2	-0.4
ALN	Alexandroupoli	1.88	7	P	Pn	23 55 41.8	+0.2
ALN	Alexandroupoli	1.88	7	ePn	Pn	23 55 42.0	+0.4
OUR	Ouranopolis	1.88	314	PN	Pn	23 55 41.4	-0.2
OUR	Ouranopolis	1.88	314	P	Pn	23 55 41.8	+0.1
OUR				S	Sn	23 56 03.7	-1.5
OUR				AML	AML	23 56 11.8	
	comp=N,1536µm,0.5s						
OUR				AML	AML	23 56 14.1	
	comp=E,1320µm,0.4s						
OUR	Ouranopolis	1.88	314	P	Pn	23 55 41.7	+0.1
OUR	Ouranopolis	1.88	314	ePn	Pn	23 55 41.4	-0.2
OUR	Ouranopolis	1.88	314	P	Pn	23 55 41.7	+0.1
OUR				S	Sn	23 56 04.4	-0.8
ATH	Athens Observa	1.91	237	P	Pb	23 55 43.3	-1.2
ATH				S	Sn	23 56 05.5	-0.5
ATH				AML	AML	23 56 13.6	
	comp=E,2464µm,0.5s						
ATH				AML	AML	23 56 14.6	
	comp=N,1816µm,0.4s						
ATH	Athens Observa	1.91	237	P	Pb	23 55 42.8	-1.7
ATH				S	Sn	23 56 05.9	0.0
KESN	Edirne-Kesan	1.93	22	iP	Pn	23 55 42.8	+0.1
KESN				iS	Sn	23 56 07.3	+0.3
KESN	Edirne-Kesan	1.93	22	P	Pn	23 55 42.8	+0.1
KESN				S	Sn	23 56 07.3	+0.3
APE	Apeiranthos	1.97	185	PN	Pn	23 55 42.4	-0.5
APE	Apeiranthos	1.97	185	P	Pn	23 55 42.2	-0.7
APE				S	Sb	23 56 08.5	-1.5
APE				AML	AML	23 56 14.4	
	comp=E,1769µm,0.5s						
APE				AML	AML	23 56 14.8	
	comp=N,1477µm,0.5s						
APE	Apeiranthos	1.97	185	⇓iP	Pb	23 55 45.7	+0.2
APE	Apeiranthos	1.97	185	S	Sg	23 56 11.4	-1.7
APE	Apeiranthos	1.97	185	P	Pn	23 55 42.5	-0.5
APE				S	Sn	23 56 05.7	-1.8
APE	Apeiranthos	1.97	185	P	Pn	23 55 42.6	-0.3
APE				S	Sn	23 56 08.0	+0.5
NEO	Neokhori	1.98	279	P	Pn	23 55 41.8	-1.2
NEO				S	Sn	23 56 07.0	-0.7
NEO				AML	AML	23 56 17.8	
	comp=N,1431µm,0.7s						
NEO				AML	AML	23 56 18.1	
	comp=E,1343µm,0.8s						
NEO	Neokhori	1.98	279	P	Pn	23 55 42.4	-0.6
NEO	Neokhori	1.98	279	P	Pn	23 55 42.5	-0.6
NEO				S	Sn	23 56 07.4	-0.3
SMIA	Simia	1.98	266	P	Pn	23 55 42.6	-0.5
SMIA				S	Sb	23 56 09.8	-0.5
SMIA				AML	AML	23 56 18.0	
	comp=N,5357µm,0.5s						
SMIA				AML	AML	23 56 19.1	
	comp=E,5677µm,0.6s						
SMIA	Simia	1.98	266	P	Pn	23 55 42.9	-0.2
SMIA	Simia	1.98	266	P	Pn	23 55 42.9	-0.2
SMIA				S	Sb	23 56 08.9	-1.4
RKY	Sarkoy-Tekirda	1.99	33	PN	Pn	23 55 43.3	+0.1
RKY	Sarkoy-Tekirda	1.99	33	ePn	Pn	23 55 43.3	+0.1
SART	Tekirdag	1.99	33	iP	Pb	23 55 44.2	-1.8
SART				iS	Sg	23 56 13.4	-0.5
SART	Tekirdag	1.99	33	P	Pb	23 55 44.2	-1.8
AYDB	Zeytinkoy-Aydi	2.01	122	PN	Pn	23 55 43.8	+0.3
AYDB	Zeytinkoy-Aydi	2.01	122	ePn	Pn	23 55 43.8	+0.3
XOR	Xorichti	2.01	280	P	Pn	23 55 42.1	-1.4
XOR				S	Sn	23 56 07.8	-0.7
XOR				AML	AML	23 56 17.0	
	comp=N,778µm,0.6s						
XOR				AML	AML	23 56 17.6	
	comp=E,666µm,1.1s						
XOR	Xorichti	2.01	280	P	Pn	23 55 42.6	-0.9
XOR	Xorichti	2.01	280	P	Pn	23 55 42.8	-0.7
XOR				S	Sn	23 56 08.2	-0.3
EDC	Edincik	2.10	51	PN	Pn	23 55 45.1	+0.4
EDC	Edincik	2.10	51	ePn	Pn	23 55 45.1	+0.4
RDO	Rodhopi	2.12	356	PN	Pn	23 55 45.7	+0.8
RDO	Rodhopi	2.12	356	P	Pn	23 55 44.9	0.0
RDO	Rodhopi	2.12	356	P	Pn	23 55 44.7	-0.2
RDO	Rodhopi	2.12	356	P	Pn	23 55 44.8	-0.2
RDO	Rodhopi	2.12	356	ePn	Pn	23 55 45.7	+0.8
AYDN	Tasoluk	2.17	129	iP	Pn	23 55 45.9	+0.2
AYDN	Tasoluk	2.17	129	P	Pn	23 55 45.9	+0.2
LKR	Lokris	2.17	261	P	Pn	23 55 44.5	-1.2
LKR	Lokris	2.17	261	P	Pn	23 55 45.0	-0.7
LKR	Lokris	2.17	261	P	Pn	23 55 45.2	-0.5
DURS	Dursunbey	2.19	74	iP	Pn	23 55 46.4	+0.3
DURS				iS	Sb	23 56 14.4	-2.2
DURS	Dursunbey	2.19	74	P	Pn	23 55 46.4	+0.3
DURS				S	Sb	23 56 14.4	-2.2
AMGA	Amorgos Island	2.20	177	P	Pn	23 55 44.8	-1.3
AMGA	Amorgos Island	2.20	177	P	Pn	23 55 45.5	-0.6
FYTO	Fytoko, Volos	2.21	281	P	Pn	23 55 46.1	-0.1
FYTO	Fytoko, Volos	2.21	281	P	Pn	23 55 46.1	-0.1
MANT	Manisa	2.27	103	iP	Pn	23 55 47.7	+0.5
MANT	Manisa	2.27	103	P	Pn	23 55 47.7	+0.5
DST	Dursunbey	2.30	75	PN	Pn	23 55 48.2	+0.6
DST	Dursunbey	2.30	75	ePn	Pn	23 55 48.2	+0.6
DEMI	Demirci	2.32	89	iP	Pn	23 55 48.2	+0.4
DEMI	Demirci	2.32	89	P	Pn	23 55 48.2	+0.4
BODT	Bodrum	2.33	147	PN	Pn	23 55 47.9	+0.1
BODT	Bodrum	2.33	147	P	Pn	23 55 47.9	+0.1
BODT	Bodrum	2.33	147	P	Pn	23 55 47.9	+0.1
KULA	Kula-Manisa	2.34	102	PN	Pn	23 55 48.3	+0.2
KULA	Kula-Manisa	2.34	102	ePn	Pn	23 55 48.3	+0.2
PROD	Prodromos	2.35	252	P	Pn	23 55 48.9	+0.7
PROD	Prodromos	2.35	252	P	Pn	23 55 48.0	-0.2
PROD	Prodromos	2.35	252	P	Pn	23 55 48.0	-0.2
KCTX	Karacabey (Bur	2.37	58	PN	Pn	23 55 49.5	+1.1
KCTX	Karacabey (Bur	2.37	58	ePn	Pn	23 55 49.5	+1.1
TKR	Tekirdag	2.39	35	PN	Pn	23 55 49.4	+0.7
TKR	Tekirdag	2.39	35	ePn	Pn	23 55 49.4	+0.7
LTK	Loutraki	2.40	246	P	Pn	23 55 47.6	-1.2
LTK	Loutraki	2.40	246	P	Pn	23 55 48.3	-0.5
LTK	Loutraki	2.40	246	P	Pn	23 55 48.4	-0.4
LOUT	Loutraki	2.41	245	P	Pn	23 55 48.9	0.0
LOUT	Loutraki	2.41	245	P	Pn	23 55 48.9	0.0
DID	Didima	2.49	233	P	Pn	23 55 48.1	-2.0
DID	Didima	2.49	233	P	Pn	23 55 49.9	-0.2
DID	Didima	2.49	233	P	Pn	23 55 49.9	-0.2
SBT3	Marmara-Eregli	2.52	42	PN	Pn	23 55 51.6	+1.3
SBT3	Marmara-Eregli	2.52	42	ePn	Pn	23 55 51.6	+1.3
SOH	Sokhos	2.56	315	P	Pn	23 55 51.5	+0.4
SOH	Sokhos	2.56	315	P	Pn	23 55 51.5	+0.4
HORT	Hortiatis	2.56	308	PN	Pn	23 55 50.8	-0.4
HORT	Hortiatis	2.56	308	P	Pn	23 55 51.8	+0.6
HORT	Hortiatis	2.56	308	P	Pn	23 55 51.6	+0.4
HORT	Hortiatis	2.56	308	ePn	Pn	23 55 50.8	-0.4
HORT	Hortiatis	2.56	308	P	Pn	23 55 51.5	+0.4
DSF	Desfina	2.59	257	P	Pn	23 55 50.2	-1.3
DSF	Desfina	2.59	257	P	Pn	23 55 51.0	-0.5
DSF	Desfina	2.59	257	P	Pn	23 55 51.0	-0.5
CRLT	Corlu	2.59	36	PN	Pn	23 55 52.2	+0.7
CRLT	Corlu	2.59	36	ePn	Pn	23 55 52.2	+0.7
KRND	KRANIDI	2.62	232	P	Pn	23 55 50.3	-1.6
KRND	KRANIDI	2.62	232	P	Pn	23 55 51.4	-0.5
KRND	KRANIDI	2.62	232	P	Pn	23 55 51.4	-0.5
KDZ	Kurdzhali	2.63	355	iP	Pn	23 55 51.8	-0.1
THR3	Thira Island,	2.63	186	P	Pn	23 55 52.1	+0.1
THR3	Thira Island,	2.63	186	P	Pn	23 55 52.1	+0.1
SRS	Serrai	2.66	322	ePn	Pn	23 55 53.3	+1.0
SRS				eSn	Sn	23 56 24.5	+0.1
SRS	Serrai	2.66	322	P	Pn	23 55 52.0	-0.3
SRS	Serrai	2.66	322	P	Pn	23 55 52.6	+0.3
SRS	Serrai	2.66	322	P	Pn	23 55 52.2	-0.1
SRS	Serrai	2.66	322	ePn	Pn	23 55 53.3	+1.0
SRS				eSn	Sn	23 56 24.5	+0.1
AGG	Agios Georgios	2.66	271	P	Pn	23 55 52.3	0.0
AGG	Agios Georgios	2.66	271	P	Pn	23 55 52.5	+0.1
AGG	Agios Georgios	2.66	271	P	Pn	23 55 52.5	+0.1
SANT	Santorini	2.67	185	⇑iP	Pn	23 55 54.0	+1.5
SANT	Santorini	2.67	185	⇑iP	Pn	23 55 54.0	+1.5
THE	Thessaloniki	2.67	308	P	Pn	23 55 53.5	+1.0
THE	Thessaloniki	2.67	308	P	Pn	23 55 53.1	+0.6
DAT	Datca	2.72	147	iP	Pn	23 55 53.0	-0.4
DAT	Datca	2.72	147	P	Pn	23 55 53.0	-0.4
NVR	Nevrokopi	2.73	329	P	Pn	23 55 53.5	+0.1
NVR	Nevrokopi	2.73	329	P	Pn	23 55 53.1	-0.2
NVR	Nevrokopi	2.73	329	P	Pn	23 55 53.4	+0.1
RZN	Rozhen	2.77	344	iP	Pn	23 55 54.4	+0.4
MDNY	Mudanya-Bursa	2.77	60	PN	Pn	23 55 54.4	+0.5
MDNY	Mudanya-Bursa	2.77	60	ePn	Pn	23 55 54.4	+0.5
GUR	Goura	2.88	249	P	Pn	23 55 54.6	-1.0
GUR	Goura	2.88	249	P	Pn	23 55 55.7	+0.1
GUR	Goura	2.88	249	P	Pn	23 55 55.3	-0.3
KALE	Kalithea	2.89	258	P	Pn	23 55 55.0	-0.6
KALE	Kalithea	2.89	258	P	Pn	23 55 55.5	-0.1
GDZ	Gediz	2.91	88	iP	Pn	23 55 57.1	+1.1
GDZ	Gediz	2.91	88	P	Pn	23 55 57.1	+1.1
THL	Klokotos Trika	2.94	282	P	Pn	23 55 56.7	+0.4
THL	Klokotos Trika	2.94	282	P	Pn	23 55 56.6	+0.4
THL	Klokotos Trika	2.94	282	P	Pn	23 55 56.6	+0.4
IGD	Bursa	2.94	64	iP	Pn	23 55 56.7	+0.5
TRIZ	Trizonia	2.95	258	P	Pn	23 55 56.5	+0.1
TRIZ	Trizonia	2.95	258	P	Pn	23 55 56.6	+0.3
SERG	Sergoula	2.95	259	P	Pn	23 55 56.0	-0.4
SERG	Sergoula	2.95	259	P	Pn	23 55 56.4	0.0
TAVA	DENIZLI_Tavas	2.95	121	iP	Pn	23 55 57.2	+0.8
TAVA	DENIZLI_Tavas	2.95	121	P	Pn	23 55 57.2	+0.8
ELBA	Catalca	2.95	43	iP	Pn	23 55 57.2	+0.8
ELBA	Catalca	2.95	43	P	Pn	23 55 57.2	+0.8
MMB	Musomiste	2.98	330	iP	Pn	23 55 56.8	0.0
KLV	Kalavryta, Ach	2.98	252	P	Pn	23 55 55.9	-1.0

KLV	Kalavryta, Ach	2.98	252	P	Pn	23 55 57.0	+0.1
KLV	Kalavryta, Ach	2.98	252	P	Pn	23 55 56.6	-0.3
KHAL	Karahalli	3.01	102	i P	Pn	23 55 58.0	+0.7
KHAL	Karahalli	3.01	102	P	Pn	23 55 58.0	+0.7
ANX	Ano Chora	3.02	263	P	Pn	23 55 58.2	+0.8
ANX	Ano Chora	3.02	263	P	Pn	23 55 58.0	+0.6
DIM	Dimitrovgrad	3.02	357	eP	Pn	23 55 57.6	+0.3
KNT	Kendrikon	3.04	315	P	Pn	23 55 60.0	+2.3
KNT	Kendrikon	3.04	315	P	Pn	23 55 59.0	+1.3
LAKA	Lakka	3.05	256	P	Pn	23 55 58.2	+0.4
LAKA	Lakka	3.05	256	P	Pn	23 55 58.2	+0.4
EFP	Efpalio	3.06	260	P	Pn	23 55 58.0	+0.1
EFP	Efpalio	3.06	260	P	Pn	23 55 58.2	+0.3
TURN	Turunc	3.13	133	i P	Pn	23 55 57.2	-1.5
TURN	Turunc	3.13	133	P	Pn	23 55 57.2	-1.5
PLD	Plovdiv	3.17	346	ePn	Pn	23 55 58.5	-0.9
PLD	Plovdiv	3.17	346	i P	Pn	23 56 00.3	+0.9
PLD	Plovdiv	3.17	346	ePn	Pn	23 55 58.5	-0.9
DALY	Dalyan (Mu˜la	3.19	133	i P	Pn	23 56 00.3	+0.6
DALY	Dalyan (Mu˜la	3.19	133	P	Pn	23 56 00.3	+0.6
VLI	Veliai	3.20	225	P	Pn	23 55 57.9	-2.0
VLI	Veliai	3.20	225	P	Pn	23 55 59.3	-0.6
VLI	Veliai	3.20	225	P	Pn	23 55 59.3	-0.6
GRG	Griva	3.21	308	P	Pn	23 56 01.9	+2.0
GRG	Griva	3.21	308	P	Pn	23 56 01.1	+1.2
PVO	Paravola	3.32	264	P	Pn	23 56 03.2	+1.8
PVO	Paravola	3.32	264	P	Pn	23 56 02.6	+1.2
VAY	Valandovo	3.33	314	ePn	Pn	23 56 03.7	+2.0
VAY	Valandovo	3.33	314	i Pn	Pn	23 56 03.9	+2.3
VAY	Valandovo	3.33	314	ePn	Pn	23 56 03.7	+2.0
DRO	Drossia	3.34	252	P	Pn	23 56 01.9	+0.1
DRO	Drossia	3.34	252	P	Pn	23 56 02.1	+0.3
ARG	Arkhangelos	3.39	145	P	Pn	23 56 03.0	+0.6
ARG	Arkhangelos	3.39	145	P	Pn	23 56 02.9	+0.5
AUBOZ	BOZOYUK	3.44	74	i P	Pn	23 56 02.9	-0.2
AUBOZ	BOZOYUK	3.44	74	P	Pn	23 56 02.9	-0.2
KKB	Krupnik	3.48	325	eP	Pn	23 56 04.7	+1.0
GOLH	Golhisar	3.51	120	i P	Pn	23 56 05.9	+1.8
GOLH	Golhisar	3.51	120	P	Pn	23 56 05.9	+1.8
DYR	Agios Nikonas	3.52	231	P	Pn	23 56 04.3	+0.1
DYR	Agios Nikonas	3.52	231	P	Pn	23 56 04.7	+0.4
PDO	Prodromos	3.59	264	P	Pn	23 56 06.4	+1.3
PDO	Prodromos	3.59	264	P	Pn	23 56 06.1	+1.0
DSL	Palaion Diasel	3.62	273	P	Pn	23 56 08.1	+2.5
DSL	Palaion Diasel	3.62	273	P	Pn	23 56 07.1	+1.5
BRDR	BURDUR-Merkez	3.65	110	i P	Pn	23 56 06.8	+0.7
BRDR	BURDUR-Merkez	3.65	110	P	Pn	23 56 06.8	+0.7
MES3	Kyparissia	3.67	242	P	Pn	23 56 08.9	+2.7
MES3	Kyparissia	3.67	242	P	Pn	23 56 08.0	+1.8
ANKY	Antikythira Is	3.71	212	P	Pn	23 56 04.0	-2.8
ANKY	Antikythira Is	3.71	212	P	Pn	23 56 05.8	-1.0
PGB	Panagyurishte	3.71	342	i P	Pn	23 56 07.2	+0.3
FNA	Florina	3.78	299	ePn	Pn	23 56 09.5	+1.6
FNA	Florina	3.78	299	P	Pn	23 56 09.0	+1.1
FNA	Florina	3.78	299	P	Pn	23 56 08.7	+0.8
FNA	Florina	3.78	299	ePn	Pn	23 56 09.5	+1.6
GEYV	SAKARYA_Geyve	3.80	66	i P	Pn	23 56 08.3	+0.3
GEYV	SAKARYA_Geyve	3.80	66	P	Pn	23 56 08.3	+0.3
IDI	Anoyia	3.80	191	Pn	Pn	23 56 09.0	+0.9
	comp=E,1.7nm,0.3s,baz=7.7,slow=14,SNR=11						
IDI	Anoyia	3.80	191	⇑iP	Pn	23 56 10.1	+2.0
IDI	Anoyia	3.80	191	⇑iP	Pn	23 56 10.1	+2.0
PYL	PYLOS	3.81	237	P	Pn	23 56 09.8	+1.5
PYL	PYLOS	3.81	237	P	Pn	23 56 09.4	+1.2
MES2	Methoni	3.88	237	P	Pn	23 56 10.7	+1.6
MES2	Methoni	3.88	237	P	Pn	23 56 10.3	+1.2
VTS	Vitosha	4.04	332	ePn	Pn	23 56 12.3	+0.8
VTS	Vitosha	4.04	332	⇑iP	Pn	23 56 13.2	+1.7
VTS	Vitosha	4.04	332	eP	Pn	23 56 12.6	+1.1
VTS	Vitosha	4.04	332	ePn	Pn	23 56 12.3	+0.8
VTS	Vitosha	4.04	332	⇑iP	Pn	23 56 13.2	+1.7
KRUS	Krusevo	4.16	306	i Pn	Pn	23 56 13.8	+0.8
IGT	Igoumenitsa	4.23	278	ePn	Pn	23 56 17.0	+3.1
IGT				eSn	Sn	23 57 06.0	+2.9
IGT	Igoumenitsa	4.23	278	ePn	Pn	23 56 17.0	+3.1
IGT				eSn	Sn	23 57 06.0	+2.9
SGD	Sagiada	4.31	279	P	Pb	23 56 20.9	-4.5
SKO	Skopje	4.40	313	ePn	Pn	23 56 18.1	+1.8
SKO	Skopje	4.40	313	ePn	Pn	23 56 18.1	+1.8
BARS	Barje	4.81	323	ePn	Pn	23 56 22.9	+1.0
BARS	Barje	4.81	323	ePn	Pn	23 56 22.9	+1.0
ZAPS	Zavoj	4.84	332	ePn	Pn	23 56 24.1	+1.7
SELS	Selova	5.45	322	ePn	Pn	23 56 31.2	+0.5
BOVS	Bovan	5.51	328	ePn	Pn	23 56 32.5	+1.0
BOVS	Bovan	5.51	328	ePn	Pn	23 56 32.5	+1.0
TIRR	Tirgusor	5.78	19	⇓iP	Pn	23 56 35.7	+0.5
TIRR	Tirgusor	5.78	19	⇓iP	Pn	23 56 35.7	+0.5
TLB	Topalu	5.81	16	⇓iP	Pn	23 56 35.9	+0.3
TLB	Topalu	5.81	16	⇓iP	Pn	23 56 35.9	+0.3
HARR	Harsova	5.88	15	⇑iP	Pn	23 56 37.3	+0.6
HARR	Harsova	5.88	15	⇑iP	Pn	23 56 37.3	+0.6
SJES	Sjenica	6.07	316	ePn	Pn	23 56 39.2	-0.1
GRUS	Gruza	6.15	324	ePn	Pn	23 56 40.8	+0.5
GRUS	Gruza	6.15	324	ePn	Pn	23 56 40.8	+0.5
BRTR	Keskin Array B	6.16	81	Pn	Pn	23 56 42.4	+1.7
	comp=E,1.0nm,0.3s,baz=257,slow=13,SNR=38						
BRTR				Lg	Lg	23 58 26.6	
	baz=258,slow=27,SNR=3.4						
IVAS	Ivanjica	6.19	319	ePn	Pn	23 56 42.3	+1.4
IVAS	Ivanjica	6.19	319	ePn	Pn	23 56 42.3	+1.4
HERR	Herculane	6.35	338	⇓iP	Pn	23 56 43.2	+0.2
HERR	Herculane	6.35	338	⇓iP	Pn	23 56 43.2	+0.2
ARR	Arges	6.38	353	⇑iP	Pn	23 56 44.0	+0.4
ARR	Arges	6.38	353	⇑iP	Pn	23 56 44.0	+0.4
CFR	Carcaliu	6.39	15	⇑iP	Pn	23 56 43.8	+0.2
CFR	Carcaliu	6.39	15	⇑iP	Pn	23 56 43.8	+0.2
VOIR		6.42	356	⇑iP	Pn	23 56 44.7	+0.6
VOIR		6.42	356	⇑iP	Pn	23 56 44.7	+0.6
MLR	Muntele Rosu	6.46	1	Pn	Pn	23 56 46.7	+2.0
	comp=E,0.8nm,0.3s,baz=232,slow=3.6,SNR=16						
MLR				Sn	Sn	23 57 58.5	+0.3
	comp=E,0.2nm,0.3s,baz=168,slow=19,SNR=1.2						
MLR				LR	LR	23 59 34.2	
	comp=E,54nm,20.6s,baz=196,slow=41						
MLR	Muntele Rosu	6.46	1	⇓iP	Pn	23 56 46.4	+1.8
MLR	Muntele Rosu	6.46	1	⇓iP	Pn	23 56 46.4	+1.8
MDVR	Moldovita	6.48	334	⇑iP	Pn	23 56 45.7	+0.8
MDVR	Moldovita	6.48	334	⇑iP	Pn	23 56 45.7	+0.8
TRUS	Trudelj	6.55	324	ePn	Pn	23 56 46.9	+1.1
TRUS	Trudelj	6.55	324	ePn	Pn	23 56 46.9	+1.1
LOT	Lotru	6.58	348	⇓iP	Pn	23 56 46.4	+0.1
LOT	Lotru	6.58	348	⇓iP	Pn	23 56 46.4	+0.1
DIVS	Divibare	6.65	321	ePn	Pn	23 56 47.7	+0.5
DIVS	Divibare	6.65	321	ePn	Pn	23 56 47.7	+0.5
PLOR	Plostina	6.85	5	⇑iP	Pn	23 56 52.1	+2.2
PLOR	Plostina	6.85	5	⇑iP	Pn	23 56 52.1	+2.2
VRI	Vrincioaia	6.87	6	⇓iP	Pn	23 56 52.0	+1.8
VRI	Vrincioaia	6.87	6	⇓iP	Pn	23 56 52.0	+1.8
DOPR	Dopca	6.94	358	⇓iP	Pn	23 56 52.8	+1.7
DOPR	Dopca	6.94	358	⇓iP	Pn	23 56 52.8	+1.7
OZUR		7.06	0	⇑iP	Pn	23 56 54.7	+1.9
OZUR		7.06	0	⇑iP	Pn	23 56 54.7	+1.9
BZS	Buzias	7.25	336	⇑iP	Pn	23 56 57.2	+1.7
BZS	Buzias	7.25	336	⇑iP	Pn	23 56 57.2	+1.7
TESR	Tescani	7.50	5	⇑iP	Pn	23 56 59.9	+1.0
TESR	Tescani	7.50	5	⇑iP	Pn	23 56 59.9	+1.0
CJR	Cluj-Napoca	7.83	349	⇓iP	Pn	23 57 05.4	+1.9
CJR	Cluj-Napoca	7.83	349	⇓iP	Pn	23 57 05.4	+1.9
BIZ	Bicaz	7.91	2	⇑iP	Pn	23 57 06.8	+2.4
BIZ	Bicaz	7.91	2	⇑iP	Pn	23 57 06.8	+2.4
DRGR		8.07	345	⇓iP	Pn	23 57 09.1	+2.4
DRGR		8.07	345	⇓iP	Pn	23 57 09.1	+2.4
BURAR	Bucovina Array	8.59	358	⇑iP	Pn	23 57 16.5	+2.6
BURAR	Bucovina Array	8.59	358	⇑iP	Pn	23 57 16.5	+2.6
MMAI	Mount Meron Ar	9.86	125	Pn	Pn	23 57 31.1	-0.3
	comp=E,0.9nm,0.3s,baz=305,slow=12,SNR=9.5						
MMAI				Sn	Sn	23 59 17.4	-4.5
	comp=E,0.3nm,0.3s,baz=324,slow=27,SNR=1.7						
VYHS	Vyhne	10.69	334	ePN	Pn	23 57 43.5	+0.9
VYHS	Vyhne	10.69	334	ePn	Pn	23 57 43.5	+0.9
AKASG	Malin Array Be	11.92	11	Pn	Pn	23 58 00.6	+1.2
	comp=E,0.8nm,0.3s,baz=201,slow=13,SNR=1.7						
ESDC	Sonseca Array	22.93	281	P	P	00 00 15.6	+1.9
	comp=E,0.3nm,0.6s,baz=73,slow=10,SNR=3.8						
TORD	Torodi Ar. Bea	33.42	226	P	P	00 01 48.4	0.0
	comp=E,0.1nm,0.5s,baz=20,slow=8.8						
KURBB	Kurchatov Arra	38.41	55	P	P	00 02 31.7	+0.9
	comp=E,0.4nm,0.6s,baz=279,slow=8.6,SNR=2.3						
MKAR	Makanchi Array	41.35	60	P	P	00 02 56.3	+1.0
	comp=E,0.7nm,0.7s,baz=280,slow=7.3,SNR=6.7						
ZALV	Zalesovo Beam	42.06	49	LR	LR	00 22 45.6	

comp=E,24nm,19.3s,baz=246,slow=39

ISC Computed Locations for July 2012